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

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Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

*NEIC **01** 18:45:41.7±1.7,21°.70S×179°.55W,h600km,mb4.6/6,*
Error ellipse: s-maj=75.5km s-min=25.7km az=151.0
*IDC **01** 18:45:46.3±2.6,21°.76S×179°.70W,h627km±37km,mb3.5/4,*
mb1 3.7/4,mb1mx3.2/14,Error ellipse: s-maj=83.2km
s-min=20.6km az=159.0
ISC 01 18:45:43.1±2.7,22°.3S±0°.2×179°.6W±0°.3,h613km±42km,
n22,σ1°.15/21,mb4.4/9,1C,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HBZ	**Hicks Bay**	**15.41**	**186**	*e*P	**P**	**18 48 53.1**	**-1.7**
URZ	**Urewera**	**16.21**	**189**	P	**P**	**18 49 01.5**	**-0.9**
MRZ	**Mangatainoka R**	**18.81**	**192**	*e*P	**P**	**18 49 26.7**	**0.0**
DIW	**D'Urville Isla**	**19.30**	**195**	*e*P	**P**	**18 49 27.3**	**-3.9**
CAW	**Cannon Point**	**19.34**	**192**	*e*P	**P**	**18 49 31.7**	**+0.1**
OTW	**Orongorongo Tu**	**19.52**	**192**	*e*P	**P**	**18 49 33.0**	**-0.2**
MOW	**Moikau**	**19.61**	**192**	*e*P	**P**	**18 49 35.5**	**+1.5**
THZ	**Tophouse**	**20.46**	**196**	*e*P	**P**	**18 49 42.0**	**+0.2**
KHZ	**Kahutara**	**20.93**	**194**	P	**P**	**18 49 46.2**	**+0.2**
ARMA	**Armidale**	**27.03**	**246**	*e*P	**P**	**18 50 42.4**	**+2.3**
	4.9nm,0.5s,mb4.4						
CTA	**Charters Tower**	**31.93**	**267**	⇑*i*P	**P**	**18 51 22.3**	**+0.4**
	13nm,0.5s,mb4.8						
STKA	**Stephens Creek**	**35.75**	**246**	*e*P	**P**	**18 51 55.3**	**+1.8**
	3.1nm,0.4s,mb4.2						
ASAR	**Alice Springs**	**42.74**	**259**	P	**P**	**18 52 50.1**	**+0.3**
	9.8nm,0.5s,mb4.6,baz=92,slow=8.2,SNR=47						
ASAR				S	**S**	**18 58 31.3**	**-0.1**
	1.0nm,0.8s,baz=95,slow=15,SNR=5.7						
ASPA	**Alice Springs**	**42.74**	**259**	*e*P	**P**	**18 52 50.1**	**+0.2**
WRA	**Warramunga Arr**	**42.96**	**264**	P	**P**	**18 52 51.0**	**-0.7**
	1.8nm,0.3s,mb4.0,baz=96,slow=7.8,SNR=93						
WRA				S	**S**	**18 58 33.0**	**-1.5**
	0.3nm,0.9s,baz=99,slow=14,SNR=3.0						
KAKA	**Kakadu**	**46.64**	**273**	*e*P	**P**	**18 53 18.2**	**-1.8**
	14nm,0.4s,mb4.8						
FITZ	**Fitzroy Crossi**	**51.39**	**264**	*e*P	**P**	**18 53 54.3**	**-0.7**
	12nm,0.3s,mb4.8						
MBWA	**Marble Bar**	**56.08**	**259**	*e*P	**P**	**18 54 27.1**	**-0.7**
	11nm,0.6s,mb4.2						
CMAR	**Chiang Mai Arr**	**89.35**	**290**	P	**P**	**18 57 38.1**	**+1.0**
	1.3nm,0.8s,mb3.8,baz=135,slow=3.1,SNR=8.1						
ARCES	**ARCESS Array B**	**130.36**	**349**	PKP	PKP	19 03 43.7	-0.5
	0.7nm,0.6s,baz=282,slow=4.2,SNR=3.5						
FINES	**FINESS Array B**	**137.02**	**342**	PKP	PKP	19 03 57.3	+0.5
	3.7nm,1.1s,baz=158,slow=3.2,SNR=3.4						
MLR	**Muntele Rosu**	**148.85**	**324**	PKPbc	PKP	19 04 22.7	+5.2
	0.2nm,0.7s,baz=1.2,slow=23,SNR=2.3						

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

Addendum III

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

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

*CSEM **01** 00:13:04.9±0.4, 40.°68N×19.°63E, h2km, ML1.9, Error ellipse: s-maj=10.9km s-min=5.4km az=66.0*
*TIR **01** 00:13:05.2, 40.°71N×19.°72E, h1km, Md3.2/6*
*THE **01** 00:13:05.8, 40.°73N×19.°72E, h5km±1km, ML1.9/5, Error ellipse: s-maj=1.9km s-min=1.0km az=286.0*
*PDG **01** 00:13:05.3±0.5, 40.°71N×19.°58E, h11km±1km, ML2.6/5, Error ellipse: s-maj=1.2km s-min=2.4km az=0.0*

ISC 01 00:13:05.5±1.1, 40.°70N±0.°02×19.°67E±0.°03, h11km±9km, n41, σ1°15/73, 6C-4D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.66**	**13**	P	**Pb**	**00 13 18.3**	**-0.8**
TIR	**Tirane**	**0.66**	**13**	*i* PG	**Pb**	**00 13 18.9**	**-0.1**
TIR				*i* SG	**Sn**	**00 13 29.6**	**-1.6**
TIR	**Tirane**	**0.66**	**13**	P	**Pb**	**00 13 18.3**	**-0.8**
TIR	**Tirane**	**0.66**	**13**	*i* Pg	**Pb**	**00 13 18.9**	**-0.2**
	baz=10.0						
TIR				*i* Sg	**Sn**	**00 13 29.6**	**-1.6**
	baz=10.0						
KBN	**Korca**	**0.85**	**95**	P	**Pg**	**00 13 20.7**	**-1.2**
KBN				S	**Sb**	**00 13 33.4**	**-0.4**
KBN	**Korca**	**0.85**	**95**	*i* PG	**Pb**	**00 13 22.0**	**-0.3**
KBN				*i* SG	**Sn**	**00 13 35.5**	**-0.5**
KBN	**Korca**	**0.85**	**95**	P	**Pg**	**00 13 20.7**	**-1.2**
KBN	**Korca**	**0.85**	**95**	*i* Pg	**Pb**	**00 13 22.0**	**-0.3**
	baz=96						
KBN				S	**Sb**	**00 13 33.4**	**-0.4**
KBN				*i* Sg	**Sn**	**00 13 35.5**	**-0.5**
	baz=96						
SRN	**Sarande**	**0.86**	**163**	P	**Pg**	**00 13 21.5**	**-0.5**
SRN				S	**Sn**	**00 13 35.8**	**-0.2**
SRN	**Sarande**	**0.86**	**163**	*i* PG	**Pg**	**00 13 21.5**	**-0.6**
SRN				*i* SG	**Sn**	**00 13 38.1**	**+2.1**
SRN	**Sarande**	**0.86**	**163**	P	**Pg**	**00 13 21.5**	**-0.5**
KEK	**Kerkira**	**0.99**	**174**	P	**Pb**	**00 13 24.5**	**-0.2**
KEK				S	**Sn**	**00 13 40.1**	**+0.7**
KEK	**Kerkira**	**0.99**	**174**	P	**Pb**	**00 13 24.5**	**-0.2**
NEST	**Nestorio**	**1.09**	**105**	P	**Pg**	**00 13 25.6**	**-0.8**
NEST	**Nestorio**	**1.09**	**105**	P	**Pg**	**00 13 25.6**	**-0.8**
PHP	**Peshkopia**	**1.14**	**30**	*i* PN	**Pn**	**00 13 28.4**	**+0.9**
PHP				*i* SN	**Sn**	**00 13 45.8**	**+2.7**
PHP	**Peshkopia**	**1.14**	**30**	*i* Pn	**Pn**	**00 13 28.4**	**+1.0**
	baz=29						
PHP				*i* Sn	**Sn**	**00 13 45.8**	**+2.7**
	baz=29						
SGD	**Sagiada**	**1.17**	**158**	P	**Pg**	**00 13 28.0**	**0.0**
SGD	**Sagiada**	**1.17**	**158**	P	**Pg**	**00 13 28.0**	**0.0**
IGT	**Igoumenitsa**	**1.27**	**156**	P	**Pg**	**00 13 29.3**	**-0.6**
IGT				S	**Sg**	**00 13 48.5**	**+2.0**
IGT	**Igoumenitsa**	**1.27**	**156**	P	**Pg**	**00 13 29.3**	**-0.6**
FNA	**Florina**	**1.30**	**86**	P	**Pn**	**00 13 28.7**	**-0.9**
FNA				S	**Sg**	**00 13 47.4**	**+0.1**
FNA	**Florina**	**1.30**	**86**	P	**Pn**	**00 13 28.7**	**-0.9**
FNA				S	**Sg**	**00 13 47.4**	**+0.1**
ULC	**Ulcinj**	**1.30**	**346**	⇑*i* Pg	**Pn**	**00 13 28.9**	**-0.7**
ULC				*e*Sg	**Sg**	**00 13 49.0**	**+1.6**
ULC	**Ulcinj**	**1.30**	**346**	⇑*i* Pg	**Pn**	**00 13 28.9**	**-0.7**
ULC				*e*Sg	**Sg**	**00 13 49.0**	**+1.6**
PUK	**Puka**	**1.35**	**7**	*i* PN	**Pg**	**00 13 31.2**	**-0.3**
PUK				*i* SN	**Sg**	**00 13 52.4**	**+3.5**
PUK	**Puka**	**1.35**	**7**	*i* Pn	**Pg**	**00 13 31.2**	**-0.2**
	baz=5.0						
PUK				*i* Sn	**Sg**	**00 13 52.4**	**+3.4**
	baz=5.0						
DRME	**Dracevica, Mon**	**1.53**	**346**	⇓*i* Pg	**Pn**	**00 13 32.5**	**-0.2**
DRME				*e*Sg	**Sg**	**00 13 54.6**	**-0.1**
DRME	**Dracevica, Mon**	**1.53**	**346**	⇓*i* Pg	**Pn**	**00 13 32.5**	**-0.2**
DRME				*e*Sg	**Sg**	**00 13 54.6**	**-0.1**
BCI	**Bajram Curri**	**1.69**	**10**	*i* PN	**Pb**	**00 13 36.8**	**+0.2**
BCI				*i* SN	**Sg**	**00 14 02.1**	**+2.2**
BCI	**Bajram Curri**	**1.69**	**10**	*i* Pn	**Pb**	**00 13 36.8**	**+0.2**
	baz=9.0						
BCI				*i* Sn	**Sg**	**00 14 02.1**	**+2.3**
	baz=9.0						
BUM	**Brajici-Budva**	**1.70**	**340**	*e*Pn	**Pb**	**00 13 36.1**	**-0.7**
BUM				*e*Sn	**Sg**	**00 13 59.1**	**-1.1**
BUM	**Brajici-Budva**	**1.70**	**340**	*e*Pn	**Pb**	**00 13 36.1**	**-0.7**
BUM				*e*Sn	**Sg**	**00 13 59.1**	**-1.1**
PDG	**Podgorica**	**1.75**	**350**	⇑*i* Pn	**Pn**	**00 13 36.1**	**+0.3**
PDG				*e*Sn	**Sg**	**00 14 00.7**	**-1.2**
TTG	**Podgorica**	**1.75**	**350**	⇑*i* Pn	**Pn**	**00 13 36.1**	**+0.3**
TTG				*e*Sn	**Sg**	**00 14 00.7**	**-1.2**
PVY	**Plav**	**1.90**	**6**	*e*Pn	**Pb**	**00 13 39.4**	**-0.9**
PVY				*e*Sn	**Sb**	**00 14 04.3**	**+0.2**
PVY	**Plav**	**1.90**	**6**	*e*Pn	**Pb**	**00 13 39.4**	**-0.9**
PVY				*e*Sn	**Sb**	**00 14 04.3**	**+0.2**
CEME	**Cevo**	**1.93**	**343**	⇑*i* Pn	**Pn**	**00 13 38.9**	**+0.6**
CEME				*e*Sn	**Sb**	**00 14 04.5**	**-0.3**
CEME	**Cevo**	**1.93**	**343**	⇑*i* Pn	**Pn**	**00 13 38.9**	**+0.6**
CEME				*e*Sn	**Sb**	**00 14 04.5**	**-0.3**
BEY	**Berane**	**2.17**	**4**	⇓*i* Pn	**Pn**	**00 13 42.1**	**+0.4**
BEY				*e*Sn	**Sb**	**00 14 11.5**	**-0.4**
IVA	**Berane**	**2.17**	**4**	⇓*i* Pn	**Pn**	**00 13 42.1**	**+0.4**
IVA				*e*Sn	**Sb**	**00 14 11.5**	**-0.4**

*CSEM **01** 00:13:43.5, 36.°16N×21.°65E, h27km, ML1.8/5*

ATH 01 00:13:43.5, 36.°16N×21.°65E, h27km±1km, ML1.8/5, Error ellipse: s-maj=3.4km s-min=1.7km az=22.0, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MES2	**Methoni**	**0.66**	**4**	P	Pn	00 13 57.9	+0.8
MES2				S	Sn	00 14 06.6	-0.1
MES2				AML	AML	00 14 10.7	
	comp=E,223μm,0.8s						
MES2				AML	AML	00 14 10.9	
	comp=N,279μm,0.8s						
MES2	**Methoni**	**0.66**	**4**	P	Pn	00 13 57.3	+0.2
MES2				S	Sn	00 14 06.5	-0.2
PYL	**PYLOS**	**0.74**	**6**	P	Pn	00 13 58.5	+0.3
PYL				S	Sn	00 14 09.4	+0.9
PYL	**PYLOS**	**0.74**	**6**	P	Pn	00 13 58.2	0.0
PYL				S	Sn	00 14 09.0	+0.5
DYR	**Agios Nikonas**	**0.81**	**42**	P	Pb	00 13 59.1	+0.1
DYR				AML	AML	00 14 12.3	
	comp=N,69μm,0.4s						
DYR				S	S	00 14 12.3	+2.6
DYR				AML	AML	00 14 18.5	
	comp=E,112μm,0.5s						
DYR	**Agios Nikonas**	**0.81**	**42**	P	Pn	00 13 59.3	0.0
DYR				S	Sn	00 14 11.7	+1.2
ITM	**Ithomi**	**1.04**	**12**	P	Pn	00 14 02.6	+0.2
ITM				S	Sb	00 14 16.7	+0.6
ITM				AML	AML	00 14 24.3	
	comp=N,108μm,0.6s						
ITM				AML	AML	00 14 26.1	
	comp=E,71μm,0.4s						
ITM	**Ithomi**	**1.04**	**12**	P	Pb	00 14 03.0	+0.1
ITM				S	Sb	00 14 17.4	+1.3
MES3	**Kyparissia**	**1.08**	**1**	P	Pb	00 14 03.4	-0.3
MES3				S	Sb	00 14 18.8	+1.5
MES3	**Kyparissia**	**1.08**	**1**	P	Pb	00 14 03.8	+0.2
MES3				S	Sb	00 14 19.1	+1.7
VLI	**Veliai**	**1.18**	**61**	P	Pb	00 14 06.0	+0.8
VLI				S	Sb	00 14 22.1	+2.0
VLI				AML	AML	00 14 28.5	
	comp=N,62μm,0.6s						
VLI				AML	AML	00 14 30.9	
	comp=E,62μm,0.6s						
VLI	**Veliai**	**1.18**	**61**	P	Pb	00 14 06.0	+0.8
VLI				S	Sb	00 14 22.2	+2.2
VLX	**Vlachokerasia**	**1.34**	**26**	P	Pb	00 14 08.2	+0.1
VLX				S	Sb	00 14 27.5	+2.7
VLX				AML	AML	00 14 37.4	
	comp=E,114μm,0.6s						
VLX				AML	AML	00 14 38.2	
	comp=N,116μm,0.6s						
VLX	**Vlachokerasia**	**1.34**	**26**	P	Pb	00 14 08.3	+0.3
VLX				S	Sb	00 14 27.1	+2.3
AMT	**Artemida-Makis**	**1.37**	**2**	P	Pb	00 14 09.5	+1.0
AMT	**Artemida-Makis**	**1.37**	**2**	P	Pb	00 14 09.2	+0.7

*CSEM **01** 00:14:52.5, 44.°85N×11.°32E, h8km, ML1.8/6*

ROM 01 00:14:52.5±0.0, 44.°851N±0.°001×11.°316E±0.°003, h7km, ML1.8/3, 3C-7D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0822	**Casumaru (Bond**	**0.03**	**131**	⇑*i* P	Pg	00 14 54.3	+0.4
T0822				*i* S	Sg	00 14 56.5	+1.6
T0822	**Casumaru (Bond**	**0.03**	**131**	*i* P	Pg	00 14 54.3	+0.4
T0822				*i* S	Sg	00 14 56.5	+1.6
T0800	**Massa Finalese**	**0.05**	**267**	⇓*i* P	Pg	00 14 54.5	+0.4
T0800				*i* S	Sg	00 14 56.8	+1.6
T0800	**Massa Finalese**	**0.05**	**267**	*i* P	Pg	00 14 54.5	+0.4
T0800				*i* S	Sg	00 14 56.8	+1.6
T0805	**Bondeno (FE)**	**0.07**	**4**	⇓*e*P	Pg	00 14 54.9	+0.6
T0805				*i* S	Sg	00 14 57.2	+1.5
T0805	**Bondeno (FE)**	**0.07**	**4**	*e*P	Pg	00 14 54.9	+0.5
T0805				*i* S	Sg	00 14 57.2	+1.6
T0813	**Massa Finalese**	**0.09**	**288**	⇓*e*P	Pg	00 14 55.5	+0.9
T0813				*i* S	Sg	00 14 57.8	+1.7
T0813	**Massa Finalese**	**0.09**	**288**	*e*P	Pg	00 14 55.5	+0.9
T0813				*i* S	Sg	00 14 57.8	+1.7
T0803	**Dosso, Cento (**	**0.09**	**164**	⇓*i* P	Pg	00 14 55.2	+0.6
T0803				*i* S	Sg	00 14 58.2	+2.1
T0803	**Dosso, Cento (**	**0.09**	**164**	*i* P	Pg	00 14 55.2	+0.6
T0803				*i* S	Sg	00 14 58.1	+2.1
T0811	**Palata Pepoli**	**0.09**	**223**	⇑*i* P	Pg	00 14 55.2	+0.5
T0811				*i* S	Sg	00 14 58.3	+2.1
T0811	**Palata Pepoli**	**0.09**	**223**	*i* P	Pg	00 14 55.2	+0.6
T0811				*i* S	Sg	00 14 58.4	+2.2
T0802	**SanFelice sul**	**0.10**	**284**	⇓*e*P	Pg	00 14 55.3	+0.5
T0802				*i* S	Sg	00 14 57.6	+1.2
T0802	**SanFelice sul**	**0.10**	**284**	*e*P	Pg	00 14 55.3	+0.5
T0802				*i* S	Sg	00 14 57.6	+1.3
T0812	**Loc. Stoppiaro**	**0.14**	**317**	*e*P	Pg	00 14 56.2	+0.7
T0812	**Loc. Stoppiaro**	**0.14**	**317**	*e*P	Pg	00 14 56.2	+0.7
SERM	**Sermide**	**0.16**	**355**	*e*P	Pg	00 14 56.7	+0.9
SERM	**Sermide**	**0.16**	**355**	*e*P	Pg	00 14 56.7	+0.9
T0823	**Castello D'Arg**	**0.17**	**189**	⇓*i* P	Pg	00 14 56.8	+0.9
T0823				*i* S	Sg	00 15 01.2	+3.0
T0823	**Castello D'Arg**	**0.17**	**189**	*i* P	Pg	00 14 56.8	+0.9
T0823				*i* S	Sg	00 15 01.2	+3.0
T0821	**Loc. Casaglia**	**0.17**	**72**	*e*P	Pg	00 14 56.1	+0.1
T0821	**Loc. Casaglia**	**0.17**	**72**	*e*P	Pg	00 14 56.1	+0.2
RAVA	**Ravarino**	**0.17**	**236**	⇑*i* P	Pg	00 14 56.0	0.0
RAVA				*i* S	Sg	00 15 01.7	+3.4
RAVA	**Ravarino**	**0.17**	**236**	*i* P	Pg	00 14 57.0	+1.0
RAVA				*i* S	Sg	00 15 01.7	+3.3
RAVA				AML	AML		
	comp=E,1310μm,0.5s						
RAVA				AML	AML		
	comp=N,1350μm,0.2s						
RAVA				AML	AML		
	comp=E,1305μm,0.5s						
RAVA				AML	AML		
	comp=N,1350μm,0.2s						
T0817	**Loc. Veratica,**	**0.17**	**35**	*e*P	Pg	00 14 56.8	+0.8
T0817				*i* S	Sg	00 15 01.2	+2.8
T0817	**Loc. Veratica,**	**0.17**	**35**	*e*P	Pg	00 14 56.8	+0.8
T0817				*i* S	Sg	00 15 01.2	+2.7
T0818	**Loc. Fossa, Co**	**0.22**	**292**	*e*P	Pg	00 14 57.7	+0.8
T0818	**Loc. Fossa, Co**	**0.22**	**292**	*e*P	Pg	00 14 57.7	+0.8
T0816	**San Bartolomeo**	**0.24**	**123**	*e*P	Pg	00 14 57.6	+0.4
T0816				*i* S	Sg	00 15 02.3	+1.8
T0816	**San Bartolomeo**	**0.24**	**123**	*e*P	Pg	00 14 57.6	+0.4
T0816				*i* S	Sg	00 15 02.3	+1.8
FIU	**Minerbio Fiu**	**0.25**	**149**	⇓*e*P	Pg	00 14 58.5	+1.1
FIU				*i* S	Sg	00 15 03.1	+2.4
FIU	**Minerbio Fiu**	**0.25**	**149**	*e*P	Pg	00 14 58.5	+1.1
FIU				*i* S	Sg	00 15 03.1	+2.5
FIU				AML	AML		
	comp=E,275μm,1.2s						
FIU				AML	AML		
	comp=N,290μm,0.3s						
FIU				AML	AML		
	comp=E,274μm,1.2s						
FIU				AML	AML		
	comp=N,290μm,0.3s						
FIU				AML	AML		
	comp=N,290μm,0.3s						
FIU				AML	AML		
	comp=E,274μm,1.2s						
T0814	**Loc. Cortile,**	**0.25**	**257**	*e*P	Pb	00 14 58.5	-0.9
T0814	**Loc. Cortile,**	**0.25**	**257**	*e*P	Pb	00 14 58.5	-0.9
T0815	**Correggio (RE)**	**0.29**	**86**	*e*P	Pb	00 14 59.2	-0.7
T0815	**Correggio (RE)**	**0.29**	**86**	*e*P	Pb	00 14 59.2	-0.7
ZCCA	**Zocca**	**0.56**	**206**	*e*P	Pn	00 15 05.8	-1.0
ZCCA	**Zocca**	**0.56**	**206**	*e*P	Pn	00 15 05.8	-1.0
TEOL	**Teolo**	**0.57**	**26**	*e*P	Pb	00 15 04.5	-0.2
TEOL	**Teolo**	**0.57**	**26**	*e*P	Pb	00 15 04.5	-0.2
TEOL				AML	AML		
	comp=E,83μm,0.8s						
TEOL				AML	AML		
	comp=N,67μm,1.1s						
TEOL				AML	AML		
	comp=E,83μm,0.8s						
TEOL				AML	AML		
	comp=N,67μm,1.1s						
TEOL				AML	AML		
	comp=N,67μm,1.1s						
TEOL				AML	AML		
	comp=E,83μm,0.8s						
ROVR	**Rover¨¤ Verone**	**0.81**	**348**	*e*P	Pb	00 15 08.8	-0.2
ROVR	**Rover¨¤ Verone**	**0.81**	**348**	*e*P	Pb	00 15 08.8	-0.2
ROVR				AML	AML		
	comp=E,128μm,0.3s						
ROVR				AML	AML		
	comp=N,188μm,0.8s						
ROVR				AML	AML		
	comp=E,128μm,0.3s						
ROVR				AML	AML		
	comp=N,188μm,0.8s						
MAGA	**Magasa**	**1.04**	**333**	*e*P	Pb	00 15 12.8	-0.1
MAGA	**Magasa**	**1.04**	**333**	*e*P	Pb	00 15 12.8	-0.1

*ISCJB **01** 00:15:21.3±0.2, 63.°64N±0.°02×149.°83W±0.°06, h135km±2km, mb3.7/10, Error ellipse: s-maj=4.3km s-min=3.5km az=31.1*
*IDC **01** 00:15:21.5±1.6, 63.°59N×149.°90W, h124km±16km, mb3.5/10, mb1 3.4/13, mb1mx3.1/80, mbtmp3.8/13, Error ellipse: s-maj=36.2km s-min=17.3km az=126.0*
*NEIC **01** 00:15:23.1±0.0, 63.°62N×149.°81W, h124km, ML3.2(AEIC), After AEIC.*

ISC 01 00:15:22.3±0.7, 63.°60N±0.°03×149.°81W±0.°03, h133km±5km, n85, σ0°86/100, mb3.9/10, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRF	**Thorofare Moun**	**0.26**	**236**	P	**Pn**	**00 15 41.0**	**+0.1**
TRF				S	**Sn**	**00 15 54.4**	**-0.5**
MCK	**McKinley**	**0.41**	**71**	P	**Pn**	**00 15 41.5**	**+0.3**
MCK				S	**Sn**	**00 15 55.0**	**-0.6**
RND	**Reindeer**	**0.47**	**114**	P	**Pn**	**00 15 41.5**	**0.0**
RND				S	**Sn**	**00 15 55.5**	**-0.7**
KTH	**Kantishna Hill**	**0.50**	**265**	P	**Pn**	**00 15 42.0**	**+0.2**
KTH				S	**Sn**	**00 15 55.6**	**-0.8**
BWN	**Browne**	**0.59**	**15**	P	**Pn**	**00 15 42.6**	**+0.4**
BWN				S	**Sn**	**00 15 56.8**	**-0.5**
HUR	**Hurricane**	**0.63**	**173**	P	**Pn**	**00 15 42.6**	**+0.1**
HUR				S	**Sn**	**00 15 57.9**	**+0.2**
BPAW	**Bear Paw Mtn.**	**0.72**	**314**	P	**Pn**	**00 15 43.0**	**-0.1**
BPAW				S	**Sn**	**00 15 57.5**	**-1.5**
NEA	**Nenana**	**1.03**	**18**	P	**Pn**	**00 15 45.5**	**-0.1**
NEA				S	**Sn**	**00 16 02.0**	**-1.5**
CAST	**Castle Rocks**	**1.04**	**261**	P	**Pn**	**00 15 45.7**	**-0.1**
CAST				S	**Sn**	**00 16 02.4**	**-1.2**
CHUM	**Lake Minchumin**	**1.15**	**285**	P	**Pn**	**00 15 47.0**	**+0.2**
CHUM				S	**Sn**	**00 16 04.8**	**-0.7**
WRH	**Wood River Hil**	**1.16**	**40**	P	**Pn**	**00 15 46.7**	**-0.2**
WRH				S	**Sn**	**00 16 04.4**	**-1.2**
DHY	**Denali Highway**	**1.22**	**114**	P	**Pn**	**00 15 47.9**	**+0.3**
DHY				S	**Sn**	**00 16 07.8**	**+0.8**
PPLA	**Purkeypile**	**1.29**	**238**	P	**Pn**	**00 15 48.9**	**+0.5**
PPLA				S	**Sn**	**00 16 08.8**	**+0.5**
CCB	**Clear Creek Bu**	**1.37**	**39**	P	**Pn**	**00 15 49.0**	**-0.1**
MLY	**Manley**	**1.49**	**345**	P	**Pn**	**00 15 50.4**	**-0.1**
HDA	**Harding Lake**	**1.50**	**56**	P	**Pn**	**00 15 50.4**	**-0.1**
MDM	**Murphy Dome**	**1.53**	**26**	P	**Pn**	**00 15 51.1**	**+0.2**
COLA	**College**	**1.54**	**33**	P	**Pn**	**00 15 51.0**	**+0.1**
PS08	**TAPS Pump Stn8**	**1.62**	**53**	P	**Pn**	**00 15 51.8**	**-0.1**
ILAR	**Eielson Array**	**1.74**	**46**	P	**Pn**	**00 15 53.0**	**-0.2**
	15nm,0.3s,baz=226,slow=12,SNR=480						
ILAR				S	**Sn**	**00 16 15.9**	**-0.9**
	5.9nm,0.3s,baz=225,slow=18,SNR=15						
ILB	**Eielson Array**	**1.74**	**46**	P	**Pn**	**00 15 52.8**	**-0.4**
GLM	**Gilmore Dome**	**1.75**	**36**	P	**Pn**	**00 15 53.5**	**+0.1**
SKT	**Skwentna**	**1.81**	**207**	P	**Pn**	**00 15 54.1**	**0.0**
PS10	**TAPS Pump St10**	**1.82**	**94**	P	**Pn**	**00 15 55.6**	**+1.4**
GHO	**Glory Hole Cre**	**1.88**	**167**	P	**Pn**	**00 15 55.5**	**+0.5**
SML	**Sawmill**	**1.92**	**159**	P	**Pn**	**00 15 55.6**	**+0.2**
PMR	**Palmer**	**2.04**	**171**	P	**Pn**	**00 15 57.1**	**+0.3**
PAX	**Paxson**	**2.06**	**106**	P	**Pn**	**00 15 57.5**	**+0.3**
SCM	**Sheep Creek Mo**	**2.11**	**146**	P	**Pn**	**00 15 58.0**	**+0.3**
SUA	**Susitna One**	**2.19**	**192**	P	**Pn**	**00 15 59.7**	**+0.9**
RIDG	**Independ'e Rid**	**2.22**	**84**	P	**Pn**	**00 15 59.3**	**+0.2**
PS06	**TAPS Pump Stn6**	**2.27**	**1**	P	**Pn**	**00 15 59.7**	**+0.2**
KNK	**Knik Glacier**	**2.28**	**163**	P	**Pn**	**00 16 00.1**	**+0.3**
HARP	**HAARP**	**2.44**	**117**	P	**Pn**	**00 16 02.1**	**+0.3**
PS11	**TAPS Pump St11**	**2.51**	**126**	P	**Pn**	**00 16 02.7**	**+0.1**
RC01	**Rabbit Creek A**	**2.52**	**179**	P	**Pn**	**00 16 03.1**	**+0.3**
DOT	**Dot Lake**	**2.57**	**86**	P	**Pn**	**00 16 03.2**	**-0.2**
SPCP	**Crater Peak Br**	**2.58**	**206**	P	**Pn**	**00 16 04.2**	**+0.4**
SCRK	**Sand Creek**	**2.61**	**79**	P	**Pn**	**00 16 04.0**	**0.0**
SPWE	**Spurr West**	**2.66**	**210**	P	**Pn**	**00 16 05.7**	**+1.0**
PRP	**Porcupine Dome**	**2.67**	**42**	P	**Pn**	**00 16 04.5**	**-0.3**
CKL	**Chakachamna La**	**2.68**	**207**	P	**Pn**	**00 16 06.2**	**+1.3**
KLU	**Klutina**	**2.78**	**138**	P	**Pn**	**00 16 05.8**	**-0.3**
TT01	**Tatalina**	**2.90**	**259**	P	**Pn**	**00 16 07.5**	**-0.1**
IM3	**Indian Mountai**	**2.93**	**327**	P	**Pn**	**00 16 08.0**	**+0.1**
JPK	**Jack Peak**	**2.96**	**148**	P	**Pn**	**00 16 08.2**	**-0.3**
SLKM	**Skilak Lake**	**3.11**	**184**	P	**Pn**	**00 16 10.8**	**+0.5**
DIV	**Divide**	**3.11**	**141**	P	**Pn**	**00 16 09.7**	**-0.7**
DFR	**Drift River**	**3.31**	**205**	P	**Pn**	**00 16 14.1**	**+1.1**
RDJH	**Redoubt Jeurge**	**3.33**	**206**	P	**Pn**	**00 16 14.6**	**+1.3**
NCT	**North Crescent**	**3.38**	**207**	P	**Pn**	**00 16 15.4**	**+1.4**
RDWB	**Redoubt West**	**3.43**	**206**	P	**Pn**	**00 16 15.6**	**+0.9**
FYU	**Fort Yukon**	**3.55**	**31**	P	**Pn**	**00 16 15.8**	**-0.2**
BMRM	**Bremner River**	**3.59**	**135**	P	**Pn**	**00 16 16.3**	**-0.3**
EYAK	**Cordova Ski Ar**	**3.61**	**146**	P	**Pn**	**00 16 16.9**	**+0.1**
COLD	**Coldfoot**	**3.65**	**358**	P	**Pn**	**00 16 17.5**	**+0.2**
BCA3	**Beaver Creek A**	**3.66**	**95**	P	**Pn**	**00 16 17.2**	**-0.3**
SVW2	**Sparrevohn**	**3.68**	**230**	P	**Pn**	**00 16 17.6**	**-0.2**
VRDI	**Verde Repeater**	**3.79**	**126**	P	**Pn**	**00 16 19.8**	**+0.3**
BRLK	**Bradley Lake**	**3.88**	**188**	P	**Pn**	**00 16 20.9**	**+0.4**
EGAK	**Eagle**	**3.96**	**69**	P	**Pn**	**00 16 21.5**	**+0.1**
CRQM	**Cirque**	**4.23**	**129**	P	**Pn**	**00 16 25.5**	**+0.3**
KIAG	**Kiagna River**	**4.39**	**124**	P	**Pn**	**00 16 27.5**	**+0.1**
BM3	**Burnt Mountain**	**4.40**	**27**	P	**Pn**	**00 16 27.2**	**-0.1**
KHIT	**Khitrov Hills**	**4.42**	**133**	P	**Pn**	**00 16 28.1**	**+0.4**
AUW	**Augustine West**	**4.59**	**204**	P	**Pn**	**00 16 30.7**	**+0.9**
DAWY	**Dawson**	**4.64**	**80**	*e*Pn	**Pn**	**00 16 30.3**	**-0.2**
KULT	**Kultieth River**	**4.74**	**132**	P	**Pn**	**00 16 32.3**	**+0.4**
CDD	**Cape Douglas**	**5.04**	**203**	P	**Pn**	**00 16 36.4**	**+0.5**
RKAV	**Rock Avalanche**	**5.18**	**126**	P	**Pn**	**00 16 38.6**	**+0.7**
KAHC	**Katmai Hardscr**	**5.57**	**209**	P	**Pn**	**00 16 43.1**	**+0.1**
KAKN	**Katmai Knife C**	**5.90**	**208**	P	**Pn**	**00 16 47.2**	**-0.2**
KDAK	**Kodiak Island**	**5.99**	**194**	P	**Pn**	**00 16 47.1**	**-1.5**
	1.5nm,0.3s,baz=36,slow=7.8,SNR=18						
KDAK				S	**Sn**	**00 17 50.1**	**-5.8**
	2.4nm,0.3s,baz=175,slow=20,SNR=10						
INK	**Inuvik**	**8.14**	**47**	P	**Pn**	**00 17 17.5**	**+0.2**
	0.1nm,0.3s,baz=246,slow=14,SNR=5.2						
YKA	**Yellowknife Ar**	**15.88**	**78**	P	**P**	**00 18 58.0**	**-0.9**
	0.1nm,0.3s,baz=295,slow=12,SNR=6.0						
SPITS	**Spitsbergen Ar**	**38.21**	**5**	P	**P**	**00 22 29.0**	**+0.6**
	1.7nm,0.7s,baz=345,slow=10,SNR=4.7						
ARCES	**ARCESS Array B**	**47.10**	**2**	P	**P**	**00 23 40.5**	**+0.4**
	1.4nm,0.8s,baz=8.6,slow=9.0,SNR=5.8						
SONM	**Songino Array**	**53.90**	**306**	P	**P**	**00 24 33.2**	**+1.7**
	0.6nm,0.9s,baz=20,slow=4.6,SNR=3.6						
FINES	**FINESS Array B**	**55.23**	**2**	P	**P**	**00 24 40.8**	**+0.1**
	1.4nm,0.7s,baz=356,slow=5.7,SNR=5.1						
ZALV	**Zalesovo Beam**	**55.35**	**324**	P	**P**	**00 24 40.7**	**-1.0**
	0.6nm,0.5s,baz=19,slow=9.2,SNR=3.0						
HFS	**Hagfors**	**55.95**	**10**	P	**P**	**00 24 45.8**	**-0.1**
	1.6nm,0.9s,baz=353,slow=7.3,SNR=3.3						
EKA	**Eskdalemuir Ar**	**58.62**	**22**	P	**P**	**00 25 05.2**	**+0.6**
	0.3nm,0.3s,baz=332,slow=5.6,SNR=6.8						
BVAR	**Borovoye Array**	**59.56**

ISC 01 00:39:36.0±0.7, 14°.7N±0°.1×90°.7W±0°.1, h205km±5km, n56, σ1§48/68, mb3.6/14, 1D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APG	**El Apazote**	**0.34**	**39**	P	**Pn**	**00 40 03.0**	**-0.5**
	39nm,0.3s,baz=334,slow=15,SNR=258						
APG				S	**Sn**	**00 40 23.5**	**-1.4**
	104nm,0.3s,baz=307,slow=20,SNR=61						
SNJE	**San Jose**	**1.36**	**130**	*e*P	**Pn**	**00 40 09.0**	**-0.3**
SNJE				*e*S	**Sn**	**00 40 35.5**	**+0.5**
SBLS	**San Blas**	**1.37**	**131**	*e*P	**Pn**	**00 40 09.2**	**-0.2**
SBLS				*e*S	**Sn**	**00 40 35.6**	**+0.5**
BOQS	**Boqueron**	**1.69**	**126**	*e*P	**Pn**	**00 40 12.1**	**0.0**
LFU	**La Fuente**	**1.82**	**123**	*e*P	**Pn**	**00 40 13.2**	**0.0**
LFRS	**El Faro**	**1.93**	**125**	*e*P	**Pn**	**00 40 14.1**	**-0.2**
LFRS				*e*S	**Sn**	**00 40 45.9**	**+1.8**
PAVA	**Las Pavas**	**1.98**	**121**	*e*P	**Pn**	**00 40 15.1**	**+0.2**
CNGN	**Cerro Negro**	**4.47**	**119**	*e*P	Pn	00 40 48.3	+4.4
CNGN				AML	AML	00 41 37.6	
	comp=N,51nm,0.4s						
MOMN	**Momotombo**	**4.65**	**119**	*e*P	**Pn**	**00 40 48.7**	**+2.5**
CMIG	**Matias Romero**	**4.67**	**301**	P	**Pn**	**00 40 43.8**	**-2.5**
	comp=N,28nm,0.3s,baz=141,slow=8.6,SNR=312						
CMIG				S	S	00 41 33.0	-8.3
	comp=N,68nm,0.3s,baz=76,slow=14,SNR=17						
COPN	**Copaltepe**	**4.73**	**122**	*e*P	**Pn**	**00 40 48.6**	**+1.5**
BOAB	**BOACO BROADBAN**	**5.39**	**114**	*e*P	**Pn**	**00 40 57.4**	**+1.9**
NY14	**Universidad de**	**6.47**	**128**	*e*P	**Pn**	**00 41 11.5**	**+2.2**
BUEV	**Buena Vista**	**6.47**	**127**	*e*P	**Pn**	**00 41 09.4**	**-0.1**
LIM1	**Limonal**	**6.65**	**127**	*e*P	**Pn**	**00 41 13.4**	**+1.6**
MESS	**Mesas**	**6.67**	**126**	*e*P	**Pn**	**00 41 13.5**	**+1.4**
MESS				⇓*i*P		00 41 13.7	
MESS				*e*S	**Sn**	**00 42 26.9**	**-1.5**
VCR	**Vista de Mar**	**6.74**	**132**	*e*P	**Pn**	**00 41 10.0**	**-3.0**
VCR				*e*S	**Sn**	**00 42 29.5**	**-0.6**
CUI	**Cuipilapa**	**6.75**	**126**	*e*P	**Pn**	**00 41 14.2**	**+1.2**
ACAL	**Aguas Claras**	**6.86**	**126**	*e*P	**Pn**	**00 41 16.5**	**+1.9**
AMAS	**Alto Masis**	**6.91**	**126**	*e*P	**Pn**	**00 41 17.0**	**+1.8**
JTS	**JuntasAbangare**	**7.13**	**128**	P	**Pn**	**00 41 19.5**	**+1.4**
	comp=N,19nm,0.3s,baz=28,slow=14,SNR=46						
JTS				S	**Sn**	**00 42 34.2**	**-5.0**
	comp=N,2.4nm,0.3s,baz=346,slow=19,SNR=1.9						
JTS	**JuntasAbangare**	**7.13**	**128**	*e*P	**Pn**	**00 41 19.3**	**+1.2**
CGA2	**Cerro Gallo 2**	**7.68**	**127**	*e*P	**Pn**	**00 41 26.7**	**+1.5**
URSC	**Urasca**	**8.33**	**125**	*e*P	**Pn**	**00 41 34.3**	**+0.6**
URSC				*e*S	**Sn**	**00 43 09.2**	**+1.5**
BUS	**Buena Vista**	**8.51**	**127**	*e*P	**Pn**	**00 41 37.5**	**+1.1**
BUS				*e*S	**Sn**	**00 43 13.4**	**+1.0**
SJCC	**San Jacinto, C**	**15.89**	**106**	*e*P	**Pn**	**00 43 08.4**	**-0.5**
ZARC	**Zaragoza, Cauc**	**17.11**	**113**	*e*P	**Pn**	**00 43 23.0**	**-0.4**
YOTC	**Yotoco, Valle**	**17.72**	**126**	*e*P	**Pn**	**00 43 30.6**	**-0.1**
HORQ	**Saladito**	**17.81**	**128**	*e*P	**Pn**	**00 43 32.1**	**+0.1**
ANIL	**Santa Ana**	**18.17**	**123**	*e*P	**Pn**	**00 43 39.6**	**+3.5**
SOTA	**Rioblanco**	**18.71**	**131**	*e*P	**Pn**	**00 43 43.2**	**+0.5**
TXAR	**Lajitas Array**	**18.83**	**323**	P	**P**	**00 43 43.0**	**+2.4**
	comp=N,0.2nm,0.3s,baz=157,slow=14,SNR=6.3						
ROSC	**El Rosal**	**18.88**	**120**	P	**Pn**	**00 43 44.1**	**-0.4**
	comp=N,1.1nm,0.3s,baz=114,slow=20,SNR=3.4						
PRAC	**Prado**	**19.04**	**124**	*e*P	**Pn**	**00 43 44.0**	**-2.1**
RUSC	**La Rusia**	**19.41**	**115**	*e*P	**Pn**	**00 43 48.7**	**-2.3**
CHIC	**Chingaza**	**19.48**	**119**	*e*P	**Pn**	**00 43 49.9**	**-1.9**
FLOC	**Florencia**	**19.78**	**130**	*e*P	**Pn**	**00 43 53.7**	**-1.4**
SDV	**Santo Domingo**	**20.46**	**104**	P	**P**	**00 43 58.3**	**0.0**
	comp=N,5.4nm,0.3s,baz=298,slow=5.3,SNR=15						
PDAR	**Pinedale Array**	**32.30**	**334**	ScP	**ScP**	**00 51 52.7**	**-0.4**
	comp=N,0.2nm,0.3s,baz=106,slow=5.7,SNR=4.4						
NVAR	**Mina Array Bea**	**33.92**	**319**	P	**P**	**00 46 02.2**	**+2.3**
	comp=N,0.5nm,0.6s,baz=137,slow=8.1,SNR=5.2						
NVAR				pP	**pP**	**00 46 42.6**	**+0.5**
	comp=N,0.7nm,0.6s,baz=129,slow=8.6,SNR=4.3						
NVAR				ScP	**ScP**	**00 51 59.8**	**+1.0**
	comp=N,0.3nm,0.4s,baz=148,slow=4.1,SNR=4.0						
ULM	**Lac du Bonnet**	**35.66**	**354**	P	**P**	**00 46 14.1**	**-0.2**
	comp=N,6.3nm,0.7s,baz=178,slow=9.1,SNR=14						
LPAZ	**La Paz**	**38.04**	**143**	P	**P**	**00 46 35.5**	**0.0**
	comp=N,0.9nm,0.5s,baz=324,slow=11,SNR=6.7						
SCHQ	**Schefferville**	**44.09**	**20**	P	**P**	**00 47 22.8**	**-0.8**
	comp=N,15nm,0.9s,baz=226,slow=7.1,SNR=6.8						
YKA	**Yellowknife Ar**	**50.61**	**346**	P	**P**	**00 48 13.4**	**-0.2**
	comp=N,0.8nm,0.6s,baz=145,slow=8.0,SNR=14						
YKA				pP	**pP**	**00 48 59.1**	**+0.1**
	comp=N,0.9nm,0.7s,baz=147,slow=7.6,SNR=5.3						
YKA				ScP	**ScP**	**00 53 04.2**	**-0.4**
	comp=N,0.3nm,0.7s,baz=148,slow=4.1,SNR=4.0						
CPUP	**Villa Florida**	**52.14**	**141**	P	**P**	**00 48 25.2**	**-0.3**
	comp=N,2.3nm,0.8s,baz=290,slow=8.7,SNR=4.6						
PLCA	**Paso Flores**	**58.27**	**162**	P	**P**	**00 49 09.5**	**+0.4**
	comp=N,1.8nm,0.8s,baz=13,slow=15,SNR=3.5						
ILAR	**Eielson Array**	**62.67**	**336**	P	**P**	**00 49 38.4**	**-0.2**
	comp=N,0.4nm,0.6s,baz=161,slow=5.7,SNR=5.6						
EKA	**Eskdalemuir Ar**	**76.62**	**36**	P	**P**	**00 51 03.1**	**-0.7**
	comp=N,2.3nm,0.6s,baz=273,slow=5.6,SNR=17						
ESDC	**Sonseca Array**	**78.26**	**52**	P	**P**	**00 51 13.0**	**-0.4**
	comp=N,0.7nm,0.5s,baz=290,slow=4.6,SNR=8.6						
SPITS	**Spitsbergen Ar**	**79.11**	**12**	P	**P**	**00 51 17.7**	**+0.6**
	comp=N,1.9nm,0.9s,baz=258,slow=6.9,SNR=3.5						
ARCES	**ARCESS Array B**	**85.03**	**18**	P	**P**	**00 51 47.4**	**-0.7**
	comp=N,0.4nm,0.5s,baz=276,slow=4.8,SNR=8.9						
GERES	**GERESS Array B**	**88.22**	**40**	P	**P**	**00 52 04.7**	**+0.7**
	comp=N,0.1nm,0.3s,baz=265,slow=5.8,SNR=2.4						
TORD	**Torodi Ar. Bea**	**88.97**	**77**	P	**P**	**00 52 05.9**	**-2.1**
	comp=N,0.5nm,1.0s,baz=295,slow=2.3,SNR=3.1						
MAW	**Mawson**	**124.44**	**168**	PKP	**PKPdf**	**00 58 09.9**	**-0.1**
	comp=N,1.2nm,0.5s,baz=241,slow=4.7,SNR=6.5						
WRA	**Warramunga Arr**	**136.81**	**256**	PKP	**PKPdf**	**00 58 35.9**	**+1.1**
	comp=N,1.8nm,0.6s,baz=89,slow=2.7,SNR=12						
ASAR	**Alice Springs**	**137.11**	**251**	PKP	**PKPdf**	**00 58 36.5**	**+1.1**
	comp=N,0.4nm,0.5s,baz=81,slow=1.7,SNR=6.3						

*CSEM **01** 01:19:33.7, 44°.87N×10°.97E, h7km, MD1.4/2*

ROM 01 01:19:33.7±0.1, 44°.867N±0°.004×10°.974E±0°.004, h7km, Md1.4/2, 1C, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NDIM	**Novi di Modena**	**0.06**	**291**	AML	AML		
	comp=E,4245μm,0.5s						
NDIM				AML	AML		
	comp=E,4195μm,0.5s						
NDIM				AML	AML		
	comp=N,4095μm,0.3s						
NDIM				AML	AML		
	comp=N,4115μm,0.3s						
NDIM				AML	AML		
	comp=E,18450μm,0.3s						
NDIM				AML	AML		
	comp=N,16500μm,0.4s						
NDIM				AML	AML		
	comp=E,18600μm,0.3s						
NDIM				AML	AML		
	comp=N,16150μm,0.4s						
NDIM				END			
NDIM				END			
T0826	**Rio Saliceto (**	**0.12**	**257**	P	Pg	01 19 38.5	+2.3
T0826				S	Sg	01 19 42.1	+4.1
T0826	**Rio Saliceto (**	**0.12**	**257**	P	Pg	01 19 38.5	+2.3
T0826				S	Sg	01 19 42.1	+4.1
T0825	**Gonzaga (MN)**	**0.14**	**320**	P	Pg	01 19 39.3	+2.7
T0825				S	Sg	01 19 43.6	+5.0
T0825	**Gonzaga (MN)**	**0.14**	**320**	P	Pg	01 19 39.3	+2.7
T0825				S	Sg	01 19 43.6	+5.0
T0825				AML	AML		
	comp=E,3640μm,0.2s						
T0825				AML	AML		
	comp=N,3865μm,0.1s						
T0825				AML	AML		
	comp=E,21200μm,0.4s						
T0825				AML	AML		
	comp=N,15150μm,0.4s						
T0825				END			
T0825				END			
T0825				END			
T0802	**SanFelice sul**	**0.15**	**87**	P	Pg	01 19 39.5	+2.8
T0802	**SanFelice sul**	**0.15**	**87**	P	Pg	01 19 39.5	+2.8
RAVA	**Ravarino**	**0.15**	**137**	P	Pg	01 19 39.0	+2.2
RAVA				S	Sg	01 19 44.5	+5.6
RAVA	**Ravarino**	**0.15**	**137**	P	Pg	01 19 40.0	+3.2
RAVA				S	Sg	01 19 44.5	+5.6
RAVA				AML	AML		
	comp=E,541μm,1.2s						
RAVA				AML	AML		
	comp=N,564μm,0.2s						
RAVA				AML	AML		
	comp=E,39250μm,0.7s						
RAVA				AML	AML		
	comp=N,36950μm,0.8s						
SBPO	**S.Benedetto Po**	**0.19**	**348**	P	Pg	01 19 40.2	+2.7
SBPO	**S.Benedetto Po**	**0.19**	**348**	P	Pg	01 19 40.1	+2.7
SBPO				AML	AML		
	comp=E,550μm,0.2s						
SBPO				AML	AML		
	comp=N,1204μm,0.2s						
SBPO				AML	AML		
	comp=E,5565μm,0.9s						
SBPO				AML	AML		
	comp=N,15200μm,0.5s						
SBPO				END			
NOVE	**Novellara**	**0.20**	**249**	⇑P	Pg	01 19 40.2	+2.6
NOVE				S	Sg	01 19 45.1	+4.9
NOVE	**Novellara**	**0.20**	**249**	P	Pg	01 19 40.2	+2.6
NOVE				S	Sg	01 19 45.1	+4.9
NOVE				AML	AML		
	comp=E,445μm,1.1s						
NOVE				AML	AML		
	comp=N,368μm,0.3s						
NOVE				AML	AML		
	comp=E,1885μm,0.2s						
NOVE				AML	AML		
	comp=N,2640μm,0.3s						
NOVE				END			
NOVE				END			
T0800	**Massa Finalese**	**0.20**	**95**	P	Pg	01 19 40.2	+2.6
T0800	**Massa Finalese**	**0.20**	**95**	P	Pg	01 19 40.2	+2.6
T0800				AML	AML		
	comp=E,849μm,0.2s						
T0800				AML	AML		
	comp=N,1205μm,0.2s						
T0800				AML	AML		
	comp=E,39200μm,0.2s						
T0800				AML	AML		
	comp=N,43650μm,1.3s						
T0800				AML	AML		
	comp=E,35400μm,1.1s						
T0800				AML	AML		
	comp=N,43150μm,0.2s						
T0805	**Bondeno (FE)**	**0.25**	**78**	P	Pn	01 19 42.5	-1.3
T0805				S	Sb	01 19 47.3	+2.2
T0805	**Bondeno (FE)**	**0.25**	**78**	P	Pn	01 19 42.5	-1.3
T0805				S	Sb	01 19 47.3	+2.2
T0822	**Casumaru (Bond**	**0.27**	**97**	P	Pb	01 19 41.5	+0.7
T0822	**Casumaru (Bond**	**0.27**	**97**	P	Pb	01 19 41.5	+0.8
T0822				AML	AML		
	comp=E,15200μm,0.3s						
T0822				AML	AML		
	comp=N,15200μm,0.3s						
ROVR	**Rover¨¤ Verone**	**0.78**	**5**	AML	AML		
	comp=N,1565μm,0.5s						
ROVR				AML	AML		
	comp=E,156μm,0.2s						
ROVR				AML	AML		
	comp=N,322μm,0.7s						
ROVR				AML	AML		
	comp=E,660μm,0.6s						
MAGA	**Magasa**	**0.94**	**345**	AML	AML		
	comp=E,1900μm,0.4s						
MAGA				AML	AML		
	comp=N,1735μm,1.4s						

*ROM **01** 01:20:09.7±0.0, 44°.889N±0°.001×11°.077E±0°.001, h3km, ML2.7/44*

*ISCJB **01** 01:20:10.1±0.2, 44°.89N±0°.02×11°.06E±0°.02, h19km±1km, Error ellipse: s-maj=3.2km s-min=2.3km az=164.3*

*IASPEI **01** 01:20:10.3±0.8, 44°.90N±0°.02×11°.08E±0°.02, h13km±4km, Error ellipse: s-maj=2.4km s-min=2.3km az=151.4, GT5 selection from ISC bulletin GT5 identified by Bond¨¡r and McLaughlin (2009) selection criteria Bond¨¡r and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*

*LDG **01** 01:20:10.4±0.3, 44°.94N×11°.20E, h2km, Ml2.8/10, Error ellipse: s-maj=6.1km s-min=3.1km az=92.0*

*CSEM **01** 01:20:10.0±0.1, 44°.93N×11°.06E, h10km, ML2.9/19, Error ellipse: s-maj=2.4km s-min=2.0km az=129.0*

*PRU **01** 01:20:15.2, 44°.94N×11°.45E, h24km*

ISC 01 01:20:10.3±0.7, 44°.91N±0°.01×11°.09E±0°.01, h15km±3km, n170, σ0§97/218, 10C-5D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0818	**Loc. Fossa, Co**	**0.05**	**295**	*e*P	**Pg**	**01 20 12.1**	**-0.9**
T0818				*i* S	**Sg**	**01 20 15.2**	**+0.4**
T0818	**Loc. Fossa, Co**	**0.05**	**295**	*e*P	**Pg**	**01 20 12.1**	**-0.9**
T0818				*i* S	**Sg**	**01 20 15.2**	**+0.4**
T0802	**SanFelice sul**	**0.07**	**121**	*e*P	**Pg**	**01 20 12.4**	**-0.8**
T0802	**SanFelice sul**	**0.07**	**121**	*e*P	**Pg**	**01 20 12.4**	**-0.8**
T0812	**Loc. Stoppiaro**	**0.07**	**57**	⇓*e*P	**Pg**	**01 20 12.9**	**-0.3**
T0812				*i* S	**Sg**	**01 20 16.5**	**+1.4**
T0812	**Loc. Stoppiaro**	**0.07**	**57**	*e*P	**Pg**	**01 20 12.9**	**-0.3**
T0812				*i* S	**Sg**	**01 20 16.5**	**+1.4**
T0813	**Massa Finalese**	**0.08**	**115**	*e*P	**Pg**	**01 20 12.5**	**-0.8**
T0813				*i* S	**Sg**	**01 20 15.8**	**+0.5**
T0813	**Massa Finalese**	**0.08**	**115**	*e*P	**Pg**	**01 20 12.5**	**-0.8**
T0813				*i* S	**Sg**	**01 20 15.8**	**+0.5**
T0827	**Moglia (MN)**	**0.12**	**282**	*e*P	**Pg**	**01 20 13.2**	**-0.5**
T0827	**Moglia (MN)**	**0.12**	**282**	*e*P	**Pg**	**01 20 13.2**	**-0.5**
T0800	**Massa Finalese**	**0.13**	**120**	*e*P	**Pg**	**01 20 13.5**	**-0.3**
T0800				*i* S	**Sg**	**01 20 16.7**	**+0.6**
T0800	**Massa Finalese**	**0.13**	**120**	*e*P	**Pg**	**01 20 13.5**	**-0.3**
T0800				*i* S	**Sg**	**01 20 16.7**	**+0.6**
T0800				AML	AML		
	comp=E,39200μm,0.2s						
T0800				AML	AML		
	comp=N,43650μm,1.3s						
T0800				AML	AML		
	comp=E,35400μm,1.1s						
T0800				AML	AML		
	comp=N,43150μm,0.2s						
T0800				AML	AML		
	comp=E,39200μm,0.2s						
T0800				AML	AML		
	comp=N,43650μm,1.3s						
T0800				AML	AML		
	comp=E,35350μm,1.1s						
T0800				AML	AML		
	comp=N,43150μm,0.2s						
T0800				AML	AML		
	comp=E,39200μm,0.2s						
T0800				AML	AML		
	comp=N,43650μm,1.3s						
T0800				AML	AML		
	comp=E,35400μm,1.1s						
T0800				AML	AML		
	comp=N,43150μm,0.2s						
NDIM	**Novi di Modena**	**0.14**	**259**	*e*P	**Pg**	**01 20 12.7**	**-1.3**
NDIM				*i* S	**Sg**	**01 20 18.1**	**+1.7**
NDIM				AML	AML		
	comp=E,18450μm,0.3s						
NDIM				AML	AML		
	comp=N,16500μm,0.4s						
NDIM				AML	AML		
	comp=E,18650μm,0.3s						
NDIM				AML	AML		
	comp=N,16150μm,0.4s						
NDIM				AML	AML		
	comp=E,18450μm,0.3s						
NDIM				AML	AML		
	comp=N,16500μm,0.4s						
NDIM				AML	AML		
	comp=E,18600μm,0.3s						
NDIM				AML	AML		
	comp=N,16150μm,0.4s						
T0814	**Loc. Cortile,**	**0.15**	**216**	⇓*i*P	**Pg**	**01 20 13.0**	**-1.1**
T0814				*i* S	**Sg**	**01 20 16.7**	**+0.1**
T0814	**Loc. Cortile,**	**0.15**	**216**	*i* P	**Pg**	**01 20 13.0**	**-1.1**
T0814				*i* S	**Sg**	**01 20 16.7**	**+0.1**
T0828	**Loc. Fossoli,**	**0.15**	**237**	*e*P	**Pg**	**01 20 13.9**	**-0.2**
T0828				*i* S	**Sg**	**01 20 16.8**	**+0.2**
T0828	**Loc. Fossoli,**	**0.15**	**237**	*e*P	**Pg**	**01 20 13.9**	**-0.2**
T0828				*i* S	**Sg**	**01 20 16.9**	**+0.2**
RAVA	**Ravarino**	**0.16**	**173**	*e*P	**Pg**	**01 20 13.2**	**-1.0**
RAVA				*i* S	**Sg**	**01 20 17.2**	**+0.4**
RAVA	**Ravarino**	**0.16**	**173**	*e*P	**Pg**	**01 20 13.2**	**-1.0**
RAVA				*i* S	**Sg**	**01 20 17.2**	**+0.4**
RAVA				AML	AML		
	comp=E,39200μm,0.7s						
RAVA				AML	AML		
	comp=N,36900μm,0.8s						
RAVA				AML	AML		
	comp=E,39250μm,0.7s						
RAVA				AML	AML		
	comp=N,36900μm,0.8s						
RAVA				AML	AML		
	comp=E,39250μm,0.7s						
RAVA				AML	AML		
	comp=N,36950μm,0.8s						
RAVA				AML	AML		
	comp=N,36950μm,0.8s						
RAVA				AML	AML		
	comp=E,39250μm,0.7s						
T0811	**Palata Pepoli**	**0.16**	**144**	*e*P	**Pg**	**01 20 13.2**	**-1.1**
T0811	**Palata Pepoli**	**0.16**	**144**	*e*P	**Pg**	**01 20 13.2**	**-1.1**
T0805	**Bondeno (FE)**	**0.16**	**88**	*e*P	**Pg**	**01 20 14.5**	**+0.2**
T0805	**Bondeno (FE)**	**0.16**	**88**	*e*P	**Pg**	**01 20 14.5**	**+0.2**
SERM	**Sermide**	**0.17**	**56**	*e*P	**Pg**	**01 20 14.7**	**+0.3**
SERM				*i* S	**Sg**	**01 20 20.1**	**+2.9**
SERM	**Sermide**	**0.17**	**56**	*e*P	**Pg**	**01 20 14.7**	**+0.3**
SERM				*i* S	**Sg**	**01 20 20.1**	**+2.9**
SERM				AML	AML		
	comp=E,3290μm,0.5s						
SERM				AML	AML		
	comp=N,3210μm,1.0s						
SERM				AML	AML		
	comp=E,6180μm,1.1s						
SERM				AML	AML		
	comp=N,7540μm,1.1s						
SERM				AML	AML		
	comp=E,3290μm,0.5s						
SERM				AML	AML		
	comp=N,3205μm,0.9s						
SERM				AML	AML		
	comp=E,3290μm,0.5s						
SERM				AML	AML		
	comp=N,3210μm,1.0s						
SERM				AML	AML		
	comp=N,3210μm,1.0s						
SERM				AML	AML		
	comp=E,3290μm,0.5s						
SBPO	**S.Benedetto Po**	**0.18**	**318**	*e*P	**Pg**	**01 20 15.1**	**+0.5**
SBPO	**S.Benedetto Po**	**0.18**	**318**	*e*P	**Pg**	**01 20 15.1**	**+0.5**
SBPO				AML	AML		
	comp=E,5560μm,0.9s						
SBPO				AML	AML		
	comp=N,15200μm,0.5s						
SBPO				AML	AML		
	comp=E,5565μm,0.9s						
SBPO				AML	AML		
	comp=N,15200μm,0.5s						
SBPO				AML	AML		
	comp=E,5560μm,0.9s						
SBPO				AML	AML		
	comp=N,15200μm,0.5s						
T0825	**Gonzaga (MN)**	**0.18**	**289**	*e*P	**Pg**	**01 20 14.0**	**-0.6**
T0825	**Gonzaga (MN)**	**0.18**	**289**	*e*P	**Pg**	**01 20 15.0**	**+0.4**
T0825				*i* S	**Sb**	**01 20 20.5**	**+1.7**
T0825				AML	AML		
	comp=E,21250μm,0.4s						
T0825				AML	AML		
	comp=N,15150μm,0.4s						
T0825				AML	AML		
	comp=E,21200μm,0.4s						
T0825				AML	AML		
	comp=N,15150μm,0.4s						
T0825				AML	AML		
	comp=E,21200μm,0.4s						
T0825				AML	AML		
	comp=N,15150μm,0.4s						
T0825				AML	AML		
	comp=E,21250μm,0.4s						
T0825				AML	AML		
	comp=N,15150μm,0.4s						
T0824	**Loc. Limidi di**	**0.19**	**217**	*e*P	**Pg**	**01 20 13.0**	**-1.8**
T0824	**Loc. Limidi di**	**0.19**	**217**	*e*P	**Pg**	**01 20 14.0**	**-0.8**
T0822	**Casumaru (Bond**	**0.20**	**114**	*e*P	**Pg**	**01 20 14.3**	**-0.5**
T0822				*i* S	**Sg**	**01 20 19.5**	**+1.6**
T0822	**Casumaru (Bond**	**0.20**	**114**	*e*P	**Pg**	**01 20 14.3**	**-0.5**
T0822				*i* S	**Sg**	**01 20 19.5**	**+1.6**
T0822				AML	AML		
	comp=E,15200μm,0.3s						
T0822				AML	AML		
	comp=N,15150μm,0.3s						
T0822				AML	AML		
	comp=E,15200μm,0.3s						
T0822				AML	AML		
	comp=N,15200μm,0.3s						
T0826	**Rio Saliceto (**	**0.21**	**250**	*e*P	**Pg**	**01 20 14.3**	**-0.8**
T0826				*i* S	**Sg**	**01 20 19.3**	**+1.0**
T0826	**Rio Saliceto (**	**0.21**	**250**	*e*P	**Pg**	**01 20 14.3**	**-0.8**
T0826				*i* S	**Sg**	**01 20 19.3**	**+1.0**
T0803	**Dosso, Cento (**	**0.24**	**129**	*e*P	**Pg**	**01 20 14.9**	**-0.5**
T0803	**Dosso, Cento (**	**0.24**	**129**	*e*P	**Pg**	**01 20 14.9**	**-0.5**
T0823	**Castello D'Arg**	**0.26**	**150**	*e*P	**Pg**	**01 20 15.8**	**-0.1**
T0823	**Castello D'Arg**	**0.26**	**150**	*e*P	**Pg**	**01 20 15.8**	**-0.1**
T0817	**Loc. Veratica,**	**0.27**	**73**	*e*P	**Pg**	**01 20 16.2**	**+0.2**
T0817	**Loc. Veratica,**	**0.27**	**73**	*e*P	**Pg**	**01 20 16.2**	**+0.2**
T0817				*i* S	**Sg**	**01 20 23.3**	**+3.4**
NOVE	**Novellara**	**0.29**	**247**	*e*P	**Pg**	**01 20 15.9**	**-0.5**
NOVE	**Novellara**	**0.29**	**247**	*e*P	**Pg**	**01 20 15.9**	**-0.5**
NOVE				AML	AML		
	comp=E,1885μm,0.2s						
NOVE				AML	AML		
	comp=N,2640μm,0.3s						
NOVE				AML	AML		
	comp=E,1885μm,0.2s						
NOVE				AML	AML		
	comp=N,2640μm,0.3s						
NOVE				AML	AML		
	comp=E,1885μm,0.2s						
NOVE				AML	AML		
	comp=N,2635μm,0.3s						
T0821	**Loc. Casaglia**	**0.32**	**92**	*e*P	**Pg**	**01 20 16.4**	**-0.5**
T0821	**Loc. Casaglia**	**0.32**	**92**	*e*P	**Pg**	**01 20 16.4**	**-0.5**
T0821				AML	AML		
	comp=E,1625μm,0.3s						
T0821				AML	AML		
	comp=N,2060μm,0.3s						
T0821				AML	AML		
	comp=E,1655μm,0.3s						
T0821				AML	AML		
	comp=N,2075μm,0.3s						
T0821				AML	AML		
	comp=E,1626μm,0.3s						
T0821				AML	AML		
	comp=N,2065μm,0.3s						
T0821				AML	AML		
	comp=E,1655μm,0.3s						
T0821				AML	AML		
	comp=N,2075μm,0.3s						
T0821				AML	AML		
	comp=E,1626μm,0.3s						
T0821				AML	AML		
	comp=E,1655μm,0.3s						
T0821				AML	AML		
	comp=N,2065μm,0.3s						
T0821				AML	AML		
	comp=N,2075μm,0.3s						
T0820	**Chiesuol del F**	**0.36**	**110**	AML	AML		
	comp=N,2715μm,0.4s						
T0820				AML	AML		
	comp=E,3760μm,0.6s						
T0820				AML	AML		
	comp=N,2465μm,0.4s						
T0820				AML	AML		
	comp=E,3285μm,0.6s						
T0820				AML	AML		
	comp=E,3760μm,0.6s						
T0820				AML	AML		
	comp=N,2460μm,0.4s						
T0820				AML	AML		
	comp=E,3285μm,0.6s						
T0820				AML	AML		
	comp=N,2715μm,0.4s						
T0820				AML	AML		
	comp=N,2460μm,0.4s						
T0820				AML	AML		
	comp=

FIU	**Minerbio Fiu**	**0.40**	**134**	*e*P	**Pb**	**01 20 18.9**	**-1.0**
FIU	**Minerbio Fiu**	**0.40**	**134**	*e*P	**Pb**	**01 20 18.9**	**-1.0**
FIU				AML	AML		
	comp=E,2295µm,0.5s						
FIU				AML	AML		
	comp=N,1735µm,0.8s						
FIU				AML	AML		
	comp=E,2295µm,1.2s						
FIU				AML	AML		
	comp=N,1740µm,0.8s						
FIU				AML	AML		
	comp=E,2295µm,0.5s						
FIU				AML	AML		
	comp=N,1740µm,0.8s						
FIU				AML	AML		
	comp=N,1740µm,0.8s						
FIU				AML	AML		
	comp=E,2295µm,0.5s						
T0816	**San Bartolomeo**	**0.41**	**118**	*e*P	**Pb**	**01 20 18.2**	**-1.0**
T0816	**San Bartolomeo**	**0.41**	**118**	*e*P	**Pb**	**01 20 18.2**	**-1.0**
T0815	**Correggio (RE)**	**0.45**	**95**	*e*P	**Pb**	**01 20 19.9**	**0.0**
T0815	**Correggio (RE)**	**0.45**	**95**	*e*P	**Pb**	**01 20 19.9**	**0.0**
T0815				*i* S	**Sb**	**01 20 28.7**	**+2.3**
ZCCA	**Zocca**	**0.57**	**188**	*e*P	**Pb**	**01 20 22.9**	**+0.9**
ZCCA	**Zocca**	**0.57**	**188**	*e*P	**Pb**	**01 20 22.9**	**+0.9**
ZCCA				AML	AML		
	comp=E,409µm,0.4s						
ZCCA				AML	AML		
	comp=N,459µm,1.1s						
ZCCA				AML	AML		
	comp=E,409µm,0.4s						
ZCCA				AML	AML		
	comp=N,459µm,1.1s						
ZCCA				AML	AML		
	comp=E,409µm,0.4s						
ZCCA				AML	AML		
	comp=N,459µm,1.1s						
MTRZ	**Monterenzio**	**0.60**	**153**	*e*P	**Pn**	**01 20 25.0**	**+0.6**
TEOL	**Teolo**	**0.60**	**42⇑**	*e*Pg	**Pb**	**01 20 22.6**	**-0.1**
TEOL				*e*Sg	**Sn**	**01 20 32.2**	**-1.8**
TEOL	**Teolo**	**0.60**	**42**	*e*P	**Pb**	**01 20 22.5**	**-0.1**
TEOL				*e*Sg	**Sn**	**01 20 32.2**	**-1.8**
TEOL	**Teolo**	**0.60**	**42**	*e*P	**Pb**	**01 20 22.5**	**-0.1**
TEOL				AML	AML		
	comp=E,2125µm,1.1s						
TEOL				AML	AML		
	comp=N,1380µm,0.3s						
TEOL				AML	AML		
	comp=E,2125µm,1.1s						
TEOL				AML	AML		
	comp=N,1380µm,0.3s						
TEOL				AML	AML		
	comp=N,1380µm,0.3s						
TEOL				AML	AML		
	comp=E,2125µm,1.1s						
CMPO	**Campotto Po**	**0.61**	**123**	*e*P	**Pg**	**01 20 21.0**	**-1.2**
CMPO	**Campotto Po**	**0.61**	**123**	*e*P	**Pb**	**01 20 22.0**	**-0.7**
CMPO				AML	AML		
	comp=E,1030µm,0.3s						
CMPO				AML	AML		
	comp=N,824µm,0.6s						
CMPO				AML	AML		
	comp=E,1030µm,0.3s						
CMPO				AML	AML		
	comp=N,819µm,0.6s						
CMPO				AML	AML		
	comp=E,1230µm,1.0s						
CMPO				AML	AML		
	comp=N,820µm,0.6s						
CMPO				AML	AML		
	comp=N,820µm,0.6s						
CMPO				AML	AML		
	comp=E,1230µm,1.0s						
ADRI	**Adria, Italy**	**0.67**	**79⇑**	*e*Pg	**Pb**	**01 20 23.7**	**+0.1**
ADRI	**Adria, Italy**	**0.67**	**79**	*e*Pg	**Pb**	**01 20 23.7**	**+0.1**
MARN	**Marana (Italy)**	**0.73**	**7⇑**	*e*Pg	**Pb**	**01 20 24.7**	**0.0**
MARN				*e*Sg	**Sn**	**01 20 36.4**	**-0.6**
MARN	**Marana (Italy)**	**0.73**	**7**	*e*Pg	**Pb**	**01 20 24.7**	**0.0**
MARN				*e*Sg	**Sn**	**01 20 36.4**	**-0.6**
ROVR	**Rover˜¤ Verone**	**0.73**	**359**	*e*P	**Pg**	**01 20 24.0**	**-0.6**
ROVR	**Rover˜¤ Verone**	**0.73**	**359**	*e*P	**Pb**	**01 20 24.9**	**+0.1**
ROVR				*i* S	**Sn**	**01 20 39.4**	**+2.0**
ROVR				AML	AML		
	comp=E,660µm,0.6s						
ROVR				AML	AML		
	comp=N,1565µm,0.5s						
ROVR				AML	AML		
	comp=E,660µm,0.6s						
ROVR				AML	AML		
	comp=N,1565µm,0.5s						
ROVR				AML	AML		
	comp=N,1565µm,0.5s						
ROVR				AML	AML		
	comp=E,660µm,0.6s						
SALO	**Salr**	**0.81**	**331**	*e*P	**Pg**	**01 20 26.0**	**0.0**
SALO	**Salr**	**0.81**	**331**	*e*P	**Pb**	**01 20 27.0**	**+0.9**
SALO				AML	AML		
	comp=E,475µm,0.3s						
SALO				AML	AML		
	comp=N,606µm,0.5s						
SALO				AML	AML		
	comp=E,475µm,0.3s						
SALO				AML	AML		
	comp=N,606µm,0.5s						
SALO				AML	AML		
	comp=N,606µm,0.5s						
SALO				AML	AML		
	comp=E,475µm,0.3s						
SEI	**Scarperia**	**0.88**	**167**	*e*P	**Pn**	**01 20 28.6**	**+0.4**
SEI	**Scarperia**	**0.88**	**167**	*e*P	**Pn**	**01 20 28.6**	**+0.4**
POPM	**Popiglio**	**0.90**	**196**	*e*P	**Pg**	**01 20 28.3**	**+0.6**
POPM	**Popiglio**	**0.90**	**196**	*e*P	**Pg**	**01 20 28.3**	**+0.6**
POPM				AML	AML		
	comp=E,266µm,0.3s						
POPM				AML	AML		
	comp=N,506µm,0.4s						
POPM				AML	AML		
	comp=E,266µm,0.3s						
POPM				AML	AML		
	comp=N,506µm,0.4s						
POPM				AML	AML		
	comp=N,506µm,0.4s						
POPM				AML	AML		
	comp=E,266µm,0.3s						
VLC	**Villacollemand**	**0.91**	**214**	*e*P	**Pg**	**01 20 27.9**	**0.0**
VLC	**Villacollemand**	**0.91**	**214**	*e*P	**Pg**	**01 20 27.9**	**0.0**
VLC				AML	AML		
	comp=E,118µm,0.5s						
VLC				AML	AML		
	comp=N,184µm,0.9s						
VLC				AML	AML		
	comp=E,118µm,0.5s						
VLC				AML	AML		
	comp=N,184µm,0.9s						
VLC				AML	AML		
	comp=N,184µm,0.9s						
VLC				AML	AML		
	comp=E,118µm,0.5s						
MAGA	**Magasa**	**0.92**	**339**	*e*P	**Pb**	**01 20 28.9**	**+0.8**
MAGA	**Magasa**	**0.92**	**339**	*e*P	**Pb**	**01 20 28.9**	**+0.8**
MAGA				AML	AML		
	comp=E,1900µm,0.4s						
MAGA				AML	AML		
	comp=N,1735µm,1.4s						
MAGA				AML	AML		
	comp=E,1900µm,0.4s						
MAGA				AML	AML		
	comp=N,1735µm,1.4s						
MAGA				AML	AML		
	comp=N,1735µm,1.4s						
MAGA				AML	AML		
	comp=E,1900µm,0.4s						
BDI	**Bagni Di Lucca**	**0.92**	**203**	*e*P	**Pg**	**01 20 28.5**	**+0.4**
BDI	**Bagni Di Lucca**	**0.92**	**203**	*e*P	**Pg**	**01 20 28.5**	**+0.4**
BDI				AML	AML		
	comp=E,366µm,0.4s						
BDI				AML	AML		
	comp=N,368µm,0.3s						
BDI				AML	AML		
	comp=E,442µm,0.3s						
BDI				AML	AML		
	comp=N,406µm,0.3s						
BDI				AML	AML		
	comp=N,368µm,0.3s						
BDI				AML	AML		
	comp=N,406µm,0.3s						
BDI				AML	AML		
	comp=E,442µm,0.3s						
BDI				AML	AML		
	comp=E,366µm,0.4s						
DOSS	**Dosso del Somm**	**0.97**	**4⇑**	*e*Pg	**Pb**	**01 20 28.9**	**0.0**
DOSS	**Dosso del Somm**	**0.97**	**4**	*e*Pg	**Pb**	**01 20 29.0**	**0.0**
CTL8	**Castelleone**	**1.01**	**292**	AML	AML		
	comp=N,101µm,1.4s						
CTL8				AML	AML		
	comp=E,128µm,0.6s						
CTL8				AML	AML		
	comp=N,101µm,1.4s						
CTL8				AML	AML		
	comp=E,128µm,0.6s						
CTL8				AML	AML		
	comp=E,128µm,0.6s						
CTL8				AML	AML		
	comp=N,101µm,1.4s						
CGRP	**Cima Grappa**	**1.09**	**27⇑**	*e*Pg	**Pn**	**01 20 31.4**	**+0.2**
CGRP				*e*Sg	**Sn**	**01 20 47.1**	**+1.0**
CGRP	**Cima Grappa**	**1.09**	**27**	*e*P	**Pn**	**01 20 31.1**	**-0.1**
CGRP	**Cima Grappa**	**1.09**	**27**	*e*Pg	**Pn**	**01 20 31.4**	**+0.2**
CGRP				*e*Sg	**Sn**	**01 20 47.1**	**+1.0**
CGRP	**Cima Grappa**	**1.09**	**27**	*e*P	**Pn**	**01 20 31.1**	**-0.1**
CGRP				AML	AML		
	comp=E,396µm,0.4s						
CGRP				AML	AML		
	comp=N,336µm,0.6s						
CGRP				AML	AML		
	comp=E,397µm,0.4s						
CGRP				AML	AML		
	comp=N,336µm,0.6s						
CGRP				AML	AML		
	comp=N,336µm,0.6s						
CGRP				AML	AML		
	comp=E,397µm,0.4s						
MAIM	**Mastiano**	**1.09**	**204**	AML	AML		
	comp=N,288µm,0.6s						
MAIM				AML	AML		
	comp=E,276µm,0.4s						
MAIM				AML	AML		
	comp=E,276µm,0.4s						
MAIM				AML	AML		
	comp=N,288µm,0.6s						
MAIM				AML	AML		
	comp=N,288µm,0.6s						
MAIM				AML	AML		
	comp=E,276µm,0.4s						
CRMI	**Carmignano**	**1.13**	**184**	AML	AML		
	comp=N,68µm,0.4s						
CRMI				AML	AML		
	comp=E,93µm,0.6s						
CRMI				AML	AML		
	comp=N,68µm,0.4s						
CRMI				AML	AML		
	comp=E,93µm,0.6s						
CRMI				AML	AML		
	comp=N,68µm,0.4s						
CRMI				AML	AML		
	comp=E,93µm,0.6s						
MTLO	**Montello**	**1.15**	**38⇓**	*e*Pg	**Pn**	**01 20 32.4**	**+0.6**
MTLO				*e*Sg	**Sn**	**01 20 49.7**	**+2.4**
MTLO	**Montello**	**1.15**	**38**	*e*Pg	**Pn**	**01 20 32.4**	**+0.6**
MTLO				*e*Sg	**Sn**	**01 20 49.7**	**+2.4**
SFI	**Santa Sofia**	**1.15**	**152**	AML	AML		
	comp=E,152µm,0.4s						
SFI				AML	AML		
	comp=N,315µm,0.5s						
SFI				AML	AML		
	comp=E,152µm,0.4s						
SFI				AML	AML		
	comp=N,315µm,0.5s						
SFI				AML	AML		
	comp=N,315µm,0.5s						
SFI				AML	AML		
	comp=E,152µm,0.4s						
BOB	**Bobbio (Coli)**	**1.18**	**263**	AML	AML		
	comp=N,178µm,1.4s						
BOB				AML	AML		
	comp=E,142µm,0.4s						
BOB				AML	AML		
	comp=N,178µm,1.4s						
BOB				AML	AML		
	comp=E,142µm,0.4s						
MABI	**Malga Bissina**	**1.21**	**341**	AML	AML		
	comp=E,99µm,0.4s						
MABI				AML	AML		
	comp=E,99µm,0.4s						
MABI				AML	AML		
	comp=N,93µm,1.6s						
MABI				AML	AML		
	comp=N,93µm,1.6s						
MABI				AML	AML		
	comp=N,93µm,1.6s						
MABI				AML	AML		
	comp=E,99µm,0.4s						
ASQU	**Asqua**	**1.22**	**156**	AML	AML		
	comp=N,168µm,0.4s						
ASQU				AML	AML		
	comp=E,111µm,0.5s						
ASQU				AML	AML		
	comp=N,168µm,0.4s						
ASQU				AML	AML		
	comp=E,111µm,0.5s						
PLMA	**Palmaria, Port**	**1.24**	**226**	AML	AML		
	comp=E,254µm,0.4s						
PLMA				AML	AML		
	comp=E,254µm,0.4s						
PLMA				AML	AML		
	comp=N,332µm,1.2s						
PLMA				AML	AML		
	comp=E,254µm,0.4s						
PLMA				AML	AML		
	comp=N,332µm,1.2s						
PLMA				AML	AML		
	comp=N,332µm,1.2s						
MSSA	**Maissana**	**1.27**	**243**	AML	AML		
	comp=E,163µm,0.7s						
MSSA				AML	AML		
	comp=N,178µm,1.4s						
MSSA				AML	AML		
	comp=E,163µm,0.7s						
MSSA				AML	AML		
	comp=N,178µm,1.4s						
MSSA				AML	AML		
	comp=N,178µm,1.4s						
MSSA				AML	AML		
	comp=E,163µm,0.7s						
VARN	**Col Varnada, M**	**1.29**	**33⇑**	*e*Pg	**Pg**	**01 20 34.6**	**-0.6**
VARN	**Col Varnada, M**	**1.29**	**33**	*e*Pg	**Pg**	**01 20 34.6**	**-0.6**
POLC	**Polcenigo**	**1.49**	**41**	AML	AML		
	comp=E,433µm,0.5s						
POLC				AML	AML		
	comp=E,433µm,0.5s						
POLC				AML	AML		
	comp=N,592µm,0.5s						
POLC				AML	AML		
	comp=E,433µm,0.5s						
POLC				AML	AML		
	comp=N,592µm,0.5s						
POLC				AML	AML		
	comp=N,592µm,0.5s						
OZOL	**Ozolo**	**1.49**	**359⇓**	*e*Pg	**Pb**	**01 20 37.5**	**-0.3**
OZOL	**Ozolo**	**1.49**	**359**	*e*Pg	**Pb**	**01 20 37.5**	**-0.3**
PARC	**Parchiule**	**1.51**	**147**	AML	AML		
	comp=N,75µm,0.6s						
PARC				AML	AML		
	comp=E,60µm,0.4s						
PARC				AML	AML		
	comp=N,75µm,0.6s						
PARC				AML	AML		
	comp=E,60µm,0.4s						
PARC				AML	AML		
	comp=E,60µm,0.4s						
PARC				AML	AML		
	comp=N,75µm,0.6s						
AGOR	**Agordo**	**1.52**	**26**	AML	AML		
	comp=E,186µm,0.3s						
AGOR				AML	AML		
	comp=N,204µm,0.3s						
AGOR				AML	AML		
	comp=N,204µm,0.3s						
AGOR				AML	AML		
	comp=E,186µm,0.3s						
CARE	**Lago del Cares**	**1.54**	**350⇓**	*e*Pg	**Pn**	**01 20 38.1**	**+0.7**
CARE	**Lago del Cares**	**1.54**	**350**	*e*Pg	**Pn**	**01 20 38.2**	**+0.7**
KOSI	**Kohlern**	**1.56**	**7**	AML	AML		
	comp=N,180µm,0.7s						
KOSI				AML	AML		
	comp=E,182µm,0.7s						
KOSI				AML	AML		
	comp=N,180µm,0.7s						
KOSI				AML	AML		
	comp=E,182µm,0.7s						
APPI	**Appiano**	**1.57**	**3**	AML	AML		
	comp=N,407µm,0.4s						
APPI				AML	AML		
	comp=E,406µm,0.3s						
APPI				AML	AML		
	comp=N,407µm,0.4s						
APPI				AML	AML		
	comp=E,406µm,0.3s						
BRMO	**Bormio**	**1.64**	**342**	AML	AML		
	comp=E,82µm,1.3s						
BRMO				AML	AML		
	comp=E,82µm,1.3s						
BRMO				AML	AML		
	comp=N,86µm,0.6s						
BRMO				AML	AML		
	comp=N,86µm,0.6s						
CAFI	**Castiglion Fio**	**1.71**	**158**	AML	AML		
	comp=N,42µm,0.4s						
CAFI				AML	AML		
	comp=E,45µm,0.5s						
CAFI				AML	AML		
	comp=N,42µm,0.4s						
CAFI				AML	AML		
	comp=E,45µm,0.5s						
ATPI	**Pietralunga -**	**1.74**	**147**	AML	AML		
	comp=E,58µm,0.7s						
ATPI				AML	AML		
	comp=N,65µm,0.7s						
ATPI				AML	AML		
	comp=E,58µm,0.7s						
ATPI				AML	AML		
	comp=N,65µm,0.7s						
MOSI	**Grossmontoni**	**1.75**	**348**	AML	AML		
	comp=E,201µm,0.9s						
MOSI				AML	AML		
	comp=E,201µm,0.9s						
MOSI				AML	AML		
	comp=N,304µm,0.5s						
MOSI				AML	AML		
	comp=N,304µm,0.5s						
STAL	**STALIGIAL**	**1.76**	**40**	AML	AML		
	comp=E,284µm,0.3s						
STAL				AML	AML		
	comp=N,318µm,0.8s						
STAL				AML	AML		
	comp=E,266µm,0.3s						
STAL				AML	AML		
	comp=N,309µm,0.3s						
STAL				AML	AML		
	comp=N,318µm,0.8s						
STAL				AML	AML		
	comp=N,309µm,0.3s						
STAL				AML	AML		
	comp=E,266µm,0.3s						
STAL				AML	AML		
	comp=E,284µm,0.3s						
ABSI	**Aberstueckl**	**1.82**	**5**	AML	AML		
	comp=E,354µm,0.6s						
ABSI				AML	AML		
	comp=N,296µm,0.5s						
ABSI				AML	AML		
	comp=N,296µm,0.5s						
ABSI				AML	AML		
	comp=E,354µm,0.6s						
PCP	**Piancastagn**	**1.85**	**259**	AML	AML		
	comp=E,40µm,1.5s						
PCP				AML	AML		
	comp=N,48µm,0.9s						
PCP				AML	AML		
	comp=E,40µm,1.5s						
PCP				AML	AML		
	comp=N,48µm,0.9s						
ROSI	**Rosskopf**	**2.03**	**6**	AML	AML		
	comp=N,211µm,0.4s						
ROSI				AML	AML		
	comp=E,208µm,1.6s						
ROSI				AML	AML		
	comp=N,211µm,0.4s						
ROSI				AML	AML		
	comp=E,208µm,1.6s						
VINO	**Villanova**	**2.04**	**48**	AML	AML		
	comp=E,118µm,0.4s						
VINO				AML	AML		
	comp=N,89µm,0.8s						
VINO				AML	AML		
	comp=E,118µm,0.4s						
VINO				AML	AML		
	comp=N,89µm,0.8s						
SABO	**M.te Sabotino**	**2.06**	**58**	AML	AML		
	comp=E,179µm,0.6s						
SABO				AML	AML		
	comp=E,179µm,0.6s						
SABO				AML	AML		
	comp=N,230µm,0.5s						
SABO				AML	AML		
	comp=N,230µm,0.5s						
ABTA	**Abfaltersbach**	**2.08**	**28**	*e*Pg	**Pg**	**01 20 49.7**	**-0.6**
	comp=N,3.9nm,0.3s,SNR=12						
ABTA	**Abfaltersbach**	**2.08**	**28**	Pg	**Pg**	**01 20 49.7**	**-0.6**
	comp=N,3.9nm,0.3s,SNR=12						
FINB	**Finale Ligure**	**2.11**	**251**	AML	AML		
	comp=E,136µm,0.3s						
FINB				AML	AML		
	comp=N,118µm,0.6s						
FINB				AML	AML		
	comp=N,118µm,0.6s						
FINB				AML	AML		
	comp=E,136µm,0.3s						
FETA	**Feichten**	**2.12**	**353**	*e*Pn	**Pb**	**01 20 49.2**	**+0.6**
	comp=E,5.8nm,0.3s,SNR=7.9						
FETA				*e*Sg	**Sg**	**01 21 18.9**	**+0.4**
	comp=E,2.8nm,0.2s						
FETA	**Feichten**	**2.12**	**353**	Pn	**Pb**	**01 20 49.2**	**+0.6**
	comp=E,5.8nm,0.3s,SNR=7.9						
FETA				Sg	**Sg**	**01 21 18.9**	**+0.4**
	comp=E,2.8nm,0.2s						
RISI	**Rein**	**2.15**	**18**	AML	AML		
	comp=N,307µm,0.4s						
RISI				AML	AML		
	comp=E,246µm,1.5s						
RISI				AML	AML		
	comp=N,307µm,0.4s						
RISI				AML	AML		
	comp=E,246µm,1.5s						
SKDS	**Skadanscina**	**2.16**	**72⇑**	*i*Pn	**Pn**	**01 20 45.3**	**-0.5**
SKDS				*i* Sn	**Sn**	**01 21 11.8**	**-0.5**
	comp=Z,15nm,0.2s						
SKDS	**Skadanscina**	**2.16**	**72⇑**	*i*Pn	**Pn**	**01 20 45.3**	**-0.5**
SKDS				*i* Sn	**Sn**	**01 21 11.9**	**-0.5**
	comp=Z,15nm,0.2s						
JAVS	**Javornik**	**2.31**	**64⇑**	*i*Pn	**Pn**	**01 20 47.8**	**-0.1**
JAVS				*i* Sn	**Sn**	**01 21 16.5**	**+0.3**
	comp=Z,14nm,0.3s						
JAVS	**Javornik**	**2.31**	**64⇑**	*i*Pn	**Pn**	**01 20 47.8**	**-0.1**
JAVS				*i* Sn	**Sn**	**01 21 16.5**	**+0.3**
	comp=Z,14nm,0.3s						
WTTA	**Wattenberg**	**2.38**	**9**	*e*Sg	**Sg**	**01 21 26.9**	**+0.1**
	comp=Z,29nm,0.4s						
WTTA	**Wattenberg**	**2.38**	**9**	Sg	**Sg**	**01 21 26.9**	**+0.1**
	comp=Z,29nm,0.4s						
MYKA	**Terra Mystica**	**2.48**	**45**	*e*Pg	**Pg**	**01 20 57.7**	**0.0**
	comp=Z,4.6nm,0.2s,SNR=5.3						
MYKA				Sg	**Sg**	**01 21 30.6**	**+0.8**
	comp=Z,12nm,0.3s						
MYKA	**Terra Mystica**	**2.48**	**45**	Pg	**Pg**	**01 20 57.7**	**0.0**
	comp=Z,4.6nm,0.2s,SNR=5.3						
MYKA				Sg	**Sg**	**01 21 30.6**	**+0.8**
	comp=Z,12nm,0.3s						
RETA	**Reutte**	**2.58**	**355**	*e*Pn	**Pb**	**01 20 55.5**	**-0.9**
	comp=Z,1.1nm,0.2s,SNR=6.5						
RETA				*e*Sn	**Sb**	**01 21 27.5**	**-0.5**
	comp=Z,6.3nm,0.4s						
RETA	**Reutte**	**2.58**	**355**	Pn	**Pb**	**01 20 55.5**	**-0.9**
	comp=Z,1.1nm,0.2s,SNR=6.5						
RETA				Sn	**Sb**	**01 21 27.5**	**-0.5**
	comp=Z,6.3nm,0.4s						
KBA	**Koelnbreinsper**	**2.67**	**35**	*e*Pg	**Pg**	**01 21 01.6**	**+0.1**
	comp=Z,3.2nm,0.2s,SNR=6.9						
KBA				Sg	**Sg**	**01 21 36.2**	**0.0**
	comp=Z,13nm,0.6s,SNR=11						
KBA	**Koelnbreinsper**	**2.67**	**35**	Pg	**Pg**	**01 21 01.6**	**+0.1**

comp=Z,3.2nm,0.2s,SNR=6.9
KBA Sg **Sg** **01 21 36.2 0.0**

NVLJ Novalja 2.72 96 *e*Pn **Pn** **01 20 53.5 +0.1**
NVLJ Sn **Sn** **01 21 25.0 -0.9**

PGF Pioggiola 2.81 213 *e*Pn **Pn** **01 20 55.6 +0.8**
PGF *e*Sn **Sn** **01 21 28.5 0.0**
comp=Z,7.6nm,0.3s

PGF Pioggiola 2.81 213 *e*Pn **Pn** **01 20 55.6 +0.8**
PGF *e*Sn **Sn** **01 21 28.5 0.0**
comp=Z,3.8nm,0.3s

SBF Sospel 2.82 249 *e*Pn **Pn** **01 20 56.2 +1.2**
SBF *e*Sn **Sn** **01 21 29.0 +0.2**
comp=Z,16nm,0.4s

SBF Sospel 2.82 249 *e*Pn **Pn** **01 20 56.2 +1.2**
SBF *e*Sn **Sn** **01 21 29.0 +0.2**
comp=Z,7.8nm,0.4s

OBKA Obir 2.90 55 *e*Pn **Pn** **01 20 56.9 +0.9**
comp=Z,0.9nm,0.2s,SNR=5.0
OBKA *e*Sn **Sb** **01 21 33.1 -4.0**
comp=Z,2.4nm,0.2s

OBKA *e*Sg **Sg** **01 21 44.9 +1.5**
comp=Z,43nm,0.6s

OBKA Obir 2.90 55 Pn **Pn** **01 20 56.9 +0.9**
comp=Z,0.9nm,0.2s,SNR=5.0
OBKA Sn **Sb** **01 21 33.1 -4.0**
comp=Z,2.4nm,0.2s

OBKA Sg **Sg** **01 21 44.9 +1.5**
comp=Z,43nm,0.6s

LPG La Plagne 3.12 282 *e*Pn **Pn** **01 20 59.0 -0.3**
LPG *e*Sn **Sn** **01 21 35.7 -0.8**
comp=Z,7.8nm,0.6s

LPG La Plagne 3.12 282 *e*Pn **Pn** **01 20 59.0 -0.3**
LPG *e*Sn **Sn** **01 21 35.7 -0.8**
comp=Z,3.9nm,0.6s

LPL La Plagne 3.14 283 *e*Pn **Pn** **01 21 00.2 +0.8**
LPL *e*Sn **Sn** **01 21 36.8 0.0**
comp=Z,7.2nm,0.6s

LPL La Plagne 3.14 283 *e*Pn **Pn** **01 21 00.2 +0.8**
LPL *e*Sn **Sn** **01 21 36.8 0.0**
comp=Z,3.6nm,0.6s

OZLJ Ozalj 3.17 76 *e*Pn **Pn** **01 21 00.2 +0.6**
OZLJ Ozalj 3.17 76 *e*Pn **Pn** **01 21 00.2 +0.6**
UDBI Udbina 3.35 95 *e*Pn **Pn** **01 21 03.7 +1.5**
UDBI Udbina 3.35 95 *e*Pn **Pn** **01 21 03.7 +1.5**
FRF La Foret Royal 3.47 249 *e*Pn **Pn** **01 21 04.7 +0.9**
FRF *e*Sn **Sn** **01 21 45.0 +0.4**
comp=Z,4.7nm,0.3s

FRF La Foret Royal 3.47 249 *e*Pn **Pn** **01 21 04.7 +0.9**
FRF *e*Sn **Sn** **01 21 45.0 +0.4**
comp=Z,2.3nm,0.3s

LMR La Mourre 3.66 246 *e*Pn **Pn** **01 21 06.9 +0.5**
LMR *e*Sn **Sn** **01 21 48.3 -0.9**
comp=Z,4.9nm,0.3s

LMR La Mourre 3.66 246 *e*Pn **Pn** **01 21 06.9 +0.5**
LMR *e*Sn **Sn** **01 21 48.3 -0.9**
comp=Z,2.5nm,0.3s

ORIF Oris-en-Rattie 3.70 272 *e*Pn **Pn** **01 21 07.8 +0.7**
ORIF *e*Sn **Sn** **01 21 50.9 +0.4**
comp=Z,7.5nm,0.6s

ORIF Oris-en-Rattie 3.70 272 *e*Pn **Pn** **01 21 07.8 +0.7**
ORIF *e*Sn **Sn** **01 21 50.9 +0.4**
comp=Z,3.8nm,0.6s

CABF La Chapelle 3.89 298 *e*Pn **Pn** **01 21 09.6 -0.1**
CABF La Chapelle 3.89 298 *e*Pn **Pn** **01 21 09.6 -0.1**
HINF Hinteralfeld 4.13 316 *e*Pn **Pn** **01 21 13.1 +0.2**
HINF *e*Sn **Sn** **01 22 00.6 -0.3**
comp=Z,4.3nm,0.4s

HINF Hinteralfeld 4.13 316 *e*Pn **Pn** **01 21 13.1 +0.2**
HINF *e*Sn **Sn** **01 22 00.6 -0.3**
comp=Z,2.2nm,0.4s

CDF Champ du Feu 4.38 324 *e*Pn **Pn** **01 21 16.0 -0.3**
CDF *e*Sn **Sn** **01 22 05.6 -1.5**
comp=Z,3.6nm,0.4s

CDF Champ du Feu 4.38 324 *e*Pn **Pn** **01 21 16.0 -0.3**
CDF *e*Sn **Sn** **01 22 05.6 -1.5**
comp=Z,1.8nm,0.4s

HAU Haudompre 4.51 315 *e*Pn **Pn** **01 21 17.1 -0.9**
HAU *e*Sn **Sn** **01 22 09.3 -0.9**
comp=Z,5.0nm,0.3s

HAU Haudompre 4.51 315 *e*Pn **Pn** **01 21 17.1 -0.9**
HAU *e*Sn **Sn** **01 22 09.3 -0.9**
comp=Z,2.5nm,0.3s

KHC Kasperske Hory 4.55 21 *e*PN **Pn** **01 21 20.4 +1.8**
KHC *e*PG **Pg** **01 21 35.3 -2.0**
KHC *e*SN **Sn** **01 22 10.4 -0.8**
KHC *e*SG **Sg** **01 22 35.5 -0.7**
comp=Z,3.9nm,0.6s

KHC Kasperske Hory 4.55 21 Pn **Pn** **01 21 20.4 +1.8**
STON Ston 5.19 111 *e*Pn **Pn** **01 21 27.0 -0.5**
LOR Lormes 5.55 298 *e*Pn **Pn** **01 21 31.9 -0.5**
LOR *e*Sn **Sn** **01 22 33.9 -2.1**
LOR Lormes 5.55 298 *e*Pn **Pn** **01 21 31.9 -0.5**
LOR *e*Sn **Sn** **01 22 33.9 -2.1**
AVF Avril sur Loir 5.72 292 *e*Pn **Pn** **01 21 35.0 +0.3**
AVF Avril sur Loir 5.72 292 *e*Pn **Pn** **01 21 35.0 +0.3**

MAN 01 01:33:14.8, 11°.91N×124°.21E, h65km, mb4.1, ML2.9, MS2.6, 2C, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Cataram**	**0.74**	**36**	*e*P	Pn	01 33 31.7	+1.8
CNP				*e*S	Sn	01 33 43.7	+2.7
PLP	**Palo**	**1.06**	**134**	*e*P	Pn	01 33 33.8	+0.1
PLP				*i* S	Sn	01 33 49.7	+1.8
BESP	**Borongan**	**1.24**	**104**	*e*P	Pn	01 33 37.6	+1.4
RCP	**Roxas**	**1.48**	**257**	*e*P	Pn	01 33 40.0	+0.7
RCP				*e*S	Sn	01 33 59.5	+1.8

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*IDC **01** 01:49:47.2±2.3, 48°.98N×128°.77W, h0km, mb4.2/1, mb1 4.0/8, mb1mx3.5/69, mbtmp3.7/8, ML3.5/7, MS3.4/15, Ms1 3.4/15, ms1mx3.1/64, Error ellipse: s-maj=33.0km s-min=17.1km az=71.0*

*NEIC **01** 01:49:48.2±2.2, 49°.18N×128°.79W, h10km±16km, mb4.0/51, MW4.0(OTT), Error ellipse: s-maj=6.0km s-min=3.0km az=57.0*

ISC 01 01:49:48.8±2.1, 49°.07N±0°.05×128°.93W±0°.06, h25km±14km, n234, σ1§42/256, mb4.4/13, MS3.4/10, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BPBC	**Brooks Peninsu**	**1.32**	**34**	Pn	**Pn**	**01 50 10.3**	**-1.4**
BPBC	**Brooks Peninsu**	**1.32**	**34**	Pn	**Pn**	**01 50 10.3**	**-1.4**
EDB	**Eliza Dome**	**1.43**	**55**	Pn	**Pn**	**01 50 11.6**	**-1.4**
EDB				Sn	**Sb**	**01 50 31.4**	**-1.0**
EDB	**Eliza Dome**	**1.43**	**55**	Pn	**Pn**	**01 50 11.6**	**-1.4**
EDB				Sn	**Sb**	**01 50 31.4**	**-1.0**
ETB	**Estevan Point**	**1.60**	**78**	Pn	**Pn**	**01 50 13.9**	**-1.4**
ETB	**Estevan Point**	**1.60**	**78**	Pn	**Pn**	**01 50 13.9**	**-1.4**
PACB	**Port Alice, BC**	**1.66**	**34**	Pn	**Pn**	**01 50 14.8**	**-1.3**
PACB				Sn	**Sb**	**01 50 36.9**	**-2.1**
HOLB	**Holberg**	**1.66**	**18**	Pn	**Pn**	**01 50 14.7**	**-1.5**
HOLB	**Holberg**	**1.66**	**18**	Pn	**Pn**	**01 50 14.7**	**-1.5**
MAYB	**Maynard**	**1.76**	**40**	Pn	**Pn**	**01 50 16.7**	**-0.9**
MAYB	**Maynard**	**1.76**	**40**	Pn	**Pn**	**01 50 16.7**	**-0.9**
WOSB	**Woss**	**1.88**	**54**	Pn	**Pn**	**01 50 18.9**	**-0.4**
WOSB	**Woss**	**1.88**	**54**	Pn	**Pn**	**01 50 18.9**	**-0.4**
PHC	**Port Hardy**	**1.91**	**30**	Pn	**Pn**	**01 50 19.1**	**-0.5**
PHC				Sn	**Sn**	**01 50 42.7**	**+0.1**
TOFB	**Tofino**	**1.99**	**86**	Pn	**Pn**	**01 50 18.8**	**-1.9**
TOFB				Sn	**Sn**	**01 50 44.1**	**-0.6**
TLCB	**Telegraph Cove**	**2.01**	**42**	Pn	**Pn**	**01 50 20.6**	**-0.4**
TLCB				Sn	**Sb**	**01 50 46.6**	**-2.5**
GDR	**Gold River**	**2.02**	**68**	Pn	**Pn**	**01 50 20.1**	**-1.1**
GDR	**Gold River**	**2.02**	**68**	Pn	**Pn**	**01 50 20.1**	**-1.1**
B012	**Ucluelet**	**2.23**	**92**	Pn	**Pn**	**01 50 21.4**	**-2.6**
B012				Sn	**Sn**	**01 50 49.2**	**-1.6**
OZB	**Mount Ozzard**	**2.26**	**91**	Pn	**Pn**	**01 50 22.2**	**-2.3**
OZB				Sn	**Sn**	**01 50 49.9**	**-1.8**
OZB	**Mount Ozzard**	**2.26**	**91**	Pn	**Pn**	**01 50 22.2**	**-2.3**
OZB				*e*Sn	**Sn**	**01 50 50.8**	**-0.8**
BTB	**Buttle Lake**	**2.27**	**79**	Pn	**Pn**	**01 50 23.6**	**-1.2**
BTB				Sn	**Sn**	**01 50 52.6**	**+0.7**
BTB	**Buttle Lake**	**2.27**	**79**	Pn	**Pn**	**01 50 23.6**	**-1.2**
BTB				Sn	**Sn**	**01 50 52.6**	**+0.7**
SPLB	**Strathcona Par**	**2.29**	**68**	Pn	**Pn**	**01 50 24.3**	**-0.5**
SPLB				Sn	**Sb**	**01 50 54.6**	**-2.6**
NCRB	**Newcastle Ridg**	**2.29**	**53**	Pn	**Pn**	**01 50 25.2**	**+0.1**
MWAB	**Mount Washingt**	**2.46**	**73**	Pn	**Pn**	**01 50 25.9**	**-1.4**
B928	**Bamfield**	**2.51**	**94**	Pn	**Pn**	**01 50 25.5**	**-2.4**
B928				Sn	**Sn**	**01 50 56.7**	**-0.9**
B928	**Bamfield**	**2.51**	**94**	*e*Pn	**Pn**	**01 50 25.7**	**-2.2**
CBB	**Campbell River**	**2.51**	**66**	Pn	**Pn**	**01 50 27.4**	**-0.5**
CBB				Sn	**Sn**	**01 50 59.7**	**+2.0**
CBB	**Campbell River**	**2.51**	**66**	Pn	**Pn**	**01 50 27.4**	**-0.5**
CBB				Sn	**Sn**	**01 50 59.7**	**+2.0**
B927	**Port Alberni**	**2.71**	**85**	Pn	**Pn**	**01 50 29.2**	**-1.3**
MGB	**Mount Grey**	**2.79**	**90**	Pn	**Pn**	**01 50 29.8**	**-2.0**
MGB				Sn	**Sn**	**01 51 03.4**	**-1.3**
MGB	**Mount Grey**	**2.79**	**90**	Pn	**Pn**	**01 50 29.8**	**-2.0**
MGB				Sn	**Sn**	**01 51 03.4**	**-1.3**
TXB	**Texada**	**3.00**	**76**	Pn	**Pn**	**01 50 34.5**	**-0.2**
YOUB	**Youbou, Lake C**	**3.08**	**91**	Pn	**Pn**	**01 50 34.1**	**-1.6**
YOUB				Sn	**Sn**	**01 51 11.7**	**0.0**
YOUB	**Youbou, Lake C**	**3.08**	**91**	Pn	**Pn**	**01 50 34.1**	**-1.6**
YOUB				Sn	**Sn**	**01 51 11.7**	**0.0**
GHNB	**Nanoose**	**3.09**	**84**	Pn	**Pn**	**01 50 35.3**	**-0.5**
GHNB				Sn	**Sn**	**01 51 13.0**	**+1.2**
BBB	**Bella Bella**	**3.16**	**9**	Pn	**Pn**	**01 50 36.0**	**-0.8**
BBB				Sn	**Sn**	**01 51 12.7**	**-1.0**
BBB	**Bella Bella**	**3.16**	**9**	Pn	**Pn**	**01 50 36.0**	**-0.8**
BBB				Sn	**Sn**	**01 51 12.7**	**-1.0**
B926	**Mesachie Lake**	**3.17**	**93**	Pn	**Pn**	**01 50 35.4**	**-1.6**
B926				Sn	**Sn**	**01 51 13.7**	**-0.2**
NLLB	**Nanaimo Lost L**	**3.25**	**85**	Pn	**Pn**	**01 50 37.7**	**-0.3**
NLLB				Sn	**Sn**	**01 51 17.2**	**+1.4**
SHB	**Sechelt**	**3.35**	**79**	Pn	**Pn**	**01 50 39.5**	**+0.1**
OBC	**Olympics--Boni**	**3.38**	**106**	Pn	**Pn**	**01 50 37.9**	**-2.0**
LZB	**Mount Lazard**	**3.40**	**96**	Pn	**Pn**	**01 50 38.3**	**-1.9**
LZB				Sn	**Sn**	**01 51 19.1**	**-0.7**
BPCB	**Bare Point**	**3.44**	**90**	Sn	**Sn**	**01 51 21.4**	**+0.8**
GOBB	**Galiano Island**	**3.57**	**90**	Pn	**Pn**	**01 50 41.6**	**-0.8**
B009	**North Saanich**	**3.64**	**95**	Pn	**Pn**	**01 50 42.1**	**-1.3**
B009				Sn	**Sn**	**01 51 25.0**	**-0.5**
B010	**North Saanich**	**3.64**	**95**	Pn	**Pn**	**01 50 42.0**	**-1.3**
B010				Sn	**Sn**	**01 51 24.9**	**-0.6**
PGC	**Sidney**	**3.64**	**95**	Pn	**Pn**	**01 50 42.1**	**-1.3**
PGC				Sn	**Sn**	**01 51 25.4**	**0.0**
PGC	**Sidney**	**3.64**	**95**	*e*Pn	**Pn**	**01 50 42.1**	**-1.3**
PGC				*e*Sn	**Sn**	**01 51 25.4**	**0.0**
PA02	**PA02 Ocean**	**3.64**	**94**	Pn	**Pn**	**01 50 41.9**	**-1.5**
PA02				Sn	**Sn**	**01 51 25.4**	**-0.1**
PA12	**PA12 Sannich**	**3.64**	**95**	Pn	**Pn**	**01 50 41.8**	**-1.7**
PA12				Sn	**Sn**	**01 51 25.2**	**-0.3**
B011	**North Saanich**	**3.64**	**95**	Pn	**Pn**	**01 50 42.0**	**-1.4**
B011				Sn	**Sn**	**01 51 25.7**	**+0.2**
PA01	**PA01 North**	**3.64**	**94**	Pn	**Pn**	**01 50 42.1**	**-1.3**
PA01				Sn	**Sn**	**01 51 25.8**	**+0.3**
PA04	**PA04 Cage**	**3.64**	**95**	Pn	**Pn**	**01 50 42.1**	**-1.3**
PA03	**PA03 Flamable**	**3.64**	**94**	Pn	**Pn**	**01 50 42.2**	**-1.3**
OSD	**Olympics--Snow**	**3.69**	**108**	Pn	**Pn**	**01 50 43.3**	**-1.1**
BIB	**Bowen Island**	**3.70**	**83**	Pn	**Pn**	**01 50 42.9**	**-1.3**
B04A	**Port Angeles**	**3.74**	**104**	*e*Pn	**Pn**	**01 50 44.2**	**-0.6**
VGZ	**Gonzales**	**3.77**	**98**	Pn	**Pn**	**01 50 43.3**	**-1.8**
WPB	**Watts Point**	**3.78**	**79**	Pn	**Pn**	**01 50 45.5**	**+0.2**
SNB	**Saturna Island**	**3.81**	**92**	Pn	**Pn**	**01 50 44.5**	**-1.3**
WISH	**Wishkah**	**3.97**	**118**	Pn	**Pn**	**01 50 47.1**	**-0.9**
MCW	**Mount Constitu**	**4.04**	**93**	Pn	**Pn**	**01 50 48.1**	**-0.8**
WSLR	**Whistler**	**4.05**	**73**	Pn	**Pn**	**01 50 49.9**	**+0.8**
BLN	**Blyn Mountain**	**4.10**	**103**	Pn	**Pn**	**01 50 48.7**	**-1.0**
BLN	**Blyn Mountain**	**4.10**	**103**	*e*Pn	**Pn**	**01 50 49.3**	**-0.4**
A04D	**Lummi Island**	**4.12**	**92**	P	**Pn**	**01 50 49.2**	**-0.8**
	baz=278,SNR=14						
A04D				S	**Sn**	**01 51 36.2**	**-1.1**
	baz=278						
HDW	**Hoodsport**	**4.17**	**108**	Pn	**Pn**	**01 50 50.0**	**-0.8**
E03A	**Lebam**	**4.41**	**123**	*e*Pn	**Pn**	**01 50 53.0**	**-0.9**
VDB	**Vedder Mountai**	**4.49**	**88**	Pn	**Pn**	**01 50 54.2**	**-0.9**
B05A	**Bryant**	**4.60**	**97**	P	**Pn**	**01 50 55.6**	**-1.0**
	baz=283,SNR=8.1						
B05A				S	**Sn**	**01 51 46.9**	**-2.3**
	baz=283						
MBW	**Mount Baker**	**4.64**	**91**	Pn	**Pn**	**01 50 57.0**	**-0.3**
MBW	**Mount Baker**	**4.64**	**91**	*e*Pn	**Pn**	**01 50 57.0**	**-0.3**
JCW	**Jim Creek**	**4.72**	**98**	Pn	**Pn**	**01 50 57.5**	**-0.9**
JCW	**Jim Creek**	**4.72**	**98**	*e*Pn	**Pn**	**01 50 58.1**	**-0.2**
SHUK	**Shuksan-Mt. Ba**	**4.78**	**90**	*e*Pn	**Pn**	**01 50 59.7**	**+0.4**
LLLB	**Lillooet**	**4.81**	**69**	Pn	**Pn**	**01 51 00.7**	**+1.1**
LLLB	**Lillooet**	**4.81**	**69**	*e*Pn	**Pn**	**01 51 00.8**	**+1.2**
UBRB	**Upper Baezaeko**	**4.90**	**37**	Pn	**Pn**	**01 51 01.9**	**+1.0**
HOPB	**Hope**	**4.93**	**83**	Pn	**Pn**	**01 51 01.1**	**-0.1**
B06A	**Marblemount**	**4.95**	**94**	Pn	**Pn**	**01 51 00.2**	**-1.2**
B06A	**Marblemount**	**4.95**	**94**	*e*Pn	**Pn**	**01 51 00.8**	**-0.6**
B941	**Kapowsin**	**4.96**	**112**	*e*Pn	**Pn**	**01 51 01.7**	**+0.2**
D05A	**Enumclaw**	**5.01**	**109**	Pn	**Pn**	**01 51 01.7**	**-0.6**
D05A	**Enumclaw**	**5.01**	**109**	*e*Pn	**Pn**	**01 51 03.9**	**+1.6**
ERK	**Elk Rock**	**5.24**	**119**	*e*Pn	**Pn**	**01 51 04.4**	**-1.1**
B201	**Coldwater, Mou**	**5.28**	**119**	*e*Pn	**Pn**	**01 51 05.9**	**-0.1**
LON	**Longmire**	**5.32**	**113**	*e*Pn	**Pn**	**01 51 06.6**	**+0.1**
LON				*e*Sn	**Sn**	**01 52 06.5**	**-0.5**
FMW	**Mount Fremont**	**5.32**	**111**	*e*Pn	**Pn**	**01 51 07.7**	**+1.0**
LVP	**Lakeview Peak**	**5.33**	**122**	*e*Pn	**Pn**	**01 51 07.5**	**+0.7**
PANH	**Panhandle Gap,**	**5.37**	**112**	*e*Pn	**Pn**	**01 51 08.6**	**+1.2**
WPW	**White Pass**	**5.50**	**113**	*e*Pn	**Pn**	**01 51 10.5**	**+1.4**
ASR	**Mount Adams--S**	**5.75**	**118**	*e*Pn	**Pn**	**01 51 13.8**	**+1.2**
TBM	**Table Mountain**	**5.89**	**106**	*e*Pn	**Pn**	**01 51 15.6**	**+1.2**
NAC	**Naches**	**5.93**	**110**	*e*Sn	**Sn**	**01 52 24.5**	**+2.5**
EBG	**Ellensburg**	**6.01**	**108**	*e*Pn	**Pn**	**01 51 17.3**	**+1.3**
PNT	**Penticton**	**6.11**	**84**	Pn	**Pn**	**01 51 17.1**	**-0.3**
H04A	**Detroit Lake**	**6.37**	**131**	*e*Pn	**Pn**	**01 51 22.8**	**+1.9**
H04A				*e*Sn	**Sn**	**01 52 28.6**	**-4.3**
B08A	**Colville Reser**	**6.39**	**93**	*e*Pn	**Pn**	**01 51 22.6**	**+1.4**
SAW	**Saint Andrews**	**6.49**	**99**	*e*Pn	**Pn**	**01 51 22.5**	**-0.1**
I03D	**Drain, OR**	**6.61**	**142**	P	**Pn**	**01 51 24.1**	**-0.1**
	baz=327,SNR=5.3						
HAWA	**Hanford**	**6.88**	**109**	*e*Pn	**Pn**	**01 51 27.9**	**0.0**
C09A	**Chrisman Ranch**	**7.20**	**96**	*e*Pn	**Pn**	**01 51 32.2**	**-0.2**
HUMO	**Hull Mountain**	**7.69**	**145**	*e*Pn	**Pn**	**01 51 40.0**	**+1.0**
G08A	**Pilot Rock**	**7.77**	**115**	*e*Pn	**Pn**	**01 51 41.2**	**+0.9**
NEW	**Newport**	**7.86**	**91**	Pn	**Pn**	**01 51 40.7**	**-0.7**
	1.3nm,0.3s,baz=289,slow=13,SNR=12						
NEW				LR	LR	01 54 50.2	
	comp=Z,363nm,19.0s,baz=264,slow=39						
NEW	**Newport**	**7.86**	**91**	P	**Pn**	**01 51 40.7**	**-0.7**
	baz=281						
NEW	**Newport**	**7.86**	**91**	*e*Pn	**Pn**	**01 51 40.9**	**-0.5**
I07A	**Izee**	**8.18**	**124**	*e*Pn	**Pn**	**01 51 48.8**	**+2.9**
K05A	**Summer Lake**	**8.46**	**136**	*e*Pn	**Pn**	**01 51 52.1**	**+2.3**
F10A	**Beach Ranch, E**	**8.50**	**107**	*e*Pn	**Pn**	**01 51 50.2**	**-0.1**
YBH	**Yreka Blue Hor**	**8.54**	**147**	Pn	**Pn**	**01 51 51.9**	**+1.2**
	0.3nm,0.3s,baz=338,slow=14,SNR=24						
YBH				LR	LR	01 54 47.5	
	comp=Z,278nm,18.6s,baz=334,slow=36						
YBH	**Yreka Blue Hor**	**8.54**	**147**	*e*Pn	**Pn**	**01 51 53.3**	**+2.5**
M02C	**Callahan**	**8.79**	**149**	P	**Pn**	**01 51 55.9**	**+1.8**
	baz=333,SNR=8.4						
M04C	**Macdoel**	**8.82**	**143**	P	**Pn**	**01 51 56.1**	**+1.4**
	baz=329,SNR=13						
KHMM	**Horse Mountain**	**8.98**	**154**	*e*Pn	**Pn**	**01 51 58.0**	**+1.1**
BMO	**Blue Mountains**	**8.99**	**114**	*e*Pn	**Pn**	**01 51 57.2**	**+0.2**
J08A	**Circle Bar Ran**	**9.22**	**124**	*e*Pn	**Pn**	**01 52 02.3**	**+2.1**
MOD	**Modoc Plateau**	**9.38**	**137**	*e*Pn	**Pn**	**01 52 04.2**	**+1.9**
WDC	**Whiskeytown Da**	**9.62**	**150**	*e*Pn	**Pn**	**01 52 06.9**	**+1.5**
WVOR	**Wild Horse Val**	**9.78**	**129**	*e*Pn	**Pn**	**01 52 11.0**	**+3.2**
JTMT	**Jette**	**9.83**	**92**	*e*Pn	**Pn**	**01 52 07.7**	**-0.8**
WALA	**Waterton Lakes**	**9.86**	**84**	*e*Pn	**Pn**	**01 52 09.3**	**+0.4**
MSO	**Missoula**	**10.30**	**97**	*e*Pn	**Pn**	**01 52 15.7**	**+0.8**
ORV	**Oroville**	**10.89**	**148**	*e*Pn	**Pn**	**01 52 24.6**	**+1.7**
BEKR	**Beckworth**	**11.04**	**143**	*e*Pn	**Pn**	**01 52 28.0**	**+2.8**
HLID	**Hailey**	**11.44**	**113**	*e*Pn	**Pn**	**01 52 32.1**	**+1.5**
PAHR	**Pah Rah Range**	**11.57**	**140**	*e*Pn	**Pn**	**01 52 35.2**	**+2.8**
AFDM	**Forest Hills D**	**11.62**	**148**	*e*Pn	**Pn**	**01 52 34.5**	**+1.6**
MCMT	**McKenzie Canyo**	**11.78**	**105**	*e*Pn	**Pn**	**01 52 35.6**	**+0.4**
VCNR	**Virginia City**	**11.81**	**142**	*e*Pn	**Pn**	**01 52 38.0**	**+2.3**
PNTR	**Pine Nut**	**12.01**	**143**	*e*Pn	**Pn**	**01 52 39.7**	**+1.3**
WHY	**Whitehorse**	**12.11**	**346**	*e*Pn	**Pn**	**01 52 41.8**	**+2.2**
YERR	**Yerington**	**12.24**	**142**	*e*Pn	**Pn**	**01 52 44.8**	**+3.2**
ELK	**Elko**	**12.77**	**126**	Pn	**Pn**	**01 52 52.8**	**+4.1**
	0.1nm,0.3s,baz=302,slow=9.6,SNR=3.3						
YHH	**Holmes Hill**	**13.07**	**102**	*e*Pn	**Pn**	**01 52 54.8**	**+1.8**
NV01	**Mina Array Sit**	**13.10**	**140**	*e*Pn	**Pn**	**01 52 56.1**	**+2.7**
NVAR	**Mina Array Bea**	**13.10**	**140**	Pn	**Pn**	**01 52 55.3**	**+1.9**
	baz=313,slow=12,SNR=13						
NVAR				LR	LR	01 57 45.0	
	comp=Z,186nm,19.6s,baz=59,slow=37						
NV11	**Mina Array Sit**	**13.16**	**140**	*e*Pn	**Pn**	**01 52 56.2**	**+2.2**
YPP	**Pitchstone Pla**	**13.33**	**104**	*e*Pn	**Pn**	**01 52 58.3**	**+1.8**
HVU	**Hansel Valley**	**13.47**	**117**	*e*Pn	**Pn**	**01 53 00.9**	**+2.6**
LOHW	**Long Hollow**	**13.77**	**106**	*e*Pn	**Pn**	**01 53 04.3**	**+1.8**
AHID	**Auburn Hatcher**	**13.90**	**110**	*e*Pn	**Pn**	**01 53 06.6**	**+2.3**
SPUT	**South Promonto**	**13.95**	**118**	*e*Pn	**Pn**	**01 53 07.5**	**+2.6**
RLMT	**Red Lodge**	**13.96**	**99**	*e*Pn	**Pn**	**01 53 05.6**	**+0.6**
R11A	**Troy Canyon, C**	**14.39**	**133**	*e*Pn	**Pn**	**01 53 13.8**	**+2.9**
DUG	**Dugway, Tooele**	**14.48**	**122**	*e*Pn	**Pn**	**01 53 13.2**	**+1.1**
PDAR	**Pinedale Array**	**14.86**	**108**	Pn	**Pn**	**01 53 19.8**	**+2.4**
	0.2nm,0.3s,baz=306,slow=12,SNR=7.3						
PDAR				LR	LR	01 59 18.4	
	comp=Z,126nm,20.9s,baz=300,slow=39						
PDAR	**Pinedale Array**	**14.86**	**108**	*e*Pn	**Pn**	**01 53 19.4**	**+2.1**
JLU	**Jordanelle**	**14.99**	**118**	*e*Pn	**Pn**	**01 53 19.4**	**+0.4**
NLU	**North Lily Min**	**15.06**	**121**	*e*Pn	**Pn**	**01 53 19.3**	**-0.6**
	9.4nm,0.8s						
PSUT	**Pine Spring**	**15.11**	**129**	*e*Pn	**Pn**	**01 53 21.3**	**+0.6**
	5.9nm,1.1s						
TPNV	**Topopah Spring**	**15.23**	**138**	*e*Pn	**Pn**	**01 53 21.6**	**-0.6**
	26nm,1.8s						
DAC	**Darwin (Calif)**	**15.24**	**143**	*e*Pn	**Pn**	**01 53 23.6**	**+1.3**
	12nm,1.5s						
LAO	**LASA Array**	**15.41**	**90**	*e*Pn	**Pn**	**01 53 24.8**	**+0.4**
	9.4nm,0.8s						
YKA	**Yellowknife Ar**	**15.62**	**25**	Pn	**Pn**	**01 53 26.9**	**0.0**
	0.1nm,0.3s,baz=214,slow=12,SNR=9.2						
YKA				LR	LR	01 59 25.2	
	comp=Z,8.7nm,18.1s,baz=216,slow=37						
CCCA	**Chr Cany lake**	**15.98**	**144**	*e*Pn	**P**	**01 53 34.3**	**-0.8**
MSU	**Marysvale**	**16.01**	**125**	*e*Pn	**Pn**	**01 53 31.3**	**-1.1**
DAWY	**Dawson**	**16.07**	**343**	*e*Pn	**Pn**	**01 53 30.9**	**-1.8**
	16nm,1.6s						
SHPR	**Sheep Range**	**16.08**	**136**	*e*Pn	**Pn**	**01 53 32.9**	**-0.4**
	9.9nm,1.5s						
P17A	**Butcher Ranch,**	**16.14**	**120**	*e*Pn	**Pn**	**01 53 32.6**	**-1.4**
	15nm,0.9s						
Q16A	**Castle Valley**	**16.28**	**122**	*e*Pn	**Pn**	**01 53 34.2**	**-1.5**
	15nm,1.0s						
LEOC	**Leona Valley**	**16.43**	**147**	*e*Pn	**Pn**	**01 53 38.5**	**+0.9**
KDAK	**Kodiak Island**	**16.50**	**311**	LR	LR	01 57 35.0	
	comp=Z,65nm,21.8s,baz=112,slow=28						
SRU	**San Rafael Swe**	**16.51**	**120**	*e*Pn	**Pn**	**01 53 38.5**	**-0.1**
	7.7nm,0.9s						
LCMT	**Little Creek M**	**16.59**	**131**	*e*Pn	**P**	**01 53 41.7**	**-0.3**
	6.0nm,0.9s						
K22A	**Casper**	**16.84**	**104**	*e*Pn	**Pn**	**01 53 42.5**	**-0.3**
	54nm,1.8s						
RIDG	**Independ'e Rid**	**17.06**	**335**	*e*Pn	**Pn**	**01 53 43.7**	**-1.6**
	7.9nm,1.0s						
O20A	**White River Ci**	**17.18**	**114**	*e*Pn	**Pn**	**01 53 46.8**	**-0.3**
	10.0nm,0.9s						
FFC	**Flin Flon**	**17.51**	**61**	*e*Pn	**Pn**	**01 53 50.5**	**-0.3**
	42nm,0.7s						
U15A	**North Rim**	**17.52**	**130**	*e*Pn	**P**	**01 53 54.2**	**+1.8**
	9.5nm,1.1s						
PV09	**Paradox Valley**	**17.72**	**119**	*e*Pn	**Pn**	**01 53 52.7**	**-1.2**
RSSD	**Black Hills**	**17.77**	**97**	*e*Pn	**Pn**	**01 53 54.4**	**0.0**
	7.4nm,0.8s						
W13A	**Hualapai Mount**	**17.83**	**136**	*e*Pn	**Pn**	**01 53 54.9**	**-0.2**
	7.2nm,1.5s						
PV10

HHC			pmax	pmax		
	comp=Z,10.0nm,0.9s					
HHC			pmax	pmax		
	comp=Z,38nm,5.1s					
HHC			LR	LR		
	comp=N,70nm,23.3s					
HHC			LR	LR		
	comp=E,75nm,22.5s					
HHC			LR	LR		
	comp=Z,38nm,20.7s					
AKTO	**Aktyubinsk**	**80.70 356**	LR	LR	02 42 06.7	
	comp=Z,14nm,18.3s,baz=10,slow=39					
MKAR	**Makanchi Array**	**80.74 339**	LR	LR	02 40 01.1	
	comp=Z,20nm,19.5s,baz=256,slow=37					
WMQ	**Urumqi**	**82.08 334**	*e*P	**P**	**02 02 09.6**	**+2.8**
CD2	**Chengdu**	**87.57 317**	P	**P**	**02 02 33.7**	**-0.9**
CD2			pmax	pmax		
	comp=Z,1.0nm,0.5s					

*IDC **01** 01:51:00.3±1.6, 20°.32S×168°.16E, h0km, mb3.9/6, mb1 4.2/7, mb1mx3.8/46, mbtmp3.9/7, ML3.6/1, Error ellipse: s-maj=64.7km s-min=22.6km az=140.0*
*ISCJB **01** 01:51:03.8±1.3, 20°.4S±0°.2×168°.1E±0°.3, h32km, mb3.9/6, Error ellipse: s-maj=44.6km s-min=11.1km az=37.9*

ISC 01 01:51:04.9±1.4, 20°.5S±0°.3×168°.2E±0°.3, h32km, n7, σ1§04/8, mb3.9/6, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.27**	**225**	Pn	**Pn**	**01 51 39.5**	**-0.8**
	13nm,0.3s,baz=64,slow=11,SNR=16.3						
DZM				Sn	**Sn**	**01 52 07.3**	**0.0**
	45nm,0.3s,baz=53,slow=23,SNR=10						
STKA	**Stephens Creek**	**26.36**	**239**	P	**P**	**01 56 40.0**	**+1.7**
	1.9nm,0.6s,baz=54,slow=10.0,SNR=5.9						
WRA	**Warramunga Arr**	**31.74**	**265**	P	**P**	**01 57 25.4**	**-0.9**
	0.7nm,0.9s,baz=91,slow=8.5,SNR=11						
ASAR	**Alice Springs**	**31.89**	**258**	P	**P**	**01 57 27.8**	**+0.2**
	3.8nm,0.6s,baz=87,slow=8.9,SNR=40						
SONM	**Songino Array**	**87.62**	**324**	P	**P**	**02 03 50.6**	**+0.5**
	0.3nm,0.5s,baz=128,slow=9.3,SNR=2.8						
NVAR	**Mina Array Bea**	**90.36**	**49**	P	**P**	**02 04 03.6**	**+0.3**
	0.4nm,0.6s,baz=228,slow=9.0,SNR=4.7						
ILAR	**Eielson Array**	**91.70**	**18**	P	**P**	**02 04 07.8**	**-0.8**
	0.5nm,0.9s,baz=231,slow=5.7,SNR=3.3						

GUC 01 01:58:15.8±0.6, 25°.79S×70°.68W, h25km±3km, ML3.6, 2C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO02	**Mina Guanaco**	**1.17**	**58⇑**	*e*P	Pn	01 58 37.0	+0.1
GO02				*i* S	Sb	01 58 52.4	0.0
GO02				IAML		01 58 57.6	
	comp=N,2μm,0.3s						
PB14	**IPOC Station P**	**1.19**	**12⇓**	*i*P	Pn	01 58 37.0	-0.2
PB14				*i* S	Sn	01 58 52.7	0.0
PB14				IAML		01 58 56.3	
	comp=E,3μm,0.3s						
GO03	**Copiap**	**1.84**	**168**	*e*P	Pb	01 58 47.5	-1.3
GO03				*i* S	Sb	01 59 10.7	-0.7
GO03				IAML		01 59 16.4	
	comp=N,592nm,0.3s						
PB10	**IPOC Station P**	**2.27**	**3⇑**	*i*P	Pn	01 58 51.0	-0.8
PB10				*e*S	Sb	01 59 22.6	-1.2
PB15	**IPOC Station P**	**2.80**	**23**	*e*P	Pn	01 59 01.5	+2.3
PB15				*e*S	Sb	01 59 36.1	-3.0

MAN 01 02:22:03.6, 16°.32N×119°.91E, h32km, mb4.3, ML3.1, MS2.9, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.06**	**7**	*e*P	Pb	02 22 08.8	-0.3
BOLP				*e*S	Sb	02 22 14.3	+1.5
SCZP	**Santa Cruz**	**0.54**	**179**	*e*P	Pn	02 22 16.5	+1.4
SCZP				*e*S	Sn	02 22 24.1	+1.1
ABRA	**Dolores**	**1.53**	**30**	*e*P	Pn	02 22 29.9	+1.1
BALP	**Baler**	**1.71**	**109**	*e*P	Pn	02 22 31.2	0.0
APYP	**Conner**	**2.00**	**40**	*e*P	Pb	02 22 38.1	-1.3
APYP				*e*S	Sn	02 23 00.4	+1.3

*NEIC **01** 02:51:45.7±1.0, 17°.32S×178°.46W, h459km±12km, mb4.1/30, Error ellipse: s-maj=11.9km s-min=5.2km az=130.0*
*IDC **01** 02:51:49.7±1.4, 17°.33S×178°.39W, h507km±17km, mb3.8/14, mb1 3.9/16, mb1mx3.5/51, mbtmp4.6/16, Error ellipse: s-maj=16.9km s-min=10.0km az=141.0*
*ISCJB **01** 02:51:52.0±0.2, 17°.60S±0°.06×178°.48W±0°.08, h547km, mb4.3/53, Error ellipse: s-maj=11.4km s-min=5.3km az=37.3*

ISC 01 02:51:53.1±0.5, 17°.4S±0°.1×178°.5W±0°.1, h547km, n80, σ1§13/83, mb4.1/54, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.36**	**63**	P	P	02 53 38.5	-6.1
	9.7nm,0.3s,baz=109,slow=5.4,SNR=6.5						
AFI				S	S	02 55 07.6	-8.3
	4.8nm,0.3s,baz=3.1,slow=11,SNR=2.5						
AFI	**Afiamalu**	**7.36**	**63**	*e*Pn	P	02 53 33.1	-12
AFI				S	S	02 55 07.6	-8.3
DZM	**Mont Dzumac**	**14.90**	**249**	P	**P**	**02 55 01.6**	**-0.1**
	0.6nm,0.3s,baz=88,slow=17,SNR=5.7						
OUZ	**Omahuta**	**19.07**	**200**	*e*P	**P**	**02 55 40.3**	**-0.5**
	60nm,0.8s						
URZ	**Urewera**	**21.11**	**190**	P	**P**	**02 55 57.4**	**-1.8**
	36nm,0.8s,baz=7.4,slow=6.6,SNR=14						
URZ	**Urewera**	**21.11**	**190**	*e*P	**P**	**02 55 58.1**	**-1.1**
	45nm,0.8s						
THZ	**Tophouse**	**25.36**	**195**	*e*P	**P**	**02 56 35.1**	**-1.9**
	52nm,1.5s						
KHZ	**Kahutara**	**25.82**	**194**	*e*P	**P**	**02 56 37.8**	**-3.2**
	167nm,1.9s						
LTZ	**Lake Taylor**	**26.47**	**195**	*e*P	**P**	**02 56 45.7**	**-1.2**
	31nm,0.7s						
OXZ	**Oxford**	**27.04**	**195**	*e*P	**P**	**02 56 50.6**	**-1.2**
	71nm,0.8s						
PPT	**Papeete**	**27.58**	**95**	P	**P**	**02 56 55.4**	**-1.6**
	40nm,0.7s,baz=117,slow=3.2,SNR=5.2						
RPZ	**Rata Peaks**	**27.66**	**196**	P	**P**	**02 56 57.0**	**-0.2**
	14nm,0.9s,baz=221,slow=3.1,SNR=5.6						
RPZ	**Rata Peaks**	**27.66**	**196**	*e*P	**P**	**02 56 55.9**	**-1.3**
	23nm,1.1s						
FOZ	**Fox Glacier**	**27.85**	**198**	*e*P	**P**	**02 56 57.6**	**-1.2**
	57nm,0.8s						
LBZ	**Lake Benmore**	**28.52**	**197**	*e*P	**P**	**02 57 02.7**	**-2.1**
	133nm,1.9s						
ODZ	**Otahua Downs**	**29.00**	**196**	*e*P	**P**	**02 57 05.9**	**-3.0**
	116nm,1.8s						
WKZ	**Wanaka**	**29.26**	**198**	*e*P	**P**	**02 57 09.1**	**-2.1**
	64nm,1.1s						
MLZ	**Mavora Lakes**	**30.02**	**199**	*e*P	**P**	**02 57 16.8**	**-0.9**
	90nm,0.9s						
WHZ	**Wether Hill Ro**	**30.55**	**199**	*e*P	**P**	**02 57 21.1**	**-1.2**
	44nm,0.9s						
PYZ	**Puysegur Point**	**31.20**	**200**	*e*P	**P**	**02 57 26.1**	**-1.6**
	136nm,1.2s						
STKA	**Stephens Creek**	**38.78**	**241**	P	**P**	**02 58 32.2**	**+1.0**
	11nm,0.7s,baz=96,slow=9.2,SNR=30						
STKA				PcP	**PcP**	**03 00 29.8**	**+1.2**
	0.5nm,0.5s,baz=35,slow=3.7,SNR=3.0						
STKA	**Stephens Creek**	**38.78**	**241**	*e*P	**P**	**02 58 31.3**	**+0.2**
	4.9nm,1.1s						
STKA				PcP	**PcP**	**03 00 29.8**	**+1.2**
KIP	**Kipapa**	**43.52**	**28**	*e*P	**P**	**02 59 07.4**	**-1.3**
BBOO	**Buckleboo**	**43.56**	**241**	*e*P	**P**	**02 59 09.6**	**+0.6**
	20nm,0.8s						
WRAB	**Tennant Creek**	**44.62**	**259**	*e*P	**P**	**02 59 16.8**	**-0.6**
	6.4nm,0.7s						
WRA	**Warramunga Arr**	**44.63**	**259**	P	**P**	**02 59 17.1**	**-0.4**
	5.2nm,0.7s,baz=96,slow=6.9,SNR=83						
WRA				PcP	**PcP**	**03 00 48.7**	**+0.3**
	0.9nm,0.9s,baz=93,slow=3.2,SNR=5.5						
AS01	**Alice Springs**	**44.79**	**254**	*e*P	**P**	**02 59 18.7**	**0.0**
AS01				*e*pP	**PcP**	**03 00 48.6**	**-0.4**
AS31	**Alice Springs**	**44.83**	**254**	*e*P	**P**	**02 59 19.3**	**+0.3**
	9.5nm,0.7s						
ASAR	**Alice Springs**	**44.83**	**254**	P	**P**	**02 59 19.3**	**+0.3**
	37nm,0.7s,baz=89,slow=8.0,SNR=309						
ASAR				PcP	**PcP**	**03 00 49.3**	**+0.1**
	2.3nm,0.8s,baz=102,slow=3.6,SNR=7.7						
ASAR				S	**S**	**03 05 15.8**	**-1.3**
	1.7nm,0.9s,baz=86,slow=16,SNR=9.0						
SBA	**Scott Base**	**60.90**	**184**	*e*P	**P**	**03 01 14.8**	**+2.3**
	8.2nm,1.0s						
VNDA	**Vanda**	**60.92**	**185**	P	**P**	**03 01 13.8**	**+1.1**
	2.0nm,0.8s,baz=14,slow=6.7,SNR=11						
VNDA	**Vanda**	**60.92**	**185**	*e*P	**P**	**03 01 14.0**	**+1.4**
	2.5nm,0.8s						
CASY	**Casey**	**66.54**	**205**	*e*P	**P**	**03 01 48.6**	**0.0**
	14nm,1.1s						
QSPA	**South Pole Qui**	**72.63**	**180**	P	**P**	**03 02 25.7**	**+0.5**
	11nm,0.8s,baz=45,slow=2.8,SNR=30						
QSPA	**South Pole Qui**	**72.63**	**180**	*e*P	**P**	**03 02 25.1**	**0.0**
MDPB	**Devils Postpil**	**78.19**	**44**	*e*P	**P**	**03 02 56.9**	**+0.2**
	5.3nm,0.9s						
OMMB	**Old Mammoth Mi**	**78.24**	**44**	*e*P	**P**	**03 02 57.3**	**+0.3**
	6.8nm,1.3s						
YERR	**Yerington**	**78.82**	**43**	*e*P	**P**	**03 03 00.2**	**+0.2**
	4.2nm,0.9s						
NV01	**Mina Array Sit**	**79.14**	**44**	*e*P	**P**	**03 03 01.2**	**-0.4**
NVAR	**Mina Array Bea**	**79.14**	**44**	P	**P**	**03 03 01.5**	**-0.2**
	3.0nm,0.8s,baz=226,slow=9.4,SNR=25						
KVN	**Kaiserville**	**79.61**	**44**	*e*P	**P**	**03 03 04.1**	**0.0**
	3.1nm,0.9s						
PINE	**Pine Mountain**	**80.47**	**38**	*e*P	**P**	**03 03 09.0**	**+0.5**
	4.4nm,0.8s						
WVOR	**Wild Horse Val**	**81.10**	**40**	*e*P	**P**	**03 03 11.0**	**-0.7**
	6.4nm,1.1s						
TUC	**Tucson**	**81.48**	**52**	*e*P	**P**	**03 03 14.1**	**+0.3**
	4.6nm,0.9s						
J08A	**Circle Bar Ran**	**81.70**	**40**	*e*P	**P**	**03 03 14.4**	**-0.4**
	5.4nm,1.1s						
LCMT	**Little Creek M**	**81.87**	**47**	*e*P	**P**	**03 03 16.3**	**+0.5**
	4.8nm,1.2s						
X16A	**Lo Mia Camp, P**	**81.94**	**50**	*e*P	**P**	**03 03 17.1**	**+0.8**
	5.2nm,0.9s						
CCUT	**Cedar City**	**82.05**	**47**	*e*P	**P**	**03 03 17.6**	**+0.8**
	3.9nm,1.0s						
PSUT	**Pine Spring**	**82.19**	**46**	*e*P	**P**	**03 03 17.7**	**+0.2**
	3.3nm,0.8s						
U15A	**North Rim**	**82.26**	**48**	*e*P	**P**	**03 03 18.5**	**+0.5**
	6.7nm,0.8s						
WUAZ	**Wupatki**	**82.50**	**49**	*e*P	**P**	**03 03 19.8**	**+0.7**
	6.6nm,1.0s						
MTPU	**Mount Pierson**	**83.10**	**47**	*e*P	**P**	**03 03 23.4**	**+1.1**
	3.8nm,0.9s						
MFID	**Camas Ranch**	**83.37**	**41**	*e*P	**P**	**03 03 23.3**	**+0.1**
	5.3nm,1.0s						
F10A	**Beach Ranch, E**	**83.88**	**38**	*e*P	**P**	**03 03 25.3**	**-0.3**
	4.7nm,1.0s						
PAX	**Paxson**	**84.20**	**14**	*e*P	**P**	**03 03 30.6**	**+3.8**
	7.1nm,0.5s						
MAW	**Mawson**	**84.28**	**200**	P	**P**	**03 03 27.4**	**+0.3**
	5.1nm,0.7s,baz=130,slow=4.8,SNR=14						
MAW	**Mawson**	**84.28**	**200**	*e*P	**P**	**03 03 27.8**	**+0.7**
	1.3nm,0.8s						
HLID	**Hailey**	**84.33**	**41**	*e*P	**P**	**03 03 28.4**	**+0.4**
	2.4nm,0.9s						
ILAR	**Eielson Array**	**85.44**	**13**	P	**P**	**03 03 31.2**	**-1.4**
	0.3nm,0.4s,baz=223,slow=5.1,SNR=7.1						
TX31	**Lajitas Ar. Si**	**85.81**	**58**	*e*P	**P**	**03 03 36.5**	**+1.2**
TXAR	**Lajitas Array**	**85.81**	**58**	P	**P**	**03 03 36.0**	**+0.6**
	2.5nm,0.7s,baz=214,slow=6.0,SNR=8.7						
MCMT	**McKenzie Canyo**	**85.93**	**41**	*e*P	**P**	**03 03 36.1**	**+0.4**
REDW	**Red Top Meadow**	**86.50**	**43**	*e*P	**P**	**03 03 38.7**	**+0.2**
	4.1nm,1.0s						
IMW	**Indian Meadow**	**86.69**	**42**	*e*P	**P**	**03 03 39.8**	**+0.4**
	3.4nm,0.8s						
S22A	**4UR Ranch, Cre**	**86.76**	**49**	*e*P	**P**	**03 03 40.3**	**+0.4**
	3.0nm,1.1s						
HHC	**Hu-ho-hao-te**	**86.86**	**314**	*e*P	**P**	**03 03 38.6**	**-1.5**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,18nm,4.7s						
PDAR	**Pinedale Array**	**87.06**	**43**	P	**P**	**03 03 40.0**	**-1.1**
	comp=Z,0.9nm,0.6s,baz=225,slow=4.0,SNR=8.6						
PDAR	**Pinedale Array**	**87.06**	**43**	*e*P	**P**	**03 03 39.9**	**-1.2**
CD2	**Chengdu**	**88.73**	**303**	P	**P**	**03 03 49.7**	**+0.7**
CD2				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA	**Yellowknife Ar**	**93.93**	**25**	P	**P**	**03 04 10.9**	**-1.1**
	comp=Z,0.4nm,0.7s,baz=246,slow=4.8,SNR=5.1						
BUR08	**Bucovina Ar. S**	**144.12**	**332**	*e*PKPbc	**PKPdf**	**03 10 27.2**	**+0.3**
BUR04	**Bucovina Ar. S**	**144.14**	**332**	*e*PKPbc	**PKPdf**	**03 10 26.9**	**0.0**
BRTR	**Keskin Array B**	**144.37**	**315**	PKP	PKPbc	03 10 26.9	-0.6
	comp=Z,1.9nm,0.9s,baz=122,slow=4.7,SNR=12						
CLL	**Collm**	**144.97**	**347**	*e*PKPbc	**PKPbc**	**03 10 29.0**	**+0.2**
DPC	**Dobruska-Polom**	**145.06**	**343**	*e*PKP	**PKPab**	**03 10 29.8**	**-0.3**
MMAI	**Mount Meron Ar**	**145.80**	**304**	PKPbc	**PKPbc**	**03 10 32.4**	**+0.5**
	comp=Z,1.3nm,0.4s,baz=72,slow=4.7,SNR=5.8						
KHC	**Kasperske Hory**	**146.88**	**345**	*e*PKP	**PKPbc**	**03 10 35.5**	**+1.2**
GERES	**GERESS Array B**	**147.12**	**345**	PKPbc	**PKPbc**	**03 10 34.5**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=55,slow=5.1,SNR=4.3						
DIVS	**Divibare**	**149.16**	**334**	*e*PKPdf	**PKPbc**	**03 10 39.6**	**-0.7**
FUORN	**Ofenpass-Fuorn**	**149.99**	**348**	*e*PKPbc	**PKPbc**	**03 10 42.7**	**+0.3**

IDC 01 02:54:44.7±1.3, 2°.62N×92°.55E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.5/71, mbtmp3.7/7, MS2.8/2, Ms1 2.8/2, ms1mx2.4/60, Error ellipse: s-maj=64.8km s-min=20.8km az=50.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	**Pallekele**	**12.67**	**292**	LR	LR	03 01 49.5	
	comp=Z,51nm,21.7s,baz=116,slow=34						
MKAR	**Makanchi Array**	**44.89**	**350**	P	P	03 03 00.9	-0.1
	1.4nm,0.7s,baz=169,slow=8.5,SNR=14						
WRA	**Warramunga Arr**	**46.74**	**121**	P	P	03 03 15.4	-0.7
	0.9nm,0.8s,baz=299,slow=8.6,SNR=4.5						
KSRS	**Korea Array**	**47.49**	**39**	LR	LR	03 23 24.7	
	comp=Z,10nm,19.0s,baz=155,slow=36						
ASAR	**Alice Springs**	**47.98**	**125**	P	P	03 03 26.1	+0.4
	0.5nm,0.9s,baz=317,slow=7.6,SNR=3.0						
KURBB	**Kurchatov Arra**	**49.28**	**348**	P	P	03 03 35.1	0.0
	1.2nm,0.9s,baz=172,slow=7.3,SNR=9.1						
ZALV	**Zalesovo Beam**	**51.55**	**354**	P	P	03 03 52.2	-0.1
	1.2nm,0.6s,baz=189,slow=8.4,SNR=5.2						
BRTR	**Keskin Array B**	**64.74**	**313**	P	P	03 05 25.0	-0.2
	0.4nm,0.7s,baz=101,slow=7.5,SNR=3.3						
GERES	**GERESS Array B**	**80.69**	**319**	P	P	03 07 00.2	+0.3
	0.8nm,0.7s,baz=108,slow=4.3,SNR=6.0						

*ISCJB **01** 03:01:02.2±0.7, 1°.74N±0°.06×128°.5E±0°.1, h35km, mb4.0/9, Error ellipse: s-maj=19.5km s-min=8.6km az=170.9*
*IDC **01** 03:01:10.2±3.9, 1°.41N×128°.23E, h101km±39km, mb3.7/9, mb1 3.8/10, mb1mx3.5/55, mbtmp4.0/10, MS3.0/1, Ms1 3.0/1, ms1mx2.3/51, Error ellipse: s-maj=45.7km s-min=16.9km az=73.0*
*DJA **01** 03:01:12.7±1.3, 1°N±3°×12°8E±2°4, h10km, M3.9/5, MLv3.9/5*

ISC 01 03:01:03.5±0.8, 1°.70N±0°.09×128°.5E±0°.2, h35km, n25, σ1§05/23, mb4.0/9, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**2.53**	**204**	P	**Pn**	**03 01 43.4**	**+1.2**
SIJI	**Sorong**	**3.75**	**133**	P	Pn	03 02 06.5	+7.7
	5.8nm,0.3s,baz=217,slow=19,SNR=10						
SIJI				S	Sn	03 02 50.7	+8.9
	2.1nm,0.3s,baz=315,slow=22,SNR=4.5						
SANI	**Sanana**	**4.50**	**214**	P	**Pn**	**03 02 09.2**	**0.0**
NLAI	**Namlea**	**5.11**	**196**	P	**Pn**	**03 02 19.5**	**+2.0**
BATI	**Baumata**	**12.78**	**202**	LR	LR	03 09 20.9	
	comp=Z,66nm,18.1s,baz=122,slow=40						
WRA	**Warramunga Arr**	**22.25**	**165**	P	P	**03 05 56.4**	**-1.1**
	1.7nm,0.5s,baz=344,slow=11,SNR=16						
ASAR	**Alice Springs**	**25.75**	**169**	P	P	**03 06 29.6**	**-1.4**
	1.4nm,0.7s,baz=351,slow=13,SNR=9.8						
STKA	**Stephens Creek**	**35.62**	**161**	P	P	**03 07 57.9**	**-0.1**
	1.7nm,0.6s,baz=344,slow=8.2,SNR=5.4						
JIRN	**Jiri**	**48.01**	**307**	*e*P	**P**	**03 09 39.8**	**0.0**
	18nm,0.5s						
GUN	**Gumba**	**48.36**	**307**	*e*P	**P**	**03 09 42.9**	**+0.3**
	24nm,0.7s						
PKI	**Pulchoki**	**48.60**	**306**	*e*P	**P**	**03 09 44.0**	**-0.4**
	9.1nm,0.7s						
PKIN	**Phulchoki**	**48.61**	**306**	*e*P	**P**	**03 09 43.3**	**-1.1**
KKN	**Kakani**	**48.79**	**306**	*e*P	**P**	**03 09 45.7**	**0.0**
	8.7nm,0.5s						
DMN	**Daman**	**48.86**	**306**	*e*P	**P**	**03 09 46.4**	**+0.1**
	10nm,0.7s						
GKN	**Gorkha**	**49.40**	**306**	*e*P	**P**	**03 09 49.8**	**-0.5**
	5.9nm,0.5s						
SONM	**Songino Array**	**49.79**	**341**	P	**P**	**03 09 54.5**	**+1.6**
	1.0nm,0.7s,baz=157,slow=10.0,SNR=5.6						
KOLN	**Koldanda**	**50.15**	**305**	*e*P	**P**	**03 09 56.3**	**+0.2**
	27nm,0.6s						
DANN	**Dangsing**	**50.25**	**306**	*e*P	**P**	**03 09 57.0**	**+0.1**
	28nm,0.6s						
PYUN	**Piuthan**	**50.77**	**306**	*e*P	**P**	**03 10 01.1**	**+0.3**
	29nm,0.8s						
MKAR	**Makanchi Array**	**60.23**	**325**	P	**P**	**03 11 08.7**	**+0.4**
	3.4nm,0.6s,baz=119,slow=8.4,SNR=44						
KURBB	**Kurchatov Arra**	**64.40**	**327**	P	**P**	**03 11 36.0**	**0.0**
	5.1nm,0.6s,baz=127,slow=6.1,SNR=65						
AKTO	**Aktyubinsk**	**76.35**	**322**	P	**P**	**03 12 48.5**	**-0.6**
	1.2nm,0.7s,baz=101,slow=5.7,SNR=3.6						
ILAR	**Eielson Array**	**86.16**	**25**	P	**P**	**03 13 41.9**	**+1.0**
	0.2nm,0.4s,baz=246,slow=6.0,SNR=7.1						
ARCES	**ARCESS Array B**	**92.96**	**340**	P	**P**	**03 14 12.1**	**-0.7**
	0.5nm,0.6s,baz=93,slow=6.1,SNR=5.0						
TORD	**Torodi Ar. Bea**	**125.24**	**287**	PKP	**PKPdf**	**03 19 59.0**	**-2.6**
	0.5nm,0.7s,baz=95,slow=1.9,SNR=9.3						

IDC 01 03:02:59.6±62.0, 17°.48S×176°.57E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.4/45, mbtmp3.8/3, Error ellipse: s-maj=1086.0km s-min=147.5km az=76.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**34.69**	**239**	P	P	03 09 51.7	+0.4
	0.5nm,0.3s,baz=80,slow=12,SNR=2.8						
WRA	**Warramunga Arr**	**40.00**	**260**	P	P	03 10 36.3	-0.2
	0.4nm,0.6s,baz=94,slow=8.0,SNR=8.0						
ASAR	**Alice Springs**	**40.30**	**254**	P	P	03 10 38.7	-0.3
	2.3nm,0.6s,baz=87,slow=8.0,SNR=27						

*IDC **01** 03:43:44.9±3.7, 51°.45N×178°.89E, h0km, mb3.1/3, mb1 3.8/4, mb1mx3.2/79, mbtmp3.5/4, ML3.6/1, Error ellipse: s-maj=76.5km s-min=35.6km az=14.0*
*ISCJB **01** 03:43:55.1±0.7, 52°.3N±0°.1×178°.80E±0°.08, h59km, mb3.4/4, Error ellipse: s-maj=20.1km s-min=5.1km az=13.7*
*NEIC **01** 03:43:56.7±0.0, 52°.13N×178°.74E, h59km, ML2.8(AEIC), After AEIC.*

ISC 01 03:43:55.7±1.3, 52°.1N±0°.2×178°.76E±0°.06, h59km, n21, σ1§02/22, mb3.3/4, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GALAA	**Gareloi Lava P**	**1.57**	**102**	P	**Pn**	**03 44 21.9**	**+0.6**
GALAA				S	**Sn**	**03 44 41.4**	**+0.8**
TAPA	**Tanaga Point A**	**2.14**	**97**	P	**Pn**	**03 44 29.4**	**+0.3**
TAPA				S	**Sn**	**03 44 56.1**	**+1.6**
KICM	**Kanaga Island**	**2.51**	**93**	P	**Pn**	**03 44 34.8**	**+0.8**
KICM				S	**Sn**	**03 45 04.0**	**+0.6**
KIKV	**Kanaga Island**	**2.53**	**94**	P	**Pn**	**03 44 34.7**	**+0.4**
KINC	**Kanaga Island**	**2.55**	**93**	P	**Pn**	**03 44 35.2**	**+0.6**
KIRH	**Kanaga Island**	**2.57**	**93**	P	**Pn**	**03 44 35.1**	**+0.2**
ADAG	**Mount Adagdak**	**2.87**	**91**	P	**Pn**	**03 44 38.9**	**0.0**
SMY	**Shemya**	**2.92**	**284**	P	**Pn**	**03 44 39.5**	**0.0**
SMY				S	**Sn**	**03 45 14.3**	**+0.9**
ETKA	**Kagalaska Isla**	**3.00**	**93**	P	**Pn**	**03 44 40.7**	**0.0**
GSMY	**Great Sitkin M**	**3.20**	**89**	P	**Pn**	**03 44 43.5**	**+0.1**
KOKL	**Mount Kliuchef**	**4.33**	**85**	P	**Pn**	**03 44 58.8**	**-0.2**
ATKA	**Atka Island**	**4.34**	**86**	P	**Pn**	**03 44 59.3**	**+0.3**
KOFP	**Korovin Flat P**	**4.40**	**85**	P	**Pn**	**03 45 00.7**	**+0.9**
KDAK	**Kodiak Island**	**17.32**	**60**	P	**Pn**	**03 47 51.9**	**-1.1**
	0.2nm,0.3s,baz=243,slow=2.3,SNR=4.1						
ILAR	**Eielson Array**	**21.64**	**41**	P	**P**	**03 48 42.1**	**+1.4**
	0.2nm,0.5s,baz=238,slow=8.0,SNR=3.5						
H11N2	**WAKE ISLAND Hy**	**33.64**	**200**	T	T	04 25 44.8	
	baz=11,slow=76,SNR=5.2						
H11N3	**WAKE ISLAND Hy**	**33.65**	**200**	T	T	04 25 48.4	
	baz=11,slow=76,SNR=3.7						
H11N1	**WAKE ISLAND Hy**	**33.66**	**200**	T	T	04 26 00.5	
	baz=11,slow=76,SNR=4.4						
YKA	**Yellowknife Ar**	**35.82**	**47**	P	**P**	**03 50 47.8**	**-1.1**
	0.1nm,0.3s,baz=282,slow=9.0,SNR=8.2						
NRIK	**Noril'sk**	**42.99**	**329**	P	**P**	**03 51 50.1**	**+1.6**
	3.7nm,0.5s,baz=90,slow=6.1,SNR=4.0						
NVAR	**Mina Array Bea**	**44.95**	**82**	P	**P**	**03 52 02.6**	**-2.3**
	0.5nm,0.7s,baz=291,slow=7.6,SNR=5.3						

DJA 01 03:47:06.6±1.9, 4°N±27°×97°3E±°, h71km±96km, M3.9/3, MLv3.9/3, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**2.13**	**60**	P	Pn	03 47 39.0	-1.0
BSI				S	Sn	03 48 06.5	+1.0
MLSI	**Meulaboh, Aceh**	**2.96**	**93**	P	Pn	03 47 50.3	-1.0
MLSI				S	Sn	03 48 29.0

4.7nm,0.5s,baz=86
JAVC Velka Javorina 1.73 267 *e*PN **Pn 03 48 11.2 -0.6**
JAVC *e*SG **Sg 03 48 36.7 +0.3**
JAVC Velka Javorina 1.73 267 *e*Pn **Pn 03 48 11.2 -0.6**
baz=86
JAVC *e*Sg **Sg 03 48 36.7 +0.3**
4.7nm,0.5s,baz=86
MORC Moravsky Berou 1.97 295⇑ *i*P **Pb 03 48 17.6 +0.3**
MORC Moravsky Berou 1.97 295 *e*Pn **Pn 03 48 15.1 0.0**
baz=113
MORC *e*Sn **Sn 03 48 40.8 +0.5**
4.7nm,0.4s,baz=113
MORC Moravsky Berou 1.97 295 *e*PN **Pn 03 48 15.2 +0.1**
MORC *e*SN **Sn 03 48 40.8 +0.5**
MORC Moravsky Berou 1.97 295 *e*Pn **Pn 03 48 15.1 0.0**
baz=113
MORC *e*Sn **Sn 03 48 40.8 +0.5**
4.7nm,0.4s,baz=113
VRAC Vranov 2.46 279 *e*Pn **Pn 03 48 21.7 +0.1**
VRAC Vranov 2.46 279 *e*PN **Pn 03 48 21.7 +0.1**
VRAC Vranov 2.46 279 *e*Pn **Pn 03 48 21.7 +0.1**
baz=97
KRUC Moravsky 2.57 274 *e*Pn **Pn 03 48 22.9 -0.3**
baz=91
KRUC *e*Sn **Sn 03 48 54.6 -0.3**
1.9nm,0.4s,baz=91
KRUC Moravsky 2.57 274 *e*PN **Pn 03 48 23.0 -0.3**
KRUC *e*SN **Sn 03 48 54.6 -0.3**
KRUC Moravsky 2.57 274 *e*Pn **Pn 03 48 22.9 -0.3**
baz=91
KRUC *e*Sn **Sn 03 48 54.6 -0.3**
1.9nm,0.4s,baz=91
DPC Dobruska-Polom 2.93 300 *e*PG **Pb 03 48 34.7 +1.1**
DPC *e*SG **Sg 03 49 13.5 -1.3**
comp=Z,6.1nm,0.7s
DPC Dobruska-Polom 2.93 300 Pg **Pb 03 48 34.7 +1.1**
DPC Sg **Sg 03 49 13.5 -1.3**
6.1nm,0.7s
BURAR Bucovina Array 3.55 111⇑ *i*P **Pn 03 48 37.5 +0.7**

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*ISCJB **01** 03:57:18.9±0.6,26'.41S±0'.04×27'.54E±0'.04,h8km±5km, Error ellipse: s-maj=7.6km s-min=4.7km az=40.4*
*PRE **01** 03:57:19.0±1.9,26'.42S×27'.52E,h2km,ML2.6*
*EAF **01** 03:57:25.0±9.2,26'.10S×26'.70E,h15km,ML3.9*
ISC 01 03:57:18.9±0.9,26'.38S±0'.04×27'.50E±0'.04,h10km±7km, n15,σ1s54/25,South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLOF	**Kloof**	**0.10**	**74**	*e*P	**Pg**	**03 57 21.5**	**-0.1**
KLOF				*e*S	**Sg**	**03 57 22.7**	**-0.9**
KLOF				AML	AML	03 57 23.8	
	comp=Z,3μm,0.2s						
PRYS	**Parys**	**0.56**	**193**	*e*P	**Pg**	**03 57 29.8**	**0.0**
PRYS				*e*S	**Sg**	**03 57 37.2**	**0.0**
PRYS				AML	AML	03 57 42.2	
	comp=Z,96nm,0.5s						
ERPM	**east rand prop**	**0.66**	**87**	*e*P	**Pg**	**03 57 32.5**	**+0.7**
ERPM				*e*S	**Sg**	**03 57 40.4**	**-0.1**
ERPM				AML	AML	03 57 41.2	
	comp=Z,34nm,0.3s						
KSR	**Koster**	**0.76**	**314**	*e*P	**Pb**	**03 57 35.0**	**+0.7**
KSR				*e*S	**Sb**	**03 57 45.1**	**+0.5**
KSR				AML	AML	03 57 54.6	
	comp=Z,51nm,0.5s						
SLR	**Silverton**	**0.95**	**48**	*e*P	**Pg**	**03 57 36.2**	**-0.9**
SLR				*e*S	**Sb**	**03 57 51.4**	**+1.2**
SLR				AML	AML	03 57 54.8	
	comp=Z,73nm,0.2s						
SWZ	**Schweizer**	**2.10**	**247**	*e*P	**Pb**	**03 57 56.7**	**-0.4**
SWZ				*e*S	**Sb**	**03 58 22.9**	**-0.4**
SWZ				AML	AML	03 58 26.1	
	comp=Z,226nm,0.3s						
BOSA	**Boshof**	**2.99**	**221**	*i* P	**Pn**	**03 58 07.6**	**+1.1**
BOSA	**Boshof**	**2.99**	**221**	*e*P	**Pn**	**03 58 07.6**	**+1.1**
BOSA				*e*S	**Sn**	**03 58 44.4**	**+1.9**
BOSA				AML	AML	03 58 52.5	
	comp=Z,20nm,0.7s						
BOSA	**Boshof**	**2.99**	**221**	*i* P	**Pn**	**03 58 07.6**	**+1.1**
CNG	**Changalane**	**4.21**	**90**	*e*P	**Pn**	**03 58 23.6**	**+0.6**
CNG				*e*S	**Sn**	**03 59 08.5**	**-3.8**
CNG				AML	AML	03 59 28.2	
	comp=Z,12nm,0.4s						
CNG	**Changalane**	**4.21**	**90**	*e*P	Pg	03 58 47.7	+8.3
CNG				*e*		03 58 50.0	
	baz=0.9,slow=18						
CNG				*e*S	**Sb**	**03 59 26.5**	**+2.7**
CNG				IAML		03 59 29.9	
	comp=Z,275nm,0.6s						
UPI	**Upington**	**5.90**	**249**	*e*P	**Pn**	**03 58 46.8**	**+0.4**
UPI				*e*S	**Sn**	**03 59 52.6**	**-1.5**
UPI				AML	AML	03 59 55.2	
	comp=Z,29nm,0.7s						
BLWY	**Bulawayo**	**6.29**	**10**	*i* P	**Pn**	**03 58 53.1**	**+1.2**
BLWY	**Bulawayo**	**6.29**	**10**	*i* P	**Pn**	**03 58 53.1**	**+1.2**
SOE	**Somerset East**	**6.54**	**195**	*e*P	**Pn**	**03 58 56.1**	**+0.9**
SOE				*e*S	**Sn**	**04 00 06.7**	**-3.1**
SOE				AML	AML	04 00 12.7	
	comp=Z,1.5nm,0.4s						

IDC 01 04:04:43.6±8.0,5'.93S×149'.87E,h67km±61km,mb3.5/2, mb1 3.8/3,mb1mx3.1/54,mbtmp3.8/3,ML1.8/1,Error ellipse: s-maj=118.8km s-min=52.2km az=123.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.37**	**218**	P	Pn	04 05 47.7	0.0
	4.0nm,0.3s,baz=18,slow=5.9,SNR=4.9						
PMG				S	Sn	04 06 38.2	+0.9
	5.1nm,0.3s,baz=201,slow=20,SNR=5.9						
WRA	**Warramunga Arr**	**20.54**	**226**	P	P	04 09 17.1	+0.2
	2.4nm,0.5s,baz=51,slow=11,SNR=41						
ASAR	**Alice Springs**	**23.39**	**219**	P	P	04 09 46.6	-0.2
	0.7nm,0.3s,baz=54,slow=9.0,SNR=20						
TORD	**Torodi Ar. Bea**	**147.84**	**285**	PKPbc	PKPbc	04 24 21.5	-0.7
	0.2nm,0.3s,baz=88,slow=2.7,SNR=11						

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*IDC **01** 04:12:16.2±1.6,48'.80N×129'.27W,h0km,mb4.0/4, mb1 4.0/9,mb1mx3.6/76,mbtmp3.8/9,ML3.6/5,MS3.5/11, Ms1 3.5/11,ms1mx3.1/65,Error ellipse: s-maj=32.5km s-min=16.3km az=38.0*
*NEIC **01** 04:12:17.4±0.0,48'.86N×129'.16W,h10km,mb4.0/52, MW3.8(OTT),After OTT.*
*PGC **01** 04:12:17.4±0.6,48'.86N×129'.16W,h10km,mb4.1, MLSn3.2/30,Mw3.8/30,238km west of Tofino, Bc Vancouver Island, Canada Region*
ISC 01 04:12:21.6±0.8,49'.06N±0'.05×128'.90W±0'.07,h20km±7km, n306,σ1s50/332,mb4.3/16,MS3.5/9,2C-2D,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BPBC	**Brooks Peninsu**	**1.32**	**33**	Pn	**Pn**	**04 12 43.9**	**-1.0**
BPBC				Sn	**Sb**	**04 13 02.1**	**-0.2**
BPBC	**Brooks Peninsu**	**1.32**	**33**	Pn	**Pn**	**04 12 43.9**	**-1.0**
BPBC				Sn	**Sb**	**04 13 02.1**	**-0.2**
EDB	**Eliza Dome**	**1.42**	**54**	Pn	**Pn**	**04 12 44.6**	**-1.6**
EDB				Sn	**Sn**	**04 13 04.3**	**0.0**
EDB	**Eliza Dome**	**1.42**	**54**	Pn	**Pn**	**04 12 44.6**	**-1.6**
EDB				Sn	**Sn**	**04 13 04.3**	**0.0**
ETB	**Estevan Point**	**1.58**	**78**	Pn	**Pn**	**04 12 46.7**	**-1.7**
ETB	**Estevan Point**	**1.58**	**78**	Pn	**Pn**	**04 12 46.7**	**-1.7**
PACB	**Port Alice, BC**	**1.65**	**33**	Pn	**Pn**	**04 12 48.2**	**-1.2**
PACB				Sn	**Sn**	**04 13 08.9**	**-1.1**
HOLB	**Holberg**	**1.66**	**17**	Pn	**Pn**	**04 12 47.9**	**-1.6**
HOLB				Sn	**Sn**	**04 13 09.7**	**-0.6**
HOLB	**Holberg**	**1.66**	**17**	Pn	**Pn**	**04 12 47.9**	**-1.6**
HOLB				Sn	**Sn**	**04 13 09.7**	**-0.6**
MAYB	**Maynard**	**1.75**	**39**	Pn	**Pn**	**04 12 49.5**	**-1.4**
MAYB				Sn	**Sn**	**04 13 12.1**	**-0.6**
MAYB	**Maynard**	**1.75**	**39**	Pn	**Pn**	**04 12 49.5**	**-1.4**
MAYB				Sn	**Sn**	**04 13 12.1**	**-0.6**
WOSB	**Woss**	**1.87**	**53**	Pn	**Pn**	**04 12 51.7**	**-0.9**
WOSB	**Woss**	**1.87**	**53**	Pn	**Pn**	**04 12 51.7**	**-0.9**
PHC	**Port Hardy**	**1.90**	**29**	Pn	**Pn**	**04 12 52.0**	**-0.9**
PHC				Sn	**Sn**	**04 13 16.6**	**+0.4**
PHC	**Port Hardy**	**1.90**	**29**	Pn	**Pn**	**04 12 52.0**	**-0.9**
PHC				Sn	**Sn**	**04 13 16.6**	**+0.4**
TOFB	**Tofino**	**1.97**	**86**	Pn	**Pn**	**04 12 51.3**	**-2.5**
TOFB				Sn	**Sn**	**04 13 16.7**	**-1.1**
TLCB	**Telegraph Cove**	**2.00**	**41**	Pn	**Pn**	**04 12 53.7**	**-0.5**
GDR	**Gold River**	**2.01**	**68**	Pn	**Pn**	**04 12 52.6**	**-1.7**
GDR	**Gold River**	**2.01**	**68**	Pn	**Pn**	**04 12 52.6**	**-1.7**
B012	**Ucluelet**	**2.22**	**92**	Pn	**Pn**	**04 12 54.3**	**-2.9**
B012				Sn	**Sn**	**04 13 21.3**	**-2.6**
OZB	**Mount Ozzard**	**2.25**	**91**	Pn	**Pn**	**04 12 54.7**	**-2.9**
OZB				Sn	**Sn**	**04 13 22.9**	**-1.9**
OZB	**Mount Ozzard**	**2.25**	**91**	Pn	**Pn**	**04 12 54.7**	**-2.9**
OZB				Sn	**Sn**	**04 13 22.9**	**-1.9**
BTB	**Buttle Lake**	**2.25**	**78**	Pn	**Pn**	**04 12 56.2**	**-1.6**
BTB				Sn	**Sn**	**04 13 24.6**	**-0.5**
BTB	**Buttle Lake**	**2.25**	**78**	Pn	**Pn**	**04 12 56.2**	**-1.6**
BTB				Sn	**Sn**	**04 13 24.6**	**-0.5**
SPLB	**Strathcona Par**	**2.28**	**67**	Pn	**Pn**	**04 12 57.1**	**-0.9**
SPLB				Sn	**Sn**	**04 13 25.0**	**-0.5**
NCRB	**Newcastle Ridg**	**2.28**	**53**	Pn	**Pn**	**04 12 58.0**	**-0.2**
NCRB				Sn	**Sn**	**04 13 26.4**	**+0.6**
NCRB	**Newcastle Ridg**	**2.28**	**53**	Pn	**Pn**	**04 12 58.0**	**-0.2**
NCRB				Sn	**Sn**	**04 13 26.4**	**+0.6**
MWAB	**Mount Washingt**	**2.45**	**73**	Sn	**Sn**	**04 13 29.9**	**+0.1**
B928	**Bamfield**	**2.49**	**94**	Pn	**Pn**	**04 12 58.0**	**-2.9**
B928				Sn	**Sn**	**04 13 27.7**	**-3.0**
CBB	**Campbell River**	**2.50**	**66**	Pn	**Pn**	**04 13 00.4**	**-0.7**
CBB				Sn	**Sn**	**04 13 31.8**	**+0.8**
CBB	**Campbell River**	**2.50**	**66**	Pn	**Pn**	**04 13 00.4**	**-0.7**
CBB				Sn	**Sn**	**04 13 31.8**	**+0.8**
B927	**Port Alberni**	**2.69**	**85**	Pn	**Pn**	**04 13 01.3**	**-2.3**
B927				Sn	**Sn**	**04 13 34.6**	**-0.9**
MGB	**Mount Grey**	**2.77**	**90**	Pn	**Pn**	**04 13 02.2**	**-2.7**
MGB				Sn	**Sn**	**04 13 35.8**	**-2.1**
MGB	**Mount Grey**	**2.77**	**90**	Pn	**Pn**	**04 13 02.2**	**-2.7**
MGB				Sn	**Sn**	**04 13 35.8**	**-2.1**
TXB	**Texada**	**2.99**	**76**	Pn	**Pn**	**04 13 06.6**	**-1.2**
TXB	**Texada**	**2.99**	**76**	Pn	**Pn**	**04 13 06.6**	**-1.2**
YOUB	**Youbou, Lake C**	**3.06**	**91**	Pn	**Pn**	**04 13 06.6**	**-2.3**
YOUB				Sn	**Sn**	**04 13 44.2**	**-0.7**
YOUB	**Youbou, Lake C**	**3.06**	**91**	Pn	**Pn**	**04 13 06.6**	**-2.3**
YOUB				Sn	**Sn**	**04 13 44.2**	**-0.7**
GHNB	**Nanoose**	**3.07**	**84**	Pn	**Pn**	**04 13 07.8**	**-1.1**
GHNB				Sn	**Sn**	**04 13 44.9**	**-0.1**
B926	**Mesachie Lake**	**3.15**	**93**	Pn	**Pn**	**04 13 08.2**	**-1.9**
B926				Sn	**Sn**	**04 13 46.1**	**-1.0**
BBB	**Bella Bella**	**3.17**	**9**	Pn	**Pn**	**04 13 09.5**	**-0.7**
BBB				Sn	**Sn**	**04 13 46.9**	**-0.5**
BBB	**Bella Bella**	**3.17**	**9**	*e*Pn	**Pn**	**04 13 09.8**	**-0.4**
OFR	**Olym-F Res Ctr**	**3.20**	**109**	Sn	**Sn**	**04 13 46.0**	**-2.2**
NLLB	**Nanaimo Lost L**	**3.23**	**85**	Pn	**Pn**	**04 13 09.7**	**-1.4**
NLLB				Sn	**Sn**	**04 13 48.5**	**-0.5**
NLLB	**Nanaimo Lost L**	**3.23**	**85**	Pn	**Pn**	**04 13 09.7**	**-1.4**
NLLB				Sn	**Sn**	**04 13 48.5**	**-0.5**
SHB	**Sechelt**	**3.33**	**79**	Pn	**Pn**	**04 13 11.9**	**-0.8**
SHB	**Sechelt**	**3.33**	**79**	Pn	**Pn**	**04 13 11.9**	**-0.8**
LZB	**Mount Lazard**	**3.38**	**96**	Pn	**Pn**	**04 13 10.8**	**-2.5**
LZB				Sn	**Sn**	**04 13 51.7**	**-1.2**
LZB	**Mount Lazard**	**3.38**	**96**	Pn	**Pn**	**04 13 10.8**	**-2.5**
BPCB	**Bare Point**	**3.43**	**90**	Pn	**Pn**	**04 13 12.3**	**-1.5**
BPCB				Sn	**Sn**	**04 13 53.5**	**-0.3**
BPCB	**Bare Point**	**3.43**	**90**	Pn	**Pn**	**04 13 12.3**	**-1.5**
BPCB				Sn	**Sn**	**04 13 53.5**	**-0.3**
GOBB	**Galiano Island**	**3.55**	**90**	Pn	**Pn**	**04 13 14.4**	**-1.1**
GOBB	**Galiano Island**	**3.55**	**90**	Pn	**Pn**	**04 13 14.4**	**-1.1**
B010	**North Saanich**	**3.62**	**94**	Pn	**Pn**	**04 13 14.4**	**-2.1**
PGC	**Sidney**	**3.62**	**94**	Pn	**Pn**	**04 13 14.4**	**-2.1**
PGC				Sn	**Sn**	**04 13 58.3**	**-0.3**
PGC	**Sidney**	**3.62**	**94**	*e*Pn	**Pn**	**04 13 14.5**	**-2.0**
PGC				*e*Sn	**Sn**	**04 13 59.2**	**+0.6**
PA02	**PA02 Ocean**	**3.62**	**94**	Pn	**Pn**	**04 13 14.1**	**-2.4**
B011	**North Saanich**	**3.62**	**94**	Pn	**Pn**	**04 13 14.4**	**-2.1**
PA01	**PA01 North**	**3.62**	**94**	Pn	**Pn**	**04 13 14.6**	**-1.9**
PA04	**PA04 Cage**	**3.63**	**94**	Pn	**Pn**	**04 13 14.3**	**-2.2**
VGZ	**Gonzales**	**3.75**	**98**	Pn	**Pn**	**04 13 15.7**	**-2.6**
SNB	**Saturna Island**	**3.79**	**92**	Pn	**Pn**	**04 13 17.1**	**-1.7**
MCW	**Mount Constitu**	**4.03**	**93**	Pn	**Pn**	**04 13 19.8**	**-2.3**
A04D	**Lummi Island**	**4.10**	**92**	P	**Pn**	**04 13 21.5**	**-1.6**
	baz=274,SNR=7.8						
B05A	**Bryant**	**4.58**	**97**	P	**Pn**	**04 13 28.4**	**-1.2**
	baz=280						
LLLB	**Lilloet**	**4.80**	**69**	*e*Pn	**Pn**	**04 13 33.4**	**+0.6**
LON	**Longmire**	**5.30**	**113**	*e*Pn	**Pn**	**04 13 39.7**	**+0.1**
LTY	**Liberty**	**5.80**	**105**	*e*Pn	**Pn**	**04 13 46.4**	**-0.1**
H04A	**Detroit Lake**	**6.35**	**131**	*e*Pn	**Pn**	**04 13 54.1**	**0.0**
B08A	**Colville Reser**	**6.37**	**93**	*e*Pn	**Pn**	**04 13 53.3**	**-1.0**
G05D	**Wamic, OR**	**6.43**	**124**	P	**Pn**	**04 13 55.7**	**+0.6**
	baz=307						
I03D	**Drain, OR**	**6.60**	**142**	P	**Pn**	**04 13 57.4**	**0.0**
	baz=324						
PINE	**Pine Mountain**	**7.62**	**131**	*e*Pn	**Pn**	**04 14 12.4**	**+0.9**
HUMO	**Hull Mountain**	**7.67**	**145**	*e*Pn	**Pn**	**04 14 12.9**	**+0.7**
NEW	**Newport**	**7.84**	**91**	Pn	**Pn**	**04 14 14.3**	**-0.2**
	0.8nm,0.3s,baz=288,slow=13,SNR=7.9						
NEW				LR	LR	04 17 22.8	
	comp=Z,468nm,20.3s,baz=264,slow=38						
NEW	**Newport**	**7.84**	**91**	P	**Pn**	**04 14 14.2**	**-0.2**
	baz=279						
YBH	**Yreka Blue Hor**	**8.52**	**147**	Pn	**Pn**	**04 14 26.0**	**+2.1**
	0.2nm,0.3s,baz=334,slow=13,SNR=19						
YBH				LR	LR	04 17 19.8	
	comp=Z,327nm,19.4s,baz=332,slow=36						
YBH	**Yreka Blue Hor**	**8.52**	**147**	*e*Pn	**Pn**	**04 14 25.9**	**+2.0**
M02C	**Callahan**	**8.77**	**149**	P	**Pn**	**04 14 29.1**	**+1.7**
	baz=331,SNR=8.3						
M04C	**Macdoel**	**8.81**	**143**	P	**Pn**	**04 14 29.2**	**+1.3**
	baz=327,SNR=7.8						
BMO	**Blue Mountains**	**8.98**	**114**	*e*Pn	**Pn**	**04 14 28.6**	**-1.5**
N02D	**Trinity Center**	**9.20**	**149**	P	**Pn**	**04 14 34.3**	**+1.2**
	baz=332						
J08A	**Circle Bar Ran**	**9.21**	**124**	*e*Pn	**Pn**	**04 14 36.9**	**+3.7**
MOD	**Modoc Plateau**	**9.36**	**137**	*e*Pn	**Pn**	**04 14 37.7**	**+2.2**
DLBC	**Dease Lake**	**9.42**	**356**	*e*Pn	**Pn**	**04 14 33.9**	**-2.2**
WDC	**Whiskeytown Da**	**9.61**	**150**	*e*Pn	**Pn**	**04 14 40.4**	**+1.8**
WVOR	**Wild Horse Val**	**9.76**	**129**	*e*Pn	**Pn**	**04 14 42.3**	**+1.4**
WALA	**Waterton Lakes**	**9.84**	**84**	*e*Pn	**Pn**	**04 14 41.4**	**-0.6**
O03D	**Paynes Creek**	**10.11**	**147**	P	**Pn**	**04 14 46.2**	**+0.5**
	baz=331						
MSO	**Missoula**	**10.29**	**97**	P	**Pn**	**04 14 47.6**	**-0.4**
	baz=287						
MFID	**Camas Ranch**	**10.67**	**117**	*e*Pn	**Pn**	**04 14 53.7**	**+0.5**
ORV	**Oroville**	**10.88**	**148**	*e*Pn	**Pn**	**04 14 56.9**	**+0.9**
BEKR	**Beckworth**	**11.03**	**143**	*e*Pn	**Pn**	**04 15 01.1**	**+2.8**
HLID	**Hailey**	**11.42**	**113**	P	**Pn**	**04 15 03.6**	**-0.1**
	baz=303						
HLID	**Hailey**	**11.42**	**113**	*e*Pn	**Pn**	**04 15 04.4**	**+0.7**
PAHR	**Pah Rah Range**	**11.56**	**140**	*e*Pn	**Pn**	**04 15 07.9**	**+2.4**
AFDM	**Forest Hills D**	**11.60**	**148**	*e*Pn	**Pn**	**04 15 07.8**	**+1.8**
MCMT	**McKenzie Canyo**	**11.76**	**105**	*e*Pn	**Pn**	**04 15 08.5**	**+0.2**
PNTR	**Pine Nut**	**11.99**	**143**	*e*Pn	**Pn**	**04 15 11.6**	**+0.1**
BOZ	**Bozeman (W)**	**12.22**	**100**	*e*Pn	**Pn**	**04 15 12.6**	**-2.0**
	3.5nm,1.4s						
YERR	**Yerington**	**12.23**	**142**	*e*Pn	**Pn**	**04 15 15.8**	**+1.1**
WAKR	**Walker**	**12.56**	**144**	*e*Pn	**Pn**	**04 15 22.0**	**+2.7**
CMB	**Columbia Colle**	**12.62**	**148**	*e*Pn	**Pn**	**04 15 21.9**	**+1.9**
RYN	**Ryan**	**12.83**	**141**	*e*Pn	**Pn**	**04 15 26.2**	**+3.3**
YHB	**Horse Butte**	**12.85**	**103**	*e*Pn	**Pn**	**04 15 24.1**	**+1.0**
YHH	**Holmes Hill**	**13.05**	**102**	*e*Pn	**Pn**	**04 15 28.6**	**+2.5**
NVAR	**Mina Array Bea**	**13.09**	**140**	Pn	**Pn**	**04 15 27.7**	**+1.2**
	baz=316,slow=12,SNR=9.7						
NV11	**Mina Array Sit**	**13.15**	**140**	*e*Pn	**Pn**	**04 15 31.0**	**+3.8**
YPP	**Pitchstone Pla**	**13.31**	**104**	*e*Pn	**Pn**	**04 15 31.9**	**+2.3**
HVU	**Hansel Valley**	**13.45**	**117**	*e*Pn	**Pn**	**04 15 32.4**	**+1.1**
TPAW	**Teton Pass**	**13.60**	**107**	*e*Pn	**Pn**	**04 15 34.5**	**+1.1**
REDW	**Red Top Meadow**	**13.72**	**108**	*e*Pn	**Pn**	**04 15 35.8**	**+0.6**
BGU	**Big Grassy Mou**	**13.85**	**120**	*e*Pn	**Pn**	**04 15 39.3**	**+2.5**
SPUT	**South Promonto**	**13.94**	**118**	*e*Pn	**Pn**	**04 15 40.4**	**+2.4**
RLMT	**Red Lodge**	**13.94**	**99**	P	**Pn**	**04 15 38.5**	**+0.4**
	baz=293,SNR=16						
RLMT	**Red Lodge**	**13.94**	**99**	*e*Pn	**Pn**	**04 15 39.7**	**+1.7**
HWUT	**Hardware Ranch**	**14.27**	**115**	*e*Pn	**Pn**	**04 15 44.7**	**+2.1**
DUG	**Dugway, Tooele**	**14.46**	**122**	P	**Pn**	**04 15 44.6**	**-0.5**
	baz=312						
DUG	**Dugway, Tooele**	**14.46**	**122**	*e*Pn	**Pn**	**04 15 46.6**	**+1.5**
PD31	**Pinedale Array**	**14.85**	**108**	*e*Pn	**P**	**04 15 53.4**	**-2.7**
PDAR	**Pinedale Array**	**14.85**	**108**	Pn	**Pn**	**04 15 52.1**	**+1.7**
	0.1nm,0.3s,baz=283,slow=14,SNR=4.7						
PDAR				LR	LR	04 21 51.0	
	comp=Z,187nm,18.1s,baz=302,slow=38						
PDAR	**Pinedale Array**	**14.85**	**108**	*e*Pn	**Pn**	**04 15 51.9**	**+1.5**
CWC	**Cottonwood Cre**	**14.89**	**144**	P	**Pn**	**04 15 51.4**	**+0.4**
	baz=330						
PSUT	**Pine Spring**	**15.10**	**129**	*e*Pn	**Pn**	**04 15 56.2**	**+2.4**
	6.3nm,1.0s						
PSUT				*e*Sn	**S**	**04 18 53.7**	**-3.9**
TPNV	**Topopah Spring**	**15.21**	**138**	P	**Pn**	**04 15 55.8**	**+0.5**
	baz=326,SNR=6.7						
FURC	**Furnace Creek,**	**15.36**	**141**	P	**Pn**	**04 15 58.4**	**+1.4**
	baz=328						
LAO	**LASA Array**	**15.39**	**90**	P	**Pn**	**04 15 57.1**	**-0.4**
	baz=286						
LAO	**LASA Array**	**15.39**	**90**	*e*Pn	**Pn**	**04 15 59.4**	**+1.9**
	48nm,1.9s						
ISA	**Isabella, Lake**	**15.43**	**146**	*e*Pn	**Pn**	**04 15 59.3**	**+1.3**
	9.5nm,1.3s						
MPMC	**Manual Prospec**	**15.45**	**143**	P	**Pn**	**04 16 00.1**	**+1.5**
	baz=330						
YKA	**Yellowknife Ar**	**15.62**	**25**	Pn	**Pn**	**04 15 59.6**	**-0.7**
	0.2nm,0.3s,baz=217,slow=12,SNR=25						
YKA				LR	LR	04 21 57.4	
	comp=Z,12nm,18.3s,baz=216,slow=36						
YKW3	**Yellowknife Ar**	**15.67**	**25**	*e*Pn	**Pn**	**04 15 58.9**	**-2.1**
	3.4nm,0.9s						
MSU	**Marysvale**	**16.00**	**125**	*e*Pn	**Pn**	**04 16 05.7**	**+0.1**
DAWY	**Dawson**	**16.07**	**343**	*e*Pn	**Pn**	**04 16 04.6**	**-1.6**
	7.5nm,1.2s						
CCUT	**Cedar City**	**16.10**	**130**	*e*Pn	**Pn**	**04 16 07.2**	**+0.3**
	17nm,1.8s						
CCUT				*e*S	**S**	**04 19 21.2**	**+3.2**
Q16A	**Castle Valley**	**16.26**	**122**	*e*Pn	**Pn**	**04 16 07.9**	**-1.0**
	21nm,1.1s						
MTPU	**Mount Pierson**	**16.34**	**126**	*e*Pn	**P**	**04 16 11.9**	**-1.0**
	11nm,1.0s						
GSC	**Goldstone, Bar**	**16.38**	**143**	P	**P**	**04 16 12.6**	**-0.5**
	baz=330						
KDAK	**Kodiak Island**	**16.52**	**311**	LR	LR	04 20 33.5	
	comp=Z,148nm,21.1s,baz=127,slow=30						
LCMT	**Little Creek M**	**16.57**	**131**	*e*Pn	**Pn**	**04 16 13.3**	**+0.5**
	8.9nm,1.1s						
LCMT				*e*Sn	**Sn**	**04 19 19.7**	**+3.4**
TUQ	**Turquoise Moun**	**16.63**	**140**	P	**Pn**	**04 16 14.8**	**+1.3**
	baz=328						
KNB	**Kanab**	**16.78**	**130**	*e*Pn	**P**	**04 16 18.4**	**+0.8**
	9.5nm,1.2s						
DOT	**Dot Lake**	**16.79**	**336**	*e*Pn	**Pn**	**04 16 16.3**	**+1.0**
	28nm,1.1s						
K22A	**Casper**	**16.82**	**104**	P	**Pn**	**04 16 16.7**	**+0.7**
	baz=299						
K22A	**Casper**	**16.82**	**104**	*e*Pn	**Pn**	**04 16 16.5**	**+0.5**
	15nm,1.1s						
RWWY	**Rawlins**	**16.89**	**108**	*e*Pn	**Pn**	**04 16 17.4**	**+0.5**
	18nm,1.3s						
SCRK	**Sand Creek**	**17.03**	**337**	*e*Pn	**Pn**	**04 16 18.4**	**0.0**
	6.8nm,1.1s						
O20A	**White River Ci**	**17.16**	**114**	P	**P**	**04 16 21.7**	**-0.1**
	baz=307,SNR=5.3						
O20A	**White River Ci**	**17.16**	**114**	*e*Pn	**P**	**04 16 23.4**	**+1.5**
	13nm,1.1s						
GMRC	**Granite Mounta**	**17.30**	**141**	P	**P**	**04 16 22.8**	**-0.5**
	baz=329						
DHY	**Denali Highway**	**17.32**	**331**	*e*Pn	**Pn**	**04 16 21.1**	**-1.0**
	16nm,1.6s						
FFC	**Flin Flon**	**17.49**	**61**	*e*Pn	**Pn**	**04 16 24.1**	**0.0**
	39nm,0.9s						
U15A	**North Rim**	**17.51**	**130**	*e*Pn	**P**	**04 16 26.5**	**+0.8**
	9.1nm,1.1s						
PV09	**Paradox Valley**	**17.70**	**119**	*e*Pn	**P**	**04 16 29.8**	**+1.8**
RSSD	**Black Hills**	**17.76**	**97**	P	**P**	**04 16 28.3**	**-0.1**
	baz=294						
RSSD	**Black Hills**	**17.76**	**97**	*e*Pn	**P**	**04 16 28.6**	**+0.2**
	6.6nm,1.0s						
W13A	**Hualapai Mount**	**17.81**	**136**	*e*Pn	**P**	**04 16 31.7**	**+2.7**
	2.8nm,1.0s						
PV10	**Paradox Valley**	**17.84**	**119**	*e*Pn	**P**	**04 16 29.9**	**+0.6**
	25nm,1.2s						
PV04	**Paradox Valley**	**17.91**	**119**	*e*Pn	**P**	**04 16 29.9**	**-0.2**
	19nm,1.2s						
PV05	**Paradox Valley**	**18.01**	**120**	*e*Pn	**P**	**04 16 31.2**	**0.0**
	41nm

25nm,1.5s
C32A **Crookston** 21.43 81 P P 04 17 08.3 +0.1
baz=285
E32A **Braaten, Kindr** 21.43 85 P P 04 17 08.4 +0.2
baz=288
G32A **Webster** 21.61 88 P P 04 17 10.7 +0.6
baz=291
F32A **Veblen** 21.63 86 P P 04 17 11.3 +1.0
baz=290
TASM **ASL Pad, Albuq** 21.73 122 P P 04 17 13.4 +1.7
baz=317,SNR=5.1
ANMO **Albuquerque** 21.73 122 P P 04 17 13.3 +1.6
baz=317
ANMO **Albuquerque** 21.73 122 *e*P P 04 17 12.5 +0.7
4.2nm,1.0s
TASL **Snake Pit, Alb** 21.73 122 P P 04 17 13.5 +1.8
baz=317,SNR=5.1
AGMN **Agassiz Nation** 21.74 79 P P 04 17 11.9 +0.4
baz=284,SNR=14
AGMN **Agassiz Nation** 21.74 79 *e*P P 04 17 11.3 -0.2
21nm,1.1s
A33A **Warroad** 21.89 78 P P 04 17 13.1 0.0
baz=283,SNR=5.8
B33A **Robert and Kas** 21.92 79 P P 04 17 13.6 +0.1
baz=284
H32A **Carlson Farm,** 21.93 90 P P 04 17 13.6 0.0
baz=293,SNR=6.5
C33A **Trail** 21.94 81 P P 04 17 13.2 -0.4
baz=285
D33A **AnnSam, Waubun** 22.07 82 P P 04 17 14.7 -0.3
baz=287,SNR=5.3
TOLK **Toolik Lake Re** 22.13 340 P P 04 17 15.3 -0.3
baz=143,SNR=10
TOLK **Toolik Lake Re** 22.13 340 *e*P P 04 17 15.8 +0.2
12nm,1.0s
E33A **Westby DABS, E** 22.16 84 P P 04 17 16.2 +0.2
baz=286,SNR=9.1
F33A **5 Mile Ranch,** 22.19 86 P P 04 17 16.6 +0.2
baz=290,SNR=6.0
H33A **Prehn Over Nor** 22.32 89 P P 04 17 18.1 +0.4
baz=292
G33A **Ortonville** 22.32 88 P P 04 17 17.9 +0.1
baz=291
FCC **Fort Churchill** 22.44 51 *e*P P 04 17 19.0 +0.2
13nm,0.8s
B34A **Aery, Baudette** 22.47 78 P P 04 17 19.3 0.0
baz=284,SNR=7.3
D34A **Park Rapids** 22.51 82 P P 04 17 19.8 +0.1
baz=287,SNR=18
C34A **RKJ Ranch, Bem** 22.53 81 P P 04 17 20.1 +0.2
baz=286
E34A **Wadena** 22.70 84 P P 04 17 21.9 +0.1
baz=288,SNR=6.1
ECSD **EROS Data Cent** 22.79 91 P P 04 17 22.4 -0.3
baz=294,SNR=6.0
ECSD **EROS Data Cent** 22.79 91 *e*P P 04 17 23.2 +0.5
8.1nm,1.0s
G34A **Benson** 22.83 87 P P 04 17 23.4 +0.3
baz=291
B35A **Bob, Littlefor** 23.10 78 P P 04 17 25.7 -0.2
baz=285,SNR=10
C35A **Jirik Farms, M** 23.12 80 P P 04 17 25.9 -0.2
baz=286
E35A **Pequot Lakes** 23.19 83 P P 04 17 26.6 -0.2
baz=288
D35A **Remer** 23.25 82 P P 04 17 27.5 +0.1
baz=287
F35A **Swanville** 23.31 85 P P 04 17 28.5 +0.4
baz=290
H35A **Sunnyside Ranc** 23.57 88 P P 04 17 31.2 +0.6
baz=292
G35A **Watkins** 23.60 86 P P 04 17 31.0 +0.1
baz=291
D36A **Goodland** 23.80 81 P P 04 17 33.0 +0.2
baz=288
E36A **McGregor** 23.95 82 P P 04 17 33.7 -0.6
baz=289
C37A **Embarrass** 24.27 79 P P 04 17 37.2 0.0
baz=287
J36A **Seneca 1, Swea** 24.46 90 P P 04 17 39.7 +0.8
baz=295
F37A **Hinrichs Farm,** 24.63 84 P P 04 17 41.7 +1.2
baz=291
EYMN **Ely** 24.65 78 P P 04 17 41.4 +0.7
baz=286,SNR=8.5
EYMN **Ely** 24.65 78 *e*P P 04 17 40.8 +0.1
K36A **Gilmore City** 24.69 92 P P 04 17 41.4 +0.3
baz=297
C38A **Sawbill Land.** 24.86 79 P P 04 17 42.9 +0.3
baz=287
K37A **Belmond** 25.16 91 P P 04 17 46.2 +0.9
baz=296,SNR=5.3
I38A **Scanlan Farm,** 25.48 87 P P 04 17 48.9 +0.7
baz=294
C39A **Grand Marais** 25.57 78 P P 04 17 49.8 +0.8
baz=287
F39A **Loretta** 25.68 83 P P 04 17 50.5 +0.5
baz=291
J38A **Wedel Dairy, R** 25.69 89 P P 04 17 51.6 +1.6
baz=295
E39A **Mellen** 25.75 81 P P 04 17 51.0 +0.3
baz=290
K38A **Parkersburg** 25.79 91 P P 04 17 50.6 -0.4
baz=297
L38A **Oak Wood Farm,** 25.90 92 P P 04 17 51.0 -1.0
baz=298
H39A **Augusta** 25.91 85 P P 04 17 52.0 0.0
baz=293
I39A **Houston** 26.08 87 P P 04 17 54.6 +0.9
baz=294
M38A **Pleasantville** 26.09 93 P P 04 17 54.5 +0.8
baz=299
C40A **Isle Royale Na** 26.17 77 P P 04 17 54.6 +0.3
baz=287
G40A **Rib Lake** 26.39 83 P P 04 17 58.8 +2.4
baz=292
WMOK **Wichita Mounta** 26.39 112 P P 04 17 57.3 +0.8
baz=312
WMOK **Wichita Mounta** 26.39 112 *e*P P 04 17 55.7 -0.9
2.4nm,0.8s
O38A **Galt** 26.56 96 P P 04 18 01.9 +3.9
baz=301
N39A **Derby Farms, D** 26.81 94 P P 04 18 00.9 +0.7
baz=300
D41A **Chassel** 26.81 79 P P 04 18 00.5 +0.3
baz=289
L40A **Anamosa** 27.08 91 P P 04 18 04.2 +1.6
baz=298
M40A **Post Highland** 27.20 92 P P 04 18 04.7 +1.0
baz=299
K41A **Shullsburg** 27.43 89 P P 04 18 09.8 +4.0
baz=297
E42A **Champion** 27.45 80 P P 04 18 10.5 +4.5
baz=290
Q39A **Willow Grove F** 27.46 98 P P 04 18 10.5 +4.4
baz=303
TXAR **Lajitas Array** 27.55 126 LR LR 04 29 08.2
comp=Z,50nm,18.3s,baz=0.0,slow=37
S38A **Stockton** 27.65 101 P P 04 18 12.6 +4.8
baz=305
I42A **Draeger Farm,** 27.78 85 P P 04 18 14.1 +5.2
baz=295
R39A **Chumby, Stover** 27.83 99 P P 04 18 14.5 +5.1
baz=304
S39A **Bolivar** 28.00 100 P P 04 18 12.9 +2.0
baz=305
E43A **Lone Tree Farm** 28.06 79 P P 04 18 13.5 +2.0
baz=291
O41A **Passleys Farm,** 28.26 94 P P 04 18 16.6 +3.4
baz=301,SNR=5.2
LPIG **La Paz** 28.89 143 LR LR 04 29 30.9
comp=Z,46nm,18.2s,baz=4.0,slow=36
V39A **Pettigrew** 28.90 104 P P 04 18 20.7 +1.7
baz=308
W39A **Magazine** 29.21 105 P P 04 18 23.0 +1.3
baz=309
U41A **Viola** 29.70 101 P P 04 18 26.8 +0.7
baz=307
SCHQ **Schefferville** 37.57 57 P P 04 19 35.6 +1.4
2.8nm,0.6s,baz=274,slow=14,SNR=4.1
MA2 **Magadan** 45.20 315 LR LR 04 37 25.6
comp=Z,33nm,20.3s,baz=150,slow=33
TIXI **Tiksi** 47.91 335 LR LR 04 41 18.1
comp=Z,39nm,18.9s,baz=34,slow=36
H11N2 **WAKE ISLAND Hy** 58.50 264 T T 05 25 25.1
baz=44,slow=75,SNR=17
H11N3 **WAKE ISLAND Hy** 58.50 264 T T 05 25 24.5
baz=44,slow=75,SNR=23
H11N1 **WAKE ISLAND Hy** 58.52 264 T T 05 25 26.2
baz=44,slow=75,SNR=13
H11S1 **WAKE ISLAND Hy** 59.51 263 T T 05 26 45.2
baz=44,slow=75,SNR=6.5
H11S2 **WAKE ISLAND Hy** 59.52 263 T T 05 26 50.7
baz=44,slow=75,SNR=9.6
H11S3 **WAKE ISLAND Hy** 59.53 263 T T 05 26 52.7
baz=44,slow=75,SNR=7.4
ZALV **Zalesovo Beam** 73.49 340 LR LR 04 58 10.6
comp=Z,26nm,20.0s,baz=215,slow=37
HHC **Hu-ho-hao-te** 75.83 317 *e*P P 04 24 06.1 -0.1
HHC pP pP 04 24 10.8 -2.0
HHC sP sP 04 24 13.1 -2.2
HHC S S 04 33 44.5 -2.8
HHC sS pS 04 33 52.6 -3.0
HHC pmax pmax
comp=Z,8.0nm,0.9s
HHC pmax pmax
comp=Z,35nm,5.2s
HHC LR LR
comp=N,100nm,19.9s
HHC LR LR
comp=E,40nm,19.9s
HHC LR LR
comp=Z,29nm,19.9s
BVAR **Borovoye Array** 76.98 348 P P 04 24 11.1 -1.3
comp=Z,0.4nm,0.5s,baz=32,slow=5.6,SNR=3.1
KURK **Kurchatov** 77.84 343 P P 04 24 16.1 -1.1
KURBB **Kurchatov Arra** 77.95 343 P P 04 24 16.1 -1.7
comp=Z,0.9nm,0.7s,baz=13,slow=5.6,SNR=6.8
MK31 **Makanchi Array** 80.75 339 ⇑Pg P 04 24 26.4 -6.8
comp=Z,1.1nm,0.8s,baz=87,slow=16,SNR=4.3
MK31 ⇓Lg Lg 04 25 29.0
comp=Z,0.2nm,0.4s,baz=84,slow=28
MKAR **Makanchi Array** 80.75 339 LR LR 05 05 39.9
comp=Z,68nm,18.9s,baz=258,slow=40
MAKZ **Makanchi** 80.81 339 ⇓Pg P 04 24 28.4 -5.2
comp=Z,3.7nm,1.1s
MAKZ ⇑Lg Lg 04 25 33.5
comp=Z,1.1nm,0.9s
WMQ **Urumqi** 82.10 334 *e*P P 04 24 42.3 +1.8
WMQ LR LR
comp=N,130nm,24.3s
WMQ LR LR
comp=Z,170nm,24.3s
CD2 **Chengdu** 87.59 317 P P 04 25 07.6 -0.7
CD2 pmax pmax
comp=Z,1.0nm,0.5s

IDC 01 04:13:16.1±2.2, 15°.77S×177°.83E, h0km, mb3.9/4, mb1 4.2/4, mb1mx3.6/52, mbtmp3.9/4, MS3.3/7, Ms1 3.3/7, ms1mx3.0/43, Error ellipse: s-maj=146.0km s-min=26.1km az=142.0, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	12.46	238	LR		LR	04 20 23.2	
comp=Z,194nm,20.0s,baz=134,slow=34								
DZM	**Mont Dzumac**	12.46	238	*e*LR		LR	04 19 43.1	
220nm,26.4s								
HNR	**Honiara**	18.55	288	LR		LR	04 24 03.7	
comp=Z,106nm,21.5s,baz=174,slow=35								
RAR	**Rarotonga**	21.91	108	LR		LR	04 26 01.4	
comp=Z,73nm,18.4s,baz=286,slow=35								
PMG	**Port Moresby**	30.57	278	LR		LR	04 28 52.2	
comp=Z,39nm,18.4s,baz=106,slow=31								
PPT2	**Papeete2**	31.25	98	*e*LR		LR	04 27 33.9	
122nm,28.2s								
TBI	**Tubuai**	31.67	109	*e*LR		LR	04 27 40.8	
134nm,29.8s								
H11S2	**WAKE ISLAND Hy**	35.77	342	T		T	04 58 37.1	
baz=164								
H11S3	**WAKE ISLAND Hy**	35.78	342	T		T	04 58 37.2	
baz=164								
H11S1	**WAKE ISLAND Hy**	35.79	342	T		T	04 58 37.8	
baz=164								
STKA	**Stephens Creek**	36.61	237	P		P	04 20 24.7	+0.3
3.2nm,0.8s,baz=82,slow=7.8,SNR=6.4								
STKA				LR		LR	04 33 22.7	
comp=Z,88nm,20.1s,baz=29,slow=33								
ASAR	**Alice Springs**	41.96	252	P		P	04 21 08.6	-0.6
1.2nm,0.7s,baz=79,slow=8.7,SNR=11								
GUMO	**Guam**	43.74	310	LR		LR	04 35 39.0	
comp=Z,22nm,20.7s,baz=121,slow=31								
JNU	**Nakatsue**	66.13	318	LR		LR	04 49 24.5	
comp=Z,19nm,21.6s,baz=117,slow=33								
NVAR	**Mina Array Bea**	80.45	46	P		P	04 25 29.8	-0.5
0.2nm,0.4s,baz=226,slow=7.2,SNR=4.5								
ILAR	**Eielson Array**	84.68	14	P		P	04 25 52.0	+0.6
1.0nm,0.9s,baz=233,slow=7.4,SNR=7.5								

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*IDC **01** 04:14:45.9±0.8, 31°.56N×41°.03W, h0km, mb3.7/10, mb1 3.8/10, mb1mx3.6/69, mbtmp3.7/10, MS3.8/34, Ms1 3.8/34, ms1mx3.7/55, Error ellipse: s-maj=26.2km s-min=18.1km az=12.0*
*ISCJB **01** 04:14:46.4±0.6, 31°.6N±0°.1×41°.0W±0°.1, h14km, mb3.7/11, MS3.8/34, Error ellipse: s-maj=18.2km s-min=13.6km az=179.1*
*NEIC **01** 04:14:47.5±0.5, 31°.58N×41°.02W, h10km, mb4.2/1, Error ellipse: s-maj=17.0km s-min=12.5km az=183.0*
*GCMT **01** 04:14:47.5±0.3, 31°.58N×41°.05W, h12km, MW4.9/91, Moment Tensor Solution. s12,c14; s91,c121; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.21±.08; $M_{\theta\theta}$0.73±.09; $M_{\phi\phi}$1.48±.07; $M_{r\theta}$1.13±.42; $M_{\theta\phi}$1.02±.06; $M_{r\phi}$-0.68±.28; Best double couple: $M_0$2.50800×10^{16} NP1:ϕ_s238.00000°, δ51.00000°, λ-58.00000°. NP2: ϕ_s13.00000°, δ49.00000°, λ-124.00000°. Principal axes: T 2.1950, Plg1.0000°, Azm306.0000°; N 0.6280, Plg25.0000°, Azm36.0000°; P -2.8200, Plg65.0000°, Azm213.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 01 04:14:48.1±0.7, 31°.6N±0°.2×41°.0W±0°.1, h14km, n43, σ0=97/12, mb3.8/11, MS3.7/34, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SJG	**San Juan**	26.39	245	LR		LR	04 28 53.6	
comp=Z,94nm,20.7s,baz=80,slow=32								
SCHQ	**Schefferville**	29.59	329	LR		LR	04 32 06.8	
comp=Z,620nm,19.7s,baz=124,slow=35								
MDT	**Midelt**	30.73	78	LR		LR	04 30 37.8	
comp=Z,378nm,20.6s,baz=298,slow=31								
ESDC	**Sonseca Array**	31.00	65	LR		LR	04 31 48.4	
comp=Z,59nm,18.8s,baz=245,slow=33								
SDV	**Santo Domingo**	35.60	237	P		P	04 21 46.2	+0.5
2.7nm,0.5s,baz=27,slow=7.9,SNR=3.8								
SDV				LR		LR	04 33 48.8	
comp=Z,115nm,21.8s,baz=92,slow=32								
SFJD	**Kangerlussuaq**	35.91	354	LR		LR	04 33 16.8	
comp=Z,95nm,21.9s,baz=122,slow=31								
KOWA	**Kowa**	37.83	108	P		P	04 22 05.0	+0.6
2.4nm,0.8s,baz=329,slow=9.2,SNR=4.3								
KOWA				LR		LR	04 35 32.3	
comp=Z,293nm,21.4s,baz=13,slow=33								
ROSC	**El Rosal**	41.03	236	LR		LR	04 38 21.7	
comp=Z,87nm,21.2s,baz=71,slow=34								
KEST	**Kesra**	41.75	70	LR		LR	04 36 21.1	
comp=Z,115nm,21.7s,baz=209,slow=31								
DBIC	**Dimbokro**	41.87	119	LR		LR	04 37 11.2	
comp=Z,360nm,21.6s,baz=298,slow=32								
TORD	**Torodi Ar. Bea**	43.22	105	P		P	04 22 48.7	-0.3
1.2nm,0.9s,baz=311,slow=7.8,SNR=5.7								
TORD				LR		LR	04 38 27.3	
comp=Z,142nm,21.6s,baz=280,slow=33								
GERES	**GERESS Array B**	44.20	51	LR		LR	04 40 06.7	
comp=Z,49nm,18.2s,baz=287,slow=34								
ULM	**Lac du Bonnet**	44.36	311	P		P	04 22 58.5	+0.6
0.7nm,0.5s,baz=81,slow=9.5,SNR=2.9								
ULM				LR		LR	04 41 05.2	
comp=Z,94nm,19.4s,baz=75,slow=36								
NOA	**NORSAR Array B**	44.79	33	LR		LR	04 38 31.5	
comp=Z,38nm,21.7s,baz=270,slow=32								
HFS	**Hagfors**	45.73	35	LR		LR	04 38 50.8	
comp=Z,66nm,20.1s,baz=300,slow=32								
JTS	**JuntasAbangare**	45.79	252	LR		LR	04 40 08.0	
comp=Z,114nm,18.7s,baz=106,slow=33								
H10N2	**ASCENSION HYDR**	46.68	143	T		T	05 12 57.7	
baz=328,slow=75,SNR=696								
H10N3	**ASCENSION HYDR**	46.68	143	T		T	05 12 58.0	
baz=328,slow=75,SNR=902								
H10N1	**ASCENSION HYDR**	46.70	143	T		T	05 12 59.4	
baz=328,slow=75,SNR=680								
OTAV	**Otavalo**	47.18	236	*e*P		P	04 23 21.5	+0.5
1.0nm,0.5s								
H10S1	**ASCENSION HYDR**	47.54	144	T		T	05 14 04.1	
baz=329,slow=75,SNR=1143								
H10S3	**ASCENSION HYDR**	47.55	144	T		T	05 14 04.1	
baz=329,slow=75,SNR=1211								
H10S2	**ASCENSION HYDR**	47.56	144	T		T	05 14 05.3	
baz=329,slow=75,SNR=1306								
FINES	**FINESS Array B**	51.92	34	LR		LR	04 44 05.2	
comp=Z,46nm,18.3s,baz=278,slow=34								
TXAR	**Lajitas Array**	53.39	285	LR		LR	04 46 58.2	
comp=Z,65nm,18.5s,baz=0.0,slow=36								
ANMO	**Albuquerque**	53.95	292	LR		LR	04 44 42.6	
comp=Z,303nm,21.8s,baz=70,slow=33								
AKASG	**Malin Array Be**	54.14	48	LR		LR	04 45 51.0	
comp=Z,101nm,18.0s,baz=295,slow=34								
LPAZ	**La Paz**	54.25	213	P		P	04 24 13.3	-1.1
0.6nm,0.6s,baz=14,slow=9.9,SNR=5.7								
LPAZ				LR		LR	04 45 53.8	
comp=Z,111nm,19.9s,baz=12,slow=34								
PDAR	**Pinedale Array**	54.38	303	P		P	04 24 14.5	-0.3
0.6nm,0.6s,baz=64,slow=6.8,SNR=6.3								
PDAR				LR		LR	04 47 00.9	
comp=Z,420nm,18.0s,baz=115,slow=36								
YKA	**Yellowknife Ar**	55.00	327	P		P	04 24 18.5	-0.2
0.2nm,0.6s,baz=85,slow=7.6,SNR=4.4								
YKA				LR		LR	04 47 09.1	
comp=Z,29nm,19.9s,baz=86,slow=35								
BRTR	**Keskin Array B**	59.60	60	P		P	04 24 53.1	+1.4
0.7nm,0.8s,baz=265,slow=5.6,SNR=3.3								
BRTR				LR		LR	04 49 57.5	
comp=Z,26nm,18.5s,baz=298,slow=35								
CPUP	**Villa Florida**	59.66	197	LR		LR	04 47 43.4	
comp=Z,40nm,20.9s,baz=24,slow=33								
LPIG	**La Paz**	60.83	282	LR		LR	04 49 59.9	
comp=Z,73nm,20.1s,baz=32,slow=35								
NVAR	**Mina Array Bea**	61.96	300	P		P	04 25 08.0	0.0
0.3nm,0.7s,baz=74,slow=10,SNR=3.0								
NVAR				LR		LR	04 51 31.4	
comp=Z,529nm,18.9s,baz=274,slow=36								
KVAR	**Kislovodsk Arr**	64.65	53	LR		LR	04 54 32.2	
comp=Z,21nm,19.2s,slow=37								
GNI	**Garni**	67.47	56	LR		LR	04 55 40.1	
comp=Z,18nm,19.2s,baz=305,slow=36								
ILAR	**Eielson Array**	68.23	334	LR		LR	04 55 35.5	
comp=Z,207nm,19.1s,baz=94,slow=36								
ARU	**Arti**	69.23	36	LR		LR	04 53 32.7	
comp=Z,43nm,20.8s,baz=323,slow=34								
AKTO	**Aktyubinsk**	71.64	42	LR		LR	04 56 43.1	
comp=Z,63nm,18.9s,baz=321,slow=35								
ATD	**Arta Tunnel**	78.87	83	LR		LR	05 01 29.3	
comp=Z,117nm,18.9s,baz=324,slow=36								
KMBO	**Kilima Mbogo**	80.60	97	LR		LR	05 01 58.0	
comp=Z,265nm,20.2s,baz=278,slow=35								
KURK	**Kurchatov**	82.29	34	P		P	04 27 07.7	-1.4
KURBB	**Kurchatov Arra**	82.31	34	P		P	04 27 07.7	-1.5
0.3nm,0.4s,baz=320,slow=6.0,SNR=5.9								

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*ATH **01** 04:26:29.5, 37°.38N×26°.94E, h33km±3km, ML2.3/5, Error ellipse: s-maj=3.4km s-min=1.1km az=304.0*
*ISK **01** 04:26:29.2, 37°.34N×26°.89E, h10km, ML2.8/7*
*CSEM **01** 04:26:29.8±0.1, 37°.35N×26°.89E, h12km, ML2.8, Error ellipse: s-maj=3.3km s-min=2.5km az=60.0*
*ISCJB **01** 04:26:29.7±0.5, 37°.35N±0°.02×26°.90E±0°.03, h9km±4km, Error ellipse: s-maj=3.9km s-min=2.7km az=155.2*
*THE **01** 04:26:29.7, 37°.36N×26°.93E, h3km±4km, ML2.1/2, Error ellipse: s-maj=4.4km s-min=0.9km az=58.0*
*DDA **01** 04:26:29.2, 37°.39N×26°.88E, h7km, Ml3.0*

ISC 01 04:26:29.7±1.0, 37°.36N±0°.02×26°.91E±0°.02, h13km±8km, n69, σ0=77/113, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
YKAV	**Yalikavak-Bodr**	0.37	128	PG		Pg	04 26 37.0	-0.1
YKAV				SG		Sb	04 26 43.5	-0.3
YKAV	**Yalikavak-Bodr**	0.37	128	*e*Pg		Pg	04 26 37.0	-0.1
YKAV				*e*Sg		Sb	04 26 43.5	-0.3
GCAM	**G?zelcaml?**	0.43	36	PG		Pg	04 26 38.5	+0.3
GCAM				SG		Sb	04 26 46.3	+0.8
GCAM	**G?zelcaml?**	0.43	36	*i* P		Pg	04 26 38.5	+0.3
GCAM				*i* S		Sb	04 26 45.6	+0.2
GCAM	**G?zelcaml?**	0.43	36	P		Pg	04 26 38.5	+0.3
GCAM				S		Sb	04 26 45.7	+0.2
GCAM				*e*Sg		Sb	04 26 46.3	+0.8
BODT	**Bodrum**	0.43	133	PG		Pg	04 26 37.4	-0.8
BODT				SG		Sb	04 26 45.4	-0.1
BODT	**Bodrum**	0.43	133	P		Pg	04 26 37.3	-0.9
BODT				S		Sg	04 26 44.6	+0.6
BODT	**Bodrum**	0.43	133	*e*Pg		Pg	04 26 37.4	-0.8
BODT				S		Sg	04 26 44.6	+0.6
BODT				*e*Sg		Sb	04 26 45.4	-0.1
BDRM	**Kayabasi**	0.51	124	*i* P		Pg	04 26 39.7	-0.1
BDRM				*i* S		Sb	04 26 48.4	+0.5
BDRM	**Kayabasi**	0.51	124	P		Pg	04 26 39.7	-0.1
BDRM				S		Sb	04 26 48.4	+0.5
MLSB	**Milas**	0.69	95	PG		Pg	04 26 43.0	-0.1
MLSB	**Milas**	0.69	95	*e*Pg		Pg	04 26 43.0	-0.1
DGB	**˜zmir**	0.70	358	*i* P		Pg	04 26 42.2	-1.0
DGB				*i* S		Sb	04 26 54.1	+0.9
NISR	**Nisiros**	0.76	167	P		Pg	04 26 44.3	-0.1
NISR	**Nisiros**	0.76	167	P		Pg	04 26 44.6	+0.2
DAT	**Datca**	0.82	139	*i* P		Pb	04 26 46.8	+0.9
DAT				*i* S		Sn	04 26 58.8	-0.2
DAT	**Datca**	0.82	139	P		Pb	04 26 46.8	+0.9
DAT				S		Sn	04 26 58.8	-0.2
AYDN	**Tasoluk**	0.83	68	*i* P		Pg	04 26 45.4	-0.3
AYDN				*i* S		Sb	04 26 58.0	+1.0
AYDN	**Tasoluk**	0.83	68	P		Pg	04 26 45.4	-0.3
AYDN				S		Sb	04 26 58.0	+1.0
DATC	**Datca-Mugla**	0.84	135	PG		Pg	04 26 45.9	-0.1
DATC	**Datca-Mugla**	0.84	135	*e*Pg		Pg	04 26 45.9	-0.1
ZEY	**˜zmir**	0.94	340	*i* P		Pb	04 26 48.0	+0.2
ZEY				*i* S		Sn	04 27 01.4	-0.5
AYDB	**Zeytinkoy-Aydi**	0.97	52	PG		Pg	04 26 47.9	-0.6
AYDB				SG		Sn	04 27 03.6	+0.7
AYDB	**Zeytinkoy-Aydi**	0.97	52	*e*Pg		Pg	04 26 47.9	-0.6
AYDB				*e*Sg		Sn	04 27 03.6	+0.7
BLCB	**Balcova**	1.03	6	PG		Pn	04 26 50.2	+0.3
BLCB	**Balcova**	1.03	6	*e*Pg		Pn	04 26 50.2	+0.3
URLA	**Izmir**	1.03	346	PG		Pg	04 26 48.7	-1.0
URLA				SG		Sn	04 27 04.7	+0.4
URLA	**Izmir**	1.03	346	*i* P		Pg	04 26 48.0	-1.7
URLA				*i* S		Sn	04 27 04.0	-0.2
URLA	**Izmir**	1.03	346	P		Pg	04 26 48.0	-1.7
URLA	**Izmir**	1.03	346	*e*Pg		Pg	04 26 48.7	-1.0
URLA				S		Sn	04 27 04.1	-0.2
YER	**Yerkesik**	1.11	101	PN		Pg	04 26 51.3	+0.2
YER	**Yerkesik**	1.11	101	P		Pb	04 26 50.9	+0.1
YER	**Yerkesik**	1.11	101	P		Pb	04 26 50.9	+0.1
YER	**Yerkesik**	1.11	101	*e*Pn		Pg	04 26 51.3	+0.2
APE	**Apeiranthos**	1.14	256	PN		Pn	04 26 51.7	+0.3
APE				SN		Sn	04 27 07.3	+0.4
APE	**Apeiranthos**	1.14	256	P		Pn	04 26 51.3	-0.1
APE				S		Sn	04 27 07.0	0.0
APE				AML		AML	04 27 08.2	
comp=N,166μm,0.5s								
APE				AML		AML	04 27 09.3	
comp=E,181μm,0.2s								
APE	**Apeiranthos**	1.14	256	P		Pn	04 26 51.4	0.0
APE				S		Sn	04 27 07.5	+0.6
APE	**Apeiranthos**	1.14	256	P		Pn	04 26 51.4	0.0
APE	**Apeiranthos**	1.14	256	*e*Pn		Pn	04 26 51.7	+0.3
APE				*e*Sn		Sn	04 27 07.3	+0.4
CHOS	**Chios island**	1.23	327	PN		Pg	04 26 53.0	-0.5
CHOS	**Chios island**	1.23	327	P		Pn	04 26 52.4	-0.3
CHOS				S		Sg	04 27 08.9	-0.6
CHOS				AML		AML	04 27 13.0	
comp=N,146μm,0.5s								
CHOS				AML		AML	04 27 15.6	
comp=E,197μm,0.6s								
CHOS	**Chios island**	1.23	327	P		Pb	04 26 52.8	-0.1
CHOS				S		Sn	04 27 09.5	+0.2
CHOS	**Chios island**	1.23	327	P		Pb	04 26 52.8	-0.1
CHOS				S		Sg	04 27 08.9	-0.6
ANAF	**Anafi Island**	1.35	223	P		Pb	04 26 54.9	0.0
ANAF				S		Sn	04 27 12.5	+0.4
ANAF				AML		AML	04 27 18.4	
comp=N,597μm,0.3s								
ANAF				AML		AML	04 27 19.6	
comp=E,462μm,0.2s								

ANAF	**Anafi Island**	**1.35**	**223**	P	**Pb**	**04 26 54.8**	**-0.1**
ANAF				S	**Sg**	**04 27 13.5**	**+0.2**
ANAF	**Anafi Island**	**1.35**	**223**	P	**Pb**	**04 26 54.7**	**-0.1**
ANAF				S	**Sn**	**04 27 12.5**	**+0.4**
TURN	**Turunc**	**1.43**	**109**	PN	**Pn**	**04 26 52.5**	**-2.8**
TURN	**Turunc**	**1.43**	**109**	*i* P	**Pn**	**04 26 52.2**	**-3.1**
TURN				*i* S	**Sn**	**04 27 13.2**	**-0.8**
TURN	**Turunc**	**1.43**	**109**	P	**Pn**	**04 26 52.2**	**-3.1**
TURN				S	**Sn**	**04 27 13.2**	**-0.8**
ARG	**Arkhangelos**	**1.50**	**139**	PN	**Pb**	**04 26 57.4**	**+0.1**
ARG	**Arkhangelos**	**1.50**	**139**	P	**Pn**	**04 26 55.7**	**-0.5**
ARG	**Arkhangelos**	**1.50**	**139**	P	**Pn**	**04 26 55.8**	**-0.5**
ARG	**Arkhangelos**	**1.50**	**139**	*e*Pn	**Pb**	**04 26 57.4**	**+0.1**
TAVA	**DENIZLI_Tavas**	**1.59**	**85**	*i* P	**Pb**	**04 26 59.6**	**+0.6**
TAVA	**DENIZLI_Tavas**	**1.59**	**85**	P	**Pb**	**04 26 59.7**	**+0.6**
MANT	**Manisa**	**1.73**	**48**	*i* P	**Pb**	**04 27 01.0**	**-0.4**
MANT				*i* S	**Sn**	**04 27 22.1**	**+0.5**
MANT	**Manisa**	**1.73**	**48**	P	**Pb**	**04 27 01.0**	**-0.4**
MANT				S	**Sn**	**04 27 22.1**	**+0.5**
KARP	**Karpathos**	**1.81**	**174**	P	**Pn**	**04 27 01.1**	**+0.4**
KARP				S	**Sn**	**04 27 22.9**	**-0.6**
KARP				AML	AML	04 27 31.6	
	comp=N,118μm,1.1s						
KARP				AML	AML	04 27 48.4	
	comp=E,142μm,1.1s						
KARP	**Karpathos**	**1.81**	**174**	P	**Pn**	**04 27 00.6**	**0.0**
KARP	**Karpathos**	**1.81**	**174**	P	**Pn**	**04 27 00.9**	**+0.3**
KARP				S	**Sn**	**04 27 23.2**	**-0.3**
SIGR	**SIGRI**	**2.03**	**336**	P	**Pn**	**04 27 03.3**	**-0.3**
SIGR				S	**Sn**	**04 27 27.3**	**-1.6**
SIGR				AML	AML	04 27 43.5	
	comp=E,41μm,0.6s						
SIGR				AML	AML	04 27 44.8	
	comp=N,50μm,0.5s						
SIGR	**SIGRI**	**2.03**	**336**	P	**Pn**	**04 27 03.3**	**-0.3**
SIGR				S	**Sn**	**04 27 27.7**	**-1.1**
BAYC	**CANAKKALE_Bayr**	**2.40**	**353**	*i* P	**Pn**	**04 27 09.6**	**+0.9**
BAYC				*i* S	**Sg**	**04 27 47.4**	**+0.6**
BAYC	**CANAKKALE_Bayr**	**2.40**	**353**	P	**Pn**	**04 27 09.6**	**+0.9**
BALY	**Balya**	**2.44**	**13**	*i* P	**Pb**	**04 27 13.1**	**-0.5**
BALY				*i* S	**Sg**	**04 27 48.8**	**+0.5**
BALY	**Balya**	**2.44**	**13**	P	**Pb**	**04 27 13.1**	**-0.5**
DURS	**Dursunbey**	**2.56**	**28**	*i* P	**Pg**	**04 27 19.4**	**+0.8**
DURS				*i* S	**Sg**	**04 27 52.7**	**+0.9**
SMTH	**Samothraki Isl**	**3.29**	**341**	P	**Pn**	**04 27 21.4**	**+0.5**
SMTH	**Samothraki Isl**	**3.29**	**341**	P	**Pn**	**04 27 21.3**	**+0.3**

*IDC **01** 04:42:13.9±4.3, 36°.13N×71°.08E, h190km±35km, mb3.4/7, mb1 3.4/12, mb1mx3.1/69, mbtmp4.0/12, MS4.2/1, Ms1 4.2/1, ms1mx2.4/52, Error ellipse: s-maj=40.9km s-min=25.7km az=147.0*

*ISCJB **01** 04:42:16.7±0.6, 36°.52N±0°.03×70°.76E±0°.08, h188km, mb3.7/6, Error ellipse: s-maj=9.0km s-min=3.6km az=163.9*

*NNC **01** 04:42:19.8±3.0, 36°.99N×70°.43E, h0km, mb4.5, mpv4.3, Error ellipse: s-maj=24.2km s-min=17.6km az=165.0*

ISC 01 04:42:17.4±0.7, 36°.52N±0°.05×70°.93E±0°.08, h188km, n50, σ2°36/61, mb3.7/6, 9C-5D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.81**	**163**	P	Pn	04 43 09.4	+5.1
CEP				S	**Sn**	**04 43 47.0**	**+6.1**
CHCP	**Chirah Chowk**	**3.44**	**145**	P	Pn	04 43 17.0	+5.2
THW	**Thamme Wali**	**3.78**	**170**	P	**Pn**	**04 43 20.3**	**+4.2**
SFK	**Sufi-Kurgan**	**4.03**	**29**	⇑P	**Pn**	**04 43 21.9**	**+2.6**
	23nm,0.4s						
SFK				⇑S	**Sn**	**04 44 09.0**	**+1.1**
	132nm,0.5s						
SARP	**Sargodha**	**4.81**	**162**	P	**Pn**	**04 43 33.1**	**+4.0**
THN	**Thein Dam**	**5.68**	**135**	*e*P	**Pn**	**04 43 40.0**	**-0.3**
THN				*e*S	**Sn**	**04 44 43.6**	**-2.1**
AML	**Almayashu**	**6.00**	**20**	P	**Pn**	**04 43 46.0**	**+1.3**
	SNR=151						
MNAS	**Manas**	**6.08**	**11**	⇑P	**Pn**	**04 43 46.8**	**+1.3**
	19nm,0.5s						
MNAS				⇓S	**Sn**	**04 44 53.3**	**-1.8**
	31nm,0.6s						
DHRM	**DHARAMSHALA**	**6.16**	**132**	*e*P	**Pn**	**04 43 47.4**	**+0.7**
DHRM				*e*S	**Sn**	**04 44 56.3**	**-0.9**
UCH	**Uchtor**	**6.34**	**25**	P	**Pn**	**04 43 50.7**	**+1.5**
	SNR=64						
KZA	**Kyzart**	**6.48**	**30**	P	**Pn**	**04 43 52.0**	**+1.0**
	SNR=16						
EKS2	**Erkin-Say**	**6.51**	**19**	P	**Pn**	**04 43 52.7**	**+1.5**
	SNR=7.4						
KK31	**Karatay Array**	**6.58**	**357**	⇑P	**Pn**	**04 43 52.9**	**+0.9**
	5.5nm,0.4s,baz=176,slow=12,SNR=103						
KK31				⇓S	**Sn**	**04 45 04.7**	**-2.1**
	5.6nm,0.4s,baz=182,slow=21,SNR=5.6						
AAK	**Ala-Archa**	**6.70**	**23**	P	**Pn**	**04 43 55.1**	**+1.5**
	11nm,0.3s,baz=190,slow=5.9,SNR=86						
AAK				S	**Sn**	**04 45 09.4**	**-0.4**
	2.7nm,0.3s,baz=318,slow=23,SNR=21						
AAK	**Ala-Archa**	**6.70**	**23**	⇓P	**Pn**	**04 43 55.1**	**+1.5**
	21nm,0.4s						
AAK				⇑S	**Sn**	**04 45 09.6**	**-0.2**
	39nm,0.8s						
AAK	**Ala-Archa**	**6.70**	**23**	P	**Pn**	**04 43 55.2**	**+1.6**
	SNR=29						
KBK	**Karagaybulak**	**6.87**	**26**	P	**Pn**	**04 43 57.6**	**+1.8**
	SNR=8.2						
ULHL	**Ulahol**	**7.04**	**34**	P	**Pn**	**04 43 59.3**	**+1.1**
	SNR=18						
CHMS	**Chumysh**	**7.11**	**23**	P	**Pn**	**04 44 00.5**	**+1.6**
	SNR=9.1						
USP	**Ospenovka**	**7.27**	**21**	P	**Pn**	**04 44 02.3**	**+1.2**
	SNR=7.8						
TKM2	**Tokmak 2**	**7.33**	**28**	⇑P	**Pn**	**04 44 03.0**	**+1.0**
	26nm,0.8s						
TKM2				⇓S	**Sn**	**04 45 26.9**	**+2.0**
	13nm,1.0s						
TKM2	**Tokmak 2**	**7.33**	**28**	P	**Pn**	**04 44 03.1**	**+1.1**
	SNR=35						
SMLA	**Simla**	**7.48**	**134**	*e*P	**Pn**	**04 44 05.6**	**+1.8**
SMLA				*e*S	**Sn**	**04 45 25.2**	**-2.9**
SMLA				IAML		04 45 28.8	
	comp=N,142nm,0.5s						
SMLA				IAML		04 45 29.5	
	comp=E,125nm,0.4s						
JOSI	**Joshimath**	**9.34**	**127**	*e*P	**Pn**	**04 44 28.8**	**+0.4**
JOSI				*e*S	**Sn**	**04 46 09.4**	**-3.4**
KHET	**Khetri**	**9.38**	**153**	*e*P	**Pn**	**04 44 29.0**	**+0.2**
KHET				*e*S	**Sn**	**04 46 08.9**	**-4.6**
KHET				IAML		04 46 11.9	
	comp=E,25nm,0.4s						
KHET				IAML		04 46 12.0	
	comp=N,18nm,0.6s						
SONA	**Sohna**	**9.75**	**146**	*e*S	**Sn**	**04 46 15.3**	**-7.0**
SONA				IAML		04 46 21.6	
	comp=E,26nm,0.4s						
SONA				IAML		04 46 23.4	
PYUN	**Piuthan**	**13.21**	**126**	*e*P	**Pn**	**04 45 18.5**	**+0.4**
	comp=E,8.3nm,0.3s						
MKAR	**Makanchi Array**	**13.31**	**36**	P	**Pn**	**04 45 18.8**	**-0.2**
	comp=E,0.4nm,0.3s,baz=223,slow=17,SNR=13						
DANN	**Dangsing**	**13.55**	**123**	*e*P	**Pn**	**04 45 23.7**	**+1.2**
	comp=E,9.0nm,0.3s						
KOLN	**Koldanda**	**13.82**	**126**	*e*P	**Pn**	**04 45 27.3**	**+1.5**
	comp=E,5.1nm,0.3s						
GKN	**Gorkha**	**14.37**	**122**	*e*P	**P**	**04 45 34.4**	**+0.2**
	comp=E,8.2nm,0.3s						
DMN	**Daman**	**14.94**	**123**	*e*P	**P**	**04 45 43.0**	**+2.4**
	comp=E,7.5nm,0.3s						
KKN	**Kakani**	**14.94**	**122**	*e*P	**P**	**04 45 42.4**	**+1.8**
	comp=E,10nm,0.6s						
AB31	**Akbulak array**	**15.04**	**331**	⇑P	**P**	**04 45 44.0**	**+2.8**
	comp=E,1.1nm,0.5s,baz=145,slow=12,SNR=16						
AB31				⇑S	**Sn**	**04 48 26.6**	**-1.6**
	comp=E,5.6nm,1.4s,baz=149,slow=14,SNR=6.5						
KURBB	**Kurchatov Arra**	**15.12**	**19**	P	**Pn**	**04 45 40.1**	**-1.2**
	comp=E,0.1nm,0.3s,baz=208,slow=11,SNR=11						
PKIN	**Phulchoki**	**15.15**	**122**	*e*P	**P**	**04 45 46.0**	**+3.0**
	comp=E,12nm,0.4s						
PKI	**Pulchoki**	**15.17**	**122**	*e*P	**P**	**04 45 46.2**	**+3.0**
	comp=E,8.2nm,0.3s						
GUN	**Gumba**	**15.28**	**120**	*e*P	**P**	**04 45 47.8**	**+3.3**
	comp=E,12nm,0.4s						
JIRN	**Jiri**	**15.65**	**120**	*e*P	**P**	**04 45 52.5**	**+3.9**
	comp=E,20nm,0.3s						
BVAR	**Borovoye Array**	**16.50**	**359**	P	**Pn**	**04 45 58.2**	**+0.1**
	comp=E,0.6nm,0.3s,baz=150,slow=12,SNR=6.3						
AKTO	**Aktyubinsk**	**16.73**	**330**	P	**Pn**	**04 46 00.5**	**-0.3**
	comp=E,0.7nm,0.3s,baz=128,slow=9.1,SNR=9.7						
AKTO	**Aktyubinsk**	**16.73**	**330**	⇑P	**Pn**	**04 46 05.5**	**+4.7**
	comp=E,2.3nm,0.6s						
AKTO				⇓S	**Sn**	**04 49 07.2**	**-1.5**
	comp=E,3.9nm,1.4s						
ZALV	**Zalesovo Beam**	**19.92**	**25**	P	**P**	**04 46 33.8**	**-0.6**
	comp=E,1.5nm,0.4s,baz=223,slow=11,SNR=6.5						
FINES	**FINESS Array B**	**37.43**	**326**	P	**P**	**04 49 11.4**	**-0.6**
	comp=E,1.0nm,0.5s,baz=120,slow=11,SNR=7.7						
ARCES	**ARCESS Array B**	**41.10**	**338**	P	**P**	**04 49 42.1**	**-0.2**
	comp=E,1.7nm,0.6s,baz=111,slow=7.8,SNR=22						
HFS	**Hagfors**	**43.01**	**322**	P	**P**	**04 49 57.4**	**-0.4**
	comp=E,1.7nm,0.7s,baz=97,slow=12,SNR=3.7						
NOA	**NORSAR Array B**	**44.33**	**323**	P	**P**	**04 50 07.7**	**-0.7**
	comp=E,0.5nm,0.5s,baz=104,slow=6.9,SNR=2.8						
JMIC	**Jan Mayen**	**52.54**	**336**	LR	LR	05 13 19.4	
	comp=E,225nm,19.5s,baz=318,slow=35						
TORD	**Torodi Ar. Bea**	**65.66**	**269**	P	**P**	**04 52 38.8**	**-3.0**
	comp=E,0.9nm,0.4s,baz=51,slow=6.0,SNR=32						
YKA	**Yellowknife Ar**	**81.22**	**3**	P	**P**	**04 54 10.4**	**-1.4**
	comp=E,0.5nm,0.5s,baz=352,slow=5.4,SNR=17						

ISC 01 04:51:17.8±2.5, 51°.5N±0°.1×16°.17E±0°.06, h0km, n9, σ0°42/16, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.66**	**173**	*e*Pg	**Pg**	**04 51 30.8**	**+0.5**
KSP				*e*Sg	**Sg**	**04 51 39.1**	**+0.3**
UPC	**Upice**	**0.99**	**186**	*e*PG	**Pb**	**04 51 37.6**	**-0.2**
UPC				*e*SG	**Sg**	**04 51 49.6**	**-0.1**
	comp=Z,16nm,0.7s						
DPC	**Dobruska-Polon**	**1.15**	**175**	*e*PG	**Pg**	**04 51 39.7**	**-0.1**
DPC				*e*SG	**Sg**	**04 51 54.5**	**-0.2**
	comp=Z,4.7nm,0.4s						
PVCC	**Panska Ves**	**1.40**	**227**	*e*PG	**Pn**	**04 51 44.4**	**-0.1**
PVCC				*e*SG	**Sb**	**04 52 03.5**	**+0.4**
	comp=Z,28nm,0.4s						
BRG	**Berggiesshubel**	**1.53**	**247**	PG	**Pn**	**04 51 46.6**	**+0.2**
BRG				SG	**Sn**	**04 52 06.5**	**-0.5**
	10nm,0.3s						
PRU	**Pruhonice**	**1.83**	**215**	*e*SG	**Sn**	**04 52 15.0**	**+0.7**
	comp=Z,4.8nm,0.5s						
MORC	**Moravsky Berou**	**1.93**	**153**	*e*PN	**Pn**	**04 51 51.8**	**-0.1**
MORC				*e*SG	**Sn**	**04 52 16.7**	**-0.2**
NKC	**Novy Kostel**	**2.67**	**243**	*e*SG	**Sg**	**04 52 43.8**	**+0.2**
	comp=Z,5.4nm,0.3s						
KHC	**Kasperske Hory**	**2.89**	**216**	*e*PN	**Pn**	**04 52 05.0**	**-0.1**
KHC				*e*SG	**Sg**	**04 52 49.7**	**-0.9**

*ISCJB **01** 04:53:40.0±0.7, 36°.91N±0°.05×71°.46E±0°.07, h106km, Error ellipse: s-maj=9.0km s-min=5.2km az=146.0*

*NNC **01** 04:53:45.7±2.4, 37°.58N×71°.22E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=20.9km s-min=7.1km az=168.0*

ISC 01 04:53:41.3±1.0, 36°.99N±0°.06×71°.37E±0°.07, h106km, n23, σ1°73/29, 7C-9D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZET	**Dzherino**	**2.71**	**313**	⇓P	**Pn**	**04 54 24.2**	**+0.8**
	15nm,0.3s						
DZET				⇑S	**Sn**	**04 54 54.7**	**-1.1**
	149nm,0.4s						
SFK	**Sufi-Kurgan**	**3.46**	**28**	⇓P	**Pn**	**04 54 35.2**	**+1.8**
	14nm,0.3s						
SFK				⇓S	**Sn**	**04 55 14.5**	**+0.8**
	33nm,0.3s						
AML	**Almayashu**	**5.44**	**19**	P	**Pn**	**04 55 00.8**	**+0.4**
	SNR=254						
MNAS	**Manas**	**5.56**	**9**	⇓P	**Pn**	**04 55 02.0**	**+0.3**
	7.7nm,0.5s						
MNAS				⇑S	**Sn**	**04 56 01.2**	**-3.3**
	6.3nm,0.4s						
UCH	**Uchtor**	**5.77**	**24**	P	**Pn**	**04 55 05.4**	**+0.5**
	SNR=13						
KZA	**Kyzart**	**5.90**	**29**	P	**Pn**	**04 55 07.2**	**+0.6**
	SNR=9.1						
EKS2	**Erkin-Say**	**5.96**	**17**	P	**Pn**	**04 55 08.6**	**+1.4**
	SNR=11						
AAK	**Ala-Archa**	**6.14**	**22**	⇑P	**Pn**	**04 55 10.6**	**+1.0**
	11nm,0.4s						
AAK				⇑S	**Sn**	**04 56 15.9**	**-2.4**
	9.1nm,0.8s						
AAK	**Ala-Archa**	**6.14**	**22**	P	**Pn**	**04 55 10.7**	**+1.2**
	SNR=18						
KK31	**Karatay Array**	**6.14**	**354**	⇓P	**Pn**	**04 55 09.8**	**+0.3**
	6.4nm,0.4s,baz=182,slow=13,SNR=78						
KK31				⇓S	**Sn**	**04 56 15.0**	**-3.4**
	1.9nm,0.3s,baz=180,slow=23						
DHRM	**DHARAMSHALA**	**6.23**	**138**	*e*P	**Pn**	**04 55 13.1**	**+2.1**
DHRM				*e*S	**Sn**	**04 56 18.9**	**-2.0**
DHRM				IAML		04 56 24.2	
	comp=E,128nm,0.4s						
DHRM				IAML		04 56 24.4	
	comp=N,115nm,0.6s						
ULHL	**Ulahol**	**6.46**	**34**	P	**Pn**	**04 55 14.2**	**+0.2**
	SNR=7.0						
CHMS	**Chumysh**	**6.54**	**22**	P	**Pn**	**04 55 15.8**	**+0.9**
	SNR=11						
USP	**Ospenovka**	**6.72**	**20**	P	**Pn**	**04 55 17.7**	**+0.4**
	SNR=11						
TKM2	**Tokmak 2**	**6.76**	**27**	⇑P	**Pn**	**04 55 18.7**	**+0.6**
	comp=N,8.0nm,0.6s						
TKM2				⇑S	**Sn**	**04 56 32.8**	**-0.7**
	comp=N,2.1nm,0.5s						
TKM2	**Tokmak 2**	**6.76**	**27**	P	**Pn**	**04 55 18.8**	**+0.8**
	SNR=6.6						
SMLA	**Simla**	**7.57**	**139**	*e*P	**Pn**	**04 55 30.5**	**+1.6**
SMLA				*e*S	**Sn**	**04 56 48.9**	**-4.2**
SMLA				IAML		04 56 53.9	
	comp=N,53nm,0.3s						
SMLA				IAML		04 56 55.2	
	comp=E,87nm,0.1s						
JOSI	**Joshimath**	**9.36**	**131**	*ex*	Sn	04 57 21.6	-15
BHGR	**Bahadurgarh**	**9.51**	**149**	*e*S	Sn	04 57 20.4	-20
KHET	**Khetri**	**9.64**	**156**	*e*S	Sn	04 57 15.5	-28
SONA	**Sohna**	**9.95**	**149**	*e*S	Sn	04 57 27.1	-24
SONA				IAML		04 57 40.0	
	comp=E,14nm,0.3s						
SONA				IAML		04 57 40.1	
	comp=N,10.0nm,0.4s						
AB31	**Akbulak array**	**14.81**	**329**	⇓P	**Pn**	**04 57 05.9**	**+0.8**
	comp=N,0.8nm,0.4s,baz=134,slow=13,SNR=24						
AB31				⇓S	**Sn**	**04 59 48.1**	**-0.3**
	comp=N,1.1nm,0.5s,baz=149,slow=23,SNR=7.8						
AKTO	**Aktyubinsk**	**16.51**	**329**	⇓P	**Pn**	**04 57 29.0**	**+2.7**
	comp=N,2.2nm,0.7s						
AKTO				⇑S	**Sn**	**05 00 29.7**	**+0.2**
	comp=N,2.5nm,0.9s						

*MAN **01** 05:03:01.3, 15°.84N×122°.02E, h3km, mb4.5, ML3.3, MS3.1*

*IDC **01** 05:03:06.3±10.0, 15°.05N×122°.82E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.3/71, mbtmp3.7/4, ML4.3/1, MS2.9/1, Ms1 3.1/1, ms1mx2.4/58, Error ellipse: s-maj=201.4km s-min=29.7km az=179.0*

ISC 01 05:03:03.2±1.3, 15°.92N±0°.03×121°.98E±0°.07, h29km±11km, n12, σ2°12/19, mb3.5/3, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALP	**Baler**	**0.43**	**245**	*e*P	**Pb**	**05 03 10.4**	**-2.1**
BALP				*e*S	**Sb**	**05 03 17.7**	**-1.1**
PCPH	**Palayan**	**0.93**	**247**	⇓*i*P	**Pn**	**05 03 19.4**	**-0.8**
PCPH				*i* S	**Sn**	**05 03 32.8**	**+0.4**
CAUP	**Cauayan**	**1.03**	**351**	*e*P	**Pn**	**05 03 21.4**	**-0.1**
CAUP				*e*S	**Sb**	**05 03 38.3**	**+2.8**
BOLP	**Bolinao**	**2.04**	**283**	*e*P	**Pb**	**05 03 38.8**	**-0.7**
BOLP				*e*S	**Sb**	**05 04 08.7**	**+4.1**
APYP	**Conner**	**2.05**	**340**	*e*P	**Pn**	**05 03 36.7**	**+0.9**
APYP				*e*S	**Sn**	**05 04 00.3**	**-0.1**
GQP	**Guinayangan**	**2.06**	**167**	⇑*e*P	**Pn**	**05 03 36.1**	**+0.3**
GQP				*i* S	**Sn**	**05 04 01.1**	**+0.7**
TGY	**Tagaytay City**	**2.07**	**209**	Pn	**Pb**	**05 03 42.1**	**+1.9**
	110nm,0.3s,baz=92,slow=9.3,SNR=4.8						
TGY				Sn	**Sb**	**05 04 09.5**	**+3.9**
	96nm,0.3s,baz=139,slow=19,SNR=7.2						
ABRA	**Dolores**	**2.10**	**325**	*e*P	**Pb**	**05 03 39.6**	**-1.0**
ABRA				*e*S	**Sb**	**05 04 09.1**	**+2.7**
CMAR	**Chiang Mai Arr**	**22.15**	**280**	LR	LR	05 17 06.2	
	comp=Z,29nm,19.1s,baz=75,slow=36						
WRA	**Warramunga Arr**	**37.66**	**161**	P	**P**	**05 10 13.7**	**-2.2**
	0.5nm,0.7s,baz=342,slow=9.3,SNR=6.3						
ASAR	**Alice Springs**	**41.04**	**163**	P	**P**	**05 10 43.1**	**-1.0**
	0.3nm,0.4s,baz=352,slow=8.3,SNR=5.4						
STKA	**Stephens Creek**	**51.12**	**158**	P	**P**	**05 12 02.4**	**-0.9**
	0.9nm,0.9s,baz=347,slow=10,SNR=3.3						

*IDC **01** 05:06:59.9±0.3, 76°.94S×149°.02W, h0km, mb5.2/15, mb1 5.3/17, mb1mx5.1/33, mbtmp5.2/17, ML4.8/1, MS5.1/29, Ms1 5.1/29, ms1mx5.0/33, Error ellipse: s-maj=16.4km s-min=12.8km az=11.0*

*ISCJB **01** 05:07:00.5±0.2, 77°.08S±0°.05×148°.9W±0°.2, h10km, mb5.3/59, MS5.2/193, Error ellipse: s-maj=7.2km s-min=4.8km az=16.9*

*MOS **01** 05:07:00.6±1.3, 77°.16S×149°.57W, h10km, mb5.5/30, MS5.2/9, Error ellipse: s-maj=40.5km s-min=11.6km az=86.9*

*NEIC **01** 05:07:02.0±0.1, 77°.08S×148°.86W, h12km, mb5.5/51, MS5.2/153, MW5.5, Error ellipse: s-maj=6.1km s-min=4.5km az=5.0, Moment Tensor Solution. s28 Moment tensor: Scale 10^17Nm; M_{rr}-1.64; $M_{\theta\theta}$2.08; $M_{\phi\phi}$-0.44; $M_{r\theta}$0.96; $M_{\theta\phi}$0.32; $M_{\phi r}$0.63; Best double couple: $M_0$2.20000×10^17 NP1:ϕ_s102.00000°, δ33.00000°, λ-60.00000°. NP2:ϕ_s247.00000°, δ62.00000°, λ-108.00000°. Principal axes: T 2.3900, Plg15.0000°, Azm350.0000°; N -0.3400, Plg16.0000°, Azm256.0000°; P -2.0600, Plg68.0000°, Azm120.0000°;*

*GCMT **01** 05:07:01.9±0.1, 77°.02S×149°.80W, h13km, MW5.6/103, Moment Tensor Solution. s96,c153; s103,c177; Duration: 1s5 Moment tensor: Scale 10^17Nm; M_{rr}-1.92±.04; $M_{\theta\theta}$2.67±.04; $M_{\phi\phi}$-0.75±.03; $M_{r\theta}$-0.48±.08; $M_{\theta\phi}$0.60±.03; $M_{\phi r}$0.96±.10; Best double couple: $M_0$2.67600×10^17 NP1:ϕ_s107.00000°, δ56.00000°, λ-52.00000°. NP2:ϕ_s233.00000°, δ49.00000°, λ-133.00000°. Principal axes: T 2.7940, Plg4.0000°, Azm172.0000°; N -0.2400, Plg31.0000°, Azm264.0000°; P -2.5590, Plg59.0000°, Azm75.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*BJI **01** 05:07:01.0, 77°.20S×148°.90W, h16km, mB5.8/25, Ms5.5/26, Ms7 5.2/27*

*AWI **01** 05:07:02.0, 77°.04S×148°.79W*

ISC 01 05:07:01.6±0.5, 77°.19S±0°.05×148°.87W±0°.05, h8km±2km, h8km:pP-P, n1013, σ1°45/861, mb5.5/59, MS5.2/194, 35C-70D, Antarctica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBA	**Scott Base**	**9.44**	**245**	*e*Pn	**Pn**	**05 09 16.5**	**-1.2**
SBA	**Scott Base**	**9.44**	**245**	*e*P	**Pn**	**05 09 16.5**	**-1.2**
VNDA	**Vanda**	**10.55**	**244**	Pn	**Pn**	**05 09 31.7**	**-1.1**
	6.9nm,0.3s,baz=108,slow=16,SNR=500						
VNDA				Sn	**Sn**	**05 11 24.6**	**-6.2**
	5.5nm,0.3s,baz=12,slow=19,SNR=2.2						
VNDA				LR	LR	05 13 36.5	
	comp=Z,9μm,19.1s,baz=112,slow=37						
QSPA	**South Pole Qui**	**12.87**	**180**	Pn	**Pn**	**05 10 09.3**	**+4.6**
	0.6nm,0.3s,baz=70,slow=6.5,SNR=62						
QSPA				LR	LR	05 15 12.3	
	comp=Z,14μm,18.5s,baz=57,slow=38						
PMSA	**Palmer Station**	**27.20**	**111**	LR	LR	05 21 54.4	
	comp=Z,2μm,20.9s,baz=204,slow=33						
CASY	**Casey**	**28.97**	**235**	*e*P	**P**	**05 13 03.1**	**+2.1**
	76nm,1.5s						
CASY				LR	LR		
	comp=Z,4μm,20.0s						
VNA3	**Neumayer Olymp**	**29.81**	**155**	P	**P**	**05 13 09.6**	**+1.2**
VNA3				S	**S**	**05 18 05.6**	**+1.0**
SNAA	**Sanae**	**29.99**	**159**	P	**P**	**05 13 11.5**	**+1.4**
SNAA				S	**S**	**05 18 08.6**	**+1.0**
SNAA	**Sanae**	**29.99**	**159**	P	**P**	**05 13 11.4**	**+1.4**
	comp=Z,25nm,1.0s,baz=197,slow=7.3,SNR=48						
SNAA				LR	LR	05 25 35.3	
	comp=Z,6μm,20.8s,baz=206,slow=37						
SNAA	**Sanae**	**29.99**	**159**	*e*P	**P**	**05 13 11.5**	**+1.4**
	comp=Z,48nm,1.1s						
SNAA	**Sanae**	**29.99**	**159**	*d i*P	**P**	**05 13 11.1**	**+1.1**
VNA1	**Neumayer--Stat**	**30.51**	**155**	P	**P**	**05 13 15.8**	**+1.3**
VNA1				S	**S**	**05 18 15.6**	**0.0**
MIR	**Mirnyy**	**31.65**	**222**	⇑*i*P	**P**	**05 13 23.0**	**-1.6**
MIR				*i*		05 13 23.0	
NVL	**N'lazarevskaya**	**31.80**	**168**	⇑*i*P	**P**	**05 13 27.1**	**+1.2**
NVL				*e*S	**S**	**05 18 40.1**	**+4.4**
NVL				MLR	MLR		
	comp=Z,35μm,10.0s						
SYO	**Syowa Base**	**33.93**	**185**	⇑*i*P	**P**	**05 13 45.4**	**+0.9**
SYO	**Syowa Base**	**33.93**	**185**	⇓*i*sP	sP	05 13 48.0	+0.2
MAW	**Mawson**	**34.14**	**201**	P	**P**	**05 13 48.7**	**+2.4**
	comp=Z,25nm,0.9s,baz=173,slow=9.0,SNR=29						
MAW				PcP	**PcP**	**05 16 24.3**	**+1.3**
	comp=Z,17nm,1.0s,baz=203,slow=3.4,SNR=4.3						
MAW				LR	LR	05 26 52.3	
	comp=Z,4μm,19.1s,baz=158,slow=35						
MAW	**Mawson**	**34.14**	**201**	*e*P	**P**	**05 13 49.3**	**+2.9**
	comp=Z,9.5nm,1.0s						
MAW				PcP	**PcP**	**05 16 24.3**	**+1.3**
MAW	**

RPN	Rapa Nui	53.45	45	LR	LR	05 34 22.2	
	comp=Z,787nm,18.9s,baz=186,slow=31						
TBI	Tubuai	53.90	359	eS	S	05 24 07.3	+7.1
	comp=Z,4μm,26.0s						
TBI				eSS	SS	05 27 41.0	+0.1
	comp=Z,685nm,26.2s						
TBI				eLR	LR	05 32 04.4	
	comp=Z,4μm,28.5s,baz=184						
TBI	Tubuai	53.90	359	eT	T	06 12 54.4	
	comp=Z,124nm,0.3s						
ARMA	Armidale	53.92	293	eP	P	05 16 25.9	+0.5
	comp=Z,31nm,1.2s						
ARMA				LR	LR		
	comp=Z,2μm,21.0s						
RKT	Rikitea	54.55	16	eS	S	05 24 17.0	+8.0
	comp=Z,3μm,26.2s						
RKT				eSS	SS	05 27 51.6	+0.5
	comp=Z,417nm,25.5s						
RKT				eLQ	LQ	05 30 00.7	
	comp=Z,3μm,26.8s						
RKT				eLR	LR	05 32 11.7	
	comp=Z,3μm,32.2s,baz=176						
RKT	Rikitea	54.55	16	eT	T	06 13 44.0	
	comp=Z,17nm,0.3s						
STKA	Stephens Creek	54.64	282	P	P	05 16 31.2	+0.8
	comp=Z,26nm,0.7s,baz=140,slow=6.5,SNR=36						
STKA				LR	LR	05 36 14.0	
	comp=Z,3μm,18.4s,baz=154,slow=32						
STKA	Stephens Creek	54.64	282	eP	P	05 16 31.2	+0.8
	comp=Z,4.7nm,0.9s						
STKA	Stephens Creek	54.64	282	eP	P	05 16 31.3	+0.8
STKA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BBOO	Buckleboo	54.96	276	eP	P	05 16 33.4	+0.6
	comp=Z,88nm,0.8s						
AAGR	Agrelo	55.80	89	eP	P	05 16 39.8	+0.9
ARCO	CERRO ARCO	56.02	88	eP	P	05 16 41.2	+0.7
ASAL	Salagasta	56.28	88	eP	P	05 16 42.8	+0.5
RAR	Rarotonga	56.28	348	LR	LR	05 34 36.7	
	comp=Z,2μm,18.2s,baz=208,slow=30						
AUSP	Uspallata	56.51	88	eP	P	05 16 45.2	+1.0
RTLS	Leoncito	56.94	88	eP	P	05 16 47.9	+0.6
RTCV	Cerro Valdivia	57.05	88	eP	P	05 16 47.4	-0.3
RTLL	Cerro Villicun	57.57	88	eP	P	05 16 51.4	0.0
AMOG	MOGNA	57.94	88	eP	P	05 16 54.6	+0.5
GO04	Tololo Observa	58.17	86	eP	P	05 16 55.5	-0.4
	comp=Z,58nm,1.0s						
TCA	Tanti	58.43	92	eP	P	05 16 57.8	+0.3
EIDS	Eidsvold	58.93	294	eP	P	05 17 00.6	-0.3
	comp=Z,38nm,0.9s						
EIDS				LR	LR		
	comp=Z,2μm,22.0s						
NWAO	Narrogin (SRO)	59.03	258	P	P	05 17 01.2	-0.3
	comp=Z,34nm,1.0s,baz=81,slow=9.7,SNR=4.9						
NWAO				LR	LR	05 37 54.9	
	comp=Z,2μm,21.7s,baz=20,slow=31						
DZM	Mont Dzumac	59.25	311	LR	LR	05 39 43.6	
	comp=Z,4μm,18.2s,baz=186,slow=33						
DZM	Mont Dzumac	59.25	311	eS	S	05 25 18.0	+6.8
	comp=Z,979nm,25.5s						
DZM				eLQ	LQ	05 31 57.9	
	comp=Z,4μm,31.1s						
DZM				eLR	LR	05 34 27.7	
	comp=Z,5μm,22.9s						
DZM	Mont Dzumac	59.25	311	PFAKE		05 17 10.0	+6.7
DZM				LR	LR		
	comp=Z,4μm,20.0s						
LCO	Las Campanas	59.31	86	eP	P	05 17 03.8	-0.1
	comp=Z,53nm,1.2s						
LCO				LR	LR		
	comp=Z,1μm,18.0s						
AGUA	GUANDACOL	59.34	88	eP	P	05 17 04.4	+0.5
TVO	Taravao	59.43	360	eT	T	06 19 50.0	
	comp=Z,14nm,0.3s						
PAE	Paea	59.55	359	eT	T	06 19 59.6	
	comp=Z,3.9nm,0.3s						
PPT2	Papeete2	59.63	359	eS	S	05 25 24.9	+8.8
	comp=Z,5μm,26.0s						
PPT2				eSS	SS	05 29 13.1	+1.8
	comp=Z,694nm,25.5s						
PPT2				eLR	LR	05 34 40.8	
	comp=Z,5μm,27.5s,baz=183						
PPT2	Papeete2	59.63	359	eT	T	06 20 01.6	
	comp=Z,12nm,0.3s						
PPT	Papeete	59.65	359	LR	LR	05 36 52.1	
	comp=Z,1μm,18.4s,baz=192,slow=30						
TIAR	Tiarei	59.66	359	eT	T	06 19 56.1	
	comp=Z,9.1nm,0.3s						
GO03	Copiap	60.78	86	eP	P	05 17 13.6	-0.1
	comp=Z,34nm,1.2s						
GO03				LR	LR		
	comp=Z,2μm,22.0s						
CYA	Choya	60.95	90	eP	P	05 17 14.9	0.0
VAH	Vaihoa	61.97	1	eT	T	06 23 02.3	
	comp=Z,170nm,0.3s						
PMOR	Pomariorio Ree	62.20	1	eT	T	06 23 17.1	
	comp=Z,14nm,0.3s						
GO02	Mina Guanaco	63.27	86	eP	P	05 17 30.6	-0.1
	comp=Z,33nm,1.0s						
GO02				LR	LR		
	comp=Z,1μm,21.0s						
AS01	Alice Springs	64.25	277	eP	P	05 17 35.9	-1.0
ASAR	Alice Springs	64.26	277	P	P	05 17 36.0	-1.0
	comp=Z,11nm,0.6s,baz=157,slow=7.5,SNR=31						
ASAR				LR	LR	05 42 43.7	
	comp=Z,1μm,19.0s,baz=159,slow=33						
AS31	Alice Springs	64.26	277	eP	P	05 17 36.0	-1.0
	comp=Z,6.0nm,0.6s						
AFI	Afiamalu	64.38	335	LR	LR	05 41 19.7	
	comp=Z,2μm,18.5s,baz=173,slow=32						
AFI	Afiamalu	64.38	335	PFAKE		05 17 50.0	+12
AFI				LR	LR		
	comp=Z,66μm,22.0s						
PB10	IPOC Station P	64.65	84	eP	P	05 17 39.5	+0.1
	comp=Z,74nm,1.4s						
PB10				LR	LR		
	comp=Z,1μm,20.0s						
CPUP	Villa Florida	64.87	98	P	P	05 17 41.1	+0.2
	comp=Z,20nm,1.0s,baz=205,slow=6.1,SNR=22						
CPUP				LR	LR	05 46 07.1	
	comp=Z,2μm,18.2s,baz=190,slow=36						
CPUP	Villa Florida	64.87	98	eP	P	05 17 41.1	+0.2
	comp=Z,42nm,1.2s						
CPUP	Villa Florida	64.87	98	eP	P	05 17 41.1	+0.2
CPUP				pmax	pmax		
	comp=Z,42nm,1.2s						
CTAO	Charters Tower	65.05	290	PFAKE		05 17 50.0	+7.9
CTAO				LR	LR		
	comp=Z,2μm,18.0s						
PB04	IPOC Station P	65.88	84	eP	P	05 17 48.3	+0.7
	comp=Z,136nm,1.5s						
HJA	Humahuaca	66.09	89	eP	P	05 17 50.2	+0.9
PB01	IPOC Station P	67.27	85	eP	P	05 17 56.8	+0.3
	comp=Z,32nm,1.0s						
WR0	Warramunga Arr	67.70	279	PFAKE		05 18 10.0	+11
WR0				LR	LR		
	comp=Z,1μm,19.0s						
WR7	Warramunga Arr	67.72	278	PFAKE		05 18 10.0	+11
WR7				LR	LR		
	comp=Z,1μm,18.0s						
WR6	Warramunga Arr	67.72	278	PFAKE		05 18 10.0	+11
WR6				LR	LR		
	comp=Z,1μm,18.0s						
WR5	Warramunga Arr	67.73	278	PFAKE		05 18 10.0	+11
WR5				LR	LR		
	comp=Z,1μm,19.0s						
WC4	Warramunga Arr	67.74	278	PFAKE		05 18 10.0	+11
WC4				LR	LR		
	comp=Z,1μm,18.0s						
WR3	Warramunga Arr	67.75	278	PFAKE		05 18 10.0	+11
WR3				LR	LR		
	comp=Z,1μm,22.0s						
WB2	Warramunga Arr	67.76	278	eP	P	05 17 58.8	-0.7
	comp=Z,59nm,1.0s						
WRA	Warramunga Arr	67.76	278	P	P	05 17 58.2	-1.3
	comp=Z,27nm,0.7s,baz=158,slow=5.5,SNR=44						
WRA				LR	LR	05 43 39.8	
	comp=Z,888nm,18.2s,baz=160,slow=32						
WRAB	Tennant Creek	67.77	278	eP	P	05 17 58.8	-0.7
	comp=Z,52nm,0.9s						
WRAB				LR	LR		
	comp=Z,1μm,22.0s						
WRAB	Tennant Creek	67.77	278	⇑iP	P	05 17 58.3	-1.2
WRAB				i *PP	pP	05 18 00.9	-1.2
WRAB				i *SP	sP	05 18 03.1	+0.1
WRAB				pmax	pmax		
	comp=Z,36nm,0.9s						
WB8	Warramunga Arr	67.88	278	PFAKE		05 18 10.0	+10
WB8				LR	LR		
	comp=Z,1μm,18.0s						
WB9	Warramunga Arr	67.90	278	PFAKE		05 18 10.0	+10
WB9				LR	LR		
	comp=Z,2μm,18.0s						
WB0	Warramunga Arr	67.92	278	PFAKE		05 18 10.0	+10
WB0				LR	LR		
	comp=Z,1μm,19.0s						
TAOE	Nuku Hiva Isla	68.47	9	eS	S	05 27 15.3	+9.5
	comp=Z,4μm,26.2s						
TAOE				eSS	SS	05 31 28.5	-0.8
	comp=Z,589nm,25.1s						
TAOE				eLR	LR	05 38 37.3	
	comp=Z,2μm,30.9s,baz=194						
PB11	IPOC Station P	68.47	84	eP	P	05 18 04.8	+0.7
	comp=Z,80nm,1.1s						
PB11				LR	LR		
	comp=Z,900nm,21.0s						
MNMC	Minye Minye	69.09	84	eP	P	05 18 08.8	+0.6
	comp=Z,55nm,1.0s						
SPB	Sao Paulo	69.67	106	eP	P	05 18 12.3	+0.9
	comp=Z,70nm,1.5s						
SPB				LR	LR		
	comp=Z,2μm,20.0s						
MBWA	Marble Bar	69.84	264	eP	P	05 18 12.7	+0.3
	comp=Z,66nm,1.3s						
MBWA				LR	LR		
	comp=Z,2μm,18.0s						
SUR	Sutherland	70.50	171	eP	P	05 18 18.3	+1.7
	comp=Z,78nm,0.9s						
SUR				LR	LR		
	comp=Z,5μm,20.0s						
FUNA	Funafuti	70.68	326	PFAKE		05 18 30.0	+12
FUNA				LR	LR		
	comp=Z,8μm,20.0s						
FITZ	Fitzroy Crossi	71.48	270	eP	P	05 18 22.6	+0.2
	comp=Z,41nm,1.3s						
COEN	Coen	71.64	289	eP	P	05 18 24.2	+0.8
	comp=Z,92nm,1.5s						
COEN				LR	LR		
	comp=Z,3μm,18.0s						
LPAZ	La Paz	72.17	85	P	P	05 18 27.8	+0.4
	comp=Z,27nm,0.9s,baz=172,slow=4.3,SNR=101						
LPAZ	La Paz	72.17	85	eP	P	05 18 27.9	+0.6
	comp=Z,48nm,1.0s						
LPAZ	La Paz	72.17	85	eP	P	05 18 27.9	+0.6
LPAZ				pmax	pmax		
	comp=Z,48nm,1.0s						
HNR	Honiara	72.74	306	LR	LR	05 44 29.9	
	comp=Z,2μm,21.6s,baz=182,slow=31						
HNR	Honiara	72.74	306	PFAKE		05 18 40.0	+10
HNR				LR	LR		
	comp=Z,2μm,18.0s						
BOSA	Boshof	74.38	175	P	P	05 18 40.6	+0.9
	comp=Z,50nm,0.9s,baz=182,slow=5.7,SNR=53						
BOSA				LR	LR	05 48 22.7	
	comp=Z,2μm,21.3s,baz=180,slow=33						
BOSA	Boshof	74.38	175	eP	P	05 18 40.8	+1.1
	comp=Z,80nm,1.0s						
BOSA	Boshof	74.38	175	eP	P	05 18 40.8	+1.1
BOSA				pmax	pmax		
	comp=Z,80nm,1.0s						
NNA	Nana	74.42	75	eP	P	05 18 40.0	0.0
	comp=Z,38nm,1.0s						
NNA				LR	LR		
	comp=Z,1μm,18.0s						
NNA	Nana	74.42	75	iP	P	05 18 39.9	0.0
PMG	Port Moresby	75.23	294	LR	LR	05 45 49.9	
	comp=Z,846nm,19.2s,baz=148,slow=31						
PMG	Port Moresby	75.23	294	PFAKE		05 19 00.0	+15
PMG				LR	LR		
	comp=Z,1μm,18.0s						
PMG	Port Moresby	75.23	294	⇑iP	P	05 18 45.5	+0.9
PMG				i *PP	pP	05 18 47.7	+0.6
PMG				i *SP	sP	05 18 49.5	+1.5
PMG				pmax	pmax		
	comp=Z,142nm,1.1s						
MTN	Manton Dam	75.34	277	eP	P	05 18 45.1	-0.1
	comp=Z,98nm,1.0s						
MTN				LR	LR		
	comp=Z,1μm,18.0s						
XMAS	Kiritimati	79.28	351	PFAKE		05 19 20.0	+13
XMAS				LR	LR		
	comp=Z,6.0nm,19.0s						
RABL	Rabaul	79.31	300	PFAKE		05 19 20.0	+13
RABL				LR	LR		
	comp=Z,1μm,18.0s						
BATI	Baumata	79.55	270	LR	LR	05 52 25.3	
	comp=Z,874nm,19.5s,baz=188,slow=34						
SOEI	Soe	79.86	271	PFAKE		05 19 20.0	+9.4
SOEI				LR	LR		
	comp=Z,2μm,20.0s						
SAML	Samuel	80.37	88	eP	P	05 19 12.5	-0.7
	comp=Z,45nm,1.1s						
SAML				LR	LR		
	comp=Z,1μm,18.0s						
TARA	Tarawa	81.23	321	PFAKE		05 19 30.0	+12
TARA				LR	LR		
	comp=Z,79nm,19.0s						
JAY	Jayapura	83.27	289	P	P	05 19 27.6	-0.9
	comp=Z,24nm,0.8s,baz=141,slow=3.0,SNR=5.9						
COCO	West Island	83.41	244	PFAKE		05 19 40.0	+11
COCO				LR	LR		
	comp=Z,2μm,20.0s						
TSUM	Tsumeb	83.47	167	eP	P	05 19 30.8	+1.1
	comp=Z,21nm,1.0s						
TSUM				LR	LR		
	comp=Z,3μm,20.0s						
ABPO	Ambohimpanom	83.52	195	eP	P	05 19 32.1	+2.2
	comp=Z,42nm,1.4s						
ABPO				LR	LR		
	comp=Z,1μm,19.0s						
ABPO	Ambohimpanom	83.52	195	eP	P	05 19 32.1	+2.2
ABPO				pmax	pmax		
	comp=Z,42nm,1.4s						
OPO	Ambohidratompo	83.97	195	P	P	05 19 33.7	+1.5
	comp=Z,12nm,0.9s,baz=174,slow=6.2,SNR=6.4						
OPO				LR	LR	05 54 09.8	
	comp=Z,3μm,19.9s,baz=181,slow=34						
SHEL	Horse Pasture	84.57	145	PFAKE		05 19 50.0	+15
SHEL				LR	LR		
	comp=Z,647nm,19.0s						
FAKI	Fak Fak	84.70	280	eP	P	05 19 35.9	+0.1
	comp=Z,79nm,1.3s						
OTAV	Otavalo	85.94	71	eP	P	05 19 42.4	-0.1
	comp=Z,53nm,1.1s						
OTAV				LR	LR		
	comp=Z,456nm,20.0s						
OTAV	Otavalo	85.94	71	P	P	05 19 42.4	-0.1
OTAV				pmax	pmax		
	comp=Z,53nm,1.1s						
LEM	Lembang	86.37	255	P	P	05 19 44.5	+0.2
	comp=Z,22nm,0.5s,baz=149,slow=3.7,SNR=6.4						
LEM				LR	LR	05 52 34.9	
	comp=Z,542nm,22.0s,baz=188,slow=32						
LEM	Lembang	86.37	255	P	P	05 19 44.5	+0.2
LEM				pmax	pmax		
	comp=Z,17nm,0.4s						
LSZ	Lusaka	87.70	177	eP	P	05 19 52.4	+1.7
	comp=Z,43nm,1.5s						
LSZ				LR	LR		
	comp=Z,2μm,20.0s						
LSZ	Lusaka	87.70	177	P	P	05 19 52.8	+2.1
	SNR=6.6						
LSZ	Lusaka	87.70	177	P	P	05 19 52.8	+2.1
	SNR=6.6						
LSZ	Lusaka	87.70	177	eP	P	05 19 52.4	+1.7
LSZ				pmax	pmax		
	comp=Z,43nm,1.5s						
PTGA	Pitinga	89.05	89	eP	P	05 19 56.8	-0.1
	comp=Z,88nm,1.3s						
PTGA				LR	LR		
	comp=Z,13μm,20.0s						
MDSI	Maura Dua	89.38	252	P	P	05 19 58.0	-0.5
PRAC	Prado	90.07	74	eP	P	05 20 01.2	-0.5
	comp=Z,52nm,1.2s						
ROSC	El Rosal	91.29	74	P	P	05 20 07.2	-0.6
	comp=Z,4.1nm,0.6s,baz=225,slow=4.3,SNR=8.9						
ROSC				LR	LR	05 54 38.1	
	comp=Z,595nm,21.9s,baz=192,slow=31						
ROSC	El Rosal	91.29	74	eP	P	05 20 07.1	-0.6
	comp=Z,12nm,1.1s						
HELC	Santa Helena	92.34	72	eP	P	05 20 11.0	-1.6
	comp=Z,19nm,1.0s						
RUSC	La Rusia	92.57	75	eP	P	05 20 11.5	-2.4
	comp=Z,22nm,1.1s						
BCIP	Isla Barro Col	94.33	68	PFAKE		05 20 30.0	+8.7
BCIP				LR	LR		
	comp=Z,625nm,19.0s						
JTS	JuntasAbangare	94.38	62	LR	LR	05 54 28.5	
	comp=Z,844nm,19.5s,baz=258,slow=30						
JTS	JuntasAbangare	94.38	62	PFAKE		05 20 30.0	+8.4
JTS				LR	LR		
	comp=Z,16μm,20.0s						
JOHN	Johnston Islan	94.52	340	PFAKE		05 20 30.0	+8.0
JOHN				LR	LR		
	comp=Z,194nm,20.0s						
DAV	Davao City (W)	95.86	276	LR	LR	06 04 18.5	
	comp=Z,234nm,18.4s,baz=156,slow=36						
DAV	Davao City (W)	95.86	276	PFAKE		05 20 40.0	+12
DAV				LR	LR		
	comp=Z,4μm,20.0s						
SDV	Santo Domingo	96.00	77	PFAKE		05 20 40.0	+11
SDV				LR	LR		
	comp=Z,798nm,20.0s						
POHA	Pohakuloa	96.82	354	PFAKE		05 20 40.0	+7.2
POHA				LR	LR		
	comp=Z,2μm,21.0s						
PSI	Prapat	97.56	249	LR	LR	05 58 45.1	
	comp=Z,1μm,21.3s,baz=95,slow=32						
APG	El Apazote	97.92	56	LR	LR	05 56 07.7	
	comp=Z,427nm,19.5s,baz=185,slow=30						
GUMO	Guam	98.06	296	LR	LR	05 58 59.5	
	comp=Z,282nm,21.1s,baz=167,slow=32						
GUMO	Guam	98.06	296	PFAKE		05 20 50.0	+12
GUMO				LR	LR		
	comp=Z,56μm,20.0s						
CMIG	Matias Romero	99.16	52	LR	LR	05 56 43.2	
	comp=Z,621nm,19.8s,baz=174,slow=30						
WAKE	Wake Island	99.76	318	PFAKE		05 21 00.0	+14
WAKE				LR	LR		
	comp=Z,1μm,22.0s						
GRGR	Grenville	101.12	85	PFAKE		05 21 00.0	+8.1
GRGR				LR	LR		
	comp=Z,716nm,19.0s						
KMBO	Kilima Mbogo	101.70	186	PFAKE		05 21 10.0	+15
KMBO				LR	LR		
	comp=Z,948nm,20.0s						
MBAR	Mbarara	102.30	180	PFAKE		05 21 10.0	+13
MBAR				LR	LR		
	comp=Z,652nm,21.0s						
MTDJ	Mount Denham	103.60	68	PFAKE		05 21 10.0	+7.1
MTDJ				LR	LR		
	comp=Z,383nm,20.0s						
SDDR	Presa de Saban	105.65	74	PFAKE		05 25 40.0	
SDDR				LR	LR		
	comp=Z,566nm,19.0s						
SJG	San Juan	105.92	79	PFAKE		05 25 40.0	
SJG				LR	LR		
	comp=Z,677nm,21.0s						
ANWB	Willy Bob	106.45	83	PFAKE		05 25 40.0	
ANWB				LR	LR		
	comp=Z,458nm,20.0s						
GRTK	Grand Turk	108.13	73	PFAKE		05 25 40.0	
GRTK				LR	LR		
	comp=Z,464nm,19.0s						
KVTX	Kingsville	108.88	47	PFAKE		05 25 40.0	
KVTX				LR	LR		
	comp=Z,759nm,20.0s						
TXAR	Lajitas Array	109.74	41	PKKP	PKKPdf	05 36 48.3	-1.2
	comp=Z,1.5nm,1.0s,baz=7.6,slow=3.8,SNR=5.6						
QIZ	Qiongzhong	110.93	263	PFAKE		05 25 50.0	
QIZ				LR	LR		
	comp=Z,385nm,20.0s						
JCT	Junction City	111.45	44	PFAKE		05 25 50.0	
JCT				LR	LR		
	comp=Z,389nm,19.0s						
MONP2	Monument Peak	111.62	29	P	PKiKP	05 25 37.0	+1.1
	baz=187						
TUC	Tucson	111.70	34	PFAKE		05 25 50.0	
TUC				LR	LR		
	comp=Z,439nm,19.0s						
SWSC	Sam W. Stewart	111.74	30	P	PKiKP	05 25 35.5	-0.4
	baz=188						
MNTX	Cornudas Mount	111.82	39	PFAKE		05 25 50.0	
MNTX				LR	LR		
	comp=Z,351nm,19.0s						
SACV	Santiago Islan	112.01	122	PFAKE		05 25 50.0	
SACV				LR	LR		
	comp=Z,214nm,21.0s						
PFO	Pinyon Flats O	112.33	29	PFAKE		05 25 50.0	
PFO				LR	LR		
	comp=Z,653nm,20.0s						
CMAR	Chiang Mai Arr	112.75	252	PKiKP	PKiKP	05 25 37.7	-0.5
	comp=Z,1.3nm,0.4s,baz=192,slow=3.0,SNR=5.4						
CHTO	Chiang Mai	113.10	252	PFAKE		05 25 50.0	
CHTO				LR	LR		
	comp=Z,562nm,19.0s						
NATX	Nacogdoches	113.54	49	PFAKE		05 25 50.0	
NATX				LR	LR		
	comp=Z,475nm,19.0s						
TORD	Torodi Ar. Bea	114.18	148	PKP	PKPdf	05 25 40.2	-0.8
	comp=Z,0.8nm,0.9s,baz=196,slow=2.6,SNR=3.7						
TORD				PKKPab	PKKPab	05 36 25.7	-2.2
	comp=Z,1.3nm,1.0s,baz=336,slow=6.3,SNR=3.7						
BRAL	Brewton	114.31	56	PFAKE		05 25 50.0	+9.2
BRAL				LR	LR		
	comp=Z,471nm,20.0s						
WUAZ	Wupatki	114.79	33	PFAKE		05 25 50.0	+8.2
WUAZ				LR	LR		
	comp=Z,476nm,20.0s						
ANMO	Albuquerque	114.86	38	PFAKE		05 25 50.0	+8.0
ANMO				LR	LR		
	comp=Z,467nm,19.0s						
WMOK	Wichita Mounta	115.79	45	P	PKPdf	05 25 42.4	-1.2
	baz=191						
WMOK	Wichita Mounta	115.79	45	ePKPdf	PKPdf	05 25 42.3	-1.2
WMOK				LR	LR		
	comp=Z,283nm,20.0s						
WMOK	Wichita Mounta	115.79	45	ePKIKP	PKPdf	05 25 42.3	-1.2
Z47A	Carrollton	116.10	55	P	PKPdf	05 25 42.6	-1.6
	baz=193						
X39A	Fountain Ranch	116.32	49	P	PKPdf	05 25 43.0	-1.6
	baz=192						
MIAR	Mount Ida	116.44	49	PFAKE		05 26 00.0	+15
MIAR				LR	LR		
	comp=Z,356nm,19.0s						
MVCO	Mesa Verde	116.82	35	PFAKE		05 26 00.0	+14
MVCO				LR	LR		
	comp=Z,322nm,19.0s						
NV01	Mina Array Sit	116.90	27	ePKPdf	PKPdf	05 25 45.1	-0.7
NV01				epPKPdf	PKiKP	05 25 45.6	-0.3
NVAR	Mina Array Bea	116.90	27	PKP	PKPdf	05 25 45.6	-0.3
	comp=Z,1.6nm,0.8s,baz=183,slow=4.1,SNR=10						
R11A	Troy Canyon, C	117.10	29	P	PKPdf	05 25 45.8	-0.4
	baz=188						
R11A	Troy Canyon, C	117.10	29	ePKPdf	PKPdf	05 25 45.5	-0.6
GOGA	Godfrey	117.16	59	PFAKE		05 26 00.0	+14
GOGA				LR	LR		
	comp=Z,337nm,19.0s						
W41B	Gary Mavity, V	117.28	50	P	PKPdf	05 25 45.0	-1.4
	baz=192						
W41B	Gary Mavity, V	117.28	50	ePKPdf	PKPdf	05 25 44.8	-1.6
W41B				epPKPdf	PKiKP	05 25 45.6	-0.8
PSUT	Pine Spring	117.48	30	ePKPdf	PKPdf	05 25 47.1	+0.1
PSUT				epPKPdf	PKiKP	05 25 47.3	+0.3
NHSC	New Hope	117.51	62	PFAKE		05 26 00.0	+13
NHSC				LR	LR		
	comp=Z,632nm,20.0s						
KVN	Kaiserville	117.54	27	ePKPdf	PKPdf	05 25 46.8	-0.2
KVN				epPKPdf	PKiKP	05 25 47.1	0.0
KVN	Kaiserville	117.54	27	ePKIKP	PKPdf	05 25 46.8	-0.2
S22A	4UR Ranch, Cre	117.57	37	P	PKPdf	05 25 46.6	-0.7
	baz=190						
S22A	4UR Ranch, Cre	117.57	37	ePKPdf	PKPdf	05 25 46.6	-0.7
S22A				epPKPdf	PKiKP	05 25 46.8	-0.5
MSU	Marysvale	117.65	32	ePKPdf	PKPdf	05 25 47.7	+0.4
MSU				epPKPdf	PKiKP	05 25 47.8	+0.5
MSU	Marysvale	117.65	32	ePKIKP	PKPdf	05 25 47.7	+0.4
SDCO	Great Sand Dun	117.75	38	P	PKPdf	05 25 46.8	-0.8
	baz=190						
SDCO	Great Sand Dun	117.75	38	ePKPdf	PKPdf	05 25 47.0	-0.6
SDCO				LR	LR		
	comp=Z,401nm,21.0s						
PV03	Paradox Valley	117.81	35	ePKPdf	PKPdf	05 25 47.2	-0.4
PLAL	Pickwick Lake	117.83	54	ePKPdf	PKP

baz=192
U40A Yellville 118.33 50 P PKPdf 05 25 46.7 -1.7
baz=192
KMI Kunming 118.39 258 PKP PKPdf 05 25 51.9 +2.8
KMI PP **PP** 05 27 10.8 +5.0
KMI SKS **SKSdf** 05 33 00.3 -1.0
KMI AMB AMB
comp=Z,97nm,7.0s
KMI LR LR
comp=Z,590nm,17.7s
KMI LR LR
comp=Z,220nm,20.4s
KMI LR LR
comp=Z,510nm,17.7s
SRU San Rafael Swe 118.44 33 *e*PKPdf PKPdf 05 25 48.0 -0.7
SRU *ep*PKPdf **PKiKP** 05 25 48.5 -0.3
SRU San Rafael Swe 118.44 33 *e*PKIKP PKPdf 05 25 48.0 -0.7
U41A Viola 118.48 50 P PKPdf 05 25 46.9 -1.7
baz=192
TMUT Trail Mountain 118.54 33 *e*PKPdf PKPdf 05 25 49.0 -0.1
W50A Signal Mountai 118.55 57 P PKPdf 05 25 47.3 -1.6
baz=193
U42A Revenden 118.61 51 P PKPdf 05 25 47.3 -1.6
baz=192
W52A Murphy 118.71 58 P PKPdf 05 25 47.6 -1.6
baz=193
T38A Diamond 118.76 48 P PKPdf 05 25 47.2 -2.0
baz=192
V47A Nunnelly 118.76 54 P PKPdf 05 25 46.9 -2.3
baz=193
GYA Guiyang 118.81 262 *e*Pdif Pdif 05 22 12.0 +1.6
GYA PKP **PKiKP** 05 25 51.2 +1.4
GYA PP **PP** 05 27 14.8 +6.2
GYA AMB AMB
comp=Z,140nm,7.9s
T39A Clever 118.90 49 P PKPdf 05 25 48.0 -1.5
baz=192
SMCO Snowmass 118.96 36 *e*PKPdf PKPdf 05 25 49.6 -0.4
NLU North Lily Min 119.09 32 *e*PKPdf PKPdf 05 25 50.3 +0.3
T40A Mansfield 119.17 50 P PKPdf 05 25 48.3 -1.6
baz=192
T41A Mountain View 119.19 50 P PKPdf 05 25 48.7 -1.4
baz=192
DUG Dugway, Tooele 119.24 31 P PKPdf 05 25 49.9 -0.3
baz=189
DUG Dugway, Tooele 119.24 31 *e*PKPdf PKPdf 05 25 50.2 +0.1
DUG LR LR
comp=Z,481nm,19.0s
DUG Dugway, Tooele 119.24 31 *e*PKIKP PKPdf 05 25 50.3 +0.1
M02C Callahan 119.42 22 P PKPdf 05 25 50.5 +0.1
baz=186
S39A Bolivar 119.56 49 P PKPdf 05 25 48.6 -2.1
baz=192
U48A Cassie Pea, Po 119.60 55 P PKPdf 05 25 48.8 -2.0
baz=193
S40A Lebanon 119.61 50 P PKPdf 05 25 49.0 -1.8
baz=192
CBKS Cedar Bluff 119.63 43 P PKPdf 05 25 49.6 -1.3
baz=191
CBKS Cedar Bluff 119.63 43 *e*PKPdf PKPdf 05 25 50.1 -0.8
CBKS LR LR
comp=Z,388nm,20.0s
CBKS Cedar Bluff 119.63 43 *e*PKIKP PKPdf 05 25 50.1 -0.8
S41A Jillco Farms, 119.72 50 P PKPdf 05 25 49.2 -1.9
baz=192
ISCO Idaho Springs 119.75 37 P PKPdf 05 25 50.6 -0.8
baz=190
ISCO Idaho Springs 119.75 37 *e*PKPdf PKPdf 05 25 51.1 -0.3
ISCO LR LR
comp=Z,706nm,19.0s
ISCO Idaho Springs 119.75 37 *e*PKIKP PKPdf 05 25 51.1 -0.3
YBH Yreka Blue Hor 119.77 22 *e*PKPdf PKPdf 05 25 49.8 -1.3
YBH Yreka Blue Hor 119.77 22 *e*PKIKP PKPdf 05 25 49.8 -1.3
T46A Princeton 119.87 54 P PKPdf 05 25 49.7 -1.6
baz=193
BGU Big Grassy Mou 119.94 31 *e*PKPdf PKPdf 05 25 51.6 +0.1
R38A Fenwick Farm, 119.94 48 P PKPdf 05 25 49.5 -1.9
baz=192
S43A Fulton Ridge, 120.00 52 P PKPdf 05 25 49.6 -2.0
baz=193
BBSR BB Station 120.02 76 PFAKE 05 26 00.0 +8.3
BBSR LR LR
comp=Z,433nm,20.0s
CNNC Cliffs of the 120.03 63 PFAKE 05 26 00.0 +8.4
CNNC LR LR
comp=Z,582nm,20.0s
S42A Caledonia 120.07 51 P PKPdf 05 25 49.9 -1.8
baz=193
MOD Modoc Plateau 120.15 24 *e*PKPdf PKPdf 05 25 51.6 -0.3
MOD *ep*PKPdf **PKiKP** 05 25 51.8 -0.2
T48A Bowling Green 120.21 55 P PKPdf 05 25 50.0 -1.9
baz=193
R39A Chumby, Stover 120.21 49 P PKPdf 05 25 50.1 -1.9
baz=192
CCM Cathedral Cave 120.27 51 P PKPdf 05 25 49.9 -2.1
baz=193
CCM Cathedral Cave 120.27 51 *e*PKPdf PKPdf 05 25 50.3 -1.7
CCM Cathedral Cave 120.27 51 *e*PKIKP PKPdf 05 25 50.3 -1.7
R40A Maddies Statio 120.32 50 P PKPdf 05 25 50.1 -2.1
baz=192
SPUT South Promonto 120.38 31 *e*PKPdf PKPdf 05 25 52.7 +0.4
KSU1 Kansas State U 120.40 46 PFAKE 05 26 00.0 +7.7
KSU1 LR LR
comp=Z,310nm,19.0s
R41A Rosebud 120.48 50 P PKPdf 05 25 50.6 -1.9
baz=193
R42A Luebbering 120.56 51 P PKPdf 05 25 50.9 -1.7
baz=193
HUMO Hull Mountain 120.62 22 *e*PKPdf PKPdf 05 25 52.5 -0.1
HUMO *ep*PKPdf **PKiKP** 05 25 52.7 0.0
Q38A Cooks Store, C 120.75 48 P PKPdf 05 25 50.8 -2.2
baz=192
KEBM Edson Butte 120.77 21 *e*PKPdf PKPdf 05 25 53.1 +0.2
HWUT Hardware Ranch 120.78 32 PFAKE 05 26 00.0 +6.8
HWUT LR LR
comp=Z,512nm,19.0s
N23A Red Feather La 120.78 37 P PKPdf 05 25 52.8 -0.5
baz=190
N23A Red Feather La 120.78 37 *e*PKPdf PKPdf 05 25 53.5 +0.2
S48A Wiedeman Farm, 120.80 55 P PKPdf 05 25 50.9 -2.2
baz=193
WVOR Wild Horse Val 120.83 26 *e*PKPdf PKPdf 05 25 52.3 -0.8
WVOR LR LR
comp=Z,499nm,21.0s
WVOR Wild Horse Val 120.83 26 *e*PKIKP PKPdf 05 25 52.3 -0.8
K05A Summer Lake 120.91 24 *e*PKPdf PKPdf 05 25 53.3 -0.1
Q40A Laux Farm, Aux 121.04 50 P PKPdf 05 25 51.9 -1.6
baz=193
Q41A Truxton 121.14 50 P PKPdf 05 25 51.9 -1.8
baz=193
P37A Lathrop 121.24 47 P PKPdf 05 25 51.7 -2.1
baz=192
S51A Beattyville 121.24 57 P PKPdf 05 25 52.9 -1.1
baz=194
WCI Wyandotte Cave 121.31 55 P PKPdf 05 25 52.4 -1.6
baz=194
J04D Umpqua Nationa 121.32 23 P PKPdf 05 25 53.2 -0.9
baz=187
R47A Wooly Knot Far 121.34 55 P PKPdf 05 25 52.0 -2.0
baz=193
OGNE Ogallala 121.38 40 PFAKE 05 26 10.0 +16
OGNE LR LR
comp=Z,591nm,19.0s
P39B Salisbury 121.41 49 P PKPdf 05 25 52.5 -1.7
baz=193
BLA Blacksburg 121.44 60 PFAKE 05 26 10.0 +16
BLA LR LR
comp=Z,562nm,20.0s
J05D Fort Rock, OR 121.44 23 P PKPdf 05 25 53.6 -0.7
baz=187
NJ2 Nanjing 121.49 276 *e*PKP PKPdf 05 25 58.1 +3.5
P40A Paris 121.57 49 P PKPdf 05 25 53.7 -0.7
baz=193
I03D Drain, OR 121.67 22 P PKPdf 05 25 53.2 -1.3
baz=186
MJAR Matsushiro Arr 121.67 295 PKP **PKPdf 05 25 53.2 -1.7**
comp=Z,3.2nm,0.8s,baz=198,slow=3.5,SNR=8.9
MJAR PKKPab **PKKPab 05 35 53.6 +0.4**
comp=Z,0.7nm,0.3s,baz=343,slow=4.5,SNR=4.1
MAJO Matsushiro 121.68 295 PFAKE 05 26 10.0 +15
MAJO LR LR
comp=Z,502nm,22.0s
MAJO Matsushiro 121.68 295*c i*PKIKP PKPdf 05 25 53.3 -1.5
J08A Circle Bar Ran 121.77 26 *e*PKPdf PKPdf 05 25 54.7 -0.2
J08A *ep*PKPdf **PKiKP** 05 25 55.0 0.0
ENH Enshi 121.86 266 PFAKE 05 26 10.0 +15
ENH LR LR
comp=Z,449nm,19.0s
O38A Galt 121.90 48 P PKPdf 05 25 53.5 -1.6
baz=192
PINE Pine Mountain 121.97 24 *e*PKPdf PKPdf 05 25 55.1 -0.2
PINE *ep*PKPdf **PKiKP** 05 25 55.6 +0.1
AHID Auburn Hatcher 121.98 32 *e*PKPdf PKPdf 05 25 55.5 +0.1
AHID LR LR
comp=Z,563nm,19.0s
MFID Camas Ranch 122.09 28 *e*PKPdf PKPdf 05 25 55.5 -0.1
BW06 Boulder Array 122.16 33 P PKPdf 05 25 54.5 -1.4
baz=190
BW06 Boulder Array 122.16 33 *e*PKPdf PKPdf 05 25 54.5 -1.4
BW06 LR LR
comp=Z,520nm,19.0s
PD31 Pinedale Array 122.16 33 *e*PKPdf PKPdf 05 25 54.8 -1.1
PDAR Pinedale Array 122.16 33 PKP **PKPdf 05 25 54.3 -1.6**
comp=Z,2.1nm,0.8s,baz=151,slow=3.4,SNR=16
PDAR Pinedale Array 122.16 33 *e*PKPpre PKPpre 05 25 53.1
PDAR *e*PKPdf **PKPdf 05 25 54.9 -0.9**
O40A La Belle 122.17 49 P PKPdf 05 25 54.0 -1.6
baz=193
O39A Kirksville 122.19 49 P PKPdf 05 25 54.4 -1.3
baz=193
HLID Hailey 122.39 29 P PKPdf 05 25 56.3 +0.1
baz=189
HLID Hailey 122.39 29 *e*PKPdf PKPdf 05 25 56.3 +0.1
HLID LR LR
comp=Z,400nm,20.0s
N37A Lee Faris, Mou 122.40 47 P PKPdf 05 25 54.3 -1.7
baz=192
BGNE Belgrade 122.41 44 P PKPdf 05 25 54.5 -1.6
baz=192
K22A Casper 122.44 36 P PKPdf 05 25 55.4 -0.9
baz=190
K22A Casper 122.44 36 *e*PKPdf PKPdf 05 25 55.5 -0.9
I05D Terrebonne, OR 122.47 23 P PKPdf 05 25 55.9 -0.3
baz=187
P46A Rosedale 122.50 54 P PKPdf 05 25 55.2 -1.1
baz=194
REDW Red Top Meadow 122.59 32 *e*PKPdf PKPdf 05 25 56.2 -0.4
IP01 Cuckoo 122.65 63 *e*PKPdf PKPdf 05 25 55.5 -1.1
IP03 Louisa 122.69 62 *e*PKPdf PKPdf 05 25 55.8 -0.9
SNOW Snow King Moun 122.70 32 *e*PKPdf PKPdf 05 25 57.6 +0.7
TPAW Teton Pass 122.71 32 *e*PKPdf PKPdf 05 25 56.4 -0.5
SPRD Spring Road, M 122.72 63 *e*PKPdf PKPdf 05 25 56.3 -0.4
H04A Detroit Lake 122.74 22 *e*PKPdf PKPdf 05 25 55.1 -1.5
N39A Derby Farms, D 122.80 49 P PKPdf 05 25 55.4 -1.4
baz=193
FXWY Fox Creek 122.84 32 *e*PKPdf PKPdf 05 25 57.3 +0.2
N41A Harden Midland 122.92 50 P PKPdf 05 25 55.4 -1.7
baz=193
MOOW Moose Ponds 122.99 32 *e*PKPdf PKPdf 05 25 57.0 -0.3
CBN Corbin Frederi 123.00 63 PFAKE 05 26 10.0 +13
CBN LR LR
comp=Z,367nm,20.0s
HDIL Hopedale 123.04 52 P PKPdf 05 25 56.1 -1.2
baz=193
HDIL Hopedale 123.04 52 *e*PKPdf PKPdf 05 25 56.2 -1.1
HDIL LR LR
comp=Z,495nm,19.0s
M37A Trindle Farm, 123.06 47 P PKPdf 05 25 56.1 -1.2
baz=193
IMW Indian Meadow 123.11 32 *e*PKPdf PKPdf 05 25 58.1 +0.4
M38A Pleasantville 123.21 48 P PKPdf 05 25 56.3 -1.2
baz=193
O47A Sheridan 123.28 54 P PKPdf 05 25 55.6 -2.2
baz=194
BMO Blue Mountains 123.36 26 *e*PKPdf PKPdf 05 25 56.6 -1.2
BMO LR LR
comp=Z,536nm,20.0s
BMO Blue Mountains 123.36 26 *e*PKIKP PKPdf 05 25 56.7 -1.2
M39A Webster 123.44 49 P PKPdf 05 25 56.5 -1.5
baz=193
M40A Post Highland 123.48 49 P PKPdf 05 25 56.5 -1.6
baz=193
M41A Milan 123.62 50 P PKPdf 05 25 57.0 -1.4
baz=193
G08A Pilot Rock 123.64 25 *e*PKPdf PKPdf 05 25 58.1 -0.4
H17A Grant Village 123.64 32 P PKPdf 05 25 60.0 +1.3
baz=190
H17A Grant Village 123.64 32 *e*PKPdf PKPdf 05 26 00.2 +1.6
SCIA State Center 123.69 48 P PKPdf 05 25 57.1 -1.4
baz=193
SCIA State Center 123.69 48 *e*PKPdf PKPdf 05 25 57.6 -0.9
SCIA LR LR
comp=Z,516nm,20.0s
CD2 Chengdu 123.75 261 PKP **PKPdf 05 25 57.8 -1.2**
CD2 sPKP 05 26 05.3
CD2 PP **PP** 05 27 40.3 -1.9
CD2 SKS **SKSdf** 05 33 09.0 -1.8
CD2 SKKS **SKKSac** 05 34 38.0 -2.4
CD2 SS **SS** 05 44 32.7 +2.2
CD2 AMB AMB
comp=Z,460nm,7.7s
CD2 LR LR
comp=Z,850nm,23.8s
CD2 LR LR
comp=Z,530nm,14.7s
TJN Taejon 123.78 285*i i*PKIKP PKPdf 05 25 58.4 -0.4
MCMT McKenzie Canyo 123.81 30 *e*PKPdf PKPdf 05 25 59.0 +0.1
L37A Phoenix Point, 123.81 47 P PKPdf 05 25 56.7 -2.0
baz=193
N46A Monticello 123.82 54 P PKPdf 05 25 57.8 -1.0
baz=194
LKWY Lake 123.83 32 PFAKE 05 26 10.0 +11
LKWY LR LR
comp=Z,2μm,19.0s
YMR Madison River 123.87 32 *e*PKPdf PKPdf 05 26 00.1 +1.0
ACSO Alum Creek Sta 123.87 57 PFAKE 05 26 10.0 +11
ACSO LR LR
comp=Z,592nm,20.0s
MCWV Mont Chateau 123.91 60 P PKPdf 05 25 57.6 -1.4
baz=195
YHB Horse Butte 123.92 32 *e*PKPdf PKPdf 05 26 00.4 +1.2
L38A Oak Wood Farm, 123.96 48 P PKPdf 05 25 57.7 -1.3
baz=193
YHH Holmes Hill 124.00 32 *e*PKPdf PKPdf 05 25 59.4 0.0
L39A Vinton 124.10 49 P PKPdf 05 25 57.9 -1.3
baz=193
TAM Tamanrasset 124.14 151 *e*PKPdf PKPdf 05 26 00.5 +0.4
TAM Tamanrasset 124.14 151 *e*PKIKP PKPdf 05 26 00.5 +0.4
L40A Anamosa 124.17 49 P PKPdf 05 25 58.0 -1.4
baz=193
K36A Gilmore City 124.20 47 P PKPdf 05 25 57.7 -1.7
baz=193
RSSD Black Hills 124.21 38 P PKPdf 05 25 58.2 -1.5
baz=191
RSSD Black Hills 124.21 38 *e*PKPdf PKPdf 05 25 58.8 -0.9
RSSD Black Hills 124.21 38 *e*PKIKP PKPdf 05 25 58.8 -0.9
SDMD Soldier's Deli 124.27 63 *e*PKPdf PKPdf 05 25 58.6 -1.0
L41A Preston 124.31 50 P PKPdf 05 25 58.4 -1.2
baz=193
DLMT Dillon 124.36 30 *e*PKPdf PKPdf 05 26 00.3 +0.4
K37A Belmond 124.46 47 P PKPdf 05 25 58.2 -1.7
baz=193
F10A Beach Ranch, E 124.48 26 *e*PKPdf PKPdf 05 25 59.4 -0.6
E03A Lebam 124.48 21 *e*PKPdf PKPdf 05 25 59.7 -0.1
K38A Parkersburg 124.48 48 P PKPdf 05 25 58.4 -1.6
baz=193
RLMT Red Lodge 124.52 33 P PKPdf 05 26 00.2 -0.1
baz=190
RLMT Red Lodge 124.52 33 *e*PKPdf PKPdf 05 26 00.0 -0.3
RLMT LR LR
comp=Z,548nm,20.0s
HAWA Hanford 124.67 24 PFAKE 05 26 10.0 +10
HAWA LR LR
comp=Z,648nm,20.0s
K39A Oelwein 124.69 49 P PKPdf 05 25 58.6 -1.8
baz=193
KS15 Wonju Array Si 124.70 286 *e*PKPdf PKPdf 05 25 60.0 -0.6
KSAR Wonju Array Be 124.70 286 PKP **PKPdf 05 25 59.5 -1.0**
KSAR Wonju Array Be 124.70 286 PKIKP **PKPdf 05 25 59.5 -1.0**
KSRS Korea Array 124.70 286 PKP **PKPdf 05 25 59.5 -1.0**
comp=Z,8.7nm,1.0s,baz=173,slow=1.9,SNR=33
BOZ Bozeman (W) 124.71 31 P PKPdf 05 26 00.3 -0.2
baz=190
BOZ Bozeman (W) 124.71 31 *e*PKPdf PKPdf 05 26 00.8 +0.3
BOZ LR LR
comp=Z,356nm,21.0s
BOZ Bozeman (W) 124.71 31 *e*PKIKP PKPdf 05 26 00.8 +0.3
KS01 Wonju Array Si 124.73 286 *e*PKPdf PKPdf 05 25 59.5 -1.1
O56A Blue Knob Stat 124.75 61 P PKPdf 05 25 59.4 -1.3
baz=195
O56A Blue Knob Stat 124.75 61 *e*PKPdf PKPdf 05 25 59.6 -1.1
K40A Colesburg 124.81 49 P PKPdf 05 25 59.1 -1.5
baz=193
LON Longmire 124.83 22 *e*PKPdf PKPdf 05 25 59.7 -0.9
LON Longmire 124.83 22 *e*PKIKP PKPdf 05 25 59.7 -0.9
LRM Limekiln Ridge 124.84 30 *e*PKPdf PKPdf 05 26 01.1 +0.2
K41A Shullsburg 124.86 50 P PKPdf 05 25 59.3 -1.4
baz=194
J36A Seneca 1, Swea 124.89 46 P PKPdf 05 25 59.1 -1.7
baz=193
ECSD EROS Data Cent 124.92 44 P PKPdf 05 25 59.1 -1.8
baz=192
ECSD EROS Data Cent 124.92 44 *e*PKPdf PKPdf 05 25 59.0 -1.8
ECSD LR LR
comp=Z,440nm,19.0s
E09A Wood Farm, Sta 124.92 25 *e*PKPdf PKPdf 05 26 00.3 -0.4
J37A Redenius Farm, 125.00 47 P PKPdf 05 25 59.1 -1.8
baz=193
INCN Inchon 125.00 285 *e*PKPdf PKPdf 05 26 00.3 -0.9
INCN LR LR
comp=Z,468nm,21.0s
I32A Karley and Nic 125.08 44 P PKPdf 05 25 59.5 -1.6
baz=192
GCMT Greycliff 125.13 33 *e*PKPdf PKPdf 05 26 01.7 +0.4
N54A Moraine State 125.15 60 P PKPdf 05 25 59.7 -1.7
baz=195
JFWS Jewell Farm 125.17 50 P PKPdf 05 26 00.1 -1.2
baz=194
JFWS Jewell Farm 125.17 50 *e*PKPdf PKPdf 05 26 00.2 -1.0
JFWS LR LR
comp=Z,718nm,20.0s
JFWS Jewell Farm 125.17 50 *e*PKIKP PKPdf 05 26 00.3 -1.0
J38A Wedel Dairy, R 125.19 48 P PKPdf 05 25 59.3 -2.0
baz=193
I33A Coleman 125.20 44 P PKPdf 05 25 59.3 -2.0
baz=192
SSPA Standing Stone 125.24 62 P PKPdf 05 26 00.0 -1.5
baz=195
SSPA Standing Stone 125.24 62 *e*PKPdf PKPdf 05 26 00.4 -1.1
D05A Enumclaw 125.25 22 *e*PKPdf PKPdf 05 26 01.2 -0.1
SUSD Miller 125.26 42 P PKPdf 05 25 59.8 -1.6
baz=192
LSA Lhasa 125.28 247 PFAKE 05 26 10.0 +7.4
LSA LR LR
comp=Z,631nm,19.0s
J39A Decorah 125.33 49 P PKPdf 05 25 59.4 -2.2
baz=193
LTY Liberty 125.43 23 *e*PKPdf PKPdf 05 26 00.4 -1.4
H32A Carlson Farm, 125.55 43 P PKPdf 05 26 00.1 -1.9
baz=192
J40A Soldiers Grove 125.55 50 P PKPdf 05 26 00.2 -1.8
baz=194
I36A Fitzsimmons Fa 125.61 47 P PKPdf 05 26 00.6 -1.5
baz=193
XAN Xi'an 125.61 267 PKP **PKPdf 05 26 01.5 -1.0**
J41A Loganville 125.65 50 P PKPdf 05 26 01.1 -1.1
baz=194
MSO Missoula 125.67 29 P PKPdf 05 26 01.2 -1.0
baz=189
MSO Missoula 125.67 29 *e*PKPdf PKPdf 05 26 01.7 -0.6
I37A Lemond, Waseca 125.71 47 P PKPdf 05 26 00.8 -1.5
baz=193
M54A Oil Creek Stat 125.74 60 P PKPdf 05 26 01.3 -1.1
baz=195
M54A Oil Creek Stat 125.74 60 *e*PKPdf PKPdf 05 26 01.4 -1.0
AAM Ann Arbor 125.75 56 PFAKE 05 26 10.0 +7.6
AAM LR LR
comp=Z,486nm,20.0s
J42A Columbus 125.75 51 P PKPdf 05 26 01.0 -1.4
baz=194
RAYN Ar Rayn 125.82 196 *e*PKPdf PKPdf 05 26 03.0 -0.2
RAYN LR LR
comp=Z,686nm,20.0s
RAYN Ar Rayn 125.82 196 PKIKP **PKPdf 05 26 03.0 -0.2**
H33A Prehn Over Nor 125.83 44 P PKPdf 05 26 00.8 -1.8
baz=193
I39A Houston 125.86 49 P PKPdf 05 26 00.4 -2.2
baz=194
TIA Tai'an 125.87 275 PKP **PKPdf 05 26 02.4 -0.5**
I38A Scanlan Farm, 125.91 48 P PKPdf 05 26 00.3 -2.4
baz=193
H34A Spellman Lake, 125.97 45 P PKPdf 05 26 00.9 -1.9
baz=193
ERM Erimo 125.99 301 PFAKE 05 26 10.0 +7.2
ERM LR LR
comp=Z,716nm,20.0s
I40A Norwalk 126.05 50 P PKPdf 05 26 01.6 -1.3
baz=194
H35A Sunnyside Ranc 126.14 46 P PKPdf 05 26 01.5 -1.6
baz=193
H36A Jessenland, He 126.17 46 P PKPdf 05 26 01.8 -1.4
baz=193
C09A Chrisman Ranch 126.19 25 *e*PKPdf PKPdf 05 26 02.9 -0.2
G32A Webster 126.27 43 P PKPdf 05 26 02.0 -1.4
baz=192
B05A Bryant 126.31 22 P PKPdf 05 26 02.6 -0.7
baz=187
ODNJ Ogdensburg 126.33 65 *e*PKPdf PKPdf 05 26 02.9 -0.6
H37A Dierke Farm, C 126.34 47 P PKPdf 05 26 01.9 -1.6
baz=193
I41A Arkdale 126.34 50 P PKPdf 05 26 02.1 -1.4
baz=194
I42A Draeger Farm, 126.35 51 P PKPdf 05 26 02.5 -1.0
baz=194
I42A Draeger Farm, 126.35 51 *e*PKPdf PKPdf 05 26 03.1 -0.4
G33A Ortonville 126.38 44 P PKPdf 05 26 01.6 -1.9
baz=193
PAL Palisades 126.39 65 P PKPdf 05 26 02.4 -1.3
baz=196
LAO LASA Array 126.44 35 P PKPdf 05 26 02.7 -1.0
baz=191
LAO LASA Array 126.44 35 *e*PKPdf PKPdf 05 26 03.4 -0.3
LAO LR LR
comp=Z,412nm,20.0s
I43A Langenfeld Bro 126.47 52 P PKPdf 05 26 02.6 -1.1
baz=194
JTMT Jette 126.53 28 *e*PKPdf PKPdf 05 26 03.4 -0.5
H38A Maiden Rock 126.54 48 P PKPdf 05 26 01.7 -2.1
baz=194
G34A Benson 126.55 45 P PKPdf 05 26 02.0 -1.8
baz=193
KSPA Keystone Colle 126.55 63 *e*PKPdf PKPdf 05 26 03.3 -0.7
PGC Sidney 126.58 21 *e*PKPdf PKPdf 05 26 03.5 -0.2
B08A Colville Reser 126.64 24 *e*PKPdf PKPdf 05 26 03.3 -0.7
H39A Augusta 126.71 49 P PKPdf 05 26 02.8 -1.4
baz=194
A04D Lummi Island 126.71 21 P PKPdf 05 26 04.1 +0.1
baz=187
G35A Watkins 126.71 46 P PKPdf 05 26 02.7 -1.5
baz=193
F31A Hecla 126.75 42 P PKPdf 05 26 02.6 -1.6
baz=192
NEW Newport 126.76 26 P PKPdf 05 26 03.2 -0.9
baz=188
NEW Newport 126.76 26 *e*PKPdf PKPdf 05 26 03.3 -0.9
NEW LR LR
comp=Z,466nm,19.0s
NEW Newport 126.76 26 *e*PKIKP PKPdf 05 26 03.3 -0.9
H40A Chili 126.80 49 P PKPdf 05 26 02.9 -1.5
baz=194
G36A St. Michael 126.84 46 P PKPdf 05 26 02.9 -1.5
baz=193
H41A Junction City 126.92 50 P PKPdf 05 26 03.1 -1.5
baz=194
H41A Junction City 126.92 50 *e*PKPdf PKPdf 05 26 03.7 -0.9
F32A Veblen 126.93 43 P PKPdf 05 26 03.0 -1.6
baz=193
SPMN Marine on St. 126.98 47 P PKPdf 05 26 02.8 -1.9
baz=194
SPMN Marine on St. 126.98 47 *e*PKPdf PKPdf 05 26 02.9 -1.8
F33A 5 Mile Ranch, 127.03 44 P PKPdf 05 26 03.2 -1.5
baz=193
G38A Ridgeland 127.09 48 P PKPdf 05 26 02.8 -2.1
baz=194
H43A Windswept, Lux 127.11 52 P PKPdf 05 26 04.0 -1.0
baz=194
H43A Windswept, Lux 127.11 52 *e*PKPdf PKPdf 05 26 04.9 -0.1
BINY Binghamton 127.12 63 P PKPdf 05 26 04.1 -1.0
baz=196
BINY Binghamton 127.12 63 *e*PKPdf PKPdf 05 26 04.5 -0.6
BINY LR LR
comp=Z,626nm,20.0s
F34A Alexandria 127.15 45 P PKPdf 05 26 03.4 -1.6
baz=193
MMNY Mt. Morris Dam 127.26 61 *e*PKPdf PKPdf 05 26 04.4 -0.9
F35A Swanville 127.32 46 P PKPdf 05 26 04.0 -1.3
baz=193

G39A	Holcombe	127.32	49	P	PKPdf	05 26 03.7	-1.6
	baz=194						
EGMT	Eagleton	127.32	32	P	PKPdf	05 26 04.2	-1.2
	baz=190						
EGMT	Eagleton	127.32	32	*e*PKPdf	PKPdf	05 26 04.5	-0.8
EGMT				LR	LR		
	comp=Z,529nm,19.0s						
G40A	Rib Lake	127.46	49	P	PKPdf	05 26 04.2	-1.4
	baz=194						
E31A	Nome	127.48	43	P	PKPdf	05 26 04.1	-1.5
	baz=193						
F36A	Milaca	127.49	46	P	PKPdf	05 26 03.8	-1.8
	baz=193						
F37A	Hinrichs Farm,	127.50	47	P	PKPdf	05 26 04.0	-1.6
	baz=194						
G41A	Antigo	127.58	50	P	PKPdf	05 26 04.2	-1.6
	baz=194						
E32A	Braaten, Kindr	127.64	43	P	PKPdf	05 26 04.6	-1.3
	baz=193						
E33A	Westby DABS, E	127.72	44	P	PKPdf	05 26 04.5	-1.6
	baz=193						
G42A	Mountain	127.74	51	P	PKPdf	05 26 04.9	-1.2
	baz=194						
G42A	Mountain	127.74	51	*e*PKPdf	PKPdf	05 26 05.0	-1.1
E34A	Wadena	127.86	45	P	PKPdf	05 26 04.5	-1.8
	baz=193						
WALA	Waterton Lakes	127.87	29	*e*PKPdf	PKPdf	05 26 05.7	-0.7
G43A	Wallace	127.88	52	P	PKPdf	05 26 05.1	-1.2
	baz=194						
G43A	Wallace	127.88	52	*e*PKPdf	PKPdf	05 26 05.6	-0.8
F39A	Loretta	127.97	49	P	PKPdf	05 26 04.8	-1.7
	baz=194						
F41A	Three Lakes	128.10	50	P	PKPdf	05 26 05.3	-1.6
	baz=194						
F40A	Park Falls	128.11	49	P	PKPdf	05 26 05.2	-1.6
	baz=194						
E36A	McGregor	128.17	46	P	PKPdf	05 26 05.0	-1.9
	baz=194						
D32A	Dogwood Acres,	128.18	43	P	PKPdf	05 26 05.2	-1.7
	baz=193						
E37A	Wrenshall	128.36	47	P	PKPdf	05 26 05.8	-1.4
	baz=194						
D33A	AnnSam, Wauburn	128.37	44	P	PKPdf	05 26 05.7	-1.6
	baz=193						
D34A	Park Rapids	128.41	45	P	PKPdf	05 26 05.6	-1.7
	baz=193						
COWI	Conover	128.45	50	*e*PKPdf	PKPdf	05 26 06.3	-1.2
COWI				LR	LR		
	comp=Z,379nm,20.0s						
DGMT	Dagmar	128.46	37	P	PKPdf	05 26 06.5	-0.9
	baz=192						
DGMT	Dagmar	128.46	37	*e*PKPdf	PKPdf	05 26 06.3	-1.1
DGMT				LR	LR		
	comp=Z,582nm,19.0s						
E39A	Mellen	128.48	49	P	PKPdf	05 26 06.1	-1.4
	baz=194						
MDND	Maddock	128.49	41	P	PKPdf	05 26 05.9	-1.6
	baz=192						
MDND	Maddock	128.49	41	*e*PKPdf	PKPdf	05 26 06.1	-1.4
F43A	Flat Rock, Esc	128.53	52	P	PKPdf	05 26 06.6	-1.0
	baz=195						
E38A	The Farm, Brul	128.53	48	P	PKPdf	05 26 05.5	-2.1
	baz=194						
D35A	Remer	128.59	46	P	PKPdf	05 26 05.7	-2.0
	baz=194						
LLLB	Lilloet	128.65	22	*e*PKPdf	PKPdf	05 26 07.1	-0.6
E40A	Wakefield	128.65	49	P	PKPdf	05 26 06.4	-1.5
	baz=194						
F45A	CMU Biological	128.68	53	P	PKPdf	05 26 06.7	-1.1
	baz=195						
LZH	Lanzhou	128.71	262	*e*PKP	PKPdf	05 26 08.9	+0.4
LZH				sPKP		05 26 15.6	
LZH				PP	PP	05 28 17.8	+2.6
LZH				PKS	PKSdf	05 29 45.0	-0.1
LZH				SKKS		05 35 05.4	
LZH				SS	SS	05 45 37.2	+4.5
LZH				AMB	AMB		
	comp=Z,240nm,5.6s						
LZH				LR	LR		
	comp=Z,560nm,17.6s						
LZH				LR	LR		
	comp=Z,620nm,17.7s						
LZH				LR	LR		
	comp=Z,960nm,20.9s						
C31A	Landman Farms,	128.71	42	P	PKPdf	05 26 06.3	-1.6
	baz=193						
ACCN	Adirondack Com	128.73	65	*e*PKPdf	PKPdf	05 26 07.2	-0.8
F44A	Big Bay de Noc	128.80	52	P	PKPdf	05 26 06.8	-1.3
	baz=195						
D36A	Goodland	128.82	46	P	PKPdf	05 26 06.6	-1.5
	baz=194						
E41A	Kenton	128.83	50	P	PKPdf	05 26 06.6	-1.5
	baz=194						
F46A	Macinaw City C	128.91	54	P	PKPdf	05 26 08.1	-0.2
	baz=195						
D37A	Cotton	128.93	47	P	PKPdf	05 26 07.1	-1.2
	baz=194						
C32A	Crookston	128.93	43	P	PKPdf	05 26 06.5	-1.8
	baz=193						
C33A	Trail	128.98	44	P	PKPdf	05 26 06.7	-1.7
	baz=193						
E42A	Champion	128.98	51	P	PKPdf	05 26 06.7	-1.8
	baz=195						
C34A	RKJ Ranch, Bem	129.01	45	P	PKPdf	05 26 07.0	-1.5
	baz=194						
E43A	Lone Tree Farm	129.09	52	P	PKPdf	05 26 07.4	-1.2
	baz=195						
NCB	Newcomb	129.18	64	*e*PKPdf	PKPdf	05 26 08.4	-0.6
C35A	Jirik Farms, M	129.20	45	P	PKPdf	05 26 06.6	-2.2
	baz=194						
HNH	Hanover	129.32	66	*e*PKPdf	PKPdf	05 26 08.4	-0.7
B31A	Greenbush Farm	129.34	42	P	PKPdf	05 26 07.2	-1.9
	baz=193						
E45A	Wooded Hills,	129.39	53	P	PKPdf	05 26 08.1	-1.1
	baz=195						
C36A	Pine Crest Far	129.44	46	P	PKPdf	05 26 07.3	-2.0
	baz=194						
D41A	Chassel	129.48	50	P	PKPdf	05 26 08.5	-0.9
	baz=195						
B32A	Ashes, Strandq	129.48	43	P	PKPdf	05 26 07.2	-2.1
	baz=193						
AGMN	Agassiz Nation	129.49	44	P	PKPdf	05 26 07.3	-2.1
	baz=193						
AGMN	Agassiz Nation	129.49	44	*e*PKPdf	PKPdf	05 26 07.5	-1.9
AGMN				LR	LR		
	comp=Z,587nm,20.0s						
B33A	Robert and Kas	129.51	44	P	PKPdf	05 26 08.1	-1.3
	baz=194						
E44A	Grand Marais A	129.51	53	P	PKPdf	05 26 08.5	-1.0
	baz=195						
C37A	Embarrass	129.52	47	P	PKPdf	05 26 07.4	-2.1
	baz=194						
C38A	Sawbill Land.	129.66	48	P	PKPdf	05 26 07.1	-2.7
	baz=194						
BJT	Baijiatuau	129.73	276	PFAKE		05 26 20.0	+10
BJT				LR	LR		
	comp=Z,357nm,19.0s						
LONY	Lake Ozonia	129.73	63	P	PKPdf	05 26 08.7	-1.3
	baz=196						
LONY	Lake Ozonia	129.73	63	*e*PKPdf	PKPdf	05 26 09.3	-0.7
LONY				LR	LR		
	comp=Z,415nm,20.0s						
VT1	Waterbury	129.82	65	*e*PKPdf	PKPdf	05 26 09.6	-0.5
EYMN	Ely	129.84	48	P	PKPdf	05 26 08.1	-1.9
	baz=194						
EYMN	Ely	129.84	48	*e*PKPdf	PKPdf	05 26 08.2	-1.9
EYMN				LR	LR		
	comp=Z,658nm,19.0s						
B34A	Aery, Baudette	129.86	45	P	PKPdf	05 26 08.2	-1.8
	baz=194						
B35A	Bob, Littlefor	129.88	45	P	PKPdf	05 26 08.0	-2.1
	baz=194						
LBNH	Lisbon	129.90	66	P	PKPdf	05 26 09.3	-1.0
	baz=196						
LBNH	Lisbon	129.90	66	*e*PKPdf	PKPdf	05 26 09.9	-0.4
LBNH	Lisbon	129.90	66	*e*PKIKP	PKPdf	05 26 09.9	-0.4
A31A	Linda, St. Vin	129.91	42	P	PKPdf	05 26 08.2	-1.9
	baz=193						
C39A	Grand Marais	129.95	49	P	PKPdf	05 26 07.9	-2.3
	baz=194						
A32A	Rocking H Ranc	130.00	43	P	PKPdf	05 26 08.4	-1.9
	baz=193						
FRNY	Flat Rock	130.14	64	*e*PKPdf	PKPdf	05 26 09.9	-0.8
A33A	Warroad	130.19	44	P	PKPdf	05 26 09.0	-1.6
	baz=194						
C40A	Isle Royale Na	130.21	50	P	PKPdf	05 26 09.5	-1.2
	baz=195						
YSS	Yuzh-Sakhalins	130.83	303	PFAKE		05 26 20.0	+8.1
YSS				LR	LR		
	comp=Z,276nm,20.0s						
MDJ	Mudanjiang	131.21	290	PFAKE		05 26 20.0	+7.3
MDJ				LR	LR		
	comp=Z,260nm,20.0s						
CN2	Changchun	131.31	286	*e*PKP	PKPdf	05 26 16.7	+3.7
CN2				*e*PP	PP	05 28 39.4	+7.4
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=Z,250nm,20.0s						
CN2				LR	LR		
	comp=Z,220nm,20.0s						
CN2				LR	LR		
	comp=Z,230nm,21.0s						
ULM	Lac du Bonnet	131.39	43	PKP	PKPdf	05 26 10.8	-2.1
	comp=Z,17nm,1.0s,baz=232,slow=1.8,SNR=31						
ULM	Lac du Bonnet	131.39	43	*e*PKPdf	PKPdf	05 26 10.7	-2.2
PKME	Peaks-Kenny Pk	131.42	68	PFAKE		05 26 20.0	+6.9
PKME				LR	LR		
	comp=Z,591nm,19.0s						
HHC	Hu-ho-hao-te	131.55	272	*e*PKP	PKPdf	05 26 10.1	-3.6
NIL	Nilore	132.51	229	PFAKE		05 26 30.0	+14
NIL				LR	LR		
	comp=Z,523nm,20.0s						
GTA	Gaotai	132.78	260	PKP	PKPdf	05 26 15.0	-1.1
GTA				PP	PP	05 28 42.8	+1.2
GTA				SS	SS	05 46 17.2	-5.4
GTA				AMB	AMB		
	comp=Z,290nm,6.1s						
GTA				LR	LR		
	comp=Z,340nm,18.2s						
GTA				LR	LR		
	comp=Z,320nm,21.3s						
GTA				LR	LR		
	comp=Z,380nm,18.5s						
PQI	Presque Isle	133.03	68	*e*PKPdf	PKPdf	05 26 14.8	-1.3
WRAK	Wrangell Islan	133.75	13	PFAKE		05 26 30.0	+13
WRAK				LR	LR		
	comp=Z,980nm,19.0s						
PET	Petropavlovsk	134.01	318	PFAKE		05 26 30.0	+12
PET				LR	LR		
	comp=Z,503nm,21.0s						
PETK	Petropavlovsk-	134.23	317	PKP	PKPdf	05 26 16.6	-1.6
	comp=Z,16nm,1.0s,baz=117,slow=5.2,SNR=7.4						
KDAK	Kodiak Island	134.73	357	PFAKE		05 26 30.0	+11
KDAK				LR	LR		
	comp=Z,525nm,20.0s						
FFC	Flin Flon	134.87	37	*e*PKPdf	PKPdf	05 26 17.3	-2.0
FFC				LR	LR		
	comp=Z,763nm,19.0s						
FFC	Flin Flon	134.87	37	*e*PKIKP	PKPdf	05 26 17.3	-2.0
KLR	Kul'dur	135.17	294	PKP	PKPdf	05 26 18.6	-1.4
	comp=Z,0.3nm,0.8s,baz=324,slow=1.7,SNR=9.2						
KLR	Kul'dur	135.17	294	⇓*i*PKIKP	PKPdf	05 26 19.7	-0.3
MMAI	Mount Meron Ar	135.69	185	PKP	PKPdf	05 26 21.0	-0.6
	comp=Z,0.3nm,0.3s,baz=301,slow=6.4,SNR=3.7						
GRNR	Gornyy	135.70	299	*e*PKIKP	PKPpre	05 26 15.2	
PBDV	Barranco-do-Ve	136.53	133	*e*PKPdf	PKPdf	05 26 27.7	+4.7
PVAQ	Vaqueiros	136.72	133	*e*PKPdf	PKPdf	05 26 20.9	-2.4
PVAQ	Vaqueiros	136.72	133	*e*LR	LR	06 13 11.9	
	comp=Z,493nm,22.0s						
MESJ	Messejana	137.06	133	*e*PKPdf	PKPdf	05 26 21.4	-2.5
PNCL	Nicolau / Gran	137.28	132	*e*PKPdf	PKPdf	05 26 25.4	+1.1
KEST	Kesra	137.34	154	*e*PKPdf	PKPdf	05 26 24.1	-0.5
PBAR	Barrancos	137.58	134	*e*PKPdf	PKPdf	05 26 25.8	+0.9
CSS	Mathiatis	137.66	183	P	PKPdf	05 26 26.6	+1.4
CSS	Mathiatis	137.66	183	P	PKPdf	05 26 26.6	+1.4
HIA	Hailar	137.74	283	PFAKE		05 26 40.0	+15
HIA				LR	LR		
	comp=Z,327nm,20.0s						
KSH	Kashi	137.75	234	PKP	PKPdf	05 26 24.5	-0.8
KSH				PP	PP	05 29 08.6	-4.2
KSH				PKS	PKSdf	05 30 00.9	-0.6
KSH				SKS	SKSdf	05 33 33.8	-2.0
KSH				SKKS	SKKSac	05 36 03.6	-3.1
KSH				SS	SS	05 47 22.7	+0.8
KSH				AMB	AMB		
	comp=Z,300nm,4.3s						
KSH				LR	LR		
	comp=Z,920nm,14.8s						
KSH				LR	LR		
	comp=Z,900nm,14.1s						
KSH				LR	LR		
	comp=Z,1μm,17.2s						
IDI	Anoyia	137.91	172	⇓*i*P	PKPdf	05 26 27.3	+1.6
IDI	Anoyia	137.91	172	*e*PKPdf	PKPdf	05 26 25.5	-0.2
PMAFR	Mafra	137.97	131	*e*PKPdf	PKPdf	05 26 24.9	-0.7
PESTR	Estremoz	138.17	133	*e*PKPdf	PKPdf	05 26 26.7	+0.7
SUA	Susitna One	138.41	359	*e*PKPdf	PKPdf	05 26 27.3	+1.5
ANKY	Antikythira Is	138.43	170	P	PKPdf	05 26 28.3	+1.8
ANKY	Antikythira Is	138.43	170	P	PKPdf	05 26 28.3	+1.8
PMRV	Marv??o	138.75	133	*e*PKPdf	PKPdf	05 26 25.9	-1.1
PMRV	Marv??o	138.75	133	*e*LR	LR	06 13 49.3	
	comp=Z,500nm,20.0s						
PCBR	Castelo Branco	139.14	133	*e*PKPdf	PKPdf	05 26 27.3	-0.4
PCAS	Casmilo, Conde	139.18	132	*e*PKPdf	PKPdf	05 26 28.1	+0.3
ULN	Ulaanbaatar	139.22	270	*e*PKPdf	PKPdf	05 26 27.2	-0.7
ULN				LR	LR		
	comp=Z,270nm,19.0s						
ULN	Ulaanbaatar	139.22	270	P	PKPdf	05 26 27.5	-0.3
	SNR=7.2						
ULN	Ulaanbaatar	139.22	270	PKPdf	PKPdf	05 26 27.5	-0.3
	SNR=7.2						
ULN	Ulaanbaatar	139.22	270	⇑*i*PKIKP	PKPdf	05 26 27.1	-0.7
SONM	Songino Array	139.34	270	PKhKP	PKPpre	05 26 18.6	
	comp=Z,1.3nm,0.7s,baz=173,slow=3.6,SNR=4.1						
SONM				PP	PP	05 29 27.1	+4.4
	comp=Z,1.5nm,0.8s,baz=147,slow=4.8,SNR=4.9						
PAB	San Pablo	139.35	136	PFAKE		05 26 40.0	+12
PAB				LR	LR		
	comp=Z,883nm,21.0s						
SONA1	Songino Array	139.35	270	*e*PKPpre	PKPpre	05 26 18.9	
ESDC	Sonseca Array	139.53	137	PKhKP	PKPpre	05 26 19.7	
	comp=Z,2.7nm,0.9s,baz=191,slow=3.8,SNR=12						
TARG	Taragay, Kyrgy	139.55	237	*e*PKPdf	PKPdf	05 26 27.5	-1.4
ES19	SONSECA Array	139.57	137	*e*PKPpre	PKPpre	05 26 19.3	
NRN	Naryn	139.60	235	*e*PKPpre	PKPpre	05 26 21.4	
NRN	Naryn	139.60	235	*e*PKHKP	PKPpre	05 26 21.4	
WMQ	Urumqi	139.60	249	*e*PKP	PKPdf	05 26 27.7	-0.8
WMQ				LR	LR		
	comp=Z,970nm,22.3s						
WMQ				LR	LR		
	comp=Z,350nm,17.9s						
WMQ				LR	LR		
	comp=Z,610nm,22.3s						
MTE	Manteigas	139.67	132	*e*LQ	LQ	06 05 48.8	
MTE				*e*LR	LR	06 14 16.9	
	comp=Z,518nm,20.0s						
PPLA	Purkeypile	139.86	358	*e*PKPdf	PKPdf	05 26 29.7	+1.3
FCC	Fort Churchill	139.90	41	*e*PKPpre	PKPpre	05 26 18.3	
FCC	Fort Churchill	139.90	41	*e*PKHKP	PKPpre	05 26 18.3	
ZEA	Zeya	140.35	292	*e*PKIKP	PKPdf	05 26 27.8	-1.6
ZEA				*e*		05 29 24.4	
TRF	Thorofare Moun	140.40	359	*e*PKPpre	PKPpre	05 26 20.1	
MVO	Moncorvo	140.50	133	*e*PKPdf	PKPpre	05 26 26.5	
POLO	Lamas de Olo	140.58	132	*e*PKPdf	PKPpre	05 26 25.7	
DOT	Dot Lake	140.63	3	*e*PKPpre	PKPpre	05 26 24.3	
SCRK	Sand Creek	140.96	3	*e*PKPpre	PKPpre	05 26 23.6	
SCHQ	Schefferville	141.00	66	PKhKP	PKPpre	05 26 23.4	
	comp=Z,11nm,0.9s,baz=206,slow=3.2,SNR=5.5						
AAK	Ala-Archa	141.04	234	PKhKP	PKPpre	05 26 25.1	
	comp=Z,1.6nm,0.5s,baz=214,slow=4.4,SNR=4.9						
AAK	Ala-Archa	141.04	234	*e*PKPpre	PKPpre	05 26 25.0	
AAK				LR	LR		
	comp=Z,899nm,20.0s						
AAK	Ala-Archa	141.04	234	PKPdf	PKPpre	05 26 25.6	
	SNR=5.8						
AAK	Ala-Archa	141.04	234	⇑*i*PKHKP	PKPpre	05 26 25.3	
YKA	Yellowknife Ar	141.05	25	PKhKP	PKPpre	05 26 21.7	
	comp=Z,3.5nm,0.8s,baz=185,slow=3.3,SNR=38						
YKA				PKKP	PKKPdf	05 35 47.3	-2.9
	comp=Z,0.3nm,0.9s,baz=350,slow=2.1,SNR=3.7						
BPAW	Bear Paw Mtn.	141.06	359	*e*PKPpre	PKPpre	05 26 23.2	
PGAV	Gavieira, Arco	141.08	131	*e*LR	LR	06 21 34.8	
	comp=Z,498nm,20.0s						
ANX	Ano Chora	141.09	168	P	PKPdf	05 26 35.0	+3.6
TKM2	Tokmak 2	141.12	235	PKIKP	PKPpre	05 26 25.8	
TKM2				pmax	pmax		
	comp=Z,8.0nm,1.2s						
YKW3	Yellowknife Ar	141.12	25	*e*PKPpre	PKPpre	05 26 22.4	
BWN	Browne	141.13	360	*e*PKPdf	PKPdf	05 26 32.3	+1.8
DAWY	Dawson	141.14	7	*e*PKPpre	PKPpre	05 26 24.3	
PBRG	Braganca	141.18	133	*e*PKPdf	PKPdf	05 26 34.3	+2.9
MANT	Manisa	141.18	177	*e*PKPpre	PKPpre	05 26 26.4	
FRU	Bishkek	141.21	234	*e*PKIKP	PKPdf	05 26 30.0	-1.4
FRU				pmax	pmax		
	comp=Z,40nm,2.0s						
TIP	Timpagrande	141.38	162	⇑*i*P	PKPpre	05 26 26.5	
TIP	Timpagrande	141.38	162	*e*PKPpre	PKPpre	05 26 26.6	
TIP	Timpagrande	141.38	162	P	PKPpre	05 26 26.2	
WRH	Wood River Hil	141.43	1	*e*PKPpre	PKPpre	05 26 23.8	
MA2	Magadan	141.53	315	PFAKE		05 26 40.0	+8.6
MA2				LR	LR		
	comp=Z,564nm,20.0s						
CCB	Clear Creek Bu	141.60	1	*e*PKPpre	PKPpre	05 26 24.0	
CCB				*e*PKPdf	PKiKP	05 26 33.5	-0.7
IL1	Eielson Array	141.73	1	*e*PKPpre	PKPpre	05 26 24.2	
ILAR	Eielson Array	141.73	1	PKhKP	PKPpre	05 26 22.9	
	comp=Z,7.4nm,1.0s,baz=197,slow=4.8,SNR=18						
ILB	Eielson Array	141.73	1	*e*PKPpre	PKPpre	05 26 25.0	
EGAK	Eagle	141.81	5	*e*PKPpre	PKPpre	05 26 25.2	
EGAK				LR	LR		
	comp=Z,1μm,19.0s						
COLA	College	141.83	1	PFAKE		05 26 40.0	+8.3
COLA				LR	LR		
	comp=Z,588nm,20.0s						
MDM	Murphy Dome	141.92	0	*e*PKPpre	PKPpre	05 26 25.7	
MDM				*e*PKPdf	PKiKP	05 26 33.7	-1.2
MLY	Manley	141.99	359	*e*PKPpre	PKPpre	05 26 25.5	
THL	Klokotos Trika	142.07	169	P	PKPpre	05 26 28.1	
CUC	Castrocucco	142.13	161	*e*PKPpre	PKPpre	05 26 28.1	
KK31	Karatay Array	142.19	229	*e*PKPpre	PKPpre	05 26 28.4	
KK31	Karatay Array	142.19	229	*e*PKIKP	PKPpre	05 26 28.4	
KKAR	Karatay Array	142.19	229	*e*PKPpre	PKPpre	05 26 28.4	
KKAR	Karatay Array	142.19	229	*e*PKIKP	PKPpre	05 26 28.4	
GNI	Garni	142.40	197	PFAKE		05 26 50.0	+16
GNI				LR	LR		
	comp=Z,1μm,22.0s						
GNI	Garni	142.40	197	⇑*i*PKIKP	PKPpre	05 26 29.4	
BR131	Keskin Array S	142.42	183	*e*PKPpre	PKPpre	05 26 29.6	
BRTR	Keskin Array B	142.42	183	PKhKP	PKPpre	05 26 29.0	
	comp=Z,20nm,0.9s,baz=186,slow=5.0,SNR=118						
ZAK	Zakamensk	142.43	268	*e*PKHKP	PKPpre	05 26 25.8	
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BR231	Keskin MP Arra	142.54	182	*e*PKPpre	PKPpre	05 26 30.2	
ANTO	Ankara	142.57	182	⇑*i*P	PKPpre	05 26 28.0	
ANTO	Ankara	142.57	182	*e*PKPpre	PKPpre	05 26 29.9	
ANTO				LR	LR		
	comp=Z,502nm,20.0s						
ANTO	Ankara	142.57	182	P	PKPdf	05 26 30.9	-3.1
	SNR=19						
ANTO	Ankara	142.57	182	PKPdf	PKPdf	05 26 30.9	-3.1
	SNR=19						
ANTO	Ankara	142.57	182	*e*PKIKP	PKPpre	05 26 29.9	
LIT	Litokhoron	142.62	169	*e*PKPpre	PKPpre	05 26 29.1	
LIT	Litokhoron	142.62	169	P	PKPpre	05 26 29.4	
LIT	Litokhoron	142.62	169	*e*PKHKP	PKPpre	05 26 29.1	
MATE	Matera	142.84	162	⇑*i*P	PKPpre	05 26 30.2	
PLG	Polygyros	142.93	170	P	PKPpre	05 26 31.0	
PLG	Polygyros	142.93	170	P	PKPpre	05 26 31.0	
PLG	Polygyros	142.93	170	PKIKP	PKPpre	05 26 31.0	
IM3	Indian Mountai	142.98	357	*e*PKPpre	PKPpre	05 26 29.3	
SMTH	Samothraki Isl	143.10	173	P	PKPab	05 26 30.4	+0.1
SMTH	Samothraki Isl	143.10	173	P	PKPab	05 26 30.4	+0.1
HORT	Hortiatis	143.14	170	P	PKPbc	05 26 31.5	-0.5
HORT	Hortiatis	143.14	170	P	PKPbc	05 26 31.5	-0.5
FNA	Florina	143.25	168	*e*PKPpre	PKPpre	05 26 31.8	
FNA	Florina	143.25	168	P	PKPpre	05 26 31.3	
FNA	Florina	143.25	168	*e*PKIKP	PKPpre	05 26 31.8	
SOH	Sokhos	143.38	170	P	PKPab	05 26 31.8	+0.4
SOH	Sokhos	143.38	170	P	PKPab	05 26 31.8	+0.4
SOH	Sokhos	143.38	170	PKIKP	PKPab	05 26 31.8	+0.4
GRG	Griva	143.47	169	P	PKPbc	05 26 32.4	-0.4
GRG	Griva	143.47	169	P	PKPbc	05 26 32.4	-0.4
GRG	Griva	143.47	169	PKIKP	PKPbc	05 26 32.4	-0.4
AKT	Akhty	143.51	201	⇑*i*PKIKP	PKPbc	05 26 33.4	+0.4
AKT				*e*		05 29 50.8	
AKT				pmax	pmax		
	comp=Z,32nm,1.0s						
MK01	Makanchi Array	143.53	244	*e*PKPpre	PKPpre	05 26 31.3	
ALN	Alexandroupoli	143.54	174	*e*PKPpre	PKPpre	05 26 31.7	
ALN	Alexandroupoli	143.54	174	P	PKPab	05 26 31.8	-0.2
ALN	Alexandroupoli	143.54	174	*e*PKIKP	PKPab	05 26 31.7	-0.3
FYU	Fort Yukon	143.55	2	*e*PKPpre	PKPpre	05 26 31.3	
OHR	Ohrid	143.55	167	*i* PKP	PKPbc	05 26 33.6	+0.5
MK31	Makanchi Array	143.56	244	*e*PKPpre	PKPpre	05 26 31.6	
MK31	Makanchi Array	143.56	244	*i* PKIKP	PKPpre	05 26 31.6	
MK31				pmax	pmax		
	comp=Z,12nm,0.9s						
MKAR	Makanchi Array	143.56	244	PKhKP	PKPpre	05 26 31.4	
	comp=Z,6.2nm,0.9s,baz=142,slow=4.6,SNR=38						
MKAR	Makanchi Array	143.56	244	*e*PKPpre	PKPpre	05 26 31.6	
MKAR	Makanchi Array	143.56	244	*e*PKIKP	PKPpre	05 26 31.6	
TLY	Talaya	143.57	269	PFAKE		05 26 50.0	+15
TLY				LR	LR		
	comp=Z,274nm,20.0s						
TLY	Talaya	143.57	269	P	PKPbc	05 26 32.2	-0.5
	SNR=10						
TLY	Talaya	143.57	269	PKPdf	PKPbc	05 26 32.2	-0.5
	SNR=10						
TLY	Talaya	143.57	269	*e*PKIKP	PKPab	05 26 31.9	+0.1
TLY				pmax	pmax		
	comp=Z,24nm,1.3s						
MAKZ	Makanchi	143.63	244	*e*PKPpre	PKPpre	05 26 31.9	
MAKZ	Makanchi	143.63	244	*e*PKIKP	PKPpre	05 26 31.9	
KNT	Kendrikon	143.70	169	P	PKPbc	05 26 33.1	-0.3
KNT	Kendrikon	143.70	169	P	PKPbc	05 26 33.1	-0.3
KN

VTS **Vitosha** 145.14 170 P PKPbc 05 26 37.0 -1.1
VTS **Vitosha** 145.14 170 P PKPbc 05 26 37.6 -0.5
VTS **Vitosha** 145.14 170 ⇓PKIKP PKPbc 05 26 38.0 -0.1
NKY **Niksic** 145.15 164 ⇓*i*P PKPdf 05 26 38.7 +0.3
BRY **Bratogost** 145.21 164 ⇓*i*P PKPdf 05 26 38.6 0.0
KOME **Kolasin** 145.22 165 ⇓*i*P PKPdf 05 26 39.1 +0.6
IVA **Berane** 145.26 165 ⇓*i*P PKPdf 05 26 38.8 +0.2
RDOG **Red Dog Mine** 145.28 351 *e*PKPbc PKPbc 05 26 36.8 -0.8
GROC **Groznyy** 145.37 199 *e*PKIKP PKPab 05 26 38.8 0.0
GROC *e* 05 29 59.2
GROC pmax pmax
comp=Z,319nm,1.3s
UPM **Unac-Piva** 145.53 164 *e*P PKPab 05 26 39.6 0.0
INK **Inuvik** 145.58 10 PKPbc PKPdf 05 26 37.0 -1.2
comp=Z,98nm,1.0s,baz=170,slow=4.1,SNR=164
TOLK **Toolik Lake Re** 145.62 360 P PKPdf 05 26 38.1 -0.2
baz=180
TOLK **Toolik Lake Re** 145.62 360 *e*PKPdf PKPdf 05 26 38.0 -0.4
PLE **Pljevlja** 145.69 165 ⇓*i*P PKPab 05 26 40.1 0.0
VLC **Villacollemand** 145.79 153 *e*PKPdf PKPdf 05 26 38.7 -0.7
SZH **Strazhica** 145.90 173 P PKPdf 05 26 39.0 -0.6
KBZ **Khabaz** 146.08 195 PKPbc PKPbc 05 26 40.9 +0.1
comp=Z,62nm,0.9s,baz=193,slow=2.2,SNR=84
SOC **Sochi** 146.10 191 *d*PKP2 PKPbc 05 26 40.5 -0.3
SOC *e* 05 30 02.6
SOC *e*PPP PPP 05 33 17.7
SOC *e*SSS SSS 05 54 28.4
SOC pmax pmax
comp=Z,187nm,0.9s
SOC MLR MLR
comp=Z,274nm,15.0s
SSB **Saint Sauveur** 146.22 145 *e*PKPdf PKPbc 05 26 41.2 -0.1
SSB **Saint Sauveur** 146.22 145 *e*PKP2 PKPbc 05 26 41.2 -0.1
KIV **Kislovodsk** 146.32 195 *e*PKPdf PKPdf 05 26 39.8 -0.6
KIV LR LR
comp=Z,607nm,21.0s
KIV **Kislovodsk** 146.32 195 P PKPdf 05 26 40.7 +0.3
SNR=38
KIV **Kislovodsk** 146.32 195 PKPdf PKPdf 05 26 40.7 +0.3
SNR=38
KIV **Kislovodsk** 146.32 195 *i* PKP2 PKPdf 05 26 40.1 -0.3
KIV *e* 05 30 03.9
KIV *e*PPP PPP 05 33 20.1
KIV pmax pmax
comp=Z,241nm,1.2s
KIV MLR MLR
comp=Z,541nm,20.0s
KVAR **Kislovodsk Arr** 146.32 195 PKPbc PKPbc 05 26 41.5 -0.1
comp=Z,168nm,1.1s,baz=164,slow=1.2,SNR=58
DIVS **Divibare** 146.49 165 *e*PKPbc PKPbc 05 26 42.3 +0.2
ICOR **Ion Corvin** 146.79 176 ⇑*i*P PKPdf 05 26 39.4 -1.6
OTUK **Ortayu** 146.85 234 PKP2 PKPdf 05 26 41.6 +0.5
OTUK pmax pmax
comp=Z,78nm,1.3s
BLY **Banja Luka** 146.96 162 *e*PKPbc PKPbc 05 26 43.4 +0.1
BOD **Bodaibo** 146.96 283 *e*PKIKP PKPdf 05 26 39.9 -1.0
BOD pmax pmax
comp=Z,85nm,1.5s
TIRR **Tirgusor** 147.14 176 ⇓*i*P PKPbc 05 26 43.1 -0.7
TIRR **Tirgusor** 147.14 176 *e*PKPdf PKPbc 05 26 43.1 -0.7
TIRR **Tirgusor** 147.14 176 ⇓PKP2 PKPbc 05 26 43.1 -0.7
BEO **Beograd** 147.22 166 *e*PKPdf PKPbc 05 26 43.0 -1.1
BEO **Beograd** 147.22 166 *e*PKP2 PKPbc 05 26 43.0 -1.1
TLB **Topalu** 147.26 176 ⇓*i*P PKPbc 05 26 43.8 -0.3
TLB **Topalu** 147.26 176 ⇓PKP2 PKPbc 05 26 43.9 -0.2
HARR **Harsova** 147.37 176 ⇓*i*P PKPbc 05 26 44.6 +0.2
HARR **Harsova** 147.37 176 ⇓PKP2 PKPbc 05 26 44.6 +0.2
GOF **Gofitskoye** 147.40 196 ⇓*i*PKP2 PKPbc 05 26 44.1 -0.4
GOF pmax pmax
comp=Z,150nm,1.0s
ANN **Anapa** 147.40 188 *d*PKP2 PKPbc 05 26 44.3 -0.2
ANN *e* 05 30 08.3
ANN pmax pmax
comp=Z,235nm,1.2s
ANN pmax pmax
comp=N,72nm,1.1s
ANN pmax pmax
comp=E,41nm,1.1s
ANN MLR MLR
comp=Z,581nm,21.0s
BILL **Bilibino** 147.53 330 *e*PKPdf PKPdf 05 26 42.4 +0.9
BILL LR LR
comp=Z,694nm,21.0s
BILL **Bilibino** 147.53 330 *i* PKP2 PKPbc 05 26 42.8 -1.4
BILL pmax pmax
comp=Z,38nm,1.7s
YAK **Yakutsk** 147.57 300 *e*PKPdf PKPdf 05 26 42.3 +0.6
YAK *e*PKPbc PKPbc 05 26 42.4 -2.0
YAK LR LR
comp=Z,525nm,19.0s
YAK **Yakutsk** 147.57 300 *e*PKP2 PKPdf 05 26 42.3 +0.6
YAK *e* 05 30 12.8
YAK *e* 05 33 44.6
YAK *e*SS SS 05 49 15.3 +0.1
YAK pmax pmax
comp=Z,77nm,0.9s
YAK pmax pmax
comp=N,7.0nm,0.9s
YAK pmax pmax
comp=E,6.0nm,0.9s
YAK pmax pmax
comp=Z,67nm,2.0s
YAK pmax pmax
comp=N,30nm,1.8s
YAK pmax pmax
comp=E,24nm,1.5s
SENIN **Lac Senin/Sane** 147.63 148 *e*PKPdf PKPdf 05 26 43.3 +0.7
SENIN *e*PKPbc PKPbc 05 26 45.4 0.0
SIM **Simferopol'** 147.63 184 *de*PKP2 PKPbc 05 26 44.9 -0.3
SIM *e* 05 30 23.0
SIM pmax pmax
comp=Z,112nm,0.8s
SECR 147.67 173 ⇓*i*P PKPbc 05 26 45.3 0.0
TLCR 147.88 177 ⇓*i*P PKPbc 05 26 45.7 -0.1
TLCR 147.88 177 ⇓PKP2 PKPbc 05 26 45.7 -0.1
KURBB **Kurchatov Arra** 147.96 242 PKP PKPdf 05 26 41.2 -1.6
comp=Z,30nm,1.0s,baz=173,slow=1.9,SNR=70
KURBB PKPbc pPKPdf 05 26 44.9 -0.5
comp=Z,37nm,0.9s,baz=170,slow=2.2,SNR=100
TUE **Stuetta** 147.97 151 *e*PKPbc PKPbc 05 26 45.5 -0.8
KURK **Kurchatov** 148.03 242 *e*PKPdf PKPdf 05 26 41.4 -1.4
KURK LR LR
comp=Z,732nm,20.0s
KURK **Kurchatov** 148.03 242 P PKPdf 05 26 41.7 -1.2
SNR=45
KURK **Kurchatov** 148.03 242 PKPdf PKPdf 05 26 41.7 -1.2
SNR=45
KURK **Kurchatov** 148.03 242 *d*PKIKP PKPdf 05 26 40.9 -2.0
VOIR 148.04 172 ⇓*i*P PKPbc 05 26 45.0 -1.4
VOIR 148.04 172 ⇓PKP2 PKPbc 05 26 45.0 -1.4
BZS **Buzias** 148.09 167 ⇑*i*P PKPbc 05 26 46.1 -0.3
BZS **Buzias** 148.09 167 ⇑PKP2 PKPbc 05 26 46.1 -0.3
MLR **Muntele Rosu** 148.12 173 PKP PKPdf 05 26 42.5 -0.9
comp=Z,11nm,1.0s,baz=154,slow=2.0,SNR=24
MLR PKPbc pPKPdf 05 26 46.2 +0.2
comp=Z,8.3nm,0.8s,baz=233,slow=2.4,SNR=69
MLR **Muntele Rosu** 148.12 173 *e*PKPdf PKPdf 05 26 41.9 -1.5
FUORN **Ofenpass-Fuorn** 148.21 152 *ep*PKPdf pPKPdf 05 26 46.5 +0.2
DEV **Deva** 148.41 169 ⇓*i*P PKPbc 05 26 47.5 +0.3
DEV **Deva** 148.41 169 ⇓PKP2 PKPbc 05 26 47.5 +0.3
OBKA **Obir** 148.50 158 *i* PKPbc PKPbc 05 26 47.9 +0.3
comp=Z,61nm,1.4s,SNR=18
MORH **M¨†r¨¡gy, Hung** 148.51 163 ⇓*e*PKPdf PKPbc 05 26 47.2 -0.2
VRI **Vrincioaia** 148.52 174 ⇓*i*P PKPbc 05 26 46.4 -1.1
VRI **Vrincioaia** 148.52 174 ⇓PKP2 PKPbc 05 26 46.4 -1.1
MYKA **Terra Mystica** 148.54 157 *i* PKPbc PKPbc 05 26 47.9 +0.3
comp=Z,107nm,1.9s,SNR=29
ABTA **Abfaltersbach** 148.56 155 *i* PKPbc PKPbc 05 26 47.6 -0.1
comp=Z,45nm,1.3s,SNR=21
DOPR **Dopca** 148.58 172 ⇓*i*P PKPbc 05 26 47.9 +0.2
BEHE **Becsehely** 148.64 161 ⇓*e*PKPdf PKPbc 05 26 48.3 +0.5
FETA **Feichten** 148.65 153 *i* PKPbc PKPbc 05 26 47.8 -0.2
comp=Z,60nm,1.1s,SNR=26
SOKA **Soboth** 148.71 158 *i* PKPbc PKPbc 05 26 48.2 +0.1
comp=Z,25nm,0.9s,SNR=13
DAVA **Damuels** 148.83 152 *i* pPKPdf PKPbc 05 26 48.5 0.0
comp=Z,99nm,0.8s,SNR=34
FRB **Frobisher Bay** 148.91 58 PKP PKPdf 05 26 42.1 -1.8
comp=Z,51nm,0.9s,baz=215,slow=1.5,SNR=6.2
FRB PKPbc pPKPdf 05 26 46.4 -0.1
comp=Z,44nm,0.9s,baz=197,slow=4.5,SNR=18
KBA **Koelnbreinsper** 148.96 156 *i* pPKPdf PKPbc 05 26 48.2 -0.6
comp=Z,21nm,0.8s,SNR=14
WTTA **Wattenberg** 148.98 154 *i* pPKPdf PKPbc 05 26 48.8 -0.1
comp=Z,55nm,0.8s,SNR=22
WATA **Walderalm** 149.05 154 *i* pPKPdf PKPbc 05 26 48.7 -0.3
comp=Z,29nm,0.7s,SNR=10
RETA **Reutte** 149.12 153 *i* pPKPdf PKPbc 05 26 48.9 -0.2
comp=Z,38nm,0.8s,SNR=19
TESR **Tescani** 149.16 174 ⇑*i*P PKPbc 05 26 47.2 -1.9
CJR **Cluj-Napoca** 149.27 170 ⇑*i*P PKPbc 05 26 49.7 +0.3
CJR **Cluj-Napoca** 149.27 170 ⇑PKP2 PKPbc 05 26 49.7 +0.3
DRGR 149.31 169 ⇑*i*P PKPbc 05 26 49.0 -0.6
DRGR 149.31 169 ⇑PKP2 PKPbc 05 26 49.0 -0.6
ARSA **Arzberg** 149.32 159 *i* pPKPdf PKPbc 05 26 49.8 +0.3
comp=Z,68nm,1.1s,SNR=22
ECH **Echery** 149.44 148 *e*PKPbc PKPbc 05 26 49.7 -0.1
ECH **Echery** 149.44 148 *e*PKP2 PKPbc 05 26 49.7 -0.1
CSKK **Cs¨‡kako** 149.63 163 ⇓*e*PKPdf PKPbc 05 26 49.8 -0.4
ARCR **ARCALIA** 149.67 171 ⇑*i*P PKPbc 05 26 50.5 +0.2
BFO **Black Forest** 149.69 149 *e*PKPbc PKPbc 05 26 49.7 -0.7
BFO LR LR
comp=Z,577nm,19.0s
BFO **Black Forest** 149.69 149 *e*PKP2 PKPbc 05 26 49.7 -0.7
KIS **Kishinev** 149.69 177 ⇓*i*PKP PKPbc 05 26 49.0 -1.4
KIS M M 05 26 50.0
comp=Z,400nm,1.5s
KIS *i* SKP 05 30 24.0
KIS **Kishinev** 149.69 177 *e*PP PP 05 30 38.0 +14
KIS *e*SKKS 05 37 15.0
KIS LRM MLR 06 36 20.0
comp=Z,600nm,22.0s
KIS **Kishinev** 149.69 177 *k i*PKP2 PKPbc 05 26 49.0 -1.4
KIS *i* 05 30 24.0
KIS pmax pmax
comp=Z,400nm,1.5s
KIS pmax pmax
comp=Z,700nm,2.0s
KIS MLR MLR
comp=Z,600nm,22.0s
BUD **Budapest** 149.80 164 ⇓*e*PKPdf PKPbc 05 26 50.5 -0.1
MOA **Molln** 149.81 157 *i* pPKPdf PKPbc 05 26 50.5 -0.2
comp=Z,62nm,0.9s,SNR=28
ZAA0 **Zalesovo Array** 149.81 251 *e*PKPdf PKPdf 05 26 46.0 +0.4
ZALV **Zalesovo Beam** 149.81 251 PKP PKPdf 05 26 43.4 -2.2
comp=Z,4.5nm,0.8s,baz=219,slow=1.9,SNR=4.7
ZALV PKPbc pPKPdf 05 26 48.2 -0.1
comp=Z,3.7nm,0.6s,baz=213,slow=2.6,SNR=7.8
ABKAR **Akbulak array** 149.83 219 *e*PKPdf PKPdf 05 26 44.5 -1.3
ABKAR *e*PKPbc pPKPdf 05 26 49.4 +0.9
SOP **Sopron** 149.83 160 ⇓*e*PKPdf PKPbc 05 26 50.6 -0.1
LTVH **L¨†av¨†rtes,** 149.86 167 ⇓*e*PKPdf PKPbc 05 26 51.0 +0.2
PRAR **RASCA** 150.00 173 ⇓*i*P PKPbc 05 26 51.2 0.0
CONA **Conrad Observa** 150.02 159 *i* pPKPdf PKPbc 05 26 50.9 -0.4
comp=Z,43nm,1.3s,SNR=17
STU **Stuttgart** 150.22 150 *e*PKPdf PKPdf 05 26 45.4 -1.1
STU *e*PKPbc PKPbc 05 26 51.5 -0.1
STU **Stuttgart** 150.22 150 *e*PKIKP PKPdf 05 26 45.4 -1.1
STU *e* 05 26 51.5
BURAR **Bucovina Array** 150.22 172 ⇓*i*P PKPbc 05 26 52.0 +0.2
BURAR **Bucovina Array** 150.22 172 ⇓PKIKP PKPbc 05 26 52.0 +0.2
BUR04 **Bucovina Ar. S** 150.23 172 *e*PKPdf PKPdf 05 26 45.5 -1.2
BUR04 *e*PKPbc PKPbc 05 26 52.0 +0.2
BUR08 **Bucovina Ar. S** 150.25 172 *e*PKPdf PKPdf 05 26 46.0 -0.7
BUR08 *e*PKPbc PKPbc 05 26 52.0 +0.1
PSZ **Piszkesteto** 150.29 165 ⇓*i*P PKPbc 05 26 51.6 -0.3
PSZ **Piszkesteto** 150.29 165 ⇓*e*PKPdf PKPbc 05 26 51.6 -0.3
PSZ **Piszkesteto** 150.29 165 *e*PKPdf PKPdf 05 26 45.8 -0.9
PSZ *e*PKPbc PKPbc 05 26 51.5 -0.3
PSZ **Piszkesteto** 150.29 165 *e*PKIKP PKPdf 05 26 45.8 -0.9
PSZ *e* 05 26 51.5
VAL **Valentia** 150.37 124 *e*P PKPbc 05 26 51.8 0.0
MODS **Modra-Piesok** 150.57 161 *e*PKIKP PKPbc 05 26 50.7 -1.8
MODS **Modra-Piesok** 150.57 161 *e*PKP PKPbc 05 26 50.7 -1.8
TRPA **Tarpa** 150.64 168 ⇓*i*P PKPbc 05 26 52.7 +0.1
TRPA **Tarpa** 150.64 168 ⇓*e*PKPdf PKPbc 05 26 52.6 0.0
GEA0 **GERESS Array S** 150.74 156 *e*PKPdf PKPdf 05 26 45.6 -1.8
GEA0 *e*PKPbc PKPbc 05 26 52.3 -0.6
WLF **Walferdange** 150.74 146 ⇑PKP PKPbc 05 26 53.2 +0.4
WLF **Walferdange** 150.74 146 *e*PKPbc PKPbc 05 26 53.3 +0.4
WLF **Walferdange** 150.74 146 *e*PKIKP PKPbc 05 26 53.3 +0.5
GEC2 **GERESS Array S** 150.75 156 *e*PKPdf PKPdf 05 26 46.5 -0.9
GEC2 *e*PKPbc PKPbc 05 26 52.4 -0.6
GEC2 **GERESS Array S** 150.75 156 *e*PKIKP PKPdf 05 26 46.5 -0.9
GEC2 *e* 05 26 52.4
GERES **GERESS Array B** 150.75 156 PKP PKPdf 05 26 45.6 -1.8
comp=Z,1.4nm,0.7s,baz=146,slow=0.5,SNR=12
GERES PKPbc PKPbc 05 26 52.4 -0.6
comp=Z,26nm,0.9s,baz=177,slow=2.3,SNR=78
VYHS **Vyhne** 150.80 163 *e*PKIKP PKPdf 05 26 46.0 -1.4
VYHS *e* 05 26 52.4
VYHS **Vyhne** 150.80 163 *e*PKP PKPdf 05 26 46.0 -1.4
VYHS *e* 05 26 52.4
IVI **Ivigtut** 150.81 77 *e*PKPbc PKPbc 05 26 51.2 -1.3
SORM **Soroca** 150.82 176 ⇓*i*P PKPbc 05 26 52.3 -0.7
SORM **Soroca** 150.82 176 ⇓PKIKP PKPbc 05 26 52.3 -0.7
DOU **Dourbes** 150.96 144 ⇓PKP PKPbc 05 26 53.7 +0.4
NVS **Novosibirsk** 150.98 250 *e*PKIKP PKPbc 05 26 51.5 -1.7
NVS pmax pmax
comp=N,24nm,1.4s
NVS pmax pmax
comp=Z,51nm,1.4s
NVS pmax pmax
comp=E,24nm,1.5s
KHC **Kasperske Hory** 151.02 156 *e*PKPDF PKPdf 05 26 46.0 -1.8
KHC ⇑*e*PKP PKPbc 05 26 53.3 -0.3
KHC *e*SKP 05 30 22.5
KHC AMS AMS 06 38 50.0
comp=E,500nm,17.3s
KHC **Kasperske Hory** 151.02 156 *e*PKPdf PKPdf 05 26 46.2 -1.5
KHC *e*PKPbc PKPbc 05 26 52.9 -0.6
KHC **Kasperske Hory** 151.02 156 *e*PKIKP PKPdf 05 26 46.0 -1.8
KHC *e* 05 26 53.3
KHC MLR MLR
comp=Z,500nm,17.3s
JAVC **Velka Javorina** 151.08 161 *e*PKP PKPdf 05 26 48.0 +0.1
JAVC *e* 05 26 54.6
UZH **Uzhgorod** 151.13 168 *e*PKIKP PKPdf 05 26 49.1 +1.2
UZH *e* 05 26 52.1
UZH *i* 05 26 58.5
KRUC **Moravsky** 151.19 160 *e*PKP PKPdf 05 26 46.9 -1.1
KRUC *e* 05 26 53.5
AKTO **Aktyubinsk** 151.25 217 PKP PKPdf 05 26 46.8 -1.2
comp=Z,0.7nm,0.3s,baz=131,slow=3.2,SNR=9.1
GRFO **Grafenberg** 151.34 153 *e*PKPdf PKPdf 05 26 47.4 -0.8
GRFO *e*PKPbc PKPbc 05 26 54.2 0.0
GRFO **Grafenberg** 151.34 153 *e*PKIKP PKPdf 05 26 47.4 -0.8
GRFO *e* 05 26 54.2
CRVS **Cervenica-Dubn** 151.35 167 *e*PKIKP PKPdf 05 26 47.1 -1.2
CRVS *e* 05 26 53.7
CRVS **Cervenica-Dubn** 151.35 167 *e*PKP PKPdf 05 26 47.1 -1.2
CRVS *e* 05 26 53.7
CRVS *e* 05 27 04.4
BCLA **Clavier** 151.37 144 ⇓PKPbc PKPbc 05 26 54.5 +0.3
BCLA ⇑PKPab PKPab 05 27 03.4 +0.8
VRAC **Vranov** 151.45 160 PKP PKPdf 05 26 46.9 -1.5
comp=Z,6.8nm,0.8s,baz=198,slow=1.4,SNR=15
VRAC PKPbc PKPbc 05 26 54.5 0.0
comp=Z,28nm,0.9s,baz=178,slow=2.6,SNR=24
VRAC **Vranov** 151.45 160 ⇓*i*P PKPdf 05 26 48.3 -0.1
VRAC **Vranov** 151.45 160 ⇓PKIKP PKPdf 05 26 48.3 -0.1
VRAC **Vranov** 151.45 160 *e*PKP PKPdf 05 26 47.1 -1.3
VRAC *e* 05 26 54.5
LANS **Liptovska Anna** 151.49 164 *e*PKIKP PKPbc 05 26 54.6 0.0
LANS **Liptovska Anna** 151.49 164 *e*PKP PKPbc 05 26 54.6 0.0
LANS *e* 05 27 04.8
UCC **Uccle** 151.62 143 ⇓PKP PKPbc 05 26 55.1 +0.3
UCC **Uccle** 151.62 143 *e*PKPdf PKPdf 05 26 47.9 -0.6
UCC *e*PKPbc PKiKP 05 26 55.2 0.0
UCC **Uccle** 151.62 143 *e*PKIKP PKPdf 05 26 47.9 -0.6
UCC *e* 05 26 55.2
MEM **Membach** 151.65 145 ⇓PKP PKPbc 05 26 55.2 +0.3
BEBN **Eben Emael** 151.79 145 ⇑PKP PKPbc 05 26 55.9 +0.7
HGN **Heimansgroeve** 151.79 145 *e*PKPdf PKPdf 05 26 48.6 -0.1
HGN *e*PKPbc PKiKP 05 26 55.6 0.0
HGN *e*PKPab PKPab 05 27 05.3 +1.0
BVA0 **Borovoye Array** 151.79 234 PKIKP PKPbc 05 26 52.6 -2.6
BVA0 pmax pmax
comp=Z,47nm,1.1s
BVAR **Borovoye Array** 151.79 234 PKP PKPdf 05 26 47.4 -1.4
comp=Z,1.3nm,0.6s,baz=243,slow=38,SNR=5.4
BVAR PKPbc PKPbc 05 26 54.8 -0.3
comp=Z,19nm,0.9s,baz=132,slow=4.3,SNR=45
NIE **Niedzica** 151.81 165 *e*PKP PKPdf 05 26 47.1 -1.8
NIE **Niedzica** 151.81 165 *e*PKIKP PKPdf 05 26 47.1 -1.8
BRVK **Borovoye** 151.84 234 *e*PKPdf PKPdf 05 26 48.0 -0.8
BRVK *e*PKPbc PKPbc 05 26 55.3 0.0
BRVK LR LR
comp=Z,491nm,21.0s
BRVK **Borovoye** 151.84 234 P PKPdf 05 26 50.4 +1.6
SNR=31
BRVK **Borovoye** 151.84 234 PKPdf PKPdf 05 26 50.4 +1.6
SNR=31
BRVK **Borovoye** 151.84 234 ⇑*i*PKIKP PKPdf 05 26 48.6 -0.2
GOPC **GO Pecny, Ondr** 151.90 157 ⇑*e*PKP PKPbc 05 26 55.7 +0.2
GOPC **GO Pecny, Ondr** 151.90 157 *e*PKIKP PKPbc 05 26 55.7 +0.2
PRU **Pruhonice** 151.95 157 ⇑*e*PKP PKPbc 05 26 55.4 -0.2
PRU *e*SP 05 30 44.0
PRU AMS AMS 06 44 40.0
comp=Z,600nm,20.8s
PRU **Pruhonice** 151.95 157 *e*PKIKP PKPbc 05 26 55.4 -0.2
PRU *e*SP 05 30 44.0
PRU MLR MLR
comp=Z,600nm,20.8s
MORC **Moravsky Berou** 151.98 161 ⇓*i*P PKPdf 05 26 49.4 +0.2
MORC **Moravsky Berou** 151.98 161 *e*PKPdf PKPdf 05 26 48.1 -1.2
MORC *e*PKPbc PKPbc 05 26 55.9 +0.1
MORC **Moravsky Berou** 151.98 161 ⇓PKIKP PKPdf 05 26 49.4 +0.2
MORC **Moravsky Berou** 151.98 161 *e*PKP PKPdf 05 26 48.0 -1.2
MORC *e* 05 26 55.6
NKC **Novy Kostel** 152.00 154 ⇑*e*PKP PKPbc 05 26 56.0 +0.2
NKC AMS AMS 06 42 30.0
comp=Z,700nm,18.8s
NKC **Novy Kostel** 152.00 154 *e*PKIKP PKPbc 05 26 56.0 +0.2
NKC MLR MLR
comp=Z,700nm,18.8s
OKC **Ostrava-Krasne** 152.09 162 ⇑*e*PKP PKPbc 05 26 56.8 +0.9
OKC AMS AMS 06 38 00.0
comp=Z,500nm,22.8s
OKC **Ostrava-Krasne** 152.09 162 *e*PKIKP PKPbc 05 26 56.8 +0.9
OKC MLR MLR
comp=Z,500nm,22.8s
KWP **Kalwaria Pacla** 152.14 168 *e*PKP PKPdf 05 26 48.6 -0.8
KWP **Kalwaria Pacla** 152.14 168 *e*PKPdf PKPdf 05 26 48.1 -1.3
KWP **Kalwaria Pacla** 152.14 168 *e*PKIKP PKPdf 05 26 48.6 -0.8
DSB **Dublin** 152.31 128 *ep*PKPdf pPKPdf 05 26 54.0 +1.8
DPC **Dobruska-Polom** 152.46 159 ⇑*e*PKP PKPbc 05 26 57.2 +0.4
DPC *e*PKPAB pPKPab 05 27 08.8 -1.0
DPC AMS AMS 06 39 20.0
comp=Z,500nm,23.0s
DPC **Dobruska-Polom** 152.46 159 *e*PKIKP PKPbc 05 26 57.2 +0.4
DPC MLR MLR
comp=Z,500nm,23.0s
PVCC **Panska Ves** 152.49 157 ⇑*e*PKP PKPbc 05 26 57.5 +0.7
PVCC **Panska Ves** 152.49 157 *e*PKIKP PKPbc 05 26 57.5 +0.7
OJC **Ojcow** 152.57 164 *e*PKP PKPdf 05 26 48.3 -1.7
OJC **Ojcow** 152.57 164 *e*PKPdf PKPdf 05 26 48.9 -1.1
OJC *e*PKPbc PKPbc 05 26 57.0 0.0
OJC **Ojcow** 152.57 164 *e*PKIKP PKPdf 05 26 48.9 -1.1
OJC *e* 05 26 57.0
UPC **Upice** 152.59 159 *e*PP PP 05 30 38.7 -2.2
UPC AMS AMS 06 42 40.0
comp=Z,400nm,17.2s
BRG **Berggiesshubel** 152.78 156 *i* PKP PKPdf 05 26 48.3 -2.0
comp=Z,43nm,1.7s
BRG **Berggiesshubel** 152.78 156 *i* PKP PKPbc 05 26 56.7 -0.8
comp=Z,31nm,1.1s
BRG PP PP 05 30 41.0 -0.9
BRG SS SS 05 50 17.0 +4.0
comp=N,348nm,16.1s
comp=E,325nm,22.5s
comp=Z,472nm,16.6s
BRG **Berggiesshubel** 152.78 156 *i* PKIKP PKPdf 05 26 48.3 -2.0
BRG *i* 05 26 56.7
BRG 05 30 41.0
BRG SS SS 05 50 17.0 +4.0
BRG pmax pmax
comp=Z,43nm,1.7s
BRG MLR MLR
comp=N,348nm,16.1s
BRG MLR MLR
comp=E,325nm,22.5s
BRG MLR MLR
comp=Z,472nm,16.6s
KSP **Ksiaz** 152.95 159 *e*PKP PKPdf 05 26 49.4 -1.1
KSP **Ksiaz** 152.95 159 *e*PKIKP PKPdf 05 26 49.4 -1.1
CLL **Collm** 153.12 154 ⇓*i*PKPdf PKPdf 05 26 48.8 -2.0
comp=Z,20nm,1.3s
CLL *i* PKPbc PKPbc 05 26 57.7 -0.5
comp=Z,23nm,1.0s
CLL *i* PKPab PKPab 05 27 10.7 +0.8
comp=Z,30nm,1.2s
CLL *ep*PKPab sPKPab 05 27 15.0 +1.6
CLL *e*PP PP 05 30 42.0 -1.9
CLL *e*PPP PPP 05 34 16.0
CLL *e*PPPrev 05 40 22.0
CLL *e*PSKS 05 41 07.0
CLL *e*PPS PPS 05 44 01.0
CLL *e*SS SS 05 50 18.0 +1.3
CLL *e*(SSS) 05 56 54.0
CLL *e*SSSS 06 00 12.0
CLL LmV 06 45 00.0
comp=Z,500nm,21.5s
CLL **Collm** 153.12 154 *e*PKPdf PKPdf 05 26 49.5 -1.3
CLL **Collm** 153.12 154 *e*PKIKP PKPdf 05 26 49.5 -1.3
AK11 **Malin Array Si** 153.37 177 *e*PKPdf PKPdf 05 26 49.0 -2.1
AK11 *e*PKPbc PKPbc 05 26 57.9 -0.8
AKASG **Malin Array Be** 153.40 177 PKP PKPdf 05 26 48.6 -2.6
comp=Z,3.5nm,1.0s,baz=246,slow=0.7,SNR=26
AKASG PKPbc PKPbc 05 26 58.2 -0.6
comp=Z,12nm,0.9s,baz=196,slow=1.8,SNR=23
AKASG PKPab PKPab 05 27 11.1 +0.1
comp=Z,7.5nm,0.9s,baz=188,slow=3.3,SNR=6.1
AKBB **Malin Array Si** 153.40 177 *e*PKPdf PKPdf 05 26 49.0 -2.1
AKBB *e*PKPbc PKPbc 05 26 58.4 -0.4
AKBB **Malin Array Si** 153.40 177 *e*PKIKP PKPdf 05 26 49.1 -2.1
VORD **Divnogorie** 153.49 192 *e*PKIKP PKPdf 05 26 50.9 -0.4
VORD pmax pmax
comp=Z,10.0nm,0.8s
VSR **Storozhevoye** 153.74 191 *e*PKIKP PKPdf 05 26 50.2 -1.4
VSR pmax pmax
comp=Z,7.0nm,0.9s
RES **Resolute Bay** 154.80 30 PKP PKPdf 05 26 47.7 -4.7
comp=Z,5.2nm,1.1s,baz=327,slow=15,SNR=7.6
RES PKPbc PKPbc 05 26 59.9 -1.2
comp=Z,9.3nm,0.9s,baz=222,slow=5.0,SNR=18
RES PKPab PKPab 05 27 14.9 -1.5
comp=Z,6.8nm,0.9s,baz=187,slow=9.8,SNR=5.8
ESK **Eskdalemuir** 154.84 131 PFAKE 05 27 00.0 -1.7
ESK LR LR
comp=Z,655nm,21.0s
EKA **Eskdalemuir Ar** 154.87 131 PKP PKPdf 05 26 50.9 -2.2
comp=Z,3.4nm,1.0s,baz=14,slow=3.7,SNR=4.8
EKA PKPbc PKPbc 05 27 01.3 -0.5
comp=Z,2.6nm,0.8s,baz=204,slow=1.8,SNR=5.3
EKA PKPab PKPab 05 27 16.9 -0.3
comp=Z,8.4nm,0.9s,baz=196,slow=3.7,SNR=9.4
EKA **Eskdalemuir Ar** 154.87 131 PKIKP PKPdf 05 26 50.9 -2.2
EKA 05 27 16.9
EKA pmax pmax
comp=Z,2.0nm,1.0s
SFJD **Kangerlussuaq** 155.36 69 PFAKE 05 27 00.0 +6.6
SFJD LR LR
comp=Z,583nm,19.0s
TIXI **Tiksi** 156.22 309 PKP PKPdf 05 26 51.0 -3.4
comp=Z,0.6nm,0.3s,baz=194,slow=3.4,SNR=5.9
TIXI **Tiksi** 156.22 309 *e*PKPdf PKPdf 05 26 50.7 -3.7
TIXI LR LR
comp=Z,406nm,20.0s
TIXI **Tiksi** 156.22 309 PKIKP PKPdf 05 26 51.0 -3.4
TIXI pmax pmax
comp=Z,1.0nm,0.3s
SUW **Suwalki** 156.54 168 *e*PKP PKPdf 05 26 53.2 -2.1
SUW **Suwalki** 156.54 168 *e*PKPdf PKPdf 05 26 53.4 -2.0
SUW *e*PKPab PKPab 05 27 25.1 +0.7
SUW **Suwalki** 156.54 168 *e*PKIKP PKPdf 05 26 53.4 -2.0
ARU **Arti** 157.01 221 PKP PKPdf 05 26 54.5 -1.4
comp=Z,1.8nm,0.3s,baz=189,slow=1.6,SNR=10
ARU PKPab PKPab 05 27 27.4 +1.0
comp=Z,3.5nm,0.3s,baz=65,slow=1.1,SNR=5.3
ARU **Arti** 157.01 221 *e*PKPdf PKPdf 05 26 54.2 -1.6
ARU *e*PKPab PKPab 05 27 27.2 +0.8
ARU LR LR
comp=Z,587nm,19.0s
ARU **Arti** 157.01 221 *i* PKIKP PKPdf 05 26 54.3 -1.6
SVE **Sverdlovsk** 157.08 224 *e*PKP2 PKPab 05 27 27.6 +0.9
SVE pmax pmax
comp=Z,38nm,1.5s
MICGM **Minsk** 157.18 175 *e* PKPdf 05 26 53.0 -3.2
MNK **Minsk** 157.18 175 *e*PKIKP PKPdf 05 26 53.0 -3.2

OBN	Obninsk	157.74	188	PKPab	PKPab	05 27 30.2	+0.6
	comp=Z,31nm,0.3s,baz=252,slow=0.9,SNR=8.0						
OBN	Obninsk	157.74	188	ePKPab	PKPab	05 27 30.1	+0.6
OBN				LR	LR		
	comp=Z,541nm,20.0s						
OBN	Obninsk	157.74	188	ePKIKP	PKPdf	05 26 53.0	-3.8
OBN				e		05 27 28.4	
OBN				e		05 31 08.9	
OBN				ePPP	PPP	05 34 46.4	
OBN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MOS	Moscow	158.33	190	ePKP2	PKPab	05 27 32.4	+0.3
MOS				pmax	pmax		
	comp=Z,46nm,0.7s						
BORG	Borgarnes	159.86	99	PFAKE		05 27 10.0	+11
BORG				LR	LR		
	comp=Z,279nm,19.0s						
SUMG	Summit	162.35	69	i P	PKPab	05 27 48.4	-1.4
	comp=Z,14nm,1.1s						
SUMG	Summit	162.35	69	ePKPab	PKPab	05 27 48.7	-1.1
SUMG	Summit	162.35	69	ePKP2	PKPab	05 27 48.7	-1.1
NBO00	NORSAR Array S	162.43	146	ePKPab	PKPab	05 27 50.5	+0.6
NB2	NORSAR Subarra	162.49	147	PKP	PKPab	05 27 50.6	+0.4
	comp=Z,23nm,1.2s,baz=195,slow=4.4						
NB2	NORSAR Subarra	162.49	147	PKP	PKPab	05 27 50.6	+0.4
	baz=195,slow=4.4						
NOA	NORSAR Array B	162.49	147	PKPab	PKPab	05 27 50.9	+0.7
	comp=Z,8.2nm,0.9s,baz=196,slow=4.2,SNR=8.4						
NC204	NORSAR Array S	162.66	146	ePKPab	PKPab	05 27 51.5	+0.6
NC303	NORSAR Array S	162.69	147	ePKPab	PKPab	05 27 51.3	+0.3
NRIK	Noril'sk	162.77	273	PKP	PKPdf	05 26 59.3	-2.7
	comp=Z,4.1nm,0.6s,baz=154,slow=2.5,SNR=6.0						
NRIK				PKPab	PKPab	05 27 50.5	-0.7
	comp=Z,8.4nm,0.5s,baz=154,slow=4.5,SNR=8.1						
KLMR	Klimovskoe	163.35	194	ePKP2	PKPab	05 27 50.4	-3.4
KLMR				pmax	pmax		
	comp=Z,52nm,1.4s						
KLMR	Klimovskoe	163.35	194	ePKPdf	PKPab	05 27 50.5	-3.4
KLMR				AMP		05 27 55.4	
	comp=Z,52nm,1.4s						
PRGR	Permogore	163.66	205	ePKIKP	PKPdf	05 27 02.0	-1.1
PRGR				pmax	pmax		
	comp=Z,11nm,0.6s						
FINES	FINESS Array B	164.09	171	PKPab	PKPab	05 27 57.2	+0.1
	comp=Z,6.1nm,0.9s,baz=110,slow=8.3,SNR=7.9						
FIA1	FINESS Array S	164.09	171	ePKPab	PKPab	05 27 57.8	+0.7
SCO	Scoresbysund	164.39	87	i P	PKPab	05 27 57.2	-1.0
	comp=Z,28nm,1.6s						
SCO	Scoresbysund	164.39	87	ePKPab	PKPab	05 27 57.3	-1.0
SCO	Scoresbysund	164.39	87	ePKP2	PKPab	05 27 57.3	-1.0
TMCR	Tamitsa	166.73	193	ePKIKP	PKPdf	05 27 08.1	+2.5
LVZ	Lovozero	170.60	188	PFAKE		05 27 20.0	+12
LVZ				LR	LR		
	comp=Z,915nm,21.0s						
ARCES	ARCESS Array B	172.14	165	PKPab	PKPab	05 28 32.5	-0.2
	comp=Z,4.4nm,0.8s,baz=177,slow=2.4,SNR=12						
KEV	Kevo	172.44	169	PFAKE		05 27 20.0	+11
KEV				LR	LR		
	comp=Z,639nm,19.0s						
KBS	Kingsbay	175.66	57	PFAKE		05 27 20.0	+10
KBS				LR	LR		
	comp=Z,816nm,20.0s						

IDC 01 05:15:49.2±1.1, 59°.43N×30°.28W, h0km, mb3.6/7, mb1 3.7/7, mb1mx3.4/72, mbtmp3.6/7, MS3.1/1, Ms1 3.1/1, ms1mx2.5/59, Error ellipse: s-maj=30.2km s-min=22.4km az=32.0, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFJD	Kangerlussuaq	11.85	318	LR	LR	05 22 24.9	
	comp=Z,101nm,20.5s,baz=128,slow=33						
ARCES	ARCESS Array B	25.09	43	P	P	05 21 14.9	0.0
	1.0nm,0.9s,baz=264,slow=8.6,SNR=4.8						
ESDC	Sonseca Array	25.82	128	P	P	05 21 22.9	+1.0
	0.2nm,0.4s,baz=328,slow=9.7,SNR=4.4						
YKA	Yellowknife Ar	38.31	312	P	P	05 23 10.9	0.0
	0.4nm,0.7s,baz=56,slow=9.3,SNR=6.4						
PDAR	Pinedale Array	49.34	287	P	P	05 24 40.0	-0.1
	0.4nm,0.7s,baz=86,slow=4.6,SNR=3.9						
TORD	Torodi Ar. Bea	51.93	139	P	P	05 24 58.8	-0.8
	0.4nm,0.7s,baz=334,slow=8.8,SNR=2.8						
KURBB	Kurchatov Arra	56.11	47	P	P	05 25 29.5	-0.3
	1.2nm,0.8s,baz=323,slow=6.7,SNR=8.3						
MKAR	Makanchi Array	60.68	47	P	P	05 26 01.8	0.0
	1.0nm,0.5s,baz=347,slow=4.8,SNR=18						

*ECX **01** 05:24:34.1±1.1, 30°.45N×114°.07W, h10km±14km, MD3.5, ML3.7*
*MEX **01** 05:24:36.2±0.6, 30°.47N×114°.00W, h12km±16km, MD4.1*
ISC 01 05:24:28.1±2.2, 30°.8N±0°.2×113°.73W±0°.05, h10km, n10, σ1§96/14, 3C-1D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECBX	El Chinero	1.32	302	⇑eP	Pg	05 24 55.6	+2.1
ECBX				eS	Sn	05 25 15.2	+4.9
ECBX				⇓e		05 25 32.4	
ECBX				IAML		05 25 32.4	
	comp=N,1μm,0.7s						
ECBX				e		05 25 33.3	
ECBX				IAML		05 25 33.3	
	comp=E,780nm,0.6s						
SPX	San Pedro Mart	1.51	280	⇑eP	Pg	05 24 58.0	+0.8
SPX	San Pedro Mart	1.51	280	eP	Pg	05 24 57.6	+0.5
SPX				eS	Sn	05 25 14.9	-0.6
SPIG	San Pedro Mart	1.51	280	⇑eP	Pg	05 24 57.9	+0.6
SPIG	San Pedro Mart	1.51	280	eP	Pg	05 24 57.8	+0.6
SPIG				eS	Sn	05 25 14.6	-0.9
CBX	Cerro Bola	2.93	302	eP	Pb	05 25 21.0	+0.4
CBX	Cerro Bola	2.93	302	eP	Pb	05 25 20.7	+0.1
CBX				eS	Sn	05 25 31.5	-19
TUC	Tucson	2.94	58	i P	Pg	05 25 24.7	+0.2
TJIG	Tijuana	3.00	304	eP	Pg	05 25 23.9	-1.8
TJIG				i S	Sb	05 25 55.8	-2.6
BAR	Barrett	3.14	308	eP	Pb	05 25 23.0	-1.0

MEX 01 05:30:23.5±0.3, 31°.04N×114°.13W, h20km±686km, MD3.8, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPX	San Pedro Mart	1.15	271	eP	Pn	05 30 41.2	-3.5
SPIG	San Pedro Mart	1.15	271	eP	Pn	05 30 41.4	-3.3
SPIG				eS	Sb	05 30 55.6	-3.9
CBX	Cerro Bola	2.51	301	eP	Pn	05 31 00.7	-2.6
TJIG	Tijuana	2.58	303	eP	Pn	05 31 03.0	-1.2

IDC 01 05:31:07.3±586.0, 1°.52S×152°.12W, h0km, Error ellipse: s-maj=277.7km s-min=200.9km az=97.0, South Pacific Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I21FR	MARQUESAS ISLA	13.97	122	i		07 01 50.0	
	baz=301,slow=316,SNR=2.3						
I24FR	TAHITI-TARAVAO	16.37	170	i		07 11 20.0	
	baz=349,slow=315,SNR=0.9						
I53US	FAIRBANKS INFR	66.31	2	i		12 16 00.0	
	baz=179,slow=362,SNR=1.5						

*DJA **01** 05:31:43.7±2.1, 2°.N±6°.×9°.4E±1°.9, h30km, M4.7/8, mB5.3/1, mb5.0/5, MLv4.6/8, Mw(mB)4.7/1*
*IDC **01** 05:31:48.9±2.2, 2°.39N×94°.12E, h0km, mb3.6/3, mb1 3.8/5, mb1mx3.5/73, mbtmp3.7/5, ML4.1/2, Error ellipse: s-maj=63.6km s-min=25.5km az=51.0*
*ISCJB **01** 05:31:49.1±1.4, 2°.13N±0°.10×94°.2E±0°.1, h33km, mb3.7/3, Error ellipse: s-maj=19.9km s-min=10.2km az=144.5*
ISC 01 05:31:51.7±1.5, 2°.24N±0°.09×94°.1E±0°.2, h35km, n17, σ2§18/14, mb3.6/3, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSI	Meulaboh, Aceh	3.07	49	P	Pn	05 32 36.7	-1.1
TPTI		3.26	72	P	Pn	05 32 39.0	-1.3
BSI	Banda Aceh	3.46	20	P	Pn	05 32 40.0	-3.1
GSI	Gunungsitoli	3.61	105	P	Pn	05 32 43.6	-1.6
KCSI	Kotacane, Aceh	3.90	71	P	Pn	05 32 48.3	-0.9
LHMI	Lhok Sumawe	4.12	44	P	Pn	05 32 50.7	-1.6
PBSI	Pulau Batu	4.77	118	P	Pn	05 32 58.5	-2.7
PSI	Prapat	4.87	83	Pn	Pn	05 33 01.9	-0.7
	4.8nm,0.3s,baz=181,slow=1.0,SNR=18						
MNSI	Mandailing Nat	5.68	105	P	Pn	05 33 11.9	-1.7
SISI	Saibi	6.13	125	P	Pn	05 33 16.7	-3.1
	62nm,0.8s,0.3nm						
CMAR	Chiang Mai Arr	16.81	16	Pn	P	05 35 45.1	-1.3
	0.4nm,0.3s,baz=208,slow=11,SNR=8.7						
H08S2	Diego Garcia H	23.67	245	T	T	06 02 44.0	
	baz=63,slow=76,SNR=25						
H08S3	Diego Garcia H	23.67	245	T	T	06 02 49.0	
	baz=63,slow=76,SNR=28						
H08S1	Diego Carcia H	23.69	245	T	T	06 02 49.4	
	baz=63,slow=76,SNR=24						
MKAR	Makanchi Array	45.56	349	P	P	05 40 09.2	+1.0
	1.0nm,0.6s,baz=171,slow=8.6,SNR=7.8						
ASAR	Alice Springs	46.51	126	P	P	05 40 19.1	+3.0
	0.2nm,0.3s,baz=291,slow=7.8,SNR=4.0						
KURBB	Kurchatov Arra	49.98	347	P	P	05 40 43.4	+1.1
	0.3nm,0.5s,baz=172,slow=7.5,SNR=4.1						

*NNC **01** 05:31:56.8±3.5, 40°.86N×69°.60E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=26.5km s-min=14.8km az=48.0*
*SOME **01** 05:31:58.7, 40°.93N×69°.77E, h0km*
*KRNET **01** 05:32:02.2±0.1, 40°.94N×69°.64E, mb3.1*
ISC 01 05:32:02.9±1.8, 41°.07N±0°.04×70°.03E±0°.07, h16km±14km, n14, σ2§08/23, 8C-9D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
IUG	luzhnay	1.08	0	eP	Pb	05 32 22.2	-1.0
	117nm,0.2s						
IUG				eS	Sn	05 32 39.2	+1.1
	404nm,0.5s						
BTK	Batken	1.18	149	⇑iP	Pg	05 32 25.4	-0.2
	baz=34						
BTK				⇑iS	Sg	05 32 42.4	+1.5
	baz=34						
KK31	Karatay Array	2.06	10	⇑Pg	Pb	05 32 40.5	+0.5
	15nm,0.6s,baz=201,slow=16,SNR=55						
KK31				⇑Lg	Lg	05 33 10.6	
	23nm,0.5s,baz=202,slow=26,SNR=13						
ARSB	Arslanbob	2.24	83	⇓iP	Pg	05 32 44.9	-1.0
	baz=80						
ARSB				⇓iS	Sg	05 33 16.4	+1.4
	baz=80						
MNAS	Manas	2.33	52	⇓Pg	Pg	05 32 47.1	-0.5
	6.9nm,0.6s						
MNAS				⇑Lg	Lg	05 33 20.7	
	18nm,0.5s						
MNAS	Manas	2.33	52	⇑iP	Pg	05 32 46.7	-0.9
	baz=53						
MNAS				⇑iS	Sg	05 33 18.3	+0.5
	baz=53						
SFK	Sufi-Kurgan	2.85	111	⇓Pg	Pb	05 32 52.8	-0.7
	3.3nm,0.4s						
SFK				⇓Lg	Lg	05 33 32.8	
	13nm,0.5s						
SFK	Sufi-Kurgan	2.85	111	⇓iP	Pb	05 32 52.0	-1.5
	baz=6.0						
SFK				⇓iS	Sb	05 33 29.1	+0.9
	baz=6.0						
MRKS	Merke	2.92	54	eP	Pg	05 32 57.8	-1.0
	13nm,0.5s						
MRKS				eS	Sg	05 33 40.5	+3.9
	20nm,0.4s						
AAK	Ala-Archa	3.69	63	⇓Pg	Pg	05 33 11.9	-1.6
	6.2nm,0.8s						
AAK				Lg	Lg	05 34 03.4	
	10nm,0.7s						
TKM2	Tokmak 2	4.54	64	⇓Pg	Pg	05 33 27.1	-2.8
	3.6nm,0.7s						
TKM2				⇑Lg	Lg	05 34 31.5	
	12nm,0.6s						
KST	Kastek	4.84	64	eP	Pg	05 33 32.2	-3.3
	7.1nm,0.6s						
KST				eS	Sg	05 34 40.2	+2.1
	14nm,0.6s						
IZV	Izvestkoviy	5.28	66	eP	Pg	05 33 41.7	-2.3
	3.2nm,0.3s						
IZV				eS	Sg	05 34 55.5	+3.2
	8.4nm,0.4s						
KUU	Kurty	5.45	57	eP	Pg	05 33 43.8	-3.4
	4.9nm,0.5s						
KUU				eS	Sg	05 34 59.2	+1.3
	10nm,0.6s						

*IDC **01** 05:47:08.7±2.6, 13°.73N×91°.18W, h56km±24km, mb2.9/2, mb1 3.6/5, mb1mx3.2/52, mbtmp3.5/5, ML4.0/3, Error ellipse: s-maj=21.7km s-min=15.3km az=177.0*
*UCR **01** 05:47:08.6±1.9, 13°.76N×91°.01W, h25km±10km, ML3.9*
ISC 01 05:47:06.0±2.2, 13°.73N±0°.09×91°.14W±0°.07, h29km±15km, n37, σ1§56/47, mb3.4/3, 2C-3D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	Ixpaco	0.80	57	⇑eP	Pn	05 47 21.9	+0.5
APG	El Apazote	1.43	27	P	Pb	05 47 31.9	-0.1
	46nm,0.3s,baz=156,slow=9.6,SNR=304						
APG				S	Sb	05 47 50.9	+1.0
	70nm,0.3s,baz=276,slow=15,SNR=44						
RTR	El Retiro	1.46	83	eP	Pb	05 47 32.1	-0.5
SBLS	San Blas	1.48	86	⇓eP	Pn	05 47 31.8	+1.0
SNJE	San Jose	1.50	85	⇓eP	Pn	05 47 32.3	+1.2
SNJE				eS	Sn	05 47 49.8	0.0
UNIC	Santa Ana	1.56	80	eP	Pn	05 47 33.1	+1.3
UNIC				eS	Sb	05 47 52.6	-1.0
COLS	Colinas	1.79	92	eP	Pn	05 47 36.5	+1.4
COLS				eS	Sn	05 47 57.2	+0.3
BOQS	Boqueron	1.81	90	eP	Pn	05 47 36.5	+1.1
BOQS				eS	Sn	05 47 58.5	+1.0
UEES	San Salvador	1.85	90	eP	Pn	05 47 36.8	+1.1
UEES				IAML		05 48 08.9	
	comp=Z,3μm,0.2s						
MTO3	Montecristo	1.85	69	⇑eP	Pn	05 47 36.9	+0.9
MTO3				IAML		05 48 04.2	
	comp=Z,293nm,0.5s						
SNET	Serv Nac Est T	1.86	91	eP	Pn	05 47 37.5	+1.5
SNET				eS	Sn	05 47 59.1	+0.7
SNET				IAML		05 48 06.5	
	comp=Z,3μm,0.3s						
OPAM	San Salvador	1.89	90	eP	Pn	05 47 37.7	+1.4
OPAM				IAML		05 48 05.2	
	comp=Z,3μm,0.2s						
LOMA	San Marcos	1.92	92	eP	Pn	05 47 38.2	+1.6
LOMA				eS	Sn	05 47 59.9	+0.2
LOMA				IAML		05 48 07.0	
	comp=Z,4μm,0.3s						
UDBS	Soyapango	1.93	90	eP	Pn	05 47 39.0	+2.1
UDBS				IAML		05 48 09.7	
	comp=Z,3μm,0.2s						
LFU	La Fuente	1.97	89	eP	Pn	05 47 39.1	+1.6
LFRS	El Faro	2.02	93	⇓eP	Pn	05 47 39.8	+1.6
LFRS				eS	Sn	05 48 03.8	+1.2
LBRS	Las Brisas	2.04	90	eP	Pn	05 47 40.2	+1.8
PAVA	Las Pavas	2.14	90	eP	Pn	05 47 41.6	+1.7
PAVA				IAML		05 48 19.5	
	comp=Z,931nm,0.3s						
SNVI	San Vicente	2.24	93	eP	Pn	05 47 43.6	+2.3
SNVI				eS	Sb	05 48 11.8	-1.5
TECA	Tecapa	2.58	95	eP	Pn	05 47 47.6	+1.7
PACA	Pacayal	2.75	95	eP	Pn	05 47 49.9	+1.6
VSM	San Miguel	2.81	96	eP	Pn	05 47 50.8	+1.7
CNGN	Cerro Negro	4.50	105	eP	Pn	05 48 12.6	+0.4
CNGN				AML	AML	05 49 19.0	
	comp=N,119nm,0.5s						
MOMN	Momotombo	4.67	106	eP	Pn	05 48 15.0	+0.4
ESTN	Estel	4.69	97	eP	Pn	05 48 16.3	+1.4
COPN	Copaltepe	4.70	109	eP	Pn	05 48 15.5	+0.6
RCON	San Juan de Ri	4.85	92	eP	Pn	05 48 18.6	+1.4
CMIG	Matias Romero	4.92	313	P	Pn	05 48 19.6	+1.7
	comp=N,5.8nm,0.3s,baz=147,slow=14,SNR=58						
CMIG				S	Sn	05 49 15.3	+1.4
	comp=N,4.5nm,0.3s,baz=262,slow=20,SNR=3.4						
MATN	Matagalpa	5.14	98	eP	Pn	05 48 22.2	+1.2
BOAB	BOACO BROADBAN	5.49	103	eP	Pn	05 48 26.1	+0.3
JTS	JuntasAbangare	6.95	119	P	Pn	05 48 49.0	+3.1
	comp=N,4.0nm,0.3s,baz=13,slow=17,SNR=28						
JTS	JuntasAbangare	6.95	119	eP	Pn	05 48 49.2	+3.2
TEIG	Tepich	7.02	23	eP	Pn	05 48 48.8	+2.0
TXAR	Lajitas Array	19.38	325	P	P	05 51 31.0	+1.3
	comp=N,0.1nm,0.3s,baz=137,slow=8.5,SNR=3.6						
PFO	Pinyon Flats O	30.34	315	P	P	05 53 12.6	-2.8
	comp=N,1.1nm,0.3s,baz=119,slow=7.0,SNR=5.1						
NVAR	Mina Array Bea	34.40	321	P	P	05 53 52.1	+1.1
	comp=N,0.4nm,0.8s,baz=146,slow=8.2,SNR=3.2						
YKA	Yellowknife Ar	51.48	346	P	P	05 56 06.2	-2.3
	comp=N,0.1nm,0.6s,baz=150,slow=7.2,SNR=4.0						

*ISCJB **01** 05:49:33.8±0.5, 37°.77N±0°.02×26°.75E±0°.03, h5km±5km, Error ellipse: s-maj=4.9km s-min=3.2km az=142.7*
*ATH **01** 05:49:33.1, 37°.73N×26°.78E, h15km±2km, ML2.4/4, Error ellipse: s-maj=3.7km s-min=1.1km az=272.0*
*THE **01** 05:49:33.8, 37°.77N×26°.74E, h2km±3km, ML2.2/2, Error ellipse: s-maj=3.7km s-min=1.0km az=262.0*
*ISK **01** 05:49:33.7, 37°.77N×26°.76E, h10km, ML2.8/6*
*CSEM **01** 05:49:34.0±0.1, 37°.77N×26°.74E, h5km, ML2.8, Error ellipse: s-maj=3.4km s-min=2.4km az=57.0*
ISC 01 05:49:34.0±1.0, 37°.76N±0°.02×26°.76E±0°.02, h14km±9km, n52, σ0§65/78, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	G?zelcaml?	0.38	99	PG	Pg	05 49 41.8	+0.1
GCAM	G?zelcaml?	0.38	99	ePg	Pg	05 49 41.8	+0.1
URLA	Izmir	0.61	348	PG	Pg	05 49 44.9	-1.1
URLA	Izmir	0.61	348	ePg	Pg	05 49 44.9	-1.1
BLCB	Balcova	0.66	20	PG	Pg	05 49 46.3	-0.6
BLCB	Balcova	0.66	20	ePg	Pg	05 49 46.3	-0.6
YKAV	Yalikavak-Bodr	0.76	147	PG	Pn	05 49 49.9	-0.4
YKAV				SG	Sb	05 49 59.8	+0.6
YKAV	Yalikavak-Bodr	0.76	147	ePg	Pn	05 49 49.9	-0.4
YKAV				eSg	Sb	05 49 59.8	+0.6
BODT	Bodrum	0.83	148	PG	Pb	05 49 50.3	+0.1
BODT				SG	Sb	05 50 01.9	+0.7
BODT	Bodrum	0.83	148	P	Pg	05 49 49.0	-1.0
BODT				S	Sb	05 50 02.2	+1.0
BODT	Bodrum	0.83	148	P	Pg	05 49 49.0	-1.0
BODT	Bodrum	0.83	148	ePg	Pb	05 49 50.3	+0.1
BODT				eSg	Sb	05 50 01.9	+0.7
BODT				S	Sb	05 50 02.2	+1.0
CHOS	Chios island	0.83	318	PG	Pb	05 49 50.8	+0.5
CHOS				SG	Sb	05 50 02.0	+0.5
CHOS	Chios island	0.83	318	P	Pg	05 49 49.5	-0.6
CHOS				S	Sb	05 50 01.4	0.0
CHOS				AML	AML	05 50 04.0	
	comp=N,405μm,0.3s						
CHOS				AML	AML	05 50 07.0	
	comp=E,508μm,0.3s						
CHOS	Chios island	0.83	318	P	Pg	05 49 49.6	-0.6
CHOS				S	Sb	05 50 01.5	0.0
CHOS	Chios island	0.83	318	P	Pg	05 49 49.6	-0.6
CHOS	Chios island	0.83	318	ePg	Pb	05 49 50.8	+0.5
CHOS				S	Sb	05 50 01.5	0.0
CHOS				eSg	Sb	05 50 02.0	+0.5
KRBN	Karaburun	0.84	349	PG	Pg	05 49 49.4	-1.0
KRBN	Karaburun	0.84	349	ePg	Pg	05 49 49.4	-1.0
AYDB	Zeytinkoy-Aydi	0.91	78	PG	Pg	05 49 51.5	-0.2
AYDB				SG	Sn	05 50 05.0	-0.6
AYDB	Zeytinkoy-Aydi	0.91	78	ePg	Pg	05 49 51.5	-0.2
AYDB				eSg	Sn	05 50 05.0	-0.6
MLSB	Milas	0.93	120	PG	Pn	05 49 53.3	+0.5
MLSB				SG	Sn	05 50 05.6	-0.4
MLSB	Milas	0.93	120	ePg	Pn	05 49 53.3	+0.5
MLSB				eSg	Sn	05 50 05.6	-0.4
FOCM	Fo^§a	0.95	359	PG	Pb	05 49 52.3	+0.1
FOCM				SG	Sn	05 50 05.9	-0.3
FOCM	Fo^§a	0.95	359	ePg	Pb	05 49 52.3	+0.1
FOCM				eSg	Sn	05 50 05.9	-0.3
APE	Apeiranthos	1.20	235	PN	Pg	05 49 57.1	0.0
APE	Apeiranthos	1.20	235	P	Pb	05 49 56.1	-0.4
APE				S	Sb	05 50 12.2	+0.3
APE				AML	AML	05 50 17.4	
	comp=N,199μm,0.2s						
APE				AML	AML	05 50 18.1	
	comp=E,168μm,0.2s						
APE	Apeiranthos	1.20	235	P	Pb	05 49 56.1	-0.4
APE				S	Sg	05 50 12.7	0.0
APE	Apeiranthos	1.20	235	P	Pb	05 49 56.1	-0.4
APE	Apeiranthos	1.20	235	ePn	Pg	05 49 57.1	0.0
APE				S	Sb	05 50 12.3	+0.3
DKL	Dikili	1.31	5	PN	Pg	05 49 59.0	-0.2
DKL	Dikili	1.31	5	ePn	Pg	05 49 59.0	-0.2
YER	Yerkesik	1.37	117	PN	Pb	05 49 59.7	+0.3
YER	Yerkesik	1.37	117	P	Pb	05 49 59.3	-0.1
YER				S	Sg	05 50 18.3	+0.3
YER	Yerkesik	1.37	117	P	Pb	05 49 59.3	-0.1
YER	Yerkesik	1.37	117	ePn	Pb	05 49 59.7	+0.3
YER				S	Sg	05 50 18.3	+0.3
PRK	Paraskevi	1.53	346	P	Pg	05 50 02.7	-0.7
PRK				S	Sg	05 50 24.7	+1.5
PRK				AML	AML	05 50 24.8	
	comp=N,280μm,0.5s						
PRK				AML	AML	05 50 31.6	
	comp=E,372μm,0.8s						
PRK	Paraskevi	1.53	346	P	Pg	05 50 02.6	-0.7
PRK				S	Sg	05 50 24.3	+1.0
IOSP	Ios island	1.57	229	P	Pb	05 50 03.2	+0.5
IOSP				S	Sg	05 50 24.1	-0.3
IOSP				AML	AML	05 50 29.4	
	comp=N,259μm,0.3s						
IOSP				AML	AML	05 50 30.5	
	comp=E,301μm,0.2s						
IOSP	Ios island	1.57	229	P	Pb	05 50 02.8	0.0
IOSP				S	Sg	05 50 24.0	-0.4
ANAF	Anafi Island	1.61	210	P	Pb	05 50 03.8	+0.2
ANAF	Anafi Island	1.61	210	P	Pn	05 50 03.0	+1.0
ANAF	Anafi Island	1.61	210	P	Pn	05 50 03.0	+1.0
KULA	Kula-Manisa	1.68	63	PN	Pn	05 50 03.2	+0.2
KULA	Kula-Manisa	1.68	63	ePn	Pn	05 50 03.2	+0.2
TURN	Turunc	1.72	121	PN	Pn	05 50 01.0	-2.5
DALY	Dalyan (Mu^la	1.78	121	PN	Pb	05 50 05.7	-0.7
DALY	Dalyan (Mu^la	1.78	121	ePn	Pb	05 50 05.7	-0.7
FETY	Fethiye	2.17	121	PN	Pn	05 50 10.3	+0.5
FETY	Fethiye	2.17	121	ePn	Pn	05 50 10.3	+0.5
KARP	Karpathos	2.24	172	P	Pn	05 50 10.7	0.0
KARP	Karpathos	2.24	172	P	Pn	05 50 11.1	+0.4

IDC 01 06:08:23.1±26.0, 30°.01N×65°.65E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.1/74, mbtmp3.4/4, Error ellipse: s-maj=471.7km s-min=48.3km az=166.0, Southeastern Afghanistan

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

TIXI	Tiksi	48.36	9	P		P	06 19 59.0	+0.8
	1.0nm,0.3s,baz=348,slow=7.1,SNR=4.8							
PDAR	Pinedale Array	49.36	288	P		P	06 20 06.9	+0.4
	0.4nm,0.8s,baz=52,slow=7.7,SNR=4.3							
TORD	Torodi Ar. Bea	51.94	139	P		P	06 20 24.8	-1.1
	0.4nm,0.7s,baz=330,slow=8.3,SNR=2.8							
KURBB	Kurchatov Arra	56.06	47	P		P	06 20 55.9	+0.3
	0.6nm,0.6s,baz=319,slow=7.2,SNR=7.5							
TXAR	Lajitas Array	56.90	272	P		P	06 21 02.2	+0.1
	0.6nm,0.8s,baz=46,slow=10,SNR=2.6							
MKAR	Makanchi Array	60.63	47	P		P	06 21 27.8	+0.1
	1.1nm,0.7s,baz=332,slow=5.2,SNR=11							
SONM	Songino Array	67.33	30	P		P	06 22 12.3	+0.4
	0.7nm,0.8s,baz=347,slow=12,SNR=3.8							

NNC ***01*** *06:12:56.2±5.2, 37°.25N×70°.68E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=41.2km s-min=31.0km az=166.0*
IDC ***01*** *06:12:59.1±9.3, 37°.17N×71°.07E, h198km±62km, mb2.7/1, mb1 3.0/4, mb1mx2.7/71, mbtmp3.5/4, Error ellipse: s-maj=135.0km s-min=81.0km az=116.0*

ISC 01 06:12:51.7±1.5, 36°.72N±0°.09×71°.1E±0°.1, h200km, n19, σ1§72/24, 5C-7D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.81	30	⇓P	Pn	06 13 53.3	+2.0
	7.3nm,0.3s						
SFK				⇑S	Sn	06 14 36.5	-1.6
	25nm,0.4s						
MNAS	Manas	5.86	11	⇓P	Pn	06 14 19.6	+2.3
	2.4nm,0.4s						
MNAS				⇓S	Sn	06 15 23.4	-1.6
	16nm,0.7s						
KK31	Karatay Array	6.38	356	⇑P	Pn	06 14 26.5	+2.6
	2.4nm,0.3s,baz=178,slow=12,SNR=74						
KK31				⇑S	Sn	06 15 35.2	-1.8
	2.3nm,0.4s,baz=187,slow=24,SNR=14						
AAK	Ala-Archa	6.47	23	P	Pn	06 14 27.2	+2.0
	1.0nm,0.3s,baz=190,slow=11,SNR=4.6						
AAK				S	Sn	06 15 37.2	-2.1
	0.8nm,0.3s,baz=117,slow=20,SNR=11						
AAK	Ala-Archa	6.47	23	⇓P	Pn	06 14 27.4	+2.2
	1.1nm,0.3s						
AAK				⇑S	Sn	06 15 38.7	-0.6
	6.3nm,0.8s						
TKM2	Tokmak 2	7.11	28	⇓P	Pn	06 14 35.5	+2.0
	1.9nm,0.5s						
TKM2				⇑S	Sn	06 15 54.3	+0.1
	3.7nm,0.8s						
MKAR	Makanchi Array	13.08	36	P	P	06 15 52.9	-0.3
	baz=220,slow=9.7,SNR=1.9						
PYUN	Piuthan	13.24	127	*e*P	P	06 15 52.7	-2.7
	7.4nm,0.4s						
DANN	Dangsing	13.58	124	*e*P	P	06 15 56.7	-2.5
	4.6nm,0.2s						
KOLN	Koldanda	13.86	127	*e*P	P	06 16 00.8	-1.5
	4.6nm,0.4s						
GKN	Gorkha	14.39	123	*e*P	P	06 16 07.2	-0.9
	7.1nm,0.3s						
AB31	Akbulak array	14.91	331	⇓P	P	06 16 18.5	+5.1
	0.4nm,0.3s,baz=137,slow=13,SNR=9.8						
AB31				⇓S	Sn	06 18 58.3	-1.1
	0.5nm,0.5s						
KKN	Kakani	14.96	122	*e*P	P	06 16 14.9	+0.5
PKIN	Phulchoki	15.18	123	*e*P	P	06 16 17.3	+0.4
PKI	Pulchoki	15.19	123	*e*P	P	06 16 17.4	+0.3
	11nm,0.5s						
GUN	Gumba	15.29	121	*e*P	P	06 16 18.7	+0.4
	7.6nm,0.5s						
JIRN	Jiri	15.66	121	*e*P	Pn	06 16 23.7	+1.3
	13nm,0.3s						
ZALV	Zalesovo Beam	19.69	25	P	Pn	06 17 09.0	-0.5
	0.5nm,0.3s,baz=220,slow=12,SNR=5.9						
YKA	Yellowknife Ar	81.02	3	P	P	06 24 48.9	+5.1
	0.1nm,0.5s,baz=351,slow=5.4,SNR=8.2						

BJI ***01*** *06:18:48.6, 2°.14N×126°.43E, h102km, mb4.9/49, mB4.8/18*
NEIC ***01*** *06:18:50.1±1.5, 2°.53N×126°.13E, h64km±13km, mb4.9/63, Error ellipse: s-maj=6.8km s-min=4.3km az=81.0*
MOS ***01*** *06:18:51.2±1.0, 2°.58N×126°.13E, h88km, mb4.9/30, Error ellipse: s-maj=10.3km s-min=5.8km az=111.9*
ISCJB ***01*** *06:18:52.8±0.1, 2°.56N±0°.02×126°.18E±0°.03, h105km, mb4.7/111, Error ellipse: s-maj=3.8km s-min=2.5km az=174.6*
IDC ***01*** *06:18:53.7±1.7, 2°.54N×126°.07E, h100km±15km, mb4.4/28, mb1 4.4/30, mb1mx4.3/54, mbtmp4.7/30, MS3.5/8, Ms1 3.5/8, ms1mx3.3/61, Error ellipse: s-maj=15.6km s-min=8.5km az=82.0*
DJA ***01*** *06:18:56.9±0.3, 2°.N±3°×12°.6E±°, h121km±3km, M5.0/45, mb5.2/45, mB5.4/24, MLv5.4/12, Mw(mB)4.8/24*

ISC 01 06:18:54.4±0.3, 2°.51N±0°.03×126°.17E±0°.05, h105km, n278, σ1§47/288, mb4.8/111, 12C-9D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	2.10	145	*e*Pn	Pn	06 19 28.2	-0.2
LBMI	Labuha	3.40	157	P	Pn	06 19 46.1	+0.5
GSPH	General Santos	3.76	341	⇑*i*P	Pn	06 19 48.8	-1.7
GSPH				*i* S	Sn	06 20 21.8	-12
MATI	Mati	4.41	1	*e*P	Sn	06 20 47.4	-2.1
SANI	Sanana	4.53	182	P	Pn	06 19 58.6	-2.2
DMPH	Davao City--Mi	4.59	352	⇑*i*P	Pn	06 20 05.8	+4.1
DMPH				*i* S	Sn	06 20 50.7	-3.2
BUKP	Musuan	5.45	348	*e*P	Pn	06 20 12.6	-0.7
BUKP				*e*S	Sn	06 21 15.1	+0.4
BIPH	Bislig	5.64	2	⇑*e*P	Pn	06 20 15.1	-0.7
BIPH				*e*S	Sn	06 21 15.6	-3.8
NLAI	Namlea	5.79	171	P	Pn	06 20 16.9	-0.9
	1μm,0.6s,22μm10nm						
PAGZ	Pagadian	5.99	332	*e*P	Pn	06 20 20.6	0.0
CGP	Cagayan de Oro	6.09	346	⇓*e*P	Pn	06 20 22.0	+0.1
CGP				*i* S	Sn	06 21 33.1	+2.9
SIJI	Sorong	6.10	123	P	Pn	06 20 22.4	+0.3
	7.1nm,0.3s,baz=322,slow=17,SNR=11						
SIJI				LR	LR	06 22 58.2	
	comp=Z,308nm,19.3s,baz=220,slow=39						
MSAI	Masohi	6.44	155	P	Pn	06 20 27.1	+0.4
BUTP	Butuan	6.44	355	*e*P	Pn	06 20 26.9	+0.2
AAI	Ambon	6.48	162	P	Pn	06 20 27.4	+0.1
	726nm,0.5s,14μm3.6nm						
AAI	Ambon	6.48	162	P	Pn	06 20 27.2	-0.1
AAI				pmax	pmax		
	comp=Z,687nm,0.5s						
PCI	Palu	7.18	242	P	Pn	06 20 36.7	-0.1
	comp=Z,205nm,0.9s,comp=Z,2μmcomp=Z,0.8nm						
PCI	Palu	7.18	242	P	Pn	06 20 37.4	+0.6
PCI				pmax	pmax		
	comp=Z,205nm,0.9s						
KDI	Kendari	7.34	209	P	Pn	06 20 37.4	-1.5
	comp=Z,58nm,0.8s,comp=Z,1μmcomp=Z,1.0nm						
BNDI	Bandanaira	7.92	152	P	Pn	06 20 46.9	+0.1
	comp=Z,409nm,0.7s,comp=Z,1.9nm						
MYLDM	Lahad Datu	8.10	289	*e*Pn	Pn	06 20 52.7	+3.5
FAKI	Fak Fak	8.13	132	P	Pn	06 20 50.5	+0.9
	comp=Z,102nm,0.7s,comp=Z,2μmcomp=Z,0.4nm						
FAKI	Fak Fak	8.13	132	*e*Pn	Pn	06 20 50.3	+0.7
TTSI	Tana Toraja	8.41	229	P	Pn	06 20 54.1	+0.6
	comp=Z,121nm,0.9s,comp=Z,2μm						
RKPI	Ransiki, Papua	8.95	116	P	Pn	06 21 01.9	+1.1
SPSI	Sidrap Palu	9.07	225	P	Pn	06 21 03.9	+1.5
	comp=Z,50nm,0.8s						
RCP	Roxas	9.61	339	⇓*e*P	Pn	06 21 11.1	+1.3
KKM	Kota Kinabalu	10.53	290	*e*Pn	Pn	06 21 26.8	+4.4
BAKI	Biak	10.60	110	P	Pn	06 21 23.7	+0.5
KBKI	Kotabaru	11.54	240	P	Pn	06 21 36.6	+0.7
	comp=Z,54nm,1.0s,comp=Z,3μm						
MMRI	Maumere	11.74	199	P		06 21 55.8	+8.4
MTKI	Muara Teweh, K	11.78	253	P	Pn	06 21 41.4	+2.3
EDFI	Ende, Flores	12.04	202	P	Pn	06 21 43.4	+0.7
	comp=Z,53nm,1.0s,comp=Z,846nm						
SOEI	Soe	12.33	189	P	Pn	06 21 47.0	+0.5
SOEI	Soe	12.33	189	*e*Pn	P	06 21 52.7	-1.6
TGY	Tagaytay City	12.62	336	LR	LR	06 28 02.5	
	comp=Z,239nm,18.4s,baz=80,slow=44						
BATI	Baumata	12.88	191	P	P	06 21 59.8	-0.4
	comp=Z,4.8nm,0.3s,baz=233,slow=5.5,SNR=10.0						
BATI	Baumata	12.88	191	P	P	06 21 58.4	-1.9
BASI	Baing, Sumba	13.81	204	P	Pn	06 22 06.2	+0.4
WBSI	Waikabubak, Su	13.83	209	P	Pn	06 22 06.0	0.0
	comp=Z,182nm,0.9s,comp=Z,1μm						
SBUM	Sibu	13.94	270	*e*P	P	06 22 13.9	+1.9
PLAI	Plampang	14.03	217	P	Pn	06 22 10.2	+1.6
	comp=Z,482nm,1.0s,comp=Z,4μm						
TWSI	Taliwang, Sumb	14.51	220	P	Pn	06 22 15.4	+0.7
	comp=Z,93nm,0.7s,comp=Z,1μm						
GENI	Genyem	14.88	110	P	P	06 22 24.3	+1.7
STKI	Sintang	14.88	261	P	P	06 22 22.2	-0.4
SRBI	Singaraja	15.17	226	P	P	06 22 25.6	-0.1
	comp=Z,171nm,1.4s,comp=Z,2μm						
JAY	Jayapura	15.37	109	P	Pn	06 22 26.0	+0.4
	comp=Z,1.3nm,0.3s,baz=296,slow=4.3,SNR=4.4						
KSM	Kuching	15.88	267	*e*P	P	06 22 34.9	+1.2
	comp=Z,36nm,0.8s						
MTN	Manton Dam	16.03	162	*e*Pn	Pn	06 22 32.9	-0.9
	comp=Z,48nm,0.5s						
BLJI	Banyuglugur	16.16	231	P	P	06 22 38.0	+1.3
JAGI	Jajag, Banyuwa	16.20	228	P	P	06 22 39.2	+2.0
JAGI	Jajag, Banyuwa	16.20	228	*e*P	P	06 22 37.5	+0.3
	comp=Z,162nm,0.9s						
GMJI	Gumukmas	16.61	230	P	P	06 22 42.2	+0.6
	comp=Z,187nm,0.9s						
NGJI	Ngawi	17.65	236	P	Pn	06 22 54.3	+0.6
PWJI	Pagerwojo	17.74	234	P	P	06 22 53.0	-1.2
	comp=Z,87nm,0.9s						
SMRI	Semarang	18.34	239	P	Pn	06 23 01.8	-0.3
SMRI	Semarang	18.34	239	*e*P	P	06 23 00.5	-0.4
	comp=Z,88nm,0.8s						
PCJI	Pacitan	18.35	234	P	P	06 23 00.0	-0.8
	comp=Z,163nm,0.7s,comp=Z,2μm						
WOJI	Wonogiri, Jawa	18.35	236	P	Pn	06 23 01.7	-0.5
UGM	Wanagama	18.73	236	*e*P	P	06 23 03.9	-1.2
	comp=Z,117nm,1.1s						
KPJI	Karang Pucung	19.79	240	P	P	06 23 14.9	-1.6
	comp=Z,92nm,0.7s						
FITZ	Fitzroy Crossi	20.48	181	*e*P	P	06 23 23.1	-0.8
	comp=Z,16nm,1.0s						
LEM	Lembang	20.71	243	P	Pn	06 23 30.9	+0.9
	comp=Z,194nm,0.8s,baz=25,slow=8.1,SNR=12						
LEM	Lembang	20.71	243	P	Pn	06 23 31.2	+1.2
	comp=Z,2μm,0.8s						
TWG	Pinlang	20.79	347	*e*P	P	06 23 23.3	-3.9
	comp=Z,180nm,0.5s						
CISI	Cisompet, Garu	20.86	241	P	P	06 23 26.1	-2.1
	comp=Z,118nm,0.9s,comp=Z,6μm						
CISI	Cisompet, Garu	20.86	241	*e*P	P	06 23 25.9	-2.3
	comp=Z,108nm,1.1s						
YULB	Yu-li	21.29	348	*e*P	P	06 23 29.0	-3.6
	comp=Z,32nm,0.7s						
TPUB	Ta-pu	21.35	346	*e*P	P	06 23 30.7	-2.6
	comp=Z,80nm,0.7s						
DBJI	Dramaga	21.37	245	P	P	06 23 36.6	+3.0
SSLB	Suanglung	21.75	347	*e*P	P	06 23 35.2	-2.3
	comp=Z,49nm,0.7s						
SBJI	Serang	21.77	247	P	P	06 23 40.5	+2.7
	comp=Z,505nm,1.1s,comp=Z,8μm						
NACB	Ninganchiao	21.99	349	*e*P	P	06 23 38.2	-1.8
	comp=Z,41nm,1.2s						
MYKOM	Kota Tinggi	22.31	269	*e*P	P	06 23 43.0	-0.6
	comp=Z,21nm,1.0s						
BLSI	Bandar Lampung	22.32	249	P	P	06 23 45.9	+2.3
CGJI	Cibinong	22.36	246	P	P	06 23 44.7	+0.7
KLI	Kotabumi	22.52	251	P	P	06 23 47.3	+1.7
KLI	Kotabumi	22.52	251	P	P	06 23 47.3	+1.7
MDSI	Maura Dua	23.05	252	P	P	06 23 50.1	-0.8
	comp=Z,77nm,0.9s,comp=Z,976nm						
KASI	Kota Agung	23.07	250	P	P	06 23 51.8	+0.7
LWLI	Liwa	23.32	251	P	P	06 23 55.0	+1.4
COEN	Coen	23.50	135	*e*P	P	06 23 54.0	-1.0
	comp=Z,12nm,0.9s						
WRAB	Tennant Creek	23.70	161	*e*P	P	06 23 56.2	-0.6
	comp=Z,35nm,0.8s						
WRAB	Tennant Creek	23.70	161	*ce*P	P	06 23 55.8	-1.1
WRAB				pmax	pmax		
	comp=Z,19nm,0.6s						
WRA	Warramunga Arr	23.71	161	P	P	06 23 56.0	-1.0
	comp=Z,25nm,0.4s,baz=336,slow=11,SNR=447						
WRA				S	S	06 28 00.7	-3.7
	comp=Z,10nm,1.0s,baz=335,slow=17,SNR=9.4						
WRA				LR	LR	06 33 34.9	
	comp=Z,172nm,20.2s,baz=280,slow=37						
WB2	Warramunga Arr	23.71	161	*e*P	P	06 23 56.0	-1.0
	comp=Z,41nm,0.7s						
MNAI	Manna	24.18	254	*e*P	P	06 24 01.0	-0.2
	comp=Z,295nm,1.0s						
JOW	Kunigami	24.27	5	P	P	06 24 02.6	+0.8
	comp=Z,74nm,0.7s,baz=136,slow=6.6,SNR=7.9						
JOW	Kunigami	24.27	5	*e*P	P	06 24 01.9	0.0
	comp=Z,220nm,1.3s						
MBWA	Marble Bar	24.35	195	*e*P	P	06 24 03.0	+0.4
	comp=Z,114nm,0.8s						
MASI	Maura Aman, Be	24.57	257	P	P	06 24 08.9	+4.1
IPM	Ipoh	25.17	275	*e*P	P	06 24 10.8	+0.5
	comp=Z,31nm,1.0s						
BKNI	Bangkinang	25.21	265	*e*P	P	06 24 10.4	-0.3
	comp=Z,112nm,0.5s						
SKNT	Sakolnakorn	26.12	305	P	P	06 24 22.7	+4.0
	comp=Z,5.8nm,1.0s						
MNSI	Mandailing Nat	26.63	267	P	P	06 24 22.7	-0.7
AS31	Alice Springs	27.09	164	*e*P	P	06 24 27.1	-0.3
	comp=Z,6.3nm,0.4s						
AS31				*e*S	S	06 28 57.0	-1.0
ASAR	Alice Springs	27.09	164	P	P	06 24 26.9	-0.5
	comp=Z,4.3nm,0.6s,baz=345,slow=7.8,SNR=36						
ASAR				PcP	PcP	06 27 46.1	+0.1
	comp=Z,4.5nm,0.6s,baz=352,slow=2.5,SNR=8.8						
ASAR				S	S	06 28 55.8	-2.2
	comp=Z,7.5nm,0.9s,baz=347,slow=22,SNR=14						
AS01	Alice Springs	27.10	164	*e*P	P	06 24 27.1	-0.4
PSI	Prapat	27.22	271	P	P	06 24 27.8	-1.0
	comp=Z,11nm,0.6s,baz=3.4,slow=1.3,SNR=6.1						
PSI				LR	LR	06 36 58.1	
	comp=Z,154nm,18.8s,baz=266,slow=40						
CHAI	Chaiyaphum	27.28	301	P	P	06 24 29.0	-0.2
	comp=Z,7.2nm,0.7s,comp=Z,796nm						
GSI	Gunungsitoli	28.60	268	*e*P	P	06 24 40.1	-0.9
	comp=Z,53nm,0.6s						
NANT	Nan	29.73	305	P	P	06 24 52.8	+1.8
	comp=Z,2.6nm,0.5s						
NJ2	Nanjing	30.18	348	*e*P	P	06 24 55.1	+0.4
NJ2				pmax	pmax		
	comp=Z,21nm,0.8s						
JNU	Nakatsue	30.77	8	P	P	06 24 59.5	-0.5
	comp=Z,27nm,0.8s,baz=192,slow=4.3,SNR=19						
CM01	Chiang Mai Arr	31.00	303	*e*P	P	06 25 03.1	+0.9
CMAR	Chiang Mai Arr	31.03	303	P	P	06 25 02.9	+0.5
	comp=Z,1.7nm,0.3s,baz=121,slow=7.4,SNR=11						
CMAR				ScP	ScP	06 31 29.4	-0.2
	comp=Z,1.5nm,0.8s,baz=167,slow=1.7,SNR=8.6						
CMAR				LR	LR	06 37 53.9	
	comp=Z,64nm,19.8s,baz=214,slow=37						
KMI	Kunming	31.86	317	P	P	06 25 12.6	+2.7
KMI				pmax	pmax		
	comp=Z,17nm,0.5s						
JHJ	Hachijo jima 2	33.02	21	LR	LR	06 42 44.5	
	comp=Z,51nm,18.0s,baz=85,slow=43						
TJN	Taejon	33.72	2	*ce*P	P	06 25 26.2	+0.5
INU	Inuyama	34.19	16	*e*P	P	06 25 30.0	+0.2
	comp=Z,22nm,1.0s						
TIA	Tai'an	34.56	347	P	P	06 25 33.6	+0.6
TIA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KS15	Wonju Array Si	34.80	2	*e*P	P	06 25 35.8	+0.8
KSAR	Wonju Array Be	34.80	2	P	P	06 25 35.1	+0.1
KSAR	Wonju Array Be	34.80	2	P	P	06 25 35.1	+0.1
INCN	Inchon	34.81	1	*e*P	P	06 25 35.8	+0.7
	comp=Z,16nm,0.8s						
INCN	Inchon	34.81	1	*e*P	P	06 25 35.8	+0.7
INCN				pmax	pmax		
	comp=Z,16nm,0.8s						
KSRS	Korea Array	34.81	2	P	P	06 25 35.1	0.0
	comp=Z,11nm,0.6s,baz=181,slow=10.0,SNR=65						
KSRS				LR	LR	06 42 28.5	
	comp=Z,117nm,18.1s,baz=245,slow=41						
KS01	Wonju Array Si	34.84	2	*e*P	P	06 25 35.4	+0.1
XAN	Xi'an	35.26	335	P	P	06 25 37.8	-1.3
XAN				pP	pP	06 26 00.5	-2.3
XAN				PP	PnPn	06 26 56.7	-4.1
XAN				PcP	PcP	06 28 07.5	-0.2
XAN				pmax	pmax		
	comp=Z,21nm,0.9s						
XAN				pmax	pmax		
	comp=Z,370nm,12.3s						
CD2	Chengdu	35.31	325	P	P	06 25 38.9	-0.6
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
MAJO	Matsushiro	35.65	17	*e*P	P	06 25 41.4	-0.9
	comp=Z,12nm,0.7s						
MAJO	Matsushiro	35.65	17	*de*P	P	06 25 40.9	-1.4
MAJO				pmax	pmax		
	comp=Z,11nm,0.9s						
MAT	Matsushiro	35.65	17	P	P	06 25 41.3	-1.0
MJAR	Matsushiro Arr	35.65	17	P	P	06 25 41.1	-1.2
	comp=Z,10nm,0.9s,baz=191,slow=10,SNR=22						
MJAR				ScP	ScP	06 31 45.0	-0.3
	comp=Z,0.8nm,0.3s,baz=220,slow=4.9,SNR=4.9						
MJB9	Matsu-Tunnel	35.65	17	*e*P	P	06 25 41.5	-0.8
	comp=Z,12nm,0.6s						
NWAO	Narrogin (SRO)	36.24	193	P	P	06 25 47.0	-0.4
	comp=Z,27nm,0.9s,baz=264,slow=9.8,SNR=6.0						
NWAO	Narrogin (SRO)	36.24	193	*e*P	P	06 25 47.9	+0.5
	comp=Z,88nm,1.5s						
NWAO	Narrogin (SRO)	36.24	193	*e*P	P	06 25 47.9	+0.5
NWAO				pmax	pmax		
	comp=Z,88nm,1.5s						
BBOO	Buckleboo	36.35	166	*e*P	P	06 25 48.3	-0.1
	comp=Z,11nm,0.7s						
DL2	Dalian	36.46	354	P	P	06 25 49.2	0.0
DL2				pmax	pmax		
	comp=Z,56nm,0.9s						
EIDS	Eidsvold	36.76	140	*e*P	P	06 25 52.9	+1.0
	comp=Z,24nm,1.4s						
STKA	Stephens Creek	37.20	158	P	P	06 25 55.8	+0.2
	comp=Z,15nm,0.8s,baz=332,slow=8.3,SNR=45						
STKA				LR	LR	06 43 54.0	
	comp=Z,56nm,19.8s,baz=25,slow=40						
STKA	Stephens Creek	37.20	158	*e*P	P	06 25 55.6	0.0
	comp=Z,3.3nm,0.8s						
STKA	Stephens Creek	37.20	158	*e*P	P	06 25 55.6	0.0
STKA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BJT	Baijiatuau	38.42	348	P	P	06 26 06.0	+0.3
BJT				pmax	pmax		
	comp=Z,28nm,0.7s						
LZH	Lanzhou	39.28	331	*e*P	P	06 26 12.8	-0.3
LZH				pP	pP	06 26 34.8	-2.4
LZH				sP	sP	06 26 45.1	-4.1
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
SHL	Shillong	40.16	308	P	P	06 26 20.5	-0.2
SHL				pmax	pmax		
	comp=Z,14nm,0.4s						
HHC	Hu-ho-hao-te	40.38	343	*e*P	P	06 26 24.7	+2.5
HHC				pP	pP	06 26 47.4	+1.1
HHC				sP	sP	06 26 59.0	+0.7
HHC				S	S	06 32 26.2	+3.6
HHC				sS	sS	06 33 05.8	+1.5
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,32nm,6.0s						
HHC				LR	LR		
	comp=Z,59nm,18.1s						
HHC				LR	LR		
	comp=Z,110nm,16.4s						
HHC				LR	LR		
	comp=Z,54nm,16.4s						
ARMA	Armidale	40.77	145	*e*P	P	06 26 26.6	+1.1
	comp=Z,8.0nm,0.7s						
USRK	Ussuriysk Ar.	41.84	6	P	P	06 26 34.2	+0.4
	comp=Z,6.5nm,0.7s,baz=193,slow=7.0,SNR=12						
MDJ	Mudanjiang	42.04	4	P	P	06 26 33.3	-2.2
MDJ				pP	pP	06 26 55.9	-3.9
MDJ				sP	sP	06 27 07.1	-4.7
MDJ				PP	PP	06 28 14.9	0.0
MDJ				S	S	06 32 51.9	+5.1
MDJ				sS	sS	06 33 31.3	+2.6
MDJ				pmax	pmax		
	comp=Z,19nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,86nm,6.8s						
MDJ				LR	LR		
	comp=Z,290nm,15.1s						
MDJ				LR	LR		
	comp=Z,210nm,16.7s						
MDJ				LR	LR		
	comp=Z,330nm,17.5s						
H11S3	WAKE ISLAND Hy	42.74	65	T	T	07 13 44.8	
	baz=253,slow=75,SNR=12						
H11S1	WAKE ISLAND Hy	42.76	65	T	T	07 13 45.7	
	baz=253,slow=75,SNR=1.0						
H11S2	WAKE ISLAND Hy	42.76	65	T	T	07 13 55.8	
	baz=253,slow=75,SNR=8.9						
CAN	Canberra	43.29	152	*e*P	P	06 26 47.3	+1.5
	comp=Z,7.3nm,0.8s						
CAN	Canberra	43.29	152	*e*P	P	06 26 47.3	+1.5
CAN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GTA	Gaotai	43.86	330	P	P	06 26 49.9	-0.6
GTA				pP	pP	06 27 13.5	-1.4
GTA				sP	sP	06 27 23.8	-3.0
GTA				ScP	ScP	06 32 16.9	-0.4
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ASAJ	Asahikawa	43.92	17	P	P	06 26 51.5	+0.8
	comp=Z,8.8nm,0.6s,baz=245,slow=18,SNR=7.0						
ASAJ	Asahikawa	43.92	17	*e*P	P	06 26 51.7	+1.0
	comp=Z,18nm,1.0s						
JIRN	Jiri	45.64	307	*e*P	P	06 27 03.9	-1.2
	comp=Z,17nm,0.5s						
GUN	Gumba	46.00	307	*e*P	P	06 27 06.8	-1.1
	comp=Z,33nm,0.8s						
PKI	Pulchoki	46.23	307	*e*P	P	06 27 06.2	-3.5
	comp=Z,58nm,0.3s						
PKIN	Phulchoki	46.24	307	*e*P	P	06 27 06.8	-2.9
	comp=Z,11nm,0.5s						
KKN	Kakani	46.42	307	*e*P	P	06 27 08.8	-2.3
	comp=Z,7.5nm,0.5s						
DMN	Daman	46.49	307	*e*P	P	06 27 09.7	-1.9
	comp=Z,10nm,0.5s						
YSS	Yuzh-Sakhalins

comp=Z,35nm,0.6s
TARG Taragay, Kyrgy 58.29 319 *e*P **P 06 28 39.8 +1.1**
comp=Z,3.9nm,0.7s
MAKZ Makanchi 58.42 326 *e*P **P 06 28 38.9 -0.2**
comp=Z,11nm,1.1s
MAKZ Makanchi 58.42 326 *e*P **P 06 28 38.9 -0.2**
MAKZ pmax pmax
comp=Z,11nm,1.1s
KSH Kashi 58.51 316 P P 06 28 48.4 +8.4
KSH pP pP 06 29 11.0 +5.3
KSH sP sP 06 29 20.1 +2.8
KSH PP PP 06 30 59.2 +8.5
KSH S S 06 36 46.3 +11
KSH sS sS 06 37 23.4 +3.6
KSH Kashi 58.51 316 SS SS 06 40 37.3 +7.3
KSH pmax pmax
comp=Z,170nm,4.9s
KSH LR LR
comp=N,360nm,9.7s
KSH LR LR
comp=E,560nm,8.9s
KSH LR LR
comp=Z,430nm,7.3s
KDJ Kajisay 58.89 319 *e*P **P 06 28 42.5 -0.1**
comp=Z,5.0nm,0.6s
KDJ Kajisay 58.89 319 *e*P **P 06 28 42.5 -0.1**
KDJ pmax pmax
comp=Z,5.0nm,0.6s
YAK Yakutsk 59.44 2 *e*P **P 06 28 44.0 -1.8**
YAK pmax pmax
comp=Z,11nm,0.9s
YAK pmax pmax
comp=N,5.0nm,1.0s
YAK pmax pmax
comp=E,5.0nm,1.0s
MA2 Magadan 60.02 14 *e*P **P 06 28 51.1 +1.4**
comp=E,10nm,0.8s
MA2 Magadan 60.02 14⇑*e*P **P 06 28 51.2 +1.4**
MA2 pmax pmax
comp=Z,17nm,1.7s
SFK Sufi-Kurgan 60.45 315 P **P 06 28 54.8 +1.3**
SFK pmax pmax
comp=Z,3.0nm,1.0s
AAK Ala-Archa 60.89 319⇓*e*P **P 06 28 55.7 -0.6**
AAK pmax pmax
comp=Z,5.0nm,1.5s
LBZ Lake Benmore 61.00 145 *e*P **P 06 28 57.3 +0.5**
comp=Z,40nm,1.4s
THZ Tophouse 61.09 142 *e*P **P 06 28 57.7 +0.1**
comp=Z,6.3nm,0.9s
ZALV Zalesovo Beam 61.42 334 P **P 06 28 58.4 -1.1**
comp=Z,5.5nm,1.1s,baz=130,slow=6.0,SNR=9.4
BKZ Black Stump Fm 62.06 137 *e*P **P 06 29 04.6 +0.5**
comp=Z,39nm,1.3s
MNAS Manas 62.15 318 P **P 06 29 05.8 +1.0**
MNAS pmax pmax
comp=Z,3.0nm,1.0s
KURBB Kurchatov Arra 62.46 328 P **P 06 29 05.2 -1.3**
comp=Z,7.5nm,0.6s,baz=131,slow=6.3,SNR=79
KURK Kurchatov 62.47 328 *e*P **P 06 29 05.6 -1.0**
comp=Z,13nm,0.7s
KURK Kurchatov 62.47 328⇑*e*P **P 06 29 05.5 -1.0**
KURK pmax pmax
comp=Z,12nm,0.6s
SEY Seymchan 63.34 13⇑*e*P **P 06 29 13.4 +1.4**
DZET Dzherino 63.36 313 P **P 06 29 13.0 +0.2**
DZET pmax pmax
comp=Z,9.0nm,0.7s
KK31 Karatay Array 63.74 318 *e*P **P 06 29 16.1 +0.9**
KK31 Karatay Array 63.74 318 *e*P **P 06 29 16.1 +0.9**
KKAR Karatay Array 63.74 318 *e*P **P 06 29 16.1 +0.9**
KKAR Karatay Array 63.74 318 *e*P **P 06 29 16.1 +0.9**
OTUK Ortayu 64.76 323 P **P 06 29 24.3 +2.6**
OTUK pmax pmax
comp=Z,2.0nm,0.8s
BRVK Borovoye 68.11 327⇑*e*P **P 06 29 43.7 +0.8**
BRVK pmax pmax
comp=Z,4.0nm,1.2s
TIXI Tiksi 69.06 1⇑*e*P **P 06 29 47.9 -0.5**
TIXI pmax pmax
comp=Z,17nm,2.5s
CASY Casey 69.55 187 *e*P **P 06 29 52.5 +1.1**
comp=Z,11nm,0.8s
BILL Bilibino 70.87 15 *e*P **P 06 30 00.2 +0.6**
BILL *e* 06 32 37.9
BILL *e*PPP PPP 06 34 23.7
BILL pmax pmax
comp=Z,1.0nm,1.0s
NRIK Noril'sk 71.48 346 P **P 06 30 02.9 -0.4**
comp=Z,4.6nm,0.5s,baz=160,slow=5.5,SNR=6.8
ABKAR Akbulak array 72.74 321 *e*P **P 06 30 10.4 -0.7**
MIR Mirnyy 72.85 193⇓*i*P **P 06 30 13.0 +1.6**
MIR pmax pmax
comp=Z,63nm,1.0s
ARU Arti 75.66 328 *e*P **P 06 30 28.8 +0.8**
comp=Z,4.0nm,0.6s
ARU Arti 75.66 328*d i*P **P 06 30 28.4 +0.4**
ARU *PP **pP** 06 30 52.0 -2.8
ARU S **S** 06 40 02.9 +2.1
ARU pmax pmax
comp=Z,11nm,1.7s
FALS False Pass 76.76 34 *e*P **P 06 30 35.6 +1.5**
comp=Z,162nm,1.4s
OPO Ambohidratompo 80.36 251 P **P 06 30 54.7 -0.3**
comp=Z,18nm,0.8s,baz=77,slow=6.1,SNR=17
ABPO Ambohimpanom 80.37 250 *e*P **P 06 30 54.4 -0.7**
comp=Z,16nm,0.7s
ABPO Ambohimpanom 80.37 250 P **P 06 30 54.3 -0.7**
ABPO pmax pmax
comp=Z,16nm,0.7s
RAYN Ar Rayn 80.44 293 *e*P **P 06 30 54.3 -0.9**
comp=Z,6.6nm,0.8s
RAYN Ar Rayn 80.44 293 *e*P **P 06 30 54.3 -0.9**
RAYN pmax pmax
comp=Z,7.0nm,0.8s
VNDA Vanda 82.30 173 P **P 06 31 04.3 +0.5**
comp=Z,3.3nm,0.7s,baz=317,slow=6.5,SNR=33
VNDA Vanda 82.30 173 *e*P **P 06 31 04.3 +0.5**
comp=Z,12nm,1.4s
VNDA Vanda 82.30 173 *e*P **P 06 31 04.3 +0.5**
VNDA pmax pmax
comp=Z,13nm,1.4s
MAW Mawson 82.42 200 P **P 06 31 05.4 +0.9**
comp=Z,8.1nm,1.0s,baz=75,slow=5.8,SNR=8.6
MAW Mawson 82.42 200 *e*P **P 06 31 05.4 +0.9**
comp=Z,3.0nm,1.1s
MAW Mawson 82.42 200 *e*P **P 06 31 05.4 +0.9**
MAW pmax pmax
comp=Z,3.0nm,1.1s
ZEI Tsey 82.62 313 *e*P **P 06 31 05.1 -1.4**
ZEI pmax pmax
comp=Z,5.0nm,0.4s
KIV Kislovodsk 83.57 314 *e*P **P 06 31 12.3 +1.1**
KIV pmax pmax
comp=Z,3.0nm,0.8s
IM3 Indian Mountai 83.68 24 *e*P **P 06 31 12.0 +0.9**
SUA Susitna One 84.50 29 *e*P **P 06 31 16.7 +1.1**
comp=Z,11nm,0.9s
MLY Manley 84.81 25 *e*P **P 06 31 17.8 +0.8**
comp=Z,2.7nm,1.0s
RC01 Rabbit Creek A 84.95 29 *e*P **P 06 31 18.2 +0.5**
comp=Z,10nm,1.0s
COLD Coldfoot 85.23 23 *e*P **P 06 31 21.0 +2.1**
comp=Z,2.6nm,0.9s
PMR Palmer 85.28 29 *e*P **P 06 31 19.7 +0.5**
comp=Z,13nm,1.4s
PMR Palmer 85.28 29 *e*P **P 06 31 19.7 +0.5**
PMR pmax pmax
comp=Z,13nm,1.4s
TOLK Toolik Lake Re 85.58 21 *e*P **P 06 31 22.7 +2.0**
comp=Z,4.1nm,1.0s
SML Sawmill 85.67 28 *e*P **P 06 31 22.8 +1.5**
comp=Z,17nm,1.3s
SML Sawmill 85.67 28 *e*P **P 06 31 22.8 +1.5**
SML pmax pmax
comp=Z,17nm,1.3s
COLA College 86.03 25⇓*e*P **P 06 31 21.9 -1.0**
COLA pmax pmax
comp=Z,2.0nm,1.4s
VORD Divnogorie 86.09 321 *e*P **P 06 31 22.6 -0.9**
VORD pmax pmax
comp=Z,20nm,0.8s
VSR Storozhevoye 86.18 321 *e*P **P 06 31 23.0 -0.9**
VSR pmax pmax
comp=Z,10.0nm,0.8s
ILAR Eielson Array 86.44 25 P **P 06 31 23.9 -1.1**
comp=Z,0.2nm,0.5s,baz=255,slow=5.7,SNR=5.6
OBN Obninsk 87.73 325 *e*P **P 06 31 34.6 +3.3**
comp=Z,31nm,0.4s
OBN Obninsk 87.73 325 *e*P **P 06 31 29.1 -2.2**
OBN *e* 06 34 59.3
OBN *e*PPP PPP 06 36 53.5
OBN pmax pmax
comp=Z,6.0nm,0.8s
ASF Jabal al Asfar 88.06 302 P **P 06 31 33.7 +0.1**
comp=Z,6.9nm,0.7s,baz=74,slow=2.3,SNR=12
KMBO Kilima Mbogo 88.97 269 P **P 06 31 38.4 0.0**
comp=Z,7.1nm,0.9s,baz=58,slow=7.8,SNR=12
KMBO Kilima Mbogo 88.97 269 *e*P **P 06 31 38.7 +0.3**
comp=Z,13nm,1.1s
KMBO Kilima Mbogo 88.97 269 *e*P **P 06 31 38.7 +0.3**
KMBO pmax pmax
comp=Z,13nm,1.1s
MMAI Mount Meron Ar 89.29 303 P **P 06 31 39.1 -0.2**
comp=Z,1.7nm,0.3s,baz=69,slow=7.9,SNR=7.4
BR131 Keskin Array S 90.36 310 *e*P **P 06 31 47.5 +3.3**
BRTR Keskin Array B 90.36 310 P **P 06 31 42.8 -1.5**
comp=Z,2.1nm,0.8s,baz=126,slow=5.3,SNR=8.2
SYO Syowa Base 91.09 201⇑*e*P **P 06 31 46.2 -0.6**
ARCES ARCESS Array B 91.39 340 P **P 06 31 46.9 -1.4**
comp=Z,1.6nm,0.8s,baz=80,slow=5.0,SNR=4.7
ARCES ARCESS Array B 91.39 340 *e*P **P 06 31 47.6 -0.6**
ARCES ARCESS Array B 91.39 340 *e*P **P 06 31 47.6 -0.6**
QSPA South Pole Qui 92.42 180 *e*P **P 06 31 52.5 -0.7**
comp=Z,4.4nm,0.7s
AKASG Malin Array Be 92.48 321 P **P 06 31 51.3 -2.3**
comp=Z,1.8nm,0.9s,baz=67,slow=5.3,SNR=4.8
FIA1 FINESS Array S 92.63 332 *e*P **P 06 31 52.5 -1.6**
FINES FINESS Array B 92.64 332 P **P 06 31 52.4 -1.7**
comp=Z,1.5nm,0.8s,baz=50,slow=3.0,SNR=5.9
BUR04 Bucovina Ar. S 95.53 318 *e*P **P 06 32 07.3 -0.5**
BUR08 Bucovina Ar. S 95.54 318 *e*P **P 06 32 07.8 -0.1**
YKA Yellowknife Ar 100.83 24 PKiKP **PKiKP 06 36 57.3 +1.0**
comp=Z,0.1nm,0.4s,baz=308,slow=1.8,SNR=5.7
YKA PKKPbc **PKKPbc 06 48 42.6 -3.7**
comp=Z,0.2nm,0.6s,baz=117,slow=3.0,SNR=6.1
CLL Collm 102.29 324 *e*PP PP 06 36 47.0 -4.1
CLL *e*SKKSac SKKSac 06 43 49.0 +2.1
CLL *e*pPS 06 45 34.0
NVAR Mina Array Bea 108.13 48 PKKP **PKKPab 06 48 36.7 -0.5**
comp=Z,0.5nm,0.6s,baz=108,slow=5.5,SNR=5.1
PDAR Pinedale Array 112.64 41 PKKPab PKKPab 06 48 15.6 -1.7
comp=Z,0.8nm,0.6s,baz=104,slow=6.3,SNR=7.4
SMCO Snowmass 116.00 44 *e*PKPdf **PKPdf 06 37 22.2 -3.8**
ECSD EROS Data Cent 120.10 35 *e*PKPdf **PKPdf 06 37 33.2 0.0**
TORD Torodi Ar. Bea 122.75 287 PKP **PKPdf 06 37 38.5 -0.5**
comp=Z,2.6nm,0.7s,baz=53,slow=2.0,SNR=15
DBIC Dimbokro 130.27 281 SKPbc **SKPab 06 41 05.5 -1.7**
comp=Z,3.1nm,0.7s,baz=64,slow=6.2,SNR=4.0
LCO Las Campanas 149.14 150 *e*PKPbc **PKPbc 06 38 31.9 +0.3**
LCO Las Campanas 149.14 150 *e*PKP2 **PKPbc 06 38 31.9 +0.3**
GO02 Mina Guanaco 152.84 147 *e*PKPbc **PKPbc 06 38 41.7 +1.3**
CPUP Villa Florida 156.08 172 PKPab **PKPab 06 39 05.9 +1.1**
comp=Z,2.2nm,0.7s,baz=178,slow=5.4,SNR=6.3
LPAZ La Paz 160.37 135 PKP **PKPdf 06 38 44.0 +0.5**
comp=Z,1.5nm,0.9s,baz=84,slow=2.8,SNR=6.4
LPAZ La Paz 160.37 135 PKIKP **PKPdf 06 38 44.0 +0.5**
SIV San Ignacio 164.82 152 PKP **PKPdf 06 38 47.8 +0.7**
comp=Z,1.2nm,0.7s,baz=269,slow=1.5,SNR=6.8
SIV PKPab **PKPab 06 39 44.2 +1.0**
comp=Z,1.0nm,0.7s,baz=95,slow=7.8,SNR=6.2

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*ISCJB **01** 06:27:22.5±0.6, 36°.10N±0°.03×28°.53E±0°.02, h5km±4km, Error ellipse: s-maj=4.7km s-min=3.1km az=179.2*
*NIC **01** 06:27:22.9±0.4, 36°.32N×28°.40E, h25km, ML3.2*
*DDA **01** 06:27:22.8, 36°.13N×28°.48E, h7km, Ml3.7*
*ATH **01** 06:27:23.6, 36°.13N×28°.47E, h23km±1km, ML3.0/7, Error ellipse: s-maj=2.2km s-min=0.9km az=2.0*
*ISK **01** 06:27:23.4, 36°.17N×28°.47E, h8km, ML3.5/17*
*CSEM **01** 06:27:23.1±0.2, 36°.12N×28°.53E, h5km, ML3.2, Error ellipse: s-maj=4.0km s-min=2.8km az=170.0*
*THE **01** 06:27:23.4, 36°.14N×28°.49E, h0km, ML2.9/6, Error ellipse: s-maj=1.7km s-min=0.5km az=2.0*
ISC 01 06:27:23.5±1.0, 36°.11N±0°.02×28°.52E±0°.02, h8km±8km, n115, σ1$00/158, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.33**	**288**	PG	**Pg**	**06 27 30.0**	**-0.1**
ARG	**Arkhangelos**	**0.33**	**288**	P	**Pg**	**06 27 29.0**	**-1.1**
ARG				S	**Sb**	**06 27 36.8**	**-0.4**
ARG				AML	AML	06 27 38.5	
	comp=N,7842μm,0.3s						
ARG				AML	AML	06 27 38.6	
	comp=E,10572μm,0.3s						
ARG	**Arkhangelos**	**0.33**	**288**	P	**Pg**	**06 27 29.5**	**-0.6**
	baz=63						
ARG				S	**Sg**	**06 27 33.8**	**-0.7**
ARG	**Arkhangelos**	**0.33**	**288**	P	**Pg**	**06 27 29.7**	**-0.4**
ARG				S	**Sg**	**06 27 35.3**	**+0.8**
ARG	**Arkhangelos**	**0.33**	**288**	P	**Pg**	**06 27 29.7**	**-0.4**
ARG	**Arkhangelos**	**0.33**	**288**	*e*Pg	**Pg**	**06 27 30.0**	**-0.1**
ARG				S	**Sg**	**06 27 35.3**	**+0.8**
MRSB	**Marmaris-Mugla**	**0.65**	**337**	PG	**Pg**	**06 27 35.2**	**-1.0**
MRSB	**Marmaris-Mugla**	**0.65**	**337**	*e*Pg	**Pg**	**06 27 35.2**	**-1.0**
FETY	**Fethiye**	**0.69**	**41**	PG	**Pg**	**06 27 35.9**	**-1.0**
FETY	**Fethiye**	**0.69**	**41**	P	**Pg**	**06 27 34.7**	**-2.2**
FETY	**Fethiye**	**0.69**	**41**	*e*Pg	**Pg**	**06 27 35.9**	**-1.0**
FETY				S	**Sg**	**06 27 46.4**	**+0.5**
DALY	**Dalyan (Mu¨la**	**0.71**	**9**	PG	**Pg**	**06 27 36.2**	**-1.0**
DALY				SG	**Sg**	**06 27 46.3**	**-0.2**
DALY	**Dalyan (Mu¨la**	**0.71**	**9**	*i* P	**Pg**	**06 27 35.9**	**-1.4**
DALY				*i* S	**Sb**	**06 27 47.7**	**-0.4**
DALY	**Dalyan (Mu¨la**	**0.71**	**9**	P	**Pg**	**06 27 35.9**	**-1.4**
DALY	**Dalyan (Mu¨la**	**0.71**	**9**	*e*Pg	**Pg**	**06 27 36.2**	**-1.0**
DALY				*e*Sg	**Sg**	**06 27 46.3**	**-0.2**
DALY				S	**Sb**	**06 27 47.7**	**-0.4**
TURN	**Turunc**	**0.76**	**5**	PG	**Pg**	**06 27 36.6**	**-1.6**
TURN	**Turunc**	**0.76**	**5**	*i* P	**Pg**	**06 27 36.3**	**-1.9**
TURN				*i* S	**Sb**	**06 27 49.0**	**-0.5**
TURN	**Turunc**	**0.76**	**5**	P	**Pg**	**06 27 36.3**	**-1.9**
TURN	**Turunc**	**0.76**	**5**	*e*Pg	**Pg**	**06 27 36.6**	**-1.6**
TURN				S	**Sb**	**06 27 49.0**	**-0.5**
KSL	**Kastellorizon**	**0.86**	**87**	P	**Pg**	**06 27 40.6**	**+0.5**
KSL				S	**Sn**	**06 27 54.5**	**-0.2**
KSL				AML	AML	06 27 56.5	
	comp=E,1491μm,1.0s						
KSL				AML	AML	06 27 57.7	
	comp=N,1431μm,0.7s						
KSL	**Kastellorizon**	**0.86**	**87**	P	**Pb**	**06 27 40.9**	**+0.1**
KSL				S	**Sn**	**06 27 55.1**	**+0.4**
KSL	**Kastellorizon**	**0.86**	**87**	P	**Pb**	**06 27 40.8**	**0.0**
KSL				S	**Sn**	**06 27 54.1**	**-0.6**
AKAS	**Kas**	**0.89**	**82**	PG	**Pg**	**06 27 40.5**	**-0.1**
AKAS	**Kas**	**0.89**	**82**	*i* P	**Pg**	**06 27 40.6**	**-0.1**
AKAS				*i* S	**Sn**	**06 27 55.1**	**-0.5**
AKAS	**Kas**	**0.89**	**82**	*e*Pg	**Pg**	**06 27 40.5**	**-0.1**
AKAS				S	**Sn**	**06 27 55.1**	**-0.5**
YER	**Yerkesik**	**1.04**	**350**	PG	**Pg**	**06 27 43.1**	**-0.4**
YER	**Yerkesik**	**1.04**	**350**	*e*Pg	**Pg**	**06 27 43.1**	**-0.4**
NISR	**Nisiros**	**1.23**	**294**	P	**Pg**	**06 27 47.5**	**+0.4**
NISR				S	**Sb**	**06 28 01.7**	**-1.2**
NISR				AML	AML	06 28 08.4	
	comp=E,1588μm,0.3s						
NISR				AML	AML	06 28 12.4	
	comp=N,1382μm,0.4s						
NISR	**Nisiros**	**1.23**	**294**	P	**Pn**	**06 27 46.7**	**-0.2**
NISR				S	**Sb**	**06 28 02.0**	**-0.9**
KARP	**Karpathos**	**1.24**	**243**	PN	**Pg**	**06 27 47.6**	**+0.3**
KARP	**Karpathos**	**1.24**	**243**	P	**Pn**	**06 27 45.8**	**-1.3**
KARP				S	**Sn**	**06 28 03.8**	**-0.3**
KARP				AML	AML	06 28 08.5	
	comp=E,1182μm,0.4s						
KARP				AML	AML	06 28 11.2	
	comp=N,962μm,0.7s						
KARP	**Karpathos**	**1.24**	**243**	P	**Pn**	**06 27 46.2**	**-1.0**
KARP				S	**Sn**	**06 28 04.0**	**-0.1**
KARP	**Karpathos**	**1.24**	**243**	P	**Pn**	**06 27 46.2**	**-1.0**
KARP	**Karpathos**	**1.24**	**243**	*e*Pn	**Pg**	**06 27 47.6**	**+0.3**
KARP				S	**Sn**	**06 28 03.6**	**-0.5**
BDRM	**Kayabasi**	**1.28**	**318**	*i* P	**Pn**	**06 27 47.2**	**-0.6**
BDRM				*i* S	**Sn**	**06 28 06.0**	**+0.8**
BDRM	**Kayabasi**	**1.28**	**318**	P	**Pn**	**06 27 47.2**	**-0.6**
BDRM				S	**Sn**	**06 28 05.9**	**+0.8**
ELL	**Elmali**	**1.29**	**60**	PN	**Pg**	**06 27 49.2**	**+0.9**
ELL	**Elmali**	**1.29**	**60**	*e*Pn	**Pg**	**06 27 49.2**	**+0.9**
GLHS	**Glhisar (BURDU**	**1.31**	**37**	PN	**Pn**	**06 27 47.8**	**-0.4**
GLHS	**Glhisar (BURDU**	**1.31**	**37**	*e*Pn	**Pn**	**06 27 47.8**	**-0.4**
BODT	**Bodrum**	**1.36**	**315**	PN	**Pn**	**06 27 47.6**	**-1.2**
BODT				SN	**Sn**	**06 28 06.4**	**-0.6**
BODT	**Bodrum**	**1.36**	**315**	*e*Pn	**Pn**	**06 27 47.6**	**-1.2**
BODT				*e*Sn	**Sn**	**06 28 06.4**	**-0.6**
TAVA	**DENIZLI_Tavas**	**1.39**	**13**	*i* P	**Pn**	**06 27 48.6**	**-0.7**
TAVA				*i* S	**Sg**	**06 28 10.7**	**+2.6**
TAVA	**DENIZLI_Tavas**	**1.39**	**13**	P	**Pn**	**06 27 48.6**	**-0.7**
TAVA				S	**Sg**	**06 28 10.7**	**+2.6**
GOLH	**Golhisar**	**1.40**	**37**	*i* P	**Pn**	**06 27 48.1**	**-1.4**
GOLH				*i* S	**Sg**	**06 28 11.5**	**+2.9**
GOLH	**Golhisar**	**1.40**	**37**	P	**Pn**	**06 27 48.1**	**-1.4**
GOLH				S	**Sg**	**06 28 11.5**	**+2.9**
YKAV	**Yalikavak-Bodr**	**1.42**	**316**	PN	**Pn**	**06 27 48.9**	**-0.7**
YKAV	**Yalikavak-Bodr**	**1.42**	**316**	*e*Pn	**Pn**	**06 27 48.9**	**-0.7**
AYDN	**Tasoluk**	**1.63**	**342**	*i* P	**Pn**	**06 27 53.0**	**+0.5**
AYDN				*i* S	**Sg**	**06 28 17.1**	**+1.3**
AYDN	**Tasoluk**	**1.63**	**342**	P	**Pn**	**06 27 53.0**	**+0.5**
AYDN				S	**Sg**	**06 28 17.1**	**+1.3**
DNZL	**Cakiroluk**	**1.63**	**15**	*i* P	**Pb**	**06 27 53.3**	**-0.7**
DNZL				*i* S	**Sg**	**06 28 19.3**	**+3.3**
DNZL	**Cakiroluk**	**1.63**	**15**	P	**Pb**	**06 27 53.3**	**-0.7**
DENT	**Denizli**	**1.69**	**14**	PN	**Pn**	**06 27 54.0**	**+0.6**
DENT	**Denizli**	**1.69**	**14**	*e*Pn	**Pn**	**06 27 54.0**	**+0.6**
KORT	**Korkueli**	**1.72**	**59**	PN	**Pb**	**06 27 55.4**	**-0.1**
KORT	**Korkueli**	**1.72**	**59**	*e*Pn	**Pb**	**06 27 55.4**	**-0.1**
GCAM	**G?zelcaml?**	**1.89**	**327**	PN	**Pn**	**06 27 56.3**	**+0.3**
GCAM	**G?zelcaml?**	**1.89**	**327**	*i* P	**Pn**	**06 27 55.4**	**-0.6**
GCAM	**G?zelcaml?**	**1.89**	**327**	P	**Pn**	**06 27 55.4**	**-0.6**
GCAM	**G?zelcaml?**	**1.89**	**327**	*e*Pn	**Pn**	**06 27 56.3**	**+0.3**
AYDB	**Zeytinkoy-Aydi**	**1.90**	**345**	PN	**Pn**	**06 27 56.9**	**+0.6**
AYDB	**Zeytinkoy-Aydi**	**1.90**	**345**	*e*Pn	**Pn**	**06 27 56.9**	**+0.6**
ZKR	**Zakros**	**2.12**	**243**	P	**Pb**	**06 28 01.6**	**-0.6**
ZKR	**Zakros**	**2.12**	**243**	P	**Pn**	**06 28 00.6**	**+1.3**
ANAF	**Anafi Island**	**2.23**	**277**	P	**Pn**	**06 28 00.0**	**-0.8**
ANAF				S	**Sn**	**06 28 28.3**	**-0.2**
ANAF				AML	AML	06 28 34.1	
	comp=N,980μm,0.4s						
ANAF				AML	AML	06 28 41.5	
	comp=E,983μm,0.6s						
ANAF	**Anafi Island**	**2.23**	**277**	P	**Pn**	**06 28 00.6**	**-0.2**
ANAF				S	**Sn**	**06 28 28.8**	**+0.2**
ANAF	**Anafi Island**	**2.23**	**277**	P	**Pn**	**06 28 00.6**	**-0.2**
ANAF				S	**Sn**	**06 28 28.2**	**-0.4**
KULA	**Kula-Manisa**	**2.40**	**3**	PN	**Pn**	**06 28 03.6**	**+0.4**
KULA	**Kula-Manisa**	**2.40**	**3**	*e*Pn	**Pn**	**06 28 03.6**	**+0.4**
SUTC	**Sutluce-Ispart**	**2.41**	**55**	PN	**Pn**	**06 28 04.7**	**+1.3**
SUTC	**Sutluce-Ispart**	**2.41**	**55**	*e*Pn	**Pn**	**06 28 04.7**	**+1.3**
SANT	**Santorini**	**2.49**	**277**	PN	**Pn**	**06 28 04.5**	**+0.2**
SANT	**Santorini**	**2.49**	**277**	P	**Pn**	**06 28 05.1**	**+0.8**
SANT	**Santorini**	**2.49**	**277**	*e*Pn	**Pn**	**06 28 04.5**	**+0.2**
SANT	**Santorini**	**2.49**	**277**	P	**Pn**	**06 28 04.8**	**+0.5**
THR6	**Thira Island,**	**2.53**	**276**	P	**Pn**	**06 28 06.5**	**+1.5**
THR6	**Thira Island,**	**2.53**	**276**	P	**Pn**	**06 28 05.8**	**+0.9**
THR3	**Thira Island,**	**2.54**	**278**	P	**Pn**	**06 28 06.1**	**+1.1**
THR3	**Thira Island,**	**2.54**	**278**	P	**Pn**	**06 28 05.6**	**+0.6**
BLCB	**Balcova**	**2.56**	**333**	PN	**Pn**	**06 28 05.3**	**+0.1**
BLCB	**Balcova**	**2.56**	**333**	*e*Pn	**Pn**	**06 28 05.3**	**+0.1**
THR5	**Thira Island,**	**2.58**	**278**	P	**Pn**	**06 28 05.6**	**+0.1**
THR5	**Thira Island,**	**2.58**	**278**	P	**Pn**	**06 28 05.7**	**+0.1**
APE	**Apeiranthos**	**2.59**	**293**	PN	**Pn**	**06 28 05.4**	**-0.3**
APE	**Apeiranthos**	**2.59**	**293**	P	**Pn**	**06 28 04.0**	**-1.8**
APE	**Apeiranthos**	**2.59**	**293**	P	**Pn**	**06 28 05.0**	**-0.7**
APE	**Apeiranthos**	**2.59**	**293**	P	**Pn**	**06 28 05.0**	**-0.7**
APE	**Apeiranthos**	**2.59**	**293**	*e*Pn	**Pn**	**06 28 05.4**	**-0.3**
LAST	**Lasithi**	**2.65**	**250**	P	**Pn**	**06 28 07.2**	**+0.6**
LAST				S	**Sn**	**06 28 38.9**	**-0.1**
LAST				AML	AML	06 28 49.8	
	comp=N,129μm,0.6s						
LAST				AML	AML	06 28 56.0	
	comp=E,149μm,0.6s						
LAST	**Lasithi**	**2.65**	**250**	P	**Pn**	**06 28 07.0**	**+0.4**
LAST				S	**Sn**	**06 28 39.8**	**+0.8**
LAST	**Lasithi**	**2.65**	**250**	P	**Pn**	**06 28 07.0**	**+0.4**
LAST				S	**Sn**	**06 28 38.7**	**-0.3**
URLA	**Izmir**	**2.72**	**326**	PN	**Pn**	**06 28 06.4**	**-1.1**
URLA	**Izmir**	**2.72**	**326**	*e*Pn	**Pn**	**06 28 06.4**	**-1.1**
CHOS	**Chios island**	**3.00**	**320**	PN	**Pn**	**06 28 11.2**	**-0.2**
CHOS	**Chios island**	**3.00**	**320**	P	**Pn**	**06 28 11.1**	**-0.4**
CHOS				S	**Sn**	**06 28 47.7**	**0.0**
CHOS				AML	AML	06 28 52.4	
	comp=E,176μm,0.3s						
CHOS				AML	AML	06 28 53.4	
	comp=N,134μm,1.0s						
CHOS	**Chios island**	**3.00**	**320**	P	**Pn**	**06 28 11.3**	**-0.2**
CHOS				S	**Sn**	**06 28 47.3**	**-0.3**
CHOS	**Chios island**	**3.00**	**320**	P	**Pn**	**06 28 11.3**	**-0.2**
CHOS				S	**Sn**	**06 28 47.3**	**-0.3**
AKMC	**Akamas**	**3.29**	**108**	P	**Pn**	**06 28 13.3**	**-2.1**
	baz=293						
AKMC	**Akamas**	**3.29**	**108**	P	**Pn**	**06 28 13.3**	**-2.1**
PPCY	**Paphos**	**3.35**	**110**	P	**Pn**	**06 28 14.8**	**-1.4**
	baz=295						
PPCY	**Paphos**	**3.35**	**110**	P	**Pn**	**06 28 14.8**	**-1.4**
ALFC	**Alefka**	**3.46**	**105**	P	**Pn**	**06 28 16.6**	**-1.1**
	baz=290						
ALFC				S	**Sn**	**06 28 58.4**	**-0.5**
ALFC	**Alefka**	**3.46**	**105**	P	**Pn**	**06 28 16.6**	**-1.1**
ALFC				S	**Sn**	**06 28 58.4**	**-0.5**
PRK	**Paraskevi**	**3.60**	**331**	P	**Pn**	**06 28 20.6**	**+1.0**
PRK	**Paraskevi**	**3.60**	**331**	P	**Pn**	**06 28 20.4**	**+0.8**
SZAC	**Souni**	**3.81**	**110**	P	**Pn**	**06 28 21.1**	**-1.5**
	baz=294						
SZAC	**Souni**	**3.81**	**110**	P	**Pn**	**06 28 21.1**	**-1.5**
KYTH	**Kithira**	**4.43**	**274**	P	**Pn**	**06 28 31.9**	**+0.9**
KYTH	**Kithira**	**4.43**	**274**	P	**Pn**	**06 28 31.9**	**+0.9**
VLI	**Veliai**	**4.54**	**279**	P	**Pn**	**06 28 34.8**	**+2.2**
VLI	**Veliai**	**4.54**	**279**	P	**Pn**	**06 28 34.0**	**+1.5**
LIA	**Limnos Island**	**4.61**	**326**	P	**Pn**	**06 28 34.2**	**+0.9**
LIA	**Limnos Island**	**4.61**	**326**	P	**Pn**	**06 28 34.3**	**+0.9**
SMTH	**Samothraki Isl**	**4.94**	**333**	P	**Pn**	**06 28 38.7**	**+0.6**
SMTH	**Samothraki Isl**	**4.94**	**333**	P	**Pn**	**06 28 38.9**	**+0.8**

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*IDC **01** 06:37:08.6±1.8, 0°.69S×133°.35E, h0km, mb3.1/2, mb1 3.3/4, mb1mx3.2/53, mbtmp3.2/4, ML3.2/2, Error ellipse: s-maj=36.3km s-min=25.9km az=57.0*
*ISCJB **01** 06:37:12.3±1.1, 0°.73S±0°.09×133°.27E±0°.06, h29km, mb3.3/2, Error ellipse: s-maj=13.6km s-min=7.7km az=19.1*
*DJA **01** 06:37:13.0±0.6, 1°.S±6°×13°.3E±°, h10km, M3.5/4, MLv3.5/4*
ISC 01 06:37:13.5±1.3, 0°.8S±0°.1×133°.28E±0°.07, h29km, n6, σ0$55/9, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**1.17**	**130**	P	**Pn**	**06 37 34.2**	**+0.3**
RKPI				S	**Sb**	**06 37 49.8**	**0.0**
SIJI	**Sorong**	**2.02**	**267**	Pn	**Pn**	**06 37 45.4**	**-0.2**
	17nm,0.3s,baz=307,slow=23,SNR=61						

s-maj=3.5km s-min=2.9km az=71.0, Moment Tensor Solution. s25 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.13; $M_{\theta\theta}$-1.84; $M_{\phi\phi}$ 1.97; $M_{r\theta}$-3.16; $M_{\theta\phi}$-0.86; $M_{\phi r}$1.58; Best double couple: $M_0$4.10000×10^{17} NP1:ϕ_s121.00000°, δ89.00000°, λ-121.00000°. NP2:ϕ_s30.00000°, δ31.00000°, λ-1.00000°. Principal axes: T 3.9200, Plg37.0000°, Azm238.0000°; N 0.3500, Plg31.0000°, Azm121.0000°; P -4.2800, Plg38.0000°, Azm3.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s295.00000°, δ5.00000°, λ-90.00000°. NP2:ϕ_s115.00000°, δ85.00000°, λ-90.00000°. Principal axes: T Plg40.0000°, Azm205.0000°; N Plg0.0000°, Azm0.0000°; P Plg50.0000°, Azm25.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.

NEIC Felt [III] at Manokwari andRansiki and [II] at Sorong.

GCMT ***01*** *06:56:20.2±0.1, 0°.74S×133°.18E, h33km, MW5.8/135, Moment Tensor Solution. s128,c241; s135,c349; Duration: 2s0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.37±.05; $M_{\theta\theta}$-2.80±.04; $M_{\phi\phi}$2.43±.05; $M_{r\theta}$-5.61±.16; $M_{\theta\phi}$-1.36±.04; $M_{\phi r}$2.54±.09; Best double couple: $M_0$6.82100×10^{17} NP1:ϕ_s296.00000°, δ88.00000°, λ115.00000°. NP2:ϕ_s31.00000°, δ25.00000°, λ5.00000°. Principal axes: T 6.5750, Plg42.0000°, Azm230.0000°; N 0.4920, Plg25.0000°, Azm115.0000°; P -7.0680, Plg38.0000°, Azm4.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

MOS ***01*** *06:56:20.2±0.9, 0°.58S×133°.25E, h33km, mb5.8/71, MS5.3/20 Error ellipse: s-maj=6.7km s-min=4.5km az=114.1*

ISCJB ***01*** *06:56:20.4±0.4, 0°.74S±0°.02×133°.27E±0°.02, h39km±3km, mb5.6/282, MS5.5/224, Error ellipse: s-maj=3.4km s-min=2.8km az=17.9*

DJA ***01*** *06:56:23.1±0.4, 1°.5S±2°×13°.3E±°, h38km±3km, M6.0/104, mb5.9/104, mB6.2/77, MLv6.2/14, Mw(mB)6.0/77, Mwp5.8/6*

ISC 01 06:56:21.9±0.2, 0.76S±0°.03×133°.27E±0°.03, h39km±2km, h40km:pP-P, n1067, σ1°.49/1057, mb5.7/299, MS5.5/226, 18C-52D, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**1.17**	**129**	P	**Pn**	**06 56 41.6**	**-0.3**
SIJI	**Sorong**	**2.01**	**267**	Pn	**Pn**	**06 56 52.6**	**-0.8**
	3μm,0.3s,baz=330,slow=24,SNR=1399						
SIJI				Sn	**Sn**	**06 57 18.6**	**+1.4**
	2μm,0.3s,baz=46,slow=17,SNR=5.7						
FAKI	**Fak Fak**	**2.38**	**205**	P	**Pn**	**06 56 58.4**	**0.0**
FAKI	**Fak Fak**	**2.38**	**205**	*e*Pn	**Pn**	**06 56 58.6**	**+0.2**
BAKI	**Biak**	**2.87**	**99**	P	**Pn**	**06 57 04.8**	**-0.4**
KMPI	**Kaimana, Papua**	**2.92**	**171**	P	**Pn**	**06 57 05.3**	**-0.5**
SRPI	**Serui, Papua**	**3.17**	**110**	P	**Pn**	**06 57 10.0**	**+0.7**
BNDI	**Bandanaira**	**5.03**	**222**	P	**Pn**	**06 57 35.4**	**+0.5**
	16μm,0.7s,162μm56μm86nm						
MSAI	**Masohi**	**5.04**	**239**	P	**Pn**	**06 57 35.7**	**+0.6**
LBMI	**Labuha**	**5.77**	**271**	P	**Pn**	**06 57 45.9**	**+0.8**
	6μm,1.0s,50μm18nm						
AAI	**Ambon**	**5.85**	**240**	P	**Pn**	**06 57 46.5**	**+0.4**
	6μm,0.6s,56μm32μm23nm						
AAI	**Ambon**	**5.85**	**240**	P	**Pn**	**06 57 47.1**	**+1.0**
AAI				pmax	pmax		
	comp=Z,6μm,0.6s						
TNTI	**Ternate**	**6.10**	**284**	*e*Pn	**Pn**	**06 57 51.0**	**+1.4**
TNTI				*e*Sn	**Sn**	**06 58 58.9**	**+0.8**
NLAI	**Namlea**	**6.64**	**248**	P	**Pn**	**06 57 57.4**	**+0.4**
	comp=Z,5μm,0.6s,comp=Z,41μmcomp=Z,15nm						
GENI	**Genyem**	**7.13**	**105**	P	**Pn**	**06 58 05.4**	**+1.6**
SANI	**Sanana**	**7.39**	**260**	P	**Pn**	**06 58 06.7**	**-0.7**
SAUI	**Saumlaki**	**7.44**	**195**	P	**Pn**	**06 58 09.1**	**+1.1**
	comp=Z,3μm,1.0s,comp=Z,27μmcomp=Z,19nm						
SAUI	**Saumlaki**	**7.44**	**195**	*e*Pn	**Pn**	**06 58 07.0**	**-1.0**
SAUI				*e*Sn	**Sn**	**06 59 28.1**	**-3.1**
JAY	**Jayapura**	**7.63**	**103**	Pn	**Pn**	**06 58 12.6**	**+1.9**
	comp=Z,2.1nm,0.3s,baz=206,slow=11,SNR=5.6						
JAY				LR	LR	07 01 25.9	
	comp=Z,40μm,19.2s,baz=294,slow=40						
JAY	**Jayapura**	**7.63**	**103**	P	**Pn**	**06 58 11.6**	**+0.9**
DAV	**Davao City (W)**	**10.93**	**316**	Pn	**Pn**	**06 58 59.3**	**+3.5**
	comp=Z,64nm,0.3s,baz=106,slow=3.5,SNR=16						
DAV				LR	LR	07 03 33.9	
	comp=Z,13μm,18.8s,baz=160,slow=40						
DAV	**Davao City (W)**	**10.93**	**316**	*e*P	**Pn**	**06 58 55.0**	**-0.8**
DAV	**Davao City (W)**	**10.93**	**316**	*e*Pn	Pn	06 59 00.3	+4.5
DAV	**Davao City (W)**	**10.93**	**316**	P	Pn	06 59 01.2	+5.4
	SNR=14						
DAV	**Davao City (W)**	**10.93**	**316**	Pn	Pn	06 59 01.2	+5.4
	SNR=14						
KDI	**Kendari**	**11.11**	**253**	P	**Pn**	**06 58 58.5**	**+0.2**
	comp=Z,630nm,1.0s,comp=Z,7μm						
BUKP	**Musuan**	**11.86**	**317**	*e*P	**Pn**	**06 59 11.7**	**+3.1**
MTN	**Manton Dam**	**12.19**	**190**	*e*Pn	**Pn**	**06 59 10.9**	**-2.3**
MTN				*e*Sn	**Sn**	**07 01 23.2**	**-4.6**
BUTP	**Butuan**	**12.31**	**322**	*e*P	**Pn**	**06 59 18.3**	**+3.5**
SOEI	**Soe**	**12.65**	**225**	P	**Pn**	**06 59 19.6**	**0.0**
	comp=Z,2μm,1.6s,comp=Z,34μm						
SOEI	**Soe**	**12.65**	**225**	*e*Pn	**Pn**	**06 59 19.2**	**-0.4**
BATI	**Baumata**	**13.39**	**225**	Pn	**Pn**	**06 59 29.1**	**-0.4**
	comp=Z,206nm,0.3s,baz=112,slow=1.1,SNR=179						
BATI				LR	LR	07 06 15.0	
	comp=Z,15μm,18.1s,baz=72,slow=44						
BATI	**Baumata**	**13.39**	**225**	P	**Pn**	**06 59 29.2**	**-0.4**
	comp=Z,2μm,1.2s,comp=Z,18μm						
PCI	**Palu**	**13.43**	**269**	P	**Pn**	**06 59 30.4**	**+0.2**
	comp=Z,927nm,0.9s,comp=Z,10μm						
PCI	**Palu**	**13.43**	**269**	P	**Pn**	**06 59 29.3**	**-0.9**
PCI				pmax	pmax		
	comp=Z,927nm,0.9s						
MMRI	**Maumere**	**13.49**	**234**	P	**Pn**	**06 59 31.0**	**+0.1**
	comp=Z,1μm,1.2s,comp=Z,16μm						
MMRI	**Maumere**	**13.49**	**234**	*e*Pn	**Pn**	**06 59 31.6**	**+0.7**
TTSI	**Tana Toraja**	**13.63**	**260**	P	**Pn**	**06 59 33.1**	**+0.2**
	comp=Z,585nm,1.0s,comp=Z,6μm						
MSLP	**Maasin**	**13.68**	**322**	*e*P	**P**	**06 59 38.2**	**-3.3**
SPSI	**Sidrap Palu**	**13.86**	**257**	P	**Pn**	**06 59 37.2**	**+1.3**
	comp=Z,267nm,1.3s,comp=Z,6μm						
EDFI	**Ende, Flores**	**14.00**	**235**	P	**Pn**	**06 59 37.7**	**-0.3**
	comp=Z,314nm,1.5s,comp=Z,7μm						
KAPI	**Kappang**	**14.14**	**252**	*e*Pn	**Pn**	**06 59 40.3**	**+0.4**
	comp=Z,534nm,0.9s						
MANU	**Manus Island**	**14.15**	**95**	*e*Pn	**P**	**06 59 44.5**	**-2.2**
PLP	**Palo**	**14.43**	**325**	||*i*P	**Pn**	**06 59 44.2**	**+0.5**
GUIM	**Jordan**	**15.52**	**317**	*e*P	**Pn**	**06 59 59.6**	**+1.5**
WSI	**Waingapu**	**15.65**	**235**	P	**Pn**	**07 00 01.2**	**+1.4**
	comp=Z,2μm,0.9s						
SGKI	**Sangatta, Kali**	**15.67**	**271**	P	**Pn**	**07 00 01.5**	**+1.4**
	comp=Z,487nm,1.0s,comp=Z,4μm						
CNP	**Catarman**	**15.71**	**327**	*e*P	**Pn**	**06 59 59.1**	**-1.5**
BASI	**Baing, Sumba**	**15.73**	**233**	P	**Pn**	**07 00 01.1**	**+0.2**
	comp=Z,1μm,1.0s,comp=Z,10μm						
MYLDM	**Lahad Datu**	**15.89**	**292**	*e*Pn	**P**	**07 00 05.6**	**-0.5**
	comp=Z,2μm,1.3s						
SMKI	**Samarinda**	**16.06**	**271**	P	**Pn**	**07 00 06.4**	**+1.3**
	comp=Z,2μm,1.0s,comp=Z,17μm						
RCP	**Roxas**	**16.10**	**320**	*e*P	**Pn**	**07 00 06.9**	**+1.3**
PMG	**Port Moresby**	**16.27**	**122**	Pn	**P**	**07 00 09.9**	**-0.5**
	comp=Z,0.8nm,0.3s,baz=322,slow=8.0,SNR=20						
PMG	**Port Moresby**	**16.27**	**122**	*e*P	**P**	**07 00 09.8**	**-0.5**
	comp=Z,364nm,1.0s						
PMG	**Port Moresby**	**16.27**	**122**	*i*P	**P**	**07 00 09.3**	**-1.1**
PMG				pmax	pmax		
	comp=Z,1μm,1.7s						
COEN	**Coen**	**16.37**	**144**	*e*Pn	**Pn**	**07 00 08.2**	**-0.8**
	comp=Z,175nm,1.1s						
BKB	**Balikpapan**	**16.38**	**268**	P	**P**	**07 00 11.1**	**-0.5**
	comp=Z,794nm,1.0s,comp=Z,13μm						
WBSI	**Waikabubak, Su**	**16.39**	**237**	P	**Pn**	**07 00 06.4**	**-2.9**
	comp=Z,740nm,0.9s,comp=Z,8μm						
PVCP	**Virac**	**16.88**	**328**	*e*P	**Pn**	**07 00 14.4**	**-1.1**
OTRP	**Odiongan**	**17.17**	**320**	*e*P	**P**	**07 00 22.9**	**+2.7**
KBKI	**Kotabaru**	**17.28**	**261**	P	**P**	**07 00 21.4**	**-0.1**
	comp=Z,125nm,1.1s,comp=Z,4μm						
PLAI	**Plampang**	**17.39**	**242**	P	**Pn**	**07 00 21.0**	**-0.7**
	comp=Z,2μm,1.4s,comp=Z,23μm						
AUQP	**San Andres**	**17.50**	**323**	*e*P	P	07 00 37.7	+14
SJMP	**San Jose**	**17.83**	**318**	*e*P	**P**	**07 00 28.8**	**+1.1**
BATP	**Bataraza**	**18.10**	**302**	*e*P	**Pn**	**07 00 27.1**	**-3.4**
BOAC	**Boac**	**18.11**	**322**	*e*P	**P**	**07 00 33.4**	**+2.7**
TWSI	**Taliwang, Sumb**	**18.14**	**244**	P	**Pn**	**07 00 30.7**	**-0.4**
	comp=Z,404nm,1.0s,comp=Z,10μm						
BUSP	**Coron**	**18.15**	**315**	*e*P	**P**	**07 00 34.0**	**+2.9**
ENPP	**El Nido**	**18.19**	**311**	*e*P	**Pn**	**07 00 31.3**	**-0.2**
GUMO	**Guam**	**18.31**	**38**	P	**P**	**07 00 30.7**	**-2.2**
	comp=Z,2.5nm,0.3s,baz=14,slow=23,SNR=2.5						
GUMO				LR	LR	07 07 00.5	
	comp=Z,13μm,18.7s,baz=216,slow=35						
KKM	**Kota Kinabalu**	**18.32**	**292**	*e*Pn	**Pn**	**07 00 34.4**	**+1.1**
	comp=Z,638nm,1.2s						
MTKI	**Muara Teweh, K**	**18.37**	**269**	P	**Pn**	**07 00 35.0**	**+1.1**
	comp=Z,1μm,1.1s						
FITZ	**Fitzroy Crossi**	**18.79**	**203**	*e*P	**P**	**07 00 34.7**	**-3.4**
	comp=Z,230nm,0.9s						
WRAB	**Tennant Creek**	**19.09**	**177**	*e*P	**P**	**07 00 39.8**	**-1.6**
	comp=Z,468nm,1.1s						
WRAB	**Tennant Creek**	**19.09**	**177**	*c*e*P	**P**	**07 00 41.5**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,403nm,1.7s						
WRA	**Warramunga Arr**	**19.09**	**177**	P	**P**	**07 00 38.9**	**-2.6**
	comp=Z,5.1nm,0.3s,baz=355,slow=11,SNR=86						
WRA				S	Sn	07 03 59.3	-16
	comp=Z,2.3nm,0.3s,baz=357,slow=17,SNR=4.5						
WRA				LR	LR	07 09 56.2	
	comp=Z,3μm,18.2s,baz=0.0,slow=43						
WB2	**Warramunga Arr**	**19.09**	**177**	*e*P	**P**	**07 00 40.1**	**-1.4**
TGY	**Tagaytay City**	**19.16**	**321**	P	**Pn**	**07 00 43.3**	**-0.1**
	comp=Z,69nm,0.3s,baz=124,slow=5.7,SNR=11						
RABL	**Rabaul**	**19.18**	**101**	*e*P	**Pn**	**07 00 44.9**	**+1.3**
	comp=Z,1μm,1.4s						
LUBP	**Lubang**	**19.34**	**319**	*e*P	**Pn**	**07 00 44.9**	**-0.6**
SRBI	**Singaraja**	**19.41**	**247**	P	**Pn**	**07 00 46.3**	**0.0**
	comp=Z,703nm,1.7s,comp=Z,10μm						
DNP	**Denpasar**	**19.63**	**246**	P	**Pn**	**07 00 50.2**	**+1.2**
IGBI	**Denpasar**	**19.74**	**246**	P	**Pn**	**07 00 50.4**	**+0.1**
	comp=Z,752nm,1.1s,comp=Z,7μm						
BALP	**Baler**	**20.06**	**325**	*e*P	Pn	07 00 53.0	-0.9
JAGI	**Jajag, Banyuwa**	**20.52**	**248**	P	**P**	**07 00 57.8**	**+0.7**
	comp=Z,1μm,1.1s,comp=Z,14μm						
JAGI	**Jajag, Banyuwa**	**20.52**	**248**	*e*P	**P**	**07 00 56.5**	**-0.7**
	comp=Z,982nm,1.0s						
JAGI				LR	LR		
	comp=Z,3μm,19.0s						
BLJI	**Banyuglugur**	**20.80**	**250**	P	**P**	**07 01 01.4**	**+1.3**
	comp=Z,951nm,1.1s,comp=Z,27μm						
SCZP	**Santa Cruz**	**21.07**	**322**	*e*P	**P**	**07 01 03.8**	**+0.8**
GMJI	**Gumukmas**	**21.11**	**249**	P	**P**	**07 01 04.4**	**+0.9**
	comp=Z,551nm,1.1s,comp=Z,12μm						
BWJI	**Bawean**	**21.18**	**256**	P	**P**	**07 01 06.2**	**+1.9**
	comp=Z,479nm,1.1s,comp=Z,6μm						
SBUM	**Sibu**	**21.29**	**279**	*e*P	**P**	**07 01 07.0**	**+1.7**
	comp=Z,609nm,1.2s						
BOLP	**Bolinao**	**21.54**	**323**	*e*P	**P**	**07 01 08.2**	**+0.3**
GRJI	**Gresik**	**21.62**	**253**	P	**P**	**07 01 10.9**	**+2.0**
	comp=Z,451nm,0.9s,comp=Z,4μm						
PBKI	**Pangkalan Bun**	**21.68**	**265**	P	**P**	**07 01 10.4**	**+0.9**
	comp=Z,2μm,1.0s,comp=Z,14μm						
STKI	**Sintang**	**21.81**	**272**	P	**P**	**07 01 12.3**	**+1.3**
	comp=Z,328nm,1.3s						
APYP	**Conner**	**21.97**	**328**	*e*P	**P**	**07 01 13.0**	**+0.5**
TBJI	**Tambak Boyo**	**22.20**	**254**	P	**P**	**07 01 16.9**	**+1.8**
	comp=Z,638nm,1.1s,comp=Z,7μm						
PWJI	**Pagerwojo**	**22.57**	**251**	P	**P**	**07 01 18.5**	**-0.7**
	comp=Z,460nm,1.3s,comp=Z,11μm						
NGJI	**Ngawi**	**22.71**	**253**	P	**P**	**07 01 22.4**	**+1.8**
	comp=Z,669nm,1.1s,comp=Z,15μm						
AS31	**Alice Springs**	**22.78**	**178**	*e*P	**P**	**07 01 20.8**	**-0.5**
	comp=Z,104nm,0.9s						
AS31				LR	LR		
	comp=Z,400nm,21.0s						
AS01	**Alice Springs**	**22.78**	**178**	*e*P	**P**	**07 01 20.5**	**-0.8**
ASAR	**Alice Springs**	**22.78**	**178**	P	**P**	**07 01 19.7**	**-1.6**
	comp=Z,79nm,0.7s,baz=6.5,slow=12,SNR=234						
ASAR				S	**S**	**07 05 27.1**	**-0.6**
	comp=Z,43nm,0.9s,baz=0.0,slow=17,SNR=4.2						
ASAR				LR	LR	07 11 21.0	
	comp=Z,28μm,18.4s,baz=1.0,slow=40						
ASAR	**Alice Springs**	**22.78**	**178**	P	**P**	**07 01 19.7**	**-1.6**
ASAR				S	**S**	**07 05 27.1**	**-0.6**
ASAR				pmax	pmax		
	comp=Z,81nm,0.8s						
ASAR				smax	smax		
	comp=N,43nm,0.9s						
ASAR				MLR	MLR		
	comp=Z,28μm,18.4s						
CTAO	**Charters Tower**	**23.03**	**147**	*e*P	**P**	**07 01 24.5**	**+0.6**
	comp=Z,521nm,1.5s						
CTAO				LR	LR		
	comp=Z,30μm,19.0s						
CTAO	**Charters Tower**	**23.03**	**147**	*e*P	**P**	**07 01 24.5**	**+0.6**
CTAO				pmax	pmax		
	comp=Z,520nm,1.5s						
KSM	**Kuching**	**23.07**	**276**	*e*P	**P**	**07 01 25.4**	**+1.1**
	comp=Z,251nm,0.9s						
PCJI	**Pacitan**	**23.22**	**251**	P	**P**	**07 01 25.6**	**-0.2**
	comp=Z,549nm,1.1s,comp=Z,7μm						
WOJI	**Wonogiri, Jawa**	**23.35**	**252**	P	**P**	**07 01 26.7**	**-0.4**
SMRI	**Semarang**	**23.61**	**254**	P	**P**	**07 01 31.8**	**+2.2**
	comp=Z,785nm,0.9s,comp=Z,16μm						
SMRI	**Semarang**	**23.61**	**254**	*e*P	**P**	**07 01 31.0**	**+1.4**
	comp=Z,3μm,1.7s						
UGM	**Wagagma**	**23.75**	**252**	P	**P**	**07 01 29.9**	**-1.1**
	comp=Z,843nm,1.5s,comp=Z,11μm						
UGM	**Wanagama**	**23.75**	**252**	*e*P	**P**	**07 01 31.3**	**+0.3**
	comp=Z,1μm,1.2s						
UGM				LR	LR		
	comp=Z,5μm,20.0s						
MBWA	**Marble Bar**	**24.20**	**212**	*e*P	**P**	**07 01 35.3**	**+0.3**
	comp=Z,738nm,1.1s						
MBWA				LR	LR		
	comp=Z,6μm,20.0s						
MBWA	**Marble Bar**	**24.20**	**212**	P	**P**	**07 01 36.3**	**+1.3**
	SNR=40						
MBWA	**Marble Bar**	**24.20**	**212**	P	**P**	**07 01 36.3**	**+1.3**
	SNR=40						
KPJI	**Karang Pucung**	**25.13**	**254**	P	**P**	**07 01 43.5**	**-0.1**
	comp=Z,836nm,1.2s,comp=Z,10μm						
JCJI	**Jatiwangi**	**25.58**	**257**	P	**P**	**07 01 48.9**	**+1.2**
	comp=Z,400nm,0.9s,comp=Z,9μm						
CMJI	**Cimerak**	**25.70**	**254**	P	**P**	**07 01 47.7**	**-1.1**
	comp=Z,551nm,1.1s,comp=Z,6μm						
PATS	**Pohnpei**	**26.10**	**73**	PFAKE		07 02 00.0	+7.6
PATS				LR	LR		
	comp=Z,18μm,20.0s						
CISI	**Cisompet, Garu**	**26.26**	**254**	P	**P**	**07 01 53.3**	**-0.6**
	comp=Z,1μm,1.0s,comp=Z,10μm						
CISI	**Cisompet, Garu**	**26.26**	**254**	*e*P	**P**	**07 01 53.8**	**-0.1**
	comp=Z,1μm,0.9s						
CISI				LR	LR		
	comp=Z,5μm,22.0s						
TWG	**Pinlang**	**26.28**	**334**	*e*P	**P**	**07 01 53.4**	**-0.4**
	comp=Z,220nm,1.1s						
TWG				LR	LR		
	comp=Z,14μm,20.0s						
LEM	**Lembang**	**26.29**	**256**	P	**P**	**07 01 55.0**	**+0.8**
	comp=Z,208nm,0.9s,baz=98,slow=11,SNR=12						
LEM				LR	LR	07 13 51.8	
	comp=Z,7μm,21.6s,baz=94,slow=40						
LEM	**Lembang**	**26.29**	**256**	P	**P**	**07 01 55.4**	**+1.2**
	comp=Z,5μm,1.0s,comp=Z,57μm						
YULB	**Yu-li**	**26.68**	**335**	*e*P	**P**	**07 01 59.1**	**+1.5**
	comp=Z,66nm,1.0s						
YULB				LR	LR		
	comp=Z,4μm,18.0s						
TPUB	**Ta-pu**	**26.89**	**334**	*e*P	**P**	**07 02 00.5**	**+1.1**
	comp=Z,128nm,1.2s						
TPUB				LR	LR		
	comp=Z,5μm,20.0s						
YOJ	**Yonaguni jima**	**26.97**	**339**	PFAKE		07 02 10.0	+10
YOJ				LR	LR		
	comp=Z,7μm,19.0s						
DBJI	**Dramaga**	**27.07**	**257**	P	**P**	**07 02 01.3**	**+0.1**
	comp=Z,376nm,1.1s						
TNG	**Tangerang**	**27.10**	**258**	P	**P**	**07 02 02.9**	**+1.5**
	comp=Z,1μm,0.5s						
TNG				P	pP	07 02 03.2	-9.0
	comp=Z,776nm,0.5s						
PPBI	**Pangkal Pinang**	**27.16**	**267**	P	**P**	**07 02 03.3**	**+1.3**
	comp=Z,0.8nm,1.1s,comp=Z,54nm						
SSLB	**Suanglung**	**27.18**	**335**	PFAKE		07 02 10.0	+8.0
SSLB				LR	LR		
	comp=Z,4μm,21.0s						
NACB	**Ninganchiao**	**27.25**	**336**	*e*P	**P**	**07 02 01.7**	**-0.9**
	comp=Z,367nm,1.7s						
NACB				LR	LR		
	comp=Z,5μm,20.0s						
SBJI	**Serang**	**27.60**	**258**	P	**P**	**07 02 06.6**	**+0.7**
	comp=Z,322nm,1.0s						
YHNB	**Yeheng**	**27.78**	**336**	*e*P	**P**	**07 02 08.5**	**+1.0**
	comp=Z,185nm,1.3s						
YHNB				LR	LR		
	comp=Z,8μm,22.0s						
JOW	**Kunigami**	**27.85**	**350**	LR	LR	07 10 52.5	
	comp=Z,24μm,21.9s,baz=158,slow=32						
HNR	**Honiara**	**27.91**	**109**	*e*P	**P**	**07 02 09.0**	**+0.4**
HNR	**Honiara**	**27.91**	**109**	P	**P**	**07 02 09.8**	**+1.2**
	comp=Z,104nm,0.7s,baz=154,slow=2.8,SNR=8.6						
HNR				LR	LR	07 13 57.4	
	comp=Z,5μm,20.1s,baz=274,slow=38						
HNR	**Honiara**	**27.91**	**109**	*e*P	**P**	**07 02 09.9**	**+1.3**
	comp=Z,144nm,0.8s						
HNR	**Honiara**	**27.91**	**109**	*e*P	**P**	**07 02 09.9**	**+1.3**
HNR				pmax	pmax		
	comp=Z,140nm,0.8s						
TATO	**Taipei**	**28.01**	**337**	PFAKE		07 02 20.0	+11
TATO				LR	LR		
	comp=Z,6μm,21.0s						
CGJI	**Cibinong**	**28.12**	**257**	P	**P**	**07 02 08.8**	**-1.7**
	comp=Z,215nm,1.1s,comp=Z,2μm						
BLSI	**Bandar Lampung**	**28.35**	**260**	P	**P**	**07 02 13.6**	**+1.0**
	comp=Z,160nm,0.4s						
PMBI	**Palembang**	**28.56**	**265**	P	**P**	**07 02 16.4**	**+1.9**
	comp=Z,414nm,0.8s,comp=Z,14μm						
KLI	**Kotabumi**	**28.66**	**261**	P	**P**	**07 02 16.7**	**+1.3**
	comp=Z,215nm,1.5s,comp=Z,6μm						
KLI	**Kotabumi**	**28.66**	**261**	P	**P**	**07 02 17.2**	**+1.8**
KLI				pmax	pmax		
	comp=Z,220nm,1.2s						
TPRI	**Tanjung Pinang**	**28.79**	**273**	P	**P**	**07 02 17.7**	**+1.2**
JCJ	**Chichijima**	**28.99**	**17**	LR	LR	07 10 59.6	
	comp=Z,7μm,21.7s,baz=196,slow=31						
KASI	**Kota Agung**	**29.11**	**260**	P	**P**	**07 02 19.3**	**0.0**
	comp=Z,118nm,1.1s						
QZH	**Quanzhou**	**29.24**	**332**	||*i*P	**P**	**07 02 20.1**	**-0.2**
QZH				S	**S**	**07 07 10.3**	**-0.3**
QZH				pmax	pmax		
	comp=Z,57nm,1.3s						
QZH				pmax	pmax		
	comp=Z,780nm,7.1s						
QZH				LR	LR		
	comp=Z,2μm,14.3s						
QZH				LR	LR		
	comp=Z,720nm,14.5s						
QZH				LR	LR		
	comp=Z,3μm,16.7s						
MDSI	**Maura Dua**	**29.29**	**262**	P	**P**	**07 02 21.7**	**+0.7**
LWLI	**Liwa**	**29.47**	**261**	P	**P**	**07 02 24.4**	**+1.7**
MYKOM	**Kota Tinggi**	**29.53**	**275**	*e*P	**P**	**07 02 22.2**	**-0.8**
	comp=Z,90nm,1.1s						
MYKOM				LR	LR		
	comp=Z,2μm,20.0s						
EIDS	**Eidsvold**	**29.91**	**146**	*e*P	**P**	**07 02 26.6**	**+0.4**
	comp=Z,45nm,0.9s						
EIDS				LR	LR		
	comp=Z,19μm,20.0s						
QIZ	**Qiongzhong**	**30.27**	**312**	P	**P**	**07 02 29.5**	**0.0**
QIZ				sP	**pP**	**07 02 39.9**	**-0.5**
QIZ				S	**S**	**07 07 27.1**	**+0.2**
QIZ				pmax	pmax		
	comp=Z,250nm,2.4s						
QIZ				LR	LR		
	comp=Z,3μm,13.7s						
QIZ				LR	LR		
	comp=Z,2μm,21.6s						
QIZ				LR	LR		
	comp=Z,5μm,23.5s						
QIZ	**Qiongzhong**	**30.27**	**312**	*e*P	**P**	**07 02 29.4**	**0.0**
	comp=Z,86nm,1.0s						
QIZ				LR	LR		
	comp=Z,2μm,22.0s						
MNAI	**Manna**	**30.49**	**263**	P	**P**	**07 02 33.4**	**+1.8**
MNAI	**Manna**	**30.49**	**263**	*e*P	**P**	**07 02 31.0**	**-0.6**
	comp=Z,529nm,1.0s						
MNAI				LR	LR		
	comp=Z,7μm,22.0s						
RGRI	**Rengat**	**30.94**	**271**	P	P	07 02 41.2	+5.7
MASI	**Maura Aman, Be**	**31.10**	**265**	P	**P**	**07 02 39.1**	**+2.1**
UBPT	**Khong Chiam**	**31.77**	**301**	P	**P**	**07 02 42.3**	**-0.5**
	comp=Z,70nm,1.3s						
KRJI	**Kerinci**	**31.83**	**267**	P	**P**	**07 02 45.3**	**+1.8**
STKA	**Stephens Creek**	**31.93**	**167**	P	**P**	**07 02 42.8**	**-1.3**
	comp=Z,31nm,0.8s,baz=345,slow=8.7,SNR=34						
STKA				LR	LR	07 17 07.7	
	comp=Z,24μm,19.4s,baz=339,slow=39						
STKA	**Stephens Creek**	**31.93**	**167**	*e*P	**P**	**07 02 42.2**	**-1.8**
	comp=Z,36nm,1.5s						
STKA	**Stephens Creek**	**31.93**	**167**	P	**P**	**07 02 42.8**	**-1.3**
STKA				pmax	pmax		
	comp=Z,31nm,0.8s						
STKA				MLR	MLR		
	comp=Z,24μm,19.5s						
BBOO	**Buckleboo**	**31.99**	**176**	*e*P	**P**	**07 02 43.7**	**-0.8**
	comp=Z,112nm,1.0s						
BBOO				LR	LR		
	comp=Z,16μm,22.0s						
BKNI	**Bangkinang**	**32.25**

comp=Z,124nm,0.9s
NWAO LR LR
NWAO Narrogin (SRO) 35.38 204 *e*P **P 07 03 14.2 +0.2**
NWAO pmax pmax
comp=Z,120nm,1.0s
SURT Suratani 35.67 286 P **P 07 03 17.8 +1.0**
comp=Z,35nm,0.8s
KCSI Kotacane, Aceh 35.73 277 P **P 07 03 17.1 -0.3**
GSI Gunungsitoli 35.75 273 P **P 07 03 17.9 +0.4**
GSI Gunungsitoli 35.75 273 *e*P **P 07 03 16.6 -0.9**
comp=Z,145nm,1.0s
GSI LR LR
comp=Z,4μm,22.0s
WHN Wuhan 35.96 332 ⇓P **P 07 03 19.8 +0.8**
WHN S **S 07 08 58.0 +3.0**
WHN pmax pmax
comp=Z,390nm,1.6s
WHN LR LR
comp=Z,2μm,8.7s
WHN LR LR
comp=Z,3μm,11.6s
WHN LR LR
comp=Z,8μm,24.2s
INU Inuyama 36.09 5 *e*P **P 07 03 19.3 -0.8**
comp=Z,92nm,1.1s
INU LR LR
comp=Z,10μm,18.0s
TPTI 36.30 277 P **P 07 03 22.9 +0.8**
comp=Z,103nm,1.2s
LHMI Lhok Sumawe 36.76 280 P **P 07 03 28.5 +2.4**
comp=Z,406nm,1.0s
LHMI Lhok Sumawe 36.76 280 *e*P **P 07 03 26.0 -0.1**
comp=Z,411nm,1.0s
PHIT Phitsanulok 36.96 300 P **P 07 03 29.0 +1.3**
comp=Z,37nm,1.2s,comp=Z,580nm
SRDT SRDT 36.99 295 P **P 07 03 28.9 +0.9**
comp=Z,62nm,1.3s,comp=Z,3μm
MLSI Meulaboh, Aceh 37.17 278 P **P 07 03 30.8 +1.2**
GYA Guiyang 37.29 318 ⇓*i*P **P 07 03 30.9 +0.3**
GYA pP pP 07 03 38.7 -2.9
GYA PP **PnPn 07 05 00.2 +3.3**
GYA PcP **PcP 07 05 52.0 +2.4**
GYA S **S 07 09 19.5 +3.8**
GYA SS **SnSn 07 11 51.6 -2.2**
GYA pmax pmax
comp=Z,30nm,1.0s
GYA pmax pmax
comp=Z,150nm,5.8s
GYA LR LR
comp=Z,2μm,17.4s
GYA LR LR
comp=Z,2μm,17.8s
GYA LR LR
comp=Z,3μm,18.2s
TJN Taejon 37.35 352*d i*P **P 07 03 30.2 -0.6**
CAN Canberra 37.38 159 *e*P **P 07 03 30.9 -0.2**
comp=Z,72nm,1.2s
CAN LR LR
comp=Z,35μm,18.0s
CAN Canberra 37.38 159 *e*P **P 07 03 30.9 -0.2**
CAN pmax pmax
comp=Z,72nm,1.2s
MJAR Matsushiro Arr 37.40 7 P **P 07 03 28.6 -2.6**
comp=Z,7.4nm,0.8s,baz=198,slow=9.0,SNR=15
MJAR LR LR 07 15 59.0
comp=Z,10μm,20.7s,baz=175,slow=32
MAJO Matsushiro 37.40 7 *e*P **P 07 03 29.4 -1.8**
comp=Z,41nm,1.0s
MAJO LR LR
comp=Z,11μm,21.0s
MAJO Matsushiro 37.40 7*d i*P **P 07 03 28.5 -2.7**
MAJO pmax pmax
comp=Z,15nm,0.9s
MAT Matsushiro 37.40 7 P **P 07 03 29.0 -2.2**
MAT S **S 07 09 15.6 -1.2**
MJB9 Matsu-Tunnel 37.40 7 *e*P **P 07 03 29.5 -1.7**
comp=Z,44nm,1.1s
MJB9 LR LR
comp=Z,11μm,20.0s
COCO West Island 37.88 251 PFAKE 07 03 50.0 +14
COCO LR LR
comp=Z,3μm,21.0s
ENH Enshi 38.28 326 *e*P **P 07 03 39.0 +0.2**
comp=Z,52nm,0.9s
ENH LR LR
comp=Z,2μm,19.0s
KSAR Wonju Array Be 38.34 353 P **P 07 03 38.5 -0.6**
KSAR Wonju Array Be 38.34 353 P **P 07 03 38.5 -0.6**
WAKE Wake Island 38.34 57 PFAKE 07 03 50.0 +11
WAKE LR LR
comp=Z,6μm,19.0s
KSRS Korea Array 38.34 353 P **P 07 03 38.5 -0.6**
comp=Z,2.9nm,0.9s,baz=174,slow=9.9,SNR=15
KSRS LR LR 07 18 52.8
comp=Z,7μm,19.1s,baz=172,slow=36
KS01 Wonju Array Si 38.37 353 *e*P **P 07 03 37.9 -1.5**
BSI Banda Aceh 38.43 280 P **P 07 03 40.0 -0.3**
comp=Z,127nm,1.1s
INCN Inchon 38.55 352 PFAKE 07 03 50.0 +9.1
INCN LR LR
comp=Z,9μm,22.0s
DZM Mont Dzumac 38.62 126 P **P 07 03 42.4 +0.5**
comp=Z,39nm,1.2s,baz=325,slow=11,SNR=4.3
DZM Mont Dzumac 38.62 126 *e*P **P 07 03 42.5 +0.6**
comp=Z,96nm,1.3s
DZM Mont Dzumac 38.62 126 *e*LR LR 07 14 29.8
comp=Z,7μm,23.9s
DZM Mont Dzumac 38.62 126 *e*P **P 07 03 42.9 +1.1**
comp=Z,60nm,1.3s
H11N1 WAKE ISLAND Hy 38.74 56 T T 07 44 48.7
baz=243,slow=75,SNR=2110
CM01 Chiang Mai Arr 38.74 301 *e*P **P 07 03 42.2 -0.6**
H11N2 WAKE ISLAND Hy 38.75 56 T T 07 44 50.4
baz=243,slow=75,SNR=455
H11N3 WAKE ISLAND Hy 38.75 56 T T 07 45 10.0
baz=243,slow=75,SNR=2366
CM31 Chiang Mai Arr 38.77 301 *e*P **P 07 03 44.4 +1.3**
CMAR Chiang Mai Arr 38.77 301 P **P 07 03 43.2 +0.2**
comp=Z,22nm,1.0s,baz=123,slow=6.7,SNR=34
CMAR PcP **PcP 07 05 57.3 +3.1**
comp=Z,12nm,1.0s,baz=128,slow=3.9,SNR=4.3
CMAR ScP **ScP 07 09 41.2 +1.7**
comp=Z,1.0nm,0.3s,baz=116,slow=4.1,SNR=4.5
CMAR Chiang Mai Arr 38.77 301 P **P 07 03 43.3 +0.2**
CMAR 07 05 57.3
CMAR 07 09 41.2
CMAR pmax pmax
comp=Z,23nm,1.0s
CMAR pmax pmax
comp=Z,12nm,1.0s
CMAR pmax pmax
comp=N,1.0nm,0.3s
CHTO Chiang Mai 38.92 302 P **P 07 03 44.3 -0.1**
comp=N,191nm,1.3s,comp=N,4μm
CHTO Chiang Mai 38.92 302 *e*P **P 07 03 44.2 -0.1**
comp=N,57nm,1.0s
CHTO LR LR
comp=Z,2μm,21.0s
CHTO Chiang Mai 38.92 302 P **P 07 03 44.6 +0.2**
SNR=15
CHTO Chiang Mai 38.92 302 P **P 07 03 44.6 +0.2**
SNR=16
CHTO Chiang Mai 38.92 302 *e*P **P 07 03 44.2 -0.1**
CHTO pmax pmax
comp=Z,57nm,1.0s
LHI Lord Howe Isla 39.13 144 PFAKE 07 04 00.0 +14
LHI LR LR
comp=Z,7μm,19.0s
KMI Kunming 39.18 313 P **P 07 03 47.3 +0.7**
KMI pP pP 07 03 55.2 -2.5
KMI sP sP 07 03 57.8 -4.5
KMI PP **PP 07 05 16.7 -0.3**
KMI S **S 07 09 45.4 +0.9**
KMI sS sS 07 10 04.0 +1.2
KMI SS **SS 07 12 34.0 -4.6**
KMI pmax pmax
comp=Z,52nm,1.4s
KMI pmax pmax
comp=Z,540nm,6.1s
KMI LR LR
comp=Z,1μm,24.2s
KMI LR LR
comp=Z,3μm,21.9s
KMI LR LR
comp=Z,4μm,21.9s

CMAI Chiengmai2 39.34 303 P **P 07 03 48.4 +0.4**
comp=Z,341nm,1.9s
TARA Tarawa 39.70 87 PFAKE 07 04 00.0 +9.1
TARA LR LR
comp=Z,8μm,18.0s
TIA Tai'an 39.73 339 P **P 07 03 50.8 0.0**
TIA pP **pP 07 04 00.4 -1.5**
TIA PP **PnPn 07 05 27.7 +1.7**
TIA S **S 07 09 52.5 +0.4**
TIA pmax pmax
comp=Z,19nm,1.4s
TIA pmax pmax
comp=Z,450nm,5.0s
TIA LR LR
comp=Z,1μm,17.6s
TIA LR LR
comp=Z,970nm,19.7s
TIA LR LR
comp=Z,1μm,17.5s
DL2 Dalian 40.90 346 ⇓*i*P **P 07 04 01.1 +0.7**
DL2 S **S 07 10 10.8 +1.5**
DL2 pmax pmax
comp=Z,75nm,1.4s
DL2 pmax pmax
comp=Z,1μm,6.1s
DL2 LR LR
comp=Z,7μm,20.8s
DL2 LR LR
comp=Z,5μm,19.8s
DL2 LR LR
comp=Z,10μm,20.6s
XAN Xi'an 41.48 329 P **P 07 04 05.0 -0.4**
XAN pP pP 07 04 10.3 -6.2
XAN PP **PP 07 05 43.1 +1.3**
XAN PcP **PcP 07 06 04.1 +1.5**
XAN S **S 07 10 17.0 -1.4**
XAN pmax pmax
comp=Z,52nm,1.5s
XAN pmax pmax
comp=Z,690nm,6.5s
XAN LR LR
comp=Z,2μm,18.1s
XAN LR LR
comp=Z,1μm,20.6s
XAN LR LR
comp=Z,2μm,22.1s
CD2 Chengdu 42.17 321 P **P 07 04 10.8 -0.2**
CD2 sP pP 07 04 20.5 -1.7
CD2 PP **PP 07 05 48.9 -0.3**
CD2 S **S 07 10 25.8 -2.8**
CD2 sS sS 07 10 42.1 -4.9
CD2 pmax pmax
comp=Z,130nm,1.3s
CD2 pmax pmax
comp=Z,720nm,8.0s
CD2 LR LR
comp=Z,4μm,17.8s
CD2 LR LR
comp=Z,5μm,16.7s
DGPR DIGLIPUR 42.32 291 *e*P **P 07 04 12.4 -0.1**
TIY Taiyuan 42.85 335 *e*P **P 07 04 16.8 +0.3**
TIY PP **PP 07 05 55.8 -0.7**
TIY S **S 07 10 37.1 -1.4**
TIY sS **sS 07 10 59.0 +2.1**
TIY SS SS 07 13 39.8 -11
TIY pmax pmax
comp=Z,260nm,1.7s
TIY pmax pmax
comp=Z,770nm,6.6s
TIY LR LR
comp=Z,1μm,14.3s
TIY LR LR
comp=Z,2μm,16.3s
TIY LR LR
comp=Z,2μm,17.2s
SNY Shenyang 43.29 349 ⇓P **P 07 04 19.9 +0.1**
SNY S **S 07 10 43.6 -1.0**
SNY pmax pmax
comp=Z,60nm,1.4s
SNY pmax pmax
comp=Z,1μm,6.2s
SNY LR LR
comp=Z,6μm,24.9s
SNY LR LR
comp=Z,3μm,21.4s
SNY LR LR
comp=Z,10μm,24.9s
BJT Baijiatuau 43.49 341 *e*P **P 07 04 21.8 +0.3**
comp=Z,293nm,1.1s
BJT LR LR
comp=Z,5μm,21.0s
BJT Baijiatuau 43.49 341 *e*P **P 07 04 21.8 +0.3**
BJT pmax pmax
comp=Z,293nm,1.1s
BJT MLR MLR
comp=Z,5μm,21.0s
BJI Beijing 43.51 341 P **P 07 04 21.7 +0.1**
BJI PP **PP 07 06 00.9 -2.5**
BJI S **S 07 10 47.7 -0.1**
BJI pmax pmax
comp=Z,300nm,1.3s
BJI pmax pmax
comp=Z,900nm,3.9s
BJI LR LR
comp=Z,4μm,23.2s
BJI LR LR
comp=Z,4μm,19.9s
BJI LR LR
comp=Z,6μm,25.1s
ERM Erimo 43.51 11 PFAKE 07 04 30.0 +8.4
ERM LR LR
comp=Z,6μm,19.0s
ERM Erimo 43.51 11*c e*P **P 07 04 21.7 +0.1**
ERM pmax pmax
comp=Z,22nm,0.9s
TAU Tasmania Unive 43.81 165 PFAKE 07 04 40.0 +16
TAU LR LR
comp=Z,15μm,21.0s
USRK Ussuriysk Ar. 44.78 359 P **P 07 04 31.7 -0.1**
comp=Z,9.2nm,0.8s,baz=176,slow=7.6,SNR=20
USRK LR LR 07 20 25.6
comp=Z,4μm,21.0s,baz=159,slow=32
CN2 Changchun 44.91 352 *e*P **P 07 04 31.9 -0.9**
CN2 *e*sP pP 07 04 42.7 -1.3
CN2 *e*S **S 07 11 09.7 +1.5**
CN2 SS **ScS 07 14 23.7 -3.4**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=Z,4μm,20.0s
CN2 LR LR
comp=Z,3μm,20.0s
CN2 LR LR
comp=Z,4μm,18.0s
MDJ Mudanjiang 45.30 356 P **P 07 04 33.0 -2.9**
MDJ pP pP 07 04 40.8 -6.3
MDJ sP sP 07 04 44.4 -7.3
MDJ PP **PcP 07 06 17.7 +2.5**
MDJ S **S 07 11 09.7 -4.0**
MDJ SS **ScS 07 14 30.6 +1.1**
MDJ pmax pmax
comp=Z,35nm,1.0s
MDJ pmax pmax
comp=Z,950nm,3.0s
MDJ LR LR
comp=Z,3μm,18.3s
MDJ LR LR
comp=Z,2μm,18.3s
MDJ LR LR
comp=Z,4μm,18.3s
MDJ Mudanjiang 45.30 356 *e*P **P 07 04 36.3 +0.4**
comp=Z,55nm,1.1s
MDJ LR LR
comp=Z,4μm,21.0s
ASAJ Asahikawa 45.45 9 P **P 07 04 36.3 -0.8**
comp=Z,18nm,0.8s,baz=104,slow=7.5,SNR=9.1
ASAJ LR LR 07 23 36.0
comp=Z,5μm,19.3s,baz=188,slow=36
ASAJ Asahikawa 45.45 9 *e*P **P 07 04 37.5 +0.4**
comp=Z,252nm,1.9s
TEY Ternei 45.69 3 *e*P **P 07 04 39.0 0.0**
TEY pmax pmax
comp=Z,1μm,4.0s
TEY pmax pmax

comp=Z,34nm,1.0s
LZH Lanzhou 45.76 326 *e*P **P 07 04 40.8 +0.9**
LZH pP pP 07 04 46.0 -5.1
LZH sP sP 07 04 47.6 -8.1
LZH *e*S **S 07 11 21.5 +0.5**
LZH sS sS 07 11 33.8 -5.7
LZH SS **ScS 07 14 36.6 +3.4**
LZH pmax pmax
comp=Z,160nm,1.1s
LZH pmax pmax
comp=Z,2μm,4.3s
LZH LR LR
comp=Z,3μm,15.0s
LZH LR LR
comp=Z,3μm,15.8s
LZH LR LR
comp=Z,4μm,16.9s
IMP Imphal 45.79 307 *e*P **P 07 04 38.8 -1.4**
HHC Hu-ho-hao-te 45.88 337 *e*P **P 07 04 41.2 +0.5**
HHC pP pP 07 04 47.2 -4.7
HHC sP sP 07 04 50.0 -6.5
HHC S **S 07 11 24.4 +1.9**
HHC sS sS 07 11 34.5 -6.6
HHC pmax pmax
comp=Z,26nm,0.9s
HHC pmax pmax
comp=Z,770nm,4.8s
HHC LR LR
comp=Z,1μm,17.0s
HHC LR LR
comp=Z,1μm,18.0s
HHC LR LR
comp=Z,1μm,20.8s
YUK Yuzh-Kuril'sk 45.99 13*d i*P **P 07 04 41.4 0.0**
YUK *i* S **S 07 11 25.0 +1.3**
YUK pmax pmax
comp=Z,516nm,1.1s
YUK pmax pmax
comp=N,297nm,1.3s
YUK pmax pmax
comp=E,516nm,1.2s
BTO Baotou 46.30 335 *e*P **P 07 04 42.6 -1.4**
BTO pmax pmax
comp=E,16nm,1.4s
FUNA Funafuti 46.38 101 *e*P **P 07 04 45.8 +0.9**
comp=E,379nm,1.4s
FUNA LR LR
comp=Z,5μm,19.0s
JORH JORHAT 46.46 309 *e*P **P 07 04 45.4 0.0**
ZIRO ZIRO 47.16 310 *e*P **P 07 04 51.1 0.0**
ZIRO IAmb IAmb 07 04 54.6
comp=Z,86nm,0.8s
TEZP TEZPUR 47.54 308 *e*P **P 07 04 51.8 -2.0**
AGT Agartala 47.57 304 *e*P **P 07 04 54.1 0.0**
KUR Kuril'sk 47.59 14*d i*P **P 07 04 53.4 -0.4**
KUR *i* 07 06 20.8
KUR *e* 07 06 46.0
KUR *i* S **S 07 11 46.9 +0.4**
KUR pmax pmax
comp=Z,250nm,1.6s
KUR pmax pmax
comp=Z,1μm,2.6s
KUR MLR MLR
comp=E,1μm,19.0s
KUR MLR MLR
comp=Z,2μm,19.0s
KUR MLR MLR
comp=N,936nm,18.0s
SHL Shillong 47.78 306 *e*P **P 07 04 55.4 -0.6**
SHL IAmb IAmb 07 04 59.9
comp=Z,46nm,0.8s
GUWA GUWAHATI 48.22 307 *e*P **P 07 04 57.9 -1.2**
GUWA IAmb IAmb 07 05 03.2
comp=Z,336nm,2.1s
YSS Yuzh-Sakhalins 48.24 9 *e*P **P 07 04 58.6 -0.2**
comp=Z,107nm,1.0s
YSS LR LR
comp=Z,4μm,21.0s
YSS Yuzh-Sakhalins 48.24 9*κ e*P **P 07 04 58.3 -0.5**
YSS *e* 07 05 08.8
YSS *e* 07 06 48.0
YSS *e*S **S 07 11 53.2 -2.5**
YSS pmax pmax
comp=Z,30nm,0.9s
YSS pmax pmax
comp=Z,500nm,4.0s
TURI Tura 49.03 305 *e*P **P 07 05 03.5 -1.9**
KLR Kul'dur 49.81 359 P **P 07 05 10.8 -0.1**
comp=Z,0.9nm,0.6s,baz=181,slow=5.3,SNR=28
KLR Kul'dur 49.81 359*d i*P **P 07 05 10.2 -0.7**
LSA Lhasa 50.30 311 P **P 07 05 16.2 +0.7**
LSA pmax pmax
comp=Z,83nm,1.2s
LSA pmax pmax
comp=Z,310nm,10.6s
LSA LR LR
comp=Z,1μm,37.4s
LSA LR LR
comp=Z,2μm,22.5s
LSA Lhasa 50.30 311 *e*P **P 07 05 16.4 +0.9**
comp=Z,85nm,0.9s
LSA LR LR
comp=Z,2μm,22.0s
LSA Lhasa 50.30 311 P **P 07 05 16.2 +0.7**
LSA Lhasa 50.30 311 *e*P **P 07 05 16.4 +0.9**
LSA pmax pmax
comp=Z,85nm,0.9s
LSA MLR MLR
comp=Z,2μm,22.0s
GTA Gaotai 50.36 326 ⇓P **P 07 05 15.8 +0.4**
GTA pP pP 07 05 26.5 -0.2
GTA sP sP 07 05 30.0 -1.3
GTA S **S 07 12 26.2 +0.2**
GTA sS sS 07 12 42.8 -2.0
GTA SS **SS 07 15 57.5 -2.7**
GTA pmax pmax
comp=Z,66nm,1.6s
GTA pmax pmax
comp=Z,750nm,7.2s
GTA LR LR
comp=Z,1μm,18.6s
GTA LR LR
comp=Z,1μm,18.9s
GTA LR LR
comp=Z,2μm,17.9s
OUZ Omahuta 50.82 137 *e*P **P 07 05 20.2 +1.4**
comp=Z,164nm,1.7s
BWNR Bhubaneshwar 50.95 297 *e*P **P 07 05 17.9 -2.1**
HIA Hailar 51.18 349 PFAKE 07 05 30.0 +8.7
HIA LR LR
comp=Z,4μm,20.0s
GTK Tadong 51.19 307 *e*P **P 07 05 21.6 -0.3**
GTK IAmb IAmb 07 05 26.7
comp=Z,133nm,1.2s
GRNR Gornyy 51.41 3 *e*P **P 07 05 22.4 -0.5**
GRNR pmax pmax
comp=Z,70nm,1.2s
CHLP Challavanipeta 52.00 294 *e*P **P 07 05 28.2 +0.4**
CHLP IAmb IAmb 07 05 29.6
comp=Z,83nm,1.2s
CHLP *e*S **S 07 12 47.7 -1.2**
TYV Tymovskoe 52.05 8 *e*P **P 07 05 28.1 +0.5**
TYV *e*S **S 07 12 54.3 +5.7**
TYV pmax pmax
comp=Z,900nm,8.6s
TYV pmax pmax
comp=Z,67nm,1.1s
TYV smax smax
comp=E,1μm,12.9s
BOK Bokaro 52.06 301 *e*P **P 07 05 28.6 +0.3**
BOK IAmb IAmb 07 05 31.6
comp=Z,50nm,1.6s
PALK Pallekele 53.04 280 *e*P **P 07 05 35.5 -0.2**
comp=Z,56nm,1.0s
PALK LR LR
comp=Z,2μm,21.0s
PALK Pallekele 53.04 280 *i* P **P 07 05 36.7 +1.0**
JIRN Jiri 53.28 306 *e*P **P 07 05 37.6 -0.1**
comp=Z,123nm,0.7s
HIZ Hauiti 53.49 140 *e*P **P 07 05 41.9 +3.3**
comp=Z,142nm,1.3s
ULN Ulaanbaatar 53.54 338 *e*P **P 07 05 39.5 +0.6**
comp=Z,255nm,1.6s
ULN LR LR
comp=Z,2μm,19.0s
ULN Ulaanbaatar 53.54 338 P **P 07 05 40.2 +1.2**

	SNR=89					
ULN	**Ulaanbaatar**	**53.54 338**	P	**P**	**07 05 40.2**	**+1.2**
	SNR=89					
ULN	**Ulaanbaatar**	**53.54 338**	*d iP*	**P**	**07 05 39.7**	**+0.8**
ULN			pmax	pmax		
	comp=Z,138nm,1.2s					
DCZ	**Deep Cove**	**53.59 151**	*e*P	**P**	**07 05 41.1**	**+2.0**
	comp=Z,101nm,1.3s					
GUN	**Gumba**	**53.63 306**	*e*P	**P**	**07 05 40.1**	**-0.1**
	comp=Z,178nm,0.8s					
SONM	**Songino Array**	**53.76 338**	P	**P**	**07 05 41.0**	**+0.5**
	comp=Z,42nm,1.1s,baz=158,slow=6.1,SNR=79					
SONM			LR	LR	07 29 06.4	
	comp=Z,3μm,19.2s,baz=140,slow=37					
SONM			PKP2bc		07 36 12.7	
	comp=Z,0.4nm,0.5s,baz=211,slow=5.2,SNR=4.2					
SONM			PKP2ab		07 36 32.5	
	comp=Z,1.1nm,0.8s,baz=315,slow=0.2,SNR=4.3					
SONM	**Songino Array**	**53.76 338**	P	**P**	**07 05 41.0**	**+0.5**
SONM			pmax	pmax		
	comp=Z,29nm,1.0s					
SONM			MLR	MLR		
	comp=Z,3μm,19.2s					
SONA1	**Songino Array**	**53.77 338**	*e*P	**P**	**07 05 41.3**	**+0.7**
PYZ	**Puysegur Point**	**53.87 152**	*e*P	**P**	**07 05 38.4**	**-2.8**
	comp=Z,152nm,1.2s					
PKI	**Pulchoki**	**53.88 305**	*e*P	**P**	**07 05 41.4**	**-0.6**
PKIN	**Phulchoki**	**53.89 305**	*e*P	**P**	**07 05 42.5**	**+0.4**
	comp=Z,51nm,0.8s					
PVM	**Polavaram**	**53.91 292**	*e*P	**P**	**07 05 42.0**	**0.0**
PVM			IAmb	IAmb	07 05 44.0	
	comp=Z,135nm,1.5s					
MLZ	**Mavora Lakes**	**54.00 150**	*e*P	**P**	**07 05 43.3**	**+1.1**
	comp=Z,136nm,1.7s					
KKN	**Kakani**	**54.07 306**	*e*P	**P**	**07 05 43.0**	**-0.3**
	comp=Z,106nm,1.0s					
WKZ	**Wanaka**	**54.07 149**	*e*P	**P**	**07 05 44.7**	**+1.9**
	comp=Z,155nm,1.3s					
NKL	**Nikolayevsk**	**54.08 6**	*e*P	**P**	**07 05 41.5**	**-1.0**
NKL			*e*		07 05 50.0	
NKL			*e*		07 05 53.0	
NKL			*e*		07 07 38.0	
NKL			*e*S	**S**	**07 13 18.5**	**+2.4**
NKL			*e*		07 13 40.0	
NKL			*e*		07 15 30.0	
NKL			pmax	pmax		
	comp=Z,37nm,0.6s					
NKL			pmax	pmax		
	comp=Z,1μm,7.0s					
NKL			pmax	pmax		
	comp=N,500nm,8.0s					
NKL			smax	smax		
	comp=N,700nm,7.0s					
DMN	**Daman**	**54.14 305**	*e*P	**P**	**07 05 43.6**	**-0.3**
	comp=N,102nm,0.9s					
THZ	**Tophouse**	**54.21 144**	*e*P	**P**	**07 05 45.6**	**+1.8**
	comp=N,99nm,1.5s					
WHZ	**Wether Hill Ro**	**54.29 151**	*e*P	**P**	**07 05 44.4**	**+0.1**
	comp=N,150nm,1.7s					
LBZ	**Lake Benmore**	**54.38 148**	*e*P	**P**	**07 05 46.1**	**+1.1**
	comp=N,180nm,1.4s					
RPZ	**Rata Peaks**	**54.40 147**	P	**P**	**07 05 46.0**	**+0.8**
	comp=N,102nm,1.1s,baz=28,slow=3.4,SNR=12					
RPZ	**Rata Peaks**	**54.40 147**	*e*P	**P**	**07 05 46.7**	**+1.5**
	comp=N,152nm,1.3s					
RAO	**Raoul Island**	**54.42 126**	LR	LR	07 28 19.1	
	comp=N,2μm,18.9s,baz=274,slow=35					
LTZ	**Lake Taylor**	**54.48 145**	*e*P	**P**	**07 05 46.1**	**+0.4**
	comp=N,136nm,1.4s					
ZEA	**Zeya**	**54.54 356**	*e*P	**P**	**07 05 46.2**	**+0.3**
ZEA			*e*		07 06 00.5	
ZEA			*e*S	**S**	**07 13 22.0**	**-0.4**
ZEA			*e*		07 13 38.0	
ZEA			pmax	pmax		
	comp=Z,700nm,8.0s					
ZEA			pmax	pmax		
	comp=Z,180nm,1.8s					
ZEA			smax	smax		
	comp=N,600nm,10.0s					
ZEA			MLR	MLR		
	comp=Z,2μm,16.0s					
ZEA			MLR	MLR		
	comp=N,1μm,16.0s					
GKN	**Gorkha**	**54.68 306**	*e*P	**P**	**07 05 47.3**	**-0.3**
	comp=N,101nm,0.9s					
OXZ	**Oxford**	**54.69 146**	*e*P	**P**	**07 05 49.3**	**+2.1**
	comp=N,79nm,1.3s					
OXZ			LR	LR		
	comp=Z,10μm,21.0s					
SKR	**Severo-Kuril's**	**54.83 18**	*e*P	**P**	**07 05 46.8**	**-1.2**
SKR			*e*S	**S**	**07 13 25.9**	**-0.4**
SKR			pmax	pmax		
	comp=Z,400nm,11.1s					
SKR			pmax	pmax		
	comp=Z,800nm,11.1s					
SKR			MLR	MLR		
	comp=Z,1μm,15.0s					
SKR			MLR	MLR		
	comp=Z,1μm,18.0s					
URZ	**Urewera**	**54.84 138**	LR	LR	07 29 18.3	
	comp=Z,6μm,21.6s,baz=310,slow=36					
URZ	**Urewera**	**54.84 138**	*e*P	**P**	**07 05 50.4**	**+2.0**
	comp=Z,56nm,1.0s					
BKZ	**Black Stump Fm**	**54.92 139**	*e*P	**P**	**07 05 50.1**	**+1.1**
	comp=Z,50nm,0.9s					
SKHT	**Srikalahasti**	**54.97 287**	*e*P	**P**	**07 05 48.5**	**-1.2**
SKHT			IAmb	IAmb	07 05 51.3	
	comp=Z,144nm,1.5s					
SKHT			*e*S	**S**	**07 13 27.6**	**-1.8**
KHZ	**Kahutara**	**54.98 144**	*e*P	**P**	**07 05 51.0**	**+1.6**
	comp=Z,60nm,1.1s					
SNZO	**South Karori**	**55.01 143**	*e*P	**P**	**07 05 50.1**	**+0.6**
	comp=Z,162nm,1.4s					
SNZO			LR	LR		
	comp=Z,11μm,22.0s					
KNTN	**Kanton**	**55.02 93**	PFAKE		07 06 00.0	+10
KNTN			LR	LR		
	comp=Z,6μm,18.0s					
ADKI	**Addanki**	**55.14 290**	*e*P	**P**	**07 05 50.3**	**-0.7**
ADKI			IAmb	IAmb	07 05 53.8	
	comp=Z,52nm,0.9s					
ADKI			*e*S	**S**	**07 13 29.8**	**-1.8**
CIT	**Chita**	**55.16 345**	*e*P	**P**	**07 05 51.8**	**+1.3**
CIT			*e*		07 06 09.0	
CIT			pmax	pmax		
	comp=Z,470nm,2.0s					
MQZ	**McQueen's Vall**	**55.28 146**	*e*P	**P**	**07 05 52.0**	**+0.5**
	comp=Z,95nm,1.3s					
MXZ	**Matakaoa Point**	**55.28 137**	PFAKE		07 06 00.0	+8.4
MXZ			LR	LR		
	comp=Z,8μm,22.0s					
MIDW	**Midway**	**55.35 54**	PFAKE		07 06 00.0	+7.7
MIDW			LR	LR		
	comp=Z,5μm,18.0s					
KOLN	**Koldanda**	**55.44 305**	*e*P	**P**	**07 05 53.3**	**+0.1**
	comp=Z,140nm,0.7s					
DANN	**Dangsing**	**55.53 306**	*e*P	**P**	**07 05 53.7**	**-0.2**
	comp=Z,499nm,1.2s					
BFZ	**Birch Farm**	**55.60 141**	*e*P	**P**	**07 05 54.3**	**+0.4**
	comp=Z,118nm,1.3s					
AFI	**Afiamalu**	**55.89 106**	LR	LR	07 29 08.0	
	comp=Z,3μm,18.6s,baz=278,slow=35					
NJS	**Nagarjunasagar**	**55.91 291**	*e*P	**P**	**07 05 55.1**	**-1.4**
NJS			IAmb	IAmb	07 05 57.9	
	comp=Z,57nm,1.0s					
NJS			*e*S	**S**	**07 13 39.3**	**-2.7**
PYUN	**Piuthan**	**56.06 305**	*e*P	**P**	**07 05 57.9**	**+0.3**
	comp=Z,291nm,0.8s					
SRLM	**Srisailam**	**56.21 290**	*e*P	**P**	**07 05 57.2**	**-1.5**
SRLM			IAmb	IAmb	07 05 59.8	
	comp=Z,232nm,1.6s					
SRLM			*e*S	**S**	**07 13 42.6**	**-3.3**
RPR	**Rampur**	**56.45 293**	*e*P	**P**	**07 05 60.0**	**-0.3**
RPR			IAmb	IAmb	07 06 01.1	
	comp=Z,176nm,1.6s					
RPR			*e*S	**S**	**07 13 46.4**	**-2.7**
HYB	**Hyderabad**	**56.80 291**	*i* P	**P**	**07 06 01.5**	**-1.4**
HYB			*e*S	**S**	**07 13 52.0**	**-1.9**
HYB	**Hyderabad**	**56.80 291**	*e*P	**P**	**07 05 60.0**	**-2.9**
HYB			IAmb	IAmb	07 06 04.0	
	comp=Z,251nm,1.7s					
HYBB	**Hyderabad (bro**	**56.81 291**	*e*P	**P**	**07 06 01.5**	**-1.5**
HYBB			IAmb	IAmb	07 06 05.1	
	comp=Z,75nm,1.0s					
HYBB			*e*S	**S**	**07 13 50.0**	**-3.9**
ZAK	**Zakamensk**	**57.02 338**	*e*P	**P**	**07 06 03.2**	**-0.7**
ZAK			pmax	pmax		
	comp=Z,72nm,1.4s					
NGP	**Nagpur**	**57.25 296**	*e*P	**P**	**07 06 05.5**	**-0.4**
PEA0B	**Petropavlovsk-**	**57.43 17**	*e*P	**P**	**07 06 06.8**	**+0.2**
	comp=Z,176nm,1.1s					
PEA0B			LR	LR		
	comp=Z,2μm,20.0s					
PETK	**Petropavlovsk-**	**57.43 17**	P	**P**	**07 06 06.8**	**+0.2**
	comp=Z,17nm,0.7s,baz=178,slow=4.2,SNR=22					
PETK			LR	LR	07 30 16.7	
	comp=Z,1μm,19.6s,baz=198,slow=36					
PETK	**Petropavlovsk-**	**57.43 17**	*e*P	**P**	**07 06 07.0**	**+0.4**
PETK	**Petropavlovsk-**	**57.43 17**	*e*P	**P**	**07 06 07.0**	**+0.4**
URV	**Uravakonda**	**57.52 288**	*e*P	**P**	**07 06 07.8**	**-0.2**
URV			IAmb	IAmb	07 06 09.7	
	comp=Z,44nm,1.1s					
URV			*e*S	**S**	**07 13 58.9**	**-4.5**
PET	**Petropavlovsk**	**57.64 18**	*e*P	**P**	**07 06 09.6**	**+1.6**
	comp=Z,143nm,1.2s					
PET			LR	LR		
	comp=Z,2μm,20.0s					
PET	**Petropavlovsk**	**57.64 18**	*e*P	**P**	**07 06 07.3**	**-0.8**
PET			*e*S	**S**	**07 14 02.6**	**-1.0**
PET			pmax	pmax		
	comp=Z,900nm,20.3s					
CLNS	**Chul'man**	**57.81 355**	*e*P	**P**	**07 06 09.2**	**-0.1**
CLNS			*e**PP	**pP**	**07 06 16.6**	**-4.2**
CLNS			*e*		07 06 57.9	
CLNS			*e*		07 08 15.0	
CLNS			*e*PPP	PPP	07 09 36.6	
CLNS			*e*S	**S**	**07 14 08.0**	**+2.2**
CLNS			*e*		07 15 48.6	
CLNS			*e*SS	**SS**	**07 17 56.0**	**-1.1**
CLNS			pmax	pmax		
	comp=E,5.0nm,0.8s					
CLNS			pmax	pmax		
	comp=N,12nm,1.2s					
CLNS			pmax	pmax		
	comp=Z,18nm,1.0s					
CLNS			pmax	pmax		
	comp=Z,8.0nm,0.9s					
CLNS			pmax	pmax		
	comp=N,16nm,1.1s					
CLNS			pmax	pmax		
	comp=E,6.0nm,0.8s					
CLNS			smax	smax		
	comp=E,469nm,12.6s					
CLNS			smax	smax		
	comp=N,572nm,16.8s					
CLNS			MLR	MLR		
	comp=N,2μm,19.0s					
CLNS			MLR	MLR		
	comp=Z,3μm,19.0s					
CLNS			MLR	MLR		
	comp=E,1μm,21.0s					
TLY	**Talaya**	**57.94 339**	P	**P**	**07 06 10.4**	**+0.1**
	comp=E,17nm,0.9s,baz=162,slow=7.5,SNR=12					
TLY	**Talaya**	**57.94 339**	*e*P	**P**	**07 06 11.7**	**+1.4**
	comp=E,41nm,1.1s					
TLY			LR	LR		
	comp=Z,3μm,20.0s					
TLY	**Talaya**	**57.94 339**	P	**P**	**07 06 11.2**	**+1.0**
	SNR=23					
TLY	**Talaya**	**57.94 339**	P	**P**	**07 06 11.2**	**+1.0**
	SNR=23					
TLY	**Talaya**	**57.94 339**	*d iP*	**P**	**07 06 11.0**	**+0.8**
TLY			*e*		07 08 24.7	
TLY			*e*PPP	PPP	07 09 48.6	
TLY			*e*S	**S**	**07 14 04.3**	**-3.3**
TLY			*e*		07 15 56.4	
TLY			*e*SS	**SS**	**07 18 00.4**	**+1.2**
TLY			pmax	pmax		
	comp=Z,69nm,1.8s					
TLY			MLR	MLR		
	comp=Z,2μm,19.0s					
IRK	**Irkutsk**	**58.17 339**	*e*P	**P**	**07 06 12.3**	**+0.4**
IRK			pmax	pmax		
	comp=Z,261nm,2.1s					
KLRI	**Killari**	**58.77 292**	*e*P	**P**	**07 06 15.2**	**-1.5**
KLRI			IAmb	IAmb	07 06 18.3	
	comp=Z,53nm,1.0s					
KLRI			*e*S	**S**	**07 14 14.4**	**-5.1**
MOY	**Mondy**	**58.92 337**	*e*P	**P**	**07 06 17.8**	**+0.6**
MOY			pmax	pmax		
	comp=Z,260nm,2.5s					
JOHN	**Johnston Islan**	**58.99 70**	PFAKE		07 06 30.0	+12
JOHN			LR	LR		
	comp=Z,413nm,20.0s					
BHPL	**Bhopal**	**59.26 298**	*e*P	**P**	**07 06 18.3**	**-1.7**
BHPL			IAmb	IAmb	07 06 23.1	
	comp=Z,122nm,1.5s					
WMQ	**Urumqi**	**60.16 323**	P	**P**	**07 06 26.7**	**+0.8**
WMQ			pP	pP	07 06 37.4	-0.1
WMQ			PP	**PP**	**07 08 42.3**	**+3.3**
WMQ			S	**S**	**07 14 38.3**	**+1.4**
WMQ			ScS	SKKSac	07 16 12.9	-0.5
WMQ			SS	**SS**	**07 18 34.0**	**-0.6**
WMQ			pmax	pmax		
	comp=Z,320nm,1.9s					
WMQ			LR	LR		
	comp=Z,3μm,13.7s					
WMQ			LR	LR		
	comp=Z,3μm,21.9s					
WMQ			LR	LR		
	comp=Z,3μm,23.1s					
BOD	**Bodaibo**	**60.40 348**	*e*P	**P**	**07 06 26.6**	**-0.5**
BOD			pmax	pmax		
	comp=Z,135nm,1.8s					
DDI	**Dehra Dun**	**60.88 306**	*e*P	**P**	**07 06 30.1**	**-0.9**
DDI			IAmb	IAmb	07 06 40.4	
	comp=Z,145nm,0.9s					
DGAR	**Diego Garcia**	**60.97 262**⇑	*e*P	**P**	**07 06 33.6**	**+1.7**
POO	**Poona**	**61.41 292**	*e*P	**P**	**07 06 32.0**	**-2.8**
POO			IAmb	IAmb	07 06 36.4	
	comp=Z,50nm,1.0s					
HVS	**Khovu-Aksy**	**61.62 333**⇓	*e*P	**P**	**07 06 36.2**	**+0.6**
HVS			pmax	pmax		
	comp=Z,140nm,1.0s					
MA2	**Magadan**	**61.70 10**	LR	LR	07 32 50.0	
	comp=Z,2μm,19.0s,baz=201,slow=36					
MA2	**Magadan**	**61.70 10**	*e*P	**P**	**07 06 36.1**	**+0.2**
	comp=Z,133nm,1.5s					
MA2	**Magadan**	**61.70 10**	*i* P	**P**	**07 06 36.0**	**0.0**
MA2			pmax	pmax		
	comp=Z,54nm,2.5s					
SMLA	**Simla**	**61.87 306**	*e*P	**P**	**07 06 36.1**	**-1.5**
YAK	**Yakutsk**	**62.69 358**	PFAKE		07 06 50.0	+7.6
YAK			LR	LR		
	comp=Z,2μm,21.0s					
YAK	**Yakutsk**	**62.69 358**	*d iP*	**P**	**07 06 42.4**	**0.0**
YAK			*e**PP	**pP**	**07 06 52.1**	**-2.0**
YAK			*e*		07 07 17.7	
YAK			*e*		07 08 54.9	
YAK			*e*S	**S**	**07 15 07.9**	**-0.1**
YAK			*e*S	S	07 15 09.0	+1.0
YAK			*e*		07 16 29.4	
YAK			*e*SSS	SSS	07 22 00.1	
YAK			pmax	pmax		
	comp=Z,76nm,0.9s					
YAK			pmax	pmax		
	comp=N,13nm,1.1s					
YAK			pmax	pmax		
	comp=Z,129nm,3.1s					
YAK			pmax	pmax		
	comp=N,115nm,2.8s					
YAK			pmax	pmax		
	comp=E,17nm,1.4s					
YAK			smax	smax		
	comp=E,346nm,6.9s					
YAK			smax	smax		
	comp=N,948nm,8.6s					
YAK			MLR	MLR		
	comp=Z,2μm,17.0s					
YAK			MLR	MLR		
	comp=N,3μm,17.0s					
YAK			MLR	MLR		
	comp=E,350nm,16.0s					
DHRM	**DHARAMSHALA**	**62.95 307**	*e*P	**P**	**07 06 44.2**	**-0.9**
SMY	**Shemya**	**63.28 26**	PFAKE		07 07 00.0	+13
SMY			LR	LR		
	comp=Z,4μm,22.0s					
ZSN	**Zaisan**	**63.84 326**⇓	*i P*	**P**	**07 06 51.2**	**+0.8**
	comp=Z,6.8nm,1.3s					
ZSN			*i* S	**S**	**07 15 25.3**	**+2.2**
MK01	**Makanchi Array**	**64.96 324**	*e*P	**P**	**07 06 58.5**	**+0.7**
SHLS	**Shalkode**	**64.97 319**⇓	*i P*	**P**	**07 06 57.2**	**-0.9**
	comp=Z,70nm,1.3s					
SHLS			*i* S	**S**	**07 15 36.5**	**-0.9**
SHLS			LR	LR	07 37 22.2	
	comp=Z,292nm,18.1s					
MK31	**Makanchi Array**	**64.98 324**	*e*P	**P**	**07 06 58.5**	**+0.6**
MK31	**Makanchi Array**	**64.98 324**	*e*P	**P**	**07 06 58.5**	**+0.6**
MKAR	**Makanchi Array**	**64.98 324**	P	**P**	**07 06 58.3**	**+0.4**
	comp=Z,62nm,0.6s,baz=113,slow=8.0,SNR=788					
MKAR			PKPPKP	**P'P'df**	**07 35 36.1**	**-6.2**
	comp=Z,0.6nm,0.9s,baz=285,slow=4.8,SNR=4.1					
MKAR			PKP2ab		07 35 54.2	
	comp=Z,0.9nm,1.0s,baz=289,slow=4.4,SNR=3.9					
MKAR			LR	LR	07 36 50.5	
	comp=Z,1μm,19.7s,baz=108,slow=38					
MKAR	**Makanchi Array**	**64.98 324**	*e*P	**P**	**07 06 58.5**	**+0.6**
	comp=Z,405nm,0.6s					
MKAR			P'P'		07 35 36.1	
MKAR			P'P'ab	**P'P'ab**	**07 35 54.2**	**+2.5**
MKAR	**Makanchi Array**	**64.98 324**	*e*P	**P**	**07 06 58.5**	**+0.6**
MKAR			pmax	pmax		
	comp=Z,400nm,0.6s					
PDGK	**Podgornoye**	**65.03 320**	P	**P**	**07 06 57.8**	**-0.7**
PDGK			pmax	pmax		
	comp=Z,128nm,1.2s					
SEY	**Seymchan**	**65.13 10**	LR	LR	07 32 44.6	
	comp=Z,2μm,21.0s,baz=170,slow=34					
SEY	**Seymchan**	**65.13 10**	*d iP*	**P**	**07 06 59.0**	**+0.5**
MAKZ	**Makanchi**	**65.17 324**	*e*P	**P**	**07 06 55.9**	**-3.3**
	comp=Z,90nm,0.6s					
MAKZ	**Makanchi**	**65.17 324**	*e*P	**P**	**07 06 55.9**	**-3.3**
UZB	**Uzynbulak**	**65.25 319**⇓	*i P*	**P**	**07 07 00.5**	**+0.6**
	comp=Z,59nm,1.3s					
UZB			*i* sP	**pP**	**07 07 09.4**	**-2.2**
UZB			*i* PP	**PP**	**07 09 23.8**	**-0.1**
UZB			*i* S	**S**	**07 15 43.0**	**+2.1**
UZB			LR	LR	07 37 47.3	
	comp=Z,153nm,15.3s					
PRZ	**Przheval'sk**	**65.37 318**	*e*P	**P**	**07 07 02.7**	**+1.9**
	comp=Z,349nm,1.4s					
PRZ			LR	LR		
	comp=Z,2μm,20.0s					
PRZ	**Przheval'sk**	**65.37 318**	*e*P	**P**	**07 07 02.7**	**+1.9**
PRZ			pmax	pmax		
	comp=Z,350nm,1.4s					
TARG	**Taragay, Kyrgy**	**65.44 317**	*e*P	**P**	**07 07 03.1**	**+1.5**
	comp=Z,91nm,1.1s					
TARG			LR	LR		
	comp=Z,2μm,21.0s					
KPKS	**Kokpek**	**65.62 319**⇓	*i P*	**P**	**07 07 02.6**	**+0.4**
	comp=Z,105nm,1.3s					
KPKS			*i* sP	**pP**	**07 07 11.7**	**-2.2**
KPKS			*i* PP	**PP**	**07 09 26.9**	**-0.1**
KPKS			*i* S	**S**	**07 15 47.2**	**+1.9**
KPKS			LR	LR	07 37 50.7	
	comp=Z,343nm,17.3s					
SATY	**Saty**	**65.62 319**⇓	*e*P	**P**	**07 07 03.5**	**+1.2**
	comp=Z,127nm,1.2s					
SATY			LR	LR	07 38 21.3	
	comp=Z,412nm,19.1s					
ZHN	**Zhinishke**	**65.65 319**⇓	*i P*	**P**	**07 07 03.3**	**+0.8**
	comp=Z,44nm,1.4s					
ZHN			*e*S	**S**	**07 15 48.1**	**+2.5**
ZHN			LR	LR	07 38 09.2	
	comp=Z,146nm,15.6s					
KSH	**Kashi**	**65.82 314**	P	**P**	**07 07 05.6**	**+1.9**
KSH			pP	pP	07 07 13.8	-1.6
KSH			PP	**PP**	**07 09 33.2**	**+4.2**
KSH			S	**S**	**07 15 51.2**	**+3.2**
KSH			sS	pS	07 16 02.9	+0.7
KSH			SS	**SS**	**07 20 09.4**	**+6.1**
KSH			pmax	pmax		
	comp=Z,450nm,1.4s					
KSH			LR	LR		
	comp=Z,2μm,14.7s					
KSH			LR	LR		
	comp=Z,2μm,15.2s					
KSH			LR	LR		
	comp=Z,2μm,18.1s					
NIL	**Nilore**	**65.82 308**	*e*P	**P**	**07 07 04.0**	**+0.3**
	comp=Z,405nm,2.0s					
NIL			LR	LR		
	comp=Z,799nm,21.0s					
NIL	**Nilore**	**65.82 308**	*e*P	**P**	**07 07 04.0**	**+0.3**
NIL			pmax	pmax		
	comp=Z,405nm,2.0s					
NIL			MLR	MLR		
	comp=Z,799nm,21.0s					
KDJ	**Kajisay**	**66.04 318**	*e*P	**P**	**07 07 05.9**	**+0.8**
	comp=Z,71nm,0.8s					
KDJ	**Kajisay**	**66.04 318**	P	**P**	**07 07 05.8**	**+0.8**
KDJ			pmax	pmax		
	comp=Z,71nm,0.8s					
NRN	**Naryn**	**66.56 316**	*e*P	**P**	**07 07 09.2**	**+0.6**
	comp=Z,34nm,1.0s					
NRN	**Naryn**	**66.56 316**	*e*P	**P**	**07 07 09.2**	**+0.6**
NRN			pmax	pmax		
	comp=Z,34nm,1.0s					
MDOK	**Medeo**	**66.56 318**	*i* P	**P**	**07 07 09.2**	**+0.8**
	comp=Z,938nm,1.5s					
MDOK			*i* sP	**pP**	**07 07 18.2**	**-1.8**
MDOK			*i* S	**S**	**07 15 59.4**	**+2.5**
MDOK			LR	LR	07 37 27.4	
	comp=Z,307nm,13.1s					
AAA	**Alma-Ata**	**66.67 318**	*e*P	**P**	**07 07 10.1**	**+1.2**
	comp=Z,106nm,1.2s					
AAA			LR	LR	07 38 18.4	
	comp=Z,270nm,15.8s					
AAA	**Alma-Ata**	**66.67 318**	*i* P	**P**	**07 07 10.2**	**+1.2**
AAA			*i* S	**S**	**07 16 01.2**	**+3.2**
AAA			pmax	pmax		
	comp=Z,500nm,3.8s					
AAA			smax	smax		
	comp=E,1μm,8.9s					
ULHL	**Ulahol**	**66.72 317**	P	**P**	**07 07 10.4**	**+0.9**
	SNR=20					
KZA	**Kyzart**	**67.33 317**	P	**P**	**07 07 14.6**	**+0.9**
	SNR=117					
KUU	**Kurty**	**67.33 319**⇓	*i P*	**P**	**07 07 13.8**	**+0.7**
	comp=E,119nm,1.1s					
KUU			*i* sP	**pP**	**07 07 22.7**	**-2.2**
KUU			*i* S	**S**	**07 16 08.2**	**+2.2**
KUU			LR	LR	07 39 21.6	
	comp=E,782nm,19.4s					
CASY	**Casey**	**67.35 190**	*e*P	**P**	**07 07 13.4**	**+0.7**
	comp=E,102nm,1.1s					
CASY			LR	LR		
	comp=Z,2μm,20.0s					
TKM2	**Tokmak 2**	**67.43 318**	P	**P**	**07 07 14.4**	**+0.4**
	SNR=74					
TKM2	**Tokmak 2**	**67.43 318**	P	**P**	**07 07 14.1**	**+0.1**
TKM2			pmax	pmax		
	comp=Z,64nm,0.8s					
BMNS	**Besmoynak**	**67.46 318**	*e*P	**P**	**07 07 14.7**	**+0.6**
	comp=Z,26nm,1.0s					
BMNS			*e*S	**S**	**07 16 09.9**	**+2.2**
ZAA0	**Zalesovo Array**	**67.58 331**	*e*P	**P**	**07 07 13.7**	**-0.7**
	comp=Z,88nm,1.1s					
ZALV	**Zalesovo Beam**	**67.58 331**	P	**P**	**07 07 13.6**	**-0.8**
	comp=Z,68nm,1.1s,baz=117,slow=6.0,SNR=58					
ZALV			PKP2ab		07 35 41.7	
	comp=Z,0.7nm,0.4s,baz=285,slow=5.7,SNR=3.7					
ZALV			LR	LR	07 38 27.7	
	comp=Z,969nm,19.7s,baz=80,slow=38					
ZALV	**Zalesovo Beam**	**67.58 331**	*e*P	**P**	**07 07 12.8**	**-1.5**
ZALV			P'P'ab	**P'P'ab**	**07 35 41.7**	**+0.7**
KBK	**Karagaybulak**	**67.76 317**	P	**P**	**07 07 17.1**	**+1.1**
	SNR=22					
SFK	**Sufi-Kurgan**	**67.78 314**	P	**P**	**07 07 16.2**	**-0.1**
SFK			pmax	pmax		
	comp=Z,131nm,1.2s					
UCH	**Uchtor**	**67.89 317**	P	**P**	**07 07 18.3**	**+1.1**
	SNR=103					
SEM	**Semipalatinsk**	**67.99 327**⇓	*e*P	**P**	**07 07 17.1**	**-0.3**
	comp=Z,32nm,1.3s					
SEM			LR	LR	07 37 36.1	
	comp=Z,361nm,18.8s					
CHMS	**Chumysh**	**68.03 318**	P	**P**	**07 07 18.1**	**+0.6**
	SNR=24					
FRU	**Bishkek**	**68.06 317**⇓	*i P*	**P**	**07 07 18.0**	**+0.3**
FRU			*e*		07 07 34.0	
FRU			pmax	pmax		
	comp=Z,120nm,2.0s					
AAK	**Ala-Archa**	**68.06 317**	P	**P**	**07 07 18.8**	**+0.9**
	comp=Z,26nm,0.9s,baz=108,slow=5.9,SNR=57					
AAK	**Ala-Archa**	**68.06 317**	P	**P**	**07 07 18.9**	**+1.0**

SNR=23
AAK Ala-Archa 68.06 317 *e*P **P 07 07 18.3 +0.4**
comp=Z,94nm,1.4s
AAK LR LR
comp=Z,2μm,21.0s
AAK Ala-Archa 68.06 317 P **P 07 07 19.1 +1.2**
SNR=44
AAK Ala-Archa 68.06 317 P **P 07 07 19.1 +1.2**
SNR=44
AAK Ala-Archa 68.06 317 *i* P **P 07 07 18.1 +0.2**
SNR=19
AAK Ala-Archa 68.06 317 *d i* P **P 07 07 18.6 +0.7**
AAK pmax pmax
comp=Z,40nm,1.3s
RAR Rarotonga 68.29 112 LR LR 07 34 05.2
comp=Z,911nm,21.1s,baz=276,slow=33
USP Ospenovka 68.30 318 P **P 07 07 19.7 +0.4**
SNR=35
AML Almayashu 68.42 316 P **P 07 07 21.6 +1.2**
SNR=6.0
EKS2 Erkin-Say 68.56 317 P **P 07 07 21.9 +0.9**
SNR=67
ATKA Atka Island 68.66 32 *e*P **P 07 07 20.9 -0.2**
comp=Z,107nm,1.3s
NVS Novosibirsk 68.85 332⇑ *i* P **P 07 07 22.6 +0.3**
NVS *e*S **S 07 16 25.6 +2.1**
NVS pmax pmax
comp=E,73nm,1.4s
NVS pmax pmax
comp=Z,130nm,1.4s
NVS pmax pmax
comp=N,97nm,1.3s
NVS smax smax
comp=E,44nm,2.0s
KURK Kurchatov 69.05 326 *e*P **P 07 07 23.9 +0.3**
comp=E,195nm,1.0s
KURK S **S 07 16 28.1 +2.1**
KURK LR LR
comp=Z,2μm,20.0s
KURK Kurchatov 69.05 326 P **P 07 07 24.0 +0.3**
SNR=106
KURK Kurchatov 69.05 326 P **P 07 07 24.0 +0.3**
SNR=106
KURK Kurchatov 69.05 326 *e*P **P 07 07 23.9 +0.3**
KURK pmax pmax
comp=Z,190nm,1.0s
KURBB Kurchatov Arra 69.05 326 P **P 07 07 23.7 0.0**
comp=Z,105nm,0.9s,baz=121,slow=5.6,SNR=401
KURBB S **S 07 16 28.1 +2.0**
comp=Z,0.8nm,1.0s,baz=123,slow=11,SNR=3.4
XMAS Kiritimati 69.33 88 PFAKE 07 07 40.0 +14
XMAS LR LR
comp=Z,4.0nm,22.0s
MNAS Manas 69.37 316 P **P 07 07 26.6 +0.6**
MNAS pmax pmax
comp=Z,152nm,1.4s
KBL Kabul 69.42 307 *e*P **P 07 07 26.9 +0.3**
comp=Z,76nm,1.1s
KBL Kabul 69.42 307 *e*P **P 07 07 26.9 +0.3**
KBL pmax pmax
comp=Z,76nm,1.1s
DZA Taraz 70.32 316 *e*P **P 07 07 32.7 +0.9**
comp=Z,64nm,1.2s
KIP Kipapa 70.52 67 PFAKE 07 07 50.0 +17
KIP LR LR
comp=Z,9μm,20.0s
KIP Kipapa 70.52 67⇑ *e*P **P 07 07 34.3 +1.0**
KIP pmax pmax
comp=Z,263nm,0.8s
KK31 Karatay Array 70.96 316 *e*P **P 07 07 35.7 +0.1**
KK31 Karatay Array 70.96 316 *i* P **P 07 07 36.0 +0.4**
KK31 pmax pmax
comp=Z,87nm,1.0s
KKAR Karatay Array 70.96 316 *e*P **P 07 07 35.7 +0.1**
KKAR Karatay Array 70.96 316 *e*P **P 07 07 35.7 +0.1**
IUG Iuzhnay 70.97 315⇓ *i* P **P 07 07 36.7 +0.9**
comp=Z,64nm,1.0s
IUG LR LR 07 40 16.5
comp=Z,272nm,19.2s
CHM Chimkent 71.33 315 *e*P **P 07 07 39.1 +1.3**
comp=Z,32nm,0.8s
MIR Mirnyy 71.49 196⇓ *i* P **P 07 07 40.0 +1.7**
MIR *e*PPP PPP 07 12 09.0
MIR *e*S **S 07 16 59.0 +5.1**
MIR pmax pmax
comp=Z,162nm,1.5s
MIR pmax pmax
comp=Z,1μm,4.0s
OTUK Ortayu 71.64 322 P **P 07 07 40.1 +0.5**
OTUK pmax pmax
comp=Z,123nm,1.0s
BRZS Berezniki 72.13 324⇓ *e*P **P 07 07 42.9 +0.4**
comp=Z,5.1nm,1.4s
BRZS *i* S **S 07 17 04.0 +2.0**
TIXI Tiksi 72.34 359 P **P 07 07 42.3 -1.0**
comp=Z,23nm,0.8s,baz=175,slow=3.8,SNR=25
TIXI Tiksi 72.34 359 *e*P **P 07 07 41.5 -1.8**
comp=Z,54nm,1.2s
TIXI LR LR
comp=Z,3μm,19.0s
TIXI Tiksi 72.34 359 *d i* P **P 07 07 42.0 -1.3**
TIXI pmax pmax
comp=Z,50nm,1.7s
TIXI MLR MLR
comp=Z,4μm,17.0s
BILL Bilibino 72.35 12 *e*P **P 07 07 43.5 0.0**
comp=Z,25nm,1.3s
BILL LR LR
comp=Z,2μm,21.0s
BILL Bilibino 72.35 12 *d i* P **P 07 07 42.3 -1.1**
BILL *e* 07 08 01.5
BILL *e* 07 10 21.6
BILL *e*S **S 07 17 04.3 +0.5**
BILL pmax pmax
comp=Z,27nm,2.5s
POHA Pohakuloa 72.59 69 PFAKE 07 08 00.0 +14
POHA LR LR
comp=Z,3μm,20.0s
UNV Unalaska Valle 73.53 32 *e*P **P 07 07 50.7 +0.1**
comp=Z,40nm,0.8s
AKUT Akutan 74.04 32 *e*P **P 07 07 55.0 +1.4**
comp=Z,245nm,1.4s
BVA0 Borovoye Array 74.64 326 *i* P **P 07 07 57.4 +0.2**
BVA0 pmax pmax
comp=Z,160nm,1.2s
BVAR Borovoye Array 74.64 326 P **P 07 07 57.2 -0.1**
comp=Z,54nm,0.8s,baz=121,slow=7.6,SNR=117
BRVK Borovoye 74.72 326 *e*P **P 07 07 57.9 +0.2**
comp=Z,285nm,1.4s
BRVK LR LR
comp=Z,755nm,19.0s
BRVK Borovoye 74.72 326 P **P 07 07 58.1 +0.5**
SNR=98
BRVK Borovoye 74.72 326 P **P 07 07 58.1 +0.5**
SNR=98
BRVK Borovoye 74.72 326 *d i* P **P 07 07 57.4 -0.2**
BRVK pmax pmax
comp=Z,119nm,1.2s
FALS False Pass 75.59 32 *e*P **P 07 08 02.7 +0.2**
comp=Z,316nm,1.6s
WSAR Wadi Sarin 76.20 294 P **P 07 08 06.9 +0.1**
comp=Z,52nm,1.0s,baz=123,slow=5.7,SNR=18
NRIK Noril'sk 76.38 345 P **P 07 08 06.6 -0.2**
comp=Z,82nm,1.1s,baz=127,slow=5.8,SNR=62
MRIV Mauritius Mete 76.40 249 *e*P **P 07 08 08.6 +0.6**
comp=Z,106nm,1.0s
JMDO Jabal Madar 76.59 293 P P 07 08 17.0 +8.0
SNR=8.3
BIDO Bidbid 76.70 294 P **P 07 08 11.0 +1.4**
SNR=27
BIDO Bidbid 76.70 294 P **P 07 08 11.0 +1.4**
SNR=27
SMDO Samad 76.72 294 P **P 07 08 14.0 +4.1**
SNR=14
SMDO Samad 76.72 294 P **P 07 08 14.0 +4.1**
SNR=14
SDPT Sand Point 77.34 32 *e*P **P 07 08 12.8 +0.3**
comp=Z,325nm,1.5s
HOQ Hoqain 77.45 294 P **P 07 08 16.0 +2.1**
SNR=24
HOQ Hoqain 77.45 294 P **P 07 08 16.0 +2.1**
SNR=24
BSY Bisya 77.46 293 P P 07 08 19.0 +5.1
SNR=25
BSY Bisya 77.46 293 P P 07 08 19.0 +5.1
SNR=25
PPT Papeete 77.52 108 LR LR 07 37 41.7
comp=Z,844nm,21.1s,baz=288,slow=32
PPT Papeete 77.52 108 *e*P **P 07 08 12.6 -1.7**
PPT Papeete 77.52 108 *e*P **P 07 08 12.6 -1.7**
PPT2 Papeete2 77.53 108 *e*S **S 07 18 03.2 -0.2**
comp=Z,4μm,27.8s
PPT2 Papeete2 77.53 108 *e*LQ LQ 07 29 09.6
comp=Z,5μm,31.2s
PPT2 *e*LR LR 07 32 30.0
comp=Z,2μm,24.2s
TBI Tubuai 78.01 114 *e*S **S 07 18 07.7 -0.6**
comp=Z,3μm,29.2s
TBI *e*SS **SS 07 23 10.8 +0.5**
comp=Z,477nm,28.2s
TBI *e*LQ LQ 07 29 21.2
comp=Z,2μm,38.2s
TBI *e*LR LR 07 32 45.5
comp=Z,2μm,30.0s
RER Riviere de l'E 78.09 249 *e*P **P 07 08 20.9 +3.3**
comp=Z,126nm,1.0s
ARQ Araqi 78.14 294 P **P 07 08 20.0 +2.3**
SNR=36
ARQ Araqi 78.14 294 P **P 07 08 20.0 +2.3**
SNR=36
SOHO SOHO 78.22 295 *i* P **P 07 08 17.9 -0.2**
SNR=92
VNDA Vanda 78.24 174 P **P 07 08 17.9 +0.8**
comp=Z,12nm,1.1s,baz=319,slow=6.6,SNR=27
VNDA Vanda 78.24 174 *e*P **P 07 08 17.6 +0.5**
comp=Z,74nm,1.1s
VNDA Vanda 78.24 174 P **P 07 08 17.9 +0.8**
VNDA pmax pmax
comp=Z,11nm,0.9s
SHAO Shalim 78.49 288 P **P 07 08 21.8 +2.1**
SNR=9.1
SHAO Shalim 78.49 288 P **P 07 08 21.8 +2.1**
SNR=9.1
SHAO Shalim 78.49 288 P **P 07 08 19.8 +0.1**
UOSS Minazif 78.60 296 *e*P **P 07 08 19.5 -0.7**
comp=Z,68nm,0.8s
UOSS Minazif 78.60 296 *i* P **P 07 08 19.6 -0.7**
SNR=23
BANOM Banah 78.62 296 P **P 07 08 22.7 +2.3**
SNR=13
BANOM Banah 78.62 296 P **P 07 08 22.7 +2.3**
SNR=13
BANOM Banah 78.62 296 *i* P **P 07 08 20.4 0.0**
SNR=14
HATD Hatta, Dubai 78.65 295 *i* P **P 07 08 20.2 -0.3**
SNR=36
MSFE Esma-Masafi 78.69 296 *i* P **P 07 08 20.9 +0.2**
SNR=26
SHME Shamm 78.78 297 *i* P **P 07 08 21.7 +0.5**
SNR=14
GEYT Alibeck 78.78 309 P **P 07 08 21.1 +0.1**
comp=Z,24nm,0.7s,baz=132,slow=2.1,SNR=8.1
GYA0B ALIBECK ARRAY 78.78 309 *e*P **P 07 08 21.6 +0.6**
comp=Z,150nm,1.3s
ALNE Al Ain 78.92 295 *i* P **P 07 08 22.1 +0.1**
SNR=33
SBA Scott Base 79.08 173 *e*P **P 07 08 23.5 +1.8**
comp=Z,83nm,1.3s
SBA LR LR
comp=Z,3μm,21.0s
SBA Scott Base 79.08 173 *e*P **P 07 08 23.5 +1.8**
SBA pmax pmax
comp=Z,83nm,1.2s
NAZ Nazwa, Dubai 79.09 295 *i* P **P 07 08 22.5 -0.4**
SNR=26
ASUD Al Ashush, Dub 79.36 295 *i* P **P 07 08 24.3 0.0**
SNR=8.6
AJN Ajban 79.66 295 *i* P **P 07 08 25.7 -0.2**
SNR=7.0
AB31 Akbulak array 79.75 320 *i* P **P 07 08 25.2 -0.7**
AB31 pmax pmax
comp=Z,25nm,0.8s
ABKAR Akbulak array 79.75 320 *e*P **P 07 08 25.5 -0.4**
MZR Muzera 80.90 293 *i* P **P 07 08 32.7 0.0**
SNR=8.5
RDOG Red Dog Mine 81.17 20 *e*P **P 07 08 34.2 +1.1**
comp=Z,35nm,0.9s
SVE Sverdlovsk 81.19 328 *c i* P **P 07 08 33.6 +0.1**
SVE *e* 07 11 34.6
SVE *e*S **S 07 18 39.5 -1.3**
SVE pmax pmax
comp=Z,138nm,1.4s
AKTO Aktyubinsk 81.22 321 P **P 07 08 33.7 -0.2**
comp=Z,30nm,1.1s,baz=94,slow=6.5,SNR=40
SVW2 Sparrevohn 81.64 28 *e*P **P 07 08 36.8 +1.0**
comp=Z,73nm,1.3s
OHAK Old Harbor 81.72 32 *e*P **P 07 08 36.8 +0.5**
comp=Z,67nm,1.0s
MAW Mawson 81.91 201 P **P 07 08 38.4 +1.3**
comp=Z,48nm,1.2s,baz=71,slow=6.2,SNR=22
MAW Mawson 81.91 201 *e*P **P 07 08 38.5 +1.4**
comp=Z,12nm,1.1s
MAW Mawson 81.91 201 *e*P **P 07 08 38.5 +1.4**
ARU Arti 82.21 327 P **P 07 08 38.6 -0.3**
comp=Z,45nm,0.9s,baz=124,slow=0.5,SNR=20
ARU Arti 82.21 327 *e*P **P 07 08 38.2 -0.7**
comp=Z,59nm,0.9s
ARU LR LR
comp=Z,1μm,20.0s
ARU Arti 82.21 327 *d i* P **P 07 08 38.0 -0.9**
ARU 07 11 45.6
ARU S **S 07 18 52.0 +0.8**
ARU SSS SSS 07 27 30.8
ARU pmax pmax
comp=Z,104nm,2.5s
KDAK Kodiak Island 82.23 31 *e*P **P 07 08 39.5 +0.5**
comp=Z,48nm,0.8s
KDAK LR LR
comp=Z,2μm,22.0s
KDAK Kodiak Island 82.23 31 *i* P **P 07 08 39.2 +0.3**
BRLK Bradley Lake 83.55 30 *e*P **P 07 08 46.0 +0.2**
comp=Z,60nm,1.2s
PPLA Purkeypile 83.66 26 *e*P **P 07 08 46.9 +0.4**
comp=Z,151nm,1.4s
SKT Skwentna 83.74 27 *e*P **P 07 08 46.3 -0.5**
comp=Z,49nm,1.1s
IM3 Indian Mountai 83.81 23 *e*P **P 07 08 46.4 -0.6**
CAST Castle Rocks 83.84 26 *e*P **P 07 08 47.3 +0.1**
comp=Z,198nm,1.9s
SUA Susitna One 83.99 28 *e*P **P 07 08 47.7 -0.4**
comp=Z,68nm,1.0s
RC01 Rabbit Creek A 84.38 28 *e*P **P 07 08 49.7 -0.3**
comp=Z,68nm,1.0s
BPAW Bear Paw Mtn. 84.47 25 *e*P **P 07 08 50.5 0.0**
comp=Z,380nm,2.0s
TRF Thorofare Moun 84.63 26 *e*P **P 07 08 50.9 -0.5**
comp=Z,190nm,1.8s
PMR Palmer 84.77 28 *e*P **P 07 08 51.5 -0.4**
comp=Z,94nm,1.4s
PMR Palmer 84.77 28 *e*P **P 07 08 51.5 -0.4**
MLY Manley 84.79 24 *e*P **P 07 08 52.3 +0.2**
comp=Z,65nm,1.0s
GHO Glory Hole Cre 84.90 28 *e*P **P 07 08 52.8 +0.1**
comp=Z,246nm,1.8s
BWN Browne 85.14 25 *e*P **P 07 08 54.4 +0.6**
comp=Z,196nm,1.2s
SML Sawmill 85.19 28 *e*P **P 07 08 54.2 +0.1**
comp=Z,109nm,1.1s
SML Sawmill 85.19 28 *e*P **P 07 08 54.2 +0.1**
RND Reindeer 85.25 26 *e*P **P 07 08 53.5 -0.9**
comp=Z,64nm,0.8s
RND Reindeer 85.25 26 *e*P **P 07 08 53.5 -0.9**
MCK McKinley 85.28 26 *e*P **P 07 08 54.2 -0.3**
comp=Z,234nm,1.4s
MCK McKinley 85.28 26 *e*P **P 07 08 54.2 -0.3**
COLD Coldfoot 85.49 22 *e*P **P 07 08 56.0 +0.6**
comp=Z,28nm,1.2s
WRH Wood River Hil 85.79 25 *e*P **P 07 08 56.6 -0.4**
comp=Z,116nm,1.2s
MDM Murphy Dome 85.82 25 *e*P **P 07 08 56.9 -0.2**
comp=Z,48nm,1.3s
DHY Denali Highway 85.85 27 *e*P **P 07 08 57.9 +0.3**
comp=Z,125nm,1.3s
CCB Clear Creek Bu 85.94 25 *e*P **P 07 08 56.8 -0.9**
comp=Z,139nm,1.3s
COLA College 85.96 25 *e*P **P 07 08 57.4 -0.4**
comp=Z,85nm,1.4s
COLA LR LR
comp=Z,2μm,22.0s
COLA College 85.96 25 *e*P **P 07 08 57.4 -0.4**
ABPO Ambohimpanom 86.01 251 PFAKE 07 09 10.0 +11
ABPO LR LR
comp=Z,532nm,21.0s
TOLK Toolik Lake Re 86.03 21 P **P 07 08 58.5 +0.3**
baz=258
TOLK Toolik Lake Re 86.03 21 *e*P **P 07 08 58.5 +0.3**
comp=Z,54nm,1.9s
OPO Ambohidratompo 86.05 252 LR LR 07 42 03.0
comp=Z,847nm,22.0s,baz=88,slow=32
KLU Klutina 86.27 28 *e*P **P 07 09 00.1 +0.6**
comp=Z,60nm,1.2s
DIV Divide 86.29 29 *e*P **P 07 09 00.3 +0.7**
comp=Z,179nm,1.2s
IL1 Eielson Array 86.35 25 *e*P **P 07 08 58.5 -1.3**
ILAR Eielson Array 86.35 25 P **P 07 08 57.8 -1.9**
comp=Z,15nm,0.7s,baz=255,slow=4.6,SNR=144
ILAR PKKPbc **PKKPbc 07 26 58.6 -1.5**
comp=Z,1.4nm,1.1s,baz=158,slow=1.3,SNR=5.8
ILB Eielson Array 86.35 25 *e*P **P 07 08 58.5 -1.3**
TAOE Nuku Hiva Isla 86.51 99 *e*LR LR 07 36 32.0
comp=Z,4μm,22.4s
PAX Paxson 86.69 27 *e*P **P 07 09 01.7 +0.1**
comp=Z,278nm,1.7s
PAX Paxson 86.69 27 *e*P **P 07 09 01.7 +0.1**
BMRM Bremner River 86.83 29 *e*P **P 07 09 02.7 +0.4**
comp=Z,122nm,1.2s
RIDG Independ'e Rid 87.08 26 *e*P **P 07 09 03.1 -0.3**
comp=Z,53nm,1.0s
FYU Fort Yukon 87.30 23 *e*P **P 07 09 05.0 +0.7**
comp=Z,141nm,1.7s
MAK Makhachkala 87.41 313 *e*P **P 07 09 01.9 -3.4**
MAK *e* 07 12 28.5
MAK *e* 07 19 25.9
MAK *e*SS SS 07 25 24.1 -4.8
MAK *e*SSS SSS 07 28 59.3
MAK pmax pmax
comp=Z,141nm,1.4s
DOT Dot Lake 87.41 26 *e*P **P 07 09 04.6 -0.4**
comp=Z,88nm,1.2s
SCRK Sand Creek 87.48 26 *e*P **P 07 09 05.4 0.0**
comp=Z,88nm,1.7s
CRQM Cirque 87.52 29 *e*P **P 07 09 06.7 +0.9**
comp=Z,83nm,0.9s
TGL Tana Glacier 87.67 29 *e*P **P 07 09 07.0 +0.7**
comp=Z,70nm,0.9s
RAYN Ar Rayn 88.25 293 *e*P **P 07 09 09.7 -0.2**
comp=Z,50nm,1.0s
RAYN LR LR
comp=Z,1μm,22.0s
RAYN Ar Rayn 88.25 293 *i* P **P 07 09 09.3 -0.6**
SNR=13
RAYN Ar Rayn 88.25 293 P **P 07 09 09.7 -0.2**
RAYN pmax pmax
comp=Z,50nm,1.0s
GROC Groznyy 88.67 313 *e*P **P 07 09 09.7 -1.7**
GROC *e* 07 12 37.5
GROC *e*S **SKSac 07 19 34.8 -3.0**
GROC pmax pmax
comp=Z,58nm,1.0s
EGAK Eagle 88.79 25 *e*P **P 07 09 12.2 +0.7**
comp=Z,50nm,1.8s
EGAK LR LR
comp=Z,2μm,20.0s
DAMY Dhamar 89.10 284 *e*P **P 07 09 15.8 +1.4**
comp=Z,43nm,1.2s
QSPA South Pole Qui 89.17 180 PFAKE 07 09 30.0 +17
QSPA LR LR
comp=Z,7μm,20.0s
GNI Garni 89.36 310 P **P 07 09 14.5 -0.4**
comp=Z,5.7nm,0.4s,baz=147,slow=8.9,SNR=4.3
GNI Garni 89.36 310 P **P 07 09 14.5 -0.4**
GNI LR LR
comp=Z,754nm,19.0s
GNI Garni 89.36 310⇓ *e*P **P 07 09 15.4 +0.5**
GNI pmax pmax
comp=Z,22nm,1.2s
DAWY Dawson 89.51 26 *e*P **P 07 09 15.1 +0.2**
comp=Z,23nm,1.0s
PRGR Permogore 89.54 332 *e*P **P 07 09 12.5 -2.5**
PRGR *e* 07 12 46.9
PRGR pmax pmax
comp=Z,29nm,1.0s
ZEI Tsey 90.05 313 *e*P **P 07 09 16.0 -2.1**
ZEI pmax pmax
comp=Z,14nm,0.8s
AKH Akhalkalaki 90.33 311⇓ *i* P **P 07 09 19.8 +0.4**
AKH Akhalkalaki 90.33 311 *e*P **P 07 09 19.6 +0.2**
comp=Z,46nm,1.3s
AKH Akhalkalaki 90.33 311 *e*P **P 07 09 19.6 +0.2**
ATD Arta Tunnel 90.56 281 P **P 07 09 21.1 +0.2**
comp=Z,4.5nm,0.4s,baz=107,slow=6.6,SNR=3.9
SYO Syowa Base 90.62 201⇑ *e*P **P 07 09 19.7 -0.2**
SYO Syowa Base 90.62 201⇓ *e*PcP **PcP 07 09 20.8 -0.2**
GOF Gofitskoye 90.69 315⇑ *e*P P 07 09 29.3 +8.5
GOF pmax pmax
comp=Z,22nm,0.6s
KBZ Khabaz 90.79 314 P **P 07 09 19.9 -1.3**
comp=Z,2.3nm,0.9s,baz=32,slow=0.8,SNR=4.5
KIV Kislovodsk 90.94 314 PFAKE 07 09 30.0 +7.9
KIV LR LR
comp=Z,1μm,20.0s
KIV Kislovodsk 90.94 314⇑ *e*P **P 07 09 21.2 -0.9**
KIV *e* 07 13 04.7
KIV *e*PPP PPP 07 14 54.1
KIV *e*S **S 07 20 09.7 -7.1**
KIV *e*SS **SS 07 26 23.3 +2.9**
KIV pmax pmax
comp=Z,20nm,1.5s
RKT Rikitea 91.32 113 *e*S **S 07 20 18.5 -2.3**
comp=Z,1μm,29.8s
RKT *e*SS **SS 07 26 26.9 +0.2**
comp=Z,992nm,29.2s
RKT Rikitea 91.32 113 *e*LR LR 07 38 47.1
comp=Z,2μm,24.2s
WHY Whitehorse 91.57 30 *e*P **P 07 09 24.5 -0.2**
comp=Z,9.9nm,0.8s
INK Inuvik 91.89 22 P **P 07 09 24.4 -1.4**
comp=Z,6.2nm,0.8s,baz=275,slow=5.4,SNR=19
INK PKKPbc **PKKPdf 07 26 44.6 +1.3**
comp=Z,1.9nm,0.9s,baz=61,slow=4.7,SNR=4.1
INK Inuvik 91.89 22 *e*P **P 07 09 24.6 -1.2**
comp=Z,20nm,1.2s
INK PKKPbc **PKKPdf 07 26 44.6 +1.3**
INK Inuvik 91.89 22 *e*P **P 07 09 24.6 -1.2**
KLMR Klimovskoe 92.49 331 *e*P **P 07 09 25.2 -3.6**
KLMR pmax pmax
comp=Z,75nm,1.2s
KLMR MLR MLR
comp=Z,2μm,23.0s
KLMR Klimovskoe 92.49 331 *e*P **P 07 09 25.2 -3.6**
KLMR AMP 07 09 30.9
comp=Z,75nm,1.2s
KLMR LQ LQ 07 41 47.9
KLMR LQ LQ 07 41 47.9
KLMR LR LR 07 43 59.0
KLMR AMP 07 54 46.9
comp=Z,2μm,22.7s
TMCR Tamitsa 92.97 334 *e*P **P 07 09 28.8 -2.1**
TMCR pmax pmax
comp=Z,38nm,0.8s
WRAK Wrangell Islan 93.06 34 PFAKE 07 09 40.0 +8.5
WRAK LR LR
comp=Z,2μm,20.0s
VORD Divnogorie 93.10 321 *e*P **P 07 09 31.2 -0.6**
VORD pmax pmax
comp=Z,20nm,1.0s
H02S1 DAWSON INLET T 93.16 37 T T 08 53 08.6
SNR=12
VSR Storozhevoye 93.17 321 *e*P **P 07 09 30.1 -2.0**
VSR pmax pmax
comp=Z,10.0nm,1.2s
LVZ Lovozero 93.95 338 PFAKE 07 09 50.0 +15
LVZ LR LR
comp=Z,1μm,22.0s
OBN Obninsk 94.46 325 P **P 07 09 36.1 -1.8**
comp=Z,13nm,0.3s,baz=281,slow=4.2,SNR=4.9
OBN Obninsk 94.46 325 P **P 07 09 36.1 -1.8**
OBN LR LR
comp=Z,2μm,21.0s
OBN Obninsk 94.46 325 *d i* P **P 07 09 36.1 -1.8**
OBN *e* 07 13 24.0
OBN *e*S **SKSac 07 20 09.8 -0.3**
OBN *e*SS **SS 07 27 05.0 -4.9**
OBN pmax pmax
comp=Z,29nm,1.3s
OBN MLR MLR
comp=Z,2μm,21.0s
APA Apatity 94.47 338⇓ *i* P P 07 09 32.8 -4.9
APA *i* 07 13 28.0
APA *i* S S 07 20 36.0 -11

APA *i* PS **PS** **07 22 02.0 -5.3**
APA *i* PPS PPS 07 22 33.0
APA pmax pmax
comp=Z,14nm,0.8s
ANN Anapa 94.68 315 *e*P **P** **07 09 37.0 -2.2**
ANN *e**PP **PcP** **07 09 44.1 +4.6**
ANN *e* 07 20 17.4
ANN pmax pmax
comp=Z,29nm,1.3s
ANN MLR MLR
comp=Z,641nm,18.0s
ASF Jabal al Asfar 95.80 302 P **P** **07 09 44.4 -0.4**
comp=Z,1.2nm,0.6s,baz=129,slow=7.7,SNR=4.3
KMBO Kilima Mbogo 96.00 269 P **P** **07 09 46.2 -0.1**
comp=Z,2.8nm,0.7s,baz=28,slow=4.0,SNR=4.3
KMBO LR LR 07 49 44.2
comp=Z,662nm,21.8s,baz=96,slow=33
SPA0 Spitsbergen Ar 96.09 349 *e*P **P** **07 09 44.0 -1.1**
SPITS Spitsbergen Ar 96.09 349 P **P** **07 09 43.7 -1.3**
comp=Z,21nm,1.0s,baz=24,slow=6.5,SNR=8.8
SPITS LR LR 07 56 12.9
comp=Z,2μm,19.9s,baz=30,slow=38
KEV Kevo 96.31 340 PFAKE 07 10 00.0 +14
KEV LR LR
comp=Z,3μm,22.0s
KBS Kingsbay 96.51 350 PFAKE 07 10 00.0 +13
KBS LR LR
comp=Z,2μm,22.0s
ARCES ARCESS Array B 96.87 340 P **P** **07 09 47.3 -1.3**
comp=Z,20nm,0.8s,baz=89,slow=4.9,SNR=32
ARCES ARCESS Array B 96.87 340 *e*P **P** **07 09 47.1 -1.5**
ARE0 ARCESS Array S 96.87 340 *e*P **P** **07 09 47.5 -1.2**
comp=Z,17nm,0.8s
SIM Simferopol' 97.02 315 P **P** **07 09 50.0 +0.1**
SIM *e* 07 20 26.0
SIM *e*SSS SSS 07 31 34.0
SIM pmax pmax
comp=Z,12nm,0.6s
BRTR Keskin Array B 97.90 310 P **P** **07 09 53.5 -0.7**
comp=Z,1.4nm,0.8s,baz=120,slow=4.9,SNR=7.7
BRTR Keskin Array B 97.90 310 *e*P Pdif 07 09 55.4 +1.2
BRTR pmax pmax
comp=Z,1.0nm,0.8s
ANTO Ankara 98.53 310 PFAKE 07 10 10.0 +13
ANTO LR LR
comp=Z,658nm,21.0s
FIA1 FINESS Array S 98.83 332 *e*P **P** **07 09 56.3 -1.3**
comp=Z,26nm,1.1s
FINES FINESS Array B 98.83 332 P **P** **07 09 56.1 -1.5**
comp=Z,11nm,1.0s,baz=66,slow=4.8,SNR=12
NVL N'lazarevskaya 99.23 197 *e*P **Pdif** **07 10 07.7 +8.5**
NVL pmax pmax
comp=Z,9.0nm,0.8s
VSU Vasula 99.25 329⇑ *e*P **Pdif** **07 09 59.5 0.0**
VSU pmax pmax
comp=Z,51nm,1.1s
AKASG Malin Array Be 99.47 321 P **Pdif** **07 09 58.4 -2.3**
comp=Z,2.1nm,0.7s,baz=65,slow=4.4,SNR=11
AKBB Malin Array Si 99.47 321 *e*P **Pdif** **07 09 58.4 -2.3**
comp=Z,8.9nm,1.1s
AKBB Malin Array Si 99.47 321 *e*P **Pdif** **07 10 00.2 -0.5**
AK11 Malin Array Si 99.51 321 *e*P **Pdif** **07 09 58.5 -2.4**
MICGM Minsk 99.52 325 *e* 07 14 09.0
MICGM *e*LR LR 07 57 18.0
KIS Kishinev 100.39 318 *e*PP PP 07 14 14.0 +2.5
KIS LRM MLR 08 00 56.0
comp=Z,600nm,19.0s
YKW3 Yellowknife Ar 100.72 26 *e*Pdif **Pdif** **07 10 05.1 -0.9**
YKA Yellowknife Ar 100.75 26 P **Pdif** **07 10 05.4 -0.7**
comp=Z,2.1nm,0.7s,baz=293,slow=4.6,SNR=40
YKA PP **PP** **07 14 12.0 -1.6**
comp=Z,0.5nm,0.8s,baz=286,slow=7.0,SNR=3.2
YKA PKKPbc **PKKPbc** **07 26 18.7 -3.4**
comp=Z,1.3nm,0.9s,baz=100,slow=3.0,SNR=8.5
RES Resolute Bay 100.95 12 *e*Pdif **Pdif** **07 10 06.2 -0.6**
RES Resolute Bay 100.95 12 *e*P **Pdif** **07 10 06.2 -0.6**
TIRR Tirgusor 101.12 315⇓ *i*P **Pdif** **07 10 06.6 -1.6**
TIRR Tirgusor 101.12 315⇓ *i*P **Pdif** **07 10 06.6 -1.6**
CFR Carcaliu 101.18 316⇑ *i*P **Pdif** **07 10 06.4 -2.0**
CFR Carcaliu 101.18 316⇑ *i*P **Pdif** **07 10 06.4 -2.0**
TLB Topalu 101.36 315⇓ *i*P **Pdif** **07 10 10.4 +1.2**
TLB Topalu 101.36 315⇓ *i*P **Pdif** **07 10 10.4 +1.2**
TESR Tescani 101.95 317⇑ *i*P **Pdif** **07 10 08.1 -3.8**
VRI Vrincioaia 102.03 317⇓ *i*P **Pdif** **07 10 11.8 -0.4**
VRI Vrincioaia 102.03 317⇓ P **Pdif** **07 10 11.8 -0.4**
PLOR Plostina 102.08 317⇓ *i*P **Pdif** **07 10 13.0 +0.5**
PLOR Plostina 102.08 317⇓ P **Pdif** **07 10 13.0 +0.5**
HAWA Hanford 102.36 43 PFAKE 07 10 30.0 +16
HAWA LR LR
comp=Z,3μm,20.0s
MBAR Mbarara 102.52 269 PFAKE 07 10 30.0 +15
MBAR LR LR
comp=Z,647nm,21.0s
MLR Muntele Rosu 102.64 317 P **Pdif** **07 10 14.0 -1.1**
comp=Z,0.7nm,1.0s,baz=44,slow=5.3,SNR=5.0
MLR Muntele Rosu 102.64 317⇓ *i*P **Pdif** **07 10 14.2 -0.9**
MLR Muntele Rosu 102.64 317 *e*Pdif **Pdif** **07 10 14.0 -1.1**
MLR Muntele Rosu 102.64 317⇓ P **Pdif** **07 10 14.2 -0.9**
BURAR Bucovina Array 102.67 319⇑ *i*P **Pdif** **07 10 03.3 -12**
BUR04 Bucovina Ar. S 102.67 319 *e*Pdif **Pdif** **07 10 14.1 -1.1**
BUR08 Bucovina Ar. S 102.68 319 *e*Pdif **Pdif** **07 10 16.0 +0.8**
NEW Newport 103.53 40 PFAKE 07 10 30.0 +11
NEW LR LR
comp=Z,2μm,22.0s
ARR Arges 103.57 317⇓ *i*P **Pdif** **07 10 17.6 -1.6**
WVOR Wild Horse Val 103.81 46 PFAKE 07 10 30.0 +10
WVOR LR LR
comp=Z,3μm,20.0s
BMO Blue Mountains 104.23 44 PFAKE 07 10 30.0 +7.8
BMO LR LR
comp=Z,3μm,22.0s
LSZ Lusaka 104.34 254 PFAKE 07 10 40.0 +17
LSZ LR LR
comp=Z,1μm,21.0s
CRVS Cervenica-Dubn 104.78 321 *e*P **Pdif** **07 10 25.9 +1.5**
CRVS Cervenica-Dubn 104.78 321 *e*PDIFF **Pdif** **07 10 25.9 +1.5**
NV01 Mina Array Sit 104.86 50 *e*Pdif **Pdif** **07 10 25.9 +0.6**
NVAR Mina Array Bea 104.86 50 Pdiff **Pdif** **07 10 25.9 +0.6**
comp=Z,1.0nm,0.8s,baz=259,slow=6.4,SNR=8.1
NVAR PP **PP** **07 14 49.5 +4.0**
comp=Z,1.9nm,1.1s,baz=258,slow=6.8,SNR=5.5
NVAR PKKPbc **PKKPbc** **07 26 10.2 +0.8**
comp=Z,0.7nm,1.0s,baz=119,slow=3.4,SNR=3.6
HFS Hagfors 104.98 333 Pdiff **Pdif** **07 10 23.7 -1.3**
comp=Z,18nm,1.1s,baz=90,slow=8.9,SNR=6.8
HFS PP **PP** **07 14 44.7 -0.6**
comp=Z,4.0nm,0.9s,baz=103,slow=11,SNR=3.5
NB2 NORSAR Subarra 105.65 335 P **Pdif** **07 10 25.1 -3.0**
comp=Z,7.5nm,1.4s,baz=66,slow=4.6
NB2 NORSAR Subarra 105.65 335 P **Pdif** **07 10 25.1 -3.0**
baz=66,slow=4.6
NOA NORSAR Array B 105.65 335 Pdiff **Pdif** **07 10 25.9 -2.1**
comp=Z,2.4nm,0.8s,baz=64,slow=4.4,SNR=3.2
NOA PP **PP** **07 14 50.7 +0.4**
comp=Z,7.1nm,1.1s,baz=62,slow=6.7,SNR=3.6
OKC Ostrava-Krasne 106.55 322 AMS AMS 08 08 00.0
comp=Z,1μm,18.3s
HLID Hailey 106.56 45 PFAKE 07 15 00.0
HLID LR LR
comp=Z,3μm,21.0s
PFO Pinyon Flats O 107.24 55 PFAKE 07 15 00.0
PFO LR LR
comp=Z,3μm,22.0s
DPC Dobruska-Polom 107.48 323 *e*SS SS 07 30 10.8 -0.2
DPC AMS AMS 08 06 10.0
comp=Z,1μm,19.4s
UPC Upice 107.61 323 *e*SP SP 07 24 18.1 -4.3
UPC *e*SS SS 07 30 04.6 -8.1
UPC AMS AMS 08 06 40.0
comp=Z,2μm,19.5s
BOZ Bozeman (W) 107.89 42 PFAKE 07 15 00.0
BOZ LR LR
comp=Z,2μm,20.0s
EGMT Eagleton 108.31 39 PFAKE 07 15 00.0
EGMT LR LR
comp=Z,1μm,20.0s
SUR Sutherland 108.43 236 PFAKE 07 15 00.0
SUR LR LR
comp=Z,3μm,19.0s
PVCC Panska Ves 108.46 324 AMS AMS 08 08 20.0
comp=Z,1μm,18.5s
GOPC GO Pecny, Ondr 108.56 323 *e*SS SS 07 30 27.9 +2.4
GOPC AMS AMS 08 08 20.0
comp=Z,1μm,18.0s
DUG Dugway, Tooele 108.60 48 PFAKE 07 15 00.0
DUG LR LR
comp=Z,2μm,21.0s
PRU Pruhonice 108.68 323 *e*SP SP 07 24 23.0 -10
PRU *e*SS SS 07 30 06.3 -21
PRU AMS AMS 08 08 20.0
comp=Z,2μm,19.0s
BRG Berggiesshubel 108.69 324 *e*PDIFF **Pdif** **07 10 42.7 +1.0**
comp=Z,4.1nm,1.1s
BRG Berggiesshubel 108.69 324 PKP PKiKP 07 14 56.0 +9.1
BRG SKS **SKSac** **07 21 22.0 +3.4**
BRG SDIFF **Sdif** **07 22 52.0 +4.5**
comp=N,2μm,19.9s
comp=E,914nm,21.0s
comp=Z,2μm,20.6s
BRG Berggiesshubel 108.69 324 *e*P **Pdif** **07 10 42.7 +1.0**
BRG pmax pmax
comp=Z,4.0nm,1.1s
PRA Prague 108.71 323 AMS AMS 08 08 20.0
comp=Z,2μm,22.9s
LKWY Lake 109.04 43 PFAKE 07 15 00.0
LKWY LR LR
comp=Z,3μm,20.0s
CLL Collm 109.06 325 *e*Pdif **Pdif** **07 10 43.0 -0.4**
CLL *e*PP **PP** **07 15 16.0 +0.5**
CLL *e*Sdif Sdif 07 22 53.0 +2.5
CLL *e*PS **PS** **07 24 36.0 -6.6**
CLL *e*PPS PPS 07 25 42.0
CLL *e*PKKPbc **PKKPbc** **07 25 51.0 -5.5**
CLL *e* 07 30 06.0
CLL *e*SS SS 07 30 36.0 +3.9
CLL *e* 07 34 00.0
CLL *e*SSS SSS 07 34 42.0
CLL *e*SSSS 07 38 00.0
CLL *e* 07 39 30.0
CLL Lm MLR 08 06 00.0
comp=N,2μm,19.7s
CLL Lm MLR 08 06 00.0
comp=E,2μm,19.0s
CLL Lm MLR 08 06 00.0
comp=Z,2μm,18.9s
CLL Collm 109.06 325 *e*P **Pdif** **07 10 43.0 -0.4**
CLL *e* 07 15 16.0
CLL MLR MLR
comp=Z,2μm,18.9s
AHID Auburn Hatcher 109.11 45 PFAKE 07 15 00.0
AHID LR LR
comp=Z,3μm,20.0s
HWUT Hardware Ranch 109.12 46 PFAKE 07 15 00.0
HWUT LR LR
comp=Z,4μm,22.0s
KHC Kasperske Hory 109.59 323 *e*PKP **pPKiKP** **07 15 06.0 +4.9**
KHC *e*SP SP 07 24 35.3 -7.4
KHC *e*SS SS 07 30 12.9 -27
KHC AMS AMS 08 09 10.0
comp=Z,2μm,19.2s
RLMT Red Lodge 109.62 42 PFAKE 07 15 00.0
RLMT LR LR
comp=Z,2μm,20.0s
GERES GERESS Array B 109.62 322 Pdiff **Pdif** **07 10 43.8 -2.3**
comp=Z,0.4nm,0.2s,baz=64,slow=8.9,SNR=2.7
GERES PKiKP **PKiKP** **07 14 48.7 -0.1**
comp=Z,1.1nm,0.7s,baz=96,slow=2.7,SNR=5.3
NKC Novy Kostel 109.82 324 *e*SP SP 07 24 40.8 -4.1
NKC AMS AMS 08 08 30.0
comp=Z,2μm,17.7s
FFC Flin Flon 109.96 30 PFAKE 07 15 00.0
FFC LR LR
comp=Z,2μm,20.0s
BW06 Boulder Array 110.19 44 PFAKE 07 15 00.0
BW06 LR LR
comp=Z,3μm,20.0s
PDAR Pinedale Array 110.19 44 PKiKP **PKiKP** **07 14 50.9 +0.7**
comp=Z,0.8nm,0.8s,baz=280,slow=1.6,SNR=4.5
PDAR PKKPbc **PKKPbc** **07 25 52.7 -0.2**
comp=Z,0.7nm,0.7s,baz=104,slow=4.7,SNR=5.5
PDAR PKKPab **PKKPab** **07 26 02.2 -0.9**
comp=Z,2.6nm,0.9s,baz=106,slow=4.8,SNR=10
WUAZ Wupatki 110.91 52 PFAKE 07 15 00.0
WUAZ LR LR
comp=Z,2μm,21.0s
LAO LASA Array 111.04 39 PFAKE 07 15 00.0
LAO LR LR
comp=Z,1μm,22.0s
DGMT Dagmar 111.57 37 PFAKE 07 15 00.0
DGMT LR LR
comp=Z,2μm,21.0s
O20A White River Ci 111.97 47 P **PKiKP** **07 14 54.8 +1.1**
baz=289
TUC Tucson 112.17 55 PFAKE 07 15 10.0
TUC LR LR
comp=Z,3μm,22.0s
MVCO Mesa Verde 112.68 50 *e*PKPdf **PKiKP** **07 14 55.8 +0.7**
MVCO LR LR
comp=Z,2μm,19.0s
BFO Black Forest 113.08 324 PFAKE 07 15 10.0
BFO LR LR
comp=Z,2μm,20.0s
PMSA Palmer Station 113.40 172 PFAKE 07 15 10.0
PMSA LR LR
comp=Z,2μm,20.0s
RSSD Black Hills 113.46 41 P **PKiKP** **07 14 56.5 +0.1**
baz=294
RSSD Black Hills 113.46 41 *e*PKPdf **PKiKP** **07 14 56.0 -0.4**
RSSD Black Hills 113.46 41 *e*PKIKP **PKiKP** **07 14 56.0 -0.4**
BORG Borgarnes 113.54 348 PFAKE 07 15 10.0
BORG LR LR
comp=Z,388nm,20.0s
S22A 4UR Ranch, Cre 113.78 49 P **PKiKP** **07 14 57.2 -0.1**
baz=289
SFJD Kangerlussuaq 113.84 2 PFAKE 07 15 10.0
SFJD LR LR
comp=Z,1μm,21.0s
TSUM Tsumeb 113.91 249 PFAKE 07 15 10.0
TSUM LR LR
comp=Z,1μm,22.0s
ISCO Idaho Springs 113.98 46 PFAKE 07 15 10.0
ISCO LR LR
comp=Z,2μm,21.0s
SDCO Great Sand Dun 114.77 48 P PKPdf 07 15 00.2 +1.0
baz=290
SDCO Great Sand Dun 114.77 48 *e*PKPdf PKPdf 07 14 60.0 +0.8
SDCO LR LR
comp=Z,3μm,19.0s
TASM ASL Pad, Albuq 114.93 51 P PKPdf 07 15 00.5 +1.0
baz=288
ANMO Albuquerque 114.94 51 P PKPdf 07 15 00.5 +1.0
baz=288
ANMO Albuquerque 114.94 51 *e*PKPdf PKPdf 07 15 00.3 +0.8
ANMO LR LR
comp=Z,3μm,21.0s
ANMO Albuquerque 114.94 51 *e*PKIKP PKPdf 07 15 00.3 +0.8
ANMO MLR MLR
comp=Z,3μm,21.0s
TASL Snake Pit, Alb 114.94 51 P PKPdf 07 15 00.6 +1.1
baz=288
BNM Barren Site 115.04 52 *e*PKiKP **PKPdf** **07 15 00.7 +0.9**
EKA Eskdalemuir Ar 115.14 334 PKKPbc PKKPbc 07 25 35.0 -1.5
comp=Z,0.6nm,0.7s,baz=132,slow=3.7,SNR=3.4
ESK Eskdalemuir 115.17 334 PFAKE 07 15 10.0 +11
ESK LR LR
comp=Z,2μm,20.0s
ULM Lac du Bonnet 115.47 33 PKP **PKPdf** **07 14 58.8 -0.9**
comp=Z,2.8nm,0.8s,baz=244,slow=1.6,SNR=4.1
ULM PKKPab **PKKPab** **07 25 39.6 +0.3**
comp=Z,6.6nm,0.8s,baz=116,slow=3.2,SNR=14
C31A Landman Farms, 115.72 36 P **PKPdf** **07 14 59.6 -0.8**
baz=300
T25A Trinidad 115.79 49 *e*PKPdf **PKPdf** **07 15 04.1 +3.0**
A32A Rocking H Ranc 115.85 34 P **PKPdf** **07 14 59.7 -0.8**
baz=302
OGNE Ogallala 116.09 44 PFAKE 07 15 10.0 +8.6
OGNE LR LR
comp=Z,2μm,21.0s
B32A Ashes, Strandq 116.10 35 P **PKPdf** **07 15 00.5 -0.6**
baz=302
E31A Nome 116.25 37 P **PKPdf** **07 15 00.8 -0.6**
baz=300
AGMN Agassiz Nation 116.53 34 *e*PKPdf **PKPdf** **07 15 03.3 +1.4**
AGMN LR LR
comp=Z,3μm,22.0s
MNTX Cornudas Mount 116.76 55 P **PKPdf** **07 15 03.3 +0.4**
baz=287
MNTX Cornudas Mount 116.76 55 *e*PKPdf **PKPdf** **07 15 03.6 +0.8**
MNTX LR LR
comp=Z,3μm,22.0s
B34A Aery, Baudette 117.11 34 P **PKPdf** **07 15 03.1 +0.1**
baz=304
D33A AnnSam, Wauburn 117.16 35 P **PKPdf** **07 15 03.2 0.0**
baz=302
E33A Westby DABS, E 117.39 36 P **PKPdf** **07 15 03.6 0.0**
baz=302
KEST Kesra 117.50 310 PKP **PKPdf** **07 15 04.5 +0.3**
comp=Z,4.3nm,0.9s,baz=139,slow=9.2,SNR=4.1
H32A Carlson Farm, 117.54 39 P **PKPdf** **07 15 04.2 +0.2**
baz=299
D34A Park Rapids 117.56 35 P **PKPdf** **07 15 03.4 -0.5**
baz=302
F33A 5 Mile Ranch, 117.57 37 P **PKPdf** **07 15 03.6 -0.4**
baz=301
I32A Karley and Nic 117.75 39 P **PKPdf** **07 15 03.8 -0.6**
baz=299
C35A Jirik Farms, M 117.92 34 P **PKPdf** **07 15 03.6 -1.0**
baz=304
MSTX Muleshoe 118.13 51 *e*PKPdf **PKPdf** **07 15 06.1 +0.5**
D35A Remer 118.22 35 P **PKPdf** **07 15 04.7 -0.5**
baz=304
ECSD EROS Data Cent 118.43 39 P **PKPdf** **07 15 05.4 -0.3**
baz=300
ECSD EROS Data Cent 118.43 39 *e*PKPdf **PKPdf** **07 15 05.2 -0.5**
ECSD LR LR
comp=Z,3μm,21.0s
H34A Spellman Lake, 118.48 38 P **PKPdf** **07 15 05.9 +0.2**
baz=301
C36A Pine Crest Far 118.52 34 P **PKPdf** **07 15 06.0 +0.3**
baz=305
BGNE Belgrade 118.54 42 P **PKPdf** **07 15 05.7 -0.4**
baz=297
BGNE Belgrade 118.54 42 *e*PKPdf **PKPdf** **07 15 05.6 -0.4**
CBKS Cedar Bluff 118.57 45 PFAKE 07 15 20.0 +14
CBKS LR LR
comp=Z,2μm,20.0s
F35A Swanville 118.58 36 P **PKPdf** **07 15 06.0 +0.1**
baz=302
D36A Goodland 118.67 34 P **PKPdf** **07 15 06.2 +0.2**
baz=304
TX31 Lajitas Ar. Si 118.86 57 *e*PKPdf **PKPdf** **07 15 07.6 +0.6**
TXAR Lajitas Array 118.86 57 PKP **PKPdf** **07 15 07.7 +0.6**
comp=Z,1.5nm,0.7s,baz=224,slow=2.2,SNR=14
TXAR PKKPab **PKKPab** **07 25 24.3 -0.5**
comp=Z,2.2nm,1.0s,baz=122,slow=6.2,SNR=10.0
C37A Embarrass 118.90 33 P **PKPdf** **07 15 06.5 0.0**
baz=306
E36A McGregor 118.99 35 P **PKPdf** **07 15 06.4 -0.3**
baz=304
H35A Sunnyside Ranc 119.04 37 P **PKPdf** **07 15 06.9 +0.1**
baz=302
EYMN Ely 119.15 33 P **PKPdf** **07 15 06.6 -0.3**
baz=306
EYMN Ely 119.15 33 *e*PKPdf **PKPdf** **07 15 06.4 -0.6**
EYMN LR LR
comp=Z,2μm,20.0s
F36A Milaca 119.19 36 P **PKPdf** **07 15 06.6 -0.5**
baz=304
G36A St. Michael 119.40 36 P **PKPdf** **07 15 06.3 -1.2**
baz=303
F37A Hinrichs Farm, 119.79 35 P **PKPdf** **07 15 08.2 0.0**
baz=304
I36A Fitzsimmons Fa 119.90 38 P **PKPdf** **07 15 08.5 +0.1**
baz=302
E38A The Farm, Brul 119.90 34 P **PKPdf** **07 15 07.9 -0.5**
baz=306
SPMN Marine on St. 119.97 36 P **PKPdf** **07 15 07.7 -1.0**
baz=304
SPMN Marine on St. 119.97 36 *e*PKPdf **PKPdf** **07 15 07.6 -1.0**
J36A Seneca 1, Swea 120.06 39 P **PKPdf** **07 15 08.6 -0.2**
baz=302
I37A Lemond, Waseca 120.28 37 P **PKPdf** **07 15 09.3 +0.1**
baz=303
K36A Gilmore City 120.35 39 P **PKPdf** **07 15 09.3 -0.1**
baz=301
C40A Isle Royale Na 120.42 32 P **PKPdf** **07 15 08.8 -0.6**
baz=309
H38A Maiden Rock 120.58 36 P **PKPdf** **07 15 09.7 -0.1**
baz=304
E39A Mellen 120.59 34 P **PKPdf** **07 15 09.6 -0.2**
baz=307
KSU1 Kansas State U 120.64 44 P **PKPdf** **07 15 10.3 +0.2**
baz=297
KSU1 Kansas State U 120.64 44 *e*PKPdf **PKPdf** **07 15 10.2 +0.1**
KSU1 LR LR
comp=Z,3μm,21.0s
F39A Loretta 120.66 34 P **PKPdf** **07 15 09.4 -0.6**
baz=306
K37A Belmond 120.79 39 P **PKPdf** **07 15 10.1 -0.2**
baz=302
I38A Scanlan Farm, 120.91 37 P **PKPdf** **07 15 10.0 -0.5**
baz=304
E40A Wakefield 120.92 33 P **PKPdf** **07 15 10.4 0.0**
baz=307
WMOK Wichita Mounta 120.92 49 P **PKPdf** **07 15 10.7 -0.1**
baz=293
WMOK Wichita Mounta 120.92 49 *e*PKPdf **PKPdf** **07 15 10.1 -0.7**
WMOK LR LR
comp=Z,2μm,20.0s
WMOK Wichita Mounta 120.92 49 *e*PKIKP **PKPdf** **07 15 10.1 -0.7**
WMOK MLR MLR
comp=Z,2μm,20.0s
ABTX Abilene, Hawle 121.06 52 *e*PKPdf **PKPdf** **07 15 11.2 +0.1**
H39A Augusta 121.17 36 P **PKPdf** **07 15 10.6 -0.3**
baz=305
M37A Trindle Farm, 121.23 40 P **PKPdf** **07 15 10.9 -0.2**
baz=301
D41A Chassel 121.26 32 P **PKPdf** **07 15 10.9 -0.1**
baz=309
E41A Kenton 121.42 33 P **PKPdf** **07 15 11.2 -0.1**
baz=308
G40A Rib Lake 121.45 35 P **PKPdf** **07 15 11.4 -0.1**
baz=306
I39A Houston 121.50 37 P **PKPdf** **07 15 11.0 -0.6**
baz=304
SCIA State Center 121.51 39 PFAKE 07 15 20.0 +8.3
SCIA LR LR
comp=Z,1μm,19.0s
COWI Conover 121.55 33 *e*PKPdf **PKPdf** **07 15 11.5 -0.1**
COWI LR LR
comp=Z,2μm,22.0s
J39A Decorah 121.67 37 P **PKPdf** **07 15 10.9 -1.0**
baz=304
JCT Junction City 121.69 54 P **PKPdf** **07 15 12.4 0.0**
baz=290
JCT Junction City 121.69 54 *e*PKPdf **PKPdf** **07 15 12.9 +0.5**
JCT LR LR
comp=Z,3μm,20.0s
F41A Three Lakes 121.78 34 P **PKPdf** **07 15 11.9 -0.2**
baz=308
O37A Wolven Farm, M 121.80 42 P **PKPdf** **07 15 11.9 -0.3**
baz=300
P37A Lathrop 121.95 42 P **PKPdf** **07 15 12.2 -0.3**
baz=300
E42A Champion 122.01 32 P **PKPdf** **07 15 12.4 -0.1**
baz=309
H41A Junction City 122.15 35 P **PKPdf** **07 15 11.8 -1.0**
baz=307
H41A Junction City 122.15 35 *e*PKPdf **PKPdf** **07 15 11.8 -1.0**
L39A Vinton 122.16 39 P **PKPdf** **07 15 12.2 -0.7**
baz=303
K40A Colesburg 122.38 38 P **PKPdf** **07 15 12.6 -0.6**
baz=304
M39A Webster 122.40 39 P **PKPdf** **07 15 13.0 -0.4**
baz=303
G42A Mountain 122.47 34 P **PKPdf** **07 15 13.0 -0.4**
baz=308
G42A Mountain 122.47 34 *e*PKPdf **PKPdf** **07 15 13.1 -0.3**
P38A Dawn 122.48 42 P **PKPdf** **07 15 13.5 -0.1**
baz=300
E43A Lone Tree Farm 122.53 32 P **PKPdf** **07 15 13.6 +0.1**
baz=310
TUL1 Leonard 122.65 47 P **PKPdf** **07 15 14.4 +0.4**
baz=296
TUL1 Leonard 122.65 47 *e*PKPdf **PKPdf** **07 15 14.4 +0.4**
J41A Loganville 122.67 36 P **PKPdf** **07 15 13.8 0.0**
baz=306
833A Chaparral WMA, 122.74 56 P **PKPdf** **07 15 15.5 +1.0**
baz=289
F43A Flat Rock, Esc 122.79 33 P **PKPdf** **07 15 14.1 +0.2**
baz=310
JFWS Jewell Farm 122.79 37 P **PKPdf** **07 15 13.6 -0.5**
baz=305
JFWS Jewell Farm 122.79 37 *e*PKPdf **PKPdf** **07 15 13.2 -0.9**
JFWS LR LR
comp=Z,1μm,20.0s
JFWS Jewell Farm 122.79 37 *e*PKIKP **PKPdf** **07 15 13.2 -0.9**
JFWS MLR MLR

comp=Z,2μm,20.0s
O39A Kirksville 122.81 41 P **PKPdf 07 15 14.0 -0.2**
baz=302
G43A Wallace 122.87 33 P **PKPdf 07 15 14.5 +0.3**
baz=309
G43A Wallace 122.87 33 *e*PKPdf **PKPdf 07 15 13.7 -0.4**
K41A Shullsburg 122.94 37 P **PKPdf 07 15 14.1 -0.3**
baz=305
E44A Grand Marais A 122.94 31 P **PKPdf 07 15 14.4 +0.2**
baz=311
R38A Fenwick Farm, 122.94 44 P **PKPdf 07 15 14.1 -0.4**
baz=299
I42A Draeger Farm, 123.01 35 *e*PKPdf **PKPdf 07 15 13.9 -0.6**
P39B Salisbury 123.07 42 P **PKPdf 07 15 14.5 -0.2**
baz=301
S38A Stockton 123.20 44 P **PKPdf 07 15 14.7 -0.3**
baz=299
T38A Diamond 123.22 45 P **PKPdf 07 15 15.0 -0.1**
baz=298
R39A Chumby, Stover 123.47 43 P **PKPdf 07 15 15.3 -0.2**
baz=300
P40A Paris 123.51 41 P **PKPdf 07 15 15.3 -0.2**
baz=302
S39A Bolivar 123.58 44 P **PKPdf 07 15 15.5 -0.2**
baz=299
SCHQ Schefferville 123.64 14 PKP **PKPdf 07 15 15.3 0.0**
comp=Z,3.4nm,0.6s,baz=248,slow=5.8,SNR=5.2
L42A Oliver, Polo 123.67 38 P **PKPdf 07 15 15.1 -0.7**
baz=305
Q40A Laux Farm, Aux 123.77 42 P **PKPdf 07 15 16.1 0.0**
baz=301
HHAR Hobbs 123.82 46 *e*PKPdf **PKPdf 07 15 16.1 -0.2**
T39A Clever 123.87 44 P **PKPdf 07 15 16.3 0.0**
baz=299
O41A Passleys Farm, 123.96 40 P **PKPdf 07 15 16.1 -0.3**
baz=303
R40A Maddies Statio 124.00 43 P **PKPdf 07 15 16.6 0.0**
baz=301
P41A Barry, Barry 124.08 41 P **PKPdf 07 15 16.8 +0.1**
baz=303
U39A Green Forest 124.10 45 P **PKPdf 07 15 16.4 -0.4**
baz=299
S40A Lebanon 124.19 43 P **PKPdf 07 15 16.7 -0.3**
baz=300
V39A Pettigrew 124.24 46 P **PKPdf 07 15 16.4 -0.8**
baz=298
KVTX Kingsville 124.25 57 PFAKE 07 15 30.0 +13
KVTX LR LR
comp=Z,2μm,19.0s
Q41A Truxton 124.35 41 P **PKPdf 07 15 17.5 +0.3**
baz=302
T40A Mansfield 124.40 44 P **PKPdf 07 15 16.8 -0.6**
baz=300
W39A Magazine 124.44 47 P **PKPdf 07 15 17.7 +0.3**
baz=298
W39A Magazine 124.44 47 *e*PKPdf **PKPdf 07 15 17.2 -0.3**
HOPE Hope Point 124.49 187 PFAKE 07 15 30.0 +13
HOPE LR LR
comp=Z,2μm,19.0s
X39A Fountain Ranch 124.51 48 P **PKPdf 07 15 17.9 +0.3**
baz=297
U40A Yellville 124.56 45 P **PKPdf 07 15 17.5 -0.2**
baz=299
P42A Winchester 124.60 40 P **PKPdf 07 15 17.6 0.0**
baz=303
R41A Rosebud 124.60 42 P **PKPdf 07 15 17.9 +0.2**
baz=302
S41A Jillco Farms, 124.72 43 P **PKPdf 07 15 17.6 -0.3**
baz=301
HDIL Hopedale 124.73 39 P **PKPdf 07 15 17.7 -0.2**
baz=305
HDIL Hopedale 124.73 39 *e*PKPdf **PKPdf 07 15 17.7 -0.2**
HDIL LR LR
comp=Z,1μm,20.0s
TAM Tamanrasset 124.75 297 *e*PKPdf **PKPdf 07 15 18.8 +0.2**
TAM Tamanrasset 124.75 297 *e*PKIKP **PKPdf 07 15 18.8 +0.2**
CCM Cathedral Cave 124.82 42 P **PKPdf 07 15 18.0 -0.1**
baz=302
V40A Witts Springs 124.84 46 P **PKPdf 07 15 18.1 -0.2**
baz=299
V40A Witts Springs 124.84 46 *e*PKPdf **PKPdf 07 15 18.0 -0.3**
MIAR Mount Ida 124.89 47 P **PKPdf 07 15 18.9 +0.5**
baz=297
MIAR Mount Ida 124.89 47 *e*PKPdf **PKPdf 07 15 18.9 +0.5**
MIAR LR LR
comp=Z,3μm,20.0s
MIAR Mount Ida 124.89 47 *e*PKIKP **PKPdf 07 15 18.9 +0.5**
MIAR MLR MLR
comp=Z,3μm,20.0s
W40A Ferguson Farm, 124.96 46 *e*PKPdf **PKPdf 07 15 19.7 +1.3**
T41A Mountain View 124.98 44 P **PKPdf 07 15 18.4 -0.1**
baz=300
R42A Luebbering 125.00 42 P **PKPdf 07 15 18.4 -0.1**
baz=302
ES19 SONSECA Array 125.04 320 *e*PKPdf **PKPdf 07 15 18.5 -0.1**
HKT Hockley 125.08 53 *e*PKPdf **PKPdf 07 15 19.6 +0.9**
HKT Hockley 125.08 53 *e*PKIKP **PKPdf 07 15 19.6 +0.9**
ESDC Sonseca Array 125.09 320 PKP **PKPdf 07 15 18.3 -0.4**
comp=Z,0.4nm,0.4s,baz=20,slow=2.8,SNR=5.0
P43A Skaggs, Pawnee 125.10 40 P **PKPdf 07 15 19.0 +0.4**
baz=304
U41A Viola 125.22 45 P **PKPdf 07 15 18.8 -0.2**
baz=300
S42A Caledonia 125.27 42 P **PKPdf 07 15 18.9 -0.1**
baz=302
NATX Nacogdoches 125.28 51 PFAKE 07 15 30.0 +11
NATX LR LR
comp=Z,2μm,19.0s
Y40A Okolona 125.35 48 P **PKPdf 07 15 19.6 +0.4**
baz=297
Q43A New Douglas 125.37 41 P **PKPdf 07 15 19.1 0.0**
baz=303
FVM French Village 125.40 42 *e*PKPdf **PKPdf 07 15 19.1 -0.2**
FVM French Village 125.40 42 *e*PKIKP **PKPdf 07 15 19.1 -0.2**
PAB San Pablo 125.41 320 PFAKE 07 15 30.0 +11
PAB LR LR
comp=Z,1μm,20.0s
T42A Van Buren 125.45 43 P **PKPdf 07 15 19.3 -0.1**
baz=301
W41B Gary Mavity, V 125.56 46 *e*PKPdf **PKPdf 07 15 18.8 -0.8**
WLAR White Oak Lake 125.62 48 *e*PKPdf **PKPdf 07 15 20.3 +0.5**
X41A Kaden, Bauxite 125.69 47 P **PKPdf 07 15 20.1 +0.2**
baz=298
U42A Revenden 125.69 44 P **PKPdf 07 15 18.7 -1.1**
baz=300
V42A Cord 125.86 45 P **PKPdf 07 15 19.8 -0.4**
baz=300
T43A Greenville 125.97 43 P **PKPdf 07 15 19.9 -0.5**
baz=302
PBMO Poplar Bluff 126.03 43 *e*PKPdf **PKPdf 07 15 20.2 -0.3**
MVO Moncorvo 126.12 323 *e*PKPdf **PKPdf 07 15 23.1 +2.5**
MVO Moncorvo 126.12 323 *e*SS SS 07 34 20.0 +6.1
MVO Moncorvo 126.12 323 *e*LR LR 08 07 45.2
comp=Z,2μm,22.0s
P45A Graceland, Par 126.29 39 P **PKPdf 07 15 21.1 +0.2**
baz=306
PGAV Gavieira, Arco 126.35 325 *e*PKPdf **PKPdf 07 15 21.9 +0.8**
PGAV Gavieira, Arco 126.35 325 *e*LR LR 08 09 43.1
comp=Z,1μm,22.0s
Q45A Warren Harvey, 126.39 40 P **PKPdf 07 15 21.5 +0.4**
baz=305
T44A Benton 126.44 43 P **PKPdf 07 15 21.2 -0.1**
baz=302
POLO Lamas de Olo 126.44 324 *e*PKPdf **PKPdf 07 15 22.1 +0.8**
PVRL Vila Real 126.46 324 *e*PKPdf **PKPdf 07 15 24.8 +3.6**
OLIL Olney 126.52 40 *e*PKPdf **PKPdf 07 15 21.3 -0.1**
PARMO Parma 126.56 43 *e*PKPdf **PKPdf 07 15 20.8 -0.7**
R45A Skylar, Fairfi 126.65 41 P **PKPdf 07 15 21.8 +0.2**
baz=304
EFI East Falkland 126.88 171 PFAKE 07 15 30.0 +8.4
EFI LR LR
comp=Z,2μm,20.0s
MTE Manteigas 126.90 323 *e*LR LR 08 07 59.7
comp=Z,2μm,22.0s
PVIS Viseu 126.91 323 *e*PKPdf **PKPdf 07 15 22.9 +0.8**
AAM Ann Arbor 127.00 34 PFAKE 07 15 30.0 +7.8
AAM LR LR
comp=Z,2μm,22.0s
PCBR Castelo Branco 127.20 322 *e*PKPdf **PKPdf 07 15 23.1 +0.5**
BLO Bloomington 127.27 39 *e*PKPdf **PKPdf 07 15 23.2 +0.4**
BLO Bloomington 127.27 39 *e*PKIKP **PKPdf 07 15 23.2 +0.4**
PMRV Marv??o 127.39 322 *e*PKPdf **PKPdf 07 15 25.9 +2.9**
PMRV Marv??o 127.39 322 *e*SS SS 07 34 37.6 +7.8
PMRV Marv??o 127.39 322 *e*LR LR 08 08 43.4
comp=Z,894nm,18.0s
T46A Princeton 127.60 42 P **PKPdf 07 15 23.8 +0.4**
baz=304
R47A Wooly Knot Far 127.78 40 P **PKPdf 07 15 24.0 +0.3**
baz=306
U46A Springville 127.79 43 P **PKPdf 07 15 24.3 +0.5**
baz=303
PBAR Barrancos 127.92 320 *e*PKPdf **PKPdf 07 15 24.9 +0.9**
WCI Wyandotte Cave 127.97 40 P **PKPdf 07 15 24.4 +0.3**
baz=306
V46A Holladay 128.13 43 P **PKPdf 07 15 24.0 -0.5**
baz=303
T47A Sharon Grove 128.16 41 P **PKPdf 07 15 24.8 +0.3**
baz=305
ALMR Almeirim 128.29 322 *e*PKPdf **PKPdf 07 15 25.5 +0.8**
W46A Michie 128.31 44 P **PKPdf 07 15 25.5 +0.6**
baz=302
EVO Evora 128.32 321 *e*PKPdf **PKPdf 07 15 31.7 +6.9**
U47A Clarksville 128.34 42 P **PKPdf 07 15 24.9 0.0**
baz=304
S48A Wiedeman Farm, 128.45 40 P **PKPdf 07 15 25.4 +0.4**
baz=306
V47A Nunnelly 128.53 43 P **PKPdf 07 15 25.5 +0.2**
baz=304
T48A Bowling Green 128.55 41 P **PKPdf 07 15 25.6 +0.3**
baz=305
TRQ Mont Tremblant 128.57 24 *e*PKPdf **PKPdf 07 15 25.3 +0.1**
PLAL Pickwick Lake 128.60 44 *e*PKPdf **PKPdf 07 15 24.8 -0.7**
ACSO Alum Creek Sta 128.74 35 PFAKE 07 15 40.0 +14
ACSO LR LR
comp=Z,2μm,21.0s
W47A Westpoint 128.79 43 P **PKPdf 07 15 25.2 -0.6**
baz=303
U48A Cassie Pea, Po 128.80 41 P **PKPdf 07 15 26.2 +0.4**
baz=305
PVAQ Vaqueiros 128.81 320 *e*SS SS 07 34 52.2 +4.8
PVAQ Vaqueiros 128.81 320 *e*LR LR 08 09 50.2
comp=Z,639nm,20.0s
MESJ Messejana 128.87 321 *e*PKPdf **PKPdf 07 15 25.5 -0.4**
V48A Smith Brothers 129.05 42 P **PKPdf 07 15 25.8 -0.5**
baz=304
T49A Edmonton 129.12 40 P **PKPdf 07 15 25.8 -0.6**
baz=306
U49A Red Boiling Sp 129.30 41 P **PKPdf 07 15 27.2 +0.4**
baz=306
W48A Pulaski 129.30 43 P **PKPdf 07 15 25.8 -1.0**
baz=304
T50A Nancy 129.61 40 P **PKPdf 07 15 27.8 +0.4**
baz=307
V49A McMinnville 129.65 42 P **PKPdf 07 15 27.4 0.0**
baz=305
W49A Belvidere 129.77 43 P **PKPdf 07 15 27.6 -0.1**
baz=304
LONY Lake Ozonia 129.83 26 *e*PKPdf **PKPdf 07 15 28.5 +1.0**
LONY LR LR
comp=Z,1μm,22.0s
SWET Sewanee 129.94 42 *e*PKPdf **PKPdf 07 15 27.5 -0.5**
X49A Woodville 130.07 43 P **PKPdf 07 15 28.3 0.0**
baz=304
FRNY Flat Rock 130.09 25 *e*PKPdf **PKPdf 07 15 28.0 0.0**
Y49A Blount Mountai 130.37 44 P **PKPdf 07 15 29.0 +0.2**
baz=303
W50A Signal Mountai 130.37 42 P **PKPdf 07 15 29.1 +0.2**
baz=305
LRAL Lakeview Retre 130.39 45 P **PKPdf 07 15 29.1 +0.2**
baz=302
LRAL Lakeview Retre 130.39 45 *e*PKPdf **PKPdf 07 15 29.4 +0.5**
TOA0 Torodi Ar. Sit 130.49 287 *e*PKPdf **PKPdf 07 15 29.2 -0.3**
TORD Torodi Ar. Bea 130.49 287 PKP **PKPdf 07 15 28.7 -0.9**
comp=Z,3.8nm,0.7s,baz=204,slow=0.8,SNR=4.3
TORD SKP 07 19 08.5
comp=Z,1.8nm,0.9s,baz=85,slow=3.0,SNR=3.2
Z49A Columbiana 130.64 45 P **PKPdf 07 15 29.6 +0.2**
baz=303
149A Jones 130.77 46 P **PKPdf 07 15 30.3 +0.7**
baz=302
Z50A Ashland 131.04 45 P **PKPdf 07 15 30.3 +0.2**
baz=303
BINY Binghamton 131.07 29 *e*PKPdf **PKPdf 07 15 29.8 -0.2**
BINY LR LR
comp=Z,2μm,22.0s
V52A Sevierville 131.12 40 P **PKPdf 07 15 31.0 +0.7**
baz=307
O56A Blue Knob Stat 131.18 32 *e*PKPdf **PKPdf 07 15 30.9 +0.6**
SSPA Standing Stone 131.28 32 *e*PKPdf **PKPdf 07 15 31.4 +1.0**
BRAL Brewton 131.32 48 PFAKE 07 15 40.0 +9.3
BRAL LR LR
comp=Z,3μm,22.0s
X52A Dahlonega 131.66 42 P **PKPdf 07 15 32.3 +1.0**
baz=306
TRY Troy 131.74 27 *e*PKPdf **PKPdf 07 15 32.5 +1.3**
450A Crestview 131.85 48 P **PKPdf 07 15 32.3 +0.6**
baz=301
Y52A Lilburn 131.98 43 P **PKPdf 07 15 33.0 +1.1**
baz=306
251A Midway 132.03 46 P **PKPdf 07 15 33.0 +1.0**
baz=303
Z52A Williamson 132.12 44 P **PKPdf 07 15 33.3 +1.1**
baz=305
152A Waverly Hall 132.20 44 P **PKPdf 07 15 33.6 +1.2**
baz=304
BLA Blacksburg 132.23 37 PFAKE 07 15 40.0 +7.7
BLA LR LR
comp=Z,1μm,19.0s
Y53A Monroe 132.31 42 P **PKPdf 07 15 32.9 +0.4**
baz=306
252A Lumpkin 132.56 45 P **PKPdf 07 15 34.8 +1.7**
baz=304
GOGA Godfrey 132.65 43 PFAKE 07 15 50.0 +17
GOGA LR LR
comp=Z,2μm,20.0s
KMSC Kings Mountain 133.00 40 *e*PKPdf **PKPdf 07 15 34.3 +0.5**
CBN Corbin Frederi 133.30 33 PFAKE 07 15 50.0 +16
CBN LR LR
comp=Z,2μm,20.0s
PLCA Paso Flores 133.36 155 PKP **PKPdf 07 15 35.7 +1.3**
comp=Z,4.8nm,0.7s,baz=268,slow=3.3,SNR=9.5
PLCA Paso Flores 133.36 155 *e*PKPdf **PKPdf 07 15 36.1 +1.7**
TEIG Tepich 135.01 62 PFAKE 07 15 50.0 +12
TEIG LR LR
comp=Z,10.0nm,21.0s
NHSC New Hope 135.03 41 PFAKE 07 15 50.0 +12
NHSC LR LR
comp=Z,2μm,19.0s
CNNC Cliffs of the 135.07 37 PFAKE 07 15 50.0 +12
CNNC LR LR
comp=Z,2μm,19.0s
KOWA Kowa 135.63 290 *e*PKPdf **PKPdf 07 15 40.0 +0.7**
SHEL Horse Pasture 136.26 246 PFAKE 07 15 50.0 +10
SHEL LR LR
comp=Z,943nm,20.0s
PMOZ Porto Moniz, M 137.70 322 *e*LR LR 08 13 29.6
comp=Z,605nm,20.0s
KIC Kosan Boka 137.75 279 *e*P PKPpre 07 15 36.3
comp=Z,38nm,1.2s
DBIC Dimbokro 137.83 279 *e*PKPdf **PKPdf 07 15 43.9 +0.6**
DBIC Dimbokro 137.83 279 *e*PKIKP **PKPdf 07 15 43.9 +0.6**
TIC Toumodi 137.99 279 *e*P PKPpre 07 15 32.8
LIC Lamto 138.04 278 *e*P PKPpre 07 15 33.7
comp=Z,56nm,1.1s
CMLA Cha da Macela 138.32 334 PFAKE 07 16 00.0 +16
CMLA LR LR
comp=Z,1μm,22.0s
TRQA Tornquist 138.89 162 *e*PKPdf **PKPdf 07 15 45.5 +0.8**
TRQA LR LR
comp=Z,3μm,20.0s
TRQA Tornquist 138.89 162 PKIKP **PKPdf 07 15 45.5 +0.8**
AAGR Agrelo 140.41 150 *e*P PKPpre 07 15 41.2
JTS JuntasAbangare 140.84 75 PFAKE 07 16 00.0 +11
JTS LR LR
comp=Z,2μm,21.0s
ACAN Cantantal 141.87 151 *e*P **PKPdf 07 15 49.7 -0.6**
LCO Las Campanas 142.55 144 *e*PKPdf **PKPdf 07 15 50.8 -1.1**
LCO LR LR
comp=Z,2μm,21.0s
LCO Las Campanas 142.55 144 PKIKP **PKPdf 07 15 50.8 -1.1**
AGUA GUANDACOL 143.44 147 *e*P PKPbc 07 15 51.7 +1.3
TCA Tanti 143.85 154 *e*P PKPbc 07 15 52.2 +0.7
VCA Vinchina 144.18 147 *e*P **PKPdf 07 15 54.3 -0.3**
BBSR BB Station 144.28 27 PFAKE 07 16 10.0 +16
BBSR LR LR
comp=Z,1μm,22.0s
MTDJ Mount Denham 145.12 58 PFAKE 07 16 10.0 +14
MTDJ LR LR
comp=Z,1μm,22.0s
CYA Choya 145.69 149 *e*P **PKPab 07 15 57.9 +0.2**
BCIP Isla Barro Col 146.01 75 PFAKE 07 16 10.0 +11
BCIP LR LR
comp=Z,2μm,21.0s
BCIP Isla Barro Col 146.01 75 *e*P **PKPab 07 16 00.2 +0.9**
GO02 Mina Guanaco 146.03 141 *e*PKPdf **PKPab 07 15 59.8 +0.3**
PB10 IPOC Station P 146.56 138 *e*PKPdf **PKPab 07 16 01.5 +0.4**
ASCN Ascension 146.59 254 PFAKE 07 16 10.0 +8.5
ASCN LR LR
comp=Z,1μm,20.0s
AHML Horco Molle 147.27 148 *e*P **PKPbc 07 16 01.1 -1.0**
ATAH Atahualpa 147.45 104 PKPbc **PKPbc 07 16 03.4 0.0**
comp=Z,64nm,0.9s,baz=281,slow=2.0,SNR=16
FSA Cafayete 147.46 147 *e*P **PKPdf 07 16 01.1 +0.8**
NNA Nana 147.53 114 PKP **PKPdf 07 16 01.3 +0.8**
comp=Z,26nm,0.7s,baz=268,slow=7.7,SNR=10
NNA PKPbc **PKPbc 07 16 03.7 +0.6**
comp=Z,26nm,0.7s,baz=270,slow=7.7,SNR=10
NNA Nana 147.53 114 *e*PKPdf **PKPbc 07 16 02.0 -1.1**
NNA LR LR
comp=Z,1μm,21.0s
PB04 IPOC Station P 147.62 137 *e*PKPbc **PKPab 07 16 05.0 -0.6**
OTAV Otavalo 148.28 91 *e*PKPbc **PKPbc 07 16 05.9 +0.2**
OTAV LR LR
comp=Z,2μm,20.0s
GRTK Grand Turk 148.51 47 PFAKE 07 16 10.0 +1.2
GRTK LR LR
comp=Z,2μm,21.0s
PB01 IPOC Station P 148.94 136 *e*PKPdf **PKPdf 07 16 04.5 +1.7**
GCUF Volcan Galeras 149.38 89 *e*P **PKPdf 07 16 04.8 +0.7**
PB11 IPOC Station P 149.65 133 *e*PKPdf **PKPdf 07 16 04.7 +0.7**
CRUC La Cruz 149.77 88 *e*P **PKPbc 07 16 08.8 -0.5**
SDDR Presa de Saban 149.87 52 *e*PKPbc **PKPbc 07 16 09.4 +0.4**
SDDR LR LR
comp=Z,1μm,22.0s
HORQ Saladito 150.01 84 *e*P **PKPdf 07 16 06.2 +1.3**
HJA Humahuaca 150.03 144 *e*P **PKPdf 07 16 07.3 +2.5**
MNMC Minye Minye 150.09 133 *e*PKPdf **PKPdf 07 16 06.6 +1.8**
MNMC *e*PKPbc **PKiKP 07 16 11.4 +0.6**
SOTA Rioblanco 150.10 87 *e*P **PKPbc 07 16 08.8 -1.5**
MOTC Monteria, Cord 150.11 74 *e*P **PKPbc 07 16 08.8 -0.9**
YOTC Yotoco, Valle 150.24 83 *e*P **PKPbc 07 16 08.2 -2.0**
SJCC San Jacinto, C 150.28 71 *e*P **PKPdf 07 16 07.5 +2.5**
PCON Cinco Dias 150.30 87 *e*P **PKPdf 07 16 06.2 +0.5**
YJA Yavi 150.75 142 *e*P **PKPdf 07 16 08.6 +2.6**
HELC Santa Helena 150.76 79 *e*PKPdf **PKPdf 07 16 04.5 -1.7**
HELC Santa Helena 150.76 79 *e*P **PKPbc 07 16 10.2 -1.6**
FLOC Florencia 151.07 88 *e*P **PKPbc 07 16 09.5 -2.6**
ANIL Santa Ana 151.12 82 *e*P **PKPdf 07 16 08.8 +2.2**
ZARC Zaragoza, Cauc 151.17 76 *e*P **PKPdf 07 16 08.8 +2.5**
CPUP Villa Florida 151.19 160 PKP **PKPdf 07 16 07.0 +0.9**
comp=Z,5.9nm,1.0s,baz=174,slow=1.5,SNR=18
CPUP PKPbc **PKiKP 07 16 12.8 +0.4**
comp=Z,58nm,1.0s,baz=218,slow=1.5,SNR=36
CPUP Villa Florida 151.19 160 *e*PKPdf **PKPdf 07 16 07.1 +1.1**
CPUP *e*PKPbc **PKiKP 07 16 12.4 0.0**
PRAC Prado 151.72 84 *e*PKPdf **PKPdf 07 16 07.9 +0.7**
PRAC *e*PKPbc **PKPbc 07 16 13.6 +0.1**
PRAC Prado 151.72 84 *e*P **PKPdf 07 16 09.5 +2.3**
PTBC PUERTO BERRIO 151.75 78 *e*P **PKPdf 07 16 10.2 +2.9**
CODC Agust¨›n Codaz 151.91 70 *e*P **PKPbc 07 16 11.5 -2.4**
ROSC El Rosal 152.15 81 PKP **PKPdf 07 16 09.4 +1.1**
comp=Z,6.6nm,0.9s,baz=74,slow=12,SNR=7.1
ROSC PKPbc **PKiKP 07 16 15.8 +0.5**
comp=Z,18nm,0.8s,baz=347,slow=11,SNR=16
ROSC El Rosal 152.15 81 *e*P **PKPdf 07 16 10.8 +2.5**
CHIC Chingaza 152.76 81 *e*P **PKPdf 07 16 10.2 +0.9**
VILC Villavicencio, 152.86 83 *e*P **PKPbc 07 16 15.5 -0.8**
LPAZ La Paz 152.92 130 PKP **PKPdf 07 16 11.2 +1.6**
comp=Z,6.7nm,1.0s,baz=230,slow=1.3,SNR=17
LPAZ PKPbc **PKiKP 07 16 18.3 +1.3**
comp=Z,22nm,1.1s,baz=194,slow=2.6,SNR=21
LPAZ La Paz 152.92 130 *e*PKPdf **PKPdf 07 16 10.9 +1.3**
LPAZ *e*PKPbc **PKiKP 07 16 18.6 +1.5**
SACV Santiago Islan 153.15 303 PFAKE 07 16 20.0 +3.4
SACV LR LR
comp=Z,712nm,20.0s
RUSC La Rusia 153.21 78 *e*PKPdf **PKPdf 07 16 10.3 +0.3**
RUSC La Rusia 153.21 78 *e*P **PKPdf 07 16 11.5 +1.5**
SJG San Juan 154.28 47 PFAKE 07 16 20.0 +1.0
SJG LR LR
comp=Z,945nm,21.0s
SDV Santo Domingo 154.87 71 PKP **PKPdf 07 16 12.4 +0.4**
comp=Z,10nm,1.0s,baz=276,slow=2.5,SNR=8.2
SDV PKPbc **PKPbc 07 16 20.6 0.0**
comp=Z,11nm,0.9s,baz=172,slow=0.2,SNR=7.1
SDV Santo Domingo 154.87 71 *e*PKPdf **PKPdf 07 16 12.3 +0.4**
SDV PKPbc **PKPbc 07 16 20.6 0.0**
SDV LR LR
comp=Z,1μm,22.0s
ANWB Willy Bob 157.60 41 PFAKE 07 16 30.0 +15
ANWB LR LR
comp=Z,2μm,22.0s
SIV San Ignacio 158.15 140 PKP **PKPdf 07 16 16.9 +1.0**
comp=Z,3.1nm,0.8s,baz=227,slow=3.6,SNR=5.4
SAML Samuel 160.98 121 *e*PKPdf **PKPdf 07 16 20.1 +1.0**
SAML LR LR
comp=Z,1μm,21.0s
GRGR Grenville 161.38 52 PFAKE 07 16 30.0 +10
GRGR LR LR
comp=Z,1μm,22.0s
BBGH Gun Hill 162.31 45 PFAKE 07 16 30.0 +9.5
BBGH LR LR
comp=Z,4μm,22.0s
PTGA Pitinga 166.68 96 PKP **PKPdf 07 16 24.1 -0.4**
comp=Z,4.5nm,0.7s,baz=52,slow=4.1,SNR=7.6
PTGA Pitinga 166.68 96 *e*PKPdf **PKPdf 07 16 24.6 +0.1**
PTGA LR LR
comp=Z,13μm,21.0s
RCBR Riachuelo 167.36 239 PFAKE 07 16 40.0 +15
RCBR LR LR
comp=Z,21μm,22.0s

IDC 01 06:58:48.9±1.3, 0.°63S×133.°48E, $h0^{km}$, mb4.7/3, mb1 4.9/4, mb1mx4.1/56, mbtmp4.8/4, ML5.1/1, Error ellipse: s-maj=35.9km s-min=29.5km az=97.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.23**	**264**	Pn	Pn		06 59 26.3	-0.9
	510nm,0.3s,baz=154,slow=3.8,SNR=9.0							
SIJI				Sn	Sn		06 59 51.8	-3.6
	339nm,0.3s,baz=285,slow=23,SNR=8.0							
ASAR	**Alice Springs**	**22.90**	**179**	P	P		07 03 54.8	+0.3
	36nm,1.0s,baz=359,slow=10,SNR=2.3							
MKAR	**Makanchi Array**	**65.00**	**324**	P	P		07 09 31.5	+0.7
	6.3nm,0.6s,baz=112,slow=7.9,SNR=7.2							
ILAR	**Eielson Array**	**86.14**	**25**	P	P		07 11 31.1	-0.6
	1.9nm,0.7s,baz=255,slow=4.7,SNR=5.7							
YKA	**Yellowknife Ar**	**100.54**	**26**	P	Pdif		07 12 37.8	-0.4
	0.3nm,0.7s,baz=294,slow=4.8,SNR=3.8							

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*IDC **01** 07:12:08.3±1.4, 0.°75S×133.°38E, $h0^{km}$, mb3.7/3, mb1 3.8/5, mb1mx3.6/57, mbtmp3.7/5, ML3.6/2, MS4.5/1, Ms1 4.5/1, ms1mx3.6/57, Error ellipse: s-maj=33.8km s-min=22.9km az=68.0*

*ISCJB **01** 07:12:09.5±1.0, 0.°69S±0.°08×133.°10E±0.°07, $h10^{km}$, mb3.6/3, MS4.4/1, Error ellipse: s-maj=12.0km s-min=9.3km az=30.7*

*DJA **01** 07:12:13.9±0.5, 1.°S±5.°×13.°3E±.°, $h10^{km}$, M3.8/4, MLv3.8/4*

ISC 01 07:12:11.9±1.1, 0.89S±0.09×133.°15E±0.06, $h10^{km}$, n8, σ1§86/10, mb3.6/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**1.20**	**121**	P	**Pb**		**07 12 35.1**	**+0.4**
RKPI				S	**Sb**		**07 12 51.7**	**+1.4**
SIJI	**Sorong**	**1.88**	**271**	Pn	**Pn**		**07 12 46.1**	**+2.0**
	21nm,0.3s,baz=99,slow=5.8,SNR=24							
SIJI				Sn	**Sb**		**07 13 11.4**	**+1.5**
	32nm,0.3s,baz=269,slow=22,SNR=12							
FAKI	**Fak Fak**	**2.21**	**204**	P	**Pn**		**07 12 50.6**	**+2.0**
FAKI				S	**Sb**		**07 13 17.7**	**-1.7**
WRA	**Warramunga Arr**	**18.97**	**177**	P	**P**		**07 16 32.2**	**-1.3**
	0.2nm,0.3s,baz=355,slow=12,SNR=7.4							
ASAR	**Alice Springs**	**22.65**	**178**	P	**P**		**07 17 13.1**	**-0.3**
	1.0nm,0.4s,baz=360,slow=12,SNR=10							
JCJ	**Chichijima**	**29.15**	**17**	LR	LR		07 27 13.4	
	comp=Z,880nm,19.5s,baz=156,slow=31							
MKAR	**Makanchi Array**	**65.01**	**324**	P	**P**		**07 22 50.6**	**-1.6**
	0.8nm,0.6s,baz=119,slow=8.6,SNR=9.4							
KURBB	**Kurchatov Arra**	**69.09**	**326**	P	**P**		**07 23 15.9**	**-2.1**
	0.3nm,0.6s,baz=116,slow=5.6,SNR=7.0							

*ISCJB **01** 07:17:52.4±0.8, 59.5°N±0.1°×30.2°W±0.2°, h14km, mb3.8/11, Error ellipse: s-maj=19.8km s-min=16.9km az=40.9*
*IDC **01** 07:17:52.0±0.9, 59.45°N×30.24°W, h0km, mb3.8/11, mb1 3.9/11, mb1mx3.6/78, mbtmp3.8/11, MS3.8/1, Ms1 3.8/1, ms1mx3.0/73, Error ellipse: s-maj=23.3km s-min=20.6km az=31.0*

ISC 01 07:17:54.1±0.9, 59.4°N±0.2°×30.2°W±0.1°, h14km, n12, σ0.9 74/11, mb3.8/11, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMIC	Jan Mayen	14.60	29	LR	LR	07 25 28.5	
	comp=Z,415nm,20.5s,baz=248,slow=31						
ARCES	ARCESS Array B	25.06	43	P	P	07 23 17.3	-0.3
	1.5nm,0.9s,baz=294,slow=9.0,SNR=4.3						
ESDC	Sonseca Array	25.81	128	P	P	07 23 25.4	+0.8
	0.7nm,0.7s,baz=330,slow=8.9,SNR=4.8						
YKA	Yellowknife Ar	38.31	312	P	P	07 25 13.2	-0.5
	0.6nm,0.7s,baz=57,slow=9.3,SNR=8.5						
BRTR	Keskin Array B	43.89	87	P	P	07 26 00.8	+0.8
	0.4nm,0.7s,baz=309,slow=4.6,SNR=2.5						
ILAR	Eielson Array	47.28	329	P	P	07 26 27.0	+0.6
	0.8nm,0.8s,baz=29,slow=7.1,SNR=7.2						
AKTO	Aktyubinsk	47.87	60	P	P	07 26 31.4	+0.3
	1.8nm,0.7s,baz=314,slow=12,SNR=4.7						
BVAR	Borovoye Array	51.09	50	P	P	07 26 55.5	-0.1
	1.2nm,0.8s,baz=305,slow=6.5,SNR=7.3						
TORD	Torodi Ar. Bea	51.92	139	P	P	07 27 00.9	-1.4
	0.7nm,0.9s,baz=338,slow=6.4,SNR=3.7						
KURBB	Kurchatov Arra	56.09	47	P	P	07 27 31.9	-0.4
	2.9nm,0.9s,baz=324,slow=7.2,SNR=17						
MKAR	Makanchi Array	60.65	47	P	P	07 28 04.0	-0.3
	2.4nm,0.7s,baz=340,slow=5.0,SNR=20						
SIV	San Ignacio	79.25	210	P	P	07 29 59.2	+0.5
	2.0nm,1.0s,baz=17,slow=2.6,SNR=5.3						

*ISCJB **01** 07:29:28.0±0.3, 41.0°N±0.03°×28.35°E±0.02, h10km±3km, Error ellipse: s-maj=5.2km s-min=3.1km az=178.1*
*ISK **01** 07:29:27.8, 41.09°N×28.37°E, h14km, ML2.5/18*
*CSEM **01** 07:29:28.1±0.1, 41.09°N×28.35°E, h10km, ML2.5, Error ellipse: s-maj=3.5km s-min=2.2km az=173.0*
*DDA **01** 07:29:28.1, 41.04°N×28.37°E, h7km, Ml2.2*

ISC 01 07:29:28.3±0.8, 41.08°N±0.03°×28.35°E±0.02, h16km±5km, n71, σ0.8 88/89, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELBA	Catalca	0.09	45	*i* P	Pg	07 29 31.2	-0.5
ELBA				*i* S	Sg	07 29 33.0	-0.9
ELBA	Catalca	0.09	45	P	Pg	07 29 31.2	-0.5
ELBA				S	Sg	07 29 33.0	-0.9
SLVT	Silivri	0.18	325	PG	Pg	07 29 32.7	-0.1
SLVT				SG	Sg	07 29 35.8	0.0
SLVT	Silivri	0.18	325	*e*Pg	Pg	07 29 32.7	-0.1
SLVT				*e*Sg	Sg	07 29 35.8	0.0
CTKS	Kestanelik-??a	0.20	38	PG	Pg	07 29 32.6	-0.4
CTKS	Kestanelik-??a	0.20	38	*e*Pg	Pg	07 29 32.6	-0.4
BGKT	Bogazkoy	0.34	73	PG	Pg	07 29 35.1	-0.2
BGKT				SG	Sg	07 29 39.7	-0.4
BGKT	Bogazkoy	0.34	73	*e*Pg	Pg	07 29 35.1	-0.2
BGKT				*e*Sg	Sg	07 29 39.7	-0.4
SBT3	Marmara-Eregli	0.34	235	PG	Pg	07 29 35.6	+0.3
SBT3	Marmara-Eregli	0.34	235	*e*Pg	Pg	07 29 35.6	+0.3
CTYL	Yalikoy Yolu	0.40	354	PG	Pg	07 29 35.8	-0.5
CTYL	Yalikoy Yolu	0.40	354	*e*Pg	Pg	07 29 35.8	-0.5
ISK	Istanbul-Kandi	0.54	92	PG	Pg	07 29 38.3	-0.7
ISK	Istanbul-Kandi	0.54	92	*e*Pg	Pg	07 29 38.3	-0.7
KAVV	Kandilli-Istan	0.54	92	PG	Pg	07 29 38.3	-0.7
KAVV	Kandilli-Istan	0.54	92	*e*Pg	Pg	07 29 38.3	-0.7
KLYT	Kilyos	0.55	72	PG	Pg	07 29 38.9	-0.3
KLYT	Kilyos	0.55	72	*e*Pg	Pg	07 29 38.9	-0.3
SBT5	Esenkoy-Cinarc	0.61	138	PG	Pb	07 29 40.2	-0.2
SBT5	Esenkoy-Cinarc	0.61	138	*e*Pg	Pb	07 29 40.2	-0.2
TKR	Tekirdag	0.62	262	PG	Pb	07 29 41.1	+0.4
TKR	Tekirdag	0.62	262	*e*Pg	Pb	07 29 41.1	+0.4
BUY	Buyukada	0.63	111	PG	Pb	07 29 41.1	+0.3
BUY	Buyukada	0.63	111	*e*Pg	Pb	07 29 41.1	+0.3
ARMT	Armutlu	0.65	143	PG	Pg	07 29 40.9	-0.1
ARMT	Armutlu	0.65	143	*e*Pg	Pg	07 29 40.9	-0.1
KCTX	Karacabey (Bur	0.82	179	PG	Pb	07 29 44.9	+0.9
KCTX	Karacabey (Bur	0.82	179	*e*Pg	Pb	07 29 44.9	+0.9
EDC	Edincik	0.82	207	PG	Pg	07 29 44.1	-0.2
EDC	Edincik	0.82	207	*e*Pg	Pg	07 29 44.1	-0.2
MDNY	Mudanya-Bursa	0.82	150	PG	Pg	07 29 43.7	-0.6
MDNY	Mudanya-Bursa	0.82	150	*e*Pg	Pg	07 29 43.7	-0.6
YLV	Yalova	0.93	123	PG	Pb	07 29 46.1	0.0
YLV	Yalova	0.93	123	*e*Pg	Pb	07 29 46.1	0.0
SART	Tekirdag	0.97	246	*i* P	Pg	07 29 44.8	-2.2
SART				*i* S	Sg	07 29 57.9	-1.8
SART	Tekirdag	0.97	246	*i* P	Pg	07 29 44.5	-2.5
SART				*i* S	Sg	07 29 57.8	-1.9
SART	Tekirdag	0.97	246	P	Pg	07 29 44.8	-2.2
SART				S	Sg	07 29 57.8	-1.9
RKY	Sarkoy-Tekirda	0.97	246	PG	Pg	07 29 46.5	-0.6
RKY	Sarkoy-Tekirda	0.97	246	*e*Pg	Pg	07 29 46.5	-0.6
SILT	Sile	0.98	85	PG	Pg	07 29 46.7	-0.6
SILT	Sile	0.98	85	*e*Pg	Pg	07 29 46.7	-0.6
KNL	Bal¨–kesir	1.02	218	*i* P	Pg	07 29 47.8	-0.3
KNL	Bal¨–kesir	1.02	218	*i* P	Pg	07 29 47.1	-1.0
KNL				*i* S	Sg	07 30 01.5	0.0
HRT	Hereke	1.03	104	PG	Pg	07 29 47.3	-1.0
HRT	Hereke	1.03	104	*e*Pg	Pg	07 29 47.3	-1.0
IGD	Bursa	1.04	141	*i* P	Pg	07 29 46.2	-2.2
IGD				*i* S	Sg	07 30 01.2	-1.0
KRBG	Karabiga-Canak	1.05	229	PG	Pg	07 29 48.1	-0.5
KRBG	Karabiga-Canak	1.05	229	*e*Pg	Pg	07 29 48.1	-0.5
KESN	Edirne-Kesan	1.29	259	*i* P	Pn	07 29 51.5	-0.4
KESN				*i* S	Sb	07 30 08.6	-0.1
KESN	Edirne-Kesan	1.29	259	P	Pn	07 29 51.5	-0.4
KESN				S	Sb	07 30 08.6	-0.1
KAND	Kocaeli-Kandir	1.40	89	*i* P	Pn	07 29 53.1	+0.1
KAND				*i* S	Sn	07 30 11.8	+0.7
KAND	Kocaeli-Kandir	1.40	89	P	Pn	07 29 53.1	+0.1
KAND				S	Sn	07 30 11.8	+0.7
LPK	Lapseki	1.40	240	PN	Pn	07 29 53.1	+0.1
LPK	Lapseki	1.40	240	*e*Pn	Pn	07 29 53.1	+0.1
EDRB	Edirne	1.43	303	PN	Pn	07 29 53.8	+0.4
EDRB	Edirne	1.43	303	*e*Pn	Pn	07 29 53.8	+0.4
ERIK	Erikli-Kesan	1.45	254	PN	Pn	07 29 54.4	+0.7
ERIK	Erikli-Kesan	1.45	254	*e*Pn	Pn	07 29 54.4	+0.7
SAUV	Serdivan-Sakar	1.54	102	PN	Pn	07 29 55.2	+0.2
SAUV	Serdivan-Sakar	1.54	102	*e*Pn	Pn	07 29 55.2	+0.2
GELI	Tayfur-Gelibol	1.58	245	PN	Pn	07 29 55.9	+0.4
GELI	Tayfur-Gelibol	1.58	245	*e*Pn	Pn	07 29 55.9	+0.4
ENEZ	Enez	1.70	259	PN	Pn	07 29 58.7	+1.5
ENEZ	Enez	1.70	259	*e*Pn	Pn	07 29 58.7	+1.5
ALN	Alexandroupoli	1.75	265	PN	Pn	07 29 58.7	+0.8
ALN	Alexandroupoli	1.75	265	*e*Pn	Pn	07 29 58.7	+0.8
TVSB	Tavsanli	1.84	152	PN	Pn	07 30 00.7	+1.5
TVSB	Tavsanli	1.84	152	*e*Pn	Pn	07 30 00.7	+1.5
SAHE	Sakarya_HENDEK	1.91	96	*i* P	Pn	07 29 59.2	-0.9
SAHE				*i* S	Sb	07 30 27.4	+1.1
BAYC	CANAKKALE_Bayr	1.92	226	*i* P	Pn	07 30 01.6	+1.4
BAYC				*i* S	Sb	07 30 26.9	+0.4
BAYC	CANAKKALE_Bayr	1.92	226	P	Pn	07 30 01.6	+1.4
BAYC				S	Sb	07 30 26.9	+0.4

IDC 01 07:33:19.2±1.9, 2.57°N×90.12°E, h0km, mb3.7/4, mb1 3.9/5, mb1mx3.5/66, mbtmp3.8/5, ML3.7/1, Error ellipse: s-maj=61.5km s-min=26.8km az=49.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	Pallekele	10.48	297	Pn	Pn	07 35 50.9	0.0
	0.6nm,0.3s,baz=117,slow=11,SNR=4.5						
H08S3	Diego Garcia H	20.30	240	T	T	07 58 46.1	
	baz=60,slow=75,SNR=139						
H08S2	Diego Garcia H	20.30	240	T	T	07 58 51.5	
	baz=60,slow=75,SNR=52						
H08S1	Diego Garcia H	20.32	240	T	T	07 58 56.2	
	baz=60,slow=75,SNR=51						
H01W3	Cape Leeuwin H	43.55	151	T	T	08 27 53.9	
	baz=314						
H01W2	Cape Leeuwin H	43.56	151	T	T	08 28 06.7	
	baz=314						
H01W1	Cape Leeuwin H	43.56	151	T	T	08 27 54.9	
	baz=314						
MKAR	Makanchi Array	44.57	352	P	P	07 41 32.7	-0.3
	0.6nm,0.4s,baz=169,slow=8.8,SNR=9.1						
SONM	Songino Array	47.23	15	P	P	07 41 54.6	+0.4
	1.7nm,0.5s,baz=196,slow=10.0,SNR=9.4						
WRA	Warramunga Arr	48.82	119	P	P	07 42 06.6	-0.2
	0.6nm,0.9s,baz=298,slow=8.5,SNR=3.4						
KURBB	Kurchatov Arra	48.87	350	P	P	07 42 06.3	-0.3
	0.4nm,0.6s,baz=176,slow=6.4,SNR=6.5						
TXAR	Lajitas Array	145.63	22	PKPbc	PKPdf	07 52 59.5	-1.0
	0.6nm,0.8s,baz=328,slow=3.9,SNR=6.6						

IDC 01 07:50:53.6±1.6, 0.15°N×125.85°E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.3/57, mbtmp3.5/4, Error ellipse: s-maj=167.2km s-min=21.9km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.64	158	P	P	07 55 45.0	-0.7
	0.7nm,0.5s,baz=336,slow=12,SNR=13						
ASAR	Alice Springs	24.94	162	P	P	07 56 19.3	+0.5
	0.2nm,0.3s,baz=342,slow=9.4,SNR=8.7						
MKAR	Makanchi Array	60.01	327	P	P	08 01 01.0	-1.2
	0.5nm,0.7s,baz=126,slow=9.3,SNR=3.7						
KURBB	Kurchatov Arra	64.29	329	P	P	08 01 31.5	+0.8
	0.6nm,0.6s,baz=123,slow=6.0,SNR=4.3						

IDC 01 08:04:48.2±12.0, 15.35°S×177.98°W, h449km±141km, mb3.0/7, mb1 3.4/7, mb1mx3.0/45, mbtmp3.8/7, Error ellipse: s-maj=87.7km s-min=34.3km az=153.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	40.26	239	P	P	08 11 44.4	-0.4
	0.9nm,0.5s,baz=86,slow=7.6,SNR=5.5						
WRA	Warramunga Arr	45.55	257	P	P	08 12 26.4	-0.2
	0.3nm,0.4s,baz=95,slow=8.4,SNR=13						
ASAR	Alice Springs	45.92	252	P	P	08 12 29.6	0.0
	3.1nm,0.4s,baz=86,slow=8.3,SNR=37						
NVAR	Mina Array Bea	77.31	44	P	P	08 15 55.5	-0.2
	0.4nm,0.6s,baz=226,slow=8.5,SNR=5.1						
ILAR	Eielson Array	83.31	13	P	P	08 16 26.3	0.0
	0.3nm,0.4s,baz=228,slow=4.8,SNR=6.1						
TXAR	Lajitas Array	84.29	58	P	P	08 16 32.4	+0.3
	0.6nm,0.8s,baz=216,slow=6.2,SNR=6.4						
YKA	Yellowknife Ar	91.85	25	P	P	08 17 06.7	-0.1
	0.1nm,0.7s,baz=250,slow=4.7,SNR=4.3						
BRTR	Keskin Array B	143.23	318	PKP	PKPdf	08 23 30.0	-0.8
	1.2nm,0.8s,baz=85,slow=2.6,SNR=7.3						

*ISCJB **01** 08:08:07.3±0.8, 31.67S±0.06°×177.6W±0.1°, h35km, mb4.4/8, Error ellipse: s-maj=16.9km s-min=6.7km az=15.7*
*NEIC **01** 08:08:10.5±1.2, 31.63S×177.54W, h50km±11km, mb4.4/5, Error ellipse: s-maj=18.3km s-min=11.2km az=123.0*
*IDC **01** 08:08:11.6±7.6, 31.51S×178.00W, h29km±55km, mb4.1/3, mb1 4.2/5, mb1mx3.7/44, mbtmp4.2/5, ML3.9/2, Error ellipse: s-maj=63.4km s-min=23.0km az=115.0*

ISC 01 08:08:08.9±0.9, 31.65S±0.07°×177.5W±0.1°, h35km, n20, σ1.9 36/24, mb4.6/8, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	2.42	350	Pn	Pn	08 08 47.3	+1.2
	104nm,0.3s,baz=221,slow=23,SNR=6.1						
RAO				Sn	Sn	08 09 12.6	-1.9
	182nm,0.3s,baz=91,slow=22,SNR=7.4						
RAO	Raoul Island	2.42	350	*e*Pn	Pn	08 08 46.8	+0.8
RAO				*e*Sn	Sn	08 09 12.6	-1.9
MXZ	Matakaoa Point	6.85	209	*e*Pn	Pn	08 09 47.4	+0.5
URZ	Urewera	7.96	213	Pn	Pn	08 10 02.4	+0.4
	0.7nm,0.3s,baz=274,slow=4.1,SNR=5.0						
URZ				Sn	Sn	08 11 29.1	-1.6
	4.6nm,0.3s,baz=106,slow=19,SNR=20						
URZ	Urewera	7.96	213	*e*Pn	Pn	08 10 03.3	+1.3
URZ				*e*Sn	Sn	08 11 29.1	-1.6
OUZ	Omahuta	8.28	242	*e*Pn	Pn	08 10 09.7	+3.2
BKZ	Black Stump Fm	8.98	212	*e*Pn	Pn	08 10 16.1	+0.1
STKA	Stephens Creek	34.67	259	P	P	08 14 55.9	+0.7
	0.8nm,0.7s,baz=114,slow=10.0,SNR=3.2						
STKA	Stephens Creek	34.67	259	*e*P	P	08 14 55.6	+0.4
	1.0nm,1.3s						
TAOE	Nuku Hiva Isla	41.39	65	*e*P	P	08 15 53.6	+1.5
	144nm,1.2s						
AS01	Alice Springs	43.48	268	*e*P	P	08 16 08.3	-0.7
AS31	Alice Springs	43.52	268	*e*P	P	08 16 08.4	-0.9
	1.0nm,0.4s						
ASAR	Alice Springs	43.52	268	P	P	08 16 08.4	-0.9
	1.4nm,0.3s,baz=106,slow=7.3,SNR=24						
WB2	Warramunga Arr	44.61	273	*e*P	P	08 16 17.1	-0.9
	16nm,1.2s						
WRAB	Tennant Creek	44.62	273	*e*P	P	08 16 17.2	-0.9
	12nm,1.1s						
WR1	Warramunga Arr	44.62	273	*e*P	P	08 16 17.1	-1.0
	5.8nm,0.6s						
WRA	Warramunga Arr	44.62	273	P	P	08 16 17.1	-1.0
	4.2nm,0.3s,baz=111,slow=8.0,SNR=218						
VPDC	Valencia Peak	85.15	43	*e*P	P	08 20 40.1	-1.3
FIA0	FINESS Array S	146.48	340	*e*PKPdf	PKPab	08 27 47.4	+0.8
FINES	FINESS Array B	146.48	340	PKPbc	PKPab	08 27 47.4	+0.8
	1.3nm,0.6s,baz=90,slow=3.1,SNR=4.4						

*DDA **01** 08:15:08.2, 39.69N×29.56E, h8km, Ml2.5*
*ISCJB **01** 08:15:09.9±0.4, 39.66N±0.03°×29.48E±0.03, h0km, Error ellipse: s-maj=3.9km s-min=3.5km az=145.9*
*CSEM **01** 08:15:09.9±0.2, 39.65N×29.47E, h1km, ML2.1, Error ellipse: s-maj=4.6km s-min=4.2km az=112.0, Suspected Mining explosion.*
*ISK **01** 08:15:09.2, 39.62N×29.42E, h5km, ML2.1/4, Suspected Mining explosion.*

ISC 01 08:15:09.4±0.8, 39.65N±0.02°×29.48E±0.02, h0km, n36, σ0.9 59/54, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVSB	Tavsanli	0.20	184	PG	Pg	08 15 13.2	0.0
TVSB	Tavsanli	0.20	184	*e*Pg	Pg	08 15 13.2	0.0
GDZ	Gediz	0.56	180	*i* P	Pg	08 15 19.5	-0.5
GDZ	Gediz	0.56	180	P	Pg	08 15 19.5	-0.5
DURS	Dursunbey	0.78	267	*i* P	Pg	08 15 24.2	-0.1
DURS				*i* S	Sb	08 15 36.2	-0.8
DURS	Dursunbey	0.78	267	P	Pg	08 15 24.2	-0.1
DURS				S	Sb	08 15 36.2	-0.8
BORA	Eskisehir	0.79	72	PG	Pb	08 15 25.8	-0.3
BORA				SG	Sb	08 15 37.4	+0.1
BORA	Eskisehir	0.79	72	*e*Pg	Pb	08 15 25.8	-0.3
BORA				*e*Sg	Sb	08 15 37.4	+0.1
DEMI	Demirci	0.84	225	*i* P	Pb	08 15 27.5	+0.5
DEMI	Demirci	0.84	225	P	Pb	08 15 27.5	+0.5
MDNY	Mudanya-Bursa	0.85	328	PG	Pg	08 15 25.9	+0.1
MDNY	Mudanya-Bursa	0.85	328	*e*Pg	Pg	08 15 25.9	+0.1
YLV	Yalova	0.92	355	PG	Pb	08 15 28.3	-0.1
YLV				SG	Sb	08 15 41.2	-0.1
YLV	Yalova	0.92	355	*e*Pg	Pb	08 15 28.3	-0.1
YLV				*e*Sg	Sb	08 15 41.2	-0.1
ARMT	Armutlu	1.03	333	PG	Pg	08 15 29.1	-0.2
ARMT				SG	Sb	08 15 44.4	0.0
ARMT	Armutlu	1.03	333	*e*Pg	Pg	08 15 29.1	-0.2
ARMT				*e*Sg	Sb	08 15 44.4	0.0
SBT5	Esenkoy-Cinarc	1.09	335	PN	Pg	08 15 30.3	0.0
SBT5				SN	Sb	08 15 45.9	+0.1
SBT5	Esenkoy-Cinarc	1.09	335	*e*Pn	Pg	08 15 30.3	0.0
SBT5				*e*Sn	Sb	08 15 45.9	+0.1
GULT	Gulveren	1.12	45	PN	Pn	08 15 32.6	+0.2
GULT	Gulveren	1.12	45	*e*Pn	Pn	08 15 32.6	+0.2
MANT	Manisa	1.36	212	*i* P	Pn	08 15 35.8	-0.1
MANT				*i* S	Sn	08 15 55.5	+0.8
MANT	Manisa	1.36	212	P	Pn	08 15 35.8	-0.1
MANT				S	Sn	08 15 55.5	+0.8
STEP	BALIKESIR_Sava	1.39	259	*i* P	Pb	08 15 36.1	-0.1
STEP				*i* S	Sn	08 15 57.1	+2.0
STEP	BALIKESIR_Sava	1.39	259	P	Pb	08 15 36.1	-0.1
STEP				S	Sn	08 15 57.1	+2.0
BALY	Balya	1.44	274	*i* P	Pn	08 15 36.0	-0.8
BALY				*i* S	Sg	08 15 54.9	-0.8
BALY	Balya	1.44	274	P	Pn	08 15 36.0	-0.8
BALY				S	Sg	08 15 54.8	-0.8
SILT	Sile	1.51	5	PN	Pg	08 15 38.4	0.0
SILT	Sile	1.51	5	*e*Pn	Pg	08 15 38.4	0.0
SVRH	Sivrihisar-ESK	1.59	96	PN	Pb	08 15 39.4	-0.4
SVRH	Sivrihisar-ESK	1.59	96	*e*Pn	Pb	08 15 39.4	-0.4
AUSIV	SIVRIHISAR	1.61	97	PN	Pb	08 15 39.7	-0.3
AUSIV	SIVRIHISAR	1.61	97	*e*Pn	Pb	08 15 39.7	-0.3
SART	Tekirdag	2.05	301	*i* P	Pb	08 15 46.5	-1.0
SART				*i* S	Sb	08 16 14.2	+0.7
SART	Tekirdag	2.05	301	P	Pb	08 15 46.5	-1.0
SART				S	Sb	08 16 14.2	+0.7
BAYC	CANAKKALE_Bayr	2.26	273	*i* P	Pb	08 15 51.1	0.0
BAYC	CANAKKALE_Bayr	2.26	273	P	Pb	08 15 51.2	0.0

*CSEM **01** 08:21:19.9±0.1, 58.89N×18.43E, h2km, ML2.2, Error ellipse: s-maj=3.6km s-min=3.0km az=105.0, Mining explosion.*
*UPP **01** 08:21:19.7±0.5, 58.87N×18.46E, h1km±3km, ML2.5*
*HEL **01** 08:21:20.5±0.0, 58.88N×18.46E, h0km, ML2.2, ML2.5(UPP), Explosion*
*BER **01** 08:21:21.9±3.6, 58.94N×18.35E, h0km, ML2.4(NAO), Suspected explosion*
*IDC **01** 08:21:22.7±1.9, 59.05N×18.29E, h0km, mb1 3.4/4, mb1mx3.0/63, mbtmp3.3/4, ML3.0/4, Error ellipse: s-maj=25.6km s-min=6.8km az=1.0*
*NAO **01** 08:21:24.4±1.2, 59.27N×18.33E, ML2.4*

ISC 01 08:21:19.4±1.1, 58.86°N±0.02°×18.42E±0.02, h4km±10km, n95, σ0.9 98/134, Baltic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NYNU	Nynaeshamn	0.26	304	P	Pg	08 21 24.9	+0.6
NYNU				S	Sg	08 21 28.4	+0.7
NYNU	Nynaeshamn	0.26	304	*i* P	Pg	08 21 24.9	+0.6
NYNU				*i* S	Sg	08 21 28.4	+0.7
NYNU	Nynaeshamn	0.26	304	*i* P	Pg	08 21 24.9	+0.6
NYNU				*i* S	Sg	08 21 28.4	+0.7
NRTU	Norrtaelje	0.82	8	P	Pg	08 21 34.9	-0.3
NRTU				S	Sg	08 21 45.6	-0.2
NRTU	Norrtaelje	0.82	8	*i* P	Pg	08 21 34.9	-0.3
NRTU				*i* S	Sg	08 21 45.6	-0.2
NRTU	Norrtaelje	0.82	8	*i* P	Pg	08 21 34.9	-0.3
NRTU				*i* S	Sg	08 21 45.6	-0.2
VIKU	Vikbolandet	0.97	249	P	Pb	08 21 38.2	-0.5
VIKU	Vikbolandet	0.97	249	*e*P	Pb	08 21 38.2	-0.5
VIKU	Vikbolandet	0.97	249	*e*P	Pb	08 21 38.2	-0.5
UPP	Uppsala	1.08	338	P	Pg	08 21 40.0	0.0
UPP	Uppsala	1.08	338	*e*P	Pg	08 21 40.0	0.0
UPP	Uppsala	1.08	338	P	Pg	08 21 40.0	0.0
ESKU	Eskilstuna	1.11	290	P	Pb	08 21 40.5	-0.6
ESKU	Eskilstuna	1.11	290	*e*P	Pb	08 21 40.5	-0.6
ESKU	Eskilstuna	1.11	290	*e*P	Pb	08 21 40.5	-0.6
FIBU	Brunna	1.17	333	P	Pb	08 21 41.6	-0.7
FIBU	Brunna	1.17	333	*e*P	Pb	08 21 41.6	-0.7
FIBU	Brunna	1.17	333	*e*P	Pb	08 21 41.6	-0.7
GOTU	Gotland	1.19	176	P	Pb	08 21 41.2	-1.2
GOTU				S	Sb	08 21 57.2	-0.8
GOTU	Gotland	1.19	176	*e*P	Pb	08 21 41.2	-1.2
GOTU				*e*S	Sb	08 21 57.2	-0.8
GOTU	Gotland	1.19	176	*e*P	Pb	08 21 41.2	-1.2
GOTU				*e*S	Sb	08 21 57.2	-0.8
BACU	Backbrunna	1.20	327	P	Pn	08 21 42.2	-0.7
BACU	Backbrunna	1.20	327	*e*P	Pn	08 21 42.2	-0.7
BACU	Backbrunna	1.20	327	*e*P	Pn	08 21 42.2	-0.7
FLYU	Flymyra	1.30	348	P	Pb	08 21 43.9	-0.4
FLYU				S	Sb	08 22 00.4	-0.9
FLYU	Flymyra	1.30	348	*e*P	Pb	08 21 43.9	-0.4
FLYU				*e*S	Sb	08 22 00.4	-0.9
FLYU	Flymyra	1.30	348	*e*P	Pb	08 21 43.9	-0.4
FLYU				*e*S	Sb	08 22 00.4	-0.9
GRAU	Graesoe	1.48	2	P	Pb	08 21 46.7	-0.7
GRAU	Graesoe	1.48	2	*e*P	Pb	08 21 46.7	-0.7
GRAU	Graesoe	1.48	2	*e*P	Pb	08 21 46.7	-0.7
OSTU	Oestervaala	1.52	335	P	Pb	08 21 47.7	-0.4
OSTU	Oestervaala	1.52	335	*e*P	Pb	08 21 47.7	-0.4
OSTU	Oestervaala	1.52	335	*e*P	Pb	08 21 47.7	-0.4
FORU	Forsmark	1.53	356	P	Pb	08 21 47.7	-0.6
FORU	Forsmark	1.53	356	*e*P	Pb	08 21 47.7	-0.6
FORU	Forsmark	1.53	356	*e*P	Pb	08 21 47.7	-0.6
AAL	Aland	1.54	31	*e*P	Pn	08 21 45.6	-2.1
AAL				*e*S	Sn	08 22 05.2	-2.9
AAL	Aland	1.54	31	*e*P	Pn	08 21 45.6	-2.1
VSTU	Vaestervik	1.56	220	P	Pb	08 21 48.6	-0.3
VSTU	Vaestervik	1.56	220	*e*P	Pb	08 21 48.6	-0.

NRA0	**NORESS Array S**	**3.95 301**	Pg	**Pb**	**08 22 30.0 +0.5**
	SNR=1.6				
NRA0			Lg	Lg	08 23 23.6
	SNR=7.3				
NRA0	**NORESS Array S**	**3.95 301**	Pn	**Pn**	**08 22 20.8 +0.1**
	baz=110,slow=11				
NRA0			Pg	**Pb**	**08 22 30.0 +0.5**
	baz=111,slow=16				
NRA0			Lg	Lg	08 23 23.6
	baz=109,slow=28				
NB2	**NORSAR Subarra**	**4.23 304**	Pn	**Pn**	**08 22 25.2 +0.6**
	baz=127,slow=12				
NB2			Pg	**Pb**	**08 22 34.6 +0.3**
NB2			Lg	Lg	08 23 30.5
	baz=116,slow=28				
NB2	**NORSAR Subarra**	**4.23 304**	Pn	**Pn**	**08 22 25.2 +0.6**
	baz=127,slow=12,SNR=2.5				
NB2			Lg	Lg	08 23 30.5
	SNR=4.8				
NB2	**NORSAR Subarra**	**4.23 304**	Pn	**Pn**	**08 22 25.2 +0.6**
	baz=127,slow=12				
NB2			Pg	**Pb**	**08 22 34.6 +0.3**
NB2			Lg	Lg	08 23 30.5
	baz=116,slow=28				
NOA	**NORSAR Array B**	**4.23 304**	Pn	**Pn**	**08 22 24.0 -0.6**
	comp=Z,1.0nm,0.3s,baz=109,slow=14,SNR=23				
NOA			Pg	**Pb**	**08 22 34.5 +0.3**
	comp=Z,1.4nm,0.3s,baz=278,slow=18,SNR=16				
NOA			Lg	Lg	08 23 29.5
	comp=Z,2.9nm,0.3s,baz=254,slow=18,SNR=7.3				
FIA0	**FINESS Array S**	**4.62 53**	Pn	**Pn**	**08 22 31.4 +1.5**
	baz=224,slow=12				
FIA0			Sn	**Sn**	**08 23 24.7 +0.8**
	baz=244,slow=28				
FIA0			Lg	Lg	08 23 42.1
	baz=239,slow=28				
FIA0	**FINESS Array S**	**4.62 53**	Pn	**Pn**	**08 22 31.5 +1.5**
	baz=224,slow=12,SNR=8.8				
FIA0			Sn	**Sn**	**08 23 24.7 +0.8**
	baz=244,slow=23,SNR=3.6				
FIA0			Lg	Lg	08 23 42.1
	SNR=7.9				
FIA0	**FINESS Array S**	**4.62 53**	Pn	**Pn**	**08 22 31.4 +1.5**
	baz=224,slow=12				
FIA0			Sn	**Sn**	**08 23 24.7 +0.8**
	baz=244,slow=28				
FIA0			Lg	Lg	08 23 42.1
	baz=239,slow=28				
FINES	**FINESS Array B**	**4.62 53**	Pn	**Pn**	**08 22 31.4 +1.5**
	comp=Z,0.5nm,0.3s,baz=231,slow=12,SNR=22				
FINES			Pg	**Pb**	**08 22 41.9 +1.0**
	comp=Z,0.8nm,0.3s,baz=246,slow=13,SNR=12				
FINES			Sn	**Sn**	**08 23 25.3 +1.3**
	comp=Z,1.3nm,0.3s,baz=247,slow=22,SNR=8.4				
FINES			Lg	Lg	08 23 42.7
	comp=Z,1.6nm,0.3s,baz=234,slow=24,SNR=7.1				
ARA0	**ARCESS Array S**	**11.14 13**	Pn	**Pn**	**08 23 57.6 -1.6**
	baz=198,slow=16				
ARA0	**ARCESS Array S**	**11.14 13**	Pn	**Pn**	**08 23 57.6 -1.6**
	baz=198,slow=16				
ARCES	**ARCESS Array B**	**11.14 13**	Pn	**Pn**	**08 23 57.6 -1.6**
	comp=Z,0.5nm,0.3s,baz=192,slow=14,SNR=28				

*ROM **01** 08:39:42.9±0.0, 44°.864N±0°.002×10°.958E±0°.001, h9km, ML3.4/15*
*ISCJB **01** 08:39:43.0±0.2, 44°.93N±0°.01×10°.94E±0°.02, h13km±2km, Error ellipse: s-maj=3.1km s-min=2.2km az=32.4*
*CSEM **01** 08:39:43.4±0.1, 44°.92N×10°.99E, h8km, ML3.5/6, Error ellipse: s-maj=3.7km s-min=3.0km az=127.0*
*IASPEI **01** 08:39:43.6±0.8, 44°.89N±0°.02×10°.94E±0°.02, h12km±4km, Error ellipse: s-maj=3.3km s-min=2.9km az=88.9, GT5 selection from ISC bulletin GT5 identified by Bond˜¡r and McLaughlin (2009) selection criteria Bond˜¡r and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
*STR **01** 08:39:44.9±1.0, 45°.5N×1°.1E±°, h5km, M3.6/7, MLv3.6/7*
*PRU **01** 08:39:44.2, 44°.71N×11°.12E, h24km*
*LDG **01** 08:39:44.4±0.2, 44°.89N×10°.99E, h2km, Ml3.6/16, Error ellipse: s-maj=4.4km s-min=3.5km az=75.0*

ISC 01 08:39:43.3±0.7, 44°.91N±0°.02×10°.94E±0°.02, h13km±3km, n171, σ1§49/221, 8C-25D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
T0827	**Moglia (MN)**	**0.03**	**345**	⇓*e*P			**Pg**	**08 39 45.8**	**+0.1**
T0827				⇓*e*S			**Sg**	**08 39 48.0**	**+0.7**
T0827	**Moglia (MN)**	**0.03**	**345**	*e*P			**Pg**	**08 39 45.8**	**+0.1**
T0827				*e*S			**Sg**	**08 39 49.0**	**+1.7**
NDIM	**Novi di Modena**	**0.04**	**233**	*e*P			**Pg**	**08 39 44.9**	**-0.8**
NDIM				*e*S			**Sg**	**08 39 47.1**	**-0.3**
NDIM					AML		AML		
NDIM					AML		AML		
NDIM					AML		AML		
NDIM					AML		AML		
NDIM					AML		AML		
T0818	**Loc. Fossa, Co**	**0.07**	**69**	⇓*i*P			**Pg**	**08 39 45.9**	**0.0**
T0818				⇓*i*S			**Sg**	**08 39 49.2**	**+1.4**
T0818	**Loc. Fossa, Co**	**0.07**	**69**	*i* P			**Pg**	**08 39 45.9**	**0.0**
T0818				*i* S			**Sg**	**08 39 49.2**	**+1.4**
T0828	**Loc. Fossoli,**	**0.08**	**194**	⇑*i*P			**Pg**	**08 39 45.2**	**-0.9**
T0828				⇑*i*S			**Sg**	**08 39 47.8**	**-0.2**
T0828	**Loc. Fossoli,**	**0.08**	**194**	*i* P			**Pg**	**08 39 45.2**	**-0.9**
T0828				*i* S			**Sg**	**08 39 47.8**	**-0.2**
T0825	**Gonzaga (MN)**	**0.09**	**313**		AML		AML		
T0825					AML		AML		
T0825					AML		AML		
T0825					AML		AML		
T0825					AML		AML		
T0825					AML		AML		
T0826	**Rio Saliceto (**	**0.12**	**233**		AML		AML		
	comp=N,85650μm,0.5s								
T0826					AML		AML		
	comp=E,81150μm,0.5s								
T0826					AML		AML		
	comp=N,85650μm,0.5s								
T0826					AML		AML		
	comp=E,81150μm,0.5s								
T0826					AML		AML		
	comp=N,85650μm,0.5s								
T0826					AML		AML		
	comp=E,81150μm,0.5s								
T0814	**Loc. Cortile,**	**0.12**	**171**	⇓*i*P			**Pg**	**08 39 45.6**	**-0.9**
T0814				⇓*i*S			**Sg**	**08 39 48.4**	**-0.4**
T0814	**Loc. Cortile,**	**0.12**	**171**	*i* P			**Pg**	**08 39 45.6**	**-0.9**
T0814				*i* S			**Sg**	**08 39 48.4**	**-0.4**
SBPO	**S.Benedetto Po**	**0.14**	**354**	⇓*e*P			**Pg**	**08 39 47.0**	**+0.1**
SBPO	**S.Benedetto Po**	**0.14**	**354**	*e*P			**Pg**	**08 39 48.0**	**+1.1**
SBPO					AML		AML		
	comp=E,11950μm,0.4s								
SBPO					AML		AML		
SBPO					AML		AML		
	comp=E,11950μm,0.4s								
SBPO					AML		AML		
SBPO					AML		AML		
SBPO					AML		AML		
	comp=E,11950μm,0.4s								
T0824	**Loc. Limidi di**	**0.15**	**184**	⇓*i*P			**Pg**	**08 39 46.3**	**-0.7**
T0824				⇓*i*S			**Sg**	**08 39 49.9**	**+0.4**
T0824	**Loc. Limidi di**	**0.15**	**184**	*i* P			**Pg**	**08 39 46.3**	**-0.7**
T0824				*i* S			**Sg**	**08 39 49.9**	**+0.4**
T0802	**SanFelice sul**	**0.17**	**102**	*e*P			**Pg**	**08 39 47.5**	**+0.2**
T0802				*e*S			**Sg**	**08 39 51.3**	**+1.2**
T0802	**SanFelice sul**	**0.17**	**102**	*e*P			**Pg**	**08 39 47.5**	**+0.2**
T0802				*e*S			**Sg**	**08 39 51.3**	**+1.2**
T0813	**Massa Finalese**	**0.19**	**100**	*e*P			**Pg**	**08 39 47.3**	**-0.2**
T0813				*e*S			**Sg**	**08 39 51.8**	**+1.4**
T0813	**Massa Finalese**	**0.19**	**100**	*e*P			**Pg**	**08 39 47.3**	**-0.2**
T0813				*e*S			**Sg**	**08 39 51.9**	**+1.4**
NOVE	**Novellara**	**0.20**	**235**	⇓*e*P			**Pg**	**08 39 47.5**	**-0.2**
NOVE				⇓*e*S			**Sg**	**08 39 52.3**	**+1.6**
NOVE	**Novellara**	**0.20**	**235**	*e*P			**Pg**	**08 39 47.5**	**-0.2**
NOVE				*e*S			**Sg**	**08 39 52.3**	**+1.6**
NOVE					AML		AML		
	comp=E,65100μm,0.3s								
NOVE					AML		AML		
	comp=N,39200μm,0.2s								
NOVE					AML		AML		
	comp=E,65150μm,0.3s								
NOVE					AML		AML		
	comp=N,39200μm,0.2s								
NOVE					AML		AML		
	comp=N,39200μm,0.2s								
NOVE					AML		AML		
	comp=E,65100μm,0.3s								
RAVA	**Ravarino**	**0.20**	**141**	⇓*i*P			**Pg**	**08 39 47.1**	**-0.6**
RAVA				⇓*i*S			**Sg**	**08 39 50.4**	**-0.4**
RAVA	**Ravarino**	**0.20**	**141**	*i* P			**Pg**	**08 39 47.1**	**-0.6**
RAVA				*i* S			**Sg**	**08 39 50.4**	**-0.4**
RAVA					AML		AML		
	comp=E,23150μm,0.7s								
RAVA					AML		AML		
	comp=N,15150μm,0.7s								
RAVA					AML		AML		
	comp=E,23150μm,0.7s								
RAVA					AML		AML		
	comp=N,15150μm,0.7s								
RAVA					AML		AML		
	comp=E,23150μm,0.7s								
RAVA					AML		AML		
	comp=N,15150μm,0.7s								
T0800	**Massa Finalese**	**0.23**	**106**	⇑*e*P			**Pg**	**08 39 47.7**	**-0.5**
T0800				⇑*e*S			**Sg**	**08 39 52.2**	**+0.7**
T0800	**Massa Finalese**	**0.23**	**106**	*e*P			**Pg**	**08 39 47.7**	**-0.5**
T0800				*e*S			**Sg**	**08 39 52.2**	**+0.7**
T0800					AML		AML		
	comp=E,16550μm,0.3s								
T0800					AML		AML		
	comp=N,17000μm,0.3s								
T0800					AML		AML		
	comp=E,16050μm,0.3s								
T0800					AML		AML		
	comp=N,15800μm,0.3s								
T0800					AML		AML		
	comp=E,16550μm,0.3s								
T0800					AML		AML		
	comp=N,17000μm,0.3s								
T0800					AML		AML		
	comp=E,16050μm,0.3s								
T0800					AML		AML		
	comp=N,15800μm,0.3s								
T0800					AML		AML		
	comp=E,16550μm,0.3s								
T0800					AML		AML		
	comp=E,16050μm,0.3s								
T0800					AML		AML		
	comp=N,17000μm,0.3s								
T0800					AML		AML		
	comp=N,15800μm,0.3s								
GAZZ	**Gazzo Veronese**	**0.23**	**28**	⇓*e*Pg			**Pg**	**08 39 49.2**	**+0.9**
GAZZ	**Gazzo Veronese**	**0.23**	**28**	*e*Pg			**Pg**	**08 39 49.2**	**+0.9**
T0811	**Palata Pepoli**	**0.24**	**122**	*e*P			**Pg**	**08 39 47.8**	**-0.6**
T0811				*e*S			**Sg**	**08 39 52.6**	**+0.8**
T0811	**Palata Pepoli**	**0.24**	**122**	*e*P			**Pg**	**08 39 47.9**	**-0.6**
T0811				*e*S			**Sg**	**08 39 52.6**	**+0.8**
T0805	**Bondeno (FE)**	**0.27**	**88**	*e*P			**Pg**	**08 39 48.8**	**-0.2**
T0805				*e*S			**Sg**	**08 39 53.4**	**+0.6**
T0805	**Bondeno (FE)**	**0.27**	**88**	*e*P			**Pg**	**08 39 48.8**	**-0.2**
T0805				*e*S			**Sg**	**08 39 53.4**	**+0.6**
MODE	**Modena**	**0.28**	**179**	*e*P			**Pg**	**08 39 48.8**	**-0.3**
MODE	**Modena**	**0.28**	**179**	*e*P			**Pg**	**08 39 48.8**	**-0.3**
T0823	**Castello D'Arg**	**0.33**	**133**	*e*P			**Pg**	**08 39 49.9**	**-0.1**
T0823	**Castello D'Arg**	**0.33**	**133**	*e*P			**Pg**	**08 39 49.9**	**-0.1**
T0817	**Loc. Veratica,**	**0.37**	**77**	*e*P			**Pb**	**08 39 51.6**	**-0.1**
T0817	**Loc. Veratica,**	**0.37**	**77**	*e*P			**Pb**	**08 39 51.6**	**-0.1**
T0817				*e*S			**Sb**	**08 39 58.8**	**+1.4**
ZCCA	**Zocca**	**0.56**	**177**	⇓*e*P			**Pg**	**08 39 55.3**	**+1.0**
ZCCA	**Zocca**	**0.56**	**177**	*e*P			**Pg**	**08 39 55.4**	**+1.0**
TEOL	**Teolo**	**0.68**	**49**	⇓*e*Pg			**Pb**	**08 39 57.0**	**0.0**
TEOL				*e*Sg			**Sn**	**08 40 09.7**	**+0.5**
TEOL	**Teolo**	**0.68**	**49**	*e*Pg			**Pb**	**08 39 57.0**	**0.0**
TEOL	**Teolo**	**0.68**	**49**	*e*P			**Pn**	**08 39 57.6**	**-1.1**
TEOL	**Teolo**	**0.68**	**49**	*e*P			**Pn**	**08 39 57.6**	**-1.1**
ROVR	**Rover˜¤ Verone**	**0.74**	**7**	⇓*e*P			**Pb**	**08 39 57.0**	**-1.1**
ROVR	**Rover˜¤ Verone**	**0.74**	**7**	*e*P			**Pb**	**08 39 58.0**	**-0.2**
ROVR					AML		AML		
	comp=E,2305μm,1.6s								
ROVR					AML		AML		
	comp=N,4715μm,0.2s								
ROVR					AML		AML		
	comp=E,2305μm,1.6s								
ROVR					AML		AML		
	comp=N,4715μm,0.2s								
ROVR					AML		AML		
	comp=E,2305μm,1.6s								
ROVR					AML		AML		
	comp=N,4715μm,0.2s								
MARN	**Marana (Italy)**	**0.75**	**14**	⇓*e*Pg			**Pb**	**08 39 58.2**	**-0.1**
MARN				*e*Sg			**Sn**	**08 40 12.0**	**+1.1**
MARN	**Marana (Italy)**	**0.75**	**14**	*e*Pg			**Pb**	**08 39 58.2**	**-0.1**
MARN				*e*Sg			**Sn**	**08 40 12.0**	**+1.1**
SALO	**Salr**	**0.77**	**338**	⇓*e*P			**Pb**	**08 39 58.7**	**+0.2**
SALO	**Salr**	**0.77**	**338**	*e*P			**Pb**	**08 39 58.7**	**+0.2**
SALO					AML		AML		
	comp=E,2265μm,0.6s								
SALO					AML		AML		
	comp=N,4305μm,0.7s								
SALO					AML		AML		
	comp=E,2265μm,0.6s								
SALO					AML		AML		
	comp=N,4305μm,0.7s								
SALO					AML		AML		
	comp=E,2265μm,0.6s								
SALO					AML		AML		
	comp=N,4305μm,0.7s								
BALD	**Monte Baldo**	**0.78**	**354**	⇓*e*Pg			**Pn**	**08 39 59.2**	**-0.9**
BALD				*e*Sg			**Sn**	**08 40 13.5**	**+1.7**
BALD	**Monte Baldo**	**0.78**	**354**	*e*Pg			**Pn**	**08 39 59.2**	**-0.9**
BALD				*e*Sg			**Sn**	**08 40 13.5**	**+1.7**
VOBA	**Vobarno**	**0.80**	**337**		AML		AML		
	comp=N,2930μm,0.8s								
VOBA					AML		AML		
	comp=E,2705μm,0.2s								
VOBA					AML		AML		
	comp=N,2930μm,0.8s								
VOBA					AML		AML		
	comp=E,2705μm,0.2s								
VOBA					AML		AML		
	comp=N,2930μm,0.8s								
VOBA					AML		AML		
	comp=E,2705μm,0.2s								
POPM	**Popiglio**	**0.88**	**189**		AML		AML		
	comp=E,1010μm,0.8s								
POPM					AML		AML		
	comp=E,506μm,0.3s								
POPM					AML		AML		
	comp=N,440μm,0.7s								
POPM					AML		AML		
	comp=N,1465μm,1.0s								
POPM					AML		AML		
	comp=E,1010μm,0.8s								
POPM					AML		AML		
	comp=N,1465μm,1.0s								
POPM					AML		AML		
	comp=N,1465μm,1.0s								
POPM					AML		AML		
	comp=E,1010μm,0.8s								
MAGA	**Magasa**	**0.89**	**346**		AML		AML		
	comp=N,8670μm,0.4s								
MAGA					AML		AML		
	comp=E,11950μm,0.5s								
CTL8	**Castelleone**	**0.91**	**294**		AML		AML		
	comp=E,1245μm,0.7s								
CTL8					AML		AML		
	comp=E,3275μm,0.4s								
CTL8					AML		AML		
	comp=N,2975μm,0.7s								
CTL8					AML		AML		
	comp=E,1250μm,0.7s								
CTL8					AML		AML		
	comp=N,798μm,0.7s								
CTL8					AML		AML		
	comp=N,798μm,0.7s								
CTL8					AML		AML		
	comp=N,2975μm,0.7s								
CTL8					AML		AML		
	comp=E,1250μm,0.7s								
CTL8					AML		AML		
	comp=E,3275μm,0.4s								
DOSS	**Dosso del Somm**	**0.99**	**10**	⇓*e*Pg			**Pn**	**08 40 02.4**	**-0.6**
DOSS				*e*Sg			**Sn**	**08 40 18.5**	**+1.6**
DOSS	**Dosso del Somm**	**0.99**	**10**	*e*Pg			**Pn**	**08 40 02.4**	**-0.6**
DOSS				*e*Sg			**Sn**	**08 40 18.5**	**+1.6**
BOB	**Bobbio (Coli)**	**1.07**	**263**		AML		AML		
	comp=E,1160μm,1.2s								
BOB					AML		AML		
	comp=N,1660μm,0.8s								
RNI	**Roncone**	**1.09**	**348**	⇓*e*Pg			**Pn**	**08 40 04.4**	**-0.1**
RNI	**Roncone**	**1.09**	**348**	*e*Pg			**Pn**	**08 40 04.4**	**-0.1**
CGRP	**Cima Grappa**	**1.14**	**32**	⇑*e*Pg			**Pn**	**08 40 05.0**	**-0.1**
CGRP	**Cima Grappa**	**1.14**	**32**	*e*Pg			**Pn**	**08 40 05.0**	**-0.1**
CGRP	**Cima Grappa**	**1.14**	**32**	*e*P			**Pn**	**08 40 04.9**	**-0.3**
CGRP					AML		AML		
	comp=E,662μm,0.5s								
CGRP					AML		AML		
	comp=N,456μm,0.7s								
MSSA	**Maissana**	**1.18**	**240**		AML		AML		
	comp=N,827μm,1.0s								
MSSA					AML		AML		
	comp=E,747μm,0.8s								
MABI	**Malga Bissina**	**1.18**	**345**		AML		AML		
	comp=N,315μm,0.5s								
MABI					AML		AML		
	comp=E,455μm,1.2s								
MTLO	**Montello**	**1.22**	**42**	⇓*e*Pg			**Pn**	**08 40 06.2**	**+0.2**
MTLO				*e*Sg			**Sn**	**08 40 25.2**	**+2.9**
MTLO	**Montello**	**1.22**	**42**	*e*Pg			**Pn**	**08 40 06.2**	**+0.2**
MTLO				*e*Sg			**Sn**	**08 40 25.2**	**+2.9**
CTI	**Castel Tesino**	**1.24**	**23**		AML		AML		
	comp=E,3120μm,0.2s								
CTI					AML		AML		
	comp=N,3185μm,0.3s								
VARN	**Col Varnada, M**	**1.36**	**37**	⇓*e*Pg			**Pg**	**08 40 07.8**	**-1.6**
VARN				*e*Sg			**Sn**	**08 40 29.0**	**+3.1**
VARN	**Col Varnada, M**	**1.36**	**37**	*e*Pg			**Pg**	**08 40 07.8**	**-1.6**
VARN				*e*Sg			**Sn**	**08 40 29.0**	**+3.1**
OZOL	**Ozolo**	**1.50**	**3**	⇑*e*Pg			**Pb**	**08 40 10.1**	**-0.9**
OZOL	**Ozolo**	**1.50**	**3**	*e*Pg			**Pb**	**08 40 10.1**	**-0.9**
FAU	**Forcella Aurin**	**1.51**	**29**	⇑*e*Pg			**Pg**	**08 40 10.5**	**-1.8**
FAU				*e*Sg			**Sg**	**08 40 32.9**	**+1.0**
FAU	**Forcella Aurin**	**1.51**	**29**	*e*Pg			**Pg**	**08 40 10.5**	**-1.8**
FAU				*e*Sg			**Sg**	**08 40 32.9**	**+1.0**
CARE	**Lago del Cares**	**1.52**	**354**	⇓*e*Pg			**Pb**	**08 40 10.7**	**-0.9**
CARE	**Lago del Cares**	**1.52**	**354**	*e*Pg			**Pb**	**08 40 10.7**	**-0.9**
POLC	**Polcenigo**	**1.56**	**44**		AML		AML		
	comp=N,572μm,0.8s								
POLC					AML		AML		
	comp=E,406μm,0.4s								
AGOR	**Agordo**	**1.58**	**29**		AML		AML		
	comp=N,366μm,1.0s								
AGOR					AML		AML		
	comp=E,522μm,0.5s								
APPI	**Appiano**	**1.58**	**7**		AML		AML		
	comp=E,1365μm,0.4s								
APPI					AML		AML		
	comp=N,1100μm,0.4s								
KOSI	**Kohlern**	**1.58**	**11**		AML		AML		
	comp=N,714μm,0.7s								
KOSI					AML		AML		
	comp=E,558μm,0.8s								
BRMO	**Bormio**	**1.62**	**346**		AML		AML		
	comp=N,268μm,0.6s								
BRMO					AML		AML		
	comp=E,280μm,0.5s								
MOSI	**Grossmontoni**	**1.73**	**351**		AML		AML		
	comp=N,1122μm,0.6s								
MOSI					AML		AML		
	comp=E,928μm,0.9s								
PCP	**Piancastagn**	**1.75**	**259**		AML		AML		
	comp=N,580μm,0.6s								
PCP					AML		AML		
	comp=E,376μm,0.6s								
CIMO	**Cimolais**	**1.75**	**36**	⇑*e*Pn			**Pn**	**08 40 13.3**	**-0.1**
CIMO	**Cimolais**	**1.75**	**36**	*e*Pn			**Pn**	**08 40 13.3**	**-0.1**
NARO	**Abbazia di Nar**	**1.75**	**137**		AML		AML		
	comp=N,79μm,1.6s								
NARO					AML		AML		
	comp=E,87μm,0.8s								
NARO					AML		AML		
	comp=N,79μm,1.6s								
NARO					AML		AML		
	comp=E,95μm,1.2s								
NARO					AML		AML		
	comp=N,119μm,1.4s								
NARO					AML		AML		
	comp=E,87μm,0.8s								
VARE	**Varese**	**1.81**	**303**		AML		AML		
	comp=N,536μm,1.0s								
VARE					AML		AML		
	comp=E,960μm,0.5s								
STAL	**STALIGIAL**	**1.83**	**42**		AML		AML		
	comp=E,385μm,0.8s								
STAL					AML		AML		
	comp=E,355μm,1.4s								
STAL					AML		AML		
	comp=N,322μm,1.6s								
STAL					AML		AML		
	comp=N,350μm,0.2s								
ABSI	**Aberstueckl**	**1.84**	**8**		AML		AML		
	comp=N,787μm,0.5s								
ABSI					AML		AML		
	comp=E,1420μm,0.5s								
QLNO	**Quiliano**	**1.94**	**253**		AML		AML		
	comp=E,188μm,1.3s								
QLNO					AML		AML		
	comp=N,250μm,0.4s								
FINB	**Finale Ligure**	**2.01**	**250**		AML		AML		
	comp=E,1225μm,1.6s								
FINB					AML		AML		
	comp=N,850μm,1.3s								
ROSI	**Rosskopf**	**2.04**	**9**		AML		AML		
	comp=N,478μm,0.4s								
ROSI					AML		AML		
	comp=E,572μm,0.4s								
FETA	**Feichten**	**2.12**	**356**	*e*Pn			**Pb**	**08 40 20.8**	**-0.8**
	comp=E,2.9nm,0.2s								
FETA				*e*Pg			**Pg**	**08 40 24.2**	**+0.3**
	comp=E,59nm,0.6s,SNR=39								
FETA				*e*Sg			**Sg**	**08 40 50.1**	**-1.2**
	comp=E,16nm,0.4s								
FETA	**Feichten**	**2.12**	**356**	Pn			**Pb**	**08 40 20.8**	**-0.8**
	comp=E,2.9nm,0.2s								
ABTA	**Abfaltersbach**	**2.14**	**30**	*e*Pg			**Pg**	**08 40 23.4**	**-0.9**
	comp=E,14nm,0.3s,SNR=15								
ABTA	**Abfaltersbach**	**2.14**	**30**	Pg			**Pg**	**08 40 23.4**	**-0.9**
	comp=E,14nm,0.3s,SNR=15								
SABO	**M.te Sabotino**	**2.15**	**59**		AML		AML		
	comp=E,218μm,1.1s								
SABO					AML		AML		
	comp=N,308μm,0.7s								
SKDS	**Skadanscina**	**2.26**	**73**	*i* Pn			**Pn**	**08 40 19.4**	**-1.0**
SKDS				*i* Sn			**Sn**	**08 40 46.6**	**-1.5**
SKDS	**Skadanscina**	**2.26**	**73**	Pn			**Pn**	**08 40 19.4**	**-1.0**
SKDS				*i* Sn			**Sn**	**08 40 46.6**	**-1.5**
WTTA	**Wattenberg**	**2.40**	**11**	*e*Pn			**Pb**	**08 40 26.1**	**-0.4**
	comp=N,2.6nm,0.1s,SNR=8.7								
WTTA				*e*Sg			**Sg**	**08 40 58.3**	**-2.2**
	comp=N,46nm,0.5s								
WTTA	**Wattenberg**	**2.40**	**11**	Pn			**Pb**	**08 40 26.1**	**-0.4**
	comp=N,2.6nm,0.1s,SNR=8.7								
WTTA				Sg			**Sg**	**08 40 58.3**	**-2.2**
	comp=N,46nm,0.5s								
JAVS	**Javornik**	**2.41**	**65**	*i* Pn			**Pn**	**08 40 22.1**	**-0.4**
JAVS				*i* Sn			**Sn**	**08 40 52.6**	**+0.7**
JAVS	**Javornik**	**2.41**	**65**	*i* Pn			**Pn**	**08 40 22.0**	**-0.4**
JAVS				*i* Sn			**Sn**	**08 40 52.6**	**+0.7**
FDMO	**Fiordimonte**	**2.43**	**140**		AML		AML		
	comp=N,33μm,0.8s								
FDMO					AML		AML		
	comp=E,30μm,1.3s								
FDMO					AML		AML		
	comp=N,33μm,0.8s								
FDMO					AML		AML		
	comp=E,41μm,0.8s								
FDMO					AML		AML		
	comp=N,46μm,0.5s								
FDMO					AML		AML		

comp=E,27nm,0.4s
RETA Reutte 2.58 357 Pn **Pb 08 40 27.4 -2.0**
comp=E,2.4nm,0.1s,SNR=5.6
RETA Sn **Sb 08 40 59.9 -1.2**
comp=E,27nm,0.4s
ARRO Arrone 2.68 150 AML AML
comp=N,39μm,1.3s
ARRO AML AML
comp=E,51μm,1.6s
ARRO AML AML
comp=N,39μm,1.3s
ARRO AML AML
comp=E,68μm,0.5s
ARRO AML AML
comp=N,52μm,1.0s
ARRO AML AML
comp=E,51μm,1.6s
SBF Sospel 2.72 249 *e*Pn **Pn 08 40 29.7 +2.9**
SBF *e*Sn **Sn 08 41 02.3 +2.7**
comp=E,96nm,0.3s
SBF Sospel 2.72 249 *e*Pn **Pn 08 40 29.7 +2.9**
KBA Koelnbreinsper 2.74 37 *e*Pg **Pg 08 40 36.0 +0.2**
comp=E,7.3nm,0.2s,SNR=9.5
KBA *e*Sg **Sg 08 41 14.0 +2.7**
comp=E,27nm,0.6s
KBA Koelnbreinsper 2.74 37 Pg **Pg 08 40 36.0 +0.2**
comp=E,7.3nm,0.2s,SNR=9.5
KBA Sg **Sg 08 41 14.0 +2.7**
comp=E,27nm,0.6s
PGF Pioggiola 2.75 211 *e*Pn **Pn 08 40 28.2 +1.1**
PGF *e*Sn **Sn 08 41 00.3 +0.1**
comp=E,49nm,0.4s
PGF Pioggiola 2.75 211 *e*Pn **Pn 08 40 28.2 +1.1**
PGF *e*Sn **Sn 08 41 00.3 +0.1**
comp=E,24nm,0.4s
LUCF Luceram 2.77 250 P **Pn 08 40 29.8 +2.4**
LUCF S **Sn 08 41 05.6 +4.9**
LUCF Luceram 2.77 250 P **Pn 08 40 29.8 +2.4**
NVLJ Novalja 2.82 96 *e*Pn **Pn 08 40 28.2 +0.1**
NVLJ Sn **Sn 08 41 00.1 -1.8**
NVLJ Novalja 2.82 96 *e*Pn **Pn 08 40 28.1 +0.1**
NVLJ Sn **Sn 08 41 00.0 -1.8**
MBDF Montbardon 2.97 268 *e*Pn **Pn 08 40 30.0 -0.3**
MBDF Montbardon 2.97 268 *e*Pn **Pn 08 40 30.0 -0.3**
SURF Saint Ours 2.98 263 P **Pn 08 40 31.8 +1.5**
SURF Saint Ours 2.98 263 P **Pn 08 40 31.8 +1.5**
LPG La Plagne 3.02 283 *e*Pn **Pn 08 40 34.7 +3.7**
LPG *e*Sn **Sb 08 41 13.7 -0.2**
comp=E,43nm,0.5s
LPG La Plagne 3.02 283 *e*Pn **Pn 08 40 34.7 +3.7**
LPL La Plagne 3.04 283 *e*Pn **Pn 08 40 34.6 +3.4**
LPL *e*Sn **Sb 08 41 13.0 -1.3**
comp=E,37nm,0.5s
LPL La Plagne 3.04 283 *e*Pn **Pn 08 40 34.6 +3.4**
LPL *e*Sn **Sb 08 41 13.0 -1.3**
comp=E,18nm,0.5s
CALF Calern 3.11 250 P **Pn 08 40 34.3 +2.2**
CALF Calern 3.11 250 P **Pn 08 40 34.3 +2.2**
FRF La Foret Royal 3.37 248 *e*Pn **Pn 08 40 37.3 +1.7**
FRF *e*Sn **Sn 08 41 17.6 +2.2**
comp=E,49nm,0.2s
FRF La Foret Royal 3.37 248 *e*Pn **Pn 08 40 37.3 +1.7**
LMR La Mourre 3.56 245 *e*Pn **Pn 08 40 39.9 +1.7**
LMR *e*Sn **Sn 08 41 21.0 +0.9**
comp=E,76nm,0.3s
LMR La Mourre 3.56 245 *e*Pn **Pn 08 40 39.9 +1.7**
ORIF Oris-en-Rattie 3.60 272 *e*Pn **Pn 08 40 39.6 +0.8**
ORIF Oris-en-Rattie 3.60 272 P **Pn 08 40 40.6 +1.8**
ORIF Oris-en-Rattie 3.60 272 *e*Pn **Pn 08 40 39.6 +0.8**
KIZ Kirchzarten 3.69 327 P **Pn 08 40 41.3 +1.2**
KIZ Kirchzarten 3.69 327 P **Pn 08 40 41.3 +1.2**
MOA Molln 3.73 37 *i* Pn **Pn 08 40 42.3 +1.7**
comp=E,2.0nm,0.2s
MOA Molln 3.73 37 Pn **Pn 08 40 42.3 +1.7**
comp=E,2.0nm,0.2s
CHMF Charmoille 3.79 310 P **Pn 08 40 42.7 +1.3**
CHMF Charmoille 3.79 310 P **Pn 08 40 42.7 +1.3**
CABF La Chapelle 3.80 298 *e*Pn **Pn 08 40 42.7 +1.1**
CABF La Chapelle 3.80 298 *e*Pn **Pn 08 40 42.7 +1.1**
SMRF Simiane la Rot 3.96 258 *e*Sn **Sb 08 41 37.8 -2.8**
comp=E,12nm,0.3s
HINF Hinteralfeld 4.06 317 *e*Pn **Pn 08 40 46.0 +0.9**
HINF *e*Sn **Sn 08 41 33.0 +0.6**
comp=E,24nm,0.3s
HINF Hinteralfeld 4.06 317 *e*Pn **Pn 08 40 46.0 +0.9**
HINF *e*Sn **Sn 08 41 33.0 +0.6**
comp=E,12nm,0.3s
OPP Oppenau 4.06 333 P **Pn 08 40 46.4 +1.4**
OPP Oppenau 4.06 333 P **Pn 08 40 46.4 +1.4**
ECH Echery 4.21 323 P **Pn 08 40 48.1 +0.9**
ECH Echery 4.21 323 P **Pn 08 40 48.1 +0.9**
CDF Champ du Feu 4.32 326 *e*Pn **Pn 08 40 49.0 +0.3**
CDF *e*Sn **Sn 08 41 39.1 +0.2**
comp=E,14nm,0.4s
CDF Champ du Feu 4.32 326 *e*Pn **Pn 08 40 49.0 +0.3**
CDF *e*Sn **Sn 08 41 39.1 +0.2**
comp=E,7.1nm,0.4s
HAU Haudompre 4.43 316 *e*Pn **Pn 08 40 51.1 +0.9**
HAU *e*Sn **Sn 08 41 41.6 -0.1**
comp=E,66nm,0.3s
HAU Haudompre 4.43 316 *e*Pn **Pn 08 40 51.1 +0.9**
HAU *e*Sn **Sn 08 41 41.6 -0.1**
comp=E,33nm,0.3s
VIVF Saint-Julien-l 4.46 272 *e*Pn **Pn 08 40 50.4 -0.1**
VIVF *e*Sn **Sn 08 41 40.6 -1.6**
comp=E,5.3nm,0.3s
VIVF Saint-Julien-l 4.46 272 *e*Pn **Pn 08 40 50.4 -0.1**
VIVF *e*Sn **Sn 08 41 40.6 -1.6**
comp=E,2.7nm,0.3s
KHC Kasperske Hory 4.59 22 *e*PN **Pn 08 40 53.0 +0.6**
KHC *e*PG **Pg 08 41 08.4 -2.8**
KHC *e*SN **Sn 08 41 45.7 +0.2**
KHC *e*SG **Sg 08 42 15.0 +4.4**
comp=E,23nm,1.0s
KHC Kasperske Hory 4.59 22 Pn **Pn 08 40 53.0 +0.6**
SMF Signal de Mont 5.26 292 *e*Pn **Pn 08 41 02.5 +0.9**
SMF *e*Sn **Sn 08 41 58.7 -3.3**
comp=E,31nm,0.4s
SMF Signal de Mont 5.26 292 *e*Pn **Pn 08 41 02.5 +0.9**
LOR Lormes 5.46 298 *e*Pn **Pn 08 41 05.3 +1.0**
LOR *e*Sn **Sn 08 42 00.5 -6.5**
comp=E,12nm,0.2s
LOR Lormes 5.46 298 *e*Pn **Pn 08 41 05.3 +1.0**
SSF Saint Saulge 5.61 295 *e*Sn **Sn 08 42 08.7 -1.9**
comp=E,16nm,0.3s
AVF Avril sur Loir 5.62 292 *e*Pn **Pn 08 41 06.8 +0.3**
AVF Avril sur Loir 5.62 292 *e*Pn **Pn 08 41 06.8 +0.3**
TCF Toulx Ste Croi 6.28 286 *e*Sn **Sn 08 42 25.7 -1.5**
comp=E,7.5nm,0.4s
BRG Berggiesshubel 6.30 18 PG **Pg 08 41 42.1 -1.7**
BRG SG **Sg 08 43 03.6 -1.7**
comp=E,9.1nm,1.1s
BRG PG 08 44 41.1
BRG SG 08 44 58.0
comp=E,3.5nm,0.6s
CLL Collm 6.55 11 *e*Pg **Pg 08 41 50.0 +1.4**
CLL *e* 08 42 42.0
CLL *e*Sg **Sg 08 43 18.0 +4.7**
comp=Z,13nm,1.2s

MEX 01 08:42:10.4±0.5, 16°.13N×95°.78W, h16km±12km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.48**	**222**	*e*P	Pg	08 42 18.4	-1.6
HUIG				*e*S	Sg	08 42 25.1	-1.3
VHO	**Vista Hermosa**	**1.31**	**316**	*e*P	Pn	08 42 30.8	-3.5
VHO				*e*S	Sb	08 42 46.4	-5.2
PCIG		**2.50**	**99**	*e*P	Pn	08 42 47.5	-2.9
TGIG		**2.63**	**75**	*e*P	Pg	08 42 59.1	-1.8

ISCJB ***01*** *08:45:44.5±0.8, 8°.67S±0°.07×108°.82E±0°.05, h55km, mb3.7/5, Error ellipse: s-maj=11.0km s-min=6.1km az=26.2*
DJA ***01*** *08:45:47.7±0.5, 8°S±5°×10°9E±°, h61km±10km, M4.0/13, MLv4.0/13*
IDC ***01*** *08:45:49.6±1.8, 7°.85S×109°.05E, h126km±22km, mb3.5/5, mb1 3.6/5, mb1mx3.2/59, mbtmp3.9/5, Error ellipse: s-maj=85.2km s-min=17.2km az=44.0*
ISC 01 08:45:44.4±1.0, 8°.6S±0°.1×108.79E±0°.06, h55km, n19, σ1°90/11, mb3.6/5, Jawa

2012 JUN

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMJI	**Cimerak**	**0.88**	**337**	P	Pn	08 46 03.2	+2.5
KPJI	**Karang Pucung**	**1.27**	**6**	P	Pn	08 46 07.2	+1.3
KPJI				S	**Sn**	**08 46 22.1**	**+0.2**
CISI	**Cisompet, Garu**	**1.42**	**317**	P	Pn	08 46 10.2	+2.2
CISI				S	**Sn**	**08 46 27.2**	**+1.5**
UGM	**Wanagama**	**1.84**	**68**	P	**Pn**	**08 46 15.1**	**+1.4**
UGM				S	**Sn**	**08 46 35.6**	**-0.4**
LEM	**Lembang**	**2.12**	**326**	P	Pn	08 46 20.4	+2.9
	17nm,0.3s,baz=120,slow=14,SNR=13						
LEM	**Lembang**	**2.12**	**326**	P	Pn	08 46 19.5	+1.9
WOJI	**Wonogiri, Jawa**	**2.24**	**70**	P	Pn	08 46 21.1	+2.0
SMRI	**Semarang**	**2.25**	**47**	P	**Pn**	**08 46 20.1**	**+0.9**
PCJI	**Pacitan**	**2.39**	**80**	P	Pn	08 46 23.6	+2.4
PWJI	**Pagerwojo**	**3.03**	**79**	P	**Pn**	**08 46 31.9**	**+1.9**
CGJI	**Cibinong**	**3.66**	**303**	P	**Pn**	**08 46 40.3**	**+1.8**
WRA	**Warramunga Arr**	**27.16**	**117**	P	**P**	**08 51 22.6**	**-0.3**
	0.6nm,0.4s,baz=290,slow=11,SNR=8.3						
ASAR	**Alice Springs**	**28.32**	**125**	P	**P**	**08 51 33.6**	**+0.5**
	1.0nm,0.7s,baz=305,slow=9.3,SNR=12						
H08S2	**Diego Garcia H**	**35.94**	**269**	T	T	09 31 04.6	
	baz=93,slow=76,SNR=14						
H08S3	**Diego Garcia H**	**35.95**	**269**	T	T	09 31 06.2	
	baz=93,slow=76,SNR=12						
H08S1	**Diego Garcia H**	**35.96**	**269**	T	T	09 31 23.3	
	baz=93,slow=76,SNR=10.0						
STKA	**Stephens Creek**	**38.25**	**132**	P	**P**	**08 53 00.2**	**+0.8**
	2.6nm,0.5s,baz=288,slow=9.7,SNR=7.2						
MKAR	**Makanchi Array**	**60.00**	**339**	P	P	08 55 38.2	-7.1
	0.4nm,0.5s,baz=150,slow=6.8,SNR=5.5						
BRTR	**Keskin Array B**	**84.22**	**311**	P	**P**	**08 58 06.4**	**-4.0**
	0.4nm,0.7s,baz=132,slow=6.0,SNR=3.7						

NIED ***01*** *08:48:00, 36°.10N×139°.90E, h53km, Mw5.1 Best double couple: M₀5.61000×10¹⁶ NP1:φ₀278.00000°, δ36.00000°, λ134.00000°. NP2:φ₀48.00000°, δ65.00000°, λ63.00000°.*
BJI ***01*** *08:48:03.9, 35°.91N×140°.15E, h57km, mb5.0/73, mB5.0/47, Ms4.5/71, Ms7 4.3/68*
IDC ***01*** *08:48:07.8±1.1, 36°.00N×139°.76E, h42km±10km, mb4.8/37, mb1 4.9/39, mb1mx4.7/63, mbtmp5.1/39, ML4.6/1, MS4.2/45, Ms1 4.2/45, ms1mx4.1/65, Error ellipse: s-maj=11.2km s-min=7.8km az=88.0*
ISCJB ***01*** *08:48:08.7±0.2, 36°.00N±0°.02×139°.73E±0°.02, h61km±1km, mb5.1/377, Error ellipse: s-maj=2.6km s-min=2.1km az=152.4*
JMA ***01*** *08:48:08.7±0.1, 36°.03N×139°.88E, h44km±1km, M5.1 Broadband fault plane solution: P waves. NP1: φ₀55.00000°, δ56.00000°, λ80.00000°. NP2:φ₀252.00000°, δ36.00000°, λ104.00000°. Principal axes: T Plg77.0000°, Azm293.0000°; N Plg8.0000°, Azm61.0000°; P Plg10.0000°, Azm152.0000°;*
JMA Felt IV J1.
MOS ***01*** *08:48:09.2±0.8, 36°.35N×139°.64E, h53km, mb5.3/123, MS4.4/25 Error ellipse: s-maj=5.5km s-min=3.5km az=102.8*
NEIC ***01*** *08:48:10.4±0.4, 35°.98N×139°.64E, h63km±3km, mb5.1/277, Error ellipse: s-maj=2.6km s-min=1.9km az=146.0*
NEIC Felt [V] at Utsunomiya; [IV] at Kawasaki, Tokyo and Tsuchiura; [III] at Yokohama-shi and Yokosuka. Felt in much of southeastern Honshu. Recorded [4 JMA] in Gumma, Ibaraki, Kanagawa, Saitama and Tochigi.
GCMT ***01*** *08:48:10.4±0.2, 35°.90N×139°.92E, h52km±1km, MW5.2/109, Moment Tensor Solution. s72,c97; s109,c166; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr5.73±.22; Mθθ-5.57±.14; Mφφ-0.15±.15; Mrθ1.98±.13; Mrφ-1.62±.11; Mθφ2.85±.10; Best double couple: M₀6.81900×10¹⁶ NP1:φ₀56.00000°, δ60.00000°, λ71.00000°. NP2:φ₀271.00000°, δ35.00000°, λ120.00000°. Principal axes: T 7.0100, Plg69.0000°, Azm286.0000°; N -0.3770, Plg17.0000°, Azm66.0000°; P -6.6290, Plg13.0000°, Azm160.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 01 08:48:08.7±0.4, 36°.01N±0°.03×139°.89E±0°.03, h55km±3km, n1264, σ1°45/1329, mb5.1/396, MS4.4/69, 70C-58D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.33**	**48**	⇑P	**Pn**	**08 48 17.5**	**-1.1**
JYT				S	**Sn**	**08 48 23.8**	**-1.9**
TOK	**Tokyo**	**0.34**	**198**	P	**Pn**	**08 48 18.9**	**+0.3**
JHU	**Hanno**	**0.52**	**253**	⇑P	**Pn**	**08 48 19.5**	**-1.0**
JHU				S	**Sn**	**08 48 27.5**	**-1.5**
JAG	**Ashikaga**	**0.55**	**320**	⇓P	**Pn**	**08 48 20.0**	**-0.8**
JAG				S	**Sn**	**08 48 28.1**	**-1.5**
I30JP	**ISUMI INFRASON**	**0.78**	**153**	P	**Pn**	**08 48 25.0**	**+1.3**
	baz=325,slow=14,SNR=3.6						
I30JP				S	**Sn**	**08 48 40.1**	**+5.5**
	baz=309,slow=266						
I30JP				*i*		08 54 00.0	
	baz=333,slow=322,SNR=0.3						
JRY	**Ryogami san**	**0.80**	**271**	⇓P	**Pn**	**08 48 23.4**	**-0.6**
JRY				S	**Sn**	**08 48 34.1**	**-1.1**
JHO	**Hitachi**	**0.82**	**42**	P	**Pn**	**08 48 22.9**	**-1.3**
JHO				S	**Sn**	**08 48 33.2**	**-2.3**
JKT	**Katashina**	**0.92**	**326**	⇓P	**Pn**	**08 48 24.8**	**-0.8**
JKT				S	**Sn**	**08 48 37.4**	**-0.6**
JSB	**Shiboa**	**0.96**	**2**	⇓P	**Pn**	**08 48 25.8**	**-0.3**
JSB				S	**Sn**	**08 48 38.3**	**-0.6**
JOD2	**Odawara 2**	**0.99**	**222**	⇓P	**Pn**	**08 48 26.1**	**-0.3**
JOD2				S	**Sn**	**08 48 39.2**	**-0.3**
BSO4	**Boso 4**	**1.08**	**160**	⇓P	**Pn**	**08 48 27.9**	**+0.4**
JGK	**Kuni**	**1.15**	**299**	⇓P	**Pn**	**08 48 27.6**	**-1.1**
AJI	**Ajiro2**	**1.16**	**214**	⇓P	**Pn**	**08 48 28.3**	**-0.4**
AJI				S	**Sn**	**08 48 43.0**	**-0.5**
JYN	**Shimob**	**1.21**	**246**	⇑P	**Pn**	**08 48 29.8**	**+0.4**
BSO3	**Boso 3**	**1.30**	**157**	⇓P	**Pn**	**08 48 30.1**	**-0.3**
ONAJ	**Iwakimizuishiy**	**1.32**	**34**	⇓P	**Pn**	**08 48 30.2**	**-0.7**
JIM2	**Oshima 3**	**1.34**	**196**	⇓P	**Pn**	**08 48 30.4**	**-0.8**
JFY	**Yanaizu**	**1.41**	**354**	⇓P	**Pn**	**08 48 32.1**	**0.0**
JHK	**Hinoka**	**1.42**	**331**	⇓P	**Pn**	**08 48 32.2**	**-0.1**
JNT	**Takato**	**1.43**	**265**	⇓P	**Pn**	**08 48 33.5**	**+1.1**
MJAR	**Matsushiro Arr**	**1.46**	**292**	P	**Pn**	**08 48 31.2**	**-1.5**
	995nm,0.3s,baz=93,slow=14,SNR=6427						
MJAR				LR	LR	08 49 10.1	
	comp=Z,10μm,18.7s,baz=120,slow=47						
MAJO	**Matsushiro**	**1.46**	**292**	*e*Pn	**Pn**	**08 48 33.0**	**+0.2**
MAJO	**Matsushiro**	**1.46**	**292**	*de*P	**Pn**	**08 48 33.0**	**+0.2**
MAT	**Matsushiro**	**1.46**	**292**	P	**Pn**	**08 48 31.9**	**-0.9**
MAT	**Matsushiro**	**1.46**	**292**	P	**Pn**	**08 48 33.2**	**+0.4**
MAT				S	**Sn**	**08 48 51.9**	**+1.0**
MJB9	**Matsu-Tunnel**	**1.46**	**292**	*e*Pn	**Pn**	**08 48 32.4**	**-0.4**
JNG	**Nsakai**	**1.50**	**286**	⇓P	**Pn**	**08 48 33.2**	**-0.2**
JIZS	**Izushimoda**	**1.53**	**213**	P	**Pn**	**08 48 33.5**	**-0.2**
JIZS				S	**Sn**	**08 48 52.8**	**+0.4**
JFT	**Otama**	**1.55**	**13**	⇓P	**Pn**	**08 48 34.2**	**+0.2**
JFK	**Kawauchi**	**1.57**	**30**	⇓P	**Pn**	**08 48 33.9**	**-0.4**
BSO1	**Boso 1**	**1.62**	**146**	⇓P	**Pn**	**08 48 33.7**	**-0.7**
SHZ3	**Shizuoka 3**	**1.66**	**236**	⇑P	**Pn**	**08 48 36.7**	**+1.2**
SHZ3				S	**Sn**	**08 48 58.1**	**+2.3**
JJN	**Nakama**	**1.77**	**309**	⇓P	**Pn**	**08 48 37.5**	**+0.5**
JJN				S	**Sn**	**08 49 00.7**	**+2.4**
JNY	**Yasuok**	**1.77**	**249**	⇑P	**Pn**	**08 48 38.3**	**+1.2**
JIZZ	**Izumozaki**	**1.79**	**328**	⇓P	**Pn**	**08 48 38.2**	**+0.9**
JNS	**Sasagawa**	**1.87**	**346**	⇓P	**Pn**	**08 48 38.4**	**+0.1**
JKO	**Kozu shima**	**1.92**	**199**	⇓P	**Pn**	**08 48 39.1**	**+0.1**
JSG	**Sagara**	**1.92**	**227**	P	**Pn**	**08 48 40.5**	**+1.4**
JMM	**Marumori**	**1.99**	**21**	⇓P	**Pn**	**08 48 40.1**	**+0.1**
JYZW	**Yoshizawa**	**2.03**	**241**	P	**Pn**	**08 48 41.4**	**+0.9**
JGN	**Niukaw**	**2.09**	**277**	⇓P	**Pn**	**08 48 42.6**	**+1.1**
JGF	**Kuroka**	**2.10**	**260**	⇑P	**Pn**	**08 48 43.0**	**+1.5**
HMMJ	**Hamamatsu 2**	**2.11**	**238**	⇑P	**Pn**	**08 48 42.8**	**+1.2**
JTT	**Ttatey**	**2.15**	**287**	P	**Pn**	**08 48 43.2**	**+1.1**
JAO	**Obara**	**2.27**	**252**	⇑P	**Pn**	**08 48 44.9**	**+1.1**
JSD	**Sado**	**2.41**	**328**	⇓P	**Pn**	**08 48 45.5**	**-0.2**
INU	**Inuyama**	**2.43**	**255**	*e*Pn	**Pn**	**08 48 47.0**	**+1.0**
JOU	**Okura**	**2.44**	**15**	⇓P	**Pn**	**08 48 46.9**	**+0.8**
JSZ	**Suzu**	**2.49**	**306**	⇓P	**Pn**	**08 48 46.5**	**-0.2**
JAW	**Awa shima**	**2.50**	**348**	⇓P	**Pn**	**08 48 46.9**	**0.0**
JYA	**Atsumi**	**2.59**	**357**	⇓P	**Pn**	**08 48 48.9**	**+0.8**
JAA	**Atsumi**	**2.63**	**239**	P	**Pn**	**08 48 49.5**	**+0.8**
JJH	**Hakui**	**2.67**	**291**	⇓P	**Pn**	**08 48 49.9**	**+0.7**
JIO	**Ouri**	**2.71**	**25**	⇓P	**Pn**	**08 48 49.4**	**-0.4**
JHJ	**Hachijo jima 2**	**2.88**	**182**	P	**Pn**	**08 48 51.7**	**-0.5**

3μm,0.3s,baz=315,slow=15,SNR=690
JHJ S **Sn 08 49 24.0 -1.6**
960nm,0.3s,baz=319,slow=21,SNR=4.1
JHJ2 Mitsune 2.89 181 *e*Pn **Pn 08 48 51.9 -0.3**
JHJ2 Mitsune 2.89 181 P **Pn 08 48 51.7 -0.6**
JKG Kaga 2.89 276 P **Pn 08 48 53.6 +1.3**
JYK Kaneyama 2.93 7 ⇓P **Pn 08 48 54.0 +1.1**
JHG Hegura jima 3.01 309 ⇓P **Pn 08 48 53.8 -0.1**
TSUJ Tsu 2 3.12 246 P **Pn 08 48 56.4 +1.0**
JTB Tobi-shima 3.19 355 ⇓P **Pn 08 48 57.0 +0.6**
JFM Mihama 3.21 263 ⇑P **Pn 08 48 57.8 +1.1**
JAH Hinai 4.22 8 ⇓P **Pn 08 49 12.6 +2.1**
ERM Erimo 6.52 22 *e*Pn **Pn 08 49 41.6 -0.4**
ERM Erimo 6.52 22 *ce*P **Pn 08 49 41.5 -0.4**
ERM pmax pmax
comp=Z,169nm,1.0s
JNU Nakatsue 7.97 251 P **Pn 08 50 02.6 +0.7**
comp=Z,3.7nm,0.3s,baz=47,slow=7.9,SNR=25
JNU LR LR 08 53 29.5
comp=Z,3μm,19.1s,baz=72,slow=41
JNU Nakatsue 7.97 251 *e*Pn **Pn 08 50 03.1 +1.2**
ASAJ Asahikawa 8.36 14 P **Pn 08 50 05.8 -1.4**
comp=Z,7.3nm,0.3s,baz=218,slow=11,SNR=14
ASAJ LR LR 08 53 43.0
comp=Z,1μm,21.5s,baz=198,slow=40
ASAJ Asahikawa 8.36 14 *e*Pn **Pn 08 50 06.7 -0.5**
GLVR Golovnino 8.85 28 P **Pn 08 50 12.9 -1.0**
GLVR *e*S **Sn 08 51 46.3 -5.8**
GLVR pmax pmax
comp=N,290nm,0.5s
GLVR pmax pmax
comp=E,140nm,0.5s
GLVR pmax pmax
comp=Z,441nm,0.5s
CBIJ Chichi jima 9.10 167 *e*Pn **Pn 08 50 13.3 -4.1**
CBIJ *e*Sn **Sn 08 51 51.2 -7.1**
CBIJ Chichi jima 9.10 167 P **Pn 08 50 13.0 -4.4**
JCJ Chichijima 9.10 167 P **Pn 08 50 13.7 -3.6**
comp=Z,147nm,0.3s,baz=64,slow=5.5,SNR=88
JCJ S **Sn 08 51 49.8 -8.6**
comp=Z,46nm,0.3s,baz=288,slow=22,SNR=3.3
GRPR Tuman 9.16 28 *e*P **Pn 08 50 17.5 -0.7**
GRPR *i* S **Sn 08 51 52.2 -7.6**
GRPR pmax pmax
comp=N,76nm,0.3s
GRPR pmax pmax
comp=Z,261nm,0.3s
GRPR pmax pmax
comp=E,107nm,0.2s
LAGR Lagunnoye 9.22 28 *e*P **Pn 08 50 18.6 -0.4**
LAGR *i* S **Sn 08 51 56.5 -4.7**
LAGR pmax pmax
comp=E,137nm,0.3s
LAGR pmax pmax
comp=Z,374nm,0.3s
LAGR pmax pmax
comp=N,256nm,0.4s
YUK Yuzh-Kuril'sk 9.23 28 *e*P **Pn 08 50 18.5 -0.6**
YUK *i* S **Sn 08 51 55.6 -5.9**
YUK pmax pmax
comp=N,192nm,0.5s
YUK pmax pmax
comp=Z,244nm,0.5s
YUK pmax pmax
comp=E,72nm,0.3s
YUK MLR MLR
comp=E,578nm,11.0s
YUK MLR MLR
comp=Z,641nm,17.0s
MSHR Mys Shultsa 9.42 317 *ce*P **Pn 08 50 20.4 -1.3**
KSRS Korea Array 9.71 282 P **Pn 08 50 28.7 +2.9**
comp=Z,4.1nm,0.3s,baz=100,slow=14,SNR=99
KSRS LR LR 08 54 06.4
comp=Z,3μm,20.3s,baz=85,slow=37
KSRS PcP **PcP 08 56 37.5 +0.8**
baz=140,slow=0.4,SNR=4.3
KSRS ScP **ScP 09 00 05.6 +1.4**
comp=Z,0.0nm,0.3s,baz=170,slow=0.8,SNR=4.4
KS01 Wonju Array Si 9.74 282 *e*Pn **Pn 08 50 27.6 +1.5**
KS15 Wonju Array Si 9.74 282 *e*Pn **Pn 08 50 29.1 +3.0**
KSAR Wonju Array Be 9.74 282 P **Pn 08 50 28.7 +2.5**
KSAR PcP **PcP 08 56 37.5 +0.8**
KSAR ScP **ScP 09 00 05.6 +1.3**
KSAR Wonju Array Be 9.74 282 P **Pn 08 50 28.7 +2.5**
TJN Taejon 10.13 276 *ce*P **Pn 08 50 33.8 +2.4**
USRK Ussuriysk Ar. 10.17 326 P **Pn 08 50 36.2 +4.2**
comp=Z,3.8nm,0.3s,baz=136,slow=13,SNR=107
USRK LR LR 08 54 14.0
comp=Z,1μm,21.0s,baz=124,slow=36
INCN Inchon 10.74 282 *e*Pn **Pn 08 50 44.0 +4.2**
KUR Kuril'sk 11.03 31 *e*P **Pn 08 50 45.9 +2.3**
KUR *e*S **Sn 08 52 39.1 -6.2**
KUR pmax pmax
comp=Z,89nm,0.6s
KUR pmax pmax
comp=E,36nm,0.5s
KUR pmax pmax
comp=N,20nm,0.4s
KUR smax smax
comp=E,159nm,0.8s
KUR smax smax
comp=N,67nm,0.5s
KUR smax smax
comp=N,585nm,2.1s
KUR smax smax
comp=E,211nm,1.1s
KUR MLR MLR
comp=E,903nm,13.0s
KUR MLR MLR
comp=Z,551nm,13.0s
KUR MLR MLR
comp=N,1μm,17.0s
YSS Yuzh-Sakhalins 11.15 10 *e*Pn **Pn 08 50 44.5 -0.7**
YSS Yuzh-Sakhalins 11.15 10 ⇓*e*P **Pn 08 50 44.6 -0.7**
YSS *e*S **Sn 08 52 41.4 -6.9**
YSS pmax pmax
comp=N,100nm,0.9s
YSS pmax pmax
comp=E,30nm,0.9s
YSS pmax pmax
comp=Z,120nm,0.9s
YSS smax smax
comp=N,30nm,0.7s
MDJ Mudanjiang 11.64 321 P **Pn 08 50 53.1 +1.1**
MDJ sP 08 51 09.2
MDJ S **Sn 08 53 02.0 +1.6**
MDJ sS 08 53 15.8
MDJ PcP **PcP 08 56 39.5 +0.9**
MDJ PcS **PcS 09 00 13.6 +1.2**
MDJ pmax pmax
comp=N,160nm,1.0s
MDJ LR LR
comp=N,1μm,19.1s
MDJ LR LR
comp=N,1μm,15.1s
MDJ LR LR
comp=N,2μm,15.1s
MDJ Mudanjiang 11.64 321 *e*Pn **Pn 08 50 55.5 +3.5**
comp=N,168nm,1.2s
JOW Kunigami 13.48 231 LR LR 08 56 21.0
comp=N,573nm,21.1s,baz=66,slow=37
JOW Kunigami 13.48 231 *e*Pn **P 08 51 22.7 -2.1**
CN2 Changchun 13.53 310 *e*P **Pn 08 51 19.0 +1.1**
CN2 *es*P P 08 51 37.7 +12
CN2 *e*S **Sn 08 53 47.0 +0.5**
CN2 pmax pmax
comp=N,10.0nm,0.7s
CN2 pmax pmax
comp=N,200nm,5.0s
CN2 LR LR
comp=N,740nm,13.0s
CN2 LR LR
comp=N,960nm,13.0s
CN2 LR LR
comp=N,930nm,15.0s
SNY Shenyang 13.96 300 ⇓P **Pn 08 51 24.9 +1.3**
SNY S **Sn 08 53 58.2 +1.3**
SNY pmax pmax
comp=N,15nm,0.9s
SNY LR LR
comp=N,1μm,13.3s
SNY LR LR
comp=N,1μm,16.3s
SNY LR LR
comp=N,2μm,16.7s
KLR Kul'dur 14.50 338 P **Pn 08 51 29.9 -0.7**

comp=N,0.1nm,0.3s,baz=132,slow=12,SNR=22
KLR LR LR 08 56 58.0
comp=N,86nm,18.4s,baz=145,slow=37
KLR ScP **ScP** **09 00 12.5 +1.5**
comp=N,0.0nm,0.3s,baz=228,slow=2.2,SNR=3.4
KLR Kul'dur 14.50 338 *c*eP **Pn** **08 51 29.4 -1.3**
DL2 Dalian 14.79 287 P **Pn** **08 51 36.6 +2.0**
DL2 sP P 08 51 50.4 +11
DL2 *e*S **Sn** **08 54 22.0 +4.9**
DL2 pmax pmax
comp=N,52nm,1.3s
DL2 pmax pmax
comp=N,430nm,6.2s
DL2 LR LR
comp=N,1μm,21.0s
DL2 LR LR
comp=N,2μm,22.0s
GRNR Gornyy 14.97 351 *e*P **Pn** **08 51 34.1 -2.7**
GRNR pmax pmax
comp=Z,42nm,1.0s
TYV Tymovskoe 14.98 7 *e*P **Pn** **08 51 34.4 -2.6**
TYV *e*S **Sn** **08 54 21.6 -0.1**
TYV pmax pmax
comp=Z,100nm,5.7s
TYV pmax pmax
comp=Z,102nm,0.9s
TYV smax smax
comp=E,30nm,1.5s
SSE Sheshan 16.34 258 P **Pn** **08 51 51.2 -3.2**
SSE S **Sn** **08 54 51.7 -3.0**
SSE pmax pmax
comp=E,12nm,0.6s
SSE pmax pmax
comp=E,380nm,5.5s
SSE LR LR
comp=E,560nm,24.5s
SSE LR LR
comp=E,430nm,22.6s
NKL Nikolayevsk 17.15 2 *e*P **Pn** **08 52 02.0 -2.4**
NKL *e* 08 55 10.0
NKL MLR MLR
comp=Z,600nm,15.0s
NJ2 Nanjing 17.87 263 *e*P **P** **08 52 14.6 +1.1**
NJ2 pP **pP** **08 52 26.6 +1.1**
NJ2 sP **sP** **08 52 34.3 +1.9**
NJ2 S **Sn** **08 55 33.5 +1.7**
NJ2 pmax pmax
comp=Z,22nm,0.9s
NJ2 LR LR
comp=Z,500nm,9.2s
NJ2 LR LR
comp=Z,700nm,10.8s
NJ2 LR LR
comp=Z,930nm,11.9s
TIA Tai'an 18.39 277 P **P** **08 52 18.5 -0.7**
TIA pmax pmax
comp=Z,14nm,0.9s
TIA pmax pmax
comp=Z,110nm,2.9s
TIA LR LR
comp=Z,270nm,17.6s
TIA LR LR
comp=Z,360nm,18.3s
TIA LR LR
comp=Z,470nm,17.1s
BJI Beijing 19.09 289 P **P** **08 52 26.6 -0.3**
BJI S **S** **08 55 55.9 -4.6**
BJI pmax pmax
comp=Z,35nm,1.0s
BJI LR LR
comp=Z,1μm,19.1s
BJI LR LR
comp=Z,880nm,24.6s
BJI LR LR
comp=Z,2μm,32.2s
BJT Baijiatuau 19.10 289 *e*P **P** **08 52 26.1 -0.8**
comp=Z,47nm,0.6s
BJT Baijiatuau 19.10 289 *e*P **P** **08 52 26.1 -0.8**
BJT pmax pmax
comp=Z,47nm,0.6s
YHNB Yeheng 19.53 240 *e*P **P** **08 52 31.3 -0.5**
comp=Z,95nm,1.3s
NACB Ninganchiao 19.70 238 *e*P **P** **08 52 33.4 -0.2**
comp=Z,27nm,0.6s
HIA Hailar 19.80 318 *e*P **P** **08 52 32.6 -1.9**
comp=Z,25nm,0.8s
HIA Hailar 19.80 318 *e*P **P** **08 52 32.6 -1.9**
HIA pmax pmax
comp=Z,25nm,0.8s
ZEA Zeya 19.81 337 *e*P **P** **08 52 31.6 -2.9**
ZEA pmax pmax
comp=N,62nm,0.8s
ZEA pmax pmax
comp=E,42nm,0.8s
ZEA pmax pmax
comp=Z,97nm,0.8s
ZEA MLR MLR
comp=N,800nm,16.0s
ZEA MLR MLR
comp=E,600nm,16.0s
ZEA MLR MLR
comp=Z,2μm,16.0s
SSLB Suanglung 20.39 239 *e*P **P** **08 52 40.2 -1.0**
comp=Z,22nm,0.6s
YULB Yu-li 20.42 237 *e*P **P** **08 52 40.1 -1.3**
comp=Z,19nm,1.0s
TPUB Ta-pu 20.94 238 *e*P **P** **08 52 45.0 -2.0**
comp=Z,46nm,0.7s
TWG Pinlang 20.96 236 *e*P **P** **08 52 48.6 +1.3**
comp=Z,154nm,0.8s
PEA0B Petropavlovsk- 21.19 31 *e*P **P** **08 52 50.9 +1.4**
comp=Z,53nm,0.9s
PETK Petropavlovsk- 21.19 31 P **P** **08 52 49.5 -0.1**
comp=Z,20nm,0.8s,baz=216,slow=9.3,SNR=14
PETK LR LR 09 00 46.7
comp=Z,366nm,20.3s,baz=224,slow=36
PETK Petropavlovsk- 21.19 31 *e*P **P** **08 52 51.1 +1.7**
PETK Petropavlovsk- 21.19 31 *e*P **P** **08 52 51.2 +1.7**
QZH Quanzhou 21.36 245 ⇓*i*P **P** **08 52 49.3 -2.2**
QZH *e*S **S** **08 56 41.8 -4.0**
QZH LR LR
comp=Z,760nm,15.6s
PET Petropavlovsk 21.54 32 *e*P **P** **08 52 54.0 +0.9**
comp=Z,102nm,1.2s
PET Petropavlovsk 21.54 32 *e*P **P** **08 52 53.5 +0.4**
PET *e*S **S** **08 56 43.5 -5.2**
PET pmax pmax
comp=Z,300nm,13.9s
PET pmax pmax
comp=Z,100nm,13.6s
PET pmax pmax
comp=Z,64nm,1.1s
PET MLR MLR
comp=Z,300nm,18.0s
WHN Wuhan 22.01 263 ⇓P **P** **08 52 57.8 -0.6**
WHN S **S** **08 56 57.3 -0.8**
WHN pmax pmax
comp=Z,58nm,1.0s
WHN LR LR
comp=Z,2μm,13.1s
WHN LR LR
comp=Z,1μm,11.4s
WHN LR LR
comp=Z,2μm,13.6s
HHC Hu-ho-hao-te 22.66 291 *e*P **P** **08 53 05.6 +0.1**
HHC pP pP 08 53 19.8 +2.0
HHC sP sP 08 53 27.3 +2.6
HHC S **S** **08 57 09.6 -0.1**
HHC sS sS 08 57 29.9 -1.6
HHC pmax pmax
comp=Z,14nm,0.9s
HHC pmax pmax
comp=Z,72nm,6.6s
HHC LR LR
comp=Z,160nm,16.4s
HHC LR LR
comp=Z,320nm,14.7s
HHC LR LR
comp=Z,370nm,14.7s
GUMO Guam 22.77 167 LR LR 08 59 17.2
comp=Z,121nm,21.7s,baz=26,slow=29
GUMO Guam 22.77 167 *e*P **P** **08 53 05.9 -0.7**
comp=Z,758nm,1.5s
GUMO Guam 22.77 167 *e*P **P** **08 53 05.9 -0.7**
GUMO pmax pmax
comp=Z,758nm,1.5s

CLNS Chul'man 23.16 339 *e*P **P** **08 53 10.9 +0.6**
CLNS *e**PP sP 08 53 46.9 +17
CLNS *e*S **S** **08 57 09.9 -7.6**
CLNS *e**SS sS 08 58 04.1 +24
CLNS pmax pmax
comp=Z,52nm,0.9s
CLNS pmax pmax
comp=N,21nm,0.9s
CLNS pmax pmax
comp=E,24nm,0.9s
CLNS smax smax
comp=E,157nm,12.6s
CLNS smax smax
comp=N,428nm,11.6s
MA2 Magadan 24.62 13 P **P** **08 53 24.0 +0.3**
comp=N,46nm,0.8s,baz=199,slow=8.9,SNR=53
MA2 Magadan 24.62 13 *e*P **P** **08 53 24.8 +1.0**
comp=N,70nm,1.0s
MA2 Magadan 24.62 13 *i*P **P** **08 53 24.0 +0.3**
MA2 pmax pmax
comp=Z,93nm,1.3s
XAN Xi'an 25.39 275 P **P** **08 53 28.0 -3.0**
XAN pP pP 08 53 39.2 -5.4
XAN PP **PnPn** **08 54 07.5 -0.7**
XAN S **S** **08 57 43.1 -11**
XAN pmax pmax
comp=Z,14nm,1.2s
XAN pmax pmax
comp=Z,180nm,5.9s
XAN LR LR
comp=Z,690nm,19.2s
XAN LR LR
comp=Z,660nm,20.6s
XAN LR LR
comp=Z,700nm,19.8s
ENH Enshi 26.03 266 *e*P **P** **08 53 34.7 -2.1**
comp=Z,60nm,0.6s
YAK Yakutsk 26.83 349 *e*P **P** **08 53 42.5 -1.1**
comp=Z,112nm,0.9s
YAK Yakutsk 26.83 349 *c i*P **P** **08 53 42.7 -0.9**
YAK *e**PP **pP** **08 53 56.4 -0.9**
YAK *e* 08 54 29.1
YAK *e*S **S** **08 58 14.0 -1.8**
YAK *e*SS **SnSn** **08 59 19.1 -5.5**
YAK pmax pmax
comp=Z,94nm,1.0s
YAK pmax pmax
comp=N,31nm,1.0s
YAK pmax pmax
comp=E,7.0nm,1.0s
YAK pmax pmax
comp=Z,48nm,1.5s
YAK pmax pmax
comp=E,34nm,1.5s
YAK pmax pmax
comp=N,68nm,1.5s
YAK smax smax
comp=E,194nm,2.0s
YAK smax smax
comp=N,335nm,2.3s
YAK MLR MLR
comp=Z,706nm,19.0s
YAK MLR MLR
comp=N,824nm,18.0s
YAK MLR MLR
comp=E,122nm,17.0s
ULN Ulaanbaatar 26.94 306 *e*P **P** **08 53 44.5 -0.5**
comp=E,14nm,0.7s
ULN Ulaanbaatar 26.94 306 P **P** **08 53 45.8 +0.8**
SNR=13
ULN Ulaanbaatar 26.94 306 P **P** **08 53 45.8 +0.8**
SNR=13
ULN Ulaanbaatar 26.94 306 *de*P **P** **08 53 44.6 -0.5**
ULN pmax pmax
comp=Z,28nm,1.2s
SONA1 Songino Array 27.36 306 *e*P **P** **08 53 47.6 -1.2**
SONM Songino Array 27.37 306 P **P** **08 53 47.0 -1.8**
comp=Z,11nm,0.8s,baz=106,slow=8.3,SNR=41
SONM ScP **ScP** **09 00 43.4 +0.9**
comp=Z,0.7nm,0.9s,baz=94,slow=4.5,SNR=3.6
SONM LR LR 09 05 03.6
comp=Z,800nm,18.8s,baz=102,slow=37
BOD Bodaibo 27.77 330 *e*P **P** **08 53 50.7 -1.4**
BOD pmax pmax
comp=Z,43nm,1.3s
SEY Seymchan 28.04 12 P **P** **08 53 55.1 +0.6**
comp=Z,17nm,0.9s,baz=200,slow=6.6,SNR=23
SEY Seymchan 28.04 12 ‖*e*P **P** **08 53 54.2 -0.3**
H11N2 WAKE ISLAND Hy 28.73 117 T T 09 24 05.7
baz=312,slow=75,SNR=242
H11N1 WAKE ISLAND Hy 28.73 117 T T 09 24 16.1
baz=312,slow=75,SNR=311
H11N3 WAKE ISLAND Hy 28.75 117 T T 09 24 16.8
baz=312,slow=75,SNR=334
LZH Lanzhou 29.04 281 *e*P **P** **08 54 04.4 +0.5**
LZH pP pP 08 54 14.7 -3.0
LZH sP sP 08 54 19.0 -5.1
LZH PP **PnPn** **08 54 57.1 -1.0**
LZH *e*S **S** **08 58 47.2 -4.4**
LZH sS sS 08 59 11.2 -3.7
LZH pmax pmax
comp=Z,32nm,1.1s
LZH pmax pmax
comp=Z,250nm,4.8s
LZH LR LR
comp=Z,510nm,12.0s
LZH LR LR
comp=Z,2μm,13.1s
LZH LR LR
comp=Z,2μm,13.8s
H11S3 WAKE ISLAND Hy 29.38 119 T T 09 25 07.2
baz=314,slow=76,SNR=300
H11S1 WAKE ISLAND Hy 29.38 119 T T 09 25 06.9
baz=314,slow=76,SNR=713
H11S2 WAKE ISLAND Hy 29.40 119 T T 09 25 09.5
baz=314,slow=76,SNR=401
GYA Guiyang 29.84 261 ⇓*i*P **P** **08 54 08.8 -2.2**
GYA PP **PnPn** **08 55 12.0 +3.2**
GYA PcP **PcP** **08 57 15.6 +2.4**
GYA S **S** **08 59 05.4 +1.2**
GYA sS sS 08 59 28.7 +1.2
GYA SS **SnSn** **09 00 42.0 +3.2**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,120nm,5.4s
GYA LR LR
comp=Z,660nm,17.4s
GYA LR LR
comp=Z,580nm,17.8s
GYA LR LR
comp=Z,590nm,18.2s
ZAK Zakamensk 29.97 310 *e*P **P** **08 54 08.6 -3.2**
ZAK pmax pmax
comp=Z,7.0nm,1.0s
TLY Talaya 30.10 313 *e*P **P** **08 54 12.9 0.0**
comp=Z,7.4nm,0.7s
TLY Talaya 30.10 313 *c i*P **P** **08 54 12.6 -0.3**
TLY pmax pmax
comp=Z,10.0nm,0.9s
TLY MLR MLR
comp=Z,599nm,17.0s
CD2 Chengdu 30.45 271 P **P** **08 54 14.1 -2.2**
CD2 pP pP 08 54 28.3 -1.8
CD2 sP sP 08 54 35.3 -1.2
CD2 PcP **PcP** **08 57 13.5 -1.1**
CD2 S **S** **08 59 10.3 -3.3**
CD2 sS sS 08 59 35.1 -1.9
CD2 pmax pmax
comp=Z,30nm,0.5s
CD2 pmax pmax
comp=Z,260nm,5.2s
CD2 LR LR
comp=Z,340nm,6.5s
CD2 LR LR
comp=Z,300nm,22.6s
QIZ Qiongzhong 31.39 245 P **P** **08 54 26.1 +1.6**
QIZ S **S** **08 59 29.7 +1.5**
QIZ pmax pmax
comp=Z,120nm,2.8s
QIZ LR LR
comp=Z,440nm,16.7s
QIZ LR LR
comp=Z,300nm,17.6s
QIZ LR LR
comp=Z,350nm,23.5s

MOY Mondy 31.69 312 *e*P **P** **08 54 26.2 -0.8**
GTA Gaotai 31.70 288 P **P** **08 54 27.2 -0.1**
GTA pP pP 08 54 41.3 +0.1
GTA sP sP 08 54 47.9 +0.3
GTA PP **PnPn** **08 55 34.7 +1.8**
GTA PcP **PcP** **08 57 19.0 +1.1**
GTA S **S** **08 59 33.1 -0.1**
GTA sS sS 08 59 59.9 +3.3
GTA ScP **ScP** **09 00 57.1 +0.6**
GTA SS **SnSn** **09 01 29.3 +5.4**
GTA pmax pmax
comp=Z,12nm,0.8s
GTA pmax pmax
comp=Z,78nm,6.2s
GTA LR LR
comp=Z,380nm,17.9s
GTA LR LR
comp=Z,560nm,18.5s
GTA LR LR
comp=Z,760nm,18.9s
KMI Kunming 33.59 262 P **P** **08 54 43.0 -1.1**
KMI pP pP 08 54 56.6 -1.4
KMI sP sP 08 55 03.4 -1.0
KMI PP **PnPn** **08 55 57.8 +0.7**
KMI S **S** **09 00 02.0 -1.0**
KMI sS sS 09 00 21.1 -5.3
KMI pmax pmax
comp=Z,32nm,1.1s
KMI pmax pmax
comp=Z,84nm,4.2s
KMI LR LR
comp=Z,310nm,17.2s
KMI LR LR
comp=Z,520nm,18.6s
KMI LR LR
comp=Z,680nm,18.2s
BILL Bilibino 35.36 17 *e*P **P** **08 54 59.0 +0.4**
comp=Z,8.6nm,0.7s
BILL Bilibino 35.36 17 *c i*P **P** **08 54 58.2 -0.4**
BILL *e* 08 56 22.4
BILL *e*SS SS 09 02 51.7 -12
BILL pmax pmax
comp=Z,18nm,1.2s
BILL MLR MLR
comp=Z,382nm,17.0s
ATKA Atka Island 36.05 49 *e*P **P** **08 55 05.9 +1.3**
comp=Z,28nm,0.9s
TIXI Tiksi 36.17 354 *e*P **P** **08 55 05.0 -0.4**
comp=Z,16nm,0.6s
TIXI Tiksi 36.17 354 *c i*P **P** **08 55 04.6 -0.9**
TIXI pmax pmax
comp=Z,38nm,1.2s
TIXI MLR MLR
comp=Z,366nm,17.0s
UBPT Khong Chiam 36.98 245 P **P** **08 55 11.4 -1.6**
comp=Z,36nm,0.8s
NONG Nongkai 37.01 251 P **P** **08 55 12.3 -0.9**
comp=Z,49nm,1.1s,comp=Z,2μm
SKNT Sakolnakorn 37.03 249 P **P** **08 55 11.3 -2.1**
comp=Z,16nm,0.8s
SIJI Sorong 37.56 194 P **P** **08 55 18.0 +0.2**
comp=Z,24nm,0.7s,baz=63,slow=6.0,SNR=6.5
JAY Jayapura 38.33 179 P **P** **08 55 23.2 -1.2**
GENI Genyem 38.40 180 P P 08 55 38.4 +14
CMAI Chiengmai2 39.15 257 P **P** **08 55 30.8 -0.7**
comp=Z,81nm,1.1s
FAKI Fak Fak 39.38 192 *e*P **P** **08 55 33.0 -0.1**
comp=Z,23nm,0.8s
PBKT Sadao Pong 39.57 251 P **P** **08 55 32.6 -2.1**
comp=Z,30nm,1.3s
PBKT Sadao Pong 39.57 251 *e*P **P** **08 55 33.1 -1.6**
comp=Z,60nm,1.6s
CHTO Chiang Mai 39.85 256 P **P** **08 55 40.2 +3.1**
comp=Z,54nm,1.0s
CHTO Chiang Mai 39.85 256 *e*P **P** **08 55 36.2 -0.8**
comp=Z,6.6nm,0.6s
CHTO Chiang Mai 39.85 256 *e*P **P** **08 55 36.3 -0.8**
CHTO pmax pmax
comp=Z,7.0nm,0.6s
SANI Sanana 40.02 202 P **P** **08 55 38.2 -0.3**
CMAR Chiang Mai Arr 40.05 255 P **P** **08 55 37.7 -1.0**
comp=Z,3.3nm,0.7s,baz=45,slow=7.2,SNR=13
CMAR PcP **PcP** **08 57 43.8 +1.0**
comp=Z,1.2nm,0.3s,baz=9.0,slow=2.1,SNR=7.0
CMAR LR LR 09 13 51.4
comp=Z,262nm,18.3s,baz=66,slow=39
CM01 Chiang Mai Arr 40.05 255 *e*P **P** **08 55 37.6 -1.2**
WMQ Urumqi 40.22 298 P **P** **08 55 40.2 +0.2**
WMQ pP pP 08 55 48.6 -5.5
WMQ sP sP 08 56 02.1 +1.6
WMQ pmax pmax
comp=Z,72nm,0.9s
WMQ pmax pmax
comp=Z,540nm,4.7s
WMQ LR LR
comp=Z,730nm,19.1s
WMQ LR LR
comp=Z,680nm,16.9s
WMQ LR LR
comp=Z,690nm,22.5s
LSA Lhasa 41.08 276 P **P** **08 55 48.0 +0.3**
LSA pmax pmax
comp=Z,58nm,1.2s
LSA Lhasa 41.08 276 *e*P **P** **08 55 47.8 +0.1**
comp=Z,44nm,0.8s
LSA Lhasa 41.08 276 *i*P **P** **08 55 48.0 +0.3**
SNR=7.6
LSA Lhasa 41.08 276 *e*P **P** **08 55 47.8 +0.1**
LSA pmax pmax
comp=Z,44nm,0.8s
ZAA0 Zalesovo Array 41.71 313 *e*P **P** **08 55 51.7 -0.3**
comp=Z,101nm,0.8s
ZALV Zalesovo Beam 41.71 313 P **P** **08 55 51.3 -0.7**
comp=Z,98nm,0.6s,baz=93,slow=6.2,SNR=314
ZALV PcP **PcP** **08 57 47.3 -0.3**
comp=Z,14nm,0.5s,baz=108,slow=3.4,SNR=9.7
ZALV ScP **ScP** **09 01 33.4 +0.3**
comp=Z,1.4nm,0.7s,baz=114,slow=3.6,SNR=4.2
ZALV LR LR 09 12 48.2
comp=Z,198nm,21.4s,baz=62,slow=36
ZALV Zalesovo Beam 41.71 313 *e*P **P** **08 55 51.7 -0.3**
ZALV PcP **PcP** **08 57 47.3 -0.3**
ZALV ScP **ScP** **09 01 33.4 +0.3**
ZALV Zalesovo Beam 41.71 313 *e*P **P** **08 55 51.7 -0.3**
ZALV 08 57 47.3
SHL Shillong 42.17 270 *i* PCN P 08 55 50.0 -6.3
SHL Shillong 42.17 270 *e*P **P** **08 55 55.1 -1.2**
comp=Z,30nm,0.8s
SHL Shillong 42.17 270 *e*P **P** **08 55 55.1 -1.2**
SHL pmax pmax
comp=Z,30nm,0.8s
NVS Novosibirsk 42.67 315 *e*P **P** **08 55 59.8 0.0**
NVS *e* 08 56 09.4
NVS pmax pmax
comp=N,19nm,0.7s
NVS pmax pmax
comp=E,72nm,0.7s
NVS pmax pmax
comp=Z,93nm,0.7s
PHET Kaeng Krachan 42.84 248 P **P** **08 56 01.5 -0.1**
comp=Z,15nm,0.7s
MK01 Makanchi Array 43.63 303 *e*P **P** **08 56 07.3 -0.4**
MK31 Makanchi Array 43.63 303 *e*P **P** **08 56 07.5 -0.3**
MK31 Makanchi Array 43.63 303 *i*P **P** **08 56 07.0 -0.7**
MK31 pmax pmax
comp=Z,17nm,0.6s
MKAR Makanchi Array 43.63 303 P **P** **08 56 07.4 -0.3**
comp=Z,20nm,0.6s,baz=88,slow=9.8,SNR=257
MKAR ScP **ScP** **09 01 41.3 +0.2**
comp=Z,0.6nm,0.8s,baz=64,slow=3.4,SNR=3.0
MKAR LR LR 09 14 57.4
comp=Z,680nm,18.2s,baz=69,slow=37
MKAR Makanchi Array 43.63 303 *e*P **P** **08 56 07.6 -0.1**
comp=Z,183nm,0.6s
MKAR ScP **ScP** **09 01 41.3 +0.2**
MKAR Makanchi Array 43.63 303 *e*P **P** **08 56 07.6 -0.1**
MKAR pmax pmax
comp=Z,183nm,0.6s
NRIK Noril'sk 43.70 336 P **P** **08 56 07.4 -0.4**
comp=Z,31nm,0.8s,baz=115,slow=9.7,SNR=27
NRIK PcP **PcP** **08 57 54.7 +0.7**
comp=Z,6.1nm,0.5s,baz=186,slow=2.5,SNR=3.6
NRIK LR LR 09 15 31.7
comp=Z,505nm,18.4s,baz=356,slow=38
MAKZ Makanchi 43.84 303 *e*P **P** **08 56 09.3 -0.1**
comp=Z,27nm,0.9s

MAKZ Makanchi 43.84 303 *eP* **P 08 56 09.3 -0.1**
MAKZ pmax pmax
comp=Z,27nm,0.9s
KSM Kuching 43.96 225 *eP* **P 08 56 10.0 -0.6**
comp=Z,20nm,0.7s
RDOG Red Dog Mine 44.97 27 *eP* **P 08 56 19.2 +1.1**
comp=Z,20nm,1.0s
KURK Kurchatov 45.61 309 *eP* **P 08 56 23.0 -0.3**
comp=Z,153nm,0.8s
KURK Kurchatov 45.61 309 P **P 08 56 22.8 -0.5**
SNR=56
KURK Kurchatov 45.61 309 P **P 08 56 22.8 -0.5**
SNR=56
KURK Kurchatov 45.61 309*c i*P **P 08 56 22.7 -0.6**
KURK pmax pmax
comp=Z,271nm,1.2s
KURBB Kurchatov Arra 45.67 309 P **P 08 56 23.4 -0.4**
comp=Z,102nm,0.7s,baz=84,slow=7.8,SNR=585
PMG Port Moresby 45.69 170 LR LR 09 14 50.7
comp=Z,229nm,19.7s,baz=349,slow=35
JIRN Jiri 45.89 275 *eP* **P 08 56 26.5 +0.2**
comp=Z,243nm,0.8s
GUN Gumba 46.03 276 *eP* **P 08 56 27.3 -0.2**
comp=Z,104nm,0.7s
PDGK Podgornoye 46.17 298 P **P 08 56 27.5 -0.6**
PDGK pmax pmax
comp=Z,170nm,1.1s
PKI Pulchoki 46.55 276 *eP* **P 08 56 31.0 -0.5**
comp=Z,170nm,1.1s
PKIN Phulchoki 46.56 276 *eP* **P 08 56 31.4 -0.1**
comp=Z,110nm,0.8s
KKN Kakani 46.57 276 *eP* **P 08 56 31.2 -0.3**
comp=Z,120nm,0.9s
DMN Daman 46.78 276 *eP* **P 08 56 33.0 -0.2**
comp=Z,62nm,0.8s
GKN Gorkha 47.00 277 *eP* **P 08 56 34.6 -0.2**
comp=Z,419nm,0.9s
SVW2 Sparrevohn 47.08 37 *eP* **P 08 56 37.1 +2.3**
comp=Z,20nm,1.0s
PRZ Przheval'sk 47.15 298 *eP* **P 08 56 36.6 +0.9**
comp=Z,113nm,0.9s
PRZ Przheval'sk 47.15 298 *eP* **P 08 56 36.7 +0.9**
PRZ pmax pmax
comp=Z,113nm,0.9s
IPM Ipoh 47.56 238 *eP* **P 08 56 37.6 -1.4**
comp=Z,14nm,0.7s
DANN Dangsing 47.56 277 *eP* **P 08 56 39.5 +0.2**
comp=Z,631nm,0.8s
TARG Taragay, Kyrgy 47.76 297 *eP* **P 08 56 41.5 +0.7**
comp=Z,93nm,0.7s
SOEI Soe 47.84 201 P **P 08 56 41.1 -0.1**
KOLN Koldanda 47.93 277 *eP* **P 08 56 42.1 0.0**
comp=Z,201nm,1.2s
KDJ Kajisay 48.11 297 *eP* **P 08 56 43.5 +0.3**
comp=Z,38nm,0.7s
KDJ Kajisay 48.11 297 P **P 08 56 43.5 +0.3**
KDJ pmax pmax
comp=Z,38nm,0.7s
IM3 Indian Mountai 48.16 30 *eP* **P 08 56 44.6 +1.5**
PYUN Piuthan 48.28 278 *eP* **P 08 56 44.8 0.0**
comp=Z,1μm,1.1s
OHAK Old Harbor 48.34 42 *eP* **P 08 56 45.5 +1.0**
comp=Z,26nm,1.0s
BATI Baumata 48.45 202 LR LR 09 16 52.3
comp=Z,206nm,21.4s,baz=61,slow=36
RSO Redoubt South 48.47 38 *eP* **P 08 56 47.7 +2.0**
KDAK Kodiak Island 48.68 41 *eP* **P 08 56 48.4 +1.3**
comp=Z,46nm,0.8s
KDAK Kodiak Island 48.68 41 *i*P **P 08 56 48.3 +1.2**
PPLA Purkeypile 48.71 34 *eP* **P 08 56 50.2 +2.7**
comp=Z,52nm,1.2s
ULHL Ulahol 48.75 298 P **P 08 56 48.5 +0.3**
SNR=9.7
CAST Castle Rocks 48.76 34 *eP* **P 08 56 49.9 +2.1**
comp=Z,24nm,1.2s
SPU Mount Spurr 48.79 37 *eP* **P 08 56 50.8 +2.8**
HNR Honiara 48.99 153 LR LR 09 16 36.1
comp=Z,124nm,20.9s,baz=327,slow=35
TKM2 Tokmak 2 49.04 299 P **P 08 56 51.2 +0.8**
SNR=96
TKM2 Tokmak 2 49.04 299 P **P 08 56 50.9 +0.5**
TKM2 pmax pmax
comp=Z,63nm,0.7s
NRN Naryn 49.14 297 *eP* **P 08 56 51.7 +0.4**
comp=Z,30nm,0.6s
NRN Naryn 49.14 297 *eP* **P 08 56 51.7 +0.4**
NRN pmax pmax
comp=Z,31nm,0.6s
BPAW Bear Paw Mtn. 49.26 33 *eP* **P 08 56 53.5 +1.9**
comp=Z,21nm,1.3s
KTH Kantishna Hill 49.28 34 *eP* **P 08 56 54.3 +2.5**
comp=Z,41nm,1.1s
MTN Manton Dam 49.28 191 *eP* **P 08 56 51.9 -0.3**
comp=Z,57nm,1.1s
MLY Manley 49.37 32 *eP* **P 08 56 54.4 +2.0**
comp=Z,26nm,1.1s
SUA Susitna One 49.41 36 *eP* **P 08 56 55.0 +2.1**
comp=Z,30nm,0.9s
BRLK Bradley Lake 49.43 39 *eP* **P 08 56 54.6 +1.7**
comp=Z,25nm,1.0s
KZA Kyzart 49.51 298 P **P 08 56 55.4 +1.2**
SNR=80
TRF Thorofare Moun 49.57 34 *eP* **P 08 56 56.3 +2.2**
comp=Z,17nm,1.1s
KBK Karagaybulak 49.57 299 P **P 08 56 55.0 +0.6**
SNR=9.7
CHMS Chumysh 49.62 299 P **P 08 56 54.9 +0.3**
SNR=19
COLD Coldfoot 49.64 29 *eP* **P 08 56 56.4 +2.0**
comp=Z,6.0nm,0.8s
KSH Kashi 49.71 294⇑*i*P **P 08 56 59.1 +3.7**
KSH sP sP 08 57 21.2 +4.9
KSH PP **PP 08 58 55.1 +4.9**
KSH S **S 09 04 03.6 +3.1**
KSH sS sS 09 04 33.2 +8.3
KSH ScS **ScS 09 06 44.7 +2.5**
KSH Kashi 49.71 294 P **P 08 56 58.9 +3.5**
KSH sP sP 08 57 21.2 +4.9
KSH PP PP 08 58 58.1 +7.9
KSH S **S 09 04 01.3 +0.8**
KSH sS sS 09 04 30.6 +5.7
KSH SS **SS 09 07 36.4 +3.3**
KSH pmax pmax
comp=Z,81nm,0.8s
KSH LR LR
comp=Z,510nm,7.7s
KSH LR LR
comp=Z,340nm,7.2s
KSH LR LR
comp=Z,250nm,7.9s
USP Ospenovka 49.73 299 P **P 08 56 55.3 -0.2**
SNR=20
FRU Bishkek 49.76 299 *i*P **P 08 56 55.0 -0.7**
FRU *e* 08 57 20.0
FRU pmax pmax
comp=Z,120nm,1.4s
COEN Coen 49.79 176 *eP* **P 08 56 57.0 +1.0**
comp=Z,52nm,1.3s
AAK Ala-Archa 49.90 299 LR LR 09 19 36.1
comp=Z,522nm,19.2s,baz=64,slow=38
AAK Ala-Archa 49.90 299 P **P 08 56 57.2 +0.3**
SNR=36
AAK Ala-Archa 49.90 299 *eP* **P 08 56 57.0 +0.1**
comp=Z,56nm,0.9s
AAK Ala-Archa 49.90 299 P **P 08 56 57.3 +0.4**
SNR=16
AAK Ala-Archa 49.90 299 P **P 08 56 57.3 +0.4**
SNR=16
AAK Ala-Archa 49.90 299 *i*P **P 08 56 56.9 +0.1**
SNR=39
AAK Ala-Archa 49.90 299 *i*P **P 08 56 56.7 -0.2**
AAK pmax pmax
comp=Z,55nm,0.9s
RC01 Rabbit Creek A 49.92 37 *eP* **P 08 56 58.3 +1.8**
comp=Z,32nm,1.1s
BWN Browne 49.92 33 *eP* **P 08 56 59.5 +3.0**
comp=Z,179nm,1.3s
TOLK Toolik Lake Re 49.94 27 P **P 08 56 58.1 +1.4**
baz=267
TOLK Toolik Lake Re 49.94 27 *eP* **P 08 56 58.3 +1.6**
comp=Z,13nm,0.9s
UCH Uchtor 50.00 298 P **P 08 56 58.7 +0.7**
SNR=48
OTUK Ortayu 50.04 306 P **P 08 56 56.9 -0.8**
OTUK pmax pmax
comp=Z,199nm,0.8s
MCK McKinley 50.17 33 *eP* **P 08 57 00.0 +1.6**
comp=Z,24nm,1.0s
MCK McKinley 50.17 33 *eP* **P 08 57 00.0 +1.6**
MCK pmax pmax
comp=Z,24nm,1.0s
PMR Palmer 50.18 36 *eP* **P 08 56 59.9 +1.4**
comp=Z,18nm,1.0s
PMR Palmer 50.18 36 *eP* **P 08 56 59.9 +1.4**
PMR pmax pmax
comp=Z,18nm,1.0s
PSI Prapat 50.21 238 P **P 08 56 59.4 -0.1**
comp=Z,10nm,0.7s,baz=1.7,slow=1.8,SNR=3.9
PSI PcP **PcP 08 58 18.6 +0.6**
comp=Z,11nm,0.7s,baz=0.1,slow=5.1,SNR=3.9
PSI LR LR 09 21 07.7
comp=Z,156nm,18.2s,baz=1.5,slow=39
RND Reindeer 50.22 34 *eP* **P 08 57 00.1 +1.2**
comp=Z,34nm,1.0s
RND Reindeer 50.22 34 *eP* **P 08 57 00.1 +1.2**
RND pmax pmax
comp=Z,34nm,1.0s
GHO Glory Hole Cre 50.27 36 *eP* **P 08 57 01.0 +1.7**
comp=Z,36nm,1.0s
BVA0 Borovoye Array 50.36 313 *i* P **P 08 56 59.5 -0.5**
BVA0 pmax pmax
comp=Z,25nm,0.6s
BVAR Borovoye Array 50.36 313 P **P 08 56 59.6 -0.4**
comp=Z,29nm,0.6s,baz=79,slow=7.6,SNR=62
BVAR LR LR 09 19 17.7
comp=Z,190nm,19.1s,baz=32,slow=37
EKS2 Erkin-Say 50.40 299 P **P 08 57 00.8 +0.1**
SNR=46
BRVK Borovoye 50.42 313 *eP* **P 08 57 00.6 +0.1**
comp=Z,28nm,0.6s
BRVK Borovoye 50.42 313 P **P 08 57 00.5 0.0**
SNR=16
BRVK Borovoye 50.42 313 P **P 08 57 00.5 0.0**
SNR=16
BRVK Borovoye 50.42 313*c i*P **P 08 57 00.1 -0.4**
BRVK pmax pmax
comp=Z,27nm,0.7s
MDM Murphy Dome 50.44 32 *eP* **P 08 57 02.6 +2.2**
comp=Z,58nm,1.0s
WRH Wood River Hil 50.51 32 *eP* **P 08 57 02.2 +1.2**
comp=Z,16nm,0.8s
SML Sawmill 50.55 36 *eP* **P 08 57 03.4 +2.0**
comp=Z,22nm,0.8s
SML Sawmill 50.55 36 *eP* **P 08 57 03.4 +2.0**
SML pmax pmax
comp=Z,22nm,0.8s
COLA College 50.60 32 *eP* **P 08 57 03.7 +2.1**
comp=Z,21nm,0.8s
COLA College 50.60 32 *eP* **P 08 57 03.7 +2.1**
COLA pmax pmax
comp=Z,21nm,0.8s
AML Almayashu 50.61 298 P **P 08 57 03.4 +0.8**
SNR=58
CCB Clear Creek Bu 50.63 32 *eP* **P 08 57 03.7 +1.8**
comp=Z,7.8nm,0.8s
DHY Denali Highway 50.90 34 *eP* **P 08 57 05.6 +1.4**
comp=Z,14nm,0.9s
HDA Harding Lake 51.01 32 *eP* **P 08 57 05.7 +0.9**
comp=Z,38nm,1.1s
IL1 Eielson Array 51.02 32 *eP* **P 08 57 05.7 +0.9**
ILAR Eielson Array 51.02 32 P **P 08 57 05.5 +0.7**
comp=Z,16nm,0.8s,baz=272,slow=6.1,SNR=138
ILB Eielson Array 51.02 32 *eP* **P 08 57 05.8 +1.0**
SCM Sheep Creek Mo 51.02 36 *eP* **P 08 57 07.0 +2.0**
comp=Z,26nm,1.0s
SCM Sheep Creek Mo 51.02 36 *eP* **P 08 57 07.0 +2.0**
SCM pmax pmax
comp=Z,26nm,1.0s
MNSI Mandailing Nat 51.22 236 P **P 08 57 07.3 +0.4**
MNAS Manas 51.35 299 P **P 08 57 07.7 -0.2**
MNAS pmax pmax
comp=Z,76nm,0.7s
SFK Sufi-Kurgan 51.37 296 P **P 08 57 07.2 -0.9**
SFK pmax pmax
comp=Z,51nm,0.6s
FYU Fort Yukon 51.61 30 *eP* **P 08 57 12.5 +3.3**
comp=Z,36nm,1.0s
UGM Wanagama 51.69 218 *eP* **P 08 57 08.7 -1.7**
comp=Z,368nm,1.7s
KLU Klutina 51.72 36 *eP* **P 08 57 12.3 +2.0**
comp=Z,29nm,1.1s
DIV Divide 51.83 36 *eP* **P 08 57 13.3 +2.2**
comp=Z,36nm,1.0s
EYAK Cordova Ski Ar 51.92 37 *eP* **P 08 57 14.1 +2.5**
comp=Z,68nm,1.5s
HARP HAARP 51.98 35 *eP* **P 08 57 14.5 +2.5**
comp=Z,38nm,0.8s
RIDG Independ'e Rid 51.98 33 *eP* **P 08 57 13.2 +1.1**
comp=Z,19nm,1.0s
KPJI Karang Pucung 52.01 220 P **P 08 57 11.8 -1.0**
GSI Gunungsitoli 52.22 238 *eP* **P 08 57 13.5 -0.9**
comp=Z,49nm,0.9s
LEM Lembang 52.29 222 LR LR 09 20 35.0
comp=Z,95nm,20.0s,baz=336,slow=37
SCRK Sand Creek 52.34 33 *eP* **P 08 57 16.3 +1.5**
comp=Z,31nm,1.0s
DOT Dot Lake 52.34 33 *eP* **P 08 57 16.0 +1.3**
comp=Z,39nm,0.8s
MDSI Maura Dua 52.34 227 P **P 08 57 13.6 -1.7**
BMRM Bremner River 52.42 37 *eP* **P 08 57 17.6 +2.2**
comp=Z,26nm,0.9s
KK31 Karatay Array 52.58 300 *eP* **P 08 57 16.9 +0.1**
KK31 Karatay Array 52.58 300 *i* P **P 08 57 16.6 -0.2**
KK31 pmax pmax
comp=Z,56nm,0.9s
KKAR Karatay Array 52.58 300 *eP* **P 08 57 16.9 +0.1**
KKAR Karatay Array 52.58 300 *eP* **P 08 57 16.9 +0.1**
NDI New Delhi 52.66 281 *eP* **P 08 57 17.0 -0.6**
CRQM Cirque 53.16 37 *eP* **P 08 57 23.0 +2.0**
comp=Z,41nm,1.0s
TGL Tana Glacier 53.31 37 *eP* **P 08 57 23.8 +1.8**
comp=Z,24nm,1.0s
EGAK Eagle 53.46 32 *eP* **P 08 57 23.9 +1.0**
comp=Z,14nm,0.8s
NIL Nilore 53.77 288 *eP* **P 08 57 26.2 +0.5**
comp=Z,60nm,0.7s
NIL Nilore 53.77 288 *eP* **P 08 57 26.2 +0.5**
NIL pmax pmax
comp=Z,60nm,0.7s
DAWY Dawson 54.33 32 *eP* **P 08 57 31.1 +1.8**
comp=Z,7.4nm,0.8s
SVE Sverdlovsk 55.11 319*d i*P **P 08 57 35.2 +0.2**
SVE pmax pmax
comp=Z,54nm,1.3s
SVE MLR MLR
comp=Z,603nm,20.0s
FITZ Fitzroy Crossi 55.47 197 *eP* **P 08 57 38.6 +0.6**
INK Inuvik 55.86 27 *eP* **P 08 57 41.5 +1.3**
comp=Z,25nm,0.8s
INK Inuvik 55.86 27 *eP* **P 08 57 41.5 +1.3**
INK pmax pmax
comp=Z,25nm,0.8s
WRAB Tennant Creek 55.88 186 *eP* **P 08 57 40.8 -0.1**
comp=Z,70nm,0.9s
WRAB Tennant Creek 55.88 186⇓*eP* **P 08 57 40.8 -0.1**
WRAB pmax pmax
comp=Z,16nm,0.6s
WB2 Warramunga Arr 55.89 186 *eP* **P 08 57 40.9 -0.1**
comp=Z,83nm,1.0s
WRA Warramunga Arr 55.89 186 P **P 08 57 40.5 -0.5**
comp=Z,16nm,0.5s,baz=0.9,slow=7.5,SNR=174
WRA S **S 09 05 21.7 -2.9**
comp=Z,2.8nm,1.0s,baz=8.0,slow=13,SNR=7.5
WRA Warramunga Arr 55.89 186 P **P 08 57 40.5 -0.5**
WRA S **S 09 05 21.7 -2.9**
WRA pmax pmax
comp=Z,18nm,0.5s
WRA smax smax
comp=N,3.0nm,1.0s
WC3 Warramunga Arr 55.90 186 *eP* **P 08 57 40.9 -0.1**
comp=N,100nm,1.0s
CTAO Charters Tower 56.11 173 *eP* **P 08 57 42.7 +0.2**
comp=N,29nm,1.3s
CTAO Charters Tower 56.11 173 *eP* **P 08 57 42.7 +0.2**
CTAO pmax pmax
comp=Z,29nm,1.3s
ARU Arti 56.32 319 *eP* **P 08 57 43.6 -0.1**
comp=Z,62nm,0.6s
ARU Arti 56.32 319*c i*P **P 08 57 43.5 -0.1**
ARU *PP **pP 08 57 59.4 +1.0**
ARU 08 58 40.5
ARU 08 59 51.5
ARU S **S 09 05 30.3 +0.7**
ARU SS **SS 09 09 14.2 -2.3**
ARU pmax pmax
comp=Z,110nm,1.2s
ARU MLR MLR
comp=Z,514nm,18.0s
SOKR Solikamsk 56.39 323*d i*P **P 08 57 42.5 -1.6**
SOKR pmax pmax
comp=Z,40nm,1.0s
SOKR MLR MLR
comp=Z,664nm,25.0s
KBL Kabul 56.63 291 *eP* **P 08 57 46.0 -0.6**
comp=Z,43nm,0.8s
KBL Kabul 56.63 291 *eP* **P 08 57 46.0 -0.6**
KBL pmax pmax
comp=Z,43nm,0.8s
HYB Hyderabad 56.94 268 *i* P **P 08 57 48.0 -0.7**
WHY Whitehorse 57.14 36 *eP* **P 08 57 52.1 +2.5**
comp=Z,16nm,1.0s
SKAG Skagway 57.26 37 *eP* **P 08 57 53.1 +2.9**
comp=Z,24nm,1.0s
AB31 Akbulak array 57.66 310 P **P 08 57 52.5 -0.8**
AB31 pmax pmax
comp=Z,15nm,0.4s
ABKAR Akbulak array 57.66 310 *eP* **P 08 57 53.3 0.0**
JIS Juneau Island 58.08 38 *eP* **P 08 57 59.0 +3.0**
comp=Z,27nm,0.9s
AKTO Aktyubinsk 58.45 312 LR LR 09 24 25.4
comp=Z,273nm,18.9s,baz=325,slow=37
AS01 Alice Springs 59.61 186 *eP* **P 08 58 07.0 -0.1**
AS31 Alice Springs 59.62 186 *eP* **P 08 58 07.3 +0.2**
comp=Z,6.6nm,0.6s
ASAR Alice Springs 59.62 186 P **P 08 58 07.0 -0.1**
comp=Z,5.1nm,0.7s,baz=24,slow=7.0,SNR=48
ASAR S **S 09 06 11.5 -1.9**
comp=Z,1.6nm,0.9s,baz=21,slow=19,SNR=8.6
ASAR LR LR 09 23 25.0
comp=Z,230nm,21.5s,baz=354,slow=36
ASAR Alice Springs 59.62 186 P **P 08 58 07.0 -0.1**
ASAR S **S 09 06 11.5 -1.9**
ASAR pmax pmax
comp=Z,6.0nm,0.7s
ASAR smax smax
comp=N,2.0nm,0.9s
MBWA Marble Bar 59.97 202 *eP* **P 08 58 10.0 +0.5**
comp=N,57nm,0.9s
POO Poona 60.18 272 *eP* **P 08 58 07.0 -4.2**
DLBC Dease Lake 60.19 37 *eP* **P 08 58 13.4 +2.6**
comp=N,20nm,1.1s
PALK Pallekele 60.94 257 P **P 08 58 16.6 +0.1**
comp=N,32nm,0.6s,baz=115,slow=1.5,SNR=6.9
PALK Pallekele 60.94 257 *eP* **P 08 58 16.3 -0.1**
comp=N,39nm,0.7s
PALK Pallekele 60.94 257 *i* P **P 08 58 17.5 +1.0**
PRGR Permogore 60.96 327 *eP* **P 08 58 14.7 -1.1**
PRGR *e* 09 00 26.9
PRGR pmax pmax
comp=Z,30nm,0.6s
SPA0 Spitsbergen Ar 61.29 349 *eP* **P 08 58 18.0 +0.1**
SPA0 Spitsbergen Ar 61.29 349 *eP* **P 08 58 18.2 +0.3**
SPA0 IAmb IAmb 08 58 19.2
comp=Z,97nm,2.1s
SPITS Spitsbergen Ar 61.29 349 P **P 08 58 18.0 +0.1**
comp=Z,4.8nm,0.6s,baz=58,slow=9.0,SNR=39
SPITS LR LR 09 27 19.7
comp=Z,168nm,18.5s,baz=245,slow=38
KBS Kingsbay 61.45 350 *eP* **P 08 58 20.1 +1.1**
comp=Z,30nm,1.2s
KBS Kingsbay 61.45 350 *eP* **P 08 58 20.1 +1.1**
KBS pmax pmax
comp=Z,30nm,1.2s
KBS Kingsbay 61.45 350 *eP* **P 08 58 20.0 +1.1**
KBS IVmB_BB 08 58 20.2
comp=Z,405nm,2.2s
KBS IAmb IAmb 08 58 20.6
comp=Z,143nm,2.1s
EIDS Eidsvold 61.95 169 *eP* **P 08 58 23.4 +0.5**
comp=Z,18nm,1.0s
HSPB Hornsund (broa 62.19 348 *eP* **P 08 58 24.8 +0.9**
HSPB IVmB_BB 08 58 25.1
comp=Z,328nm,1.3s
HSPB IAmb IAmb 08 58 28.9
comp=Z,53nm,1.2s
LVZ Lovozero 62.54 336 *eP* **P 08 58 26.4 0.0**
comp=Z,135nm,1.9s
LVZ Lovozero 62.54 336 *eP* **P 08 58 26.4 0.0**
LVZ pmax pmax
comp=Z,135nm,1.9s
DZM Mont Dzumac 62.99 152 LR LR 09 23 33.1
comp=Z,335nm,20.9s,baz=352,slow=34
TMCR Tamitsa 63.05 331 *eP* **P 08 58 28.1 -1.7**
TMCR pmax pmax
comp=Z,37nm,0.9s
APA Apatity 63.12 336⇓*i*P **P 08 58 29.6 -0.6**
APA pmax pmax
comp=Z,25nm,0.7s
APA MLR MLR
comp=Z,600nm,16.0s
GEYT Alibeck 63.25 299 P **P 08 58 31.8 +0.1**
comp=Z,28nm,0.7s,baz=33,slow=3.4,SNR=7.4
GEYT LR LR 09 27 57.4
comp=Z,433nm,18.8s,baz=30,slow=38
GYA0B ALIBECK ARRAY 63.25 299 *eP* **P 08 58 32.0 +0.3**
comp=Z,34nm,0.9s
RES Resolute Bay 63.90 14 *eP* **P 08 58 36.2 +1.0**
comp=Z,28nm,1.0s
RES Resolute Bay 63.90 14 *eP* **P 08 58 36.2 +1.0**
RES pmax pmax
comp=Z,28nm,1.0s
KEV Kevo 63.96 339 *eP* **P 08 58 36.0 +0.3**
comp=Z,16nm,0.7s
KEV Kevo 63.96 339 *eP* **P 08 58 36.0 +0.3**
KEV pmax pmax
comp=Z,16nm,0.7s
KLMR Klimovskoe 63.97 328 *eP* **P 08 58 33.5 -2.4**
KLMR pmax pmax
comp=Z,52nm,0.7s
KLMR MLR MLR
comp=Z,705nm,20.0s
KLMR Klimovskoe 63.97 328 *eP* **P 08 58 33.5 -2.4**
KLMR AMP 08 58 36.4
comp=Z,52nm,0.7s
KLMR LR LR 09 10 23.8
KLMR AMP 09 27 33.5
comp=Z,705nm,19.9s
HAMF Hammerfest 64.38 341 *eP* **P 08 58 38.6 +0.1**
HAMF IAmb IAmb 08 58 38.9
comp=Z,13nm,0.7s
HAMF IVmB_BB 08 58 38.9
comp=Z,143nm,0.5s
ARCES ARCESS Array B 64.52 339 P **P 08 58 39.4 0.0**
comp=Z,17nm,0.8s,baz=53,slow=7.7,SNR=52
ARCES LR LR 09 29 48.5
comp=Z,281nm,18.1s,baz=248,slow=39
ARCES ARCESS Array B 64.52 339 *eP* **P 08 58 39.5 +0.1**
ARCES ARCESS Array B 64.52 339 *eP* **P 08 58 39.6 +0.1**
ARE0 ARCESS Array S 64.52 339 *eP* **P 08 58 39.6 +0.2**
comp=Z,18nm,0.8s
ARE0 ARCESS Array S 64.52 339 *eP* **P 08 58 39.6 +0.2**
YKW3 Yellowknife Ar 65.27 29 *eP* **P 08 58 45.1 +0.7**
comp=Z,16nm,1.2s
YKA Yellowknife Ar 65.31 29 P **P 08 58 45.1 +0.5**
comp=Z,8.0nm,0.8s,baz=300,slow=6.6,SNR=144
KTK1 Kautokeino 65.48 339 *eP* **P 08 58 46.2 +0.5**
KTK1 IAmb IAmb 08 58 46.5
comp=Z,27nm,1.0s
KIF Kilpisjarvi 66.18 340 *eP* **P 08 58 50.3 +0.2**
TULEG Thule 66.27 7 *eP* **P 08 58 51.0 +0.4**
comp=Z,21nm,0.7s
TRO Tromso 66.28 341 *eP* **P 08 58 50.5 -0.3**
TRO IAmb IAmb 08 58 51.4
comp=Z,16nm,0.8s
DAG Danmarks Havn 66.69 355⇑*i*P **P 08 58 53.5 +0.2**
comp=Z,21nm,0.8s
ARMA Armidale 66.99 169 *eP* **P 08 58 56.7 +0.9**
comp=Z,17nm,1.0s
MOS Moscow 67.34 323 *eP* **P 08 58 56.6 -1.1**
MOS *e* 09 01 25.3
MOS pmax pmax
comp=Z,36nm,0.7s
STKA Stephens Creek 67.55 178 P **P 08 58 59.5 +0.3**
comp=Z,10nm,1.0s,baz=339,slow=8.4,SNR=19
STKA LR LR 09 29 22.3
comp=Z,147nm,20.8s,baz=354,slow=37
STKA Stephens Creek 67.55 178 *eP* **P 08 58 59.6 +0.4**
comp=Z,1.9nm,0.8s
STKA Stephens Creek 67.55 178 *eP* **P 08 58 59.6 +0.4**
STKA pmax pmax

comp=Z,2.0nm,0.8s
PGC Sidney 67.93 45 *e*P **P 08 59 03.6 +2.1**
comp=Z,42nm,1.9s
OBN Obninsk 68.18 323 *e*P **P 08 59 02.8 -0.2**
comp=Z,77nm,1.0s
OBN Obninsk 68.18 323*c i*P **P 08 59 02.6 -0.4**
OBN *e* 08 59 24.5
OBN *e* 09 01 32.4
OBN *e*S **S 09 07 57.5 -1.3**
OBN *e*SS **SS 09 12 21.4 -0.1**
OBN pmax pmax
comp=Z,80nm,1.2s
OBN MLR MLR
comp=Z,489nm,19.0s
A04D Lummi Island 68.33 45 P **P 08 59 05.8 +1.8**
baz=300
BBOO Buckleboo 68.55 183 *e*P **P 08 59 06.0 +0.6**
comp=Z,14nm,0.9s
VSR Storozhevoye 68.89 319 *e*P **P 08 59 07.1 -0.4**
VSR pmax pmax
comp=Z,80nm,0.9s
B05A Bryant 68.91 45 P **P 08 59 09.6 +1.9**
baz=301
E03A Lebam 68.92 47 *e*P **P 08 59 10.2 +2.5**
comp=Z,26nm,1.0s
GROC Groznyy 69.09 309 *e*P **P 08 59 06.5 -2.4**
GROC *e**PP **pP 08 59 25.1 +1.0**
GROC *e* 08 59 28.6
GROC *e**SP **PcP 08 59 32.2 -0.4**
GROC *e* 09 01 40.2
GROC *e*S **S 09 08 04.8 -5.3**
GROC pmax pmax
comp=Z,17nm,0.6s
FIA1 FINESS Array S 69.14 332 *e*P **P 08 59 08.7 -0.2**
comp=Z,47nm,0.8s
FINES FINESS Array B 69.14 332 P **P 08 59 08.6 -0.3**
comp=Z,40nm,0.8s,baz=75,slow=8.1,SNR=99
D05A Enumclaw 69.52 46 *e*P **P 08 59 13.7 +2.2**
G03D McMinnville, O 69.78 48 P **P 08 59 15.2 +2.0**
baz=301
LON Longmire 69.85 46 *e*P **P 08 59 15.4 +1.7**
comp=Z,14nm,1.4s
LON Longmire 69.85 46 *e*P **P 08 59 15.4 +1.7**
LON pmax pmax
comp=Z,14nm,1.4s
GOF Gofitskoye 69.86 311⇑*i*P **P 08 59 13.5 -0.1**
GOF pmax pmax
comp=Z,73nm,1.3s
MOR8 Moi Rana 69.89 339 *e*P **P 08 59 12.3 -1.2**
MOR8 IVmBBB 08 59 14.1
comp=Z,401nm,0.7s
MOR8 IAmb IAmb 08 59 15.9
comp=Z,41nm,0.6s
WSAR Wadi Sarin 69.94 285 P **P 08 59 14.8 +0.2**
comp=Z,19nm,0.9s,baz=119,slow=5.7,SNR=9.2
WSAR LR LR 09 36 22.2
comp=Z,192nm,18.8s,baz=20,slow=41
KONS Konsvik 70.03 340 *e*P **P 08 59 15.4 +1.1**
BIDO Bidbid 70.19 285 P **P 08 59 17.0 +1.0**
SNR=5.3
BIDO Bidbid 70.19 285 P **P 08 59 17.0 +1.0**
SNR=5.3
LTY Liberty 70.25 46 *e*P **P 08 59 17.6 +1.5**
comp=Z,6.6nm,0.8s
KEBM Edson Butte 70.32 51 *e*P **P 08 59 19.2 +2.6**
comp=Z,45nm,1.0s
BANOM Banah 70.36 288 *i*P **P 08 59 17.3 +0.2**
SNR=5.2
SHME Shamm 70.42 288 *i*P **P 08 59 17.5 0.0**
SNR=6.3
B08A Colville Reser 70.43 44 *e*P **P 08 59 18.8 +1.7**
comp=Z,12nm,1.1s
ZEI Tsey 70.50 309 *e*P **P 08 59 15.9 -1.9**
ZEI pmax pmax
comp=Z,13nm,0.8s
I03D Drain, OR 70.51 50 P **P 08 59 20.0 +2.3**
baz=302
KBZ Khabaz 70.63 310 P **P 08 59 18.5 +0.1**
comp=Z,30nm,0.9s,baz=53,slow=3.0,SNR=43
KBZ LR LR 09 34 16.6
comp=Z,191nm,19.6s,baz=36,slow=39
KIV Kislovodsk 70.64 311 *e*P **P 08 59 19.5 +0.9**
comp=Z,60nm,0.7s
KIV Kislovodsk 70.64 311 P **P 08 59 19.1 +0.6**
SNR=18
KIV Kislovodsk 70.64 311 P **P 08 59 19.1 +0.6**
SNR=18
KIV Kislovodsk 70.64 311 *i*P **P 08 59 18.8 +0.1**
SNR=8.7
KIV Kislovodsk 70.64 311*c i*P **P 08 59 18.7 +0.1**
KIV *e* 08 59 36.8
KIV *e* 09 01 54.9
KIV *e*S **S 09 08 26.8 -1.7**
KIV *e*SS **SS 09 13 02.1 +1.8**
KIV pmax pmax
comp=Z,82nm,1.0s
KIV MLR MLR
comp=Z,167nm,17.0s
H04A Detroit Lake 70.71 48 *e*P **P 08 59 20.9 +2.0**
comp=Z,17nm,0.9s
VSU Vasula 70.71 329*c i*P **P 08 59 18.4 -0.1**
VSU pmax pmax
comp=Z,238nm,1.2s
MSFE Esma-Masafi 70.77 288 *i*P **P 08 59 19.7 +0.2**
SNR=6.8
G05D Wamic, OR 70.94 48 P **P 08 59 22.4 +2.2**
baz=302
UOSS Minazif 70.95 287 *e*P **P 08 59 20.7 +0.1**
comp=Z,21nm,0.8s
UOSS Minazif 70.95 287 *i*P **P 08 59 20.1 -0.5**
SNR=11
I04A Tendick Farm, 71.04 49 P **P 08 59 22.7 +1.8**
baz=302
HATD Hatta, Dubai 71.06 287 *i*P **P 08 59 21.4 +0.1**
SNR=21
SOHO SOHO 71.11 286 *i*P **P 08 59 20.9 -0.7**
SNR=26
L02D Cave Junction, 71.15 51 P **P 08 59 23.6 +2.0**
baz=302
BSY Bisya 71.32 285 pP 08 59 33.0 +10
SNR=5.3
HUMO Hull Mountain 71.32 51 *e*P **P 08 59 25.2 +2.6**
comp=Z,9.7nm,1.4s
GNI Garni 71.33 306 LR LR 09 33 30.5
comp=Z,346nm,18.5s,baz=50,slow=38
GNI Garni 71.33 306 *e*P **P 08 59 24.2 +1.4**
comp=Z,17nm,0.8s
GNI Garni 71.33 306*c i*P **P 08 59 23.3 +0.4**
GNI pmax pmax
comp=Z,79nm,1.2s
C09A Chrisman Ranch 71.33 44 *e*P **P 08 59 24.4 +1.8**
comp=Z,12nm,0.8s
NAZ Nazwa, Dubai 71.34 288 *i*P **P 08 59 22.6 -0.4**
SNR=6.2
G06A Carlson Farm, 71.35 47 *e*P **P 08 59 25.0 +2.2**
comp=Z,14nm,1.0s
D08A Wollman Farm, 71.37 45 *e*P **P 08 59 24.2 +1.5**
comp=Z,14nm,1.0s
HAWA Hanford 71.37 46 *e*P **P 08 59 24.9 +2.1**
comp=Z,13nm,1.0s
I05D Terrebonne, OR 71.40 48 P **P 08 59 24.7 +1.6**
baz=302,SNR=5.5
F07A Phinny Hill Vi 71.41 46 *e*P **P 08 59 25.4 +2.3**
comp=Z,17nm,0.8s
AKH Akhalkalaki 71.47 308⇓*i*P **P 08 59 24.8 +1.1**
AKH Akhalkalaki 71.47 308 *e*P **P 08 59 24.9 +1.1**
AKH Akhalkalaki 71.47 308 *e*P **P 08 59 24.9 +1.1**
J04D Umpqua Nationa 71.52 50 P **P 08 59 25.9 +1.9**
baz=302,SNR=7.9
E08A Dider Farm, El 71.59 46 *e*P **P 08 59 26.2 +2.0**
comp=Z,13nm,0.8s
CHVG Ch'k'valeri 71.67 310⇓*i*P **P 08 59 25.2 +0.5**
SUMG Summit 71.70 359⇑*i*P **P 08 59 26.2 +1.3**
comp=Z,43nm,0.8s
SUMG Summit 71.70 359 *e*P **P 08 59 26.1 +1.3**
comp=Z,45nm,0.8s
SUMG Summit 71.70 359 *e*P **P 08 59 26.1 +1.2**
SUMG pmax pmax
comp=Z,45nm,0.8s
NEW Newport 71.72 43 P **P 08 59 26.1 +1.1**
baz=304
NEW Newport 71.72 43 *e*P **P 08 59 26.6 +1.7**
comp=Z,9.2nm,0.8s
NEW Newport 71.72 43 *e*P **P 08 59 26.6 +1.7**
NEW pmax pmax
comp=Z,9.0nm,0.8s
ALNE Al Ain 71.76 287 *i*P **P 08 59 25.4 -0.2**
SNR=23
NWAO Narrogin (SRO) 71.78 200 *e*P **P 08 59 25.5 +0.3**
comp=Z,97nm,1.4s
NWAO Narrogin (SRO) 71.78 200 *e*P **P 08 59 25.5 +0.3**
NWAO pmax pmax
comp=Z,97nm,1.4s
ASUD Al Ashush, Dub 71.79 287 *i*P **P 08 59 25.6 -0.1**
SNR=10
NSS Namsos 71.80 339 *e*P **P 08 59 24.7 -0.4**
NSS IAmb IAmb 08 59 27.2
comp=Z,40nm,1.5s
PINE Pine Mountain 71.94 49 *e*P **P 08 59 28.9 +2.4**
comp=Z,31nm,0.9s
YBH Yreka Blue Hor 71.94 51 *e*P **P 08 59 29.0 +2.5**
comp=Z,7.1nm,0.9s
YBH Yreka Blue Hor 71.94 51 *e*P **P 08 59 29.0 +2.5**
YBH pmax pmax
comp=Z,7.0nm,0.9s
J05D Fort Rock, OR 72.03 49 P **P 08 59 29.1 +2.0**
baz=303,SNR=11
M02C Callahan 72.03 52 P **P 08 59 29.1 +2.1**
baz=302
K04D Chiloquin, OR 72.07 50 P **P 08 59 29.0 +1.8**
baz=303
E09A Wood Farm, Sta 72.11 45 *e*P **P 08 59 29.3 +2.0**
comp=Z,19nm,1.0s
G08A Pilot Rock 72.31 47 *e*P **P 08 59 30.6 +2.0**
comp=Z,5.5nm,0.9s
N02D Trinity Center 72.35 52 P **P 08 59 31.1 +2.1**
baz=303
M04C Macdoel 72.47 51 P **P 08 59 31.7 +2.1**
baz=303
K05A Summer Lake 72.55 50 *e*P **P 08 59 32.8 +2.6**
comp=Z,32nm,1.1s
IZAR Zarasai 72.61 327 *e*P **P 08 59 30.5 +0.4**
IZAR IAmb IAmb 08 59 30.8
comp=Z,16nm,0.6s
MICGM Minsk 72.65 325 *e*P **P 08 59 31.0 +0.7**
MNK Minsk 72.65 325 *e*P **P 08 59 31.0 +0.7**
IDID Didziasalis 72.66 327 *e*P **P 08 59 30.7 +0.3**
IDID IAmb IAmb 08 59 31.9
comp=Z,18nm,0.9s
WDC Whiskeytown Da 72.67 52 *e*P **P 08 59 32.9 +2.2**
comp=Z,11nm,1.0s
WDC Whiskeytown Da 72.67 52 *e*P **P 08 59 32.9 +2.2**
WDC pmax pmax
comp=Z,11nm,1.0s
ISAL Salakas 72.77 327 *e*P **P 08 59 31.4 +0.4**
ISAL IAmb IAmb 08 59 31.9
comp=Z,22nm,0.6s
IIGN Ignalina 72.87 327 *e*P **P 08 59 32.0 +0.4**
IIGN IAmb IAmb 08 59 32.4
comp=Z,16nm,0.6s
F10A Beach Ranch, E 72.94 45 *e*P **P 08 59 34.0 +1.7**
comp=Z,11nm,1.0s
SCO Scoresbysund 73.00 354 *i*P **P 08 59 33.5 +1.4**
comp=Z,17nm,0.8s
SCO Scoresbysund 73.00 354 *e*P **P 08 59 33.5 +1.4**
comp=Z,17nm,0.8s
SCO Scoresbysund 73.00 354 *e*P **P 08 59 33.5 +1.4**
SCO pmax pmax
comp=Z,17nm,0.8s
WALA Waterton Lakes 73.02 41 *e*P **P 08 59 34.6 +1.8**
comp=Z,9.2nm,0.8s
O03D Paynes Creek 73.30 52 P **P 08 59 35.6 +1.1**
baz=303,SNR=10
ANN Anapa 73.35 313 *e*P **P 08 59 33.9 -0.7**
ANN pmax pmax
comp=Z,53nm,1.3s
MOD Modoc Plateau 73.36 50 *e*P **P 08 59 37.0 +2.0**
comp=Z,8.7nm,0.9s
BMO Blue Mountains 73.53 46 *e*P **P 08 59 37.6 +1.8**
comp=Z,13nm,0.9s
BMO Blue Mountains 73.53 46 *e*P **P 08 59 37.6 +1.8**
BMO pmax pmax
comp=Z,13nm,0.9s
JTMT Jette 73.58 43 *e*P **P 08 59 38.2 +2.0**
comp=Z,17nm,0.8s
J08A Circle Bar Ran 73.67 48 *e*P **P 08 59 38.9 +2.1**
comp=Z,29nm,1.3s
ORV Oroville 73.90 53 *e*P **P 08 59 39.6 +1.6**
comp=Z,10nm,0.8s
ORV Oroville 73.90 53 *e*P **P 08 59 39.6 +1.6**
ORV pmax pmax
comp=Z,10.0nm,0.8s
MZR Muzera 74.08 287 *i*P **P 08 59 38.7 -0.6**
SNR=12
WVOR Wild Horse Val 74.09 49 *e*P **P 08 59 41.5 +2.3**
comp=Z,15nm,1.1s
WVOR Wild Horse Val 74.09 49 *e*P **P 08 59 41.5 +2.3**
WVOR pmax pmax
comp=Z,15nm,1.1s
MSO Missoula 74.31 43 P **P 08 59 41.2 +0.8**
baz=306
MSO Missoula 74.31 43 *e*P **P 08 59 41.3 +0.9**
comp=Z,12nm,1.1s
AKASG Malin Array Be 74.35 322 P **P 08 59 39.9 -0.5**
comp=Z,17nm,0.6s,baz=48,slow=6.2,SNR=81
AKASG LR LR 09 35 21.3
comp=Z,368nm,18.6s,baz=45,slow=38
AKBB Malin Array Si 74.35 322 *e*P **P 08 59 40.0 -0.4**
comp=Z,33nm,0.9s
AKBB Malin Array Si 74.35 322 *e*P **P 08 59 40.0 -0.4**
AKBB pmax pmax
comp=Z,33nm,0.9s
AK11 Malin Array Si 74.39 322 *e*P **P 08 59 40.0 -0.6**
NC405 NORSAR Array S 74.44 337 *e*P **P 08 59 39.8 -0.9**
BEKR Beckworth 74.46 52 *e*P **P 08 59 43.2 +1.7**
comp=Z,22nm,0.9s
NC303 NORSAR Array S 74.46 337 *e*P **P 08 59 41.0 +0.1**
HFS Hagfors 74.51 335 P **P 08 59 40.6 -0.5**
comp=Z,9.2nm,0.6s,baz=64,slow=6.6,SNR=21
HFS LR LR 09 34 29.6
comp=Z,297nm,21.2s,baz=17,slow=37
AFDM Forest Hills D 74.57 53 *e*P **P 08 59 43.8 +1.9**
NC204 NORSAR Array S 74.61 337 *e*P **P 08 59 42.0 +0.2**
NB201 NORSAR Array S 74.62 337 *e*P **P 08 59 40.9 -0.9**
NB2 NORSAR Subarra 74.65 337 P **P 08 59 40.9 -1.1**
comp=Z,12nm,0.5s,baz=41,slow=5.9
NB2 NORSAR Subarra 74.65 337 P **P 08 59 40.9 -1.1**
baz=41,slow=5.9
NOA NORSAR Array B 74.65 337 P **P 08 59 41.9 -0.1**
comp=Z,22nm,0.7s,baz=38,slow=6.0,SNR=48
NOA PP **PP 09 02 27.6 -1.1**
comp=Z,5.0nm,0.9s,baz=42,slow=8.7,SNR=4.5
NOA LR LR 09 35 29.2
comp=Z,303nm,20.0s,baz=50,slow=38
NC602 NORSAR Array S 74.78 336 *e*P **P 08 59 42.1 -0.6**
ILULI Ilulissat 74.78 4 *e*P **P 08 59 43.6 +1.1**
comp=Z,25nm,0.7s
ILULI Ilulissat 74.78 4 *e*P **P 08 59 43.6 +1.1**
ILULI pmax pmax
comp=Z,25nm,0.7s
NBO00 NORSAR Array S 74.80 337 *e*P **P 08 59 42.9 +0.1**
NAO01 NORSAR Array S 74.91 337 *e*P **P 08 59 43.3 -0.1**
RUBR Rubicon Trail 75.04 53 *e*P **P 08 59 47.1 +2.2**
SUW Suwalki 75.08 327 *e*P **P 08 59 44.0 -0.5**
SUW Suwalki 75.08 327 *e*P **P 08 59 44.0 -0.5**
PAHR Pah Rah Range 75.17 52 *e*P **P 08 59 47.5 +2.0**
comp=Z,17nm,0.9s
SIM Simferopol' 75.19 315*c e*P **P 08 59 45.2 -0.1**
SIM *e* 08 59 59.7
SIM pmax pmax
comp=Z,28μm,0.8s
MFID Camas Ranch 75.22 47 *e*P **P 08 59 47.4 +1.7**
comp=Z,18nm,1.1s
FFC Flin Flon 75.23 32 *e*P **P 08 59 46.5 +1.1**
comp=Z,17nm,0.9s
FFC Flin Flon 75.23 32 *e*P **P 08 59 46.5 +1.1**
FFC pmax pmax
comp=Z,17nm,0.9s
VCNR Virginia City 75.23 52 *e*P **P 08 59 47.5 +1.6**
PNTR Pine Nut 75.38 52 *e*P **P 08 59 48.9 +2.1**
comp=Z,13nm,0.9s
FCC Fort Churchill 75.46 26 *e*P **P 08 59 47.1 +0.5**
comp=Z,26nm,1.0s
FCC Fort Churchill 75.46 26 *e*P **P 08 59 47.1 +0.5**
FCC pmax pmax
comp=Z,26nm,1.0s
CMB Columbia Colle 75.47 54 *e*P **P 08 59 49.1 +2.0**
comp=Z,17nm,1.0s
CMB Columbia Colle 75.47 54 *e*P **P 08 59 49.1 +2.0**
CMB pmax pmax
comp=Z,17nm,1.0s
HRY Holter Researc 75.54 42 *e*P **P 08 59 49.3 +1.8**
YERR Yerington 75.67 52 *e*P **P 08 59 50.0 +1.5**
comp=Z,19nm,0.9s
LRM Limekiln Ridge 75.74 43 *e*P **P 08 59 50.7 +1.9**
WAKR Walker 75.82 53 *e*P **P 08 59 51.4 +2.1**
comp=Z,9.3nm,0.8s
EGMT Eagleton 75.85 40 P **P 08 59 50.4 +1.2**
baz=309
EGMT Eagleton 75.85 40 *e*P **P 08 59 50.5 +1.4**
comp=Z,28nm,1.0s
DLMT Dillon 75.93 44 *e*P **P 08 59 51.5 +1.7**
comp=Z,21nm,0.9s
HLID Hailey 75.97 46 P **P 08 59 51.8 +1.7**
baz=307
HLID Hailey 75.97 46 *e*P **P 08 59 51.7 +1.7**
comp=Z,9.8nm,1.0s
RAO Raoul Island 76.09 143 *e*P **P 08 59 51.5 +1.0**
comp=Z,307nm,0.8s
RAO Raoul Island 76.09 143 *e*P **P 08 59 51.5 +1.0**
RAO pmax pmax
comp=Z,307nm,0.8s
BMN Battle Mountai 76.11 50 *e*P **P 08 59 53.4 +2.5**
comp=Z,19nm,0.8s
BMN Battle Mountai 76.11 50 *e*P **P 08 59 53.4 +2.5**
BMN pmax pmax
comp=Z,19nm,0.8s
MCMT McKenzie Canyo 76.11 44 *e*P **P 08 59 52.3 +1.4**
KONO Kongsberg 76.23 336 *e*P **P 08 59 51.1 +0.1**
comp=Z,88nm,1.8s
KONO Kongsberg 76.23 336 *e*P **P 08 59 51.1 +0.1**
KONO pmax pmax
comp=Z,88nm,1.8s
BOZ Bozeman (W) 76.33 43 P **P 08 59 53.4 +1.4**
baz=308
BOZ Bozeman (W) 76.33 43 *e*P **P 08 59 53.8 +1.7**
comp=Z,14nm,1.0s
BOZ Bozeman (W) 76.33 43 *e*P **P 08 59 53.8 +1.7**
BOZ pmax pmax
comp=Z,14nm,1.0s
RYN Ryan 76.33 52 *e*P **P 08 59 54.4 +2.2**
comp=Z,11nm,0.9s
KVN Kaiserville 76.36 52 *e*P **P 08 59 54.6 +2.2**
comp=Z,23nm,0.9s
KVN Kaiserville 76.36 52 *e*P **P 08 59 54.6 +2.2**
KVN pmax pmax
comp=Z,23nm,0.9s
SORM Soroca 76.40 320⇑*i*P **P 08 59 51.2 -0.9**
ARDC Alexander Ranc 76.53 56 *e*P **P 08 59 51.5 -1.6**
MDPB Devils Postpil 76.55 53 *e*P **P 08 59 55.1 +1.6**
comp=Z,9.1nm,1.0s
NV01 Mina Array Sit 76.59 52 *e*P **P 08 59 55.8 +2.1**
NVAR Mina Array Bea 76.59 52 P **P 08 59 55.5 +1.8**
comp=Z,9.6nm,0.7s,baz=287,slow=5.6,SNR=95
OMMB Old Mammoth Mi 76.61 53 *e*P **P 08 59 56.2 +2.2**
comp=Z,9.2nm,1.1s
NV11 Mina Array Sit 76.68 52 *e*P **P 08 59 56.0 +1.8**
comp=Z,2.2nm,1.6s
PAGB Antelope Grade 76.86 55 *e*P **P 08 59 57.4 +2.4**
comp=Z,23nm,1.0s
KIS Kishinev 76.87 319 *e*P **P 08 59 57.0 +2.2**
KIS *e*S **S 09 09 40.0 +1.7**
KIS LRM MLR 09 36 32.0
comp=Z,500nm,16.0s
KIS Kishinev 76.87 319 *e*P **P 08 59 57.0 +2.2**
KIS *e* 09 04 40.0
KIS *e*S **S 09 09 40.0 +1.7**
KIS MLR MLR
comp=Z,400nm,15.0s
KIS MLR MLR
comp=Z,500nm,16.0s
SFJD Kangerlussuaq 77.01 4 LR LR 09 36 00.0
comp=Z,96nm,20.4s,baz=347,slow=37
SFJD Kangerlussuaq 77.01 4 *i*P **P 08 59 56.0 +0.8**
comp=Z,17nm,0.8s
SFJD Kangerlussuaq 77.01 4 *e*P **P 08 59 56.0 +0.8**
comp=Z,21nm,0.9s
SFJD Kangerlussuaq 77.01 4 *e*P **P 08 59 56.0 +0.8**
SFJD pmax pmax
comp=Z,21nm,0.9s
YHB Horse Butte 77.09 44 *e*P **P 08 59 58.1 +1.7**
comp=Z,12nm,0.9s
YHH Holmes Hill 77.26 44 *e*P **P 08 59 59.5 +2.0**
SMMC Simmler 77.27 56 P **P 08 59 59.1 +1.8**
baz=305
YMR Madison River 77.27 44 *e*P **P 08 59 59.8 +2.3**
comp=Z,26nm,1.5s
GCMT Greycliff 77.29 42 *e*P **P 08 59 59.5 +2.1**
YFT Old Faithful 77.48 44 *e*P **P 09 00 02.3 +3.7**
VES Vestal, Richgr 77.57 55 P **P 09 00 00.1 +1.1**
baz=306
YPP Pitchstone Pla 77.61 44 *e*P **P 09 00 02.3 +2.9**
comp=Z,20nm,1.6s
BEL Belsk 77.62 326 *e*P **P 08 59 59.5 +0.5**
BEL Belsk 77.62 326 *e*P **P 08 59 59.5 +0.5**
PKM Mcpherson Peak 77.64 56 P **P 09 00 01.5 +1.9**
baz=306
H17A Grant Village 77.66 44 P **P 09 00 02.9 +3.2**
baz=309
H17A Grant Village 77.66 44 *e*P **P 09 00 03.1 +3.4**
comp=Z,25nm,1.0s
ILGA Ilgaz 77.75 312 *e*P **P 09 00 01.3 +1.1**
comp=Z,20nm,0.7s
BSD Bornholm Skovb 77.76 331⇑*i*P **P 08 59 59.3 -0.3**
comp=Z,30nm,0.7s
IMW Indian Meadow 77.77 44 *e*P **P 09 00 02.6 +2.2**
comp=Z,12nm,0.9s
FXWY Fox Creek 77.88 45 *e*P **P 09 00 02.9 +2.1**
comp=Z,9.5nm,1.2s
CWC Cottonwood Cre 77.89 54 P **P 09 00 01.9 +1.0**
baz=306
RLMT Red Lodge 77.93 43 P **P 09 00 02.7 +1.5**
baz=309,SNR=16
RLMT Red Lodge 77.93 43 *e*P **P 09 00 03.1 +2.0**
comp=Z,22nm,1.4s
MOOW Moose Ponds 77.97 44 *e*P **P 09 00 03.7 +2.4**
HVU Hansel Valley 78.01 47 *e*P **P 09 00 03.7 +2.1**
comp=Z,13nm,0.7s
HVU Hansel Valley 78.01 47 *e*P **P 09 00 03.7 +2.1**
HVU pmax pmax
comp=Z,13nm,0.7s
TPAW Teton Pass 78.01 45 *e*P **P 09 00 03.9 +2.2**
comp=Z,8.1nm,0.8s
TLCR 78.02 318⇓*i*P **P 09 00 00.4 -0.9**
GRAC Grapevine Rang 78.03 53 P **P 09 00 03.3 +1.7**
baz=306,SNR=9.6
ISA Isabella, Lake 78.08 55 P **P 09 00 02.4 +0.4**
baz=306
ISA Isabella, Lake 78.08 55 *e*P **P 09 00 02.9 +1.0**
comp=Z,12nm,1.5s
ISA Isabella, Lake 78.08 55 *e*P **P 09 00 02.9 +1.0**
ISA pmax pmax
comp=Z,12nm,1.5s
LOHW Long Hollow 78.13 44 *e*P **P 09 00 04.1 +1.8**
comp=Z,5.2nm,1.0s
SNOW Snow King Moun 78.14 45 *e*P **P 09 00 04.5 +2.2**
comp=Z,8.9nm,0.9s
REDW Red Top Meadow 78.15 45 *e*P **P 09 00 04.2 +1.8**
KWP Kalwaria Pacla 78.24 324 *e*P **P 09 00 03.0 +0.6**
KWP Kalwaria Pacla 78.24 324 *e*P **P 09 00 03.3 +0.8**
comp=Z,794nm,1.2s
KWP Kalwaria Pacla 78.24 324 *e*P **P 09 00 03.3 +0.8**
KWP pmax pmax
comp=Z,795nm,1.2s
DAC Darwin (Calif) 78.30 54 *e*P **P 09 00 04.9 +1.6**
comp=Z,10.0nm,1.2s
DAC Darwin (Calif) 78.30 54 *e*P **P 09 00 04.9 +1.6**
DAC pmax pmax
comp=Z,10.0nm,1.2s
TESR Tescani 78.33 320⇑*i*P **P 09 00 02.2 -0.8**
BUR08 Bucovina Ar. S 78.33 321 *e*P **P 09 00 03.5 +0.3**
BUR04 Bucovina Ar. S 78.35 321 *e*P **P 09 00 03.4 +0.2**
BURAR Bucovina Array 78.35 321⇑*i*P **P 09 00 03.5 +0.3**
BURAR Bucovina Array 78.35 321 P **P 09 00 03.5 +0.3**
R11A Troy Canyon, C 78.36 51 P **P 09 00 05.1 +1.5**
baz=307,SNR=20
R11A Troy Canyon, C 78.36 51 *e*P **P 09 00 05.2 +1.7**
comp=Z,25nm,1.4s
BGU Big Grassy Mou 78.38 48 *e*P **P 09 00 05.5 +1.9**
comp=Z,6.6nm,0.8s
CFR Carcaliu 78.39 318⇑*i*P **P 09 00 03.0 -0.3**
DGMT Dagmar 78.40 38 P **P 09 00 04.1 +0.6**
baz=312
DGMT Dagmar 78.40 38 *e*P **P 09 00 04.8 +1.3**
comp=Z,19nm,1.0s
SPUT South Promonto 78.49 47 *e*P **P 09 00 06.4 +2.2**
comp=Z,11nm,1.2s
BORG Borgarnes 78.50 352 *e*P **P 09 00 06.0 +2.4**
comp=Z,32nm,1.1s

BORG Borgarnes 78.50 352 *eP* **P 09 00 06.0 +2.4**
BORG pmax pmax
comp=Z,32nm,1.1s
MPMC Manual Prospec 78.50 54 P **P 09 00 05.7 +1.3**
baz=306,SNR=5.8
PETR Petresti 78.53 319⇑ *iP* **P 09 00 04.9 +0.8**
LAO LASA Array 78.55 40 P **P 09 00 05.5 +1.1**
baz=311,SNR=6.5
LAO LASA Array 78.55 40 *eP* **P 09 00 06.1 +1.7**
BR131 Keskin Array S 78.60 311 *eP* **P 09 00 05.1 +0.3**
BRTR Keskin Array B 78.60 311 P **P 09 00 04.8 0.0**
comp=Z,3.9nm,0.5s,baz=101,slow=3.9,SNR=33
BRTR PP **PP 09 03 01.8 -0.9**
comp=Z,3.5nm,1.0s,baz=69,slow=6.8,SNR=4.7
FURC Furnace Creek, 78.66 53 P **P 09 00 06.4 +1.4**
baz=307,SNR=10
ANGG Ammassalik, Gr 78.69 359 *eP* **P 09 00 05.7 +1.1**
comp=Z,24nm,0.8s
TIRR Tirgusor 78.70 317⇑ *iP* **P 09 00 05.0 -0.1**
TIRR Tirgusor 78.70 317 *eP* **P 09 00 05.0 -0.1**
TIRR Tirgusor 78.70 317 *eP* **P 09 00 05.0 -0.1**
VRI Vrincioaia 78.70 319⇑ *iP* **P 09 00 05.2 +0.1**
VRI Vrincioaia 78.70 319 P **P 09 00 05.2 +0.1**
LRMC Laurel Mtn Rad 78.71 54 P **P 09 00 06.7 +1.2**
baz=306
PLOR Plostina 78.76 319⇓ *iP* **P 09 00 05.8 +0.3**
PLOR Plostina 78.76 319 P **P 09 00 05.7 +0.3**
TPNV Topopah Spring 78.77 52 P **P 09 00 07.2 +1.4**
baz=307,SNR=16
TPNV Topopah Spring 78.77 52 *eP* **P 09 00 07.5 +1.7**
comp=Z,13nm,0.8s
TPNV Topopah Spring 78.77 52 *eP* **P 09 00 07.5 +1.7**
TPNV pmax pmax
comp=Z,13nm,0.8s
HARR Harsova 78.82 318⇑ *iP* **P 09 00 04.0 -1.7**
TLB Topalu 78.82 317⇓ *iP* **P 09 00 05.9 +0.2**
HWUT Hardware Ranch 78.83 46 *eP* **P 09 00 07.6 +1.5**
comp=Z,17nm,1.1s
EDW2 Edwards Air Fo 78.86 55 P **P 09 00 07.8 +1.6**
baz=306
DUG Dugway, Tooele 78.96 48 P **P 09 00 08.3 +1.5**
baz=308,SNR=18
DUG Dugway, Tooele 78.96 48 *eP* **P 09 00 08.7 +1.9**
comp=Z,18nm,1.0s
DUG Dugway, Tooele 78.96 48 *eP* **P 09 00 08.7 +1.9**
DUG pmax pmax
comp=Z,18nm,1.0s
ANTO Ankara 79.03 311⇑ *iP* **P 09 00 07.1 0.0**
ANTO Ankara 79.03 311 *eP* **P 09 00 07.1 0.0**
comp=Z,18nm,0.8s
ANTO Ankara 79.03 311 P **P 09 00 07.7 +0.6**
SNR=5.2
ANTO Ankara 79.03 311 P **P 09 00 07.7 +0.6**
SNR=5.2
ANTO Ankara 79.03 311 *eP* **P 09 00 07.1 0.0**
ANTO pmax pmax
comp=Z,18nm,0.8s
UZH Uzhgorod 79.12 323 *eP* **P 09 00 06.6 -0.7**
UZH *e* 09 00 20.9
ARCR ARCALIA 79.14 321⇑ *iP* **P 09 00 07.2 -0.2**
OJC Ojcow 79.20 326 *eP* **P 09 00 08.0 +0.3**
OJC Ojcow 79.20 326 *eP* **P 09 00 08.0 +0.3**
comp=Z,27nm,0.7s
OJC Ojcow 79.20 326 *eP* **P 09 00 08.0 +0.3**
TCUT Toone Canyon 79.22 47 *eP* **P 09 00 10.3 +1.9**
comp=Z,20nm,0.8s
ICOR Ion Corvin 79.26 317⇓ *iP* **P 09 00 08.8 +0.7**
BW06 Boulder Array 79.26 45 P **P 09 00 09.3 +0.8**
baz=310
BW06 Boulder Array 79.26 45 *eP* **P 09 00 09.4 +0.9**
comp=Z,14nm,1.4s
PD31 Pinedale Array 79.26 45 *eP* **P 09 00 09.5 +1.1**
PDAR Pinedale Array 79.26 45 P **P 09 00 09.4 +0.9**
comp=Z,3.5nm,0.7s,baz=264,slow=2.7,SNR=34
PDAR Pinedale Array 79.26 45 *eP* **P 09 00 09.6 +1.1**
CTU Camp Tracy 79.29 47 *eP* **P 09 00 10.6 +2.0**
comp=Z,8.2nm,0.8s
ISR Istrita 79.29 319⇓ *iP* **P 09 00 09.0 +0.6**
CRVS Cervenica-Dubn 79.33 324 *eP* **P 09 00 08.9 +0.4**
CRVS pmax pmax
comp=Z,11nm,1.0s
CRVS Cervenica-Dubn 79.33 324 *eP* **P 09 00 08.9 +0.4**
PSUT Pine Spring 79.33 50 *eP* **P 09 00 11.0 +2.0**
comp=Z,12nm,0.9s
TRPA Tarpa 79.34 323⇑ *iP* **P 09 00 09.3 +0.8**
TRPA Tarpa 79.34 323⇓ *eP* **P 09 00 09.2 +0.8**
DOPR Dopca 79.34 320⇑ *iP* **P 09 00 10.2 +1.6**
MLR Muntele Rosu 79.36 319 LR LR 09 38 57.2
comp=Z,75nm,18.2s,baz=32,slow=38
MLR Muntele Rosu 79.36 319⇑ *iP* **P 09 00 08.3 -0.6**
MLR Muntele Rosu 79.36 319 *eP* **P 09 00 08.9 0.0**
comp=Z,6.8nm,0.7s
MLR Muntele Rosu 79.36 319 *eP* **P 09 00 08.9 0.0**
MLR pmax pmax
comp=Z,7.0nm,0.7s
SHOC Shoshone, Teco 79.38 53 P **P 09 00 10.4 +1.4**
baz=307
GSC Goldstone, Bar 79.39 54 P **P 09 00 10.5 +1.3**
baz=307,SNR=6.4
GSC Goldstone, Bar 79.39 54 *eP* **P 09 00 11.0 +1.8**
comp=Z,8.8nm,1.1s
GSC Goldstone, Bar 79.39 54 *eP* **P 09 00 11.0 +1.8**
GSC pmax pmax
comp=Z,9.0nm,1.1s
CIS Catalina Islan 79.44 56 P **P 09 00 10.7 +1.3**
baz=306
BFSC Mount Baldy Ra 79.46 55 P **P 09 00 10.8 +1.2**
baz=307
JLU Jordanelle 79.52 47 *eP* **P 09 00 11.7 +1.7**
RRX Edison Barstow 79.52 55 P **P 09 00 11.2 +1.4**
baz=307
NIE Niedzica 79.53 325 *eP* **P 09 00 10.4 +0.8**
NIE Niedzica 79.53 325 *eP* **P 09 00 10.4 +0.8**
NLU North Lily Min 79.55 48 *eP* **P 09 00 12.2 +2.1**
comp=Z,10.0nm,0.9s
SHPR Sheep Range 79.74 52 *eP* **P 09 00 13.1 +2.0**
comp=Z,11nm,1.0s
MPU Maple Canyon 79.78 48 *eP* **P 09 00 13.4 +2.1**
comp=Z,12nm,0.8s
TUQ Turquoise Moun 79.89 54 P **P 09 00 13.1 +1.1**
baz=307,SNR=8.0
RAYN Ar Rayn 79.90 292 *eP* **P 09 00 12.1 0.0**
comp=Z,25nm,0.8s
RAYN Ar Rayn 79.90 292 *iP* **P 09 00 11.9 -0.1**
SNR=28
RAYN Ar Rayn 79.90 292 P **P 09 00 12.0 -0.1**
BBRC Big Bear Solar 79.94 55 P **P 09 00 13.6 +1.2**
baz=307
HEC Hector,Ludlow 79.98 54 P **P 09 00 13.9 +1.5**
baz=307
LANS Liptovska Anna 80.10 325 *eP* **P 09 00 13.7 +1.0**
LANS Liptovska Anna 80.10 325 *eP* **P 09 00 13.7 +1.0**
ARR Arges 80.14 320⇑ *iP* **P 09 00 14.2 +1.2**
MURC Murrieta 80.15 56 P **P 09 00 14.3 +1.0**
baz=307
DRGR 80.17 322⇑ *iP* P 09 00 05.7 -7.4
OKC Ostrava-Krasne 80.22 326 AMS AMS 09 39 30.0
comp=Z,300nm,13.8s
CCUT Cedar City 80.24 51 *eP* **P 09 00 16.1 +2.2**
comp=Z,14nm,1.3s
KSP Ksiaz 80.32 328 *eP* **P 09 00 14.2 +0.5**
KSP Ksiaz 80.32 328 *eP* **P 09 00 14.2 +0.5**
MSU Marysvale 80.38 49 *eP* **P 09 00 17.3 +2.6**
MSU Marysvale 80.38 49 *eP* **P 09 00 17.3 +2.6**
SZCU Shurtz Canyon 80.39 50 *eP* **P 09 00 16.6 +1.9**
GMRC Granite Mounta 80.45 54 P **P 09 00 16.4 +1.4**
baz=308,SNR=16
TMUT Trail Mountain 80.48 48 *eP* **P 09 00 17.3 +2.0**
comp=Z,27nm,1.6s
MORC Moravsky Berou 80.54 326⇓ *iP* **P 09 00 15.2 +0.2**
MORC Moravsky Berou 80.54 326 *eP* **P 09 00 14.9 -0.1**
MORC Moravsky Berou 80.54 326 *eP* **P 09 00 14.9 -0.1**
MORC Moravsky Berou 80.54 326 *eP* **P 09 00 15.0 -0.1**
RAR Rarotonga 80.57 125 LR LR 09 33 17.4
comp=Z,135nm,19.4s,baz=295,slow=34
109C Camp Elliot, M 80.63 56 P **P 09 00 17.2 +1.4**
baz=307
CPE Camp Elliot 80.63 56 *eP* **P 09 00 17.5 +1.7**
comp=Z,18nm,0.8s
PFO Pinyon Flats O 80.63 55 P **P 09 00 17.2 +1.3**
baz=307,SNR=10.0
PFO Pinyon Flats O 80.63 55 *eP* **P 09 00 18.1 +2.2**
comp=Z,16nm,0.9s
PFO Pinyon Flats O 80.63 55 *eP* **P 09 00 18.1 +2.2**
PFO pmax pmax
comp=Z,16nm,0.9s
LCMT Little Creek M 80.65 51 *eP* **P 09 00 18.2 +2.2**
comp=Z,15nm,1.0s
P17A Butcher Ranch, 80.65 48 *eP* **P 09 00 18.2 +2.2**
comp=Z,16nm,0.7s
DPC Dobruska-Polom 80.67 327 *eP* **P 09 00 16.6 +0.9**
DPC AMS AMS 09 39 50.0
comp=Z,300nm,16.6s
DPC Dobruska-Polom 80.67 327 *eP* **P 09 00 16.6 +0.9**
DPC MLR MLR
comp=Z,300nm,16.6s
MTPU Mount Pierson 80.67 50 *eP* **P 09 00 18.7 +2.4**
comp=Z,10.0nm,0.8s
UPC Upice 80.69 328 *eP* **P 09 00 16.3 +0.6**
UPC AMS AMS 09 40 20.0
comp=Z,300nm,9.8s
UPC Upice 80.69 328 *eP* **P 09 00 16.3 +0.6**
UPC MLR MLR
comp=Z,300nm,9.8s
BELC Belle Mtn. Jos 80.70 55 P **P 09 00 17.1 +0.8**
baz=307,SNR=7.7
Q16A Castle Valley 80.74 48 *eP* **P 09 00 18.8 +2.3**
comp=Z,39nm,1.7s
PSZ Piszkesteto 80.77 324⇓ *iP* **P 09 00 16.3 0.0**
PSZ Piszkesteto 80.77 324⇓ *eP* **P 09 00 16.9 +0.6**
PSZ Piszkesteto 80.77 324 *eP* **P 09 00 17.2 +0.9**
comp=Z,17nm,0.9s
PSZ Piszkesteto 80.77 324 *eP* **P 09 00 17.2 +0.9**
PSZ pmax pmax
comp=Z,17nm,0.9s
VYHS Vyhne 80.86 325 *eP* **P 09 00 17.0 +0.3**
VYHS pmax pmax
comp=Z,7.0nm,1.0s
VYHS Vyhne 80.86 325 *eP* **P 09 00 17.0 +0.3**
VYHS *e*PP **PP 09 03 20.8 -0.2**
KNB Kanab 80.91 51 *eP* **P 09 00 19.6 +2.2**
comp=Z,29nm,1.2s
KNB Kanab 80.91 51 *eP* **P 09 00 19.6 +2.2**
KNB pmax pmax
comp=Z,29nm,1.2s
SRU San Rafael Swe 81.01 48 *eP* **P 09 00 19.8 +1.8**
comp=Z,17nm,0.9s
SRU San Rafael Swe 81.01 48 *eP* **P 09 00 19.8 +1.8**
SRU pmax pmax
comp=Z,17nm,0.9s
ULM Lac du Bonnet 81.03 32 P **P 09 00 17.9 +0.2**
comp=Z,6.4nm,0.8s,baz=303,slow=6.3,SNR=18
ULM Lac du Bonnet 81.03 32 *eP* **P 09 00 17.8 +0.2**
comp=Z,14nm,1.0s
K22A Casper 81.04 43 P **P 09 00 18.6 +0.6**
baz=311,SNR=5.8
K22A Casper 81.04 43 *eP* **P 09 00 19.7 +1.7**
BAR Barrett 81.05 56 *eP* **P 09 00 19.1 +1.1**
comp=Z,16nm,0.8s
ASF Jabal al Asfar 81.05 303 P **P 09 00 18.7 +0.5**
comp=Z,11nm,0.9s,baz=16,slow=2.9,SNR=21
MDND Maddock 81.06 36 P **P 09 00 18.7 +0.9**
baz=315
MONP2 Monument Peak 81.09 56 P **P 09 00 19.6 +1.1**
baz=307,SNR=8.6
JAVC Velka Javorina 81.14 326 *eP* **P 09 00 19.6 +1.3**
IRM Iron Mountain 81.17 54 P **P 09 00 20.2 +1.5**
baz=308,SNR=10
BC3 Big Chuckawall 81.27 55 P **P 09 00 20.4 +1.1**
baz=308,SNR=14
PVCC Panska Ves 81.29 328 *eP* **P 09 00 19.6 +0.6**
PVCC Panska Ves 81.29 328 *eP* **P 09 00 19.6 +0.6**
BRG Berggiesshubel 81.30 329 *iP* **P 09 00 18.9 -0.1**
comp=Z,14nm,0.9s
BRG *e* 09 03 24.6
comp=Z,11nm,1.2s
BRG Berggiesshubel 81.30 329 *iP* **P 09 00 18.9 -0.1**
BRG *e* 09 03 24.6
BRG pmax pmax
comp=Z,14nm,0.9s
BRG pmax pmax
comp=Z,11nm,1.2s
VRAC Vranov 81.30 326 LR LR 09 39 15.8
comp=Z,227nm,18.7s,baz=30,slow=38
VRAC Vranov 81.30 326⇑ *iP* **P 09 00 19.6 +0.5**
VRAC Vranov 81.30 326 P **P 09 00 19.5 +0.5**
VRAC Vranov 81.30 326 *eP* **P 09 00 19.5 +0.5**
CLL Collm 81.36 329⇑ *iP* **P 09 00 19.1 -0.2**
comp=Z,26nm,0.8s
CLL *i* PP **PP 09 03 24.8 -0.2**
CLL LmV 09 43 00.0
comp=Z,200nm,18.6s
CLL Collm 81.36 329 *eP* **P 09 00 19.4 +0.1**
comp=Z,22nm,0.8s
CLL Collm 81.36 329 *eP* **P 09 00 19.4 +0.1**
CLL pmax pmax
comp=Z,22nm,0.8s
A31A Linda, St. Vin 81.41 34 P **P 09 00 19.7 +0.1**
baz=317
RSSD Black Hills 81.41 41 P **P 09 00 20.2 +0.2**
baz=313
RSSD Black Hills 81.41 41 *eP* **P 09 00 20.8 +0.8**
comp=Z,6.1nm,1.0s
RSSD Black Hills 81.41 41 *eP* **P 09 00 20.8 +0.8**
RSSD pmax pmax
comp=Z,6.0nm,1.0s
W13A Hualapai Mount 81.42 53 *eP* **P 09 00 21.8 +1.6**
comp=Z,8.7nm,0.9s
IKP In-Ko-Pah, Jac 81.45 56 P **P 09 00 21.7 +1.5**
baz=308,SNR=9.3
SWSC Sam W. Stewart 81.47 55 P **P 09 00 21.1 +0.9**
baz=308
SMOL Smolenice 81.50 325 P **P 09 00 21.5 +1.4**
MMAI Mount Meron Ar 81.55 305 P **P 09 00 21.5 +0.8**
comp=Z,20nm,0.9s,baz=29,slow=6.6,SNR=13
MMAI LR LR 09 40 31.0
comp=Z,190nm,18.5s,baz=30,slow=39
B31A Greenbush Farm 81.57 35 P **P 09 00 20.8 +0.3**
baz=316,SNR=8.4
KRUC Moravsky 81.57 326 *eP* **P 09 00 20.5 0.0**
U15A North Rim 81.61 51 *eP* **P 09 00 23.2 +1.9**
comp=Z,12nm,0.8s
HERR Herculane 81.62 320⇑ *iP* **P 09 00 19.1 -1.7**
GOPC GO Pecny, Ondr 81.66 328 *eP* **P 09 00 21.6 +0.7**
GOPC AMS AMS 09 40 30.0
comp=Z,300nm,17.4s
GOPC GO Pecny, Ondr 81.66 328 *eP* **P 09 00 21.6 +0.7**
GOPC MLR MLR
comp=Z,300nm,17.4s
MODS Modra-Piesok 81.67 325 *eP* **P 09 00 20.7 -0.3**
MODS pmax pmax
comp=Z,16nm,1.0s
MODS Modra-Piesok 81.67 325 *eP* **P 09 00 20.7 -0.3**
MODS *e*PP **PP 09 03 27.8 +0.2**
PRU Pruhonice 81.71 328 *eP* **P 09 00 21.6 +0.4**
PRU AMS AMS 09 41 10.0
comp=Z,300nm,17.0s
PRU Pruhonice 81.71 328 *eP* **P 09 00 21.6 +0.4**
PRU MLR MLR
comp=Z,300nm,17.0s
O20A White River Ci 81.71 46 P **P 09 00 22.7 +1.1**
baz=311,SNR=8.6
O20A White River Ci 81.71 46 *eP* **P 09 00 22.9 +1.2**
comp=Z,10nm,0.9s
A32A Rocking H Ranc 81.73 34 P **P 09 00 21.4 0.0**
baz=317,SNR=10.0
PDMCI Parker Dam,Lak 81.74 54 P **P 09 00 22.9 +1.3**
baz=308,SNR=10
Y12C Blythe 81.83 54 P **P 09 00 23.5 +1.4**
baz=308,SNR=12
Y12C Blythe 81.83 54 *eP* **P 09 00 24.2 +2.1**
comp=Z,18nm,0.8s
C31A Landman Farms, 81.98 35 P **P 09 00 22.9 +0.2**
baz=316,SNR=6.9
GLA Glamis 82.06 55 P **P 09 00 24.9 +1.6**
baz=308,SNR=8.0
GLA Glamis 82.06 55 *eP* **P 09 00 25.0 +1.6**
comp=Z,22nm,0.7s
GLA Glamis 82.06 55 *eP* **P 09 00 25.0 +1.6**
GLA pmax pmax
comp=Z,22nm,0.7s
B32A Ashes, Strandq 82.10 34 P **P 09 00 23.3 0.0**
baz=317,SNR=13
A33A Warroad 82.21 33 P **P 09 00 23.9 0.0**
baz=318,SNR=7.4
PV09 Paradox Valley 82.24 48 *eP* **P 09 00 27.0 +2.4**
ALN Alexandroupoli 82.34 316 *eP* **P 09 00 25.0 +0.3**
comp=Z,5.1nm,1.0s
ALN Alexandroupoli 82.34 316 *eP* **P 09 00 25.0 +0.3**
ALN pmax pmax
comp=Z,5.0nm,1.0s
PV10 Paradox Valley 82.37 48 *eP* **P 09 00 27.4 +2.2**
PV04 Paradox Valley 82.44 48 *eP* **P 09 00 27.8 +2.3**
AGMN Agassiz Nation 82.47 34 P **P 09 00 25.1 -0.2**
baz=318,SNR=6.4
AGMN Agassiz Nation 82.47 34 *eP* **P 09 00 25.4 +0.2**
comp=Z,26nm,1.6s
SOP Sopron 82.51 325 P **P 09 00 28.9 +3.5**
C32A Crookston 82.52 34 P **P 09 00 25.5 0.0**
baz=317
N23A Red Feather La 82.53 44 P **P 09 00 27.4 +1.3**
baz=312,SNR=10
N23A Red Feather La 82.53 44 *eP* **P 09 00 27.6 +1.6**
comp=Z,16nm,1.0s
D31A Mcclaflin, Tow 82.53 36 P **P 09 00 25.8 +0.3**
baz=317
PV05 Paradox Valley 82.53 48 *eP* **P 09 00 27.9 +1.9**
PHWY Pilot Hill 82.53 44 *eP* **P 09 00 27.5 +1.5**
comp=Z,7.2nm,1.1s
PV03 Paradox Valley 82.57 48 *eP* **P 09 00 28.1 +1.9**
PV07 Paradox Valley 82.57 47 *eP* **P 09 00 28.0 +1.8**
KPL Plockton 82.57 342 *eP* **P 09 00 26.0 +0.5**
KPL IAmb IAmb 09 00 30.8
comp=Z,36nm,1.0s
MORH M^‡r^igy, Hung 82.58 323⇑ *eP* **P 09 00 25.4 -0.4**
B33A Robert and Kas 82.62 34 P **P 09 00 26.0 0.0**
baz=318
CONA Conrad Observa 82.65 326 *i* P **P 09 00 27.1 +0.8**
comp=Z,10.0nm,0.8s,SNR=11
PV02 Paradox Valley 82.66 48 *eP* **P 09 00 28.5 +1.8**
Y14A Wickenburg 82.71 53 *eP* **P 09 00 28.5 +1.7**
comp=Z,9.9nm,0.8s
PV15 Paradox Valley 82.73 47 *eP* **P 09 00 28.9 +1.8**
WUAZ Wupatki 82.76 51 P **P 09 00 28.8 +1.6**
baz=310,SNR=14
WUAZ Wupatki 82.76 51 *eP* **P 09 00 29.1 +1.9**
comp=Z,16nm,0.9s
KHC Kasperske Hory 82.77 328 *eP* **P 09 00 26.9 +0.1**
KHC *e*PP **PP 09 03 33.0 -3.6**
KHC AMS AMS 09 41 20.0
comp=Z,300nm,17.1s
KHC Kasperske Hory 82.77 328 *eP* **P 09 00 26.9 +0.1**
KHC *e* 09 03 33.0
KHC MLR MLR
comp=Z,300nm,17.1s
VTS Vitosha 82.77 318⇑ *iP* **P 09 00 27.6 +0.5**
VTS Vitosha 82.77 318 *eP* **P 09 00 28.0 +0.9**
comp=Z,14nm,1.0s
VTS Vitosha 82.77 318 *eP* **P 09 00 28.0 +0.9**
VTS pmax pmax
comp=Z,14nm,1.0s
D32A Dogwood Acres, 82.80 35 P **P 09 00 26.8 -0.1**
baz=317
E31A Nome 82.81 36 P **P 09 00 27.3 +0.3**
baz=316,SNR=12
PV01 Paradox Valley 82.81 48 *eP* **P 09 00 29.2 +1.7**
B34A Aery, Baudette 82.88 33 P **P 09 00 27.3 0.0**
baz=318
IVI Ivigtut 82.91 4 *eP* **P 09 00 28.0 +0.9**
comp=Z,20nm,0.8s
C33A Trail 82.91 34 P **P 09 00 27.5 -0.1**
baz=318,SNR=6.3
GEC2 GERESS Array S 82.93 328 *eP* **P 09 00 27.6 -0.1**
comp=Z,7.0nm,0.9s
GEC2 GERESS Array S 82.93 328 *eP* **P 09 00 27.6 -0.1**
GEC2 pmax pmax
comp=Z,7.0nm,0.9s
GERES GERESS Array B 82.93 328 P **P 09 00 27.4 -0.3**
comp=Z,3.1nm,0.6s,baz=35,slow=4.9,SNR=21
GERES PP **PP 09 03 38.1 +0.2**
comp=Z,1.6nm,0.8s,baz=46,slow=7.0,SNR=4.4
GERES LR LR 09 39 43.9
comp=Z,146nm,20.6s,baz=38,slow=37
GEA0 GERESS Array S 82.93 327 *eP* **P 09 00 27.7 0.0**
113A Mohawk Valley, 82.93 55 *eP* **P 09 00 29.6 +1.8**
comp=Z,45nm,1.8s
INVG Invergeldie, C 82.96 341 *eP* **P 09 00 27.6 0.0**
INVG IAmb IAmb 09 00 29.1
comp=Z,10.0nm,0.6s
SMCO Snowmass 83.07 46 *eP* **P 09 00 31.0 +2.0**
comp=Z,6.9nm,0.8s
F31A Hecla 83.13 37 P **P 09 00 28.9 +0.2**
baz=316,SNR=6.1
E32A Braaten, Kindr 83.17 36 P **P 09 00 28.9 0.0**
baz=317
ARSA Arzberg 83.30 326 *i* P **P 09 00 29.8 +0.3**
comp=Z,14nm,1.5s
GRFO Grafenberg 83.34 329 *eP* **P 09 00 30.6 +1.0**
comp=Z,21nm,0.8s
GRFO Grafenberg 83.34 329 *eP* **P 09 00 30.6 +1.0**
GRFO pmax pmax
comp=Z,21nm,0.8s
D33A AnnSam, Waubun 83.34 35 P **P 09 00 29.6 -0.1**
baz=318
B35A Bob, Littlefor 83.38 33 P **P 09 00 29.9 0.0**
baz=319,SNR=12
DIVS Divibare 83.41 321 *eP* **P 09 00 30.2 -0.1**
comp=Z,18nm,1.3s
X16A Lo Mia Camp, P 83.41 52 *eP* **P 09 00 32.5 +1.9**
comp=Z,17nm,0.9s
MOA Molln 83.42 327 *i* P **P 09 00 30.4 +0.2**
comp=Z,14nm,1.2s
ISCO Idaho Springs 83.45 45 P **P 09 00 32.3 +1.4**
baz=312,SNR=6.4
ISCO Idaho Springs 83.45 45 *eP* **P 09 00 32.5 +1.7**
comp=Z,19nm,1.8s
ISCO Idaho Springs 83.45 45 *eP* **P 09 00 32.5 +1.7**
ISCO pmax pmax
comp=Z,19nm,1.8s
MVCO Mesa Verde 83.45 48 P **P 09 00 32.3 +1.4**
baz=311,SNR=8.1
MVCO Mesa Verde 83.45 48 *eP* **P 09 00 32.5 +1.6**
comp=Z,10nm,0.9s
G31A Conde 83.61 37 P **P 09 00 31.7 +0.5**
baz=316
PGBU Glenifferbraes 83.62 341 *eP* **P 09 00 30.8 -0.2**
PGBU IAmb IAmb 09 00 34.2
comp=Z,97nm,1.5s
F32A Veblen 83.67 36 P **P 09 00 31.5 0.0**
baz=317
D34A Park Rapids 83.68 34 P **P 09 00 31.4 0.0**
baz=318,SNR=7.8
EKA Eskdalemuir Ar 83.68 340 LR LR 09 40 24.5
comp=Z,112nm,19.1s,baz=245,slow=38
E33A Westby DABS, E 83.73 35 P **P 09 00 32.1 +0.3**
baz=318,SNR=12
C35A Jirik Farms, M 83.77 33 P **P 09 00 31.7 -0.2**
baz=319,SNR=13
SUSD Miller 83.81 38 P **P 09 00 32.5 +0.3**
baz=316
G32A Webster 83.94 37 P **P 09 00 33.4 +0.5**
baz=317,SNR=5.4
PERS Pernice 83.94 325 *i* P **P 09 00 32.9 0.0**
SOKA Soboth 83.95 325 *eP* **P 09 00 32.6 -0.4**
comp=Z,24nm,0.8s,SNR=21
VAY Valandovo 83.99 318 *i* P **P 09 00 33.3 +0.2**
VAY Valandovo 83.99 318 P **P 09 00 33.4 +0.2**
H31A Wolsey 84.02 38 P **P 09 00 33.4 +0.2**
baz=316
W18A Petrified Fore 84.05 51 P **P 09 00 35.4 +1.6**
baz=310,SNR=6.2
W18A Petrified Fore 84.05 51 *eP* **P 09 00 35.6 +1.8**
comp=Z,9.2nm,0.8s
214A Organ Pipe Nat 84.07 55 P **P 09 00 35.3 +1.5**
baz=309,SNR=8.6
F33A 5 Mile Ranch, 84.09 36 P **P 09 00 34.0 +0.5**
baz=318
S22A 4UR Ranch, Cre 84.10 47 P **P 09 00 36.0 +1.7**
baz=312,SNR=19
S22A 4UR Ranch, Cre 84.10 47 *eP* **P 09 00 35.6 +1.4**
comp=Z,13nm,1.0s
E34A Wadena 84.11 35 P **P 09 00 33.8 +0.1**
baz=318
SKO Skopje 84.15 319 *i* P **P 09 00 34.7 +0.8**
GOLS Golise 84.17 325 *i* P **P 09 00 33.7 -0.3**
D35A Remer 84.20 34 P **P 09 00 34.0 -0.1**
baz=319
C36A Pine Crest Far 84.22 33 P **P 09 00 34.3 +0.1**
baz=320,SNR=9.2
PLE Pljevlja 84.27 321⇑ *iP* **P 09 00 35.1 +0.4**
Q24A Divide 84.27 45 P **P 09 00 35.9 +0.9**
baz=313
Q24A Divide 84.27 45 *eP* **P 09 00 36.8 +1.7**
comp=Z,12nm,1.3s
X18A Snowflake 84.29 51 *eP* **P 09 00 36.8 +1.7**
comp=Z,44nm,1.7s
IVA Berane 84.33 320⇑ *iP* **P 09 00 35.5 +0.5**
BLY Banja Luka 84.35 323⇓ *iP* **P 09 00 35.3 +0.4**

KBA **Koelnbreinsper** 84.42 327 *e*PcP P 09 00 35.9 +0.5
comp=Z,14nm,0.8s,SNR=5.5
KBA **Koelnbreinsper** 84.42 327 P P 09 00 36.3 +0.9
E35A **Pequot Lakes** 84.43 34 P P 09 00 35.2 -0.1
baz=319
G33A **Ortonville** 84.49 36 P P 09 00 36.1 +0.4
baz=318,SNR=8.6
PVY **Plav** 84.49 320 *e*P P 09 00 35.7 -0.2
H32A **Carlson Farm,** 84.51 37 P P 09 00 35.9 +0.1
baz=317,SNR=6.8
D36A **Goodland** 84.52 33 P P 09 00 35.6 -0.1
baz=320,SNR=5.2
C37A **Embarrass** 84.53 32 P P 09 00 35.8 0.0
baz=320,SNR=11
KOME **Kolasin** 84.54 320⇑ *i*P P 09 00 36.2 +0.1
UPM **Unac-Piva** 84.60 321⇑ *i*P P 09 00 35.9 -0.6
MYKA **Terra Mystica** 84.62 326 *e*P P 09 00 35.8 -0.6
comp=Z,9.7nm,0.6s,SNR=6.8
LJU **Ljubljana** 84.66 325 *i* P P 09 00 36.1 -0.3
EYMN **Ely** 84.66 32 P P 09 00 36.7 +0.3
baz=321,SNR=16
EYMN **Ely** 84.66 32 *e*P P 09 00 36.8 +0.3
comp=Z,16nm,0.9s
MEM **Membach** 84.66 333 ⇑P P 09 00 36.7 +0.3
comp=Z,13nm,0.9s
OGNE **Ogallala** 84.67 42 P P 09 00 36.9 +0.1
baz=314
CLGH **Cloghs, Cushen** 84.70 341 *e*P P 09 00 36.8 +0.4
H33A **Prehn Over Nor** 84.72 37 P P 09 00 37.4 +0.5
baz=317,SNR=21
G34A **Benson** 84.84 36 P P 09 00 37.8 +0.4
baz=318,SNR=12
I32A **Karley and Nic** 84.85 38 P P 09 00 37.8 +0.3
baz=317
D37A **Cotton** 84.86 33 P P 09 00 37.4 -0.1
baz=320
LIT **Litokhoron** 84.88 317 *e*P P 09 00 37.5 -0.2
comp=Z,37nm,0.8s
LIT **Litokhoron** 84.88 317 *e*P P 09 00 37.5 -0.2
LIT pmax pmax
comp=Z,37nm,0.8s
F35A **Swanville** 84.88 35 P P 09 00 37.7 +0.1
baz=319
SDCO **Great Sand Dun** 84.89 46 P P 09 00 39.5 +1.4
baz=312,SNR=15
SDCO **Great Sand Dun** 84.89 46 *e*P P 09 00 39.7 +1.5
comp=Z,22nm,1.5s
NKME **Niksic** 84.89 321⇑ *i*P P 09 00 37.3 -0.5
C38A **Sawbill Land.** 84.93 32 P P 09 00 37.9 +0.1
baz=321,SNR=18
LBWR **Ladybower, Pea** 84.94 338 *e*P P 09 00 37.9 +0.2
LBWR IAmb IAmb 09 00 42.5
comp=Z,64nm,1.2s
PDG **Podgorica** 84.98 320⇑ *i*P P 09 00 38.0 -0.1
TTG **Podgorica** 84.98 320 *e*P P 09 00 37.9 -0.1
TTG **Podgorica** 84.98 320 *e*P P 09 00 38.1 0.0
comp=Z,35nm,0.6s
TTG **Podgorica** 84.98 320 *e*P P 09 00 38.1 0.0
TTG pmax pmax
comp=Z,35nm,0.6s
E36A **McGregor** 84.98 34 P P 09 00 38.2 +0.1
baz=320,SNR=8.3
BRY **Bratogost** 85.01 321⇑ *i*P P 09 00 37.7 -0.8
FNA **Florina** 85.01 318 *e*P P 09 00 38.1 -0.2
comp=Z,11nm,1.0s
FNA **Florina** 85.01 318 *e*P P 09 00 38.2 -0.2
FNA pmax pmax
comp=Z,11nm,1.0s
ABTA **Abfaltersbach** 85.04 327 *e*P P 09 00 37.3 -1.2
comp=Z,7.3nm,0.8s
CEME **Cevo** 85.07 321⇑ *i*P P 09 00 38.2 -0.5
BCLA **Clavier** 85.08 333 ⇑P P 09 00 38.0 -0.5
OHR **Ohrid** 85.09 318 *i* P P 09 00 38.5 -0.3
I33A **Coleman** 85.16 37 P P 09 00 39.2 +0.1
baz=317,SNR=5.2
TUC **Tucson** 85.18 53 P P 09 00 40.8 +1.4
baz=310
TUC **Tucson** 85.18 53 *e*P P 09 00 40.9 +1.4
comp=Z,9.9nm,0.8s
TUC **Tucson** 85.18 53 *e*P P 09 00 40.9 +1.5
TUC pmax pmax
comp=Z,10.0nm,0.8s
DRME **Dracevica, Mon** 85.19 320⇑ *i*P P 09 00 39.2 0.0
APE **Apeiranthos** 85.19 313⇓ *i*P P 09 00 38.3 -1.1
H34A **Spellman Lake,** 85.20 36 P P 09 00 39.8 +0.6
baz=318
RETA **Reutte** 85.23 328 *i* P P 09 00 39.4 0.0
comp=Z,11nm,0.8s,SNR=7.1
BUM **Brajici-Budva** 85.26 320⇑ *i*P P 09 00 39.3 -0.3
PPT **Papeete** 85.29 116 LR LR 09 31 11.8
comp=Z,206nm,20.3s,baz=338,slow=30
ULC **Ulcinj** 85.31 320⇑ *i*P P 09 00 39.2 -0.7
C39A **Grand Marais** 85.34 31 P P 09 00 39.9 +0.1
baz=322,SNR=6.8
HCY **Herceg Novi** 85.36 321⇑ *i*P P 09 00 39.4 -0.6
F36A **Milaca** 85.36 34 P P 09 00 39.7 -0.2
baz=320
WLF **Walferdange** 85.37 332 ⇑P P 09 00 39.4 -0.6
G35A **Watkins** 85.40 35 P P 09 00 40.1 -0.1
baz=319
ECSD **EROS Data Cent** 85.48 37 P P 09 00 41.0 +0.4
baz=318,SNR=10
ECSD **EROS Data Cent** 85.48 37 *e*P P 09 00 41.1 +0.4
comp=Z,8.5nm,0.8s
GIVF **Givet** 85.52 333 *e*P P 09 00 40.0 -0.7
GIVF pmax pmax
comp=Z,11nm,1.0s
BFO **Black Forest** 85.59 330 *e*P P 09 00 40.9 -0.2
comp=Z,12nm,0.8s
BFO **Black Forest** 85.59 330 *i* P P 09 00 41.1 0.0
FETA **Feichten** 85.61 328 *e*P P 09 00 40.9 -0.5
comp=Z,7.8nm,0.8s
H35A **Sunnyside Ranc** 85.62 36 P P 09 00 42.2 +0.9
baz=319,SNR=20
C40A **Isle Royale Na** 85.67 31 P P 09 00 41.6 +0.2
baz=322
E38A **The Farm, Brul** 85.67 33 P P 09 00 41.6 +0.1
baz=321,SNR=12
KSCO **Kaye Shedlock'** 85.68 44 P P 09 00 42.3 +0.5
baz=314
KSCO **Kaye Shedlock'** 85.68 44 *e*P P 09 00 43.1 +1.2
comp=Z,38nm,1.6s
AGG **Agios Georgios** 85.71 316 *e*P P 09 00 40.9 -1.0
comp=Z,18nm,0.8s
AGG **Agios Georgios** 85.71 316 *e*P P 09 00 40.9 -1.0
AGG pmax pmax
comp=Z,18nm,0.8s
WPM1 **Penmaenmawr** 85.71 339 *e*P P 09 00 41.6 +0.1
G36A **St. Michael** 85.73 35 P P 09 00 41.9 +0.1
baz=319
DAVA **Damuels** 85.77 328 *e*P P 09 00 41.7 -0.5
comp=Z,12nm,0.8s
BAIF **Baives** 85.78 333 *e*P P 09 00 40.7 -1.3
BAIF pmax pmax
comp=Z,26nm,1.6s
WLF1 **Llynfaes** 85.82 339 *e*P P 09 00 41.7 -0.4
WLF1 IAmb IAmb 09 00 43.2
comp=Z,48nm,1.1s
FOEL **Foel Wylfa** 85.83 339 *e*P P 09 00 41.6 -0.6
FOEL IAmb IAmb 09 00 43.1
comp=Z,16nm,0.7s
F37A **Hinrichs Farm,** 85.87 34 P P 09 00 42.7 +0.2
baz=320
YLL **Llanberis** 85.89 339 *e*P P 09 00 42.7 +0.3
YRC **Rhoscolyn** 85.91 340 *e*P P 09 00 41.8 -0.7
T25A **Trinidad** 85.94 46 P P 09 00 44.5 +1.2
baz=313,SNR=8.3
T25A **Trinidad** 85.94 46 *e*P P 09 00 44.8 +1.5
comp=Z,13nm,0.8s
CDF **Champ du Feu** 85.94 331 *e*P P 09 00 41.8 -1.1
CDF pmax pmax
comp=Z,13nm,0.8s
LLW **Llanuwchllyn** 86.00 339 *e*P P 09 00 42.9 0.0
F38A **Pierce - Schro** 86.03 33 P P 09 00 44.0 +0.7
baz=321,SNR=6.8
FUORN **Ofenpass-Fuorn** 86.12 328 *e*P P 09 00 44.1 0.0
comp=Z,22nm,0.6s
LAZ **Ladron** 86.13 50 *e*P P 09 00 46.2 +2.0
H36A **Jessenland, He** 86.14 35 P P 09 00 45.0 +1.1
baz=319
ECH **Echery** 86.15 331 *e*P P 09 00 43.5 -0.4
comp=Z,9.5nm,0.8s
ECH **Echery** 86.15 331 *e*P P 09 00 43.5 -0.4
ECH pmax pmax
comp=Z,10.0nm,0.8s
SPMN **Marine on St.** 86.17 34 P P 09 00 44.4 +0.4
baz=320
SPMN **Marine on St.** 86.17 34 *e*P P 09 00 44.6 +0.6
comp=Z,47nm,0.1s
TASM **ASL Pad, Albuq** 86.19 49 P P 09 00 46.1 +1.5
baz=312,SNR=14
ANMO **Albuquerque** 86.19 49 P P 09 00 46.0 +1.5
baz=312
ANMO **Albuquerque** 86.19 49 *e*P P 09 00 46.1 +1.5
comp=Z,8.7nm,1.1s
ANMO **Albuquerque** 86.19 49*c* *i*P P 09 00 46.0 +1.5
ANMO pmax pmax
comp=Z,10.0nm,1.2s
TASL **Snake Pit, Alb** 86.19 49 P P 09 00 46.0 +1.5
baz=312,SNR=13
E39A **Mellen** 86.28 32 P P 09 00 44.8 +0.2
baz=321,SNR=9.5
BGNE **Belgrade** 86.40 40 P P 09 00 45.5 +0.3
baz=317
BGNE **Belgrade** 86.40 40 *e*P P 09 00 45.8 +0.5
comp=Z,24nm,0.6s
DSB **Dublin** 86.41 340 *e*P P 09 00 45.2 +0.2
comp=Z,62nm,1.7s
F39A **Loretta** 86.48 33 P P 09 00 45.9 +0.3
baz=321,SNR=6.4
E40A **Wakefield** 86.51 32 P P 09 00 46.7 +1.0
baz=322,SNR=16
I36A **Fitzsimmons Fa** 86.52 36 P P 09 00 46.0 +0.3
baz=319
MCH1 **Michaelchurch** 86.55 338 *e*P P 09 00 45.9 +0.2
MCH1 IAmb IAmb 09 00 46.5
comp=Z,14nm,0.8s
D41A **Chassel** 86.59 31 P P 09 00 46.6 +0.6
baz=323,SNR=5.2
HINF **Hinteralfeld** 86.59 330 *e*P P 09 00 44.5 -1.6
HINF pmax pmax
comp=Z,8.0nm,1.0s
H37A **Dierke Farm, C** 86.61 35 P P 09 00 46.9 +0.7
baz=320
BNM **Barren Site** 86.61 50 *e*P P 09 00 48.5 +1.7
MONM **Monmouth** 86.62 338 *e*P P 09 00 46.1 +0.1
MONM IAmb IAmb 09 00 50.3
comp=Z,28nm,0.9s
HAU **Haudompre** 86.64 331 *e*P P 09 00 44.8 -1.5
HAU pmax pmax
comp=Z,5.0nm,0.6s
G38A **Ridgeland** 86.64 34 P P 09 00 46.4 0.0
baz=321
SCHQ **Schefferville** 86.65 15 P P 09 00 47.2 +1.0
comp=Z,14nm,0.8s,baz=20,slow=7.7,SNR=8.6
SCHQ LR LR 09 43 39.4
comp=Z,90nm,18.2s,baz=0.5,slow=38
SCHQ **Schefferville** 86.65 15 *e*P P 09 00 47.4 +1.1
comp=Z,14nm,0.8s
319A **Douglas** 86.75 53 *e*P P 09 00 49.3 +2.0
comp=Z,7.7nm,0.9s
IDI **Anoyia** 86.77 312 P P 09 00 46.5 -0.8
comp=Z,9.6nm,0.7s,baz=36,slow=11,SNR=18
IDI **Anoyia** 86.77 312⇓ *i*P P 09 00 46.3 -0.9
IDI **Anoyia** 86.77 312 *e*P P 09 00 47.0 -0.3
comp=Z,11nm,0.7s
HGH **Gray Hill** 86.80 338 *e*P P 09 00 46.8 -0.2
I37A **Lemond, Waseca** 86.81 35 P P 09 00 48.2 +1.0
baz=320,SNR=12
F40A **Park Falls** 86.83 32 P P 09 00 47.6 +0.3
baz=322
H38A **Maiden Rock** 86.83 34 P P 09 00 47.7 +0.5
baz=320,SNR=5.1
J36A **Seneca 1, Swea** 86.89 36 P P 09 00 48.0 +0.4
baz=319,SNR=6.3
E41A **Kenton** 86.90 31 P P 09 00 48.0 +0.4
baz=323,SNR=10
121A **Cookes Peak, D** 86.96 51 P P 09 00 49.5 +1.1
baz=312
COWI **Conover** 87.11 32 *e*P P 09 00 49.4 +0.8
comp=Z,9.0nm,0.9s
ITM **Ithomi** 87.22 315 *e*P P 09 00 47.9 -1.4
comp=Z,17nm,0.6s
J37A **Redenius Farm,** 87.28 36 P P 09 00 50.0 +0.5
baz=320
H39A **Augusta** 87.28 34 P P 09 00 49.7 +0.3
baz=321
I38A **Scanlan Farm,** 87.29 35 P P 09 00 49.9 +0.3
baz=320,SNR=5.5
G40A **Rib Lake** 87.30 33 P P 09 00 50.1 +0.6
baz=322,SNR=9.8
K36A **Gilmore City** 87.35 37 P P 09 00 50.3 +0.5
baz=319
E42A **Champion** 87.36 31 P P 09 00 50.4 +0.5
baz=323,SNR=8.0
F41A **Three Lakes** 87.41 32 P P 09 00 50.8 +0.8
baz=322,SNR=12
CBKS **Cedar Bluff** 87.42 42 P P 09 00 50.0 -0.3
baz=316
CBKS **Cedar Bluff** 87.42 42 *e*P P 09 00 50.9 +0.6
CBKS **Cedar Bluff** 87.42 42 *e*P P 09 00 50.9 +0.6
MATE **Matera** 87.58 320⇑ *i*P P 09 00 50.4 -0.5
K37A **Belmond** 87.65 36 P P 09 00 51.8 +0.6
baz=320,SNR=11
L36A **Harm Buss Farm** 87.65 37 P P 09 00 51.5 +0.3
baz=319
H40A **Chili** 87.73 33 P P 09 00 52.2 +0.6
baz=322,SNR=7.6
J38A **Wedel Dairy, R** 87.78 35 P P 09 00 52.2 +0.3
baz=320
E43A **Lone Tree Farm** 87.79 30 P P 09 00 52.3 +0.5
baz=324,SNR=7.4
G41A **Antigo** 87.79 32 P P 09 00 52.5 +0.6
baz=322,SNR=5.6
F42A **Maple Grove Fa** 87.81 31 P P 09 00 52.9 +1.0
baz=323
I39A **Houston** 87.81 34 P P 09 00 52.1 +0.1
baz=321
E44A **Grand Marais A** 88.02 30 P P 09 00 53.8 +0.9
baz=325,SNR=5.4
H41A **Junction City** 88.06 33 P P 09 00 53.5 +0.3
baz=322
H41A **Junction City** 88.06 33 *e*P P 09 00 54.2 +1.0
M36A **Felix, Anita** 88.07 38 P P 09 00 53.9 +0.6
baz=319,SNR=6.4
L37A **Phoenix Point,** 88.08 37 P P 09 00 53.6 +0.3
baz=319
G42A **Mountain** 88.09 32 P P 09 00 53.7 +0.4
baz=323,SNR=7.5
G42A **Mountain** 88.09 32 *e*P P 09 00 54.2 +0.9
comp=Z,23nm,0.9s
J39A **Decorah** 88.13 35 P P 09 00 53.6 +0.1
baz=321,SNR=6.7
F43A **Flat Rock, Esc** 88.15 31 P P 09 00 54.1 +0.6
baz=324,SNR=5.3
K38A **Parkersburg** 88.15 36 P P 09 00 53.9 +0.2
baz=320
I40A **Norwalk** 88.19 34 P P 09 00 54.1 +0.3
baz=322
F44A **Big Bay de Noc** 88.35 30 P P 09 00 55.1 +0.6
baz=324
G43A **Wallace** 88.40 31 P P 09 00 55.6 +0.9
baz=324
G43A **Wallace** 88.40 31 *e*P P 09 00 55.9 +1.1
comp=Z,17nm,0.8s
I41A **Arkdale** 88.40 33 P P 09 00 55.3 +0.5
baz=322
L38A **Oak Wood Farm,** 88.45 36 P P 09 00 55.6 +0.5
baz=320
N36A **Muff Farm, Cla** 88.47 38 P P 09 00 56.1 +0.9
baz=319
M37A **Trindle Farm,** 88.47 37 P P 09 00 56.0 +0.8
baz=319,SNR=5.0
LPL **La Plagne** 88.50 329 *e*P P 09 00 54.1 -1.4
LPL pmax pmax
comp=Z,3.0nm,0.3s
LPG **La Plagne** 88.50 329 *e*P P 09 00 54.3 -1.3
LPG pmax pmax
comp=Z,3.0nm,0.4s
SCIA **State Center** 88.50 37 P P 09 00 56.2 +0.8
baz=320
SCIA **State Center** 88.50 37 *e*P P 09 00 56.8 +1.5
comp=Z,22nm,1.0s
J40A **Soldiers Grove** 88.52 34 P P 09 00 55.3 -0.1
baz=321
K39A **Oelwein** 88.53 35 P P 09 00 55.5 0.0
baz=321,SNR=5.6
E45A **Wooded Hills,** 88.54 29 P P 09 00 55.8 +0.4
baz=325
H42A **Shiocton** 88.63 32 P P 09 00 56.5 +0.6
baz=323
H42A **Shiocton** 88.63 32 *e*P P 09 00 56.7 +0.8
AVF **Avril sur Loir** 88.80 332 *e*P P 09 00 55.2 -1.4
AVF pmax pmax
comp=Z,7.0nm,0.6s
J41A **Loganville** 88.88 34 P P 09 00 57.4 +0.3
baz=322
K40A **Colesburg** 88.88 35 P P 09 00 57.4 +0.4
baz=321
M38A **Pleasantville** 88.89 37 P P 09 00 57.8 +0.6
baz=320,SNR=5.9
N37A **Lee Faris, Mou** 88.89 38 P P 09 00 58.1 +0.9
baz=319,SNR=6.1
KSU1 **Kansas State U** 88.89 40 P P 09 00 57.5 +0.3
baz=318
KSU1 **Kansas State U** 88.89 40 *e*P P 09 00 57.5 +0.3
comp=Z,13nm,0.7s
L39A **Vinton** 88.92 36 P P 09 00 57.8 +0.5
baz=321,SNR=5.9
F45A **CMU Biological** 88.95 30 P P 09 00 57.7 +0.4
baz=325
I42A **Draeger Farm,** 88.96 33 P P 09 00 58.0 +0.7
baz=323,SNR=5.2
I42A **Draeger Farm,** 88.96 33 *e*P P 09 00 58.1 +0.7
comp=Z,19nm,0.8s
GRR **Gorron** 88.98 335 *e*P P 09 00 58.3 +0.9
GRR pmax pmax
comp=Z,6.0nm,0.6s
H43A **Windswept, Lux** 88.99 32 P P 09 00 57.4 -0.1
baz=323
H43A **Windswept, Lux** 88.99 32 *e*P P 09 00 58.7 +1.2
comp=Z,26nm,0.8s
MNTX **Cornudas Mount** 89.03 51 P P 09 00 58.7 +0.7
baz=313
MNTX **Cornudas Mount** 89.03 51 *e*P P 09 00 59.2 +1.2
comp=Z,3.7nm,1.2s
AMTX **Amarillo** 89.09 46 P P 09 00 59.3 +0.9
baz=315
JFWS **Jewell Farm** 89.12 34 P P 09 00 58.3 +0.1
baz=322
I43A **Langenfeld Bro** 89.30 33 P P 09 00 59.5 +0.5
baz=323
J42A **Columbus** 89.32 33 P P 09 00 59.4 +0.3
baz=322
ORIF **Oris-en-Rattie** 89.33 329 *e*P P 09 00 57.9 -1.4
ORIF pmax pmax
comp=Z,4.0nm,0.7s
M39A **Webster** 89.33 36 P P 09 00 59.7 +0.5
baz=320
L40A **Anamosa** 89.34 35 P P 09 00 59.4 +0.2
baz=321
K41A **Shullsburg** 89.34 35 P P 09 00 59.4 +0.2
baz=322
N38A **Joes South For** 89.34 37 P P 09 00 59.7 +0.5
baz=320
O37A **Wolven Farm, M** 89.36 38 P P 09 01 00.1 +0.7
baz=319
SBF **Sospel** 89.53 328 *e*P P 09 01 02.6 +2.4
J43A **Natural Harves** 89.58 33 P P 09 01 00.7 +0.4
baz=323
N39A **Derby Farms, D** 89.64 37 P P 09 01 01.1 +0.5
baz=320
K42A **Prairie Point,** 89.64 34 P P 09 01 00.8 +0.2
baz=322
L41A **Preston** 89.67 35 P P 09 01 01.0 +0.3
baz=322
M40A **Post Highland** 89.71 36 P P 09 01 01.3 +0.3
baz=321
O38A **Galt** 89.73 38 P P 09 01 01.7 +0.5
baz=320
VIVF **Saint-Julien-l** 89.88 330 *e*P P 09 01 00.5 -1.3
VIVF pmax pmax
comp=Z,7.0nm,1.0s
N40A **Mertquake, Sal** 90.08 36 P P 09 01 03.4 +0.7
baz=321
P38A **Dawn** 90.08 38 P P 09 01 03.4 +0.7
baz=320
O39A **Kirksville** 90.09 37 P P 09 01 03.3 +0.5
baz=320
L42A **Oliver, Polo** 90.11 35 P P 09 01 02.7 -0.1
baz=322
K43A **Burlington** 90.16 33 P P 09 01 03.2 +0.2
baz=323
M41A **Milan** 90.19 35 P P 09 01 03.6 +0.4
baz=322
O40A **La Belle** 90.52 37 P P 09 01 05.4 +0.6
baz=321
Q38A **Cooks Store, C** 90.54 39 P P 09 01 05.0 +0.1
baz=320
P39B **Salisbury** 90.58 38 P P 09 01 05.4 +0.3
baz=320
L44A **Lake County Fo** 90.76 33 P P 09 01 06.1 +0.2
baz=323
LPIG **La Paz** 90.77 59 LR LR 09 35 24.0
comp=Z,38nm,20.6s,baz=206,slow=31
Q39A **Willow Grove F** 90.80 38 P P 09 01 06.8 +0.7
baz=320,SNR=5.8
CAF **Calviac** 90.86 332 *e*P P 09 01 05.9 -0.4
CAF pmax pmax
comp=Z,14nm,1.2s
N42A **Yates City** 90.86 36 P P 09 01 06.7 +0.4
baz=322
WMOK **Wichita Mounta** 90.87 45 P P 09 01 07.5 +1.0
baz=316,SNR=6.5
WMOK **Wichita Mounta** 90.87 45 *e*P P 09 01 07.7 +1.1
comp=Z,4.8nm,0.9s
WMOK **Wichita Mounta** 90.87 45 *e*P P 09 01 07.7 +1.1
WMOK pmax pmax
comp=Z,5.0nm,0.9s
M43A **Waltham Townsh** 90.88 34 P P 09 01 06.9 +0.5
baz=323
P40A **Paris** 90.89 38 P P 09 01 07.3 +0.8
baz=321,SNR=6.2
R38A **Fenwick Farm,** 90.98 39 P P 09 01 06.5 -0.5
baz=319
O41A **Passleys Farm,** 91.01 36 P P 09 01 07.4 +0.4
baz=321
VAE **Valguarnera** 91.13 320 LR LR 09 47 48.4
comp=Z,120nm,18.1s,baz=5.5,slow=39
N43A **Stutzman Famil** 91.17 35 P P 09 01 08.1 +0.3
baz=322
P41A **Barry, Barry** 91.27 37 P P 09 01 08.8 +0.6
baz=321
Q40A **Laux Farm, Aux** 91.29 38 P P 09 01 08.8 +0.4
baz=321
R39A **Chumby, Stover** 91.33 39 P P 09 01 08.8 +0.2
baz=320,SNR=6.6
M44A **Midewin, Midew** 91.33 34 P P 09 01 08.6 +0.1
baz=323
LFF **La Frestale** 91.35 332 *e*P P 09 01 07.9 -0.6
LFF pmax pmax
comp=Z,10.0nm,0.6s
S38A **Stockton** 91.40 40 P P 09 01 08.9 -0.1
baz=319
HDIL **Hopedale** 91.42 35 P P 09 01 09.4 +0.5
baz=322
T38A **Diamond** 91.64 40 P P 09 01 10.4 +0.3
baz=319,SNR=9.9
S39A **Bolivar** 91.66 39 P P 09 01 09.9 -0.2
baz=320,SNR=6.2
P42A **Winchester** 91.68 36 P P 09 01 10.6 +0.4
baz=322
TUL1 **Leonard** 91.68 42 P P 09 01 10.8 +0.6
baz=318
TUL1 **Leonard** 91.68 42 *e*P P 09 01 11.6 +1.4
comp=Z,9.9nm,0.8s
M45A **Boilermakers S** 91.69 33 P P 09 01 10.3 +0.1
baz=324
TX31 **Lajitas Ar. Si** 91.72 51 *e*P P 09 01 12.2 +1.5
TXAR **Lajitas Array** 91.72 51 P P 09 01 11.9 +1.3
comp=Z,4.2nm,0.7s,baz=303,slow=3.0,SNR=63
TXAR LR LR 09 36 34.1
comp=Z,56nm,21.8s,baz=0.0,slow=32
TXAR **Lajitas Array** 91.72 51 P P 09 01 12.0 +1.3
TXAR pmax pmax
comp=Z,4.0nm,0.7s
R40A **Maddies Statio** 91.73 38 P P 09 01 10.6 +0.2
baz=320,SNR=5.8
Q41A **Truxton** 91.74 37 P P 09 01 11.1 +0.7
baz=321
N44A **Piper City** 91.77 34 P P 09 01 11.1 +0.5
baz=323
ABTX **Abilene, Hawle** 91.89 47 P P 09 01 12.1 +0.8
baz=316
ABTX **Abilene, Hawle** 91.89 47 *e*P P 09 01 12.6 +1.2
N45A **Kentland** 92.01 34 P P 09 01 12.3 +0.7
baz=324
P43A **Skaggs, Pawnee** 92.03 36 P P 09 01 12.1 +0.3
baz=322
M46A **Old House Fiel** 92.07 33 P P 09 01 12.4 +0.4
baz=324
Q42A **Golden Eagle** 92.11 37 P P 09 01 12.6 +0.4

	baz=322						
O44A	Mansfield	92.12	35	P	P	09 01 13.2	+1.0
	baz=323						
T39A	Clever	92.13	40	P	P	09 01 12.4	+0.1
	baz=320						
S40A	Lebanon	92.15	39	P	P	09 01 12.5	+0.1
	baz=320						
R41A	Rosebud	92.17	38	P	P	09 01 13.0	+0.5
	baz=321,SNR=5.1						
O45A	Potomac	92.39	34	P	P	09 01 13.9	+0.4
	baz=323						
HHAR	Hobbs	92.40	41	eP	P	09 01 14.2	+0.6
	comp=Z,4.8nm,0.8s						
CCM	Cathedral Cave	92.43	38	P	P	09 01 13.9	+0.3
	baz=321						
CCM	Cathedral Cave	92.43	38	eP	P	09 01 14.0	+0.3
CCM	Cathedral Cave	92.43	38	eP	P	09 01 14.0	+0.3
T40A	Mansfield	92.48	39	P	P	09 01 13.8	-0.1
	baz=320						
S41A	Jillco Farms,	92.54	39	P	P	09 01 14.2	0.0
	baz=321						
U39A	Green Forest	92.56	40	P	P	09 01 14.5	+0.1
	baz=320						
SFIN	Lafayette	92.57	34	P	P	09 01 14.1	-0.2
	baz=324						
P44A	Sand Creek, Wi	92.59	35	P	P	09 01 14.8	+0.4
	baz=323						
Q44A	Meyer Farm, Va	92.85	36	P	P	09 01 16.2	+0.6
	baz=322						
S42A	Caledonia	92.88	38	P	P	09 01 16.2	+0.4
	baz=321,SNR=6.1						
V39A	Pettigrew	92.89	41	P	P	09 01 15.9	0.0
	baz=320						
R43A	Red Bud	92.91	37	P	P	09 01 16.1	+0.2
	baz=322						
U40A	Yellville	92.91	40	P	P	09 01 16.1	+0.1
	baz=320						
T41A	Mountain View	92.95	39	P	P	09 01 16.1	0.0
	baz=321						
O47A	Sheridan	93.10	34	P	P	09 01 17.0	+0.2
	baz=324						
Q45A	Warren Harvey,	93.27	36	P	P	09 01 17.9	+0.4
	baz=323						
T42A	Van Buren	93.30	39	P	P	09 01 17.9	+0.3
	baz=321						
W39A	Magazine	93.30	41	P	P	09 01 17.9	+0.2
	baz=319						
JCT	Junction City	93.32	48	P	P	09 01 18.6	+0.6
	baz=316						
R44A	Waltonville	93.34	37	P	P	09 01 17.6	-0.2
	baz=322						
V40A	Witts Springs	93.35	40	P	P	09 01 18.2	+0.2
	baz=320						
S43A	Fulton Ridge,	93.39	38	P	P	09 01 18.3	+0.2
	baz=322						
U41A	Viola	93.41	39	P	P	09 01 18.3	+0.1
	baz=321						
OLIL	Olney	93.42	36	eP	P	09 01 19.5	+1.3
X39A	Fountain Ranch	93.64	42	P	P	09 01 20.4	+1.1
	baz=319						
P47A	Martinsville	93.67	34	P	P	09 01 19.6	+0.3
	baz=324						
W40A	Ferguson Farm,	93.69	41	P	P	09 01 20.3	+0.8
	baz=320						
S44A	Carbondale	93.69	37	P	P	09 01 19.9	+0.4
	baz=322						
V41A	Mountainview	93.71	40	P	P	09 01 19.6	-0.1
	baz=320						
PBMO	Poplar Bluff	93.83	38	eP	P	09 01 21.4	+1.3
	comp=Z,7.1nm,0.9s						
MIAR	Mount Ida	93.90	42	P	P	09 01 21.3	+0.7
	baz=320						
MIAR	Mount Ida	93.90	42	eP	P	09 01 21.6	+1.2
	comp=Z,6.1nm,0.8s						
MIAR	Mount Ida	93.90	42	eP	P	09 01 21.7	+1.2
MIAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
PQI	Presque Isle	93.96	19	eP	P	09 01 21.5	+1.0
	comp=Z,10nm,0.8s						
WHAR	Wooly Hollow	94.02	40	eP	P	09 01 22.1	+1.1
	comp=Z,15nm,1.3s						
S45A	Carrier Mills	94.03	37	P	P	09 01 21.6	+0.6
	baz=323						
Q47A	Bedord North L	94.04	34	P	P	09 01 21.7	+0.6
	baz=324						
V42A	Cord	94.09	39	P	P	09 01 21.4	0.0
	baz=321						
R46A	Gibon Southern	94.12	36	P	P	09 01 22.0	+0.6
	baz=324						
S46A	Don Dixon Farm	94.44	36	P	P	09 01 23.0	+0.1
	baz=323						
Y40A	Okolona	94.47	42	P	P	09 01 23.8	+0.7
	baz=320						
ACSO	Alum Creek Sta	94.50	31	P	P	09 01 23.0	-0.1
	baz=327						
R47A	Wooly Knot Far	94.51	35	P	P	09 01 23.4	+0.2
	baz=324						
U44B	Burton Farm, H	94.71	38	P	P	09 01 24.8	+0.7
	baz=322						
R48A	Northridge Ran	94.73	34	P	P	09 01 24.5	+0.3
	baz=325						
T46A	Princeton	94.87	36	P	P	09 01 25.7	+0.8
	baz=323						
KEST	Kesra	95.08	322	LR	LR	09 50 40.3	
	comp=Z,127nm,18.1s,baz=344,slow=40						
N54A	Moraine State	95.11	29	P	P	09 01 26.5	+0.6
	baz=329						
S48A	Wiedeman Farm,	95.25	35	P	P	09 01 27.0	+0.4
	baz=324						
T47A	Sharon Grove	95.29	36	P	P	09 01 27.3	+0.4
	baz=324						
NATX	Nacogdoches	95.40	44	P	P	09 01 28.0	+0.6
	baz=319						
T48A	Bowling Green	95.53	35	P	P	09 01 28.3	+0.4
	baz=324						
BINY	Binghamton	95.54	26	P	P	09 01 28.3	+0.4
	baz=332						
U47A	Clarksville	95.64	36	P	P	09 01 28.8	+0.4
	baz=324						
T49A	Edmonton	95.94	35	P	P	09 01 30.0	+0.2
	baz=325						
U48A	Cassie Pea, Po	95.94	36	P	P	09 01 30.2	+0.4
	baz=324						
V47A	Nunnelly	96.02	37	P	P	09 01 30.4	+0.3
	baz=323						
U49A	Red Boiling Sp	96.30	35	P	P	09 01 31.8	+0.4
	baz=325						
T50A	Nancy	96.33	35	P	P	09 01 31.6	+0.1
	baz=325						
S51A	Beattyville	96.38	33	P	P	09 01 32.0	+0.2
	baz=326						
V48A	Smith Brothers	96.43	37	P	P	09 01 32.2	+0.2
	baz=324						
W47A	Westpoint	96.44	37	P	P	09 01 32.3	+0.2
	baz=323						
X46A	Booneville	96.50	38	P	P	09 01 33.0	+0.7
	baz=323						
V49A	McMinnville	96.85	36	P	P	09 01 34.2	+0.3
	baz=324						
W48A	Pulaski	96.86	37	P	P	09 01 34.1	+0.2
	baz=324						
T52A	Hallie	97.09	33	P	Pdif	09 01 35.3	+0.2
	baz=326						
W49A	Belvidere	97.20	37	P	Pdif	09 01 36.1	+0.5
	baz=324						
TZTN	Tazewell	97.31	34	P	Pdif	09 01 36.4	+0.3
	baz=326						
V51A	Loudon	97.55	35	P	Pdif	09 01 37.3	+0.2
	baz=326						
ESDC	Sonseca Array	97.65	333	PP	PP	09 05 37.1	+2.3
	comp=Z,1.0nm,0.8s,baz=22,slow=7.9,SNR=5.2						
X49A	Woodville	97.66	37	P	Pdif	09 01 37.7	+0.1
	baz=324						
V52A	Sevierville	97.86	34	P	Pdif	09 01 38.7	+0.2
	baz=326						
Y49A	Blount Mountai	98.14	37	P	Pdif	09 01 40.0	+0.1
	baz=324						
Z49A	Columbiana	98.61	38	Pdiff	Pdif	09 01 42.1	+0.2
	baz=324						
Z50A	Ashland	98.87	37	Pdiff	Pdif	09 01 43.1	+0.1
	baz=324						
X53A	Estanollee	99.10	35	Pdiff	**Pdif**	**09 01 45.0**	**+0.9**
	baz=326						
Y52A	Lilburn	99.27	36	Pdiff	**Pdif**	**09 01 45.0**	**+0.2**
	baz=326						
Y54A	Tignall	99.92	35	Pdiff	**Pdif**	**09 01 48.2**	**+0.5**
	baz=326						
TOA0	Torodi Ar. Sit	117.16	313	ePKPdf	PKPdf	09 06 48.0	-0.3
TORD	Torodi Ar. Bea	117.16	313	PKP	PKPdf	09 06 47.5	-0.8
	comp=Z,1.3nm,0.6s,baz=25,slow=1.2,SNR=16						
TORD				PP	PP	09 07 55.9	-2.3
	comp=Z,3.0nm,1.1s,baz=18,slow=6.0,SNR=6.9						
MAW	Mawson	118.09	205	PKP	PKPdf	09 06 48.7	+0.4
	comp=Z,1.9nm,0.7s,baz=79,slow=7.5,SNR=8.7						
KOWA	Kowa	119.28	319	ePKPdf	PKPdf	09 06 52.5	+0.2
BOSA	Boshof	125.17	258	PKP	PKPdf	09 07 03.7	+0.3
	comp=Z,2.6nm,0.6s,baz=94,slow=4.0,SNR=6.4						
BOSA	Boshof	125.17	258	ePKPdf	PKPdf	09 07 03.8	+0.4
QSPA	South Pole Qui	125.75	180	ePKPdf	PKPdf	09 07 04.0	+0.8
DBIC	Dimbokro	126.17	315	PKP	PKPdf	09 07 05.2	-0.4
	comp=Z,2.6nm,0.6s,baz=42,slow=2.4,SNR=6.7						
DBIC	Dimbokro	126.17	315	ePKPdf	PKPdf	09 07 06.0	+0.4
DBIC	Dimbokro	126.17	315	ePKIKP	PKPdf	09 07 06.0	+0.4
SDV	Santo Domingo	126.90	39	ePKPdf	PKPdf	09 07 08.4	+1.1
ROSC	El Rosal	128.25	46	PKP	PKPdf	09 07 11.1	+0.9
	comp=Z,1.9nm,0.3s,baz=323,slow=22,SNR=3.7						
SNAA	Sanae	139.41	197	PKP	PKPpre	09 07 19.4	
VNA3	Neumayer Olymp	141.26	195	PKP	PKPpre	09 07 25.9	
VNA1	Neumayer--Stat	141.39	196	PKP	PKPpre	09 07 20.6	
SAML	Samuel	145.84	44	ePKPdf	PKPab	09 07 43.0	+0.1
LPAZ	La Paz	148.27	59	PKP	PKPdf	09 07 47.8	+1.3
	comp=Z,8.0nm,0.7s,baz=322,slow=2.1,SNR=33						
LPAZ				PKPbc	PKiKP	09 07 50.9	-0.8
	comp=Z,8.0nm,0.7s,baz=318,slow=2.2,SNR=36						
LPAZ	La Paz	148.27	59	ePKPdf	PKPbc	09 07 48.8	-1.2
LPAZ				ePKPbc	PKiKP	09 07 51.2	-0.4
MNMC	Minye Minye	149.09	65	ePKPdf	PKPdf	09 07 49.4	+1.9
MNMC				ePKPbc	PKiKP	09 07 53.6	+0.8
RCBR	Riachuelo	149.72	352	ePKPbc	PKPbc	09 07 53.4	+0.4
PB04	IPOC Station P	150.58	71	ePKPbc	PKPbc	09 07 56.5	+1.4
PB10	IPOC Station P	150.91	73	ePKPbc	PKPbc	09 07 57.2	+1.7
GO02	Mina Guanaco	152.52	75	ePKPbc	PKPbc	09 08 01.0	+1.4
LCO	Las Campanas	153.35	84	ePKPbc	PKPbc	09 08 02.4	+1.1
CHRN	Cochrane	153.44	125	ePKPbc	PKPbc	09 08 02.6	+2.1
GO04	Tololo Observa	153.71	86	ePKPbc	PKPbc	09 08 02.5	+0.6
ROC1	El Roble	154.40	92	ePKPbc	PKPbc	09 08 04.0	+0.6
CPUP	Villa Florida	162.41	62	PKPab	PKPab	09 08 53.0	+0.7
	comp=Z,2.1nm,0.9s,baz=280,slow=6.1,SNR=3.1						

MEX 01 08:59:33.8±0.6, 17°28N×101°26W, h5km±8km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.38	329	eP	Pg	08 59 41.1	-0.1
ZIIG				eS	Sg	08 59 46.0	-0.1
CAIG	El Cayaco	0.98	104	eP	Pg	08 59 49.6	-2.9
CAIG				eS	Sg	09 00 02.8	-2.4
ARIG	Puente Sto Nin	1.32	41	iP	Pn	08 59 55.2	-3.7
ARIG				eS	Sg	09 00 11.8	-4.4
ACX	Acapulco	1.40	107	eP	Pn	08 59 56.2	-3.8
ACX				iS	Sb	09 00 13.4	-5.2
MEIG	Mezcala	1.69	67	eP	Pn	09 00 01.4	-2.7
MEIG				eS	Sn	09 00 22.1	-4.0
MMIG	Aquila	2.23	297	eP	Pn	09 00 08.5	-2.8
MMIG				eS	Sn	09 00 35.0	-4.3

KRSC 01 09:05:00.1±0.7, 54°95N×161°91E, h63km±19km, ML3.8, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUMD	Tumrok D	0.91	287	eP	Pn	09 05 18.1	+1.0
TUMD				eS	Sn	09 05 30.6	+1.0
KZV	Kizimen	0.94	281	eP	Pn	09 05 18.8	+1.1
KZV				eS	Sn	09 05 31.5	+0.8
TUMR	Tumrok	1.07	289	eP	Pn	09 05 20.8	+1.5
TUMR				eS	Sn	09 05 35.0	+1.5
BZGR	Bezymyannyi-Gr	1.21	326	eP	Pn	09 05 22.8	+1.7
BZGR				eS	Sn	09 05 38.5	+1.7
ZLN	Zelenaya	1.24	330	eP	Pn	09 05 23.4	+1.8
ZLN				eS	Sn	09 05 39.6	+2.0
KMNR	Kamenistaya	1.25	311	eP	Pn	09 05 23.2	+1.5
KMNR				eS	Sn	09 05 39.3	+1.5
BZMR	Bezymyannaya	1.28	321	eP	Pn	09 05 23.4	+1.3
BZMR				eS	Sn	09 05 39.9	+1.4
BZWR	Bezymyannyi-We	1.30	322	eP	Pn	09 05 23.8	+1.4
BZWR				eS	Sn	09 05 40.3	+1.3
LGNR	Loginova	1.33	329	eP	Pn	09 05 25.0	+2.1
LGNR				eS	Sn	09 05 42.5	+2.5
CIRR	Tsirk	1.34	331	eP	Pn	09 05 24.8	+1.9
CIRR				eS	Sn	09 05 42.1	+2.1
KIRR	Kirishev	1.35	319	eP	Pn	09 05 24.9	+1.9
KIRR				eS	Sn	09 05 42.2	+2.1
KBTR	Krutoberegovo	1.37	22	eP	Pn	09 05 25.3	+2.2
KBTR				eS	Sn	09 05 43.2	+2.9
KBG	Krutoberegovo	1.39	19	eP	Pn	09 05 25.5	+2.2
KBG				eS	Sn	09 05 43.8	+3.0
KPT	Kopyto	1.40	317	eP	Pn	09 05 25.5	+1.9
KPT				eS	Sn	09 05 43.5	+2.2
KRSR	Krestovskiy	1.48	330	eP	Pn	09 05 26.1	+1.3
KLY	Klyuchi	1.54	333	eP	Pn	09 05 26.8	+1.4
KLY				eS	Sn	09 05 45.2	+0.7
KOZ	Kozyrevsk	1.61	315	eP	Pn	09 05 28.1	+1.8
KOZ				eS	Sn	09 05 48.2	+2.1
SMKR	Semkarok	1.66	352	eP	Pn	09 05 29.2	+2.1
SMKR				eS	Sn	09 05 50.0	+2.6
BDR	Baidarnaya	1.67	347	eP	Pn	09 05 29.8	+2.5
BDR				eS	Sn	09 05 50.4	+2.6
KII	Karymskiy	1.70	239	eP	Pn	09 05 29.8	+2.2
SRKR	Sorokina	1.76	347	eP	Pn	09 05 31.0	+2.5
SRKR				eS	Sn	09 05 53.1	+3.2
ESO	Esso	2.08	300	eP	Pn	09 05 33.7	+1.1
ESO				eS	Sn	09 05 57.7	+0.3
SPN	Mys Shipunski	2.16	212	eP	Pn	09 05 35.5	+1.7
SPN				eS	Sn	09 06 00.6	+1.2
NLC	Nalytchevo	2.33	221	eP	Pn	09 05 38.6	+2.5
NLC				eS	Sn	09 06 05.9	+2.3
BKI	Bering	2.35	82	eP	Pn	09 05 38.4	+2.1
BKI				eS	Sn	09 06 04.3	+0.3
SDLR	Sedlovina	2.44	228	eP	Pn	09 05 40.5	+2.8
SDLR				eS	Sn	09 06 08.4	+1.9
KRER	Koryakskii	2.48	230	eP	Pn	09 05 41.4	+3.1
KRER				eS	Sn	09 06 10.8	+3.2
SMAR	Somma	2.49	229	eP	Pn	09 05 41.0	+2.6
SMAR				eS	Sn	09 06 10.3	+2.5
KRX	Arik	2.49	232	eP	Pn	09 05 41.0	+2.6
AVH	Avacha	2.51	229	eP	Pn	09 05 41.8	+3.1
AVH				eS	Sn	09 06 11.5	+3.3
UGLR	Uglovaya	2.52	227	eP	Pn	09 05 41.5	+2.8
UGLR				eS	Sn	09 06 11.2	+2.9
KOK	Koryaka	2.54	231	eP	Pn	09 05 42.1	+3.1
KOK				eS	Sn	09 06 11.9	+3.0
GNL	Ganaly	2.64	243	eP	Pn	09 05 43.1	+2.7
DALK	Dalny	2.67	225	eP	Pn	09 05 43.3	+2.6
DALK				eS	Sn	09 06 14.1	+2.2
PET	Petropavlovsk	2.72	226	eP	Pn	09 05 44.6	+3.2
PET				eS	Sn	09 06 16.1	+3.0
KRMR	Karymshinskiy	3.08	228	eP	Pn	09 05 50.1	+3.8
KRMR				eS	Sn	09 06 25.8	+3.9
RUS	Russkaya	3.23	220	eP	Pn	09 05 50.6	+2.3
RUS				eS	Sn	09 06 26.0	+0.5
MTVR	Mutnovka	3.31	223	eP	Pn	09 05 53.0	+3.4
MTVR				eS	Sn	09 06 31.1	+3.2
APC	Apacha	3.46	236	eP	Pn	09 05 45.3	+3.8
ASAK	Asacha	3.50	225	eP	Pn	09 05 56.0	+3.8
KDTR	Khodutka, Kamc	3.89	218	eP	Pn	09 05 59.8	+2.5
OSSR	Ossora	4.36	8	eP	Pn	09 06 05.4	+1.7

KRSC 01 09:06:19.4±1.9, 49°71N×157°14E, h15km±43km, ML4.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.18	327	eP	Pn	09 06 39.9	-1.3
SKR				eS	Sb	09 06 54.3	-2.1
PAU	Pauzhetka	1.78	353	eP	Pb	09 06 51.1	-0.5
PAU				eS	Sb	09 07 13.4	-0.2
KDTR	Khodutka, Kamc	2.19	15	eP	Pb	09 06 57.7	-0.9
KDTR				eS	Sb	09 07 25.9	+0.4
RUS	Russkaya	2.87	17	P	Pn	09 07 06.8	+2.4
RUS				eS	Sn	09 07 41.2	+2.6
KRMR	Karymshinskiy	3.19	11	S	Sb	09 07 52.0	-2.3
DALK	Dalny	3.48	16	eP	Pn	09 07 16.1	+3.2
DALK				eS	Sn	09 07 58.0	+4.2
UGLR	Uglovaya	3.66	16	eP	Pn	09 07 19.5	+4.0
SMAR	Somma	3.71	16	P	Pn	09 07 20.2	+3.9
NLC	Nalytchevo	3.73	21	S	Sn	09 08 02.5	+2.5
SDLR	Sedlovina	3.74	16	P	Pn	09 07 19.6	+3.0
KRER	Koryakskii	3.74	15	P	Pn	09 07 20.7	+4.0
SPN	Mys Shipunski	3.85	27	P	Pn	09 07 21.2	+3.3
SPN				S	Sn	09 08 07.1	+4.3

MEX 01 09:07:09.1±0.3, 16°36N×98°10W, h6km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	Tlapa	1.28	340	eP	Pn	09 07 29.9	-3.8
TLIG				iS	Sg	09 07 46.2	-4.2
VHO	Vista Hermosa	1.49	61	iP	Pn	09 07 33.0	-3.6
VHO				eS	Sn	09 07 51.6	-4.9

IDC 01 09:08:53.7±3.3, 3°43N×93°05E, h0km, mb3.6/2, mb1 3.9/3, mb1mx3.3/67, mbtmp3.7/3, MS4.0/1, Ms1 4.0/1, ms1mx2.9/64, Error ellipse: s-maj=111.3km s-min=31.7km az=60.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	5.90	96	Pn	Pn	09 10 26.4	+3.9
	2.3nm,0.3s,baz=360,slow=4.8,SNR=7.0						
CMAR	Chiang Mai Arr	16.01	21	Pn	Pn	09 12 40.3	-0.2
	baz=215,slow=14,SNR=4.9						
H08S2	Diego Garcia H	23.28	242	T	T	09 39 52.6	
	baz=62,slow=75,SNR=26						
H08S3	Diego Garcia H	23.28	242	T	T	09 40 04.6	
	baz=62,slow=75,SNR=25						
H08S1	Diego Carcia H	23.30	242	T	T	09 39 54.4	
	baz=62,slow=75,SNR=27						
MKAR	Makanchi Array	44.19	349	P	P	09 17 04.5	-0.1
	0.6nm,0.6s,baz=166,slow=7.7,SNR=9.0						
MKAR				LR	LR	09 39 10.5	
	comp=Z,219nm,21.7s,baz=294,slow=41						
WRA	Warramunga Arr	46.73	122	P	P	09 17 24.8	-0.2
	0.7nm,0.6s,baz=298,slow=8.8,SNR=6.5						

DDA 01 09:09:03.4, 37°63N×29°25E, h7km, Ml1.8, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DNZL	Cakiroluk	0.17	290	iP	Pg	09 09 06.8	-0.1
DNZL				iS	Sg	09 09 10.9	+1.6
TAVA	DENIZLI_Tavas	0.31	238	iP	Pg	09 09 10.4	+0.8
TAVA				iS	Sg	09 09 14.1	+0.3
GOLH	Golhisar	0.47	147	iP	Pg	09 09 11.6	-0.9
GOLH				iS	Sb	09 09 20.9	-0.4

*ISK **01** 09:09:49.6, 39°10N×27°54E, h7km, ML2.3/3, Suspected Mining explosion.*
*ISCJB **01** 09:09:50.7±0.4, 39°04N±0°03×27°51E±0°03, h0km, Error ellipse: s-maj=3.8km s-min=3.0km az=15.0*
*CSEM **01** 09:09:51.0±0.3, 39°04N×27°51E, h1km, ML2.4, Error ellipse: s-maj=5.8km s-min=4.5km az=179.0, Suspected Mining explosion.*
*DDA **01** 09:09:51.1, 39°07N×27°52E, h7km, Ml2.4*
ISC 01 09:09:50.3±0.8, 39°07N±0°03×27°52E±0°02, h0km, n24, σ0°83/47, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	Akhisar	0.29	130	iP	Pg	09 09 56.7	+0.8
AKHS				iS	Sb	09 10 02.6	-1.3
AKHS	Akhisar	0.29	130	P	Pg	09 09 56.7	+0.8
AKHS				S	Sb	09 10 02.6	-1.3
STEP	BALIKESIR_Sava	0.34	26	iP	Pg	09 09 57.3	+0.5
STEP				iS	Sg	09 10 02.8	+1.5
STEP	BALIKESIR_Sava	0.34	26	P	Pg	09 09 57.3	+0.5
STEP				S	Sg	09 10 02.8	+1.5
DEMI	Demirci	0.93	91	iP	Pn	09 10 10.0	-0.6
DEMI				iS	Sb	09 10 22.3	+0.1
DEMI	Demirci	0.93	91	P	Pn	09 10 10.0	-0.6
DEMI				S	Sb	09 10 22.3	+0.1
MANT	Manisa	0.99	125	iP	Pb	09 10 10.9	+0.4
MANT				iS	Sb	09 10 24.4	+0.2
MANT	Manisa	0.99	125	P	Pb	09 10 10.9	+0.4
MANT				S	Sb	09 10 24.4	+0.2
BAYC	CANAKKALE_Bayr	1.01	312	iP	Pn	09 10 11.2	-0.6
BAYC				iS	Sn	09 10 26.5	-0.2
BAYC	CANAKKALE_Bayr	1.01	312	P	Pn	09 10 11.2	-0.6
BAYC				S	Sn	09 10 26.5	-0.2
URLA	Izmir	1.01	226	PG	Pg	09 10 09.7	0.0
URLA				SG	Sb	09 10 25.3	+0.7
URLA	Izmir	1.01	226	iP	Pg	09 10 09.2	-0.5
URLA				iS	Sb	09 10 24.7	+0.1
URLA	Izmir	1.01	226	P	Pg	09 10 09.2	-0.5
URLA	Izmir	1.01	226	ePg	Pg	09 10 09.7	0.0
URLA				S	Sb	09 10 24.7	+0.1
URLA				eSg	Sb	09 10 25.3	+0.7
KULA	Kula-Manisa	1.05	122	PG	Pg	09 10 10.4	+0.1
KULA				SG	Sb	09 10 25.1	-0.5
KULA	Kula-Manisa	1.05	122	ePg	Pg	09 10 10.4	+0.1
KULA				eSg	Sb	09 10 25.1	-0.5
DGB	¨zmir	1.13	207	iP	Pg	09 10 11.7	-0.3
DGB				iS	Sb	09 10 27.8	-0.1
ZEY	¨zmir	1.15	224	iP	Pb	09 10 12.7	-0.3
ZEY				iS	Sn	09 10 31.6	+1.5
AYDB	Zeytinkoy-Aydi	1.16	165	PN	Pg	09 10 12.8	+0.4
AYDB				SN	Sb	09 10 29.1	+0.3
AYDB	Zeytinkoy-Aydi	1.16	165	ePn	Pg	09 10 12.8	+0.4
AYDB				eSn	Sb	09 10 29.1	+0.3
CHOS	Chios island	1.34	240	PN	Pg	09 10 15.7	-0.2
CHOS				SN	Sn	09 10 34.7	-0.1
CHOS	Chios island	1.34	240	ePn	Pg	09 10 15.7	-0.2
CHOS				eSn	Sn	09 10 34.7	-0.1
BOZC	Bozcaada	1.38	305	iP	Pn	09 10 16.7	0.0
BOZC				iS	Sn	09 10 35.5	-0.1
IGD	Bursa	1.76	47	iP	Pn	09 10 18.3	-3.7

*ISK **01** 09:09:59.4, 39°58N×29°75E, h29km, ML1.7/1*
*ISCJB **01** 09:10:00.9±1.2, 39°60N±0°06×29°75E±0°06, h25km±20km, Error ellipse: s-maj=11.0km s-min=6.5km az=151.7*
*CSEM **01** 09:10:00.7±0.2, 39°61N×29°76E, h15km, ML1.7, Error ellipse: s-maj=6.6km s-min=4.6km az=138.0*
ISC 01 09:10:00.9±1.0, 39°57N±0°04×29°80E±0°04, h24km±8km, n12, σ1°59/21, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUTH	Kutahya	0.24	135	PG	Pb	09 10 06.9	-0.2
KUTH				SG	Sb	09 10 12.5	+1.1
KUTH	Kutahya	0.24	135	ePg	Pb	09 10 06.9	-0.2
KUTH				eSg	Sb	09 10 12.5	+1.1
TVSB	Tavsanli	0.29	245	PG	Pb

baz=105,slow=333,SNR=2.6
ZAA0 Zalesovo Array 1.73 287 ⇑P Pn 09 29 39.7 -0.3
2.9nm,0.3s
ZAA0 ⇑S Sn 09 30 03.2 +0.3
20nm,1.3s
ZALV Zalesovo Beam 1.73 287 Pg Pn 09 29 39.3 -0.8
2.5nm,0.3s,baz=101,slow=13,SNR=20
ZALV Lg Lg 09 30 04.0
2.4nm,0.3s,baz=105,slow=23,SNR=13
KURK Kurchatov 6.21 247 ⇑Lg Lg 09 32 27.4
8.7nm,1.0s
KURBB Kurchatov Arra 6.30 247 Pn Pn 09 30 43.4 +0.6
0.1nm,0.3s,baz=62,slow=14,SNR=8.4
KURBB Lg Lg 09 32 28.2
0.0nm,0.3s,baz=63,slow=32,SNR=11
KURBB Kurchatov Arra 6.30 247 ⇑Pn Pn 09 30 43.7 +0.8
1.0nm,0.3s
KURBB ⇓Sn Sn 09 31 55.9 +0.5
3.5nm,1.1s
KURBB ⇓Lg Lg 09 32 30.3
11nm,1.2s
MK31 Makanchi Array 7.52 209 ⇓Pn Pn 09 31 00.5 +0.9
0.6nm,0.8s,baz=29,slow=13,SNR=8.2
MK31 ⇑Sn Sn 09 32 27.0 +1.4
1.6nm,1.0s,baz=57,slow=7.4,SNR=4.9
MK31 ⇑Lg Lg 09 33 07.0
3.2nm,1.0s,baz=29,slow=30,SNR=3.7
MKAR Makanchi Array 7.52 209 Pn Pn 09 31 01.1 +1.4
0.2nm,0.3s,baz=30,slow=14,SNR=8.8
MKAR Lg Lg 09 33 07.2
0.0nm,0.3s,baz=32,slow=30,SNR=5.6

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*ISCJB **01** 09:34:33.4±0.5, 30°.30′N±0°.03×50°.90E±0°.07, h19km, Error ellipse: s-maj=8.7km s-min=3.7km az=172.4*
*TEH **01** 09:34:34.2, 30°.37′N×50°.73E, h11km, ML3.4*
*CSEM **01** 09:34:35.4±0.4, 30°.35′N×50°.74E, h30km, ML3.5, Error ellipse: s-maj=16.5km s-min=5.5km az=71.0*
*DSN **01** 09:34:36.2±0.9, 30°.48′N×51°.11E, h30km, ML3.7/6, Error ellipse: s-maj=14.4km s-min=7.2km az=43.0*
ISC 01 09:34:35.1±1.1, **30°.37′N**±0°.05×**50°.89E**±0°.07, **h19**km, **n38**, σ0**87**/45, **Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AHBU	**AHRAM**	**1.54**	**167**	*e*Pg	**Pb**	**09 35 03.6**	**+0.5**
IBRJ	**Brojen**	**1.56**	**12**	*e*Pn	**Pn**	**09 35 01.9**	**-0.2**
ZNGN	**Zangian**	**1.74**	**359**	*e*		09 35 31.2	
	comp=Z,99nm,0.3s						
ZNGN				*e*Pn	**Pn**	**09 35 04.7**	**+0.1**
IRAM	**Ramesheh**	**1.92**	**41**	*e*		09 35 10.8	
	comp=Z,2μm,0.1s						
IRAM				*e*Pn	**Pn**	**09 35 08.4**	**+1.5**
IRAM				*e*Sg	**Sg**	**09 35 36.9**	**-0.1**
IPAR	**Pars**	**1.94**	**105**	*e*		09 35 47.3	
	comp=Z,1μm,0.4s						
IPAR				*e*Pn	**Pn**	**09 35 09.1**	**+1.8**
ROKH	**ROKH**	**1.97**	**4**	*e*		09 35 39.4	
	comp=Z,99nm,0.2s						
ROKH				*e*Pn	**Pn**	**09 35 08.1**	**+0.4**
ROKH	**ROKH**	**1.97**	**4**	*e*Pn	**Pn**	**09 35 07.5**	**-0.2**
IGAR	**Gharneh**	**2.25**	**26**	*e*Pn	**Pn**	**09 35 12.4**	**+0.9**
IGAR				*e*		09 35 15.7	
	comp=Z,3μm,0.1s						
SHGR	**Shooshtar-Gavs**	**2.49**	**315**	*e*Pn	**Pn**	**09 35 12.5**	**-2.1**
GHIR	**Ghir-Karzin**	**2.77**	**138**	*e*Pn	**Pn**	**09 35 19.7**	**+1.1**
IZEF	**Zefreh**	**2.80**	**26**	*e*Pn	**Pn**	**09 35 19.9**	**+0.9**
IZEF				*e*		09 35 20.9	
	comp=Z,2μm,0.1s						
IZEF	**Zefreh**	**2.80**	**26**	*e*Pn	**Pn**	**09 35 20.0**	**+0.9**
NASN	**Na'in**	**2.92**	**34**	*e*Pn	**Pn**	**09 35 21.8**	**+1.0**
IKLH	**Kolahrood**	**2.99**	**11**	*e*Pn	**Pn**	**09 35 22.2**	**+0.4**
IKLH				*e*		09 35 25.2	
	comp=Z,751nm,0.0s						
IKLH	**Kolahrood**	**2.99**	**11**	*e*Pn	**Pn**	**09 35 22.5**	**+0.7**
QAM	**Ghamsar**	**3.41**	**8**	*e*Pn	**Pn**	**09 35 28.3**	**+0.9**
QAM				*e*		09 35 29.1	
	comp=Z,3μm,0.1s						
KHMZ	**Khomeyn**	**3.45**	**347**	*e*Pn	**Pn**	**09 35 27.5**	**-0.5**
IVRN	**Varamin**	**4.66**	**8**	*e*Pn	**Pn**	**09 35 44.9**	**+0.4**
IVRN				*e*		09 35 46.1	
	comp=Z,1μm,0.1s						
IVRN	**Varamin**	**4.66**	**8**	*e*Pn	**Pn**	**09 35 45.0**	**+0.4**
BOQSS		**4.68**	**197**	P	**Pn**	**09 35 45.3**	**+0.5**
BOQSS				S	**Sn**	**09 36 38.8**	**+0.2**
IDMV	**Damavand**	**5.28**	**10**	*e*Pn	**Pn**	**09 35 52.8**	**-0.4**
IDMV				*e*		09 35 55.5	
	comp=Z,483nm,0.1s						
IDMV	**Damavand**	**5.28**	**10**	*e*Pn	**Pn**	**09 35 53.1**	**-0.1**
IFIR	**Firoozkooh**	**5.48**	**16**	*e*Pn	**Pn**	**09 35 55.5**	**-0.4**
IFIR				*e*		09 35 57.4	
	comp=Z,641nm,0.2s						
IFIR	**Firoozkooh**	**5.48**	**16**	*e*Pn	**Pn**	**09 35 55.6**	**-0.4**
BTHS		**6.30**	**180**	P	**Pn**	**09 36 07.2**	**+0.2**
BTHS				S	**Sn**	**09 37 17.0**	**-1.6**
SHME	**Shamm**	**6.32**	**132**	P	**Pn**	**09 36 06.7**	**-0.7**
SHME	**Shamm**	**6.32**	**132**	P	**Pn**	**09 36 06.7**	**-0.7**
BANOM	**Banah**	**6.51**	**132**	*i* P	**Pn**	**09 36 09.6**	**-0.4**
	SNR=8.6						
BANOM				S	**Sn**	**09 37 22.1**	**-1.7**
BANOM	**Banah**	**6.51**	**132**	P	**Pn**	**09 36 09.6**	**-0.4**
	SNR=8.6						
BANOM				S	**Sn**	**09 37 22.1**	**-1.7**
MSFE	**Esma-Masafi**	**6.83**	**136**	P	**Pn**	**09 36 14.1**	**-0.2**
MSFE	**Esma-Masafi**	**6.83**	**136**	P	**Pn**	**09 36 14.1**	**-0.2**
ASUD	**Al Ashush, Dub**	**6.95**	**144**	*i* P	**Pn**	**09 36 16.7**	**+0.8**
	SNR=11						
ASUD				S	**Sn**	**09 37 35.0**	**+0.6**
ASUD	**Al Ashush, Dub**	**6.95**	**144**	P	**Pn**	**09 36 16.7**	**+0.8**
	SNR=11						
ASUD				S	**Sn**	**09 37 35.0**	**+0.6**
UOSS	**Minazif**	**7.17**	**138**	P	**Pn**	**09 36 18.4**	**-0.6**
UOSS	**Minazif**	**7.17**	**138**	P	**Pn**	**09 36 18.4**	**-0.6**
MZR	**Muzera**	**7.70**	**162**	P	**Pn**	**09 36 26.7**	**+0.5**
SOHO	**SOHO**	**7.99**	**140**	P	**Pn**	**09 36 29.2**	**-1.0**
SOHO	**SOHO**	**7.99**	**140**	P	**Pn**	**09 36 29.2**	**-1.0**

IDC 01 09:45:58.0±1.1, **77°.40S**×**148°.46W**, **h0**km, **mb3.9**/4, **mb1 4.0**/5, **mb1mx3.9**/32, **mbtmp3.8**/5, **ML3.1**/1, **MS3.4**/2, **Ms1 3.4**/2, **ms1mx3.0**/30, **Error ellipse: s-maj=71.2km s-min=26.0km az=177.0, Antarctica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**10.54**	**245**	Pn	Pn	09 48 29.3	-0.6
	0.1nm,0.3s,baz=113,slow=19,SNR=20						
VNDA				LR	LR	09 52 24.4	
	comp=Z,121nm,21.5s,baz=195,slow=37						
PMSA	**Palmer Station**	**27.05**	**110**	LR	LR	10 01 49.4	
	comp=Z,165nm,18.7s,baz=241,slow=35						
STKA	**Stephens Creek**	**54.78**	**282**	P	P	09 55 29.7	+0.7
	0.9nm,0.5s,baz=161,slow=11,SNR=3.9						
ASAR	**Alice Springs**	**64.37**	**277**	P	P	09 56 35.4	+0.1
	0.4nm,0.6s,baz=157,slow=8.0,SNR=9.5						
WRA	**Warramunga Arr**	**67.88**	**278**	P	P	09 56 57.9	0.0
	1.3nm,0.9s,baz=160,slow=5.6,SNR=6.0						
LPAZ	**La Paz**	**72.10**	**84**	P	P	09 57 25.3	+0.7
	0.8nm,0.6s,baz=152,slow=5.4,SNR=4.0						
YKA	**Yellowknife Ar**	**141.21**	**24**	PKhKP	PKPpre	10 05 23.7	
	0.1nm,0.7s,baz=180,slow=2.9,SNR=3.5						
BRTR	**Keskin Array B**	**142.21**	**183**	PKhKP	PKPpre	10 05 26.9	
	0.3nm,0.5s,baz=174,slow=4.7,SNR=3.7						
INK	**Inuvik**	**145.77**	**10**	PKPbc	PKPdf	10 05 34.7	-1.5
	1.4nm,0.7s,baz=305,slow=2.3,SNR=5.1						
GERES	**GERESS Array B**	**150.52**	**156**	PKPbc	PKPbc	10 05 49.5	-0.7
	0.2nm,0.3s,baz=249,slow=2.7,SNR=4.0						

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*NNC **01** 10:11:59.0±4.2, 53°.61N×87°.93E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=36.2km s-min=15.7km az=58.0*
IDC 01 10:12:02.2±2.4, **53°.48N**×**87°.76E**, **h0**km, **mb1 3.5**/3, **mb1mx3.1**/73, **mbtmp3.5**/3, **ML3.1**/3, **3C-3D**, **Error ellipse: s-maj=22.5km s-min=14.6km az=75.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.81**	**286**	*i*		10 23 46.0	
	baz=108,slow=338,SNR=4.7						
ZAA0	**Zalesovo Array**	**1.81**	**286**	⇑Pg	Pn	10 12 32.9	-1.7
	22nm,0.8s						
ZAA0				⇑Lg	Lg	10 12 59.4	
	70nm,0.8s						
ZALV	**Zalesovo Beam**	**1.81**	**286**	Pn	Pn	10 12 32.7	-1.9
	5.4nm,0.3s,baz=107,slow=13,SNR=73						
ZALV				Sn	Sn	10 12 58.7	+0.4
	14nm,0.3s,baz=106,slow=26,SNR=20						
KURBB	**Kurchatov Arra**	**6.37**	**247**	Pn	Pn	10 13 37.3	0.0
	0.2nm,0.3s,baz=62,slow=14,SNR=12						
KURBB				Sn	Sn	10 14 51.1	+0.4
	0.2nm,0.3s,baz=52,slow=20,SNR=4.6						
KURBB				Lg	Lg	10 15 25.4	
	0.2nm,0.3s,baz=66,slow=32,SNR=8.8						
MK31	**Makanchi Array**	**7.56**	**210**	⇓Pn	Pn	10 13 54.4	+0.7
	1.8nm,0.7s,baz=36,slow=12,SNR=20						
MK31				⇑Sn	Sn	10 15 21.4	+1.4
	5.1nm,0.9s						
MK31				⇓Lg	Lg	10 16 01.3	
	10nm,1.0s,baz=34,slow=30,SNR=5.6						
MKAR	**Makanchi Array**	**7.56**	**210**	Pn	Pn	10 13 54.9	+1.2
	0.2nm,0.3s,baz=23,slow=11,SNR=25						
MKAR				Sn	Sn	10 15 20.8	+0.8
	0.2nm,0.3s,baz=30,slow=24,SNR=4.4						
MKAR				Lg	Lg	10 16 02.6	
	0.3nm,0.3s,baz=32,slow=30,SNR=7.6						
MAKZ	**Makanchi**	**7.64**	**211**	⇓Lg	Lg	10 16 05.0	
	18nm,1.2s						
BVAR	**Borovoye Array**	**10.42**	**274**	Pn	Pn	10 14 32.7	-0.2
	0.4nm,0.3s,baz=84,slow=13,SNR=4.2						
BVAR				Sn	Sn	10 16 24.2	-6.0
	0.4nm,0.3s,baz=74,slow=26,SNR=3.7						

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*NEIC **01** 10:32:23.0±2.8, 59°.97S×26°.40W, h42km±25km, mb4.9/7, Error ellipse: s-maj=19.7km s-min=11.3km az=45.0*
*IDC **01** 10:32:24.1±0.6, 59°.87S×26°.62W, h48km±6km, mb4.0/8, mb1 4.1/8, mb1mx3.8/33, mbtmp4.2/8, MS3.3/5, Ms1 3.3/5, ms1mx3.1/29, Error ellipse: s-maj=21.3km s-min=16.6km az=67.0*
ISC 01 10:32:23.9±0.5, **60°.0S**±0°.1×**26°.4W**±0°.1, **h48**km, **n39**, σ1**34**/36, **mb4.4**/13, **MS3.2**/3, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.05**	**153**	P	**Pn**	**10 35 23.6**	**-2.6**
VNA3	**Neumayer Olymp**	**13.19**	**156**	P	Pn	10 35 24.8	-3.4
VNA3				S	Sn	10 37 36.4	-17
SNAA	**Sanae**	**15.04**	**151**	P	**Pn**	**10 35 50.1**	**-2.9**
SNAA				S	Sn	10 38 23.6	-15
SNAA	**Sanae**	**15.04**	**151**	P	**Pn**	**10 35 50.3**	**-2.7**
	4.5nm,0.3s,baz=314,slow=14,SNR=116						
SNAA				S	Sn	10 38 24.4	-14
	0.6nm,0.3s,baz=4.1,slow=17,SNR=6.2						
SNAA				LR	LR	10 40 23.0	
	comp=Z,136nm,20.6s,baz=354,slow=32						
SNAA	**Sanae**	**15.04**	**151**	*e*Pn	**Pn**	**10 35 50.1**	**-2.9**
	18nm,0.5s						
SNAA				*e*Sn	Sn	10 38 27.9	-10
PMSA	**Palmer Station**	**17.91**	**238**	LR	LR	10 42 01.0	
	comp=Z,123nm,20.8s,baz=87,slow=32						
QSPA	**South Pole Qui**	**30.28**	**180**	P	**P**	**10 38 31.2**	**+1.0**
	1.8nm,0.5s,baz=195,slow=1.2,SNR=11						
QSPA				pP	**pP**	**10 38 44.4**	**+1.8**
	6.4nm,1.1s,baz=250,slow=2.2,SNR=5.5						
TRQA	**Tornquist**	**31.41**	**298**	*e*P	**P**	**10 38 40.3**	**+0.2**
	24nm,1.3s						
PLCA	**Paso Flores**	**33.28**	**285**	P	**P**	**10 38 55.2**	**-1.3**
	2.8nm,0.6s,baz=167,slow=7.3,SNR=8.8						
PLCA				LR	LR	10 51 01.3	
	comp=Z,65nm,19.8s,baz=144,slow=34						
PLCA	**Paso Flores**	**33.28**	**285**	*e*P	**P**	**10 38 55.6**	**-0.9**
	28nm,1.8s						
MAW	**Mawson**	**36.80**	**140**	*e*P	**P**	**10 39 27.3**	**+0.8**
	1.2nm,1.1s						
SPB	**Sao Paulo**	**39.22**	**329**	*e*P	**P**	**10 39 46.5**	**-0.8**
	98nm,1.9s						
CPUP	**Villa Florida**	**39.78**	**314**	P	**P**	**10 39 51.5**	**-0.3**
	0.9nm,0.3s,baz=141,slow=7.6,SNR=3.5						
CPUP				LR	LR	10 54 39.3	
	comp=Z,38nm,21.3s,baz=153,slow=34						
VNDA	**Vanda**	**42.68**	**183**	P	**P**	**10 40 16.6**	**+1.4**
	0.6nm,0.6s,baz=197,slow=7.8,SNR=8.3						
VNDA				pP	**pP**	**10 40 29.9**	**+1.9**
	0.9nm,0.6s,baz=194,slow=7.2,SNR=3.7						
BOSA	**Boshof**	**46.67**	**71**	P	**P**	**10 40 48.6**	**+1.0**
	2.5nm,0.9s,baz=198,slow=9.9,SNR=3.1						
MNMC	**Minye Minye**	**51.08**	**304**	*e*P	**P**	**10 41 21.3**	**-0.3**
	9.4nm,0.6s						
H10S2	**ASCENSION HYDR**	**51.65**	**15**	T	T	11 37 46.4	
	baz=187,slow=75,SNR=5.2						
H10S3	**ASCENSION HYDR**	**51.66**	**15**	T	T	11 37 46.7	
	baz=187,slow=75,SNR=4.8						
H10S1	**ASCENSION HYDR**	**51.67**	**15**	T	T	11 37 47.1	
	baz=187,slow=75,SNR=5.4						
LPAZ	**La Paz**	**53.03**	**307**	P	**P**	**10 41 36.0**	**-0.6**
	1.7nm,0.5s,baz=116,slow=5.5,SNR=15						
NNA	**Nana**	**60.54**	**300**	*e*P	**P**	**10 42 30.7**	**+1.6**
	17nm,1.0s						
RPN	**Rapa Nui**	**63.45**	**261**	LR	LR	11 03 38.0	
	comp=Z,16nm,21.6s,baz=320,slow=30						
TOA0	**Torodi Ar. Sit**	**76.28**	**28**	*e*P	**P**	**10 44 08.2**	**+0.9**
TORD	**Torodi Ar. Bea**	**76.28**	**28**	P	**P**	**10 44 08.2**	**+1.0**
	2.8nm,0.4s,baz=199,slow=6.3,SNR=32						
TOA1	**Torodi Ar. Sit**	**76.29**	**28**	*e*P	**P**	**10 44 08.2**	**+0.9**
ASAR	**Alice Springs**	**95.13**	**162**	P	**P**	**10 45 41.5**	**-0.3**
	0.9nm,0.6s,baz=178,slow=3.9,SNR=15						
ASAR				pP	**pP**	**10 45 55.6**	**-0.3**
	0.8nm,0.7s,baz=179,slow=3.8,SNR=5.1						
NVAR	**Mina Array Bea**	**123.24**	**290**	PKP	**PKPdf**	**10 51 14.5**	**-0.2**
	0.1nm,0.5s,baz=129,slow=2.6,SNR=2.8						
CMAR	**Chiang Mai Arr**	**123.24**	**112**	PKP	**PKPdf**	**10 51 15.8**	**+0.8**
	1.0nm,0.7s,baz=221,slow=3.6,SNR=4.6						
MK32	**Makanchi Array**	**137.62**	**75**	*e*PKPdf	**PKPdf**	**10 51 40.1**	**-1.3**
MKAR	**Makanchi Array**	**137.62**	**75**	PKP	**PKPdf**	**10 51 40.1**	**-1.3**
	0.5nm,0.9s,baz=260,slow=4.8,SNR=3.6						
YKA	**Yellowknife Ar**	**139.30**	**315**	PKP	**PKPdf**	**10 51 43.1**	**-0.8**
	0.4nm,0.6s,baz=129,slow=2.4,SNR=10						
ZALV	**Zalesovo Beam**	**143.58**	**68**	PKP	PKPab	10 51 49.1	+0.7
	1.1nm,0.4s,baz=240,slow=4.9,SNR=4.2						
ZAA1	**Zalesovo Array**	**143.58**	**68**	*e*PKPpre	PKPab	10 51 49.1	+0.7
INK	**Inuvik**	**149.02**	**316**	PKPbc	**PKPbc**	**10 52 03.5**	**-1.2**
	1.8nm,0.8s,baz=71,slow=3.7,SNR=5.5						
SONA0	**Songino Array**	**150.33**	**93**	*e*PKPbc	**PKPbc**	**10 52 09.1**	**+0.3**
SONM	**Songino Array**	**150.33**	**93**	PKPbc	**PKPbc**	**10 52 09.1**	**+0.3**
	3.8nm,0.8s,baz=215,slow=3.4,SNR=22						
SONM				pPKPbc	**sPKPdf**	**10 52 23.0**	**-0.3**
	1.3nm,0.7s,baz=243,slow=2.3,SNR=5.2						
KSAR	**Wonju Array Be**	**152.12**	**132**	PKPbc	**PKPbc**	**10 52 13.1**	**0.0**
KSRS	**Korea Array**	**152.15**	**132**	PKPbc	**PKPbc**	**10 52 13.1**	**0.0**
	0.3nm,0.3s,baz=131,slow=1.9,SNR=5.1						
ILAR	**Eielson Array**	**152.90**	**306**	PKPbc	**PKPbc**	**10 52 12.7**	**-1.3**
	1.0nm,0.8s,baz=159,slow=2.3,SNR=11						
ILAR				pPKPbc	**pPKPbc**	**10 52 28.1**	**-0.4**
	0.6nm,0.8s,baz=102,slow=1.3,SNR=3.8						

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*IDC **01** 10:36:42.3±1.0, 33°.92N×25°.77E, h0km, mb3.8/10, mb1 3.8/13, mb1mx3.6/59, mbtmp3.7/13, ML4.1/3, MS3.0/2, Ms1 3.0/2, ms1mx2.4/58, Error ellipse: s-maj=26.4km s-min=16.5km az=140.0*
*CSEM **01** 10:36:44.5±0.2, 33°.89N×25°.63E, h10km, ML3.1, Error ellipse: s-maj=6.7km s-min=4.1km az=69.0*
*HLW **01** 10:36:46.5, 33°.93N×25°.76E, h11km±27km, Ml2.8*
*ATH **01** 10:36:49.2, 34°.20N×25°.50E, h34km±2km, ML3.1/11, Error ellipse: s-maj=2.8km s-min=1.1km az=5.0*
*THE **01** 10:36:49.4, 34°.17N×25°.55E, h6km±1km, ML3.2/3, Error ellipse: s-maj=2.7km s-min=0.9km az=162.0*
ISC 01 10:36:44.3±1.4, **33°.92N**±0°.03×**25°.59E**±0°.03, **h16**km±9km, **n83**, σ1**26**/113, **mb3.7**/10, **Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAST	**Lasithi**	**1.24**	**356**	P	**Pb**	**10 37 07.6**	**+0.2**
LAST				S	**Sb**	**10 37 19.8**	**-3.4**
LAST				AML	AML	10 37 29.4	
	comp=N,1142μm,0.7s						
LAST				AML	AML	10 37 42.5	
	comp=E,1075μm,0.9s						
LAST	**Lasithi**	**1.24**	**356**	P	**Pn**	**10 37 07.4**	**+0.3**
LAST	**Lasithi**	**1.24**	**356**	P	**Pb**	**10 37 07.6**	**+0.2**
LAST				S	**Sb**	**10 37 20.3**	**-2.9**
SIVA	**Sivas**	**1.27**	**330**	P	**Pg**	**10 37 08.8**	**+0.2**
SIVA				S	**Sb**	**10 37 22.4**	**-1.5**
SIVA				AML	AML	10 37 31.4	
	comp=E,4192μm,0.5s						
SIVA				AML	AML	10 37 32.2	
	comp=N,3065μm,0.6s						
SIVA	**Sivas**	**1.27**	**330**	P	**Pg**	**10 37 08.9**	**+0.2**
SIVA	**Sivas**	**1.27**	**330**	P	**Pb**	**10 37 08.4**	**+0.6**
SIVA				S	**Sb**	**10 37 22.1**	**-1.8**
ZKR	**Zakros**	**1.30**	**23**	P	**Pg**	**10 37 09.4**	**+0.2**
ZKR				S	**Sn**	**10 37 24.6**	**-0.3**
ZKR				AML	AML	10 37 28.9	
	comp=N,649μm,0.8s						
ZKR				AML	AML	10 37 30.4	
	comp=E,1591μm,0.8s						
ZKR	**Zakros**	**1.30**	**23**	P	**Pg**	**10 37 09.5**	**+0.2**
ZKR				S	**Sn**	**10 37 25.0**	**+0.1**
ZKR	**Zakros**	**1.30**	**23**	P	**Pg**	**10 37 09.5**	**+0.2**
ZKR				S	**Sn**	**10 37 24.5**	**-0.3**
NPS	**Neapolis**	**1.34**	**1**	P	**Pb**	**10 37 09.7**	**+0.6**
NPS				S	**Sn**	**10 37 23.2**	**-2.6**
NPS				AML	AML	10 37 33.8	
	comp=E,939μm,0.8s						
NPS				AML	AML	10 37 34.1	
	comp=N,604μm,0.6s						
NPS	**Neapolis**	**1.34**	**1**	P	**Pb**	**10 37 09.6**	**+0.6**
NPS	**Neapolis**	**1.34**	**1**	P	**Pb**	**10 37 09.4**	**+0.4**
NPS				S	**Sn**	**10 37 23.5**	**-2.3**
IDI	**Anoyia**	**1.48**	**337**	Pn	**Pg**	**10 37 12.5**	**-0.2**
	comp=N,13nm,0.3s,baz=162,slow=16,SNR=44						
GVD	**Gavdhos**	**1.54**	**307**	P	**Pg**	**10 37 13.9**	**0.0**
GVD				S	**Sn**	**10 37 29.3**	**-1.5**
GVD				AML	AML	10 37 42.4	
	comp=N,1048μm,0.6s						
GVD				AML	AML	10 37 42.5	
	comp=E,1431μm,0.5s						
GVD	**Gavdhos**	**1.54**	**307**	P	**Pb**	**10 37 13.3**	**+0.9**
GVD	**Gavdhos**	**1.54**	**307**	P	**Pb**	**10 37 13.3**	**+0.9**
GVD				S	**Sn**	**10 37 30.1**	**-0.7**
VAM	**Vamos**	**1.87**	**323**	P	**Pb**	**10 37 18.3**	**+0.2**
VAM	**Vamos**	**1.87**	**323**	P	**Pb**	**10 37 17.8**	**-0.3**
VAM	**Vamos**	**1.87**	**323**	P	**Pb**	**10 37 17.7**	**-0.3**
IMMV	**Iera Moni Meta**	**2.03**	**320**	P	**Pb**	**10 37 20.4**	**-0.3**
IMMV				S	**Sn**	**10 37 41.6**	**-1.2**
IMMV				AML	AML	10 37 50.2	
	comp=N,540μm,0.6s						
IMMV				AML	AML	10 37 52.8	
	comp=E,574μm,0.5s						
IMMV	**Iera Moni Meta**	**2.03**	**320**	P	**Pb**	**10 37 20.3**	**-0.4**
IMMV	**Iera Moni Meta**	**2.03**	**320**	P	**Pb**	**10 37 20.0**	**-0.7**
IMMV				S	**Sn**	**10 37 41.6**	**-1.2**
KARP	**Karpathos**	**2.08**	**38**	P	**Pb**	**10 37 21.0**	**-0.6**
KARP				S	**Sb**	**10 37 46.4**	**-0.8**
KARP				AML	AML	10 37 48.5	
	comp=N,476μm,0.7s						
KARP				AML	AML	10 37 49.1	
	comp=E,444μm,0.7s						
KARP	**Karpathos**	**2.08**	**38**	P	**Pb**	**10 37 21.1**	**-0.5**
KARP				S	**Sn**	**10 37 45.5**	**+1.4**
KARP	**Karpathos**	**2.08**	**38**	P	**Pb**	**10 37 21.3**	**-0.3**
KARP				S	**Sn**	**10 37 45.8**	**+1.7**
ANAF	**Anafi Island**	**2.43**	**4**	P	**Pn**	**10 37 24.3**	**+0.9**
ANAF				S	**Sn**	**10 37 51.4**	**-1.5**
ANAF				AML	AML	10 37 53.6	
	comp=N,1074μm,0.4s						
ANAF				AML	AML	10 37 55.8	
	comp=E,867μm,0.3s						
ANAF	**Anafi Island**	**2.43**	**4**	P	**Pn**	**10 37 24.3**	**+0.9**
ANAF				S	**Sn**	**10 37 52.8**	**-0.1**
ANAF	**Anafi Island**	**2.43**	**4**	P	**Pn**	**10 37 24.7**	**+1.3**
ANAF				S	**Sn**	**10 37 51.3**	**-1.6**
THR6	**Thira Island,**	**2.43**	**356**	P	**Pn**	**10 37 24.9**	**+1.5**
THR6	**Thira Island,**	**2.43**	**356**	P	**Pn**	**10 37 24.9**	**+1.5**
SLUM	**Salum**	**2.44**	**188**	P	**Pn**	**10 37 23.6**	**+0.1**
	baz=191						
SLUM				S	**Sn**	**10 37 52.0**	**-1.1**
	baz=191						
SLUM	**Salum**	**2.44**	**188**	P	**Pn**	**10 37 23.6**	**+0.1**
SLUM				S	**Sn**	**10 37 52.0**	**-1.1**
SANT	**Santorini**	**2.45**	**358**	P	**Pn**	**10 37 24.5**	**+0.9**
SANT	**Santorini**	**2.45**	**358**	P	**Pn**	**10 37 24.8**	**+1.2**
THR8	**Santorini-Mono**	**2.48**	**358**	P	**Pn**	**10 37 24.5**	**+0.5**
THR8	**Santorini-Mono**	**2.48**	**358**	P	**Pn**	**10 37 25.0**	**+1.0**
SAP2K	**Karterados**	**2.49**	**357**	P	**Pn**	**10 37 25.5**	**+1.4**
THR3	**Thira Island,**	**2.49**	**357**	P	**Pn**	**10 37 24.8**	**+0.6**
THR3	**Thira Island,**	**2.49**	**357**	P	**Pn**	**10 37 25.2**	**+1.1**
THR5	**Thira Island,**	**2.50**	**356**	P	**Pn**	**10 37 24.6**	**+0.3**
THR5	**Thira Island,**	**2.50**	**356**	P	**Pn**	**10 37 25.1**	**+0.8**
THR5	**Thira Island,**	**2.50**	**356**	P	**Pn**	**10 37 25.2**	**+0.9**
SAP3	**Santorini-Thir**	**2.52**	**356**	P	**Pn**	**10 37 25.1**	**+0.5**
THR2	**Thira island,**	**2.52**	**357**	P	**Pn**	**10 37 25.2**	**+0.6**
THR2	**Thira island,**	**2.52**	**357**	P	**Pn**	**10 37 25.6**	**+1.0**
ANKY	**Antikythira Is**	**2.70**	**317**	P	**Pb**	**10 37 30.0**	**-2.2**
ANKY				S	**Sn**	**10 38 00.5**	**+1.1**
ANKY				AML	AML	10 38 05.8	
	comp=E,421μm,0.6s						
ANKY				AML	AML	10 38 06.8	
	comp=N,270μm,0.5s					

comp=N,25nm,18.3s,baz=334,slow=40
YKA Yellowknife Ar 78.73 342 P **P 10 48 46.5 +1.0**
comp=N,0.1nm,0.5s,baz=40,slow=4.3,SNR=2.7
ILAR Eielson Array 81.45 357 P **P 10 49 00.9 +0.6**
comp=N,0.1nm,0.6s,baz=15,slow=3.7,SNR=2.5

*ISN **01** 10:46:20.9±0.3,38.°37N×43.°20E,h0km,ML3.0*
*ISK **01** 10:46:23.2,38.°72N×43.°15E,h5km,ML3.1/4*
*ISCJB **01** 10:46:24.7±0.6,38.°71N±0.°03×43.°18E±0.°04,h1km±6km, Error ellipse: s-maj=5.6km s-min=4.2km az=29.6*
*CSEM **01** 10:46:24.8±0.2,38.°71N×43.°19E,h2km,ML3.1,Error ellipse: s-maj=5.8km s-min=4.8km az=109.0*
*DDA **01** 10:46:24.8,38.°70N×43.°20E,h7km,Ml3.1*
ISC 01 10:46:25.0±1.1,38.°72N±0.°02×43.°18E±0.°02,h7km±10km, n35,σ0°71/46,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.21**	**127**	PG	**Pg**	**10 46 29.4**	**+0.2**
VANB	**Van**	**0.21**	**127**	*e*Pg	**Pg**	**10 46 29.4**	**+0.2**
ADCV	**BITLIS_Adilcev**	**0.36**	**284**	*i* P	**Pg**	**10 46 32.3**	**+0.1**
ADCV				*i* S	**Sb**	**10 46 39.1**	**-0.8**
ADCV	**BITLIS_Adilcev**	**0.36**	**284**	P	**Pg**	**10 46 32.3**	**+0.1**
ADCV				S	**Sb**	**10 46 39.1**	**-0.8**
VMUR	**Van-Muradiye**	**0.41**	**49**	*i* P	**Pg**	**10 46 32.9**	**-0.1**
VMUR				*i* S	**Sb**	**10 46 40.4**	**-0.8**
VMUR	**Van-Muradiye**	**0.41**	**49**	P	**Pg**	**10 46 32.9**	**-0.1**
VMUR				S	**Sb**	**10 46 40.4**	**-0.8**
GEVA	**Gevas**	**0.42**	**193**	*i* P	**Pg**	**10 46 31.9**	**-1.3**
GEVA				*i* S	**Sg**	**10 46 39.1**	**+0.4**
GEVA	**Gevas**	**0.42**	**193**	P	**Pg**	**10 46 31.9**	**-1.3**
GEVA				S	**Sg**	**10 46 39.1**	**+0.4**
AGRB	**Hanur-Agry**	**0.86**	**351**	PG	**Pg**	**10 46 40.9**	**-0.8**
AGRB				SG	**Sb**	**10 46 53.9**	**-0.5**
AGRB	**Hanur-Agry**	**0.86**	**351**	*e*Pg	**Pg**	**10 46 40.9**	**-0.8**
AGRB				*e*Sg	**Sb**	**10 46 53.9**	**-0.5**
GURO	**Guroymak-BITLI**	**0.91**	**260**	PG	**Pg**	**10 46 41.3**	**-1.2**
GURO				SG	**Sg**	**10 46 54.4**	**+0.1**
GURO	**Guroymak-BITLI**	**0.91**	**260**	*e*Pg	**Pg**	**10 46 41.3**	**-1.2**
GURO				*e*Sg	**Sg**	**10 46 54.4**	**+0.1**
SRTM	**Siirt_Merkez**	**1.23**	**234**	*i* P	**Pn**	**10 46 49.0**	**+0.4**
SRTM	**Siirt_Merkez**	**1.23**	**234**	P	**Pn**	**10 46 49.0**	**+0.4**
HAKT	**HAKKARI**	**1.23**	**160**	*i* P	**Pg**	**10 46 47.6**	**-1.1**
HAKT	**HAKKARI**	**1.23**	**160**	P	**Pg**	**10 46 47.6**	**-1.1**
EATA	**Eleskirt**	**1.26**	**335**	*i* P	**Pg**	**10 46 48.1**	**-1.0**
EATA	**Eleskirt**	**1.26**	**335**	P	**Pg**	**10 46 48.1**	**-1.0**
IGDI	**IGDIR**	**1.34**	**31**	*i* P	**Pn**	**10 46 49.7**	**-0.5**
SIRT	**Sirnak**	**1.35**	**206**	PN	**Pn**	**10 46 50.1**	**-0.3**
SIRT				SN	**Sn**	**10 47 09.7**	**+1.1**
SIRT	**Sirnak**	**1.35**	**206**	*e*Pn	**Pn**	**10 46 50.1**	**-0.3**
SIRT				*e*Sn	**Sn**	**10 47 09.7**	**+1.1**
SIRN	**S¨–rnak**	**1.36**	**206**	*i* P	Pn	10 46 42.5	-8.0
SVAN	**Silvan-Diyarba**	**1.65**	**250**	PN	**Pn**	**10 46 54.6**	**+0.1**
SVAN	**Silvan-Diyarba**	**1.65**	**250**	*i* P	**Sg**	**10 47 18.8**	**+0.7**
SVAN	**Silvan-Diyarba**	**1.65**	**250**	*e*Pn	**Pn**	**10 46 54.6**	**+0.1**
BTMN	**Batman**	**1.71**	**242**	*i* P	**Pg**	**10 46 58.2**	**+0.3**
BTMN	**Batman**	**1.71**	**242**	P	**Pg**	**10 46 58.2**	**+0.3**
ERZM	**Erzurum**	**1.84**	**311**	*i* P	**Pb**	**10 46 59.2**	**+0.1**
ERZM	**Erzurum**	**1.84**	**311**	P	**Pb**	**10 46 59.2**	**+0.1**
GNI	**Garni**	**1.87**	**40**	PN	**Pn**	**10 46 58.1**	**+0.5**
GNI	**Garni**	**1.87**	**40**	*e*Pn	**Pn**	**10 46 58.1**	**+0.5**
SENK	**Senkaya-Erzuru**	**1.94**	**341**	PN	**Pn**	**10 46 59.4**	**+0.7**
SENK	**Senkaya-Erzuru**	**1.94**	**341**	*e*Pn	**Pn**	**10 46 59.4**	**+0.7**
MAZI	**Mazidag**	**2.49**	**241**	PN	**Pn**	**10 47 06.6**	**+0.5**
MAZI	**Mazidag**	**2.49**	**241**	*e*Pn	**Pn**	**10 47 06.6**	**+0.5**

*MDD **01** 10:47:30.3±1.9,37.°29N×12.°64W,h0km,mb4.1/10,Error ellipse: s-maj=17.1km s-min=12.5km az=57.0,PRXIMO*
*IGIL **01** 10:47:30.7,37.°24N×12.°71W,h4km,ML2.6*
*INMG **01** 10:47:31.3±1.1,37.°12N×13.°06W,h10km,ML2.7,Error ellipse: s-maj=6.0km s-min=5.2km az=83.0*
*CSEM **01** 10:47:32.3±0.3,37.°38N×12.°46W,h10km,mb4.1,Error ellipse: s-maj=5.8km s-min=4.8km az=47.0*
ISC 01 10:47:30.2±3.3,37.°34N±0.°09×12.°6W±0.°2,h10km,n80, σ1°06/147,2C,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.01**	**93**	*e*Pn	**Pn**	**10 48 17.3**	**-0.6**
PFVI				*e*Sn	**Sn**	**10 48 53.3**	**-0.7**
PFVI				A	A	10 49 02.8	
	10nm,0.6s						
PFVI	**Vila Bisbo**	**3.01**	**93**	P	**Pn**	**10 48 17.4**	**-0.5**
	2.9nm,0.1s,SNR=7.9						
PFVI				S	**Sn**	**10 48 53.9**	**-0.1**
	2.3nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**3.01**	**93**	P	**Pn**	**10 48 17.4**	**-0.5**
	2.9nm,0.1s,SNR=7.9						
PFVI				*e*Sn	**Sn**	**10 48 53.3**	**-0.7**
PFVI				S	**Sn**	**10 48 53.9**	**-0.1**
	2.3nm,0.1s,SNR=7.9						
PMST	**Lisbon--Monsan**	**3.02**	**62**	*e*Pn	**Pn**	**10 48 19.2**	**+1.0**
PMST				*e*Sn	**Sn**	**10 48 55.6**	**+1.1**
PMST				A	A	10 49 00.8	
	44nm,0.4s						
PMST	**Lisbon--Monsan**	**3.02**	**62**	*e*Pn	**Pn**	**10 48 19.2**	**+1.0**
PMST				*e*Sn	**Sn**	**10 48 55.6**	**+1.1**
PMAFR	**Mafra**	**3.06**	**57**	*e*Pn	**Pn**	**10 48 19.4**	**+0.7**
PMAFR				*e*Sn	**Sn**	**10 48 56.7**	**+1.3**
PMAFR				A	A	10 48 59.1	
	23nm,0.4s						
PMAFR	**Mafra**	**3.06**	**57**	P	**Pn**	**10 48 19.4**	**+0.7**
	6.5nm,0.1s,SNR=6.9						
PMAFR				S	**Sn**	**10 48 57.4**	**+2.0**
	23nm,0.2s,SNR=7.0						
PMAFR	**Mafra**	**3.06**	**57**	P	**Pn**	**10 48 19.4**	**+0.7**
	6.5nm,0.1s,SNR=6.9						
PMAFR				*e*Sn	**Sn**	**10 48 56.7**	**+1.3**
PMAFR				S	**Sn**	**10 48 57.4**	**+2.0**
	23nm,0.2s,SNR=7.0						
PTEO	**Sao Teotonio**	**3.08**	**85**	*e*Pn	**Pn**	**10 48 19.4**	**+0.5**
PTEO				*e*Sn	**Sn**	**10 48 55.2**	**-0.6**
PTEO				A	A	10 49 02.7	
	8.5nm,0.6s						
PTEO	**Sao Teotonio**	**3.08**	**85**	P	**Pn**	**10 48 19.4**	**+0.5**
PTEO				S	**Sn**	**10 48 55.2**	**-0.6**
	4.2nm,0.6s						
PTEO	**Sao Teotonio**	**3.08**	**85**	P	**Pn**	**10 48 19.4**	**+0.5**
PTEO				S	**Sn**	**10 48 55.2**	**-0.6**
	4.2nm,0.6s						
MORF	**Marmelete**	**3.14**	**89**	*e*Pn	**Pn**	**10 48 21.7**	**+1.9**
MORF	**Marmelete**	**3.14**	**89**	P	**Pn**	**10 48 21.7**	**+1.9**
MORF	**Marmelete**	**3.14**	**89**	P	**Pn**	**10 48 21.7**	**+1.9**
PNCL	**Nicolau / Gran**	**3.31**	**75**	*e*Pn	**Pn**	**10 48 22.2**	**+0.2**
PNCL				*e*Sn	**Sn**	**10 49 01.4**	**0.0**
PNCL				A	A	10 49 08.0	
	6.6nm,0.2s						
PNCL	**Nicolau / Gran**	**3.31**	**75**	*e*Pn	**Pn**	**10 48 22.2**	**+0.2**
PNCL				*e*Sn	**Sn**	**10 49 01.4**	**0.0**
MESJ	**Messejana**	**3.50**	**81**	*e*P	**Pn**	**10 48 25.9**	**+1.1**
MESJ				*e*S	**Sn**	**10 49 05.7**	**-0.5**
MESJ				AML	AML	10 49 09.2	
	comp=N,9.6nm,0.5s						
MESJ	**Messejana**	**3.50**	**81⇑**	*e*Pn	**Pn**	**10 48 26.1**	**+1.4**
MESJ				*e*Sn	**Sn**	**10 49 05.8**	**-0.5**
MESJ				A	A	10 49 12.8	
	comp=N,4.8nm,0.2s						
MESJ	**Messejana**	**3.50**	**81**	P	**Pn**	**10 48 25.9**	**+1.1**
MESJ				S	**Sn**	**10 49 05.7**	**-0.5**
	comp=N,9.6nm,0.5s						
MESJ	**Messejana**	**3.50**	**81**	P	**Pn**	**10 48 25.9**	**+1.1**
MESJ				*e*Sn	**Sn**	**10 49 05.8**	**-0.5**
PCVE	**Castro Verde**	**3.63**	**84**	*e*Pn	**Pn**	**10 48 27.5**	**+1.0**
PCVE				*e*Sn	**Sn**	**10 49 08.5**	**-0.8**
PCVE				A	A	10 49 14.4	
	comp=N,3.7nm,0.2s						
PCVE	**Castro Verde**	**3.63**	**84**	P	**Pn**	**10 48 27.5**	**+1.0**
PCVE				S	**Sn**	**10 49 08.5**	**-0.8**
	comp=N,3.7nm,0.2s						
PCVE	**Castro Verde**	**3.63**	**84**	P	**Pn**	**10 48 27.5**	**+1.0**
PCVE				S	**Sn**	**10 49 08.5**	**-0.8**
	comp=N,3.7nm,0.2s						
ALMR	**Almeirim**	**3.64**	**59**	*e*P	**Pn**	**10 48 27.8**	**+1.2**
ALMR				*e*S	**Sn**	**10 49 09.8**	**+0.2**
ALMR				AML	AML	10 49 14.3	
	comp=N,30nm,0.5s						
ALMR	**Almeirim**	**3.64**	**59⇑**	*e*Pn	**Pn**	**10 48 27.8**	**+1.2**
ALMR				*e*Sn	**Sn**	**10 49 10.2**	**+0.6**
ALMR				A	A	10 49 17.9	
	comp=N,19nm,0.7s						
ALMR	**Almeirim**	**3.64**	**59**	P	**Pn**	**10 48 27.8**	**+1.2**
ALMR				S	**Sn**	**10 49 09.8**	**+0.2**
	comp=N,15nm,0.5s						
ALMR	**Almeirim**	**3.64**	**59**	P	**Pn**	**10 48 27.8**	**+1.2**
ALMR				S	**Sn**	**10 49 09.8**	**+0.2**
	comp=N,15nm,0.5s						
ALMR				*e*Sn	**Sn**	**10 49 10.2**	**+0.6**
PBDV	**Barranco-do-Ve**	**3.71**	**90**	*e*Pn	**Pn**	**10 48 28.5**	**+0.8**
PBDV				*e*Sn	**Sn**	**10 49 12.6**	**+1.1**
PBDV				A	A	10 49 25.6	
	comp=N,6.9nm,0.7s						
PBDV	**Barranco-do-Ve**	**3.71**	**90**	P	**Pn**	**10 48 28.5**	**+0.8**
PBDV				S	**Sn**	**10 49 12.6**	**+1.1**
	comp=N,6.9nm,0.7s						
PBDV	**Barranco-do-Ve**	**3.71**	**90**	P	**Pn**	**10 48 28.5**	**+0.8**
PBDV				S	**Sn**	**10 49 12.6**	**+1.1**
	comp=N,6.9nm,0.7s						
EVO	**Evora**	**3.81**	**70**	*e*Pn	**Pn**	**10 48 30.3**	**+1.4**
EVO				*e*Sn	**Sn**	**10 49 13.1**	**-0.6**
EVO				A	A	10 49 19.7	
	comp=N,11nm,0.1s						
EVO	**Evora**	**3.81**	**70**	P	**Pn**	**10 48 30.3**	**+1.4**
EVO				S	**Sn**	**10 49 13.1**	**-0.6**
	comp=N,11nm,0.1s						
EVO	**Evora**	**3.81**	**70**	P	**Pn**	**10 48 30.3**	**+1.4**
EVO				S	**Sn**	**10 49 13.1**	**-0.6**
	comp=N,11nm,0.1s						
PBEJ	**Beja**	**3.81**	**78**	*e*Pn	**Pn**	**10 48 30.0**	**+1.1**
PBEJ				*e*Sn	**Sn**	**10 49 12.8**	**-0.9**
PBEJ				A	A	10 49 18.6	
	comp=N,12nm,0.2s						
PBEJ	**Beja**	**3.81**	**78**	P	**Pn**	**10 48 30.0**	**+1.1**
PBEJ				S	**Sn**	**10 49 12.8**	**-0.9**
	comp=N,6.0nm,0.2s						
PBEJ	**Beja**	**3.81**	**78**	P	**Pn**	**10 48 30.0**	**+1.1**
PBEJ				S	**Sn**	**10 49 12.8**	**-0.9**
	comp=N,6.0nm,0.2s						
PMTG	**Montargil**	**3.84**	**62**	*e*Pn	**Pn**	**10 48 29.6**	**+0.2**
PMTG				*e*Sn	**Sn**	**10 49 14.6**	**0.0**
PMTG				A	A	10 49 19.0	
	comp=N,3.7nm,0.2s						
PMTG	**Montargil**	**3.84**	**62**	*e*Pn	**Pn**	**10 48 29.6**	**+0.2**
PMTG				*e*Sn	**Sn**	**10 49 14.6**	**0.0**
PVAQ	**Vaqueiros**	**3.88**	**88**	*e*Pn	**Pn**	**10 48 30.7**	**+0.8**
PVAQ				*e*Sn	**Sn**	**10 49 14.6**	**-0.9**
PVAQ				A	A	10 49 22.3	
	comp=N,7.0nm,0.3s						
PVAQ	**Vaqueiros**	**3.88**	**88**	P	**Pn**	**10 48 30.7**	**+0.8**
PVAQ				S	**Sn**	**10 49 14.6**	**-0.9**
	comp=N,7.0nm,0.3s						
PVAQ	**Vaqueiros**	**3.88**	**88**	P	**Pn**	**10 48 30.7**	**+0.8**
PVAQ				S	**Sn**	**10 49 14.6**	**-0.9**
	comp=N,7.0nm,0.3s						
EGRO	**El Granado**	**4.07**	**86**	P	**Pn**	**10 48 32.9**	**+0.4**
	comp=N,3.2nm,0.2s,SNR=7.9						
EGRO				S	**Sn**	**10 49 20.1**	**0.0**
	comp=N,2.2nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**4.07**	**86**	P	**Pn**	**10 48 32.9**	**+0.4**
	comp=N,3.2nm,0.2s,SNR=7.9						
EGRO				S	**Sn**	**10 49 20.1**	**0.0**
	comp=N,2.2nm,0.1s,SNR=7.9						
PCAS	**Casmilo, Conde**	**4.19**	**49**	*e*Pn	**Pn**	**10 48 35.2**	**+1.0**
PCAS				*e*Sn	**Sn**	**10 49 23.0**	**-0.2**
PCAS				A	A	10 49 38.0	
	comp=N,11nm,0.3s						
PCAS	**Casmilo, Conde**	**4.19**	**49**	*e*Pn	**Pn**	**10 48 35.2**	**+1.0**
PCAS				*e*Sn	**Sn**	**10 49 23.0**	**-0.2**
PESTR	**Estremoz**	**4.22**	**67**	*e*Pn	**Pn**	**10 48 35.3**	**+0.6**
PESTR				*e*Sn	**Sn**	**10 49 24.0**	**-0.1**
PESTR				A	A	10 49 29.2	
	comp=N,4.7nm,0.4s						
PESTR	**Estremoz**	**4.22**	**67**	*e*Pn	**Pn**	**10 48 35.3**	**+0.6**
PESTR				*e*Sn	**Sn**	**10 49 24.0**	**-0.1**
PBAR	**Barrancos**	**4.47**	**78**	*e*Pn	**Pn**	**10 48 39.0**	**+0.9**
PBAR				*e*Sn	**Sn**	**10 49 29.9**	**-0.3**
PBAR				A	A	10 49 36.2	
	comp=N,8.1nm,0.4s						
PBAR	**Barrancos**	**4.47**	**78**	*e*Pn	**Pn**	**10 48 39.0**	**+0.9**
PBAR				*e*Sn	**Sn**	**10 49 29.9**	**-0.3**
PMRV	**Marv??o**	**4.58**	**61**	*e*Pn	**Pn**	**10 48 40.3**	**+0.7**
PMRV				*e*Sn	**Sn**	**10 49 32.7**	**-0.2**
PMRV				A	A	10 49 37.9	
	comp=N,6.8nm,0.3s						
PMRV	**Marv??o**	**4.58**	**61**	*e*Pn	**Pn**	**10 48 40.3**	**+0.7**
PMRV				*e*Sn	**Sn**	**10 49 32.7**	**-0.2**
EBAD	**Badajoz**	**4.62**	**71**	P	**Pn**	**10 48 41.1**	**+1.0**
	comp=N,2.1nm,0.1s,SNR=6.9						
EBAD				S	**Sn**	**10 49 33.0**	**-0.8**
	comp=N,1.9nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**4.62**	**71**	P	**Pn**	**10 48 41.1**	**+1.0**
	comp=N,2.1nm,0.1s,SNR=6.9						
EBAD				S	**Sn**	**10 49 33.0**	**-0.8**
	comp=N,1.9nm,0.1s,SNR=7.9						
PCBR	**Castelo Branco**	**4.71**	**57**	*e*Pn	**Pn**	**10 48 42.5**	**+1.1**
PCBR	**Castelo Branco**	**4.71**	**57**	P	**Pn**	**10 48 42.5**	**+1.1**
PCBR	**Castelo Branco**	**4.71**	**57**	P	**Pn**	**10 48 42.5**	**+1.1**
EMIN	**Mina Concepcio**	**4.72**	**83**	P	**Pn**	**10 48 41.4**	**0.0**
	comp=N,1.5nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**10 49 34.5**	**-1.7**
	comp=N,1.3nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.72**	**83**	P	**Pn**	**10 48 41.4**	**0.0**
	comp=N,1.5nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**10 49 34.5**	**-1.7**
	comp=N,1.3nm,0.1s,SNR=7.9						
PMPS	**Porto Santo**	**5.26**	**217**	*e*Sn	Sn	10 49 26.1	-24
POLO	**Lamas de Olo**	**5.48**	**41**	*e*Pn	**Pn**	**10 48 52.9**	**+0.9**
POLO				*e*Sn	**Sn**	**10 49 53.1**	**-1.9**
POLO	**Lamas de Olo**	**5.48**	**41**	*e*Pn	**Pn**	**10 48 52.9**	**+0.9**
POLO				*e*Sn	**Sn**	**10 49 53.1**	**-1.9**
PGAV	**Gavieira, Arco**	**5.69**	**34**	*e*Pn	**Pn**	**10 48 56.1**	**+1.2**
PGAV	**Gavieira, Arco**	**5.69**	**34**	*e*Pn	**Pn**	**10 48 56.1**	**+1.2**
ELOB	**Lobios**	**5.71**	**36**	P	**Pn**	**10 48 56.4**	**+1.2**
	comp=N,0.5nm,0.2s,SNR=7.9						
ELOB				S	**Sn**	**10 49 59.2**	**-1.7**
	comp=N,2.3nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.71**	**36**	P	**Pn**	**10 48 56.4**	**+1.2**
	comp=N,0.5nm,0.2s,SNR=7.9						
ELOB				S	**Sn**	**10 49 59.2**	**-1.7**
	comp=N,2.3nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**5.73**	**80**	P	**Pn**	**10 48 55.8**	**+0.4**
	comp=N,1.5nm,0.1s,SNR=13						
ECAB				S	**Sn**	**10 49 59.2**	**-2.0**
	comp=N,2.2nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**5.73**	**80**	P	**Pn**	**10 48 55.8**	**+0.4**
	comp=N,1.5nm,0.1s,SNR=13						
ECAB				S	**Sn**	**10 49 59.2**	**-2.0**
	comp=N,2.2nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**5.76**	**47**	*e*Pn	**Pn**	**10 48 56.3**	**+0.5**
MVO	**Moncorvo**	**5.76**	**47**	P	**Pn**	**10 48 56.2**	**+0.5**
	comp=N,2.2nm,0.3s,SNR=7.9						
MVO				S	**Sn**	**10 49 59.0**	**-3.0**
	comp=N,5.1nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**5.76**	**47**	*e*Pn	**Pn**	**10 48 56.3**	**+0.5**
MVO				S	**Sn**	**10 49 59.0**	**-3.0**
	comp=N,5.1nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**6.44**	**43**	P	**Pn**	**10 49 05.7**	**+0.5**
	comp=N,2.7nm,0.3s,SNR=7.9						
ECAL				S	**Sn**	**10 50 17.9**	**-0.8**
	comp=N,3.0nm,0.3s,SNR=7.9						
ECAL	**Calabor**	**6.44**	**43**	P	**Pn**	**10 49 05.7**	**+0.5**
	comp=N,2.7nm,0.3s,SNR=7.9						
ECAL				S	**Sn**	**10 50 17.9**	**-0.8**
	comp=N,3.0nm,0.3s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.45**	**31**	P	**Pn**	**10 49 06.4**	**+1.1**
	comp=N,0.6nm,0.1s,SNR=7.9						
EAGO				S	**Sn**	**10 50 15.5**	**-3.5**
	comp=N,2.5nm,0.3s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.45**	**31**	P	**Pn**	**10 49 06.4**	**+1.1**
	comp=N,0.6nm,0.1s,SNR=7.9						
PAB	**San Pablo**	**6.83**	**69**	P	**Pn**	**10 49 11.2**	**+0.6**
	comp=N,1.0nm,0.2s,SNR=7.9						
PAB	**San Pablo**	**6.83**	**69**	P	**Pn**	**10 49 11.2**	**+0.6**
	comp=N,1.0nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	**7.15**	**68**	P	**Pn**	**10 49 15.0**	**+0.1**
	comp=N,1.5nm,0.3s,baz=254,slow=13,SNR=16						
ESDC	**Sonseca Array**	**7.15**	**68**	P	**Pn**	**10 49 15.0**	**+0.1**
	comp=N,1.5nm,0.3s,baz=254,slow=13,SNR=16						
GUD	**Guadarrama**	**7.35**	**61**	P	**Pn**	**10 49 18.5**	**+0.8**
	comp=N,1.4nm,0.2s,SNR=7.9						
GUD				S	**Sn**	**10 50 39.9**	**-1.3**
	comp=N,2.6nm,0.4s,SNR=7.9						
GUD	**Guadarrama**	**7.35**	**61**	P	**Pn**	**10 49 18.5**	**+0.8**
	comp=N,1.4nm,0.2s,SNR=7.9						
GUD				S	**Sn**	**10 50 39.9**	**-1.3**
	comp=N,2.6nm,0.4s,SNR=7.9						

MEX 01 10:49:47.3±0.3,19.°55N×103.°65W,h52km±5km,MD3.7, Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZ5V		**0.08**	**146**	*e*P	Pn	10 49 54.3	-1.4
EZ5V				*e*S	Sn	10 49 59.8	-1.8
MMIG	**Aquila**	**1.29**	**167**	*e*P	Pn	10 50 07.4	-1.6
MMIG				*e*S	Sn	10 50 22.4	-2.7
CJM	**Chamela**	**1.31**	**268**	*e*P	Pn	10 50 07.8	-1.5
CJM				*i* S	Sn	10 50 23.0	-2.8

*SFS **01** 11:00:28.0,37.°25N×12.°70W,h0km,ML4.1*
*MDD **01** 11:00:29.4±1.8,37.°31N×12.°68W,h0km,mb4.2/12,Error ellipse: s-maj=16.0km s-min=13.8km az=61.0,PRXIMO*
*IGIL **01** 11:00:29.9,37.°28N×12.°72W,h0km,ML2.6*
*INMG **01** 11:00:30.3±1.4,37.°11N×13.°10W,h10km,ML2.6,Error ellipse: s-maj=7.7km s-min=5.8km az=95.0*
*CSEM **01** 11:00:31.8±0.4,37.°42N×12.°47W,h10km,mb4.2,Error ellipse: s-maj=7.3km s-min=6.3km az=62.0*
ISC 01 11:00:29.0±3.3,37.°37N±0.°09×12.°6W±0.°2,h10km,n87, σ1°37/161,1C,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.05**	**93**	*e*Pn	**Pn**	**11 01 16.9**	**-0.4**
PFVI				*e*Sn	**Sn**	**11 01 53.3**	**-0.6**
PFVI				A	A	11 02 06.7	
	10nm,0.6s						
PFVI	**Vila Bisbo**	**3.05**	**93**	P	**Pn**	**11 01 17.3**	**0.0**
	3.2nm,0.2s,SNR=7.9						
PFVI				S	**Sn**	**11 01 53.3**	**-0.6**
	15nm,0.2s,SNR=7.9						
PFVI	**Vila Bisbo**	**3.05**	**93**	*e*Pn	**Pn**	**11 01 16.9**	**-0.4**
PFVI	**Vila Bisbo**	**3.05**	**93**	P	**Pn**	**11 01 17.3**	**0.0**
	3.2nm,0.2s,SNR=7.9						
PFVI				S	**Sn**	**11 01 53.3**	**-0.6**
	15nm,0.2s,SNR=7.9						
PMAFR	**Mafra**	**3.08**	**58**	*e*Pn	**Pn**	**11 01 18.8**	**+1.0**
PMAFR				*e*Sn	**Sn**	**11 01 56.2**	**+1.5**
PMAFR				A	A	11 01 57.3	
	29nm,0.2s						
PMAFR	**Mafra**	**3.08**	**58**	P	**Pn**	**11 01 18.8**	**+1.0**
	7.7nm,0.1s,SNR=9.1						
PMAFR				S	**Sn**	**11 01 56.3**	**+1.6**
	29nm,0.2s,SNR=8.1						
PMAFR	**Mafra**	**3.08**	**58**	P	**Pn**	**11 01 18.8**	**+1.0**
	7.7nm,0.1s,SNR=9.1						
PMAFR				*e*Sn	**Sn**	**11 01 56.2**	**+1.5**
PTEO	**Sao Teotonio**	**3.12**	**86**	*e*Pn	**Pn**	**11 01 18.7**	**+0.4**
PTEO				*e*Sn	**Sn**	**11 01 54.9**	**-0.7**
PTEO				A	A	11 02 03.5	
	10nm,0.4s						
PTEO	**Sao Teotonio**	**3.12**	**86**	P	**Pn**	**11 01 18.7**	**+0.4**
PTEO				S	**Sn**	**11 01 54.9**	**-0.7**
	5.2nm,0.4s						
PTEO	**Sao Teotonio**	**3.12**	**86**	P	**Pn**	**11 01 18.7**	**+0.4**
PTEO				S	**Sn**	**11 01 54.9**	**-0.7**
	5.2nm,0.4s						
MORF	**Marmelete**	**3.18**	**90**	*e*Pn	**Pn**	**11 01 21.3**	**+2.2**
MORF	**Marmelete**	**3.18**	**90**	P	**Pn**	**11 01 21.3**	**+2.2**
MORF	**Marmelete**	**3.18**	**90**	P	**Pn**	**11 01 21.3**	**+2.2**
PNCL	**Nicolau / Gran**	**3.34**	**76**	*e*Pn	**Pn**	**11 01 22.6**	**+1.3**
PNCL				*e*Sn	**Sn**	**11 02 01.0**	**-0.1**
PNCL				A	A	11 02 07.9	
	7.8nm,0.3s						
PNCL	**Nicolau / Gran**	**3.34**	**76**	*e*Pn	**Pn**	**11 01 22.6**	**+1.3**
PNCL				*e*Sn	**Sn**	**11 02 01.0**	**-0.1**
MESJ	**Messejana**	**3.54**	**81**	*e*P	**Pn**	**11 01 25.6**	**+1.5**
MESJ				*e*S	**Sn**	**11 02 05.4**	**-0.5**
MESJ				AML	AML	11 02 07.2	
	comp=N,10nm,0.3s						
MESJ	**Messejana**	**3.54**	**81⇑**	*e*Pn	**Pn**	**11 01 25.7**	**+1.7**
MESJ				*e*Sn	**Sn**	**11 02 05.5**	**-0.5**
MESJ				A	A	11 02 12.4	
	comp=N,5.2nm,0.2s						
MESJ	**Messejana**	**3.54**	**81**	P	**Pn**

PESTR				*e*Sn	Sn	11 02 23.6	0.0
PBAR	**Barrancos**	**4.51**	**78**	*e*Pn	Pn	11 01 38.8	+1.4
PBAR				*e*Sn	Sn	11 02 30.1	+0.2
PBAR				A	A	11 02 36.9	
comp=N,8.8nm,0.2s							
PBAR	**Barrancos**	**4.51**	**78**	*e*Pn	Pn	11 01 38.8	+1.4
PBAR				*e*Sn	Sn	11 02 30.1	+0.2
PMRV	**Marv??o**	**4.61**	**62**	*e*Pn	Pn	11 01 39.9	+1.2
PMRV				*e*Sn	Sn	11 02 32.0	-0.3
PMRV				A	A	11 02 38.9	
comp=N,8.5nm,0.5s							
PMRV	**Marv??o**	**4.61**	**62**	*e*Pn	Pn	11 01 39.9	+1.2
PMRV				*e*Sn	Sn	11 02 32.0	-0.3
EBAD	**Badajoz**	**4.65**	**71**	P	Pn	11 01 40.0	+0.7
comp=N,3.0nm,0.1s,SNR=11							
EBAD				S	Sn	11 02 31.8	-1.5
comp=N,6.1nm,0.2s,SNR=7.9							
EBAD	**Badajoz**	**4.65**	**71**	P	Pn	11 01 40.0	+0.7
comp=N,3.0nm,0.1s,SNR=11							
EBAD				S	Sn	11 02 31.8	-1.5
comp=N,6.1nm,0.2s,SNR=7.9							
PCBR	**Castelo Branco**	**4.74**	**57**	*e*Pn	Pn	11 01 42.5	+2.0
PCBR				*e*Sn	Sn	11 02 36.5	+1.1
PCBR				A	A	11 02 41.6	
comp=N,3.8nm,0.5s							
PCBR	**Castelo Branco**	**4.74**	**57**	P	Pn	11 01 42.5	+2.0
PCBR				S	Sn	11 02 36.5	+1.1
comp=N,1.9nm,0.5s							
PCBR	**Castelo Branco**	**4.74**	**57**	P	Pn	11 01 42.5	+2.0
PCBR				S	Sn	11 02 36.5	+1.1
comp=N,1.9nm,0.5s							
EMIN	**Mina Concepcio**	**4.76**	**83**	P	Pn	11 01 41.1	+0.3
comp=N,1.5nm,0.1s,SNR=7.0							
EMIN				S	Sn	11 02 34.8	-1.2
comp=N,1.7nm,0.2s,SNR=7.9							
EMIN	**Mina Concepcio**	**4.76**	**83**	P	Pn	11 01 41.1	+0.3
comp=N,1.5nm,0.1s,SNR=7.0							
EMIN				S	Sn	11 02 34.8	-1.2
comp=N,1.7nm,0.2s,SNR=7.9							
PVIS	**Viseu**	**4.98**	**46**	*e*Pn	Pn	11 01 45.2	+1.3
PVIS				*e*Sn	Sn	11 02 40.6	-0.9
PVIS				A	A	11 02 53.4	
comp=N,4.8nm,0.1s							
PVIS	**Viseu**	**4.98**	**46**	P	Pn	11 01 45.2	+1.3
PVIS				S	Sn	11 02 40.6	-0.9
comp=N,2.4nm,0.1s							
PVIS	**Viseu**	**4.98**	**46**	P	Pn	11 01 45.2	+1.3
PVIS				S	Sn	11 02 40.6	-0.9
comp=N,2.4nm,0.1s							
MTE	**Manteigas**	**5.00**	**51**	*e*Sn	Sn	11 02 42.5	+0.6
MTE	**Manteigas**	**5.00**	**51**	Sn	Sn	11 02 42.5	+0.6
MTE	**Manteigas**	**5.00**	**51**	Sn	Sn	11 02 42.5	+0.6
POLO	**Lamas de Olo**	**5.48**	**42**	*e*Pn	Pn	11 01 51.1	+0.3
POLO				*e*Sn	Sn	11 02 52.8	-1.2
POLO				A	A	11 03 04.8	
comp=N,1.3nm,0.7s							
POLO	**Lamas de Olo**	**5.48**	**42**	*e*Pn	Pn	11 01 51.1	+0.3
POLO				*e*Sn	Sn	11 02 52.8	-1.2
PCAB	**Cabril**	**5.61**	**38**	*e*Sn	Sn	11 02 51.7	-5.3
PGAV	**Gavieira, Arco**	**5.69**	**35**	*e*Pn	Pn	11 01 56.2	+2.5
PGAV				*e*Sn	Sn	11 02 57.5	-1.6
PGAV				A	A	11 03 01.1	
comp=N,4.0nm,0.4s							
PGAV	**Gavieira, Arco**	**5.69**	**35**	*e*Pn	Pn	11 01 56.2	+2.5
PGAV				*e*Sn	Sn	11 02 57.5	-1.6
ELOB	**Lobios**	**5.71**	**37**	P	Pn	11 01 55.4	+1.5
comp=N,0.3nm,0.3s,SNR=7.9							
ELOB				S	Sn	11 02 57.7	-1.9
comp=N,2.8nm,0.2s,SNR=7.9							
ELOB	**Lobios**	**5.71**	**37**	P	Pn	11 01 55.4	+1.5
comp=N,0.3nm,0.3s,SNR=7.9							
ELOB				S	Sn	11 02 57.7	-1.9
comp=N,2.8nm,0.2s,SNR=7.9							
ECAB	**El Cabril**	**5.77**	**81**	P	Pn	11 01 54.8	+0.1
comp=N,1.3nm,0.1s,SNR=12							
ECAB				S	Sn	11 02 58.4	-2.6
comp=N,1.8nm,0.2s,SNR=7.9							
ECAB	**El Cabril**	**5.77**	**81**	P	Pn	11 01 54.8	+0.1
comp=N,1.3nm,0.1s,SNR=12							
ECAB				S	Sn	11 02 58.4	-2.6
comp=N,1.8nm,0.2s,SNR=7.9							
MVO	**Moncorvo**	**5.77**	**47**	*e*Pn	Pn	11 01 55.7	+1.0
MVO				*e*Sn	Sn	11 02 59.7	-1.3
MVO				A	A	11 03 08.2	
comp=N,4.5nm,0.6s							
MVO	**Moncorvo**	**5.77**	**47**	P	Pn	11 01 55.6	+0.8
comp=N,2.0nm,0.2s,SNR=6.1							
MVO				S	Sn	11 02 59.6	-1.3
comp=N,2.4nm,0.1s,SNR=7.9							
MVO	**Moncorvo**	**5.77**	**47**	*e*Pn	Pn	11 01 55.7	+1.0
MVO				*e*Sn	Sn	11 02 59.7	-1.3
EPLA	**Plasencia**	**5.79**	**60**	P	Pn	11 01 53.7	-1.3
comp=N,4.3nm,0.3s,SNR=4.0							
EPLA				S	Sn	11 03 00.8	-0.7
comp=N,3.4nm,0.2s,SNR=7.9							
EPLA	**Plasencia**	**5.79**	**60**	P	Pn	11 01 53.7	-1.3
comp=N,4.3nm,0.3s,SNR=4.0							
EPLA				S	Sn	11 03 00.8	-0.7
comp=N,3.4nm,0.2s,SNR=7.9							
ECAL	**Calabor**	**6.45**	**43**	P	Pn	11 02 05.6	+1.6
comp=N,1.4nm,0.2s,SNR=4.0							
ECAL				S	Sn	11 03 16.8	-0.9
comp=N,11nm,0.7s,SNR=7.9							
ECAL	**Calabor**	**6.45**	**43**	P	Pn	11 02 05.6	+1.6
comp=N,1.4nm,0.2s,SNR=4.0							
ECAL				S	Sn	11 03 16.8	-0.9
comp=N,11nm,0.7s,SNR=7.9							
EAGO	**Agolada(Pontev**	**6.45**	**31**	P	Pn	11 02 04.6	+0.6
comp=N,1.2nm,0.2s,SNR=7.9							
EAGO				S	Sn	11 03 13.5	-4.2
comp=N,3.7nm,0.5s,SNR=7.9							
EAGO	**Agolada(Pontev**	**6.45**	**31**	P	Pn	11 02 04.6	+0.6
comp=N,1.2nm,0.2s,SNR=7.9							
PAB	**San Pablo**	**6.86**	**69**	P	Pn	11 02 10.9	+1.2
comp=N,1.4nm,0.2s,SNR=7.9							
PAB				S	Sn	11 03 25.9	-2.0
comp=N,2.7nm,0.5s,SNR=7.9							
PAB	**San Pablo**	**6.86**	**69**	P	Pn	11 02 10.9	+1.2
comp=N,1.4nm,0.2s,SNR=7.9							
PAB				S	Sn	11 03 25.9	-2.0
comp=N,2.7nm,0.5s,SNR=7.9							
ESDC	**Sonseca Array**	**7.18**	**69**	P	Pn	11 02 14.6	+0.5
comp=N,2.1nm,0.3s,baz=254,slow=14,SNR=18							
ESDC	**Sonseca Array**	**7.18**	**69**	P	Pn	11 02 14.6	+0.5
comp=N,2.1nm,0.3s,SNR=18							
GUD	**Guadarrama**	**7.37**	**61**	P	Pn	11 02 18.0	+1.2
comp=N,1.6nm,0.2s,SNR=7.9							
GUD	**Guadarrama**	**7.37**	**61**	P	Pn	11 02 18.0	+1.2
comp=N,1.6nm,0.2s,SNR=7.9							
ETOR	**Torete**	**8.92**	**64**	P	Pn	11 02 38.9	+0.9
comp=N,1.6nm,0.2s,SNR=16							
ETOR				S	Sn	11 04 15.0	-3.5
comp=N,0.8nm,0.2s,SNR=7.9							
ETOR	**Torete**	**8.92**	**64**	P	Pn	11 02 38.9	+0.9
comp=N,1.6nm,0.2s,SNR=16							
ETOR				S	Sn	11 04 15.0	-3.5
comp=N,0.8nm,0.2s,SNR=7.9							

BJI ***01*** *11:03:35.0,23°.62N×61°.45E,h12km,mb4.7/37,mB4.8/22, Ms4.2/14,Ms7 3.9/13*

ISCJB ***01*** *11:03:37.4±1.0,23°.65N±0°.03×61°.96E±0°.02,h5km±6km, mb4.7/160,MS3.7/49,Error ellipse: s-maj=5.3km s-min=2.8km az=162.7*

IDC ***01*** *11:03:38.5±0.5,23°.65N×62°.04E,h0km,mb4.6/36, mb1 4.6/37,mb1mx4.4/66,mbtmp4.6/37,ML4.8/1,MS3.7/43, Ms1 3.7/43,ms1mx3.6/67,Error ellipse: s-maj=12.8km s-min=10.2km az=171.0*

DSN ***01*** *11:03:40.0±0.9,23°.67N×62°.01E,h15km,mb5.7/1, ML5.4/12,Error ellipse: s-maj=16.0km s-min=6.8km az=157.0*

CSEM ***01*** *11:03:39.9±0.1,23°.69N×62°.00E,h10km,mb4.8/99,Error ellipse: s-maj=5.9km s-min=3.0km az=147.0*

GCMT ***01*** *11:03:40.0±0.5,23°.70N×62°.07E,h33km±2km,MW4.9/66, Moment Tensor Solution. s23,c26; s66,c88; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr0.88±.21; Mθθ0.51±.14; Mφφ-1.39±.14; Mrθ1.16±.20; Mθφ1.70±.12; Mφr0.21±.16; Best double couple: M0=2.39900×10^16 NP1:φs=8.00000°,δ58.00000°,λ157.00000°. Principal axes: T 2.3570, Plg37.0000°, Azm333.0000°; N 0.0830, Plg52.0000°, Azm138.0000°; P -2.4410, Plg8.0000°,*

Azm237.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.

NEIC ***01*** *11:03:40.0±0.3,23°.69N×62°.02E,h10km,mb4.9/64 Error ellipse: s-maj=6.0km s-min=3.7km az=162.0*

MOS ***01*** *11:03:40.0±1.1,23°.69N×62°.03E,h24km,mb4.9/74,Error ellipse: s-maj=6.7km s-min=3.9km az=104.6*

OMAN ***01*** *11:03:45.3±0.7,23°.69N×61°.64E,h31km±22km,Error ellipse: s-maj=28.5km s-min=2.8km az=256.0*

ISC 01 11:03:40.6±0.9,23°.74N±0°.04×61°.93E±0°.04,h14km±5km, n545,σ1$49/565,mb4.8/166,MS3.7/50,31C-11D,Off coast of Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JLN	**Jalan Bani Buh** SNR=1000	**2.81**	**236**	P	Pn	11 04 24.7	-0.4
WBK	**Wadi Bani Khal** SNR=141	**2.95**	**248**	P	Pn	11 04 27.3	+0.3
WBK				S	Sn	11 04 58.9	-3.3
WBK	**Wadi Bani Khal** SNR=141	**2.95**	**248**	P	Pn	11 04 27.3	+0.3
WSAR	**Wadi Sarin** 118nm,0.3s,baz=118,slow=7.7,SNR=4807	**3.07**	**261**	Pn	Pn	11 04 28.5	-0.1
WSAR				Sn	Sn	11 04 59.9	-5.4
WSAR	406nm,0.3s,baz=16,slow=21,SNR=24			LR	LR	11 05 56.8	
comp=Z,2μm,18.3s,baz=26,slow=44							
WSAR	**Wadi Sarin** SNR=3664	**3.07**	**261**	P	Pn	11 04 28.4	-0.3
WSAR				S	Sn	11 04 59.8	-5.4
BIDO	**Bidbid** SNR=588	**3.50**	**267**	P	Pn	11 04 35.0	+0.5
BIDO				S	Sn	11 05 11.6	-4.0
SNR=8.2							
BIDO	**Bidbid** SNR=588	**3.50**	**267**	P	Pn	11 04 35.0	+0.5
SMDO	**Samad** SNR=446	**3.63**	**260**	P	Pn	11 04 37.0	+0.6
SMDO				S	Sn	11 05 16.1	-3.0
SMDO	**Samad** SNR=446	**3.63**	**260**	P	Pn	11 04 37.0	+0.6
JMDO	**Jabal Madar** SNR=470	**3.78**	**250**	P	Pn	11 04 39.6	+1.2
JMDO				S	Sn	11 05 20.6	-2.1
SNR=11							
JMDO	**Jabal Madar** SNR=470	**3.78**	**250**	P	Pn	11 04 39.6	+1.2
HOQ	**Hoqain** SNR=141	**4.24**	**269**	P	Pn	11 04 44.4	-0.3
HOQ				S	Sn	11 05 30.7	-3.3
HOQ	**Hoqain** SNR=141	**4.24**	**269**	P	Pn	11 04 44.4	-0.3
BSYO	**Bisya** SNR=100	**4.43**	**258**	P	Pn	11 04 49.4	+2.0
BSYO				S	Sn	11 05 38.1	-0.7
BSY	**Bisya** SNR=100	**4.46**	**258**	P	Pn	11 04 49.4	+1.6
BSY				S	Sn	11 05 38.1	-1.4
MHTO	**MHTO** SNR=106	**4.58**	**234**	P	Pn	11 04 49.2	-0.2
SOHO	**SOHO** SNR=278	**4.95**	**276**	*i* P	Pn	11 04 54.0	-0.6
SOHO	**SOHO** SNR=159	**4.95**	**276**	P	Pn	11 04 54.1	-0.4
ARQ	**Araqi** SNR=299	**4.98**	**266**	P	Pn	11 04 57.4	+2.4
ARQ	**Araqi** SNR=299	**4.98**	**266**	P	Pn	11 04 57.4	+2.4
UOSS	**Minazif**	**5.36**	**284**	*e*Pn	Pn	11 04 59.5	-0.6
UOSS				*e*Sn	Sn	11 05 56.9	-4.8
UOSS	**Minazif** SNR=72	**5.36**	**284**	P	Pn	11 04 59.6	-0.6
UOSS	**Minazif** SNR=1089	**5.36**	**284**	*i* P	Pn	11 04 59.5	-0.6
UOSS	**Minazif** SNR=72	**5.36**	**284**	P	Pn	11 04 59.6	-0.5
MDH	**Madha** SNR=84	**5.36**	**288**	*i* P	Pn	11 04 59.7	-0.5
MDH	**Madha** SNR=84	**5.36**	**288**	P	Pn	11 04 59.7	-0.5
HATD	**Hatta, Dubai** SNR=168	**5.40**	**283**	*i* P	Pn	11 05 00.3	-0.4
HATD	**Hatta, Dubai** SNR=168	**5.40**	**283**	P	Pn	11 05 00.3	-0.4
MSFE	**Esma-Masafi** SNR=206	**5.50**	**288**	*i* P	Pn	11 05 01.3	-0.8
MSFE	**Esma-Masafi** SNR=81	**5.50**	**288**	P	Pn	11 05 01.5	-0.6
BANOM	**Banah** SNR=12	**5.56**	**294**	P	Pn	11 05 02.8	-0.1
BANOM	**Banah** SNR=246	**5.56**	**294**	*i* P	Pn	11 05 02.7	-0.2
BANOM	**Banah** SNR=12	**5.56**	**294**	P	Pn	11 05 02.8	-0.1
DQM	**DQM** SNR=27	**5.57**	**228**	P	Pn	11 05 02.6	-0.4
ALNE	**Al Ain** SNR=97	**5.66**	**274**	*i* P	Pn	11 05 06.1	+1.8
ALNE	**Al Ain** SNR=97	**5.66**	**274**	P	Pn	11 05 06.1	+1.8
SHME	**Shamm** SNR=104	**5.74**	**295**	*i* P	Pn	11 05 05.9	+0.5
SHME	**Shamm** SNR=104	**5.74**	**295**	P	Pn	11 05 06.2	+0.8
NAZ	**Nazwa, Dubai** SNR=311	**5.85**	**284**	*i* P	Pn	11 05 08.6	+1.7
NAZ	**Nazwa, Dubai** SNR=311	**5.85**	**284**	P	Pn	11 05 08.6	+1.7
UMQ	**Umm Al-Quwin** SNR=16	**5.97**	**289**	*i* P	Pn	11 05 10.4	+1.8
ASUD	**Al Ashush, Dub** SNR=308	**6.09**	**280**	*i* P	Pn	11 05 11.7	+1.5
ASUD	**Al Ashush, Dub** SNR=308	**6.09**	**280**	P	Pn	11 05 11.7	+1.5
AJN	**Ajban** SNR=19	**6.40**	**279**	*i* P	Pn	11 05 14.5	+0.2
BHJ	**Bhuj**	**7.11**	**92**	*e*P	Pn	11 05 22.5	-1.6
BHJ				*e*S	Sn	11 06 35.2	-10
BHJ				IAML		11 06 41.0	
comp=N,892nm,0.7s							
BHJ				IAML		11 06 41.4	
comp=E,920nm,0.6s							
MZR	**Muzera** SNR=31	**7.80**	**266**	*i* P	Pn	11 05 34.1	+0.4
SHAO	**Shalim** SNR=48	**8.19**	**227**	P	Pn	11 05 38.1	-1.0
SHAO	**Shalim** SNR=48	**8.19**	**227**	*i* P	Pn	11 05 38.3	-0.7
SHAO	**Shalim** SNR=48	**8.19**	**227**	P	Pn	11 05 38.3	-0.7
DMTO	**DMTO** SNR=95	**8.86**	**229**	P	Pn	11 05 48.0	-0.3
RBK	**Rabkut** SNR=24	**9.53**	**231**	P	Pn	11 05 57.4	0.0
RBK	**Rabkut** SNR=24	**9.53**	**231**	P	Pn	11 05 57.4	0.0
WHFO	**Wadi Hawf** SNR=17	**9.58**	**234**	P	Pn	11 05 57.4	-0.7
WHFO	**Wadi Hawf** SNR=17	**9.58**	**234**	P	Pn	11 05 57.4	-0.7
BTHS		**10.15**	**274**	P	Pn	11 06 05.8	-0.1
BTHS				S	Sn	11 07 53.2	-6.3
ABTO	**Aybut** SNR=14	**10.28**	**233**	P	Pn	11 06 06.6	-1.2
ABTO	**Aybut** SNR=14	**10.28**	**233**	P	Pn	11 06 06.6	-1.2
SLWS		**10.35**	**278**	P	Pn	11 06 09.3	+0.7
SLWS				S	Sn	11 07 57.8	-6.7
BOQSS		**11.60**	**283**	P	Pn	11 06 26.0	+0.3
BOQSS				S	Sn	11 08 24.7	-10
KBL	**Kabul**	**12.43**	**28**	*e*Pn	Pn	11 06 35.9	-1.3
KBL	**Kabul**	**12.43**	**28**	*e*P	Pn	11 06 35.9	-1.3
KBL	**Kabul**	**12.43**	**28**	*e*P	Pn	11 06 35.9	-1.3
THW	**Thamme Wali**	**12.49**	**42**	P	Pn	11 06 35.3	-2.6
SARP	**Sargodha**	**12.52**	**47**	P	Pn	11 06 36.2	-2.0
KHET	**Khetri**	**13.21**	**68**	*e*P	Pn	11 06 44.9	-2.9
KHET				*e*S	Sn	11 09 00.1	-14
CEP	**Cherat**	**13.31**	**39**	P	Pn	11 06 47.8	-1.5
NIL	**Nilore**	**14.00**	**43**	*e*Pn	Pn	11 06 56.7	-1.8
NIL				*e*Sn	Sn	11 09 21.4	-12
NIL	**Nilore**	**14.00**	**43**	*e*P	Pn	11 06 56.7	-1.8
NIL	**Nilore**	**14.00**	**43**	*e*P	Pn	11 06 56.7	-1.8
BHPL	**Bhopal**	**14.23**	**89**	*e*P	Pn	11 06 59.2	-2.5
BHPL				IAmb	IAmb	11 07 00.4	
comp=Z,500nm,3.3s							
SONA	**Sohna**	**14.35**	**69**	*e*P	Pn	11 06 58.3	-4.9
SONA				*ex*	x	11 09 27.6	
SONA				IAML		11 09 31.8	
comp=E,28nm,0.0s							
SONA				IAML		11 09 33.4	
comp=N,27nm,0.2s							
GEYT	**Alibeck**	**14.52**	**348**	Pn	P	11 07 09.7	-2.5
comp=N,1.7nm,0.3s,baz=163,slow=10,SNR=4.2							
GEYT				LR	LR	11 14 04.7	
comp=N,837nm,20.0s,baz=165,slow=43							
GYA0B	**ALIBECK ARRAY**	**14.52**	**348**	*e*Pn	Pn	11 07 04.5	-1.2
GYA0B				*e*Sn	Sn	11 09 46.5	+0.1
GYA0B	**ALIBECK ARRAY**	**14.52**	**348**	*e*Pn	Pn	11 07 04.5	-1.2
GYA0B				*e*Sn	Sn	11 09 46.5	+0.1
NDI	**New Delhi**	**14.57**	**67**	*e*S	Sn	11 09 44.0	-3.8
RAYN	**Ar Rayn**	**15.06**	**272**	*e*Pn	Pn	11 07 09.0	-4.1
comp=N,57nm,0.8s							
RAYN	**Ar Rayn**	**15.06**	**272**	*e*P	Pn	11 07 09.0	-4.1
RAYN				pmax	pmax		
comp=Z,57nm,0.8s							
DHRM	**DHARAMSHALA**	**15.25**	**53**	*e*P	Pn	11 07 11.1	-4.7
DHRM				*ex*	x	11 09 48.5	
DHRM				IAML		11 09 54.6	
comp=E,316nm,0.3s							
DHRM				IAML		11 09 56.1	
comp=N,222nm,0.5s							
SMLA	**Simla**	**15.39**	**58**	*e*P	Pn	11 07 14.9	-2.4
SMLA				*ex*	x	11 09 53.0	
SMLA				IAML		11 10 00.3	
comp=N,146nm,0.6s							
SMLA				IAML		11 10 00.4	
comp=E,161nm,0.3s							
DDI	**Dehra Dun**	**15.79**	**62**	*e*P	Pn	11 07 18.6	-3.9
TAS	**Tashkent**	**18.59**	**18**	*e*P	P	11 07 56.7	-0.6
DAMY	**Dhamar**	**18.89**	**244**	*e*P	P	11 08 01.0	-0.1
comp=E,65nm,0.9s							
SFK	**Sufi-Kurgan**	**18.94**	**28**	P	Pn	11 08 02.1	0.0
SFK				pmax	pmax		
comp=Z,20nm,1.2s							
SFK	**Sufi-Kurgan**	**18.94**	**28**	P	Pn	11 08 02.1	0.0
comp=Z,20nm,1.2s							
PYUN	**Piuthan**	**19.43**	**73**	*e*P	Pn	11 08 07.9	-0.1
comp=Z,189nm,1.4s							
IUG	**Iuzhnay**	**19.56**	**18⇑**	*i* P	P	11 08 08.3	+0.3
comp=Z,26nm,1.0s							
IUG				*e*S	S	11 11 47.7	-0.9
IUG				LR	LR	11 18 01.4	
comp=Z,157nm,14.2s							
KSH	**Kashi**	**19.72**	**34**	P	P	11 08 05.9	-3.9
KSH				sP	pP	11 08 14.2	+0.4
KSH				PP	PnPn	11 08 25.4	+0.3
KSH				S	S	11 11 32.5	-19
KSH				SS	SnSn	11 12 03.3	-3.8
KSH				pmax	pmax		
comp=Z,35nm,0.6s							
KSH				LR	LR		
comp=Z,740nm,6.2s							
KSH				LR	LR		
comp=Z,750nm,10.2s							
KSH				LR	LR		
comp=Z,720nm,16.2s							
KOLN	**Koldanda**	**19.92**	**74**	*e*P	Pn	11 08 13.2	-0.7
comp=Z,11nm,0.3s							
DANN	**Dangsing**	**20.14**	**72**	*e*P	Pn	11 08 15.9	-0.6
comp=Z,136nm,1.1s							
KK31	**Karatay Array**	**20.58**	**18**	*e*P	P	11 08 19.0	+0.1
KK31	**Karatay Array**	**20.58**	**18**	*i* P	P	11 08 19.5	+0.5
KK31				pmax	pmax		
comp=Z,21nm,0.9s							
KK31	**Karatay Array**	**20.58**	**18**	*i* P	P	11 08 19.5	+0.5
comp=Z,21nm,0.9s							
KKAR	**Karatay Array**	**20.58**	**18**	*e*P	P	11 08 19.0	0.0
KKAR	**Karatay Array**	**20.58**	**18**	*e*P	P	11 08 19.0	0.0
KKAR	**Karatay Array**	**20.58**	**18**	*e*P	P	11 08 19.0	0.0
AML	**Almayashu** SNR=10.0	**20.79**	**25**	P	P	11 08 22.0	+0.3
GKN	**Gorkha** comp=Z,131nm,1.2s	**20.86**	**73**	*e*P	Pn	11 08 24.9	+0.1
NRN	**Naryn** comp=Z,11nm,0.9s	**21.21**	**30**	*e*P	P	11 08 25.6	-0.6
NRN	**Naryn**	**21.21**	**30**	*e*P	P	11 08 25.6	-0.6
NRN				pmax	pmax		
comp=Z,11nm,0.9s							
NRN	**Naryn** comp=Z,11nm,0.9s	**21.21**	**30**	*e*P	P	11 08 25.6	-0.6
DMN	**Daman** comp=Z,148nm,1.0s	**21.23**	**75**	*e*P	P	11 08 29.9	+3.4
EKS2	**Erkin-Say** SNR=20	**21.28**	**25**	P	P	11 08 27.9	+1.2
AKT	**Akhty**	**21.30**	**330**	*e*P	P	11 08 28.9	+1.9
AKT				*e*		11 08 47.9	
AKT				pmax	pmax		
comp=Z,120nm,0.7s							
AKT	**Akhty** comp=Z,120nm,0.7s	**21.30**	**330**	*e*P	P	11 08 28.9	+1.9
KZA	**Kyzart** SNR=32	**21.39**	**28**	P	P	11 08 29.3	+1.1
KKN	**Kakani** comp=Z,79nm,1.0s	**21.40**	**74**	*e*P	P	11 08 31.5	+3.2
PKIN	**Phulchoki** comp=Z,50nm,0.8s	**21.49**	**75**	*e*P	P	11 08 32.8	+3.6
PKI	**Pulchoki**	**21.50**	**75**	*e*P	P	11 08 32.5	+3.1
AAK	**Ala-Archa**	**21.54**	**26**	P	P	11 08 31.0	+1.5
comp=Z,9.1nm,0.8s,baz=200,slow=9.4,SNR=17							
AAK				LR	LR	11 18 23.4	
comp=Z,242nm,21.4s,baz=194,slow=41							
AAK	**Ala-Archa** SNR=7.3	**21.54**	**26**	P	P	11 08 31.0	+1.5
AAK	**Ala-Archa** comp=Z,12nm,0.9s	**21.54**	**26**	*e*P	P	11 08 30.0	+0.5
AAK	**Ala-Archa**	**21.54**	**26**	P	P	11 08 30.2	+0.7
AAK				pmax	pmax		
comp=Z,42nm,1.2s							
AAK	**Ala-Archa** comp=Z,12nm,0.9s	**21.54**	**26**	*e*P	P	11 08 30.0	+0.5
KBK	**Karagaybulak** SNR=16	**21.74**	**27**	P	P	11 08 32.8	+1.1
FRU	**Bishkek**	**21.75**	**26**	*e*P	P	11 08 32.0	+0.3
FRU				pmax	pmax		
comp=Z,80nm,1.4s							
FRU	**Bishkek** comp=Z,80nm,1.4s	**21.75**	**26**	*e*P	P	11 08 32.0	+0.3
ATD	**Arta Tunnel**	**21.83**	**239**	P	P	11 08 34.7	+1.9
comp=Z,60nm,0.9s,baz=22,slow=6.4,SNR=19							
ATD				LR	LR	11 16 57.9	
comp=Z,149nm,19.9s,baz=84,slow=36							
ATD	**Arta Tunnel** comp=Z,74nm,1.0s	**21.83**	**239**	*e*P	P	11 08 34.3	+1.5
GNI	**Garni**	**21.86**	**323**	P	P	11 08 36.2	+3.2
comp=Z,166nm,0.9s,baz=156,slow=2.2,SNR=56							
GNI				LR	LR	11 18 24.0	
comp=Z,156nm,21.8s,baz=128,slow=40							
GNI	**Garni** comp=Z,167nm,0.9s	**21.86**	**323**	*e*P	P	11 08 35.6	+2.6
GNI	**Garni**	**21.86**	**323**	*c i*P	P	11 08 35.0	+2.0
GNI	**Garni**	**21.86**	**323**	*i* P	P	11 08 35.0	+2.0
BOK	**Bokaro**	**21.92**	**85**	*e*P	P	11 08 30.1	-3.5
BOK				IAmb	IAmb	11 08 50.4	
comp=Z,20nm,0.5s							
GUN	**Gumba** comp=Z,164nm,1.0s	**21.94**	**74**	*e*P	P	11 08 35.5	+1.3
ULHL	**Ulahol** SNR=24	**21.96**	**29**	P	P	11 08 35.5	+1.4
USP	**Ospenovka** SNR=14	**22.07**	**25**	P	P	11 08 35.4	+0.3
JIRN	**Jiri** comp=Z,

comp=Z,2.4nm,0.8s
BMNS eS S 11 12 44.8 +0.1
TBLG Delisi 22.97 325 eP P 11 08 46.7 +2.1
TBLG Delisi 22.97 325 eP P 11 08 46.7 +2.1
TBLG Delisi 22.97 325 eP P 11 08 46.7 +2.1
AAA Alma-Ata 23.03 29 eP P 11 08 46.2 +1.0
AAA eS S 11 12 56.6 +1.0
AAA LR LR 11 19 28.1
comp=Z,215nm,15.5s
MDOK Medeo 23.05 29 i P P 11 08 46.1 +0.5
comp=Z,311nm,1.6s
MDOK eS S 11 12 56.6 +0.4
MDOK LR LR 11 19 29.7
comp=Z,89nm,14.7s
KUU Kurty 23.33 27⇑ iP P 11 08 48.3 0.0
comp=Z,31nm,1.8s
GROC Groznyy 23.55 329 eP P 11 08 47.7 -2.7
GROC e 11 09 15.8
GROC e 11 12 35.4
GROC eS S 11 13 04.6 +0.6
GROC pmax pmax
comp=Z,144nm,1.2s
GROC Groznyy 23.55 329 ePcP PcP 11 12 35.4 -0.2
GROC eS S 11 13 04.6 +0.6
SATY Saty 23.60 31 eP P 11 08 50.9 -0.1
comp=Z,14nm,0.9s
ASF Jabal al Asfar 23.61 296 P P 11 08 54.2 +2.9
comp=Z,6.8nm,1.0s,baz=169,slow=3.4,SNR=7.6
ASF S S 11 13 09.2 +3.7
comp=Z,5.4nm,0.7s,baz=274,slow=22,SNR=8.4
UZB Uzynbulak 23.96 32 eP P 11 08 55.4 +0.9
comp=Z,4.6nm,0.8s
KPKS Kokpek 24.04 31 eP P 11 08 55.7 +0.4
comp=Z,13nm,0.8s
KPKS eS S 11 13 12.4 +0.4
ZEI Tsey 24.16 326 eP P 11 08 57.6 +1.1
ZEI pmax pmax
comp=Z,99nm,1.8s
SHLS Shalkode 24.18 33 eP P 11 09 00.2 +3.5
comp=Z,12nm,0.9s
GTK Tadong 24.31 76 eP P 11 08 56.1 -1.9
PDGK Podgornoye 24.32 32 P P 11 08 58.3 +0.4
PDGK pmax pmax
comp=Z,43nm,1.0s
PDGK Podgornoye 24.32 32 P P 11 08 58.3 +0.4
comp=Z,43nm,1.0s
PALK Pallekele 24.34 129 LR LR 11 17 30.6
comp=Z,138nm,20.2s,baz=296,slow=34
EIL Elat 24.79 290 P P 11 09 08.4 +6.3
comp=Z,9.4nm,0.9s,baz=122,slow=17,SNR=6.0
EIL LR LR 11 20 40.7
comp=Z,119nm,20.6s,baz=64,slow=41
NCK Nalchik 24.83 327⇑ eP P 11 09 03.5 +1.1
NCK pmax pmax
comp=Z,144nm,1.2s
NCK Nalchik 24.83 327 eP P 11 09 03.5 +1.1
comp=Z,144nm,1.2s
MMAI Mount Meron Ar 25.05 298 P P 11 09 07.0 +2.5
comp=Z,6.5nm,0.6s,baz=100,slow=13,SNR=14
NEY Neytrino 25.10 325⇑ eP P 11 09 07.6 +2.6
NEY pmax pmax
comp=Z,6.0nm,0.8s
NEY Neytrino 25.10 325 eP P 11 09 07.6 +2.6
comp=Z,6.0nm,0.8s
KBZ Khabaz 25.35 326 P P 11 09 09.3 +2.4
comp=Z,9.9nm,0.8s,baz=139,slow=9.0,SNR=25
AB31 Akbulak array 25.52 357 i P P 11 09 09.5 +1.0
AB31 pmax pmax
comp=Z,13nm,1.0s
AB31 Akbulak array 25.52 357 i P P 11 09 09.5 +1.0
comp=Z,13nm,1.0s
ABKAR Akbulak array 25.52 357 eP P 11 09 09.4 +0.9
ABKAR Akbulak array 25.52 357 eP P 11 09 09.4 +0.9
KVAR Kislovodsk Arr 25.61 327 P P 11 09 12.1 +2.5
comp=Z,173nm,1.1s,baz=310,slow=3.8,SNR=38
KVAR LR LR 11 22 10.2
comp=Z,53nm,19.0s,baz=58,slow=43
KIV Kislovodsk 25.62 327 eP P 11 09 11.5 +1.9
comp=Z,262nm,1.3s
KIV Kislovodsk 25.62 327 i P P 11 09 11.2 +1.6
SNR=26
KIV Kislovodsk 25.62 327c iP P 11 09 11.8 +2.2
KIV ePPP PPP 11 09 55.9
KIV pmax pmax
comp=Z,226nm,1.2s
KIV MLR MLR
comp=Z,69nm,18.0s
KIV Kislovodsk 25.62 327 P P 11 09 11.2 +1.6
SNR=26
OTUK Ortayu 25.82 16 P P 11 09 12.5 +1.2
OTUK pmax pmax
comp=Z,45nm,0.9s
OTUK Ortayu 25.82 16 P P 11 09 12.5 +1.2
comp=Z,45nm,0.9s
GOF Gofitskoye 26.25 329⇑ eP P 11 09 18.9 +3.7
GOF pmax pmax
comp=Z,59nm,1.7s
AKTK Aktyubinsk 26.82 354 eP P 11 09 21.2 +0.9
AKTO Aktyubinsk 26.82 354 P P 11 09 21.2 +0.9
comp=Z,5.8nm,0.6s,baz=166,slow=8.5,SNR=19
AKTO LR LR 11 21 57.3
comp=Z,164nm,20.1s,baz=161,slow=41
GUWA GUWAHATI 27.07 79 eP P 11 09 21.9 -0.8
CSS Mathiatis 27.23 301 eP P 11 09 24.2 0.0
comp=Z,40nm,1.4s
CSS Mathiatis 27.23 301 eP P 11 09 24.2 0.0
comp=Z,40nm,1.4s
BRZS Berezniki 27.51 15 eP P 11 09 26.2 -0.4
comp=Z,1.7nm,1.2s
BRZS eS S 11 14 06.9 -0.1
MAKZ Makanchi 28.09 30 eP P 11 09 32.2 +0.5
comp=Z,13nm,1.1s
MAKZ Makanchi 28.09 30 eP P 11 09 32.2 +0.5
MAKZ pmax pmax
comp=Z,13nm,1.1s
MAKZ Makanchi 28.09 30 eP P 11 09 32.2 +0.5
comp=Z,13nm,1.1s
MK01 Makanchi Array 28.21 30 eP P 11 09 33.1 +0.3
MK01 Makanchi Array 28.21 30 eP P 11 09 33.1 +0.3
MK31 Makanchi Array 28.22 30 eP P 11 09 33.4 +0.4
MK31 Makanchi Array 28.22 30 i P P 11 09 33.3 +0.4
MK31 pmax pmax
comp=Z,8.0nm,0.7s
MK31 Makanchi Array 28.22 30 i P P 11 09 33.3 +0.4
comp=Z,8.0nm,0.7s
MK32 Makanchi Array 28.22 30 eP P 11 09 33.6 +0.7
MK32 ePcP PcP 11 12 46.1 -0.2
MK32 Makanchi Array 28.22 30 eP P 11 09 33.6 +0.7
MKAR Makanchi Array 28.22 30 P P 11 09 33.6 +0.7
comp=Z,8.4nm,0.7s,baz=212,slow=9.0,SNR=60
MKAR PcP PcP 11 12 46.1 -0.2
comp=Z,1.2nm,0.7s,baz=242,slow=3.1,SNR=3.6
MKAR LR LR 11 23 26.8
comp=Z,241nm,21.1s,baz=222,slow=42
MKAR Makanchi Array 28.22 30 eP P 11 09 33.3 +0.4
comp=Z,55nm,0.7s
MKAR Makanchi Array 28.22 30 eP P 11 09 33.3 +0.4
comp=Z,55nm,0.7s
BR101 Keskin Array S 28.70 310 eP P 11 09 38.2 +0.8
BR101 ePcP PcP 11 12 48.5 +0.7
BR101 Keskin Array S 28.70 310 eP P 11 09 38.2 +0.8
BR131 Keskin Array S 28.70 310 eP P 11 09 38.6 +1.1
BR131 Keskin Array S 28.70 310 eP P 11 09 38.6 +1.1
BRTR Keskin Array B 28.70 310 P P 11 09 38.2 +0.8
comp=Z,6.2nm,0.8s,baz=124,slow=11,SNR=38
BRTR PcP PcP 11 12 48.5 +0.7
comp=Z,1.6nm,0.6s,baz=141,slow=6.2,SNR=5.8
BRTR LR LR 11 24 00.9
comp=Z,157nm,21.9s,baz=105,slow=42
BRTR Keskin Array B 28.70 310ce P P 11 09 38.7 +1.3
BRTR pmax pmax
comp=Z,6.0nm,0.8s
BRTR Keskin Array B 28.70 310 eP P 11 09 38.7 +1.3
comp=Z,6.0nm,0.8s
WMQ Urumqi 29.12 40 P P 11 09 42.3 +1.2
WMQ pP pP 11 09 45.2 -0.2
WMQ sP sP 11 09 52.6 +5.4
WMQ pmax pmax
comp=Z,30nm,1.1s
WMQ pmax pmax
comp=Z,170nm,4.3s
WMQ LR LR
comp=Z,400nm,8.5s
WMQ LR LR
comp=Z,410nm,13.7s
WMQ LR LR
comp=Z,200nm,20.9s
ANTO Ankara 29.35 310 eP P 11 09 44.8 +1.6
comp=Z,27nm,1.0s
ANTO Ankara 29.35 310 eP P 11 09 44.8 +1.6
ANTO pmax pmax
comp=Z,27nm,1.0s
ANTO Ankara 29.35 310 eP P 11 09 44.8 +1.6
comp=Z,27nm,1.0s
KURBB Kurchatov Arra 29.78 21 P P 11 09 47.4 +0.8
comp=Z,4.9nm,0.9s,baz=219,slow=8.8,SNR=32
KURK Kurchatov 29.89 21 eP P 11 09 48.4 +0.8
KURK Kurchatov 29.89 21c iP P 11 09 48.2 +0.6
KURK pmax pmax
comp=Z,6.0nm,0.8s
KURK Kurchatov 29.89 21 i P P 11 09 48.2 +0.6
comp=Z,6.0nm,0.8s
BVA0 Borovoye Array 29.94 10 P P 11 09 48.6 +0.5
BVA0 pmax pmax
comp=Z,9.0nm,0.9s
BVA0 Borovoye Array 29.94 10 P P 11 09 48.6 +0.5
comp=Z,9.0nm,0.9s
BVAR Borovoye Array 29.94 10 P P 11 09 49.0 +0.9
comp=Z,4.5nm,0.6s,baz=169,slow=8.8,SNR=24
BVAR LR LR 11 23 48.0
comp=Z,338nm,18.9s,baz=196,slow=40
BRVK Borovoye 29.96 10 eP P 11 09 49.0 +0.8
comp=Z,4.9nm,0.9s
BRVK Borovoye 29.96 10 eP P 11 09 49.0 +0.8
BRVK pmax pmax
comp=Z,5.0nm,0.9s
BRVK Borovoye 29.96 10 eP P 11 09 49.0 +0.8
comp=Z,4.9nm,0.9s
SEM Semipalatinsk 30.20 24 eP P 11 09 51.3 +0.6
comp=Z,0.4nm,0.2s
ISP Isparta 30.25 305 eP P 11 09 52.6 +1.4
comp=Z,24nm,0.7s
ISP Isparta 30.25 305 eP P 11 09 52.6 +1.4
ISP pmax pmax
comp=Z,24nm,0.7s
SIM Simferopol' 30.98 320ce P P 11 09 59.9 +2.6
SIM pmax pmax
comp=Z,20nm,0.9s
SIM Simferopol' 30.98 320 eP P 11 09 59.9 +2.6
comp=Z,20nm,0.9s
H08N2 Diego Garcia H 31.16 162 T T 11 43 30.8
baz=344,slow=75,SNR=163
H08N3 Diego Garcia H 31.18 162 T T 11 43 24.4
baz=344,slow=75,SNR=9.2
H08N1 Diego Garcia H 31.18 162 T T 11 43 28.1
baz=344,slow=75,SNR=6.3
MANT Manisa 31.93 305 eP P 11 10 07.5 +1.4
comp=Z,75nm,1.0s
MANT Manisa 31.93 305 eP P 11 10 07.5 +1.4
comp=Z,75nm,1.0s
KARP Karpathos 32.27 299 eP P 11 10 10.9 +2.0
comp=Z,26nm,0.9s
KARP Karpathos 32.27 299 eP P 11 10 10.9 +2.0
comp=Z,26nm,0.9s
VORD Divnogorie 32.34 333 eP P 11 10 09.1 -0.1
VORD pmax pmax
comp=Z,20nm,0.9s
VORD Divnogorie 32.34 333 eP P 11 10 09.1 -0.1
comp=Z,20nm,0.9s
VSR Storozhevoye 32.58 333 eP P 11 10 11.6 +0.3
VSR pmax pmax
comp=Z,20nm,0.8s
VSR Storozhevoye 32.58 333 eP P 11 10 11.6 +0.3
comp=Z,20nm,0.8s
ARU Arti 32.75 357 P P 11 10 13.8 +1.0
comp=Z,6.0nm,0.6s,baz=174,slow=3.7,SNR=8.7
ARU Arti 32.75 357 eP P 11 10 13.2 +0.5
comp=Z,9.2nm,0.7s
ARU Arti 32.75 357c iP P 11 10 13.5 +0.8
ARU 11 11 20.3
ARU S S 11 15 31.0 +2.1
ARU SS SnSn 11 17 26.4 +1.7
ARU pmax pmax
comp=Z,21nm,1.7s
ARU Arti 32.75 357 i P P 11 10 13.5 +0.8
comp=Z,21nm,1.7s
SVE Sverdlovsk 33.07 359⇑ eP P 11 10 17.1 +1.6
SVE pmax pmax
comp=Z,15nm,1.1s
SANT Santorini 33.79 300 eP P 11 10 23.2 +1.1
comp=Z,56nm,1.1s
SANT Santorini 33.79 300 eP P 11 10 23.2 +1.1
comp=Z,56nm,1.1s
APE Apeiranthos 33.88 302⇓ iP P 11 10 23.8 +0.9
APE Apeiranthos 33.88 302de P P 11 10 24.4 +1.5
APE pmax pmax
comp=Z,13nm,0.9s
APE Apeiranthos 33.88 302 eP P 11 10 24.4 +1.5
comp=Z,13nm,0.9s
IDI Anoyia 34.04 298 P P 11 10 26.5 +2.1
comp=Z,28nm,0.7s,baz=100,slow=9.1,SNR=44
IDI Anoyia 34.04 298⇑ iP P 11 10 26.5 +2.1
IDI Anoyia 34.04 298 eP P 11 10 26.0 +1.6
comp=Z,32nm,0.7s
KMBO Kilima Mbogo 34.44 228 LR LR 11 24 48.8
comp=Z,78nm,18.4s,baz=86,slow=37
ALN Alexandroupoli 34.52 308 eP P 11 10 29.7 +1.3
comp=Z,4.9nm,1.3s
ALN Alexandroupoli 34.52 308 eP P 11 10 29.7 +1.3
comp=Z,4.9nm,1.3s
ZAA0 Zalesovo Array 34.73 24 eP P 11 10 30.1 +0.1
comp=Z,5.8nm,0.8s
ZAA0 Zalesovo Array 34.73 24 eP P 11 10 30.1 +0.1
comp=Z,5.8nm,0.8s
ZALV Zalesovo Beam 34.73 24 P P 11 10 30.1 +0.1
comp=Z,3.9nm,0.5s,baz=225,slow=9.6,SNR=19
ZALV LR LR 11 26 43.7
comp=Z,306nm,20.9s,baz=250,slow=40
ZALV Zalesovo Beam 34.73 24 eP P 11 10 29.8 -0.2
ZALV Zalesovo Beam 34.73 24 eP P 11 10 29.8 -0.2
ZALV Zalesovo Beam 34.73 24 eP P 11 10 29.8 -0.2
ZAA1 Zalesovo Array 34.73 24 eP P 11 10 30.1 +0.1
CFR Carcaliu 34.75 316⇓ iP P 11 10 30.7 +0.4
CHTO Chiang Mai 34.77 91 eP P 11 10 29.4 -1.4
comp=Z,5.7nm,1.3s
CHTO Chiang Mai 34.77 91 eP P 11 10 29.4 -1.4
CHTO pmax pmax
comp=Z,6.0nm,1.3s
CMAR Chiang Mai Arr 34.86 92 LR LR 11 27 51.4
comp=Z,54nm,19.1s,baz=280,slow=42
NVS Novosibirsk 34.88 22 eP P 11 10 30.4 -0.9
NVS Novosibirsk 34.88 22 eP P 11 10 30.4 -0.9
GTA Gaotai 35.57 55 P P 11 10 38.8 +1.2
GTA pP pP 11 10 43.2 +1.2
GTA sP sP 11 10 45.9 +2.1
GTA S S 11 16 15.7 +2.5
GTA SS SnSn 11 18 33.9 +0.2
GTA pmax pmax
comp=Z,5.0nm,0.8s
GTA pmax pmax
comp=Z,86nm,5.3s
GTA LR LR
comp=Z,200nm,18.5s
GTA LR LR
comp=Z,160nm,19.8s
GTA LR LR
comp=Z,180nm,18.9s
VRI Vrincioaia 35.95 317⇑ iP P 11 10 42.1 +1.5
VRI Vrincioaia 35.95 317 P P 11 10 42.4 +1.8
VRI Vrincioaia 35.95 317 P P 11 10 42.4 +1.8
PLOR Plostina 35.99 317⇑ iP P 11 10 42.5 +1.5
SOKR Solikamsk 36.01 356 eP P 11 10 40.6 -0.3
SOKR pmax pmax
comp=Z,25nm,1.0s
SORM Soroca 36.04 321⇓ iP P 11 10 41.5 +0.2
TESR Tescani 36.28 318⇓ iP P 11 10 43.7 +0.2
MLR Muntele Rosu 36.28 316⇑ iP P 11 10 45.7 +2.0
MLR Muntele Rosu 36.28 316 eP P 11 10 46.3 +2.6
comp=Z,27nm,1.2s
MLR Muntele Rosu 36.28 316 eP P 11 10 46.3 +2.6
MLR pmax pmax
comp=Z,27nm,1.2s
MLR Muntele Rosu 36.28 316 eP P 11 10 46.3 +2.6
comp=Z,27nm,1.2s
SRS Serrai 36.36 308 P P 11 10 46.3 +2.1
SRS Serrai 36.36 308 P P 11 10 46.3 +2.1
OBN Obninsk 36.55 336 P P 11 10 46.6 +1.0
comp=Z,27nm,0.4s,baz=163,slow=23,SNR=9.6
OBN Obninsk 36.55 336de P P 11 10 47.1 +1.5
OBN e 11 12 09.7
OBN ePPP PPP 11 12 25.2
OBN pmax pmax
comp=Z,78nm,1.7s
OBN MLR MLR
comp=Z,96nm,19.0s
ITM Ithomi 36.73 301 eP P 11 10 48.0 +0.6
comp=Z,10nm,0.7s
AGG Agios Georgios 36.77 304 eP P 11 10 48.0 +0.2
comp=Z,17nm,0.7s
AGG Agios Georgios 36.77 304 eP P 11 10 48.0 +0.2
AGG pmax pmax
comp=Z,17nm,0.7s
AGG Agios Georgios 36.77 304 eP P 11 10 48.0 +0.2
comp=Z,17nm,0.7s
VOIR 36.84 315⇑ iP P 11 10 49.9 +1.6
LIT Litokhoron 36.90 306 eP P 11 10 49.2 +0.3
comp=Z,5.1nm,0.8s
LIT Litokhoron 36.90 306 eP P 11 10 49.2 +0.3
LIT pmax pmax
comp=Z,5.0nm,0.8s
LIT Litokhoron 36.90 306 eP P 11 10 49.2 +0.3
comp=Z,5.1nm,0.8s
AKASG Malin Array Be 36.94 325 P P 11 10 49.2 +0.3
comp=Z,5.5nm,0.8s,baz=122,slow=7.8,SNR=28
AKASG LR LR 11 30 10.2
comp=Z,76nm,18.1s,baz=75,slow=43
AKASG Malin Array Be 36.94 325ce P P 11 10 49.5 +0.5
AKASG pmax pmax
comp=Z,6.0nm,0.7s
AKASG Malin Array Be 36.94 325 eP P 11 10 49.5 +0.5
comp=Z,6.0nm,0.7s
AKBB Malin Array Si 36.94 325 eP P 11 10 49.6 +0.7
comp=Z,13nm,0.8s
AKBB Malin Array Si 36.94 325 eP P 11 10 49.7 +0.7
AKBB pmax pmax
comp=Z,13nm,0.8s
AKBB Malin Array Si 36.94 325 eP P 11 10 49.7 +0.7
comp=Z,13nm,0.8s
AK11 Malin Array Si 36.96 325 eP P 11 10 50.2 +1.1
AK11 Malin Array Si 36.96 325 eP P 11 10 50.2 +1.1
VTS Vitosha 37.07 310⇑ iP P 11 10 51.8 +1.3
VTS Vitosha 37.07 310 eP P 11 10 51.5 +1.1
comp=Z,13nm,1.3s
VTS Vitosha 37.07 310 eP P 11 10 51.6 +1.1
VTS pmax pmax
comp=Z,13nm,1.3s
VTS Vitosha 37.07 310 eP P 11 10 51.5 +1.1
comp=Z,13nm,1.3s
ARR Arges 37.08 315⇓ iP P 11 10 51.5 +1.1
KMI Kunming 37.08 79 P P 11 10 52.5 +1.6
KMI pmax pmax
comp=Z,9.0nm,0.5s
BURAR Bucovina Array 37.65 319⇑ iP P 11 10 56.3 +1.1
BUR04 Bucovina Ar. S 37.65 319 eP P 11 10 55.9 +0.7
BUR04 Bucovina Ar. S 37.65 319 eP P 11 10 55.9 +0.7
BUR08 Bucovina Ar. S 37.67 319 eP P 11 10 55.4 0.0
BUR08 Bucovina Ar. S 37.67 319 eP P 11 10 55.4 0.0
LOT Lotru 37.67 315⇑ iP P 11 10 56.5 +1.0
CD2 Chengdu 37.67 70 P P 11 10 54.8 -0.8
CD2 pmax pmax
comp=Z,10.0nm,0.5s
FNA Florina 37.89 307 eP P 11 10 58.3 +1.0
comp=Z,45nm,0.7s
FNA Florina 37.89 307 eP P 11 10 58.3 +1.0
FNA pmax pmax
comp=Z,45nm,0.7s
FNA Florina 37.89 307 eP P 11 10 58.3 +1.0
comp=Z,45nm,0.7s
LZH Lanzhou 38.08 61 eP P 11 11 00.8 +1.7
LZH pP sP 11 11 05.2 -0.1
LZH sP pP 11 11 07.5 +4.0
LZH pmax pmax
comp=Z,20nm,1.1s
HERR Herculane 38.36 313⇑ iP P 11 11 02.3 +1.2
BZS Buzias 39.14 314⇑ iP P 11 11 08.8 +1.1
PRGR Permogore 39.49 348 eP P 11 11 07.5 -2.8
PRGR pmax pmax
comp=Z,15nm,0.6s
DIVS Divibare 39.76 311 eP P 11 11 13.8 +0.8
comp=Z,5.9nm,1.0s
DIVS Divibare 39.76 311 eP P 11 11 13.8 +0.8
comp=Z,5.9nm,1.0s
PDG Podgorica 39.84 308⇓ iP P 11 11 13.5 0.0
KLMR Klimovskoe 40.20 343 eP P 11 11 14.2 -2.0
KLMR pmax pmax
comp=Z,77nm,1.3s
KLMR Klimovskoe 40.20 343 eP P 11 11 14.3 -2.0
KLMR AMP 11 11 17.3
comp=Z,77nm,1.3s
KLMR ePP PP 11 12 44.5 -4.2
IDID Didziasalis 40.84 330 eP P 11 11 22.9 +1.3
IDID IAmb IAmb 11 11 24.1
comp=Z,13nm,0.9s
IDID Didziasalis 40.84 330 eP P 11 11 22.9 +1.3
SNR=25
PSZ Piszkesteto 41.06 317 eP P 11 11 24.2 +0.5
comp=Z,6.0nm,0.8s
PSZ Piszkesteto 41.06 317 eP P 11 11 24.2 +0.5
PSZ pmax pmax
comp=Z,6.0nm,0.8s
PSZ Piszkesteto 41.06 317 eP P 11 11 24.2 +0.5
comp=Z,6.0nm,0.8s
TIP Timpagrande 41.06 303⇑ iP P 11 11 25.3 +1.5
TIP Timpagrande 41.06 303 eP P 11 11 25.3 +1.5
comp=Z,5.4nm,0.7s
TIP Timpagrande 41.06 303 eP P 11 11 25.3 +1.5
comp=Z,5.4nm,0.7s
IIGN Ignalina 41.10 330 eP P 11 11 25.0 +1.2
IIGN IAmb IAmb 11 11 26.1
comp=Z,11nm,0.7s
IIGN Ignalina 41.10 330 eP P 11 11 25.0 +1.2
SNR=25
GSI Gunungsitoli 41.10 118 eP P 11 11 21.9 -2.3
comp=Z,45nm,1.2s
ISAL Salakas 41.27 330 eP P 11 11 26.4 +1.2
ISAL IAmb IAmb 11 11 28.5
comp=Z,8.2nm,0.8s
IZAR Zarasai 41.32 330 eP P 11 11 26.8 +1.2
IZAR IAmb IAmb 11 11 28.2
comp=Z,13nm,0.7s
MATE Matera 41.34 305⇑ iP P 11 11 27.2 +1.3
PSI Prapat 41.37 115 LR LR 11 28 39.0
comp=Z,90nm,18.3s,baz=273,slow=36
CUC Castrocucco 41.90 304 eP P 11 11 32.6 +1.9
comp=Z,34nm,0.9s
CUC Castrocucco 41.90 304 eP P 11 11 32.6 +1.9
comp=Z,34nm,0.9s
OJC Ojcow 41.98 320 eP P 11 11 32.3 +1.2
comp=Z,26nm,1.0s
OJC Ojcow 41.98 320 eP P 11 11 32.3 +1.2
OJC pmax pmax
comp=Z,26nm,1.0s
OJC Ojcow 41.98 320 eP P 11 11 32.3 +1.2
comp=Z,26nm,1.0s
TLY Talaya 42.34 38 eP P 11 11 35.6 +1.5
comp=Z,4.7nm,1.0s
TLY Talaya 42.34 38 eP P 11 11 35.7 +1.7
TLY pmax pmax
comp=Z,3.0nm,0.7s
TLY MLR MLR
comp=Z,109nm,19.0s
TLY Talaya 42.34 38 eP P 11 11 35.6 +1.5
comp=Z,4.7nm,1.0s
SONA0 Songino Array 42.57 44 eP P 11 11 38.0 +1.9
SONA0 Songino Array 42.57 44 eP P 11 11 38.0 +1.9
SONM Songino Array 42.57 44 P P 11 11 38.0 +1.9
comp=Z,3.4nm,0.8s,baz=256,slow=8.2,SNR=21
SONM LR LR 11 32 54.6
comp=Z,129nm,19.1s,baz=268,slow=41
SONM Songino Array 42.57 44 P P 11 11 38.0 +1.9
SONM pmax pmax
comp=Z,3.0nm,0.8s
SONM MLR MLR
comp=Z,129nm,19.1s
SONM Songino Array 42.57 44 P P 11 11 38.0 +1.9
comp=Z,129nm,19.1s
SONA1 Songino Array 42.58 44 eP P 11 11 37.6 +1.4
SONA1 Songino Array 42.58 44 eP P 11 11 37.6 +1.4
VSU Vasula 42.77 334⇑ iP P 11 11 37.8 +0.5
JAVC Velka Javorina 42.78 317 eP P 11 11 39.1 +1.4
ULN Ulaanbaatar 43.00 44 eP P 11 11 40.6 +1.0
comp=Z,4.6nm,1.0s
ULN Ulaanbaatar 43.00 44 eP P 11 11 40.7 +1.0
ULN pmax pmax
comp=Z,5.0nm,1.0s
ULN Ulaanbaatar 43.00 44 eP P 11 11 40.7 +1.0
comp=Z,4.6nm,1.0s
SOP Sopron 43.11 315 P P 11 11 42.7 +2.4

SOP Sopron 43.11 315 P **P 11 11 42.7 +2.4**
MORC Moravsky Berou 43.17 318 ⇑*i*P **P 11 11 41.3 +0.5**
MORC Moravsky Berou 43.17 318 *e*P **P 11 11 41.5 +0.7**
comp=Z,27nm,0.9s
MORC Moravsky Berou 43.17 318 *e*P **P 11 11 41.5 +0.7**
MORC pmax pmax
comp=Z,27nm,0.9s
MORC Moravsky Berou 43.17 318 *e*P **P 11 11 41.5 +0.7**
comp=Z,27nm,0.9s
MORC Moravsky Berou 43.17 318 *e*P **P 11 11 40.9 +0.1**
TMCR Tamitsa 43.37 345 *e*P **P 11 11 38.2 -3.9**
VRAC Vranov 43.59 318 *e*P **P 11 11 44.9 +0.7**
VRAC Vranov 43.59 318 *e*P **P 11 11 44.9 +0.7**
CONA Conrad Observa 43.63 315 *i*P **P 11 11 45.6 +1.0**
comp=Z,11nm,1.5s,SNR=5.0
CONA Conrad Observa 43.63 315 P **P 11 11 45.6 +1.0**
comp=Z,11nm,1.5s,SNR=5.0
KRUC Moravsky 43.64 317 *e*P **P 11 11 45.3 +0.8**
ARSA Arzberg 43.66 314 *i*P **P 11 11 46.1 +1.4**
comp=Z,8.7nm,0.9s
ARSA Arzberg 43.66 314 P **P 11 11 46.1 +1.4**
comp=Z,8.7nm,0.9s
PERS Pernice 43.76 313 *e*P **P 11 11 46.3 +0.6**
PERS Pernice 43.76 313 P **P 11 11 46.3 +0.6**
SOKA Soboth 43.83 313 *e*P **P 11 11 47.4 +1.2**
comp=Z,12nm,1.1s,SNR=5.1
SOKA Soboth 43.83 313 P **P 11 11 47.4 +1.2**
comp=Z,12nm,1.1s,SNR=5.1
GBAS Gorenja Brezov 44.04 312 *e*P **P 11 11 48.8 +0.9**
GBAS Gorenja Brezov 44.04 312 *e*P **P 11 11 48.8 +0.9**
DPC Dobruska-Polom 44.11 319 *e*P **P 11 11 49.3 +0.9**
DPC Dobruska-Polom 44.11 319 *e*P **P 11 11 49.3 +0.9**
DPC smax smax
comp=N,6.0nm,0.4s
DPC Dobruska-Polom 44.11 319 *e*P **P 11 11 49.3 +0.9**
OBKA Obir 44.11 313 *e*P **P 11 11 49.9 +1.4**
comp=N,16nm,1.3s
OBKA Obir 44.11 313 P **P 11 11 49.9 +1.4**
comp=N,16nm,1.3s
OPO Ambohidratompo 44.44 200 P **P 11 11 52.9 +1.4**
comp=N,4.2nm,0.9s,baz=322,slow=12,SNR=4.3
OPO LR LR 11 26 04.0
comp=N,130nm,21.4s,baz=2.5,slow=30
MOA Molln 44.64 315 *e*P **P 11 11 53.2 +0.5**
comp=N,14nm,1.1s
MOA Molln 44.64 315 P **P 11 11 53.2 +0.5**
comp=N,14nm,1.1s
HHC Hu-ho-hao-te 44.68 55 *e*P **P 11 11 53.2 0.0**
HHC pP pP 11 11 57.6 0.0
HHC sP sP 11 12 00.2 +0.8
HHC S **S 11 18 28.2 -1.1**
HHC pmax pmax
comp=N,14nm,0.9s
HHC pmax pmax
comp=N,60nm,5.1s
HHC LR LR
comp=N,56nm,17.3s
HHC LR LR
comp=N,85nm,16.4s
HHC LR LR
comp=N,75nm,15.6s
MYKA Terra Mystica 44.74 313 *e*P **P 11 11 54.7 +1.2**
comp=N,5.0nm,0.8s
MYKA Terra Mystica 44.74 313 P **P 11 11 54.7 +1.2**
comp=N,5.0nm,0.8s
FIA0 FINESS Array S 44.93 337 *e*P **P 11 11 55.3 +0.6**
FIA0 FINESS Array S 44.93 337 *e*P **P 11 11 55.3 +0.6**
FIA1 FINESS Array S 44.93 337 *e*P **P 11 11 55.3 +0.6**
FINES FINESS Array B 44.93 337 P **P 11 11 55.3 +0.6**
comp=N,9.2nm,0.7s,baz=116,slow=11,SNR=17
FINES LR LR 11 32 55.6
comp=N,69nm,21.8s,baz=210,slow=39
FINES FINESS Array B 44.93 337 *i*P **P 11 11 55.2 +0.5**
FINES pmax pmax
comp=Z,9.0nm,0.7s
KBA Koelnbreinsper 45.05 314 *e*P **P 11 11 57.1 +1.0**
comp=Z,13nm,1.2s
KBA Koelnbreinsper 45.05 314 P **P 11 11 57.1 +1.0**
comp=Z,13nm,1.2s
GEA0 GERESS Array S 45.27 316 *e*P **P 11 11 58.0 +0.3**
GEA0 GERESS Array S 45.27 316 *e*P **P 11 11 58.0 +0.3**
GEC2 GERESS Array S 45.27 316 *e*P **P 11 11 58.0 +0.3**
comp=Z,12nm,1.1s
GEC2 GERESS Array S 45.27 316 *e*P **P 11 11 58.0 +0.3**
GEC2 pmax pmax
comp=Z,12nm,1.1s
GEC2 GERESS Array S 45.27 316 *e*P **P 11 11 58.0 +0.3**
comp=Z,12nm,1.1s
GERES GERESS Array B 45.27 316 P **P 11 11 58.6 +0.9**
comp=Z,3.3nm,0.9s,baz=109,slow=7.5,SNR=16
GERES LR LR 11 36 12.8
comp=Z,29nm,19.2s,baz=147,slow=43
KHC Kasperske Hory 45.43 316 *e*P **P 11 11 59.5 +0.5**
KHC *ex* x 11 12 17.0
KHC Kasperske Hory 45.43 316 *e*P **P 11 11 59.4 +0.5**
comp=Z,7.1nm,1.2s
KHC Kasperske Hory 45.43 316 *e*P **P 11 11 59.4 +0.5**
KHC pmax pmax
comp=Z,7.0nm,1.2s
KHC Kasperske Hory 45.43 316 *e*P **P 11 11 59.4 +0.5**
comp=Z,7.1nm,1.2s
ABTA Abfaltersbach 45.53 313 *e*P **P 11 12 00.0 +0.2**
comp=Z,17nm,0.9s,SNR=8.9
ABTA Abfaltersbach 45.53 313 P **P 11 12 00.0 +0.2**
comp=Z,17nm,0.9s,SNR=8.9
BRG Berggiesshubel 45.71 319 *e*P **P 11 12 01.9 +0.8**
comp=Z,7.7nm,1.2s
BRG *e* 11 12 18.9
comp=Z,6.8nm,1.2s
BRG Berggiesshubel 45.71 319 *e*P **P 11 12 01.9 +0.8**
BRG pmax pmax
comp=Z,8.0nm,1.2s
WTTA Wattenberg 46.23 313 *i*P **P 11 12 05.5 +0.1**
comp=Z,16nm,1.2s,SNR=5.7
WTTA Wattenberg 46.23 313 P **P 11 12 05.5 +0.1**
comp=Z,16nm,1.2s,SNR=5.7
CLL Collm 46.41 319 *i*P **P 11 12 07.8 +1.2**
comp=Z,29nm,1.2s
CLL *e* 11 12 17.0
CLL *i* 11 12 25.1
comp=Z,26nm,1.3s
CLL *e* 11 12 30.0
CLL LmV 11 36 00.0
comp=Z,100nm,19.3s
CLL Collm 46.41 319 *e*P **P 11 12 07.7 +1.2**
comp=Z,29nm,1.2s
CLL Collm 46.41 319 *i*P **P 11 12 07.8 +1.2**
CLL pmax pmax
comp=Z,29nm,1.2s
CLL Collm 46.41 319 *e*P **P 11 12 07.7 +1.2**
comp=Z,29nm,1.2s
KEST Kesra 46.71 297 P **P 11 12 11.5 +2.3**
comp=Z,3.1nm,0.8s,baz=40,slow=2.1,SNR=4.4
FETA Feichten 46.78 313 *e*P **P 11 12 09.7 -0.1**
comp=Z,18nm,0.9s,SNR=8.1
FETA Feichten 46.78 313 P **P 11 12 09.7 -0.1**
comp=Z,18nm,0.9s,SNR=8.1
RETA Reutte 46.85 314 *i*P **P 11 12 09.9 -0.3**
comp=Z,9.5nm,0.8s
RETA Reutte 46.85 314 P **P 11 12 09.9 -0.3**
comp=Z,9.5nm,0.8s
GRFO Grafenberg 47.06 317 *e*P **P 11 12 13.0 +1.3**
comp=Z,19nm,1.0s
GRFO Grafenberg 47.06 317 *e*P **P 11 12 13.0 +1.3**
GRFO pmax pmax
comp=Z,19nm,1.0s
GRFO Grafenberg 47.06 317 *e*P **P 11 12 13.0 +1.3**
comp=Z,19nm,1.0s
APA Apatity 47.26 346 ⇓*i*P **P 11 12 12.8 -0.2**
APA *i* 11 14 02.6
APA *i*S **S 11 19 02.0 -3.5**
APA *i*SS **ScS 11 22 11.0 +4.7**
APA pmax pmax
comp=Z,14nm,0.8s
APA MLR MLR
comp=Z,600nm,15.0s
DAVA Damuels 47.40 313 *i*P **P 11 12 14.4 -0.2**
comp=Z,25nm,0.9s,SNR=8.5
DAVA Damuels 47.40 313 P **P 11 12 14.4 -0.2**
comp=Z,25nm,0.9s,SNR=8.5
NRIK Noril'sk 48.13 12 P **P 11 12 21.2 +1.5**
comp=Z,9.7nm,0.7s,baz=211,slow=5.3,SNR=13
NRIK LR LR 11 36 19.4
comp=Z,159nm,19.4s,baz=210,slow=41
LPG La Plagne 49.26 310 *e*P **P 11 12 28.8 -0.3**
LPG pmax pmax
comp=Z,6.0nm,0.9s
LPG La Plagne 49.26 310 *e*P **P 11 12 28.8 -0.3**
comp=Z,6.0nm,0.9s
LPL La Plagne 49.28 310 *e*P **P 11 12 28.1 -1.1**
LPL pmax pmax
comp=Z,7.0nm,0.9s
LPL La Plagne 49.28 310 *e*P **P 11 12 28.1 -1.1**
comp=Z,7.0nm,0.9s
HFS Hagfors 49.30 331 P **P 11 12 29.3 +0.4**
comp=Z,9.4nm,0.7s,baz=138,slow=6.9,SNR=13
HFS LR LR 11 37 06.9
comp=Z,87nm,19.4s,baz=130,slow=41
HFS Hagfors 49.30 331 P **P 11 12 29.3 +0.4**
HFS pmax pmax
comp=Z,10.0nm,0.7s
HFS MLR MLR
comp=Z,87nm,19.4s
CDF Champ du Feu 49.33 314 *e*P **P 11 12 29.1 -0.3**
CDF pmax pmax
comp=Z,7.0nm,1.1s
CDF Champ du Feu 49.33 314 *e*P **P 11 12 29.1 -0.3**
comp=Z,7.0nm,1.1s
ECH Echery 49.37 314 *e*P **P 11 12 29.6 0.0**
comp=Z,8.1nm,0.9s
ECH Echery 49.37 314 *e*P **P 11 12 29.6 0.0**
ECH pmax pmax
comp=Z,8.0nm,0.9s
ECH Echery 49.37 314 *e*P **P 11 12 29.6 0.0**
comp=Z,8.1nm,0.9s
HAU Haudompre 49.88 314 *e*P **P 11 12 32.3 -1.2**
HAU pmax pmax
comp=Z,2.0nm,0.4s
HAU Haudompre 49.88 314 *e*P **P 11 12 32.3 -1.2**
comp=Z,2.0nm,0.4s
WLF Walferdange 50.27 316 *e*P **P 11 12 36.6 +0.2**
comp=Z,30nm,1.4s
WLF Walferdange 50.27 316 *e*P **P 11 12 36.6 +0.2**
WLF pmax pmax
comp=Z,30nm,1.4s
WLF Walferdange 50.27 316 *e*P **P 11 12 36.6 +0.2**
comp=Z,30nm,1.4s
KEV Kevo 50.45 345 *e*P **P 11 12 37.4 0.0**
comp=Z,19nm,0.9s
KEV Kevo 50.45 345 *e*P **P 11 12 37.4 0.0**
KEV pmax pmax
comp=Z,19nm,0.9s
NJ2 Nanjing 50.50 67 *e*P **P 11 12 39.3 +0.9**
NJ2 pmax pmax
comp=Z,15nm,0.5s
NC602 NORSAR Array S 50.53 331 *e*P **P 11 12 38.1 -0.1**
NC602 NORSAR Array S 50.53 331 *e*P **P 11 12 38.0 -0.1**
NC405 NORSAR Array S 50.60 331 *e*P **P 11 12 38.0 -0.8**
ARA0 ARCESS Array S 50.65 344 *e*P **P 11 12 39.3 +0.3**
ARCES ARCESS Array B 50.65 344 P **P 11 12 39.3 +0.3**
comp=Z,15nm,0.8s,baz=139,slow=7.6,SNR=45
ARCES LR LR 11 37 16.7
comp=Z,165nm,19.7s,baz=108,slow=40
ARCES ARCESS Array B 50.65 344 *e*P **P 11 12 39.2 +0.2**
ARE0 ARCESS Array S 50.65 344 *e*P **P 11 12 39.3 +0.3**
comp=Z,21nm,0.9s
ARE0 ARCESS Array S 50.65 344 *e*P **P 11 12 39.2 +0.2**
VIVF Saint-Julien-l 50.66 309 *e*P **P 11 12 38.9 -0.6**
VIVF pmax pmax
comp=Z,7.0nm,1.1s
VIVF Saint-Julien-l 50.66 309 *e*P **P 11 12 38.9 -0.6**
comp=Z,7.0nm,1.1s
SSB Saint Sauveur 50.79 310 *e*P **P 11 12 40.4 0.0**
comp=Z,7.3nm,0.9s
SSB Saint Sauveur 50.79 310 *e*P **P 11 12 40.4 0.0**
SSB pmax pmax
comp=Z,7.0nm,0.9s
SSB Saint Sauveur 50.79 310 *e*P **P 11 12 40.4 0.0**
comp=Z,7.3nm,0.9s
NB2 NORSAR Subarra 50.80 331 P **P 11 12 39.8 -0.4**
comp=Z,5.1nm,0.8s,baz=111,slow=7.4
NB2 NORSAR Subarra 50.80 331 P **P 11 12 39.8 -0.4**
baz=111,slow=7.4
NB200 NORSAR Array S 50.80 331 *e*P **P 11 12 39.6 -0.6**
NOA NORSAR Array B 50.80 331 P **P 11 12 39.6 -0.6**
comp=Z,8.2nm,0.9s,baz=119,slow=7.3,SNR=12
NOA LR LR 11 38 02.1
comp=Z,68nm,19.4s,baz=105,slow=40
KTK1 Kautokeino 50.87 343 *e*P **P 11 12 40.3 -0.3**
BCLA Clavier 50.94 317 ⇑P **P 11 12 42.1 +0.7**
NBO00 NORSAR Array S 50.99 331 *e*P **P 11 12 41.5 -0.1**
HOMB Homborsund 51.07 327 *e*P **P 11 12 43.3 +1.1**
GIVF Givet 51.19 316 *e*P **P 11 12 44.3 +1.0**
GIVF pmax pmax
comp=Z,12nm,1.0s
DOU Dourbes 51.34 316 ⇓P **P 11 12 45.1 +0.7**
DOU Dourbes 51.34 316 P **P 11 12 45.1 +0.7**
BAIF Baives 51.58 316 *e*P **P 11 12 46.6 +0.4**
BAIF pmax pmax
comp=Z,10.0nm,1.3s
BAIF Baives 51.58 316 *e*P **P 11 12 46.6 +0.4**
comp=Z,10.0nm,1.3s
HAMF Hammerfest 51.88 345 *e*P **P 11 12 48.7 +0.6**
MOR8 Moi Rana 51.88 338 *e*P **P 11 12 47.9 -0.3**
MOR8 IAmb IAmb 11 12 48.7
comp=Z,16nm,1.0s
TRO Tromso 52.44 342 *e*P **P 11 12 52.7 +0.4**
TCF Toulx Ste Croi 52.49 311 *e*P **P 11 12 52.4 -0.8**
TCF pmax pmax
comp=Z,6.0nm,0.9s
TCF Toulx Ste Croi 52.49 311 *e*P **P 11 12 52.4 -0.8**
comp=Z,6.0nm,0.9s
KONS Konsvik 52.51 338 *e*P **P 11 12 53.0 +0.2**
STEI Steigen 52.54 340 *e*P **P 11 12 53.2 +0.2**
RJF Les Rejaudoux 52.92 310 *e*P **P 11 12 56.1 -0.2**
RJF pmax pmax
comp=Z,9.0nm,0.8s
RJF Les Rejaudoux 52.92 310 *e*P **P 11 12 56.1 -0.2**
comp=Z,9.0nm,0.8s
FLN La Foliniere 54.48 314 *e*P **P 11 13 06.5 -1.2**
FLN pmax pmax
comp=Z,9.0nm,0.9s
FLN La Foliniere 54.48 314 *e*P **P 11 13 06.5 -1.2**
comp=Z,9.0nm,0.9s
SJPF Ste Jean 54.86 307 *e*P **P 11 13 10.2 -0.3**
SJPF pmax pmax
comp=Z,40nm,1.8s
SJPF Ste Jean 54.86 307 *e*P **P 11 13 10.2 -0.3**
comp=Z,40nm,1.8s
QUIF Quistinic 56.24 313 *e*P **P 11 13 18.9 -1.4**
QUIF pmax pmax
comp=Z,41nm,1.6s
QUIF Quistinic 56.24 313 *e*P **P 11 13 18.9 -1.4**
comp=Z,41nm,1.6s
ESDC Sonseca Array 57.09 303 P **P 11 13 26.1 -0.5**
comp=Z,0.9nm,0.7s,baz=60,slow=8.0,SNR=5.4
KS01 Wonju Array Si 57.35 60 *e*P **P 11 13 27.9 -0.5**
KS01 Wonju Array Si 57.35 60 *e*P **P 11 13 27.9 -0.5**
KSRS Korea Array 57.38 60 P **P 11 13 27.7 -0.9**
comp=Z,2.1nm,0.8s,baz=266,slow=7.0,SNR=15
KSRS PcP **PcP 11 14 22.1 -0.4**
comp=Z,2.5nm,0.8s,baz=278,slow=4.0,SNR=8.7
KSRS LR LR 11 39 15.0
comp=Z,36nm,20.1s,baz=266,slow=37
TOA0 Torodi Ar. Sit 57.75 271 *e*P **P 11 13 31.8 +0.3**
TORD Torodi Ar. Bea 57.75 271 P **P 11 13 31.9 +0.3**
comp=Z,6.4nm,0.7s,baz=66,slow=6.7,SNR=46
TORD LR LR 11 40 56.1
comp=Z,72nm,18.6s,baz=100,slow=39
TOA1 Torodi Ar. Sit 57.75 271 *e*P **P 11 13 31.9 +0.3**
SPA0 Spitsbergen Ar 58.40 350 *e*P **P 11 13 35.9 +0.7**
SPITS Spitsbergen Ar 58.40 350 P **P 11 13 36.3 +1.2**
comp=Z,3.5nm,0.6s,baz=138,slow=13,SNR=9.0
SPITS LR LR 11 43 31.4
comp=Z,98nm,18.6s,baz=150,slow=41
MDT Midelt 58.46 295 LR LR 11 46 03.4
comp=Z,67nm,18.1s,baz=144,slow=43
YAK Yakutsk 58.90 31 *e*P **P 11 13 37.4 -1.4**
YAK *e**PP **sP 11 13 47.3 +2.2**
YAK *e* 11 14 22.4
YAK *e*S S 11 21 34.2 -10
YAK *e* 11 23 19.4
YAK *e*SS **SS 11 25 39.6 +2.4**
YAK pmax pmax
comp=Z,35nm,0.9s
YAK pmax pmax
comp=E,11nm,1.0s
YAK pmax pmax
comp=Z,92nm,4.4s
YAK pmax pmax
comp=N,58nm,4.4s
YAK pmax pmax
comp=E,34nm,4.3s
YAK smax smax
comp=N,63nm,4.7s
YAK smax smax
comp=E,35nm,4.2s
YAK MLR MLR
comp=Z,167nm,23.0s
YAK MLR MLR
comp=E,85nm,24.0s
KLR Kul'dur 59.37 46 P **P 11 13 42.3 0.0**
comp=E,0.6nm,0.9s,baz=277,slow=7.8,SNR=19
KLR LR LR 11 44 18.5
comp=E,12nm,18.1s,slow=41
JOW Kunigami 59.45 72 LR LR 11 41 49.8
comp=E,63nm,18.9s,baz=166,slow=39
KBS Kingsbay 59.56 350 *e*P **P 11 13 44.2 +1.0**
comp=E,20nm,0.9s
KBS Kingsbay 59.56 350 *e*P **P 11 13 44.2 +1.0**
KBS pmax pmax
comp=Z,20nm,0.9s
KBS Kingsbay 59.56 350 *e*P **P 11 13 44.1 +1.0**
JNU Nakatsue 60.40 64 LR LR 11 43 31.6
comp=Z,66nm,21.3s,baz=300,slow=40
TIXI Tiksi 60.44 20 P **P 11 13 48.6 -0.6**
comp=Z,3.4nm,0.5s,baz=285,slow=3.5,SNR=12
TIXI Tiksi 60.44 20 *e*P **P 11 13 48.8 -0.4**
TIXI Tiksi 60.44 20*c i*P **P 11 13 48.5 -0.7**
TIXI pmax pmax
comp=Z,9.0nm,1.2s
CGP Cagayan de Oro 61.75 93||*e*P **P 11 14 00.5 +1.5**
KOWA Kowa 62.53 275 P **P 11 14 04.9 +0.6**
comp=Z,3.8nm,0.7s,baz=56,slow=7.1,SNR=8.5
KOWA LR LR 11 43 43.3
comp=Z,131nm,18.2s,baz=35,slow=38
BOSA Boshof 62.90 216 P **P 11 14 06.3 -0.3**
comp=Z,4.4nm,0.9s,baz=49,slow=11,SNR=4.6
BOSA LR LR 11 40 34.8
comp=Z,59nm,20.6s,baz=28,slow=35
DAV Davao City (W) 63.09 94 LR LR 11 46 07.6
comp=Z,23nm,19.1s,baz=300,slow=40
MJAR Matsushiro Arr 65.65 59 LR LR 11 47 10.6
comp=Z,15nm,18.5s,baz=305,slow=40
DBIC Dimbokro 66.11 267 LR LR 11 44 43.9
comp=Z,35nm,18.4s,baz=56,slow=37
YSS Yuzh-Sakhalins 66.94 47 *e*P **P 11 14 32.3 -0.3**
YSS pmax pmax
comp=Z,20nm,1.1s
ASAJ Asahikawa 67.37 50 LR LR 11 45 51.0
comp=Z,46nm,20.2s,baz=151,slow=38
JHJ Hachijo jima 2 67.70 62 LR LR 11 46 52.2
comp=Z,46nm,19.1s,baz=250,slow=38
MA2 Magadan 69.27 33 *e*P **P 11 14 47.4 +0.4**
comp=Z,9.2nm,0.9s
MA2 Magadan 69.27 33 *i*P **P 11 14 47.1 +0.1**
MA2 pmax pmax
comp=Z,12nm,1.7s
SEY Seymchan 69.35 29*c i*P **P 11 14 48.3 +0.9**
SUMG Summit 70.61 342 *e*P **P 11 14 56.7 +1.1**
comp=Z,10nm,0.9s
SUMG Summit 70.61 342 *e*P **P 11 14 56.7 +1.1**
SUMG pmax pmax
comp=Z,11nm,0.9s
BILL Bilibino 73.41 22 *e*P **P 11 15 12.5 +0.6**
comp=Z,4.7nm,0.9s
BILL Bilibino 73.41 22*c i*P **P 11 15 12.3 +0.4**
BILL *e* 11 15 29.8
BILL *e* 11 17 51.0
BILL *e*PPP PPP 11 19 38.2
BILL pmax pmax
comp=Z,11nm,2.5s
BILL MLR MLR
comp=Z,259nm,18.0s
PETK Petropavlovsk- 74.70 38 LR LR 11 53 23.0
comp=Z,70nm,18.7s,baz=271,slow=40
TULEG Thule 75.58 349 *e*P **P 11 15 24.6 +0.2**
comp=Z,15nm,1.1s
SFJD Kangerlussuaq 76.71 338 LR LR 11 51 51.6
comp=Z,99nm,19.4s,baz=71,slow=38
WR1 Warramunga Arr 82.83 115 *e*P **P 11 16 04.0 -0.9**
comp=Z,5.4nm,0.9s
WRA Warramunga Arr 82.83 115 P **P 11 16 04.0 -0.9**
comp=Z,2.5nm,0.8s,baz=309,slow=4.6,SNR=19
WRA Warramunga Arr 82.83 115 P **P 11 16 04.0 -0.9**
WRA pmax pmax
comp=Z,2.0nm,0.8s
ASAR Alice Springs 84.25 119 P **P 11 16 11.4 -0.7**
comp=Z,0.9nm,0.8s,baz=303,slow=5.3,SNR=8.4
TOLK Toolik Lake Re 85.05 11 *e*P **P 11 16 16.0 +0.5**
comp=Z,9.1nm,0.9s
COLD Coldfoot 86.18 12 *e*P **P 11 16 21.8 +0.7**
comp=Z,8.4nm,1.0s
IM3 Indian Mountai 86.53 14 *e*P **P 11 16 22.0 -0.8**
INK Inuvik 87.52 6 *e*P **P 11 16 27.4 -0.2**
comp=Z,12nm,1.1s
INK Inuvik 87.52 6 *e*P **P 11 16 27.4 -0.2**
INK pmax pmax
comp=Z,12nm,1.1s
FYU Fort Yukon 87.66 11 *e*P **P 11 16 29.4 +1.1**
comp=Z,16nm,1.2s
MLY Manley 87.99 13 *e*P **P 11 16 30.3 +0.3**
comp=Z,5.6nm,0.8s
MDM Murphy Dome 88.57 12 *e*P **P 11 16 32.8 +0.1**
comp=Z,11nm,1.0s
BPAW Bear Paw Mtn. 88.75 14 *e*P **P 11 16 33.9 +0.4**
comp=Z,15nm,1.1s
ILAR Eielson Array 88.99 12 P **P 11 16 33.7 -1.0**
comp=Z,0.6nm,0.7s,baz=337,slow=3.7,SNR=6.3
ILAR PP **PP 11 20 05.1 +1.5**
comp=Z,0.6nm,1.1s,baz=324,slow=5.6,SNR=4.8
DAWY Dawson 90.91 9 *e*P **P 11 16 44.0 +0.3**
comp=Z,4.8nm,1.1s
YKW3 Yellowknife Ar 93.96 358 *e*P **P 11 16 58.1 +0.4**
comp=Z,5.0nm,0.9s
YKA Yellowknife Ar 94.02 358 P **P 11 16 58.6 +0.7**
comp=Z,3.4nm,0.8s,baz=352,slow=4.9,SNR=86
YKA PP **PP 11 20 37.1 -6.0**
comp=Z,0.1nm,0.7s,baz=2.5,slow=7.7,SNR=2.8
YKA LR LR 12 04 37.5
comp=Z,6.6nm,18.2s,baz=356,slow=39
STKA Stephens Creek 94.04 123 LR LR 11 55 44.6
comp=Z,49nm,19.6s,baz=20,slow=33
FCC Fort Churchill 95.44 348 *e*P **P 11 17 05.0 +0.5**
comp=Z,4.7nm,0.9s
FCC Fort Churchill 95.44 348 *e*P **P 11 17 05.0 +0.5**
FCC pmax pmax
comp=Z,5.0nm,0.9s
NV01 Mina Array Sit 118.16 0 *e*PKPdf **PKPdf 11 22 28.6 +0.8**
NVAR Mina Array Bea 118.16 0 PKP **PKPdf 11 22 29.0 +1.1**
comp=Z,1.0nm,0.7s,baz=280,slow=1.1,SNR=9.9
MNTX Cornudas Mount 123.56 347 *e*PKPdf **PKPdf 11 22 38.7 +0.6**
TXAR Lajitas Array 125.44 345 PKP **PKPdf 11 22 42.3 +0.4**
comp=Z,0.8nm,0.6s,baz=160,slow=2.1,SNR=10

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*CSEM **01** 11:11:44.5, 45.54N×13.85E, h0km, ML0.9, Suspected Mining explosion.*

LJU 01 11:11:44.5, 45.54N×13.85E, h0km, ML0.9, 5C-1D
Artificial, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKDS	**Skadanscina**	**0.12**	**85**	⇑*i*Pg	Pg	11 11 47.0	+0.3
SKDS				*i* Sg	Sg	11 11 48.9	+0.6
comp=Z,53nm,0.1s							
SKDS	**Skadanscina**	**0.12**	**85**	⇑*i*Pg	Pg	11 11 47.0	+0.3
SKDS				*i* Sg	Sg	11 11 48.9	+0.6
comp=Z,53nm,0.1s							
KNDS	**Knezji Dol**	**0.37**	**91**	⇑*i*Pg	Pg	11 11 51.8	+0.1
KNDS				*i* Sg	Sg	11 11 58.0	+1.5
comp=Z,2.0nm,0.1s							
KNDS	**Knezji Dol**	**0.37**	**91**	⇑*i*Pg	Pg	11 11 51.8	+0.1
KNDS				*i* Sg	Sg	11 11 58.0	+1.5
comp=Z,2.0nm,0.1s							
JAVS	**Javornik**	**0.39**	**23**	⇑*i*Pg	Pg	11 11 51.6	-0.4
JAVS				*i* Sg	Sg	11 11 57.1	+0.1
comp=Z,4.0nm,0.1s							
JAVS	**Javornik**	**0.39**	**23**	⇓*i*Pg	Pg	11 11 51.6	-0.3
JAVS				*i* Sg	Sg	11 11 57.1	+0.1
comp=Z,4.0nm,0.1s							
CEY	**Cerknica**	**0.45**	**63**	*i* Pg	Pg	11 11 52.5	-0.7
CEY				*i* Sg	Sg	11 11 59.6	+0.5
comp=Z,7.0nm,0.2s							
CEY	**Cerknica**	**0.45**	**63**	*i* Pg	Pg	11 11 52.5	-0.7
CEY				*i* Sg	Sg	11 11 59.6	+0.5
comp=Z,7.0nm,0.2s							

*SFS **01** 11:16:43.0, 37.°30N×12.°70W, h0km, ML4.1*
*MDD **01** 11:16:44.4±1.8, 37.°31N×12.°69W, h0km, mb4.2/9, Error ellipse: s-maj=15.7km s-min=13.5km az=58.0, PRXIMO*
*INMG **01** 11:16:45.6±1.4, 37.°15N×13.°12W, h10km, ML2.5, Error ellipse: s-maj=7.5km s-min=5.5km az=84.0*
*IGIL **01** 11:16:45.2, 37.°30N×12.°76W, h9km, ML2.7*
*CSEM **01** 11:16:46.9±0.3, 37.°42N×12.°49W, h10km, mb4.2, Error ellipse: s-maj=5.0km s-min=4.2km az=71.0*

ISC 01 11:16:41.3±3.2, 37.°31N±0.°09×12.°7W±0.°2, h10km, n86, σ2°01/160, 2C-1D, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.13**	**92**	*e*Pn	**Pn**		**11 17 32.1**	**+1.4**
PFVI				*e*Sn	**Sn**		**11 18 08.6**	**+0.5**
PFVI				A	A		11 18 15.1	
	11nm,0.7s							
PFVI	**Vila Bisbo**	**3.13**	**92**	P	**Pn**		**11 17 32.1**	**+1.4**
	2.9nm,0.1s,SNR=4.0							
PFVI				S	**Sn**		**11 18 09.0**	**+0.9**
	4.6nm,0.1s,SNR=7.9							
PFVI	**Vila Bisbo**	**3.13**	**92**	P	**Pn**		**11 17 32.1**	**+1.4**
	2.9nm,0.1s,SNR=4.0							
PFVI				*e*Sn	**Sn**		**11 18 08.6**	**+0.5**
PFVI				S	**Sn**		**11 18 09.0**	**+0.9**
	4.6nm,0.1s,SNR=7.9							
PMAFR	**Mafra**	**3.18**	**58**	*e*Pn	**Pn**		**11 17 34.0**	**+2.6**
PMAFR				*e*Sn	**Sn**		**11 18 10.8**	**+1.3**
PMAFR				A	A		11 18 14.0	
	15nm,0.4s							
PMAFR	**Mafra**	**3.18**	**58**	P	**Pn**		**11 17 34.0**	**+2.6**
	5.4nm,0.1s,SNR=10.0							
PMAFR				S	**Sn**		**11 18 11.1**	**+1.7**
	15nm,0.2s,SNR=6.8							
PMAFR	**Mafra**	**3.18**	**58**	P	**Pn**		**11 17 34.0**	**+2.6**
	5.4nm,0.1s,SNR=10.0							
PMAFR				*e*Sn	**Sn**		**11 18 10.8**	**+1.3**
PMAFR				S	**Sn**		**11 18 11.1**	**+1.7**
	15nm,0.2s,SNR=6.8							
PTEO	**Sao Teotonio**	**3.21**	**85**	*e*Pn	**Pn**		**11 17 33.8**	**+2.1**
PTEO				*e*Sn	**Sn**		**11 18 10.0**	**0.0**
PTEO				A	A		11 18 15.7	
	8.9nm,1.0s							
PTEO	**Sao Teotonio**	**3.21**	**85**	P	**Pn**		**11 17 33.8**	**+2.1**
PTEO				S	**Sn**		**11 18 10.0**	**0.0**
	4.4nm,1.0s							
PTEO	**Sao Teotonio**	**3.21**	**85**	P	**Pn**		**11 17 33.8**	**+2.1**
PTEO				S	**Sn**		**11 18 10.0**	**0.0**
	4.4nm,1.0s							
MORF	**Marmelete**	**3.26**	**89**	*e*Pn	**Pb**		**11 17 35.8**	**-3.5**
MORF	**Marmelete**	**3.26**	**89**	P	**Pb**		**11 17 35.8**	**-3.5**
MORF	**Marmelete**	**3.26**	**89**	P	**Pb**		**11 17 35.8**	**-3.5**
PNCL	**Nicolau / Gran**	**3.44**	**75**	*e*Pn	**Pn**		**11 17 37.2**	**+2.3**
PNCL				*e*Sn	**Sn**		**11 18 15.8**	**+0.2**
PNCL				A	A		11 18 24.6	
	6.5nm,0.3s							
PNCL	**Nicolau / Gran**	**3.44**	**75**	*e*Pn	**Pn**		**11 17 37.2**	**+2.3**
PNCL				*e*Sn	**Sn**		**11 18 15.8**	**+0.2**
MESJ	**Messejana**	**3.63**	**80**	*e*P	**Pn**		**11 17 40.1**	**+2.5**
MESJ				*e*S	**Sn**		**11 18 20.2**	**-0.2**
MESJ				AML	AML		11 18 23.9	
	comp=N,10nm,0.4s							
MESJ	**Messejana**	**3.63**	**80⇑**	*e*Pn	**Pn**		**11 17 40.8**	**+3.2**
MESJ				*e*Sn	**Sn**		**11 18 20.3**	**-0.2**
MESJ				A	A		11 18 28.5	
	comp=N,5.0nm,0.6s							
MESJ	**Messejana**	**3.63**	**80**	P	**Pn**		**11 17 40.1**	**+2.5**
MESJ				S	**Sn**		**11 18 20.2**	**-0.2**
	comp=N,10nm,0.4s							
MESJ	**Messejana**	**3.63**	**80**	P	**Pn**		**11 17 40.1**	**+2.5**
MESJ	**Messejana**	**3.63**	**80⇑**	*e*Pn	**Pn**		**11 17 40.8**	**+3.2**
MESJ				*e*Sn	**Sn**		**11 18 20.3**	**-0.2**
PCVE	**Castro Verde**	**3.76**	**84⇓**	*e*Pn	**Pn**		**11 17 42.1**	**+2.8**
PCVE				*e*Sn	**Sn**		**11 18 24.9**	**+1.3**
PCVE				A	A		11 18 32.3	
	comp=N,3.1nm,0.4s							
PCVE	**Castro Verde**	**3.76**	**84**	P	**Pn**		**11 17 42.1**	**+2.8**
PCVE				S	**Sn**		**11 18 24.9**	**+1.3**
	comp=N,3.1nm,0.4s							
PCVE	**Castro Verde**	**3.76**	**84**	P	**Pn**		**11 17 42.1**	**+2.8**
PCVE				S	**Sn**		**11 18 24.9**	**+1.3**
	comp=N,3.1nm,0.4s							
ALMR	**Almeirim**	**3.76**	**59**	*e*P	**Pn**		**11 17 41.9**	**+2.5**
ALMR				*e*S	**Sn**		**11 18 23.4**	**-0.3**
ALMR				AML	AML		11 18 30.3	
	comp=N,28nm,0.4s							
ALMR	**Almeirim**	**3.76**	**59**	*e*Pn	**Pn**		**11 17 42.6**	**+3.2**
ALMR				*e*Sn	**Sn**		**11 18 25.0**	**+1.3**
ALMR				A	A		11 18 29.9	
	comp=N,18nm,0.4s							
ALMR	**Almeirim**	**3.76**	**59**	P	**Pn**		**11 17 41.9**	**+2.5**
ALMR				S	**Sn**		**11 18 23.4**	**-0.3**
	comp=N,14nm,0.4s							
ALMR	**Almeirim**	**3.76**	**59**	P	**Pn**		**11 17 41.9**	**+2.5**
ALMR	**Almeirim**	**3.76**	**59**	*e*Pn	**Pn**		**11 17 42.6**	**+3.2**
ALMR				S	**Sn**		**11 18 23.4**	**-0.3**
	comp=N,14nm,0.4s							
ALMR				*e*Sn	**Sn**		**11 18 25.0**	**+1.3**
PBDV	**Barranco-do-Ve**	**3.84**	**90**	*e*Pn	**Pn**		**11 17 43.5**	**+3.1**
PBDV				*e*Sn	**Sn**		**11 18 25.9**	**+0.3**
PBDV	**Barranco-do-Ve**	**3.84**	**90**	P	**Pn**		**11 17 43.5**	**+3.1**
PBDV				S	**Sn**		**11 18 25.9**	**+0.3**
PBDV	**Barranco-do-Ve**	**3.84**	**90**	P	**Pn**		**11 17 43.5**	**+3.1**
PBDV				S	**Sn**		**11 18 25.9**	**+0.3**
EVO	**Evora**	**3.93**	**71**	*e*Pn	**Pn**		**11 17 44.5**	**+2.8**
EVO				*e*Sn	**Sn**		**11 18 28.1**	**+0.2**
EVO	**Evora**	**3.93**	**71**	P	**Pn**		**11 17 44.3**	**+2.6**
EVO				S	**Sn**		**11 18 27.9**	**0.0**
EVO	**Evora**	**3.93**	**71**	*e*Pn	**Pn**		**11 17 44.5**	**+2.8**
EVO				S	**Sn**		**11 18 27.9**	**0.0**
PBEJ	**Beja**	**3.94**	**78**	*e*Pn	**Pn**		**11 17 44.5**	**+2.8**
PBEJ				*e*Sn	**Sn**		**11 18 27.9**	**-0.1**
PBEJ				A	A		11 18 33.3	
	comp=N,5.4nm,0.2s							
PBEJ	**Beja**	**3.94**	**78**	P	**Pn**		**11 17 44.5**	**+2.8**
PBEJ				S	**Sn**		**11 18 27.9**	**-0.1**
	comp=N,2.7nm,0.2s							
PBEJ	**Beja**	**3.94**	**78**	P	**Pn**		**11 17 44.5**	**+2.8**
PBEJ				S	**Sn**		**11 18 27.9**	**-0.1**
	comp=N,2.7nm,0.2s							
PMTG	**Montargil**	**3.97**	**62**	*e*Pn	**Pn**		**11 17 44.3**	**+2.1**
PMTG				*e*Sn	**Sn**		**11 18 29.1**	**+0.3**
PMTG				A	A		11 18 35.0	
	comp=N,1.9nm,0.1s							
PMTG	**Montargil**	**3.97**	**62**	*e*Pn	**Pn**		**11 17 44.3**	**+2.1**
PMTG				*e*Sn	**Sn**		**11 18 29.1**	**+0.3**
PVAQ	**Vaqueiros**	**4.00**	**87**	*e*Pn	**Pn**		**11 17 45.5**	**+2.8**
PVAQ				*e*Sn	**Sn**		**11 18 30.0**	**+0.3**
PVAQ				A	A		11 18 35.5	
	comp=N,5.6nm,0.1s							
PVAQ	**Vaqueiros**	**4.00**	**87**	P	**Pn**		**11 17 45.5**	**+2.8**
PVAQ				S	**Sn**		**11 18 30.0**	**+0.3**
	comp=N,5.6nm,0.1s							
PVAQ	**Vaqueiros**	**4.00**	**87**	P	**Pn**		**11 17 45.5**	**+2.8**
PVAQ				S	**Sn**		**11 18 30.0**	**+0.3**
	comp=N,5.6nm,0.1s							
EGRO	**El Granado**	**4.19**	**85**	P	**Pn**		**11 17 47.8**	**+2.5**
	comp=N,5.0nm,0.2s,SNR=7.9							
EGRO				S	**Sn**		**11 18 35.3**	**+1.0**
	comp=N,1.8nm,0.1s,SNR=7.9							
EGRO	**El Granado**	**4.19**	**85**	P	**Pn**		**11 17 47.8**	**+2.5**
	comp=N,5.0nm,0.2s,SNR=7.9							
EGRO				S	**Sn**		**11 18 35.3**	**+1.0**
	comp=N,1.8nm,0.1s,SNR=7.9							
PCAS	**Casmilo, Conde**	**4.30**	**49**	*e*Pn	**Pn**		**11 17 50.1**	**+3.3**
PCAS				*e*Sn	**Sn**		**11 18 38.4**	**+1.3**
PCAS				A	A		11 18 41.3	
	comp=N,3.1nm,0.2s							
PCAS	**Casmilo, Conde**	**4.30**	**49**	*e*Pn	**Pn**		**11 17 50.1**	**+3.3**
PCAS				*e*Sn	**Sn**		**11 18 38.4**	**+1.3**
PESTR	**Estremoz**	**4.35**	**68**	*e*Pn	**Pn**		**11 17 50.7**	**+3.2**
PESTR				*e*Sn	**Sn**		**11 18 38.6**	**+0.3**
PESTR				A	A		11 18 49.3	
	comp=N,4.0nm,0.5s							
PESTR	**Estremoz**	**4.35**	**68**	*e*Pn	**Pn**		**11 17 50.7**	**+3.2**
PESTR				*e*Sn	**Sn**		**11 18 38.6**	**+0.3**
PBAR	**Barrancos**	**4.60**	**77**	*e*Pn	**Pn**		**11 17 53.6**	**+2.7**
PBAR				*e*Sn	**Sn**		**11 18 45.2**	**+0.8**
PBAR				A	A		11 18 50.4	
	comp=N,6.9nm,0.5s							
PBAR	**Barrancos**	**4.60**	**77**	Pn	**Pn**		**11 17 53.6**	**+2.7**
PBAR				S	**Sn**		**11 18 45.2**	**+0.8**
	comp=N,6.9nm,0.5s							
PBAR	**Barrancos**	**4.60**	**77**	Pn	**Pn**		**11 17 53.6**	**+2.7**
PBAR				S	**Sn**		**11 18 45.2**	**+0.8**
	comp=N,6.9nm,0.5s							
PMRV	**Marv??o**	**4.71**	**62**	*e*Pn	**Pn**		**11 17 55.2**	**+2.8**
PMRV				*e*Sn	**Sn**		**11 18 47.3**	**+0.3**
PMRV				A	A		11 18 50.6	
	comp=N,6.8nm,0.2s							
PMRV	**Marv??o**	**4.71**	**62**	P	**Pn**		**11 17 55.2**	**+2.8**
PMRV				S	**Sn**		**11 18 47.3**	**+0.3**
	comp=N,6.8nm,0.2s							
PMRV	**Marv??o**	**4.71**	**62**	P	**Pn**		**11 17 55.2**	**+2.8**
PMRV				S	**Sn**		**11 18 47.3**	**+0.3**
	comp=N,6.8nm,0.2s							
EBAD	**Badajoz**	**4.75**	**71**	P	**Pn**		**11 17 55.6**	**+2.7**
	comp=N,2.8nm,0.2s,SNR=15							
EBAD				S	**Sn**		**11 18 47.1**	**-0.9**
	comp=N,4.3nm,0.2s,SNR=7.9							
EBAD	**Badajoz**	**4.75**	**71**	P	**Pn**		**11 17 55.6**	**+2.7**
	comp=N,2.8nm,0.2s,SNR=15							
EBAD				S	**Sn**		**11 18 47.1**	**-0.9**
	comp=N,4.3nm,0.2s,SNR=7.9							
PCBR	**Castelo Branco**	**4.84**	**57**	*e*Pn	**Pn**		**11 17 57.1**	**+3.0**
PCBR	**Castelo Branco**	**4.84**	**57**	P	**Pn**		**11 17 57.1**	**+3.0**
PCBR	**Castelo Branco**	**4.84**	**57**	P	**Pn**		**11 17 57.1**	**+3.0**
EMIN	**Mina Concepcio**	**4.85**	**83**	P	**Pn**		**11 17 56.4**	**+2.2**
	comp=N,1.5nm,0.1s,SNR=7.9							
EMIN				S	**Sn**		**11 18 49.9**	**-0.5**
	comp=N,1.4nm,0.1s,SNR=6.2							
EMIN	**Mina Concepcio**	**4.85**	**83**	P	**Pn**		**11 17 56.4**	**+2.2**
	comp=N,1.5nm,0.1s,SNR=7.9							
EMIN				S	**Sn**		**11 18 49.9**	**-0.5**
	comp=N,1.4nm,0.1s,SNR=6.2							
PVIS	**Viseu**	**5.08**	**47**	*e*Pn	**Pn**		**11 18 00.1**	**+2.6**
PVIS				*e*Sn	**Sn**		**11 18 56.9**	**+0.6**
PVIS				A	A		11 19 00.2	
	comp=N,4.7nm,0.2s							
PVIS	**Viseu**	**5.08**	**47**	P	**Pn**		**11 18 00.1**	**+2.6**
PVIS				S	**Sn**		**11 18 56.9**	**+0.6**
	comp=N,2.3nm,0.2s							
PVIS	**Viseu**	**5.08**	**47**	P	**Pn**		**11 18 00.1**	**+2.6**
PVIS				S	**Sn**		**11 18 56.9**	**+0.6**
	comp=N,2.3nm,0.2s							
POLO	**Lamas de Olo**	**5.58**	**42**	*e*Pn	**Pn**		**11 18 07.1**	**+2.6**
POLO				*e*Sn	**Sn**		**11 19 08.4**	**-0.3**
POLO				A	A		11 19 09.2	
	comp=N,1.1nm,0.6s							
POLO	**Lamas de Olo**	**5.58**	**42**	*e*Pn	**Pn**		**11 18 07.1**	**+2.6**
POLO				*e*Sn	**Sn**		**11 19 08.4**	**-0.3**
PCAB	**Cabril**	**5.71**	**38**	*e*Pn	**Pn**		**11 18 09.2**	**+3.0**
PCAB				*e*Sn	**Sn**		**11 19 11.3**	**-0.4**
PCAB	**Cabril**	**5.71**	**38**	P	**Pn**		**11 18 09.2**	**+3.0**
PCAB				Sn	**Sn**		**11 19 11.3**	**-0.4**
PCAB	**Cabril**	**5.71**	**38**	P	**Pn**		**11 18 09.2**	**+3.0**
PCAB				Sn	**Sn**		**11 19 11.3**	**-0.4**
PGAV	**Gavieira, Arco**	**5.79**	**35**	*e*Pn	**Pn**		**11 18 00.4**	**-6.9**
PGAV				*e*Sn	**Sn**		**11 19 13.1**	**-0.7**
PGAV				A	A		11 19 16.5	
	comp=N,2.9nm,0.5s							
ELOB	**Lobios**	**5.81**	**37**	S	**Sn**		**11 19 12.9**	**-1.4**
	comp=N,1.1nm,0.1s,SNR=7.9							
ELOB	**Lobios**	**5.81**	**37**	S	**Sn**		**11 19 12.9**	**-1.4**
	comp=N,1.1nm,0.1s,SNR=7.9							
ECAB	**El Cabril**	**5.86**	**80**	P	**Pn**		**11 18 10.4**	**+2.2**
	comp=N,1.2nm,0.1s,SNR=17							
ECAB				S	**Sn**		**11 19 14.9**	**-0.6**
	comp=N,1.5nm,0.4s,SNR=4.0							
ECAB	**El Cabril**	**5.86**	**80**	P	**Pn**		**11 18 10.4**	**+2.2**
	comp=N,1.2nm,0.1s,SNR=17							
ECAB				S	**Sn**		**11 19 14.9**	**-0.6**
	comp=N,1.5nm,0.4s,SNR=4.0							
MVO	**Moncorvo**	**5.87**	**47**	*e*Pn	**Pn**		**11 18 10.9**	**+2.5**
MVO				*e*Sn	**Sn**		**11 19 14.9**	**-0.9**
MVO				A	A		11 19 18.5	
	comp=N,2.9nm,0.3s							
MVO	**Moncorvo**	**5.87**	**47**	P	**Pn**		**11 18 10.8**	**+2.4**
	comp=N,1.7nm,0.2s,SNR=7.9							
MVO				S	**Sn**		**11 19 14.3**	**-1.5**
	comp=N,1.8nm,0.2s,SNR=7.9							
MVO	**Moncorvo**	**5.87**	**47**	*e*Pn	**Pn**		**11 18 10.9**	**+2.5**
MVO				S	**Sn**		**11 19 14.3**	**-1.5**
	comp=N,1.8nm,0.2s,SNR=7.9							
MVO				*e*Sn	**Sn**		**11 19 14.9**	**-0.9**
EPLA	**Plasencia**	**5.89**	**60**	P	**Pn**		**11 18 11.2**	**+2.5**
	comp=N,2.2nm,0.3s,SNR=7.9							
EPLA				S	**Sn**		**11 19 16.1**	**-0.2**
	comp=N,3.8nm,0.4s,SNR=7.9							
EPLA	**Plasencia**	**5.89**	**60**	P	**Pn**		**11 18 11.2**	**+2.5**
	comp=N,2.2nm,0.3s,SNR=7.9							
EPLA				S	**Sn**		**11 19 16.1**	**-0.2**
	comp=N,3.8nm,0.4s,SNR=7.9							
EAGO	**Agolada(Pontev**	**6.54**	**32**	P	**Pn**		**11 18 19.7**	**+2.1**
	comp=N,0.6nm,0.1s,SNR=7.9							
EAGO				S	**Sn**		**11 19 28.8**	**-3.4**
	comp=N,0.9nm,0.1s,SNR=7.9							
EAGO	**Agolada(Pontev**	**6.54**	**32**	P	**Pn**		**11 18 19.7**	**+2.1**
	comp=N,0.6nm,0.1s,SNR=7.9							
ECAL	**Calabor**	**6.55**	**43**	S	**Sn**		**11 19 32.1**	**-0.4**
	comp=N,2.6nm,0.3s,SNR=7.9							
ECAL	**Calabor**	**6.55**	**43**	S	**Sn**		**11 19 32.1**	**-0.4**
	comp=N,2.6nm,0.3s,SNR=7.9							
PAB	**San Pablo**	**6.96**	**69**	P	**Pn**		**11 18 25.5**	**+2.1**
	comp=N,0.7nm,0.2s,SNR=7.9							
PAB				S	**Sn**		**11 19 41.8**	**-0.8**
	comp=N,0.6nm,0.2s,SNR=4.0							
PAB	**San Pablo**	**6.96**	**69**	P	**Pn**		**11 18 25.5**	**+2.1**
	comp=N,0.7nm,0.2s,SNR=7.9							
PAB				S	**Sn**		**11 19 41.8**	**-0.8**
	comp=N,0.6nm,0.2s,SNR=4.0							
EQES	**Quesada**	**7.70**	**83**	P	**Pn**		**11 18 36.2**	**+2.7**
	comp=N,0.4nm,0.2s,SNR=4.0							
EQES	**Quesada**	**7.70**	**83**	P	**Pn**		**11 18 36.2**	**+2.7**
	comp=N,0.4nm,0.2s,SNR=4.0							

*ISCJB **01** 11:56:16.5±0.2, 61.°74N±0.°02×150.°49W±0.°04, h69km±4km, mb3.9/4, Error ellipse: s-maj=3.9km s-min=3.2km az=151.7*
*IDC **01** 11:56:17.5±2.3, 61.°85N×150.°70W, h61km±25km, mb3.6/4, mb1 3.5/8, mb1mx3.1/82, mbtmp3.7/8, ML3.0/4, Error ellipse: s-maj=37.6km s-min=16.2km az=116.0*
*NEIC **01** 11:56:18.4±0.0, 61.°74N×150.°51W, h46km, ML3.3(AEIC), After AEIC.*
NEIC Felt at Anchorage.

ISC 01 11:56:17.0±0.8, 61.°74N±0.°03×150.°49W±0.°03, h59km±7km, n82, σ0°95/96, mb4.0/4, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SUA	**Susitna One**	**0.30**	**203**	P	**Pn**		**11 56 27.1**	**-0.1**
SUA				S	**Sn**		**11 56 34.8**	**+0.3**
SKT	**Skwentna**	**0.55**	**297**	P	**Pn**		**11 56 29.0**	**-0.4**
SKT				S	**Sn**		**11 56 38.0**	**-0.4**
PMR	**Palmer**	**0.67**	**102**	P	**Pn**		**11 56 30.4**	**-0.4**
PMR				S	**Sn**		**11 56 40.4**	**-0.4**
GHO	**Glory Hole Cre**	**0.75**	**87**	P	**Pn**		**11 56 32.1**	**+0.3**
GHO				S	**Sn**		**11 56 43.4**	**+0.7**
RC01	**Rabbit Creek A**	**0.75**	**151**	P	**Pn**		**11 56 31.4**	**-0.4**
RC01				S	**Sn**		**11 56 43.0**	**+0.4**
SPCP	**Crater Peak Br**	**0.93**	**240**	P	**Pn**		**11 56 34.7**	**+0.5**
SPCP				S	**Sn**		**11 56 47.7**	**+0.9**
SPCR	**Spurr Chakacha**	**0.98**	**237**	P	**Pn**		**11 56 35.2**	**+0.4**
SPCR				S	**Sn**		**11 56 48.8**	**+0.7**
KNK	**Knik Glacier**	**1.03**	**108**	P	**Pn**		**11 56 35.8**	**+0.4**
KNK				S	**Sn**		**11 56 50.7**	**+1.7**
SML	**Sawmill**	**1.03**	**85**	P	**Pn**		**11 56 35.5**	**+0.1**
SML				S	**Sn**		**11 56 50.0**	**+1.0**
CKL	**Chakachamna La**	**1.04**	**239**	P	**Pn**		**11 56 36.0**	**+0.4**
SPWE	**Spurr West**	**1.09**	**246**	P	**Pn**		**11 56 36.7**	**+0.3**
SLKM	**Skilak Lake**	**1.25**	**174**	P	**Pn**		**11 56 38.3**	**+0.1**
HUR	**Hurricane**	**1.30**	**17**	P	**Pn**		**11 56 39.9**	**+0.9**
PPLA	**Purkeypile**	**1.40**	**326**	P	**Pn**		**11 56 40.7**	**+0.2**
SCM	**Sheep Creek Mo**	**1.51**	**85**	P	**Pn**		**11 56 42.6**	**+0.8**
SCM				S	**Sn**		**11 57 02.5**	**+2.1**
DFR	**Drift River**	**1.57**	**224**	P	**Pn**		**11 56 43.4**	**+0.7**
RDJH	**Redoubt Jeurge**	**1.61**	**225**	P	**Pn**		**11 56 44.1**	**+0.9**
NCT	**North Crescent**	**1.67**	**226**	P	**Pn**		**11 56 45.2**	**+1.1**
RDWB	**Redoubt West**	**1.70**	**223**	P	**Pn**		**11 56 45.4**	**+0.9**
TRF	**Thorofare Moun**	**1.72**	**3**	P	**Pn**		**11 56 45.6**	**+0.8**
TRF				S	**Sn**		**11 57 07.9**	**+2.1**
KTH	**Kantishna Hill**	**1.83**	**354**	P	**Pn**		**11 56 47.2**	**+1.1**
RND	**Reindeer**	**1.84**	**24**	P	**Pn**		**11 56 47.1**	**+0.8**
CAST	**Castle Rocks**	**1.84**	**337**	P	**Pn**		**11 56 46.8**	**+0.6**
DHY	**Denali Highway**	**1.98**	**46**	P	**Pn**		**11 56 49.0**	**+0.7**
BRLK	**Bradley Lake**	**1.99**	**186**	P	**Pn**		**11 56 48.7**	**+0.4**
JPK	**Jack Peak**	**2.00**	**108**	P	**Pn**		**11 56 48.9**	**+0.4**
MCK	**McKinley**	**2.12**	**19**	P	**Pn**		**11 56 51.5**	**+1.4**
IVE	**Iliamna Volcan**	**2.12**	**217**	P	**Pn**		**11 56 51.5**	**+1.3**
HOM	**Homer**	**2.17**	**196**	P	**Pn**		**11 56 51.8**	**+1.2**
KLU	**Klutina**	**2.20**	**94**	P	**Pn**		**11 56 51.5**	**+0.3**
CHUM	**Lake Minchumin**	**2.31**	**340**	P	**Pn**		**11 56 53.5**	**+1.0**
DIV	**Divide**	**2.35**	**103**	P	**Pn**		**11 56 53.4**	**+0.1**
BPAW	**Bear Paw Mtn.**	**2.38**	**355**	P	**Pn**		**11 56 54.0**	**+0.4**
PS11	**TAPS Pump St11**	**2.40**	**80**	P	**Pn**		**11 56 55.5**	**+1.7**
SVW2	**Sparrevohn**	**2.53**	**257**	P	**Pn**		**11 56 55.8**	**+0.2**
EYAK	**Cordova Ski Ar**	**2.59**	**115**	P	**Pn**		**11 56 57.5**	**+1.0**
HARP	**HAARP**	**2.60**	**73**	P	**Pn**		**11 56 58.2**	**+1.6**
PAX	**Paxson**	**2.65**	**60**	P	**Pn**		**11 56 58.7**	**+1.4**
PS10	**TAPS Pump St10**	**2.76**	**50**	P	**Pn**		**11 57 00.9**	**+2.1**
AUW	**Augustine West**	**2.80**	**213**	P	**Pn**		**11 57 00.5**	**+1.2**
TT01	**Tatalina**	**2.83**	**297**	P	**Pn**		**11 57 00.1**	**+0.3**
NEA	**Nenana**	**2.92**	**12**	P	**Pn**		**11 57 01.5**	**+0.6**
BMRM	**Bremner River**	**2.94**	**103**	P	**Pn**		**11 57 01.3**	**0.0**
WRH	**Wood River Hil**	**2.95**	**21**	P	**Pn**		**11 57 02.1**	**+0.7**
HDA	**Harding Lake**	**3.13**	**30**	P	**Pn**		**11 57 04.9**	**+1.1**
CCB	**Clear Creek Bu**	**3.16**	**21**	P	**Pn**		**11 57 04.7**	**+0.5**
CDD	**Cape Douglas**	**3.23**	**210**	P	**Pn**		**11 57 07.0**	**+1.8**
PS08	**TAPS Pump Stn8**	**3.27**	**29**	P	**Pn**		**11 57 07.0**	**+1.3**
RIDG	**Independ'e Rid**	**3.29**	**50**	P	**Pn**		**11 57 07.7**	**+1.7**
MLY	**Manley**	**3.31**	**358**	P	**Pn**		**11 57 06.8**	**+0.5**
COLA	**College**	**3.36**	**20**	P	**Pn**		**11 57 08.0**	**+1.0**
MDM	**Murphy Dome**	**3.39**	**17**	P	**Pn**		**11 57 08.1**	**+0.8**
VRDI	**Verde Repeater**	**3.42**	**96**	P	**Pn**		**11 57 07.8**	**-0.1**
ILAR	**Eielson Array**	**3.45**	**27**	P	**Pn**		**11 57 09.4**	**+1.2**
	6.6nm,0.3s,baz=210,slow=14,SNR=320							
ILAR				S	**Sn**		**11 57 47.2**	**-0.6**
	6.4nm,0.3s,baz=217,slow=19,SNR=14							
ILB	**Eielson Array**	**3.45**	**27**	P	**Pn**		**11 57 08.7**	**+0.5**
DOT	**Dot Lake**	**3.53**	**54**	P	**Pn**		**11 57 10.2**	**+0.9**
MCARA	**McCarthy VSAT**	**3.59**	**92**	P	**Pn**		**11 57 11.7**	**+1.5**
SCRK	**Sand Creek**	**3.73**	**50**	P	**Pn**		**11 57 12.8**	**+0.7**
WAX	**Waxell Ridge**	**3.93**	**106**	P	**Pn**		**11 57 15.7**	**+0.9**
KIAG	**Kiagna River**	**4.00**	**98**	P	**Pn**		**11 57 16.5**	**+0.6**
KDAK	**Kodiak Island**	**4.11**	**196**	P	**Pn**		**11 57 17.5**	**+0.3**
	2.5nm,0.3s,baz=69,slow=7.8,SNR=35							
KDAK	**Kodiak Island**	**4.11**	**196**	P	**Pn**		**11 57 17.6**	**+0.5**
ISLE	**Juniper Island**	**4.11**	**103**	P	**Pn**		**11 57 18.1**	**+0.8**
BARK	**Barkley Ridge**	**4.11**	**106**	P	**Pn**		**11 57 17.0**	**-0.3**
KAKN	**Katmai Knife C**	**4.14**	**216**	P	**Pn**		**11 57 18.8**	**+1.0**
BCA3	**Beaver Creek A**	**4.26**	**68**	P	**Pn**		**11 57 20.2**	**+0.8**
BAGL	**Bagley Icefiel**	**4.27**	**103**	P	**Pn**		**11 57 19.4**	**+0.1**
BARN	**Barnard Glacie**	**4.30**	**95**	P	**Pn**		**11 57 20.6**	**+0.6**
GRNC	**Granite Creek**	**4.34**	**100**	P	**Pn**		**11 57 20.3**	**-0.3**
PRP	**Porcupine Dome**	**4.39**	**28**	P	**Pn**		**11 57 22.1**	**+0.9**
IM3	**Indian Mountai**	**4.50**	**343**	P	**Pn**		**11 57 23.1**	**+0.7**
EGAK	**Eagle**	**5.20**	**50**	P	**Pn**		**11 57 32.6**	**+0.5**
COLD	**Coldfoot**	**5.51**	**1**	P	**Pn**		**11 57 37.6**	**+1.2**

KATZ			P	Pn	12 03 39.0	-0.5
KRHZ	Kereru	1.08 76	P	Pn	12 03 39.6	+0.2
TIWZ	Tintock	1.09 142	Pn	Pn	12 03 40.5	+0.9
TIWZ	Tintock	1.09 142	P	Pn	12 03 40.5	+0.9
WPHZ	Waipukurau	1.11 98	Pn	Pn	12 03 40.0	+0.2
WPHZ	Waipukurau	1.11 98	P	Pn	12 03 40.0	+0.2
RITZ	Rihia Road	1.14 36	P	Pn	12 03 40.1	0.0
CAW	Cannon Point	1.20 178	Pn	Pn	12 03 41.9	+1.2
CAW	Cannon Point	1.20 178	P	Pn	12 03 41.9	+1.2
KWHZ	Kaweka Forest	1.20 66	P	Pn	12 03 41.4	+0.6
RATZ	Rangitukua	1.20 30	P	Pn	12 03 40.6	-0.2
RATZ			P	Pn	12 03 40.6	-0.2
DUWZ	D'Urville Isla	1.22 223	Pn	Pn	12 03 42.1	+1.1
DUWZ	D'Urville Isla	1.22 223	P	Pn	12 03 42.0	+1.1
BFZ	Birch Farm	1.22 129	Pn	Pn	12 03 41.4	+0.4
BFZ	Birch Farm	1.22 129	P	Pn	12 03 41.4	+0.4
ANWZ	Angora Road	1.25 116	P	Pn	12 03 42.0	+0.7
PRHZ	Porangahau	1.30 106	P	Pn	12 03 42.2	+0.2
MTW	Mount Morrison	1.30 163	P	Pn	12 03 42.7	+0.8
HATZ	Hinemaiaia	1.32 40	Pn	Pn	12 03 41.6	-0.6
HATZ	Hinemaiaia	1.32 40	P	Pn	12 03 41.6	-0.6
WATZ	Wairara	1.33 25	P	Pn	12 03 42.4	0.0
BKZ	Black Stump Fm	1.37 58	Pn	Pn	12 03 42.5	-0.3
BKZ	Black Stump Fm	1.37 58	P	Pn	12 03 42.8	0.0
TMWZ	Te Maipa	1.37 151	Pn	Pn	12 03 43.6	+0.7
TMWZ	Te Maipa	1.37 151	P	Pn	12 03 43.8	+0.9
WEL	Wellington	1.38 187	Pn	Pn	12 03 43.9	+1.0
MCHZ	McNeill Hill	1.39 71	Pn	Pn	12 03 43.5	+0.6
MCHZ	McNeill Hill	1.39 71	P	Pn	12 03 43.6	+0.6
HIZ	Hauiti	1.40 355	Pn	Pn	12 03 43.0	-0.2
HIZ	Hauiti	1.40 355	P	Pn	12 03 43.0	-0.2
TCW	Tory Channel	1.41 203	P	Pn	12 03 44.5	+1.2
SNZO	South Karori	1.42 189	ePn	Pn	12 03 44.2	+1.1
SNZO			eSn	Sn	12 04 02.9	+0.8
PXZ	Pawanui	1.43 95	Pn	Pn	12 03 43.8	+0.3
PXZ	Pawanui	1.43 95	P	Pn	12 03 44.3	+0.8
KAHZ	Kahuranaki	1.44 86	P	Pn	12 03 44.6	+0.9
WHTZ	Whakaora	1.45 31	Pn	Pn	12 03 44.0	+0.2
WHTZ	Whakaora	1.45 31	P	Pn	12 03 44.4	+0.6
BHW	Baring Head	1.50 184	P	Pn	12 03 45.3	+0.9
PAWZ	Paruwai Farm	1.50 168	P	Pn	12 03 45.4	+0.9
MSWZ	Moikau Station	1.51 173	P	Pn	12 03 45.6	+0.9
MRHZ	Matea Rd	1.53 46	P	Pn	12 03 44.4	-0.5
KUTZ	Kaahu Road	1.56 24	P	Pn	12 03 45.1	0.0
TRWZ	Traveller	1.57 161	Pn	Pn	12 03 46.6	+1.3
TRWZ	Traveller	1.57 161	P	Pn	12 03 46.7	+1.3
NMHZ	Naumai	1.61 60	P	Pn	12 03 46.6	+0.7
TLZ	Tolley Road	1.63 15	Pn	Pn	12 03 45.7	-0.4
TLZ	Tolley Road	1.63 15	P	Pn	12 03 45.7	-0.4
WPRZ	Whakapapatarin	1.66 33	Pn	Pn	12 03 46.3	-0.1
WPRZ	Whakapapatarin	1.66 33	P	Pn	12 03 46.4	0.0
PLWZ	Palliser	1.67 174	P	Pn	12 03 47.2	+0.7
ARHZ	Aropaoanui	1.67 68	P	Pn	12 03 47.0	+0.5
ALRZ	Allen Road	1.70 38	P	Pn	12 03 46.8	-0.2
TUWZ	Tuamarina	1.72 208	Pn	Pn	12 03 48.0	+0.9
TUWZ	Tuamarina	1.72 208	P	Pn	12 03 48.0	+0.9
MTHZ	Maungataniwha	1.77 54	P	Pn	12 03 47.6	-0.3
PRRZ	Plateau Road	1.77 38	P	Pn	12 03 47.8	-0.1
GRRZ	Galatos Road	1.78 29	P	Pn	12 03 48.5	+0.5
NNZ	Nelson	1.80 223	Pn	Pn	12 03 49.1	+0.9
NNZ	Nelson	1.80 223	P	Pn	12 03 49.1	+0.9
HRRZ	Handcock Road	1.81 34	P	Pn	12 03 48.8	+0.3
HSRZ	Hossack Road	1.87 31	P	Pn	12 03 49.4	+0.3
RAHZ	Arahi	1.89 59	P	Pn	12 03 49.5	+0.1
WHHZ	Waihua	1.92 65	P	Pn	12 03 49.9	+0.2
RRRZ	Republican Roa	1.96 37	Pn	Pn	12 03 50.2	-0.2
RRRZ	Republican Roa	1.96 37	P	Pn	12 03 50.3	0.0
UTU	Utuhina	1.96 28	P	Pn	12 03 51.0	+0.7
MUGZ	Murupara	1.98 44	P	Pn	12 03 50.0	-0.6
BSWZ	Blackbirch Sta	2.00 205	P	Pn	12 03 51.7	+1.0
RTZ	Ruatahuna	2.01 50	P	Pn	12 03 50.4	-0.5
NGRZ	Ngongotaha	2.03 27	P	Pn	12 03 51.9	+0.6
TARZ	Mount Tarawera	2.04 35	Pn	Pn	12 03 51.8	+0.3
TARZ	Mount Tarawera	2.04 35	P	Pn	12 03 52.0	+0.5
OMRZ	Omania	2.09 31	P	Pn	12 03 52.4	+0.3
QRZ	Quartz Range	2.10 243	Pn	Pn	12 03 52.6	+0.5
QRZ	Quartz Range	2.10 243	P	Pn	12 03 52.6	+0.5
MKRZ	Makatiti	2.10 33	P	Pn	12 03 53.0	+0.7
KARZ	Kaharoa	2.12 27	P	Pn	12 03 53.0	+0.5
SNGZ	Shannon Statio	2.13 59	Pn	Pn	12 03 52.4	-0.1
SNGZ	Shannon Statio	2.13 59	P	Pn	12 03 52.6	0.0
KMRZ	Kaimai	2.19 20	P	Pn	12 03 53.6	+0.3
TOZ	Tahuroa Road	2.21 10	Pn	Pn	12 03 53.3	-0.3
TOZ	Tahuroa Road	2.21 10	P	Pn	12 03 53.3	-0.3
KNZ	Kokohu	2.25 68	Pn	Pn	12 03 53.2	-0.8
KNZ	Kokohu	2.25 68	P	Pn	12 03 53.2	-0.8
EDRZ	Edgecumbe	2.25 37	P	Pn	12 03 54.7	+0.5
MARZ	Manawahe	2.32 35	P	Pn	12 03 55.1	0.0
URZ	Urewera	2.33 45	P	Pn	12 03 53.9	-1.2
	0.5nm,0.3s,baz=173,slow=4.0,SNR=3.9					
URZ			S	Sn	12 04 21.7	-1.4
	36nm,0.3s,baz=141,slow=23,SNR=12					
URZ	Urewera	2.33 45	Pn	Pn	12 03 54.0	-1.0
URZ	Urewera	2.33 45	P	Pn	12 03 54.0	-1.0
RAGZ	Rawiri	2.35 54	Pn	Pn	12 03 54.9	-0.6
RAGZ	Rawiri	2.35 54	P	Pn	12 03 54.9	-0.6
MHGZ	Mahia Peninsul	2.37 72	P	Pn	12 03 55.4	-0.2
TGRZ	Tauranga	2.39 25	Pn	Pn	12 03 56.3	+0.4
TGRZ	Tauranga	2.39 25	P	Pn	12 03 56.4	+0.4
OPRZ	Ohinepanea	2.39 31	P	Pn	12 03 56.1	+0.1
PRGZ	Paritu Road	2.44 67	P	Pn	12 03 55.9	-0.7
THZ	Tophouse	2.44 220	Pn	Pn	12 03 57.6	+0.9
THZ	Tophouse	2.44 220	P	Pn	12 03 57.6	+0.9
RIGZ	Rimuhau	2.45 61	P	Pn	12 03 56.3	-0.5
MWZ	Matawai	2.52 52	Pn	Pn	12 03 54.5	-3.1
MWZ	Matawai	2.52 52	P	Pn	12 03 56.6	-1.0
TKGZ	Te Karaka	2.65 57	Pn	Pn	12 03 58.6	-0.8
TKGZ	Te Karaka	2.65 57	P	Pn	12 03 58.7	-0.7
KHZ	Kahutara	2.74 203	Pn	Pn	12 04 01.1	+0.6
KHZ	Kahutara	2.74 203	P	Pn	12 04 01.1	+0.6
MKAZ	Moumakai	2.81 3	Pn	Pn	12 04 01.4	-0.1
MKAZ	Moumakai	2.81 3	P	Pn	12 04 01.4	-0.1
KBAZ	Karaka Road Bo	2.81 358	P	Pn	12 04 02.1	+0.6
RUGZ	Raukumara Rang	2.85 48	P	Pn	12 04 00.7	-1.5
AWAZ	Awhitu Peninsu	2.86 354	P	Pn	12 04 02.6	+0.5
TWGZ	Tauwhareparae	2.89 54	Pn	Pn	12 04 01.2	-1.4
TWGZ	Tauwhareparae	2.89 54	P	Pn	12 04 01.2	-0.4
ETAZ	East Tamaki Re	2.95 359	Pn	Pn	12 04 03.7	+0.2
ETAZ	East Tamaki Re	2.95 359	P	Pn	12 04 03.8	+0.3
WTAZ	Waiatarua	2.99 353	Pn	Pn	12 04 04.6	+0.6
WTAZ	Waiatarua	2.99 353	P	Pn	12 04 04.7	+0.7
EPAZ	Eden Park BICE	3.04 356	P	Pn	12 04 05.3	+0.7
DSZ	Denniston Nort	3.04 232	Pn	Pn	12 04 04.8	+0.2
DSZ	Denniston Nort	3.04 232	P	Pn	12 04 04.9	+0.2
HAZ	Te Kaha	3.06 46	P	Pn	12 04 02.8	-2.0
HBAZ	Herne Bay Bore	3.06 356	P	Pn	12 04 05.6	+0.7
WIAZ	Waiheke Island	3.12 2	P	Pn	12 04 05.9	+0.3
PUZ	Puketiti	3.13 55	Pn	Pn	12 04 04.3	-1.5
PUZ	Puketiti	3.13 55	P	Pn	12 04 04.5	-1.4
PKGZ	Pakihiroa	3.13 51	P	Pn	12 04 05.0	-1.0
RVAZ	Riverhead Bore	3.15 354	Pn	Pn	12 04 06.6	+0.4
RVAZ	Riverhead Bore	3.15 354	P	Pn	12 04 06.5	+0.4
KUZ	Kuaotunu	3.21 10	Pn	Pn	12 04 06.5	-0.4
KUZ	Kuaotunu	3.21 10	P	Pn	12 04 06.6	-0.3
ABAZ	Army Bay	3.31 358	P	Pn	12 04 08.7	+0.5
WMGZ	Waiomatatini S	3.38 53	Pn	Pn	12 04 07.7	-1.5
WMGZ	Waiomatatini S	3.38 53	P	Pn	12 04 07.8	-1.5
MXZ	Matakaoa Point	3.49 49	P	Pn	12 04 09.8	-0.8
LTZ	Lake Taylor	3.53 215	Pn	Pn	12 04 10.0	-1.2
LTZ	Lake Taylor	3.53 215	P	Pn	12 04 10.9	-0.3
GRZ	Great Barrier	3.67 6	P	Pn	12 04 12.8	-0.3
INZ	Inchbonnie	3.88 223	P	Pn	12 04 15.7	-0.3
WCZ	Waipu Caves	4.00 352	Pn	Pn	12 04 17.9	+0.3
WCZ	Waipu Caves	4.00 352	P	Pn	12 04 17.8	+0.2
EYCZ	Eyrewell	4.03 209	P	Pn	12 04 17.3	-0.6
CRLZ	Canterbury Las	4.07 205	Pn	Pn	12 04 18.7	+0.3
CRLZ	Canterbury Las	4.07 205	P	Pn	12 04 18.8	+0.3
CRLZ	Canterbury Las	4.07 205	P	Sn	12 04 57.4	-7.6
OXZ	Oxford	4.07 212	Pn	Pn	12 04 16.9	-1.6
OXZ	Oxford	4.07 212	P	Sn	12 05 00.9	-4.2
OKCZ	Okains Bay	4.08 200	P	Pn	12 04 17.8	-0.8
OKCZ	Okains Bay	4.08 200	P	Sn	12 05 02.5	-2.7
MQZ	McQueen's Vall	4.18 204	Pn	Pn	12 04 18.5	-1.5
MQZ	McQueen's Vall	4.18 204	P	Sn	12 05 01.3	-6.4
AKCZ	Akaroa Harbour	4.26 201	P	Pn	12 04 20.9	-0.1
AKCZ	Akaroa Harbour	4.26 201	P	Sn	12 05 04.4	-5.1
WVZ	Waitaha Valley	4.50 224	Pn	Pn	12 04 25.5	+1.2
WVZ	Waitaha Valley	4.50 224	P	Pn	12 04 25.6	+1.3
RPZ	Rata Peaks	4.81 217	P	Pn	12 04 26.8	-1.7
	1.4nm,0.3s,baz=220,slow=2.4,SNR=12					
RPZ			S	Sn	12 05 18.8	-4.2
	5.0nm,0.3s,baz=153,slow=22,SNR=16					
RPZ	Rata Peaks	4.81 217	Pn	Pn	12 04 29.2	+0.6
RPZ	Rata Peaks	4.81 217	P	Pn	12 04 29.1	+0.6
OUZ	Omahuta	4.81 346	P	Pn	12 04 29.8	+1.1
FOZ	Fox Glacier	5.31 225	P	Pn	12 04 36.2	+0.9
LBZ	Lake Benmore	5.73 217	P	Pn	12 04 40.9	-0.1
LBZ			P		12 04 41.3	
ODZ	Otahua Downs	6.06 211	Pn	Pn	12 04 43.8	-1.7
JCZ	Jackson Bay	6.23 226	P	Pn	12 04 48.3	+0.4
WKZ	Wanaka	6.62 220	P	Pn	12 04 55.1	+2.1
MSZ	Milford Sound	7.08 225	P	Pn	12 05 01.6	+2.2
CTZ	Chatham Island	7.33 124	Pn	Pn	12 05 04.2	+1.5
CTZ	Chatham Island	7.33 124	P	Pn	12 05 03.9	+1.1
WHZ	Wether Hill Ro	7.91 219	P	Pn	12 05 13.1	+2.5
ASAR	Alice Springs	38.14 283	P	P	12 10 30.9	+2.2
	0.3nm,0.4s,baz=124,slow=7.2,SNR=8.9					
WRA	Warramunga Arr	40.05 288	P	P	12 10 47.0	+2.5
	0.7nm,1.1s,baz=126,slow=8.1,SNR=5.7					
TORD	Torodi Ar. Bea	152.70 194	PKPbc	PKPbc	12 23 06.5	+1.8
	0.2nm,0.3s,baz=154,slow=3.6,SNR=6.8					

ISCJB ***01*** *12:07:12.6±1.2, 8°.32S±0°.08×121°.68E±0°.05, h32km±8km, mb3.8/3, Error ellipse: s-maj=13.6km s-min=7.6km az=167.0*

IDC ***01*** *12:07:12.0±1.2, 7°.27S×123°.56E, h0km, mb3.8/3, mb1 3.8/6, mb1mx3.6/54, mbtmp3.7/6, ML3.8/3, Error ellipse: s-maj=90.1km s-min=19.3km az=68.0*

DJA ***01*** *12:07:13.5±0.5, 8°S±4°×12°2E±°, h18km±5km, M4.2/7, MLv4.2/7*

ISC 01 12:07:12.4±1.7, 8°.36S±0°.07×121°.59E±0°.04, h15km±11km, n14, σ1§61/21, mb3.8/3, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDFI	Ende, Flores	0.40	166	P	Pb	12 07 21.5	+0.2
EDFI				S	Sb	12 07 27.1	-0.2
MMRI	Maumere	0.69	113	P	Pg	12 07 26.2	+0.2
MMRI				S	Sb	12 07 35.9	+0.3
WSI	Waingapu	1.83	224	P	Pn	12 07 44.4	+1.1
WSI				S	Sg	12 08 11.3	+0.1
BASI	Baing, Sumba	2.10	208	P	Pn	12 07 47.6	+0.5
BASI				S	Sn	12 08 13.2	+0.2
WBSI	Waikabubak, Su	2.52	239	P	Pn	12 07 53.4	+0.5
WBSI				S	Sn	12 08 25.9	+2.5
BATI	Baumata	2.75	132	Pn	Pb	12 08 00.6	-0.7
	20nm,0.3s,baz=335,slow=1.4,SNR=13						
BATI	Baumata	2.75	132	P	Pb	12 08 00.4	-0.9
SOEI	Soe	2.98	118	P	Pn	12 08 02.7	+3.4
SOEI				S	Sb	12 08 42.8	+1.1
PLAI	Plampang	3.80	263	P	Pn	12 08 12.0	+1.5
PLAI				S	Sn	12 08 57.1	+2.1
WRA	Warramunga Arr	16.88	134	Pn	Pn	12 11 04.7	-3.6
	0.3nm,0.3s,baz=305,slow=13,SNR=15						
ASAR	Alice Springs	19.26	144	P	P	12 11 36.9	+0.3
	0.3nm,0.3s,baz=326,slow=11,SNR=20						
STKA	Stephens Creek	29.89	144	P	P	12 13 19.1	-0.6
	0.9nm,0.7s,baz=325,slow=16,SNR=2.6						
SONM	Songino Array	57.54	348	P	P	12 17 00.0	-1.4
	0.6nm,0.6s,baz=168,slow=7.8,SNR=5.3						
ZALV	Zalesovo Beam	69.39	338	P	P	12 18 19.4	0.0
	0.4nm,0.3s,baz=120,slow=5.2,SNR=2.3						

IDC 01 12:09:02.0±2.2, 3°.56S×134°.95E, h0km, mb3.6/3, mb1 3.8/5, mb1mx3.5/50, mbtmp3.6/5, ML3.4/2, MS2.9/1, Ms1 2.9/1, ms1mx2.3/42, Error ellipse: s-maj=84.0km s-min=26.6km az=73.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	4.55	306	Pn	Pn	12 10 10.3	-1.9
	2.2nm,0.3s,baz=297,slow=23,SNR=7.9						
SIJI				Sn	Sn	12 10 56.0	-10
	2.4nm,0.3s,baz=217,slow=24,SNR=6.4						
WRA	Warramunga Arr	16.30	182	Pn	Pn	12 12 53.8	+1.3
	0.2nm,0.3s,baz=3.5,slow=12,SNR=5.2						
ASAR	Alice Springs	20.02	183	P	P	12 13 35.8	-0.8
	1.2nm,0.6s,baz=6.0,slow=12,SNR=4.5						
JOW	Kunigami	30.89	348	LR	LR	12 27 25.1	
	comp=Z,23nm,20.1s,baz=150,slow=36						
MKAR	Makanchi Array	68.21	324	P	P	12 20 05.0	+0.4
	0.6nm,0.6s,baz=108,slow=8.0,SNR=6.0						
KURBB	Kurchatov Arra	72.30	326	P	P	12 20 29.6	+0.2
	0.5nm,0.8s,baz=132,slow=5.2,SNR=5.4						

IDC ***01*** *12:22:42.1±1.7, 44°.80N×11°.09E, h0km, mb3.4/3, mb1 3.4/4, mb1mx3.2/62, mbtmp3.4/4, ML3.2/1, MS2.5/4, Ms1 2.5/4, ms1mx2.3/45, Error ellipse: s-maj=55.9km s-min=16.1km az=108.0*

ISCJB ***01*** *12:22:44.1±0.2, 44°.86N±0°.02×10°.93E±0°.02, h20km±1km, mb3.5/3, Error ellipse: s-maj=2.9km s-min=2.1km az=159.3*

CSEM ***01*** *12:22:44.5±0.1, 44°.91N×10°.98E, h10km, ML3.8/23, Error ellipse: s-maj=2.8km s-min=2.2km az=152.0*

ROM ***01*** *12:22:44.1±0.0, 44°.862N±0°.002×10°.959E±0°.001, h9km, ML3.6/16*

IASPEI ***01*** *12:22:44.3±0.8, 44°.88N±0°.02×10°.96E±0°.02, h14km±4km, mb3.6/3, Error ellipse: s-maj=2.9km s-min=2.5km az=100.4, GT5 selection from ISC bulletin GT5 identified by Bond¨jr and McLaughlin (2009) selection criteria Bond¨jr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*

LDG ***01*** *12:22:44.9±0.1, 44°.86N×11°.00E, h2km, Ml3.9/24, Error ellipse: s-maj=3.3km s-min=2.1km az=52.0*

STR ***01*** *12:22:46.3±0.9, 45°N±4°×1°1E±°, h5km, M4.1/11, mB4.0/1, mb4.2/2, MLv4.0/11, Mw(mB)3.0/1*

PRU ***01*** *12:22:50.1, 44°.90N×11°.30E, h39km*

ISC 01 12:22:44.2±0.7, 44°.88N±0°.01×10°.96E±0°.01, h16km±3km, n264, σ1§28/338, mb3.6/3, 18C-32D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NDIM	Novi di Modena	0.04	277	*i* P	Pg	12 22 46.1	-1.0
NDIM				*i* S	Sg	12 22 48.4	-0.7
T0827	Moglia (MN)	0.06	342	⇑*i* P	Pg	12 22 46.0	-1.3
T0827				⇑*i* S	Sg	12 22 50.3	+1.0
T0827	Moglia (MN)	0.06	342	*i* P	Pg	12 22 47.0	-0.3
T0827				*i* S	Sg	12 22 50.3	+1.0
T0828	Loc. Fossoli,	0.06	211	⇓*i* P	Pg	12 22 46.3	-0.9
T0828				⇓*i* S	Sg	12 22 49.1	-0.2
T0828	Loc. Fossoli,	0.06	211	*i* P	Pg	12 22 46.3	-0.9
T0828				*i* S	Sg	12 22 49.1	-0.2
T0818	Loc. Fossa, Co	0.07	44	⇑*i* P	Pg	12 22 47.1	-0.3
T0818				⇑*i* S	Sg	12 22 50.5	+1.0
T0818	Loc. Fossa, Co	0.07	44	*i* P	Pg	12 22 47.1	-0.3
T0818				*i* S	Sg	12 22 50.5	+1.0
T0814	Loc. Cortile,	0.09	175	⇓*i* P	Pg	12 22 46.7	-0.8
T0814				⇓*i* S	Sg	12 22 49.7	0.0
T0814	Loc. Cortile,	0.09	175	*i* P	Pg	12 22 46.7	-0.8
T0814				*i* S	Sg	12 22 49.7	0.0
T0826	Rio Saliceto (	0.11	248	AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0825	Gonzaga (MN)	0.12	319	AML	AML		
T0825				AML	AML		
T0825				AML	AML		
T0825				AML	AML		
T0825				AML	AML		
T0825				AML	AML		
T0825				AML	AML		
T0824	Loc. Limidi di	0.12	190	⇓*i* P	Pg	12 22 47.4	-0.5
T0824				⇓*i* S	Sb	12 22 51.1	+0.4
T0824	Loc. Limidi di	0.12	190	*i* P	Pg	12 22 47.4	-0.5
T0824				*i* S	Sb	12 22 51.1	+0.4
T0802	SanFelice sul	0.16	92	*e*P	Pg	12 22 47.0	-1.4
T0802				*e*S	Sb	12 22 52.2	+0.5
T0802	SanFelice sul	0.16	92	*e*P	Pg	12 22 48.0	-0.4
T0802				*e*S	Sb	12 22 52.2	+0.5
T0802				AML	AML		
	comp=E,45850μm,1.3s						
T0802				AML	AML		
	comp=N,41600μm,0.5s						
T0802				AML	AML		
	comp=E,45850μm,1.3s						
T0802				AML	AML		
	comp=N,41650μm,0.5s						
T0802				AML	AML		
	comp=N,41600μm,0.5s						
T0802				AML	AML		
	comp=E,45850μm,1.3s						
RAVA	Ravarino	0.17	138	⇓*i* P	Pg	12 22 48.3	-0.2
RAVA				⇓*i* S	Sb	12 22 52.6	+0.5
RAVA	Ravarino	0.17	138	*i* P	Pg	12 22 48.3	-0.2
RAVA				*i* S	Sb	12 22 52.6	+0.5
RAVA				AML	AML		
	comp=E,62200μm,0.4s						
RAVA				AML	AML		
	comp=N,52400μm,1.1s						
RAVA				AML	AML		
	comp=E,62200μm,0.4s						
RAVA				AML	AML		
	comp=N,52400μm,1.1s						
RAVA				AML	AML		
	comp=E,62200μm,0.4s						
RAVA				AML	AML		
	comp=N,52400μm,1.1s						
RAVA				AML	AML		
	comp=N,52400μm,1.1s						
RAVA				AML	AML		
	comp=E,62200μm,0.4s						
SBPO	S.Benedetto Po	0.17	351	⇓*e*P	Pb	12 22 49.2	+0.2
SBPO	S.Benedetto Po	0.17	351	*e*P	Pb	12 22 49.2	+0.2
SBPO				AML	AML		
	comp=E,14800μm,0.4s						
SBPO				AML	AML		
SBPO				AML	AML		
	comp=E,14800μm,0.4s						
SBPO				AML	AML		
SBPO				AML	AML		
SBPO				AML	AML		
	comp=E,14800μm,0.4s						
T0813	Massa Finalese	0.17	91	⇑*e*P	Pg	12 22 48.4	-0.1
T0813				⇑*e*S	Sb	12 22 52.5	+0.4
T0813	Massa Finalese	0.17	91	*e*P	Pg	12 22 48.4	-0.1
T0813				*e*S	Sb	12 22 52.5	+0.4
T0812	Loc. Stoppiaro	0.17	65	⇓*e*P	Pg	12 22 48.4	-0.2
T0812	Loc. Stoppiaro	0.17	65	*e*P	Pg	12 22 48.4	-0.2
NOVE	Novellara	0.19	244	⇓*e*P	Pg	12 22 48.7	-0.1
NOVE				⇓*e*S	Sb	12 22 53.5	+0.8
NOVE	Novellara	0.19	244	*e*P	Pg	12 22 48.7	-0.1
NOVE				*e*S	Sb	12 22 53.5	+0.8
NOVE				AML	AML		
	comp=E,98400μm,0.2s						
NOVE				AML	AML		
	comp=N,59900μm,1.2s						
NOVE				AML	AML		
	comp=E,98450μm,0.2s						
NOVE				AML	AML		
	comp=N,59950μm,1.2s						
NOVE				AML	AML		
	comp=E,98500μm,0.2s						
NOVE				AML	AML		
	comp=N,59900μm,1.2s						
NOVE				AML	AML		
	comp=E,98450μm,0.2s						
NOVE				AML	AML		
	comp=N,59950μm,1.2s						
T0800	Massa Finalese	0.21	99	⇑*i* P	Pg	12 22 48.9	-0.2
T0800				⇑*i* S	Sb	12 22 53.6	+0.4
T0800	Massa Finalese	0.21	99	*i* P	Pg	12 22 48.9	-0.2
T0800				*i* S	Sb	12 22 53.6	+0.4
T0800				AML	AML		
	comp=E,31650μm,0.3s						
T0800				AML	AML		
	comp=N,93400μm,0.3s						
T0800				AML	AML		
	comp=E,40450μm,0.2s						
T0800				AML	AML		
	comp=N,83500μm,0.3s						
T0800				AML	AML		
	comp=E,31650μm,0.3s						
T0800				AML	AML		
	comp=N,93400μm,0.3s						
T0800				AML	AML		
	comp=E,40450μm,0.2s						
T0800				AML	AML		
	comp=N,83500μm,0.3s						
T0800				AML	AML		
	comp=E,31650μm,0.3s						
T0800				AML	AML		
	comp=N,93400μm,0.3s						
T0800				AML	AML		
	comp=E,40450μm,0.2s						
T0800				AML	AML		
	comp=N,83450μm,0.3s						
T0800				AML	AML		
	comp=E,40450μm,0.2s						
T0800				AML	AML		
	comp=N,93400μm,0.3s						
T0800				AML	AML		
	comp=N,83500μm,0.3s						
T0800				AML	AML		
	comp=E,31650μm,0.3s						
T0811	Palata Pepoli	0.21	117	*e*P	Pg	12 22 48.0	-1.2
T0811				*e*S	Sb	12 22 53.8	+0.5
T0811	Palata Pepoli	0.21	117	*e*P	Pg	12 22 49.0	-0.2
T0811				*e*S	Sb	12 22 53.9	+0.5
MODE	Modena	0.25	181	⇓*e*P	Pb	12 22 50.4	+0.1
MODE				⇓*e*S	Sb	12 22 55.9	+1.5
MODE	Modena	0.25	181	*e*P	Pb	12 22 50.4	+0.1
MODE				*e*S	Sb	12 22 55.9	+1.5
MODE				AML	AML		
	comp=E,70150μm,0.5s						
MODE				AML	AML		
	comp=N,76550μm,0.5s						
MODE				AML	AML		
	comp=E,70200μm,0.5s						
MOD

FIU				AML	AML		
	comp=E,4725μm,0.6s						
FIU				AML	AML		
	comp=N,4615μm,0.8s						
FIU				AML	AML		
	comp=E,4725μm,0.6s						
FIU				AML	AML		
	comp=N,4615μm,0.8s						
OPPE	**Oppeano**	**0.45**	**20**	AML	AML		
	comp=N,10610μm,1.1s						
OPPE				AML	AML		
	comp=E,7405μm,0.7s						
OPPE				AML	AML		
	comp=N,10610μm,1.1s						
OPPE				AML	AML		
	comp=E,7405μm,0.7s						
OPPE				AML	AML		
	comp=N,10600μm,1.1s						
OPPE				AML	AML		
	comp=E,7405μm,0.7s						
PRMA	**PARMA**	**0.47**	**256**	AML	AML		
	comp=N,6245μm,0.2s						
PRMA				AML	AML		
	comp=E,5160μm,1.0s						
PRMA				AML	AML		
	comp=E,5160μm,1.0s						
PRMA				AML	AML		
	comp=N,6245μm,0.2s						
PRMA				AML	AML		
	comp=E,5160μm,1.0s						
PRMA				AML	AML		
	comp=N,6245μm,0.2s						
T0816	**San Bartolomeo**	**0.48**	**109**	*e*P	**Pb**	**12 22 54.5**	**+0.3**
T0816	**San Bartolomeo**	**0.48**	**109**	*e*P	**Pb**	**12 22 54.5**	**+0.3**
ZCCA	**Zocca**	**0.53**	**179⇓**	*e*P	**Pg**	**12 22 55.0**	**+0.2**
ZCCA	**Zocca**	**0.53**	**179**	*e*P	**Pb**	**12 22 56.0**	**+0.8**
ZCCA				AML	AML		
	comp=E,4670μm,0.5s						
ZCCA				AML	AML		
	comp=N,6665μm,0.9s						
ZCCA				AML	AML		
	comp=E,4535μm,1.0s						
ZCCA				AML	AML		
	comp=N,7195μm,1.0s						
ZCCA				AML	AML		
	comp=E,4670μm,0.5s						
ZCCA				AML	AML		
	comp=N,6665μm,0.9s						
ZCCA				AML	AML		
	comp=E,4535μm,1.0s						
ZCCA				AML	AML		
	comp=N,7195μm,1.0s						
ZCCA				AML	AML		
	comp=E,4535μm,1.0s						
ZCCA				AML	AML		
	comp=E,4670μm,0.5s						
ZCCA				AML	AML		
	comp=N,6665μm,0.9s						
ZCCA				AML	AML		
	comp=N,7195μm,1.0s						
MTRZ	**Monterenzio**	**0.62**	**144⇓**	*e*P	**Pn**	**12 22 58.6**	**+0.3**
MTRZ	**Monterenzio**	**0.62**	**144**	*e*P	**Pn**	**12 22 58.6**	**+0.3**
TREG	**Tregnago**	**0.66**	**13**	AML	AML		
	comp=E,3605μm,0.3s						
TREG				AML	AML		
	comp=E,3610μm,0.3s						
TREG				AML	AML		
	comp=N,6925μm,1.4s						
TREG				AML	AML		
	comp=N,6925μm,1.4s						
TREG				AML	AML		
	comp=E,3610μm,0.3s						
TREG				AML	AML		
	comp=N,6925μm,1.4s						
ZOVE	**Zovencedo**	**0.68**	**33**	AML	AML		
	comp=N,3630μm,0.5s						
ZOVE				AML	AML		
	comp=E,2750μm,1.4s						
ZOVE				AML	AML		
	comp=E,2750μm,1.4s						
ZOVE				AML	AML		
	comp=N,3630μm,0.5s						
ZOVE				AML	AML		
	comp=E,2750μm,1.4s						
ZOVE				AML	AML		
	comp=N,3630μm,0.5s						
TEOL	**Teolo**	**0.69**	**46⇓**	*e*Pg	**Pb**	**12 22 58.0**	**+0.1**
TEOL				*e*Sg	**Sn**	**12 23 09.1**	**-0.6**
TEOL	**Teolo**	**0.69**	**46⇓**	*e*P	**Pg**	**12 22 57.0**	**-0.8**
TEOL	**Teolo**	**0.69**	**46**	*e*Pg	**Pb**	**12 22 58.0**	**+0.1**
TEOL				*e*Sg	**Sn**	**12 23 09.1**	**-0.6**
TEOL	**Teolo**	**0.69**	**46**	*e*P	**Pb**	**12 22 58.0**	**+0.1**
TEOL				AML	AML		
	comp=E,9715μm,0.4s						
TEOL				AML	AML		
	comp=N,4740μm,0.3s						
TEOL				AML	AML		
	comp=E,9715μm,0.4s						
TEOL				AML	AML		
	comp=N,4735μm,0.3s						
TEOL				AML	AML		
	comp=N,4740μm,0.3s						
TEOL				AML	AML		
	comp=E,9715μm,0.4s						
IMOL	**Imola, Italy**	**0.77**	**133**	AML	AML		
	comp=N,3245μm,1.5s						
IMOL				AML	AML		
	comp=E,3480μm,0.9s						
IMOL				AML	AML		
	comp=N,3245μm,1.5s						
IMOL				AML	AML		
	comp=E,529μm,1.1s						
IMOL				AML	AML		
	comp=N,475μm,0.8s						
IMOL				AML	AML		
	comp=E,3480μm,0.9s						
IMOL				AML	AML		
	comp=N,3245μm,1.5s						
IMOL				AML	AML		
	comp=E,528μm,1.1s						
IMOL				AML	AML		
	comp=N,472μm,0.8s						
IMOL				AML	AML		
	comp=E,529μm,1.1s						
IMOL				AML	AML		
	comp=E,3480μm,0.9s						
IMOL				AML	AML		
	comp=N,475μm,0.8s						
ROVR	**Rover¨¤ Verone**	**0.77**	**6⇓**	*e*P	**Pg**	**12 22 59.2**	**0.0**
ROVR	**Rover¨¤ Verone**	**0.77**	**6**	*e*P	**Pg**	**12 22 59.2**	**0.0**
ROVR				*e*S	**Sn**	**12 23 13.6**	**+1.8**
ROVR				AML	AML		
	comp=E,7335μm,0.9s						
ROVR				AML	AML		
	comp=N,14250μm,0.3s						
ROVR				AML	AML		
	comp=E,7335μm,0.9s						
ROVR				AML	AML		
	comp=N,14250μm,0.3s						
ROVR				AML	AML		
	comp=E,7335μm,0.9s						
ROVR				AML	AML		
	comp=N,14250μm,0.3s						
MARN	**Marana (Italy)**	**0.78**	**13⇑**	*e*Pg	**Pb**	**12 22 59.6**	**+0.3**
MARN				*e*Sg	**Sn**	**12 23 11.8**	**0.0**
MARN	**Marana (Italy)**	**0.78**	**13**	*e*Pg	**Pb**	**12 22 59.6**	**+0.3**
MARN				*e*Sg	**Sn**	**12 23 11.8**	**0.0**
SALO	**Salr**	**0.80**	**338⇓**	*e*P	**Pb**	**12 22 59.0**	**-0.7**
SALO	**Salr**	**0.80**	**338**	*e*P	**Pb**	**12 22 60.0**	**+0.3**
SALO				AML	AML		
	comp=E,9240μm,0.5s						
SALO				AML	AML		
	comp=N,12150μm,0.7s						
SALO				AML	AML		
	comp=E,9240μm,0.5s						
SALO				AML	AML		
	comp=N,12150μm,0.7s						
SALO				AML	AML		
	comp=E,9240μm,0.5s						
SALO				AML	AML		
	comp=N,12150μm,0.7s						
BALD	**Monte Baldo**	**0.81**	**353⇓**	*e*Pg	**Pb**	**12 23 00.4**	**+0.5**
BALD				*e*Sg	**Sn**	**12 23 13.9**	**+1.1**
BALD	**Monte Baldo**	**0.81**	**353**	*e*Pg	**Pb**	**12 23 00.4**	**+0.5**
BALD				*e*Sg	**Sn**	**12 23 13.9**	**+1.1**
VLC	**Villacollemand**	**0.83**	**210**	AML	AML		
	comp=N,2635μm,0.7s						
VLC				AML	AML		
	comp=E,2445μm,0.6s						
VLC				AML	AML		
	comp=E,2445μm,0.6s						
VLC				AML	AML		
	comp=N,2635μm,0.7s						
VLC				AML	AML		
	comp=E,2445μm,0.6s						
VLC				AML	AML		
	comp=N,2635μm,0.7s						
POPM	**Popiglio**	**0.85**	**190**	AML	AML		
	comp=E,3350μm,1.2s						
POPM				AML	AML		
	comp=N,5890μm,0.6s						
MAGA	**Magasa**	**0.92**	**346⇓**	*e*P	**Pb**	**12 23 01.7**	**-0.1**
MAGA	**Magasa**	**0.92**	**346**	*e*P	**Pb**	**12 23 01.7**	**-0.1**
MAGA				AML	AML		
	comp=E,56300μm,0.4s						
MAGA				AML	AML		
	comp=N,43750μm,0.4s						
MAGA				AML	AML		
	comp=E,56300μm,0.4s						
MAGA				AML	AML		
	comp=N,43750μm,0.4s						
MAGA				AML	AML		
	comp=N,43750μm,0.4s						
MAGA				AML	AML		
	comp=E,56300μm,0.4s						
CTL8	**Castelleone**	**0.93**	**295**	AML	AML		
	comp=N,8615μm,0.6s						
CTL8				AML	AML		
	comp=E,11435μm,0.4s						
CTL8				AML	AML		
	comp=E,3705μm,0.4s						
CTL8				AML	AML		
	comp=N,2115μm,0.7s						
CTL8				AML	AML		
	comp=E,11405μm,0.4s						
CTL8				AML	AML		
	comp=N,8600μm,0.6s						
CTL8				AML	AML		
	comp=E,3705μm,0.4s						
CTL8				AML	AML		
	comp=N,2120μm,0.7s						
CTL8				AML	AML		
	comp=N,2115μm,0.7s						
CTL8				AML	AML		
	comp=E,3705μm,0.4s						
CTL8				AML	AML		
	comp=N,8615μm,0.6s						
CTL8				AML	AML		
	comp=E,11435μm,0.4s						
DOSS	**Dosso del Somm**	**1.01**	**9⇓**	*e*Pg	**Pb**	**12 23 03.4**	**0.0**
DOSS				*e*Sg	**Sn**	**12 23 18.8**	**+1.0**
DOSS	**Dosso del Somm**	**1.01**	**9**	*e*Pg	**Pb**	**12 23 03.4**	**0.0**
DOSS				*e*Sg	**Sn**	**12 23 18.8**	**+1.0**
MAIM	**Mastiano**	**1.02**	**199**	AML	AML		
	comp=E,3625μm,0.4s						
MAIM				AML	AML		
	comp=N,7290μm,0.6s						
BOB	**Bobbio (Coli)**	**1.08**	**264**	AML	AML		
	comp=N,4495μm,0.8s						
BOB				AML	AML		
	comp=E,3105μm,1.2s						
CRMI	**Carmignano**	**1.09**	**180**	AML	AML		
	comp=N,768μm,1.6s						
CRMI				AML	AML		
	comp=E,922μm,0.4s						
CRMI				AML	AML		
	comp=E,922μm,0.4s						
CRMI				AML	AML		
	comp=N,768μm,1.6s						
CRMI				AML	AML		
	comp=E,922μm,0.4s						
CRMI				AML	AML		
	comp=N,768μm,1.6s						
CGRP	**Cima Grappa**	**1.16**	**30⇑**	*e*Pg	**Pn**	**12 23 06.1**	**+0.2**
CGRP				*e*Sg	**Sg**	**12 23 22.8**	**+1.0**
CGRP	**Cima Grappa**	**1.16**	**30⇓**	*e*P	**Pb**	**12 23 06.2**	**+0.3**
CGRP				⇓*e*S	**Sg**	**12 23 22.4**	**+0.6**
CGRP	**Cima Grappa**	**1.16**	**30**	*e*P	**Pb**	**12 23 06.2**	**+0.3**
CGRP				*e*S	**Sg**	**12 23 22.4**	**+0.6**
CGRP				AML	AML		
	comp=E,2675μm,0.6s						
CGRP				AML	AML		
	comp=N,2510μm,0.7s						
CGRP				AML	AML		
	comp=E,2675μm,0.6s						
CGRP				AML	AML		
	comp=N,2510μm,0.7s						
CGRP				AML	AML		
	comp=E,2675μm,0.6s						
CGRP				AML	AML		
	comp=N,2510μm,0.7s						
SFI	**Santa Sofia**	**1.17**	**147**	AML	AML		
	comp=E,1094μm,0.9s						
SFI				AML	AML		
	comp=N,2345μm,1.2s						
SFI				AML	AML		
	comp=E,1208μm,0.9s						
SFI				AML	AML		
	comp=N,2325μm,1.2s						
MSSA	**Maissana**	**1.17**	**242**	AML	AML		
	comp=E,2145μm,0.5s						
MSSA				AML	AML		
	comp=N,2270μm,1.5s						
MSSA				AML	AML		
	comp=E,2145μm,0.5s						
MSSA				AML	AML		
	comp=N,2270μm,1.5s						
MSSA				AML	AML		
	comp=N,2270μm,1.5s						
MSSA				AML	AML		
	comp=E,2145μm,0.5s						
PANI	**Panarotta**	**1.20**	**13⇓**	*e*Pg	**Pn**	**12 23 06.0**	**-0.4**
PANI				*e*Sg	**Sg**	**12 23 23.3**	**+0.2**
PANI	**Panarotta**	**1.20**	**13**	*e*Pg	**Pn**	**12 23 06.0**	**-0.4**
PANI				*e*Sg	**Sg**	**12 23 23.3**	**+0.2**
MABI	**Malga Bissina**	**1.21**	**345**	AML	AML		
	comp=N,849μm,1.4s						
MABI				AML	AML		
	comp=E,1200μm,0.6s						
MABI				AML	AML		
	comp=E,1200μm,0.6s						
MABI				AML	AML		
	comp=N,849μm,1.4s						
MABI				AML	AML		
	comp=E,1200μm,0.6s						
MABI				AML	AML		
	comp=N,849μm,1.4s						
MTLO	**Montello**	**1.23**	**40⇑**	*e*Pg	**Pb**	**12 23 07.2**	**+0.2**
MTLO				*e*Sg	**Sg**	**12 23 25.4**	**+1.4**
MTLO	**Montello**	**1.23**	**40**	*e*Pg	**Pb**	**12 23 07.2**	**+0.2**
MTLO				*e*Sg	**Sg**	**12 23 25.4**	**+1.4**
ASQU	**Asqua**	**1.24**	**151**	AML	AML		
	comp=N,958μm,0.8s						
ASQU				AML	AML		
	comp=E,1155μm,0.8s						
ASQU				AML	AML		
	comp=E,1155μm,0.8s						
ASQU				AML	AML		
	comp=N,958μm,0.8s						
ASQU				AML	AML		
	comp=E,1155μm,0.8s						
ASQU				AML	AML		
	comp=N,958μm,0.8s						
CTI	**Castel Tesino**	**1.26**	**22**	AML	AML		
	comp=N,5540μm,0.2s						
CTI				AML	AML		
	comp=E,5820μm,0.2s						
OZOL	**Ozolo**	**1.52**	**2⇓**	*e*Pg	**Pn**	**12 23 11.4**	**+0.6**
OZOL	**Ozolo**	**1.52**	**2**	*e*Pg	**Pn**	**12 23 11.4**	**+0.6**
FAU	**Forcella Aurin**	**1.53**	**28**	*e*Pg	**Pn**	**12 23 11.5**	**+0.6**
FAU				*e*Sg	**Sg**	**12 23 32.8**	**-0.7**
FAU	**Forcella Aurin**	**1.53**	**28**	*e*Pg	**Pn**	**12 23 11.5**	**+0.6**
FAU				*e*Sg	**Sg**	**12 23 32.8**	**-0.7**
CAE	**Caneva**	**1.53**	**42**	*e*Pg	**Pn**	**12 23 11.3**	**+0.4**
CAE	**Caneva**	**1.53**	**42**	*e*Pg	**Pn**	**12 23 11.3**	**+0.4**
PARC	**Parchiule**	**1.54**	**143**	AML	AML		
	comp=E,590μm,0.6s						
PARC				AML	AML		
	comp=N,532μm,0.9s						
CARE	**Lago del Cares**	**1.55**	**353⇓**	*e*Pg	**Pn**	**12 23 11.8**	**+0.4**
CARE	**Lago del Cares**	**1.55**	**353**	*e*Pg	**Pn**	**12 23 11.8**	**+0.4**
AGOR	**Agordo**	**1.60**	**28⇓**	*e*Pg	**Pn**	**12 23 12.7**	**+0.9**
AGOR	**Agordo**	**1.60**	**28**	AML	AML		
	comp=N,993μm,0.4s						
AGOR				AML	AML		
	comp=E,1045μm,1.2s						
APPI	**Appiano**	**1.61**	**7**	AML	AML		
	comp=E,4675μm,0.4s						
APPI				AML	AML		
	comp=N,4405μm,0.4s						
KOSI	**Kohlern**	**1.61**	**10**	AML	AML		
	comp=E,2560μm,0.5s						
KOSI				AML	AML		
	comp=N,2135μm,0.8s						
GROG	**Isola di Gorgo**	**1.65**	**208**	AML	AML		
	comp=E,256μm,0.4s						
GROG				AML	AML		
	comp=N,357μm,1.2s						
BRMO	**Bormio**	**1.65**	**346**	AML	AML		
	comp=N,1120μm,0.9s						
BRMO				AML	AML		
	comp=E,635μm,0.5s						
BADI	**Badiali**	**1.66**	**146**	AML	AML		
	comp=N,590μm,1.2s						
BADI				AML	AML		
	comp=E,580μm,1.0s						
MLNI	**Malnisio**	**1.72**	**42⇑**	*e*Pn	**Pn**	**12 23 14.2**	**+0.7**
MLNI	**Malnisio**	**1.72**	**42**	*e*Pn	**Pn**	**12 23 14.2**	**+0.7**
MOSI	**Grossmontoni**	**1.76**	**351**	AML	AML		
	comp=N,3200μm,0.6s						
MOSI				AML	AML		
	comp=E,2535μm,0.9s						
PIEI	**Pieia**	**1.76**	**139**	AML	AML		
	comp=E,312μm,0.3s						
PIEI				AML	AML		
	comp=N,257μm,1.2s						
CIMO	**Cimolais**	**1.77**	**36⇓**	*e*Pn	**Pn**	**12 23 14.5**	**+0.4**
CIMO	**Cimolais**	**1.77**	**36**	*e*Pn	**Pn**	**12 23 14.5**	**+0.4**
FSSB	**Fossombrone**	**1.77**	**132**	AML	AML		
	comp=N,728μm,1.5s						
FSSB				AML	AML		
	comp=E,797μm,0.4s						
TRIF	**Trifonti**	**1.77**	**181**	AML	AML		
	comp=N,393μm,0.9s						
TRIF				AML	AML		
	comp=E,391μm,0.9s						
ATPC	**Poggio Castell**	**1.77**	**142**	AML	AML		
	comp=E,606μm,1.3s						
ATPC				AML	AML		
	comp=N,502μm,1.5s						
ATPI	**Pietralunga -**	**1.77**	**144**	AML	AML		
	comp=N,482μm,1.2s						
ATPI				AML	AML		
	comp=E,353μm,0.8s						
ATBU	**Serra di Buran**	**1.81**	**140**	AML	AML		
	comp=N,1225μm,1.2s						
ATBU				AML	AML		
	comp=E,1295μm,0.8s						
VARE	**Varese**	**1.83**	**303**	AML	AML		
	comp=N,92μm,0.4s						
VARE				AML	AML		
	comp=E,81μm,0.5s						
STAL	**STALIGIAL**	**1.85**	**41**	AML	AML		
	comp=N,834μm,0.8s						
STAL				AML	AML		
	comp=E,711μm,0.8s						
STAL				AML	AML		
	comp=N,902μm,0.8s						
STAL				AML	AML		
	comp=E,974μm,0.8s						
ABSI	**Aberstueckl**	**1.86**	**8**	AML	AML		
	comp=N,2465μm,0.5s						
ABSI				AML	AML		
	comp=E,3860μm,0.6s						
ATVA	**AVT- Monte Val**	**1.87**	**149**	AML	AML		
	comp=N,242μm,0.8s						
ATVA				AML	AML		
	comp=E,218μm,1.6s						
QLNO	**Quiliano**	**1.95**	**254**	AML	AML		
	comp=E,456μm,0.5s						
QLNO				AML	AML		
	comp=N,520μm,0.7s						
TUE	**Stuetta**	**1.95**	**325**	AML	AML		
	comp=N,599μm,0.3s						
TUE				AML	AML		
	comp=E,964μm,0.4s						
MPRI	**Monte Prat**	**1.97**	**46**	*e*Pn	**Pn**	**12 23 17.5**	**+0.6**
MPRI	**Monte Prat**	**1.97**	**46**	*e*Pn	**Pn**	**12 23 17.5**	**+0.6**
ROSI	**Rosskopf**	**2.07**	**9**	AML	AML		
	comp=E,1190μm,0.6s						
ROSI				AML	AML		
	comp=N,1485μm,0.5s						
CASP	**Castiglione de**	**2.09**	**182**	AML	AML		
	comp=E,226μm,1.1s						
CASP				AML	AML		
	comp=N,420μm,0.7s						
FETA	**Feichten**	**2.15**	**356**	*e*Pg	**Pg**	**12 23 24.5**	**-0.9**
	comp=N,133nm,0.5s,SNR=107						
FETA				*e*Sn	**Sb**	**12 23 51.4**	**+2.3**
	comp=N,61nm,0.5s						
FETA	**Feichten**	**2.15**	**356**	Pg	**Pg**	**12 23 24.5**	**-0.9**
	comp=N,133nm,0.5s,SNR=107						
FETA				Sn	**Sb**	**12 23 51.4**	**+2.3**
	comp=N,61nm,0.5s						
SACS	**San Casciano d**	**2.15**	**161**	AML	AML		
	comp=E,186μm,1.2s						
SACS				AML	AML		
	comp=N,191μm,1.3s						
ABTA	**Abfaltersbach**	**2.16**	**30**	*e*Pn	**Pb**	**12 23 21.6**	**-1.3**
	comp=N,1.1nm,0.2s,SNR=29						
ABTA				Sg	**Sg**	**12 23 55.7**	**+2.0**
	comp=N,122nm,0.5s						
ABTA	**Abfaltersbach**	**2.16**	**30**	Pn	**Pb**	**12 23 21.6**	**-1.3**
	comp=N,1.1nm,0.2s,SNR=29						
ABTA				Sg	**Sg**	**12 23 55.7**	**+2.0**
	comp=N,122nm,0.5s						
CING	**Cingoli**	**2.21**	**132**	AML	AML		
	comp=E,206μm,0.6s						
CING				AML	AML		
	comp=N,208μm,1.1s						
RORO	**Rocca Rossa**	**2.21**	**251**	AML	AML		
	comp=E,366μm,0.6s						
RORO				AML	AML		
	comp=N,483μm,1.4s						
RISI	**Rein**	**2.21**	**20**	AML	AML		
	comp=E,1920μm,0.6s						
RISI				AML	AML		
	comp=N,1590μm,0.6s						
SKDS	**Skadanscina**	**2.26**	**72⇑**	*i*Pn	**Pn**	**12 23 20.5**	**-0.3**
SKDS				*i* Sn	**Sn**	**12 23 48.0**	**-0.4**
	comp=Z,32nm,0.2s						
SKDS	**Skadanscina**	**2.26**	**72⇑**	*i*Pn	**Pn**	**12 23 20.5**	**-0.3**
SKDS				*i* Sn	**Sn**	**12 23 48.0**	**-0.4**
	comp=Z,32nm,0.2s						
SATI	**Passo dei Sala**	**2.39**	**296**	AML	AML		
	comp=N,606μm,0.8s						
SATI				AML	AML		
	comp=E,1099μm,0.7s						
JAVS	**Javornik**	**2.41**	**64⇑**	*i*Pn	**Pn**	**12 23 23.2**	**+0.2**
JAVS				*i* Sn	**Sn**	**12 23 52.4**	**+0.2**
	comp=Z,37nm,0.4s						
JAVS	**Javornik**	**2.41**	**64⇑**	*i*Pn	**Pn**	**12 23 23.2**	**+0.2**
JAVS				*i* Sn	**Sn**	**12 23 52.4**	**+0.2**
	comp=Z,37nm,0.4s						
WTTA	**Wattenberg**	**2.43**	**11**	*e*Pn	**Pb**	**12 23 27.3**	**-0.3**
	comp=Z,5.9nm,0.1s,SNR=35						
WTTA				*e*Pg	**Pg**	**12 23 30.5**	**-0.3**
	comp=Z,100nm,0.5s						
WTTA				*e*Sn	**Sb**	**12 23 58.5**	**+1.2**
	comp=Z,164nm,0.5s						
WTTA	**Wattenberg**	**2.43**	**11**	Pn	**Pb**	**12 23 27.3**	**-0.3**
	comp=Z,5.9nm,0.1s,SNR=35						
ACOM	**Acomizza, Ital**	**2.44**	**46**	AML	AML		
	comp=N,680μm,0.9s						
ACOM				AML	AML		
	comp=E,684μm,0.9s						
WATA	**Walderalm**	**2.49**	**10**	*e*Pn	**Pb**	**12 23 27.7**	**-0.9**
	comp=E,18nm,0.2s,SNR=30						
WATA				*e*Sn	**Sb**	**12 24 00.5**	**+1.4**
	comp=E,109nm,0.5s						
WATA	**Walderalm**	**2.49**	**10**	Pn	**Pb**	**12 23 27.7**	**-0.9**
	comp=E,18nm,0.2s,SNR=30						
DAVA	**Damuels**	**2.52**	**343**	*e*Pn	**Pb**	**12 23 27.6**	**-1.5**
	comp=E,38nm,0.4s,SNR=31						
DAVA				*e*Sn	**Sb**	**12 24 00.4**	**+0.6**
	comp=E,67nm,0.4s						
DAVA	**Damuels**	**2.52**	**343**	Pn	**Pb**	**12 23 27.6**	**-1.5**
	comp=E,38nm,0.4s,SNR=31						
DAVA				Sn	**Sb**	**12 24 00.4**	**+0.6**
	comp=E,67nm,0.4s						
NEGI	**Seborga**	**2.55**	**247**	AML	AML		
	comp=N,646μm,1.6s						

NEGI AML AML
comp=E,680μm,0.2s
MYKA Terra Mystica 2.57 46 *e*Pg **Pg 12 23 33.1 -0.3**
comp=E,5.9nm,0.2s,SNR=16
MYKA Terra Mystica 2.57 46 Pg **Pg 12 23 33.1 -0.3**
comp=E,5.9nm,0.2s,SNR=16
SAOF Saorge 2.60 251 AML AML
comp=E,432μm,0.4s
SAOF AML AML
comp=N,352μm,0.5s
RETA Reutte 2.61 357 *e*Pn **Pb 12 23 28.8 -1.8**
comp=N,7.6nm,0.2s,SNR=14
RETA Reutte 2.61 357 Pn **Pb 12 23 28.8 -1.8**
comp=N,7.6nm,0.2s,SNR=14
STV Sant Anna di V 2.67 257 AML AML
comp=N,131μm,1.4s
STV AML AML
comp=E,177μm,0.3s
SBF Sospel 2.72 249 *e*Pn **Pb 12 23 30.6 -1.9**
SBF *e*Sn **Sn 12 24 00.7 +0.8**
comp=E,390nm,0.5s
SBF Sospel 2.72 249 *e*Pn **Pb 12 23 30.6 -1.9**
PGF Pioggiola 2.73 212 *e*Pn **Pn 12 23 28.4 +1.0**
PGF *e*Sn **Sn 12 24 00.0 -0.1**
comp=E,154nm,0.4s
PGF Pioggiola 2.73 212 *e*Pn **Pn 12 23 28.4 +1.0**
PGF *e*Sn **Sn 12 24 00.0 -0.1**
comp=E,77nm,0.4s
KBA Koelnbreinsper 2.76 36 *e*Pn **Pn 12 23 30.0 +2.2**
comp=E,1.0nm,0.1s
KBA *e*Pg **Pg 12 23 38.3 +1.2**
comp=E,22nm,0.3s
KBA *e*Sg **Sg 12 24 13.4 +0.6**
comp=E,115nm,0.7s
KBA Koelnbreinsper 2.76 36 Pn **Pn 12 23 30.0 +2.2**
comp=E,1.0nm,0.1s
LUCF Luceram 2.77 250 P **Pn 12 23 30.4 +2.5**
LUCF Luceram 2.77 250 P **Pn 12 23 30.4 +2.5**
LUCF S **Sb 12 24 05.4 -1.7**
NVLJ Novalja 2.81 95 *e*Pn **Pn 12 23 28.1 -0.3**
NVLJ Sn **Sn 12 24 00.2 -1.6**
NVLJ Novalja 2.81 95 *e*Pn **Pn 12 23 28.0 -0.3**
NVLJ Sn **Sn 12 24 00.2 -1.6**
MVIF Mont Vial 2.90 251 P **Pn 12 23 32.6 +2.8**
MVIF Mont Vial 2.90 251 P **Pn 12 23 32.6 +2.8**
MVIF S **Sb 12 24 08.5 -2.3**
MBDF Montbardon 2.98 268 *e*Pn **Pn 12 23 31.4 +0.5**
MBDF *e*Sn **Sn 12 24 06.8 +0.4**
comp=E,120nm,0.5s
MBDF Montbardon 2.98 268 *e*Pn **Pn 12 23 31.4 +0.5**
MBDF *e*Sn **Sn 12 24 06.8 +0.4**
comp=E,60nm,0.5s
SURF Saint Ours 2.98 264 P **Pn 12 23 32.2 +1.3**
SURF Saint Ours 2.98 264 P **Pn 12 23 32.2 +1.3**
OBKA Obir 3.00 56 *i* Pn **Pn 12 23 32.2 +1.2**
comp=E,1.2nm,0.1s
OBKA *e*Pg **Pg 12 23 42.2 +0.6**
comp=E,10nm,0.3s
OBKA *e*Sg **Sg 12 24 20.7 +0.3**
comp=E,35nm,0.3s
OBKA Obir 3.00 56 Pn **Pn 12 23 32.2 +1.2**
comp=E,1.2nm,0.1s
LPG La Plagne 3.04 283 *e*Pn **Pn 12 23 31.2 -0.6**
LPG *e*Sn **Sn 12 24 09.1 +1.2**
comp=E,110nm,0.4s
LPG La Plagne 3.04 283 *e*Pn **Pn 12 23 31.2 -0.6**
LPG *e*Sn **Sn 12 24 09.1 +1.2**
comp=E,55nm,0.4s
LPL La Plagne 3.05 283 *e*Pn **Pn 12 23 35.6 +3.7**
LPL *e*Sn **Sn 12 24 08.6 +0.4**
comp=E,92nm,0.4s
LPL La Plagne 3.05 283 *e*Pn **Pn 12 23 35.6 +3.7**
LPL *e*Sn **Sn 12 24 08.6 +0.4**
comp=E,46nm,0.4s
CALF Calern 3.11 250 P **Pn 12 23 35.2 +2.6**
CALF Calern 3.11 250 P **Pn 12 23 35.2 +2.6**
OZLJ Ozalj 3.27 75 *i* Pn **Pn 12 23 35.5 +0.9**
OZLJ Sn **Sn 12 24 11.8 -1.4**
OZLJ Ozalj 3.27 75 *i* Pn **Pn 12 23 35.5 +0.9**
OZLJ Sn **Sn 12 24 11.7 -1.4**
FRF La Foret Royal 3.37 248 *e*Pn **Pn 12 23 39.2 +3.1**
FRF *e*Sn **Sn 12 24 15.9 +0.2**
comp=E,121nm,0.3s
FRF La Foret Royal 3.37 248 *e*Pn **Pn 12 23 39.2 +3.1**
FRF *e*Sn **Sn 12 24 15.9 +0.2**
comp=E,61nm,0.3s
SOKA Soboth 3.37 56 *e*Pn **Pn 12 23 37.0 +0.9**
comp=E,1.8nm,0.2s
SOKA *e*Sn **Sn 12 24 16.7 +0.9**
comp=E,8.9nm,0.4s
SOKA Soboth 3.37 56 P **Pn 12 23 37.0 +0.9**
comp=E,1.8nm,0.2s
SOKA Sn **Sn 12 24 16.7 +0.9**
comp=E,8.9nm,0.4s
LMR La Mourre 3.56 246 *e*Pn **Pn 12 23 40.7 +2.1**
LMR *e*Sn **Sn 12 24 20.6 +0.3**
comp=E,223nm,0.3s
LMR La Mourre 3.56 246 *e*Pn **Pn 12 23 40.7 +2.1**
LMR *e*Sn **Sn 12 24 20.6 +0.3**
comp=E,111nm,0.3s
ORIF Oris-en-Rattie 3.61 272 *e*Pn **Pn 12 23 41.6 +2.2**
ORIF *e*Sn **Sn 12 24 21.7 0.0**
comp=E,59nm,0.4s
ORIF Oris-en-Rattie 3.61 272 P **Pn 12 23 41.6 +2.2**
ORIF Oris-en-Rattie 3.61 272 *e*Pn **Pn 12 23 41.6 +2.2**
ORIF *e*Sn **Sn 12 24 21.7 0.0**
comp=E,29nm,0.4s
KIZ Kirchzarten 3.73 327 P **Pn 12 23 42.5 +1.5**
KIZ Kirchzarten 3.73 327 P **Pn 12 23 42.5 +1.5**
MOA Molln 3.75 36 *i* Pn **Pn 12 23 43.5 +2.2**
comp=E,2.2nm,0.2s
MOA Molln 3.75 36 Pn **Pn 12 23 43.5 +2.2**
comp=E,2.2nm,0.2s
LOMF Lomont 3.79 312 P **Pn 12 23 43.4 +1.5**
LOMF Lomont 3.79 312 P **Pn 12 23 43.4 +1.5**
CHMF Charmoille 3.82 310 P **Pn 12 23 44.0 +1.7**
CHMF Charmoille 3.82 310 P **Pn 12 23 43.0 +0.7**
CABF La Chapelle 3.82 299 *e*Pn **Pn 12 23 44.5 +2.1**
CABF *e*Sn **Sn 12 24 26.3 -0.7**
comp=E,52nm,0.5s
CABF La Chapelle 3.82 299 *e*Pn **Pn 12 23 44.5 +2.1**
CABF *e*Sn **Sn 12 24 26.3 -0.7**
comp=E,26nm,0.5s
SMRF Simiane la Rot 3.96 259 *e*Pn **Pn 12 23 45.4 +1.2**
SMRF *e*Sn **Sn 12 24 30.2 -0.1**
comp=E,27nm,0.3s
SMRF Simiane la Rot 3.96 259 *e*Pn **Pn 12 23 45.4 +1.2**
SMRF *e*Sn **Sn 12 24 30.2 -0.1**
comp=E,13nm,0.3s
MOF Molkenrain 3.98 320 P **Pn 12 23 46.2 +1.7**
MOF Molkenrain 3.98 320 P **Pn 12 23 46.2 +1.7**
HINF Hinteralfeld 4.09 317 *e*Pn **Pn 12 23 46.8 +0.9**
HINF *e*Sn **Sn 12 24 33.4 0.0**
comp=E,41nm,0.3s
HINF Hinteralfeld 4.09 317 *e*Pn **Pn 12 23 46.8 +0.9**
HINF *e*Sn **Sn 12 24 33.4 0.0**
comp=E,21nm,0.3s
OPP Oppenau 4.09 333 P **Pn 12 23 47.5 +1.6**
OPP Oppenau 4.09 333 P **Pn 12 23 47.5 +1.6**
ECH Echery 4.24 323 P **Pn 12 23 49.0 +0.9**
ECH Echery 4.24 323 P **Pn 12 23 49.0 +0.9**
WLS Welschbruch 4.32 326 P **Pn 12 23 50.5 +1.4**
WLS Welschbruch 4.32 326 P **Pn 12 23 50.5 +1.4**
CDF Champ du Feu 4.35 326 *e*Pn **Pn 12 23 50.5 +0.9**
CDF Champ du Feu 4.35 326 *e*Pn **Pn 12 23 50.5 +0.9**
GERES GERESS Array B 4.39 24 Pn **Pn 12 23 51.0 +0.8**
comp=E,0.9nm,0.3s,baz=200,slow=12,SNR=13
GERES Sn **Sn 12 24 41.5 +0.5**
comp=E,3.1nm,0.3s,baz=202,slow=23,SNR=7.7
GERES LR LR 12 25 46.7
comp=E,36nm,21.6s,baz=302,slow=42
HAU Haudompre 4.46 316 *e*Pn **Pn 12 23 51.9 +0.8**
HAU *e*Sn **Sn 12 24 43.7 +1.0**
comp=E,134nm,0.3s
HAU Haudompre 4.46 316 *e*Pn **Pn 12 23 51.9 +0.8**
HAU *e*Sn **Sn 12 24 43.7 +1.0**
comp=E,67nm,0.3s
VIVF Saint-Julien-I 4.47 272 *e*Pn **Pn 12 23 52.7 +1.5**
VIVF *e*Sn **Sn 12 24 42.6 -0.2**
comp=E,31nm,0.5s
VIVF Saint-Julien-I 4.47 272 *e*Pn **Pn 12 23 52.7 +1.5**
VIVF *e*Sn **Sn 12 24 42.6 -0.2**
comp=E,16nm,0.5s
KHC Kasperske Hory 4.61 22 *e*PN **Pn 12 23 54.8 +1.6**
KHC *e*PG **Pg 12 24 11.5 -1.0**
KHC *e*SN **Sn 12 24 45.5 -0.9**
KHC *e*SG **Sg 12 25 13.2 +1.0**
comp=E,45nm,0.7s
KHC Kasperske Hory 4.61 22 Pn **Pn 12 23 54.8 +1.6**
PAGF Fort de Pagny 5.14 317 *e*Pn **Pn 12 24 01.9 +1.5**
baz=131
PAGF *e*Sn **Sn 12 24 59.1 -0.3**
comp=E,31nm,0.4s,baz=134
PAGF Fort de Pagny 5.14 317 *e*Pn **Pn 12 24 01.9 +1.5**
PAGF *e*Sn **Sn 12 24 59.1 -0.3**
comp=E,16nm,0.4s
LASF Ste Croix 5.14 263 *e*Pn **Pn 12 24 01.7 +1.2**
LASF *e*Sn **Sn 12 24 57.8 -1.7**
comp=E,8.9nm,0.3s
LASF Ste Croix 5.14 263 *e*Pn **Pn 12 24 01.7 +1.2**
LASF *e*Sn **Sn 12 24 57.8 -1.7**
comp=E,4.4nm,0.3s
SFTF Sexfontaines 5.26 311 *e*Pn **Pn 12 24 03.8 +1.7**
baz=128
SFTF *e*Sn **Sn 12 25 01.4 -1.0**
comp=E,26nm,0.4s
SFTF Sexfontaines 5.26 311 *e*Pn **Pn 12 24 03.8 +1.7**
SFTF *e*Sn **Sn 12 25 01.4 -1.0**
comp=E,13nm,0.4s
STON Ston 5.27 110 *i* Pn **Pn 12 24 02.3 +0.1**
STON Sn **Sn 12 24 59.8 -2.7**
STON Ston 5.27 110 *i* Pn **Pn 12 24 02.2 +0.1**
STON Sn **Sn 12 24 59.8 -2.7**
SMF Signal de Mont 5.28 292 *e*Pn **Pn 12 24 04.1 +1.7**
SMF *e*Sn **Sn 12 25 01.5 -1.4**
comp=E,51nm,0.4s
SMF Signal de Mont 5.28 292 *e*Pn **Pn 12 24 04.1 +1.7**
SMF *e*Sn **Sn 12 25 01.5 -1.4**
comp=E,26nm,0.4s
MEZF Maizieres J'vi 5.44 314 *e*Pn **Pn 12 24 06.0 +1.5**
baz=133
MEZF *e*Sn **Sn 12 25 07.9 +1.2**
comp=E,23nm,0.4s
MEZF Maizieres J'vi 5.44 314 *e*Pn **Pn 12 24 06.0 +1.5**
MEZF *e*Sn **Sn 12 25 07.9 +1.2**
comp=E,12nm,0.4s
LOR Lormes 5.49 298 *e*Pn **Pn 12 24 06.7 +1.6**
baz=121
LOR *e*Sn **Sn 12 25 07.7 -0.2**
comp=E,28nm,0.3s
LOR Lormes 5.49 298 P **Pn 12 24 06.3 +1.1**
LOR Lormes 5.49 298 *e*Pn **Pn 12 24 06.7 +1.6**
LOR *e*Sn **Sn 12 25 07.7 -0.2**
comp=E,14nm,0.3s
MODS Modra-Piesok 5.58 49 *e*PG **Pg 12 24 32.2 +1.2**
MODS *e*SG Sg 12 25 56.8 +14
MODS Modra-Piesok 5.58 49 *e*Pg **Pg 12 24 32.2 +1.2**
KRUC Moravsky 5.60 40 *e*SG **Sg 12 25 41.2 -2.5**
AGO Saint Agoulin 5.63 285 P **Pn 12 24 09.0 +1.8**
AGO Saint Agoulin 5.63 285 P **Pn 12 24 08.0 +0.9**
SSF Saint Saulge 5.63 295 *e*Pn **Pn 12 24 08.4 +1.2**
SSF *e*Sn **Sn 12 25 09.4 -2.1**
comp=E,29nm,0.5s
SSF Saint Saulge 5.63 295 *e*Pn **Pn 12 24 08.4 +1.2**
AVF Avril sur Loir 5.65 292 *e*Pn **Pn 12 24 09.0 +1.7**
AVF Avril sur Loir 5.65 292 *e*Pn **Pn 12 24 09.0 +1.7**
PRU Pruhonice 5.66 24 *e*PG **Pg 12 24 30.6 -1.8**
PRU *e*SG **Sg 12 25 44.6 -1.0**
PRU Pruhonice 5.66 24 Pg **Pg 12 24 30.6 -1.8**
PRU Sg **Sg 12 25 44.6 -1.0**
VRAC Vranov 5.87 39 Lg Lg 12 25 50.5
comp=E,0.6nm,0.3s,baz=120,slow=20,SNR=3.0
VRAC LR LR 12 27 01.1
comp=E,41nm,20.1s,baz=210,slow=44
VRAC Vranov 5.87 39 *e*SG **Sg 12 25 49.0 -3.3**
BGF Bois d'Agland 5.92 289 *e*Pn **Pn 12 24 12.8 +1.7**
BGF *e*Sn **Sn 12 25 17.3 -1.3**
comp=E,76nm,0.4s
BGF Bois d'Agland 5.92 289 *e*Pn **Pn 12 24 12.8 +1.7**
HYF Humbligny 6.26 295 *e*Pn **Pn 12 24 16.9 +1.1**
HYF *e*Sn **Sn 12 25 25.1 -1.8**
HYF Humbligny 6.26 295 *e*Pn **Pn 12 24 16.9 +1.1**
TCF Toulx Ste Croi 6.30 286 *e*Pn **Pn 12 24 18.5 +2.2**
TCF *e*Sn **Sn 12 25 26.1 -1.8**
comp=E,16nm,0.4s
TCF Toulx Ste Croi 6.30 286 *e*Pn **Pn 12 24 18.5 +2.2**
CAF Calviac 6.32 274 *e*Pn **Pn 12 24 18.4 +1.8**
CAF Calviac 6.32 274 *e*Pn **Pn 12 24 18.4 +1.8**
BRG Berggiesshubel 6.32 17 PN **Pn 12 24 19.5 +2.9**
BRG PG **Pg 12 24 43.7 -1.4**
BRG SG **Sg 12 26 03.2 -3.7**
comp=E,52nm,1.2s
KRLC Kraliky 6.52 35 *e*SG **Sg 12 26 12.0 -1.4**
KRLC Kraliky 6.52 35 Sg **Sg 12 26 12.0 -1.4**
CLL Collm 6.57 11 *e*Pn **Pn 12 24 22.0 +2.0**
CLL *e*Pg **Pg 12 24 48.0 -1.9**
CLL *e* 12 25 32.0
CLL *i* 12 25 48.0
CLL *e*Sg **Sg 12 26 10.0 -5.0**
comp=Z,37nm,1.1s
MORC Moravsky Berou 6.63 40 *e*SG **Sg 12 26 12.7 -4.2**
HFS Hagfors 15.37 5 LR LR 12 32 55.5
comp=Z,39nm,18.1s,baz=148,slow=40
NOA NORSAR Array B 16.19 0 LR LR 12 32 15.6
comp=Z,16nm,21.3s,baz=185,slow=35
TORD Torodi Ar. Bea 32.60 197 P **P 12 29 14.1 -0.8**
comp=Z,0.5nm,0.5s,baz=18,slow=8.6,SNR=5.2
KURBB Kurchatov Arra 44.37 57 P **P 12 30 54.2 +0.8**
comp=Z,0.2nm,0.4s,baz=296,slow=9.9,SNR=2.7
MKAR Makanchi Array 48.14 61 P **P 12 31 23.7 +0.5**
comp=Z,0.5nm,0.9s,baz=282,slow=6.2,SNR=3.8

*ISK **01** 12:29:10.5,37°.53N×36°.07E,h24km,ML2.2/5*
*ISCJB **01** 12:29:11.9±0.6,37°.54N±0°.03×36°.05E±0°.04,h22km±7km, Error ellipse: s-maj=5.6km s-min=4.8km az=3.0*
*DDA **01** 12:29:11.8,37°.55N×36°.01E,h7km,Ml2.5*
*CSEM **01** 12:29:11.4±0.2,37°.54N×36°.06E,h17km±2km,ML2.2, Error ellipse: s-maj=5.9km s-min=4.7km az=25.0*
ISC 01 12:29:11.3±1.0,37°.55N±0°.03×36°.06E±0°.02,h17km±9km**, n19,σ0°55/33,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.19**	**251**	PG	**Pb**	**12 29 16.8**	**+0.4**
KOZT				SG	**Sb**	**12 29 20.2**	**+0.3**
KOZT	**Kozan**	**0.19**	**251**	*e*Pg	**Pb**	**12 29 16.8**	**+0.4**
ANDN	**Andirin**	**0.23**	**81**	*i* P	**Pb**	**12 29 17.2**	**+0.1**
ANDN				*i* S	**Sb**	**12 29 22.1**	**+1.0**
ANDN	**Andirin**	**0.23**	**81**	P	**Pb**	**12 29 17.2**	**+0.1**
ANDN				S	**Sb**	**12 29 22.0**	**+1.0**
SAIM	**ADANA**	**0.43**	**3**	*i* P	**Pg**	**12 29 20.2**	**+0.1**
SAIM				*i* S	**Sb**	**12 29 27.1**	**+0.2**
SAIM	**ADANA**	**0.43**	**3**	P	**Pg**	**12 29 20.2**	**+0.1**
SAIM				S	**Sb**	**12 29 27.1**	**+0.2**
CEYT	**Ceyhan**	**0.59**	**205**	PG	**Pg**	**12 29 22.8**	**-0.1**
CEYT	**Ceyhan**	**0.59**	**205**	*e*Pg	**Pg**	**12 29 22.8**	**-0.1**
KMRS	**Kahramanmaras**	**0.67**	**93**	PG	**Pb**	**12 29 24.7**	**+0.1**
KMRS				SG	**Sb**	**12 29 33.8**	**+0.1**
KMRS	**Kahramanmaras**	**0.67**	**93**	*e*Pg	**Pb**	**12 29 24.7**	**+0.1**
KMRS				*e*Sg	**Sb**	**12 29 33.8**	**+0.1**
YAHY	**KAYSERI_Yahyal**	**0.78**	**315**	*i* P	**Pg**	**12 29 26.4**	**0.0**
YAHY				*i* S	**Sg**	**12 29 36.7**	**-0.1**
YAHY	**KAYSERI_Yahyal**	**0.78**	**315**	P	**Pg**	**12 29 26.5**	**0.0**
YAHY				S	**Sg**	**12 29 36.7**	**-0.1**
SARI	**SarD1z-Kayseri**	**0.91**	**18**	PG	**Pb**	**12 29 27.9**	**-0.8**
SARI				SG	**Sg**	**12 29 41.5**	**+0.5**
GULE	**Gulek**	**1.05**	**256**	*i* P	**Pn**	**12 29 31.6**	**+0.1**
GULE				*i* S	**Sn**	**12 29 46.0**	**+0.1**
GULE	**Gulek**	**1.05**	**256**	P	**Pn**	**12 29 31.6**	**+0.1**
GULE				S	**Sn**	**12 29 46.0**	**+0.1**
KUZU	**Kuzuini**	**1.12**	**133**	*i* P	**Pg**	**12 29 33.3**	**+0.3**
KUZU				*i* S	**Sn**	**12 29 47.7**	**+0.4**
KUZU	**Kuzuini**	**1.12**	**133**	P	**Pg**	**12 29 33.3**	**+0.3**
KUZU				S	**Sn**	**12 29 47.7**	**+0.4**
TAHT	**Tahtakopru-Hat**	**1.17**	**175**	PN	**Pn**	**12 29 31.4**	**-1.5**
TAHT	**Tahtakopru-Hat**	**1.17**	**175**	*e*Pn	**Pn**	**12 29 31.4**	**-1.5**

*BJI **01** 12:32:20.8,39°.86N×75°.05E,h7km,mb4.9/59,mB4.9/43, ML5.2/8,Ms5.0/42,Ms7 4.7/58*
*ISCJB **01** 12:32:24.2±0.1,39°.68N±0°.01×75°.16E±0°.02,h33km, mb5.2/313,MS4.5/89,Error ellipse: s-maj=2.1km s-min=1.8km az=17.6*
*MOS **01** 12:32:25.8±0.9,39°.84N×75°.22E,h43km,mb5.5/102, MS4.7/38,Error ellipse: s-maj=4.7km s-min=3.3km az=124.2*
*KRNET **01** 12:32:25.3±0.1,39°.83N×75°.16E,mb5.9*
*IDC **01** 12:32:26.1±2.1,39°.76N×75°.26E,h33km±15km,mb4.9/47, mb1 5.0/53,mb1mx4.9/71,mbtmp5.1/53,ML4.5/6,MS4.4/56, Ms1 4.4/56,ms1mx4.4/67,Error ellipse: s-maj=9.7km s-min=7.3km az=177.0*
*NNC **01** 12:32:26.2±1.0,39°.85N×75°.13E,h0km,mb5.8,mpv5.5, Error ellipse: s-maj=10.4km s-min=3.1km az=160.0*
*NEIC **01** 12:32:27.7±0.3,39°.80N×75°.19E,h48km±2km,mb5.3/196, ML5.2(BJI),Error ellipse: s-maj=2.8km s-min=2.0km az=173.0*
*GCMT **01** 12:32:27.7±0.2,39°.82N×75°.32E,h35km,MW5.1/106, Moment Tensor Solution. s61,c82; s106,c172; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.82±.16; $M_{\theta\theta}$1.47±.11; $M_{\phi\phi}$-4.29±.11; $M_{r\theta}$2.78±.14; $M_{\theta\phi}$-0.95±.08; $M_{\phi r}$0.60±.12; Best double couple: $M_0$4.80900×10^{16} NP1:ϕ_s42.00000°,δ64.00000°,λ132.00000°. NP2: ϕ_s158.00000°,δ48.00000°,λ36.00000°. Principal axes: T 5.0070, Plg52.0000°, Azm1.0000°; N -0.3970, Plg37.0000°, Azm200.0000°; P -4.6100, Plg9.0000°, Azm103.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*SOME **01** 12:32:29.1,40°.27N×75°.35E,h25km*
ISC 01 12:32:25.5±0.6,39°.81N±0°.02×75°.20E±0°.02,h29km±4km**, n1180,σ1°51/1269,mb5.3/334,MS4.6/89,156C-35D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**0.66**	**116**	Pg	**Pb**	**12 32 38.0**	**-0.7**
KSH				Sg	**Sb**	**12 32 47.3**	**-0.4**
KSH				smax	smax		
comp=N,71μm,0.4s							
KSH				smax	smax		
comp=E,47μm,0.4s							
KSH	**Kashi**	**0.66**	**116**	Pg	**Pb**	**12 32 38.0**	**-0.7**
KSH				Sg	**Sb**	**12 32 47.3**	**-0.4**
SFK	**Sufi-Kurgan**	**1.32**	**279**	⇑P	**Pb**	**12 32 49.7**	**-0.2**
6μm,0.4s							
SFK				⇓S	**Sb**	**12 33 07.4**	**+0.8**
30μm,0.3s							
SFK	**Sufi-Kurgan**	**1.32**	**279**	⇓*i*P	**Pb**	**12 32 49.9**	**0.0**
baz=79							
SFK				⇓*i*S	**Sb**	**12 33 07.3**	**+0.8**
baz=79							
SFK	**Sufi-Kurgan**	**1.32**	**279**	P	**Pb**	**12 32 49.7**	**-0.2**
SFK				S	**Sb**	**12 33 07.4**	**+0.8**
SFK				pmax	pmax		
comp=Z,6μm,0.4s							
NRN	**Naryn**	**1.73**	**20**	*e*Pn	**Pb**	**12 32 56.7**	**-0.2**
NRN	**Naryn**	**1.73**	**20**	⇑*i*P	**Pb**	**12 32 57.0**	**+0.1**
baz=21							
NRN				⇑*i*S	**Sb**	**12 33 20.5**	**+2.2**
baz=21							
NRN	**Naryn**	**1.73**	**20**	*e*PN	**Pb**	**12 32 56.7**	**-0.2**
KZA	**Kyzart**	**2.27**	**1**	P	**Pb**	**12 33 05.5**	**-0.5**
SNR=4597							
KZA	**Kyzart**	**2.27**	**1**	⇑*i*P	**Pb**	**12 33 05.2**	**-0.8**
baz=2.0							
KZA				⇑*i*S	**Sb**	**12 33 34.8**	**+1.1**
baz=2.0							
UCH	**Uchtor**	**2.47**	**348**	P	**Pb**	**12 33 07.9**	**-1.6**
SNR=3516							
UCH	**Uchtor**	**2.47**	**348**	⇑*i*P	**Pb**	**12 33 08.4**	**-1.1**
baz=49							
UCH				⇑*i*S	**Sb**	**12 33 39.1**	**-0.6**
baz=49							
ULHL	**Ulahol**	**2.56**	**18**	P	**Pb**	**12 33 08.7**	**-2.1**
SNR=1292							
ULHL	**Ulahol**	**2.56**	**18**	⇑*e*P	**Pb**	**12 33 09.1**	**-1.7**
baz=18							
ULHL				⇑*i*S	**Sb**	**12 33 42.0**	**+0.1**
baz=18							
AML	**Almayashu**	**2.58**	**334**	P	**Pb**	**12 33 09.3**	**-2.1**
SNR=2848							
AML	**Almayashu**	**2.58**	**334**	⇑*i*P	**Pb**	**12 33 09.5**	**-1.9**
baz=35							
AML				⇑*i*S	**Sb**	**12 33 42.0**	**-0.9**
baz=35							
DRK	**Karamyk**	**2.65**	**264**	⇑*e*P	**Pb**	**12 33 10.9**	**-1.5**
baz=64							
DRK				⇑*i*S	**Sb**	**12 33 43.9**	**-0.7**
baz=64							
BOOM	**Boomskoye usch**	**2.73**	**12**	⇑*i*P	**Pb**	**12 33 12.0**	**-1.8**
baz=12							
BOOM				⇑*i*S	**Sb**	**12 33 46.1**	**-0.9**
baz=12							
TARG	**Taragay, Kyrgy**	**2.75**	**45**	*e*Pn	**Pb**	**12 33 12.2**	**-2.1**
TARG				*e*Sn	**Sn**	**12 33 39.8**	**-0.8**
TARG	**Taragay, Kyrgy**	**2.75**	**45**	⇑*i*P	**Pb**	**12 33 12.4**	**-1.9**
baz=46							
TARG				⇑*i*S	**Sb**	**12 33 47.3**	**-0.5**
baz=46							
KDJ	**Kajisay**	**2.76**	**32**	*e*Pn	**Pb**	**12 33 11.9**	**-2.4**
KDJ				*e*Sn	**Sn**	**12 33 38.2**	**-2.2**
KDJ	**Kajisay**	**2.76**	**32**	⇑*i*P	**Pb**	**12 33 12.0**	**-2.3**
baz=33							
KDJ				⇑*i*S	**Sb**	**12 33 47.1**	**-0.6**
baz=33							
KBK	**Karagaybulak**	**2.85**	**356**	P	**Pb**	**12 33 13.6**	**-2.2**
SNR=4379							
KBK	**Karagaybulak**	**2.85**	**356**	⇑*i*P	**Pb**	**12 33 14.0**	**-1.8**
baz=57							
KBK				⇑*i*S	**Sb**	**12 33 49.2**	**-1.1**
baz=57							
AAK	**Ala-Archa**	**2.87**	**350**	Pn	**Pb**	**12 33 13.9**	**-2.3**
comp=Z,1μm,0.3s,baz=157,slow=9.4,SNR=9335							
AAK				Lg	Lg	12 33 51.4	
comp=Z,383nm,0.3s,baz=30,slow=16,SNR=7.2							
AAK	**Ala-Archa**	**2.87**	**350**	⇑Pn	**Pb**	**12 33 14.5**	**-1.7**
comp=Z,8μm,0.6s							
AAK				⇑Lg	Lg	12 33 54.1	
comp=Z,9μm,0.9s							
AAK	**Ala-Archa**	**2.87**	**350**	P	**Pb**	**12 33 13.7**	**-2.5**
SNR=8700							
AAK	**Ala-Archa**	**2.87**	**350**	*e*Pn	**Pb**	**12 33 14.4**	**-1.8**
AAK	**Ala-Archa**	**2.87**	**350**	Pn	**Pb**	**12 33 13.9**	**-2.3**
SNR=3525							
AAK	**Ala-Archa**	**2.87**	**350**	P	**Pb**	**12 33 13.9**	**-2.3**
SNR=3525							
AAK	**Ala-Archa**	**2.87**	**350**	*i* P	**Pb**	**12 33 13.7**	**-2.5**
SNR=8924							
AAK	**Ala-Archa**	**2.87**	**350**	⇑*e*P	**Pb**	**12 33 14.3**	**-1.8**
baz=50							
AAK				⇑*e*S	**Sb**	**12 33 49.4**	**-1.6**
baz=50							
AAK	**Ala-Archa**	**2.87**	**350**	*c* iPN	**Pb**	**12 33 14.4**	**-1.8**
FRU1	**Bishkek**	**3.03**	**352**	⇑*i*P	**Pb**	**12 33 17.0**	**-1.8**
baz=53							
FRU1				⇑*i*S	**Sb**	**12 33 52.5**	**-2.8**
baz=53							
EKS2	**Erkin-Say**	**3.04**	**340**	P	**Pb**	**12 33 16.3**	**-2.8**
SNR=1638							
EKS2	**Erkin-Say**	**3.04**	**340**	⇓*i*P	**Pb**	**12 33 15.7**	**-3.4**
baz=40							
EKS2				⇓*e*S	**Sb**	**12 33 52.8**	**-3.0**
baz=40							
FRU	**Bishkek**	**3.05**	**352**	*i* PN	**Pb**	**12 33 16.0**	**-3.2**
FRU				*i* S	**Sb**	**12 33 56.0**	**0.0**
FRU				pmax	pmax		
comp=Z,12μm,2.0s							
FRU				smax	smax		
comp=E,25μm,3.0s							
FRU				MLR	MLR		
comp=Z,30μm,8.0s							
TKM2	**Tokmak 2**	**3.12**	**5**	⇑Pn	**Pb**	**12 33 17.6**	**-2.8**
comp=Z,4μm,0.4s							
TKM2				⇓Lg	Lg	12 34 01.7	
comp=Z,6μm,0.6s							
TKM2	**Tokmak 2**	**3.12**	**5**	P	**Pb**	**12 33 16.9**	**-3.5**
TKM2	**Tokmak 2**	**3.12**	**5**	⇑*i*P	**Pb**	**12 33 17.7**	**-2.8**
baz=6.0							
TKM2				⇑*i*S	**Sb**	**12 33 55.5**	**-2.6**
baz=6.0							
CHMS	**Chumysh**	**3.20**	**354**	P	**Pb**	**12 33 18.8**	**-2.9**
SNR=2341							
CHMS	**Chumysh**	**3.20**	**354**	⇑*i*P	**Pb**	**12 33 18.8**	**-2.9**
baz=55							
CHMS				⇑*e*S	**Sb**	**12 33 57.2**	**-3.1**
baz=55							
KST	**Kastek**	**3.28**	**10**	*e*P	**Pb**	**12 33 20.0**	**-3.1**
comp=Z,5μm,0.6s							
KST				*e*S	**Sb**	**12 34 01.5**	**-1.1**
comp=Z,6μm,0.6s							

MRKS	**Merke**	**3.29 334**		*e*P		**Pb**	**12 33 24.9 +1.7**
	comp=Z,3μm,0.6s						
MRKS				*e*S		**Sb**	**12 34 08.7 +5.8**
	comp=Z,3μm,0.8s						
BMNS	**Besmoynak**	**3.31**	**6**	*e*P		**Pb**	**12 33 20.6 -3.1**
	comp=Z,21μm,0.5s						
BMNS				*e*S		**Sb**	**12 34 01.7 -1.9**
	comp=Z,5μm,0.8s						
MNAS	**Manas**	**3.36 324**		⇑Pn		**Pn**	**12 33 19.4 +3.2**
	comp=Z,172nm,0.5s						
MNAS				⇑Pg		**Pb**	**12 33 26.9 +2.4**
	comp=Z,2μm,0.9s						
MNAS				⇓Lg		Lg	12 34 11.9
	comp=Z,8μm,1.2s						
MNAS	**Manas**	**3.36 324**		⇑*i*P		**Pn**	**12 33 19.6 +3.4**
	baz=24						
MNAS				⇑*i*S		**Sb**	**12 34 00.8 -4.2**
	baz=24						
MNAS	**Manas**	**3.36 324**		PN		**Pn**	**12 33 19.4 +3.2**
MNAS				pmax		pmax	
	comp=Z,172nm,0.5s						
BTK	**Batken**	**3.38 276**		⇑*i*P		**Pb**	**12 33 20.1 -4.7**
	baz=75						
BTK				⇑*i*S		**Sb**	**12 34 01.1 -4.3**
	baz=75						
IZV	**Izvestkoviy**	**3.39**	**18**	*e*P		**Pb**	**12 33 21.1 -3.9**
	comp=Z,1μm,0.6s						
DGS	**Degeres**	**3.46**	**7**	*e*P		**Pb**	**12 33 22.4 -3.7**
	comp=Z,9μm,0.6s						
DGS				*e*S		**Sb**	**12 34 05.0 -2.7**
	comp=Z,3μm,0.6s						
TNSS	**Tian-Shan**	**3.48**	**22**	*e*P		**Pb**	**12 33 22.4 -4.3**
	comp=Z,5μm,0.5s						
TNSS				*e*S		**Sb**	**12 34 06.1 -2.6**
	comp=Z,1μm,0.6s						
USP	**Ospenovka**	**3.49 352**		P		**Pb**	**12 33 22.4 -4.2**
	SNR=1501						
PRZ	**Przheval'sk**	**3.60**	**41**	*e*Pn		**Pb**	**12 33 24.2 -4.4**
PRZ				*e*Sn		**Sn**	**12 33 59.1 -2.1**
PRZ	**Przheval'sk**	**3.60**	**41**	⇑*e*P		**Pb**	**12 33 24.3 -4.3**
	baz=42						
PRZ				⇑*i*S		**Sb**	**12 34 07.6 -4.3**
	baz=42						
PRZ	**Przheval'sk**	**3.60**	**41**	*e*PN		**Pb**	**12 33 24.2 -4.4**
MDOK	**Medeo**	**3.62**	**22**	⇑Pn		**Pn**	**12 33 23.8 +3.9**
	comp=Z,1μm,0.5s						
MDOK				⇑Lg		Lg	12 34 19.3
	comp=Z,9μm,0.9s						
MDOK	**Medeo**	**3.62**	**22**	*e*P		**Pb**	**12 33 24.2 -4.8**
	comp=Z,2μm,0.5s						
MDOK				*e*S		**Sb**	**12 34 08.5 -4.0**
	comp=Z,1μm,0.5s						
AAA	**Alma-Ata**	**3.63**	**20**	*e*PN		**Pb**	**12 33 32.2 +3.2**
AAA				pmax		pmax	
	comp=Z,995nm,0.8s						
AAA	**Alma-Ata**	**3.63**	**20**	*e*P		**Pb**	**12 33 31.4 +2.3**
	comp=Z,995nm,0.6s						
AAA				*e*S		**Sb**	**12 34 20.6 +8.0**
	comp=Z,7μm,0.9s						
KNDC	**Almaty**	**3.65**	**21**	⇑Pn		**Pb**	**12 33 24.9 -4.5**
	comp=Z,2μm,0.5s						
KNDC				⇑Lg		Lg	12 34 21.4
	comp=Z,20μm,1.3s						
KOTS	**Kotyrbulak**	**3.71**	**22**	*e*P		**Pb**	**12 33 26.1 -4.3**
	comp=Z,3μm,0.4s						
KOTS				*e*S		**Sb**	**12 34 11.0 -3.9**
	comp=Z,5μm,1.0s						
SATY	**Saty**	**4.04**	**36**	*e*P		**Pn**	**12 33 29.5 +4.0**
	comp=Z,3μm,0.8s						
SATY				*e*S		**Sb**	**12 34 19.1 -5.4**
	comp=Z,1μm,0.9s						
DZA	**Taraz**	**4.24 318**		*e*P		**Pb**	**12 33 42.2 +2.9**
	comp=Z,1μm,0.6s						
DZA				*e*S		Sb	12 34 41.2 +11
	comp=Z,6μm,0.7s						
CHKK	**Chushkaly**	**4.25**	**18**	*e*P		**Pn**	**12 33 32.4 +4.0**
KURS	**Kuram**	**4.29**	**30**	*e*P		**Pn**	**12 33 33.2 +4.3**
	comp=Z,941nm,0.9s						
KURS				*e*S		**Sb**	**12 34 25.3 -6.4**
	comp=Z,909nm,0.9s						
IUG	**Iuzhnay**	**4.56 302**		*e*P		**Pb**	**12 33 48.0 +3.2**
	comp=Z,3μm,0.6s						
IUG				*e*S		Sb	12 34 49.5 +10
	comp=Z,10μm,0.9s						
TAS	**Tashkent**	**4.75 291**		⇓Pn		**Pn**	**12 33 38.6 +3.3**
	comp=Z,260nm,0.6s						
TAS				⇓Pg		**Pb**	**12 33 51.6 +3.4**
	comp=Z,6μm,0.7s						
TAS				⇓Lg		Lg	12 34 57.6
	comp=Z,16μm,0.9s						
TAS	**Tashkent**	**4.75 291**		PN		**Pn**	**12 33 38.6 +3.3**
TAS				pmax		pmax	
	comp=Z,260nm,0.6s						
PDGK	**Podgornoye**	**4.76**	**41**	⇑Pn		**Pn**	**12 33 38.7 +3.2**
	comp=Z,558nm,0.9s						
PDGK				⇑Pg		**Pb**	**12 33 50.9 +2.5**
	comp=Z,1μm,0.8s						
PDGK				⇑Lg		Lg	12 34 57.5
	comp=Z,6μm,1.4s						
PDGK	**Podgornoye**	**4.76**	**41**	PN		**Pn**	**12 33 38.7 +3.2**
PDGK				pmax		pmax	
	comp=Z,558nm,0.9s						
KK31	**Karatay Array**	**4.82 315**		⇑Pn		**Pn**	**12 33 38.3 +2.2**
	comp=Z,95nm,0.5s,baz=122,slow=13,SNR=1333						
KK31				⇓Pg		Pb	12 33 55.0 +5.7
	comp=Z,332nm,0.6s,baz=138,slow=16,SNR=12						
KK31				⇓Lg		Lg	12 34 57.8
	comp=Z,1μm,0.7s						
KK31	**Karatay Array**	**4.82 315**		*e*Pn		**Pn**	**12 33 38.3 +2.2**
KK31	**Karatay Array**	**4.82 315**		*e*PN		**Pn**	**12 33 38.3 +2.2**
KKAR	**Karatay Array**	**4.82 315**		*e*Pn		**Pn**	**12 33 38.3 +2.2**
KKAR	**Karatay Array**	**4.82 315**		*e*PN		**Pn**	**12 33 38.3 +2.2**
CHM	**Chimkent**	**4.92 302**		*e*P		**Pb**	**12 33 54.1 +3.2**
	comp=Z,938nm,0.6s						
CHM				*e*S		Sb	12 35 01.8 +12
	comp=Z,6μm,0.4s						
DZET	**Dzherino**	**5.05 261**		PN		**Pn**	**12 33 41.0 +1.7**
CHCP	**Chirah Chowk**	**6.33 195**		P		**Pn**	**12 34 00.9 +3.9**
NIL	**Nilore**	**6.34 195**		*e*Pn		**Pn**	**12 34 00.6 +3.5**
NIL				*e*Sn		**Sn**	**12 35 06.6 -2.1**
NIL	**Nilore**	**6.34 195**		*e*PN		**Pn**	**12 34 00.6 +3.5**
CEP	**Cherat**	**6.53 205**		P		**Pn**	**12 34 03.0 +3.2**
KBL	**Kabul**	**7.20 225**		*e*Pn		**Pn**	**12 34 12.4 +3.4**
KBL				*e*Sn		**Sn**	**12 35 33.1 +3.2**
KBL	**Kabul**	**7.20 225**		*e*P		**Pn**	**12 34 12.4 +3.4**
KBL				*e*			12 35 33.2
THN	**Thein Dam**	**7.37 177**		*e*P		**Pn**	**12 34 11.2 0.0**
THN				*ex*		x	12 35 27.5
THW	**Thamme Wali**	**7.54 203**		P		**Pn**	**12 34 16.1 +2.6**
DHRM	**DHARAMSHALA**	**7.60 173**		*e*P		**Pn**	**12 34 15.2 +0.7**
DHRM				*e*S		**Sn**	**12 35 37.3 -2.5**
DHRM				IAML			12 35 44.9
	comp=N,2μm,0.4s						
DHRM				IAML			12 35 45.5
	comp=E,2μm,0.4s						
SARP	**Sargodha**	**8.14 195**		P		**Pn**	**12 34 23.5 +1.8**
MAKZ	**Makanchi**	**8.56**	**33**	⇓Pn		**Pn**	**12 34 30.3 +2.8**
	comp=E,103nm,0.9s						
MAKZ				⇑Pg			12 35 03.8
	comp=E,170nm,0.9s						
MAKZ				⇓Lg		Lg	12 36 58.0
	comp=E,467nm,1.3s						
MAKZ	**Makanchi**	**8.56**	**33**	*e*Pn		**Pn**	**12 34 29.6 +2.1**
MAKZ	**Makanchi**	**8.56**	**33**	*e*P		**Pn**	**12 34 29.6 +2.1**
MK01	**Makanchi Array**	**8.67**	**34**	*e*Pn		**Pn**	**12 34 30.9 +1.9**
OTUK	**Ortayu**	**8.68 347**		⇑Pn		**Pn**	**12 34 30.7 +1.6**
	comp=E,41nm,0.5s						
OTUK				⇑Lg		Lg	12 36 58.5
	comp=E,2μm,1.3s						
OTUK	**Ortayu**	**8.68 347**		P		**Pn**	**12 34 30.7 +1.6**
OTUK				pmax		pmax	
	comp=Z,41nm,0.5s						
MK31	**Makanchi Array**	**8.68**	**34**	⇑Pn		**Pn**	**12 34 31.5 +2.5**
	comp=Z,40nm,0.8s,baz=210,slow=14,SNR=248						
MK31				⇓Pg			12 35 06.0
	comp=Z,68nm,0.7s,baz=209,slow=13,SNR=7.3						
MK31				⇓Lg		Lg	12 37 01.5
	comp=Z,428nm,1.0s,baz=217,slow=27,SNR=4.0						
MK31	**Makanchi Array**	**8.68**	**34**	*e*Pn		**Pn**	**12 34 31.6 +2.5**
MK31	**Makanchi Array**	**8.68**	**34**	*e*P		**Pn**	**12 34 31.6 +2.5**
MK32	**Makanchi Array**	**8.68**	**34**	*e*Pn		**Pn**	**12 34 31.1 +2.0**
MKAR	**Makanchi Array**	**8.68**	**34**	Pn		**Pn**	**12 34 31.1 +2.0**
	comp=Z,3.6nm,0.3s,baz=206,slow=14,SNR=280						
MKAR				Lg		Lg	12 36 59.9
	comp=Z,6.0nm,0.3s,baz=219,slow=28,SNR=5.8						
MKAR				LR		LR	12 38 11.5
	comp=Z,6μm,18.2s,baz=211,slow=40						
MKAR	**Makanchi Array**	**8.68**	**34**	*e*Pn		**Pn**	**12 34 31.6 +2.4**
MKAR	**Makanchi Array**	**8.68**	**34**	*i* P		**Pn**	**12 34 31.7 +2.6**
MKAR				pmax		pmax	
	comp=Z,39nm,0.8s						
SMLA	**Simla**	**8.81 169**		*e*P		**Pn**	**12 34 31.7 +0.8**
SMLA				*e*S		**Sn**	**12 36 05.1 -4.1**
DDI	**Dehra Dun**	**9.75 165**		*e*P		**Pn**	**12 34 44.2 +0.3**
DDI				*e*S		**Sn**	**12 36 26.5 -6.0**
WMQ	**Urumqi**	**10.15**	**63**	P		**Pn**	**12 34 50.7 +1.4**
WMQ				PP		**PnPn**	**12 35 01.0 +4.2**
WMQ				S		**Sn**	**12 36 43.0 +0.9**
WMQ				SS		**SnSn**	**12 37 01.3 +7.6**
WMQ				pmax		pmax	
	comp=Z,180nm,1.1s						
WMQ				pmax		pmax	
	comp=Z,270nm,4.3s						
WMQ				LR		LR	
	comp=Z,10μm,7.1s						
WMQ				LR		LR	
	comp=Z,8μm,5.7s						
WMQ				LR		LR	
	comp=Z,5μm,22.1s						
KURBB	**Kurchatov Arra**	**11.06**	**11**	Pn		**Pn**	**12 35 02.2 +0.6**
	comp=Z,2.0nm,0.3s,baz=198,slow=12,SNR=141						
KURBB				Lg		Lg	12 38 14.1
	comp=Z,1.1nm,0.3s,baz=200,slow=32,SNR=6.0						
KURBB	**Kurchatov Arra**	**11.06**	**11**	⇑Pn		**Pn**	**12 35 03.6 +2.0**
	comp=Z,62nm,0.7s						
KURBB				⇑Lg		Lg	12 38 17.5
	comp=Z,2μm,1.4s						
KURK	**Kurchatov**	**11.17**	**11**	⇑Pn		**Pn**	**12 35 04.1 +1.0**
	comp=Z,88nm,1.0s						
KURK				⇑Lg		Lg	12 38 19.0
	comp=Z,2μm,1.2s						
KURK	**Kurchatov**	**11.17**	**11**	*e*Pn		**Pn**	**12 35 03.1 +0.1**
KURK	**Kurchatov**	**11.17**	**11**	Pn		**Pn**	**12 35 04.6 +1.5**
	SNR=44						
KURK	**Kurchatov**	**11.17**	**11**	P		**Pn**	**12 35 04.6 +1.5**
	SNR=44						
KURK	**Kurchatov**	**11.17**	**11**	P		**Pn**	**12 35 04.6 +1.5**
	SNR=44						
KURK	**Kurchatov**	**11.17**	**11**	*ce*P		**Pn**	**12 35 02.8 -0.3**
KURK				pmax		pmax	
	comp=Z,79nm,0.8s						
NDI	**New Delhi**	**11.22 171**		*e*P		**Pn**	**12 35 03.0 -1.0**
PYUN	**Piuthan**	**13.34 149**		*e*P		**Pn**	**12 35 28.9 -4.2**
	comp=Z,156nm,0.4s						
DANN	**Dangsing**	**13.44 146**		*e*P		**Pn**	**12 35 30.5 -4.1**
	comp=Z,106nm,0.4s						
GEYT	**Alibeck**	**13.45 267**		Pn		**Pn**	**12 35 33.0 -1.4**
	comp=Z,8.2nm,0.3s,baz=92,slow=10,SNR=12						
GEYT				Sn		**Sn**	**12 37 54.2 -8.6**
	comp=Z,7.1nm,0.3s,baz=145,slow=16,SNR=5.1						
GYA0B	**ALIBECK ARRAY**	**13.45 267**		*e*Pn		**Pn**	**12 35 31.6 -2.8**
BVAR	**Borovoye Array**	**13.62 348**		Lg		Lg	12 39 33.6
	comp=Z,4.3nm,0.3s,baz=169,slow=23,SNR=4.1						
BVAR				LR		LR	12 41 02.9
	comp=Z,5μm,19.0s,baz=167,slow=38						
BRVK	**Borovoye**	**13.67 347**		*e*Pn		**Pn**	**12 35 36.7 -0.6**
BRVK	**Borovoye**	**13.67 347**		Pn		**Pn**	**12 35 36.5 -0.8**
	SNR=109						
BRVK	**Borovoye**	**13.67 347**		P		**Pn**	**12 35 36.5 -0.8**
	SNR=109						
BRVK	**Borovoye**	**13.67 347**		*ce*P		**Pn**	**12 35 36.7 -0.6**
BRVK				pmax		pmax	
	comp=Z,126nm,1.2s						
KOLN	**Koldanda**	**13.88 147**		*e*P		**Pn**	**12 35 36.6 -3.9**
	comp=Z,75nm,0.5s						
GKN	**Gorkha**	**14.13 144**		*e*P		**Pn**	**12 35 40.0 -3.9**
	comp=Z,114nm,0.3s						
AB31	**Akbulak array**	**14.38 316**		⇑Pn		**Pn**	**12 35 48.6 +1.6**
	comp=Z,60nm,0.7s,baz=120,slow=10,SNR=674						
AB31	**Akbulak array**	**14.38 316**		P		**Pn**	**12 35 48.6 +1.6**
AB31				pmax		pmax	
	comp=Z,60nm,0.7s						
ABKAR	**Akbulak array**	**14.38 316**		*e*Pn		**Pn**	**12 35 45.8 -1.2**
KKN	**Kakani**	**14.61 142**		*e*P		**Pn**	**12 35 46.4 -4.1**
	comp=Z,139nm,0.5s						
DMN	**Daman**	**14.68 143**		*e*P		**Pn**	**12 35 47.0 -4.5**
	comp=Z,88nm,0.4s						
GUN	**Gumba**	**14.80 140**		*e*P		**Pn**	**12 35 48.6 -4.6**
	comp=Z,260nm,0.6s						
GUN	**Gumba**	**14.80 140**		*e*P		**Pn**	**12 35 48.8 -4.4**
	comp=Z,276nm,0.7s						
PKIN	**Phulchoki**	**14.85 142**		*e*P		Pn	12 35 48.8 -4.9
	comp=Z,132nm,0.5s						
PKI	**Pulchoki**	**14.86 142**		*e*P		**Pn**	**12 35 49.3 -4.6**
	comp=Z,107nm,0.4s						
JIRN	**Jiri**	**15.16 140**		*e*P		**Pn**	**12 35 53.7 -4.3**
	comp=Z,379nm,0.4s						
ZAA0	**Zalesovo Array**	**15.57**	**22**	*e*Pn		**Pn**	**12 36 02.3 -0.6**
	comp=Z,182nm,1.0s						
ZALV	**Zalesovo Beam**	**15.57**	**22**	Pn		**Pn**	**12 36 02.5 -0.4**
	comp=Z,8.0nm,0.3s,baz=200,slow=10,SNR=200						
ZALV				LR		LR	12 42 27.5
	comp=Z,2μm,20.9s,baz=246,slow=38						
ZALV	**Zalesovo Beam**	**15.57**	**22**	*e*Pn		**Pn**	**12 36 01.7 -1.1**
ZALV	**Zalesovo Beam**	**15.57**	**22**	*e*P		**Pn**	**12 36 01.7 -1.1**
ZAA1	**Zalesovo Array**	**15.58**	**22**	*e*Pn		**Pn**	**12 36 02.5 -0.4**
NVS	**Novosibirsk**	**15.97**	**17**	*e*P		**Pn**	**12 36 07.9 -0.1**
NVS				*e*			12 39 04.5
AKTO	**Aktyubinsk**	**16.08 317**		Pn		**Pn**	**12 36 09.4 0.0**
	comp=Z,4.8nm,0.3s,baz=120,slow=12,SNR=83						
AKTO				LR		LR	12 42 41.2
	comp=Z,4μm,18.6s,baz=130,slow=38						
AKTO	**Aktyubinsk**	**16.08 317**		⇑Pn		**Pn**	**12 36 10.3 +0.9**
	comp=Z,92nm,0.8s						
LSA	**Lhasa**	**16.52 123**		P		**Pn**	**12 36 16.1 +0.6**
LSA				S		**Sn**	**12 39 18.3 +0.1**
LSA				pmax		pmax	
	comp=Z,36nm,1.9s						
LSA				pmax		pmax	
	comp=Z,160nm,5.9s						
LSA				LR		LR	
	comp=Z,5μm,16.4s						
LSA	**Lhasa**	**16.52 123**		*e*Pn		**Pn**	**12 36 15.1 -0.4**
	comp=Z,82nm,1.4s						
LSA	**Lhasa**	**16.52 123**		P		**Pn**	**12 36 16.3 +0.8**
LSA	**Lhasa**	**16.52 123**		*e*P		**Pn**	**12 36 15.1 -0.4**
LSA				pmax		pmax	
	comp=Z,82nm,1.4s						
BHPL	**Bhopal**	**16.63 173**		*e*P		**Pn**	**12 36 15.8 -0.7**
BHPL				IAmb		IAmb	12 36 17.0
	comp=Z,392nm,2.1s						
GTK	**Tadong**	**16.71 134**		*e*P		**Pn**	**12 36 16.1 -1.5**
BHJ	**Bhuj**	**17.16 198**		*e*P		**Pn**	**12 36 21.5 -1.7**
HVS	**Khovu-Aksy**	**17.17**	**43**	⇑*i*P		**Pn**	**12 36 23.2 0.0**
HVS				pmax		pmax	
	comp=Z,31nm,0.6s						
BOK	**Bokaro**	**18.34 147**		*e*P		**P**	**12 36 37.1 -0.6**
NGP	**Nagpur**	**18.89 169**		*e*P		**P**	**12 36 41.6 -2.1**
NGP				*ex*		x	12 39 59.0
GTA	**Gaotai**	**18.96**	**83**	⇑P		**Pn**	**12 36 45.8 +0.5**
GTA				pP		pP	12 36 48.9 -3.3
GTA				sP		sP	12 36 51.9 -4.0
GTA				S		**S**	**12 40 21.3 +3.2**
GTA				sS		sS	12 40 26.5 -4.2
GTA				pmax		pmax	
	comp=Z,52nm,1.2s						
GTA				pmax		pmax	
	comp=Z,140nm,5.2s						
GTA				LR		LR	
	comp=Z,2μm,13.1s						
TURI	**Tura**	**19.05 134**		*e*P		**P**	**12 36 45.4 -0.1**
GUWA	**GUWAHATI**	**19.34 130**		*e*P		**P**	**12 36 48.5 -0.1**
SVE	**Sverdlovsk**	**19.52 336**		*d*P		**Pn**	**12 36 51.6 -0.1**
SVE				*e*S		**S**	**12 40 22.2 -6.7**
SVE				pmax		pmax	
	comp=Z,163nm,0.8s						
SVE				MLR		MLR	
	comp=Z,2μm,15.0s						
TEZP	**TEZPUR**	**19.70 127**		*e*P		**Pn**	**12 36 53.4 -0.7**
ZIRO	**ZIRO**	**19.73 123**		*e*P		**P**	**12 36 53.2 +0.2**
ARU	**Arti**	**19.91 332**		P		**Pn**	**12 36 55.1 -1.1**
	comp=Z,0.1nm,0.3s,baz=132,slow=6.1,SNR=72						
ARU				Lg		Lg	12 42 51.0
	comp=Z,0.0nm,0.3s,baz=59,slow=7.0,SNR=5.5						
ARU				LR		LR	12 45 00.1
	comp=Z,3μm,18.4s,baz=132,slow=38						
ARU	**Arti**	**19.91 332**		*e*P		**Pn**	**12 36 55.2 -1.1**
	comp=Z,117nm,0.8s						
ARU	**Arti**	**19.91 332**		*c i*P		**Pn**	**12 36 55.2 -1.1**
ARU				S		**Sn**	**12 40 40.2 +1.1**
ARU				pmax		pmax	
	comp=Z,149nm,1.0s						
ITAN	**ITANAGAR**	**19.91 124**		*e*P		**Pn**	**12 36 56.0 -0.5**
SHL	**Shillong**	**19.92 130**		*e*P		**P**	**12 36 55.6 +0.5**
SHL				IAmb		IAmb	12 36 59.6
	comp=Z,191nm,2.0s						
SHL				*i* x		x	12 40 28.0
SHL	**Shillong**	**19.92 130**		P		**P**	**12 36 51.4 -3.8**
SHL				pmax		pmax	
	comp=Z,67nm,0.9s						
JORH	**JORHAT**	**20.52 124**		*e*P		**P**	**12 37 02.5 +1.0**
JORH				IAmb		IAmb	12 37 02.8
	comp=Z,228nm,0.3s						
AGT	**Agartala**	**20.88 135**		*e*P		Pn	12 37 07.5 -0.4
AKT	**Akhty**	**20.88 283**		*e*P		**P**	**12 37 04.9 -0.5**
AKT				*e*			12 37 23.6
AKT				*e*PPP		PPP	12 37 29.8
AKT				*e*S		**S**	**12 40 56.1 -0.7**
AKT				pmax		pmax	
	comp=Z,62nm,1.0s						
MAK	**Makhachkala**	**20.98 288**		*e*P		**P**	**12 37 05.9 -0.4**
MAK				*e*S		**S**	**12 40 59.5 +1.1**
MAK				pmax		pmax	
	comp=Z,110nm,1.3s						
MAK				MLR		MLR	
	comp=Z,784nm,12.0s						
BANOM	**Banah**	**21.01 234**		P		**P**	**12 37 04.9 -1.8**
SHME	**Shamm**	**21.02 235**		P		**P**	**12 37 05.3 -1.6**
LKP	**Lekhapani**	**21.17 120**		*e*P		**P**	**12 37 07.6 -0.8**
LKP				IAmb		IAmb	12 37 10.3
	comp=Z,80nm,0.7s						
POO	**Poona**	**21.24 184**		*e*P		**P**	**12 37 10.0 +0.7**
MOY	**Mondy**	**21.43 48**		*e*P		**P**	**12 37 12.6 +1.4**
MOY				pmax		pmax	
	comp=Z,131nm,1.5s						
BWNR	**Bhubaneshwar**	**21.48 152**		*e*P		**P**	**12 37 12.1 +0.4**
BELO	**BELONIA**	**21.49 135**		*e*P		**P**	**12 37 10.7 -1.2**
MSFE	**Esma-Masafi**	**21.50 234**		P		**P**	**12 37 10.3 -1.8**
WSAR	**Wadi Sarin**	**21.68 225**		P		**P**	**12 37 13.3 -0.7**
	comp=Z,9.8nm,0.5s,baz=66,slow=7.1,SNR=32						
WSAR				LR		LR	12 46 55.5
	comp=Z,610nm,21.2s,baz=86,slow=40						
IMP	**Imphal**	**21.71 128**		*e*P		**P**	**12 37 15.1 +0.8**
IMP				IAmb		IAmb	12 37 18.6
	comp=Z,70nm,0.7s						
UOSS	**Minazif**	**21.78 233**		*e*P		**P**	**12 37 13.6 -1.4**
	comp=Z,38nm,1.0s						
UOSS	**Minazif**	**21.78 233**		P		**P**	**12 37 11.8 -3.2**
HATD	**Hatta, Dubai**	**21.91 233**		P		**P**	**12 37 14.4 -2.1**
GROC	**Groznyy**	**22.23 288**		*e*P		**P**	**12 37 19.0 -0.7**
GROC				*e*			12 37 41.0
GROC				pmax		pmax	
	comp=Z,236nm,0.9s						
ZAK	**Zakamensk**	**22.33 52**		*e*P		**P**	**12 37 21.0 +0.1**
ZAK				pmax		pmax	
	comp=Z,37nm,1.5s						
HYB	**Hyderabad**	**22.50 172**		*i* P		**P**	**12 37 22.0 -0.9**
HYB				*e*S		**S**	**12 41 20.0 -8.1**
HYB	**Hyderabad**	**22.50 172**		*e*P		**P**	**12 37 21.1 -1.7**
ASUD	**Al Ashush, Dub**	**22.55 234**		P		**P**	**12 37 20.9 -2.4**
LZH	**Lanzhou**	**22.85 90**		*e*P		**P**	**12 37 28.3 +1.8**
LZH				pP		pP	12 37 32.8 -1.6
LZH				sP		sP	12 37 35.3 -2.8
LZH				PP		**PnPn**	**12 37 58.1 +6.9**
LZH				PcP		**PcP**	**12 41 17.9 +1.0**
LZH				*e*S		**S**	**12 41 32.2 -2.1**
LZH				sS		pS	12 41 38.0 -5.3
LZH				SS		**SnSn**	**12 42 14.0 +7.9**
LZH				pmax		pmax	
	comp=Z,100nm,1.1s						
LZH				pmax		pmax	
	comp=Z,340nm,5.1s						
LZH				LR		LR	
	comp=Z,3μm,13.8s						
LZH				LR		LR	
	comp=Z,4μm,13.3s						
LZH				LR		LR	
	comp=Z,5μm,15.8s						
SOKR	**Solikamsk**	**22.96 336**		*c i*P		**P**	**12 37 26.0 -1.2**
SOKR				S		**PcP**	**12 41 12.3 -4.1**
SOKR				pmax		pmax	
	comp=Z,105nm,1.0s						
SOKR				MLR		MLR	
	comp=Z,2μm,19.0s						
TLY	**Talaya**	**22.97 49**		P		**P**	**12 37 28.7 +1.2**
	comp=Z,8.5nm,0.6s,baz=234,slow=11,SNR=11						
TLY				LR		LR	12 45 54.5
	comp=Z,305nm,19.1s,baz=257,slow=35						
TLY	**Talaya**	**22.97 49**		*e*P		**P**	**12 37 28.6 +1.2**
	comp=Z,136nm,1.9s						
TLY	**Talaya**	**22.97 49**		P		**P**	**12 37 29.4 +1.9**
	SNR=11						
TLY	**Talaya**	**22.97 49**		P		**P**	**12 37 29.4 +1.9**
	SNR=11						
TLY	**Talaya**	**22.97 49**		P		**P**	**12 37 29.4 +1.9**
	SNR=11						
TLY	**Talaya**	**22.97 49**		*c i*P		**P**	**12 37 22.0 -5.5**
TLY				*e*			12 37 41.1
TLY				*e*S		**S**	**12 41 37.9 +2.1**
TLY				*e*SSS		SSS	12 42 26.1
TLY				pmax		pmax	
	comp=Z,56nm,1.6s						
TLY				MLR		MLR	
	comp=Z,928nm,15.0s						
GNI	**Garni**	**23.29 281**		P		**P**	**12 37 32.6 +1.5**
	comp=Z,84nm,0.8s,baz=354,slow=2.5,SNR=29						
GNI	**Garni**	**23.29 281**		*e*P		**P**	**12 37 32.4 +1.3**
	comp=Z,237nm,1.0s						
GNI	**Garni**	**23.29 281**		P		**P**	**12 37 32.9 +1.9**
	SNR=50						
GNI	**Garni**	**23.29 281**		P		**P**	**12 37 32.9 +1.9**
	SNR=50						
GNI	**

SNR=17
KIV Kislovodsk 24.47 290 *i* P **P 12 37 42.0 0.0**
SNR=10
KIV Kislovodsk 24.47 290 *ce*P **P 12 37 42.0 0.0**
KIV *e* 12 38 11.5
KIV *e*S **S 12 41 58.9 -1.5**
KIV pmax pmax
comp=Z,23nm,0.7s
KIV MLR MLR
comp=Z,761nm,20.0s
NEY Neytrino 24.47 289⇓ *e*P **P 12 37 42.9 +0.7**
NEY pmax pmax
comp=Z,10.0nm,0.6s
CD2 Chengdu 24.84 102 P **P 12 37 46.9 +1.4**
CD2 sP pP 12 37 49.5 -4.3
CD2 PP **PnPn 12 38 23.6 +5.2**
CD2 S **S 12 42 11.4 +4.9**
CD2 sS pS 12 42 13.6 -2.2
CD2 SS **SnSn 12 43 01.8 +6.9**
CD2 pmax pmax
comp=Z,60nm,0.5s
CD2 pmax pmax
comp=Z,150nm,5.7s
CD2 LR LR
comp=Z,2μm,14.1s
MZR Muzera 24.89 234 *i* P **P 12 37 45.0 -0.9**
SNR=9.3
BTO Baotou 26.50 77 *e*P **P 12 38 00.8 +0.3**
VORD Divnogorie 27.31 306 *e*P **P 12 38 07.5 0.0**
VORD pmax pmax
comp=Z,50nm,1.0s
KMI Kunming 27.33 114 P **P 12 38 10.8 +2.6**
KMI pP pP 12 38 14.2 -2.4
KMI sP sP 12 38 16.1 -4.0
KMI S **S 12 42 48.9 +2.6**
KMI sS pS 12 42 55.0 -0.9
KMI pmax pmax
comp=Z,13nm,0.6s
KMI pmax pmax
comp=Z,69nm,4.0s
KMI LR LR
comp=Z,2μm,16.9s
VSR Storozhevoye 27.43 307 *e*P **P 12 38 08.2 -0.4**
VSR pmax pmax
comp=Z,30nm,0.8s
VSR MLR MLR
comp=Z,6μm,19.0s
XAN Xi'an 27.46 91 P **P 12 38 09.6 +0.5**
XAN pP pP 12 38 14.6 -2.9
XAN pmax pmax
comp=Z,20nm,0.7s
XAN pmax pmax
comp=Z,100nm,4.6s
XAN LR LR
comp=Z,2μm,16.9s
XAN LR LR
comp=Z,2μm,17.5s
XAN LR LR
comp=Z,2μm,21.2s
HHC Hu-ho-hao-te 27.62 76 *e*P **P 12 38 10.0 -0.5**
HHC pP pP 12 38 14.4 -4.5
HHC sP sP 12 38 17.1 -5.4
HHC S **S 12 42 48.9 -1.5**
HHC pmax pmax
comp=Z,15nm,0.9s
HHC pmax pmax
comp=Z,64nm,5.3s
HHC LR LR
comp=Z,520nm,16.4s
ANN Anapa 28.20 293 *e*P **P 12 38 15.1 -0.4**
ANN *e*PPP PPP 12 39 10.6
ANN *e*S **S 12 43 06.5 +7.3**
ANN pmax pmax
comp=Z,52nm,1.4s
ANN MLR MLR
comp=Z,802nm,13.0s
ANN MLR MLR
comp=N,1μm,13.0s
PRGR Permogore 28.33 330 *e*P **P 12 38 14.1 -2.4**
PRGR pmax pmax
comp=Z,44nm,0.6s
CMAI Chiengmai2 28.48 127 P **P 12 38 18.6 +0.2**
comp=Z,87nm,0.5s
TIY Taiyuan 28.98 82 *e*P **P 12 38 23.8 +1.2**
TIY S **S 12 43 15.4 +3.7**
TIY LR LR
comp=Z,840nm,16.0s
CHTO Chiang Mai 29.27 129 *e*P **P 12 38 24.9 -0.4**
comp=Z,9.6nm,1.0s
CHTO Chiang Mai 29.27 129 *e*P **P 12 38 24.9 -0.4**
CHTO pmax pmax
comp=Z,10.0nm,1.0s
MOS Moscow 29.40 315 *e*P **P 12 38 23.4 -2.7**
MOS *e*PPP PPP 12 39 24.4
MOS *e* 12 41 32.6
MOS pmax pmax
comp=Z,44nm,0.8s
MOS MLR MLR
comp=Z,2μm,16.0s
ENH Enshi 29.49 98 *e*P **P 12 38 27.9 +0.8**
comp=Z,6.3nm,0.5s
ENH *e*PcP **PcP 12 41 32.8 +0.6**
CMAR Chiang Mai Arr 29.55 129 P **P 12 38 26.5 -1.2**
comp=Z,1.8nm,0.7s,baz=319,slow=8.5,SNR=9.6
CMAR PcP **PcP 12 41 32.1 -0.3**
comp=Z,8.5nm,0.9s,baz=305,slow=3.9,SNR=9.1
CMAR ScP **ScP 12 45 12.2 +0.1**
comp=Z,2.4nm,0.9s,baz=317,slow=4.3,SNR=7.8
CMAR LR LR 12 52 46.5
comp=Z,1μm,18.8s,baz=317,slow=41
CMAR Chiang Mai Arr 29.55 129 *i* P **P 12 38 29.5 +1.8**
CMAR pmax pmax
comp=Z,2.0nm,0.7s
CM01 Chiang Mai Arr 29.59 129 *e*P **P 12 38 27.9 -0.2**
OBN Obninsk 29.81 314 P **P 12 38 30.2 +0.5**
comp=Z,19nm,0.4s,baz=66,slow=7.6,SNR=9.3
OBN LR LR 12 51 16.5
comp=Z,2μm,19.6s,baz=98,slow=38
OBN Obninsk 29.81 314 *c i*P **P 12 38 29.6 -0.1**
OBN *e* 12 39 27.5
OBN *e*S **S 12 43 24.9 +0.6**
OBN *e*SS **SnSn 12 44 58.8 +3.3**
OBN pmax pmax
comp=Z,49nm,1.2s
OBN MLR MLR
comp=Z,1μm,18.0s
RAYN Ar Rayn 29.86 246 *e*P **P 12 38 30.9 +0.4**
comp=Z,20nm,0.6s
RAYN Ar Rayn 29.86 246 *i* P **P 12 38 30.8 +0.3**
SNR=24
RAYN Ar Rayn 29.86 246 P **P 12 38 30.9 +0.4**
RAYN pmax pmax
comp=Z,20nm,0.6s
NRIK Noril'sk 30.32 9 P **P 12 38 35.2 +1.2**
comp=Z,75nm,0.8s,baz=194,slow=6.6,SNR=77
NRIK LR LR 12 52 22.3
comp=Z,2μm,19.9s,baz=223,slow=39
KLMR Klimovskoe 30.42 326 *e*P **P 12 38 32.6 -2.4**
KLMR *e* 12 39 33.9
KLMR pmax pmax
comp=Z,90nm,1.5s
KLMR Klimovskoe 30.42 326 *e*P **P 12 38 32.7 -2.3**
KLMR AMP 12 38 36.2
comp=Z,90nm,1.5s
KLMR *e*PP **PnPn 12 39 34.0 +0.1**
SIM Simferopol' 30.54 293 *ce*P **P 12 38 36.6 +0.3**
SIM *e*S **S 12 43 36.8 +0.8**
SIM *e*SS **ScP 12 45 22.0 +7.1**
SIM pmax pmax
comp=Z,69nm,0.6s
BOD Bodaibo 30.69 41 *e*P **P 12 38 37.7 +0.3**
BOD pmax pmax
comp=Z,102nm,1.1s
ILGA Ilgaz 31.39 286 *e*P **P 12 38 45.5 +1.4**
comp=Z,39nm,0.9s
ASF Jabal al Asfar 31.73 268 P **P 12 38 49.1 +2.1**
comp=Z,6.9nm,0.8s,baz=43,slow=3.0,SNR=14
ASF LR LR 12 54 12.6
comp=Z,461nm,21.3s,baz=32,slow=41
BR101 Keskin Array S 31.74 283 *e*P **P 12 38 48.0 +0.9**
BR101 *e*PcP **PcP 12 41 37.4 -0.6**
BR131 Keskin Array S 31.74 283 *e*P **P 12 38 47.5 +0.4**
BRTR Keskin Array B 31.74 283 P **P 12 38 48.0 +0.9**
comp=Z,43nm,0.6s,baz=92,slow=8.3,SNR=253
BRTR PcP **PcP 12 41 37.4 -0.6**
comp=Z,1.6nm,0.5s,baz=117,slow=5.7,SNR=4.2
BRTR LR LR 12 53 19.6
comp=Z,162nm,18.2s,baz=76,slow=39
PBKT Sadao Pong 32.22 129 P **P 12 38 50.6 -0.7**
comp=Z,12nm,0.9s
PBKT Sadao Pong 32.22 129 *e*P **P 12 38 50.7 -0.6**
comp=Z,7.5nm,0.7s
ANTO Ankara 32.34 284⇓ *i*P **P 12 38 53.2 +1.0**
ANTO Ankara 32.34 284 *e*P **P 12 38 53.3 +1.0**
comp=Z,95nm,1.4s
ANTO Ankara 32.34 284 P **P 12 38 53.8 +1.5**
SNR=9.7
ANTO Ankara 32.34 284 P **P 12 38 53.8 +1.5**
SNR=9.7
ANTO Ankara 32.34 284 P **P 12 38 53.8 +1.5**
SNR=9.7
ANTO Ankara 32.34 284 *e*P **P 12 38 53.3 +1.0**
ANTO pmax pmax
comp=Z,95nm,1.4s
NONG Nongkai 32.45 124 P **P 12 38 53.8 +0.5**
comp=Z,17nm,0.7s,comp=Z,2μm
MMAI Mount Meron Ar 32.54 271 P **P 12 38 55.9 +1.8**
comp=Z,2.8nm,0.5s,baz=66,slow=9.3,SNR=7.3
MMAI PcP **PcP 12 41 41.0 +0.7**
comp=Z,4.7nm,0.6s,baz=72,slow=4.7,SNR=7.4
TMCR Tamitsa 32.63 331 *e*P **P 12 38 51.5 -2.9**
TMCR pmax pmax
comp=Z,66nm,0.8s
PALK Pallekele 32.77 170 P **P 12 38 56.0 -0.1**
comp=Z,9.1nm,0.7s,baz=296,slow=6.0,SNR=3.5
PALK Pallekele 32.77 170 P **P 12 38 56.0 -0.1**
PALK pmax pmax
comp=Z,9.0nm,0.7s
TIA Tai'an 33.01 83 P **P 12 38 59.2 +1.1**
TIA S **S 12 44 15.7 +1.0**
TIA pmax pmax
comp=Z,20nm,1.0s
TIA LR LR
comp=Z,640nm,14.5s
CSS Mathiatis 33.40 275 *e*P **P 12 39 00.7 -0.7**
comp=Z,20nm,0.9s
AKASG Malin Array Be 33.64 304 P **P 12 39 02.8 -0.6**
comp=Z,13nm,0.7s,baz=77,slow=8.0,SNR=42
AKASG PcP **PcP 12 41 42.4 -0.5**
comp=Z,5.1nm,0.6s,baz=69,slow=3.6,SNR=5.6
AKASG LR LR 12 55 53.1
comp=Z,1μm,18.2s,baz=75,slow=42
AKASG Malin Array Be 33.64 304 *i* P **P 12 39 03.0 -0.3**
AKASG pmax pmax
comp=Z,13nm,0.7s
AKBB Malin Array Si 33.64 304 *e*P **P 12 39 02.9 -0.4**
comp=Z,20nm,0.7s
AKBB Malin Array Si 33.64 304 *e*P **P 12 39 02.9 -0.4**
AKBB pmax pmax
comp=Z,20nm,0.7s
AK11 Malin Array Si 33.67 304 *e*P **P 12 39 03.3 -0.4**
SKNT Sakolnakorn 33.79 124 P **P 12 39 03.9 -1.1**
comp=Z,21nm,0.8s
KIS Kishinev 34.04 298 *e*P **P 12 39 06.0 -0.9**
KIS Kishinev 34.04 298 *e*PP PP 12 40 30.0 +5.9
KIS Kishinev 34.04 298 *e*P **P 12 39 06.0 -0.9**
KIS *e* 12 39 18.0
KIS *e* 12 40 30.0
KIS *e*PPP PPP 12 40 40.0
KIS *e* 12 46 44.0
KIS MLR MLR
comp=E,700nm,16.0s
KIS MLR MLR
comp=Z,900nm,20.0s
SORM Soroca 34.27 300⇓ *i*P **P 12 39 08.4 -0.5**
SORM Soroca 34.27 300⇓ P **P 12 39 08.4 -0.5**
PUL Pulkovo 34.29 321 *de*P **P 12 39 09.7 +0.8**
PUL pmax pmax
comp=Z,136nm,0.4s
EIL Elat 34.34 266 P **P 12 39 11.1 +1.4**
comp=Z,9.2nm,0.7s,baz=52,slow=4.4,SNR=9.9
ISP Isparta 34.60 281 *e*P **P 12 39 12.5 +0.5**
comp=Z,31nm,0.7s
ISP Isparta 34.60 281 *i* P **P 12 39 12.4 +0.4**
ISP pmax pmax
comp=Z,27nm,0.8s
GIUM Giurgiulesti 34.63 295⇑ *i*P P 12 39 17.9 +5.9
TIRR Tirgusor 34.63 293 *e*P **P 12 39 12.4 +0.3**
comp=Z,9.6nm,0.9s
TIRR Tirgusor 34.63 293 *e*P **P 12 39 12.4 +0.3**
TIRR pmax pmax
comp=Z,10.0nm,0.9s
MICGM Minsk 34.66 311 *e*P **P 12 39 12.0 -0.1**
MICGM *e* 12 51 11.0
MICGM *e* 12 53 24.0
MNK Minsk 34.66 311 *e*P **P 12 39 12.0 -0.1**
CFR Carcaliu 34.72 295⇓ *i*P **P 12 39 12.9 +0.1**
CFR Carcaliu 34.72 295 ⇓P **P 12 39 12.9 +0.1**
TLB Topalu 34.88 294⇓ *i*P **P 12 39 14.8 +0.6**
TLB Topalu 34.88 294 ⇓P **P 12 39 14.8 +0.6**
ICOR Ion Corvin 35.12 293⇑ *i*P **P 12 39 17.0 +0.7**
IDID Didziasalis 35.39 312 *e*P **P 12 39 19.3 +0.8**
IDID IAmb IAmb 12 39 20.3
comp=Z,12nm,0.8s
PRD Provadia 35.58 291 P **P 12 39 20.0 -0.2**
TESR Tescani 35.58 297⇑ *i*P **P 12 39 19.8 -0.4**
VRI Vrincioaia 35.61 296⇑ *i*P **P 12 39 21.9 +1.4**
VRI Vrincioaia 35.61 296 ⇑P **P 12 39 21.9 +1.4**
PLOR Plostina 35.66 296⇑ *i*P **P 12 39 22.2 +1.2**
PLOR Plostina 35.66 296 ⇑P **P 12 39 22.2 +1.2**
IIGN Ignalina 35.69 312 *e*P **P 12 39 21.8 +0.8**
IIGN IAmb IAmb 12 39 22.1
comp=Z,12nm,0.9s
IZAR Zarasai 35.71 313 *e*P **P 12 39 22.0 +0.8**
IZAR IAmb IAmb 12 39 22.4
comp=Z,19nm,0.8s
LVZ Lovozero 35.73 335 *e*P **P 12 39 21.1 -0.2**
comp=Z,81nm,0.8s
LVZ Lovozero 35.73 335 *c i*P **P 12 39 21.4 +0.1**
LVZ pmax pmax
comp=Z,76nm,0.9s
ISAL Salakas 35.76 313 *e*P **P 12 39 22.5 +0.8**
ISAL IAmb IAmb 12 39 22.8
comp=Z,14nm,0.9s
VSU Vasula 35.81 318 *c i*P **P 12 39 22.0 0.0**
VSU pmax pmax
comp=Z,317nm,1.7s
ISR Istrita 35.85 295⇑ *i*P **P 12 39 24.8 +2.2**
ISR Istrita 35.85 295 ⇑P **P 12 39 24.8 +2.2**
KSL Kastellorizon 35.85 279 *e*P **P 12 39 22.3 -0.3**
KSL Kastellorizon 35.85 279 P **P 12 39 22.3 -0.3**
NJ2 Nanjing 35.90 89 *e*P **P 12 39 24.3 +1.2**
NJ2 S **S 12 45 02.5 +3.2**
NJ2 pmax pmax
comp=Z,19nm,0.7s
NJ2 LR LR
comp=Z,1μm,11.9s
NJ2 LR LR
comp=Z,690nm,15.2s
NJ2 LR LR
comp=Z,2μm,13.0s
APA Apatity 35.98 334⇓ *i*P **P 12 39 22.7 -0.6**
APA *i* S **S 12 44 59.0 -0.8**
APA pmax pmax
comp=Z,11nm,0.7s
APA MLR MLR
comp=Z,2μm,13.0s
MLR Muntele Rosu 36.20 296 P **P 12 39 27.6 +1.8**
comp=Z,5.2nm,0.9s,baz=106,slow=7.4,SNR=29
MLR LR LR 12 57 00.9
comp=Z,221nm,19.9s,baz=54,slow=41
MLR Muntele Rosu 36.20 296⇑ *i*P **P 12 39 27.6 +1.8**
MLR Muntele Rosu 36.20 296 *e*P **P 12 39 26.0 +0.2**
comp=Z,46nm,1.1s
MLR Muntele Rosu 36.20 296 *e*P **P 12 39 26.0 +0.2**
MLR pmax pmax
comp=Z,46nm,1.1s
CLNS Chul'man 36.23 45 *e*P **P 12 39 25.9 +0.2**
CLNS pmax pmax
comp=Z,41nm,0.9s
CLNS pmax pmax
comp=E,27nm,1.1s
CLNS pmax pmax
comp=N,10.0nm,1.1s
CLNS MLR MLR
comp=N,381nm,11.0s
QIZ Qiongzhong 36.27 115 P **P 12 39 26.7 +0.3**
QIZ S **S 12 45 07.0 +1.7**
QIZ pmax pmax
comp=N,250nm,3.1s
QIZ LR LR
comp=N,680nm,12.7s
BURAR Bucovina Array 36.42 299⇑ *i*P **P 12 39 28.0 +0.5**
BURAR Bucovina Array 36.42 299 ⇑P **P 12 39 28.0 +0.5**
BUR04 Bucovina Ar. S 36.42 299 *e*P **P 12 39 27.5 -0.1**
BUR08 Bucovina Ar. S 36.43 299 *e*P **P 12 39 27.6 0.0**
DOPR Dopca 36.52 296⇑ *i*P **P 12 39 29.4 +1.1**
FIA1 FINESS Array S 36.73 323 *e*P **P 12 39 30.0 +0.2**
FIA0 FINESS Array S 36.73 323 *e*P **P 12 39 30.2 +0.4**
FIA0 *e*PcP **PcP 12 41 52.0 +0.3**
FIA0 FINESS Array S 36.73 323 *e*P **P 12 39 30.2 +0.4**
FIA0 *e* 12 41 52.0
FINES FINESS Array B 36.73 323 P **P 12 39 30.2 +0.4**
comp=N,45nm,0.5s,baz=111,slow=10.0,SNR=263
FINES PcP **PcP 12 41 52.0 +0.3**
comp=N,13nm,0.6s,baz=98,slow=3.9,SNR=6.2
FINES LR LR 12 55 07.4
comp=N,2μm,18.4s,baz=95,slow=37
VOIR 36.84 296⇑ *i*P **P 12 39 31.8 +0.7**
VOIR 36.84 296 ⇑P **P 12 39 31.8 +0.7**
MTUR Matau 36.86 295⇑ *i*P **P 12 39 32.6 +1.3**
MTUR Matau 36.86 295 ⇑P **P 12 39 32.6 +1.3**
DAMY Dhamar 36.87 236 *e*P **P 12 39 30.6 -1.3**
comp=N,42nm,1.5s
LVV L'vov 36.99 303 *e*P **P 12 39 33.0 +0.7**
LVV *e* 12 40 59.8
LVV *e*S **S 12 45 12.1 -3.6**
LVV MLR MLR
comp=N,100nm,18.0s
LVV MLR MLR
comp=E,900nm,18.0s
LVV MLR MLR
comp=Z,800nm,18.0s
ARCR ARCALIA 37.07 298⇓ *i*P **P 12 39 34.9 +2.0**
ALN Alexandroupoli 37.08 288 *e*P **P 12 39 33.5 +0.4**
comp=Z,9.4nm,0.8s
ALN Alexandroupoli 37.08 288 *e*P **P 12 39 33.5 +0.4**
ALN pmax pmax
comp=Z,9.0nm,0.8s
ARR Arges 37.14 296⇑ *i*P **P 12 39 34.8 +1.2**
CN2 Changchun 37.20 67 *e*P **P 12 39 33.8 -0.3**
CN2 *e*sP pP 12 39 40.8 -1.8
CN2 *e*S **S 12 45 18.3 -0.7**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=Z,800nm,20.0s
CN2 LR LR
comp=Z,780nm,20.0s
CN2 LR LR
comp=Z,1μm,21.0s
PRK Paraskevi 37.37 285 *e*P **P 12 39 35.9 +0.4**
PRK Paraskevi 37.37 285 P **P 12 39 35.9 +0.4**
PRK Paraskevi 37.37 285 *e*P **P 12 39 35.9 +0.4**
SUW Suwalki 37.39 310 *e*P **P 12 39 35.7 +0.2**
SUW Suwalki 37.39 310 *e*P **P 12 39 35.4 -0.1**
comp=Z,229nm,1.8s
SUW Suwalki 37.39 310 *e*P **P 12 39 35.7 +0.2**
RDO Rodhopi 37.39 289 *e*P **P 12 39 35.9 +0.2**
RDO Rodhopi 37.39 289 P **P 12 39 35.9 +0.2**
ZEA Zeya 37.40 50 *e*P **P 12 39 36.8 +1.2**
ZEA *e*S **S 12 45 25.0 +3.2**
ZEA *e* 12 48 31.0
ZEA pmax pmax
comp=Z,35nm,1.0s
ZEA smax smax
comp=N,200nm,8.0s
ZEA MLR MLR
comp=Z,1μm,14.0s
ZEA MLR MLR
comp=E,500nm,13.0s
SMTH Samothraki Isl 37.57 287 *e*P **P 12 39 37.7 +0.4**
SMTH Samothraki Isl 37.57 287 P **P 12 39 37.7 +0.4**
SIGR SIGRI 37.69 285 *e*P **P 12 39 38.5 +0.3**
SIGR SIGRI 37.69 285 P **P 12 39 38.5 +0.3**
LOT Lotru 37.72 296⇑ *i*P **P 12 39 39.9 +1.3**
CHOS Chios island 37.78 284 *e*P **P 12 39 39.8 +0.6**
CHOS Chios island 37.78 284 P **P 12 39 39.8 +0.6**
KWP Kalwaria Pacla 37.87 303 *e*P **P 12 39 40.4 +0.7**
KWP Kalwaria Pacla 37.87 303 *e*P **P 12 39 40.2 +0.6**
comp=E,505nm,1.3s
KWP Kalwaria Pacla 37.87 303 *e*P **P 12 39 40.4 +0.7**
KARP Karpathos 37.90 279 *e*P **P 12 39 40.1 0.0**
comp=E,54nm,0.8s
KARP Karpathos 37.90 279 P **P 12 39 40.1 0.0**
PGB Panagyurishte 38.04 291 P **P 12 39 42.0 +0.7**
TRPA Tarpa 38.15 300⇑ *i*P **P 12 39 42.7 +0.7**
UZH Uzhgorod 38.25 301 *e*P **P 12 39 41.3 -1.5**
UZH *e* 12 39 56.0
APE Apeiranthos 38.60 282⇑ *i*P **P 12 39 46.5 +0.4**
APE Apeiranthos 38.60 282 *e*P **P 12 39 46.5 +0.4**
APE Apeiranthos 38.60 282 P **P 12 39 46.5 +0.4**
APE Apeiranthos 38.60 282 *c i*P **P 12 39 46.3 +0.2**
APE pmax pmax
comp=Z,35nm,0.7s
VTS Vitosha 38.72 292⇑ *i*P **P 12 39 48.2 +1.1**
VTS Vitosha 38.72 292 *e*P **P 12 39 48.0 +0.9**
comp=Z,17nm,0.8s
VTS Vitosha 38.72 292 P **P 12 39 47.5 +0.4**
VTS Vitosha 38.72 292 *e*P **P 12 39 48.0 +0.9**
VTS pmax pmax
comp=Z,17nm,0.8s
CRVS Cervenica-Dubn 38.76 302 *e*PP PP 12 41 17.7 +1.7
HERR Herculane 38.77 295⇑ *i*P **P 12 39 47.3 0.0**
ZKR Zakros 38.78 279 *e*P **P 12 39 47.9 +0.4**
ZKR Zakros 38.78 279 P **P 12 39 47.9 +0.4**
SRS Serrai 38.81 289 *e*P **P 12 39 48.3 +0.6**
SRS Serrai 38.81 289 P **P 12 39 48.3 +0.6**
SRS Serrai 38.81 289 *e*P **P 12 39 48.3 +0.6**
SANT Santorini 38.90 281⇓ *i*P **P 12 39 47.5 -1.0**
SANT Santorini 38.90 281 *e*P **P 12 39 47.8 -0.7**
comp=Z,174nm,1.5s
KKB Krupnik 38.99 290 P **P 12 39 49.0 -0.2**
KEV Kevo 39.05 336 *e*P **P 12 39 49.7 +0.4**
comp=Z,34nm,0.8s
KEV Kevo 39.05 336 *e*P **P 12 39 49.7 +0.4**
KEV pmax pmax
comp=Z,34nm,0.8s
KLNR Kaliningrad 39.12 311⇑ *i*P **P 12 39 49.8 -0.3**
KLNR pmax pmax
comp=Z,152nm,1.4s
BZS Buzias 39.18 297⇑ *i*P **P 12 39 51.9 +1.2**
BZS Buzias 39.18 297 ⇑P **P 12 39 51.9 +1.2**
KNT Kendrikon 39.31 289 *e*P **P 12 39 52.4 +0.5**
KNT Kendrikon 39.31 289 P **P 12 39 52.4 +0.5**
KNT Kendrikon 39.31 289 *e*P **P 12 39 52.4 +0.5**
LAST Lasithi 39.32 279 *e*P **P 12 39 52.4 +0.3**
LAST Lasithi 39.32 279 P **P 12 39 52.4 +0.3**
YAK Yakutsk 39.34 37 *e*P **P 12 39 51.9 +0.1**
comp=Z,149nm,0.7s
YAK Yakutsk 39.34 37 *i* P **P 12 39 51.6 -0.2**
YAK *e*'PP **sP 12 40 05.9 +2.0**
YAK *e* 12 41 23.7
YAK *e*PPP PPP 12 41 46.4
YAK *e* 12 41 57.7
YAK *e*S **S 12 45 50.1 -0.8**
YAK *e*SS **SS 12 48 42.7 -2.1**
YAK *e* 12 49 59.2
YAK pmax pmax
comp=N,10.0nm,1.1s
YAK pmax pmax
comp=E,58nm,1.2s
YAK pmax pmax
comp=Z,134nm,0.9s
YAK pmax pmax
comp=Z,41nm,1.6s
YAK pmax pmax
comp=N,21nm,1.5s
YAK pmax pmax
comp=E,29nm,1.5s
YAK smax smax
comp=N,71nm,1.9s
YAK smax smax
comp=E,40nm,1.8s
YAK MLR MLR
comp=Z,2μm,14.0s
YAK MLR MLR
comp=E,2μm,16.0s
YAK MLR MLR
comp=N,624nm,15.0s
ARA0 ARCESS Array S 39.45 335 *e*P **P 12 39 53.2 +0.5**
ARA0 *e*PcP **PcP 12 41 59.6 -0.4**

ARCES ARCESS Array B 39.45 335 P P 12 39 53.2 +0.5
comp=N,68nm,0.6s,baz=106,slow=9.0,SNR=362
ARCES PcP **PcP 12 41 59.6 -0.4**
comp=N,9.5nm,0.7s,baz=102,slow=5.1,SNR=4.4
ARCES LR LR 12 56 56.7
comp=N,2μm,18.4s,baz=112,slow=37
ARCES ARCESS Array B 39.45 335 P P 12 39 53.2 +0.5
ARCES 12 41 59.6
ARCES pmax pmax
comp=Z,68nm,0.6s
ARCES MLR MLR
comp=Z,2μm,18.4s
ARE0 ARCESS Array S 39.45 335 *e*P **P 12 39 53.3 +0.6**
comp=Z,72nm,0.6s
ARE0 ARCESS Array S 39.45 335 *e*P **P 12 39 53.3 +0.6**
NIE Niedzica 39.45 303 *e*P **P 12 39 54.1 +1.1**
NIE Niedzica 39.45 303 *e*P **P 12 39 54.1 +1.1**
VAY Valandovo 39.50 290 *e*P **P 12 39 53.4 0.0**
VAY Valandovo 39.50 290 P **P 12 39 53.4 0.0**
VAY Valandovo 39.50 290 *i* P **P 12 39 54.0 +0.6**
VAY Valandovo 39.50 290 *e*P **P 12 39 53.4 0.0**
NEO Neokhori 39.60 287 *e*P **P 12 39 54.3 -0.1**
NEO Neokhori 39.60 287 P **P 12 39 54.3 -0.1**
XOR Xorichti 39.61 287 *e*P **P 12 39 54.7 +0.3**
XOR Xorichti 39.61 287 P **P 12 39 54.7 +0.3**
VLY Voula,Athens 39.64 284 *e*P **P 12 39 55.0 +0.3**
VLY Voula,Athens 39.64 284 P **P 12 39 55.0 +0.3**
OJC Ojcow 39.67 304 *e*P **P 12 39 55.0 +0.2**
OJC Ojcow 39.67 304 *e*P **P 12 39 55.0 +0.2**
comp=Z,84nm,1.6s
OJC Ojcow 39.67 304 *e*P **P 12 39 55.0 +0.2**
IDI Anoyia 39.72 280⇑*i*P **P 12 39 53.0 -2.4**
LIT Litokhoron 39.91 288 *e*P **P 12 39 56.8 -0.1**
LIT Litokhoron 39.91 288 P **P 12 39 56.8 -0.1**
LIT Litokhoron 39.91 288 *e*P **P 12 39 56.8 -0.1**
PSZ Piszkesteto 39.93 301⇑*i*P **P 12 39 57.8 +0.7**
PSZ Piszkesteto 39.93 301 *e*P **P 12 39 57.4 +0.3**
comp=Z,42nm,1.9s
PSZ Piszkesteto 39.93 301⇑P **P 12 39 57.8 +0.7**
MDJ Mudanjiang 39.94 65 P **P 12 39 55.1 -2.0**
MDJ PcP **PcP 12 42 01.0 -1.1**
MDJ S **S 12 46 00.6 +0.3**
MDJ SS **SS 12 48 58.2 +0.8**
MDJ ScS **ScS 12 50 02.7 +0.8**
MDJ pmax pmax
comp=Z,12nm,0.6s
MDJ pmax pmax
comp=Z,88nm,4.4s
MDJ LR LR
comp=Z,1μm,11.0s
MDJ LR LR
comp=Z,1μm,14.3s
MDJ LR LR
comp=Z,2μm,15.9s
MDJ Mudanjiang 39.94 65 *e*P **P 12 39 57.3 +0.2**
comp=Z,26nm,1.5s
LKR Lokris 39.98 286 *e*P **P 12 39 57.5 +0.1**
LKR Lokris 39.98 286 P **P 12 39 57.5 +0.1**
KTK1 Kautokeino 40.02 334 *e*P **P 12 39 57.7 +0.3**
LANS Liptovska Anna 40.03 302 *e*P **P 12 40 00.2 +2.4**
LANS Liptovska Anna 40.03 302 *e*P **P 12 40 00.2 +2.4**
SKO Skopje 40.14 291 *i* P **P 12 39 59.4 +0.6**
ATD Arta Tunnel 40.15 234 LR LR 12 59 48.0
comp=Z,428nm,19.6s,baz=6.5,slow=41
VAM Vamos 40.20 280 *e*P **P 12 39 58.9 -0.4**
VAM Vamos 40.20 280 P **P 12 39 58.9 -0.4**
VAM Vamos 40.20 280 *e*P **P 12 39 58.9 -0.4**
IMMV Iera Moni Meta 40.34 281 P **P 12 40 00.6 +0.1**
AGG Agios Georgios 40.35 286 *e*P **P 12 40 00.2 -0.4**
AGG Agios Georgios 40.35 286 P **P 12 40 00.2 -0.4**
AGG Agios Georgios 40.35 286 *e*P **P 12 40 00.3 -0.4**
DSF Desfina 40.40 285 *e*P **P 12 40 00.2 -0.9**
DSF Desfina 40.40 285 P **P 12 40 00.2 -0.9**
THL Klokotos Trika 40.42 287 P **P 12 40 00.6 -0.5**
HAMF Hammerfest 40.44 336 *e*P **P 12 40 01.7 +0.8**
BIA Bitola 40.49 290 *i* P **P 12 40 02.2 +0.4**
GVD Gavdhos 40.50 280 *e*P **P 12 40 01.5 -0.3**
GVD Gavdhos 40.50 280 P **P 12 40 01.5 -0.3**
FNA Florina 40.52 289 *e*P **P 12 40 01.9 -0.1**
FNA Florina 40.52 289 P **P 12 40 01.9 -0.1**
FNA Florina 40.52 289 *e*P **P 12 40 01.9 -0.1**
VYHS Vyhne 40.54 302 *e*P **P 12 40 02.7 +0.7**
VYHS pmax pmax
comp=Z,11nm,1.4s
VYHS Vyhne 40.54 302 *e*P **P 12 40 02.7 +0.7**
KLR Kul'dur 40.54 57 P **P 12 40 02.4 +0.4**
comp=Z,1.0nm,0.6s,baz=281,slow=8.2,SNR=52
KLR PcP **PcP 12 42 04.0 +0.1**
comp=Z,0.7nm,0.9s,baz=295,slow=5.9,SNR=4.0
KLR Kul'dur 40.54 57*c i*P **P 12 40 02.1 +0.1**
DIVS Divibare 40.63 295 *e*P **P 12 40 03.2 +0.3**
comp=Z,90nm,1.6s
VLI Veliai 40.67 283 *e*P **P 12 40 01.0 -2.2**
VLI Veliai 40.67 283 P **P 12 40 01.0 -2.2**
GUR Goura 40.70 285 *e*P **P 12 40 02.3 -1.3**
GUR Goura 40.70 285 P **P 12 40 02.3 -1.3**
ANKY Antikythira Is 40.71 281 *e*P **P 12 40 02.6 -0.9**
ANKY Antikythira Is 40.71 281 P **P 12 40 02.6 -0.9**
TJN Taejon 40.72 78⇑*e*P **P 12 40 02.8 -0.8**
KS01 Wonju Array Si 40.73 76 *e*P **P 12 40 03.2 -0.5**
KS15 Wonju Array Si 40.73 76 *e*P **P 12 40 03.8 0.0**
SERG Sergoula 40.75 286 P **P 12 40 03.1 -0.8**
KYTH Kithira 40.76 282 *e*P **P 12 40 02.7 -1.3**
KYTH Kithira 40.76 282 P **P 12 40 02.7 -1.3**
KSRS Korea Array 40.76 76 P **P 12 40 03.1 -0.8**
comp=Z,5.7nm,0.7s,baz=284,slow=7.5,SNR=39
KSRS LR LR 12 59 42.0
comp=Z,835nm,18.9s,baz=294,slow=40
EVR Evrytania 40.77 286 *e*P **P 12 40 04.4 +0.2**
EVR Evrytania 40.77 286 P **P 12 40 04.4 +0.2**
OKC Ostrava-Krasne 40.78 304 AMS AMS 13 00 20.0
comp=Z,800nm,14.6s
ANX Ano Chora 40.79 286 P **P 12 40 03.9 -0.4**
EFP Efpalio 40.86 286 P **P 12 40 04.5 -0.2**
PENT Pentalofos 40.87 286 P **P 12 40 04.7 -0.2**
GKP Gorka Klasztor 40.95 309 *e*P **P 12 40 05.7 +0.4**
GKP Gorka Klasztor 40.95 309 *e*P **P 12 40 05.7 +0.4**
IVA Berane 41.01 293⇑*i*P **P 12 40 07.0 +1.0**
PVY Plav 41.04 292 *e*P **P 12 40 06.9 +0.6**
PVO Paravola 41.08 286 P **P 12 40 06.8 +0.3**
DYR Agios Nikonas 41.11 283 P **P 12 40 05.6 -1.3**
MORC Moravsky Berou 41.18 304⇑*i*P **P 12 40 07.7 +0.5**
MORC Moravsky Berou 41.18 304 *e*P **P 12 40 07.8 +0.5**
comp=Z,199nm,1.7s
MORC Moravsky Berou 41.18 304 *e*P **P 12 40 07.8 +0.5**
MORC pmax pmax
comp=Z,199nm,1.7s
MORC Moravsky Berou 41.18 304 *e*P **P 12 40 07.6 +0.3**
DSL Palaion Diasel 41.23 287 *e*P **P 12 40 07.7 -0.1**
DSL Palaion Diasel 41.23 287 P **P 12 40 07.7 -0.1**
JAVC Velka Javorina 41.24 302 *e*P **P 12 40 09.2 +1.4**
ITM Ithomi 41.27 284 *e*P **P 12 40 06.6 -1.6**
comp=Z,36nm,0.7s
ITM Ithomi 41.27 284 P **P 12 40 06.6 -1.6**
KOME Kolasin 41.28 293 *e*P **P 12 40 09.5 +1.2**
AMT Artemida-Makis 41.31 285 P **P 12 40 07.2 -1.3**
PDO Prodromos 41.34 286 P **P 12 40 08.4 -0.3**
TIXI Tiksi 41.46 23 P **P 12 40 09.6 +0.4**
comp=Z,136nm,0.7s,baz=263,slow=5.1,SNR=342
TIXI Tiksi 41.46 23 *e*P **P 12 40 09.5 +0.3**
comp=Z,135nm,0.7s
TIXI Tiksi 41.46 23*c i*P **P 12 40 09.3 +0.1**
TIXI pmax pmax
comp=Z,159nm,0.8s
PYL PYLOS 41.51 284 *e*P **P 12 40 08.2 -1.9**
PYL PYLOS 41.51 284 P **P 12 40 08.2 -1.9**
PDG Podgorica 41.58 292⇓*i*P **P 12 40 11.3 +0.7**
TTG Podgorica 41.58 292 *e*P **P 12 40 10.8 +0.2**
TTG Podgorica 41.58 292 *e*P **P 12 40 11.0 +0.4**
comp=Z,48nm,0.7s
TTG Podgorica 41.58 292 *e*P **P 12 40 11.0 +0.4**
TTG pmax pmax
comp=Z,48nm,0.7s
MODS Modra-Piesok 41.58 302 *e*P **P 12 40 10.2 -0.4**
MODS pmax pmax
comp=Z,35nm,1.9s
MODS Modra-Piesok 41.58 302 *e*P **P 12 40 10.2 -0.4**
KRLC Kraliky 41.62 304 *e*P **P 12 40 10.8 -0.1**
KRLC Kraliky 41.62 304 *e*P **P 12 40 10.8 -0.1**
UPM Unac-Piva 41.62 294⇑*i*P **P 12 40 12.0 +0.8**
TRO Tromso 41.66 334 *e*P **P 12 40 11.2 +0.3**
LKD2 Lefkada island 41.66 287 *e*P **P 12 40 10.4 -1.0**
LKD2 Lefkada island 41.66 287 P **P 12 40 10.4 -1.0**

DRME Dracevica, Mon 41.70 292⇑*i*P **P 12 40 11.5 -0.1**
NKME Niksic 41.70 293 *e*P **P 12 40 12.1 +0.4**
USRK Ussuriysk Ar. 41.71 65 P **P 12 40 11.1 -0.5**
comp=Z,4.6nm,0.8s,baz=281,slow=13,SNR=7.4
USRK LR LR 12 59 16.6
comp=Z,1μm,19.2s,baz=277,slow=39
ULC Ulcinj 41.72 292⇑*i*P **P 12 40 11.4 -0.4**
CEME Cevo 41.79 293⇑*i*P **P 12 40 12.5 +0.1**
KFL Anninata 41.80 286 P **P 12 40 10.9 -1.5**
KSP Ksiaz 41.81 305 *e*P **P 12 40 12.8 +0.4**
KSP Ksiaz 41.81 305 *e*P **P 12 40 12.8 +0.4**
FSK Fiskardo 41.84 286 P **P 12 40 11.4 -1.4**
VRAC Vranov 41.86 303⇓*i*P **P 12 40 14.4 +1.5**
VRAC Vranov 41.86 303⇓P **P 12 40 14.4 +1.5**
VRAC Vranov 41.86 303 *e*P **P 12 40 13.5 +0.6**
DPC Dobruska-Polom 41.87 305 *e*P **P 12 40 14.0 +1.1**
DPC AMS AMS 13 00 50.0
comp=Z,1μm,18.3s
DPC Dobruska-Polom 41.87 305 *e*P **P 12 40 14.0 +1.1**
DPC MLR MLR
comp=Z,1μm,18.3s
BUM Brajici-Budva 41.87 292⇑*i*P **P 12 40 13.4 +0.3**
BRY Bratogost 41.96 293⇑*i*P **P 12 40 14.1 +0.2**
KEK Kerkira 41.99 288 *e*P **P 12 40 12.8 -1.3**
KEK Kerkira 41.99 288 P **P 12 40 12.8 -1.3**
KRUC Moravsky 42.03 303 *e*P **P 12 40 15.0 +0.8**
UPC Upice 42.04 305 AMS AMS 13 00 50.0
comp=Z,1μm,16.7s
HCY Herceg Novi 42.12 293⇑*i*P **P 12 40 14.8 -0.2**
BSD Bornholm Skovb 42.16 312 *i* P **P 12 40 14.7 -0.4**
TWG Pinlang 42.20 100 *e*P **P 12 40 18.4 +2.5**
comp=Z,84nm,0.7s
BLY Banja Luka 42.43 296⇑*i*P **P 12 40 18.2 +0.7**
BLY Banja Luka 42.43 296 *e*P **P 12 40 18.0 +0.5**
comp=Z,14nm,0.8s
STON Ston 42.56 294 P **P 12 40 17.1 -1.5**
STEI Steigen 42.60 331 *e*P **P 12 40 18.5 0.0**
CONA Conrad Observa 42.60 301 *e*P **P 12 40 19.6 +0.6**
SNR=14
HFS Hagfors 42.61 319 P **P 12 40 19.0 +0.2**
comp=Z,36nm,0.5s,baz=98,slow=11,SNR=190
HFS LR LR 12 58 51.2
comp=Z,2μm,19.1s,baz=89,slow=37
HFS Hagfors 42.61 319 P **P 12 40 19.0 +0.2**
HFS pmax pmax
comp=Z,36nm,0.5s
HFS MLR MLR
comp=Z,2μm,19.1s
MOR8 Moi Rana 42.64 328 *e*P **P 12 40 18.5 -0.5**
PSI Prapat 42.67 144 LR LR 13 02 17.0
comp=Z,255nm,18.2s,baz=271,slow=42
GOPC GO Pecny, Ondr 42.91 304 *e*PP PP 12 42 16.4 +15
GOPC AMS AMS 13 01 40.0
comp=Z,1μm,15.8s
PVCC Panska Ves 42.94 305 *e*P **P 12 40 23.2 +1.6**
PVCC AMS AMS 12 59 30.0
comp=Z,1μm,13.7s
PVCC Panska Ves 42.94 305 *e*P **P 12 40 23.2 +1.6**
PVCC MLR MLR
comp=Z,1μm,13.7s
ARSA Arzberg 42.97 300 *i* P **P 12 40 21.9 0.0**
PRU Pruhonice 43.05 304 *e*P **P 12 40 23.2 +0.7**
PRU *ex* x 12 42 17.0
PRU AMS AMS 13 01 40.0
comp=Z,1μm,15.9s
PRU Pruhonice 43.05 304 *e*P **P 12 40 23.2 +0.7**
PRU *e* 12 42 17.0
PRU MLR MLR
comp=Z,1μm,15.9s
PRA Prague 43.11 305 AMS AMS 13 01 50.0
comp=Z,1μm,15.9s
BJO Bjornoya 43.11 341 *e*P **P 12 40 23.6 +1.0**
GROS Grobnik 43.16 299 *i* P **P 12 40 23.4 -0.1**
GROS *i* 12 42 22.8
KONS Konsvik 43.21 329 *e*P **P 12 40 23.8 +0.3**
LOF Lofoten 43.26 331 *e*P **P 12 40 23.9 0.0**
GRNR Gornyy 43.27 54 *e*P **P 12 40 24.0 -0.3**
GRNR *e* 12 42 40.8
GRNR pmax pmax
comp=Z,39nm,1.0s
BRG Berggiesshubel 43.28 306 *i* P **P 12 40 24.9 +0.6**
comp=Z,17nm,1.5s
BRG *i* 12 40 48.7
comp=Z,16nm,0.9s
BRG *i* PCP **PcP 12 42 13.1 +0.2**
comp=Z,12nm,0.8s
comp=N,437nm,16.7s
comp=E,1μm,14.8s
comp=Z,2μm,15.7s
BRG Berggiesshubel 43.28 306 *i* P **P 12 40 24.9 +0.6**
BRG *i* 12 42 13.1
BRG pmax pmax
comp=Z,17nm,1.5s
BRG MLR MLR
comp=N,437nm,16.7s
BRG MLR MLR
comp=E,1μm,14.8s
BRG MLR MLR
comp=Z,2μm,15.7s
SOKA Soboth 43.42 300 *e*P **P 12 40 26.0 +0.3**
SNR=12
NC405 NORSAR Array S 43.58 321 *e*P **P 12 40 25.8 -0.8**
MOA Molln 43.66 301 *e*P **P 12 40 27.6 +0.1**
NC602 NORSAR Array S 43.67 320 *e*P **P 12 40 27.0 -0.3**
NC602 NORSAR Array S 43.67 320 *e*P **P 12 40 27.1 -0.2**
NC303 NORSAR Array S 43.74 321 *e*P **P 12 40 27.8 -0.2**
NB201 NORSAR Array S 43.78 321 *e*P **P 12 40 26.9 -1.4**
CLL Collm 43.78 307⇑*i*P **P 12 40 28.5 +0.1**
comp=Z,19nm,0.8s
CLL *es*P sP 12 40 47.0 +6.5
CLL *i* 12 40 52.3
CLL *e*PP **PP 12 42 11.0 +0.6**
CLL *e*PPP PPP 12 42 41.0
CLL *e*PcS **PcS 12 46 08.0 +0.7**
CLL *e* 12 47 42.0
CLL *e*SS SS 12 50 18.0 +5.1
CLL LmV 13 00 00.0
comp=Z,1μm,19.6s
CLL Collm 43.78 307 *e*P **P 12 40 28.5 +0.1**
comp=Z,50nm,1.5s
CLL Collm 43.78 307⇑*i*P **P 12 40 28.5 +0.1**
CLL pmax pmax
comp=Z,19nm,0.8s
CLL MLR MLR
comp=Z,1μm,19.6s
OBKA Obir 43.79 300 *e*P **P 12 40 29.1 +0.5**
GEC2 GERESS Array S 43.82 303 *e*P **P 12 40 29.5 +0.7**
comp=Z,90nm,1.7s
GEC2 GERESS Array S 43.82 303 *e*P **P 12 40 29.5 +0.7**
GEC2 pmax pmax
comp=Z,90nm,1.7s
GERES GERESS Array B 43.82 303 P **P 12 40 29.5 +0.7**
comp=Z,7.9nm,0.6s,baz=69,slow=7.6,SNR=27
GERES LR LR 13 01 49.9
comp=Z,906nm,20.0s,baz=80,slow=40
GEA0 GERESS Array S 43.82 303 *e*P **P 12 40 29.4 +0.5**
NB2 NORSAR Subarra 43.82 321 P **P 12 40 28.2 -0.4**
comp=Z,29nm,0.8s,baz=89,slow=8.6
NB2 NORSAR Subarra 43.82 321 P **P 12 40 28.2 -0.4**
baz=89,slow=8.6
NB200 NORSAR Array S 43.82 321 *e*P **P 12 40 28.2 -0.4**
NB200 *e*PcP **PcP 12 42 14.1 -0.5**
NOA NORSAR Array B 43.82 321 P **P 12 40 28.2 -0.4**
comp=Z,44nm,0.8s,baz=91,slow=7.8,SNR=92
NOA PcP **PcP 12 42 14.1 -0.5**
comp=Z,8.2nm,0.8s,baz=75,slow=4.3,SNR=3.1
NOA LR LR 12 59 38.4
comp=Z,1μm,20.7s,baz=85,slow=37
NOA NORSAR Array B 43.82 321 P **P 12 40 28.2 -0.4**
NOA 12 42 14.1
NOA pmax pmax
comp=Z,36nm,0.8s
NOA MLR MLR
comp=Z,1μm,20.7s
KHC Kasperske Hory 43.84 303 *e*P **P 12 40 29.7 +0.8**
KHC *e*PP **PcP 12 42 20.9 +6.0**
KHC AMS AMS 13 00 10.0
comp=Z,1μm,15.7s
KHC Kasperske Hory 43.84 303 *e*P **P 12 40 29.5 +0.6**
comp=Z,4.5nm,0.8s
KHC Kasperske Hory 43.84 303 *e*P **P 12 40 29.7 +0.8**
KHC *e* 12 42 20.9
KHC MLR MLR
comp=Z,1μm,15.7s
LJU Ljubljana 43.92 299 *i* P **P 12 40 30.2 +0.6**

MATE Matera 43.94 291⇑*i*P **P 12 40 28.4 -1.3**
NAO01 NORSAR Array S 43.99 321 *e*P **P 12 40 29.6 -0.3**
NBO00 NORSAR Array S 44.03 321 *e*P **P 12 40 29.9 -0.4**
NC204 NORSAR Array S 44.03 321 *e*P **P 12 40 30.1 -0.2**
OSL Oslo 44.10 319 *e*P **P 12 40 30.8 0.0**
TBLU Trondheim 44.25 324 *e*P **P 12 40 30.2 -1.8**
NKC Novy Kostel 44.33 305 AMS AMS 13 00 20.0
comp=Z,2μm,15.0s
TIP Timpagrande 44.39 289⇓*i*P **P 12 40 33.2 -0.2**
TIP Timpagrande 44.39 289 *e*P **P 12 40 33.3 -0.2**
TIP Timpagrande 44.39 289 P **P 12 40 33.3 -0.2**
CADS Cadrg 44.40 299 *i* P **P 12 40 33.1 -0.4**
CADS *e*SS SS 12 50 42.1 +17
KBA Koelnbreinsper 44.45 301 *e*P **P 12 40 34.0 0.0**
JNU Nakatsue 44.66 80 P **P 12 40 36.2 +0.5**
comp=Z,33nm,0.9s,baz=258,slow=2.4,SNR=14
JNU LR LR 13 01 51.6
comp=Z,384nm,18.8s,baz=298,slow=40
JNU Nakatsue 44.66 80 *e*P **P 12 40 35.4 -0.3**
comp=Z,52nm,1.0s
KONO Kongsberg 44.69 319 *e*P **P 12 40 35.4 -0.1**
comp=Z,32nm,0.9s
KONO Kongsberg 44.69 319*c i*P **P 12 40 35.4 -0.1**
KONO pmax pmax
comp=Z,50nm,1.7s
KONO Kongsberg 44.69 319 *e*P **P 12 40 35.6 +0.1**
CUC Castrocucco 44.80 290 *e*P **P 12 40 37.1 +0.4**
comp=Z,30nm,0.8s
DOMB Dombas 44.82 322 *e*P **P 12 40 36.7 +0.1**
HSPB Hornsund (broa 44.83 344 *e*P **P 12 40 37.5 +1.1**
SPA0 Spitsbergen Ar 45.07 346 *e*P **P 12 40 39.4 +1.1**
SPA0 Spitsbergen Ar 45.07 346 *e*P **P 12 40 39.5 +1.2**
SPITS Spitsbergen Ar 45.07 346 P **P 12 40 38.8 +0.5**
comp=Z,31nm,0.6s,baz=97,slow=6.2,SNR=143
SPITS LR LR 13 02 19.9
comp=Z,1μm,20.9s,baz=95,slow=40
GRFO Grafenberg 45.22 305 *e*P **P 12 40 41.0 +1.1**
comp=Z,58nm,1.4s
GRFO Grafenberg 45.22 305 *e*P **P 12 40 41.0 +1.1**
GRFO pmax pmax
comp=Z,58nm,1.4s
CEL Celeste 45.35 288 *e*P **P 12 40 41.7 +0.6**
comp=Z,52nm,0.7s
NKL Nikolayevsk 45.44 50 *e*P **P 12 40 41.0 -0.5**
NKL pmax pmax
comp=E,40nm,1.0s
NKL pmax pmax
comp=Z,40nm,1.0s
NKL MLR MLR
comp=E,1μm,15.0s
NKL MLR MLR
comp=Z,2μm,15.0s
MOL Molde 45.51 323 *e*P **P 12 40 45.8 +3.9**
WTTA Wattenberg 45.53 301 *e*P **P 12 40 42.4 -0.2**
comp=Z,20nm,1.6s
JOW Kunigami 45.59 90 LR LR 13 02 50.7
comp=Z,292nm,19.4s,baz=333,slow=40
SNART Snartemo 46.05 317 *e*P **P 12 40 46.9 +0.6**
RETA Reutte 46.05 302 *i* P **P 12 40 46.6 0.0**
comp=Z,14nm,0.9s,SNR=7.7
KBS Kingsbay 46.16 346 *e*P **P 12 40 47.8 +0.9**
comp=Z,66nm,0.6s
KBS Kingsbay 46.16 346 *e*P **P 12 40 47.8 +0.9**
KBS pmax pmax
comp=Z,66nm,0.6s
KBS Kingsbay 46.16 346 *e*P **P 12 40 47.9 +0.9**
ODD1 Odda 46.16 319 *e*P **P 12 40 48.2 +1.0**
HYA Hoyanger 46.25 321 *e*P **P 12 40 48.5 +0.7**
FUORN Ofenpass-Fuorn 46.61 301 *e*P **P 12 40 51.1 -0.2**
comp=Z,32nm,1.3s
DAVA Damuels 46.68 302 *i* P **P 12 40 51.5 -0.1**
comp=Z,19nm,0.8s,SNR=8.9
VAE Valguarnera 46.73 288 LR LR 13 04 58.6
comp=Z,173nm,18.8s,baz=146,slow=42
BER Bergen 46.75 320 *e*P **P 12 40 52.5 +0.7**
STAV Stavanger 46.75 318 *e*P **P 12 40 51.8 0.0**
ASK Askoy 46.81 320 *e*P **P 12 40 52.8 +0.6**
TUE Stuetta 47.26 301 *e*P **P 12 40 55.8 -0.5**
comp=Z,9.7nm,0.8s
VLC Villacollemand 47.26 298 *e*P **P 12 40 57.2 +1.2**
comp=Z,23nm,0.8s
WDD Wied Dalam 47.29 285 *e*P **P 12 40 56.1 -0.3**
comp=Z,55nm,0.9s
BFO Black Forest 47.40 304 *e*P **P 12 40 57.2 +0.1**
comp=Z,18nm,1.2s
BFO Black Forest 47.40 304 *i* P **P 12 40 57.6 +0.5**
TGY Tagaytay City 47.47 109 LR LR 13 04 02.3
comp=Z,381nm,20.2s,baz=346,slow=40
CDF Champ du Feu 48.05 304 *e*P **P 12 41 02.8 +0.6**
CDF pmax pmax
comp=Z,59nm,1.6s
ECH Echery 48.19 304 *e*P **P 12 41 03.2 0.0**
comp=Z,37nm,1.5s
ECH Echery 48.19 304 *e*P **P 12 41 03.2 0.0**
ECH pmax pmax
comp=Z,37nm,1.5s
YSS Yuzh-Sakhalins 48.24 58 *e*P **P 12 41 03.3 -0.2**
YSS *e* 12 41 12.3
YSS *e*S **S 12 48 02.0 +1.0**
YSS pmax pmax
comp=Z,10.0nm,1.2s
YSS MLR MLR
comp=Z,400nm,13.0s
YSS MLR MLR
comp=N,200nm,14.0s
YSS MLR MLR
comp=E,300nm,13.0s
MEM Membach 48.25 307⇑P **P 12 41 03.7 +0.1**
comp=Z,11nm,1.0s
INU Inuyama 48.34 75 *e*P **P 12 41 04.0 -0.4**
comp=Z,17nm,1.0s
SENIN Lac Senin/Sane 48.65 301 *e*P **P 12 41 06.5 -0.4**
comp=Z,62nm,1.7s
MJB9 Matsu-Tunnel 48.73 73 *e*P **P 12 41 06.7 -0.7**
comp=Z,18nm,0.8s
MAJO Matsushiro 48.73 73 *e*P **P 12 41 06.7 -0.7**
comp=Z,18nm,0.8s
MAJO Matsushiro 48.73 73*c i*P **P 12 41 06.5 -1.0**
MAJO pmax pmax
comp=Z,17nm,0.9s
MAT Matsushiro 48.73 73 P **P 12 41 06.8 -0.7**
MAT S **S 12 48 05.8 -2.5**
MJAR Matsushiro Arr 48.73 73 P **P 12 41 06.7 -0.8**
comp=Z,16nm,0.8s,baz=288,slow=9.6,SNR=43
MJAR LR LR 13 03 12.2
comp=Z,331nm,21.1s,baz=290,slow=38
BCLA Clavier 48.74 307⇓P **P 12 41 08.2 +0.8**
ASAJ Asahikawa 49.03 62 P **P 12 41 09.0 -0.7**
comp=Z,5.1nm,0.5s,baz=324,slow=6.7,SNR=14
ASAJ LR LR 13 03 55.5
comp=Z,1μm,18.4s,baz=292,slow=38
ASAJ Asahikawa 49.03 62 *e*P **P 12 41 09.1 -0.7**
comp=Z,13nm,0.9s
ASAJ Asahikawa 49.03 62 P **P 12 41 09.0 -0.7**
ASAJ pmax pmax
comp=Z,5.0nm,0.5s
ASAJ MLR MLR
comp=Z,1μm,18.4s
DOU Dourbes 49.26 307⇑P **P 12 41 11.7 +0.3**
comp=Z,8.1nm,1.1s
LPG La Plagne 49.28 300 *e*P **P 12 41 11.4 -0.5**
LPG pmax pmax
comp=Z,54nm,1.4s
LPL La Plagne 49.29 300 *e*P **P 12 41 11.4 -0.5**
LPL pmax pmax
comp=Z,11nm,0.6s
SBF Sospel 49.37 298 *e*P **P 12 41 12.2 -0.2**
SBF pmax pmax
comp=Z,77nm,1.3s
MA2 Magadan 49.71 40 *e*P **P 12 41 14.8 +0.2**
comp=Z,28nm,0.9s
MA2 Magadan 49.71 40⇑*e*P **P 12 41 13.9 -0.7**
MA2 pmax pmax
comp=Z,44nm,1.3s
KSM Kuching 49.74 131 *e*P **P 12 41 15.3 -0.1**
comp=Z,19nm,0.8s
SEY Seymchan 49.81 36⇓*e*P **P 12 41 15.1 -0.2**
LRW Lerwick 49.99 321⇑*e*P **P 12 41 16.6 -0.1**
LRW IAmb IAmb 12 41 17.6
comp=Z,48nm,1.0s
FRF La Foret Royal 50.01 298 *e*P **P 12 41 16.2 -1.0**
FRF pmax pmax
comp=Z,24nm,1.1s
ORIF Oris-en-Rattie 50.06 300 *e*P **P 12 41 18.7 +1.1**
SBUM Sibu 50.09 128 *e*P **P 12 41 17.6 -0.5**
comp=Z,20nm,0.8s

TAMR Tamra 50.78 289 *eP* **P 12 41 23.1 +0.1**
comp=Z,44nm,0.6s
SSB Saint Sauveur 50.82 301 *eP* **P 12 41 23.2 -0.1**
comp=Z,44nm,1.6s
SSB Saint Sauveur 50.82 301 *eP* **P 12 41 23.2 -0.1**
SSB pmax pmax
comp=Z,44nm,1.6s
VIVF Saint-Julien-I 50.88 300 *eP* **P 12 41 23.3 -0.5**
VIVF pmax pmax
comp=Z,112nm,2.1s
WACR West Acre 50.89 311 *eP* **P 12 41 23.5 -0.2**
WACR IAmb IAmb 12 41 24.8
comp=Z,143nm,0.9s
KEST Kesra 51.16 288 P **P 12 41 26.4 +0.4**
comp=Z,11nm,0.7s,baz=311,slow=1.2,SNR=14
KEST LR LR 13 07 47.8
comp=Z,244nm,19.3s,baz=318,slow=41
KEST Kesra 51.16 288 *eP* **P 12 41 26.4 +0.4**
comp=Z,66nm,1.6s
JHJ Hachijo jima 2 51.37 76 LR LR 13 06 08.8
DRUM Mains of Drumt 51.44 317⇑ *eP* **P 12 41 27.2 -0.5**
DRUM IAmb IAmb 12 41 28.0
comp=Z,54nm,0.9s
MME1 Meikle Cairn 51.58 317 *eP* **P 12 41 28.6 -0.2**
MCD Coleburn Disti 51.66 318⇑ *eP* **P 12 41 29.4 0.0**
THTN Thala 51.72 288 *eP* **P 12 41 30.9 +0.6**
comp=Z,20nm,1.2s
EDMD Edmundbyers 51.75 314⇑ *eP* **P 12 41 29.8 -0.2**
EDMD IAmb IAmb 12 41 30.7
comp=Z,46nm,1.0s
BIGH Upper Bighouse 51.75 319⇑ *eP* **P 12 41 30.2 +0.3**
BIGH IAmb IAmb 12 41 30.6
comp=Z,122nm,0.5s
ESY Stoneypath 51.79 316⇑ *eP* **P 12 41 29.9 -0.5**
HPK Haverah Park 51.82 313⇑ *eP* **P 12 41 30.5 0.0**
HPK IAmb IAmb 12 41 31.3
comp=Z,64nm,0.7s
EDU Dundee 51.82 316⇑ *eP* **P 12 41 30.4 -0.2**
TCF Toulx Ste Croi 52.00 303 *eP* **P 12 41 31.3 -0.8**
TCF pmax pmax
comp=Z,54nm,1.5s
MYLDM Lahad Datu 52.01 120 *eP* **P 12 41 32.9 +0.4**
comp=Z,24nm,0.8s
LBWR Ladybower, Pea 52.04 312 *eP* **P 12 41 32.3 0.0**
LBWR IAmb IAmb 12 41 32.9
comp=Z,39nm,1.0s
EDI Edinburgh 52.09 316⇑ *eP* **P 12 41 32.5 -0.1**
EDI IAmb IAmb 12 41 33.2
comp=Z,31nm,0.8s
EKA Eskdalemuir Ar 52.26 315 P **P 12 41 33.4 -0.4**
comp=Z,31nm,0.8s,baz=81,slow=7.6,SNR=81
EKA PcP **PcP 12 42 45.4 +0.5**
comp=Z,15nm,0.7s,baz=86,slow=4.9,SNR=9.2
EKA LR LR 13 05 46.8
comp=Z,917nm,18.8s,baz=60,slow=38
EKA Eskdalemuir Ar 52.26 315 P **P 12 41 33.4 -0.4**
EKA 12 42 45.4
EKA pmax pmax
comp=Z,28nm,0.7s
EKA MLR MLR
comp=Z,917nm,18.8s
MDO Dochfour 52.27 318⇑ *eP* **P 12 41 33.8 -0.2**
ECK Cauldkaine Hil 52.28 315 *eP* **P 12 41 33.5 -0.5**
ESK Eskdalemuir 52.28 315 *eP* **P 12 41 33.6 -0.4**
comp=Z,37nm,0.8s
ESK Eskdalemuir 52.28 315⇑ *eP* **P 12 41 32.7 -1.3**
ESK IAmb IAmb 12 41 33.6
comp=Z,40nm,0.9s
ESK Eskdalemuir 52.28 315 *eP* **P 12 41 33.6 -0.4**
ESK pmax pmax
comp=Z,37nm,0.8s
BHH Howats Hill 52.36 315 *eP* **P 12 41 34.3 -0.2**
INVG Invergeldie, C 52.40 316⇑ *eP* **P 12 41 34.5 -0.4**
INVG IAmb IAmb 12 41 35.9
comp=Z,18nm,0.9s
KESW Keswick, Cumbr 52.45 314 *eP* **P 12 41 34.7 -0.6**
KESW IAmb IAmb 12 41 36.3
comp=Z,86nm,1.0s
BBO1 Bothel 52.48 314⇑ *eP* **P 12 41 35.4 -0.1**
DAG Danmarks Havn 52.51 343⇑ *iP* **P 12 41 35.6 +0.2**
comp=Z,72nm,0.7s
CAF Calviac 52.59 301 *eP* **P 12 41 35.9 -0.6**
CAF pmax pmax
comp=Z,36nm,1.4s
EAB Aberfoyle 52.63 316⇑ *eP* **P 12 41 36.3 -0.3**
PGBU Glenifferbraes 52.83 316 *eP* **P 12 41 38.0 0.0**
PGBU IAmb IAmb 12 41 38.8
comp=Z,44nm,0.8s
KPL Plockton 52.97 318⇑ *eP* **P 12 41 38.8 -0.2**
KPL IAmb IAmb 12 41 39.6
comp=Z,36nm,0.8s
HLM1 Long Mynd 52.99 312 *eP* **P 12 41 38.5 -0.8**
HLM1 IAmb IAmb 12 41 39.5
comp=Z,12nm,0.8s
MONM Monmouth 53.17 311⇑ *eP* **P 12 41 40.3 -0.3**
MONM IAmb IAmb 12 41 41.1
comp=Z,72nm,1.1s
GRR Gorron 53.20 306 *eP* **P 12 41 39.5 -1.4**
GRR pmax pmax
comp=Z,55nm,1.1s
MCH1 Michaelchurch 53.23 311⇑ *eP* **P 12 41 40.8 -0.3**
MCH1 IAmb IAmb 12 41 41.7
comp=Z,69nm,0.9s
HGH Gray Hill 53.24 310⇑ *eP* **P 12 41 40.7 -0.4**
WPM1 Penmaenmawr 53.33 313⇑ *eP* **P 12 41 41.6 -0.1**
IOMK Kirk Michael 53.37 314⇑ *eP* **P 12 41 42.3 +0.3**
IOMK IAmb IAmb 12 41 43.0
comp=Z,60nm,0.9s
KMBO Kilima Mbogo 53.50 230 P **P 12 41 44.1 +0.3**
comp=Z,4.7nm,0.6s,baz=33,slow=12,SNR=12
KMBO LR LR 13 07 59.9
comp=Z,237nm,18.4s,baz=82,slow=40
KMBO Kilima Mbogo 53.50 230 *eP* **P 12 41 44.4 +0.6**
comp=Z,42nm,1.7s
KMBO Kilima Mbogo 53.50 230 *eP* **P 12 41 44.4 +0.6**
KMBO pmax pmax
comp=Z,42nm,1.7s
WME Myndd Eilian 53.51 313⇑ *eP* **P 12 41 42.9 -0.1**
YLL Llanberis 53.52 313 *eP* **P 12 41 43.0 -0.1**
GMK Mull of Kintyr 53.57 316⇑ *eP* **P 12 41 43.9 +0.4**
WLF1 Llynfaes 53.59 313 *eP* **P 12 41 43.6 -0.1**
WLF1 IAmb IAmb 12 41 44.6
comp=Z,70nm,0.9s
WPS Cemaes, Angles 53.62 313 *eP* **P 12 41 43.8 -0.1**
WPS IAmb IAmb 12 41 44.8
comp=Z,51nm,1.1s
YRC Rhoscolyn 53.71 313⇑ *eP* **P 12 41 44.6 +0.1**
GMM Mts of Mourne 54.14 314⇑ *eP* **P 12 41 47.4 -0.2**
BILL Bilibino 54.16 28 *eP* **P 12 41 48.4 +0.8**
comp=Z,51nm,0.9s
BILL Bilibino 54.16 28 *c iP* **P 12 41 48.1 +0.4**
BILL *e* 12 42 52.1
BILL *e* 12 43 47.6
BILL *e*PPP PPP 12 44 59.9
BILL *e*S **S 12 49 18.6 -3.7**
BILL pmax pmax
comp=Z,44nm,0.9s
BILL MLR MLR
comp=Z,1μm,18.0s
DSB Dublin 54.73 313 *eP* **P 12 41 51.9 0.0**
comp=Z,26nm,0.8s
QUIF Quistinic 54.81 306 *eP* **P 12 41 51.2 -1.4**
QUIF pmax pmax
comp=Z,16nm,0.7s
CCA1 Carnmenellis 55.19 309 *eP* **P 12 41 54.7 -0.7**
CCA1 IAmb IAmb 12 41 55.7
comp=Z,38nm,1.1s
LEM Lembang 55.22 140 LR LR 13 09 18.9
comp=Z,216nm,19.7s,baz=284,slow=40
PETK Petropavlovsk- 55.29 47 LR LR 13 06 17.0
comp=Z,317nm,21.3s,baz=290,slow=37
SCO Scoresbysund 55.36 336 *eP* **P 12 41 57.4 +1.1**
comp=Z,12nm,0.7s
SCO Scoresbysund 55.36 336 *eP* **P 12 41 57.4 +1.1**
SCO pmax pmax
comp=Z,12nm,0.7s
DAV Davao City (W) 55.56 112 LR LR 13 08 03.7
comp=Z,598nm,18.8s,baz=24,slow=38
EMHD Djebel Mahouad 55.60 291 P **P 12 41 58.5 -0.2**
EBNR Beni Rached 56.58 292 P **P 12 42 06.0 +0.4**
ECHA Ech Chlef 56.76 292 P **P 12 42 08.0 +1.2**
EANR 'Ain N'Sour 57.05 292 P **P 12 42 09.0 +0.1**
MBAR Mbarara 57.11 237 *eP* **P 12 42 09.8 +0.1**
comp=Z,19nm,0.6s
MBAR Mbarara 57.11 237 *eP* **P 12 42 09.8 +0.1**
MBAR pmax pmax
comp=Z,19nm,0.6s
ETRT Tiaret 57.17 291 P **P 12 42 10.4 +0.5**
BORG Borgarnes 57.42 330 *eP* **P 12 42 13.4 +2.4**
comp=Z,20nm,1.0s
BORG Borgarnes 57.42 330 *eP* **P 12 42 13.4 +2.4**
BORG pmax pmax
comp=Z,20nm,1.0s
ES19 SONSECA Array 58.80 298 *eP* **P 12 42 20.7 -0.4**
ESDC Sonseca Array 58.85 298 P **P 12 42 21.4 -0.2**
comp=Z,13nm,0.7s,baz=56,slow=7.3,SNR=60
ESDC LR LR 13 12 13.1
comp=Z,270nm,19.6s,baz=75,slow=40
ESLA Sonseca Array 58.85 298 *eP* **P 12 42 21.3 -0.3**
comp=Z,78nm,1.8s
SUMG Summit 59.00 341⇑ *iP* **P 12 42 23.2 +0.7**
comp=Z,38nm,0.8s
SUMG Summit 59.00 341 *eP* **P 12 42 23.2 +0.7**
comp=Z,41nm,0.8s
SUMG Summit 59.00 341 *eP* **P 12 42 23.2 +0.7**
SUMG pmax pmax
comp=Z,41nm,0.8s
PAB San Pablo 59.17 298 *eP* **P 12 42 23.9 +0.1**
comp=Z,35nm,1.4s
PAB San Pablo 59.17 298 *eP* **P 12 42 23.9 +0.1**
PAB pmax pmax
comp=Z,35nm,1.4s
PBRG Braganca 59.72 301 *eP* **P 12 42 27.5 0.0**
comp=Z,32nm,1.7s
MVO Moncorvo 60.21 300 *eP* **P 12 42 31.4 +0.5**
comp=Z,33nm,1.2s
MVO Moncorvo 60.21 300 *e*LQ LQ 12 59 29.6
MVO *e*LR LR 13 06 19.4
comp=Z,204nm,16.0s
TAM Tamanrasset 60.49 276 *eP* **P 12 42 33.4 +0.2**
comp=Z,8.8nm,0.6s
TAM Tamanrasset 60.49 276 *eP* **P 12 42 33.4 +0.2**
TAM pmax pmax
comp=Z,9.0nm,0.6s
PCAB Cabril 60.61 301 *eP* **P 12 42 34.1 +0.5**
comp=Z,74nm,1.4s
PVRL Vila Real 60.62 301 *eP* **P 12 42 33.9 +0.3**
comp=Z,26nm,1.4s
POLO Lamas de Olo 60.62 301 *eP* **P 12 42 33.8 +0.1**
comp=Z,13nm,1.4s
PGAV Gavieira, Arco 60.65 302 *eP* **P 12 42 34.5 +0.6**
comp=Z,54nm,1.4s
PGAV Gavieira, Arco 60.65 302 *e*LR LR 13 06 05.6
comp=Z,253nm,22.0s
MTE Manteigas 60.92 300 *eP* **P 12 42 36.4 +0.6**
comp=Z,48nm,1.3s
MTE Manteigas 60.92 300 *e*LR LR 13 05 55.3
comp=Z,257nm,20.0s
MTE Manteigas 60.92 300 *eP* **P 12 42 36.3 +0.6**
comp=Z,87nm,1.7s
PVIS Viseu 61.00 300 *eP* **P 12 42 36.8 +0.5**
comp=Z,46nm,1.6s
PCBR Castelo Branco 61.15 299 *eP* **P 12 42 37.6 +0.4**
comp=Z,30nm,2.1s
PMRV Marv??o 61.30 299 *eP* **P 12 42 39.0 +0.8**
comp=Z,36nm,1.5s
PMRV Marv??o 61.30 299 *e*LR LR 13 08 33.3
comp=Z,236nm,20.0s
KULLO Kullorsuaq 61.61 347⇑ *iP* **P 12 42 39.9 +0.1**
comp=Z,43nm,0.6s
PBAR Barrancos 61.67 297 *eP* **P 12 42 41.2 +0.4**
comp=Z,119nm,1.5s
PESTR Estremoz 61.71 298 *eP* **P 12 42 41.5 +0.5**
comp=Z,19nm,1.3s
PESTR Estremoz 61.71 298 *eP* **P 12 42 40.1 -0.9**
comp=Z,29nm,1.8s
TULEG Thule 61.71 351 *eP* **P 12 42 40.0 -0.4**
comp=Z,153nm,1.8s
PCAS Casmilo, Conde 61.73 300 *eP* **P 12 42 41.7 +0.5**
comp=Z,51nm,1.6s
PTOM Tomar 61.89 300 *eP* **P 12 42 42.8 +0.6**
comp=Z,54nm,1.4s
PMTG Montargil 62.03 299 *eP* **P 12 42 43.3 +0.1**
comp=Z,30nm,1.5s
PBEJ Beja 62.31 298 *eP* **P 12 42 45.6 +0.5**
comp=Z,40nm,1.4s
PVAQ Vaqueiros 62.53 297 *eP* **P 12 42 46.9 +0.4**
comp=Z,96nm,1.8s
PVAQ Vaqueiros 62.53 297 *e*LR LR 13 10 13.8
comp=Z,313nm,18.0s
PCVE Castro Verde 62.63 297 *eP* **P 12 42 47.4 +0.2**
comp=Z,55nm,1.8s
MESJ Messejana 62.65 298 *eP* **P 12 42 47.8 +0.4**
MESJ AMb AMB 12 42 56.9
comp=Z,48nm,1.6s
MESJ Messejana 62.65 298 *eP* **P 12 42 47.9 +0.6**
comp=Z,51nm,1.5s
MESJ Messejana 62.65 298 *eP* **P 12 42 47.7 +0.4**
MDT Midelt 62.70 291 LR LR 13 14 00.9
comp=Z,74nm,21.8s,baz=36,slow=40
PNCL Nicolau / Gran 62.72 298 *eP* **P 12 42 48.2 +0.4**
comp=Z,60nm,2.0s
PBDV Barranco-do-Ve 62.76 297 *eP* **P 12 42 48.8 +0.7**
comp=Z,93nm,1.8s
ANGG Ammassalik, Gr 62.87 335 *eP* **P 12 42 48.7 +0.4**
comp=Z,35nm,0.8s
OPO Ambohidratompo 63.69 210 P **P 12 42 54.9 +0.4**
comp=Z,6.7nm,0.9s,baz=20,slow=4.6,SNR=5.9
OPO LR LR 13 08 17.1
comp=Z,155nm,21.7s,baz=359,slow=34
RDOG Red Dog Mine 64.03 21 *eP* **P 12 42 55.5 -0.4**
comp=Z,17nm,0.9s
ILULI Ilulissat 64.35 341⇑ *iP* **P 12 42 58.1 +0.1**
comp=Z,69nm,0.7s
ILULI Ilulissat 64.35 341 *eP* **P 12 42 58.2 +0.1**
comp=Z,70nm,0.7s
ILULI Ilulissat 64.35 341 *eP* **P 12 42 58.2 +0.1**
ILULI pmax pmax
comp=Z,70nm,0.7s
RES Resolute Bay 65.60 357 *eP* **P 12 43 06.1 +0.1**
comp=Z,10nm,0.6s
RES Resolute Bay 65.60 357 *eP* **P 12 43 06.1 +0.1**
RES pmax pmax
comp=Z,10.0nm,0.6s
SFJD Kangerlussuaq 65.84 340 P **P 12 43 07.4 -0.4**
comp=Z,35nm,0.7s,baz=45,slow=8.4,SNR=22
SFJD Kangerlussuaq 65.84 340 *i P* **P 12 43 07.5 -0.2**
comp=Z,33nm,0.7s
SFJD Kangerlussuaq 65.84 340 *eP* **P 12 43 07.5 -0.2**
GUMO Guam 65.85 92 LR LR 13 12 18.1
comp=Z,144nm,21.1s,baz=310,slow=36
TOLK Toolik Lake Re 66.85 16 P **P 12 43 14.5 +0.2**
baz=324,SNR=128
TOLK Toolik Lake Re 66.85 16 *eP* **P 12 43 14.5 +0.2**
comp=Z,91nm,0.6s
BATI Baumata 67.01 127 LR LR 13 18 24.5
comp=Z,226nm,18.0s,baz=248,slow=41
FAKI Fak Fak 67.28 115 *eP* **P 12 43 18.1 +0.4**
comp=Z,47nm,1.0s
COLD Coldfoot 67.86 17 *eP* **P 12 43 20.8 +0.1**
comp=Z,71nm,0.9s
IM3 Indian Mountai 67.99 19 *eP* **P 12 43 20.9 -0.5**
NRS Narsarsuaq 68.44 333 *eP* **P 12 43 24.6 +0.3**
comp=Z,43nm,0.8s
NRS Narsarsuaq 68.44 333 *eP* **P 12 43 24.6 +0.3**
NRS pmax pmax
comp=Z,43nm,0.8s
TOA1 Torodi Ar. Sit 69.07 270 *eP* **P 12 43 28.1 -0.9**
TOA0 Torodi Ar. Sit 69.08 270 *eP* **P 12 43 28.1 -0.8**
TORD Torodi Ar. Bea 69.08 270 P **P 12 43 28.1 -0.9**
comp=Z,31nm,0.5s,baz=46,slow=5.5,SNR=200
TORD LR LR 13 20 48.4
comp=Z,84nm,18.8s,baz=30,slow=42
MLY Manley 69.51 19 *eP* **P 12 43 31.0 0.0**
comp=Z,45nm,1.3s
FYU Fort Yukon 69.51 16 *eP* **P 12 43 31.8 +0.9**
comp=Z,164nm,1.6s
INK Inuvik 70.07 11 *eP* **P 12 43 34.5 +0.2**
comp=Z,108nm,1.3s
INK Inuvik 70.07 11 *eP* **P 12 43 34.5 +0.2**
INK pmax pmax
comp=Z,107nm,1.3s
LSZ Lusaka 70.13 229 *eP* **P 12 43 35.4 -0.1**
comp=Z,49nm,1.3s
LSZ Lusaka 70.13 229 *eP* **P 12 43 35.4 -0.1**
LSZ pmax pmax
comp=Z,49nm,1.3s
MDM Murphy Dome 70.18 18 *eP* **P 12 43 35.0 -0.1**
comp=Z,102nm,1.6s
BPAW Bear Paw Mtn. 70.20 20 *eP* **P 12 43 34.7 -0.5**
comp=Z,36nm,1.2s
COLA College 70.34 18 *eP* **P 12 43 35.1 -0.9**
comp=Z,58nm,0.9s
COLA College 70.34 18 *eP* **P 12 43 35.1 -0.9**
COLA pmax pmax
comp=Z,58nm,0.9s
CAST Castle Rocks 70.46 21 *eP* **P 12 43 36.1 -0.7**
comp=Z,144nm,1.6s
BWN Browne 70.53 19 *eP* **P 12 43 37.1 -0.1**
comp=Z,71nm,1.0s
CCB Clear Creek Bu 70.55 18 *eP* **P 12 43 36.6 -0.7**
comp=Z,64nm,1.7s
WRH Wood River Hil 70.62 18 *eP* **P 12 43 36.9 -0.8**
comp=Z,15nm,1.0s
IL1 Eielson Array 70.66 18 *eP* **P 12 43 37.0 -1.0**
ILAR Eielson Array 70.66 18 P **P 12 43 37.1 -0.9**
comp=Z,19nm,0.8s,baz=320,slow=4.9,SNR=196
ILAR PP PP 12 46 06.1 -7.9
comp=Z,2.6nm,0.9s,baz=315,slow=5.8,SNR=4.0
ILAR LR LR 13 18 38.1
comp=Z,258nm,18.2s,baz=318,slow=39
ILB Eielson Array 70.66 18 *eP* **P 12 43 37.1 -0.9**
ILB *e*PP PP 12 46 06.1 -7.9
PMPS Porto Santo 70.80 297 *eP* **P 12 43 39.7 +0.4**
comp=Z,111nm,1.8s
PPLA Purkeypile 70.85 21 *eP* **P 12 43 39.3 -0.1**
comp=Z,107nm,1.5s
TRF Thorofare Moun 70.91 20 *eP* **P 12 43 39.1 -0.7**
comp=Z,8.4nm,0.8s
SVW2 Sparrevohn 71.29 23 *eP* **P 12 43 41.7 -0.1**
comp=Z,30nm,1.4s
RND Reindeer 71.32 19 *eP* **P 12 43 41.4 -0.7**
comp=Z,47nm,1.5s
RND Reindeer 71.32 19 *eP* **P 12 43 41.4 -0.7**
RND pmax pmax
comp=Z,47nm,1.5s
PMAR Madeira 71.39 297 *eP* **P 12 43 43.8 +0.6**
comp=Z,150nm,1.0s
PMOZ Porto Moniz, M 71.53 298 *eP* **P 12 43 46.3 +2.4**
comp=Z,108nm,1.8s
EGAK Eagle 71.92 15 *eP* **P 12 43 45.1 -0.5**
comp=Z,40nm,1.3s
DHY Denali Highway 71.97 19 *eP* **P 12 43 45.7 -0.4**
comp=Z,26nm,0.7s
SCRK Sand Creek 72.00 17 *eP* **P 12 43 46.1 -0.1**
comp=Z,48nm,1.1s
RIDG Independ'e Rid 72.01 18 *eP* **P 12 43 45.5 -0.8**
comp=Z,57nm,0.8s
DOT Dot Lake 72.27 17 *eP* **P 12 43 47.0 -0.7**
comp=Z,46nm,0.8s
SUA Susitna One 72.41 21 *eP* **P 12 43 48.2 -0.5**
comp=Z,36nm,1.1s
PAX Paxson 72.52 18 *eP* **P 12 43 48.8 -0.5**
comp=Z,70nm,1.2s
PAX Paxson 72.52 18 *eP* **P 12 43 48.8 -0.5**
PAX pmax pmax
comp=Z,70nm,1.2s
RSO Redoubt South 72.64 23 *eP* **P 12 43 50.6 +0.4**
KOWA Kowa 72.65 275 P **P 12 43 50.3 -0.4**
comp=Z,28nm,0.5s,baz=52,slow=6.8,SNR=93
GHO Glory Hole Cre 72.65 20 *eP* **P 12 43 49.6 -0.5**
comp=Z,80nm,1.4s
PMR Palmer 72.75 20 *eP* **P 12 43 50.0 -0.6**
comp=Z,36nm,1.0s
PMR Palmer 72.75 20 *eP* **P 12 43 50.0 -0.6**
PMR pmax pmax
comp=Z,36nm,1.0s
SML Sawmill 72.78 20 *eP* **P 12 43 50.5 -0.4**
comp=Z,67nm,0.8s
SML Sawmill 72.78 20 *eP* **P 12 43 50.5 -0.4**
SML pmax pmax
comp=Z,67nm,0.8s
DAWY Dawson 72.91 15 *eP* **P 12 43 51.1 -0.4**
comp=Z,35nm,1.0s
RC01 Rabbit Creek A 73.00 21 *eP* **P 12 43 51.8 -0.3**
comp=Z,57nm,1.0s
HARP HAARP 73.08 18 *eP* **P 12 43 53.2 +0.7**
comp=Z,184nm,1.0s
MBWA Marble Bar 73.52 137 *eP* **P 12 43 55.4 -0.2**
comp=Z,26nm,0.7s
KLU Klutina 73.67 19 *eP* **P 12 43 56.2 0.0**
comp=Z,58nm,1.4s
BRLK Bradley Lake 73.76 22 *eP* **P 12 43 55.7 -0.9**
comp=Z,49nm,1.1s
DIV Divide 74.02 19 *eP* **P 12 43 58.0 -0.2**
comp=Z,106nm,1.8s
FITZ Fitzroy Crossi 74.35 130 *eP* **P 12 44 00.5 -0.1**
comp=Z,19nm,0.8s
BMRM Bremner River 74.45 19 *eP* **P 12 44 00.7 0.0**
comp=Z,45nm,1.1s
EYAK Cordova Ski Ar 74.52 20 *eP* **P 12 44 00.7 -0.3**
comp=Z,26nm,0.8s
KDAK Kodiak Island 74.86 24 *eP* **P 12 44 03.0 0.0**
comp=Z,42nm,0.7s
KDAK Kodiak Island 74.86 24 *i P* **P 12 44 02.8 -0.2**
CRQM Cirque 75.00 18 *eP* **P 12 44 04.2 +0.2**
comp=Z,72nm,1.5s
TGL Tana Glacier 75.07 18 *eP* **P 12 44 04.6 +0.3**
comp=Z,24nm,1.0s
WHY Whitehorse 76.89 15 *eP* **P 12 44 14.1 -0.7**
comp=Z,13nm,0.8s
YKW3 Yellowknife Ar 77.67 5 *eP* **P 12 44 18.7 -0.2**
comp=Z,47nm,0.6s
YKA Yellowknife Ar 77.74 5 P **P 12 44 19.1 -0.1**
comp=Z,39nm,0.5s,baz=348,slow=5.7,SNR=665
YKA PP **PP 12 47 14.0 +0.1**
comp=Z,2.4nm,0.8s,baz=353,slow=8.1,SNR=4.0
YKA PKKPbc **PKKPbc 13 03 19.0 -1.8**
comp=Z,0.3nm,0.5s,baz=162,slow=2.2,SNR=6.4
YKA LR LR 13 23 40.9
comp=Z,23nm,18.3s,baz=354,slow=40
SKAG Skagway 77.91 15 *eP* **P 12 44 20.9 +0.7**
comp=Z,53nm,1.1s
DBIC Dimbokro 78.13 269 P **P 12 44 21.8 -0.4**
comp=Z,19nm,0.9s,baz=28,slow=6.8,SNR=16
DBIC LR LR 13 23 49.6
comp=Z,467nm,18.0s,baz=32,slow=39
DBIC Dimbokro 78.13 269 *eP* **P 12 44 21.8 -0.4**
comp=Z,34nm,1.3s
KIC Kosan Boka 78.24 268 *eP* **P 12 44 22.2 -0.6**
comp=Z,54nm,0.8s
TIC Toumodi 78.27 269 *eP* **P 12 44 22.4 -0.6**
LIC Lamto 78.54 269 *eP* **P 12 44 23.8 -0.7**
comp=Z,67nm,1.0s
JIS Juneau Island 79.19 15 *eP* **P 12 44 28.1 +0.8**
comp=Z,21nm,1.0s
TSUM Tsumeb 79.55 234 *eP* **P 12 44 30.2 +0.2**
comp=Z,27nm,1.4s
DLBC Dease Lake 79.87 13 *eP* **P 12 44 31.5 +0.3**
comp=Z,27nm,1.1s
SCHQ Schefferville 80.28 339 P **P 12 44 32.8 -0.6**
comp=Z,10nm,0.8s,baz=48,slow=3.7,SNR=4.9
SCHQ LR LR 13 19 29.1
comp=Z,242nm,21.8s,baz=65,slow=35
SCHQ Schefferville 80.28 339 *eP* **P 12 44 32.4 -1.0**
comp=Z,19nm,1.1s
WR1 Warramunga Arr 81.05 125 *eP* **P 12 44 37.6 -0.3**
comp=Z,79nm,0.6s
WRA Warramunga Arr 81.05 125 P **P 12 44 37.6 -0.3**
comp=Z,52nm,0.6s,baz=326,slow=5.0,SNR=608
WRA PKKPbc **PKKPbc 13 03 14.9 +0.8**
comp=Z,3.7nm,0.7s,baz=139,slow=2.1,SNR=39
WRAB Tennant Creek 81.05 125 *eP* **P 12 44 37.6 -0.3**
comp=Z,76nm,0.6s
WRAB Tennant Creek 81.05 125 *c iP* **P 12 44 37.6 -0.3**
WRAB pmax pmax
comp=Z,44nm,0.8s
WB2 Warramunga Arr 81.06 125 *eP* **P 12 44 36.9 -1.0**
comp=Z,83nm,0.6s
FCC Fort Churchill 81.38 354 *eP* **P 12 44 39.0 -0.1**
comp=Z,30nm,1.1s
FCC Fort Churchill 81.38 354 *eP* **P 12 44 39.0 -0.1**
FCC pmax pmax
comp=Z,30nm,1.1s
NWAO Narrogin (SRO) 82.17 145 P **P 12 44 42.9 -0.6**
comp=Z,11nm,0.6s,baz=204,slow=5.6,SNR=9.2
NWAO LR LR 13 24 21.9
comp=Z,80nm,19.0s,baz=170,slow=38
BOSA Boshof 82.42 223 P **P 12 44 44.8 -0.2**
comp=Z,12nm,0.8s,baz=32,slow=4.5,SNR=13
BOSA LR LR 13 22 23.9
comp=Z,106nm,19.7s,baz=28,slow=36
BOSA Boshof 82.42 223 *eP* **P 12 44 44.8 -0.2**
comp=Z,102nm,1.9s
PMG Port Moresby 82.42 109 P **P 12 44 45.4 +0.2**
comp=Z,21nm,0.9s,baz=349,slow=11,SNR=5.0
PMG Port Moresby 82.42 109 *ceP* **P 12 44 45.5 +0.2**
PMG pmax pmax
comp=Z,86nm,0.9s

COEN	Coen	82.67	115	eP	P	12 44 46.6	+0.1
	comp=Z,32nm,0.8s						
AS31	Alice Springs	83.55	128	eP	P	12 44 50.4	-0.5
	comp=Z,16nm,0.6s						
ASAR	Alice Springs	83.55	128	P	P	12 44 50.4	-0.6
	comp=Z,45nm,0.6s,baz=315,slow=5.0,SNR=871						
ASAR				PKiKP	PKiKP	12 50 06.8	-1.2
	comp=Z,0.5nm,0.5s,baz=335,slow=1.3,SNR=8.0						
ASAR				PKKPbc	PKKPbc	13 03 08.9	+0.4
	comp=Z,1.2nm,0.6s,baz=120,slow=2.3,SNR=18						
ASAR				LR	LR	13 27 12.1	
	comp=Z,104nm,18.7s,baz=318,slow=39						
AS01	Alice Springs	83.58	128	eP	P	12 44 50.3	-0.7
FORT	Forrest	85.67	137	eP	P	12 45 01.0	-0.4
	comp=Z,130nm,0.6s						
FFC	Flin Flon	85.80	358	eP	P	12 45 01.6	-0.3
	comp=Z,37nm,0.8s						
FFC	Flin Flon	85.80	358	eP	P	12 45 01.6	-0.3
FFC				pmax	pmax		
	comp=Z,37nm,0.8s						
SUR	Sutherland	87.73	224	eP	P	12 45 12.8	+1.2
	comp=Z,48nm,1.1s						
PQI	Presque Isle	87.85	336	eP	P	12 45 12.3	+0.3
	comp=Z,37nm,1.0s						
LLLB	Lillooet	88.72	11	eP	P	12 45 16.5	+0.3
	comp=Z,16nm,1.0s						
CTAO	Charters Tower	89.01	117	eP	P	12 45 18.0	+0.2
	comp=Z,25nm,0.7s						
CTAO	Charters Tower	89.01	117	eP	P	12 45 18.0	+0.2
CTAO				pmax	pmax		
	comp=Z,25nm,0.7s						
PKME	Peaks-Kenny Pk	89.50	336	eP	P	12 45 20.7	+0.9
ULM	Lac du Bonnet	89.97	354	P	P	12 45 21.1	-0.8
	comp=Z,15nm,0.8s,baz=357,slow=5.5,SNR=37						
ULM				LR	LR	13 29 06.6	
	comp=Z,285nm,20.9s,baz=12,slow=38						
ULM	Lac du Bonnet	89.97	354	eP	P	12 45 21.1	-0.8
	comp=Z,19nm,0.8s						
TRQ	Mont Tremblant	90.17	340	eP	P	12 45 23.6	+0.5
A04D	Lummi Island	90.43	12	P	P	12 45 24.2	+0.2
	baz=346						
B05A	Bryant	90.97	11	P	P	12 45 26.5	-0.1
	baz=347,SNR=5.9						
WALA	Waterton Lakes	91.14	6	eP	P	12 45 27.4	-0.2
	comp=Z,21nm,1.0s						
LBNH	Lisbon	91.24	337	P	P	12 45 28.1	+0.2
	baz=25						
A33A	Warroad	91.24	354	P	P	12 45 27.2	-0.6
	baz=7.2,SNR=8.2						
B08A	Colville Reser	91.27	10	eP	P	12 45 28.0	0.0
	comp=Z,34nm,1.4s						
A32A	Rocking H Ranc	91.35	355	P	P	12 45 27.8	-0.5
	baz=6.4						
C40A	Isle Royale Na	91.55	350	P	P	12 45 28.8	-0.5
	baz=12,SNR=29						
BBOO	Buckleboo	91.61	133	eP	P	12 45 29.0	-0.6
	comp=Z,18nm,0.7s						
B34A	Aery, Baudette	91.62	353	P	P	12 45 29.0	-0.6
	baz=7.8,SNR=6.4						
NEW	Newport	91.62	8	P	P	12 45 29.6	-0.1
	baz=351,SNR=10						
NEW	Newport	91.62	8	eP	P	12 45 29.6	-0.1
	comp=Z,13nm,0.9s						
NEW	Newport	91.62	8	eP	P	12 45 29.6	-0.1
NEW				pmax	pmax		
	comp=Z,13nm,0.9s						
LONY	Lake Ozonia	91.66	339	P	P	12 45 30.0	+0.1
	baz=23,SNR=5.5						
LONY	Lake Ozonia	91.66	339	eP	P	12 45 30.2	+0.3
	comp=Z,27nm,1.3s						
B35A	Bob, Littlefor	91.66	353	P	P	12 45 29.0	-0.8
	baz=8.5,SNR=6.4						
C39A	Grand Marais	91.78	350	P	P	12 45 29.2	-1.2
	baz=11,SNR=5.1						
EYMN	Ely	91.83	351	P	P	12 45 30.2	-0.4
	baz=10,SNR=20						
EYMN	Ely	91.83	351	eP	P	12 45 30.4	-0.2
	comp=Z,25nm,0.8s						
B32A	Ashes, Strandq	91.87	355	P	P	12 45 30.1	-0.7
	baz=6.3						
AGMN	Agassiz Nation	91.91	354	P	P	12 45 30.4	-0.6
	baz=6.9,SNR=14						
AGMN	Agassiz Nation	91.91	354	eP	P	12 45 30.7	-0.3
	comp=Z,16nm,0.8s						
B31A	Greenbush Farm	91.92	355	P	P	12 45 30.4	-0.6
	baz=5.5						
B33A	Robert and Kas	91.92	354	P	P	12 45 30.5	-0.6
	baz=7.1						
C09A	Chrisman Ranch	91.95	9	eP	P	12 45 31.7	+0.5
	comp=Z,24nm,1.1s						
C38A	Sawbill Land.	92.03	351	P	P	12 45 30.6	-0.9
	baz=10,SNR=7.3						
DGMT	Dagmar	92.10	360	P	P	12 45 32.0	+0.1
	baz=0.5						
DGMT	Dagmar	92.10	360	eP	P	12 45 32.9	+1.0
	comp=Z,42nm,1.1s						
C37A	Embarrass	92.12	352	P	P	12 45 31.3	-0.7
	baz=9.7,SNR=5.5						
C36A	Pine Crest Far	92.17	352	P	P	12 45 31.4	-0.8
	baz=9.2,SNR=5.5						
LTY	Liberty	92.17	11	eP	P	12 45 31.9	-0.3
	comp=Z,4.8nm,0.8s						
D41A	Chassel	92.31	349	P	P	12 45 32.3	-0.5
	baz=12,SNR=5.9						
E44A	Grand Marais A	92.31	347	P	P	12 45 32.6	-0.3
	baz=14						
C35A	Jirik Farms, M	92.34	353	P	P	12 45 32.1	-0.9
	baz=8.3						
JTMT	Jette	92.42	6	eP	P	12 45 33.4	-0.2
	comp=Z,21nm,1.2s						
EGMT	Eagleton	92.44	3	P	P	12 45 33.1	-0.4
	baz=356						
EGMT	Eagleton	92.44	3	eP	P	12 45 33.3	-0.2
	comp=Z,16nm,0.9s						
E45A	Wooded Hills,	92.44	347	P	P	12 45 33.1	-0.3
	baz=15						
C33A	Trail	92.44	354	P	P	12 45 33.0	-0.5
	baz=6.9						
C34A	RKJ Ranch, Bem	92.48	353	P	P	12 45 33.1	-0.5
	baz=7.6						
LON	Longmire	92.49	12	eP	P	12 45 33.8	0.0
	comp=Z,5.8nm,0.8s						
LON	Longmire	92.49	12	eP	P	12 45 33.8	0.0
LON				pmax	pmax		
	comp=Z,6.0nm,0.8s						
C31A	Landman Farms,	92.55	355	P	P	12 45 33.2	-0.8
	baz=5.4,SNR=7.2						
D08A	Wollman Farm,	92.60	10	eP	P	12 45 32.9	-1.3
	comp=Z,7.7nm,0.8s						
MDND	Maddock	92.60	356	P	P	12 45 33.9	-0.3
	baz=4.0						
HRV	Adam Dziewonsk	92.70	336	P	P	12 45 34.5	-0.2
	baz=25						
D37A	Cotton	92.71	352	P	P	12 45 34.0	-0.7
	baz=9.5						
E43A	Lone Tree Farm	92.73	348	P	P	12 45 34.2	-0.6
	baz=14						
D36A	Goodland	92.77	352	P	P	12 45 34.1	-0.9
	baz=8.9,SNR=9.3						
E42A	Champion	92.82	348	P	P	12 45 34.8	-0.5
	baz=13,SNR=7.5						
F46A	Macinaw City C	92.92	346	P	P	12 45 35.1	-0.6
	baz=15						
E41A	Kenton	92.95	349	P	P	12 45 35.1	-0.8
	baz=12,SNR=8.9						
D35A	Remer	92.96	353	P	P	12 45 34.9	-0.9
	baz=8.2						
F44A	Big Bay de Noc	93.02	347	P	P	12 45 35.7	-0.5
	baz=14						
D33A	AnnSam, Waubun	93.06	354	P	P	12 45 35.6	-0.7
	baz=6.9,SNR=5.5						
D34A	Park Rapids	93.06	353	P	P	12 45 35.8	-0.6
	baz=7.4,SNR=12						
E40A	Wakefield	93.10	350	P	P	12 45 36.5	-0.1
	baz=11,SNR=18						
E08A	Dider Farm, El	93.14	10	eP	P	12 45 36.9	+0.3
	comp=Z,8.8nm,0.9s						
F45A	CMU Biological	93.15	347	P	P	12 45 36.3	-0.4
	baz=15						
E38A	The Farm, Brul	93.15	351	P	P	12 45 35.9	-0.9
	baz=10,SNR=10						
E09A	Wood Farm, Sta	93.23	9	eP	P	12 45 37.2	+0.1
	comp=Z,13nm,0.9s						
E09A				eS	S	12 56 47.2	+5.0
E39A	Mellen	93.25	350	P	P	12 45 36.7	-0.5
	baz=11,SNR=20						
F43A	Flat Rock, Esc	93.29	348	P	P	12 45 37.1	-0.2
	baz=14,SNR=7.7						
COWI	Conover	93.33	349	eP	P	12 45 37.2	-0.4
	comp=Z,13nm,0.8s						
MSO	Missoula	93.36	6	P	P	12 45 37.2	-0.6
	baz=353						
MSO	Missoula	93.36	6	eP	P	12 45 37.4	-0.4
	comp=Z,14nm,1.5s						
E36A	McGregor	93.44	352	P	P	12 45 37.6	-0.5
	baz=8.9,SNR=14						
E35A	Pequot Lakes	93.51	353	P	P	12 45 37.9	-0.5
	baz=8.0,SNR=6.5						
E34A	Wadena	93.63	353	P	P	12 45 38.5	-0.4
	baz=7.4						
HRY	Holter Researc	93.63	5	eP	P	12 45 39.0	-0.1
F40A	Park Falls	93.64	350	P	P	12 45 38.3	-0.8
	baz=11,SNR=7.8						
F41A	Three Lakes	93.68	349	P	P	12 45 38.6	-0.6
	baz=12,SNR=13						
E33A	Westby DABS, E	93.71	354	P	P	12 45 39.0	-0.3
	baz=6.8,SNR=5.1						
G03D	McMinnville, O	93.75	13	P	P	12 45 39.6	+0.1
	baz=346						
F39A	Loretta	93.75	350	P	P	12 45 39.1	-0.4
	baz=11,SNR=16						
E31A	Nome	93.79	355	P	P	12 45 39.2	-0.5
	baz=5.3,SNR=7.7						
F38A	Pierce - Schro	93.83	351	P	P	12 45 39.8	-0.1
	baz=9.9,SNR=17						
LAO	LASA Array	93.87	1	P	P	12 45 40.9	+0.7
	baz=359						
LAO	LASA Array	93.87	1	eP	P	12 45 41.3	+1.2
	comp=Z,23nm,0.9s						
F10A	Beach Ranch, E	93.87	9	eP	P	12 45 40.1	-0.2
	comp=Z,9.0nm,0.8s						
G43A	Wallace	93.93	348	P	P	12 45 40.0	-0.4
	baz=13,SNR=7.0						
G43A	Wallace	93.93	348	eP	P	12 45 40.2	-0.1
	comp=Z,23nm,0.8s						
G42A	Mountain	94.06	348	P	P	12 45 40.6	-0.4
	baz=13						
G42A	Mountain	94.06	348	eP	P	12 45 40.6	-0.4
	comp=Z,11nm,0.8s						
F36A	Milaca	94.11	352	P	P	12 45 40.4	-0.8
	baz=8.7,SNR=11						
F37A	Hinrichs Farm,	94.15	351	P	P	12 45 41.1	-0.3
	baz=9.3						
STKA	Stephens Creek	94.17	129	P	P	12 45 40.7	-0.7
	comp=Z,5.8nm,0.6s,baz=316,slow=4.4,SNR=19						
STKA				LR	LR	13 33 20.4	
	comp=Z,110nm,18.5s,baz=286,slow=39						
F35A	Swanville	94.22	353	P	P	12 45 40.8	-0.9
	baz=7.9						
G40A	Rib Lake	94.29	350	P	P	12 45 41.7	-0.3
	baz=11,SNR=12						
F34A	Alexandria	94.35	353	P	P	12 45 41.4	-0.9
	baz=7.3						
F33A	5 Mile Ranch,	94.39	354	P	P	12 45 42.2	-0.3
	baz=6.5,SNR=12						
G39A	Holcombe	94.40	350	P	P	12 45 41.9	-0.6
	baz=10,SNR=9.8						
LRM	Limekiln Ridge	94.47	5	eP	P	12 45 42.9	-0.2
F31A	Hecla	94.51	355	P	P	12 45 42.1	-0.9
	baz=5.0						
G38A	Ridgeland	94.61	351	P	P	12 45 42.8	-0.7
	baz=9.9,SNR=7.5						
SPMN	Marine on St.	94.66	352	P	P	12 45 43.4	-0.3
	baz=9.2						
SPMN	Marine on St.	94.66	352	eP	P	12 45 43.7	0.0
	comp=Z,15nm,0.6s						
GCMT	Greycliff	94.67	3	eP	P	12 45 44.3	+0.4
H43A	Windswept, Lux	94.71	348	P	P	12 45 43.4	-0.5
	baz=13						
BOZ	Bozeman (W)	94.75	5	P	P	12 45 44.3	-0.1
	baz=355,SNR=18						
BOZ	Bozeman (W)	94.75	5	eP	P	12 45 44.2	-0.1
	comp=Z,7.7nm,0.9s						
BOZ	Bozeman (W)	94.75	5	eP	P	12 45 44.2	-0.1
BOZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
G36A	St. Michael	94.76	352	P	P	12 45 43.8	-0.4
	baz=8.5						
PAL	Palisades	94.79	337	P	P	12 45 43.9	-0.5
	baz=23						
H42A	Shiocton	94.79	348	P	P	12 45 43.9	-0.4
	baz=12						
G35A	Watkins	94.84	353	P	P	12 45 44.1	-0.5
	baz=7.9						
H41A	Junction City	94.85	349	P	P	12 45 44.1	-0.5
	baz=12						
H41A	Junction City	94.85	349	eP	P	12 45 44.4	-0.2
	comp=Z,12nm,1.0s						
I05D	Terrebonne, OR	94.92	12	P	P	12 45 44.6	-0.3
	baz=347						
DLMT	Dillon	94.92	6	eP	P	12 45 44.9	-0.2
	comp=Z,7.2nm,0.8s						
G34A	Benson	94.93	354	P	P	12 45 44.4	-0.5
	baz=7.1						
H40A	Chili	94.95	350	P	P	12 45 44.9	-0.2
	baz=11,SNR=11						
BMO	Blue Mountains	94.97	9	eP	P	12 45 45.0	-0.3
	comp=Z,14nm,1.9s						
BMO	Blue Mountains	94.97	9	eP	P	12 45 45.0	-0.3
BMO				pmax	pmax		
	comp=Z,14nm,1.9s						
H39A	Augusta	95.02	350	P	P	12 45 45.0	-0.3
	baz=10,SNR=5.7						
G33A	Ortonville	95.04	354	P	P	12 45 44.7	-0.8
	baz=6.4						
G32A	Webster	95.06	355	P	P	12 45 45.0	-0.6
	baz=5.6						
G31A	Conde	95.14	355	P	P	12 45 45.4	-0.5
	baz=5.1						
H38A	Maiden Rock	95.14	351	P	P	12 45 45.6	-0.4
	baz=9.6						
I03D	Drain, OR	95.20	13	P	P	12 45 46.6	+0.4
	baz=346						
H37A	Dierke Farm, C	95.31	352	P	P	12 45 46.8	+0.1
	baz=9.2						
I43A	Langenfeld Bro	95.34	348	P	P	12 45 46.4	-0.4
	baz=13						
RLMT	Red Lodge	95.35	3	P	P	12 45 47.2	+0.1
	baz=357,SNR=11						
RLMT	Red Lodge	95.35	3	eP	P	12 45 47.4	+0.3
	comp=Z,17nm,1.3s						
H35A	Sunnyside Ranc	95.39	353	P	P	12 45 47.2	+0.1
	baz=7.7,SNR=5.5						
H36A	Jessenland, He	95.42	352	P	P	12 45 47.2	0.0
	baz=8.4						
MCMT	McKenzie Canyo	95.43	6	eP	P	12 45 47.2	-0.4
I42A	Draeger Farm,	95.45	349	P	P	12 45 47.0	-0.3
	baz=12						
I42A	Draeger Farm,	95.45	349	eP	P	12 45 47.3	0.0
	comp=Z,13nm,0.8s						
H34A	Spellman Lake,	95.51	354	P	P	12 45 47.5	-0.1
	baz=7.0						
H33A	Prehn Over Nor	95.58	354	P	P	12 45 47.5	-0.5
	baz=6.2						
YHH	Holmes Hill	95.61	4	eP	P	12 45 48.4	0.0
	comp=Z,6.8nm,1.4s						
I40A	Norwalk	95.70	350	P	P	12 45 48.2	-0.3
	baz=11						
I38A	Scanlan Farm,	95.78	351	P	P	12 45 48.5	-0.3
	baz=9.6						
H32A	Carlson Farm,	95.81	355	P	P	12 45 48.5	-0.5
	baz=5.7,SNR=21						
I39A	Houston	95.86	350	P	P	12 45 48.4	-0.8
	baz=10						
J04D	Umpqua Nationa	95.86	13	P	P	12 45 49.0	-0.5
	baz=347						
J43A	Natural Harves	95.88	348	P	P	12 45 48.5	-0.7
	baz=13						
M54A	Oil Creek Stat	95.89	341	P	P	12 45 48.8	-0.6
	baz=19						
I37A	Lemond, Waseca	95.92	352	P	P	12 45 49.4	-0.1
	baz=8.8						
J05D	Fort Rock, OR	95.96	12	P	P	12 45 49.6	-0.3
	baz=347						
SUSD	Miller	95.96	356	P	P	12 45 49.6	-0.1
	baz=4.5						
I36A	Fitzsimmons Fa	95.99	352	P	P	12 45 49.8	0.0
	baz=8.3						
H17A	Grant Village	96.01	4	P	P	12 45 51.8	+1.6
	baz=356						
J42A	Columbus	96.05	349	P	P	12 45 49.6	-0.5
	baz=12						
YPP	Pitchstone Pla	96.12	4	eP	P	12 45 52.7	+1.9
	comp=Z,9.3nm,1.3s						
J41A	Loganville	96.13	349	P	P	12 45 49.9	-0.5
	baz=11,SNR=6.1						
J40A	Soldiers Grove	96.20	350	P	P	12 45 50.0	-0.8
	baz=11						
I33A	Coleman	96.21	354	P	P	12 45 50.4	-0.4
	baz=6.2						
J08A	Circle Bar Ran	96.29	10	eP	P	12 45 51.6	+0.3
	comp=Z,3.4nm,0.9s						
J39A	Decorah	96.39	350	P	P	12 45 50.8	-0.8
	baz=10,SNR=5.5						
RSSD	Black Hills	96.45	359	P	P	12 45 52.2	0.0
	baz=0.6						
RSSD	Black Hills	96.45	359	eP	P	12 45 52.6	+0.4
	comp=Z,8.4nm,0.8s						
RSSD	Black Hills	96.45	359	eP	P	12 45 52.6	+0.4
RSSD				pmax	pmax		
	comp=Z,8.0nm,0.8s						
IMW	Indian Meadow	96.49	4	eP	P	12 45 53.2	+0.7
	comp=Z,8.6nm,1.1s						
N54A	Moraine State	96.49	341	P	P	12 45 51.4	-0.7
	baz=19						
J38A	Wedel Dairy, R	96.50	351	P	P	12 45 51.3	-0.9
	baz=9.5						
ECSD	EROS Data Cent	96.51	354	P	P	12 45 51.7	-0.5
	baz=6.3,SNR=12						
ECSD	EROS Data Cent	96.51	354	eP	P	12 45 52.1	-0.1
	comp=Z,11nm,0.8s						
HLID	Hailey	96.55	7	P	P	12 45 52.2	-0.4
	baz=353						
HLID	Hailey	96.55	7	eP	P	12 45 52.5	-0.1
	comp=Z,1.5nm,0.8s						
MFID	Camas Ranch	96.56	8	eP	P	12 45 52.6	+0.1
	comp=Z,3.2nm,0.8s						
K42A	Prairie Point,	96.61	349	P	P	12 45 51.8	-0.8
	baz=12						
JFWS	Jewell Farm	96.61	349	P	P	12 45 52.0	-0.6
	baz=11,SNR=5.2						
JFWS	Jewell Farm	96.61	349	eP	P	12 45 52.4	-0.2
	comp=Z,22nm,0.8s						
JFWS	Jewell Farm	96.61	349	eP	P	12 45 52.4	-0.2
JFWS				pmax	pmax		
	comp=Z,22nm,0.8s						
J37A	Redenius Farm,	96.64	352	P	P	12 45 52.5	-0.3
	baz=8.7,SNR=6.6						
MOOW	Moose Ponds	96.65	4	eP	P	12 45 53.8	+0.7
	comp=Z,2.9nm,1.0s						
J36A	Seneca 1, Swea	96.70	352	P	P	12 45 52.9	-0.1
	baz=8.1,SNR=12						
FXWY	Fox Creek	96.74	5	eP	P	12 45 54.4	+0.8
	comp=Z,15nm,1.9s						
LOHW	Long Hollow	96.79	4	eP	P	12 45 54.4	+0.7
	comp=Z,3.3nm,0.9s						
K41A	Shullsburg	96.92	349	P	P	12 45 53.6	-0.4
	baz=11						
K40A	Colesburg	96.94	350	P	P	12 45 53.4	-0.7
	baz=10						
REDW	Red Top Meadow	97.03	4	eP	Pdif	12 45 55.4	+0.5
	comp=Z,3.7nm,1.0s						
K39A	Oelwein	97.03	350	P	P	12 45 53.5	-1.0
	baz=10.0,SNR=5.9						
WVOR	Wild Horse Val	97.18	10	eP	P	12 45 55.4	0.0
	comp=Z,3.8nm,0.9s						
WVOR	Wild Horse Val	97.18	10	eP	P	12 45 55.4	0.0
WVOR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
K37A	Belmond	97.18	352	P	P	12 45 54.7	-0.5
	baz=8.6						
K38A	Parkersburg	97.20	351	P	P	12 45 54.6	-0.8
	baz=9.3						
YBH	Yreka Blue Hor	97.22	13	LR	LR	13 33 22.6	
	comp=Z,166nm,21.9s,baz=342,slow=38						
K36A	Gilmore City	97.40	352	P	P	12 45 56.0	-0.2
	baz=8.0						
L42A	Oliver, Polo	97.41	349	P	P	12 45 55.6	-0.7
	baz=12						
L41A	Preston	97.47	349	P	P	12 45 55.8	-0.8
	baz=11						
M02C	Callahan	97.52	14	P	P	12 45 56.6	-0.3
	baz=346						
L40A	Anamosa	97.58	350	P	P	12 45 56.4	-0.7
	baz=10						
AHID	Auburn Hatcher	97.61	5	eP	P	12 45 57.2	-0.2
	comp=Z,3.7nm,0.7s						
L39A	Vinton	97.62	350	P	P	12 45 56.4	-0.8
	baz=9.9						
MCWV	Mont Chateau	97.69	341	P	P	12 45 57.2	-0.4
	baz=19						
BW06	Boulder Array	97.69	4	P	P	12 45 57.5	-0.4
	baz=356						
PD31	Pinedale Array	97.69	4	eP	P	12 45 57.5	-0.3
PDAR	Pinedale Array	97.69	4	P	P	12 45 57.0	-0.8
	comp=Z,1.1nm,0.5s,baz=40,slow=2.5,SNR=5.1						
PDAR				LR	LR	13 35 29.8	
	comp=Z,161nm,18.4s,baz=16,slow=39						
PDAR	Pinedale Array	97.69	4	eP	P	12 45 57.4	-0.5
L38A	Oak Wood Farm,	97.72	351	P	P	12 45 57.1	-0.5
	baz=9.2						
L37A	Phoenix Point,	97.83	352	P	P	12 45 58.0	-0.2
	baz=8.6						
M43A	Waltham Townsh	97.86	348	P	P	12 45 58.1	-0.2
	baz=12						
SCIA	State Center	97.98	351	P	P	12 45 58.3	-0.5
	baz=9.0						
SCIA	State Center	97.98	351	eP	Pdif	12 45 59.0	+0.1
	comp=Z,12nm,0.6s						
N46A	Monticello	98.00	346	P	P	12 45 58.6	-0.3
	baz=14						
M39A	Webster	98.28	350	P	P	12 45 59.5	-0.7
	baz=9.8						
N44A	Piper City	98.35	347	P	P	12 46 00.0	-0.5
	baz=13						
M38A	Pleasantville	98.47	351	P	P	12 46 00.9	-0.1
	baz=9.0						
HVU	Hansel Valley	98.47	6	eP	P	12 46 01.2	0.0
	comp=Z,5.8nm,1.1s						
HVU	Hansel Valley	98.47	6	eP	P	12 46 01.2	0.0
HVU				pmax	pmax		
	comp=Z,6.0nm,1.1s						
M37A	Trindle Farm,	98.58	352	P	P	12 46 01.5	0.0
	baz=8.3						
M36A	Felix, Anita	98.61	352	Pdiff	P	12 46 01.2	-0.5
	baz=7.8						
HWUT	Hardware Ranch	98.73	5	eP	Pdif	12 46 03.0	+0.6
	comp=Z,7.8nm,0.8s						
N40A	Mertquake, Sal	98.79	350	Pdiff	P	12 46 02.2	-0.3
	baz=10						
N39A	Derby Farms, D	98.91	351	Pdiff	P	12 46 02.6	-0.4
	baz=9.5						
SPUT	South Promonto	98.96	6	eP	Pdif	12 46 04.0	+0.5
	comp=Z,6.9nm,1.4s						
O44A	Mansfield	99.03	347	Pdiff	Pdif	12 46 03.4	-0.2
	baz=13						
N37A	Lee Faris, Mou	99.23	352	Pdiff	Pdif	12 46 04.3	-0.2
	baz=8.2						
N36A	Muff Farm, Cla	99.25	352	Pdiff	Pdif	12 46 04.7	+0.1
	baz=7.7						
O41A	Passleys Farm,	99.44	349	Pdiff	Pdif	12 46 04.9	-0.6
	baz=11						
O40A	La Belle	99.58	350	Pdiff	Pdif	12 46 05.4	-0.6
	baz=10.0						
P43A	Skaggs, Pawnee	99.70	348	Pdiff	Pdif	12 46 06.1	-0.5
	baz=12						
O38A	Galt	99.78	351	Pdiff	Pdif	12 46 06.6	-0.3
	baz=8.8						
O37A	Wolven Farm, M	99.81	352	Pdiff	Pdif	12 46 06.6	-0.5
	baz=8.3						
P42A	Winchester	99.88	349	Pdiff	Pdif	12 46 07.1	-0.2
	baz=11						
DUG	Dugway, Tooele	100.04	6	ePdif	Pdif	12 46 07.7	-0.6
DUG	Dugway, Tooele	100.04	6	eP	Pdif	12 46 07.7	-0.6
P40A	Paris	100.18	350	Pdiff	Pdif	12 46 08.1	-0.6
	baz=9.9						
O20A	White River Ci	100.37	3	Pdiff	Pdif	12 46 08.6	-1.2
	baz=357						
Q41A	Truxton	100.63	349

baz=8.5
S41A Jillco Farms, 102.05 349 Pdiff **Pdif** **12 46 16.6 -0.5**
baz=10
S40A Lebanon 102.14 350 Pdiff **Pdif** **12 46 17.1 -0.4**
baz=9.6
S39A Bolivar 102.16 351 Pdiff **Pdif** **12 46 17.1 -0.5**
baz=9.0
V51A Loudon 102.43 343 Pdiff **Pdif** **12 46 18.0 -0.8**
baz=16
T42A Van Buren 102.50 349 Pdiff **Pdif** **12 46 18.6 -0.5**
baz=11
V50A Pikevile 102.72 344 Pdiff **Pdif** **12 46 19.5 -0.6**
baz=15
U39A Green Forest 103.47 351 Pdiff **Pdif** **12 46 22.8 -0.6**
baz=8.9
V41A Mountainview 103.88 349 Pdiff **Pdif** **12 46 24.8 -0.5**
baz=10.0
TXAR Lajitas Array 111.20 359 PKiKP **PKiKP** **12 50 55.7 -1.1**
comp=Z,0.4nm,0.5s,baz=35,slow=3.3,SNR=3.9
TXAR PKKPbc **PKKPbc** **13 01 52.2 +0.3**
comp=Z,0.4nm,0.5s,baz=157,slow=4.9,SNR=2.6
SDV Santo Domingo 122.14 319 PKP **PKPdf** **12 51 17.2 -1.0**
comp=Z,12nm,0.6s,baz=348,slow=3.1,SNR=19
SDV Santo Domingo 122.14 319 *e*P **PKPdf** **12 51 15.6 -2.5**
SNAA Sanae 123.67 202 PKP **PKPdf** **12 51 19.0 -0.2**
SNAA Sanae 123.67 202 PKP **PKPdf** **12 51 19.1 0.0**
comp=Z,3.2nm,0.9s,baz=183,slow=5.8,SNR=18
APG El Apazote 123.86 343 PKP **PKPdf** **12 51 20.5 -1.0**
comp=Z,4.5nm,0.5s,baz=356,slow=19,SNR=8.1
TGUH Tegucigalpa,Un 123.98 339 *e*PKPdf **PKPdf** **12 51 21.6 +0.2**
OCAC Ocana 124.02 321 *e*P **PKPdf** **12 51 20.2 -1.5**
MOTC Monteria, Cord 124.64 324 *e*P **PKPdf** **12 51 20.8 -1.9**
VNA1 Neumayer--Stat 124.89 204 PKP **PKPdf** **12 51 19.8 -1.6**
VNA3 Neumayer Olymp 125.53 203 PKP **PKPdf** **12 51 22.1 -0.6**
RUSC La Rusia 125.93 320 *e*PKPdf **PKPdf** **12 51 25.3 -0.5**
RUSC La Rusia 125.93 320 *e*P **PKPdf** **12 51 23.9 -1.9**
PTBC PUERTO BERRIO 126.04 322 *e*P **PKPdf** **12 51 24.9 -0.6**
BCIP Isla Barro Col 126.06 329 *e*PKPdf **PKPdf** **12 51 24.9 -0.5**
HELC Santa Helena 126.85 323 *e*PKPdf **PKPdf** **12 51 27.5 +0.1**
HELC Santa Helena 126.85 323 *e*P **PKPdf** **12 51 27.0 -0.5**
NORC Norcasia 127.09 321 *e*P **PKPdf** **12 51 23.1 -4.4**
CHIC Chingaza 127.34 320 *e*P **PKPdf** **12 51 27.8 -0.6**
ROSC El Rosal 127.45 320 PKP **PKPdf** **12 51 29.6 +1.0**
comp=Z,32nm,0.7s,baz=124,slow=8.4,SNR=16
ROSC El Rosal 127.45 320 *e*PKPdf **PKPdf** **12 51 29.5 +0.9**
ROSC El Rosal 127.45 320 *e*P **PKPdf** **12 51 27.9 -0.7**
GUYC Guyana, Colomb 127.63 322 *e*P **PKPdf** **12 51 28.7 -0.3**
VNDA Vanda 127.78 164 PKP **PKPdf** **12 51 26.6 -0.2**
comp=Z,2.6nm,1.0s,baz=277,slow=5.2,SNR=7.9
PRAC Prado 128.70 320 *e*PKPdf **PKPdf** **12 51 30.3 -0.3**
PRAC Prado 128.70 320 *e*P **PKPdf** **12 51 28.5 -2.1**
QSPA South Pole Qui 129.60 180 PKP **PKPdf** **12 51 30.1 -0.5**
comp=Z,5.8nm,0.7s,baz=229,slow=2.3,SNR=15
QSPA South Pole Qui 129.60 180 *e*PKPdf **PKPdf** **12 51 30.4 -0.2**
HORQ Saladito 129.74 322 *e*P **PKPdf** **12 51 32.5 -0.3**
SAML Samuel 131.88 298 *e*PKPdf **PKPdf** **12 51 36.3 -0.1**
OTAV Otavalo 133.44 322 *e*PKPdf **PKPdf** **12 51 39.3 -0.8**
OTAV Otavalo 133.44 322 *e*P **PKPdf** **12 51 38.9 -1.2**
CPUP Villa Florida 138.47 274 PKP **PKPdf** **12 51 47.7 -0.7**
comp=Z,5.2nm,0.7s,baz=28,slow=1.7,SNR=11
CPUP Villa Florida 138.47 274 *e*PKPdf **PKPdf** **12 51 47.6 -0.8**
LPAZ La Paz 140.45 296 PKP **PKPdf** **12 51 53.1 +0.1**
comp=Z,2.6nm,0.8s,baz=39,slow=6.2,SNR=7.6
MNMC Minye Minye 143.40 294 *e*PKPdf **PKPdf** **12 51 56.7 -1.1**
PMSA Palmer Station 145.72 210 PKPbc **PKPbc** **12 52 00.5 0.0**
comp=Z,18nm,0.5s,baz=143,slow=2.7,SNR=9.5
PB04 IPOC Station P 145.86 290 *e*PKPdf **PKPab** **12 52 02.8 -0.2**
CYA Choya 146.03 277 *e*P **PKPdf** **12 52 01.1 -0.7**
PB10 IPOC Station P 146.88 289 *e*PKPdf **PKPbc** **12 52 04.6 -0.7**
TRQA Tornquist 146.88 259 *e*PKPbc **PKPbc** **12 52 04.5 -0.3**
AGUA GUANDACOL 148.59 278 *e*P **PKPdf** **12 52 06.8 +0.6**
AMOG MOGNA 149.27 275 *e*P **PKPbc** **12 52 11.5 0.0**
RTLL Cerro Villicun 149.43 275 *e*P **PKPbc** **12 52 11.4 -0.5**
RTCV Cerro Valdivia 149.71 274 *e*P **PKPbc** **12 52 12.4 -0.1**
LCO Las Campanas 150.04 280 *e*PKPbc **PKPbc** **12 52 13.7 0.0**
ASAL Salagasta 150.25 273 *e*P **PKPbc** **12 52 14.2 +0.3**
RTLS Leoncito 150.27 274 *e*P **PKPbc** **12 52 14.3 +0.1**
AAGR Agrelo 150.44 272 *e*P **PKPbc** **12 52 14.7 +0.3**
AUSP Uspallata 150.52 274 *e*P **PKPbc** **12 52 14.9 +0.1**
ROC1 El Roble 152.08 273 *e*PKPbc **PKPbc** **12 52 17.9 -0.4**
ROC1 *e*PKPab **PKPab** **12 52 27.0 -1.0**
PLCA Paso Flores 153.95 257 PKPbc **PKPbc** **12 52 21.8 -0.2**
comp=Z,3.3nm,0.6s,baz=70,slow=2.9,SNR=6.1
PLCA PKPab **PKPab** **12 52 35.5 +0.1**
comp=Z,5.2nm,0.9s,baz=132,slow=2.7,SNR=3.5

MEX 01 12:35:21.6±0.3, 19°.56N×105°.87W, h27km±12km, MD3.5, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CJM	**Chamela**	**0.79**	**94**	*e*P	Pb	12 35 34.2	-2.4
CJM				*e*S	Sb	12 35 44.0	-2.9
PUVA	**Puert Vallarta**	**1.23**	**30**	*i* P	Pn	12 35 40.6	-2.5
PUVA				*i* S	Sn	12 35 55.5	-3.3
EZ5V		**2.14**	**92**	*i* P	Pn	12 35 53.8	-2.1
EZ5V				*e*S	Sn	12 36 18.4	-3.4
MMIG	**Aquila**	**2.70**	**117**	*e*P	Pn	12 36 01.4	-1.9

KRNET 01 12:39:08.9±0.1, 39°.81N×75°.15E, mb3.8, 18C-6D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**1.28**	**280**	⇑*i*P	Pg	12 39 33.2	-0.3
baz=80							
SFK				⇑*i*S	Sg	12 39 50.5	+0.4
baz=80							
NRN	**Naryn**	**1.75**	**21**	⇑*i*P	Pn	12 39 40.6	-0.2
baz=21							
NRN				⇑*i*S	Sb	12 40 04.5	-0.3
baz=21							
KZA	**Kyzart**	**2.27**	**2**	P	Pn	12 39 49.0	+1.0
SNR=12							
KZA	**Kyzart**	**2.27**	**2**	⇑*i*P	Pn	12 39 49.2	+1.1
baz=2.0							
KZA				⇑*i*S	Sb	12 40 18.6	-1.2
baz=2.0							
UCH	**Uchtor**	**2.47**	**349**	P	Pn	12 39 52.2	+1.4
SNR=6.5							
UCH	**Uchtor**	**2.47**	**349**	⇑*e*P	Pn	12 39 52.0	+1.2
baz=49							
UCH				⇑*i*S	Sn	12 40 22.8	+0.9
baz=49							
AML	**Almayashu**	**2.57**	**335**	P	Pg	12 39 57.4	-0.8
SNR=7.5							
AML	**Almayashu**	**2.57**	**335**	⇑*i*P	Pn	12 39 53.3	+1.1
baz=35							
AML				⇑*i*S	Sn	12 40 25.6	+1.3
baz=35							
ULHL	**Ulahol**	**2.58**	**18**	P	Pb	12 39 55.8	-0.3
SNR=15							
ULHL	**Ulahol**	**2.58**	**18**	⇑*i*P	Pn	12 39 52.8	+0.7
baz=18							
ULHL				⇑*i*S	Sn	12 40 25.1	+0.9
baz=18							
BOOM	**Boomskoye usch**	**2.75**	**12**	⇓*i*P	Pn	12 39 55.9	+1.5
baz=12							
BOOM				⇓*i*S	Sn	12 40 29.6	+1.2
baz=12							
KDJ	**Kajisay**	**2.79**	**33**	⇑*e*P	Pn	12 39 56.1	+1.2
baz=33							
KDJ				⇑*i*S	Sn	12 40 30.2	+0.8
baz=33							
TARG	**Taragay, Kyrgy**	**2.79**	**46**	⇓*e*P	Pn	12 39 56.0	+0.8
baz=45							
TARG				⇓*i*S	Sn	12 40 30.6	+0.9
baz=45							
KBK	**Karagaybulak**	**2.85**	**357**	⇑*e*P	Pn	12 39 57.5	+1.7
baz=57							
KBK				⇑*e*S	Sn	12 40 32.4	+1.4
baz=57							
AAK	**Ala-Archa**	**2.87**	**350**	⇓*e*P	Pn	12 39 57.5	+1.4
baz=50							
AAK				⇓*i*S	Sn	12 40 32.5	+1.0
baz=50							
TKM2	**Tokmak 2**	**3.13**	**6**	P	Pn	12 40 01.9	+2.2
SNR=7.3							
TKM2	**Tokmak 2**	**3.13**	**6**	⇑*i*P	Pn	12 40 01.0	+1.3
baz=6.0							
TKM2				⇑*i*S	Sn	12 40 38.7	+0.8
baz=6.0							

IDC ***01*** *13:09:33.2±1.6, 39°.54N×74°.93E, h0km, mb3.5/3, mb1 3.6/6, mb1mx3.2/71, mbtmp3.4/6, ML2.9/3, Error ellipse: s-maj=47.5km s-min=17.6km az=80.0*
KRNET ***01*** *13:09:38.8±0.1, 39°.91N×75°.12E, mb3.7*
SOME ***01*** *13:09:38.6, 39°.73N×75°.28E, h20km*
NNC ***01*** *13:09:39.2±1.1, 39°.82N×75°.10E, h0km, mb3.9, mpv3.6, Error ellipse: s-maj=9.8km s-min=3.2km az=157.0*
ISC 01 13:09:36.1±1.5, 39°.87N±0°.05×75°.26E±0°.03, h7km±10km, n56, σ1°.61/93, mb3.6/3, 31C-21D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**1.36**	**277**	⇑P	Pg	13 10 02.8	+0.7
18nm,0.3s							
SFK				⇓S	Sg	13 10 19.8	+0.1
197nm,0.3s							
SFK	**Sufi-Kurgan**	**1.36**	**277**	⇓*i*P	Pg	13 10 02.8	+0.7
baz=76							
SFK				⇓*i*S	Sg	13 10 19.7	0.0
baz=76							
NRN	**Naryn**	**1.66**	**20**	⇑*i*P	Pg	13 10 09.4	+1.4
baz=23							
NRN				⇑*i*S	Sg	13 10 32.5	+3.0
baz=23							
KZA	**Kyzart**	**2.21**	**360**	P	Pg	13 10 18.4	0.0
SNR=28							
KZA	**Kyzart**	**2.21**	**360**	⇑*i*P	Pg	13 10 18.3	-0.1
baz=3.0							
KZA				⇑*i*S	Sg	13 10 47.1	+0.1
baz=3.0							
ARSB	**Arslanbob**	**2.26**	**311**	⇑*i*P	Pg	13 10 18.5	-0.9
baz=12							
ARSB				⇑*i*S	Sg	13 10 47.0	-1.8
baz=12							
UCH	**Uchtor**	**2.42**	**347**	P	Pg	13 10 21.4	-1.2
SNR=63							
UCH	**Uchtor**	**2.42**	**347**	⇑*i*P	Pg	13 10 21.2	-1.3
baz=49							
UCH				⇑*i*S	Sg	13 10 51.6	-2.4
baz=49							
ULHL	**Ulahol**	**2.49**	**17**	P	Pg	13 10 22.1	-1.7
SNR=19							
ULHL	**Ulahol**	**2.49**	**17**	⇓*i*P	Pg	13 10 22.7	-1.1
baz=20							
ULHL				⇓*i*S	Sg	13 10 54.3	-1.8
baz=20							
AML	**Almayashu**	**2.55**	**333**	P	Pb	13 10 22.8	+0.3
SNR=43							
AML	**Almayashu**	**2.55**	**333**	⇓*i*P	Pb	13 10 22.7	+0.3
baz=35							
AML				⇓*i*S	Sb	13 10 54.4	+0.2
baz=35							
BOOM	**Boomskoye usch**	**2.67**	**11**	⇓*i*P	Pb	13 10 24.9	+0.6
baz=13							
BOOM				⇓*i*S	Sb	13 10 58.2	+0.8
baz=13							
TARG	**Taragay, Kyrgy**	**2.68**	**45**	⇑*e*P	Pg	13 10 26.2	-1.3
baz=47							
TARG				⇑*e*S	Sg	13 11 00.8	-1.5
baz=47							
KDJ	**Kajisay**	**2.69**	**32**	⇑*i*P	Pg	13 10 26.0	-1.6
baz=35							
KDJ				⇑*i*S	Sg	13 11 00.1	-2.3
baz=35							
DRK	**Karamyk**	**2.70**	**263**	⇑*i*P	Pb	13 10 24.1	-0.7
baz=62							
DRK				⇑*e*S	Sb	13 10 57.1	-1.1
baz=62							
KBK	**Karagaybulak**	**2.80**	**355**	P	Pb	13 10 27.2	+0.8
SNR=21							
KBK	**Karagaybulak**	**2.80**	**355**	⇑*i*P	Pb	13 10 25.8	-0.7
baz=57							
KBK				⇑*i*S	Sb	13 11 00.9	-0.1
baz=57							
AAK	**Ala-Archa**	**2.83**	**349**	Pn	Pb	13 10 27.3	+0.3
6.5nm,0.3s,baz=162,slow=9.6,SNR=83							
AAK				Lg	Lg	13 11 04.1	
8.2nm,0.3s,baz=313,slow=20,SNR=9.6							
AAK	**Ala-Archa**	**2.83**	**349**	⇑Pn	Pb	13 10 27.2	+0.2
36nm,0.6s							
AAK				⇓Lg	Lg	13 11 08.6	
71nm,0.8s							
AAK	**Ala-Archa**	**2.83**	**349**	P	Pb	13 10 27.3	+0.3
SNR=43							
AAK	**Ala-Archa**	**2.83**	**349**	⇑*i*P	Pb	13 10 26.4	-0.6
baz=50							
AAK				⇑*i*S	Sb	13 11 01.3	-0.6
baz=50							
EKS2	**Erkin-Say**	**3.01**	**339**	⇑*i*P	Pb	13 10 28.4	-1.6
baz=40							
EKS2				⇑*i*S	Sb	13 11 05.5	-1.5
baz=40							
TKM2	**Tokmak 2**	**3.06**	**5**	⇓Pn	Pb	13 10 30.5	-0.5
27nm,0.4s							
TKM2				⇑Sn	Sb	13 11 09.9	+1.2
37nm,0.5s							
TKM2				⇓Lg	Lg	13 11 17.2	
87nm,0.6s							
TKM2	**Tokmak 2**	**3.06**	**5**	⇑P	Pb	13 10 30.8	-0.2
SNR=125							
TKM2	**Tokmak 2**	**3.06**	**5**	⇓*i*P	Pb	13 10 30.3	-0.7
baz=7.0							
TKM2				⇓*i*S	Sb	13 11 07.5	-1.2
baz=7.0							
CHMS	**Chumysh**	**3.15**	**353**	P	Pb	13 10 31.7	-0.7
SNR=25							
KST	**Kastek**	**3.22**	**9**	*e*P	Pg	13 10 37.9	+0.2
34nm,0.3s							
KST				*e*S	Sg	13 11 20.8	+1.4
128nm,0.8s							
MRKS	**Merke**	**3.26**	**333**	*e*P	Pg	13 10 38.6	+0.2
36nm,0.5s							
MRKS				*e*S	Sg	13 11 22.2	+1.5
30nm,0.5s							
IZV	**Izvestkoviy**	**3.33**	**17**	*e*P	Pg	13 10 40.5	+0.7
23nm,0.4s							
IZV				*e*S	Sg	13 11 25.1	+2.2
102nm,0.6s							
MNAS	**Manas**	**3.34**	**322**	⇑Pg	Pg	13 10 39.4	-0.7
16nm,0.9s							
MNAS				⇑Lg	Lg	13 11 24.3	
43nm,1.1s							
MNAS	**Manas**	**3.34**	**322**	⇓*e*P	Pb	13 10 32.8	-2.9
baz=23							
MNAS				⇓*e*S	Sb	13 11 12.8	-3.9
baz=23							
MTBS	**Maitube**	**3.38**	**15**	*e*P	Pg	13 10 41.1	+0.4
15nm,0.4s							
MTBS				*e*S	Sg	13 11 26.5	+2.0
45nm,0.3s							
DGS	**Degeres**	**3.39**	**6**	*e*P	Pb	13 10 35.2	-1.4
54nm,0.4s							
DGS				*e*S	Sb	13 11 16.2	-1.9
46nm,0.4s							
USP	**Ospenovka**	**3.44**	**351**	P	Pb	13 10 35.7	-1.7
SNR=14							
USP	**Ospenovka**	**3.44**	**351**	⇑*i*P	Pb	13 10 34.9	-2.5
baz=52							
USP				⇑*i*S	Sb	13 11 16.3	-3.2
baz=52							
MDOK	**Medeo**	**3.56**	**22**	⇑Pn	Pb	13 10 36.9	-2.5
9.8nm,0.4s							
MDOK				⇑Lg	Lg	13 11 33.6	
88nm,0.7s							
MDOK	**Medeo**	**3.56**	**22**	*e*P	Pg	13 10 42.7	-1.5
11nm,0.3s							
MDOK				*e*S	Sg	13 11 29.5	-0.7
76nm,0.8s							
AAA	**Alma-Ata**	**3.56**	**20**	*e*P	Pg	13 10 45.0	+0.7
32nm,0.2s							
AAA				*e*S	Sg	13 11 32.6	+2.1
141nm,0.1s							
KOTS	**Kotyrbulak**	**3.64**	**22**	*e*P	Pg	13 10 45.6	-0.2
13nm,0.6s							
KOTS				*e*S	Sg	13 11 34.0	+1.0
132nm,0.5s							
SATY	**Saty**	**3.97**	**36**	*e*P	Pg	13 10 51.6	-0.5
38nm,0.3s							
SATY				*e*S	Sg	13 11 44.7	+1.1
45nm,0.6s							
CHKK	**Chushkaly**	**4.19**	**17**	*e*P	Pg	13 10 56.0	-0.3
16nm,0.5s							
CHKK				*e*S	Sg	13 11 51.4	+0.9
89nm,0.5s							
IUG	**Iuzhnay**	**4.56**	**302**	*e*P	Pg	13 11 03.4	-0.1
16nm,0.3s							
IUG				*e*S	Sg	13 12 03.7	+1.1
61nm,0.6s							
PDGK	**Podgornoye**	**4.69**	**41**	⇑Pn	Pn	13 10 51.8	+4.3
3.3nm,0.6s							
PDGK				⇓Pg	Pg	13 11 05.3	-0.7
18nm,1.0s							
PDGK				⇓Lg	Lg	13 12 10.1	
72nm,0.9s							
ARXS	**Arharly**	**4.74**	**23**	*e*P	Pg	13 11 06.7	-0.2
8.7nm,0.4s							
ARXS				*e*S	Sg	13 12 09.9	+1.5
38nm,0.4s							
KK31	**Karatay Array**	**4.81**	**314**	⇓Pn	Pn	13 10 52.3	+3.3
3.4nm,0.8s,baz=109,slow=13,SNR=8.5							
KK31				⇓Pg	Pg	13 11 05.0	-3.2
2.9nm,0.6s,baz=119,slow=16,SNR=4.4							
KK31				⇓Lg	Lg	13 12 09.5	
5.7nm,0.5s,baz=126,slow=28,SNR=7.1							
MNBS	**Baschi**	**4.82**	**28**	*e*P	Pg	13 11 06.5	-1.8
9.3nm,0.3s							
MNBS				*e*S	Sg	13 12 09.5	-1.2
30nm,0.5s							
KTMS	**Ketmen**	**5.23**	**45**	*e*P	Pg	13 11 16.1	-0.1
5.9nm,0.3s							
KTMS				*e*S	Sg	13 12 26.0	+2.1
16nm,0.6s							
DJR	**Jarkent**	**5.59**	**36**	*e*P	Pg	13 11 21.6	-1.6
6.0nm,0.3s							
DJR				*e*S	Sg	13 12 35.6	+0.1
7.8nm,0.5s							
TDK	**Taldyqorghan**	**5.63**	**23**	*e*P	Pg	13 11 22.4	-1.6
48nm,0.3s							
TDK				*e*S	Sg	13 12 37.7	+0.7
40nm,0.5s							
KAPS	**Kapalarasan**	**6.20**	**28**	*e*P	Pg	13 11 30.8	-4.0
3.7nm,0.5s							
KAPS				*e*S	Sg	13 12 51.6	-3.5
6.8nm,0.6s							
MKAR	**Makanchi Array**	**8.61**	**34**	Pn	Pn	13 11 44.8	+3.6
0.1nm,0.3s,baz=215,slow=12,SNR=3.9							
MKAR				Lg	Lg	13 14 09.0	
0.1nm,0.3s,baz=224,slow=26,SNR=4.0							
KURBB	**Kurchatov Arra**	**11.00**	**11**	Pn	Pn	13 12 16.3	+2.6
0.0nm,0.3s,baz=198,slow=12,SNR=3.4							
KURBB				Lg	Lg	13 15 30.1	
0.1nm,0.3s,baz=190,slow=29,SNR=5.1							
YKA	**Yellowknife Ar**	**77.68**	**5**	P	P	13 21 31.8	-1.1
0.3nm,0.5s,baz=355,slow=5.1,SNR=6.2							
WRA	**Warramunga Arr**	**81.05**	**125**	P	P	13 21 51.1	-0.8
0.4nm,1.0s,baz=316,slow=4.6,SNR=3.9							
ASAR	**Alice Springs**	**83.55**	**128**	P	P	13 22 03.0	-1.9
0.3nm,0.6s,baz=313,slow=5.2,SNR=5.3							

IDC 01 13:13:27.2±2.6, 1°.31N×90°.98E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.4/65, mbtmp3.8/6, Error ellipse: s-maj=92.9km s-min=29.8km az=55.0, North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**45.93**	**352**	P	P	13 21 51.0	-0.8
0.6nm,0.7s,baz=181,slow=9.7,SNR=4.9							
WRA	**Warramunga Arr**	**47.46**	**119**	P	P	13 22 03.9	-0.3
0.6nm,0.8s,baz=296,slow=8.7,SNR=5.1							
SONM	**Songino Array**	**48.23**	**14**	P	P	13 22 10.5	+0.6
1.8nm,0.6s,baz=193,slow=8.8,SNR=9.1							
KURBB	**Kurchatov Arra**	**50.26**	**350**	P	P	13 22 25.1	-0.1
0.3nm,0.7s,baz=172,slow=7.2,SNR=4.9							
ZALV	**Zalesovo Beam**	**52.71**	**355**	P	P	13 22 43.0	-0.5
0.4nm,0.4s,baz=178,slow=8.5,SNR=3.7							
FINES	**FINESS Array B**	**77.07**	**333**	P	P	13 25 22.4	+0.3
1.1nm,0.6s,baz=77,slow=8.4,SNR=3.9							

CSEM ***01*** *13:20:24.9, 38°.61N×43°.27E, h7km, MD2.5*
DDA ***01*** *13:20:24.9, 38°.61N×43°.27E, h7km, Md2.5*
ISCJB ***01*** *13:20:25.1±0.6, 38°.66N±0°.03×43°.18E±0°.04, h5km±10km, Error ellipse: s-maj=5.4km s-min=5.2km az=176.9*
ISC 01 13:20:25.0±1.0, 38°.63N±0°.03×43°.23E±0°.03, h12km±7km, n11, σ0°.69/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.13**	**106**	PG	**Pg**	**13 20 28.1**	**-0.3**
VANB				SG	**Sg**	**13 20 31.5**	**+0.7**
GEVA	**Gevas**	**0.34**	**203**	*i* P	**Pg**	**13 20 31.3**	**-0.8**
GEVA				*i* S	**Sb**	**13 20 37.9**	**-0.9**
GEVA	**Gevas**	**0.34**	**203**	P	**Pg**	**13 20 31.3**	**-0.8**
GEVA				S	**Sb**	**13 20 37.8**	**-0.9**
ADCV	**BITLIS_Adilcev**	**0.43**	**294**	*i* P	**Pg**	**13 20 33.5**	**-0.2**
ADCV				*i* S	**Sb**	**13 20 41.8**	**+0.4**
ADCV	**BITLIS_Adilcev**	**0.43**	**294**	P	**Pg**	**13 20 33.5**	**-0.2**
ADCV				S	**Sb**	**13 20 41.8**	**+0.4**
VMUR	**Van-Muradiye**	**0.45**	**36**	*i* P	**Pg**	**13 20 33.4**	**-0.5**
VMUR				*i* S	**Sb**	**13 20 41.0**	**-0.7**
VMUR	**Van-Muradiye**	**0.45**	**36**	P	**Pg**	**13 20 33.4**	**-0.5**
VMUR				S	**Sb**	**13 20 41.0**	**-0.7**
GURO	**Guroymak-BITLI**	**0.94**	**266**	PG	**Pg**	**13 20 42.5**	**-0.8**
GURO				SG	**Sg**	**13 20 55.6**	**0.0**
AGRB	**Hanur-Agry**	**0.96**	**349**	PG	**Pg**	**13 20 42.6**	**-1.1**
AGRB				SG	**Sg**	**13 20 56.2**	**0.0**
HAKT	**HAKKARI**	**1.13**	**161**	*i* P	**Pn**	**13 20 47.8**	**+0.8**
HAKT				*i* S	**Sn**	**13 21 02.9**	**+0.3**
HAKT	**HAKKARI**	**1.13**	**161**	P	**Pn**	**13 20 47.8**	**+0.8**
HAKT				S	**Sn**	**13 21 02.9**	**+0.3**

MEX 01 13:24:58.0±0.5, 30°.70N×113°.97W, h16km±999km, MD4.0, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPX	**San Pedro Mart**	**1.33**	**285**	*e*P	Pn	13 25 18.3	-3.9
SPX				*e*S	Sb	13 25 35.0	-4.7
SPIG	**San Pedro Mart**	**1.33**	**285**	*e*P	Pn	13 25 18.4	-3.9
SPIG				*e*S	Sb	13 25 34.9	-4.8
214A	**Organ Pipe Nat**	**1.59**	**38**	*e*P	Pn	13 25 22.1	-3.5
214A				*i* S	Sn	13 25 40.1	-5.8
MBIG	**Mexicali**	**2.00**	**329**	*e*P	Pn	13 25 31.1	+0.1
SRIG	**Santa Rosalia**	**3.69**	**155**	*e*P	Pg	13 26 26.5	+18
SRIG				*e*S	Sb	13 26 44.4	-3.0

WEL ***01*** *13:31:17.9±1.0, 19°.S±11°×17°.5W±4°.8, h347km±8km*
ISCJB ***01*** *13:31:41.6±0.7, 20°.26S±0°.04×177°.79W±0°.04, h501km±8km, mb4.9/100, Error ellipse: s-maj=6.2km s-min=4.6km az=146.4*
MOS ***01*** *13:31:41.8±1.1, 20°.25S×177°.75W, h506km, mb5.1/23, Error ellipse: s-maj=9.4km s-min=8.7km az=119.4*
BJI ***01*** *13:31:41.5, 20°.05S×177°.17W, h518km, mb5.1/34, mB4.8/14*
NEIC ***01*** *13:31:42.3±0.8, 20°.29S×177°.69W, h509km±8km, mb4.9/25, Error ellipse: s-maj=8.6km s-min=6.4km az=147.0*
GCMT ***01*** *13:31:42.3±0.4, 20°.39S×177°.65W, h537km±2km, MW5.2/67, Moment Tensor Solution. s67,c88; Duration: 1s0 Moment tensor: Scale 10^17Nm; M_{rr}-0.68±.03; $M_{\theta\theta}$0.57±.05; $M_{\phi\phi}$0.10±.05; $M_{r\theta}$0.12±.06; $M_{\theta\phi}$0.28±.04; $M_{\phi r}$-0.

4.0nm,0.3s,baz=120,slow=8.5,SNR=29
DZM Mont Dzumac 14.84 261 *e*P **P 13 34 52.3 +0.1**
139nm,1.4s
OUZ Omahuta 16.66 205 P **P 13 35 12.4 +2.1**
RAR Rarotonga 16.84 96 P **P 13 35 10.6 -1.7**
2.2nm,0.3s,baz=298,slow=12,SNR=4.1
WCZ Waipu Caves 17.01 202 P **P 13 35 17.0 +3.4**
KUZ Kuaotunu 17.30 198 P **P 13 35 17.7 +1.3**
MXZ Matakaoa Point 17.49 190 P P 13 35 28.4 +10
MXZ S S 13 38 32.6 +20
HAZ Te Kaha 17.77 192 P **P 13 35 20.6 -0.1**
PKGZ Pakihiroa 17.85 191 P **P 13 35 23.2 +1.8**
PKGZ S S 13 38 40.0 +21
PUZ Puketiti 17.99 190 P **P 13 35 23.7 +1.0**
PUZ S S 13 38 41.9 +21
RUGZ Raukumara Rang 18.00 192 P **P 13 35 22.3 -0.5**
TGRZ Tauranga 18.08 195 P **P 13 35 25.6 +2.1**
OPRZ Ohinepanea 18.12 195 P **P 13 35 24.5 +0.7**
TWGZ Tauwhareparae 18.14 191 P **P 13 35 25.4 +1.3**
TWGZ S S 13 38 48.7 +25
KMRZ Kaimai 18.27 196 P **P 13 35 27.1 +1.8**
TOZ Tahuroa Road 18.28 197 P **P 13 35 27.5 +2.2**
KARZ Kaharoa 18.36 195 P **P 13 35 29.0 +2.9**
MWZ Matawai 18.38 192 P **P 13 35 25.2 -1.0**
URZ Urewera 18.39 193 P **P 13 35 25.3 -1.0**
7.0nm,0.3s,baz=29,slow=2.7,SNR=37
URZ S **S 13 38 21.7 -5.6**
1.1nm,0.3s,baz=270,slow=20,SNR=6.6
URZ Urewera 18.39 193 P **P 13 35 25.1 -1.2**
URZ S S 13 38 54.3 +27
OMRZ Omania 18.41 195 P **P 13 35 27.9 +1.4**
UTU Utuhina 18.52 195 P **P 13 35 30.0 +2.5**
RRRZ Republican Roa 18.60 194 P **P 13 35 29.6 +1.4**
HSRZ Hossack Road 18.64 195 P **P 13 35 30.2 +1.6**
MUGZ Murupara 18.68 194 P **P 13 35 28.3 -0.6**
MUGZ S S 13 38 59.6 +28
RIGZ Rimuhau 18.70 191 P **P 13 35 29.0 -0.1**
RIGZ S S 13 38 58.4 +26
GRRZ Galatos Road 18.71 195 P **P 13 35 30.3 +1.1**
RTZ Ruatahuna 18.76 193 P **P 13 35 23.2 -6.6**
WPRZ Whakapapatarin 18.86 195 P **P 13 35 31.6 +1.1**
MTHZ Maungataniwha 19.02 193 P **P 13 35 31.6 -0.5**
RAHZ Arahi 19.03 192 P **P 13 35 32.2 0.0**
HIZ Hauiti 19.20 198 P **P 13 35 36.1 +2.5**
HATZ Hinemaiaia 19.23 195 P **P 13 35 33.3 -0.7**
NMHZ Naumai 19.26 193 P **P 13 35 33.7 -0.6**
BKZ Black Stump Fm 19.39 194 P **P 13 35 33.8 -1.7**
TWVZ Taurewa 19.56 196 P **P 13 35 36.9 -0.1**
WTVZ West Tongariro 19.56 196 P **P 13 35 36.7 -0.4**
NGZ Ngauruhoe 19.61 196 P **P 13 35 37.4 -0.2**
MCHZ McNeill Hill 19.62 193 P **P 13 35 37.1 -0.4**
COVZ Chateau Observ 19.65 196 P **P 13 35 37.5 -0.4**
KWHZ Kaweka Forest 19.66 194 P **P 13 35 37.1 -0.8**
TUVZ Tukino 19.69 195 P **P 13 35 37.8 -0.5**
FWVZ Far West T-bar 19.70 196 P **P 13 35 38.2 -0.3**
WHVZ Whangaehu Hut 19.72 195 P **P 13 35 38.4 -0.3**
TRVZ Turoa 19.75 196 P **P 13 35 38.0 -0.9**
PKVZ Pokaka 19.79 196 P **P 13 35 38.9 -0.2**
VRZ Vera Road 19.79 197 P **P 13 35 40.3 +1.3**
MOVZ Moawhango 19.80 195 P **P 13 35 38.4 -0.8**
BHHZ Black Hill Sta 19.80 194 P **P 13 35 37.3 -1.9**
KRHZ Kereru 19.88 193 P **P 13 35 39.1 -0.8**
KAHZ Kahuranaki 19.92 192 P **P 13 35 40.2 -0.1**
PXZ Pawanui 20.15 192 P **P 13 35 42.1 -0.1**
PNHZ Pukenui 20.18 194 P **P 13 35 41.3 -1.3**
LREZ Lake Rotokare 20.20 198 P **P 13 35 45.9 +3.1**
TSZ Takapari Road 20.37 194 P **P 13 35 44.1 -0.2**
DVHZ Dannevirke 20.55 193 P **P 13 35 46.0 0.0**
ANWZ Angora Road 20.64 193 P **P 13 35 46.6 -0.1**
BFZ Birch Farm 20.90 193 P **P 13 35 48.0 -1.1**
MRZ Mangatainoka R 21.03 194 P **P 13 35 48.5 -1.8**
RPZ Rata Peaks 25.11 199 P **P 13 36 25.7 -0.9**
9.2nm,0.7s,baz=1.8,slow=5.2,SNR=9.5
PAE Paea 26.76 89 *e*P **P 13 36 41.6 +0.1**
15nm,1.1s
PPT2 Papeete2 26.77 89 *e*P **P 13 36 42.0 +0.2**
108nm,1.2s
PPT Papeete 26.78 89 P **P 13 36 42.2 +0.5**
28nm,0.4s,baz=43,slow=8.2,SNR=8.3
TIAR Tiarei 27.00 89 *e*P **P 13 36 44.0 +0.3**
21nm,0.9s
CAN Canberra 32.78 236 P **P 13 37 34.5 +1.0**
CAN pmax pmax
comp=Z,5.0nm,1.4s
CTAO Charters Tower 33.73 264 *e*P **P 13 37 41.6 -0.1**
CTAO Charters Tower 33.73 264 *e*P **P 13 37 41.6 -0.1**
PMG Port Moresby 35.53 283 P **P 13 37 57.5 +0.7**
comp=Z,59nm,0.8s,baz=92,slow=5.2,SNR=15
PMG Port Moresby 35.53 283 *d i*P **P 13 37 56.9 +0.1**
PMG pmax pmax
comp=Z,200nm,0.7s
TOO Toolangi 36.17 234 P **P 13 38 02.6 +0.8**
TOO pmax pmax
comp=Z,72nm,1.3s
STKA Stephens Creek 38.06 244 P **P 13 38 18.5 +1.1**
comp=Z,56nm,0.8s,baz=90,slow=9.6,SNR=136
RKT Rikitea 39.73 102 *e*P **P 13 38 31.5 +0.5**
comp=Z,57nm,1.1s
JAY Jayapura 44.22 288 P **P 13 39 07.5 +0.9**
comp=Z,150nm,0.7s,baz=139,slow=3.9,SNR=84
JAY S **S 13 45 04.1 +2.3**
comp=Z,7.8nm,0.9s,baz=255,slow=23,SNR=8.2
JAY Jayapura 44.22 288 P **P 13 39 07.0 +0.5**
GENI Genyem 44.66 288 P **P 13 39 11.1 +1.2**
ASAR Alice Springs 44.78 257 P **P 13 39 11.2 +0.5**
comp=Z,244nm,0.8s,baz=99,slow=7.7,SNR=1885
ASAR PcP **PcP 13 40 42.0 +0.3**
comp=Z,15nm,0.8s,baz=105,slow=3.4,SNR=6.5
ASAR S **S 13 45 08.2 -1.3**
comp=Z,16nm,1.0s,baz=94,slow=15,SNR=25
WRAB Tennant Creek 44.84 262 *e*P **P 13 39 11.0 -0.2**
comp=Z,44nm,0.8s
WRAB Tennant Creek 44.84 262 *de*P **P 13 39 10.8 -0.5**
WRAB pmax pmax
comp=Z,116nm,0.8s
WRA Warramunga Arr 44.85 262 P **P 13 39 11.0 -0.4**
comp=Z,134nm,0.9s,baz=97,slow=8.4,SNR=430
WRA PcP **PcP 13 40 42.7 +0.8**
comp=Z,9.0nm,0.8s,baz=91,slow=4.1,SNR=4.9
WRA S **S 13 45 08.2 -2.3**
comp=Z,4.0nm,0.9s,baz=92,slow=13,SNR=6.8
BAKI Biak 48.91 287 P **P 13 39 43.0 +0.9**
FAKI Fak Fak 51.69 283 P **P 13 40 02.1 -0.3**
AAI Ambon 55.12 280 P **P 13 40 26.6 -0.2**
BATI Baumata 57.16 271 P **P 13 40 42.7 +1.9**
comp=Z,151nm,0.7s,baz=219,slow=2.3,SNR=23
SBA Scott Base 58.03 184 *e*P **P 13 40 47.9 +2.2**
SBA Scott Base 58.03 184 *e*P **P 13 40 47.9 +2.2**
VNDA Vanda 58.08 185 P **P 13 40 48.3 +2.3**
comp=Z,8.7nm,1.1s,baz=352,slow=7.3,SNR=21
VNDA PcP **PcP 13 41 30.9 +0.2**
comp=Z,2.4nm,0.8s,baz=4.6,slow=2.5,SNR=4.3
VNDA ScP **ScP 13 44 41.5 +1.4**
comp=Z,1.6nm,0.8s,baz=302,slow=4.3,SNR=3.8
MBWA Marble Bar 58.11 257 *e*P **P 13 40 47.0 -0.2**
NWAO Narrogin (SRO) 58.64 243 P **P 13 40 50.5 -0.2**
comp=Z,26nm,0.8s,baz=358,slow=6.8,SNR=10
KAPI Kappang 62.50 275 *e*P **P 13 41 13.3 -3.1**
comp=Z,4.1nm,0.5s
KAPI Kappang 62.50 275 *e*P **P 13 41 13.3 -3.1**
KAPI pmax pmax
comp=Z,4.0nm,0.5s
CASY Casey 64.19 205 *e*P **P 13 41 25.6 -0.7**
comp=Z,25nm,0.9s
JHJ Hachijo jima 2 66.86 322 P **P 13 41 44.0 +0.5**
comp=Z,134nm,0.4s,baz=227,slow=19,SNR=29
TGY Tagaytay City 69.31 295 P **P 13 41 59.1 +0.3**
comp=Z,231nm,0.9s,baz=210,slow=2.9,SNR=4.9
QSPA South Pole Qui 69.72 180 P **P 13 42 02.0 +1.5**
comp=Z,31nm,0.8s,baz=22,slow=1.5,SNR=68
MJAR Matsushiro Arr 70.23 323 P **P 13 42 03.6 -0.2**
comp=Z,36nm,0.6s,baz=166,slow=6.1,SNR=182
MAJO Matsushiro 70.23 323 *e*P **P 13 42 03.8 -0.1**
comp=Z,53nm,0.6s
MAJO Matsushiro 70.23 323 *e*P **P 13 42 03.8 -0.1**
MAJO pmax pmax
comp=Z,53nm,0.6s
MAT Matsushiro 70.23 323 P **P 13 42 03.8 -0.1**
JOW Kunigami 70.25 310 P **P 13 42 04.7 +0.6**
comp=Z,51nm,0.8s,baz=324,slow=1.6,SNR=7.1
ERM Erimo 71.81 330 *e*P **P 13 42 14.7 +1.7**
ERM pmax pmax
comp=Z,7.0nm,0.7s
JNU Nakatsue 72.33 317 P **P 13 42 16.7 +0.5**
comp=Z,35nm,0.8s,baz=112,slow=5.2,SNR=15
LEM Lembang 73.27 269 P **P 13 42 23.1 +0.8**
comp=Z,250nm,0.8s,baz=92,slow=5.3,SNR=18
ASAJ Asahikawa 73.71 331 P **P 13 42 25.9 +2.1**
comp=Z,94nm,0.8s,baz=222,slow=2.5,SNR=112
ASAJ Asahikawa 73.71 331 P **P 13 42 26.0 +2.1**
ASAJ pmax pmax
comp=Z,95nm,0.8s
YSS Yuzh-Sakhalins 75.87 333 *e*P **P 13 42 35.9 +0.1**
comp=Z,119nm,0.9s
YSS Yuzh-Sakhalins 75.87 333 ‖ *e*P **P 13 42 37.0 +1.1**
YSS *e* 13 42 41.1
YSS pmax pmax
comp=Z,110nm,1.0s
YSS pmax pmax
comp=N,20nm,0.8s
YSS pmax pmax
comp=E,60nm,0.8s
PET Petropavlovsk 75.88 346 *i*P **P 13 42 35.2 -0.6**
PET pmax pmax
comp=Z,23nm,0.7s
PETK Petropavlovsk- 76.19 345 P **P 13 42 37.7 +0.1**
comp=Z,44nm,0.9s,baz=124,slow=6.6,SNR=40
TJN Taejon 76.62 317 ‖ *e*P **P 13 42 41.3 +1.0**
KSRS Korea Array 76.93 318 P **P 13 42 43.0 +1.1**
comp=Z,12nm,0.8s,baz=135,slow=6.2,SNR=77
KSAR Wonju Array Be 76.95 318 P **P 13 42 43.0 +1.0**
KSAR Wonju Array Be 76.95 318 P **P 13 42 43.1 +1.0**
TEY Ternei 77.21 329 *e*P **P 13 42 44.4 +1.1**
SCZ2 Santa Cruz Isl 77.33 46 P **P 13 42 45.6 +1.3**
baz=235
PKM Mcpherson Peak 77.73 45 P **P 13 42 47.9 +1.3**
baz=234
INCN Inchon 77.75 318 *e*P **P 13 42 47.3 +0.8**
comp=Z,49nm,0.9s
INCN Inchon 77.75 318 *e*P **P 13 42 47.3 +0.8**
INCN pmax pmax
comp=Z,49nm,0.9s
FMP Fort Macarthur 78.09 47 P **P 13 42 49.5 +1.2**
baz=236
MSHR Mys Shultsa 78.33 324 *ce*P **P 13 42 51.1 +1.7**
ARVC Arvin 78.52 46 P **P 13 42 51.7 +1.1**
baz=235
MURC Murrieta 78.78 48 P **P 13 42 52.9 +0.7**
baz=236
BFSC Mount Baldy Ra 78.82 47 P **P 13 42 53.1 +0.6**
baz=236
MONP2 Monument Peak 78.94 49 P **P 13 42 54.5 +1.3**
baz=237
EDW2 Edwards Air Fo 78.95 46 P **P 13 42 54.2 +1.1**
baz=236,SNR=17
USRK Ussuriysk Ar. 78.97 326 P **P 13 42 54.4 +1.6**
comp=Z,51nm,0.8s,baz=138,slow=3.4,SNR=74
TYV Tymovskoe 79.00 336 *e*P **P 13 42 53.4 +0.6**
TYV pmax pmax
comp=Z,100nm,1.9s
TYV pmax pmax
comp=Z,48nm,1.3s
IKP In-Ko-Pah, Jac 79.03 49 P **P 13 42 54.8 +1.3**
baz=237
ISA Isabella, Lake 79.07 45 P **P 13 42 54.6 +0.9**
baz=235
CMB Columbia Colle 79.20 43 *e*P **P 13 42 52.9 -1.4**
comp=Z,68nm,0.9s
CMB Columbia Colle 79.20 43 *e*P **P 13 42 52.9 -1.4**
CMB pmax pmax
comp=Z,68nm,0.9s
PFO Pinyon Flats O 79.30 48 P **P 13 42 56.3 +1.3**
baz=237
SWSC Sam W. Stewart 79.41 49 P **P 13 42 56.7 +1.3**
baz=237
LRMC Laurel Mtn Rad 79.50 46 P **P 13 42 56.8 +0.8**
baz=236
N02D Trinity Center 79.56 39 P **P 13 42 57.7 +1.5**
baz=231,SNR=6.1
O03D Paynes Creek 79.68 40 P **P 13 42 57.5 +0.7**
baz=232
M02C Callahan 79.73 39 P **P 13 42 58.8 +1.8**
baz=231,SNR=10
CWC Cottonwood Cre 79.77 45 P **P 13 42 58.6 +1.1**
baz=235
L02D Cave Junction, 79.78 38 P **P 13 42 58.5 +1.3**
baz=230
BELC Belle Mtn. Jos 79.84 48 P **P 13 42 58.8 +1.0**
baz=237,SNR=8.9
MPMC Manual Prospec 79.95 46 P **P 13 42 59.5 +1.0**
baz=236
GSC Goldstone, Bar 79.99 47 P **P 13 42 59.4 +0.9**
baz=236
YBH Yreka Blue Hor 80.03 39 P **P 13 43 00.1 +1.5**
comp=Z,17nm,0.7s,baz=198,slow=1.3,SNR=52
YBH pP **pP 13 44 54.2 +2.3**
comp=Z,1.6nm,0.9s,baz=137,slow=7.5,SNR=4.3
BC3 Big Chuckawall 80.03 49 P **P 13 43 00.3 +1.4**
baz=237
HEC Hector,Ludlow 80.05 47 P **P 13 42 59.6 +0.8**
baz=237
GLA Glamis 80.15 49 P **P 13 43 01.1 +1.7**
baz=238
HUMO Hull Mountain 80.44 38 *e*P **P 13 42 58.7 -1.9**
comp=Z,70nm,1.1s
GMRC Granite Mounta 80.50 48 P **P 13 43 02.1 +0.8**
baz=237,SNR=8.8
IRM Iron Mountain 80.52 48 P **P 13 43 02.3 +1.1**
baz=238,SNR=11
MDJ Mudanjiang 80.53 325 P **P 13 42 59.8 -1.2**
MDJ pmax pmax
comp=Z,94nm,0.8s
MDJ Mudanjiang 80.53 325 *e*P **P 13 43 01.3 +0.3**
comp=Z,58nm,0.8s
GRAC Grapevine Rang 80.56 45 P **P 13 43 02.7 +1.3**
baz=236
M04C Macdoel 80.57 39 P **P 13 43 02.6 +1.1**
baz=232,SNR=6.9
FURC Furnace Creek, 80.60 46 P **P 13 43 02.6 +1.0**
baz=236
KDAK Kodiak Island 80.62 13 P **P 13 43 00.7 -0.4**
comp=Z,18nm,0.9s,baz=262,slow=6.7
KDAK Kodiak Island 80.62 13 *i*P **P 13 43 02.5 +1.4**
TUQ Turquoise Moun 80.67 47 P **P 13 43 03.1 +1.0**
baz=237
Y12C Blythe 80.74 49 P **P 13 43 03.7 +1.3**
baz=238
NVAR Mina Array Bea 80.76 43 P **P 13 43 03.9 +1.3**
comp=Z,11nm,0.8s,baz=226,slow=9.5,SNR=68
NVAR pP **pP 13 44 56.2 -0.1**
comp=Z,0.7nm,0.7s,baz=220,slow=7.9,SNR=3.4
I03D Drain, OR 80.90 37 P **P 13 43 04.2 +1.2**
baz=230
214A Organ Pipe Nat 81.04 51 P **P 13 43 05.3 +1.3**
baz=239
TPNV Topopah Spring 81.27 45 P **P 13 43 06.4 +1.2**
baz=236
PDMCI Parker Dam,Lak 81.30 49 P **P 13 43 06.3 +1.0**
baz=238,SNR=6.2
J04D Umpqua Nationa 81.32 38 P **P 13 43 06.6 +1.2**
baz=232,SNR=20
GRNR Gornyy 81.48 333 ‖ *i*P **P 13 43 07.0 +1.2**
GRNR *e* 13 45 02.9
GRNR pmax pmax
comp=Z,86nm,1.0s
I04A Tendick Farm, 81.49 37 P **P 13 43 06.8 +0.7**
baz=231,SNR=6.2
NKL Nikolayevsk 81.55 336 *e*P **P 13 43 05.0 -1.0**
NKL pmax pmax
comp=Z,43nm,1.0s
MOD Modoc Plateau 81.56 40 *e*P **P 13 43 06.4 -0.2**
comp=Z,22nm,1.0s
MAW Mawson 81.78 200 P **P 13 43 07.7 +0.6**
comp=Z,11nm,0.9s,baz=118,slow=6.5,SNR=20
J05D Fort Rock, OR 81.85 38 P **P 13 43 09.5 +1.4**
baz=232,SNR=36
G03D McMinnville, O 81.91 36 P **P 13 43 09.3 +1.2**
baz=230
CN2 Changchun 82.32 322 *e*P **P 13 43 10.4 +0.2**
CN2 pmax pmax
comp=Z,40nm,1.0s
I05D Terrebonne, OR 82.43 37 P **P 13 43 11.9 +1.1**
baz=232,SNR=7.5
R11A Troy Canyon, C 82.48 45 P **P 13 43 12.0 +0.6**
baz=237
KLR Kul'dur 82.52 329 P **P 13 43 12.0 +0.9**
comp=Z,1.7nm,1.0s,baz=113,slow=3.7,SNR=46
KLR Kul'dur 82.52 329 *d i*P **P 13 43 11.6 +0.5**
WHN Wuhan 82.54 306 ‖ P **P 13 43 12.9 +1.3**
BMN Battle Mountai 82.59 42 *e*P **P 13 43 10.9 -1.0**
comp=Z,38nm,1.3s
BMN Battle Mountai 82.59 42 *e*P **P 13 43 10.9 -1.0**
BMN pmax pmax
comp=Z,38nm,1.3s
F04D Rainier, OR 82.60 35 P **P 13 43 13.0 +1.4**
baz=230
TUC Tucson 82.71 52 P **P 13 43 14.4 +1.8**
baz=240
WVOR Wild Horse Val 82.87 40 P **P 13 43 11.1 -2.1**
comp=Z,18nm,1.0s
WVOR Wild Horse Val 82.87 40 P **P 13 43 11.1 -2.1**
WVOR pmax pmax
comp=Z,18nm,1.0s
G05D Wamic, OR 83.00 36 P **P 13 43 14.5 +0.8**
baz=232
TIA Tai'an 83.34 312 P **P 13 43 16.4 +0.8**
TIA pmax pmax
comp=Z,13nm,0.9s
MA2 Magadan 83.70 344 *e*P **P 13 43 15.0 -1.8**
comp=Z,187nm,1.4s
MA2 Magadan 83.70 344 *i*P **P 13 43 16.2 -0.6**
MA2 pmax pmax
comp=Z,23nm,0.9s
WUAZ Wupatki 83.87 49 P **P 13 43 19.6 +1.2**
baz=240,SNR=6.5
WUAZ Wupatki 83.87 49 *e*P **P 13 43 17.1 -1.3**
comp=Z,6.5nm,0.9s
ELK Elko 84.02 43 P **P 13 43 22.3 +3.2**
comp=Z,4.9nm,1.0s,baz=282,slow=4.7,SNR=17
A04D Lummi Island 84.44 33 P **P 13 43 21.7 +1.1**
baz=230
B05A Bryant 84.46 34 P **P 13 43 21.5 +0.7**
baz=231
SKLT Songkhla 84.68 280 P **P 13 43 23.9 +1.3**
comp=Z,100nm,0.9s
PSI Prapat 84.71 275 P **P 13 43 22.8 -0.2**
comp=Z,44nm,0.9s,baz=180,slow=1.2,SNR=18
W18A Petrified Fore 84.84 50 P **P 13 43 24.2 +0.9**
baz=241
121A Cookes Peak, D 85.04 53 P **P 13 43 26.0 +1.8**
baz=242
BMO Blue Mountains 85.06 38 *e*P **P 13 43 22.4 -1.5**
comp=Z,5.5nm,0.8s
BMO Blue Mountains 85.06 38 *e*P **P 13 43 22.4 -1.5**
BMO pmax pmax
comp=Z,6.0nm,0.8s
MFID Camas Ranch 85.12 40 *e*P **P 13 43 23.2 -1.1**
comp=Z,8.9nm,1.1s
SKNT Sakolnakorn 85.28 290 P **P 13 43 25.5 0.0**
comp=Z,33nm,1.0s
TRTT Trang 85.78 280 P **P 13 43 29.0 +1.0**
comp=Z,46nm,1.3s
SRAK Srakaew 85.88 286 P **P 13 43 27.8 -0.6**
comp=Z,81nm,1.3s,comp=Z,785nm
HLID Hailey 86.06 41 P **P 13 43 30.1 +1.2**
baz=237
HLID Hailey 86.06 41 *e*P **P 13 43 28.9 0.0**
comp=Z,9.5nm,1.2s
ENH Enshi 86.15 304 P **P 13 43 26.9 -2.5**
comp=Z,120nm,1.2s
SEY Seymchan 86.28 347 P **P 13 43 29.5 +0.3**
comp=Z,32nm,0.7s,baz=148,slow=7.6,SNR=165
SEY pP **pP 13 45 25.6 +0.8**
comp=Z,3.3nm,0.8s,baz=32,slow=5.0,SNR=3.7
SEY Seymchan 86.28 347 *d i*P **P 13 43 29.1 -0.1**
NONG Nongkai 86.43 291 P **P 13 43 32.2 +1.3**
comp=Z,38nm,0.9s
MNTX Cornudas Mount 86.48 54 P **P 13 43 32.1 +1.2**
baz=244
MNTX Cornudas Mount 86.48 54 P **P 13 43 31.5 +0.6**
comp=Z,14nm,1.0s
CHAI Chaiyaphum 86.64 288 P **P 13 43 33.2 +1.2**
comp=Z,12nm,0.9s,comp=Z,441nm
MVCO Mesa Verde 86.72 48 P **P 13 43 32.5 +0.2**
baz=241
TXAR Lajitas Array 86.78 57 P **P 13 43 34.3 +1.8**
comp=Z,5.7nm,0.7s,baz=219,slow=6.7,SNR=42
TXAR pP **pP 13 45 30.8 +2.6**
comp=Z,5.8nm,1.1s,baz=215,slow=5.8,SNR=11
TXAR PKKPbc **PKKPbc 14 01 24.1 +0.2**
comp=Z,0.7nm,0.8s,baz=114,slow=5.6,SNR=3.7
SURT Suratani 87.00 281 P **P 13 43 35.7 +2.0**
comp=Z,28nm,1.1s
NEW Newport 87.12 36 P **P 13 43 33.8 +0.2**
comp=Z,5.2nm,0.8s,baz=241,slow=8.1,SNR=6.5
NEW Newport 87.12 36 P **P 13 43 33.9 +0.3**
baz=235
TASM ASL Pad, Albuq 87.13 51 P **P 13 43 34.9 +0.7**
baz=243
ANMO Albuquerque 87.13 51 P **P 13 43 35.0 +0.8**
comp=Z,5.2nm,0.8s,baz=248,slow=3.5,SNR=13
ANMO pP **pP 13 45 32.1 +2.1**
comp=Z,1.8nm,0.8s,baz=299,slow=4.8,SNR=3.7
ANMO Albuquerque 87.13 51 P **P 13 43 34.9 +0.7**
baz=243
ANMO Albuquerque 87.13 51 *de*P **P 13 43 34.5 +0.3**
ANMO pmax pmax
comp=Z,4.0nm,0.7s
TASL Snake Pit, Alb 87.13 51 P **P 13 43 35.0 +0.8**
baz=243
ZEA Zeya 87.61 331 *e*P **P 13 43 36.0 +0.3**
ZEA pmax pmax
comp=Z,26nm,0.8s
PHET Kaeng Krachan 87.66 285 P **P 13 43 39.4 +2.6**
comp=Z,37nm,0.9s,comp=Z,257nm
PBKT Sadao Pong 87.79 288 P **P 13 43 38.2 +0.9**
comp=Z,47nm,1.2s,comp=Z,697nm
COLA College 88.01 12 *e*P **P 13 43 36.2 -1.1**
comp=Z,32nm,0.8s
COLA College 88.01 12 *e*P **P 13 43 36.2 -1.1**
COLA pmax pmax
comp=Z,33nm,0.8s
MSO Missoula 88.11 38 P **P 13 43 38.2 -0.2**
baz=237,SNR=5.6
ILAR Eielson Array 88.12 13 P **P 13 43 37.1 -0.7**
comp=Z,9.9nm,0.8s,baz=220,slow=5.8,SNR=94
ILAR pP **pP 13 45 34.4 +0.3**
comp=Z,3.2nm,0.9s,baz=231,slow=6.2,SNR=7.9
S22A 4UR Ranch, Cre 88.15 49 P **P 13 43 39.9 +0.9**
baz=242,SNR=11
SNAA Sanae 88.15 178 P **P 13 43 37.9 -0.3**
SNAA Sanae 88.15 178 P **P 13 43 37.8 -0.3**
comp=Z,5.9nm,1.0s,baz=195,slow=4.9,SNR=12
SNAA pP **pP 13 45 35.3 +1.0**
comp=Z,1.9nm,0.8s,baz=189,slow=5.9,SNR=4.3
SNAA Sanae 88.15 178 ‖ *e*P **P 13 43 37.1 -1.1**
SNAA pmax pmax
comp=Z,138nm,1.4s
XAN Xi'an 88.23 307 P **P 13 43 40.2 +1.1**
XAN pmax pmax
comp=Z,76nm,1.0s
XAN pmax pmax
comp=Z,120nm,4.1s
VNA3 Neumayer Olymp 88.27 176 P **P 13 43 38.7 +0.1**
O20A White River Ci 88.29 46 P **P 13 43 40.0 +0.5**
baz=242
PHIT Phitsanulok 88.51 289 P **P 13 43 42.7 +2.0**
comp=Z,46nm,1.1s,comp=Z,394nm
SRDT SRDT 88.64 286 P **P 13 43 42.9 +1.5**
comp=Z,56nm,1.1s
BW06 Boulder Array 88.70 43 P **P 13 43 41.6 +0.2**
baz=240
BW06 Boulder Array 88.70 43 *e*P **P 13 43 39.7 -1.6**
PDAR Pinedale Array 88.70 43 P **P 13 43 41.7 +0.4**
comp=Z,5.5nm,0.6s,baz=208,slow=2.9,SNR=35
BOZ Bozeman (W) 88.83 40 P **P 13 43 42.8 +1.0**
baz=239,SNR=29
BOZ Bozeman (W) 88.83 40 *e*P **P 13 43 42.4 +0.6**
comp=Z,35nm,1.3s
NANT Nan 88.86 290 P **P 13 43 43.5 +1.2**
comp=Z,15nm,0.9s,comp=Z,117nm
H17A Grant Village 88.86 41 P **P 13 43 44.1 +2.0**
baz=240
NVL N'lazarevskaya 88.88 183 *e*P **P 13 43 40.7 -0.7**
NVL pmax pmax
comp=Z,36nm,1.0s
BILL Bilibino 88.91 354 *e*P **P 13 43 37.8 -3.6**
comp=Z,9.3nm,0.7s
BILL Bilibino 88.91 354 *d i*P **P 13 43 41.1 -0.3**
BILL pmax pmax
comp=Z,10.0nm,0.7s
VNA1 Neumayer–Stat 88.94 177 P **P 13 43 42.1 +0.3**
SDCO Great Sand Dun 89.08 49 P **P 13 43 44.0 +0.7**
baz=243
DAWY Dawson 89.25 16 *e*P **P 13 43 42.5 -0.7**
comp=Z,20nm,0.7s
EGAK Eagle 89.40 15 *e*P **P 13 43 43.5 -0.3**
comp=Z,30nm,1.0s

MSTX **Muleshoe** 89.44 53 P **P** 13 43 45.3 +0.4
baz=245
KMI **Kunming** 89.49 297 P **P** 13 43 47.3 +1.9
KMI pmax pmax
comp=Z,47nm,1.1s
T25A **Trinidad** 89.59 50 P **P** 13 43 45.9 +0.2
baz=244
LAMP **Lampang** 89.70 290 P **P** 13 43 48.0 +1.8
comp=Z,32nm,0.8s,comp=Z,249nm
833A **Chaparral WMA,** 89.79 60 P **P** 13 43 47.2 +0.8
baz=247
ISCO **Idaho Springs** 89.93 47 P **P** 13 43 47.7 +0.5
baz=243
RLMT **Red Lodge** 90.03 41 P **P** 13 43 48.1 +0.7
baz=241,SNR=8.5
N23A **Red Feather La** 90.20 46 P **P** 13 43 49.0 +0.6
baz=243
CMAR **Chiang Mai Arr** 90.28 289 P **P** 13 43 50.8 +1.8
comp=Z,30nm,1.0s,baz=118,slow=2.9,SNR=122
CMAR PKKPbc **PKKPbc** 14 01 15.3 +0.5
comp=Z,0.9nm,0.7s,baz=309,slow=5.7,SNR=4.8
CHTO **Chiang Mai** 90.41 290 P **P** 13 43 50.9 +1.4
comp=Z,240nm,1.0s
CHTO **Chiang Mai** 90.41 290 *e*P **P** 13 43 49.4 -0.1
comp=Z,42nm,1.0s
CHTO **Chiang Mai** 90.41 290 *e*P **P** 13 43 49.4 -0.1
CHTO pmax pmax
comp=Z,42nm,1.0s
K22A **Casper** 90.61 44 P **P** 13 43 50.3 +0.2
baz=243,SNR=5.0
CMAI **Chiengmai2** 90.72 291 P **P** 13 43 52.5 +1.3
comp=Z,283nm,1.1s
TOLK **Toolik Lake Re** 91.07 10 P **P** 13 43 51.4 -0.1
baz=206
EGMT **Eagleton** 91.16 39 P **P** 13 43 53.0 +0.5
baz=240
ABTX **Abilene, Hawle** 91.28 56 P **P** 13 43 53.7 +0.4
baz=247
YAK **Yakutsk** 92.06 338 *e*P **P** 13 43 54.8 -1.3
YAK *e* 13 47 42.6
YAK *e*S **SKSac** 13 53 36.5 -1.5
YAK *e* 13 54 09.5
YAK *e*SS **SS** 14 00 46.2 +7.8
YAK *e*SSS SSS 14 04 18.2
YAK pmax pmax
comp=Z,18nm,0.9s
YAK pmax pmax
comp=N,3.0nm,1.1s
YAK pmax pmax
comp=E,3.0nm,1.0s
YAK pmax pmax
comp=Z,34nm,2.9s
YAK pmax pmax
comp=N,16nm,2.8s
YAK pmax pmax
comp=E,18nm,2.7s
YAK smax smax
comp=N,32nm,3.0s
YAK smax smax
comp=E,18nm,3.0s
RSSD **Black Hills** 92.89 44 P **P** 13 44 00.6 0.0
baz=244
INK **Inuvik** 94.07 15 P **P** 13 44 04.9 -0.2
comp=E,6.6nm,1.0s,baz=234,slow=5.2,SNR=10
ULN **Ulaanbaatar** 95.40 319*c*e**P** **P** 13 44 11.8 -0.1
ULN pmax pmax
comp=Z,6.0nm,1.2s
SONM **Songino Array** 95.79 319 P **P** 13 44 14.2 +0.6
comp=Z,1.1nm,0.5s,baz=133,slow=5.4,SNR=6.2
YKA **Yellowknife Ar** 96.28 25 P **P** 13 44 14.8 -0.4
comp=Z,0.8nm,0.7s,baz=245,slow=4.4,SNR=16
YKA pP **pP** 13 46 12.4 0.0
comp=Z,0.7nm,1.0s,baz=241,slow=4.1,SNR=4.2
GTA **Gaotai** 97.06 309 *e*P Pdif 13 44 19.8 +0.3
GTA pmax pmax
comp=Z,5.0nm,1.2s
ZAK **Zakamensk** 98.66 321 *e*P Pdif 13 44 24.3 -2.1
ZAK pmax pmax
comp=Z,1.0nm,1.2s
TIXI **Tiksi** 98.66 345⇑*e*P Pdif 13 44 24.8 -0.9
TIXI pmax pmax
comp=Z,3.0nm,1.0s
ZALV **Zalesovo Beam** 110.52 321 PKiKP **PKiKP** 13 49 15.1 -0.9
comp=Z,2.8nm,0.6s,baz=185,slow=1.1,SNR=13
MKAR **Makanchi Array** 111.26 313 Pdiff **Pdif** 13 45 24.2 +1.8
comp=Z,0.7nm,0.7s,baz=103,slow=4.9,SNR=7.3
MKAR PKiKP **PKiKP** 13 49 16.7 -1.1
comp=Z,3.8nm,0.7s,baz=76,slow=0.9,SNR=24
KURK **Kurchatov** 114.04 317 PKP PKPdf 13 49 22.1 -0.7
KURK PP **PP** 13 50 20.7 -6.7
KURK SKP 13 52 08.7
KURK **Kurchatov** 114.04 317*d* *i*PKIKP PKPdf 13 49 21.7 -1.1
KURK pmax pmax
comp=Z,7.0nm,0.8s
KURBB **Kurchatov Arra** 114.09 317 PKP PKPdf 13 49 22.1 -0.8
comp=Z,5.2nm,0.7s,baz=96,slow=1.9,SNR=57
KURBB PP **PP** 13 50 20.7 -7.1
comp=Z,0.9nm,1.0s,baz=86,slow=6.8,SNR=4.6
KURBB SKP 13 52 08.7
comp=Z,0.7nm,0.8s,baz=91,slow=2.0,SNR=4.1
AAK **Ala-Archa** 116.39 308 PKP **PKPdf** 13 49 26.9 -0.9
comp=Z,1.0nm,0.3s,baz=184,slow=2.5,SNR=3.5
FRB **Frobisher Bay** 116.55 28 PKP **PKPdf** 13 49 26.2 -1.0
comp=Z,2.5nm,0.6s,baz=268,slow=2.1,SNR=3.7
BVAR **Borovoye Array** 119.11 320 PKP **PKPdf** 13 49 31.9 -0.7
comp=Z,11nm,0.7s,baz=85,slow=1.6,SNR=42
BVAR PP **PP** 13 50 58.7 -3.5
comp=Z,0.5nm,0.6s,baz=123,slow=5.3,SNR=2.4
BRVK **Borovoye** 119.17 320*d* *i*PKIKP **PKPdf** 13 49 31.9 -0.8
BRVK pmax pmax
comp=Z,14nm,1.0s
OPO **Ambohidratompo** 121.37 232 PKP **PKPdf** 13 49 38.5 +0.3
comp=Z,6.5nm,1.0s,baz=2.7,slow=4.0,SNR=5.3
SPITS **Spitsbergen Ar** 121.73 357 PKP **PKPdf** 13 49 36.6 -0.3
comp=Z,9.9nm,0.8s,baz=101,slow=4.3,SNR=9.5
SUMG **Summit** 122.95 14 *i* P **PKPdf** 13 49 40.1 +0.2
comp=Z,16nm,1.2s
SVE **Sverdlovsk** 124.00 326 *e*PKIKP **PKPdf** 13 49 41.7 -0.1
SVE pmax pmax
comp=Z,25nm,1.2s
ARU **Arti** 125.21 326 PKP **PKPdf** 13 49 43.8 -0.3
comp=Z,9.6nm,0.6s,baz=127,slow=1.2,SNR=16
ARU PP **PP** 13 51 39.1 -3.6
comp=Z,1.2nm,0.3s,baz=85,slow=6.7,SNR=7.5
ARU **Arti** 125.21 326 *i* PKIKP **PKPdf** 13 49 43.6 -0.5
ARU 13 51 41.1
ARU 13 56 03.4
BOSA **Boshof** 126.49 205 PKP **PKPdf** 13 49 48.3 +0.6
comp=Z,6.3nm,0.9s,baz=150,slow=4.4,SNR=4.2
AKTO **Aktyubinsk** 127.11 318 PKP **PKPdf** 13 49 47.8 -0.2
comp=Z,7.0nm,0.8s,baz=77,slow=1.4,SNR=22
SCO **Scoresbysund** 127.83 10 *i* P **PKPdf** 13 49 48.4 -0.3
comp=Z,9.0nm,1.1s
ARCES **ARCESS Array B** 128.82 350 PKP **PKPdf** 13 49 50.8 +0.1
comp=Z,7.2nm,0.7s,baz=48,slow=1.8,SNR=22
KLMR **Klimovskoe** 131.84 337 *e*PKHKP PKPpre 13 49 46.9
KLMR pmax pmax
comp=Z,20nm,1.3s
KLMR **Klimovskoe** 131.84 337 *e*PKPdf PKPpre 13 49 47.0
KLMR AMP 13 49 57.9
comp=Z,20nm,1.3s
FINES **FINESS Array B** 135.69 344 PKhKP PKPpre 13 49 52.6
comp=Z,1.2nm,0.6s,baz=66,slow=4.8,SNR=4.1
FINES PKP **PKPdf** 13 50 02.4 -1.4
comp=Z,3.6nm,0.6s,baz=94,slow=2.2,SNR=10.0
FINES **FINESS Array B** 135.69 344*c* *i*PKIKP **PKPdf** 13 50 05.0 +1.2
FINES pmax pmax
comp=Z,4.0nm,0.6s
OBN **Obninsk** 136.74 332⇑*i*PKIKP **PKPdf** 13 50 02.8 -3.1
OBN *e* 13 52 48.0
OBN pmax pmax
comp=Z,41nm,2.5s
VSR **Storozhevoye** 137.78 326 *e*PKIKP **PKPdf** 13 50 07.6 -0.4
VSR pmax pmax
comp=Z,10.0nm,1.1s
VSU **Vasula** 137.98 341*d* *i*PKIKP **PKPdf** 13 50 08.7 +0.6
ZEI **Tsey** 138.60 312 *i* PKIKP **PKPdf** 13 50 11.8 +1.7
ZEI pmax pmax
comp=Z,5.0nm,0.4s
GNI **Garni** 138.79 308⇑*i*PKIKP **PKPdf** 13 50 10.9 +0.5
GNI pmax pmax
comp=Z,61nm,1.7s
NB2 **NORSAR Subarra** 138.86 353 PKP PKPpre 13 50 00.1
comp=Z,8.1nm,1.4s,baz=10,slow=3.2
NOA **NORSAR Array B** 138.86 353 PKhKP PKPpre 13 50 00.3
comp=Z,3.6nm,0.8s,baz=14,slow=2.4,SNR=6.8
KBZ **Khabaz** 138.96 314 PKP **PKPdf** 13 50 12.8 +2.5
comp=Z,3.1nm,0.8s,baz=120,slow=4.7,SNR=7.0
KIV **Kislovodsk** 139.02 314⇑*i*PKIKP **PKPdf** 13 50 10.8 +0.2
KIV pmax pmax
comp=Z,8.0nm,1.0s
NEY **Neytrino** 139.25 313⇑*i*PKIKP **PKPdf** 13 50 12.5 +1.3
HFS **Hagfors** 139.43 351 PKhKP PKPpre 13 50 02.6
comp=Z,5.0nm,0.5s,baz=47,slow=2.6,SNR=18
HFS SKPbc **SKPbc** 13 52 57.3 +0.8
comp=Z,4.4nm,0.9s,baz=318,slow=1.9,SNR=4.9
RAYN **Ar Rayn** 139.86 283 *e*PKPdf **PKPdf** 13 50 12.0 -0.7
RAYN **Ar Rayn** 139.86 283 *e*PKIKP **PKPdf** 13 50 12.0 -0.7
ANN **Anapa** 142.07 318 *e*PKIKP **PKPdf** 13 50 20.7 +4.8
ANN pmax pmax
comp=Z,34nm,1.1s
SUW **Suwalki** 142.78 340 *e*PKP **PKPdf** 13 50 14.3 -2.6
SUW **Suwalki** 142.78 340 *e*PKIKP **PKPdf** 13 50 14.3 -2.6
KELT **Kelkit** 142.78 310 *i* P **PKPdf** 13 50 15.6 -2.0
AKASG **Malin Array Be** 143.00 331 PKhKP PKPpre 13 50 14.6
comp=Z,32nm,0.6s,baz=42,slow=4.3,SNR=82
AKASG SKPbc **SKPbc** 13 53 06.2 +0.3
comp=Z,0.5nm,0.4s,baz=44,slow=3.4,SNR=4.1
SHEL **Horse Pasture** 143.07 167 *i* PKIKP **PKPdf** 13 50 18.7 +0.1
KLNR **Kaliningrad** 143.18 343*ce*PKIKP PKPbc 13 50 15.6 -0.1
SUSE **Susehri** 143.51 311 *i* P PKPab 13 50 16.9 -0.4
ELZG **Elazig** 143.55 308 *i* P **PKPdf** 13 50 18.9 -0.1
MUD **Monsted U'grnd** 143.58 354 *i* P PKPab 13 50 16.6 -0.2
comp=Z,82nm,0.9s
KEMA **Kemaliye** 143.65 309 *i* P **PKPdf** 13 50 18.7 -0.3
COP **Copenhagen** 143.90 350 *i* P PKPbc 13 50 17.6 -0.3
comp=Z,60nm,0.9s
SANL **SANLIURFA_Merk** 143.96 306 *i* P **PKPdf** 13 50 19.6 +0.1
BSD **Bornholm Skovb** 143.99 348⇓*i*P PKPbc 13 50 17.7 -0.6
comp=Z,94nm,0.8s
SIM **Simferopol'** 144.03 320*de*PKIKP **PKPdf** 13 50 19.2 -0.2
SIM pmax pmax
comp=Z,98nm,0.8s
HEKM **Malatya_Hekimh** 144.17 309 *i* P **PKPdf** 13 50 21.1 +1.0
SURC **SANLIURFA_SURC** 144.34 305 *i* P PKPbc 13 50 20.0 0.0
ERBA **Erbaa** 144.34 312 *i* P **PKPab** 13 50 20.8 +0.4
CUKAN **kangal_SIVAS** 144.37 310 *i* P **PKPab** 13 50 21.3 +0.7
ATAB **Bozova** 144.40 306 *i* P **PKPab** 13 50 21.1 +0.5
EKA **Eskdalemuir Ar** 144.84 5 PKP **PKPdf** 13 50 20.5 +0.1
comp=Z,8.8nm,0.6s,baz=348,slow=3.1,SNR=32
CUALT **Altinyayla-SIV** 144.90 310 *i* P **PKPab** 13 50 23.0 +0.4
GKP **Gorka Klasztor** 145.17 344 *e*PKP **PKPbc** 13 50 22.0 +0.1
GKP **Gorka Klasztor** 145.17 344 *e*PKIKP **PKPbc** 13 50 22.0 +0.1
SORM **Soroca** 145.20 329⇓*i*P **PKPbc** 13 50 21.9 -0.3
SORM **Soroca** 145.20 329⇓PKIKP **PKPbc** 13 50 21.9 -0.3
BEL **Belsk** 145.40 340 *e*PKP **PKPbc** 13 50 23.3 +0.6
BEL **Belsk** 145.40 340 *e*PKP2 **PKPbc** 13 50 23.3 +0.6
CTAK **Corum_Osmancik** 145.71 313 *i* P **PKPbc** 13 50 24.8 +0.6
COAL **Corum-Alaca** 145.75 313 *i* P **PKPbc** 13 50 24.7 +0.5
ANDN **Andirin** 145.82 308 *i* P **PKPbc** 13 50 24.7 +0.2
LVV **L'vov** 145.87 335 *e*PKP2 **PKPbc** 13 50 24.6 +0.5
ILGA **Ilgaz** 146.25 315 *i* P **PKPab** 13 50 27.0 -1.0
YAHY **KAYSERI_Yahyal** 146.35 309 *i* P **PKPbc** 13 50 26.2 +0.1
LEOM **Leova** 146.38 327⇓*i*P **PKPbc** 13 50 25.0 -0.6
LEOM **Leova** 146.38 327⇓PKIKP **PKPbc** 13 50 25.0 -0.6
KWP **Kalwaria Pacla** 146.54 336 *e*PKP **PKPbc** 13 50 26.1 +0.1
KWP **Kalwaria Pacla** 146.54 336 *e*PKP2 **PKPbc** 13 50 26.1 +0.1
YURE **YUREGIR** 146.62 307 *i* P **PKPbc** 13 50 27.8 +1.2
ELDT **Eldivan** 146.71 314 *i* P **PKPbc** 13 50 27.7 +0.7
BRTR **Keskin Array B** 146.91 313 PKP **PKPdf** 13 50 24.1 -0.5
comp=Z,16nm,0.8s,baz=138,slow=2.7,SNR=60
BRTR PKPbc **PKPbc** 13 50 27.2 -0.3
comp=Z,17nm,0.8s,baz=133,slow=3.5,SNR=69
BRTR pPKPbc pPKPab 13 52 31.1 +1.1
comp=Z,2.3nm,0.9s,baz=148,slow=2.6,SNR=5.0
ASF **Jabal al Asfar** 146.91 298 PKPbc **PKPbc** 13 50 28.4 +0.7
comp=Z,24nm,0.8s,baz=48,slow=2.2,SNR=38
TLCR 146.92 325⇓*i*P **PKPbc** 13 50 27.2 +0.1
TLCR 146.92 325⇓PKP2 **PKPbc** 13 50 27.2 +0.1
BURAR **Bucovina Array** 147.04 331⇑*i*P **PKPbc** 13 50 28.4 +0.8
BURAR **Bucovina Array** 147.04 331⇑PKP2 **PKPbc** 13 50 28.4 +0.8
GULE **Gulek** 147.09 308 *i* P **PKPbc** 13 50 28.4 +0.3
OJC **Ojcow** 147.10 339 *e*PKP **PKPbc** 13 50 27.6 +0.1
OJC **Ojcow** 147.10 339 *e*PKP2 **PKPbc** 13 50 27.6 +0.1
TESR **Tescani** 147.16 328⇓*i*P **PKPbc** 13 50 26.9 -0.9
AKSY **AKSARAY - Alti** 147.29 311 *i* P **PKPbc** 13 50 28.3 -0.2
CFR **Carcaliu** 147.29 325⇑*i*P **PKPbc** 13 50 27.6 -0.5
CFR **Carcaliu** 147.29 325⇑PKIKP **PKPbc** 13 50 27.6 -0.5
ANTO **Ankara** 147.42 313⇓*i*P **PKPbc** 13 50 28.8 0.0
ANTO **Ankara** 147.42 313⇓PKP2 **PKPbc** 13 50 28.8 0.0
BCAM **Yenicaga** 147.46 315 *i* P **PKPbc** 13 50 28.6 -0.3
UZH **Uzhgorod** 147.51 335 *i* PKIKP **PKPbc** 13 50 28.0 -0.6
UZH *i* 13 50 29.5
VRI **Vrincioaia** 147.57 327⇓*i*P **PKPbc** 13 50 28.8 -0.1
VRI **Vrincioaia** 147.57 327⇓PKP2 **PKPbc** 13 50 28.8 -0.1
TIRR **Tirgusor** 147.61 324⇓*i*P **PKPbc** 13 50 28.7 -0.2
TIRR **Tirgusor** 147.61 324⇓PKP2 **PKPbc** 13 50 28.7 -0.2
NIE **Niedzica** 147.61 338 *e*PKP **PKPbc** 13 50 29.6 +0.7
NIE **Niedzica** 147.61 338 *e*PKP2 **PKPbc** 13 50 29.6 +0.7
CRVS **Cervenica-Dubn** 147.61 336 *e*PKP2 **PKPbc** 13 50 29.2 +0.3
CRVS **Cervenica-Dubn** 147.61 336 *e*PKP **PKPbc** 13 50 29.2 +0.3
CRVS *e* 13 50 33.8
KSP **Ksiaz** 147.62 343 *e*PKP **PKPbc** 13 50 29.3 +0.5
KSP **Ksiaz** 147.62 343 *e*PKP2 **PKPbc** 13 50 29.3 +0.5
PLOR **Plostina** 147.62 327⇓*i*P **PKPbc** 13 50 28.5 -0.5
PLOR **Plostina** 147.62 327⇓PKIKP **PKPbc** 13 50 28.5 -0.5
HARR **Harsova** 147.72 325⇓*i*P **PKPbc** 13 50 29.9 +0.7
HARR **Harsova** 147.72 325⇓PKP2 **PKPbc** 13 50 29.9 +0.7
TLB **Topalu** 147.73 324⇓*i*P **PKPbc** 13 50 29.5 +0.2
TLB **Topalu** 147.73 324⇓PKP2 **PKPbc** 13 50 29.5 +0.2
BMR **Baia Mare** 147.76 333⇓*i*P **PKPbc** 13 50 30.0 +0.7
BMR **Baia Mare** 147.76 333⇓PKP2 **PKPbc** 13 50 30.0 +0.7
TRPA **Tarpa** 147.81 334⇑*i*P **PKPbc** 13 50 29.5 +0.2
TRPA **Tarpa** 147.81 334⇓*ex* P **PKPbc** 13 50 29.3 0.0
ARCR **ARCALIA** 147.83 331⇓*i*P **PKPab** 13 50 34.7 +0.9
MMAI **Mount Meron Ar** 147.94 300 PKPbc **PKPbc** 13 50 30.9 +0.6
comp=Z,44nm,0.8s,baz=68,slow=4.6,SNR=58
MMAI pPKPbc **pPKPab** 13 52 34.9 +0.8
comp=Z,7.3nm,0.8s,baz=222,slow=2.2,SNR=6.0
CLL **Collm** 147.97 347 *e*PKPdf **PKPdf** 13 50 26.0 +0.2
CLL ⇓*i*PKPbc **PKPbc** 13 50 29.8 +0.1
comp=Z,88nm,0.9s
CLL ⇑*i*PKPab **PKPab** 13 50 34.1 -0.1
comp=Z,28nm,1.0s
CLL *e*pPKPab **pPKPab** 13 52 33.0 -0.4
OKC **Ostrava-Krasne** 147.97 340⇑*e*PKP **PKPbc** 13 50 30.3 +0.6
OKC **Ostrava-Krasne** 147.97 340 *e*PKP2 **PKPbc** 13 50 30.3 +0.6
UPC **Upice** 148.00 343⇑*e*PKP **PKPbc** 13 50 30.7 +0.9
UPC *e*PKPAB **PKPab** 13 50 35.3 +0.9
UPC **Upice** 148.00 343 *e*PKP2 **PKPbc** 13 50 30.7 +0.9
DPC **Dobruska-Polom** 148.05 343⇑*e*PKP **PKPbc** 13 50 30.8 +0.8
DPC *e*PKPAB **PKPab** 13 50 36.1 +1.4
DPC **Dobruska-Polom** 148.05 343 *e*PKP2 **PKPbc** 13 50 30.8 +0.8
LANS **Liptovska Anna** 148.13 338 *e*PKP **PKPdf** 13 50 27.0 +0.8
LANS *e* 13 50 31.4
DOPR **Dopca** 148.16 329⇓*i*P **PKPbc** 13 50 31.3 +0.9
KRLC **Kraliky** 148.17 342⇑*e*PKP **PKPbc** 13 50 31.2 +0.9
KRLC **Kraliky** 148.17 342 *e*PKP2 **PKPbc** 13 50 31.2 +0.9
BRG **Berggiesshubel** 148.17 346 *e*PKP **PKPdf** 13 50 26.4 +0.3
comp=Z,12nm,1.3s
BRG **Berggiesshubel** 148.17 346 *i* PKP **PKPbc** 13 50 30.6 +0.4
comp=Z,52nm,1.0s
BRG **Berggiesshubel** 148.17 346 *i* PKP **PKPab** 13 50 35.1 0.0
comp=Z,29nm,0.8s
BRG *e*pPKP **pPKPdf** 13 52 31.0 +0.3
comp=Z,8.6nm,1.2s
BRG **Berggiesshubel** 148.17 346 *e*PKHKP PKPpre 13 50 26.4
BRG *i* 13 50 35.1
BRG pmax pmax
comp=Z,12nm,1.3s
ISR **Istrita** 148.17 326⇓*i*P **PKPbc** 13 50 30.9 +0.4
ISR **Istrita** 148.17 326⇓PKP2 **PKPbc** 13 50 30.9 +0.4
MORC **Moravsky Berou** 148.21 341⇓*i*P **PKPbc** 13 50 30.8 +0.4
MORC **Moravsky Berou** 148.21 341⇓PKP2 **PKPbc** 13 50 30.8 +0.4
MORC **Moravsky Berou** 148.21 341 *e*PKP **PKPbc** 13 50 30.7 +0.4
MLR **Muntele Rosu** 148.22 328 PKPbc **PKPbc** 13 50 30.6 0.0
comp=Z,5.7nm,0.9s,baz=295,slow=2.2,SNR=24
MLR **Muntele Rosu** 148.22 328⇑*i*P **PKPbc** 13 50 29.3 -1.4
PSN **Preselentsi** 148.22 323 P **PKPbc** 13 50 30.0 -0.6
SAHE **Sakarya_HENDEK** 148.23 316 *i* P **PKPbc** 13 50 29.5 -1.2
BTAS **Taskesti** 148.28 316 *i* P **PKPbc** 13 50 30.5 -0.4
KECS **Kecovo** 148.32 337 *e*PKP **PKPbc** 13 50 30.0 -0.7
PVCC **Panska Ves** 148.35 345⇑*e*PKP **PKPbc** 13 50 31.3 +0.7
PVCC **Panska Ves** 148.35 345 *e*PKP2 **PKPbc** 13 50 31.3 +0.7
CJR **Cluj-Napoca** 148.45 331⇑*i*P **PKPbc** 13 50 32.0 +0.9
CJR **Cluj-Napoca** 148.45 331⇑PKP2 **PKPbc** 13 50 32.0 +0.9
SECR 148.48 327⇑*i*P **PKPbc** 13 50 31.9 +0.7
KONT **Konya--Tatoy** 148.59 310 *i* P **PKPbc** 13 50 30.9 -0.8
VOIR 148.71 328⇑*i*P **PKPbc** 13 50 32.0 +0.2
GEYV **SAKARYA_Geyve** 148.78 316 *i* P **PKPbc** 13 50 32.1 0.0
DRGR 148.78 332⇓*i*P **PKPbc** 13 50 32.5 +0.5
DRGR 148.78 332⇑PKP2 **PKPbc** 13 50 32.5 +0.5
PRA **Prague** 148.80 345⇑*e*PKP **PKPbc** 13 50 32.8 +1.0
PRA **Prague** 148.80 345 *e*PKP2 **PKPbc** 13 50 32.8 +1.0
PRU **Pruhonice** 148.85 345⇑*e*PKP **PKPbc** 13 50 32.4 +0.5
PRU **Pruhonice** 148.85 345 *e*PKP2 **PKPbc** 13 50 32.4 +0.5
GOPC **GO Pecny, Ondr** 148.86 344⇑*e*PKP **PKPbc** 13 50 32.5 +0.5
GOPC *e*PKPAB **PKPab** 13 50 38.8 +0.8
GOPC **GO Pecny, Ondr** 148.86 344 *e*PKP2 **PKPbc** 13 50 32.5 +0.5
ESKT **Eskisehir** 148.91 314 *i* P **PKPbc** 13 50 31.2 -1.3
VYHS **Vyhne** 148.91 338 *e*PKP **PKPbc** 13 50 32.5 +0.4
VYHS *e* 13 50 38.7
VRAC **Vranov** 148.91 342⇓*i*P **PKPbc** 13 50 32.4 +0.3
VRAC **Vranov** 148.91 342⇓PKHKP PKPpre 13 50 32.4
VRAC **Vranov** 148.91 342 *e*PKP **PKPbc** 13 50 32.4 +0.3
ARR **Arges** 148.96 329⇓*i*P **PKPbc** 13 50 33.6 +1.2
PRD **Provadia** 148.97 323 P **PKPbc** 13 50 32.0 -0.4
JAVC **Velka Javorina** 148.98 340 *e*PKP **PKPbc** 13 50 33.7 +1.4
BORA **Eskisehir** 148.99 315 *i* P **PKPbc** 13 50 32.3 -0.4
CSS **Mathiatis** 149.01 305 P **PKPbc** 13 50 31.2 -1.6
CSS **Mathiatis** 149.01 305 P **PKPbc** 13 50 32.6 -0.2
CSS **Mathiatis** 149.01 305 P **PKPbc** 13 50 31.2 -1.6
PSZ **Piszkesteto** 149.01 337⇓*i*P **PKPbc** 13 50 32.5 0.0
EIL **Elat** 149.03 294 PKPbc **PKPab** 13 50 37.3 -2.0
comp=Z,51nm,1.1s,baz=49,slow=1.5,SNR=30
NKC **Novy Kostel** 149.10 347⇑*e*PKP **PKPbc** 13 50 33.2 +0.6
NKC **Novy Kostel** 149.10 347 *e*PKP2 **PKPbc** 13 50 33.2 +0.6
KRUC **Moravsky** 149.19 342 *e*PKP **PKPbc** 13 50 32.9 +0.1
DEV **Deva** 149.40 331⇑*i*P **PKPbc** 13 50 32.6 -0.8
SZAL **Souni** 149.43 304 P **PKPbc** 13 50 33.7 -0.1
ALFC **Alefka** 149.50 305 P **PKPbc** 13 50 33.5 -0.5
MODS **Modra-Piesok** 149.53 340 *e*PKP **PKPbc** 13 50 33.3 -0.3
IGD **Bursa** 149.61 317 *i* P **PKPbc** 13 50 34.3 +0.2
BAGO **Egridir - ISPA** 149.68 312 *i* P **PKPbc** 13 50 34.5 0.0
SZH **Strazhica** 149.74 324 P **PKPbc** 13 50 34.0 -0.3
AKMC **Akamas** 149.75 305 P **PKPbc** 13 50 33.7 -0.9
KHC **Kasperske Hory** 149.88 345 *e*PKPDF **PKPdf** 13 50 29.0 0.0
KHC ⇑*e*PKP **PKPbc** 13 50 34.8 +0.3
KHC *e*PKPAB **PKPab** 13 50 42.9 +0.6
KHC *ex* x 13 52 43.0
KHC **Kasperske Hory** 149.88 345 *e*PKIKP **PKPdf** 13 50 29.0 0.0
KHC *e* 13 50 42.9
KZIL **AFYON_Kizioren** 150.00 313 *i* P **PKPbc** 13 50 34.5 -0.7
GERES **GERESS Array B** 150.12 345 PKP **PKPdf** 13 50 29.4 0.0
comp=Z,2.1nm,1.0s,baz=50,slow=2.1,SNR=11
GERES PKPbc **PKPbc** 13 50 35.4 +0.3
comp=Z,16nm,0.8s,baz=48,slow=2.0,SNR=72
GERES pPKPbc **pPKPbc** 13 52 38.5 +0.1
comp=Z,1.1nm,0.8s,baz=45,slow=4.3,SNR=2.9
SRE **Strehaia** 150.17 329⇓*i*P **PKPbc** 13 50 35.6 +0.4
SRE **Strehaia** 150.17 329⇓PKIKP **PKPbc** 13 50 35.6 +0.4
BZS **Buzias** 150.18 332⇑*i*P **PKPbc** 13 50 34.7 -0.5
BZS **Buzias** 150.18 332⇑PKIKP **PKPbc** 13 50 34.7 -0.5
CONA **Conrad Observa** 150.36 341 *i* PKPbc **PKPbc** 13 50 35.9 +0.2
comp=Z,26nm,0.7s,SNR=14
CONA *e*PKPab **PKPab** 13 50 45.5 +1.1
comp=Z,14nm,0.7s
SOP **Sopron** 150.37 340⇓*ex* **PKPbc** 13 50 35.6 0.0
HERR **Herculane** 150.38 330⇑*i*P **PKPbc** 13 50 35.5 -0.2
KORT **Korkueli** 150.44 310 *i* P **PKPbc** 13 50 35.9 -0.4
DURS **Dursunbey** 150.44 316 *i* P **PKPbc** 13 50 35.8 -0.3
BANR **Banloc** 150.57 332⇓*i*P **PKPdf** 13 50 32.3 +2.2
SART **Tekirdag** 150.64 319 *i* P **PKPbc** 13 50 35.1 -1.4
MOA **Molln** 150.89 343 *e*PKPbc **PKPbc** 13 50 36.7 -0.2
comp=Z,8.6nm,0.7s
MOA *e*PKPab **PKPab** 13 50 47.3 +0.8
comp=Z,16nm,0.9s
MORH M¨±r¡gy, Hung 150.91 336⇓*ex* **PKPbc** 13 50 36.4 -0.5
BALY **Balya** 150.91 317 *i* P **PKPbc** 13 50 35.5 -1.6
STEP **BALIKESIR_Sava** 151.05 316 *i* P **PKPbc** 13 50 36.7 -0.8
ARSA **Arzberg** 151.07 341 *i* PKPbc **PKPbc** 13 50 36.8 -0.4
comp=Z,12nm,1.4s
ALN **Alexandroupoli** 151.20 321 P **PKPbc** 13 50 37.1 -0.6
TAVA **DENIZLI_Tavas** 151.24 312 *i* P **PKPbc** 13 50 38.5 +0.4
RDO **Rodhopi** 151.34 321 P **PKPbc** 13 50 37.5 -0.5
BAYC **CANAKKALE_Bayi** 151.59 318 *i* P **PKPbc** 13 50 37.8 -0.9
VTS **Vitosha** 151.66 326⇓*i*P **PKPbc** 13 50 39.1 +0.2
VTS **Vitosha** 151.66 326 P **PKPbc** 13 50 38.0 -0.9
VTS **Vitosha** 151.66 326 ⇓PKIKP **PKPbc** 13 50 39.1 +0.2
SOKA **Soboth** 151.74 341 *i* PKPbc **PKPbc** 13 50 38.3 -0.6
comp=Z,15nm,1.0s,SNR=6.4
TURN **Turunc** 151.74 311 *i* P **PKPbc** 13 50 40.0 +0.9
SMTH **Samothraki Isl** 151.77 320 P **PKPbc** 13 50 38.1 -0.9
GROS **Grobnik** 151.78 340 *e*PKPdf **PKPdf** 13 50 33.1 -0.1
GROS *e*PKPbc **PKPbc** 13 50 38.2 -0.8
GROS *i* PKPab **PKPab** 13 50 50.2 -0.1
KBA **Koelnbreinsper** 151.85 344 *e*PKPdf **PKPdf** 13 50 31.5 -0.8
comp=Z,11nm,1.6s
KBA *i* PKPbc **PKPbc** 13 50 38.5 -0.7
comp=Z,11nm,0.8s
AYDN **Tasoluk** 151.85 313 *i* P **PKPbc** 13 50 39.6 +0.2
OBKA **Obir** 152.03 342 *i* PKPbc **PKPbc** 13 50 38.7 -0.8
comp=Z,7.1nm,1.0s
PRK **Paraskevi** 152.05 318 P **PKPbc** 13 50 39.5 -0.1
RETA **Reutte** 152.06 348 *i* PKiKP **PKiKP** 13 50 40.1 +0.3
comp=Z,6.8nm,0.7s
RETA *e*PKPab **PKPab** 13 50 52.1 +0.6
comp=Z,9.9nm,0.7s
WTTA **Wattenberg** 152.09 346 *i* PKPbc **PKPbc** 13 50 39.6 -0.2
comp=Z,17nm,0.9s
WTTA *i* PKPab **PKPab** 13 50 52.3 +0.6
comp=Z,8.7nm,0.6s
NVR **Nevrokopi** 152.17 324 P **PKPbc** 13 50 39.5 -0.4
MYKA **Terra Mystica** 152.18 343 *e*PKPdf **PKPdf** 13 50 33.2 +0.6
comp=Z,5.5nm,1.2s
MYKA *i* PKPbc **PKPbc** 13 50 38.8 -1.0
comp=Z,8.0nm,0.6s
KKB **Krupnik** 152.24 325 P **PKPbc** 13 50 38.0 -2.0
ABTA **Abfaltersbach** 152.37 345 *e*PKPdf **PKPdf** 13 50 32.1 -0.8
comp=Z,12nm,0.9s
ABTA *i* PKPbc **PKPbc** 13 50 39.4 -0.9
comp=Z,20nm,0.7s
ABTA *e*PKPab **PKPab** 13 50 52.7 -0.2
comp=Z,16nm,0.8s
DAVA **Damuels** 152.42 349 *e*PKPbc **PKPbc** 13 50 40.1 -0.3
comp=Z,26nm,1.2s,SNR=6.1
LJU **Ljubljana** 152.46 341 *i* PKPbc **PKPbc** 13 50 40.1 -0.3
ZEY ¯zmir 152.47 316 *i* P **PKPbc** 13 50 39.9 -0.7
FETA **Feichten** 152.51 347 *i* PKPdf **PKPdf** 13 50 33.2 0.0
comp=Z,8.5nm,0.8s
FETA *i* PKPbc **PKPbc** 13 50 40.6 0.0
comp=Z,13nm,0.9s
FETA *e*PKPab **PKPab** 13 50 54.2 +0.7
comp=Z,8.7nm,0.9s
VISS **Visnje** 152.58 341 *i* PKPbc **PKPbc** 13 50 40.2 -0.5
CHOS **Chios island** 152.68 316 P **PKPbc** 13 50 39.6 -1.6
PDG **Podgorica** 153.73 331⇓*i*P **PKPbc** 13 50 42.0 -1.2
XOR **Xorichti** 153.86 321 P **PKPab** 13 50 57.4 -2.0
LAST **Lasithi** 154.78 311 P **PKPbc** 13 50 45.9 +0.1
ANX **Ano Chora** 155.12 321 P PKPdf 13 50 46.0 +9.0
IDI **Anoyia** 155.13 311 PKP **PKPdf** 13 50 37.6 +0.5
comp=Z,4.1nm,0.9s,baz=106,slow=6.1,SNR=3.5
IDI **Anoyia** 155.13 311⇑*i*P **PKPdf** 13 50 37.2 +0.1
DSL **Palaion Diasel** 155.22 323 P **PKPab** 13 51 02.7 -2.6
PBRG **Braganca** 157.30 18 *e*PKPdf PKPdf 13 50 49.5 +10
PBRG **Braganca** 157.30 18 *e*PKPab **PKPab**

TIC	**Toumodi**	**164.66**	**152**	*e*PKIKP	**PKPdf**	**13 50 47.2**	**-1.0**
DBIC	**Dimbokro**	**164.75**	**152**	PKP	**PKPdf**	**13 50 48.0**	**-0.3**
	comp=Z,6.6nm,1.0s,baz=331,slow=4.5,SNR=5.5						
DBIC				PKPab	**PKPab**	**13 51 47.8**	**+0.4**
	comp=Z,5.3nm,1.2s,baz=171,slow=6.3,SNR=4.7						
MDT	**Midelt**	**166.16**	**25**	PKP	**PKPdf**	**13 50 50.1**	**+1.1**
	comp=Z,5.1nm,1.0s,baz=349,slow=5.8,SNR=6.0						
KOWA	**Kowa**	**171.66**	**133**	PKP	**PKPdf**	**13 50 51.9**	**-0.8**
	comp=Z,4.1nm,0.8s,baz=314,slow=5.3,SNR=9.3						
TORD	**Torodi Ar. Bea**	**172.82**	**176**	PKP	**PKPdf**	**13 50 52.6**	**-0.7**
	comp=Z,8.0nm,0.9s,baz=314,slow=0.9,SNR=26						
TORD				PKPab	**PKPab**	**13 52 23.3**	**+0.4**
	comp=Z,2.6nm,0.9s,baz=175,slow=4.5,SNR=7.8						
TORD				pPKP	**pPKPdf**	**13 52 59.7**	**+1.0**
	comp=Z,2.3nm,1.2s,baz=152,slow=1.2,SNR=2.2						
TORD				PP	**PP**	**13 56 14.2**	**+0.5**
	comp=Z,1.3nm,0.9s,baz=176,slow=3.5,SNR=5.5						

*DDA **01** 13:34:53.8, 39°.08N×29°.17E, h7km, Ml2.5*
*ISCJB **01** 13:34:54.4±0.5, 39°.10N±0°.04×29°.15E±0°.04, h9km±4km, Error ellipse: s-maj=6.6km s-min=4.0km az=153.6*
*CSEM **01** 13:34:54.3±0.2, 39°.11N×29°.16E, h8km, ML1.8, Error ellipse: s-maj=4.3km s-min=2.9km az=136.0*
*ISK **01** 13:34:54.2, 39°.14N×29°.16E, h5km, ML1.8/4*
ISC 01 13:34:54.7±0.9, 39°.12N±0°.03×29°.16E±0°.02, h11km±6km, n23, σ0°59/40, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHAP	**Saphane-Kutahy**	**0.11**	**151**	PG	**Pg**	**13 34 57.8**	**+0.2**
SHAP				SG	**Sg**	**13 34 59.6**	**-0.1**
SHAP	**Saphane-Kutahy**	**0.11**	**151**	*e*Pg	**Pg**	**13 34 57.8**	**+0.2**
SHAP				*e*Sg	**Sg**	**13 34 59.6**	**-0.1**
SIMA	**Simav-Kutahya**	**0.14**	**255**	PG	**Pg**	**13 34 57.9**	**-0.1**
SIMA	**Simav-Kutahya**	**0.14**	**255**	*e*Pg	**Pg**	**13 34 57.9**	**-0.1**
GDZ	**Gediz**	**0.26**	**97**	*i* P	**Pg**	**13 34 59.0**	**-1.0**
GDZ				*i* S	**Sg**	**13 35 03.1**	**-0.5**
GDZ	**Gediz**	**0.26**	**97**	P	**Pg**	**13 34 59.0**	**-1.0**
GDZ				S	**Sg**	**13 35 03.1**	**-0.5**
DEMI	**Demirci**	**0.35**	**258**	*i* P	**Pg**	**13 35 01.1**	**-0.6**
DEMI				*i* S	**Sg**	**13 35 06.2**	**-0.2**
DEMI	**Demirci**	**0.35**	**258**	P	**Pg**	**13 35 01.1**	**-0.6**
DEMI				S	**Sg**	**13 35 06.2**	**-0.2**
TVSB	**Tavsanli**	**0.41**	**36**	PG	**Pg**	**13 35 01.9**	**-0.9**
TVSB				SG	**Sg**	**13 35 08.2**	**0.0**
TVSB	**Tavsanli**	**0.41**	**36**	*e*Pg	**Pg**	**13 35 01.9**	**-0.9**
TVSB				*e*Sg	**Sg**	**13 35 08.2**	**0.0**
DURS	**Dursunbey**	**0.71**	**313**	*i* P	**Pg**	**13 35 07.7**	**-0.8**
DURS				*i* S	**Sb**	**13 35 19.9**	**+0.8**
DURS	**Dursunbey**	**0.71**	**313**	P	**Pg**	**13 35 07.7**	**-0.8**
DURS				S	**Sb**	**13 35 19.9**	**+0.8**
KULA	**Kula-Manisa**	**0.72**	**213**	PG	**Pg**	**13 35 08.2**	**-0.3**
KULA	**Kula-Manisa**	**0.72**	**213**	*e*Pg	**Pg**	**13 35 08.2**	**-0.3**
MANT	**Manisa**	**0.78**	**217**	*i* P	**Pg**	**13 35 09.3**	**-0.5**
MANT				*i* S	**Sg**	**13 35 19.0**	**-1.1**
MANT	**Manisa**	**0.78**	**217**	P	**Pg**	**13 35 09.3**	**-0.5**
MANT				S	**Sg**	**13 35 19.0**	**-1.1**
CAVI	**Cavuskoy**	**1.21**	**26**	PN	**Pn**	**13 35 17.6**	**+0.1**
CAVI				SN	**Sn**	**13 35 34.5**	**+0.6**
CAVI	**Cavuskoy**	**1.21**	**26**	*e*Pn	**Pn**	**13 35 17.6**	**+0.1**
CAVI				*e*Sn	**Sn**	**13 35 34.5**	**+0.6**
BORA	**Eskisehir**	**1.26**	**52**	PN	**Pg**	**13 35 18.7**	**-0.2**
BORA				SN	**Sn**	**13 35 35.9**	**+0.6**
BORA	**Eskisehir**	**1.26**	**52**	*i* P	**Pg**	**13 35 18.7**	**-0.2**
BORA				*i* S	**Sb**	**13 35 35.1**	**+0.4**
BORA	**Eskisehir**	**1.26**	**52**	P	**Pg**	**13 35 18.7**	**-0.2**
BORA				S	**Sb**	**13 35 35.1**	**+0.4**
ARMT	**Armutlu**	**1.46**	**351**	PN	**Pb**	**13 35 21.9**	**0.0**
ARMT	**Armutlu**	**1.46**	**351**	*e*Pn	**Pb**	**13 35 21.9**	**0.0**

IDC 01 13:36:33.0±0.7, 27°.81S×73°.93E, h0km, mb4.0/14, mb1 4.1/14, mb1mx3.8/72, mbtmp4.0/14, MS3.7/32, Ms1 3.7/32, ms1mx3.5/61, Error ellipse: s-maj=27.2km s-min=19.2km az=65.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**20.10**	**356**	T	T	14 01 44.9	
	baz=177,slow=76,SNR=164						
H08S1	**Diego Garcia H**	**20.10**	**356**	T	T	14 01 42.3	
	baz=177,slow=76,SNR=174						
H08S3	**Diego Garcia H**	**20.12**	**356**	T	T	14 01 47.5	
	baz=177,slow=76,SNR=207						
OPO	**Ambohidratompo**	**26.20**	**285**	LR	LR	13 48 59.7	
	comp=Z,65nm,20.2s,baz=346,slow=28						
H01W2	**Cape Leeuwin H**	**34.88**	**112**	T	T	14 20 06.6	
	baz=272,slow=74,SNR=12						
H01W3	**Cape Leeuwin H**	**34.88**	**112**	T	T	14 20 06.7	
	baz=272,slow=74,SNR=11						
H01W1	**Cape Leeuwin H**	**34.89**	**112**	T	T	14 20 07.8	
	baz=272,slow=74,SNR=13						
PALK	**Pallekele**	**35.49**	**12**	LR	LR	13 54 50.3	
	comp=Z,141nm,20.1s,baz=116,slow=31						
LEM	**Lembang**	**38.12**	**63**	LR	LR	13 56 31.5	
	comp=Z,107nm,19.9s,baz=224,slow=31						
PSI	**Prapat**	**38.80**	**42**	LR	LR	13 57 15.2	
	comp=Z,190nm,18.2s,baz=266,slow=32						
MAW	**Mawson**	**40.38**	**187**	LR	LR	13 57 13.7	
	comp=Z,102nm,19.3s,baz=52,slow=31						
BOSA	**Boshof**	**42.66**	**257**	LR	LR	13 58 11.2	
	comp=Z,142nm,19.4s,baz=39,slow=30						
LBTB	**Lobatse**	**43.16**	**262**	LR	LR	14 00 33.0	
	comp=Z,64nm,18.1s,baz=97,slow=33						
LSZ	**Lusaka**	**44.10**	**277**	LR	LR	14 00 26.0	
	comp=Z,115nm,19.8s,baz=134,slow=32						
ATD	**Arta Tunnel**	**49.36**	**318**	LR	LR	14 04 25.0	
	comp=Z,27nm,19.1s,baz=22,slow=34						
CMAR	**Chiang Mai Arr**	**51.98**	**31**	P	P	13 45 44.5	+0.3
	1.1nm,0.8s,baz=207,slow=7.7,SNR=3.1						
CMAR				LR	LR	14 05 24.6	
	comp=Z,78nm,19.3s,baz=212,slow=33						
TSUM	**Tsumeb**	**52.00**	**267**	LR	LR	14 04 51.4	
	comp=Z,169nm,19.4s,baz=149,slow=33						
WSAR	**Wadi Sarin**	**52.85**	**342**	LR	LR	14 04 00.8	
	comp=Z,52nm,21.4s,baz=211,slow=31						
ASAR	**Alice Springs**	**53.73**	**100**	P	P	13 45 56.7	-0.5
	2.5nm,1.0s,baz=255,slow=6.4,SNR=5.4						
ASAR				LR	LR	14 05 41.4	
	comp=Z,54nm,21.9s,baz=198,slow=32						
WRA	**Warramunga Arr**	**55.33**	**96**	P	P	13 46 09.2	+0.3
	3.7nm,1.1s,baz=253,slow=7.5,SNR=5.6						
STKA	**Stephens Creek**	**57.98**	**112**	LR	LR	14 07 24.1	
	comp=Z,80nm,20.1s,baz=25,slow=32						
SNAA	**Sanae**	**59.71**	**201**	LR	LR	14 08 48.0	
	comp=Z,83nm,18.4s,baz=20,slow=32						
QSPA	**South Pole Qui**	**62.33**	**180**	P	P	13 46 56.8	-0.2
	2.1nm,0.6s,baz=282,slow=18,SNR=6.5						
VNDA	**Vanda**	**62.62**	**166**	P	P	13 46 58.6	+0.1
	0.9nm,0.8s,baz=251,slow=6.5,SNR=3.7						
GEYT	**Alibeck**	**67.05**	**346**	LR	LR	14 13 09.8	
	comp=Z,46nm,20.6s,baz=185,slow=33						
JAY	**Jayapura**	**68.34**	**81**	LR	LR	14 16 05.6	
	comp=Z,41nm,20.8s,baz=322,slow=35						
PMG	**Port Moresby**	**70.88**	**91**	LR	LR	14 17 33.9	
	comp=Z,48nm,18.0s,baz=78,slow=35						
MKAR	**Makanchi Array**	**74.64**	**6**	P	P	13 48 13.1	-0.8
	0.9nm,0.8s,baz=167,slow=6.0,SNR=8.4						
MKAR				LR	LR	14 20 51.0	
	comp=Z,54nm,18.0s,baz=232,slow=36						
KBZ	**Khabaz**	**76.67**	**337**	LR	LR	14 19 40.9	
	comp=Z,52nm,18.2s,baz=48,slow=34						
BRTR	**Keskin Array B**	**76.96**	**329**	P	P	13 48 27.1	-0.4
	0.3nm,0.5s,baz=113,slow=3.3,SNR=5.3						
KURBB	**Kurchatov Arra**	**78.19**	**3**	P	P	13 48 33.5	-0.3
	0.8nm,0.9s,baz=197,slow=5.6,SNR=5.7						
GUMO	**Guam**	**80.04**	**69**	LR	LR	14 24 24.7	
	comp=Z,14nm,18.3s,baz=200,slow=36						
BVAR	**Borovoye Array**	**80.55**	**358**	LR	LR	14 22 45.7	
	comp=Z,56nm,20.0s,baz=152,slow=34						
TORD	**Torodi Ar. Bea**	**80.89**	**290**	P	P	13 48 48.5	-0.9
	0.9nm,1.0s,baz=96,slow=4.2,SNR=4.1						
JNU	**Nakatsue**	**81.20**	**45**	LR	LR	14 21 49.7	
	comp=Z,55nm,21.4s,baz=297,slow=34						
ZALV	**Zalesovo Beam**	**81.96**	**6**	LR	LR	14 24 49.0	
	comp=Z,60nm,18.4s,baz=244,slow=35						
KSRS	**Korea Array**	**82.34**	**41**	P	P	13 48 56.4	-0.2
	0.3nm,0.4s,baz=231,slow=5.8,SNR=4.7						
KSRS				LR	LR	14 23 49.6	
	comp=Z,63nm,19.4s,baz=206,slow=34						
DBIC	**Dimbokro**	**83.25**	**281**	LR	LR	14 23 22.6	
	comp=Z,56nm,19.2s,baz=102,slow=34						
ARU	**Arti**	**84.92**	**352**	P	P	13 49 09.7	+0.3
	1.1nm,0.3s,baz=98,slow=7.2,SNR=3.7						
MLR	**Muntele Rosu**	**85.00**	**328**	P	P	13 49 10.6	+0.4
	0.8nm,0.8s,baz=56,slow=0.5,SNR=10.0						
JHJ	**Hachijo jima 2**	**87.04**	**50**	LR	LR	14 22 05.8	
	comp=Z,35nm,20.1s,baz=320,slow=31						
AKASG	**Malin Array Be**	**87.58**	**333**	P	P	13 49 22.7	+0.1
	0.1nm,0.3s,baz=138,slow=4.2,SNR=7.5						
KEST	**Kesra**	**87.73**	**313**	P	P	13 49 25.6	+1.7
	2.0nm,0.8s,baz=58,slow=6.7,SNR=4.4						
MJAR	**Matsushiro Arr**	**88.03**	**47**	LR	LR	14 26 53.5	
	comp=Z,32nm,20.2s,baz=195,slow=34						
USRK	**Ussuriysk Ar.**	**89.16**	**38**	LR	LR	14 28 38.8	
	comp=Z,82nm,19.2s,baz=242,slow=35						
ASAJ	**Asahikawa**	**95.16**	**42**	LR	LR	14 33 38.0	
	comp=Z,22nm,18.7s,baz=170,slow=36						
FINES	**FINESS Array B**	**96.97**	**339**	LR	LR	14 32 06.9	
	comp=Z,28nm,19.2s,baz=201,slow=34						
NRIK	**Noril'sk**	**97.37**	**5**	LR	LR	14 34 06.7	
	comp=Z,24nm,18.9s,baz=158,slow=36						
YKA	**Yellowknife Ar**	**144.86**	**7**	PKP	PKPab	13 56 09.9	-0.4
	0.2nm,0.6s,baz=330,slow=3.8,SNR=7.7						
DLBC	**Dease Lake**	**145.13**	**22**	PKPbc	PKPdf	13 56 11.9	-0.1
	2.9nm,1.0s,baz=168,slow=0.7,SNR=4.0						

IDC 01 13:38:15.5±2.5, 17°.29S×176°.75W, h0km, mb4.2/3, mb1 4.4/4, mb1mx3.7/59, mbtmp4.3/4, ML4.1/1, Error ellipse: s-maj=166.7km s-min=31.3km az=151.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.85**	**56**	Pn	Pn	13 39 43.7	+0.1
	4.7nm,0.3s,baz=175,slow=17,SNR=7.3						
AFI				Sn	Sn	13 40 37.1	-14
	16nm,0.3s,baz=222,slow=23,SNR=14						
STKA	**Stephens Creek**	**40.31**	**241**	P	P	13 45 55.5	+0.7
	0.5nm,0.3s,baz=90,slow=13,SNR=5.4						
WRA	**Warramunga Arr**	**46.30**	**259**	P	P	13 46 43.0	-0.3
	1.7nm,0.5s,baz=96,slow=7.0,SNR=26						
ASAR	**Alice Springs**	**46.48**	**254**	P	P	13 46 44.2	-0.6
	6.6nm,0.6s,baz=94,slow=8.0,SNR=36						

*SOME **01** 13:54:12.8, 39°.68N×75°.25E, h25km*
*NNC **01** 13:54:14.3±1.4, 39°.85N×75°.08E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=14.2km s-min=4.3km az=161.0*
ISC 01 13:54:12.5±2.1, 39°.6N±0°.1×75°.20E±0°.05, h10km, n28, σ1°66/43, 10C-4D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**1.36**	**287**	⇓P	**Pn**	**13 54 37.3**	**-0.5**
	34nm,0.2s						
SFK				⇑S	**Sb**	**13 54 54.2**	**-1.5**
	260nm,0.3s						
KZA	**Kyzart**	**2.44**	**1**	P	**Pn**	**13 54 53.2**	**+0.4**
	SNR=15						
UCH	**Uchtor**	**2.64**	**349**	P	**Pn**	**13 54 56.1**	**+0.5**
	SNR=14						
ULHL	**Ulahol**	**2.73**	**17**	P	**Pn**	**13 54 56.7**	**+0.2**
	SNR=18						
AML	**Almayashu**	**2.74**	**336**	P	**Pn**	**13 54 57.5**	**+0.5**
	SNR=16						
KBK	**Karagaybulak**	**3.03**	**356**	P	**Pn**	**13 55 02.0**	**+1.4**
	SNR=9.2						
AAK	**Ala-Archa**	**3.05**	**350**	⇑Pn	**Pn**	**13 55 02.0**	**+1.1**
	9.0nm,0.7s						
AAK				⇑Lg	Lg	13 55 41.6	
	40nm,0.9s						
AAK	**Ala-Archa**	**3.05**	**350**	P	**Pn**	**13 55 02.2**	**+1.3**
	SNR=9.5						
TKM2	**Tokmak 2**	**3.30**	**5**	⇑Pn	**Pn**	**13 55 05.1**	**+0.7**
	16nm,0.6s						
TKM2				⇑Lg	Lg	13 55 51.4	
	24nm,0.4s						
TKM2	**Tokmak 2**	**3.30**	**5**	P	**Pn**	**13 55 05.2**	**+0.9**
	SNR=9.2						
CHMS	**Chumysh**	**3.38**	**354**	P	**Pn**	**13 55 06.3**	**+1.0**
	SNR=7.2						
MRKS	**Merke**	**3.45**	**335**	*e*P	**Pb**	**13 55 13.0**	**-0.7**
	27nm,0.5s						
MRKS				*e*S	**Sb**	**13 55 56.3**	**+0.6**
	15nm,0.4s						
KST	**Kastek**	**3.46**	**9**	*e*P	**Pn**	**13 55 09.3**	**+2.8**
	23nm,0.3s						
KST				*e*S	**Sn**	**13 55 49.8**	**+2.2**
	66nm,0.5s						
MNAS	**Manas**	**3.50**	**325**	⇓Pn	**Pn**	**13 55 08.9**	**+1.7**
	4.4nm,0.4s						
MNAS				⇓Lg	Lg	13 55 58.9	
	14nm,0.7s						
IZV	**Izvestkoviy**	**3.56**	**17**	*e*P	**Pb**	**13 55 14.9**	**-0.8**
	21nm,0.5s						
IZV				*e*S	**Sb**	**13 55 59.7**	**+0.6**
	36nm,0.6s						
MTBS	**Maitube**	**3.62**	**14**	*e*P	**Pb**	**13 55 16.3**	**-0.2**
	9.2nm,0.4s						
MTBS				*e*S	**Sb**	**13 56 02.0**	**+1.6**
	28nm,0.5s						
DGS	**Degeres**	**3.63**	**7**	*e*P	**Pn**	**13 55 09.8**	**+1.0**
	22nm,0.3s						
DGS				*e*S	**Sn**	**13 55 51.5**	**-0.4**
	28nm,0.5s						
USP	**Ospenovka**	**3.67**	**352**	P	**Pn**	**13 55 10.3**	**+1.0**
	SNR=9.2						
MDOK	**Medeo**	**3.79**	**21**	Pn	**Pn**	**13 55 11.8**	**+0.7**
	4.7nm,0.4s						
MDOK				Lg	Lg	13 56 08.1	
	28nm,0.8s						
MDOK	**Medeo**	**3.79**	**21**	*e*P	**Pb**	**13 55 18.0**	**-1.5**
	6.2nm,0.3s						
MDOK				*e*S	**Sb**	**13 56 04.9**	**-0.7**
	24nm,0.6s						
KOTS	**Kotyrbulak**	**3.88**	**21**	*e*P	**Pb**	**13 55 19.7**	**-1.3**
	6.3nm,0.5s						
KOTS				*e*S	**Sb**	**13 56 08.5**	**+0.5**
	26nm,0.6s						
KTBS	**Karatobe**	**4.22**	**15**	*e*P	**Pb**	**13 55 26.6**	**-0.3**
	6.6nm,0.4s						
KTBS				*e*S	**Sb**	**13 56 19.7**	**+1.7**
	25nm,0.5s						
KUU	**Kurty**	**4.34**	**11**	*e*P	**Pb**	**13 55 28.2**	**-0.6**
	7.6nm,0.6s						
KUU				*e*S	**Sb**	**13 56 22.4**	**+1.1**
	30nm,0.6s						
KURS	**Kuram**	**4.45**	**29**	*e*P	**Pb**	**13 55 30.2**	**-0.5**
	5.2nm,0.5s						
KURS				*e*S	**Sb**	**13 56 25.7**	**+1.3**
	16nm,0.8s						
PDGK	**Podgornoye**	**4.90**	**40**	⇑Pn	**Pn**	**13 55 26.6**	**+0.3**
	2.5nm,0.9s						
PDGK				⇑Pg	**Pb**	**13 55 38.8**	**+0.4**
	6.6nm,0.8s						
PDGK				⇑Lg	Lg	13 56 48.2	
	18nm,0.9s						
KK31	**Karatay Array**	**4.95**	**316**	⇑Pn	**Pn**	**13 55 26.9**	**+0.1**
	0.3nm,0.3s,baz=128,slow=13,SNR=7.4						
KK31				⇑Pg	**Pb**	**13 55 41.5**	**+2.3**
	1.5nm,0.5s,baz=128,slow=16,SNR=6.8						
KK31				⇓Lg	Lg	13 56 46.4	
	5.0nm,0.6s,baz=127,slow=28,SNR=4.5						
ARXS	**Arharly**	**4.98**	**22**	*e*P	**Pb**	**13 55 41.7**	**+1.9**
	4.9nm,0.6s						
ARXS				*e*S	**Sg**	**13 56 45.7**	**-6.6**
	13nm,0.9s						
MNBS	**Baschi**	**5.04**	**27**	*e*P	**Pb**	**13 55 40.9**	**0.0**
	4.6nm,0.4s						
MNBS				*e*S	**Sb**	**13 56 45.2**	**+3.6**
	11nm,0.9s						

*CSEM **01** 13:58:13.5±1.0, 23°.67N×61°.45E, h10km, ML3.6, Error ellipse: s-maj=20.9km s-min=9.7km az=89.0*
*OMAN **01** 13:58:13.4±0.3, 23°.67N×61°.55E, h24km±11km, Error ellipse: s-maj=14.8km s-min=2.0km az=255.0*
*DSN **01** 13:58:20.6±2.2, 24°.03N×60°.98E, h10km, ML3.6/4, Error ellipse: s-maj=41.6km s-min=15.2km az=39.0*
ISC 01 13:58:11.8±3.5, 23°.77N±0°.06×61°.7E±0°.2, h35km, n35, σ1°64/48, Off coast of Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JLN	**Jalan Bani Buh**	**2.67**	**233**	P	**Pn**	**13 58 51.8**	**-0.5**
JLN				S	**Sn**	**13 59 22.9**	**-0.5**
WBK	**Wadi Bani Khal**	**2.77**	**246**	P	**Pn**	**13 58 54.5**	**+0.6**
	SNR=23						
WBK				S	**Sn**	**13 59 26.0**	**-0.2**
WSAR	**Wadi Sarin**	**2.88**	**260**	P	**Pn**	**13 58 55.7**	**+0.5**
WSAR				S	**Sn**	**13 59 27.5**	**-1.2**
WSAR	**Wadi Sarin**	**2.88**	**260**	P	**Pn**	**13 58 55.7**	**+0.5**
WSAR				S	**Sn**	**13 59 27.5**	**-1.2**
BIDO	**Bidbid**	**3.30**	**266**	P	**Pn**	**13 59 02.4**	**+1.4**
	SNR=6.9						
BIDO	**Bidbid**	**3.30**	**266**	P	**Pn**	**13 59 02.4**	**+1.4**
	SNR=6.9						
SMDO	**Samad**	**3.44**	**259**	P	**Pn**	**13 59 04.7**	**+1.6**
	SNR=12						
SMDO	**Samad**	**3.44**	**259**	P	**Pn**	**13 59 04.7**	**+1.6**
	SNR=12						
JMDO	**Jabal Madar**	**3.60**	**248**	P	**Pn**	**13 59 07.1**	**+1.8**
	SNR=15						
JMDO				S	**Sn**	**13 59 48.4**	**+1.8**
JMDO	**Jabal Madar**	**3.60**	**248**	P	**Pn**	**13 59 07.1**	**+1.8**
	SNR=15						
HOQ	**Hoqain**	**4.04**	**268**	P	**Pn**	**13 59 13.0**	**+1.8**
HOQ	**Hoqain**	**4.04**	**268**	P	**Pn**	**13 59 13.0**	**+1.8**
BSYO	**Bisya**	**4.24**	**257**	P	**Pn**	**13 59 16.5**	**+2.5**
	SNR=7.8						
BSY	**Bisya**	**4.27**	**257**	P	**Pn**	**13 59 16.5**	**+2.0**
	SNR=7.8						
MHTO	**MHTO**	**4.44**	**232**	P	**Pn**	**13 59 16.6**	**-0.1**
MHTO				S	**Sn**	**14 00 05.5**	**-1.6**
SOHO	**SOHO**	**4.75**	**275**	*i* P	**Pn**	**13 59 22.0**	**+1.0**
	SNR=11						
SOHO	**SOHO**	**4.75**	**275**	P	**Pn**	**13 59 21.5**	**+0.5**
	SNR=11						
SOHO				S	**Sn**	**14 00 14.6**	**-0.3**
UOSS	**Minazif**	**5.16**	**284**	P	**Pn**	**13 59 27.0**	**+0.4**
UOSS				S	**Sn**	**14 00 21.4**	**-3.5**
UOSS	**Minazif**	**5.16**	**284**	*i* P	**Pn**	**13 59 26.5**	**-0.1**
	SNR=19						
UOSS	**Minazif**	**5.16**	**284**	P	**Pn**	**13 59 27.0**	**+0.4**
MDH	**Madha**	**5.16**	**288**	P	**Pn**	**13 59 26.9**	**+0.3**
MDH	**Madha**	**5.16**	**288**	P	**Pn**	**13 59 26.9**	**+0.3**
MSFE	**Esma-Masafi**	**5.30**	**288**	P	**Pn**	**13 59 29.7**	**+1.2**
MSFE	**Esma-Masafi**	**5.30**	**288**	P	**Pn**	**13 59 29.7**	**+1.2**
BANOM	**Banah**	**5.36**	**295**	P	**Pn**	**13 59 30.7**	**+1.3**
	SNR=11						
BANOM				S	**Sn**	**14 00 28.7**	**-1.3**
	SNR=14						
BANOM	**Banah**	**5.36**	**295**	*i* P	**Pn**	**13 59 30.2**	**+0.7**
	SNR=11						
BANOM				S	**Sn**	**14 00 25.8**	**-4.2**
BANOM	**Banah**	**5.36**	**295**	P	**Pn**	**13 59 30.7**	**+1.3**
	SNR=11						
BANOM				S	**Sn**	**14 00 28.7**	**-1.3**
	SNR=14						
DQM	**DQM**	**5.45**	**226**	P	**Pn**	**13 59 31.0**	**+0.5**
DQM				S	**Sn**	**14 00 29.8**	**-2.2**
SHME	**Shamm**	**5.54**	**295**	P	**Pn**	**13 59 33.9**	**+2.0**
SHME	**Shamm**	**5.54**	**295**	P	**Pn**	**13 59 33.9**	**+2.0**
NAZ	**Nazwa, Dubai**	**5.65**	**284**	P	**Pn**	**13 59 36.1**	**+2.8**
NAZ	**Nazwa, Dubai**	**5.65**	**284**	P	**Pn**	**13 59 36.1**	**+2.8**
ASUD	**Al Ashush, Dub**	**5.89**	**280**	P	**Pn**	**13 59 38.5**	**+1.9**
ASUD	**Al Ashush, Dub**	**5.89**	**280**	P	**Pn**	**13 59 38.5**	**+1.9**

*DDA **01** 14:16:32.8, 42°.26N×36°.35E, h29km, Ml2.7*
*CSEM **01** 14:16:32.8, 42°.26N×36°.35E, h29km, ML2.7*
*ISK **01** 14:16:44.3, 41°.52N×35°.39E, h17km±1km, ML2.2/3*
ISC 01 14:16:28.5±2.3, 42°.49N±0°.10×36°.53E±0°.06, h32km±13km, n24, σ1°59/41, Black Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNOP	**Sinop**	**1.09**	**245**	PG	Pb	14 16 54.5	+5.7
SNOP				SG	**Sn**	**14 17 03.0**	**+1.5**
SNOP	**Sinop**	**1.09**	**245**	*i* PG	**Pb**	**14 16 50.1**	**+1.3**
SNOP	**Sinop**	**1.09**	**245**	*i* Pg	Pb	14 16 54.5	+5.7
SNOP				*i* Sg	**Sn**	**14 17 03.0**	**+1.5**
SINO	**SINOP_Merkez**	**1.09**	**245**	*i* P	**Pb**	**14 16 50.0**	**+1.1**
SINO				*i* S	**Sn**	**14 17 03.5**	**+1.8**
SINO	**SINOP_Merkez**	**1.09**	**245**	P	**Pb**	**14 16 50.0**	**+1.1**
SINO				S	**Sn**	**14 17 03.5**	**+1.8**
SAMS	**Samsun-Alacam**	**1.16**	**193**	*i* P	**Pb**	**14 16 51.7**	**+1.7**
SAMS				*i* S	**Sn**	**14 17 05.8**	**+2.5**
SAMS	**Samsun-Alacam**	**1.16**	**193**	P	**Pb**	**14 16 51.7**	**+1.7**
SAMS				S	**Sn**	**14 17 05.8**	**+2.5**
DIKM	**Dikmen**	**1.27**	**229**	PG	**Pn**	**14 16 49.1**	**-0.9**
DIKM	**Dikmen**	**1.27**	**229**	*e*PG	**Pb**	**14 16 52.8**	**+1.0**
DIKM				*e*SG	**Sb**	**14 17 07.3**	**-0.5**
DIKM	**Dikmen**	**1.27**	**229**	*e*Pg	**Pn**	**14 16 49.1**	**-0.9**
KVT	**Kavak**	**1.46**	**195**	PG	**Pb**	**14 16 57.9**	**+2.8**
KVT	**Kavak**	**1.46**	**195**	*e*PG	**Pb**	**14 16 56.5**	**+1.4**
KVT				*e*SG	**Sb**	**14 17 13.4**	**+0.2**
KVT	**Kavak**	**1.46**	**195**	*e*Pg	**Pb**	**14 16 57.9**	**+2.8**
HAVZ	**Havza**	**1.

n50,σ1§30/81,35C-13D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan** 26nm,0.2s	**1.48**	**289**	⇓P	**Pn**	**14 22 27.3**	**-1.0**
SFK	**Sufi-Kurgan** baz=84	**1.48**	**289**	⇓*i*P	**Pn**	**14 22 27.4**	**-1.0**
SFK	baz=84			⇓*i*S	**Sg**	**14 22 48.4**	**+0.1**
NRN	**Naryn** baz=14	**1.96**	**15**	⇑*i*P	**Pn**	**14 22 33.5**	**-1.6**
NRN	baz=14			⇑*i*S	**Sn**	**14 22 57.8**	**-2.5**
ARSB	**Arslanbob** baz=13	**2.52**	**316**	⇑*i*P	**Pn**	**14 22 43.6**	**+1.0**
ARSB	baz=13			⇑*i*S	**Sn**	**14 23 14.8**	**+0.9**
KZA	**Kyzart** SNR=41	**2.53**	**359**	P	**Pn**	**14 22 42.9**	**-0.1**
KZA	**Kyzart** baz=58	**2.53**	**359**	⇑*i*P	**Pn**	**14 22 42.6**	**-0.4**
KZA	baz=58			⇑*i*S	**Sn**	**14 23 13.6**	**-1.0**
UCH	**Uchtor** SNR=40	**2.75**	**347**	P	**Pn**	**14 22 46.1**	**0.0**
UCH	**Uchtor** baz=46	**2.75**	**347**	⇑*i*P	**Pn**	**14 22 45.9**	**-0.2**
UCH	baz=46			⇑*i*S	**Sn**	**14 23 19.5**	**-0.5**
ULHL	**Ulahol** SNR=18	**2.79**	**14**	P	**Pn**	**14 22 46.7**	**+0.3**
ULHL	**Ulahol** baz=14	**2.79**	**14**	⇓*i*P	**Pn**	**14 22 45.7**	**-0.7**
ULHL	baz=14			⇓*i*S	**Sn**	**14 23 19.5**	**-1.1**
AML	**Almayashu** SNR=60	**2.87**	**335**	P	**Pn**	**14 22 47.3**	**-0.3**
AML	**Almayashu** baz=33	**2.87**	**335**	⇑*i*P	**Pn**	**14 22 47.6**	**0.0**
AML	baz=33			⇑*i*S	**Sn**	**14 23 22.7**	**-0.1**
TARG	**Taragay, Kyrgy** baz=41	**2.89**	**40**	⇑*i*P	**Pn**	**14 22 47.5**	**-0.4**
TARG	baz=41			⇑*i*S	**Sn**	**14 23 22.4**	**-0.9**
KDJ	**Kajisay** baz=29	**2.94**	**28**	⇑*i*P	**Pn**	**14 22 48.0**	**-0.5**
KDJ	baz=29			⇑*i*S	**Sn**	**14 23 23.5**	**-0.9**
BOOM	**Boomskoye usch** baz=8.0	**2.98**	**9**	⇑*i*P	**Pn**	**14 22 48.5**	**-0.5**
BOOM	baz=8.0			⇑*i*S	**Sn**	**14 23 23.9**	**-1.4**
KBK	**Karagaybulak** SNR=20	**3.12**	**355**	P	**Pn**	**14 22 52.0**	**+1.0**
KBK	**Karagaybulak** baz=54	**3.12**	**355**	⇑*i*P	**Pn**	**14 22 50.8**	**-0.2**
KBK	baz=54			⇑*i*S	**Sn**	**14 23 27.9**	**-0.9**
AAK	**Ala-Archa** 30nm,0.6s	**3.15**	**349**	⇓Pn	**Pn**	**14 22 51.9**	**+0.6**
AAK	80nm,0.8s			⇑Sn	**Sb**	**14 23 34.1**	**-2.3**
AAK	81nm,0.7s			⇓Lg	Lg	14 23 45.2	
AAK	**Ala-Archa** SNR=32	**3.15**	**349**	P	**Pn**	**14 22 52.1**	**+0.7**
AAK	**Ala-Archa** baz=48	**3.15**	**349**	⇑*i*P	**Pn**	**14 22 51.2**	**-0.2**
AAK	baz=48			⇑*i*S	**Sn**	**14 23 28.6**	**-1.0**
EKS2	**Erkin-Say** SNR=7.9	**3.33**	**340**	P	**Pn**	**14 22 53.9**	**+0.2**
EKS2	**Erkin-Say** baz=38	**3.33**	**340**	⇑*e*P	**Pn**	**14 22 54.0**	**+0.3**
EKS2	baz=38			⇑*i*S	**Sn**	**14 23 33.2**	**-0.6**
TKM2	**Tokmak 2** 34nm,0.3s	**3.38**	**3**	⇑Pn	**Pn**	**14 22 55.3**	**+0.7**
TKM2	**Tokmak 2** SNR=46	**3.38**	**3**	P	**Pn**	**14 22 55.4**	**+0.9**
CHMS	**Chumysh** SNR=20	**3.48**	**353**	P	**Pn**	**14 22 56.4**	**+0.6**
CHMS	**Chumysh** baz=52	**3.48**	**353**	⇑*i*P	**Pn**	**14 22 55.6**	**-0.1**
CHMS	baz=52			⇑*i*S	**Sn**	**14 23 36.4**	**-1.0**
KST	**Kastek**	**3.53**	**8**	*e*P	**Pb**	**14 23 00.6**	**-3.3**
KST				*e*S	**Sn**	**14 23 41.2**	**+2.4**
MRKS	**Merke** 11nm,0.5s	**3.57**	**334**	*e*P	**Pn**	**14 23 00.6**	**+3.6**
MRKS	32nm,0.5s			*e*S	**Sn**	**14 23 41.7**	**+2.0**
IZV	**Izvestkoviy** 27nm,0.5s	**3.62**	**15**	*e*P	**Pb**	**14 23 05.1**	**-0.3**
IZV	102nm,0.6s			*e*S	**Sb**	**14 23 49.3**	**-0.5**
MNAS	**Manas** 7.2nm,0.4s	**3.63**	**325**	⇑Pn	**Pn**	**14 23 00.0**	**+2.1**
MNAS	32nm,0.7s			⇑Lg	Lg	14 23 56.8	
MNAS	**Manas** baz=23	**3.63**	**325**	⇑*i*P	**Pn**	**14 22 58.4**	**+0.5**
MNAS	baz=23			⇑*i*S	**Sn**	**14 23 41.2**	**-0.1**
DGS	**Degeres**	**3.71**	**5**	*e*P	**Pb**	**14 23 06.3**	**-0.6**
DGS				*e*S	**Sb**	**14 23 50.9**	**-1.4**
USP	**Ospenovka** SNR=21	**3.77**	**351**	P	**Pn**	**14 23 00.5**	**+0.8**
MDOK	**Medeo** 12nm,0.4s	**3.84**	**19**	Pn	**Pn**	**14 23 01.6**	**+0.8**
MDOK	133nm,0.7s			⇑Sn	**Sb**	**14 23 56.6**	**+0.5**
MDOK	135nm,1.0s			⇓Lg	Lg	14 24 10.5	
MDOK	**Medeo**	**3.84**	**19**	*e*P	**Pb**	**14 23 09.2**	**0.0**
MDOK				*e*S	**Sb**	**14 23 55.9**	**-0.2**
KNDC	**Almaty** 27nm,0.4s	**3.87**	**18**	⇑Pn	**Pn**	**14 23 02.6**	**+1.5**
KNDC	269nm,0.8s			⇓Sn	**Sb**	**14 23 55.1**	**-1.8**
KNDC	188nm,0.6s			⇓Lg	Lg	14 24 13.3	
KOTS	**Kotyrbulak** 9.0nm,0.4s	**3.93**	**19**	*e*P	**Pb**	**14 23 10.9**	**+0.3**
KOTS	116nm,0.9s			*e*S	**Sb**	**14 23 59.5**	**+1.0**
KTBS	**Karatobe** 9.9nm,0.4s	**4.29**	**13**	*e*P	**Pb**	**14 23 16.7**	**0.0**
KTBS	59nm,0.7s			*e*S	**Sb**	**14 24 08.9**	**0.0**
CHKK	**Chushkaly** 14nm,0.7s	**4.48**	**16**	*e*P	**Pb**	**14 23 21.4**	**+1.4**
CHKK	56nm,0.8s			*e*S	**Sb**	**14 24 16.8**	**+2.3**
IUG	**Iuzhnay** 18nm,0.3s	**4.78**	**305**	*e*P	**Pb**	**14 23 24.1**	**-1.1**
IUG	81nm,0.6s			*e*S	**Sb**	**14 24 21.8**	**-1.4**
PDGK	**Podgornoye** 3.1nm,0.6s	**4.91**	**38**	⇑Pn	**Pn**	**14 23 16.6**	**+1.2**
PDGK	11nm,0.5s			⇑Pg	**Pg**	**14 23 34.1**	**-0.7**
PDGK	81nm,1.1s			⇓Lg	Lg	14 24 40.9	
ARXS	**Arharly** 8.6nm,0.6s	**5.03**	**21**	*e*P	**Pb**	**14 23 30.9**	**+1.6**
ARXS	39nm,1.0s			*e*S	**Sb**	**14 24 33.1**	**+3.0**
KK31	**Karatay Array** 0.6nm,0.3s,baz=121,slow=12,SNR=4.2	**5.08**	**316**	⇑Pn	**Pn**	**14 23 17.2**	**-0.4**
KK31	2.4nm,0.3s			⇓Pg	**Pb**	**14 23 33.5**	**+3.4**
KK31	22nm,0.8s,baz=111,slow=29			⇓Lg	Lg	14 24 42.0	
MNBS	**Baschi**	**5.08**	**26**	*e*P	**Pb**	**14 23 31.9**	**+1.7**
MNBS				*e*S	**Sb**	**14 24 33.8**	**+2.0**
PYUN	**Piuthan**	**13.06**	**149**	*e*P	**Pn**	**14 25 09.3**	**+2.0**
GKN	**Gorkha** 4.2nm,0.3s	**13.86**	**143**	*e*P	**Pn**	**14 25 18.8**	**+0.6**
KKN	**Kakani** 5.0nm,0.4s	**14.34**	**142**	*e*P	**Pn**	**14 25 24.2**	**-0.6**
PKIN	**Phulchoki** 4.8nm,0.4s	**14.58**	**142**	*e*P	**Pn**	**14 25 26.8**	**-1.3**
PKI	**Pulchoki**	**14.59**	**142**	*e*P	**Pn**	**14 25 27.5**	**-0.8**
JIRN	**Jiri**	**14.90**	**139**	*e*P	**Pn**	**14 25 31.4**	**-1.1**

KRNET 01 14:22:19.6±0.1,39°.73N×75°.23E,mb4.0,26C-5D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan** baz=83	**1.36**	**283**	⇑*i*P	Pg	14 22 44.9	-0.7
SFK	baz=83			⇑*i*S	Sn	14 23 04.5	-0.3
SFK	**Sufi-Kurgan** 443nm,0.4s	**1.36**	**283**	⇓S	Pg	14 22 45.0	-0.6
NRN	**Naryn** baz=18	**1.80**	**19**	⇑*i*P	Pb	14 22 53.3	-0.3
NRN	baz=18			⇑*i*S	Sb	14 23 17.0	+0.1
KZA	**Kyzart** baz=0.0	**2.35**	**0**	⇑*i*P	Pb	14 23 01.9	-1.1
KZA	baz=0.0			⇑*i*S	Sb	14 23 32.5	-0.1
UCH	**Uchtor** baz=48	**2.55**	**348**	⇑*i*P	Pb	14 23 04.8	-1.7
UCH	baz=48			⇑*i*S	Sb	14 23 37.7	-1.0
ULHL	**Ulahol** baz=17	**2.63**	**17**	⇑*i*P	Pb	14 23 05.8	-1.9
ULHL	baz=17			⇑*i*S	Sb	14 23 39.1	-1.5
AML	**Almayashu** baz=35	**2.67**	**335**	⇓*i*P	Pn	14 23 06.0	+1.9
AML	baz=35			⇓*i*S	Sb	14 23 40.0	-1.8
TARG	**Taragay, Kyrgy** baz=44	**2.80**	**44**	⇑*i*P	Pn	14 23 07.8	+1.8
TARG	baz=44			⇑*i*S	Sn	14 23 43.1	+2.5
BOOM	**Boomskoye usch** baz=11	**2.81**	**11**	⇑*i*P	Pn	14 23 07.8	+1.9
BOOM	baz=11			⇑*i*S	Sb	14 23 43.3	-2.5
KDJ	**Kajisay** baz=31	**2.82**	**31**	⇑*i*P	Pn	14 23 08.0	+2.0
KDJ	baz=31			⇑*i*S	Sb	14 23 43.6	-2.4
KBK	**Karagaybulak** baz=56	**2.93**	**356**	⇑*i*P	Pn	14 23 09.7	+2.1
KBK	baz=56			⇑*i*S	Sn	14 23 46.0	+2.4
AAK	**Ala-Archa** baz=49	**2.96**	**349**	⇓*i*P	Pn	14 23 10.2	+2.3
AAK	baz=49			⇓*i*S	Sn	14 23 46.7	+2.5
EKS2	**Erkin-Say** baz=40	**3.13**	**340**	⇑*e*P	Pn	14 23 12.3	+2.1
EKS2	baz=40			⇑*i*S	Sn	14 23 50.7	+2.4
TKM2	**Tokmak 2** baz=5.0	**3.20**	**5**	⇑*i*P	Pn	14 23 13.6	+2.3
TKM2	baz=5.0			⇑*i*S	Sn	14 23 53.0	+2.7
CHMS	**Chumysh** baz=54	**3.29**	**354**	⇑*i*P	Pn	14 23 14.7	+2.4
CHMS	baz=54			⇑*i*S	Sn	14 23 54.8	+2.7
MNAS	**Manas** baz=24	**3.44**	**324**	⇑*i*P	Pn	14 23 16.8	+2.3
MNAS	baz=24			⇑*i*S	Sn	14 23 58.8	+2.8

*SOME **01** 14:25:03.6,49°.65N×83°.78E,h5km*
*NNC **01** 14:25:09.6±4.7,49°.35N×84°.10E,h0km,mb3.3,mpv2.9, Error ellipse: s-maj=49.9km s-min=24.8km az=64.0, Suspected Mining explosion.*

ISC 01 14:25:09.5±2.1,49°.49N±0°.09×84°.1E±0°.1,h0km,n7, σ1§03/10,8C,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZSN	**Zaisan** 16nm,0.4s	**2.11**	**165**	*e*P	**Pn**	**14 25 47.0**	**+0.9**
ZSN	81nm,0.5s			*e*S	**Sn**	**14 26 12.9**	**-0.1**
SEM	**Semipalatinsk** 9.9nm,0.2s	**2.63**	**292**	*e*P	**Pg**	**14 25 59.7**	**-0.2**
SEM	191nm,0.2s			*e*S	**Sg**	**14 26 35.8**	**+1.7**
MK31	**Makanchi Array** 0.7nm,0.2s,baz=24,slow=13,SNR=112	**2.95**	**205**	⇑Pn	**Pn**	**14 25 57.7**	**+0.1**
MK31	14nm,0.2s,baz=31,slow=28,SNR=27			⇑Lg	Lg	14 26 35.8	
MAKZ	**Makanchi** 3.3nm,0.3s	**3.03**	**208**	⇑Pn	**Pn**	**14 25 58.7**	**0.0**
MAKZ	11nm,0.3s			⇑Lg	Lg	14 26 38.2	
KURK	**Kurchatov** 1.5nm,0.5s	**3.72**	**291**	⇑Pn	**Pn**	**14 26 07.8**	**-0.3**
KURK	36nm,0.6s			⇑Lg	Lg	14 27 08.1	
KURBB	**Kurchatov Arra** 1.3nm,0.3s	**3.75**	**290**	⇑Pn	**Pn**	**14 26 08.6**	**+0.1**
KURBB	74nm,0.5s			⇑Lg	Lg	14 27 09.5	
KAPS	**Kapalarasan** 1.6nm,0.3s	**5.29**	**219**	*e*P	**Pb**	**14 26 41.2**	**-1.5**
KAPS	8.7nm,0.6s			*e*S	**Sb**	**14 27 47.9**	**+1.1**

NNC 01 14:46:16.4±4.4,37°.11N×70°.64E,h0km,mb3.8,mpv3.4, 7C-3D,Error ellipse: s-maj=34.5km s-min=30.4km az=152.0,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan** 1.9nm,0.3s	**3.67**	**37**	⇓Pn	Pn	14 47 14.4	-0.1
SFK	7.8nm,0.4s			⇑Sn	Sn	14 48 01.0	+2.4
MNAS	**Manas** 2.2nm,0.6s	**5.56**	**14**	⇓Pn	Pn	14 47 40.8	+0.2
MNAS	2.4nm,0.3s			⇑Sn	Sn	14 48 46.1	+0.9
MNAS	9.0nm,0.6s			⇑Lg	Lg	14 49 02.4	
KK31	**Karatay Array** 2.6nm,0.5s,baz=178,slow=13,SNR=13	**5.99**	**359**	Pn	Pn	14 47 47.5	+1.3
KK31	1.1nm,0.3s,baz=188,slow=25,SNR=6.4			⇓Sn	Sn	14 48 57.4	+1.8
KK31	6.5nm,0.6s			⇑Lg	Lg	14 49 11.7	
AAK	**Ala-Archa** 3.9nm,0.7s	**6.27**	**27**	⇑Pn	Pn	14 47 48.7	-1.5
AAK	3.5nm,0.6s			⇑Sn	Sn	14 49 00.9	-1.8
AAK	3.5nm,0.5s			⇑Lg	Lg	14 49 18.5	

*ISCJB **01** 14:53:38.0±1.0,15°.7S±0°.1×13°.1W±0°.2,h10km,mb3.9/7, MS4.1/33,Error ellipse: s-maj=20.9km s-min=20.3km az=177.8*
*IDC **01** 14:53:38.2±2.7,15°.60S×13°.44W,h0km,mb4.0/6, mb1 3.9/6,mb1mx3.6/55,mbtmp4.0/6,MS4.0/33, Ms1 4.0/33,ms1mx3.9/42,Error ellipse: s-maj=224.5km s-min=24.6km az=104.0*
*NEIC **01** 14:53:39.0±1.0,15°.71S×13°.20W,h10km,mb4.1/1,Error ellipse: s-maj=22.6km s-min=19.1km az=160.0*
*GCMT **01** 14:53:39.0±0.3,15°.88S×13°.11W,h14km±1km,MW5.0/82, Moment Tensor Solution. s28,c29; s82,c120; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.35±.16; $M_{\theta\theta}$0.00±.10; $M_{\phi\phi}$2.34±.12; $M_{r\theta}$-1.08±.27; $M_{\theta\phi}$-1.23±.07; $M_{\phi r}$-1.70±.25; Best double couple: M=3.31400×10^{16} NP1:ϕ_s132.00000°,δ39.00000°,λ-135.00000°. Principal axes: T 3.1410, Plg13.0000°, Azm73.0000°; N 0.3390, Plg27.0000°, Azm170.0000°; P -3.4870, Plg59.0000°, Azm319.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 01 14:53:39.3±1.0,15°.85S±0°.2×13°.2W±0°.1,h10km,n43, σ1§67/8,mb4.0/7,MS4.1/33,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10S2	**ASCENSION HYDR** baz=168,slow=74,SNR=254	**6.91**	**348**	T	T	15 02 11.5	
H10S3	**ASCENSION HYDR** baz=168,slow=74,SNR=230	**6.92**	**348**	T	T	15 02 11.7	
H10S1	**ASCENSION HYDR** baz=168,slow=74,SNR=181	**6.92**	**348**	T	T	15 02 18.7	
SHEL	**Horse Pasture** 8.1nm,0.4s	**7.17**	**93**	P	**Pn**	**14 55 22.8**	**-1.4**
H10N1	**ASCENSION HYDR** baz=86,slow=21,SNR=7.6	**7.96**	**351**	T	T	15 03 29.8	
H10N3	**ASCENSION HYDR** baz=86,slow=21,SNR=29	**7.97**	**351**	T	T	15 03 19.1	
H10N2	**ASCENSION HYDR** baz=86,slow=21,SNR=6.8	**7.98**	**351**	T	T	15 03 32.1	
DBIC	**Dimbokro** 1.1nm,0.5s,baz=206,slow=11,SNR=3.1	**23.76**	**21**	P	**P**	**14 58 51.5**	**-0.6**
DBIC	comp=Z,362nm,20.2s,baz=180,slow=31			LR	LR	15 05 51.0	
KOWA	**Kowa** 1.6nm,0.4s,baz=222,slow=5.6,SNR=5.7	**31.40**	**17**	P	**P**	**14 59 59.8**	**-0.9**
KOWA	comp=Z,354nm,20.6s,baz=214,slow=32			LR	LR	15 10 26.5	
TORD	**Torodi Ar. Bea** 2.8nm,0.8s,baz=213,slow=8.6,SNR=11	**32.27**	**28**	P	**P**	**15 00 07.8**	**-0.6**
TORD	comp=Z,611nm,20.4s,baz=210,slow=32			LR	LR	15 10 49.0	
BOSA	**Boshof** comp=Z,332nm,20.1s,baz=276,slow=32	**37.66**	**117**	LR	LR	15 13 39.6	
CPUP	**Villa Florida** comp=Z,272nm,21.9s,baz=68,slow=32	**42.34**	**248**	LR	LR	15 16 08.9	
MDT	**Midelt** comp=Z,166nm,20.4s,baz=180,slow=33	**48.99**	**10**	LR	LR	15 20 22.2	
SAML	**Samuel** 0.7nm,0.4s	**49.21**	**272**	P	**P**	**15 02 26.4**	**-1.8**
KMBO	**Kilima Mbogo** comp=Z,167nm,20.6s,baz=258,slow=34	**51.80**	**79**	LR	LR	15 22 48.4	
LPAZ	**La Paz** comp=Z,209nm,20.6s,baz=66,slow=34	**52.67**	**261**	LR	LR	15 23 37.2	
PLCA	**Paso Flores** comp=Z,290nm,20.0s,baz=109,slow=33	**55.24**	**231**	LR	LR	15 23 58.3	
ESDC	**Sonseca Array** comp=Z,67nm,21.7s,baz=205,slow=35	**55.81**	**9**	LR	LR	15 25 43.6	
OPO	**Ambohidratompo** comp=Z,208nm,19.4s,baz=218,slow=35	**57.53**	**102**	LR	LR	15 26 56.4	
PMSA	**Palmer Station** comp=Z,61nm,20.6s,baz=60,slow=32	**59.71**	**203**	LR	LR	15 25 23.8	
NNA	**Nana** comp=Z,287nm,19.5s,baz=128,slow=35	**61.72**	**265**	LR	LR	15 29 22.6	
ATD	**Arta Tunnel** comp=Z,150nm,19.7s,baz=170,slow=34	**61.73**	**67**	LR	LR	15 28 36.9	
SDV	**Santo Domingo** comp=Z,157nm,18.1s,baz=89,slow=36	**61.92**	**289**	LR	LR	15 30 40.8	
IDI	**Anoyia** comp=Z,39nm,18.5s,baz=256,slow=36	**62.30**	**35**	LR	LR	15 31 22.7	
ROSC	**El Rosal** comp=Z,564nm,18.6s,baz=130,slow=36	**63.85**	**284**	LR	LR	15 31 19.1	
ATAH	**Atahualpa** comp=Z,260nm,19.7s,baz=129,slow=36	**64.28**	**270**	LR	LR	15 32 16.5	
MMAI	**Mount Meron Ar** comp=Z,68nm,18.2s,baz=220,slow=36	**67.13**	**43**	LR	LR	15 34 17.4	
GERES	**GERESS Array B** comp=Z,126nm,18.5s,baz=190,slow=36	**68.61**	**19**	LR	LR	15 34 47.7	
MAW	**Mawson** comp=Z,84nm,19.8s,baz=262,slow=31	**70.23**	**157**	LR	LR	15 29 43.3	
BRTR	**Keskin Array B** 0.5nm,0.6s,baz=198,slow=9.1,SNR=4.0	**70.35**	**37**	P	**P**	**15 04 54.5**	**+1.0**
BRTR	comp=Z,22nm,18.1s,baz=216,slow=38			LR	LR	15 38 38.4	
QSPA	**South Pole Qui** 2.5nm,0.8s,baz=202,slow=3.5,SNR=4.7	**74.41**	**180**	P	**P**	**15 05 18.6**	**+1.2**
JTS	**JuntasAbangare** comp=Z,412nm,21.1s,baz=176,slow=35	**75.60**	**285**	LR	LR	15 37 32.8	
AKASG	**Malin Array Be** 0.3nm,0.4s,baz=224,slow=5.1,SNR=4.9	**75.89**	**26**	P	**P**	**15 05 28.0**	**+2.1**
KBZ	**Khabaz** comp=Z,46nm,19.9s,baz=225,slow=36	**78.26**	**38**	LR	LR	15 40 19.1	
HFS	**Hagfors** comp=Z,62nm,19.6s,baz=190,slow=37	**78.69**	**13**	LR	LR	15 41 40.3	
NOA	**NORSAR Array B** comp=Z,62nm,18.1s,baz=195,slow=37	**78.99**	**12**	LR	LR	15 42 19.9	
FINES	**FINESS Array B** comp=Z,84nm,18.4s,baz=214,slow=37	**83.02**	**18**	LR	LR	15 45 04.5	
SCHQ	**Schefferville** comp=Z,93nm,20.4s,baz=94,slow=31	**83.58**	**332**	LR	LR	15 36 18.7	
GEYT	**Alibeck** comp=Z,118nm,20.6s,baz=115,slow=35	**85.48**	**49**	LR	LR	15 43 02.0	
SFJD	**Kangerlussuaq** comp=Z,41nm,19.0s,baz=195,slow=31	**87.00**	**346**	LR	LR	15 38 19.1	
ARCES	**ARCESS Array B** comp=Z,57nm,19.4s,baz=233,slow=37	**89.33**	**13**	LR	LR	15 48 50.8	
ULM	**Lac du Bonnet** comp=Z,30nm,18.3s,baz=282,slow=33	**97.37**	**320**	LR	LR	15 46 45.7	
BVAR	**Borovoye Array** comp=Z,37nm,19.9s,baz=238,slow=38	**98.63**	**37**	LR	LR	15 56 04.2	

*IDC **01** 14:56:53.9±0.6,11°.00N×43°.56W,h0km,mb4.0/15, mb1 4.1/15,mb1mx3.9/57,mbtmp4.0/15,MS3.1/1, Ms1 3.1/1,ms1mx2.5/47,Error ellipse: s-maj=23.9km s-min=15.2km az=146.0*
*ISCJB **01** 14:56:54.7±0.5,11°.0N±0°.1×43°.6W±0°.1,h16km,mb4.1/16, MS2.9/1,Error ellipse: s-maj=19.8km s-min=11.5km az=146.9*

ISC 01 14:56:56.3±0.7,11°.0N±0°.2×43°.6W±0°.1,h16km,n24, σ0§42/15,mb4.0/16,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTGA	**Pitinga** 10nm,0.5s,baz=56,slow=15,SNR=16	**20.02**	**235**	P	**Pn**	**15 01 30.6**	**+0.1**
PTGA	comp=Z,48nm,18.7s,baz=104,slow=35			LR	LR	15 08 43.0	
SIV	**San Ignacio** 1.5nm,0.8s,baz=59,slow=9.1,SNR=6.5	**31.91**	**213**	P	**P**	**15 03 21.5**	**+0.2**
H10N3	**ASCENSION HYDR** baz=302,slow=75,SNR=6.7	**34.45**	**122**	T	T	15 40 15.7	
H10N2	**ASCENSION HYDR** baz=302,slow=75,SNR=6.1	**34.45**	**122**	T	T	15 40 16.1	
H10N1	**ASCENSION HYDR** baz=302,slow=75,SNR=7.0	**34.47**	**122**	T	T	15 40 17.3	
H10S3	**ASCENSION HYDR** baz=307,slow=74,SNR=2.4	**34.92**	**123**	T	T	15 40 44.5	
H10S1	**ASCENSION HYDR** baz=307,slow=74,SNR=3.2	**34.93**	**123**	T	T	15 40 47.5	
H10S2	**ASCENSION HYDR** baz=307	**34.94**	**123**	T	T	15 40 49.8	
LPAZ	**La Paz** 3.8nm,0.9s,baz=34,slow=8.4,SNR=7.5	**36.39**	**222**	P	**P**	**15 04 01.0**	**+0.1**
TIC	**Toumodi**	**38.32**	**93**	*e*P	P	15 04 25.2	+8.4
LIC	**Lamto** 51nm,1.1s	**38.38**	**94**	*e*P	P	15 04 24.8	+7.5
DBIC	**Dimbokro** 5.1nm,0.8s,baz=275,slow=8.5,SNR=5.8	**38.48**	**93**	P	**P**	**15 04 17.9**	**-0.2**
KIC	**Kosan Boka** 36nm,1.2s	**38.64**	**94**	*e*P	P	15 04 28.0	+8.5
KOWA	**Kowa** 2.7nm,0.9s,baz=276,slow=10,SNR=4.0	**38.71**	**81**	P	**P**	**15 04 20.4**	**+0.4**
TORD	**Torodi Ar. Bea** 1.9nm,0.8s,baz=280,slow=8.4,SNR=7.4	**44.28**	**82**	P	**P**	**15 05 05.4**	**-0.3**
ESDC	**Sonseca Array** 0.6nm,0.6s,baz=235,slow=9.1,SNR=4.5	**45.24**	**44**	P	**P**	**15 05 13.2**	**0.0**
TXAR	**Lajitas Array** 0.7nm,0.8s,baz=127,slow=8.0,SNR=4.8	**58.68**	**298**	P	**P**	**15 06 53.7**	**+0.1**
HFS	**Hagfors** 4.9nm,0.8s,baz=236,slow=6.8,SNR=6.3	**64.56**	**28**	P	**P**	**15 07 32.7**	**+0.2**
IDI	**Anoyia** 1.8nm,0.8s,baz=275,slow=2.4,SNR=2.8	**66.19**	**56**	P	**P**	**15 07 43.9**	**+0.2**
AKASG	**Malin Array Be** 0.4nm,0.5s,baz=261,slow=5.2,SNR=5.2	**70.69**	**40**	P	**P**	**15 08 11.8**	**+0.3**
YKA	**Yellowknife Ar** 0.2nm,0.6s,baz=101,slow=6.1,SNR=4.1	**71.59**	**332**	P	**P**	**15 08 15.7**	**-0.9**
BRTR	**Keskin Array B** 0.9nm,0.9s,baz=248,slow=4.9,SNR=4.3	**73.26**	**52**	P	**P**	**15 08 26.9**	**-0.4**
ILAR	**Eielson Array** 1.6nm,0.9s,baz=71,slow=4.4,SNR=12	**85.75**	**335**	P	**P**	**15 09 35.1**	**+0.6**
SNAA	**Sanae** 0.8nm,0.9s,baz=329,slow=5.9,SNR=4.7	**86.88**	**168**	P	**P**	**15 09 39.1**	**-0.4**

IDC 01 14:58:44.1±420.0,47°.36N×48°.28E,h0km,Error ellipse: s-maj=165.8km s-min=144.2km az=173.0,Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF** baz=248,slow=314,SNR=0.6	**7.12**	**61**	*i*		15 43 30.0	
I43RU	**DUBNA INFRASONI**	**11.57**	**328**	*i*		16 07 55.0	

baz=141,slow=324,SNR=2.8
I48TN KESRA INFRASON 31.03 262 *i* 18 10 00.0
baz=58,slow=322,SNR=0.4

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*IDC **01** 14:59:04.8±1.4, 0°.64S×133°.48E, h0km, mb3.8/4, mb1 4.1/5, mb1mx3.6/48, mbtmp4.0/5, ML4.5/1, MS2.9/2, Ms1 2.9/2, ms1mx2.4/52, Error ellipse: s-maj=37.6km s-min=29.4km az=87.0*
*ISCJB **01** 14:59:07.7±0.7, 0°.48S±0°.08×133°.29E±0°.05, h28km, mb3.9/5, MS2.9/1, Error ellipse: s-maj=12.5km s-min=7.0km az=19.2*
*DJA **01** 14:59:10.4±0.7, 1°.5±9°×13°.3E±°, h55km±10km, M4.4/6, mb4.5/3, MLv4.3/6*
ISC 01 14:59:09.0±0.9, 0°.61S±0°.09×133°.29E±0°.06, h28km, n15, σ1°56/12, mb4.0/5, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**1.26**	**135**	**P**	**Pn**	**14 59 31.0**	**+0.2**
RKPI				S	**Sb**	**14 59 50.0**	**+2.0**
SIJI	**Sorong**	**2.04**	**263**	Pn	**Pn**	**14 59 42.4**	**+1.0**
	123nm,0.3s,baz=266,slow=23,SNR=420						
SIJI				Sn	**Sn**	**15 00 07.5**	**+1.6**
	112nm,0.3s,baz=264,slow=22,SNR=14						
FAKI	**Fak Fak**	**2.51**	**204**	P	**Pn**	**14 59 46.3**	**-1.8**
BAKI	**Biak**	**2.88**	**102**	P	**Pn**	**14 59 53.2**	**+0.1**
LBMI	**Labuha**	**5.79**	**270**	P	**Pn**	**15 00 33.3**	**+0.3**
GUMO	**Guam**	**18.19**	**39**	LR	LR	15 10 14.6	
	comp=Z,28nm,19.0s,baz=171,slow=37						
ASAR	**Alice Springs**	**22.92**	**179**	P	**P**	**15 04 10.6**	**-0.4**
	1.0nm,0.3s,baz=1.4,slow=11,SNR=5.1						
JHJ	**Hachijo jima 2**	**34.11**	**10**	LR	LR	15 16 53.3	
	comp=Z,22nm,20.1s,baz=84,slow=31						
H11N1	**WAKE ISLAND Hy**	**38.64**	**57**	T	T	15 47 34.4	
	baz=243,slow=75,SNR=24						
H11N2	**WAKE ISLAND Hy**	**38.66**	**57**	T	T	15 47 35.3	
	baz=243,slow=75,SNR=22						
H11N3	**WAKE ISLAND Hy**	**38.66**	**57**	T	T	15 47 36.0	
	baz=243,slow=75,SNR=18						
XAN	**Xi'an**	**41.37**	**329**	P	**P**	**15 06 50.1**	**-2.8**
XAN				pP	pP	15 06 59.7	-1.6
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MKAR	**Makanchi Array**	**64.87**	**324**	P	**P**	**15 09 47.2**	**+1.5**
	comp=Z,1.0nm,0.5s,baz=110,slow=8.0,SNR=13						
KURBB	**Kurchatov Arra**	**68.94**	**326**	P	**P**	**15 10 12.6**	**+1.1**
	comp=Z,1.0nm,0.7s,baz=119,slow=6.6,SNR=5.5						
ILAR	**Eielson Array**	**86.21**	**25**	P	**P**	**15 11 47.1**	**-0.5**
	comp=Z,0.4nm,0.7s,baz=270,slow=4.5,SNR=5.6						

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*BJI **01** 14:59:05.0, 10°.16S×120°.23E, h24km, mb4.4/8, mB4.9/5*
*IDC **01** 14:59:08.3±0.8, 9°.54S×119°.77E, h0km, mb4.0/10, mb1 4.2/12, mb1mx3.9/52, mbtmp4.1/12, ML4.5/2, MS3.5/5, Ms1 3.5/5, ms1mx2.9/49, Error ellipse: s-maj=44.7km s-min=16.6km az=59.0*
*ISCJB **01** 14:59:15.3±0.4, 9°.72S±0°.06×119°.71E±0°.03, h74km±4km, mb3.9/11, Error ellipse: s-maj=10.1km s-min=5.1km az=13.2*
*DJA **01** 14:59:17.0±0.3, 10°.5±3°×12°.0E±°, h35km±3km, M4.5/13, mb4.6/1, MLv4.5/13*
ISC 01 14:59:15.9±0.8, 9°.71S±0°.07×119°.70E±0°.04, h58km±7km, n42, σ1°24/42, mb4.0/11, MS3.6/4, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**0.31**	**282**	P	**Pn**	**14 59 25.4**	**-0.5**
WBSI				S	**Sn**	**14 59 33.1**	**-0.1**
WSI	**Waingapu**	**0.59**	**86**	P	**Pn**	**14 59 29.2**	**+0.5**
WSI				S	**Sn**	**14 59 39.2**	**+1.1**
BASI	**Baing, Sumba**	**1.01**	**120**	P	**Pn**	**14 59 34.5**	**+0.6**
BASI				S	**Sn**	**14 59 49.2**	**+1.9**
PLAI	**Plampang**	**2.09**	**295**	P	**Pn**	**14 59 49.3**	**+0.8**
PLAI				S	**Sn**	**15 00 15.3**	**+1.9**
EDFI	**Ende, Flores**	**2.19**	**64**	P	**Pn**	**14 59 50.2**	**+0.2**
EDFI				S	**Sn**	**15 00 15.1**	**-0.9**
MMRI	**Maumere**	**2.73**	**67**	P	**Pn**	**14 59 58.1**	**+0.9**
MMRI				S	**Sn**	**15 00 29.1**	**+0.1**
BATI	**Baumata**	**3.94**	**98**	Pn	**Pn**	**15 00 15.4**	**+1.5**
	43nm,0.3s,baz=88,slow=2.4,SNR=33						
BATI				Sn	**Sn**	**15 00 59.9**	**+0.9**
	17nm,0.3s,baz=352,slow=23,SNR=7.9						
BATI	**Baumata**	**3.94**	**98**	P	**Pn**	**15 00 14.9**	**+1.0**
BATI				S	**Sn**	**15 00 59.8**	**+0.9**
SOEI	**Soe**	**4.51**	**91**	P	**Pn**	**15 00 23.5**	**+1.7**
IGBI	**Denpasar**	**4.58**	**281**	P	**Pn**	**15 00 25.1**	**+2.5**
SPSI	**Sidrap Palu**	**5.71**	**1**	P	**Pn**	**15 00 40.9**	**+2.8**
TTSI	**Tana Toraja**	**6.62**	**1**	P	Pn	15 00 55.0	+4.4
SIJI	**Sorong**	**14.48**	**53**	Pn	**Pn**	**15 02 37.8**	**0.0**
	0.3nm,0.3s,baz=176,slow=19,SNR=1.9						
WRA	**Warramunga Arr**	**17.42**	**127**	P	**Pn**	**15 03 12.7**	**-2.3**
	1.4nm,0.3s,baz=302,slow=13,SNR=72						
WRA				S	Sn	15 06 14.0	-14
	0.7nm,0.3s,baz=335,slow=29,SNR=7.0						
DAV	**Davao City (W)**	**17.67**	**20**	LR	LR	15 11 57.3	
	comp=Z,33nm,18.7s,baz=164,slow=44						
ASAR	**Alice Springs**	**19.41**	**137**	P	**P**	**15 03 37.8**	**+0.3**
	2.4nm,0.3s,baz=331,slow=14,SNR=103						
ASAR				S	S	15 07 03.3	-11
	0.6nm,0.3s,baz=309,slow=22,SNR=11						
PSI	**Prapat**	**24.14**	**300**	LR	LR	15 14 56.1	
	comp=Z,83nm,19.5s,baz=267,slow=39						
STKA	**Stephens Creek**	**29.97**	**141**	P	**P**	**15 05 19.9**	**+0.9**
	1.3nm,0.4s,baz=306,slow=8.7,SNR=9.0						
CMAR	**Chiang Mai Arr**	**34.68**	**324**	P	**P**	**15 06 00.3**	**+0.1**
	1.4nm,0.6s,baz=152,slow=6.3,SNR=11						
CMAR				LR	LR	15 20 47.1	
	comp=Z,26nm,18.4s,baz=185,slow=38						
DZM	**Mont Dzumac**	**46.43**	**111**	LR	LR	15 29 06.5	
	comp=Z,313nm,18.3s,baz=32,slow=39						
H08S2	**Diego Garcia H**	**46.68**	**269**	T	T	15 57 15.9	
	baz=96,slow=76,SNR=26						
H08S3	**Diego Garcia H**	**46.69**	**269**	T	T	15 57 23.1	
	baz=96,slow=76,SNR=29						
H08S1	**Diego Carcia H**	**46.70**	**269**	T	T	15 57 47.8	
	baz=96,slow=76,SNR=21						
MJAR	**Matsushiro Arr**	**49.19**	**20**	P	**P**	**15 07 56.2**	**-2.1**
	1.0nm,0.8s,baz=199,slow=8.2,SNR=3.9						
JIRN	**Jiri**	**49.32**	**320**	*eP*	**P**	**15 07 59.1**	**-0.8**
	21nm,0.7s						
GUN	**Gumba**	**49.69**	**320**	*eP*	**P**	**15 08 01.7**	**-1.0**
	20nm,0.7s						
PKI	**Pulchoki**	**49.76**	**319**	*eP*	**P**	**15 08 02.3**	**-0.9**
	6.0nm,0.6s						
PKIN	**Phulchoki**	**49.77**	**319**	*eP*	**P**	**15 08 02.6**	**-0.6**
DMN	**Daman**	**49.98**	**319**	*eP*	**P**	**15 08 04.5**	**-0.3**
KKN	**Kakani**	**50.00**	**319**	*eP*	**P**	**15 08 03.5**	**-1.3**
GKN	**Gorkha**	**50.56**	**319**	*eP*	**P**	**15 08 07.3**	**-1.7**
DANN	**Dangsing**	**51.36**	**319**	*eP*	**P**	**15 08 14.1**	**-1.1**
	19nm,0.7s						
PYUN	**Piuthan**	**51.70**	**318**	*eP*	**P**	**15 08 16.9**	**-0.8**
	10.0nm,0.6s						
GTA	**Gaotai**	**52.24**	**341**	*eP*	**P**	**15 08 22.3**	**+0.9**
GTA				pP	pP	15 08 27.3	-9.4
GTA				sP	sP	15 08 30.4	-13
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
SONM	**Songino Array**	**58.49**	**350**	P	**P**	**15 09 06.1**	**-0.1**
	1.3nm,0.6s,baz=164,slow=8.9,SNR=9.5						
RAO	**Raoul Island**	**61.26**	**118**	LR	LR	15 33 54.3	
	comp=Z,105nm,19.4s,baz=139,slow=34						
MKAR	**Makanchi Array**	**65.40**	**333**	P	**P**	**15 09 51.9**	**-0.5**
	0.9nm,0.5s,baz=149,slow=7.6,SNR=8.7						
KURBB	**Kurchatov Arra**	**69.90**	**333**	P	**P**	**15 10 20.1**	**-0.6**
	0.9nm,0.7s,baz=140,slow=4.7,SNR=6.2						
ZALV	**Zalesovo Beam**	**69.94**	**339**	P	**P**	**15 10 21.4**	**+0.5**
	0.7nm,0.4s,baz=149,slow=4.6,SNR=3.8						
BVAR	**Borovoye Array**	**75.24**	**332**	P	**P**	**15 10 51.7**	**-0.7**
	0.9nm,0.7s,baz=134,slow=6.4,SNR=7.9						
AKTO	**Aktyubinsk**	**80.19**	**325**	P	**P**	**15 11 19.1**	**-0.9**
	1.9nm,0.7s,baz=96,slow=9.2,SNR=8.7						
SNAA	**Sanae**	**90.51**	**195**	P	**P**	**15 12 12.4**	**+1.2**
	0.8nm,1.0s,baz=161,slow=8.3,SNR=7.4						

MAN 01 15:06:36.3, 9°.17N×126°.68E, h7km, mb4.6, ML3.5, MS3.4, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**1.06**	**259**	*eP*	Pg	15 06 55.6	-1.1
BUTP				*eS*	Sn	15 07 13.4	+0.6
BUKP	**Musuan**	**2.05**	**231**	*eP*	Pn	15 07 11.9	+0.6
BUKP				*eS*	Sb	15 07 41.0	+1.2
BESP	**Borongan**	**2.71**	**333**	*eP*	Pn	15 07 21.3	+1.0

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*IDC **01** 15:16:46.7±1.0, 39°.54N×75°.06E, h0km, mb3.5/4, mb1 3.7/8, mb1mx3.4/71, mbtmp3.5/8, ML3.0/4, MS3.0/3, Ms1 3.0/3, ms1mx2.4/59, Error ellipse: s-maj=27.8km s-min=16.4km az=89.0*
*SOME **01** 15:16:50.9, 39°.78N×75°.27E, h20km*
*KRNET **01** 15:16:51.7±0.1, 39°.88N×75°.15E, mb4.1*
*BJI **01** 15:16:52.0, 39°.79N×75°.22E, h10km, ML3.4/5*
*NNC **01** 15:16:53.1±1.2, 39°.89N×75°.10E, h0km, mb4.1, mpv3.8, Error ellipse: s-maj=13.2km s-min=3.8km az=159.0*
ISC 01 15:16:49.7±1.3, 39°.73N±0°.04×75°.18E±0°.03, h7km±9km, n62, σ2°73/81, mb3.6/4, 20C-27D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**0.65**	**109**	Pg	**Pg**	**15 17 04.2**	**+2.0**
KSH				Sg	**Sb**	**15 17 13.7**	**+0.9**
KSH				smax	smax		
	comp=N,2μm,0.2s						
KSH				smax	smax		
	comp=E,1μm,0.2s						
SFK	**Sufi-Kurgan**	**1.32**	**283**	⇓P	**Pn**	**15 17 15.9**	**+1.1**
	64nm,0.2s						
SFK				⇑S	**Sb**	**15 17 33.4**	**+1.1**
	797nm,0.4s						
SFK	**Sufi-Kurgan**	**1.32**	**283**	⇓*i*P	**Pn**	**15 17 15.9**	**+1.1**
	baz=77						
SFK				⇓*i*S	**Sb**	**15 17 33.4**	**+1.1**
	baz=77						
NRN	**Naryn**	**1.81**	**20**	⇓*i*P	**Pn**	**15 17 23.0**	**+1.3**
	baz=22						
NRN				⇓*i*S	**Sn**	**15 17 45.3**	**+0.1**
	baz=22						
ARSB	**Arslanbob**	**2.31**	**314**	⇑*i*P	**Pn**	**15 17 31.4**	**+3.0**
	baz=12						
ARSB				⇑*i*S	**Sb**	**15 18 00.5**	**-0.2**
	baz=12						
KZA	**Kyzart**	**2.35**	**1**	P	**Pn**	**15 17 31.5**	**+2.3**
	SNR=94						
KZA	**Kyzart**	**2.35**	**1**	⇓*i*P	**Pn**	**15 17 31.4**	**+2.3**
	baz=2.0						
KZA				⇓*i*S	**Sb**	**15 18 00.7**	**-1.3**
	baz=2.0						
UCH	**Uchtor**	**2.55**	**349**	P	**Pn**	**15 17 34.7**	**+2.8**
	SNR=81						
UCH	**Uchtor**	**2.55**	**349**	⇓*i*P	**Pn**	**15 17 34.3**	**+2.4**
	baz=49						
UCH				⇓*i*S	**Sn**	**15 18 05.4**	**+1.9**
	baz=49						
ULHL	**Ulahol**	**2.64**	**17**	P	**Pn**	**15 17 35.3**	**+2.3**
	SNR=30						
ULHL	**Ulahol**	**2.64**	**17**	⇓*i*P	**Pn**	**15 17 35.5**	**+2.5**
	baz=19						
ULHL				⇓*i*S	**Sb**	**15 18 07.8**	**-2.4**
	baz=19						
AML	**Almayashu**	**2.65**	**335**	P	**Pn**	**15 17 36.3**	**+3.0**
	SNR=20						
AML	**Almayashu**	**2.65**	**335**	⇑*i*P	**Pn**	**15 17 35.9**	**+2.6**
	baz=34						
AML				⇑*i*S	**Sn**	**15 18 07.7**	**+1.8**
	baz=34						
TARG	**Taragay, Kyrgy**	**2.82**	**44**	⇑*i*P	**Pn**	**15 17 38.8**	**+3.1**
	baz=47						
TARG				⇑*i*S	**Sb**	**15 18 13.3**	**-2.4**
	baz=47						
KDJ	**Kajisay**	**2.84**	**32**	⇑*i*P	**Pn**	**15 17 38.4**	**+2.7**
	baz=34						
KDJ				⇑*i*S	**Sn**	**15 18 12.8**	**+2.6**
	baz=34						
KBK	**Karagaybulak**	**2.93**	**357**	P	**Pb**	**15 17 40.8**	**-1.7**
	SNR=16						
KBK	**Karagaybulak**	**2.93**	**357**	⇓*i*P	**Pn**	**15 17 39.7**	**+2.8**
	baz=57						
KBK				⇓*i*S	**Sn**	**15 18 14.2**	**+1.7**
	baz=57						
AAK	**Ala-Archa**	**2.95**	**350**	Pn	**Pn**	**15 17 40.6**	**+3.3**
	8.9nm,0.3s,baz=155,slow=7.9,SNR=79						
AAK				Lg	Lg	15 18 16.7	
	9.0nm,0.3s,baz=338,slow=19,SNR=7.5						
AAK				LR	LR	15 18 48.0	
	comp=Z,41nm,19.3s,baz=196,slow=39						
AAK	**Ala-Archa**	**2.95**	**350**	⇑Pn	**Pn**	**15 17 40.5**	**+3.3**
	35nm,0.6s						
AAK				Lg	Lg	15 18 18.3	
	115nm,0.8s						
AAK	**Ala-Archa**	**2.95**	**350**	P	**Pn**	**15 17 40.7**	**+3.5**
	SNR=35						
AAK	**Ala-Archa**	**2.95**	**350**	⇑*i*P	**Pn**	**15 17 39.8**	**+2.6**
	baz=50						
AAK				⇑*i*S	**Sn**	**15 18 14.6**	**+1.6**
	baz=50						
EKS2	**Erkin-Say**	**3.12**	**341**	P	**Pn**	**15 17 42.5**	**+3.1**
	SNR=12						
EKS2	**Erkin-Say**	**3.12**	**341**	⇑*i*P	**Pn**	**15 17 42.2**	**+2.8**
	baz=40						
EKS2				⇑*i*S	**Sn**	**15 18 18.4**	**+1.4**
	baz=40						
TKM2	**Tokmak 2**	**3.21**	**5**	⇑Pn	**Pn**	**15 17 43.9**	**+3.1**
	42nm,0.3s						
TKM2				⇑Lg	Lg	15 18 28.8	
	107nm,0.5s						
TKM2	**Tokmak 2**	**3.21**	**5**	P	**Pn**	**15 17 43.9**	**+3.1**
	SNR=138						
TKM2	**Tokmak 2**	**3.21**	**5**	⇓*e*P	**Pn**	**15 17 43.1**	**+2.4**
	baz=6.0						
TKM2				⇓*i*S	**Sn**	**15 18 21.2**	**+1.9**
	baz=6.0						
CHMS	**Chumysh**	**3.28**	**355**	P	**Pn**	**15 17 45.0**	**+3.4**
	SNR=18						
CHMS	**Chumysh**	**3.28**	**355**	⇓*i*P	**Pn**	**15 17 44.2**	**+2.5**
	baz=55						
CHMS				⇓*i*S	**Sn**	**15 18 22.3**	**+1.3**
	baz=55						
MRKS	**Merke**	**3.35**	**335**	*eP*	**Pb**	**15 17 47.9**	**-1.7**
	42nm,0.4s						
MRKS				*eS*	**Sb**	**15 18 28.3**	**-2.4**
	48nm,0.7s						
MNAS	**Manas**	**3.42**	**325**	⇑Pn	**Pn**	**15 17 46.7**	**+3.1**
	14nm,0.4s						
MNAS				⇓Lg	Lg	15 18 37.4	
	38nm,0.8s						
IZV	**Izvestkoviy**	**3.48**	**18**	*eP*	**Pb**	**15 17 53.2**	**+1.5**
	35nm,0.5s						
IZV				*eS*	**Sg**	**15 18 39.0**	**-2.4**
	128nm,0.8s						
USP	**Ospenovka**	**3.57**	**352**	P	**Pn**	**15 17 48.5**	**+2.9**
	SNR=23						
MDOK	**Medeo**	**3.71**	**22**	⇓Pn	**Pn**	**15 17 50.1**	**+2.5**
	18nm,0.4s						
MDOK				⇓Lg	Lg	15 18 44.9	
	178nm,0.7s						
MDOK	**Medeo**	**3.71**	**22**	*eP*	**Pb**	**15 17 57.2**	**+1.5**
	22nm,0.4s						
MDOK				*eS*	**Sg**	**15 18 45.0**	**-3.8**
	159nm,0.8s						
KNDC	**Almaty**	**3.74**	**20**	⇓Pn	**Pn**	**15 17 51.2**	**+3.3**
	25nm,0.4s						
KNDC				⇑Lg	Lg	15 18 46.8	
	150nm,0.6s						
CHKK	**Chushkaly**	**4.34**	**18**	*eP*	**Pb**	**15 18 08.5**	**+2.1**
	13nm,0.5s						
CHKK				*eS*	**Sg**	**15 19 04.8**	**-4.2**
	78nm,0.8s						
KURS	**Kuram**	**4.38**	**30**	*eP*	**Pb**	**15 18 08.8**	**+1.9**
KURS				*eS*	**Sg**	**15 19 05.4**	**-4.8**
IUG	**Iuzhnay**	**4.59**	**303**	*eP*	**Pb**	**15 18 14.2**	**+3.6**
IUG				*eS*	**Sg**	**15 19 13.9**	**-3.1**
PDGK	**Podgornoye**	**4.84**	**41**	⇓Pn	**Pn**	**15 18 05.2**	**+2.1**
	6.8nm,0.7s						
PDGK				⇓Pg	**Pb**	**15 18 17.0**	**+2.2**
	17nm,0.5s						
PDGK				⇓Lg	Lg	15 19 21.2	
	100nm,1.1s						
KK31	**Karatay Array**	**4.87**	**315**	⇓Pn	**Pn**	**15 18 04.9**	**+1.5**
	0.9nm,0.3s,baz=121,slow=13,SNR=16						
KK31				⇑Pg	**Pb**	**15 18 18.8**	**+3.5**
	6.8nm,0.6s,baz=132,slow=13,SNR=12						
KK31				⇓Lg	Lg	15 19 23.7	
	21nm,0.7s,baz=132,slow=29,SNR=6.1						
MNBS	**Baschi**	**4.97**	**28**	*eP*	**Pb**	**15 18 18.9**	**+1.8**
	20nm,0.6s						
MNBS				*eS*	**Sb**	**15 19 22.7**	**+5.6**
	52nm,0.9s						
BRLS	**Borolday**	**5.20**	**311**	*eP*	**Pb**	**15 18 25.1**	**+4.1**
BRLS				*eS*	**Sg**	**15 19 32.4**	**-4.3**
KTMS	**Ketmen**	**5.37**	**45**	*eP*	**Pb**	**15 18 26.1**	**+2.2**
	7.5nm,0.4s						
KTMS				*eS*	**Sb**	**15 19 35.2**	**+6.5**
	16nm,0.9s						
MK31	**Makanchi Array**	**8.76**	**34**	⇓Pn	**Pn**	**15 18 58.3**	**+1.5**
	0.4nm,0.4s,baz=208,slow=12,SNR=5.2						
MK31				⇑Lg	Lg	15 21 31.6	
	4.2nm,0.9s,baz=216,slow=29,SNR=4.9						
MKAR	**Makanchi Array**	**8.76**	**34**	Pn	**Pn**	**15 18 58.5**	**+1.7**
	0.2nm,0.3s,baz=208,slow=12,SNR=6.9						
MKAR				Lg	Lg	15 21 19.2	
	0.1nm,0.3s,baz=236,slow=26,SNR=3.2						
WMQ	**Urumqi**	**10.20**	**62**	*eP*	Pn	15 19 22.0	+5.4
KURBB	**Kurchatov Arra**	**11.15**	**11**	Pn	**Pn**	**15 19 29.4**	**0.0**
	0.0nm,0.3s,baz=202,slow=12,SNR=2.5						
KURBB				Lg	Lg	15 22 40.6	
	0.1nm,0.3s,baz=205,slow=30,SNR=6.4						
PYUN	**Piuthan**	**13.28**	**148**	*eP*	Pn	15 19 56.4	-2.5
	4.5nm,0.3s						
BVAR	**Borovoye Array**	**13.70**	**348**	Pn	**Pn**	**15 20 07.5**	**+3.2**
	0.1nm,0.3s,baz=130,slow=13,SNR=2.3						
BVAR				Lg	Lg	15 23 56.0	
	0.2nm,0.3s,baz=152,slow=29,SNR=3.8						
GKN	**Gorkha**	**14.08**	**143**	*eP*	Pn	15 20 05.7	-4.0
	4.5nm,0.2s						
KKN	**Kakani**	**14.56**	**142**	*eP*	Pn	15 20 12.8	-3.6
	9.3nm,0.5s						
GUN	**Gumba**	**14.75**	**140**	*eP*	**Pn**	**15 20 16.6**	**-2.5**
	8.0nm,0.4s						
PKIN	**Phulchoki**	**14.79**	**142**	*eP*	Pn	15 20 16.0	-3.6
	7.1nm,0.3s						
PKI	**Pulchoki**	**14.80**	**142**	*eP*	Pn	15 20 16.0	-3.8
	6.4nm,0.3s						
JIRN	**Jiri**	**15.11**	**139**	*eP*	**Pn**	**15 20 20.1**	**-3.9**
	15nm,0.4s						
ZALV	**Zalesovo Beam**	**15.66**	**22**	Pn	**Pn**	**15 20 30.3**	**-0.3**
	0.3nm,0.3s,baz=202,slow=11,SNR=5.2						
TORD	**Torodi Ar. Bea**	**69.06**	**270**	P	**P**	**15 27 54.4**	**-2.2**
	0.3nm,0.7s,baz=50,slow=4.2,SNR=2.8						
FRB	**Frobisher Bay**	**72.92**	**344**	LR	LR	16 02 44.4	
	comp=Z,16nm,20.7s,baz=174,slow=38						
YKA	**Yellowknife Ar**	**77.82**	**5**	P	**P**	**15 28 45.3**	**-2.1**
	0.3nm,0.4s,baz=345,slow=5.7,SNR=5.7						
DBIC	**Dimbokro**	**78.11**	**269**	LR	LR	16 07 50.9	
	comp=Z,31nm,18.4s,baz=96,slow=39						
WRA	**Warramunga Arr**	**81.02**	**125**	P	**P**	**15 29 03.1**	**-2.3**
	0.3nm,0.7s,baz=329,slow=5.5,SNR=3.1						
ASAR	**Alice Springs**	**83.51**	**128**	P	**P**	**15 29 16.8**	**-1.6**
	0.5nm,1.0s,baz=321,slow=7.2,SNR=3.8						

MEX 01 15:18:09.3±0.9, 15°.72N×92°.56W, h184km±8km, MD3.9, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.64**	**269**	*eP*	Pn	15 18 33.6	-1.5
PCIG				*eS*	Sn	15 18 52.1	-2.9
CCIG	**Comitan**	**0.69**	**36**	*eP*	Pn	15 18 33.2	-2.5
CCIG				*eS*	Sn	15 18 53.1	-3.0
TGBT	**Tuxtla Gutierr**	**1.17**	**334**	*i P*	Pn	15 18 37.8	-0.8
TGIG		**1.18**	**333**	*eP*	Pn	15 18 37.9	-1.0
TGIG				*i S*	Sn	15 19 00.1	-1.8

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*ISCJB **01** 15:26:46.0±1.3, 6°.02S±0°.10×146°.4E±0°.2, h52km, mb3.7/4, Error ellipse: s-maj=27.8km s-min=12.0km az=164.8*
*IDC **01** 15:26:53.1±3.5, 6°.25S×146°.66E, h109km±33km, mb3.4/4, mb1 3.6/6, mb1mx3.2/45, mbtmp3.8/6, Error ellipse: s-maj=36.3km s-min=27.8km az=103.0*
ISC 01 15:26:47.5±1.1, 6°.0S±0°.1×146°.4E±0°.2, h52km, n9, σ1°93/10, mb3.8/4, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.49**	**168**	P	**Pn**	**15 27 42.5**	**+3.2**
	17nm,0.3s,baz=30,slow=6.1,SNR=74						
PMG				S	**Sn**	**15 28 19.0**	**-0.3**
	13nm,0.3s,baz=8.1,slow=15,SNR=3.4						
CTA	**Charters Tower**	**14.03**	**181**	P	**P**	**15 30 08.0**	**-2.0**
	2.5nm,0.3s,baz=358,slow=14,SNR=41						
WRA	**Warramunga Arr**	**18.18**	**219**	P	**Pn**	**15 30 55.4**	**-0.9**
	0.3nm,0.3s,baz=37,slow=11,SNR=15						
ASAR	**Alice Springs**	**21.32**	**213**	P	**P**	**15 31 29.9**	**-0.3**
	1.7nm,0.7s,baz=53,slow=8.3,SNR=24						
STKA	**Stephens Creek**	**26.16**	**189**	P	**P**	**15 32 16.1**	**-0.9**
	1.3nm,0.5s,baz=10.0,slow=8.2,SNR=12						
CMAR	**Chiang Mai Arr**	**52.72**	**298**	P	**P**	**15 36 00.0**	**+2.6**
	0.5nm,0.5s,baz=108,slow=5.6,SNR=3.2						
ILAR	**Eielson Array**	**85.69**	**23**	P	**P**	**15 39 19.6**	**-0.8**
	0.6nm,0.7s,baz=258,slow=5.2,SNR=7.1						
TORD	**Torodi Ar. Bea**	**144.52**	**284**	PKP	**PKPdf**	**15 46 18.0**	**-1.2**
	1.3nm,0.7s,baz=74,slow=3.4,SNR=7.7						
KOWA	**Kowa**	**149.72**	**289**	PKPbc	**PKPbc**	**15 46 31.6**	**-1.0**
	1.0nm,0.3s,baz=69,slow=4.2,SNR=5.0						

IDC 01 16:10:32.8±18.0, 21°.50S×176°.24W, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.6/47, mbtmp3.8/5, Error ellipse: s-maj=336.9km s-min=142.8km az=82.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**35.04**	**265**	P	P	16 17 28.9	+1.3
	1.1nm,0.4s,baz=95,slow=9.7,SNR=4.2						
STKA	**Stephens Creek**	**38.85**	**246**	P	P	16 17 58.9	-1.1
	0.5nm,0.5s,baz=77,slow=14,SNR=4.8						
ASAR	**Alice Springs**	**45.90**	**257**	P	P

comp=Z,36nm,18.0s,baz=328,slow=37
YKA Yellowknife Ar 67.36 352 P P 16 47 09.0 -0.3
0.2nm,0.7s,baz=168,slow=6.3,SNR=4.0
ILAR Eielson Array 77.03 341 P P 16 48 07.3 +0.2
0.1nm,0.6s,baz=128,slow=7.1,SNR=3.0

IDC 01 16:36:22.4±5.0, 0°.25S×20°.22W, h0km, mb3.5/2, mb1 3.8/3, mb1mx3.4/59, mbtmp3.8/3, ML3.6/1, Error ellipse: s-maj=202.7km s-min=43.4km az=127.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**9.45**	**143**	T	T	16 47 48.7	
	baz=322,slow=74,SNR=14						
H10N3	**ASCENSION HYDR**	**9.46**	**143**	T	T	16 47 44.5	
	baz=322,slow=74,SNR=20						
H10N1	**ASCENSION HYDR**	**9.47**	**143**	T	T	16 47 45.8	
	baz=322,slow=74,SNR=27						
H10S1	**ASCENSION HYDR**	**10.27**	**147**	T	T	16 48 43.8	
	baz=55,slow=7.6,SNR=14						
H10S3	**ASCENSION HYDR**	**10.27**	**148**	T	T	16 48 44.0	
	baz=55,slow=7.6,SNR=12						
H10S2	**ASCENSION HYDR**	**10.28**	**147**	T	T	16 48 44.3	
	baz=55,slow=7.6,SNR=8.4						
DBIC	**Dimbokro**	**16.80**	**66**	Pn	Pn	16 40 19.0	-0.3
	0.2nm,0.3s,baz=247,slow=14,SNR=3.1						
KOWA	**Kowa**	**21.72**	**47**	P	P	16 41 15.3	-0.1
	0.9nm,0.3s,baz=220,slow=11,SNR=3.7						
TORD	**Torodi Ar. Bea**	**25.48**	**58**	P	P	16 41 52.9	+0.3
	0.5nm,0.6s,baz=241,slow=11,SNR=3.7						
ASAR	**Alice Springs**	**145.41**	**135**	PKPbc	PKPbc	16 56 02.4	-0.9
	0.5nm,0.6s,baz=230,slow=2.2,SNR=9.0						

IDC 01 16:51:11.0±1.8, 11°.02S×165°.49E, h0km, mb3.8/4, mb1 4.0/5, mb1mx3.6/50, mbtmp3.9/5, ML4.3/1, MS3.2/1, Ms1 3.2/1, ms1mx2.4/39, Error ellipse: s-maj=53.5km s-min=28.8km az=149.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.68**	**286**	Pn	Pn	16 52 37.9	+1.2
	8.1nm,0.3s,baz=141,slow=5.0,SNR=4.5						
HNR				Sn	Sn	16 53 42.7	0.0
	7.1nm,0.3s,baz=204,slow=18,SNR=2.2						
H11S2	**WAKE ISLAND Hy**	**29.34**	**2**	T	T	17 27 51.5	
	baz=183,slow=76,SNR=9.8						
H11S3	**WAKE ISLAND Hy**	**29.35**	**2**	T	T	17 27 56.5	
	baz=183,slow=76,SNR=7.4						
H11S1	**WAKE ISLAND Hy**	**29.36**	**2**	T	T	17 27 59.4	
	baz=183,slow=76,SNR=7.6						
H11N1	**WAKE ISLAND Hy**	**30.57**	**3**	T	T	17 29 30.6	
	baz=182,slow=76,SNR=6.8						
H11N3	**WAKE ISLAND Hy**	**30.57**	**3**	T	T	17 29 23.1	
	baz=182,slow=76,SNR=7.2						
H11N2	**WAKE ISLAND Hy**	**30.59**	**3**	T	T	17 29 25.7	
	baz=182,slow=76,SNR=7.1						
WRA	**Warramunga Arr**	**31.26**	**250**	P	P	16 57 33.1	+0.2
	0.6nm,0.8s,baz=81,slow=9.1,SNR=4.3						
GUMO	**Guam**	**31.88**	**320**	LR	LR	17 07 42.5	
	comp=Z,45nm,21.4s,baz=181,slow=31						
ASAR	**Alice Springs**	**32.58**	**243**	P	P	16 57 44.2	-0.3
	0.8nm,0.6s,baz=66,slow=10,SNR=28						
ILAR	**Eielson Array**	**83.57**	**19**	P	P	17 03 41.0	+0.2
	0.4nm,0.6s,baz=241,slow=5.0,SNR=7.3						
MKAR	**Makanchi Array**	**93.33**	**317**	P	P	17 04 27.4	-0.6
	0.4nm,0.8s,baz=113,slow=5.7,SNR=4.4						

IDC 01 16:53:26.2±1.6, 16°.23S×172°.16W, h0km, mb3.4/2, mb1 3.6/3, mb1mx3.4/51, mbtmp3.4/3, ML3.1/1, MS3.5/1, Ms1 3.5/1, ms1mx2.6/25, Error ellipse: s-maj=46.7km s-min=31.3km az=136.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.34**	**9**	Pn	Pn	16 54 06.1	0.0
	4.5nm,0.3s,baz=25,slow=17,SNR=5.9						
AFI				Sn	Sn	16 54 26.4	-9.2
	24nm,0.3s,baz=238,slow=20,SNR=8.6						
RAO	**Raoul Island**	**14.00**	**201**	LR	LR	17 01 03.3	
	comp=Z,224nm,21.6s,baz=148,slow=33						
WRA	**Warramunga Arr**	**50.83**	**257**	P	P	17 02 28.6	-0.5
	0.7nm,1.1s,baz=95,slow=6.8,SNR=4.6						
ASAR	**Alice Springs**	**51.00**	**253**	P	P	17 02 30.5	+0.2
	0.3nm,0.6s,baz=88,slow=8.0,SNR=8.0						
TORD	**Torodi Ar. Bea**	**173.31**	**116**	PKPab	PKPab	17 15 06.2	-0.4
	1.3nm,0.7s,baz=251,slow=4.8,SNR=6.2						

*IDC **01** 17:07:56.6±2.0, 0°.79S×127°.75E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.1/55, mbtmp3.2/3, MS3.2/1, Ms1 3.2/1, ms1mx2.4/20, Error ellipse: s-maj=156.9km s-min=25.6km az=67.0*
*DJA **01** 17:07:59.7±0.4, 1°.5S±3°×12°.7E±°, h16km±7km, M3.8/7, mB4.6/1, mb4.4/1, MLv3.5/7, Mw(mB)3.8/1*
*ISCJB **01** 17:08:00.1±0.6, 0°.95S±0°.04×126°.94E±0°.04, h31km, mb3.3/2, MS3.1/1, Error ellipse: s-maj=6.6km s-min=6.0km az=150.1*
ISC 01 17:08:00.2±0.9, 1°.12S±0°.04×127°.06E±0°.06, h31km, n10, σ1§44/14, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**0.66**	**43**	P	**Pb**	**17 08 12.3**	**-1.0**
LBMI				S	**Sb**	**17 08 21.6**	**-0.6**
SANI	**Sanana**	**1.41**	**229**	P	**Pn**	**17 08 23.0**	**-0.8**
SANI				S	**Sb**	**17 08 43.6**	**+0.1**
NLAI	**Namlea**	**2.10**	**179**	P	**Pb**	**17 08 36.8**	**-0.9**
NLAI				S	**Sb**	**17 09 03.0**	**-0.4**
AAI	**Ambon**	**2.79**	**156**	P	**Pb**	**17 08 47.2**	**-2.2**
AAI				S	**Sb**	**17 09 24.0**	**+0.9**
KMSI	**Cibinong**	**3.51**	**299**	S	**Sn**	**17 09 31.0**	**-2.1**
APSI	**Ampana**	**5.41**	**272**	P	**Pn**	**17 09 18.4**	**-0.4**
SPSI	**Sidrap Palu**	**7.81**	**249**	P	**Pn**	**17 09 53.1**	**+1.3**
WRA	**Warramunga Arr**	**20.01**	**160**	P	**Pn**	**17 12 32.1**	**-0.4**
	0.4nm,0.5s,baz=340,slow=11,SNR=6.8						
ASAR	**Alice Springs**	**23.37**	**164**	P	**P**	**17 13 08.5**	**+2.1**
	0.5nm,0.7s,baz=346,slow=11,SNR=7.9						
ASAR				LR	LR	17 23 48.4	
	comp=Z,58nm,18.6s,baz=94,slow=40						
MKAR	**Makanchi Array**	**61.73**	**327**	P	**P**	**17 18 17.6**	**+1.8**
	0.2nm,0.6s,baz=108,slow=7.7,SNR=3.4						

*ISCJB **01** 17:11:59.5±1.0, 36°.87N±0°.03×141°.41E±0°.06, h16km±6km, mb3.7/21, MS3.3/1, Error ellipse: s-maj=7.7km s-min=5.0km az=16.7*
*JMA **01** 17:12:00.3±0.1, 36°.86N×141°.35E, h30km±1km, M3.8*
JMA Felt I J1.
*NIED **01** 17:12:00, 36°.90N×141°.40E, h8km, Mw3.8 Best double couple: M∘5.81000×10^14 NP1:φ∘±11.00000°, δ42.00000°, λ-95.00000°. NP2:φ∘±198.00000°, δ48.00000°, λ-85.00000°.*
*IDC **01** 17:12:06.2±1.7, 36°.81N×141°.08E, h49km±17km, mb3.5/21, mb1 3.7/26, mb1mx3.6/68, mbtmp3.8/26, ML2.7/4, MS3.1/2, Ms1 3.1/2, ms1mx2.4/51, Error ellipse: s-maj=17.6km s-min=11.8km az=85.0*
ISC 01 17:12:00.2±1.6, 36°.87N±0°.04×141°.23E±0°.05, h4km±10km, n43, σ1§04/48, mb3.8/21, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.41**	**304**	P	**Pb**	**17 12 10.3**	**+0.2**
ONAJ				S	**Sb**	**17 12 17.5**	**+0.8**
JFK	**Kawauchi**	**0.57**	**330**	P	**Pb**	**17 12 12.5**	**-0.2**
JFK				S	**Sb**	**17 12 21.0**	**-0.2**
JHO	**Hitachi**	**0.59**	**244**	P	**Pb**	**17 12 13.2**	**+0.1**
JHO				S	**Sb**	**17 12 22.4**	**+0.6**
JFT	**Otama**	**0.96**	**312**	P	**Pn**	**17 12 19.6**	**-0.8**
JFT				*e*S	**Sb**	**17 12 33.0**	**+0.6**
JMM	**Marumori**	**1.05**	**341**	P	**Pg**	**17 12 19.9**	**-0.5**
JMM				*e*S	**Sg**	**17 12 33.8**	**-0.2**
JSB	**Shiboa**	**1.05**	**276**	P	**Pn**	**17 12 21.7**	**0.0**
JSB				S	**Sn**	**17 12 37.0**	**+0.1**
JYT	**Yasato**	**1.05**	**233**	P	**Pg**	**17 12 19.8**	**-0.6**
JFY	**Yanaizu**	**1.33**	**294**	P	**Pb**	**17 12 25.5**	**-0.2**
JFY				S	**Sn**	**17 12 43.8**	**+0.1**
MJAR	**Matsushiro Arr**	**2.45**	**263**	P	**Pn**	**17 12 41.4**	**+0.5**
	1.9nm,0.3s,baz=92,slow=14,SNR=37						
MJAR				S	**Sb**	**17 13 14.4**	**-0.9**
	4.1nm,0.3s,baz=78,slow=18,SNR=6.6						
MAT	**Matsushiro**	**2.45**	**263**	P	**Pn**	**17 12 41.9**	**+0.9**
MAT				*e*S	**Sb**	**17 13 13.9**	**-1.4**
JHJ	**Hachijo jima 2**	**3.93**	**198**	P	**Pn**	**17 13 02.6**	**+1.4**
	2.0nm,0.3s,baz=348,slow=16,SNR=5.0						
JHJ				S	**Sn**	**17 13 47.5**	**-0.3**
	5.1nm,0.3s,baz=82,slow=21,SNR=3.2						
ASAJ	**Asahikawa**	**7.31**	**8**	P	**Pn**	**17 13 46.4**	**-1.3**
	0.2nm,0.3s,baz=204,slow=12,SNR=4.5						
ASAJ				S	**Sn**	**17 15 10.8**	**-0.2**
	0.1nm,0.3s,baz=157,slow=16,SNR=2.1						
JCJ	**Chichijima**	**9.78**	**175**	P	**Pn**	**17 14 22.5**	**+0.8**
USRK	**Ussuriysk Ar.**	**10.14**	**319**	P	**Pn**	**17 14 28.4**	**+1.9**
	0.4nm,0.3s,baz=139,slow=42,SNR=4.3						
KSRS	**Korea Array**	**10.64**	**277**	P	**Pn**	**17 14 35.9**	**+2.6**
	0.1nm,0.3s,baz=1.7,slow=28,SNR=2.6						
KSRS				LR	LR	17 18 09.9	
	comp=Z,66nm,19.3s,baz=90,slow=34						
MA2	**Magadan**	**23.54**	**12**	P	**P**	**17 17 13.8**	**+2.6**
	0.6nm,0.2s,baz=210,slow=14,SNR=2.7						
SEY	**Seymchan**	**26.98**	**11**	P	**P**	**17 17 44.3**	**+1.7**
	0.4nm,0.6s,baz=184,slow=9.4,SNR=3.6						
SONM	**Songino Array**	**27.75**	**304**	P	**P**	**17 17 50.3**	**+0.4**
	0.5nm,0.6s,baz=102,slow=8.4,SNR=3.6						
H11N2	**WAKE ISLAND Hy**	**28.19**	**120**	T	T	17 47 18.2	
	baz=313,slow=75,SNR=322						
H11N1	**WAKE ISLAND Hy**	**28.20**	**120**	T	T	17 47 19.1	
	baz=313,slow=75,SNR=347						
H11N3	**WAKE ISLAND Hy**	**28.21**	**120**	T	T	17 47 19.9	
	baz=313,slow=75,SNR=362						
H11S1	**WAKE ISLAND Hy**	**28.90**	**122**	T	T	17 48 10.1	
	baz=315,slow=76,SNR=174						
H11S3	**WAKE ISLAND Hy**	**28.90**	**122**	T	T	17 48 10.3	
	baz=315,slow=76,SNR=114						
H11S2	**WAKE ISLAND Hy**	**28.91**	**122**	T	T	17 48 11.4	
	baz=315,slow=76,SNR=62						
CMAR	**Chiang Mai Arr**	**41.31**	**255**	P	**P**	**17 19 45.0**	**-2.0**
	0.4nm,0.7s,baz=37,slow=5.1,SNR=3.1						
ZALV	**Zalesovo Beam**	**41.91**	**313**	P	**P**	**17 19 50.9**	**-0.6**
	1.3nm,0.6s,baz=84,slow=7.2,SNR=6.9						
NRIK	**Noril'sk**	**43.35**	**335**	LR	LR	17 38 38.8	
	comp=Z,34nm,18.0s,baz=146,slow=37						
MKAR	**Makanchi Array**	**44.08**	**302**	P	**P**	**17 20 08.6**	**-0.6**
	1.2nm,0.7s,baz=88,slow=9.7,SNR=17						
KURBB	**Kurchatov Arra**	**45.98**	**308**	P	**P**	**17 20 24.1**	**-0.2**
	1.8nm,0.7s,baz=84,slow=8.1,SNR=19						
ILAR	**Eielson Array**	**49.71**	**32**	P	**P**	**17 20 52.5**	**-0.4**
	0.8nm,0.7s,baz=273,slow=6.9,SNR=9.9						
BVAR	**Borovoye Array**	**50.57**	**312**	P	**P**	**17 20 58.0**	**-1.6**
	0.3nm,0.2s,baz=221,slow=34,SNR=3.3						
INK	**Inuvik**	**54.60**	**27**	P	**P**	**17 21 31.3**	**+2.1**
	0.3nm,0.4s,baz=301,slow=5.9,SNR=2.8						
WRA	**Warramunga Arr**	**56.88**	**188**	P	**P**	**17 21 45.0**	**-1.1**
	1.4nm,0.7s,baz=5.2,slow=7.3,SNR=14						
WRA				PcP	**PcP**	**17 22 41.9**	**+0.2**
	1.0nm,1.0s,baz=0.9,slow=4.1,SNR=3.0						
AKTO	**Aktyubinsk**	**58.67**	**312**	P	**P**	**17 21 58.2**	**-0.4**
	2.4nm,1.1s,baz=97,slow=8.1,SNR=3.4						
ASAR	**Alice Springs**	**60.61**	**188**	P	**P**	**17 22 11.5**	**-0.6**
	0.7nm,0.8s,baz=13,slow=5.2,SNR=6.0						
SPITS	**Spitsbergen Ar**	**60.65**	**349**	P	**P**	**17 22 11.1**	**-0.7**
	1.8nm,0.8s,baz=298,slow=13,SNR=2.2						
YKA	**Yellowknife Ar**	**64.02**	**30**	P	**P**	**17 22 34.6**	**+0.1**
	0.2nm,0.5s,baz=304,slow=6.6,SNR=3.1						
FINES	**FINESS Array B**	**68.89**	**332**	P	**P**	**17 23 05.1**	**-0.5**
	0.9nm,0.6s,baz=18,slow=4.8,SNR=3.7						
KBZ	**Khabaz**	**70.89**	**311**	P	**P**	**17 23 18.2**	**-0.1**
	1.6nm,0.7s,baz=28,slow=5.9,SNR=3.7						
NOA	**NORSAR Array B**	**74.28**	**337**	P	**P**	**17 23 37.5**	**-0.7**
	0.9nm,0.8s,baz=60,slow=1.5,SNR=2.5						
PDAR	**Pinedale Array**	**77.88**	**45**	P	**P**	**17 24 00.2**	**+0.8**
	0.2nm,0.4s,baz=250,slow=4.5,SNR=2.7						
BRTR	**Keskin Array B**	**78.85**	**311**	P	**P**	**17 24 05.1**	**+0.5**
	0.3nm,0.4s,baz=64,slow=3.4,SNR=2.6						
GERES	**GERESS Array B**	**82.77**	**328**	P	**P**	**17 24 24.8**	**-0.6**
	0.2nm,0.4s,baz=40,slow=7.7,SNR=3.2						

DJA 01 17:21:27.9±1.1, 11°S±8°×12°5E±°, h73km±24km, M4.2/7, mb4.5/3, MLv4.1/7, South of Timor

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**1.53**	**313**	P	Pn	17 21 54.2	+0.8
BATI				S	Sn	17 22 18.9	+6.2
SOEI	**Soe**	**1.58**	**341**	P	Pn	17 21 54.0	-0.2
MMRI	**Maumere**	**3.63**	**316**	P	Pn	17 22 22.4	+0.6
MMRI				S	Sn	17 23 06.4	+3.0
EDFI	**Ende, Flores**	**3.95**	**309**	P	Pn	17 22 25.4	-0.8
EDFI				S	Sn	17 23 12.5	+1.1
BASI	**Baing, Sumba**	**4.28**	**284**	P	Pn	17 22 30.9	+0.3
BASI				S	Sn	17 23 20.5	+1.2
PLAI	**Plampang**	**7.33**	**289**	P	Pn	17 23 12.2	-0.1

TAP 01 17:22:24.0, 23°.21N×121°.00E, h9km, ML1.4, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELDTW	**Lidau**	**0.03**	**137**	P	Pg	17 22 26.3	+0.5
	baz=130						
ELDTW				S	Sg	17 22 27.2	+0.3
	baz=130						
STYT	**Tauyuan**	**0.23**	**259**	P	Pg	17 22 29.5	+0.9
	baz=257						
STYT				S	Sg	17 22 32.6	+0.9
	baz=257						
FULB	**Fuli**	**0.27**	**92**	P	Pb	17 22 31.2	0.0
	baz=92						
FULB				S	Sb	17 22 35.8	-0.2
	baz=92						
TWF1	**Yuli**	**0.31**	**62**	P	Pb	17 22 31.2	-0.6
	baz=63						
TWF1				S	Sg	17 22 35.0	+0.7
	baz=63						
YULB	**Yu-li**	**0.33**	**56**	*e*P	Pg	17 22 31.3	+0.7
	baz=56						
YULB				*e*S	Sg	17 22 35.2	+0.2
	baz=56						
ALS	**Alishan**	**0.35**	**330**	*e*P	Pb	17 22 32.0	-0.6
	baz=330						
ALS				*e*S	Sb	17 22 37.1	-1.3
	baz=330						
TPUB	**Ta-pu**	**0.35**	**285**	*e*P	Pb	17 22 32.4	-0.1
	baz=285						
CHKT	**Chengkung**	**0.35**	**108**	*e*P	Pb	17 22 32.2	-0.3
	baz=107						
WTP	**Ta-pu**	**0.35**	**276**	*e*P	Pb	17 22 32.3	-0.3
	baz=275						
SLGT	**Liugui**	**0.39**	**237**	*e*P	Pb	17 22 32.7	-0.4
	baz=236						
SLGT				*e*S	Sg	17 22 37.9	+1.2
	baz=236						
TWGBT	**Beinan**	**0.40**	**169**	*e*P	Pb	17 22 32.7	-0.6
	baz=169						
CHN1	**Nanshi**	**0.43**	**267**	*e*P	Pb	17 22 33.5	-0.4
	baz=266						
CHN1				*e*S	Sb	17 22 40.4	-0.2
	baz=266						
TWK	**Hsinying**	**0.47**	**277**	*e*S	Sb	17 22 41.7	0.0
	baz=277						
HGSD	**Ruisui**	**0.48**	**54**	*e*P	Pb	17 22 34.7	0.0
	baz=54						
HGSD				*e*S	Sb	17 22 41.4	-0.6
	baz=54						
VWDT	**VWDT**	**0.56**	**14**	*e*P	Pg	17 22 35.5	+0.6
	baz=13						
VWDT				*e*S	Sb	17 22 44.5	+0.3
	baz=13						

*ISCJB **01** 17:37:28.5±2.0, 36°.86N±0°.05×141°.45E±0°.07, h13km±14km, mb3.5/4, Error ellipse: s-maj=9.9km s-min=7.6km az=169.6*
*IDC **01** 17:37:28.6±1.8, 36°.86N×141°.38E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.3/60, mbtmp3.5/4, ML2.4/1, MS2.3/1, Ms1 2.3/1, ms1mx1.9/59, Error ellipse: s-maj=41.4km s-min=22.3km az=59.0*
*JMA **01** 17:37:30.2±0.1, 36°.86N×141°.34E, h30km±1km, M3.2*
ISC 01 17:37:29.7±2.7, 36°.87N±0°.05×141°.33E±0°.09, h8km±15km, n14, σ0§92/20, mb3.6/4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.48**	**299**	P	**Pb**	**17 37 40.1**	**-0.3**
ONAJ				*e*S	**Sb**	**17 37 47.3**	**-0.4**
JFK	**Kawauchi**	**0.62**	**324**	P	**Pb**	**17 37 42.3**	**-0.4**
JFK				*e*S	**Sg**	**17 37 50.6**	**+0.9**
JHO	**Hitachi**	**0.66**	**248**	P	**Pb**	**17 37 42.9**	**-0.5**
JHO				*e*S	**Sb**	**17 37 52.2**	**-0.5**
JFT	**Otama**	**1.02**	**310**	P	**Pb**	**17 37 49.4**	**-0.2**
JMM	**Marumori**	**1.09**	**337**	P	**Pb**	**17 37 49.6**	**-1.1**
JMM				*e*S	**Sb**	**17 38 03.5**	**-1.5**
JYT	**Yasato**	**1.11**	**235**	P	**Pb**	**17 37 49.7**	**-1.4**
JFY	**Yanaizu**	**1.41**	**293**	P	**Pb**	**17 37 55.4**	**-0.7**
JFY				*e*S	**Sn**	**17 38 13.3**	**-0.9**
MJAR	**Matsushiro Arr**	**2.53**	**264**	Pn	**Pn**	**17 38 11.4**	**+0.5**
	0.7nm,0.3s,baz=79,slow=9.1,SNR=16						
MJAR				Sn	**Sn**	**17 38 43.3**	**+1.4**
	1.5nm,0.3s,baz=83,slow=29,SNR=5.9						
MAT	**Matsushiro**	**2.53**	**264**	P	**Pn**	**17 38 11.9**	**+0.9**
MAT				*e*S	**Sb**	**17 38 45.1**	**-1.4**
KSRS	**Korea Array**	**10.72**	**277**	LR	LR	17 43 50.2	
	comp=Z,15nm,18.0s,baz=115,slow=35						
MKAR	**Makanchi Array**	**44.15**	**302**	P	**P**	**17 45 38.8**	**+0.1**
	0.4nm,0.6s,baz=90,slow=10,SNR=8.8						
KURBB	**Kurchatov Arra**	**46.05**	**308**	P	**P**	**17 45 54.0**	**+0.4**
	0.7nm,0.6s,baz=81,slow=7.7,SNR=8.3						
WRA	**Warramunga Arr**	**56.88**	**188**	P	**P**	**17 47 15.1**	**+0.2**
	0.7nm,0.9s,baz=6.2,slow=7.4,SNR=3.8						
ASAR	**Alice Springs**	**60.61**	**188**	P	**P**	**17 47 41.2**	**+0.3**
	0.2nm,0.8s,baz=24,slow=7.1,SNR=3.6						

*ISCJB **01** 17:50:07.1±1.8, 11°.5S±0°.1×166°.2E±0°.2, h35km, mb3.9/4, MS2.9/1, Error ellipse: s-maj=25.2km s-min=9.5km az=146.2*
*IDC **01** 17:50:15.1±4.4, 11°.58S×165°.97E, h81km±30km, mb3.6/4, mb1 3.9/6, mb1mx3.4/52, mbtmp4.1/6, MS2.9/2, Ms1 2.9/2, ms1mx2.6/49, Error ellipse: s-maj=45.4km s-min=20.4km az=54.0*
ISC 01 17:50:08.9±1.7, 11°.3S±0°.1×166°.3E±0°.2, h35km, n8, σ2§00/11, mb3.8/4, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.55**	**286**	P	**Pn**	**17 51 44.0**	**+1.2**
HNR	**Honiara**	**6.55**	**286**	P	**Pn**	**17 51 45.5**	**+2.7**
	19nm,0.3s,baz=178,slow=9.4,SNR=9.0						
HNR				S	**Sn**	**17 52 56.6**	**+0.2**
	7.1nm,0.3s,baz=166,slow=17,SNR=3.0						
HNR				LR	LR	17 53 60.0	
	comp=Z,90nm,20.1s,baz=186,slow=36						
DZM	**Mont Dzumac**	**10.69**	**179**	P	**Pn**	**17 52 42.5**	**+2.9**
	0.3nm,0.3s,baz=33,slow=17,SNR=6.4						
DZM				S	**Sn**	**17 54 36.8**	**-1.4**
	0.1nm,0.3s,baz=133,slow=22,SNR=2.0						
WRA	**Warramunga Arr**	**31.93**	**250**	P	**P**	**17 56 29.6**	**-2.0**
	1.1nm,0.8s,baz=83,slow=9.2,SNR=6.2						
WRA				PcP	**PcP**	**17 59 21.3**	**-0.2**
	0.5nm,0.8s,baz=79,slow=3.5,SNR=4.2						
GUMO	**Guam**	**32.65**	**319**	LR	LR	18 10 36.9	
	comp=Z,25nm,18.6s,baz=127,slow=38						
ASAR	**Alice Springs**	**33.18**	**244**	P	**P**	**17 56 40.9**	**-1.7**
	1.0nm,0.8s,baz=68,slow=9.6,SNR=12						
ASAR				PcP	**PcP**	**17 59 24.2**	**-0.7**
	0.5nm,0.7s,baz=68,slow=3.0,SNR=5.3						
FITZ	**Fitzroy Crossi**	**39.86**	**255**	P	**P**	**17 57 37.1**	**-2.4**
	0.9nm,0.7s,baz=90,slow=11,SNR=3.1						
MKAR	**Makanchi Array**	**94.11**	**317**	P	**P**	**18 03 23.8**	**-0.1**
	0.7nm,0.5s,baz=100,slow=5.7,SNR=12						

*ISCJB **01** 17:58:54.1±0.4, 21°.07S±0°.02×68°.61W±0°.07, h124km±4km, mb4.3/17, Error ellipse: s-maj=10.8km s-min=4.0km az=179.5*
*GUC **01** 17:58:55.3±0.7, 21°.05S×68°.83W, h126km±4km, ML4.0*
*NEIC **01** 17:58:55.1±0.4, 21°.17S×68°.61W, mb4.5/13, Error ellipse: s-maj=13.1km s-min=7.0km az=94.0*
*IDC **01** 17:58:56.4±2.6, 21°.00S×68°.40W, h118km±22km, mb3.8/9, mb1 3.9/12, mb1mx3.6/46, mbtmp4.2/12, MS2.5/1, Ms1 2.6/1, ms1mx2.3/42, Error ellipse: s-maj=22.0km s-min=15.8km az=84.0*
ISC 01 17:58:55.6±0.6, 21°.03S±0°.03×68°.58W±0°.07, h117km±5km, h118km; pP-P, n72, σ1§21/91, mb4.3/17, 6C-6D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.85**	**269**	*e*Pn	**Pn**	**17 59 15.0**	**-1.1**
PB01				*e*Sn	**Sn**	**17 59 30.2**	**-1.3**
PB01	**IPOC Station P**	**0.85**	**269**	⇑*i*P	**Pn**	**17 59 15.3**	**-0.7**
PB01				*i* S	**Sn**	**17 59 29.9**	**-1.6**
PB01				IAML		17 59 30.5	
	comp=N,4μm,0.3s						
PB09	**IPOC Station P**	**0.98**	**219**	⇑*i*P	**Pn**	**17 59 17.2**	**-0.1**
PB09				*i* S	**Sn**	**17 59 33.7**	**-0.1**
PB09				IAML		17 59 36.0	
	comp=E,3μm,0.2s						
PB08	**IPOC Station P**	**1.04**	**329**	⇓*i*P	**Pn**	**17 59 18.7**	**+0.5**
PB08				*e*S	**Sn**	**17 59 35.9**	**+0.6**
PB02	**IPOC Station P**	**1.26**	**257**	⇑*e*P	**Pn**	**17 59 19.5**	**-0.7**
PB02				*e*S	**Sn**	**17 59 37.4**	**-1.5**
PB07	**IPOC Station P**	**1.40**	**240**	⇑*i*P	**Pn**	**17 59 20.9**	**-0.9**
PB07				*e*S	**Sn**	**17 59 39.8**	**-2.0**
PB07				IAML		17 59 42.0	
	comp=N,3μm,0.5s						
PB11	**IPOC Station P**	**1.62**	**321**	*e*Pn	**Pn**	**17 59 23.6**	**-0.9**
PB11				*e*Sn	**Sn**	**17 59 44.5**	**-1.8**
PB11	**IPOC Station P**	**1.62**	**321**	⇓*e*P	**Pn**	**17 59 24.1**	**-0.4**
PB11				*e*S	**Sn**	**17 59 45.8**	**-0.6**
PB11				IAML		17 59 47.5	
	comp=E,2μm,0.5s						
PB06	**IPOC Station P**	**1.90**	**209**	⇑*

comp=N,9.3nm,0.8s
PTGA Pitinga 21.86 24 P **P 18 03 37.4 -1.6**
comp=N,5.7nm,0.2s,baz=131,slow=19,SNR=1.3
PTGA Pitinga 21.86 24 *eP* **P 18 03 37.2 -1.8**
comp=N,7.3nm,0.9s
RUSC La Rusia 27.12 350 *eP* **P 18 04 28.0 -0.3**
comp=N,2.7nm,1.1s
HALT Halls 59.95 341 *eP* **P 18 08 48.8 -0.7**
comp=N,113nm,0.6s
MIAR Mount Ida 60.17 336 *eP* **P 18 08 51.0 0.0**
comp=N,14nm,1.8s
WHAR Wooly Hollow 60.36 338 *eP* **P 18 08 52.1 -0.1**
comp=N,13nm,1.5s
TXAR Lajitas Array 60.42 325 P **P 18 08 53.7 +0.8**
comp=N,0.2nm,0.4s,baz=134,slow=5.2,SNR=3.1
TXAR Lajitas Array 60.42 325 P **P 18 08 53.7 +0.8**
TX31 Lajitas Ar. Si 60.43 325 *eP* **P 18 08 52.2 -0.8**
W40A Ferguson Farm, 60.56 337 *eP* **P 18 08 53.3 -0.3**
comp=N,8.0nm,0.5s
W39A Magazine 60.82 336 *eP* **P 18 08 55.8 +0.4**
comp=N,15nm,1.6s
WCI Wyandotte Cave 61.25 344 *eP* **P 18 08 57.3 -0.9**
comp=N,6.3nm,0.7s
SNAA Sanae 62.62 161 P **P 18 09 07.4 +0.3**
comp=N,1.3nm,0.6s,baz=280,slow=9.0,SNR=13
SNAA Sanae 62.62 161 *eP* **P 18 09 07.5 +0.4**
comp=N,8.1nm,1.5s
SDCO Great Sand Dun 68.00 329 *eP* **P 18 09 42.5 0.0**
comp=N,3.8nm,1.5s
DBIC Dimbokro 68.31 73 P **P 18 09 44.6 +0.1**
comp=N,3.5nm,1.0s,baz=227,slow=11,SNR=3.6
DBIC Dimbokro 68.31 73 *eP* **P 18 09 44.3 -0.3**
comp=N,19nm,1.4s
QSPA South Pole Qui 69.16 180 P **P 18 09 50.7 +1.5**
comp=N,1.4nm,0.5s,baz=262,slow=7.1,SNR=7.7
QSPA South Pole Qui 69.16 180 *eP* **P 18 09 49.9 +0.8**
comp=N,13nm,1.6s
HWB Hans Werner Br 70.87 318 *eP* **P 18 10 01.2 +1.2**
KOWA Kowa 72.55 66 P **P 18 10 10.5 +0.2**
comp=N,1.1nm,0.4s,baz=269,slow=9.5,SNR=3.2
KOWA Kowa 72.55 66 *eP* **P 18 10 10.5 +0.2**
NV01 Mina Array Sit 75.32 322 *eP* **P 18 10 26.7 +0.4**
NVAR Mina Array Bea 75.32 322 P **P 18 10 27.9 +1.6**
comp=N,0.6nm,0.8s,baz=189,slow=5.3,SNR=3.8
NVAR Mina Array Bea 75.32 322 P **P 18 10 27.9 +1.6**
TOA0 Torodi Ar. Sit 76.91 70 *eP* **P 18 10 35.0 -0.4**
TOA1 Torodi Ar. Sit 76.91 70 *eP* **P 18 10 35.2 -0.3**
TOA1 *epP* **pP 18 11 05.9 +0.7**
TORD Torodi Ar. Bea 76.91 70 P **P 18 10 35.2 -0.3**
comp=N,3.2nm,0.6s,baz=255,slow=5.1,SNR=14
TORD *pP* **pP 18 11 05.9 +0.7**
comp=N,0.8nm,0.7s,baz=251,slow=6.3,SNR=1.7
TORD Torodi Ar. Bea 76.91 70 P **P 18 10 35.2 -0.3**
TORD *pP* **pP 18 11 05.9 +0.7**
YKA Yellowknife Ar 90.85 340 P **P 18 11 45.6 +0.4**
comp=N,0.4nm,0.5s,baz=130,slow=4.5,SNR=8.9
YKA *pP* **pP 18 12 17.1 +1.4**
comp=N,0.9nm,0.9s,baz=135,slow=4.4,SNR=5.5
YKA Yellowknife Ar 90.85 340 P **P 18 11 45.6 +0.4**
YKA *pP* **pP 18 12 17.1 +1.4**
ASAR Alice Springs 130.47 207 PKP **PKPdf 18 17 53.6 +0.4**
comp=N,0.3nm,0.5s,baz=161,slow=1.6,SNR=6.3
ASAR Alice Springs 130.47 207 PKP **PKPdf 18 17 53.6 +0.4**
WR1 Warramunga Arr 133.51 210 *e*PKPdf **PKPdf 18 17 58.7 -0.2**
WRA Warramunga Arr 133.51 210 PKP **PKPdf 18 17 58.7 -0.2**
comp=N,0.2nm,0.6s,baz=162,slow=1.8,SNR=4.6
WRA Warramunga Arr 133.51 210 PKP **PKPdf 18 17 58.7 -0.2**
BVAR Borovoye Array 135.24 34 PKP **PKPdf 18 18 01.3 +0.2**
comp=N,0.3nm,0.7s,baz=248,slow=6.2,SNR=4.5
BVAR Borovoye Array 135.24 34 PKP **PKPdf 18 18 01.3 +0.2**
MK32 Makanchi Array 145.08 36 *e*PKPbc **PKPdf 18 18 19.8 +0.6**
MKAR Makanchi Array 145.08 36 PKP **PKPdf 18 18 19.8 +0.7**
comp=N,0.4nm,0.4s,baz=334,slow=3.6,SNR=9.4
MKAR Makanchi Array 145.08 36 PKP **PKPdf 18 18 19.8 +0.6**

*ISCJB **01** 18:00:54.2±0.3, 67°.07N±0°.02×20°.87E±0°.07, h0km, Error ellipse: s-maj=4.2km s-min=3.4km az=2.1*
*UPP **01** 18:00:54.5±0.1, 67°.07N×20°.85E, h0km, ML1.7*
*CSEM **01** 18:00:54.9±0.2, 67°.10N×20°.86E, h2km, ML2.3, Error ellipse: s-maj=4.9km s-min=3.7km az=72.0, Mining explosion.*
*HEL **01** 18:00:55.2±0.1, 67°.09N×20°.87E, h0km, ML2.3, ML1.7(UPP), Explosion*
*IDC **01** 18:00:56.5±0.8, 67°.04N×21°.36E, h0km, mb1 3.3/5, mb1mx3.0/75, mbtmp3.3/5, ML2.3/5, Error ellipse: s-maj=17.3km s-min=6.7km az=109.0*
*NAO **01** 18:00:56.3±1.4, 67°.10N×21°.55E, ML2.4*
*BER **01** 18:00:58.2±3.1, 67°.10N×20°.88E, h0km, ML1.6, ML2.4(NAO), Suspected explosion*

ISC 01 18:00:54.6±0.7, 67°.07N±0°.02×20°.87E±0°.02, h0km, n68, σ1°.01/84, Sweden

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MASU	**Masugnsbyn**	**0.59**	**48**	P			**Pg**	**18 01 05.8**	**-0.1**
MASU				S			**Sg**	**18 01 14.6**	**+1.0**
MASU	**Masugnsbyn**	**0.59**	**48**	*i* P			**Pg**	**18 01 05.8**	**-0.1**
MASU				*i* S			**Sg**	**18 01 14.6**	**+1.0**
MASU	**Masugnsbyn**	**0.59**	**48**	*i* P			**Pg**	**18 01 05.8**	**-0.1**
MASU				*i* S			**Sg**	**18 01 14.6**	**+1.0**
ERTU	**Ertsjaerv**	**0.73**	**134**	P			**Pg**	**18 01 08.3**	**-0.4**
ERTU	**Ertsjaerv**	**0.73**	**134**	*eP*			**Pg**	**18 01 08.2**	**-0.5**
ERTU	**Ertsjaerv**	**0.73**	**134**	P			**Pg**	**18 01 08.3**	**-0.4**
PAJU	**Pajala**	**0.88**	**92**	P			**Pg**	**18 01 11.2**	**-0.3**
PAJU	**Pajala**	**0.88**	**92**	*i* P			**Pg**	**18 01 11.2**	**-0.3**
PAJU	**Pajala**	**0.88**	**92**	*i* P			**Pg**	**18 01 11.2**	**-0.3**
RATU	**Laukkuluspa**	**0.91**	**328**	P			**Pg**	**18 01 11.6**	**-0.4**
RATU	**Laukkuluspa**	**0.91**	**328**	*eP*			**Pg**	**18 01 11.6**	**-0.4**
RATU	**Laukkuluspa**	**0.91**	**328**	*eP*			**Pg**	**18 01 11.6**	**-0.4**
KUA	**Kurravaara**	**0.92**	**347**	P			**Pg**	**18 01 11.8**	**-0.4**
KUA	**Kurravaara**	**0.92**	**347**	*eP*			**Pg**	**18 01 11.8**	**-0.4**
KUA	**Kurravaara**	**0.92**	**347**	*eP*			**Pg**	**18 01 11.8**	**-0.4**
SALU	**Saltoluokta**	**0.97**	**290**	P			**Pg**	**18 01 12.7**	**-0.6**
SALU	**Saltoluokta**	**0.97**	**290**	*eP*			**Pg**	**18 01 12.7**	**-0.6**
SALU	**Saltoluokta**	**0.97**	**290**	*eP*			**Pg**	**18 01 12.6**	**-0.6**
NIKU	**Nikkaluokta**	**1.07**	**320**	P			**Pg**	**18 01 13.7**	**-1.4**
NIKU	**Nikkaluokta**	**1.07**	**320**	*eP*			**Pg**	**18 01 13.7**	**-1.4**
NIKU	**Nikkaluokta**	**1.07**	**320**	*eP*			**Pg**	**18 01 13.7**	**-1.4**
LANU	**Lannavaara**	**1.08**	**23**	P			**Pg**	**18 01 13.9**	**-1.4**
LANU	**Lannavaara**	**1.08**	**23**	*eP*			**Pg**	**18 01 13.5**	**-1.8**
LANU	**Lannavaara**	**1.08**	**23**	P			**Pg**	**18 01 13.9**	**-1.4**
KALU	**Kalix**	**1.57**	**139**	*eP*			**Pn**	**18 01 23.4**	**-0.3**
KALU	**Kalix**	**1.57**	**139**	*eP*			**Pn**	**18 01 23.4**	**-0.3**
SJUU	**Sjulsmark**	**1.59**	**169**	P			**Pn**	**18 01 23.8**	**-0.2**
SJUU	**Sjulsmark**	**1.59**	**169**	*eP*			**Pn**	**18 01 23.8**	**-0.2**
SJUU	**Sjulsmark**	**1.59**	**169**	*eP*			**Pn**	**18 01 23.8**	**-0.2**
TOF	**Tornio**	**1.70**	**124**	*eP*			**Pn**	**18 01 25.4**	**-0.1**
TOF				*eS*			**Sb**	**18 01 48.5**	**-0.1**
TOF	**Tornio**	**1.70**	**124**	*eP*			**Pn**	**18 01 25.4**	**-0.1**
TOF				*eS*			**Sb**	**18 01 48.5**	**-0.1**
HEF	**Hetta**	**1.72**	**37**	*eP*			**Pn**	**18 01 25.1**	**-0.7**
HEF				*eS*			**Sn**	**18 01 47.8**	**-0.6**
HEF				MSG				18 01 57.0	
comp=Z,21nm,0.2s
HEF	**Hetta**	**1.72**	**37**	*eP*			**Pn**	**18 01 25.1**	**-0.7**
HEF				*eS*			**Sn**	**18 01 47.8**	**-0.6**
LILU	**Lilltraesk**	**1.84**	**194**	P			**Pn**	**18 01 28.0**	**+0.6**
LILU	**Lilltraesk**	**1.84**	**194**	*eP*			**Pn**	**18 01 28.0**	**+0.6**
LILU	**Lilltraesk**	**1.84**	**194**	*eP*			**Pn**	**18 01 28.0**	**+0.6**
KIF	**Kilpisjarvi**	**1.95**	**359**	Pn			**Pb**	**18 01 30.6**	**-0.3**
KIF				Sn			**Sg**	**18 01 58.8**	**+1.7**
KIF	**Kilpisjarvi**	**1.95**	**359**	*eP*			**Pn**	**18 01 29.1**	**+0.2**
KIF				MSG				18 02 05.2	
comp=Z,24nm,0.2s
KIF	**Kilpisjarvi**	**1.95**	**359**	*eP*			**Pn**	**18 01 29.1**	**+0.2**
KIF	**Kilpisjarvi**	**1.95**	**359**	Pn			**Pb**	**18 01 30.6**	**-0.3**
KIF	**Kilpisjarvi**	**1.95**	**359**	Pn			**Pb**	**18 01 30.6**	**-0.3**
KIF				Sg			**Sg**	**18 01 58.8**	**+1.7**
RNF	**Rovaniemi**	**2.09**	**100**	*eP*			**Pn**	**18 01 31.2**	**+0.4**
RNF	**Rovaniemi**	**2.09**	**100**	*eP*			**Pn**	**18 01 31.2**	**+0.4**
KTK1	**Kautokeino**	**2.15**	**23**	*eP*			**Pb**	**18 01 33.6**	**-0.8**
KTK1				*e*				18 02 04.6	
KTK1				IAML				18 02 10.0	
comp=Z,9.3nm,0.5s
SGF	**Sodankyl**	**2.23**	**78**	*eP*			**Pn**	**18 01 33.2**	**+0.4**
SGF	**Sodankyl**	**2.23**	**78**	*eP*			**Pn**	**18 01 33.2**	**+0.4**
STEI	**Steigen**	**2.33**	**294**	*eP*			**Pb**	**18 01 36.0**	**-1.5**
STEI				*e*				18 02 13.2	
STEI				IAML				18 02 18.3	
comp=Z,5.8nm,0.5s
BURU	**Burvik**	**2.50**	**175**	*eP*			**Pn**	**18 01 37.8**	**+1.3**
BURU	**Burvik**	**2.50**	**175**	*eP*			**Pn**	**18 01 37.8**	**+1.3**
MOR8	**Moi Rana**	**2.72**	**254**	*eP*			**Pb**	**18 01 42.1**	**-1.9**
MOR8				*eSg*			**Sb**	**18 02 17.1**	**-0.8**
LOF	**Lofoten**	**3.00**	**294**	*eP*			**Pn**	**18 01 44.6**	**+1.2**
LOF				*e*				18 02 35.7	
ARE0	**ARCESS Array S**	**3.02**	**33**	*eP*			**Pn**	**18 01 44.3**	**+0.6**
ARA0	**ARCESS Array S**	**3.02**	**33**	Pn			**Pn**	**18 01 44.1**	**+0.4**
baz=205,slow=16
ARA0				Lg			Lg	18 02 24.6	
baz=209,slow=28
ARA0	**ARCESS Array S**	**3.02**	**33**	Pn			**Pn**	**18 01 44.1**	**+0.4**
baz=205,slow=15,SNR=181
ARA0				Lg			Lg	18 02 24.5	
SNR=1.3
ARA0	**ARCESS Array S**	**3.02**	**33**	Pn			**Pn**	**18 01 44.1**	**+0.4**
baz=205,slow=16
ARA0				Sg			**Sb**	**18 02 24.6**	**-2.0**
baz=209,slow=28
ARCES	**ARCESS Array B**	**3.02**	**33**	Pn			**Pn**	**18 01 44.7**	**+1.0**
comp=Z,0.6nm,0.3s,baz=210,slow=14,SNR=58
ARCES				Pg			**Pb**	**18 01 47.6**	**-1.6**
comp=Z,1.0nm,0.3s,baz=210,slow=14,SNR=42
ARCES				Sn			**Sn**	**18 02 22.2**	**+1.7**
comp=Z,0.8nm,0.3s,baz=215,slow=23,SNR=9.0
ARCES				Lg			Lg	18 02 28.3	
comp=Z,1.3nm,0.3s,baz=214,slow=26,SNR=8.8
KONS	**Konsvik**	**3.12**	**263**	*eP*			**Pn**	**18 01 47.6**	**+2.6**
VAF	**Ylistaro**	**4.11**	**168**	*eP*			**Pn**	**18 02 00.8**	**+2.2**
VAF	**Ylistaro**	**4.11**	**168**	*eP*			**Pn**	**18 02 00.8**	**+2.2**
FIA0	**FINESS Array S**	**6.08**	**156**	Pn			**Pn**	**18 02 27.4**	**+1.7**
baz=338,slow=16
FIA0				Sn			**Sn**	**18 03 35.3**	**-0.6**
baz=348,slow=28
FIA0	**FINESS Array S**	**6.08**	**156**	Pn			**Pn**	**18 02 27.4**	**+1.7**
baz=338,slow=16
FIA0				Sn			**Sn**	**18 03 35.3**	**-0.6**
baz=348,slow=28
FINES	**FINESS Array B**	**6.08**	**156**	Pn			**Pn**	**18 02 25.8**	**+0.1**
comp=Z,0.1nm,0.3s,baz=347,slow=11,SNR=4.5
FINES				Sn			**Sn**	**18 03 36.6**	**+0.8**
comp=Z,0.1nm,0.3s,baz=337,slow=23,SNR=3.8
NB2	**NORSAR Subarra**	**7.38**	**219**	Pn			**Pn**	**18 02 43.9**	**+0.4**
NB2	**NORSAR Subarra**	**7.38**	**219**	Pn			**Pn**	**18 02 43.9**	**+0.4**
NB2	**NORSAR Subarra**	**7.38**	**219**	Pn			**Pn**	**18 02 43.9**	**+0.4**
NOA	**NORSAR Array B**	**7.38**	**219**	Pn			**Pn**	**18 02 45.8**	**+2.4**
comp=Z,0.1nm,0.3s,baz=31,slow=17,SNR=2.8
HFS	**Hagfors**	**7.65**	**208**	Pn			**Pn**	**18 02 47.0**	**-0.2**
comp=Z,0.1nm,0.3s,baz=22,slow=16,SNR=2.4
HFS				Lg			Lg	18 04 59.2	
comp=Z,0.1nm,0.3s,baz=30,slow=25,SNR=2.6
SPITS	**Spitsbergen Ar**	**11.25**	**355**	Pn			**Pn**	**18 03 36.8**	**+0.5**
baz=170,slow=11,SNR=6.6

*SJA **01** 18:19:49.3±0.8, 31°.68S×68°.84W, h9km±2km, ML4.0, MW4.1, Fault plane solution: NP1:φ=103.82000°, δ=60.02000°, λ=36.68000°.*
*IDC **01** 18:19:49.3±0.7, 31°.80S×69°.22W, h0km, mb3.8/5, mb1 4.1/7, mb1mx3.8/39, mbtmp3.8/7, ML3.9/1, MS3.4/6, Ms1 3.5/6, ms1mx3.1/32, Error ellipse: s-maj=42.2km s-min=20.4km az=83.0*
*ISCJB **01** 18:19:50.7±0.5, 31°.71S±0°.02×68°.72W±0°.04, h15km±4km, mb4.5/25, MS3.5/3, Error ellipse: s-maj=6.0km s-min=3.9km az=9.5*
*NEIC **01** 18:19:52.0±2.4, 31°.72S×68°.64W, h19km±15km, mb4.7/21, MD4.1(SJA), Error ellipse: s-maj=10.7km s-min=7.1km az=88.0*
NEIC Felt [IV] at San Juan.
*BJI **01** 18:19:51.0, 31°.70S×68°.60W, h19km*

ISC 01 18:19:50.6±1.0, 31°.73S±0°.03×68°.75W±0°.03, h10km±6km, n88, σ1°.84/98, mb4.6/25, MS3.5/3, 5C-14D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ZON	**Zonda**	**0.20**	**17**	*iP*			**Pg**	**18 19 54.5**	**-0.3**
ZON				*eS*			**Sg**	**18 19 57.0**	**-0.6**
ZON				IAML				18 19 57.1	
comp=Z,15μm,0.2s
RTCV	**Cerro Valdivia**	**0.22**	**127**	*iP*			**Pg**	**18 19 56.2**	**+1.1**
SJA	**San Juan**	**0.26**	**38**	*eP*			**Pg**	**18 19 56.1**	**+0.2**
SJA				*eS*			**Sg**	**18 20 00.3**	**+0.9**
SJA				IAML				18 20 01.5	
comp=Z,14μm,0.1s
RTLL	**Cerro Villicun**	**0.46**	**30**	*iP*			**Pg**	**18 19 58.8**	**-0.9**
RTLL				IAML				18 20 06.5	
comp=Z,7μm,0.6s
RTLS	**Leoncito**	**0.47**	**262**	*iP*			**Pg**	**18 19 58.5**	**-1.4**
RTLS				IAML				18 20 05.5	
comp=Z,8μm,0.2s
AUSP	**Uspallata**	**0.73**	**228**	*iP*			**Pg**	**18 20 03.7**	**-1.1**
AMOG	**MOGNA**	**0.82**	**15**	*eP*			**Pb**	**18 20 05.3**	**-1.7**
ASAL	**Salagasta**	**0.86**	**185**	*eP*			**Pb**	**18 20 06.9**	**-0.8**
ARCO	**CERRO ARCO**	**1.12**	**188**	*eP*			**Pb**	**18 20 11.7**	**-0.5**
ARCO				IAML				18 20 38.0	
comp=Z,1μm,0.2s
AAGR	**Agrelo**	**1.35**	**183**	*eP*			**Pn**	**18 20 16.2**	**+0.5**
ACAN	**Cantantal**	**1.43**	**113**	*eP*			**Pg**	**18 20 18.1**	**+0.1**
AVIZ	**Vizcacheras**	**1.75**	**174**	*eP*			**Pb**	**18 20 23.5**	**+0.7**
AGUA	**GUANDACOL**	**2.25**	**6**	*eP*			**Pn**	**18 20 30.2**	**+2.2**
ROC1	**El Roble**	**2.29**	**237**	*ePn*			**Pn**	**18 20 30.8**	**+2.1**
ROC1				*eSn*			**Sb**	**18 21 01.1**	**+0.5**
ROC1	**El Roble**	**2.29**	**237**	*eP*			**Pn**	**18 20 30.8**	**+2.1**
GO04	**Tololo Observa**	**2.35**	**311**	*ePn*			**Pn**	**18 20 30.7**	**+1.1**
GO04				*eSn*			**Sn**	**18 21 00.7**	**+2.1**
MRA	**San Martin**	**2.66**	**106**	*eP*			**Pn**	**18 20 35.7**	**+2.0**
MRA				IAML				18 21 19.5	
comp=Z,1μm,0.3s
VCA	**Vinchina**	**3.02**	**9**	*eP*			**Pn**	**18 20 41.9**	**+3.2**
VCA				IAML				18 21 26.1	
comp=Z,1μm,0.3s
RFA	**San Rafael**	**3.04**	**176**	*eP*			**Pn**	**18 20 39.6**	**+0.7**
RFA				IAML				18 21 29.2	
comp=Z,469nm,0.3s
LCO	**Las Campanas**	**3.19**	**328**	*ePn*			**Pn**	**18 20 42.7**	**+1.5**
LCO				*eSn*			**Sn**	**18 21 23.1**	**+3.6**
TCA	**Tanti**	**3.57**	**85**	*eP*			**Pn**	**18 20 47.3**	**+1.2**
TCA				IAML				18 21 48.0	
comp=Z,474nm,0.6s
CYA	**Choya**	**4.16**	**39**	*eP*			**Pn**	**18 20 55.0**	**+0.8**
CYA				IAML				18 22 03.7	
comp=Z,205nm,0.4s
GO05	**HualaæØ**	**4.22**	**218**	*ePn*			**Pn**	**18 20 57.0**	**+2.0**
GO05				*eSn*			**Sn**	**18 21 48.2**	**+3.8**
GO03	**Copiap**	**4.32**	**342**	*ePn*			**Pn**	**18 20 57.4**	**+0.9**
GO03				*eSn*			**Sn**	**18 21 47.9**	**+0.8**
AHML	**Horco Molle**	**5.76**	**32**	*eP*			**Pn**	**18 21 16.9**	**+0.7**
FSA	**Cafayete**	**6.10**	**24**	*eP*			**Pn**	**18 21 22.8**	**+1.7**
FSA				IAML				18 23 06.7	
comp=Z,53nm,0.7s
GO02	**Mina Guanaco**	**6.59**	**353**	*ePn*			**Pn**	**18 21 29.5**	**+1.7**
GO02				*eLg*			Lg	18 23 12.9	
SLA	**San Lorenzo**	**7.55**	**23**	*eP*			**Pn**	**18 21 43.2**	**+2.3**
PB10	**IPOC Station P**	**8.34**	**348**	*ePn*			**Pn**	**18 21 51.8**	**+0.1**
PB10				*eSn*			**Sn**	**18 23 33.9**	**+7.9**
PB10				*eLg*			Lg	18 24 08.3	
TRQA	**Tornquist**	**8.41**	**140**	*ePn*			**Pn**	**18 21 53.5**	**+1.0**
TRQA				*eSn*			**Sn**	**18 23 23.5**	**-4.0**
HJA	**Humahuaca**	**8.99**	**20**	*iP*			**Pn**	**18 22 02.9**	**+1.9**
PLCA	**Paso Flores**	**9.10**	**189**	Pn			**Pn**	**18 22 01.5**	**-0.6**
baz=203,slow=9.7,SNR=1.7
PLCA				Lg			Lg	18 24 38.9	
comp=Z,0.3nm,0.3s,baz=324,slow=19,SNR=2.7
PLCA				LR			LR	18 25 59.9	
comp=Z,380nm,19.9s,baz=38,slow=41
PLCA	**Paso Flores**	**9.10**	**189**	*ePn*			**Pn**	**18 22 01.2**	**-0.9**
PLCA				Lg			Lg	18 24 38.9	
PB04	**IPOC Station P**	**9.45**	**352**	*ePn*			**Pn**	**18 22 05.0**	**-2.0**
PB01	**IPOC Station P**	**10.67**	**356**	*ePn*			**Pn**	**18 22 22.1**	**-1.5**
CPUP	**Villa Florida**	**11.35**	**65**	Pn			**Pn**	**18 22 32.1**	**-0.8**
comp=Z,0.3nm,0.3s,baz=240,slow=14,SNR=3.5
CPUP				Lg			Lg	18 25 50.8	
comp=Z,0.7nm,0.3s,baz=123,slow=17,SNR=2.0
CPUP				LR			LR	18 27 13.5	
comp=Z,185nm,20.9s,baz=237,slow=38
CPUP	**Villa Florida**	**11.35**	**65**	*ePn*			**Pn**	**18 22 32.0**	**-0.8**
CPUP				*eLg*			Lg	18 25 50.3	
LPAZ	**La Paz**	**15.39**	**2**	Pn			**Pn**	**18 23 30.5**	**+2.0**
comp=Z,0.2nm,0.3s,baz=188,slow=5.8,SNR=7.6
LPAZ				LR			LR	18 30 37.1	
comp=Z,120nm,19.4s,baz=196,slow=42
LPAZ	**La Paz**	**15.39**	**2**	*ePn*			**Pn**	**18 23 30.3**	**+1.9**
SIV	**San Ignacio**	**17.16**	**26**	P			**Pn**	**18 23 47.7**	**-2.9**
comp=Z,0.1nm,0.3s,baz=223,slow=16,SNR=9.3
SAML	**Samuel**	**23.25**	**14**	*eP*			**P**	**18 25 00.0**	**+1.7**
comp=Z,17nm,1.2s
RUSC	**La Rusia**	**37.64**	**353**	*eP*			**P**	**18 27 06.0**	**-0.5**
comp=Z,6.4nm,0.8s
HELC	**Santa Helena**	**38.26**	**349**	*eP*			**P**	**18 27 11.3**	**-0.3**
comp=Z,28nm,0.8s
RCBR	**Riachuelo**	**40.09**	**57**	*eP*			**P**	**18 27 25.9**	**-0.7**
comp=Z,17nm,1.0s
SDV	**Santo Domingo**	**40.43**	**357**	LR			LR	18 45 16.5	
comp=Z,58nm,18.1s,baz=36,slow=38
SNAA	**Sanae**	**52.66**	**159**	P			**P**	**18 29 06.1**	**+1.4**
comp=Z,3.5nm,0.9s,baz=279,slow=9.1,SNR=4.3
SNAA				LR			LR	18 49 57.0	
comp=Z,28nm,20.4s,baz=115,slow=34
SNAA	**Sanae**	**52.66**	**159**	*eP*			**P**	**18 29 04.6**	**-0.1**
comp=Z,21nm,1.7s
QSPA	**South Pole Qui**	**58.50**	**180**	*eP*			**P**	**18 29 47.2**	**+0.3**
comp=Z,5.1nm,0.9s
TXAR	**Lajitas Array**	**69.21**	**328**	P			**P**	**18 30 57.5**	**-0.2**
comp=Z,0.6nm,0.8s,baz=156,slow=6.9,SNR=6.1
TX31	**Lajitas Ar. Si**	**69.21**	**328**	*eP*			**P**	**18 30 57.9**	**+0.1**
WVT	**Waverly**	**69.84**	**344**	*eP*			**P**	**18 31 03.2**	**+1.9**
comp=Z,5.5nm,0.6s
MNTX	**Cornudas Mount**	**71.99**	**328**	*eP*			**P**	**18 31 12.8**	**-1.7**
comp=Z,2.3nm,0.9s
CCM	**Cathedral Cave**	**72.53**	**342**	*eP*			**P**	**18 31 17.2**	**-0.3**
comp=Z,7.5nm,1.0s
SMCO	**Snowmass**	**78.99**	**331**	*eP*			**P**	**18 31 55.3**	**+0.2**
comp=Z,5.4nm,0.9s
ECSD	**EROS Data Cent**	**79.31**	**340**	*eP*			**P**	**18 31 55.5**	**-0.7**
comp=Z,6.3nm,1.1s
KNB	**Kanab**	**79.85**	**326**	*eP*			**P**	**18 31 59.8**	**+0.3**
comp=Z,7.7nm,1.1s
PHWY	**Pilot Hill**	**80.18**	**333**	*eP*			**P**	**18 32 03.0**	**+1.6**
comp=Z,27nm,0.9s
CCUT	**Cedar City**	**80.54**	**326**	*eP*			**P**	**18 32 04.4**	**+1.2**
comp=Z,5.2nm,1.1s
TORD	**Torodi Ar. Bea**	**80.82**	**68**	P			**P**	**18 32 08.1**	**+3.2**
comp=Z,1.0nm,0.9s,baz=251,slow=4.7,SNR=3.6
TORD				LR			LR	19 07 12.2	
comp=Z,24nm,18.0s,baz=205,slow=35
TOA1	**Torodi Ar. Sit**	**80.82**	**68**	*eP*			**P**	**18 32 08.1**	**+3.1**
MAGC	**SCE Magundon P**	**81.69**	**321**	*eP*			**P**	**18 32 11.7**	**+2.6**
R11A	**Troy Canyon, C**	**82.25**	**325**	*eP*			**P**	**18 32 12.8**	**+0.5**
comp=Z,2.7nm,1.0s
PD31	**Pinedale Array**	**83.06**	**331**	*eP*			**P**	**18 32 15.7**	**-0.8**
PDAR	**Pinedale Array**	**83.06**	**331**	P			**P**	**18 32 16.6**	**+0.2**
comp=Z,0.2nm,0.3s,baz=133,slow=7.9,SNR=2.8
PDAR	**Pinedale Array**	**83.06**	**331**	*eP*			**P**	**18 32 15.9**	**-0.6**
NV01	**Mina Array Sit**	**83.68**	**323**	*eP*			**P**	**18 32 19.1**	**-0.6**
NVAR	**Mina Array Bea**	**83.68**	**323**	P			**P**	**18 32 20.0**	**+0.3**
comp=Z,0.5nm,0.8s,baz=142,slow=5.3,SNR=4.1
YHH	**Holmes Hill**	**85.26**	**331**	*eP*			**P**	**18 32 27.2**	**-0.5**
comp=Z,4.9nm,1.2s
HLID	**Hailey**	**85.79**	**329**	*eP*			**P**	**18 32 30.1**	**-0.1**
comp=Z,4.1nm,1.1s
MCMT	**McKenzie Canyo**	**86.12**	**330**	*eP*			**P**	**18 32 31.7**	**-0.2**
J08A	**Circle Bar Ran**	**87.50**	**326**	*eP*			**P**	**18 32 38.4**	**-0.1**
comp=Z,10nm,1.1s
K05A	**Summer Lake**	**88.20**	**324**	*eP*			**P**	**18 32 42.4**	**+0.5**
comp=Z,11nm,1.1s
PINE	**Pine Mountain**	**89.01**	**325**	*eP*			**P**	**18 32 45.1**	**-0.6**
comp=Z,5.6nm,0.9s
MBAR	**Mbarara**	**97.75**	**96**	*eP*			**P**	**18 33 24.4**	**-2.4**
comp=Z,18nm,1.0s
ASAR	**Alice Springs**	**120.80**	**204**	PKP			**PKPdf**	**18 38 41.4**	**-2.3**
comp=Z,0.2nm,0.4s,baz=103,slow=1.1,SNR=4.5
WR1	**Warramunga Arr**	**124.05**	**206**	*e*PKPdf			**PKPdf**	**18 38 47.9**	**-2.1**
WRA	**Warramunga Arr**	**124.05**	**206**	PKP			**PKPdf**	**18 38 47.9**	**-2.1**
comp=Z,0.4nm,0.4s,baz=158,slow=1.8,SNR=15
KURBB	**Kurchatov Arra**	**149.33**	**42**	PKPbc			**PKPbc**	**18 39 38.7**	**-0.6**
comp=Z,0.2nm,0.4s,baz=291,slow=3.4,SNR=3.1
KURK	**Kurchatov**	**149.34**	**42**	*e*PKPbc			**PKPbc**	**18 39 38.7**	**-0.6**
KSH	**Kashi**	**150.43**	**65**	PKPbc			**PKPdf**	**18 39 32.7**	**-4.6**
KSH				PP			**PP**	**18 43 16.2**	**-2.6**
ZAA1	**Zalesovo Array**	**150.83**	**33**	*e*PKPbc			**PKPbc**	**18 39 44.4**	**+1.6**
ZALV	**Zalesovo Beam**	**150.83**	**33**	PKPbc			**PKPbc**	**18 39 44.4**	**+1.6**

JZK			S		Sb	18 38 06.0	+1.9
JTAJ	**Takarajima**	**1.27 359**	P		**Pn**	**18 37 59.8**	**-1.6**
JTAJ			*e*S		**Sb**	**18 38 15.9**	**-2.2**
JOW	**Kunigami**	**1.34 219**	Pn		**Pn**	**18 38 02.7**	**+0.2**
	286nm,0.3s,baz=260,slow=14,SNR=1127						
JOW			Sn		**Sb**	**18 38 20.2**	**0.0**
	322nm,0.3s,baz=322,slow=30,SNR=11						
JOW			LR		LR	18 38 26.4	
	comp=Z,168nm,20.2s,baz=106,slow=35						
JOW	**Kunigami**	**1.34 219**	P		**Pn**	**18 38 02.5**	**+0.1**
JOW			*e*S		**Sn**	**18 38 20.3**	**-0.1**
JIH	**Iheya**	**1.40 234**	P		**Pn**	**18 38 03.2**	**0.0**
JIH			S		**Sb**	**18 38 21.4**	**-0.4**
JNTH	**Nagotoyohara**	**1.73 219**	P		**Pn**	**18 38 08.3**	**+0.6**
JNN	**Nakanoshima**	**2.04 16**	S		**Sn**	**18 38 35.9**	**-1.6**
JAGN	**Aguni-jima**	**2.19 235**	P		**Pn**	**18 38 14.5**	**+0.5**
JAGN			S		**Sn**	**18 38 40.7**	**-0.5**
JYAK	**Yakushimahirau**	**2.61 25**	P		**Pn**	**18 38 19.4**	**-0.4**
JYAK			S		**Sn**	**18 38 49.7**	**-1.8**
JKE	**Kume jima 2**	**2.67 235**	P		**Pn**	**18 38 21.0**	**+0.3**
JKE			*e*S		**Sn**	**18 38 52.9**	**-0.2**
JKC	**Kuchinoerabu**	**2.71 18**	P		**Pn**	**18 38 21.3**	**+0.1**
JKC			S		**Sn**	**18 38 52.2**	**-1.9**
JMZ	**Minamidaito 2**	**2.71 139**	P		**Pn**	**18 38 19.9**	**-1.4**
JMZ			*e*S		**Sn**	**18 38 51.3**	**-2.9**
JTN	**Tanegashima 3**	**3.16 28**	P		**Pn**	**18 38 28.3**	**+0.8**
JTN			*e*S		**Sn**	**18 39 05.4**	**+0.1**
JNU	**Nakatsue**	**5.42 15**	Pn		**Pn**	**18 39 01.0**	**+2.5**
	3.1nm,0.3s,baz=192,slow=11,SNR=33						
JNU			Sn		**Sn**	**18 40 03.1**	**+2.1**
	baz=163,slow=16,SNR=1.7						
JNU			LR		LR	18 41 20.9	
	comp=Z,75nm,19.3s,baz=119,slow=40						
KSRS	**Korea Array**	**9.61 354**	Pn		**Pn**	**18 39 58.8**	**+2.8**
	0.1nm,0.3s,baz=175,slow=14,SNR=6.4						
KSRS			LR		LR	18 43 37.5	
	comp=Z,37nm,18.5s,baz=178,slow=37						
JHJ	**Hachijo jima 2**	**10.49 58**	LR		LR	18 43 30.2	
	comp=Z,33nm,19.8s,baz=217,slow=33						
ASAJ	**Asahikawa**	**19.44 30**	P		**P**	**18 42 03.0**	**-1.2**
	0.1nm,0.3s,baz=221,slow=7.4,SNR=3.8						
ASAJ			LR		LR	18 50 17.4	
	comp=Z,44nm,18.5s,baz=178,slow=39						
GUMO	**Guam**	**20.36 131**	LR		LR	18 48 39.8	
	comp=Z,25nm,18.4s,baz=130,slow=32						
CMAR	**Chiang Mai Arr**	**29.31 258**	P		**P**	**18 43 40.6**	**+0.1**
	0.3nm,0.6s,baz=40,slow=7.1,SNR=3.6						
CMAR			LR		LR	18 56 37.2	
	comp=Z,48nm,18.2s,baz=126,slow=39						
H11N2	**WAKE ISLAND Hy 35.29**	**95**	T		T	19 21 45.6	
	baz=290,slow=75,SNR=80						
H11N1	**WAKE ISLAND Hy 35.30**	**95**	T		T	19 21 46.2	
	baz=290,slow=75,SNR=51						
H11N3	**WAKE ISLAND Hy 35.31**	**95**	T		T	19 21 46.8	
	baz=290,slow=75,SNR=94						
H11S3	**WAKE ISLAND Hy 35.56**	**97**	T		T	19 22 15.4	
	baz=290,slow=75,SNR=22						
H11S1	**WAKE ISLAND Hy 35.56**	**97**	T		T	19 22 14.1	
	baz=290,slow=75,SNR=12						
H11S2	**WAKE ISLAND Hy 35.58**	**97**	T		T	19 22 15.1	
	baz=290,slow=75,SNR=14						
MKAR	**Makanchi Array**	**41.13 310**	P		**P**	**18 45 21.6**	**-0.3**
	0.5nm,0.8s,baz=97,slow=9.9,SNR=4.9						
ZALV	**Zalesovo Beam**	**41.50 321**	P		**P**	**18 45 24.6**	**-0.2**
	0.5nm,0.5s,baz=113,slow=9.6,SNR=3.5						
KURBB	**Kurchatov Arra**	**44.30 315**	P		**P**	**18 45 47.4**	**-0.1**
	0.5nm,0.6s,baz=100,slow=8.9,SNR=6.6						
WRA	**Warramunga Arr**	**47.79 174**	P		**P**	**18 46 15.4**	**0.0**
	0.4nm,0.5s,baz=355,slow=8.3,SNR=4.8						
WRA			PcP		**PcP**	**18 47 45.0**	**+0.8**
	0.5nm,0.8s,baz=345,slow=3.6,SNR=3.1						
BVAR	**Borovoye Array**	**49.66 317**	P		**P**	**18 46 29.7**	**+0.3**
	0.3nm,0.3s,baz=218,slow=43,SNR=3.3						
BVAR			PcP		**PcP**	**18 47 50.3**	**-0.3**
	0.9nm,0.8s,baz=198,slow=38,SNR=4.8						
ASAR	**Alice Springs**	**51.44 175**	P		**P**	**18 46 45.1**	**+2.0**
	0.4nm,0.7s,baz=9.9,slow=11,SNR=5.2						
ILAR	**Eielson Array**	**62.57 29**	P		P	18 48 07.1	+5.6
	0.3nm,0.7s,baz=277,slow=7.2,SNR=4.9						
KBZ	**Khabaz**	**68.81 309**	P		**P**	**18 48 42.9**	**+0.7**
	1.3nm,0.6s,baz=72,slow=3.2,SNR=2.9						
FINES	**FINESS Array B**	**71.87 331**	P		**P**	**18 49 00.1**	**-0.4**
	0.4nm,0.4s,baz=97,slow=6.0,SNR=6						
AKASG	**Malin Array Be**	**74.86 320**	P		**P**	**18 49 17.2**	**-1.2**
	0.3nm,0.4s,baz=57,slow=6.3,SNR=4.3						
YKA	**Yellowknife Ar**	**76.66 25**	P		**P**	**18 49 29.7**	**+1.3**
	0.3nm,0.8s,baz=301,slow=6.4,SNR=3.2						
BRTR	**Keskin Array B**	**76.73 308**	P		**P**	**18 49 29.2**	**-0.2**
	0.3nm,0.4s,baz=111,slow=6.8,SNR=3.7						
GERES	**GERESS Array B**	**84.42 323**	P		**P**	**18 50 10.6**	**+0.1**
	0.8nm,0.9s,baz=64,slow=6.7,SNR=3.7						

*IDC **01** 18:38:45.2±1.5, 0°.89S×133°.37E, h0km, mb3.4/3, mb1 3.6/6, mb1mx3.3/57, mbtmp3.5/6, ML3.8/4, MS3.7/1, Ms1 3.7/1, ms1mx2.5/29, Error ellipse: s-maj=32.8km s-min=14.9km az=74.0*

*NEIC **01** 18:38:50.0±0.9, 0°.88S×133°.42E, h35km, mb4.0/5, Error ellipse: s-maj=18.6km s-min=11.0km az=69.0*

*ISCJB **01** 18:38:50.9±0.6, 0°.94S±0°.05×133°.25E±0°.04, h66km±7km, mb3.6/5, Error ellipse: s-maj=8.4km s-min=5.7km az=18.9*

*DJA **01** 18:38:50.3±0.5, 1°S±4°×13°3E±°, h54km±9km, M4.1/6, mb4.4/2, MLv4.0/6*

ISC 01 18:38:51.6±1.1, 0°.94S±0°.06×133°.28E±0°.04, h51km±12km, n29, σ2°34/33, mb3.4/5, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**1.06**	**123**	P	**Pn**	**18 39 10.2**	**+0.1**
RKPI				S	**Sn**	**18 39 26.3**	**+2.4**
SIJI	**Sorong**	**2.02**	**272**	Pn	**Pn**	**18 39 21.9**	**-1.4**
	48nm,0.3s,baz=312,slow=4.1,SNR=346						
SIJI				Sn	**Sn**	**18 39 48.5**	**+1.2**
	40nm,0.3s,baz=272,slow=22,SNR=17						
FAKI	**Fak Fak**	**2.22**	**208**	P	**Pn**	**18 39 25.8**	**-0.2**
FAKI				S	**Sn**	**18 39 55.0**	**+2.7**
FAKI	**Fak Fak**	**2.22**	**208**	*e*Pn	**Pn**	**18 39 25.6**	**-0.5**
FAKI				*e*Sn	**Sn**	**18 39 53.1**	**+0.8**
KMPI	**Kaimana, Papua**	**2.74**	**171**	S	**Sn**	**18 40 07.2**	**+2.2**
BAKI	**Biak**	**2.83**	**95**	P	**Pn**	**18 39 32.5**	**-1.9**
BAKI				S	**Sn**	**18 40 08.4**	**+1.1**
AAI	**Ambon**	**5.77**	**242**	P	**Pn**	**18 40 14.6**	**-0.1**
LBMI	**Labuha**	**5.79**	**273**	S	**Sn**	**18 41 19.7**	**-0.4**
TNTI	**Ternate**	**6.16**	**286**	*e*Pn	**Pn**	**18 40 20.2**	**+0.2**
MTN	**Manton Dam**	**12.02**	**190**	*e*Pn	**Pn**	**18 41 38.4**	**-1.9**
MTN				*e*Sn	**Sn**	**18 43 50.4**	**-2.6**
BATI	**Baumata**	**13.28**	**226**	Pn	**Pn**	**18 41 58.2**	**+0.7**
	1.5nm,0.3s,baz=228,slow=1.7,SNR=5.8						
MMRI	**Maumere**	**13.40**	**235**	*e*Pn	**Pn**	**18 42 01.0**	**+1.9**
FITZ	**Fitzroy Crossi**	**18.63**	**203**	P	**P**	**18 43 04.9**	**-0.2**
	0.1nm,0.3s,baz=24,slow=12,SNR=6.2						
FITZ				S	Sn	18 46 23.7	-10
	0.2nm,0.3s,baz=244,slow=8.9,SNR=5.6						
FITZ	**Fitzroy Crossi**	**18.63**	**203**	*e*P	**P**	**18 43 03.5**	**-1.7**
	10nm,1.4s						
FITZ				S	Sn	18 46 23.7	-10
WR1	**Warramunga Arr**	**18.92**	**177**	*e*P	**P**	**18 43 07.8**	**-0.5**
	13nm,1.4s						
WRA	**Warramunga Arr**	**18.92**	**177**	P	**P**	**18 43 07.8**	**-0.5**
	0.2nm,0.3s,baz=356,slow=13,SNR=11						
WRA				S	**S**	**18 46 32.5**	**-8.2**
	0.1nm,0.3s,baz=2.3,slow=23,SNR=4.6						
WB2	**Warramunga Arr**	**18.92**	**177**	*e*P	**P**	**18 43 08.8**	**+0.5**
	27nm,1.9s						
AS31	**Alice Springs**	**22.60**	**179**	*e*P	**P**	**18 43 49.5**	**+1.4**
	0.8nm,0.6s						
AS01	**Alice Springs**	**22.60**	**178**	*e*P	**P**	**18 43 50.7**	**+2.6**
ASAR	**Alice Springs**	**22.60**	**179**	P	**P**	**18 43 49.1**	**+1.0**
	0.9nm,0.6s,baz=3.8,slow=12,SNR=14						
ASAR				S	**S**	**18 47 58.0**	**+5.6**
	0.3nm,0.7s,baz=359,slow=28,SNR=3.1						
CAN	**Canberra**	**37.21**	**159**	*e*P	**P**	**18 45 57.8**	**-0.4**
	38nm,1.8s						
H11N1	**WAKE ISLAND Hy 38.82**	**56**	T		T	19 27 13.1	
	baz=243,slow=75,SNR=18						
H11N2	**WAKE ISLAND Hy 38.84**	**56**	T		T	19 27 14.0	
	baz=243,slow=75,SNR=20						
H11N3	**WAKE ISLAND Hy 38.84**	**56**	T		T	19 27 15.5	
	baz=243,slow=75,SNR=16						
AFI	**Afiamalu**	**55.83**	**106**	LR	LR	19 11 03.3	
	comp=Z,66nm,18.6s,baz=171,slow=35						
MK32	**Makanchi Array**	**65.13**	**324**	*e*P	**P**	**18 49 26.6**	**-0.6**
MKAR	**Makanchi Array**	**65.13**	**324**	P	**P**	**18 49 26.6**	**-0.6**
	0.3nm,0.6s,baz=116,slow=8.2,SNR=3.6						
KURK	**Kurchatov**	**69.20**	**326**	*e*P	**P**	**18 49 54.6**	**+1.7**
KURBB	**Kurchatov Arra**	**69.20**	**326**	P	**P**	**18 49 54.6**	**+1.7**
	0.3nm,0.8s,baz=116,slow=5.8,SNR=4.0						

*CSEM **01** 18:53:31.0±0.6, 36°.82N×27°.65E, h1km, ML2.5, Error ellipse: s-maj=11.5km s-min=5.0km az=20.0, Suspected Mining explosion.*

*ISK **01** 18:53:32.9, 36°.97N×27°.56E, h14km±5km, ML2.2/5*

*ISCJB **01** 18:53:33.6±0.6, 36°.97N±0°.03×27°.60E±0°.03, h0km, Error ellipse: s-maj=5.1km s-min=3.4km az=14.2*

*DDA **01** 18:53:33.8, 37°.00N×27°.61E, h7km, Ml2.5, Suspected Mining explosion.*

ISC 01 18:53:32.5±0.9, 37°.03N±0°.04×27°.75E±0°.02, h0km, n27, σ1°19/47, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.25**	**279**	*i* P	**Pg**	**18 53 37.0**	**-0.2**
BDRM				*i* S	**Sg**	**18 53 39.7**	**-0.7**
BDRM	**Kayabasi**	**0.25**	**279**	P	**Pg**	**18 53 37.0**	**-0.2**
BDRM				S	**Sg**	**18 53 39.7**	**-0.7**
MLSB	**Milas**	**0.27**	**5**	PG	**Pb**	**18 53 40.3**	**+0.1**
MLSB				SG	**Sb**	**18 53 46.4**	**+1.0**
MLSB	**Milas**	**0.27**	**5**	*e*Pg	**Pb**	**18 53 40.3**	**+0.1**
MLSB				*e*Sg	**Sb**	**18 53 46.4**	**+1.0**
DATC	**Datca-Mugla**	**0.28**	**195**	PG	**Pg**	**18 53 38.1**	**+0.3**
DATC	**Datca-Mugla**	**0.28**	**195**	*e*Pg	**Pg**	**18 53 38.1**	**+0.3**
BODT	**Bodrum**	**0.35**	**276**	PG	**Pg**	**18 53 37.9**	**-1.3**
BODT				SG	**Sg**	**18 53 41.9**	**-1.9**
BODT	**Bodrum**	**0.35**	**276**	*e*Pg	**Pg**	**18 53 37.9**	**-1.3**
BODT				*e*Sg	**Sg**	**18 53 41.9**	**-1.9**
YKAV	**Yalikavak-Bodr**	**0.39**	**285**	PG	**Pg**	**18 53 39.6**	**-0.3**
YKAV				SG	**Sg**	**18 53 43.8**	**-1.1**
YKAV	**Yalikavak-Bodr**	**0.39**	**285**	*e*Pg	**Pg**	**18 53 39.6**	**-0.3**
YKAV				*e*Sg	**Sg**	**18 53 43.8**	**-1.1**
YER	**Yerkesik**	**0.44**	**76**	PG	**Pn**	**18 53 44.9**	**-1.2**
YER	**Yerkesik**	**0.44**	**76**	*e*Pg	**Pn**	**18 53 44.9**	**-1.2**
AYDN	**Tasoluk**	**0.64**	**9**	*i* P	**Pb**	**18 53 47.4**	**+0.7**
AYDN				*i* S	**Sb**	**18 53 57.1**	**+1.0**
AYDN	**Tasoluk**	**0.64**	**9**	P	**Pb**	**18 53 47.3**	**+0.7**
AYDN				S	**Sb**	**18 53 57.1**	**+1.0**
TURN	**Turunc**	**0.70**	**102**	PG	**Pg**	**18 53 44.9**	**-1.0**
TURN				SG	**Sg**	**18 53 53.4**	**-1.6**
TURN	**Turunc**	**0.70**	**102**	*i* P	**Pg**	**18 53 44.5**	**-1.4**
TURN				*i* S	**Sg**	**18 53 53.0**	**-2.0**
TURN	**Turunc**	**0.70**	**102**	P	**Pg**	**18 53 44.5**	**-1.4**
TURN	**Turunc**	**0.70**	**102**	*e*Pg	**Pg**	**18 53 44.9**	**-1.0**
TURN				*e*Sg	**Sg**	**18 53 53.4**	**-1.6**
DALY	**Dalyan (Mu¨la**	**0.76**	**106**	*i* P	**Pn**	**18 53 50.6**	**+0.2**
DALY				*i* S	**Sn**	**18 54 04.3**	**+1.9**
GCAM	**G?zelcaml?**	**0.79**	**329**	PG	**Pb**	**18 53 48.9**	**-0.1**
GCAM	**G?zelcaml?**	**0.79**	**329**	*i* P	**Pb**	**18 53 50.1**	**+1.0**
GCAM				*i* S	**Sb**	**18 53 59.4**	**-0.8**
GCAM	**G?zelcaml?**	**0.79**	**329**	*e*Pg	**Pb**	**18 53 48.9**	**-0.1**
GCAM	**G?zelcaml?**	**0.79**	**329**	P	**Pb**	**18 53 50.1**	**+1.0**
GCAM				S	**Sb**	**18 53 59.4**	**-0.8**
AYDB	**Zeytinkoy-Aydi**	**0.92**	**7**	PG	**Pb**	**18 53 52.2**	**+0.7**
AYDB				SG	**Sn**	**18 54 07.7**	**+0.8**
AYDB	**Zeytinkoy-Aydi**	**0.92**	**7**	*e*Pg	**Pb**	**18 53 52.2**	**+0.7**
AYDB				*e*Sg	**Sn**	**18 54 07.7**	**+0.8**
TAVA	**DENIZLI_Tavas**	**1.03**	**64**	*i* P	**Pn**	**18 53 54.7**	**+0.5**
TAVA				*i* S	**Sn**	**18 54 12.1**	**+2.7**
TAVA	**DENIZLI_Tavas**	**1.03**	**64**	P	**Pn**	**18 53 54.7**	**+0.5**
TAVA				S	**Sn**	**18 54 12.1**	**+2.7**

*NIED **01** 19:11:00, 35°.80N×140°.80E, h47km, Mw4.4 Best double couple: M0=4.09000×10^15 NP1:φs172.00000°, δ25.00000°, λ73.00000°. NP2:φs11.00000°, δ66.00000°, λ97.00000°.*

*BJI **01** 19:11:20.3, 35°.53N×140°.79E, h47km, mb4.5/33, mB4.8/11, Ms4.5/1, Ms7 4.2/1*

*MOS **01** 19:11:21.6±0.8, 35°.70N×140°.77E, h49km, mb4.5/26, Error ellipse: s-maj=11.2km s-min=6.7km az=105.3*

*ISCJB **01** 19:11:22.5±0.3, 35°.72N±0°.03×140°.80E±0°.04, h57km±3km, mb4.4/51, MS3.4/15, Error ellipse: s-maj=5.2km s-min=4.8km az=154.0*

*NEIC **01** 19:11:23.5±0.7, 35°.67N×140°.71E, h48km±6km, mb4.5/21, Error ellipse: s-maj=6.6km s-min=6.4km az=138.0*

*JMA **01** 19:11:23.0±0.1, 35°.75N×140°.66E, h49km±1km, M3.4 Broadband fault plane solution: P waves. NP1: φs9.00000°, δ76.00000°, λ84.00000°. NP2:φs213.00000°, δ15.00000°, λ114.00000°. Principal axes: T Plg58.0000°, Azm271.0000°; N Plg6.0000°, Azm10.0000°; P Plg31.0000°, Azm104.0000°;*

JMA Felt I J1.

*IDC **01** 19:11:25.9±1.6, 35°.66N×140°.67E, h67km±14km, mb3.8/20, mb1 3.8/24, mb1mx3.7/71, mbtmp4.0/24, MS3.4/21, Ms1 3.4/21, ms1mx3.2/62 Error ellipse: s-maj=16.6km s-min=7.4km az=70.0*

ISC 01 19:11:23.3±0.6, 35°.68N±0°.04×140°.81E±0°.05, h49km±5km, n145, σ1°80/152, mb4.4/51, MS3.5/15, 7C-7D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.05**	**59**	⇑P	**Pn**	**19 11 30.8**	**0.0**
CHOJ				S	**Sn**	**19 11 37.0**	**+0.8**
JCN	**Nagara**	**0.56**	**243**	⇓P	**Pn**	**19 11 35.0**	**-0.1**
JYT	**Yasato**	**0.74**	**318**	⇓P	**Pn**	**19 11 35.6**	**-1.9**
BSO4	**Boso 4**	**0.79**	**209**	P	**Pn**	**19 11 38.3**	**+0.3**
BSO3	**Boso 3**	**0.91**	**196**	P	**Pn**	**19 11 40.4**	**+0.9**
JHO	**Hitachi**	**0.95**	**348**	⇓P	**Pn**	**19 11 39.2**	**-1.1**
BSO1	**Boso 1**	**1.03**	**172**	P	**Pn**	**19 11 41.9**	**+1.0**
JAG	**Ashikaga**	**1.33**	**305**	⇓P	**Pn**	**19 11 43.3**	**-2.1**
MJAR	**Matsushiro Arr**	**2.27**	**293**	P	**Pn**	**19 11 57.6**	**-0.8**
	12nm,0.3s,baz=310,slow=22,SNR=104						
MJAR				S	**Sn**	**19 12 25.8**	**+0.6**
	11nm,0.3s,baz=130,slow=19,SNR=8.7						
MJAR				LR	LR	19 12 57.1	
	comp=Z,835nm,19.8s,baz=110,slow=43						
MAJO	**Matsushiro**	**2.27**	**293**	*e*Pn	**Pn**	**19 11 57.9**	**-0.5**
MAJO				*e*Sn	**Sn**	**19 12 25.8**	**+0.6**
MAJO	**Matsushiro**	**2.27**	**293**	*de*P	**Pn**	**19 11 57.8**	**-0.5**
MAT	**Matsushiro**	**2.27**	**293**	P	**Pn**	**19 11 58.1**	**-0.3**
MAT				S	**Sn**	**19 12 27.4**	**+2.2**
MJB9	**Matsu-Tunnel**	**2.28**	**293**	*e*Pn	**Pn**	**19 11 58.1**	**-0.3**
JHJ2	**Mitsune**	**2.69**	**198**	*e*Pn	**Pn**	**19 12 03.7**	**-0.3**
JHJ	**Hachijo jima 2**	**2.69**	**199**	P	**Pn**	**19 12 04.9**	**+0.8**
	27nm,0.3s,baz=329,slow=20,SNR=20						
JHJ				S	**Sn**	**19 12 38.1**	**+2.8**
	38nm,0.3s,baz=72,slow=23,SNR=9.6						
JHJ				LR	LR	19 13 20.4	
	comp=Z,293nm,19.8s,baz=13,slow=43						
INU	**Inuyama**	**3.11**	**265**	*e*Pn	**Pn**	**19 12 09.8**	**0.0**
ERM	**Erimo**	**6.59**	**15**	*e*Pn	**Pn**	**19 12 58.3**	**+0.8**
ERM				*e*Sn	**Sn**	**19 14 08.4**	**-2.8**
ERM	**Erimo**	**6.59**	**15**	⇑*e*P	**Pn**	**19 12 58.3**	**+0.8**
ASAJ	**Asahikawa**	**8.54**	**9**	P	**Pn**	**19 13 23.2**	**-1.0**
	0.9nm,0.3s,baz=193,slow=17,SNR=10.0						
ASAJ				S	**Sn**	**19 14 58.1**	**-1.1**
	0.5nm,0.3s,baz=73,slow=31,SNR=2.6						
ASAJ				LR	LR	19 17 31.2	
	comp=Z,97nm,20.6s,baz=192,slow=43						
ASAJ	**Asahikawa**	**8.54**	**9**	*e*Pn	**Pn**	**19 13 22.5**	**-1.7**
ASAJ				S	**Sn**	**19 14 58.1**	**-1.1**
JNU	**Nakatsue**	**8.59**	**256**	P	**Pn**	**19 13 27.4**	**+2.3**
	0.1nm,0.3s,baz=332,slow=23,SNR=2.0						
JNU				LR	LR	19 17 11.9	
	comp=Z,543nm,18.1s,baz=118,slow=41						
CBIJ	**Chichi jima**	**8.64**	**172**	*e*Pn	**Pn**	**19 13 23.8**	**-1.8**
CBIJ				*e*Sn	**Sn**	**19 14 55.6**	**-6.1**
JCJ	**Chichijima**	**8.64**	**172**	P	**Pn**	**19 13 24.3**	**-1.4**
	9.2nm,0.3s,baz=287,slow=22,SNR=11						
JCJ				S	**Sn**	**19 14 56.1**	**-5.5**
YUK	**Yuzh-Kuril'sk**	**9.21**	**23**	*e*P	**Pn**	**19 13 34.5**	**+1.2**
YUK				*e*S	**Sn**	**19 15 07.8**	**-7.6**
YUK				pmax	pmax		
	comp=Z,15nm,0.2s						
KSRS	**Korea Array**	**10.51**	**283**	P	**Pn**	**19 13 55.0**	**+3.8**
	comp=Z,0.1nm,0.3s,baz=100,slow=14,SNR=18						
KSRS				LR	LR	19 17 45.0	
	comp=Z,263nm,21.5s,baz=114,slow=36						
KS15	**Wonju Array Si**	**10.54**	**283**	*e*Pn	**Pn**	**19 13 54.8**	**+3.1**
KSAR	**Wonju Array Be**	**10.54**	**283**	P	**Pn**	**19 13 55.0**	**+3.3**
KSAR	**Wonju Array Be**	**10.54**	**283**	P	**Pn**	**19 13 55.0**	**+3.3**
USRK	**Ussuriysk Ar.**	**10.87**	**324**	P	**Pn**	**19 13 57.9**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=141,slow=12,SNR=4.6						
USRK				LR	LR	19 17 47.7	
	comp=Z,116nm,19.7s,baz=149,slow=35						
YSS	**Yuzh-Sakhalins**	**11.36**	**7**	*e*P	**Pn**	**19 14 04.5**	**+1.7**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2	**Changchun**	**14.32**	**309**	*e*P	**Pn**	**19 14 43.4**	**+0.3**
CN2				*e*S	**Sn**	**19 17 19.9**	**-0.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
TYV	**Tymovskoe**	**15.24**	**4**	*e*P	**Pn**	**19 14 53.6**	**-1.5**
TYV				pmax	pmax		
	comp=Z,100nm,3.3s						
TYV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
NJ2	**Nanjing**	**18.58**	**265**	*e*P	**P**	**19 15 33.8**	**-2.4**
NJ2				pmax	pmax		
	comp=Z,11nm,0.7s						
ZEA	**Zeya**	**20.40**	**336**	*e*P	**P**	**19 15 52.2**	**-3.7**
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
GUMO	**Guam**	**22.30**	**170**	LR	LR	19 25 13.4	
	comp=Z,17nm,18.0s,baz=28,slow=37						
HHC	**Hu-ho-hao-te**	**23.48**	**292**	*e*P	**P**	**19 16 27.1**	**-1.5**
HHC				pP	pP	19 16 41.4	+0.8
HHC				sP	sP	19 16 48.9	+2.3
HHC				S	**S**	**19 20 31.4**	**-7.2**
HHC				sS	sS	19 20 56.3	-3.4
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,37nm,5.3s						
MA2	**Magadan**	**24.78**	**12**	P	**P**	**19 16 41.9**	**+1.7**
	comp=Z,3.1nm,0.6s,baz=202,slow=6.8,SNR=9.9						
MA2	**Magadan**	**24.78**	**12**	*e*P	**P**	**19 16 39.5**	**-0.7**
	comp=Z,4.6nm,0.8s						
MA2	**Magadan**	**24.78**	**12**	⇑*e*P	**P**	**19 16 41.8**	**+1.6**
MA2				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ENH	**Enshi**	**26.75**	**267**	*e*P	**P**	**19 16 56.0**	**-2.5**
	comp=Z,12nm,0.8s						
YAK	**Yakutsk**	**27.29**	**349**	*e*P	**P**	**19 17 02.5**	**-0.3**
	comp=Z,10nm,0.8s						
YAK	**Yakutsk**	**27.29**	**349**	*e*P	**P**	**19 17 01.7**	**-1.1**
YAK				*e*		19 18 01.3	
YAK				*e*		19 20 16.1	
YAK				*e*S	**S**	**19 21 36.0**	**-2.6**
YAK				*e**SS	**sS**	**19 21 57.6**	**-2.4**
YAK				*e*SS	**SnSn**	**19 22 56.2**	**+5.6**
YAK				*e*		19 27 52.8	
YAK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,45nm,3.4s						
YAK				pmax	pmax		
	comp=N,16nm,3.4s						
YAK				pmax	pmax		
	comp=E,15nm,3.0s						
YAK				smax	smax		
	comp=N,35nm,3.7s						
YAK				smax	smax		
	comp=E,18nm,3.8s						
ULN	**Ulaanbaatar**	**27.74**	**307**	*e*P	**P**	**19 17 06.5**	**-0.8**
	comp=E,5.2nm,1.3s						
ULN	**Ulaanbaatar**	**27.74**	**307**	*ce*P	**P**	**19 17 08.6**	**+1.4**
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
H11N2	**WAKE ISLAND Hy 27.91**	**118**	T		T	19 46 16.4	
	baz=311,slow=75,SNR=58						
H11N1	**WAKE ISLAND Hy 27.92**	**118**	T		T	19 46 17.0	
	baz=311,slow=75,SNR=32						
H11N3	**WAKE ISLAND Hy 27.93**	**118**	T		T	19 46 12.9	
	baz=311,slow=75,SNR=33						
SONA0	**Songino Array**	**28.16**	**306**	*e*P	**P**	**19 17 12.5**	**+1.5**
SONM	**Songino Array**	**28.16**	**306**	P	**P**	**19 17 12.5**	**+1.5**
	comp=Z,2.3nm,1.1s,baz=107,slow=9.8,SNR=3.5						
SONM				LR	LR	19 28 48.5	
	comp=Z,121nm,21.4s,baz=244,slow=37						
SONM	**Songino Array**	**28.16**	**306**	P	**P**	**19 17 12.5**	**+1.5**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SONM				MLR	MLR		
	comp=

comp=Z,4.4nm,0.9s
BWN Browne 49.80 33 *e*P **P 19 20 12.1 +1.4**
comp=Z,22nm,0.8s
MDM Murphy Dome 50.33 32 *e*P **P 19 20 16.9 +2.1**
comp=Z,3.3nm,0.8s
KSH Kashi 50.52 295 P **P 19 20 19.4 +2.7**
AAK Ala-Archa 50.71 299 P **P 19 20 18.5 +0.3**
comp=Z,0.6nm,0.3s,baz=158,slow=6.6,SNR=3.6
AAK Ala-Archa 50.71 299 *e*P **P 19 20 16.9 -1.2**
comp=Z,2.1nm,0.8s
IL1 Eielson Array 50.90 32 *e*P **P 19 20 20.0 +0.9**
ILAR Eielson Array 50.90 32 P **P 19 20 20.0 +0.9**
comp=Z,1.2nm,0.8s,baz=273,slow=6.3,SNR=14
ILAR Eielson Array 50.90 32 P **P 19 20 20.0 +0.9**
ILAR Eielson Array 50.90 32 P **P 19 20 20.0 +0.9**
ILAR pmax pmax
comp=Z,1.0nm,0.8s
ILB Eielson Array 50.90 32 *e*P **P 19 20 20.6 +1.6**
BVAR Borovoye Array 51.13 313 P **P 19 20 21.6 +0.7**
comp=Z,2.0nm,0.7s,baz=97,slow=13,SNR=9.1
BVAR LR LR 19 44 17.7
comp=Z,26nm,18.8s,baz=47,slow=39
BRVK Borovoye 51.19 313 *e*P **P 19 20 21.0 -0.3**
comp=Z,4.3nm,0.8s
BRVK Borovoye 51.19 313⇓*e*P **P 19 20 21.5 +0.1**
BRVK pmax pmax
comp=Z,3.0nm,0.7s
KK31 Karatay Array 53.39 301 *e*P **P 19 20 37.7 -0.2**
KK31 Karatay Array 53.39 301 *e*P **P 19 20 37.7 -0.2**
KKAR Karatay Array 53.39 301 *e*P **P 19 20 37.4 -0.5**
KKAR Karatay Array 53.39 301 *e*P **P 19 20 37.4 -0.5**
NIL Nilore 54.58 289 *e*P **P 19 20 46.1 -0.7**
comp=Z,31nm,1.9s
NIL Nilore 54.58 289 *e*P **P 19 20 46.1 -0.7**
NIL pmax pmax
comp=Z,31nm,1.9s
FITZ Fitzroy Crossi 55.38 198 P **P 19 20 52.7 +0.3**
comp=Z,1.6nm,0.7s,baz=22,slow=11,SNR=5.0
WR1 Warramunga Arr 55.65 187 *e*P **P 19 20 54.1 -0.3**
comp=Z,27nm,1.8s
WRA Warramunga Arr 55.65 187 P **P 19 20 54.1 -0.3**
comp=Z,0.6nm,0.5s,baz=0.8,slow=7.5,SNR=15
WRA Warramunga Arr 55.65 187 *i*P **P 19 20 54.7 +0.3**
WRA pmax pmax
comp=Z,1.0nm,0.5s
INK Inuvik 55.82 27 LR LR 19 46 51.6
comp=Z,27nm,18.4s,baz=244,slow=38
INK Inuvik 55.82 27 *e*P **P 19 20 56.0 +1.1**
comp=Z,4.8nm,1.3s
INK Inuvik 55.82 27 *e*P **P 19 20 56.1 +1.1**
INK pmax pmax
comp=Z,5.0nm,1.3s
SVE Sverdlovsk 55.84 319 *e*P **P 19 20 55.9 +0.5**
SVE pmax pmax
comp=Z,9.0nm,0.9s
HLK Haleakala 56.55 87 *e*P **P 19 21 03.0 +1.7**
comp=Z,166nm,1.1s
ARU Arti 57.05 319 P **P 19 21 04.0 0.0**
comp=Z,2.1nm,0.3s,baz=80,slow=5.0,SNR=9.4
ARU Arti 57.05 319 *e*P **P 19 21 03.3 -0.7**
comp=Z,8.0nm,1.0s
ARU Arti 57.05 319*d i*P **P 19 21 03.9 -0.1**
ARU *PP **pP 19 21 18.3 +0.7**
ARU 19 23 06.4
ARU S **S 19 28 57.4 +2.4**
ARU SS **SS 19 32 43.6 0.0**
ARU pmax pmax
comp=Z,9.0nm,1.0s
HPAH Hawaii Prepara 57.36 88 *e*P **P 19 21 08.8 +2.0**
comp=Z,458nm,1.9s
ABKAR Abkulak array 58.44 311 *e*P **P 19 21 13.3 -0.6**
AKTO Aktyubinsk 59.22 312 P **P 19 21 20.1 +0.8**
comp=Z,1.5nm,0.7s,baz=77,slow=7.0,SNR=5.0
AS31 Alice Springs 59.38 187 *e*P **P 19 21 20.6 0.0**
comp=Z,5.2nm,1.9s
ASAR Alice Springs 59.38 187 P **P 19 21 21.4 +0.8**
comp=Z,0.5nm,0.6s,baz=18,slow=11,SNR=10.0
SPITS Spitsbergen Ar 61.76 349 LR LR 19 51 20.8
comp=Z,31nm,18.2s,baz=255,slow=39
ARA0 ARCESS Array S 65.09 339 *e*P **P 19 21 58.3 0.0**
ARCES ARCESS Array B 65.09 339 P **P 19 21 58.3 0.0**
comp=Z,2.2nm,0.8s,baz=57,slow=15,SNR=4.3
YKA Yellowknife Ar 65.23 30 P **P 19 22 00.7 +1.5**
comp=Z,0.6nm,0.9s,baz=297,slow=6.3,SNR=5.4
YKA Yellowknife Ar 65.23 30*c e*P **P 19 21 59.7 +0.5**
OBN Obninsk 68.89 323 *e*P **P 19 22 22.5 -0.1**
OBN *e* 19 22 49.6
OBN *e* 19 24 53.7
OBN pmax pmax
comp=Z,4.0nm,0.8s
B941 Kapowsin 69.17 47 *e*P **P 19 22 22.3 -2.1**
VSR Storozhevoye 69.63 319 *e*P **P 19 22 25.9 -1.3**
VSR pmax pmax
comp=Z,6.0nm,0.7s
FINES FINESS Array B 69.78 332 LR LR 19 54 35.2
comp=Z,22nm,18.8s,baz=19,slow=37
KIV Kislovodsk 71.42 311 *e*P **P 19 22 37.9 -0.6**
KIV *e* 19 22 58.4
KIV pmax pmax
comp=Z,8.0nm,1.2s
KKPM Kettenpom Peak 71.99 53 *e*P **P 19 22 41.1 -0.9**
GNI Garni 72.12 307 LR LR 19 56 35.2
comp=Z,32nm,19.2s,baz=4.5,slow=38
AKASG Malin Array Be 75.07 322 P **P 19 22 59.5 -0.2**
comp=Z,1.2nm,0.6s,baz=41,slow=6.3,SNR=6.8
AKASG LR LR 19 58 56.1
comp=Z,55nm,18.5s,baz=340,slow=38
AKBB Malin Array Si 75.07 322 *e*P **P 19 22 59.1 -0.6**
comp=Z,5.4nm,0.8s
AKBB Malin Array Si 75.07 322 *e*P **P 19 22 59.1 -0.6**
AKBB pmax pmax
comp=Z,5.0nm,0.8s
HFS Hagfors 75.12 336 LR LR 20 01 07.6
comp=Z,28nm,18.3s,baz=56,slow=40
NB200 NORSAR Array S 75.25 337 *e*P **P 19 23 00.9 +0.3**
NOA NORSAR Array B 75.25 337 P **P 19 23 00.9 +0.3**
comp=Z,4.8nm,1.0s,baz=38,slow=6.0,SNR=4.3
NOA LR LR 19 58 44.6
comp=Z,22nm,19.7s,baz=60,slow=38
NV01 Mina Array Sit 76.20 53 *e*P **P 19 23 07.9 +1.2**
NVAR Mina Array Bea 76.20 53 P **P 19 23 08.2 +1.6**
comp=Z,0.6nm,0.8s,baz=281,slow=6.1,SNR=3.8
BR101 Keskin Array S 79.38 311 *e*P **P 19 23 24.8 +0.5**
BRTR Keskin Array B 79.38 311 P **P 19 23 24.8 +0.5**
comp=Z,1.3nm,0.8s,baz=100,slow=5.1,SNR=7.2
BRTR LR LR 20 00 45.7
comp=Z,18nm,18.2s,baz=90,slow=37
BRTR Keskin Array B 79.38 311 *i*P **P 19 23 27.3 +3.0**
BRTR pmax pmax
comp=Z,1.0nm,0.9s
RAYN Ar Rayn 80.71 292 *e*P **P 19 23 31.3 -0.3**
comp=Z,20nm,1.9s
RAYN Ar Rayn 80.71 292 P **P 19 23 31.3 -0.3**
RAYN pmax pmax
comp=Z,20nm,1.9s
ERRC Elmore Ranch 80.93 56 *e*P **P 19 23 36.0 +3.5**

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*IDC **01** 19:11:34.0±1.1, 28°.91N×95°.63E, h0km, mb3.6/8, mb1 3.8/8, mb1mx3.4/76, mbtmp3.7/8, Error ellipse: s-maj=111.4km s-min=19.4km az=56.0*
*NDI **01** 19:11:34.8±2.4, 29°.22N×95°.52E, h30km, ML4.0*
*BJI **01** 19:11:37.0, 28°.91N×95°.48E, h7km, mb3.7/3, ML3.4/4*
*ISCJB **01** 19:11:38.1±0.6, 28°.95N±0°.04×95°.44E±0°.07, h40km, mb3.7/7, Error ellipse: s-maj=8.2km s-min=5.6km az=5.2*
ISC 01 19:11:40.2±0.8, 28°.90N±0°.06×95°.37E±0°.07, h40km, n19, σ2°22/27, mb3.7/7, Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKP	**Lekhapani**	**1.62**	**165**	*e*P	**Pn**	**19 12 05.5**	**-0.7**
LKP				*e*S	**Sn**	**19 12 27.1**	**+1.3**
LKP				IAML		19 12 33.6	
	comp=E,1μm,0.3s						
LKP				IAML		19 12 33.9	
	comp=N,1μm,0.6s						
ZIRO	**ZIRO**	**1.92**	**225**	*e*P	**Pn**	**19 12 11.0**	**+0.5**
ZIRO				*e*S	**Sn**	**19 12 37.4**	**+3.9**
ZIRO				IAML		19 12 41.0	
	comp=E,2μm,0.4s						
ZIRO				IAML		19 12 41.7	
	comp=N,3μm,0.7s						
ITAN	**ITANAGAR**	**2.28**	**220**	*e*P	**Pn**	**19 12 15.9**	**+0.6**
ITAN				*e*S	**Sn**	**19 12 46.6**	**+4.4**
ITAN				IAML		19 12 51.7	
	comp=N,5μm,0.6s						
ITAN				IAML		19 12 51.8	
	comp=E,3μm,0.4s						
JORH	**JORHAT**	**2.37**	**205**	*e*x	Pn	19 12 06.8	-10
JORH				*e*S	**Sn**	**19 12 46.6**	**+2.2**
TEZP	**TEZPUR**	**3.22**	**226**	*e*P	**Pn**	**19 12 26.6**	**-1.7**
TEZP				*e*S	**Sn**	**19 13 07.4**	**+2.0**
TEZP				IAML		19 13 22.3	
	comp=N,423nm,0.2s						
TEZP				IAML		19 13 22.5	
	comp=E,304nm,0.2s						
LSA	**Lhasa**	**3.77**	**283**	Pn	**Pn**	**19 12 38.2**	**+2.0**
LSA				Sn	**Sn**	**19 13 22.0**	**+2.4**
GUWA	**GUWAHATI**	**4.24**	**231**	*e*P	**Pn**	**19 12 41.1**	**-1.1**
GUWA				*e*S	**Sn**	**19 13 28.9**	**-1.5**
SHL	**Shillong**	**4.55**	**224**	*e*P	**Pn**	**19 12 46.6**	**-0.1**
SHL				*e*S	**Sn**	**19 13 36.7**	**-1.7**
TURI	**Tura**	**5.59**	**235**	*e*P	**Pn**	**19 13 00.7**	**-0.2**
TURI				IAML		19 14 37.7	
	comp=E,112nm,0.6s						
TURI				IAML		19 14 38.9	
	comp=N,87nm,0.1s						
GTK	**Tadong**	**6.18**	**257**	*e*P	**Pn**	**19 13 07.7**	**-1.4**
GTK				*e*S	**Sn**	**19 14 12.2**	**-6.5**
WMQ	**Urumqi**	**16.11**	**340**	*e*P	**Pn**	**19 15 23.2**	**-0.5**
MKAR	**Makanchi Array**	**20.58**	**334**	P	**P**	**19 16 15.1**	**-0.5**
	comp=N,0.7nm,0.6s,baz=139,slow=12,SNR=4.4						
KURBB	**Kurchatov Arra**	**25.15**	**334**	P	**P**	**19 17 01.8**	**+0.4**
	comp=N,0.7nm,0.5s,baz=147,slow=10,SNR=7.7						
ZALV	**Zalesovo Beam**	**26.19**	**346**	P	**P**	**19 17 10.2**	**-0.5**
	comp=N,0.4nm,0.3s,baz=153,slow=9.7,SNR=2.4						
FINES	**FINESS Array B**	**55.20**	**327**	P	**P**	**19 21 08.7**	**0.0**
	comp=N,3.1nm,1.1s,baz=80,slow=11,SNR=2.8						
WRA	**Warramunga Arr**	**61.42**	**138**	P	**P**	**19 21 52.0**	**-0.7**
	comp=N,0.7nm,0.6s,baz=328,slow=7.5,SNR=5.9						
GERES	**GERESS Array B**	**63.58**	**313**	P	**P**	**19 22 07.2**	**+0.4**
	comp=N,0.3nm,0.5s,baz=74,slow=7.2,SNR=3.3						
ASAR	**Alice Springs**	**64.09**	**141**	P	**P**	**19 22 08.2**	**-2.1**
	comp=N,0.5nm,0.8s,baz=324,slow=6.1,SNR=4.0						
EKA	**Eskdalemuir Ar**	**71.32**	**323**	P	**P**	**19 22 57.1**	**+1.6**
	comp=N,0.9nm,0.7s,baz=69,slow=10.0,SNR=3.2						

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*SOME **01** 19:12:39.0, 42°.23N×82°.18E, h15km*
*NNC **01** 19:12:40.3±2.3, 42°.13N×82°.04E, h0km, mb2.9, mpv2.5, Error ellipse: s-maj=18.0km s-min=9.1km az=150.0*
ISC 01 19:12:39.3±3.1, 41°.9N±0°.2×82°.03E±0°.09, h16km±16km, n9, σ1°13/17, 5C-3D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.95**	**321**	*e*P	**Pb**	**19 13 14.3**	**-0.2**
KTMS				*e*S	**Sb**	**19 13 38.9**	**+0.3**
SHLS	**Shalkode**	**2.25**	**303**	*e*P	**Pn**	**19 13 16.1**	**0.0**
	15nm,0.3s						
SHLS				*e*S	**Sn**	**19 13 42.3**	**-1.3**
	67nm,0.4s						
PDGK	**Podgornoye**	**2.33**	**307**	⇑Pg	**Pb**	**19 13 20.7**	**-0.3**
	1.3nm,0.4s						
PDGK				⇓Lg	Lg	19 13 51.7	
	23nm,0.8s						
DJR	**Jarkent**	**2.90**	**326**	*e*P	**Pb**	**19 13 28.7**	**-1.9**
DJR				*e*S	**Sb**	**19 14 03.8**	**-2.1**
KPKS	**Kokpek**	**2.90**	**303**	*e*P	**Pb**	**19 13 30.3**	**-0.4**
KPKS				*e*S	**Sb**	**19 14 06.5**	**+0.6**
ZHN	**Zhinishke**	**2.93**	**296**	*e*P	**Pg**	**19 13 35.0**	**-0.4**
ZHN				*e*S	**Sg**	**19 14 14.6**	**+1.3**
MNBS	**Baschi**	**3.41**	**310**	*e*P	**Pb**	**19 13 39.4**	**-0.1**
	0.7nm,0.2s						
MNBS				*e*S	**Sb**	**19 14 22.3**	**+1.6**
	6.1nm,0.4s						
MK31	**Makanchi Array**	**4.85**	**2**	⇑Pn	**Pn**	**19 13 52.1**	**+0.4**
	0.1nm,0.2s,baz=183,slow=13,SNR=23						
MK31				⇑Sn	**Sn**	**19 14 48.6**	**+1.1**
	0.2nm,0.2s,baz=192,slow=28,SNR=8.1						
MK31				⇑Lg	Lg	19 15 06.0	
	1.6nm,0.7s,baz=174,slow=29,SNR=3.6						
MAKZ	**Makanchi**	**4.87**	**360**	⇓Pn	**Pn**	**19 13 52.3**	**+0.5**
	0.5nm,0.5s						
MAKZ				⇓Sn	**Sn**	**19 14 48.2**	**+0.4**
	1.0nm,0.4s						
MAKZ				⇑Lg	Lg	19 15 07.2	
	0.8nm,0.5s						

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*CSEM **01** 19:17:54.3, 44°.86N×11°.03E, h8km, MD1.2/3*
ROM 01 19:17:54.3±0.2, 44°.855N±0°.008×11°.030E±0°.006, h8km, Md1.2/3, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0802	**SanFelice sul**	**0.11**	**79**	P	Pg	19 17 58.8	+2.0
T0802				S	Sg	19 18 02.5	+4.0
T0802	**SanFelice sul**	**0.11**	**79**	P	Pg	19 17 58.8	+2.0
T0802				S	Sg	19 18 02.5	+4.0
RAVA	**Ravarino**	**0.12**	**147**	P	Pg	19 17 59.2	+2.3
RAVA				S	Sg	19 18 03.5	+4.8
RAVA	**Ravarino**	**0.12**	**147**	P	Pg	19 17 59.2	+2.3
RAVA				S	Sg	19 18 03.5	+4.8
RAVA				AML	AML		
	comp=E,1670μm,0.3s						
RAVA				AML	AML		
	comp=N,1765μm,0.6s						
RAVA				AML	AML		
	comp=N,1765μm,0.6s						
RAVA				AML	AML		
	comp=E,1670μm,0.3s						
RAVA				END			
RAVA				END			
T0800	**Massa Finalese**	**0.15**	**92**	P	Pg	19 17 59.5	+2.0
T0800				S	Sg	19 18 03.9	+4.1
T0800	**Massa Finalese**	**0.15**	**92**	P	Pg	19 17 59.5	+1.9
T0800				S	Sg	19 18 03.9	+4.1
T0800				AML	AML		
	comp=E,2370μm,0.2s						
T0800				AML	AML		
	comp=N,1505μm,0.2s						
T0800				AML	AML		
	comp=E,2370μm,0.2s						
T0800				AML	AML		
	comp=N,1505μm,0.2s						
T0800				END			
T0800				END			
T0826	**Rio Saliceto (**	**0.16**	**264**	P	Pg	19 17 59.1	+1.5
T0826				S	Sg	19 18 03.4	+3.6
T0826	**Rio Saliceto (**	**0.16**	**264**	P	Pg	19 17 59.1	+1.5
T0826				S	Sg	19 18 03.4	+3.6
T0825	**Gonzaga (MN)**	**0.18**	**312**	P	Pg	19 17 59.9	+2.0
T0825				S	Sg	19 18 04.7	+4.3
T0825	**Gonzaga (MN)**	**0.18**	**312**	P	Pg	19 17 59.9	+2.0
T0825				S	Sg	19 18 04.7	+4.3
T0825				AML	AML		
	comp=E,1003μm,1.4s						
T0825				AML	AML		
	comp=N,901μm,0.2s						
T0825				AML	AML		
	comp=N,901μm,0.2s						
T0825				AML	AML		
	comp=E,1003μm,1.4s						
T0805	**Bondeno (FE)**	**0.22**	**73**	P	Pg	19 18 00.4	+1.7
T0805	**Bondeno (FE)**	**0.22**	**73**	P	Pg	19 18 00.4	+1.7
T0822	**Casumaru (Bond**	**0.23**	**95**	P	Pg	19 18 00.7	+1.9
T0822				S	Sg	19 18 06.9	+5.0
T0822	**Casumaru (Bond**	**0.23**	**95**	P	Pg	19 18 00.7	+1.9
T0822				S	Sg	19 18 06.9	+5.0
T0822				END			
T0822				END			
NOVE	**Novellara**	**0.23**	**256**	P	Pg	19 18 00.7	+1.8
NOVE	**Novellara**	**0.23**	**256**	P	Pg	19 18 00.7	+1.8

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*CSEM **01** 19:18:16.0, 44°.85N×11°.16E, h7km, ML2.1/2*
ROM 01 19:18:16.0±0.1, 44°.854N±0°.003×11°.163E±0°.003, h7km, ML2.1/1, 2C-4D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0802	**SanFelice sul**	**0.03**	**32**	*e*P	Pg	19 18 17.7	+0.3
T0802				*e*S	Sg	19 18 19.7	+1.4
T0802	**SanFelice sul**	**0.03**	**32**	*e*P	Pg	19 18 17.7	+0.3
T0802				*e*S	Sg	19 18 19.7	+1.4
T0813	**Massa Finalese**	**0.04**	**47**	⇑*i*P	Pg	19 18 17.9	+0.5
T0813				⇑*i*S	Sg	19 18 20.5	+2.0
T0813	**Massa Finalese**	**0.04**	**47**	*i*P	Pg	19 18 17.9	+0.4
T0813				*i*S	Sg	19 18 20.5	+2.0
T0800	**Massa Finalese**	**0.06**	**95**	*e*P	Pg	19 18 18.4	+0.7
T0800				*e*S	Sg	19 18 21.2	+2.3
T0800	**Massa Finalese**	**0.06**	**95**	*e*P	Pg	19 18 18.4	+0.7
T0800				*e*S	Sg	19 18 21.2	+2.3
T0800				AML	AML		
	comp=E,2370μm,0.2s						
T0800				AML	AML		
	comp=N,1505μm,0.2s						
T0811	**Palata Pepoli**	**0.08**	**147**	⇓*i*P	Pg	19 18 18.5	+0.5
T0811				⇓*i*S	Sg	19 18 21.3	+1.9
T0811	**Palata Pepoli**	**0.08**	**147**	*i*P	Pg	19 18 18.5	+0.5
T0811				*i*S	Sg	19 18 21.4	+1.9
T0812	**Loc. Stoppiaro**	**0.10**	**7**	*e*P	Pg	19 18 19.2	+0.9
T0812	**Loc. Stoppiaro**	**0.10**	**7**	*e*P	Pg	19 18 19.2	+0.9
RAVA	**Ravarino**	**0.10**	**198**	⇓*i*P	Pg	19 18 19.2	+0.9
RAVA				⇓*i*S	Sg	19 18 22.6	+2.7
RAVA	**Ravarino**	**0.10**	**198**	*i*P	Pg	19 18 19.2	+0.8
RAVA				*i*S	Sg	19 18 22.6	+2.7
RAVA				AML	AML		
	comp=E,1670μm,0.3s						
RAVA				AML	AML		
	comp=N,1765μm,0.6s						
RAVA				AML	AML		
	comp=N,1765μm,0.6s						
RAVA				AML	AML		
	comp=E,1670μm,0.3s						
T0805	**Bondeno (FE)**	**0.13**	**60**	*e*P	Pg	19 18 19.6	+0.8
T0805	**Bondeno (FE)**	**0.13**	**60**	*e*P	Pg	19 18 19.6	+0.8
T0822	**Casumaru (Bond**	**0.13**	**99**	*e*P	Pg	19 18 19.5	+0.7
T0822				*e*S	Sg	19 18 23.3	+2.6
T0822	**Casumaru (Bond**	**0.13**	**99**	*e*P	Pg	19 18 19.6	+0.8
T0822				*e*S	Sg	19 18 23.3	+2.6
T0803	**Dosso, Cento (**	**0.16**	**123**	*e*P	Pg	19 18 20.2	+0.9
T0803	**Dosso, Cento (**	**0.16**	**123**	*e*P	Pg	19 18 20.2	+0.9
T0825	**Gonzaga (MN)**	**0.25**	**298**	AML	AML		
	comp=E,1003μm,1.4s						
T0825				AML	AML		
	comp=N,901μm,0.2s						

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*UCR **01** 19:26:39.8±2.8, 7°.47N×81°.07W, h4km±14km, MD4.6*
*ISCJB **01** 19:26:41.3±0.7, 7°.47N±0°.06×81°.09W±0°.02, h18km, Error ellipse: s-maj=8.9km s-min=3.5km az=3.9*
ISC 01 19:26:43.0±1.5, 7°.58N±0°.09×81°.10W±0°.03, h18km, n24, σ1°29/33, 2C-2D, Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZANG	**Zanguenga, Cho**	**1.83**	**42**	⇓*i*P	**Pn**	**19 27 12.7**	**-0.9**
ZANG				*e*S	**Sn**	**19 27 36.2**	**-0.3**
BRU2	**Volcan**	**1.99**	**308**	⇑*e*P	**Pn**	**19 27 13.5**	**-2.4**
BRU2				*e*S	**Sb**	**19 27 42.4**	**-0.9**
BCIP	**Isla Barro Col**	**2.01**	**38**	⇓*i*P	**Pn**	**19 27 15.2**	**-0.9**
BCIP				*e*S	**Sn**	**19 27 41.7**	**+0.9**
BCIP	**Isla Barro Col**	**2.01**	**38**	*e*P	**Pn**	**19 27 15.3**	**-0.8**
UPA	**Univ. de Panam**	**2.08**	**48**	*e*P	**Pn**	**19 27 16.0**	**-1.1**
UPA				*e*S	**Sb**	**19 27 44.7**	**-1.1**
EDSV	**San Vito**	**2.23**	**304**	*e*P	**Pn**	**19 27 18.2**	**-1.0**
EDSV				*e*S	**Sb**	**19 27 49.8**	**-0.5**
ACR	**Cerro Adams**	**2.31**	**298**	*e*P	**Pn**	**19 27 18.2**	**-2.1**
ACR				*e*S	**Sn**	**19 27 49.0**	**+0.7**
PTJ1	**Puerto Jim˜ˆne**	**2.38**	**294**	*e*P	**Pn**	**19 27 20.6**	**-0.6**
PTJ1				*e*S	**Sn**	**19 27 50.8**	**+0.8**
EDBA	**Buenos Aires**	**2.67**	**306**	*e*P	**Pn**	**19 27 22.3**	**-2.9**
EDPN	**Palmar Norte**	**2.71**	**301**	*e*P	**Pn**	**19 27 24.2**	**-1.5**
EDPN				*e*S	**Sn**	**19 28 00.4**	**+2.3**
UPD2	**Meteti**	**3.20**	**72**	*e*P	**Pn**	**19 27 31.9**	**-0.5**
UPD2				*e*S	**Sn**	**19 28 10.2**	**0.0**
EDDO	**Dominical**	**3.21**	**302**	*e*P	**Pn**	**19 27 32.9**	**+0.4**
BUS	**Buena Vista**	**3.29**	**307**	⇑*e*P	**Pn**	**19 27 33.3**	**-0.7**
URSC	**Urasca**	**3.47**	**310**	*e*P	**Pn**	**19 27 36.7**	**+0.3**
QCR1	**Quepos**	**3.55**	**301**	*e*P	**Pn**	**19 27 38.2**	**+1.0**
VTR0	**Volcan Turrial**	**3.58**	**313**	*e*P	**Pn**	**19 27 38.5**	**+0.4**
HDC	**Heredia**	**3.83**	**309**	*e*P	**Pn**	**19 27 42.6**	**+1.3**
CAPC	**Capurgana**	**3.85**	**74**	*e*P	**Pn**	**19 27 42.5**	**+1.0**
CGA2	**Cerro Gallo 2**	**4.12**	**306**	*e*P	**Pn**	**19 27 45.6**	**+0.4**
DBBC	**Dabeiba**	**4.88**	**96**	*e*P	**Pn**	**19 27 56.1**	**+0.4**
CUI	**Cuipilapa**	**5.05**	**308**	*e*P	**Pn**	**19 28 00.4**	**+2.5**
MALC	**Bahia Malaga**	**5.15**	**133**	*e*P	**Pn**	**19 27 59.1**	**-0.2**
MOTC	**Monteria, Cord**	**5.51**	**77**	*e*P	**Pn**	**19 28 05.2**	**+1.0**
SJCC	**San Jacinto, C**	**6.29**	**68**	*e*P	**Pn**	**19 28 16.5**	**+1.5**

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*ISK **01** 19:28:56.5, 38°.70N×43°.15E, h5km, ML2.6/5*
*ISCJB **01** 19:28:57.8±0.5, 38°.74N±0°.02×43°.16E±0°.04, h0km±6km, Error ellipse: s-maj=4.9km s-min=3.7km az=19.2*
*CSEM **01** 19:28:57.7±0.2, 38°.75N×43°.17E, h5km, ML2.6, Error ellipse: s-maj=4.5km s-min=3.3km az=112.0*
*DDA **01** 19:28:57.6, 38°.73N×43°.22E, h7km, Ml2.7*
ISC 01 19:28:58.1±0.9, 38°.74N±0°.02×43°.17E±0°.03, h11km±8km, n24, σ0°74/46, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.23**	**130**	PG	**Pg**	**19 29 02.5**	**-0.4**
VANB				SG	**Sg**	**19 29 06.9**	**+0.7**
VANB	**Van**	**0.23**	**130**	*i* Pg	**Pg**	**19 29 02.5**	**-0.4**
VANB				*i* Sg	**Sg**	**19 29 06.9**	**+0.7**
ERCV	**ERCIS-VAN**	**0.31**	**26**	PG	**Pg**	**19 29 03.6**	**-0.8**
ERCV				SG	**Sg**	**19 29 09.4**	**+0.8**
ERCV	**ERCIS-VAN**	**0.31**	**26**	*e*Pg	**Pg**	**19 29 03.6**	**-0.8**
ERCV				*e*Sg	**Sg**	**19 29 09.4**	**+0.8**
ADCV	**BITLIS_Adilcev**	**0.35**	**281**	*i* P	**Pg**	**19 29 05.5**	**+0.3**
ADCV				*i* S	**Sb**	**19 29 11.8**	**-0.3**
ADCV	**BITLIS_Adilcev**	**0.35**	**281**	P	**Pg**	**19 29 05.4**	**+0.3**
ADCV				S	**Sb**	**19 29 11.8**	**-0.3**
VMUR	**Van-Muradiye**	**0.40**	**52**	*i* P	**Pg**	**19 29 05.3**	**-0.8**
VMUR				*i* S	**Sg**	**19 29 11.3**	**-0.1**
VMUR	**Van-Muradiye**	**0.40**	**52**	P	**Pg**	**19 29 05.3**	**-0.8**
VMUR				S	**Sg**	**19 29 11.4**	**-0.1**
GEVA	**Gevas**	**0.44**	**191**	*i* P	**Pg**	**19 29 05.3**	**-1.5**
GEVA				*i* S	**Sg**	**19 29 12.5**	**-0.1**
GEVA	**Gevas**	**0.44**	**191**	P	**Pg**	**19 29 05.3**	**-1.5**
GEVA				S	**Sg**	**19 29 12.5**	**-0.1**
AGRB	**Hanur-Agry**	**0.84**	**351**	PG	**Pg**	**19 29 13.4**	**-1.0**
AGRB				SG	**Sb**	**19 29 26.9**	**+0.7**
AGRB	**Hanur-Agry**	**0.84**	**351**	*e*Pg	**Pg**	**19 29 13.4**	**-1.0**
AGRB				*e*Sg	**Sb**	**19 29 26.9**	**+0.7**
GURO	**Guroymak-BITLI**	**0.91**	**258**	PG	**Pg**	**19 29 14.4**	**-1.2**
GURO				SG	**Sg**	**19 29 26.8**	**-0.6**
GURO	**Guroymak-BITLI**	**0.91**	**258**	*i* Pg	**Pg**	**19 29 14.4**	**-1.2**
GURO				*i* Sg	**Sg**	**19 29 26.8**	**-0.6**
SRTM	**Siirt_Merkez**	**1.23**	**233**	*i* P	**Pn**	**19 29 21.6**	**+0.3**
SRTM				*i* S	**Sn**	**19 29 38.6**	**+0.6**
SRTM	**Siirt_Merkez**	**1.23**	**233**	P	**Pn**	**19 29 21.6**	**+0.3**
SRTM				S	**Sn**	**19 29 38.6**	**+0.6**
EATA	**Eleskirt**	**1.23**	**335**	*i* P	**Pg**	**19 29 21.0**	**-0.8**
EATA				*i* S	**Sb**	**19 29 38.0**	**+0.4**
EATA	**Eleskirt**	**1.23**	**335**	P	**Pg**	**19 29 21.0**	**-0.8**
EATA				S	**Sb**	**19 29 38.0**	**+0.4**
IGDI	**IGDIR**	**1.33**	**32**	*i* P	**Pn**	**19 29 22.2**	**-0.4**
SIRT	**Sirnak**	**1.37**	**205**	PN	**

ASAL	**Salagasta**	**0.95**	**177**	*e*P	**Pg**	**19 32 18.9**	**-0.5**
ASAL				*e*S	**Sb**	**19 32 32.3**	**0.0**
ARCO	**CERRO ARCO**	**1.20**	**182**	*e*P	**Pn**	**19 32 23.6**	**-0.4**
ARCO				IAML		19 32 48.7	
	comp=Z,614nm,0.3s						
AAGR	**Agrelo**	**1.44**	**178**	*e*P	**Pb**	**19 32 27.7**	**-0.3**
ACAN	**Cantantal**	**1.58**	**114**	*e*P	**Pg**	**19 32 30.2**	**-1.2**
AVIZ	**Vizcacheras**	**1.85**	**170**	*e*P	**Pb**	**19 32 34.8**	**-0.3**
MRA	**San Martin**	**2.81**	**107**	IAML		19 33 31.2	
	comp=Z,291nm,0.6s						
PLCA	**Paso Flores**	**9.17**	**188**	Lg	Lg	19 37 00.5	
	comp=Z,0.3nm,0.3s,baz=85,slow=14,SNR=2.9						
CPUP	**Villa Florida**	**11.42**	**65**	Pn	**Pn**	**19 34 47.6**	**+3.3**
	comp=Z,0.2nm,0.3s,baz=242,slow=14,SNR=2.6						
CPUP				Lg	Lg	19 38 09.6	
	comp=Z,0.2nm,0.3s,baz=338,slow=18,SNR=2.3						
ASAR	**Alice Springs**	**120.83**	**204**	PKP	**PKPdf**	**19 50 53.6**	**-0.6**
	comp=Z,0.2nm,0.9s,baz=158,slow=2.2,SNR=2.5						
WRA	**Warramunga Arr**	**124.08**	**207**	PKP	**PKPdf**	**19 51 00.0**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=158,slow=1.7,SNR=6.0						

UCR 01 19:37:03.7±2.5, 7°.66N×81°.12W, h0km±8km, MD4.7, 1C-2D, Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZANG	**Zanguenga, Cho**	**1.79**	**44**	*e*P	Pn	19 37 34.1	-1.7
BRU2	**Volcan**	**1.92**	**306⇑**	*e*P	Pn	19 37 35.8	-2.0
BRU2				*e*S	Sn	19 38 02.7	0.0
BCIP	**Isla Barro Col**	**1.96**	**40⇓**	*i*P	Pn	19 37 37.6	-0.6
BCIP				*e*S	Sn	19 38 03.8	+0.2
UPA	**Univ. de Panam**	**2.04**	**50⇓**	*e*P	Pn	19 37 38.3	-1.1
UPA				*e*S	Sg	19 38 08.7	-0.7
ACR	**Cerro Adams**	**2.25**	**296**	*e*P	Pn	19 37 40.0	-2.4
ACR				*e*S	Sn	19 38 11.2	+0.3
PTJ1	**Puerto Jim¨ne**	**2.33**	**292**	*e*P	Pn	19 37 43.1	-0.2
PTJ1				*e*S	Sb	19 38 14.8	-1.2
EDBA	**Buenos Aires**	**2.60**	**305**	*e*P	Pn	19 37 46.1	-1.0
EDPN	**Palmar Norte**	**2.65**	**299**	*e*P	Pn	19 37 48.1	+0.3
EDPN				*e*S	Sn	19 38 22.3	+1.7
EDLM	**Las Mercedes**	**2.92**	**304**	*e*P	Pn	19 37 52.4	+0.8
EDLM				*e*S	Sn	19 38 29.7	+2.2
EDDO	**Dominical**	**3.14**	**300**	*e*P	Pn	19 37 55.4	+0.9
UPD2	**Meteti**	**3.20**	**74**	*e*S	Sn	19 38 36.5	+2.3
BUS	**Buena Vista**	**3.22**	**306**	*e*P	Pn	19 37 55.5	-0.4
BUS				*e*S	Sn	19 38 37.1	+1.9
URSC	**Urasca**	**3.40**	**310**	*e*P	Pn	19 37 59.0	+0.8
QCR1	**Quepos**	**3.49**	**300**	*e*P	Pn	19 37 59.7	+0.5
VTR0	**Volcan Turrial**	**3.51**	**312**	*e*P	Pn	19 38 01.0	+1.1
HDC	**Heredia**	**3.76**	**308**	*e*P	Pn	19 38 05.8	+2.6
CGA2	**Cerro Gallo 2**	**4.05**	**306**	*e*P	Pn	19 38 07.9	+0.8
CUI	**Cuipilapa**	**4.98**	**307**	*e*P	Pn	19 38 21.6	+1.8

IDC 01 19:41:07.0±3.2, 5°.90S×128°.34E, h376km±32km, mb3.1/2, mb1 3.2/6, mb1mx2.8/54, mbtmp4.0/6, Error ellipse: s-maj=43.9km s-min=11.9km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.30**	**227**	P	Pn	19 42 42.7	+0.5
	16nm,0.3s,baz=87,slow=2.3,SNR=35						
BATI				S	S	19 43 59.1	-0.6
	3.5nm,0.3s,baz=85,slow=6.9,SNR=3.7						
FITZ	**Fitzroy Crossi**	**12.41**	**192**	P	Pn	19 43 53.6	+0.3
	0.4nm,0.3s,baz=22,slow=11,SNR=10						
FITZ				S	S	19 46 08.5	-0.2
	0.1nm,0.3s,baz=40,slow=6.5,SNR=1.9						
WRA	**Warramunga Arr**	**15.13**	**158**	P	P	19 44 21.2	-0.7
	1.1nm,0.3s,baz=342,slow=12,SNR=43						
WRA				S	S	19 47 05.8	+2.3
	0.1nm,0.3s,baz=333,slow=20,SNR=4.4						
ASAR	**Alice Springs**	**18.46**	**164**	P	P	19 44 57.9	+0.3
	0.2nm,0.3s,baz=344,slow=12,SNR=14						
ASAR				S	S	19 48 08.9	+0.5
	0.1nm,0.3s,baz=346,slow=23,SNR=9.2						
MKAR	**Makanchi Array**	**66.41**	**327**	P	P	19 51 16.9	0.0
	0.6nm,0.4s,baz=118,slow=8.2,SNR=16						
KURBB	**Kurchatov Arra**	**70.72**	**329**	P	P	19 51 43.0	-0.1
	0.5nm,0.5s,baz=128,slow=5.4,SNR=7.9						

*SFS **01** 19:43:01.0, 37°.28N×12°.70W, h0km, ML4.1*
*MDD **01** 19:43:01.8±1.3, 37°.29N×12°.70W, h0km, mb4.6/27, Error ellipse: s-maj=12.0km s-min=8.6km az=59.0, PRXIMO*
*IGIL **01** 19:43:02.0, 37°.30N×12°.74W, h0km, ML2.9*
*INMG **01** 19:43:03.3±2.0, 37°.12N×13°.10W, h10km, ML3.0, Error ellipse: s-maj=4.9km s-min=3.6km az=104.0*
*CSEM **01** 19:43:04.8±0.3, 37°.40N×12°.44W, h10km, ML3.4/7, Error ellipse: s-maj=5.6km s-min=4.2km az=56.0*
*LDG **01** 19:43:04.5±0.4, 37°.56N×12°.21W, h2km, Ml3.3/3, Error ellipse: s-maj=8.2km s-min=6.6km az=59.0*
*CNRM **01** 19:43:09.4, 36°.18N×12°.76W, h30km*

ISC 01 19:42:58.7±2.1, 37°.28N±0°.06×12°.8W±0°.1, h10km, n171, σ2s15/295, 3C-2D, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.17**	**91⇑**	*e*Pn	**Pn**	**19 43 50.1**	**+1.5**
PFVI				*e*Sn	**Sn**	**19 44 26.0**	**-0.5**
PFVI				A	A	19 44 30.6	
	17nm,0.3s						
PFVI	**Vila Bisbo**	**3.17**	**91**	⇑P	**Pn**	**19 43 50.1**	**+1.5**
	16nm,0.2s,SNR=18						
PFVI				S	**Sn**	**19 44 25.9**	**-0.5**
	9.9nm,0.2s,SNR=7.9						
PFVI	**Vila Bisbo**	**3.17**	**91**	P	**Pn**	**19 43 50.1**	**+1.5**
	16nm,0.2s,SNR=18						
PFVI				S	**Sn**	**19 44 25.9**	**-0.5**
	9.9nm,0.2s,SNR=7.9						
PMST	**Lisbon--Monsan**	**3.20**	**62**	*e*Pn	**Pn**	**19 43 51.7**	**+2.6**
PMST				*e*Sn	**Sn**	**19 44 27.8**	**+0.5**
PMST				A	A	19 44 30.2	
	60nm,0.2s						
PMST	**Lisbon--Monsan**	**3.20**	**62**	*e*Pn	**Pn**	**19 43 51.7**	**+2.6**
PMST				*e*Sn	**Sn**	**19 44 27.8**	**+0.5**
PMAFR	**Mafra**	**3.24**	**58**	*e*Pn	**Pn**	**19 43 52.1**	**+2.5**
PMAFR				*e*Sn	**Sn**	**19 44 29.5**	**+1.4**
PMAFR				A	A	19 44 37.4	
	69nm,0.4s						
PMAFR	**Mafra**	**3.24**	**58**	⇑P	**Pn**	**19 43 52.1**	**+2.5**
	31nm,0.1s,SNR=18						
PMAFR				S	**Sn**	**19 44 29.6**	**+1.4**
	45nm,0.1s,SNR=11						
PMAFR	**Mafra**	**3.24**	**58**	P	**Pn**	**19 43 52.1**	**+2.5**
	31nm,0.1s,SNR=18						
PMAFR				*e*Sn	**Sn**	**19 44 29.5**	**+1.4**
PTEO	**Sao Teotonio**	**3.25**	**84**	*e*Pn	**Pn**	**19 43 51.7**	**+2.0**
PTEO				*e*Sn	**Sn**	**19 44 27.7**	**-0.7**
PTEO				A	A	19 44 35.2	
	25nm,0.7s						
PTEO	**Sao Teotonio**	**3.25**	**84**	P	**Pn**	**19 43 51.7**	**+2.0**
PTEO				S	**Sn**	**19 44 27.7**	**-0.7**
	13nm,0.7s						
PTEO	**Sao Teotonio**	**3.25**	**84**	P	**Pn**	**19 43 51.7**	**+2.0**
PTEO				S	**Sn**	**19 44 27.7**	**-0.7**
	13nm,0.7s						
MORF	**Marmelete**	**3.30**	**88**	*e*P	**Pn**	**19 43 52.3**	**+1.8**
MORF				*e*S	**Sn**	**19 44 29.4**	**-0.4**
MORF				AML	AML	19 44 33.5	
	comp=N,40nm,0.1s						
MORF	**Marmelete**	**3.30**	**88**	*e*Pn	**Pn**	**19 43 52.3**	**+1.8**
MORF				*e*Sn	**Sn**	**19 44 30.2**	**+0.4**
MORF				A	A	19 44 37.6	
	comp=N,28nm,0.2s						
MORF	**Marmelete**	**3.30**	**88**	P	**Pn**	**19 43 52.3**	**+1.8**
MORF				S	**Sn**	**19 44 30.2**	**+0.4**
	comp=N,28nm,0.2s						
MORF	**Marmelete**	**3.30**	**88**	P	**Pn**	**19 43 52.3**	**+1.8**
MORF				S	**Sn**	**19 44 30.2**	**+0.4**
	comp=N,28nm,0.2s						
PNCL	**Nicolau / Gran**	**3.48**	**75**	*e*Pn	**Pn**	**19 43 54.8**	**+1.9**
PNCL				*e*Sn	**Sn**	**19 44 34.2**	**0.0**
PNCL				A	A	19 44 40.8	
	comp=N,24nm,0.1s						
MESJ	**Messejana**	**3.67**	**80**	*e*P	**Pn**	**19 43 57.6**	**+2.0**
MESJ				*e*S	**Sn**	**19 44 38.1**	**-0.9**
MESJ				AML	AML	19 44 40.4	
	comp=N,20nm,0.4s						
MESJ	**Messejana**	**3.67**	**80**	*e*Pn	**Pn**	**19 43 57.6**	**+2.0**
MESJ				*e*Sn	**Sn**	**19 44 38.5**	**-0.5**
MESJ				A	A	19 44 48.3	
	comp=N,14nm,0.2s						
MESJ	**Messejana**	**3.67**	**80**	P	**Pn**	**19 43 57.6**	**+2.0**
MESJ				S	**Sn**	**19 44 38.5**	**-0.5**
	comp=N,14nm,0.2s						
MESJ	**Messejana**	**3.67**	**80**	P	**Pn**	**19 43 57.6**	**+2.0**
MESJ				S	**Sn**	**19 44 38.5**	**-0.5**
	comp=N,14nm,0.2s						
PCVE	**Castro Verde**	**3.80**	**83**	*e*Pn	**Pn**	**19 43 59.2**	**+1.9**
PCVE				*e*Sn	**Sn**	**19 44 40.8**	**-1.2**
PCVE				A	A	19 44 47.1	
	comp=N,13nm,0.3s						
PCVE	**Castro Verde**	**3.80**	**83**	P	**Pn**	**19 43 59.2**	**+1.9**
PCVE				S	**Sn**	**19 44 40.8**	**-1.2**
	comp=N,13nm,0.3s						
PCVE	**Castro Verde**	**3.80**	**83**	P	**Pn**	**19 43 59.2**	**+1.9**
PCVE				S	**Sn**	**19 44 40.8**	**-1.2**
	comp=N,13nm,0.3s						
ALMR	**Almeirim**	**3.81**	**59**	*e*P	**Pn**	**19 43 59.6**	**+2.1**
ALMR				*e*S	**Sn**	**19 44 42.0**	**-0.4**
ALMR				AML	AML	19 44 43.9	
	comp=N,37nm,0.1s						
ALMR	**Almeirim**	**3.81**	**59**	*e*Pn	**Pn**	**19 44 00.3**	**+2.8**
ALMR				*e*Sn	**Sn**	**19 44 42.7**	**+0.3**
ALMR				A	A	19 44 49.1	
	comp=N,51nm,0.2s						
ALMR	**Almeirim**	**3.81**	**59**	P	**Pn**	**19 43 59.6**	**+2.1**
ALMR				S	**Sn**	**19 44 42.0**	**-0.4**
	comp=N,19nm,0.1s						
ALMR	**Almeirim**	**3.81**	**59**	P	**Pn**	**19 43 59.6**	**+2.1**
ALMR	**Almeirim**	**3.81**	**59**	*e*Pn	**Pn**	**19 44 00.3**	**+2.8**
ALMR				S	**Sn**	**19 44 42.0**	**-0.4**
	comp=N,19nm,0.1s						
ALMR				*e*Sn	Sb	19 44 42.7	-10
PBDV	**Barranco-do-Ve**	**3.88**	**89**	*e*Pn	**Pn**	**19 44 01.0**	**+2.6**
PBDV				*e*Sn	**Sn**	**19 44 43.4**	**-0.6**
PBDV				A	A	19 44 50.0	
	comp=N,20nm,0.3s						
PBDV	**Barranco-do-Ve**	**3.88**	**89**	P	**Pn**	**19 44 01.0**	**+2.6**
PBDV				S	**Sn**	**19 44 43.4**	**-0.6**
	comp=N,20nm,0.3s						
PBDV	**Barranco-do-Ve**	**3.88**	**89**	P	**Pn**	**19 44 01.0**	**+2.6**
PBDV				S	**Sn**	**19 44 43.4**	**-0.6**
	comp=N,20nm,0.3s						
PBEJ	**Beja**	**3.98**	**78**	*e*Pn	**Pn**	**19 44 02.6**	**+2.8**
PBEJ				*e*Sn	**Sn**	**19 44 45.3**	**-1.2**
PBEJ				A	A	19 44 51.2	
	comp=N,36nm,0.3s						
PBEJ	**Beja**	**3.98**	**78**	Pn	**Pn**	**19 44 02.6**	**+2.8**
PBEJ				Sn	**Sn**	**19 44 45.3**	**-1.2**
	comp=N,18nm,0.3s						
PBEJ	**Beja**	**3.98**	**78**	Pn	**Pn**	**19 44 02.6**	**+2.8**
PBEJ				Sn	**Sn**	**19 44 45.3**	**-1.2**
	comp=N,18nm,0.3s						
EVO	**Evora**	**3.98**	**70**	*e*Pn	**Pn**	**19 44 02.5**	**+2.7**
EVO				*e*Sn	**Sn**	**19 44 45.8**	**-0.7**
EVO				A	A	19 44 52.1	
	comp=N,34nm,0.1s						
EVO	**Evora**	**3.98**	**70**	P	**Pn**	**19 44 02.2**	**+2.4**
EVO				S	**Sn**	**19 44 45.6**	**-0.9**
EVO	**Evora**	**3.98**	**70**	P	**Pn**	**19 44 02.2**	**+2.4**
EVO	**Evora**	**3.98**	**70**	*e*Pn	**Pn**	**19 44 02.5**	**+2.7**
EVO				*e*Sn	**Sn**	**19 44 45.8**	**-0.7**
PVAQ	**Vaqueiros**	**4.04**	**87**	*e*Pn	**Pn**	**19 44 02.8**	**+2.1**
PVAQ				*e*Sn	**Sn**	**19 44 47.7**	**-0.4**
PVAQ				A	A	19 44 52.5	
	comp=N,30nm,0.1s						
PVAQ	**Vaqueiros**	**4.04**	**87**	P	**Pn**	**19 44 02.8**	**+2.1**
PVAQ				S	**Sn**	**19 44 47.7**	**-0.4**
	comp=N,30nm,0.1s						
PVAQ	**Vaqueiros**	**4.04**	**87**	P	**Pn**	**19 44 02.8**	**+2.1**
PVAQ				S	**Sn**	**19 44 47.7**	**-0.4**
	comp=N,30nm,0.1s						
PTOM	**Tomar**	**4.16**	**54**	*e*Pn	**Pn**	**19 44 05.5**	**+3.3**
PTOM				*e*Sn	**Sn**	**19 44 50.6**	**-0.3**
PTOM				A	A	19 44 57.1	
	comp=N,30nm,0.2s						
PTOM	**Tomar**	**4.16**	**54**	P	**Pn**	**19 44 05.5**	**+3.3**
PTOM				S	**Sn**	**19 44 50.6**	**-0.3**
	comp=N,15nm,0.2s						
PTOM	**Tomar**	**4.16**	**54**	P	**Pn**	**19 44 05.5**	**+3.3**
PTOM				S	**Sn**	**19 44 50.6**	**-0.3**
	comp=N,15nm,0.2s						
EGRO	**El Granado**	**4.23**	**85**	P	**Pn**	**19 44 05.5**	**+2.2**
	comp=N,7.6nm,0.1s,SNR=46						
EGRO				S	**Sn**	**19 44 52.1**	**-0.6**
	comp=N,5.5nm,0.3s,SNR=7.9						
EGRO	**El Granado**	**4.23**	**85**	P	**Pn**	**19 44 05.5**	**+2.2**
	comp=N,7.6nm,0.1s,SNR=46						
EGRO				S	**Sn**	**19 44 52.1**	**-0.6**
	comp=N,5.5nm,0.3s,SNR=7.9						
PCAS	**Casmilo, Conde**	**4.36**	**49**	*e*Pn	**Pn**	**19 44 07.9**	**+2.9**
PCAS				*e*Sn	**Sn**	**19 44 55.9**	**+0.1**
PCAS				A	A	19 45 01.8	
	comp=N,9.4nm,0.4s						
PCAS	**Casmilo, Conde**	**4.36**	**49**	*e*Pn	**Pn**	**19 44 07.9**	**+2.9**
PCAS				*e*Sn	**Sn**	**19 44 55.9**	**+0.1**
PESTR	**Estremoz**	**4.40**	**67**	*e*Pn	**Pn**	**19 44 07.7**	**+2.1**
PESTR				*e*Sn	**Sn**	**19 44 56.4**	**-0.5**
PESTR				A	A	19 45 02.3	
	comp=N,14nm,0.6s						
PESTR	**Estremoz**	**4.40**	**67**	*e*Pn	**Pn**	**19 44 07.7**	**+2.1**
PESTR				*e*Sn	**Sn**	**19 44 56.4**	**-0.5**
COI	**Coimbra**	**4.50**	**48**	P	**Pn**	**19 44 10.6**	**+3.6**
COI				S	**Sn**	**19 44 59.6**	**+0.2**
COI	**Coimbra**	**4.50**	**48**	P	**Pn**	**19 44 10.6**	**+3.6**
COI				S	**Sn**	**19 44 59.6**	**+0.2**
PBAR	**Barrancos**	**4.65**	**77**	*e*Pn	**Pn**	**19 44 11.6**	**+2.7**
PBAR				*e*Sn	**Sn**	**19 45 02.7**	**-0.2**
PBAR				A	A	19 45 08.8	
	comp=N,24nm,0.5s						
PBAR	**Barrancos**	**4.65**	**77**	P	**Pn**	**19 44 11.6**	**+2.7**
PBAR				S	**Sn**	**19 45 02.7**	**-0.2**
	comp=N,24nm,0.5s						
PBAR	**Barrancos**	**4.65**	**77**	P	**Pn**	**19 44 11.6**	**+2.7**
PBAR				S	**Sn**	**19 45 02.7**	**-0.2**
	comp=N,24nm,0.5s						
PMRV	**Marv??o**	**4.76**	**61**	*e*Pn	**Pn**	**19 44 13.0**	**+2.5**
PMRV				*e*Sn	**Sn**	**19 45 05.0**	**-0.7**
PMRV				A	A	19 45 12.1	
	comp=N,17nm,0.5s						
PMRV	**Marv??o**	**4.76**	**61**	P	**Pn**	**19 44 13.0**	**+2.5**
PMRV				S	**Sn**	**19 45 05.0**	**-0.7**
	comp=N,17nm,0.5s						
PMRV	**Marv??o**	**4.76**	**61**	P	**Pn**	**19 44 13.0**	**+2.5**
PMRV				S	**Sn**	**19 45 05.0**	**-0.7**
	comp=N,17nm,0.5s						
EBAD	**Badajoz**	**4.80**	**70**	P	**Pn**	**19 44 12.9**	**+1.9**
	comp=N,5.3nm,0.1s,SNR=36						
EBAD				S	**Sn**	**19 45 05.1**	**-1.5**
	comp=N,13nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**4.80**	**70**	P	**Pn**	**19 44 12.9**	**+1.9**
	comp=N,5.3nm,0.1s,SNR=36						
EBAD				S	**Sn**	**19 45 05.1**	**-1.5**
	comp=N,13nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.89**	**82**	P	**Pn**	**19 44 14.3**	**+2.0**
	comp=N,5.0nm,0.2s,SNR=104						
EMIN				S	**Sn**	**19 45 06.5**	**-2.4**
	comp=N,5.3nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.89**	**82**	P	**Pn**	**19 44 14.3**	**+2.0**
	comp=N,5.0nm,0.2s,SNR=104						
EMIN				S	**Sn**	**19 45 06.5**	**-2.4**
	comp=N,5.3nm,0.1s,SNR=7.9						
PCBR	**Castelo Branco**	**4.89**	**57**	*e*Pn	**Pn**	**19 44 15.0**	**+2.7**
PCBR				*e*Sn	**Sn**	**19 45 08.0**	**-0.9**
PCBR				A	A	19 45 13.6	
	comp=N,9.2nm,0.3s						
PCBR	**Castelo Branco**	**4.89**	**57**	P	**Pn**	**19 44 15.0**	**+2.7**
PCBR				Sn	**Sn**	**19 45 08.0**	**-0.9**
	comp=N,4.6nm,0.3s						
PCBR	**Castelo Branco**	**4.89**	**57**	P	**Pn**	**19 44 15.0**	**+2.7**
PCBR				Sn	**Sn**	**19 45 08.0**	**-0.9**
	comp=N,4.6nm,0.3s						
PTO	**Porto**	**5.05**	**39**	*e*Sn	**Sn**	**19 45 13.5**	**+0.8**
PTO	**Porto**	**5.05**	**39**	Sn	**Sn**	**19 45 13.5**	**+0.8**
PTO	**Porto**	**5.05**	**39**	Sn	**Sn**	**19 45 13.5**	**+0.8**
PMPS	**Porto Santo**	**5.11**	**216**	*e*Pn	Pn	19 44 08.7	-6.6
PMPS				*e*Sn	Sn	19 44 58.2	-16
PMPS				A	A	19 45 00.3	
	comp=N,14nm,0.5s						
PVIS	**Viseu**	**5.13**	**46**	*e*Pn	**Pn**	**19 44 18.4**	**+2.7**
PVIS				*e*Sn	**Sn**	**19 45 13.7**	**-1.3**
PVIS				A	A	19 45 18.7	
	comp=N,18nm,0.3s						
PVIS	**Viseu**	**5.13**	**46**	Pn	**Pn**	**19 44 18.4**	**+2.7**
PVIS				Sn	**Sn**	**19 45 13.7**	**-1.3**
	comp=N,9.1nm,0.3s						
PVIS	**Viseu**	**5.13**	**46**	Pn	**Pn**	**19 44 18.4**	**+2.7**
PVIS				Sn	**Sn**	**19 45 13.7**	**-1.3**
	comp=N,9.1nm,0.3s						
MTE	**Manteigas**	**5.15**	**51**	*e*Pn	**Pn**	**19 44 18.9**	**+3.0**
MTE				*e*Sn	**Sn**	**19 45 15.3**	**-0.1**
MTE				A	A	19 45 24.5	
	comp=N,15nm,0.5s						
MTE	**Manteigas**	**5.15**	**51**	Pn	**Pn**	**19 44 18.9**	**+3.0**
MTE				Sn	**Sn**	**19 45 15.3**	**-0.1**
	comp=N,7.6nm,0.5s						
MTE	**Manteigas**	**5.15**	**51**	Pn	**Pn**	**19 44 18.9**	**+3.0**
MTE				Sn	**Sn**	**19 45 15.3**	**-0.1**
	comp=N,7.6nm,0.5s						
PVRL	**Vila Real**	**5.61**	**43**	*e*Pn	**Pn**	**19 44 25.0**	**+2.8**
PVRL				*e*Sn	**Sn**	**19 45 25.9**	**-0.8**
PVRL				A	A	19 45 28.9	
	comp=N,7.6nm,0.3s						
PVRL	**Vila Real**	**5.61**	**43**	Pn	**Pn**	**19 44 25.0**	**+2.8**
PVRL				Sn	**Sn**	**19 45 25.9**	**-0.8**
	comp=N,3.8nm,0.3s						
PVRL	**Vila Real**	**5.61**	**43**	Pn	**Pn**	**19 44 25.0**	**+2.8**
PVRL				Sn	**Sn**	**19 45 25.9**	**-0.8**
	comp=N,3.8nm,0.3s						
POLO	**Lamas de Olo**	**5.63**	**42**	*e*Pn	**Pn**	**19 44 24.9**	**+2.3**
POLO				*e*Sn	**Sn**	**19 45 25.5**	**-1.9**
POLO				A	A	19 45 27.9	
	comp=N,2.4nm,0.6s						
POLO	**Lamas de Olo**	**5.63**	**42**	*e*Pn	**Pn**	**19 44 24.9**	**+2.3**
POLO				*e*Sn	**Sn**	**19 45 25.5**	**-1.9**
PMOZ	**Porto Moniz, M**	**5.72**	**220**	*e*Sn	Sn	19 45 14.1	-16
PCAB	**Cabril**	**5.76**	**38**	*e*Pn	**Pn**	**19 44 26.3**	**+2.0**
PCAB				*e*Sn	**Sn**	**19 45 28.7**	**-1.7**
PCAB				A	A	19 45 33.3	
	comp=N,8.7nm,0.3s						
PCAB	**Cabril**	**5.76**	**38**	Pn	**Pn**	**19 44 26.3**	**+2.0**
PCAB				Sn	**Sn**	**19 45 28.7**	**-1.7**
	comp=N,4.3nm,0.3s						
PCAB	**Cabril**	**5.76**	**38**	Pn	**Pn**	**19 44 26.3**	**+2.0**
PCAB				Sn	**Sn**	**19 45 28.7**	**-1.7**
	comp=N,4.3nm,0.3s						
PGAV	**Gavieira, Arco**	**5.84**	**35**	*e*Pn	**Pn**	**19 44 27.8**	**+2.4**
PGAV				*e*Sn	**Sn**	**19 45 30.2**	**-2.3**
PGAV				A	A	19 45 33.5	
	comp=N,8.8nm,0.4s						
PGAV	**Gavieira, Arco**	**5.84**	**35**	*e*Pn	**Pn**	**19 44 27.8**	**+2.4**
ELOB	**Lobios**	**5.86**	**37**	P	**Pn**	**19 44 28.3**	**+2.6**
	comp=N,1.5nm,0.1s,SNR=11						
ELOB				S	**Sn**	**19 45 31.0**	**-2.0**
	comp=N,4.5nm,0.3s,SNR=7.9						
ELOB	**Lobios**	**5.86**	**37**	P	**Pn**	**19 44 28.3**	**+2.6**
	comp=N,1.5nm,0.1s,SNR=11						
ELOB				S	**Sn**	**19 45 31.0**	**-2.0**
	comp=N,4.5nm,0.3s,SNR=7.9						
ECAB	**El Cabril**	**5.90**	**80**	⇓P	**Pn**	**19 44 28.1**	**+1.9**
	comp=N,13nm,0.3s,SNR=18						
ECAB				S	**Sn**	**19 45 32.0**	**-1.9**
	comp=N,1.5nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**5.90**	**80**	P	**Pn**	**19 44 28.1**	**+1.9**
	comp=N,13nm,0.3s,SNR=18						
ECAB				S	**Sn**	**19 45 32.0**	**-1.9**
	comp=N,1.5nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**5.92**	**47**	*e*Pn	**Pn**	**19 44 28.6**	**+2.1**
MVO				*e*Sn	**Sn**	**19 45 32.7**	**-1.8**
MVO				A	A	19 45 37.0	
	comp=N,10nm,0.1s						
MVO	**Moncorvo**	**5.92**	**47**	P	**Pn**	**19 44 28.4**	**+1.8**
	comp=N,3.2nm,0.1s,SNR=30						
MVO				S	**Sn**	**19 45 32.0**	**-2.5**
	comp=N,4.9nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**5.92**	**47**	*e*Pn	**Pn**	**19 44 28.6**	**+2.1**
MVO				S	**Sn**	**19 45 32.0**	**-2.5**
	comp=N,4.9nm,0.1s,SNR=7.9						
MVO				*e*Sn	**Sn**	**19 45 32.7**	**-1.8**
EPLA	**Plasencia**	**5.94**	**60**	⇓P	**Pn**	**19 44 29.1**	**+2.3**
	comp=N,8.3nm,0.2s,SNR=18						
EPLA				S	**Sn**	**19 45 33.4**	**-1.5**
	comp=N,11nm,0.2s,SNR=7.9						
EPLA	**Plasencia**	**5.94**	**60**	P	**Pn**	**19 44 29.1**	**+2.3**
	comp=N,8.3nm,0.2s,SNR=18						
EPLA				S	**Sn**	**19 45 33.4**	**-1.5**
	comp=N,11nm,0.2s,SNR=7.9						
RSA	**Sarsar**	**6.12**	**111**	P	**Pn**	**19 44 33.7**	**+4.4**
RSA				S	Sn	**19 45 38.7**	**-0.7**
EMAZ	**Mazaricos**	**6.38**	**26**	P	**Pn**	**19 44 33.7**	**+1.0**
	comp=N,2.3nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**19 45 40.0**	**-5.6**
	comp=N,7.2nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**6.38**	**26**	P	**Pn**	**

comp=N,1.0nm,0.1s,SNR=7.9
EQUE Quentar 7.46 88 P **Pn 19 44 50.4 +2.7**
comp=N,0.8nm,0.2s,SNR=7.9
EQUE S **Sn 19 46 09.7 -2.7**
comp=N,0.1nm,0.2s,SNR=7.9
EQUE Quentar 7.46 88 P **Pn 19 44 50.4 +2.7**
comp=N,0.8nm,0.2s,SNR=7.9
EQUE S **Sn 19 46 09.7 -2.7**
comp=N,0.1nm,0.2s,SNR=7.9
GUD Guadarrama 7.52 61 P **Pn 19 44 50.2 +1.6**
comp=N,4.0nm,0.2s,SNR=7.9
GUD S **Sn 19 46 10.6 -3.4**
SNR=7.9
GUD Guadarrama 7.52 61 P **Pn 19 44 50.2 +1.6**
comp=N,4.0nm,0.2s,SNR=7.9
GUD S **Sn 19 46 10.6 -3.4**
SNR=7.9
EQES Quesada 7.74 83 P **Pn 19 44 53.1 +1.6**
comp=N,1.5nm,0.2s,SNR=7.9
EQES S **Sn 19 46 16.4 -2.9**
comp=N,0.4nm,0.1s,SNR=7.9
EQES Quesada 7.74 83 P **Pn 19 44 53.1 +1.6**
comp=N,1.5nm,0.2s,SNR=7.9
EQES S **Sn 19 46 16.4 -2.9**
comp=N,0.4nm,0.1s,SNR=7.9
EARI Arriondas 8.35 42 P **Pn 19 45 02.6 +2.8**
comp=N,0.7nm,0.2s,SNR=7.9
EARI S **Sn 19 46 30.7 -3.5**
comp=N,0.2nm,0.2s,SNR=7.9
EARI Arriondas 8.35 42 P **Pn 19 45 02.6 +2.8**
comp=N,0.7nm,0.2s,SNR=7.9
ETOB Tobarra 8.98 78 P **Pn 19 45 09.7 +1.1**
comp=N,1.6nm,0.1s,SNR=7.9
ETOB S **Sn 19 46 47.1 -2.7**
SNR=7.9
ETOB Tobarra 8.98 78 P **Pn 19 45 09.7 +1.1**
comp=N,1.6nm,0.1s,SNR=7.9
ETOB S **Sn 19 46 47.1 -2.7**
SNR=7.9
ETOR Torete 9.07 64 P **Pn 19 45 11.5 +1.8**
comp=N,4.1nm,0.1s,SNR=7.9
ETOR S **Sn 19 46 47.6 -4.3**
comp=N,0.6nm,0.2s,SNR=7.9
ETOR Torete 9.07 64 P **Pn 19 45 11.5 +1.8**
comp=N,4.1nm,0.1s,SNR=7.9
EMOS Mosqueruela 10.10 68 P **Pn 19 45 26.5 +2.7**
comp=N,0.9nm,0.2s,SNR=7.9
EMOS S **Sn 19 47 12.4 -4.9**
comp=N,0.2nm,0.2s,SNR=7.9
EMOS Mosqueruela 10.10 68 P **Pn 19 45 26.5 +2.7**
comp=N,0.9nm,0.2s,SNR=7.9
EORO Oroz-Betelu 10.43 54 P **Pn 19 45 30.4 +2.1**
comp=N,2.0nm,0.2s,SNR=7.9
EORO Oroz-Betelu 10.43 54 P **Pn 19 45 30.4 +2.1**
comp=N,2.0nm,0.2s,SNR=7.9
IELO Elcoad 10.45 54 P **Pn 19 45 30.7 +2.0**
comp=N,5.4nm,0.2s,SNR=7.9
IELO S **Sn 19 47 21.2 -4.6**
comp=N,2.0nm,0.6s,SNR=7.9
IELO Elcoad 10.45 54 P **Pn 19 45 30.7 +2.0**
comp=N,5.4nm,0.2s,SNR=7.9
EALK Alkurruntz 10.47 52 P **Pn 19 45 31.5 +2.6**
comp=N,2.8nm,0.3s,SNR=7.9
EALK Alkurruntz 10.47 52 P **Pn 19 45 31.5 +2.6**
comp=N,2.8nm,0.3s,SNR=7.9
SJPF Ste Jean 10.59 53 *eP* **Pn 19 45 32.6 +2.1**
SJPF *eSn* Sn 19 47 14.0 -15
comp=N,1.3nm,0.3s
SJPF *eS* **Sn 19 47 27.5 -1.6**
SJPF Ste Jean 10.59 53 P **Pn 19 45 32.6 +2.1**
SJPF Ste Jean 10.59 53 P **Pn 19 45 32.6 +2.1**
SJPF *eS* **Sn 19 47 27.5 -1.6**
ERTA Horta de San J 10.84 66 P **Pn 19 45 36.0 +2.1**
comp=N,1.3nm,0.3s,SNR=7.9
ERTA Horta de San J 10.84 66 P **Pn 19 45 36.0 +2.1**
comp=N,1.3nm,0.3s,SNR=7.9
ATE Arette 10.91 54 P **Pn 19 45 37.9 +3.0**
comp=N,2.7nm,0.2s,SNR=7.9
ATE Arette 10.91 54 P **Pn 19 45 37.9 +3.0**
comp=N,2.7nm,0.2s,SNR=7.9
ETSF Etsaut 10.92 55 *eP* **Pn 19 45 37.5 +2.4**
ETSF *eSn* Sn 19 47 21.9 -15
comp=N,0.9nm,0.4s
ETSF *eS* **Sn 19 47 35.2 -2.1**
ETSF Etsaut 10.92 55 P **Pn 19 45 37.5 +2.4**
ETSF Etsaut 10.92 55 P **Pn 19 45 37.5 +2.4**
ETSF *eS* **Sn 19 47 35.2 -2.1**
ECHI Chisagues Biel 11.32 58 P **Pn 19 45 43.8 +3.2**
comp=N,4.1nm,0.3s,SNR=7.9
ECHI Chisagues Biel 11.32 58 P **Pn 19 45 43.8 +3.2**
comp=N,4.1nm,0.3s,SNR=7.9
EPOB Poblet 11.49 65 P **Pn 19 45 44.9 +2.1**
comp=N,0.7nm,0.2s,SNR=7.9
EPOB Poblet 11.49 65 P **Pn 19 45 44.9 +2.1**
comp=N,0.7nm,0.2s,SNR=7.9
EPF Esparros 11.57 56 *eP* **Pn 19 45 46.9 +3.0**
EPF *eSn* Sn 19 47 37.4 -16
comp=N,1.1nm,0.3s
EPF *eS* **Sn 19 47 51.3 -1.9**
EPF Esparros 11.57 56 P **Pn 19 45 46.9 +3.0**
EPF Esparros 11.57 56 P **Pn 19 45 46.9 +3.0**
EPF *eS* **Sn 19 47 51.3 -1.9**
CSOR Sort 11.85 60 P **Pn 19 45 50.3 +2.5**
comp=N,2.1nm,0.4s,SNR=7.9
CSOR Sort 11.85 60 P **Pn 19 45 50.3 +2.5**
comp=N,2.1nm,0.4s,SNR=7.9
CLLI Llivia 12.47 61 P **Pn 19 45 58.9 +2.6**
comp=N,0.9nm,0.3s,SNR=7.9
CLLI Llivia 12.47 61 P **Pn 19 45 58.9 +2.6**
comp=N,0.9nm,0.3s,SNR=7.9
CFON Fontmartina 12.58 64 P **Pn 19 45 59.2 +1.4**
comp=N,2.2nm,0.3s,SNR=7.9
CFON Fontmartina 12.58 64 P **Pn 19 45 59.2 +1.4**
comp=N,2.2nm,0.3s,SNR=7.9
ROSF Rostrenen 13.06 29 *eP* **Pn 19 46 05.4 +1.1**
ROSF Rostrenen 13.06 29 P **Pn 19 46 05.4 +1.1**
ROSF Rostrenen 13.06 29 P **Pn 19 46 05.4 +1.1**
BGF Bois d'Agland 14.86 46 *eP* **P 19 46 35.3 +0.7**
BGF Bois d'Agland 14.86 46 *eP* **P 19 46 35.3 +0.7**
SMRF Simiane la Rot 15.45 59 *eP* **P 19 46 39.7 -1.6**
SMRF Simiane la Rot 15.45 59 P **P 19 46 39.7 -1.6**
SMRF Simiane la Rot 15.45 59 P **P 19 46 39.7 -1.6**

*IDC **01** 19:48:54.9±1.8, 0.°71S×133.°35E, h0km, mb3.1/2, mb1 3.4/5, mb1mx3.1/51, mbtmp3.2/5, ML3.2/3, Error ellipse: s-maj=35.2km s-min=23.9km az=63.0*
*ISCJB **01** 19:48:58.3±1.1, 0.°76S±0.°09×133.°26E±0.°07, h29km, mb3.1/2, Error ellipse: s-maj=13.3km s-min=9.6km az=18.9*
*DJA **01** 19:48:59.2±0.5, 1.°S±5.°×13.°3E±.°, h10km, M3.5/4, MLv3.5/4*
ISC 01 19:48:59.4±1.3, 0.8S±0.°1×133.26E±0.°06, h29km, n7, σ0.81/10, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**1.17**	**128**	P	**Pn**	**19 49 19.4**	**-0.4**
RKPI				S	**Sb**	**19 49 36.7**	**+0.9**
SIJI	**Sorong**	**1.99**	**268**	Pn	**Pn**	**19 49 32.1**	**+0.9**
	7.0nm,0.3s,baz=273,slow=24,SNR=98						
SIJI				Sn	**Sb**	**19 49 58.6**	**-0.8**
	14nm,0.3s,baz=296,slow=22,SNR=11						
FAKI	**Fak Fak**	**2.35**	**205**	P	**Pn**	**19 49 35.7**	**-0.3**
FAKI				S	**Sn**	**19 50 04.6**	**+0.7**
FITZ	**Fitzroy Crossi**	**18.76**	**203**	P	**P**	**19 53 15.5**	**-0.8**
	0.1nm,0.3s,baz=30,slow=14,SNR=3.7						
WRA	**Warramunga Arr**	**19.07**	**177**	P	**Pn**	**19 53 20.2**	**-0.4**
	0.1nm,0.3s,baz=356,slow=12,SNR=5.0						
ASAR	**Alice Springs**	**22.75**	**178**	P	**P**	**19 54 00.3**	**+0.8**
	0.3nm,0.5s,baz=356,slow=12,SNR=3.8						
MKAR	**Makanchi Array**	**64.99**	**324**	P	**P**	**19 59 36.6**	**-0.2**
	0.1nm,0.4s,baz=112,slow=8.7,SNR=3.4						

*ISCJB **01** 19:56:04.6±0.2, 6.°76S±0.°02×129.°89E±0.°03, h150km, mb4.3/37, Error ellipse: s-maj=3.9km s-min=3.4km az=166.1*
*NEIC **01** 19:56:05.6±0.5, 6.°67S×129.°84E, h140km±5km, mb4.6/30, Error ellipse: s-maj=6.4km s-min=4.9km az=59.0*
*IDC **01** 19:56:05.5±1.9, 6.°62S×129.°87E, h136km±17km, mb3.9/19, mb1 4.0/23, mb1mx3.9/47, mbtmp4.4/23, Error ellipse: s-maj=17.0km s-min=10.3km az=71.0*
*DJA **01** 19:56:06.3±0.2, 7.°S±2.°×13.°0E±.°, h142km±5km, M4.7/13, mb4.6/12, mB5.1/7, MLv4.9/13, Mw(mB)4.4/7*

ISC 01 19:56:05.8±0.3, 6.77S±0.°04×129.°90E±0.°04, h150km, n116, σ2.24/134, mb4.4/36, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.84**	**131**	P	**Pn**	**19 56 40.5**	**+1.4**
SAUI				S	**Sn**	**19 57 04.1**	**-0.5**
SAUI	**Saumlaki**	**1.84**	**131**	*e*Pn	**Pn**	**19 56 41.7**	**+2.6**
SAUI				*e*Sn	**Sn**	**19 57 00.1**	**-4.5**
BNDI	**Bandanaira**	**2.23**	**0**	P	**Pn**	**19 56 44.8**	**+1.1**
AAI	**Ambon**	**3.50**	**331**	P	**Pn**	**19 57 00.7**	**+1.1**
MSAI	**Masohi**	**3.54**	**344**	P	**Pn**	**19 57 01.5**	**+1.4**
MSAI				S	**Sn**	**19 57 44.0**	**+1.8**
FAKI	**Fak Fak**	**4.48**	**32**	P	**Pn**	**19 57 11.5**	**-1.0**
FAKI				S	**Sn**	**19 57 59.9**	**-4.4**
FAKI	**Fak Fak**	**4.48**	**32**	*e*Pn	**Pn**	**19 57 11.4**	**-1.0**
FAKI				*e*Sn	**Sn**	**19 57 58.0**	**-6.3**
KMPI	**Kaimana, Papua**	**4.88**	**51**	P	**Pn**	**19 57 17.9**	**+0.2**
KMPI				S	**Sn**	**19 58 11.1**	**-2.7**
SIJI	**Sorong**	**6.02**	**13**	P	**Pn**	**19 57 31.7**	**-1.1**
	3.5nm,0.3s,baz=189,slow=18,SNR=39						
SIJI				S	**Sn**	**19 58 34.1**	**-6.7**
	16nm,0.3s,baz=226,slow=22,SNR=9.0						
SANI	**Sanana**	**6.10**	**320**	P	**Pn**	**19 57 35.3**	**+1.4**
	36nm,1.0s,0.2nm						
MTN	**Manton Dam**	**6.16**	**169**	*e*Pn	**Pn**	**19 57 34.8**	**+0.1**
MTN				*e*Sn	**Sn**	**19 58 40.8**	**-3.4**
SOEI	**Soe**	**6.32**	**242**	P	**Pn**	**19 57 37.1**	**+0.2**
	179nm,0.9s,2μm2.3nm						
SOEI				S	**Sn**	**19 58 45.3**	**-2.9**
	179nm,0.9s,2μm2.3nm						
SOEI	**Soe**	**6.32**	**242**	*e*Pn	**Pn**	**19 57 37.1**	**+0.2**
SOEI				*e*Sn	**Sn**	**19 58 44.1**	**-4.1**
RKPI	**Ransiki, Papua**	**6.74**	**39**	P	Pn	19 57 35.7	-6.7
RKPI				S	**Sn**	**19 58 54.0**	**-4.2**
BATI	**Baumata**	**7.05**	**241**	P	**Pn**	**19 57 46.6**	**-0.1**
	72nm,0.3s,baz=113,slow=3.6,SNR=124						
BATI				S	**Sn**	**19 59 02.2**	**-3.5**
	74nm,0.3s,baz=220,slow=0.8,SNR=11						
BATI	**Baumata**	**7.05**	**241**	P	**Pn**	**19 57 46.2**	**-0.4**
	108nm,0.5s,1μm0.7nm						
BATI				S	**Sn**	**19 59 02.6**	**-3.1**
	108nm,0.5s,1μm0.7nm						
MMRI	**Maumere**	**7.82**	**256**	P	**Pn**	**19 57 57.2**	**+0.3**
	39nm,1.1s,1μm0.3nm						
MMRI				S	**Sn**	**19 59 22.6**	**-1.5**
	39nm,1.1s,1μm0.3nm						
MMRI	**Maumere**	**7.82**	**256**	*e*Pn	**Pn**	**19 57 54.8**	**-2.1**
MMRI				*e*Sn	**Sn**	**19 59 16.1**	**-8.0**
TNTI	**Ternate**	**7.91**	**341**	*e*Pn	**Pn**	**19 57 58.3**	**+0.3**
TNTI				*e*Sn	**Sn**	**19 59 20.6**	**-5.6**
BAKI	**Biak**	**8.30**	**48**	P	**Pn**	**19 58 02.9**	**-0.4**
	169nm,0.8s,1μm						
EDFI	**Ende, Flores**	**8.37**	**256**	P	**Pn**	**19 58 04.7**	**+0.4**
	39nm,1.2s						
EDFI				S	**Sn**	**19 59 38.7**	**+1.1**
	39nm,1.2s						
JAY	**Jayapura**	**11.56**	**69**	P	**Pn**	**19 58 44.4**	**-2.1**
	0.3nm,0.3s,baz=140,slow=23,SNR=2.4						
JAY				S	**Sn**	**20 00 56.7**	**+2.3**
	0.5nm,0.3s,baz=104,slow=23,SNR=4.3						
JAY	**Jayapura**	**11.56**	**69**	P	**Pn**	**19 58 45.6**	**-0.9**
	94nm,0.9s						
FITZ	**Fitzroy Crossi**	**12.00**	**200**	P	**Pn**	**19 58 49.5**	**-2.7**
	2.0nm,0.3s,baz=34,slow=12,SNR=56						
FITZ				S	Sn	20 00 55.5	-9.5
	7.1nm,0.3s,baz=75,slow=20,SNR=9.7						
FITZ	**Fitzroy Crossi**	**12.00**	**200**	*e*Pn	**Pn**	**19 58 49.4**	**-2.8**
FITZ				*e*Sn	Sn	20 00 49.5	-15
FITZ				S	Sn	20 00 55.5	-9.5
WRAB	**Tennant Creek**	**13.78**	**162**	*e*Pn	**Pn**	**19 59 13.3**	**-1.7**
WRAB				*e*Sn	Sn	20 01 37.3	-10
WR1	**Warramunga Arr**	**13.79**	**162**	*e*Pn	**Pn**	**19 59 11.6**	**-3.5**
WR1				*e*Sn	Sn	20 01 38.4	-10
WRA	**Warramunga Arr**	**13.79**	**162**	P	**Pn**	**19 59 11.6**	**-3.5**
	3.8nm,0.3s,baz=349,slow=13,SNR=89						
WRA				S	Sn	20 01 38.3	-10
	5.1nm,0.3s,baz=334,slow=24,SNR=10						
WB2	**Warramunga Arr**	**13.79**	**162**	*e*Pn	**Pn**	**19 59 12.2**	**-2.9**
WB2				*e*Sn	Sn	20 01 36.6	-11
DAV	**Davao City (W)**	**14.41**	**342**	*e*Pn	**Pn**	**19 59 20.0**	**-2.9**
COEN	**Coen**	**14.88**	**120**	*e*Pn	**Pn**	**19 59 28.5**	**-0.3**
COEN				*e*Sn	Sn	20 02 03.0	-11
JAGI	**Jajag, Banyuwa**	**15.70**	**263**	*e*Pn	**Pn**	**19 59 36.0**	**-3.1**
	162nm,2.0s						
MTKI	**Muara Teweh, K**	**16.05**	**291**	P	**P**	**19 59 43.6**	**-0.1**
	15nm,0.5s,2μm						
AS31	**Alice Springs**	**17.23**	**168**	*e*P	**Pn**	**19 59 58.6**	**+1.0**
	7.2nm,0.3s						
AS31				*e*S	**S**	**20 03 03.5**	**-5.4**
ASAR	**Alice Springs**	**17.24**	**168**	P	**Pn**	**19 59 58.5**	**+0.9**
	2.3nm,0.3s,baz=351,slow=11,SNR=97						
ASAR				S	**S**	**20 03 04.2**	**-4.7**
	1.4nm,0.3s,baz=349,slow=26,SNR=7.1						
AS01	**Alice Springs**	**17.25**	**167**	*e*P	**Pn**	**19 59 58.8**	**+1.1**
PMG	**Port Moresby**	**17.28**	**100**	P	**Pn**	**20 00 03.0**	**+4.8**
	2.5nm,0.3s,baz=9.0,slow=8.2,SNR=14						
PMG				S	**S**	**20 03 05.1**	**-4.9**
	1.2nm,0.3s,baz=194,slow=21,SNR=5.5						
PMG	**Port Moresby**	**17.28**	**100**	*e*P	**Pn**	**20 00 02.5**	**+4.3**
	43nm,0.8s						
PMG				*e*S	**S**	**20 03 05.1**	**-4.9**
MBWA	**Marble Bar**	**17.37**	**214**	*e*P	**P**	**19 59 58.8**	**+0.6**
	29nm,0.8s						
MANU	**Manus Island**	**18.03**	**76**	*e*P	**Pn**	**20 00 10.2**	**+3.1**
	41nm,0.8s						
KKM	**Kota Kinabalu**	**18.67**	**313**	*e*P	**Pn**	**20 00 13.0**	**-1.8**
	45nm,1.3s						
UGM	**Wanagama**	**19.25**	**265**	*e*P	**P**	**20 00 18.2**	**-0.7**
	385nm,1.7s						
SMRI	**Semarang**	**19.32**	**268**	*e*P	**P**	**20 00 18.0**	**-1.6**
	80nm,1.3s						
SBUM	**Sibu**	**19.89**	**297**	*e*P	**Pn**	**20 00 27.2**	**-1.7**
	69nm,2.0s						
CTA	**Charters Tower**	**20.66**	**131**	P	Pn	20 00 37.4	-0.7
	6.6nm,0.6s,baz=309,slow=13,SNR=12						
CTAO	**Charters Tower**	**20.66**	**131**	*e*P	Pn	20 00 37.5	-0.6
	16nm,1.0s						
KSM	**Kuching**	**21.20**	**292**	*e*P	**P**	**20 00 40.5**	**+0.7**
	20nm,1.2s						
CISI	**Cisompet, Garu**	**21.93**	**267**	*e*P	**P**	**20 00 46.0**	**-1.6**
	40nm,0.7s						
LEM	**Lembang**	**22.13**	**269**	P	**P**	**20 00 49.6**	**-0.1**
	15nm,0.6s,baz=53,slow=14,SNR=5.2						
FORT	**Forrest**	**23.95**	**184**	*e*P	**P**	**20 01 07.8**	**+1.6**
	23nm,0.6s						
BBOO	**Buckleboo**	**26.54**	**168**	*e*P	**P**	**20 01 30.2**	**+0.6**
	31nm,1.4s						
STKA	**Stephens Creek**	**27.26**	**158**	P	**P**	**20 01 38.3**	**+2.2**
	1.0nm,0.3s,baz=330,slow=12,SNR=7.5						
STKA	**Stephens Creek**	**27.26**	**158**	*e*P	**P**	**20 01 37.7**	**+1.6**
	5.0nm,1.8s						
NWAO	**Narrogin (SRO)**	**28.57**	**203**	*e*P	**P**	**20 01 49.0**	**+1.3**
	93nm,1.4s						
IPM	**Ipoh**	**30.92**	**290**	*e*P	**P**	**20 02 10.6**	**+1.9**
	8.9nm,0.8s						
CM01	**Chiang Mai Arr**	**39.48**	**310**	*e*P	**P**	**20 03 22.0**	**+0.1**
CM31	**Chiang Mai Arr**	**39.51**	**310**	*e*P	**P**	**20 03 22.0**	**-0.1**
CMAR	**Chiang Mai Arr**	**39.51**	**310**	P	**P**	**20 03 22.4**	**+0.2**
	3.1nm,0.7s,baz=138,slow=7.7,SNR=19						
CHTO	**Chiang Mai**	**39.72**	**310**	*e*P	**P**	**20 03 23.2**	**-0.7**
	5.0nm,0.8s						
KSAR	**Wonju Array Be**	**44.02**	**358**	P	**P**	**20 03 58.3**	**-0.1**
KSRS	**Korea Array**	**44.03**	**358**	P	**P**	**20 03 58.3**	**-0.2**
	0.5nm,0.6s,baz=178,slow=11,SNR=4.0						
USRK	**Ussuriysk Ar.**	**50.77**	**2**	P	**P**	**20 04 51.0**	**+0.5**
	1.0nm,0.5s,baz=174,slow=8.9,SNR=3.1						
GTA	**Gaotai**	**53.72**	**331**	*e*P	**P**	**20 05 13.5**	**+0.9**
GTA				pP	pP	20 05 18.7	-29
GTA				sP	sP	20 05 21.9	-42
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
JIRN	**Jiri**	**54.36**	**311**	*e*P	**P**	**20 05 17.5**	**-0.2**
	comp=Z,8.2nm,0.4s						
GUN	**Gumba**	**54.73**	**311**	*e*P	**P**	**20 05 20.2**	**-0.1**
	comp=Z,12nm,0.5s						
PKIN	**Phulchoki**	**54.92**	**310**	*e*P	**P**	**20 05 21.7**	**+0.1**
	comp=Z,10nm,0.5s						
KKN	**Kakani**	**55.12**	**311**	*e*P	**P**	**20 05 22.5**	**-0.5**
	comp=Z,8.9nm,0.6s						
DMN	**Daman**	**55.15**	**310**	*e*P	**P**	**20 05 23.1**	**-0.2**
	comp=Z,6.5nm,0.5s						
GKN	**Gorkha**	**55.71**	**311**	*e*P	**P**	**20 05 26.9**	**-0.3**
	comp=Z,18nm,0.4s						
KOLN	**Koldanda**	**56.38**	**310**	*e*P	**P**	**20 05 32.0**	**0.0**
	comp=Z,12nm,0.5s						
PYUN	**Piuthan**	**57.01**	**310**	*e*P	**P**	**20 05 36.4**	**0.0**
	comp=Z,24nm,0.8s						
ULN	**Ulaanbaatar**	**58.02**	**342**	*e*P	**P**	**20 05 43.9**	**+0.9**
	comp=Z,2.6nm,0.6s						
SONA0	**Songino Array**	**58.19**	**342**	*e*P	**P**	**20 05 43.7**	**-0.5**
SONM	**Songino Array**	**58.19**	**342**	P	**P**	**20 05 43.7**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=160,slow=8.8,SNR=4.7						
CASY	**Casey**	**60.91**	**189**	*e*P	**P**	**20 06 03.9**	**+1.5**
	comp=Z,11nm,1.3s						
NIL	**Nilore**	**66.99**	**311**	*e*P	**P**	**20 06 42.6**	**-0.1**
	comp=Z,4.7nm,0.6s						
MK01	**Makanchi Array**	**67.96**	**327**	*e*P	**P**	**20 06 49.1**	**+0.5**
MK31	**Makanchi Array**	**67.98**	**327**	*e*P	**P**	**20 06 49.3**	**+0.6**
MK32	**Makanchi Array**	**67.98**	**327**	*e*P	**P**	**20 06 49.6**	**+0.9**
MKAR	**Makanchi Array**	**67.98**	**327**	P	**P**	**20 06 49.6**	**+0.9**
	comp=Z,3.6nm,0.3s,baz=116,slow=7.9,SNR=123						
MKAR	**Makanchi Array**	**67.98**	**327**	*e*P	**P**	**20 06 49.2**	**+0.5**
	comp=Z,54nm,1.0s						
MAKZ	**Makanchi**	**68.16**	**327**	*e*P	**P**	**20 06 50.0**	**+0.2**
	comp=Z,6.0nm,0.8s						
YAK	**Yakutsk**	**68.59**	**360**	*e*P	**P**	**20 06 53.2**	**+1.1**
	comp=Z,9.5nm,0.7s						
ZAA0	**Zalesovo Array**	**71.33**	**334**	*e*P	**P**	**20 07 08.6**	**-0.4**
	comp=Z,4.7nm,0.8s						
ZALV	**Zalesovo Beam**	**71.33**	**334**	P	**P**	**20 07 09.0**	**0.0**
	comp=Z,3.3nm,0.5s,baz=126,slow=5.5,SNR=17						
ZALV	**Zalesovo Beam**	**71.33**	**334**	*e*P	**P**	**20 07 08.6**	**-0.4**
ZAA1	**Zalesovo Array**	**71.34**	**334**	*e*P	**P**	**20 07 09.0**	**-0.1**
KURBB	**Kurchatov Arra**	**72.26**	**329**	P	**P**	**20 07 15.7**	**+1.0**
	comp=Z,7.1nm,0.5s,baz=127,slow=4.9,SNR=77						
KURK	**Kurchatov**	**72.27**	**329**	*e*P	**P**	**20 07 15.2**	**+0.5**
	comp=Z,9.5nm,0.9s						
VNDA	**Vanda**	**72.69**	**173**	P	**P**	**20 07 18.9**	**+2.2**
	comp=Z,0.9nm,0.6s,baz=325,slow=8.4,SNR=6.9						
VNDA	**Vanda**	**72.69**	**173**	*e*P	**P**	**20 07 18.5**	**+1.7**
VNDA				*e*PcP	**P**	**20 07 18.8**	**+2.0**
KK31	**Karatay Array**	**73.10**	**319**	*e*P	**P**	**20 07 20.4**	**+0.6**
KKAR	**Karatay Array**	**73.10**	**319**	*e*P	**P**	**20 07 20.4**	**+0.6**
SBA	**Scott Base**	**73.58**	**172**	*e*P	**P**	**20 07 24.7**	**+2.7**
	comp=Z,22nm,1.9s						
MAW	**Mawson**	**75.13**	**201**	P	**P**	**20 07 33.3**	**+2.3**
	comp=Z,5.3nm,0.7s,baz=70,slow=6.3,SNR=22						
MAW	**Mawson**	**75.13**	**201**	*e*P	**P**	**20 07 32.8**	**+1.8**
	comp=Z,4.4nm,1.6s						
WSAR	**Wadi Sarin**	**75.68**	**296**	P	**P**	**20 07 36.7**	**+1.6**
	comp=Z,5.3nm,0.6s,baz=199,slow=4.5,SNR=10						
BVAR	**Borovoye Array**	**77.82**	**328**	P	**P**	**20 07 47.1**	**+0.7**
	comp=Z,3.6nm,0.7s,baz=118,slow=5.7,SNR=21						
GEYT	**Alibeck**	**79.99**	**310**	P	**P**	**20 07 59.6**	**+0.9**
	comp=Z,26nm,0.4s,baz=145,slow=5.4,SNR=5.1						
OPO	**Ambohidratompo**	**81.00**	**252**	P	**P**	**20 08 06.0**	**+1.3**
	comp=Z,3.5nm,0.8s,baz=87,slow=7.0,SNR=3.8						
ABKAR	**Akbulak array**	**82.27**	**322**	*e*P	**P**	**20 08 10.3**	**-0.1**
QSPA	**South Pole Qui**	**83.21**	**180**	P	**P**	**20 08 16.6**	**+1.5**
	comp=Z,2.5nm,0.7s,baz=258,slow=1.0,SNR=12						
AKTO	**Aktyubinsk**	**83.83**	**322**	P	**P**	**20 08 19.1**	**+0.7**
	comp=Z,2.9nm,0.5s,baz=108,slow=9.5,SNR=12						
ARU	**Arti**	**85.46**	**328**	*e*P	**P**	**20 08 26.2**	**-0.3**
	comp=Z,5.3nm,0.6s						
RAYN	**Ar Rayn**	**87.56**	**294**	*e*P	**P**	**20 08 38.4**	**+0.8**
	comp=Z,6.6nm,0.6s						
ILAR	**Eielson Array**	**93.18**	**25**	P	**P**	**20 09 01.6**	**-1.1**
	comp=Z,0.1nm,0.5s,baz=261,slow=3.6,SNR=2.4						
ILB	**Eielson Array**	**93.18**	**25**	*e*P	**P**	**20 09 01.7**	**-1.0**
BR101	**Keskin Array S**	**99.10**	**309**	*e*P	Pdif	20 09 29.1	-1.2
BRTR	**Keskin Array B**	**99.10**	**309**	P	Pdif	20 09 29.1	-1.2
	comp=Z,0.4nm,0.8s,baz=98,slow=2.9,SNR=3.4						
GERES	**GERESS Array B**	**112.18**	**320**	PKiKP	**PKiKP**	**20 14 23.2**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=54,slow=2.3,SNR=3.9						
TORD	**Torodi Ar. Bea**	**128.67**	**281**	PKP	**PKPdf**	**20 14 57.4**	**+1.2**
	comp=Z,0.5nm,0.5s,baz=67,slow=2.9,SNR=5.3						
TOA1	**Torodi Ar. Sit**	**128.67**	**281**	*e*PKPdf	**PKPdf**	**20 14 57.4**	**+1.2**
CPUP	**Villa Florida**	**146.36**	**168**	PKPbc	**PKPab**	**20 15 31.6**	**+0.9**
	comp=Z,2.5nm,0.5s,baz=234,slow=3.3,SNR=6.4						
CPUP	**Villa Florida**	**146.36**	**168**	*e*PKPdf	**PKPab**	**20 15 31.1**	**+0.4**
LPAZ	**La Paz**	**150.96**	**142**	PKPbc	**PKPbc**	**20 15 44.7**	**+2.1**
	comp=Z,1.2nm,0.3s,baz=57,slow=3.9,SNR=9.6						
LPAZ	**La Paz**	**150.96**	**142**	*e*PKPbc	**PKPbc**	**20 15 43.5**	**+0.8**

*IDC **01** 19:59:08.8±0.8, 0.°37S×133.°35E, h0km, mb4.0/9, mb1 4.2/11, mb1mx3.9/47, mbtmp4.1/11, ML4.5/1, MS3.2/4, Ms1 3.2/4, ms1mx2.7/45, Error ellipse: s-maj=30.9km s-min=16.8km az=80.0*
*ISCJB **01** 19:59:10.8±0.4, 0.°51S±0.°05×133.°22E±0.°07, h28km, mb4.2/13, MS3.2/2, Error ellipse: s-maj=10.3km s-min=7.3km az=0.5*
*NEIC **01** 19:59:11.6±6.0, 0.°49S×133.°17E, h18km±39km, mb4.4/7, Error ellipse: s-maj=15.9km s-min=9.6km az=56.0*
ISC 01 19:59:12.5±0.6, 0.59S±0.°07×133.30E±0.°08, h28km, n41, σ1.37/35, mb4.2/13, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.05**	**262**	P	**Pn**	**19 59 45.0**	**-0.2**
	160nm,0.3s,baz=94,slow=9.3,SNR=72						
SIJI				Sn	**Sn**	**20 00 11.2**	**+1.3**
	111nm,0.3s,baz=218,

NIKH	**Nikolski High**	**71.72**	**33**	*e*P	**P**	**20 10 31.1**	**-0.8**
	57nm,1.1s						
BVAR	**Borovoye Array**	**74.51**	**326**	P	**P**	**20 10 48.5**	**0.0**
	0.8nm,0.6s,baz=100,slow=6.0,SNR=4.4						
ILAR	**Eielson Array**	**86.18**	**25**	P	**P**	**20 11 49.7**	**-1.3**
	0.8nm,0.7s,baz=265,slow=4.6,SNR=9.0						
LPAZ	**La Paz**	**153.01**	**129**	PKPbc	**PKPbc**	**20 19 09.0**	**-0.1**
	0.7nm,0.7s,baz=210,slow=4.4,SNR=2.7						

*ISCJB **01** 20:03:25.5±0.9, 37°.34N±0°.04×26°.88E±0°.06, h11km±6km, Error ellipse: s-maj=8.6km s-min=5.1km az=140.3*
*CSEM **01** 20:03:25.6±0.4, 37°.35N×26°.86E, h10km, ML2.1, Error ellipse: s-maj=7.0km s-min=5.9km az=47.0*
*DDA **01** 20:03:25.3, 37°.36N×26°.87E, h7km, Ml2.6*
*ISK **01** 20:03:25.9, 37°.43N×26°.82E, h14km±1km, ML2.1/3*

ISC 01 20:03:26.2±1.2, 37°.37N±0°.04×26°.89E±0°.04, h17km±8km, n21, σ0§90/35, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.43**	**39**	PG	**Pg**	**20 03 34.7**	**-0.3**
GCAM				SG	**Sb**	**20 03 42.2**	**+0.6**
GCAM	**G?zelcaml?**	**0.43**	**39**	*i* P	**Pg**	**20 03 34.2**	**-0.8**
GCAM				*i* S	**Sg**	**20 03 41.4**	**+0.4**
GCAM	**G?zelcaml?**	**0.43**	**39**	P	**Pg**	**20 03 34.2**	**-0.8**
GCAM	**G?zelcaml?**	**0.43**	**39**	*e*Pg	**Pg**	**20 03 34.7**	**-0.3**
GCAM				S	**Sg**	**20 03 41.4**	**+0.4**
GCAM				*e*Sg	**Sb**	**20 03 42.2**	**+0.6**
BDRM	**Kayabasi**	**0.54**	**124**	*i* P	**Pg**	**20 03 36.0**	**-0.9**
BDRM				*i* S	**Sg**	**20 03 44.4**	**+0.3**
BDRM	**Kayabasi**	**0.54**	**124**	P	**Pg**	**20 03 36.0**	**-0.9**
BDRM				S	**Sg**	**20 03 44.4**	**+0.3**
DGB	**˜zmir**	**0.69**	**360**	*i* P	**Pg**	**20 03 38.6**	**-1.1**
DGB				*i* S	**Sb**	**20 03 48.8**	**-0.1**
MLSB	**Milas**	**0.71**	**95**	PG	**Pb**	**20 03 41.3**	**+1.1**
MLSB	**Milas**	**0.71**	**95**	*e*Pg	**Pb**	**20 03 41.3**	**+1.1**
AYDN	**Tasoluk**	**0.84**	**69**	*i* P	**Pg**	**20 03 41.6**	**-1.0**
AYDN				*i* S	**Sg**	**20 03 53.7**	**0.0**
AYDN	**Tasoluk**	**0.84**	**69**	P	**Pg**	**20 03 41.6**	**-1.0**
AYDN				S	**Sg**	**20 03 53.7**	**0.0**
ZEY	**˜zmir**	**0.92**	**341**	*i* P	**Pg**	**20 03 43.0**	**-1.1**
ZEY				*i* S	**Sn**	**20 03 57.5**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**0.98**	**54**	PG	**Pb**	**20 03 45.4**	**+0.5**
AYDB	**Zeytinkoy-Aydi**	**0.98**	**54**	*e*Pg	**Pb**	**20 03 45.4**	**+0.5**
URLA	**Izmir**	**1.02**	**347**	PG	**Pg**	**20 03 44.5**	**-1.5**
URLA	**Izmir**	**1.02**	**347**	*i* P	**Pg**	**20 03 44.4**	**-1.5**
URLA				*i* S	**Sb**	**20 03 59.3**	**+0.7**
URLA	**Izmir**	**1.02**	**347**	*e*Pg	**Pg**	**20 03 44.5**	**-1.5**
URLA				S	**Sb**	**20 03 59.3**	**+0.7**
APE	**Apeiranthos**	**1.12**	**255**	PN	**Pn**	**20 03 47.7**	**+0.5**
APE	**Apeiranthos**	**1.12**	**255**	*e*Pn	**Pn**	**20 03 47.7**	**+0.5**
TURN	**Turunc**	**1.46**	**109**	*i* P	**Pn**	**20 03 51.8**	**+0.1**
TURN				*i* S	**Sn**	**20 04 08.8**	**-1.6**
TURN	**Turunc**	**1.46**	**109**	P	**Pn**	**20 03 51.8**	**+0.1**
TURN				S	**Sn**	**20 04 08.8**	**-1.6**

*ISCJB **01** 20:15:50.7±0.8, 77°.05S±0°.1×150°.9W±0°.4, h10km, mb4.3/8, Error ellipse: s-maj=16.1km s-min=11.3km az=162.2*
*IDC **01** 20:15:50.4±1.0, 76°.87S×149°.83W, h0km, mb3.8/5, mb1 3.9/7, mb1mx3.8/36, mbtmp3.8/7, ML2.8/2, MS2.7/1, Ms1 2.8/1, ms1mx2.5/36, Error ellipse: s-maj=34.5km s-min=24.0km az=19.0*
*NEIC **01** 20:15:51.8±0.6, 76°.84S×150°.05W, h10km, mb4.4/4, Error ellipse: s-maj=13.0km s-min=12.2km az=170.0*

ISC 01 20:15:51.8±0.8, 76°.9S±0°.1×150°.38W±0°.09, h10km, n20, σ1§47/24, mb4.2/8, Antarctica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBA	**Scott Base**	**9.28**	**243**	*e*Pn	**Pn**	**20 18 06.0**	**+0.6**
VNDA	**Vanda**	**10.38**	**243**	Pn	**Pn**	**20 18 20.9**	**+0.4**
	0.2nm,0.3s,baz=112,slow=17,SNR=14						
VNDA				Sn	**Sn**	**20 20 15.2**	**-1.4**
	0.1nm,0.3s,baz=27,slow=2.3,SNR=1.8						
VNDA				LR	LR	20 22 06.2	
	comp=Z,42nm,19.4s,baz=342,slow=36						
VNDA	**Vanda**	**10.38**	**243**	*e*Pn	**Pn**	**20 18 20.6**	**+0.1**
VNDA				Sn	**Sn**	**20 20 15.2**	**-1.4**
QSPA	**South Pole Qui**	**13.19**	**180**	Pn	**Pn**	**20 19 00.3**	**+1.2**
	0.2nm,0.3s,baz=70,slow=15,SNR=5.0						
SNAA	**Sanae**	**30.41**	**160**	P	**P**	**20 22 03.2**	**-0.4**
	2.0nm,1.1s,baz=187,slow=8.3,SNR=4.0						
SNAA	**Sanae**	**30.41**	**160**	*e*P	**P**	**20 22 03.4**	**-0.2**
	17nm,1.9s						
STKA	**Stephens Creek**	**54.24**	**284**	P	**P**	**20 25 20.0**	**+2.7**
	0.8nm,0.7s,baz=144,slow=14,SNR=2.7						
STKA	**Stephens Creek**	**54.24**	**284**	*e*P	**P**	**20 25 19.9**	**+2.6**
	3.4nm,1.7s						
ASAR	**Alice Springs**	**63.88**	**278**	P	**P**	**20 26 24.8**	**+0.5**
	0.4nm,0.6s,baz=157,slow=7.7,SNR=8.4						
ASAR				PcP	**PcP**	**20 26 59.8**	**-0.2**
	0.8nm,1.0s,baz=157,slow=5.0,SNR=4.3						
AS31	**Alice Springs**	**63.88**	**278**	*e*P	**P**	**20 26 19.6**	**-4.7**
	2.1nm,1.4s						
WR1	**Warramunga Arr**	**67.37**	**280**	*e*P	**P**	**20 26 47.4**	**+0.6**
	36nm,1.9s						
WRA	**Warramunga Arr**	**67.37**	**280**	P	**P**	**20 26 47.4**	**+0.6**
	1.7nm,0.9s,baz=164,slow=6.2,SNR=6.9						
HNR	**Honiara**	**72.27**	**308**	*e*P	**P**	**20 27 17.0**	**-0.1**
	85nm,1.1s						
LPAZ	**La Paz**	**72.48**	**86**	P	**P**	**20 27 18.5**	**-0.6**
	0.8nm,0.7s,baz=170,slow=4.7,SNR=3.9						
LPAZ	**La Paz**	**72.48**	**86**	*e*P	**P**	**20 27 18.2**	**-0.9**
LPAZ				*e*PcP	**P**	**20 27 18.4**	**-0.6**
YKA	**Yellowknife Ar**	**140.90**	**25**	PKP	**PKPdf**	**20 35 19.8**	**-0.1**
	0.2nm,0.7s,baz=181,slow=3.4,SNR=3.8						
INK	**Inuvik**	**145.32**	**11**	PKPbc	**PKPdf**	**20 35 27.0**	**-0.6**
	4.1nm,1.0s,baz=160,slow=0.7,SNR=4.5						
INK	**Inuvik**	**145.32**	**11**	*e*PKPbc	**PKPdf**	**20 35 26.8**	**-0.8**
KURBB	**Kurchatov Arra**	**147.80**	**244**	PKPbc	**PKPbc**	**20 35 34.9**	**-0.3**
	1.2nm,0.8s,baz=169,slow=2.5,SNR=8.8						
KURK	**Kurchatov**	**147.87**	**244**	*e*PKPbc	**PKPbc**	**20 35 34.9**	**-0.5**

*DDA **01** 20:26:16.6, 38°.46N×43°.41E, h7km, Ml2.6*

ISC 01 20:26:16.9±1.7, 38°.49N±0°.06×43°.36E±0°.08, h2km±11km, n7, σ1§36/13, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.11**	**14**	*i* PG	**Pg**	**20 26 18.9**	**-0.1**
VANB				*i* SG	**Sg**	**20 26 20.4**	**0.0**
GEVA	**Gevas**	**0.29**	**232**	*i* P	**Pg**	**20 26 22.4**	**-0.1**
GEVA				*i* S	**Sb**	**20 26 28.7**	**-1.7**
VMUR	**Van-Muradiye**	**0.53**	**19**	*i* P	**Pg**	**20 26 27.8**	**+0.9**
VMUR				*i* S	**Sn**	**20 26 39.2**	**-2.0**
ADCV	**BITLIS_Adilcev**	**0.59**	**303**	*i* P	**Pg**	**20 26 28.6**	**+0.5**
ADCV				*i* S	**Sb**	**20 26 38.6**	**-0.2**
GURO	**Guroymak-BITLI**	**1.04**	**274**	*e*PG	**Pg**	**20 26 35.5**	**-1.3**
AGRB	**Hanur-Agry**	**1.12**	**345**	*e*PG	**Pn**	**20 26 40.3**	**+0.6**
AGRB				*e*SG	**Sn**	**20 26 55.7**	**-0.1**
SRTM	**Siirt_Merkez**	**1.23**	**247**	*i* P	**Pg**	**20 26 40.9**	**+0.4**
SRTM				*i* S	**Sn**	**20 27 01.1**	**+2.6**

IDC 01 20:30:42.0±2.0, 5°.59S×148°.12E, h238km±19km, mb3.3/4, mb1 3.5/6, mb1mx3.0/47, mbtmp3.9/6, Error ellipse: s-maj=42.7km s-min=17.3km az=116.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.91**	**194**	P	Pn	20 31 44.8	+0.5
	2.9nm,0.3s,baz=334,slow=6.2,SNR=9.2						
PMG				S	S	20 32 33.1	-0.4
	2.6nm,0.3s,baz=72,slow=9.2,SNR=5.7						
WRA	**Warramunga Arr**	**19.57**	**222**	P	P	20 34 53.1	+0.7
	1.0nm,0.3s,baz=46,slow=11,SNR=40						
WRA				S	S	20 38 20.2	-0.4
	0.1nm,0.3s,baz=46,slow=18,SNR=3.0						
ASAR	**Alice Springs**	**22.59**	**216**	P	P	20 35 23.6	+0.9
	1.9nm,0.4s,baz=55,slow=8.5,SNR=57						
FITZ	**Fitzroy Crossi**	**25.23**	**239**	P	P	20 35 46.8	+0.2
	3.8nm,0.5s,baz=58,slow=8.0,SNR=35						
STKA	**Stephens Creek**	**26.85**	**192**	P	P	20 36 00.6	-0.3
	1.1nm,0.9s,baz=39,slow=17,SNR=2.7						
MKAR	**Makanchi Array**	**77.90**	**320**	P	P	20 42 12.4	-1.3
	0.1nm,0.3s,baz=120,slow=5.2,SNR=4.3						
TORD	**Torodi Ar. Bea**	**146.07**	**285**	PKPbc	PKPbc	20 49 54.4	-0.6
	0.1nm,0.3s,baz=101,slow=2.4,SNR=3.1						

*ISK **01** 20:32:11.0, 36°.95N×27°.54E, h20km, ML2.4/5*
*DDA **01** 20:32:12.7, 37°.01N×27°.60E, h7km, Ml2.5, Suspected Mining explosion.*
*CSEM **01** 20:32:12.3±0.2, 36°.97N×27°.58E, h1km, ML2.5, Error ellipse: s-maj=5.2km s-min=3.3km az=37.0, Suspected Mining explosion.*

ISC 01 20:32:11.4±0.8, 36°.96N±0°.03×27°.66E±0°.03, h10km±7km, n30, σ1§45/44, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.20**	**302**	*i* P	**Pg**	**20 32 15.5**	**-0.1**
BDRM				*i* S	**Sg**	**20 32 17.8**	**-0.7**
BDRM	**Kayabasi**	**0.20**	**302**	P	**Pg**	**20 32 15.5**	**-0.1**
BDRM				S	**Sg**	**20 32 17.8**	**-0.7**
DATC	**Datca-Mugla**	**0.20**	**179**	PG	**Pb**	**20 32 16.8**	**+1.2**
DATC	**Datca-Mugla**	**0.20**	**179**	*e*Pg	**Pb**	**20 32 16.8**	**+1.2**
BODT	**Bodrum**	**0.29**	**290**	PG	**Pg**	**20 32 16.5**	**-0.9**
BODT				SG	**Sg**	**20 32 20.9**	**-0.4**
BODT	**Bodrum**	**0.29**	**290**	*e*Pg	**Pg**	**20 32 16.5**	**-0.9**
BODT				*e*Sg	**Sg**	**20 32 20.9**	**-0.4**
YKAV	**Yalikavak-Bodr**	**0.34**	**299**	PG	**Pg**	**20 32 17.5**	**-0.7**
YKAV				SG	**Sg**	**20 32 22.4**	**-0.4**
YKAV	**Yalikavak-Bodr**	**0.34**	**299**	*e*Pg	**Pg**	**20 32 17.5**	**-0.7**
YKAV				*e*Sg	**Sg**	**20 32 22.4**	**-0.4**
MLSB	**Milas**	**0.35**	**16**	PG	**Pg**	**20 32 19.0**	**+0.6**
MLSB	**Milas**	**0.35**	**16**	*e*Pg	**Pg**	**20 32 19.0**	**+0.6**
YER	**Yerkesik**	**0.53**	**71**	PG	**Pb**	**20 32 23.9**	**+1.0**
YER	**Yerkesik**	**0.53**	**71**	*e*Pg	**Pb**	**20 32 23.9**	**+1.0**
AYDN	**Tasoluk**	**0.72**	**14**	*i* P	**Pb**	**20 32 25.8**	**-0.4**
AYDN				*i* S	**Sg**	**20 32 34.8**	**-0.1**
AYDN	**Tasoluk**	**0.72**	**14**	P	**Pb**	**20 32 25.8**	**-0.4**
AYDN				S	**Sg**	**20 32 34.8**	**-0.1**
TURN	**Turunc**	**0.77**	**96**	PG	**Pg**	**20 32 23.9**	**-2.3**
TURN				SG	**Sg**	**20 32 32.3**	**-3.9**
TURN	**Turunc**	**0.77**	**96**	*i* P	**Pg**	**20 32 24.2**	**-2.0**
TURN				*i* S	**Sg**	**20 32 31.2**	**-5.0**
TURN	**Turunc**	**0.77**	**96**	*e*Pg	**Pg**	**20 32 23.9**	**-2.3**
GCAM	**G?zelcaml?**	**0.81**	**336**	PG	**Pn**	**20 32 28.1**	**-0.9**
GCAM	**G?zelcaml?**	**0.81**	**336**	*i* P	**Pn**	**20 32 28.5**	**-0.5**
GCAM				*i* S	**Sb**	**20 32 38.5**	**-0.2**
GCAM	**G?zelcaml?**	**0.81**	**336**	*e*Pg	**Pn**	**20 32 28.1**	**-0.9**
GCAM	**G?zelcaml?**	**0.81**	**336**	P	**Pn**	**20 32 28.5**	**-0.5**
GCAM				S	**Sb**	**20 32 38.5**	**-0.2**
DALY	**Dalyan (Mu¨la**	**0.81**	**100**	*i* P	**Pn**	**20 32 29.6**	**+0.6**
DALY				*i* S	**Sn**	**20 32 42.5**	**+1.4**
DALY	**Dalyan (Mu¨la**	**0.81**	**100**	P	**Pn**	**20 32 29.6**	**+0.6**
DALY				S	**Sn**	**20 32 42.5**	**+1.4**
ARG	**Arkhangelos**	**0.83**	**153**	PG	**Pg**	**20 32 27.7**	**+0.2**
ARG	**Arkhangelos**	**0.83**	**153**	*e*Pg	**Pg**	**20 32 27.7**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**1.00**	**11**	PG	**Pg**	**20 32 30.8**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**1.00**	**11**	*e*Pg	**Pg**	**20 32 30.8**	**0.0**
TAVA	**DENIZLI_Tavas**	**1.12**	**63**	*i* P	**Pg**	**20 32 35.1**	**+2.0**
TAVA	**DENIZLI_Tavas**	**1.12**	**63**	P	**Pg**	**20 32 35.1**	**+2.0**
FETY	**Fethiye**	**1.19**	**105**	P	**Pg**	**20 32 36.5**	**+2.2**

*MDD **01** 20:38:20.5±1.8, 37°.34N×12°.74W, h0km, mb3.7/12, Error ellipse: s-maj=16.1km s-min=13.0km az=49.0, PRXIMO*
*IGIL **01** 20:38:20.5, 37°.33N×12°.77W, h0km, ML2.0*
*INMG **01** 20:38:21.5±1.0, 37°.15N×13°.17W, h10km, ML2.2, Error ellipse: s-maj=6.5km s-min=4.8km az=84.0*
*CSEM **01** 20:38:22.8±0.4, 37°.44N×12°.54W, h10km, mb3.7, Error ellipse: s-maj=7.1km s-min=6.0km az=56.0*

ISC 01 20:38:18.2±3.2, 37°.34N±0°.09×12°.8W±0°.1, h10km, n82, σ1§67/154, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.19**	**93**	*e*Pn	**Pn**	**20 39 07.5**	**-0.9**
PFVI				*e*Sn	**Sn**	**20 39 44.4**	**-2.1**
PFVI	**Vila Bisbo**	**3.19**	**93**	*e*Pn	**Pn**	**20 39 07.5**	**-0.9**
PFVI				*e*Sn	**Sn**	**20 39 44.4**	**-2.1**
PMAFR	**Mafra**	**3.22**	**59**	*e*Pn	**Pn**	**20 39 10.5**	**+1.8**
PMAFR				*e*Sn	**Sn**	**20 39 48.5**	**+1.3**
PMAFR				A	A	20 39 48.7	
	14nm,0.6s						
PMAFR	**Mafra**	**3.22**	**59**	P	**Pn**	**20 39 10.6**	**+1.8**
	2.9nm,0.1s,SNR=7.9						
PMAFR				S	**Sn**	**20 39 47.4**	**+0.2**
	2.7nm,0.4s,SNR=7.9						
PMAFR	**Mafra**	**3.22**	**59**	P	**Pn**	**20 39 10.6**	**+1.8**
	2.9nm,0.1s,SNR=7.9						
PMAFR				S	**Sn**	**20 39 47.4**	**+0.2**
	2.7nm,0.4s,SNR=7.9						
PMAFR				*e*Sn	**Sn**	**20 39 48.5**	**+1.3**
PTEO	**Sao Teotonio**	**3.26**	**85**	*e*Pn	**Pn**	**20 39 11.2**	**+1.8**
PTEO				*e*Sn	**Sn**	**20 39 48.7**	**+0.4**
PTEO				A	A	20 40 05.8	
	6.0nm,0.6s						
PTEO	**Sao Teotonio**	**3.26**	**85**	P	**Pn**	**20 39 11.2**	**+1.8**
PTEO				S	**Sn**	**20 39 48.7**	**+0.4**
	3.0nm,0.6s						
PTEO	**Sao Teotonio**	**3.26**	**85**	P	**Pn**	**20 39 11.2**	**+1.8**
PTEO				S	**Sn**	**20 39 48.7**	**+0.4**
	3.0nm,0.6s						
MORF	**Marmelete**	**3.32**	**89**	*e*P	**Pn**	**20 39 11.0**	**+0.8**
MORF				*e*S	**Sn**	**20 39 48.5**	**-1.3**
MORF	**Marmelete**	**3.32**	**89**	*e*Pn	**Pn**	**20 39 11.0**	**+0.8**
MORF				*e*Sn	**Sn**	**20 39 49.7**	**-0.1**
MORF				A	A	20 40 05.2	
	2.9nm,0.7s						
MORF	**Marmelete**	**3.32**	**89**	*e*Pn	**Pn**	**20 39 11.0**	**+0.8**
MORF				S	**Sn**	**20 39 48.5**	**-1.3**
MORF				*e*Sn	**Sn**	**20 39 49.7**	**-0.1**
PNCL	**Nicolau / Gran**	**3.49**	**76**	*e*Pn	**Pn**	**20 39 14.9**	**+2.5**
PNCL				*e*Sn	**Sn**	**20 39 52.6**	**-1.1**
PNCL				A	A	20 40 00.9	
	2.3nm,0.3s						
PNCL	**Nicolau / Gran**	**3.49**	**76**	*e*Pn	**Pn**	**20 39 14.9**	**+2.5**
PNCL				*e*Sn	**Sn**	**20 39 52.6**	**-1.1**
MESJ	**Messejana**	**3.69**	**81**	*e*P	**Pn**	**20 39 16.4**	**+1.2**
MESJ				*e*S	**Sn**	**20 39 57.1**	**-1.6**
MESJ				AML	AML	20 39 58.7	
	comp=N,2.1nm,0.4s						
MESJ	**Messejana**	**3.69**	**81**	*e*Pn	**Pn**	**20 39 17.3**	**+2.1**
MESJ				*e*Sn	**Sn**	**20 39 57.1**	**-1.6**
MESJ				A	A	20 40 05.4	
	comp=N,1.9nm,0.3s						
MESJ	**Messejana**	**3.69**	**81**	P	**Pn**	**20 39 16.4**	**+1.2**
MESJ				S	**Sn**	**20 39 57.1**	**-1.6**
	comp=N,2.1nm,0.4s						
MESJ	**Messejana**	**3.69**	**81**	P	**Pn**	**20 39 16.4**	**+1.2**
MESJ	**Messejana**	**3.69**	**81**	*e*Pn	**Pn**	**20 39 17.3**	**+2.1**
MESJ				S	**Sn**	**20 39 57.1**	**-1.6**
	comp=N,2.1nm,0.4s						
ALMR	**Almeirim**	**3.80**	**60**	*e*P	**Pn**	**20 39 18.2**	**+1.5**
ALMR				*e*S	**Sn**	**20 40 00.7**	**-0.7**
ALMR				AML	AML	20 40 03.6	
	comp=N,7.4nm,0.6s						
ALMR	**Almeirim**	**3.80**	**60**	*e*Pn	**Pn**	**20 39 18.9**	**+2.2**
ALMR				*e*Sn	**Sn**	**20 40 01.9**	**+0.5**
ALMR				A	A	20 40 05.1	
	comp=N,6.5nm,0.9s						
ALMR	**Almeirim**	**3.80**	**60**	P	**Pn**	**20 39 18.2**	**+1.5**
ALMR				S	**Sn**	**20 40 00.7**	**-0.7**
	comp=N,3.7nm,0.6s						
ALMR	**Almeirim**	**3.80**	**60**	P	**Pn**	**20 39 18.2**	**+1.5**
ALMR	**Almeirim**	**3.80**	**60**	*e*Pn	**Pn**	**20 39 18.9**	**+2.2**
ALMR				S	**Sn**	**20 40 00.7**	**-0.7**
	comp=N,3.7nm,0.6s						
ALMR				*e*Sn	Sb	20 40 01.9	-9.4
PCVE	**Castro Verde**	**3.81**	**84**	*e*Pn	**Pn**	**20 39 18.6**	**+1.7**
PCVE				*e*Sn	**Sn**	**20 40 01.1**	**-0.7**
PCVE				A	A	20 40 07.8	
	comp=N,1.9nm,0.7s						
PCVE	**Castro Verde**	**3.81**	**84**	P	**Pn**	**20 39 18.6**	**+1.7**
PCVE				S	**Sn**	**20 40 01.1**	**-0.7**
	comp=N,1.9nm,0.7s						
PCVE	**Castro Verde**	**3.81**	**84**	P	**Pn**	**20 39 18.6**	**+1.7**
PCVE				S	**Sn**	**20 40 01.1**	**-0.7**
	comp=N,1.9nm,0.7s						
PBDV	**Barranco-do-Ve**	**3.90**	**90**	*e*Pn	**Pn**	**20 39 20.2**	**+2.1**
PBDV				*e*Sn	**Sn**	**20 40 03.8**	**-0.2**
PBDV				A	A	20 40 13.2	
	comp=N,3.3nm,0.7s						
PBDV	**Barranco-do-Ve**	**3.90**	**90**	P	**Pn**	**20 39 20.2**	**+2.1**
PBDV				S	**Sn**	**20 40 03.8**	**-0.2**
	comp=N,3.3nm,0.7s						
PBDV	**Barranco-do-Ve**	**3.90**	**90**	P	**Pn**	**20 39 20.2**	**+2.1**
PBDV				S	**Sn**	**20 40 03.8**	**-0.2**
	comp=N,3.3nm,0.7s						
EVO	**Evora**	**3.98**	**71**	*e*Pn	**Pn**	**20 39 21.3**	**+2.1**
EVO				*e*Sn	**Sn**	**20 40 04.6**	**-1.3**
EVO	**Evora**	**3.98**	**71**	P	**Pn**	**20 39 21.3**	**+2.1**
EVO				S	**Sn**	**20 40 04.6**	**-1.3**
EVO	**Evora**	**3.98**	**71**	P	**Pn**	**20 39 21.3**	**+2.1**
EVO				S	**Sn**	**20 40 04.6**	**-1.3**
PBEJ	**Beja**	**3.99**	**79**	*e*Pn	**Pn**	**20 39 21.3**	**+2.0**
PBEJ				*e*Sn	**Sn**	**20 40 06.4**	**+0.3**
PBEJ				A	A	20 40 09.6	
	comp=N,3.9nm,0.3s						
PBEJ	**Beja**	**3.99**	**79**	P	**Pn**	**20 39 21.3**	**+2.0**
PBEJ				S	**Sn**	**20 40 06.4**	**+0.3**
	comp=N,1.9nm,0.3s						
PBEJ	**Beja**	**3.99**	**79**	P	**Pn**	**20 39 21.3**	**+2.0**
PBEJ				S	**Sn**	**20 40 06.4**	**+0.3**
	comp=N,1.9nm,0.3s						
PVAQ	**Vaqueiros**	**4.06**	**88**	*e*Pn	**Pn**	**20 39 21.5**	**+1.1**
PVAQ				*e*Sn	**Sn**	**20 40 06.6**	**-1.4**
PVAQ				A	A	20 40 11.4	
	comp=N,1.9nm,0.1s						
PVAQ	**Vaqueiros**	**4.06**	**88**	P	**Pn**	**20 39 21.5**	**+1.1**
PVAQ				S	**Sn**	**20 40 06.6**	**-1.4**
	comp=N,1.9nm,0.1s						
PVAQ	**Vaqueiros**	**4.06**	**88**	P	**Pn**	**20 39 21.5**	**+1.1**
PVAQ				S	**Sn**	**20 40 06.6**	**-1.4**
	comp=N,1.9nm,0.1s						
EGRO	**El Granado**	**4.25**	**86**	P	**Pn**	**20 39 24.2**	**+1.2**
	comp=N,1.1nm,0.2s,SNR=7.9						
EGRO				S	**Sn**	**20 40 11.1**	**-1.5**
	comp=N,0.5nm,0.3s,SNR=7.9						
EGRO	**El Granado**	**4.25**	**86**	P	**Pn**	**20 39 24.2**	**+1.2**
	comp=N,1.1nm,0.2s,SNR=7.9						
EGRO				S	**Sn**	**20 40 11.1**	**-1.5**
	comp=N,0.5nm,0.3s,SNR=7.9						
PESTR	**Estremoz**	**4.39**	**68**	*e*Pn	**Pn**	**20 39 26.8**	**+1.8**
PESTR				*e*Sn	**Sn**	**20 40 15.8**	**-0.4**
PESTR				A	A	20 40 20.6	
	comp=N,2.1nm,0.5s						
PESTR	**Estremoz**	**4.39**	**68**	*e*Pn	**Pn**	**20 39 26.8**	**+1.8**
PESTR				*e*Sn	**Sn**	**20 40 15.8**	**-0.4**
PBAR	**Barrancos**	**4.65**	**78**	*e*Pn	**Pn**	**20 39 30.4**	**+1.9**
PBAR				*e*Sn	**Sn**	**20 40 21.7**	**-0.9**
PBAR				A	A	20 40 26.9	
	comp=N,3.0nm,0.5s						
PBAR	**Barrancos**	**4.65**	**78**	P	**Pn**	**20 39 30.4**	**+1.9**
PBAR				S	**Sn**	**20 40 21.7**	**-0.9**
	comp=N,3.0nm,0.5s						
PBAR	**Barrancos**	**4.65**	**78**	P	**Pn**	**20 39 30.4**	**+1.9**
PBAR				S	**Sn**	**20 40 21.7**	**-0.9**
	comp=N,3.0nm,0.5s						
PMRV	**Marv??o**	**4.74**	**62**	*e*Pn	**Pn**	**20 39 31.5**	**+1.7**
PMRV				*e*Sn	**Sn**	**20 40 23.2**	**-1.6**
PMRV				A	A	20 40 23.7	
	comp=N,2.1nm,0.2s						
PMRV	**Marv??o**	**4.74**	**62**	P	**Pn**	**20 39 31.5**	**+1.7**
PMRV				S	**Sn**	**20 40 23.2**	**-1.6**
	comp=N,2.1nm,0.2s						
PMRV	**Marv??o**	**4.74**	**62**	P	**Pn**	**20 39 31.5**	**+1.7**
PMRV				S	**Sn**	**20 40 23.2**	**-1.6**
	comp=N,2.1nm,0.2s						
EBAD	**Badajoz**	**4.79**	**71**	P	**Pn**	**20 39 31.5**	**+1.1**
	comp=N,0.8nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**20 40 24.1**	**-2.0**
	comp=N,1.1nm,0.3s,SNR=7.9						
EBAD	**Badajoz**	**4.79**	**71**	P	**Pn**	**20 39 31.5**	**+1.1**
	comp=N,0.8nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**20 40 24.0**	**-2.0**
	comp=N,1.1nm,0.3s,SNR=7.9						
PCBR	**Castelo Branco**	**4.87**	**58**	*e*Pn	**Pn**	**20 39 33.9**	**+2.4**
PCBR				*e*Sn	**Sn**	**20 40 26.3**	**-1.6**
PCBR	**Castelo Branco**	**4.87**	**58**	P	**Pn**	**20 39 33.9**	**+2.4**
PCBR				S	**Sn**	**20 40 26.3**	**-1.6**
PCBR	**Castelo Branco**	**4.87**	**58**	P	**Pn**	**20 39 33.9**	**+2.4**
PCBR				S	**Sn**	**20 40 26.3**	**-1.6**

comp=N,0.6nm,0.3s,SNR=12

*ISK **01** 20:41:38.8, 36.84N×28.87E, h10km±1km, ML2.3/4*
*CSEM **01** 20:41:38.7±0.2, 36.88N×28.89E, h1km, ML2.3, Error ellipse: s-maj=5.2km s-min=3.8km az=32.0, Suspected Mining explosion.*
*DDA **01** 20:41:38.9, 36.90N×28.88E, h7km, Ml2.6, Suspected Mining explosion.*

ISC 01 20:41:38.6±1.0, 36.90N±0.03×28.94E±0.02, h6km±9km, n27, σ1.20/42, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DALY	**Dalyan (Mu˘la**	**0.24**	**250**	PG	**Pg**	**20 41 42.9**	**-0.5**
DALY	**Dalyan (Mu˘la**	**0.24**	**250**	*i* P	**Pg**	**20 41 43.0**	**-0.5**
DALY				*i* S	**Sg**	**20 41 47.3**	**+0.6**
DALY	**Dalyan (Mu˘la**	**0.24**	**250**	P	**Pg**	**20 41 43.0**	**-0.5**
DALY				S	**Sg**	**20 41 47.3**	**+0.6**
TURN	**Turunc**	**0.27**	**264**	PG	Pb	20 41 49.9	+4.0
TURN	**Turunc**	**0.27**	**264**	*i* P	**Pb**	**20 41 49.1**	**+3.2**
TURN				*i* S	Sg	20 41 58.0	+10
FETY	**Fethiye**	**0.29**	**157**	PG	**Pg**	**20 41 43.7**	**-0.6**
FETY				SG	**Sb**	**20 41 49.2**	**-2.1**
FETY	**Fethiye**	**0.29**	**157**	P	**Pg**	**20 41 43.2**	**-1.1**
FETY	**Fethiye**	**0.29**	**157**	*e*Pg	**Pg**	**20 41 43.7**	**-0.6**
FETY				S	**Sb**	**20 41 49.1**	**-2.2**
TAVA	**DENIZLI_Tavas**	**0.56**	**358**	*i* P	**Pg**	**20 41 49.5**	**0.0**
TAVA				*i* S	**Sg**	**20 41 58.3**	**+1.4**
TAVA	**DENIZLI_Tavas**	**0.56**	**358**	P	**Pg**	**20 41 49.5**	**0.0**
TAVA				S	**Sg**	**20 41 58.3**	**+1.4**
YER	**Yerkesik**	**0.58**	**294**	PG	**Pg**	**20 41 49.6**	**-0.1**
YER	**Yerkesik**	**0.58**	**294**	*e*Pg	**Pg**	**20 41 49.6**	**-0.1**
GOLH	**Golhisar**	**0.60**	**56**	*i* P	**Pg**	**20 41 48.1**	**-2.1**
GOLH				*i* S	**Sg**	**20 41 59.5**	**+1.5**
GOLH	**Golhisar**	**0.60**	**56**	P	**Pg**	**20 41 48.1**	**-2.1**
GOLH				S	**Sg**	**20 41 59.5**	**+1.5**
ELL	**Elmali**	**0.79**	**101**	PG	**Pn**	**20 41 56.2**	**-0.2**
ELL	**Elmali**	**0.79**	**101**	*e*Pg	**Pn**	**20 41 56.2**	**-0.2**
AKAS	**Kas**	**0.85**	**141**	PG	**Pg**	**20 41 55.4**	**+0.3**
AKAS	**Kas**	**0.85**	**141**	*i* P	**Pg**	**20 41 55.2**	**+0.1**
AKAS				*i* S	**Sn**	**20 42 10.8**	**+0.6**
AKAS	**Kas**	**0.85**	**141**	*e*Pg	**Pg**	**20 41 55.4**	**+0.3**
AKAS				S	**Sn**	**20 42 10.8**	**+0.6**
AYDN	**Tasoluk**	**1.14**	**312**	*i* P	**Pb**	**20 41 59.6**	**-1.1**
AYDN				*i* S	**Sn**	**20 42 16.2**	**-0.9**
AYDN	**Tasoluk**	**1.14**	**312**	P	**Pb**	**20 41 59.6**	**-1.1**
AYDN				S	**Sn**	**20 42 16.2**	**-0.9**
BRDR	**BURDUR-Merkez**	**1.20**	**48**	*i* P	**Pn**	**20 42 02.4**	**+0.4**
BRDR				*i* S	**Sn**	**20 42 20.6**	**+2.1**
BRDR	**BURDUR-Merkez**	**1.20**	**48**	P	**Pn**	**20 42 02.4**	**+0.4**
BRDR				S	**Sn**	**20 42 20.6**	**+2.1**
BDRM	**Kayabasi**	**1.21**	**278**	*i* P	**Pg**	**20 42 01.9**	**+0.1**
BDRM				*i* S	**Sg**	**20 42 16.6**	**-0.9**
BDRM	**Kayabasi**	**1.21**	**278**	P	**Pg**	**20 42 01.9**	**+0.1**
BDRM				S	**Sg**	**20 42 16.6**	**-0.9**
AYDB	**Zeytinkoy-Aydi**	**1.34**	**322**	PN	**Pb**	**20 42 04.1**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	**1.34**	**322**	*e*Pn	**Pb**	**20 42 04.1**	**-0.1**

SJA 01 20:48:38.0±1.0, 31.68S×68.83W, h11km±4km, ML3.2, MW3.7, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZON	**Zonda**	**0.18**	**44**	*e*P	Pb	20 48 42.8	-0.6
ZON				*e*S	Sg	20 48 45.4	+0.4
ZON				IAML		20 48 47.2	
	comp=Z,3μm,0.4s						
SJA	**San Juan**	**0.27**	**57**	*e*P	Pb	20 48 44.6	-0.4
SJA				*e*S	Sg	20 48 48.5	+1.0
RTCV	**Cerro Valdivia**	**0.31**	**127**	*e*P	Pb	20 48 44.9	-0.6
RTCV				*e*S	Sg	20 48 49.3	+0.9
RTLS	**Leoncito**	**0.42**	**253**	*e*P	Pb	20 48 47.2	-0.4
RTLS				IAML		20 48 47.3	
	comp=Z,975nm,0.3s						
RTLS				*e*S	Sb	20 48 53.4	-0.6
RTLL	**Cerro Villicun**	**0.46**	**41**	*e*P	Pg	20 48 47.4	+0.3
RTLL				IAML		20 48 54.6	
	comp=Z,1μm,0.5s						
AUSP	**Uspallata**	**0.72**	**221**	*e*P	Pb	20 48 52.4	-0.3
AMOG	**MOGNA**	**0.79**	**21**	*e*P	Pb	20 48 53.7	-0.1
ASAL	**Salagasta**	**0.91**	**180**	*e*P	Pb	20 48 56.2	+0.4
ARCO	**CERRO ARCO**	**1.16**	**184**	*e*P	Pg	20 49 02.0	+1.6
ARCO				IAML		20 49 25.5	
	comp=Z,191nm,0.3s						
AAGR	**Agrelo**	**1.40**	**180**	*e*P	Pg	20 49 06.0	+1.1
ACAN	**Cantantal**	**1.51**	**114**	*e*P	Pg	20 49 06.8	-0.3
MRA	**San Martin**	**2.74**	**106**	IAML		20 50 08.4	
	comp=Z,114nm,0.3s						
VCA	**Vinchina**	**2.98**	**11**	*e*P	Pb	20 49 31.0	-0.2
VCA				IAML		20 50 13.9	
	comp=Z,214nm,0.3s						
TCA	**Tanti**	**3.63**	**86**	IAML		20 50 34.9	
	comp=Z,108nm,1.0s						

*ISCJB **01** 20:52:48.3±0.5, 43.62S±0.03×172.96E±0.03, h11km±3km, mb3.6/3, MS3.2/2, Error ellipse: s-maj=5.3km s-min=2.8km az=140.8*
*WEL **01** 20:52:49.8, 44.S±1.×172.8E±0.6, h15km±1km, ML4.5/4*
*IDC **01** 20:52:49.5±1.3, 43.37S×172.87E, h0km, mb3.8/3, mb1 3.9/4, mb1mx3.7/41, mbtmp3.8/4, ML3.5/1, MS3.2/3, Ms1 3.3/3, ms1mx2.9/36, Error ellipse: s-maj=45.5km s-min=25.9km az=163.0*
*NEIC **01** 20:52:50.7±0.0, 43.55S×172.81E, h9km, ML4.3(WEL), After WEL.*

ISC 01 20:52:50.1±0.9, 43.55S±0.02×172.91E±0.03, h10km±6km, n139, σ1.27/163, mb3.6/3, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKCZ	**Okains Bay**	**0.20**	**149**	P	**Pg**	**20 52 56.5**	**+2.1**
CRLZ	**Canterbury Las**	**0.21**	**263**	*e*Pg	**Pg**	**20 52 54.5**	**-0.1**
CRLZ				*e*Sg	**Sg**	**20 52 56.8**	**-0.7**
CRLZ	**Canterbury Las**	**0.21**	**263**	P	**Pg**	**20 52 55.0**	**+0.4**
CRLZ				S	**Sg**	**20 52 57.2**	**-0.3**
MQZ	**McQueen's Vall**	**0.25**	**230**	*e*Pg	**Pg**	**20 52 54.9**	**-0.2**
MQZ				*e*Sg	**Sg**	**20 52 57.7**	**-0.8**
MQZ	**McQueen's Vall**	**0.25**	**230**	P	**Pg**	**20 52 54.9**	**-0.2**
MQZ				S	**Sg**	**20 52 57.9**	**-0.6**
AKCZ	**Akaroa Harbour**	**0.32**	**180**	P	**Pb**	**20 52 58.0**	**0.0**
AKCZ				S	**Sb**	**20 53 03.2**	**0.0**
EYCZ	**Eyrewell**	**0.42**	**287**	P	**Pg**	**20 52 58.0**	**-0.4**
EYCZ				S	**Sg**	**20 53 04.1**	**0.0**
OXZ	**Oxford**	**0.68**	**289**	*e*Pg	**Pg**	**20 53 02.5**	**-0.6**
OXZ				*e*Sg	**Sg**	**20 53 11.2**	**-0.8**
OXZ	**Oxford**	**0.68**	**289**	P	**Pg**	**20 53 02.5**	**-0.6**
OXZ				S	**Sg**	**20 53 12.1**	**+0.1**
LTZ	**Lake Taylor**	**0.90**	**328**	*e*Pn	**Pb**	**20 53 07.8**	**+0.1**
LTZ				*e*Sg	**Sb**	**20 53 19.7**	**-0.1**
LTZ	**Lake Taylor**	**0.90**	**328**	P	**Pb**	**20 53 07.8**	**+0.1**
LTZ				S	**Sb**	**20 53 20.1**	**+0.4**
KHZ	**Kahutara**	**1.22**	**22**	*e*Pn	**Pg**	**20 53 13.0**	**-0.6**
KHZ	**Kahutara**	**1.22**	**22**	P	**Pg**	**20 53 12.9**	**-0.6**
INZ	**Inchbonnie**	**1.35**	**307**	P	**Pn**	**20 53 14.2**	**-0.8**
RPZ	**Rata Peaks**	**1.36**	**262**	Pg	**Pn**	**20 53 14.0**	**-1.1**
	334nm,0.3s,baz=114,slow=2.6,SNR=304						
RPZ				Lg	Lg	20 53 30.9	
	398nm,0.3s,baz=208,slow=4.0,SNR=18						
RPZ	**Rata Peaks**	**1.36**	**262**	*e*Pn	**Pn**	**20 53 13.9**	**-1.2**
RPZ				*e*Sn	**Sb**	**20 53 30.5**	**-2.6**
RPZ				*e*Sn	**Sn**	**20 53 30.9**	**-2.3**
RPZ	**Rata Peaks**	**1.36**	**262**	P	**Pn**	**20 53 14.0**	**-1.1**
WVZ	**Waitaha Valley**	**1.66**	**286**	*e*Pn	**Pn**	**20 53 19.0**	**-0.2**
WVZ	**Waitaha Valley**	**1.66**	**286**	P	**Pn**	**20 53 18.6**	**-0.5**
THZ	**Tophouse**	**1.79**	**360**	*e*Pn	**Pn**	**20 53 20.9**	**-0.1**
THZ	**Tophouse**	**1.79**	**360**	P	**Pn**	**20 53 20.9**	**-0.1**
BSWZ	**Blackbirch Sta**	**1.96**	**22**	*e*Pn	**Pn**	**20 53 23.9**	**+0.5**
BSWZ	**Blackbirch Sta**	**1.96**	**22**	P	**Pn**	**20 53 23.9**	**+0.5**
DSZ	**Denniston Nort**	**1.98**	**335**	*e*Pn	**Pn**	**20 53 23.7**	**+0.1**
DSZ				*e*Sn	**Sg**	**20 53 57.8**	**+4.1**
DSZ				*e*		20 54 02.1	
DSZ	**Denniston Nort**	**1.98**	**335**	P	**Pn**	**20 53 23.7**	**+0.1**
CMWZ	**Cape Campbell**	**2.04**	**29**	P	**Pb**	**20 53 25.2**	**-1.9**
LBZ	**Lake Benmore**	**2.14**	**246**	*e*Pn	**Pn**	**20 53 25.4**	**-0.5**
LBZ				*e*Sn	**Sb**	**20 53 55.4**	**-0.1**
LBZ	**Lake Benmore**	**2.14**	**246**	P	**Pn**	**20 53 25.3**	**-0.5**
ODZ	**Otahua Downs**	**2.21**	**227**	*e*Pn	**Pn**	**20 53 25.9**	**-0.9**
ODZ				*e*Sn	**Sb**	**20 53 58.2**	**+0.6**
ODZ	**Otahua Downs**	**2.21**	**227**	P	**Pn**	**20 53 25.8**	**-0.9**
TUWZ	**Tuamarina**	**2.25**	**20**	*e*Pn	**Pn**	**20 53 27.5**	**+0.2**
TUWZ	**Tuamarina**	**2.25**	**20**	P	**Pn**	**20 53 27.6**	**+0.4**
FOZ	**Fox Glacier**	**2.25**	**269**	*e*Pn	**Pn**	**20 53 27.7**	**+0.3**
FOZ				*e*Sn	**Sg**	**20 54 07.8**	**+5.4**
FOZ	**Fox Glacier**	**2.25**	**269**	P	**Pn**	**20 53 28.0**	**+0.7**
NNZ	**Nelson**	**2.35**	**9**	*e*Pn	**Pn**	**20 53 29.3**	**+0.6**
NNZ				*e*Lg	Lg	20 54 24.6	
NNZ	**Nelson**	**2.35**	**9**	P	**Pn**	**20 53 29.5**	**+0.8**
TCW	**Tory Channel**	**2.54**	**24**	*e*Pn	**Pn**	**20 53 31.0**	**-0.4**
TCW	**Tory Channel**	**2.54**	**24**	P	**Pn**	**20 53 31.0**	**-0.4**
BHW	**Baring Head**	**2.58**	**35**	*e*Pn	**Pn**	**20 53 31.7**	**-0.1**
BHW				*e*Sn	**Sn**	**20 54 02.8**	**-0.4**
BHW	**Baring Head**	**2.58**	**35**	P	**Pn**	**20 53 31.8**	**-0.1**
SNZO	**South Karori**	**2.60**	**31**	*e*Pn	**Pn**	**20 53 31.9**	**-0.1**
PLWZ	**Palliser**	**2.63**	**42**	*e*Pn	**Pn**	**20 53 32.1**	**-0.4**
PLWZ	**Palliser**	**2.63**	**42**	P	**Pn**	**20 53 32.2**	**-0.4**
WEL	**Wellington**	**2.65**	**32**	*e*Pn	**Pn**	**20 53 32.9**	**+0.2**
WEL				*e*Sn	**Sn**	**20 54 05.6**	**+0.8**
QRZ	**Quartz Range**	**2.74**	**354**	*e*Pn	**Pn**	**20 53 34.1**	**+0.1**
QRZ				*e*Lg	Lg	20 54 27.7	
QRZ	**Quartz Range**	**2.74**	**354**	P	**Pn**	**20 53 34.1**	**+0.1**
MSWZ	**Moikau Station**	**2.74**	**40**	*e*Pn	**Pn**	**20 53 33.6**	**-0.5**
MSWZ	**Moikau Station**	**2.74**	**40**	P	**Pn**	**20 53 33.7**	**-0.4**
DUWZ	**D'Urville Isla**	**2.84**	**16**	P	**Pn**	**20 53 36.4**	**+0.9**
PAWZ	**Paruwai Farm**	**2.85**	**42**	P	**Pn**	**20 53 35.1**	**-0.5**
HHSZ	**Highcliff Hill**	**2.86**	**214**	*e*Pn	**Pn**	**20 53 34.2**	**-1.5**
HHSZ	**Highcliff Hill**	**2.86**	**214**	P	**Pn**	**20 53 35.3**	**-0.4**
CAW	**Cannon Point**	**2.92**	**34**	P	**Pn**	**20 53 36.4**	**0.0**
TRWZ	**Traveller**	**2.97**	**45**	*e*Pn	**Pn**	**20 53 36.9**	**-0.3**
TRWZ	**Traveller**	**2.97**	**45**	P	**Pn**	**20 53 37.0**	**-0.3**
JCZ	**Jackson Bay**	**3.03**	**259**	P	**Pn**	**20 53 37.7**	**-0.4**
MTW	**Mount Morrison**	**3.06**	**40**	*e*Pn	**Pn**	**20 53 37.8**	**-0.7**
MTW	**Mount Morrison**	**3.06**	**40**	P	**Pn**	**20 53 37.8**	**-0.7**
KIW	**Kapiti Island**	**3.07**	**30**	*e*Pn	**Pn**	**20 53 38.5**	**-0.1**
KIW	**Kapiti Island**	**3.07**	**30**	P	**Pn**	**20 53 38.5**	**-0.1**
WKZ	**Wanaka**	**3.08**	**244**	*e*Pn	**Pn**	**20 53 38.7**	**0.0**
WKZ				*e*Sn	**Sb**	**20 54 25.3**	**+2.8**
WKZ	**Wanaka**	**3.08**	**244**	P	**Pn**	**20 53 38.1**	**-0.7**
EAZ	**Earnscleugh**	**3.08**	**236**	*e*Pn	**Pn**	**20 53 38.0**	**-0.8**
EAZ				*e*Lg	Lg	20 54 31.3	
EAZ	**Earnscleugh**	**3.08**	**236**	P	**Pn**	**20 53 38.1**	**-0.8**
OGWZ	**Otaki Gorge**	**3.20**	**32**	P	**Pn**	**20 53 40.0**	**-0.4**
HOWZ	**Holdsworth Sta**	**3.28**	**37**	P	**Pn**	**20 53 40.9**	**-0.6**
TMWZ	**Te Maipa**	**3.29**	**43**	P	**Pn**	**20 53 41.5**	**-0.1**
TUZ	**Tuapeka**	**3.35**	**223**	*e*Pn	**Pn**	**20 53 42.2**	**-0.2**
TUZ				*e*Lg	Lg	20 54 46.6	
TUZ	**Tuapeka**	**3.35**	**223**	P	**Pn**	**20 53 41.7**	**-0.7**
MRZ	**Mangatainoka R**	**3.50**	**35**	*e*Pn	**Pn**	**20 53 43.7**	**-0.8**
MRZ	**Mangatainoka R**	**3.50**	**35**	P	**Pn**	**20 53 43.8**	**-0.8**
TIWZ	**Tintock**	**3.54**	**45**	P	**Pn**	**20 53 45.1**	**-0.1**
PRWZ	**Puri Road**	**3.76**	**38**	P	**Pn**	**20 53 47.3**	**-0.7**
BFZ	**Birch Farm**	**3.79**	**42**	*e*Pn	**Pn**	**20 53 47.3**	**-1.1**
BFZ				*e*Sn	**Sn**	**20 54 33.1**	**0.0**
BFZ				*e*Sg	**Sb**	**20 54 39.6**	**-3.2**
BFZ	**Birch Farm**	**3.79**	**42**	P	**Pn**	**20 53 47.3**	**-1.1**
MLZ	**Mavora Lakes**	**3.88**	**240**	*e*Pn	**Pn**	**20 53 48.7**	**-1.1**
MLZ				*e*Lg	Lg	20 55 03.5	
MLZ	**Mavora Lakes**	**3.88**	**240**	P	**Pn**	**20 53 49.0**	**-0.8**
MLZ				P	**Pn**	**20 53 49.0**	**-0.8**
SYZ	**Scrubby Hill**	**4.01**	**221**	*e*Pn	**Pn**	**20 53 51.5**	**0.0**
SYZ				*e*Lg	Lg	20 55 10.3	
SYZ	**Scrubby Hill**	**4.01**	**221**	P	**Pn**	**20 53 51.6**	**+0.1**
DVHZ	**Dannevirke**	**4.05**	**38**	P	**Pn**	**20 53 50.9**	**-1.2**
ANWZ	**Angora Road**	**4.07**	**42**	P	**Pn**	**20 53 51.4**	**-0.9**
WAZ	**Wanganui**	**4.10**	**23**	*e*Sn	**Sn**	**20 54 45.2**	**+4.6**
WAZ				*e*		20 55 34.4	
WAZ	**Wanganui**	**4.10**	**23**	P	**Pn**	**20 53 55.1**	**+2.4**
TSZ	**Takapari Road**	**4.17**	**34**	P	**Pn**	**20 53 53.6**	**-0.1**
WHZ	**Wether Hill Ro**	**4.25**	**235**	*e*Pn	**Pn**	**20 53 52.8**	**-2.0**
WHZ				*e*Sg	**Sg**	**20 55 07.5**	**+1.1**
WHZ				*e*Lg	Lg	20 55 16.3	
WHZ	**Wether Hill Ro**	**4.25**	**235**	P	**Pn**	**20 53 53.0**	**-1.7**
PRHZ	**Porangahau**	**4.30**	**42**	P	**Pn**	**20 53 53.3**	**-2.2**
PREZ	**Palmer Road**	**4.30**	**13**	P	**Pn**	**20 53 58.1**	**+2.5**
KHEZ	**Kahui Hut**	**4.33**	**11**	Pn	**Pn**	**20 53 57.7**	**+1.7**
WPHZ	**Waipukurau**	**4.37**	**38**	P	**Pn**	**20 53 56.4**	**0.0**
PNHZ	**Pukenui**	**4.39**	**35**	P	**Pn**	**20 53 56.0**	**-0.7**
PKE	**Pukeiti**	**4.42**	**11**	P	**Pn**	**20 53 59.0**	**+1.8**
DCZ	**Deep Cove**	**4.54**	**243**	*e*Pn	**Pn**	**20 53 57.8**	**-1.0**
DCZ				*e*Sg	**Sg**	**20 55 16.8**	**+0.9**
DCZ				*e*Lg	Lg	20 55 21.6	
DCZ	**Deep Cove**	**4.54**	**243**	P	**Pn**	**20 53 58.1**	**-0.7**
PKVZ	**Pokaka**	**4.63**	**24**	P	**Pn**	**20 54 00.8**	**+0.7**
VRZ	**Vera Road**	**4.63**	**18**	P	**Pn**	**20 54 01.6**	**+1.5**
MOWZ	**Moawhango**	**4.66**	**28**	P	**Pn**	**20 54 00.3**	**-0.1**
KRHZ	**Kereru**	**4.68**	**35**	P	**Pn**	**20 53 59.8**	**-1.0**
TRVZ	**Turoa**	**4.68**	**26**	P	**Pn**	**20 54 01.6**	**+0.6**
BHHZ	**Black Hill Sta**	**4.69**	**31**	P	**Pn**	**20 54 01.7**	**+0.7**
DRZ	**Dome Shelter**	**4.71**	**26**	P	**Pn**	**20 54 03.1**	**+1.6**
WHVZ	**Whangaehu Hut**	**4.71**	**26**	P	**Pn**	**20 54 01.9**	**+0.5**
FWVZ	**Far West T-bar**	**4.73**	**26**	P	**Pn**	**20 54 01.7**	**+0.2**
TUVZ	**Tukino**	**4.75**	**27**	P	**Pn**	**20 54 02.1**	**+0.3**
COVZ	**Chateau Observ**	**4.77**	**25**	P	**Pn**	**20 54 03.3**	**+1.2**
KAHZ	**Kahuranaki**	**4.78**	**40**	P	**Pn**	**20 54 00.4**	**-1.8**
APZ	**The Paps**	**4.79**	**225**	P	**Pn**	**20 54 02.0**	**-0.2**
NGZ	**Ngauruhoe**	**4.81**	**26**	P	**Pn**	**20 54 03.0**	**+0.3**
TWVZ	**Taurewa**	**4.86**	**24**	P	**Pn**	**20 54 04.0**	**+0.7**
WTVZ	**West Tongariro**	**4.87**	**25**	P	**Pn**	**20 54 03.6**	**+0.3**
KWHZ	**Kaweka Forest**	**4.89**	**34**	P	**Pn**	**20 54 03.5**	**-0.2**
KRVZ	**Karewarewa**	**4.90**	**26**	P	**Pn**	**20 54 05.2**	**+1.4**
MCHZ	**McNeill Hill**	**4.99**	**36**	P	**Pn**	**20 54 05.5**	**+0.6**
BKZ	**Black Stump Fm**	**5.14**	**33**	*e*Pn	**Pn**	**20 54 06.6**	**-0.5**
BKZ	**Black Stump Fm**	**5.14**	**33**	P	**Pn**	**20 54 06.6**	**-0.6**
PYZ	**Puysegur Point**	**5.15**	**237**	*e*Pn	**Pn**	**20 54 04.8**	**-2.3**
HIZ	**Hauiti**	**5.24**	**17**	*e*Pn	**Pn**	**20 54 09.1**	**+0.7**
HIZ	**Hauiti**	**5.24**	**17**	P	**Pn**	**20 54 09.0**	**+0.7**
MRHZ	**Matea Rd**	**5.40**	**30**	P	**Pn**	**20 54 09.2**	**-1.5**
URZ	**Urewera**	**6.17**	**32**	Pn	**Pn**	**20 54 19.3**	**-1.8**
	1.3nm,0.3s,baz=266,slow=3.7,SNR=11						
URZ				Sn	**Sn**	**20 55 26.2**	**-5.4**
	3.7nm,0.3s,baz=126,slow=15,SNR=7.3						
URZ				LR	LR	20 57 19.4	
	comp=Z,399nm,20.3s,baz=216,slow=45						
MXZ	**Matakaoa Point**	**7.25**	**36**	*e*Pn	**Pn**	**20 54 33.2**	**-2.8**
OUZ	**Omahuta**	**8.33**	**4**	*e*Pn	**Pn**	**20 54 48.3**	**-2.6**
STKA	**Stephens Creek**	**27.22**	**285**	P	**P**	**20 58 36.2**	**+2.2**
	1.2nm,0.8s,baz=120,slow=20,SNR=2.9						
ASAR	**Alice Springs**	**37.62**	**289**	P	**P**	**21 00 05.1**	**0.0**
	0.7nm,0.7s,baz=131,slow=7.8,SNR=11						
ASAR				PcP	**PcP**	**21 02 21.3**	**-1.4**
	0.7nm,1.1s,baz=128,slow=4.1,SNR=3.5						
WR1	**Warramunga Arr**	**39.87**	**294**	*e*P	**P**	**21 00 23.9**	**0.0**
WR1				*e*S	S	21 06 19.6	-8.9
WRA	**Warramunga Arr**	**39.87**	**294**	P	**P**	**21 00 23.9**	**0.0**
	0.8nm,0.5s,baz=132,slow=7.7,SNR=4.9						
WRA				S	S	21 06 19.6	-8.9
	0.5nm,1.0s,baz=159,slow=23,SNR=3.7						
JHJ	**Hachijo jima 2**	**82.09**	**332**	LR	LR	21 41 30.7	
	comp=Z,15nm,19.2s,baz=0.0,slow=36						
CMAR	**Chiang Mai Arr**	**91.46**	**294**	LR	LR	21 49 40.4	
	comp=Z,6.0nm,18.5s,baz=40,slow=37						
AGOC	**Agoura**	**99.25**	**51**	*e*P	**Pdif**	**21 06 30.8**	**-1.0**
MK32	**Makanchi Array**	**120.28**	**307**	*e*PKPdf	**PKPdf**	**21 11 40.9**	**+0.1**
MKAR	**Makanchi Array**	**120.28**	**307**	PKP	**PKPdf**	**21 11 40.9**	**+0.1**
	0.6nm,0.9s,baz=122,slow=2.2,SNR=4.0						
KURK	**Kurchatov**	**124.37**	**310**	*e*PKPdf	**PKPdf**	**21 11 48.5**	**+0.1**
KURBB	**Kurchatov Arra**	**124.38**	**310**	PKP	**PKPdf**	**21 11 48.5**	**+0.1**
	0.5nm,0.7s,baz=102,slow=1.8,SNR=4.1						
TORD	**Torodi Ar. Bea**	**148.78**	**197**	PKPbc	**PKPab**	**21 12 40.4**	**-1.2**
	1.2nm,0.8s,baz=158,slow=3.2,SNR=4.8						
TOA1	**Torodi Ar. Sit**	**148.78**	**197**	*e*PKPbc	**PKPab**	**21 12 40.4**	**-1.3**
ARA0	**ARCESS Array S**	**149.11**	**338**	*e*PKPbc	**PKPbc**	**21 12 38.6**	**+1.4**
ARCES	**ARCESS Array B**	**149.11**	**338**	PKPbc	**PKPbc**	**21 12 38.6**	**+1.4**
	4.1nm,1.0s,baz=73,slow=3.1,SNR=4.1						
BR101	**Keskin Array S**	**149.54**	**277**	*e*PKPbc	**PKPbc**	**21 12 39.8**	**+0.4**
BRTR	**Keskin Array B**	**149.54**	**277**	PKPbc	**PKPbc**	**21 12 39.8**	**+0.4**
	0.8nm,0.8s,baz=118,slow=3.7,SNR=6.1						

*INMG **01** 21:06:38.2±1.1, 37.16N×13.28W, h10km, ML2.1, Error ellipse: s-maj=9.6km s-min=8.9km az=49.0*
*MDD **01** 21:06:39.2±2.0, 37.24N×12.63W, h0km, mb3.5/2, Error ellipse: s-maj=18.0km s-min=17.0km az=85.0, PRXIMO*
*CSEM **01** 21:06:40.8±0.5, 37.39N×12.52W, h10km, mb3.5, Error ellipse: s-maj=9.8km s-min=8.5km az=110.0*
*IGIL **01** 21:06:41.9, 37.21N×12.48W, h1km*

ISC 01 21:06:40.0±2.9, 37.32N±0.08×12.3W±0.1, h10km, n70, σ2.69/113, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**2.81**	**93**	*e*Pn	**Pn**	**21 07 26.4**	**+1.5**
PFVI	**Vila Bisbo**	**2.81**	**93**	P	**Pn**	**21 07 26.3**	**+1.4**
	1.5nm,0.1s,SNR=4.0						
PFVI				S	**Sn**	**21 08 01.2**	**+2.4**
	0.9nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**2.81**	**93**	*e*Pn	**Pn**	**21 07 26.4**	**+1.5**
PTEO	**Sao Teotonio**	**2.88**	**84**	*e*Pn	**Pb**	**21 07 29.4**	**-2.1**
PTEO	**Sao Teotonio**	**2.88**	**84**	P	**Pb**	**21 07 29.4**	**-2.1**
PTEO	**Sao Teotonio**	**2.88**	**84**	P	**Pb**	**21 07 29.4**	**-2.1**
PMAFR	**Mafra**	**2.91**	**55**	*e*Pn	**Pn**	**21 07 28.4**	**+2.1**
PMAFR				*e*Sn	**Sb**	**21 08 06.8**	**-0.8**
PMAFR				A	A	21 08 09.4	
	11nm,0.5s						
PMAFR	**Mafra**	**2.91**	**55**	P	**Pn**	**21 07 28.2**	**+1.9**
	1.2nm,0.1s,SNR=7.9						
PMAFR				S	**Sn**	**21 08 04.0**	**+2.6**
	2.2nm,0.1s,SNR=7.9						
PMAFR	**Mafra**	**2.91**	**55**	*e*Pn	**Pn**	**21 07 28.4**	**+2.1**
PMAFR				S	**Sn**	**21 08 04.0**	**+2.6**
	2.2nm,0.1s,SNR=7.9						
PMAFR				*e*Sn	**Sb**	**21 08 06.8**	**-0.8**
MORF	**Marmelete**	**2.94**	**89**	*e*P	**Pb**	**21 07 29.3**	**-3.1**
MORF	**Marmelete**	**2.94**	**89**	*e*Pn	**Pb**	**21 07 30.2**	**-2.2**
MORF	**Marmelete**	**2.94**	**89**	P	**Pb**	**21 07 29.3**	**-3.1**
MORF	**Marmelete**	**2.94**	**89**	P	**Pb**	**21 07 29.3**	**-3.1**
MORF	**Marmelete**	**2.94**	**89**	*e*Pn	**Pb**	**21 07 30.2**	**-2.2**
PNCL	**Nicolau / Gran**	**3.12**	**74**	*e*Pn	**Pb**	**21 07 32.7**	**-2.8**
PNCL				*e*Sn	**Sb**	**21 08 10.4**	**-3.2**
PNCL				A	A	21 08 16.4	
	2.2nm,0.6s						
PNCL	**Nicolau / Gran**	**3.12**	**74**	*e*Pn	**Pb**	**21 07 32.7**	**-2.8**
PNCL				*e*Sn	**Sb**	**21 08 10.4**	**-3.2**
MESJ	**Messejana**	**3.31**	**80**	*e*P	**Pn**	**21 07 34.9**	**+3.1**
MESJ	**Messejana**	**3.31**	**80**	*e*Sn	**Sb**	**21 08 16.3**	**-2.8**
MESJ	**Messejana**	**3.31**	**80**	P	**Pn**	**21 07 34.9**	**+3

EADA				S		Sn	21 09 26.1	+3.4
	0.4nm,0.1s,SNR=7.9							
PAB	San Pablo	6.65	68	P		Pn	21 08 20.1	+2.3
	0.1nm,0.1s,SNR=7.9							
PAB	San Pablo	6.65	68	P		Pn	21 08 20.1	+2.3
	0.1nm,0.1s,SNR=7.9							
ESDC	Sonseca Array	6.97	68	P		Pn	21 08 23.9	+1.7
	0.1nm,0.3s,baz=252,slow=13,SNR=3.5							
ESDC	Sonseca Array	6.97	68	P		Pn	21 08 23.9	+1.7
	0.1nm,0.3s,baz=252,slow=13,SNR=3.5							

IDC 01 21:06:59.0±1.1, 10°.34N×84°.95W, h61km±45km, mb3.3/2, mb1 3.8/2, mb1mx3.1/50, mbtmp3.5/2, Error ellipse: s-maj=104.4km s-min=6.9km az=8.0, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTS	JuntasAbangare	0.05	188	P	Pn	21 07 08.4	+0.3
	baz=7.5,slow=17						
JTS				S	Sn	21 07 15.7	+1.0
	2μm,0.3s,baz=342,slow=20,SNR=144						
TXAR	Lajitas Array	25.75	320	P	P	21 12 24.6	+0.4
	0.6nm,0.5s,baz=138,slow=9.8,SNR=10.0						
NVAR	Mina Array Bea	40.90	319	P	P	21 14 35.2	-0.4
	0.4nm,0.6s,baz=121,slow=6.6,SNR=3.9						
WRA	Warramunga Arr	140.98	251	PKP	PKPdf	21 26 22.8	-0.4
	0.2nm,0.5s,baz=91,slow=2.6,SNR=5.2						

*MDD **01** 21:11:03.1±1.9, 37°.30N×12°.65W, h0km, mb3.7/4, Error ellipse: s-maj=17.0km s-min=16.6km az=125.0, PRXIMO*
*INMG **01** 21:11:03.6±1.0, 37°.17N×13°.15W, h10km, ML2.1, Error ellipse: s-maj=8.2km s-min=5.8km az=101.0*
*IGIL **01** 21:11:03.1, 37°.23N×12°.83W, h20km, ML1.3*
*CSEM **01** 21:11:06.3±0.5, 37°.35N×12°.55W, h109km±11km, mb3.7, Error ellipse: s-maj=12.5km s-min=7.0km az=98.0*

ISC 01 21:11:02.7±3.0, 37°.39N±0°.08×12°.5W±0°.1, h10km, n73, σ2°38/126, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	2.94	94	P	Pn	21 11 51.3	+1.8
	1.8nm,0.2s,SNR=7.9						
PFVI				S	Sn	21 12 25.3	+0.5
	1.6nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	2.94	94	P	Pn	21 11 51.3	+1.8
	1.8nm,0.2s,SNR=7.9						
PMAFR	Mafra	2.98	57	ePn	Pb	21 11 53.0	-2.9
PMAFR				eSn	Sn	21 12 29.7	+3.9
PMAFR				A	A	21 12 56.7	
	8.6nm,0.6s						
PMAFR	Mafra	2.98	57	P	Pn	21 11 52.8	+2.8
	4.7nm,0.2s,SNR=7.9						
PMAFR				S	Sn	21 12 27.6	+1.7
	2.4nm,0.1s,SNR=7.9						
PMAFR	Mafra	2.98	57	ePn	Pb	21 11 53.0	-2.9
PMAFR				S	Sn	21 12 27.6	+1.7
	2.4nm,0.1s,SNR=7.9						
PMAFR				eSn	Sn	21 12 29.7	+3.9
PTEO	Sao Teotonio	3.01	86	ePn	Pn	21 11 52.6	+2.2
PTEO				eSn	Sb	21 12 31.9	-1.2
PTEO				A	A	21 12 36.6	
	6.4nm,0.7s						
PTEO	Sao Teotonio	3.01	86	P	Pn	21 11 52.6	+2.2
PTEO				S	Sb	21 12 31.9	-1.2
	3.2nm,0.7s						
PTEO	Sao Teotonio	3.01	86	P	Pn	21 11 52.6	+2.2
PTEO				S	Sb	21 12 31.9	-1.2
	3.2nm,0.7s						
MORF	Marmelete	3.07	90	eP	Pn	21 11 52.6	+1.3
MORF	Marmelete	3.07	90	ePn	Pn	21 11 53.0	+1.7
MORF	Marmelete	3.07	90	P	Pn	21 11 52.6	+1.3
MORF	Marmelete	3.07	90	P	Pn	21 11 52.6	+1.3
MORF	Marmelete	3.07	90	ePn	Pn	21 11 53.0	+1.7
PNCL	Nicolau / Gran	3.23	76	ePn	Pb	21 11 56.5	-3.6
PNCL				eSn	Sn	21 12 34.0	+2.1
PNCL				A	A	21 12 40.7	
	2.0nm,0.4s						
PNCL	Nicolau / Gran	3.23	76	ePn	Pb	21 11 56.5	-3.6
PNCL				eSn	Sn	21 12 34.0	+2.1
MESJ	Messejana	3.43	81	eP	Pn	21 11 57.9	+1.7
MESJ				eS	Sn	21 12 37.9	+1.1
MESJ				AML	AML	21 12 39.0	
	comp=N,0.8nm,0.2s						
MESJ	Messejana	3.43	81	ePn	Pn	21 11 59.1	+2.9
MESJ				eSn	Sn	21 12 40.7	+3.8
MESJ				A	A	21 12 47.9	
	comp=N,2.4nm,0.8s						
MESJ	Messejana	3.43	81	P	Pn	21 11 57.9	+1.7
MESJ				S	Sn	21 12 37.9	+1.1
	comp=N,0.8nm,0.2s						
MESJ	Messejana	3.43	81	P	Pn	21 11 57.9	+1.7
MESJ	Messejana	3.43	81	ePn	Pn	21 11 59.1	+2.9
MESJ				S	Sn	21 12 37.9	+1.1
	comp=N,0.8nm,0.2s						
MESJ				eSn	Sn	21 12 40.7	+3.8
PCVE	Castro Verde	3.56	85	ePn	Pn	21 12 00.4	+2.5
PCVE				eSn	Sn	21 12 43.0	+3.0
PCVE	Castro Verde	3.56	85	P	Pn	21 12 00.4	+2.5
PCVE				S	Sn	21 12 43.0	+3.0
PCVE	Castro Verde	3.56	85	P	Pn	21 12 00.4	+2.5
PCVE				S	Sn	21 12 43.0	+3.0
ALMR	Almeirim	3.56	59	eP	Pn	21 12 00.0	+2.1
ALMR	Almeirim	3.56	59	ePn	Pn	21 12 01.1	+3.2
ALMR				eSn	Sn	21 12 42.9	+2.9
ALMR	Almeirim	3.56	59	P	Pn	21 12 00.0	+2.1
ALMR				S	Sn	21 12 42.9	+2.9
ALMR	Almeirim	3.56	59	P	Pn	21 12 00.0	+2.1
ALMR	Almeirim	3.56	59	ePn	Pn	21 12 01.1	+3.2
ALMR				S	Sn	21 12 42.9	+2.9
PBDV	Barranco-do-Ve	3.65	91	ePn	Pn	21 12 01.9	+2.7
PBDV				eSn	Sn	21 12 45.3	+3.1
PBDV				A	A	21 12 49.5	
	comp=N,2.5nm,0.7s						
PBDV	Barranco-do-Ve	3.65	91	P	Pn	21 12 01.9	+2.7
PBDV				S	Sn	21 12 45.3	+3.1
	comp=N,2.5nm,0.7s						
PBDV	Barranco-do-Ve	3.65	91	P	Pn	21 12 01.9	+2.7
PBDV				S	Sn	21 12 45.3	+3.1
	comp=N,2.5nm,0.7s						
EVO	Evora	3.73	71	ePn	Pn	21 12 03.3	+3.0
EVO				eSn	Sn	21 12 47.4	+3.2
EVO	Evora	3.73	71	P	Pn	21 12 03.3	+3.0
EVO				S	Sn	21 12 47.4	+3.2
EVO	Evora	3.73	71	P	Pn	21 12 03.3	+3.0
EVO				S	Sn	21 12 47.4	+3.2
PBEJ	Beja	3.73	79	eSn	Sb	21 12 51.2	-2.7
PBEJ	Beja	3.73	79	eSn	Sb	21 12 51.2	-2.7
PVAQ	Vaqueiros	3.81	88	ePn	Pn	21 12 03.6	+2.2
PVAQ				eSn	Sn	21 12 48.5	+2.3
PVAQ				A	A	21 12 52.1	
	comp=N,2.0nm,0.9s						
PVAQ	Vaqueiros	3.81	88	P	Pn	21 12 03.6	+2.2
PVAQ				S	Sn	21 12 48.5	+2.3
	comp=N,2.0nm,0.9s						
PVAQ	Vaqueiros	3.81	88	P	Pn	21 12 03.6	+2.2
PVAQ				S	Sn	21 12 48.5	+2.3
	comp=N,2.0nm,0.9s						
EGRO	El Granado	3.99	86	P	Pn	21 12 06.1	+2.2
	comp=N,0.9nm,0.1s,SNR=7.9						
EGRO				S	Sn	21 12 50.9	+0.1
	comp=N,0.7nm,0.1s,SNR=7.9						
EGRO	El Granado	3.99	86	P	Pn	21 12 06.1	+2.2
	comp=N,0.9nm,0.1s,SNR=7.9						
EGRO				S	Sn	21 12 50.9	+0.1
	comp=N,0.7nm,0.1s,SNR=7.9						
PESTR	Estremoz	4.14	68	ePn	Pn	21 12 09.2	+3.2
PESTR				eSn	Sn	21 12 57.5	+2.9
PESTR				A	A	21 13 00.5	
	comp=N,1.5nm,0.6s						
PESTR	Estremoz	4.14	68	ePn	Pn	21 12 09.2	+3.2
PESTR				eSn	Sn	21 12 57.5	+2.9
PBAR	Barrancos	4.40	78	ePn	Pn	21 12 12.1	+2.6
PBAR				eSn	Sn	21 13 03.6	+2.8
PBAR				A	A	21 13 12.2	
	comp=N,2.8nm,0.7s						
PBAR	Barrancos	4.40	78	P	Pn	21 12 12.1	+2.6
PBAR				S	Sn	21 13 03.6	+2.8
	comp=N,2.8nm,0.7s						
PBAR	Barrancos	4.40	78	P	Pn	21 12 12.1	+2.6
PBAR				S	Sn	21 13 03.6	+2.8
	comp=N,2.8nm,0.7s						
PMRV	Marv??o	4.50	61	ePn	Pn	21 12 13.8	+2.9
PMRV				eSn	Sn	21 13 05.5	+2.2
PMRV				A	A	21 13 12.2	
	comp=N,1.8nm,0.3s						
PMRV	Marv??o	4.50	61	P	Pn	21 12 13.8	+2.9
PMRV				S	Sn	21 13 05.5	+2.2
	comp=N,1.8nm,0.3s						
PMRV	Marv??o	4.50	61	P	Pn	21 12 13.8	+2.9
PMRV				S	Sn	21 13 05.5	+2.2
	comp=N,1.8nm,0.3s						
EBAD	Badajoz	4.54	71	P	Pn	21 12 13.7	+2.3
	comp=N,0.7nm,0.1s,SNR=6.3						
EBAD				S	Sn	21 13 05.1	+0.8
	comp=N,1.7nm,0.2s,SNR=7.9						
EBAD	Badajoz	4.54	71	P	Pn	21 12 13.7	+2.3
	comp=N,0.7nm,0.1s,SNR=6.3						
EBAD				S	Sn	21 13 05.1	+0.8
	comp=N,1.7nm,0.2s,SNR=7.9						
PCBR	Castelo Branco	4.63	57	ePn	Pn	21 12 15.9	+3.2
PCBR				eSn	Sn	21 13 08.7	+2.1
PCBR	Castelo Branco	4.63	57	P	Pn	21 12 15.9	+3.2
PCBR				S	Sn	21 13 08.7	+2.1
PCBR	Castelo Branco	4.63	57	P	Pn	21 12 15.9	+3.2
PCBR				S	Sn	21 13 08.7	+2.1
EMIN	Mina Concepcio	4.64	84	P	Pn	21 12 14.5	+1.6
	comp=N,0.4nm,0.2s,SNR=7.9						
EMIN				S	Sn	21 13 06.6	-0.3
	comp=N,0.4nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	4.64	84	P	Pn	21 12 14.5	+1.6
	comp=N,0.4nm,0.2s,SNR=7.9						
PVIS	Viseu	4.89	46	eSn	Sn	21 13 15.7	+2.7
PVIS	Viseu	4.89	46	Sn	Sn	21 13 15.7	+2.7
PVIS	Viseu	4.89	46	Sn	Sn	21 13 15.7	+2.7
POLO	Lamas de Olo	5.40	41	eSn	Sn	21 13 26.1	+0.5
POLO	Lamas de Olo	5.40	41	eSn	Sn	21 13 26.1	+0.5
PGAV	Gavieira, Arco	5.62	34	eSn	Sn	21 13 30.9	-0.1
PGAV	Gavieira, Arco	5.62	34	eSn	Sn	21 13 30.9	-0.1
ELOB	Lobios	5.64	36	S	Sn	21 13 30.9	-0.5
	comp=N,0.3nm,0.2s,SNR=7.9						
ELOB	Lobios	5.64	36	S	Sn	21 13 30.9	-0.5
	comp=N,0.3nm,0.2s,SNR=7.9						
ECAB	El Cabril	5.66	81	P	Pn	21 12 28.9	+2.1
	comp=N,0.5nm,0.1s,SNR=7.4						
ECAB				S	Sn	21 13 31.4	-0.4
	comp=N,0.2nm,0.2s,SNR=7.9						
ECAB	El Cabril	5.66	81	P	Pn	21 12 28.9	+2.1
	comp=N,0.5nm,0.1s,SNR=7.4						
ECAB				S	Sn	21 13 31.4	-0.4
	comp=N,0.2nm,0.2s,SNR=7.9						
MVO	Moncorvo	5.68	47	P	Pn	21 12 29.3	+2.1
	comp=N,0.8nm,0.3s,SNR=7.9						
MVO				S	Sn	21 13 32.5	0.0
	comp=N,0.4nm,0.2s,SNR=7.9						
MVO	Moncorvo	5.68	47	P	Pn	21 12 29.3	+2.1
	comp=N,0.8nm,0.3s,SNR=7.9						
MVO				S	Sn	21 13 32.5	0.0
	comp=N,0.4nm,0.2s,SNR=7.9						
MVO				eSn	Sn	21 13 33.3	+0.8
EPLA	Plasencia	5.69	60	P	Pn	21 12 29.5	+2.2
	comp=N,0.3nm,0.1s,SNR=7.6						
EPLA				S	Sn	21 13 32.3	-0.3
	comp=N,0.6nm,0.1s,SNR=7.9						
EPLA	Plasencia	5.69	60	P	Pn	21 12 29.5	+2.2
	comp=N,0.3nm,0.1s,SNR=7.6						
EPLA				S	Sn	21 13 32.3	-0.3
	comp=N,0.6nm,0.1s,SNR=7.9						
PAB	San Pablo	6.75	69	P	Pn	21 12 43.3	+1.4
	comp=N,0.2nm,0.2s,SNR=7.9						
PAB	San Pablo	6.75	69	P	Pn	21 12 43.3	+1.4
	comp=N,0.2nm,0.2s,SNR=7.9						

*IDC **01** 21:17:04.2±3.7, 55°.34N×160°.32E, h45km±43km, mb3.2/6, mb1 3.6/8, mb1mx3.1/75, mbtmp3.5/8, ML3.3/2, MS1.9/1, Ms1 1.9/1, ms1mx1.8/27, Error ellipse: s-maj=82.5km s-min=24.6km az=137.0*
*KRSC **01** 21:17:08.3±0.7, 54°.67N×160°.80E, h96km±12km, ML3.5*
*ISCJB **01** 21:17:09.0±0.3, 54°.68N±0°.02×160°.80E±0°.08, h103km±4km, mb3.3/6, Error ellipse: s-maj=7.9km s-min=2.4km az=24.7*

ISC 01 21:17:09.3±0.8, 54°.70N±0°.03×160°.75E±0°.05, h98km±7km, n51, σ1°28/82, mb3.4/6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZV	Kizimen	0.49	328	eP	Pn	21 17 25.0	+0.1
KZV				eS	Sn	21 17 36.6	-0.1
TUMD	Tumrok D	0.55	339	eP	Pn	21 17 24.8	-0.4
TUMD				eS	Sn	21 17 36.3	-0.8
TUMR	Tumrok	0.68	330	eP	Pn	21 17 26.6	+0.2
TUMR				eS	Sn	21 17 39.7	+0.4
KII	Karymskiy	1.01	229	eP	Pn	21 17 29.9	+0.3
KII				eS	Sn	21 17 46.1	+1.1
KMNR	Kamenistaya	1.10	345	eP	Pn	21 17 31.1	+0.3
KMNR				eS	Sn	21 17 47.9	+1.0
BZGR	Bezymyannyi-Gr	1.25	359	eP	Pn	21 17 32.7	+0.3
BZGR				eS	Sn	21 17 51.0	+1.1
BZMR	Bezymyannaya	1.25	353	eP	Pn	21 17 33.0	+0.5
BZMR				eS	Sn	21 17 51.7	+1.6
BZWR	Bezymyannyi-We	1.28	354	eP	Pn	21 17 33.4	+0.5
BZWR				eS	Sn	21 17 52.3	+1.6
KIRR	Kirishev	1.28	350	eP	Pn	21 17 32.8	-0.1
KIRR				eS	Sn	21 17 51.4	+0.7
KPT	Kopyto	1.31	347	eP	Pn	21 17 33.1	0.0
ZLN	Zelenaya	1.32	1	eP	Pn	21 17 34.3	+0.9
ZLN				eS	Sn	21 17 53.7	+2.2
LGNR	Loginova	1.39	359	eP	Pn	21 17 35.6	+1.3
LGNR				eS	Sn	21 17 55.9	+2.6
CIRR	Tsirk	1.42	0	eP	Pn	21 17 35.3	+0.7
CIRR				eS	Sn	21 17 55.4	+1.7
KOZ	Kozyrevsk	1.45	340	eP	Pn	21 17 34.2	-0.6
KOZ				eS	Sn	21 17 53.7	-0.5
KRSR	Krestovskiy	1.53	356	eP	Pn	21 17 36.1	+0.3
KRSR				eS	Sn	21 17 56.9	+0.9
KLY	Klyuchi	1.62	358	eP	Pn	21 17 37.8	+0.9
KLY				eS	Sn	21 17 59.8	+2.0
SPN	Mys Shipunski	1.66	195	eP	Pn	21 17 36.9	-0.4
SPN				eS	Sn	21 17 57.9	-0.7
ESO	Esso	1.70	317	eP	Pn	21 17 37.2	-0.7
NLC	Nalytchevo	1.74	209	eP	Pn	21 17 38.5	+0.2
NLC				eS	Sn	21 18 00.7	+0.3
SDLR	Sedlovina	1.80	218	eP	Pn	21 17 39.8	+0.6
SDLR				eS	Sn	21 18 03.4	+1.4
KRX	Arik	1.82	224	eP	Pn	21 17 40.3	+0.7
KRER	Koryakskii	1.82	221	eP	Pn	21 17 40.7	+1.0
KRER				eS	Sn	21 18 04.5	+1.7
SMAR	Somma	1.84	219	eP	Pn	21 17 40.3	+0.5
SMAR				eS	Sn	21 18 03.4	+0.3
AVH	Avacha	1.86	220	eP	Pn	21 17 41.0	+1.0
AVH				eS	Sn	21 18 05.1	+1.7
UGLR	Uglovaya	1.87	218	eP	Pn	21 17 40.8	+0.6
UGLR				eS	Sn	21 18 04.7	+1.0
KOK	Koryaka	1.88	222	eP	Pn	21 17 41.4	+1.2
BDR	Baidarnaya	1.90	8	eP	Pn	21 17 41.3	+0.9
BDR				eS	Sn	21 18 05.5	+1.3
KBG	Krutoberegovo	1.92	35	eP	Pn	21 17 42.3	+1.7
KBG				eS	Sn	21 18 07.9	+3.3
KBTR	Krutoberegovo	1.92	37	eP	Pn	21 17 41.2	+0.5
KBTR				eS	Sn	21 18 05.9	+1.3
GNL	Ganaly	1.93	240	eP	Pn	21 17 41.0	+0.1
GNL				eS	Sn	21 18 05.8	+0.8
SMKR	Semkarok	1.94	12	eP	Pn	21 17 41.6	+0.7
SMKR				eS	Sn	21 18 06.8	+1.7
DALK	Dalny	2.04	216	eP	Pn	21 17 42.5	+0.3
DALK				eS	Sn	21 18 08.3	+0.9
PET	Petropavlovsk	2.08	217	eP	Pn	21 17 43.3	+0.5
PET				eS	Sn	21 18 09.4	+1.0
PETK	Petropavlovsk-	2.40	230	P	Pn	21 17 47.0	0.0
	4.6nm,0.3s,baz=64,slow=17,SNR=49						
PETK				S	Sn	21 18 16.7	+0.8
	1.4nm,0.3s,baz=49,slow=18,SNR=4.4						
PETK				LR	LR	21 18 41.0	
	comp=Z,20nm,18.9s,baz=66,slow=36						
KRMR	Karymshinskiy	2.43	221	eP	Pn	21 17 48.1	+0.8
KRMR				eS	Sn	21 18 17.5	+1.0
RUS	Russkaya	2.63	211	eP	Pn	21 17 49.7	-0.2
RUS				eS	Sn	21 18 20.4	-0.8
MTVR	Mutnovka	2.69	216	eP	Pn	21 17 51.6	+0.7
APC	Apacha	2.77	232	eP	Pn	21 17 52.4	+0.6
ASAK	Asacha	2.87	217	eP	Pn	21 17 54.1	+0.8
BKI	Bering	3.06	78	eP	Pn	21 17 56.0	+0.4
BKI				eS	Sn	21 18 30.4	-1.0
KDTR	Khodutka, Kamc	3.31	210	eP	Pn	21 18 01.6	+2.6
KDTR				eS	Sn	21 18 41.3	+3.9
ASAJ	Asahikawa	15.81	235	P	P	21 20 47.3	-0.6
	0.5nm,0.3s,baz=45,slow=14,SNR=5.2						
MJAR	Matsushiro Art	23.86	230	P	P	21 22 15.9	+2.4
	0.7nm,0.4s,baz=324,slow=5.7,SNR=4.5						
ILAR	Eielson Array	27.43	47	P	P	21 22 43.8	-1.6
	0.4nm,0.6s,baz=257,slow=6.9,SNR=4.3						
H11N2	WAKE ISLAND Hy	35.22	170	T	T	22 01 27.2	
	baz=355,slow=76,SNR=28						
H11N3	WAKE ISLAND Hy	35.23	170	T	T	22 01 28.4	
	baz=355,slow=76,SNR=31						
H11N1	WAKE ISLAND Hy	35.23	170	T	T	22 01 28.6	
	baz=355,slow=76,SNR=32						
YKA	Yellowknife Ar	41.73	44	P	P	21 24 44.1	-4.0
	0.2nm,0.5s,baz=299,slow=7.7,SNR=2.9						
NVAR	Mina Array Bea	54.85	72	P	P	21 26 30.8	+1.4
	0.2nm,0.4s,baz=310,slow=7.0,SNR=3.7						
PDAR	Pinedale Array	56.42	62	P	P	21 26 40.7	+0.1
	0.2nm,0.5s,baz=324,slow=4.5,SNR=2.5						
TXAR	Lajitas Array	69.67	68	P	P	21 28 08.6	+0.3
	0.5nm,0.5s,baz=291,slow=5.1,SNR=11						

*ISCJB **01** 21:31:29.0±0.4, 37°.78N±0°.02×26°.74E±0°.03, h7km±4km, Error ellipse: s-maj=4.4km s-min=3.0km az=146.4*
*CSEM **01** 21:31:29.0±0.2, 37°.76N×26°.73E, h5km, ML2.0, Error ellipse: s-maj=4.7km s-min=3.5km az=50.0*
*THE **01** 21:31:29.3, 37°.77N×26°.75E, h9km±1km, ML2.0/5, Error ellipse: s-maj=2.9km s-min=0.8km az=69.0*
*DDA **01** 21:31:29.2, 37°.80N×26°.77E, h7km, Ml2.8*
*ISK **01** 21:31:29.2, 37°.79N×26°.78E, h10km, ML2.4/4*

ISC 01 21:31:28.9±0.8, 37°.78N±0°.02×26°.76E±0°.02, h13km±5km, n42, σ0°62/71, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	Samos	0.10	139	P	Pg	21 31 32.0	+0.1
SMG				S	Sg	21 31 33.9	-0.1
SMG	Samos	0.10	139	P	Pg	21 31 32.0	+0.1
SMG				S	Sg	21 31 33.9	-0.1
DGB	˜zmir	0.29	20	iP	Pg	21 31 34.8	-0.1
DGB				iS	Sg	21 31 38.8	-0.1
GCAM	G?zelcaml?	0.39	102	PG	Pb	21 31 37.1	-0.4
GCAM				SG	Sb	21 31 43.1	-0.3
GCAM	G?zelcaml?	0.39	102	iP	Pg	21 31 36.9	+0.3
GCAM				iS	Sb	21 31 43.5	+0.1
GCAM	G?zelcaml?	0.39	102	ePg	Pb	21 31 37.1	-0.4
GCAM				eSg	Sb	21 31 43.1	-0.3
ZEY	˜zmir	0.50	336	iP	Pg	21 31 38.8	0.0
ZEY				iS	Sb	21 31 46.1	-0.6
URLA	Izmir	0.59	347	PG	Pg	21 31 40.4	-0.1
URLA	Izmir	0.59	347	iP	Pg	21 31 38.2	-2.3
URLA				iS	Sg	21 31 48.1	-0.3
URLA	Izmir	0.59	347	P	Pg	21 31 38.2	-2.3
URLA	Izmir	0.59	347	ePg	Pg	21 31 40.4	-0.1
URLA				S	Sg	21 31 48.1	-0.3
BLCB	Balcova	0.64	20	PG	Pb	21 31 41.7	-0.3
BLCB				SG	Sg	21 31 50.4	+0.4
BLCB	Balcova	0.64	20	ePg	Pb	21 31 41.7	-0.3
BLCB				eSg	Sg	21 31 50.4	+0.4
CHOS	Chios island	0.82	318	PG	Pn	21 31 46.8	+0.6
CHOS				SG	Sn	21 31 58.0	-0.2
CHOS	Chios island	0.82	318	P	Pb	21 31 45.4	+0.4
CHOS				S	Sb	21 31 56.8	+0.8
CHOS	Chios island	0.82	318	P	Pb	21 31 45.4	+0.4
CHOS	Chios island	0.82	318	ePg	Pn	21 31 46.8	+0.6
CHOS				S	Sb	21 31 56.8	+0.8
CHOS				eSg	Sn	21 31 58.0	-0.2
BODT	Bodrum	0.84	148	PG	Pg	21 31 44.9	-0.3
BODT	Bodrum	0.84	148	P	Pg	21 31 44.3	-0.9
BODT				S	Sb	21 31 57.2	+0.7
BODT	Bodrum	0.84	148	P	Pg	21 31 44.3	-0.9
BODT	Bodrum	0.84	148	ePg	Pg	21 31 44.9	-0.3
BODT				S	Sb	21 31 57.2	+0.7
AYDN	Tasoluk	0.90	97	iP	Pg	21 31 45.9	-0.4
AYDN				iS	Sb	21 31 58.4	+0.2
AYDN	Tasoluk	0.90	97	P	Pg	21 31 45.9	-0.4
AYDN				S	Sb	21 31 58.4	+0.2
BDRM	Kayabasi	0.90	142	iP	Pg	21 31 46.1	-0.2
BDRM				iS	Sn	21 31 59.9	-0.2
BDRM	Kayabasi	0.90	142	P	Pg	21 31 46.1	-0.2
BDRM				S	Sn	21 31 59.9	-0.2
AYDB	Zeytinkoy-Aydi	0.91	79	PG	Pb	21 31 46.9	+0.3
AYDB	Zeytinkoy-Aydi	0.91	79	ePg	Pb	21 31 46.9	+0.3
MLSB	Milas	0.94	121	PG	Pn	21 31 47.8	0.0
MLSB	Milas	0.94	121	ePg	Pn	21 31 47.8	0.0
APE	Apeiranthos	1.21	234	PN	Pg	21 31 53.2	+1.0
APE	Apeiranthos	1.21	234	P	Pn	21 31 50.3	-1.2
APE				S	Sg	21 32 08.0	+0.1
APE	Apeiranthos	1.21	234	P	Pn	21 31 50.3	-1.2
APE	Apeiranthos	1.21	234	ePn	Pg	21 31 53.2	+1.0
APE				S	Sg	21 32 08.0	+0.1
DKL	Dikili	1.29	5	PN	Pg	21 31 53.9	+0.1
DKL	Dikili	1.29	5	ePn	Pg	21 31 53.9	+0.1
MANT	Manisa	1.59	63	iP	Pg	21 32 00.1	+0.7
MANT				iS	Sg	21 32 20.3	+0.3
MANT	Manisa	1.59	63	P	Pg	21 32 00.1	+0.7
MANT				S	Sg	21 32 20.3	+0.3
SIGR	SIGRI	1.59	334	PN	Pn	21 31 56.9	+0.2
SIGR	SIGRI	1.59	334	P	Pn	21 31 56.9	+0.2
SIGR				S	Sb	21 32 18.2	0.0
SIGR	SIGRI	1.59	334	P	Pn	21 31 56.9	+0.2

comp=N,30nm,0.4s
SMLA IAML 21 37 08.1
comp=E,31nm,0.3s
PYUN Piuthan 13.27 126 *e*P **Pn 21 36 59.1 +1.5**
MKAR Makanchi Array 13.36 36 P **Pn 21 36 58.6 +0.2**
comp=E,0.1nm,0.3s,baz=219,slow=14,SNR=7.1
KOLN Koldanda 13.89 125 *e*P **Pn 21 37 07.2 +1.9**
GKN Gorkha 14.43 122 *e*P **Pn 21 37 13.0 +1.0**
comp=E,3.0nm,0.2s
AB31 Akbulak array 15.00 331 P **P 21 37 21.3 +1.7**
comp=E,1.3nm,0.6s,baz=146,slow=12,SNR=18
AB31 ⇑S **Sn 21 40 02.5 -3.7**
comp=E,0.4nm,0.3s
KURBB Kurchatov Arra 15.15 19 P **P 21 37 22.1 +0.9**
comp=E,0.1nm,0.3s,baz=195,slow=10,SNR=5.6
PKIN Phulchoki 15.22 122 *e*P **Pn 21 37 23.4 +1.6**
comp=E,6.4nm,0.5s
JIRN Jiri 15.72 120 *e*P **Pn 21 37 30.1 +2.1**
BVAR Borovoye Array 16.51 359 P **Pn 21 37 38.4 +1.5**
comp=E,0.4nm,0.3s,baz=161,slow=10,SNR=12
AKTO Aktyubinsk 16.70 330 P **Pn 21 37 40.3 +1.1**
comp=E,0.4nm,0.3s,baz=139,slow=12,SNR=8.0
ZALV Zalesovo Beam 19.96 25 P **P 21 38 14.8 +1.2**
comp=E,1.5nm,0.3s,baz=222,slow=12,SNR=9.6
TORD Torodi Ar. Bea 65.58 269 P **P 21 44 18.8 -1.2**
comp=E,0.2nm,0.5s,baz=50,slow=7.8,SNR=2.8
YKA Yellowknife Ar 81.24 3 P **P 21 45 52.4 +1.8**
comp=E,0.1nm,0.4s,baz=353,slow=5.5,SNR=3.6
WRA Warramunga Arr 82.12 122 P **P 21 45 55.3 -0.6**
comp=E,0.4nm,0.5s,baz=322,slow=4.4,SNR=4.8
ASAR Alice Springs 84.38 125 P **P 21 46 06.8 -0.5**
comp=E,0.4nm,0.7s,baz=306,slow=4.8,SNR=4.5

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*CSEM **01** 21:35:02.6±0.3, 43°.25N×7°.32W, h2km, ML1.9, Error ellipse: s-maj=5.7km s-min=3.3km az=140.0*
*INMG **01** 21:35:03.8±1.5, 43°.24N×7°.33W, h0km, ML1.5, Error ellipse: s-maj=4.7km s-min=2.6km az=128.0*
MDD 01 21:35:03.4±0.4, 43°.27N×7°.32W, h11km±1km, mbLg1.9/8, 1C-1D, Error ellipse: s-maj=10.8km s-min=3.4km az=155.0, PRXIMO, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EPON	**Pontenova**	**0.14**	**66**	⇑Pg	Pg	21 35 06.5	-0.2
EPON	9.0nm,0.1s,SNR=18			Lg	Lg	21 35 08.6	
	33nm,0.1s,SNR=7.9						
EPON	**Pontenova**	**0.14**	**66**	Pg	Pg	21 35 06.5	-0.2
EPON	9.0nm,0.1s,SNR=18			Lg	Lg	21 35 08.6	
	33nm,0.1s,SNR=7.9						
EAGO	**Agolada(Pontev**	**0.73**	**230**	⇓Pg	Pg	21 35 16.6	-0.9
EAGO	0.9nm,0.1s,SNR=18			Lg	Lg	21 35 26.1	
	5.6nm,0.0s,SNR=7.9						
EAGO	**Agolada(Pontev**	**0.73**	**230**	Pg	Pg	21 35 16.6	-0.9
EAGO	0.9nm,0.1s,SNR=18			Lg	Lg	21 35 26.1	
	5.6nm,0.0s,SNR=7.9						
EMAZ	**Mazaricos**	**1.25**	**256**	Pg	Pn	21 35 26.2	-0.6
EMAZ	0.5nm,0.1s,SNR=7.9			Lg	Lg	21 35 42.6	
	6.9nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**1.25**	**256**	Pg	Pn	21 35 26.2	-0.6
EMAZ	0.5nm,0.1s,SNR=7.9			Lg	Lg	21 35 42.6	
	6.9nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**1.40**	**162**	Pg	Pb	21 35 29.2	-0.3
ECAL	2.5nm,0.1s,SNR=8.1			Lg	Lg	21 35 47.0	
	6.4nm,0.3s,SNR=6.1						
ECAL	**Calabor**	**1.40**	**162**	Pg	Pn	21 35 29.2	+0.3
ECAL	2.5nm,0.1s,SNR=8.1			Lg	Lg	21 35 47.0	
	6.4nm,0.3s,SNR=6.1						
PGAV	**Gavieira, Arco**	**1.48**	**208**	*e*P	Pb	21 35 30.7	-0.2
PGAV				*e*S	Sn	21 35 49.5	+0.1
PGAV				A	A	21 35 51.1	
	3.9nm,0.1s						
PGAV	**Gavieira, Arco**	**1.48**	**208**	*e*P	Pb	21 35 30.7	-0.2
PGAV				*e*S	Sn	21 35 49.5	+0.1
ELOB	**Lobios**	**1.50**	**201**	Pg	Pn	21 35 30.6	+0.3
ELOB	0.3nm,0.1s,SNR=7.9			Lg	Lg	21 35 50.2	
	2.9nm,0.1s,SNR=9.3						
ELOB	**Lobios**	**1.50**	**201**	Pg	Pn	21 35 30.6	+0.2
ELOB	0.3nm,0.1s,SNR=7.9			Lg	Lg	21 35 50.2	
	2.9nm,0.1s,SNR=9.3						
PBRG	**Braganca**	**1.53**	**163**	*e*P	Pb	21 35 32.1	+0.4
PBRG				*e*S	Sb	21 35 51.3	+0.2
PBRG				A	A	21 35 53.4	
	2.7nm,0.4s						
PBRG	**Braganca**	**1.53**	**163**	*e*P	Pb	21 35 32.1	+0.4
PBRG				*e*S	Sb	21 35 51.3	+0.2
EARI	**Arriondas**	**1.54**	**88**	Pg	Pn	21 35 31.3	+0.5
EARI	0.8nm,0.1s,SNR=15			Lg	Lg	21 35 52.1	
	1.7nm,0.2s,SNR=7.9						
EARI	**Arriondas**	**1.54**	**88**	Pg	Pn	21 35 31.3	+0.4
EARI	0.8nm,0.1s,SNR=15			Lg	Lg	21 35 52.1	
	1.7nm,0.2s,SNR=7.9						
PCAB	**Cabril**	**1.65**	**199**	*e*Pg	Pb	21 35 33.8	+0.1
PCAB				*e*Sg	Sb	21 35 55.0	+0.6
PCAB				A	A	21 35 56.2	
	4.4nm,0.1s						
PCAB	**Cabril**	**1.65**	**199**	Pg	Pb	21 35 33.8	+0.1
PCAB				Lg	Lg	21 35 55.0	
	2.2nm,0.1s						
PCAB	**Cabril**	**1.65**	**199**	Pg	Pb	21 35 33.8	+0.1
PCAB				*e*Sg	Sb	21 35 55.0	+0.6
POLO	**Lamas de Olo**	**1.93**	**191**	*e*Pg	Pg	21 35 39.5	-0.9
POLO				*e*Sg	Sb	21 36 03.7	+1.0
POLO				A	A	21 36 04.7	
	1.4nm,0.5s						
POLO	**Lamas de Olo**	**1.93**	**191**	*e*Pg	Pg	21 35 39.5	-0.9
POLO				*e*Sg	Sb	21 36 03.7	+1.0
MVO	**Moncorvo**	**2.12**	**174**	*e*Pg	Pb	21 35 42.4	+0.6
MVO				*e*Sg	Sg	21 36 09.8	-1.6
MVO				A	A	21 36 12.0	
	2.5nm,0.8s						
MVO	**Moncorvo**	**2.12**	**174**	Pg	Pb	21 35 41.0	-0.8
MVO	0.2nm,0.1s,SNR=7.9			Lg	Lg	21 36 08.6	
	3.5nm,0.3s,SNR=7.9						
MVO	**Moncorvo**	**2.12**	**174**	*e*Pg	Pb	21 35 42.4	+0.6
MVO				Lg	Lg	21 36 08.6	
	3.5nm,0.3s,SNR=7.9						
MVO				*e*Sg	Sg	21 36 09.8	-1.6
ELAN	**Lanestosa**	**2.84**	**89**	Pn	Pn	21 35 48.2	-0.5
ELAN	21nm,1.1s,SNR=4.0			Lg	Lg	21 36 31.9	
	0.5nm,0.2s,SNR=7.9						
ELAN	**Lanestosa**	**2.84**	**89**	Pn	Pn	21 35 48.2	-0.5
ELAN	21nm,1.1s,SNR=4.0			Lg	Lg	21 36 31.9	
	0.5nm,0.2s,SNR=7.9						

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*ISCJB **01** 21:35:48.2±1.1, 16°.3S±0°.2×174°.9W±0°.2, h10km, mb4.2/11, Error ellipse: s-maj=36.3km s-min=23.6km az=152.0*
*IDC **01** 21:35:48.3±1.6, 16°.14S×174°.87W, h0km, mb4.2/5, mb1 4.4/5, mb1mx3.8/53, mbtmp4.2/5, Error ellipse: s-maj=145.0km s-min=27.3km az=155.0*
*NEIC **01** 21:35:49.7±0.8, 16°.24S×174°.86W, h10km, mb4.2/6, Error ellipse: s-maj=26.0km s-min=16.9km az=152.0*
ISC 01 21:35:49.7±1.3, 16°.2S±0°.3×174°.9W±0°.2, h10km, n11, σ0s58/11, mb4.3/11, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTAO	**Charters Tower**	**37.10**	**258**	P	**P**	**21 43 00.4**	**-0.3**
	4.0nm,0.4s						
STKA	**Stephens Creek**	**42.41**	**240**	P	**P**	**21 43 45.8**	**+1.0**
	1.8nm,0.6s,baz=78,slow=9.8,SNR=11						
WRAB	**Tennant Creek**	**48.29**	**258**	P	**P**	**21 44 31.1**	**-0.4**
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**48.30**	**258**	P	**P**	**21 44 30.7**	**-0.9**
	2.0nm,0.6s,baz=96,slow=7.3,SNR=56						
ASAR	**Alice Springs**	**48.53**	**253**	P	**P**	**21 44 33.2**	**-0.2**
	14nm,0.5s,baz=88,slow=8.1,SNR=273						
GUMO	**Guam**	**49.63**	**304**	P	**P**	**21 44 41.7**	**-0.1**
	9.1nm,0.4s						
FITZ	**Fitzroy Crossi**	**56.68**	**259**	P	**P**	**21 45 34.3**	**+0.5**
	1.9nm,0.6s,baz=61,slow=3.9						
MBWA	**Marble Bar**	**61.79**	**254**	P	**P**	**21 46 09.1**	**-0.2**
	0.9nm,0.3s						
CASY	**Casey**	**69.07**	**205**	P	**P**	**21 46 55.1**	**-0.4**
	0.1nm,0.5s						
TXAR	**Lajitas Array**	**82.23**	**57**	P	**P**	**21 48 11.8**	**+0.1**
	0.3nm,0.9s,baz=209,slow=7.0,SNR=2.4						
CHTO	**Chiang Mai**	**91.65**	**289**	P	**P**	**21 48 58.1**	**+0.2**
	0.5nm,0.6s						

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*NEIC **01** 21:35:52.7±0.0, 15°.46N×95°.50W, h10km, MD4.1(MEX), After MEX.*
MEX 01 21:35:52.7±0.6, 15°.46N×95°.50W, h10km, MD4.1, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.66**	**298**	*e*P	Pg	21 36 04.4	-1.1
HUIG				*e*S	Sg	21 36 12.4	-1.8
HUIG	**Huatulco**	**0.66**	**298**	*e*P	Pg	21 36 04.4	-1.1
HUIG				*e*S	Sg	21 36 12.4	-1.8
PCIG		**2.22**	**83**	*e*P	Pn	21 36 25.8	-3.7
PCIG		**2.22**	**83**	*e*P	Pn	21 36 25.8	-3.7
PCIG				*e*S	Sn	21 36 46.3	-11
TGIG		**2.64**	**60**	*e*P	Pn	21 36 32.8	-2.7
TGIG		**2.64**	**60**	*e*P	Pn	21 36 32.8	-2.7
TGIG				*e*S	Sn	21 36 56.1	-12
TEIG	**Tepich**	**8.36**	**54**	Pn	Pn	21 37 53.9	-0.1

MRB 01 21:37:33.3±0.4, 42°.39N×1°.09E, ML-0.5/2, Error ellipse: s-maj=2.2km s-min=2.2km az=125.0, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSOR	**Sort**	**0.04**	**122**	P	Pg	21 37 34.6	+0.7
CSOR				S	Sg	21 37 35.6	+1.2
	4.2nm,0.1s						
CORG	**Organya**	**0.23**	**135**	P	Pg	21 37 38.1	+0.3
CORG				S	Sg	21 37 41.5	+0.8
CEST	**Esterri de Car**	**0.24**	**30**	S	Sg	21 37 42.2	+1.2
CEST	**Esterri de Car**	**0.24**	**30**	P	Pg	21 37 37.8	-0.1
CEST				S	Sg	21 37 42.2	+1.2
CTRE	**Tremp**	**0.25**	**254**	P	Pg	21 37 38.5	+0.5
CTRE				S	Sg	21 37 42.2	+1.0
	0.8nm,0.4s						

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*ISCJB **01** 21:40:24.3±0.6, 15°.57N±0°.05×146°.3E±0°.1, h100km, mb3.8/18, Error ellipse: s-maj=14.4km s-min=6.5km az=9.5*
*IDC **01** 21:40:26.8±1.7, 15°.54N×146°.14E, h105km±15km, mb3.7/18, mb1 3.8/20, mb1mx3.6/67, mbtmp4.1/20, MS2.9/6, Ms1 2.9/6, ms1mx2.6/57, Error ellipse: s-maj=20.2km s-min=10.3km az=87.0*
ISC 01 21:40:26.1±0.7, 15°.57N±0°.07×146°.3E±0°.1, h100km, n36, σ1s06/32, mb3.8/18, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.38**	**214**	P	**Pn**	**21 41 04.8**	**+1.1**
	34nm,0.3s,baz=297,slow=1.9,SNR=68						
GUMO				S	**Sn**	**21 41 31.9**	**-0.5**
	538nm,0.3s,baz=0.0,slow=20,SNR=46						
GUMO				LR	LR	21 41 39.1	
	comp=Z,94nm,18.6s,baz=88,slow=32						
JCJ	**Chichijima**	**12.08**	**342**	P	**Pn**	**21 43 15.7**	**+0.8**
	1.8nm,0.3s,baz=197,slow=19,SNR=7.6						
JCJ				S	**Sn**	**21 45 27.8**	**+0.2**
	1.3nm,0.3s,baz=250,slow=18,SNR=2.7						
H11S3	**WAKE ISLAND Hy 19.76**	**79**		T	T	22 05 52.4	
	baz=265,slow=75,SNR=39						
H11S1	**WAKE ISLAND Hy 19.77**	**79**		T	T	22 05 54.5	
	baz=265,slow=75,SNR=43						
H11S2	**WAKE ISLAND Hy 19.77**	**79**		T	T	22 05 53.6	
	baz=265,slow=75,SNR=58						
H11N1	**WAKE ISLAND Hy 20.10**	**75**		T	T	22 06 13.3	
	baz=263,slow=75,SNR=57						
H11N2	**WAKE ISLAND Hy 20.10**	**75**		T	T	22 06 12.3	
	baz=263,slow=75,SNR=51						
H11N3	**WAKE ISLAND Hy 20.11**	**75**		T	T	22 06 14.9	
	baz=263,slow=75,SNR=63						
JOW	**Kunigami**	**20.13**	**307**	P	**P**	**21 44 53.8**	**+1.5**
	5.3nm,0.4s,baz=109,slow=17,SNR=2.3						
JOW				LR	LR	21 52 16.2	
	comp=Z,31nm,18.6s,baz=90,slow=35						
MJAR	**Matsushiro Arr**	**22.08**	**343**	P	**P**	**21 45 09.6**	**-3.4**
	0.0nm,0.5s,baz=166,slow=8.9,SNR=6.0						
JNU	**Nakatsue**	**22.35**	**324**	P	**P**	**21 45 17.1**	**+1.2**
	5.0nm,0.8s,baz=134,slow=6.3,SNR=3.1						
JNU				LR	LR	21 52 51.5	
	comp=Z,22nm,19.4s,baz=121,slow=33						
KSRS	**Korea Array**	**27.18**	**327**	P	**P**	**21 46 00.0**	**-0.2**
	2.0nm,0.7s,baz=146,slow=9.4,SNR=10						
HNR	**Honiara**	**28.30**	**150**	LR	LR	21 54 41.1	
	comp=Z,48nm,21.1s,baz=104,slow=30						
ASAJ	**Asahikawa**	**28.63**	**355**	LR	LR	21 57 37.0	
	comp=Z,28nm,21.1s,baz=198,slow=36						
USRK	**Ussuriysk Ar.**	**31.00**	**340**	P	**P**	**21 46 33.4**	**-0.7**
	1.1nm,0.7s,baz=184,slow=15,SNR=6.3						
KLR	**Kul'dur**	**35.60**	**344**	P	**P**	**21 47 12.9**	**-1.1**
	0.3nm,0.6s,baz=138,slow=5.7,SNR=15						
WRA	**Warramunga Arr**	**37.18**	**199**	P	**P**	**21 47 27.1**	**-0.6**
	0.9nm,0.8s,baz=18,slow=9.0,SNR=9.8						
WRA				PcP	**PcP**	**21 49 46.5**	**+0.6**
	0.9nm,0.6s,baz=14,slow=3.4,SNR=7.0						
FITZ	**Fitzroy Crossi**	**39.13**	**212**	P	**P**	**21 47 42.9**	**-1.2**
	0.8nm,0.6s,baz=41,slow=9.3						
ASAR	**Alice Springs**	**40.82**	**197**	P	**P**	**21 47 56.5**	**-1.6**
	0.3nm,0.5s,baz=17,slow=11,SNR=6.1						
ASAR				PcP	**PcP**	**21 49 56.6**	**-0.7**
	0.4nm,0.7s,baz=15,slow=3.8,SNR=3.6						
CMAR	**Chiang Mai Arr**	**45.23**	**281**	P	**P**	**21 48 33.5**	**-0.3**
	0.4nm,0.3s,baz=70,slow=7.2,SNR=2.3						
SONM	**Songino Array**	**45.93**	**323**	P	**P**	**21 48 39.1**	**+0.1**
	2.3nm,0.6s,baz=136,slow=7.2,SNR=8.5						
JIRN	**Jiri**	**56.65**	**293**	*e*P	**P**	**21 50 00.3**	**+0.6**
	18nm,0.6s						
GUN	**Gumba**	**56.92**	**293**	*e*P	**P**	**21 50 02.6**	**+1.0**
GKN	**Gorkha**	**58.01**	**293**	*e*P	**P**	**21 50 09.3**	**+0.2**
	9.5nm,0.5s						
DANN	**Dangsing**	**58.78**	**294**	*e*P	**P**	**21 50 15.0**	**+0.5**
	13nm,0.6s						
KOLN	**Koldanda**	**58.94**	**293**	*e*P	**P**	**21 50 15.4**	**-0.1**
PYUN	**Piuthan**	**59.47**	**294**	*e*P	**P**	**21 50 19.9**	**+0.7**
	20nm,1.0s						
ZALV	**Zalesovo Beam**	**60.82**	**324**	P	**P**	**21 50 26.4**	**-1.3**
	1.3nm,0.5s,baz=109,slow=7.9,SNR=7.4						
ZALV				LR	LR	22 17 50.9	
	comp=Z,20nm,18.1s,baz=256,slow=37						
MKAR	**Makanchi Array**	**61.02**	**315**	P	**P**	**21 50 29.8**	**+0.6**
	1.7nm,0.6s,baz=95,slow=7.2,SNR=11						
KURBB	**Kurchatov Arra**	**64.00**	**319**	P	**P**	**21 50 48.9**	**-0.1**
	4.3nm,0.6s,baz=96,slow=7.4,SNR=33						
ILAR	**Eielson Array**	**66.22**	**26**	P	**P**	**21 51 02.8**	**-0.3**
	0.9nm,0.6s,baz=246,slow=5.9,SNR=9.4						
BVAR	**Borovoye Array**	**69.22**	**321**	P	**P**	**21 51 21.7**	**-0.5**
	1.8nm,0.5s,baz=102,slow=8.0,SNR=11						
YKA	**Yellowknife Ar**	**80.50**	**28**	P	**P**	**21 52 27.1**	**+0.3**
	0.4nm,0.5s,baz=286,slow=5.6,SNR=5.0						
YBH	**Yreka Blue Hor**	**80.58**	**49**	P	**P**	**21 52 28.5**	**+0.7**
	0.8nm,0.5s,baz=231,slow=5.3,SNR=4.6						
NVAR	**Mina Array Bea**	**84.65**	**52**	P	**P**	**21 52 50.7**	**+1.4**
	1.4nm,0.6s,baz=275,slow=5.4,SNR=11						
LPAZ	**La Paz**	**146.95**	**96**	PKPbc	**PKPbc**	**21 59 60.0**	**+1.2**
	2.1nm,0.5s,baz=335,slow=4.3,SNR=9.4						

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*ISCJB **01** 21:42:51.6±0.7, 24°.75N±0°.05×95°.04E±0°.05, h119km±6km, mb3.8/10, Error ellipse: s-maj=8.4km s-min=6.0km az=144.5*
*NDI **01** 21:42:52.1±2.2, 24°.77N×95°.03E, h12km, ML3.9*
*IDC **01** 21:42:54.7±3.2, 24°.62N×95°.30E, h138km±31km, mb3.4/10, mb1 3.6/11, mb1mx3.2/77, mbtmp3.9/11, Error ellipse: s-maj=25.9km s-min=13.0km az=56.0*
ISC 01 21:42:52.2±1.0, 24°.73N±0°.06×95°.09E±0°.06, h112km±10km, n31, σ1s18/42, mb3.8/10, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JORH	**JORHAT**	**2.14**	**340**	*e*P	**Pn**	**21 43 27.7**	**+0.6**
JORH				*e*S	**Sn**	**21 43 54.5**	**+0.8**
JORH				IAML		21 44 09.8	
	comp=E,2μm,0.1s						
LKP	**Lekhapani**	**2.68**	**15**	*e*P	**Pn**	**21 43 34.8**	**+0.8**
LKP				*e*S	**Sn**	**21 44 06.7**	**+0.5**
LKP				IAML		21 44 09.6	
	comp=E,310nm,0.2s						
LKP				IAML		21 44 09.6	
	comp=N,489nm,0.2s						
LKP				IAML		21 44 11.0	
	comp=Z,149nm,0.3s						
ITAN	**ITANAGAR**	**2.70**	**333**	*e*P	**Pn**	**21 43 35.2**	**+0.9**
ITAN				*e*S	**Sn**	**21 44 06.4**	**-0.3**
TEZP	**TEZPUR**	**2.79**	**313**	*e*P	**Pn**	**21 43 35.7**	**+0.3**
TEZP				*e*S	**Sn**	**21 44 07.7**	**-1.1**
TEZP				IAML		21 44 09.7	
	comp=N,2μm,0.4s						
TEZP				IAML		21 44 09.7	
	comp=E,1μm,0.1s						
ZIRO	**ZIRO**	**3.00**	**339**	*e*P	**Pn**	**21 43 38.6**	**+0.2**
ZIRO				*e*S	**Sn**	**21 44 12.2**	**-1.7**
ZIRO				IAML		21 44 49.6	
	comp=N,1μm,0.3s						
ZIRO				IAML		21 44 51.1	
	comp=E,1μm,0.5s						
SHL	**Shillong**	**3.02**	**287**	*e*P	**Pn**	**21 43 38.9**	**+0.2**
SHL				*e*S	**Sn**	**21 44 13.4**	**-1.1**
SHL				IAML		21 44 15.2	
	comp=N,402nm,0.1s						
SHL				IAML		21 44 15.6	
	comp=E,728nm,0.2s						
GUWA	**GUWAHATI**	**3.40**	**296**	*e*P	**Pn**	**21 43 43.5**	**0.0**
GUWA				*e*S	**Sn**	**21 44 21.3**	**-1.8**
AGT	**Agartala**	**3.60**	**257**	*e*S	**Sn**	**21 44 29.7**	**+1.6**
BELO	**BELONIA**	**3.64**	**247**	*e*P	**Pn**	**21 43 46.5**	**-0.3**
BELO				*e*S	**Sn**	**21 44 30.1**	**+1.1**
TURI	**Tura**	**4.38**	**282**	*e*P	**Pn**	**21 43 58.0**	**+1.2**
TURI				*e*S	**Sn**	**21 44 46.8**	**-0.1**
TURI				IAML		21 44 50.4	
	comp=N,707nm,0.4s						
TURI				IAML		21 44 50.6	
	comp=E,545nm,0.1s						
GTK	**Tadong**	**6.38**	**295**	*e*P	**Pn**	**21 44 24.7**	**+0.9**
GTK				*e*S	**Sn**	**21 45 33.0**	**-2.3**
CMAR	**Chiang Mai Arr**	**7.20**	**149**	P	**Pn**	**21 44 35.0**	**0.0**
	comp=E,0.7nm,0.3s,baz=323,slow=13,SNR=46						
JIRN	**Jiri**	**8.50**	**292**	*e*P	**Pn**	**21 44 53.3**	**+0.4**
	comp=E,68nm,0.3s						
GUN	**Gumba**	**8.84**	**293**	*e*P	**Pn**	**21 44 57.7**	**+0.2**
	comp=E,23nm,0.2s						
PKIN	**Phulchoki**	**9.15**	**290**	*e*P	**Pn**	**21 45 01.4**	**-0.2**
	comp=E,44nm,0.4s						
PKIN				*e*S	**Sn**	**21 46 41.3**	**-1.7**
KKN	**Kakani**	**9.31**	**291**	*e*P	**Pn**	**21 45 03.4**	**-0.3**
	comp=E,33nm,0.3s						
DMN	**Daman**	**9.41**	**290**	*e*P	**Pn**	**21 45 04.2**	**-0.9**
	comp=E,13nm,0.3s						
GKN	**Gorkha**	**9.92**	**291**	*e*P	**Pn**	**21 45 11.6**	**-0.3**
	comp=E,106nm,0.5s						
KOLN	**Koldanda**	**10.74**	**289**	*e*P	**Pn**	**21 45 21.7**	**-1.4**
	comp=E,11nm,0.2s						
DANN	**Dangsing**	**10.76**	**292**	*e*P	**Pn**	**21 45 22.7**	**-0.7**
	comp=E,10nm,0.2s						
PYUN	**Piuthan**	**11.35**	**290**	*e*P	**Pn**	**21 45 28.9**	**-2.3**
	comp=E,8.8nm,0.3s						
MKAR	**Makanchi Array**	**24.28**	**338**	P	**P**	**21 48 00.7**	**+1.7**
	comp=E,2.9nm,0.6s,baz=148,slow=9.8,SNR=36						
KURBB	**Kurchatov Arra**	**28.84**	**338**	P	**P**	**21 48 41.1**	**+1.2**
	comp=E,0.3nm,0.3s,baz=150,slow=9.0,SNR=4.8						
ZALV	**Zalesovo Beam**	**30.17**	**348**	P	**P**	**21 48 53.4**	**+1.8**
	comp=E,0.4nm,0.3s,baz=160,slow=9.5,SNR=2.5						
MJAR	**Matsushiro Arr**	**38.63**	**62**	P	**P**	**21 50 03.5**	**-1.2**
	comp=E,5.5nm,1.2s,baz=274,slow=8.2,SNR=5.5						
BRTR	**Keskin Array B**	**53.12**	**302**	P	**P**	**21 51 59.6**	**+0.9**
	comp=E,0.2nm,0.6s,baz=114,slow=7.9,SNR=2.7						
FINES	**FINESS Array B**	**58.57**	**328**	P	**P**	**21 52 38.0**	**+1.1**
	comp=E,0.5nm,0.6s,baz=106,slow=8.8,SNR=5.3						
WRA	**Warramunga Arr**	**58.58**	**136**	P	**P**	**21 52 35.3**	**-2.2**
	comp=E,0.8nm,0.5s,baz=324,slow=7.1,SNR=26						
ASAR	**Alice Springs**	**61.08**	**139**	P	**P**	**21 52 53.3**	**-1.4**
	comp=E,0.6nm,0.6s,baz=318,slow=6.8,SNR=7.7						
BOSA	**Boshof**	**85.56**	**236**	P	**P**	**21 55 18.2**	**-0.1**
	comp=E,1.4nm,0.4s,baz=66,slow=3.6,SNR=7.0						
TORD	**Torodi Ar. Bea**	**87.61**	**283**	P	**P**	**21 55 29.1**	**+0.6**
	comp=E,0.3nm,0.5s,baz=64,slow=3.4,SNR=3.3						

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*ISK **01** 21:44:10.9, 35°.34N×27°.91E, h10km, ML2.5/5*
*ISCJB **01** 21:44:12.5±1.4, 35°.49N±0°.07×27°.91E±0°.07, h5km±9km, Error ellipse: s-maj=14.1km s-min=6.0km az=146.2*
*CSEM **01** 21:44:12.3±0.6, 35°.46N×27°.95E, h5km, ML2.5, Error ellipse: s-maj=15.3km s-min=5.9km az=151.0*
*ATH **01** 21:44:12.7, 35°.49N×27°.86E, h15km±2km, ML2.1/4, Error ellipse: s-maj=5.9km s-min=1.9km az=322.0*
*DDA **01** 21:44:30.3, 36°.61N×28°.55E, h7km, Ml1.9*
ISC 01 21:44:11.8±1.5, 35°.54N±0°.05×27°.82E±0°.04, h15km±12km, n48, σ0s68/56, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.53**	**271**	PG	**Pb**	**21 44 23.7**	**+0.9**
KARP				SG	**Sn**	**21 44 33.6**	**0.0**
KARP	**Karpathos**	**0.53**	**271**	P	**Pb**	**21 44 23.3**	**+0.4**
KARP				S	**Sn**	**21 44 32.6**	**-1.0**
KARP				AML	AML	21 44 34.5	
	comp=N,490μm,0.3s						
KARP				AML	AML	21 44 34.6	
	comp=E,393μm,0.2s						
KARP	**Karpathos**	**0.53**	**271**	*e*Pg	**Pb**	**21 44 23.7**	**+0.9**
KARP				S	**Sn**	**21 44 32.2**	**-1.4**
KARP				*e*Sg	**Sn**	**21 44 33.6**	**0.0**
ARG	**Arkhangelos**	**0.72**	**20**	PG	**Pn**	**21 44 28.5**	**+1.1**
ARG	**Arkhangelos**	**0.72**	**20**	P	**Pn**	**21 44 27.5**	**+0.2**
ARG				S	**Sn**	**21 44 39.2**	**+1.2**
ARG				AML	AML	21 44 45.7	
	comp=N,168μm,0.5s						
ARG				AML	AML	21 44 46.9	
	comp=E,357μm,0.4s						
ARG	**Arkhangelos**	**0.72**	**20**	P	**Pn**	**21 44 27.3**	**-0.1**
ARG	**Arkhangelos**	**0.72**	**20**	*e*Pg

GOLH	Golhisar	2.20	39	P		Pb	21 44 49.7	-1.6
SMG	Samos	2.30	340	P		Pb	21 44 52.2	-0.8
SMG	Samos	2.30	340	P		Pb	21 44 52.8	-0.1
APE	Apeiranthos	2.39	310	P		Pb	21 44 54.5	0.0
APE	Apeiranthos	2.39	310	P		Pb	21 44 54.7	+0.2
AYDB	Zeytinkoy-Aydi	2.40	1	PN		Pb	21 44 54.4	-0.3
AYDB	Zeytinkoy-Aydi	2.40	1	*e*Pn		Pb	21 44 54.4	-0.3

ISCJB ***01*** *21:52:14.6±0.5, 6°.22S±0°.06×145°.78E±0°.08, h100km, mb3.9/16, Error ellipse: s-maj=12.3km s-min=6.4km az=153.9*
IDC ***01*** *21:52:18.0±1.5, 6°.33S×145°.82E, h120km±16km, mb3.7/16, mb1 3.8/20, mb1mx3.7/51, mbtmp4.1/20, MS3.4/1, Ms1 3.4/1, ms1mx2.5/44, Error ellipse: s-maj=19.4km s-min=11.7km az=78.0*

ISC 01 21:52:16.4±0.6, 6°.24S±0°.08×145°.8E±0°.1, h100km, n22, σ1§06/24, mb3.9/16, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.43**	**157**	P		**21 53 10.2**	**+2.2**
	54nm,0.3s,baz=30,slow=4.5,SNR=87						
PMG				S		**21 53 48.6**	**+0.8**
	43nm,0.3s,baz=336,slow=20,SNR=12						
JAY	**Jayapura**	**6.26**	**306**	P		**21 53 47.6**	**+1.2**
	1.3nm,0.3s,baz=168,slow=3.6,SNR=6.0						
JAY				S		**21 54 56.2**	**-0.4**
	1.5nm,0.3s,baz=324,slow=19,SNR=3.1						
SIJI	**Sorong**	**15.43**	**290**	P		**21 55 49.2**	**+0.5**
	1.4nm,0.3s,baz=102,slow=9.8,SNR=11						
WRA	**Warramunga Arr**	**17.58**	**218**	P		**P**	**21 56 13.5**	**-1.3**
	0.3nm,0.3s,baz=43,slow=12,SNR=17						
ASAR	**Alice Springs**	**20.76**	**212**	P		**P**	**21 56 48.0**	**-1.3**
	3.1nm,0.8s,baz=41,slow=11,SNR=17						
ASAR				PcP		**PcP**	**22 00 54.5**	**-0.5**
	0.8nm,0.9s,baz=60,slow=3.0,SNR=4.1						
FITZ	**Fitzroy Crossi**	**22.91**	**237**	P		**P**	**21 57 11.8**	**-0.3**
	1.3nm,0.5s,baz=63,slow=8.9,SNR=4.6						
FITZ				LR		LR	22 06 54.4	
	comp=Z,87nm,19.9s,baz=86,slow=38						
STKA	**Stephens Creek**	**25.81**	**188**	P		**P**	**21 57 37.2**	**-1.1**
	2.6nm,0.4s,baz=12,slow=9.7,SNR=15						
MJAR	**Matsushiro Arr**	**43.14**	**351**	P		**P**	**22 00 06.0**	**-1.1**
	1.2nm,0.8s,baz=178,slow=7.1,SNR=4.9						
KSRS	**Korea Array**	**46.55**	**340**	P		**P**	**22 00 34.7**	**+0.7**
	2.4nm,0.7s,baz=162,slow=8.9,SNR=16						
USRK	**Ussurisyk Ar.**	**51.72**	**347**	P		**P**	**22 01 13.2**	**-0.2**
	2.2nm,0.6s,baz=160,slow=9.0,SNR=6.2						
CMAR	**Chiang Mai Arr**	**52.30**	**299**	P		**P**	**22 01 19.4**	**+1.2**
	1.2nm,0.6s,baz=124,slow=6.2,SNR=8.9						
KLR	**Kul'dur**	**56.58**	**349**	P		**P**	**22 01 49.6**	**+1.0**
	0.1nm,0.6s,baz=300,slow=1.5,SNR=4.5						
PETK	**Petropavlovsk-**	**59.98**	**8**	P		**P**	**22 02 12.9**	**+0.7**
	4.3nm,0.8s,baz=137,slow=4.2,SNR=5.2						
SONM	**Songino Array**	**64.03**	**332**	P		**P**	**22 02 40.0**	**+0.5**
	0.4nm,0.3s,baz=157,slow=7.8,SNR=4.1						
SEY	**Seymchan**	**69.16**	**3**	P		**P**	**22 03 11.1**	**-0.6**
	1.0nm,0.6s,baz=190,slow=5.5,SNR=5.7						
VNDA	**Vanda**	**71.75**	**176**	P		**P**	**22 03 25.7**	**-1.6**
	0.7nm,0.7s,baz=341,slow=3.7,SNR=4.2						
MKAR	**Makanchi Array**	**76.91**	**321**	P		**P**	**22 03 58.2**	**+0.4**
	1.2nm,0.8s,baz=99,slow=7.5,SNR=10						
ZALV	**Zalesovo Beam**	**78.57**	**328**	P		**P**	**22 04 06.2**	**-0.6**
	1.2nm,0.5s,baz=98,slow=6.6,SNR=6.4						
KURBB	**Kurchatov Arra**	**80.69**	**323**	P		**P**	**22 04 18.3**	**0.0**
	1.4nm,0.7s,baz=117,slow=4.0,SNR=7.6						
ILAR	**Eielson Array**	**86.18**	**23**	P		**P**	**22 04 44.6**	**-1.6**
	1.0nm,0.8s,baz=247,slow=5.1,SNR=13						
BVAR	**Borovoye Array**	**86.25**	**324**	P		**P**	**22 04 46.3**	**-0.5**
	1.3nm,0.8s,baz=106,slow=5.1,SNR=8.7						
TORD	**Torodi Ar. Bea**	**143.97**	**284**	PKP		PKPab	22 11 38.8	+0.1
	0.6nm,0.6s,baz=95,slow=2.5,SNR=5.2						

ISK ***01*** *21:53:50.9, 37°.49N×36°.97E, h9km, ML2.4/3*
CSEM ***01*** *21:53:51.6±0.2, 37°.51N×37°.00E, h2km, ML2.4, Error ellipse: s-maj=5.4km s-min=3.7km az=15.0*
DDA ***01*** *21:53:52.5, 37°.55N×36°.93E, h7km, Ml2.7*

ISC 01 21:53:51.7±0.9, 37°.50N±0°.03×36°.98E±0°.03, h7km±7km, n24, σ0§56/39, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMRS	**Kahramanmaras**	**0.06**	**273**	PG	**Pg**	**21 53 52.9**	**-0.5**
KMRS	**Kahramanmaras**	**0.06**	**273**	*e*Pg	**Pg**	**21 53 52.9**	**-0.5**
GAZ	**Gaziantep**	**0.38**	**150**	PG	**Pg**	**21 53 59.5**	**+0.4**
GAZ				SG	**Sg**	**21 54 04.1**	**+0.1**
GAZ	**Gaziantep**	**0.38**	**150**	*e*Pg	**Pg**	**21 53 59.5**	**+0.4**
GAZ				*e*Sg	**Sg**	**21 54 04.1**	**+0.1**
ANDN	**Andirin**	**0.51**	**279**	*i* P	**Pg**	**21 54 01.6**	**+0.1**
ANDN				*i* S	**Sg**	**21 54 08.5**	**+0.4**
ANDN	**Andirin**	**0.51**	**279**	P	**Pg**	**21 54 01.5**	**+0.1**
ANDN				S	**Sg**	**21 54 08.5**	**+0.4**
KUZU	**Kuzuini**	**0.73**	**174**	*i* P	**Pb**	**21 54 07.3**	**+0.5**
KUZU				*i* S	**Sn**	**21 54 19.6**	**-0.4**
KUZU	**Kuzuini**	**0.73**	**174**	P	**Pb**	**21 54 07.3**	**+0.5**
KUZU				S	**Sn**	**21 54 19.5**	**-0.4**
SAIM	**ADANA**	**0.85**	**304**	*i* P	**Pg**	**21 54 08.1**	**+0.1**
SAIM	**ADANA**	**0.85**	**304**	P	**Pg**	**21 54 08.1**	**+0.1**
KOZT	**Kozan**	**0.91**	**269**	PG	**Pg**	**21 54 09.3**	**+0.1**
KOZT	**Kozan**	**0.91**	**269**	*e*Pg	**Pg**	**21 54 09.3**	**+0.1**
SARI	**SarD1z-Kayseri**	**1.00**	**334**	PG	**Pg**	**21 54 10.3**	**-0.7**
DARE	**Darende-Malaty**	**1.14**	**20**	PN	**Pn**	**21 54 14.4**	**+0.2**
DARE	**Darende-Malaty**	**1.14**	**20**	*e*Pn	**Pn**	**21 54 14.4**	**+0.2**
MALT	**Malatya**	**1.41**	**54**	PN	**Pn**	**21 54 17.9**	**+0.1**
MALT				SN	**Sg**	**21 54 37.2**	**+0.3**
MALT	**Malatya**	**1.41**	**54**	*e*Pn	**Pn**	**21 54 17.9**	**+0.1**
MALT				*e*Sn	**Sg**	**21 54 37.2**	**+0.3**
YAHY	**KAYSERI_Yahyal**	**1.41**	**295**	*i* P	**Pb**	**21 54 18.1**	**-0.3**
YAHY				*i* S	**Sg**	**21 54 37.9**	**+1.0**
SURC	**SANLIURFA_SURC**	**1.45**	**115**	*i* P	**Pn**	**21 54 18.0**	**-0.4**
SURC				*i* S	**Sn**	**21 54 36.7**	**-0.9**
SURC	**SANLIURFA_SURC**	**1.45**	**115**	P	**Pn**	**21 54 18.0**	**-0.4**
SURC				S	**Sn**	**21 54 36.7**	**-0.9**
URFA	**Urfa**	**1.47**	**92**	PN	**Pn**	**21 54 18.2**	**-0.5**
URFA				SN	**Sn**	**21 54 37.6**	**-0.7**
URFA	**Urfa**	**1.47**	**92**	*e*Pn	**Pn**	**21 54 18.2**	**-0.5**
URFA				*e*Sn	**Sn**	**21 54 37.6**	**-0.7**
HEKM	**Malatya_Hekimh**	**1.58**	**29**	*i* P	**Pg**	**21 54 21.8**	**-0.2**
HEKM				*i* S	**Sg**	**21 54 43.8**	**+1.4**
HEKM	**Malatya_Hekimh**	**1.58**	**29**	P	**Pg**	**21 54 21.8**	**-0.2**
HEKM				S	**Sg**	**21 54 43.8**	**+1.4**

CSEM ***01*** *22:14:59.9±0.2, 37°.83N×26°.79E, h2km, ML2.1, Error ellipse: s-maj=4.9km s-min=2.6km az=36.0*

DDA 01 22:14:59.7, 37°.81N×26°.81E, h7km, Ml2.1, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGB	**˜zmir**	**0.25**	**14**	*i* P	Pg	22 15 04.8	+0.2
DGB				*i* S	Sg	22 15 08.7	+0.7
GCAM	**G?zelcaml?**	**0.35**	**108**	*i* P	Pg	22 15 06.9	+0.3
GCAM				*i* S	Sb	22 15 13.7	-0.4
GCAM	**G?zelcaml?**	**0.35**	**108**	P	Pg	22 15 06.9	+0.3
GCAM				S	Sb	22 15 13.7	-0.4
ZEY	**˜zmir**	**0.49**	**331**	*i* P	Pg	22 15 09.7	+0.5
ZEY				*i* S	Sg	22 15 16.5	+0.9
URLA	**Izmir**	**0.57**	**343**	*i* P	Pg	22 15 10.5	-0.3
URLA				*i* S	Sg	22 15 17.7	-0.5
URLA	**Izmir**	**0.57**	**343**	P	Pg	22 15 10.5	-0.3
URLA				S	Sg	22 15 17.7	-0.6
AYDN	**Tasoluk**	**0.86**	**100**	*i* P	Pg	22 15 16.5	+0.2
AYDN				*i* S	Sb	22 15 28.3	-0.5
AYDN	**Tasoluk**	**0.86**	**100**	P	Pg	22 15 16.5	+0.2
AYDN				S	Sb	22 15 28.3	-0.5
BDRM	**Kayabasi**	**0.90**	**146**	*i* P	Pb	22 15 17.6	-0.1
BDRM				*i* S	Sb	22 15 29.9	0.0
BDRM	**Kayabasi**	**0.90**	**146**	P	Pb	22 15 17.6	0.0
BDRM				S	Sb	22 15 29.9	+0.1

NIED ***01*** *22:25:00, 23°.20N×120°.40E, h17km, Mw3.9 Best double couple: M07.63000×1014 NP1:φs1.00000°, δ9.00000°, λ-150.00000°. NP2:φs242.00000°, δ86.00000°, λ-83.00000°.*
IDC ***01*** *22:25:54.6±1.0, 23°.17N×120°.68E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.3/64, mbtmp3.6/6, MS3.0/2, Ms1 3.0/2, ms1mx2.4/52, Error ellipse: s-maj=70.3km s-min=20.4km az=65.0*
IASPEI ***01*** *22:25:57.7±0.8, 23°.22N±0°.01×120°.46E±0°.02, h15km±4km, mb3.6/6, Error ellipse: s-maj=2.3km s-min=2.0km az=89.1, GT5 selection from ISC bulletin GT5 identified by Bond˜j˜r and McLaughlin (2009) selection criteria Bond˜j˜r and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
JMA ***01*** *22:25:57.4±0.1, 23°.24N×120°.44E, h10km±2km, M3.6*
TAP ***01*** *22:25:57.2, 23°.20N×120°.46E, h13km, ML3.9, B*
ISCJB ***01*** *22:25:58.3±0.2, 23°.19N±0°.01×120°.43E±0°.01, h20km±1km, mb3.6/6, MS3.4/1, Error ellipse: s-maj=2.0km s-min=1.9km az=173.7*

ISC 01 22:25:57.8±0.7, 23°.21N±0°.01×120°.45E±0°.01, h18km±3km, n115, σ1§01/184, mb3.6/6, 15C-21D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWK	**Hsinying**	**0.07**	**31**	⇑*i* P	**Pg**	**22 26 00.6**	**-0.7**
	baz=33						
TWK				S	**Sg**	**22 26 03.0**	**-0.5**
	baz=33						
CHN1	**Nanshi**	**0.07**	**110**	⇑*i* P	**Pg**	**22 26 00.2**	**-1.0**
	baz=100						
CHN1				S	**Sg**	**22 26 02.7**	**-0.9**
	baz=100						
WTP	**Ta-pu**	**0.15**	**77**	⇓*i* P	**Pg**	**22 26 01.7**	**-0.4**
	baz=73						
WTP				S	**Sg**	**22 26 04.9**	**-0.1**
	baz=73						
CHN3	**Shinhua**	**0.16**	**211**	*e*P	**Pg**	**22 26 01.9**	**-0.1**
	baz=224						
CHN3				S	**Sg**	**22 26 06.3**	**+1.4**
	baz=224						
SGST	**Jiashian**	**0.18**	**136**	⇓P	**Pg**	**22 26 02.0**	**-0.4**
	baz=133						
SGST				*e*S	**Sg**	**22 26 05.6**	**+0.1**
	baz=133						
TPUB	**Ta-pu**	**0.19**	**61**	⇓P	**Pg**	**22 26 02.1**	**-0.4**
	baz=57						
TPUB				S	**Sg**	**22 26 05.7**	**-0.1**
	baz=57						
SCLT	**Jiali**	**0.24**	**262**	⇓*i* P	**Pg**	**22 26 03.4**	**+0.1**
	baz=264						
SCLT				*e*S	**Sg**	**22 26 08.7**	**+1.6**
	baz=264						
CHN8	**Yiju**	**0.26**	**301**	*e*P	**Pb**	**22 26 03.6**	**-0.2**
	baz=304						
CHN8				*e*S	**Sb**	**22 26 09.1**	**+1.1**
	baz=304						
TAI1	**Yung-k'ang**	**0.27**	**230**	*e*P	**Pb**	**22 26 04.4**	**+0.4**
	baz=237						
TAI1				*e*S	**Sb**	**22 26 09.7**	**+1.5**
	baz=237						
SLGT	**Liugui**	**0.28**	**140**	⇓P	**Pb**	**22 26 03.9**	**-0.4**
	baz=130						
SLGT				*e*S	**Sb**	**22 26 09.1**	**+0.4**
	baz=130						
STYT	**Tauyuan**	**0.28**	**99**	⇓*i* P	**Pb**	**22 26 03.9**	**-0.5**
	baz=88						
STYT				S	**Sb**	**22 26 08.9**	**+0.1**
	baz=88						
WLGB	**Puzi**	**0.30**	**332**	⇓P	**Pb**	**22 26 04.6**	**0.0**
	baz=332						
WLGB				*e*S	**Sb**	**22 26 10.2**	**+1.0**
	baz=332						
TWM1	**Shoushan**	**0.39**	**184**	⇑P	**Pb**	**22 26 07.2**	**+1.1**
	baz=186						
ALS	**Alishan**	**0.44**	**47**	⇓*e*P	**Pb**	**22 26 06.8**	**-0.4**
	baz=56						
ALS				*e*S	**Sb**	**22 26 14.3**	**+0.7**
	baz=56						
WSF	**Szhu**	**0.47**	**334**	⇓P	**Pb**	**22 26 07.6**	**0.0**
	baz=334						
WSF				S	**Sb**	**22 26 15.8**	**+1.5**
	baz=334						
WDLH	**Douliu**	**0.48**	**10**	*e*P	**Pb**	**22 26 08.2**	**+0.4**
	baz=9.0						
WDLH				*e*S	**Sb**	**22 26 16.1**	**+1.5**
	baz=9.0						
WGK	**Gukeng**	**0.48**	**12**	P	**Pb**	**22 26 08.2**	**+0.5**
	baz=13						
WGK				*e*S	**Sb**	**22 26 15.9**	**+1.4**
	baz=13						
SGLT	**Jiouru**	**0.48**	**176**	*e*P	**Pb**	**22 26 08.5**	**+0.7**
	baz=165						
SSD	**Sandimen**	**0.49**	**160**	⇑P	**Pb**	**22 26 07.7**	**-0.2**
	baz=148						
SSD				*e*S	**Sb**	**22 26 15.8**	**+1.0**
	baz=148						
ELDTW	**Lidau**	**0.52**	**92**	⇓*i* P	**Pb**	**22 26 08.1**	**-0.4**
	baz=91						
ELDTW				*e*S	**Sb**	**22 26 15.9**	**+0.1**
	baz=91						
MASBT	**Mashibuluo**	**0.62**	**164**	⇑P	**Pb**	**22 26 09.8**	**-0.3**
	baz=157						
MASBT				*e*S	**Sb**	**22 26 19.2**	**+0.8**
	baz=157						
KAU	**Kaohsiung**	**0.65**	**192**	*e*P	**Pb**	**22 26 11.3**	**+0.7**
	baz=192						
KAU				*e*S	**Sn**	**22 26 22.8**	**+0.8**
	baz=192						
WJS	**Zhushan**	**0.66**	**23**	P	**Pb**	**22 26 11.3**	**+0.5**
	baz=22						
WJS				*e*S	**Sb**	**22 26 21.4**	**+1.8**
	baz=22						
WTCT	**Ta-ch'eng**	**0.67**	**347**	P	**Pg**	**22 26 10.7**	**-0.3**
	baz=347						
WTCT				*e*S	**Sb**	**22 26 21.4**	**+1.6**
	baz=347						
RLNB	**Erlin**	**0.68**	**353**	P	**Pb**	**22 26 11.2**	**0.0**
	baz=352						
RLNB				S	**Sb**	**22 26 21.9**	**+1.7**
	baz=352						
TWG	**Pinlang**	**0.69**	**124**	⇓*i* P	**Pb**	**22 26 11.4**	**+0.1**
	baz=110						
TWG				*e*S	**Sb**	**22 26 21.6**	**+1.1**
	baz=110						
WNT	**Mingjian**	**0.70**	**18**	⇑P	**Pb**	**22 26 11.8**	**+0.3**
	baz=18						
WNT				S	**Sb**	**22 26 22.7**	**+1.9**
	baz=18						
TWGBT	**Beinan**	**0.70**	**124**	⇓P	**Pb**	**22 26 11.3**	**-0.1**
	baz=110						
TWGBT				*e*S	**Sb**	**22 26 21.5**	**+0.7**
	baz=110						
WDGT	**Dungji**	**0.73**	**274**	⇓P	**Pg**	**22 26 11.3**	**-0.8**
	baz=275						
WDGT				*e*S	**Sb**	**22 26 21.9**	**+0.3**
	baz=275						
SSPT	**Xinbi**	**0.73**	**171**	*e*P	**Pb**	**22 26 12.5**	**+0.5**
	baz=156						
SSPT				*e*S	**Sn**	**22 26 25.4**	**+1.5**
	baz=156						
SSLB	**Suanglung**	**0.74**	**39**	*e*P	**Pb**	**22 26 12.0**	**-0.2**
	baz=25						
SSLB				S	**Sb**	**22 26 23.4**	**+1.5**
	baz=25						
ECL	**Taimali**	**0.77**	**143**	*e*P	**Pb**	**22 26 12.7**	**+0.1**
	baz=142						
ECL				*e*S	**Sb**	**22 26 23.9**	**+1.2**
	baz=142						
FULB	**Fuli**	**0.78**	**91**	⇓*i* P	**Pb**	**22 26 13.2**	**+0.4**
	baz=82						
FULB				*e*S	**Sn**	**22 26 24.6**	**-0.5**
	baz=82						
TYC	**Yuchr**	**0.78**	**28**	⇑*i* P	**Pb**	**22 26 13.2**	**+0.3**
	baz=29						
TYC				S	**Sn**	**22 26 25.1**	**-0.1**
	baz=29						
SMLT	**Sun Moon Lake**	**0.79**	**32**	⇑P	**Pb**	**22 26 13.2**	**+0.2**
	baz=32						
SMLT				S	**Sb**	**22 26 25.0**	**+1.6**
	baz=32						
TTN	**Taitung**	**0.79**	**125**	*e*P	**Pn**	**22 26 14.3**	**+0.3**
	baz=124						
TWF1	**Yuli**	**0.79**	**80**	⇓*i* P	**Pb**	**22 26 12.9**	**-0.2**
	baz=79						
TWF1				*e*S	**Sb**	**22 26 23.8**	**+0.4**
	baz=79						
YULB	**Yu-li**	**0.80**	**77**	⇓P	**Pg**	**22 26 12.8**	**-0.6**
	baz=76						
YULB				*e*S	**Sg**	**22 26 22.8**	**-1.2**
	baz=76						
VWDT	**VWDT**	**0.83**	**49**	⇓P	**Pb**	**22 26 14.0**	**+0.2**
	baz=49						
VWDT				S	**Sb**	**22 26 25.8**	**+1.2**
	baz=49						
CHKT	**Chengkung**	**0.85**	**97**	⇓*e*P	**Pn**	**22 26 14.5**	**-0.3**
	baz=96						
CHKT				*e*S	**Sn**	**22 26 27.3**	**+0.5**
	baz=96						
SCZT	**Fangliau**	**0.85**	**169**	⇑*e*P	**Pb**	**22 26 14.0**	**0.0**
	baz=158						
EHY	**Hungye**	**0.85**	**70**	*e*P	**Pb**	**22 26 14.2**	**+0.2**
	baz=76						
EHY				*e*S	**Sb**	**22 26 26.3**	**+1.1**
	baz=76						
WLCH	**Liuqiu**	**0.86**	**184**	*e*P	**Pn**	**22 26 15.1**	**+0.1**
	baz=187						
PHUB	**P'eng-hu**	**0.86**	**291**	*e*P	**Pg**	**22 26 13.1**	**-1.5**
	baz=291						
PHUB				*e*S	**Sg**	**22 26 25.0**	**-1.1**
	baz=291						
TWP	**Hsiaoliuchiu**	**0.86**	**185**	*e*P	**Pn**	**22 26 15.1**	**0.0**
	baz=188						
WCHH	**Zhanghua**	**0.87**	**6**	*e*P	**Pb**	**22 26 14.9**	**+0.5**
	baz=6.0						
WCHH				*e*S	**Sn**	**22 26 27.9**	**+0.5**
	baz=6.0						
PNG	**Penghu**	**0.90**	**294**	*e*P	**Pg**	**22 26 13.8**	**-1.4**
	baz=294						
PNG				*e*S	**Sg**	**22 26 26.2**	**-0.9**
	baz=294						
EAST	**Anshuo**	**0.90**	**156**	*e*P	**Pb**	**22 26 15.1**	**+0.2**
	baz=149						
EAST				*e*S	**Sn**	**22 26 28.6**	**+0.4**
	baz=149						
DPDB	**Guoxing**	**0.93**	**28**	*e*P	**Pg**	**22 26 15.4**	**-0.5**
	baz=28						
DPDB				*e*S	**Sn**	**22 26 29.2**	**+0.3**
	baz=28						
HGSD	**Ruisui**	**0.94**	**72**	⇓P	**Pn**	**22 26 16.1**	**0.0**
	baz=78						
HGSD				*e*S	**Sn**	**22 26 30.4**	**+1.4**
	baz=78						
VCHM	**Qimei**	**0.94**	**270**	⇓P	**Pg**	**22 26 14.7**	**-1.4**
	baz=271						
VCHM				*e*S	**Sg**	**22 26 27.5**	**-1.0**
	baz=271						
TAW	**Tawu**	**0.94**	**154**	*e*P	**Pn**	**22 26 15.9**	**-0.2**
	baz=147						
TAW				*e*S	**Sn**	**22 26 29.4**	**+0.3**
	baz=147						
TCU	**Taichung**	**0.95**	**12**	*e*P	**Pn**	**22 26 16.6**	**+0.2**
	baz=12						
EGFH	**Guangfu**	**1.01**	**63**	*e*P	**Pn**	**22 26 17.0**	**0.0**
	baz=55						
EGFH				*e*S	**Sb**	**22 26 30.7**	**+1.1**
	baz=55						
TWH	**Lutao**	**1.07**	**118**	*e*P	**Pb**	**22 26 17.7**	**0.0**
	baz=108						
TWH				*e*S	**Sn**	**22 26 33.3**	**+1.0**
	baz=108						
CHGB	**Renai**	**1.07**	**38**	⇓*e*P	**Pg**	**22 26 17.8**	**-0.9**
	baz=27						
CHGB				*e*S	**Sn**	**22 26 33.2**	**+0.5**
	baz=27						
ESL	**Shilin**	**1.08**	**56**	*e*P	**Pb**	**22 26 18.2**	**+0.2**
	baz=56						
ESL				*e*S	**Sb**	**22 26 32.7**	**+0.9**
	baz=56						
TWQ1	**Liyutan**	**1.17**	**15**	⇑P	**Pb**	**22 26 19.7**	**+0.2**
	baz=16						
TWQ1				*e*S	**Sn**	**22 26 36.2**	**+1.4**
	baz=16						
TDCB	**Techi**	**1.22**	**32**	⇑P	**Pn**	**22 26 20.5**	**+0.4**
	baz=32						
TDCB				*e*S	**Sb**	**22 26 36.7**	**+0.7**
	baz=32						
HEN	**Hengchun**	**1.23**	**167**	*e*P	**Pg**	**22 26 20.8**	**-0.7**
	baz=170						
TWT	**Tachien**	**1.23**	**32**	*e*P	**Pn**	**22 26 20.5**	**+0.2**
	baz=33						
TWT				*e*S	**Sg**	**22 26 37.4**	**-0.5**
	baz=33						
NSY	**Sanyi**	**1.23**	**13**	⇑P	**Pb**	**22 26 20.9**	**+0.3**
	baz=14						
NSY				*e*S	**Sn**	**22 26 38.5**	**+2.1**
	baz=14						
ENLB	**Shoufeng**	**1.26**	**57**	*e*P	**Pg**	**22 26 21.6**	**-0.6**
	baz=57						
ENLB				*e*S	**Sn**	**22 26 39.1**	**+2.1**
	baz=57						
TWK1	**Hengchun**	**1.30**	**165**	⇑*e*P	**Pn**	**22 26 21.0**	**-0.1**
	baz=167						
TWKBT	**Hengchun**	**1.31**	**165**	⇑*e*P	**Pn**	**22 26 21.0**	**-0.1**
	baz=167						
NMLH	**Miaoli**	**1.36**	**13**	*e*P	**Pn**	**22 26 22.4**	**+0.6**
	baz=12						
TWD	**Chiawan**	**1.36**	**50**	*e*P	**Pg**	**22 26 23.3**	**-0.7**
	baz=60						
TWD				*e*S	**Sg**	**22 26 41.0**	**-0.8**
	baz=60						
TSEB	**Hengchuen, Pin**	**1.37**	**162**	*e*P	**Pg**	**22 26 23.3**	**-0.9**
	baz=185						
NACB	**Ninganchiao**	**1.42**	**47**	*e*P	**Pn**	**22 26 23.3**	**+0.6**
	baz=47						
NACB				*e*S	**Sg**	**22 26 42.5**	**-1.2**
	baz=47						
NNSB	**Datong**	**1.48**	**35**	*e*P	**Pn**	**22 26 24.1**	**+0.4**
	baz=35						
NNSB				*e*S	**Sg**	**22 26 44.9**	**-0.8**
	baz=35						
NNSH	**Datong**	**1.48**	**35**	*e*P	**Pb**	**22 26 24.7**	**-0.2**
	baz=34						
NNS	**Nan Shan**	**1.49**	**34**	*e*P	**Pn**	**22 26 24.1**	**+0.4**
	baz=34						
NSTT	**Nanjuang**	**1.50**	**19**	*e*P	**Pn**	**22 26 24.3**	**+0.5**
	baz=20						
NSTT				*e*S	**Sb**	**22 26 44.5**	**+0.7**
	baz=20						
LIOB	**Emei**	**1.52**	**20**	*e*P	**Pn**	**22 26 22.7**	**-1.4**
	baz=20						
LIOB				*e*S	**Sn**	**22 26 44.1**	**+0.6**
	baz=20						
SBCB	**Hsinchu**	**1.65**	**17**	*e*P	**Pn**	**22 26 26.8**	**+1.0**
	baz=17						
NSK	**Sanguang**	**1.68**	**29**	*e*P	**Pb**	**22 26 27.9**	**-0.4**
	baz=15						
YHNB	**Yeheng**	**1.68**	**30**	⇑*e*P	**Pn**	**22 26 26.9**	**+0.5**
	baz=17						
YHNB				*e*S	**Sb**	**22 26 50.4**	**+1.3**
	baz=17						
ENA	**Nanau**	**1.69**	**44**	*e*P	**Pb**	**22 26 27.9**	**-0.5**
	baz=61						
NANB	**Nanao**	**1.70**	**44**	*e*P	**Pn**	**22 26 27.3**	**+0.8**
	baz=30						
NANB				*e*S	**Sb**	**22 26 50.4**	**+0.9**
	baz=30						
ENTT	**Nioudou**	**1.75**	**35**	*e*P	**Pb**	**22 26 28.7**	**-0.7**

KNMB	Chin-men Tao	2.26	304	*e*P	Pn	22 26 33.8	-0.6
	baz=303						
TWB1	Santiao Chiao	2.27	38	*e*P	Pb	22 26 37.8	-0.6
	baz=21						
JYNG	Yonaguni jima	2.60	61	P	Pn	22 26 40.4	+1.5
JYNG				*e*S	Sb	22 27 13.5	-1.9
YOJ	Yonaguni jima	2.65	62	*e*P	Pn	22 26 41.4	+1.8
	baz=62						
YOJ	Yonaguni jima	2.65	62	P	Pn	22 26 41.5	+1.8
YOJ				*e*S	Sn	22 27 14.1	+2.7
MATB	Ma-tsu	2.96	351	*e*P	Pn	22 26 43.1	-0.9
	baz=351						
HATJ	Hateruma jima	3.19	74	*e*S	Sn	22 27 26.4	+1.8
IRIF	Iriomote-Funau	3.21	69	P	Pn	22 26 49.3	+2.0
IRIF				*e*S	Sn	22 27 26.7	+1.7
JKRS	Kuro-shima	3.42	72	P	Pn	22 26 51.7	+1.5
JKRS				*e*S	Sn	22 27 33.4	+3.1
JIJ	Ishigaki jima	3.57	71	P	Pn	22 26 53.3	+1.0
JIJ				*e*S	Sn	22 27 35.4	+1.3
JISG	Ishigakijimahi	3.79	68	*e*S	Sn	22 27 39.8	+0.4
JTJ	Tarama	4.14	69	P	Pn	22 27 02.7	+2.6
JTJ				*e*S	Sn	22 27 50.8	+2.7
JIRB	Irabujima	4.61	69	S	Sn	22 27 59.3	-0.3
KSRS	Korea Array	15.58	23	LR	LR	22 36 24.5	
	comp=Z,22nm,20.0s,baz=220,slow=41						
MKAR	Makanchi Array	38.58	317	P	P	22 33 20.4	+0.8
	0.3nm,0.6s,baz=109,slow=9.5,SNR=3.9						
PMG	Port Moresby	41.64	138	LR	LR	22 50 18.9	
	comp=Z,57nm,20.5s,baz=98,slow=35						
WRA	Warramunga Arr	44.98	161	P	P	22 34 10.8	-1.4
	0.8nm,0.5s,baz=343,slow=8.7,SNR=14						
BVAR	Borovoye Array	48.01	321	P	P	22 34 36.3	+0.7
	0.3nm,0.5s,baz=91,slow=7.4,SNR=3.1						
ASAR	Alice Springs	48.40	163	P	P	22 34 38.0	-0.9
	0.3nm,0.4s,baz=356,slow=15,SNR=4.9						
STKA	Stephens Creek	58.39	159	P	P	22 35 50.4	-1.8
	0.9nm,0.8s,baz=331,slow=13,SNR=2.8						
YKA	Yellowknife Ar	84.12	22	P	P	22 38 27.4	0.0
	0.2nm,0.5s,baz=313,slow=5.4,SNR=4.3						

IDC ***01*** *22:30:49.5±4.9,39°.17N×67°.16E,h0km,mb3.3/1, mb1 3.4/3,mb1mx3.0/65,mbtmp3.4/3,ML3.2/2,Error ellipse: s-maj=224.5km s-min=24.2km az=150.0*
NNC ***01*** *22:31:00.3±3.2,37°.11N×70°.51E,h0km,mb3.7,mpv3.3, Error ellipse: s-maj=24.6km s-min=22.0km az=150.0*
ISC 01 22:30:49.6±1.6,**38°.9N**±0°.2×**67°.5E**±0°.2,**h10km**,**n7**,σ**5**§**48**/7,
6C-2D,Southeastern Uzbekistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	4.76	74	⇑Pn	Pn	22 31 59.9	-1.8
	1.5nm,0.3s						
SFK				⇓Sn	Sn	22 32 45.8	-11
	39nm,0.5s						
KK31	Karatay Array	4.80	27	⇑Pn	Pg	22 32 30.8	+9.2
	1.6nm,0.5s,baz=182,slow=12,SNR=28						
KK31				⇑Sn	Sg	22 33 41.0	+17
	2.8nm,0.3s,baz=190,slow=23,SNR=16						
MNAS	Manas	5.24	45	⇑Pn	Pb	22 32 24.9	+3.5
	1.8nm,0.4s						
MNAS				⇓Sn	Sg	22 33 31.2	-6.5
	13nm,0.5s						
AAK	Ala-Archa	6.49	52	⇑Pn	Pn	22 32 33.0	+7.7
	2.7nm,0.6s						
AAK				⇑Sn	Sn	22 33 47.1	+7.6
	5.4nm,0.6s						
MKAR	Makanchi Array	13.41	49	Pn	Pn	22 33 57.8	-2.1
	0.2nm,0.3s,baz=218,slow=11,SNR=5.2						
ZALV	Zalesovo Beam	19.15	32	P	Pn	22 35 12.9	-0.8
	0.3nm,0.3s,baz=213,slow=12,SNR=4.0						
TORD	Torodi Ar. Bea	63.10	265	P	P	22 41 17.3	-0.3
	0.2nm,0.5s,baz=50,slow=5.9,SNR=5.1						

NIED ***01*** *22:32:00,36°.80N×141°.30E,h11km,Mw3.4 Best double couple: M0 1.51000×10^14 NP1:*ϕ_s*188.00000°,*δ*39.00000°,* λ*-103.00000°. NP2:*ϕ_s*25.00000°,*δ*52.00000°,* λ*-79.00000°.*
IDC ***01*** *22:32:51.3±1.9,36°.93N×141°.53E,h0km,mb3.7/4, mb1 3.6/7,mb1mx3.4/66,mbtmp3.6/7,ML3.2/3,Error ellipse: s-maj=38.6km s-min=24.4km az=65.0*
ISCJB ***01*** *22:32:54.1±1.2,36°.79N±0°.03×141°.30E±0°.09,h23km±7km, mb3.5/4,Error ellipse: s-maj=11.5km s-min=5.7km az=6.9*
JMA ***01*** *22:32:54.6,36°.80N×141°.26E,h30km±1km,M3.6*
JMA Felt I J1.
ISC 01 22:32:53.5±2.1,**36°.83N**±0°.04×**141°.32E**±0°.09,**h9**km±10km,
n21,σ1§**59**/25,**mb3.6**/4,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.49	303	P	Pb	22 33 04.3	-0.1
ONAJ				S	Sg	22 33 11.5	+1.9
JFK	Kawauchi	0.64	326	P	Pb	22 33 06.9	+0.1
JFK				S	Sb	22 33 16.1	+0.2
JHO	Hitachi	0.64	250	P	Pg	22 33 06.0	+0.2
JHO				S	Sg	22 33 14.3	+0.1
JFT	Otama	1.04	311	P	Pb	22 33 13.6	0.0
JFT				S	Sg	22 33 27.3	+0.4
JYT	Yasato	1.09	237	P	Pg	22 33 12.7	-1.6
JYT				S	Sg	22 33 26.2	-2.3
JMM	Marumori	1.11	338	P	Pn	22 33 14.4	-0.8
JMM				S	Sb	22 33 29.5	0.0
JFY	Yanaizu	1.41	294	P	Pn	22 33 19.1	-0.3
JFY				*e*S	Sn	22 33 37.2	-0.9
MJAR	Matsushiro Arr	2.52	264	Pn	Pn	22 33 34.7	+0.1
	3.5nm,0.3s,baz=97,slow=13,SNR=30						
MJAR				Sn	Sn	22 34 08.2	+2.8
	8.1nm,0.3s,baz=84,slow=12,SNR=5.1						
MAT	Matsushiro	2.52	264	P	Pn	22 33 35.1	+0.5
MAT				*e*S	Sn	22 34 01.9	-3.5
JHJ	Hachijo jima 2	3.91	199	Pn	Pn	22 33 55.9	+2.2
	4.9nm,0.3s,baz=38,slow=19,SNR=4.1						
JHJ				Sn	Sn	22 34 39.3	-0.6
	7.1nm,0.3s,baz=62,slow=22,SNR=1.9						
KSRS	Korea Array	10.71	277	Pn	Pn	22 35 30.8	+3.7
	0.2nm,0.3s,baz=90,slow=15,SNR=3.4						
SONM	Songino Array	27.83	304	P	P	22 38 43.1	-0.1
	0.5nm,0.6s,baz=98,slow=9.0,SNR=2.8						
H11N2	WAKE ISLAND Hy 28.11	120		T	T	23 08 11.9	
	baz=313,slow=75,SNR=169						
H11N1	WAKE ISLAND Hy 28.12	120		T	T	23 08 16.7	
	baz=313,slow=75,SNR=202						
H11N3	WAKE ISLAND Hy 28.13	120		T	T	23 08 16.3	
	baz=313,slow=75,SNR=152						
H11S1	WAKE ISLAND Hy 28.82	122		T	T	23 09 06.1	
	baz=314,slow=76,SNR=104						
H11S3	WAKE ISLAND Hy 28.82	122		T	T	23 09 06.3	
	baz=314,slow=76,SNR=104						
H11S2	WAKE ISLAND Hy 28.83	122		T	T	23 09 06.1	
	baz=314,slow=76,SNR=63						
ZALV	Zalesovo Beam	41.99	313	P	P	22 40 44.3	-0.4
	1.0nm,0.6s,baz=108,slow=4.8,SNR=4.4						
MKAR	Makanchi Array	44.16	302	P	P	22 41 02.5	0.0
	0.6nm,0.6s,baz=87,slow=9.6,SNR=9.4						
WRA	Warramunga Arr	56.85	188	P	P	22 42 38.2	-0.3
	0.3nm,0.5s,baz=3.9,slow=7.3,SNR=7.3						

ISCJB ***01*** *22:40:23.6±0.8,6°.97S±0°.05×130°.0E±0°.1,h104km, mb3.4/1,Error ellipse: s-maj=18.2km s-min=7.3km az=3.1*
IDC ***01*** *22:40:25.1±1.9,6°.96S×129°.93E,h100km±25km,mb3.2/1, mb1 3.7/6,mb1mx3.2/50,mbtmp3.9/6,Error ellipse: s-maj=40.1km s-min=15.9km az=101.0*
ISC 01 22:40:24.5±0.9,**7°.11S**±0°.06×**130°.0E**±0°.1,**h104**km,**n6**,
σ3§**29**/10,**Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	6.33	11	P	Pn	22 41 55.9	+0.6
	3.8nm,0.3s,baz=55,slow=24,SNR=35						
SIJI				S	Sn	22 43 02.5	-3.7
	3.8nm,0.3s,baz=242,slow=22,SNR=3.8						
BATI	Baumata	6.99	243	P	Pn	22 42 05.7	+1.4
	11nm,0.3s,baz=108,slow=4.1,SNR=4.7						
FITZ	Fitzroy Crossi	11.72	201	P	Pn	22 43 09.1	+0.6
	0.7nm,0.3s,baz=125,slow=16,SNR=3.4						
FITZ				S	Sn	22 45 12.2	-5.1
	0.7nm,0.3s,baz=110,slow=18,SNR=3.6						
WRA	Warramunga Arr	13.43	162	P	Pn	22 43 32.7	+1.7
	0.4nm,0.3s,baz=332,slow=14,SNR=28						
WRA				S	Sn	22 45 55.3	-3.5
	1.4nm,0.3s,baz=337,slow=23,SNR=10						
ASAR	Alice Springs	16.88	168	P	P	22 44 18.6	+3.8
	0.2nm,0.3s,baz=341,slow=9.1,SNR=11						
ASAR				S	Sn	22 47 20.5	-1.7
	0.3nm,0.3s,baz=350,slow=26,SNR=6.3						
MKAR	Makanchi Array	68.33	327	P	P	22 51 14.5	-0.1
	0.2nm,0.3s,baz=117,slow=8.0,SNR=7.5						

LDG ***01*** *22:50:29.4±0.2,44°.95N×11°.35E,h2km,Ml3.1/7,Error ellipse: s-maj=6.0km s-min=4.1km az=77.0*
ISCJB ***01*** *22:50:29.5±0.2,44°.90N±0°.01×11°.26E±0°.02,h15km±1km, Error ellipse: s-maj=2.3km s-min=1.9km az=135.6*
CSEM ***01*** *22:50:29.6±0.1,44°.90N×11°.26E,h10km,ML3.2/13,Error ellipse: s-maj=3.3km s-min=2.7km az=129.0*
IASPEI ***01*** *22:50:29.3±0.8,44°.88N±0°.02×11°.22E±0°.02,h12km±3km, Error ellipse: s-maj=2.8km s-min=2.4km az=53.1,GT5 selection from ISC bulletin GT5 identified by Bond˜jr and McLaughlin (2009) selection criteria Bond˜jr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
ROM ***01*** *22:50:29.4±0.0,44°.885N±0°.001×11°.236E±0°.001, h5km,ML3.2/27*
STR ***01*** *22:50:29.8±1.1,45°.N±6°.×1°.2E±°,h5km,M3.6/7,MLv3.6/7*
PRU ***01*** *22:50:29.6,44°.87N×11°.61E,h0km*
ISC 01 22:50:28.9±0.7,**44°.88N**±0°.01×**11°.19E**±0°.01,**h16**km±3km,
n177,σ1§**47**/251,**18C-30D,Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0813	**Massa Finalese**	**0.01**	**78**	⇑*i*P	**Pg**	**22 50 30.8**	**-0.8**
T0813				⇑*i*S	**Sg**	**22 50 32.6**	**-0.8**
T0813	**Massa Finalese**	**0.01**	**78**	*i* P	**Pg**	**22 50 30.9**	**-0.8**
T0813				*i* S	**Sg**	**22 50 32.6**	**-0.8**
T0802	**SanFelice sul**	**0.01**	**257**	⇑*i*P	**Pg**	**22 50 31.7**	**+0.1**
T0802				⇑*i*S	**Sg**	**22 50 33.6**	**+0.2**
T0802	**SanFelice sul**	**0.01**	**257**	*i* P	**Pg**	**22 50 31.7**	**+0.1**
T0802				*i* S	**Sg**	**22 50 33.6**	**+0.2**
T0800	**Massa Finalese**	**0.05**	**125**	⇓*i*P	**Pg**	**22 50 30.0**	**-1.8**
T0800				⇑*i*S	**Sg**	**22 50 32.9**	**-0.7**
T0800	**Massa Finalese**	**0.05**	**125**	*i* P	**Pg**	**22 50 31.0**	**-0.8**
T0800				*i* S	**Sg**	**22 50 32.9**	**-0.7**
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0812	**Loc. Stoppiaro**	**0.08**	**354**	⇓*i*P	**Pg**	**22 50 31.0**	**-1.0**
T0812				⇓*i*S	**Sg**	**22 50 34.8**	**+0.7**
T0812	**Loc. Stoppiaro**	**0.08**	**354**	*i* P	**Pg**	**22 50 32.0**	**-0.1**
T0812				*i* S	**Sg**	**22 50 34.8**	**+0.7**
T0811	**Palata Pepoli**	**0.10**	**165**	⇓*i*P	**Pg**	**22 50 32.2**	**0.0**
T0811				⇓*i*S	**Sg**	**22 50 35.3**	**+1.0**
T0811	**Palata Pepoli**	**0.10**	**165**	*i* P	**Pg**	**22 50 32.2**	**0.0**
T0811				*i* S	**Sg**	**22 50 35.4**	**+1.0**
T0805	**Bondeno (FE)**	**0.10**	**66**	⇓*i*P	**Pg**	**22 50 31.7**	**-0.6**
T0805				⇓*i*S	**Sg**	**22 50 34.4**	**0.0**
T0805	**Bondeno (FE)**	**0.10**	**66**	*i* P	**Pg**	**22 50 31.7**	**-0.6**
T0805				*i* S	**Sg**	**22 50 34.4**	**0.0**
T0822	**Casumaru (Bond**	**0.12**	**112**	⇑*i*P	**Pg**	**22 50 32.1**	**-0.3**
T0822				⇑*i*S	**Sb**	**22 50 35.6**	**+0.2**
T0822	**Casumaru (Bond**	**0.12**	**112**	*i* P	**Pg**	**22 50 32.1**	**-0.3**
T0822				*i* S	**Sb**	**22 50 35.6**	**+0.2**
T0822				AML	AML		
	comp=E,48850μm,1.4s						
T0822				AML	AML		
T0822				AML	AML		
	comp=E,48850μm,1.4s						
T0822				AML	AML		
T0822				AML	AML		
	comp=E,48850μm,1.4s						
T0822				AML	AML		
T0822				AML	AML		
T0822				AML	AML		
	comp=E,48850μm,1.4s						
T0818	**Loc. Fossa, Co**	**0.13**	**297**	⇑*e*P	**Pb**	**22 50 33.5**	**+0.5**
T0818				⇑*e*S	**Sb**	**22 50 37.5**	**+1.8**
T0818	**Loc. Fossa, Co**	**0.13**	**297**	*e*P	**Pb**	**22 50 33.5**	**+0.5**
T0818				*e*S	**Sb**	**22 50 37.5**	**+1.8**
RAVA	**Ravarino**	**0.13**	**203**	⇓*i*P	**Pb**	**22 50 33.5**	**+0.5**
RAVA				⇓*i*S	**Sb**	**22 50 37.8**	**+2.0**
RAVA	**Ravarino**	**0.13**	**203**	*i* P	**Pb**	**22 50 33.5**	**+0.5**
RAVA				*i* S	**Sb**	**22 50 37.8**	**+2.0**
RAVA				AML	AML		
	comp=E,26800μm,0.5s						
RAVA				AML	AML		
	comp=N,70350μm,0.7s						
RAVA				AML	AML		
	comp=E,26750μm,0.5s						
RAVA				AML	AML		
	comp=N,70350μm,0.7s						
RAVA				AML	AML		
	comp=E,26800μm,0.5s						
RAVA				AML	AML		
	comp=N,70350μm,0.7s						
RAVA				AML	AML		
	comp=N,70350μm,0.7s						
RAVA				AML	AML		
	comp=E,26800μm,0.5s						
SERM	**Sermide**	**0.15**	**29**	⇓*i*P	**Pb**	**22 50 33.8**	**+0.4**
SERM	**Sermide**	**0.15**	**29**	*i* P	**Pb**	**22 50 33.8**	**+0.4**
SERM				AML	AML		
	comp=E,6055μm,1.4s						
SERM				AML	AML		
	comp=N,10295μm,0.8s						
SERM				AML	AML		
	comp=E,8455μm,0.7s						
SERM				AML	AML		
	comp=N,14650μm,1.0s						
SERM				AML	AML		
	comp=E,6055μm,1.4s						
SERM				AML	AML		
	comp=N,10255μm,0.8s						
SERM				AML	AML		
	comp=E,8455μm,0.7s						
SERM				AML	AML		
	comp=N,14650μm,1.0s						
SERM				AML	AML		
	comp=E,6055μm,1.4s						
SERM				AML	AML		
	comp=N,10285μm,0.8s						
SERM				AML	AML		
	comp=E,8460μm,0.7s						
SERM				AML	AML		
	comp=N,14650μm,1.0s						
SERM				AML	AML		
	comp=N,10285μm,0.8s						
T0803	**Dosso, Cento (**	**0.16**	**134**	⇓*e*P	**Pg**	**22 50 33.1**	**+0.1**
T0803				⇓*e*S	**Sg**	**22 50 36.0**	**+0.4**
T0803	**Dosso, Cento (**	**0.16**	**134**	*e*P	**Pg**	**22 50 33.1**	**+0.1**
T0803				*e*S	**Sb**	**22 50 37.0**	**+0.4**
T0814	**Loc. Cortile,**	**0.18**	**242**	⇓*i*P	**Pb**	**22 50 34.7**	**+0.8**
T0814				⇓*i*S	**Sb**	**22 50 39.6**	**+2.5**
T0814	**Loc. Cortile,**	**0.18**	**242**	*i* P	**Pb**	**22 50 34.7**	**+0.8**
T0814				*i* S	**Sb**	**22 50 39.6**	**+2.5**
T0827	**Moglia (MN)**	**0.20**	**288**	*e*P	**Pb**	**22 50 34.9**	**+0.8**
T0827				*e*S	**Sb**	**22 50 39.8**	**+2.2**
T0827	**Moglia (MN)**	**0.20**	**288**	*e*P	**Pb**	**22 50 34.9**	**+0.8**
T0827				*e*S	**Sb**	**22 50 39.9**	**+2.2**
T0823	**Castello D'Arg**	**0.20**	**162**	⇓*e*P	**Pb**	**22 50 34.4**	**+0.2**
T0823				⇓*e*S	**Sb**	**22 50 38.9**	**+1.2**
T0823	**Castello D'Arg**	**0.20**	**162**	*e*P	**Pb**	**22 50 34.4**	**+0.2**
T0823				*e*S	**Sb**	**22 50 38.9**	**+1.2**
T0828	**Loc. Fossoli,**	**0.20**	**257**	⇓*e*P	**Pb**	**22 50 34.9**	**+0.7**
T0828				⇓*e*S	**Sb**	**22 50 40.7**	**+2.9**
T0828	**Loc. Fossoli,**	**0.20**	**257**	*e*P	**Pb**	**22 50 34.9**	**+0.7**
T0828				*e*S	**Sb**	**22 50 40.7**	**+2.9**
T0817	**Loc. Veratica,**	**0.22**	**58**	⇓*i*P	**Pg**	**22 50 33.0**	**-0.9**
T0817				⇓*i*S	**Sg**	**22 50 38.2**	**+0.9**
T0817	**Loc. Veratica,**	**0.22**	**58**	*i* P	**Pg**	**22 50 34.0**	**+0.1**
T0817				*i* S	**Sg**	**22 50 38.2**	**+0.9**
T0824	**Loc. Limidi di**	**0.22**	**238**	⇓*e*P	**Pb**	**22 50 35.5**	**+0.9**
T0824				⇓*e*S	**Sb**	**22 50 40.5**	**+2.1**
T0824	**Loc. Limidi di**	**0.22**	**238**	*e*P	**Pb**	**22 50 35.5**	**+0.9**
T0824				*e*S	**Sb**	**22 50 40.5**	**+2.1**
GAZZ	**Gazzo Veronese**	**0.25**	**344**	⇓*e*Pg	**Pb**	**22 50 35.1**	**+0.1**
GAZZ	**Gazzo Veronese**	**0.25**	**344**	*e*Pg	**Pb**	**22 50 35.1**	**+0.1**
T0821	**Loc. Casaglia**	**0.25**	**84**	*e*P	**Pg**	**22 50 33.9**	**-0.5**
T0821				*e*S	**Sg**	**22 50 37.6**	**-0.5**
T0821	**Loc. Casaglia**	**0.25**	**84**	*e*P	**Pg**	**22 50 33.9**	**-0.5**
T0821				*e*S	**Sg**	**22 50 37.6**	**-0.5**
T0821				AML	AML		
	comp=E,7290μm,0.3s						
T0821				AML	AML		
	comp=N,7690μm,0.9s						
T0821				AML	AML		
	comp=E,7405μm,0.3s						
T0821				AML	AML		
	comp=N,7620μm,0.9s						
T0821				AML	AML		
	comp=E,7305μm,0.3s						
T0821				AML	AML		
	comp=N,7690μm,0.9s						
T0821				AML	AML		
	comp=E,7405μm,0.3s						
T0821				AML	AML		
	comp=N,7620μm,0.9s						
T0821				AML	AML		
	comp=E,7405μm,0.3s						
T0821				AML	AML		
	comp=E,7305μm,0.3s						
T0821				AML	AML		
	comp=N,7690μm,0.9s						
T0821				AML	AML		
	comp=N,7620μm,0.9s						
T0825	**Gonzaga (MN)**	**0.26**	**292**	AML	AML		
	comp=E,14550μm,0.6s						
T0825				AML	AML		
	comp=N,12100μm,0.8s						
T0825				AML	AML		
	comp=E,14550μm,0.6s						
T0825				AML	AML		
	comp=N,12100μm,0.8s						
T0825				AML	AML		
	comp=E,14500μm,0.6s						
T0825				AML	AML		
	comp=N,12100μm,0.8s						
T0825				AML	AML		
	comp=E,14500μm,0.6s						
T0825				AML	AML		
	comp=N,12100μm,0.8s						
T0820	**Chiesuol del F**	**0.28**	**107**	*e*P	**Pb**	**22 50 35.9**	**+0.2**
T0820				*e*S	**Sg**	**22 50 40.1**	**+1.0**
T0820	**Chiesuol del F**	**0.28**	**107**	*e*P	**Pb**	**22 50 35.9**	**+0.2**
T0820				*e*S	**Sg**	**22 50 40.1**	**+1.0**
T0820				AML	AML		
	comp=E,8195μm,0.5s						
T0820				AML	AML		
	comp=N,7750μm,0.7s						
T0820				AML	AML		
	comp=E,9290μm,0.3s						
T0820				AML	AML		
	comp=N,8555μm,0.6s						
T0820				AML	AML		
	comp=E,8195μm,0.5s						
T0820				AML	AML		
	comp=N,7750μm,0.7s						
T0820				AML	AML		
	comp=E,9260μm,0.3s						
T0820				AML	AML		
	comp=N,8550μm,0.6s						
T0820				AML	AML		
	comp=E,9260μm,0.3s						
T0820				AML	AML		
	comp=N,7750μm,0.7s						
T0820				AML	AML		
	comp=N,8550μm,0.6s						
T0820				AML	AML		
	comp=E,8195μm,0.5s						
FIU	**Minerbio Fiu**	**0.32**	**138**	⇑*e*P	**Pb**	**22 50 36.7**	**+0.5**
FIU				⇑*e*S	**Sb**	**22 50 41.4**	**+0.2**
FIU	**Minerbio Fiu**	**0.32**	**138**	*e*P	**Pb**	**22 50 36.7**	**+0.5**
FIU				*e*S	**Sb**	**22 50 41.4**	**+0.2**
T0816	**San Bartolomeo**	**0.33**	**118**	⇑*e*P	**Pg**	**22 50 35.6**	**-0.1**
T0816				⇑*e*S	**Sg**	**22 50 40.1**	**-0.3**
T0816	**San Bartolomeo**	**0.33**	**118**	*e*P	**Pg**	**22 50 35.6**	**-0.1**
T0816				*e*S	**Sg**	**22 50 40.1**	**-0.3**
NOVE	**Novellara**	**0.35**	**257**	*e*P	**Pn**	**22 50 37.7**	**-1.7**
NOVE	**Novellara**	**0.35**	**257**	*e*P	**Pn**	**22 50 37.7**	**-1.7**
T0815	**Correggio (RE)**	**0.38**	**90**	*e*P	**Pg**	**22 50 36.7**	**+0.1**
T0815	**Correggio (RE)**	**0.38**	**90**	*e*P	**Pg**	**22 50 36.7**	**+0.1**
CMPO	**Campotto Po**	**0.53**	**124**	*e*P	**Pg**	**22 50 39.6**	**+0.3**
CMPO	**Campotto Po**	**0.53**	**124**	*e*P	**Pg**	**22 50 39.6**	**+0.3**
TEOL	**Teolo**	**0.59**	**35**	⇓*e*Pg	**Pg**	**22 50 40.7**	**+0.2**
TEOL				⇓*e*Sg	**Sb**	**22 50 50.1**	**+1.1**
TEOL	**Teolo**	**0.59**	**35**	*e*Pg	**Pg**	**22 50 40.7**	**+0.2**
TEOL				*e*Sg	**Sb**	**22 50 50.2**	**+1.1**
TEOL	**Teolo**	**0.59**	**35**	*e*P	**Pg**	**22 50 40.8**	**+0.2**
TEOL				AML	AML		
	comp=E,3200μm,0.2s						
TEOL				AML	AML		
	comp=N,3480μm,0.3s						
TEOL				AML	AML		
	comp=E,3200μm,0.2s						
TEOL				AML	AML		
	comp=N,3480μm,0.3s						
TEOL				AML	AML		
	comp=N,3480μm,0.3s						
TEOL				AML	AML		
	comp=E,3200μm,0.2s						
MARN	**Marana (Italy)**	**0.76**	**1**	⇓*e*Pg	**Pb**	**22 50 44.0**	**+0.2**
MARN				*e*Sg	**Sb**	**22 50 55.1**	**+1.1**
MARN	**Marana (Italy)**	**0.76**	**1**	*e*Pg	**Pb**	**22 50 44.0**	**+0.2**
MARN				*e*Sg	**Sb**	**22 50 55.1**	**+1.1**
ROVR	**Rover˜¤ Verone**	**0.78**	**354**	AML	AML		
	comp=E,1940μm,0.4s						
ROVR				AML	AML		
	comp=E,1940μm,0.4s						
ROVR				AML	AML		
	comp=N,3520μm,0.3s						
ROVR				AML	AML		
	comp=N,3520μm,0.3s						
ROVR				AML	AML		
	comp=E,1940μm,0.4s						
ROVR				AML	AML		
	comp=N,3520μm,0.3s						
BALD	**Monte Baldo**	**0.85**	**342**	*e*Pg	**Pn**	**22 50 46.4**	**-0.1**
BALD				*e*Sg	**Sn**	**22 50 59.4**	**+0.7**
BALD	**Monte Baldo**	**0.85**	**342**	*e*Pg	**Pn**	**22 50 46.4**	**-0.1**
BALD				*e*Sg	**Sn**	**22 50 59.4**	**+0.7**
SALO	**Salr**	**0.88**	**328**	AML	AML		
	comp=N,2410μm,0.7s						
SALO				AML	AML		
	comp=E,1830μm,1.3s						
SALO				AML	AML		
	comp=E,1830μm,1.3s						
SALO				AML	AML		
	comp=N,2410μm,0.7s						
SALO				AML	AML		
	comp=N,2410μm,0.7s						
SALO				AML	AML		
	comp=E,1830μm,1.3s						
MAGA	**Magasa**	**0.98**	**336**	AML	AML		
	comp=E,5085μm,0.4s						
MAGA				AML	AML		
	comp=E,5085μm,0.4s						
MAGA				AML	AML		
	comp=N,3985μm,0.5s						
MAGA				AML	AML		
	comp=N,3985μm,0.5s						
MAGA				AML	AML		
	comp=N,3985μm,0.5s						
MAGA				AML	AML		
	comp=E,5085μm,0.

	comp=E,350μm,1.3s							
CTL8					AML	AML		
	comp=N,290μm,1.2s							
CTL8					AML	AML		
	comp=N,1300μm,0.3s							
CTL8					AML	AML		
	comp=E,350μm,1.3s							
CTL8					AML	AML		
	comp=N,290μm,1.2s							
CTL8					AML	AML		
	comp=E,350μm,1.3s							
CTL8					AML	AML		
	comp=E,1345μm,0.5s							
CTL8					AML	AML		
	comp=N,1300μm,0.3s							
CTL8					AML	AML		
	comp=N,290μm,1.2s							
CGRP	**Cima Grappa**	**1.09**	**23**⇓	*e*Pg	**Pb**	**22 50 49.7**	**+0.1**	
CGRP				*e*Sg	**Sn**	**22 51 05.8**	**+1.1**	
CGRP	**Cima Grappa**	**1.09**	**23**	*e*Pg	**Pb**	**22 50 49.7**	**+0.1**	
CGRP				*e*Sg	**Sn**	**22 51 05.8**	**+1.1**	
CGRP	**Cima Grappa**	**1.09**	**23**	*e*P	**Pb**	**22 50 49.6**	**+0.1**	
CGRP				AML	AML			
	comp=E,716μm,0.6s							
CGRP				AML	AML			
	comp=N,781μm,0.8s							
CGRP				AML	AML			
	comp=E,716μm,0.6s							
CGRP				AML	AML			
	comp=N,781μm,0.8s							
CGRP				AML	AML			
	comp=E,716μm,0.6s							
CGRP				AML	AML			
	comp=N,781μm,0.8s							
MTLO	**Montello**	**1.13**	**34**⇓	*e*Pg	**Pg**	**22 50 50.9**	**+0.1**	
MTLO	**Montello**	**1.13**	**34**	*e*Pg	**Pg**	**22 50 50.9**	**+0.1**	
RNI	**Roncone**	**1.17**	**340**⇑	*e*Pg	**Pb**	**22 50 50.9**	**-0.1**	
RNI				*e*Sg	**Sn**	**22 51 09.1**	**+2.4**	
RNI	**Roncone**	**1.17**	**340**	*e*Pg	**Pb**	**22 50 50.9**	**-0.1**	
RNI				*e*Sg	**Sn**	**22 51 09.1**	**+2.4**	
MABI	**Malga Bissina**	**1.27**	**338**	AML	AML			
	comp=N,211μm,1.2s							
MABI				AML	AML			
	comp=E,278μm,0.7s							
MABI				AML	AML			
	comp=N,211μm,1.2s							
MABI				AML	AML			
	comp=E,278μm,0.7s							
VARN	**Col Varnada, M**	**1.29**	**30**⇓	*e*Pg	**Pn**	**22 50 52.8**	**+0.4**	
VARN				*e*Sg	**Sg**	**22 51 12.4**	**+1.8**	
VARN	**Col Varnada, M**	**1.29**	**30**	*e*Pg	**Pn**	**22 50 52.8**	**+0.4**	
VARN				*e*Sg	**Sg**	**22 51 12.4**	**+1.8**	
CAE	**Caneva**	**1.43**	**37**⇑	*e*Pg	**Pb**	**22 50 55.1**	**-0.2**	
CAE	**Caneva**	**1.43**	**37**	*e*Pg	**Pb**	**22 50 55.1**	**-0.2**	
FAU	**Forcella Aurin**	**1.46**	**22**⇑	*e*Pg	**Pb**	**22 50 56.3**	**+0.5**	
FAU				*e*Sg	**Sg**	**22 51 16.6**	**+0.5**	
FAU	**Forcella Aurin**	**1.46**	**22**	*e*Pg	**Pb**	**22 50 56.3**	**+0.5**	
FAU				*e*Sg	**Sg**	**22 51 16.6**	**+0.5**	
POLC	**Polcenigo**	**1.47**	**38**⇑	*e*Pg	**Pb**	**22 50 55.9**	**-0.1**	
POLC	**Polcenigo**	**1.47**	**38**	*e*Pg	**Pb**	**22 50 55.9**	**-0.1**	
POLC	**Polcenigo**	**1.47**	**38**	AML	AML			
	comp=N,1045μm,0.6s							
POLC				AML	AML			
	comp=E,1122μm,0.4s							
POLC				AML	AML			
	comp=N,1045μm,0.6s							
POLC				AML	AML			
	comp=E,1122μm,0.4s							
ATCA	**Cantone**	**1.52**	**149**	AML	AML			
	comp=N,97μm,1.0s							
ATCA				AML	AML			
	comp=E,118μm,0.4s							
ATCA				AML	AML			
	comp=N,97μm,1.0s							
ATCA				AML	AML			
	comp=E,118μm,0.4s							
ATCA				AML	AML			
	comp=N,97μm,1.0s							
ATCA				AML	AML			
	comp=E,118μm,0.4s							
AGOR	**Agordo**	**1.53**	**23**⇓	*e*Pg	**Pb**	**22 50 57.2**	**+0.3**	
AGOR				*e*Sg	**Sg**	**22 51 18.9**	**+0.7**	
AGOR	**Agordo**	**1.53**	**23**	AML	AML			
	comp=N,380μm,0.3s							
AGOR				AML	AML			
	comp=E,316μm,1.4s							
AGOR				AML	AML			
	comp=N,380μm,0.3s							
AGOR				AML	AML			
	comp=E,316μm,1.4s							
OZOL	**Ozolo**	**1.53**	**356**⇑	*e*Pg	**Pb**	**22 50 57.0**	**0.0**	
OZOL	**Ozolo**	**1.53**	**356**	*e*Pg	**Pb**	**22 50 57.0**	**0.0**	
CARE	**Lago del Cares**	**1.59**	**347**	*e*Pg	**Pb**	**22 50 58.0**	**-0.1**	
CARE	**Lago del Cares**	**1.59**	**347**	*e*Pg	**Pb**	**22 50 58.0**	**-0.1**	
KOSI	**Kohlern**	**1.59**	**5**	AML	AML			
	comp=E,612μm,0.7s							
KOSI				AML	AML			
	comp=N,514μm,0.5s							
KOSI				AML	AML			
	comp=E,612μm,0.7s							
KOSI				AML	AML			
	comp=N,514μm,0.5s							
APPI	**Appiano**	**1.60**	**1**	AML	AML			
	comp=E,710μm,1.4s							
APPI				AML	AML			
	comp=E,710μm,1.4s							
APPI				AML	AML			
	comp=N,490μm,1.0s							
APPI				AML	AML			
	comp=N,490μm,1.0s							
BRMO	**Bormio**	**1.70**	**341**	AML	AML			
	comp=N,173μm,0.3s							
BRMO				AML	AML			
	comp=E,154μm,0.7s							
BRMO				AML	AML			
	comp=E,154μm,0.7s							
BRMO				AML	AML			
	comp=N,173μm,0.3s							
STAL	**STALIGIAL**	**1.75**	**37**	AML	AML			
	comp=E,776μm,1.3s							
STAL				AML	AML			
	comp=E,774μm,0.3s							
STAL				AML	AML			
	comp=N,1012μm,0.3s							
STAL				AML	AML			
	comp=N,769μm,0.8s							
STAL				AML	AML			
	comp=N,769μm,0.8s							
STAL				AML	AML			
	comp=N,1012μm,0.3s							
STAL				AML	AML			
	comp=E,776μm,1.3s							
STAL				AML	AML			
	comp=E,774μm,0.3s							
MOSI	**Grossmontoni**	**1.80**	**346**	AML	AML			
	comp=N,1022μm,0.9s							
MOSI				AML	AML			
	comp=E,524μm,0.9s							
MOSI				AML	AML			
	comp=N,1022μm,0.9s							
MOSI				AML	AML			
	comp=E,524μm,0.9s							
ABSI	**Aberstueckl**	**1.85**	**3**	AML	AML			
	comp=E,629μm,0.3s							
ABSI				AML	AML			
	comp=E,629μm,0.3s							
ABSI				AML	AML			
	comp=N,606μm,1.0s							
ABSI				AML	AML			
	comp=N,606μm,1.0s							
VINO	**Villanova**	**2.01**	**46**	AML	AML			
	comp=N,236μm,1.1s							
VINO				AML	AML			
	comp=E,190μm,0.3s							
VINO				AML	AML			
	comp=N,236μm,1.1s							
VINO				AML	AML			
	comp=E,190μm,0.3s							
SABO	**M.te Sabotino**	**2.02**	**56**	AML	AML			
	comp=N,500μm,0.6s							
SABO				AML	AML			
	comp=E,405μm,0.2s							
SABO				AML	AML			
	comp=N,500μm,0.6s							
SABO				AML	AML			
	comp=E,405μm,0.2s							
ROSI	**Rosskopf**	**2.06**	**4**	AML	AML			
	comp=E,406μm,0.8s							
ROSI				AML	AML			
	comp=N,522μm,0.8s							
ROSI				AML	AML			
	comp=N,522μm,0.8s							
ROSI				AML	AML			
	comp=E,406μm,0.8s							
ABTA	**Abfaltersbach**	**2.09**	**26**	*e*Pn	**Pb**	**22 51 05.1**	**-1.3**	
	comp=E,1.2nm,0.3s							
ABTA				*e*Pg	**Pg**	**22 51 08.3**	**-0.7**	
	comp=E,12nm,0.2s							
ABTA				*e*Sg	**Sg**	**22 51 34.7**	**-1.3**	
	comp=E,20nm,0.3s							
ABTA	**Abfaltersbach**	**2.09**	**26**	Pn	**Pb**	**22 51 05.1**	**-1.3**	
	comp=E,1.2nm,0.3s							
SKDS	**Skadanscina**	**2.10**	**70**	*i* Pn	**Pn**	**22 51 03.5**	**-0.1**	
SKDS	**Skadanscina**	**2.10**	**70**	*i* Pn	**Pn**	**22 51 03.5**	**-0.1**	
PTCC	**Patocco-Chiusa**	**2.15**	**44**	AML	AML			
	comp=E,180μm,0.8s							
PTCC				AML	AML			
	comp=N,174μm,0.3s							
PTCC				AML	AML			
	comp=N,174μm,0.3s							
PTCC				AML	AML			
	comp=E,180μm,0.8s							
RISI	**Rein**	**2.16**	**16**	AML	AML			
	comp=E,419μm,0.5s							
RISI				AML	AML			
	comp=N,448μm,0.3s							
RISI				AML	AML			
	comp=E,419μm,0.5s							
RISI				AML	AML			
	comp=N,448μm,0.3s							
FETA	**Feichten**	**2.17**	**352**	*e*Pn	**Pb**	**22 51 07.8**	**-0.1**	
	comp=N,3.7nm,0.3s,SNR=14							
FETA				Sn	**Sb**	**22 51 35.7**	**+1.1**	
	comp=N,10.0nm,0.3s							
FETA	**Feichten**	**2.17**	**352**	Pn	**Pb**	**22 51 07.8**	**-0.1**	
	comp=N,3.7nm,0.3s,SNR=14							
FETA				Sn	**Sb**	**22 51 35.7**	**+1.1**	
	comp=N,10.0nm,0.3s							
JAVS	**Javornik**	**2.27**	**62**	*i* Pn	**Pn**	**22 51 06.4**	**+0.6**	
JAVS	**Javornik**	**2.27**	**62**	*i* Pn	**Pn**	**22 51 06.4**	**+0.6**	
WTTA	**Wattenberg**	**2.41**	**7**	*e*Pg	**Pg**	**22 51 14.0**	**-1.1**	
	comp=N,6.4nm,0.2s,SNR=8.8							
WTTA				*e*Sg	**Sg**	**22 51 45.5**	**-0.8**	
	comp=N,19nm,0.3s							
WTTA	**Wattenberg**	**2.41**	**7**	Pg	**Pg**	**22 51 14.0**	**-1.1**	
	comp=N,6.4nm,0.2s,SNR=8.8							
WTTA				Sg	**Sg**	**22 51 45.5**	**-0.8**	
	comp=N,19nm,0.3s							
MYKA	**Terra Mystica**	**2.45**	**43**	*e*Pg	**Pg**	**22 51 16.0**	**+0.1**	
	comp=N,7.6nm,0.2s,SNR=12							
MYKA				Sg	**Sg**	**22 51 46.8**	**-0.9**	
	comp=N,24nm,0.3s							
MYKA	**Terra Mystica**	**2.45**	**43**	Pg	**Pg**	**22 51 16.0**	**+0.1**	
	comp=N,7.6nm,0.2s,SNR=12							
MYKA				Sg	**Sg**	**22 51 46.8**	**-0.9**	
	comp=N,24nm,0.3s							
WATA	**Walderalm**	**2.47**	**6**	*e*Pn	**Pb**	**22 51 12.5**	**-0.6**	
	comp=N,3.1nm,0.1s,SNR=13							
WATA	**Walderalm**	**2.47**	**6**	Pn	**Pb**	**22 51 12.5**	**-0.6**	
	comp=N,3.1nm,0.1s,SNR=13							
DAVA	**Damuels**	**2.58**	**340**	*e*Pn	**Pb**	**22 51 13.5**	**-1.4**	
	comp=N,3.8nm,0.3s,SNR=7.9							
DAVA				*e*Sn	**Sb**	**22 51 46.4**	**0.0**	
	comp=N,20nm,0.4s							
DAVA	**Damuels**	**2.58**	**340**	Pn	**Pb**	**22 51 13.5**	**-1.4**	
	comp=N,3.8nm,0.3s,SNR=7.9							
DAVA				Sn	**Sb**	**22 51 46.4**	**0.0**	
	comp=N,20nm,0.4s							
NVLJ	**Novalja**	**2.64**	**96**	*e*Pn	**Pn**	**22 51 11.4**	**+0.5**	
NVLJ				Sn	**Sn**	**22 51 42.4**	**-0.2**	
NVLJ	**Novalja**	**2.64**	**96**	*e*Pn	**Pn**	**22 51 11.3**	**+0.5**	
NVLJ				Sn	**Sn**	**22 51 42.3**	**-0.2**	
KBA	**Koelnbreinsper**	**2.67**	**34**	*i* Pn	**Pb**	**22 51 14.8**	**-1.6**	
	comp=N,0.7nm,0.2s							
KBA				*e*Pg	**Pg**	**22 51 19.0**	**-1.0**	
	comp=N,20nm,0.3s							
KBA				Sg	**Sg**	**22 51 53.4**	**-1.1**	
	comp=N,17nm,0.4s							
KBA	**Koelnbreinsper**	**2.67**	**34**	Pn	**Pb**	**22 51 14.8**	**-1.6**	
	comp=N,0.7nm,0.2s							
PGF	**Pioggiola**	**2.82**	**215**	*e*Sn	**Sn**	**22 51 47.6**	**+0.4**	
	comp=N,10nm,0.3s							
PGF	**Pioggiola**	**2.82**	**215**	*e*Sn	**Sn**	**22 51 47.6**	**+0.4**	
	comp=N,5.2nm,0.3s							
SBF	**Sospel**	**2.88**	**251**	*e*Pn	**Pb**	**22 51 18.3**	**-1.6**	
SBF				*e*Sn	**Sb**	**22 51 51.5**	**-3.5**	
	comp=N,37nm,0.4s							
SBF	**Sospel**	**2.88**	**251**	*e*Pn	**Pb**	**22 51 18.3**	**-1.6**	
SBF				*e*Sn	**Sb**	**22 51 51.5**	**-3.5**	
	comp=N,18nm,0.4s							
LUCF	**Luceram**	**2.93**	**252**	P	**Pb**	**22 51 19.5**	**-1.3**	
LUCF				S	**Sg**	**22 51 58.9**	**-4.0**	
LUCF	**Luceram**	**2.93**	**252**	P	**Pb**	**22 51 19.5**	**-1.3**	
OZLJ	**Ozalj**	**3.11**	**75**	*e*Pn	**Pn**	**22 51 19.9**	**+2.5**	
OZLJ	**Ozalj**	**3.11**	**75**	*e*Pn	**Pn**	**22 51 19.8**	**+2.5**	
LPG	**La Plagne**	**3.20**	**283**	*e*Pn	**Pb**	**22 51 24.0**	**-1.6**	
LPG	**La Plagne**	**3.20**	**283**	*e*Pn	**Pb**	**22 51 24.0**	**-1.6**	
SOKA	**Soboth**	**3.23**	**55**	*i* Pn	**Pn**	**22 51 20.4**	**+1.3**	
	comp=N,0.7nm,0.2s							
SOKA				*i* Sn	**Sn**	**22 51 58.5**	**+1.1**	
	comp=N,6.5nm,0.4s							
SOKA	**Soboth**	**3.23**	**55**	Pn	**Pn**	**22 51 20.4**	**+1.3**	
	comp=N,0.7nm,0.2s							
SOKA				Sn	**Sn**	**22 51 58.5**	**+1.1**	
	comp=N,6.5nm,0.4s							
CALF	**Calern**	**3.26**	**251**	P	**Pb**	**22 51 22.9**	**-3.6**	
CALF	**Calern**	**3.26**	**251**	P	**Pb**	**22 51 22.9**	**-3.6**	
UDBI	**Udbina**	**3.28**	**94**	*e*Pn	**Pn**	**22 51 21.7**	**+2.0**	
UDBI				Sn	**Sn**	**22 51 58.1**	**-0.4**	
UDBI	**Udbina**	**3.28**	**94**	*e*Pn	**Pn**	**22 51 21.7**	**+2.0**	
UDBI				Sn	**Sn**	**22 51 58.0**	**-0.4**	
FRF	**La Foret Royal**	**3.52**	**250**	*e*Pn	**Pn**	**22 51 25.6**	**+2.6**	
FRF				*e*Sn	**Sn**	**22 52 07.3**	**+2.9**	
	comp=N,14nm,0.5s							
FRF	**La Foret Royal**	**3.52**	**250**	*e*Pn	**Pn**	**22 51 25.6**	**+2.6**	
FRF				*e*Sn	**Sn**	**22 52 07.3**	**+2.9**	
	comp=N,6.8nm,0.5s							
MOA	**Molln**	**3.66**	**34**	*i* Pn	**Pn**	**22 51 27.2**	**+2.3**	
	comp=N,1.1nm,0.1s							
MOA	**Molln**	**3.66**	**34**	Pn	**Pn**	**22 51 27.2**	**+2.3**	
	comp=N,1.1nm,0.1s							
LMR	**La Mourre**	**3.71**	**247**	*e*Pn	**Pn**	**22 51 27.6**	**+2.0**	
LMR				*e*Sn	**Sn**	**22 52 11.0**	**+2.1**	
	comp=N,7.7nm,0.3s							
LMR	**La Mourre**	**3.71**	**247**	*e*Pn	**Pn**	**22 51 27.6**	**+2.0**	
LMR				*e*Sn	**Sn**	**22 52 11.0**	**+2.1**	
	comp=N,3.8nm,0.3s							
ORIF	**Oris-en-Rattie**	**3.77**	**272**	*e*Pn	**Pn**	**22 51 29.5**	**+2.9**	
ORIF	**Oris-en-Rattie**	**3.77**	**272**	*e*Pn	**Pn**	**22 51 29.5**	**+2.9**	
KIZ	**Kirchzarten**	**3.82**	**325**	P	**Pn**	**22 51 29.2**	**+2.1**	
KIZ	**Kirchzarten**	**3.82**	**325**	P	**Pn**	**22 51 29.2**	**+2.1**	
CHMF	**Charmoille**	**3.95**	**308**	P	**Pn**	**22 51 32.8**	**+3.8**	
CHMF	**Charmoille**	**3.95**	**308**	P	**Pn**	**22 51 32.8**	**+3.8**	
CABF	**La Chapelle**	**3.97**	**298**	*e*Pn	**Pn**	**22 51 29.5**	**+0.2**	
CABF	**La Chapelle**	**3.97**	**298**	*e*Pn	**Pn**	**22 51 29.5**	**+0.2**	
SMRF	**Simiane la Rot**	**4.12**	**259**	*e*Pn	**Pb**	**22 51 37.5**	**-3.6**	
SMRF	**Simiane la Rot**	**4.12**	**259**	*e*Pn	**Pb**	**22 51 37.5**	**-3.6**	
OPP	**Oppenau**	**4.17**	**331**	P	**Pn**	**22 51 33.9**	**+2.0**	
OPP	**Oppenau**	**4.17**	**331**	P	**Pn**	**22 51 33.9**	**+2.0**	
HINF	**Hinteralfeld**	**4.20**	**316**	*e*Pn	**Pn**	**22 51 32.2**	**-0.2**	
HINF				*e*Sn	**Sn**	**22 52 19.8**	**-1.4**	
	comp=N,6.1nm,0.3s							
HINF	**Hinteralfeld**	**4.20**	**316**	*e*Pn	**Pn**	**22 51 32.2**	**-0.2**	
HINF				*e*Sn	**Sn**	**22 52 19.8**	**-1.4**	
	comp=N,3.0nm,0.3s							
ECH	**Echery**	**4.35**	**322**	P	**Pn**	**22 51 36.3**	**+1.9**	
ECH	**Echery**	**4.35**	**322**	P	**Pn**	**22 51 36.3**	**+1.9**	
CDF	**Champ du Feu**	**4.45**	**324**	*e*Pn	**Pn**	**22 51 37.3**	**+1.5**	
CDF				*e*Sn	**Sn**	**22 52 26.8**	**-0.5**	
	comp=N,5.1nm,0.3s							
CDF	**Champ du Feu**	**4.45**	**324**	*e*Pn	**Pn**	**22 51 37.3**	**+1.5**	
CDF				*e*Sn	**Sn**	**22 52 26.8**	**-0.5**	
	comp=N,2.5nm,0.3s							
KHC	**Kasperske Hory**	**4.56**	**20**	*e*PN	**Pn**	**22 51 39.4**	**+2.1**	
KHC				*e*PG	**Pg**	**22 51 53.5**	**-2.7**	
KHC				*e*SN	**Sn**	**22 52 27.6**	**-2.3**	
KHC				*e*SG	**Sg**	**22 52 55.6**	**+0.4**	
	comp=N,17nm,0.9s							
KHC	**Kasperske Hory**	**4.56**	**20**	Pn	**Pn**	**22 51 39.4**	**+2.1**	
VIVF	**Saint-Julien-l**	**4.63**	**272**	*e*Pn	**Pn**	**22 51 38.8**	**+0.5**	
VIVF				*e*Sn	**Sn**	**22 52 32.4**	**+0.6**	
VIVF	**Saint-Julien-l**	**4.63**	**272**	*e*Pn	**Pn**	**22 51 38.8**	**+0.5**	
VIVF				*e*Sn	**Sn**	**22 52 32.4**	**+0.6**	
STON	**Ston**	**5.11**	**111**	*e*Pn	**Pn**	**22 51 45.3**	**+0.4**	
STON				Sn	**Sn**	**22 52 41.6**	**-1.9**	
STON	**Ston**	**5.11**	**111**	*e*Pn	**Pn**	**22 51 45.2**	**+0.4**	
STON				Sn	**Sn**	**22 52 41.6**	**-1.9**	
NKC	**Novy Kostel**	**5.43**	**9**	*e*SG	**Sg**	**22 53 23.5**	**+0.5**	
	comp=N,5.6nm,0.6s							
NKC	**Novy Kostel**	**5.43**	**9**	Sg	**Sg**	**22 53 23.5**	**+0.5**	
	comp=N,5.6nm,0.6s							
LOR	**Lormes**	**5.63**	**298**	*e*Pn	**Pn**	**22 51 54.0**	**+2.0**	
LOR				*e*Sn	**Sn**	**22 52 55.9**	**-0.5**	
	comp=N,5.0nm,0.5s							
LOR	**Lormes**	**5.63**	**298**	*e*Pn	**Pn**	**22 51 54.0**	**+2.0**	
PRA	**Prague**	**5.64**	**22**	*e*SG	**Sg**	**22 53 29.4**	**-0.4**	
	comp=N,9.2nm,0.9s							
PRA	**Prague**	**5.64**	**22**	Sg	**Sg**	**22 53 29.4**	**-0.4**	
	comp=N,9.2nm,0.9s							
AVF	**Avril sur Loir**	**5.80**	**292**	*e*Pn	**Pn**	**22 51 56.1**	**+1.8**	
AVF	**Avril sur Loir**	**5.80**	**292**	*e*Pn	**Pn**	**22 51 56.1**	**+1.8**	
BRG	**Berggiesshubel**	**6.28**	**16**	SG	**Sg**	**22 53 48.6**	**-1.7**	
	comp=N,4.2nm,1.0s							
VYHS	**Vyhne**	**6.38**	**53**	*e*PN	**Pn**	**22 52 02.5**	**+0.2**	
VYHS				*e*SN	**Sn**	**22 53 08.9**	**-5.9**	
VYHS	**Vyhne**	**6.38**	**53**	*e*Pn	**Pn**	**22 52 02.5**	**+0.2**	
CLL	**Collm**	**6.55**	**10**	*e*Pn	**Pn**	**22 52 06.0**	**+1.5**	
CLL				*e*Sg	**Sg**	**22 53 54.0**	**-4.9**	
	comp=Z,11nm,1.3s							

PRU ***01*** *23:07:13.0, 44°.83N×10°.95E, h0km*
IDC ***01*** *23:07:13.9±1.0, 44°.94N×10°.88E, h0km, mb3.6/6, mb1 3.7/11, mb1mx3.5/65, mbtmp3.5/11, ML3.5/5, MS2.4/4, Ms1 2.4/4, ms1mx2.2/68, Error ellipse: s-maj=27.4km s-min=12.4km az=126.0*
ISCJB ***01*** *23:07:15.2±0.2, 44°.92N±0°.02×10°.92E±0°.02, h20km±1km, mb3.5/6, Error ellipse: s-maj=2.7km s-min=1.8km az=171.3*
LDG ***01*** *23:07:15.4±0.1, 44°.94N×11°.10E, h2km, Ml3.7/25, Error ellipse: s-maj=2.0km s-min=1.5km az=40.0*
CSEM ***01*** *23:07:15.7±0.1, 44°.94N×10°.95E, h10km, ML3.7/28, Error ellipse: s-maj=2.2km s-min=1.8km az=173.0*
ROM ***01*** *23:07:15.2±0.0, 44°.896N±0°.001×10°.936E±0°.001, h3km, ML3.5/70*

ISC 01 23:07:15.2±0.6, 44°.94N±0°.01×10°.90E±0°.01, h11km±3km, n341, σ1§28/428, mb3.7/6, 33C-39D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
T0827	**Moglia (MN)**	**0.02**	**96**	⇓*i*P		**Pg**	**23 07 17.1**	**-0.1**
T0827				⇓*i*S		**Sg**	**23 07 19.2**	**+0.7**
T0827	**Moglia (MN)**	**0.02**	**96**	*i* P		**Pg**	**23 07 17.1**	**-0.1**
T0827				*i* S		**Sg**	**23 07 19.2**	**+0.7**
T0825	**Gonzaga (MN)**	**0.05**	**309**	AML		AML		
T0825				AML		AML		
NDIM	**Novi di Modena**	**0.05**	**184**	*i* P		**Pg**	**23 07 16.3**	**-1.1**
NDIM				*i* S		**Sg**	**23 07 17.7**	**-1.3**
T0818	**Loc. Fossa, Co**	**0.09**	**93**	⇓*i*P		**Pg**	**23 07 18.4**	**+0.6**
T0818				⇓*i*S		**Sg**	**23 07 21.2**	**+1.5**
T0818	**Loc. Fossa, Co**	**0.09**	**93**	*i* P		**Pg**	**23 07 18.4**	**+0.6**
T0818				*i* S		**Sg**	**23 07 21.2**	**+1.5**
T0828	**Loc. Fossoli,**	**0.11**	**176**	⇓*i*P		**Pg**	**23 07 17.4**	**-0.6**
T0828				⇓*i*S		**Sg**	**23 07 19.5**	**-0.6**
T0828	**Loc. Fossoli,**	**0.11**	**176**	*i* P		**Pg**	**23 07 17.4**	**-0.6**
T0828				*i* S		**Sg**	**23 07 19.5**	**-0.6**
SBPO	**S.Benedetto Po**	**0.11**	**6**	⇑*e*P		**Pb**	**23 07 19.9**	**+0.5**
SBPO	**S.Benedetto Po**	**0.11**	**6**	*e*P		**Pb**	**23 07 19.9**	**+0.5**
T0826	**Rio Saliceto (**	**0.12**	**213**	AML		AML		
T0826				AML		AML		
T0826				AML		AML		
T0826				AML		AML		
T0826				AML		AML		
T0826				AML		AML		
T0826				AML		AML		
T0826				AML		AML		
T0814	**Loc. Cortile,**	**0.15**	**162**	⇓*i*P		**Pg**	**23 07 18.5**	**-0.2**
T0814				⇓*i*S		**Sg**	**23 07 22.1**	**+1.0**
T0814	**Loc. Cortile,**	**0.15**	**162**	*i* P		**Pg**	**23 07 18.4**	**-0.2**
T0814				*i* S		**Sg**	**23 07 22.1**	**+1.0**
T0824	**Loc. Limidi di**	**0.18**	**175**	⇓*i*P		**Pg**	**23 07 19.2**	**0.0**
T0824				⇓*i*S		**Sg**	**23 07 23.4**	**+1.5**
T0824	**Loc. Limidi di**	**0.18**	**175**	*i* P		**Pg**	**23 07 19.2**	**0.0**
T0824				*i* S		**Sg**	**23 07 23.4**	**+1.5**
NOVE	**Novellara**	**0.20**	**223**	⇓*i*P		**Pg**	**23 07 19.6**	**+0.2**
NOVE				⇓*i*S		**Sg**	**23 07 24.5**	**+2.3**
NOVE	**Novellara**	**0.20**	**223**	*i* P		**Pg**	**23 07 19.6**	**+0.2**
NOVE				*i* S		**Sg**	**23 07 24.5**	**+2.3**
NOVE				AML		AML		
	comp=E,66250μm,0.8s							
NOVE				AML		AML		
	comp=N,98350μm,0.5s							
NOVE				AML		AML		
	comp=E,66250μm,0.8s							
NOVE				AML		AML		
	comp=N,98400μm,0.5s							
NOVE				AML		AML		
	comp=E,66250μm,0.8s							
NOVE				AML		AML		
	comp=N,98400μm,0.5s							
NOVE				AML		AML		
	comp=E,66250μm,0.8s							
T0812	**Loc. Stoppiaro**	**0.20**	**86**⇑	*e*P		**Pg**	**23 07 19.9**	**+0.4**
T0812	**Loc. Stoppiaro**	**0.20**	**86**	*e*P		**Pg**	**23 07 19.9**	**+0.4**
T0802	**SanFelice sul**	**0.21**	**108**	⇓*e*P		**Pg**	**23 07 19.5**	**-0.1**
T0802				⇓*e*S		**Sg**	**23 07 24.9**	**+2.3**
T0802	**SanFelice sul**	**0.21**	**108**	*e*P		**Pg**	**23 07 19.5**	**-0.1**
T0802				*e*S		**Sg**	**23 07 24.9**	**+2.3**
T0813	**Massa Finalese**	**0.22**	**106**	⇓*e*P		**Pg**	**23 07 19.8**	**0.0**
T0813				⇓*e*S		**Sg**	**23 07 24.8**	**+1.9**
T0813	**Massa Finalese**	**0.22**	**106**	*e*P		**Pg**	**23 07 19.8**	**0.0**
T0813				*e*S		**Sg**	**23 07 24.9**	**+1.9**
MNTV	**Mantova**	**0.23**	**339**	AML		AML		
	comp=N,64700μm,0.6s							
MNTV				AML		AML		
MNTV				AML		AML		
MNTV				AML		AML		
	comp=N,64700μm,0.6s				

comp=E,50850µm,0.2s
T0800 AML AML
comp=N,87600µm,0.3s
T0800 AML AML
comp=E,65750µm,0.3s
T0800 AML AML
comp=N,76150µm,0.3s
T0800 AML AML
comp=E,65750µm,0.3s
T0800 AML AML
comp=N,87600µm,0.3s
T0800 AML AML
comp=N,76150µm,0.3s
T0800 AML AML
comp=E,50850µm,0.2s
T0811 Palata Pepoli 0.28 124⇓ *eP* **Pg 23 07 20.5 -0.4**
T0811 ⇓ *eS* **Sb 23 07 26.2 -0.7**
T0811 Palata Pepoli 0.28 124 *eP* **Pg 23 07 20.5 -0.4**
T0811 *eS* **Sb 23 07 26.2 -0.7**
SERM Sermide 0.29 76 *eP* **Pb 23 07 22.0 -0.4**
SERM Sermide 0.29 76 *eP* **Pb 23 07 22.0 -0.4**
T0805 Bondeno (FE) 0.30 94 *eP* **Pg 23 07 21.4 +0.1**
T0805 Bondeno (FE) 0.30 94 *eP* **Pg 23 07 21.4 +0.1**
MODE Modena 0.31 174⇓ *eP* **Pg 23 07 21.9 +0.4**
MODE ⇓ *eS* **Sg 23 07 26.3 +0.6**
MODE Modena 0.31 174 *eP* **Pg 23 07 21.9 +0.4**
MODE *eS* **Sg 23 07 26.3 +0.6**
MODE AML AML
comp=E,69000µm,0.6s
MODE AML AML
comp=N,45400µm,0.6s
MODE AML AML
comp=E,68950µm,0.6s
MODE AML AML
comp=N,45400µm,0.6s
MODE AML AML
comp=E,68950µm,0.6s
MODE AML AML
comp=N,45400µm,0.6s
T0822 Casumaru (Bond 0.33 109⇓ *eP* **Pg 23 07 21.7 -0.1**
T0822 ⇓ *eS* **Sg 23 07 27.0 +0.7**
T0822 Casumaru (Bond 0.33 109 *eP* **Pg 23 07 21.7 -0.1**
T0822 *eS* **Sb 23 07 28.0 -0.4**
T0822 AML AML
comp=E,25800µm,0.5s
T0822 AML AML
comp=N,32400µm,0.4s
T0822 AML AML
comp=E,25750µm,0.5s
T0822 AML AML
comp=N,32400µm,0.4s
T0822 AML AML
comp=E,25750µm,0.5s
T0822 AML AML
comp=N,32400µm,0.4s
T0822 AML AML
comp=N,32400µm,0.4s
T0822 AML AML
comp=E,25750µm,0.5s
T0803 Dosso, Cento (0.36 118⇑ *eP* **Pg 23 07 22.2 -0.2**
T0803 Dosso, Cento (0.36 118 *eP* **Pg 23 07 22.2 -0.2**
T0823 Castello D'Arg 0.37 134⇓ *eP* **Pg 23 07 22.7 +0.2**
T0823 Castello D'Arg 0.37 134 *eP* **Pg 23 07 22.7 +0.2**
T0817 Loc. Veratica, 0.40 82⇓ *eP* **Pg 23 07 23.5 +0.5**
T0817 Loc. Veratica, 0.40 82 *eP* **Pg 23 07 23.6 +0.5**
T0821 Loc. Casaglia 0.45 94 AML AML
comp=N,12650µm,0.6s
T0821 AML AML
comp=E,8070µm,0.7s
T0821 AML AML
comp=E,8090µm,0.7s
T0821 AML AML
comp=N,12750µm,0.6s
T0821 AML AML
comp=E,8070µm,0.7s
T0821 AML AML
comp=N,12650µm,0.6s
T0821 AML AML
comp=E,8090µm,0.7s
T0821 AML AML
comp=N,12750µm,0.6s
T0821 AML AML
comp=N,12750µm,0.6s
T0821 AML AML
comp=N,12650µm,0.6s
T0821 AML AML
comp=E,8070µm,0.7s
T0821 AML AML
comp=E,8090µm,0.7s
PRMA PARMA 0.46 247 AML AML
comp=E,3035µm,1.4s
PRMA AML AML
comp=E,3035µm,1.4s
PRMA AML AML
comp=N,4230µm,1.2s
PRMA AML AML
comp=N,4230µm,1.2s
PRMA AML AML
comp=N,4230µm,1.2s
PRMA AML AML
comp=E,3035µm,1.4s
T0820 Chiesuol del F 0.50 107 *eP* **Pb 23 07 26.1 +0.2**
T0820 Chiesuol del F 0.50 107 *eP* **Pb 23 07 26.1 +0.2**
T0820 AML AML
comp=E,9265µm,1.4s
T0820 AML AML
comp=N,8465µm,1.1s
T0820 AML AML
comp=E,9085µm,1.4s
T0820 AML AML
comp=N,8565µm,1.0s
T0820 AML AML
comp=E,9265µm,1.4s
T0820 AML AML
comp=N,8445µm,1.1s
T0820 AML AML
comp=E,9085µm,1.4s
T0820 AML AML
comp=N,8565µm,1.0s
T0820 AML AML
comp=N,8445µm,1.1s
T0820 AML AML
comp=N,8565µm,1.0s
T0820 AML AML
comp=E,9085µm,1.4s
T0820 AML AML
comp=E,9265µm,1.4s
FIU Minerbio Fiu 0.52 125 AML AML
comp=N,5825µm,0.8s
FIU AML AML
comp=E,4805µm,0.8s
FIU AML AML
comp=E,4800µm,0.8s
FIU AML AML
comp=N,5825µm,0.8s
FIU AML AML
comp=E,4800µm,0.8s
FIU AML AML
comp=N,5825µm,0.8s
T0815 Correggio (RE) 0.58 96 *eP* **Pg 23 07 26.9 +0.3**
T0815 Correggio (RE) 0.58 96 *eP* **Pg 23 07 26.9 +0.3**
T0815 *eS* **Sn 23 07 37.2 -1.7**
ZCCA Zocca 0.59 175⇓ *eP* **Pb 23 07 27.9 +0.3**
ZCCA Zocca 0.59 175 *eP* **Pb 23 07 27.9 +0.3**
ZCCA AML AML
comp=E,5895µm,0.5s
ZCCA AML AML
comp=N,3875µm,0.6s
ZCCA AML AML
comp=E,5880µm,0.5s
ZCCA AML AML
comp=N,4545µm,0.7s
ZCCA AML AML
comp=E,5895µm,0.5s
ZCCA AML AML
comp=N,3875µm,0.6s
ZCCA AML AML
comp=E,5880µm,0.5s
ZCCA AML AML
comp=N,4545µm,0.7s
ZCCA AML AML
comp=N,4545µm,0.7s
ZCCA AML AML
comp=N,3875µm,0.6s
ZCCA AML AML
comp=E,5880µm,0.5s
ZCCA AML AML
comp=E,5895µm,0.5s
TEOL Teolo 0.69 52⇑ *ePg* **Pb 23 07 29.4 +0.3**
TEOL *eSg* **Sn 23 07 40.1 -1.4**
TEOL Teolo 0.69 52⇑ *eP* **Pb 23 07 29.3 +0.1**
TEOL *eSg* **Sn 23 07 40.1 -1.4**
TEOL Teolo 0.69 52 *eP* **Pb 23 07 29.3 +0.1**
TEOL AML AML
comp=E,11550µm,0.6s
TEOL AML AML
comp=N,12450µm,0.4s
TEOL AML AML
comp=E,11550µm,0.6s
TEOL AML AML
comp=N,12450µm,0.4s
TEOL AML AML
comp=N,12450µm,0.4s
TEOL AML AML
comp=E,11550µm,0.6s
MTRZ Monterenzio 0.69 144 AML AML
comp=E,5705µm,0.7s
MTRZ AML AML
comp=N,5390µm,0.7s
MTRZ AML AML
comp=E,5965µm,0.8s
MTRZ AML AML
comp=N,5450µm,0.7s
MTRZ AML AML
comp=N,5390µm,0.7s
MTRZ AML AML
comp=N,5450µm,0.7s
MTRZ AML AML
comp=E,5965µm,0.8s
MTRZ AML AML
comp=E,5705µm,0.7s
ROVR Rover^¤ Verone 0.72 9⇑ *eP* **Pb 23 07 30.0 +0.2**
ROVR Rover^¤ Verone 0.72 9 *eP* **Pb 23 07 30.0 +0.2**
ROVR AML AML
comp=E,12550µm,0.3s
ROVR AML AML
comp=N,14000µm,0.3s
ROVR AML AML
comp=E,12550µm,0.3s
ROVR AML AML
comp=N,14000µm,0.3s
ROVR AML AML
comp=E,12550µm,0.3s
ROVR AML AML
comp=N,14000µm,0.3s
SALO Salr 0.73 339⇑ *eP* **Pb 23 07 30.7 +0.7**
SALO Salr 0.73 339 *eP* **Pb 23 07 30.7 +0.7**
SALO AML AML
comp=E,6180µm,0.5s
SALO AML AML
comp=N,5090µm,0.6s
SALO AML AML
comp=E,6180µm,0.5s
SALO AML AML
comp=N,5090µm,0.6s
SALO AML AML
comp=E,6180µm,0.5s
SALO AML AML
comp=N,5090µm,0.6s
MARN Marana (Italy) 0.73 17 *ePg* **Pb 23 07 30.5 +0.5**
MARN *eSg* **Sn 23 07 43.3 +0.6**
MARN Marana (Italy) 0.73 17 *ePg* **Pb 23 07 30.5 +0.5**
MARN *eSg* **Sn 23 07 43.3 +0.6**
CMPO Campotto Po 0.74 119 *eP* **Pn 23 07 31.8 +0.3**
CMPO *eS* **Sn 23 07 43.5 +0.8**
CMPO AML AML
comp=E,7145µm,0.2s
CMPO AML AML
comp=N,7085µm,0.9s
CMPO AML AML
comp=E,7145µm,0.2s
CMPO AML AML
comp=N,7085µm,0.9s
CMPO AML AML
comp=E,7145µm,0.2s
CMPO AML AML
comp=N,7085µm,0.9s
BALD Monte Baldo 0.75 355⇑ *ePg* **Pb 23 07 30.6 +0.3**
BALD *eSg* **Sn 23 07 43.5 +0.2**
BALD Monte Baldo 0.75 355 *ePg* **Pb 23 07 30.6 +0.3**
BALD *eSg* **Sn 23 07 43.5 +0.2**
FNVD Fontana Vidola 0.79 168 AML AML
comp=N,2490µm,0.9s
FNVD AML AML
comp=E,4555µm,0.3s
FNVD AML AML
comp=E,4555µm,0.3s
FNVD AML AML
comp=N,2490µm,0.9s
ADRI Adria, Italy 0.80 83⇓ *ePg* **Pb 23 07 31.6 +0.6**
ADRI Adria, Italy 0.80 83 *ePg* **Pb 23 07 31.6 +0.6**
IMOL Imola, Italy 0.83 134 AML AML
comp=E,5265µm,0.4s
IMOL AML AML
comp=N,6165µm,0.3s
IMOL AML AML
comp=E,836µm,0.9s
IMOL AML AML
comp=N,660µm,0.4s
IMOL AML AML
comp=N,6165µm,0.3s
IMOL AML AML
comp=E,836µm,0.9s
IMOL AML AML
comp=N,660µm,0.4s
IMOL AML AML
comp=E,5265µm,0.4s
MAGA Magasa 0.86 347 AML AML
comp=E,57600µm,0.5s
MAGA AML AML
comp=E,57600µm,0.5s
MAGA AML AML
comp=N,47200µm,0.4s
MAGA AML AML
comp=E,57600µm,0.5s
MAGA AML AML
comp=N,47200µm,0.4s
MAGA AML AML
comp=N,47200µm,0.4s
VLC Villacollemand 0.86 206 AML AML
comp=N,1090µm,0.8s
VLC AML AML
comp=E,600µm,0.7s
VLC AML AML
comp=N,1090µm,0.8s
VLC AML AML
comp=E,600µm,0.7s
VLC AML AML
comp=N,1090µm,0.8s
VLC AML AML
comp=E,600µm,0.7s
CTL8 Castelleone 0.88 293 AML AML
comp=N,1080µm,0.6s
CTL8 AML AML
comp=E,4745µm,0.8s
CTL8 AML AML
comp=N,6320µm,0.6s
CTL8 AML AML
comp=E,1895µm,0.5s
CTL8 AML AML
comp=E,4745µm,0.8s
CTL8 AML AML
comp=N,6320µm,0.6s
CTL8 AML AML
comp=E,1890µm,0.5s
CTL8 AML AML
comp=N,1180µm,0.7s
CTL8 AML AML
comp=E,1890µm,0.5s
CTL8 AML AML
comp=N,6320µm,0.6s
CTL8 AML AML
comp=E,4745µm,0.8s
CTL8 AML AML
comp=N,1180µm,0.7s
POPM Popiglio 0.90 187 AML AML
comp=E,1330µm,0.5s
POPM AML AML
comp=E,1330µm,0.5s
POPM AML AML
comp=N,3065µm,0.6s
POPM AML AML
comp=N,3065µm,0.6s
POPM AML AML
comp=N,3065µm,0.6s
POPM AML AML
comp=E,1330µm,0.5s
BDI Bagni Di Lucca 0.90 194⇑ *eP* **Pb 23 07 33.1 +0.2**
BDI Bagni Di Lucca 0.90 194 *eP* **Pb 23 07 33.1 +0.2**
BDI AML AML
comp=E,2025µm,0.5s
BDI AML AML
comp=N,1390µm,0.6s
BDI AML AML
comp=E,2080µm,0.4s
BDI AML AML
comp=N,1390µm,0.6s
BDI AML AML
comp=E,2080µm,0.4s
BDI AML AML
comp=E,2025µm,0.5s
BDI AML AML
comp=N,1390µm,0.6s
BDI AML AML
comp=N,1390µm,0.6s
DOSS Dosso del Somm 0.96 12⇑ *ePg* **Pb 23 07 34.4 +0.4**
DOSS *eSg* **Sn 23 07 49.6 +1.1**
DOSS Dosso del Somm 0.96 12 *ePg* **Pb 23 07 34.4 +0.4**
DOSS *eSg* **Sn 23 07 49.7 +1.1**
RNI Roncone 1.06 349⇓ *ePg* **Pg 23 07 35.3 -0.3**
RNI *eSg* **Sn 23 07 53.1 +2.1**
RNI Roncone 1.06 349 *ePg* **Pg 23 07 35.3 -0.3**
RNI *eSg* **Sn 23 07 53.1 +2.1**
MAIM Mastiano 1.07 196 AML AML
comp=E,1485µm,0.5s
MAIM AML AML
comp=E,1485µm,0.5s
MAIM AML AML
comp=N,2460µm,1.0s
MAIM AML AML
comp=N,2460µm,1.0s
MAIM AML AML
comp=N,2460µm,1.0s
MAIM AML AML
comp=E,1485µm,0.5s
CGRP Cima Grappa 1.13 34⇓ *ePg* **Pg 23 07 37.0 0.0**
CGRP *eSg* **Sn 23 07 54.3 +1.5**
CGRP Cima Grappa 1.13 34⇑ *eP* **Pn 23 07 37.2 0.0**
CGRP *eSg* **Sn 23 07 54.3 +1.5**
CGRP Cima Grappa 1.13 34 *eP* **Pn 23 07 37.2 0.0**
CGRP AML AML
comp=E,3720µm,0.5s
CGRP AML AML
comp=N,3045µm,0.4s
CGRP AML AML
comp=E,3720µm,0.5s
CGRP AML AML
comp=N,3045µm,0.4s
CGRP AML AML
comp=E,3720µm,0.5s
CGRP AML AML
comp=N,3045µm,0.4s
MABI Malga Bissina 1.15 346 AML AML
comp=E,1525µm,0.5s
MABI AML AML
comp=E,1525µm,0.5s
MABI AML AML
comp=N,946µm,0.3s
MABI AML AML
comp=E,1525µm,0.5s
MABI AML AML
comp=N,946µm,0.3s
MABI AML AML
comp=N,946µm,0.3s
CRMI Carmignano 1.15 178 AML AML
comp=N,624µm,1.4s
CRMI AML AML
comp=E,920µm,0.9s
CRMI AML AML
comp=N,624µm,1.4s
CRMI AML AML
comp=E,920µm,0.9s
PANI Panarotta 1.15 15⇑ *ePg* **Pb 23 07 37.0 -0.2**
PANI *eSg* **Sn 23 07 54.4 +1.1**
PANI Panarotta 1.15 15 *ePg* **Pb 23 07 37.0 -0.2**
PANI *eSg* **Sn 23 07 54.4 +1.1**
PLMA Palmaria, Port 1.17 221 AML AML
comp=E,1560µm,1.1s
PLMA AML AML
comp=E,1560µm,1.1s
PLMA AML AML
comp=N,2335µm,0.4s
PLMA AML AML
comp=N,2335µm,0.4s
MSSA Maissana 1.17 238 AML AML
comp=N,1585µm,0.8s
MSSA AML AML
comp=E,1370µm,0.5s
MSSA AML AML
comp=E,1370µm,0.5s
MSSA AML AML
comp=N,1585µm,0.8s
MSSA AML AML
comp=E,1370µm,0.5s
MSSA AML AML
comp=N,1585µm,0.8s
MTLO Montello 1.21 43⇑ *ePg* **Pg 23 07 38.6 +0.1**
MTLO Montello 1.21 43 *ePg* **Pg 23 07 38.6 +0.1**
CTI Castel Tesino 1.23 25 AML AML
comp=N,10700µm,0.3s
CTI AML AML
comp=E,5605µm,0.4s
CTI AML AML
comp=N,10700µm,0.3s
CTI AML AML
comp=E,5605µm,0.4s
CTI AML AML
comp=E,5605µm,0.4s
CTI AML AML
comp=N,10700µm,0.3s
SFI Santa Sofia 1.24 147 AML AML
comp=E,1180µm,0.6s
SFI AML AML
comp=N,1745µm,1.6s
SFI AML AML
comp=E,1160µm,0.6s
SFI AML AML
comp=N,1800µm,1.6s
SFI AML AML
comp=N,1800µm,1.6s
SFI AML AML
comp=N,1745µm,1.6s
SFI AML AML
comp=E,1160µm,0.6s
SFI AML AML
comp=E,1180µm,0.6s
ASQU Asqua 1.31 151 AML AML
comp=E,740µm,1.4s
ASQU AML AML
comp=N,1022µm,0.9s
ASQU AML AML
comp=N,1022µm,0.9s
ASQU AML AML
comp=E,740µm,1.4s
VARN Col Varnada, M 1.35 38⇑ *ePg* **Pn 23 07 40.2 +0.1**
VARN Col Varnada, M 1.35 38 *ePg* **Pn 23 07 40.2 +0.1**
OZOL Ozolo 1.47 4⇓ *ePg* **Pb 23 07 42.2 -0.4**
OZOL Ozolo 1.47 4 *ePg* **Pb 23 07 42.2 -0.4**
CARE Lago del Cares 1.49 354⇑ *ePg* **Pb 23 07 42.9 -0.2**
CARE *eSg* **Sg 23 08 04.0 +0.7**
CARE Lago del Cares 1.49 354 *ePg* **Pb 23 07 42.9 -0.2**
CARE *eSg* **Sg 23 08 04.0 +0.7**
CAE Caneva 1.52 45⇑ *ePg* **Pn 23 07 42.4 +0.1**
CAE Caneva 1.52 45 *ePg* **Pn 23 07 42.4 +0.1**
APPI Appiano 1.56 8 AML AML
comp=N,2465µm,0.4s
APPI AML AML
comp=E,2755µm,0.3s
APPI AML AML
comp=N,2465µm,0.4s
APPI AML AML
comp=E,2755µm,0.3s
KOSI Kohlern 1.56 12 AML AML
comp=E,2090µm,0.9s
KOSI AML AML
comp=E,2090µm,0.9s
KOSI AML AML
comp=N,1735µm,0.5s
KOSI AML AML
comp=N,1735µm,0.5s
POLC Polcenigo 1.56 45⇑ *ePg* **Pn 23 07 43.3 +0.4**

POLC	Polcenigo	1.56	45	ePg	Pn	23 07 43.3	+0.4
POLC	Polcenigo	1.56	45	AML	AML		
	comp=N,3955µm,0.4s						
POLC				AML	AML		
	comp=E,3190µm,0.5s						
POLC				AML	AML		
	comp=N,3955µm,0.4s						
POLC				AML	AML		
	comp=E,3190µm,0.5s						
AGOR	Agordo	1.56	30⇑	ePg	Pb	23 07 43.7	-0.5
AGOR				eSg	Sg	23 08 06.8	+1.2
AGOR	Agordo	1.56	30	AML	AML		
	comp=E,1775µm,0.4s						
AGOR				AML	AML		
	comp=N,1810µm,0.5s						
AGOR				AML	AML		
	comp=E,1775µm,0.4s						
AGOR				AML	AML		
	comp=N,1810µm,0.5s						
BRMO	Bormio	1.58	347	AML	AML		
	comp=N,816µm,1.6s						
BRMO				AML	AML		
	comp=E,1370µm,0.5s						
BRMO				AML	AML		
	comp=N,816µm,1.6s						
BRMO				AML	AML		
	comp=E,1370µm,0.5s						
BOSI	Bolzano	1.58	10	AML	AML		
	comp=N,5445µm,0.4s						
BOSI				AML	AML		
	comp=E,3370µm,0.9s						
BOSI				AML	AML		
	comp=N,5445µm,0.4s						
BOSI				AML	AML		
	comp=E,3370µm,0.9s						
PARC	Parchiule	1.61	143	AML	AML		
	comp=N,520µm,1.0s						
PARC				AML	AML		
	comp=E,390µm,1.5s						
PARC				AML	AML		
	comp=N,520µm,1.0s						
PARC				AML	AML		
	comp=E,390µm,1.5s						
MOSI	Grossmontoni	1.69	352	AML	AML		
	comp=E,3375µm,0.3s						
MOSI				AML	AML		
	comp=N,4580µm,0.8s						
MOSI				AML	AML		
	comp=E,3375µm,0.3s						
MOSI				AML	AML		
	comp=N,4580µm,0.8s						
MLNI	Malnisio	1.70	44⇑	ePn	Pn	23 07 45.1	+0.2
MLNI	Malnisio	1.70	44	ePn	Pn	23 07 45.1	+0.2
BADI	Badiali	1.72	146	AML	AML		
	comp=N,438µm,0.6s						
BADI				AML	AML		
	comp=E,489µm,1.0s						
BADI				AML	AML		
	comp=N,438µm,0.6s						
BADI				AML	AML		
	comp=E,489µm,1.0s						
FROS	Frosini	1.74	174	AML	AML		
	comp=E,596µm,0.6s						
FROS				AML	AML		
	comp=E,596µm,0.6s						
FROS				AML	AML		
	comp=N,454µm,0.6s						
FROS				AML	AML		
	comp=N,454µm,0.6s						
CIMO	Cimolais	1.74	38⇑	ePn	Pn	23 07 45.5	+0.1
CIMO				eSn	Sb	23 08 09.4	+0.3
CIMO	Cimolais	1.74	38	ePn	Pn	23 07 45.5	+0.1
CIMO				eSn	Sb	23 08 09.4	+0.3
VARE	Varese	1.77	302	AML	AML		
	comp=E,1122µm,1.0s						
VARE				AML	AML		
	comp=E,1122µm,1.0s						
VARE				AML	AML		
	comp=N,1300µm,0.7s						
VARE				AML	AML		
	comp=N,1300µm,0.7s						
CAFI	Castiglion Fio	1.78	154	AML	AML		
	comp=N,284µm,0.6s						
CAFI				AML	AML		
	comp=E,322µm,1.3s						
CAFI				AML	AML		
	comp=N,284µm,0.6s						
CAFI				AML	AML		
	comp=E,322µm,1.3s						
ABSI	Aberstueckl	1.81	9	AML	AML		
	comp=N,2615µm,0.7s						
ABSI				AML	AML		
	comp=E,2000µm,0.6s						
ABSI				AML	AML		
	comp=N,2615µm,0.7s						
ABSI				AML	AML		
	comp=E,2000µm,0.6s						
STAL	STALIGIAL	1.83	43	AML	AML		
	comp=E,1555µm,0.8s						
STAL				AML	AML		
	comp=E,1555µm,0.8s						
STAL				AML	AML		
	comp=N,1450µm,0.3s						
STAL				AML	AML		
	comp=E,2040µm,0.8s						
STAL				AML	AML		
	comp=N,1470µm,0.3s						
STAL				AML	AML		
	comp=N,1470µm,0.3s						
STAL				AML	AML		
	comp=N,1450µm,0.3s						
STAL				AML	AML		
	comp=E,2040µm,0.8s						
ATPC	Poggio Castell	1.84	142	AML	AML		
	comp=E,609µm,0.5s						
ATPC				AML	AML		
	comp=E,609µm,0.5s						
ATPC				AML	AML		
	comp=N,660µm,0.5s						
ATPC				AML	AML		
	comp=N,660µm,0.5s						
ATPI	Pietralunga -	1.84	144	AML	AML		
	comp=E,338µm,0.7s						
ATPI				AML	AML		
	comp=N,438µm,1.5s						
ATPI				AML	AML		
	comp=N,438µm,1.5s						
ATPI				AML	AML		
	comp=E,338µm,0.7s						
TUE	Stuetta	1.88	325	AML	AML		
	comp=E,790µm,1.5s						
TUE				AML	AML		
	comp=N,904µm,0.5s						
TUE				AML	AML		
	comp=E,790µm,1.5s						
TUE				AML	AML		
	comp=N,904µm,0.5s						
ATVO	AVT- Monte Val	1.90	145	AML	AML		
	comp=N,374µm,0.9s						
ATVO				AML	AML		
	comp=E,464µm,1.0s						
ATVO				AML	AML		
	comp=N,374µm,0.9s						
ATVO				AML	AML		
	comp=E,464µm,1.0s						
QLNO	Quiliano	1.93	252	AML	AML		
	comp=E,246µm,0.6s						
QLNO				AML	AML		
	comp=N,316µm,0.9s						
QLNO				AML	AML		
	comp=E,246µm,0.6s						
QLNO				AML	AML		
	comp=N,316µm,0.9s						
ATVA	AVT- Monte Val	1.94	149	AML	AML		
	comp=N,185µm,1.4s						
ATVA				AML	AML		
	comp=E,220µm,1.0s						
ATVA				AML	AML		
	comp=N,185µm,1.4s						
ATVA				AML	AML		
	comp=E,220µm,1.0s						
MPRI	Monte Prat	1.96	48⇑	ePn	Pn	23 07 48.7	+0.3
MPRI	Monte Prat	1.96	48	ePn	Pn	23 07 48.7	+0.3
CSMI	Casera Mimoias	1.99	37⇑	ePn	Pn	23 07 49.5	+0.5
CSMI	Casera Mimoias	1.99	37	ePn	Pn	23 07 49.5	+0.5
ROSI	Rosskopf	2.02	10	AML	AML		
	comp=N,2060µm,0.4s						
ROSI				AML	AML		
	comp=E,1420µm,0.4s						
ROSI				AML	AML		
	comp=N,2060µm,0.4s						
ROSI				AML	AML		
	comp=E,1420µm,0.4s						
ATTE	AVT- Monte Tez	2.03	149	AML	AML		
	comp=E,360µm,0.4s						
ATTE				AML	AML		
	comp=N,281µm,1.1s						
ATTE				AML	AML		
	comp=E,360µm,0.4s						
ATTE				AML	AML		
	comp=N,281µm,1.1s						
MURB	Monte Urbino	2.04	145	AML	AML		
	comp=E,961µm,1.1s						
MURB				AML	AML		
	comp=E,961µm,1.1s						
MURB				AML	AML		
	comp=N,680µm,1.1s						
MURB				AML	AML		
	comp=N,680µm,1.1s						
CLUD	Cludinico	2.06	42⇑	ePn	Pn	23 07 50.1	+0.4
CLUD				eSn	Sb	23 08 17.1	-1.0
CLUD	Cludinico	2.06	42	ePn	Pn	23 07 50.1	+0.4
CLUD				eSn	Sb	23 08 17.1	-1.0
FETA	Feichten	2.08	357	ePn	Pb	23 07 52.7	-0.4
	comp=N,95nm,0.6s,SNR=55						
FETA				eSn	Sg	23 08 21.9	-0.4
	comp=N,53nm,0.5s						
FETA	Feichten	2.08	357	Pn	Pb	23 07 52.7	-0.4
	comp=N,95nm,0.6s,SNR=55						
FETA				Sn	Sg	23 08 21.9	-0.4
	comp=N,53nm,0.5s						
COLI	Coloredo	2.11	55⇑	ePn	Pn	23 07 50.7	+0.3
COLI	Coloredo	2.11	55	ePn	Pn	23 07 50.7	+0.3
ARCI	Arcidosso	2.13	169	AML	AML		
	comp=N,129µm,0.4s						
ARCI				AML	AML		
	comp=E,108µm,1.0s						
ARCI				AML	AML		
	comp=N,129µm,0.4s						
ARCI				AML	AML		
	comp=E,108µm,1.0s						
ABTA	Abfaltersbach	2.13	31	ePn	Pb	23 07 52.4	-1.4
	comp=E,8.0nm,0.3s,SNR=57						
ABTA	Abfaltersbach	2.13	31	Pn	Pb	23 07 52.4	-1.4
	comp=E,8.0nm,0.3s,SNR=57						
CASP	Castiglione de	2.15	181	AML	AML		
	comp=N,296µm,0.5s						
CASP				AML	AML		
	comp=E,152µm,0.9s						
CASP				AML	AML		
	comp=N,296µm,0.5s						
CASP				AML	AML		
	comp=E,152µm,0.9s						
RISI	Rein	2.17	22	AML	AML		
	comp=N,2000µm,0.4s						
RISI				AML	AML		
	comp=E,2240µm,0.7s						
RISI				AML	AML		
	comp=N,2000µm,0.4s						
RISI				AML	AML		
	comp=E,2240µm,0.7s						
SACS	San Casciano d	2.21	160	AML	AML		
	comp=N,194µm,0.7s						
SACS				AML	AML		
	comp=E,160µm,0.8s						
SACS				AML	AML		
	comp=N,194µm,0.7s						
SACS				AML	AML		
	comp=E,160µm,0.8s						
SNTG	Esanatoglia	2.23	138	AML	AML		
	comp=N,347µm,0.4s						
SNTG				AML	AML		
	comp=E,236µm,1.2s						
SNTG				AML	AML		
	comp=N,347µm,0.4s						
SNTG				AML	AML		
	comp=E,236µm,1.2s						
CING	Cingoli	2.27	133	AML	AML		
	comp=N,236µm,0.6s						
CING				AML	AML		
	comp=E,154µm,1.6s						
CING				AML	AML		
	comp=E,154µm,1.6s						
CING				AML	AML		
	comp=N,236µm,0.6s						
SKDS	Skadanscina	2.28	73	i Pn	Pn	23 07 52.3	-0.5
SKDS				i Sn	Sn	23 08 20.0	-0.9
	comp=Z,263nm,0.6s						
SKDS	Skadanscina	2.28	73	Pn	Pn	23 07 52.3	-0.5
SKDS				i Sn	Sn	23 08 20.0	-0.9
	comp=Z,263nm,0.6s						
ASSB	Assisi San Ben	2.28	146	AML	AML		
	comp=N,202µm,1.0s						
ASSB				AML	AML		
	comp=E,258µm,0.5s						
ASSB				AML	AML		
	comp=N,202µm,1.0s						
ASSB				AML	AML		
	comp=E,258µm,0.5s						
WTTA	Wattenberg	2.38	12	ePg	Pb	23 07 58.5	+0.3
	comp=E,50nm,0.3s						
WTTA				Sg	Sg	23 08 33.0	+1.3
	comp=E,109nm,0.3s						
WTTA	Wattenberg	2.38	12	Pg	Pb	23 07 58.5	+0.3
	comp=E,50nm,0.3s						
WTTA				Sg	Sg	23 08 33.0	+1.3
	comp=E,109nm,0.3s						
WTTA	Wattenberg	2.38	12	AML	AML		
	comp=N,436µm,1.0s						
WTTA				AML	AML		
	comp=E,638µm,0.5s						
WTTA				AML	AML		
	comp=E,638µm,0.5s						
WTTA				AML	AML		
	comp=N,436µm,1.0s						
AOI	Ancona	2.38	125	AML	AML		
	comp=E,210µm,0.5s						
AOI				AML	AML		
	comp=N,230µm,1.6s						
AOI				AML	AML		
	comp=E,210µm,0.5s						
AOI				AML	AML		
	comp=N,230µm,1.6s						
IMI	Imperia	2.39	246	AML	AML		
	comp=N,669µm,0.9s						
IMI				AML	AML		
	comp=E,507µm,0.5s						
IMI				AML	AML		
	comp=N,669µm,0.9s						
IMI				AML	AML		
	comp=E,507µm,0.5s						
JAVS	Javornik	2.42	66	i Pn	Pn	23 07 54.6	-0.2
JAVS				i Sn	Sn	23 08 25.2	+0.8
	comp=Z,377nm,0.7s						
JAVS	Javornik	2.42	66	i Pn	Pn	23 07 54.6	-0.2
JAVS				i Sn	Sn	23 08 25.2	+0.8
	comp=Z,377nm,0.7s						
ACOM	Acomizza, Ital	2.43	48	AML	AML		
	comp=N,1300µm,0.5s						
ACOM				AML	AML		
	comp=E,1140µm,0.5s						
ACOM				AML	AML		
	comp=N,1300µm,0.5s						
ACOM				AML	AML		
	comp=E,1140µm,0.5s						
WATA	Walderalm	2.44	11	ePn	Pb	23 07 57.5	-1.7
	comp=E,14nm,0.3s,SNR=115						
WATA	Walderalm	2.44	11	Pn	Pb	23 07 57.5	-1.7
	comp=E,14nm,0.3s,SNR=115						
MOMA	Monte Martano	2.45	150	AML	AML		
	comp=N,2104µm,1.6s						
MOMA				AML	AML		
	comp=E,299µm,0.3s						
MOMA				AML	AML		
	comp=E,315µm,0.3s						
MOMA				AML	AML		
	comp=N,240µm,1.6s						
MOMA				AML	AML		
	comp=N,240µm,1.6s						
MOMA				AML	AML		
	comp=E,299µm,0.3s						
MOMA				AML	AML		
	comp=E,315µm,0.3s						
MOMA				AML	AML		
	comp=N,2104µm,1.6s						
DAVA	Damuels	2.45	343	ePn	Pb	23 07 58.4	-1.0
	comp=N,36nm,0.4s,SNR=29						
DAVA				eSn	Sb	23 08 28.8	-0.9
	comp=N,69nm,0.4s						
DAVA	Damuels	2.45	343	Pn	Pb	23 07 58.4	-1.0
	comp=N,36nm,0.4s,SNR=29						
DAVA				Sn	Sb	23 08 28.8	-0.9
	comp=N,69nm,0.4s						
NEGI	Seborga	2.54	246	AML	AML		
	comp=E,324µm,0.7s						
NEGI				AML	AML		
	comp=N,402µm,0.6s						
NEGI				AML	AML		
	comp=N,402µm,0.6s						
NEGI				AML	AML		
	comp=E,324µm,0.7s						
RETA	Reutte	2.55	358	ePn	Pb	23 07 59.8	-1.2
	comp=E,38nm,0.4s,SNR=19						
RETA	Reutte	2.55	358	Pn	Pb	23 07 59.8	-1.2
	comp=E,38nm,0.4s,SNR=19						
MYKA	Terra Mystica	2.56	48	ePn	Pn	23 07 57.4	+0.8
	comp=E,4.6nm,0.3s						
MYKA				Pg	Pg	23 08 03.6	-0.6
	comp=E,61nm,0.3s						
MYKA				eSg	Sg	23 08 38.7	+1.4
	comp=E,70nm,0.4s						
MYKA	Terra Mystica	2.56	48	Pn	Pn	23 07 57.4	+0.8
	comp=E,4.6nm,0.3s						
CEY	Cerknica	2.61	71⇑	i Pn	Pn	23 07 56.9	-0.4
SBF	Sospel	2.71	248	ePn	Pn	23 08 00.9	+2.2
SBF				eSn	Sn	23 08 31.1	-0.4
	comp=E,218nm,0.6s						
SBF	Sospel	2.71	248	ePn	Pn	23 08 00.9	+2.2
SBF				eSn	Sn	23 08 31.1	-0.4
	comp=E,109nm,0.6s						
ARRO	Arrone	2.72	150	AML	AML		
	comp=N,154µm,1.2s						
ARRO				AML	AML		
	comp=E,178µm,1.0s						
ARRO				AML	AML		
	comp=E,178µm,1.0s						
ARRO				AML	AML		
	comp=N,154µm,1.2s						
KBA	Koelnbreinsper	2.73	38	ePn	Pn	23 08 01.3	+2.1
	comp=N,3.2nm,0.2s,SNR=75						
KBA				ePg	Pg	23 08 07.0	-0.5
	comp=N,60nm,0.3s						
KBA	Koelnbreinsper	2.73	38	Pn	Pn	23 08 01.3	+2.1
	comp=N,3.2nm,0.2s,SNR=75						
LUCF	Luceram	2.76	249	P	Pb	23 08 02.3	-2.2
LUCF	Luceram	2.76	249	P	Pb	23 08 02.3	-2.2
LUCF				S	Sb	23 08 36.8	-1.5
PGF	Pioggiola	2.76	211	ePn	Pn	23 08 00.3	+0.8
PGF				eSn	Sn	23 08 32.8	0.0
	comp=N,44nm,0.4s						
PGF	Pioggiola	2.76	211	ePn	Pn	23 08 00.3	+0.8
PGF				eSn	Sn	23 08 32.8	0.0
	comp=N,22nm,0.4s						
LJU	Ljubljana	2.78	65⇑	i Pn	Pn	23 07 59.9	+0.3
NVLJ	Novalja	2.85	96	i Pn	Pn	23 08 01.1	+0.5
NVLJ				Sn	Sn	23 08 33.5	-1.4
NVLJ	Novalja	2.85	96	i Pn	Pn	23 08 01.0	+0.5
NVLJ				Sn	Sn	23 08 33.5	-1.4
MVIF	Mont Vial	2.88	250	P	Pb	23 08 04.1	-2.6
MVIF	Mont Vial	2.88	250	P	Pb	23 08 04.1	-2.6
MBDF	Montbardon	2.95	267	ePn	Pn	23 08 01.7	-0.4
MBDF				eSn	Sn	23 08 38.2	+0.7
	comp=N,81nm,0.6s						
MBDF	Montbardon	2.95	267	ePn	Pn	23 08 01.7	-0.4
MBDF				eSn	Sn	23 08 38.2	+0.7
	comp=N,40nm,0.6s						
LPG	La Plagne	2.99	282	ePn	Pb	23 08 06.0	-2.6
LPG				eSn	Sn	23 08 39.4	+0.7
	comp=N,84nm,0.6s						
LPG	La Plagne	2.99	282	ePn	Pb	23 08 06.0	-2.6
LPG				eSn	Sn	23 08 39.4	+0.7
	comp=N,42nm,0.6s						
OBKA	Obir	3.00	57	ePn	Pn	23 08 03.3	+0.6
	comp=N,6.8nm,0.3s,SNR=8.8						
OBKA				ePg	Pg	23 08 13.2	+0.5
	comp=N,66nm,0.4s						
OBKA				eSn	Sn	23 08 40.9	+2.3
	comp=N,89nm,0.4s						
OBKA				eSg	Sg	23 08 53.6	+2.2
	comp=N,241nm,0.6s						
OBKA	Obir	3.00	57	Pn	Pn	23 08 03.3	+0.6
	comp=N,6.8nm,0.3s,SNR=8.8						
LPL	La Plagne	3.00	283	ePn	Pn	23 08 05.6	+2.7
LPL				eSn	Sn	23 08 40.1	+1.1
	comp=N,96nm,0.7s						
LPL	La Plagne	3.00	283	ePn	Pn	23 08 05.6	+2.7
LPL				eSn	Sn	23 08 40.1	+1.1
	comp=N,48nm,0.7s						
CALF	Calern	3.09	249	P	Pn	23 08 06.3	+2.2
CALF	Calern	3.09	249	P	Pn	23 08 06.3	+2.2
AQU	L'Aquila	3.16	144⇑	i Pn	Pn	23 08 06.9	+2.0
OZLJ	Ozalj	3.29	77	i Pn	Pn	23 08 06.9	+0.3
OZLJ				Sn	Sn	23 08 44.0	-1.7
OZLJ	Ozalj	3.29	77	i Pn	Pn	23 08 06.9	+0.3
OZLJ				Sn	Sn	23 08 44.0	-1.7
CRES	Cresnjev	3.33	73⇑	i Pn	Pn	23 08 07.2	0.0
FRF	La Foret Royal	3.35	247	ePn	Pn	23 08 08.8	+1.3
FRF				eSn	Sn	23 08 49.3	+2.0
	comp=N,43nm,0.4s						
FRF	La Foret Royal	3.35	247	ePn	Pn	23 08 08.8	+1.3
FRF				eSn	Sn	23 08 49.3	+2.0
	comp=N,21nm,0.4s						
SOKA	Soboth	3.37	57	i Pn	Pn	23 08 08.4	+0.6
	comp=N,10nm,0.4s,SNR=15						
SOKA				ePg	Pg	23 08 18.8	-0.9
	comp=N,18nm,0.3s						
SOKA	Soboth	3.37	57	Pn	Pn	23 08 08.4	+0.6
	comp=N,10nm,0.4s,SNR=15						
UDBI	Udbina	3.49	95	ePn	Pn	23 08 10.4	+1.0
UDBI				Sn	Sn	23 08 49.4	-1.4
UDBI	Udbina	3.49	95	ePn	Pn	23 08 10.4	+1.0
UDBI				Sn	Sn	23 08 49.3	-1.4
LMR	La Mourre	3.55	245	ePn	Pn	23 08 11.0	+0.8
LMR				eSn	Sn	23 08 52.9	+0.8
	comp=N,49nm,0.4s						
LMR	La Mourre	3.55	245	ePn	Pn	23 08 11.0	+0.8
LMR				eSn	Sn	23 08 52.9	+0.8
	comp=N,25nm,0.4s						
ORIF	Oris-en-Rattie	3.57	271	ePn	Pn	23 08 12.4	+1.8
ORIF				eSn	Sn	23 08 55.2	+2.5
	comp=N,97nm,0.7s						
ORIF	Oris-en-Rattie	3.57	271	P	Pn	23 08 12.6	+2.0
ORIF	Oris-en-Rattie	3.57	271	ePn	Pn	23 08 12.4	+1.8
ORIF				eSn	Sn	23 08 55.2	+2.5
	comp=N,48nm,0.7s						
KIZ	Kirchzarten	3.66	327	P	Pn	23 08 12.9	+1.2
KIZ	Kirchzarten	3.66	327	P	Pn	23 08 12.9	+1.2
ZAG	Zagreb	3.69	74	ePn	Pb	23 08 16.2	-4.2
MOA	Molln	3.73	37	i Pn	Pn	23 08 14.3	+1.7
	comp=N,17nm,0.3s,SNR=14						
MOA				i Sn	Sn	23 08 59.2	+2.7
	comp=N,45nm,0.5s						
MOA	Molln	3.73	37	Pn	Pn	23 08 14.3	+1.7
	comp=N,17nm,0.3s,SNR=14						
MOA				Sn	Sn	23 08 59.2	+2.7
	comp=N,45nm,0.5s						
CHMF	Charmoille	3.75	309	P	Pn	23 08 14.3	+1.3
CHMF	Charmoille	3.75	309	P	Pn	23 08 14.3	+1.3
CABF	La Chapelle	3.76	298	ePn	Pn	23 08 14.0	+0.8
CABF				eSn	Sn	23 08 56.0	-1.5
	comp=N,111nm,0.8s						
CABF	La Chapelle	3.76	298	ePn	Pn	23 08 14.0	+0.8
CABF				eSn	Sn	23 08 56.0	-1.5
	comp=N,56nm,0.8s						
OG35	Corcelles	3.91	288	P	Pn	23 08 17.0	+1.8
OG35	Corcelles	3.91	288	P	Pn	23 08 16.0	+0.8
SMRF	Simiane la Rot	3.94	258	ePn	Pn	23 08 19.9	+4.3
SMRF				eSn	Sn	23 09 03.7	+2.0
	comp=N,37nm,0.8s						
SMRF	Simiane la Rot	3.94	258	ePn	Pn	23 08 19.9	+4.3
SMRF				eSn	Sn	23 09 03.7	+2.0
	comp=N,19nm,0.8s						
ARSA	Arzberg	3.96	53	i Pn	Pn	23 08 16.0	+0.1
	comp=N,11nm,0.4s,SNR=10						
ARSA	Arzberg	3.96	53	Pn	Pn	23 08 16.0	+0.1
	comp=N,11nm,0.4s,SNR=10						
HINF	Hinteralfeld	4.02	317	ePn	Pn	23 08 17.0	+0.3
HINF				eSn	Sn	23 09 03.0	-0.7
	comp=N,61nm,0.7s						
HINF	Hinteralfeld	4.02	317	ePn	Pn	23 08 17.0	+0.3
HINF				eSn	Sn	23 09 03.0	-0.7

comp=N,30nm,0.7s
OPP Oppenau 4.02 333 P Pn 23 08 17.7 +1.0
OPP Oppenau 4.02 333 P Pn 23 08 17.7 +1.0
ECH Echery 4.17 323 P Pn 23 08 19.8 +1.0
ECH Echery 4.17 323 P Pn 23 08 19.8 +1.0
WLS Welschbruch 4.25 326 P Pn 23 08 21.1 +1.2
WLS Welschbruch 4.25 326 P Pn 23 08 21.1 +1.2
CDF Champ du Feu 4.28 326 *e*Pn **Pn 23 08 20.9 +0.6**
CDF *e*Sn **Sn 23 09 09.4 -0.8**
comp=N,81nm,0.8s
CDF Champ du Feu 4.28 326 *e*Pn **Pn 23 08 20.9 +0.6**
CDF *e*Sn **Sn 23 09 09.4 -0.8**
comp=N,41nm,0.8s
GERES GERESS Array B 4.35 25 Pn **Pn 23 08 22.0 +0.6**
comp=N,4.2nm,0.3s,baz=198,slow=13,SNR=40
GERES Pg **Pg 23 08 37.6 -1.0**
comp=N,4.4nm,0.3s,baz=201,slow=16,SNR=15
GERES Sn **Sn 23 09 10.1 -1.9**
comp=N,12nm,0.3s,baz=201,slow=23,SNR=9.2
GERES Lg Lg 23 09 24.6
comp=N,4.2nm,0.3s,baz=204,slow=30,SNR=3.8
GERES LR LR 23 10 01.4
comp=N,9.0nm,19.7s,baz=294,slow=38
BEHE Becsehely 4.39 68‖*e*x **Pn 23 08 21.6 -0.1**
BEHE Becsehely 4.39 68‖*e*Pn **Pn 23 08 21.6 -0.1**
HAU Haudompre 4.39 316 *e*Pn **Pn 23 08 22.7 +0.9**
HAU *e*Sn **Sn 23 09 12.9 -0.1**
comp=N,94nm,0.5s
HAU Haudompre 4.39 316 *e*Pn **Pn 23 08 22.7 +0.9**
HAU *e*Sn **Sn 23 09 12.9 -0.1**
comp=N,47nm,0.5s
VIVF Saint-Julien-l 4.43 271 *e*Pn **Pn 23 08 21.9 -0.4**
VIVF *e*Sn **Sn 23 09 13.9 0.0**
comp=N,9.8nm,0.5s
VIVF Saint-Julien-l 4.43 271 *e*Pn **Pn 23 08 21.9 -0.4**
VIVF *e*Sn **Sn 23 09 13.9 0.0**
comp=N,4.9nm,0.5s
BLY Banja Luka 4.47 90 *e*Pn **Pn 23 08 20.2 -2.7**
CONA Conrad Observa 4.55 47 *i* Pn **Pn 23 08 25.0 +1.0**
comp=N,3.3nm,0.3s,SNR=7.3
CONA Conrad Observa 4.55 47 Pn **Pn 23 08 25.0 +1.0**
comp=N,3.3nm,0.3s,SNR=7.3
KHC Kasperske Hory 4.57 23 *e*PN **Pn 23 08 25.0 +0.7**
KHC *e*PG **Pg 23 08 39.5 -3.3**
KHC *e*SN **Sn 23 09 17.1 -0.3**
KHC *e*SG **Sg 23 09 43.8 +1.8**
comp=N,38nm,0.6s
KHC Kasperske Hory 4.57 23 Pn **Pn 23 08 25.0 +0.7**
THEF They Montfort 4.72 316 P **Pn 23 08 27.7 +1.4**
THEF They Montfort 4.72 316 P **Pn 23 08 27.7 +1.4**
SOP Sopron 4.78 53‖*e*Pn **Pn 23 08 28.6 +1.5**
SOP *e*Sn **Sn 23 09 26.0 +3.5**
SOP Sopron 4.78 53‖*e*Pn **Pn 23 08 28.6 +1.5**
SOP *e*Sn **Sn 23 09 26.0 +3.5**
PAGF Fort de Pagny 5.07 317 *e*Pn **Pn 23 08 32.7 +1.6**
PAGF *e*Sn **Sn 23 09 28.5 -1.2**
comp=N,56nm,0.6s
PAGF Fort de Pagny 5.07 317 *e*Pn **Pn 23 08 32.7 +1.6**
PAGF *e*Sn **Sn 23 09 28.5 -1.2**
comp=N,28nm,0.6s
LASF Ste Croix 5.11 263 *e*Pn **Pn 23 08 32.1 +0.4**
LASF *e*Sn **Sn 23 09 30.2 -0.5**
comp=N,12nm,0.6s
LASF Ste Croix 5.11 263 *e*Pn **Pn 23 08 32.1 +0.4**
LASF *e*Sn **Sn 23 09 30.2 -0.5**
comp=N,6.1nm,0.6s
SFTF Sexfontaines 5.20 311 *e*Pn **Pn 23 08 34.2 +1.3**
SFTF *e*Sn **Sn 23 09 31.0 -1.8**
comp=N,47nm,0.8s
SFTF Sexfontaines 5.20 311 *e*Pn **Pn 23 08 34.2 +1.3**
SFTF *e*Sn **Sn 23 09 31.0 -1.8**
comp=N,24nm,0.8s
SMF Signal de Mont 5.22 292 *e*Pn **Pn 23 08 34.3 +1.1**
SMF *e*Sn **Sn 23 09 32.2 -1.3**
comp=N,40nm,0.5s
SMF Signal de Mont 5.22 292 *e*Pn **Pn 23 08 34.3 +1.1**
SMF *e*Sn **Sn 23 09 32.2 -1.3**
comp=N,20nm,0.5s
STON Ston 5.33 110 *e*Pn **Pn 23 08 34.4 -0.3**
STON Sn **Sn 23 09 31.8 -4.1**
STON Ston 5.33 110 *e*Pn **Pn 23 08 34.3 -0.3**
MEZF Maizieres J'vi 5.37 314 *e*Pn **Pn 23 08 36.8 +1.5**
MEZF Maizieres J'vi 5.37 314 *e*Pn **Pn 23 08 36.8 +1.5**
NKC Novy Kostel 5.40 11 *e*PN **Pn 23 08 35.9 +0.3**
NKC Novy Kostel 5.40 11 Pn **Pn 23 08 35.9 +0.3**
LOR Lormes 5.42 298 *e*Pn **Pn 23 08 36.9 +0.9**
LOR *e*Sn **Sn 23 09 37.2 -1.2**
comp=N,25nm,0.5s
LOR Lormes 5.42 298 P **Pn 23 08 37.5 +1.5**
LOR Lormes 5.42 298 *e*Pn **Pn 23 08 36.9 +0.9**
ABH Alteburg 5.44 336 P **Pn 23 08 37.8 +1.5**
ABH Alteburg 5.44 336 P **Pn 23 08 37.8 +1.5**
MODS Modra-Piesok 5.57 50 *e*PN **Pn 23 08 36.6 -1.4**
MODS *e*SN **Sn 23 09 39.4 -2.6**
MODS Modra-Piesok 5.57 50 *e*Pn **Pn 23 08 36.6 -1.4**
SSF Saint Saulge 5.57 295 *e*Pn **Pn 23 08 38.9 +0.9**
SSF *e*Sn **Sn 23 09 41.3 -0.7**
comp=N,15nm,0.5s
SSF Saint Saulge 5.57 295 *e*Pn **Pn 23 08 38.9 +0.9**
SSF *e*Sn **Sn 23 09 41.3 -0.7**
comp=N,7.6nm,0.5s
KRUC Moravsky 5.58 40 *e*PN **Pn 23 08 37.5 -0.6**
KRUC *e*PG **Pg 23 08 59.6 -2.4**
KRUC *e*SG **Sg 23 10 13.6 -0.5**
MORH M^‡r^¡gy, Hung 5.58 74‖*e*Pn **Pn 23 08 36.9 -1.2**
MORH *e*Sn **Sn 23 09 40.2 -2.0**
MORH M^‡r^¡gy, Hung 5.58 74‖*e*Pn **Pn 23 08 36.9 -1.2**
MORH *e*Sn **Sn 23 09 40.2 -2.0**
AVF Avril sur Loir 5.59 292 *e*Pn **Pn 23 08 39.1 +0.9**
AVF *e*Sn **Sn 23 09 41.2 -1.2**
comp=N,18nm,0.8s
AVF Avril sur Loir 5.59 292 *e*Pn **Pn 23 08 39.1 +0.9**
PRU Pruhonice 5.62 25 *e*PN **Pn 23 08 39.7 +1.1**
PRU *e*PG **Pg 23 08 59.3 -3.5**
PRU AMS AMS 23 10 50.0
comp=N,200nm,8.1s
PRU Pruhonice 5.62 25 Pn **Pn 23 08 39.7 +1.1**
GOPC GO Pecny, Ondr 5.63 27 *e*PN **Pn 23 08 39.9 +1.1**
GOPC *e*PG **Pg 23 09 00.0 -3.0**
GOPC GO Pecny, Ondr 5.63 27 Pn **Pn 23 08 39.9 +1.1**
CSKK Cs^‡kako 5.66 62 *e*Pn **Pn 23 08 39.0 -0.1**
CSKK *e*Sn **Sn 23 09 42.3 -1.8**
CSKK Cs^‡kako 5.66 62 *e*Pn **Pn 23 08 39.0 -0.1**
CSKK *e*Sn **Sn 23 09 42.3 -1.8**
PRA Prague 5.66 24 *e*SG **Sg 23 10 18.4 +1.5**
comp=N,95nm,1.2s
PRA AMS AMS 23 11 00.0
comp=N,400nm,5.7s
PRA Prague 5.66 24 Sg **Sg 23 10 18.4 +1.5**
comp=N,95nm,1.2s
SMOL Smolenice 5.74 49 *e*PN **Pn 23 08 40.5 +0.3**
SMOL Smolenice 5.74 49 *e*Pn **Pn 23 08 40.5 +0.3**
HAPS Han Pijesak,BI 5.82 96 *e*Pn **Pn 23 08 41.2 -0.3**
VRAC Vranov 5.84 40 Pn **Pn 23 08 42.1 +0.4**
comp=N,0.5nm,0.3s,baz=205,slow=17,SNR=2.8
VRAC Pg **Pg 23 09 03.1 -4.0**
comp=N,0.8nm,0.3s,baz=228,slow=16,SNR=4.1
VRAC Lg Lg 23 10 22.1
comp=N,1.6nm,0.3s,baz=314,slow=22,SNR=3.6
VRAC Vranov 5.84 40 *e*PN **Pn 23 08 41.7 0.0**
VRAC *e*Sg **Sg 23 10 23.0 +0.3**
VRAC Vranov 5.84 40 *e*PN **Pn 23 08 41.7 0.0**
VRAC *e*PG **Pg 23 09 04.0 -3.1**
VRAC *e*SG **Sg 23 10 23.0 +0.3**
BGF Bois d'Agland 5.87 289 *e*Pn **Pn 23 08 43.8 +1.8**
BGF *e*Sn **Sn 23 09 48.2 -1.0**
comp=N,72nm,0.6s
BGF Bois d'Agland 5.87 289 *e*Pn **Pn 23 08 43.8 +1.8**
BRY Bratogost 5.88 108⇑*i*Pn **Pn 23 08 43.4 +1.1**
UPM Unac-Piva 6.02 104⇑*i*Pn **Pn 23 08 46.3 +2.0**
HCY Herceg Novi 6.04 112 *e*Pn **Pn 23 08 44.7 +0.3**
JAVC Velka Javorina 6.07 47 *e*PN **Pn 23 08 45.8 +0.9**
PVCC Panska Ves 6.11 23 *e*PN **Pn 23 08 46.2 +0.8**
PVCC Panska Ves 6.11 23 Pn **Pn 23 08 46.2 +0.8**
TEKS Tekeris 6.16 91⇑*i*Pn **Pn 23 08 46.4 +0.4**
BBLS Lazići 6.18 97 *e*Pn **Pn 23 08 47.0 +0.5**
HYF Humbligny 6.20 295 *e*Pn **Pn 23 08 47.7 +1.1**
HYF *e*Sn **Sn 23 09 55.5 -2.0**
HYF Humbligny 6.20 295 *e*Pn **Pn 23 08 47.7 +1.1**
CAF Calviac 6.28 273 *e*Pn **Pn 23 08 49.6 +1.9**
CAF *e*Sn **Sn 23 09 58.5 -0.9**
comp=N,11nm,0.7s
CAF Calviac 6.28 273 *e*Pn **Pn 23 08 49.6 +1.9**
CAF *e*Sn **Sn 23 09 58.5 -0.9**
comp=N,5.3nm,0.7s
BRG Berggiesshubel 6.28 18 PN **Pn 23 08 48.0 +0.3**
BRG PG **Pg 23 09 15.2 -0.2**
BRG SG **Sg 23 10 37.7 +1.1**
comp=N,33nm,1.2s
VYHS Vyhne 6.51 54 *e*PN **Pn 23 08 49.4 -1.5**
VYHS *e*SN **Sn 23 10 02.2 -2.9**
VYHS Vyhne 6.51 54 *e*Pn **Pn 23 08 49.4 -1.5**
CLL Collm 6.53 12 *e*Pn **Pn 23 08 51.0 0.0**
comp=Z,11nm,0.3s
CLL *e*Pg **Pg 23 09 23.0 +2.9**
CLL *e* 23 09 43.0
CLL *e* 23 10 16.0
CLL *e* 23 10 27.0
CLL *e*Sg **Sg 23 10 45.0 +0.5**
comp=Z,25nm,0.8s
DPC Dobruska-Polom 6.53 32 *e*PN **Pn 23 08 51.1 -0.1**
DPC *e*SN **Sn 23 10 01.9 -3.8**
DPC Dobruska-Polom 6.53 32 Pn **Pn 23 08 51.1 -0.1**
UPC Upice 6.55 30 *e*PN **Pn 23 08 51.3 -0.1**
UPC AMS AMS 23 11 30.0
comp=Z,200nm,9.6s
UPC Upice 6.55 30 Pn **Pn 23 08 51.3 -0.1**
DIVS Divibare 6.55 94 *e*Pn **Pn 23 08 51.4 -0.1**
PDG Podgorica 6.55 110⇑*i*Pn **Pn 23 08 52.5 +1.0**
GIVF Givet 6.60 324 *e*Pn **Pn 23 08 53.5 +1.4**
GIVF Givet 6.60 324 *e*Pn **Pn 23 08 53.5 +1.4**
MORC Moravsky Berou 6.61 41 *e*Pn **Pn 23 08 52.0 -0.3**
MORC Moravsky Berou 6.61 41 *e*PN **Pn 23 08 52.0 -0.3**
MORC *e*SG **Sg 23 10 44.7 -2.6**
DRME Dracevica, Mon 6.61 112⇑*i*Pn **Pn 23 08 53.2 +0.9**
IVAS Ivanjica 6.78 98 *e*Pn **Pn 23 08 54.6 0.0**
TRUS Trudelj 6.82 93 *e*Pn **Pn 23 08 55.2 0.0**
GRUS Gruza 7.11 95 *e*Pn **Pn 23 08 59.2 +0.2**
SELS Selova 7.55 100 *e*Pn **Pn 23 09 04.5 -0.7**
ZAGS Zajecar 8.20 94 *e*Pn **Pn 23 09 14.9 +0.9**
KEST Kesra 9.27 188 Pn Pn 23 09 35.0 +6.1
comp=Z,0.6nm,0.3s,baz=300,slow=4.1,SNR=14
ESDC Sonseca Array 12.20 250 Pn **Pn 23 10 10.7 +1.9**
comp=Z,0.1nm,0.3s,baz=61,slow=14,SNR=4.8
EKA Eskdalemuir Ar 13.74 324 Pn **Pn 23 10 29.2 -0.5**
baz=138,slow=14,SNR=4.9
HFS Hagfors 15.31 5 LR LR 23 17 13.1
comp=Z,16nm,21.2s,baz=347,slow=39
NOA NORSAR Array B 16.13 1 LR LR 23 17 21.9
comp=Z,19nm,20.0s,baz=190,slow=38
FINES FINESS Array B 18.78 23 P **Pn 23 11 34.5 -0.2**
comp=Z,0.1nm,0.3s,baz=217,slow=12,SNR=4.6
FINES LR LR 23 19 25.3
comp=Z,37nm,18.8s,baz=134,slow=39
TORD Torodi Ar. Bea 32.64 197 P **P 23 13 45.6 -1.6**
comp=Z,0.5nm,0.4s,baz=13,slow=9.5,SNR=8.2
KURBB Kurchatov Arra 44.37 57 P **P 23 15 25.7 +0.5**
comp=Z,0.9nm,0.5s,baz=294,slow=9.0,SNR=9.0
MKAR Makanchi Array 48.14 61 P **P 23 15 56.0 +0.9**
comp=Z,0.7nm,0.8s,baz=302,slow=5.6,SNR=7.0
SONM Songino Array 61.68 50 P **P 23 17 34.6 +1.5**
comp=Z,0.3nm,0.8s,baz=287,slow=9.9,SNR=2.8
YKA Yellowknife Ar 64.41 335 P **P 23 17 51.0 +0.2**
comp=Z,0.1nm,0.6s,baz=27,slow=8.5,SNR=3.2
TXAR Lajitas Array 85.11 307 P **P 23 19 52.7 +1.3**
comp=Z,0.3nm,0.8s,baz=55,slow=3.6,SNR=4.4

DDA ***01*** *23:22:52.0,36°.99N×27°.59E,h17km, MI3.5*
ISK ***01*** *23:22:51.6,37°.01N×27°.58E,h5km, ML3.4/22*
IDC ***01*** *23:22:51.4±1.3,37°.01N×27°.58E,h0km,mb3.4/3, mb1 3.4/5,mb1mx3.2/61,mbtmp3.3/5,ML2.6/2, Error ellipse: s-maj=56.5km s-min=16.6km az=150.0*
CSEM ***01*** *23:22:52.8±0.1,37°.00N×27°.56E,h5km, ML3.5, Error ellipse: s-maj=2.9km s-min=2.7km az=31.0*
THE ***01*** *23:22:52.7,36°.98N×27°.60E,h2km×2km, ML3.1/6, Error ellipse: s-maj=2.5km s-min=0.8km az=43.0*
ISCJB ***01*** *23:22:52.8±0.3,36°.99N±0°.01×27°.57E±0°.02,h8km×2km, mb3.4/3, Error ellipse: s-maj=2.5km s-min=2.2km az=28.1*
ATH ***01*** *23:22:52.8,36°.97N×27°.55E,h30km±1km, ML3.1/5, Error ellipse: s-maj=2.5km s-min=1.2km az=214.0*
ISC 01 23:22:52.1±0.9,**36°.98N**±0°.01×**27°.63E**±0°.01,**h8**km±6km,
n156,σ1§**07**/211,**mb3.4**/3,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.17**	**300**	*i* P	**Pg**		**23 22 56.1**	**+0.4**
BDRM				*i* S	**Sg**		**23 22 58.8**	**+0.6**
BDRM	**Kayabasi**	**0.17**	**300**	P	**Pg**		**23 22 56.1**	**+0.4**
BDRM				S	**Sg**		**23 22 58.8**	**+0.6**
DATC	**Datca-Mugla**	**0.22**	**174**	PG	**Pg**		**23 22 57.3**	**+0.7**
DATC	**Datca-Mugla**	**0.22**	**174**	*e*Pg	**Pg**		**23 22 57.3**	**+0.7**
DAT	**Datca**	**0.25**	**190**	*i* S	**Sb**		**23 23 02.3**	**-1.3**
DAT	**Datca**	**0.25**	**190**	S	**Sb**		**23 23 02.3**	**-1.3**
BODT	**Bodrum**	**0.27**	**288**	PG	**Pg**		**23 22 56.4**	**-1.1**
BODT				SG	**Sg**		**23 23 01.2**	**+0.1**
BODT	**Bodrum**	**0.27**	**288**	P	**Pg**		**23 22 56.9**	**-0.6**
BODT				S	**Sg**		**23 23 01.2**	**+0.1**
YKAV	**Yalikavak-Bodr**	**0.32**	**297**	PG	**Pg**		**23 22 58.3**	**-0.1**
YKAV				SG	**Sg**		**23 23 03.2**	**+0.6**
MLSB	**Milas**	**0.34**	**20**	PG	**Pg**		**23 22 59.3**	**+0.5**
MLSB				SG	**Sb**		**23 23 04.9**	**-1.0**
MLSB	**Milas**	**0.34**	**20**	*e*Pg	**Pg**		**23 22 59.3**	**+0.5**
MLSB				*e*Sg	**Sb**		**23 23 04.9**	**-1.0**
MRSB	**Marmaris-Mugla**	**0.53**	**120**	PG	**Pb**		**23 23 03.6**	**0.0**
MRSB				SG	**Sb**		**23 23 12.4**	**+1.1**
YER	**Yerkesik**	**0.54**	**73**	PG	**Pb**		**23 23 03.6**	**-0.3**
YER	**Yerkesik**	**0.54**	**73**	P	**Pb**		**23 23 03.7**	**-0.2**
YER				S	**Sb**		**23 23 11.8**	**-0.1**
YER	**Yerkesik**	**0.54**	**73**	P	**Pb**		**23 23 03.7**	**-0.2**
YER				S	**Sb**		**23 23 11.8**	**-0.1**
NISR	**Nisiros**	**0.55**	**228**	P	**Pg**		**23 23 03.3**	**+0.6**
NISR				S	**Sb**		**23 23 11.7**	**-0.2**
NISR				AML	AML		23 23 12.0	
comp=E,5393μm,0.3s								
NISR				AML	AML		23 23 14.3	
comp=N,2956μm,0.3s								
NISR	**Nisiros**	**0.55**	**228**	P	**Pb**		**23 23 03.4**	**-0.5**
NISR				S	**Sb**		**23 23 11.3**	**-0.6**
NISR	**Nisiros**	**0.55**	**228**	P	**Pb**		**23 23 03.4**	**-0.5**
NISR				S	**Sb**		**23 23 11.3**	**-0.6**
AYDN	**Tasoluk**	**0.71**	**16**	*i* P	**Pg**		**23 23 06.3**	**+0.5**
AYDN				*i* S	**Sg**		**23 23 15.2**	**+0.1**
AYDN	**Tasoluk**	**0.71**	**16**	P	**Pg**		**23 23 06.3**	**+0.5**
AYDN				S	**Sg**		**23 23 15.2**	**+0.1**
GCAM	**G?zelcaml?**	**0.79**	**336**	PG	**Pg**		**23 23 07.4**	**+0.2**
GCAM	**G?zelcaml?**	**0.79**	**336**	*i* P	**Pg**		**23 23 07.5**	**+0.2**
GCAM				*i* S	**Sb**		**23 23 18.7**	**-0.1**
GCAM	**G?zelcaml?**	**0.79**	**336**	*e*Pg	**Pg**		**23 23 07.4**	**+0.2**
GCAM				S	**Sb**		**23 23 18.7**	**-0.1**
TURN	**Turunc**	**0.79**	**97**	PG	**Pg**		**23 23 03.9**	**-3.4**
TURN				SG	**Sg**		**23 23 13.3**	**-4.2**
TURN	**Turunc**	**0.79**	**97**	*i* P	**Pg**		**23 23 03.0**	**-4.3**
TURN				*i* S	**Sg**		**23 23 11.6**	**-5.9**
TURN	**Turunc**	**0.79**	**97**	*e*Pg	**Pg**		**23 23 03.9**	**-3.4**
DALY	**Dalyan (Mu¨la**	**0.84**	**101**	PG	**Pb**		**23 23 09.4**	**+0.5**
DALY				SG	**Sn**		**23 23 22.7**	**+0.1**
DALY	**Dalyan (Mu¨la**	**0.84**	**101**	*i* P	**Pb**		**23 23 09.3**	**+0.4**
DALY				*i* S	**Sn**		**23 23 21.5**	**-1.1**
DALY	**Dalyan (Mu¨la**	**0.84**	**101**	*e*Pg	**Pb**		**23 23 09.4**	**+0.5**
DALY				S	**Sn**		**23 23 21.5**	**-1.1**
DALY				*e*Sg	**Sn**		**23 23 22.7**	**+0.1**
ARG	**Arkhangelos**	**0.86**	**152**	PG	**Pn**		**23 23 10.3**	**-0.2**
ARG				SG	**Sn**		**23 23 23.7**	**+0.5**
ARG	**Arkhangelos**	**0.86**	**152**	P	**Pg**		**23 23 08.9**	**+0.2**
ARG				S	**Sn**		**23 23 24.2**	**+1.0**
ARG				AML	AML		23 23 24.7	
comp=N,6472μm,0.7s								
ARG				AML	AML		23 23 30.1	
comp=E,5892μm,0.6s								
ARG	**Arkhangelos**	**0.86**	**152**	P	**Pb**		**23 23 09.1**	**-0.2**
ARG				S	**Sn**		**23 23 22.0**	**-1.2**
ARG	**Arkhangelos**	**0.86**	**152**	P	**Pb**		**23 23 09.1**	**-0.2**
ARG	**Arkhangelos**	**0.86**	**152**	*e*Pg	**Pn**		**23 23 10.3**	**-0.2**
ARG				S	**Sn**		**23 23 22.0**	**-1.2**
ARG				*e*Sg	**Sn**		**23 23 23.7**	**+0.5**
SMG	**Samos**	**0.96**	**319**	P	**Pg**		**23 23 09.9**	**-0.8**
SMG				S	**Sn**		**23 23 25.2**	**-0.6**
SMG				AML	AML		23 23 26.9	
comp=N,2333μm,0.3s								
SMG				AML	AML		23 23 30.6	
comp=E,3442μm,0.5s								
SMG	**Samos**	**0.96**	**319**	P	**Pg**		**23 23 10.3**	**-0.4**
SMG				S	**Sn**		**23 23 24.9**	**-0.9**
SMG	**Samos**	**0.96**	**319**	P	**Pg**		**23 23 10.3**	**-0.4**
SMG				S	**Sn**		**23 23 24.6**	**-1.2**
AYDB	**Zeytinkoy-Aydi**	**0.99**	**12**	PG	**Pb**		**23 23 11.4**	**-0.1**
AYDB				SG	**Sn**		**23 23 25.5**	**-1.1**
AYDB	**Zeytinkoy-Aydi**	**0.99**	**12**	*e*Pg	**Pb**		**23 23 11.4**	**-0.1**
AYDB				*e*Sg	**Sn**		**23 23 25.5**	**-1.1**
TAVA	**DENIZLI_Tavas**	**1.13**	**64**	*i* P	**Pb**		**23 23 14.0**	**0.0**
TAVA				*i* S	**Sn**		**23 23 30.7**	**+0.6**
TAVA	**DENIZLI_Tavas**	**1.13**	**64**	P	**Pb**		**23 23 14.0**	**0.0**
TAVA				S	**Sn**		**23 23 30.7**	**+0.6**
FETY	**Fethiye**	**1.22**	**106**	PN	**Pg**		**23 23 17.3**	**+1.8**
FETY	**Fethiye**	**1.22**	**106**	P	**Pn**		**23 23 14.8**	**-0.6**
FETY				S	**Sn**		**23 23 33.4**	**+1.4**
FETY	**Fethiye**	**1.22**	**106**	P	**Pn**		**23 23 15.2**	**-0.2**
FETY	**Fethiye**	**1.22**	**106**	*e*Pn	**Pg**		**23 23 17.3**	**+1.8**
FETY				S	**Sn**		**23 23 32.5**	**+0.5**
DGB	**¯zmir**	**1.23**	**331**	*i* P	**Pn**		**23 23 15.2**	**-0.3**
DGB				*i* S	**Sb**		**23 23 30.9**	**-0.5**
GMLD	**Gumuldur**	**1.23**	**333**	PN	**Pb**		**23 23 15.6**	**-0.1**
GMLD				SN	**Sn**		**23 23 33.1**	**+0.7**
GMLD	**Gumuldur**	**1.23**	**333**	*e*Pn	**Pb**		**23 23 15.6**	**-0.1**
GMLD				*e*Sn	**Sn**		**23 23 33.1**	**+0.7**
DNZL	**Cakiroluk**	**1.33**	**57**	*i* P	**Pg**		**23 23 17.9**	**+0.2**
DNZL				*i* S	**Sg**		**23 23 36.2**	**+1.2**
DNZL	**Cakiroluk**	**1.33**	**57**	P	**Pg**		**23 23 17.9**	**+0.2**
DNZL				S	**Sg**		**23 23 36.2**	**+1.2**
DENT	**Denizli**	**1.36**	**55**	PN	**Pg**		**23 23 18.9**	**+0.7**
DENT	**Denizli**	**1.36**	**55**	*e*Pn	**Pg**		**23 23 18.9**	**+0.7**
BLCB	**Balcova**	**1.48**	**342**	PN	**Pb**		**23 23 19.5**	**-0.3**
BLCB	**Balcova**	**1.48**	**342**	*e*Pn	**Pb**		**23 23 19.5**	**-0.3**
KARP	**Karpathos**	**1.48**	**195**	PN	**Pg**		**23 23 20.5**	**0.0**
KARP	**Karpathos**	**1.48**	**195**	P	**Pn**		**23 23 18.5**	**-0.6**
KARP				S	**Sn**		**23 23 37.9**	**-0.6**
KARP				AML	AML		23 23 45.6	
comp=N,1882μm,0.8s								
KARP				AML	AML		23 23 51.1	
comp=E,1007μm,0.8s								
KARP	**Karpathos**	**1.48**	**195**	P	**Pn**		**23 23 18.7**	**-0.3**
KARP				S	**Sn**		**23 23 38.1**	**-0.5**
KARP	**Karpathos**	**1.48**	**195**	P	**Pn**		**23 23 18.7**	**-0.3**
KARP	**Karpathos**	**1.48**	**195**	*e*Pn	**Pg**		**23 23 20.5**	**0.0**
KARP				S	**Sn**		**23 23 38.1**	**-0.5**
GLHS	**Glhisar (BURDU**	**1.50**	**83**	PN	**Pg**		**23 23 22.2**	**+1.2**
GLHS	**Glhisar (BURDU**	**1.50**	**83**	*e*Pn	**Pg**		**23 23 22.2**	**+1.2**
ZEY	**¯zmir**	**1.54**	**325**	*i* P	**Pn**		**23 23 19.8**	**-0.1**
ZEY				*i* S	**Sb**		**23 23 40.7**	**+0.1**
GOLH	**Golhisar**	**1.56**	**80**	*i* P	**Pg**		**23 23 22.8**	**+0.7**
GOLH	**Golhisar**	**1.56**	**80**	P	**Pg**		**23 23 22.8**	**+0.7**
URLA	**Izmir**	**1.60**	**330**	PN	**Pn**		**23 23 20.8**	**0.0**
URLA	**Izmir**	**1.60**	**330**	*i* P	**Pn**		**23 23 19.7**	**-1.1**
URLA	**Izmir**	**1.60**	**330**	P	**Pn**		**23 23 19.7**	**-1.1**
URLA	**Izmir**	**1.60**	**330**	*e*Pn	**Pn**		**23 23 20.8**	**0.0**
ANAF	**Anafi Island**	**1.62**	**248**	P	**Pn**		**23 23 19.9**	**-1.0**
ANAF	**Anafi Island**	**1.62**	**248**	P	**Pn**		**23 23 20.4**	**-0.5**
ANAF				S	**Sn**		**23 23 42.1**	**+0.1**
ANAF	**Anafi Island**	**1.62**	**248**	P	**Pn**		**23 23 20.4**	**-0.5**
ANAF				S	**Sn**		**23 23 42.1**	**+0.1**
MANT	**Manisa**	**1.68**	**26**	*i* P	**Pn**		**23 23 22.2**	**+0.2**
MANT	**Manisa**	**1.68**	**26**	P	**Pn**		**23 23 22.2**	**+0.2**
APE	**Apeiranthos**	**1.68**	**274**	PN	**Pb**		**23 23 22.6**	**-0.8**
APE	**Apeiranthos**	**1.68**	**274**	P	**Pn**		**23 23 21.6**	**-0.3**
APE				S	**Sn**		**23 23 43.0**	**-0.6**
APE				AML	AML		23 23 49.9	
comp=N,217μm,0.6s								
APE				AML	AML		23 23 54.4	
comp=E,209μm,0.6s								
APE	**Apeiranthos**	**1.68**	**274**	P	**Pn**		**23 23 21.4**	**-0.5**
APE	**Apeiranthos**	**1.68**	**274**	P	**Pn**		**23 23 21.5**	**-0.3**
APE	**Apeiranthos**	**1.68**	**274**	*e*Pn	**Pb**		**23 23 22.6**	**-0.8**
APE				S	**Sn**		**23 23 42.7**	**-0.9**
KULA	**Kula-Manisa**	**1.74**	**28**	PN	**Pn**		**23 23 23.3**	**+0.7**
KULA	**Kula-Manisa**	**1.74**	**28**	*e*Pn	**Pn**		**23 23 23.3**	**+0.7**
AKAS	**Kas**	**1.75**	**115**	PN	**Pg**		**23 23 26.3**	**+0.5**
AKAS	**Kas**	**1.75**	**115**	*i* P	**Pg**		**23 23 25.3**	**-0.5**
AKAS				*i* S	**Sg**		**23 23 51.7**	**+3.1**
AKAS	**Kas**	**1.75**	**115**	P	**Pg**		**23 23 25.3**	**-0.5**
AKAS	**Kas**	**1.75**	**115**	*e*Pn	**Pg**		**23 23 26.3**	**+0.5**
KSL	**Kastellorizon**	**1.78**	**117**	P	**Pb**		**23 23 25.6**	**+0.7**
KSL	**Kastellorizon**	**1.78**	**117**	P	**Pb**		**23 23 25.6**	**+0.7**
ELL	**Elmali**	**1.84**	**97**	PN	**Pg**		**23 23 26.9**	**-0.5**
ELL	**Elmali**	**1.84**	**97**	*e*Pn	**Pg**		**23 23 26.9**	**-0.5**
SANT	**Santorini**	**1.85**	**251**	PN	**Pb**		**23 23 25.9**	**-0.3**
SANT	**Santorini**	**1.85**	**251**	*e*Pn	**Pb**		**23 23 25.9**	**-0.3**
CHOS	**Chios island**	**1.88**	**319**	PN	**Pb**		**23 23 26.1**	**-0.6**
CHOS	**Chios island**	**1.88**	**319**	P	**Pn**		**23 23 24.7**	**+0.1**
CHOS	**Chios island**	**1.88**	**319**	P	**Pn**		**23 23 24.6**	**0.0**
CHOS				S	**Sb**		**23 23 49.9**	**-0.5**
CHOS	**Chios island**	**1.88**	**319**	P	**Pn**		**23 23 24.6**	**0.0**
CHOS	**Chios island**	**1.88**	**319**	*e*Pn	**Pb**		**23 23 26.1**	**-0.6**
CHOS				S	**Sb**		**23 23 49.9**	**-0.5**
THR3	**Thira Island,**	**1.88**	**253**	P	**Pn**		**23 23 24.2**	**-0.3**
THR3	**Thira Island,**	**1.88**	**253**	P	**Pn**		**23 23 24.2**	**-0.3**
THR6	**Thira Island,**	**1.90**	**252**	P	**Pn**		**23 23 25.4**	**+0.6**
THR6	**Thira Island,**	**1.90**	**252**	P	**Pn**		**23 23 25.4**	**+0.6**
SAP1	**Santorini-Akro**	**1.90**	**252**	P	**Pn**		**23 23 24.8**	**0.0**
SAP1

*IDC **01** 23:33:29.5±2.2, 1.62N×93.45E, h0km, mb3.6/3, mb1 4.0/5, mb1mx3.4/63, mbtmp3.8/5, ML4.2/2, Error ellipse: s-maj=58.9km s-min=28.0km az=55.0*
*ISCJB **01** 23:33:32.1±2.1, 1.6N±0.2×93.5E±0.2, h33km, mb3.6/3, Error ellipse: s-maj=36.6km s-min=21.3km az=137.5*
ISC 01 23:33:34.5±1.8, 1.6N±0.2×93.5E±0.2, h35km, n6, σ0=45/6, mb3.8/3, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**5.53**	**78**	Pn	**Pn**	**23 34 54.6**	**+0.1**
	2.1nm,0.3s,baz=182,slow=0.8,SNR=8.5						
CMAR	**Chiang Mai Arr**	**17.54**	**17**	P	**Pn**	**23 37 36.5**	**+0.1**
	0.7nm,0.3s,baz=210,slow=12,SNR=3.7						
WRA	**Warramunga Arr**	**45.42**	**120**	P	**P**	**23 41 50.1**	**-0.2**
	0.6nm,1.1s,baz=301,slow=8.9,SNR=4.1						
MKAR	**Makanchi Array**	**46.02**	**349**	P	**P**	**23 41 54.7**	**+0.1**
	0.7nm,0.6s,baz=168,slow=9.0,SNR=8.4						
SONM	**Songino Array**	**47.34**	**12**	P	**P**	**23 42 04.7**	**-0.4**
	0.8nm,0.6s,baz=204,slow=7.4,SNR=4.9						
TXAR	**Lajitas Array**	**145.08**	**27**	PKPbc	**PKPdf**	**23 53 09.8**	**+0.6**
	0.2nm,0.4s,baz=270,slow=1.8,SNR=6.4						

*ISCJB **01** 23:37:26.5±0.6, 44.67N±0.04×105.49W±0.08, h0km, Error ellipse: s-maj=8.3km s-min=5.3km az=165.0*
*NEIC **01** 23:37:27.8±0.6, 44.55N×105.51W, h0km, ML2.0, Error ellipse: s-maj=9.3km s-min=8.3km az=193.0, Suspected Mining explosion.*
NEIC 29 km [18 miles] N of Gillette.
*IDC **01** 23:37:27.9±1.4, 44.70N×105.93W, h0km, mb1 3.4/3, mb1mx3.1/67, mbtmp3.1/3, ML2.7/3, Error ellipse: s-maj=56.2km s-min=9.3km az=140.0*
ISC 01 23:37:27.6±0.8, 44.59N±0.04×105.53W±0.05, h0km, n9, σ1=45/20, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.17**	**113**	*e*Pg	**Pg**	**23 37 49.5**	**-0.6**
LAO	**LASA Array**	**2.15**	**347**	*e*Pn	**Pn**	**23 38 04.5**	**-0.4**
LAO				*e*Sn	**Sn**	**23 38 31.2**	**-1.1**
PDAR	**Pinedale Array**	**3.44**	**239**	Pn	**Pn**	**23 38 22.9**	**+0.2**
	0.6nm,0.3s,baz=60,slow=15,SNR=6.4						
PDAR				Pg	**Pb**	**23 38 30.2**	**+0.6**
	3.6nm,0.3s,baz=60,slow=20,SNR=22						
PDAR				Lg	Lg	23 39 10.4	
	2.4nm,0.3s,baz=66,slow=32,SNR=9.7						
BW06	**Boulder Array**	**3.44**	**239**	*e*Pn	**Pn**	**23 38 21.7**	**-1.1**
BW06				*e*Pg	**Pb**	**23 38 29.9**	**+0.3**
BW06				*e*Sg	**Sb**	**23 39 10.8**	**-1.3**
BOZ	**Bozeman (W)**	**4.43**	**285**	*e*Pn	**Pn**	**23 38 37.2**	**+1.0**
BOZ				*e*Pb	**Pb**	**23 38 46.1**	**-0.3**
BOZ				*e*Pg	**Pg**	**23 38 54.2**	**+1.6**
BOZ				*e*Sg	**Sg**	**23 39 47.5**	**-2.6**
EGMT	**Eagleton**	**4.51**	**321**	*e*Pn	**Pn**	**23 38 39.0**	**+1.7**
EGMT				*e*Pg	**Pg**	**23 38 54.1**	**+0.1**
EGMT				*e*Sb	**Sb**	**23 39 45.0**	**+2.4**
ISCO	**Idaho Springs**	**4.79**	**181**	*e*Pn	**Pn**	**23 38 41.4**	**+0.1**
ISCO				*e*Pb	**Pb**	**23 38 53.9**	**+1.3**
ISCO				*e*Sb	**Sb**	**23 39 53.5**	**+2.7**
ULM	**Lac du Bonnet**	**8.65**	**46**	Pn	**Pn**	**23 39 34.5**	**+0.5**
	0.3nm,0.3s,baz=229,slow=13,SNR=2.1						
ULM				Pg	Pg	23 40 06.4	-6.8
	0.3nm,0.3s,baz=243,slow=12,SNR=3.7						
ULM				Lg	Lg	23 41 59.4	
	0.2nm,0.3s,baz=331,slow=19,SNR=3.1						
YKA	**Yellowknife Ar**	**18.69**	**347**	P	**P**	**23 41 45.5**	**-1.7**
	0.0nm,0.3s,baz=160,slow=12,SNR=4.1						

*IDC **01** 23:37:57.7±1.3, 2.20N×93.10E, h0km, mb3.5/7, mb1 3.8/10, mb1mx3.5/66, mbtmp3.6/10, ML3.8/2, MS3.2/2, Ms1 3.2/2, ms1mx2.5/57, Error ellipse: s-maj=39.1km s-min=18.3km az=44.0*
ISC 01 23:38:03.6±1.4, 2.3N±0.2×93.3E±0.1, h35km, n15, σ0=91/10, mb3.5/7, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**5.66**	**85**	Pn	**Pn**	**23 39 26.7**	**+1.3**
	1.4nm,0.3s,baz=0.4,slow=3.9,SNR=5.7						
PSI				Sn	**Sn**	**23 40 28.0**	**-1.2**
	1.6nm,0.3s,baz=182,slow=1.2,SNR=5.2						
PALK	**Pallekele**	**13.46**	**292**	Pn	Pn	23 41 06.7	-5.7
	0.7nm,0.3s,baz=113,slow=13,SNR=4.5						
PALK				Sn	Sn	23 43 20.8	-20
	1.8nm,0.3s,baz=115,slow=4.1,SNR=5.2						
CMAR	**Chiang Mai Arr**	**16.97**	**19**	P	**Pn**	**23 41 58.0**	**-0.4**
	baz=218,slow=12,SNR=4.3						
H08S2	**Diego Garcia H**	**22.98**	**244**	T	T	00 04 29.2	
	baz=63,slow=75,SNR=9.4						
H08S3	**Diego Garcia H**	**22.98**	**244**	T	T	00 04 12.9	
	baz=63,slow=75,SNR=9.0						
H08S1	**Diego Carcia H**	**23.00**	**244**	T	T	00 04 26.1	
	baz=63,slow=75,SNR=10.0						
DAV	**Davao City (W)**	**32.52**	**81**	LR	LR	23 58 35.7	
	comp=Z,16nm,18.5s,baz=184,slow=38						
FITZ	**Fitzroy Crossi**	**37.78**	**124**	P	**P**	**23 45 16.1**	**-0.7**
	1.5nm,0.6s,baz=319,slow=10,SNR=5.3						
MKAR	**Makanchi Array**	**45.32**	**349**	P	**P**	**23 46 17.1**	**-1.1**
	0.3nm,0.5s,baz=171,slow=9.2,SNR=5.5						
WRA	**Warramunga Arr**	**45.96**	**121**	P	**P**	**23 46 23.6**	**-0.1**
	1.2nm,0.9s,baz=302,slow=8.6,SNR=9.0						
SONM	**Songino Array**	**46.74**	**12**	P	**P**	**23 46 30.3**	**+0.8**
	0.2nm,0.7s,baz=160,slow=4.7,SNR=3.6						
ASAR	**Alice Springs**	**47.21**	**126**	LR	LR	00 07 13.3	
	comp=Z,62nm,18.6s,baz=102,slow=37						
KURBB	**Kurchatov Arra**	**49.72**	**348**	P	**P**	**23 46 52.1**	**-0.2**
	0.2nm,0.5s,baz=166,slow=6.6,SNR=3.6						
ZALV	**Zalesovo Beam**	**51.93**	**354**	P	**P**	**23 47 08.8**	**-0.1**
	0.3nm,0.3s,baz=177,slow=7.0,SNR=2.6						
BRTR	**Keskin Array B**	**65.48**	**313**	P	**P**	**23 48 43.6**	**0.0**
	0.3nm,0.8s,baz=123,slow=5.3,SNR=3.0						

KRSC 01 23:46:42.4±2.9, 53.92N×168.38E, h16km±36km, ML3.8, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**1.90**	**313**	*e*P	Pn	23 47 14.3	+0.3
BKI				*e*S	Sn	23 47 38.8	+1.2
KBTR	**Krutoberegovo**	**3.93**	**308**	*e*P	Pn	23 47 43.4	+1.4
KBTR				S	Sn	23 48 30.5	+2.8
MKZ	**Mys Kozlova**	**3.95**	**282**	P	Pn	23 47 45.6	+3.4
MKZ				S	Sn	23 48 32.0	+3.9
SMKR	**Semkarok**	**4.77**	**307**	*e*P	Pn	23 47 57.0	+3.5
SMKR				S	Sn	23 48 51.4	+3.0
TUMD	**Tumrok D**	**4.82**	**289**	*e*S	Sn	23 48 53.8	+4.2
ZLN	**Zelenaya**	**4.84**	**299**	P	Pb	23 48 01.3	-5.5
KZV	**Kizimen**	**4.86**	**287**	*e*P	Pn	23 47 58.7	+3.9
KZV				S	Sn	23 48 54.2	+3.4
BZGR	**Bezymyannyi-Gr**	**4.87**	**298**	*e*S	Sn	23 48 57.2	+6.3
CIRR	**Tsirk**	**4.91**	**300**	*e*P	Pn	23 48 01.0	+5.5
CIRR				S	Sn	23 48 57.3	+5.3
TUMR	**Tumrok**	**4.98**	**289**	*e*P	Pb	23 48 03.3	-5.8
KMNR	**Kamenistaya**	**5.05**	**295**	*e*P	Pn	23 48 03.3	+5.9
KMNR				S	Sn	23 49 02.8	+7.4
KII	**Karymskiy**	**5.27**	**275**	*e*P	Pn	23 48 02.7	+2.3
KII				S	Sn	23 49 05.2	+4.4
NLC	**Nalytchevo**	**5.44**	**266**	*e*S	Sn	23 49 09.6	+4.8
SDLR	**Sedlovina**	**5.69**	**267**	P	Pn	23 48 11.0	+4.8
SDLR				S	Sn	23 49 17.1	+5.9
UGLR	**Uglovaya**	**5.74**	**267**	P	Pn	23 48 11.9	+5.0
UGLR				S	Sn	23 49 17.4	+5.0
SMAR	**Somma**	**5.74**	**267**	*e*P	Pn	23 48 12.5	+5.5
KRER	**Koryakskii**	**5.77**	**268**	*e*P	Pn	23 48 12.4	+5.1
AVH	**Avacha**	**5.78**	**267**	P	Pn	23 48 10.3	+2.9
AVH				S	Sn	23 49 18.2	+4.9
RUS	**Russkaya**	**6.12**	**260**	*e*P	Pn	23 48 16.9	+4.9
RUS				S	Sn	23 49 26.3	+4.8
GNL	**Ganaly**	**6.19**	**272**	*e*P	Pn	23 48 18.2	+5.1
GNL				S	Sn	23 49 30.5	+7.1
KRMR	**Karymshinskiy**	**6.23**	**264**	S	Sn	23 49 29.2	+4.9
MTVR	**Mutnovka**	**6.29**	**261**	*e*S	Sn	23 49 30.0	+3.9
ASAK	**Asacha**	**6.49**	**260**	*e*P	Pn	23 48 22.8	+5.6
KDTR	**Khodutka, Kamc**	**6.59**	**255**	*e*P	Pn	23 48 23.1	+4.7
KDTR				S	Sn	23 49 36.2	+3.1

MEX 02 00:00:44.5±0.5, 16.29N×99.47W, h16km±25km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**1.07**	**315**	*e*P	Pb	00 01 00.3	-4.5
CAIG				*e*S	Sb	00 01 13.4	-5.2
MEIG	**Mezcala**	**1.63**	**355**	*e*P	Pn	00 01 06.3	-6.4
MEIG				*e*S	Sn	00 01 28.8	-4.6
ARIG	**Puente Sto Nin**	**2.15**	**337**	*e*P	Pn	00 01 16.8	-3.0
ARIG				*e*S	Sn	00 01 41.4	-4.7

IDC 02 00:02:39.8±2.6, 4.57S×135.37E, h0km, mb3.7/1, mb1 4.0/5, mb1mx3.6/48, mbtmp3.9/5, ML3.8/4, Error ellipse: s-maj=77.6km s-min=26.2km az=78.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.50**	**312**	Pn	Pn	00 04 02.6	-0.6
	6.7nm,0.3s,baz=186,slow=23,SNR=21						
SIJI				Sn	Sn	00 04 58.3	-8.9
	0.3nm,0.3s,baz=162,slow=20,SNR=2.1						
WRA	**Warramunga Arr**	**15.31**	**184**	Pn	Pn	00 06 16.4	-1.0
	0.2nm,0.3s,baz=3.4,slow=13,SNR=7.1						
WRA				Sn	Sn	00 09 03.3	-4.6
	0.2nm,0.3s,baz=6.3,slow=22,SNR=5.3						
FITZ	**Fitzroy Crossi**	**16.47**	**215**	Pn	Pn	00 06 32.6	+0.2
	0.1nm,0.3s,baz=36,slow=12,SNR=7.1						
ASAR	**Alice Springs**	**19.04**	**184**	P	P	00 07 03.9	+0.3
	0.8nm,0.3s,baz=5.1,slow=12,SNR=35						
MKAR	**Makanchi Array**	**69.27**	**324**	P	P	00 13 49.1	+0.2
	0.4nm,0.6s,baz=111,slow=7.9,SNR=6.0						

*ATH **02** 00:11:06.7, 39.01N×21.46E, h15km±1km, ML3.2/17, Error ellipse: s-maj=1.4km s-min=0.8km az=273.0*
*ISCJB **02** 00:11:06.6±0.3, 38.99N±0.01×21.45E±0.02, h2km±2km, mb3.5/11, MS2.2/1, Error ellipse: s-maj=2.2km s-min=1.8km az=142.9*
*THE **02** 00:11:07.0, 38.99N×21.45E, h0km±1km, ML3.3/19, Error ellipse: s-maj=1.5km s-min=0.4km az=225.0*
*PDG **02** 00:11:07.5±0.8, 39.01N×21.42E, h5km±1km, ML3.4/8, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*
*CSEM **02** 00:11:07.3±0.1, 38.98N×21.47E, h2km, ML3.2, Error ellipse: s-maj=2.4km s-min=1.7km az=60.0*
*BEO **02** 00:11:12.1±0.6, 39.26N×21.51E, h5km*
*IDC **02** 00:11:12.1±1.9, 39.06N×21.45E, h42km±23km, mb3.4/11, mb1 3.5/16, mb1mx3.3/64, mbtmp3.5/16, ML3.5/4, MS2.6/6, Ms1 2.6/6, ms1mx2.4/38, Error ellipse: s-maj=17.5km s-min=13.4km az=44.0*
*SOF **02** 00:11:21.6, 39.96N×22.20E, h1km, MD3.5*
ISC 02 00:11:07.2±0.9, 39.00N±0.01×21.46E±0.01, h8km±7km, n298, σ1=63/398, mb3.5/11, 19C-21D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EVR	**Evrytania**	**0.28**	**106**	P	**Pg**	**00 11 13.3**	**+0.4**
EVR				S	**Sg**	**00 11 17.0**	**+0.3**
EVR				AML	AML	00 11 19.7	
	comp=E,14078μm,0.4s						
EVR				AML	AML	00 11 22.9	
	comp=N,14159μm,0.4s						
EVR	**Evrytania**	**0.28**	**106**	P	**Pg**	**00 11 13.1**	**+0.1**
EVR				S	**Sg**	**00 11 17.3**	**+0.6**
EVR	**Evrytania**	**0.28**	**106**	P	**Pg**	**00 11 13.0**	**+0.1**
EVR				S	**Sg**	**00 11 17.0**	**+0.3**
PVO	**Paravola**	**0.38**	**172**	P	**Pg**	**00 11 14.3**	**-0.4**
PVO				S	**Sg**	**00 11 20.3**	**+0.5**
PVO	**Paravola**	**0.38**	**172**	P	**Pg**	**00 11 14.3**	**-0.4**
PVO				S	**Sg**	**00 11 20.3**	**+0.5**
PDO	**Prodromos**	**0.45**	**209**	P	**Pg**	**00 11 15.1**	**-0.9**
PDO				S	**Sg**	**00 11 22.2**	**+0.2**
PDO	**Prodromos**	**0.45**	**209**	P	**Pg**	**00 11 15.1**	**-0.9**
PDO				S	**Sg**	**00 11 22.2**	**+0.2**
ANX	**Ano Chora**	**0.54**	**138**	P	**Pg**	**00 11 17.3**	**-0.4**
ANX				S	**Sg**	**00 11 25.7**	**+0.9**
ANX	**Ano Chora**	**0.54**	**138**	P	**Pg**	**00 11 17.3**	**-0.4**
ANX				S	**Sg**	**00 11 25.7**	**+0.9**
MGNA	**Meganis**	**0.62**	**237**	P	**Pg**	**00 11 18.2**	**-1.1**
MGNA				S	**Sg**	**00 11 28.1**	**+0.7**
MGNA				AML	AML	00 11 33.3	
	comp=N,3256μm,0.4s						
MGNA				AML	AML	00 11 33.6	
	comp=E,2928μm,0.5s						
MGNA	**Meganis**	**0.62**	**237**	P	**Pg**	**00 11 18.5**	**-0.8**
MGNA				S	**Sg**	**00 11 27.9**	**+0.5**
LKD2	**Lefkada island**	**0.66**	**252**	P	**Pg**	**00 11 18.9**	**-1.1**
LKD2				S	**Sg**	**00 11 29.1**	**+0.5**
LKD2				AML	AML	00 11 35.9	
	comp=E,4505μm,0.7s						
LKD2				AML	AML	00 11 36.9	
	comp=N,6538μm,0.7s						
LKD2	**Lefkada island**	**0.66**	**252**	P	**Pg**	**00 11 19.1**	**-0.8**
LKD2				S	**Sg**	**00 11 28.8**	**+0.2**
LKD2	**Lefkada island**	**0.66**	**252**	P	**Pg**	**00 11 19.2**	**-0.7**
LKD2				S	**Sg**	**00 11 28.8**	**+0.2**
EFP	**Efpalio**	**0.67**	**148**	P	**Pg**	**00 11 19.1**	**-1.0**
EFP				AML	AML	00 11 36.3	
	comp=N,4733μm,0.6s						
EFP				AML	AML	00 11 36.8	
	comp=E,8908μm,0.7s						
EFP	**Efpalio**	**0.67**	**148**	P	**Pg**	**00 11 19.3**	**-0.8**
EFP				S	**Sg**	**00 11 29.1**	**+0.3**
EFP	**Efpalio**	**0.67**	**148**	P	**Pg**	**00 11 19.4**	**-0.7**
EFP				S	**Sg**	**00 11 29.1**	**+0.3**
AGG	**Agios Georgios**	**0.68**	**88**	P	**Pb**	**00 11 21.0**	**-0.3**
AGG				S	**Sg**	**00 11 29.8**	**+0.6**
AGG				AML	AML	00 11 34.2	
	comp=N,16371μm,0.4s						
AGG				AML	AML	00 11 34.6	
	comp=E,14917μm,0.4s						
AGG	**Agios Georgios**	**0.68**	**88**	P	**Pg**	**00 11 20.4**	**+0.1**
AGG				S	**Sb**	**00 11 30.7**	**-0.2**
AGG	**Agios Georgios**	**0.68**	**88**	P	**Pg**	**00 11 20.4**	**+0.1**
AGG				S	**Sg**	**00 11 29.6**	**+0.4**
THL	**Klokotos Trika**	**0.71**	**37**	P	**Pg**	**00 11 20.8**	**-0.2**
THL				S	**Sg**	**00 11 30.4**	**+0.1**
THL				AML	AML	00 11 40.5	
	comp=E,1893μm,0.5s						
THL				AML	AML	00 11 44.2	
	comp=N,2210μm,0.8s						
THL	**Klokotos Trika**	**0.71**	**37**	P	**Pg**	**00 11 20.5**	**-0.5**
THL				S	**Sg**	**00 11 30.9**	**+0.6**
THL	**Klokotos Trika**	**0.71**	**37**	P	**Pg**	**00 11 20.5**	**-0.5**
THL				S	**Sg**	**00 11 30.9**	**+0.6**
SERG	**Sergoula**	**0.75**	**141**	P	**Pg**	**00 11 20.7**	**-0.9**
SERG				S	**Sb**	**00 11 32.6**	**-0.2**
SERG	**Sergoula**	**0.75**	**141**	P	**Pg**	**00 11 20.7**	**-0.9**
SERG				S	**Sb**	**00 11 32.6**	**-0.2**
UPR	**University Cam**	**0.76**	**160**	P	**Pg**	**00 11 21.9**	**+0.1**
UPR	**University Cam**	**0.76**	**160**	P	**Pg**	**00 11 21.5**	**-0.3**
UPR	**University Cam**	**0.76**	**160**	P	**Pg**	**00 11 21.5**	**-0.3**
TRIZ	**Trizonia**	**0.79**	**143**	P	**Pg**	**00 11 20.7**	**-1.7**
TRIZ	**Trizonia**	**0.79**	**143**	P	**Pg**	**00 11 21.4**	**-1.1**
KALE	**Kalithea**	**0.81**	**138**	P	**Pg**	**00 11 20.6**	**-2.1**
KALE				AML	AML	00 11 42.3	
	comp=N,4177μm,0.5s						
KALE				AML	AML	00 11 44.0	
	comp=E,2299μm,1.0s						
KALE	**Kalithea**	**0.81**	**138**	P	**Pg**	**00 11 21.4**	**-1.3**
JAN	**Janina**	**0.81**	**325**	P	**Pg**	**00 11 22.4**	**-0.4**
JAN				S	**Sb**	**00 11 34.4**	**-0.3**
JAN				AML	AML	00 11 38.6	
	comp=E,3822μm,0.3s						
JAN				AML	AML	00 11 38.6	
	comp=N,4128μm,0.6s						
JAN	**Janina**	**0.81**	**325**	P	**Pg**	**00 11 22.2**	**-0.6**
JAN				S	**Sg**	**00 11 34.0**	**+0.6**
JAN	**Janina**	**0.81**	**325**	P	**Pg**	**00 11 22.2**	**-0.6**
JAN				S	**Sg**	**00 11 33.8**	**+0.4**
LAKA	**Lakka**	**0.86**	**152**	P	**Pg**	**00 11 24.1**	**+0.3**
LAKA	**Lakka**	**0.86**	**152**	P	**Pg**	**00 11 23.6**	**-0.1**
FSK	**Fiskardo**	**0.88**	**233**	P	**Pg**	**00 11 23.0**	**-1.2**
FSK				S	**Sb**	**00 11 36.5**	**-0.2**
RLS	**Riolos of Patr**	**0.94**	**180**	P	**Pg**	**00 11 24.2**	**-1.0**
RLS				AML	AML	00 11 47.7	
	comp=N,2179μm,0.7s						
RLS				AML	AML	00 11 50.7	
	comp=E,1818μm,0.6s						
RLS	**Riolos of Patr**	**0.94**	**180**	P	**Pg**	**00 11 24.4**	**-0.8**
RLS	**Riolos of Patr**	**0.94**	**180**	P	**Pg**	**00 11 24.5**	**-0.8**
KPRO	**Kipourio**	**0.96**	**356**	P	**Pg**	**00 11 23.7**	**-2.0**
KPRO				AML	AML	00 11 47.8	
	comp=N,2508μm,0.6s						
KPRO				AML	AML	00 11 54.1	
	comp=E,4393μm,1.0s						
KPRO	**Kipourio**	**0.96**	**356**	P	**Pg**	**00 11 24.8**	**-0.9**
KPRO				S	**Sb**	**00 11 39.8**	**+0.8**
KPRO	**Kipourio**	**0.96**	**356**	P	**Pg**	**00 11 24.8**	**-0.9**
KPRO				S	**Sb**	**00 11 39.8**	**+0.8**
DLFA	**Delphi**	**0.96**	**122**	P	**Pg**	**00 11 25.3**	**-0.5**
DLFA	**Delphi**	**0.96**	**122**	P	**Pg**	**00 11 25.2**	**-0.5**
LRSO	**Larissa Observ**	**0.99**	**47**	P	**Pg**	**00 11 25.5**	**-0.7**
LRSO				S	**Sn**	**00 11 41.2**	**-0.3**
LRSO	**Larissa Observ**	**0.99**	**47**	P	**Pg**	**00 11 25.5**	**-0.7**
LRSO				S	**Sn**	**00 11 41.2**	**-0.3**
DSF	**Desfina**	**1.02**	**125**	P	**Pg**	**00 11 24.3**	**-2.5**
DSF				AML	AML	00 11 44.7	
	comp=N,2528μm,0.5s						
DSF				AML	AML	00 11 51.4	
	comp=E,1292μm,0.6s						
DSF	**Desfina**	**1.02**	**125**	P	**Pg**	**00 11 25.3**	**-1.5**
DSF				S	**Sb**	**00 11 41.5**	**+0.8**
DSF	**Desfina**	**1.02**	**125**	P	**Pg**	**00 11 25.3**	**-1.5**
DSF				S	**Sb**	**00 11 41.5**	**+0.8**
IGT	**Igoumenitsa**	**1.03**	**302**	*e*Pg	**Pg**	**00 11 25.9**	**-1.0**
IGT				*e*Sg	**Sn**	**00 11 43.7**	**+1.2**
IGT	**Igoumenitsa**	**1.03**	**302**	P	**Pg**	**00 11 25.4**	**-1.5**
IGT	**Igoumenitsa**	**1.03**	**302**	P	**Pg**	**00 11 25.9**	**-1.0**
IGT				S	**Sn**	**00 11 42.4**	**-0.1**
IGT	**Igoumenitsa**	**1.03**	**302**	P	**Pg**	**00 11 25.9**	**-1.0**
IGT				S	**Sn**	**00 11 42.4**	**-0.1**
IGT				*e*Sg	**Sn**	**00 11 43.7**	**+1.2**
KFL	**Anninata**	**1.03**	**211**	P	**Pg**	**00 11 25.9**	**-1.1**
KFL	**Anninata**	**1.03**	**211**	P	**Pg**	**00 11 26.0**	**-1.1**
KFL				S	**Sb**	**00 11 41.5**	**+0.5**
KFL	**Anninata**	**1.03**	**211**	P	**Pg**	**00 11 26.2**	**-0.8**
KFL				S	**Sb**	**00 11 41.5**	**+0.5**
DRO	**Drossia**	**1.06**	**169**	P	**Pg**	**00 11 26.9**	**-0.7**
DRO	**Drossia**	**1.06**	**169**	P	**Pg**	**00 11 26.9**	**-0.7**
VLS	**Valsamata**	**1.06**	**220**	P	**Pg**	**00 11 25.1**	**-2.6**
VLS				S	**Sg**	**00 11 39.7**	**-1.8**
VLS				AML	AML	00 11 49.4	
	comp=E,2200μm,0.7s						
VLS				AML	AML	00 11 49.5	
	comp=N,2983μm,0.7s						
VLS	**Valsamata**	**1.06**	**220**	P	**Pg**	**00 11 25.9**	**-1.8**
VLS				S	**Sn**	**00 11 43.0**	**-0.4**
VLS	**Valsamata**	**1.06**	**220**	P	**Pg**	**00 11 26.1**	**-1.6**
VLS				S	**Sg**	**00 11 40.8**	**-0.7**
SGD	**Sagiada**	**1.13**	**303**	P	**Pg**	**00 11 28.3**	**-0.7**
SGD	**Sagiada**	**1.13**	**303**	P	**Pg**	**00 11 28.3**	**-0.7**
FYTO	**Fytoko, Volos**	**1.22**	**70**	P	**Pb**	**00 11 30.5**	**-0.1**
FYTO				S	**Sg**	**00 11 45.6**	**-0.9**
FYTO				AML	AML	00 11 51.9	
	comp=N,2141μm,0.7s						
FYTO				AML	AML	00 11 56.3	
	comp=E,962μm,0.8s						
FYTO	**Fytoko, Volos**	**1.22**	**70**	P	**Pb**	**00 11 30.1**	**-0.5**
FYTO				S	**Sg**	**00 11 46.0**	**-0.5**
PENT	**Pentalofos**	**1.22**	**348**	P	**Pn**	**00 11 31.0**	**+0.3**
PENT				AML	AML	00 11 59.1	
	comp=N,1833μm,0.5s						
PENT				AML	AML	00 11 59.3	
	comp=E,1533μm,0.7s						
PENT	**Pentalofos**	**1.22**	**348**	P	**Pb**	**00 11 30.3**	**-0.4**
PENT				S	**Sn**	**00 11 47.4**	**-0.1**
PENT	**Pentalofos**	**1.22**	**348**	P	**Pb**	**00 11 30.3**	**-0.4**
PENT				S	**Sn**	**00 11 47.4**	**-0.1**
LKR	**Lokris**	**1.25**	**106**	P	**Pn**	**00 11 30.4**	**-0.7**
LKR				AML	AML	00 11 52.3	
	comp=N,1142μm,0.7s						
LKR				AML	AML	00 12 02.7	
	comp=E,819μm,0.9s						
LKR	**Lokris**	**1.25**	**106**	P	**Pn**	**00 11 30.3**	**-0.7**
LKR	**Lokris**	**1.25**	**106**	P	**Pn**	**00 11 30.3**	**-0.7**
GUR	**Goura**	**1.27**	**147**	P	**Pn**	**00 11 31.1**	**-0.2**
GUR	**Goura**	**1.27**	**147**	P	**Pn**	**00 11 30.9**	**-0.4**
KZN	**Kozani**	**1.33**	**10**	P	**Pn**	**00 11 31.3**	**-0.9**
KZN	**Kozani**	**1.33**	**10**	P	**Pn**	**00 11 31.4**	**-0.8**
KZN	**Kozani**	**1.33**	**10**	P	**Pn**	**00 11 31.4**	**-0.8**
THAL	**Thalero**	**1.34**	**135**	P	**Pg**	**00 11 33.2**	**+0.1**
THAL	**Thalero**	**1.34**	**135**	P	**Pb**	**00 11 32.7**	**0.0**
PROD	**Prodromos**	**1.35**	**123**	P	**Pn**	**00 11 32.5**	**+0.1**
PROD	**Prodromos**	**1.35**	**123**	P	**Pn**	**00 11 32.3**	**0.0**
LIT	**Litokhoron**	**1.36**	**36**	P	**Pn**	**00 11 31.9**	**-0.6**
LIT	**Litokhoron**	**1.36**	**36**	P	**Pn**	**00 11 32.2**	**-0.3**
LIT				S	**Sg**	**00 11 52.9**	**+1.9**
LIT	**Litokhoron**	**1.36**	**36**	P	**Pn**	**00 11 32.2**	**-0.3**
LIT				S	**Sg**	**00 11 52.9**	**+1.9**
SMIA	**Simia**	**1.37**	**94**	P	**Pg**	**00 11 33.8**	**+0.2**
SMIA	**Simia**	**1.37**	**94**	P	**Pb**	**00 11 33.1**	**0.0**
XOR	**Xorichti**	**1.40**	**74**	P	**Pb**	**00 11 33.7**	**+0.1**
XOR				AML	AML	00 12 01.2	
	comp=N,2851μm,0.8s						
XOR				AML	AML	00 12 04.7	
	comp=E,1173μm,1.4s						
XOR	**Xorichti**	**1.

KRND	KRANIDI	2.09 140	P		Pb	00 11 44.4	-0.9
KRND	KRANIDI	2.09 140	P		Pn	00 11 44.0	+1.5
ATHU	Athens Univers	2.10 119	P		Pn	00 11 41.6	-1.0
ATHU	Athens Univers	2.10 119	P		Pn	00 11 42.6	0.0
PYL	PYLOS	2.11 174	P		Pb	00 11 45.7	0.0
PYL	PYLOS	2.11 174	P		Pb	00 11 44.8	-0.9
PTL	Penteli	2.11 116	P		Pb	00 11 44.4	-1.3
PTL	Penteli	2.11 116	P		Pn	00 11 44.1	+1.3
DION	Dionisos Attik	2.15 115	P		Pn	00 11 44.2	+0.9
DION	Dionisos Attik	2.15 115	P		Pn	00 11 44.3	+0.9
VLY	Voula,Athens	2.16 121	P		Pn	00 11 44.9	+1.4
VLY	Voula,Athens	2.16 121	P		Pn	00 11 44.7	+1.2
OHR	Ohrid	2.17 347	*i* Pn		Pn	00 11 45.1	+1.4
OHR			*i* Sn		Sg	00 12 17.4	+0.4
MES2	Methoni	2.18 175	P		Pb	00 11 47.6	+0.7
MES2	Methoni	2.18 175	P		Pb	00 11 46.2	-0.6
SOH	Sokhos	2.33 38	P		Pn	00 11 46.8	+0.9
SOH	Sokhos	2.33 38	P		Pn	00 11 46.8	+0.9
DYR	Agios Nikonas	2.34 163	P		Pb	00 11 49.5	-0.1
DYR	Agios Nikonas	2.34 163	P		Pb	00 11 48.3	-1.3
OUR	Ouranopolis	2.36 55	P		Pn	00 11 46.3	+0.1
OUR	Ouranopolis	2.36 55	P		Pn	00 11 46.8	+0.6
KNT	Kendrikon	2.43 27	P		Pn	00 11 47.8	+0.6
KNT	Kendrikon	2.43 27	P		Pn	00 11 47.9	+0.7
VAY	Valandovo	2.47 20	*e*Pn		Pn	00 11 48.6	+0.8
VAY			*e*Sn		Sn	00 12 17.7	-0.5
VAY	Valandovo	2.47 20	*i* Pn		Pn	00 11 48.8	+1.1
VAY			*i* Sn		Sg	00 12 25.0	-1.6
VAY	Valandovo	2.47 20	*e*Pn		Pn	00 11 48.6	+0.8
VAY			*e*Sn		Sn	00 12 17.7	-0.5
TIR	Tirane	2.65 333	⇓*i*P		Pb	00 11 52.8	-2.1
SRS	Serrai	2.68 37	*e*Pn		Pb	00 11 51.1	+0.5
SRS	Serrai	2.68 37	*e*Pn		Pb	00 11 51.1	+0.5
SKO	Skopje	2.97 360	*e*Pn		Pn	00 11 57.1	+2.4
SKO	Skopje	2.97 360	*i* Pn		Pn	00 11 56.1	+1.4
SKO			*i* Sn		Sb	00 12 36.3	-0.6
SKO	Skopje	2.97 360	*e*Pn		Pn	00 11 57.1	+2.4
SERI	Serifos	3.01 127	P		Pn	00 11 56.2	+1.0
SERI	Serifos	3.01 127	P		Pn	00 11 56.4	+1.2
LIA	Limnos Island	3.02 71	P		Pn	00 11 55.0	-0.3
LIA	Limnos Island	3.02 71	P		Pn	00 11 55.8	+0.5
MMB	Musomiste	3.12 33	P		Pn	00 11 56.8	+0.1
MMB			Pg		Pb	00 12 01.6	-1.3
MMB	Musomiste	3.12 33	P		Pn	00 11 56.8	+0.1
KKB	Krupnik	3.12 23	P		Pn	00 11 57.9	+1.1
KKB			Pg		Pb	00 12 01.3	-1.7
KKB	Krupnik	3.12 23	P		Pn	00 11 57.9	+1.1
ULC	Ulcinj	3.41 331	*e*Pn		Pn	00 12 02.1	+1.4
ULC			*e*Sn		Sn	00 12 44.5	+3.1
ULC	Ulcinj	3.41 331	*e*Pn		Pn	00 12 02.1	+1.4
ULC			*e*Sn		Sn	00 12 44.5	+3.1
SIGR	SIGRI	3.43 85	P		Pn	00 12 01.4	+0.5
SIGR	SIGRI	3.43 85	P		Pn	00 12 01.8	+0.9
DRME	Dracevica, Mon	3.63 332	⇓*i*Pn		Pn	00 12 05.4	+1.7
DRME			*e*Sn		Sn	00 12 50.0	+3.4
DRME	Dracevica, Mon	3.63 332	⇓*i*Pn		Pn	00 12 05.4	+1.7
DRME			*e*Sn		Sn	00 12 50.0	+3.4
FASA	Fasano	3.64 301	*e*Pn		Pn	00 12 02.8	-1.1
RZN	Rozhen	3.66 42	P		Pn	00 12 05.1	+0.8
RZN	Rozhen	3.66 42	P		Pn	00 12 05.1	+0.8
TIP	Timpagrande	3.66 274	⇑*i*P		Pn	00 12 05.3	+1.1
MASS	Massafra	3.70 298	*e*Pn		Pn	00 12 06.5	+1.8
APE	Apeiranthos	3.75 120	⇑*i*P		Pn	00 12 06.6	+1.2
PVY	Plav	3.77 343	⇓*i*Pn		Pn	00 12 08.4	+2.6
PVY			*e*Sn		Sn	00 12 54.4	+4.0
PVY	Plav	3.77 343	⇓*i*Pn		Pn	00 12 08.4	+2.6
PVY			*e*Sn		Sn	00 12 54.4	+4.0
PDG	Podgorica	3.82 335	*e*Pn		Pn	00 12 08.2	+1.9
PDG			*e*Sn		Sn	00 12 55.1	+3.8
TTG	Podgorica	3.82 335	*e*Pn		Pn	00 12 08.2	+1.9
TTG			*e*Sn		Sn	00 12 55.1	+3.8
BARS	Barje	3.83 4	*e*Pn		Pn	00 12 08.4	+2.0
BARS			*e*Sn		Sn	00 12 48.5	-3.0
BARS	Barje	3.83 4	*e*Pn		Pn	00 12 08.4	+2.0
BARS			*e*Sn		Sn	00 12 48.5	-3.0
VTS	Vitosha	3.83 20	⇓*i*P		Pb	00 12 11.5	-3.5
VTS	Vitosha	3.83 20	P		Pb	00 12 11.6	-3.5
VTS	Vitosha	3.83 20	P		Pb	00 12 11.6	-3.5
BUM	Brajici-Budva	3.83 330	⇑*i*Pn		Pn	00 12 07.9	+1.3
BUM			*e*Sn		Sn	00 12 55.9	+4.1
BUM	Brajici-Budva	3.83 330	⇑*i*Pn		Pn	00 12 07.9	+1.3
BUM			*e*Sn		Sn	00 12 55.9	+4.1
CEME	Cevo	4.04 332	⇓*i*Pn		Pn	00 12 10.7	+1.3
CEME			*e*Sn		Sn	00 13 00.1	+3.3
CEME	Cevo	4.04 332	⇓*i*Pn		Pn	00 12 10.7	+1.3
CEME			*e*Sn		Sn	00 13 00.1	+3.3
BEY	Berane	4.05 343	⇓*i*Pn		Pn	00 12 12.6	+3.1
BEY			*e*Sn		Sn	00 13 00.9	+3.7
IVA	Berane	4.05 343	⇓*i*Pn		Pn	00 12 12.6	+3.1
IVA			*e*Sn		Sn	00 13 00.9	+3.7
BAI	Bari	4.10 302	*e*Pn		Pn	00 12 11.2	+1.1
SG1	Sgolgore (BA)	4.11 298	*e*Pn		Pn	00 12 11.6	+1.3
SANT	Santorini	4.12 128	⇓*i*P		Pn	00 12 12.3	+1.9
HCY	Herceg Novi	4.12 328	⇓*i*Pn		Pn	00 12 11.3	+0.9
HCY			*e*Sn		Sn	00 13 02.3	+3.6
HCY	Herceg Novi	4.12 328	⇓*i*Pn		Pn	00 12 11.3	+0.9
HCY			*e*Sn		Sn	00 13 02.3	+3.6
KOME	Kolasin	4.12 340	⇑*i*Pn		Pn	00 12 13.1	+2.5
KOME			*e*Sn		Sn	00 13 03.0	+4.0
KOME	Kolasin	4.12 340	⇑*i*Pn		Pn	00 12 13.1	+2.5
KOME			*e*Sn		Sn	00 13 03.0	+4.0
NKME	Niksic	4.22 334	⇑*i*Pn		Pn	00 12 14.0	+2.2
NKME			*e*Sn		Sn	00 13 05.1	+3.8
NKME	Niksic	4.22 334	⇑*i*Pn		Pn	00 12 14.0	+2.2
NKME			*e*Sn		Sn	00 13 05.1	+3.8
SELS	Selova	4.23 357	*e*Pn		Pn	00 12 13.0	+1.1
NKY	Niksic	4.25 335	⇓*i*Pn		Pn	00 12 14.6	+2.3
NKY			*e*Sn		Sn	00 13 05.4	+3.4
NKY	Niksic	4.25 335	⇓*i*Pn		Pn	00 12 14.6	+2.3
NKY			*e*Sn		Sn	00 13 05.4	+3.4
ZAPS	Zavoj	4.36 11	*e*Pn		Pn	00 12 15.7	+1.9
SJES	Sjenica	4.41 346	*e*Pn		Pn	00 12 17.1	+2.6
SJES			*e*Sn		Sn	00 13 03.7	-2.3
SJES	Sjenica	4.41 346	*e*Pn		Pn	00 12 17.1	+2.6
SJES			*e*Sn		Sn	00 13 03.7	-2.3
BRY	Bratogost	4.48 331	⇑*i*Pn		Pn	00 12 17.2	+1.6
BRY			*e*Sn		Sn	00 13 11.4	+3.4
BRY	Bratogost	4.48 331	⇑*i*Pn		Pn	00 12 17.2	+1.6
BRY			*e*Sn		Sn	00 13 11.4	+3.4
IDI	Anoyia	4.61 142	P		Pn	00 12 19.4	+2.2
	comp=N,0.7nm,0.3s,baz=320,slow=14,SNR=16						
IDI			S		Sn	00 13 13.2	+2.3
	comp=N,1.0nm,0.3s,baz=294,slow=18,SNR=3.8						
IDI	Anoyia	4.61 142	⇑*i*P		Pn	00 12 18.8	+1.6
UPM	Unac-Piva	4.62 336	⇓*i*Pn		Pn	00 12 19.5	+2.0
UPM			*e*Sn		Sn	00 13 14.6	+3.1
UPM	Unac-Piva	4.62 336	⇓*i*Pn		Pn	00 12 19.5	+2.0
UPM			*e*Sn		Sn	00 13 14.6	+3.1
IVAS	Ivanjica	4.68 348	*e*Pn		Pn	00 12 20.2	+2.0
IVAS	Ivanjica	4.68 348	*e*Pn		Pn	00 12 20.2	+2.0
MPEP	Malo Peshtene	4.68 21	P		Pn	00 12 19.8	+1.6
STON	Ston	4.80 325	⇑*i*Pn		Pn	00 12 18.9	-0.9
ZAGS	Zajecar	4.85 7	*e*Pn		Pn	00 12 21.6	+1.2
ZAGS			*e*Sn		Sn	00 13 13.5	-3.2
ZAGS	Zajecar	4.85 7	*e*Pn		Pn	00 12 21.6	+1.2
ZAGS			*e*Sn		Sn	00 13 13.5	-3.2
GRUS	Gruza	4.92 354	*e*Pn		Pn	00 12 22.9	+1.5
GRUS			*e*Sn		Sn	00 13 16.0	-2.5
GRUS	Gruza	4.92 354	*e*Pn		Pn	00 12 22.9	+1.5
GRUS			*e*Sn		Sn	00 13 16.0	-2.5
BBLS	Lazići	5.10 343	*e*Pn		Pn	00 12 26.3	+2.3
BBLS	Lazići	5.10 343	*e*Pn		Pn	00 12 26.3	+2.3
DIVS	Divibare	5.21 348	*e*Pn		Pn	00 12 27.4	+1.8
DIVS			*e*Sn		Sn	00 13 22.0	-3.9
DIVS	Divibare	5.21 348	*e*Pn		Pn	00 12 27.4	+1.8
DIVS			*e*Sn		Sn	00 13 22.0	-3.9
TRUS	Trudelj	5.28 352	*e*Pn		Pn	00 12 27.3	+0.9
TRUS	Trudelj	5.28 352	*e*Pn		Pn	00 12 27.3	+0.9
KUBS	Kucevo	5.41 2	*e*Pn		Pn	00 12 30.1	+1.9
KUBS	Kucevo	5.41 2	*e*Pn		Pn	00 12 30.1	+1.9
HAPS	Han Pijesak,BI	5.42 340	⇑*i*Pn		Pn	00 12 29.1	+0.7
TEKS	Tekeris	5.73 346	*e*Pn		Pn	00 12 34.3	+1.7
TEKS	Tekeris	5.73 346	*e*Pn		Pn	00 12 34.3	+1.7
VAE	Valguarnera	5.75 257	P		Pn	00 12 37.1	+4.2
	comp=N,0.4nm,0.3s,baz=180,slow=19,SNR=2.7						
VAE			S		Sn	00 13 40.1	+1.1
	comp=N,0.4nm,0.3s,baz=61,slow=13,SNR=3.3						
HERR	Herculane	5.92 7	⇓*i*P		Pn	00 12 38.7	+3.5
HUMR	Humele	6.12 24	⇓*i*P		Pn	00 12 40.3	+2.4
BLY	Banja Luka	6.57 332	⇑*i*P		Pn	00 12 46.2	+2.1
BLY	Banja Luka	6.57 332	*e*Pn		Pn	00 12 44.6	+0.5
BZS	Buzias	6.62 1	⇑*i*P		Pn	00 12 48.8	+4.1
VOIR		6.96 21	⇓*i*P		Pn	00 12 53.4	+3.8
UDBI	Udbina	6.97 324	*e*Pn		Pn	00 12 51.1	+1.4
UDBI			Sn		Sn	00 14 08.2	-1.0
AQU	L'Aquila	6.98 301	*e*Pn		Pn	00 12 52.1	+2.3
MLR	Muntele Rosu	7.29 26	P		Pn	00 12 59.2	+5.1
	comp=N,0.2nm,0.3s,baz=197,slow=7.3,SNR=11						
MLR	Muntele Rosu	7.29 26	⇑*i*P		Pn	00 12 57.7	+3.6
NVLJ	Novalja	7.43 321	*e*Pn		Pn	00 12 55.9	+0.1
NVLJ			Sn		Sn	00 14 17.9	-2.2
NVLJ	Novalja	7.43 321	*e*Pn		Pn	00 12 55.9	+0.1
DOPR	Dopca	7.55 21	⇑*i*P		Pn	00 13 01.6	+4.1
PLOR	Plostina	7.85 28	⇓*i*P		Pn	00 13 05.2	+3.5
VRI	Vrincioaia	7.89 28	⇑*i*P		Pn	00 13 06.1	+3.9
CRES	Cresnjev	8.14 329	*e*Pn		Pn	00 13 05.2	-0.4
CEY	Cerknica	8.51 325	*e*Pn		Pn	00 13 10.7	0.0
SOKA	Soboth	9.01 331	*e*Pn		Pn	00 13 16.9	-0.7
	comp=N,0.6nm,0.3s						
SOKA			*e*Sn		Sn	00 14 55.9	-3.3
	comp=N,1.0nm,0.5s						
SOKA	Soboth	9.01 331	Pn		Pn	00 13 16.9	-0.7
	comp=N,0.6nm,0.3s						
BURAR	Bucovina Array	9.04 16	⇑*i*P		Pn	00 13 21.7	+3.7
OBKA	Obir	9.06 328	*e*Pn		Pn	00 13 19.6	+1.3
	comp=N,0.6nm,0.2s						
OBKA			*e*Sn		Sn	00 14 58.5	-2.1
	comp=N,5.8nm,0.6s						
OBKA	Obir	9.06 328	Pn		Pn	00 13 19.6	+1.3
	comp=N,0.6nm,0.2s						
ARSA	Arzberg	9.32 334	*e*Pn		Pn	00 13 23.1	+1.3
	comp=N,0.7nm,0.3s						
ARSA	Arzberg	9.32 334	Pn		Pn	00 13 23.1	+1.3
	comp=N,0.7nm,0.3s						
BRTR	Keskin Array B	9.46 82	P		Pn	00 13 26.4	+2.4
	comp=N,0.1nm,0.3s,baz=264,slow=12,SNR=6.3						
KBA	Koelnbreinsper	10.02 326	*e*Pn		Pn	00 13 32.2	+0.7
	comp=N,0.4nm,0.3s						
KBA	Koelnbreinsper	10.02 326	Pn		Pn	00 13 32.2	+0.7
	comp=N,0.4nm,0.3s						
ABTA	Abfaltersbach	10.15 323	*e*Pn		Pn	00 13 32.4	-0.8
	comp=N,1.1nm,0.3s						
ABTA			Sn		Sn	00 15 27.2	0.0
	comp=N,3.5nm,0.7s						
ABTA	Abfaltersbach	10.15 323	Pn		Pn	00 13 32.4	-0.8
	comp=N,1.1nm,0.3s						
ABTA			Sn		Sn	00 15 27.2	0.0
	comp=N,3.5nm,0.7s						
VRAC	Vranov	10.88 343	LR		LR	00 19 01.0	
	comp=N,36nm,18.2s,baz=169,slow=43						
GERES	GERESS Array B	11.32 333	P		Pn	00 13 50.3	+1.1
	comp=N,0.2nm,0.3s,baz=156,slow=13,SNR=4.6						
GERES			LR		LR	00 18 50.9	
	comp=N,44nm,18.2s,baz=148,slow=41						
GNI	Garni	17.98 79	LR		LR	00 23 32.8	
	comp=N,10nm,19.0s,baz=170,slow=41						
ESDC	Sonseca Array	19.66 280	P		Pn	00 15 37.4	-0.5
	comp=N,0.1nm,0.3s,baz=73,slow=11,SNR=4.8						
HFS	Hagfors	21.72 349	P		P	00 15 58.3	-0.2
	comp=N,1.6nm,0.8s,baz=171,slow=9.9,SNR=5.2						
HFS			LR		LR	00 27 04.3	
	comp=N,12nm,19.5s,baz=87,slow=44						
FINES	FINESS Array B	22.66 6	P		P	00 16 07.9	-0.7
	comp=N,0.9nm,0.5s,baz=166,slow=11,SNR=7.5						
NOA	NORSAR Array B	22.97 347	P		P	00 16 10.7	-1.3
	comp=N,1.0nm,0.7s,baz=140,slow=11,SNR=3.3						
NOA			LR		LR	00 27 26.8	
	comp=N,8.8nm,20.0s,baz=240,slow=43						
EKA	Eskdalemuir Ar	23.20 323	P		P	00 16 14.8	+0.5
	comp=N,0.6nm,0.5s,baz=122,slow=11,SNR=5.5						
ARCES	ARCESS Array B	30.68 3	P		P	00 17 21.7	-0.2
	comp=N,1.7nm,0.9s,baz=186,slow=9.8,SNR=4.1						
TORD	Torodi Ar. Bea	31.13 220	P		P	00 17 26.6	+0.2
	comp=N,1.1nm,0.9s,baz=29,slow=8.5,SNR=7.3						
SPITS	Spitsbergen Ar	39.35 358	P		P	00 18 36.7	+0.2
	comp=N,1.0nm,0.7s,baz=152,slow=9.5,SNR=7.4						
SPITS			LR		LR	00 36 34.6	
	comp=N,21nm,19.5s,baz=350,slow=39						
KURBB	Kurchatov Arra	41.15 54	P		P	00 18 51.0	-0.8
	comp=N,0.2nm,0.5s,baz=295,slow=6.6,SNR=3.8						
MKAR	Makanchi Array	44.25 59	P		P	00 19 17.5	+0.5
	comp=N,0.4nm,0.4s,baz=276,slow=8.6,SNR=9.4						
ZALV	Zalesovo Beam	44.60 49	P		P	00 19 20.2	+0.6
	comp=N,1.5nm,0.4s,baz=277,slow=8.6,SNR=6.1						
YKA	Yellowknife Ar	72.87 340	P		P	00 22 35.9	-0.3
	comp=N,0.3nm,0.9s,baz=36,slow=5.4,SNR=3.8						

CSEM ***02*** *00:12:09.9, 44˚.88N×10˚.90E, h8km, ML1.9/4*
ROM 02 00:12:09.9±0.0, 44˚.879N±0˚.001×10˚.903E±0˚.001, h8km, ML1.9/2, 3C-4D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NDIM	**Novi di Modena**	**0.01**	**343**	*i* P	Pg	00 12 11.4	+0.2
NDIM				*i* S	Sg	00 12 13.1	+1.0
NDIM				AML	AML		
	comp=E,9855μm,0.1s						
NDIM				AML	AML		
	comp=N,10805μm,0.2s						
NDIM				AML	AML		
	comp=E,9510μm,0.1s						
NDIM				AML	AML		
	comp=N,11000μm,0.2s						
T0828	**Loc. Fossoli,**	**0.05**	**170**	⇓*i*P	Pg	00 12 12.2	+0.7
T0828				*i* S	Sg	00 12 14.6	+2.0
T0828	**Loc. Fossoli,**	**0.05**	**170**	*i* P	Pg	00 12 12.2	+0.7
T0828				*i* S	Sg	00 12 14.6	+2.0
T0827	**Moglia (MN)**	**0.06**	**19**	⇑*i*P	Pg	00 12 12.5	+0.8
T0827				*i* S	Sg	00 12 15.4	+2.4
T0827	**Moglia (MN)**	**0.06**	**19**	*i* P	Pg	00 12 12.5	+0.8
T0827				*i* S	Sg	00 12 15.4	+2.4
T0826	**Rio Saliceto (**	**0.08**	**239**	⇑*i*P	Pg	00 12 12.5	+0.7
T0826				*i* S	Sg	00 12 15.4	+2.2
T0826	**Rio Saliceto (**	**0.08**	**239**	*i* P	Pg	00 12 12.4	+0.6
T0826				*i* S	Sg	00 12 15.4	+2.2
T0826				AML	AML		
	comp=E,8185μm,0.1s						
T0826				AML	AML		
	comp=N,9670μm,0.2s						
T0826				AML	AML		
	comp=E,8185μm,0.1s						
T0826				AML	AML		
	comp=N,9685μm,0.2s						
T0814	**Loc. Cortile,**	**0.10**	**151**	⇓*i*P	Pg	00 12 12.9	+0.8
T0814				*i* S	Sg	00 12 16.2	+2.5
T0814	**Loc. Cortile,**	**0.10**	**151**	*i* P	Pg	00 12 12.9	+0.8
T0814				*i* S	Sg	00 12 16.2	+2.5
T0825	**Gonzaga (MN)**	**0.10**	**337**	*e*P	Pg	00 12 13.5	+1.3
T0825				*i* S	Sg	00 12 17.7	+3.8
T0825	**Gonzaga (MN)**	**0.10**	**337**	*e*P	Pg	00 12 13.6	+1.3
T0825				*i* S	Sg	00 12 17.7	+3.8
T0825				AML	AML		
	comp=E,7725μm,0.1s						
T0825				AML	AML		
	comp=N,3025μm,0.1s						
T0825				AML	AML		
	comp=E,7730μm,0.1s						
T0825				AML	AML		
	comp=N,3020μm,0.1s						
T0818	**Loc. Fossa, Co**	**0.11**	**58**	⇓*i*P	Pg	00 12 13.2	+0.9
T0818				*i* S	Sg	00 12 16.7	+2.7
T0818	**Loc. Fossa, Co**	**0.11**	**58**	*i* P	Pg	00 12 13.2	+0.8
T0818				*i* S	Sg	00 12 16.7	+2.7
T0824	**Loc. Limidi di**	**0.12**	**171**	⇓*i*P	Pg	00 12 13.5	+1.0
T0824				*i* S	Sg	00 12 17.3	+3.0
T0824	**Loc. Limidi di**	**0.12**	**171**	*i* P	Pg	00 12 13.5	+1.0
T0824				*i* S	Sg	00 12 17.3	+3.0
NOVE	**Novellara**	**0.15**	**239**	⇑*e*P	Pg	00 12 13.9	+0.8
NOVE				*i* S	Sg	00 12 18.3	+3.0
NOVE	**Novellara**	**0.15**	**239**	*e*P	Pg	00 12 13.9	+0.8
NOVE				*i* S	Sg	00 12 18.3	+3.0
NOVE				AML	AML		
	comp=E,834μm,0.9s						
NOVE				AML	AML		
	comp=N,700μm,1.1s						
NOVE				AML	AML		
	comp=E,832μm,0.9s						
NOVE				AML	AML		
	comp=N,700μm,1.1s						
NOVE				AML	AML		
	comp=E,834μm,0.9s						
NOVE				AML	AML		
	comp=N,700μm,1.1s						
SBPO	**S.Benedetto Po**	**0.17**	**4**	*e*P	Pg	00 12 14.6	+1.2
SBPO	**S.Benedetto Po**	**0.17**	**4**	*e*P	Pg	00 12 14.6	+1.2
RAVA	**Ravarino**	**0.20**	**129**	*e*P	Pg	00 12 14.8	+1.0
RAVA				*i* S	Sg	00 12 19.9	+3.4
RAVA	**Ravarino**	**0.20**	**129**	*e*P	Pg	00 12 14.8	+0.9
RAVA				*i* S	Sg	00 12 19.9	+3.4
T0802	**SanFelice sul**	**0.20**	**91**	*e*P	Pg	00 12 14.6	+0.7
T0802				*i* S	Sg	00 12 19.6	+3.0
T0802	**SanFelice sul**	**0.20**	**91**	*e*P	Pg	00 12 14.6	+0.7
T0802				*i* S	Sg	00 12 19.6	+3.0
T0813	**Massa Finalese**	**0.21**	**90**	*e*P	Pg	00 12 14.8	+0.7
T0813				*i* S	Sg	00 12 19.7	+2.7
T0813	**Massa Finalese**	**0.21**	**90**	*e*P	Pg	00 12 14.8	+0.7
T0813				*i* S	Sg	00 12 19.7	+2.7
T0812	**Loc. Stoppiaro**	**0.21**	**69**	*e*P	Pg	00 12 14.9	+0.8
T0812	**Loc. Stoppiaro**	**0.21**	**69**	*e*P	Pg	00 12 14.9	+0.7
T0800	**Massa Finalese**	**0.25**	**97**	*e*P	Pg	00 12 15.2	+0.4
T0800				*i* S	Sg	00 12 20.4	+2.3
T0800	**Massa Finalese**	**0.25**	**97**	*e*P	Pg	00 12 15.2	+0.5
T0800				*i* S	Sg	00 12 20.4	+2.3
T0800				AML	AML		
	comp=E,780μm,0.2s						
T0800				AML	AML		
	comp=N,558μm,0.3s						
T0800				AML	AML		
	comp=E,779μm,0.2s						
T0800				AML	AML		
	comp=N,750μm,1.6s						
T0811	**Palata Pepoli**	**0.25**	**112**	*e*P	Pg	00 12 15.5	+0.7
T0811				*i* S	Sg	00 12 20.0	+1.9
T0811	**Palata Pepoli**	**0.25**	**112**	*e*P	Pg	00 12 15.4	+0.6
T0811				*i* S	Sg	00 12 20.9	+2.8
T0805	**Bondeno (FE)**	**0.30**	**82**	*e*P	Pg	00 12 16.5	+0.7
T0805	**Bondeno (FE)**	**0.30**	**82**	*e*P	Pg	00 12 16.5	+0.7
T0822	**Casumaru (Bond**	**0.32**	**98**	*e*P	Pg	00 12 16.5	+0.4
T0822				*i* S	Sb	00 12 22.8	-0.3
T0822	**Casumaru (Bond**	**0.32**	**98**	*e*P	Pg	00 12 16.6	+0.4
T0822				*i* S	Sb	00 12 22.9	-0.3
T0823	**Castello D'Arg**	**0.33**	**126**	*e*P	Pb	00 12 17.9	-0.1
T0823				*i* S	Sb	00 12 24.1	+0.7
T0823	**Castello D'Arg**	**0.33**	**126**	*e*P	Pb	00 12 17.9	-0.1
T0823				*i* S	Sb	00 12 24.1	+0.7
T0817	**Loc. Veratica,**	**0.41**	**74**	*e*P	Pb	00 12 19.5	+0.1
T0817				*i* S	Sb	00 12 26.9	+1.1
T0817	**Loc. Veratica,**	**0.41**	**74**	*e*P	Pb	00 12 19.5	+0.1
T0817				*i* S	Sb	00 12 26.9	+1.2
ROVR	**Rover˜¤ Verone**	**0.78**	**9**	*e*P	Pb	00 12 25.5	-0.3
ROVR	**Rover˜¤ Verone**	**0.78**	**9**	*e*P	Pb	00 12 25.5	-0.3
ROVR				AML	AML		
	comp=E,55μm,0.7s						
ROVR				AML	AML		
	comp=N,98μm,0.1s						
ROVR				AML	AML		
	comp=E,55μm,0.7s						
ROVR				AML	AML		
	comp=N,98μm,0.1s						
ROVR				AML	AML		
	comp=E,55μm,0.7s						
ROVR				AML	AML		
	comp=N,98μm,0.1s						
SALO	**Salr**	**0.79**	**340**	AML	AML		
	comp=E,49μm,1.1s						
SALO				AML	AML		
	comp=N,52μm,1.2s						
BDI	**Bagni Di Lucca**	**0.84**	**195**	*e*P	Pn	00 12 30.8	+2.6
BDI	**Bagni Di Lucca**	**0.84**	**195**	*e*P	Pn	00 12 30.8	+2.6
MAGA	**Magasa**	**0.92**	**348**	*e*P	Pg	00 12 27.3	-0.2
MAGA	**Magasa**	**0.92**	**348**	*e*P	Pg	00 12 27.3	-0.2
MAGA				AML	AML		
	comp=E,158μm,0.6s						
MAGA				AML	AML		
	comp=N,121μm,0.4s						

ISCJB ***02*** *00:22:17.9±0.5, 17˚.45S±0˚.04×69˚.62W±0˚.07, h158km±5km, mb4.1/8, Error ellipse: s-maj=10.6km s-min=6.4km az=12.7*
NEIC ***02*** *00:22:19.9±1.1, 17˚.28S×69˚.50W, h153km±11km, mb4.0/1, Error ellipse: s-maj=17.4km s-min=12.9km az=200.0*
GUC ***02*** *00

T0827	**Moglia (MN)**	**0.07 293**	*e*P		Pg	00 22 29.4	+1.4
T0827			*i* S		Sg	00 22 31.9	+2.9
NDIM	**Novi di Modena**	**0.09 257**	*i* P		Pg	00 22 28.6	+0.3
NDIM			*i* S		Sg	00 22 30.1	+0.5
T0828	**Loc. Fossoli,**	**0.11 226**	⇊*i*P		Pg	00 22 29.5	+0.9
T0828			*i* S		Sg	00 22 32.2	+2.1
T0828	**Loc. Fossoli,**	**0.11 226**	*i* P		Pg	00 22 29.5	+0.9
T0828			*i* S		Sg	00 22 32.2	+2.1
T0802	**SanFelice sul**	**0.12 107**	*e*P		Pg	00 22 30.6	+1.9
T0802			*i* S		Sg	00 22 32.7	+2.5
T0802	**SanFelice sul**	**0.12 107**	*e*P		Pg	00 22 30.6	+1.9
T0802			*i* S		Sg	00 22 32.7	+2.5
T0812	**Loc. Stoppiaro**	**0.12 67**	⇊*i*P		Pg	00 22 30.0	+1.2
T0812			*i* S		Sg	00 22 33.0	+2.6
T0812	**Loc. Stoppiaro**	**0.12 67**	*i* P		Pg	00 22 31.0	+2.2
T0812			*i* S		Sg	00 22 34.0	+3.6
T0814	**Loc. Cortile,**	**0.12 200**	*e*P		Pg	00 22 30.5	+1.7
T0814			*i* S		Sg	00 22 34.7	+4.2
T0814	**Loc. Cortile,**	**0.12 200**	*e*P		Pg	00 22 30.5	+1.7
T0814			*i* S		Sg	00 22 34.7	+4.2
T0813	**Massa Finalese**	**0.13 104**	⇑*i*P		Pg	00 22 29.9	+1.0
T0813			*i* S		Sg	00 22 31.7	+1.1
T0813	**Massa Finalese**	**0.13 104**	*i* P		Pg	00 22 29.9	+1.0
T0813			*i* S		Sg	00 22 31.7	+1.1
T0824	**Loc. Limidi di**	**0.17 205**	*e*P		Pg	00 22 31.2	+1.6
T0824			*i* S		Sg	00 22 35.4	+3.6
T0824	**Loc. Limidi di**	**0.17 205**	*e*P		Pg	00 22 31.2	+1.6
T0824			*i* S		Sg	00 22 35.4	+3.6
RAVA	**Ravarino**	**0.17 157**	⇊*i*P		Pg	00 22 32.4	+2.8
RAVA			*i* S		Sg	00 22 36.8	+5.0
RAVA	**Ravarino**	**0.17 157**	*i* P		Pg	00 22 32.4	+2.8
RAVA			*i* S		Sg	00 22 36.8	+4.9
RAVA				AML	AML		
	comp=E,921μm,0.2s						
RAVA				AML	AML		
	comp=N,1284μm,0.2s						
RAVA				AML	AML		
	comp=E,1350μm,0.2s						
RAVA				AML	AML		
	comp=N,1365μm,0.5s						
RAVA				AML	AML		
	comp=N,1365μm,0.5s						
RAVA				AML	AML		
	comp=E,1350μm,0.2s						
T0800	**Massa Finalese**	**0.17 111**	⇑*i*P		Pg	00 22 29.9	+0.2
T0800			*i* S		Sg	00 22 31.9	0.0
T0800	**Massa Finalese**	**0.17 111**	*i* P		Pg	00 22 29.9	+0.2
T0800			*i* S		Sg	00 22 31.9	0.0
T0800				AML	AML		
	comp=E,14350μm,0.1s						
T0800				AML	AML		
	comp=N,15350μm,0.3s						
T0800				AML	AML		
	comp=E,11435μm,0.1s						
T0800				AML	AML		
	comp=N,15350μm,0.2s						
T0800				AML	AML		
	comp=E,11435μm,0.1s						
T0826	**Rio Saliceto (**	**0.17 246**	*e*P		Pg	00 22 30.2	+0.5
T0826			*i* S		Sg	00 22 33.5	+1.6
T0826	**Rio Saliceto (**	**0.17 246**	*e*P		Pg	00 22 30.2	+0.6
T0826			*i* S		Sg	00 22 33.5	+1.6
T0811	**Palata Pepoli**	**0.19 131**	⇊*i*P		Pg	00 22 31.6	+1.5
T0811			*i* S		Sg	00 22 34.1	+1.6
T0811	**Palata Pepoli**	**0.19 131**	*i* P		Pg	00 22 31.6	+1.5
T0811			*i* S		Sg	00 22 34.1	+1.6
T0805	**Bondeno (FE)**	**0.21 87**	⇊*e*P		Pg	00 22 30.7	+0.2
T0805	**Bondeno (FE)**	**0.21 87**	*e*P		Pg	00 22 30.7	+0.3
T0805				AML	AML		
	comp=E,2405μm,0.4s						
T0805				AML	AML		
	comp=N,2690μm,0.9s						
T0805				AML	AML		
	comp=E,2405μm,0.3s						
T0805				AML	AML		
	comp=N,2690μm,0.9s						
T0805				AML	AML		
	comp=E,2405μm,0.3s						
T0805				AML	AML		
	comp=N,2690μm,0.9s						
SERM	**Sermide**	**0.22 62**	*e*P		Pg	00 22 32.1	+1.5
SERM	**Sermide**	**0.22 62**	*e*P		Pg	00 22 32.1	+1.6
T0822	**Casumaru (Bond**	**0.24 108**	⇑*e*P		Pg	00 22 30.0	-1.0
T0822			*i* S		Sg	00 22 33.0	-1.1
T0822	**Casumaru (Bond**	**0.24 108**	*e*P		Pg	00 22 31.0	0.0
T0822			*i* S		Sg	00 22 34.0	-0.2
T0803	**Dosso, Cento (**	**0.27 122**	*e*P		Pg	00 22 31.0	-0.6
T0803	**Dosso, Cento (**	**0.27 122**	*e*P		Pg	00 22 32.0	+0.4
T0823	**Castello D'Arg**	**0.28 141**	*e*P		Pb	00 22 33.3	-0.7
T0823	**Castello D'Arg**	**0.28 141**	*e*P		Pb	00 22 33.3	-0.7
T0817	**Loc. Veratica,**	**0.32 75**	*e*P		Pg	00 22 32.9	+0.4
T0817	**Loc. Veratica,**	**0.32 75**	*e*P		Pg	00 22 32.9	+0.5
T0821	**Loc. Casaglia**	**0.36 91**	*e*P		Pg	00 22 32.8	-0.6
T0821	**Loc. Casaglia**	**0.36 91**	*e*P		Pg	00 22 32.8	-0.6
ROVR	**Rover¨¤ Verone**	**0.74 2**		AML	AML		
	comp=E,96μm,0.4s						
ROVR				AML	AML		
	comp=E,96μm,0.4s						
ROVR				AML	AML		
	comp=N,168μm,0.4s						
ROVR				AML	AML		
	comp=E,96μm,0.4s						
ROVR				AML	AML		
	comp=N,168μm,0.4s						
ROVR				AML	AML		
	comp=N,168μm,0.4s						

CSEM ***02*** *00:23:14.8, 44°.87N×11°.07E, h8km, ML1.8/4*
ROM 02 00:23:14.8±0.0, 44°.871N±0°.002×11°.071E±0°.004, h8km, ML1.8/2, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0818	**Loc. Fossa, Co**	**0.07**	**336**	*e*P		Pg	00 23 17.2	+0.5
T0818				*e*S		Sg	00 23 20.1	+2.0
T0818	**Loc. Fossa, Co**	**0.07**	**336**	*e*P		Pg	00 23 17.2	+0.5
T0818				*e*S		Sg	00 23 20.1	+2.1
T0802	**SanFelice sul**	**0.08**	**87**	*e*P		Pg	00 23 17.2	+0.4
T0802				*e*S		Sg	00 23 20.0	+1.8
T0802	**SanFelice sul**	**0.08**	**87**	*e*P		Pg	00 23 17.2	+0.4
T0802				*e*S		Sg	00 23 21.0	+2.8
T0813	**Massa Finalese**	**0.09**	**86**	*e*P		Pg	00 23 17.7	+0.7
T0813				*e*S		Sg	00 23 21.4	+2.9
T0813	**Massa Finalese**	**0.09**	**86**	*e*P		Pg	00 23 17.7	+0.8
T0813				*e*S		Sg	00 23 21.4	+2.9
T0814	**Loc. Cortile,**	**0.11**	**223**	*e*P		Pg	00 23 17.9	+0.7
T0814				*e*S		Sg	00 23 21.5	+2.6
T0814	**Loc. Cortile,**	**0.11**	**223**	*e*P		Pg	00 23 17.9	+0.8
T0814				*e*S		Sg	00 23 21.5	+2.6
T0812	**Loc. Stoppiaro**	**0.11**	**43**	*e*P		Pg	00 23 18.4	+1.1
T0812				*e*S		Sg	00 23 23.1	+4.0
T0812	**Loc. Stoppiaro**	**0.11**	**43**	*e*P		Pg	00 23 18.4	+1.1
T0812				*e*S		Sg	00 23 23.1	+4.0
T0828	**Loc. Fossoli,**	**0.12**	**250**	*e*P		Pg	00 23 18.6	+1.2
T0828				*e*S		Sg	00 23 21.7	+2.5
T0828	**Loc. Fossoli,**	**0.12**	**250**	*e*P		Pg	00 23 18.6	+1.2
T0828				*e*S		Sg	00 23 21.6	+2.5
T0827	**Moglia (MN)**	**0.12**	**304**	*e*P		Pg	00 23 18.2	+0.8
T0827				*e*S		Sg	00 23 22.1	+2.9
T0827	**Moglia (MN)**	**0.12**	**304**	*e*P		Pg	00 23 18.2	+0.8
T0827				*e*S		Sg	00 23 22.1	+2.9
RAVA	**Ravarino**	**0.12**	**163**	*e*P		Pg	00 23 18.3	+0.9
RAVA				*e*S		Sg	00 23 22.1	+2.9
RAVA	**Ravarino**	**0.12**	**163**	*e*P		Pg	00 23 18.3	+0.8
RAVA				*e*S		Sg	00 23 22.1	+2.9
RAVA					AML	AML		
	comp=E,1350μm,0.2s						
RAVA					AML	AML		
	comp=N,1365μm,0.5s						
NDIM	**Novi di Modena**	**0.12**	**278**		AML	AML		
	comp=E,723μm,0.2s						
NDIM					AML	AML		
	comp=E,723μm,0.2s						
NDIM					AML	AML		
	comp=N,754μm,0.3s						
NDIM					AML	AML		
	comp=N,754μm,0.3s						
T0800	**Massa Finalese**	**0.13**	**100**	*e*P		Pg	00 23 18.1	+0.6
T0800				*e*S		Sg	00 23 21.8	+2.3
T0800	**Massa Finalese**	**0.13**	**100**	*e*P		Pg	00 23 18.1	+0.6
T0800				*e*S		Sg	00 23 21.8	+2.3
T0800					AML	AML		
	comp=E,786μm,0.2s						
T0800					AML	AML		
	comp=N,670μm,0.2s						
T0800					AML	AML		
	comp=N,670μm,0.2s						
T0800					AML	AML		
	comp=E,786μm,0.2s						
T0811	**Palata Pepoli**	**0.14**	**128**	*e*P		Pg	00 23 18.3	+0.5
T0811				*e*S		Sg	00 23 22.3	+2.5
T0811	**Palata Pepoli**	**0.14**	**128**	*e*P		Pg	00 23 18.3	+0.5
T0811				*e*S		Sg	00 23 22.3	+2.5
T0824	**Loc. Limidi di**	**0.15**	**222**	*e*P		Pg	00 23 18.9	+1.0
T0824				*e*S		Sg	00 23 23.2	+3.1
T0824	**Loc. Limidi di**	**0.15**	**222**	*e*P		Pg	00 23 18.9	+1.0
T0824				*e*S		Sg	00 23 23.2	+3.1
T0822	**Casumaru (Bond**	**0.20**	**101**	*e*P		Pg	00 23 19.5	+0.7
T0822				*e*S		Sg	00 23 24.3	+2.8
T0822	**Casumaru (Bond**	**0.20**	**101**	*e*P		Pg	00 23 19.5	+0.7
T0822				*e*S		Sg	00 23 24.3	+2.7
T0803	**Dosso, Cento (**	**0.23**	**118**	*e*P		Pg	00 23 20.9	+1.6
T0803				*e*S		Sg	00 23 23.3	+1.0
T0803	**Dosso, Cento (**	**0.23**	**118**	*e*P		Pg	00 23 20.9	+1.6
T0803				*e*S		Sg	00 23 23.3	+1.0
T0823	**Castello D'Arg**	**0.24**	**141**	*e*P		Pg	00 23 20.9	+1.4
T0823				*e*S		Sg	00 23 26.5	+3.9
T0823	**Castello D'Arg**	**0.24**	**141**	*e*P		Pg	00 23 20.9	+1.4
T0823				*e*S		Sg	00 23 26.5	+3.9
NOVE	**Novellara**	**0.26**	**254**	*e*P		Pb	00 23 20.9	-0.8
NOVE				*e*S		Sb	00 23 27.3	+0.9
NOVE	**Novellara**	**0.26**	**254**	*e*P		Pb	00 23 20.9	-0.8
NOVE				*e*S		Sb	00 23 27.3	+0.9

ISCJB ***02*** *00:23:13.9±0.8, 46°.7N±0°.2×27°.7W±0°.2, h16km, mb3.6/9, MS3.3/11, Error ellipse: s-maj=26.6km s-min=13.9km az=21.4*
IDC ***02*** *00:23:13.4±1.1, 46°.66N×27°.65W, h0km, mb3.6/9, mb1 3.8/10, mb1mx3.5/77, mbtmp3.6/10, ML4.2/1, MS3.3/11, Ms1 3.3/11, ms1mx2.9/63, Error ellipse: s-maj=32.8km s-min=19.6km az=16.0*
ISC 02 00:23:15.8±1.0, 46°.6N±0°.2×27°.7W±0°.1, h16km, n25, σ0§29/10, mb3.7/9, MS3.2/11, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESDC	**Sonseca Array**	**18.59**	**103**	P		**Pn**	**00 27 32.4**	**0.0**
	0.2nm,0.3s,baz=296,slow=13,SNR=5.6						
SCHQ	**Schefferville**	**25.83**	**303**	LR		LR	00 36 34.7	
	comp=Z,63nm,20.5s,baz=109,slow=31						
NOA	**NORSAR Array B**	**26.59**	**43**	LR		LR	00 38 00.5	
	comp=Z,14nm,19.4s,baz=115,slow=33						
GERES	**GERESS Array B**	**27.65**	**70**	LR		LR	00 39 20.8	
	comp=Z,54nm,19.0s,baz=312,slow=35						
VRAC	**Vranov**	**29.42**	**68**	LR		LR	00 40 28.8	
	comp=Z,58nm,18.9s,baz=241,slow=35						
KEST	**Kesra**	**29.64**	**98**	LR		LR	00 39 39.1	
	comp=Z,103nm,19.4s,baz=312,slow=33						
MLR	**Muntele Rosu**	**36.60**	**72**	LR		LR	00 45 50.8	
	comp=Z,11nm,19.7s,baz=20,slow=37						
TORD	**Torodi Ar. Bea**	**41.51**	**134**	P		**P**	**00 31 02.3**	**+0.1**
	1.1nm,0.8s,baz=330,slow=7.7,SNR=6.3						
TORD				LR		LR	00 46 41.6	
	comp=Z,78nm,18.2s,baz=290,slow=34						
YKA	**Yellowknife Ar**	**48.79**	**322**	P		**P**	**00 31 59.3**	**-0.2**
	0.6nm,1.0s,baz=59,slow=7.9,SNR=6.2						
ARU	**Arti**	**51.19**	**45**	P		**P**	**00 32 17.3**	**+0.1**
	0.6nm,0.3s,baz=295,slow=9.6,SNR=3.5						
AKTO	**Aktyubinsk**	**53.81**	**52**	LR		LR	00 54 58.2	
	comp=Z,21nm,18.4s,baz=145,slow=35						
H10N2	**ASCENSION HYDR**	**55.48**	**164**	T		T	01 32 31.4	
	baz=351						
H10N3	**ASCENSION HYDR**	**55.49**	**164**	T		T	01 32 33.1	
	baz=351						
H10N1	**ASCENSION HYDR**	**55.50**	**164**	T		T	01 32 28.7	
	baz=351						
PDAR	**Pinedale Array**	**55.83**	**298**	P		**P**	**00 32 52.2**	**-0.2**
	0.4nm,0.5s,baz=64,slow=6.8,SNR=4.0						
H10S1	**ASCENSION HYDR**	**56.54**	**165**	T		T	01 33 44.9	
	baz=350,slow=75,SNR=9.1						
H10S3	**ASCENSION HYDR**	**56.54**	**165**	T		T	01 33 46.5	
	baz=350,slow=75,SNR=8.2						
H10S2	**ASCENSION HYDR**	**56.55**	**165**	T		T	01 33 45.7	
	baz=350,slow=75,SNR=10						
DLBC	**Dease Lake**	**57.41**	**322**	LR		LR	00 56 51.2	
	comp=Z,58nm,18.1s,baz=57,slow=35						
BVAR	**Borovoye Array**	**58.71**	**44**	P		**P**	**00 33 12.1**	**-0.3**
	0.3nm,0.4s,baz=307,slow=5.4,SNR=5.9						
ILAR	**Eielson Array**	**59.30**	**334**	P		**P**	**00 33 16.8**	**+0.5**
	0.6nm,0.9s,baz=40,slow=5.9,SNR=6.1						
TXAR	**Lajitas Array**	**60.09**	**282**	P		**P**	**00 33 22.4**	**0.0**
	0.3nm,0.7s,baz=76,slow=8.4,SNR=3.4						
TXAR				LR		LR	00 57 46.8	
	comp=Z,32nm,20.8s,baz=0.0,slow=34						
KURBB	**Kurchatov Arra**	**64.12**	**43**	P		**P**	**00 33 48.6**	**-0.3**
	0.8nm,1.0s,baz=314,slow=7.5,SNR=3.3						
LPIG	**La Paz**	**67.99**	**282**	LR		LR	01 03 33.4	
	comp=Z,40nm,18.1s,baz=24,slow=36						
MKAR	**Makanchi Array**	**68.58**	**44**	P		**P**	**00 34 17.9**	**+0.3**
	0.7nm,1.0s,baz=319,slow=6.6,SNR=3.9						

BJI ***02*** *00:32:16.9, 43°.47N×45°.72E, h74km, mb4.7/20, mB4.8/9, Ms4.3/5, Ms7 4.0/4*
ISCJB ***02*** *00:32:21.4±0.1, 43°.10N±0°.01×46°.26E±0°.01, h96km±1km, mb4.4/150, Error ellipse: s-maj=2.5km s-min=1.5km az=25.9*
NEIC ***02*** *00:32:21.9±0.3, 43°.16N×46°.20E, h80km±3km, mb4.5/70, Error ellipse: s-maj=4.5km s-min=3.0km az=177.0*
MOS ***02*** *00:32:21.0±1.2, 43°.21N×46°.30E, h78km, mb4.5/65, Error ellipse: s-maj=4.3km s-min=2.9km az=35.8*
TIF ***02*** *00:32:21.8, 43°.11N×46°.15E, h36km±10km*
CSEM ***02*** *00:32:22.4±0.1, 43°.10N×46°.28E, h91km, mb4.5/62, Error ellipse: s-maj=2.2km s-min=1.7km az=35.0*
IDC ***02*** *00:32:22.6±0.5, 43°.11N×46°.14E, h89km±4km, mb4.0/32, mb1 4.1/40, mb1mx4.0/72, mbtmp4.4/40, MS3.0/10, Ms1 3.0/10, ms1mx2.7/61, Error ellipse: s-maj=7.9km s-min=6.1km az=158.0*
AZER ***02*** *00:32:24.7±0.1, 42°.78N×46°.20E, h70km, ml4.7/30, Error ellipse: s-maj=2.0km s-min=1.2km az=337.0*
NNC ***02*** *00:32:25.5±4.3, 43°.17N×47°.04E, h60km±32km, mb4.1, Error ellipse: s-maj=33.4km s-min=20.4km az=79.0*
ISC 02 00:32:21.9±0.4, 43°.13N±0°.03×46°.30E±0°.02, h89km±3km, h89km:pP-P, n670, σ1§68/834, mb4.5/151, 117C-79D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVE	**Vedeno**	**0.21**	**216**	⇑*i*P		**Pn**	**00 32 34.8**	**-0.1**
DVE				*e*S		**Sn**	**00 32 43.1**	**-1.5**
DVE	**Vedeno**	**0.21**	**216**	*i* P		**Pn**	**00 32 34.8**	**-0.1**
DLMR	**Dylym**	**0.25**	**104**	*e*P		**Pn**	**00 32 35.0**	**0.0**
DLMR				*e*S		**Sn**	**00 32 44.5**	**-0.3**
DLMR	**Dylym**	**0.25**	**104**	*e*P		**Pn**	**00 32 35.0**	**0.0**
DLMR				*e*S		**Sn**	**00 32 44.5**	**-0.3**
GROC	**Groznyy**	**0.37**	**281**	*e*P		**Pn**	**00 32 36.4**	**+0.8**
GROC				*e*			00 32 47.4	
GROC					pmax	pmax		
	comp=Z,2μm,0.3s						
GROC					smax	smax		
	comp=N,26μm,0.5s						
GROC	**Groznyy**	**0.37**	**281**	*e*P		**Pn**	**00 32 36.4**	**+0.8**
	comp=N,2μm,0.3s						
GROC				*e*S		**Sn**	**00 32 47.4**	**+1.5**
	comp=N,26μm,0.5s						
DBC	**Dubki**	**0.41**	**106**	⇑*i*P		**Pn**	**00 32 36.2**	**+0.2**
DBC				*e*S		**Sn**	**00 32 46.1**	**-0.3**
DBC					pmax	pmax		
	comp=Z,805nm,0.1s						
DBC	**Dubki**	**0.41**	**106**	*i* P		**Pn**	**00 32 36.2**	**+0.2**
	comp=Z,805nm,0.1s						
DBC				*e*S		**Sn**	**00 32 46.1**	**-0.3**
GRO	**Groznyy**	**0.44**	**296**	⇑*i*P		**Pn**	**00 32 36.4**	**+0.3**
GRO				*e*S		**Sn**	**00 32 45.0**	**-1.7**
GRO	**Groznyy**	**0.44**	**296**	⇑*i*P		**Pn**	**00 32 36.4**	**+0.3**
GRO				*e*S		**Sn**	**00 32 45.0**	**-1.7**
BTLR	**Botlikh**	**0.47**	**187**	⇑*i*P		**Pn**	**00 32 36.1**	**-0.3**
BTLR				*e*S		**Sn**	**00 32 46.4**	**-0.8**
BTLR					pmax	pmax		
	comp=Z,9μm,0.7s						
BTLR	**Botlikh**	**0.47**	**187**	*i* P		**Pn**	**00 32 36.1**	**-0.3**
	comp=Z,9μm,0.7s						
BTLR				*e*S		**Sn**	**00 32 46.4**	**-0.8**
KRNR	**Karanay**	**0.54**	**124**	*i* P		**Pn**	**00 32 36.8**	**-0.2**
KRNR				*i* S		**Sn**	**00 32 47.6**	**-0.7**
KRNR	**Karanay**	**0.54**	**124**	*i* P		**Pn**	**00 32 36.8**	**-0.2**
KRNR				*i* S		**Sn**	**00 32 47.6**	**-0.7**
UNCR	**Uncukul**	**0.55**	**139**	⇊*i*P		**Pn**	**00 32 36.7**	**-0.4**
UNCR				*e*S		**Sn**	**00 32 47.2**	**-1.1**
UNCR	**Uncukul**	**0.55**	**139**	*i* P		**Pn**	**00 32 36.7**	**-0.4**
UNCR				*e*S		**Sn**	**00 32 47.2**	**-1.1**
XNZR	**Khunzakh**	**0.66**	**153**	*e*P		**Pn**	**00 32 38.0**	**-0.2**
XNZR				*e*S		**Sn**	**00 32 51.0**	**+0.7**
XNZR	**Khunzakh**	**0.66**	**153**	*e*P		**Pn**	**00 32 38.0**	**-0.2**
XNZR				*e*S		**Sn**	**00 32 51.0**	**+0.7**
BUJR	**Buynaksk**	**0.67**	**117**	⇑*i*P		**Pn**	**00 32 39.0**	**+0.9**
BUJR				*i* S		**Sn**	**00 32 52.5**	**+2.4**
BUJR	**Buynaksk**	**0.67**	**117**	*i* P		**Pn**	**00 32 39.0**	**+0.9**
BUJR				*i* S		**Sn**	**00 32 52.5**	**+2.4**
ARKR	**Arakani**	**0.74**	**136**	*i* P		**Pn**	**00 32 38.7**	**-0.1**
ARKR				*e*S		**Sn**	**00 32 52.4**	**+1.1**
ARKR	**Arakani**	**0.74**	**136**	*i* P		**Pn**	**00 32 38.7**	**-0.1**
ARKR				*e*S		**Sn**	**00 32 52.4**	**+1.1**
MAK	**Makhachkala**	**0.90**	**100**	⇑*i*P		**Pn**	**00 32 41.8**	**+1.4**
MAK	**Makhachkala**	**0.90**	**100**	⇑*i*P		**Pn**	**00 32 41.8**	**+1.4**
MAK				*e*			00 32 56.2	
MAK					pmax	pmax		
	comp=Z,2μm,0.4s						
MAK					smax	smax		
	comp=E,23μm,0.9s						
MAK	**Makhachkala**	**0.90**	**100**	*i* P		**Pn**	**00 32 41.8**	**+1.4**
	comp=E,2μm,0.4s						
MAK				*e*S		**Sn**	**00 32 56.2**	**+1.9**
KMGR	**Komgaron**	**1.05**	**267**	*e*P		**Pn**	**00 32 43.2**	**+1.0**
KMGR				*e*S		**Sn**	**00 32 58.5**	**+1.1**
KMGR	**Komgaron**	**1.05**	**267**	*e*P		**Pn**	**00 32 43.2**	**+1.0**
KMGR				*e*S		**Sn**	**00 32 58.5**	**+1.1**
KMKR	**Kumukh**	**1.16**	**149**	⇊*i*P		**Pn**	**00 32 45.0**	**+1.3**
KMKR				*e*S		**Sn**	**00 33 01.0**	**+1.0**
KMKR					pmax	pmax		
	comp=Z,1μm,0.3s						
KMKR	**Kumukh**	**1.16**	**149**	*i* P		**Pn**	**00 32 45.0**	**+1.3**
	comp=Z,1μm,0.3s						
KMKR				*e*S		**Sn**	**00 33 01.0**	**+1.0**
VLKR	**Vladikavkaz**	**1.19**	**267**	⇊*i*P		**Pn**	**00 32 44.8**	**+1.0**
VLKR				*e*S		**Sn**	**00 33 01.5**	**+1.2**
VLKR	**Vladikavkaz**	**1.19**	**267**	*i* P		**Pn**	**00 32 44.8**	**+1.0**
VLKR				*e*S		**Sn**	**00 33 01.5**	**+1.2**
TRKR	**Terskaya**	**1.28**	**298**	*e*P		**Pn**	**00 32 46.2**	**+1.3**
TRKR				*e*S		**Sn**	**00 33 03.6**	**+1.4**
TRKR	**Terskaya**	**1.28**	**298**	*e*P		**Pn**	**00 32 46.2**	**+1.3**
TRKR				*e*S		**Sn**	**00 33 03.6**	**+1.4**
BTKR	**Batakoyurt**	**1.30**	**281**	*e*P		**Pn**	**00 32 46.4**	**+1.2**
BTKR				*e*S		**Sn**	**00 33 04.1**	**+1.3**
BTKR	**Batakoyurt**	**1.30**	**281**	*e*P		**Pn**	**00 32 46.4**	**+1.2**
BTKR				*e*S		**Sn**	**00 33 04.1**	**+1.3**
URKR	**Urkarakh**	**1.38**	**134**	⇊*i*P		**Pn**	**00 32 47.0**	**+0.8**
URKR				*i* S		**Sn**	**00 33 06.0**	**+1.4**
URKR	**Urkarakh**	**1.38**	**134**	*i* P		**Pn**	**00 32 47.0**	**+0.8**
URKR				*i* S		**Sn**	**00 33 06.0**	**+1.4**
ARNR	**Ardon**	**1.47**	**273**	⇊*i*P		**Pn**	**00 32 48.4**	**+1.1**
ARNR				*e*S		**Sn**	**00 33 06.5**	**0.0**
ARNR	**Ardon**	**1.47**	**273**	*i* P		**Pn**	**00 32 48.4**	**+1.1**
ARNR				*e*S		**Sn**	**00 33 06.5**	**0.0**
GUDG	**Gudauri**	**1.50**	**244**	P		**Pn**	**00 32 49.3**	**+1.5**
GUDG				S		**Sn**	**00 33 08.5**	**+1.2**
GUDG	**Gudauri**	**1.50**	**244**	P		**Pn**	**00 32 49.3**	**+1.5**
GUDG				S		**Sn**	**00 33 08.5**	**+1.2**
ZKTA	**Zakatala**	**1.51**	**171**	⇑P		**Pn**	**00 32 47.8**	**0.0**
ZKTA				⇓S		**Sn**	**00 33 06.0**	**-1.3**
DUS	**Dusheti**	**1.57**	**229**	P		**Pn**	**00 32 49.2**	**+0.6**
DUS				S		**Sn**	**00 33 09.8**	**+1.0**
DUS	**Dusheti**	**1.57**	**229**	⇊*i*P		**Pn**	**00 32 49.2**	**+0.6**
DUS				*e*S		**Sn**	**00 33 09.8**	**+1.0**
DUS	**Dusheti**	**1.57**	**229**	P		**Pn**	**00 32 49.2**	**+0.6**
DUS				S		**Sn**	**00 33 09.8**	**+1.0**
PRTR	**Priterechnaya**	**1.59**	**294**	*e*P		**Pn**	**00 32 50.1**	**+1.3**
PRTR				*e*S		**Sn**	**00 33 11.0**	**+1.9**
PRTR	**Priterechnaya**	**1.59**	**294**	*e*P		**Pn**	**00 32 50.1**	**+1.3**
PRTR				*e*S		**Sn**	**00 33 11.0**	**+1.9**
STDR	**Stavd-Durt**	**1.65**	**279**	⇑*i*P		**Pn**	**00 32 50.7**	**+1.2**
STDR				*e*S		**Sn**	**00 33 11.6**	**+1.1**
STDR	**Stavd-Durt**	**1.65**	**279**	*i* P		**Pn**	**00 32 50.7**	**+1.2**
STDR				*e*S		**Sn**	**00 33 11.6**	**+1.1**
DDFL	**Dedoflistskaro**	**1.69**	**185**	P		**Pn**	**00 32 51.1**	**+1.0**
DDFL				S		**Sn**	**00 33 12.0**	**+0.6**
DDFL	**Dedoflistskaro**	**1.69**	**185**	P		**Pn**	**00 32 51.1**	**+1.0**
DDFL				S		**Sn**	**00 33 12.0**	**+0.6**
SEAG	**Tbilisi Sea**	**1.76**	**219**	P		**Pn**	**00 32 51.0**	**0.0**
SEAG				S		**Sn**

ONI eS Sn 00 33 23.4 +1.0
ONI Oni 2.16 256 P Pn 00 32 57.4 +1.2
ONI eS Sn 00 33 23.4 +1.0
QSAR Qusar 2.17 137 ⇓P Pn 00 32 57.8 +1.4
QSAR ⇓S Sn 00 33 24.6 +1.8
QSAR Qusar 2.17 137 ⇓P Pn 00 32 57.8 +1.4
QSAR ⇓S Sn 00 33 24.6 +1.8
QZX Qazax, Azerbai 2.18 199 ⇑P Pn 00 32 55.6 -0.9
QZX ⇑S Sn 00 33 20.4 -2.5
QZX Qazax, Azerbai 2.18 199 ⇑P Pn 00 32 55.6 -0.9
QZX ⇑S Sn 00 33 20.4 -2.5
KZR Kazreti 2.24 219 P Pn 00 32 57.0 -0.2
KZR S Sn 00 33 22.0 -2.3
KZR Kazreti 2.24 219 P Pn 00 32 57.0 -0.2
KZR S Sn 00 33 22.0 -2.3
QUB Quba 2.33 138 ePn Pn 00 33 00.7 +2.2
QUB eSn Sn 00 33 29.4 +3.0
XNQ Khinaliq 2.39 144 ⇓P Pn 00 33 00.4 +1.0
XNQ ⇑S Sn 00 33 28.5 +0.4
QUBA Quba, Azerbaij 2.41 137 ⇓P Pn 00 33 00.7 +1.1
QUBA ⇓S Sn 00 33 29.4 +1.1
QUBA Quba, Azerbaij 2.41 137 ⇓P Pn 00 33 00.7 +1.1
QUBA ⇓S Sn 00 33 29.4 +1.1
MNGR Mingechevir, A 2.43 166 ⇓S Sn 00 33 27.1 -1.6
MNGR Mingechevir, A 2.43 166 ⇓S Sn 00 33 27.1 -1.6
GDB GEDABAY 2.44 190 ⇓P Pn 00 32 59.0 -1.1
GDB ⇑S Sn 00 33 25.9 -3.4
GDB GEDABAY 2.44 190 ⇓P Pn 00 32 59.0 -1.1
GDB ⇑S Sn 00 33 25.9 -3.4
QBL Gabala 2.47 152 ⇑P Pn 00 33 01.1 +0.9
QBL ⇓S Sn 00 33 29.8 +0.1
GANJ Ganja 2.48 180 ⇑P Pn 00 32 59.6 -0.9
GANJ ⇑S Sn 00 33 27.2 -2.9
GANJ Ganja 2.48 180 ⇑P Pn 00 32 59.6 -0.9
GANJ ⇑S Sn 00 33 27.2 -2.9
NEY Neytrino 2.62 274 *d iP* Pn 00 33 02.5 +0.1
NEY *i* S Sn 00 33 31.8 -1.7
NEY pmax pmax
comp=E,984nm,0.5s
NEY Neytrino 2.62 274 *i* P Pn 00 33 02.5 +0.1
NEY *i* S Sn 00 33 31.8 -1.7
AKH Akhalkalaki 2.70 231 P Pn 00 33 03.9 +0.3
AKH S Sn 00 33 35.7 +0.2
AKH Akhalkalaki 2.70 231 *eP* Pn 00 33 03.8 +0.3
AKH eS Sn 00 33 35.7 +0.2
AKH Akhalkalaki 2.70 231 *eP* Pn 00 33 03.8 +0.3
AKH S Sn 00 33 35.7 +0.2
IML Ismayilli 2.73 148 ⇓P Pn 00 33 04.3 +0.5
IML Ismayilli 2.73 148 ⇓P Pn 00 33 04.3 +0.5
IML ⇑S Sn 00 33 35.6 -0.4
BGD Bogdanovka 2.74 228 P Pn 00 33 04.6 +0.5
BGD S Sn 00 33 35.1 -1.4
BGD Bogdanovka 2.74 228 P Pn 00 33 04.6 +0.5
BGD S Sn 00 33 35.1 -1.4
KVAR Kislovodsk Arr 2.75 289 P Pn 00 33 04.0 0.0
baz=90,slow=10
KVAR S Sn 00 33 34.9 -1.6
baz=210,slow=20,SNR=108
KVAR LR LR 00 33 53.4
comp=E,175nm,19.5s,baz=87,slow=34
KIV Kislovodsk 2.75 289 *ePn* Pn 00 33 04.3 +0.1
KIV *eSn* Sn 00 33 34.8 -1.8
KIV Kislovodsk 2.75 289 *eP* Pn 00 33 04.2 +0.1
SNR=203
KIV Kislovodsk 2.75 289 *c iP* Pn 00 33 04.1 0.0
KIV *i* S Sn 00 33 35.0 -1.6
KIV pmax pmax
comp=Z,263nm,0.6s
KIV Kislovodsk 2.75 289 P Pn 00 33 04.2 +0.1
SNR=203
KIV Kislovodsk 2.75 289 *ePn* Pn 00 33 04.3 +0.1
KIV *i* S Sn 00 33 35.0 -1.6
SIZA Siyzn 2.82 136 ⇓S Sn 00 33 39.7 +1.4
PQL Pirkuli 2.90 143 ⇑P Pn 00 33 06.8 +0.6
PQL ⇑S Sn 00 33 40.1 -0.2
BRDA Brd 2.94 167 ⇑P Pn 00 33 07.0 +0.4
BRDA ⇓S Sn 00 33 39.9 -1.1
BRDA Brd 2.94 167 ⇑P Pn 00 33 07.0 +0.4
BRDA ⇓S Sn 00 33 39.9 -1.1
ATGJ Altiaghaj 3.00 138 ⇑P Pn 00 33 08.1 +0.6
ATGJ ⇑S Sn 00 33 41.3 -1.3
ZRD Zardab 3.03 160 ⇑P Pn 00 33 08.0 +0.2
ZRD ⇓S Sn 00 33 42.0 -1.2
ZRD Zardab 3.03 160 ⇑P Pn 00 33 08.0 +0.2
ZRD ⇓S Sn 00 33 42.0 -1.2
GOF Gofitskoye 3.03 311 ⇑*eP* Pn 00 33 08.8 +1.0
GOF eS Sn 00 33 43.5 +0.3
GOF pmax pmax
comp=Z,105nm,0.7s
GOF smax smax
comp=E,1μm,0.6s
GOF smax smax
comp=N,2μm,0.8s
GOF Gofitskoye 3.03 311 *eP* Pn 00 33 08.8 +1.0
comp=N,105nm,0.7s
GOF eS Sn 00 33 43.5 +0.3
comp=N,2μm,0.8s
KDMR Kurdemir 3.09 152 ⇓P Pn 00 33 08.9 +0.3
KDMR ⇓S Sn 00 33 43.6 -1.0
KDMR Kurdemir 3.09 152 ⇓P Pn 00 33 08.9 +0.3
KDMR ⇓S Sn 00 33 43.6 -1.0
EPOS Posof 3.11 240 *i* P Pn 00 33 14.5 +5.5
EPOS *i* S Sn 00 33 58.8 +14
CHVG Ch'k'valeri 3.12 264 P Pn 00 33 10.7 +1.7
CHVG S Sn 00 33 46.1 +0.7
CHVG Ch'k'valeri 3.12 264 P Pn 00 33 10.7 +1.7
CHVG S Sn 00 33 46.1 +0.7
EAK Akyaka 3.16 220 *i* P Pn 00 33 08.7 -1.1
EAK Akyaka 3.16 220 P Pn 00 33 08.6 -1.1
GNI Garni 3.20 202 P Pn 00 33 10.4 +0.2
comp=N,36nm,0.3s,baz=323,slow=3.5,SNR=138
GNI S Sn 00 33 47.2 -0.3
comp=N,36nm,0.3s,baz=150,slow=20,SNR=6.1
GNI Garni 3.20 202 *eP* Pn 00 33 10.3 +0.1
GNI Garni 3.20 202 *ePn* Pn 00 33 10.1 -0.2
GNI S Sn 00 33 47.2 -0.3
GNI Garni 3.20 202 *eP* Pn 00 33 10.0 -0.2
SNR=89
GNI Garni 3.20 202 *d iP* Pn 00 33 10.3 +0.1
GNI Garni 3.20 202 P Pn 00 33 10.0 -0.2
SNR=89
GBS Qobustan 3.26 142 ⇑P Pn 00 33 12.1 +1.1
GBS Qobustan 3.26 142 ⇑P Pn 00 33 12.1 +1.1
DOMR Dombai 3.42 274 ⇓*eP* Pn 00 33 14.9 +1.7
DOMR Dombai 3.42 274 *eP* Pn 00 33 14.9 +1.7
KARS Kars 3.47 225 *eP* Pn 00 33 14.7 +0.9
DIGO Kars 3.48 220 *i* P Pn 00 33 13.6 -0.6
DIGO Kars 3.48 220 P Pn 00 33 13.6 -0.6
TASB TASBURUN-IGDIR 3.50 207 *eP* Pn 00 33 14.5 +0.2
HYR Heyderabad 3.58 198 ⇑P Pn 00 33 15.7 +0.4
HYR Heyderabad 3.58 198 ⇑P Pn 00 33 15.7 +0.4
SAAT Saatly 3.64 153 ⇑P Pn 00 33 15.4 -0.6
SAAT ⇓S Sn 00 33 54.3 -3.5
SAAT Saatly 3.64 153 ⇑P Pn 00 33 15.4 -0.6
SAAT ⇓S Sn 00 33 54.3 -3.5
IGDI IGDIR 3.66 208 *i* P Pn 00 33 15.6 -0.8
GOBA Gobu 3.75 136 ⇑Sn Sn 00 33 58.8 -1.7
GOBA Gobu 3.75 136 ⇑Sn Sn 00 33 58.8 -1.7
NDR Nardaran 3.75 131 ⇓Sn Sn 00 33 58.9 -1.7
NDR Nardaran 3.75 131 ⇓Sn Sn 00 33 58.9 -1.7
ALIB Äli-Bayra 3.77 146 ⇓P Pn 00 33 19.4 +1.7
ALIB ⇓S Sn 00 34 00.9 0.0
ALIB Äli-Bayra 3.77 146 ⇓P Pn 00 33 19.4 +1.7
ALIB ⇓S Sn 00 34 00.9 0.0
SBZ Shahbuz 3.77 189 ⇓P Pn 00 33 18.4 +0.4
SBZ ⇑S Sn 00 33 59.0 -2.3
SBZ Shahbuz 3.77 189 ⇓P Pn 00 33 18.4 +0.4
SBZ ⇑S Sn 00 33 59.0 -2.3
BCA Borcka 3.85 246 *eP* Pn 00 33 19.7 +0.7
DBOC Borcka 3.87 244 *i* P Pn 00 33 20.8 +1.6
DBOC *i* S Sn 00 33 48.8 -15
DBOC Borcka 3.87 244 P Pn 00 33 20.8 +1.6
SENK Senkaya-Erzuru 3.91 230 *eP* Pn 00 33 20.3 +0.4
NAX Nakhchivan 4.00 189 ⇑P Pn 00 33 20.8 -0.2
NAX Nakhchivan 4.00 189 ⇑P Pn 00 33 20.8 -0.2
DBAD Bademkaya 4.02 240 *i* P Pn 00 33 22.1 +0.8
DBAD Bademkaya 4.02 240 P Pn 00 33 22.1 +0.8
DDEM Demirkent 4.06 238 *i* P Pn 00 33 22.6 +0.8
DDEM Demirkent 4.06 238 P Pn 00 33 22.6 +0.8
GLBA Clilabad 4.19 157 ⇑Pn Pn 00 33 23.2 -0.3
GLBA ⇑Sn Sn 00 34 09.0 -2.3
GLBA Clilabad 4.19 157 ⇑Pn Pn 00 33 23.2 -0.3
GLBA ⇑Sn Sn 00 34 09.0 -2.3
ORD Ordubad 4.20 183 ⇑P Pn 00 33 23.7 -0.1
ORD Ordubad 4.20 183 ⇑P Pn 00 33 23.7 -0.1
AGRB Hanur-Agry 4.33 216 *eP* Pn 00 33 26.8 +1.1
EATA Eleskirt 4.34 222 *i P* Pn 00 33 27.1 +1.3
EATA Eleskirt 4.34 222 P Pn 00 33 27.1 +1.3
CHOM Cayeli-Rize 4.59 246 *eP* Pn 00 33 30.1 +1.2
LRK Lerik 4.74 160 ⇑Pn Pn 00 33 30.8 -0.4
LRK ⇓Sn Sn 00 34 22.4 -2.6
LRK Lerik 4.74 160 ⇑Pn Pn 00 33 30.8 -0.4
LRK ⇓Sn Sn 00 34 22.4 -2.6
LKRN Lenkeran, Azer 4.80 156 ⇑Pn Pn 00 33 30.9 -0.8
LKRN Lenkeran, Azer 4.80 156 ⇑Pn Pn 00 33 30.9 -0.8
LKRN ⇓Sn Sn 00 34 20.8 -5.2
SOC Sochi 4.82 278 *eP* Pn 00 33 33.3 +1.3
SOC *e* 00 34 28.3
SOC pmax pmax
comp=Z,123nm,0.5s
SOC smax smax
comp=N,79nm,0.7s
SOC Sochi 4.82 278 *eP* Pn 00 33 33.3 +1.3
comp=N,123nm,0.5s
SOC *eS* Sn 00 34 28.3 +1.8
comp=N,79nm,0.7s
ERZM Erzurum 4.91 231 *i* P Pn 00 33 34.0 +0.5
ERZM Erzurum 4.91 231 P Pn 00 33 34.0 +0.5
ASTR Astara 4.94 157 ⇑Pn Pn 00 33 32.8 -0.9
ASTR Astara 4.94 157 ⇑Pn Pn 00 33 32.8 -0.9
ASTR ⇓Sn Sn 00 34 24.7 -4.9
VANB Van 5.04 207 *eP* Pn 00 33 37.9 +2.8
KOPT Kop Dagi 5.35 236 *i* P Pn 00 33 40.3 +0.8
KOPT Kop Dagi 5.35 236 P Pn 00 33 40.3 +0.8
VRTB Varto-Mus 5.39 224 *eP* Pn 00 33 42.6 +2.6
VRTB Varto-Mus 5.39 224 *i* P Pn 00 33 41.5 +1.5
VRTB Varto-Mus 5.39 224 P Pn 00 33 41.5 +1.5
YEDI Yedisu-Bingol 5.69 232 *eP* Pn 00 33 45.3 +1.3
BNGB Bing¶l 5.92 228 *eP* Pn 00 33 48.3 +1.1
KELT Kelkit 6.06 243 *i* P Pn 00 33 52.9 +3.8
ANN Anapa 6.61 288 *eP* Pn 00 33 59.5 +3.2
ANN *eS* Sn 00 35 15.9 +5.7
ANN pmax pmax
comp=Z,98nm,1.0s
SUSE Susehri 6.73 247 *i* P Pn 00 34 00.0 +1.9
SUSE Susehri 6.73 247 P Pn 00 34 00.0 +1.9
SUDU Sudak 8.33 286 *eP* Pn 00 34 20.9 +1.1
SUDU *eS* Sn 00 35 51.3 -0.8
SUDU pmax pmax
comp=Z,10.0nm,0.5s
SUDU smax smax
comp=N,8.0nm,0.5s
SUDU Sudak 8.33 286 *eP* Pn 00 34 20.9 +1.1
comp=N,10.0nm,0.5s
SUDU *eS* Sn 00 35 51.3 -0.8
comp=N,8.0nm,0.5s
ALU Alushta 8.73 284 *eP* Pn 00 34 26.1 +0.9
ALU *eS* Sn 00 36 01.6 -0.2
ALU pmax pmax
comp=Z,8.0nm,0.4s
ALU smax smax
comp=N,4.0nm,0.5s
ALU Alushta 8.73 284 *eP* Pn 00 34 26.1 +0.9
comp=N,8.0nm,0.4s
ALU *eS* Sn 00 36 01.6 -0.2
comp=N,4.0nm,0.5s
YAL Yalta 8.89 283 ⇑*eP* Pn 00 34 27.6 +0.3
YAL *eS* Sn 00 36 06.0 +0.3
YAL pmax pmax
comp=Z,13nm,0.4s
YAL smax smax
comp=N,7.0nm,0.3s
YAL smax smax
comp=E,5.0nm,0.8s
YAL Yalta 8.89 283 *eP* Pn 00 34 27.6 +0.3
comp=E,13nm,0.4s
YAL *eS* Sn 00 36 06.0 +0.3
comp=E,7.0nm,0.3s
SIM Simferopol' 8.96 286 ⇑*eP* Pn 00 34 28.8 +0.4
SIM *eS* Sn 00 36 07.7 +0.2
SIM pmax pmax
comp=Z,38nm,0.6s
SIM smax smax
comp=N,20nm,0.5s
SIM Simferopol' 8.96 286 *eP* Pn 00 34 28.8 +0.4
comp=N,38nm,0.6s
SIM *eS* Sn 00 36 07.7 +0.2
comp=N,20nm,0.5s
VORD Divnogorie 9.18 331 *eP* Pn 00 34 30.5 -0.8
VORD *eS* Sn 00 36 09.1 -3.6
VORD pmax pmax
comp=Z,9.0nm,0.4s
VORD smax smax
comp=E,810nm,1.0s
VORD Divnogorie 9.18 331 *eP* Pn 00 34 30.5 -0.8
comp=E,9.0nm,0.4s
SEV Sevastopol' 9.24 283 *eP* Pn 00 34 30.0 -2.1
SEV *eS* Sn 00 36 11.0 -3.2
SEV pmax pmax
comp=Z,49nm,0.9s
SEV smax smax
comp=N,2.0nm,0.3s
VSR Storozhevoye 9.43 332 *eP* Pn 00 34 33.8 -0.9
VSR *eS* Sn 00 36 13.0 -5.8
VSR pmax pmax
comp=Z,8.0nm,0.4s
VSR smax smax
comp=E,190nm,0.9s
VSR Storozhevoye 9.43 332 *eP* Pn 00 34 33.8 -0.9
comp=E,8.0nm,0.4s
VORR Voronezh 9.80 333 P Pn 00 34 51.0 +11
BR131 Keskin Array S 10.10 255 *ePn* Pn 00 34 42.8 -1.2
BRTR Keskin Array B 10.10 255 P Pn 00 34 43.6 -0.5
comp=E,0.1nm,0.3s,baz=72,slow=12,SNR=19
BRTR Keskin Array B 10.10 255 *i P* Pn 00 34 46.5 +2.5
BRTR pmax pmax
comp=Z,2.0nm,0.9s
BRTR Keskin Array B 10.10 255 *i P* Pn 00 34 46.5 +2.5
comp=Z,2.0nm,0.9s
GEYT Alibeck 10.39 116 P Pn 00 34 44.5 -3.4
comp=Z,7.3nm,0.3s,baz=302,slow=16,SNR=9.8
GEYT S Sn 00 36 34.6 -7.8
comp=Z,11nm,0.3s,baz=255,slow=23,SNR=9.2
GYA0B ALIBECK ARRAY 10.39 116 ⇑Pn Pn 00 34 45.1 -2.8
comp=Z,12nm,0.5s
GYA0B ⇑Sn Sn 00 36 32.4 -10
comp=Z,75nm,0.6s
GYA0B ALIBECK ARRAY 10.39 116 *ePn* Pn 00 34 44.5 -3.4
AKTO Aktyubinsk 10.85 44 P Pn 00 34 51.9 -2.2
comp=Z,5.2nm,0.3s,baz=233,slow=11,SNR=55
AKTO S Sn 00 36 47.0 -6.5
comp=Z,5.9nm,0.3s,baz=226,slow=21,SNR=15
AKTO LR LR 00 39 48.0
comp=Z,33nm,20.7s,baz=168,slow=41
AKTO Aktyubinsk 10.85 44 ⇑Pn Pn 00 34 52.3 -1.8
comp=Z,20nm,0.7s
AKTO ⇓Sn Sn 00 36 46.9 -6.5
comp=Z,57nm,0.7s
AKTO Aktyubinsk 10.85 44 P Pn 00 34 51.5 -2.6
AKTO pmax pmax
comp=Z,20nm,0.7s
AB31 Akbulak array 11.26 52 ⇑Pn Pn 00 34 59.1 -0.6
comp=Z,13nm,0.6s,baz=244,slow=11,SNR=178
AB31 ⇑Sn Sn 00 36 57.9 -5.5
comp=Z,17nm,0.5s,baz=240,slow=17,SNR=6.8
AB31 Akbulak array 11.26 52 *eP* Pn 00 34 59.5 -0.2
AB31 pmax pmax
comp=Z,13nm,0.6s
AB31 Akbulak array 11.26 52 *eP* Pn 00 34 59.5 -0.2
comp=Z,13nm,0.6s
ABKAR Akbulak array 11.26 52 *ePn* Pn 00 34 58.7 -1.0
TIRR Tirgusor 12.99 282 ⇓*iP* Pn 00 35 21.7 -1.2
TIRR Tirgusor 12.99 282 *ePn* Pn 00 35 20.6 -2.3
TIRR Tirgusor 12.99 282 *eP* Pn 00 35 20.6 -2.3
LEOM Leova 13.24 291 ⇓*iP* Pn 00 35 25.2 -1.0
LEOM Leova 13.24 291 ⇓P Pn 00 35 25.2 -1.0
TLB Topalu 13.26 283 ⇑*iP* Pn 00 35 25.6 -0.8
TLB Topalu 13.26 283 ⇑P Pn 00 35 25.6 -0.8
ICOR Ion Corvin 13.44 281 ⇑*iP* Pn 00 35 28.2 -0.6
SORM Soroca 13.51 298 ⇑*iP* Pn 00 35 28.1 -1.6
SORM Soroca 13.51 298 ⇑P Pn 00 35 28.1 -1.6
OBN Obninsk 13.56 336 P Pn 00 35 28.0 -2.3
comp=Z,5.9nm,0.3s,baz=169,slow=10,SNR=9.8
OBN S Sn 00 37 53.3 -5.8
comp=Z,2.3nm,0.3s,baz=137,slow=23,SNR=6.8
OBN LR LR 00 41 37.9
comp=Z,26nm,20.5s,baz=92,slow=41
OBN Obninsk 13.56 336 *ePn* Pn 00 35 27.4 -2.9
OBN S Sn 00 37 53.3 -5.8
OBN Obninsk 13.56 336 *d iP* Pn 00 35 28.2 -2.1
OBN *i* S Sn 00 37 52.3 -6.9
OBN pmax pmax
comp=Z,78nm,1.7s
OBN MLR MLR
comp=Z,38nm,19.0s
PRD Provadia 13.80 277 P P 00 35 41.1 +2.2
MOS Moscow 13.81 339 *eP* Pn 00 35 34.8 +1.3
MOS *e* 00 37 54.5
MOS pmax pmax
comp=Z,100nm,1.1s
MOS pmax pmax
comp=Z,135nm,1.1s
AKASG Malin Array Be 13.89 309 P Pn 00 35 32.4 -2.2
comp=Z,2.7nm,0.3s,baz=114,slow=13,SNR=18
AKASG S Sn 00 37 59.0 -8.2
comp=Z,2.7nm,0.3s,baz=116,slow=25,SNR=6.5
AKASG Malin Array Be 13.89 309 *i P* Pn 00 35 32.7 -1.9
AKASG pmax pmax
comp=Z,22nm,0.8s
AKBB Malin Array Si 13.89 309 *ePn* Pn 00 35 32.1 -2.5
AKBB Malin Array Si 13.89 309 *eP* Pn 00 35 32.1 -2.5
AK11 Malin Array Si 13.91 309 *ePn* Pn 00 35 33.1 -1.7
AK11 *eSn* Sn 00 38 04.0 -3.7
VRI Vrincioaia 14.23 288 ⇑*iP* Pn 00 35 38.9 -0.2
VRI Vrincioaia 14.23 288 ⇑P Pn 00 35 38.9 -0.2
PLOR Plostina 14.28 288 ⇑*iP* Pn 00 35 39.7 -0.1
PLOR Plostina 14.28 288 ⇑P Pn 00 35 39.7 -0.1
ISR Istrita 14.33 285 ⇑*iP* Pn 00 35 40.1 -0.3
ISR Istrita 14.33 285 ⇑P Pn 00 35 40.1 -0.3
TESR Tescani 14.35 290 ⇑*iP* Pn 00 35 39.1 -1.5
PRAR RASCA 14.75 294 ⇑*iP* Pn 00 35 44.8 -0.9
MLR Muntele Rosu 14.76 286 P Pn 00 35 45.1 -0.9
comp=Z,0.0nm,0.3s,baz=100,slow=6.8,SNR=22
MLR Muntele Rosu 14.76 286 ⇓*iP* Pn 00 35 46.4 +0.4
MLR Muntele Rosu 14.76 286 *ePn* Pn 00 35 45.9 -0.1
MLR Muntele Rosu 14.76 286 *eP* Pn 00 35 45.9 -0.1
SZH Strazhica 14.86 278 P P 00 35 52.7 +2.0
DOPR Dopca 15.17 288 ⇓*iP* Pn 00 35 50.9 -0.2
ALN Alexandroupoli 15.22 268 *eP* P 00 35 54.0 -0.7
comp=Z,17nm,1.2s
ALN Alexandroupoli 15.22 268 *eP* P 00 35 54.0 -0.7
ALN pmax pmax
comp=Z,17nm,1.2s
ALN Alexandroupoli 15.22 268 *eP* P 00 35 54.0 -0.7
comp=Z,17nm,1.2s
VOIR 15.39 286 ⇑*iP* Pn 00 35 54.3 +0.4
VOIR 15.39 286 ⇑P Pn 00 35 54.3 +0.4
HUMR Humele 15.45 283 ⇓*iP* Pn 00 35 54.8 +0.2
ARU Arti 15.46 26 P Pn 00 35 51.6 -3.0
comp=Z,0.1nm,0.3s,baz=242,slow=5.2,SNR=28
ARU S Sn 00 38 33.6 -11
comp=Z,0.1nm,0.3s,baz=343,slow=23,SNR=7.2
ARU LR LR 00 43 44.8
comp=Z,52nm,18.1s,baz=228,slow=44
ARU Arti 15.46 26 *ePn* Pn 00 35 50.5 -4.1
comp=Z,20nm,0.8s
ARU S Sn 00 38 33.6 -11
ARU Arti 15.46 26 *c iP* Pn 00 35 51.4 -3.2
ARU S Sn 00 38 38.6 -6.4
ARU pmax pmax
comp=Z,24nm,1.0s
BURAR Bucovina Array 15.46 294 ⇓*iP* Pn 00 35 54.3 -0.6
BURAR Bucovina Array 15.46 294 ⇓P Pn 00 35 54.3 -0.6
BUR04 Bucovina Ar. S 15.47 294 *ePn* Pn 00 35 53.3 -1.7
BUR08 Bucovina Ar. S 15.48 294 *ePn* Pn 00 35 52.8 -2.3
ARR Arges 15.68 286 ⇑*iP* Pn 00 35 58.5 +0.9
ARCR ARCALIA 15.98 292 ⇑*iP* Pn 00 35 59.9 -1.3
EIL Elat 16.22 218 P P 00 36 05.3 -0.5
comp=Z,0.3nm,0.3s,baz=4.4,slow=15,SNR=6.7
LOT Lotru 16.29 286 ⇑*iP* Pn 00 36 05.9 +0.6
MPEP Malo Peshtene 16.43 279 P P 00 36 08.6 +0.4
CJR Cluj-Napoca 16.46 290 ⇑*iP* P 00 36 07.9 -0.5
CJR Cluj-Napoca 16.46 290 ⇑P P 00 36 07.9 -0.5
CJR Cluj-Napoca 16.46 290 P P 00 36 07.9 -0.5
SVE Sverdlovsk 16.47 29 ⇓*eP* Pn 00 36 05.8 -1.5
SVE *eS* Sn 00 38 56.4 -13
SVE pmax pmax
comp=Z,65nm,0.8s
MICGM Minsk 16.57 320 *eP* Pn 00 36 05.0 -3.5
MICGM *epP* pP 00 36 18.0 -8.6
MICGM *eS* Sn 00 39 02.0 -10
MICGM *esS* S 00 39 10.0 -8.1
MNK Minsk 16.57 320 *eP* Pn 00 36 05.0 -3.5
MNK *eS* Sn 00 39 02.0 -10
LVV L'vov 16.70 301 *eP* Pn 00 35 57.8 -12
DEV Deva 16.90 287 ⇑*iP* Pn 00 36 12.0 -0.7
DEV Deva 16.90 287 ⇑P Pn 00 36 12.0 -0.7
DEV Deva 16.90 287 P Pn 00 36 12.0 -0.7
VTS Vitosha 16.93 276 ⇓*iP* Pn 00 36 13.4 +0.1
VTS Vitosha 16.93 276 *eP* P 00 36 13.9 +0.1
comp=Z,3.8nm,0.7s
VTS Vitosha 16.93 276 *eP* P 00 36 13.9 +0.1
VTS pmax pmax
comp=Z,4.0nm,0.7s
SRS Serrai 16.96 271 P P 00 36 15.8 +1.8
SRS pmax pmax
comp=Z,11nm,0.9s
SRS Serrai 16.96 271 P P 00 36 15.8 +1.8
comp=Z,11nm,0.9s
APE Apeiranthos 16.98 256 ⇑*eP* P 00 36 17.1 +2.8
APE Apeiranthos 16.98 256 *eP* P 00 36 17.1 +2.8
DRGR 17.07 291 ⇑*iP* P 00 36 15.1 -0.1
DRGR 17.07 291 ⇑P P 00 36 15.1 -0.1
DRGR 17.07 291 P P 00 36 15.1 -0.1
SOH Sokhos 17.21 270 P P 00 36 19.0 +2.2
SOH pmax pmax
comp=Z,5.0nm,0.9s
SOH Sokhos 17.21 270 P P 00 36 19.0 +2.2
comp=Z,5.0nm,0.9s
ZAPS Zavoj 17.25 279 ⇑*iP* P 00 36 19.4 +2.2
HERR Herculane 17.26 284 ⇑*iP* Pn 00 36 17.1 0.0
TRPA Tarpa 17.32 295 ⇓*iP* Pn 00 36 17.3 -0.5
KWP Kalwaria Pacla 17.49 300 *eP* Pn 00 36 20.7 +0.9
KWP Kalwaria Pacla 17.49 300 *ePn* Pn 00 36 20.1 +0.3
comp=Z,716nm,1.5s
KWP Kalwaria Pacla 17.49 300 *eP* Pn 00 36 20.7 +0.9
KWP Kalwaria Pacla 17.49 300 *eP* Pn 00 36 20.7 +0.9
UZH Uzhgorod 17.56 297 *eP* P 00 36 19.5 -1.0
KK31 Karatay Array 17.67 82 Pn P 00 36 22.1 +0.3
comp=Z,8.5nm,0.9s,baz=290,slow=12,SNR=40
KK31 ⇑Sn Sn 00 39 32.0 -6.7
comp=Z,5.3nm,0.6s,baz=272,slow=25,SNR=6.3
KK31 Karatay Array 17.67 82 *eP* P 00 36 21.9 +0.1
KK31 *eSn* Sn 00 39 33.0 -5.7
KK31 Karatay Array 17.67 82 *eP* P 00 36 21.9 +0.1
KK31 *e* 00 39 33.0
KK31 Karatay Array 17.67 82 *eP* P 00 36 21.9 +0.1
KKAR Karatay Array 17.67 82 *eP* P 00 36 22.1 +0.3
KKAR *eSn* Sn 00 39 33.0 -5.6
KKAR Karatay Array 17.67 82 *eP* P 00 36 22.1 +0.3
KKAR *e* 00 39 33.0
KKAR Karatay Array 17.67 82 *eP* P 00 36 22.1 +0.3
SOKR Solikamsk 17.70 18 *eP* P 00 36 18.5 -3.4
SOKR pmax pmax
comp=Z,21nm,0.8s
BZS Buzias 17.80 287 ⇓*iP* Pn 00 36 23.7 +0.1
BZS Buzias 17.80 287 ⇓P Pn 00 36 23.7 +0.1
BZS Buzias 17.80 287 P Pn 00 36 23.7 +0.1
KUBS Kucevo 17.82 283 *eP* Pn 00 36 23.9 0.0
ISAL Salakas 18.02 321 *eP* P 00 36 24.6 -0.8
ISAL IAmb IAmb 00 36 29.5
comp=Z,13nm,0.8s
IZAR Zarasai 18.07 321 *eP* P 00 36 25.2 -0.8
IZAR IAmb IAmb 00 36 28.9
comp=Z,9.8nm,0.5s
CRVS Cervenica-Dubn 18.15 297 *eP* Pn 00 36 28.7 +0.9
CRVS pmax pmax
comp=Z,11nm,0.9s
CRVS Cervenica-Dubn 18.15 297 *eP* Pn 00 36 28.7 +0.9
CRVS Cervenica-Dubn 18.15 297 *eP* Pn 00 36 28.7 +0.9
comp=Z,11nm,0.9s
KLMR Klimovskoe 18.22 349 *eP* P 00 36 26.6 -1.0
KLMR *e* 00 39 34.7
KLMR pmax pmax
comp=Z,46nm,0.8s
KLMR Klimovskoe 18.22 349 *ePn* P 00 36 26.6 -1.0
KLMR *ePn* P 00 36 26.6 -1.0
KLMR *ePn* P 00 36 26.6 -1.0
KLMR AMP 00 36 46.0

comp=Z,46nm,0.8s
KLMR *e*Sn S 00 39 34.8 -16
KLMR *e*Sn S 00 39 34.8 -16
IDI Anoyia 18.31 252 P **P 00 36 28.8 -0.2**
comp=Z,0.9nm,0.3s,baz=78,slow=10.0,SNR=17
IDI S **S 00 39 52.4 -0.8**
comp=Z,0.2nm,0.3s,baz=210,slow=20,SNR=2.8
IDI Anoyia 18.31 252⇑*i*P **P 00 36 28.7 -0.2**
IDI Anoyia 18.31 252 *e*P **P 00 36 28.5 -0.4**
comp=Z,3.8nm,0.6s
IDI S **S 00 39 52.4 -0.8**
AGG Agios Georgios 18.51 265 *e*P **Pn 00 36 33.0 +0.7**
comp=Z,36nm,1.0s
AGG Agios Georgios 18.51 265 *e*P **Pn 00 36 33.0 +0.7**
AGG pmax pmax
comp=Z,36nm,1.0s
AGG Agios Georgios 18.51 265 *e*P **Pn 00 36 33.0 +0.7**
comp=Z,36nm,1.0s
PRGR Permogore 18.54 359⇑*i*P **P 00 36 31.2 +0.1**
PRGR *e* 00 39 49.5
PRGR pmax pmax
comp=Z,28nm,0.8s
GRUS Gruza 18.55 281 *e*P **Pn 00 36 32.7 0.0**
FNA Florina 18.66 271 *e*P **Pn 00 36 34.6 +0.5**
comp=Z,19nm,0.8s
FNA Florina 18.66 271 *e*P **Pn 00 36 34.6 +0.5**
FNA pmax pmax
comp=Z,19nm,0.8s
FNA Florina 18.66 271 *e*P **Pn 00 36 34.6 +0.5**
comp=Z,19nm,0.8s
SUW Suwalki 18.68 314 *e*P **P 00 36 32.6 -0.1**
SUW Suwalki 18.68 314 *e*P **P 00 36 32.7 -0.1**
comp=Z,142nm,1.1s
SUW Suwalki 18.68 314 *e*P **P 00 36 32.7 -0.1**
SUW pmax pmax
comp=Z,142nm,1.1s
KECS Kecovo 18.73 296 *e*P **Pn 00 36 34.3 -0.5**
KECS Kecovo 18.73 296 *e*P **Pn 00 36 34.3 -0.5**
KECS Kecovo 18.73 296 *e*P **Pn 00 36 34.3 -0.5**
BRVK Borovoye 18.77 50 *e*P **Pn 00 36 34.8 -0.3**
comp=Z,22nm,0.9s
BRVK Borovoye 18.77 50*ce*P **Pn 00 36 34.9 -0.3**
BRVK pmax pmax
comp=Z,19nm,0.7s
BVA0 Borovoye Array 18.81 50⇑Pn **P 00 36 34.2 0.0**
comp=Z,12nm,0.8s
BVA0 Borovoye Array 18.81 50 P **P 00 36 34.2 0.0**
BVA0 pmax pmax
comp=Z,12nm,0.8s
BVAR Borovoye Array 18.81 50 P **Pn 00 36 35.3 -0.4**
comp=Z,1.4nm,0.3s,baz=246,slow=9.6,SNR=55
BVAR S **S 00 39 54.3 -8.9**
comp=Z,2.0nm,0.3s,baz=248,slow=24,SNR=8.4
SHME Shamm 18.84 152 P **Pn 00 36 36.5 +0.1**
OTUK Ortayu 18.86 65⇑P **P 00 36 35.3 +0.5**
comp=Z,14nm,0.9s
OTUK Ortayu 18.86 65 P **P 00 36 34.9 +0.1**
OTUK pmax pmax
comp=Z,5.0nm,0.7s
OTUK Ortayu 18.86 65 P **P 00 36 34.9 +0.1**
comp=Z,5.0nm,0.7s
NIE Niedzica 18.98 298 *e*P **Pn 00 36 37.9 +0.1**
NIE Niedzica 18.98 298 *e*P **Pn 00 36 37.9 +0.1**
OHR Ohrid 19.00 273 *i*P **Pn 00 36 38.7 +0.6**
BANOM Banah 19.02 151 *i*P **Pn 00 36 37.7 -0.6**
SNR=9.0
BANOM Banah 19.02 151 P **Pn 00 36 37.7 -0.6**
SNR=9.0
DIVS Divibare 19.05 282 *e*P **P 00 36 37.7 +0.7**
comp=Z,12nm,1.0s
PSZ Piszkesteto 19.07 294⇓*i*P **P 00 36 37.8 +0.7**
PSZ Piszkesteto 19.07 294 *e*P **Pn 00 36 38.7 -0.1**
comp=Z,25nm,1.1s
PSZ Piszkesteto 19.07 294 *e*P **Pn 00 36 38.7 -0.1**
PSZ pmax pmax
comp=Z,25nm,1.1s
FRGS Fruska Gora 19.09 285⇑*i*P **Pn 00 36 38.5 -0.6**
MNAS Manas 19.22 83⇑P **P 00 36 38.7 -0.2**
comp=Z,4.6nm,0.8s
MNAS Manas 19.22 83 P **P 00 36 38.7 -0.2**
MNAS pmax pmax
comp=Z,5.0nm,0.8s
PUL Pulkovo 19.32 335⇓*e*P **Pn 00 36 41.5 0.0**
PUL pmax pmax
comp=Z,197nm,1.0s
TEKS Tekeris 19.34 283 *e*P **P 00 36 40.8 +0.8**
OJC Ojcow 19.45 301 *e*P **Pn 00 36 42.5 -0.7**
OJC Ojcow 19.45 301 *e*P **P 00 36 41.9 +0.7**
comp=Z,12nm,0.6s
OJC Ojcow 19.45 301 *e*P **P 00 36 41.9 +0.7**
OJC pmax pmax
comp=Z,13nm,0.6s
LANS Liptovska Anna 19.48 297 *e*P **Pn 00 36 42.9 -0.8**
LANS Liptovska Anna 19.48 297 *e*P **Pn 00 36 42.9 -0.8**
MSFE Esma-Masafi 19.48 152 *i*P **Pn 00 36 43.5 -0.3**
SNR=8.6
BBLS Lazići 19.50 281⇑*i*P **P 00 36 42.8 +1.0**
ITM Ithomi 19.52 261 *e*P **P 00 36 42.1 0.0**
comp=Z,10nm,0.6s
RAYN Ar Rayn 19.57 182 *e*P **P 00 36 43.5 +0.8**
comp=Z,18nm,1.1s
RAYN Ar Rayn 19.57 182 *i*P **P 00 36 43.2 +0.5**
SNR=15
RAYN Ar Rayn 19.57 182 P **P 00 36 43.2 +0.5**
SNR=15
VSU Vasula 19.59 328*c i*P **P 00 36 43.0 +0.4**
VSU pmax pmax
comp=Z,80nm,0.5s
KBL Kabul 19.64 108 P **Pn 00 36 48.1 +2.3**
KBL pmax pmax
comp=Z,7.0nm,1.1s
NAZ Nazwa, Dubai 19.66 154 *i*P **Pn 00 36 45.1 -0.8**
SNR=8.2
NAZ Nazwa, Dubai 19.66 154 P **Pn 00 36 45.1 -0.8**
SNR=8.2
HAPS Han Pijesak,BI 19.80 282 *e*P **P 00 36 45.0 -0.1**
VYHS Vyhne 19.82 295 *e*P **Pn 00 36 46.5 -1.1**
VYHS pmax pmax
comp=Z,11nm,1.0s
VYHS Vyhne 19.82 295 *e*P **Pn 00 36 46.5 -1.1**
PDG Podgorica 19.84 277⇓*i*P **P 00 36 45.9 +0.5**
TTG Podgorica 19.84 277 *e*P **P 00 36 45.7 +0.3**
comp=Z,28nm,0.8s
TTG Podgorica 19.84 277 *e*P **P 00 36 45.7 +0.3**
TTG pmax pmax
comp=Z,28nm,0.8s
UOSS Minazif 19.88 153 *e*P **P 00 36 46.2 +0.2**
comp=Z,21nm,0.6s
UOSS Minazif 19.88 153 *i*P **P 00 36 46.0 -0.1**
SNR=6.7
UOSS Minazif 19.88 153 P **P 00 36 46.0 -0.1**
SNR=6.7
ASUD Al Ashush, Dub 19.90 155 *i*P **P 00 36 46.8 +0.5**
SNR=17
ASUD Al Ashush, Dub 19.90 155 P **P 00 36 46.8 +0.5**
SNR=17
HATD Hatta, Dubai 19.97 153 *i*P **P 00 36 47.4 +0.3**
SNR=13
HATD Hatta, Dubai 19.97 153 P **P 00 36 47.4 +0.3**
SNR=13
SRO2 Moca 20.06 293 *e*P **P 00 36 47.7 -0.1**
SRO2 Moca 20.06 293 *e*P **P 00 36 47.7 -0.1**
CSKK Cs^ţkako 20.14 292⇓*e*P Pn 00 36 51.5 +0.2
BRY Bratogost 20.27 279 *e*P **P 00 36 51.3 +1.0**
DOB Doboj 20.33 284 *e*P **P 00 36 51.0 +0.2**
OKC Ostrava-Krasne 20.43 299 *e*P **P 00 36 52.3 +0.5**
OKC Ostrava-Krasne 20.43 299 *e*P **P 00 36 52.3 +0.5**
SFK Sufi-Kurgan 20.56 89 P Pn 00 36 58.5 +2.0
SFK pmax pmax
comp=Z,8.0nm,0.9s
ALNE Al Ain 20.56 155 *i*P **P 00 36 53.8 +0.4**
SNR=9.4
JAVC Velka Javorina 20.62 296 *e*P **P 00 36 55.1 +1.1**
AAK Ala-Archa 20.63 82 P Pn 00 36 56.3 -1.1
comp=Z,2.0nm,0.4s,baz=265,slow=11,SNR=6.7
AAK Ala-Archa 20.63 82⇓P **P 00 36 55.7 +1.4**
comp=Z,5.1nm,0.7s
AAK Ala-Archa 20.63 82 *e*P Pn 00 36 57.6 +0.3
comp=Z,5.9nm,0.7s
AAK Ala-Archa 20.63 82 P Pn 00 36 57.4 +0.1
AAK Ala-Archa 20.63 82⇑*e*P Pn 00 36 57.3 0.0
AAK pmax pmax
comp=Z,3.0nm,0.5s
SOHO SOHO 20.74 153 *i*P **P 00 36 55.0 -0.3**
SNR=15
SOHO SOHO 20.74 153 P **P 00 36 55.0 -0.3**
SNR=15
SMOL Smolenice 20.76 295 *e*P **P 00 36 56.6 +1.3**
SMOL Smolenice 20.76 295 *e*P **P 00 36 56.6 +1.3**
MORC Moravsky Berou 20.81 299⇓*i*P **P 00 36 56.5 +0.5**
MORC Moravsky Berou 20.81 299 *e*P **P 00 36 56.6 +0.5**
comp=Z,52nm,0.8s
MORC Moravsky Berou 20.81 299 P **P 00 36 57.2 +1.2**
MORC Moravsky Berou 20.81 299 *e*P **P 00 36 56.4 +0.5**
MODS Modra-Piesok 20.85 295 *e*P **P 00 36 56.7 +0.4**
MODS pmax pmax
comp=Z,26nm,1.0s
MODS Modra-Piesok 20.85 295 *e*P **P 00 36 56.7 +0.4**
STON Ston 20.88 279 *e*P **P 00 36 57.9 +1.2**
MZR Muzera 20.94 161 *i*P **P 00 36 57.1 -0.4**
SNR=19
ZST Bratislava 20.95 294 *e*P **P 00 36 58.5 +1.1**
ZST pmax pmax
comp=Z,3.0nm,1.0s
ZST Bratislava 20.95 294 *e*P **P 00 36 58.5 +1.1**
SOP Sopron 21.30 293⇑*e*P **P 00 37 04.1 +3.0**
SOP Sopron 21.30 293 P **P 00 37 03.8 +2.7**
SOP pmax pmax
comp=Z,25nm,0.9s
SOP Sopron 21.30 293 P **P 00 37 03.8 +2.7**
comp=Z,25nm,0.9s
TKM2 Tokmak 2 21.38 80⇓P **P 00 37 04.4 +2.1**
comp=Z,4.7nm,1.1s
KRUC Moravsky 21.48 296 *e*P **P 00 37 03.7 +0.6**
TMCR Tamitsa 21.60 350 *e*P **P 00 37 05.4 +1.3**
JOF Joensuu 21.67 341 P **P 00 37 07.0 +2.1**
JOF pmax pmax
comp=Z,42nm,0.8s
DPC Dobruska-Polom 21.67 300 *e*P **P 00 37 06.0 +0.9**
DPC Dobruska-Polom 21.67 300 *e*P **P 00 37 06.0 +0.9**
CONA Conrad Observa 21.77 293 *e*P **P 00 37 06.9 +0.6**
comp=Z,18nm,0.9s,SNR=17
FIA1 FINESS Array S 21.95 334 *e*P **P 00 37 08.2 +0.3**
FINES FINESS Array B 21.95 334 P **P 00 37 08.1 +0.2**
comp=Z,9.4nm,0.4s,baz=139,slow=10,SNR=76
FINES S **S 00 41 03.9 -0.8**
comp=Z,6.9nm,0.8s,baz=132,slow=22,SNR=4.3
FINES LR LR 00 45 18.7
comp=Z,55nm,18.4s,baz=202,slow=35
ARSA Arzberg 22.00 291 *e*P **P 00 37 10.2 +1.6**
comp=Z,5.4nm,0.5s,SNR=9.2
CRES Cresnjev 22.10 288 *e*P **P 00 37 09.6 -0.1**
BOJS Bojanci 22.27 287 *i*P **P 00 37 11.9 +0.4**
PERS Pernice 22.29 290 *e*P **P 00 37 12.6 +0.8**
PERS Pernice 22.29 290 *e*P **P 00 37 12.6 +0.8**
WSAR Wadi Sarin 22.32 149 P **P 00 37 13.4 +1.3**
comp=Z,10nm,0.6s,baz=336,slow=7.9,SNR=12
SOKA Soboth 22.35 290 *e*P **P 00 37 13.3 +0.9**
SNR=15
KSH Kashi 22.52 89 P **P 00 37 17.5 +3.1**
KSH pP pP 00 37 34.0 +1.9
KSH sP sP 00 37 40.4 -2.8
KSH pmax pmax
comp=Z,250nm,4.8s
TIP Timpagrande 22.53 270 *e*P **P 00 37 13.3 -1.1**
comp=Z,9.8nm,1.2s
VISS Visnje 22.54 288 *e*P **P 00 37 14.6 +0.3**
OBKA Obir 22.69 290 *e*P **P 00 37 17.4 +1.4**
comp=Z,3.8nm,0.7s
LJU Ljubljana 22.73 288⇑*i*P **P 00 37 17.3 +0.9**
PRU Pruhonice 22.76 299 *e*P **P 00 37 17.2 +0.6**
PRU Pruhonice 22.76 299 *e*P **P 00 37 17.2 +0.6**
MOA Molln 22.85 293 *e*P **P 00 37 17.4 -0.1**
comp=Z,9.0nm,0.7s,SNR=5.6
CUC Castrocucco 22.96 273 *e*P **P 00 37 19.0 +0.3**
comp=Z,32nm,1.1s
JAVS Javornik 23.07 288 *e*P **P 00 37 19.8 0.0**
KURBB Kurchatov Arra 23.14 60 P **P 00 37 21.0 +0.8**
comp=Z,7.2nm,0.8s,baz=272,slow=12,SNR=42
KURBB pP **pP 00 37 41.1 +2.6**
comp=Z,6.9nm,0.7s,baz=269,slow=12,SNR=8.1
KURBB Kurchatov Arra 23.14 60⇑P **P 00 37 20.7 +0.5**
comp=Z,6.4nm,0.7s
KURK Kurchatov 23.20 60 *e*P **P 00 37 22.2 +1.3**
comp=Z,6.5nm,0.8s
KURK pP **pP 00 37 41.1 +1.9**
KURK Kurchatov 23.20 60 *e*P **P 00 37 22.2 +1.3**
KURK *PP **pP 00 37 41.1 +1.9**
KURK pmax pmax
comp=Z,6.0nm,0.8s
BRG Berggiesshubel 23.24 301 *e*P **P 00 37 24.0 +2.8**
comp=Z,7.0nm,1.0s
BRG Berggiesshubel 23.24 301 *e*P **P 00 37 24.0 +2.8**
BRG pmax pmax
comp=Z,7.0nm,1.0s
GEA0 GERESS Array S 23.24 296 *e*P **P 00 37 21.2 -0.2**
GEC2 GERESS Array S 23.24 296 *e*P **P 00 37 21.5 +0.1**
comp=Z,6.3nm,0.7s
GEC2 GERESS Array S 23.24 296 *e*P **P 00 37 21.5 +0.1**
GEC2 pmax pmax
comp=Z,6.0nm,0.7s
GERES GERESS Array B 23.24 296 P **P 00 37 21.6 +0.1**
comp=Z,5.1nm,0.5s,baz=91,slow=8.5,SNR=46
MYKA Terra Mystica 23.31 290 *e*P **P 00 37 22.5 +0.5**
comp=Z,8.9nm,0.8s
KHC Kasperske Hory 23.33 296 *e*P **P 00 37 22.2 0.0**
KHC Kasperske Hory 23.33 296 *e*P **P 00 37 22.4 +0.2**
comp=Z,4.9nm,1.1s
KHC Kasperske Hory 23.33 296 *e*P **P 00 37 22.4 +0.2**
KHC pmax pmax
comp=Z,5.0nm,1.1s
KBA Koelnbreinsper 23.49 291 *e*P **P 00 37 24.4 +0.6**
comp=Z,20nm,0.5s,SNR=21
KBA Koelnbreinsper 23.49 291 P **P 00 37 25.0 +1.2**
KBA pmax pmax
comp=Z,34nm,0.6s
BSD Bornholm Skovb 23.56 312 *i*P **P 00 37 23.4 -0.7**
WET Wettzell 23.79 296 P **P 00 37 30.0 +3.7**
WET pmax pmax
comp=Z,6.0nm,1.0s
CLL Collm 23.88 302 *e*P **P 00 37 28.0 +1.0**
comp=Z,6.0nm,0.9s
CLL *i* Pmax 00 37 30.1
comp=Z,8.0nm,0.8s
CLL *e* 00 37 50.0
CLL *i* sP **sP 00 37 53.6 -3.7**
comp=Z,9.0nm,0.8s
CLL Collm 23.88 302 *e*P **P 00 37 26.8 -0.2**
comp=Z,7.3nm,0.7s
CLL Collm 23.88 302 *e*P **P 00 37 28.0 +1.0**
CLL *e**SP **pP 00 37 50.0 +3.6**
CLL pmax pmax
comp=Z,6.0nm,0.9s
FVI Forni Avoltri 23.90 290 P **P 00 37 27.9 +0.6**
ABTA Abfaltersbach 24.08 290 *e*P **P 00 37 29.4 +0.5**
comp=Z,11nm,0.7s,SNR=15
AQU L'Aquila 24.09 280 *e*P **P 00 37 30.1 +1.1**
comp=Z,16nm,1.0s
AQU L'Aquila 24.09 280 *e*P **P 00 37 30.1 +1.1**
AQU pmax pmax
comp=Z,16nm,1.0s
NKC Novy Kostel 24.13 299 *e*P **P 00 37 30.2 +0.9**
NKC Novy Kostel 24.13 299 *e*P **P 00 37 30.2 +0.9**
VAF Ylistaro 24.21 334 P **P 00 37 31.7 +1.9**
VAF pmax pmax
comp=Z,75nm,0.9s
WTTA Wattenberg 24.64 292 *e*P **P 00 37 34.1 0.0**
comp=Z,16nm,0.5s,SNR=16
WATA Walderalm 24.68 292 *e*P **P 00 37 34.5 0.0**
comp=Z,9.1nm,0.5s,SNR=9.2
MOX Moxa 24.69 300 P **P 00 37 36.6 +2.3**
MOX pmax pmax
comp=Z,12nm,1.1s
OUL Oulu 24.81 339 P **P 00 37 36.4 +1.2**
OUL pmax pmax
comp=Z,35nm,0.8s
VAE Valguarnera 24.87 268 P **P 00 37 36.0 -0.2**
comp=Z,5.7nm,0.9s,baz=333,slow=2.3,SNR=5.2
GRFO Grafenberg 24.89 298 *e*P **P 00 37 36.3 +0.1**
comp=Z,6.9nm,0.8s
GRFO Grafenberg 24.89 298 *e*P **P 00 37 36.3 +0.1**
GRFO pmax pmax
comp=Z,7.0nm,0.8s
RETA Reutte 25.23 292 *e*P **P 00 37 39.0 -0.3**
comp=Z,6.3nm,0.6s,SNR=6.7
FETA Feichten 25.28 291 *e*P **P 00 37 39.5 -0.4**
comp=Z,22nm,0.6s,SNR=16
MAKZ Makanchi 25.37 69⇓P **P 00 37 41.2 +0.6**
comp=Z,3.3nm,0.8s
MAKZ Makanchi 25.37 69 *e*P **P 00 37 42.2 +1.6**
comp=Z,1.9nm,1.0s
MAKZ Makanchi 25.37 69 *e*P **P 00 37 42.2 +1.6**
MAKZ pmax pmax
comp=Z,2.0nm,1.0s
APA Apatity 25.46 349⇓*i*P **P 00 37 43.0 +1.9**
APA *i* 00 38 09.9
APA *i* S **S 00 42 02.0 +0.7**
APA pmax pmax
comp=Z,7.0nm,0.7s
MK31 Makanchi Array 25.59 69 *e*P **P 00 37 44.1 +1.6**
MK31 Makanchi Array 25.59 69 *e*P **P 00 37 43.3 +0.7**
MK31 pmax pmax
comp=Z,1.0nm,0.4s
MKAR Makanchi Array 25.59 69 P **P 00 37 43.8 +1.2**
comp=Z,1.3nm,0.6s,baz=275,slow=8.5,SNR=11
MKAR pP **pP 00 38 05.3 +2.6**
comp=Z,2.5nm,0.5s,baz=267,slow=9.2,SNR=9.1
MKAR Makanchi Array 25.59 69 *e*P **P 00 37 44.1 +1.5**
comp=Z,10nm,0.6s
MKAR pP **pP 00 38 05.3 +2.6**
MKAR Makanchi Array 25.59 69 *e*P **P 00 37 44.1 +1.5**
MKAR *PP **pP 00 38 05.3 +2.6**
MKAR pmax pmax
comp=Z,10.0nm,0.6s
LVZ Lovozero 25.59 350 *e*P **P 00 37 43.3 +0.9**
comp=Z,32nm,0.8s
LVZ Lovozero 25.59 350*ce*P **P 00 37 45.5 +3.1**
LVZ pmax pmax
comp=Z,100nm,2.5s
MK01 Makanchi Array 25.60 69 *e*P **P 00 37 43.8 +1.1**
MK01 Makanchi Array 25.60 69 *e*P **P 00 37 43.8 +1.1**
FUORN Ofenpass-Fuorn 25.63 290 *e*P **P 00 37 42.5 -0.7**
comp=Z,14nm,0.8s
CLTB Caltabellotta 25.70 269 *e*P **P 00 37 43.8 +0.1**
comp=Z,7.8nm,0.6s
DAVA Damuels 25.84 292 *e*P **P 00 37 44.6 -0.3**
comp=Z,6.1nm,0.7s,SNR=8.1
VLC Villacollemand 25.88 285 *e*P **P 00 37 46.4 +1.1**
comp=Z,11nm,0.6s
HFS Hagfors 26.05 322 P **P 00 37 46.8 +0.3**
comp=Z,18nm,0.6s,baz=127,slow=9.8,SNR=53
STU Stuttgart 26.22 295 *e*P **P 00 37 49.0 +0.8**
comp=Z,20nm,0.9s
STU Stuttgart 26.22 295 *e*P **P 00 37 49.0 +0.8**
STU pmax pmax
comp=Z,20nm,0.9s
TUE Stuetta 26.27 290 *e*P **P 00 37 48.7 -0.3**
comp=Z,6.9nm,1.0s
BFO Black Forest 26.81 294 *i*P **P 00 37 54.5 +0.9**
NC405 NORSAR Array S 27.35 323 *e*P **P 00 37 57.4 -0.9**
ZALV Zalesovo Beam 27.37 53 P **P 00 37 58.7 +0.2**
comp=Z,1.8nm,0.7s,baz=274,slow=10,SNR=7.9
ZALV pP **pP 00 38 19.8 +1.1**
comp=Z,1.8nm,0.5s,baz=272,slow=10,SNR=5.2
CDF Champ du Feu 27.51 295 *e*P **P 00 37 58.6 -1.3**
CDF pmax pmax
comp=Z,6.0nm,1.0s
NB201 NORSAR Array S 27.51 323 *e*P **P 00 37 58.9 -0.8**
NB2 NORSAR Subarra 27.54 323 P **P 00 37 59.1 -0.9**
comp=Z,4.1nm,0.7s,baz=116,slow=9.3
NB2 NORSAR Subarra 27.54 323 P **P 00 37 59.1 -0.9**
baz=116,slow=9.3
NOA NORSAR Array B 27.54 323 P **P 00 38 00.1 +0.1**
comp=Z,6.1nm,0.7s,baz=107,slow=10,SNR=20
NOA pP **pP 00 38 19.5 -0.6**
comp=Z,7.6nm,0.7s,baz=111,slow=12,SNR=9.1
NOA LR LR 00 49 36.9
comp=Z,8.3nm,20.6s,baz=105,slow=38
ECH Echery 27.60 294 *e*P **P 00 37 59.2 -1.4**
comp=Z,5.4nm,1.1s
ECH Echery 27.60 294 *e*P **P 00 37 59.2 -1.4**
ECH pmax pmax
comp=Z,5.0nm,1.1s
SENIN Lac Senin/Sane 27.69 290 *e*P **P 00 38 00.7 -1.0**
comp=Z,16nm,0.5s
NBO00 NORSAR Array S 27.73 323 *e*P **P 00 38 01.4 -0.2**
KONO Kongsberg 27.76 319⇓*e*P **P 00 38 04.8 +3.0**
KONO pmax pmax
comp=Z,19nm,1.1s
HINF Hinteralfeld 27.84 294 *e*P **P 00 38 01.7 -1.1**
HINF pmax pmax
comp=Z,2.0nm,0.5s
SAOF Saorge 27.92 285 P **P 00 38 05.9 +2.4**
SAOF pmax pmax
comp=Z,13nm,1.0s
HAU Haudompre 28.16 294 *e*P **P 00 38 04.7 -0.9**
HAU pmax pmax
comp=Z,20nm,0.7s
LPG La Plagne 28.20 289 *e*P **P 00 38 05.5 -0.8**
LPG pmax pmax
comp=Z,6.0nm,0.6s
LPL La Plagne 28.21 289 *e*P **P 00 38 05.6 -0.7**
LPL pmax pmax
comp=Z,6.0nm,0.4s
KEV Kevo 28.46 346 *e*P **P 00 38 08.8 +0.8**
KEV Kevo 28.46 346 *e*P **P 00 38 08.8 +0.8**
CABF La Chapelle 28.49 291 *e*P **P 00 38 07.8 -0.8**
CABF pmax pmax
comp=Z,13nm,0.7s
ARCES ARCESS Array B 28.55 345 P **P 00 38 09.8 +1.0**
comp=Z,1.9nm,0.4s,baz=158,slow=9.6,SNR=36
ARE0 ARCESS Array S 28.55 345 *e*P **P 00 38 10.0 +1.2**
KTK1 Kautokeino 28.58 343 *e*P **P 00 38 09.8 +0.7**
FRF La Foret Royal 28.65 285 *e*P **P 00 38 09.8 -0.2**
FRF pmax pmax
comp=Z,17nm,0.6s
ORIF Oris-en-Rattie 28.91 288 *e*P **P 00 38 13.6 +1.2**
ORIF pmax pmax
comp=Z,5.0nm,0.9s
TBLU Trondheim 28.91 327 *e*P **P 00 38 11.7 -0.3**
KIF Kilpisjarvi 29.12 341 *e*P **P 00 38 14.5 +0.7**
KEST Kesra 29.30 268 P **P 00 38 17.4 +1.5**
comp=Z,8.0nm,0.7s,baz=331,slow=2.6,SNR=17
KEST Kesra 29.30 268 *e*P **P 00 38 16.9 +1.0**
comp=Z,7.9nm,0.7s
KEST Kesra 29.30 268 *e*P **P 00 38 16.9 +1.0**
comp=Z,7.9nm,0.7s
KONS Konsvik 29.57 334 *e*P **P 00 38 18.6 +0.8**
VIVF Saint-Julien-l 29.76 288 *e*P **P 00 38 19.3 -0.6**
VIVF pmax pmax
comp=Z,6.0nm,0.7s
SSB Saint Sauveur 29.77 289 *e*P **P 00 38 20.0 +0.1**
comp=Z,22nm,0.7s
SSB Saint Sauveur 29.77 289 *e*P **P 00 38 20.0 +0.1**
SSB pmax pmax
comp=Z,22nm,0.7s
WMQ Urumqi 29.83 74 P **P 00 38 23.1 +2.6**
WMQ pP pP 00 38 39.9 -0.9
WMQ sP sP 00 38 48.2 -3.0
WMQ pmax pmax
comp=Z,15nm,0.7s
WMQ LR LR
comp=Z,72nm,22.9s
WMQ LR LR
comp=Z,78nm,27.5s
SMF Signal de Mont 30.02 292 *e*P **P 00 38 21.1 -1.0**
SMF pmax pmax
comp=Z,5.0nm,0.5s
TRO Tromso 30.04 341 *e*P **P 00 38 22.3 +0.4**
AVF Avril sur Loir 30.33 292 *e*P **P 00 38 24.1 -0.7**
AVF pmax pmax
comp=Z,9.0nm,0.6s
TCF Toulx Ste Croi 31.19 291 *e*P **P 00 38 32.5 +0.1**
TCF pmax pmax
comp=Z,14nm,0.9s
CAF Calviac 31.56 289 *e*P **P 00 38 35.7 0.0**
CAF pmax pmax
comp=Z,7.0nm,0.6s
RJF Les Rejaudoux 31.86 290 *e*P **P 00 38 38.5 +0.2**
RJF pmax pmax
comp=Z,11nm,0.7s
LDF La Druitiere 32.38 296 *e*P **P 00 38 42.8 0.0**
LDF pmax pmax
comp=Z,3.0nm,0.5s
FLN La Foliniere 32.60 296 *e*P **P 00 38 44.0 -0.7**
FLN pmax pmax
comp=Z,6.0nm,0.7s
MFF Saint Martin d 32.73 292 *e*P **P 00 38 44.9 -1.0**
MFF pmax pmax
comp=Z,7.0nm,0.6s
GRR Gorron 32.90 296 *e*P **P 00 38 46.5 -0.8**
GRR pmax pmax
comp=Z,9.0nm,0.6s
EPF Esparros 33.24 286 *e*P **P 00 38 48.9 -1.5**
EPF pmax pmax
comp=Z,6.0nm,0.8s

NRIK Noril'sk 33.68 25 P **P 00 38 55.2 +1.4**
comp=Z,2.7nm,0.7s,baz=251,slow=6.5,SNR=5.7
NRIK pP **pP 00 39 16.9 +2.5**
comp=Z,2.0nm,0.6s,baz=267,slow=7.0,SNR=3.1
NRIK LR LR 00 53 51.4
comp=Z,42nm,18.4s,baz=248,slow=38
EKA Eskdalemuir Ar 33.80 309 P **P 00 38 54.7 -0.4**
comp=Z,4.5nm,0.6s,baz=90,slow=7.6,SNR=38
ESK Eskdalemuir 33.83 309 *eP* **P 00 38 55.2 -0.1**
comp=Z,25nm,1.5s
ESK Eskdalemuir 33.83 309 *eP* **P 00 38 55.2 -0.1**
ESK pmax pmax
comp=Z,25nm,1.5s
ETSF Etsaut 33.91 286 *eP* **P 00 38 55.8 -0.5**
ETSF pmax pmax
comp=Z,6.0nm,1.0s
SJPF Ste Jean 34.32 287 *eP* **P 00 38 59.4 -0.3**
SJPF pmax pmax
comp=Z,6.0nm,1.0s
ROSF Rostrenen 34.49 296 *eP* **P 00 39 00.7 -0.4**
ROSF pmax pmax
comp=Z,9.0nm,0.6s
QUIF Quistinic 34.50 296 *eP* **P 00 39 00.7 -0.5**
QUIF pmax pmax
comp=Z,8.0nm,0.6s
SPA0 Spitsbergen Ar 37.12 350 *eP* **P 00 39 25.3 +2.0**
SPA0 Spitsbergen Ar 37.12 350 *eP* **P 00 39 25.0 +1.8**
SPITS Spitsbergen Ar 37.12 350 P **P 00 39 25.1 +1.9**
comp=Z,3.8nm,0.4s,baz=126,slow=6.3,SNR=82
SPITS LR LR 00 55 38.8
comp=Z,34nm,18.1s,baz=330,slow=38
ES19 SONSECA Array 37.35 282 *eP* **P 00 39 25.4 -0.3**
ESDC Sonseca Array 37.40 282 P **P 00 39 25.4 -0.7**
comp=Z,1.7nm,0.6s,baz=63,slow=8.6,SNR=21
PAB San Pablo 37.73 282 P **P 00 39 27.6 -1.3**
PAB pmax pmax
comp=Z,6.0nm,3.0s
MVO Moncorvo 39.03 286 *eP* **P 00 39 39.8 0.0**
comp=Z,12nm,1.0s
TAM Tamanrasset 39.28 252 *eP* **P 00 39 42.4 +0.2**
comp=Z,4.9nm,1.3s
TAM Tamanrasset 39.28 252 *eP* **P 00 39 42.4 +0.2**
TAM pmax pmax
comp=Z,5.0nm,1.3s
TAM Tamanrasset 39.28 252 *eP* **P 00 39 42.4 +0.2**
comp=Z,4.9nm,1.3s
PCAB Cabril 39.53 287 *eP* **P 00 39 45.3 +1.3**
comp=Z,19nm,1.4s
PGAV Gavieira, Arco 39.61 288 *eP* **P 00 39 45.0 +0.3**
comp=Z,24nm,1.5s
MTE Manteigas 39.68 285 *eP* **P 00 39 45.8 +0.6**
comp=Z,32nm,1.5s
PCBR Castelo Branco 39.84 284 *eP* **P 00 39 46.6 +0.1**
comp=Z,16nm,1.9s
PMRV Marv??o 39.94 284 *eP* **P 00 39 47.1 -0.2**
comp=Z,24nm,1.4s
PBAR Barrancos 40.20 282 *eP* **P 00 39 49.0 -0.4**
comp=Z,18nm,1.5s
PESTR Estremoz 40.31 283 *eP* **P 00 39 50.1 -0.3**
comp=Z,30nm,1.7s
PESTR Estremoz 40.31 283 *eP* **P 00 39 49.8 -0.6**
comp=Z,7.1nm,0.9s
PCAS Casmilo, Conde 40.48 285 *eP* **P 00 39 52.3 +0.5**
comp=Z,22nm,2.0s
PTOM Tomar 40.59 284 *eP* **P 00 39 53.0 +0.3**
comp=Z,26nm,1.4s
EVO Evora 40.75 283 *eP* **P 00 39 53.8 -0.2**
comp=Z,21nm,1.5s
PVAQ Vaqueiros 41.01 281 *eP* **P 00 39 55.9 -0.2**
comp=Z,28nm,2.0s
SONM Songino Array 41.47 62 P **P 00 40 01.0 +1.0**
comp=Z,0.5nm,0.5s,baz=288,slow=9.9,SNR=4.5
ULN Ulaanbaatar 41.89 62 *eP* **P 00 40 05.4 +2.0**
comp=Z,3.0nm,0.8s
ULN Ulaanbaatar 41.89 62 *ceP* **P 00 40 04.8 +1.4**
ULN pmax pmax
comp=Z,5.0nm,1.2s
DAG Danmarks Havn 42.75 342 ⇑ *iP* **P 00 40 10.7 +0.9**
comp=Z,6.5nm,0.9s
SCO Scoresbysund 42.88 333 *i* P **P 00 40 12.7 +1.8**
comp=Z,7.5nm,1.0s
SCO Scoresbysund 42.88 333 *eP* **P 00 40 12.9 +2.0**
comp=Z,7.4nm,1.0s
SCO Scoresbysund 42.88 333 *eP* **P 00 40 12.9 +2.0**
SCO pmax pmax
comp=Z,7.0nm,1.0s
LZH Lanzhou 44.14 79 *eP* **P 00 40 23.6 +1.9**
LZH pP pP 00 40 44.4 +1.5
LZH sP sP 00 40 53.3 +0.3
LZH pmax pmax
comp=Z,15nm,1.0s
CD2 Chengdu 46.63 85 P **P 00 40 40.6 -0.7**
CD2 pmax pmax
comp=Z,10.0nm,0.6s
HHC Hu-ho-hao-te 47.45 69 *eP* **P 00 40 48.6 +1.0**
HHC pmax pmax
comp=Z,6.0nm,0.7s
HHC pmax pmax
comp=Z,29nm,4.3s
SUMG Summit 47.95 336 *i* P **P 00 40 53.0 +1.6**
comp=Z,13nm,0.8s
SUMG Summit 47.95 336 *eP* **P 00 40 52.6 +1.2**
comp=Z,13nm,0.7s
SUMG Summit 47.95 336 *eP* **P 00 40 52.6 +1.2**
SUMG pmax pmax
comp=Z,13nm,0.7s
TOA0 Torodi Ar. Sit 48.57 246 *eP* **P 00 40 55.4 -1.0**
TORD Torodi Ar. Bea 48.57 246 P **P 00 40 55.3 -1.0**
comp=Z,2.9nm,0.6s,baz=44,slow=7.3,SNR=22
TORD LR LR 01 02 57.4
comp=Z,40nm,19.1s,baz=120,slow=38
KMI Kunming 49.12 92 P **P 00 41 03.8 +3.0**
KMI pmax pmax
comp=Z,4.0nm,0.6s
KOWA Kowa 51.52 252 P **P 00 41 17.9 -0.8**
comp=Z,1.4nm,0.4s,baz=340,slow=15,SNR=12
KOWA Kowa 51.52 252 *eP* **P 00 41 18.2 -0.5**
comp=Z,2.7nm,0.8s
KULLO Kullorsuaq 52.37 341 ⇑ *iP* **P 00 41 24.7 +0.5**
comp=Z,7.8nm,0.7s
ILULI Ilulissat 52.94 334 *i* P **P 00 41 28.7 +0.3**
comp=Z,10nm,0.7s
ILULI Ilulissat 52.94 334 *eP* **P 00 41 28.8 +0.3**
comp=Z,11nm,0.7s
ILULI Ilulissat 52.94 334 *eP* **P 00 41 28.8 +0.3**
ILULI pmax pmax
comp=Z,11nm,0.7s
SFJD Kangerlussuaq 53.72 331 P **P 00 41 34.1 -0.1**
comp=Z,7.3nm,0.6s,baz=72,slow=10,SNR=4.1
SFJD Kangerlussuaq 53.72 331 *i* P **P 00 41 34.1 -0.1**
comp=Z,6.7nm,0.7s
CN2 Changchun 55.28 60 *eP* **P 00 41 47.7 +1.9**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
IVI Ivigtut 55.36 324 *eP* **P 00 41 45.8 -0.3**
comp=Z,13nm,0.8s
KLR Kul'dur 56.46 52 P **P 00 41 55.1 +0.9**
comp=Z,0.1nm,0.6s,baz=297,slow=9.3,SNR=4.8
NJ2 Nanjing 56.90 75 *eP* **P 00 41 59.0 +1.5**
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
DBIC Dimbokro 57.67 246 P **P 00 42 02.1 -1.0**
comp=Z,2.7nm,0.7s,baz=25,slow=7.9,SNR=11
TIC Toumodi 57.80 246 *eP* **P 00 42 03.3 -0.8**
KIC Kosan Boka 57.82 246 *eP* **P 00 42 02.7 -1.5**
comp=Z,30nm,1.4s
LIC Lamto 58.12 246 *eP* **P 00 42 04.8 -1.5**
comp=Z,16nm,0.6s
SEY Seymchan 59.14 31 P **P 00 42 14.8 +2.1**
comp=Z,6.5nm,0.6s,baz=274,slow=6.2,SNR=13
SEY Seymchan 59.14 31 ‖ *eP* **P 00 42 14.2 +1.5**
USRK Ussuriysk Ar. 59.15 57 P **P 00 42 13.9 +0.9**
comp=Z,1.1nm,0.5s,baz=303,slow=7.5,SNR=4.3
RES Resolute Bay 59.66 349 P **P 00 42 17.8 +1.6**
comp=Z,1.9nm,0.7s,baz=44,slow=8.5,SNR=9.0
KSAR Wonju Array Be 60.16 65 P **P 00 42 20.8 +0.7**
KSAR Wonju Array Be 60.16 65 P **P 00 42 20.8 +0.7**
KSRS Korea Array 60.17 65 P **P 00 42 20.8 +0.6**
comp=Z,1.0nm,0.5s,baz=301,slow=7.0,SNR=3.5
BILL Bilibino 60.42 22 *eP* **P 00 42 22.9 +1.5**
comp=Z,3.6nm,0.7s
BILL Bilibino 60.42 22 *deP* **P 00 42 23.0 +1.5**
BILL *e* 00 43 06.7
BILL *e* 00 44 34.0
BILL *i* S **S 00 50 22.1 -7.0**
BILL pmax pmax
comp=Z,2.0nm,1.0s
BILL MLR MLR
comp=Z,28nm,17.0s
MA2 Magadan 60.44 35 ⇑ *eP* **P 00 42 23.7 +2.0**
MA2 pmax pmax
comp=Z,3.0nm,1.0s
OPO Ambohidratompo 61.40 179 P **P 00 42 30.2 +1.5**
comp=Z,4.2nm,0.6s,baz=353,slow=5.0,SNR=7.8
OPO pP **pP 00 42 51.8 +0.6**
comp=Z,1.5nm,0.6s,baz=97,slow=22,SNR=1.5
FRB Frobisher Bay 61.75 333 P **P 00 42 31.0 +0.6**
baz=47,slow=10
ABPO Ambohimpanom 61.84 179 *i* P **P 00 42 33.9 +2.2**
YSS Yuzh-Sakhalins 63.91 49 P P 00 42 53.4 +8.4
SCHQ Schefferville 67.09 325 LR LR 01 11 45.0
comp=Z,31nm,18.2s,baz=26,slow=35
TOLK Toolik Lake Re 67.92 6 *eP* **P 00 43 12.4 +1.9**
comp=Z,16nm,0.6s
INK Inuvik 68.89 360 P **P 00 43 17.0 +0.6**
comp=Z,1.6nm,0.5s,baz=357,slow=11,SNR=5.5
INK Inuvik 68.89 360 *eP* **P 00 43 17.3 +0.9**
comp=Z,6.3nm,1.3s
INK Inuvik 68.89 360 *eP* **P 00 43 17.3 +0.9**
INK pmax pmax
comp=Z,6.0nm,1.3s
COLD Coldfoot 69.25 7 *eP* **P 00 43 20.7 +1.9**
comp=Z,7.4nm,0.7s
IM3 Indian Mountai 70.12 9 *eP* **P 00 43 25.2 +1.2**
MLY Manley 71.36 8 *eP* **P 00 43 33.6 +2.0**
comp=Z,4.4nm,0.7s
COLA College 71.77 6 P **P 00 43 36.3 +2.3**
COLA pmax pmax
comp=Z,50nm,0.8s
IL1 Eielson Array 71.94 6 *eP* **P 00 43 36.1 +1.0**
ILAR Eielson Array 71.94 6 P **P 00 43 36.0 +0.9**
comp=Z,1.1nm,0.7s,baz=337,slow=6.0,SNR=14
CCB Clear Creek Bu 71.99 6 *eP* **P 00 43 36.6 +1.2**
comp=Z,5.6nm,0.7s
EGAK Eagle 72.27 3 *eP* **P 00 43 39.0 +2.0**
comp=Z,4.9nm,0.8s
CAST Castle Rocks 72.79 9 *eP* **P 00 43 41.4 +1.2**
comp=Z,9.9nm,0.8s
SCRK Sand Creek 72.93 5 *eP* **P 00 43 42.8 +1.7**
comp=Z,2.0nm,0.8s
DAWY Dawson 73.05 3 *eP* **P 00 43 43.2 +1.5**
comp=Z,7.3nm,0.8s
RIDG Independ'e Rid 73.11 5 *eP* **P 00 43 43.6 +1.5**
comp=Z,4.1nm,0.8s
RND Reindeer 73.13 7 *eP* **P 00 43 42.8 +0.5**
comp=Z,5.7nm,0.8s
RND Reindeer 73.13 7 *eP* **P 00 43 42.8 +0.5**
RND pmax pmax
comp=Z,6.0nm,0.8s
DOT Dot Lake 73.25 5 *eP* **P 00 43 44.2 +1.3**
comp=Z,12nm,0.7s
FCC Fort Churchill 73.29 340 *eP* **P 00 43 44.2 +1.1**
comp=Z,6.5nm,0.9s
FCC Fort Churchill 73.29 340 *eP* **P 00 43 44.3 +1.1**
FCC pmax pmax
comp=Z,7.0nm,0.9s
YKW3 Yellowknife Ar 73.55 351 *eP* **P 00 43 45.3 +0.7**
comp=Z,7.5nm,0.6s
DHY Denali Highway 73.58 6 *eP* **P 00 43 45.8 +0.8**
comp=Z,2.7nm,0.7s
YKA Yellowknife Ar 73.61 351 P **P 00 43 45.7 +0.7**
comp=Z,4.2nm,0.6s,baz=15,slow=6.4,SNR=44
YKA pP **pP 00 44 08.3 +0.2**
comp=Z,1.5nm,0.7s,baz=13,slow=6.3,SNR=4.9
SKT Skwentna 74.26 9 *eP* **P 00 43 49.3 +0.4**
comp=Z,3.3nm,0.6s
SML Sawmill 74.75 7 *eP* **P 00 43 53.0 +1.3**
comp=Z,8.0nm,0.8s
SML Sawmill 74.75 7 *eP* **P 00 43 53.0 +1.3**
SML pmax pmax
comp=Z,8.0nm,0.8s
SUA Susitna One 74.85 8 *eP* **P 00 43 53.6 +1.2**
comp=Z,8.3nm,0.8s
KLU Klutina 75.26 6 *eP* **P 00 43 56.5 +1.9**
comp=Z,8.4nm,0.8s
KDAK Kodiak Island 78.22 10 P **P 00 44 12.6 +1.3**
comp=Z,4.7nm,0.6s,baz=300,slow=2.6,SNR=8.4
KDAK Kodiak Island 78.22 10 *i* P **P 00 44 12.7 +1.4**
FFC Flin Flon 78.83 342 *eP* **P 00 44 15.4 +0.7**
comp=Z,3.7nm,0.6s
FFC Flin Flon 78.83 342 *eP* **P 00 44 15.4 +0.7**
FFC pmax pmax
comp=Z,4.0nm,0.6s
ULM Lac du Bonnet 81.31 337 P **P 00 44 28.6 +0.5**
comp=Z,1.7nm,0.5s,baz=355,slow=5.7,SNR=3.2
EYMN Ely 81.97 333 *eP* **P 00 44 32.6 +0.9**
comp=Z,9.5nm,1.4s
SSPA Standing Stone 82.59 321 *eP* **P 00 44 35.8 +0.8**
comp=Z,20nm,1.4s
NEW Newport 87.82 349 P **P 00 45 02.5 +1.4**
comp=Z,3.4nm,0.7s,baz=45,slow=5.7,SNR=6.1
NEW Newport 87.82 349 *eP* **P 00 45 02.8 +1.7**
comp=Z,3.9nm,0.9s
NEW Newport 87.82 349 *eP* **P 00 45 02.8 +1.7**
NEW pmax pmax
comp=Z,4.0nm,0.9s

IDC ***02*** *00:32:49.7±1.1, 2°.35N×89°.70E, h0km, mb3.8/9, mb1 4.0/12, mb1mx3.7/74, mbtmp3.9/12, ML3.7/2, MS3.3/7, Ms1 3.3/7, ms1mx2.9/58, Error ellipse: s-maj=34.4km s-min=18.5km az=40.0*
ISCJB ***02*** *00:32:53.8±0.9, 2°.5N±0°.1×90°.03E±0°.07, h35km, mb4.0/11, MS3.4/6, Error ellipse: s-maj=19.1km s-min=7.7km az=18.0*
DJA ***02*** *00:33:14.1±0.9, 3°N±6°×9°1E±1°0, h42km±44km, M4.7/7, mB5.0/2, mb4.8/7, MLv4.6/6, Mw(mB)4.3/2*
ISC 02 00:32:54.9±0.9, 2°.4N±0°.1×90°.00E±0°.07, h35km, n33, σ2°79/25, mb3.9/11, MS3.3/6, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**6.09**	**60**	P	**Pn**	**00 34 24.3**	**+1.8**
BSI				S	**Sn**	**00 35 25.0**	**-6.0**
MLSI	**Meulaboh, Aceh**	**6.64**	**74**	P	**Pn**	**00 34 30.8**	**+0.7**
	155nm,0.7s,0.6nm						
MLSI				S	Sn	00 35 35.0	-10
	155nm,0.7s,0.6nm						
TPTI		**7.21**	**83**	P	**Pn**	**00 34 39.0**	**+1.1**
	37nm,0.9s,869nm0.2nm						
TPTI				S	Sn	00 35 49.4	-9.3
	37nm,0.9s,869nm0.2nm						
LHMI	**Lhok Sumawe**	**7.46**	**68**	P	**Pn**	**00 34 43.6**	**+2.3**
	156nm,0.8s						
GSI	**Gunungsitoli**	**7.65**	**98**	P	**Pn**	**00 34 44.9**	**+1.0**
GSI				S	Sn	00 35 59.8	-10
KCSI	**Kotacane, Aceh**	**7.83**	**82**	P	**Pn**	**00 34 48.3**	**+1.9**
	99nm,0.7s						
KCSI				S	**Sn**	**00 36 09.6**	**-4.3**
	99nm,0.7s						
PSI	**Prapat**	**8.92**	**87**	Pn	**Pn**	**00 35 02.6**	**+1.2**
	1.3nm,0.3s,baz=358,slow=0.5,SNR=3.4						
PSI				Sn	**Sn**	**00 36 40.6**	**-0.2**
	1.2nm,0.3s,baz=180,slow=6.1,SNR=2.6						
PSI				LR	LR	00 38 27.5	
	comp=Z,119nm,20.0s,baz=268,slow=37						
MNSI	**Mandailing Nat**	**9.71**	**100**	P	**Pn**	**00 35 14.4**	**+2.2**
	29nm,0.5s,1μm						
MNSI				S	**Sn**	**00 36 52.7**	**-7.4**
	29nm,0.5s,1μm						
PALK	**Pallekele**	**10.44**	**298**	Pn	**Pn**	**00 35 18.0**	**-4.1**
	0.4nm,0.3s,baz=117,slow=4.5,SNR=2.7						
PALK				Sn	Sn	00 37 03.8	-14
	4.6nm,0.3s,baz=115,slow=8.0,SNR=5.9						
CMAR	**Chiang Mai Arr**	**18.17**	**28**	P	**Pn**	**00 37 07.1**	**+2.5**
	baz=225,slow=12,SNR=11						
H08S2	**Diego Garcia H**	**20.14**	**240**	T	T	00 57 51.7	
	baz=58						
H08S3	**Diego Garcia H**	**20.14**	**240**	T	T	00 58 30.4	
	baz=58,slow=74						
H08S1	**Diego Garcia H**	**20.15**	**240**	T	T	00 58 31.7	
	baz=58,slow=74						
XAN	**Xi'an**	**36.06**	**27**	P	P	00 40 01.1	+7.8
XAN				pP	sP	00 40 09.5	+1.8
XAN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,100nm,5.5s						
GTA	**Gaotai**	**37.87**	**12**	*eP*	**P**	**00 40 10.8**	**+2.1**
GTA				pP	pP	00 40 14.3	-4.6
GTA				sP	sP	00 40 16.8	-6.3
GTA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
H01W3	**Cape Leeuwin H**	**43.49**	**151**	T	T	01 27 30.7	
	baz=325,slow=76,SNR=6.6						
H01W2	**Cape Leeuwin H**	**43.50**	**151**	T	T	01 27 40.2	
	baz=325,slow=76,SNR=5.4						
H01W1	**Cape Leeuwin H**	**43.50**	**151**	T	T	01 27 45.3	
	baz=325,slow=76,SNR=7.9						
MKAR	**Makarchi Array**	**44.69**	**352**	P	**P**	**00 41 05.0**	**+0.5**
	comp=Z,1.0nm,0.7s,baz=170,slow=7.5,SNR=4.5						
SONM	**Songino Array**	**47.39**	**15**	P	**P**	**00 41 27.6**	**+1.8**
	comp=Z,6.7nm,0.7s,baz=194,slow=9.3,SNR=38						
WRA	**Warramunga Arr**	**48.85**	**119**	P	**P**	**00 41 38.5**	**+1.1**
	comp=Z,0.6nm,0.8s,baz=297,slow=8.6,SNR=4.9						
JNU	**Nakatsue**	**48.93**	**47**	LR	LR	01 05 09.4	
	comp=Z,24nm,18.9s,baz=298,slow=39						
KURBB	**Kurchatov Arra**	**48.99**	**350**	P	**P**	**00 41 37.5**	**-0.4**
	comp=Z,1.1nm,0.8s,baz=189,slow=5.5,SNR=4.0						
KSRS	**Korea Array**	**49.25**	**40**	LR	LR	01 05 52.0	
	comp=Z,27nm,18.5s,baz=196,slow=40						
ASAR	**Alice Springs**	**49.97**	**124**	P	**P**	**00 41 48.1**	**+2.2**
	comp=Z,0.2nm,0.6s,baz=299,slow=8.4,SNR=3.1						
ZALV	**Zalesovo Beam**	**51.52**	**356**	P	**P**	**00 41 56.8**	**-0.3**
	comp=Z,1.5nm,0.5s,baz=176,slow=7.8,SNR=4.8						
ZALV				LR	LR	01 06 03.0	
	comp=Z,25nm,18.8s,baz=75,slow=39						
BRTR	**Keskin Array B**	**63.02**	**314**	P	**P**	**00 43 17.2**	**-1.5**
	comp=Z,0.3nm,0.5s,baz=133,slow=8.1,SNR=3.5						
NRIK	**Noril'sk**	**66.81**	**359**	LR	LR	01 17 53.5	
	comp=Z,22nm,18.4s,baz=138,slow=40						
FINES	**FINESS Array B**	**75.64**	**334**	P	**P**	**00 44 36.7**	**+0.6**
	comp=Z,1.2nm,0.6s,baz=111,slow=7.6,SNR=3.4						
GERES	**GERESS Array B**	**79.16**	**319**	P	**P**	**00 44 56.2**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=95,slow=7.0,SNR=3.5						
NOA	**NORSAR Array B**	**82.45**	**331**	LR	LR	01 24 41.7	
	comp=Z,11nm,18.2s,baz=5.0,slow=38						
VNDA	**Vanda**	**88.48**	**168**	LR	LR	01 20 20.9	
	comp=Z,39nm,18.9s,baz=300,slow=32						
TXAR	**Lajitas Array**	**145.80**	**22**	PKPbc	**PKPab**	**00 52 31.6**	**0.0**
	comp=Z,1.3nm,0.8s,baz=318,slow=3.4,SNR=6.4						

NEIC ***02*** *00:37:05.5±0.0, 50°.53N×130°.32W, h10km, mb4.1/2, MW4.1(OTT), After OTT.*
PGC ***02*** *00:37:05.5±0.8, 50°.53N×130°.32W, h10km, MLSn3.4/36, Mw4.1/36, 206km west of Pt. Hardy, Bc Vancouver Island, Canada Region*
IDC ***02*** *00:37:08.6±1.6, 50°.64N×129°.82W, h0km, mb3.6/3, mb1 4.1/9, mb1mx3.7/74, mbtmp3.7/9, ML3.8/6, MS3.0/8, Ms1 3.0/8, ms1mx2.7/64, Error ellipse: s-maj=23.8km s-min=9.8km az=69.0*
ISC 02 00:37:09.3±1.8, 50°.66N±0°.06×129°.82W±0°.07, h18km±10km, n103, σ1°39/108, mb3.8/4, MS3.2/3, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.07**	**91**	Pn	**Pg**	**00 37 29.2**	**-0.9**
HOLB				Sn	**Sb**	**00 37 43.6**	**+0.5**
BPBC	**Brooks Peninsu**	**1.40**	**110**	Pn	**Pn**	**00 37 32.4**	**-1.7**
PACB	**Port Alice, BC**	**1.50**	**98**	Pn	**Pn**	**00 37 34.7**	**-0.6**
PHC	**Port Hardy**	**1.52**	**87**	Pn	**Pn**	**00 37 35.8**	**+0.2**
PHC				Sn	**Sb**	**00 37 55.9**	**+0.1**
MAYB	**Maynard**	**1.71**	**98**	Pn	**Pn**	**00 37 37.8**	**-0.5**
BBB	**Bella Bella**	**1.86**	**34**	Pn	**Pn**	**00 37 40.4**	**+0.1**
	31nm,0.3s,baz=223,slow=6.3,SNR=703						
BBB				Sn	**Sn**	**00 38 04.7**	**+1.4**
	80nm,0.3s,baz=127,slow=20,SNR=17						
BBB				LR	LR	00 38 32.6	
	comp=Z,107nm,19.5s,baz=169,slow=45						
BBB	**Bella Bella**	**1.86**	**34**	Pn	**Pn**	**00 37 40.2**	**0.0**
BBB				Sn	**Sn**	**00 38 02.3**	**-0.9**
EDB	**Eliza Dome**	**1.90**	**114**	Pn	**Pn**	**00 37 39.5**	**-1.3**
TLCB	**Telegraph Cove**	**1.90**	**92**	Pn	**Pn**	**00 37 41.2**	**+0.4**
TLCB				Sn	**Sn**	**00 38 06.0**	**+1.7**
WOSB	**Woss**	**2.14**	**102**	Pn	**Pn**	**00 37 44.0**	**-0.2**
BNB	**Barry Inlet**	**2.26**	**329**	Pn	Pn	00 37 40.6	-5.3
NCRB	**Newcastle Ridg**	**2.41**	**95**	Pn	**Pn**	**00 37 48.1**	**+0.1**
ETB	**Estevan Point**	**2.48**	**120**	Pn	**Pn**	**00 37 47.1**	**-1.7**
BCBC	**Bella Coola**	**2.57**	**47**	Pn	**Pn**	**00 37 52.4**	**+2.4**
BCBC				Sn	**Sn**	**00 38 21.8**	**+1.2**
GDR	**Gold River**	**2.59**	**109**	Pn	**Pn**	**00 37 49.4**	**-0.8**
NC89	**ODP889**	**2.77**	**135**	Pn	**Pn**	**00 37 50.8**	**-1.9**
SPLB	**Strathcona Par**	**2.78**	**105**	Pn	**Pn**	**00 37 52.4**	**-0.6**
CBB	**Campbell River**	**2.92**	**101**	Pn	**Pn**	**00 37 55.2**	**+0.3**
CBB				Sn	**Sn**	**00 38 29.4**	**-0.1**
TOFB	**Tofino**	**2.94**	**119**	Pn	**Pn**	**00 37 53.6**	**-1.6**
TOFB				Sn	**Sn**	**00 38 28.2**	**-1.8**
BTB	**Buttle Lake**	**3.02**	**112**	Pn	**Pn**	**00 37 55.6**	**-0.7**
DIB	**Dawson Inlet,**	**3.03**	**328**	Pn	Pn	00 37 51.5	-4.8
MWAB	**Mount Washingt**	**3.04**	**106**	Pn	**Pn**	**00 37 55.7**	**-1.0**
B012	**Ucluelet**	**3.27**	**121**	Pn	**Pn**	**00 37 58.4**	**-1.3**
OZB	**Mount Ozzard**	**3.28**	**120**	Pn	**Pn**	**00 37 58.2**	**-1.6**
ALB	**Alberni**	**3.51**	**111**	Pn	**Pn**	**00 38 02.8**	**-0.1**
B927	**Port Alberni**	**3.54**	**112**	Pn	**Pn**	**00 38 02.4**	**-0.9**
B928	**Bamfield**	**3.55**	**119**	Pn	**Pn**	**00 38 02.6**	**-0.8**
TXB	**Texada**	**3.59**	**104**	Pn	**Pn**	**00 38 03.6**	**-0.5**
RUBB	**Prince Rupert**	**3.68**	**356**	Pn	**Pn**	**00 38 03.2**	**-2.0**
MGB	**Mount Grey**	**3.71**	**115**	Pn	**Pn**	**00 38 05.0**	**-0.9**
GHNB	**Nanoose**	**3.85**	**109**	Pn	**Pn**	**00 38 06.8**	**-0.7**
SHB	**Sechelt**	**3.97**	**103**	Pn	**Pn**	**00 38 09.8**	**+0.4**
YOUB	**Youbou, Lake C**	**4.01**	**114**	Pn	**Pn**	**00 38 09.4**	**-0.4**
NLLB	**Nanaimo Lost L**	**4.03**	**109**	Pn	**Pn**	**00 38 10.0**	**-0.1**
B926	**Mesachie Lake**	**4.12**	**114**	Pn	**Pn**	**00 38 10.9**	**-0.5**
UBRB	**Upper Baezaeko**	**4.20**	**56**	Pn	**Pn**	**00 38 14.6**	**+2.0**
UBRB				Sn	**Sn**	**00 39 02.5**	**+1.3**
BPCB	**Bare Point**	**4.33**	**111**	Pn	**Pn**	**00 38 14.5**	**+0.4**
LZB	**Mount Lazard**	**4.40**	**116**	Pn	**Pn**	**00 38 15.1**	**-0.2**
GOBB	**Galiano Island**	**4.43**	**110**	Pn	**Pn**	**00 38 16.9**	**+1.3**
WSLR	**Whistler**	**4.44**	**94**	Pn	**Pn**	**00 38 17.3**	**+1.4**
OFR	**Olym-F Res Ctr**	**4.48**	**126**	Pn	**Pn**	**00 38 17.2**	**+1.0**
OBC	**Olympics--Boni**	**4.58**	**123**	Pn	**Pn**	**00 38 18.1**	**+0.3**
B010	**North Saanich**	**4.60**	**114**	Pn	**Pn**	**00 38 17.8**	**-0.1**
B009	**North Saanich**	**4.60**	**114**	Pn	**Pn**	**00 38 17.9**	**-0.1**
PA02	**PA02 Ocean**	**4.60**	**114**	Pn	**Pn**	**00 38 17.4**	**-0.5**
B011	**North Saanich**	**4.60**	**114**	Pn	**Pn**	**00 38 17.4**	**-0.5**
PA12	**PA12 Sannich**	**4.60**	**114**	Pn	**Pn**	**00 38 18.7**	**+0.7**
SNB	**Saturna Island**	**4.71**	**111**	Pn	**Pn**	**00 38 20.0**	**+0.6**
VGZ	**Gonzales**	**4.79**	**116**	Pn	**Pn**	**00 38 20.6**	**+0.1**
OSD	**Olympics--Snow**	**4.91**	**123**	Pn	**Pn**	**00 38 22.6**	**+0.2**
MCW	**Mount Constitu**	**4.95**	**111**	Pn	**Pn**	**00 38 24.3**	**+1.5**
LLLB	**Lillooet**	**5.05**	**88**	Pn	**Pn**	**00 38 25.9**	**+1.8**
BLN	**Blyn Mountain**	**5.21**	**118**	Pn	**Pn**	**00 38 26.8**	**+0.5**
VDB	**Vedder Mountai**	**5.25**	**105**	Pn	**Pn**	**00 38 28.6**	**+1.6**
WISH	**Wishkah**	**5.34**	**129**	Pn	**Pn**	**00 38 28.2**	**+0.1**
HDW	**Hoodsport**	**5.37**	**122**	Pn	**Pn**	**00 38 28.8**	**+0.3**
MBW	**Mount Baker**	**5.47**	**107**	Pn	**Pn**	**00 38 32.1**	**+2.1**
JCW	**Jim Creek**	**5.71**	**113**	Pn	**Pn**	**00 38 34.3**	**+1.1**
B06A	**Marblemount**	**5.83**	**108**	Pn	**Pn**	**00 38 36.2**	**+1.4**
GPW	**Glacier Peak**	**6.21**	**111**	Pn	**Pn**	**00 38 42.0**	**+1.7**
D05A	**Enumclaw**	**6.22**	**121**	Pn	**Pn**	**00 38 40.6**	**+0.4**
FMW	**Mount Fremont**	**6.55**	**122**	Pn	**Pn**	**00 38 46.2**	**+1.3**
LON	**Longmire**	**6.59**	**123**	Pn	**Pn**	**00 38 46.1**	**+0.8**
PNT	**Pentiction**	**6.71**	**98**	Pn	**Pn**	**00 38 48.3**	**+1.3**
LTY	**Liberty**	**6.92**	**116**	Pn	**Pn**	**00 38 51.0**	**+1.2**
B08A	**Colville Reser**	**7.21**	**105**	Pn	**Pn**	**00 38 55.6**	**+1.9**
DLBC	**Dease Lake**	**7.79**	**359**	Pn	**Pn**	**00 39 03.3**	**+1.5**
	1.5nm,0.3s,baz=182,slow=10,SNR=27						
DLBC				Sn	**Sn**	**00 40 31.2**	**+1.8**
	0.1nm,0.3s,baz=343,slow=19,SNR=3.5						
DLBC				LR	LR	00 41 23.9	
	comp=Z,60nm,20.3s,baz=46,slow=33						
DLBC	**Dease Lake**	**7.79**	**359**	Pn	**Pn**	**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
	0.2nm,0.3s,baz=221,slow=12,SNR=13						
YKA				LR	LR	00 46 07.1	
	comp=Z,7.3nm,18.5s,baz=215,slow=37						
YKW1	**Yellowknife Ar**	**14.49**	**29**	Pn	**Pn**	**00 40 31.8**	**-1.5**
YKW3	**Yellowknife Ar**	**14.51**	**29**	Pn	**Pn**	**00 40 32.6**	**-0.9**
YKW3				Sn	**Sn**	**00 43 07.6**	**-6.2**
NVAR	**Mina Array Bea**	**14.71**	**142**	Pn	**Pn**	**00 40 39.4**	**+2.8**
	baz=321,slow=13,SNR=2.3						
DUG	**Dugway, Tooele**	**15.84**	**125**	*e*Pn	**Pn**	**00 40 50.8**	**-0.6**
	4.4nm,1.1s						
BW06	**Boulder Array**	**15.95**	**112**	*e*Pn	**P**	**00 40 55.0**	**-1.4**
	10nm,1.3s						
PDAR	**Pinedale Array**	**15.95**	**112**	Pn	**P**	**00 40 55.8**	**-0.6**
	0.1nm,0.3s,baz=307,slow=11,SNR=20						
PDAR				LR	LR	00 47 20.2	
	comp=Z,60nm,18.4s,baz=331,slow=38						
LDBN	**Lake De Bois**	**16.29**	**7**	Pn	**Pn**	**00 40 56.3**	**-0.6**
ILAR	**Eielson Array**	**16.73**	**334**	Pn	**P**	**00 41 07.0**	**+2.2**
	0.1nm,0.3s,baz=149,slow=11,SNR=23						
FFC	**Flin Flon**	**17.30**	**66**	*e*Pn	**P**	**00 41 11.7**	**+0.6**
	6.0nm,1.2s						
ULM	**Lac du Bonnet**	**21.51**	**78**	P	**P**	**00 41 57.7**	**+0.7**
	1.9nm,0.4s,baz=273,slow=10,SNR=5.0						
ULM	**Lac du Bonnet**	**21.51**	**78**	P	**P**	**00 41 57.7**	**+0.7**
FCC	**Fort Churchill**	**21.94**	**55**	P	**P**	**00 42 03.2**	**+1.7**
AGMN	**Agassiz Nation**	**22.08**	**83**	*e*P	**P**	**00 42 04.5**	**+1.4**
	18nm,1.2s						
EPLO	**Experimental L**	**23.00**	**78**	P	**P**	**00 42 12.9**	**0.0**
ANMO	**Albuquerque**	**23.10**	**124**	P	**P**	**00 42 16.2**	**+1.9**
	1.4nm,0.9s,baz=301,slow=7.7,SNR=4.0						
SOLO	**Sioux Lookout**	**23.93**	**77**	P	**P**	**00 42 23.0**	**+1.0**
ATKO	**Atikokan Iron**	**24.59**	**79**	P	**P**	**00 42 26.4**	**-1.8**
PKLO	**Pickle Lake**	**24.61**	**73**	P	**P**	**00 42 28.2**	**0.0**
RES	**Resolute Bay**	**28.08**	**19**	LR	LR	00 53 39.7	
	comp=Z,49nm,18.8s,baz=130,slow=35						
TXAR	**Lajitas Array**	**28.98**	**127**	P	**P**	**00 43 09.7**	**+1.8**
	1.5nm,1.0s,baz=330,slow=5.2,SNR=7.0						
ASAJ	**Asahikawa**	**56.33**	**300**	LR	LR	01 10 52.1	
	comp=Z,22nm,19.8s,baz=47,slow=36						
H11N2	**WAKE ISLAND Hy**	**58.10**	**262**	T	T	01 49 27.8	
	baz=42,slow=76,SNR=1383						
H11N3	**WAKE ISLAND Hy**	**58.11**	**262**	T	T	01 49 29.9	
	baz=42,slow=76,SNR=1272						
H11N1	**WAKE ISLAND Hy**	**58.12**	**262**	T	T	01 49 29.0	
	baz=42,slow=76,SNR=862						
RPN	**Rapa Nui**	**79.54**	**162**	LR	LR	01 14 09.8	
	comp=Z,48nm,21.5s,baz=356,slow=28						

*CSEM **02** 00:41:08.8, 44°.88N×10°.95E, h7km, ML1.7/5*
ROM 02 00:41:08.8±0.2, 44°.881N±0°.006×10°.946E±0°.008, h7km, ML1.7/2, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
T0826	**Rio Saliceto (**	**0.10**	**246**	P	Pg	00 41 12.4	+1.3
T0826				S	Sg	00 41 15.9	+3.2
T0826	**Rio Saliceto (**	**0.10**	**246**	P	Pg	00 41 12.4	+1.3
T0826				S	Sg	00 41 15.9	+3.2
T0825	**Gonzaga (MN)**	**0.12**	**323**	P	Pg	00 41 13.0	+1.7
T0825				S	Sg	00 41 16.0	+3.0
T0825	**Gonzaga (MN)**	**0.12**	**323**	P	Pg	00 41 13.0	+1.7
T0825				S	Sg	00 41 17.0	+3.9
T0825				AML	AML		
	comp=E,2050μm,0.5s						
T0825				AML	AML		
	comp=N,2850μm,0.2s						
T0825				AML	AML		
	comp=E,3810μm,0.2s						
T0825				AML	AML		
	comp=N,2985μm,0.2s						
T0825				AML	AML		
	comp=E,3810μm,0.2s						
T0825				AML	AML		
	comp=N,2985μm,0.2s						
T0802	**SanFelice sul**	**0.17**	**92**	P	Pg	00 41 14.4	+2.2
T0802				S	Sg	00 41 18.6	+4.1
T0802	**SanFelice sul**	**0.17**	**92**	P	Pg	00 41 14.4	+2.2
T0802				S	Sg	00 41 18.6	+4.1
SBPO	**S.Benedetto Po**	**0.17**	**354**	P	Pg	00 41 14.3	+2.0
SBPO	**S.Benedetto Po**	**0.17**	**354**	P	Pg	00 41 14.3	+2.0
SBPO				AML	AML		
	comp=E,282μm,0.3s						
SBPO				AML	AML		
	comp=N,1275μm,0.4s						
SBPO				AML	AML		
	comp=E,704μm,0.4s						
SBPO				AML	AML		
	comp=N,2365μm,1.4s						
SBPO				AML	AML		
	comp=E,2365μm,1.4s						
SBPO				AML	AML		
	comp=E,704μm,0.4s						
RAVA	**Ravarino**	**0.18**	**135**	P	Pg	00 41 14.4	+2.1
RAVA				S	Sg	00 41 19.6	+4.9
RAVA	**Ravarino**	**0.18**	**135**	P	Pg	00 41 14.4	+2.1
RAVA				S	Sg	00 41 19.6	+4.9
RAVA				AML	AML		
	comp=E,220μm,0.5s						
RAVA				AML	AML		
	comp=N,237μm,0.1s						
RAVA				AML	AML		
	comp=E,2970μm,0.3s						
RAVA				AML	AML		
	comp=N,3365μm,0.3s						
RAVA				AML	AML		
	comp=N,3365μm,0.3s						
RAVA				AML	AML		
	comp=E,2970μm,0.3s						
NOVE	**Novellara**	**0.18**	**243**	P	Pg	00 41 14.5	+2.0
NOVE				S	Sg	00 41 18.9	+3.9
NOVE	**Novellara**	**0.18**	**243**	P	Pg	00 41 14.5	+2.0
NOVE				S	Sg	00 41 18.9	+3.9
NOVE				AML	AML		
	comp=E,284μm,0.7s						
NOVE				AML	AML		
	comp=N,430μm,0.6s						
NOVE				AML	AML		
	comp=N,430μm,0.6s						
NOVE				AML	AML		
	comp=E,284μm,0.7s						
T0800	**Massa Finalese**	**0.22**	**98**	P	Pg	00 41 14.7	+1.6
T0800				S	Sg	00 41 20.3	+4.3
T0800	**Massa Finalese**	**0.22**	**98**	P	Pg	00 41 14.7	+1.6
T0800				S	Sg	00 41 20.3	+4.3
T0800				AML	AML		
	comp=E,846μm,0.2s						
T0800				AML	AML		
	comp=N,530μm,0.2s						
T0800				AML	AML		
	comp=E,662μm,1.6s						
T0800				AML	AML		
	comp=N,930μm,0.4s						
T0800				AML	AML		
	comp=E,4450μm,0.2s						
T0800				AML	AML		
	comp=N,2815μm,0.3s						
T0800				AML	AML		
	comp=E,4310μm,0.2s						
T0800				AML	AML		
	comp=N,2945μm,0.3s						
T0800				AML	AML		
	comp=N,2945μm,0.3s						
T0800				AML	AML		
	comp=E,4450μm,0.2s						
T0800				AML	AML		
	comp=N,2815μm,0.3s						
T0800				AML	AML		
	comp=E,4310μm,0.2s						
T0805	**Bondeno (FE)**	**0.27**	**82**	P	Pb	00 41 15.6	-0.4
T0805	**Bondeno (FE)**	**0.27**	**82**	P	Pb	00 41 15.6	-0.4
ROVR	**Rover˜¤ Verone**	**0.77**	**7**	P	Pn	00 41 25.8	-0.5
ROVR	**Rover˜¤ Verone**	**0.77**	**7**	P	Pn	00 41 25.8	-0.4
ROVR				AML	AML		
	comp=E,39μm,0.3s						
ROVR				AML	AML		
	comp=N,52μm,0.8s						
ROVR				AML	AML		
	comp=E,62μm,0.8s						
ROVR				AML	AML		
	comp=N,131μm,0.4s						
ROVR				AML	AML		
	comp=E,62μm,0.8s						
ROVR				AML	AML		
	comp=N,131μm,0.4s						
MAGA	**Magasa**	**0.92**	**346**	P	Pn	00 41 28.5	+0.2
MAGA	**Magasa**	**0.92**	**346**	P	Pn	00 41 28.6	+0.2
MAGA				AML	AML		
	comp=E,245μm,1.3s						
MAGA				AML	AML		
	comp=N,279μm,0.5s						
MAGA				AML	AML		
	comp=E,245μm,1.3s						
MAGA				AML	AML		
	comp=N,279μm,0.5s						

*CSEM **02** 00:41:34.4, 44°.88N×11°.02E, h8km, ML2.1/10*
ROM 02 00:41:34.4±0.0, 44°.880N±0°.001×11°.020E±0°.001, h8km, ML2.1/5, 4C-5D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
T0818	**Loc. Fossa, Co**	**0.06**	**7**	⇓*i*P	Pg	00 41 36.8	+0.7
T0818				*i* S	Sg	00 41 39.3	+1.9
T0818	**Loc. Fossa, Co**	**0.06**	**7**	*i* P	Pg	00 41 36.8	+0.6
T0818				*i* S	Sg	00 41 39.3	+1.9
T0827	**Moglia (MN)**	**0.09**	**313**	⇑*e*P	Pg	00 41 37.4	+0.9
T0827				*i* S	Sg	00 41 40.7	+2.7
T0827	**Moglia (MN)**	**0.09**	**313**	*e*P	Pg	00 41 37.4	+0.9
T0827				*i* S	Sg	00 41 40.7	+2.6
NDIM	**Novi di Modena**	**0.09**	**275**	*i* P	Pg	00 41 36.8	+0.3
NDIM				*i* S	Sg	00 41 39.4	+1.3
NDIM				AML	AML		
	comp=E,3520μm,0.1s						
NDIM				AML	AML		
	comp=N,3875μm,0.1s						
NDIM				AML	AML		
	comp=E,3640μm,0.1s						
NDIM				AML	AML		
	comp=N,3760μm,0.1s						
NDIM				AML	AML		
	comp=E,3520μm,0.1s						
NDIM				AML	AML		
	comp=N,3875μm,0.1s						
NDIM				AML	AML		
	comp=E,3645μm,0.1s						
NDIM				AML	AML		
	comp=N,3755μm,0.1s						
T0828	**Loc. Fossoli,**	**0.09**	**237**	⇓*i*P	Pg	00 41 37.3	+0.7
T0828				*i* S	Sg	00 41 40.4	+2.3
T0828	**Loc. Fossoli,**	**0.09**	**237**	*i* P	Pg	00 41 37.3	+0.7
T0828				*i* S	Sg	00 41 40.4	+2.3
T0814	**Loc. Cortile,**	**0.09**	**203**	⇓*i*P	Pg	00 41 37.4	+0.8
T0814				*i* S	Sg	00 41 40.7	+2.5
T0814	**Loc. Cortile,**	**0.09**	**203**	*i* P	Pg	00 41 37.4	+0.7
T0814				*i* S	Sg	00 41 40.7	+2.5
T0802	**SanFelice sul**	**0.12**	**92**	*e*P	Pg	00 41 37.7	+0.7
T0802				*i* S	Sg	00 41 41.7	+3.0
T0802	**SanFelice sul**	**0.12**	**92**	*e*P	Pg	00 41 37.6	+0.7
T0802				*i* S	Sg	00 41 41.7	+3.0
T0813	**Massa Finalese**	**0.13**	**91**	*e*P	Pg	00 41 37.9	+0.7
T0813				*i* S	Sg	00 41 41.9	+2.8
T0813	**Massa Finalese**	**0.13**	**91**	*e*P	Pg	00 41 37.9	+0.8
T0813				*i* S	Sg	00 41 41.9	+2.8
T0812	**Loc. Stoppiaro**	**0.14**	**57**	*e*P	Pg	00 41 38.4	+1.1
T0812				*i* S	Sg	00 41 41.9	+2.6
T0812	**Loc. Stoppiaro**	**0.14**	**57**	*e*P	Pg	00 41 38.4	+1.1
T0812				*i* S	Sg	00 41 41.9	+2.5
T0824	**Loc. Limidi di**	**0.14**	**209**	⇓*i*P	Pg	00 41 38.3	+1.0
T0824				*i* S	Sg	00 41 42.5	+3.2
T0824	**Loc. Limidi di**	**0.14**	**209**	*i* P	Pg	00 41 38.3	+1.0
T0824				*i* S	Sg	00 41 42.5	+3.1
RAVA	**Ravarino**	**0.14**	**150**	⇓*i*P	Pg	00 41 38.3	+0.9
RAVA				*i* S	Sg	00 41 42.5	+3.0
RAVA	**Ravarino**	**0.14**	**150**	*i* P	Pg	00 41 38.3	+0.9
RAVA				*i* S	Sg	00 41 42.5	+3.0
RAVA				AML	AML		
	comp=E,2970μm,0.3s						
RAVA				AML	AML		
	comp=N,3365μm,0.3s						
RAVA				AML	AML		
	comp=E,2970μm,0.3s						
RAVA				AML	AML		
	comp=N,3365μm,0.3s						
RAVA				AML	AML		
	comp=N,3365μm,0.3s						
RAVA				AML	AML		
	comp=E,2970μm,0.3s						
T0826	**Rio Saliceto (**	**0.15**	**255**	*e*P	Pg	00 41 38.3	+0.7
T0826				*i* S	Sg	00 41 42.6	+2.8
T0826	**Rio Saliceto (**	**0.15**	**255**	*e*P	Pg	00 41 38.3	+0.7
T0826				*i* S	Sg	00 41 42.6	+2.8
T0825	**Gonzaga (MN)**	**0.15**	**307**	⇑*i*P	Pg	00 41 39.1	+1.5
T0825				*i* S	Sg	00 41 44.7	+4.9
T0825	**Gonzaga (MN)**	**0.15**	**307**	*i* P	Pg	00 41 39.1	+1.5
T0825				*i* S	Sg	00 41 44.7	+4.9
T0800	**Massa Finalese**	**0.17**	**101**	⇑*e*P	Pg	00 41 38.4	+0.6
T0800				*i* S	Sg	00 41 42.8	+2.7
T0800	**Massa Finalese**	**0.17**	**101**	*e*P	Pg	00 41 38.4	+0.6
T0800				*i* S	Sg	00 41 42.9	+2.7
T0800				AML	AML		
	comp=E,4450μm,0.2s						
T0800				AML	AML		
	comp=N,2820μm,0.3s						
T0800				AML	AML		
	comp=E,4315μm,0.2s						
T0800				AML	AML		
	comp=N,2945μm,0.3s						
T0800				AML	AML		
	comp=E,4450μm,0.2s						
T0800				AML	AML		
	comp=N,2815μm,0.3s						
T0800				AML	AML		
	comp=E,4310μm,0.2s						
T0800				AML	AML		
	comp=N,2945μm,0.3s						
T0811	**Palata Pepoli**	**0.17**	**123**	*e*P	Pg	00 41 38.6	+0.6
T0811				*i* S	Sg	00 41 43.3	+2.9
T0811	**Palata Pepoli**	**0.17**	**123**	*e*P	Pg	00 41 38.6	+0.6
T0811				*i* S	Sg	00 41 43.3	+2.9
SBPO	**S.Benedetto Po**	**0.19**	**337**	*e*P	Pg	00 41 39.7	+1.5
SBPO	**S.Benedetto Po**	**0.19**	**337**	*e*P	Pg	00 41 39.7	+1.5
SBPO				AML	AML		
	comp=E,704μm,0.4s						
SBPO				AML	AML		
	comp=N,2365μm,1.4s						
SBPO				AML	AML		
	comp=E,704μm,0.4s						
SBPO				AML	AML		
	comp=N,2365μm,1.4s						
SBPO				AML	AML		
	comp=E,704μm,0.4s						
T0805	**Bondeno (FE)**	**0.22**	**80**	*e*P	Pg	00 41 39.4	+0.6
T0805	**Bondeno (FE)**	**0.22**	**80**	*e*P	Pg	00 41 39.4	+0.6
NOVE	**Novellara**	**0.23**	**249**	*e*P	Pg	00 41 39.8	+0.8
NOVE				*i* S	Sg	00 41 45.6	+3.5
NOVE	**Novellara**	**0.23**	**249**	*e*P	Pg	00 41 39.8	+0.8
NOVE				*i* S	Sg	00 41 45.6	+3.5
NOVE				AML	AML		
	comp=E,284μm,0.7s						
NOVE				AML	AML		
	comp=N,429μm,0.6s						
T0822	**Casumaru (Bond**	**0.24**	**101**	⇑*e*P	Pg	00 41 39.8	+0.7
T0822	**Casumaru (Bond**	**0.24**	**101**	*e*P	Pg	00 41 39.8	+0.7
T0822				AML	AML		
	comp=E,744μm,0.2s						
T0822				AML	AML		
	comp=N,718μm,0.7s						
T0822				AML	AML		
	comp=E,746μm,0.2s						
T0822				AML	AML		
	comp=N,720μm,0.7s						
T0822				AML	AML		
	comp=E,746μm,0.2s						
T0822				AML	AML		
	comp=N,720μm,0.7s						
T0803	**Dosso, Cento (**	**0.26**	**116**	*e*P	Pg	00 41 40.4	+0.8
T0803	**Dosso, Cento (**	**0.26**	**116**	*e*P	Pg	00 41 40.4	+0.8
T0823	**Castello D'Arg**	**0.27**	**137**	*e*P	Pb	00 41 40.9	-0.5
T0823				*i* S	Sb	00 41 46.7	+0.6
T0823	**Castello D'Arg**	**0.27**	**137**	*e*P	Pb	00 41 40.9	-0.5
T0823				*i* S	Sb	00 41 46.6	+0.5
T0817	**Loc. Veratica,**	**0.33**	**70**	*e*P	Pb	00 41 42.2	-0.3
T0817	**Loc. Veratica,**	**0.33**	**70**	*e*P	Pb	00 41 42.2	-0.3
ROVR	**Rover˜¤ Verone**	**0.77**	**3**	AML	AML		
	comp=E,62μm,0.8s						
ROVR				AML	AML		
	comp=N,131μm,0.4s						
ROVR				AML	AML		
	comp=E,62μm,0.8s						
ROVR				AML	AML		
	comp=N,131μm,0.4s						
ROVR				AML	AML		
	comp=E,62μm,0.8s						
ROVR				AML	AML		
	comp=N,131μm,0.4s						
SALO	**Salr**	**0.82**	**335**	AML	AML		
	comp=E,95μm,0.7s						
SALO				AML	AML		
	comp=N,124μm,1.4s						
SALO				AML	AML		
	comp=E,95μm,0.7s						
SALO				AML	AML		
	comp=N,124μm,1.4s						

*IDC **02** 00:42:55.7±1.7, 41°.12N×72°.83E, h0km, mb3.5/4, mb1 3.5/9, mb1mx3.4/73, mbtmp3.4/9, ML3.0/5, Error ellipse: s-maj=29.6km s-min=11.0km az=150.0*
*KRNET **02** 00:42:58.9±0.1, 41°.36N×72°.73E, h19km, mb3.9*
*SOME **02** 00:42:58.8, 41°.33N×72°.72E, h10km*
*NNC **02** 00:42:58.8±0.5, 41°.38N×72°.71E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=5.8km s-min=2.8km az=74.0*
*KNET **02** 00:43:00.5±0.5, 41°.53N×72°.73E, h8km±2km, ml3.3, Error ellipse: s-maj=5.6km s-min=2.3km az=143.0*
ISC 02 00:42:58.8±1.0, 41°.36N±0°.02×72°.74E±0°.02, h8km±7km, n71, σ1.9 67/117, mb3.4/4, 48C-22D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
ARSB	**Arslanbob**	**0.19**	**100**	⇑*i*P	Pg	00 43 02.9	+0.2
ARSB	baz=2.0						
				⇑*i*S	Sg	00 43 05.7	+0.3
TOKL	**Toktogul**	**0.59**	**10**	⇓*i*P	Pg	00 43 10.4	+0.2
TOKL	baz=10.0						
				⇓*i*S	Sg	00 43 18.3	+0.3
AML	**Almayashu**	**1.05**	**42**	P	Pg	00 43 18.7	-0.4
AML	121nm,0.2s,SNR=379						
	226nm,0.2s			⇑S	Sg	00 43 33.2	+0.4
AML	**Almayashu**	**1.05**	**42**	⇑*i*P	Pg	00 43 18.6	-0.4
AML	baz=43						
				⇑*i*S	Sg	00 43 33.0	+0.3
MNAS	**Manas**	**1.14**	**351**	⇓P	Pg	00 43 20.1	-0.6
MNAS	30nm,0.5s						
	107nm,0.3s			⇑S	Sg	00 43 35.5	-0.1
MNAS	**Manas**	**1.14**	**351**	⇑*i*P	Pg	00 43 20.5	-0.2
MNAS	baz=52						
				⇑*i*S	Sb	00 43 35.7	-0.1
MRKS	**Merke**	**1.43**	**15**	*e*P	Pn	00 43 25.4	+0.3
MRKS	141nm,0.5s						
	286nm,0.5s			*e*S	Sg	00 43 44.7	-0.2
SFK	**Sufi-Kurgan**	**1.46**	**156**	⇓P	Pn	00 43 25.2	-0.4
SFK	55nm,0.4s						
	448nm,0.3s			⇑S	Sg	00 43 46.8	+1.0
SFK	**Sufi-Kurgan**	**1.46**	**156**	⇓*i*P	Pn	00 43 25.9	+0.3
SFK	baz=56						
				⇓*i*S	Sg	00 43 46.1	+0.3
EKS2	**Erkin-Say**	**1.52**	**30**	P	Pb	00 43 26.9	-0.3
EKS2	7.1nm,0.2s,SNR=50						
	78nm,0.3s			⇓S	Sb	00 43 46.6	+0.1
EKS2	**Erkin-Say**	**1.52**	**30**	⇓*i*P	Pb	00 43 26.9	-0.3
EKS2	baz=31						
				⇓*i*S	Sb	00 43 46.7	+0.1
UCH	**Uchtor**	**1.59**	**56**	P	Pn	00 43 28.2	+0.7
UCH	242nm,0.2s,SNR=380						
	90nm,0.2s			⇑S	Sg	00 43 50.1	+0.2
UCH	**Uchtor**	**1.59**	**56**	⇑*i*P	Pn	00 43 28.2	+0.7
UCH	baz=57						
				⇑*i*S	Sb	00 43 49.4	+0.5
AAK	**Ala-Archa**	**1.83**	**45**	Pg	Pb	00 43 32.8	+0.3
AAK	65nm,0.3s,baz=203,slow=8.0,SNR=301						
	24nm,0.3s,baz=350,slow=22,SNR=16			Lg	Lg	00 43 57.9	
AAK	**Ala-Archa**	**1.83**	**45**	⇑Pn	Pb	00 43 32.6	+0.1
AAK	178nm,0.6s						
	122nm,0.5s			⇑Sn	Sg	00 43 57.9	+0.3
AAK	**Ala-Archa**	**1.83**	**45**	⇑P	Pb	00 43 32.7	+0.1
AAK	259nm,0.4s,SNR=151						
	133nm,0.2s			⇑S	Sg	00 43 57.6	0.0
AAK	**Ala-Archa**	**1.83**	**45**	⇑*i*P	Pb	00 43 32.5	0.0
AAK	baz=45						
				⇑*i*S	Sb	00 43 56.5	+0.8
DZA	**Taraz**	**1.86**	**326**	*e*P	Pg	00 43 34.2	-0.2
DZA	81nm,0.3s						
	781nm,0.3s			*e*S	Sg	00 43 59.8	+1.4
BTK	**Batken**	**1.95**	**229**	⇑*i*P	Pb	00 43 34.0	-0.6
BTK	baz=29						
				⇑*i*S	Sb	00 43 58.8	-0.3
DRK	**Karamyk**	**2.01**	**201**	⇑*i*P	Pb	00 43 35.1	-0.6
DRK	baz=1.0						
				⇑*i*S	Sb	00 44 01.1	+0.2
KZA	**Kyzart**	**2.01**	**68**	⇓P	Pb	00 43 36.0	+0.2
KZA	244nm,0.2s,SNR=139						
	176nm,0.4s			⇑S	Sg	00 44 04.0	+0.5
KZA	**Kyzart**	**2.01**	**68**	⇑*i*P	Pb	00 43 35.5	-0.3
KZA	baz=68						
				⇑*i*S	Sb	00 44 01.9	+0.7
FRU1	**Bishkek**	**2.02**	**44**	⇑*i*P	Pb	00 43 35.1	-0.7
FRU1	baz=44						
				⇑*i*S	Sb	00 44 01.5	+0.4
KBK	**Karagaybulak**	**2.10**	**51**	P	Pb	00 43 37.7	+0.6
KBK	226nm,0.4s,SNR=155						
	174nm,0.3s			⇓S	Sg	00 44 06.3	+0.2
KBK	**Karagaybulak**	**2.10**	**51**	⇑*i*P	Pb	00 43 36.1	-1.0
KBK	baz=51						
				⇑*i*S	Sb	00 44 03.2	-0.1
IUG	**Iuzhnay**	**2.17**	**292**	*e*P	Pb	00 43 38.7	+0.3
IUG	96nm,0.2s						
	923nm,0.4s			*e*S	Sg	00 44 07.2	-1.4
CHMS	**Chumysh**	**2.22**	**42**	⇓P	Pb	00 43 38.8	-0.3
CHMS	16nm,0.2s,SNR=64						
				⇓S	Sg	00 44 11.7	+2.0
CHMS	**Chumysh**	**2.22**	**42**	⇑*i*P	Pb	00 43 38.0	-1.1
CHMS	baz=42						
				⇑*i*S	Sb	00 44 05.5	-1.2
USP	**Ospenovka**	**2.31**	**34**	P	Pb	00 43 39.8	-0.9
USP	SNR=60						
				*e*S	Sg	00 44 20.4	+0.3
USP	**Ospenovka**	**2.31**	**34**	⇑*i*P	Pn	00 43 39.0	+1.9
USP	baz=34						
				⇑*i*S	Sb	00 44 08.5	-0.9
KK31	**Karatay Array**	**2.40**	**317**	Pn	Pb	00 43 40.5	-1.7
KK31	19nm,0.5s,baz=131,slow=12,SNR=123						
	48nm,0.4s,baz=134,slow=27,SNR=6.1			⇓Lg	Lg	00 44 14.2	
NRN	**Naryn**	**2.46**	**87**	⇑*i*P	Pn	00 43 40.7	+1.4
NRN	baz=88						
				⇑*i*S	Sn	00 44 11.7	+2.0
CHM	**Chimkent**	**2.53**	**293**	*e*P	Pg	00 43 46.4	-0.8
CHM	47nm,0.2s						
	519nm,0.4s			*e*S	Sg	00 44 20.4	+0.3
TAS	**Tashkent**	**2.60**	**271**	⇑Pn	Pn	00 43 42.5	+1.5
TAS	78nm,0.4s						
	1μm,0.6s			⇓Lg	Lg	00 44 21.8	
TAS	**Tashkent**	**2.60**	**271**	⇑*i*P	Pn	00 43 43.0	+1.9
	baz=70						

TAS				⇑iS	Sn	00 44 14.9	+2.1
	baz=70							
TKM2	**Tokmak 2**	**2.64**	**53**	⇑Pn	**Pn**	**00 43 43.6**	**+1.8**
	34nm,0.3s							
TKM2				⇓Lg	Lg	00 44 20.8	
	118nm,0.7s							
TKM2	**Tokmak 2**	**2.64**	**53**	P	**Pb**	**00 43 44.6**	**-1.7**
	SNR=54							
TKM2	**Tokmak 2**	**2.64**	**53**	⇑iP	**Pn**	**00 43 43.8**	**+2.0**
	baz=53							
TKM2				⇑iS	Sn	00 44 16.3	+2.3
	baz=53							
BOOM	**Boomskoye usch**	**2.64**	**64**	⇑iP	**Pn**	**00 43 44.3**	**+2.5**
	baz=64							
BOOM				⇑iS	Sn	00 44 16.5	+2.4
	baz=64							
BRLS	**Borolday**	**2.73**	**309**	eP	**Pb**	**00 43 47.5**	**-0.3**
	6.3nm,0.6s							
BRLS				eS	Sb	00 44 22.1	+0.7
	97nm,0.5s							
ULHL	**Ulahol**	**2.77**	**70**	P	**Pb**	**00 43 46.7**	**-1.8**
	SNR=44							
ULHL	**Ulahol**	**2.77**	**70**	⇑iP	**Pn**	**00 43 45.2**	**+1.7**
	baz=70							
ULHL				⇑iS	Sn	00 44 19.3	+2.1
	baz=70							
BMNS	**Besmoynak**	**2.79**	**50**	eP	**Pb**	**00 43 49.4**	**+0.5**
	36nm,0.3s							
BMNS				eS	Sb	00 44 25.8	+2.5
	539nm,0.6s							
KST	**Kastek**	**2.93**	**54**	eP	**Pb**	**00 43 52.4**	**+1.2**
	123nm,0.5s							
KST				eS	Sg	00 44 31.3	-1.5
	208nm,0.7s							
DGS	**Degeres**	**2.93**	**49**	eP	**Pb**	**00 43 52.5**	**+1.1**
	36nm,0.4s							
DGS				eS	Sg	00 44 31.1	-1.9
	137nm,0.5s							
IZV	**Izvestkoviy**	**3.33**	**58**	eP	**Pb**	**00 44 00.3**	**+2.2**
	77nm,0.6s							
IZV				eS	Sg	00 44 44.4	-1.4
	64nm,1.0s							
TNSS	**Tian-Shan**	**3.55**	**60**	eP	**Pg**	**00 44 04.7**	**-2.1**
	35nm,0.3s							
TNSS				eS	Sg	00 44 51.7	-1.1
	49nm,0.5s							
KNDC	**Almaty**	**3.65**	**58**	⇑Pg	**Pb**	**00 44 04.5**	**+1.1**
	25nm,0.4s							
KNDC				⇑Lg	Lg	00 44 54.2	
	143nm,0.8s							
KUU	**Kurty**	**3.67**	**45**	eP	**Pb**	**00 44 04.6**	**+0.8**
	12nm,0.3s							
KUU				eS	Sb	00 44 51.3	+2.8
	80nm,0.6s							
MDOK	**Medeo**	**3.67**	**59**	⇑Pg	**Pb**	**00 44 05.5**	**+1.5**
	17nm,0.5s							
MDOK				⇓Lg	Lg	00 44 53.3	
	125nm,1.2s							
MDOK	**Medeo**	**3.67**	**59**	eP	**Pb**	**00 44 05.3**	**+1.3**
	14nm,0.3s							
MDOK				eS	Sg	00 44 53.2	-3.5
	66nm,0.9s							
KTBS	**Karatobe**	**3.75**	**50**	eP	**Pb**	**00 44 06.7**	**+1.6**
	15nm,0.3s							
KTBS				eS	Sg	00 44 55.6	-3.4
	31nm,0.8s							
CHKK	**Chushkaly**	**4.01**	**50**	eP	**Pb**	**00 44 11.3**	**+1.8**
	4.0nm,0.2s							
CHKK				eS	Sg	00 45 03.7	-3.7
	77nm,0.3s							
KURS	**Kuram**	**4.55**	**60**	eP	**Pb**	**00 44 22.1**	**+3.2**
	13nm,0.6s							
KURS				eS	Sg	00 45 22.0	-2.8
	23nm,2.3s							
ARXS	**Arharly**	**4.71**	**51**	eP	**Pb**	**00 44 24.5**	**+3.0**
	26nm,0.6s							
ARXS				eS	Sg	00 45 29.9	-4.0
	66nm,0.6s							
KPKS	**Kokpek**	**4.88**	**62**	eP	**Pg**	**00 44 28.8**	**-3.4**
	31nm,0.4s							
KPKS				eS	Sg	00 45 32.9	-2.5
	52nm,0.5s							
MNBS	**Baschi**	**4.98**	**55**	eP	**Pb**	**00 44 29.1**	**+2.9**
	8.1nm,0.8s							
MNBS				eS	Sg	00 45 33.8	-4.9
	20nm,0.7s							
UZB	**Uzynbulak**	**4.99**	**67**	eP	**Pb**	**00 44 29.1**	**+2.7**
	6.9nm,0.5s							
UZB				eS	Sg	00 45 33.9	-5.2
	18nm,0.5s							
PDGK	**Podgornoye**	**5.38**	**66**	⇓Pg	**Pb**	**00 44 36.0**	**+3.0**
	5.0nm,0.6s							
PDGK				⇓Lg	Lg	00 45 46.9	
	36nm,0.8s							
OTUK	**Ortayu**	**6.89**	**358**	⇓Pn	**Pn**	**00 44 39.3**	**-0.7**
	5.8nm,1.1s							
OTUK				⇓Lg	Lg	00 46 35.6	
	31nm,0.7s							
MKAR	**Makanchi Array**	**8.76**	**48**	Pn	**Pn**	**00 45 07.6**	**+2.0**
	0.3nm,0.3s,baz=237,slow=16,SNR=9.4							
MKAR				Lg	Lg	00 47 45.1	
	0.3nm,0.3s,baz=241,slow=22,SNR=4.3							
KURBB	**Kurchatov Arra**	**10.10**	**22**	Pn	**Pn**	**00 45 23.1**	**-0.8**
	0.1nm,0.3s,baz=214,slow=13,SNR=4.4							
KURBB	**Kurchatov Arra**	**10.10**	**22**	⇓Lg	Lg	00 48 18.2	
	16nm,0.7s							
KURK	**Kurchatov**	**10.21**	**22**	⇓Lg	Lg	00 48 21.9	
	15nm,1.1s							
BVAR	**Borovoye Array**	**11.78**	**353**	Pn	**Pn**	**00 45 47.4**	**+0.5**
	0.1nm,0.3s,baz=174,slow=14,SNR=2.9							
AKTO	**Aktyubinsk**	**13.67**	**317**	Pn	**Pn**	**00 46 12.4**	**-0.4**
	0.1nm,0.3s,baz=149,slow=18,SNR=1.7							
ZALV	**Zalesovo Beam**	**14.97**	**29**	Pn	**Pn**	**00 46 31.4**	**+1.0**
	0.2nm,0.3s,baz=195,slow=10,SNR=2.3							
BRTR	**Keskin Array B**	**29.59**	**280**	P	**P**	**00 49 03.6**	**-0.7**
	0.4nm,0.8s,baz=94,slow=9.1,SNR=3.6							
GERES	**GERESS Array B**	**41.41**	**301**	P	**P**	**00 50 45.5**	**0.0**
	0.1nm,0.3s,baz=64,slow=9.1,SNR=3.6							
TORD	**Torodi Ar. Bea**	**67.23**	**268**	P	**P**	**00 53 51.4**	**-2.4**
	0.3nm,0.6s,baz=45,slow=5.0,SNR=4.2							
YKA	**Yellowknife Ar**	**76.33**	**4**	P	**P**	**00 54 46.8**	**-0.9**
	0.2nm,0.4s,baz=351,slow=5.9,SNR=4.1							

*SJA **02** 00:50:13.3±1.3,32°.81S×71°.87W,h20km±18km,ML3.6, MW3.7*
*GUC **02** 00:50:15.2±0.6,32°.53S×71°.51W,h34km±4km,ML3.7*
ISC 02 00:50:12.0±2.1,**32°.76S**±0°.05×**71°.96W**±0°.09,**h17**km±11km, **n21**,σ1§**86**/29,**1C-6D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROC1	**El Roble**	**0.83**	**106**	⇓eP	**Pg**	**00 50 28.6**	**+0.3**
ROC1				eS	**Sg**	**00 50 38.5**	**-0.7**
ROCH	**El Roble**	**0.83**	**105**	⇓iP	**Pg**	**00 50 28.5**	**+0.3**
ROCH				iS	**Sg**	**00 50 38.4**	**-0.8**
ROCH				IAML		00 50 38.9	
	comp=N,5μm,0.4s						
PEL	**Peldehue**	**1.14**	**110**	⇓iP	**Pb**	**00 50 32.9**	**-0.5**
PEL				iS	**Sb**	**00 50 46.2**	**-1.7**
PEL				IAML		00 50 49.6	
	comp=E,4μm,0.3s						
RCDM	**Rinconada Maip**	**1.21**	**127**	eP	**Pn**	**00 50 34.2**	**-0.1**
RCDM				eS	**Sb**	**00 50 48.9**	**-1.1**
CLCH	**Cerro Calan**	**1.36**	**118**	⇓iP	**Pn**	**00 50 37.3**	**+1.0**
CLCH				iS	**Sn**	**00 50 53.8**	**-0.2**
FCH	**Farellones**	**1.52**	**112**	⇓iP	**Pn**	**00 50 39.5**	**+0.8**
FCH				iS	**Sn**	**00 50 57.5**	**-0.7**
FCH				IAML		00 50 59.1	
	comp=E,2μm,0.2s						
AUSP	**Uspallata**	**2.24**	**77**	eP	**Pb**	**00 50 51.5**	**-0.8**
GO05	**HualaæØ**	**2.25**	**179**	⇓eP	**Pn**	**00 50 50.8**	**+2.3**
RTLS	**Leoncito**	**2.45**	**68**	eP	**Pn**	**00 50 54.5**	**+2.9**
RTLS				IAML		00 51 34.5	
	comp=Z,141nm,0.4s						
ARCO	**CERRO ARCO**	**2.55**	**93**	eP	**Pb**	**00 50 56.9**	**-0.6**
ARCO				IAML		00 51 06.4	
	comp=Z,176nm,0.4s						
ASAL	**Salagasta**	**2.64**	**87**	eP	**Pb**	**00 50 58.6**	**-0.4**
AAGR	**Agrelo**	**2.66**	**98**	eP	**Pn**	**00 50 57.2**	**+3.0**
GO04	**Tololo Observa**	**2.76**	**21**	⇑iP	**Pn**	**00 50 55.8**	**0.0**
GO04				iS	**Sn**	**00 51 27.2**	**-1.7**
TLL	**Tololo Astrono**	**2.77**	**21**	eP	**Pn**	**00 50 55.9**	**+0.1**
TLL				eS	**Sn**	**00 51 27.5**	**-1.5**
TLL				IAML		00 51 38.5	
	comp=N,739nm,0.6s						
RTCV	**Cerro Valdivia**	**3.03**	**74**	eP	**Pn**	**00 51 03.1**	**+3.8**
RTLL	**Cerro Villicun**	**3.29**	**65**	eP	**Pn**	**00 51 05.5**	**+2.7**
AMOG	**MOGNA**	**3.46**	**59**	eP	**Pn**	**00 51 08.1**	**+2.8**
ACAN	**Cantantal**	**4.06**	**84**	eP	**Pn**	**00 51 15.7**	**+2.2**
AGUA	**GUANDACOL**	**4.42**	**43**	eP	**Pn**	**00 51 21.1**	**+2.7**
VCA	**Vinchina**	**5.15**	**40**	eP	**Pn**	**00 51 30.9**	**+2.4**
VCA				IAML		00 52 50.1	
	comp=Z,132nm,0.6s						
MRA	**San Martin**	**5.28**	**88**	eP	**Pn**	**00 51 31.7**	**+1.4**
MRA				IAML		00 52 41.4	
	comp=Z,38nm,0.7s						

*TAP **02** 00:51:11.6,23°.77N×122°.76E,h15km±1km,ML2.6,D*
*JMA **02** 00:51:12.4±0.2,23°.78N×122°.83E,h51km,M2.5*
ISC 02 00:51:09.8±1.1,**23°.73N**±0°.06×**122°.81E**±0°.03,**h17**km±9km, **n18**,σ0§**70**/33,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.73**	**10**	P	**Pn**	**00 51 26.1**	**+0.7**
JYNG				eS	**Sn**	**00 51 35.7**	**-0.5**
YOJ	**Yonaguni jima**	**0.75**	**14**	iP	**Pn**	**00 51 26.1**	**+0.4**
	baz=17						
YOJ				iS	**Sn**	**00 51 36.6**	**-0.1**
	baz=17						
YOJ	**Yonaguni jima**	**0.75**	**14**	P	**Pn**	**00 51 26.1**	**+0.4**
YOJ				S	**Sn**	**00 51 35.8**	**-0.9**
HATJ	**Hateruma jima**	**0.97**	**70**	P	**Pn**	**00 51 29.7**	**+1.0**
HATJ				eS	**Sg**	**00 51 41.2**	**-0.2**
EOS1	**EOS1**	**1.02**	**323**	eP	**Pn**	**00 51 30.0**	**+0.6**
	baz=323						
EOS1				eS	**Sn**	**00 51 44.0**	**+0.6**
	baz=323						
IRIF	**Iriomote-Funau**	**1.04**	**54**	P	**Pn**	**00 51 30.3**	**+0.7**
IRIF				S	**Sg**	**00 51 43.2**	**-0.3**
NACB	**Ninganchiao**	**1.19**	**292**	eP	**Pg**	**00 51 33.0**	**+0.1**
	baz=290						
JKRS	**Kuro-shima**	**1.21**	**65**	P	**Pg**	**00 51 33.9**	**+0.7**
JKRS				S	**Sb**	**00 51 47.6**	**-0.1**
HGSD	**Ruisui**	**1.29**	**260**	eP	**Pg**	**00 51 34.3**	**-0.4**
	baz=257						
HGSD				eS	**Sb**	**00 51 50.1**	**+0.1**
	baz=257						
JIJ	**Ishigaki jima**	**1.38**	**62**	P	**Pb**	**00 51 35.0**	**-0.1**
JIJ				S	**Sn**	**00 51 50.7**	**-1.4**
EHY	**Hungye**	**1.38**	**261**	eP	**Pg**	**00 51 36.2**	**-0.2**
	baz=258						
EHY				eS	**Sg**	**00 51 53.9**	**-0.5**
	baz=258						
YULB	**Yu-li**	**1.43**	**257**	eP	**Pg**	**00 51 37.0**	**-0.3**
	baz=254						
YULB				eS	**Sg**	**00 51 55.2**	**-0.7**
	baz=254						
FULB	**Fuli**	**1.49**	**249**	eP	**Pb**	**00 51 37.0**	**0.0**
	baz=247						
FULB				eS	**Sn**	**00 51 54.2**	**-0.7**
	baz=247						
VWDT	**VWDT**	**1.53**	**271**	eP	**Pb**	**00 51 38.3**	**+0.6**
	baz=269						
YHNB	**Yeheng**	**1.61**	**306**	eP	**Pg**	**00 51 39.9**	**-0.8**
	baz=305						
JISG	**Ishigakijimahi**	**1.62**	**58**	P	**Pn**	**00 51 37.7**	**+0.1**
JISG				eS	**Sn**	**00 51 56.6**	**-1.5**
JTJ	**Tarama**	**1.95**	**62**	P	**Pn**	**00 51 43.1**	**+0.9**
JTJ				eS	**Sn**	**00 52 05.3**	**-1.1**
CHN1	**Nanshi**	**2.16**	**256**	eP	**Pb**	**00 51 49.5**	**+1.0**
	baz=254						
CHN1				eS	**Sb**	**00 52 15.3**	**+0.2**
	baz=254						

IDC 02 01:11:23.4±2.1,**6°.68S**×**129°.40E**,**h0**km,**mb3.3**/1, **mb1 3.5**/4,**ms1mx3.3**/47,**mbtmp3.3**/4,**ML3.2**/3,**Error ellipse: s-maj=91.6km s-min=27.7km az=76.0**,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.93**	**198**	Pn	Pn	01 14 15.8	+1.0
	0.1nm,0.3s,baz=18,slow=12,SNR=9.3						
FITZ				Sn	Sn	01 16 18.8	-10
	0.1nm,0.3s,baz=164,slow=19,SNR=3.3						
WRA	**Warramunga Arr**	**14.03**	**160**	Pn	Pn	01 14 43.5	-0.1
	0.1nm,0.3s,baz=341,slow=13,SNR=7.2						
WRA				Sn	Sn	01 17 08.8	-11
	0.2nm,0.3s,baz=333,slow=22,SNR=6.4						
ASAR	**Alice Springs**	**17.44**	**166**	P	Pn	01 15 27.5	-0.7
	0.0nm,0.3s,baz=349,slow=9.0,SNR=3.4						
MKAR	**Makanchi Array**	**67.63**	**327**	P	P	01 22 22.2	0.0
	0.1nm,0.4s,baz=134,slow=6.2,SNR=3.0						

DJA 02 01:35:56.2±1.0,**8°S**±5°×**10°6E**±°,**h33**km±12km,**M3.5**/7, **MLv3.5**/7,**Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.73**	**7**	P	Pb	01 36 10.6	-0.1
SKJI				S	Sn	01 36 18.8	-1.6
DBJI	**Dramaga**	**1.21**	**13**	P	Pn	01 36 17.2	+0.3
DBJI				S	Sn	01 36 31.8	-0.3
CISI	**Cisompet, Garu**	**1.35**	**82**	P	Pn	01 36 17.1	-1.6
CISI				S	Sn	01 36 32.0	-3.5
CGJI	**Cibinong**	**1.36**	**325**	P	Pn	01 36 19.1	+0.2
CGJI				S	Sn	01 36 36.2	+0.4
LEM	**Lembang**	**1.46**	**52**	P	Pb	01 36 21.6	-1.2
LEM				S	Sb	01 36 40.1	-1.0
CMJI	**Cimerak**	**1.96**	**91**	P	Pn	01 36 26.9	-0.3
CMJI				S	Sn	01 36 46.4	-4.2
KPJI	**Karang Pucung**	**2.47**	**81**	P	Pn	01 36 35.9	+1.7
KPJI				S	Sn	01 37 04.2	+0.9

MAN 02 01:39:46.0,9°.43N×**126°.12E,h19**km,**mb4.2,ML3.0,MS2.6, 1D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.67**	**227**	eP	Pb	01 39 58.8	-0.2
BUTP				eS	Sn	01 40 10.8	+0.3
SCPH	**Surigao**	**0.71**	**300**	⇓eP	Pb	01 39 59.8	0.0
SCPH				eS	Sn	01 40 12.8	+1.2
MSLP	**Maasin**	**1.43**	**300**	eP	Pb	01 40 12.7	+0.6
MSLP				eS	Sg	01 40 34.9	+2.7
BUKP	**Musuan**	**1.86**	**214**	eP	Pn	01 40 17.2	+0.2
BUKP				eS	Sn	01 40 41.0	+1.1
BESP	**Borongan**	**2.26**	**343**	eP	Pn	01 40 23.6	+1.2
BESP				eS	Sn	01 40 50.2	+0.4
CNP	**Catarman**	**3.38**	**335**	eP	Pn	01 40 38.6	+0.8
CNP				eS	Sn	01 41 16.5	-1.0

*ISCJB **02** 01:47:20.5±0.4,45°.33N±0°.09×142°.50E±0°.10, h317km±5km,mb3.1/8,Error ellipse: s-maj=14.4km s-min=9.7km az=25.8*
*JMA **02** 01:47:20.8±0.3,45°.49N×142°.56E,h311km±3km,M3.5*
*IDC **02** 01:47:21.3±0.7,45°.80N×142°.50E,h287km±20km,mb2.9/8, mb1 3.2/9,mb1mx2.9/72,mbtmp3.5/9,Error ellipse: s-maj=41.6km s-min=13.6km az=1.0*
ISC 02 01:47:21.2±0.7,**45°.29N**±0°.09×**142°.51E**±0°.08,**h313**km±7km, **n27**,σ1§**34**/36,**mb3.2**/8,**Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSE	**Soyaes**	**0.33**	**171**	P	**Pn**	**01 48 00.8**	**-0.3**
JWK2	**Keihoku**	**0.44**	**274**	P	**Pn**	**01 48 00.9**	**-0.2**
JWK2				eS	**S**	**01 48 31.6**	**-1.4**
JRR	**Rishiri**	**0.86**	**260**	P	**Pn**	**01 48 02.2**	**-0.2**
JSS	**Shosan**	**1.00**	**208**	P	**Pn**	**01 48 03.6**	**+0.5**
JYG	**Yagishiri**	**1.16**	**222**	P	**Pn**	**01 48 04.0**	**+0.2**
ASAJ	**Asahikawa**	**1.17**	**177**	P	**Pn**	**01 48 04.8**	**+0.8**
	11nm,0.3s,baz=315,slow=6.6,SNR=83						
ASAJ				S	**S**	**01 48 39.2**	**+1.2**
	1.1nm,0.3s,baz=53,slow=31,SNR=8.5						
ASAJ	**Asahikawa**	**1.17**	**177**	P	**Pn**	**01 48 04.7**	**+0.8**
ASAJ				eS	**S**	**01 48 38.8**	**+0.8**
JMP	**Maruseppu**	**1.42**	**154**	P	**Pn**	**01 48 06.0**	**+0.7**
JMP				eS	**S**	**01 48 41.0**	**+0.6**
JKK2	**Kamakawa 2**	**1.42**	**173**	P	**Pn**	**01 48 06.3**	**+1.0**
JKK2				eS	**S**	**01 48 41.9**	**+1.4**
JTKR	**Abashiri--Toko**	**1.65**	**142**	P	**Pn**	**01 48 07.6**	**+0.9**
JAR	**Ashorobuto**	**2.19**	**155**	P	**Pn**	**01 48 11.7**	**+1.0**
JAR				eS	**S**	**01 48 51.0**	**+0.8**
JEW	**Eniwo**	**2.56**	**198**	P	**Pn**	**01 48 15.4**	**+1.5**
JCH	**Churui**	**2.74**	**167**	eS	**S**	**01 48 56.0**	**-2.9**
JAK	**Akkeshi**	**2.78**	**145**	P	**Pn**	**01 48 16.0**	**+0.2**
JAK				eS	**S**	**01 48 57.8**	**-1.7**
NEM2	**Nemuro 2**	**3.01**	**129**	P	**Pn**	**01 48 17.4**	**-0.6**
NEM2				eS	**S**	**01 49 00.9**	**-2.5**
JNBK	**Urakawa-nobuka**	**3.01**	**177**	P	**Pn**	**01 48 19.2**	**+1.2**
JKB	**Kayabe**	**3.56**	**198**	P	**Pn**	**01 48 23.4**	**-0.2**
JKB				eS	**S**	**01 49 11.1**	**-2.4**
USRK	**Ussuriysk Ar.**	**7.57**	**265**	P	**Pn**	**01 49 08.3**	**-1.3**
	0.1nm,0.3s,baz=57,slow=11,SNR=3.9						
KLR	**Kul'dur**	**8.31**	**302**	P	**Pn**	**01 49 17.2**	**-1.4**
	0.0nm,0.3s,baz=100,slow=9.9,SNR=5.3						
SONM	**Songino Array**	**24.82**	**289**	P	**P**	**01 52 15.7**	**+0.1**
	0.9nm,0.5s,baz=79,slow=9.6,SNR=6.4						
MKAR	**Makanchi Array**	**40.93**	**294**	P	**P**	**01 54 35.7**	**+2.0**
	0.2nm,0.5s,baz=83,slow=7.0,SNR=2.4						
KURBB	**Kurchatov Arra**	**41.99**	**301**	P	**P**	**01 54 41.3**	**-0.8**
	0.3nm,0.4s,baz=71,slow=9.0,SNR=4.8						
ILAR	**Eielson Array**	**42.23**	**37**	P	**P**	**01 54 43.1**	**-0.7**
	0.3nm,0.6s,baz=279,slow=8.2,SNR=4.8						
INK	**Inuvik**	**46.76**	**30**	P	**P**	**01 55 17.2**	**-2.0**
	0.9nm,0.3s,baz=297,slow=4.5,SNR=6.5						
YKA	**Yellowknife Ar**	**56.34**	**33**	P	**P**	**01 56 29.1**	**-0.6**
	0.6nm,0.8s,baz=304,slow=6.5,SNR=5.6						
NVAR	**Mina Array Bea**	**69.52**	**56**	P	**P**	**01 57 58.1**	**+1.5**
	0.3nm,0.5s,baz=294,slow=4.6,SNR=3.2						
TXAR	**Lajitas Array**	**84.47**	**53**	P	**P**	**01 59 20.7**	**+1.4**
	0.5nm,0.8s,baz=320,slow=3.8,SNR=4.8						

DJA 02 01:48:03.5±0.9,**9°S**±4°×**11°3E**±°,**h24**km±9km,**M3.5**/12, **MLv3.5**/12,**South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMJI	**Gumukmas**	**1.28**	**22**	P	Pn	01 48 24.6	-1.3
GMJI				S	Sn	01 48 40.4	-1.9
JAGI	**Jajag, Banyuwa**	**1.53**	**50**	P	Pn	01 48 29.7	+0.3
JAGI				S	Sb	01 48 50.2	-0.1
BLJI	**Banyuglugur**	**1.82**	**20**	P	Pn	01 48 33.7	+0.3
BLJI				S	Sn	01 48 56.3	+0.6
PWJI	**Pagerwojo**	**1.84**	**321**	P	Pn	01 48 31.7	-2.0
PWJI				S	Sn	01 48 54.6	-1.6
PCJI	**Pacitan**	**2.18**	**305**	P	Pn	01 48 36.6	-1.7
IGBI	**Denpasar**	**2.24**	**73**	P	Pn	01 48 39.7	+0.5
NGJI	**Ngawi**	**2.57**	**324**	P	Pn	01 48 42.4	-1.2
NGJI				S	Sn	01 49 15.5	+1.4
SRBI	**Singaraja**	**2.61**	**58**	P	Pn	01 48 43.2	-1.0
UGM	**Wanagama**	**2.87**	**302**	P	Pn	01 48 48.8	+1.0
UGM				S	Sn	01 49 23.1	+1.4

*IDC **02** 01:53:24.2±1.3,0°.81S×133°.22E,h0km,mb3.3/3, mb1 3.6/5,mb1mx3.4/53,mbtmp3.4/5,ML3.5/2,MS2.9/1, Ms1 2.9/1,ms1mx2.3/27,Error ellipse: s-maj=22.1km s-min=17.6km az=18.0*
*ISCJB **02** 01:53:28.0±0.9,0°.69S±0°.08×133°.21E±0°.07,h33km, mb3.4/3,MS2.9/1,Error ellipse: s-maj=11.6km s-min=9.4km az=35.7*
*DJA **02** 01:53:29.0±0.5,1°S±5°×13°3E±°,h10km,M3.7/4,MLv3.7/4*
ISC 02 01:53:29.5±1.2,**0°.8S**±0°.1×**133°.25E**±0°.07,**h35**km,**n9**, σ1§**09**/10,**mb3.5**/3,**Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**1.19**	**129**	P	**Pn**	**01 53 49.9**	**+0.2**
RKPI				S	**Sn**	**01 54 06.1**	**+1.4**
SIJI	**Sorong**	**1.99**	**267**	Pg	**Pn**	**01 54 01.1**	**+0.4**
	29nm,0.3s,baz=213,slow=22,SNR=184						
SIJI				Lg	Lg	01 54 25.4	
	19nm,0.3s,baz=252,slow=20,SNR=4.7						
FAKI	**Fak Fak**	**2.37**	**205**	P	**Pn**	**01 54 06.4**	**+0.4**
FAKI				S	**Sn**	**01 54 34.8**	**+0.9**
FITZ	**Fitzroy Crossi**	**18.79**	**203**	P	**P**	**01 57 45.2**	**-0.8**
	0.1nm,0.3s,baz=21,slow=14,SNR=4.5						
WRA	**Warramunga Arr**	**19.10**	**177**	P	**P**	**01 57 47.6**	**-1.9**
	0.1nm,0.3s,baz=356,slow=12,SNR=7.4						
ASAR	**Alice Springs**	**22.79**	**178**	P	**P**	**01 58 28.2**	**-1.1**
	0.8nm,0.4s,baz=2.9,slow=11,SNR=14						
KSRS	**Korea Array**	**38.33**	**353**	LR	LR	02 16 20.3	
	comp=Z,18nm,19.4s,baz=146,slow=36						
MKAR	**Makanchi Array**	**64.96**	**324**	P	**P**	**02 04 06.1**	**+0.2**
	0.2nm,0.5s,baz=124,slow=7.2,SNR=2.7						
KURBB	**Kurchatov Arra**	**69.03**	**326**	P	**P**	**02 04 31.7**	**+0.1**
	0.2nm,0.6s,baz=120,slow=5.5,SNR=2.9						

*ISK **02** 02:04:35.9,39°.95N×39°.26E,h16km,ML2.2/3*
*ISCJB **02** 02:04:36.6±0.5,39°.96N±0°.02×39°.26E±0°.05,h8km±6km, Error ellipse: s-maj=6.1km s-min=4.0km az=167.6*
*CSEM **02** 02:04:36.3±0.2,39°.96N×39°.24E,h12km,ML2.8,Error ellipse: s-maj=3.7km s-min=3.3km az=82.0*
*DDA **02** 02:04:38.5,40°.11N×39°.09E,h7km,Ml2.8*
ISC 02 02:04:36.6±0.8,**39°.97N**±0°.03×**39°.27E**±0°.03,**h17**km±6km, **n25**,σ0§**63**/39,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KELT	**Kelkit**	**0.17**	**357**	iP	**Pg**	**02 04 41.4**	**+0.2**
KELT				iS	**Sg**	**02 04 44.4**	**0.0**
KELT	**Kelkit**	**0.17**	**357**	P	**Pg**	**02 04 41.4**	**+0.2**
KELT				S	**Sg**	**02 04 44.4**	**0.0**
EUZM	**Uzumlu**	**0.42**	**129**	iS	**Sb**	**02 04 51.6**	**-0.2**
EUZM	**Uzumlu**	**0.42**	**129**	S	**Sb**	**02 04 51.6**	**-0.2**
ERZN	**Erzincan**	**0.52**	**138**	PG	**Pg**	**02 04 46.5**	**-0.5**
ERZN				SG	**Sg**	**02 04 54.1**	**+0.1**
REFA	**Refahiye_ERZ¨**	**0.70**	**214**	iP	Pb	02 04 44.2	-6.1
REFA				iS	Sb	02 04 50.4	-9.4
BAYT	**Ayd¨–ntepe-Bay**	**0.79**	**58**	PG	**Pg**	**02 04 52.3**	**+0.3**

CGA2	Cerro Gallo 2	4.31	308	eP	Pn	02 07 50.5 +1.3

NNC 02 02:16:50.7±3.8, 36°.54N×70°.30E, h0km, mb3.5, mpv3.1, 4C-2D, Error ellipse: s-maj=34.7km s-min=24.6km az=144.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	4.29	35	⇑P	Pn	02 17 57.3	-0.2
	1.3nm,0.3s						
SFK				⇑S	Sn	02 18 50.4	+2.1
	4.2nm,0.3s						
MNAS	Manas	6.18	15	⇑P	Pn	02 18 24.3	+0.9
MNAS				⇓S	Sn	02 19 35.6	+0.8
	1.7nm,0.4s						
KK31	Karatay Array	6.56	1	P	Pn	02 18 28.2	-0.2
	0.4nm,0.2s,baz=174,slow=12,SNR=18						
KK31				⇑S	Sn	02 19 46.4	+2.4
	0.9nm,0.5s,baz=194,slow=26,SNR=6.7						
AAK	Ala-Archa	6.90	27	⇓S	Sn	02 19 51.4	-1.2
	3.6nm,0.8s						
AB31	Akbulak array	14.78	333	P	Pn	02 20 20.0	-0.9
	0.4nm,0.3s,baz=158,slow=13,SNR=8.8						

MAN 02 02:24:16.1, 10°.11N×126°.04E, h13km, mb4.3, ML3.1, MS2.9, 2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	Surigao	0.63	239	⇓eP	Pb	02 24 28.8	-0.2
SCPH				eS	Sn	02 24 40.3	-0.4
MSLP	Maasin	1.16	271	eP	Pb	02 24 37.3	-0.7
MSLP				eS	Sn	02 24 54.1	+0.3
BUTP	Butuan	1.20	200	eP	Pn	02 24 37.2	-1.5
BUTP				eS	Sg	02 24 55.2	+0.2
PLP	Palo	1.48	315	⇓eP	Pn	02 24 41.1	-1.4
PLP				i S	Sb	02 25 02.5	+0.4
BESP	Borongan	1.59	338	eP	Pn	02 24 43.1	-1.0
BESP				eS	Sg	02 25 07.6	+0.1
BUKP	Musuan	2.42	204	eP	Pn	02 24 56.2	+0.9
BUKP				eS	Sb	02 25 29.2	0.0

*SJA **02** 02:37:08.5±0.9, 24°.26S×64°.55W, h78km±6km, ML3.2, MW3.4*
*ISCJB **02** 02:37:09.5±2.0, 24°.28S±0°.05×64°.43W±0°.07, h25km±17km, mb3.8/1, Error ellipse: s-maj=11.3km s-min=7.4km az=166.9*
*IDC **02** 02:37:11.2±7.0, 23°.71S×64°.06W, h0km, mb3.9/1, mb1 3.4/3, mb1mx3.3/39, mbtmp3.4/3, ML3.2/2, Error ellipse: s-maj=186.6km s-min=21.7km az=41.0*

ISC 02 02:37:09.4±2.0, 24°.24S±0°.04×64°.53W±0°.07, h15km±13km, n9, σ1§30/16, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.01	242	eP	Pb	02 37 29.2	+0.6
SLA				eS	Sn	02 37 43.5	+0.3
SLA				IAML		02 37 45.5	
	comp=Z,658nm,0.5s						
HJA	Humahuaca	1.31	322	eP	Pn	02 37 33.0	-0.4
HJA				eS	Sg	02 37 52.1	+0.2
HJA				IAML		02 37 56.1	
	comp=Z,1μm,0.4s						
YJA	Yavi	2.25	336	eP	Pn	02 37 46.6	+0.2
YJA				eS	Sn	02 38 15.1	+0.9
YJA				IAML		02 38 24.3	
	comp=Z,69nm,0.4s						
FSA	Cafayete	2.28	215	eP	Pn	02 37 47.3	+0.6
FSA				eS	Sn	02 38 13.3	-1.2
FSA				IAML		02 38 19.0	
	comp=Z,63nm,0.5s						
AHML	Horco Molle	2.63	196	eP	Pn	02 37 52.0	+0.6
AHML				eS	Sg	02 38 35.0	+0.9
AHML				IAML		02 38 43.7	
	comp=Z,57nm,0.6s						
CYA	Choya	4.33	195	eP	Pn	02 38 15.2	+0.4
CYA				eS	Sg	02 39 26.1	-2.5
CPUP	Villa Florida	6.84	109	Pn	Pn	02 38 48.9	-0.2
	comp=Z,0.2nm,0.3s,baz=286,slow=14,SNR=5.5						
CPUP				Pg	Pg	02 39 13.1	-7.2
	comp=Z,0.8nm,0.3s,baz=286,slow=15,SNR=7.3						
CPUP				Lg	Lg	02 40 40.8	
	comp=Z,2.6nm,0.3s,baz=195,slow=13,SNR=5.2						
LPAZ	La Paz	8.61	336	Pn	Pn	02 39 12.9	-1.1
	comp=Z,0.1nm,0.3s,baz=135,slow=5.7,SNR=3.4						
LPAZ				Sn	Sn	02 40 48.7	-2.4
	comp=Z,0.1nm,0.3s,baz=253,slow=17,SNR=2.3						
TORD	Torodi Ar. Bea	74.56	68	P	P	02 48 49.5	+1.4
	comp=Z,0.8nm,0.7s,baz=252,slow=6.3,SNR=8.0						

*IDC **02** 02:40:21.8±0.6, 0°.68S×138°.73E, h0km, mb4.0/13, mb1 4.3/18, mb1mx4.1/50, mbtmp4.1/18, ML4.1/3, MS3.6/28, Ms1 3.6/28, ms1mx3.4/50, Error ellipse: s-maj=20.5km s-min=12.7km az=75.0*
*NEIC **02** 02:40:23.3±0.3, 0°.71S×138°.77E, h10km, mb4.4/8, Error ellipse: s-maj=8.4km s-min=5.5km az=93.0*
*ISCJB **02** 02:40:24.9±0.3, 0°.78S±0°.04×138°.73E±0°.04, h33km, mb4.2/28, MS3.6/22, Error ellipse: s-maj=6.5km s-min=5.2km az=151.9*

ISC 02 02:40:27.3±0.5, 0°.78S±0°.06×138°.76E±0°.07, h35km, n68, σ1§36/53, mb4.3/27, MS3.6/22, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	Jayapura	2.59	132	Pn	Pn	02 41 05.5	-1.3
	6.5nm,0.3s,baz=298,slow=4.9,SNR=21						
JAY				Sn	Sn	02 41 35.8	-1.4
	33nm,0.3s,baz=137,slow=19,SNR=9.9						
JAY				LR	LR	02 41 43.4	
	comp=Z,596nm,19.7s,baz=66,slow=30						
FAKI	Fak Fak	6.85	252	eP	Pn	02 42 04.1	-1.2
SIJI	Sorong	7.50	269	Pn	Pn	02 42 12.2	-2.0
	1.0nm,0.3s,baz=120,slow=20,SNR=3.0						
SIJI				Sn	Sn	02 43 38.1	0.0
	1.2nm,0.3s,baz=287,slow=19,SNR=1.7						
SIJI				LR	LR	02 44 53.0	
	comp=Z,761nm,21.2s,baz=72,slow=36						
PMG	Port Moresby	11.97	136	Pn	Pn	02 43 15.5	0.0
	1.6nm,0.3s,baz=332,slow=5.3,SNR=6.7						
PMG				LR	LR	02 48 07.9	
	comp=Z,172nm,19.8s,baz=258,slow=39						
PMG	Port Moresby	11.97	136	ePn	Pn	02 43 15.3	-0.2
MTN	Manton Dam	14.17	212	ePn	Pn	02 43 45.1	-0.5
DAV	Davao City (W)	15.29	301	LR	LR	02 49 22.5	
	comp=Z,73nm,19.5s,baz=158,slow=36						
GUMO	Guam	15.51	23	LR	LR	02 49 33.1	
	comp=Z,173nm,19.1s,baz=208,slow=36						
SOEI	Soe	16.95	238	ePn	P	02 44 22.7	-1.0
	78nm,0.9s						
BATI	Baumata	17.69	238	P	Pn	02 44 29.5	-1.6
	4.2nm,0.3s,baz=66,slow=19,SNR=2.1						
BATI				LR	LR	02 52 59.8	
	comp=Z,257nm,18.4s,baz=90,slow=43						
WRAB	Tennant Creek	19.52	193	eP	P	02 44 51.2	-0.6
	14nm,0.6s						
WB2	Warramunga Arr	19.52	193	eP	P	02 44 51.8	-0.1
	34nm,0.8s						
WRA	Warramunga Arr	19.53	193	P	P	02 44 51.6	-0.3
	1.7nm,0.3s,baz=14,slow=11,SNR=53						
WRA				S	S	02 48 15.0	-16
	0.0nm,0.3s,baz=15,slow=23,SNR=5.0						
WRA				LR	LR	02 52 37.4	
	comp=Z,285nm,20.6s,baz=45,slow=38						
CTAO	Charters Tower	20.54	160	eP	P	02 45 04.2	+1.3
	14nm,0.9s						
FITZ	Fitzroy Crossi	21.50	216	P	P	02 45 13.2	-0.1
	11nm,0.9s,baz=52,slow=9.9,SNR=8.4						
FITZ				LR	LR	02 54 19.9	
	comp=Z,174nm,20.1s,baz=34,slow=39						
HNR	Honiara	22.77	113	LR	LR	02 52 30.5	
	comp=Z,68nm,20.2s,baz=282,slow=32						
AS01	Alice Springs	23.22	191	eP	P	02 45 30.6	-0.8
AS31	Alice Springs	23.23	191	eP	P	02 45 31.4	-0.2
	8.7nm,0.9s						
ASAR	Alice Springs	23.23	191	P	P	02 45 31.3	-0.2
	9.5nm,0.8s,baz=19,slow=11,SNR=75						
ASAR				S	S	02 49 43.9	+2.5
	5.0nm,0.9s,baz=14,slow=24,SNR=8.8						
ASAR				LR	LR	02 54 52.5	
	comp=Z,210nm,18.2s,baz=22,slow=37						

MBWA	Marble Bar	27.48	221	eP	P	02 46 12.2 +1.8
JOW	Kunigami	29.26	341	LR	LR	02 55 21.2
	comp=Z,75nm,21.6s,baz=282,slow=31					
STKA	Stephens Creek	31.04	175	P	P	02 46 42.1 +0.2
	2.8nm,0.7s,baz=339,slow=8.0,SNR=6.9					
STKA				LR	LR	03 01 07.9
	comp=Z,199nm,18.3s,baz=3.7,slow=40					
LEM	Lembang	31.64	258	LR	LR	03 00 38.4
	comp=Z,117nm,19.2s,baz=66,slow=38					
JHJ	Hachijo jima 2	33.73	2	LR	LR	02 57 36.4
	comp=Z,118nm,18.8s,baz=162,slow=31					
JNU	Nakatsue	34.53	348	LR	LR	02 59 37.5
	comp=Z,62nm,18.8s,baz=119,slow=34					
MJAR	Matsushiro Arr	37.14	359	LR	LR	03 00 50.7
	comp=Z,84nm,19.7s,baz=145,slow=33					
NJ2	Nanjing	37.70	332	eP	P	02 47 40.5 +0.9
NJ2				pmax	pmax	
	comp=Z,19nm,0.7s					
KSAR	Wonju Array Be	39.34	346	P	P	02 47 52.5 -0.7
KSRS	Korea Array	39.35	346	P	P	02 47 52.5 -0.7
	comp=Z,0.5nm,0.5s,baz=153,slow=11,SNR=3.1					
KSRS				LR	LR	03 02 35.9
	comp=Z,60nm,18.5s,baz=166,slow=34					
PSI	Prapat	39.98	275	LR	LR	03 05 47.3
	comp=Z,122nm,18.1s,baz=88,slow=38					
KMI	Kunming	43.33	309	P	P	02 48 30.0 +3.5
KMI				pmax	pmax	
	comp=Z,5.0nm,0.6s					
CMAR	Chiang Mai Arr	43.55	298	P	P	02 48 27.4 -0.8
	comp=Z,1.2nm,0.3s,baz=125,slow=7.8,SNR=2.5					
CMAR				LR	LR	03 08 12.2
	comp=Z,19nm,18.1s,baz=136,slow=38					
ASAJ	Asahikawa	44.83	4	LR	LR	03 07 07.5
	comp=Z,58nm,20.0s,baz=54,slow=36					
USRK	Ussuriysk Ar.	45.19	353	LR	LR	03 04 28.4
	comp=Z,74nm,18.6s,baz=132,slow=32					
CD2	Chengdu	45.81	317	P	P	02 48 45.4 -0.6
CD2				pmax	pmax	
	comp=Z,10.0nm,0.5s					
CN2	Changchun	45.96	347	eP	P	02 48 46.4 -0.5
CN2				pmax	pmax	
	comp=Z,10.0nm,0.6s					
HHC	Hu-ho-hao-te	48.26	332	eP	P	02 49 05.7 +0.7
HHC				pmax	pmax	
	comp=Z,9.0nm,0.7s					
HHC				pmax	pmax	
	comp=Z,27nm,5.2s					
LZH	Lanzhou	48.99	322	eP	P	02 49 13.8 +3.0
LZH				pP	pP	02 49 17.4 -3.9
LZH				sP	sP	02 49 20.3 -5.1
LZH				pmax	pmax	
	comp=Z,20nm,1.2s					
LZH				pmax	pmax	
	comp=Z,120nm,4.8s					
KLR	Kul'dur	50.18	354	P	P	02 49 18.1 -1.4
	comp=Z,0.1nm,0.5s,baz=262,slow=3.0,SNR=4.7					
GTA	Gaotai	53.57	323	eP	P	02 49 52.5 +7.4
GTA				pP	pP	02 49 57.0 +1.4
GTA				sP	sP	02 49 59.5 -0.2
GTA				S	S	02 57 30.3 +14
GTA				pmax	pmax	
	comp=Z,2.0nm,1.0s					
GTA				pmax	pmax	
	comp=Z,27nm,5.6s					
GTA				LR	LR	
	comp=N,120nm,20.6s					
GTA				LR	LR	
	comp=E,120nm,15.5s					
GTA				LR	LR	
	comp=Z,120nm,16.5s					
ULN	Ulaanbaatar	55.75	335	eP	P	02 50 00.6 -0.2
	comp=Z,3.9nm,1.0s					
PETK	Petropavlovsk-	55.99	14	LR	LR	03 13 16.8
	comp=Z,45nm,20.1s,baz=181,slow=35					
SONM	Songino Array	56.01	334	P	P	02 50 01.6 -1.0
	comp=Z,0.4nm,0.5s,baz=154,slow=7.9,SNR=2.2					
SONM				LR	LR	03 15 06.0
	comp=Z,34nm,18.6s,baz=250,slow=37					
YAK	Yakutsk	63.03	355	eP	P	02 50 50.2 -0.3
WMQ	Urumqi	63.55	321	P	P	02 50 55.7 +1.2
WMQ				pmax	pmax	
	comp=Z,22nm,0.8s					
MK01	Makanchi Array	68.29	322	eP	P	02 51 25.7 +0.8
MKAR	Makanchi Array	68.31	322	P	P	02 51 24.3 -0.7
	comp=Z,0.6nm,0.8s,baz=117,slow=7.1,SNR=4.4					
KSH	Kashi	69.81	313	P	P	02 51 37.7 +3.1
KSH				pmax	pmax	
	comp=Z,260nm,4.7s					
ZALV	Zalesovo Beam	70.31	330	P	P	02 51 36.0 -1.1
	comp=Z,0.4nm,0.3s,baz=103,slow=6.4,SNR=3.3					
KURK	Kurchatov	72.18	325	P	P	02 51 48.1 -0.5
KURBB	Kurchatov Arra	72.20	324	P	P	02 51 48.1 -0.5
	comp=Z,0.8nm,0.9s,baz=112,slow=5.4,SNR=3.8					
VNDA	Vanda	77.68	175	P	P	02 52 21.2 +1.4
	comp=Z,0.6nm,0.6s,baz=332,slow=5.6,SNR=9.2					
VNDA				LR	LR	03 26 57.7
	comp=Z,96nm,18.1s,baz=347,slow=36					
BVAR	Borovoye Array	77.77	325	P	P	02 52 20.1 -0.7
	comp=Z,2.2nm,0.7s,baz=101,slow=7.6,SNR=12					
BRVK	Borovoye	77.84	325	eP	P	02 52 20.1 -1.0
	comp=Z,3.9nm,0.6s					
NRIK	Noril'sk	77.90	344	LR	LR	03 28 58.1
	comp=Z,34nm,18.9s,baz=110,slow=38					
COLD	Coldfoot	83.45	22	eP	P	02 52 52.9 +1.9
	comp=Z,2.6nm,1.0s					
CCB	Clear Creek Bu	83.66	25	eP	P	02 52 51.2 -0.8
	comp=Z,3.4nm,1.0s					
MAW	Mawson	83.92	202	LR	LR	03 27 30.9
	comp=Z,59nm,20.1s,baz=61,slow=34					
ILAR	Eielson Array	84.07	25	P	P	02 52 52.7 -1.4
	comp=Z,0.8nm,0.8s,baz=258,slow=4.8,SNR=9.3					
IL1	Eielson Array	84.07	25	eP	P	02 52 51.7 -2.4
DAWY	Dawson	87.12	26	eP	P	02 53 10.3 +0.9
INK	Inuvik	89.87	22	eP	P	02 53 19.3 -2.9
	comp=Z,1.0nm,0.6s					
YBH	Yreka Blue Hor	96.89	48	LR	LR	03 29 36.8
	comp=Z,40nm,21.0s,baz=280,slow=30					
SPITS	Spitsbergen Ar	97.11	350	LR	LR	03 36 29.1
	comp=Z,37nm,21.6s,baz=345,slow=35					
YKA	Yellowknife Ar	98.33	27	P	Pdif	02 54 01.5 +0.3
	comp=Z,0.2nm,0.6s,baz=279,slow=5.0,SNR=3.0					
VYHS	Vyhne	110.00	322	ePDIFF	Pdif	02 54 53.1 -0.3
LPAZ	La Paz	148.50	124	PKPbc	PKPbc	03 00 12.6 +0.4
	comp=Z,1.2nm,1.1s,baz=237,slow=4.7,SNR=2.8					
CPUP	Villa Florida	148.89	151	PKPbc	PKPbc	03 00 12.1 -0.1
	comp=Z,1.2nm,0.9s,baz=22,slow=19,SNR=2.2					

*ISCJB **02** 02:46:31.9±0.9, 3°.85N±0°.03×75°.94W±0°.03, h12km±7km, mb3.5/2, Error ellipse: s-maj=5.0km s-min=3.6km az=39.9*
*RSNC **02** 02:46:32.7±1.0, 3°.84N×75°.95W, h10km±3km, ML3.1*
*IDC **02** 02:46:34.9±6.9, 3°.90N×75°.89W, h91km±47km, mb3.1/2, mb1 3.4/2, mb1mx2.9/40, mbtmp3.4/2, Error ellipse: s-maj=73.6km s-min=41.3km az=18.0*

ISC 02 02:46:29.0±1.1, 3°.93N±0°.03×75°.93W±0°.03, h11km±10km, n20, σ1§30/33, 2C, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOTC	Yotoco, Valle	0.42	277	⇑iP	Pn	02 46 40.9	-0.3
YOTC				eS	Sb	02 46 47.1	+2.0
YOTC				i		02 46 48.8	
	comp=Z,2μm,0.1s						
ANIL	Santa Ana	0.76	43	eP	Pn	02 46 47.2	+1.2
ANIL				eS	Sn	02 46 59.4	+1.6
HORQ	Saladito	0.83	237	eP	Pb	02 46 46.0	+0.4
HORQ				eS	Sg	02 46 56.4	+0.5
HORQ				i		02 46 57.3	
	comp=Z,1μm,0.3s						
PRAC	Prado	1.06	102	⇑iP	Pn	02 46 51.8	+1.9
PRAC				eS	Sn	02 47 06.8	+2.1
MARP	Paez Belalcaza	1.08	181	eP	Pn	02 46 50.7	+0.2
MARP				eS	Sb	02 47 04.2	-0.1
MARP				i		02 47 06.1	
	comp=Z,561nm,0.4s						
BETC	Betania	1.33	159	eP	Pb	02 46 54.1	0.0
BETC				eS	Sg	02 47 11.2	-0.9
MALC	Bahia Malaga	1.41	273	eP	Pg	02 46 56.8	+0.8
MALC				eS	Sn	02 47 16.0	+2.8
POPC	Popayan, Colom	1.57	208	eP	Pn	02 46 57.8	+0.6
POPC				eS	Sn	02 47 17.6	-0.1
POPC				i		02 47 18.8	
	comp=Z,216nm,0.2s						
PCON	Cinco Dias	1.66	196	eP	Pg	02 47 00.6	-0.4
PCON				eS	Sn	02 47 21.4	+1.1
PCON				i		02 47 26.4	
	comp=Z,144nm,0.3s						
ROSC	El Rosal	1.84	61	P	Pg	02 47 05.3	+0.9
	comp=Z,3.9nm,0.3s,baz=240,slow=16,SNR=9.7						
ROSC				S	Sg	02 47 28.5	+0.3
	comp=Z,9.2nm,0.3s,baz=207,slow=23,SNR=9.6						
ROSC	El Rosal	1.84	61	eP	Pg	02 47 04.7	+0.4
SOTA	Rioblanco	1.91	201	eP	Pb	02 47 04.0	-0.2
SOTA				i		02 47 38.6	
	comp=Z,72nm,0.7s						
NORC	Norcasia	1.93	33	eP	Pg	02 47 05.4	-0.7
SJAC	San Juan de Ar	2.08	108	eP	Pb	02 47 07.0	+0.2
SJAC				eS	Sb	02 47 32.6	-0.2
VILC	Villavicencio,	2.23	85	eP	Pb	02 47 09.1	-0.5
VILC				eS	Sb	02 47 38.0	+0.6
VILC				i		02 47 41.5	
	comp=Z,59nm,0.4s						
HELC	Santa Helena	2.28	10	eP	Pb	02 47 10.6	+0.1
HELC				eS	Sg	02 47 40.5	-1.9
CHIC	Chingaza	2.30	72	eP	Pb	02 47 10.8	0.0
FLOC	Florencia	2.35	173	eP	Pn	02 47 09.0	+1.3
FLOC				eS	Sn	02 47 37.7	+1.1
FLOC				i		02 47 45.1	
	comp=Z,80nm,0.4s						
YKA	Yellowknife Ar	65.04	341	P	P	02 57 05.5	-3.7
	comp=Z,0.4nm,0.5s,baz=137,slow=6.0,SNR=7.5						
TORD	Torodi Ar. Bea	77.07	77	P	P	02 58 18.9	-4.3
	comp=Z,0.2nm,0.5s,baz=283,slow=5.0,SNR=4.1						

*ISCJB **02** 02:52:00.5±0.8, 7°.45N±0°.07×81°.06W±0°.03, h10km, Error ellipse: s-maj=10.6km s-min=3.9km az=8.4*
*UCR **02** 02:52:01.7±1.6, 7°.39N×81°.03W, h24km±40km, MD4.8*

ISC 02 02:52:02.2±1.5, 7°.5N±0°.1×81°.08W±0°.04, h10km, n23, σ1§21/29, 2C-2D, Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	Volcan	2.04	309	⇑eP	Pn	02 52 34.0	-2.8
BRU2				eS	Sn	02 53 03.5	+1.0
BCIP	Isla Barro Col	2.05	37	⇓iP	Pn	02 52 35.4	-1.4
BCIP				eS	Sn	02 53 01.9	-0.5
BCIP	Isla Barro Col	2.05	37	eP	Pn	02 52 35.8	-1.0
UPA	Univ. de Panam	2.11	46	⇓iP	Pn	02 52 36.7	-0.9
UPA				eS	Sn	02 53 03.4	-0.5
EDSV	San Vito	2.28	305	eP	Pn	02 52 39.1	-0.9
EDSV				eS	Sn	02 53 08.5	+0.2
ACR	Cerro Adams	2.36	299	⇑eP	Pn	02 52 39.8	-1.3
ACR				eS	Sn	02 53 10.8	+0.6
PTJ1	Puerto Jim¨ne	2.43	295	eS	Sn	02 53 11.5	-0.2
EDBA	Buenos Aires	2.72	307	eP	Pn	02 52 45.9	-0.2
EDPN	Palmar Norte	2.76	302	eS	Sn	02 53 21.8	+1.8
EDDO	Dominical	3.25	302	eP	Pn	02 52 53.7	+0.3
BUS	Buena Vista	3.34	308	eP	Pn	02 52 53.8	-1.1
URSC	Urasca	3.53	311	eP	Pn	02 52 57.6	+0.3
URSC				eS	Sn	02 53 40.8	+1.6
QCR1	Quepos	3.60	302	eP	Pn	02 52 57.7	-0.4
VTR0	Volcan Turrial	3.64	313	eP	Pn	02 52 59.2	+0.2
CAPC	Capurgana	3.85	73	eP	Pn	02 53 01.3	-0.3
SOLC	Bahia Solano	3.86	109	eP	Pn	02 53 00.2	-1.5
HDC	Heredia	3.89	310	eP	Pn	02 53 03.4	+1.2
CGA2	Cerro Gallo 2	4.17	307	eP	Pn	02 53 05.9	-0.2
SRA1	San Ram¨‡n	4.22	307	eP	Pn	02 53 08.2	+1.4
JTS	JuntasAbangare	4.72	306	eP	Pn	02 53 12.4	-1.2
MOTC	Monteria, Cord	5.50	76	eP	Pn	02 53 26.4	+2.1
SJCC	San Jacinto, C	6.29	67	eP	Pn	02 53 36.8	+1.6
PTBC	PUERTO BERRIO,	6.64	98	eP	Pn	02 53 40.7	+0.8

*IDC **02** 02:54:03.7±1.2, 0°.93S×133°.31E, h0km, mb3.8/3, mb1 4.0/5, mb1mx3.6/51, mbtmp3.8/5, ML3.9/2, MS3.0/1, Ms1 3.0/1, ms1mx2.4/56, Error ellipse: s-maj=19.4km s-min=12.2km az=63.0*
*ISCJB **02** 02:54:08.5±0.8, 0°.72S±0°.06×133°.27E±0°.04, h33km, mb3.8/3, Error ellipse: s-maj=9.0km s-min=6.4km az=3.0*
*DJA **02** 02:54:10.2±0.8, 1°.5±5°.×13°.3E±°, h37km±13km, M4.3/7, mB4.6/1, mb4.6/3, MLv4.1/7, Mw(mB)3.8/1*

ISC 02 02:54:09.3±1.1, 0°.81S±0°.08×133°.27E±0°.05, h35km, n12, σ1§81/13, mb3.8/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKPI	Ransiki, Papua	1.14	127	P	Pn	02 54 29.7	+0.9
RKPI				S	Sn	02 54 45.9	+2.6
SIJI	Sorong	2.00	268	Pg	Pn	02 54 41.5	+0.8
	168nm,0.3s,baz=70,slow=5.2,SNR=357						
SIJI				Lg	Lg	02 55 08.6	
	114nm,0.3s,baz=270,slow=20,SNR=12						
FAKI	Fak Fak	2.33	206	P	Pn	02 54 46.5	+1.4
FAKI				S	Sn	02 55 14.6	+2.1
BAKI	Biak	2.86	98	P	Pn	02 54 52.3	-0.2
BAKI				S	Sn	02 55 27.5	+1.7
MSAI	Masohi	5.01	240	P	Pn	02 55 25.5	+3.4
NLAI	Namlea	6.62	249	P	Pn	02 55 48.2	+4.0
JAY	Jayapura	7.62	103	LR	LR	02 59 04.9	
	comp=Z,114nm,19.6s,baz=291,slow=40						
FITZ	Fitzroy Crossi	18.74	203	P	Pn	02 58 24.2	-1.7
	0.4nm,0.3s,baz=25,slow=8.5,SNR=13						
WRA	Warramunga Arr	19.04	177	P	Pn	02 58 27.8	-1.7
	0.3nm,0.3s,baz=357,slow=13,SNR=20						
WRA				S	Sn	03 01 59.1	-2.8
	0.2nm,0.3s,baz=350,slow=22,SNR=5.2						
ASAR	Alice Springs	22.73	178	P	P	02 59 07.6	-0.8
	2.2nm,0.7s,baz=5.1,slow=10,SNR=19						
MKAR	Makanchi Array	65.02	324	P	P	03 04 46.7	+0.7
	0.9nm,0.5s,baz=114,slow=8.0,SNR=13						
KURBB	Kurchatov Arra	69.09	326	P	P	03 05 11.3	-0.5
	0.7nm,0.7s,baz=117,slow=6.1,SNR=8.6						

*ISCJB **02** 03:38:29.4±1.5, 43°.31N±0°.10×39°.48E±0°.05, h10km±14km, Error ellipse: s-maj=16.7km s-min=5.7km az=7.2*
*CSEM **02** 03:38:29.2, 43°.06N×39°.51E, h7km, ML3.6*
*DDA **02** 03:38:29.2, 43°.06N×39°.51E, h7km, Ml3.6*

ISC 02 03:38:29.6±2.5, 43°.23N±0°.09×39°.52E±0°.04, h5km±21km, n24, σ1§70/48, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHVG	Ch'k'valeri	1.95	104	P	Pb	03 39 05.9	+0.3
CHVG				S	Sg	03 39 33.2	+0.9
MACK	Trabzon	2.29	175	i P	Pn	03 39 08.5	+0.5
MACK				i S	Sb	03 39 38.3	-1.7
MACK	Trabzon	2.29	175	P	Pn	03 39 08.5	+0.5
MACK				S	Sb	03 39 38.3	-1.7
DBOC	Borcka	2.47	139	i P	Pn	03 39 10.6	+0.2
DBOC				i S	Sn	03 39 41.5	+0.6
DBOC	Borcka

CUZAR	Zara_SIVAS	3.58	202	*i* P	Pn	03 39 27.9	+2.0
CUZAR				*i* S	Sb	03 40 14.1	-3.2
CUZAR	Zara_SIVAS	3.58	202	P	Pn	03 39 27.9	+2.0
CUZAR				S	Sb	03 40 14.1	-3.2
BOYT	Boyabat	3.87	244	*i* P	Pn	03 39 30.2	+0.5
BOYT				*i* S	Sn	03 40 13.7	-1.8

IDC 02 03:42:50.8±2.6, 13°.17S×167°.22E, h0km, mb3.7/4, mb1 4.0/4, mb1mx3.6/52, mbtmp3.7/4, Error ellipse: s-maj=119.4km s-min=30.0km az=136.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	29.98	227	P	P	03 49 02.1	+1.0
	1.5nm,0.4s,baz=46,slow=11,SNR=6.6						
WRA	Warramunga Arr	32.19	253	P	P	03 49 20.4	-0.4
	0.2nm,0.4s,baz=90,slow=8.5,SNR=2.6						
ASAR	Alice Springs	33.21	247	P	P	03 49 29.2	-0.5
	0.8nm,0.5s,baz=75,slow=9.1,SNR=13						
ILAR	Eielson Array	85.06	18	P	P	03 55 28.0	0.0
	0.2nm,0.4s,baz=234,slow=4.0,SNR=6.0						

IDC 02 03:44:29.4±0.9, 28°.99N×53°.00E, h0km, mb3.8/12, mb1 3.8/14, mb1mx3.6/62, mbtmp3.7/14, ML3.6/2, Error ellipse: s-maj=23.0km s-min=19.1km az=46.0
ISCJB 02 03:44:31.0±0.4, 28°.94N±0°.04×52°.89E±0°.07, h16km, mb3.7/12, Error ellipse: s-maj=9.1km s-min=3.4km az=152.6
TEH 02 03:44:31.6, 29°.00N×52°.96E, h23km, ML3.2
CSEM 02 03:44:32.8±0.4, 29°.05N×53°.01E, h10km, ML3.5, Error ellipse: s-maj=9.8km s-min=8.7km az=48.0
DSN 02 03:44:36.5±1.5, 28°.68N×52°.88E, h16km, ML3.5/5, Error ellipse: s-maj=34.9km s-min=9.5km az=33.0
OMAN 02 03:44:38.0±3.6, 28°.12N×52°.27E, h23km, Error ellipse: s-maj=21.9km s-min=20.9km az=125.0

ISC 02 03:44:32.3±0.6, 29°.01N±0°.04×52°.97E±0°.05, h16km, n47, σ1§38/55, mb3.7/12, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GHIR	Ghir-Karzin	0.73	179	*e*Pg	Pn	03 44 49.1	+1.0
JHRM	Jahrom	0.74	133	*e*Pg	Pg	03 44 47.4	+0.7
JHRM				*e*		03 45 14.1	
	comp=Z,99nm,0.2s						
SHI	Shiraz	0.74	328	*e*Pg	Pg	03 44 47.1	+0.2
SHI				*e*		03 45 09.6	
	comp=Z,14μm,0.4s						
AHBU	AHRAM	1.48	265	*e*Pg	Pg	03 45 01.2	+0.5
IMEH	Mehriz	2.76	31	*e*Pn	Pn	03 45 18.3	+2.1
IMEH				*e*		03 45 43.9	
	comp=Z,958nm,0.3s						
IRAM	Ramesheh	2.83	350	*e*Pn	Pn	03 45 18.9	+1.8
IRAM				*e*		03 46 23.7	
	comp=Z,1μm,0.4s						
ISAD	Sadrabad	2.96	12	*e*Pn	Pn	03 45 20.3	+1.4
ISAD				*e*		03 46 17.8	
	comp=Z,1μm,0.5s						
IBRJ	Brojen	3.24	333	*e*Pn	Pn	03 45 24.4	+1.6
IBRJ				*e*		03 46 28.2	
	comp=Z,547nm,0.4s						
GENO	Geno	3.25	119	*e*Pn	Pn	03 45 23.7	+0.8
GENO				*e*		03 46 39.3	
	comp=Z,99nm,0.5s						
KHGB	Koh Gabri	3.34	65	*e*Pn	Pn	03 45 25.7	+1.6
KHGB				*e*		03 46 23.6	
	comp=Z,99nm,0.4s						
KRBR	Kerman	3.44	73	*e*Pn	Pn	03 45 26.5	+0.9
ICHK	Chekchek	3.45	21	*e*Pn	Pn	03 45 27.5	+1.9
ICHK				*e*		03 45 36.8	
	comp=Z,1μm,0.3s						
IZEF	Zefreh	3.91	352	*e*Pn	Pn	03 45 32.9	+0.9
IZEF				*e*		03 45 53.3	
	comp=Z,292nm,0.3s						
CHMN	Cheshme madani	4.08	77	*e*Pn	Pn	03 45 36.2	+1.9
CHMN				*e*		03 46 47.3	
	comp=Z,99nm,0.7s						
BANOM	Banah	4.27	135	P	Pn	03 45 39.2	+2.4
	SNR=15						
BANOM	Banah	4.27	135	*i* P	Pn	03 45 38.9	+2.2
	SNR=15						
BANOM				S	Sn	03 46 26.3	0.0
BANOM	Banah	4.27	135	P	Pn	03 45 38.9	+2.2
	SNR=15						
BANOM				S	Sn	03 46 26.3	0.0
IKLH	Kolahrood	4.45	345	*e*Pn	Pn	03 45 42.3	+2.8
IKLH				*e*		03 47 12.3	
	comp=Z,312nm,0.6s						
MSFE	Esma-Masafi	4.62	141	*i* P	Pn	03 45 43.8	+2.3
	SNR=9.2						
MSFE				S	Sn	03 46 35.9	+1.0
MSFE	Esma-Masafi	4.62	141	P	Pn	03 45 44.4	+2.9
	SNR=9.2						
MSFE				S	Sn	03 46 35.9	+1.0
MDH	Madha	4.74	141	*i* P	Pn	03 45 44.9	+1.7
	SNR=7.4						
MDH	Madha	4.74	141	P	Pn	03 45 44.9	+1.7
	SNR=7.4						
MDH				S	Sn	03 46 38.3	+0.4
ASUD	Al Ashush, Dub	4.85	154	*i* P	Pn	03 45 45.6	+0.9
	SNR=14						
ASUD	Al Ashush, Dub	4.85	154	P	Pn	03 45 45.6	+0.9
	SNR=14						
UOSS	Minazif	4.98	144	P	Pn	03 45 48.9	+2.5
	SNR=17						
UOSS				S	Sn	03 46 42.9	-0.7
UOSS	Minazif	4.98	144	*i* P	Pn	03 45 47.3	+0.9
	SNR=6.6						
UOSS	Minazif	4.98	144	P	Pn	03 45 47.3	+0.9
	SNR=6.6						
UOSS				S	Sn	03 46 42.9	-0.7
HATD	Hatta, Dubai	5.04	145	P	Pn	03 45 48.9	+1.6
HATD	Hatta, Dubai	5.04	145	P	Pn	03 45 48.9	+1.6
ALNE	Al Ain	5.53	153	P	Pn	03 45 54.0	-0.1
SOHO	SOHO	5.81	146	S	Sn	03 47 03.7	-0.6
TABS	Tabas	5.83	36	*e*Pn	Pn	03 45 58.4	+0.2
WSAR	Wadi Sarin	7.68	137	Pn	Pn	03 46 23.1	-0.5
	comp=Z,2.6nm,0.3s,baz=2.2,slow=12,SNR=16						
WSAR				Sn	Sn	03 47 48.2	-2.1
	comp=Z,0.4nm,0.3s,baz=351,slow=19,SNR=2.9						
MHTO	MHTO	9.19	149	P	Pn	03 46 45.2	+1.0
	SNR=17						
BRTR	Keskin Array B	19.16	309	P	P	03 48 55.6	+0.4
	comp=Z,0.1nm,0.3s,baz=123,slow=10,SNR=3.4						
AKTO	Aktyubinsk	21.73	9	P	P	03 49 22.9	0.0
	comp=Z,1.7nm,0.7s,baz=193,slow=12,SNR=6.2						
BVAR	Borovoye Array	27.21	23	P	P	03 50 14.9	-0.3
	comp=Z,0.5nm,0.5s,baz=190,slow=7.3,SNR=4.8						
MKAR	Makanchi Array	28.92	44	P	P	03 50 30.4	-0.2
	comp=Z,0.4nm,0.7s,baz=223,slow=7.9,SNR=4.3						
KURBB	Kurchatov Arra	28.92	35	P	P	03 50 31.3	+0.8
	comp=Z,1.1nm,1.1s,baz=234,slow=9.3,SNR=7.0						
ZALV	Zalesovo Beam	34.01	34	P	P	03 51 14.5	-0.7
	comp=Z,1.3nm,0.4s,baz=243,slow=9.4,SNR=6.8						
FINES	FINESS Array B	37.01	339	P	P	03 51 40.7	-0.2
	comp=Z,2.1nm,0.8s,baz=148,slow=9.7,SNR=5.4						
HFS	Hagfors	40.79	331	P	P	03 52 12.0	-0.6
	comp=Z,2.5nm,0.7s,baz=134,slow=10,SNR=5.7						
TORD	Torodi Ar. Bea	50.00	263	P	P	03 53 26.5	+0.3
	comp=Z,0.8nm,0.7s,baz=60,slow=7.8,SNR=7.5						
ILAR	Eielson Array	85.24	8	P	P	03 57 06.8	-1.1
	comp=Z,0.2nm,0.7s,baz=328,slow=3.2,SNR=4.0						
YKA	Yellowknife Ar	88.27	354	P	P	03 57 21.2	-1.5
	comp=Z,0.6nm,0.8s,baz=3.7,slow=4.8,SNR=11						
WRA	Warramunga Arr	92.29	111	P	P	03 57 42.2	0.0
	comp=Z,0.1nm,0.6s,baz=311,slow=4.2,SNR=2.5						
ASAR	Alice Springs	93.79	115	P	P	03 57 47.9	-1.1
	comp=Z,0.3nm,0.7s,baz=312,slow=5.8,SNR=3.3						

NNC 02 03:56:53.5±0.9, 38°.49N×69°.45E, h0km, mb3.6, mpv3.2, 6C-8D, Error ellipse: s-maj=7.3km s-min=5.9km az=50.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.50	63	⇓Pn	Pn	03 57 49.0	-0.5
	1.2nm,0.3s						
SFK				⇑Pg	Pb	03 57 57.6	+1.1
	3.7nm,0.5s						
SFK				⇓Lg	Lg	03 58 44.4	
	27nm,0.9s						
MNAS	Manas	4.62	29	⇑Pn	Pn	03 58 05.8	+1.0
	4.1nm,0.4s						
MNAS				⇓Lg	Lg	03 59 20.3	
	9.0nm,0.8s						
KK31	Karatay Array	4.68	10	Pn	Pn	03 58 05.8	+0.4
	0.6nm,0.4s,baz=200,slow=14,SNR=8.9						
KK31				⇓Pg	Pb	03 58 18.1	+1.6
	5.0nm,0.8s,baz=192,slow=20,SNR=8.4						
KK31				⇑Sn	Sn	03 59 01.3	+0.8
	0.9nm,0.3s,baz=202,slow=30,SNR=3.6						
KK31				⇑Lg	Lg	03 59 22.0	
	4.0nm,0.4s,baz=192,slow=31,SNR=8.6						
AAK	Ala-Archa	5.65	41	⇑Pg	Pb	03 58 37.1	+3.9
	5.0nm,1.1s						
AAK				⇓Sn	Sn	03 59 26.1	+1.5
	2.3nm,0.6s						
AAK				⇑Lg	Lg	03 59 53.6	
	6.1nm,1.0s						
TKM2	Tokmak 2	6.44	45	⇓Pn	Pn	03 58 29.4	-0.3
	1.3nm,0.5s						
TKM2				⇓Pg	Pb	03 58 50.6	+4.1
	2.8nm,0.9s						
TKM2				⇓Sn	Sn	03 59 45.5	+1.5
	3.8nm,0.9s						
TKM2				Lg	Lg	04 00 18.6	
	3.5nm,0.9s						

IDC 02 04:17:20.9±0.8, 29°.08N×52°.96E, h0km, mb4.0/25, mb1 4.1/29, mb1mx4.0/61, mbtmp4.0/29, ML4.0/4, MS2.8/3, Ms1 2.9/3, ms1mx2.4/60, Error ellipse: s-maj=18.7km s-min=13.1km az=1.0
TEH 02 04:17:21.5, 29°.01N×52°.94E, h13km, ML3.7
ISCJB 02 04:17:22.2±0.2, 29°.04N±0°.03×52°.91E±0°.04, h16km, mb4.0/39, MS2.8/2, Error ellipse: s-maj=5.0km s-min=3.3km az=148.1
NEIC 02 04:17:24.7±0.0, 28°.99N×53°.05E, h46km, mb4.0/8, ML3.6(THR), MN3.7(TEH), After THR.
THR 02 04:17:24.7±0.4, 28°.99N×53°.05E, h46km±4km, ML3.6
CSEM 02 04:17:26.8±0.1, 29°.06N×52°.97E, h40km, mb4.1/11, Error ellipse: s-maj=5.9km s-min=4.0km az=56.0
DSN 02 04:17:27.7±1.1, 29°.01N×53°.29E, h16km, ML3.7/7, Error ellipse: s-maj=27.2km s-min=6.6km az=41.0

ISC 02 04:17:23.6±0.4, 29°.06N±0°.03×52°.99E±0°.04, h16km, n118, σ1§39/123, mb4.0/39, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHI	Shiraz	0.72	325	*e*Pg	Pg	04 17 36.2	-1.5
SHI				*e*		04 18 01.7	
	comp=Z,23μm,0.2s						
SHI	Shiraz	0.72	325	*e*Pg	Pg	04 17 37.6	-0.1
JHRM	Jahrom	0.75	137	*e*Pg	Pg	04 17 37.6	-0.7
JHRM				*e*		04 17 58.6	
	comp=Z,99nm,0.2s						
JHRM	Jahrom	0.75	137	*e*Pg	Pg	04 17 37.7	-0.6
GHIR	Ghir-Karzin	0.77	180	Pg	Pb	04 17 39.0	+0.3
GHIR	Ghir-Karzin	0.77	180	*e*Pg	Pb	04 17 39.5	+0.8
GHIR	Ghir-Karzin	0.77	180	*e*Pg	Pb	04 17 39.5	+0.8
AHBU	AHRAM	1.50	263	*e*Pg	Pg	04 17 52.9	+0.5
IMEH	Mehriz	2.72	31	Pn	Pn	04 18 09.2	+2.4
IMEH	Mehriz	2.72	31	*e*		04 18 35.0	
	comp=Z,2μm,0.2s						
IMEH				*e*Pn	Pn	04 18 09.2	+2.4
IRAM	Ramesheh	2.79	349	Pn	Pn	04 18 09.4	+1.6
IRAM	Ramesheh	2.79	349	*e*Pn	Pn	04 18 09.5	+1.6
IRAM				*e*		04 19 04.4	
	comp=Z,3μm,0.5s						
IRAM	Ramesheh	2.79	349	*e*Pn	Pn	04 18 09.9	+2.0
ISAD	Sadrabad	2.91	12	Pn	Pn	04 18 11.7	+2.2
ISAD	Sadrabad	2.91	12	*e*Pn	Pn	04 18 11.8	+2.2
ISAD				*e*		04 19 02.2	
	comp=Z,2μm,0.5s						
ISAD	Sadrabad	2.91	12	*e*Pn	Pn	04 18 11.5	+2.0
GENO	Geno	3.26	120	*e*Pn	Pn	04 18 15.0	+0.8
GENO				*e*		04 19 24.8	
	comp=Z,99nm,0.4s						
GENO	Geno	3.26	120	*e*Pn	Pn	04 18 14.8	+0.6
KHGB	Koh Gabri	3.31	66	*e*Pn	Pn	04 18 16.3	+1.4
KHGB				*e*		04 19 14.5	
	comp=Z,99nm,0.4s						
KHGB	Koh Gabri	3.31	66	*e*Pn	Pn	04 18 16.3	+1.4
NGRK	Negar Kerman	3.32	79	*e*Pn	Pn	04 18 17.0	+1.8
ICHK	Chekchek	3.41	21	Pn	Pn	04 18 18.4	+2.2
ICHK	Chekchek	3.41	21	*e*Pn	Pn	04 18 18.5	+2.2
ICHK				*e*		04 18 27.7	
	comp=Z,3μm,0.4s						
ICHK	Chekchek	3.41	21	*e*Pn	Pn	04 18 18.3	+2.0
KRBR	Kerman	3.41	73	Pn	Pn	04 18 16.0	-0.5
KRBR				Sg	Sb	04 19 08.0	+2.7
KRBR	Kerman	3.41	73	*e*Pn	Pn	04 18 16.4	-0.1
KRBR				*e*Sg	Sb	04 19 08.0	+2.7
KRBR				AML	AML	04 19 16.5	
	comp=N,176nm,0.7s						
KRBR				AML	AML	04 19 18.5	
	comp=E,103nm,0.6s						
KRBR	Kerman	3.41	73	*e*Pn	Pn	04 18 16.4	-0.1
ROKH	ROKH	3.69	333	*e*Pn	Pn	04 18 22.3	+2.2
ROKH				*e*		04 19 33.3	
	comp=Z,99nm,0.5s						
ROKH	ROKH	3.69	333	*e*Pn	Pn	04 18 22.1	+2.0
NIAN	Nian	3.70	113	*e*Pn	Pn	04 18 21.1	+0.9
IZEF	Zefreh	3.87	352	Pn	Pn	04 18 24.6	+1.9
IZEF	Zefreh	3.87	352	*e*Pn	Pn	04 18 24.7	+2.0
IZEF				*e*		04 18 44.0	
	comp=Z,678nm,0.3s						
IZEF	Zefreh	3.87	352	Pn	Pn	04 18 24.6	+1.9
CHMN	Cheshme madani	4.05	77	*e*Pn	Pn	04 18 26.9	+1.7
BANOM	Banah	4.29	136	*i* P	Pn	04 18 29.4	+1.2
	SNR=22						
BANOM				S	Sn	04 19 18.3	+0.4
BANOM	Banah	4.29	136	P	Pn	04 18 29.4	+1.2
	SNR=22						
BANOM				S	Sn	04 19 18.3	+0.4
IKLH	Kolahrood	4.42	344	*e*Pn	Pn	04 18 32.3	+2.1
MSFE	Esma-Masafi	4.64	142	*i* P	Pn	04 18 34.9	+1.8
	SNR=13						
MSFE				S	Sn	04 19 26.9	+0.2
MSFE	Esma-Masafi	4.64	142	*e*Pn	Pn	04 18 35.1	+2.0
NAZ	Nazwa, Dubai	4.70	149	P	Pn	04 18 36.5	+2.6
NAZ	Nazwa, Dubai	4.70	149	P	Pn	04 18 36.5	+2.6
MDH	Madha	4.76	141	*i* P	Pn	04 18 36.3	+1.6
	SNR=16						
MDH	Madha	4.76	141	P	Pn	04 18 36.3	+1.6
	SNR=16						
ASUD	Al Ashush, Dub	4.88	154	*i* P	Pn	04 18 39.1	+2.7
	SNR=11						
ASUD	Al Ashush, Dub	4.88	154	P	Pn	04 18 39.1	+2.7
	SNR=11						
UOSS	Minazif	5.00	144	*e*Pn	Pn	04 18 39.2	+1.2
UOSS	Minazif	5.00	144	*i* P	Pn	04 18 39.4	+1.4
	SNR=13						
UOSS	Minazif	5.00	144	P	Pn	04 18 39.4	+1.4
	SNR=13						
HATD	Hatta, Dubai	5.06	146	P	Pn	04 18 40.7	+1.8
HATD	Hatta, Dubai	5.06	146	P	Pn	04 18 40.7	+1.8
ALNE	Al Ain	5.56	153	*i* P	Pn	04 18 47.6	+1.9
	SNR=5.7						
ALNE	Al Ain	5.56	153	*e*Pn	Pn	04 18 48.3	+2.6
SOHO	SOHO	5.84	146	*i* P	Pn	04 18 50.4	+0.8
	SNR=7.9						
SOHO	SOHO	5.84	146	P	Pn	04 18 50.3	+0.8
	SNR=7.9						
HOQ	Hoqain	6.69	144	*e*Pn	Pn	04 19 04.0	+2.8
WSAR	Wadi Sarin	7.70	138	Pn	Pn	04 19 15.4	+0.4
	comp=Z,4.5nm,0.3s,baz=8.1,slow=14,SNR=26						
WSAR				Sn	Sn	04 20 39.1	-2.9
	comp=Z,1.0nm,0.3s,baz=331,slow=22,SNR=5.9						
RAYN	Ar Rayn	8.69	232	*e*Pn	Pn	04 19 29.0	+0.3
RAYN				*e*Sn	Sn	04 21 05.5	-0.9
RAYN	Ar Rayn	8.69	232	*e*Pn	Pn	04 19 29.0	+0.3
RAYN				*e*Sn	Sn	04 21 05.5	-0.9
GEYT	Alibeck	9.83	24	Pn	Pn	04 19 45.0	+0.7
	comp=Z,3.8nm,0.3s,baz=195,slow=10,SNR=3.6						
GNI	Garni	12.98	331	LR	LR	04 26 02.6	
	comp=Z,38nm,19.1s,baz=124,slow=40						
KVAR	Kislovodsk Arr	17.00	334	Pn	Pn	04 21 21.8	+1.1
	baz=217,slow=5.1,SNR=2.5						
BR131	Keskin Array S	19.15	309	*e*P	Pn	04 21 47.8	+0.5
BR131	Keskin Array S	19.15	309	*e*P	Pn	04 21 47.8	+0.5
BRTR	Keskin Array B	19.15	309	P	P	04 21 47.2	+0.9
	comp=Z,0.1nm,0.3s,baz=121,slow=12,SNR=7.4						
ABKAR	Akbulak array	20.86	13	*e*P	Pn	04 22 07.7	+0.4
ABKAR	Akbulak array	20.86	13	*e*P	Pn	04 22 07.7	+0.5
AKTO	Aktyubinsk	21.69	9	P	P	04 22 13.6	0.0
	comp=Z,5.0nm,0.9s,baz=189,slow=12,SNR=12						
IDI	Anoyia	24.54	292	P	P	04 22 42.8	+0.2
	comp=Z,2.1nm,0.5s,baz=85,slow=11,SNR=8.4						
MLR	Muntele Rosu	26.88	315	P	P	04 23 06.5	+2.7
	comp=Z,0.7nm,0.9s,baz=146,slow=3.7,SNR=4.6						
BVAR	Borovoye Array	27.16	23	P	P	04 23 06.3	+0.3
	comp=Z,1.6nm,0.6s,baz=219,slow=8.4,SNR=11						
BVAR				LR	LR	04 35 51.8	
	comp=Z,24nm,19.1s,baz=240,slow=41						
AKASG	Malin Array Be	28.06	327	P	P	04 23 12.8	-1.3
	comp=Z,0.3nm,0.3s,baz=128,slow=8.6,SNR=5.3						
MAKZ	Makanchi	28.69	44	*e*P	P	04 23 20.8	+0.9
	comp=Z,2.0nm,0.9s						
MAKZ	Makanchi	28.69	44	*e*P	P	04 23 20.8	+0.9
	comp=Z,2.0nm,0.9s						
MK01	Makanchi Array	28.87	44	*e*P	P	04 23 21.7	+0.2
MK01	Makanchi Array	28.87	44	*e*P	P	04 23 21.7	+0.2
KURBB	Kurchatov Arra	28.88	35	P	P	04 23 21.1	-0.3
	comp=Z,1.8nm,0.8s,baz=234,slow=9.0,SNR=4.6						
MK31	Makanchi Array	28.88	44	*e*P	P	04 23 22.1	+0.6
MK31	Makanchi Array	28.88	44	*e*P	P	04 23 22.1	+0.6
MKAR	Makanchi Array	28.88	44	P	P	04 23 21.8	+0.3
	comp=Z,0.7nm,0.6s,baz=224,slow=6.7,SNR=9.2						
MKAR	Makanchi Array	28.88	44	*e*P	P	04 23 22.1	+0.6
	comp=Z,8.1nm,1.1s						
MKAR	Makanchi Array	28.88	44	*e*P	P	04 23 22.1	+0.6
	comp=Z,8.1nm,1.1s						
KURK	Kurchatov	28.98	35	*e*P	P	04 23 23.3	+1.0
	comp=Z,3.2nm,1.0s						
KURK	Kurchatov	28.98	35	*e*P	P	04 23 23.3	+1.0
	comp=Z,3.2nm,1.0s						
WMQ	Urumqi	31.31	52	P	P	04 23 44.9	+1.8
WMQ				pmax	pmax		
	comp=Z,19nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,220nm,4.3s						
ZAA0	Zalesovo Array	33.96	34	*e*P	P	04 24 06.4	+0.3
	comp=Z,5.2nm,0.8s						
ZALV	Zalesovo Beam	33.96	34	P	P	04 24 06.2	+0.2
	comp=Z,4.4nm,0.6s,baz=240,slow=9.4,SNR=13						
ZALV	Zalesovo Beam	33.96	34	*e*P	P	04 24 06.0	-0.1
GERES	GERESS Array B	35.87	314	P	P	04 24 22.0	-0.7
	comp=Z,0.3nm,0.5s,baz=114,slow=6.3,SNR=5.2						
KHC	Kasperske Hory	36.04	315	*e*P	P	04 24 24.3	+0.1
	comp=Z,1.3nm,0.9s						
FINES	FINESS Array B	36.98	339	P	P	04 24 30.6	-1.3
	comp=Z,0.9nm,0.4s,baz=143,slow=11,SNR=9.7						
GTA	Gaotai	39.68	62	*e*P	P	04 24 56.1	+1.0
GTA				pP	pP	04 25 00.5	+0.4
GTA				sP	sP	04 25 03.2	+1.1
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HFS	Hagfors	40.76	331	P	P	04 25 02.3	-1.4
	comp=Z,1.7nm,0.4s,baz=120,slow=8.5,SNR=9.2						
NB2	NORSAR Subarra	42.28	331	P	P	04 25 14.8	-1.4
	comp=Z,1.1nm,0.8s,baz=120,slow=8.6						
NOA	NORSAR Array B	42.28	331	P	P	04 25 14.8	-1.4
	comp=Z,1.2nm,0.7s,baz=124,slow=7.8,SNR=3.3						
NOA				LR	LR	04 44 39.2	
	comp=Z,13nm,18.9s,baz=310,slow=39						
ARCES	ARCESS Array B	43.49	346	P	P	04 25 25.8	0.0
	comp=Z,1.9nm,0.9s,baz=149,slow=9.6,SNR=4.7						
CD2	Chengdu	43.70	74	P	P	04 25 26.1	-2.0
CD2				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SONM	Songino Array	44.87	50	P	P	04 25 37.8	+0.5
	comp=Z,0.7nm,0.5s,baz=251,slow=8.4,SNR=3.1						
ULN	Ulaanbaatar	45.31	50	*e*P	P	04 25 40.9	0.0
	comp=Z,1.4nm,0.6s						
ESDC	Sonseca Array	47.49	299	P	P	04 25 57.8	-0.1
	comp=Z,0.4nm,0.4s,baz=84,slow=7.4,SNR=6.4						
EKA	Eskdalemuir Ar	47.53	320	P	P	04 25 56.9	-1.0
	comp=Z,1.6nm,0.8s,baz=101,slow=11,SNR=6.5						
HHC	Hu-ho-hao-te	48.62	60	*e*P	P	04 26 06.5	-0.2
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,53nm,6.1s						
TOA0	Torodi Ar. Sit	50.02	263	*e*P	P	04 26 17.7	0.0
	comp=Z,8.2nm,1.4s						
TORD	Torodi Ar. Bea	50.02	263	P	P	04 26 17.4	-0.3
	comp=Z,2.0nm,0.7s,baz=60,slow=8.3,SNR=24						
SPITS	Spitsbergen Ar	51.85	351	P	P	04 26 29.5	-1.1
	comp=Z,1.0nm,0.8s,baz=147,slow=17,SNR=2.9						
KOWA	Kowa	54.41	267	P	P	04 26 50.4	+0.1
	comp=Z,1.0nm,0.6s,baz=72,slow=8.1,SNR=5.5						
KSAR	Wonju Array Be	61.70	61	P	P	04 27 40.2	-0.9
KSAR	Wonju Array Be	61.70	61	P	P	04 27 40.2	-0.9
KSRS	Korea Array	61.73	61	P	P	04 27 40.2	-1.0
	comp=Z,1.9nm,0.8s,baz=283,slow=6.6,SNR=8.3						
USRK	Ussuriysk Ar.	62.88	52	P	P	04 27 48.6	-0.3
	comp=Z,1.2nm,0.6s,baz=266,slow=19,SNR=3.5						
SCHQ	Schefferville	81.83	330	P	P	04 29 41.9	+0.1
	comp=Z,2.9nm,0.7s,baz=31,slow=6.5,SNR=4.0						
INK	Inuvik	82.81	2	*e*P	P	04 29 45.7	-1.0
	comp=Z,1.0nm,0.7s						
IM3	Indian Mountai	83.06	11	*e*P	P	04 29 47.3	-0.7
ILAR	Eielson Array	85.20	8	P	P	04 29 58.4	-0.6
	comp=Z,0.5nm,0.8s,baz=335,slow=4.7,SNR=6.0						
EGAK	Eagle	85.83	6	*e*P	P	04 30 01.8	-0.2
	comp=Z,1.4nm,0.8s						
SCRK	Sand Creek	86.32	7	*e*P	P	04 30

ANTF	Antibes	0.75	43	Pg		Pb	04 53 06.7	-0.2
ANTF	Antibes	0.75	43	Pg		Pb	04 53 06.7	-0.2
CALF	Calern	0.82	27	Pg		Pb	04 53 07.9	-0.3
CALF	Calern	0.82	27	Pg		Pb	04 53 07.9	-0.3
REVF	Revere	1.00	44	Pg		Pn	04 53 12.1	+0.1
REVF	Revere	1.00	44	Pg		Pn	04 53 12.1	+0.1
MON	Monaco	1.02	46	Pg		Pn	04 53 12.1	-0.1
MON	Monaco	1.02	46	Pg		Pn	04 53 12.1	-0.1
BSTF	la Bastide-des	1.03	327	Pg		Pg	04 53 10.2	-1.1
OGDI	Digne	1.09	356	Pg		Pg	04 53 12.6	0.0
OGDI	Digne	1.09	356	Pg		Pg	04 53 12.6	0.0
LUCF	Luceram	1.10	38	Pg		Pn	04 53 13.6	+0.1
LUCF	Luceram	1.10	38	Pg		Pn	04 53 13.6	+0.1
RUSF	Rustrel	1.14	324	Pg		Pn	04 53 14.1	+0.2
RUSF	Rustrel	1.14	324	Pg		Pn	04 53 14.1	+0.2
ISO	Isola	1.25	21	Pn		Pg	04 53 15.8	+0.2
ISO	Isola	1.25	21	Pn		Pg	04 53 15.8	+0.2
NEGI	Seborga	1.25	48	P		Pn	04 53 14.8	-0.6
NEGI				S		Sn	04 53 32.9	+0.4
NEGI	Seborga	1.25	48	P		Pn	04 53 14.8	-0.6
NEGI				S		Sn	04 53 32.9	+0.4
NEGI				AML		AML		
	comp=E,103μm,0.6s							
NEGI				AML		AML		
	comp=N,91μm,0.5s							
NEGI				AML		AML		
	comp=E,103μm,0.6s							
NEGI				AML		AML		
	comp=N,91μm,0.5s							
SAOF	Saorge	1.27	40	P		Pb	04 53 15.7	-0.1
SAOF	Saorge	1.27	40	P		Pb	04 53 15.7	-0.1
SAOF				AML		AML		
	comp=E,103μm,0.6s							
SAOF				AML		AML		
	comp=N,89μm,0.7s							
SAOF				AML		AML		
	comp=E,103μm,0.6s							
SAOF				AML		AML		
	comp=N,89μm,0.7s							
STV	Sant Anna di V	1.39	28	P		Pb	04 53 17.9	0.0
STV				S		Sg	04 53 36.8	+0.4
STV	Sant Anna di V	1.39	28	P		Pb	04 53 17.9	0.0
STV				S		Sg	04 53 36.8	+0.4
STV				AML		AML		
	comp=E,81μm,0.4s							
STV				AML		AML		
	comp=N,92μm,0.4s							
STV				AML		AML		
	comp=N,92μm,0.4s							
STV				AML		AML		
	comp=E,81μm,0.4s							
IMI	Imperia	1.40	50	P		Pn	04 53 16.7	-0.8
IMI	Imperia	1.40	50	P		Pn	04 53 16.7	-0.8
IMI				AML		AML		
	comp=E,50μm,0.4s							
IMI				AML		AML		
	comp=N,61μm,0.4s							
IMI				AML		AML		
	comp=N,61μm,0.4s							
IMI				AML		AML		
	comp=E,50μm,0.4s							
ENR	Entracque	1.41	31	P		Pg	04 53 18.5	-0.1
ENR	Entracque	1.41	31	P		Pg	04 53 18.5	-0.1
ENR				AML		AML		
	comp=E,115μm,0.6s							
ENR				AML		AML		
	comp=N,236μm,0.4s							
ENR				AML		AML		
	comp=N,236μm,0.4s							
ENR				AML		AML		
	comp=E,115μm,0.6s							
SURF	Saint Ours	1.49	11	Pg		Pb	04 53 19.8	+0.2
SURF	Saint Ours	1.49	11	Pg		Pb	04 53 19.8	+0.2
PZZ	Stroppo	1.57	19	P		Pb	04 53 20.7	-0.3
PZZ	Stroppo	1.57	19	P		Pb	04 53 20.7	-0.3
PZZ				AML		AML		
	comp=E,112μm,0.6s							
PZZ				AML		AML		
	comp=N,147μm,0.5s							
PZZ				AML		AML		
	comp=N,147μm,0.5s							
PZZ				AML		AML		
	comp=E,112μm,0.6s							
DOI	San Damiano	1.60	22	P		Pb	04 53 21.2	-0.3
DOI	San Damiano	1.60	22	P		Pb	04 53 21.1	-0.3
DOI				AML		AML		
	comp=E,118μm,0.6s							
DOI				AML		AML		
	comp=N,115μm,0.2s							
DOI				AML		AML		
	comp=E,118μm,0.6s							
DOI				AML		AML		
	comp=N,115μm,0.2s							
RORO	Rocca Rossa	1.62	47	P		Pn	04 53 20.2	-0.3
RORO	Rocca Rossa	1.62	47	P		Pn	04 53 20.2	-0.3
QLNO	Quiliano	1.91	46	P		Pn	04 53 24.0	-0.5
QLNO	Quiliano	1.91	46	P		Pn	04 53 24.9	+0.4
QLNO				AML		AML		
	comp=E,42μm,1.5s							
QLNO				AML		AML		
	comp=N,43μm,1.6s							
QLNO				AML		AML		
	comp=E,42μm,1.5s							
QLNO				AML		AML		
	comp=N,43μm,1.6s							
BHB	Bricherasio	1.92	18	P		Pn	04 53 25.5	+0.9
BHB	Bricherasio	1.92	18	P		Pn	04 53 25.5	+0.9
BHB				AML		AML		
	comp=E,45μm,0.5s							
BHB				AML		AML		
	comp=N,45μm,1.6s							
BHB				AML		AML		
	comp=N,45μm,1.6s							
BHB				AML		AML		
	comp=E,45μm,0.5s							
TRBF	Trabuc cave	2.09	302	Pn		Pn	04 53 26.3	-0.6
TRBF	Trabuc cave	2.09	302	Pn		Pn	04 53 26.3	-0.6
RSP	Reno Superiore	2.21	16	P		Pn	04 53 29.8	+1.1
RSP	Reno Superiore	2.21	16	P		Pn	04 53 29.8	+1.1
RSP				AML		AML		
	comp=E,26μm,0.5s							
RSP				AML		AML		
	comp=N,33μm,0.7s							
RSP				AML		AML		
	comp=E,26μm,0.5s							
RSP				AML		AML		
	comp=N,33μm,0.7s							
SMPL	Sampolo	2.31	113	P		Pn	04 53 30.3	+0.3
SMPL				S		Sn	04 53 58.0	-0.6
SMPL	Sampolo	2.31	113	P		Pn	04 53 30.3	+0.3
SMPL				S		Sn	04 53 59.0	+0.4
MTLF	Montolieu	3.09	277	Pn		Pn	04 53 40.9	+0.3
FNEB	N¯bias	3.16	269	Pn		Pn	04 53 42.0	+0.3
FNEB	N¯bias	3.16	269	Pn		Pn	04 53 42.0	+0.3
LBL	Lubilhac	3.18	315	Pn		Pn	04 53 42.1	+0.2
LBL	Lubilhac	3.18	315	Pn		Pn	04 53 42.1	+0.2
NDIM	Novi di Modena	3.74	58	AML		AML		
	comp=E,994μm,0.1s							
NDIM				AML		AML		
	comp=E,998μm,0.1s							
NDIM				AML		AML		
	comp=N,552μm,1.2s							
NDIM				AML		AML		
	comp=E,994μm,0.1s							
NDIM				AML		AML		
	comp=N,666μm,1.2s							
NDIM				AML		AML		
	comp=N,552μm,1.2s							
NDIM				AML		AML		
	comp=N,666μm,1.2s							
NDIM				AML		AML		
	comp=E,998μm,0.1s							
MLS	Moulis	3.90	271	Pn		Pn	04 53 52.4	+0.5
MLS	Moulis	3.90	271	Pn		Pn	04 53 52.4	+0.5
MONQ	Montcuq	4.02	291	Pn		Pn	04 53 53.8	+0.4
MONQ	Montcuq	4.02	291	Pn		Pn	04 53 53.8	+0.4
ECH	Echery	5.22	5	Pn		Pn	04 54 09.1	-0.9
ECH	Echery	5.22	5	Pn		Pn	04 54 09.1	-0.9

NNC 02 05:00:06.7±1.2, 52°.84N×87°.54E, h0km, mb3.5, mpv3.1, 4C-8D, Error ellipse: s-maj=11.4km s-min=5.8km az=81.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**1.97**	**305**	⇓Pn	Pn	05 00 41.0	-0.3
	4.2nm,0.5s						
ZAA0				⇓Lg	Lg	05 01 09.8	
	18nm,0.4s						
KURK	**Kurchatov**	**5.93**	**252**	⇑Lg	Lg	05 03 16.0	
	4μm,0.1s						
KURBB	**Kurchatov Arra**	**6.02**	**252**	⇓Pn	Pn	05 01 37.2	+0.2
	0.8nm,0.5s						
KURBB				⇓Sn	Sn	05 02 47.3	+0.8
	2.6nm,0.7s						
KURBB				⇑Lg	Lg	05 03 17.2	
	6.5nm,0.7s						
MK31	**Makanchi Array**	**6.94**	**211**	⇓Pn	Pn	05 01 50.4	+0.8
	0.3nm,0.2s,baz=35,slow=13,SNR=32						
MK31				⇓Sn	Sn	05 03 10.0	+0.8
	1.1nm,0.7s,baz=37,slow=26,SNR=6.3						
MK31				⇑Lg	Lg	05 03 46.9	
	1.4nm,0.7s,baz=34,slow=31,SNR=3.9						
MAKZ	**Makanchi**	**7.03**	**213**	⇓Pn	Pn	05 01 51.8	+0.9
	3.7nm,0.9s						
MAKZ				⇓Sn	Sn	05 03 11.9	+0.5
	0.7nm,0.3s						
MAKZ				⇑Lg	Lg	05 03 51.2	
	3.4nm,1.2s						

BJI ***02*** *05:00:59.1, 49°.73S×120°.58E, h10km, mb5.1/25, mB5.1/16, Ms4.7/7, Ms7 4.4/4*

IDC ***02*** *05:01:00.8±0.5, 49°.23S×120°.51E, h0km, mb4.5/17, mb1 4.6/18, mb1mx4.5/45, mbtmp4.5/18, ML2.4/1, MS4.1/27, Ms1 4.1/27, ms1mx4.0/39, Error ellipse: s-maj=21.9km s-min=12.7km az=108.0*

ISCJB ***02*** *05:01:01.1±0.3, 49°.30S±0°.05×120°.6E±0°.1, h10km, mb4.8/33, MS4.1/27, Error ellipse: s-maj=10.4km s-min=6.7km az=14.6*

NEIC ***02*** *05:01:02.6±0.1, 49°.28S×120°.49E, h10km, mb4.7/16, Error ellipse: s-maj=7.7km s-min=5.6km az=111.0*

GCMT ***02*** *05:01:02.6±0.3, 49°.31S×120°.69E, h12km, MW4.9/79, Moment Tensor Solution. s32,c36; s79,c118; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.72±.08; $M_{\theta\theta}$2.42±.07; $M_{\phi\phi}$0.29±.08; $M_{r\theta}$0.42±.25; $M_{\theta\phi}$-0.79±.07; $M_{r\phi}$1.73±.32; Best double couple: $M_0$3.14000×10^{16} NP1:ϕ_s133.00000°, δ52.00000°, λ-56.00000°. NP2: ϕ_s265.00000°, δ49.00000°, λ-126.00000°. Principal axes: T 2.6870, Plg2.0000°, Azm200.0000°; N 0.9010, Plg26.0000°, Azm291.0000°; P -3.5920, Plg64.0000°, Azm106.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 02 05:01:02.5±0.3, 49°.29S±0°.06×120°.55E±0°.1, h10km, n176, σ0°.84/148, mb4.8/33, MS4.2/28, 1C-1D, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.14**	**339**	T	T	05 20 02.5	
	baz=161,slow=73,SNR=228						
H01W1	**Cape Leeuwin H**	**15.14**	**339**	T	T	05 20 18.3	
	baz=161,slow=73,SNR=165						
H01W3	**Cape Leeuwin H**	**15.15**	**339**	T	T	05 20 11.1	
	baz=161,slow=73,SNR=129						
NWAO	**Narrogin (SRO)**	**16.53**	**350**	Pn	**Pn**	**05 04 53.7**	**-0.7**
	0.6nm,0.3s,baz=25,slow=15,SNR=5.1						
NWAO				LR	LR	05 09 48.8	
	comp=Z,1μm,19.9s,baz=30,slow=32						
NWAO	**Narrogin (SRO)**	**16.53**	**350**	*e*Pn	**P**	**05 04 56.5**	**-0.6**
	63nm,1.4s						
CASY	**Casey**	**17.81**	**193**	*e*Pn	**Pn**	**05 05 09.6**	**-0.6**
	49nm,1.2s						
BBOO	**Buckleboo**	**20.13**	**41**	*e*P	**P**	**05 05 36.7**	**+0.2**
	30nm,1.0s						
STKA	**Stephens Creek**	**23.49**	**50**	P	**P**	**05 06 11.8**	**-0.5**
	9.6nm,0.8s,baz=215,slow=9.1,SNR=15						
STKA				LR	LR	05 13 37.7	
	comp=Z,599nm,20.9s,baz=217,slow=32						
STKA	**Stephens Creek**	**23.49**	**50**	*e*P	**P**	**05 06 12.2**	**-0.2**
	14nm,1.4s						
ASAR	**Alice Springs**	**27.65**	**27**	P	**P**	**05 06 50.0**	**-0.5**
	9.3nm,0.9s,baz=202,slow=8.7,SNR=52						
ASAR				PcP	**PcP**	**05 10 06.8**	**-0.7**
	0.7nm,0.8s,baz=192,slow=2.0,SNR=4.7						
ASAR				LR	LR	05 16 27.2	
	comp=Z,973nm,21.2s,baz=206,slow=34						
AS31	**Alice Springs**	**27.65**	**27**	*e*P	**P**	**05 06 50.0**	**-0.5**
	5.8nm,1.0s						
AS01	**Alice Springs**	**27.66**	**27**	*e*P	**P**	**05 06 50.1**	**-0.4**
ARMA	**Armidale**	**30.10**	**63**	*e*P	**P**	**05 07 14.6**	**+2.4**
	12nm,1.0s						
WRA	**Warramunga Arr**	**31.30**	**26**	P	**P**	**05 07 22.1**	**-0.7**
	4.7nm,0.9s,baz=200,slow=9.3,SNR=14						
WRA				PP	**PnPn**	**05 08 21.8**	**-3.1**
	5.4nm,1.2s,baz=191,slow=13,SNR=6.1						
WRA				LR	LR	05 18 42.5	
	comp=Z,475nm,19.8s,baz=200,slow=34						
WB2	**Warramunga Arr**	**31.30**	**26**	*e*P	**P**	**05 07 22.4**	**-0.3**
	19nm,1.3s						
FITZ	**Fitoy Crossi**	**31.38**	**9**	P	**P**	**05 07 23.6**	**+0.1**
	9.1nm,0.9s,baz=178,slow=12,SNR=10						
FITZ				LR	LR	05 18 50.9	
	comp=Z,580nm,20.6s,baz=210,slow=34						
FITZ	**Fitzroy Crossi**	**31.38**	**9**	*e*P	**P**	**05 07 24.2**	**+0.7**
VNDA	**Vanda**	**32.36**	**164**	P	**P**	**05 07 31.8**	**+0.2**
	3.3nm,0.8s,baz=304,slow=8.8,SNR=18						
VNDA				LR	LR	05 19 51.5	
	comp=Z,657nm,18.6s,baz=320,slow=35						
VNDA	**Vanda**	**32.36**	**164**	*e*P	**P**	**05 07 31.6**	**+0.1**
	6.4nm,0.9s						
MAW	**Mawson**	**33.67**	**216**	P	**P**	**05 07 43.7**	**+0.7**
	11nm,0.9s,baz=79,slow=14,SNR=17						
MAW				LR	LR	05 20 00.3	
	comp=Z,298nm,18.6s,baz=59,slow=34						
MAW	**Mawson**	**33.67**	**216**	*e*P	**P**	**05 07 44.0**	**+1.0**
	3.0nm,1.0s						
RPZ	**Rata Peaks**	**34.67**	**100**	P	**P**	**05 07 52.4**	**+0.3**
	9.2nm,1.0s,baz=47,slow=6.9,SNR=3.8						
CTA	**Charters Tower**	**35.65**	**44**	LR	LR	05 22 15.4	
	comp=Z,626nm,19.8s,baz=226,slow=36						
BASI	**Baing, Sumba**	**38.95**	**0**	P	P	05 08 34.1	+5.5
BATI	**Baumata**	**39.04**	**5**	LR	LR	05 25 05.5	
	comp=Z,479nm,18.0s,baz=198,slow=37						
BFZ	**Birch Farm**	**39.52**	**99**	*e*P	**P**	**05 08 34.6**	**+1.3**
	43nm,1.1s						
QSPA	**South Pole Qui**	**40.84**	**180**	P	**P**	**05 08 43.7**	**-0.4**
	7.4nm,1.0s,baz=333,slow=5.2,SNR=9.7						
QSPA				LR	LR	05 24 42.7	
	comp=Z,394nm,21.2s,baz=332,slow=35						
QSPA	**South Pole Qui**	**40.84**	**180**	*e*P	**P**	**05 08 43.0**	**-1.1**
	132nm,1.3s						
URZ	**Urewera**	**41.40**	**97**	*e*P	**P**	**05 08 48.9**	**0.0**
	31nm,1.4s						
SYO	**Syowa Base**	**42.09**	**212**	⇑*e*P	**P**	**05 08 53.1**	**-0.9**
LEM	**Lembang**	**43.70**	**341**	LR	LR	05 24 19.9	
	comp=Z,192nm,20.0s,baz=197,slow=32						
DZM	**Mont Dzumac**	**45.16**	**70**	P	**P**	**05 09 18.2**	**-1.3**
	16nm,1.2s,baz=84,slow=12,SNR=3.2						
PMG	**Port Moresby**	**45.54**	**38**	LR	LR	05 28 07.8	
	comp=Z,251nm,19.6s,baz=207,slow=36						
MPSI	**Mapaga**	**49.44**	**359**	P	**P**	**05 09 51.8**	**-0.8**
	96nm,0.5s,11μm9μm						
JAY	**Jayapura**	**49.68**	**27**	LR	LR	05 30 41.8	
	comp=Z,406nm,20.0s,baz=172,slow=36						
HNR	**Honiara**	**51.52**	**53**	LR	LR	05 31 41.0	
	comp=Z,182nm,18.0s,baz=212,slow=36						
SNAA	**Sanae**	**52.92**	**199**	P	**P**	**05 10 18.7**	**+0.4**
SNAA	**Sanae**	**52.92**	**199**	P	**P**	**05 10 18.7**	**+0.4**
	29nm,0.9s,baz=143,slow=9.7,SNR=96						
SNAA				LR	LR	05 31 41.8	
	comp=Z,631nm,18.8s,baz=134,slow=35						
SNAA	**Sanae**	**52.92**	**199**	*e*P	**P**	**05 10 18.7**	**+0.4**
	49nm,1.0s						
VNA3	**Neumayer Olymp**	**54.66**	**198**	P	**P**	**05 10 31.3**	**+0.3**
VNA1	**Neumayer--Stat**	**54.84**	**199**	P	**P**	**05 10 33.0**	**+0.8**
PSI	**Prapat**	**55.16**	**333**	LR	LR	05 30 43.3	
	comp=Z,53nm,21.4s,baz=91,slow=32						
DAV	**Davao City (W)**	**56.29**	**6**	LR	LR	05 36 00.8	
	comp=Z,79nm,19.6s,baz=176,slow=37						
GUMO	**Guam**	**66.19**	**26**	LR	LR	05 41 25.8	
	comp=Z,62nm,18.2s,baz=178,slow=37						
PMSA	**Palmer Station**	**66.22**	**178**	LR	LR	05 39 30.3	
	comp=Z,320nm,21.3s,baz=211,slow=35						
CM01	**Chiang Mai Arr**	**70.08**	**338**	*e*P	**P**	**05 12 14.6**	**-0.1**
CMAR	**Chiang Mai Arr**	**70.12**	**338**	P	**P**	**05 12 13.2**	**-1.8**
	1.7nm,0.4s,baz=188,slow=6.1,SNR=10						
CMAR				LR	LR	05 44 04.8	
	comp=Z,54nm,18.1s,baz=174,slow=37						
BOSA	**Boshof**	**72.12**	**247**	P	**P**	**05 12 26.8**	**-0.6**
	4.7nm,0.9s,baz=145,slow=10,SNR=4.4						
BOSA				LR	LR	05 38 28.6	
	comp=Z,152nm,18.2s,baz=135,slow=31						
KMI	**Kunming**	**75.76**	**343**	P	**P**	**05 12 50.2**	**+1.7**
KMI				pmax	pmax		
	comp=Z,22nm,1.0s						
SHL	**Shillong**	**78.78**	**334**	⇓*i*P	**P**	**05 13 04.5**	**-0.9**
LSZ	**Lusaka**	**80.10**	**258**	*e*P	**P**	**05 13 14.7**	**+1.7**
	13nm,1.1s						
NJ2	**Nanjing**	**80.99**	**359**	*e*P	**P**	**05 13 19.6**	**+2.7**
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2	**Chengdu**	**81.23**	**345**	P	**P**	**05 13 20.0**	**+1.6**
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
JIRN	**Jiri**	**82.50**	**330**	*e*P	**P**	**05 13 25.5**	**-0.1**
	59nm,1.0s						
JNU	**Nakatsue**	**82.56**	**9**	LR	LR	05 53 05.9	
	comp=Z,25nm,19.2s,baz=117,slow=38						
DMN	**Daman**	**82.82**	**329**	*e*P	**P**	**05 13 26.8**	**-0.3**
	34nm,1.0s						
GUN	**Gumba**	**82.84**	**330**	*e*P	**P**	**05 13 27.3**	**0.0**
	83nm,1.1s						
KKN	**Kakani**	**82.93**	**329**	*e*P	**P**	**05 13 27.7**	**+0.1**
	25nm,0.9s						
GKN	**Gorkha**	**83.34**	**329**	*e*P	**P**	**05 13 29.2**	**-0.4**
	41nm,1.0s						
KOLN	**Koldanda**	**83.49**	**328**	*e*P	**P**	**05 13 30.0**	**-0.4**
	26nm,0.9s						
DANN	**Dangsing**	**83.96**	**328**	*e*P	**P**	**05 13 32.6**	**-0.4**
	59nm,0.9s						
PYUN	**Piuthan**	**84.01**	**327**	*e*P	**P**	**05 13 32.5**	**-0.6**
	66nm,1.0s						
LZH	**Lanzhou**	**86.29**	**347**	*e*P	**P**	**05 13 45.2**	**+0.9**
LZH				pP	sP	05 13 50.9	+2.1
LZH				sP	pP	05 13 54.1	+6.5
LZH				pmax	pmax		
	comp=Z,24nm,1.3s						
LZH				pmax	pmax		
	comp=Z,96nm,4.2s						
KSAR	**Wonju Array Be**	**86.60**	**6**	P	**P**	**05 13 45.7**	**+0.2**
KSRS	**Korea Array**	**86.61**	**6**	P	**P**	**05 13 45.7**	**+0.1**
	0.7nm,0.3s,baz=182,slow=5.3,SNR=9.4						
KSRS				LR	LR	05 53 32.6	
	comp=Z,30nm,20.1s,baz=195,slow=36						
KS01	**Wonju Array Si**	**86.63**	**6**	*e*P	**P**	**05 13 45.8**	**+0.1**
MJAR	**Matsushiro Arr**	**86.88**	**14**	P	**P**	**05 13 46.4**	**-0.6**
	0.4nm,0.4s,baz=198,slow=5.3,SNR=3.5						
MAJO	**Matsushiro**	**86.88**	**14**	*e*P	**P**	**05 13 47.7**	**+0.7**
	12nm,1.3s						
MJB9	**Matsu-Tunnel**	**86.89**	**14**	*e*P	**P**	**05 13 47.7**	**+0.7**
	16nm,1.5s						
PLCA	**Paso Flores**	**89.83**	**172**	P	**P**	**05 14 01.3**	**-0.1**
	4.8nm,1.1s,baz=243,slow=6.9,SNR=3.5						
PLCA				LR	LR	05 53 48.3	
	comp=Z,79nm,18.0s,baz=201,slow=35						
HHC	**Hu-ho-hao-te**	**90.11**	**353**	*e*P	**P**	**05 14 04.6**	**+2.3**
HHC				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC				pmax	pmax		
	comp=Z,56nm,6.1s						
GTA	**Gaotai**	**90.20**	**344**	P	**P**	**05 14 03.3**	**+0.5**
GTA				pP	sP	05 14 07.7	+0.4
GTA				sP	pP	05 14 10.3	+4.2
GTA				S	**S**	**05 24 58.2**	**+1.9**
GTA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,67nm,6.4s						
GTA				LR	LR		
	comp=N,270nm,18.2s						
GTA				LR	LR		
	comp=E,270nm,15.3s						
GTA				LR	LR		
	comp=Z,140nm,21.6s						
WSAR	**Wadi Sarin**	**90.75**	**306**	LR	LR	05 46 50.7	
	comp=Z,121nm,21.0s,baz=82,slow=30						
CN2	**Changchun**	**92.81**	**4**	*e*P	**P**	**05 14 15.4**	**+0.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
USRK	**Ussuriysk Ar.**	**93.64**	**8**	P	**P**	**05 14 17.7**	**-0.7**
	1.3nm,0.7s,baz=108,slow=4.7,SNR=3.9						
ASAJ	**Asahikawa**	**95.00**	**16**	LR	LR	05 57 45.3	
	comp=Z,22nm,19.2s,baz=134,slow=36						
KSH	**Kashi**	**96.79**	**327**	P	**P**	**05 14 33.7**	**+0.6**
WMQ	**Urumqi**	**97.08**	**337**	P	Pdif	05 14 35.7	+1.3
WMQ				pP	sP	05 14 39.1	+0.3
WMQ				sP	pP	05 14 43.6	+6.0
WMQ				LR	LR		
	comp=N,81nm,27.1s						
SONM	**Songino Array**	**97.51**	**350**	P	**P**	**05 14 35.4**	**-0.8**
	1.0nm,0.8s,baz=161,slow=9.4,SNR=5.0						
SONM				LR	LR	05 59 35.0	
	comp=Z,37nm,20.9s,baz=252,slow=36						
SONA1	**Songino Array**	**97.52**	**350**	*e*P	**P**	**05 14 35.6**	**-0.6**
KURBB	**Kurchatov Arra**	**105.83**	**334**	Pdiff	**Pdif**	**05 15 12.7**	**-0.3**
	0.4nm,0.8s,baz=165,slow=4.5,SNR=4.5						
KURK	**Kurchatov**	**105.89**	**334**	Pdif	**Pdif**	**05 15 12.7**	**-0.5**
BRTR	**Keskin Array B**	**116.99**	**300**	PKP	**PKPdf**	**05 19 46.1**	**-1.0**
	0.5nm,0.7s,baz=187,slow=2.5,SNR=3.9						
TOA0	**Torodi Ar. Sit**	**118.60**	**256**	*e*PKPdf	**PKPdf**	**05 19 50.1**	**-0.6**
TOA0				*ep*PKPdf	**PKiKP**	**05 19 50.5**	**-0.3**
TORD	**Torodi Ar. Bea**	**118.60**	**256**	PKP	**PKPdf**	**05 19 50.2**	**-0.6**
	1.4nm,1.0s,baz=130,slow=1.3,SNR=6.2						
MANT	**Manisa**	**119.10**	**296**	*e*PKPdf	**PKPdf**	**05 19 51.0**	**-0.4**
TIXI	**Tiksi**	**120.78**	**3**	PKP	**PKPdf**	**05 19 52.7**	**-0.5**
	4.5nm,0.7s,baz=331,slow=3.7,SNR=8.3						
TIXI	**Tiksi**	**120.78**	**3**	*e*PKPdf	**PKPdf**	**05 19 52.1**	**-1.1**
AGG	**Agios Georgios**	**123.15**	**293**	*e*PKPdf	**PKPdf**	**05 19 58.3**	**-0.5**
AKASG	**Malin Array Be**	**126.36**	**308**	PKP	**PKPdf**	**05 20 03.5**	**-1.1**
	2.1nm,0.9s,baz=87,slow=2.5,SNR=7.3						
AK11	**Malin Array Si**	**126.38**	**308**	*e*PKPdf	**PKPdf**	**05 20 03.5**	**-1.1**
TIP	**Timpagrande**	**126.64**	**290**	*e*PKPdf	**PKPdf**	**05 20 05.8**	**+0.2**
BUR04	**Bucovina Ar. S**	**126.71**	**303**	*e*PKPdf	**PKPdf**	**05 20 05.8**	**+0.3**
FINES	**FINESS Array B**	**133.42**	**319**	PKP	**PKPdf**	**05 20 17.8**	**+0.2**
	4.1nm,0.8s,baz=96,slow=6.7,SNR=5.2						
GEA0	**GERESS Array S**	**133.85**	**299**	*e*PKPdf	**PKPdf**	**05 20 18.9**	**-0.1**
GERES	**GERESS Array B**	**133.85**	**299**	PKP	**PKPdf**	**05 20 18.6**	**-0.4**
	1.6nm,0.9s,baz=158,slow=1.4,SNR=9.2						
ILAR	**Eielson Array**	**134.06**	**37**	PKP	**PKPdf**	**05 20 18.2**	**-0.6**
	0.4nm,0.8s,baz=329,slow=2.4,SNR=4.5						
ARCES	**ARCESS Array B**	**136.70**	**

BOZ	Bozeman (W)	145.10	76	*e*PKPbc	PKPdf	05 20 39.6	0.0
YFT	Old Faithful	145.10	78	*e*PKPbc	PKPdf	05 20 41.3	+1.5
YMR	Madison River	145.12	78	*e*PKPbc	PKPdf	05 20 40.3	+0.6
BW06	Boulder Array	145.15	81	*e*PKPbc	PKPbc	05 20 38.6	-0.9
PD31	Pinedale Array	145.15	81	*e*PKPbc	PKPbc	05 20 38.9	-0.6
PDAR	Pinedale Array	145.15	81	PKPbc	PKPbc	05 20 39.1	-0.3
	2.3nm,0.8s,baz=204,slow=3.3,SNR=19						
PDAR	Pinedale Array	145.15	81	*e*PKPbc	PKPbc	05 20 38.6	-0.9
YHH	Holmes Hill	145.24	77	*e*PKPbc	PKPdf	05 20 40.5	+0.4
H17A	Grant Village	145.24	78	*e*PKPbc	PKPdf	05 20 40.7	+0.7
HRY	Holter Researc	145.43	74	*e*PKPbc	PKPab	05 20 40.8	+0.4
T25A	Trinidad	145.55	93	*e*PKPdf	PKPdf	05 20 40.8	0.0
EKA	Eskdalemuir Ar	145.88	302	PKPbc	PKPbc	05 20 41.0	-0.1
	11nm,0.8s,baz=94,slow=4.3,SNR=24						
ESK	Eskdalemuir	145.91	302	*e*PKPdf	PKPab	05 20 41.4	-0.3
AMTX	Amarillo	145.99	99	*e*PKPdf	PKPbc	05 20 41.8	-0.4
Q24A	Divide	146.09	90	*e*PKPdf	PKPab	05 20 43.0	-0.3
RWWY	Rawlins	146.15	85	*e*PKPdf	PKPdf	05 20 42.0	+0.3
ISCO	Idaho Springs	146.23	89	*e*PKPdf	PKPbc	05 20 43.3	+0.2
RLMT	Red Lodge	146.40	78	*e*PKPdf	PKPbc	05 20 43.5	+0.2
HKT	Hockley	146.40	112	*e*PKPdf	PKPab	05 20 44.1	-0.2
N23A	Red Feather La	146.58	87	*e*PKPbc	PKPab	05 20 44.8	-0.3
WHTX	Lake Whitney,	146.81	107	*e*PKPdf	PKPbc	05 20 44.0	-0.6
K22A	Casper	147.06	83	*e*PKPbc	PKPbc	05 20 45.7	+0.5
PHWY	Pilot Hill	147.10	86	*e*PKPbc	PKPbc	05 20 46.0	+0.5
EGMT	Eagleton	147.24	73	*e*PKPbc	PKPbc	05 20 45.8	+0.4
YKW3	Yellowknife Ar	147.47	45	*e*PKPbc	PKPbc	05 20 45.5	+0.1
YKA	Yellowknife Ar	147.47	45	PKPbc	PKPbc	05 20 44.5	-0.9
	6.1nm,0.8s,baz=275,slow=2.6,SNR=63						
WMOK	Wichita Mounta	147.76	102	*e*PKPbc	PKPbc	05 20 47.1	-0.1
KSCO	Kaye Shedlock'	147.76	92	*e*PKPbc	PKPbc	05 20 47.5	+0.3
LAO	LASA Array	148.97	77	*e*PKPbc	PKPbc	05 20 51.2	+1.2
240A	Hunter Patters	149.13	111	*e*PKPbc	PKPbc	05 20 51.4	+0.6
RSSD	Black Hills	149.34	82	*e*PKPbc	PKPbc	05 20 50.9	-0.3
CBKS	Cedar Bluff	149.54	95	*e*PKPbc	PKPbc	05 20 52.2	+0.6
TUL1	Leonard	150.40	103	*e*PKPbc	PKPbc	05 20 54.3	+0.5
RES	Resolute Bay	150.50	18	*e*PKPbc	PKPbc	05 20 52.8	0.0
WLAR	White Oak Lake	150.66	109	*e*PKPbc	PKPbc	05 20 55.5	+1.1
DGMT	Dagmar	150.88	74	*e*PKPbc	PKPbc	05 20 55.1	+0.6
DGMT				*e*PKPab	PKPab	05 21 02.5	+0.5
W40A	Ferguson Farm,	151.67	107	*e*PKPbc	PKPbc	05 20 56.9	+0.1
KSU1	Kansas State U	151.74	97	*e*PKPbc	PKPbc	05 20 57.4	+0.6
HHAR	Hobbs	151.81	104	*e*PKPdf	PKPdf	05 20 50.3	-0.3
W41B	Gary Mavity, V	152.17	108	*e*PKPbc	PKPbc	05 20 57.8	-0.1
WHAR	Wooly Hollow	152.22	108	*e*PKPbc	PKPbc	05 20 57.9	-0.1
SCO	Scoresbysund	152.43	334	*e*PKPbc	PKPbc	05 20 58.1	+0.8
PLAL	Pickwick Lake	154.60	114	*e*PKPdf	PKPdf	05 20 54.6	0.0
FCC	Fort Churchill	157.79	52	*e*PKPab	PKPab	05 21 30.0	-0.9

IDC ***02*** *05:14:48.1±5.2,50°.32N×179°.97W,h0km,mb3.5/6, mb1 3.7/6,mb1mx3.4/83,mbtmp3.5/6,Error ellipse: s-maj=128.4km s-min=26.9km az=163.0*
ISCJB ***02*** *05:14:49.6±0.9,50°.0N±0°.1×179°.7W±0°.1,h33km,mb3.5/6, Error ellipse: s-maj=17.5km s-min=7.5km az=152.3*
NEIC ***02*** *05:14:53.1±0.0,50°.20N×179°.46W,h17km,ML2.8(AEIC), After AEIC.*

ISC 02 05:14:52.1±1.4,50°.1N±0°.2×179°.78W±0°.09,h35km,n22, σ0°68/27,mb3.5/6,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GALAA	Gareloi Lava P	1.76	21	P	Pn	05 15 20.5	+0.4
TAPA	Tanaga Point A	2.10	35	P	Pn	05 15 24.7	-0.1
TAPA				S	Sn	05 15 49.9	+0.1
KIRH	Kanaga Island	2.46	43	P	Pn	05 15 29.7	+0.1
KIRH				S	Sn	05 15 58.4	-0.1
KINC	Kanaga Island	2.47	42	P	Pn	05 15 30.2	+0.5
ADAG	Mount Adagdak	2.74	46	P	Pn	05 15 33.9	+0.4
ETKA	Kagalaska Isla	2.75	49	P	Pn	05 15 33.2	-0.5
GSTD	Great Sitkin T	3.00	48	P	Pn	05 15 37.5	+0.3
GSTD				S	Sn	05 16 11.7	-0.3
GSMY	Great Sitkin M	3.04	49	P	Pn	05 15 37.8	+0.2
ATKA	Atka Island	4.09	57	P	Pn	05 15 51.5	-0.4
ATKA				S	Sn	05 16 38.9	+0.4
KOWE	Korovin West	4.14	55	P	Pn	05 15 53.6	+0.9
KOKL	Mount Kliuchef	4.14	56	P	Pn	05 15 53.6	+0.8
KOFP	Korovin Flat P	4.17	57	P	Pn	05 15 53.7	+0.4
NIKH	Nikolski High	7.39	63	P	Pn	05 16 37.6	+0.3
NIKH				S	Sn	05 17 58.4	-1.4
OKTU	Okmok Mt. Tuli	7.98	61	P	Pn	05 16 46.3	+0.8
MREP	Makushin Rep't	8.86	60	P	Pn	05 16 57.7	+0.3
UNV	Unalaska Valle	9.00	60	P	Pn	05 16 59.6	+0.3
ILAR	Eielson Array	22.62	37	P	P	05 19 47.9	-1.6
	0.2nm,0.5s,baz=235,slow=8.1,SNR=4.2						
KLR	Kul'dur	30.94	287	P	P	05 21 05.7	+0.3
	0.1nm,0.6s,baz=73,slow=9.9,SNR=6.3						
YKA	Yellowknife Ar	36.56	45	P	P	05 21 55.2	+1.2
	0.6nm,0.7s,baz=285,slow=6.7,SNR=5.7						
SPITS	Spitsbergen Ar	51.59	356	P	P	05 23 54.4	+0.3
	2.4nm,0.4s,baz=18,slow=9.6,SNR=38						
MKAR	Makanchi Array	60.33	308	P	P	05 24 56.0	-1.1
	0.2nm,0.6s,baz=46,slow=8.3,SNR=3.2						
NOA	NORSAR Array B	68.84	354	P	P	05 25 52.5	+0.1
	0.9nm,0.8s,baz=8.0,slow=6.7,SNR=3.9						

IDC 02 05:17:56.4±3.8,10°.89S×166°.78E,h0km,mb3.8/4, mb1 4.0/4,mb1mx3.5/49,mbtmp3.7/4,MS3.4/2,Ms1 3.4/2, ms1mx2.8/48,Error ellipse: s-maj=175.4km s-min=33.8km az=144.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	32.49	250	P	P	05 24 28.9	-0.1
	0.5nm,1.0s,baz=79,slow=8.0,SNR=2.8						
PPT	Papeete	42.74	104	LR	LR	05 41 18.9	
	comp=Z,62nm,18.9s,baz=258,slow=33						
ILAR	Eielson Array	83.05	18	P	P	05 30 24.3	+0.9
	0.9nm,0.6s,baz=234,slow=5.4,SNR=11						
MKAR	Makanchi Array	94.11	317	P	P	05 31 16.8	-0.2
	0.4nm,0.6s,baz=93,slow=5.3,SNR=4.8						
YKA	Yellowknife Ar	94.37	27	P	P	05 31 16.5	-1.3
	0.1nm,0.4s,baz=256,slow=5.2,SNR=2.5						
NRIK	Noril'sk	96.34	339	LR	LR	06 16 32.7	
	comp=Z,13nm,18.2s,baz=153,slow=36						

IDC 02 05:31:28.4±49.0,17°.76S×178°.13W,h0km,mb4.0/3, mb1 4.2/3,mb1mx3.6/53,mbtmp4.0/3,Error ellipse: s-maj=903.3km s-min=162.5km az=79.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.94	241	P	P	05 38 56.8	+0.6
	0.6nm,0.3s,baz=80,slow=11,SNR=3.1						
WRA	Warramunga Arr	44.92	259	P	P	05 39 45.0	-0.4
	0.6nm,0.5s,baz=95,slow=8.1,SNR=26						
ASAR	Alice Springs	45.09	254	P	P	05 39 46.4	-0.3
	3.5nm,0.5s,baz=89,slow=8.6,SNR=68						

ISK ***02*** *06:15:30.3,38°.72N×43°.18E,h5km,ML2.9/5*
CSEM ***02*** *06:15:31.7±0.3,38°.74N×43°.19E,h12km,ML2.9,Error ellipse: s-maj=7.2km s-min=5.9km az=82.0*
DDA ***02*** *06:15:31.1,38°.73N×43°.27E,h7km,Ml3.2*
ISCJB ***02*** *06:15:32.0±0.6,38°.74N±0°.04×43°.19E±0°.05,h13km±6km, Error ellipse: s-maj=7.5km s-min=6.0km az=151.9*

ISC 02 06:15:32.0±1.0,38°.74N±0°.03×43°.22E±0°.03,h19km±3km, n21,σ0°89/27,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	Van	0.19	137	PG	Pg	06 15 36.7	-0.4
VANB				SG	Sg	06 15 41.4	+0.9
VANB	Van	0.19	137	*e*Pg	Pg	06 15 36.7	-0.4
VANB				*e*Sg	Sg	06 15 41.4	+0.9
ERCV	ERCIS-VAN	0.30	17	PG	Pg	06 15 37.8	-0.9
ERCV				SG	Sb	06 15 43.4	+0.1
ERCV	ERCIS-VAN	0.30	17	*e*Pg	Pg	06 15 37.8	-0.9
ERCV				*e*Sg	Sb	06 15 43.4	+0.1
ADCV	BITLIS_Adilcev	0.40	281	*i* P	Pg	06 15 39.9	-0.5
ADCV				*i* S	Sg	06 15 46.4	+0.3
ADCV	BITLIS_Adilcev	0.40	281	P	Pg	06 15 39.9	-0.5
ADCV				S	Sg	06 15 46.4	+0.3
GEVA	Gevas	0.44	197	*i* P	Pg	06 15 39.7	-1.5
GEVA	Gevas	0.44	197	P	Pg	06 15 39.7	-1.5
AGRB	Hanur-Agry	0.86	348	PG	Pb	06 15 47.9	-0.5
AGRB	Hanur-Agry	0.86	348	*e*Pg	Pb	06 15 47.9	-0.5
GURO	Guroymak-BITLI	0.95	259	PG	Pb	06 15 48.8	-1.1
GURO	Guroymak-BITLI	0.95	259	*e*Pg	Pb	06 15 48.8	-1.1
HAKT	HAKKARI	1.24	162	*i* P	Pn	06 15 54.5	+0.1
HAKT	HAKKARI	1.24	162	P	Pn	06 15 54.5	+0.1
EATA	Eleskirt	1.26	333	*i* P	Pn	06 15 55.4	+0.5
EATA	Eleskirt	1.26	333	P	Pn	06 15 55.4	+0.5
SIRT	Sirnak	1.38	207	PN	Pb	06 15 57.1	-0.1
SIRT	Sirnak	1.38	207	*e*Pn	Pb	06 15 57.1	-0.1
BNGL	BINGOL	1.63	278	*i* P	Pb	06 16 01.6	0.0
MAZI	Mazidag	2.54	241	PN	Pn	06 16 13.9	+1.7
MAZI	Mazidag	2.54	241	*e*Pn	Pn	06 16 13.9	+1.7

IDC 02 06:16:22.4±3.1,5°.21S×100°.68E,h0km,mb3.8/7, mb1 3.9/7,mb1mx3.6/59,mbtmp3.8/7,Error ellipse: s-maj=128.4km s-min=18.4km az=57.0,Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	23.58	356	P	P	06 21 34.5	-0.4
	0.9nm,0.4s,baz=170,slow=11,SNR=3.3						
H08S2	Diego Garcia H	28.11	264	T	T	06 51 53.5	
	baz=86,slow=74,SNR=65						
H08S3	Diego Garcia H	28.12	264	T	T	06 51 55.3	
	baz=86,slow=74,SNR=82						
H08S1	Diego Carcia H	28.13	264	T	T	06 51 54.9	
	baz=86,slow=74,SNR=59						
H01W3	Cape Leeuwin H	32.04	159	T	T	06 57 12.0	
	baz=337,slow=76,SNR=9.1						
H01W2	Cape Leeuwin H	32.05	159	T	T	06 57 13.6	
	baz=337,slow=76,SNR=9.4						
H01W1	Cape Leeuwin H	32.05	159	T	T	06 56 53.3	
	baz=337,slow=76,SNR=9.6						
WRA	Warramunga Arr	35.86	117	P	P	06 23 24.3	0.0
	0.2nm,0.5s,baz=292,slow=8.5,SNR=4.1						
ASAR	Alice Springs	36.88	123	P	P	06 23 32.6	-0.3
	0.4nm,0.4s,baz=301,slow=7.7,SNR=7.4						
STKA	Stephens Creek	46.55	130	P	P	06 24 51.4	-0.6
	3.6nm,1.0s,baz=326,slow=15,SNR=4.2						
SONM	Songino Array	53.06	5	P	P	06 25 41.5	+0.1
	1.8nm,1.0s,baz=189,slow=7.5,SNR=6.7						
MKAR	Makanchi Array	54.29	345	P	P	06 25 50.2	-0.2
	1.0nm,0.8s,baz=152,slow=9.2,SNR=8.4						
ZALV	Zalesovo Beam	60.43	349	P	P	06 26 33.1	-0.5
	0.5nm,0.4s,baz=160,slow=4.7,SNR=4.5						
TXAR	Lajitas Array	146.75	41	PKPbc	PKPbc	06 36 07.5	+0.3
	1.3nm,0.8s,baz=279,slow=1.2,SNR=16						

ISCJB ***02*** *06:18:24.3±0.2,27°.77S±0°.02×66°.81W±0°.03,h171km±2km, mb4.3/104,Error ellipse: s-maj=4.7km s-min=3.3km az=9.0*
GUC ***02*** *06:18:24.6±0.5,27°.79S×66°.78W,h155km±9km,ML5.1*
SJA ***02*** *06:18:24.2±0.9,27°.82S×66°.75W,h180km±8km,ML4.1, MW3.9,Fault plane solution: NP1:ϕs303.00000°, δ45.01000°,λ-88.59000°.*
NEIC ***02*** *06:18:24.4±0.4,27°.77S×66°.67W,h155km±3km,mb4.5/93, Error ellipse: s-maj=5.9km s-min=3.9km az=77.0*
IDC ***02*** *06:18:26.6±0.7,27°.72S×66°.56W,h174km±5km,mb3.9/20, mb1 3.9/23,mb1mx3.9/39,mbtmp4.3/23,Error ellipse: s-maj=14.7km s-min=9.6km az=69.0*

ISC 02 06:18:25.3±0.5,27°.79S±0°.04×66°.80W±0°.04,h168km±4km, h168km:pP-P,n351,σ1°04/385,mb4.4/103,21C-7D, Catamarca Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CYA	Choya	1.09	127	⇓*e*P	Pn	06 19 53.4	+0.8
CYA				*e*S	Sn	06 19 13.2	-0.4
VCA	Vinchina	1.56	232	⇑*e*P	Pn	06 18 58.6	+1.5
VCA				IAML		06 19 26.3	
	comp=Z,6μm,0.4s						
VCA	Vinchina	1.56	232	⇓*i*P	Pn	06 18 58.4	+1.3
VCA				*e*S	Sn	06 19 20.6	-0.9
VCA				IAML		06 19 26.0	
	comp=E,17μm,0.9s						
AHML	Horco Molle	1.64	53	⇑*e*P	Pn	06 18 58.2	+0.4
AHML				IAML		06 18 58.4	
	comp=Z,792nm,0.2s						
AHML	Horco Molle	1.64	53	⇑*i*P	Pn	06 18 58.1	+0.4
AHML				*e*S	Sn	06 19 22.0	-0.8
FSA	Cafayete	1.82	24	⇑*e*P	Pn	06 19 00.1	+0.3
FSA				⇓*e*S	Sn	06 19 26.4	0.0
AGUA	GUANDACOL	2.26	221	*e*P	Pn	06 19 05.4	+0.8
AGUA				*e*S	Sn	06 19 37.7	+2.7
GO03	Copiap	3.06	273	*e*Pn	Pn	06 19 14.5	+0.3
GO03				*e*Sn	Sn	06 19 50.8	-1.3
GO03	Copiap	3.06	273	*e*P	Pn	06 19 14.1	-0.1
GO03				*i* S	Sn	06 19 51.0	-1.1
GO03				IAML		06 19 52.5	
	comp=E,3μm,0.7s						
AMOG	MOGNA	3.47	205	⇑*e*P	Pn	06 19 19.2	-0.2
AMOG				*e*S	Sn	06 20 00.4	-1.1
LCO	Las Campanas	3.65	250	*e*Pn	Pn	06 19 21.4	-0.4
LCO				*e*Sn	Sn	06 20 04.9	-0.9
LCO	Las Campanas	3.65	250	⇑*i*P	Pn	06 19 21.8	0.0
LCO	Las Campanas	3.65	250	*e*P	Pn	06 19 21.3	-0.5
LCO				*i* S	Sn	06 20 04.7	-1.1
LCO				IAML		06 20 06.1	
	comp=E,2μm,0.5s						
RTLL	Cerro Villicun	3.82	202	*e*P	Pn	06 19 23.4	-0.4
RTLL				⇑*e*P		06 19 23.5	
RTLL				IAML		06 20 11.4	
	comp=Z,301nm,0.3s						
TCA	Tanti	4.02	152	⇑*e*P	Pn	06 19 26.1	-0.3
TCA				*e*P		06 19 26.2	
TCA				IAML		06 20 12.5	
	comp=Z,202nm,0.8s						
SJA	San Juan	4.03	202	*e*P	Pn	06 19 26.5	0.0
ZON	Zonda	4.09	203	⇑*i*P	Pn	06 19 26.9	-0.3
GO04	Tololo Observa	4.24	235	*e*Pn	Pn	06 19 28.6	-0.7
GO04				*e*Sn	Sn	06 20 18.7	-0.7
GO04	Tololo Observa	4.24	235	⇑*i*P	Pn	06 19 28.7	-0.7
GO04				*i* S	Sn	06 20 17.9	-1.4
TLL	Tololo Astrono	4.24	235	⇓*i*P	Pn	06 19 28.9	-0.4
TLL				*e*S	Sn	06 20 18.1	-1.3
TLL				IAML		06 20 21.3	
	comp=N,1μm,0.4s						
RTCV	Cerro Valdivia	4.34	200	*e*P	Pn	06 19 30.1	-0.3
ACAN	Cantantal	4.49	184	⇑*e*P	Pn	06 19 32.1	-0.2
ACAN				*e*S	Sn	06 20 17.6	-7.3
PB14	IPOC Station P	4.52	313	⇑*e*P	Pn	06 19 33.7	+0.6
PB14	IPOC Station P	4.52	313	*e*P	Pn	06 19 32.6	-0.5
PB14				*i* S	Sn	06 20 24.1	-1.9
PB14				IAML		06 20 30.7	
	comp=E,359nm,0.6s						
RTLS	Leoncito	4.55	208	⇑*e*P	Pn	06 19 33.3	-0.2
RTLS				IAML		06 20 30.6	
	comp=Z,206nm,0.3s						
MRA	San Martin	4.71	169	⇑*e*P	Pn	06 19 34.9	-0.5
MRA				IAML		06 20 49.5	
	comp=Z,83nm,0.4s						
HJA	Humahuaca	4.73	16	⇑*i*P	Pn	06 19 37.2	+1.3
HJA				IAML		06 20 31.8	
	comp=Z,30nm,0.5s						
AUSP	Uspallata	4.96	206	⇑*e*P	Pn	06 19 39.0	+0.2
ASAL	Salagasta	5.10	200	⇑*e*P	Pn	06 19 39.7	-0.7
PB15	IPOC Station P	5.16	331	⇓*i*P	Pn	06 19 41.2	-0.2
PB15				*e*S	Sn	06 20 39.0	-1.9
PB15				IAML		06 20 44.5	
	comp=E,195nm,0.4s						
ARCO	CERRO ARCO	5.37	200	⇑*e*P	Pn	06 19 43.5	-0.4
ARCO				IAML		06 20 48.1	
	comp=Z,334nm,0.3s						
PB10	IPOC Station P	5.44	321	*e*Pn	Pn	06 19 44.6	-0.3
PB10	IPOC Station P	5.44	321	⇓*e*P	Pn	06 19 44.7	-0.3
AAGR	Agrelo	5.56	198	⇑*e*P	Pn	06 19 46.3	-0.3
YJA	Yavi	5.71	12	⇑*e*P	Pn	06 19 50.3	+1.5
PB04	IPOC Station P	6.22	330	*e*Pn	Pn	06 19 54.6	-0.8
ROC1	El Roble	6.33	214	*e*Pn	Pn	06 19 54.5	-2.2
ROC1				*e*Sn	Sn	06 21 05.4	-3.2
ROC1	El Roble	6.33	214	⇑*e*P	Pn	06 19 54.7	-2.0
PB01	IPOC Station P	7.15	339	*e*Pn	Pn	06 20 06.9	-0.6
PB01				*e*Sn	Sn	06 21 24.1	-3.9
PB11	IPOC Station P	8.41	341	*e*Pn	Pn	06 20 23.1	-1.2
GO05	HualaæØ	8.43	210	*e*Pn	Pn	06 20 20.1	-4.3
GO05				*e*Sn	Sn	06 21 57.7	-0.8
CPUP	Villa Florida	8.56	82	P	Pn	06 20 24.3	-1.8
	comp=Z,0.8nm,0.3s,baz=270,slow=11,SNR=43						
CPUP	Villa Florida	8.56	82	*e*Pn	Pn	06 20 23.9	-2.3
MNMC	Minye Minye	8.99	343	*e*Pn	Pn	06 20 32.0	-0.1
TRQA	Tornquist	11.01	160	*e*Pn	Pn	06 20 58.8	+0.6
LPAZ	La Paz	11.51	354	P	Pn	06 21 05.5	+0.1
	comp=Z,0.5nm,0.3s,baz=172,slow=7.4,SNR=22						
LPAZ	La Paz	11.51	354	*e*Pn	Pn	06 21 05.8	+0.4
SIV	San Ignacio	12.88	25	P	Pn	06 21 21.7	-0.8
	comp=Z,0.6nm,0.3s,baz=234,slow=11,SNR=14						
SAML	Samuel	19.05	11	*e*P	P	06 22 33.5	-1.3
	comp=Z,8.3nm,0.9s						
EFI	East Falkland	24.75	167	*e*P	P	06 23 31.6	+0.4
	comp=Z,150nm,1.5s						
PTGA	Pitinga	27.69	15	P	P	06 23 57.1	-0.8
	comp=Z,4.7nm,0.3s,baz=15,slow=22,SNR=22						
PTGA	Pitinga	27.69	15	*e*P	P	06 23 57.4	-0.5
	comp=Z,7.5nm,0.6s						
RUSC	La Rusia	34.03	349	*e*P	P	06 24 54.1	+0.1
	comp=Z,3.8nm,0.7s						
HELC	Santa Helena	34.82	345	*e*P	P	06 25 00.1	-0.6
	comp=Z,20nm,1.1s						
SDV	Santo Domingo	36.64	354	P	P	06 25 14.5	-1.6
	comp=Z,3.7nm,0.4s,baz=239,slow=5.9,SNR=6.4						
SDV	Santo Domingo	36.64	354	*e*P	P	06 25 15.1	-1.0
	comp=Z,10nm,1.1s						
JTS	JuntasAbangare	41.74	333	P	P	06 26 00.2	+2.0
	comp=Z,2.7nm,0.4s,baz=46,slow=19,SNR=7.5						
FDF	Fort de France	42.62	8	*e*P	P	06 26 04.2	-1.0
	comp=Z,148nm,1.5s						
OBIP	Obispado Ponce	45.56	0	*e*P	P	06 26 27.4	-1.1
	comp=Z,10nm,1.0s						
HUMP	Col San Antoni	45.67	1	*e*P	P	06 26 29.3	0.0
	comp=Z,16nm,1.1s						
CBYP	Canovanas	45.79	1	*e*P	P	06 26 29.1	-1.4
	comp=Z,44nm,1.5s						
STVI	Saint Thomas	45.90	2	*e*P	P	06 26 29.6	-1.6
	comp=Z,36nm,1.3s						
MTDJ	Mount Denham	46.91	346	*e*P	P	06 26 39.8	+0.6
	comp=Z,50nm,1.1s						
APG	El Apazote	48.33	329	P	P	06 26 51.5	+1.2
	comp=Z,4.5nm,0.7s,baz=297,slow=4.5,SNR=6.2						
CCIG	Comitan	50.22	328	*e*P	P	06 27 05.3	+0.7
	comp=Z,17nm,1.5s						
MYIG	MØrida	53.30	333	*e*P	P	06 27 24.7	-2.4
	comp=Z,61nm,0.6s						
VNA3	Neumayer Olymp	53.53	160	P	P	06 27 29.1	+0.8
VNA1	Neumayer--Stat	53.75	159	P	P	06 27 30.0	+0.3
SNAA	Sanae	55.74	160	P	P	06 27 42.5	-1.7
SNAA	Sanae	55.74	160	P	P	06 27 44.6	+0.5
	comp=Z,2.6nm,0.5s,baz=282,slow=7.5,SNR=52						
SNAA	Sanae	55.74	160	*e*P	P	06 27 44.7	+0.5
	comp=Z,3.6nm,0.7s						
251A	Midway	62.13	342	P	P	06 28 28.0	-0.5
	baz=161						
QSPA	South Pole Qui	62.43	180	P	P	06 28 31.6	+1.2
	comp=Z,5.7nm,0.6s,baz=151,slow=4.1,SNR=25						
QSPA	South Pole Qui	62.43	180	*e*P	P	06 28 31.5	+1.2
	comp=Z,4.8nm,0.6s						
GOGA	Godfrey	62.89	344	*e*P	P	06 28 33.5	0.0
	comp=Z,14nm,1.5s						
Y53A	Monroe	63.34	344	P	P	06 28 36.1	-0.4
	baz=163						
Z50A	Ashland	63.37	342	P	P	06 28 36.4	-0.3
	baz=161						
245A	Little AP, Sta	63.42	338	P	P	06 28 37.5	+0.5
	baz=157						
LRAL	Lakeview Retre	63.46	341	P	P	06 28 36.8	-0.5
	baz=160						
LRAL	Lakeview Retre	63.46	341	*e*P	P	06 28 37.0	-0.3
	comp=Z,4.6nm,1.1s						
Y52A	Lilburn	63.46	344	P	P	06 28 36.7	-0.6
	baz=163						
Z49A	Columbiana	63.48	342	P	P	06 28 37.1	-0.3
	baz=160						
147A	Livingston	63.50	340	P	P	06 28 37.4	-0.1
	baz=159						
342A	Flagon Creek P	63.67	336	P	P	06 28 40.2	+1.5
	baz=155						
Y51A	Rockmart	63.75	343	P	P	06 28 39.0	-0.2
	baz=162						
HKT	Hockley	63.77	332	*e*P	P	06 28 40.2	+0.9
	comp=Z,5.4nm,1.5s						
X53A	Estanollee	63.89	345	P	P	06 28 39.5	-0.6
	baz=164						
Y50A	Piedmont	63.92	343	P	P	06 28 39.9	-0.3
	baz=161						
Z48A	Northport	63.94	341	P	P	06 28 40.0	-0.4
	baz=160						
341A	Kurthwood	63.94	335	P	P	06 28 41.8	+1.4
	baz=154						
341A	Kurthwood	63.94	335	*e*P	P	06 28 41.9	+1.4
	comp=Z,7.4nm,0.6s						
833A

comp=Z,7.6nm,1.3s
W41B Gary Mavity, V 67.08 338 P P 06 29 01.1 +0.5
baz=156
W41B Gary Mavity, V 67.08 338 eP P 06 29 00.9 +0.4
comp=Z,5.2nm,1.0s
X39A Fountain Ranch 67.14 336 P P 06 29 01.9 +0.9
baz=154,SNR=6.7
WHAR Woody Hollow 67.20 338 eP P 06 29 01.6 +0.3
comp=Z,4.3nm,1.0s
T47A Sharon Grove 67.20 342 P P 06 29 01.4 +0.1
baz=160
V42A Cord 67.37 338 P P 06 29 02.2 -0.2
baz=156
W40A Ferguson Farm, 67.38 337 P P 06 29 03.1 +0.6
baz=155
W40A Ferguson Farm, 67.38 337 eP P 06 29 03.2 +0.8
comp=Z,12nm,1.0s
V41A Mountainview 67.61 338 P P 06 29 03.9 0.0
baz=156,SNR=7.1
W39A Magazine 67.64 336 P P 06 29 05.0 +1.0
baz=154
W39A Magazine 67.64 336 eP P 06 29 05.2 +1.2
comp=Z,5.8nm,0.6s
U42A Revenden 67.82 339 P P 06 29 05.3 +0.1
baz=157
V40A Witts Springs 67.85 337 P P 06 29 05.6 +0.2
baz=155
V40A Witts Springs 67.85 337 eP P 06 29 05.4 0.0
comp=Z,5.4nm,0.9s
PBMO Poplar Bluff 67.96 340 eP P 06 29 06.1 +0.1
comp=Z,14nm,0.8s
MVL Millersville 68.02 352 eP P 06 29 07.5 +1.2
comp=Z,7.4nm,1.1s
U41A Viola 68.04 338 P P 06 29 06.4 -0.2
baz=156,SNR=5.5
WCI Wyandotte Cave 68.16 344 P P 06 29 06.6 -0.6
baz=161
WCI Wyandotte Cave 68.16 344 eP P 06 29 06.7 -0.6
comp=Z,18nm,1.5s
V39A Pettigrew 68.16 337 P P 06 29 07.8 +0.3
baz=154
MCWV Mont Chateau 68.19 349 eP P 06 29 08.6 +1.2
comp=Z,19nm,1.4s
T43A Greenville 68.20 340 P P 06 29 07.3 -0.3
baz=158,SNR=6.5
U40A Yellville 68.36 338 P P 06 29 09.0 +0.4
baz=155,SNR=5.7
O56A Blue Knob Stat 68.59 350 eP P 06 29 10.4 +0.5
comp=Z,13nm,1.2s
S43A Fulton Ridge, 68.59 340 P P 06 29 09.7 -0.3
baz=158
U39A Green Forest 68.60 337 P P 06 29 10.3 +0.3
baz=155,SNR=6.9
T41A Mountain View 68.62 339 P P 06 29 10.5 +0.3
baz=156,SNR=6.9
HHAR Hobbs 68.67 337 eP P 06 29 11.3 +0.8
comp=Z,4.1nm,0.7s
SSPA Standing Stone 68.85 351 eP P 06 29 12.3 +0.8
comp=Z,9.7nm,1.1s
N59A State Game Lan 68.86 353 eP P 06 29 12.7 +1.1
comp=Z,23nm,1.4s
DBIC Dimbokro 68.87 70 P P 06 29 10.1 -2.1
comp=Z,1.2nm,0.3s,baz=202,slow=3.8,SNR=9.5
DBIC Dimbokro 68.87 70 eP P 06 29 11.5 -0.7
comp=Z,9.7nm,1.4s
S42A Caledonia 68.99 340 P P 06 29 12.1 -0.4
baz=157,SNR=5.7
TUL1 Leonard 69.00 335 P P 06 29 12.5 -0.1
baz=153
FVM French Village 69.07 340 eP P 06 29 12.8 -0.1
comp=Z,7.2nm,0.6s
BLO Bloomington 69.11 344 eP P 06 29 12.5 -0.6
comp=Z,5.4nm,0.6s
S41A Jillco Farms, 69.12 339 P P 06 29 13.4 +0.2
baz=156
T39A Clever 69.14 337 P P 06 29 13.7 +0.3
baz=155
WMOK Wichita Mounta 69.16 332 P P 06 29 13.7 +0.2
baz=150
WMOK Wichita Mounta 69.16 332 eP P 06 29 13.8 +0.2
comp=Z,4.1nm,1.2s
S40A Lebanon 69.37 338 P P 06 29 15.2 +0.4
baz=156,SNR=7.7
CCM Cathedral Cave 69.39 340 P P 06 29 14.9 0.0
baz=157
CCM Cathedral Cave 69.39 340 eP P 06 29 14.8 0.0
comp=Z,9.7nm,0.6s
R42A Luebbering 69.46 340 P P 06 29 15.4 +0.1
baz=157
T38A Diamond 69.47 337 P P 06 29 15.8 +0.4
baz=154,SNR=7.3
N54A Moraine State 69.49 349 P P 06 29 16.0 +0.6
baz=167
N54A Moraine State 69.49 349 eP P 06 29 16.1 +0.6
comp=Z,25nm,1.5s
MNTX Cornudas Mount 69.64 325 P P 06 29 16.6 0.0
baz=144
MNTX Cornudas Mount 69.64 325 eP P 06 29 16.6 0.0
comp=Z,1.4nm,0.8s
R41A Rosebud 69.65 340 P P 06 29 16.5 0.0
baz=157
S39A Bolivar 69.72 338 P P 06 29 17.4 +0.5
baz=155,SNR=13
S38A Stockton 69.87 337 P P 06 29 18.0 +0.2
baz=154,SNR=6.9
R40A Maddies Statio 69.93 339 P P 06 29 18.2 0.0
baz=156
Q42A Golden Eagle 69.96 340 P P 06 29 18.3 0.0
baz=158
M54A Oil Creek Stat 69.97 350 eP P 06 29 18.6 +0.3
comp=Z,34nm,1.4s
SYO Syowa Base 69.97 158 eP P 06 29 16.8 -1.3
O47A Sheridan 70.03 344 P P 06 29 18.2 -0.6
baz=162
BINY Binghamton 70.15 353 eP P 06 29 20.2 +0.7
comp=Z,25nm,1.5s
R39A Chumby, Stover 70.20 338 P P 06 29 20.0 +0.2
baz=155
MSTX Muleshoe 70.25 329 P P 06 29 20.9 +0.5
baz=146
R38A Fenwick Farm, 70.37 338 P P 06 29 21.2 +0.3
baz=155
Q40A Laux Farm, Aux 70.51 339 P P 06 29 21.9 +0.3
baz=156
P42A Winchester 70.53 341 P P 06 29 21.4 -0.4
baz=158
P41A Barry, Barry 70.82 340 P P 06 29 23.2 -0.4
baz=157
Q39A Willow Grove F 70.84 339 P P 06 29 23.8 +0.1
baz=156
Q38A Cooks Store, C 70.97 338 P P 06 29 24.3 -0.1
baz=155
P40A Paris 70.99 340 P P 06 29 24.4 -0.1
baz=156
VNDA Vanda 71.02 190 P P 06 29 26.0 +1.7
comp=Z,1.5nm,1.0s,baz=98,slow=0.8,SNR=5.0
HDIL Hopedale 71.14 342 P P 06 29 25.0 -0.4
baz=159
HDIL Hopedale 71.14 342 eP P 06 29 25.2 -0.2
comp=Z,8.4nm,0.8s
O40A La Belle 71.48 340 P P 06 29 27.3 -0.2
baz=157
P38A Dawn 71.55 339 P P 06 29 27.8 -0.1
baz=155
LBNH Lisbon 71.83 356 eP P 06 29 31.0 +1.5
comp=Z,27nm,1.5s
N40A Mertquake, Sal 72.09 340 P P 06 29 30.8 -0.3
baz=157
EMMW East Machias 72.15 360 eP P 06 29 32.2 +0.9
comp=Z,14nm,1.4s
N39A Derby Farms, D 72.36 340 P P 06 29 32.3 -0.4
baz=156
LONY Lake Ozonia 72.41 354 eP P 06 29 33.7 +0.8
comp=Z,10.0nm,1.1s
M40A Post Highland 72.55 341 P P 06 29 33.7 -0.1
baz=157
ANMO Albuquerque 72.79 327 P P 06 29 37.0 +1.4
comp=Z,1.6nm,0.6s,baz=140,slow=9.5,SNR=12
ANMO Albuquerque 72.79 327 P P 06 29 37.0 +1.4
baz=144
ANMO Albuquerque 72.79 327 eP P 06 29 37.1 +1.4
comp=Z,2.7nm,0.9s
TASL Snake Pit, Alb 72.79 327 P P 06 29 37.2 +1.6
baz=144,SNR=5.6
TASM ASL Pad, Albuq 72.79 327 P P 06 29 37.0 +1.3
baz=144,SNR=5.4
M38A Pleasantville 73.07 340 P P 06 29 36.8 0.0
baz=156

L40A Anamosa 73.07 341 P P 06 29 37.0 +0.1
baz=157
M37A Trindle Farm, 73.33 339 P P 06 29 38.6 +0.2
baz=155
J43A Natural Harves 73.55 344 P P 06 29 39.7 0.0
baz=160
JFWS Jewell Farm 73.59 342 P P 06 29 40.0 +0.1
baz=158
JFWS Jewell Farm 73.59 342 eP P 06 29 40.3 +0.4
comp=Z,8.0nm,1.0s
T25A Trinidad 73.62 329 P P 06 29 41.0 +0.5
baz=146
T25A Trinidad 73.62 329 eP P 06 29 42.0 +1.5
comp=Z,3.3nm,0.8s
SUR Sutherland 73.83 118 eP P 06 29 42.9 +0.9
comp=Z,19nm,1.3s
K39A Oelwein 73.86 341 P P 06 29 41.0 -0.5
baz=157
KOWA Kowa 73.91 64 P P 06 29 40.9 -1.5
comp=Z,2.1nm,0.6s,baz=248,slow=7.8,SNR=5.5
J41A Loganville 73.95 343 P P 06 29 41.0 -1.0
baz=159
PQI Presque Isle 74.11 359 eP P 06 29 44.2 +1.4
comp=Z,11nm,1.0s
I42A Draeger Farm, 74.16 344 P P 06 29 43.1 -0.1
baz=160
I42A Draeger Farm, 74.16 344 eP P 06 29 43.3 +0.2
comp=Z,16nm,1.1s
J40A Soldiers Grove 74.17 342 P P 06 29 43.2 -0.1
baz=158
J39A Decorah 74.38 341 P P 06 29 44.4 -0.1
baz=157
H42A Shiocton 74.64 344 P P 06 29 46.2 +0.2
baz=160
H42A Shiocton 74.64 344 eP P 06 29 46.1 +0.2
comp=Z,9.2nm,0.4s
H40A Chili 75.22 343 P P 06 29 49.1 -0.2
baz=158
Q24A Divide 75.45 330 P P 06 29 52.2 +1.1
baz=145
I37A Lemond, Waseca 75.50 341 P P 06 29 50.9 0.0
baz=156
F41A Three Lakes 75.94 344 P P 06 29 53.4 0.0
baz=160
G39A Holcombe 76.04 343 P P 06 29 53.4 -0.5
baz=158
ECSD EROS Data Cent 76.25 338 P P 06 29 55.2 0.0
baz=153
ECSD EROS Data Cent 76.25 338 eP P 06 29 55.5 +0.4
comp=Z,5.3nm,0.9s
COWI Conover 76.28 344 eP P 06 29 55.7 +0.4
comp=Z,11nm,1.4s
E42A Champion 76.31 345 P P 06 29 55.7 +0.2
baz=161
ISCO Idaho Springs 76.34 330 eP P 06 29 57.8 +1.6
comp=Z,2.4nm,0.9s
SPMN Marine on St. 76.43 341 P P 06 29 55.9 -0.2
baz=156
SPMN Marine on St. 76.43 341 eP P 06 29 56.3 +0.2
comp=Z,6.0nm,0.3s
SMCO Snowmass 76.44 329 eP P 06 29 58.9 +2.0
comp=Z,2.4nm,0.8s
TSUM Tsumeb 76.49 105 eP P 06 29 57.9 +0.6
comp=Z,7.1nm,1.2s
H35A Sunnyside Ranc 76.55 340 P P 06 29 56.9 +0.1
baz=155
F39A Loretta 76.56 343 P P 06 29 56.9 +0.1
baz=158
H34A Spellman Lake, 76.81 339 P P 06 29 58.1 -0.2
baz=154
F38A Pierce - Schro 76.85 342 P P 06 29 58.7 +0.2
baz=157
E39A Mellen 76.89 343 P P 06 29 59.1 +0.4
baz=158
D41A Chassel 77.05 345 P P 06 30 00.1 +0.5
baz=160
H33A Prehn Over Nor 77.13 339 P P 06 30 00.8 +0.6
baz=153
H32A Carlson Farm, 77.20 338 P P 06 30 00.8 +0.2
baz=152
F36A Milaca 77.22 341 P P 06 30 00.5 -0.1
baz=156
KNB Kanab 77.62 324 eP P 06 30 05.2 +2.0
comp=Z,4.5nm,0.9s
E36A McGregor 77.74 342 P P 06 30 03.2 -0.2
baz=156
TOA0 Torodi Ar. Sit 77.78 68 eP P 06 30 03.7 -0.6
TORD Torodi Ar. Bea 77.78 68 P P 06 30 03.7 -0.7
comp=Z,4.4nm,0.6s,baz=269,slow=5.9,SNR=33
TORD pP pP 06 30 46.5 +1.2
comp=Z,1.2nm,0.8s,baz=239,slow=4.5,SNR=1.8
MAW Mawson 77.78 162 P P 06 30 03.4 -0.1
comp=Z,5.4nm,0.7s,baz=204,slow=6.5,SNR=12
MAW Mawson 77.78 162 eP P 06 30 04.7 +1.2
comp=Z,1.0nm,0.8s
O20A White River Ci 77.80 329 P P 06 30 05.7 +1.5
baz=143
SRU San Rafael Swe 78.07 327 eP P 06 30 07.1 +1.4
comp=Z,2.8nm,0.9s
MTPU Mount Pierson 78.07 325 eP P 06 30 07.2 +1.3
comp=Z,1.2nm,0.8s
C39A Grand Marais 78.13 344 P P 06 30 05.2 -0.3
baz=159
CCUT Cedar City 78.31 324 eP P 06 30 09.4 +2.4
comp=Z,3.2nm,0.9s
MSU Marysvale 78.43 325 eP P 06 30 09.9 +2.2
D35A Remer 78.48 341 P P 06 30 08.0 +0.5
baz=156
SNCC San Nicolas Is 78.66 317 eP P 06 30 08.0 -0.8
comp=Z,56nm,1.1s
BOSA Boshof 78.87 116 P P 06 30 10.6 +0.2
comp=Z,8.8nm,0.7s,baz=256,slow=3.4,SNR=18
BOSA Boshof 78.87 116 eP P 06 30 10.4 +0.1
comp=Z,8.7nm,0.6s
C35A Jirik Farms, M 79.02 342 P P 06 30 10.5 +0.1
baz=156
C34A RKJ Ranch, Bem 79.24 341 P P 06 30 11.8 +0.1
baz=155
RSSD Black Hills 79.27 334 P P 06 30 12.8 +0.7
baz=147
PSUT Pine Spring 79.30 324 eP P 06 30 14.4 +2.0
comp=Z,2.7nm,0.9s
TPNV Topopah Spring 79.41 322 eP P 06 30 15.1 +2.2
comp=Z,3.6nm,1.4s
B35A Bob, Littlefor 79.56 342 P P 06 30 13.5 +0.2
baz=156
C33A Trail 79.59 341 P P 06 30 13.9 +0.4
baz=154
JLU Jordanelle 79.67 327 eP P 06 30 16.0 +1.6
comp=Z,1.9nm,0.6s
B34A Aery, Baudette 79.92 342 P P 06 30 15.3 +0.1
baz=155
R11A Troy Canyon, C 80.07 323 P P 06 30 17.7 +1.1
baz=137
AGMN Agassiz Nation 80.10 341 P P 06 30 16.5 +0.3
baz=154
AGMN Agassiz Nation 80.10 341 eP P 06 30 16.7 +0.5
comp=Z,4.7nm,0.8s
C31A Landman Farms, 80.22 339 P P 06 30 17.1 +0.3
baz=152
PDAR Pinedale Array 80.49 330 P P 06 30 19.3 +0.6
comp=Z,1.3nm,0.7s,baz=117,slow=6.0,SNR=8.7
PDAR Pinedale Array 80.49 330 eP P 06 30 19.4 +0.7
A33A Warroad 80.54 341 P P 06 30 18.9 +0.3
baz=154
SPUT South Promonto 80.70 327 eP P 06 30 20.4 +0.6
comp=Z,2.7nm,0.6s
LBTB Lobatse 80.71 113 eP P 06 30 20.6 +0.3
comp=Z,13nm,1.0s
B31A Greenbush Farm 80.75 340 P P 06 30 20.0 +0.3
baz=152
A31A Linda, St. Vin 81.06 340 P P 06 30 21.5 +0.2
baz=153
HVU Hansel Valley 81.22 327 eP P 06 30 23.6 +1.1
comp=Z,3.5nm,0.9s
NVAR Mina Array Bea 81.60 322 P P 06 30 26.0 +1.3
comp=Z,0.2nm,0.5s,baz=140,slow=7.6,SNR=3.9
ULM Lac du Bonnet 81.86 342 P P 06 30 25.4 0.0
comp=Z,1.3nm,0.3s,baz=204,slow=3.3,SNR=8.2
ULM Lac du Bonnet 81.86 342 eP P 06 30 25.7 +0.2
comp=Z,7.2nm,1.3s
RLMT Red Lodge 82.23 331 P P 06 30 28.9 +1.1
baz=143
YFT Old Faithful 82.39 330 eP P 06 30 31.1 +2.4
comp=Z,3.8nm,0.4s
YHH Holmes Hill 82.66 330 eP P 06 30 31.9 +1.8
comp=Z,4.5nm,1.0s
DGMT Dagmar 82.98 336 P P 06 30 32.4 +1.0

baz=147
HLID Hailey 83.36 327 P P 06 30 35.1 +1.5
baz=139
HLID Hailey 83.36 327 eP P 06 30 35.1 +1.5
comp=Z,2.3nm,0.7s
MCMT McKenzie Canyo 83.59 329 eP P 06 30 36.5 +1.7
LRM Limekiln Ridge 84.17 330 eP P 06 30 39.3 +1.5
J08A Circle Bar Ran 85.21 325 eP P 06 30 44.5 +1.6
comp=Z,3.7nm,0.9s
K05A Summer Lake 86.02 323 eP P 06 30 48.9 +1.9
comp=Z,4.4nm,1.0s
CASY Casey 86.21 179 eP P 06 30 48.6 +1.2
comp=Z,2.0nm,0.8s
YBH Yreka Blue Hor 86.32 322 P P 06 30 47.7 -0.7
comp=Z,0.9nm,0.5s,baz=153,slow=6.8,SNR=3.8
JTMT Jette 86.45 330 eP P 06 30 50.4 +1.5
comp=Z,3.6nm,0.8s
J05D Fort Rock, OR 86.59 323 P P 06 30 50.5 +0.8
baz=134
PINE Pine Mountain 86.79 324 eP P 06 30 52.4 +1.7
comp=Z,2.7nm,0.8s
HUMO Hull Mountain 87.05 322 eP P 06 30 52.0 +0.2
comp=Z,3.3nm,1.3s
WALA Waterton Lakes 87.29 331 eP P 06 30 54.0 +1.1
comp=Z,4.7nm,0.8s
ESDC Sonseca Array 89.01 43 P P 06 31 01.8 +0.7
comp=Z,0.3nm,0.5s,baz=216,slow=3.2,SNR=3.2
FCC Fort Churchill 89.17 346 eP P 06 31 01.8 +0.5
comp=Z,3.7nm,0.5s
YKA Yellowknife Ar 97.73 340 P Pdif 06 31 40.6 0.0
comp=Z,0.3nm,0.5s,baz=132,slow=4.9,SNR=7.7
AS01 Alice Springs 125.07 203 ePKPdf PKPdf 06 37 06.0 -0.4
ASAR Alice Springs 125.09 203 PKP PKPdf 06 37 06.1 -0.3
comp=Z,1.5nm,0.4s,baz=131,slow=1.6,SNR=22
ASAR pPKP **pPKPdf 06 37 50.7 +0.3**
comp=Z,0.8nm,0.8s,baz=149,slow=3.5,SNR=4.4
AS31 Alice Springs 125.09 203 ePKPdf PKPdf 06 37 06.2 -0.2
WB2 Warramunga Arr 128.33 206 ePKPdf PKPdf 06 37 12.8 +0.2
WRA Warramunga Arr 128.33 206 PKP PKPdf 06 37 12.7 0.0
comp=Z,1.6nm,0.3s,baz=153,slow=2.0,SNR=105
WRA pPKP **pPKPdf 06 37 57.5 +0.8**
comp=Z,1.2nm,0.8s,baz=167,slow=1.7,SNR=4.1
WRAB Tennant Creek 128.34 206 ePKPdf PKPdf 06 37 12.8 +0.2
FITZ Fitzroy Crossi 132.82 196 PKP PKPdf 06 37 21.4 +0.3
comp=Z,2.1nm,0.6s,baz=177,slow=1.8,SNR=4.9
FITZ Fitzroy Crossi 132.82 196 ePKPdf PKPdf 06 37 21.6 +0.5
BVAR Borovoye Array 139.65 39 PKP PKPdf 06 37 33.2 +0.5
comp=Z,0.7nm,0.5s,baz=349,slow=1.5,SNR=3.1
EKS2 Erkin-Say 144.88 55 P PKPdf 06 37 43.4 +0.9
SNR=6.9
AML Almayashu 144.92 55 P PKPdf 06 37 43.5 +0.6
SNR=6.2
KURBB Kurchatov Arra 145.25 39 PKPbc PKPab 06 37 43.4 +0.4
comp=Z,6.1nm,0.6s,baz=301,slow=3.3,SNR=49
KURBB pPKPbc **pPKPdf 06 38 27.6 +0.8**
comp=Z,1.9nm,0.8s,baz=302,slow=3.6,SNR=2.5
KURK Kurchatov 145.25 39 ePKPbc PKPab 06 37 44.0 +0.9
KURK pPKPbc **pPKPdf 06 38 27.6 +0.8**
USP Ospenovka 145.26 53 P PKPab 06 37 43.9 +0.5
SNR=5.4
AAK Ala-Archa 145.40 54 P PKPab 06 37 44.8 +0.7
SNR=18
AAK Ala-Archa 145.40 54 ePKPdf PKPab 06 37 45.0 +0.9
UCH Uchtor 145.50 55 P PKPab 06 37 45.8 +0.9
SNR=26
CHMS Chumysh 145.50 54 P PKPab 06 37 45.0 +0.7
SNR=8.5
KBK Karagaybulak 145.72 54 P PKPab 06 37 46.2 +0.8
SNR=6.4
TKM2 Tokmak 2 146.12 54 P PKPbc 06 37 46.0 +0.1
SNR=8.7
ZALV Zalesovo Beam 146.59 31 PKPbc PKPbc 06 37 45.9 -0.8
comp=Z,6.6nm,0.4s,baz=308,slow=4.0,SNR=24
ZALV pPKPbc pPKPab 06 38 31.6 +0.8
comp=Z,1.3nm,0.4s,baz=292,slow=4.4,SNR=2.1
NRN Naryn 146.75 56 ePKPbc PKPab 06 37 49.1 -0.5
KSH Kashi 147.09 59 PKPbc PKPbc 06 37 49.2 +0.5
KSH pPKP pPKPdf 06 38 27.0 -3.4
KSH PP **PP 06 41 11.5 -3.9**
KSH PKS **PKSdf 06 41 19.0 -2.7**
KSH SKS **SKSdf 06 44 35.6 -3.8**
KSH SKKS **SKKSac 06 47 48.9 -1.6**
KDJ Kajisay 147.45 54 ePKPbc PKPbc 06 37 50.8 +1.0
TARG Taragay, Kyrgy 148.00 55 ePKPbc PKPbc 06 37 51.9 +0.4
TARG ePKPab **PKPab 06 37 55.9 +1.2**
MAKZ Makanchi 149.03 44 ePKPbc PKPbc 06 37 54.2 +0.8
MAKZ ePKPab **PKPab 06 37 59.0 +0.9**
MK31 Makanchi Array 149.23 44 ePKPbc PKPbc 06 37 54.4 +0.4
MK31 ePKPab **PKPab 06 37 60.0 +1.0**
MKAR Makanchi Array 149.23 44 PKPbc PKPbc 06 37 54.4 +0.5
comp=Z,8.7nm,0.8s,baz=299,slow=2.8,SNR=62
MKAR PKPab **PKPab 06 37 59.5 +0.6**
comp=Z,3.5nm,0.6s,baz=304,slow=3.2,SNR=16
MKAR Makanchi Array 149.23 44 ePKPbc PKPbc 06 37 54.5 +0.6
MKAR ePKPab **PKPab 06 37 59.9 +1.0**
MK01 Makanchi Array 149.24 44 ePKPbc PKPbc 06 37 54.4 +0.4
MK01 ePKPab **PKPab 06 37 60.0 +0.9**
WMQ Urumqi 153.99 45 eP PKPdf 06 37 56.5 -0.3
SONM Songino Array 159.29 13 PKPab PKPab 06 38 43.0 +1.2
comp=Z,0.9nm,0.6s,baz=318,slow=4.1,SNR=5.6
HHC Hu-ho-hao-te 166.90 5 eP PKPdf 06 38 09.9 -1.1
CD2 Chengdu 171.19 67 PKP PKPdf 06 38 13.2 -0.7
NJ2 Nanjing 173.51 312 eP PKPdf 06 38 16.0 +1.2

*ISCJB **02** 06:20:12.6±0.6,37°.21N±0°.06×28°.19E±0°.08,h0km, Error ellipse: s-maj=11.1km s-min=4.0km az=137.7*
*CSEM **02** 06:20:12.7±0.2,37°.22N×28°.21E,h1km,ML2.1, Error ellipse: s-maj=6.1km s-min=2.7km az=45.0, Suspected Mining explosion.*
*ISK **02** 06:20:12.1,37°.22N×28°.18E,h8km,ML2.1/4*
*DDA **02** 06:20:13.0,37°.23N×28°.20E,h7km,Ml2.5, Suspected Mining explosion.*

ISC 02 06:20:11.0±1.0,**37°.11N**±0°.05×**28°.04E**±0°.06,**h0km,n16,**
σ0§**61**/22,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.20**	**84**	PG	**Pg**	**06 20 15.1**	**+0.3**
YER				SG	**Sg**	**06 20 17.4**	**+0.1**
YER	**Yerkesik**	**0.20**	**84**	*e*Pg	**Pg**	**06 20 15.1**	**+0.3**
YER				*e*Sg	**Sg**	**06 20 17.4**	**+0.1**
BDRM	**Kayabasi**	**0.48**	**264**	*i* P	**Pn**	**06 20 25.4**	**+0.3**
BDRM	**Kayabasi**	**0.48**	**264**	P	**Pn**	**06 20 25.4**	**+0.3**
TURN	**Turunc**	**0.51**	**118**	PG	**Pg**	**06 20 21.2**	**+0.4**
TURN				SG	**Sg**	**06 20 27.9**	**+0.5**
TURN	**Turunc**	**0.51**	**118**	*i* P	**Pb**	**06 20 22.0**	**-0.9**
TURN	**Turunc**	**0.51**	**118**	*e*Pg	**Pg**	**06 20 21.2**	**+0.4**
TURN	**Turunc**	**0.51**	**118**	P	**Pb**	**06 20 22.0**	**-0.9**
TURN				*e*Sg	**Sg**	**06 20 27.9**	**+0.5**
AYDN	**Tasoluk**	**0.56**	**347**	*i* P	**Pb**	**06 20 22.9**	**-0.9**
AYDN				*i* S	**Sg**	**06 20 30.2**	**+1.1**
AYDN	**Tasoluk**	**0.56**	**347**	P	**Pb**	**06 20 22.9**	**-0.9**
AYDN				S	**Sg**	**06 20 30.2**	**+1.1**
BODT	**Bodrum**	**0.58**	**265**	PG	**Pn**	**06 20 26.3**	**-0.3**
BODT	**Bodrum**	**0.58**	**265**	*e*Pg	**Pn**	**06 20 26.3**	**-0.3**
AYDB	**Zeytinkoy-Aydi**	**0.84**	**352**	PG	**Pg**	**06 20 27.2**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**0.84**	**352**	*e*Pg	**Pg**	**06 20 27.2**	**+0.1**
FETY	**Fethiye**	**0.96**	**119**	PG	**Pb**	**06 20 30.3**	**-0.3**
FETY	**Fethiye**	**0.96**	**119**	*e*Pg	**Pb**	**06 20 30.3**	**-0.3**

*ISCJB **02** 06:47:36.0±0.3,36°.11N±0°.03×71°.05E±0°.05,h102km, mb3.7/13, Error ellipse: s-maj=6.4km s-min=3.4km az=156.5*
*IDC **02** 06:47:36.1±3.1,36°.03N×70°.95E,h88km±27km,mb3.6/14, mb1 3.7/18,mb1mx3.4/67,mbtmp4.0/18,MS2.7/1, Ms1 2.7/1,ms1mx2.1/56, Error ellipse: s-maj=20.3km s-min=17.9km az=166.0*
*NNC **02** 06:47:43.4±2.0,36°.66N×70°.60E,h118km±36km,mb3.7, mpv4.3, Error ellipse: s-maj=19.1km s-min=16.1km az=93.0*

ISC 02 06:47:36.8±0.5,**36°.11N**±0°.05×**70°.98E**±0°.06,**h102km,n60,**
σ2§**28**/69,**mb3.9**/13,**7C-6D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**4.38**	**26**	⇓P	**Pn**	**06 48 44.0**	**+2.6**
	92nm,0.4s						
SFK				⇑S	**Sn**	**06 49 32.0**	**+0.6**
	76nm,0.5s						
THN	**Thein Dam**	**5.37**	**132**	*e*P	**Pn**	**06 48 56.0**	**+1.5**

THN				*e*S	Sn	06 49 53.5	-1.6
DHRM	**DHARAMSHALA**	**5.85**	**130**	*e*P	**Pn**	**06 49 02.7**	**+1.4**
DHRM				*e*S	**Sn**	**06 50 06.8**	**-0.5**
DHRM				IAML		06 50 09.6	
	comp=N,226nm,0.2s						
DHRM				IAML		06 50 10.2	
	comp=E,241nm,0.1s						
AML	**Almayashu**	**6.38**	**19**	P	**Pn**	**06 49 09.1**	**+0.6**
	SNR=87						
MNAS	**Manas**	**6.48**	**10**	⇑P	**Pn**	**06 49 09.8**	**0.0**
	comp=E,14nm,0.5s						
MNAS				⇑S	Sn	06 50 17.8	-4.5
	comp=E,48nm,0.5s						
UCH	**Uchtor**	**6.70**	**23**	P	**Pn**	**06 49 13.7**	**+0.7**
	SNR=15						
KZA	**Kyzart**	**6.83**	**28**	P	**Pn**	**06 49 15.3**	**+0.7**
	SNR=19						
EKS2	**Erkin-Say**	**6.90**	**17**	P	**Pn**	**06 49 16.1**	**+0.7**
	SNR=12						
KK31	**Karatay Array**	**7.00**	**357**	⇓P	**Pn**	**06 49 16.2**	**-0.5**
	comp=E,11nm,0.3s,baz=180,slow=13,SNR=181						
KK31				⇓S	Sn	06 50 28.6	-6.0
	comp=E,12nm,0.4s,baz=179,slow=18,SNR=8.1						
AAK	**Ala-Archa**	**7.07**	**22**	P	**Pn**	**06 49 18.8**	**+1.1**
	comp=E,7.3nm,0.3s,baz=170,slow=6.4,SNR=36						
AAK				S	Sn	06 50 33.7	-2.9
	comp=E,5.7nm,0.3s,baz=342,slow=21,SNR=18						
AAK	**Ala-Archa**	**7.07**	**22**	P	**Pn**	**06 49 18.5**	**+0.7**
	comp=E,1.5nm,0.2s						
AAK				⇑S	Sn	06 50 33.8	-2.7
	comp=E,37nm,0.6s						
AAK	**Ala-Archa**	**7.07**	**22**	P	**Pn**	**06 49 18.7**	**+0.9**
	SNR=24						
SMLA	**Simla**	**7.16**	**132**	*e*P	**Pn**	**06 49 19.9**	**+1.0**
SMLA				*e*S	**Sn**	**06 50 37.7**	**-1.1**
SMLA				IAML		06 50 41.8	
	comp=E,93nm,0.3s						
SMLA				IAML		06 50 43.3	
	comp=N,93nm,0.7s						
KBK	**Karagaybulak**	**7.23**	**24**	P	**Pn**	**06 49 21.9**	**+2.0**
	SNR=7.8						
ULHL	**Ulahol**	**7.37**	**32**	P	**Pn**	**06 49 22.6**	**+0.7**
	SNR=8.2						
CHMS	**Chumysh**	**7.47**	**22**	P	**Pn**	**06 49 23.8**	**+0.7**
	SNR=12						
USP	**Ospenovka**	**7.65**	**20**	P	**Pn**	**06 49 25.5**	**0.0**
	SNR=8.1						
TKM2	**Tokmak 2**	**7.68**	**26**	⇓P	**Pn**	**06 49 26.5**	**+0.4**
	comp=N,8.1nm,0.5s						
TKM2				⇓S	Sn	06 50 49.8	-1.8
	comp=N,22nm,0.8s						
TKM2	**Tokmak 2**	**7.68**	**26**	P	**Pn**	**06 49 26.8**	**+0.7**
	SNR=12						
DDI	**Dehra Dun**	**8.27**	**132**	*e*P	**Pn**	**06 49 36.2**	**+2.1**
KHET	**Khetri**	**8.99**	**152**	*e*P	**Pn**	**06 49 43.5**	**-0.4**
KHET				*e*S	**Sn**	**06 51 18.2**	**-5.2**
KHET				IAML		06 51 22.4	
	comp=N,32nm,0.5s						
KHET				IAML		06 51 22.6	
	comp=E,42nm,0.3s						
SONA	**Sohna**	**9.39**	**145**	*e*P	**Pn**	**06 49 50.2**	**+1.1**
SONA				*e*S	**Sn**	**06 51 27.3**	**-5.6**
SONA				IAML		06 51 33.5	
	comp=E,29nm,1.1s						
SONA				IAML		06 51 36.9	
	comp=N,29nm,0.8s						
GEYT	**Alibeck**	**10.44**	**284**	P	**Pn**	**06 50 03.8**	**+0.3**
	comp=N,3.0nm,0.3s,baz=102,slow=14,SNR=4.1						
GEYT				S	**Sn**	**06 51 52.7**	**-5.8**
	comp=N,6.1nm,0.3s,baz=326,slow=32,SNR=7.5						
OTUK	**Ortayu**	**12.17**	**4**	⇑P	**Pn**	**06 50 24.4**	**-2.2**
	comp=N,6.9nm,0.7s						
PYUN	**Piuthan**	**12.93**	**125**	*e*P	**Pn**	**06 50 35.6**	**-1.4**
	comp=N,50nm,0.5s						
PYUN				*e*S	**Sn**	**06 52 51.4**	**-7.9**
DANN	**Dangsing**	**13.29**	**122**	*e*P	**Pn**	**06 50 40.7**	**-1.1**
	comp=N,30nm,0.5s						
KOLN	**Koldanda**	**13.55**	**124**	*e*P	**Pn**	**06 50 44.4**	**-0.7**
	comp=N,9.7nm,0.4s						
MK31	**Makanchi Array**	**13.62**	**35**	⇑P	**P**	**06 50 50.6**	**-0.4**
	comp=N,2.3nm,0.9s,baz=218,slow=10,SNR=4.8						
MKAR	**Makanchi Array**	**13.62**	**35**	P	**Pn**	**06 50 45.1**	**-0.6**
	comp=N,0.1nm,0.3s,baz=222,slow=13,SNR=4.5						
BHPL	**Bhopal**	**13.99**	**155**	*e*P	**Pn**	**06 50 51.0**	**+0.5**
GKN	**Gorkha**	**14.11**	**121**	*e*P	**Pn**	**06 50 50.7**	**-1.6**
	comp=N,17nm,0.3s						
DMN	**Daman**	**14.68**	**121**	*e*P	**Pn**	**06 50 58.9**	**-0.8**
	comp=N,26nm,0.6s						
KKN	**Kakani**	**14.69**	**120**	*e*P	**Pn**	**06 50 58.1**	**-1.7**
	comp=N,17nm,0.8s						
GUN	**Gumba**	**15.04**	**119**	*e*P	**Pn**	**06 51 03.3**	**-1.0**
	comp=N,18nm,0.5s						
JIRN	**Jiri**	**15.41**	**119**	*e*P	**Pn**	**06 51 08.3**	**-0.7**
	comp=N,29nm,0.3s						
AB31	**Akbulak array**	**15.42**	**332**	⇓P	**Pn**	**06 51 06.5**	**-2.0**
	comp=N,2.6nm,0.3s,baz=158,slow=11,SNR=3.4						
KURBB	**Kurchatov Arra**	**15.50**	**18**	P	**Pn**	**06 51 06.8**	**-2.8**
	comp=N,0.0nm,0.3s,baz=215,slow=12,SNR=3.4						
BVAR	**Borovoye Array**	**16.92**	**359**	P	**Pn**	**06 51 26.3**	**-0.8**
	comp=N,0.5nm,0.3s,baz=172,slow=11,SNR=8.3						
AKTO	**Aktyubinsk**	**17.11**	**331**	P	**Pn**	**06 51 28.9**	**-0.5**
	comp=N,2.0nm,0.3s,baz=140,slow=13,SNR=30						
AKTO	**Aktyubinsk**	**17.11**	**331**	⇑P	**Pn**	**06 51 29.3**	**-0.2**
	comp=N,13nm,0.8s						
BOK	**Bokaro**	**17.79**	**130**	*e*P	**Pn**	**06 51 42.9**	**+5.0**
ZALV	**Zalesovo Beam**	**20.28**	**24**	P	**P**	**06 52 05.0**	**+0.9**
	comp=N,2.5nm,0.4s,baz=217,slow=11,SNR=11						
TEZP	**TEZPUR**	**20.86**	**111**	*e*P	Pn	06 52 20.2	+6.1
GNI	**Garni**	**21.00**	**289**	LR	LR	07 03 53.2	
	comp=N,21nm,18.1s,baz=114,slow=46						
ZIRO	**ZIRO**	**21.20**	**107**	*e*P	P	06 52 24.5	+10
AGT	**Agartala**	**21.32**	**119**	*e*P	P	06 52 23.9	+8.4
ARU	**Arti**	**22.00**	**341**	P	**P**	**06 52 24.3**	**+1.9**
	comp=N,3.1nm,0.4s,baz=249,slow=5.2,SNR=8.3						
KBZ	**Khabaz**	**22.77**	**298**	P	**P**	**06 52 31.6**	**+1.1**
	comp=N,0.6nm,0.3s,baz=66,slow=3.0,SNR=3.7						
FINES	**FINESS Array B**	**37.80**	**326**	P	**P**	**06 54 44.1**	**+1.3**
	comp=N,1.4nm,0.6s,baz=129,slow=15,SNR=5.8						
ARCES	**ARCESS Array B**	**41.50**	**338**	P	**P**	**06 55 16.0**	**+2.6**
	comp=N,1.4nm,0.7s,baz=106,slow=9.1,SNR=5.3						
NB2	**NORSAR Subarra**	**44.68**	**323**	P	**P**	**06 55 40.0**	**+0.8**
	comp=Z,0.6nm,0.6s,baz=97,slow=7.9						
NOA	**NORSAR Array B**	**44.68**	**323**	P	**P**	**06 55 38.9**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=127,slow=5.7,SNR=3.4						
SPITS	**Spitsbergen Ar**	**47.87**	**347**	P	**P**	**06 56 05.3**	**+1.4**
	comp=Z,0.8nm,0.7s,baz=90,slow=4.3,SNR=4.8						
TORD	**Torodi Ar. Bea**	**65.69**	**269**	P	**P**	**06 58 10.3**	**-0.4**
	comp=Z,2.0nm,0.8s,baz=45,slow=5.4,SNR=9.1						
KOWA	**Kowa**	**69.57**	**273**	P	**P**	**06 58 35.5**	**+0.4**
	comp=Z,2.6nm,0.5s,baz=63,slow=11,SNR=9.3						
INK	**Inuvik**	**74.30**	**9**	P	**P**	**06 59 03.8**	**+1.3**
	comp=Z,1.3nm,0.6s,baz=341,slow=9.0,SNR=6.3						
BOSA	**Boshof**	**77.43**	**220**	P	**P**	**06 59 22.9**	**+2.0**
	comp=Z,1.6nm,0.8s,baz=78,slow=6.8,SNR=3.5						
YKA	**Yellowknife Ar**	**81.64**	**3**	P	**P**	**06 59 44.6**	**+1.5**
	comp=Z,0.4nm,0.6s,baz=352,slow=5.3,SNR=11						
WRA	**Warramunga Arr**	**81.80**	**122**	P	**P**	**06 59 46.0**	**+1.3**
	comp=Z,0.3nm,0.7s,baz=324,slow=4.8,SNR=4.7						
ASAR	**Alice Springs**	**84.05**	**125**	P	**P**	**06 59 56.3**	**0.0**
	comp=Z,0.3nm,0.7s,baz=340,slow=4.9,SNR=3.5						

*ISCJB **02** 07:13:54.4±0.7, 7.°27N±0.°06×126.°66E±0.°09, h143km±6km, mb3.6/6, Error ellipse: s-maj=14.7km s-min=9.1km az=173.5*
*MAN **02** 07:13:55.6, 7.°36N×126.°97E, h97km, mb4.2, ML3.1, MS2.8*
*IDC **02** 07:13:57.1±2.1, 7.°22N×126.°44E, h150km±14km, mb3.4/6, mb1 3.6/7, mb1mx3.2/57, mbtmp3.9/7, Error ellipse: s-maj=60.8km s-min=12.6km az=65.0*

ISC 02 07:13:55.4±0.8, 7.°28N±0.°06×126.°70E±0.°10, h136km±7km, n15, σ1°39/25, mb3.8/6, 3C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.55**	**233**	*e*P	**Pn**	**07 14 14.8**	**-0.7**
MATI				*e*S	**Sn**	**07 14 29.3**	**-1.4**
BIPH	**Bislig**	**0.96**	**339**	⇑*e*P	**Pn**	**07 14 18.1**	**-0.5**
BIPH				*e*S	**Sn**	**07 14 33.9**	**-2.3**
DAV	**Davao City (W)**	**1.13**	**260**	P	**Pn**	**07 14 20.9**	**+0.8**
	125nm,0.3s,baz=246,slow=5.7,SNR=6.4						
DAV				S	**Sn**	**07 14 39.4**	**+0.5**
	207nm,0.3s,baz=58,slow=21,SNR=16						
DMPH	**Davao City--Mi**	**1.20**	**261**	⇑*e*P	**Pn**	**07 14 23.5**	**+2.7**
DMPH				*e*S	**Sn**	**07 14 41.9**	**+1.8**
BUKP	**Musuan**	**1.73**	**290**	*e*P	**Pn**	**07 14 26.2**	**-0.4**
BUKP				*e*S	**Sn**	**07 14 49.0**	**-1.5**
BUTP	**Butuan**	**1.99**	**328**	*e*P	**Pn**	**07 14 30.0**	**+0.4**
BUTP				*e*S	**Sn**	**07 14 57.3**	**+1.3**
GSPH	**General Santos**	**2.11**	**236**	⇑*i*P	**Pn**	**07 14 29.9**	**-1.3**
GSPH				*i* S	**Sn**	**07 14 56.0**	**-2.5**
CGP	**Cagayan de Oro**	**2.31**	**301**	⇓*e*P	**Pn**	**07 14 35.0**	**+1.5**
SIJI	**Sorong**	**9.29**	**150**	P	**Pn**	**07 16 08.1**	**+2.0**
	3.3nm,0.3s,baz=350,slow=14,SNR=5.3						
FITZ	**Fitzroy Crossi**	**25.24**	**182**	P	**P**	**07 19 09.3**	**+0.4**
	2.5nm,0.5s,baz=9.3,slow=6.9,SNR=12						
WRA	**Warramunga Arr**	**28.07**	**165**	P	**P**	**07 19 35.4**	**+1.0**
	0.5nm,0.9s,baz=341,slow=11,SNR=5.7						
WRA				PcP	**PcP**	**07 22 45.4**	**-0.2**
	0.3nm,0.5s,baz=341,slow=2.5,SNR=5.3						
ASAR	**Alice Springs**	**31.55**	**167**	P	**P**	**07 20 04.7**	**-0.3**
	0.3nm,0.3s,baz=340,slow=7.2,SNR=12						
ASAR				PcP	**PcP**	**07 22 54.8**	**+0.1**
	0.7nm,0.5s,baz=345,slow=2.4,SNR=11						
MKAR	**Makanchi Array**	**54.67**	**324**	P	**P**	**07 23 10.0**	**-0.3**
	0.8nm,0.4s,baz=114,slow=7.7,SNR=13						
MKAR				PcP	**PcP**	**07 24 10.3**	**-1.2**
	0.6nm,0.6s,baz=120,slow=5.2,SNR=4.3						
KURBB	**Kurchatov Arra**	**58.77**	**326**	P	**P**	**07 23 38.5**	**-0.7**
	0.5nm,0.3s,baz=123,slow=7.6,SNR=10						
BVAR	**Borovoye Array**	**64.36**	**326**	P	**P**	**07 24 16.3**	**-0.4**
	0.6nm,0.6s,baz=125,slow=9.3,SNR=3.0						

*IDC **02** 07:14:25.0±2.4, 38.°04N×74.°25E, h120km±20km, mb3.6/11, mb1 3.7/16, mb1mx3.4/69, mbtmp4.0/16, Error ellipse: s-maj=16.7km s-min=16.0km az=155.0*
*MOS **02** 07:14:26.6±1.0, 38.°22N×74.°27E, h144km, mb4.0/13, Error ellipse: s-maj=16.2km s-min=7.0km az=93.4*
*ISCJB **02** 07:14:27.1±0.3, 38.°20N±0.°03×74.°27E±0.°06, h158km, mb3.8/16, Error ellipse: s-maj=6.8km s-min=3.7km az=171.2*
*NNC **02** 07:14:41.7±4.5, 39.°39N×74.°59E, h22km±80km, mb4.2, mpv3.6, Error ellipse: s-maj=83.1km s-min=27.4km az=164.0*

ISC 02 07:14:27.8±0.5, 38.°12N±0.°05×74.°29E±0.°06, h158km, n65, σ2°31/72, mb3.9/16, 10C-3D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.91**	**43**	Pg	Pn	07 14 56.7	-5.9
KSH				Sg	Sn	07 15 16.7	-13
KSH				smax	smax		
	comp=N,10μm,0.4s						
KSH				smax	smax		
	comp=E,8μm,0.3s						
SFK	**Sufi-Kurgan**	**1.99**	**342**	⇓P	**Pn**	**07 15 01.2**	**-2.3**
	comp=E,38nm,0.3s						
SFK	**Sufi-Kurgan**	**1.99**	**342**	PN	**Pn**	**07 15 01.2**	**-2.3**
SFK				pmax	pmax		
	comp=Z,38nm,0.3s						
KZA	**Kyzart**	**4.02**	**10**	P	**Pn**	**07 15 27.3**	**-1.6**
	SNR=36						
AML	**Almayashu**	**4.03**	**354**	P	**Pn**	**07 15 27.0**	**-2.1**
	SNR=50						
UCH	**Uchtor**	**4.11**	**2**	P	**Pn**	**07 15 28.5**	**-1.5**
	SNR=23						
AAK	**Ala-Archa**	**4.51**	**2**	P	**Pn**	**07 15 33.5**	**-1.6**
	comp=Z,2.2nm,0.3s,baz=140,slow=6.0,SNR=9.6						
AAK				S	**Sn**	**07 16 25.1**	**-2.5**
	comp=Z,4.3nm,0.3s,baz=190,slow=19,SNR=10						
AAK	**Ala-Archa**	**4.51**	**2**	⇓Pn	**Pn**	**07 15 33.4**	**-1.7**
	comp=Z,5.2nm,0.7s						
AAK				⇑Sn	Sn	07 16 10.6	-17
	comp=Z,34nm,0.9s						
AAK	**Ala-Archa**	**4.51**	**2**	P	**Pn**	**07 15 33.2**	**-1.9**
	SNR=7.3						
AAK	**Ala-Archa**	**4.51**	**2**	*i* PN	**Pn**	**07 15 33.9**	**-1.2**
CHCP	**Chirah Chowk**	**4.53**	**191**	P	**Pn**	**07 15 38.4**	**+3.1**
KBK	**Karagaybulak**	**4.56**	**6**	P	**Pn**	**07 15 34.8**	**-0.9**
	SNR=12						
MNAS	**Manas**	**4.57**	**343**	⇑Pn	**Pn**	**07 15 33.9**	**-1.9**
	comp=Z,9.0nm,0.3s						
MNAS				⇓Sn	Sn	07 16 16.0	-13
	comp=Z,20nm,0.4s						
MNAS	**Manas**	**4.57**	**343**	PN	**Pn**	**07 15 33.9**	**-1.9**
MNAS				pmax	pmax		
	comp=Z,9.0nm,0.3s						
CEP	**Cherat**	**4.70**	**205**	P	**Pn**	**07 15 39.7**	**+2.0**
CEP				S	**Sn**	**07 16 32.0**	**-0.1**
CHMS	**Chumysh**	**4.88**	**4**	P	**Pn**	**07 15 38.8**	**-1.1**
	SNR=17						
TKM2	**Tokmak 2**	**4.90**	**11**	P	**Pn**	**07 15 38.9**	**-1.2**
	SNR=12						
KK31	**Karatay Array**	**5.75**	**331**	Pn	**Pn**	**07 15 48.9**	**-2.3**
	comp=Z,2.1nm,0.2s,baz=128,slow=12,SNR=120						
KK31				Sn	**Sn**	**07 16 48.4**	**-8.1**
	comp=Z,12nm,0.3s,baz=138,slow=24,SNR=14						
KK31	**Karatay Array**	**5.75**	**331**	PN	**Pn**	**07 15 48.9**	**-2.3**
KK31				pmax	pmax		
	comp=Z,2.0nm,0.2s						
THN	**Thein Dam**	**5.79**	**168**	*e*P	**Pn**	**07 15 54.0**	**+2.1**
THN				*e*S	**Sn**	**07 16 53.4**	**-4.2**
DHRM	**DHARAMSHALA**	**6.08**	**164**	*e*P	**Pn**	**07 15 55.5**	**-0.5**
DHRM				*e*S	**Sn**	**07 16 58.5**	**-6.4**
PDGK	**Podgornoye**	**6.53**	**36**	⇑Pn	**Pn**	**07 15 59.9**	**-1.8**
	comp=Z,11nm,1.1s						
PDGK				⇑Lg	Lg	07 17 32.5	
	comp=Z,25nm,0.7s						
PDGK	**Podgornoye**	**6.53**	**36**	PN	**Pn**	**07 15 59.9**	**-1.8**
PDGK				pmax	pmax		
	comp=Z,11nm,1.1s						
SMLA	**Simla**	**7.37**	**160**	*e*P	**Pn**	**07 16 13.2**	**+0.4**
SMLA				*e*S	**Sn**	**07 17 30.1**	**-5.1**
SMLA				IAML		07 17 36.4	
	comp=N,249nm,0.5s						
SMLA				IAML		07 17 37.4	
	comp=E,60nm,0.3s						
JOSI	**Joshimath**	**8.71**	**148**	*e*S	**Sn**	**07 18 02.5**	**-5.4**
KHET	**Khetri**	**10.10**	**172**	*e*S	Sn	07 18 30.6	-10
KHET				IAML		07 18 38.7	
	comp=N,5.1nm,0.4s						
KHET				IAML		07 18 38.9	
	comp=E,7.4nm,0.0s						
SONA	**Sohna**	**10.12**	**166**	*e*S	Sn	07 18 29.7	-12
SONA				IAML		07 18 41.6	
	comp=N,12nm,0.5s						
SONA				IAML		07 18 43.2	
	comp=E,15nm,0.1s						
MKAR	**Makanchi Array**	**10.48**	**32**	P	**Pn**	**07 16 53.0**	**-1.0**
	comp=E,0.1nm,0.3s,baz=213,slow=15,SNR=14						
MKAR	**Makanchi Array**	**10.48**	**32**	*e*P	**Pn**	**07 16 53.8**	**-0.2**
WMQ	**Urumqi**	**11.62**	**56**	*e*P	**Pn**	**07 17 10.6**	**+1.7**
PYUN	**Piuthan**	**12.36**	**141**	*e*P	**Pn**	**07 17 17.7**	**-1.1**
	comp=E,22nm,0.4s						
DANN	**Dangsing**	**12.55**	**138**	*e*P	**Pn**	**07 17 20.9**	**-0.4**
	comp=E,15nm,0.3s						
GEYT	**Alibeck**	**12.76**	**274**	P	**Pn**	**07 17 20.4**	**-3.3**
	comp=E,3.0nm,0.3s,baz=116,slow=10,SNR=11						
KURBB	**Kurchatov Arra**	**12.86**	**12**	P	**Pn**	**07 17 21.4**	**-3.4**
	comp=E,0.1nm,0.3s,baz=202,slow=11,SNR=6.8						
KOLN	**Koldanda**	**12.94**	**140**	*e*P	**Pn**	**07 17 26.3**	**+0.1**
	comp=E,11nm,0.4s						
KURK	**Kurchatov**	**12.96**	**12**	*ce*P	**P**	**07 17 28.5**	**-2.2**
KURK				pmax	pmax		
	comp=Z,12nm,1.7s						
GKN	**Gorkha**	**13.29**	**136**	*e*P	**Pn**	**07 17 31.6**	**+0.9**
	comp=Z,48nm,0.4s						
KKN	**Kakani**	**13.82**	**135**	*e*P	**Pn**	**07 17 37.7**	**+0.4**
DMN	**Daman**	**13.86**	**136**	*e*P	**Pn**	**07 17 38.6**	**+0.7**
GUN	**Gumba**	**14.06**	**133**	*e*P	**Pn**	**07 17 42.2**	**+1.6**
	comp=Z,13nm,0.4s						
JIRN	**Jiri**	**14.43**	**133**	*e*P	**Pn**	**07 17 45.1**	**-0.1**
	comp=Z,26nm,0.3s						
BVAR	**Borovoye Array**	**15.15**	**351**	P	**Pn**	**07 17 50.9**	**-2.6**
	comp=Z,1.5nm,0.3s,baz=151,slow=13,SNR=34						
BRVK	**Borovoye**	**15.20**	**351**	*ce*P	**Pn**	**07 17 52.1**	**-2.0**
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.7s						
ZALV	**Zalesovo Beam**	**17.40**	**21**	P	**Pn**	**07 18 19.6**	**-1.3**
	comp=Z,2.6nm,0.3s,baz=222,slow=11,SNR=18						
NVS	**Novosibirsk**	**17.80**	**17**	*e*P	**Pn**	**07 18 24.6**	**-0.9**
WSAR	**Wadi Sarin**	**19.99**	**227**	P	**P**	**07 18 48.0**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=80,slow=6.2,SNR=6.3						
ARU	**Arti**	**21.11**	**335**	*c* *i*P	**P**	**07 19 00.6**	**+0.9**
ARU				*PP	**pP**	**07 19 30.4**	**+2.9**
ARU				S	**S**	**07 22 44.5**	**-0.7**
ARU				pmax	pmax		
	comp=Z,7.0nm,1.7s						
KIV	**Kislovodsk**	**24.45**	**294**	*i* P	**P**	**07 19 33.6**	**+1.6**
KIV				*e*PP	**pP**	**07 20 06.1**	**+2.2**
KIV				*e*		07 20 14.7	
KIV				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SONM	**Songino Array**	**25.25**	**57**	P	**P**	**07 19 41.5**	**+2.2**
	comp=Z,2.3nm,0.8s,baz=260,slow=10.0,SNR=10						
ULN	**Ulaanbaatar**	**25.70**	**57**	*ce*P	**P**	**07 19 43.4**	**+0.1**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NRIK	**Noril'sk**	**32.09**	**9**	P	**P**	**07 20 41.0**	**+1.5**
	comp=Z,1.2nm,0.3s,baz=217,slow=3.9,SNR=4.1						
FINES	**FINESS Array B**	**37.66**	**324**	P	**P**	**07 21 28.4**	**+1.2**
	comp=Z,3.7nm,0.9s,baz=115,slow=7.5,SNR=5.9						
ARCES	**ARCESS Array B**	**40.69**	**336**	P	**P**	**07 21 53.7**	**+1.4**
	comp=Z,1.5nm,0.5s,baz=111,slow=8.4,SNR=19						
HFS	**Hagfors**	**43.45**	**321**	P	**P**	**07 22 15.8**	**+1.0**
	comp=Z,1.8nm,0.4s,baz=106,slow=11,SNR=9.7						
NOA	**NORSAR Array B**	**44.70**	**322**	P	**P**	**07 22 25.8**	**+1.1**
	comp=Z,0.4nm,0.4s,baz=111,slow=7.0,SNR=3.3						
NOA	**NORSAR Array B**	**44.70**	**322**	P	**P**	**07 22 25.8**	**+1.1**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KONO	**Kongsberg**	**45.51**	**320**	*i* P	**P**	**07 22 32.7**	**+1.6**
KONO				pmax	pmax		
	comp=Z,17nm,2.4s						
SPITS	**Spitsbergen Ar**	**46.53**	**346**	P	**P**	**07 22 40.8**	**+1.9**
	comp=Z,0.4nm,0.4s,baz=88,slow=7.5,SNR=10.0						
TORD	**Torodi Ar. Bea**	**68.36**	**270**	P	**P**	**07 25 13.5**	**+1.0**
	comp=Z,0.5nm,0.4s,baz=57,slow=7.6,SNR=7.3						
TORD				pP	**pP**	**07 25 50.4**	**0.0**
	comp=Z,0.4nm,0.3s,baz=42,slow=6.3,SNR=8.0						
KDAK	**Kodiak Island**	**76.69**	**24**	*ce*P	**P**	**07 26 03.2**	**+2.2**
YKA	**Yellowknife Ar**	**79.47**	**4**	P	**P**	**07 26 17.6**	**+1.4**
	comp=Z,1.0nm,0.4s,baz=346,slow=5.7,SNR=28						
WRA	**Warramunga Arr**	**80.67**	**124**	P	**P**	**07 26 24.4**	**+1.0**
	comp=Z,0.6nm,0.7s,baz=324,slow=5.0,SNR=6.7						
WRA	**Warramunga Arr**	**80.67**	**124**	*e*P	**P**	**07 26 25.1**	**+1.8**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WRAB	**Tennant Creek**	**80.67**	**124**	*ce*P	**P**	**07 26 25.6**	**+2.3**
WRAB				pmax	pmax		
	comp=Z,9.0nm,1.7s						
ASAR	**Alice Springs**	**83.08**	**127**	P	**P**	**07 26 36.8**	**+0.9**
	comp=Z,0.2nm,0.7s,baz=309,slow=5.9,SNR=3.1						

*CSEM **02** 07:14:29.1, 36.°83N×31.°76E, h7km, ML2.7*
*DDA **02** 07:14:29.1, 36.°83N×31.°76E, h7km, Ml2.7*

ISC 02 07:14:29.3±1.1, 36.°84N±0.°05×31.°78E±0.°05, h7km±11km, n11, σ0°49/14, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEPZ	**Antalya-Kepez**	**0.15**	**293**	*i* P	**Pg**	**07 14 32.1**	**-0.4**
KEPZ				*i* S	**Sg**	**07 14 35.1**	**+0.5**
KEPZ	**Antalya-Kepez**	**0.15**	**293**	P	**Pg**	**07 14 32.1**	**-0.4**
KEPZ				S	**Sg**	**07 14 35.1**	**+0.5**
GAZI	**Gazipasa**	**0.74**	**144**	*i* P	**Pg**	**07 14 43.8**	**+0.1**
GAZI	**Gazipasa**	**0.74**	**144**	P	**Pg**	**07 14 43.8**	**+0.1**
SUTC	**Sutluce-Ispart**	**0.89**	**316**	PG	**Pb**	**07 14 47.4**	**+0.2**
SUTC				SG	**Sn**	**07 15 02.3**	**+0.6**
ERMK	**Ermenek**	**0.93**	**102**	*i* P	**Pg**	**07 14 47.1**	**-0.2**
ERMK	**Ermenek**	**0.93**	**102**	P	**Pg**	**07 14 47.1**	**-0.2**
KMER	**Konya-Meram**	**1.04**	**27**	*i* P	**Pg**	**07 14 49.5**	**+0.3**
KMER	**Konya-Meram**	**1.04**	**27**	P	**Pg**	**07 14 49.5**	**+0.3**
KONT	**Konya--Tatoy**	**1.19**	**23**	PG	**Pg**	**07 14 51.6**	**-0.6**
AKKU	**Akkuyu-Mersin**	**1.58**	**115**	*e*PG	**Pn**	**07 14 57.1**	**-0.7**

DJA 02 07:19:29.6±1.3, 8.°S±6.°×107.°E±.°, h16km±8km, M3.7/5, MLv3.7/5, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CISI	**Cisompet, Garu**	**0.71**	**40**	P	Pg	07 19 42.7	-0.8
CISI				S	Sb	07 19 53.5	+0.3
CMJI	**Cimerak**	**1.13**	**74**	P	Pn	07 19 49.2	-1.6
CMJI				S	Sb	07 20 04.3	-1.0
LEM	**Lembang**	**1.29**	**12**	P	Pn	07 19 51.4	-1.8
LEM				S	Sb	07 20 09.0	-

LPAZ ScP **ScP** 07 41 25.1 +0.5
comp=Z,0.1nm,0.3s,baz=72,slow=4.6,SNR=6.7
LPAZ La Paz 7.19 323⇓ *e*P **P** 07 32 59.4 -0.1
LPAZ *e*S **S** 07 34 25.2 -3.9
LPAZ La Paz 7.19 323 *e*Pn **P** 07 32 59.4 -0.1
LPAZ *e*Sn **S** 07 34 25.3 -3.8
BBOB La Paz, Bander 7.31 324 *e*Pn **P** 07 32 59.5 -1.0
BBOB *e*Sn **S** 07 34 27.6 -3.5
comp=Z,714nm,0.7s
VCA Vinchina 7.77 211⇑ *e*P **P** 07 33 03.2 -1.2
VCA *e*S **S** 07 34 33.8 -4.9
VCA IAML 07 34 37.1
comp=Z,1μm,0.5s
VCA Vinchina 7.77 211⇑ *i*P **P** 07 33 03.3 -1.2
GO03 Copiap 8.09 226 *e*P **P** 07 33 07.2 -0.5
AGUA GUANDACOL 8.53 210⇑ *e*P **P** 07 33 10.7 -1.5
AGUA *e*S **S** 07 34 48.4 -4.4
TCA Tanti 9.21 185⇑ *e*P **P** 07 33 17.0 -2.2
TCA *e*S **S** 07 35 00.0 -5.5
TCA IAML 07 35 29.2
comp=Z,30nm,0.5s
LCO Las Campanas 9.36 221 *e*P **P** 07 33 20.9 0.0
LCO *e*S **S** 07 35 08.4 -0.3
LCO Las Campanas 9.36 221⇑ *i*P **P** 07 33 20.7 -0.1
LCO *e*S **S** 07 35 08.3 -0.3
LCO Las Campanas 9.36 221 *e*P **P** 07 33 20.9 0.0
LCO *e*S **S** 07 35 08.4 -0.3
AMOG MOGNA 9.79 205⇑ *e*P **P** 07 33 24.2 -0.9
AMOG *e*S **S** 07 35 13.2 -3.3
RTLL Cerro Villicun 10.13 204⇓ *e*P **P** 07 33 28.3 -0.3
RTLL IAML 07 33 28.4
comp=Z,197nm,0.4s
TLL Tololo Astrono 10.27 217⇑ *i*P **P** 07 33 29.9 -0.4
GO04 Tololo Observa 10.27 217 *e*P **P** 07 33 29.8 -0.5
ZON Zonda 10.40 205⇑ *e*P **P** 07 33 31.2 -0.2
MRA San Martin 10.42 190⇑ *e*P **P** 07 33 28.4 -3.3
MRA *e*S **S** 07 35 19.7 -8.8
MRA IAML 07 35 26.7
comp=Z,61nm,0.5s
ACAN Cantantal 10.59 197⇑ *e*P **P** 07 33 31.9 -1.5
ACAN ⇓*e*S S 07 35 22.1 -10
RTCV Cerro Valdivia 10.63 203⇑ *e*P **P** 07 33 33.5 -0.4
RTLS Leoncito 10.87 206⇑ *e*P **P** 07 33 36.9 +0.3
RTLS IAML 07 33 37.2
comp=Z,200nm,0.5s
AUSP Uspallata 11.28 206⇑ *e*P **P** 07 33 41.2 +0.3
AUSP ⇓*e*S **S** 07 35 45.9 +0.6
ASAL Salagasta 11.40 203⇑ *e*P **P** 07 33 42.2 +0.4
ASAL *e*S **S** 07 35 45.1 -2.0
ARCO CERRO ARCO 11.66 203⇑ *e*P **P** 07 33 44.9 +0.2
ARCO IAML 07 33 45.0
comp=Z,273nm,0.4s
ARCO ⇓*e*S **S** 07 35 50.3 -2.0
AAGR Agrelo 11.84 202⇑ *e*P **P** 07 33 46.8 +0.3
AAGR ⇓*e*S **S** 07 35 58.5 +2.7
AVIZ Vizcacheras 12.10 200⇑ *e*P **P** 07 33 49.3 +0.1
AVIZ *e*S **S** 07 35 56.6 -3.9
ROCH El Roble 12.62 210⇑ *i*P **P** 07 33 54.0 -0.8
ROC1 El Roble 12.63 210 *e*P **P** 07 33 54.1 -0.8
ROC1 El Roble 12.63 210⇓ *e*P **P** 07 33 54.0 -0.9
SAML Samuel 13.11 2 *e*P **P** 07 33 59.8 -0.2
SAML Samuel 13.11 2 *e*P **P** 07 33 59.8 -0.2
RFA San Rafael 13.29 198⇑ *i*P **P** 07 34 01.0 -0.6
GO05 HualaæØ 14.75 208 *e*P **P** 07 34 15.0 -1.8
GO05 HualaæØ 14.75 208⇑ *i*P **P** 07 34 14.8 -2.0
GO05 *e*S **S** 07 36 50.5 -0.6
SPB Sao Paulo 15.02 99 *e*P **P** 07 34 18.7 -1.1
comp=Z,74nm,0.8s
TRQA Tornquist 15.94 175 *e*P **P** 07 34 25.3 -3.9
comp=Z,30nm,1.4s
TRQA Tornquist 15.94 175 *e*P **P** 07 34 25.3 -3.9
TRQA pmax pmax
comp=Z,30nm,1.4s
NNA Nana 16.14 307 P **P** 07 34 31.2 -0.3
comp=Z,4.0nm,0.3s,baz=146,slow=8.1,SNR=30
NNA Nana 16.14 307 *e*P **P** 07 34 31.1 -0.3
comp=Z,64nm,0.8s
NNA Nana 16.14 307 *e*P **P** 07 34 31.1 -0.3
NNA pmax pmax
comp=Z,64nm,0.8s
CCHI Chillan 16.18 205⇑ *i*P **P** 07 34 30.1 -1.4
PLCA Paso Flores 19.45 196 P **P** 07 35 01.1 -0.8
comp=Z,4.6nm,0.3s,baz=37,slow=10,SNR=103
PLCA PcP **PcP** 07 38 58.5 +1.1
comp=Z,0.5nm,0.3s,baz=54,slow=0.5,SNR=3.2
PLCA ScP **ScP** 07 41 44.1 +0.4
comp=Z,0.1nm,0.3s,baz=75,slow=2.7,SNR=3.9
PLCA Paso Flores 19.45 196 *e*P **P** 07 35 01.1 -0.8
comp=Z,34nm,0.6s
PLCA PcP **PcP** 07 38 58.5 +1.1
PLCA ScP **ScP** 07 41 44.1 +0.4
PLCA Paso Flores 19.45 196 *e*P **P** 07 35 01.1 -0.8
PLCA pmax pmax
comp=Z,34nm,0.6s
ATAH Atahualpa 20.60 314 P **P** 07 35 13.3 +0.2
comp=Z,5.6nm,0.6s,baz=207,slow=5.5,SNR=6.2
ATAH ScP **ScP** 07 41 48.2 +0.9
comp=Z,7.4nm,0.9s,baz=130,slow=2.6,SNR=3.6
PTGA Pitinga 21.57 10 P **P** 07 35 20.9 -0.4
comp=Z,20nm,0.6s,baz=203,slow=15,SNR=54
PTGA S **S** 07 38 41.4 -3.3
comp=Z,8.9nm,0.8s,baz=270,slow=20,SNR=4.1
PTGA Pitinga 21.57 10 *e*P **P** 07 35 20.9 -0.4
comp=Z,23nm,0.6s
PTGA S **S** 07 38 41.4 -3.3
CHRN Cochrane 26.09 194 *e*P **P** 07 36 00.9 -0.2
comp=Z,8.1nm,0.7s
OTAV Otavalo 26.50 325 *e*P **P** 07 36 07.5 +1.8
comp=Z,5.8nm,1.4s
OTAV Otavalo 26.50 325 *e*P **P** 07 36 07.5 +1.8
OTAV pmax pmax
comp=Z,6.0nm,1.4s
ROSC El Rosal 28.77 337 ScP **ScP** 07 42 10.9 +0.5
comp=Z,10nm,0.8s,baz=128,slow=8.8,SNR=6.7
RUSC La Rusia 29.34 341 *e*P **P** 07 36 29.1 -1.5
comp=Z,3.6nm,0.6s
EFI East Falkland 29.81 173 *e*P **P** 07 36 32.8 -0.7
comp=Z,74nm,1.3s
EFI East Falkland 29.81 173 *e*P **P** 07 36 32.8 -0.7
EFI pmax pmax
comp=Z,74nm,1.3s
HELC Santa Helena 30.45 336 *e*P **P** 07 36 38.0 -2.0
comp=Z,14nm,0.6s
RCBR Riachuelo 31.32 63 P **P** 07 36 47.1 -0.1
comp=Z,68nm,1.0s,baz=26,slow=1.8,SNR=6.9
RCBR Riachuelo 31.32 63 *e*P **P** 07 36 48.5 +1.3
comp=Z,51nm,0.9s
RCBR Riachuelo 31.32 63 *e*P **P** 07 36 48.5 +1.3
RCBR pmax pmax
comp=Z,51nm,0.9s
SDV Santo Domingo 31.57 347 P **P** 07 36 48.7 -0.7
comp=Z,5.7nm,0.4s,baz=131,slow=7.3,SNR=9.7
SDV Santo Domingo 31.57 347 *e*P **P** 07 36 48.1 -1.3
comp=Z,5.4nm,0.8s
PCRV Puerto La Cruz 32.12 358 P **P** 07 36 53.6 -0.3
comp=Z,10.0nm,0.8s,baz=120,slow=6.6,SNR=5.0
GRGR Grenville 34.10 3 *e*P **P** 07 37 10.2 -0.3
comp=Z,90nm,0.8s
BCIP Isla Barro Col 34.92 331 *e*P **P** 07 37 16.8 -0.7
comp=Z,22nm,1.5s
SVB Belmont 35.26 4 *e*P **P** 07 37 19.1 -1.2
comp=Z,177nm,1.5s
FDF Fort de France 36.71 4 *e*P **P** 07 37 32.1 -0.3
comp=Z,59nm,1.1s
FDF Fort de France 36.71 4 *e*P **P** 07 37 32.1 -0.3
FDF pmax pmax
comp=Z,59nm,1.1s
HOPE Hope Point 38.09 154 *e*P **P** 07 37 43.5 +0.4
comp=Z,54nm,0.8s
JTS JuntasAbangare 38.40 325 P **P** 07 37 46.6 +0.5
comp=Z,4.2nm,0.6s,baz=288,slow=20,SNR=8.6
MTP Monte Pirata 40.02 357 *e*P **P** 07 37 56.8 -2.3
comp=Z,28nm,1.1s
OBIP Obispado Ponce 40.03 356 *e*P **P** 07 37 57.4 -1.8
comp=Z,34nm,1.0s
CRPR Cabo Rojo, PR 40.03 355 *e*P **P** 07 37 57.6 -1.5
comp=Z,46nm,0.7s
SJG San Juan 40.06 356 *e*P **P** 07 37 57.8 -1.7
comp=Z,28nm,1.0s
SJG San Juan 40.06 356 *e*P **P** 07 37 57.8 -1.7
SJG pmax pmax
comp=Z,28nm,1.0s
HUMP Col San Antoni 40.08 357 *e*P **P** 07 37 59.5 -0.1
comp=Z,12nm,0.9s
CBYP Canovanas 40.21 357 *e*P **P** 07 37 59.1 -1.6
comp=Z,45nm,1.1s
MPR Mayaguez 40.23 355 *e*P **P** 07 37 59.3 -1.5
comp=Z,55nm,1.3s
AOPR Arecibo Observ 40.34 355 *e*P **P** 07 37 59.7 -2.0
comp=Z,36nm,0.5s
AGP Aguadilla 40.43 355 *e*P **P** 07 38 00.5 -1.9
comp=Z,139nm,1.2s
CCIG Comitan 47.29 321 *e*P **P** 07 38 55.3 -0.5
comp=Z,4.0nm,0.6s
SHEL Horse Pasture 54.81 94 *e*P **P** 07 39 52.1 +1.6
comp=Z,133nm,0.8s
SHEL Horse Pasture 54.81 94 *e*P **P** 07 39 52.1 +1.6
SHEL pmax pmax
comp=Z,133nm,0.8s
TIGA Tifton 56.59 340 P **P** 07 40 01.8 -0.5
baz=158
255A Hazlehurst 56.69 341 P **P** 07 40 02.4 -0.7
baz=159
353A Camilla 56.71 339 P **P** 07 40 02.6 -0.6
baz=157
254A Abbeville 56.96 340 P **P** 07 40 04.4 -0.5
baz=158
352A Blakely 57.07 338 P **P** 07 40 04.7 -1.0
baz=156
351A Pinckard 57.12 338 P **P** 07 40 05.6 -0.5
baz=156
NHSC New Hope 57.15 343 *e*P **P** 07 40 06.2 0.0
comp=Z,70nm,1.1s
155A Kite 57.34 341 P **P** 07 40 07.1 -0.4
baz=159
253A Americus 57.34 339 P **P** 07 40 06.4 -1.1
baz=157
252A Lumpkin 57.48 339 P **P** 07 40 07.5 -0.9
baz=157
154A Montrose 57.52 341 P **P** 07 40 08.1 -0.6
baz=158,SNR=6.2
BRAL Brewton 57.55 336 P **P** 07 40 08.0 -0.9
baz=154
BRAL Brewton 57.55 336 *e*P **P** 07 40 08.6 -0.3
comp=Z,94nm,1.4s
349A Repton 57.77 336 P **P** 07 40 10.0 -0.4
baz=154
153A Fort Valley 57.78 340 P **P** 07 40 09.8 -0.8
baz=158
251A Midway 57.80 338 P **P** 07 40 09.6 -1.0
baz=156,SNR=6.4
VNA3 Neumayer Olymp 57.94 162 P **P** 07 40 11.7 +0.6
VNA3 S **S** 07 47 33.6 +2.9
250A Grady 57.99 337 P **P** 07 40 10.8 -1.2
baz=155
Z54A Sparta 58.02 341 P **P** 07 40 11.4 -0.7
baz=159
VNA1 Neumayer--Stat 58.09 161 P **P** 07 40 13.0 +1.0
152A Waverly Hall 58.09 339 P **P** 07 40 10.7 -1.9
baz=157
151A Opelika 58.16 338 P **P** 07 40 11.8 -1.3
baz=156
LNIG Linares 58.26 321 *e*P **P** 07 40 13.4 -0.5
comp=Z,14nm,1.4s
Z53A Monticello 58.28 340 P **P** 07 40 12.9 -1.0
baz=158
249A Camden 58.30 337 P **P** 07 40 13.1 -1.0
baz=154
347A Saraland 58.33 335 P **P** 07 40 13.3 -1.0
baz=153
GOGA Godfrey 58.37 341 P **P** 07 40 13.3 -1.2
baz=158
GOGA Godfrey 58.37 341 *e*P **P** 07 40 13.7 -0.8
comp=Z,8.6nm,0.8s
GOGA Godfrey 58.37 341 *e*P **P** 07 40 13.7 -0.8
GOGA pmax pmax
comp=Z,9.0nm,0.8s
Z52A Williamson 58.47 340 P **P** 07 40 13.8 -1.3
baz=157
150A Eclectic 58.48 338 P **P** 07 40 14.0 -1.2
baz=156,SNR=6.1
JSC Jenkinsville 58.55 343 *e*P **P** 07 40 15.6 0.0
comp=Z,15nm,1.0s
JSC Jenkinsville 58.55 343 *e*P **P** 07 40 15.6 0.0
JSC pmax pmax
comp=Z,15nm,1.0s
ZAIG Zacatecas 58.55 317 *e*P **P** 07 40 17.0 +0.7
comp=Z,9.0nm,0.8s
Y54A Tignall 58.56 341 P **P** 07 40 14.9 -0.8
baz=159
149A Jones 58.74 337 P **P** 07 40 15.6 -1.4
baz=155
Y53A Monroe 58.82 341 P **P** 07 40 16.6 -0.9
baz=158,SNR=5.4
Z51A Franklin 58.83 339 P **P** 07 40 16.5 -1.1
baz=157
Y52A Lilburn 58.98 340 P **P** 07 40 17.6 -1.0
baz=158
Z50A Ashland 59.03 338 P **P** 07 40 18.0 -0.9
baz=156,SNR=10
148A Greensboro 59.07 336 P **P** 07 40 17.8 -1.4
baz=154
Z49A Columbiana 59.19 338 P **P** 07 40 18.8 -1.2
baz=155
LRAL Lakeview Retre 59.21 337 P **P** 07 40 18.9 -1.3
baz=155,SNR=5.6
LRAL Lakeview Retre 59.21 337 *e*P **P** 07 40 19.1 -1.0
comp=Z,26nm,1.4s
Y51A Rockmart 59.33 339 P **P** 07 40 19.8 -1.2
baz=157,SNR=5.8
X53A Estanollee 59.34 341 P **P** 07 40 20.0 -1.0
baz=159
KMSC Kings Mountain 59.38 343 P **P** 07 40 20.7 -0.5
baz=161
KMSC Kings Mountain 59.38 343 *e*P **P** 07 40 21.1 -0.2
comp=Z,14nm,1.0s
Y50A Piedmont 59.55 339 P **P** 07 40 21.1 -1.3
baz=156,SNR=5.2
X52A Dahlonega 59.61 341 P **P** 07 40 21.9 -1.0
baz=158
BG3 Lake Jocassee 59.68 342 *e*P **P** 07 40 23.3 0.0
comp=Z,7.2nm,0.7s
Z48A Northport 59.72 337 P **P** 07 40 22.2 -1.4
baz=154,SNR=6.6
Y49A Blount Mountai 59.75 338 P **P** 07 40 22.6 -1.1
baz=155
Z47A Carrollton 59.75 336 P **P** 07 40 22.4 -1.4
baz=154
X51A Calhoun 59.88 340 P **P** 07 40 23.7 -0.8
baz=157
342A Flagon Creek P 59.88 332 P **P** 07 40 23.4 -1.2
baz=149
W53A Cullowhee 59.91 342 P **P** 07 40 24.0 -0.9
baz=159,SNR=5.3
145A Houston Renfro 59.94 334 P **P** 07 40 24.1 -1.0
baz=152
X50B Fort Payne 60.04 339 P **P** 07 40 24.4 -1.3
baz=156
Y48A Jasper 60.06 337 P **P** 07 40 24.4 -1.4
baz=155
W52A Murphy 60.07 341 P **P** 07 40 25.2 -0.7
baz=158
Z46A Louisville 60.07 336 P **P** 07 40 25.5 -0.4
baz=153
SNAA Sanae 60.11 161 P **P** 07 40 26.1 +0.4
SNAA S **S** 07 47 59.8 +1.8
SNAA Sanae 60.11 161 P **P** 07 40 26.1 +0.4
comp=Z,29nm,0.8s,baz=291,slow=7.9,SNR=186
SNAA Sanae 60.11 161 *e*P **P** 07 40 26.1 +0.4
comp=Z,54nm,1.0s
SNAA Sanae 60.11 161 *d i*P **P** 07 40 25.8 +0.1
341A Kurthwood 60.22 331 P **P** 07 40 26.9 -0.1
baz=148
V53A Saluda 60.28 342 P **P** 07 40 26.7 -0.6
baz=160
Y47A UCPARC, Winfie 60.30 337 P **P** 07 40 26.4 -1.0
baz=154,SNR=9.3
X49A Woodville 60.31 338 P **P** 07 40 26.2 -1.2
baz=156
242A Grayson 60.40 332 P **P** 07 40 27.3 -0.8
baz=149
X48A Hartselle 60.51 338 P **P** 07 40 27.6 -1.1
baz=155,SNR=9.8
Z45A Winona 60.52 335 P **P** 07 40 28.0 -0.8
baz=152
CPCT Cooper Cave 60.59 340 *e*P **P** 07 40 28.9 -0.3
comp=Z,9.8nm,0.8s
W50A Signal Mountai 60.60 340 P **P** 07 40 28.2 -1.3
baz=157
Y46A Houston 60.65 336 P **P** 07 40 28.1 -1.6
baz=153
V52A Sevierville 60.67 341 P **P** 07 40 28.7 -1.1
baz=159,SNR=5.8
Z44A Pea Ridge, Bel 60.73 334 P **P** 07 40 29.6 -0.7
baz=151
SWET Sewanee 60.82 339 *e*P **P** 07 40 29.8 -1.1
comp=Z,21nm,1.3s
W49A Belvidere 60.84 339 P **P** 07 40 29.4 -1.6
baz=156,SNR=5.6
X47A Russelville 60.85 337 P **P** 07 40 29.5 -1.5
baz=154,SNR=9.6
V51A Loudon 60.86 341 P **P** 07 40 29.8 -1.2
baz=158
833A Chaparral WMA, 60.88 324 P **P** 07 40 31.5 +0.1
baz=142,SNR=8.3
Y45A Yeager Farm, C 60.90 335 P **P** 07 40 30.5 -0.9
baz=152,SNR=7.1
V50A Pikevile 60.97 340 P **P** 07 40 30.7 -1.1
baz=157,SNR=6.8
W48A Pulaski 61.09 338 P **P** 07 40 31.5 -1.1
baz=155,SNR=11
BLA Blacksburg 61.10 345 *e*P **P** 07 40 32.8 +0.1
comp=Z,18nm,1.3s
BLA Blacksburg 61.10 345 *e*P **P** 07 40 32.8 +0.1
BLA pmax pmax
comp=Z,18nm,1.3s
IP07 Quail 61.24 347 *e*P **P** 07 40 33.5 0.0
comp=Z,19nm,1.5s
IP01 Cuckoo 61.25 347 *e*P **P** 07 40 33.4 -0.1
comp=Z,14nm,1.3s
SPRD Spring Road, M 61.31 347 *e*P **P** 07 40 33.5 -0.4
comp=Z,20nm,1.4s
TZTN Tazewell 61.31 342 *e*P **P** 07 40 33.2 -0.8
comp=Z,7.0nm,0.8s
V49A McMinnville 61.31 339 P **P** 07 40 32.5 -1.6
baz=156,SNR=7.1
PLAL Pickwick Lake 61.35 337 *e*P **P** 07 40 32.9 -1.4
comp=Z,12nm,1.0s
IP04 Greensprings 61.42 347 *e*P **P** 07 40 34.7 0.0
comp=Z,21nm,1.5s
W47A Westpoint 61.42 338 P **P** 07 40 33.4 -1.4
baz=155,SNR=12
OXF Oxford 61.42 336 P **P** 07 40 33.1 -1.7
baz=153
OXF Oxford 61.42 336 *e*P **P** 07 40 33.4 -1.3
comp=Z,26nm,0.9s
OXF Oxford 61.42 336 *e*P **P** 07 40 33.4 -1.3
OXF pmax pmax
comp=Z,26nm,0.9s
Y43A Makayla and Ka 61.49 334 P **P** 07 40 34.4 -0.8
baz=151
140A Cam and Jess, 61.51 331 P **P** 07 40 35.1 -0.2
baz=148
W46A Michie 61.59 337 P **P** 07 40 33.9 -1.9
baz=154
V48A Smith Brothers 61.59 339 P **P** 07 40 34.3 -1.6
baz=156,SNR=7.0
X44A Crenshaw 61.69 335 P **P** 07 40 35.0 -1.5
baz=152
W45A Hickory Valley 61.91 336 P **P** 07 40 36.5 -1.5
baz=153,SNR=11
V47A Nunnelly 61.91 338 P **P** 07 40 36.1 -1.9
baz=155,SNR=8.6
U49A Red Boiling Sp 61.96 340 P **P** 07 40 36.5 -1.7
baz=157
Z40A Long Farm, Mag 61.96 332 P **P** 07 40 37.5 -0.8
baz=149
X43A Marvell 62.00 335 P **P** 07 40 37.4 -1.1
baz=151
X43A Marvell 62.00 335 *e*P **P** 07 40 38.5 0.0
comp=Z,29nm,0.6s
V46A Holladay 62.10 338 P **P** 07 40 37.4 -1.8
baz=154,SNR=6.5
T50A Nancy 62.13 341 P **P** 07 40 37.8 -1.6
baz=158
Y41A Eaglette Beard 62.15 333 P **P** 07 40 39.2 -0.3
baz=150
WLAR White Oak Lake 62.20 332 *e*P **P** 07 40 40.1 +0.3
comp=Z,11nm,0.8s
U48A Cassie Pea, Po 62.20 339 P **P** 07 40 38.6 -1.2
baz=156
S52A Salyersville 62.23 343 P **P** 07 40 38.3 -1.7
baz=160
WVT Waverly 62.29 338 P **P** 07 40 38.7 -1.7
baz=155
WVT Waverly 62.29 338 *e*P **P** 07 40 38.8 -1.6
comp=Z,21nm,0.7s
WVT Waverly 62.29 338 *e*P **P** 07 40 38.8 -1.6
WVT pmax pmax
comp=Z,21nm,0.7s
S51A Beattyville 62.34 342 P **P** 07 40 39.8 -0.9
baz=159
V45A Humboldt 62.35 337 P **P** 07 40 39.2 -1.6
baz=153
U47A Clarksville 62.39 339 P **P** 07 40 39.3 -1.7
baz=155,SNR=13
T49A Edmonton 62.42 340 P **P** 07 40 39.7 -1.5
baz=157,SNR=6.1
U46A Springville 62.62 338 P **P** 07 40 41.1 -1.4
baz=154,SNR=8.5
T48A Bowling Green 62.70 340 P **P** 07 40 41.5 -1.5
baz=156
JCT Junction City 62.79 325 P **P** 07 40 43.0 -0.8
baz=142
JCT Junction City 62.79 325 *e*P **P** 07 40 43.6 -0.2
comp=Z,5.4nm,0.6s
JCT Junction City 62.79 325 *e*P **P** 07 40 43.6 -0.2
JCT pmax pmax
comp=Z,5.0nm,0.6s
U45A Rockin P Farm, 62.82 337 P **P** 07 40 42.4 -1.4
baz=154
T47A Sharon Grove 62.82 339 P **P** 07 40 42.1 -1.7
baz=156,SNR=8.3
MVL Millersville 62.93 349 *e*P **P** 07 40 44.4 0.0
comp=Z,22nm,1.3s
GLAT Glass 62.94 337 *e*P **P** 07 40 43.9 -0.7
comp=Z,87nm,1.2s
GNAR Gosnell 62.94 336 *e*P **P** 07 40 44.4 -0.1
comp=Z,80nm,1.1s
U44B Burton Farm, H 63.02 337 P **P** 07 40 44.0 -1.1
baz=153
S48A Wiedeman Farm, 63.09 340 P **P** 07 40 43.5 -2.0
baz=157,SNR=5.5
W41B Gary Mavity, V 63.12 334 P **P** 07 40 44.6 -1.2
baz=150
MIAR Mount Ida 63.13 333 P **P** 07 40 45.0 -0.9
baz=149
MIAR Mount Ida 63.13 333 *e*P **P** 07 40 45.2 -0.6
comp=Z,7.3nm,1.2s
MIAR Mount Ida 63.13 333 *e*P **P** 07 40 45.3 -0.6
MIAR pmax pmax
comp=Z,7.0nm,1.2s
T46A Princeton 63.14 338 P **P** 07 40 44.4 -1.5
baz=155
PAGS Pennsylvania G 63.22 349 *e*P **P** 07 40 46.1 -0.2
comp=Z,24nm,1.2s
U44A Portageville 63.29 337 P **P** 07 40 46.4 -0.4
baz=153
MCWV Mont Chateau 63.30 346 P **P** 07 40 46.8 -0.1
baz=163,SNR=5.5
MCWV Mont Chateau 63.30 346 *e*P **P** 07 40 47.2 +0.4
comp=Z,21nm,0.6s
V42A Cord 63.32 335 P **P** 07 40 45.8 -1.2
baz=151
X39A Fountain Ranch 63.34 332 P **P** 07 40 46.2 -1.0
baz=148
PARMO Parma 63.46 337 *e*P **P** 07 40 47.6 -0.3
comp=Z,49nm,0.8s
W40A Ferguson Farm, 63.47 333 P **P** 07 40 47.6 -0.4
baz=149
HPIG 63.50 318 *e*P **P** 07 40 49.0 +0.3
comp=Z,9.6nm,0.7s
V41A Mountainview 63.61 334 P **P** 07 40 47.7 -1.2
baz=150,SNR=12
O56A Blue Knob Stat 63.61 347 P **P** 07 40 48.6 -0.3
baz=164
O56A Blue Knob Stat 63.61 347 *e*P **P** 07 40 49.0 +0.1
comp=Z,39nm,1.3s
S46A Don Dixon Farm 63.66 339 P **P** 07 40 46.9 -2.2
baz=155
WCI Wyandotte Cave 63.69 340 P **P** 07 40 47.7 -1.6
baz=156
WCI Wyandotte Cave 63.69 340 *e*P **P** 07 40 47.9 -1.5
comp=Z,12nm,0.6s
WCI Wyandotte Cave 63.69 340 *e*P **P** 07 40 47.9 -1.5
WCI pmax pmax
comp=Z,12nm,0.6s
ODNJ Ogdensburg 63.70 351 *e*P **P** 07 40 49.2 -0.2
comp=Z,24nm,1.3s
R48A Northridge Ran 63.72 341 P **P** 07 40 48.1 -1.4
baz=157

N59A State Game Lan 63.72 350 P P 07 40 49.6 +0.1
baz=167
N59A State Game Lan 63.72 350 eP P 07 40 49.5 0.0
comp=Z,9.9nm,1.1s
U42A Revenden 63.74 335 P P 07 40 48.5 -1.2
baz=151,SNR=8.4
T44A Benton 63.77 337 P P 07 40 48.8 -1.1
baz=153
W39A Magazine 63.78 333 P P 07 40 49.6 -0.3
baz=149,SNR=5.8
W39A Magazine 63.78 333 eP P 07 40 50.0 0.0
comp=Z,6.5nm,0.6s
PBMO Poplar Bluff 63.81 336 eP P 07 40 49.1 -1.0
comp=Z,29nm,0.8s
R47A Wooly Knot Far 63.83 340 P P 07 40 48.6 -1.6
baz=156
SSPA Standing Stone 63.83 348 P P 07 40 49.8 -0.4
baz=165
SSPA Standing Stone 63.83 348 eP P 07 40 50.2 0.0
comp=Z,21nm,1.1s
V40A Witts Springs 63.90 334 P P 07 40 49.6 -1.2
baz=150,SNR=7.6
V40A Witts Springs 63.90 334 eP P 07 40 49.8 -1.0
comp=Z,6.2nm,0.6s
LIC Lamto 63.91 71 eP P 07 40 50.3 -1.0
comp=Z,127nm,1.0s
U41A Viola 64.00 335 P P 07 40 50.3 -1.1
baz=151,SNR=6.8
T43A Greenville 64.03 336 P P 07 40 49.9 -1.6
baz=152
SLBS Sierra La Lagu 64.04 313 eP P 07 40 53.3 +1.2
comp=Z,20nm,1.4s
TXAR Lajitas Array 64.06 321 P P 07 40 51.9 -0.1
comp=Z,1.6nm,0.7s,baz=150,slow=8.4,SNR=21
TXAR pP pP 07 42 40.9 +2.2
comp=Z,0.6nm,0.7s,baz=150,slow=6.7,SNR=4.4
TXAR S S 07 48 53.2 +5.5
comp=Z,0.2nm,0.5s,baz=106,slow=19,SNR=3.3
TX31 Lajitas Ar. Si 64.06 321 eP P 07 40 52.1 +0.1
TIC Toumodi 64.12 71 eP P 07 40 51.5 -1.2
BRYW Bryant College 64.14 353 eP P 07 40 52.9 +0.8
comp=Z,40nm,1.4s
KIC Kosan Boka 64.23 71 eP P 07 40 52.2 -1.1
comp=Z,151nm,0.9s
V39A Pettigrew 64.27 333 P P 07 40 52.4 -0.8
baz=149
DBIC Dimbokro 64.27 71 P P 07 40 53.7 +0.1
comp=Z,72nm,0.8s,baz=218,slow=6.6,SNR=62
DBIC Dimbokro 64.27 71 eP P 07 40 53.8 +0.1
comp=Z,94nm,0.9s
DBIC Dimbokro 64.27 71 eP P 07 40 53.8 +0.2
DBIC pmax pmax
comp=Z,94nm,0.9s
T42A Van Buren 64.28 336 P P 07 40 51.9 -1.3
baz=152
KSPA Keystone Colle 64.35 350 eP P 07 40 53.3 -0.2
comp=Z,12nm,0.7s
Q47A Bedord North L 64.38 340 P P 07 40 52.4 -1.4
baz=156
S43A Fulton Ridge, 64.38 337 P P 07 40 52.0 -1.7
baz=153
U40A Yellville 64.39 334 P P 07 40 52.8 -1.1
baz=150,SNR=8.5
R45A Skylar, Fairfi 64.40 339 P P 07 40 51.9 -1.9
baz=155
NVL N'lazarevskaya 64.51 159⇑ iP P 07 40 53.9 -0.2
NVL eS S 07 48 51.5 -0.2
NVL pmax pmax
comp=Z,108nm,0.9s
T41A Mountain View 64.55 335 P P 07 40 53.7 -1.2
baz=151,SNR=7.6
N54A Moraine State 64.58 346 P P 07 40 54.8 -0.2
baz=163
N54A Moraine State 64.58 346 eP P 07 40 55.1 +0.1
comp=Z,19nm,0.8s
ACSO Alum Creek Sta 64.60 344 P P 07 40 54.4 -0.7
baz=160,SNR=6.5
ACSO Alum Creek Sta 64.60 344 eP P 07 40 54.6 -0.6
comp=Z,26nm,0.6s
BLO Bloomington 64.63 340 eP P 07 40 54.4 -0.9
comp=Z,18nm,0.6s
BLO Bloomington 64.63 340 eP P 07 40 54.4 -0.9
BLO pmax pmax
comp=Z,18nm,0.6s
R44A Waltonville 64.63 338 P P 07 40 53.6 -1.8
baz=154
U39A Green Forest 64.66 334 P P 07 40 54.7 -0.9
baz=149,SNR=7.3
HRV Adam Dziewonsk 64.72 354 eP P 07 40 56.0 +0.2
comp=Z,34nm,1.4s
HRV Adam Dziewonsk 64.72 354 eP P 07 40 56.0 +0.2
HRV pmax pmax
comp=Z,34nm,1.4s
HHAR Hobbs 64.77 333 eP P 07 40 55.7 -0.6
comp=Z,11nm,0.8s
S42A Caledonia 64.82 336 P P 07 40 54.7 -1.8
baz=152
P47A Martinsville 64.84 341 P P 07 40 55.1 -1.5
baz=157,SNR=5.4
Q45A Warren Harvey, 64.90 339 P P 07 40 55.4 -1.6
baz=155,SNR=5.3
T40A Mansfield 64.94 335 P P 07 40 56.4 -0.9
baz=150
BINY Binghamton 65.01 350 P P 07 40 57.7 0.0
baz=167
BINY Binghamton 65.01 350 eP P 07 40 57.4 -0.3
comp=Z,36nm,1.3s
S41A Jillco Farms, 65.02 336 P P 07 40 56.8 -1.1
baz=151
M54A Oil Creek Stat 65.03 347 P P 07 40 57.5 -0.3
baz=164,SNR=6.2
M54A Oil Creek Stat 65.03 347 eP P 07 40 57.4 -0.4
comp=Z,52nm,1.1s
T39A Clever 65.17 334 P P 07 40 58.1 -0.7
baz=150,SNR=5.5
TRY Troy 65.19 352 eP P 07 40 59.2 +0.5
comp=Z,14nm,0.8s
Q44A Meyer Farm, Va 65.20 338 P P 07 40 57.1 -1.8
baz=154
CCM Cathedral Cave 65.24 336 P P 07 40 57.8 -1.4
baz=152
CCM Cathedral Cave 65.24 336 eP P 07 40 57.8 -1.4
comp=Z,12nm,0.6s
CCM Cathedral Cave 65.24 336 eP P 07 40 57.8 -1.4
CCM pmax pmax
comp=Z,12nm,0.6s
TUL1 Leonard 65.25 332 P P 07 40 58.8 -0.5
baz=147,SNR=6.1
TUL1 Leonard 65.25 332 eP P 07 40 59.0 -0.3
comp=Z,9.4nm,0.6s
ALLY Alegheny Colle 65.27 346 eP P 07 40 59.0 -0.3
comp=Z,43nm,0.9s
R42A Luebbering 65.27 337 P P 07 40 58.3 -1.1
baz=152
S40A Lebanon 65.32 335 P P 07 40 58.4 -1.3
baz=150,SNR=6.9
P45A Graceland, Par 65.34 340 P P 07 40 57.6 -2.2
baz=155
O47A Sheridan 65.50 341 P P 07 40 59.3 -1.5
baz=157
R41A Rosebud 65.50 336 P P 07 40 59.5 -1.3
baz=152,SNR=11
T38A Diamond 65.56 333 P P 07 41 00.6 -0.6
baz=149,SNR=16
WMOK Wichita Mounta 65.67 329 P P 07 41 01.3 -0.7
baz=144
WMOK Wichita Mounta 65.67 329 eP P 07 41 01.5 -0.5
comp=Z,6.2nm,1.3s
WMOK Wichita Mounta 65.67 329 eP P 07 41 01.5 -0.5
WMOK pmax pmax
comp=Z,6.0nm,1.3s
ERPA Erie 65.68 347 P P 07 41 01.7 -0.1
baz=163
ERPA Erie 65.68 347 eP P 07 41 01.8 -0.1
comp=Z,43nm,0.7s
S39A Bolivar 65.73 334 P P 07 41 01.6 -0.7
baz=150,SNR=18
Q42A Golden Eagle 65.74 337 P P 07 41 00.8 -1.4
baz=153
R40A Maddies Statio 65.83 336 P P 07 41 01.5 -1.3
baz=151,SNR=7.6
MMNY Mt. Morris Dam 65.86 349 eP P 07 41 02.7 -0.2
comp=Z,44nm,1.4s
S38A Stockton 65.91 334 P P 07 41 02.5 -0.9
baz=149,SNR=8.9
SFIN Lafayette 65.91 341 P P 07 41 01.5 -1.8
baz=156,SNR=5.2
SFIN Lafayette 65.91 341 eP P 07 41 01.9 -1.4
comp=Z,20nm,0.7s
HNH Hanover 65.98 353 eP P 07 41 04.7 +1.0
comp=Z,34nm,1.3s
O45A Potomac 65.99 340 P P 07 41 01.9 -1.9
baz=156
Q41A Truxton 66.03 337 P P 07 41 02.6 -1.4
baz=152,SNR=6.8
P43A Skaggs, Pawnee 66.03 338 P P 07 41 02.4 -1.7
baz=154,SNR=5.5
R39A Chumby, Stover 66.15 335 P P 07 41 03.8 -1.1
baz=150,SNR=7.5
P42A Winchester 66.27 338 P P 07 41 03.8 -1.7
baz=153,SNR=5.4
N46A Monticello 66.27 341 P P 07 41 04.2 -1.4
baz=157
Q40A Laux Farm, Aux 66.38 336 P P 07 41 05.0 -1.2
baz=151,SNR=5.1
R38A Fenwick Farm, 66.39 334 P P 07 41 05.5 -0.8
baz=149,SNR=17
N45A Kentland 66.47 340 P P 07 41 05.0 -1.8
baz=156
LBNH Lisbon 66.47 354 eP P 07 41 06.9 +0.1
comp=Z,19nm,1.3s
LBNH Lisbon 66.47 354 eP P 07 41 06.9 +0.1
LBNH pmax pmax
comp=Z,19nm,1.3s
NCB Newcomb 66.48 352 eP P 07 41 06.9 0.0
comp=Z,10.0nm,1.0s
WVL Waterville 66.59 355 eP P 07 41 07.9 +0.5
comp=Z,30nm,1.5s
EMMW East Machias 66.60 357 eP P 07 41 07.4 -0.1
comp=Z,10.0nm,0.8s
O42A Bath 66.72 338 P P 07 41 07.0 -1.3
baz=153
Q39A Willow Grove F 66.76 335 P P 07 41 07.4 -1.3
baz=150,SNR=6.1
HDIL Hopedale 66.78 339 P P 07 41 07.0 -1.7
baz=154,SNR=6.7
HDIL Hopedale 66.78 339 eP P 07 41 07.3 -1.4
comp=Z,23nm,0.7s
MNTX Cornudas Mount 66.80 322 P P 07 41 08.4 -0.7
baz=138,SNR=11
MNTX Cornudas Mount 66.80 322 eP P 07 41 08.8 -0.3
comp=Z,4.7nm,0.8s
P40A Paris 66.83 336 P P 07 41 08.0 -1.1
baz=151
O41A Passleys Farm, 66.93 338 P P 07 41 07.9 -1.7
baz=152
Q38A Cooks Store, C 66.94 335 P P 07 41 08.8 -1.0
baz=150,SNR=7.9
P39B Salisbury 67.06 336 P P 07 41 09.2 -1.3
baz=151,SNR=9.8
MSTX Muleshoe 67.08 325 P P 07 41 10.9 +0.1
baz=141,SNR=5.3
MSTX Muleshoe 67.08 325 eP P 07 41 11.2 +0.3
comp=Z,18nm,0.8s
N43A Stutzman Famil 67.08 339 P P 07 41 09.4 -1.2
baz=154,SNR=6.6
LONY Lake Ozonia 67.17 352 P P 07 41 10.8 -0.3
baz=169
LONY Lake Ozonia 67.17 352 eP P 07 41 10.9 -0.1
comp=Z,14nm,0.9s
Q37A Longview Farm, 67.20 334 P P 07 41 10.5 -0.8
baz=149,SNR=8.4
O40A La Belle 67.29 337 P P 07 41 10.4 -1.5
baz=152,SNR=8.5
N41A Harden Midland 67.44 338 P P 07 41 11.3 -1.5
baz=153,SNR=6.7
M43A Waltham Townsh 67.46 340 P P 07 41 11.5 -1.3
baz=155
P38A Dawn 67.48 335 P P 07 41 12.0 -1.1
baz=150,SNR=11
O39A Kisville 67.65 336 P P 07 41 12.8 -1.3
baz=151
P37A Lathrop 67.77 335 P P 07 41 13.6 -1.2
baz=149,SNR=10.0
N40A Mertquake, Sal 67.86 337 P P 07 41 14.0 -1.3
baz=152,SNR=6.2
O38A Galt 67.89 336 P P 07 41 14.2 -1.3
baz=150
M41A Milan 67.93 338 P P 07 41 14.2 -1.5
baz=153
PLVO Plevna 67.95 350 eP P 07 41 15.3 -0.5
comp=Z,18nm,1.0s
SADO Sadowa 68.06 348 eP P 07 41 15.5 -1.0
comp=Z,31nm,1.3s
L43A Garden Prairie 68.06 340 P P 07 41 15.4 -1.1
baz=155
QSPA South Pole Qui 68.07 180 P P 07 41 17.0 +0.5
comp=Z,20nm,0.4s,baz=163,slow=3.3,SNR=176
QSPA South Pole Qui 68.07 180 eP P 07 41 17.5 +1.0
comp=Z,27nm,0.6s
N39A Derby Farms, D 68.18 337 P P 07 41 15.9 -1.4
baz=151,SNR=7.7
O37A Wolven Farm, M 68.18 335 P P 07 41 16.4 -1.0
baz=150
L42A Oliver, Polo 68.20 339 P P 07 41 16.2 -1.2
baz=154
KSU1 Kansas State U 68.28 333 P P 07 41 17.0 -0.9
baz=147
KSU1 Kansas State U 68.28 333 eP P 07 41 17.5 -0.4
M40A Post Highland 68.29 338 P P 07 41 16.5 -1.4
baz=152,SNR=6.3
N38A Joes South For 68.38 336 P P 07 41 17.2 -1.3
baz=150
K43A Burlington 68.41 341 P P 07 41 17.6 -1.0
baz=155
L41A Preston 68.54 339 P P 07 41 17.9 -1.5
baz=153
PQI Presque Isle 68.58 357 eP P 07 41 19.7 +0.1
comp=Z,27nm,1.1s
M39A Webster 68.59 337 P P 07 41 18.4 -1.4
baz=152,SNR=6.1
N37A Lee Faris, Mou 68.72 336 P P 07 41 19.6 -1.0
baz=150,SNR=7.4
TRQ Mont Tremblant 68.74 352 eP P 07 41 20.3 -0.3
L40A Anamosa 68.77 338 P P 07 41 19.6 -1.3
baz=153,SNR=6.6
K42A Prairie Point, 68.79 340 P P 07 41 19.9 -1.1
baz=154
121A Cookes Peak, D 68.80 321 P P 07 41 22.2 +0.8
baz=136,SNR=6.6
KOWA Kowa 68.84 64 P P 07 41 21.4 -0.4
comp=Z,42nm,0.7s,baz=245,slow=6.3,SNR=103
KOWA pP pP 07 43 12.2 +1.6
comp=Z,12nm,0.9s,baz=207,slow=8.2,SNR=5.9
KOWA Kowa 68.84 64 eP P 07 41 21.8 -0.1
comp=Z,52nm,0.8s
KOWA pP pP 07 43 12.2 +1.6
319A Douglas 68.87 319 eP P 07 41 23.2 +1.4
comp=Z,10nm,0.9s
M38A Pleasantville 68.91 337 P P 07 41 20.3 -1.4
baz=151,SNR=7.9
K41A Shullsburg 68.95 339 P P 07 41 20.9 -1.0
baz=154
J43A Natural Harves 69.05 341 P P 07 41 21.4 -1.1
baz=155
N36A Muff Farm, Cla 69.06 335 P P 07 41 21.8 -0.8
baz=149
L39A Vinton 69.10 338 P P 07 41 21.6 -1.2
baz=152,SNR=5.7
JFWS Jewell Farm 69.20 339 P P 07 41 22.5 -0.9
baz=154,SNR=7.0
JFWS Jewell Farm 69.20 339 eP P 07 41 22.7 -0.7
comp=Z,29nm,0.6s
JFWS Jewell Farm 69.20 339 eP P 07 41 22.7 -0.7
JFWS pmax pmax
comp=Z,29nm,0.6s
J42A Columbus 69.21 340 P P 07 41 22.4 -1.0
baz=155,SNR=6.0
M37A Trindle Farm, 69.22 336 P P 07 41 22.7 -0.9
baz=150,SNR=7.7
K40A Colesburg 69.31 339 P P 07 41 23.0 -1.0
baz=153
BNM Barren Site 69.31 323 eP P 07 41 26.0 +1.4
SCIA State Center 69.34 337 P P 07 41 23.5 -0.7
baz=151
SCIA State Center 69.34 337 eP P 07 41 23.6 -0.7
comp=Z,8.7nm,0.6s
CBKS Cedar Bluff 69.42 331 P P 07 41 24.9 0.0
baz=144
CBKS Cedar Bluff 69.42 331 eP P 07 41 25.5 +0.6
CBKS Cedar Bluff 69.42 331 eP P 07 41 25.5 +0.6
LPM Los Pinos Moun 69.43 323 eP P 07 41 26.4 +1.2
L38A Oak Wood Farm, 69.45 337 P P 07 41 23.8 -1.2
baz=151
J41A Loganville 69.53 340 P P 07 41 24.5 -1.0
baz=154
M36A Felix, Anita 69.54 335 P P 07 41 24.5 -1.0
baz=149,SNR=5.6
K39A Oelwein 69.57 338 P P 07 41 24.3 -1.3
baz=152,SNR=8.6
I42A Draeger Farm, 69.66 341 P P 07 41 25.3 -0.9
baz=155
I42A Draeger Farm, 69.66 341 eP P 07 41 25.4 -0.8
comp=Z,25nm,1.1s
J40A Soldiers Grove 69.80 339 P P 07 41 25.9 -1.1
baz=153,SNR=5.7
ANMO Albuquerque 69.80 323 P P 07 41 27.5 0.0
comp=Z,2.2nm,0.6s,baz=146,slow=10,SNR=16
ANMO Albuquerque 69.80 323 P P 07 41 28.1 +0.6
baz=138
ANMO Albuquerque 69.80 323 eP P 07 41 28.5 +1.0
comp=Z,4.0nm,0.9s
ANMO Albuquerque 69.80 323 eP P 07 41 27.7 +0.2
ANMO pmax pmax
comp=Z,5.0nm,1.1s
TASL Snake Pit, Alb 69.80 323 P P 07 41 28.1 +0.6
baz=138,SNR=8.7
TASM ASL Pad, Albuq 69.80 323 P P 07 41 28.2 +0.7
baz=138,SNR=9.3
K38A Parkersburg 69.83 338 P P 07 41 26.0 -1.2
baz=151
H43A Windswept, Lux 69.85 342 P P 07 41 26.0 -1.3
baz=156
H43A Windswept, Lux 69.85 342 eP P 07 41 26.4 -0.9
comp=Z,24nm,0.7s
L36A Harm Buss Farm 70.05 336 P P 07 41 27.5 -1.1
baz=149
J39A Decorah 70.06 339 P P 07 41 27.4 -1.2
baz=152,SNR=9.4
H42A Shiocton 70.11 341 P P 07 41 27.7 -1.1
baz=156
H42A Shiocton 70.11 341 eP P 07 41 28.0 -0.8
comp=Z,15nm,0.6s
I41A Arkdale 70.11 340 P P 07 41 27.7 -1.1
baz=154
I40A Norwalk 70.20 340 P P 07 41 28.2 -1.2
baz=153
K37A Belmond 70.24 337 P P 07 41 28.5 -1.1
baz=150,SNR=5.6
J38A Wedel Dairy, R 70.31 338 P P 07 41 28.9 -1.1
baz=152,SNR=5.2
T25A Trinidad 70.36 326 eP P 07 41 31.9 +1.1
comp=Z,3.5nm,0.9s
K36A Gilmore City 70.43 336 P P 07 41 29.9 -0.9
baz=150
TUC Tucson 70.43 319 P P 07 41 32.2 +1.1
baz=134
TUC Tucson 70.43 319 eP P 07 41 32.3 +1.1
comp=Z,2.6nm,0.9s
TUC Tucson 70.43 319 eP P 07 41 32.3 +1.1
TUC pmax pmax
comp=Z,3.0nm,0.9s
I39A Houston 70.46 339 P P 07 41 29.8 -1.1
baz=153,SNR=5.3
H41A Junction City 70.55 341 P P 07 41 30.3 -1.1
baz=154
H41A Junction City 70.55 341 eP P 07 41 30.8 -0.6
comp=Z,12nm,0.7s
G43A Wallace 70.55 342 eP P 07 41 29.6 -1.8
comp=Z,24nm,1.2s
J37A Redenius Farm, 70.69 337 P P 07 41 31.1 -1.2
baz=151,SNR=5.0
G42A Mountain 70.75 342 eP P 07 41 31.9 -0.7
H40A Chili 70.78 340 P P 07 41 31.7 -1.1
baz=154
BGNE Belgrade 70.85 333 P P 07 41 32.8 -0.5
baz=146,SNR=5.7
BGNE Belgrade 70.85 333 eP P 07 41 33.0 -0.3
comp=Z,46nm,0.6s
E45A Wooded Hills, 70.90 344 P P 07 41 32.9 -0.5
baz=159
I38A Scanlan Farm, 70.90 339 P P 07 41 32.5 -1.0
baz=152,SNR=6.4
F43A Flat Rock, Esc 70.93 343 P P 07 41 32.5 -1.1
baz=157
J36A Seneca 1, Swea 70.99 337 P P 07 41 32.9 -1.2
baz=150,SNR=6.5
H39A Augusta 71.12 340 P P 07 41 33.6 -1.2
baz=153
I37A Lemond, Waseca 71.25 338 P P 07 41 34.7 -0.9
baz=151,SNR=7.1
G40A Rib Lake 71.30 341 P P 07 41 35.3 -0.6
baz=154
SDCO Great Sand Dun 71.39 326 eP P 07 41 38.2 +1.3
comp=Z,9.6nm,1.3s
E43A Lone Tree Farm 71.39 343 P P 07 41 35.6 -0.7
baz=157
F41A Three Lakes 71.40 341 P P 07 41 35.8 -0.6
baz=155,SNR=5.2
H38A Maiden Rock 71.44 339 P P 07 41 35.6 -1.1
baz=152
214A Organ Pipe Nat 71.45 317 P P 07 41 38.2 +1.2
baz=132
I36A Fitzsimmons Fa 71.47 337 P P 07 41 35.8 -1.0
baz=150,SNR=5.6
X18A Snowflake 71.48 321 eP P 07 41 38.5 +1.1
comp=Z,4.1nm,0.8s
H37A Dierke Farm, C 71.58 338 P P 07 41 36.8 -0.7
baz=151
G39A Holcombe 71.62 340 P P 07 41 36.7 -1.0
baz=153,SNR=5.1
E42A Champion 71.69 343 P P 07 41 37.4 -0.7
baz=156
COWI Conover 71.73 342 eP P 07 41 37.8 -0.6
comp=Z,8.1nm,1.0s
G38A Ridgeland 71.74 339 P P 07 41 37.1 -1.3
baz=152
F40A Park Falls 71.86 341 P P 07 41 38.6 -0.5
baz=154
H36A Jessenland, He 71.92 338 P P 07 41 38.9 -0.6
baz=150,SNR=8.1
S22A 4UR Ranch, Cre 72.08 325 P P 07 41 41.6 +0.6
baz=138
S22A 4UR Ranch, Cre 72.08 325 eP P 07 41 42.1 +1.1
comp=Z,1.5nm,0.6s
SPMN Marine on St. 72.10 339 P P 07 41 39.4 -1.1
baz=152,SNR=6.2
SPMN Marine on St. 72.10 339 eP P 07 41 39.9 -0.6
comp=Z,12nm,0.7s
F39A Loretta 72.11 340 P P 07 41 39.9 -0.6
baz=154
Q24A Divide 72.13 327 P P 07 41 41.9 +0.7
baz=140,SNR=6.0
Q24A Divide 72.13 327 eP P 07 41 42.5 +1.3
comp=Z,8.6nm,0.8s
ECSD EROS Data Cent 72.19 336 P P 07 41 40.3 -0.7
baz=148,SNR=9.5
ECSD EROS Data Cent 72.19 336 eP P 07 41 40.3 -0.7
comp=Z,18nm,1.3s
E40A Wakefield 72.27 341 P P 07 41 41.0 -0.4
baz=154,SNR=9.3
X16A Lo Mia Camp, P 72.29 320 eP P 07 41 43.5 +1.4
comp=Z,4.4nm,0.6s
H35A Sunnyside Ranc 72.35 337 P P 07 41 40.6 -1.3
baz=150
E39A Mellen 72.41 341 P P 07 41 41.9 -0.4
baz=154
G36A St. Michael 72.43 338 P P 07 41 41.5 -0.9
baz=151,SNR=6.1
D41A Chassel 72.44 342 P P 07 41 42.2 -0.3
baz=156,SNR=8.2
F38A Pierce - Schro 72.45 340 P P 07 41 42.1 -0.4
baz=153
F37A Hinrichs Farm, 72.48 339 P P 07 41 42.0 -0.7
baz=152
MVCO Mesa Verde 72.58 324 P P 07 41 44.5 +0.8
baz=137,SNR=7.4
MVCO Mesa Verde 72.58 324 eP P 07 41 45.0 +1.2
comp=Z,17nm,1.4s
113A Mohawk Valley, 72.59 317 eP P 07 41 44.5 +0.9
comp=Z,2.7nm,0.8s
H34A Spellman Lake, 72.67 337 P P 07 41 43.1 -0.7
baz=149,SNR=7.4
I32A Karley and Nic 72.76 335 P P 07 41 43.7 -0.7
baz=147
Y14A Wickenburg 72.90 319 eP P 07 41 46.7 +1.2
comp=Z,4.7nm,0.7s
F36A Milaca 72.91 339 P P 07 41 44.4 -0.7
baz=151,SNR=8.6
ISCO Idaho Springs 73.00 327 P P 07 41 46.9 +0.7
baz=140,SNR=10
ISCO Idaho Springs 73.00 327 eP P 07 41 47.2 +1.0
comp=Z,7.0nm,0.8s
ISCO Idaho Springs 73.00 327 eP P 07 41 47.2 +1.0

ISCO pmax pmax
comp=Z,7.0nm,0.8s
TOA0 Torodi Ar. Sit 73.01 68 eP P 07 41 46.2 -0.2
comp=Z,94nm,0.8s
TORD Torodi Ar. Bea 73.01 68 P P 07 41 46.0 -0.4
comp=Z,82nm,0.7s,baz=252,slow=5.5,SNR=374
TORD PcP PcP 07 41 59.1 -0.8
comp=Z,16nm,0.7s,baz=258,slow=4.5,SNR=7.6
TORD pP pP 07 43 38.7 +1.9
comp=Z,19nm,0.9s,baz=249,slow=6.0,SNR=12
TORD S S 07 50 28.9 -2.6
comp=Z,1.7nm,0.9s,baz=241,slow=12,SNR=5.4
WUAZ Wupatki 73.01 321 P P 07 41 47.3 +1.1
baz=134
H33A Prehn Over Nor 73.04 336 P P 07 41 45.4 -0.6
baz=148,SNR=11
G34A Benson 73.11 337 P P 07 41 45.0 -1.2
baz=149
H32A Carlson Farm, 73.15 335 P P 07 41 45.8 -0.8
baz=147,SNR=6.0
SMCO Snowmass 73.22 326 eP P 07 41 49.0 +1.4
comp=Z,6.4nm,0.6s
F35A Swanville 73.26 338 P P 07 41 45.7 -1.4
baz=150
PV01 Paradox Valley 73.30 324 eP P 07 41 49.4 +1.5
comp=Z,4.1nm,0.7s
G33A Ortonville 73.36 336 P P 07 41 46.8 -0.9
baz=148
C40A Isle Royale Na 73.39 342 P P 07 41 46.9 -0.9
baz=155
E36A McGregor 73.39 339 P P 07 41 47.0 -0.9
baz=151,SNR=5.4
PV15 Paradox Valley 73.40 325 eP P 07 41 50.1 +1.6
comp=Z,7.3nm,0.9s
PV02 Paradox Valley 73.44 324 eP P 07 41 50.0 +1.3
comp=Z,12nm,1.4s
F34A Alexandria 73.45 338 P P 07 41 47.6 -0.6
baz=150
PV07 Paradox Valley 73.56 325 eP P 07 41 50.8 +1.4
comp=Z,7.4nm,0.9s
C39A Grand Marais 73.58 342 P P 07 41 47.9 -1.0
baz=154,SNR=11
PV04 Paradox Valley 73.67 324 eP P 07 41 51.2 +1.3
comp=Z,4.1nm,0.8s
WIN Windhoek 73.70 108 P P 07 41 51.0 +0.5
WIN pmax pmax
comp=Z,34nm,0.9s
SUSD Miller 73.70 334 P P 07 41 48.7 -1.0
baz=146
E35A Pequot Lakes 73.81 338 P P 07 41 49.4 -0.9
baz=150
C38A Sawbill Land. 73.83 341 P P 07 41 49.1 -1.3
baz=153,SNR=6.6
F33A 5 Mile Ranch, 73.86 337 P P 07 41 49.5 -1.0
baz=149,SNR=5.3
PV09 Paradox Valley 73.86 324 eP P 07 41 53.1 +2.0
D36A Goodland 73.94 340 P P 07 41 50.2 -0.8
baz=152
N23A Red Feather La 74.00 328 P P 07 41 52.6 +0.8
baz=140,SNR=10
N23A Red Feather La 74.00 328 eP P 07 41 52.9 +1.0
comp=Z,11nm,0.6s
SUR Sutherland 74.02 119 eP P 07 41 52.9 +0.7
comp=Z,45nm,1.1s
PHWY Pilot Hill 74.07 329 eP P 07 41 53.5 +1.2
comp=Z,6.4nm,0.8s
EYMN Ely 74.10 341 P P 07 41 50.9 -1.0
baz=153
EYMN Ely 74.10 341 eP P 07 41 51.2 -0.7
comp=Z,4.5nm,0.8s
C37A Embarrass 74.12 340 P P 07 41 51.2 -0.8
baz=153
D35A Remer 74.15 339 P P 07 41 52.5 +0.3
baz=151
SYO Syowa Base 74.17 159⇑ iP P 07 41 51.4 -0.6
U15A North Rim 74.17 321 eP P 07 41 54.7 +1.7
comp=Z,5.5nm,0.7s
E33A Westby DABS, E 74.32 337 P P 07 41 52.0 -1.2
baz=149
C36A Pine Crest Far 74.35 340 P P 07 41 52.5 -0.8
baz=152,SNR=5.1
MONP2 Monument Peak 74.36 316 P P 07 41 55.3 +1.3
baz=130
IRM Iron Mountain 74.37 318 P P 07 41 54.9 +1.1
baz=131,SNR=5.5
BAR Barrett 74.39 316 eP P 07 41 55.2 +1.3
comp=Z,5.4nm,0.6s
O20A White River Ci 74.59 326 P P 07 41 56.3 +1.2
baz=138,SNR=7.0
O20A White River Ci 74.59 326 eP P 07 41 56.5 +1.4
comp=Z,14nm,1.0s
C35A Jirik Farms, M 74.67 339 P P 07 41 54.3 -0.8
baz=151,SNR=13
BELC Belle Mtn. Jos 74.81 317 P P 07 41 57.6 +1.2
baz=130
KNB Kanab 74.89 321 eP P 07 41 58.6 +1.8
comp=Z,12nm,0.8s
KNB Kanab 74.89 321 eP P 07 41 58.6 +1.8
KNB pmax pmax
comp=Z,12nm,0.8s
C34A RKJ Ranch, Bem 74.93 339 P P 07 41 55.8 -0.8
baz=150,SNR=5.3
E31A Nome 75.05 336 P P 07 41 56.5 -0.8
baz=147
SRU San Rafael Swe 75.06 324 eP P 07 41 58.7 +0.9
comp=Z,12nm,0.7s
SRU San Rafael Swe 75.06 324 eP P 07 41 58.7 +0.9
SRU pmax pmax
comp=Z,12nm,0.7s
GMRC Granite Mounta 75.11 318 P P 07 41 59.1 +1.1
baz=131,SNR=12
LCMT Little Creek M 75.13 321 eP P 07 41 59.7 +1.6
comp=Z,3.3nm,0.7s
B35A Bob, Littlefor 75.16 340 P P 07 41 57.2 -0.6
baz=151,SNR=9.4
TSUM Tsumeb 75.16 105 eP P 07 41 58.9 +0.1
comp=Z,68nm,0.8s
RWWY Rawlins 75.22 328 eP P 07 41 59.1 +0.4
comp=Z,14nm,0.8s
D32A Dogwood Acres, 75.22 337 P P 07 41 57.5 -0.7
baz=148
MTPU Mount Pierson 75.23 322 eP P 07 42 00.0 +1.1
comp=Z,5.0nm,0.8s
Q16A Castle Valley 75.28 323 eP P 07 42 00.4 +1.4
comp=Z,2.8nm,0.7s
C33A Trail 75.32 338 P P 07 41 58.0 -0.7
baz=149
D31A Mcclaflin, Tow 75.41 337 P P 07 41 58.7 -0.5
baz=148
P17A Butcher Ranch, 75.43 324 eP P 07 42 00.9 +1.1
comp=Z,12nm,1.1s
SZCU Shurtz Canyon 75.44 321 eP P 07 42 01.5 +1.5
comp=Z,1.8nm,0.8s
MSU Marysvale 75.55 323 eP P 07 42 02.0 +1.4
TMUT Trail Mountain 75.56 324 eP P 07 42 02.1 +1.4
comp=Z,3.5nm,0.6s
CCUT Cedar City 75.57 321 eP P 07 42 02.8 +2.1
comp=Z,4.7nm,0.9s
B34A Aery, Baudette 75.57 339 P P 07 41 59.9 -0.2
baz=150
RSSD Black Hills 75.59 331 P P 07 42 00.5 -0.1
baz=142
RSSD Black Hills 75.59 331 eP P 07 42 01.3 +0.6
comp=Z,6.7nm,1.1s
RSSD Black Hills 75.59 331 eP P 07 42 01.3 +0.6
RSSD pmax pmax
comp=Z,7.0nm,1.1s
K22A Casper 75.61 329 P P 07 42 00.9 +0.1
baz=139
K22A Casper 75.61 329 eP P 07 42 01.8 +1.0
comp=Z,5.8nm,1.0s
B33A Robert and Kas 75.70 339 P P 07 42 00.5 -0.3
baz=150,SNR=5.5
AGMN Agassiz Nation 75.81 338 P P 07 42 01.0 -0.5
baz=149,SNR=7.3
AGMN Agassiz Nation 75.81 338 eP P 07 42 01.1 -0.4
comp=Z,9.8nm,1.0s
SHPR Sheep Range 75.93 319 eP P 07 42 04.2 +1.6
comp=Z,3.6nm,0.7s
C31A Landman Farms, 76.04 337 P P 07 42 02.2 -0.5
baz=148,SNR=6.5
SBA Scott Base 76.07 190 eP P 07 42 04.5 +2.0
comp=Z,10nm,1.4s
SBA Scott Base 76.07 190 eP P 07 42 04.5 +2.0
SBA pmax pmax
comp=Z,10.0nm,1.4s
B32A Ashes, Strandq 76.13 338 P P 07 42 02.8 -0.4
baz=149,SNR=9.7

A33A Warroad 76.21 339 P P 07 42 03.4 -0.3
baz=150,SNR=11
MPU Maple Canyon 76.30 324 eP P 07 42 05.9 +1.2
comp=Z,4.4nm,0.8s
NLU North Lily Min 76.50 324 eP P 07 42 07.2 +1.5
comp=Z,3.0nm,0.8s
PSUT Pine Spring 76.52 322 eP P 07 42 07.6 +1.7
comp=Z,5.8nm,0.7s
B31A Greenbush Farm 76.54 337 P P 07 42 04.6 -0.9
baz=148
JLU Jordanelle 76.62 325 eP P 07 42 07.6 +1.2
comp=Z,6.9nm,0.6s
SCHQ Schefferville 76.69 358 P P 07 42 05.3 -0.8
comp=Z,9.1nm,0.7s,baz=189,slow=5.3,SNR=6.7
SCHQ Schefferville 76.69 358 eP P 07 42 05.7 -0.5
comp=Z,31nm,1.4s
MDND Maddock 76.78 336 P P 07 42 06.9 +0.1
baz=146,SNR=7.9
MDND Maddock 76.78 336 eP P 07 42 07.0 +0.1
comp=Z,77nm,1.4s
TPNV Topopah Spring 76.88 319 P P 07 42 09.3 +1.5
baz=131,SNR=7.5
TPNV Topopah Spring 76.88 319 eP P 07 42 09.6 +1.8
comp=Z,4.3nm,0.7s
TCUT Toone Canyon 76.96 325 eP P 07 42 09.6 +1.3
comp=Z,15nm,1.3s
VNDA Vanda 77.05 189 P P 07 42 09.5 +1.6
comp=Z,4.9nm,0.8s,baz=142,slow=3.7,SNR=30
VNDA Vanda 77.05 189 eP P 07 42 09.3 +1.4
comp=Z,6.4nm,0.9s
VNDA Vanda 77.05 189 eP P 07 42 09.3 +1.4
VNDA pmax pmax
comp=Z,6.0nm,0.9s
MPMC Manual Prospec 77.07 318 P P 07 42 09.5 +0.6
baz=130
DUG Dugway, Tooele 77.08 324 P P 07 42 09.4 +0.6
baz=134,SNR=5.8
DUG Dugway, Tooele 77.08 324 eP P 07 42 10.2 +1.4
comp=Z,3.4nm,0.8s
DUG Dugway, Tooele 77.08 324 P P 07 42 10.1 +1.3
DUG pmax pmax
comp=Z,6.0nm,1.0s
BW06 Boulder Array 77.19 327 P P 07 42 09.7 +0.2
baz=137,SNR=6.6
BW06 Boulder Array 77.19 327 eP P 07 42 09.7 +0.2
comp=Z,4.1nm,0.8s
PD31 Pinedale Array 77.19 327 eP P 07 42 10.0 +0.5
PDAR Pinedale Array 77.19 327 P P 07 42 09.7 +0.2
comp=Z,2.7nm,0.5s,baz=122,slow=7.4,SNR=29
PDAR pP pP 07 44 03.9 +2.3
comp=Z,1.0nm,0.6s,baz=120,slow=5.8,SNR=5.0
DAC Darwin (Calif) 77.27 318 eP P 07 42 11.3 +1.2
comp=Z,4.8nm,1.0s
HWUT Hardware Ranch 77.39 325 eP P 07 42 11.2 +0.7
comp=Z,6.5nm,0.6s
R11A Troy Canyon, C 77.40 321 P P 07 42 11.9 +1.3
baz=132,SNR=9.1
R11A Troy Canyon, C 77.40 321 eP P 07 42 12.1 +1.4
comp=Z,3.4nm,0.8s
ISA Isabella, Lake 77.43 317 P P 07 42 12.0 +1.2
baz=129
ISA Isabella, Lake 77.43 317 eP P 07 42 12.1 +1.4
comp=Z,5.6nm,0.8s
ULM Lac du Bonnet 77.50 339 P P 07 42 10.0 -0.6
comp=Z,3.9nm,0.5s,baz=153,slow=6.5,SNR=21
ULM pP pP 07 44 04.2 +1.3
comp=Z,7.4nm,0.9s,baz=145,slow=6.1,SNR=8.1
ULM Lac du Bonnet 77.50 339 eP P 07 42 09.9 -0.7
comp=Z,23nm,1.4s
ULM pP pP 07 44 04.2 +1.3
ULM Lac du Bonnet 77.50 339 eP P 07 42 09.9 -0.7
ULM *PP pP 07 44 04.2 +1.3
ULM pmax pmax
comp=Z,23nm,1.4s
SPUT South Promonto 77.65 325 eP P 07 42 12.9 +1.0
comp=Z,22nm,1.5s
CWC Cottonwood Cre 77.68 318 P P 07 42 13.3 +1.1
baz=130
BGU Big Grassy Mou 77.70 324 eP P 07 42 13.1 +0.9
comp=Z,5.2nm,0.9s
VES Vestal, Richgr 77.93 317 P P 07 42 14.3 +1.0
baz=129,SNR=6.4
AHID Auburn Hatcher 77.97 326 eP P 07 42 14.6 +0.9
comp=Z,11nm,0.8s
HVU Hansel Valley 78.16 325 eP P 07 42 15.4 +0.8
comp=Z,4.4nm,0.8s
HVU Hansel Valley 78.16 325 eP P 07 42 15.5 +0.8
HVU pmax pmax
comp=Z,4.0nm,0.8s
REDW Red Top Meadow 78.28 327 eP P 07 42 15.5 +0.2
comp=Z,5.9nm,1.0s
REDW eS S 07 51 33.0 +5.4
SNOW Snow King Moun 78.30 327 eP P 07 42 16.5 +1.0
comp=Z,4.1nm,0.6s
LOHW Long Hollow 78.33 327 eP P 07 42 16.2 +0.6
comp=Z,5.6nm,0.7s
TPAW Teton Pass 78.42 327 eP P 07 42 16.9 +0.7
comp=Z,10nm,1.5s
MDT Midelt 78.47 47 P P 07 42 16.9 +0.4
comp=Z,15nm,0.9s,baz=235,slow=7.1,SNR=18
MOOW Moose Ponds 78.50 327 eP P 07 42 16.6 +0.1
comp=Z,4.5nm,0.9s
LAO LASA Array 78.56 332 P P 07 42 16.6 +0.1
baz=140,SNR=7.7
LAO LASA Array 78.56 332 eP P 07 42 16.6 +0.1
comp=Z,8.3nm,0.8s
FXWY Fox Creek 78.56 327 eP P 07 42 17.7 +0.8
comp=Z,2.9nm,0.8s
MORF Marmelete 78.57 42 eP P 07 42 17.1 +0.3
MORF AMb AMB 07 42 18.7
comp=Z,26nm,0.9s
MORF Marmelete 78.57 42 eP P 07 42 17.3 +0.5
comp=Z,26nm,2.2s
MORF Marmelete 78.57 42 eP P 07 42 17.1 +0.3
PAGB Antelope Grade 78.61 316 eP P 07 42 18.2 +1.2
comp=Z,12nm,0.7s
PTEO Sao Teotonio 78.68 42 eP P 07 42 18.6 +1.3
comp=Z,62nm,1.5s
IMW Indian Meadow 78.70 327 eP P 07 42 18.4 +0.7
comp=Z,10nm,0.8s
RLMT Red Lodge 78.78 329 P P 07 42 18.4 +0.5
baz=138,SNR=11
RLMT Red Lodge 78.78 329 eP P 07 42 18.4 +0.5
comp=Z,8.6nm,0.7s
BOSA Boshof 78.81 116 P P 07 42 17.7 -0.8
comp=Z,26nm,1.0s,baz=248,slow=4.1,SNR=20
BOSA Boshof 78.81 116 eP P 07 42 17.9 -0.6
comp=Z,40nm,1.1s
BOSA Boshof 78.81 116 eP P 07 42 17.9 -0.6
BOSA pmax pmax
comp=Z,40nm,1.1s
H17A Grant Village 78.88 328 P P 07 42 19.8 +1.2
baz=136,SNR=6.4
H17A Grant Village 78.88 328 eP P 07 42 19.9 +1.3
comp=Z,3.8nm,0.8s
PBDV Barranco-do-Ve 78.98 42 eP P 07 42 19.9 +0.9
comp=Z,65nm,1.4s
OMMB Old Mammoth Mi 78.99 318 eP P 07 42 20.2 +0.8
comp=Z,7.4nm,0.6s
NV01 Mina Array Sit 79.08 319 eP P 07 42 20.4 +0.7
NVAR Mina Array Bea 79.08 319 P P 07 42 20.3 +0.6
comp=Z,2.6nm,0.7s,baz=140,slow=5.5,SNR=19
NVAR pP pP 07 44 15.1 +2.6
comp=Z,2.7nm,1.0s,baz=128,slow=6.0,SNR=7.1
DGMT Dagmar 79.08 334 P P 07 42 20.0 +0.7
baz=142,SNR=7.0
DGMT Dagmar 79.08 334 eP P 07 42 19.9 +0.7
comp=Z,30nm,0.9s
PCVE Castro Verde 79.16 42 eP P 07 42 20.8 +1.0
comp=Z,38nm,1.6s
PNCL Nicolau / Gran 79.16 41 eP P 07 42 20.6 +0.8
comp=Z,26nm,1.3s
MESJ Messejana 79.17 42 eP P 07 42 20.3 +0.4
MESJ AMb AMB 07 42 22.3
comp=Z,42nm,1.0s
MESJ Messejana 79.17 42 eP P 07 42 20.5 +0.6
comp=Z,42nm,1.5s
MESJ Messejana 79.17 42 eP P 07 42 20.3 +0.4
PVAQ Vaqueiros 79.21 42 eP P 07 42 20.6 +0.5
comp=Z,43nm,1.7s
YMR Madison River 79.27 328 eP P 07 42 22.0 +1.4
comp=Z,12nm,0.9s
YHH Holmes Hill 79.30 328 eP P 07 42 22.3 +1.4
comp=Z,11nm,0.7s
RYN Ryan 79.34 319 eP P 07 42 21.7 +0.7
comp=Z,4.5nm,0.7s
KVN Kaiserville 79.35 320 eP P 07 42 21.9 +0.8
comp=Z,6.6nm,0.6s

KVN Kaiserville 79.35 320 eP P 07 42 21.9 +0.8
KVN pmax pmax
comp=Z,7.0nm,0.6s
YHB Horse Butte 79.44 328 eP P 07 42 22.1 +0.6
comp=Z,5.7nm,0.9s
GCMT Greycliff 79.46 329 eP P 07 42 21.8 +0.3
PBEJ Beja 79.51 42 eP P 07 42 22.7 +1.0
comp=Z,27nm,1.6s
EVO Evora 79.73 41 eP P 07 42 23.1 +0.2
comp=Z,16nm,1.5s
ALMR Almeirim 79.79 40 eP P 07 42 23.4 +0.2
ALMR AMb AMB 07 42 25.4
comp=Z,80nm,1.6s
ALMR Almeirim 79.79 40 eP P 07 42 23.3 +0.2
WAKR Walker 79.81 319 eP P 07 42 25.5 +1.9
comp=Z,4.2nm,0.7s
PBAR Barrancos 80.11 42 eP P 07 42 25.3 +0.4
comp=Z,33nm,1.3s
PTOM Tomar 80.18 40 eP P 07 42 25.5 +0.3
comp=Z,55nm,1.0s
PESTR Estremoz 80.20 41 eP P 07 42 26.1 +0.8
comp=Z,33nm,1.1s
HLID Hailey 80.26 325 P P 07 42 27.0 +1.2
baz=133,SNR=18
HLID Hailey 80.26 325 eP P 07 42 27.0 +1.2
comp=Z,8.8nm,0.8s
BOZ Bozeman (W) 80.27 328 P P 07 42 25.9 +0.2
baz=136
BOZ Bozeman (W) 80.27 328 eP P 07 42 25.9 +0.2
comp=Z,1.7nm,0.8s
BOZ Bozeman (W) 80.27 328 eP P 07 42 25.9 +0.2
BOZ pmax pmax
comp=Z,2.0nm,0.8s
PNTR Pine Nut 80.28 319 eP P 07 42 27.6 +1.5
comp=Z,11nm,0.7s
LBTB Lobatse 80.29 113 eP P 07 42 26.0 -0.4
comp=Z,34nm,0.8s
MCMT McKenzie Canyo 80.33 327 eP P 07 42 27.2 +1.0
PCAS Casmilo, Conde 80.40 40 eP P 07 42 26.9 +0.5
comp=Z,54nm,1.5s
DLMT Dillon 80.58 327 eP P 07 42 27.9 +0.6
comp=Z,15nm,1.4s
PMRV Marv??o 80.67 41 eP P 07 42 27.4 -0.4
comp=Z,15nm,1.6s
TAM Tamanrasset 80.79 61 eP P 07 42 29.5 +0.6
comp=Z,58nm,1.3s
TAM Tamanrasset 80.79 61 eP P 07 42 29.5 +0.6
TAM pmax pmax
comp=Z,58nm,1.3s
LRM Limekiln Ridge 80.83 328 eP P 07 42 29.5 +0.7
PCBR Castelo Branco 80.88 40 eP P 07 42 29.3 +0.5
comp=Z,21nm,1.0s
EGMT Eagleton 81.14 331 P P 07 42 30.0 -0.1
baz=137,SNR=6.5
EGMT Eagleton 81.14 331 eP P 07 42 30.0 -0.1
comp=Z,12nm,1.1s
HRY Holter Researc 81.16 329 eP P 07 42 30.9 +0.6
PVIS Viseu 81.18 39 eP P 07 42 30.7 +0.3
comp=Z,16nm,1.7s
MTE Manteigas 81.19 40 eP P 07 42 30.4 -0.1
comp=Z,42nm,2.0s
MTE Manteigas 81.19 40 eP P 07 42 30.9 +0.4
comp=Z,32nm,1.4s
BEKR Beckworth 81.22 319 eP P 07 42 32.3 +1.4
comp=Z,2.5nm,0.9s
PVRL Vila Real 81.64 39 eP P 07 42 33.2 +0.5
comp=Z,37nm,1.0s
POLO Lamas de Olo 81.65 39 eP P 07 42 33.2 +0.3
comp=Z,6.2nm,1.7s
PCAB Cabril 81.73 39 eP P 07 42 33.4 +0.2
comp=Z,16nm,0.8s
PGAV Gavieira, Arco 81.75 38 eP P 07 42 33.6 +0.2
comp=Z,40nm,1.7s
MVO Moncorvo 81.97 40 eP P 07 42 34.9 +0.4
comp=Z,40nm,1.5s
MAW Mawson 82.27 162 P P 07 42 36.1 +0.6
comp=Z,36nm,0.8s,baz=220,slow=6.2,SNR=84
MAW Mawson 82.27 162 eP P 07 42 36.1 +0.6
comp=Z,8.9nm,0.8s
MAW Mawson 82.27 162 eP P 07 42 36.1 +0.6
MAW pmax pmax
comp=Z,9.0nm,0.8s
J08A Circle Bar Ran 82.33 323 eP P 07 42 37.4 +1.0
comp=Z,9.7nm,0.6s
PBRG Braganca 82.54 39 eP P 07 42 37.8 +0.5
comp=Z,58nm,1.6s
PAB San Pablo 82.61 42 eP P 07 42 38.1 +0.3
comp=Z,31nm,1.0s
PAB San Pablo 82.61 42 eP P 07 42 38.1 +0.3
PAB pmax pmax
comp=Z,31nm,1.0s
BMO Blue Mountains 82.67 325 eP P 07 42 38.3 +0.3
comp=Z,2.2nm,0.8s
BMO Blue Mountains 82.67 325 eP P 07 42 38.3 +0.3
BMO pmax pmax
comp=Z,2.0nm,0.8s
ESDC Sonseca Array 82.93 42 P P 07 42 39.6 +0.3
comp=Z,22nm,1.0s,baz=241,slow=4.6,SNR=65
ESDC pP pP 07 44 35.5 +2.0
comp=Z,3.9nm,1.0s,baz=233,slow=5.4,SNR=5.0
ESLA Sonseca Array 82.93 42 eP P 07 42 39.5 +0.2
comp=Z,30nm,1.0s
ES19 SONSECA Array 82.98 42 eP P 07 42 40.1 +0.5
M04C Macdoel 83.29 320 P P 07 42 40.9 -0.3
baz=128
FFC Flin Flon 83.29 339 eP P 07 42 41.6 +0.9
comp=Z,7.5nm,1.4s
FFC Flin Flon 83.29 339 eP P 07 42 41.6 +0.9
FFC pmax pmax
comp=Z,7.0nm,1.4s
K05A Summer Lake 83.31 321 eP P 07 42 42.5 +1.1
comp=Z,12nm,1.3s
F10A Beach Ranch, E 83.37 326 eP P 07 42 41.9 +0.5
comp=Z,2.2nm,0.8s
YBH Yreka Blue Hor 83.78 320 P P 07 42 43.0 -0.5
comp=Z,2.1nm,0.6s,baz=135,slow=5.7,SNR=12
IVI Ivigtut 83.97 7 eP P 07 42 44.5 +0.7
comp=Z,47nm,1.2s
PINE Pine Mountain 84.00 322 eP P 07 42 45.4 +0.6
comp=Z,5.3nm,0.8s
FCC Fort Churchill 84.43 345 eP P 07 42 46.0 -0.2
comp=Z,23nm,1.2s
FCC Fort Churchill 84.43 345 eP P 07 42 46.0 -0.2
FCC pmax pmax
comp=Z,23nm,1.2s
NEW Newport 84.83 327 P P 07 42 51.7 +3.1
baz=132
D08A Wollman Farm, 84.96 326 eP P 07 42 49.9 +0.8
comp=Z,13nm,1.2s
C09A Chrisman Ranch 85.11 327 eP P 07 42 50.1 +0.2
comp=Z,9.9nm,0.8s
G05D Wamic, OR 85.11 323 P P 07 42 50.6 +0.7
baz=128
LTY Liberty 86.01 325 eP P 07 42 54.3 +0.1
comp=Z,16nm,1.4s
LSZ Lusaka 86.02 105 eP P 07 42 56.4 +1.2
comp=Z,30nm,0.9s
LSZ Lusaka 86.02 105 eP P 07 42 56.4 +1.2
LSZ pmax pmax
comp=Z,30nm,0.9s
SJPF Ste Jean 86.60 41 eP P 07 42 57.1 0.0
SJPF pmax pmax
comp=Z,13nm,0.9s
B05A Bryant 87.39 325 P P 07 43 00.2 -0.4
baz=128
EPF Esparros 87.50 41 eP P 07 43 01.1 -0.3
EPF pmax pmax
comp=Z,13nm,1.2s
QUIF Quistinic 88.27 36 eP P 07 43 03.4 -1.3
QUIF pmax pmax
comp=Z,10.0nm,1.0s
ROSF Rostrenen 88.46 35 eP P 07 43 04.4 -1.2
ROSF pmax pmax
comp=Z,21nm,1.2s
LFF La Frestale 88.79 40 eP P 07 43 06.8 -0.5
LFF pmax pmax
comp=Z,31nm,1.2s
MTLF Montolieu 88.82 42 eP P 07 43 06.7 -0.8
MTLF pmax pmax
comp=Z,7.0nm,1.0s
RJF Les Rejaudoux 89.45 40 eP P 07 43 09.6 -0.8
RJF pmax pmax
comp=Z,13nm,1.1s
CAF Calviac 89.58 40 eP P 07 43 10.4 -0.6
CAF pmax pmax
comp=Z,9.0nm,0.8s
GRR Gorron 89.80 36 eP P 07 43 10.4 -1.5

GRR pmax pmax
comp=Z,12nm,0.8s
KEST Kesra 89.83 51 P **P 07 43 13.2 +0.8**
comp=Z,13nm,0.9s,baz=270,slow=3.1,SNR=14
KEST Kesra 89.83 51 *eP* **P 07 43 13.2 +0.8**
comp=Z,17nm,0.9s
TCF Toulx Ste Croi 90.39 39 *eP* **P 07 43 13.6 -1.1**
TCF pmax pmax
comp=Z,5.0nm,0.9s
VIVF Saint-Julien-l 91.12 41 *eP* **P 07 43 17.8 -0.3**
VIVF pmax pmax
comp=Z,8.0nm,1.1s
SSB Saint Sauveur 91.26 41 *eP* **P 07 43 19.4 +0.6**
comp=Z,11nm,1.0s
SSB Saint Sauveur 91.26 41 *eP* **P 07 43 19.4 +0.6**
SSB pmax pmax
comp=Z,11nm,1.0s
AVF Avril sur Loir 91.32 39 *eP* **P 07 43 17.8 -1.2**
AVF pmax pmax
comp=Z,9.0nm,1.3s
FRF La Foret Royal 91.71 43 *eP* **P 07 43 20.5 -0.3**
FRF pmax pmax
comp=Z,19nm,1.4s
CASY Casey 91.76 178 *eP* **P 07 43 22.1 +1.4**
comp=Z,18nm,1.1s
ORIF Oris-en-Rattie 91.89 42 *eP* **P 07 43 21.8 0.0**
ORIF pmax pmax
comp=Z,11nm,0.8s
MBDF Montbardon 92.36 42 *eP* **P 07 43 23.8 -0.2**
MBDF pmax pmax
comp=Z,10.0nm,1.1s
EKA Eskdalemuir Ar 92.65 30 P **P 07 43 23.4 -1.5**
comp=Z,1.9nm,0.8s,baz=120,slow=4.2,SNR=4.3
LPL La Plagne 92.71 42 *eP* **P 07 43 24.4 -1.3**
LPL pmax pmax
comp=Z,13nm,1.0s
LPG La Plagne 92.72 42 *eP* **P 07 43 25.9 +0.1**
LPG pmax pmax
comp=Z,15nm,1.1s
PGF Pioggiola 92.75 45 *eP* **P 07 43 25.4 -0.4**
PGF pmax pmax
comp=Z,12nm,1.2s
YKA Yellowknife Ar 93.47 339 P **P 07 43 27.9 -0.5**
comp=Z,2.5nm,0.6s,baz=125,slow=4.5,SNR=53
YKA pP **pP 07 45 27.5 +2.5**
comp=Z,1.4nm,0.8s,baz=127,slow=4.3,SNR=8.5
YKA PKKPbc **PKKPdf 08 00 31.1 -1.6**
comp=Z,0.6nm,1.0s,baz=299,slow=3.4,SNR=4.7
GIVF Givet 93.86 37 *eP* **P 07 43 28.4 -2.1**
GIVF pmax pmax
comp=Z,4.0nm,0.5s
ECH Echery 94.27 39 *eP* **P 07 43 32.2 -0.3**
comp=Z,15nm,1.5s
ECH Echery 94.27 39 *eP* **P 07 43 32.2 -0.3**
ECH pmax pmax
comp=Z,15nm,1.5s
WLF Walferdange 94.39 38 *eP* **P 07 43 34.2 +1.3**
WLF pmax pmax
comp=Z,19nm,1.3s
CDF Champ du Feu 94.43 39 *eP* **P 07 43 32.0 -1.3**
CDF pmax pmax
comp=Z,24nm,1.6s
GERES GERESS Array B 98.45 41 P Pdif 07 43 50.1 -1.2
comp=Z,0.2nm,0.4s,baz=285,slow=6.8,SNR=3.5
BRTR Keskin Array B 109.21 54 PKiKP **PKiKP 07 48 39.1 -1.0**
comp=Z,0.8nm,0.7s,baz=186,slow=2.9,SNR=4.5
BRTR PP **PP 07 49 15.6 -4.2**
comp=Z,0.9nm,0.8s,baz=232,slow=6.1,SNR=5.3
OBN Obninsk 113.64 38 ⇑ *i* PKiKP **PKiKP 07 48 47.9 +0.1**
OBN *i* 07 50 42.9
OBN pmax pmax
comp=Z,8.0nm,0.5s
KLMR Klimovskoe 115.46 32 *e*PKIKP **PKPdf 07 48 47.2 -3.9**
KLMR pmax pmax
comp=Z,11nm,1.3s
KLMR Klimovskoe 115.46 32 *e*PKPdf **PKPdf 07 48 47.3 -3.9**
KLMR AMP 07 48 50.8
comp=Z,11nm,1.3s
KIV Kislovodsk 116.57 51 ⇑ *i* PKIKP **PKPdf 07 48 52.3 -1.7**
KIV pmax pmax
comp=Z,9.0nm,1.0s
KBZ Khabaz 116.70 51 PKP **PKPdf 07 48 55.0 +1.0**
comp=Z,6.1nm,0.9s,baz=144,slow=1.9,SNR=8.5
STKA Stephens Creek 121.11 205 PKP **PKPdf 07 49 02.6 -0.5**
comp=Z,2.9nm,0.8s,baz=141,slow=2.4,SNR=4.6
STKA Stephens Creek 121.11 205 *e*PKPdf **PKPdf 07 49 03.5 +0.5**
STKA Stephens Creek 121.11 205 *e*PKIKP **PKPdf 07 49 03.6 +0.5**
BBOO Buckleboo 122.22 200 *e*PKPdf **PKPdf 07 49 04.3 -0.9**
BILL Bilibino 124.86 339 ‖ *e*PKIKP **PKPdf 07 49 08.8 -0.2**
BILL *e* 07 51 11.8
BILL pmax pmax
comp=Z,6.0nm,1.1s
NWAO Narrogin (SRO) 125.25 181 PKP **PKPdf 07 49 10.8 -0.2**
comp=Z,5.0nm,0.4s,baz=29,slow=5.2,SNR=5.5
NWAO Narrogin (SRO) 125.25 181 *e*PKPdf **PKPdf 07 49 11.3 +0.3**
ARU Arti 125.87 35 PKP **PKPdf 07 49 12.0 +0.7**
comp=Z,5.7nm,0.5s,baz=271,slow=1.4,SNR=12
ARU Arti 125.87 35 *i* PKIKP **PKPdf 07 49 10.3 -1.0**
ARU 07 51 08.1
ARU 07 55 33.5
AKTO Aktyubinsk 126.81 43 PKP **PKPdf 07 49 13.8 +0.6**
comp=Z,4.9nm,0.8s,baz=210,slow=2.7,SNR=11
WSAR Wadi Sarin 127.04 77 PKP **PKPdf 07 49 14.6 0.0**
comp=Z,9.3nm,0.9s,baz=158,slow=2.3,SNR=4.8
ABKAR Akbulak array 128.24 44 *e*PKPdf **PKPdf 07 49 17.0 +1.0**
NRIK Noril'sk 129.68 13 SKPbc SKPab 07 51 51.3 +0.1
comp=Z,2.7nm,0.9s,baz=16,slow=3.5,SNR=4.0
TIXI Tiksi 129.94 355 *i* PKIKP **PKPdf 07 49 18.4 -0.2**
AS01 Alice Springs 131.37 202 *e*PKPdf **PKPdf 07 49 22.7 -0.2**
ASAR Alice Springs 131.39 202 PKhKP PKPpre 07 49 05.3
comp=Z,0.6nm,0.5s,baz=138,slow=2.1,SNR=13
ASAR PKP **PKPdf 07 49 22.4 -0.5**
comp=Z,3.7nm,0.5s,baz=133,slow=1.7,SNR=47
ASAR SKPbc **SKPbc 07 51 58.7 -0.4**
comp=Z,16nm,1.0s,baz=148,slow=4.6,SNR=39
AS31 Alice Springs 131.39 202 *e*PKPdf **PKPdf 07 49 22.9 -0.1**
SEY Seymchan 132.53 339 PKP **PKPdf 07 49 24.3 +0.5**
comp=Z,5.2nm,0.7s,baz=82,slow=5.0,SNR=21
SEY Seymchan 132.53 339 *i* PKIKP **PKPdf 07 49 23.6 -0.1**
BRVK Borovoye 133.38 37 *e*PKPdf **PKPdf 07 49 26.2 +0.6**
BRVK Borovoye 133.38 37 *i* PKIKP **PKPdf 07 49 22.7 -2.9**
BVAR Borovoye Array 133.45 37 PKP **PKPdf 07 49 26.3 +0.5**
comp=Z,3.5nm,0.7s,baz=262,slow=1.9,SNR=14
BVAR SKPbc **SKPbc 07 52 06.4 +1.4**
comp=Z,1.7nm,0.5s,baz=323,slow=2.2,SNR=6.6
BVAR SKKPbc **SKKPbc 08 01 21.2 -3.1**
comp=Z,1.2nm,0.7s,baz=84,slow=4.6,SNR=5.3
WB2 Warramunga Arr 134.64 204 *e*PKPdf **PKPdf 07 49 29.2 +0.1**
WRA Warramunga Arr 134.65 204 PKhKP PKPpre 07 49 14.6
comp=Z,0.6nm,0.3s,baz=158,slow=2.2,SNR=20
WRA PKP **PKPdf 07 49 29.1 0.0**
comp=Z,6.6nm,0.5s,baz=171,slow=1.6,SNR=41
WRA SKPbc **SKPbc 07 52 09.7 -0.3**
comp=Z,25nm,1.0s,baz=158,slow=2.8,SNR=55
WRAB Tennant Creek 134.65 204 *e*PKPdf **PKPdf 07 49 29.5 +0.3**
WRAB Tennant Creek 134.65 204 *i* PKIKP **PKPdf 07 49 28.3 -0.8**
PETK Petropavlovsk- 135.93 325 PKP **PKPdf 07 49 30.4 0.0**
comp=Z,3.6nm,0.8s,baz=92,slow=8.9,SNR=4.6
PETK PP **PP 07 52 13.4 -3.4**
comp=Z,5.2nm,0.8s,baz=82,slow=7.0,SNR=7.1
MBWA Marble Bar 136.85 185 *e*PKPdf **PKPdf 07 49 34.8 +1.7**
NVS Novosibirsk 139.00 29 *e*PKHKP PKPpre 07 49 29.6
NVS pmax pmax
comp=E,7.0nm,1.1s
NVS pmax pmax
comp=Z,19nm,1.1s
FITZ Fitzroy Crossi 139.00 194 PKP **PKPdf 07 49 37.8 +0.7**
comp=Z,2.4nm,0.4s,baz=288,slow=1.2,SNR=12
FITZ SKPbc **SKPbc 07 52 23.3 +0.5**
comp=Z,18nm,0.8s,baz=203,slow=4.9,SNR=28
FITZ Fitzroy Crossi 139.00 194 *e*PKPdf **PKPdf 07 49 39.7 +2.6**
FITZ SKPbc **SKPbc 07 52 23.3 +0.5**
KURBB Kurchatov Arra 139.04 37 PKhKP PKPpre 07 49 28.5
comp=Z,0.9nm,0.7s,baz=294,slow=2.8,SNR=6.6
KURBB PKP **PKPdf 07 49 36.9 +0.7**
comp=Z,5.5nm,0.8s,baz=294,slow=2.4,SNR=28
KURBB SKPbc **SKPbc 07 52 22.1 +0.3**
comp=Z,1.6nm,0.6s,baz=305,slow=3.0,SNR=7.3
KURK Kurchatov 139.05 36 PKPpre PKPpre 07 49 28.5
KURK PKP **PKPdf 07 49 36.9 +0.7**
KURK SKPbc **SKPbc 07 52 22.1 +0.3**
KURK Kurchatov 139.05 36 *i* PKIKP **PKPdf 07 49 36.4 +0.2**
YAK Yakutsk 139.08 350 *i* PKIKP **PKPdf 07 49 36.1 +0.2**
AAK Ala-Archa 139.67 50 PKhKP PKPpre 07 49 31.7
comp=Z,2.7nm,0.6s,baz=300,slow=0.3,SNR=5.7
AAK PKP **PKPdf 07 49 38.2 +0.4**
comp=Z,5.4nm,0.7s,baz=225,slow=5.8,SNR=8.9
AAK Ala-Archa 139.67 50 *i* PKIKP **PKPdf 07 49 34.5 -3.3**
ZAA0 Zalesovo Array 140.28 29 *e*PKPpre PKPpre 07 49 32.4
ZALV Zalesovo Beam 140.28 29 PKhKP PKPpre 07 49 32.2
comp=Z,2.3nm,0.6s,baz=291,slow=3.9,SNR=10.0
ZALV PKP **PKPdf 07 49 38.5 +0.2**
comp=Z,19nm,0.7s,baz=299,slow=2.6,SNR=26
ZALV SKPbc **SKPbc 07 52 24.6 -0.3**
comp=Z,3.0nm,0.6s,baz=300,slow=3.5,SNR=4.4
ZALV Zalesovo Beam 140.28 29 *e*PKPpre PKPpre 07 49 31.8
ZALV PKP **PKPdf 07 49 38.5 +0.2**
ZALV SKPbc **SKPbc 07 52 24.6 -0.3**
ZALV Zalesovo Beam 140.28 29 *e*PKHKP PKPpre 07 49 31.8
ZALV 07 49 38.5
TARG Taragay, Kyrgy 142.29 50 *e*PKPpre PKPpre 07 49 40.3
MTN Manton Dam 142.35 204 *e*PKPpre PKPpre 07 49 39.3
PRZ Przheval'sk 142.45 48 *e*PKPdf **PKPdf 07 49 41.2 -1.6**
PRZ Przheval'sk 142.45 48 *e*PKIKP **PKPdf 07 49 41.2 -1.6**
MAKZ Makanchi 142.92 40 *e*PKPdf **PKPdf 07 49 41.6 -1.7**
MAKZ Makanchi 142.92 40 *e*PKIKP **PKPdf 07 49 41.6 -1.7**
MK31 Makanchi Array 143.12 40 *e*PKPpre PKPbc 07 49 41.8 0.0
MK31 Makanchi Array 143.12 40 *e*PKIKP PKPbc 07 49 41.8 0.0
MKAR Makanchi Array 143.12 40 PKP PKPbc 07 49 41.8 0.0
comp=Z,34nm,0.9s,baz=292,slow=3.5,SNR=110
MKAR SKKPbc SKKPbc 08 00 44.5 -2.4
comp=Z,1.2nm,0.8s,baz=141,slow=4.1,SNR=4.9
MK01 Makanchi Array 143.13 40 *e*PKPpre PKPbc 07 49 41.9 +0.1
NKL Nikolayevsk 143.88 335 *e*PKIKP PKPbc 07 49 43.8 -0.1
NKL pmax pmax
comp=Z,21nm,1.0s
HYB Hyderabad 144.18 91 *i* PKP PKPbc 07 49 46.0 +0.1
BOD Bodaibo 144.31 2 *e*PKIKP PKPbc 07 49 43.7 -1.4
BOD pmax pmax
comp=Z,97nm,1.1s
HVS Khovu-Aksy 146.09 26 *i* PKIKP **PKPdf 07 49 49.6 +0.9**
YSS Yuzh-Sakhalins 147.32 326 *e*PKPbc **PKPbc 07 49 54.5 +0.5**
YSS Yuzh-Sakhalins 147.32 326 PKP2 **PKPbc 07 49 54.4 +0.4**
ZEA Zeya 147.37 348 *e*PKP2 **PKPbc 07 49 53.8 -0.1**
ZEA pmax pmax
comp=Z,28nm,1.2s
TLY Talaya 148.89 15 PKPbc **PKPbc 07 49 58.5 +0.6**
comp=Z,6.1nm,0.6s,baz=316,slow=2.3,SNR=4.7
TLY Talaya 148.89 15 *e*PKP2 **PKPbc 07 49 59.1 +1.2**
TLY pmax pmax
comp=Z,21nm,1.5s
ASAJ Asahikawa 149.18 322 PKPbc **PKPbc 07 49 59.0 +0.2**
comp=Z,12nm,0.8s,baz=243,slow=18,SNR=8.4
ASAJ pPKPbc **pPKPab 07 52 03.5 -0.4**
comp=Z,16nm,1.1s,baz=135,slow=1.8,SNR=6.2
ASAJ Asahikawa 149.18 322 *e*PKPbc **PKPbc 07 49 58.1 -0.6**
ASAJ pPKPbc **pPKPab 07 52 03.5 -0.4**
CISI Cisompet, Garu 149.34 163 *e*PKPbc **PKPbc 07 50 00.1 0.0**
JAGI Jajag, Banyuwa 149.52 176 *e*PKPbc **PKPbc 07 50 01.0 +0.5**
LEM Lembang 149.98 162 PKPbc **PKPbc 07 50 02.5 +0.7**
comp=Z,106nm,0.8s,baz=12,slow=16,SNR=8.5
ZAK Zakamensk 149.99 17 *e*PKHKP PKPpre 07 49 55.4
ZAK pmax pmax
comp=Z,16nm,1.1s
ERM Erimo 150.05 318 *e*PKPbc **PKPbc 07 50 02.2 +1.3**
ERM Erimo 150.05 318 *e*PKIKP **PKPbc 07 50 02.2 +1.3**
MNAI Manna 150.59 152 *e*PKPbc **PKPbc 07 50 03.6 +0.5**
FAKI Fak Fak 150.66 214 *e*PKPbc **PKPbc 07 50 03.6 +0.4**
SIJI Sorong 152.91 214 PKPbc **PKPbc 07 50 07.7 -0.5**
comp=Z,18nm,0.7s,baz=109,slow=4.7,SNR=3.9
SONA1 Songino Array 153.12 15 *e*PKPdf **PKPdf 07 50 00.8 +0.9**
SONA1 *e*PKPbc **PKiKP 07 50 08.0 +0.2**
SONA1 *e*PKPab **PKPab 07 50 22.7 +0.7**
SONM Songino Array 153.13 15 PKP **PKPdf 07 49 59.6 -0.3**
comp=Z,4.7nm,0.9s,baz=309,slow=1.0,SNR=15
SONM PKPbc **PKiKP 07 50 08.1 +0.2**
comp=Z,5.2nm,0.7s,baz=287,slow=1.3,SNR=15
SONM PKPab **PKPab 07 50 22.6 +0.6**
comp=Z,5.7nm,0.8s,baz=334,slow=5.1,SNR=11
SONM pPKPbc **pPKPbc 07 52 12.9 +1.7**
comp=Z,5.4nm,0.9s,baz=313,slow=1.2,SNR=11
ULN Ulaanbaatar 153.25 14 *e*PKPab **PKPab 07 50 22.9 +0.3**
ULN Ulaanbaatar 153.25 14 *e*PKP2 **PKPab 07 50 22.9 +0.3**
MJAR Matsushiro Arr 156.22 312 PKPab **PKPab 07 50 34.7 -0.8**
comp=Z,0.4nm,0.3s,baz=30,slow=1.8,SNR=4.2
MJAR SKKPbc 07 59 53.2
comp=Z,1.1nm,0.5s,baz=212,slow=4.3,SNR=4.4
GTA Gaotai 157.73 36 PKP **PKPdf 07 50 06.7 +0.4**
GTA PKPab **PKPab 07 50 42.5 +0.4**
GTA pPKP pPKPdf 07 52 03.9 -7.1
GTA sPKP 07 52 51.8
HHC Hu-ho-hao-te 160.90 11 *eP* **PKPdf 07 50 05.3 -4.5**
KS01 Wonju Array Si 161.74 329 *e*PKPdf **PKPdf 07 50 10.8 +0.2**
KS01 *e*PKPab **PKPab 07 50 59.7 +0.2**
KSRS Korea Array 161.75 329 PKP **PKPdf 07 50 11.2 +0.7**
comp=Z,1.1nm,0.8s,baz=122,slow=1.6,SNR=7.7
KSRS PKPab **PKPab 07 50 59.6 +0.2**
comp=Z,1.0nm,0.7s,baz=39,slow=3.7,SNR=5.0
KSRS pPKPab **pPKPab 07 52 58.6 +1.6**
comp=Z,1.5nm,0.8s,baz=42,slow=5.1,SNR=5.0
KSAR Wonju Array Be 161.77 329 PKP **PKPdf 07 50 11.2 +0.6**
KSAR PKPab **PKPab 07 50 59.6 0.0**
KSAR pPKPab **pPKPab 07 52 58.6 +1.5**
KSAR Wonju Array Be 161.77 329 PKIKP **PKPdf 07 50 11.3 +0.6**
KSAR 07 50 59.7
CMAR Chiang Mai Arr 163.26 99 PKP **PKPdf 07 50 13.3 +0.7**
comp=Z,1.9nm,0.5s,baz=259,slow=2.5,SNR=12
CMAR PKPab **PKPab 07 51 06.2 -0.8**
comp=Z,2.0nm,0.7s,baz=253,slow=4.7,SNR=6.8
CM01 Chiang Mai Arr 163.27 100 *e*PKPdf **PKPdf 07 50 12.9 +0.3**
CM01 *e*PKPab **PKPab 07 51 06.6 -0.3**
PBKT Sadao Pong 164.47 108 *e*PKPdf **PKPdf 07 50 14.0 +0.3**
CD2 Chengdu 165.74 50 PKP **PKPdf 07 50 13.1 -1.4**

DHMR ***02*** *07:36:45.7±1.2, 11°.79N×42°.76E, h25km±156km, ML4.0*
ISCJB ***02*** *07:36:50.5±0.7, 11°.83N±0°.07×43°.05E±0°.07, h19km, Error ellipse: s-maj=12.7km s-min=5.6km az=139.6*
ARO ***02*** *07:36:51.1, 11°.8N±0°.4×43°.1E±0°.9, h12km±1km, Ml3.8*
ISC 02 07:36:49.6±1.0, 11°.78N±0°.07×43°.00E±0°.06, h19km, n11, σ1§44/15, Ethiopia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TDD	**Tadjoura Ara**	**0.10**	**285**	*eP*	**Pg**	**07 36 54.8**	**+1.4**
MCAD	**Moucha**	**0.21**	**103**	*eP*	**Pg**	**07 36 55.0**	**+0.2**
ATD	**Arta Tunnel**	**0.29**	**212**	*eP*	**Pn**	**07 36 58.2**	**-0.7**
ATD	**Arta Tunnel**	**0.29**	**212**	*eP*	**Pn**	**07 36 58.2**	**-0.7**
ATD				eS	**Sn**	**07 37 03.6**	**-1.1**
OBO	**Obock**	**0.35**	**54**	*eP*	**Pg**	**07 36 56.4**	**-0.7**
ATA	**Atar**	**0.38**	**148**	*eP*	**Pb**	**07 36 58.7**	**+0.9**
SGH	**Sud-Ghoubbet**	**0.50**	**227**	*eP*	**Pn**	**07 37 01.9**	**+0.1**
LDLD	**Lac de Lave**	**0.53**	**249**	*eP*	**Pn**	**07 37 01.9**	**-0.2**
ADEN	**Aden**	**2.18**	**63**	*i* P	**Pn**	**07 37 26.5**	**+1.7**
ADEN				*i* S	**Sb**	**07 37 56.6**	**+1.7**
ADEN				AML	AML	07 38 04.4	
	comp=N,1μm,0.6s						
LBOS		**3.02**	**46**	*i* P	**Pn**	**07 37 37.1**	**+0.4**
LBOS				*i* S	**Sb**	**07 38 17.8**	**-1.8**
BDHA	**Al Bayda'**	**3.32**	**49**	*i* P	**Pn**	**07 37 41.0**	**+0.2**
BDHA				*i* S	**Sb**	**07 38 25.0**	**-3.2**
BDHA				AML	AML	07 38 40.1	
	comp=E,649nm,0.6s						

IDC 02 07:40:01.4±1.9, 50°.84N×28°.37E, h0km, mb1 3.7/1, mb1mx3.0/59, mbtmp3.7/1, ML2.6/1, Error ellipse: s-maj=12.8km s-min=7.8km az=89.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKASG	**Malin Array Be**	**0.56**	**104**	Pg	Pg	07 40 12.6	+0.5
	20nm,0.3s,baz=287,slow=17,SNR=70						
AKASG				Lg	Lg	07 40 20.0	
	46nm,0.3s,baz=284,slow=36,SNR=129						
AKASG				Rg	Rg	07 40 24.6	
	562nm,0.6s,baz=284,slow=37,SNR=68						
I26DE	**FREYUNG INFRAS**	**9.68**	**264**	*i*		08 38 34.0	
	baz=73,slow=326,SNR=0.5						
FINES	**FINESS Array B**	**10.71**	**354**	Pn	Pn	07 42 30.6	-5.3
	0.1nm,0.3s,baz=172,slow=15,SNR=4.3						

IDC ***02*** *07:50:14.2±0.9, 2°.42N×90°.35E, h0km, mb3.9/14, mb1 4.1/17, mb1mx3.9/77, mbtmp4.0/17, ML4.1/3, MS3.6/2, Ms1 3.6/2, ms1mx3.0/75, Error ellipse: s-maj=28.3km s-min=16.1km az=37.0*
NEIC ***02*** *07:50:16.0±0.6, 2°.34N×90°.37E, h10km, mb4.4/3, Error ellipse: s-maj=14.3km s-min=7.6km az=201.0*
ISCJB ***02*** *07:50:17.3±0.6, 2°.33N±0°.08×90°.43E±0°.05, h33km, mb4.2/22, MS4.3/1, Error ellipse: s-maj=12.4km s-min=6.1km az=18.7*
DJA ***02*** *07:50:32.9±0.7, 3°.1N±5°.×9°.2E±°, h10km, M4.9/8, mb5.0/8, mB5.3/4, MLv4.9/5, Mw(mB)4.7/4*
ISC 02 07:50:19.8±0.7, 2°.37N±0°.09×90°.53E±0°.06, h35km, n56, σ2§24/51, mb4.3/22, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**5.68**	**57**	P	**Pn**	**07 51 41.9**	**+0.2**
MLSI	**Meulaboh, Aceh**	**6.16**	**72**	P	**Pn**	**07 51 49.7**	**+1.4**
TPTI		**6.70**	**82**	P	**Pn**	**07 51 56.1**	**+0.4**
TPTI				S	**Sn**	**07 53 04.6**	**-6.3**
LHMI	**Lhok Sumawe**	**7.00**	**66**	P	**Pn**	**07 52 02.3**	**+2.4**
LHMI	**Lhok Sumawe**	**7.00**	**66**	*e*Pn	**Pn**	**07 52 02.3**	**+2.4**
GSI	**Gunungsitoli**	**7.12**	**98**	P	**Pn**	**07 52 01.9**	**+0.4**
GSI				S	**Sn**	**07 53 17.7**	**-3.5**
GSI	**Gunungsitoli**	**7.12**	**98**	*e*Pn	**Pn**	**07 52 02.2**	**+0.7**
GSI				*e*Sn	**Sn**	**07 53 18.2**	**-3.0**
KCSI	**Kotacane, Aceh**	**7.32**	**81**	P	**Pn**	**07 52 06.2**	**+1.9**
KCSI				S	**Sn**	**07 53 23.1**	**-3.1**
PSI	**Prapat**	**8.39**	**87**	Pn	**Pn**	**07 52 20.1**	**+0.9**
	1.4nm,0.3s,baz=359,slow=1.8,SNR=8.4						
PSI				LR	LR	07 54 54.5	
	comp=Z,90nm,20.7s,baz=268,slow=33						
PSI	**Prapat**	**8.39**	**87**	*e*Pn	**Pn**	**07 52 19.4**	**+0.2**
MNSI	**Mandailing Nat**	**9.18**	**100**	P	**Pn**	**07 52 32.9**	**+3.1**
MNSI				S	**Sn**	**07 54 06.6**	**-5.3**
KULM	**Kulim**	**10.50**	**74**	*e*Pn	**Pn**	**07 52 48.1**	**+0.1**
TRTT	**Trang**	**10.61**	**59**	P	**Pn**	**07 52 54.1**	**+4.6**
	15nm,1.3s						
IPM	**Ipoh**	**10.68**	**78**	*e*Pn	**Pn**	**07 52 51.2**	**+0.8**
PALK	**Pallekele**	**10.94**	**297**	Pn	**Pn**	**07 52 50.7**	**-3.3**
	1.4nm,0.3s,baz=115,slow=12,SNR=5.6						
PALK				Sn	Sn	07 54 40.9	-14
	4.4nm,0.3s,baz=116,slow=6.1,SNR=8.6						
PALK	**Pallekele**	**10.94**	**297**	*e*Pn	**Pn**	**07 52 53.1**	**-0.9**
PALK				*e*Sn	Sn	07 54 40.6	-15
COCO	**West Island**	**15.76**	**157**	*e*Pn	**P**	**07 54 06.4**	**+3.6**
	544nm,0.5s						
PBKT	**Sadao Pong**	**17.45**	**35**	P	P	07 54 30.2	+8.6
	18nm,1.0s						
PBKT	**Sadao Pong**	**17.45**	**35**	*e*P	**P**	**07 54 23.4**	**+1.8**
	12nm,0.8s						
PHIT	**Phitsanulok**	**17.64**	**33**	P	P	07 54 34.1	+10
CMAR	**Chiang Mai Arr**	**17.99**	**27**	P	**P**	**07 54 28.1**	**+0.6**
	0.3nm,0.3s,baz=218,slow=10.0,SNR=4.0						
H08S2	**Diego Garcia H**	**20.56**	**241**	T	T	08 15 55.9	
	baz=60,slow=75,SNR=300						
H08S3	**Diego Garcia H**	**20.56**	**241**	T	T	08 16 03.1	
	baz=60,slow=75,SNR=300						
H08S1	**Diego Carcia H**	**20.58**	**241**	T	T	08 16 01.5	
	baz=60,slow=75,SNR=129						
STKI	**Sintang**	**21.06**	**96**	P	P	07 55 12.1	+11
KMI	**Kunming**	**25.50**	**26**	P	**P**	**07 55 48.0**	**+2.7**
KMI				pmax	pmax		
	comp=Z,15nm,0.5s						
CD2	**Chengdu**	**31.02**	**22**	P	**P**	**07 56 36.9**	**+2.5**
CD2				pmax	pmax		
	comp=Z,20nm,0.7s						
LZH	**Lanzhou**	**35.74**	**19**	*e*P	P	07 57 23.9	+8.3
LZH				pP	pP	07 57 27.3	+1.5
LZH				sP	sP	07 57 29.9	-0.1
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
GTA	**Gaotai**	**37.83**	**12**	*e*P	P	07 57 44.7	+11
GTA				pP	sP	07 57 48.1	+0.4
GTA				sP	pP	07 57 50.7	+7.2
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
WMQ	**Urumqi**	**41.35**	**357**	P	**P**	**07 58 05.1**	**+2.6**
HHC	**Hu-ho-hao-te**	**42.76**	**24**	*e*P	**P**	**07 58 17.5**	**+3.4**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,36nm,6.9s						
H01W3	**Cape Leeuwin H**	**43.17**	**151**	T	T	08 44 28.1	
	baz=326,slow=75,SNR=14						
H01W2	**Cape Leeuwin H**	**43.18**	**151**	T	T	08 44 20.2	
	baz=326,slow=75,SNR=16						
H01W1	**Cape Leeuwin H**	**43.18**	**151**	T	T	08 44 19.5	
	baz=326,slow=75,SNR=15						
MK01	**Makanchi Array**	**44.81**	**352**	*e*P	**P**	**07 58 31.7**	**+1.4**
MKAR	**Makanchi Array**	**44.83**	**352**	P	**P**	**07 58 28.7**	**-1.8**
	comp=Z,0.9nm,0.8s,baz=169,slow=8.7,SNR=5.8						
GEYT	**Alibeck**	**46.20**	**324**	P	**P**	**07 58 39.6**	**-2.0**
	comp=Z,18nm,0.3s,baz=168,slow=7.4,SNR=9.5						
SONM	**Songino Array**	**47.32**	**15**	P	**P**	**07 58 50.4**	**+0.1**
	comp=Z,2.7nm,0.4s,baz=195,slow=9.0,SNR=14						
SONA1	**Songino Array**	**47.34**	**15**	*e*P	**P**	**07 58 50.9**	**+0.5**
WRA	**Warramunga Arr**	**48.36**	**119**	P	**P**	**07 58 59.7**	**+1.1**
	comp=Z,3.0nm,0.7s,baz=296,slow=8.6,SNR=24						
WRAB	**Tennant Creek**	**48.36**	**119**	*e*P	**P**	**07 59 00.5**	**+1.9**
	comp=Z,3.5nm,0.8s						
WB2	**Warramunga Arr**	**48.37**	**119**	*e*P	**P**	**07 59 00.1**	**+1.4**
	comp=Z,3.3nm,0.7s						
KSAR	**Wonju Array Be**	**48.93**	**40**	P	**P**	**07 59 03.1**	**+0.5**
KSRS	**Korea Array**	**48.96**	**40**	P	**P**	**07 59 03.1**	**+0.2**
	comp=Z,1.0nm,0.7s,baz=230,slow=9.0,SNR=6.5						
KURBB	**Kurchatov Arra**	**49.15**	**350**	P	**P**	**07 59 03.5**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=171,slow=7.0,SNR=6.9						
KURK	**Kurchatov**	**49.22**	**350**	P	**P**	**07 59 03.5**	**-1.1**
ASAR	**Alice Springs**	**49.49**	**124**	P	**P**	**07 59 07.9**	**+0.6**
	comp=Z,0.6nm,0.9s,baz=286,slow=7.6,SNR=4.8						
ASAR				PcP	**PcP**	**08 00 29.4**	**+0.4**
	comp=Z,0.2nm,0.7s,baz=304,slow=4.1,SNR=5.1						
ZALV	**Zalesovo Beam**	**51.63**	**356**	P	**P**	**07 59 21.9**	**-0.9**
	comp=Z,0.8nm,0.4s,baz=172,slow=5.3,SNR=3.6						
BVAR	**Borovoye Array**	**53.18**	**345**	P	**P**	**07 59 32.1**	**-2.3**
	comp=Z,0.3nm,0.4s,baz=133,slow=14,SNR=2.5						
ABKAR	**Akbulak array**	**53.52**	**336**	*e*P	**P**	**07 59 37.9**	**+1.0**
BRTR	**Keskin Array B**	**63.45**	**314**	P	**P**	**08 00 45.4**	**-1.2**
	comp=Z,0.4nm,0.6s,baz=110,slow=6.6,SNR=2.7						
IDI	**Anoyia**	**68.86**	**307**	P	**P**	**08 01 20.8**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=111,slow=14,SNR=2.5						
TIXI	**Tiksi**	**73.31**	**12**	P	**P**	**08 01 46.1**	**-1.3**
	comp=Z,1.9nm,0.5s,baz=288,slow=5.4,SNR=4.3						
FINES	**FINESS Array B**	**75.94**	**333**	P	**P**	**08 02 01.9**	**-0.9**
	comp=Z,5.5nm,1.0s,baz=163,slow=10,SNR=2.9						
ARCES	**ARCESS Array B**	**79.24**	**341**	P	**P**	**08 02 20.7**	**-0.4**
	comp=Z,2.8nm,0.9s,baz=99,slow=10,SNR=3.3						
**GERES

λ-97.00000°. NP2:φs11.00000°,δ34.00000°,λ-80.00000°.
Principal axes: T 1.1740, Plg12.0000°, Azm274.0000°; N -0.0120, Plg5.0000°, Azm183.0000°; P -1.1660, Plg77.0000°, Azm68.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s.
BJI **02** 07:52:54.0, 22.11S×63.62W, h530km, mB5.8/47
IDC **02** 07:52:54.4±0.2, 22.18S×63.64W, h534km±2km, mb5.2/41, mb1 5.3/46, mb1mx5.2/49, mbtmp6.1/46, Error ellipse: s-maj=7.6km s-min=5.8km az=72.0
ISC 02 07:52:54.6±0.2, 22.10S±0.03×63.66W±0.03, h539km±2km, h540km:pP-P, n2088, σ1.41/2459, mb5.8/539, 61C-120D, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOCB	**Mochara**	**2.03**	**294**	*e*Pn	P	07 53 58.8	-5.3
SLA	**San Lorenzo**	**3.11**	**213**	⇓*e*P	**P**	**07 54 08.3**	**-1.3**
SLA				*e*S	**S**	**07 55 07.5**	**-3.3**
SLA				IAML		07 55 09.8	
	comp=Z,9μm,1.5s						
SLA				IAML		07 55 09.9	
	comp=Z,8μm,1.5s						
SLA	**San Lorenzo**	**3.11**	**213**	⇓*i*P	**P**	**07 54 08.3**	**-1.3**
AHML	**Horco Molle**	**4.91**	**198**	⇓*i*P	**P**	**07 54 20.9**	**-2.1**
PB09	**IPOC Station P**	**5.19**	**272**	⇑*i*P	**P**	**07 54 24.2**	**-1.5**
PB15	**IPOC Station P**	**5.48**	**257**	⇑*i*P	**P**	**07 54 25.5**	**-2.8**
PB08	**IPOC Station P**	**5.49**	**290**	⇑*i*P	**P**	**07 54 27.1**	**-1.5**
PB06	**IPOC Station P**	**5.51**	**263**	⇑*i*P	**P**	**07 54 25.7**	**-2.8**
PB01	**IPOC Station P**	**5.53**	**280**	*e*P	**P**	**07 54 26.4**	**-2.1**
PB01				*e*S	**S**	**07 55 41.2**	**-4.1**
PB01	**IPOC Station P**	**5.53**	**280**	⇑*i*P	**P**	**07 54 25.7**	**-2.9**
PB07	**IPOC Station P**	**5.80**	**273**	⇑*i*P	**P**	**07 54 28.5**	**-2.5**
PB02	**IPOC Station P**	**5.85**	**276**	⇑*i*P	**P**	**07 54 29.4**	**-2.2**
PB04	**IPOC Station P**	**6.02**	**267**	*e*P	**P**	**07 54 30.8**	**-2.3**
PB04				*e*S	**S**	**07 55 50.5**	**-3.2**
PB04	**IPOC Station P**	**6.02**	**267**	⇑*i*P	**P**	**07 54 30.7**	**-2.4**
PB11	**IPOC Station P**	**6.07**	**291**	*e*P	**P**	**07 54 31.6**	**-2.0**
PB11				*e*S	**S**	**07 55 52.1**	**-2.4**
PB11	**IPOC Station P**	**6.07**	**291**	⇑*i*P	**P**	**07 54 30.9**	**-2.7**
GO02	**Mina Guanaco**	**6.24**	**240**	*e*P	**P**	**07 54 33.4**	**-1.8**
GO02				*e*S	**S**	**07 55 53.7**	**-3.8**
GO02	**Mina Guanaco**	**6.24**	**240**	⇓*i*P	**P**	**07 54 32.5**	**-2.7**
MNMC	**Minye Minye**	**6.30**	**297**	*e*P	**P**	**07 54 34.0**	**-1.8**
MNMC				*e*S	**S**	**07 55 56.1**	**-2.5**
MNMC	**Minye Minye**	**6.30**	**297**	⇑*i*P	**P**	**07 54 33.6**	**-2.2**
PB10	**IPOC Station P**	**6.52**	**256**	*e*P	**P**	**07 54 35.4**	**-2.1**
PB10				*e*S	**S**	**07 55 59.3**	**-2.5**
PB10	**IPOC Station P**	**6.52**	**256**	*e*P	**P**	**07 54 35.0**	**-2.5**
PB10				IAML		07 56 05.5	
	comp=Z,19μm,1.1s						
PB10				IAML		07 56 05.5	
	comp=Z,19μm,1.1s						
PB10	**IPOC Station P**	**6.52**	**256**	⇑*i*P	**P**	**07 54 35.2**	**-2.3**
PSGC	**Pisagua**	**6.54**	**291**	⇑*i*P	**P**	**07 54 35.4**	**-2.6**
SIV	**San Ignacio**	**6.55**	**22**	P	**P**	**07 54 37.7**	**-0.4**
	comp=Z,55nm,0.3s,baz=215,slow=9.3,SNR=1075						
SIV				S	**S**	**07 56 02.7**	**+0.1**
	comp=Z,12nm,0.3s,baz=223,slow=16,SNR=9.4						
SIV	**San Ignacio**	**6.55**	**22**	*e*P	**P**	**07 54 33.8**	**-4.3**
CYA	**Choya**	**6.60**	**197**	⇓*e*P	**P**	**07 54 35.7**	**-2.7**
CYA				IAML		07 56 09.2	
	comp=Z,1μm,1.3s						
CYA				IAML		07 56 09.2	
	comp=Z,1μm,1.3s						
CYA	**Choya**	**6.60**	**197**	⇓*i*P	**P**	**07 54 35.6**	**-2.7**
PB16	**IPOC Station P**	**6.65**	**303**	⇑*i*P	**P**	**07 54 38.7**	**-0.9**
BBOJ	**La Paz, Jacaqu**	**6.65**	**319**	*e*Pn	**P**	**07 54 37.0**	**-2.6**
PB14	**IPOC Station P**	**6.69**	**247**	*e*P	**P**	**07 54 37.6**	**-1.9**
PB14				*e*S	**S**	**07 55 57.6**	**-7.7**
PB14				IAML		07 56 06.6	
	comp=Z,16μm,2.0s						
PB14				IAML		07 56 06.6	
	comp=Z,16μm,2.0s						
PB14	**IPOC Station P**	**6.69**	**247**	⇑*i*P	**P**	**07 54 37.5**	**-2.0**
CPUP	**Villa Florida**	**7.15**	**127**	P	**P**	**07 54 42.9**	**-0.6**
	comp=Z,341nm,0.3s,baz=310,slow=8.4,SNR=7365						
CPUP				S	**S**	**07 56 11.8**	**-1.0**
	comp=Z,24nm,0.3s,baz=117,slow=18,SNR=1.9						
CPUP	**Villa Florida**	**7.15**	**127**	*e*P	**P**	**07 54 43.6**	**0.0**
CPUP				S	**S**	**07 56 11.8**	**-1.0**
PB12	**IPOC Station P**	**7.16**	**298**	⇑*i*P	**P**	**07 54 41.3**	**-2.6**
BBOD	**La Paz, Gloria**	**7.16**	**319**	*e*Pn	**P**	**07 54 42.7**	**-1.8**
BBOD				*e*Sn	**S**	**07 56 08.9**	**-5.3**
	comp=Z,674nm,0.8s						
LPAZ	**La Paz**	**7.16**	**323**	P	**P**	**07 54 43.5**	**-1.1**
	comp=Z,194nm,0.3s,baz=144,slow=5.6,SNR=1649						
LPAZ				S	**S**	**07 56 13.2**	**-1.2**
	comp=Z,24nm,0.3s,baz=324,slow=15,SNR=6.8						
LPAZ	**La Paz**	**7.16**	**323**	*e*Pn	**P**	**07 54 43.4**	**-1.1**
LPAZ				*e*Sn	**S**	**07 56 10.1**	**-4.3**
LPAZ	**La Paz**	**7.16**	**323**	⇑*i*P	**P**	**07 54 43.4**	**-1.1**
I41PY	**VILLA FLORIDA**	**7.17**	**127**	P	**P**	**07 54 42.8**	**-1.0**
	baz=303,slow=10,SNR=1.3						
BBOB	**La Paz, Bander**	**7.28**	**324**	*e*Pn	**P**	**07 54 44.3**	**-1.3**
BBOB				*e*Sn	**S**	**07 56 13.0**	**-3.3**
	comp=Z,510nm,0.6s						
I08BO	**LAS PENAS INFR**	**7.40**	**321**	P	**P**	**07 54 46.5**	**-0.3**
	baz=174,slow=8.1,SNR=0.5						
VCA	**Vinchina**	**7.78**	**211**	⇑*e*P	**P**	**07 54 48.0**	**-1.9**
VCA				*e*P	P	07 54 48.4	-1.5
VCA				*e*S	**S**	**07 56 17.7**	**-6.8**
VCA				*e*S	S	07 56 18.9	-5.6
VCA				IAML		07 56 29.9	
	comp=Z,12μm,1.0s						
VCA				IAML		07 56 29.9	
	comp=Z,12μm,1.0s						
VCA	**Vinchina**	**7.78**	**211**	⇓*i*P	**P**	**07 54 47.2**	**-2.7**
GO03	**Copiap**	**8.10**	**226**	*e*P	**P**	**07 54 51.2**	**-1.8**
GO03				*e*S	**S**	**07 56 28.8**	**-1.4**
GO03	**Copiap**	**8.10**	**226**	⇑*i*P	**P**	**07 54 51.1**	**-1.9**
AGUA	**GUANDACOL**	**8.55**	**210**	⇑*e*P	**P**	**07 54 55.0**	**-2.6**
TCA	**Tanti**	**9.24**	**185**	⇓*e*P	**P**	**07 55 00.9**	**-3.7**
TCA				*e*S	**S**	**07 56 42.8**	**-8.5**
TCA				IAML		07 57 01.0	
	comp=Z,558nm,1.0s						
TCA				IAML		07 57 01.0	
	comp=Z,558nm,1.0s						
TCA	**Tanti**	**9.24**	**185**	⇑*i*P	**P**	**07 55 01.0**	**-3.6**
LCO	**Las Campanas**	**9.37**	**221**	*e*P	**P**	**07 55 04.8**	**-1.3**
LCO	**Las Campanas**	**9.37**	**221**	⇑*e*P	**P**	**07 55 04.7**	**-1.4**
LCO				*e*S	**S**	**07 56 51.5**	**-2.6**
LCO				IAML		07 56 58.7	
	comp=Z,6μm,2.2s						
LCO				IAML		07 56 58.7	
	comp=Z,6μm,2.2s						
LCO	**Las Campanas**	**9.37**	**221**	⇑*i*P	**P**	**07 55 04.5**	**-1.6**
LCO	**Las Campanas**	**9.37**	**221**	P	**P**	**07 55 04.4**	**-1.7**
LCO				pmax	pmax		
	comp=Z,5μm,1.2s						
PIL	**Pilar**	**9.53**	**181**	⇑*i*P	**P**	**07 55 08.2**	**+0.8**
PIL				IAML		07 57 27.2	
	comp=Z,747nm,0.8s						
PIL				IAML		07 57 27.2	
	comp=Z,747nm,0.8s						
AMOG	**MOGNA**	**9.81**	**205**	⇑*e*P	**P**	**07 55 08.2**	**-2.1**
AMOG				IAML		07 57 04.0	
	comp=Z,1μm,0.9s						
AMOG				IAML		07 57 04.0	
	comp=Z,1μm,0.9s						
RTLL	**Cerro Villicun**	**10.15**	**204**	⇓*e*P	**P**	**07 55 12.2**	**-1.7**
RTLL				⇑*e*P	P	07 55 12.2	-1.6
RTLL				IAML		07 57 08.0	
	comp=Z,1μm,1.2s						
RTLL				IAML		07 57 08.0	
	comp=Z,1μm,1.2s						
TLL	**Tololo Astrono**	**10.28**	**217**	⇑*i*P	**P**	**07 55 13.7**	**-1.7**
GO04	**Tololo Observa**	**10.28**	**217**	*e*P	**P**	**07 55 13.9**	**-1.5**
SJA	**San Juan**	**10.36**	**204**	⇑*e*P	**P**	**07 55 15.1**	**-0.9**
SJA				*e*S	**S**	**07 57 06.5**	**-5.8**
SJA				IAML		07 57 33.9	
	comp=Z,2μm,1.0s						
SJA				IAML		07 57 33.9	
	comp=Z,2μm,1.0s						
ZON	**Zonda**	**10.42**	**204**	⇓*e*P	**P**	**07 55 15.3**	**-1.4**
ZON				*e*S	**S**	**07 57 07.6**	**-5.9**
ZON				IAML		07 57 17.6	
	comp=Z,2μm,1.0s						
ZON				IAML		07 57 17.6	
	comp=Z,2μm,1.0s						
MRA	**San Martin**	**10.44**	**190**	IAML		07 57 05.0	
	comp=Z,623nm,0.5s						
ACAN	**Cantantal**	**10.61**	**196**	⇑*e*P	**P**	**07 55 16.0**	**-2.6**
ACAN				IAML		07 57 14.0	
	comp=Z,566nm,1.0s						
ACAN				IAML		07 57 14.0	
	comp=Z,508nm,1.0s						
RTCV	**Cerro Valdivia**	**10.65**	**203**	⇑*e*P	**P**	**07 55 17.6**	**-1.5**
RTCV				IAML		07 57 20.0	
	comp=Z,1μm,1.3s						
RTCV				IAML		07 57 20.0	
	comp=Z,1μm,1.3s						
RTLS	**Leoncito**	**10.89**	**206**	⇑*e*P	**P**	**07 55 20.9**	**-0.8**
RTLS				IAML		07 57 23.5	
	comp=Z,2μm,1.0s						
RTLS				IAML		07 57 23.5	
	comp=Z,2μm,1.0s						
SUCO	**SUCO**	**11.25**	**185**	IAML		07 57 59.6	
	comp=Z,235nm,0.8s						
AUSP	**Uspallata**	**11.29**	**206**	⇑*e*P	**P**	**07 55 25.3**	**-0.7**
ASAL	**Salagasta**	**11.41**	**203**	⇑*e*P	**P**	**07 55 26.2**	**-0.8**
ASAL				IAML		07 57 33.8	
	comp=Z,1μm,1.0s						
ASAL				IAML		07 57 36.4	
	comp=Z,1μm,0.9s						
ARCO	**CERRO ARCO**	**11.68**	**202**	⇑*e*P	**P**	**07 55 28.9**	**-0.9**
ARCO				IAML		07 57 49.5	
	comp=Z,2μm,1.1s						
ARCO				IAML		07 57 49.5	
	comp=Z,2μm,1.1s						
AAGR	**Agrelo**	**11.86**	**202**	⇑*e*P	**P**	**07 55 30.9**	**-0.8**
AAGR				IAML		07 57 45.4	
	comp=Z,2μm,1.7s						
AAGR				IAML		07 57 45.4	
	comp=Z,2μm,1.7s						
ROCH	**El Roble**	**12.63**	**209**	⇑*i*P	**P**	**07 55 38.0**	**-1.9**
ROC1	**El Roble**	**12.64**	**209**	*e*P	**P**	**07 55 38.0**	**-2.0**
ROC1	**El Roble**	**12.64**	**209**	⇑*e*P	**P**	**07 55 37.9**	**-2.0**
CLCH	**Cerro Calan**	**12.79**	**207**	⇑*i*P	**P**	**07 55 39.2**	**-2.1**
SAML	**Samuel**	**13.09**	**2**	*e*P	**P**	**07 55 43.6**	**-0.9**
RFA	**San Rafael**	**13.31**	**197**	*i* P	**P**	**07 55 45.1**	**-1.5**
RFA				IAML		07 58 14.8	
	comp=Z,468nm,0.7s						
RFA				IAML		07 58 14.8	
	comp=Z,468nm,0.7s						
GO05	**HualaæØ**	**14.76**	**208**	*e*P	**P**	**07 55 59.1**	**-2.6**
GO05	**HualaæØ**	**14.76**	**208**	⇑*i*P	**P**	**07 55 58.8**	**-2.9**
SPB	**Sao Paulo**	**15.03**	**99**	*e*P	**P**	**07 56 02.6**	**-2.1**
	comp=Z,1μm,0.9s						
TRQA	**Tornquist**	**15.97**	**175**	*e*P	**P**	**07 56 09.3**	**-4.7**
	comp=Z,101nm,0.8s						
TRQA	**Tornquist**	**15.97**	**175**	P	**P**	**07 56 09.7**	**-4.3**
TRQA				pmax	pmax		
	comp=Z,93nm,1.4s						
COCH	**Cobquecura**	**16.08**	**208**	⇑*e*P	**P**	**07 56 12.4**	**-2.6**
NNA	**Nana**	**16.11**	**306**	P	**P**	**07 56 14.5**	**-1.3**
	comp=Z,93nm,0.3s,baz=138,slow=8.5,SNR=336						
NNA				ScP	**ScP**	**08 03 21.0**	**+1.7**
	comp=Z,1.5nm,0.3s,baz=242,slow=0.6,SNR=6.8						
NNA				PKiKP	**PKiKP**	**08 08 29.0**	**-0.3**
	baz=302,slow=5.1,SNR=6.0						
NNA	**Nana**	**16.11**	**306**	*e*P	**P**	**07 56 14.7**	**-1.1**
	comp=Z,2μm,0.9s						
NNA				ScP	**ScP**	**08 03 21.0**	**+1.7**
NNA				PKiKP	**PKiKP**	**08 08 29.0**	**-0.3**
NNA	**Nana**	**16.11**	**306**	*i* P	**P**	**07 56 14.9**	**-0.9**
I09BR	**BRASILIA INFRA**	**16.13**	**69**	P	**P**	**07 56 15.3**	**-0.7**
	baz=235,slow=7.8,SNR=1.0						
CCHI	**Chillan**	**16.20**	**205**	⇑*i*P	**P**	**07 56 14.1**	**-2.1**
CCHI	**Chillan**	**16.20**	**205**	⇑*i*P	**P**	**07 56 13.6**	**-2.6**
PLCA	**Paso Flores**	**19.47**	**196**	P	**P**	**07 56 44.7**	**-1.6**
	comp=Z,4.4nm,0.3s,baz=40,slow=9.5,SNR=90						
PLCA				PcP	**PcP**	**08 00 42.2**	**+1.2**
	comp=Z,3.8nm,0.3s,baz=24,slow=2.9,SNR=9.2						
PLCA				ScP	**ScP**	**08 03 27.5**	**+1.3**
	comp=Z,0.6nm,0.3s,baz=67,slow=4.0,SNR=3.0						
PLCA				PKiKP	**PKiKP**	**08 08 30.0**	**0.0**
	comp=Z,0.2nm,0.3s,baz=241,slow=2.2,SNR=6.0						
PLCA	**Paso Flores**	**19.47**	**196**	*e*P	**P**	**07 56 44.7**	**-1.6**
	comp=Z,80nm,1.0s						
PLCA				PcP	**PcP**	**08 00 42.2**	**+1.2**
PLCA				ScP	**ScP**	**08 03 27.5**	**+1.3**
PLCA				PKiKP	**PKiKP**	**08 08 30.0**	**0.0**
PLCA	**Paso Flores**	**19.47**	**196**	*e*P	**P**	**07 56 44.7**	**-1.6**
PLCA				pmax	pmax		
	comp=Z,80nm,1.0s						
ATAH	**Atahualpa**	**20.58**	**314**	P	**P**	**07 56 57.4**	**+0.3**
	comp=Z,162nm,1.1s,baz=142,slow=7.0,SNR=121						
ATAH				PcP	**PcP**	**08 00 45.2**	**+1.2**
	comp=Z,97nm,0.9s,baz=198,slow=4.5,SNR=3.9						
ATAH				ScP	**ScP**	**08 03 32.0**	**+2.3**
	comp=Z,58nm,1.0s,baz=12,slow=2.5,SNR=4.4						
PTGA	**Pitinga**	**21.54**	**10**	P	**P**	**07 57 04.4**	**-0.9**
	comp=Z,198nm,0.5s,baz=196,slow=10,SNR=341						
PTGA				S	**S**	**08 00 26.6**	**-1.2**
	comp=Z,72nm,1.0s,baz=6.7,slow=13,SNR=6.9						
PTGA	**Pitinga**	**21.54**	**10**	*e*P	**P**	**07 57 04.4**	**-0.9**
	comp=Z,631nm,1.1s						
PTGA				S	**S**	**08 00 26.6**	**-1.2**
GUVC	**San Jose del G**	**26.02**	**339**	*e*P	**P**	**07 57 42.5**	**-2.6**
CHRN	**Cochrane**	**26.11**	**194**	*e*P	**P**	**07 57 44.8**	**-0.6**
	comp=Z,50nm,1.1s						
CHRN				*e*PcP	**PcP**	**08 00 56.8**	**+2.0**
CHRN	**Cochrane**	**26.11**	**194**	⇓*i*P	**P**	**07 57 44.4**	**-1.0**
OTAV	**Otavalo**	**26.48**	**325**	*e*P	**P**	**07 57 50.8**	**+1.1**
	comp=Z,28nm,1.0s						
OTAV				*e*PcP	**PcP**	**08 00 59.1**	**+2.2**
OTAV	**Otavalo**	**26.48**	**325**	*e*P	**P**	**07 57 50.5**	**+0.8**
OTAV	**Otavalo**	**26.48**	**325**	P	**P**	**07 57 50.7**	**+1.1**
OTAV				pmax	pmax		
	comp=Z,28nm,1.0s						
GCUF	**Volcan Galeras**	**26.76**	**328**	*e*P	P	07 58 07.1	+15
SJAC	**San Juan de Ar**	**27.15**	**337**	*e*P	**P**	**07 57 53.2**	**-2.0**
PCON	**Cinco Dias**	**27.29**	**331**	*e*P	**P**	**07 57 55.8**	**-1.1**
POPC	**Popayan, Colom**	**27.60**	**331**	*e*P	**P**	**07 57 57.8**	**-1.4**
PRAC	**Prado**	**27.91**	**335**	*e*P	**P**	**07 58 00.7**	**-1.0**
	comp=Z,58nm,0.5s						
PRAC	**Prado**	**27.91**	**335**	*e*P	**P**	**07 57 59.1**	**-2.6**
CHIC	**Chingaza**	**28.34**	**338**	*e*P	**P**	**07 58 01.8**	**-4.1**
HORQ	**Saladito**	**28.41**	**332**	*e*P	**P**	**07 58 02.5**	**-4.0**
GRGC	**Isla de Gorgon**	**28.70**	**329**	*e*P	**P**	**07 58 08.4**	**-0.1**
ROSC	**El Rosal**	**28.74**	**337**	P	**P**	**07 58 10.1**	**+0.7**
	comp=Z,56nm,0.5s,baz=140,slow=4.1,SNR=43						
ROSC				PcP	**PcP**	**08 01 03.1**	**+0.7**
	comp=Z,56nm,0.9s,baz=118,slow=7.8,SNR=4.5						
ROSC				S	**S**	**08 02 22.8**	**+1.4**
	comp=Z,43nm,0.9s,baz=4.0,slow=23,SNR=5.8						
ROSC				ScP	**ScP**	**08 03 54.2**	**+1.4**
	comp=Z,25nm,0.8s,baz=88,slow=7.3,SNR=4.0						
ROSC	**El Rosal**	**28.74**	**337**	*e*P	**P**	**07 58 09.4**	**0.0**
	comp=Z,59nm,0.8s						
ROSC				*e*PcP	**PcP**	**08 01 04.0**	**+1.7**
ROSC				S	**S**	**08 02 22.8**	**+1.4**
ROSC				ScP	**ScP**	**08 03 54.2**	**+1.4**
ROSC	**El Rosal**	**28.74**	**337**	*e*P	**P**	**07 58 08.4**	**-0.9**
YOTC	**Yotoco, Valle**	**28.74**	**333**	*e*P	**P**	**07 58 05.1**	**-4.0**
ANIL	**Santa Ana**	**28.82**	**335**	*e*P	**P**	**07 58 07.1**	**-2.9**
RREF	**El Recreo**	**29.18**	**336**	*e*P	**P**	**07 58 11.1**	**-2.3**
MALC	**Bahia Malaga**	**29.20**	**331**	*e*P	**P**	**07 58 11.8**	**-1.2**
RUSC	**La Rusia**	**29.31**	**341**	*e*P	**P**	**07 58 13.2**	**-1.3**
	comp=Z,97nm,0.8s						
RUSC	**La Rusia**	**29.31**	**341**	*e*P	**P**	**07 58 12.4**	**-2.0**
PLMC	**San Jos¨ del**	**29.55**	**334**	*e*P	**P**	**07 58 12.4**	**-3.6**
EFI	**East Falkland**	**29.84**	**173**	*e*P	**P**	**07 58 17.0**	**-1.0**
	comp=Z,105nm,0.7s						
EFI				*e*PcP	**PcP**	**08 01 05.0**	**+0.9**
EFI	**East Falkland**	**29.84**	**173**	*i* P	**P**	**07 58 16.8**	**-1.1**
EFI				pmax	pmax		
	comp=Z,95nm,0.9s						
BARC	**Barichara**	**30.00**	**341**	*e*P	**P**	**07 58 16.4**	**-3.7**
PTBC	**PUERTO BERRIO,**	**30.37**	**338**	*e*P	P	07 58 17.8	-5.3
HELC	**Santa Helena**	**30.43**	**336**	*e*P	**P**	**07 58 21.6**	**-2.4**
	comp=Z,257nm,1.0s						
HELC	**Santa Helena**	**30.43**	**336**	*e*P	P	07 58 18.4	-5.5
PAMC	**Pamplona, Colo**	**30.57**	**342**	*e*P	**P**	**07 58 22.4**	**-2.9**
RCBR	**Riachuelo**	**31.32**	**63**	P	**P**	**07 58 31.8**	**+0.5**
	comp=Z,175nm,0.7s,baz=8.9,slow=0.5,SNR=51						
RCBR				PcP	**PcP**	**08 01 09.6**	**+0.7**
	comp=Z,123nm,0.8s,baz=211,slow=3.6,SNR=4.0						
RCBR	**Riachuelo**	**31.32**	**63**	*e*P	**P**	**07 58 32.4**	**+1.1**
	comp=Z,211nm,0.8s						
RCBR				*e*PcP	**PcP**	**08 01 10.2**	**+1.4**
ZARC	**Zaragoza, Cauc**	**31.39**	**338**	*e*P	**P**	**07 58 29.1**	**-2.8**
SDV	**Santo Domingo**	**31.55**	**347**	P	**P**	**07 58 31.7**	**-1.7**
	comp=Z,94nm,0.4s,baz=217,slow=7.6,SNR=141						
SDV				S	**S**	**08 03 02.5**	**-1.8**
	comp=Z,16nm,0.8s,baz=277,slow=22,SNR=6.2						
SDV	**Santo Domingo**	**31.55**	**347**	*e*P	**P**	**07 58 31.6**	**-1.7**
	comp=Z,344nm,1.0s						
SDV				S	**S**	**08 03 02.5**	**-1.8**
SDV	**Santo Domingo**	**31.55**	**347**	*e*P	**P**	**07 58 31.0**	**-2.3**
OCAC	**Ocana**	**31.61**	**342**	*e*P	P	07 58 26.4	-7.4
PCRV	**Puerto La Cruz**	**32.09**	**358**	P	**P**	**07 58 37.8**	**0.0**
	comp=Z,452nm,1.0s,baz=172,slow=5.1,SNR=72						
PCRV				S	**S**	**08 03 10.3**	**-1.9**
	comp=Z,84nm,1.2s,baz=349,slow=23,SNR=7.7						
TBH	**Brigand Hill**	**32.48**	**5**	*e*P	**P**	**07 58 42.5**	**+1.5**
MOTC	**Monteria, Cord**	**32.87**	**338**	*e*P	**P**	**07 58 41.0**	**-3.3**
TOSP	**Speyside**	**33.33**	**6**	*e*P	**P**	**07 58 47.5**	**-0.7**
CAPC	**Capurgana**	**33.37**	**335**	*e*P	P	07 58 43.7	-4.9
SJCC	**San Jacinto, C**	**33.75**	**339**	*e*P	P	07 58 46.3	-5.5
GRGR	**Grenville**	**34.08**	**3**	*e*P	**P**	**07 58 54.0**	**-0.5**
	comp=Z,2μm,0.7s						
GRGR				*e*PcP	**PcP**	**08 01 17.1**	**+0.6**
GRGR	**Grenville**	**34.08**	**3**	*e*P	**P**	**07 58 54.0**	**-0.5**
GRHS	**Sauteurs**	**34.17**	**4**	*e*P	**P**	**07 58 54.5**	**-0.7**
GRSS	**Sisters**	**34.24**	**4**	*e*P	**P**	**07 58 55.4**	**-0.5**
BCIP	**Isla Barro Col**	**34.89**	**331**	*e*P	**P**	**07 59 00.8**	**-0.6**
	comp=Z,93nm,0.8s						
BCIP				*e*PcP	**PcP**	**08 01 21.1**	**+2.2**
BCIP	**Isla Barro Col**	**34.89**	**331**	*e*P	**P**	**07 58 57.6**	**-3.7**
FCV	**Fort Charlotte**	**35.12**	**4**	*e*P	**P**	**07 59 02.2**	**-1.0**
SVB	**Belmont**	**35.23**	**4**	*e*P	**P**	**07 59 02.7**	**-1.5**
	comp=Z,406nm,0.9s						
SVB				*e*PcP	**PcP**	**08 01 20.3**	**+0.3**
SVB	**Belmont**	**35.23**	**4**	*e*P	**P**	**07 59 02.6**	**-1.5**
SSV	**Crater Summit**	**35.29**	**4**	*e*P	P	07 58 59.4	-5.4
MCLT	**Moule a Chique**	**35.69**	**5**	*e*P	**P**	**07 59 06.7**	**-1.3**
SLB	**Belfond**	**35.80**	**4**	*e*P	**P**	**07 59 08.4**	**-0.5**
H05S1	**Guadeloupe/Mar**	**36.41**	**5**	P	**P**	**07 59 12.6**	**-1.2**
	SNR=41						
BIM	**Bigot**	**36.48**	**4**	⇓*i*P	**P**	**07 59 13.5**	**-1.0**
TRMF	**Trois Ilets**	**36.50**	**4**	*e*P	**P**	**07 59 13.8**	**-0.8**
MVM	**Montagne Vaucl**	**36.53**	**4**	*e*P	**P**	**07 59 14.1**	**-0.8**
LPMF	**Morne Lapointe**	**36.54**	**4**	*e*P	**P**	**07 59 14.2**	**-0.8**
FDF	**Fort de France**	**36.69**	**4**	*e*P	**P**	**07 59 15.4**	**-0.8**
	comp=Z,557nm,0.5s						
FDF				*e*PcP	**PcP**	**08 01 25.5**	**+1.2**
FDF	**Fort de France**	**36.69**	**4**	*e*P	**P**	**07 59 14.7**	**-1.5**
FDF	**Fort de France**	**36.69**	**4**	*e*P	**P**	**07 59 15.4**	**-0.8**
FDF				*e*		08 01 25.5	
FDF				pmax	pmax		
	comp=Z,560nm,0.5s						
PML	**Morne Lenard**	**36.73**	**4**	*e*P	**P**	**07 59 15.9**	**-0.7**
CXM	**Morne La Croix**	**36.77**	**4**	*i* P	**P**	**07 59 16.2**	**-0.7**
PCM	**Pelee Case Pet**	**36.77**	**4**	*e*P	**P**	**07 59 15.8**	**-1.1**
PCM	**Pelee Case Pet**	**36.77**	**4**	*e*P	**P**	**07 59 15.9**	**-0.9**
BAMF	**Morne Balai**	**36.77**	**4**	*e*P	**P**	**07 59 16.6**	**-0.3**
DLPL	**La Plaine**	**37.28**	**4**	*e*P	**P**	**07 59 18.8**	**-2.2**
BBL	**Barber's Block**	**37.46**	**3**	*e*P	**P**	**07 59 21.2**	**-1.3**
MDPO	**Dominica; Chan**	**37.51**	**3**	*e*P	**P**	**07 59 21.7**	**-1.2**
MDVC	**Dominica, Viel**	**37.55**	**4**	*e*P	**P**	**07 59 21.8**	**-1.3**
HDC	**Heredia**	**37.69**	**326**	*e*P	**P**	**07 59 26.4**	**+1.8**
	comp=Z,110nm,0.7s						
HDC				*e*PcP	**PcP**	**08 01 29.5**	**+1.9**
TBG	**Guadaloupe-3**	**37.77**	**3**	*e*P	**P**	**07 59 23.2**	**-1.8**
MGG	**Marie-Galante**	**37.85**	**4**	*e*P	**P**	**07 59 24.1**	**-1.6**
HOPE	**Hope Point**	**38.11**	**154**	*e*P	**P**	**07 59 27.6**	**+0.3**
	comp=Z,532nm,1.1s						
HOPE				*e*PcP	**PcP**	**08 01 29.3**	**+1.1**
GDHS	**Morne Mazeau,

comp=Z,369nm,0.9s
APG El Apazote 45.28 322 P P 08 00 24.5 -0.2
comp=Z,43nm,0.7s,baz=296,slow=14,SNR=54
APG ScP ScP 08 04 55.0 +0.6
comp=Z,16nm,0.9s,baz=174,slow=5.2,SNR=5.4
CCIG Comitan 47.26 321 eP P 08 00 39.3 -0.3
comp=Z,74nm,0.8s
H10S3 ASCENSION HYDR 48.78 82 P P 08 00 51.9 +1.4
baz=203,slow=74,SNR=4.4
H10S2 ASCENSION HYDR 48.79 82 P P 08 00 52.1 +1.5
baz=203,slow=74,SNR=5.1
H10S1 ASCENSION HYDR 48.79 82 P P 08 00 52.0 +1.3
baz=203,slow=74,SNR=7.0
H10N3 ASCENSION HYDR 49.34 81 P P 08 00 55.7 +1.0
baz=226,slow=7.4,SNR=5.1
H10N1 ASCENSION HYDR 49.35 81 P P 08 00 56.3 +1.5
baz=226,slow=7.4,SNR=6.5
H10N2 ASCENSION HYDR 49.35 81 P P 08 00 56.1 +1.3
baz=226,slow=7.4,SNR=5.6
ASCN Ascension 49.43 81 eP P 08 00 56.3 +0.6
comp=Z,304nm,1.0s
CMIG Matias Romero 49.52 319 S S 08 07 23.6 -0.7
comp=Z,8.7nm,1.1s,baz=208,slow=23,SNR=15
MYIG MØrida 49.80 327 eP P 08 00 57.9 -0.3
comp=Z,182nm,0.9s
061Z Ochoppi 50.53 340 P P 08 01 03.1 -0.3
baz=159,SNR=16
060Z West Palm Beac 50.92 340 P P 08 01 06.3 0.0
baz=160,SNR=16
059Z Ave Maria 51.14 339 P P 08 01 07.8 -0.1
baz=159,SNR=12
060A Indiantown 51.45 341 P P 08 01 10.2 +0.1
baz=160,SNR=11
059A Moore Haven 51.63 340 P P 08 01 11.3 -0.1
baz=159,SNR=21
058A Arcadia 51.93 339 P P 08 01 13.5 -0.1
baz=158,SNR=24
959A Okeechobee 52.07 341 P P 08 01 14.5 0.0
baz=160,SNR=13
TLIG Tlapa 52.17 316 eP P 08 01 16.5 +0.8
comp=Z,65nm,0.8s
958A Wauchula 52.40 340 P P 08 01 16.7 -0.3
baz=159,SNR=17
LVIG Laguna Verde 52.47 320 eP P 08 01 18.4 +0.8
LVIG ePcP PcP 08 02 21.0 +1.8
859A Kempfer Cattle 52.58 341 P P 08 01 18.1 0.0
baz=160,SNR=12
957A Wimauma 52.64 339 P P 08 01 18.6 0.0
baz=158,SNR=14
DWPF Disney Wildern 52.79 340 P P 08 01 19.4 -0.3
baz=159
DWPF Disney Wildern 52.79 340 eP P 08 01 19.9 +0.2
comp=Z,287nm,0.9s
DWPF ePcP PcP 08 02 21.4 +1.2
858A St. Cloud 52.86 340 P P 08 01 19.9 -0.3
baz=159,SNR=8.0
857A Zephyrhills 53.19 339 P P 08 01 22.0 -0.6
baz=158,SNR=13
758A Lake Helen 53.51 341 P P 08 01 24.7 -0.1
baz=160,SNR=13
757A Oxford 53.76 340 P P 08 01 26.5 -0.1
baz=159,SNR=13
SACV Santiago Islan 53.84 50 eP P 08 01 26.5 -1.0
comp=Z,254nm,0.9s
SACV ePcP PcP 08 02 24.4 -0.2
658A Bunnell 53.96 341 P P 08 01 27.9 0.0
baz=160,SNR=6.6
BBSR BB Station 54.17 359 eP P 08 01 29.5 +0.1
comp=Z,338nm,0.9s
BBSR ePcP PcP 08 02 26.5 +1.0
657A Interlachen 54.30 340 P P 08 01 30.4 0.0
baz=159,SNR=32
656A Willston 54.31 340 P P 08 01 30.1 -0.3
baz=158,SNR=13
557A Orange Park 54.66 341 P P 08 01 32.9 +0.1
baz=159,SNR=47
655A Horseshoe Beac 54.67 339 P P 08 01 32.9 -0.1
baz=158,SNR=13
SHEL Horse Pasture 54.82 94 eP P 08 01 35.8 +1.3
comp=Z,401nm,0.8s
SHEL ePcP PcP 08 02 29.7 +1.2
SHEL Horse Pasture 54.82 94 eP P 08 01 35.8 +1.3
SHEL e 08 02 29.7
SHEL pmax pmax
comp=Z,400nm,0.8s
556A Lake Butler 54.85 340 P P 08 01 34.2 -0.1
baz=159,SNR=27
555A McAlpin 55.14 340 P P 08 01 36.2 -0.1
baz=158,SNR=26
457A Yulee 55.17 341 P P 08 01 36.4 0.0
baz=160,SNR=5.0
554A Perry 55.34 339 P P 08 01 37.6 -0.1
baz=157,SNR=27
MOIG Morelia 55.40 316 eP P 08 01 40.4 +1.8
comp=Z,117nm,0.7s
456A Hilliard 55.41 341 P P 08 01 38.3 +0.2
baz=159,SNR=63
553A Crawfordville 55.70 338 P P 08 01 40.4 +0.3
baz=156,SNR=42
455A Stateville 55.74 340 P P 08 01 40.2 -0.2
baz=158,SNR=26
357A Townsend 55.90 342 P P 08 01 41.4 0.0
baz=160,SNR=9.2
454A Quitman 55.91 339 P P 08 01 41.3 -0.2
baz=158,SNR=42
552A Lynn Haven 55.95 337 P P 08 01 41.8 0.0
baz=156,SNR=7.2
356A Blackshear 56.00 341 P P 08 01 41.8 -0.3
baz=159,SNR=57
355A Pearson 56.24 340 P P 08 01 43.5 -0.3
baz=158,SNR=36
453A Whigham 56.27 339 P P 08 01 43.7 -0.4
baz=157,SNR=59
257A Skidaway Islan 56.28 342 P P 08 01 44.3 +0.2
baz=160,SNR=19
256A Glennville 56.54 341 P P 08 01 45.9 0.0
baz=160,SNR=41
451A Vernon 56.55 337 P P 08 01 45.5 -0.4
baz=155,SNR=16
452A Marianna 56.56 338 P P 08 01 45.8 -0.2
baz=156,SNR=29
TIGA Tifton 56.56 340 P P 08 01 45.7 -0.4
baz=158,SNR=43
TIGA Tifton 56.56 340 eP P 08 01 46.0 -0.1
comp=Z,528nm,0.8s
255A Hazlehurst 56.66 341 P P 08 01 46.8 0.0
baz=159,SNR=76
353A Camilla 56.68 339 P P 08 01 46.5 -0.4
baz=157,SNR=87
254A Abbeville 56.93 340 P P 08 01 48.4 -0.2
baz=158,SNR=115
RGRS Roger Stewart 56.94 343 eP P 08 01 49.2 +0.7
comp=Z,8µm,0.5s
CSU Charleston Sou 56.98 344 eP P 08 01 49.6 +0.7
450A Crestview 57.02 336 P P 08 01 49.0 -0.3
baz=154,SNR=16
352A Blakely 57.05 338 P P 08 01 48.8 -0.6
baz=156,SNR=138
156A Sylvania 57.05 342 P P 08 01 49.5 +0.1
baz=160,SNR=43
351A Pinckard 57.09 338 P P 08 01 49.2 -0.5
baz=156,SNR=139
NHSC New Hope 57.12 343 P P 08 01 50.0 +0.1
baz=162,SNR=46
NHSC New Hope 57.12 343 eP P 08 01 50.5 +0.7
comp=Z,1µm,1.0s
449A Pace 57.22 336 P P 08 01 50.4 -0.2
baz=154,SNR=15
646A Port Sulphur 57.23 333 P P 08 01 52.0 +1.3
baz=151,SNR=5.2
155A Kite 57.31 341 P P 08 01 51.1 0.0
baz=159,SNR=117
253A Americus 57.31 339 P P 08 01 50.3 -0.9
baz=157,SNR=92
252A Lumpkin 57.45 339 P P 08 01 51.2 -0.9
baz=157,SNR=103
645A Chauvin 57.45 332 P P 08 01 53.3 +1.1
baz=150,SNR=8.2
350A Dozier 57.49 337 P P 08 01 51.7 -0.7
baz=155,SNR=48
154A Montrose 57.49 341 P P 08 01 52.0 -0.4
baz=158,SNR=235
BRAL Brewton 57.52 336 P P 08 01 52.2 -0.5
baz=154,SNR=48
BRAL Brewton 57.52 336 eP P 08 01 52.3 -0.3
comp=Z,1µm,0.8s
448A Bay Minette 57.62 335 P P 08 01 52.9 -0.4
baz=153,SNR=24

349A Repton 57.74 336 P P 08 01 53.6 -0.5
baz=154,SNR=113
546A Slidell 57.75 333 P P 08 01 54.2 0.0
baz=151,SNR=5.0
153A Fort Valley 57.76 340 P P 08 01 53.7 -0.5
baz=158,SNR=70
251A Midway 57.77 338 P P 08 01 53.6 -0.7
baz=156,SNR=147
Z55A Blythe 57.77 342 P P 08 01 54.2 -0.1
baz=160,SNR=55
447A Lucedale 57.81 335 P P 08 01 54.1 -0.5
baz=152,SNR=26
545A Edgard 57.91 332 P P 08 01 56.5 +1.1
baz=150
250A Grady 57.97 337 P P 08 01 54.5 -1.1
baz=155,SNR=83
VNA3 Neumayer Olymp 57.97 162 P P 08 01 55.2 0.0
VNA3 S S 08 09 14.0 +0.1
Z54A Sparta 57.99 341 P P 08 01 55.0 -0.8
baz=159,SNR=131
152A Waverly Hall 58.06 339 P P 08 01 55.1 -1.2
baz=157,SNR=133
348A Jackson 58.06 336 P P 08 01 56.1 -0.3
baz=153,SNR=62
446A Poplarville 58.09 334 P P 08 01 56.2 -0.3
baz=152,SNR=26
VNA1 Neumayer--Stat 58.11 161 P P 08 01 56.6 +0.6
VNA1 S S 08 09 21.4 +5.7
151A Opelika 58.14 338 P P 08 01 55.8 -1.0
baz=156,SNR=94
LNIG Linares 58.24 321 eP P 08 01 57.4 -0.3
comp=Z,119nm,0.9s
LNIG ePcP PcP 08 02 43.2 +1.5
Z53A Monticello 58.26 340 P P 08 01 57.0 -0.6
baz=158,SNR=102
544A White Castle 58.26 332 P P 08 01 58.6 +0.9
baz=150
249A Camden 58.27 337 P P 08 01 56.8 -1.0
baz=154,SNR=167
347A Saraland 58.30 335 P P 08 01 56.9 -1.1
baz=153,SNR=61
GOGA Godfrey 58.35 341 P P 08 01 57.2 -0.9
baz=158,SNR=89
GOGA Godfrey 58.35 341 eP P 08 01 57.4 -0.8
comp=Z,277nm,0.8s
GOGA ePcP PcP 08 02 43.0 +1.1
GOGA Godfrey 58.35 341 eP P 08 01 57.4 -0.8
GOGA e 08 02 43.0
GOGA pmax pmax
comp=Z,280nm,0.9s
Z52A Williamson 58.44 340 P P 08 01 58.4 -0.5
baz=157,SNR=102
445A Amite 58.44 333 P P 08 01 59.0 +0.1
baz=151,SNR=23
150A Eclectic 58.45 338 P P 08 01 58.3 -0.6
baz=156,SNR=222
JSC Jenkinsville 58.52 343 eP P 08 01 59.1 -0.2
comp=Z,448nm,0.9s
JSC Jenkinsville 58.52 343 eP P 08 01 59.1 -0.2
JSC pmax pmax
comp=Z,450nm,0.9s
ZAIG Zacatecas 58.53 317 eP P 08 02 01.3 +1.4
comp=Z,115nm,0.9s
Y54A Tignall 58.53 341 P P 08 01 58.7 -0.8
baz=159,SNR=108
543A St. Martinvill 58.55 331 P P 08 02 00.8 +1.2
baz=149,SNR=6.7
444A Pine Grove 58.60 333 P P 08 01 59.9 -0.1
baz=150,SNR=30
CNNC Cliffs of the 58.60 346 P P 08 01 59.2 -0.7
baz=164,SNR=16
CNNC Cliffs of the 58.60 346 eP P 08 01 59.8 0.0
comp=Z,407nm,1.6s
248A Dixon Mills 58.61 336 P P 08 01 59.4 -0.6
baz=154,SNR=68
346A Big Creek Wild 58.66 334 P P 08 01 59.9 -0.5
baz=152,SNR=43
149A Jones 58.72 337 P P 08 01 59.3 -1.4
baz=155,SNR=135
HODGE Hodges 58.75 342 eP P 08 02 01.4 +0.5
comp=Z,158nm,1.2s
Y53A Monroe 58.80 341 P P 08 02 00.3 -1.0
baz=158,SNR=148
Z51A Franklin 58.81 339 P P 08 02 00.3 -1.0
baz=157,SNR=43
345A Thompson Farm, 58.82 334 P P 08 02 00.7 -0.7
baz=151,SNR=31
542A Morse 58.89 331 P P 08 02 03.5 +1.6
baz=148,SNR=10
247A Quitman 58.91 335 P P 08 02 01.0 -1.0
baz=153,SNR=51
Y52A Lilburn 58.95 340 P P 08 02 01.2 -1.1
baz=158,SNR=140
Z50A Ashland 59.00 338 P P 08 02 01.6 -1.1
baz=156,SNR=361
148A Greensboro 59.04 336 P P 08 02 01.5 -1.4
baz=154,SNR=79
246A Jackson Lee, B 59.08 335 P P 08 02 02.6 -0.5
baz=152,SNR=11
443A Delano Plantat 59.09 332 P P 08 02 03.7 +0.4
baz=149,SNR=8.0
541A Lake Charles 59.13 330 P P 08 02 05.1 +1.6
baz=148,SNR=14
Z49A Columbiana 59.16 338 P P 08 02 02.6 -1.1
baz=155,SNR=108
PAULI Pauline 59.18 343 eP P 08 02 03.9 +0.2
comp=Z,93nm,0.9s
LRAL Lakeview Retre 59.18 337 P P 08 02 02.6 -1.3
baz=155,SNR=146
LRAL Lakeview Retre 59.18 337 eP P 08 02 02.8 -1.1
comp=Z,416nm,1.0s
344A Westbrook Farm 59.24 333 P P 08 02 03.6 -0.6
baz=151,SNR=59
Y51A Rockmart 59.30 339 P P 08 02 03.8 -0.8
baz=157,SNR=151
X53A Estanollee 59.31 341 P P 08 02 03.9 -0.8
baz=159,SNR=110
147A Livingston 59.33 336 P P 08 02 03.9 -0.9
baz=153,SNR=31
442A Mamou 59.34 331 P P 08 02 05.6 +0.8
baz=149,SNR=9.4
KMSC Kings Mountain 59.35 343 P P 08 02 04.5 -0.4
baz=161,SNR=146
KMSC Kings Mountain 59.35 343 eP P 08 02 04.9 0.0
comp=Z,458nm,0.9s
KMSC ePcP PcP 08 02 47.9 +2.0
245A Little AP, Sta 59.40 334 P P 08 02 04.4 -0.9
baz=152,SNR=96
KVTX Kingsville 59.42 325 eP P 08 02 07.5 +2.0
comp=Z,520nm,0.9s
343A Vidalia 59.47 332 P P 08 02 05.1 -0.6
baz=150,SNR=11
Y50A Piedmont 59.52 339 P P 08 02 04.9 -1.2
baz=156,SNR=146
X52A Dahlonega 59.58 341 P P 08 02 05.4 -1.1
baz=158,SNR=95
146A Union 59.60 335 P P 08 02 05.7 -0.9
baz=152,SNR=79
BG3 Lake Jocassee 59.66 342 eP P 08 02 07.0 0.0
comp=Z,320nm,0.9s
Z48A Northport 59.69 337 P P 08 02 05.8 -1.4
baz=154,SNR=153
441A DeRidder 59.71 331 P P 08 02 08.3 +0.9
baz=148,SNR=21
Y49A Blount Mountai 59.72 338 P P 08 02 06.1 -1.3
baz=155
Z47A Carrollton 59.72 336 P P 08 02 06.0 -1.4
baz=154,SNR=88
244A Avery, Jackson 59.73 333 P P 08 02 06.8 -0.7
baz=151,SNR=72
VBMS Vicksburg 59.81 334 P P 08 02 07.5 -0.5
baz=151,SNR=31
VBMS Vicksburg 59.81 334 eP P 08 02 07.7 -0.3
comp=Z,861nm,1.4s
NCAT North Carolina 59.84 345 eP P 08 02 07.1 -1.1
comp=Z,121nm,0.8s
X51A Calhoun 59.85 340 P P 08 02 07.7 -0.6
baz=157,SNR=138
342A Flagon Creek P 59.85 332 P P 08 02 08.7 +0.3
baz=149,SNR=63
W53A Cullowhee 59.89 342 P P 08 02 07.9 -0.7
baz=159,SNR=180
145A Houston Renfro 59.91 334 P P 08 02 08.2 -0.5
baz=152,SNR=80
243A Waterproof 59.92 333 P P 08 02 08.6 -0.2
baz=150,SNR=22
X50B Fort Payne 60.01 339 P P 08 02 08.5 -0.9
baz=156,SNR=104

Y48A Jasper 60.04 337 P P 08 02 08.4 -1.1
baz=155,SNR=113
W52A Murphy 60.05 341 P P 08 02 09.1 -0.5
baz=158,SNR=99
Z46A Louisville 60.05 336 P P 08 02 08.9 -0.6
baz=153,SNR=75
144A Alexander Plac 60.14 334 P P 08 02 09.6 -0.5
baz=151,SNR=44
SNAA Sanae 60.14 161 P P 08 02 09.7 0.0
SNAA S S 08 09 43.7 +2.3
SNAA Sanae 60.14 161 P P 08 02 09.7 0.0
comp=Z,439nm,0.8s,baz=289,slow=6.2,SNR=1628
SNAA pP pP 08 03 56.4 -0.2
comp=Z,148nm,1.1s,baz=312,slow=6.7,SNR=4.0
SNAA S S 08 09 43.4 +2.1
comp=Z,15nm,1.0s,baz=252,slow=21,SNR=9.8
SNAA Sanae 60.14 161 eP P 08 02 10.0 +0.3
comp=Z,956nm,1.1s
SNAA ePcP PcP 08 02 50.6 +1.9
SNAA pP pP 08 03 56.4 -0.2
SNAA S S 08 09 43.4 +2.1
SNAA Sanae 60.14 161 dP P 08 02 09.5 -0.2
341A Kurthwood 60.20 331 P P 08 02 10.8 +0.2
baz=148,SNR=128
341A Kurthwood 60.20 331 eP P 08 02 11.1 +0.5
comp=Z,433nm,0.9s
V53A Saluda 60.25 342 P P 08 02 10.2 -0.8
baz=159,SNR=155
Y47A UCPARC, Winfie 60.27 337 P P 08 02 10.0 -1.1
baz=154,SNR=278
X49A Woodville 60.29 339 P P 08 02 09.8 -1.3
baz=156,SNR=134
HKT Hockley 60.30 328 eP P 08 02 12.0 +0.7
comp=Z,381nm,1.3s
HKT Hockley 60.30 328 eP P 08 02 12.0 +0.7
HKT pmax pmax
comp=Z,380nm,1.3s
242A Grayson 60.37 332 P P 08 02 11.4 -0.4
baz=149,SNR=142
X48A Hartselle 60.48 338 P P 08 02 11.4 -1.0
baz=155,SNR=335
Z45A Winona 60.49 335 P P 08 02 12.1 -0.5
baz=152,SNR=66
CPCT Cooper Cave 60.56 340 eP P 08 02 12.1 -0.9
comp=Z,275nm,0.8s
CPCT ePcP PcP 08 02 51.7 +0.8
W50A Signal Mountai 60.58 340 P P 08 02 12.1 -1.1
baz=157,SNR=131
143A Socs Landing, 60.60 333 P P 08 02 12.8 -0.4
baz=150,SNR=52
Y46A Houston 60.63 336 P P 08 02 11.9 -1.5
baz=153,SNR=132
V52A Sevierville 60.64 341 P P 08 02 12.5 -1.0
baz=159,SNR=156
241A Mo Tay, Goldon 60.67 332 P P 08 02 13.8 +0.1
baz=149,SNR=54
142A Monroe 60.70 333 P P 08 02 14.0 +0.2
baz=150,SNR=32
Z44A Pea Ridge, Bel 60.71 334 P P 08 02 13.2 -0.7
baz=151,SNR=126
URVA University of 60.77 347 eP P 08 02 14.5 +0.2
SWET Sewanee 60.80 339 eP P 08 02 13.7 -0.8
comp=Z,473nm,1.1s
W49A Belvidere 60.82 339 P P 08 02 13.3 -1.4
baz=156,SNR=127
X47A Russelville 60.83 337 P P 08 02 13.3 -1.4
baz=154,SNR=248
V51A Loudon 60.83 341 P P 08 02 13.3 -1.4
baz=158,SNR=53
833A Chaparral WMA, 60.85 324 P P 08 02 15.1 +0.1
baz=142,SNR=316
Y45A Yeager Farm, C 60.87 335 P P 08 02 14.1 -0.9
baz=152,SNR=229
V50A Pikevile 60.94 340 P P 08 02 14.2 -1.2
baz=157,SNR=218
Z43A Armstrong Fami 60.98 334 P P 08 02 15.3 -0.4
baz=151
240A Hunter Patters 61.06 331 P P 08 02 17.2 +0.9
baz=148,SNR=30
240A Hunter Patters 61.06 331 eP P 08 02 16.9 +0.7
comp=Z,505nm,0.9s
W48A Pulaski 61.06 338 P P 08 02 15.0 -1.3
baz=155,SNR=305
IP05 Hopewell Churc 61.07 347 eP P 08 02 16.2 -0.1
comp=Z,129nm,0.9s
BLA Blacksburg 61.08 345 P P 08 02 15.9 -0.5
baz=162,SNR=42
BLA Blacksburg 61.08 345 eP P 08 02 16.2 -0.1
comp=Z,504nm,1.4s
BLA Blacksburg 61.08 345 eP P 08 02 16.2 -0.1
BLA pmax pmax
comp=Z,500nm,1.3s
X46A Booneville 61.12 337 P P 08 02 15.5 -1.2
baz=154,SNR=46
141A Papa Simpson, 61.16 332 P P 08 02 16.8 -0.1
baz=149,SNR=68
IP07 Quail 61.21 347 eP P 08 02 17.0 -0.2
comp=Z,326nm,1.0s
IP06 Yanceyville 61.22 347 eP P 08 02 17.7 +0.5
comp=Z,130nm,1.0s
Y44A Strider, Charl 61.22 335 P P 08 02 16.7 -0.6
baz=152,SNR=27
IP01 Cuckoo 61.23 347 eP P 08 02 17.0 -0.2
comp=Z,248nm,1.0s
IP01 ePcP PcP 08 02 55.2 +1.7
NATX Nacogdoches 61.24 330 P P 08 02 17.9 +0.4
baz=147,SNR=87
NATX Nacogdoches 61.24 330 eP P 08 02 18.4 +0.9
comp=Z,699nm,0.9s
SPRD Spring Road, M 61.28 347 eP P 08 02 17.3 -0.3
comp=Z,217nm,1.0s
SPRD ePcP PcP 08 02 54.9 +1.2
TZTN Tazewell 61.28 342 P P 08 02 16.7 -1.0
baz=159,SNR=44
TZTN Tazewell 61.28 342 eP P 08 02 16.8 -1.0
comp=Z,167nm,0.8s
V49A McMinnville 61.29 339 P P 08 02 16.0 -1.7
baz=156,SNR=226
IP03 Louisa 61.31 347 eP P 08 02 17.9 +0.1
comp=Z,331nm,1.0s
IP03 ePcP PcP 08 02 55.1 +1.3
X45A UM Field Stati 61.31 336 P P 08 02 16.5 -1.4
baz=153,SNR=90
PLAL Pickwick Lake 61.32 337 eP P 08 02 16.6 -1.3
comp=Z,393nm,0.9s
Z42A Norrel Spur, H 61.33 333 P P 08 02 17.6 -0.4
baz=150,SNR=25
CBN Corbin Frederi 61.35 348 P P 08 02 17.9 -0.2
baz=165,SNR=23
CBN Corbin Frederi 61.35 348 eP P 08 02 18.3 +0.2
comp=Z,427nm,1.4s
IP04 Greensprings 61.39 347 eP P 08 02 19.0 +0.6
comp=Z,333nm,1.2s
W47A Westpoint 61.39 338 P P 08 02 17.0 -1.4
baz=155,SNR=511
OXF Oxford 61.39 336 P P 08 02 16.8 -1.6
baz=153,SNR=138
OXF Oxford 61.39 336 eP P 08 02 17.1 -1.2
comp=Z,869nm,0.9s
OXF Oxford 61.39 336 eP P 08 02 17.2 -1.2
OXF pmax pmax
comp=Z,870nm,0.9s
Y43A Makayla and Ka 61.46 334 P P 08 02 18.2 -0.6
baz=151,SNR=60
140A Cam and Jess, 61.49 331 P P 08 02 19.3 +0.2
baz=148,SNR=99
140A Cam and Jess, 61.49 331 eP P 08 02 19.6 +0.5
comp=Z,860nm,0.9s
W46A Michie 61.57 337 P P 08 02 18.1 -1.4
baz=154,SNR=108
V48A Smith Brothers 61.57 339 P P 08 02 18.0 -1.5
baz=156,SNR=213
T52A Hallie 61.65 343 P P 08 02 19.4 -0.6
baz=160,SNR=55
X44A Crenshaw 61.67 335 P P 08 02 18.7 -1.5
baz=152,SNR=54
Y42A Garnett, Star 61.74 334 P P 08 02 20.4 -0.3
baz=150,SNR=40
CCAR Cane Creek 61.81 334 eP P 08 02 21.8 +0.6
comp=Z,429nm,1.0s
435B Jarrell 61.85 327 P P 08 02 21.8 +0.3
baz=144,SNR=26
435B Jarrell 61.85 327 eP P 08 02 22.6 +1.1
comp=Z,182nm,0.9s
W45A Hickory Valley 61.88 336 P P 08 02 20.2 -1.4
baz=153,SNR=248
V47A Nunnelly 61.89 338 P P 08 02 19.8 -1.8
baz=155,SNR=186

U49A	Red Boiling Sp	61.93	340	P	P	08 02 20.3 -1.6
	baz=157,SNR=114					
Z40A	Long Farm, Mag	61.93	332	P	P	08 02 22.0 +0.1
	baz=149,SNR=150					
X43A	Marvell	61.97	335	P	P	08 02 21.8 -0.3
	baz=151,SNR=70					
X43A	Marvell	61.97	335	eP	P	08 02 22.5 +0.4
	comp=Z,853nm,0.8s					
X43A				ePcP	PcP	08 02 58.4 +1.8
V46A	Holladay	62.07	338	P	P	08 02 21.1 -1.8
	baz=154,SNR=208					
W44A	Shelby Farms P	62.10	336	P	P	08 02 22.2 -0.8
	baz=152,SNR=9.4					
T50A	Nancy	62.11	341	P	P	08 02 21.6 -1.5
	baz=158,SNR=156					
Y41A	Eaglette Beard	62.13	333	P	P	08 02 22.5 -0.7
	baz=150,SNR=182					
MET	Memphis--Engin	62.13	336	eP	P	08 02 23.0 -0.2
	comp=Z,1µm,1.4s					
WLAR	White Oak Lake	62.17	332	eP	P	08 02 24.1 +0.6
	comp=Z,698nm,1.0s					
U48A	Cassie Pea, Po	62.18	339	P	P	08 02 22.0 -1.5
	baz=156,SNR=164					
S52A	Salyersville	62.21	343	P	P	08 02 22.9 -0.8
	baz=160					
WVT	Waverly	62.27	338	P	P	08 02 22.2 -1.8
	baz=155					
WVT	Waverly	62.27	338	eP	P	08 02 22.6 -1.5
	comp=Z,724nm,0.8s					
WVT	Waverly	62.27	338	eP	P	08 02 22.6 -1.5
WVT				pmax	pmax	
	comp=Z,720nm,0.9s					
X42A	Stuttgart	62.30	334	P	P	08 02 23.7 -0.6
	baz=151,SNR=21					
S51A	Beattyville	62.31	342	P	P	08 02 23.3 -1.0
	baz=159,SNR=70					
V45A	Humboldt	62.32	337	P	P	08 02 23.1 -1.3
	baz=153,SNR=308					
U47A	Clarksville	62.36	339	P	P	08 02 22.9 -1.7
	baz=155,SNR=285					
T49A	Edmonton	62.40	340	P	P	08 02 23.8 -1.2
	baz=157,SNR=194					
W43A	Forest City	62.40	335	P	P	08 02 24.3 -0.7
	baz=152,SNR=8.1					
SDMD	Soldier's Deli	62.42	349	eP	P	08 02 25.5 +0.5
	comp=Z,115nm,0.9s					
SDMD				ePcP	PcP	08 02 60.0 +1.6
Y40A	Okolona	62.52	332	P	P	08 02 25.0 -0.8
	baz=149,SNR=40					
U46A	Springville	62.59	338	P	P	08 02 24.4 -1.8
	baz=154,SNR=178					
X41A	Kaden, Bauxite	62.61	333	P	P	08 02 25.4 -0.9
	baz=150,SNR=13					
T48A	Bowling Green	62.67	340	P	P	08 02 25.4 -1.3
	baz=156,SNR=80					
PSUB	Penn St. - Bra	62.68	350	eP	P	08 02 27.1 +0.4
	comp=Z,270nm,1.0s					
X40A	Basin Creek Fa	62.74	333	P	P	08 02 26.2 -1.0
	baz=149,SNR=28					
X40A	Basin Creek Fa	62.74	333	eP	P	08 02 27.1 -0.1
	comp=Z,52nm,0.8s					
V44A	Blytheville	62.74	336	P	P	08 02 26.5 -0.6
	baz=152,SNR=29					
JCT	Junction City	62.76	325	P	P	08 02 27.0 -0.4
	baz=142,SNR=165					
JCT	Junction City	62.76	325	eP	P	08 02 27.6 +0.1
	comp=Z,263nm,0.8s					
JCT	Junction City	62.76	325	eP	P	08 02 27.6 +0.1
JCT				pmax	pmax	
	comp=Z,260nm,0.9s					
WHTX	Lake Whitney,	62.77	328	P	P	08 02 27.5 +0.1
	baz=145,SNR=39					
WHTX	Lake Whitney,	62.77	328	eP	P	08 02 27.7 +0.3
	comp=Z,655nm,1.6s					
HBAR	Harrisburg	62.79	335	eP	P	08 02 27.5 +0.1
	comp=Z,383nm,0.9s					
U45A	Rockin P Farm,	62.79	337	P	P	08 02 26.0 -1.4
	baz=154,SNR=46					
T47A	Sharon Grove	62.80	339	P	P	08 02 25.8 -1.6
	baz=156,SNR=333					
W42A	Bald Knob	62.88	335	P	P	08 02 27.2 -0.9
	baz=151,SNR=32					
MVL	Millersville	62.90	349	eP	P	08 02 28.2 +0.1
	comp=Z,298nm,0.9s					
GLAT	Glass	62.91	337	eP	P	08 02 27.5 -0.7
	comp=Z,3µm,1.2s					
GNAR	Gosnell	62.91	336	eP	P	08 02 28.7 +0.5
	comp=Z,3µm,1.1s					
V43A	Jonesboro	62.95	336	P	P	08 02 27.9 -0.6
	baz=152,SNR=33					
U44B	Burton Farm, H	63.00	337	P	P	08 02 27.6 -1.1
	baz=153,SNR=168					
S48A	Wiedeman Farm,	63.07	340	P	P	08 02 27.1 -2.1
	baz=157					
W41B	Gary Mavity, V	63.09	334	P	P	08 02 28.3 -1.1
	baz=150,SNR=72					
W41B	Gary Mavity, V	63.09	334	eP	P	08 02 28.5 -0.9
	comp=Z,231nm,1.3s					
MIAR	Mount Ida	63.11	333	P	P	08 02 28.7 -0.8
	baz=149,SNR=213					
MIAR	Mount Ida	63.11	333	eP	P	08 02 28.8 -0.8
	comp=Z,252nm,1.0s					
MIAR	Mount Ida	63.11	333	eP	P	08 02 28.8 -0.8
MIAR				pmax	pmax	
	comp=Z,250nm,1.0s					
T46A	Princeton	63.11	338	P	P	08 02 28.2 -1.3
	baz=155,SNR=144					
PVMO	Portageville	63.19	337	eP	P	08 02 30.7 +0.7
	comp=Z,4µm,1.0s					
PAGS	Pennsylvania G	63.19	349	eP	P	08 02 29.7 -0.2
	comp=Z,443nm,1.0s					
WHAR	Wooly Hollow	63.21	334	eP	P	08 02 29.6 -0.5
	comp=Z,193nm,1.0s					
U44A	Portageville	63.27	337	P	P	08 02 29.8 -0.7
	baz=153,SNR=114					
MCWV	Mont Chateau	63.27	346	P	P	08 02 30.4 -0.1
	baz=163,SNR=137					
MCWV	Mont Chateau	63.27	346	eP	P	08 02 30.8 +0.3
	comp=Z,575nm,0.8s					
BRNJ	Basking Ridge	63.28	351	eP	P	08 02 31.2 +0.7
	comp=Z,304nm,0.9s					
V42A	Cord	63.30	335	P	P	08 02 29.6 -1.2
	baz=151,SNR=82					
CPNY	Central Park	63.30	351	eP	P	08 02 30.9 +0.3
	comp=Z,325nm,1.2s					
X39A	Fountain Ranch	63.31	332	P	P	08 02 30.3 -0.5
	baz=148,SNR=165					
LUPA	Lehigh Univers	63.32	350	eP	P	08 02 31.1 +0.3
	comp=Z,26nm,1.1s					
LUPA				ePcP	PcP	08 03 03.0 +0.9
T45A	Paducah	63.35	338	P	P	08 02 29.2 -1.8
	baz=154,SNR=61					
U43A	Rector	63.41	336	P	P	08 02 30.6 -0.9
	baz=152,SNR=114					
PARMO	Parma	63.43	337	eP	P	08 02 31.2 -0.4
	comp=Z,2µm,0.9s					
W40A	Ferguson Farm,	63.45	333	P	P	08 02 31.4 -0.3
	baz=149,SNR=212					
W40A	Ferguson Farm,	63.45	333	eP	P	08 02 31.6 -0.1
	comp=Z,550nm,0.9s					
HPIG		63.47	318	eP	P	08 02 32.8 +0.5
	comp=Z,165nm,0.8s					
PAL	Palisades	63.50	351	P	P	08 02 31.8 -0.1
	baz=169,SNR=16					
PAL	Palisades	63.50	351	eP	P	08 02 32.3 +0.4
	comp=Z,272nm,1.0s					
PAL	Palisades	63.50	351	eP	P	08 02 32.3 +0.4
PAL				pmax	pmax	
	comp=Z,270nm,1.0s					
V41A	Mountainview	63.58	334	P	P	08 02 31.2 -1.4
	baz=150,SNR=359					
O56A	Blue Knob Stat	63.59	347	P	P	08 02 32.5 -0.1
	baz=164,SNR=122					
O56A	Blue Knob Stat	63.59	347	eP	P	08 02 32.6 +0.1
	comp=Z,650nm,1.0s					
S46A	Don Dixon Farm	63.63	339	P	P	08 02 30.7 -2.1
	baz=155,SNR=88					
WCI	Wyandotte Cave	63.67	340	P	P	08 02 31.1 -1.9
	baz=156					
WCI	Wyandotte Cave	63.67	340	eP	P	08 02 31.6 -1.4
	comp=Z,347nm,0.8s					
WCI	Wyandotte Cave	63.67	340	eP	P	08 02 31.6 -1.4
WCI				pmax	pmax	
	comp=Z,350nm,0.8s					
M65A	Busby, Falmout	63.67	354	P	P	08 02 32.8 -0.2
	baz=173					
YLE	Yale	63.68	352	eP	P	08 02 34.0 +1.0
	comp=Z,506nm,1.0s					
ODNJ	Ogdensburg	63.68	351	eP	P	08 02 33.3 +0.2
	comp=Z,189nm,0.9s					
R48A	Northridge Ran	63.69	341	P	P	08 02 32.1 -1.1
	baz=157,SNR=48					
N59A	State Game Lan	63.70	350	P	P	08 02 33.2 0.0
	baz=167,SNR=43					
N59A	State Game Lan	63.70	350	eP	P	08 02 33.4 +0.2
	comp=Z,391nm,1.1s					
U42A	Revenden	63.72	335	P	P	08 02 32.1 -1.2
	baz=151,SNR=349					
T44A	Benton	63.75	337	P	P	08 02 31.8 -1.8
	baz=153					
W39A	Magazine	63.75	333	P	P	08 02 33.3 -0.3
	baz=149,SNR=143					
W39A	Magazine	63.75	333	eP	P	08 02 33.7 0.0
	comp=Z,203nm,0.8s					
W39A				ePcP	PcP	08 03 05.7 +1.8
PBMO	Poplar Bluff	63.78	336	eP	P	08 02 33.2 -0.6
	comp=Z,1µm,0.9s					
R47A	Wooly Knot Far	63.80	340	P	P	08 02 32.0 -1.9
	baz=156,SNR=103					
SSPA	Standing Stone	63.80	348	P	P	08 02 33.7 -0.1
	baz=165					
SSPA	Standing Stone	63.80	348	eP	P	08 02 33.8 0.0
	comp=Z,580nm,0.9s					
USIN	University of	63.87	339	eP	P	08 02 33.2 -1.2
	comp=Z,412nm,0.9s					
V40A	Witts Springs	63.87	334	P	P	08 02 33.2 -1.2
	baz=150,SNR=152					
V40A	Witts Springs	63.87	334	eP	P	08 02 33.6 -0.9
	comp=Z,197nm,0.8s					
LIC	Lamto	63.92	71	eP	P	08 02 33.5 -1.7
	comp=Z,935nm,1.0s					
S45A	Carrier Mills	63.92	338	P	P	08 02 32.9 -1.7
	baz=154,SNR=82					
U41A	Viola	63.98	335	P	P	08 02 33.7 -1.3
	baz=151,SNR=286					
T43A	Greenville	64.00	336	P	P	08 02 33.6 -1.6
	baz=152,SNR=136					
SLBS	Sierra La Lagu	64.02	313	eP	P	08 02 37.1 +1.4
	comp=Z,117nm,1.1s					
TXAR	Lajitas Array	64.03	321	P	P	08 02 35.4 -0.3
	comp=Z,53nm,0.8s,baz=147,slow=7.4,SNR=394					
TXAR				P4KPPKP	P'P'df	08 31 11.4 -7.2
	comp=Z,2.3nm,0.9s,baz=199,slow=2.3,SNR=6.0					
TXAR				P4KPbc		08 39 26.9
	comp=Z,0.7nm,1.0s,baz=134,slow=5.4,SNR=4.1					
R46A	Gibon Southern	64.04	339	P	P	08 02 33.7 -1.8
	baz=155,SNR=44					
BRYW	Bryant College	64.11	353	eP	P	08 02 36.1 +0.3
	comp=Z,589nm,0.9s					
BRYW				ePcP	PcP	08 03 06.5 +1.2
TIC	Toumodi	64.12	71	eP	P	08 02 34.9 -1.6
S44A	Carbondale	64.17	338	P	P	08 02 34.4 -1.9
	baz=154,SNR=76					
KIC	Kosan Boka	64.23	71	eP	P	08 02 35.9 -1.3
	comp=Z,1µm,0.9s					
V39A	Pettigrew	64.24	333	P	P	08 02 35.9 -1.0
	baz=149					
T42A	Van Buren	64.25	336	P	P	08 02 35.6 -1.2
	baz=152,SNR=158					
DBIC	Dimbokro	64.28	71	P	P	08 02 37.3 -0.1
	comp=Z,620nm,0.9s,baz=216,slow=6.7,SNR=468					
DBIC				S	S	08 10 33.8 +0.2
	comp=Z,34nm,1.1s,baz=67,slow=19,SNR=24					
DBIC				PKPPKP	P'P'df	08 31 20.9 +0.7
	comp=Z,23nm,1.3s,baz=23,slow=2.1,SNR=5.2					
DBIC	Dimbokro	64.28	71	eP	P	08 02 37.4 -0.1
	comp=Z,754nm,0.9s					
DBIC				S	S	08 10 33.8 +0.2
DBIC				P'P'		08 31 20.9
DBIC	Dimbokro	64.28	71	eP	P	08 02 37.4 0.0
DBIC				pmax	pmax	
	comp=Z,750nm,0.9s					
KSPA	Keystone Colle	64.32	350	eP	P	08 02 37.3 +0.2
	comp=Z,429nm,0.9s					
S43A	Fulton Ridge,	64.36	337	P	P	08 02 35.5 -1.9
	baz=153,SNR=118					
Q47A	Bedord North L	64.36	340	P	P	08 02 35.8 -1.6
	baz=156,SNR=158					
U40A	Yellville	64.36	334	P	P	08 02 36.3 -1.2
	baz=150,SNR=288					
ABTX	Abilene, Hawle	64.37	327	P	P	08 02 37.1 -0.6
	baz=143,SNR=46					
ABTX	Abilene, Hawle	64.37	327	eP	P	08 02 37.4 -0.3
	comp=Z,212nm,1.1s					
R45A	Skylar, Fairfi	64.37	339	P	P	08 02 35.5 -2.0
	baz=155,SNR=128					
BCX	Boston College	64.49	354	eP	P	08 02 38.5 +0.4
	comp=Z,117nm,1.0s					
T41A	Mountain View	64.52	335	P	P	08 02 37.2 -1.4
	baz=151,SNR=277					
NVL	N'lazarevskaya	64.54	159	↓iP	P	08 02 33.2 -4.9
NVL				e		08 03 06.9
NVL				e'PP	pP	08 04 25.5 -1.5
NVL				i S	S	08 10 29.6 -5.4
NVL				pmax	pmax	
	comp=Z,2µm,1.0s					
LPIG	La Paz	64.54	313	P	P	08 02 39.2 +0.3
	comp=Z,120nm,1.1s,baz=8.4,slow=1.0,SNR=16					
N54A	Moraine State	64.55	346	P	P	08 02 38.5 -0.1
	baz=163,SNR=180					
N54A	Moraine State	64.55	346	eP	P	08 02 38.7 +0.1
	comp=Z,669nm,0.9s					
WES	Weston	64.55	354	eP	P	08 02 38.6 +0.1
	comp=Z,159nm,0.9s					
WES	Weston	64.55	354	eP	P	08 02 38.7 +0.1
WES				pmax	pmax	
	comp=Z,160nm,1.0s					
QUA2	Belchertown	64.56	353	eP	P	08 02 38.6 0.0
	comp=Z,217nm,0.9s					
ACSO	Alum Creek Sta	64.58	344	P	P	08 02 37.8 -1.0
	baz=160,SNR=162					
ACSO	Alum Creek Sta	64.58	344	eP	P	08 02 38.8 +0.1
	comp=Z,825nm,0.8s					
BLO	Bloomington	64.60	340	eP	P	08 02 38.1 -0.9
	comp=Z,630nm,0.8s					
BLO	Bloomington	64.60	340	eP	P	08 02 38.1 -0.9
BLO				pmax	pmax	
	comp=Z,630nm,0.9s					
R44A	Waltonville	64.61	338	P	P	08 02 36.9 -2.1
	baz=154,SNR=127					
U39A	Green Forest	64.64	334	P	P	08 02 38.3 -1.0
	baz=149,SNR=238					
HRV	Adam Dziewonsk	64.70	354	P	P	08 02 39.6 +0.2
	baz=172					
HRV	Adam Dziewonsk	64.70	354	eP	P	08 02 40.5 +1.0
	comp=Z,345nm,0.9s					
HRV	Adam Dziewonsk	64.70	354	eP	P	08 02 40.5 +1.0
HRV				pmax	pmax	
	comp=Z,350nm,0.9s					
OLIL	Olney	64.71	339	eP	P	08 02 38.1 -1.5
	comp=Z,298nm,1.0s					
Q46A	CEJHS Indians,	64.73	340	P	P	08 02 38.1 -1.6
	baz=156					
HHAR	Hobbs	64.74	333	eP	P	08 02 39.0 -0.9
	comp=Z,403nm,0.9s					
S42A	Caledonia	64.80	336	P	P	08 02 38.2 -2.0
	baz=152,SNR=85					
P47A	Martinsville	64.81	341	P	P	08 02 38.5 -1.8
	baz=157,SNR=123					
FVM	French Village	64.85	337	eP	P	08 02 40.2 -0.3
	comp=Z,424nm,1.0s					
FVM	French Village	64.85	337	eP	P	08 02 40.2 -0.3
FVM				pmax	pmax	
	comp=Z,420nm,1.0s					
Q45A	Warren Harvey,	64.87	339	P	P	08 02 38.7 -2.0
	baz=155,SNR=194					
T40A	Mansfield	64.91	335	P	P	08 02 39.9 -1.1
	baz=150,SNR=194					
R43A	Red Bud	64.93	337	P	P	08 02 39.7 -1.4
	baz=153,SNR=53					
BINY	Binghamton	64.98	350	P	P	08 02 41.2 -0.1
	baz=167,SNR=103					
BINY	Binghamton	64.98	350	eP	P	08 02 42.1 +0.8
	comp=Z,658nm,0.9s					
BINY				ePcP	PcP	08 03 09.9 +1.0
S41A	Jillco Farms,	64.99	336	P	P	08 02 40.3 -1.2
	baz=151					
M54A	Oil Creek Stat	65.00	347	P	P	08 02 41.0 -0.4
	baz=164,SNR=97					
M54A	Oil Creek Stat	65.00	347	eP	P	08 02 41.5 0.0
	comp=Z,860nm,0.9s					
T39A	Clever	65.15	334	P	P	08 02 41.4 -1.0
	baz=150,SNR=175					
TRY	Troy	65.17	352	eP	P	08 02 43.1 +0.7
	comp=Z,497nm,0.9s					
Q44A	Meyer Farm, Va	65.17	338	P	P	08 02 40.9 -1.6
	baz=154,SNR=84					
CCM	Cathedral Cave	65.21	336	P	P	08 02 41.3 -1.6
	baz=152					
CCM	Cathedral Cave	65.21	336	eP	P	08 02 41.7 -1.2
	comp=Z,408nm,0.8s					
CCM	Cathedral Cave	65.21	336	eP	P	08 02 41.7 -1.2
CCM				pmax	pmax	
	comp=Z,410nm,0.8s					
P46A	Rosedale	65.22	340	P	P	08 02 41.3 -1.6
	baz=156,SNR=51					
TUL1	Leonard	65.22	332	P	P	08 02 42.3 -0.6
	baz=147,SNR=170					
TUL1	Leonard	65.22	332	eP	P	08 02 42.8 -0.2
	comp=Z,416nm,0.9s					
ALLY	Alegheny Colle	65.24	346	eP	P	08 02 43.6 +0.6
	comp=Z,1µm,0.9s					
ALLY				ePcP	PcP	08 03 11.6 +1.6
R42A	Luebbering	65.25	337	P	P	08 02 41.6 -1.5
	baz=152,SNR=141					
S40A	Lebanon	65.30	335	P	P	08 02 42.2 -1.2
	baz=150,SNR=229					
P45A	Graceland, Par	65.31	340	P	P	08 02 41.3 -2.1
	baz=155,SNR=122					
SLM	Saint Louis	65.36	337	eP	P	08 02 43.2 -0.5
	comp=Z,226nm,0.9s					
SLM	Saint Louis	65.36	337	eP	P	08 02 43.2 -0.5
SLM				pmax	pmax	
	comp=Z,230nm,1.0s					
Q43A	New Douglas	65.44	338	P	P	08 02 42.3 -1.9
	baz=153,SNR=68					
O47A	Sheridan	65.47	341	P	P	08 02 42.7 -1.7
	baz=157,SNR=117					
R41A	Rosebud	65.48	336	P	P	08 02 43.0 -1.4
	baz=152,SNR=312					
T38A	Diamond	65.53	333	P	P	08 02 44.1 -0.8
	baz=149,SNR=233					
P44A	Sand Creek, Wi	65.55	339	P	P	08 02 42.9 -2.0
	baz=154,SNR=83					
WMOK	Wichita Mounta	65.64	329	P	P	08 02 45.2 -0.4
	baz=144,SNR=199					
WMOK	Wichita Mounta	65.64	329	eP	P	08 02 45.9 +0.3
	comp=Z,224nm,1.2s					
WMOK	Wichita Mounta	65.64	329	eP	P	08 02 45.9 +0.3
WMOK				pmax	pmax	
	comp=Z,220nm,1.2s					
ERPA	Erie	65.66	347	P	P	08 02 45.3 -0.3
	baz=163,SNR=46					
ERPA	Erie	65.66	347	eP	P	08 02 46.1 +0.5
	comp=Z,1µm,0.8s					
FFD	Franklin Falls	65.66	354	eP	P	08 02 46.1 +0.7
	comp=Z,315nm,1.0s					
S39A	Bolivar	65.70	334	P	P	08 02 45.1 -0.8
	baz=150,SNR=106					
Q42A	Golden Eagle	65.71	337	P	P	08 02 44.4 -1.5
	baz=153,SNR=86					
R40A	Maddies Statio	65.81	336	P	P	08 02 45.0 -1.6
	baz=151,SNR=233					
ACCN	Adirondack Com	65.81	352	eP	P	08 02 47.1 +0.7
	comp=Z,102nm,1.0s					
MMNY	Mt. Morris Dam	65.83	349	eP	P	08 02 46.5 -0.1
	comp=Z,623nm,0.8s					
MMNY				ePcP	PcP	08 03 13.1 +0.7
S38A	Stockton	65.88	334	P	P	08 02 46.0 -1.0
	baz=149,SNR=327					
SFIN	Lafayette	65.88	341	P	P	08 02 45.1 -1.9
	baz=156,SNR=114					
SFIN	Lafayette	65.88	341	eP	P	08 02 45.6 -1.3
	comp=Z,597nm,0.8s					
HNH	Hanover	65.96	353	eP	P	08 02 48.1 +0.8
	comp=Z,564nm,1.1s					
HNH				ePcP	PcP	08 03 14.3 +1.4
O45A	Potomac	65.96	340	P	P	08 02 45.5 -2.0
	baz=156,SNR=118					
Q41A	Truxton	66.00	337	P	P	08 02 46.2 -1.5
	baz=152,SNR=188					
P43A	Skaggs, Pawnee	66.00	338	P	P	08 02 46.0 -1.7
	baz=154,SNR=186					
O44A	Mansfield	66.11	339	P	P	08 02 46.4 -2.0
	baz=155,SNR=82					
R39A	Chumby, Stover	66.12	335	P	P	08 02 47.4 -1.1
	baz=150,SNR=282					
P42A	Winchester	66.24	338	P	P	08 02 47.4 -1.8
	baz=153,SNR=132					
N46A	Monticello	66.25	341	P	P	08 02 47.6 -1.6
	baz=157,SNR=62					
Q40A	Laux Farm, Aux	66.35	336	P	P	08 02 48.5 -1.4
	baz=151,SNR=159					
MEDO	Medina	66.36	348	P	P	08 02 49.5 -0.4
	baz=165,SNR=17					
R38A	Fenwick Farm,	66.36	334	P	P	08 02 49.0 -1.0
	baz=149,SNR=596					
N45A	Kentland	66.44	340	P	P	08 02 48.5 -1.9
	baz=156,SNR=57					
LBNH	Lisbon	66.45	354	P	P	08 02 50.6 +0.2
	baz=172,SNR=65					
LBNH	Lisbon	66.45	354	eP	P	08 02 51.0 +0.6
	comp=Z,314nm,0.9s					
LBNH	Lisbon	66.45	354	eP	P	08 02 51.0 +0.6
LBNH				pmax	pmax	
	comp=Z,310nm,0.9s					
NCB	Newcomb	66.46	352	eP	P	08 02 50.4 -0.1
	comp=Z,225nm,1.0s					
O43A	Sugar Creek Fa	66.51	339	P	P	08 02 49.1 -1.8
	baz=154,SNR=62					
STCO	Saint Catharin	66.54	348	P	P	08 02 51.0 0.0
	baz=164,SNR=18					
WVL	Waterville	66.57	355	eP	P	08 02 51.6 +0.5
	comp=Z,274nm,0.9s					
WVL				ePcP	PcP	08 03 16.6 +1.1
TYNO	Tyneside	66.57	347	P	P	08 02 51.0 -0.2
	baz=164,SNR=21					
P41A	Barry, Barry	66.58	337	P	P	08 02 49.6 -1.7
	baz=152,SNR=80					
EMMW	East Machias	66.58	357	eP	P	08 02 51.0 -0.1
	comp=Z,388nm,0.9s					
N44A	Piper City	66.59	340	P	P	08 02 49.9 -1.4
	baz=155,SNR=68					
M46A	Old House Fiel	66.60	342	P	P	08 02 50.1 -1.3
	baz=157,SNR=78					
VT1	Waterbury	66.63	353	eP	P	08 02 52.1 +0.6
	comp=Z,207nm,1.1s					
AAM	Ann Arbor	66.69	344	P	P	08 02 51.0 -1.0
	baz=160,SNR=21					
AAM	Ann Arbor	66.69	344	eP	P	08 02 52.2 +0.3
	comp=Z,243nm,0.8s					
AAM	Ann Arbor	66.69	344	eP	P	08 02 52.2 +0.3
AAM				pmax	pmax	
	comp=Z,240nm,0.8s					
O42A	Bath	66.69	338	P	P	08 02 50.5 -1.5
	baz=153					
Q39A	Willow Grove F	66.74	335	P	P	08 02 51.0 -1.3
	baz=150,SNR=104					
HDIL	Hopedale	66.75	339	P	P	08 02 50.7 -1.7
	baz=154,SNR=135					
HDIL	Hopedale	66.75	339	eP	P	08 02 51.3 -1.0
	comp=Z,783nm,0.8s					
MNTX	Cornudas Mount	66.77	322	P	P	08 02 51.8 -0.9
	baz=138,SNR=402					
MNTX	Cornudas Mount	66.77	322	eP	P	08 02 52.3 -0.4
	comp=Z,229nm,1.0s					
P40A	Paris	66.81	336	P	P	08 02 51.3 -1.4
	baz=151,SNR=200					
M45A	Boilermakers S	66.85	341	P	P	08 02 51.6 -1.4
	baz=156,SNR=6.2					
O41A	Passleys Farm,	66.90	338	P	P	08 02 51.5 -1.8
	baz=152,SNR=103					
Q38A	Cooks Store, C	66.91	335	P	P	08 02 52.5 -0.9
	baz=150,SNR=171					
P39B	Salisbury	67.03	336	P	P	08 02 52.7 -1.4
	baz=151,SNR=305					
MSTX	Muleshoe	67.05	325	P	P	08 02 54.2 -0.3
	baz=141,SNR=492					
MSTX	Muleshoe	67.05	325	eP	P	08 02 54.2 -0.3
	comp=Z,890nm,0.9s					
N43A	Stutzman Famil	67.05	339	P	P	08 02 52.9 -1.3
	baz=154,SNR=284					
WLVO	Wesleyville	67.08	348	P	P	08 02 54.0 -0.3
	baz=165,SNR=17					
DRWO	Darlington Wes	67.09	348	P	P	08 02 54.1 -0.2
	baz=165,SNR=24					
M44A	Midewin, Midew	67.10	340	P	P	08 02 53.2 -1.3
	baz=155,SNR=20					
ACTO	Acton	67.10	347	P	P	08 02 54.2 -0.3
	baz=163,SNR=17					
LONY	Lake Ozonia	67.14	352	P	P	08 02 54.4 -0.3
	baz=169,SNR=126					
LONY	Lake Ozonia	67.14	352

Q37A	Longview Farm,	67.17 334	P	P	08 02 54.0	-1.0
	baz=149,SNR=200					
AMTX	Amarillo	67.19 327	P	P	08 02 55.4	+0.1
	baz=142					
AMTX	Amarillo	67.19 327	eP	P	08 02 55.5	+0.1
	comp=Z,315nm,0.9s					
FRNY	Flat Rock	67.23 352	eP	P	08 02 55.1	0.0
	comp=Z,255nm,1.1s					
N42A	Yates City	67.24 339	P	P	08 02 53.9	-1.5
	baz=153,SNR=209					
PKRO	Pickering	67.25 348	P	P	08 02 55.1	-0.2
	baz=164,SNR=28					
O40A	La Belle	67.26 337	P	P	08 02 54.0	-1.5
	baz=152,SNR=212					
N41A	Harden Midland	67.42 338	P	P	08 02 54.9	-1.5
	baz=153,SNR=148					
M43A	Waltham Townsh	67.43 340	P	P	08 02 55.1	-1.4
	baz=155,SNR=161					
P38A	Dawn	67.45 335	P	P	08 02 55.6	-1.1
	baz=150,SNR=409					
EPT	El Paso	67.47 321	eP	P	08 02 57.1	0.0
	comp=Z,120nm,0.8s					
DELO	Deloro Mine	67.51 349	P	P	08 02 56.5	-0.5
	baz=166,SNR=28					
O39A	Kirksville	67.62 336	P	P	08 02 56.4	-1.4
	baz=151,SNR=72					
MACI	Morro de la Ar	67.65 44	eP	P	08 02 57.8	-0.5
	comp=Z,260nm,0.8s					
M42A	Sheffield	67.71 339	P	P	08 02 57.0	-1.2
	baz=154,SNR=34					
P37A	Lathrop	67.74 335	P	P	08 02 57.2	-1.3
	baz=149,SNR=242					
L44A	Lake County Fo	67.78 341	P	P	08 02 57.7	-0.9
	baz=156,SNR=19					
BWLO	Walkerton	67.81 346	P	P	08 02 58.5	-0.3
	baz=162,SNR=14					
N40A	Mertquake, Sal	67.83 337	P	P	08 02 57.6	-1.4
	baz=152,SNR=242					
BASO	Ashfield	67.83 346	P	P	08 02 58.6	-0.2
	baz=162,SNR=15					
O38A	Galt	67.86 336	P	P	08 02 57.9	-1.3
	baz=150,SNR=175					
M41A	Milan	67.90 338	P	P	08 02 57.9	-1.5
	baz=153,SNR=135					
PLVO	Plevna	67.93 350	P	P	08 02 59.4	-0.1
	baz=166,SNR=52					
PLVO	Plevna	67.93 350	eP	P	08 02 59.6	+0.2
	comp=Z,350nm,0.9s					
PLVO			ePcP	PcP	08 03 21.9	+0.8
CLWO	Collingwood	67.96 347	P	P	08 02 59.2	-0.5
	baz=163,SNR=27					
SRIG	Santa Rosalia	67.97 314	eP	P	08 02 60.0	-0.1
	comp=Z,173nm,1.1s					
BRCO	Bruce Peninsul	68.00 346	P	P	08 02 59.7	-0.2
	baz=162,SNR=19					
SADO	Sadowa	68.03 348	P	P	08 02 59.6	-0.5
	comp=Z,112nm,0.6s,baz=185,slow=6.1,SNR=81					
SADO	Sadowa	68.03 348	eP	P	08 02 59.4	-0.7
	comp=Z,362nm,1.2s					
L43A	Garden Prairie	68.04 340	P	P	08 02 59.1	-1.1
	baz=155,SNR=170					
BANO	Bancroft	68.06 349	P	P	08 02 59.7	-0.6
	baz=166,SNR=30					
QSPA	South Pole Qui	68.10 180	P	P	08 03 01.0	+0.6
	comp=Z,666nm,0.9s,baz=160,slow=4.8					
QSPA			S	S	08 11 16.1	-1.3
	comp=Z,16nm,1.1s,baz=31,slow=3.0,SNR=4.1					
QSPA			P4KPbc		08 39 43.2	
	comp=Z,4.7nm,1.1s,baz=148,slow=3.2,SNR=7.6					
QSPA	South Pole Qui	68.10 180	eP	P	08 03 01.3	+0.8
	comp=Z,726nm,0.9s					
QSPA			S	S	08 11 16.1	-1.3
QSPA			e		08 39 43.2	
N39A	Derby Farms, D	68.16 337	P	P	08 02 59.5	-1.4
	baz=151,SNR=212					
O37A	Wolven Farm, M	68.16 335	P	P	08 02 59.8	-1.2
	baz=150,SNR=142					
L42A	Oliver, Polo	68.17 339	P	P	08 02 59.9	-1.1
	baz=154,SNR=24					
ALFO	Alfred	68.17 352	P	P	08 03 00.7	-0.2
	baz=169,SNR=79					
KSU1	Kansas State U	68.25 333	P	P	08 03 00.6	-0.9
	baz=147,SNR=133					
KSU1	Kansas State U	68.25 333	eP	P	08 03 01.3	-0.3
	comp=Z,408nm,0.9s					
HSIG		68.26 316	eP	P	08 03 02.4	+0.6
	comp=Z,127nm,0.9s					
M40A	Post Highland	68.27 338	P	P	08 03 00.1	-1.5
	baz=152,SNR=197					
H07S1	FLORES T-PHASE	68.28 27	P	P	08 03 01.7	0.0
	SNR=2.2					
H07S1	FLORES T-PHASE	68.28 27	eP	P	08 03 01.6	-0.1
BMRO	Meriville Lake	68.29 347	P	P	08 03 01.3	-0.4
	baz=162,SNR=21					
N38A	Joes South For	68.35 336	P	P	08 03 00.7	-1.4
	baz=150,SNR=76					
K43A	Burlington	68.38 341	P	P	08 03 01.1	-1.2
	baz=155,SNR=56					
L41A	Preston	68.51 339	P	P	08 03 01.6	-1.5
	baz=153,SNR=112					
PQI	Presque Isle	68.56 357	eP	P	08 03 03.2	0.0
	comp=Z,331nm,0.9s					
PQI			ePcP	PcP	08 03 24.4	+0.6
M39A	Webster	68.56 337	P	P	08 03 02.1	-1.3
	baz=152,SNR=223					
H07N1	FLORES T-PHASE	68.57 26	eP	P	08 03 04.2	+0.7
PEMO	Pembroke	68.58 350	P	P	08 03 03.0	-0.4
	baz=166,SNR=45					
CALA	Caldeira	68.69 29	eP	P	08 03 08.1	+3.8
N37A	Lee Faris, Mou	68.69 336	P	P	08 03 03.1	-1.1
	baz=150,SNR=172					
PCAN	Candelaria	68.69 29	eP	P	08 03 05.0	+0.7
	comp=Z,486nm,1.1s					
TRQ	Mont Tremblant	68.71 352	eP	P	08 03 03.9	-0.4
PCED	Cedros	68.73 29	eP	P	08 03 05.2	+0.7
	comp=Z,253nm,0.9s					
BUKO	Buck Lake	68.73 348	P	P	08 03 04.1	-0.2
	baz=164,SNR=48					
L40A	Anamosa	68.75 338	P	P	08 03 03.2	-1.3
	baz=153,SNR=221					
PICO	Pico	68.75 29	eP	P	08 03 05.6	+0.9
	comp=Z,553nm,1.3s					
K42A	Prairie Point,	68.77 340	P	P	08 03 03.4	-1.2
	baz=154,SNR=101					
121A	Cookes Peak, D	68.77 321	P	P	08 03 06.2	+1.1
	baz=136,SNR=212					
KLBO	Killbear Provi	68.81 348	P	P	08 03 04.3	-0.5
	baz=164,SNR=31					
319A	Douglas	68.84 319	eP	P	08 03 06.6	+1.1
	comp=Z,379nm,0.9s					
KOWA	Kowa	68.84 64	P	P	08 03 05.3	-0.3
	comp=Z,505nm,0.8s,baz=242,slow=5.5,SNR=838					
KOWA			S	S	08 11 26.2	-1.1
	comp=Z,9.7nm,0.7s,baz=359,slow=20,SNR=11					
KOWA	Kowa	68.84 64	eP	P	08 03 05.4	-0.3
	comp=Z,604nm,0.8s					
KOWA			S	S	08 11 26.2	-1.1
M38A	Pleasantville	68.88 337	P	P	08 03 03.9	-1.4
	baz=151,SNR=285					
K41A	Shullsburg	68.92 339	P	P	08 03 04.6	-0.9
	baz=154,SNR=119					
TOBO	Tobermory, Bru	68.95 347	P	P	08 03 05.1	-0.6
	baz=162,SNR=12					
PMAN	Manadas	69.01 29	eP	P	08 03 07.2	+1.1
	comp=Z,737nm,1.1s					
ROSA	Rosais	69.01 29	eP	P	08 03 06.7	+0.5
	comp=Z,474nm,1.2s					
ROSA	Rosais	69.01 29	eP	P	08 03 06.8	+0.7
	comp=Z,336nm,0.9s					
J43A	Natural Harves	69.02 341	P	P	08 03 05.1	-1.0
	baz=155,SNR=79					
N36A	Muff Farm, Cla	69.03 335	P	P	08 03 05.4	-0.8
	baz=149,SNR=145					
L39A	Vinton	69.07 338	P	P	08 03 05.2	-1.3
	baz=152,SNR=206					
PSMA	Santa Maria	69.10 32	eP	P	08 03 06.4	-0.3
	comp=Z,346nm,1.4s					
PSMN	Pico do Norte,	69.14 32	eP	P	08 03 03.8	-3.2
	comp=Z,353nm,1.3s					
JFWS	Jewell Farm	69.18 339	P	P	08 03 06.1	-1.0
	baz=154,SNR=204					
JFWS	Jewell Farm	69.18 339	eP	P	08 03 06.5	-0.6
	comp=Z,836nm,0.8s					
JFWS	Jewell Farm	69.18 339	eP	P	08 03 06.5	-0.6
JFWS			pmax	pmax		
	comp=Z,840nm,0.8s					
J42A	Columbus	69.18 340	P	P	08 03 06.1	-1.0
	baz=155,SNR=89					
M37A	Trindle Farm,	69.19 336	P	P	08 03 06.3	-0.9
	baz=150,SNR=155					
K40A	Colesburg	69.28 339	P	P	08 03 06.4	-1.3
	baz=153,SNR=142					
BNM	Barren Site	69.28 323	eP	P	08 03 10.0	+1.7
SCIA	State Center	69.31 337	P	P	08 03 06.9	-1.1
	baz=151,SNR=104					
SCIA	State Center	69.31 337	eP	P	08 03 07.9	0.0
	comp=Z,544nm,0.8s					
PGRA	Graciosa	69.38 29	eP	P	08 03 08.9	+0.5
	comp=Z,377nm,1.5s					
CBKS	Cedar Bluff	69.39 331	P	P	08 03 08.8	+0.3
	baz=144,SNR=164					
CBKS	Cedar Bluff	69.39 331	eP	P	08 03 09.1	+0.6
	comp=Z,764nm,0.9s					
CBKS	Cedar Bluff	69.39 331	eP	P	08 03 09.1	+0.6
CBKS			pmax	pmax		
	comp=Z,760nm,1.0s					
Y22D	IRIS PASSCAL I	69.39 323	P	P	08 03 10.3	+1.5
	baz=137,SNR=13					
Y22D	IRIS PASSCAL I	69.39 323	eP	P	08 03 10.8	+2.1
	comp=Z,505nm,1.6s					
Y22E	IRIS PASSCAL I	69.39 323	P	P	08 03 10.2	+1.4
	baz=137					
I43A	Langenfeld Bro	69.40 341	P	P	08 03 07.4	-1.0
	baz=156,SNR=40					
LPM	Los Pinos Moun	69.41 323	eP	P	08 03 10.3	+1.4
ADH	Angra Heroismo	69.42 30	eP	P	08 03 09.3	+0.7
	comp=Z,548nm,1.2s					
L38A	Oak Wood Farm,	69.43 337	P	P	08 03 07.4	-1.1
	baz=151,SNR=101					
PDA	Ponta Delgada	69.43 31	eP	P	08 03 09.2	+0.5
	comp=Z,292nm,0.9s					
PSET	Sete Cidades	69.47 31	eP	P	08 03 09.5	+0.5
	comp=Z,342nm,1.3s					
J41A	Loganville	69.51 340	P	P	08 03 07.9	-1.1
	baz=154,SNR=182					
CMLA	Cha da Macela	69.51 31	eP	P	08 03 09.4	+0.2
	comp=Z,279nm,0.7s					
CMLA	Cha da Macela	69.51 31	eP	P	08 03 09.8	+0.6
	comp=Z,240nm,0.8s					
CMLA	Cha da Macela	69.51 31	i P	P	08 03 10.1	+0.9
M36A	Felix, Anita	69.52 335	P	P	08 03 08.3	-0.9
	baz=149,SNR=122					
K39A	Oelwein	69.54 338	P	P	08 03 07.9	-1.4
	baz=152,SNR=346					
I42A	Draeger Farm,	69.64 341	P	P	08 03 08.8	-1.0
	baz=155,SNR=131					
I42A	Draeger Farm,	69.64 341	eP	P	08 03 09.1	-0.7
	comp=Z,661nm,0.9s					
BART	Pico Bartolome	69.70 32	eP	P	08 03 10.0	-0.4
	comp=Z,438nm,0.8s					
L37A	Phoenix Point,	69.70 337	P	P	08 03 08.8	-1.4
	baz=150,SNR=101					
LAZ	Ladron	69.76 323	eP	P	08 03 13.0	+2.0
J40A	Soldiers Grove	69.77 339	P	P	08 03 09.4	-1.2
	baz=153,SNR=148					
TASL	Snake Pit, Alb	69.78 324	P	P	08 03 11.6	+0.5
	baz=138,SNR=398					
ANMO	Albuquerque	69.78 324	P	P	08 03 11.4	+0.3
	comp=Z,224nm,1.1s,baz=143,slow=9.9,SNR=279					
ANMO			PKPPKP	P'P'df	08 31 09.7	+0.7
	comp=Z,14nm,1.0s,baz=281,slow=3.9,SNR=18					
ANMO	Albuquerque	69.78 324	P	P	08 03 11.6	+0.5
	baz=138					
ANMO	Albuquerque	69.78 324	eP	P	08 03 11.9	+0.8
	comp=Z,418nm,1.3s					
ANMO			P'P'		08 31 09.7	
ANMO	Albuquerque	69.78 324	eP	P	08 03 11.9	+0.8
ANMO			pmax	pmax		
	comp=Z,420nm,1.3s					
TASM	ASL Pad, Albuq	69.78 323	P	P	08 03 11.7	+0.6
	baz=138,SNR=408					
K38A	Parkersburg	69.80 338	P	P	08 03 09.7	-1.1
	baz=151,SNR=130					
H43A	Windswept, Lux	69.83 342	P	P	08 03 09.9	-1.0
	baz=156,SNR=33					
H43A	Windswept, Lux	69.83 342	eP	P	08 03 10.1	-0.8
	comp=Z,596nm,0.8s					
L36A	Harm Buss Farm	70.02 336	P	P	08 03 11.0	-1.2
	baz=149,SNR=132					
J39A	Decorah	70.04 339	P	P	08 03 10.9	-1.3
	baz=152,SNR=230					
H42A	Shiocton	70.08 341	P	P	08 03 11.4	-1.0
	baz=155,SNR=70					
I41A	Arkdale	70.09 340	P	P	08 03 11.3	-1.2
	baz=154,SNR=93					
I40A	Norwalk	70.17 340	P	P	08 03 12.2	-0.8
	baz=153,SNR=51					
K37A	Belmond	70.22 337	P	P	08 03 11.9	-1.4
	baz=150,SNR=196					
F46A	Macinaw City C	70.22 344	P	P	08 03 12.5	-0.7
	baz=159,SNR=40					
J38A	Wedel Dairy, R	70.29 338	P	P	08 03 12.5	-1.2
	baz=152,SNR=121					
F45A	CMU Biological	70.33 344	P	P	08 03 13.3	-0.5
	baz=158,SNR=29					
T25A	Trinidad	70.33 326	P	P	08 03 15.0	+0.6
	baz=140,SNR=194					
T25A	Trinidad	70.33 326	eP	P	08 03 15.5	+1.1
	comp=Z,257nm,1.0s					
PMOZ	Porto Moniz, M	70.36 40	eP	P	08 03 14.6	+0.1
	comp=Z,240nm,1.5s					
K36A	Gilmore City	70.40 336	P	P	08 03 13.4	-1.0
	baz=150,SNR=88					
TUC	Tucson	70.41 319	P	P	08 03 15.5	+0.8
	baz=134					
TUC	Tucson	70.41 319	eP	P	08 03 16.0	+1.2
	comp=Z,313nm,1.5s					
TUC	Tucson	70.41 319	eP	P	08 03 16.0	+1.2
TUC			pmax	pmax		
	comp=Z,310nm,1.5s					
I39A	Houston	70.44 339	P	P	08 03 13.4	-1.2
	baz=153,SNR=125					
PMAR	Madeira	70.46 41	eP	P	08 03 15.2	0.0
	comp=Z,272nm,1.4s					
H41A	Junction City	70.52 341	P	P	08 03 14.0	-1.0
	baz=154,SNR=66					
H41A	Junction City	70.52 341	eP	P	08 03 14.2	-0.9
	comp=Z,390nm,0.8s					
G43A	Wallace	70.52 342	P	P	08 03 14.1	-0.8
	baz=156,SNR=26					
G43A	Wallace	70.52 342	eP	P	08 03 14.2	-0.8
	comp=Z,285nm,0.9s					
J37A	Redenius Farm,	70.66 337	P	P	08 03 14.7	-1.2
	baz=151,SNR=138					
G42A	Mountain	70.72 342	P	P	08 03 15.2	-1.0
	baz=156,SNR=42					
G42A	Mountain	70.72 342	eP	P	08 03 15.7	-0.5
	comp=Z,246nm,1.0s					
H40A	Chili	70.75 340	P	P	08 03 15.4	-1.0
	baz=154,SNR=125					
BGNE	Belgrade	70.82 333	P	P	08 03 16.4	-0.5
	baz=146,SNR=174					
BGNE	Belgrade	70.82 333	eP	P	08 03 16.6	-0.3
	comp=Z,2μm,0.8s					
F44A	Big Bay de Noc	70.84 343	P	P	08 03 16.4	-0.5
	baz=158,SNR=50					
E45A	Wooded Hills,	70.87 344	P	P	08 03 16.4	-0.6
	baz=159,SNR=80					
I38A	Scanlan Farm,	70.87 339	P	P	08 03 16.1	-1.1
	baz=152,SNR=250					
KSCO	Kaye Shedlock'	70.90 329	P	P	08 03 18.9	+1.3
	baz=142,SNR=91					
KSCO	Kaye Shedlock'	70.90 329	eP	P	08 03 18.7	+1.1
	comp=Z,768nm,1.0s					
F43A	Flat Rock, Esc	70.91 343	P	P	08 03 16.1	-1.1
	baz=157,SNR=43					
G41A	Antigo	70.92 341	P	P	08 03 16.4	-0.9
	baz=155,SNR=83					
J36A	Seneca 1, Swea	70.96 337	P	P	08 03 16.5	-1.2
	baz=150,SNR=208					
PMPS	Porto Santo	71.05 41	eP	P	08 03 19.5	+1.1
	comp=Z,379nm,1.6s					
H39A	Augusta	71.09 340	P	P	08 03 17.7	-0.8
	baz=153,SNR=66					
F42A	Maple Grove Fa	71.11 342	P	P	08 03 17.8	-0.6
	baz=156,SNR=12					
I37A	Lemond, Waseca	71.22 338	P	P	08 03 18.3	-0.9
	baz=151,SNR=255					
G40A	Rib Lake	71.28 341	P	P	08 03 18.6	-0.8
	baz=154,SNR=68					
E44A	Grand Marais A	71.30 344	P	P	08 03 19.8	+0.2
	baz=158,SNR=16					
SDCO	Great Sand Dun	71.36 326	P	P	08 03 21.3	+0.8
	baz=139,SNR=262					
SDCO	Great Sand Dun	71.36 326	eP	P	08 03 21.6	+1.1
	comp=Z,231nm,0.9s					
E43A	Lone Tree Farm	71.36 343	P	P	08 03 19.4	-0.5
	baz=157,SNR=48					
F41A	Three Lakes	71.37 341	P	P	08 03 19.3	-0.7
	baz=155,SNR=133					
H38A	Maiden Rock	71.42 339	P	P	08 03 19.3	-1.0
	baz=152,SNR=134					
214A	Organ Pipe Nat	71.42 317	P	P	08 03 21.6	+0.9
	baz=132,SNR=95					
I36A	Fitzsimmons Fa	71.44 337	P	P	08 03 19.3	-1.1
	baz=150,SNR=174					
X18A	Snowflake	71.46 321	eP	P	08 03 22.7	+1.7
	comp=Z,257nm,0.9s					
H37A	Dierke Farm, C	71.55 338	P	P	08 03 20.3	-0.8
	baz=151,SNR=79					
G39A	Holcombe	71.60 340	P	P	08 03 20.4	-1.0
	baz=153,SNR=124					
E42A	Champion	71.66 343	P	P	08 03 21.0	-0.7
	baz=156,SNR=118					
COWI	Conover	71.71 342	eP	P	08 03 21.6	-0.4
	comp=Z,165nm,0.8s					
G38A	Ridgeland	71.71 339	P	P	08 03 21.1	-0.9
	baz=152,SNR=113					
W18A	Petrified Fore	71.75 322	P	P	08 03 23.9	+1.2
	baz=135,SNR=28					
W18A	Petrified Fore	71.75 322	eP	P	08 03 24.2	+1.5
	comp=Z,352nm,1.0s					
F40A	Park Falls	71.84 341	P	P	08 03 22.2	-0.6
	baz=154,SNR=280					
H36A	Jessenland, He	71.90 338	P	P	08 03 23.0	-0.1
	baz=150,SNR=40					
E41A	Kenton	71.99 342	P	P	08 03 23.1	-0.5
	baz=155,SNR=67					
S22A	4UR Ranch, Cre	72.05 325	P	P	08 03 25.5	+1.0
	baz=138,SNR=151					
S22A	4UR Ranch, Cre	72.05 325	eP	P	08 03 25.9	+1.3
	comp=Z,90nm,0.9s					
SPMN	Marine on St.	72.08 339	P	P	08 03 23.0	-1.1
	baz=152,SNR=172					
SPMN	Marine on St.	72.08 339	eP	P	08 03 23.7	-0.4
	comp=Z,432nm,0.8s					
F39A	Loretta	72.08 340	P	P	08 03 23.4	-0.7
	baz=153,SNR=100					
Q24A	Divide	72.11 327	P	P	08 03 25.5	+0.7
	baz=140,SNR=286					
Q24A	Divide	72.11 327	eP	P	08 03 26.1	+1.3
	comp=Z,507nm,0.9s					
OGNE	Ogallala	72.15 330	P	P	08 03 25.3	+0.5
	baz=143,SNR=82					
OGNE	Ogallala	72.15 330	eP	P	08 03 25.9	+1.1
	comp=Z,564nm,0.8s					
ECSD	EROS Data Cent	72.16 336	P	P	08 03 23.8	-0.9
	baz=148,SNR=351					
ECSD	EROS Data Cent	72.16 336	eP	P	08 03 24.2	-0.4
	comp=Z,399nm,1.0s					
E40A	Wakefield	72.25 341	P	P	08 03 24.7	-0.4
	baz=154,SNR=205					
X16A	Lo Mia Camp, P	72.26 320	eP	P	08 03 27.5	+1.8
	comp=Z,257nm,1.0s					
H35A	Sunnyside Ranc	72.32 337	P	P	08 03 24.6	-0.9
	baz=150,SNR=457					
E39A	Mellen	72.38 341	P	P	08 03 25.2	-0.6
	baz=154,SNR=189					
G36A	St. Michael	72.41 338	P	P	08 03 25.1	-0.9
	baz=151,SNR=96					
D41A	Chassel	72.42 342	P	P	08 03 25.7	-0.3
	baz=156,SNR=198					
F38A	Pierce - Schro	72.42 340	P	P	08 03 25.8	-0.3
	baz=153,SNR=100					
F37A	Hinrichs Farm,	72.46 339	P	P	08 03 25.8	-0.5
	baz=152,SNR=137					
I33A	Coleman	72.50 336	P	P	08 03 26.0	-0.6
	baz=148,SNR=31					
MVCO	Mesa Verde	72.56 324	P	P	08 03 28.2	+0.8
	baz=137,SNR=275					
MVCO	Mesa Verde	72.56 324	eP	P	08 03 28.6	+1.2
	comp=Z,541nm,1.2s					
113A	Mohawk Valley,	72.57 317	eP	P	08 03 29.1	+1.9
	comp=Z,88nm,0.8s					
H34A	Spellman Lake,	72.64 337	P	P	08 03 26.4	-1.0
	baz=149,SNR=376					
G35A	Watkins	72.65 338	P	P	08 03 27.1	-0.4
	baz=150,SNR=72					
I32A	Karley and Nic	72.74 335	P	P	08 03 27.5	-0.5
	baz=147,SNR=40					
Y14A	Wickenburg	72.88 319	eP	P	08 03 30.6	+1.5
	comp=Z,183nm,0.9s					
F36A	Milaca	72.88 339	P	P	08 03 27.6	-1.1
	baz=151,SNR=205					
E38A	The Farm, Brul	72.89 340	P	P	08 03 28.0	-0.8
	baz=153,SNR=35					
ISCO	Idaho Springs	72.97 327	P	P	08 03 30.6	+0.8
	baz=140,SNR=441					
ISCO	Idaho Springs	72.97 327	eP	P	08 03 30.9	+1.1
	comp=Z,353nm,0.9s					
ISCO	Idaho Springs	72.97 327	eP	P	08 03 30.9	+1.1
ISCO			pmax	pmax		
	comp=Z,350nm,0.9s					
WUAZ	Wupatki	72.98 321	P	P	08 03 31.1	+1.3
	baz=134,SNR=108					
WUAZ	Wupatki	72.98 321	eP	P	08 03 31.2	+1.4
	comp=Z,328nm,1.0s					
TOA0	Torodi Ar. Sit	73.01 68	eP	P	08 03 29.9	-0.2
TORD	Torodi Ar. Bea	73.01 68	P	P	08 03 29.6	-0.5
	comp=Z,842nm,0.7s,baz=252,slow=5.5,SNR=2360					
TORD			pP	pP	08 05 23.2	+0.4
	comp=Z,76nm,0.9s,baz=256,slow=5.7,SNR=4.0					
TORD			S	S	08 12 12.5	-1.9
	comp=Z,9.4nm,0.7s,baz=256,slow=14,SNR=9.9					
TORD			PKKP	PKKPdf	08 22 49.6	+1.0
	comp=Z,1.8nm,0.9s,baz=40,slow=3.9,SNR=3.9					
TORD			PKPPKP	P'P'df	08 31 04.0	-1.3
	comp=Z,6.0nm,1.1s,baz=63,slow=2.1,SNR=8.0					
TORD			P4KPbc		08 40 07.8	
	comp=Z,4.6nm,0.9s,baz=250,slow=5.0,SNR=18					
H33A	Prehn Over Nor	73.01 336	P	P	08 03 29.0	-0.6
	baz=148,SNR=365					
G34A	Benson	73.08 337	P	P	08 03 28.9	-1.0
	baz=149,SNR=156					
H32A	Carlson Farm,	73.13 335	P	P	08 03 29.3	-0.9
	baz=147,SNR=241					
E37A	Wrenshall	73.13 340	P	P	08 03 30.1	-0.1
	baz=152					
I31A	Royce, Wessing	73.16 334	P	P	08 03 30.3	-0.2
	baz=146,SNR=9.1					
SMCO	Snowmass	73.20 326	eP	P	08 03 32.7	+1.5
	comp=Z,363nm,0.9s					
F35A	Swanville	73.23 338	P	P	08 03 29.9	-0.9
	baz=150,SNR=101					
PV01	Paradox Valley	73.27 324	eP	P	08 03 33.0	+1.6
	comp=Z,284nm,1.0s					
G33A	Ortonville	73.33 336	P	P	08 03 30.4	-1.0
	baz=148,SNR=123					
C40A	Isle Royale Na	73.36 342	P	P	08 03 30.5	-1.0
	baz=155,SNR=172					
E36A	McGregor	73.36 339	P	P	08 03 30.8	-0.7
	baz=151,SNR=205					
PV15	Paradox Valley	73.37 325	eP	P	08 03 34.3	+2.2
	comp=Z,508nm,1.0s					
PV02	Paradox Valley	73.41 324	eP	P	08 03 33.5	+1.2
	comp=Z,332nm,1.4s					
F34A	Alexandria	73.42 338	P	P	08 03 31.0	-0.8
	baz=150,SNR=54					
GLA	Glamis	73.42 317	P	P	08 03 33.1	+0.9
	baz=131,SNR=41					
GLA	Glamis	73.42 317	eP	P	08 03 33.8	+1.6
	comp=Z,145nm,0.9s					
GLA	Glamis	73.42 317	eP	P	08 03 33.8	+1.6
GLA			pmax	pmax		
	comp=Z,140nm,0.9s					
PV03	Paradox Valley	73.51 324	eP	P	08 03 34.1	+1.3
	comp=Z,116nm,1.0s					
H31A	Wolsey	73.51 335	P	P	08 03 31.5	-0.9
	baz=146,SNR=25					
PV05	Paradox Valley	73.52 324	eP	P	08 03 34.5	+1.7
	comp=Z,286nm,1.0s					
PV07	Paradox Valley	73.53 325	eP	P	08 03 34.5	+1.6
	comp=Z,331nm,0.9s					
C39A	Grand Marais	73.55 342	P	P	08 03 31.4	-1.1
	baz=154,SNR=298					
PV04	Paradox Valley	73.64 324	eP	P	08 03 34.9	+1.4
	comp=Z,198nm,0.9s					
D37A	Cotton	73.66 340	P	P	08 03 32.6	-0.6
	baz=152,SNR=64					

comp=Z,246nm,1.1s
PV10 **Paradox Valley** 73.70 324 *e*P P 08 03 35.0 +1.1
comp=Z,259nm,1.0s
WIN **Windhoek** 73.72 108 P P 08 03 34.2 -0.2
WIN pmax pmax
comp=Z,375nm,1.2s
E35A **Pequot Lakes** 73.78 338 P P 08 03 33.1 -0.8
baz=150,SNR=105
G32A **Webster** 73.78 336 P P 08 03 33.2 -0.8
baz=147,SNR=32
C38A **Sawbill Land.** 73.80 341 P P 08 03 32.9 -1.1
baz=153,SNR=180
PDMCI **Parker Dam,Lak** 73.82 318 P P 08 03 35.6 +1.3
baz=132,SNR=36
F33A **5 Mile Ranch,** 73.83 337 P P 08 03 33.0 -1.2
baz=149,SNR=139
PV09 **Paradox Valley** 73.84 324 *e*P P 08 03 36.3 +1.6
D36A **Goodland** 73.91 340 P P 08 03 34.2 -0.4
baz=152,SNR=72
N23A **Red Feather La** 73.97 328 P P 08 03 36.2 +0.7
baz=140,SNR=292
N23A **Red Feather La** 73.97 328 *e*P P 08 03 36.7 +1.3
comp=Z,311nm,0.8s
SWSC **Sam W. Stewart** 73.97 316 P P 08 03 36.7 +1.5
baz=130,SNR=25
IKP **In-Ko-Pah, Jac** 73.98 316 P P 08 03 36.7 +1.2
baz=130,SNR=57
E34A **Wadena** 74.01 338 P P 08 03 34.9 -0.3
baz=150,SNR=64
G31A **Conde** 74.03 335 P P 08 03 34.7 -0.6
baz=147,SNR=49
SUR **Sutherland** 74.04 119 *e*P P 08 03 36.6 +0.6
comp=Z,334nm,1.1s
SUR **Sutherland** 74.04 119 P P 08 03 36.9 +0.8
SNR=12
SUR **Sutherland** 74.04 119 P P 08 03 36.9 +0.8
SNR=12
PHWY **Pilot Hill** 74.04 329 *e*P P 08 03 36.9 +1.1
comp=Z,490nm,1.3s
EYMN **Ely** 74.07 341 P P 08 03 34.5 -1.0
baz=153,SNR=172
EYMN **Ely** 74.07 341 *e*P P 08 03 35.3 -0.2
comp=Z,306nm,1.1s
C37A **Embarrass** 74.09 340 P P 08 03 34.8 -0.8
baz=152,SNR=131
D35A **Remer** 74.12 339 P P 08 03 35.2 -0.6
baz=151,SNR=66
U15A **North Rim** 74.15 321 *e*P P 08 03 38.3 +1.7
comp=Z,275nm,0.9s
F32A **Veblen** 74.16 336 P P 08 03 35.4 -0.6
baz=148,SNR=35
SYO **Syowa Base** 74.19 159⇑ *i*P P 08 03 35.0 -0.9
W13A **Hualapai Mount** 74.20 319 *e*P P 08 03 38.5 +1.7
comp=Z,146nm,0.9s
E33A **Westby DABS, E** 74.30 337 P P 08 03 35.7 -1.1
baz=149,SNR=75
C36A **Pine Crest Far** 74.32 340 P P 08 03 36.2 -0.7
baz=152,SNR=124
MONP2 **Monument Peak** 74.34 316 P P 08 03 38.8 +1.2
baz=130,SNR=55
IRM **Iron Mountain** 74.35 318 P P 08 03 38.6 +1.1
baz=131,SNR=162
BAR **Barrett** 74.37 316 *e*P P 08 03 38.9 +1.3
comp=Z,186nm,0.9s
NEE2 **Needles Airpor** 74.42 318 P P 08 03 39.1 +1.3
baz=132,SNR=31
D34A **Park Rapids** 74.51 338 P P 08 03 37.4 -0.6
baz=150,SNR=54
O20A **White River Ci** 74.56 326 P P 08 03 39.8 +1.1
baz=138,SNR=435
O20A **White River Ci** 74.56 326 *e*P P 08 03 40.1 +1.4
comp=Z,606nm,0.9s
F31A **Hecla** 74.58 336 P P 08 03 37.8 -0.6
baz=147,SNR=16
C35A **Jirik Farms, M** 74.64 339 P P 08 03 37.9 -0.8
baz=151,SNR=390
E32A **Braaten, Kindr** 74.76 337 P P 08 03 38.8 -0.6
baz=148,SNR=33
109C **Camp Elliot, M** 74.78 316 P P 08 03 40.7 +0.9
baz=130,SNR=13
CPE **Camp Elliot** 74.78 316 *e*P P 08 03 41.2 +1.4
comp=Z,161nm,1.4s
BELC **Belle Mtn. Jos** 74.78 317 P P 08 03 41.1 +1.1
baz=130,SNR=159
D33A **AnnSam, Waubun** 74.79 338 P P 08 03 38.8 -0.8
baz=149,SNR=27
PFO **Pinyon Flats O** 74.82 316 P P 08 03 41.6 +1.4
baz=130,SNR=51
PFO **Pinyon Flats O** 74.82 316 *e*P P 08 03 41.6 +1.4
comp=Z,118nm,0.9s
PFO **Pinyon Flats O** 74.82 316 *e*P P 08 03 41.6 +1.4
PFO pmax pmax
comp=Z,120nm,1.0s
PKCU **Pink Cliffs** 74.86 322 *e*P P 08 03 42.3 +1.7
comp=Z,76nm,0.9s
KNB **Kanab** 74.86 321 *e*P P 08 03 42.3 +1.8
comp=Z,683nm,1.0s
KNB **Kanab** 74.86 321 *e*P P 08 03 42.3 +1.8
KNB pmax pmax
comp=Z,680nm,1.0s
C34A **RKJ Ranch, Bem** 74.91 339 P P 08 03 39.4 -0.8
baz=150,SNR=158
LDFC **Landfair** 74.93 318 *e*P P 08 03 43.0 +2.2
comp=Z,308nm,0.9s
E31A **Nome** 75.03 336 P P 08 03 40.3 -0.6
baz=147,SNR=164
SRU **San Rafael Swe** 75.03 324 *e*P P 08 03 42.4 +1.0
comp=Z,476nm,0.9s
SRU **San Rafael Swe** 75.03 324 *e*P P 08 03 42.4 +1.0
SRU pmax pmax
comp=Z,480nm,0.9s
GMRC **Granite Mounta** 75.08 318 P P 08 03 43.0 +1.4
baz=131,SNR=295
LCMT **Little Creek M** 75.11 321 *e*P P 08 03 43.6 +1.8
comp=Z,152nm,0.9s
B35A **Bob, Littlefor** 75.14 340 P P 08 03 40.6 -0.8
baz=151,SNR=248
TSUM **Tsumeb** 75.18 105 P P 08 03 42.5 -0.1
comp=Z,551nm,0.8s,baz=238,slow=5.7,SNR=601
TSUM pP pP 08 05 36.7 +0.6
comp=Z,39nm,0.9s,baz=233,slow=5.5,SNR=3.5
TSUM S S 08 12 36.9 -1.5
comp=Z,4.3nm,0.9s,baz=122,slow=22,SNR=13
TSUM **Tsumeb** 75.18 105 *e*P P 08 03 42.8 +0.2
comp=Z,636nm,0.8s
TSUM pP pP 08 05 36.7 +0.6
TSUM S S 08 12 36.9 -1.5
RWWY **Rawlins** 75.19 328 *e*P P 08 03 42.6 +0.3
comp=Z,535nm,0.8s
D32A **Dogwood Acres,** 75.20 337 P P 08 03 41.1 -0.7
baz=148,SNR=50
MTPU **Mount Pierson** 75.20 322 *e*P P 08 03 43.9 +1.3
comp=Z,196nm,0.9s
Q16A **Castle Valley** 75.25 323 *e*P P 08 03 44.1 +1.5
comp=Z,789nm,1.7s
MURC **Murrieta** 75.29 316 P P 08 03 44.0 +1.3
baz=130,SNR=46
C33A **Trail** 75.29 338 P P 08 03 41.6 -0.7
baz=149,SNR=104
D31A **Mcclaflin, Tow** 75.38 337 P P 08 03 42.2 -0.6
baz=148,SNR=82
P17A **Butcher Ranch,** 75.41 324 *e*P P 08 03 44.8 +1.4
comp=Z,563nm,1.0s
SZCU **Shurtz Canyon** 75.41 321 *e*P P 08 03 45.6 +2.1
comp=Z,531nm,1.8s
MSU **Marysvale** 75.53 323 *e*P P 08 03 45.9 +1.7
MSU **Marysvale** 75.53 323 *e*P P 08 03 45.9 +1.7
HEC **Hector,Ludlow** 75.53 317 P P 08 03 45.6 +1.5
baz=130,SNR=49
BBRC **Big Bear Solar** 75.53 317 P P 08 03 45.6 +1.3
baz=130,SNR=59
TMUT **Trail Mountain** 75.54 324 *e*P P 08 03 45.9 +1.6
comp=Z,181nm,0.9s
CCUT **Cedar City** 75.54 321 *e*P P 08 03 46.3 +2.0
comp=Z,313nm,1.0s
B34A **Aery, Baudette** 75.55 339 P P 08 03 43.0 -0.7
baz=150,SNR=107
RSSD **Black Hills** 75.56 331 P P 08 03 44.5 +0.3
baz=142
RSSD **Black Hills** 75.56 331 *e*P P 08 03 45.2 +1.0
comp=Z,203nm,0.9s
RSSD **Black Hills** 75.56 331 *e*P P 08 03 45.3 +1.0
RSSD pmax pmax
comp=Z,200nm,1.0s
K22A **Casper** 75.58 329 P P 08 03 45.1 +0.8
baz=139,SNR=181
K22A **Casper** 75.58 329 *e*P P 08 03 45.5 +1.2
comp=Z,598nm,1.4s

C32A **Crookston** 75.61 338 P P 08 03 43.9 -0.2
baz=149,SNR=22
TUQ **Turquoise Moun** 75.67 318 P P 08 03 46.3 +1.4
baz=131,SNR=56
B33A **Robert and Kas** 75.67 339 P P 08 03 44.0 -0.5
baz=150,SNR=119
SCI2 **San Clemente I** 75.78 315 P P 08 03 46.4 +1.0
baz=128,SNR=10
AGMN **Agassiz Nation** 75.79 338 P P 08 03 44.4 -0.6
baz=149,SNR=202
AGMN **Agassiz Nation** 75.79 338 *e*P P 08 03 45.0 0.0
comp=Z,364nm,1.0s
SHPR **Sheep Range** 75.90 319 *e*P P 08 03 48.0 +1.7
comp=Z,136nm,0.9s
CIS **Catalina Islan** 75.95 315 P P 08 03 47.6 +1.2
baz=129,SNR=24
RRX **Edison Barstow** 75.98 317 P P 08 03 48.1 +1.7
baz=130,SNR=20
BFSC **Mount Baldy Ra** 75.99 316 P P 08 03 47.8 +1.0
baz=129,SNR=72
C31A **Landman Farms,** 76.01 337 P P 08 03 45.8 -0.6
baz=148,SNR=120
FMP **Fort Macarthur** 76.07 316 P P 08 03 48.2 +1.3
baz=129,SNR=7.0
SBA **Scott Base** 76.09 190 *e*P P 08 03 48.2 +1.8
comp=Z,394nm,1.4s
SBA **Scott Base** 76.09 190 *e*P P 08 03 48.2 +1.8
SBA pmax pmax
comp=Z,390nm,1.3s
B32A **Ashes, Strandq** 76.10 338 P P 08 03 46.3 -0.5
baz=149,SNR=366
GSC **Goldstone, Bar** 76.13 318 P P 08 03 48.6 +1.2
baz=130,SNR=123
GSC **Goldstone, Bar** 76.13 318 *e*P P 08 03 49.0 +1.6
comp=Z,243nm,1.0s
GSC **Goldstone, Bar** 76.13 318 *e*P P 08 03 49.0 +1.6
GSC pmax pmax
comp=Z,240nm,1.0s
A33A **Warroad** 76.18 339 P P 08 03 47.0 -0.2
baz=150,SNR=368
SHOC **Shoshone, Teco** 76.19 318 P P 08 03 49.1 +1.5
baz=131,SNR=27
MWC **Mount Wilson** 76.24 316 *e*P P 08 03 49.4 +1.2
comp=Z,232nm,1.1s
MWC **Mount Wilson** 76.24 316 *e*P P 08 03 49.4 +1.2
MWC pmax pmax
comp=Z,230nm,1.1s
BLKC **Black Mountain** 76.25 317 *e*P P 08 03 49.6 +1.5
MPU **Maple Canyon** 76.28 324 *e*P P 08 03 49.8 +1.5
comp=Z,300nm,1.0s
PASC **Pasadena Art C** 76.29 316 *e*P P 08 03 49.6 +1.4
comp=Z,305nm,1.1s
DECC **Green Verdugo** 76.43 316 P P 08 03 50.3 +1.3
baz=129,SNR=45
NLU **North Lily Min** 76.48 324 *e*P P 08 03 51.0 +1.6
comp=Z,351nm,1.3s
PSUT **Pine Spring** 76.50 322 *e*P P 08 03 51.0 +1.5
comp=Z,246nm,0.9s
B31A **Greenbush Farm** 76.52 337 P P 08 03 48.7 -0.4
baz=148,SNR=134
A32A **Rocking H Ranc** 76.53 338 P P 08 03 48.7 -0.5
baz=149,SNR=101
SNCC **San Nicolas Is** 76.59 315 P P 08 03 50.8 +0.9
baz=128,SNR=6.7
JLU **Jordanelle** 76.59 325 *e*P P 08 03 51.1 +1.1
comp=Z,346nm,0.9s
EDW2 **Edwards Air Fo** 76.61 317 P P 08 03 50.8 +0.8
baz=129,SNR=98
BLCC **Black Canyon** 76.65 316 *e*P P 08 03 52.9 +2.7
SCHQ **Schefferville** 76.67 358 P P 08 03 49.8 0.0
comp=Z,241nm,0.8s,baz=171,slow=4.3,SNR=82
SCHQ pP pP 08 05 44.8 +0.8
comp=Z,70nm,1.0s,baz=173,slow=5.7,SNR=5.2
SCHQ **Schefferville** 76.67 358 *e*P P 08 03 49.9 +0.1
comp=Z,310nm,0.8s
SCHQ pP pP 08 05 44.8 +0.8
MDND **Maddock** 76.75 336 P P 08 03 50.6 +0.2
baz=146,SNR=232
MDND **Maddock** 76.75 336 *e*P P 08 03 50.7 +0.3
comp=Z,1µm,0.9s
A31A **Linda, St. Vin** 76.79 338 P P 08 03 50.3 -0.2
baz=148,SNR=29
LRMC **Laurel Mtn Rad** 76.79 317 P P 08 03 52.5 +1.4
baz=130,SNR=19
BLG **Laguna Peak, P** 76.82 315 P P 08 03 52.2 +1.0
baz=128,SNR=26
CTU **Camp Tracy** 76.82 324 *e*P P 08 03 52.8 +1.6
comp=Z,165nm,1.1s
TPNV **Topopah Spring** 76.85 319 P P 08 03 52.8 +1.4
baz=131,SNR=261
TPNV **Topopah Spring** 76.85 319 *e*P P 08 03 53.0 +1.6
comp=Z,279nm,1.0s
TPNV **Topopah Spring** 76.85 319 *e*P P 08 03 53.0 +1.6
TPNV pmax pmax
comp=Z,280nm,1.0s
OSI **Osito Audit: C** 76.91 316 P P 08 03 52.8 +1.2
baz=129,SNR=16
OSI **Osito Audit: C** 76.91 316 *e*P P 08 03 53.5 +1.8
comp=Z,197nm,0.8s
FURC **Furnace Creek,** 76.92 318 P P 08 03 53.0 +1.5
baz=130,SNR=132
TCUT **Toone Canyon** 76.94 325 *e*P P 08 03 53.0 +1.1
comp=Z,776nm,1.3s
MPMC **Manual Prospec** 77.04 318 P P 08 03 53.1 +0.6
baz=130,SNR=134
DUG **Dugway, Tooele** 77.05 324 P P 08 03 53.4 +0.9
baz=134,SNR=302
DUG **Dugway, Tooele** 77.05 324 *e*P P 08 03 53.2 +0.8
comp=Z,261nm,1.0s
DUG **Dugway, Tooele** 77.05 324 *e*P P 08 03 53.2 +0.8
DUG pmax pmax
comp=Z,260nm,1.0s
VNDA **Vanda** 77.07 189 P P 08 03 53.1 +1.3
comp=Z,170nm,0.9s,baz=134,slow=5.0,SNR=529
VNDA pP pP 08 05 46.7 +0.7
comp=Z,20nm,0.9s,baz=141,slow=5.2,SNR=2.1
VNDA **Vanda** 77.07 189 *e*P P 08 03 53.3 +1.5
comp=Z,218nm,0.9s
VNDA pP pP 08 05 46.7 +0.7
VNDA **Vanda** 77.07 189 *e*P P 08 03 53.3 +1.5
VNDA pmax pmax
comp=Z,220nm,0.9s
SCZ2 **Santa Cruz Isl** 77.12 315 P P 08 03 54.0 +1.2
baz=128,SNR=20
BW06 **Boulder Array** 77.16 327 P P 08 03 53.2 +0.2
baz=137,SNR=148
BW06 **Boulder Array** 77.16 327 *e*P P 08 03 53.7 +0.6
comp=Z,673nm,1.7s
PD31 **Pinedale Array** 77.16 327 *e*P P 08 03 53.5 +0.4
PDAR **Pinedale Array** 77.16 327 P P 08 03 53.2 +0.1
comp=Z,74nm,0.8s,baz=134,slow=7.1,SNR=480
PDAR pP pP 08 05 48.7 +1.3
comp=Z,22nm,1.0s,baz=134,slow=4.3,SNR=4.1
PDAR PKKPbc PKKPbc 08 22 53.9 -2.5
comp=Z,1.7nm,0.7s,baz=248,slow=1.6,SNR=7.3
PDAR PKPPKP P'P'df 08 30 40.4 -15
comp=Z,0.6nm,0.6s,baz=218,slow=1.7,SNR=3.5
PDAR **Pinedale Array** 77.16 327 *e*P P 08 03 53.5 +0.4
PDAR pP pP 08 05 48.7 +1.3
PDAR PKKPbc PKKPbc 08 22 53.9 -2.5
PDAR P'P' 08 30 40.4
DAC **Darwin (Calif)** 77.25 318 *e*P P 08 03 54.8 +1.2
comp=Z,236nm,1.0s
DAC **Darwin (Calif)** 77.25 318 *e*P P 08 03 54.8 +1.2
DAC pmax pmax
comp=Z,240nm,1.0s
ARVC **Arvin** 77.30 316 P P 08 03 54.7 +1.1
baz=129,SNR=18
HWUT **Hardware Ranch** 77.36 325 *e*P P 08 03 54.9 +0.8
comp=Z,337nm,1.1s
R11A **Troy Canyon, C** 77.38 321 P P 08 03 55.6 +1.3
baz=132,SNR=440
R11A **Troy Canyon, C** 77.38 321 *e*P P 08 03 55.6 +1.3
comp=Z,262nm,1.0s
ISA **Isabella, Lake** 77.41 317 P P 08 03 55.5 +1.1
baz=129,SNR=147
ISA **Isabella, Lake** 77.41 317 *e*P P 08 03 55.5 +1.1
comp=Z,179nm,0.8s
ISA **Isabella, Lake** 77.41 317 *e*P P 08 03 55.5 +1.1
ISA pmax pmax
comp=Z,180nm,0.9s
SBC **Santa Barbara** 77.44 315 P P 08 03 55.8 +1.3
baz=128
ULM **Lac du Bonnet** 77.47 339 P P 08 03 53.6 -0.7
comp=Z,202nm,0.9s,baz=148,slow=5.8,SNR=253
ULM pP pP 08 05 49.7 +0.9
comp=Z,69nm,0.9s,baz=192,slow=6.5,SNR=6.6

ULM S S 08 12 57.4 -3.7
comp=Z,10nm,1.1s,baz=65,slow=22,SNR=10
ULM PKPPKP P'P'df 08 30 48.4 -5.8
comp=Z,3.0nm,0.9s,baz=359,slow=4.2,SNR=3.5
ULM **Lac du Bonnet** 77.47 339 *e*P P 08 03 53.7 -0.5
comp=Z,1µm,1.5s
ULM pP pP 08 05 49.7 +0.9
ULM S S 08 12 57.4 -3.7
ULM P'P' 08 30 48.4
ULM **Lac du Bonnet** 77.47 339 *e*P P 08 03 53.7 -0.5
ULM pmax pmax
comp=Z,1µm,1.5s
CWC **Cottonwood Cre** 77.65 318 P P 08 03 57.2 +1.5
baz=130
BGU **Big Grassy Mou** 77.67 324 *e*P P 08 03 56.8 +1.0
comp=Z,380nm,1.0s
PKM **Mcpherson Peak** 77.78 316 P P 08 03 57.9 +1.3
baz=128,SNR=98
VES **Vestal, Richgr** 77.91 317 P P 08 03 58.2 +1.2
baz=129,SNR=171
AHID **Auburn Hatcher** 77.95 326 *e*P P 08 03 58.9 +1.6
comp=Z,538nm,0.9s
HVU **Hansel Valley** 78.13 325 *e*P P 08 03 59.5 +1.3
comp=Z,287nm,1.0s
HVU **Hansel Valley** 78.13 325 *e*P P 08 03 59.5 +1.3
HVU pmax pmax
comp=Z,290nm,1.0s
TIN **Tinemaha, Big** 78.13 318 P P 08 03 59.9 +1.6
baz=130,SNR=26
SMMC **Simmler** 78.16 316 P P 08 04 00.0 +1.6
baz=128,SNR=53
REDW **Red Top Meadow** 78.25 327 *e*P P 08 03 59.7 +0.8
comp=Z,301nm,1.0s
SNOW **Snow King Moun** 78.27 327 *e*P P 08 04 00.7 +1.6
comp=Z,163nm,0.9s
LOHW **Long Hollow** 78.30 327 *e*P P 08 03 60.0 +0.8
comp=Z,318nm,0.9s
PFVI **Vila Bisbo** 78.34 42 *e*P P 08 04 00.3 +1.1
comp=Z,450nm,1.2s
PFVI *i*P pP 08 05 53.5 -0.6
PFVI **Vila Bisbo** 78.34 42 *e*P P 08 04 00.3 +1.1
comp=Z,346nm,1.0s
TPAW **Teton Pass** 78.39 327 *e*P P 08 04 00.8 +1.0
comp=Z,210nm,1.1s
MDT **Midelt** 78.47 47 P P 08 04 01.3 +1.1
comp=Z,238nm,0.9s,baz=248,slow=5.3,SNR=256
MOOW **Moose Ponds** 78.47 327 *e*P P 08 04 01.0 +0.9
comp=Z,231nm,0.9s
LAO **LASA Array** 78.53 332 P P 08 04 00.0 -0.1
baz=140,SNR=107
LAO **LASA Array** 78.53 332 *e*P P 08 04 00.7 +0.6
comp=Z,443nm,0.9s
FXWY **Fox Creek** 78.53 327 *e*P P 08 04 01.3 +0.9
comp=Z,120nm,0.9s
MORF **Marmelete** 78.56 42 *e*P P 08 04 00.9 +0.3
MORF AMb AMB 08 04 02.8
comp=Z,446nm,1.4s
MORF *e*S S 08 13 14.9 +1.7
MORF **Marmelete** 78.56 42 *e*P P 08 04 01.3 +0.8
comp=Z,446nm,1.2s
MORF *i*P pP 08 05 54.7 -0.7
MORF **Marmelete** 78.56 42 *e*P P 08 04 00.8 +0.3
MORF *e*S S 08 13 14.9 +1.7
PAGB **Antelope Grade** 78.58 316 *e*P P 08 04 01.9 +1.3
comp=Z,360nm,0.8s
PTEO **Sao Teotonio** 78.67 42 *e*P P 08 04 02.1 +1.1
comp=Z,885nm,1.1s
PTEO *i*P pP 08 05 54.8 -1.1
IMW **Indian Meadow** 78.68 327 *e*P P 08 04 02.5 +1.2
comp=Z,484nm,0.9s
RLMT **Red Lodge** 78.75 329 P P 08 04 01.9 +0.3
baz=138,SNR=371
RLMT **Red Lodge** 78.75 329 *e*P P 08 04 02.3 +0.8
comp=Z,328nm,0.9s
BOSA **Boshof** 78.83 116 P P 08 04 01.7 -0.7
comp=Z,245nm,0.9s,baz=252,slow=4.5,SNR=195
BOSA S S 08 13 12.7 -4.1
comp=Z,9.9nm,0.7s,baz=16,slow=18,SNR=4.6
BOSA PKKPbc PKKPbc 08 22 51.4 +0.5
comp=Z,3.0nm,0.8s,baz=50,slow=1.9,SNR=6.5
BOSA **Boshof** 78.83 116 *e*P P 08 04 02.0 -0.4
comp=Z,309nm,0.9s
BOSA S S 08 13 12.7 -4.1
BOSA PKKPbc PKKPbc 08 22 51.4 +0.5
BOSA **Boshof** 78.83 116 *e*P P 08 04 02.0 -0.4
BOSA pmax pmax
comp=Z,310nm,1.0s
H17A **Grant Village** 78.86 328 P P 08 04 03.4 +1.2
baz=136,SNR=141
H17A **Grant Village** 78.86 328 *e*P P 08 04 04.2 +2.0
comp=Z,102nm,0.8s
MLAC **Mammoth, Mammo** 78.87 318 P P 08 04 03.4 +1.1
baz=129,SNR=49
YPP **Pitchstone Pla** 78.88 328 *e*P P 08 04 04.3 +1.9
comp=Z,174nm,1.5s
VAH **Vaihoa** 78.95 258 *e*P P 08 04 04.7 +1.7
comp=Z,290nm,1.1s
OMMB **Old Mammoth Mi** 78.96 318 *e*P P 08 04 03.9 +0.9
comp=Z,251nm,0.9s
PBDV **Barranco-do-Ve** 78.97 42 *e*P P 08 04 03.7 +1.1
comp=Z,629nm,1.4s
PBDV *i*P pP 08 05 58.7 +1.0
PSMM **Smith Mountain** 79.01 316 *e*P P 08 04 05.1 +2.1
MDPB **Devils Postpil** 79.02 318 *e*P P 08 04 04.9 +1.6
comp=Z,164nm,0.9s
YFT **Old Faithful** 79.03 328 *e*P P 08 04 06.1 +3.1
comp=Z,155nm,0.9s
NV01 **Mina Array Sit** 79.05 319 *e*P P 08 04 04.4 +1.1
NVAR **Mina Array Bea** 79.05 319 P P 08 04 04.3 +1.0
comp=Z,121nm,0.9s,baz=141,slow=5.0,SNR=505
NVAR pP pP 08 06 00.1 +1.8
comp=Z,21nm,0.9s,baz=150,slow=7.2,SNR=6.2
NVAR PKKPbc PKKPbc 08 22 52.1 +0.3
comp=Z,3.0nm,0.8s,baz=279,slow=2.1,SNR=7.8
NVAR PKP2bc 08 30 37.0
comp=Z,0.6nm,0.7s,baz=344,slow=1.5,SNR=4.5
NVAR PKPPKP P'P'df 08 30 51.9 -1.0
comp=Z,1.7nm,0.8s,baz=250,slow=3.4,SNR=5.7
DGMT **Dagmar** 79.06 334 P P 08 04 03.6 +0.8
baz=142,SNR=353
DGMT **Dagmar** 79.06 334 *e*P P 08 04 04.0 +1.1
comp=Z,1µm,0.9s
LHV **Little Huntoon** 79.06 319 *e*P P 08 04 04.4 +1.3
YNR **Norris Junctio** 79.14 328 *e*P P 08 04 06.1 +2.5
comp=Z,133nm,1.0s
PCVE **Castro Verde** 79.14 42 *e*P P 08 04 04.2 +0.7
comp=Z,306nm,1.5s
PCVE *i*P pP 08 05 59.5 +0.9
PMST **Lisbon--Monsan** 79.14 40 *e*P P 08 04 04.6 +1.1
comp=Z,438nm,2.0s
PNCL **Nicolau / Gran** 79.14 41 *e*P P 08 04 04.2 +0.7
comp=Z,304nm,1.2s
PNCL *i*P pP 08 05 59.5 +0.9
LIS **Lisbon** 79.15 40 *e*P P 08 04 04.0 +0.4
LIS AMb AMB 08 04 06.6
comp=Z,393nm,2.0s
LIS *e*S S 08 13 20.9 +1.8
LIS **Lisbon** 79.15 40 *e*P P 08 04 03.9 +0.4
LIS *e*S S 08 13 20.9 +1.8
MESJ **Messejana** 79.16 42 *e*P P 08 04 04.1 +0.5
MESJ AMb AMB 08 04 06.5
comp=Z,388nm,0.9s
MESJ *e*S S 08 13 21.0 +1.7
MESJ **Messejana** 79.16 42 *e*P P 08 04 04.6 +1.0
comp=Z,402nm,1.1s
MESJ *i*P pP 08 05 59.7 +1.0
MESJ **Messejana** 79.16 42 *e*P P 08 04 04.1 +0.5
MESJ *e*S S 08 13 21.0 +1.7
PVAQ **Vaqueiros** 79.20 42 *e*P P 08 04 04.8 +1.0
comp=Z,430nm,1.4s
PVAQ *i*P pP 08 05 59.9 +1.0
PVAQ *e*S S 08 13 22.0 +2.3
PMAFR **Mafra** 79.22 40 *e*P P 08 04 04.6 +0.7
comp=Z,435nm,1.2s
PMPB **Monarch Peak** 79.23 316 *e*P P 08 04 06.5 +2.4
comp=Z,243nm,0.9s
YMR **Madison River** 79.25 328 *e*P P 08 04 05.8 +1.7
comp=Z,478nm,0.9s
PMOR **Pomariorio Ree** 79.27 258 *e*P P 08 04 06.4 +1.7
comp=Z,251nm,1.2s
YHH **Holmes Hill** 79.28 328 *e*P P 08 04 06.0 +1.6
comp=Z,458nm,0.9s
RYN **Ryan** 79.31 319 *e*P P 08 04 05.9 +1.3
comp=Z,192nm,0.9s
KVN **Kaiserville** 79.33 320 *e*P P 08 04 05.3 +0.6
comp=Z,274nm,0.9s
KVN **Kaiserville** 79.33 320 *e*P P 08 04 05.3 +0.6

KVN pmax pmax
comp=Z,270nm,0.9s
YHB Horse Butte 79.42 328 *eP* **P 08 04 06.3 +1.2**
comp=Z,271nm,0.9s
GCMT Greycliff 79.43 329 *eP* **P 08 04 05.2 +0.2**
PBEJ Beja 79.50 42 *eP* **P 08 04 06.3 +0.9**
comp=Z,300nm,1.3s
PBEJ *i* P **pP 08 06 01.1 +0.5**
TVO Taravao 79.55 255 *eP* **P 08 04 07.8 +1.6**
comp=Z,32nm,1.1s
SFS San Fernando 79.58 44 *eP* **P 08 04 07.8 +2.0**
SFS pmax pmax
comp=Z,150nm,1.2s
QLMT Earthquake Lak 79.59 328 *eP* **P 08 04 08.2 +2.1**
BAVM Antelope Valle 79.64 316 *eP* **P 08 04 07.4 +1.1**
BVL Bear Valley 79.70 316 *eP* **P 08 04 07.9 +1.4**
BMN Battle Mountai 79.70 321 *eP* **P 08 04 07.6 +1.0**
comp=Z,42nm,1.1s
BMN Battle Mountai 79.70 321 *eP* **P 08 04 06.8 +0.2**
BMN pmax pmax
comp=Z,42nm,1.1s
EVO Evora 79.72 41 *eP* **P 08 04 07.2 +0.6**
comp=Z,247nm,1.2s
EVO *i* P **pP 08 06 02.3 +0.4**
ALMR Almeirim 79.78 40 *eP* **P 08 04 07.2 +0.3**
ALMR AMb AMB 08 04 09.6
comp=Z,1μm,1.0s
ALMR *e*S **S 08 13 27.3 +1.7**
ALMR Almeirim 79.78 40 *eP* **P 08 04 07.5 +0.7**
comp=Z,1μm,1.1s
ALMR *i* P **pP 08 06 01.2 -0.9**
ALMR Almeirim 79.78 40 *eP* **P 08 04 07.1 +0.3**
ALMR *e*S **S 08 13 27.2 +1.7**
WAKR Walker 79.79 319 *eP* **P 08 04 09.1 +1.9**
comp=Z,217nm,1.0s
PAE Paea 79.88 255 *eP* **P 08 04 09.5 +1.6**
comp=Z,20nm,1.1s
PPT2 Papeete2 79.90 255 *eP* **P 08 04 09.7 +1.6**
comp=Z,105nm,1.2s
PPT Papeete 79.91 255 P **P 08 04 09.2 +1.1**
comp=Z,75nm,0.9s,baz=128,slow=4.0,SNR=6.8
YERR Yerington 79.97 319 *eP* **P 08 04 10.1 +2.0**
comp=Z,237nm,0.9s
SAO San Andreas Ge 79.98 316 *eP* **P 08 04 09.4 +1.5**
comp=Z,80nm,0.9s
SAO San Andreas Ge 79.98 316 *eP* **P 08 04 09.4 +1.5**
SAO pmax pmax
comp=Z,80nm,0.9s
CMB Columbia Colle 80.08 318 *eP* **P 08 04 09.4 +0.9**
comp=Z,92nm,1.2s
CMB Columbia Colle 80.08 318 *eP* **P 08 04 09.4 +0.9**
CMB pmax pmax
comp=Z,92nm,1.2s
PBAR Barrancos 80.10 42 *eP* **P 08 04 09.3 +0.8**
comp=Z,623nm,1.2s
PTOM Tomar 80.17 40 *eP* **P 08 04 09.7 +0.8**
comp=Z,1μm,1.0s
PTOM *i* P **pP 08 06 05.0 +0.7**
PESTR Estremoz 80.19 41 *eP* **P 08 04 09.8 +0.8**
comp=Z,466nm,1.2s
PESTR *i* P **pP 08 06 04.9 +0.4**
PESTR Estremoz 80.19 41 *eP* **P 08 04 10.1 +1.1**
comp=Z,243nm,1.2s
HLID Hailey 80.24 325 P **P 08 04 10.5 +1.2**
baz=133,SNR=719
HLID Hailey 80.24 325 *eP* **P 08 04 10.8 +1.4**
comp=Z,378nm,0.9s
BOZ Bozeman (W) 80.24 328 P **P 08 04 09.7 +0.4**
baz=136,SNR=160
BOZ Bozeman (W) 80.24 328 *eP* **P 08 04 10.1 +0.8**
comp=Z,98nm,1.0s
BOZ Bozeman (W) 80.24 328 *eP* **P 08 04 10.1 +0.8**
BOZ pmax pmax
comp=Z,98nm,1.0s
PNTR Pine Nut 80.25 319 *eP* **P 08 04 11.1 +1.5**
comp=Z,371nm,0.9s
MCMT McKenzie Canyo 80.30 327 *eP* **P 08 04 11.2 +1.4**
LBTB Lobatse 80.31 113 *eP* **P 08 04 09.9 -0.3**
comp=Z,309nm,0.8s
LBTB Lobatse 80.31 113 *eP* **P 08 04 09.9 -0.3**
LBTB pmax pmax
comp=Z,310nm,0.8s
PCAS Casmilo, Conde 80.39 40 *eP* **P 08 04 10.9 +0.9**
comp=Z,528nm,1.2s
VCNR Virginia City 80.41 319 *eP* **P 08 04 12.0 +1.5**
comp=Z,156nm,1.1s
PAHR Pah Rah Range 80.51 320 *eP* **P 08 04 12.4 +1.5**
comp=Z,254nm,1.0s
COI Coimbra 80.54 40 *eP* P 08 04 19.0 +8.2
COI pmax pmax
comp=Z,717nm,1.1s
DLMT Dillon 80.55 327 *eP* **P 08 04 11.8 +0.9**
comp=Z,337nm,1.1s
RDG13 Poverty Ridge 80.57 317 *eP* **P 08 04 12.4 +1.3**
comp=Z,77nm,0.9s
RUBR Rubicon Trail 80.57 319 *eP* **P 08 04 13.2 +2.0**
comp=Z,179nm,1.0s
PMRV Marv??o 80.66 41 *eP* **P 08 04 11.3 -0.2**
comp=Z,183nm,1.2s
PMRV *e*S **S 08 13 34.5 -0.1**
TAM Tamanrasset 80.79 61 *eP* **P 08 04 13.7 +1.0**
comp=Z,646nm,1.2s
TAM Tamanrasset 80.79 61 *eP* **P 08 04 13.7 +1.0**
TAM pmax pmax
comp=Z,650nm,1.2s
LRM Limekiln Ridge 80.80 328 *eP* **P 08 04 13.2 +0.9**
PCBR Castelo Branco 80.87 40 *eP* **P 08 04 12.7 +0.2**
comp=Z,262nm,1.0s
PCBR *i* P **pP 08 06 09.1 +0.9**
MFID Camas Ranch 80.89 324 *eP* **P 08 04 14.2 +1.5**
comp=Z,202nm,1.0s
AFDM Forest Hills D 81.01 318 *eP* **P 08 04 14.0 +0.7**
comp=Z,115nm,0.9s
PTO Porto 81.02 39 *eP* **P 08 04 14.4 +1.2**
EGMT Eagleton 81.12 331 P **P 08 04 13.4 -0.2**
baz=137,SNR=254
EGMT Eagleton 81.12 331 *eP* **P 08 04 14.0 +0.3**
comp=Z,399nm,0.9s
HRY Holter Researc 81.13 329 *eP* **P 08 04 14.9 +1.1**
PVIS Viseu 81.17 39 *eP* **P 08 04 14.4 +0.3**
comp=Z,268nm,1.5s
PVIS *i* P **pP 08 06 10.9 +1.0**
MTE Manteigas 81.18 40 *eP* **P 08 04 14.7 +0.5**
comp=Z,346nm,1.1s
MTE *i* P **pP 08 06 09.9 -0.1**
MTE *e*S **S 08 13 38.2 -1.7**
MTE Manteigas 81.18 40 *eP* **P 08 04 14.8 +0.7**
comp=Z,249nm,0.9s
BEKR Beckworth 81.20 319 *eP* **P 08 04 15.8 +1.4**
comp=Z,155nm,1.1s
PVRL Vila Real 81.63 39 *eP* **P 08 04 17.0 +0.6**
comp=Z,601nm,1.4s
PVRL *i* P **pP 08 06 13.7 +1.3**
POLO Lamas de Olo 81.64 39 *eP* **P 08 04 17.1 +0.5**
comp=Z,202nm,1.7s
POLO *i* P **pP 08 06 12.1 -0.5**
ORV Oroville 81.70 319 *eP* **P 08 04 19.0 +2.2**
comp=Z,273nm,1.3s
ORV Oroville 81.70 319 *eP* **P 08 04 19.0 +2.2**
ORV pmax pmax
comp=Z,270nm,1.2s
PCAB Cabril 81.72 39 *eP* **P 08 04 17.3 +0.4**
comp=Z,479nm,1.3s
PCAB *i* P **pP 08 06 14.0 +1.1**
PGAV Gavieira, Arco 81.74 38 *eP* **P 08 04 17.5 +0.4**
comp=Z,418nm,1.7s
PGAV *e*S **S 08 13 49.5 +3.9**
WVOR Wild Horse Val 81.81 322 *eP* **P 08 04 18.4 +1.0**
comp=Z,55nm,1.0s
WVOR Wild Horse Val 81.81 322 *eP* **P 08 04 18.4 +1.0**
WVOR pmax pmax
comp=Z,55nm,1.0s
MVO Moncorvo 81.96 40 *eP* **P 08 04 19.0 +0.8**
comp=Z,690nm,1.5s
MVO *i* P **pP 08 06 15.4 +1.1**
MVO *e*S **S 08 13 51.0 +3.3**
OLHC Oulhaca 82.03 47 P P 08 04 25.0 +6.4
GDXM Geysers 82.06 317 *eP* **P 08 04 20.6 +1.9**
comp=Z,69nm,1.0s
MSO Missoula 82.25 328 P **P 08 04 19.8 +0.3**
baz=134,SNR=98
MSO Missoula 82.25 328 *eP* **P 08 04 20.1 +0.6**
comp=Z,132nm,1.3s
MAW Mawson 82.30 162 P **P 08 04 19.8 +0.5**
comp=Z,585nm,0.8s,baz=223,slow=6.1,SNR=872
MAW pP **pP 08 06 15.9 +0.4**
comp=Z,69nm,0.9s,baz=246,slow=5.6,SNR=6.5
MAW PKKPbc **PKKPbc 08 22 41.9 -2.7**
comp=Z,12nm,0.8s,baz=347,slow=3.8,SNR=16
MAW PKPPKP **P'P'df 08 30 44.4 -3.5**
comp=Z,7.0nm,1.0s,baz=340,slow=3.4,SNR=6.6
MAW Mawson 82.30 162 *eP* **P 08 04 20.1 +0.7**
comp=Z,144nm,0.8s
MAW pP **pP 08 06 15.9 +0.4**
MAW PKKPbc **PKKPbc 08 22 41.9 -2.7**
MAW P'P' 08 30 44.4
MAW Mawson 82.30 162 *eP* **P 08 04 20.1 +0.7**
MAW pmax pmax
comp=Z,140nm,0.9s
J08A Circle Bar Ran 82.31 323 *eP* **P 08 04 21.0 +1.1**
comp=Z,520nm,0.9s
O03D Paynes Creek 82.33 319 P **P 08 04 19.3 -0.8**
baz=127,SNR=48
HOPS Hopland Field 82.34 317 *eP* **P 08 04 20.0 -0.1**
comp=Z,196nm,1.4s
MOD Modoc Plateau 82.43 321 *eP* **P 08 04 21.7 +1.1**
comp=Z,214nm,1.4s
PBRG Braganca 82.53 39 *eP* **P 08 04 21.7 +0.7**
comp=Z,794nm,1.5s
PBRG *i* P **pP 08 06 18.0 +0.7**
GHMM Hull Mountain 82.55 318 *eP* **P 08 04 21.6 +0.3**
PAB San Pablo 82.60 42 *eP* **P 08 04 22.0 +0.6**
comp=Z,569nm,1.1s
PAB San Pablo 82.60 42 *eP* **P 08 04 21.6 +0.1**
PAB pmax pmax
comp=Z,570nm,1.1s
BMO Blue Mountains 82.64 325 *eP* **P 08 04 22.5 +1.0**
comp=Z,639nm,1.8s
BMO Blue Mountains 82.64 325 *eP* **P 08 04 22.5 +1.0**
BMO pmax pmax
comp=Z,640nm,1.8s
USTO Oran 82.89 47 P **P 08 04 26.0 +3.2**
ESDC Sonseca Array 82.92 42 P **P 08 04 23.2 +0.2**
comp=Z,406nm,1.0s,baz=239,slow=4.7,SNR=689
ESDC PKKPbc **PKKPbc 08 22 41.6 -1.2**
comp=Z,0.3nm,0.4s,baz=31,slow=2.5,SNR=5.0
ESDC PKPPKP **P'P'df 08 30 40.7 -5.1**
comp=Z,0.7nm,0.8s,baz=52,slow=2.8,SNR=4.1
ESLA Sonseca Array 82.92 42 *eP* **P 08 04 23.9 +0.8**
comp=Z,471nm,1.0s
ODJA Bouhanifia 82.94 48 P **P 08 04 24.0 +0.8**
WDC Whiskeytown Da 82.96 319 *eP* **P 08 04 22.5 -0.6**
comp=Z,223nm,1.7s
WDC Whiskeytown Da 82.96 319 *eP* **P 08 04 22.5 -0.6**
WDC pmax pmax
comp=Z,220nm,1.7s
ES19 SONSECA Array 82.97 42 *eP* **P 08 04 24.1 +0.8**
JTMT Jette 83.05 328 *eP* **P 08 04 24.1 +0.5**
comp=Z,98nm,0.7s
KCPM Cahto Peak 83.07 318 *eP* **P 08 04 24.8 +0.9**
comp=Z,220nm,1.2s
LGBM Gray Butte 83.21 320 *eP* **P 08 04 25.1 +0.4**
M04C Macdoel 83.26 320 P **P 08 04 25.2 +0.4**
baz=128,SNR=74
FFC Flin Flon 83.26 339 *eP* **P 08 04 24.8 +0.5**
comp=Z,256nm,1.0s
FFC Flin Flon 83.26 339 *eP* **P 08 04 24.8 +0.5**
FFC pmax pmax
comp=Z,260nm,1.0s
K05A Summer Lake 83.28 321 *eP* **P 08 04 26.1 +1.1**
comp=Z,417nm,1.0s
N02D Trinity Center 83.29 319 P **P 08 04 24.6 -0.2**
baz=127,SNR=26
F10A Beach Ranch, E 83.34 326 *eP* **P 08 04 26.2 +1.2**
comp=Z,130nm,1.1s
I07A Izee 83.35 323 *eP* **P 08 04 26.5 +1.4**
comp=Z,176nm,1.1s
BSMT Bassoo Peak 83.37 328 *eP* **P 08 04 25.9 +0.6**
OJBR Djebel Berber 83.42 48 P **P 08 04 24.0 -1.6**
KMRM Mail Ridge 83.46 318 *eP* **P 08 04 27.6 +1.9**
comp=Z,275nm,1.1s
CART Cartagena 83.62 45 *eP* **P 08 04 26.1 -0.3**
comp=Z,481nm,1.3s
M02C Callahan 83.63 319 P **P 08 04 26.3 -0.3**
baz=127,SNR=36
OJGS Djebel Guires 83.65 48 P **P 08 04 25.0 -1.8**
K04D Chiloquin, OR 83.72 321 P **P 08 04 27.8 +0.8**
baz=128,SNR=16
YBH Yreka Blue Hor 83.75 320 P **P 08 04 26.8 -0.4**
comp=Z,52nm,0.8s,baz=114,slow=4.5,SNR=152
YBH pP **pP 08 06 24.6 +0.6**
comp=Z,18nm,1.0s,baz=165,slow=5.7,SNR=7.1
YBH PKKPbc **PKKPbc 08 22 40.8 -0.2**
comp=Z,2.0nm,0.7s,baz=22,slow=5.7,SNR=8.5
YBH Yreka Blue Hor 83.75 320 *eP* **P 08 04 26.6 -0.5**
comp=Z,69nm,0.8s
YBH pP **pP 08 06 24.6 +0.6**
YBH PKKPbc **PKKPbc 08 22 40.8 -0.2**
WALA Waterton Lakes 83.78 329 *eP* **P 08 04 27.4 +0.2**
comp=Z,307nm,1.6s
G08A Pilot Rock 83.82 324 *eP* **P 08 04 28.3 +0.8**
comp=Z,218nm,1.4s
J05D Fort Rock, OR 83.83 322 P **P 08 04 28.3 +0.8**
baz=128,SNR=135
KHMM Horse Mountain 83.86 319 *eP* **P 08 04 28.5 +0.8**
comp=Z,144nm,1.0s
IVI Ivigtut 83.95 7 *eP* **P 08 04 28.5 +1.0**
comp=Z,556nm,1.0s
PINE Pine Mountain 83.97 322 *eP* **P 08 04 29.2 +0.8**
comp=Z,317nm,1.0s
JCC Jacoby Creek, 84.01 318 *eP* **P 08 04 29.7 +1.4**
comp=Z,240nm,1.0s
NRS Narsarsuaq 84.27 9⇓ *i* P **P 08 04 29.3 +0.2**
comp=Z,197nm,0.9s
NRS Narsarsuaq 84.27 9 *i* P pP 08 06 27.4 +1.3
comp=Z,124nm,1.2s
NRS Narsarsuaq 84.27 9 P **P 08 04 29.4 +0.3**
NRS pmax pmax
comp=Z,328nm,1.2s
J04D Umpqua Nationa 84.31 321 P **P 08 04 30.6 +0.6**
baz=127,SNR=32
FCC Fort Churchill 84.41 345 *eP* **P 08 04 29.7 -0.1**
comp=Z,430nm,1.0s
FCC Fort Churchill 84.41 345 *eP* **P 08 04 29.7 -0.1**
FCC pmax pmax
comp=Z,430nm,1.0s
HUMO Hull Mountain 84.42 320 *eP* **P 08 04 30.0 -0.3**
comp=Z,59nm,1.1s
I05D Terrebonne, OR 84.54 322 P **P 08 04 31.9 +1.0**
baz=128,SNR=139
L02D Cave Junction, 84.54 320 P **P 08 04 31.8 +0.8**
baz=126,SNR=43
BLWY Bulawayo 84.63 109 *i* P **P 08 04 30.7 -1.4**
BLWY Bulawayo 84.63 109 *i* P **P 08 04 30.7 -1.4**
E08A Dider Farm, El 84.64 325 *eP* **P 08 04 31.5 +0.2**
comp=Z,430nm,1.8s
G06A Carlson Farm, 84.70 323 *eP* **P 08 04 33.1 +1.4**
comp=Z,328nm,1.1s
F07A Phinny Hill Vi 84.73 324 *eP* **P 08 04 33.1 +1.4**
comp=Z,368nm,1.2s
NEW Newport 84.80 327 S **SKSac 08 14 03.0 -1.7**
comp=Z,2.7nm,0.9s,baz=101,slow=23,SNR=6.9
NEW PKKPbc PKKPbc 08 22 37.5 -1.4
comp=Z,5.6nm,0.8s,baz=342,slow=2.6,SNR=7.2
NEW Newport 84.80 327 P **P 08 04 31.6 -0.6**
baz=132,SNR=57
NEW Newport 84.80 327 *eP* **P 08 04 32.3 +0.2**
comp=Z,51nm,0.8s
NEW S **SKSac 08 14 03.0 -1.7**
NEW PKKPbc **PKKPbc 08 22 37.5 -1.4**
NEW Newport 84.80 327 *eP* **P 08 04 32.3 +0.2**
NEW pmax pmax
comp=Z,51nm,0.8s
I04A Tendick Farm, 84.81 322 P **P 08 04 32.4 +0.1**
baz=127,SNR=6.8
HAWA Hanford 84.83 325 *eP* **P 08 04 32.8 +0.6**
comp=Z,334nm,1.1s
IRO Indian Ridge 84.85 322 *eP* **P 08 04 33.1 +0.4**
D08A Wollman Farm, 84.93 326 *eP* **P 08 04 33.7 +1.0**
comp=Z,455nm,1.1s
KBO Bosley Butte 84.94 319 *eP* **P 08 04 34.2 +1.2**
comp=Z,445nm,1.2s
WAH2 Wahluke Slope 85.08 325 *eP* **P 08 04 33.8 +0.4**
C09A Chrisman Ranch 85.08 327 *eP* **P 08 04 34.2 +0.8**
comp=Z,338nm,0.8s
G05D Wamic, OR 85.08 323 P **P 08 04 34.5 +1.0**
baz=128,SNR=96
H04A Detroit Lake 85.23 322 *eP* **P 08 04 34.6 +0.4**
comp=Z,175nm,1.0s
I03D Drain, OR 85.30 321 P **P 08 04 35.3 +0.7**
baz=126,SNR=29
TDH Tom, Dick, Har 85.37 323 *eP* **P 08 04 35.3 +0.2**
KEBM Edson Butte 85.39 320 *eP* **P 08 04 35.9 +0.8**
comp=Z,397nm,1.0s
FRB Frobisher Bay 85.65 358 P **P 08 04 35.2 -0.5**
comp=Z,79nm,1.0s,baz=173,slow=4.9,SNR=50
FRB pP **pP 08 06 33.9 +0.7**
comp=Z,86nm,1.0s,baz=181,slow=5.9,SNR=7.1
G04A Mulino 85.71 323 *eP* **P 08 04 37.2 +0.7**
COR Corvallis 85.80 322 *eP* **P 08 04 37.8 +0.8**
comp=Z,556nm,1.3s
COR Corvallis 85.80 322 *eP* **P 08 04 38.3 +1.4**
COR *e**PP **pP 08 06 37.2 +2.7**
COR pmax pmax
comp=Z,560nm,1.2s
ABA Alger-Bouzarea 85.91 48 P P 08 04 32.0 -5.7
B08A Colville Reser 85.98 326 *eP* **P 08 04 37.5 -0.2**
comp=Z,399nm,1.6s
LSZ Lusaka 86.04 105 P **P 08 04 40.3 +1.4**
comp=Z,215nm,0.7s,baz=240,slow=4.3,SNR=260
LSZ Lusaka 86.04 105 *eP* **P 08 04 40.4 +1.4**
comp=Z,319nm,0.8s
LSZ Lusaka 86.04 105 P **P 08 04 40.3 +1.4**
SNR=105
LSZ Lusaka 86.04 105 P **P 08 04 40.3 +1.4**
SNR=105
LSZ Lusaka 86.04 105 *eP* **P 08 04 40.4 +1.4**
LSZ pmax pmax
comp=Z,320nm,0.9s
G03D McMinnville, O 86.16 322 P **P 08 04 39.7 +1.1**
baz=127,SNR=25
LON Longmire 86.28 324 *eP* **P 08 04 39.8 +0.5**
comp=Z,107nm,0.9s
LON Longmire 86.28 324 *eP* **P 08 04 39.8 +0.5**
LON pmax pmax
comp=Z,110nm,1.0s
C06D Leavenworth 86.52 325 P **P 08 04 40.2 -0.1**
baz=129
F04D Rainier, OR 86.53 323 P **P 08 04 41.3 +0.9**
baz=127,SNR=7.7
SJPF Ste Jean 86.59 41 *eP* **P 08 04 40.7 0.0**
SJPF pmax pmax
comp=Z,222nm,0.9s
D05A Enumclaw 86.65 324 *eP* **P 08 04 41.5 +0.6**
comp=Z,349nm,1.0s
F03A Seaside 86.75 323 *eP* **P 08 04 42.7 +1.3**
comp=Z,225nm,1.1s
E03A Lebam 87.12 323 *eP* **P 08 04 44.4 +1.3**
comp=Z,352nm,1.2s
B06A Marblemount 87.20 326 *eP* **P 08 04 43.6 +0.2**
comp=Z,361nm,0.9s
VAL Valentia 87.22 30⇑ *iP* **P 08 04 41.3 -2.1**
VAL *e*S **SKSac 08 14 19.6 +0.5**
VAL Valentia 87.22 30 *eP* **P 08 04 43.3 -0.1**
VAL pmax pmax
comp=Z,364nm,1.0s
CKHR Kef el Ahmar 87.23 49 P **P 08 04 45.5 +1.4**
SET Setif 87.24 49 P **P 08 04 45.0 +0.9**
B05A Bryant 87.36 325 P **P 08 04 44.1 -0.1**
baz=128,SNR=76
EPF Esparros 87.49 41 *eP* **P 08 04 44.6 -0.4**
EPF pmax pmax
comp=Z,95nm,0.9s
RAR Rarotonga 87.57 248 P **P 08 04 45.3 -0.6**
DFRA Djebel Bou Aff 87.75 49 P **P 08 04 48.2 +1.7**
CTEI Djebel Teioual 87.88 50 P **P 08 04 48.0 +0.9**
A04D Lummi Island 87.96 325 P **P 08 04 47.7 +0.7**
baz=127,SNR=16
CASM Ain Smara 88.04 50 P **P 08 04 49.5 +1.7**
QUIF Quistinic 88.25 36 *eP* **P 08 04 46.9 -1.5**
QUIF pmax pmax
comp=Z,132nm,0.9s
CKFL Kef-Lekhel 88.27 49 P **P 08 04 50.0 +1.1**
PGC Sidney 88.31 325 *eP* **P 08 04 49.6 +1.0**
comp=Z,200nm,1.0s
ROSF Rostrenen 88.44 35 *eP* **P 08 04 47.9 -1.4**
ROSF pmax pmax
comp=Z,277nm,1.0s
CCA1 Carnmenellis 88.54 33⇓ *eP* **P 08 04 49.3 -0.3**
CCA1 lAmb lAmb 08 04 50.4
comp=Z,314nm,1.1s
IGLA Glengowla, Co 88.60 29 *eP* **P 08 04 48.7 -1.1**
LLLB Lillooet 88.69 327 *eP* **P 08 04 51.0 +0.6**
comp=Z,228nm,1.1s
ABSA Djebel Ababsia 88.74 50 P **P 08 04 51.8 +0.7**
SGMF Saint Gilles 88.78 36 *eP* **P 08 04 49.2 -1.6**
SGMF pmax pmax
comp=Z,51nm,0.6s
CMAH Djebel Manchou 88.87 50 P **P 08 04 52.3 +0.7**
DYA Yadsworthy 89.35 34⇓ *eP* **P 08 04 51.8 -1.7**
DYA lAmb lAmb 08 04 52.9
comp=Z,198nm,1.0s
SFJD Kangerlussuaq 89.36 5 P **P 08 04 53.4 +0.3**
comp=Z,191nm,1.0s,baz=205,slow=4.2,SNR=84
SFJD Kangerlussuaq 89.36 5⇓ *iP* **P 08 04 53.5 +0.5**
comp=Z,210nm,0.9s
SFJD Kangerlussuaq 89.36 5⇑ *iP* pP 08 06 52.3 +0.6
comp=Z,843nm,2.1s
SFJD Kangerlussuaq 89.36 5 *eP* **P 08 04 53.6 +0.5**
comp=Z,263nm,1.0s
SFJD Kangerlussuaq 89.36 5 *eP* **P 08 04 53.6 +0.5**
SFJD pmax pmax
comp=Z,260nm,1.0s
HTL Hartland 89.40 33⇓ *eP* **P 08 04 53.2 -0.4**
HTL lAmb lAmb 08 04 54.3
comp=Z,111nm,0.9s
CAF Calviac 89.56 40 *eP* **P 08 04 53.9 -0.7**
CAF pmax pmax
comp=Z,145nm,0.9s
JQE Queens East 89.61 35 *eP* **P 08 04 53.8 -0.8**
ANGG Ammassalik, Gr 89.68 10 *eP* **P 08 04 55.2 +0.6**
comp=Z,400nm,0.9s
GRR Gorron 89.79 36 *eP* **P 08 04 53.9 -1.6**
GRR pmax pmax
comp=Z,218nm,0.8s
KEST Kesra 89.82 51 P **P 08 04 57.2 +1.1**
comp=Z,197nm,0.8s,baz=192,slow=2.2,SNR=160
KEST PKKPbc **PKKPbc 08 22 25.6 -0.5**
comp=Z,8.4nm,0.8s,baz=0.5,slow=3.4,SNR=7.2
KEST PKPPKP **P'P'df 08 30 33.7 0.0**
comp=Z,1.1nm,0.6s,baz=254,slow=0.9,SNR=3.7
KEST Kesra 89.82 51 *eP* **P 08 04 57.4 +1.3**
comp=Z,224nm,0.8s
KEST PKKPbc **PKKPbc 08 22 25.6 -0.5**
KEST P'P' 08 30 33.7
DSB Dublin 89.87 30 *eP* **P 08 04 55.3 -0.4**
comp=Z,302nm,0.9s
MIR Mirnyy 89.88 171⇓ *iP* **P 08 04 57.0 +1.3**
MIR *i* 08 06 56.0
MIR pmax pmax
comp=Z,360nm,1.8s
FLN La Foliniere 90.20 36 *eP* **P 08 04 56.0 -1.4**
FLN pmax pmax
comp=Z,171nm,1.0s
LDF La Druitiere 90.31 36 *eP* **P 08 04 56.4 -1.5**
LDF pmax pmax
comp=Z,223nm,0.9s
TCF Toulx Ste Croi 90.38 39 *eP* **P 08 04 57.1 -1.2**
TCF pmax pmax
comp=Z,83nm,0.9s
CFF Clermont-Ferra 90.63 40 *eP* **P 08 05 00.7 +1.2**
HGH Gray Hill 90.63 33 *eP* **P 08 04 58.4 -1.0**
YRC Rhoscolyn 90.73 31⇓ *eP* **P 08 04 58.6 -1.1**
MCH1 Michaelchurch 90.75 33⇓ *eP* **P 08 04 58.8 -1.1**
MCH1 lAmb lAmb 08 05 00.0
comp=Z,247nm,1.3s
MONM Monmouth 90.75 33⇓ *eP* **P 08 04 59.0 -0.9**
MONM lAmb lAmb 08 05 00.1
comp=Z,230nm,1.1s
BATH Bath 90.76 33⇓ *eP* **P 08 04 58.7 -1.2**
WLF1 Llynfaes 90.84 31⇓ *eP* **P 08 04 59.0 -1.1**
WLF1 lAmb lAmb 08 05 00.6
comp=Z,412nm,1.0s
BGF Bois d'Agland 90.89 39 *eP* **P 08 04 58.6 -2.1**
BGF pmax pmax
comp=Z,158nm,1.0s
LLW Llanuwychllyn 90.92 32⇓ *eP* **P 08 04 59.7 -0.9**
WME Myndd Eilian 90.94 31⇓ *eP* **P 08 05 00.0 -0.7**
STRD Stroud 91.04 33⇓ *eP* **P 08 05 00.2 -1.0**
STRD lAmb lAmb 08 05 01.2
comp=Z,249nm,1.2s
WPM1 Penmaenmawr 91.05 31⇓ *eP* **P 08 05 00.4 -0.8**
SWN1 Swindon 91.07 33⇓ *eP* **P 08 05 00.3 -1.1**
SWN1 lAmb lAmb 08 05 01.7
comp=Z,234nm,1.1s
VIVF Saint-Julien-l 91.11 41 *eP* **P 08 05 01.3 -0.5**
VIVF pmax pmax
comp=Z,89nm,1.0s

HLM1	**Long Mynd**	**91.11**	**32**⇓	*e*P		**P**	**08 04 59.9**	**-1.7**
HLM1					IAmb	IAmb	08 05 01.8	
comp=Z,230nm,1.3s								
CLGH	**Cloghs, Cushen**	**91.14**	**29**⇓	*e*P		**P**	**08 05 01.1**	**-0.5**
CLGH					IAmb	IAmb	08 05 02.1	
comp=Z,114nm,0.8s								
WIM	**Isle of Man**	**91.22**	**30**⇓	*e*P		**P**	**08 05 01.5**	**-0.5**
SSB	**Saint Sauveur**	**91.25**	**41**	*e*P		**P**	**08 05 03.2**	**+0.8**
comp=Z,179nm,0.9s								
SSB	**Saint Sauveur**	**91.25**	**41**	*e*P		**P**	**08 05 03.2**	**+0.8**
SSB					pmax	pmax		
comp=Z,180nm,0.9s								
WOL	**Wolverton**	**91.25**	**34**⇓	*e*P		**P**	**08 05 01.4**	**-0.8**
WOL					IAmb	IAmb	08 05 02.5	
comp=Z,185nm,1.1s								
SSW	**Stow on the Wo**	**91.31**	**33**	*e*P		**P**	**08 05 02.0**	**-0.5**
AVF	**Avril sur Loir**	**91.31**	**39**	*e*P		**P**	**08 05 01.3**	**-1.3**
AVF					pmax	pmax		
comp=Z,117nm,1.2s								
IOMK	**Kirk Michael**	**91.34**	**30**⇓	*e*P		**P**	**08 05 01.4**	**-1.1**
IOMK					IAmb	IAmb	08 05 03.2	
comp=Z,393nm,1.2s								
ILULI	**Ilulissat**	**91.51**	**4**⇓	*i*P		**P**	**08 05 03.2**	**+0.3**
comp=Z,364nm,1.3s								
ILULI	**Ilulissat**	**91.51**	**4**⇑	*i*P		pP	08 07 02.5	+0.6
comp=Z,221nm,1.3s								
ILULI	**Ilulissat**	**91.51**	**4**	*e*P		**P**	**08 05 03.6**	**+0.7**
comp=Z,320nm,1.2s								
ILULI	**Ilulissat**	**91.51**	**4**	*e*P		**P**	**08 05 03.6**	**+0.7**
ILULI					pmax	pmax		
comp=Z,320nm,1.2s								
SMF	**Signal de Mont**	**91.53**	**40**	*e*P		**P**	**08 05 02.7**	**-0.9**
SMF					pmax	pmax		
comp=Z,185nm,1.0s								
SSF	**Saint Saulge**	**91.54**	**39**	*e*P		**P**	**08 05 02.2**	**-1.5**
SSF					pmax	pmax		
comp=Z,93nm,1.0s								
VSL	**Villasalto**	**91.58**	**48**	*e*P		**P**	**08 05 04.5**	**+0.5**
comp=Z,251nm,0.9s								
FRF	**La Foret Royal**	**91.70**	**43**	*e*P		**P**	**08 05 03.9**	**-0.6**
FRF					pmax	pmax		
comp=Z,260nm,1.3s								
STNC	**Stoke**	**91.78**	**32**⇓	*e*P		**P**	**08 05 04.1**	**-0.5**
STNC					IAmb	IAmb	08 05 05.4	
comp=Z,272nm,1.1s								
CASY	**Casey**	**91.78**	**178**	*e*P		**P**	**08 05 05.6**	**+1.1**
comp=Z,358nm,1.1s								
HMNX	**Herstmonceux**	**91.82**	**35**⇓	*e*P		**P**	**08 05 03.7**	**-1.1**
HMNX					IAmb	IAmb	08 05 04.8	
comp=Z,363nm,1.0s								
ORIF	**Oris-en-Rattie**	**91.89**	**42**	*e*P		**P**	**08 05 05.3**	**-0.1**
ORIF					pmax	pmax		
comp=Z,165nm,0.8s								
LBWR	**Ladybower, Pea**	**92.20**	**32**⇓	*e*P		**P**	**08 05 06.2**	**-0.4**
LBWR					IAmb	IAmb	08 05 07.2	
comp=Z,190nm,1.1s								
KESW	**Keswick, Cumbr**	**92.22**	**30**⇓	*e*P		**P**	**08 05 06.1**	**-0.5**
KESW					IAmb	IAmb	08 05 07.2	
comp=Z,514nm,1.4s								
BBO1	**Bothel**	**92.25**	**30**⇓	*e*P		**P**	**08 05 06.2**	**-0.4**
PGBU	**Glenifferbraes**	**92.32**	**29**⇓	*e*P		**P**	**08 05 05.8**	**-1.2**
PGBU					IAmb	IAmb	08 05 07.5	
comp=Z,152nm,1.1s								
SBF	**Sospel**	**92.35**	**43**	*e*P		**P**	**08 05 07.1**	**-0.4**
SBF					pmax	pmax		
comp=Z,359nm,1.1s								
ELSH	**Elham, Standar**	**92.39**	**35**⇓	*e*P		**P**	**08 05 07.1**	**-0.3**
ELSH					IAmb	IAmb	08 05 08.1	
comp=Z,386nm,0.9s								
BHH	**Howats Hill**	**92.47**	**30**⇓	*e*P		**P**	**08 05 06.5**	**-1.2**
SAOF	**Saorge**	**92.48**	**43**	*e*P		**P**	**08 05 08.6**	**+0.5**
SAOF					pmax	pmax		
comp=Z,242nm,1.2s								
BORG	**Borgarnes**	**92.51**	**17**	*e*P		**P**	**08 05 09.7**	**+2.1**
comp=Z,370nm,1.4s								
BORG	**Borgarnes**	**92.51**	**17**	*e*P		**P**	**08 05 09.7**	**+2.1**
BORG					pmax	pmax		
comp=Z,370nm,1.4s								
ECK	**Cauldkaine Hil**	**92.56**	**30**⇓	*e*P		**P**	**08 05 07.2**	**-0.9**
HPK	**Haverah Park**	**92.57**	**31**⇓	*e*P		**P**	**08 05 07.7**	**-0.5**
HPK					IAmb	IAmb	08 05 08.8	
comp=Z,429nm,1.4s								
ESK	**Eskdalemuir**	**92.61**	**30**	*e*P		**P**	**08 05 08.2**	**-0.2**
comp=Z,258nm,1.5s								
ESK	**Eskdalemuir**	**92.61**	**30**	*e*P		**P**	**08 05 08.2**	**-0.2**
ESK					pmax	pmax		
comp=Z,260nm,1.5s								
EAB	**Aberfoyle**	**92.61**	**29**⇓	*e*P		**P**	**08 05 07.3**	**-1.0**
EKA	**Eskdalemuir Ar**	**92.64**	**30**	P		**P**	**08 05 07.8**	**-0.7**
comp=Z,60nm,1.0s,baz=230,slow=3.9,SNR=61								
EKA				pP		**pP**	**08 07 07.4**	**-0.1**
comp=Z,35nm,1.0s,baz=240,slow=4.7,SNR=15								
EKA				PP		**PP**	**08 08 57.9**	**-2.1**
comp=Z,18nm,1.1s,baz=232,slow=5.2,SNR=6.2								
EKA				PKKPbc		**PKKPbc**	**08 22 19.0**	**-0.7**
comp=Z,0.8nm,0.3s,baz=44,slow=3.9,SNR=10.0								
LPL	**La Plagne**	**92.70**	**42**	*e*P		**P**	**08 05 08.7**	**-0.6**
LPL					pmax	pmax		
comp=Z,185nm,1.0s								
LPG	**La Plagne**	**92.71**	**42**	*e*P		**P**	**08 05 09.4**	**0.0**
LPG					pmax	pmax		
comp=Z,197nm,0.9s								
PGF	**Pioggiola**	**92.74**	**45**	*e*P		**P**	**08 05 08.8**	**-0.6**
PGF					pmax	pmax		
comp=Z,166nm,1.0s								
KPL	**Plockton**	**92.74**	**27**⇓	*e*P		**P**	**08 05 08.2**	**-0.7**
KPL					IAmb	IAmb	08 05 09.1	
comp=Z,100nm,0.9s								
BBB	**Bella Bella**	**92.78**	**326**	*e*P		**P**	**08 05 10.1**	**+0.9**
comp=Z,153nm,1.4s								
CABF	**La Chapelle**	**92.85**	**40**	*e*P		**P**	**08 05 09.0**	**-0.8**
CABF					pmax	pmax		
comp=Z,118nm,1.1s								
INVG	**Invergeldie, C**	**92.89**	**29**	*e*P		**P**	**08 05 09.1**	**-0.5**
WACR	**West Acre**	**92.99**	**33**⇓	*e*P		**P**	**08 05 09.1**	**-1.0**
WACR					IAmb	IAmb	08 05 10.3	
comp=Z,245nm,1.0s								
ESY	**Stoneypath**	**93.23**	**30**⇓	*e*P		**P**	**08 05 10.3**	**-0.9**
MDO	**Dochfour**	**93.36**	**28**⇓	*e*P		**P**	**08 05 11.0**	**-0.7**
EDU	**Dundee**	**93.42**	**29**⇓	*e*P		**P**	**08 05 10.9**	**-1.1**
YKA	**Yellowknife Ar**	**93.44**	**339**	P		**P**	**08 05 11.8**	**-0.2**
comp=Z,99nm,0.8s,baz=124,slow=4.4,SNR=752								
YKA				pP		**pP**	**08 07 11.2**	**+0.2**
comp=Z,15nm,0.8s,baz=124,slow=4.4,SNR=11								
YKA				PKiKP		**PKiKP**	**08 09 54.0**	**-0.2**
comp=Z,2.5nm,0.8s,baz=133,slow=1.7,SNR=5.3								
YKA				ScS		**S**	**08 15 36.0**	**+2.9**
comp=Z,7.5nm,1.2s,baz=133,slow=9.6,SNR=11								
YKA				PKKPbc		**PKKPdf**	**08 22 15.8**	**-0.5**
comp=Z,2.3nm,0.6s,baz=319,slow=1.1,SNR=36								
YKA				PKP2bc			08 29 53.8	
comp=Z,0.6nm,0.9s,baz=275,slow=1.6,SNR=4.0								
SENIN	**Lac Senin/Sane**	**93.46**	**41**	*e*P		**P**	**08 05 13.2**	**+0.4**
comp=Z,114nm,1.1s								
YKW3	**Yellowknife Ar**	**93.49**	**339**	*e*P		**P**	**08 05 12.4**	**+0.2**
comp=Z,155nm,1.0s								
LOMF	**Lomont**	**93.65**	**40**	*e*P		**P**	**08 05 13.7**	**+0.3**
HAU	**Haudompre**	**93.68**	**39**	*e*P		**P**	**08 05 12.0**	**-1.5**
HAU					pmax	pmax		
comp=Z,45nm,0.7s								
DOU	**Dourbes**	**93.72**	**37**	⇓P		**P**	**08 05 13.1**	**-0.4**
comp=Z,79nm,1.3s								
SNF	**Seneffe**	**93.76**	**36**	⇓P		**P**	**08 05 13.6**	**-0.1**
comp=Z,88nm,1.2s								
GIVF	**Givet**	**93.85**	**37**	*e*P		**P**	**08 05 12.9**	**-1.2**
GIVF					pmax	pmax		
comp=Z,177nm,1.1s								
MBAR	**Mbarara**	**93.85**	**92**	*e*P		**P**	**08 05 17.3**	**+2.0**
MBAR					pmax	pmax		
comp=Z,33nm,1.2s								
HINF	**Hinteralfeld**	**93.89**	**40**	*e*P		**P**	**08 05 13.0**	**-1.5**
HINF					pmax	pmax		
comp=Z,62nm,1.0s								
MME1	**Meikle Cairn**	**93.89**	**28**	*e*P		**P**	**08 05 12.9**	**-1.3**
MCD	**Coleburn Disti**	**93.93**	**28**⇓	*e*P		**P**	**08 05 13.6**	**-0.8**
UCC	**Uccle**	**93.94**	**36**	⇓P		**P**	**08 05 14.1**	**-0.5**
UCC	**Uccle**	**93.94**	**36**	*e*P		**P**	**08 05 14.4**	**-0.1**
UCC					pmax	pmax		
comp=Z,150nm,1.1s								
MOF	**Molkenrain**	**94.07**	**40**	*e*P		**P**	**08 05 15.2**	**-0.1**
VAE	**Valguarnera**	**94.25**	**51**	P		**P**	**08 05 16.2**	**-0.2**
comp=Z,14nm,0.5s,baz=347,slow=5.5,SNR=11								
ECH	**Echery**	**94.26**	**39**	*e*P		**P**	**08 05 16.4**	**+0.2**
comp=Z,116nm,1.1s								
ECH	**Echery**	**94.26**	**39**	*e*P		**P**	**08 05 16.3**	**+0.2**
ECH					pmax	pmax		
comp=Z,120nm,1.1s								
BCLA	**Clavier**	**94.28**	**37**	⇓P		**P**	**08 05 15.6**	**-0.5**
comp=Z,55nm,1.7s								
BCLA				⇓PP		**PP**	**08 09 08.7**	**-4.1**
WLF	**Walferdange**	**94.38**	**38**	⇑P		**P**	**08 05 16.4**	**-0.2**
comp=Z,172nm,1.4s								
WLF	**Walferdange**	**94.38**	**38**	*e*P		**P**	**08 05 17.0**	**+0.4**
comp=Z,192nm,1.0s								
WLF	**Walferdange**	**94.38**	**38**	*e*P		**P**	**08 05 17.0**	**+0.4**
WLF					pmax	pmax		
comp=Z,190nm,1.0s								
CDF	**Champ du Feu**	**94.42**	**39**	*e*P		**P**	**08 05 15.3**	**-1.6**
CDF					pmax	pmax		
comp=Z,92nm,1.0s								
BEBN	**Eben Emael**	**94.67**	**37**	⇓P		**P**	**08 05 17.4**	**-0.4**
MEM	**Membach**	**94.76**	**37**	⇓P		**P**	**08 05 18.0**	**-0.3**
comp=Z,49nm,1.2s								
MEM				⇓PP		**PP**	**08 09 12.6**	**-3.8**
MEM	**Membach**	**94.76**	**37**	*e*P		**P**	**08 05 18.2**	**-0.1**
MEM					pmax	pmax		
comp=Z,82nm,1.2s								
HGN	**Heimansgroeve**	**94.79**	**37**	*i*P		**P**	**08 05 17.9**	**-0.5**
comp=Z,205nm,1.6s								
SLE	**Schleitheim**	**94.84**	**40**	*e*P		**P**	**08 05 18.8**	**0.0**
SLE					pmax	pmax		
comp=Z,162nm,1.2s								
BFO	**Black Forest**	**95.00**	**40**	*e*P		**P**	**08 05 19.7**	**+0.2**
comp=Z,48nm,0.8s								
BFO	**Black Forest**	**95.00**	**40**	*i*P		**P**	**08 05 19.4**	**-0.1**
FUORN	**Ofenpass-Fuorn**	**95.39**	**42**	*e*P		**P**	**08 05 22.5**	**+0.9**
comp=Z,141nm,0.9s								
DAVA	**Damuels**	**95.46**	**41**	*e*P		**P**	**08 05 22.1**	**+0.3**
comp=Z,91nm,0.8s,SNR=62								
DAVA	**Damuels**	**95.46**	**41**	*e*PKKPbc		PKKPbc	08 22 11.8	-0.4
comp=Z,7.6nm,0.7s								
AQU	**L'Aquila**	**95.58**	**47**	*e*P		**P**	**08 05 23.3**	**+1.0**
AQU					pmax	pmax		
comp=Z,160nm,1.1s								
DIB	**Dawson Inlet,**	**95.58**	**326**	*e*P		**P**	**08 05 22.3**	**+0.5**
comp=Z,54nm,1.0s								
STU	**Stuttgart**	**95.72**	**39**	*e*P		**P**	**08 05 23.1**	**+0.5**
comp=Z,185nm,1.0s								
STU	**Stuttgart**	**95.72**	**39**	*e*P		**P**	**08 05 23.1**	**+0.5**
STU					pmax	pmax		
comp=Z,180nm,1.0s								
WTSB	**Winterswijk**	**95.85**	**36**	*i*P		**P**	**08 05 22.9**	**-0.3**
comp=Z,151nm,1.1s								
FETA	**Feichten**	**95.86**	**41**	*e*P		**P**	**08 05 23.8**	**+0.3**
comp=Z,59nm,0.9s,SNR=67								
FETA	**Feichten**	**95.86**	**41**	*e*PKKPbc		PKKPbc	08 22 05.0	-6.1
comp=Z,5.0nm,1.0s								
BUG	**Bochum--Univer**	**95.86**	**36**	P		**P**	**08 05 23.4**	**+0.2**
BUG					pmax	pmax		
comp=Z,149nm,1.2s								
TNS	**Taunus Mts**	**95.95**	**38**	P		**P**	**08 05 24.1**	**+0.4**
SUMG	**Summit**	**95.96**	**7**⇓	*i*P		**P**	**08 05 23.8**	**+0.1**
comp=Z,111nm,1.0s								
SUMG	**Summit**	**95.96**	**7**	*e*P		**P**	**08 05 24.8**	**+1.1**
comp=Z,139nm,1.1s								
SUMG	**Summit**	**95.96**	**7**	*e*P		**P**	**08 05 24.8**	**+1.1**
SUMG					pmax	pmax		
comp=Z,140nm,1.1s								
RETA	**Reutte**	**96.08**	**41**	*e*P		**P**	**08 05 24.8**	**+0.4**
comp=Z,71nm,0.8s,SNR=52								
RETA	**Reutte**	**96.08**	**41**	*e*PKKPdf		PKKPdf	08 22 09.9	-1.2
comp=Z,5.6nm,0.7s								
WIT	**Witteveen**	**96.19**	**35**	P		**P**	**08 05 26.1**	**+1.5**
WATA	**Walderalm**	**96.52**	**41**	*i* Pdiff		**P**	**08 05 26.7**	**+0.2**
comp=Z,50nm,0.9s,SNR=28								
WATA	**Walderalm**	**96.52**	**41**	*e*PKKPdf		PKKPdf	08 22 08.8	-1.7
comp=Z,5.9nm,0.9s								
WTTA	**Wattenberg**	**96.52**	**42**	*e*Pdiff		**P**	**08 05 26.9**	**+0.4**
comp=Z,53nm,0.8s,SNR=31								
WTTA	**Wattenberg**	**96.52**	**42**	*e*PKKPdf		PKKPdf	08 22 08.7	-1.8
comp=Z,9.9nm,0.8s								
KULLO	**Kullorsuaq**	**96.54**	**2**⇓	*i*P		**P**	**08 05 25.5**	**-0.2**
comp=Z,52nm,1.2s								
TIP	**Timpagrande**	**96.62**	**50**⇓	*i*P		**P**	**08 05 26.8**	**-0.3**
TIP	**Timpagrande**	**96.62**	**50**	*e*P		**P**	**08 05 26.4**	**-0.7**
comp=Z,87nm,1.6s								
FUR	**Furstenfeldbru**	**96.69**	**41**	P		**P**	**08 05 27.7**	**+0.6**
FUR					pmax	pmax		
comp=Z,134nm,1.3s								
ABTA	**Abfaltersbach**	**96.84**	**42**	*e*Pdiff		**P**	**08 05 28.1**	**+0.2**
comp=Z,62nm,0.8s,SNR=54								
ABTA	**Abfaltersbach**	**96.84**	**42**	*e*PKKPdf		PKKPdf	08 22 07.3	-2.5
comp=Z,6.1nm,0.8s								
SCO	**Scoresbysund**	**96.87**	**13**⇓	*i*P		**P**	**08 05 27.8**	**+0.5**
comp=Z,37nm,1.3s								
SCO	**Scoresbysund**	**96.87**	**13**	*i* P		**PKKPbc**	**08 22 07.1**	**-1.8**
comp=Z,10nm,1.2s								
SCO	**Scoresbysund**	**96.87**	**13**	*e*Pdiff		**P**	**08 05 28.0**	**+0.7**
comp=Z,59nm,1.5s								
SCO	**Scoresbysund**	**96.87**	**13**	*e*P		**P**	**08 05 28.0**	**+0.7**
SCO					pmax	pmax		
comp=Z,59nm,1.5s								
DLBC	**Dease Lake**	**97.04**	**331**	*e*P		Pdif	08 05 29.6	+1.1
comp=Z,42nm,0.9s								
WRAK	**Wrangell Islan**	**97.11**	**329**	*e*P		**P**	**08 05 29.4**	**+0.8**
comp=Z,32nm,1.0s								
MATE	**Matera**	**97.16**	**49**⇓	*i*P		**P**	**08 05 28.8**	**-0.5**
URZ	**Urewera**	**97.23**	**224**	PKKPbc		PKKPbc	08 22 04.8	-2.1
comp=Z,30nm,0.8s,baz=353,slow=3.1,SNR=19								
GRFO	**Grafenberg**	**97.32**	**39**	*e*P		**P**	**08 05 30.6**	**+0.8**
comp=Z,90nm,1.0s								
GRFO	**Grafenberg**	**97.32**	**39**	*e*P		**P**	**08 05 30.6**	**+0.8**
GRFO					pmax	pmax		
comp=Z,90nm,1.0s								
GRF	**Grafenberg Arr**	**97.32**	**39**	P		**P**	**08 05 30.6**	**+0.8**
GRF					pmax	pmax		
comp=Z,112nm,1.3s								
LTZ	**Lake Taylor**	**97.43**	**218**	*e*P		**P**	**08 05 32.2**	**+1.5**
comp=Z,33nm,1.1s								
JAVS	**Javornik**	**97.47**	**43**	*i* P		**P**	**08 05 31.1**	**+0.3**
JAVS				*i* SKSac		**SKSac**	**08 15 17.3**	**+1.3**
KBA	**Koelnbreinsper**	**97.50**	**42**	*i* Pdiff		Pdif	08 05 30.7	-0.2
comp=Z,39nm,0.7s,SNR=44								
KBA	**Koelnbreinsper**	**97.50**	**42**	*e*PKKPdf		PKKPdf	08 22 05.3	-3.4
comp=Z,1.9nm,0.6s								
KBA	**Koelnbreinsper**	**97.50**	**42**	P		Pdif	08 05 30.6	-0.3
KBA					pmax	pmax		
comp=Z,81nm,1.2s								
MYKA	**Terra Mystica**	**97.50**	**43**	*e*Pdiff		**P**	**08 05 31.3**	**+0.4**
comp=Z,50nm,0.7s,SNR=40								
MYKA	**Terra Mystica**	**97.50**	**43**	*e*PKKPdf		PKKPdf	08 22 05.6	-2.9
comp=Z,4.2nm,1.0s								
RPZ	**Rata Peaks**	**97.52**	**217**	P		**P**	**08 05 31.1**	**0.0**
comp=Z,15nm,0.9s,baz=340,slow=3.1,SNR=6.0								
RPZ				PKKPbc		**PKKPdf**	**08 22 05.8**	**-0.5**
comp=Z,19nm,1.0s,baz=282,slow=3.4,SNR=4.7								
VISS	**Visnje**	**97.93**	**44**	*e*P		Pdif	08 05 32.3	-0.4
VISS				*e*SKSac		**SKSac**	**08 15 18.5**	**+0.4**
MOX	**Moxa**	**97.95**	**38**	P		**P**	**08 05 33.0**	**+0.3**
MOX					pmax	pmax		
comp=Z,46nm,1.2s								
OBKA	**Obir**	**98.03**	**43**	*e*Pdiff		**P**	**08 05 33.8**	**+0.6**
comp=Z,23nm,0.8s,SNR=28								
OBKA	**Obir**	**98.03**	**43**	*e*PKKPbc		PKKPbc	08 22 03.7	-1.4
comp=Z,6.0nm,1.4s								
WET	**Wettzell**	**98.07**	**40**	P		**P**	**08 05 34.2**	**+1.0**
BOJS	**Bojanci**	**98.08**	**44**	*i* P		**P**	**08 05 33.8**	**+0.5**
BOJS				*e*pP		**pP**	**08 07 32.8**	**0.0**
BOJS				*i* PP		**PP**	**08 09 37.6**	**-4.1**
BOJS				*i*			08 12 29.8	
BOJS				*e*SKSac		**SKSac**	**08 15 19.6**	**+0.8**
BOJS				*e*SKKSac		**SKKSac**	**08 15 50.4**	**-0.4**
BOJS				*e*Sdiff		**S**	**08 16 14.9**	**+1.4**
BOJS				*e*			08 19 04.5	
BOJS				*e*sS		**sS**	**08 19 48.3**	**-0.6**
BOJS				*e*			08 21 12.7	
BOJS				*i* SS		**SS**	**08 23 07.6**	**-5.0**
NKC	**Novy Kostel**	**98.26**	**39**	*e*PDIFF		**P**	**08 05 34.6**	**+0.5**
NKC				*e*SP		SP	08 17 41.9	-2.5
NKC	**Novy Kostel**	**98.26**	**39**	*i* P		**P**	**08 05 34.6**	**+0.5**
NKC				*e*SP		SP	08 17 41.9	-2.5
MOA	**Molln**	**98.38**	**42**	*e*Pdiff		Pdif	08 05 34.6	0.0
comp=Z,45nm,0.7s,SNR=38								
MOA	**Molln**	**98.38**	**42**	*e*PKKPdf		PKKPdf	08 22 04.0	-2.9
comp=Z,4.7nm,1.0s								
SOKA	**Soboth**	**98.40**	**43**	*e*Pdiff		Pdif	08 05 34.6	-0.2
comp=Z,16nm,0.9s,SNR=20								
SOKA	**Soboth**	**98.40**	**43**	*e*PKKPdf		PKKPdf	08 22 03.6	-3.3
comp=Z,5.1nm,0.9s								
PERS	**Pernice**	**98.44**	**43**	*i* P		**P**	**08 05 35.0**	**0.0**
PERS				*e*SKSac		**SKSac**	**08 15 20.9**	**+0.2**
GEC2	**GERESS Array S**	**98.44**	**41**	*e*Pdif		**P**	**08 05 35.0**	**0.0**
comp=Z,32nm,1.0s								
GEC2	**GERESS Array S**	**98.44**	**41**	*e*P		**P**	**08 05 35.0**	**0.0**
GEC2					pmax	pmax		
comp=Z,32nm,1.0s								
GERES	**GERESS Array B**	**98.44**	**41**	P		Pdif	08 05 35.0	0.0
comp=Z,11nm,0.8s,baz=224,slow=3.7,SNR=51								
GERES				PP		PP	08 09 33.4	-11
comp=Z,2.9nm,0.8s,baz=207,slow=8.4,SNR=3.8								
GERES				PKiKP		**PKiKP**	**08 10 04.2**	**+0.6**
comp=Z,2.3nm,0.6s,baz=72,slow=0.7,SNR=4.3								
GERES				PKKPbc		**PKKPbc**	**08 22 02.7**	**-1.4**
comp=Z,4.5nm,0.8s,baz=90,slow=2.7,SNR=11								
GERES	**GERESS Array B**	**98.44**	**41**	P		**P**	**08 05 35.0**	**0.0**
GERES					pmax	pmax		
comp=Z,11nm,0.8s								
KHC	**Kasperske Hory**	**98.48**	**40**	*e*PDIFF		Pdif	08 05 34.8	-0.3
KHC				*e*x		x	08 06 08.0	
KHC				*e*x		x	08 09 17.5	
KHC				*e*SKS		**SKSac**	**08 15 19.1**	**-1.6**
KHC				*e*SDIF		**ScS**	**08 16 12.1**	**-4.6**
KHC				*e*x		x	08 17 39.7	
KHC				*e*x		x	08 21 08.4	
KHC				*e*PKKP		**PKKPbc**	**08 22 02.3**	**-1.6**
KHC				*e*x		x	08 22 34.5	
KHC				*e*SS		**SS**	**08 23 15.9**	**-2.2**
KHC	**Kasperske Hory**	**98.48**	**40**	*i* P		Pdif	08 05 34.8	-0.3
KHC				*e*			08 15 19.1	
KHC				*e*S		**ScS**	**08 16 12.1**	**-4.6**
KHC				*e*SS		**SS**	**08 23 15.9**	**-2.2**
RES	**Resolute Bay**	**98.62**	**352**	P		**P**	**08 05 35.4**	**+0.3**
comp=Z,23nm,0.9s,baz=170,slow=7.4,SNR=40								
RES				PP		**PP**	**08 09 47.5**	**+2.4**
comp=Z,8.4nm,0.8s,baz=158,slow=8.7,SNR=5.6								
RES	**Resolute Bay**	**98.62**	**352**	*e*Pdif		**P**	**08 05 35.8**	**+0.7**
comp=Z,47nm,1.1s								
RES				PP		**PP**	**08 09 47.5**	**+2.4**
RES	**Resolute Bay**	**98.62**	**352**	*e*P		**P**	**08 05 35.8**	**+0.7**
RES					pmax	pmax		
comp=Z,47nm,1.1s								
ARSA	**Arzberg**	**98.93**	**43**	*i* Pdiff		**P**	**08 05 37.3**	**+0.1**
comp=Z,20nm,0.9s,SNR=16								
CLL	**Collm**	**99.03**	**38**⇓	*i*Pdif		**Pdif**	**08 05 37.9**	**+0.5**
comp=Z,58nm,1.1s								
CLL				*e*pP		**pP**	**08 07 38.0**	**+1.1**
CLL				*e*(sP)		**sP**	**08 08 37.0**	**+6.0**
CLL				*e*PP		**PP**	**08 09 43.0**	**-5.7**
comp=Z,36nm,1.4s								
CLL				*e*			08 12 43.0	
CLL				*e*SKSac		**SKSac**	**08 15 25.0**	**+1.8**
CLL				*e*Sdif		**S**	**08 16 24.0**	**+2.7**
CLL				*e*SP		**SP**	**08 17 53.0**	**+0.5**
CLL				*e*PS		**PS**	**08 19 06.0**	**+3.7**
CLL				*e*(sPS)			08 21 24.0	
CLL				⇑*i*PKKPbc		**PKKPbc**	**08 22 01.6**	**-0.8**
comp=Z,11nm,0.9s								
CLL				⇓*i*PKKPab		PKKPdf	08 22 30.6	+25
comp=Z,13nm,1.1s								
CLL				*e*SS		**SS**	**08 23 25.0**	**-0.5**
CLL				*e*sSS			08 26 27.0	
CLL				*e*			08 31 18.0	
CLL	**Collm**	**99.03**	**38**	*e*Pdif		**Pdif**	**08 05 37.9**	**+0.5**
comp=Z,42nm,0.9s								
CLL	**Collm**	**99.03**	**38**⇓	*i*P		**Pdif**	**08 05 37.9**	**+0.5**
CLL				*e**PP		**pP**	**08 07 38.0**	**+1.1**
CLL				*e*			08 09 43.0	
CLL				*e*			08 15 25.0	
CLL				pmax		pmax		
comp=Z,58nm,1.1s								
CLL				pmax		pmax		
comp=Z,36nm,1.4s								
BLY	**Banja Luka**	**99.05**	**45**⇓	*i*P		**Pdif**	**08 05 38.4**	**+0.8**
MUD	**Monsted U'grnd**	**99.16**	**32**	*i* P		**Pdif**	**08 05 37.8**	**0.0**

JAVC Velka Javorina 100.87 42 *e*PDIFF **Pdif 08 05 46.7 +1.0**
JAVC *e*SKS 08 15 34.9
JAVC *e*PKKP **PKKPbc 08 21 57.9 +0.7**
JAVC *e* 08 22 24.1
MORC Moravsky Berou 101.12 41⇓ *i*P **Pdif 08 05 47.9 +1.1**
MORC Moravsky Berou 101.12 41 ⇓P **Pdif 08 05 47.9 +1.1**
MORC Moravsky Berou 101.12 41 *e*PDIFF **Pdif 08 05 47.4 +0.6**
MORC *e*PP **PP 08 09 59.6 -4.8**
MORC *e*SKS 08 15 36.8
MORC *e*PKKP **PKKPbc 08 21 56.2 -0.3**
MORC *e* 08 22 21.9
BUD Budapest 101.23 43 P **Pdif 08 05 48.9 +1.6**
BUD pmax pmax
comp=Z,27nm,1.2s
IDI Anoyia 101.30 57 P **Pdif 08 05 49.0 +1.0**
comp=Z,17nm,0.9s,baz=225,slow=7.9,SNR=21
IDI PP **PP 08 10 05.3 -0.8**
comp=Z,17nm,1.1s,baz=281,slow=5.4,SNR=3.8
IDI Anoyia 101.30 57⇓ *i*P **Pdif 08 05 49.3 +1.3**
VYHS Vyhne 101.46 42 *e*P **Pdif 08 05 48.3 0.0**
VYHS *e* 08 10 09.7
VYHS Vyhne 101.46 42 *e*PDIFF **Pdif 08 05 48.3 0.0**
VYHS *e*PP **PKiKP 08 10 09.7 +0.8**
OKC Ostrava-Krasne 101.51 41 *e*SP SP 08 18 17.9 -0.8
PSZ Piszkesteto 101.93 43⇑ *i*P **Pdif 08 05 49.8 -0.7**
PSZ Piszkesteto 101.93 43 *e*P **Pdif 08 05 51.3 +0.8**
NB2 NORSAR Subarra102.06 29 P **Pdif 08 05 50.8 +0.1**
comp=Z,33nm,1.4s,baz=244,slow=4.8
NB2 NORSAR Subarra102.06 29 P **Pdif 08 05 50.8 +0.1**
baz=244,slow=4.8
NOA NORSAR Array B 102.06 29 P **Pdif 08 05 51.2 +0.5**
comp=Z,10.0nm,0.9s,baz=244,slow=4.9,SNR=10
NOA PP **PKiKP 08 10 08.2 -1.5**
comp=Z,12nm,1.1s,baz=238,slow=7.4,SNR=5.5
NOA PKKP PKKPdf 08 22 15.7 +15
comp=Z,7.8nm,0.8s,baz=65,slow=4.5,SNR=12
SANT Santorini 102.08 56⇑ *i*P **Pdif 08 05 52.2 +0.8**
BZS Buzias 102.29 46⇓ *i*P **Pdif 08 05 53.2 +1.2**
BZS Buzias 102.29 46 ⇓P **Pdif 08 05 53.2 +1.2**
DAG Danmarks Havn 102.30 10⇓ *i*P **Pdif 08 05 51.1 -0.3**
comp=Z,26nm,1.0s
DAG Danmarks Havn 102.30 10⇓ *i*P **PKKPbc 08 21 50.6 -3.1**
comp=Z,20nm,0.8s
DAG *i* 08 22 13.4
SIRR Siria 102.53 45⇓ *i*P **Pdif 08 05 54.3 +1.2**
OJC Ojcow 102.64 41 *e*PKP **Pdif 08 05 54.7 +1.2**
OJC *e*PP **PKiKP 08 10 13.0 +2.1**
OJC *e*SP SP 08 18 32.4 +1.9
OJC Ojcow 102.64 41 *e*P **Pdif 08 05 54.7 +1.2**
OJC *e* 08 10 13.0
OJC *e*SP SP 08 18 32.4 +1.9
NIE Niedzica 102.68 42 *e*PKP **Pdif 08 05 55.7 +2.0**
NIE *e*PP **PKiKP 08 10 11.2 +0.1**
NIE *e*SP SP 08 18 32.6 +1.5
NIE Niedzica 102.68 42 *e*P **Pdif 08 05 55.7 +2.0**
NIE *e* 08 10 11.2
NIE *e*SP SP 08 18 32.6 +1.5
HFS Hagfors 102.84 30 P **Pdif 08 05 53.9 -0.2**
comp=Z,5.2nm,0.8s,baz=202,slow=3.2,SNR=7.0
HFS PP **PKiKP 08 10 11.9 +0.9**
comp=Z,8.3nm,0.9s,baz=171,slow=10,SNR=4.0
HFS PKKP PKKPdf 08 22 11.5 +13
comp=Z,10nm,0.9s,baz=186,slow=2.9,SNR=6.3
INK Inuvik 103.21 339 PP PP 08 10 15.0 -4.3
comp=Z,5.5nm,0.9s,baz=96,slow=8.0,SNR=3.6
INK PKKPbc **PKKPbc 08 21 49.4 -1.4**
comp=Z,27nm,0.8s,baz=332,slow=3.1,SNR=20
INK Inuvik 103.21 339 *e*Pdif **Pdif 08 05 56.0 +0.5**
INK PP **PKiKP 08 10 15.0 +3.6**
INK PKKPbc **PKKPbc 08 21 49.4 -1.4**
INK Inuvik 103.21 339 *e*P **Pdif 08 05 56.0 +0.5**
DRGR 103.38 45⇓ *i*P **Pdif 08 05 57.7 +0.7**
DRGR 103.38 45 ⇓P **Pdif 08 05 57.7 +0.7**
DAWY Dawson 103.62 334 *e*Pdif **Pdif 08 05 57.9 +0.3**
UZH Uzhgorod 103.68 43 *e*P **Pdif 08 05 57.9 -0.2**
TRPA Tarpa 103.68 43⇓ *i*P **Pdif 08 05 58.8 +0.7**
CJR Cluj-Napoca 103.94 45⇓ *i*P **Pdif 08 06 00.7 +1.3**
CJR Cluj-Napoca 103.94 45 ⇓P **Pdif 08 06 00.7 +1.3**
ARR Arges 104.23 47⇓ *i*P **Pdif 08 06 01.9 +1.1**
VOIR 104.53 47⇓ *i*P **Pdif 08 06 01.9 -0.2**
VOIR 104.53 47 ⇓P **Pdif 08 06 01.9 -0.2**
EGAK Eagle 104.60 334 *e*Pdif **Pdif 08 06 02.1 +0.3**
comp=Z,11nm,1.0s
MLR Muntele Rosu 105.15 47 Pdiff **Pdif 08 06 05.4 +0.5**
comp=Z,1.3nm,0.6s,baz=161,slow=12,SNR=7.4
MLR PKiKP **PKiKP 08 10 16.1 +0.3**
comp=Z,2.5nm,0.8s,baz=12,slow=3.4,SNR=6.4
MLR PP **PP 08 10 29.1 -5.2**
comp=Z,8.2nm,1.1s,baz=277,slow=4.3,SNR=6.3
MLR Muntele Rosu 105.15 47⇑ *i*P **Pdif 08 06 06.2 +1.3**
MLR Muntele Rosu 105.15 47 ⇑P **Pdif 08 06 06.2 +1.3**
BURAR Bucovina Array 105.26 45⇓ *i*P **Pdif 08 06 07.1 +1.8**
BURAR Bucovina Array 105.26 45 ⇓P **Pdif 08 06 07.1 +1.8**
DOT Dot Lake 105.41 333 *e*Pdif **Pdif 08 06 06.2 +0.7**
SCRK Sand Creek 105.49 333 *e*Pdif **Pdif 08 06 06.7 +0.7**
RIDG Independ'e Rid 105.77 333 *e*Pdif **Pdif 08 06 08.1 +0.9**
DHY Denali Highway 106.67 332 *e*Pdif **Pdif 08 06 12.4 +1.1**
ILAR Eielson Array 106.93 334 Pdiff **Pdif 08 06 12.7 +0.4**
comp=Z,2.3nm,1.1s,baz=123,slow=3.6,SNR=16
ILAR PKiKP **PKiKP 08 10 18.7 +0.3**
comp=Z,14nm,1.2s,baz=207,slow=0.8,SNR=20
ILAR PP PP 08 10 36.1 -10
comp=Z,6.3nm,0.9s,baz=108,slow=6.2,SNR=9.5
ILAR PKKPbc **PKKPbc 08 21 37.5 -2.1**
comp=Z,5.4nm,0.8s,baz=282,slow=3.2,SNR=17
ILAR PKKP **PKKPdf 08 21 52.6 +1.2**
comp=Z,2.0nm,0.7s,baz=293,slow=3.4,SNR=4.9
ILAR PKPPKP **P'P'df 08 29 55.4 -4.1**
comp=Z,0.8nm,1.0s,baz=307,slow=4.4,SNR=4.8
ILB Eielson Array 106.93 334 *e*Pdif **Pdif 08 06 13.2 +0.9**
WRH Wood River Hil 107.35 333 *e*Pdif **Pdif 08 06 15.4 +1.3**
COLA College 107.35 334 *e*Pdif **Pdif 08 06 14.5 +0.4**
comp=Z,7.6nm,0.9s
COLA College 107.35 334 *e*P **Pdif 08 06 14.5 +0.4**
COLA pmax pmax
comp=Z,8.0nm,0.9s
RND Reindeer 107.40 332 *e*Pdif **Pdif 08 06 15.6 +1.1**
RND Reindeer 107.40 332 *e*P **Pdif 08 06 15.6 +1.1**
KIS Kishinev 107.47 46 *e*P **Pdif 08 06 16.0 +1.0**
KIS Kishinev 107.47 46 *e*PKP **PKiKP 08 10 18.0 -1.9**
KIS Kishinev 107.47 46 *e*PP PP 08 10 49.0 -1.8
KIS *e*pPKP 08 12 26.0
KIS Kishinev 107.47 46 *e*PS PS 08 20 10.0 -14
KIS Kishinev 107.47 46 *e*P **Pdif 08 06 16.0 +1.0**
KIS *e* 08 10 49.0
EIL Elat 107.76 65 PKiKP **PKiKP 08 10 21.8 +0.7**
comp=Z,13nm,1.0s,baz=0.1,slow=1.4,SNR=4.4
ISAL Salakas 107.81 37 *e*P **PKiKP 08 10 21.4 +1.1**
ISAL IAmb IAmb 08 10 22.8
comp=Z,8.7nm,0.9s
IIGN Ignalina 107.82 37 *e*P **PKiKP 08 10 21.0 +0.7**
IIGN IAmb IAmb 08 10 21.6
comp=Z,11nm,0.7s
KDAK Kodiak Island 107.85 326 PKKPbc PKKPbc 08 21 36.7 +0.2
comp=Z,37nm,0.8s,baz=79,slow=2.6,SNR=33
KDAK PKKP **PKKPab 08 21 50.8 +0.9**
comp=Z,16nm,0.8s,baz=244,slow=6.1,SNR=5.9
IZAR Zarasai 107.92 36 *e*P **PKiKP 08 10 21.3 +0.8**
IZAR IAmb IAmb 08 10 21.8
comp=Z,11nm,0.7s
TRF Thorofare Moun 108.04 332 *e*Pdif **Pdif 08 06 18.3 +0.9**
IDID Didziasalis 108.10 37 *e*P **PKiKP 08 10 21.4 +0.5**
IDID IAmb IAmb 08 10 22.1
comp=Z,7.9nm,0.5s
KIF Kilpisjarvi 108.46 22 *e*P **PKKPbc 08 21 32.2 -2.7**
KIF *e* 08 21 47.0
BPAW Bear Paw Mtn. 108.49 332 *e*Pdif **Pdif 08 06 19.7 +0.5**
AKASG Malin Array Be 108.56 42 Pdiff **Pdif 08 06 19.4 -0.3**
comp=Z,1.2nm,0.7s,baz=266,slow=3.8,SNR=5.3
AKASG PKiKP **PKiKP 08 10 21.6 -0.2**
comp=Z,16nm,0.7s,baz=271,slow=2.3,SNR=38
AKASG PKKPbc **PKKPbc 08 21 33.0 -1.1**
comp=Z,6.4nm,0.7s,baz=62,slow=3.9,SNR=17
AKASG PKKP **PKKPab 08 21 47.4 +0.4**
comp=Z,8.5nm,0.8s,baz=66,slow=4.3,SNR=14
MLY Manley 108.58 333 *e*Pdif **Pdif 08 06 20.6 +0.9**
ANTO Ankara 108.61 54 P **PKiKP 08 10 23.8 +1.4**
SNR=7.1
ANTO Ankara 108.61 54 PKiKP **PKiKP 08 10 23.8 +1.4**
SNR=7.1
PPLA Purkeypile 108.76 331 *e*Pdif **Pdif 08 06 21.2 +0.6**
CAST Castle Rocks 108.82 332 *e*Pdif **Pdif 08 06 21.0 +0.3**
TOLK Toolik Lake Re 108.90 337 P **PKiKP 08 10 22.6 +0.5**
baz=102

HSPB Hornsund (broa 108.97 14 *e*P **PKKPbc 08 21 32.2 -1.2**
HSPB *e* 08 21 45.0
FINES FINESS Array B 109.03 31 PKiKP **PKiKP 08 10 22.7 +0.3**
comp=Z,7.8nm,0.9s,baz=236,slow=1.6,SNR=9.8
FINES PP **PP 08 10 57.8 -3.7**
comp=Z,14nm,0.9s,baz=216,slow=9.4,SNR=7.2
FINES PKKPbc **PKKPbc 08 21 31.9 -1.1**
comp=Z,3.4nm,0.5s,baz=80,slow=3.9,SNR=13
FINES PKKP **PKKPab 08 21 45.5 +1.0**
comp=Z,21nm,0.8s,baz=120,slow=6.8,SNR=14
BRTR Keskin Array B 109.21 54 Pdiff **Pdif 08 06 23.7 +0.5**
comp=Z,0.5nm,0.8s,baz=298,slow=3.1,SNR=3.1
BRTR PKiKP **PKiKP 08 10 24.0 +0.3**
comp=Z,14nm,0.8s,baz=179,slow=2.3,SNR=34
BRTR PP **PP 08 11 02.2 -1.4**
comp=Z,9.2nm,0.8s,baz=237,slow=4.7,SNR=6.5
BRTR PKKPbc **PKKPbc 08 21 31.9 0.0**
comp=Z,0.7nm,0.7s,baz=102,slow=4.4,SNR=4.0
BRTR PKKP **PKKPdf 08 21 47.1 +0.5**
comp=Z,1.6nm,0.8s,baz=98,slow=5.1,SNR=4.1
BRTR PKPPKP **P'P'df 08 29 55.1 -2.1**
comp=Z,0.6nm,0.8s,baz=110,slow=5.4,SNR=4.0
KTK1 Kautokeino 109.32 22 *e*P **PKKPbc 08 21 30.2 -2.0**
KTK1 *e* 08 21 43.2
HEF Hetta 109.36 23 *e*P **PKKPbc 08 21 29.9 -2.2**
HEF *e* 08 21 43.2
SPA0 Spitsbergen Ar 109.45 12 *e*P **PKKPbc 08 21 28.8 -3.1**
SPA0 *e* 08 21 42.8
SPITS Spitsbergen Ar 109.45 12 PKiKP **PKiKP 08 10 23.4 +0.6**
comp=Z,6.4nm,0.9s,baz=207,slow=1.7,SNR=8.9
SPITS PP **PP 08 10 57.0 -7.2**
comp=Z,7.3nm,0.9s,baz=200,slow=6.2,SNR=4.2
SPITS PKKPbc **PKKPbc 08 21 30.2 -1.8**
comp=Z,25nm,0.9s,baz=46,slow=4.2,SNR=15
HAMF Hammerfest 109.78 21 *e*P **PKKPbc 08 21 27.9 -2.9**
HAMF *e* 08 21 41.2
IM3 Indian Mountai 109.99 334 *e*Pdif **Pdif 08 06 26.6 +0.8**
ASF Jabal al Asfar 110.02 63 PKiKP **PKiKP 08 10 26.8 +1.4**
comp=Z,17nm,1.0s,baz=105,slow=0.8,SNR=19
ARCES ARCESS Array B 110.21 22 Pdiff **Pdif 08 06 27.2 +0.5**
comp=Z,3.0nm,1.0s,baz=221,slow=1.3,SNR=3.9
ARCES PKiKP **PKiKP 08 10 25.0 +0.5**
comp=Z,6.0nm,0.8s,baz=271,slow=2.7,SNR=12
ARCES PP **PP 08 11 07.3 -2.5**
comp=Z,11nm,0.8s,baz=286,slow=6.2,SNR=7.6
ARCES PKKPbc **PKKPbc 08 21 26.6 -2.8**
comp=Z,9.2nm,0.7s,baz=84,slow=3.0,SNR=14
ARCES PKKP **PKKPab 08 21 39.8 +0.5**
comp=Z,32nm,0.7s,baz=76,slow=5.1,SNR=33
ARCES PKPPKP **P'P'df 08 29 53.7 +0.8**
comp=Z,4.3nm,0.9s,baz=35,slow=3.3,SNR=7.0
ARE0 ARCESS Array S 110.21 22 *e*P **PKKPbc 08 21 27.9 -1.5**
ARE0 *e* 08 21 39.8
SIM Simferopol' 110.64 49 *d i*PKIKP **PKiKP 08 10 26.2 +0.2**
SIM PPP PPP 08 13 41.7
SIM SP SP 08 19 48.8 -0.8
SIM PS **PS 08 20 56.8 +3.7**
SIM pmax pmax
comp=Z,45nm,0.9s
APA Apatity 112.91 24⇑ *i*PKIKP **PKiKP 08 10 29.6 0.0**
APA *i* 08 11 26.9
APA *i* *PP 08 12 29.5
APA pmax pmax
comp=Z,18nm,0.8s
ANN Anapa 112.94 49 *i*PKIKP **PKiKP 08 10 30.3 0.0**
ANN *e* 08 16 25.3
ANN *e*SP SP 08 20 11.4 +0.8
ANN pmax pmax
comp=Z,180nm,1.5s
LVZ Lovozero 113.39 24 *c i*PKIKP **PKiKP 08 10 30.6 0.0**
LVZ pmax pmax
comp=Z,71nm,1.7s
OBN Obninsk 113.63 38 PKiKP **PKiKP 08 10 31.4 +0.1**
comp=Z,35nm,0.4s,baz=357,slow=0.8,SNR=26
OBN Obninsk 113.63 38 *c i*PKIKP **PKiKP 08 10 31.1 -0.2**
OBN *e* 08 11 31.3
OBN *e*SS SS 08 26 36.5 -4.4
OBN pmax pmax
comp=Z,217nm,1.7s
MOS Moscow 114.28 37 *i*PKIKP PKPdf 08 10 31.8 -0.8
MOS *e* 08 12 24.6
MOS *e* 08 16 29.5
MOS *e* 08 21 20.6
MOS pmax pmax
comp=Z,200nm,1.2s
MOS pmax pmax
comp=Z,138nm,1.1s
SOC Sochi 114.39 51 *i*PKIKP PKPdf 08 10 33.5 +0.3
SOC *e* 08 11 39.2
SOC *e*PS **PS 08 21 28.0 +1.0**
SOC *e*SSS SSS 08 31 19.2
SOC pmax pmax
comp=Z,92nm,0.8s
TMCR Tamitsa 114.75 28 *e*PKIKP PKPdf 08 10 33.8 +0.6
TMCR pmax pmax
comp=Z,81nm,1.1s
VSR Storozhevoye 114.85 43 *e*PKIKP PKPdf 08 10 34.0 +0.2
VSR pmax pmax
comp=Z,100nm,1.0s
VORD Divnogorie 114.91 43 *e*PKIKP PKPdf 08 10 34.0 +0.1
VORD pmax pmax
comp=Z,80nm,1.0s
RAYN Ar Rayn 115.33 74 *e*PKPdf **PKPdf 08 10 36.3 +0.6**
KLMR Klimovskoe 115.45 32 *d i*PKIKP **PKPdf 08 10 34.9 +0.2**
KLMR SS SS 08 26 58.2 -6.0
KLMR pmax pmax
comp=Z,148nm,0.9s
KLMR Klimovskoe 115.45 32⇓ *i*PKPdf **PKPdf 08 10 34.9 +0.2**
KLMR *e*PKPdf **PKPdf 08 10 34.9 +0.2**
KLMR *e*PKPdf **PKPdf 08 10 34.9 +0.2**
KLMR AMP 08 10 36.1
comp=Z,148nm,0.9s
KLMR *e*PP **PP 08 11 39.8 -6.8**
KLMR *e*x x 08 21 09.5
KLMR *e*PKKPbc **PKKPab 08 21 15.6 -0.6**
KLMR SS **SS 08 26 58.3 -5.9**
KLMR SS **SS 08 26 58.3 -5.9**
NEY Neytrino 116.52 52 *c i*PKIKP **PKPdf 08 10 38.8 +1.2**
KIV Kislovodsk 116.56 51 *e*PKPdf **PKPdf 08 10 37.8 +0.3**
KIV Kislovodsk 116.56 51 P **PKPdf 08 10 38.1 +0.5**
SNR=26
KIV Kislovodsk 116.56 51 PKPdf **PKPdf 08 10 38.1 +0.5**
SNR=26
KIV Kislovodsk 116.56 51⇓ *i*PKIKP **PKPdf 08 10 37.6 +0.1**
KIV *e* 08 11 55.2
KIV *e* 08 12 36.6
KIV *e*SS SS 08 27 19.1 -0.8
KIV pmax pmax
comp=Z,173nm,1.2s
KVAR Kislovodsk Arr 116.57 51 PKP **PKPdf 08 10 37.6 0.0**
comp=Z,82nm,0.8s,baz=349,slow=1.0,SNR=36
KBZ Khabaz 116.69 51 PKP **PKPdf 08 10 38.2 +0.6**
comp=Z,101nm,0.9s,baz=217,slow=3.1,SNR=92
KBZ PKKPbc **PKKPab 08 21 12.2 +1.1**
comp=Z,4.8nm,0.8s,baz=87,slow=4.4,SNR=6.3
GOF Gofitskoye 116.92 50⇑ *e*PKIKP **PKPdf 08 10 38.7 +0.7**
GOF *e*S **SKSac 08 16 44.4 +4.8**
GOF pmax pmax
comp=Z,309nm,1.0s
GOF smax smax
comp=N,67nm,1.3s
GOF smax smax
comp=E,74nm,1.4s
NCK Nalchik 117.18 51 *i*PKIKP **PKPdf 08 10 38.9 +0.3**
ZEI Tsey 117.33 52 *i*PKIKP **PKPdf 08 10 36.4 -2.8**
ZEI pmax pmax
comp=Z,77nm,0.9s
GNI Garni 117.69 55 PKP **PKPdf 08 10 39.7 -0.2**
comp=Z,75nm,0.8s,baz=302,slow=1.0,SNR=30
GNI Garni 117.69 55 *e*PKPdf **PKPdf 08 10 41.0 +1.1**
GNI Garni 117.69 55 P **PKPdf 08 10 41.3 +1.4**
SNR=15
GNI Garni 117.69 55 PKPdf **PKPdf 08 10 41.3 +1.4**
SNR=15
GNI Garni 117.69 55 *d i*PKIKP **PKPdf 08 10 40.1 +0.2**
ARMA Armidale 117.74 214 *e*PKPdf **PKPdf 08 10 41.5 +1.1**
PRGR Permogore 118.36 31⇓ *i*PKIKP **PKPdf 08 10 40.8 +0.6**
PRGR pmax pmax
comp=Z,198nm,0.9s
GROC Groznyy 118.75 52 *i*P **Pdif 08 07 04.4 -0.9**
GROC *i* 08 10 41.9
GROC *e* 08 12 09.5
GROC *e* 08 17 04.5
GROC *e*PS **PS 08 22 07.0 +1.1**

GROC pmax pmax
comp=Z,148nm,1.2s
MAK Makhachkala 119.99 52 *e*P **Pdif 08 07 08.4 -2.4**
MAK *i* 08 10 43.8
MAK *e* 08 12 17.4
MAK *e*PPP PPP 08 14 56.4
MAK pmax pmax
comp=Z,236nm,1.1s
STKA Stephens Creek 121.13 205 PKP **PKPdf 08 10 46.9 +0.2**
comp=Z,65nm,0.8s,baz=104,slow=1.4,SNR=67
STKA SKP 08 13 32.0
comp=Z,11nm,0.8s,baz=222,slow=0.7,SNR=4.8
STKA Stephens Creek 121.13 205 *e*PKIKP **PKPdf 08 10 47.1 +0.4**
EIDS Eidsvold 122.01 217 *e*PKPdf **PKPdf 08 10 48.8 +0.3**
BBOO Buckleboo 122.24 200 *e*PKPdf **PKPdf 08 10 48.6 -0.2**
H01W2 Cape Leeuwin H 123.28 178 PKP **PKPdf 08 10 51.5 +1.1**
baz=246,slow=74,SNR=7.2
H01W3 Cape Leeuwin H 123.29 178 PKP **PKPdf 08 10 51.5 +1.0**
baz=128,slow=74,SNR=6.1
SOKR Solikamsk 124.13 32 *d i*PKIKP **PKPdf 08 10 50.1 -1.3**
SOKR pmax pmax
comp=Z,116nm,0.6s
ASUD Al Ashush, Dub 124.33 75 P **PKPdf 08 10 54.1 +1.2**
SNR=7.4
ASUD Al Ashush, Dub 124.33 75 PKPdf **PKPdf 08 10 54.1 +1.2**
SNR=7.4
ASUD Al Ashush, Dub 124.33 75 P **PKPdf 08 10 54.0 +1.1**
SNR=10
ASUD P **PKPdf 08 10 54.0 +1.1**
SNR=10
NAZ Nazwa, Dubai 124.70 74 P **PKPdf 08 10 54.2 +0.6**
SNR=6.5
NAZ Nazwa, Dubai 124.70 74 PKPdf **PKPdf 08 10 54.2 +0.6**
SNR=6.5
BILL Bilibino 124.83 339 *e*PKPdf **PKPdf 08 10 53.7 +1.2**
BILL Bilibino 124.83 339 *d i*PKIKP **PKPdf 08 10 52.4 -0.2**
BILL *e* 08 12 46.2
BILL *e* 08 12 50.7
BILL pmax pmax
comp=Z,121nm,0.9s
HATD Hatta, Dubai 125.09 75 P **PKPdf 08 10 54.3 -0.1**
SNR=10
HATD Hatta, Dubai 125.09 75 PKPdf **PKPdf 08 10 54.3 -0.1**
SNR=10
ARQ Araqi 125.16 76 P **PKPdf 08 10 58.0 +3.4**
SNR=9.3
ARQ Araqi 125.16 76 PKPdf **PKPdf 08 10 58.0 +3.4**
SNR=9.3
UOSS Minazif 125.17 74 *e*PKPdf **PKPdf 08 10 53.9 -0.6**
NWAO Narrogin (SRO) 125.27 181 PKP **PKPdf 08 10 54.7 +0.1**
comp=Z,158nm,0.8s,baz=41,slow=2.7,SNR=70
NWAO Narrogin (SRO) 125.27 181 *e*PKPdf **PKPdf 08 10 54.9 +0.3**
NWAO Narrogin (SRO) 125.27 181 *e*PKIKP **PKPdf 08 10 54.9 +0.3**
BANOM Banah 125.43 73 P **PKPdf 08 10 55.7 +0.7**
SNR=5.6
BANOM Banah 125.43 73 PKPdf **PKPdf 08 10 55.7 +0.7**
SNR=5.6
BSY Bisya 125.66 77 P **PKPdf 08 11 01.0 +5.4**
SNR=13
BSY Bisya 125.66 77 PKPdf **PKPdf 08 11 01.0 +5.4**
SNR=13
ARU Arti 125.86 35 PKP **PKPdf 08 10 55.8 +1.0**
comp=Z,112nm,0.6s,baz=284,slow=1.2,SNR=141
ARU Arti 125.86 35 *e*PKPdf **PKPdf 08 10 56.0 +1.2**
ARU Arti 125.86 35 *i*PKIKP **PKPdf 08 10 55.4 +0.6**
ARU 08 12 52.9
ARU 08 17 16.1
HOQ Hoqain 125.92 76 P **PKPdf 08 10 59.0 +3.0**
SNR=13
HOQ Hoqain 125.92 76 PKPdf **PKPdf 08 10 59.0 +3.0**
SNR=13
SMDO Samad 126.48 77 P **PKPdf 08 11 01.0 +3.8**
SNR=18
SMDO Samad 126.48 77 PKPdf **PKPdf 08 11 01.0 +3.8**
SNR=18
BIDO Bidbid 126.64 77 P **PKPdf 08 10 58.0 +0.6**
SNR=12
BIDO Bidbid 126.64 77 PKPdf **PKPdf 08 10 58.0 +0.6**
SNR=12
SMY Shemya 126.72 320 *e*PKPdf **PKPdf 08 10 56.8 +0.3**
SMY Shemya 126.72 320 *e*PKIKP **PKPdf 08 10 56.8 +0.3**
AKTO Aktyubinsk 126.80 43 PKP **PKPdf 08 10 57.6 +0.8**
comp=Z,88nm,0.9s,baz=259,slow=0.6,SNR=122
AKTO PP **pPKPdf 08 13 03.7 +0.4**
comp=Z,27nm,1.1s,baz=264,slow=3.6,SNR=5.9
SVE Sverdlovsk 126.85 35 *e*PKIKP **PKPdf 08 10 57.6 +0.9**
SVE pmax pmax
comp=Z,159nm,1.3s
WSAR Wadi Sarin 127.05 77 PKP **PKPdf 08 10 58.3 +0.2**
comp=Z,184nm,0.8s,baz=251,slow=2.4,SNR=96
WSAR PP **pPKPdf 08 13 04.1 -0.6**
comp=Z,24nm,0.8s,baz=191,slow=1.7,SNR=4.2
WBK Wadi Bani Khal 127.23 78 P **PKPdf 08 11 01.0 +2.4**
SNR=6.6
WBK Wadi Bani Khal 127.23 78 PKPdf **PKPdf 08 11 01.0 +2.4**
SNR=6.6
H08S1 Diego Garcia H 127.83 120 PKP **PKPdf 08 11 00.7 +1.1**
baz=334,slow=6.8,SNR=15
H08S2 Diego Garcia H 127.84 120 PKP **PKPdf 08 11 01.1 +1.5**
baz=334,slow=6.8,SNR=5.5
H08S3 Diego Garcia H 127.84 120 PKP **PKPdf 08 11 00.9 +1.3**
baz=334,slow=6.8,SNR=10
DGAR Diego Garcia 127.94 119 *e*PKPdf **PKPdf 08 11 01.9 +1.8**
DGAR Diego Garcia 127.94 119 *e*PKIKP **PKPdf 08 11 01.9 +1.8**
GEYT Alibeck 127.96 59 PKP **PKPdf 08 10 59.2 -0.3**
comp=Z,64nm,0.8s,baz=260,slow=5.7,SNR=49
GYA0B ALIBECK ARRAY127.96 59 *e*PKPdf **PKPdf 08 11 00.4 +0.9**
AB31 Akbulak array 128.23 44 *i*PKIKP **PKPdf 08 11 00.6 +1.0**
AB31 pmax pmax
comp=Z,200nm,0.9s
ABKAR Akbulak array 128.23 44 *e*PKPdf **PKPdf 08 11 01.2 +1.6**
CTA Charters Tower 128.89 217 PKP **PKPdf 08 11 01.8 -0.1**
comp=Z,111nm,0.9s,baz=179,slow=1.0,SNR=69
CTA SKPbc SKPbc 08 13 33.5
comp=Z,41nm,0.8s,baz=179,slow=3.3,SNR=14
CTAO Charters Tower 128.89 217 *e*PKPdf **PKPdf 08 11 02.8 +1.0**
CTAO Charters Tower 128.89 217 *e*PKIKP **PKPdf 08 11 02.8 +1.0**
NRIK Noril'sk 129.66 13 PKP **PKPdf 08 11 02.5 +0.8**
comp=Z,60nm,1.0s,baz=34,slow=0.9,SNR=58
NRIK SKPbc SKPab 08 13 35.9 +2.3
comp=Z,22nm,0.9s,baz=16,slow=2.0,SNR=5.5
TIXI Tiksi 129.91 355 PKP **PKPdf 08 11 01.5 -0.7**
comp=Z,87nm,0.9s,baz=11,slow=2.7,SNR=8.5
TIXI SKPbc SKPab 08 13 36.2 +1.6
comp=Z,52nm,0.8s,baz=22,slow=4.7,SNR=17
TIXI Tiksi 129.91 355 *e*PKPdf **PKPdf 08 11 02.9 +0.7**
TIXI SKPbc SKPab 08 13 36.2 +1.6
TIXI Tiksi 129.91 355 *d i*PKIKP **PKPdf 08 11 00.8 -1.3**
AS01 Alice Springs 131.39 202 *e*PKPdf **PKPdf 08 11 07.0 +0.5**
ASAR Alice Springs 131.40 202 PKhKP PKPpre 08 10 46.2
comp=Z,9.0nm,0.7s,baz=140,slow=2.4,SNR=64
ASAR PKP **PKPdf 08 11 06.3 -0.2**
comp=Z,114nm,0.7s,baz=150,slow=2.1,SNR=86
ASAR pPKP pPKPdf 08 13 13.2 +0.1
comp=Z,13nm,0.8s,baz=150,slow=2.3,SNR=6.2
ASAR SKPbc **SKPbc 08 13 41.9 +0.2**
comp=Z,106nm,1.0s,baz=149,slow=4.0,SNR=26
ASAR PKKP **PKKPdf 08 21 02.5 -0.6**
comp=Z,3.2nm,0.7s,baz=352,slow=1.8,SNR=9.7
ASAR SKKPbc **SKKPbc 08 23 11.1 +0.1**
comp=Z,3.6nm,0.9s,baz=309,slow=5.1,SNR=4.8
AS31 Alice Springs 131.41 202 *e*PKPdf **PKPdf 08 11 06.8 +0.3**
SEY Seymchan 132.51 339 PKP **PKPdf 08 11 07.8 +0.5**
comp=Z,111nm,0.6s,baz=132,slow=5.3,SNR=5.1
SEY SKPbc **SKPab 08 13 45.1 -1.0**
comp=Z,32nm,0.9s,baz=9.8,slow=23,SNR=7.2
SEY PKKP **PKKPdf 08 21 01.2 -1.0**
comp=Z,3.7nm,0.8s,baz=261,slow=2.7,SNR=8.1
SEY Seymchan 132.51 339 *d i*PKIKP **PKPdf 08 11 08.0 +0.7**
WAKE Wake Island 133.02 276 *e*PKPdf **PKPdf 08 11 10.9 +1.4**
BRVK Borovoye 133.37 37 *e*PKPdf **PKPdf 08 11 11.0 +1.8**
BRVK Borovoye 133.37 37 P **PKPdf 08 11 09.4 +0.2**
SNR=53
BRVK Borovoye 133.37 37 PKPdf **PKPdf 08 11 09.4 +0.2**
SNR=53
BRVK Borovoye 133.37 37 *d i*PKIKP **PKPdf 08 11 09.4 +0.2**
BVA0 Borovoye Array 133.44 37 *i*PKIKP **PKPdf 08 11 10.1 +0.8**
BVA0 pmax pmax
comp=Z,109nm,0.9s
BVAR Borovoye Array 133.44 37 PKhKP PKPpre 08 10 56.7
comp=Z,1.5nm,0.7s,baz=300,slow=3.3,SNR=5.4
BVAR PKP **PKPdf 08 11 08.6 -0.7**
comp=Z,57nm,0.7s,baz=343,slow=1.5,SNR=65
BVAR SKPbc **SKPbc 08 13 48.2 +0.8**
comp=Z,9.5nm,0.5s,baz=299,slow=2.4,SNR=10
BVAR SKKPbc **SKKPbc 08 23 05.6 -1.2**

comp=Z,6.9nm,0.7s,baz=116,slow=3.4,SNR=12
WB2 Warramunga Arr 134.66 204 *e*PKPdf **PKPdf 08 11 13.4 +0.7**
WRA Warramunga Arr 134.66 204 PKhKP PKPpre 08 10 57.2
comp=Z,5.3nm,0.3s,baz=200,slow=2.1,SNR=67
WRA PKP **PKPdf 08 11 12.5 -0.3**
comp=Z,182nm,0.8s,baz=160,slow=1.6,SNR=78
WRA pPKP pPKPdf 08 13 19.4 +0.2
comp=Z,21nm,1.0s,baz=172,slow=1.7,SNR=5.3
WRA SKPbc **SKPbc 08 13 52.9 +0.4**
comp=Z,131nm,0.8s,baz=158,slow=2.8,SNR=34
WRA PKKP **PKKPdf 08 20 56.5 -0.3**
comp=Z,2.8nm,0.9s,baz=347,slow=1.6,SNR=6.9
WRAB Tennant Creek 134.67 204 *e*PKPdf **PKPdf 08 11 13.7 +1.0**
WRAB Tennant Creek 134.67 204 *d i*PKIKP **PKPdf 08 11 12.6 -0.1**
MA2 Magadan 135.34 336 PKhKP PKPpre 08 10 59.6
comp=Z,6.0nm,0.8s,baz=59,slow=7.5,SNR=4.8
MA2 PKP **PKPdf 08 11 13.2 +0.5**
comp=Z,39nm,0.8s,baz=92,slow=3.4,SNR=22
MA2 SKPbc **SKPbc 08 13 54.6 +1.3**
comp=Z,46nm,1.1s,baz=70,slow=3.4,SNR=9.9
MA2 PKKP **PKKPdf 08 20 54.6 -2.1**
comp=Z,5.5nm,0.9s,baz=114,slow=3.1,SNR=4.2
MA2 Magadan 135.34 336 PKPpre PKPpre 08 10 59.6
MA2 *e*PKPdf **PKiKP 08 11 13.8 -0.6**
MA2 SKPbc **SKPbc 08 13 54.6 +1.3**
MA2 PKKP **PKKPdf 08 20 54.6 -2.1**
MA2 Magadan 135.34 336 *i*PKIKP **PKPdf 08 11 12.9 +0.2**
PET Petropavlovsk 135.43 325 *e*PKPdf **PKPdf 08 11 13.9 +0.9**
PET Petropavlovsk 135.43 325 *i*PKIKP **PKPdf 08 11 13.5 +0.5**
COEN Coen 135.54 219 *e*PKPpre PKPpre 08 11 01.5
COEN *e*PKPdf **PKiKP 08 11 15.9 -0.2**
PETK Petropavlovsk- 135.90 325 PKhKP PKPpre 08 11 02.6
comp=Z,9.0nm,0.8s,baz=94,slow=7.5,SNR=11
PETK PKP **PKPdf 08 11 14.1 +0.2**
comp=Z,110nm,0.8s,baz=86,slow=5.8,SNR=37
PETK pPKP pPKPdf 08 13 20.9 +0.3
comp=Z,15nm,0.9s,baz=96,slow=6.1,SNR=4.0
PETK SKPbc **SKPbc 08 13 56.2 +1.1**
comp=Z,34nm,0.9s,baz=90,slow=7.6,SNR=8.5
PETK PKKP **PKKPdf 08 20 54.0 -1.5**
comp=Z,2.6nm,0.7s,baz=182,slow=1.6,SNR=4.2
PETK SKKPbc **SKKPbc 08 22 57.9 +0.1**
comp=Z,7.8nm,0.9s,baz=169,slow=2.4,SNR=4.5
PETK Petropavlovsk- 135.90 325 PKPpre PKPpre 08 11 02.6
PETK *e*PKPdf **PKPdf 08 11 15.3 +1.4**
PETK pPKP pPKPdf 08 13 20.9 +0.3
PETK SKPbc **SKPbc 08 13 56.2 +1.1**
PETK PKKP **PKKPdf 08 20 54.0 -1.5**
PETK SKKPbc **SKKPbc 08 22 57.9 +0.1**
PETK Petropavlovsk- 135.90 325 *e*PKIKP **PKPdf 08 11 15.3 +1.4**
BRZS Berezniki 135.95 40 *e*PKP **PKPdf 08 11 14.9 +0.7**
BRZS *i* PP **PP 08 14 02.4 +1.3**
BRZS *i* sPKP 08 14 11.3
CHM Chimkent 136.24 51 *e*PKP **PKPdf 08 11 16.2 +1.2**
OTUK Ortayu 136.40 42 PKIKP **PKPdf 08 11 15.1 +0.1**
OTUK pmax pmax
comp=Z,122nm,1.0s
PMG Port Moresby 136.48 227 PKhKP PKPpre 08 11 05.8
comp=Z,19nm,0.9s,baz=131,slow=4.3,SNR=7.3
PMG PKP **PKPdf 08 11 16.8 +0.6**
comp=Z,127nm,1.0s,baz=193,slow=1.4,SNR=17
PMG SKPbc **SKPbc 08 14 00.4 +2.2**
comp=Z,158nm,1.0s,baz=78,slow=2.1,SNR=17
PMG Port Moresby 136.48 227 *d i*PKIKP **PKPdf 08 11 16.2 0.0**
IUG Iuzhnay 136.59 51 ||*i*PKP **PKPdf 08 11 16.8 +1.1**
IUG *i* pPKP **pPKPdf 08 13 21.6 -0.7**
IUG *i* PP **PP 08 14 07.2 +1.7**
KK31 Karatay Array 136.72 50 *e*PKPdf **PKPdf 08 11 14.9 -0.9**
KK31 Karatay Array 136.72 50 *e*PKIKP **PKPdf 08 11 14.9 -0.9**
KKAR Karatay Array 136.72 50 *e*PKPdf **PKPdf 08 11 14.8 -1.0**
KKAR Karatay Array 136.72 50 *e*PKIKP **PKPdf 08 11 14.8 -1.0**
MBWA Marble Bar 136.88 185 *e*PKPpre PKPpre 08 11 06.8
MBWA *e*PKPdf **PKPdf 08 11 17.7 +1.0**
MBWA Marble Bar 136.88 185 P **PKPdf 08 11 17.3 +0.5**
SNR=7.6
KBL Kabul 136.91 63 *e*PKPpre PKPpre 08 11 05.9
KBL *e*PKPdf **PKiKP 08 11 18.3 -0.4**
KBL Kabul 136.91 63 *e*PKHKP PKPpre 08 11 05.9
KBL *e* 08 11 18.3
BHJ Bhuj 137.05 79 *e*P **PKPdf 08 11 14.3 -2.7**
BHJ IAMs_20 IAMs_20 08 39 46.2
comp=Z,563nm,4.8s
DZA Taraz 137.35 50 *e*PKP **PKPdf 08 11 18.2 +1.2**
DZA *i* pPKP **pPKPdf 08 13 22.9 -0.7**
DZA *i* sPKP 08 14 15.0
SKR Severo-Kuril's 137.91 323 *i*PKHKP PKPpre 08 11 07.9
SKR *e* 08 25 32.7
SKR pmax pmax
comp=Z,800nm,3.0s
SKR pmax pmax
comp=Z,309nm,1.0s
SKR pmax pmax
comp=Z,200nm,5.3s
SKR MLR MLR
comp=Z,200nm,16.0s
MNAS Manas 138.29 50 PKIKP **PKPdf 08 11 19.6 +0.7**
MNAS pmax pmax
comp=Z,154nm,1.0s
NVS Novosibirsk 138.98 29 *e*PKHKP PKPpre 08 11 14.1
NVS *e* 08 11 18.5
FITZ Fitzroy Crossi 139.02 194 PKhKP PKPpre 08 11 11.9
comp=Z,26nm,0.7s,baz=195,slow=4.5,SNR=31
FITZ PKP **PKPdf 08 11 21.2 +0.4**
comp=Z,72nm,0.8s,baz=195,slow=0.9,SNR=25
FITZ SKPbc **SKiKP 08 14 07.2 -1.0**
comp=Z,79nm,0.8s,baz=184,slow=4.8,SNR=19
FITZ Fitzroy Crossi 139.02 194 *e*PKPpre PKPpre 08 11 10.5
FITZ *e*PKPdf **PKiKP 08 11 22.2 -0.9**
FITZ SKPbc **SKiKP 08 14 07.2 -1.0**
KURBB Kurchatov Arra 139.03 37 PKhKP PKPpre 08 11 10.2
comp=Z,10nm,0.6s,baz=299,slow=3.3,SNR=74
KURBB PKP **PKPdf 08 11 20.2 +0.5**
comp=Z,118nm,0.8s,baz=299,slow=2.6,SNR=77
KURBB pPKP pPKPdf 08 13 26.1 -0.3
comp=Z,13nm,0.8s,baz=294,slow=2.5,SNR=4.4
KURBB SKPbc **SKiKP 08 14 05.9 -1.2**
comp=Z,18nm,1.0s,baz=316,slow=5.3,SNR=6.1
KURBB PP **PP 08 14 25.4 +5.7**
comp=Z,32nm,1.1s,baz=289,slow=7.8,SNR=7.0
KURBB PKKP **PKKPdf 08 20 47.9 -1.5**
comp=Z,1.8nm,0.8s,baz=108,slow=1.5,SNR=5.9
KURBB SKKPbc **SKKPbc 08 22 46.4 +0.7**
comp=Z,2.1nm,0.8s,baz=116,slow=4.2,SNR=4.1
KURK Kurchatov 139.03 36 *e*PKPpre PKPpre 08 11 12.4
KURK *e*PKPdf **PKiKP 08 11 21.6 -0.5**
KURK pPKP pPKPdf 08 13 26.1 -0.3
KURK SKPbc **SKiKP 08 14 05.9 -1.2**
KURK PP **PP 08 14 25.4 +5.7**
KURK PKKP **PKKPdf 08 20 47.9 -1.5**
KURK SKKPbc **SKKPbc 08 22 46.4 +0.7**
KURK Kurchatov 139.03 36 PKPdf PKPpre 08 11 12.4
SNR=68
KURK Kurchatov 139.03 36 *d i*PKIKP **PKPdf 08 11 20.5 +0.8**
YAK Yakutsk 139.05 350 *e*PKPdf **PKPdf 08 11 21.2 +1.8**
YAK Yakutsk 139.05 350 *e*PKHKP PKPpre 08 11 10.3
YAK *i* 08 11 19.1
YAK *e* 08 14 10.7
YAK *e* 08 17 35.3
YAK pmax pmax
comp=Z,34nm,0.9s
YAK pmax pmax
comp=N,3.0nm,0.9s
YAK pmax pmax
comp=E,3.0nm,1.1s
EKS2 Erkin-Say 139.15 50 P PKPpre 08 11 15.3
SNR=16
AML Almayashu 139.24 51 P PKPpre 08 11 13.5
SNR=37
USP Ospenovka 139.48 49 P PKPpre 08 11 13.9
SNR=13
SFK Sufi-Kurgan 139.63 54 PKHKP PKPpre 08 11 14.2
SFK pmax pmax
comp=Z,253nm,1.2s
AAK Ala-Archa 139.66 50 PKhKP PKPpre 08 11 13.7
comp=Z,41nm,0.8s,baz=229,slow=3.3,SNR=35
AAK PKP **PKPdf 08 11 21.6 +0.2**
comp=Z,102nm,0.7s,baz=220,slow=4.2,SNR=33
AAK PP **PP 08 14 27.9 +3.7**
comp=Z,40nm,1.0s,baz=259,slow=2.6,SNR=5.0
AAK Ala-Archa 139.66 50 P PKPpre 08 11 13.7
SNR=33
AAK Ala-Archa 139.66 50 *e*PKPpre PKPpre 08 11 15.5
AAK PKP **PKPdf 08 11 21.6 +0.2**
AAK PP **PP 08 14 27.9 +3.7**
AAK Ala-Archa 139.66 50 PKPdf PKPpre 08 11 14.3
SNR=74
AAK Ala-Archa 139.66 50 *d i*PKIKP **PKPdf 08 11 21.1 -0.3**
FRU Bishkek 139.69 49 *e*PKHKP PKPpre 08 11 13.0
FRU *i* 08 11 22.0
FRU *i* 08 14 18.0
FRU pmax pmax
comp=Z,55nm,1.5s
CHMS Chumysh 139.74 49 P PKPpre 08 11 15.0
SNR=7.6
UCH Uchtor 139.79 50 P PKPpre 08 11 17.4
SNR=100
KBK Karagaybulak 139.98 49 P PKPpre 08 11 16.3
SNR=12
POO Poona 140.08 87 *e*P **PKPdf 08 11 19.9 -2.8**
ZAA0 Zalesovo Array 140.27 29 *e*PKPpre PKPpre 08 11 16.3
ZALV Zalesovo Beam 140.27 29 PKhKP PKPpre 08 11 15.1
comp=Z,45nm,0.6s,baz=300,slow=4.6,SNR=88
ZALV PKP **PKPdf 08 11 22.3 +0.4**
comp=Z,459nm,0.8s,baz=285,slow=2.8,SNR=66
ZALV pPKP pPKPdf 08 13 28.8 +0.2
comp=Z,94nm,1.1s,baz=262,slow=4.5,SNR=6.2
ZALV Zalesovo Beam 140.27 29 *e*PKPpre PKPpre 08 11 16.4
ZALV PKP **PKPdf 08 11 22.3 +0.4**
ZALV pPKP pPKPdf 08 13 28.8 +0.2
ZALV Zalesovo Beam 140.27 29 *e*PKHKP PKPpre 08 11 16.4
TKM2 Tokmak 2 140.35 49 P PKPpre 08 11 16.6
SNR=73
TKM2 Tokmak 2 140.35 49 PKHKP PKPpre 08 11 16.7
TKM2 pmax pmax
comp=Z,158nm,0.9s
KZA Kyzart 140.36 50 P PKPpre 08 11 19.3
SNR=5.6
NIL Nilore 140.47 64 *e*PKPpre PKPpre 08 11 16.3
NIL Nilore 140.47 64 *e*PKHKP PKPpre 08 11 16.3
ULHL Ulahol 141.01 49 P PKPpre 08 11 19.6
SNR=12
KSH Kashi 141.59 54 ||*i*PKP **PKPdf 08 11 19.1 -5.8**
KSH PP **PP 08 14 34.0 -2.0**
KSH PKS **PKSdf 08 14 58.5 -2.3**
KSH SKS **SKSdf 08 17 40.2 -3.8**
KSH SKKS **SKKSac 08 20 31.3 -3.2**
KSH SS **SS 08 32 21.6 -2.9**
KSH AMB AMB
comp=Z,2μm,3.6s
KDJ Kajisay 141.71 49 *e*PKPpre PKPpre 08 11 22.6
TARG Taragay, Kyrgy 142.28 50 *e*PKPpre PKPpre 08 11 24.1
MTN Manton Dam 142.36 204 *e*PKPpre PKPpre 08 11 23.2
PRZ Przheval'sk 142.44 48 *e*PKPdf **PKPdf 08 11 25.4 -1.0**
PRZ Przheval'sk 142.44 48 *e*PKIKP **PKPdf 08 11 25.4 -1.0**
PALK Pallekele 142.63 108 PKP **PKPdf 08 11 25.2 -2.1**
comp=Z,159nm,0.9s,baz=296,slow=2.8,SNR=18
PALK Pallekele 142.63 108 *e*PKPdf **PKPdf 08 11 25.9 -1.5**
PALK Pallekele 142.63 108 P **PKPdf 08 11 25.8 -1.5**
SNR=8.6
PALK Pallekele 142.63 108 PKPdf **PKPdf 08 11 25.8 -1.5**
SNR=8.6
PALK Pallekele 142.63 108 *e*PKIKP **PKPdf 08 11 25.9 -1.5**
PDGK Podgornoye 142.87 46 PKIKP **PKPdf 08 11 25.0 -2.1**
PDGK pmax pmax
comp=Z,869nm,1.0s
MAKZ Makanchi 142.91 40 *e*PKPpre PKPpre 08 11 25.1
MAKZ Makanchi 142.91 40 PKIKP **PKPdf 08 11 24.9 -2.0**
MK31 Makanchi Array 143.10 40 *e*PKPpre PKPpre 08 11 25.4
MK31 Makanchi Array 143.10 40 *i*PKIKP PKPbc 08 11 25.2 -0.2
MK31 pmax pmax
comp=Z,794nm,1.0s
MKAR Makanchi Array 143.10 40 PKP PKPbc 08 11 25.2 -0.2
comp=Z,648nm,0.9s,baz=305,slow=2.7,SNR=1950
MKAR SKKPbc SKKPbc 08 22 28.1 -1.4
comp=Z,9.6nm,1.0s,baz=121,slow=4.7,SNR=9.7
MKAR Makanchi Array 143.10 40 *e*PKIKP PKPbc 08 11 25.5 +0.1
MK01 Makanchi Array 143.12 40 *e*PKPpre PKPbc 08 11 25.6 +0.2
DHRM DHARAMSHALA 143.15 65 *e*P PKPab 08 11 25.9 +0.1
NKL Nikolayevsk 143.86 335 *i*PKIKP **PKPdf 08 11 28.0 -0.2**
NKL *e* 08 13 30.0
NKL pmax pmax
comp=N,1μm,7.0s
NKL pmax pmax
comp=E,700nm,7.0s
NKL pmax pmax
comp=Z,4μm,7.0s
NKL pmax pmax
comp=N,58nm,1.0s
NKL pmax pmax
comp=E,120nm,1.0s
NKL pmax pmax
comp=Z,830nm,1.0s
SMLA Simla 143.99 67 *e*P PKPbc 08 11 28.4 -0.1
SMLA IAMs_20 IAMs_20 08 43 42.9
comp=Z,2μm,22.0s
BHPL Bhopal 144.14 81 *e*P PKPbc 08 11 27.1 -2.2
HYB Hyderabad 144.19 91 *i*PKP PKPbc 08 11 29.5 -0.1
HYB Hyderabad 144.19 91 *e*P PKPbc 08 11 28.4 -1.2
ZSN Zaisan 144.25 37 ||*i*PKP **PKPab 08 11 29.8 +0.5**
BOD Bodaibo 144.28 2 *e*PKIKP PKPbc 08 11 28.1 -0.5
BOD pmax pmax
comp=Z,2μm,1.0s
TYV Tymovskoe 144.71 331 *e*PKIKP **PKPab 08 11 31.2 +0.4**
TYV pmax pmax
comp=Z,5μm,3.8s
TYV pmax pmax
comp=Z,689nm,1.4s
CLNS Chul'man 144.74 352 *e*PKIKP PKPbc 08 11 30.1 0.0
CLNS pmax pmax
comp=Z,405nm,1.1s
CLNS pmax pmax
comp=N,103nm,1.0s
CLNS pmax pmax
comp=E,40nm,0.9s
DDI Dehra Dun 144.82 68 *e*P **PKPdf 08 11 30.0 -0.7**
DDI IAmb IAmb 08 11 33.8
comp=Z,3μm,0.6s
DDI IAMs_20 IAMs_20 08 42 46.9
comp=Z,301nm,4.9s
NGP Nagpur 145.37 84 *e*P **PKPbc 08 11 32.9 -0.2**
KUR Kuril'sk 145.42 319 *d i*PKIKP **PKPbc 08 11 32.1 -0.3**
KUR *i* 08 11 33.7
KUR *e* 08 13 35.7
KUR *i* SS SS 08 33 08.3 +1.6
JAY Jayapura 145.86 227 PKPbc **PKPdf 08 11 33.8 +0.8**
comp=Z,428nm,1.1s,baz=257,slow=2.6,SNR=106
JAY pPKPbc pPKPab 08 13 38.1 -0.1
comp=Z,66nm,0.9s,baz=153,slow=6.1,SNR=5.9
JAY Jayapura 145.86 227 PKP **PKPbc 08 11 34.0 -0.7**
HVS Khovu-Aksy 146.07 26 *c i*PKIKP **PKPbc 08 11 33.4 -0.9**
GENI Genyem 146.17 226 PKP **PKPbc 08 11 34.8 -0.7**
SAUI Saumlaki 146.70 208 PKP **PKPab 08 11 39.0 -0.6**
SAUI Saumlaki 146.70 208 *e*PKPbc **PKPab 08 11 39.1 -0.6**
BATI Baumata 147.10 193 PKP **PKPdf 08 11 35.8 +0.8**
comp=Z,715nm,0.8s,baz=239,slow=1.5,SNR=58
BATI PKPbc **PKiKP 08 11 39.3 -0.5**
comp=Z,715nm,0.8s,baz=288,slow=3.3,SNR=59
BATI pPKPbc **pPKPdf 08 13 41.8 -0.1**
comp=Z,173nm,1.0s,baz=173,slow=5.7,SNR=3.3
BATI Baumata 147.10 193 PKP **PKPbc 08 11 37.1 -0.9**
YUK Yuzh-Kuril'sk 147.26 319 *e*PKIKP **PKPdf 08 11 34.2 -0.1**
YUK *e*SS SS 08 33 30.1 +2.7
YUK pmax pmax
comp=Z,988nm,1.5s
YUK pmax pmax
comp=N,329nm,1.1s
YUK pmax pmax
comp=E,200nm,1.1s
YUK pmax pmax
comp=Z,958nm,1.1s
YSS Yuzh-Sakhalins 147.30 326 *e*PKPdf **PKPdf 08 11 35.4 +1.2**
YSS *e*PKPbc **PKiKP 08 11 38.8 -0.4**
YSS Yuzh-Sakhalins 147.30 326 *κ i*PKIKP **PKPdf 08 11 35.3 +1.0**
YSS *e* 08 15 09.3
YSS pmax pmax
comp=Z,2μm,3.0s
YSS pmax pmax
comp=Z,630nm,0.8s
ZEA Zeya 147.34 348 *de*PKIKP **PKPdf 08 11 34.8 +0.7**
ZEA *e* 08 11 34.8
ZEA pmax pmax
comp=Z,2μm,3.0s
ZEA pmax pmax
comp=N,120nm,1.0s
ZEA pmax pmax
comp=E,59nm,1.0s
ZEA pmax pmax
comp=Z,740nm,1.4s
GRNR Gornyy 147.36 336 ||*i*PKIKP **PKPdf 08 11 35.4 +1.1**
GRNR pmax pmax
comp=N,110nm,1.0s
GRNR pmax pmax
comp=E,100nm,1.0s
GRNR pmax pmax
comp=Z,170nm,1.0s
SOEI Soe 147.40 195 PKP **PKPbc 08 11 37.6 -1.3**
SOEI Soe 147.40 195 *e*PKPbc **PKPbc 08 11 40.7 +1.8**
BASI Baing, Sumba 147.61 188 PKP **PKPbc 08 11 38.3 -1.0**
WMQ Urumqi 147.91 41 *e*PKPbc **PKPdf 08 11 36.3 +0.8**
IRK Irkutsk 148.50 14 ||*i*PKHKP PKPpre 08 11 36.8
IRK pmax pmax
comp=Z,1μm,2.3s
TLY Talaya 148.87 15 PKP **PKPdf 08 11 37.6 +0.9**
comp=Z,12nm,0.7s,baz=227,slow=1.5,SNR=20
TLY PKPbc **PKPbc 08 11 41.4 -0.1**
comp=Z,171nm,0.8s,baz=318,slow=3.7,SNR=50
TLY pPKPbc **pPKPbc 08 13 46.6 -0.2**
comp=Z,67nm,0.9s,baz=263,slow=3.6,SNR=5.6
TLY Talaya 148.87 15 PKP **PKPdf 08 11 37.6 +0.9**
TLY *e*PKPbc **PKiKP 08 11 43.1 +0.7**
TLY pPKPbc **pPKPbc 08 13 46.6 -0.2**
TLY Talaya 148.87 15 P **PKPdf 08 11 38.4 +1.7**
SNR=114
TLY Talaya 148.87 15 PKPdf **PKPdf 08 11 38.4 +1.7**
SNR=114
TLY Talaya 148.87 15 *d i*PKHKP PKPpre 08 11 37.8
TLY pmax pmax
comp=Z,496nm,1.1s
EDFI Ende, Flores 148.90 190 PKP **PKPdf 08 11 38.0 0.0**
MMRI Maumere 148.91 191 PKP **PKPdf 08 11 38.3 +0.4**
MMRI Maumere 148.91 191 *e*PKPdf **PKPdf 08 11 38.4 +0.5**
MMRI *e*PKPbc **PKiKP 08 11 43.5 -0.1**
ASAJ Asahikawa 149.16 322 PKP **PKPdf 08 11 37.9 +0.5**
comp=Z,166nm,1.1s,baz=265,slow=8.8,SNR=72
ASAJ PKPbc **PKPbc 08 11 42.3 0.0**
comp=Z,462nm,1.0s,baz=262,slow=4.1,SNR=73
ASAJ pPKPbc **pPKPbc 08 13 48.1 +0.4**
comp=Z,181nm,1.0s,baz=305,slow=3.0,SNR=13
ASAJ Asahikawa 149.16 322 *e*PKPdf **PKPdf 08 11 38.3 +0.9**
ASAJ *e*PKPbc **PKiKP 08 11 43.5 +0.3**
ASAJ pPKPbc **pPKPbc 08 13 48.1 +0.4**
PLAI Plampang 149.23 183 PKP **PKPdf 08 11 38.9 +0.5**
IGBI Denpasar 149.25 178 PKP **PKPbc 08 11 44.0 +0.6**
SRPI Serui, Papua 149.25 222 PKP **PKPbc 08 11 45.2 +1.7**
KMPI Kaimana, Papua 149.28 216 PKP **PKPbc 08 11 45.1 +1.6**
PYUN Piuthan 149.28 72 *e*P **PKPdf 08 11 38.6 +0.2**
CMJI Cimerak 149.31 165 PKP **PKPdf 08 11 39.5 +1.0**
CISI Cisompet, Garu 149.36 163 PKP **PKPdf 08 11 39.2 +0.5**
CISI Cisompet, Garu 149.36 163 *e*PKPdf **PKPdf 08 11 38.8 +0.1**
CISI *e*PKPbc **PKiKP 08 11 44.2 -0.4**
DNP Denpasar 149.39 178 PKP **PKPbc 08 11 45.1 +1.4**
PCJI Pacitan 149.47 170 PKP **PKPdf 08 11 39.6 +0.8**
SKJI Sukabumi 149.52 161 PKP **PKPbc 08 11 45.0 +0.9**
JAGI Jajag, Banyuwa 149.54 176 PKP **PKPdf 08 11 39.2 +0.3**
JAGI Jajag, Banyuwa 149.54 176 *e*PKPdf **PKPdf 08 11 38.8 -0.1**
JAGI *e*PKPbc **PKiKP 08 11 44.9 0.0**
CGJI Cibinong 149.61 159 PKP **PKPdf 08 11 39.6 +0.6**
UGM Wanagama 149.63 169 PKP **PKPbc 08 11 45.2 +0.8**
UGM Wanagama 149.63 169 *e*PKPdf **PKPdf 08 11 39.6 +0.4**
UGM *e*PKPbc **PKPbc 08 11 45.2 +0.8**
GMJI Gumukmas 149.68 174 PKP **PKPdf 08 11 40.5 +1.4**
KOLN Koldanda 149.84 73 *e*P **PKPdf 08 11 39.6 +0.3**
KPJI Karang Pucung 149.86 165 PKP **PKPdf 08 11 40.4 +1.0**
BAKI Biak 149.87 222 PKP **PKPdf 08 11 41.4 +1.9**
DANN Dangsing 149.94 71 *e*P **PKPdf 08 11 40.5 +1.0**
comp=Z,2μm,0.9s
ZAK Zakamensk 149.97 17 *e*PKHKP PKPpre 08 11 39.9
ZAK pmax pmax
comp=Z,342nm,1.1s
SRBI Singaraja 149.98 178 PKP **PKPdf 08 11 41.5 +1.9**
LEM Lembang 150.01 162 PKP **PKPdf 08 11 40.4 +0.6**
comp=Z,166nm,0.8s,baz=145,slow=4.7,SNR=21
LEM PKPbc **PKiKP 08 11 46.1 0.0**
comp=Z,2μm,0.8s,baz=133,slow=6.8,SNR=103
LEM pPKPbc **pPKPbc 08 13 50.2 -0.7**
comp=Z,372nm,0.9s,baz=174,slow=5.1,SNR=7.0
LEM PP **PP 08 15 23.7 +0.1**
comp=Z,334nm,1.1s,baz=107,slow=3.4,SNR=4.6
DBJI Dramaga 150.01 161 PKP **PKPdf 08 11 40.6 +0.9**
ERM Erimo 150.02 318 *e*PKPdf **PKPdf 08 11 39.5 +0.7**
ERM *e*PKPbc **PKiKP 08 11 46.6 +1.6**
ERM Erimo 150.02 318 *e*PKIKP **PKPdf 08 11 39.5 +0.7**
CIT Chita 150.06 3 *e*PKHKP PKPpre 08 11 45.6
CIT *e* 08 11 48.9
CIT pmax pmax
comp=Z,1μm,1.1s
KASI Kota Agung 150.19 156 PKP **PKPdf 08 11 40.7 +0.8**
BLJI Banyuglugur 150.22 175 PKP **PKPdf 08 11 41.1 +1.1**
SBJI Serang 150.22 159 PKP **PKPbc 08 11 46.2 +0.5**
KLR Kul'dur 150.29 339 PKP **PKPdf 08 11 39.4 +0.4**
comp=Z,6.7nm,1.0s,baz=19,slow=2.5,SNR=119
KLR PKPbc **PKPbc 08 11 44.5 -0.4**
comp=Z,45nm,0.9s,baz=14,slow=3.7,SNR=152
KLR pPKPbc **pPKPbc 08 13 50.7 +0.2**
comp=Z,2.6nm,0.9s,baz=22,slow=4.1,SNR=3.9
KLR PP **PP 08 15 24.4 -1.0**
comp=Z,3.5nm,1.0s,baz=60,slow=6.7,SNR=4.7
NGJI Ngawi 150.32 170 PKP **PKPdf 08 11 42.4 +2.3**
TNG Tangerang 150.34 160 PKP **PKPbc 08 11 47.1 +1.1**
TNG PKP **PKPbc 08 11 47.0 +1.1**
BNDI Bandanaira 150.40 208 PKP **PKPbc 08 11 46.6 +0.5**
SMRI Semarang 150.46 168 PKP **PKPdf 08 11 41.8 +1.4**
SMRI Semarang 150.46 168 *e*PKPdf **PKPdf 08 11 41.8 +1.4**
SMRI *e*PKPbc **PKiKP 08 11 47.8 +1.0**
LWLI Liwa 150.49 155 PKP **PKPdf 08 11 41.2 +0.6**
PPSI Pulau Pagai 150.58 145 PKP **PKPbc 08 11 48.4 +1.8**
BLSI Bandar Lampung 150.62 157 PKP **PKPbc 08 11 46.8 +0.1**
MNAI Manna 150.62 152 PKP **PKPbc 08 11 47.4 +0.7**
MNAI Manna 150.62 152 *e*PKPbc **PKPbc 08 11 47.3 +0.7**
FAKI Fak Fak 150.67 214 PKP **PKPdf 08 11 42.9 +2.2**
FAKI Fak Fak 150.67 214 *e*PKPdf **PKPdf 08 11 41.7 +1.0**
FAKI *e*PKPbc **PKiKP 08 11 47.6 +0.3**
GKN Gorkha 150.74 72 *e*P **PKPdf 08 11 40.9 +0.3**
RKPI Ransiki, Papua 150.78 219 PKP **PKPdf 08 11 42.4 +1.5**
GRJI Gresik 150.92 172 PKP **PKPdf 08 11 42.9 +1.9**
TBJI Tambak Boyo 150.92 171 PKP **PKPbc 08 11 48.7 +1.4**
KLI Kotabumi 150.94 156 PKP **PKPdf 08 11 41.6 +0.5**
MDSI Maura Dua 151.02 154 PKP **PKPdf 08 11 40.7 -0.5**
DMN Daman 151.18 73 *e*P **PKPdf 08 11 41.9 +0.5**
SISI Saibi 151.26 142 PKP **PKPbc 08 11 49.6 +1.5**
KKN Kakani 151.32 72 *e*P **PKPdf 08 11 41.9 +0.4**
MASI Maura Aman, Be 151.37 149 PKP **PKPdf 08 11 42.5 +0.7**
BWNR Bhubaneshwar 151.49 88 *e*P **PKPdf 08 11 40.8 -0.8**
GUMO Guam 151.60 257 PKP **PKPdf 08 11 41.7 -0.3**
comp=Z,212nm,0.9s,baz=198,slow=7.5,SNR=9.1
GUMO PKPbc **PKPbc 08 11 47.8 -1.0**
comp=Z,1μm,0.9s,baz=165,slow=4.8,SNR=35
GUMO pPKPbc **pPKPbc 08 13 53.6 -0.9**
comp=Z,159nm,0.9s,baz=165,slow=0.6,SNR=4.4
GUMO Guam 151.60 257 *e*PKPdf **PKPdf 08 11 41.9 -0.1**
GUMO *e*PKPbc **PKiKP 08 11 49.0 0.0**
GUMO pPKPbc **pPKPbc 08 13 53.6 -0.9**
GUMO Guam 151.60 257 *e*PKIKP **PKPdf 08 11 41.9 -0.1**
GUMO *e* 08 11 49.0
TEY Ternei 151.72 329 *e*PKIKP **PKPdf 08 11 42.8 +1.5**
TEY pmax pmax
comp=Z,800nm,3.0s
TEY pmax pmax
comp=Z,77nm,1.0s
GUN Gumba 151.84 72 *e*P **PKPdf 08 11 42.7 +0.2**
AAI Ambon 151.87 206 PKP **PKPdf 08 11 42.9 +0.4**
MSAI Masohi 151.87 207 PKP **PKPbc 08 11 48.8 -0.7**
KRJI Kerinci 151.90 147 PKP **PKPdf 08 11 44.2 +1.5**
BOK Bokaro 151.93 81 *e*P **PKPdf 08 11 42.2 -0.1**
BOK IAmb IAmb 08 11 50.8
comp=Z,835nm,0.7s
JIRN Jiri 152.13 72 *e*P **PKPdf 08 11 43.1 +0.1**
GSI Gunungsitoli 152.41 136 PKP **PKPdf 08 11 45.0 +1.7**
GSI Gunungsitoli 152.41 136 *e*PKPdf **PKPdf 08 11 44.8 +1.5**
GSI *e*PKPbc **PKiKP 08 11 51.8 +0.9**
BKSI Bulukumba 152.50 188 PKP **PKPdf 08 11 44.3 +0.9**
PMBI Palembang 152.67 154 PKP **PKPbc 08 11 51.5 +0.3**
NLAI Namlea 152.71 204 PKP **PKPbc 08 11 51.7 +0.4**
HIA Hailar 152.76 355 *e*PKPdf **PKPdf 08 11 43.4 +0.6**
HIA Hailar 152.76 355 *e*PKIKP **PKPdf 08 11 43.4 +0.6**
SIJI Sorong 152.92 214 PKP **PKPdf 08 11 44.0 -0.1**
comp=Z,50nm,0.8s,baz=352,slow=1.7,SNR=19
SIJI PKPbc **PKPbc 08 11 51.6 -0.2**
comp=Z,392nm,0.7s,baz=9.5,slow=5.4,SNR=54
SIJI PKPab **PKPab 08 12 05.7 +0.2**
comp=Z,57nm,0.8s,baz=329,slow=12,SNR=3.7
SIJI pPKPbc **pPKPbc 08 13 56.9 -0.8**
comp=Z,71nm,0.7s,baz=56,slow=1.7,SNR=7.3

SONA1	Songino Array	153.10	15	ePKPdf	PKPdf	08 11 44.8	+1.4
SONA1				ePKPbc	PKiKP	08 11 52.7	+1.3
SONA1				ePKPab	PKPab	08 12 07.2	+1.6
SONM	Songino Array	153.11	15	PKP	PKPdf	08 11 44.0	+0.5
	comp=Z,92nm,0.9s,baz=287,slow=0.9,SNR=232						
SONM				PKPbc	PKiKP	08 11 51.8	+0.4
	comp=Z,129nm,0.8s,baz=325,slow=1.8,SNR=40						
SONM				PKPab	PKPab	08 12 06.1	+0.5
	comp=Z,100nm,0.7s,baz=310,slow=4.0,SNR=18						
SONM				pPKP	pPKPdf	08 13 50.1	-0.5
	comp=Z,23nm,0.9s,baz=337,slow=0.8,SNR=4.1						
SONM				pPKPbc	pPKPbc	08 13 58.3	+0.9
	comp=Z,123nm,0.9s,baz=296,slow=0.6,SNR=21						
SONM				SKKPbc		08 21 37.9	
	comp=Z,3.2nm,0.9s,baz=180,slow=3.7,SNR=3.6						
SONM	Songino Array	153.11	15	PKIKP	PKPdf	08 11 44.0	+0.5
SONM						08 11 51.8	
SONM						08 12 06.1	
SONM				pmax	pmax		
	comp=Z,91nm,0.9s						
SONM				pmax	pmax		
	comp=Z,129nm,0.8s						
SONM				pmax	pmax		
	comp=Z,100nm,0.7s						
ULN	Ulaanbaatar	153.23	14	ePKPdf	PKPdf	08 11 44.4	+0.8
ULN				ePKPbc	PKiKP	08 11 53.1	+1.4
ULN				ePKPab	PKPab	08 12 08.2	+2.0
ULN	Ulaanbaatar	153.23	14	P	PKPdf	08 11 44.8	+1.2
	SNR=80						
ULN	Ulaanbaatar	153.23	14	PKPdf	PKPdf	08 11 44.8	+1.2
	SNR=80						
ULN	Ulaanbaatar	153.23	14	ePKIKP	PKPdf	08 11 44.4	+0.8
MNSI	Mandailing Nat	153.26	140	PKP	PKPdf	08 11 44.4	-0.1
KDI	Kendari	153.38	194	PKP	PKPdf	08 11 45.9	+1.2
SBSI	Sibolga	153.44	138	PKP	PKPdf	08 11 46.9	+2.1
TPTI		153.60	133	PKP	PKPab	08 12 09.3	+0.8
CMBY	CAMPBELL BAY	153.68	121	eP	PKPdf	08 11 38.8	-6.3
BKNI	Bangkinang	153.72	143	PKP	PKPbc	08 11 53.3	-0.2
MLSI	Meulaboh, Aceh	153.78	130	PKP	PKPdf	08 11 45.8	+0.6
BSI	Banda Aceh	153.79	126	PKP	PKPdf	08 11 45.4	+0.1
SPSI	Sidrap Palu	153.88	188	PKP	PKPdf	08 11 46.0	+0.6
PPBI	Pangkal Pinang	153.91	156	PKP	PKPdf	08 11 46.6	+1.2
KCSI	Kotacane, Aceh	154.20	133	PKP	PKPdf	08 11 45.9	+0.1
SANI	Sanana	154.21	203	PKP	PKPdf	08 11 46.7	+0.9
GTK	Tadong	154.30	73⇑	eP	PKPdf	08 11 45.1	-0.6
PSI	Prapat	154.42	136	PKP	PKPdf	08 11 46.0	-0.2
	comp=Z,73nm,0.8s,baz=180,slow=4.5,SNR=32						
PSI				PKPbc	PKiKP	08 11 54.3	-0.8
	comp=Z,76nm,0.8s,baz=180,slow=2.6,SNR=13						
PSI				PKPab	PKPab	08 12 11.7	-0.5
	comp=Z,84nm,0.7s,baz=360,slow=3.1,SNR=3.9						
PSI	Prapat	154.42	136	ePKPdf	PKPdf	08 11 46.8	+0.5
PSI				ePKPbc	PKPbc	08 11 55.9	+0.8
PSI				ePKPab	PKPab	08 12 13.0	+0.9
PSI	Prapat	154.42	136	ePKIKP	PKPdf	08 11 46.8	+0.5
PSI				e		08 12 13.0	
USRK	Ussuriysk Ar.	154.45	333	PKP	PKPdf	08 11 45.1	-0.1
	comp=Z,47nm,0.9s,baz=260,slow=1.4,SNR=85						
USRK				PKPbc	PKPbc	08 11 54.9	+0.8
	comp=Z,85nm,0.8s,baz=346,slow=1.2,SNR=37						
USRK				PKPab	PKPab	08 12 11.3	0.0
	comp=Z,36nm,0.8s,baz=32,slow=4.1,SNR=8.1						
USRK				pPKPbc	pPKPbc	08 14 01.6	+1.3
	comp=Z,23nm,0.9s,baz=306,slow=1.5,SNR=7.3						
USRK				PP	PP	08 15 48.1	-0.7
	comp=Z,21nm,1.1s,baz=46,slow=5.5,SNR=5.2						
TSI	Tuntungan	154.71	134	PKP	PKPdf	08 11 48.0	+1.5
KBKI	Kotabaru	154.75	180	PKP	PKPdf	08 11 47.6	+1.0
TTSI	Tana Toraja	154.78	188	PKP	PKPdf	08 11 47.9	+1.3
DSRI	Dabo	154.79	151	PKP	PKPdf	08 11 47.4	+0.8
LHMI	Lhok Sumawe	154.83	129	PKP	PKPdf	08 11 48.2	+1.5
LHMI	Lhok Sumawe	154.83	129	ePKPdf	PKPdf	08 11 48.0	+1.4
LHMI				ePKPdif	PKPbc	08 11 56.6	+0.8
LHMI				ePKPab	PKPab	08 12 15.3	+1.6
LBMI	Labuha	154.91	207	PKP	PKPdf	08 11 46.9	+0.1
PBKI	Pangkalan Bun	154.93	169	PKP	PKPdf	08 11 51.3	+4.5
MDJ	Mudanjiang	155.03	337	PKP	PKPdf	08 11 43.4	-2.6
MDJ				pPKP	pPKPdf	08 13 47.7	-5.6
MDJ				sPKP		08 14 37.7	
MDJ				PP	PP	08 15 53.5	+1.6
MDJ				AMB	AMB		
	comp=Z,100nm,3.2s						
MDJ	Mudanjiang	155.03	337	ePKPdf	PKPdf	08 11 46.3	+0.3
PBA	Port Blair	155.18	111	ePKPdf	PKPdf	08 11 47.6	+0.5
PBA				ePKPab	PKPab	08 12 15.5	+0.2
TURI	Tura	155.97	77	eP	PKPdf	08 11 48.3	+0.4
CBIJ	Chichi jima	156.00	287	ePKPdf	PKPdf	08 11 47.6	-0.2
CBIJ				ePKPab	PKPab	08 12 19.7	+1.0
JCJ	Chichijima	156.00	287	PKP	PKPdf	08 11 47.7	-0.1
	comp=Z,136nm,0.8s,baz=67,slow=3.2,SNR=8.0						
JCJ				PKPab	PKPab	08 12 18.5	-0.1
	comp=Z,56nm,0.8s,baz=283,slow=19,SNR=4.4						
TPRI	Tanjung Pinang	156.00	150	PKP	PKPdf	08 11 56.2	+8.0
DGPR	DIGLIPUR	156.02	108	eP	PKPdf	08 11 46.4	-1.7
LSA	Lhasa	156.14	66	PKP	PKPdf	08 11 49.4	+0.8
LSA	Lhasa	156.14	66	ePKPdf	PKPdf	08 11 49.7	+1.1
LSA	Lhasa	156.14	66	ePKIKP	PKPdf	08 11 49.7	+1.1
MJAR	Matsushiro Arr	156.19	312	PKP	PKPdf	08 11 47.6	-0.2
	comp=Z,11nm,0.8s,baz=211,slow=0.4,SNR=29						
MJAR				PKPab	PKPab	08 12 19.3	+0.2
	comp=Z,58nm,1.0s,baz=32,slow=1.4,SNR=11						
MJAR				pPKPab	pPKPab	08 14 20.2	+0.9
	comp=Z,14nm,1.1s,baz=43,slow=2.5,SNR=3.8						
MAJO	Matsushiro	156.19	312	ePKPdf	PKPdf	08 11 48.4	+0.6
MAJO	Matsushiro	156.19	312	ePKIKP	PKPdf	08 11 48.4	+0.6
MAT	Matsushiro	156.19	312	PKP	PKPdf	08 11 47.7	-0.1
MJB9	Matsu-Tunnel	156.19	312	ePKPdf	PKPdf	08 11 48.4	+0.6
TNTI	Ternate	156.24	208	ePKPdf	PKPdf	08 11 48.6	+0.1
TNTI				ePKPab	PKPab	08 12 20.0	+0.4
MYKOM	Kota Tinggi	156.44	147	ePKPdf	PKPdf	08 11 49.2	+0.4
MYKOM				ePKPab	PKPab	08 12 20.9	+0.4
APSI	Ampana	156.55	193	PKP	PKPdf	08 11 51.5	+2.6
AGT	Agartala	156.84	81	eP	PKPdf	08 11 47.9	-1.1
AGT				IAmb	IAmb	08 11 51.9	
	comp=Z,542nm,1.2s						
BELO	BELONIA	157.00	82	ex	PKPdf	08 11 44.9	-4.2
IPM	Ipoh	157.04	138	ePKPdf	PKPdf	08 11 49.9	+0.3
IPM				ePKPab	PKPab	08 12 23.1	-0.2
MTKI	Muara Teweh, K	157.05	176	PKP	PKPdf	08 11 49.2	-0.4
CN2	Changchun	157.08	343	ePKP	PKPdf	08 11 48.3	-0.4
CN2				epPKP	pPKPdf	08 13 56.4	+0.3
GUWA	GUWAHATI	157.15	75	eP	PKPdf	08 11 49.6	+0.3
KMSI	Cibinong	157.35	200	PKP	PKPdf	08 12 03.5	+14
SHL	Shillong	157.37	76	eP	PKPdf	08 11 48.3	-1.6
SHL				IAmb	IAmb	08 11 51.0	
	comp=Z,138nm,1.0s						
SHL	Shillong	157.37	76	ePKPdf	PKPdf	08 11 50.2	+0.3
SHL				ePKPab	PKPab	08 12 24.9	0.0
SHL	Shillong	157.37	76	ePKIKP	PKPdf	08 11 50.2	+0.3
KULM	Kulim	157.42	135	ePKPdf	PKPdf	08 11 50.5	+0.5
SMKI	Samarinda	157.57	182	PKP	PKPdf	08 11 51.6	+1.4
STKI	Sintang	157.59	167	PKP	PKPdf	08 11 49.0	-1.2
INU	Inuyama	157.63	311	ePKPdf	PKPdf	08 11 49.9	+0.2
GTA	Gaotai	157.72	36	||PKP	PKPdf	08 11 50.4	+0.6
GTA				PKPab	PKPab	08 12 26.6	+0.9
GTA				pPKP	pPKPdf	08 13 57.9	+0.7
GTA				sPKP		08 14 48.3	
GTA				PP	PP	08 16 12.7	+5.6
GTA				SKKS		08 22 03.2	
GTA				SS	SS	08 35 25.5	+5.0
GTA				AMB	AMB		
	comp=Z,410nm,4.7s						
MRSI	Marisa	157.82	195	PKP	PKPdf	08 11 49.4	-1.1
MPSI	Mapaga	158.09	190	PKP	PKPdf	08 11 50.7	-0.1
TEZP	TEZPUR	158.10	73	eP	PKPdf	08 11 49.6	-0.8
AZL	Aizawl	158.16	81	eP	PKPdf	08 11 51.0	+0.2
TRTT	Trang	158.59	129	PKP	PKPdf	08 11 50.7	-0.7
SURT	Suratani	158.66	125	PKP	PKPdf	08 11 51.2	-0.3
KSM	Kuching	158.67	163	ePKPdf	PKPdf	08 11 51.9	+0.4
KSM				ePKPab	PKPab	08 12 30.7	+0.5
SKLT	Songkhla	158.78	132	PKP	PKPdf	08 11 51.2	-0.4
ITAN	ITANAGAR	158.84	72	eP	PKPdf	08 11 51.4	+0.1
ZIRO	ZIRO	158.89	71	eP	PKPdf	08 11 50.1	-1.5
IMP	Imphal	159.28	78	eP	PKPdf	08 11 51.9	-0.1
JORH	JORHAT	159.37	73	eP	PKPdf	08 11 52.8	+0.9
SNY	Shenyang	159.41	344	||PKP	PKPdf	08 11 51.8	+0.3
SNY				AMB	AMB		
	comp=Z,720nm,6.4s						
SBUM	Sibu	160.06	168	ePKPdf	PKPdf	08 11 54.3	+1.2
SBUM				ePKPab	PKPab	08 12 37.0	+0.8
LKP	Lekhapani	160.67	70	eP	PKPdf	08 11 53.7	+0.3
BTO	Baotou	160.79	15	ePKP	PKPdf	08 11 53.3	+0.1
HHC	Hu-ho-hao-te	160.88	11	ePKP	PKPdf	08 11 54.8	+1.5
PHET	Kaeng Krachan	161.64	117	PKP	PKPdf	08 11 55.5	+0.8
KS01	Wonju Array Si	161.72	329	ePKPdf	PKPdf	08 11 54.6	+0.4
KS01				ePKPab	PKPab	08 12 44.2	+1.1
KSRS	Korea Array	161.72	329	PKP	PKPdf	08 11 54.7	+0.6
	comp=Z,41nm,1.0s,baz=84,slow=1.5,SNR=130						
KSRS				PKPab	PKPab	08 12 43.4	+0.3
	comp=Z,64nm,0.9s,baz=41,slow=4.1,SNR=34						
KSRS				pPKP	pPKPdf	08 14 02.4	+0.7
	comp=Z,10nm,1.0s,baz=113,slow=0.9,SNR=5.6						
KSRS				pPKPab	pPKPab	08 14 44.2	+1.2
	comp=Z,21nm,0.9s,baz=44,slow=3.9,SNR=12						
KSRS				PP	PP	08 16 27.6	-0.4
	comp=Z,17nm,1.0s,baz=18,slow=4.9,SNR=5.3						
KS15	Wonju Array Si	161.75	329	ePKPdf	PKPdf	08 11 54.9	+0.7
KS15				ePKPab	PKPab	08 12 44.5	+1.3
KSAR	Wonju Array Be	161.75	329	PKP	PKPdf	08 11 54.7	+0.5
KSAR				PKPab	PKPab	08 12 43.4	+0.2
KSAR				pPKP	pPKPdf	08 14 02.4	+0.7
KSAR				pPKPab	pPKPab	08 14 44.2	+1.0
KSAR				PP	PP	08 16 27.6	-0.6
KSAR	Wonju Array Be	161.75	329	PKIKP	PKPdf	08 11 54.7	+0.5
KSAR						08 12 43.4	
KSAR						08 14 44.2	
KSAR						08 16 27.6	
SRDT	SRDT	161.93	112	PKP	PKPdf	08 11 55.0	+0.1
BJI	Beijing	162.12	0	PKP	PKPdf	08 11 55.4	+1.0
BJT	Baijiatuau	162.14	0	ePKPdf	PKPdf	08 11 55.5	+1.0
BJT				ePKPab	PKPab	08 12 44.4	-0.4
BJT	Baijiatuau	162.14	0	ePKIKP	PKPdf	08 11 55.5	+1.0
BJT				e		08 12 44.4	
INCN	Inchon	162.28	332	ePKPdf	PKPdf	08 11 55.0	+0.3
INCN	Inchon	162.28	332	P	PKPdf	08 11 55.4	+0.6
	SNR=13						
INCN	Inchon	162.28	332	PKPdf	PKPdf	08 11 55.4	+0.6
	SNR=13						
LZH	Lanzhou	162.32	35	ePKP	PKPdf	08 11 56.3	+1.3
LZH				PKPab	PKPab	08 12 45.6	-0.4
LZH				pPKP	pPKPdf	08 14 03.2	+0.6
LZH				SS	SS	08 36 08.9	+0.5
LZH				AMB	AMB		
	comp=Z,980nm,7.0s						
DL2	Dalian	162.65	346	PKP	PKPdf	08 11 55.4	+0.4
DL2				PKPab	PKPab	08 12 46.4	-0.6
DL2				pPKP	pPKPdf	08 14 02.4	-0.2
DL2				sPKP		08 14 45.7	
DL2				AMB	AMB		
	comp=Z,680nm,3.6s						
MYLDM	Lahad Datu	163.05	187	ePKPdf	PKPdf	08 11 58.3	+2.1
JNU	Nakatsue	163.09	314	PKP	PKPdf	08 11 56.3	+0.6
	comp=Z,32nm,0.9s,baz=72,slow=4.9,SNR=12						
JNU				PKPab	PKPab	08 12 48.5	-1.0
	comp=Z,14nm,0.8s,baz=89,slow=1.7,SNR=3.9						
JNU	Nakatsue	163.09	314	ePKPdf	PKPdf	08 11 55.9	+0.3
JNU				PKPab	PKPab	08 12 48.5	-1.0
CM31	Chiang Mai Arr	163.28	99	ePKPdf	PKPdf	08 11 56.8	+0.6
CM31				ePKPab	PKPab	08 12 50.1	-0.5
CMAR	Chiang Mai Arr	163.28	99	PKP	PKPdf	08 11 56.8	+0.5
	comp=Z,65nm,0.8s,baz=265,slow=2.4,SNR=220						
CMAR				PKPab	PKPab	08 12 50.0	-0.7
	comp=Z,26nm,0.8s,baz=247,slow=5.9,SNR=13						
CMAR				PP	PP	08 16 38.0	+0.1
	comp=Z,20nm,0.9s,baz=263,slow=5.6,SNR=9.0						
CM01	Chiang Mai Arr	163.28	100	ePKPdf	PKPdf	08 11 56.9	+0.6
CM01				ePKPab	PKPab	08 12 50.4	-0.2
CHTO	Chiang Mai	163.37	98	PKP	PKPdf	08 11 56.5	+0.2
CHTO	Chiang Mai	163.37	98	ePKPdf	PKPdf	08 11 56.5	+0.2
CHTO				ePKPab	PKPab	08 12 50.5	-0.6
CHTO	Chiang Mai	163.37	98	P	PKPdf	08 11 56.8	+0.5
	SNR=39						
CHTO	Chiang Mai	163.37	98	PKPdf	PKPdf	08 11 56.8	+0.5
	SNR=39						
CHTO	Chiang Mai	163.37	98	ePKIKP	PKPdf	08 11 56.5	+0.2
CHTO				e		08 12 50.5	
CMAI	Chiengmai2	163.71	94	PKP	PKPdf	08 11 57.2	+0.4
CHBT	CHBT	163.73	123	PKP	PKPdf	08 11 57.5	+0.8
KKM	Kota Kinabalu	164.04	180	ePKPdf	PKPdf	08 11 58.0	+0.8
KKM				ePKPab	PKPab	08 12 54.2	+0.4
TIY	Taiyuan	164.08	11	PKP	PKPdf	08 11 57.1	+0.6
TIY				PKPab	PKPab	08 12 53.9	+0.4
TIY				pPKP	pPKPdf	08 14 04.4	+0.2
TIY				sPKP		08 14 54.4	
TIY				PP	PP	08 16 41.3	+1.3
TIY				SKKS		08 22 37.7	
TIY				SS	SS	08 36 24.1	-0.8
PHIT	Phitsanulok	164.22	105	PKP	PKPdf	08 11 57.7	+0.6
PAYA	Payao	164.35	97	PKP	PKPdf	08 11 57.5	+0.3
PBKT	Sadao Pong	164.49	108	PKP	PKPdf	08 11 56.5	-0.8
PBKT	Sadao Pong	164.49	108	ePKPdf	PKPdf	08 11 56.4	-0.8
PBKT				ePKPab	PKPab	08 12 54.8	-1.1
CD2	Chengdu	165.73	49	PKP	PKPdf	08 11 58.7	+0.6
CD2				pPKP	pPKPdf	08 14 02.5	-3.3
CD2				sPKP		08 14 48.3	
CD2				PP	PP	08 16 49.5	-0.1
CD2				SKS	SKSdf	08 18 13.2	+1.6
CD2				SKKS	SKKSac	08 22 44.7	+0.6
CD2				SS	SS	08 36 44.4	+0.7
CD2				AMB	AMB		
	comp=Z,1μm,6.1s						
TIA	Tai'an	165.92	357	PKP	PKPdf	08 11 58.4	+0.4
TIA				pPKP	pPKPdf	08 14 06.3	+0.6
XAN	Xi'an	166.43	27	PKP	PKPdf	08 11 59.0	+0.5
XAN				pPKP	pPKPdf	08 14 07.4	+1.1
XAN				SKKS		08 22 45.8	
XAN				AMB	AMB		
	comp=Z,850nm,6.7s						
NONG	Nongkai	166.97	106	PKP	PKPdf	08 11 59.3	0.0
KMI	Kunming	167.17	74	PKP	PKPdf	08 11 59.9	+0.4
SKNT	Sakolnakorn	167.28	111	PKP	PKPdf	08 11 58.6	-0.9
UBPT	Khong Chiam	167.67	122	PKP	PKPdf	08 11 59.1	-0.7
JOW	Kunigami	168.16	296	PKP	PKPdf	08 12 00.3	+0.4
	comp=Z,155nm,1.0s,baz=102,slow=2.2,SNR=15						
JOW	Kunigami	168.16	296	ePKPdf	PKPdf	08 12 02.0	+2.2
ENH	Enshi	169.80	36	ePKPdf	PKPdf	08 12 01.4	+0.5
NJ2	Nanjing	169.84	348	ePKP	PKPdf	08 12 01.6	+0.9
NJ2				PKPab	PKPab	08 13 18.5	-0.5
NJ2				PP	PP	08 17 06.9	-2.0
NJ2				SS	SS	08 37 24.4	+2.4
NJ2				AMB	AMB		
	comp=Z,830nm,4.6s						
GYA	Guiyang	170.16	62	i PKP	PKPdf	08 12 01.3	0.0
GYA				PKPab	PKPab	08 13 20.3	-0.8
GYA				pPKP	pPKPdf	08 14 08.7	-0.5
GYA				sPKP		08 14 54.2	
GYA				PKS	PKSdf	08 15 31.0	-2.9
GYA				PP	PP	08 17 09.8	-2.6
GYA				SKKS		08 23 07.3	
GYA				SS	SS	08 37 27.7	-0.8
WHN	Wuhan	171.41	12	||PKP	PKPdf	08 12 01.7	+0.1
WHN				PKPab	PKPab	08 13 25.6	-0.3
WHN				pPKP	pPKPdf	08 14 09.6	+0.1
WHN				PP	PP	08 17 16.7	+0.1
WHN				SKKS		08 23 12.2	
WHN				SS	SS	08 37 36.0	-1.2
QIZ	Qiongzhong	173.19	115	PKP	PKPdf	08 12 03.1	+0.4
QIZ				PP	PP	08 17 27.8	+0.8
QIZ				SS	SS	08 37 58.4	+0.8
QIZ	Qiongzhong	173.19	115	ePKPdf	PKPdf	08 12 03.6	+0.9
YOJ	Yonaguni jima	173.44	292	ePKPdf	PKPdf	08 12 02.4	-0.2
YOJ	Yonaguni jima	173.44	292	ePKIKP	PKPdf	08 12 02.4	-0.2
YULB	Yu-li	175.25	287	ePKPdf	PKPdf	08 12 02.9	-0.4
SSLB	Suanglung	175.43	292	ePKPdf	PKPdf	08 12 04.6	+1.2
TWG	Pinlang	175.57	280	ePKPdf	PKPdf	08 12 03.8	+0.4
TPUB	Ta-pu	175.87	288	ePKPdf	PKPdf	08 12 05.2	+1.7
QZH	Quanzhou	176.50	324	i PKP	PKPdf	08 12 04.0	+0.5
QZH				PKPab	PKPab	08 13 49.0	+0.2
QZH				pPKP	pPKPdf	08 14 10.9	-0.6
QZH				PP	PP	08 17 41.2	-0.4
QZH				SKKS		08 23 36.0	
QZH				SS	SS	08 38 26.1	-0.8
QZH				AMB	AMB		
	comp=Z,1μm,3.1s						
GZH	Guangzhou	177.06	70	PKP	PKPdf	08 12 04.6	+0.9
GZH				PKPab	PKPab	08 13 52.1	+0.5
GZH				pPKP	pPKPdf	08 14 13.7	+2.1
GZH				PP	PP	08 17 47.0	+1.5
GZH				AMB	AMB		
	comp=Z,720nm,5.0s						

ISK ***02*** *07:56:54.6, 37°.94N×41°.45E, h9km, ML2.8/4*

DDA ***02*** *07:56:54.5, 37°.66N×41°.60E, h7km, Ml2.5*
CSEM ***02*** *07:56:55.4±0.4, 37°.89N×41°.52E, h15km, ML2.5, Error ellipse: s-maj=15.1km s-min=9.0km az=172.0*

ISC 02 07:56:55.6±1.1, 37.85N±0.04×41.55E±0.03, h16km±8km, n37, σ1.88/51, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTMN	Batman	0.23	281	i P	Pg	07 57 01.1	+0.3
BTMN	Batman	0.23	281	P	Pg	07 57 01.1	+0.3
SRTM	Siirt_Merkez	0.33	64	i P	Pb	07 57 03.1	-0.1
SRTM	Siirt_Merkez	0.33	64	P	Pb	07 57 03.1	-0.1
SIRN	S¨–rnak	0.77	117	i P	Pn	07 57 15.0	+3.1
SIRN	S¨–rnak	0.77	117	P	Pn	07 57 15.0	+3.1
SIRT	Sirnak	0.79	116	PG	Pn	07 57 12.1	-0.1
SIRT	Sirnak	0.79	116	ePg	Pn	07 57 12.1	-0.1
GURO	Guroymak-BITLI	0.80	28	PG	Pg	07 57 08.8	-2.4
GURO				SG	Sn	07 57 23.2	-0.8
GURO	Guroymak-BITLI	0.80	28	PG	Pg	07 57 09.9	-1.3
GURO	Guroymak-BITLI	0.80	28	ePg	Pg	07 57 09.9	-1.3
GURO	Guroymak-BITLI	0.80	28	ePg	Pg	07 57 08.8	-2.4
GURO				eSg	Sn	07 57 23.2	-0.8
MARD	Mardin	0.81	229	i P	Pg	07 57 08.7	-2.7
MAZI	Mazidag	0.96	246	PN	Pg	07 57 11.5	-2.7
MAZI				SN	Sn	07 57 27.7	-0.3
MAZI	Mazidag	0.96	246	PG	Pg	07 57 12.4	-1.8
MAZI				SG	Sb	07 57 26.8	+0.3
MAZI	Mazidag	0.96	246	ePg	Pg	07 57 12.4	-1.8
MAZI				eSg	Sb	07 57 26.8	+0.3
MAZI	Mazidag	0.96	246	ePn	Pg	07 57 11.5	-2.7
MAZI				eSn	Sn	07 57 27.7	-0.3
HANI	Diyarbakir_Han	1.07	302	i P	Pn	07 57 17.3	+1.2
HANI				i S	Sn	07 57 35.0	+4.3
HANI	Diyarbakir_Han	1.07	302	P	Pn	07 57 17.3	+1.2
HANI				S	Sn	07 57 35.0	+4.3
DIYA	Diyarbakir	1.14	274	i P	Pn	07 57 17.7	+0.7
DIYA				i S	Sn	07 57 35.9	+3.6
DIYA	Diyarbakir	1.14	274	P	Pn	07 57 17.7	+0.7
DIYA				S	Sn	07 57 35.9	+3.6
BINT	Bingol	1.32	321	ePn	Pn	07 57 17.9	-1.7
BINT	Bingol	1.32	321	ePn	Pb	07 57 19.5	-0.7
BINT				eSn	Sg	07 57 41.4	+3.0
BNGB	Bing¨¶l	1.33	329	PN	Pb	07 57 19.5	-0.8
BNGB				SN	Sg	07 57 41.4	+2.7
BNGB	Bing¨¶l	1.33	329	PN	Pn	07 57 17.9	-1.8
SVRC	Sivrice-ELAZID	1.85	287	PN	Pn	07 57 26.4	-0.5
SVRC				SN	Sg	07 57 53.5	-1.7
SVRC	Sivrice-ELAZID	1.85	287	PN	Pn	07 57 25.9	-1.0
SVRC	Sivrice-ELAZID	1.85	287	ePn	Pn	07 57 25.9	-1.0
SVRC	Sivrice-ELAZID	1.85	287	ePn	Pn	07 57 26.4	-0.5
SVRC				eSn	Sg	07 57 53.5	-1.7
PTK	Pertek	1.99	302	PN	Pn	07 57 28.8	-0.1
PTK	Pertek	1.99	302	PN	Pn	07 57 27.7	-1.2
PTK	Pertek	1.99	302	ePn	Pn	07 57 27.7	-1.2
PTK	Pertek	1.99	302	ePn	Pn	07 57 28.8	-0.1
MALT	Malatya	2.51	282	PN	Pn	07 57 35.5	-0.4
MALT	Malatya	2.51	282	PN	Pn	07 57 35.4	-0.4
MALT	Malatya	2.51	282	ePn	Pn	07 57 35.4	-0.4
MALT	Malatya	2.51	282	ePn	Pn	07 57 35.5	-0.4

ISCJB ***02*** *08:06:50.9±0.3, 6°.85N±0°.03×73°.13W±0°.04, h164km±3km, mb3.7/13, Error ellipse: s-maj=7.1km s-min=4.5km az=31.0*
IDC ***02*** *08:06:52.3±0.7, 6°.75N×72°.93W, h169km±6km, mb3.5/13, mb1 3.7/16, mb1mx3.5/50, mbtmp4.0/16, Error ellipse: s-maj=13.0km s-min=7.8km az=130.0*
RSNC ***02*** *08:06:53.3±0.8, 6°.82N×73°.17W, h149km±5km, ML4.0, Mw4.0*

ISC 02 08:06:51.7±0.6, 6.82N±0.04×73.11W±0.05, h160km±5km, n34, σ0.99/52, mb3.8/13, 1C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.24	198

comp=Z,1.3nm,1.2s,baz=229,slow=11,SNR=4.4
ASAR Alice Springs 149.12 234 PKPbc **PKPbc 08 26 21.5 -0.5**
comp=Z,0.6nm,0.8s,baz=120,slow=3.6,SNR=4.5
WRA Warramunga Arr 150.35 241 PKPbc **PKPbc 08 26 24.8 -0.3**
comp=Z,0.7nm,0.6s,baz=107,slow=2.7,SNR=15

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*MDD **02** 08:08:49.6±1.7, 42°.85N×10°.98W, h0km, mb3.5/15, Error ellipse: s-maj=15.7km s-min=8.4km az=108.0, PRXIMO*
*CSEM **02** 08:08:50.1±0.6, 42°.68N×11°.01W, h10km, mb3.5, Error ellipse: s-maj=11.6km s-min=5.2km az=96.0*
*INMG **02** 08:08:50.7±1.3, 43°.03N×11°.44W, h10km, ML2.2, Error ellipse: s-maj=9.2km s-min=4.1km az=96.0*
ISC 02 08:08:45.1±3.5,**42°.87N**±0°.07×**11°.2W**±0°.1,**h7**km±18km,**n92,**
σ2^{S}**22**/133,**2C-1D,North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMAZ	**Mazaricos**	**1.63**	**86**	⇓P	**Pn**	**08 09 15.7**	**+1.4**
	6.8nm,0.1s,SNR=18						
EMAZ				S	**Sg**	**08 09 34.5**	**-3.0**
	14nm,0.1s,SNR=7.9						
EAGO	**Agolada(Pontev**	**2.29**	**91**	⇑P	**Pn**	**08 09 24.8**	**+1.6**
	1.7nm,0.0s,SNR=18						
EAGO				S	**Sn**	**08 09 50.5**	**-1.2**
	3.6nm,0.0s,SNR=7.9						
EAGO	**Agolada(Pontev**	**2.29**	**91**	P	**Pn**	**08 09 24.8**	**+1.6**
	1.7nm,0.0s,SNR=18						
PGAV	**Gavieira, Arco**	**2.35**	**112**	*e*Pn	**Pn**	**08 09 26.8**	**+2.6**
PGAV				*e*Sn	**Sn**	**08 09 53.9**	**+0.6**
PGAV				A	A	08 09 56.0	
	3.8nm,0.1s						
PGAV	**Gavieira, Arco**	**2.35**	**112**	*e*Pn	**Pn**	**08 09 26.8**	**+2.6**
PGAV				*e*Sn	**Sn**	**08 09 53.9**	**+0.6**
ELOB	**Lobios**	**2.53**	**112**	⇑P	**Pn**	**08 09 29.2**	**+2.5**
	2.0nm,0.1s,SNR=18						
ELOB				S	**Sn**	**08 09 58.7**	**+0.9**
	2.1nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**2.53**	**112**	P	**Pn**	**08 09 29.2**	**+2.5**
	2.0nm,0.1s,SNR=18						
ELOB				S	**Sn**	**08 09 58.7**	**+0.9**
	2.1nm,0.1s,SNR=7.9						
PCAB	**Cabril**	**2.62**	**115**	*e*Pn	**Pn**	**08 09 30.5**	**+2.6**
PCAB				*e*Sn	**Sn**	**08 10 00.9**	**+0.9**
PCAB				A	A	08 10 02.8	
	5.1nm,0.3s						
PCAB	**Cabril**	**2.62**	**115**	P	**Pn**	**08 09 30.5**	**+2.6**
PCAB				S	**Sn**	**08 10 00.9**	**+0.9**
	2.6nm,0.3s						
PCAB	**Cabril**	**2.62**	**115**	P	**Pn**	**08 09 30.5**	**+2.6**
PCAB				S	**Sn**	**08 10 00.9**	**+0.9**
	2.6nm,0.3s						
POLO	**Lamas de Olo**	**2.94**	**119**	*e*Pn	**Pn**	**08 09 34.7**	**+2.4**
POLO				*e*Sn	**Sn**	**08 10 07.9**	**0.0**
POLO				A	A	08 10 08.6	
	1.1nm,0.5s						
POLO	**Lamas de Olo**	**2.94**	**119**	*e*Pn	**Pn**	**08 09 34.7**	**+2.4**
POLO				*e*Sn	**Sn**	**08 10 07.9**	**0.0**
EPON	**Pontenova**	**3.00**	**80**	P	**Pn**	**08 09 34.4**	**+1.4**
	0.3nm,0.2s,SNR=6.2						
EPON				S	**Sn**	**08 10 06.8**	**-2.5**
	3.6nm,0.1s,SNR=12						
EPON	**Pontenova**	**3.00**	**80**	P	**Pn**	**08 09 34.4**	**+1.4**
	0.3nm,0.2s,SNR=6.2						
PVIS	**Viseu**	**3.27**	**130**	*e*Pn	**Pn**	**08 09 39.0**	**+2.1**
PVIS				*e*Sn	**Sn**	**08 10 16.3**	**+0.2**
PVIS				A	A	08 10 21.2	
	3.9nm,0.5s						
PVIS	**Viseu**	**3.27**	**130**	P	**Pn**	**08 09 39.0**	**+2.1**
PVIS				S	**Sn**	**08 10 16.3**	**+0.2**
	1.9nm,0.5s						
PVIS	**Viseu**	**3.27**	**130**	P	**Pn**	**08 09 39.0**	**+2.1**
PVIS				S	**Sn**	**08 10 16.3**	**+0.2**
	1.9nm,0.5s						
ECAL	**Calabor**	**3.43**	**104**	P	**Pn**	**08 09 41.5**	**+2.5**
	0.7nm,0.2s,SNR=15						
ECAL				S	**Sn**	**08 10 19.8**	**-0.2**
	1.3nm,0.2s						
ECAL	**Calabor**	**3.43**	**104**	P	**Pn**	**08 09 41.5**	**+2.5**
	0.7nm,0.2s,SNR=15						
ECAL				S	**Sn**	**08 10 19.8**	**-0.2**
	1.3nm,0.2s						
PCAS	**Casmilo, Conde**	**3.47**	**143**	*e*Sn	**Sn**	**08 10 20.5**	**-0.3**
PCAS				A	A	08 10 24.4	
	3.5nm,0.4s						
PCAS	**Casmilo, Conde**	**3.47**	**143**	*e*Sn	**Sn**	**08 10 20.5**	**-0.3**
PBRG	**Braganca**	**3.47**	**106**	*e*Pn	**Pn**	**08 09 42.2**	**+2.7**
PBRG	**Braganca**	**3.47**	**106**	P	**Pn**	**08 09 42.2**	**+2.7**
PBRG	**Braganca**	**3.47**	**106**	P	**Pn**	**08 09 42.2**	**+2.7**
MVO	**Moncorvo**	**3.54**	**117**	*e*Pn	**Pn**	**08 09 43.1**	**+2.5**
MVO				*e*Sn	**Sn**	**08 10 21.9**	**-0.8**
MVO				A	A	08 10 26.0	
	2.8nm,0.6s						
MVO	**Moncorvo**	**3.54**	**117**	P	**Pn**	**08 09 42.9**	**+2.3**
	0.1nm,0.2s,SNR=5.5						
MVO				S	**Sn**	**08 10 21.9**	**-0.8**
	1.6nm,0.1s						
MVO	**Moncorvo**	**3.54**	**117**	P	**Pn**	**08 09 42.8**	**+2.3**
	0.1nm,0.2s,SNR=5.5						
MVO	**Moncorvo**	**3.54**	**117**	*e*Pn	**Pn**	**08 09 43.1**	**+2.5**
MVO				S	**Sn**	**08 10 21.9**	**-0.8**
	1.6nm,0.1s						
PTOM	**Tomar**	**3.87**	**146**	*e*Sn	**Sn**	**08 10 29.6**	**-1.1**
PTOM				A	A	08 10 33.1	
	6.4nm,0.3s						
PTOM	**Tomar**	**3.87**	**146**	S	**Sn**	**08 10 29.6**	**-1.1**
	3.2nm,0.3s						
PTOM	**Tomar**	**3.87**	**146**	S	**Sn**	**08 10 29.6**	**-1.1**
	3.2nm,0.3s						
PCBR	**Castelo Branco**	**4.12**	**136**	*e*Sn	**Sn**	**08 10 37.5**	**+0.6**
PCBR	**Castelo Branco**	**4.12**	**136**	S	**Sn**	**08 10 37.5**	**+0.6**
PCBR	**Castelo Branco**	**4.12**	**136**	S	**Sn**	**08 10 37.5**	**+0.6**
PMAFR	**Mafra**	**4.17**	**159**	*e*Sn	**Sn**	**08 10 37.0**	**-1.1**
PMAFR				A	A	08 10 59.2	
	13nm,0.7s						
PMAFR	**Mafra**	**4.17**	**159**	S	**Sn**	**08 10 37.4**	**-0.8**
	18nm,0.3s,SNR=7.9						
PMAFR	**Mafra**	**4.17**	**159**	*e*Sn	**Sn**	**08 10 37.0**	**-1.1**
PMAFR				S	**Sn**	**08 10 37.4**	**-0.8**
	18nm,0.3s,SNR=7.9						
ALMR	**Almeirim**	**4.21**	**151**	*e*Sn	**Sn**	**08 10 38.0**	**-1.0**
ALMR				A	A	08 10 44.1	
	20nm,0.4s						
ALMR	**Almeirim**	**4.21**	**151**	S	**Sn**	**08 10 38.0**	**-1.0**
	10nm,0.4s						
ALMR	**Almeirim**	**4.21**	**151**	S	**Sn**	**08 10 38.0**	**-1.0**
	10nm,0.4s						
EARI	**Arriondas**	**4.40**	**82**	P	**Pn**	**08 09 54.2**	**+1.8**
	2.9nm,0.2s,SNR=17						
EARI				S	**Sn**	**08 10 41.1**	**-2.9**
	0.7nm,0.2s,SNR=7.9						
EARI	**Arriondas**	**4.40**	**82**	P	**Pn**	**08 09 54.2**	**+1.8**
	2.9nm,0.2s,SNR=17						
PMRV	**Marv??o**	**4.48**	**139**	*e*Pn	**Pn**	**08 09 55.4**	**+2.0**
PMRV				*e*Sn	**Sn**	**08 10 44.6**	**-1.2**
PMRV				A	A	08 10 48.4	
	2.2nm,0.7s						
PMRV	**Marv??o**	**4.48**	**139**	P	**Pn**	**08 09 55.4**	**+2.0**
PMRV				Sn	**Sn**	**08 10 44.6**	**-1.2**
	2.2nm,0.7s						
PMRV	**Marv??o**	**4.48**	**139**	P	**Pn**	**08 09 55.4**	**+2.0**
PMRV				Sn	**Sn**	**08 10 44.6**	**-1.2**
	2.2nm,0.7s						
EPLA	**Plasencia**	**4.75**	**124**	P	**Pn**	**08 09 59.6**	**+2.4**
	0.2nm,0.1s,SNR=7.9						
EPLA				S	**Sn**	**08 10 51.5**	**-1.1**
	1.6nm,0.2s,SNR=7.9						
EPLA	**Plasencia**	**4.75**	**124**	P	**Pn**	**08 09 59.6**	**+2.4**
	0.2nm,0.1s,SNR=7.9						
EPLA				S	**Sn**	**08 10 51.5**	**-1.1**
	1.6nm,0.2s,SNR=7.9						
PESTR	**Estremoz**	**4.84**	**144**	*e*Sn	**Sn**	**08 10 52.6**	**-2.1**
PESTR				A	A	08 10 55.7	
	2.4nm,0.7s						
PESTR	**Estremoz**	**4.84**	**144**	*e*Sn	**Sn**	**08 10 52.6**	**-2.1**
EVO	**Evora**	**4.96**	**150**	*e*Sn	**Sn**	**08 10 55.2**	**-2.5**
EVO				A	A	08 10 57.1	
	5.2nm,0.1s						
EVO	**Evora**	**4.96**	**150**	S	**Sn**	**08 10 55.2**	**-2.5**
	5.2nm,0.1s						
EVO	**Evora**	**4.96**	**150**	S	**Sn**	**08 10 55.2**	**-2.5**
	5.2nm,0.1s						
PNCL	**Nicolau / Gran**	**5.17**	**156**	*e*Sn	**Sn**	**08 11 00.7**	**-2.0**
PNCL				A	A	08 11 04.7	
	2.3nm,0.3s						
PNCL	**Nicolau / Gran**	**5.17**	**156**	*e*Sn	**Sn**	**08 11 00.7**	**-2.0**
EBAD	**Badajoz**	**5.19**	**141**	S	**Sn**	**08 11 03.2**	**-0.1**
	1.2nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**5.19**	**141**	S	**Sn**	**08 11 03.2**	**-0.1**
	1.2nm,0.1s,SNR=7.9						
PBEJ	**Beja**	**5.46**	**151**	*e*Sn	**Sn**	**08 11 06.2**	**-3.8**
PBEJ	**Beja**	**5.46**	**151**	*e*Sn	**Sn**	**08 11 06.2**	**-3.8**
MESJ	**Messejana**	**5.51**	**155**	*e*Sn	**Sn**	**08 11 08.7**	**-2.5**
MESJ				A	A	08 11 12.1	
	1.7nm,0.4s						
MESJ	**Messejana**	**5.51**	**155**	S	**Sn**	**08 11 08.7**	**-2.5**
	1.7nm,0.4s						
MESJ	**Messejana**	**5.51**	**155**	S	**Sn**	**08 11 08.7**	**-2.5**
	1.7nm,0.4s						
PBAR	**Barrancos**	**5.66**	**145**	*e*Sn	**Sn**	**08 11 12.8**	**-2.0**
PBAR				A	A	08 11 25.8	
	2.3nm,0.7s						
PBAR	**Barrancos**	**5.66**	**145**	S	**Sn**	**08 11 12.8**	**-2.0**
	2.3nm,0.7s						
PBAR	**Barrancos**	**5.66**	**145**	S	**Sn**	**08 11 12.8**	**-2.0**
	2.3nm,0.7s						
ELAN	**Lanestosa**	**5.70**	**84**	P	**Pn**	**08 10 12.8**	**+2.6**
	0.3nm,0.1s,SNR=7.9						
ELAN				S	**Sn**	**08 11 13.9**	**-2.0**
	0.8nm,0.2s,SNR=7.9						
ELAN	**Lanestosa**	**5.70**	**84**	P	**Pn**	**08 10 12.8**	**+2.6**
	0.3nm,0.1s,SNR=7.9						
ELAN				S	**Sn**	**08 11 13.9**	**-2.0**
	0.8nm,0.2s,SNR=7.9						
GUD	**Guadarrama**	**5.71**	**111**	P	**Pn**	**08 10 13.7**	**+3.2**
	3.6nm,0.4s,SNR=7.9						
GUD	**Guadarrama**	**5.71**	**111**	P	**Pn**	**08 10 13.7**	**+3.2**
	3.6nm,0.4s,SNR=7.9						
PCVE	**Castro Verde**	**5.76**	**154**	*e*Sn	**Sn**	**08 11 14.4**	**-3.0**
PCVE				A	A	08 11 17.7	
	2.1nm,0.5s						
PCVE	**Castro Verde**	**5.76**	**154**	S	**Sn**	**08 11 14.4**	**-3.0**
	2.1nm,0.5s						
PCVE	**Castro Verde**	**5.76**	**154**	S	**Sn**	**08 11 14.4**	**-3.0**
	2.1nm,0.5s						
MORF	**Marmelete**	**5.89**	**160**	*e*Sn	**Sn**	**08 11 19.0**	**-1.6**
MORF				A	A	08 11 23.4	
	3.0nm,0.3s						
MORF	**Marmelete**	**5.89**	**160**	S	**Sn**	**08 11 19.0**	**-1.6**
	3.0nm,0.3s						
MORF	**Marmelete**	**5.89**	**160**	S	**Sn**	**08 11 19.0**	**-1.6**
	3.0nm,0.3s						
PFVI	**Vila Bisbo**	**6.01**	**162**	*e*Sn	**Sn**	**08 11 21.8**	**-1.7**
PFVI				A	A	08 11 34.1	
	5.1nm,0.7s						
PFVI	**Vila Bisbo**	**6.01**	**162**	P	**Pn**	**08 10 19.0**	**+4.5**
	0.1nm,0.0s,SNR=4.0						
PFVI				S	**Sn**	**08 11 21.2**	**-2.3**
	3.9nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**6.01**	**162**	S	**Sn**	**08 11 21.2**	**-2.3**
	3.9nm,0.1s,SNR=7.9						
PFVI				*e*Sn	**Sn**	**08 11 21.8**	**-1.7**
EGRO	**El Granado**	**6.04**	**151**	S	**Sn**	**08 11 20.1**	**-4.1**
	0.8nm,0.1s,SNR=5.3						
EGRO	**El Granado**	**6.04**	**151**	S	**Sn**	**08 11 20.1**	**-4.1**
	0.8nm,0.1s,SNR=5.3						
PVAQ	**Vaqueiros**	**6.07**	**153**	*e*Pn	**Pn**	**08 10 17.3**	**+2.0**
PVAQ				*e*Sn	**Sn**	**08 11 20.6**	**-4.5**
PVAQ				A	A	08 11 25.6	
	1.6nm,0.1s						
PVAQ	**Vaqueiros**	**6.07**	**153**	P	**Pn**	**08 10 17.3**	**+2.0**
PVAQ	**Vaqueiros**	**6.07**	**153**	P	**Pn**	**08 10 17.3**	**+2.0**
PVAQ				*e*Sn	**Sn**	**08 11 20.6**	**-4.5**
PAB	**San Pablo**	**6.14**	**120**	P	**Pn**	**08 10 18.8**	**+2.6**
	0.2nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**08 11 24.2**	**-2.5**
	0.2nm,0.1s,SNR=7.9						
PAB	**San Pablo**	**6.14**	**120**	P	**Pn**	**08 10 18.8**	**+2.6**
	0.2nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**08 11 24.2**	**-2.5**
	0.2nm,0.1s,SNR=7.9						
PBDV	**Barranco-do-Ve**	**6.15**	**155**	*e*Sn	**Sn**	**08 11 23.4**	**-3.6**
PBDV				A	A	08 11 31.6	
	2.7nm,1.0s						
PBDV	**Barranco-do-Ve**	**6.15**	**155**	*e*Sn	**Sn**	**08 11 23.4**	**-3.6**
EMIN	**Mina Concepcio**	**6.16**	**144**	P	**Pn**	**08 10 18.3**	**+1.9**
	0.1nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**08 11 24.3**	**-2.8**
	1.0nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**6.16**	**144**	P	**Pn**	**08 10 18.3**	**+1.9**
	0.1nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**08 11 24.3**	**-2.8**
	1.0nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**6.50**	**135**	P	**Pn**	**08 10 23.4**	**+2.1**
	0.4nm,0.1s,SNR=7.9						
ECAB				S	**Sn**	**08 11 33.1**	**-2.6**
	0.5nm,0.3s,SNR=7.9						
ECAB	**El Cabril**	**6.50**	**135**	P	**Pn**	**08 10 23.4**	**+2.1**
	0.4nm,0.1s,SNR=7.9						
ECAB				S	**Sn**	**08 11 33.1**	**-2.6**
	0.5nm,0.3s,SNR=7.9						
IELO	**Elcoad**	**7.32**	**87**	P	**Pn**	**08 10 35.2**	**+2.8**
	0.1nm,0.2s,SNR=7.9						
IELO				S	**Sn**	**08 11 53.5**	**-2.3**
	0.3nm,0.2s,SNR=7.9						
IELO	**Elcoad**	**7.32**	**87**	P	**Pn**	**08 10 35.2**	**+2.8**
	0.1nm,0.2s,SNR=7.9						
IELO				S	**Sn**	**08 11 53.5**	**-2.3**
	0.3nm,0.2s,SNR=7.9						

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*GII **02** 08:13:44.4±0.4, 26°.92N×33°.92E, h10km, mb4.0/1, MD3.7/4*
*SGS **02** 08:13:54.2, 27°.56N×34°.07E, h9km*
ISC 02 08:13:51.4±2.8,**27°.42N**±0°.09×**34°.1E**±0°.1,**h9**km±13km,**n20,**
σ1^{S}**01**/30,**Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSHS		**1.07**	**35**	P	**Pg**	**08 14 12.0**	**-0.1**
RSHS				S	**Sg**	**08 14 25.7**	**-0.3**
BDAS	**Al Bad'**	**1.34**	**41**	P	**Pn**	**08 14 15.9**	**-0.4**
BDAS				S	**Sb**	**08 14 34.9**	**+0.9**
HAQS	**Haql**	**1.78**	**24**	P	**Pn**	**08 14 21.9**	**-0.5**
HAQS				S	**Sn**	**08 14 45.9**	**+0.9**
JLOS		**1.80**	**43**	P	**Pn**	**08 14 23.0**	**+0.3**
JLOS				S	**Sn**	**08 14 42.0**	**-3.7**
HQLS		**2.06**	**24**	P	**Pn**	**08 14 26.2**	**0.0**
HQLS				S	**Sn**	**08 14 53.9**	**+1.9**
EIL	**Elat**	**2.37**	**18**	Pn	**Pn**	**08 14 29.6**	**-0.8**
EIL				Sn	**Sb**	**08 15 04.3**	**+0.9**
MBRI	**Mt Berech**	**2.47**	**17**	Pn	**Pn**	**08 14 31.1**	**-0.8**
MBRI				Sn	**Sb**	**08 15 07.2**	**+0.6**
BIDS	**Bi'r al Bayda'**	**2.61**	**102**	P	**Pb**	**08 14 38.7**	**+0.4**
HRFI	**Mount Harif**	**2.73**	**17**	Pn	**Pn**	**08 14 35.4**	**-0.1**
HRFI				Sn	**Sb**	**08 15 14.9**	**+0.8**
KRMI	**Paran Flat**	**2.74**	**11**	Pn	**Pn**	**08 14 35.0**	**-0.6**
PRNI	**Paran**	**3.03**	**15**	Pn	**Pn**	**08 14 38.9**	**-0.6**
PRNI				Sn	**Sb**	**08 15 22.5**	**-0.1**
RMNI	**Mount Ramon**	**3.22**	**10**	Pn	**Pn**	**08 14 41.6**	**-0.6**
ZFRI	**Zfri**	**3.26**	**17**	Pn	**Pn**	**08 14 42.4**	**-0.3**
ZFRI				Sn	**Sb**	**08 15 28.7**	**-0.6**
KZIT	**Kziot**	**3.48**	**4**	Pn	**Pn**	**08 14 44.6**	**-1.1**
YTIR	**Yattir**	**4.03**	**13**	Pn	**Pn**	**08 14 53.9**	**+0.6**
MZDA	**Masada**	**4.03**	**16**	Pn	**Pn**	**08 14 53.1**	**-0.1**
AMAZ	**Amatzia**	**4.16**	**10**	Pn	**Pn**	**08 14 55.1**	**0.0**
DSI	**Dead Sea**	**4.29**	**15**	Pn	**Pn**	**08 14 57.2**	**+0.5**
SLTI	**Sal'it**	**4.87**	**9**	Pn	**Pn**	**08 15 04.7**	**-0.2**
HMDT	**Nahal Hemdat**	**4.97**	**14**	Pn	**Pn**	**08 15 06.3**	**+0.1**

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*IDC **02** 08:52:50.4±3.3, 21°.26S×170°.20E, h173km±22km, mb3.5/7, mb1 3.6/8, mb1mx3.3/47, mbtmp4.0/8, Error ellipse: s-maj=69.4km s-min=24.3km az=155.0*
ISC 02 08:52:47.4±1.3,**21°.5S**±0°.5×**170°.5E**±0°.2,**h150**km,**n10,**
σ1^{S}**21**/12,**mb3.7/7,Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.77**	**260**	P	**Pn**	**08 53 45.4**	**+0.6**
	3.5nm,0.3s,baz=114,slow=20,SNR=50						
DZM				S	**Sn**	**08 54 30.3**	**+1.0**
	6.3nm,0.3s,baz=107,slow=19,SNR=4.2						
CTA	**Charters Tower**	**22.66**	**269**	P	**P**	**08 57 35.3**	**-0.9**
	1.0nm,0.3s,baz=94,slow=6.0,SNR=4.8						
STKA	**Stephens Creek**	**27.72**	**242**	P	**P**	**08 58 22.2**	**+0.4**
	0.9nm,0.5s,baz=76,slow=12,SNR=4.0						
ASAR	**Alice Springs**	**33.76**	**259**	P	**P**	**08 59 14.1**	**-0.9**
	0.7nm,0.7s,baz=87,slow=9.0,SNR=11						
ASAR				pP	**pP**	**08 59 49.1**	**+2.0**
	0.5nm,0.7s,baz=78,slow=8.8,SNR=3.2						
WRA	**Warramunga Arr**	**33.77**	**266**	P	**P**	**08 59 13.6**	**-1.5**
	0.9nm,0.5s,baz=90,slow=8.5,SNR=20						
FITZ	**Fitzroy Crossi**	**42.19**	**266**	P	**P**	**09 00 24.9**	**-0.8**
	3.3nm,0.8s,baz=148,slow=10,SNR=6.1						
NWAO	**Narrogin (SRO)**	**48.25**	**245**	P	**P**	**09 01 12.7**	**-0.6**
	6.7nm,0.9s,baz=18,slow=6.4,SNR=4.0						
NVAR	**Mina Array Bea**	**89.42**	**48**	P	**P**	**09 05 28.3**	**+0.7**
	0.3nm,0.7s,baz=236,slow=9.4,SNR=3.1						
ARCES	**ARCESS Array B**	**127.49**	**345**	PKP	**PKPdf**	**09 11 33.0**	**-0.8**
	0.9nm,0.8s,baz=25,slow=2.4,SNR=4.9						
GERES	**GERESS Array B**	**146.97**	**331**	PKPbc	**PKPdf**	**09 12 11.3**	**+1.2**
	0.5nm,0.6s,baz=57,slow=3.6,SNR=4.1						

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*IDC **02** 08:58:54.5±1.2, 11°.00S×165°.38E, h0km, mb3.7/6, mb1 4.0/8, mb1mx3.6/57, mbtmp3.8/8, ML4.0/2, MS3.3/1, Ms1 3.3/1, ms1mx2.8/45, Error ellipse: s-maj=33.3km s-min=21.3km az=146.0*
*ISCJB **02** 08:58:57.4±0.9, 11°.1S±0°.1×165°.34E±0°.09, h30km, mb3.7/5, Error ellipse: s-maj=17.3km s-min=10.8km az=28.1*
ISC 02 08:58:59.1±1.1,**11°.0S**±0°.1×**165°.4E**±0°.1,**h30**km,**n14,**
σ0^{S}**68**/9,**mb3.7**/5,**Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.59**	**286**	Pn	**Pn**	**09 00 20.1**	**-0.2**
	7.6nm,0.3s,baz=140,slow=5.8,SNR=5.2						
HNR				Sn	**Sn**	**09 01 24.6**	**+1.1**
	6.6nm,0.3s,baz=192,slow=18,SNR=2.9						
HNR				LR	LR	09 02 25.6	
	comp=Z,244nm,18.1s,baz=76,slow=38						
DZM	**Mont Dzumac**	**11.03**	**175**	Pn	**Pn**	**09 01 35.8**	**+0.8**
	0.6nm,0.3s,baz=320,slow=16,SNR=14						
CTA	**Charters Tower**	**20.50**	**242**	P	**P**	**09 03 34.8**	**-0.2**
	1.5nm,0.7s,baz=83,slow=14,SNR=2.3						
H11S2	**WAKE ISLAND Hy**	**29.36**	**3**	T	T	09 35 44.2	
	baz=173						
H11S3	**WAKE ISLAND Hy**	**29.36**	**3**	T	T	09 35 39.3	
	baz=173						
H11S1	**WAKE ISLAND Hy**	**29.38**	**3**	T	T	09 35 40.2	
	baz=173						
STKA	**Stephens Creek**	**30.21**	**223**	P	**P**	**09 05 06.4**	**-0.8**
	1.8nm,0.8s,baz=313,slow=19,SNR=2.3						
H11N1	**WAKE ISLAND Hy**	**30.59**	**3**	T	T	09 37 10.8	
	baz=188						
H11N3	**WAKE ISLAND Hy**	**30.59**	**3**	T	T	09 37 06.0	
	baz=188						
H11N2	**WAKE ISLAND Hy**	**30.60**	**3**	T	T	09 37 12.7	
	baz=188						
WRA	**Warramunga Arr**	**31.16**	**250**	P	**P**	**09 05 15.1**	**-0.6**
	0.4nm,0.7s,baz=83,slow=9.4,SNR=3.6						
ASAR	**Alice Springs**	**32.49**	**243**	P	**P**	**09 05 27.4**	**0.0**
	1.2nm,0.8s,baz=68,slow=10.0,SNR=15						
ILAR	**Eielson Array**	**83.61**	**19**	P	**P**	**09 11 24.3**	**0.0**
	0.3nm,0.7s,baz=236,slow=6.5,SNR=5.3						
NVAR	**Mina Array Bea**	**86.28**	**50**	P	**P**	**09 11 38.7**	**+0.1**
	0.3nm,0.6s,baz=229,slow=6.8,SNR=3.5						

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*JMA **02** 09:02:34.5±0.1, 25°.18N×143°.00E, h111km±4km, M4.6*
*ISCJB **02** 09:02:35.9±0.3, 25°.23N±0°.04×142°.60E±0°.05, h35km, mb4.3/55, MS3.7/1, Error ellipse: s-maj=7.0km s-min=5.9km az=166.5*
*MOS **02** 09:02:35.9±1.0, 25°.15N×142°.65E, h42km, mb4.4/26, Error ellipse: s-maj=14.0km s-min=6.6km az=110.4*
*NEIC **02** 09:02:37.5±0.3, 25°.25N×142°.57E, h35km, mb4.4/13, Error ellipse: s-maj=7.9km s-min=6.1km az=66.0*
*IDC **02** 09:02:40.0±1.9, 25°.17N×142°.57E, h58km±15km, mb3.9/30, mb1 4.0/32, mb1mx3.9/66, mbtmp4.1/32, Error ellipse: s-maj=16.1km s-min=11.3km az=95.0*
ISC 02 09:02:37.1±0.5,**25°.18N**±0°.06×**142°.79E**±0°.08,**h35**km,**n121,**
σ1^{S}**45**/120,**mb4.3**/55,**7C-1D,Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**1.55**	**339**	P	**Pn**	**09 03 03.2**	**+1.0**
JHHJ				*e*S	**Sn**	**09 03 24.8**	**+3.7**
CBIJ	**Chichi jima**	**1.99**	**344**	*e*Pn	**Pn**	**09 03 07.8**	**-0.4**
CBIJ				S	**Sn**	**09 03 35.0**	**+3.1**
CBIJ	**Chichi jima**	**1.99**	**344**	P	**Pn**	**09 03 08.4**	**+0.2**
CBIJ				*e*S	**Sn**	**09 03 34.3**	**+2.4**
JCJ	**Chichijima**	**1.99**	**344**	P	**Pn**	**09 03 08.9**	**+0.6**
	76nm,0.3s,baz=3.4,slow=23,SNR=62						
JCJ				S	**Sn**	**09 03 35.0**	**+3.1**
	157nm,0.3s,baz=285,slow=21,SNR=6.7						
JHJ2	**Mitsune**	**8.32**	**342**	*e*Pn	**Pn**	**09 04 33.5**	**-1.7**
BSO3	**Boso 3**	**9.79**	**349**	P	**Pn**	**09 04 53.9**	**-1.3**
BSO4	**Boso 4**	**10.01**	**348**	*e*S	**Sn**	**09 06 50.2**	**+0.9**
INU	**Inuyama**	**11.30**

GTA	Gaotai	38.64	302	eP	P	09 09 55.8	-1.5
GTA				pP	sP	09 10 14.2	+2.4
GTA				sP	pP	09 10 24.4	+17
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CMAR	Chiang Mai Arr	41.11	270	P	P	09 10 17.9	-0.1
	comp=Z,0.9nm,0.4s,baz=61,slow=6.3,SNR=3.7						
BILL	Bilibino	45.20	12⇓	eP	P	09 10 49.4	-0.9
BILL				e		09 12 38.5	
BILL				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BILL				MLR	MLR		
	comp=Z,87nm,21.0s						
WRAB	Tennant Creek	45.59	191	iP	P	09 10 54.1	+0.2
WRAB				pmax	pmax		
	comp=Z,2.0nm,1.0s						
WRA	Warramunga Arr	45.60	191	P	P	09 10 53.7	-0.3
	comp=Z,1.0nm,0.5s,baz=9.2,slow=8.2,SNR=22						
WRA	Warramunga Arr	45.60	191	iP	P	09 10 53.2	-0.8
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FITZ	Fitzroy Crossi	46.14	203	P	P	09 10 58.4	+0.1
	comp=Z,0.6nm,0.4s,baz=148,slow=15,SNR=3.1						
TIXI	Tiksi	47.17	354	iP	P	09 11 05.3	-0.4
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.1s						
WMQ	Urumqi	48.15	307	P	P	09 11 13.7	-0.2
ASAR	Alice Springs	49.31	191	P	P	09 11 22.7	-0.2
	comp=Z,0.2nm,0.7s,baz=6.0,slow=6.6,SNR=4.3						
JIRN	Jiri	50.37	286	eP	P	09 11 31.6	+0.1
	comp=Z,28nm,0.7s						
GUN	Gumba	50.60	286	eP	P	09 11 33.9	+0.8
PKIN	Phulchoki	51.08	286	eP	P	09 11 37.8	+1.1
	comp=Z,12nm,0.6s						
ZALV	Zalesovo Beam	51.30	320	P	P	09 11 36.3	-1.3
	comp=Z,1.2nm,0.3s,baz=95,slow=9.0,SNR=6.0						
ZALV	Zalesovo Beam	51.30	320	eP	P	09 11 35.8	-1.7
ZALV				ePcP	PcP	09 12 51.4	-0.7
DMN	Daman	51.33	286	eP	P	09 11 38.1	-0.4
MK01	Makanchi Array	52.12	311	eP	P	09 11 42.7	-1.2
MKAR	Makanchi Array	52.12	311	P	P	09 11 43.0	-0.9
	comp=Z,0.8nm,0.5s,baz=87,slow=11,SNR=9.9						
DANN	Dangsing	52.35	287	eP	P	09 11 46.4	+0.2
	comp=Z,25nm,0.7s						
KOLN	Koldanda	52.60	287	eP	P	09 11 47.8	-0.2
	comp=Z,8.4nm,0.7s						
PYUN	Piuthan	53.07	287	eP	P	09 11 50.9	-0.5
	comp=Z,14nm,0.8s						
KURK	Kurchatov	54.72	315	eP	P	09 12 01.6	-1.3
	comp=Z,3.6nm,0.9s						
KURK	Kurchatov	54.72	315	ceP	P	09 12 01.1	-1.8
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MSVF	Nonsavu	54.76	138	iP	P	09 12 02.1	-1.5
KURBB	Kurchatov Arra	54.77	315	P	P	09 12 02.2	-1.1
	comp=Z,4.3nm,0.4s,baz=92,slow=7.9,SNR=72						
STKA	Stephens Creek	56.74	181	P	P	09 12 17.9	+0.5
	comp=Z,1.5nm,0.8s,baz=329,slow=12,SNR=2.6						
AAK	Ala-Archa	57.80	306	iP	P	09 12 24.4	-0.8
AAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BWN	Browne	57.95	29	eP	P	09 12 25.8	+0.1
	comp=Z,45nm,1.7s						
ILAR	Eielson Array	59.13	28	P	P	09 12 33.8	-0.1
	comp=Z,1.2nm,0.9s,baz=250,slow=6.5,SNR=9.3						
IL1	Eielson Array	59.14	28	eP	P	09 12 33.7	-0.2
BVAR	Borovoye Array	59.83	318	P	P	09 12 38.1	-0.8
	comp=Z,3.7nm,0.4s,baz=90,slow=7.6,SNR=31						
BRVK	Borovoye	59.89	318	eP	P	09 12 38.3	-1.0
	comp=Z,5.8nm,1.1s						
BRVK	Borovoye	59.89	318	ceP	P	09 12 38.3	-1.0
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KK31	Karatay Array	60.66	307	eP	P	09 12 43.5	-1.3
KK31	Karatay Array	60.66	307	eP	P	09 12 43.5	-1.3
KKAR	Karatay Array	60.66	307	eP	P	09 12 43.5	-1.3
KKAR	Karatay Array	60.66	307	eP	P	09 12 43.5	-1.3
PALK	Pallekele	61.71	265	iP	P	09 12 52.0	-0.3
INK	Inuvik	64.55	24	P	P	09 13 10.8	+0.6
	comp=Z,0.9nm,0.8s,baz=309,slow=6.0,SNR=4.1						
ARU	Arti	66.27	323	eP	P	09 13 20.8	-0.8
	comp=Z,7.5nm,0.6s						
ARU	Arti	66.27	323	ciP	P	09 13 20.9	-0.7
ARU						09 15 44.4	
ARU				S	S	09 22 08.4	+0.1
ARU				SS	SS	09 26 23.2	-1.2
ARU				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ABKAR	Akbulak array	66.83	315	eP	P	09 13 24.1	-1.1
AKTO	Aktyubinsk	67.79	317	P	P	09 13 29.8	-1.6
	comp=Z,2.4nm,0.7s,baz=248,slow=19,SNR=4.1						
SPITS	Spitsbergen Ar	72.36	350	P	P	09 14 00.8	+1.9
	comp=Z,2.4nm,0.9s,baz=64,slow=16,SNR=5.8						
YKA	Yellowknife Ar	73.57	28	P	P	09 14 06.7	+0.4
	comp=Z,1.5nm,0.6s,baz=292,slow=5.8,SNR=23						
ARCES	ARCESS Array B	75.53	341	P	P	09 14 16.8	-0.8
	comp=Z,3.1nm,0.9s,baz=68,slow=7.8,SNR=11						
YBH	Yreka Blue Hor	76.86	50	P	P	09 14 26.9	+1.1
	comp=Z,1.3nm,0.7s,baz=155,slow=19,SNR=5.3						
PINE	Pine Mountain	77.28	48	eP	P	09 14 29.8	+1.5
	comp=Z,3.7nm,0.8s						
BEKR	Beckworth	79.23	51	eP	P	09 14 39.9	+0.8
	comp=Z,5.4nm,1.1s						
KBZ	Khabaz	79.71	313	P	P	09 14 41.9	+0.5
	comp=Z,3.2nm,0.8s,baz=102,slow=6.1,SNR=5.3						
FINES	FINESS Array B	79.90	334	P	P	09 14 42.0	0.0
	comp=Z,3.8nm,0.4s,baz=70,slow=4.6,SNR=44						
NV01	Mina Array Sit	81.27	52	eP	P	09 14 51.0	+0.8
NVAR	Mina Array Bea	81.27	52	P	P	09 14 51.5	+1.4
	comp=Z,2.0nm,0.8s,baz=273,slow=6.2,SNR=11						
YHB	Horse Butte	83.18	44	eP	P	09 15 01.5	+1.4
YMR	Madison River	83.36	44	eP	P	09 15 03.4	+2.4
	comp=Z,3.1nm,0.7s						
RLMT	Red Lodge	84.19	43	eP	P	09 15 07.0	+1.8
	comp=Z,2.7nm,0.6s						
AKASG	Malin Array Be	84.48	324	P	P	09 15 06.2	0.0
	comp=Z,4.0nm,0.6s,baz=52,slow=5.3,SNR=21						
AKASG	Malin Array Be	84.48	324	ceP	P	09 15 06.4	+0.2
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.6s						
AKBB	Malin Array Si	84.48	324	eP	P	09 15 05.9	-0.4
	comp=Z,5.1nm,0.6s						
AKBB	Malin Array Si	84.48	324	eP	P	09 15 05.9	-0.4
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.6s						
AK11	Malin Array Si	84.53	324	eP	P	09 15 05.6	-0.9
PDAR	Pinedale Array	85.19	45	P	P	09 15 11.0	+0.7
	comp=Z,0.4nm,0.5s,baz=202,slow=1.6,SNR=4.7						
PDAR	Pinedale Array	85.19	45	eP	P	09 15 08.6	-1.7
HFS	Hagfors	85.39	337	P	P	09 15 10.1	-0.5
	comp=Z,3.2nm,0.8s,baz=128,slow=19,SNR=9.1						
LCMT	Little Creek M	85.50	51	eP	P	09 15 13.2	+1.4
	comp=Z,1.6nm,0.8s						
NB2	NORSAR Subarra	85.59	339	P	P	09 15 11.3	-0.4
	comp=Z,1.1nm,0.6s,baz=45,slow=4.8						
NOA	NORSAR Array B	85.59	339	P	P	09 15 11.7	0.0
	comp=Z,1.2nm,0.4s,baz=43,slow=4.6,SNR=6.1						
KNB	Kanab	85.79	51	eP	P	09 15 14.7	+1.3
KNB	Kanab	85.79	51	eP	P	09 15 14.7	+1.3
SRU	San Rafael Swe	86.36	48	eP	P	09 15 16.8	+0.7
	comp=Z,2.3nm,0.7s						
SRU	San Rafael Swe	86.36	48	eP	P	09 15 16.8	+0.7
SRU				pmax	pmax		
	comp=Z,2.0nm,0.7s						
U15A	North Rim	86.44	51	eP	P	09 15 17.6	+0.9
	comp=Z,1.8nm,0.8s						
BRTR	Keskin Array B	87.70	313	P	P	09 15 21.7	-0.8
	comp=Z,0.5nm,0.6s,baz=92,slow=4.3,SNR=3.5						
PV05	Paradox Valley	87.85	49	eP	P	09 15 24.6	+1.2
	comp=Z,6.9nm,0.6s						
ANMO	Albuquerque	91.29	50	P	P	09 15 40.2	+0.6
	comp=Z,1.6nm,0.8s,baz=315,slow=1.4,SNR=7.6						
ANMO	Albuquerque	91.29	50	ceP	P	09 15 39.5	-0.1
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.0s						
CLL	Collm	91.98	331	e(sP)	sP	09 16 00.0	+2.7
GERES	GERESS Array B	93.43	329	P	P	09 15 48.0	-1.0
	comp=Z,0.2nm,0.4s,baz=63,slow=9.1,SNR=3.4						
TXAR	Lajitas Array	96.31	54	P	P	09 16 05.1	+2.5
	comp=Z,0.3nm,0.8s,baz=330,slow=1.3,SNR=3.2						

*ISCJB **02** 09:04:56.5±1.1, 14°.5S±0°.2×71°.8W±0°.2, h122km, mb3.4/4, Error ellipse: s-maj=36.0km s-min=13.7km az=27.7*
*IDC **02** 09:05:02.2±4.1, 14°.57S×71°.45W, h159km±32km, mb3.2/4,*

2012 JUN

mb1 3.3/6, mb1mx3.1/38, mbtmp3.7/6, Error ellipse: s-maj=42.3km s-min=26.2km az=87.0

ISC 02 09:04:57.8±1.2, 14°.6S±0°.2×71°.8W±0°.2, h122km, n6, σ1§50/7, mb3.5/4, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	3.92	116	P	Pn	09 05 58.1	+1.3
	2.1nm,0.3s,baz=292,slow=9.1,SNR=51						
LPAZ				S	Sn	09 06 43.0	+0.4
	0.6nm,0.3s,baz=185,slow=25,SNR=9.0						
CPUP	Villa Florida	17.88	133	P	P	09 08 55.7	-2.1
	0.1nm,0.3s,baz=311,slow=15,SNR=6.2						
SNAA	Sanae	69.69	162	P	P	09 15 53.9	-0.1
	0.8nm,0.7s,baz=317,slow=6.4,SNR=6.9						
QSPA	South Pole Qui	75.58	180	P	P	09 16 29.6	+0.6
	1.0nm,0.7s,baz=131,slow=3.1,SNR=7.0						
TORD	Torodi Ar. Bea	77.78	73	P	P	09 16 40.8	-1.3
	0.4nm,0.8s,baz=240,slow=3.7,SNR=2.9						
YKA	Yellowknife Ar	83.78	341	P	P	09 17 13.7	+0.8
	0.2nm,0.7s,baz=133,slow=4.3,SNR=3.8						

*ISCJB **02** 09:07:21.0±0.5, 38°.23N±0°.04×28°.20E±0°.04, h11km, Error ellipse: s-maj=5.6km s-min=4.6km az=141.5*
*ISK **02** 09:07:20.1, 38°.25N×28°.20E, h9km, ML2.1/4*
*CSEM **02** 09:07:21.0±0.2, 38°.22N×28°.21E, h10km, ML2.7, Error ellipse: s-maj=4.5km s-min=3.3km az=134.0*
*DDA **02** 09:07:21.3, 38°.25N×28°.18E, h7km, Ml2.7*

ISC 02 09:07:20.9±0.8, 38°.24N±0°.03×28°.20E±0°.03, h11km, n24, σ0§30/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANT	Manisa	0.38	48	iP	Pg	09 07 28.9	+0.3
MANT	Manisa	0.38	48	P	Pg	09 07 28.9	+0.3
KULA	Kula-Manisa	0.46	53	PG	Pg	09 07 30.2	+0.2
KULA				SG	Sg	09 07 35.7	-0.4
KULA	Kula-Manisa	0.46	53	ePg	Pg	09 07 30.2	+0.2
KULA				eSg	Sg	09 07 35.7	-0.4
AYDN	Tasoluk	0.63	204	iP	Pg	09 07 33.6	+0.5
AYDN	Tasoluk	0.63	204	P	Pg	09 07 33.7	+0.5
AKHS	Akhisar	0.71	335	iP	Pg	09 07 35.0	+0.3
AKHS				iS	Sb	09 07 44.8	-0.3
AKHS	Akhisar	0.71	335	P	Pg	09 07 35.0	+0.3
AKHS				S	Sb	09 07 44.8	-0.3
DEMI	Demirci	0.90	27	iP	Pg	09 07 38.5	+0.1
DEMI	Demirci	0.90	27	P	Pg	09 07 38.5	+0.1
BLCB	Balcova	0.92	280	PG	Pg	09 07 38.2	-0.5
BLCB				SG	Sg	09 07 51.0	+0.3
BLCB	Balcova	0.92	280	ePg	Pg	09 07 38.2	-0.5
BLCB				eSg	Sg	09 07 51.0	+0.3
YER	Yerkesik	1.10	176	PN	Pb	09 07 41.8	-0.2
YER				SN	Sn	09 07 57.6	0.0
YER	Yerkesik	1.10	176	ePn	Pb	09 07 41.8	-0.2
YER				eSn	Sn	09 07 57.6	0.0
URLA	Izmir	1.27	276	PN	Pn	09 07 44.5	-0.1
URLA	Izmir	1.27	276	iP	Pb	09 07 45.0	+0.2
URLA	Izmir	1.27	276	ePn	Pn	09 07 44.5	-0.1
URLA	Izmir	1.27	276	P	Pb	09 07 45.0	+0.2
DURS	Dursunbey	1.38	9	iP	Pg	09 07 47.6	+0.1
DURS	Dursunbey	1.38	9	P	Pg	09 07 47.6	+0.1
TVSB	Tavsanli	1.56	39	PN	Pn	09 07 48.7	-0.1
TVSB	Tavsanli	1.56	39	ePn	Pn	09 07 48.7	-0.1
BALY	Balya	1.57	343	iP	Pb	09 07 50.3	+0.3
BALY	Balya	1.57	343	P	Pb	09 07 50.3	+0.3

*ISN **02** 09:09:36.2±0.3, 37°.62N×41°.74E, h0km, ML3.1*
*ISCJB **02** 09:09:41.9±0.6, 37°.65N±0°.03×41°.55E±0°.03, h1km±6km, Error ellipse: s-maj=5.7km s-min=3.9km az=1.3*
*ISK **02** 09:09:41.6, 37°.67N×41°.55E, h8km, ML3.0/11*
*CSEM **02** 09:09:42.0±0.1, 37°.65N×41°.56E, h5km, ML3.1, Error ellipse: s-maj=3.3km s-min=2.0km az=13.0*
*DDA **02** 09:09:42.4, 37°.69N×41°.56E, h7km, Ml3.1*

ISC 02 09:09:42.5±1.0, 37°.68N±0°.03×41°.56E±0°.02, h11km±9km, n40, σ0§68/57, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTMN	Batman	0.31	312	iP	Pg	09 09 48.8	0.0
BTMN				iS	Sg	09 09 53.5	+0.5
BTMN	Batman	0.31	312	P	Pg	09 09 48.8	0.0
BTMN				S	Sg	09 09 53.5	+0.5
SRTM	Siirt_Merkez	0.42	43	iP	Pg	09 09 50.2	-0.6
SRTM	Siirt_Merkez	0.42	43	P	Pg	09 09 50.2	-0.6
SVAN	Silvan-Diyarba	0.55	329	PG	Pg	09 09 52.7	-0.5
SVAN				SG	Sg	09 10 00.9	+0.4
SVAN	Silvan-Diyarba	0.55	329	iP	Pg	09 09 53.2	0.0
SVAN				iS	Sg	09 10 00.3	-0.1
SVAN	Silvan-Diyarba	0.55	329	ePg	Pg	09 09 52.7	-0.5
SVAN	Silvan-Diyarba	0.55	329	P	Pg	09 09 53.2	0.0
SVAN				S	Sg	09 10 00.3	-0.1
SIRN	S¨–rnak	0.70	105	iP	Pg	09 09 55.7	-0.4
SIRN	S¨–rnak	0.70	105	P	Pg	09 09 55.7	-0.4
MARD	Mardin	0.72	240	iP	Pg	09 09 56.6	+0.1
MARD				iS	Sg	09 10 05.9	0.0
SIRT	Sirnak	0.72	104	PG	Pg	09 09 55.9	-0.6
SIRT				SG	Sb	09 10 06.6	-0.5
SIRT	Sirnak	0.72	104	ePg	Pg	09 09 55.9	-0.6
SIRT				eSg	Sb	09 10 06.6	-0.5
MAZI	Mazidag	0.91	256	PG	Pg	09 09 59.8	-0.3
MAZI				SG	Sg	09 10 12.1	+0.1
MAZI	Mazidag	0.91	256	ePg	Pg	09 09 59.8	-0.3
MAZI				eSg	Sg	09 10 12.1	+0.1
GURO	Guroymak-BITLI	0.94	23	PG	Pg	09 10 00.3	-0.4
GURO	Guroymak-BITLI	0.94	23	ePg	Pg	09 10 00.3	-0.4
DIYA	Diyarbakir	1.17	282	iP	Pn	09 10 04.8	0.0
DIYA	Diyarbakir	1.17	282	P	Pn	09 10 04.8	0.0
HANI	Diyarbakir_Han	1.17	309	iP	Pb	09 10 04.5	-0.3
HANI				iS	Sn	09 10 21.1	+0.2
HANI	Diyarbakir_Han	1.17	309	P	Pb	09 10 04.5	-0.3
HANI				S	Sn	09 10 21.1	+0.2
BNGL	BINGOL	1.31	346	iP	Pg	09 10 07.5	-0.2
BNGL				iS	Sn	09 10 25.4	+1.0
GEVA	Gevas	1.34	62	iP	Pb	09 10 07.8	+0.1
GEVA				iS	Sg	09 10 27.2	+1.5
GEVA	Gevas	1.34	62	P	Pb	09 10 07.8	+0.1
GEVA				S	Sg	09 10 27.2	+1.5
BINT	Bingol	1.46	325	ePn	Pb	09 10 09.5	-0.2
BGOL	Bingol	1.48	332	iP	Pb	09 10 10.1	+0.1
BGOL				iS	Sg	09 10 30.2	+0.1
BGOL	Bingol	1.48	332	P	Pb	09 10 10.1	+0.1
BGOL				S	Sg	09 10 30.2	+0.1
BNGB	Bing¶ll	1.48	332	PN	Pn	09 10 09.5	+0.4
SVRC	Sivrice-ELAZID	1.91	292	PN	Pn	09 10 15.1	0.0
SVRC	Sivrice-ELAZID	1.91	292	ePn	Pn	09 10 15.1	0.0
YEDI	Yedisu-Bingol	1.93	336	PN	Pn	09 10 15.6	+0.3
YEDI	Yedisu-Bingol	1.93	336	ePn	Pn	09 10 15.6	+0.3
PTK	Pertek	2.09	306	PN	Pn	09 10 18.1	+0.5
PTK	Pertek	2.09	306	ePn	Pn	09 10 18.1	+0.5
URFA	Urfa	2.19	265	PN	Pn	09 10 19.2	+0.3
URFA	Urfa	2.19	265	ePn	Pn	09 10 19.2	+0.3
ERZN	Erzincan	2.38	323	PN	Pn	09 10 22.2	+0.6
MALT	Malatya	2.55	285	PN	Pn	09 10 24.2	+0.3
MALT	Malatya	2.55	285	ePn	Pn	09 10 24.2	+0.3
EZC	Erzincan	2.69	321	ePn	Pn	09 10 22.2	-3.7

IDC 02 09:14:22.3±1.1, 18°.51N×120°.66E, h0km, mb3.4/5, mb1 3.7/6, mb1mx3.4/64, mbtmp3.4/6, Error ellipse: s-maj=36.5km s-min=21.5km az=71.0, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	19.92	17	P	P	09 18 56.2	+0.6
	baz=194,slow=11,SNR=4.0						
CMAR	Chiang Mai Arr	20.60	273	P	Pn	09 19 04.5	-1.0
	0.9nm,0.3s,baz=94,slow=10.0,SNR=3.0						
WRA	Warramunga Arr	40.50	160	P	P	09 22 01.9	-1.4
	0.5nm,1.1s,baz=336,slow=10.0,SNR=4.1						
ASAR	Alice Springs	43.87	162	P	P	09 22 31.7	+1.0
	0.3nm,0.7s,baz=345,slow=6.9,SNR=2.8						
KURBB	Kurchatov Arra	46.25	324	P	P	09 22 48.1	-1.2
	0.4nm,0.6s,baz=119,slow=8.2,SNR=3.8						
YKA	Yellowknife Ar	88.37	22	P	P	09 27 16.0	+0.1
	0.3nm,0.8s,baz=316,slow=4.8,SNR=6.3						

IDC 02 09:30:32.4±4.3, 5°.46S×147°.20E, h218km±45km, mb3.4/3, mb1 3.5/5, mb1mx3.0/47, mbtmp3.9/5, MS3.8/1, Ms1 3.8/1, ms1mx2.7/29, Error ellipse: s-maj=74.2km s-min=25.9km az=135.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.92	181	P	Pn	09 31 34.1	+0.2
	1.8nm,0.3s,baz=349,slow=5.2,SNR=3.7						
PMG				S	S	09 32 18.9	-3.4
	3.1nm,0.3s,baz=190,slow=21,SNR=13						
CTA	Charters Tower	14.57	184	LR	LR	09 39 24.4	
	comp=Z,409nm,21.5s,baz=299,slow=36						
WRA	Warramunga Arr	19.07	220	P	P	09 34 38.6	-0.2
	0.8nm,0.3s,baz=47,slow=11,SNR=40						
ASAR	Alice Springs	22.18	214	P	P	09 35 11.6	+0.6
	2.6nm,0.8s,baz=46,slow=8.2,SNR=24						
FITZ	Fitzroy Crossi	24.52	237	P	P	09 35 31.7	-0.5
	3.7nm,0.5s,baz=54,slow=9.5,SNR=20						
ILAR	Eielson Array	84.91	23	P	P	09 42 42.4	-0.1
	0.3nm,0.6s,baz=260,slow=5.4,SNR=5.0						

*KRNET **02** 09:34:59.1±0.1, 42°.27N×76°.47E, h19km, mb2.5*
*NNC **02** 09:34:59.3±0.8, 42°.29N×76°.44E, h2km±6km, mb2.9, mpv2.8, Error ellipse: s-maj=5.6km s-min=2.2km az=164.0*
*SOME **02** 09:35:00.5, 42°.30N×76°.42E, h20km*
*KNET **02** 09:35:01.4±0.4, 42°.32N×76°.28E, h12km±2km, ml2.0, Error ellipse: s-maj=3.9km s-min=2.9km az=144.0*

ISC 02 09:34:59.6±0.9, 42°.29N±0°.02×76°.47E±0°.02, h12km±7km, n49, σ0§70/91, 39C-20D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	Ulahol	0.18	256	⇑P	Pg	09 35 03.8	+0.1
	148nm,0.1s,SNR=35						
ULHL				⇑S	Sg	09 35 06.8	+0.1
	876nm,0.2s						
ULHL	Ulahol	0.18	256	⇑iP	Pg	09 35 03.7	0.0
	baz=61						
ULHL				⇑iS	Sg	09 35 06.1	-0.6
	baz=61						
BOOM	Boomskoye usch	0.44	297	⇓iP	Pg	09 35 08.1	-0.3
	baz=99						
BOOM				⇓iS	Sg	09 35 14.4	0.0
	baz=99						
KDJ	Kajisay	0.55	106	⇓iP	Pg	09 35 10.0	-0.3
	baz=5.0						
KDJ				⇓iS	Sg	09 35 17.4	-0.2
	baz=5.0						
IZV	Izvestkoviy	0.76	8	eP	Pb	09 35 14.5	-0.2
	101nm,0.1s						
IZV				eS	Sb	09 35 24.3	-0.8
	157nm,0.1s						
TNSS	Tian-Shan	0.83	25	eP	Pg	09 35 15.7	+0.1
	65nm,0.1s						
TNSS				eS	Sg	09 35 26.5	0.0
	48nm,0.2s						
MTBS	Maitube	0.84	358	eP	Pg	09 35 15.8	-0.1
	39nm,0.2s						
MTBS				eS	Sg	09 35 26.7	-0.3
	69nm,0.4s						
KST	Kastek	0.84	334	eP	Pg	09 35 15.6	-0.3
	49nm,0.2s						
KST				eS	Sg	09 35 26.4	-0.6
	70nm,0.3s						
TKM2	Tokmak 2	0.91	315	⇑P	Pg	09 35 16.5	-0.5
	6.9nm,0.3s						
TKM2				⇑S	Sb	09 35 29.2	-0.3
	34nm,0.3s						
TKM2	Tokmak 2	0.91	315	⇓P	Pg	09 35 16.6	-0.5
	13nm,0.1s,SNR=17						
TKM2				⇑S	Sb	09 35 29.1	-0.3
	90nm,0.1s						
TKM2	Tokmak 2	0.91	315	⇑eP	Pg	09 35 16.6	-0.5
	baz=15						
TKM2				⇑iS	Sg	09 35 29.0	0.0
	baz=15						
NRN	Naryn	0.92	203	⇑iP	Pg	09 35 16.4	-1.1
	baz=4.0						
NRN				⇑iS	Sg	09 35 29.0	-0.6
	baz=4.0						
KZA	Kyzart	0.93	257	⇑P	Pg	09 35 16.8	-0.9
	4.3nm,0.1s,SNR=27						
KZA				⇓S	Sg	09 35 29.4	-0.5
	29nm,0.3s						
KZA	Kyzart	0.93	257	⇑iP	Pg	09 35 16.9	-0.8
	baz=58						
KZA				⇑iS	Sg	09 35 29.2	-0.7
	baz=58						
MDOK	Medeo	0.97	26	⇑P	Pg	09 35 18.1	-0.3
	11nm,0.3s						
MDOK				⇓S	Sb	09 35 31.3	0.0
	24nm,0.6s						
MDOK	Medeo	0.97	26	eP	Pg	09 35 18.0	-0.3
	32nm,0.3s						
MDOK				eS	Sg	09 35 30.4	-0.6
	32nm,0.3s						
KNDC	Almaty	1.00	21	⇓P	Pn	09 35 19.2	-0.3
	28nm,0.2s						
KNDC				⇓S	Sn	09 35 33.3	-0.2
	26nm,0.3s						
BMNS	Besmoynak	1.01	324	eP	Pg	09 35 18.6	-0.5
	101nm,0.1s						
BMNS				eS	Sg	09 35 31.8	-0.6
	312nm,0.3s						
KOTS	Kotyrbulak	1.06	26	eP	Pb	09 35 19.8	-0.1
	19nm,0.2s						
KOTS				eS	Sg	09 35 33.5	-0.2
	64nm,0.5s						
DGS	Degeres	1.08	332	eP	Pb	09 35 19.9	-0.5
	16nm,0.2s						
DGS				eS	Sb	09 35 33.7	-0.8
	68nm,0.4s						
TARG	Taragay, Kyrgy	1.14

USP				⇓*i*S		**Sb**	**09 35 54.1 +0.5**
	baz=5.0						
KPKS	**Kokpek**	**2.01**	**53**	*e*P		**Pb**	**09 35 36.9 +0.8**
	9.7nm,0.2s						
KPKS				*e*S		**Sg**	**09 36 03.1 -1.0**
	67nm,0.2s						
EKS2	**Erkin-Say**	**2.03**	**282**	⇑P		**Pb**	**09 35 36.6 +0.2**
	5.5nm,0.3s,SNR=7.1						
EKS2	**Erkin-Say**	**2.03**	**282**	⇑*e*P		**Pn**	**09 35 35.3 +1.6**
	baz=82						
EKS2				⇑*i*S		**Sb**	**09 36 01.6 -0.1**
	baz=82						
UZB	**Uzynbulak**	**2.06**	**65**	*e*P		**Pb**	**09 35 37.5 +0.4**
	1.4nm,0.2s						
UZB				*e*S		**Sb**	**09 36 03.9 +1.1**
	28nm,0.4s						
AML	**Almayashu**	**2.07**	**267**	⇓P		**Pb**	**09 35 37.1 -0.2**
	5.5nm,0.2s,SNR=18						
AML	**Almayashu**	**2.07**	**267**	⇑*i*P		**Pb**	**09 35 36.7 -0.6**
	baz=67						
AML				⇑*i*S		**Sb**	**09 36 03.3 +0.2**
	baz=67						
ARXS	**Arharly**	**2.16**	**27**	*e*P		**Pb**	**09 35 38.5 -0.2**
	7.1nm,0.4s						
ARXS				*e*S		**Sb**	**09 36 05.6 +0.1**
	36nm,0.2s						
MNBS	**Baschi**	**2.28**	**38**	*e*P		**Pb**	**09 35 40.7 0.0**
	5.2nm,0.4s						
MNBS				*e*S		**Sb**	**09 36 09.4 +0.5**
	34nm,0.4s						
MRKS	**Merke**	**2.44**	**282**	*e*P		**Pb**	**09 35 44.5 +1.0**
	4.1nm,0.2s						
MRKS				*e*S		**Sb**	**09 36 15.7 +2.1**
	50nm,0.3s						
PDGK	**Podgornoye**	**2.45**	**64**	⇓Pg		**Pb**	**09 35 45.0 +1.4**
	1.7nm,0.4s						
PDGK				⇓Lg		Lg	09 36 17.4
	12nm,0.6s						
PDGK	**Podgornoye**	**2.45**	**64**	⇑*i*P		**Pn**	**09 35 41.2 +1.7**
	baz=64						
PDGK				⇑*i*S		**Sb**	**09 36 12.2 -1.6**
	baz=64						
MNAS	**Manas**	**2.95**	**275**	⇑Pn		**Pb**	**09 35 46.7 +0.4**
	1.4nm,0.7s						
MNAS				⇓Lg		Lg	09 36 32.0
	7.6nm,1.0s						
SFK	**Sufi-Kurgan**	**3.19**	**226**	⇑Pg		**Pb**	**09 35 57.3 +0.9**
	0.9nm,0.6s						
SFK				⇓Lg		Lg	09 36 40.5
	3.4nm,0.4s						
KK31	**Karatay Array**	**4.47**	**283**	⇑Pg		**Pb**	**09 36 20.2 +2.3**
	0.2nm,0.3s,baz=99,slow=16,SNR=8.3						
KK31				⇓Lg		Lg	09 37 20.2
	1.3nm,0.4s,baz=92,slow=28,SNR=6.6						

SOME ***02*** *09:40:38.1, 44°.65N×82°.18E, h10km*
NNC ***02*** *09:40:40.6±1.2, 44°.66N×81°.95E, h0km, mb3.1, mpv2.6, Error ellipse: s-maj=19.5km s-min=3.4km az=116.0*
ISC 02 09:40:37.3±2.4, 44°.64N±0°.07×82°.23E±0°.10, h1km±16km, n9, σ0§77/17, 2C-4D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.77**	**261**	*e*P		**Pg**	**09 41 11.1 -0.1**
	7.0nm,0.4s						
DJR				*e*S		**Sg**	**09 41 34.9 +0.8**
	5.2nm,0.5s						
KAPS	**Kapalarasan**	**2.14**	**289**	*e*P		**Pb**	**09 41 16.6 -0.3**
	2.4nm,0.4s						
KAPS				*e*S		**Sb**	**09 41 44.1 +0.1**
	6.9nm,0.4s						
MK31	**Makanchi Array**	**2.16**	**1**	⇓Pn		**Pb**	**09 41 18.1 +1.0**
	1.9nm,0.2s,baz=184,slow=13,SNR=103						
MK31				⇑Sn		**Sg**	**09 41 46.1 -0.5**
	0.9nm,0.2s						
MAKZ	**Makanchi**	**2.18**	**355**	⇓Pn		**Pb**	**09 41 17.6 +0.1**
	2.5nm,0.5s						
MAKZ				⇑Sn		**Sg**	**09 41 46.1 -1.1**
	3.1nm,0.3s						
PDGK	**Podgornoye**	**2.37**	**237**	⇓Pg		**Pb**	**09 41 20.8 0.0**
	1.9nm,0.6s						
PDGK				⇓Lg		Lg	09 41 51.9
	8.3nm,0.6s						
SHLS	**Shalkode**	**2.49**	**234**	*e*P		**Pn**	**09 41 19.2 +0.2**
	4.8nm,0.2s						
SHLS				*e*S		**Sn**	**09 41 48.7 -1.3**
	17nm,0.5s						
MNBS	**Baschi**	**2.80**	**260**	*e*P		**Pb**	**09 41 28.1 -0.1**
	2.4nm,0.5s						
MNBS				*e*S		**Sb**	**09 42 04.1 +1.1**
	4.4nm,0.4s						
KPKS	**Kokpek**	**2.81**	**247**	*e*P		**Pb**	**09 41 27.9 -0.4**
	5.4nm,0.2s						
KPKS				*e*S		**Sb**	**09 42 03.9 +0.6**
	12nm,0.3s						
ARXS	**Arharly**	**3.18**	**264**	*e*P		**Pb**	**09 41 34.4 -0.2**
	1.0nm,0.2s						
ARXS				*e*S		**Sb**	**09 42 14.9 +1.0**
	5.5nm,0.4s						

CSEM ***02*** *09:45:29.6±0.2, 39°.61N×33°.24E, h5km, ML2.5, Error ellipse: s-maj=5.6km s-min=3.7km az=156.0*
ISK ***02*** *09:45:29.2, 39°.59N×33°.22E, h5km, ML2.3/8*
DDA ***02*** *09:45:30.5, 39°.57N×33°.27E, h7km, Ml2.5*
ISC 02 09:45:30.1±1.2, 39°.60N±0°.03×33°.24E±0°.02, h2km±11km, n28, σ0§77/39, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBAL	**Bala**	**0.11**	**239**	*i* P		**Pg**	**09 45 32.0 -0.2**
BBAL				*i* S		**Sg**	**09 45 35.1 +1.4**
BBAL	**Bala**	**0.11**	**239**	P		**Pg**	**09 45 32.0 -0.2**
BBAL				S		**Sg**	**09 45 35.1 +1.4**
AFSR	**Af¯ar-Bala (A**	**0.20**	**221**	PG		**Pg**	**09 45 32.9 -1.1**
AFSR				SG		**Sg**	**09 45 36.5 -0.1**
AFSR	**Af¯ar-Bala (A**	**0.20**	**221**	*e*Pg		**Pg**	**09 45 32.9 -1.1**
AFSR				*e*Sg		**Sg**	**09 45 36.5 -0.1**
KAMT	**Kaman**	**0.43**	**122**	PG		**Pg**	**09 45 38.3 -0.1**
KAMT				SG		**Sg**	**09 45 44.9 +0.9**
KAMT	**Kaman**	**0.43**	**122**	*e*Pg		**Pg**	**09 45 38.3 -0.1**
KAMT				*e*Sg		**Sg**	**09 45 44.9 +0.9**
ANTO	**Ankara**	**0.44**	**308**	PG		**Pg**	**09 45 38.7 +0.1**
LOD	**Lodumlu**	**0.47**	**308**	PG		**Pg**	**09 45 38.3 -0.8**
LOD				SG		**Sg**	**09 45 45.4 +0.2**
KKUL	**Konya-Kulu**	**0.49**	**211**	*i* P		**Pg**	**09 45 40.0 +0.4**
KKUL				*i* S		**Sb**	**09 45 48.3 -1.0**
KKUL	**Konya-Kulu**	**0.49**	**211**	P		**Pg**	**09 45 40.0 +0.4**
KKUL				S		**Sb**	**09 45 48.3 -1.0**
KULU	**Kulu**	**0.58**	**199**	PG		**Pg**	**09 45 41.3 0.0**
KULU				SG		**Sg**	**09 45 49.3 +0.4**
SERE	**Sereflikochisa**	**0.70**	**159**	PG		**Pg**	**09 45 43.2 -0.3**
SERE	**Sereflikochisa**	**0.70**	**159**	*e*Pg		**Pg**	**09 45 43.2 -0.3**
YAYX	**Yaylak**	**0.79**	**146**	PG		**Pg**	**09 45 44.4 -0.9**
YAYX	**Yaylak**	**0.79**	**146**	*e*Pg		**Pg**	**09 45 44.4 -0.9**
CDAG	**Cicekdag**	**0.87**	**88**	*i* P		**Pg**	**09 45 46.8 -0.1**
CDAG	**Cicekdag**	**0.87**	**88**	P		**Pg**	**09 45 46.8 -0.1**
CHBY	**Cihanbeyli**	**1.05**	**195**	PG		**Pg**	**09 45 49.6 -0.6**
CHBY	**Cihanbeyli**	**1.05**	**195**	*e*Pg		**Pg**	**09 45 49.6 -0.6**
CORM	**Corum**	**1.22**	**61**	PN		**Pg**	**09 45 52.9 -0.5**
CORM	**Corum**	**1.22**	**61**	*e*Pn		**Pg**	**09 45 52.9 -0.5**
KIZT	**Kizilcal**	**1.28**	**236**	PN		**Pg**	**09 45 54.1 -0.5**
KIZT	**Kizilcal**	**1.28**	**236**	*e*Pn		**Pg**	**09 45 54.1 -0.5**
KDHN	**Kadinhani**	**1.39**	**220**	*i* P		**Pg**	**09 45 56.5 -0.2**
KDHN				*i* S		**Sn**	**09 46 17.7 +2.3**
KDHN	**Kadinhani**	**1.39**	**220**	P		**Pg**	**09 45 56.5 -0.2**
GULA	**Gulagac**	**1.47**	**148**	PN		**Pn**	**09 45 57.1 -0.6**
YOZ	**Yozgat**	**1.61**	**88**	PN		**Pn**	**09 45 59.3 -0.3**
YOZ	**Yozgat**	**1.61**	**88**	*e*Pn		**Pn**	**09 45 59.3 -0.3**

NIED ***02*** *09:48:00, 36°.90N×141°.40E, h8km, Mw3.8 Best double couple: M0=5.79000×10^14 NP1:φ0=252.00000°, δ46.00000°, λ-64.00000°. NP2:φ0=36.00000°, δ50.00000°, λ-114.00000°.*
IDC ***02*** *09:48:01.9±0.6, 36°.91N×141°.26E, h0km, mb3.9/20, mb1 4.0/23, mb1mx3.9/66, mbtmp3.9/23, ML3.6/3, Error ellipse: s-maj=17.7km s-min=12.9km az=104.0*
ISCJB ***02*** *09:48:02.6±1.0, 36°.87N±0°.03×141°.42E±0°.06, h19km±6km, mb3.9/22, Error ellipse: s-maj=8.0km s-min=4.7km az=17.5*
NEIC ***02*** *09:48:03.2±0.4, 36°.90N×141°.39E, h10km, mb4.6/2, Error ellipse: s-maj=9.9km s-min=7.3km az=128.0*
NEIC Recorded [2 JMA] in Fukushima and Ibaraki.
JMA ***02*** *09:48:04.0±0.1, 36°.89N×141°.33E, h32km±1km, M4.1*
JMA Felt II J1.
ISC 02 09:48:02.8±1.7, 36°.86N±0°.04×141°.36E±0°.06, h9km±10km, n45, σ1§78/55, mb4.0/22, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.51**	**298**	P		**Pb**	**09 48 13.8 -0.2**
ONAJ				S		**Sb**	**09 48 20.6 -1.0**
JFK	**Kawauchi**	**0.64**	**323**	P		**Pb**	**09 48 15.6 -0.6**
JFK				S		**Sb**	**09 48 23.7 -1.5**
JHO	**Hitachi**	**0.68**	**249**	P		**Pg**	**09 48 16.7 +0.7**
JHO				S		**Sb**	**09 48 26.1 -0.4**
JFT	**Otama**	**1.05**	**309**	P		**Pb**	**09 48 22.7 -0.5**
JFT				S		**Sb**	**09 48 36.0 -1.0**
JMM	**Marumori**	**1.10**	**336**	P		**Pg**	**09 48 22.6 -1.3**
JMM				S		**Sg**	**09 48 36.4 -1.8**
JYT	**Yasato**	**1.13**	**236**	P		**Pb**	**09 48 23.4 -1.2**
JYT				*e*S		**Sb**	**09 48 37.8 -1.6**
JSB	**Shiboa**	**1.16**	**276**	P		**Pg**	**09 48 25.0 -0.1**
JSB				S		**Sg**	**09 48 40.2 +0.1**
JFY	**Yanaizu**	**1.43**	**293**	P		**Pn**	**09 48 28.7 -0.3**
JFY				S		**Sb**	**09 48 46.5 -1.6**
MJAR	**Matsushiro Arr**	**2.55**	**264**	Pn		**Pn**	**09 48 44.9 +0.4**
	7.6nm,0.3s,baz=90,slow=14,SNR=126						
MJAR				Sn		**Sn**	**09 49 12.9 -2.8**
	12nm,0.3s,baz=172,slow=31,SNR=6.0						
MAJO	**Matsushiro**	**2.55**	**264**	*e*Pn		**Pn**	**09 48 45.2 +0.8**
MAT	**Matsushiro**	**2.55**	**264**	P		**Pn**	**09 48 45.2 +0.7**
MAT				S		**Sb**	**09 49 19.6 -0.8**
JHJ	**Hachijo jima 2**	**3.95**	**200**	Pn		**Pn**	**09 49 04.9 +1.3**
	19nm,0.3s,baz=126,slow=23,SNR=12						
JHJ				Sn		**Sn**	**09 49 50.5 +0.3**
	25nm,0.3s,baz=246,slow=19,SNR=3.5						
ERM	**Erimo**	**5.33**	**15**	*e*Pn		**Pn**	**09 49 22.0 -0.6**
ERM				*e*Sn		**Sn**	**09 50 20.7 -3.5**
ASAJ	**Asahikawa**	**7.31**	**7**	Pn		**Pn**	**09 49 47.9 -1.8**
	0.9nm,0.3s,baz=221,slow=14,SNR=6.1						
ASAJ				Sn		**Sn**	**09 51 15.9 +3.1**
	0.4nm,0.3s,baz=43,slow=18,SNR=2.1						
JCJ	**Chichijima**	**9.76**	**176**	Sn		**Sn**	**09 52 05.9 -7.4**
	3.0nm,0.3s,baz=287,slow=19,SNR=4.4						
YSS	**Yuzh-Sakhalins**	**10.14**	**5**	*e*Pn		**Pn**	**09 50 29.0 +0.4**
USRK	**Ussuriysk Ar.**	**10.22**	**319**	Pn		**Pn**	**09 50 34.0 +4.3**
	0.1nm,0.3s,baz=134,slow=14,SNR=4.0						
KSRS	**Korea Array**	**10.74**	**277**	Pn		**Pn**	**09 50 40.2 +3.3**
	0.2nm,0.3s,baz=92,slow=14,SNR=5.8						
KSAR	**Wonju Array Be**	**10.77**	**277**	Pn		**Pn**	**09 50 40.2 +2.9**
HIA	**Hailar**	**20.00**	**315**	*e*P		**P**	**09 52 36.1 +0.5**
	8.9nm,0.4s						
SEY	**Seymchan**	**26.97**	**11**	P		**P**	**09 53 44.3 -0.2**
	0.9nm,0.7s,baz=27,slow=3.4,SNR=2.9						
SONM	**Songino Array**	**27.85**	**304**	P		**P**	**09 53 51.5 -1.2**
	0.7nm,0.5s,baz=109,slow=10,SNR=5.4						
H11N2	**WAKE ISLAND Hy**	**28.10**	**120**	T		T	10 23 23.7
	baz=315						
H11N1	**WAKE ISLAND Hy**	**28.11**	**120**	T		T	10 23 24.3
	baz=315						
H11N3	**WAKE ISLAND Hy**	**28.11**	**120**	T		T	10 23 25.1
	baz=315						
ZALV	**Zalesovo Beam**	**42.00**	**313**	P		**P**	**09 55 53.5 -0.7**
	1.5nm,0.5s,baz=84,slow=7.6,SNR=4.4						
MKAR	**Makanchi Array**	**44.17**	**302**	P		**P**	**09 56 11.8 -0.2**
	1.5nm,0.6s,baz=88,slow=9.8,SNR=18						
KURK	**Kurchatov**	**46.01**	**308**	P		**P**	**09 56 26.5 +0.1**
	1.6nm,1.0s						
KURBB	**Kurchatov Arra**	**46.07**	**308**	P		**P**	**09 56 26.5 -0.5**
	2.6nm,0.8s,baz=84,slow=8.2,SNR=18						
ILAR	**Eielson Array**	**49.66**	**32**	P		**P**	**09 56 55.6 +1.0**
	1.0nm,0.7s,baz=271,slow=6.7,SNR=14						
BVAR	**Borovoye Array**	**50.66**	**312**	P		**P**	**09 57 01.9 -0.4**
	0.4nm,0.5s,baz=78,slow=9.3,SNR=3.1						
INK	**Inuvik**	**54.56**	**27**	P		**P**	**09 57 30.8 -0.1**
	1.4nm,0.8s,baz=27,slow=4.5,SNR=3.7						
FITZ	**Fitzroy Crossi**	**56.64**	**198**	P		**P**	**09 57 47.8 +1.4**
	0.9nm,0.6s,baz=7.1,slow=8.1,SNR=2.6						
WRAB	**Tennant Creek**	**56.87**	**188**	*e*P		**P**	**09 57 46.7 -1.3**
	11nm,1.4s						
WRA	**Warramunga Arr**	**56.88**	**188**	P		**P**	**09 57 48.3 +0.2**
	1.0nm,0.7s,baz=5.2,slow=7.1,SNR=20						
ASAR	**Alice Springs**	**60.61**	**188**	P		**P**	**09 58 14.3 +0.3**
	0.8nm,0.8s,baz=4.1,slow=7.8,SNR=6.5						
SPITS	**Spitsbergen Ar**	**60.68**	**349**	P		**P**	**09 58 15.9 +2.0**
	3.2nm,1.0s,baz=57,slow=21,SNR=2.6						
YKA	**Yellowknife Ar**	**63.98**	**30**	P		**P**	**09 58 35.5 -0.7**
	0.3nm,0.7s,baz=303,slow=6.7,SNR=5.0						
ARCES	**ARCESS Array B**	**64.14**	**339**	P		**P**	**09 58 37.2 0.0**
	1.8nm,0.9s,baz=50,slow=8.4,SNR=4.5						
FINES	**FINESS Array B**	**68.95**	**332**	P		**P**	**09 59 07.8 -0.2**
	2.4nm,0.9s,baz=34,slow=10,SNR=5.1						
HFS	**Hagfors**	**74.23**	**336**	P		**P**	**09 59 40.1 +0.2**
	0.8nm,0.4s,baz=79,slow=7.5,SNR=5.0						
AKASG	**Malin Array Be**	**74.41**	**322**	P		**P**	**09 59 40.5 -0.6**
	0.9nm,0.4s,baz=44,slow=5.9,SNR=8.6						
NVAR	**Mina Array Bea**	**75.13**	**53**	P		**P**	**09 59 47.5 +1.7**
	0.1nm,0.3s,baz=276,slow=5.0,SNR=2.7						
GERES	**GERESS Array B**	**82.83**	**328**	P		**P**	**10 00 27.5 -0.1**
	0.4nm,0.4s,baz=57,slow=7.2,SNR=3.6						
TXAR	**Lajitas Array**	**90.26**	**52**	P		**P**	**10 01 04.9 +0.5**
	0.1nm,0.6s,baz=308,slow=3.0,SNR=4.2						

NNC 02 10:09:03.3±3.5, 39°.15N×75°.99E, h0km, mb3.8, mpv3.4, 4C-2D, Error ellipse: s-maj=26.8km s-min=19.5km az=157.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**2.10**	**295**	⇓Pn	Pn	10 09 39.7	-0.2
	6.5nm,0.2s						
SFK				⇑Sn	Sn	10 10 07.9	+1.0
	70nm,0.2s						
TKM2	**Tokmak 2**	**3.78**	**356**	⇑Pg	Pb	10 10 11.3	+0.3
	2.2nm,0.5s						
TKM2				⇑Lg	Lg	10 11 02.7	
	8.3nm,0.8s						
MNAS	**Manas**	**4.25**	**323**	⇓Pn	Pn	10 10 11.3	+1.8
	6.0nm,0.4s						
MNAS				⇑Sn	Sn	10 11 02.4	+2.5
	5.6nm,0.4s						
KK31	**Karatay Array**	**5.72**	**315**	Pn	Pn	10 10 28.6	-0.8
	1.3nm,0.3s,baz=134,slow=12,SNR=27						
KK31				Sn	Sn	10 11 35.0	-0.8
	3.3nm,0.5s,baz=147,slow=22,SNR=10						

UPP ***02*** *10:14:44.8±3.0, 67°.60N×31°.70E, h0km, ML1.8*
KOLA ***02*** *10:14:51.1, 67°.56N×30°.43E, h0km*
CSEM ***02*** *10:14:53.0±0.6, 67°.48N×29°.95E, h2km, ML1.7, Error ellipse: s-maj=11.5km s-min=5.7km az=89.0, Mining explosion.*
HEL 02 10:14:51.2±0.2, 67°.55N×30°.39E, h0km, ML1.7, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRF	**Varrio**	**0.36**	**304**	PG	Pg	10 14 57.6	-0.5
VRF				SG	Sg	10 15 02.2	-0.5
VRF	**Varrio**	**0.36**	**304**	Pg	Pg	10 14 57.6	-0.4
VRF				Sg	Sg	10 15 02.2	-0.5
APA0	**Apatity Array**	**1.00**	**86**	P	Pg	10 15 08.6	-1.7
APA0				S	Sg	10 15 21.5	-1.7
APA	**Apatity**	**1.16**	**88**	P	Pg	10 15 11.3	-2.0
APA				S	Sg	10 15 26.1	-2.2
SGF	**Sodankyl**	**1.49**	**268**	PG	Pn	10 15 18.2	-1.0
SGF				SG	Sg	10 15 38.0	-1.0
SGF	**Sodankyl**	**1.49**	**268**	Pg	Pn	10 15 18.2	-1.0
KU6	**Riekki**	**1.55**	**188**	PG	Pn	10 15 18.7	-1.2
KU6				MSG		10 15 37.6	
	comp=Z,3.1nm,0.2s						
MSF	**Maaselka**	**1.73**	**199**	PG	Pn	10 15 22.4	-0.1
MSF				SN	Sn	10 15 45.3	0.0
MSF	**Maaselka**	**1.73**	**199**	Pg	Pn	10 15 22.4	-0.1
MSF				Sn	Sn	10 15 45.3	0.0
RNF	**Rovaniemi**	**1.96**	**243**	PG	Pn	10 15 26.0	+0.4
	baz=64						
RNF				SG	Sn	10 15 51.7	+0.9
RNF	**Rovaniemi**	**1.96**	**243**	Pg	Pn	10 15 26.0	+0.4
RNF				Sg	Sn	10 15 51.7	+0.9
HEF	**Hetta**	**2.68**	**292**	PN	Pn	10 15 35.2	-0.3
HEF				MSG		10 16 10.0	
	comp=Z,4.5nm,0.2s						
HEF				SG	Sb	10 16 12.1	-1.2
HEF	**Hetta**	**2.68**	**292**	Pn	Pn	10 15 35.2	-0.3
HEF				Sg	Sb	10 16 12.1	-1.2
	comp=Z,4.5nm,0.2s						
TOF	**Tornio**	**2.82**	**241**	PN	Pn	10 15 36.9	-0.5
TOF				MSG		10 16 14.1	
	comp=Z,3.1nm,0.2s						
TOF	**Tornio**	**2.82**	**241**	Pn	Pn	10 15 36.9	-0.5
PAJU	**Pajala**	**2.87**	**263**	P	Pn	10 15 38.1	-0.1
PAJU				S	Sb	10 16 19.1	+0.1
PAJU	**Pajala**	**2.87**	**263**	P	Pn	10 15 38.1	-0.1
OUL	**Oulu**	**3.07**	**218**	SG	Sb	10 16 25.6	+1.1
OUL	**Oulu**	**3.07**	**218**	Sg	Sb	10 16 25.6	+1.1
LANU	**Lannavaara**	**3.23**	**283**	P	Pn	10 15 42.8	-0.3
LANU	**Lannavaara**	**3.23**	**283**	PN	Pn	10 15 42.4	-0.7
LANU	**Lannavaara**	**3.23**	**283**	Pn	Pn	10 15 42.4	-0.7
LANU	**Lannavaara**	**3.23**	**283**	P	Pn	10 15 42.8	-0.3
MASU	**Masugnsbyn**	**3.23**	**272**	P	Pn	10 15 43.9	+0.8
MASU	**Masugnsbyn**	**3.23**	**272**	P	Pn	10 15 43.9	+0.8
KALU	**Kalix**	**3.27**	**242**	SG	Sb	10 16 31.1	+0.8
KALU	**Kalix**	**3.27**	**242**	Sg	Sb	10 16 31.1	+0.8
ERTU	**Ertsjaerv**	**3.37**	**256**	P	Pn	10 15 45.4	+0.5
ERTU	**Ertsjaerv**	**3.37**	**256**	SN	Sn	10 16 25.0	-0.5
ERTU	**Ertsjaerv**	**3.37**	**256**	P	Pn	10 15 45.4	+0.5
KUA	**Kurravaara**	**3.84**	**281**	P	Pn	10 15 51.3	-0.2
KUA	**Kurravaara**	**3.84**	**281**	P	Pn	10 15 51.3	-0.2
KIF	**Kilpisjarvi**	**3.85**	**297**	PN	Pn	10 15 52.0	+0.4
KIF	**Kilpisjarvi**	**3.85**	**297**	Pn	Pn	10 15 52.0	+0.4
OUF	**Merijarvi**	**3.95**	**219**	PN	Pn	10 15 52.7	-0.2
OUF	**Merijarvi**	**3.95**	**219**	Pn	Pn	10 15 52.7	-0.2
SJUU	**Sjulsmark**	**4.07**	**244**	P	Pn	10 15 54.1	-0.5
SJUU	**Sjulsmark**	**4.07**	**244**	P	Pn	10 15 54.1	-0.5
RATU	**Laukkuluspa**	**4.13**	**279**	P	Pn	10 15 55.3	-0.2
NIKU	**Nikkaluokta**	**4.34**	**279**	P	Pn	10 15 57.9	-0.3
NIKU	**Nikkaluokta**	**4.34**	**279**	P	Pn	10 15 57.9	-0.4

STR ***02*** *10:15:00.7±2.0, 45°.N±5°.×1°.2E±1°.8, h5km, M3.8/7, mb4.0/2, MLv3.6/7*
PRU ***02*** *10:15:03.2, 44°.76N×11°.14E, h0km*
ROM ***02*** *10:15:05.5±0.0, 44°.883N±0°.001×11°.016E±0°.001, h7km, ML3.3/34*
LDG ***02*** *10:15:05.9±0.1, 44°.90N×11°.14E, h2km, Ml3.3/20, Error ellipse: s-maj=3.5km s-min=2.4km az=60.0*
ISCJB ***02*** *10:15:05.5±0.2, 44°.94N±0°.01×10°.95E±0°.02, h13km±2km, Error ellipse: s-maj=2.7km s-min=2.1km az=33.3*
IASPEI ***02*** *10:15:05.7±0.8, 44°.90N±0°.02×11°.02E±0°.02, h13km±4km, Error ellipse: s-maj=2.7km s-min=2.5km az=54.5, GT5 selection from ISC bulletin GT5 identified by Bond¨jr and McLaughlin (2009) selection criteria Bond¨jr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
CSEM ***02*** *10:15:06.0±0.1, 44°.92N×11°.01E, h10km, ML3.3/19, Error ellipse: s-maj=2.9km s-min=2.6km az=137.0*
ISC 02 10:15:05.7±0.7, 44°.89N±0°.01×11°.06E±0°.02, h17km±2km, n210, σ1§22/274, 17C-26D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0818	**Loc. Fossa, Co**	**0.04**	**334**	⇓*i*P		**Pg**	**10 15 07.8 -1.0**
T0818				⇓*i*S		**Sg**	**10 15 10.4 -0.5**
T0818	**Loc. Fossa, Co**	**0.04**	**334**	*i* P		**Pg**	**10 15 07.8 -1.0**
T0818				*i* S		**Sg**	**10 15 10.4 -0.5**
T0802	**SanFelice sul**	**0.09**	**102**	⇑*e*P		**Pg**	**10 15 08.8 -0.3**
T0802				⇑*e*S		**Sg**	**10 15 12.8 +1.4**
T0802	**SanFelice sul**	**0.09**	**102**	*e*P		**Pg**	**10 15 08.8 -0.3**
T0802				*e*S		**Sg**	**10 15 12.8 +1.4**
T0802				AML	AML		
	comp=E,69750μm,0.3s						
T0802				AML	AML		
	comp=N,66650μm,1.5s						
T0802				AML	AML		
	comp=E,69750μm,0.4s						
T0802				AML	AML		
	comp=N,66650μm,1.5s						
T0802				AML	AML		
	comp=E,69750μm,0.4s						
T0802				AML	AML		
	comp=N,66650μm,1.5s						
T0827	**Moglia (MN)**	**0.10**	**296**	⇓*i*P		**Pb**	**10 15 08.4 -0.8**
T0827				⇓*i*S		**Sb**	**10 15 11.6 0.0**
T0827	**Moglia (MN)**	**0.10**	**296**	*i* P		**Pb**	**10 15 08.4 -0.8**
T0827				*i* S		**Sb**	**10 15 11.6 0.0**
T0813	**Massa Finalese**	**0.10**	**99**	*e*P		**Pg**	**10 15 09.8 +0.6**
T0813				*e*S		**Sg**	**10 15 13.1 +1.5**
T0813	**Massa Finalese**	**0.10**	**99**	*e*P		**Pg**	**10 15 09.8 +0.6**
T0813				*e*S		**Sg**	**10 15 13.1 +1.5**
T0812	**Loc. Stoppiaro**	**0.11**	**55**	⇑*e*P		**Pg**	**10 15 09.2 -0.1**
T0812				⇑*e*S		**Sg**	**10 15 13.8 +2.1**
T0812	**Loc. Stoppiaro**	**0.11**	**55**	*e*P		**Pg**	**10 15 09.2 -0.1**
T0812				*e*S		**Sg**	**10 15 13.8 +2.1**
NDIM	**Novi di Modena**	**0.11**	**266**	*e*P		**Pb**	**10 15 07.9 -1.5**
NDIM				*e*S

comp=N,90850µm,1.0s
T0825 AML AML
T0825 AML AML
T0825 AML AML
comp=N,90850µm,1.0s
T0825 AML AML
comp=N,90850µm,1.0s
T0825 AML AML
T0826 Rio Saliceto (0.18 253 AML AML
comp=E,51700µm,0.2s
T0826 AML AML
comp=N,44000µm,0.2s
T0826 AML AML
comp=E,51750µm,0.2s
T0826 AML AML
comp=N,44000µm,0.2s
T0826 AML AML
comp=E,51750µm,0.2s
T0826 AML AML
comp=N,44000µm,0.2s
SBPO S.Benedetto Po 0.18 328⇑ *e*P **Pb 10 15 10.5 -0.1**
SBPO S.Benedetto Po 0.18 328 *e*P **Pb 10 15 10.5 -0.1**
SBPO AML AML
comp=E,16050µm,0.6s
SBPO AML AML
comp=N,93400µm,1.4s
SBPO AML AML
comp=E,16050µm,0.6s
SBPO AML AML
comp=N,93400µm,1.4s
SBPO AML AML
comp=N,93400µm,1.4s
SBPO AML AML
comp=E,16050µm,0.6s
T0805 Bondeno (FE) 0.19 83 *e*P **Pg 10 15 10.6 +0.2**
T0805 Bondeno (FE) 0.19 83 *e*P **Pg 10 15 10.6 +0.2**
SERM Sermide 0.20 56 AML AML
comp=E,5395µm,1.2s
SERM AML AML
comp=E,4295µm,0.9s
SERM AML AML
comp=N,2465µm,0.5s
SERM AML AML
comp=E,5395µm,1.2s
SERM AML AML
comp=N,4730µm,0.8s
SERM AML AML
comp=E,4295µm,0.9s
SERM AML AML
comp=N,2465µm,0.5s
SERM AML AML
comp=N,4732µm,0.8s
SERM AML AML
comp=N,2465µm,0.5s
SERM AML AML
comp=E,4295µm,0.9s
SERM AML AML
comp=E,5395µm,1.2s
SERM AML AML
comp=N,4732µm,0.8s
T0822 Casumaru (Bond 0.21 107⇓ *e*P **Pg 10 15 10.0 -0.7**
T0822 ⇓*e*S **Sg 10 15 16.2 +2.1**
T0822 Casumaru (Bond 0.21 107 *e*P **Pg 10 15 10.9 +0.2**
T0822 *e*S **Sg 10 15 16.2 +2.1**
GAZZ Gazzo Veronese 0.22 7⇓ *e*Pg **Pg 10 15 11.4 +0.5**
GAZZ Gazzo Veronese 0.22 7 *e*Pg **Pg 10 15 11.4 +0.5**
T0803 Dosso, Cento (0.24 121⇑ *e*P **Pg 10 15 11.5 +0.3**
T0803 Dosso, Cento (0.24 121 *e*P **Pg 10 15 11.5 +0.3**
T0823 Castello D'Arg 0.26 143⇓ *e*P **Pg 10 15 12.3 +0.8**
T0823 Castello D'Arg 0.26 143 *e*P **Pg 10 15 12.3 +0.8**
NOVE Novellara 0.26 249⇓ *e*P **Pg 10 15 10.8 -0.7**
NOVE ⇓*e*S **Sg 10 15 16.2 +0.8**
NOVE Novellara 0.26 249 *e*P **Pg 10 15 10.8 -0.7**
NOVE *e*S **Sg 10 15 16.2 +0.8**
NOVE AML AML
comp=E,11275µm,0.7s
NOVE AML AML
comp=N,13950µm,1.1s
NOVE AML AML
comp=E,11290µm,0.7s
NOVE AML AML
comp=N,13900µm,1.1s
NOVE AML AML
comp=E,11290µm,0.7s
NOVE AML AML
comp=N,13900µm,1.1s
MODE Modena 0.28 196 *e*P **Pb 10 15 11.9 -0.3**
MODE Modena 0.28 196 *e*P **Pb 10 15 11.9 -0.3**
MODE AML AML
comp=E,60750µm,0.5s
MODE AML AML
comp=N,34150µm,0.7s
MODE AML AML
comp=E,60750µm,0.5s
MODE AML AML
comp=N,34150µm,0.7s
MODE AML AML
comp=E,60750µm,0.5s
MODE AML AML
comp=N,34150µm,0.7s
T0817 Loc. Veratica, 0.30 71 *e*P **Pg 10 15 12.7 +0.6**
T0817 Loc. Veratica, 0.30 71 *e*P **Pg 10 15 12.7 +0.6**
T0815 Correggio (RE) 0.47 92 *e*P **Pn 10 15 16.9 -0.7**
T0815 Correggio (RE) 0.47 92 *e*P **Pn 10 15 16.9 -0.7**
PRMA PARMA 0.55 256 AML AML
comp=E,1370µm,1.2s
PRMA AML AML
comp=N,1190µm,1.1s
PRMA AML AML
comp=E,1370µm,1.2s
PRMA AML AML
comp=N,1190µm,1.1s
PRMA AML AML
comp=N,1190µm,1.1s
PRMA AML AML
comp=E,1370µm,1.2s
ZCCA Zocca 0.55 186⇓ *e*P **Pn 10 15 18.3 -0.4**
ZCCA Zocca 0.55 186 *e*P **Pn 10 15 18.3 -0.4**
ZCCA AML AML
comp=E,1790µm,0.5s
ZCCA AML AML
comp=N,1480µm,0.9s
ZCCA AML AML
comp=E,1800µm,0.5s
ZCCA AML AML
comp=N,1440µm,0.8s
ZCCA AML AML
comp=E,1785µm,0.6s
ZCCA AML AML
comp=N,1555µm,1.3s
ZCCA AML AML
comp=E,1795µm,0.5s
ZCCA AML AML
comp=N,1620µm,1.4s
ZCCA AML AML
comp=E,1790µm,0.6s
ZCCA AML AML
comp=N,1550µm,1.3s
ZCCA AML AML
comp=E,1795µm,0.5s
ZCCA AML AML
comp=N,1620µm,1.4s
ZCCA AML AML
comp=E,1795µm,0.5s
ZCCA AML AML
comp=E,1790µm,0.6s
ZCCA AML AML
comp=N,1550µm,1.3s
ZCCA AML AML
comp=N,1620µm,1.4s
MTRZ Monterenzio 0.59 150⇓ *e*P **Pn 10 15 20.6 +1.2**
MTRZ Monterenzio 0.59 150 *e*P **Pn 10 15 20.6 +1.2**
TEOL Teolo 0.64 43⇓ *e*Pg **Pn 10 15 18.9 -1.0**
TEOL *e*Sg **Sn 10 15 29.2 -0.5**
TEOL Teolo 0.64 43⇓ *e*P **Pn 10 15 18.9 -1.0**
TEOL *e*Sg **Sn 10 15 29.2 -0.5**
TEOL Teolo 0.64 43 *e*P **Pn 10 15 18.9 -1.0**
TEOL AML AML
comp=E,4300µm,0.3s
TEOL AML AML
comp=N,2130µm,0.3s
TEOL AML AML
comp=E,4300µm,0.3s
TEOL AML AML
comp=N,2130µm,0.3s
TEOL AML AML
comp=N,2130µm,0.3s
TEOL AML AML
comp=E,4300µm,0.3s
MARN Marana (Italy) 0.75 8⇑ *e*Pg **Pg 10 15 20.6 +0.1**
MARN *e*Sg **Sn 10 15 33.1 +0.6**
MARN Marana (Italy) 0.75 8 *e*Pg **Pg 10 15 20.5 +0.1**
MARN *e*Sg **Sn 10 15 33.2 +0.6**
ROVR Rover~¤ Verone 0.75 1 *e*P **Pg 10 15 20.5 0.0**
ROVR Rover~¤ Verone 0.75 1 *e*P **Pg 10 15 20.5 0.0**
ROVR AML AML
comp=E,2605µm,0.2s
ROVR AML AML
comp=N,4855µm,0.3s
ROVR AML AML
comp=E,2605µm,0.2s
ROVR AML AML
comp=N,4855µm,0.3s
BALD Monte Baldo 0.81 348 *e*Pg **Pg 10 15 21.9 +0.4**
BALD Monte Baldo 0.81 348 *e*Pg **Pg 10 15 21.9 +0.4**
SALO Salr 0.82 333 *e*P **Pb 10 15 21.8 +0.4**
SALO Salr 0.82 333 *e*P **Pb 10 15 21.8 +0.4**
SALO AML AML
comp=E,3145µm,0.3s
SALO AML AML
comp=N,3545µm,0.9s
SALO AML AML
comp=E,3145µm,0.3s
SALO AML AML
comp=N,3545µm,0.9s
SEI Scarperia 0.87 166 *e*P **Pn 10 15 24.3 +1.2**
SEI Scarperia 0.87 166 *e*P **Pn 10 15 24.3 +1.2**
BDI Bagni Di Lucca 0.90 202 *e*P **Pn 10 15 23.6 +0.1**
BDI Bagni Di Lucca 0.90 202 *e*P **Pn 10 15 23.6 +0.1**
MAGA Magasa 0.93 341 *e*P **Pb 10 15 23.1 -0.4**
MAGA Magasa 0.93 341 *e*P **Pb 10 15 23.1 -0.4**
MAGA AML AML
comp=E,10800µm,0.4s
MAGA AML AML
comp=N,13550µm,0.5s
MAGA AML AML
comp=N,13550µm,0.5s
MAGA AML AML
comp=E,10800µm,0.4s
DOSS Dosso del Somm 0.99 5⇑ *e*Pg **Pg 10 15 24.8 -0.2**
DOSS *e*Sg **Sn 10 15 39.3 +0.6**
DOSS Dosso del Somm 0.99 5 *e*Pg **Pg 10 15 24.8 -0.2**
DOSS *e*Sg **Sn 10 15 39.3 +0.6**
CGRP Cima Grappa 1.12 28⇓ *e*Pg **Pg 10 15 26.9 -0.4**
CGRP *e*Sg **Sg 10 15 43.8 +1.9**
CGRP Cima Grappa 1.12 28 *e*Pg **Pg 10 15 26.9 -0.4**
CGRP Cima Grappa 1.12 28⇑ *e*P **Pg 10 15 27.9 +0.6**
CGRP *e*Sg **Sg 10 15 43.8 +1.9**
CGRP Cima Grappa 1.12 28 *e*P **Pg 10 15 27.9 +0.6**
CGRP AML AML
comp=E,662µm,0.5s
CGRP AML AML
comp=N,652µm,1.2s
CGRP AML AML
comp=N,652µm,1.2s
CGRP AML AML
comp=E,662µm,0.5s
RNI Roncone 1.13 344⇑ *e*Pg **Pn 10 15 26.5 -0.4**
RNI *e*Sg **Sg 10 15 43.2 +0.8**
RNI Roncone 1.13 344 *e*Pg **Pn 10 15 26.5 -0.4**
RNI *e*Sg **Sg 10 15 43.2 +0.8**
BOB Bobbio (Coli) 1.15 264 AML AML
comp=E,1200µm,1.3s
BOB AML AML
comp=N,1410µm,0.5s
BOB AML AML
comp=E,1200µm,1.3s
BOB AML AML
comp=N,1410µm,0.5s
PANI Panarotta 1.17 9⇑ *e*Pg **Pb 10 15 27.1 -0.5**
PANI Panarotta 1.17 9 *e*Pg **Pb 10 15 27.1 -0.5**
MTLO Montello 1.18 38⇑ *e*Pg **Pg 10 15 28.3 -0.1**
MTLO *e*Sg **Sg 10 15 46.1 +2.3**
MTLO Montello 1.18 38 *e*Pg **Pg 10 15 28.3 -0.1**
MTLO *e*Sg **Sg 10 15 46.1 +2.3**
MABI Malga Bissina 1.22 342 AML AML
comp=E,658µm,0.9s
MABI AML AML
comp=N,432µm,0.6s
MABI AML AML
comp=E,658µm,0.9s
MABI AML AML
comp=N,432µm,0.6s
CTI Castel Tesino 1.23 20 AML AML
comp=E,1495µm,0.3s
CTI AML AML
comp=E,1495µm,0.3s
CTI AML AML
comp=N,1655µm,1.3s
CTI AML AML
comp=N,1655µm,1.3s
VARN Col Varnada, M 1.32 33⇑ *e*Pg **Pg 10 15 30.0 -1.2**
VARN Col Varnada, M 1.32 33 *e*Pg **Pg 10 15 30.0 -1.2**
CAE Caneva 1.48 41⇑ *e*Pg **Pb 10 15 32.1 -0.5**
CAE Caneva 1.48 41 *e*Pg **Pb 10 15 32.2 -0.5**
OZOL Ozolo 1.51 360⇓ *e*Pg **Pb 10 15 32.5 -0.8**
OZOL Ozolo 1.51 360 *e*Pg **Pb 10 15 32.5 -0.8**
POLC Polcenigo 1.52 41 AML AML
comp=N,720µm,0.7s
POLC AML AML
comp=E,642µm,0.4s
POLC AML AML
comp=N,720µm,0.7s
POLC AML AML
comp=E,642µm,0.4s
CARE Lago del Cares 1.55 351⇑ *e*Pg **Pb 10 15 33.3 -0.9**
CARE Lago del Cares 1.55 351 *e*Pg **Pb 10 15 33.3 -0.9**
AGOR Agordo 1.55 26 AML AML
comp=N,502µm,0.4s
AGOR AML AML
comp=E,420µm,0.4s
AGOR AML AML
comp=N,502µm,0.4s
AGOR AML AML
comp=E,420µm,0.4s
APPI Appiano 1.59 4 AML AML
comp=E,1510µm,0.4s
APPI AML AML
comp=N,1290µm,0.4s
APPI AML AML
comp=E,1510µm,0.4s
APPI AML AML
comp=N,1290µm,0.4s
BRMO Bormio 1.65 343 AML AML
comp=N,372µm,0.6s
BRMO AML AML
comp=E,322µm,0.6s
BRMO AML AML
comp=N,372µm,0.6s
BRMO AML AML
comp=E,322µm,0.6s
MLNI Malnisio 1.66 40⇑ *e*Pn **Pb 10 15 34.8 -1.1**
MLNI Malnisio 1.66 40 *e*Pn **Pb 10 15 34.8 -1.1**
CIMO Cimolais 1.72 34⇑ *e*Pn **Pb 10 15 35.4 -1.5**
CIMO Cimolais 1.72 34 *e*Pn **Pb 10 15 35.3 -1.5**
ATPC Poggio Castell 1.73 144 AML AML
comp=N,187µm,0.5s
ATPC AML AML
comp=E,136µm,0.7s
ATPC AML AML
comp=N,134µm,0.7s
ATPC AML AML
comp=E,136µm,0.7s
ATPC AML AML
comp=N,134µm,0.7s
ATPC AML AML
comp=E,284µm,0.5s
ATPC AML AML
comp=N,187µm,0.5s
ATPC AML AML
comp=E,284µm,0.5s
MOSI Grossmontoni 1.76 349 AML AML
comp=N,1730µm,0.5s
MOSI AML AML
comp=E,873µm,1.0s
MOSI AML AML
comp=E,873µm,1.0s
MOSI AML AML
comp=N,1730µm,0.5s
STAL STALIGIAL 1.79 40 AML AML
comp=E,382µm,0.3s
STAL AML AML
comp=E,388µm,0.7s
STAL AML AML
comp=N,446µm,0.9s
STAL AML AML
comp=E,382µm,0.3s
STAL AML AML
comp=N,384µm,0.3s
STAL AML AML
comp=E,388µm,0.7s
STAL AML AML
comp=N,446µm,0.9s
STAL AML AML
comp=N,384µm,0.3s
PCP Piancastagn 1.83 260 AML AML
comp=E,243µm,0.8s
PCP AML AML
comp=N,293µm,1.0s
PCP AML AML
comp=N,293µm,1.0s
PCP AML AML
comp=E,243µm,0.8s
ABSI Aberstueckl 1.84 6 AML AML
comp=E,1205µm,0.5s
ABSI AML AML
comp=E,1205µm,0.5s
ABSI AML AML
comp=N,1130µm,0.8s
ABSI AML AML
comp=N,1130µm,0.8s
QLNO Quiliano 2.02 255 AML AML
comp=N,133µm,0.5s
QLNO AML AML
comp=E,140µm,0.7s
QLNO AML AML
comp=N,133µm,0.5s
QLNO AML AML
comp=E,140µm,0.7s
ROSI Rosskopf 2.05 7 AML AML
comp=E,419µm,0.7s
ROSI AML AML
comp=N,685µm,0.7s
ROSI AML AML
comp=E,419µm,0.7s
ROSI AML AML
comp=N,685µm,0.7s
VINO Villanova 2.07 48 AML AML
comp=N,171µm,0.8s
VINO AML AML
comp=E,158µm,1.3s
VINO AML AML
comp=E,158µm,1.3s
VINO AML AML
comp=N,171µm,0.8s
ABTA Abfaltersbach 2.11 28 Pn **Pb 10 15 42.9 -0.7**
comp=N,4.3nm,0.5s,SNR=10
ABTA Abfaltersbach 2.11 28 Pn **Pb 10 15 42.9 -0.7**
comp=N,4.3nm,0.5s,SNR=10
FETA Feichten 2.14 354 *e*Pn **Pb 10 15 43.4 -0.7**
comp=N,5.2nm,0.3s,SNR=19
FETA Feichten 2.14 354 Pn **Pb 10 15 43.4 -0.7**
comp=N,5.2nm,0.3s,SNR=19
RISI Rein 2.17 19 AML AML
comp=N,883µm,0.5s
RISI AML AML
comp=E,826µm,0.4s
RISI AML AML
comp=E,826µm,0.4s
RISI AML AML
comp=N,883µm,0.5s
CESI CESI - Serrava 2.31 144 AML AML
comp=N,26µm,0.5s
CESI AML AML
comp=E,11µm,0.7s
CESI AML AML
comp=E,12µm,0.4s
CESI AML AML
comp=N,39µm,1.3s
CESI AML AML
comp=N,39µm,1.3s
CESI AML AML
comp=E,12µm,0.4s
WTTA Wattenberg 2.40 9 *e*Pn **Pb 10 15 47.8 -0.8**
comp=E,3.5nm,0.2s
WTTA Wattenberg 2.40 9 Pn **Pb 10 15 47.8 -0.8**
comp=E,3.5nm,0.2s
WATA Walderalm 2.47 8 Pn **Pb 10 15 48.7 -1.0**
comp=E,9.3nm,0.3s,SNR=8.5
WATA Walderalm 2.47 8 Pn **Pb 10 15 48.7 -1.0**
comp=E,9.3nm,0.3s,SNR=8.5
MYKA Terra Mystica 2.51 45 Pn **Pb 10 15 49.2 -1.1**
comp=E,0.3nm,0.2s
MYKA Terra Mystica 2.51 45 Pn **Pb 10 15 49.2 -1.1**
comp=E,0.3nm,0.2s
DAVA Damuels 2.53 342 *e*Pn **Pb 10 15 49.2 -1.5**
comp=E,17nm,0.6s,SNR=11
DAVA Damuels 2.53 342 Pn **Pb 10 15 49.2 -1.5**
comp=E,17nm,0.6s,SNR=11
RETA Reutte 2.60 356 Pn **Pb 10 15 49.9 -2.0**
comp=E,3.8nm,0.2s
RETA Reutte 2.60 356 Pn **Pb 10 15 49.9 -2.0**
comp=E,3.8nm,0.2s
KBA Koelnbreinsper 2.70 35 Pn **Pb 10 15 52.5 -1.2**
comp=E,0.1nm,0.1s
KBA Koelnbreinsper 2.70 35 Pn **Pb 10 15 52.5 -1.2**
comp=E,0.1nm,0.1s
NVLJ Novalja 2.74 96 *e*Pn **Pb 10 15 50.7 -3.5**
NVLJ Sn **Sn 10 16 21.1 -0.3**
NVLJ Novalja 2.74 96 *e*Pn **Pb 10 15 50.6 -3.5**
NVLJ Sn **Sn 10 16 21.1 -0.3**
PGF Pioggiola 2.78 213 *e*Pn **Pn 10 15 50.9 +1.4**
SNR=1.0
PGF *e*Sn **Sn 10 16 24.0 +1.3**
comp=E,32nm,0.3s,SNR=1.0
PGF Pioggiola 2.78 213 *e*Pn **Pn 10 15 50.9 +1.4**
SNR=1.0
PGF *e*Sn **Sn 10 16 24.0 +1.3**
comp=E,16nm,0.3s,SNR=1.0
SBF Sospel 2.79 250 *e*Pn **Pn 10 15 51.9 +2.2**
SNR=1.0
SBF *e*Sn **Sn 10 16 25.5 +2.5**
comp=E,80nm,0.5s,SNR=1.0
SBF Sospel 2.79 250 *e*Pn **Pn 10 15 51.9 +2.2**
SNR=1.0
SBF *e*Sn **Sn 10 16 25.5 +2.5**
comp=E,40nm,0.5s,SNR=1.0
OBKA Obir 2.93 55 *e*Pn **Pb 10 15 53.4 -4.1**
comp=E,1.8nm,0.4s
OBKA Obir 2.93 55 Pn **Pb 10 15 53.4 -4.1**
comp=E,1.8nm,0.4s
MVIF Mont Vial 2.97 252 Pn **Pn 10 15 54.4 +2.2**
MVIF Mont Vial 2.97 252 Pn **Pn 10 15 54.4 +2.2**
FIAM Fiamignano 3.02 150 AML AML
comp=N,28µm,0.7s
FIAM AML AML
comp=E,39µm,0.6s
FIAM AML AML
comp=E,40µm,0.6s
FIAM AML AML
comp=N,28µm,0.7s
FIAM AML AML
comp=N,28µm,0.7s
FIAM AML AML
comp=E,40µm,0.6s
MBDF Montbardon 3.06 268 *e*Pn **Pn 10 15 54.2 +0.9**
MBDF Montbardon 3.06 268 *e*Pn **Pn 10 15 54.2 +0.9**
LPG La Plagne 3.10 283 *e*Pn **Pn 10 15 54.9 +0.8**
SNR=1.0
LPG *e*Sg **Sg 10 16 45.1 -0.3**
comp=E,23nm,0.6s,SNR=1.0
LPG La Plagne 3.10 283 *e*Pn **Pn 10 15 54.9 +0.8**
SNR=1.0
LPG *e*Sg **Sg 10 16 45.1 -0.3**
comp=E,12nm,0.6s,SNR=1.0
LPL La Plagne 3.12 283 *e*Pn **Pn 10 15 55.2 +0.9**
LPL *e*Sn **Sn 10 16 31.5 +0.3**
comp=E,18nm,0.4s,SNR=1.0
LPL La Plagne 3.12 283 *e*Pn **Pn 10 15 55.2 +0.9**
LPL *e*Sn **Sn 10 16 31.5 +0.3**
comp=E,9.1nm,0.4s,SNR=1.0
CALF Calern 3.18 250 Pn **Pn 10 15 56.3 +1.3**
CALF Calern 3.18 250 Pn **Pn 10 15 56.3 +1.3**
RSL Roselend 3.23 286 Pn **Pn 10 15 59.0 +3.3**
RSL Roselend 3.23 286 Pn **Pn 10 15 59.0 +3.3**
SOKA Soboth 3.30 56 *i* Pn **Pn 10 15 58.2 +1.5**
comp=E,2.8nm,0.5s
SOKA Soboth 3.30 56 Pn **Pn 10 15 58.2 +1.5**
comp=E,2.8nm,0.5s
FRF La Foret Royal 3.44 249 *e*Pn **Pn 10 15 59.4 +0.9**

SNR=1.0
FRF eSn **Sn** **10 16 38.9 +0.1**
comp=E,15nm,0.3s
FRF La Foret Royal 3.44 249 ePn **Pn** **10 15 59.4 +0.9**
SNR=1.0
FRF eSn **Sn** **10 16 38.9 +0.1**
comp=E,7.3nm,0.3s
LMR La Mourre 3.63 246 ePn **Pn** **10 16 01.4 +0.4**
SNR=1.0
LMR eSn **Sn** **10 16 44.1 +0.7**
comp=E,32nm,0.4s
LMR La Mourre 3.63 246 ePn **Pn** **10 16 01.4 +0.4**
SNR=1.0
LMR eSn **Sn** **10 16 44.1 +0.7**
comp=E,16nm,0.4s
ORIF Oris-en-Rattie 3.68 272 ePn **Pn** **10 16 03.4 +1.6**
SNR=1.0
ORIF eSn **Sn** **10 16 45.1 +0.3**
comp=E,14nm,0.3s,SNR=1.0
ORIF Oris-en-Rattie 3.68 272 Pn **Pn** **10 16 04.0 +2.2**
ORIF Oris-en-Rattie 3.68 272 ePn **Pn** **10 16 03.4 +1.6**
SNR=1.0
ORIF eSn **Sn** **10 16 45.1 +0.3**
comp=E,6.8nm,0.3s,SNR=1.0
MOA Molln 3.70 36 ePn **Pn** **10 16 04.0 +2.0**
comp=E,1.9nm,0.3s
MOA Molln 3.70 36 Pn **Pn** **10 16 04.0 +2.0**
comp=E,1.9nm,0.3s
KIZ Kirchzarten 3.75 326 Pn **Pn** **10 16 03.9 +1.1**
KIZ Kirchzarten 3.75 326 Pn **Pn** **10 16 03.9 +1.1**
CHMF Charmoille 3.87 309 Pn **Pn** **10 16 05.5 +1.1**
CHMF Charmoille 3.87 309 Pn **Pn** **10 16 05.5 +1.1**
CABF La Chapelle 3.88 298 ePn **Pn** **10 16 05.4 +0.8**
SNR=1.0
CABF eSn **Sn** **10 16 49.0 -0.8**
SNR=1.0
CABF La Chapelle 3.88 298 ePn **Pn** **10 16 05.4 +0.8**
SNR=1.0
CABF eSn **Sn** **10 16 49.0 -0.8**
SNR=1.0
ARSA Arzberg 3.90 51 ePn **Pn** **10 16 06.1 +1.3**
comp=E,0.6nm,0.2s
ARSA Arzberg 3.90 51 Pn **Pn** **10 16 06.1 +1.3**
comp=E,0.6nm,0.2s
SMRF Simiane la Rot 4.03 259 ePn **Pn** **10 16 07.5 +0.8**
SNR=1.0
SMRF eSn **Sn** **10 16 53.9 +0.4**
comp=E,7.3nm,0.3s
SMRF Simiane la Rot 4.03 259 ePn **Pn** **10 16 07.5 +0.8**
SNR=1.0
SMRF eSn **Sn** **10 16 53.9 +0.4**
comp=E,3.7nm,0.3s
HINF Hinteralfeld 4.12 317 ePn **Pn** **10 16 07.0 -0.9**
SNR=1.0
HINF eSn **Sn** **10 16 54.7 -1.1**
comp=E,9.5nm,0.3s,SNR=1.0
HINF Hinteralfeld 4.12 317 ePn **Pn** **10 16 07.0 -0.9**
SNR=1.0
HINF eSn **Sn** **10 16 54.7 -1.1**
comp=E,4.8nm,0.3s,SNR=1.0
ECH Echery 4.27 322 Pn **Pn** **10 16 10.6 +0.6**
ECH Echery 4.27 322 Pn **Pn** **10 16 10.6 +0.6**
WLS Welschbruch 4.35 325 Pn **Pn** **10 16 12.4 +1.4**
WLS Welschbruch 4.35 325 Pn **Pn** **10 16 12.4 +1.4**
CDF Champ du Feu 4.38 325 ePn **Pn** **10 16 11.9 +0.5**
SNR=1.0
CDF eSn **Sn** **10 17 02.2 +0.2**
comp=E,10nm,0.3s
CDF Champ du Feu 4.38 325 ePn **Pn** **10 16 11.9 +0.5**
SNR=1.0
CDF eSn **Sn** **10 17 02.2 +0.2**
comp=E,5.1nm,0.3s
CONA Conrad Observa 4.50 46 ePn **Pn** **10 16 13.2 +0.1**
comp=E,0.6nm,0.2s
CONA Conrad Observa 4.50 46 Pn **Pn** **10 16 13.2 +0.1**
comp=E,0.6nm,0.2s
HAU Haudompre 4.50 315 ePn **Pn** **10 16 13.6 +0.5**
SNR=1.0
HAU eSn **Sn** **10 17 03.6 -1.4**
comp=E,31nm,0.3s,SNR=1.0
HAU Haudompre 4.50 315 ePn **Pn** **10 16 13.6 +0.5**
SNR=1.0
HAU eSn **Sn** **10 17 03.6 -1.4**
comp=E,15nm,0.3s,SNR=1.0
VIVF Saint-Julien-I 4.54 272 ePn **Pn** **10 16 14.3 +0.7**
SNR=1.0
VIVF eSn **Sn** **10 17 06.6 +0.6**
comp=E,6.8nm,0.3s
VIVF Saint-Julien-I 4.54 272 ePn **Pn** **10 16 14.3 +0.7**
SNR=1.0
VIVF eSn **Sn** **10 17 06.6 +0.6**
comp=E,3.4nm,0.3s
KHC Kasperske Hory 4.58 21 ePN **Pn** **10 16 16.0 +1.9**
KHC ePG **Pg** **10 16 31.0 -2.3**
KHC eSN **Sn** **10 17 05.8 -1.0**
KHC eSG **Sg** **10 17 33.4 +0.9**
comp=E,15nm,0.6s
KHC Kasperske Hory 4.58 21 Pn **Pn** **10 16 16.0 +1.9**
THEF They Montfort 4.83 315 Pn **Pn** **10 16 18.7 +1.1**
THEF They Montfort 4.83 315 Pn **Pn** **10 16 18.7 +1.1**
PAGF Fort de Pagny 5.18 317 ePn **Pn** **10 16 22.8 +0.4**
PAGF eSn **Sn** **10 17 22.8 +1.1**
comp=E,13nm,0.6s
PAGF Fort de Pagny 5.18 317 ePn **Pn** **10 16 22.8 +0.4**
PAGF eSn **Sn** **10 17 22.8 +1.1**
comp=E,6.7nm,0.6s
LASF Ste Croix 5.22 264 ePn **Pn** **10 16 23.1 +0.2**
LASF eSn **Sn** **10 17 22.3 -0.4**
comp=E,2.2nm,0.2s,SNR=1.0
LASF Ste Croix 5.22 264 ePn **Pn** **10 16 23.1 +0.2**
LASF eSn **Sn** **10 17 22.3 -0.4**
comp=E,1.1nm,0.2s,SNR=1.0
SMF Signal de Mont 5.34 292 ePn **Pn** **10 16 25.0 +0.4**
SNR=1.0
SMF eSn **Sn** **10 17 24.7 -1.1**
comp=E,7.3nm,0.3s,SNR=1.0
SMF Signal de Mont 5.34 292 ePn **Pn** **10 16 25.0 +0.4**
SNR=1.0
SMF eSn **Sn** **10 17 24.7 -1.1**
comp=E,3.7nm,0.3s,SNR=1.0
LOR Lormes 5.54 298 ePn **Pn** **10 16 28.0 +0.6**
baz=117,SNR=1.0
LOR eSn **Sn** **10 17 29.2 -1.4**
comp=E,9.1nm,0.3s,SNR=1.0
LOR Lormes 5.54 298 Pn **Pn** **10 16 28.6 +1.3**
LOR Lormes 5.54 298 ePn **Pn** **10 16 28.0 +0.6**
SNR=1.0
LOR eSn **Sn** **10 17 29.2 -1.4**
comp=E,4.6nm,0.3s,SNR=1.0
GOPC GO Pecny, Ondr 5.62 25 eSG **Sg** **10 18 06.3 +0.2**
comp=E,17nm,1.0s
GOPC GO Pecny, Ondr 5.62 25 Sg **Sg** **10 18 06.3 +0.2**
comp=E,17nm,1.0s
SSF Saint Saulge 5.69 295 ePn **Pn** **10 16 29.5 +0.1**
SNR=1.0
SSF eSn **Sn** **10 17 30.9 -3.4**
comp=E,5.1nm,0.4s,SNR=1.0
SSF Saint Saulge 5.69 295 ePn **Pn** **10 16 29.5 +0.1**
SNR=1.0
AVF Avril sur Loir 5.71 292 ePn **Pn** **10 16 30.4 +0.8**
SNR=1.0
AVF Avril sur Loir 5.71 292 ePn **Pn** **10 16 30.4 +0.8**
SNR=1.0
BGF Bois d'Agland 5.99 289 ePn **Pn** **10 16 33.8 +0.4**
BGF eSn **Sn** **10 17 39.2 -2.3**
comp=E,10.0nm,0.3s
BGF Bois d'Agland 5.99 289 ePn **Pn** **10 16 33.8 +0.4**
BRG Berggiesshubel 6.29 17 PG **Pg** **10 17 06.2 +0.2**
BRG SG **Sg** **10 18 28.7 +1.4**
comp=E,10nm,1.3s
TCF Toulx Ste Croi 6.36 286 ePn **Pn** **10 16 38.8 +0.1**
TCF eSn **Sn** **10 17 49.8 -1.1**
comp=E,5.8nm,0.4s,SNR=1.0
TCF Toulx Ste Croi 6.36 286 ePn **Pn** **10 16 38.8 +0.1**
TCF eSn **Sn** **10 17 49.8 -1.1**
comp=E,2.9nm,0.4s,SNR=1.0
VYHS Vyhne 6.45 53 ePN **Pn** **10 16 39.9 +0.1**
VYHS eSN **Sn** **10 17 51.6 -1.3**
VYHS Vyhne 6.45 53 ePn **Pn** **10 16 39.9 +0.1**
CLL Collm 6.55 11 ePn **Pn** **10 16 42.0 +0.9**
CLL ePg **Pg** **10 17 15.0 +4.0**
CLL eSg **Sg** **10 18 40.0 +4.3**
comp=Z,7.0nm,0.6s
MFF Saint Martin d 8.02 286 ePn **Pn** **10 17 02.1 +0.7**
SNR=1.0
MFF Saint Martin d 8.02 286 ePn **Pn** **10 17 02.1 +0.7**
SNR=1.0

*ISCJB **02** 10:15:29.2±0.5, 67°.50N±0°.03×30°.44E±0°.07, h0km, Error ellipse: s-maj=4.8km s-min=3.9km az=0.7*
*CSEM **02** 10:15:31.3, 67°.56N×30°.41E, h0km, ML2.1, Mining explosion.*
*HEL **02** 10:15:31.3±0.3, 67°.56N×30°.41E, h0km, ML2.1, Explosion*
*KOLA **02** 10:15:31.7, 67°.56N×30°.45E, h0km*
*IDC **02** 10:15:32.1±1.6, 67°.67N×30°.32E, h0km, mb1 3.4/5, mb1mx3.0/74, mbtmp3.4/5, ML2.6/5, Error ellipse: s-maj=21.1km s-min=8.4km az=79.0*
ISC 02 10:15:29.4±0.8, 67°.62N±0°.04×30°.55E±0°.03, h0km, n29,
σ1§08/40, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRF	**Varrio**	**0.38**	**290**	PG	**Pg**	**10 15 37.8**	**+1.1**
	baz=119						
VRF				SG	**Sg**	**10 15 42.6**	**+0.9**
VRF	**Varrio**	**0.38**	**290**	Pg	**Pg**	**10 15 37.8**	**+1.1**
VRF				Sg	**Sg**	**10 15 42.6**	**+0.9**
APA0	**Apatity Array**	**0.94**	**90**	P	**Pb**	**10 15 49.1**	**+0.6**
APA0				S	**Sb**	**10 16 01.8**	**+0.4**
APA	**Apatity**	**1.09**	**91**	P	**Pn**	**10 15 51.7**	**-0.3**
APA				S	**Sb**	**10 16 06.5**	**+0.5**
SGF	**Sodankyl**	**1.56**	**265**	PG	**Pn**	**10 15 58.7**	**+0.4**
	baz=79						
SGF				SN	**Sg**	**10 16 20.9**	**+1.6**
SGF	**Sodankyl**	**1.56**	**265**	Pg	**Pn**	**10 15 58.7**	**+0.4**
SGF				Sn	**Sg**	**10 16 21.0**	**+1.6**
KU6	**Riekki**	**1.62**	**190**	PG	**Pn**	**10 15 59.3**	**+0.1**
KU6				MSG		10 16 17.7	
	comp=Z,10nm,0.2s						
KU6				SG	**Sn**	**10 16 18.9**	**-1.9**
KU6	**Riekki**	**1.62**	**190**	Pg	**Pn**	**10 15 59.3**	**+0.1**
KU6				Sg	**Sn**	**10 16 18.9**	**-1.9**
	comp=Z,10nm,0.2s						
MSF	**Maaselka**	**1.82**	**200**	PG	**Pn**	**10 16 02.6**	**+0.7**
	baz=21						
MSF				SN	**Sn**	**10 16 25.2**	**-0.5**
MSF	**Maaselka**	**1.82**	**200**	Pg	**Pn**	**10 16 02.6**	**+0.7**
MSF				Sn	**Sn**	**10 16 25.2**	**-0.5**
RNF	**Rovaniemi**	**2.04**	**242**	PG	**Pb**	**10 16 06.4**	**-1.0**
	baz=59						
RNF	**Rovaniemi**	**2.04**	**242**	Pg	**Pb**	**10 16 06.4**	**-1.0**
ARCES	**ARCESS Array B**	**2.67**	**318**	Pn	**Pb**	**10 16 16.7**	**-1.3**
	comp=Z,2.1nm,0.3s,baz=135,slow=16,SNR=15						
ARCES				Sn	**Sn**	**10 16 46.0**	**-0.7**
	comp=Z,1.1nm,0.3s,baz=137,slow=28,SNR=3.2						
ARCES				Lg	Lg	10 16 52.5	
	comp=Z,4.1nm,0.3s,baz=135,slow=28,SNR=18						
HEF	**Hetta**	**2.71**	**290**	MSG		10 16 50.3	
	comp=Z,10nm,0.2s						
HEF				SG	**Sb**	**10 16 52.4**	**-0.1**
TOF	**Tornio**	**2.91**	**241**	PN	**Pn**	**10 16 17.0**	**+0.2**
TOF				MSG		10 16 54.5	
	comp=Z,5.8nm,0.2s						
TOF	**Tornio**	**2.91**	**241**	Pn	**Pn**	**10 16 17.0**	**+0.2**
TOF	**Tornio**	**2.91**	**241**	Sg	**Pn**	**10 16 16.7**	**-0.1**
	comp=Z,3.1nm,0.2s						
TOF	**Tornio**	**2.91**	**241**	SG	**Pn**	**10 16 16.7**	**-0.1**
OUL	**Oulu**	**3.16**	**219**	PG	**Pb**	**10 16 26.7**	**+0.3**
OUL	**Oulu**	**3.16**	**219**	Pg	**Pb**	**10 16 26.7**	**+0.3**
KALU	**Kalix**	**3.36**	**242**	PN	**Pn**	**10 16 23.2**	**+0.2**
KIF	**Kilpisjarvi**	**3.88**	**295**	PN	**Pn**	**10 16 32.8**	**+2.6**
KIF	**Kilpisjarvi**	**3.88**	**295**	Pn	**Pn**	**10 16 32.8**	**+2.6**
OUF	**Merijarvi**	**4.04**	**219**	PN	**Pn**	**10 16 32.8**	**+0.4**
	baz=34						
OUF	**Merijarvi**	**4.04**	**219**	Pn	**Pn**	**10 16 32.8**	**+0.4**
FINES	**FINESS Array B**	**6.49**	**199**	Pn	**Pn**	**10 17 06.7**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=26,slow=12,SNR=7.1						
FINES				Lg	Lg	10 18 46.1	
	comp=Z,0.3nm,0.3s,baz=22,slow=27,SNR=3.9						
HFS	**Hagfors**	**10.53**	**233**	Pn	**Pn**	**10 18 00.9**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=32,slow=13,SNR=4.1						
NOA	**NORSAR Array B**	**10.63**	**241**	Pn	**Pn**	**10 18 01.2**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=36,slow=12,SNR=2.2						
SPITS	**Spitsbergen Ar**	**11.34**	**345**	Pn	**Pn**	**10 18 10.7**	**-1.7**
	baz=158,slow=12,SNR=3.1						

*SFS **02** 10:20:33.0, 37°.29N×12°.60W, h0km, ML4.1*
*IGIL **02** 10:20:33.0, 37°.18N×12°.91W, h15km, ML2.7*
*MDD **02** 10:20:33.6±1.5, 37°.28N×12°.68W, h0km, mb4.3/14, Error ellipse: s-maj=13.6km s-min=11.1km az=49.0, PRXIMO*
*INMG **02** 10:20:34.9±1.1, 37°.14N×13°.10W, h10km, ML2.6, Error ellipse: s-maj=4.5km s-min=3.0km az=113.0*
*CSEM **02** 10:20:35.9±0.3, 37°.42N×12°.50W, h10km, ML3.2/13, Error ellipse: s-maj=5.6km s-min=4.5km az=55.0*
ISC 02 10:20:27.2±1.9, 37°.20N±0°.06×12°.99W±0°.09, h10km, n109,
σ2§94/207, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.33**	**90**	ePn	**Pn**	**10 21 21.5**	**+2.2**
PFVI				eSn	**Sn**	**10 21 57.4**	**-1.5**
PFVI				A	A	10 22 07.3	
	8.8nm,0.9s						
PFVI	**Vila Bisbo**	**3.33**	**90**	P	**Pn**	**10 21 21.5**	**+2.2**
	4.4nm,0.1s,SNR=9.9						
PFVI				S	**Sn**	**10 21 57.0**	**-1.9**
	5.1nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**3.33**	**90**	P	**Pn**	**10 21 21.5**	**+2.2**
	4.4nm,0.1s,SNR=9.9						
PFVI				S	**Sn**	**10 21 57.0**	**-1.9**
	5.1nm,0.1s,SNR=7.9						
PFVI				eSn	Sb	10 21 57.4	-9.4
PMST	**Lisbon--Monsan**	**3.38**	**62**	eSn	**Sn**	**10 22 00.1**	**0.0**
PMST				A	A	10 22 02.6	
	30nm,0.2s						
PMST	**Lisbon--Monsan**	**3.38**	**62**	eSn	**Sn**	**10 22 00.1**	**0.0**
PMAFR	**Mafra**	**3.41**	**58**	ePn	**Pn**	**10 21 23.5**	**+3.1**
PMAFR				eSn	**Sn**	**10 22 00.9**	**0.0**
PMAFR				A	A	10 22 03.5	
	22nm,0.4s						
PMAFR	**Mafra**	**3.41**	**58**	P	**Pn**	**10 21 23.6**	**+3.1**
	7.8nm,0.1s,SNR=9.8						
PMAFR				S	**Sn**	**10 22 01.0**	**0.0**
	22nm,0.2s,SNR=7.0						
PMAFR	**Mafra**	**3.41**	**58**	ePn	**Pn**	**10 21 23.5**	**+3.1**
PMAFR				eSn	**Sn**	**10 22 00.9**	**0.0**
PTEO	**Sao Teotonio**	**3.42**	**83**	ePn	**Pn**	**10 21 23.0**	**+2.5**
PTEO				eSn	**Sn**	**10 21 59.3**	**-1.8**
PTEO				A	A	10 22 01.8	
	8.8nm,0.7s						
PTEO	**Sao Teotonio**	**3.42**	**83**	Pn	**Pn**	**10 21 23.0**	**+2.5**
PTEO				Sn	**Sn**	**10 21 59.3**	**-1.8**
	4.4nm,0.7s						
PTEO	**Sao Teotonio**	**3.42**	**83**	Pn	**Pn**	**10 21 23.0**	**+2.5**
PTEO				Sn	**Sn**	**10 21 59.3**	**-1.8**
	4.4nm,0.7s						
MORF	**Marmelete**	**3.47**	**87**	eP	**Pn**	**10 21 23.7**	**+2.5**
MORF	**Marmelete**	**3.47**	**87**	ePn	**Pn**	**10 21 23.7**	**+2.5**
MORF				eSn	**Sn**	**10 22 02.0**	**-0.4**
MORF				A	A	10 22 09.3	
	10nm,0.3s						
MORF	**Marmelete**	**3.47**	**87**	P	**Pn**	**10 21 23.7**	**+2.5**
MORF				Sn	**Sn**	**10 22 02.0**	**-0.4**
	10nm,0.3s						
MORF	**Marmelete**	**3.47**	**87**	P	**Pn**	**10 21 23.7**	**+2.5**
MORF				Sn	**Sn**	**10 22 02.0**	**-0.4**
	10nm,0.3s						
PNCL	**Nicolau / Gran**	**3.66**	**74**	ePn	**Pn**	**10 21 26.4**	**+2.6**
PNCL				eSn	**Sn**	**10 22 05.7**	**-1.3**
PNCL				A	A	10 22 12.7	
	9.8nm,0.3s						
PNCL	**Nicolau / Gran**	**3.66**	**74**	ePn	**Pn**	**10 21 26.4**	**+2.6**
PNCL				eSn	**Sn**	**10 22 05.7**	**-1.3**
MESJ	**Messejana**	**3.85**	**79**	eP	**Pn**	**10 21 29.3**	**+3.0**
MESJ				eS	**Sn**	**10 22 10.2**	**-1.5**
MESJ				AML	AML	10 22 13.4	
	comp=N,10nm,0.3s						
MESJ	**Messejana**	**3.85**	**79**	ePn	**Pn**	**10 21 29.4**	**+3.0**
MESJ				eSn	**Sn**	**10 22 10.1**	**-1.5**
MESJ				A	A	10 22 19.8	
	comp=N,5.3nm,0.2s						
MESJ	**Messejana**	**3.85**	**79**	Pn	**Pn**	**10 21 29.4**	**+3.0**
MESJ				S	**Sn**	**10 22 10.2**	**-1.5**
	comp=N,10nm,0.3s						
MESJ	**Messejana**	**3.85**	**79**	Pn	**Pn**	**10 21 29.4**	**+3.0**
MESJ				eSn	**Sn**	**10 22 10.1**	**-1.5**
PCVE	**Castro Verde**	**3.97**	**82**	ePn	**Pn**	**10 21 31.7**	**+3.6**
PCVE				eSn	**Sn**	**10 22 12.4**	**-2.2**
PCVE				A	A	10 22 18.6	
	comp=N,7.2nm,0.2s						
PCVE	**Castro Verde**	**3.97**	**82**	Pn	**Pn**	**10 21 31.7**	**+3.6**
PCVE				Sn	**Sn**	**10 22 12.4**	**-2.2**
	comp=N,7.2nm,0.2s						
PCVE	**Castro Verde**	**3.97**	**82**	Pn	**Pn**	**10 21 31.7**	**+3.6**
PCVE				Sn	**Sn**	**10 22 12.4**	**-2.2**
	comp=N,7.2nm,0.2s						
ALMR	**Almeirim**	**3.99**	**59**	eP	**Pn**	**10 21 31.7**	**+3.3**
ALMR				eS	**Sn**	**10 22 14.2**	**-0.9**
ALMR				AML	AML	10 22 16.3	
	comp=N,29nm,0.4s						
ALMR	**Almeirim**	**3.99**	**59**	ePn	**Pn**	**10 21 31.7**	**+3.3**
ALMR				eSn	**Sn**	**10 22 14.5**	**-0.6**
ALMR				A	A	10 22 22.1	
	comp=N,23nm,0.5s						
ALMR	**Almeirim**	**3.99**	**59**	Pn	**Pn**	**10 21 31.7**	**+3.3**
ALMR				S	**Sn**	**10 22 14.2**	**-0.9**
	comp=N,15nm,0.4s						
ALMR	**Almeirim**	**3.99**	**59**	Pn	**Pn**	**10 21 31.7**	**+3.3**
ALMR				S	**Sn**	**10 22 14.2**	**-0.9**
	comp=N,15nm,0.4s						
ALMR				eSn	**Sn**	**10 22 14.5**	**-0.6**
PBDV	**Barranco-do-Ve**	**4.04**	**88**	ePn	**Pn**	**10 21 32.6**	**+3.5**
PBDV				eSn	**Sn**	**10 22 16.5**	**0.0**
PBDV				A	A	10 22 21.4	
	comp=N,5.2nm,0.2s						
PBDV	**Barranco-do-Ve**	**4.04**	**88**	Pn	**Pn**	**10 21 32.6**	**+3.5**
PBDV				Sn	**Sn**	**10 22 16.5**	**0.0**
	comp=N,5.2nm,0.2s						
PBDV	**Barranco-do-Ve**	**4.04**	**88**	Pn	**Pn**	**10 21 32.6**	**+3.5**
PBDV				Sn	**Sn**	**10 22 16.5**	**0.0**
	comp=N,5.2nm,0.2s						
PBEJ	**Beja**	**4.15**	**77**	ePn	**Pn**	**10 21 33.9**	**+3.3**
PBEJ				eSn	**Sn**	**10 22 17.2**	**-2.0**
PBEJ				A	A	10 22 22.8	
	comp=N,14nm,0.2s						
PBEJ	**Beja**	**4.15**	**77**	Pn	**Pn**	**10 21 33.9**	**+3.3**
PBEJ				Sn	**Sn**	**10 22 17.2**	**-2.0**
	comp=N,6.8nm,0.2s						
PBEJ	**Beja**	**4.15**	**77**	Pn	**Pn**	**10 21 33.9**	**+3.3**
PBEJ				Sn	**Sn**	**10 22 17.2**	**-2.0**
	comp=N,6.8nm,0.2s						
EVO	**Evora**	**4.16**	**70**	ePn	**Pn**	**10 21 33.8**	**+3.1**
EVO				eSn	**Sn**	**10 22 17.5**	**-1.8**
EVO				A	A	10 22 23.2	
	comp=N,11nm,0.1s						
EVO	**Evora**	**4.16**	**70**	P	**Pn**	**10 21 34.0**	**+3.3**
EVO				S	**Sn**	**10 22 16.9**	**-2.4**
EVO	**Evora**	**4.16**	**70**	ePn	**Pn**	**10 21 33.8**	**+3.1**
EVO				S	**Sn**	**10 22 16.9**	**-2.4**
EVO				eSn	**Sn**	**10 22 17.5**	**-1.8**
PVAQ	**Vaqueiros**	**4.21**	**86**	ePn	**Pn**	**10 21 34.5**	**+3.1**
PVAQ				eSn	**Sn**	**10 22 19.3**	**-1.4**
PVAQ				A	A	10 22 28.6	
	comp=N,6.5nm,0.3s						
PVAQ	**Vaqueiros**	**4.21**	**86**	Pn	**Pn**	**10 21 34.5**	**+3.1**
PVAQ				Sn	**Sn**	**10 22 19.3**	**-1.4**
	comp=N,6.5nm,0.3s						
PVAQ	**Vaqueiros**	**4.21**	**86**	Pn	**Pn**	**10 21 34.5**	**+3.1**
PVAQ				Sn	**Sn**	**10 22 19.3**	**-1.4**
	comp=N,6.5nm,0.3s						
PTOM	**Tomar**	**4.33**	**55**	ePn	**Pn**	**10 21 37.1**	**+4.0**
PTOM				eSn	**Sn**	**10 22 22.3**	**-1.3**
PTOM				A	A	10 22 30.0	
	comp=N,13nm,0.4s						
PTOM	**Tomar**	**4.33**	**55**	Pn	**Pn**	**10 21 37.1**	**+4.0**
PTOM				Sn	**Sn**	**10 22 22.3**	**-1.3**
	comp=N,6.4nm,0.4s						
PTOM	**Tomar**	**4.33**	**55**	Pn	**Pn**	**10 21 37.1**	**+4.0**
PTOM				Sn	**Sn**	**10 22 22.3**	**-1.3**
	comp=N,6.4nm,0.4s						
EGRO	**El Granado**	**4.40**	**84**	P	**Pn**	**10 21 36.9**	**+2.9**
	comp=N,4.0nm,0.1s,SNR=45						
EGRO				S	**Sn**	**10 22 23.8**	**-1.5**
	comp=N,13nm,0.3s,SNR=5.8						
EGRO	**El Granado**	**4.40**	**84**	P	**Pn**	**10 21 36.9**	**+2.9**
	comp=N,4.0nm,0.1s,SNR=45						
EGRO				S	**Sn**	**10 22 23.8**	**-1.5**
	comp=N,13nm,0.3s,SNR=5.8						
PCAS	**Casmilo, Conde**	**4.53**	**50**	ePn	**Pn**	**10 21 39.3**	**+3.6**
PCAS				eSn	**Sn**	**10 22 27.2**	**-1.2**
PCAS				A	A	10 22 33.1	
	comp=N,4.0nm,0.3s						
PCAS	**Casmilo, Conde**	**4.53**	**50**	ePn	**Pn**	**10 21 39.3**	**+3.6**
PCAS				eSn	**Sn**	**10 22 27.2**	**-1.2**
PESTR	**Estremoz**	**4.58**	**67**	ePn	**Pn**	**10 21 39.5**	**+3.0**
PESTR				eSn	**Sn**	**10 22 28.2**	**-1.5**
PESTR				A	A	10 22 44.5	
	comp=N,3.9nm,0.6s						
PESTR	**Estremoz**	**4.58**	**67**	ePn	**Pn**	**10 21 39.5**	**+3.0**
PESTR				eSn	**Sn**	**10 22 28.2**	**-1.5**
PBAR	**Barrancos**	**4.82**	**77**	ePn	**Pn**	**10 21 43.1**	**+3.3**
PBAR				eSn	**Sn**	**10 22 34.2**	**-1.5**
PBAR				A	A	10 22 41.4	
	comp=N,5.9nm,0.2s						
PBAR	**Barrancos**	**4.82**	**77**	Pn	**Pn**	**10 21 43.1**	**+3.3**
PBAR				Sn	**Sn**	**10 22 34.2**	**-1.5**
	comp=N,5.9nm,0.2s						
PBAR	**Barrancos**	**4.82**	**77**	Pn	**Pn**	**10 21 43.1**	**+3.3**
PBAR				Sn	**Sn**	**10 22 34.2**	**-1.5**
	comp=N,5.9nm,0.2s						
PMRV	**Marv??o**	**4.93**	**62**	ePn	**Pn**	**10 21 44.4**	**+3.0**
PMRV				eSn	**Sn**	**10 22 36.9**	**-1.6**
PMRV				A	A	10 22 43.4	
	comp=N,6.1nm,0.2s						
PMRV	**Marv??o**	**4.93**	**62**	Pn	**Pn**	**10 21 44.4**	**+3.0**
PMRV				Sn	**Sn**	**10 22 36.9**	**-1.6**
	comp=N,6.1nm,0.2s						
PMRV	**Marv??o**	**4.93**	**62**	Pn	**Pn**	**10 21 44.4**	**+3.0**
PMRV				Sn	**Sn**	**10 22 36.9**	**-1.6**
	comp=N,6.1nm,0.2s						
PMPS	**Porto Santo**	**4.96**	**214**	eSn	**Sn**	**10 22 30.9**	**-8.2**
EBAD	**Badajoz**	**4.97**	**70**	P	**Pn**	**10 21 45.1**	**+3.2**
	comp=N,3.5nm,0.1s,SNR=9.6						
EBAD				S	**Sn**	**10 22 36.3**	**-3.1**
	comp=N,8.6nm,0.2s						
EBAD	**Badajoz**	**4.97**	**70**	P	**Pn**	**10 21 45.1**	**+3.2**
	comp=N,3.5nm,0.1s,SNR=9.6						
EBAD				S	**Sn**	**10 22 36.3**	**-3.1**
	comp=N,8.6nm,0.2s						
EMIN	**Mina Concepcio**	**5.06**	**82**	P	**Pn**	**10 21 45.8**	**+2.7**
	comp=N,3.1nm,0.2s,SNR=32						
EMIN				S	**Sn**	**10 22 36.9**	**-4.6**
	comp=N,1.5nm,0.1s,SNR=6.6						
EMIN	**Mina Concepcio**	**5.06**	**82**	P	**Pn**	**10 21 45.8**	**+2.7**
	comp=N,3.1nm,0.2s,SNR=32						
PCBR	**Castelo Branco**	**5.06**	**57**	ePn	**Pn**	**10 21 46.5**	**+3.4**
PCBR				eSn	**Sn**	**10 22 40.4**	**-1.2**
PCBR				A	A	10 22 52.6	
	comp=N,4.3nm,0.4s						
PCBR	**Castelo Branco**	**5.06**	**57**	Pn	**Pn**	**10 21 46.5**	**+3.4**
PCBR				Sn	**Sn**	**10 22 40.4**	**-1.2**
	comp=N,2.2nm,0.4s						
PCBR	**Castelo Branco**	**5.06**	**57**	Pn	**Pn**	**10 21 46.5**	**+3.4**
PCBR				Sn	**Sn**	**10 22 40.4**	**-1.2**
	comp=N,2.2nm,0.4s						
PVIS	**Viseu**	**5.30**	**47**	ePn	**Pn**	**10 21 49.7**	**+3.3**
PVIS				eSn	**Sn**	**10 22 45.7**	**-1.9**
PVIS				A	A	10 22 50.3	
	comp=N,6.8nm,0.3s						
PVIS	**Viseu**	**5.30**	**47**	Pn	**Pn**	**10 21 49.7**	**+3.3**
PVIS				Sn	**Sn**	**10 22 45.7**	**-1.9**
	comp=N,3.4nm,0.3s						
**P

PCAB				A	A	10 23 05.0	
	comp=N,3.9nm,0.2s						
PCAB	**Cabril**	**5.92**	**39**	Pn	**Pn**	**10 21 57.9**	**+3.0**
PCAB				Sn	**Sn**	**10 23 00.3**	**-2.5**
	comp=N,1.9nm,0.2s						
PCAB	**Cabril**	**5.92**	**39**	Pn	**Pn**	**10 21 57.9**	**+3.0**
PCAB				Sn	**Sn**	**10 23 00.3**	**-2.5**
	comp=N,1.9nm,0.2s						
PGAV	**Gavieira, Arco**	**5.99**	**36**	*e*Pn	**Pn**	**10 21 58.8**	**+2.8**
PGAV				*e*Sn	**Sn**	**10 23 01.3**	**-3.4**
PGAV				A	A	10 23 14.2	
	comp=N,3.6nm,0.6s						
PGAV	**Gavieira, Arco**	**5.99**	**36**	*e*Pn	**Pn**	**10 21 58.8**	**+2.8**
PGAV				*e*Sn	**Sn**	**10 23 01.3**	**-3.4**
ELOB	**Lobios**	**6.02**	**38**	P	**Pn**	**10 21 59.3**	**+3.0**
	comp=N,0.8nm,0.2s,SNR=6.6						
ELOB				S	**Sn**	**10 23 01.9**	**-3.4**
	comp=N,1.8nm,0.1s,SNR=4.6						
ELOB	**Lobios**	**6.02**	**38**	P	**Pn**	**10 21 59.3**	**+3.0**
	comp=N,0.8nm,0.2s,SNR=6.6						
ELOB				S	**Sn**	**10 23 01.9**	**-3.4**
	comp=N,1.8nm,0.1s,SNR=4.6						
ECAB	**El Cabril**	**6.07**	**79**	P	**Pn**	**10 21 59.5**	**+2.5**
	comp=N,2.4nm,0.1s,SNR=40						
ECAB				S	**Sn**	**10 23 03.3**	**-3.3**
	comp=N,2.5nm,0.2s						
ECAB	**El Cabril**	**6.07**	**79**	P	**Pn**	**10 21 59.5**	**+2.5**
	comp=N,2.4nm,0.1s,SNR=40						
ECAB				S	**Sn**	**10 23 03.3**	**-3.3**
	comp=N,2.5nm,0.2s						
MVO	**Moncorvo**	**6.09**	**48**	*e*Pn	**Pn**	**10 22 00.2**	**+2.9**
MVO				*e*Sn	**Sn**	**10 23 04.1**	**-3.0**
MVO				A	A	10 23 05.8	
	comp=N,4.0nm,0.6s						
MVO	**Moncorvo**	**6.09**	**48**	P	**Pn**	**10 22 00.3**	**+3.0**
	comp=N,2.2nm,0.2s,SNR=6.0						
MVO				S	**Sn**	**10 23 03.1**	**-4.0**
	comp=N,3.6nm,0.2s						
MVO	**Moncorvo**	**6.09**	**48**	*e*Pn	**Pn**	**10 22 00.2**	**+2.9**
MVO				S	**Sn**	**10 23 03.1**	**-4.0**
	comp=N,3.6nm,0.2s						
MVO				*e*Sn	**Sn**	**10 23 04.1**	**-3.0**
EPLA	**Plasencia**	**6.12**	**60**	P	**Pn**	**10 22 00.5**	**+2.8**
	comp=N,2.4nm,0.1s,SNR=15						
EPLA				S	**Sn**	**10 23 05.1**	**-2.6**
	comp=N,3.0nm,0.1s						
EPLA	**Plasencia**	**6.12**	**60**	P	**Pn**	**10 22 00.5**	**+2.8**
	comp=N,2.4nm,0.1s,SNR=15						
EPLA				S	**Sn**	**10 23 05.1**	**-2.6**
	comp=N,3.0nm,0.1s						
EMAZ	**Mazaricos**	**6.51**	**27**	P	**Pn**	**10 22 05.9**	**+2.8**
	comp=N,1.5nm,0.2s,SNR=7.9						
EMAZ				S	**Sn**	**10 23 10.9**	**-6.4**
	comp=N,2.9nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	**6.51**	**27**	P	**Pn**	**10 22 05.9**	**+2.8**
	comp=N,1.5nm,0.2s,SNR=7.9						
PBRG	**Braganca**	**6.67**	**45**	*e*Pn	**Pn**	**10 22 08.4**	**+3.2**
PBRG				*e*Sn	**Sn**	**10 23 18.2**	**-3.1**
PBRG	**Braganca**	**6.67**	**45**	Pn	**Pn**	**10 22 08.4**	**+3.2**
PBRG				Sn	**Sn**	**10 23 18.2**	**-3.1**
PBRG	**Braganca**	**6.67**	**45**	Pn	**Pn**	**10 22 08.4**	**+3.2**
PBRG				Sn	**Sn**	**10 23 18.2**	**-3.1**
EAGO	**Agolada(Pontev**	**6.74**	**32**	P	**Pn**	**10 22 08.9**	**+2.7**
	comp=N,0.9nm,0.2s,SNR=7.9						
EAGO				S	**Sn**	**10 23 17.0**	**-6.0**
	comp=N,1.1nm,0.1s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.74**	**32**	P	**Pn**	**10 22 08.9**	**+2.7**
	comp=N,0.9nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**6.74**	**79**	P	**Pn**	**10 22 09.0**	**+2.8**
	comp=N,2.7nm,0.1s,SNR=4.0						
EADA				S	**Sn**	**10 23 17.2**	**-5.9**
	comp=N,1.8nm,0.3s,SNR=4.0						
EADA	**Adamuz**	**6.74**	**79**	P	**Pn**	**10 22 09.0**	**+2.8**
	comp=N,2.7nm,0.1s,SNR=4.0						
ECAL	**Calabor**	**6.76**	**44**	P	**Pn**	**10 22 09.9**	**+3.4**
	comp=N,2.4nm,0.3s,SNR=7.9						
ECAL				S	**Sn**	**10 23 22.1**	**-1.5**
	comp=N,2.2nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**6.76**	**44**	P	**Pn**	**10 22 09.9**	**+3.4**
	comp=N,2.4nm,0.3s,SNR=7.9						
ECAL				S	**Sn**	**10 23 22.1**	**-1.5**
	comp=N,2.2nm,0.2s,SNR=7.9						
PAB	**San Pablo**	**7.18**	**68**	P	**Pn**	**10 22 14.6**	**+2.3**
	comp=N,1.4nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**10 23 29.5**	**-4.5**
	comp=N,0.7nm,0.2s,SNR=7.9						
PAB	**San Pablo**	**7.18**	**68**	P	**Pn**	**10 22 14.6**	**+2.3**
	comp=N,1.4nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**10 23 29.5**	**-4.5**
	comp=N,0.7nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	**7.50**	**68**	P	**Pn**	**10 22 18.8**	**+2.1**
	comp=N,4.7nm,0.1s,baz=254,slow=12,SNR=24						
ESDC				S	**Sn**	**10 23 38.1**	**-3.8**
	comp=N,0.8nm,0.2s,baz=259,slow=22,SNR=7.9						
ESDC	**Sonseca Array**	**7.50**	**68**	P	**Pn**	**10 22 18.8**	**+2.1**
	comp=N,4.7nm,0.1s,baz=254,slow=12,SNR=24						
ESDC				S	**Sn**	**10 23 38.1**	**-3.8**
	comp=N,0.8nm,0.2s,slow=22,SNR=7.9						
EPON	**Pontenova**	**7.57**	**34**	P	**Pn**	**10 22 20.4**	**+2.8**
	comp=N,0.5nm,0.1s,SNR=4.0						
EPON				S	**Sn**	**10 23 38.4**	**-5.1**
	comp=N,1.4nm,0.4s,SNR=4.0						
EPON	**Pontenova**	**7.57**	**34**	P	**Pn**	**10 22 20.4**	**+2.8**
	comp=N,0.5nm,0.1s,SNR=4.0						
GUD	**Guadarrama**	**7.70**	**61**	P	**Pn**	**10 22 22.5**	**+3.0**
	comp=N,2.2nm,0.2s,SNR=7.9						
GUD				S	**Sn**	**10 23 40.7**	**-6.1**
	comp=N,1.1nm,0.3s,SNR=7.9						
GUD	**Guadarrama**	**7.70**	**61**	P	**Pn**	**10 22 22.5**	**+3.0**
	comp=N,2.2nm,0.2s,SNR=7.9						
SESP	**Santiago Espad**	**8.34**	**81**	P	**Pn**	**10 22 30.6**	**+2.4**
	comp=N,0.7nm,0.2s,SNR=7.9						
SESP	**Santiago Espad**	**8.34**	**81**	P	**Pn**	**10 22 30.6**	**+2.4**
	comp=N,0.7nm,0.2s,SNR=7.9						
ETOR	**Torete**	**9.25**	**64**	P	**Pn**	**10 22 43.4**	**+2.8**
	comp=N,2.1nm,0.2s,SNR=9.2						
ETOR				S	**Sn**	**10 24 17.8**	**-7.0**
	comp=N,0.5nm,0.2s,SNR=7.9						
ETOR	**Torete**	**9.25**	**64**	P	**Pn**	**10 22 43.4**	**+2.8**
	comp=N,2.1nm,0.2s,SNR=9.2						

CSEM ***02*** *10:22:43.5±1.1,36°.90N×39°.54E, h2km, ML2.3, Error ellipse: s-maj=26.9km s-min=7.0km az=179.0*
ISK ***02*** *10:22:43.5,36°.98N×39°.54E, h5km, ML2.3/3*
DDA ***02*** *10:22:44.4,37°.01N×39°.59E, h7km, Ml2.8*
ISC 02 10:22:42.6±2.4,36°.8N±0°.2×39°.55E±0°.04,h10km,n15,
σ1°29/22,Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANL	**SANLIURFA_Merk**	**0.56**	**308**	*i* P	**Pb**	**10 22 54.7**	**+0.1**
SANL	**SANLIURFA_Merk**	**0.56**	**308**	P	**Pb**	**10 22 54.7**	**+0.1**
URFA	**Urfa**	**0.84**	**317**	PG	**Pg**	**10 22 58.1**	**-0.8**
URFA				SG	**Sg**	**10 23 08.9**	**-1.1**
URFA	**Urfa**	**0.84**	**317**	*e*Pg	**Pg**	**10 22 58.1**	**-0.8**
URFA				*e*Sg	**Sg**	**10 23 08.9**	**-1.1**
MAZI	**Mazidag**	**0.96**	**48**	PG	**Pb**	**10 23 00.5**	**-0.9**
MAZI				SG	**Sb**	**10 23 13.2**	**-0.9**
MAZI	**Mazidag**	**0.96**	**48**	*e*Pg	**Pb**	**10 23 00.5**	**-0.9**
MAZI				*e*Sg	**Sb**	**10 23 13.2**	**-0.9**
MARD	**Mardin**	**1.10**	**63**	*i* P	**Pn**	**10 23 02.6**	**-1.6**
MARD				*i* S	**Sb**	**10 23 18.1**	**-0.1**
DIYA	**Diyarbakir**	**1.19**	**22**	*i* P	**Pn**	**10 23 06.2**	**+0.8**
DIYA	**Diyarbakir**	**1.19**	**22**	P	**Pn**	**10 23 06.2**	**+0.8**
SVRC	**Sivrice-ELAZID**	**1.56**	**353**	PN	**Pn**	**10 23 10.8**	**+0.2**
SVRC	**Sivrice-ELAZID**	**1.56**	**353**	*e*Pn	**Pn**	**10 23 10.8**	**+0.2**
MALT	**Malatya**	**1.73**	**329**	PN	**Pn**	**10 23 13.9**	**+1.0**
MALT	**Malatya**	**1.73**	**329**	*e*Pn	**Pn**	**10 23 13.9**	**+1.0**
BTMN	**Batman**	**1.73**	**52**	*i* P	**Pn**	**10 23 14.6**	**+1.7**
BTMN				*i* S	**Sn**	**10 23 37.7**	**+2.6**
BTMN	**Batman**	**1.73**	**52**	P	**Pn**	**10 23 14.6**	**+1.7**
BTMN				S	**Sn**	**10 23 37.7**	**+2.6**

IDC ***02*** *10:22:49.5±0.8,36°.44S×96°.97W, h0km, mb4.0/11, mb1 4.2/11, mb1mx4.0/37, mbtmp4.0/11, MS3.8/11, Ms1 3.8/11, ms1mx3.5/30, Error ellipse: s-maj=25.9km s-min=19.7km az=61.0*
NEIC ***02*** *10:22:53.4±0.4,36°.72S×96°.44W, h10km, mb4.5/26, Error ellipse: s-maj=11.9km s-min=8.6km az=46.0*
ISC 02 10:22:52.2±0.7,36°.6S±0°.1×96.7W±0°.1,h10km,n55,
σ2°09/47,mb4.4/33,MS3.9/11,West Chile Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO05	**HualaæØ**	**20.12**	**93**	*e*P	**P**	**10 27 25.1**	**-1.1**
	27nm,1.0s						
PLCA	**Paso Flores**	**20.77**	**109**	P	**P**	**10 27 34.1**	**+0.7**
	4.2nm,1.0s,baz=302,slow=16,SNR=3.6						
PLCA	**Paso Flores**	**20.77**	**109**	*e*P	**P**	**10 27 32.0**	**-1.4**
	38nm,1.5s						
ROC1	**El Roble**	**21.36**	**88**	*e*P	**P**	**10 27 38.5**	**-1.5**
	21nm,0.9s						
PB01	**IPOC Station P**	**28.30**	**64**	*e*P	**P**	**10 28 47.1**	**+1.0**
	13nm,1.2s						
MNMC	**Minye Minye**	**29.46**	**61**	*e*P	**P**	**10 28 56.6**	**0.0**
	16nm,0.9s						
NNA	**Nana**	**30.34**	**41**	LR	LR	10 38 03.0	
	comp=Z,401nm,21.2s,baz=232,slow=30						
LPAZ	**La Paz**	**32.41**	**59**	P	**P**	**10 29 24.4**	**+1.3**
	8.0nm,0.8s,baz=207,slow=4.9,SNR=32						
LPAZ				LR	LR	10 39 25.7	
	comp=Z,92nm,21.6s,baz=235,slow=31						
LPAZ	**La Paz**	**32.41**	**59**	*e*P	**P**	**10 29 23.6**	**+0.5**
LPAZ				*e*pP	**P**	**10 29 24.3**	**+1.3**
ATAH	**Atahualpa**	**33.76**	**34**	LR	LR	10 40 04.3	
	comp=Z,245nm,18.7s,baz=206,slow=31						
PMSA	**Palmer Station**	**34.20**	**156**	LR	LR	10 39 36.1	
	comp=Z,83nm,18.9s,baz=90,slow=29						
PMSA	**Palmer Station**	**34.20**	**156**	*e*P	**P**	**10 29 36.9**	**-0.6**
	244nm,1.7s						
CPUP	**Villa Florida**	**34.88**	**84**	P	**P**	**10 29 42.7**	**-1.1**
	1.5nm,0.7s,baz=248,slow=8.3,SNR=4.5						
CPUP				LR	LR	10 42 19.5	
	comp=Z,90nm,20.1s,baz=244,slow=33						
CPUP	**Villa Florida**	**34.88**	**84**	*e*P	**P**	**10 29 44.5**	**+0.7**
	14nm,1.6s						
SIV	**San Ignacio**	**37.65**	**66**	P	**P**	**10 30 07.9**	**+0.2**
	2.0nm,0.8s,baz=254,slow=9.1,SNR=11						
ROSC	**El Rosal**	**46.24**	**32**	LR	LR	10 47 52.8	
	comp=Z,95nm,20.1s,baz=128,slow=32						
ROSC	**El Rosal**	**46.24**	**32**	*e*P	**P**	**10 31 18.2**	**0.0**
	6.5nm,0.5s						
JTS	**JuntasAbangare**	**47.95**	**16**	LR	LR	10 46 49.3	
	comp=Z,148nm,18.7s,baz=258,slow=30						
APG	**El Apazote**	**51.68**	**8**	LR	LR	10 48 11.0	
	comp=Z,114nm,19.5s,baz=254,slow=30						
QSPA	**South Pole Qui**	**53.59**	**180**	P	**P**	**10 32 14.5**	**+1.2**
	1.3nm,0.8s,baz=131,slow=5.0,SNR=5.8						
SNAA	**Sanae**	**56.88**	**158**	P	**P**	**10 32 37.4**	**+0.6**
	1.0nm,0.9s,baz=297,slow=9.0,SNR=3.1						
SNAA	**Sanae**	**56.88**	**158**	*e*P	**P**	**10 32 37.2**	**+0.4**
	9.7nm,1.5s						
VNDA	**Vanda**	**56.98**	**195**	LR	LR	10 51 25.0	
	comp=Z,51nm,20.4s,baz=122,slow=30						
VNDA	**Vanda**	**56.98**	**195**	*e*P	**P**	**10 32 37.5**	**+0.2**
TX31	**Lajitas Ar. Si**	**65.94**	**353**	*e*P	**P**	**10 33 35.7**	**-2.8**
TXAR	**Lajitas Array**	**65.94**	**353**	P	**P**	**10 33 35.6**	**-2.9**
	0.4nm,0.8s,baz=174,slow=9.6,SNR=5.4						
AMTX	**Amarillo**	**71.30**	**356**	*e*P	**P**	**10 34 13.2**	**+1.3**
	8.1nm,1.0s						
S22A	**4UR Ranch, Cre**	**74.59**	**352**	*e*P	**P**	**10 34 34.5**	**+2.9**
	3.5nm,1.1s						
PV02	**Paradox Valley**	**75.29**	**350**	*e*P	**P**	**10 34 37.9**	**+2.4**
	4.9nm,1.0s						
SMCO	**Snowmass**	**76.03**	**352**	*e*P	**P**	**10 34 42.6**	**+2.7**
	4.1nm,1.0s						
Q16A	**Castle Valley**	**76.35**	**348**	*e*P	**P**	**10 34 41.4**	**-0.2**
	2.6nm,0.9s						
PSUT	**Pine Spring**	**76.45**	**346**	*e*P	**P**	**10 34 44.2**	**+2.0**
	2.9nm,1.1s						
R11A	**Troy Canyon, C**	**76.62**	**345**	*e*P	**P**	**10 34 44.9**	**+1.9**
	1.2nm,0.8s						
TMUT	**Trail Mountain**	**76.73**	**348**	*e*P	**P**	**10 34 43.9**	**+0.1**
	3.2nm,0.9s						
NV01	**Mina Array Sit**	**77.31**	**343**	*e*P	**P**	**10 34 44.8**	**-2.2**
NVAR	**Mina Array Bea**	**77.31**	**343**	P	**P**	**10 34 43.7**	**-3.2**
	1.1nm,0.7s,baz=181,slow=7.1,SNR=9.2						
RYN	**Ryan**	**77.55**	**343**	*e*P	**P**	**10 34 50.8**	**+2.6**
	3.1nm,0.9s						
KVN	**Kaiserville**	**77.85**	**343**	*e*P	**P**	**10 34 53.0**	**+3.1**
	3.3nm,0.9s						
BW06	**Boulder Array**	**79.89**	**350**	*e*P	**P**	**10 35 03.6**	**+2.5**
	6.9nm,1.3s						
PD31	**Pinedale Array**	**79.89**	**350**	*e*P	**P**	**10 35 01.4**	**+0.3**
PDAR	**Pinedale Array**	**79.89**	**350**	P	**P**	**10 34 57.8**	**-3.3**
	2.2nm,0.7s,baz=167,slow=7.4,SNR=8.9						
ECSD	**EROS Data Cent**	**79.98**	**0**	*e*P	**P**	**10 35 03.7**	**+2.4**
	4.0nm,1.0s						
RSSD	**Black Hills**	**80.65**	**355**	*e*P	**P**	**10 35 07.1**	**+1.9**
	2.9nm,0.9s						
FXWY	**Fox Creek**	**80.95**	**349**	*e*P	**P**	**10 35 08.9**	**+2.1**
	2.5nm,1.0s						
WVOR	**Wild Horse Val**	**81.20**	**344**	*e*P	**P**	**10 35 10.8**	**+2.7**
	6.0nm,1.4s						
YBH	**Yreka Blue Hor**	**81.54**	**341**	P	**P**	**10 35 08.9**	**-0.9**
	1.3nm,1.0s,baz=102,slow=9.3,SNR=3.7						
SPMN	**Marine on St.**	**81.55**	**3**	*e*P	**P**	**10 35 12.0**	**+2.4**
	6.5nm,0.6s						
RLMT	**Red Lodge**	**82.16**	**351**	*e*P	**P**	**10 35 16.1**	**+3.0**
	4.7nm,1.2s						
GCMT	**Greycliff**	**82.87**	**351**	*e*P	**P**	**10 35 19.8**	**+3.0**
JTMT	**Jette**	**85.46**	**348**	*e*P	**P**	**10 35 34.1**	**+4.2**
	21nm,2.0s						
ULM	**Lac du Bonnet**	**86.50**	**1**	P	**P**	**10 35 34.1**	**-0.6**
	1.3nm,0.5s,baz=173,slow=6.3,SNR=3.1						
STKA	**Stephens Creek**	**92.74**	**226**	LR	LR	11 11 52.7	
	comp=Z,73nm,18.1s,baz=145,slow=32						
DBIC	**Dimbookro**	**95.39**	**86**	LR	LR	11 15 51.8	
	comp=Z,45nm,19.5s,baz=170,slow=33						
KSRS	**Korea Array**	**144.64**	**285**	PKP	**PKPab**	**10 42 24.6**	**-3.0**
	0.6nm,0.7s,baz=119,slow=3.7,SNR=3.5						
KSAR	**Wonju Array Be**	**144.67**	**285**	PKP	**PKPab**	**10 42 24.6**	**-3.1**

MDD ***02*** *10:23:37.9±2.1,37°.34N×12°.71W, h0km, mb3.6/3, Error ellipse: s-maj=20.1km s-min=18.5km az=168.0, PRXIMO*
IGIL ***02*** *10:23:38.4,37°.30N×12°.71W, h2km, ML2.0*
INMG ***02*** *10:23:39.6±1.1,37°.21N×13°.10W, h10km, ML2.1, Error ellipse: s-maj=10.1km s-min=7.8km az=151.0*
CSEM ***02*** *10:23:40.5±0.4,37°.45N×12°.50W, h10km, mb3.6, Error ellipse: s-maj=6.9km s-min=6.3km az=103.0*
ISC 02 10:23:39.1±3.0,37°.41N±0°.08×12°.4W±0°.1,h10km,n64,
σ2°58/109,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMAFR	**Mafra**	**2.90**	**57**	*e*Pn	**Pb**	**10 24 28.4**	**-2.5**
PMAFR				*e*Sn	**Sb**	**10 25 04.8**	**-1.7**
PMAFR				A	A	10 25 16.2	
	15nm,0.5s						
PMAFR	**Mafra**	**2.90**	**57**	P	**Pn**	**10 24 27.4**	**+2.0**
	4.3nm,0.3s,SNR=7.9						
PMAFR				S	**Sn**	**10 25 03.8**	**+3.5**
	11nm,0.2s,SNR=7.9						
PMAFR	**Mafra**	**2.90**	**57**	P	**Pn**	**10 24 27.4**	**+2.0**
	4.3nm,0.3s,SNR=7.9						
PMAFR	**Mafra**	**2.90**	**57**	*e*Pn	**Pb**	**10 24 28.4**	**-2.5**
PMAFR				S	**Sn**	**10 25 03.8**	**+3.5**
	11nm,0.2s,SNR=7.9						
PMAFR				*e*Sn	**Sb**	**10 25 04.8**	**-1.7**
PTEO	**Sao Teotonio**	**2.93**	**86**	*e*Pn	**Pb**	**10 24 28.4**	**-3.0**
PTEO				*e*Sn	**Sb**	**10 25 04.9**	**-2.4**
PTEO				A	A	10 25 11.0	
	4.8nm,0.9s						
PTEO	**Sao Teotonio**	**2.93**	**86**	P	**Pb**	**10 24 28.4**	**-3.0**
PTEO				S	**Sb**	**10 25 04.9**	**-2.4**
	2.4nm,0.9s						
PTEO	**Sao Teotonio**	**2.93**	**86**	P	**Pb**	**10 24 28.4**	**-3.0**
PTEO				S	**Sb**	**10 25 04.9**	**-2.4**
	2.4nm,0.9s						
MORF	**Marmelete**	**3.00**	**91**	*e*P	**Pn**	**10 24 28.8**	**+2.1**
MORF	**Marmelete**	**3.00**	**91**	*e*Pn	**Pb**	**10 24 29.8**	**-2.7**
MORF	**Marmelete**	**3.00**	**91**	P	**Pn**	**10 24 28.8**	**+2.1**
MORF	**Marmelete**	**3.00**	**91**	P	**Pn**	**10 24 28.8**	**+2.1**
MORF	**Marmelete**	**3.00**	**91**	*e*Pn	**Pb**	**10 24 29.8**	**-2.7**
PNCL	**Nicolau / Gran**	**3.15**	**76**	*e*Pn	**Pb**	**10 24 31.7**	**-3.5**
PNCL				*e*Sn	**Sn**	**10 25 09.6**	**+3.2**
PNCL				A	A	10 25 16.6	
	2.0nm,0.3s						
PNCL	**Nicolau / Gran**	**3.15**	**76**	*e*Pn	**Pb**	**10 24 31.7**	**-3.5**
PNCL				*e*Sn	**Sn**	**10 25 09.6**	**+3.2**
MESJ	**Messejana**	**3.35**	**81**	*e*P	**Pn**	**10 24 33.9**	**+2.3**
MESJ				*e*S	**Sn**	**10 25 13.7**	**+2.3**
MESJ				AML	AML	10 25 13.8	
	comp=E,1.1nm,0.1s						
MESJ	**Messejana**	**3.35**	**81**	*e*Pn	**Pn**	**10 24 34.3**	**+2.8**
MESJ				*e*Sn	**Sn**	**10 25 13.7**	**+2.3**
MESJ				A	A	10 25 19.7	
	comp=E,1.3nm,0.3s						
MESJ	**Messejana**	**3.35**	**81**	P	**Pn**	**10 24 33.9**	**+2.3**
MESJ				S	**Sn**	**10 25 13.7**	**+2.3**
	comp=E,1.3nm,0.3s						
MESJ	**Messejana**	**3.35**	**81**	P	**Pn**	**10 24 33.8**	**+2.3**
MESJ	**Messejana**	**3.35**	**81**	*e*Pn	**Pn**	**10 24 34.3**	**+2.8**
MESJ				S	**Sn**	**10 25 13.7**	**+2.3**
	comp=E,1.3nm,0.3s						
ALMR	**Almeirim**	**3.48**	**59**	*e*P	**Pn**	**10 24 35.5**	**+2.3**
ALMR				*e*S	**Sn**	**10 25 16.9**	**+2.4**
ALMR				AML	AML	10 25 21.6	
	comp=N,12nm,0.6s						
ALMR	**Almeirim**	**3.48**	**59**	*e*Pn	**Pn**	**10 24 35.8**	**+2.5**
ALMR				*e*Sn	**Sn**	**10 25 18.3**	**+3.8**
ALMR				A	A	10 25 29.6	
	comp=N,11nm,0.5s						
ALMR	**Almeirim**	**3.48**	**59**	P	**Pn**	**10 24 35.5**	**+2.3**
ALMR				S	**Sn**	**10 25 18.3**	**+3.8**
	comp=N,5.3nm,0.5s						
ALMR	**Almeirim**	**3.48**	**59**	P	**Pn**	**10 24 35.5**	**+2.3**
ALMR	**Almeirim**	**3.48**	**59**	*e*Pn	**Pn**	**10 24 35.8**	**+2.5**
ALMR				S	**Sn**	**10 25 18.3**	**+3.8**
	comp=N,5.3nm,0.5s						
PBDV	**Barranco-do-Ve**	**3.57**	**91**	*e*Pn	**Pn**	**10 24 37.1**	**+2.5**
PBDV				*e*Sn	**Sb**	**10 25 22.5**	**-3.3**
PBDV	**Barranco-do-Ve**	**3.57**	**91**	P	**Pn**	**10 24 37.1**	**+2.5**
PBDV				S	**Sb**	**10 25 22.5**	**-3.3**
PBDV	**Barranco-do-Ve**	**3.57**	**91**	P	**Pn**	**10 24 37.1**	**+2.5**
PBDV				*e*Sn	**Sb**	**10 25 22.5**	**-3.3**
EVO	**Evora**	**3.65**	**71**	*e*Pn	**Pn**	**10 24 37.6**	**+2.0**
EVO				*e*Sn	**Sn**	**10 25 21.7**	**+3.0**
EVO				A	A	10 25 27.1	
	comp=N,2.6nm,0.1s						
EVO	**Evora**	**3.65**	**71**	P	**Pn**	**10 24 37.6**	**+2.0**
EVO				S	**Sn**	**10 25 21.7**	**+3.0**
	comp=N,2.6nm,0.1s						
EVO	**Evora**	**3.65**	**71**	P	**Pn**	**10 24 37.6**	**+2.0**
EVO				S	**Sn**	**10 25 21.7**	**+3.0**
	comp=N,2.6nm,0.1s						
PBEJ	**Beja**	**3.65**	**79**	*e*Pn	**Pn**	**10 24 38.0**	**+2.4**
PBEJ				*e*Sn	**Sn**	**10 25 21.3**	**+2.5**
PBEJ	**Beja**	**3.65**	**79**	P	**Pn**	**10 24 38.0**	**+2.4**
PBEJ				S	**Sn**	**10 25 21.3**	**+2.5**
PBEJ	**Beja**	**3.65**	**79**	P	**Pn**	**10 24 38.0**	**+2.4**
PBEJ				S	**Sn**	**10 25 21.3**	**+2.5**
PVAQ	**Vaqueiros**	**3.73**	**89**	*e*Pn	**Pn**	**10 24 38.9**	**+2.1**
PVAQ				*e*Sn	**Sn**	**10 25 23.9**	**+3.1**
PVAQ				A	A	10 25 27.8	
	comp=N,1.4nm,0.1s						
PVAQ	**Vaqueiros**	**3.73**	**89**	P	**Pn**	**10 24 38.9**	**+2.1**
PVAQ				S	**Sn**	**10 25 23.9**	**+3.1**
	comp=N,1.4nm,0.1s						
PVAQ	**Vaqueiros**	**3.73**	**89**	P	**Pn**	**10 24 38.9**	**+2.1**
PVAQ				S	**Sn**	**10 25 23.9**	**+3.1**
	comp=N,1.4nm,0.1s						
EGRO	**El Granado**	**3.92**	**87**	P	**Pn**	**10 24 41.3**	**+2.0**
	comp=N,0.8nm,0.3s,SNR=7.9						
EGRO				S	**Sn**	**10 25 28.3**	**+3.0**
	comp=N,1.6nm,0.1s,SNR=5.0						
EGRO	**El Granado**	**3.92**	**87**	P	**Pn**	**10 24 41.3**	**+2.0**
	comp=N,0.8nm,0.3s,SNR=7.9						
EGRO				S	**Sn**	**10 25 28.3**	**+3.0**
	comp=N,1.6nm,0.1s,SNR=5.0						
PESTR	**Estremoz**	**4.07**	**68**	*e*Pn	**Pn**	**10 24 43.6**	**+2.3**
PESTR				*e*Sn	**Sn**	**10 25 33.0**	**+4.0**
PESTR				A	A	10 25 34.0	
	comp=N,2.6nm,0.6s						
PESTR	**Estremoz**	**4.07**	**68**	*e*Pn	**Pn**	**10 24 43.6**	**+2.3**
PESTR				*e*Sn	**Sn**	**10 25 33.0**	**+4.0**
PBAR	**Barrancos**	**4.32**	**78**	*e*Pn	**Pn**	**10 24 47.3**	**+2.5**
PBAR				*e*Sn	**Sn**	**10 25 38.3**	**+3.1**
PBAR				A	A	10 25 44.7	
	comp=N,2.5nm,0.7s						
PBAR	**Barrancos**	**4.32**	**78**	P	**Pn**	**10 24 47.3**	**+2.5**
PBAR				S	**Sn**	**10 25 38.3**	**+3.1**
	comp=N,2.5nm,

JOU S **Sn** **10 29 38.4 -0.7**
JFK Kawauchi 1.26 224 P **Pn** **10 29 28.6 +0.1**
JFK S **Sn** **10 29 44.3 -0.1**
JOM Ohasama 1.31 336 P **Pn** **10 29 29.5 +0.3**
JOM S **Sn** **10 29 46.2 +0.5**
JYK Kaneyama 1.42 297 P **Pn** **10 29 30.6 0.0**
JYK S **Sn** **10 29 47.7 -0.6**
JFT Otama 1.50 240 P **Pn** **10 29 32.1 +0.4**
JFT S **Sn** **10 29 50.1 -0.1**
JYS Shiratake 1.50 269 P **Pn** **10 29 32.0 +0.2**
JYS S **Sn** **10 29 50.3 0.0**
JRG Rokugo 1.53 317 P **Pn** **10 29 32.3 +0.1**
JRG S **Sn** **10 29 51.1 +0.1**
JYA Atsumi 1.80 281 P **Pn** **10 29 35.9 +0.1**
JYA eS **Sn** **10 29 57.9 +0.3**
MJAR Matsushiro Arr 3.46 241 P **Pn** **10 29 59.9 +1.4**
4.9nm,0.3s,baz=339,slow=5.6,SNR=64
MJAR LR LR 10 31 35.0
comp=Z,93nm,21.5s,baz=40,slow=44
MAT Matsushiro 3.46 241 P **Pn** **10 30 00.0 +1.5**
MAT S **Sn** **10 30 45.8 +7.5**
JHJ Hachijo jima 2 5.44 200 P **Pn** **10 30 24.9 -0.8**
12nm,0.3s,baz=136,slow=23,SNR=17
JHJ S **Sn** **10 31 22.4 -4.6**
24nm,0.3s,baz=37,slow=22,SNR=9.1
ASAJ Asahikawa 5.86 4 P **Pn** **10 30 30.6 -0.6**
5.3nm,0.3s,baz=205,slow=12,SNR=46
ASAJ S **Sn** **10 31 33.5 -3.6**
3.4nm,0.3s,baz=109,slow=10.0,SNR=5.6
USRK Ussuriysk Ar. 9.57 311 P **Pn** **10 31 22.9 +0.8**
1.7nm,0.3s,baz=126,slow=14,SNR=23
JNU Nakatsue 10.38 244 P **Pn** **10 31 33.0 -0.3**
0.2nm,0.3s,baz=22,slow=16,SNR=3.5
JNU LR LR 10 35 45.7
comp=Z,62nm,19.1s,baz=118,slow=38
KSRS Korea Array 11.14 270 P **Pn** **10 31 45.5 +1.9**
0.2nm,0.3s,baz=82,slow=14,SNR=6.1
JCJ Chichijima 11.15 179 P **Pn** **10 31 40.3 -3.5**
5.3nm,0.3s,baz=3.2,slow=19,SNR=19
JCJ S Sn 10 33 35.3 -12
2.2nm,0.3s,baz=270,slow=20,SNR=3.9
KLR Kul'dur 13.20 329 P **Pn** **10 32 10.5 -1.2**
0.0nm,0.3s,baz=148,slow=14,SNR=5.6
MA2 Magadan 22.05 12 P **P** **10 33 56.4 -0.4**
1.9nm,0.4s,baz=258,slow=6.7,SNR=4.0
SEY Seymchan 25.49 11 P **P** **10 34 30.2 +0.4**
0.9nm,0.6s,baz=107,slow=19,SNR=3.6
SONM Songino Array 27.49 302 P **P** **10 34 48.4 +0.2**
1.0nm,0.5s,baz=119,slow=8.2,SNR=7.4
H11N2 WAKE ISLAND Hy 28.43 124 T T 11 05 14.1
baz=316,slow=76,SNR=344
H11N1 WAKE ISLAND Hy 28.44 124 T T 11 05 14.6
baz=316,slow=76,SNR=310
H11N3 WAKE ISLAND Hy 28.45 124 T T 11 05 15.3
baz=316,slow=76,SNR=273
H11S1 WAKE ISLAND Hy 29.19 126 T T 11 06 13.9
baz=318,slow=76,SNR=162
H11S3 WAKE ISLAND Hy 29.19 126 T T 11 06 16.1
baz=318,slow=76,SNR=134
H11S2 WAKE ISLAND Hy 29.20 126 T T 11 06 16.3
baz=318,slow=76,SNR=127
ZALV Zalesovo Beam 41.42 311 P **P** **10 36 47.3 -0.5**
3.2nm,0.5s,baz=77,slow=6.9,SNR=15
MKAR Makanchi Array 43.85 301 P **P** **10 37 07.8 +0.1**
1.8nm,0.5s,baz=84,slow=10,SNR=15
KURBB Kurchatov Arra 45.60 307 P **P** **10 37 20.5 -1.0**
1.8nm,0.3s,baz=82,slow=8.3,SNR=20
KURBB pP **pP** **10 37 35.3 -0.9**
3.9nm,0.6s,baz=79,slow=8.3,SNR=12
KDAK Kodiak Island 45.88 43 P **P** **10 37 24.0 +0.3**
2.7nm,0.8s,baz=276,slow=5.2,SNR=4.2
ILAR Eielson Array 48.21 33 P **P** **10 37 42.4 +0.6**
0.6nm,0.7s,baz=266,slow=6.8,SNR=10.0
ILAR pP **pP** **10 37 58.3 +1.9**
0.5nm,0.6s,baz=268,slow=6.6,SNR=4.4
WRA Warramunga Arr 58.35 188 P **P** **10 38 55.8 -0.8**
1.1nm,0.4s,baz=6.2,slow=6.9,SNR=37
WRA pP **pP** **10 39 12.7 +1.1**
1.1nm,0.7s,baz=5.3,slow=7.3,SNR=5.0
ASAR Alice Springs 62.08 188 P **P** **10 39 21.8 -0.3**
0.6nm,0.6s,baz=4.7,slow=4.4,SNR=8.5
ASAR pP **pP** **10 39 39.1 +1.9**
0.5nm,0.7s,baz=4.8,slow=5.6,SNR=2.8
YKA Yellowknife Ar 62.52 31 P **P** **10 39 24.4 -0.1**
0.3nm,0.7s,baz=298,slow=5.6,SNR=3.2
ARCES ARCESS Array B 62.99 339 P **P** **10 39 27.6 0.0**
1.4nm,0.9s,baz=64,slow=7.1,SNR=4.8
FINES FINESS Array B 67.93 332 P **P** **10 39 59.3 -0.2**
4.9nm,1.1s,baz=72,slow=9.2,SNR=2.4
NVAR Mina Array Bea 73.89 54 P **P** **10 40 37.6 +1.1**
0.6nm,0.8s,baz=288,slow=6.2,SNR=4.8
PDAR Pinedale Array 76.48 46 P **P** **10 40 52.0 +0.7**
0.8nm,0.5s,baz=245,slow=3.1,SNR=7.0
TXAR Lajitas Array 89.02 53 P **P** **10 41 56.9 +0.6**
0.6nm,0.6s,baz=308,slow=3.9,SNR=11
H06E1 SOCORRO T-PHAS 91.25 65 T T 12 22 48.8
SNR=15
QSPA South Pole Qui 128.01 180 PKP **PKPdf** **10 48 05.0 -0.7**
0.6nm,0.4s,baz=62,slow=0.7,SNR=7.0
LPAZ La Paz 145.68 59 PKPbc **PKPab** **10 48 40.1 -0.3**
1.2nm,0.5s,baz=358,slow=4.1,SNR=6.7

JMA 02 10:29:08.1±0.1,38°.55N×142°.01E,h38km±1km,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.59**	**333**	P	Pn	10 29 20.0	-0.2
JMK	**Ichinoseki**	**0.74**	**303**	P	Pn	10 29 21.9	-0.1
JOM	**Ohasama**	**1.08**	**329**	P	Pn	10 29 27.8	+1.1

*ISCJB **02** 10:31:50.1±0.3,24°.27S±0°.03×67°.29W±0°.04,h177km±4km, mb3.8/6,Error ellipse: s-maj=5.8km s-min=3.9km az=150.1*
*IDC **02** 10:31:50.4±2.3,24°.20S×67°.09W,h159km±20km,mb3.8/6, mb1 3.7/10,mb1mx3.4/40,mbtmp4.1/10,Error ellipse: s-maj=27.8km s-min=15.7km az=90.0*
*SJA **02** 10:31:50.8±0.9,24°.27S×67°.29W,h175km±10km,ML3.2, MW3.4*
*GUC **02** 10:31:51.7±0.5,24°.17S×67°.53W,h181km±17km,ML4.7*

ISC 02 10:31:50.8±0.8,24°.23S±0°.04×67°.28W±0°.04,h169km±7km, n31,σ1§44/49,mb3.9/6,3C-3D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**1.69**	**107**	*e*P	**Pn**	**10 32 25.3**	**+1.4**
SLA				*e*S	**Sn**	**10 32 50.7**	**+1.2**
SLA				IAML		10 32 51.9	
comp=Z,104nm,0.7s							
FSA	**Cafayete**	**2.21**	**148**	*e*P	**Pn**	**10 32 29.2**	**-0.5**
FSA				IAML		10 32 29.7	
comp=Z,54nm,0.4s							
FSA				*e*S	**Sn**	**10 32 57.5**	**-2.3**
GO02	**Mina Guanaco**	**2.29**	**246**	*e*P	**Pn**	**10 32 31.7**	**+0.9**
GO02				*i* S	**Sn**	**10 33 02.7**	**+1.1**
YJA	**Yavi**	**2.62**	**39**	*e*P	**Pn**	**10 32 37.0**	**+2.3**
YJA				*e*S	**Sn**	**10 33 10.3**	**+1.6**
YJA				IAML		10 33 12.1	
comp=N,23nm,0.7s							
PB14	**IPOC Station P**	**2.87**	**262**	*e*P	**Pn**	**10 32 38.3**	**+0.7**
PB14				*e*S	**Sn**	**10 33 13.7**	**-0.3**
PB14	**IPOC Station P**	**2.87**	**262**	⇑*i*P	**Pn**	**10 32 38.3**	**+0.7**
PB14				*i* S	**Sn**	**10 33 13.7**	**-0.3**
PB10	**IPOC Station P**	**3.08**	**283**	*e*P	**Pn**	**10 32 41.4**	**+1.5**
PB10				*e*S	**Sn**	**10 33 18.2**	**+0.1**
PB10	**IPOC Station P**	**3.08**	**283**	⇑*i*P	**Pn**	**10 32 41.2**	**+1.3**
PB10				*i* S	**Sn**	**10 33 17.6**	**-0.5**
AHML	**Horco Molle**	**3.09**	**146**	*e*P	**Pn**	**10 32 40.2**	**+0.2**
AHML				IAML		10 32 41.1	
comp=Z,64nm,0.6s							
AHML				*e*S	**Sn**	**10 33 17.7**	**-0.8**
PB04	**IPOC Station P**	**3.24**	**305**	*e*P	**Pn**	**10 32 43.2**	**+1.0**
PB04				*i* S	**Sn**	**10 33 21.4**	**-0.7**
PB04				IAML		10 33 23.8	
comp=E,2μm,0.2s							
PB07	**IPOC Station P**	**3.46**	**316**	*e*P	**Pn**	**10 32 46.0**	**+1.1**
PB07				*i* S	**Sn**	**10 33 26.7**	**-0.3**
PB07				IAML		10 33 27.2	
comp=E,1μm,0.2s							
PB02	**IPOC Station P**	**3.77**	**320**	⇓*i*P	**Pn**	**10 32 49.5**	**+0.7**
PB02				*i* S	**Sn**	**10 33 32.6**	**-1.3**
PB01	**IPOC Station P**	**3.77**	**327**	⇓*i*P	**Pn**	**10 32 49.6**	**+0.8**
PB01				*i* S	**Sn**	**10 33 33.8**	**-0.2**
PB01				IAML		10 33 35.7	
comp=E,536nm,0.2s							
GO03	**Copiap**	**4.27**	**218**	⇑*i*P	**Pn**	**10 32 53.9**	**-1.2**
GO03				*i* S	**Sn**	**10 33 42.6**	**-2.9**
CYA	**Choya**	**4.40**	**163**	*e*P	**Pn**	**10 32 56.7**	**0.0**
CYA				IAML		10 32 57.6	
comp=Z,19nm,0.6s							
CYA				*e*S	**Sn**	**10 33 46.3**	**-1.9**
PB08	**IPOC Station P**	**4.43**	**337**	⇓*i*P	**Pn**	**10 32 58.9**	**+1.4**
PB08				*e*S	**Sn**	**10 33 51.1**	**+1.6**
PB08				IAML		10 33 54.2	
comp=N,105nm,0.2s							
VCA	**Vinchina**	**4.56**	**190**	*e*P	**Pn**	**10 33 00.1**	**+1.2**
VCA				*e*S	**Sn**	**10 33 54.7**	**+2.5**
VCA				IAML		10 33 57.2	
comp=Z,36nm,0.8s							
LPAZ	**La Paz**	**7.95**	**354**	P	**Pn**	**10 33 45.1**	**+1.1**
comp=Z,3.2nm,0.3s,baz=145,slow=4.8,SNR=132							
LPAZ				S	**Sn**	**10 35 11.2**	**-2.1**
comp=Z,0.1nm,0.3s,baz=347,slow=15,SNR=4.0							
MRA	**San Martin**	**8.27**	**171**	*e*P	**Pn**	**10 33 44.7**	**-3.0**
MRA				IAML		10 33 55.1	
comp=Z,10nm,0.5s							
CPUP	**Villa Florida**	**9.25**	**105**	P	**Pn**	**10 33 57.3**	**-3.3**
comp=Z,0.1nm,0.3s,baz=281,slow=13,SNR=3.8							
SIV	**San Ignacio**	**10.06**	**37**	P	**Pn**	**10 34 09.7**	**-1.7**
comp=Z,0.9nm,0.3s,baz=224,slow=13,SNR=27							
SIV				S	Sn	10 35 51.7	-12
comp=Z,0.1nm,0.3s,baz=228,slow=18,SNR=3.2							
PLCA	**Paso Flores**	**16.68**	**189**	P	**Pn**	**10 35 35.8**	**+1.1**
comp=Z,0.2nm,0.3s,baz=24,slow=12,SNR=3.7							
SNAA	**Sanae**	**59.22**	**161**	P	**P**	**10 41 33.7**	**0.0**
comp=Z,0.9nm,0.6s,baz=277,slow=9.8,SNR=13							
QSPA	**South Pole Qui**	**65.97**	**180**	P	**P**	**10 42 19.9**	**+1.2**
comp=Z,2.5nm,0.5s,baz=143,slow=4.3,SNR=18							
KOWA	**Kowa**	**72.77**	**65**	P	**P**	**10 43 01.3**	**+0.3**
comp=Z,2.6nm,0.6s,baz=240,slow=7.0,SNR=6.2							
TORD	**Torodi Ar. Bea**	**76.89**	**69**	P	**P**	**10 43 24.1**	**-0.6**
comp=Z,2.8nm,0.8s,baz=259,slow=5.5,SNR=15							
MAW	**Mawson**	**81.29**	**163**	P	**P**	**10 43 48.8**	**+1.1**
comp=Z,0.8nm,0.5s,baz=164,slow=7.4,SNR=4.2							
YKA	**Yellowknife Ar**	**94.25**	**340**	P	**P**	**10 44 49.2**	**-0.9**
comp=Z,0.1nm,0.6s,baz=128,slow=4.7,SNR=4.5							
WRA	**Warramunga Arr**	**131.30**	**207**	PKP	**PKPdf**	**10 50 44.1**	**+0.5**
comp=Z,0.4nm,1.0s,baz=154,slow=2.0,SNR=5.1							
ZALV	**Zalesovo Beam**	**143.72**	**28**	PKP	**PKPdf**	**10 51 03.6**	**-1.6**
comp=Z,1.1nm,0.5s,baz=278,slow=4.3,SNR=5.1							
MKAR	**Makanchi Array**	**146.87**	**40**	PKPbc	**PKPab**	**10 51 14.3**	**-0.5**
comp=Z,2.0nm,0.6s,baz=297,slow=3.3,SNR=19							

*SFS **02** 10:32:59.0,37°.30N×12°.70W,h0km,ML4.2*
*MDD **02** 10:33:00.2±1.6,37°.25N×12°.69W,h0km,mb4.1/10,Error ellipse: s-maj=14.6km s-min=12.6km az=47.0,PRXIMO*
*INMG **02** 10:33:01.4±1.1,37°.10N×13°.12W,h10km,ML2.4,Error ellipse: s-maj=6.0km s-min=4.5km az=86.0*
*IGIL **02** 10:33:01.4,37°.30N×12°.72W,h7km,ML2.5*
*CSEM **02** 10:33:02.5±0.3,37°.37N×12°.51W,h10km,mb4.1,Error ellipse: s-maj=5.5km s-min=4.4km az=49.0*

ISC 02 10:32:58.2±3.2,37°.30N±0°.09×12°.8W±0°.2,h10km,n100, σ1§67/181,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.14**	**92**	*e*Pn	**Pn**	**10 33 48.2**	**+0.4**
PFVI				*e*Sn	**Sn**	**10 34 24.9**	**-0.5**
PFVI				A	A	10 34 31.9	
4.7nm,0.2s							
PFVI	**Vila Bisbo**	**3.14**	**92**	P	**Pn**	**10 33 48.2**	**+0.4**
4.3nm,0.1s,SNR=7.0							
PFVI				S	**Sn**	**10 34 23.6**	**-1.8**
2.9nm,0.1s,SNR=5.7							
PFVI	**Vila Bisbo**	**3.14**	**92**	P	**Pn**	**10 33 48.2**	**+0.4**
4.3nm,0.1s,SNR=7.0							
PFVI				S	**Sn**	**10 34 23.6**	**-1.8**
2.9nm,0.1s,SNR=5.7							
PFVI				*e*Sn	**Sn**	**10 34 24.9**	**-0.5**
PMAFR	**Mafra**	**3.20**	**58**	*e*Pn	**Pn**	**10 33 50.3**	**+1.7**
PMAFR				*e*Sn	**Sn**	**10 34 28.2**	**+1.4**
PMAFR				A	A	10 34 42.0	
16nm,0.5s							
PMAFR	**Mafra**	**3.20**	**58**	P	**Pn**	**10 33 49.9**	**+1.3**
9.4nm,0.2s,SNR=9.2							
PMAFR				S	**Sn**	**10 34 27.8**	**+1.0**
9.3nm,0.1s,SNR=6.0							
PMAFR	**Mafra**	**3.20**	**58**	P	**Pn**	**10 33 49.9**	**+1.3**
9.4nm,0.2s,SNR=9.2							
PMAFR	**Mafra**	**3.20**	**58**	*e*Pn	**Pn**	**10 33 50.3**	**+1.7**
PMAFR				S	**Sn**	**10 34 27.8**	**+1.0**
9.3nm,0.1s,SNR=6.0							
PMAFR				*e*Sn	**Sn**	**10 34 28.2**	**+1.4**
PTEO	**Sao Teotonio**	**3.22**	**84**	*e*Pn	**Pn**	**10 33 49.9**	**+1.0**
PTEO				*e*Sn	**Sn**	**10 34 26.4**	**-0.9**
PTEO				A	A	10 34 40.0	
6.4nm,0.5s							
PTEO	**Sao Teotonio**	**3.22**	**84**	P	**Pn**	**10 33 49.9**	**+1.0**
PTEO				S	**Sn**	**10 34 26.4**	**-0.9**
3.2nm,0.5s							
PTEO	**Sao Teotonio**	**3.22**	**84**	P	**Pn**	**10 33 49.9**	**+1.0**
PTEO				S	**Sn**	**10 34 26.4**	**-0.9**
3.2nm,0.5s							
MORF	**Marmelete**	**3.28**	**89**	*e*P	**Pn**	**10 33 50.5**	**+0.8**
MORF	**Marmelete**	**3.28**	**89**	*e*Pn	**Pn**	**10 33 50.5**	**+0.8**
MORF				*e*Sn	**Sn**	**10 34 28.4**	**-0.3**
MORF				A	A	10 34 32.6	
5.0nm,0.3s							
MORF	**Marmelete**	**3.28**	**89**	P	**Pn**	**10 33 50.5**	**+0.8**
MORF				S	**Sn**	**10 34 28.4**	**-0.3**
5.0nm,0.3s							
MORF	**Marmelete**	**3.28**	**89**	P	**Pn**	**10 33 50.5**	**+0.8**
MORF				S	**Sn**	**10 34 28.4**	**-0.3**
5.0nm,0.3s							
PNCL	**Nicolau / Gran**	**3.45**	**75**	*e*Pn	**Pn**	**10 33 53.6**	**+1.6**
PNCL				*e*Sn	**Sn**	**10 34 32.4**	**-0.6**
PNCL				A	A	10 34 40.6	
4.1nm,0.2s							
PNCL	**Nicolau / Gran**	**3.45**	**75**	*e*Pn	**Pn**	**10 33 53.6**	**+1.6**
PNCL				*e*Sn	**Sn**	**10 34 32.4**	**-0.6**
MESJ	**Messejana**	**3.65**	**80**	*e*P	**Pn**	**10 33 56.2**	**+1.4**
MESJ				*e*S	**Sn**	**10 34 36.0**	**-1.8**
MESJ				AML	AML	10 34 40.1	
comp=N,6.4nm,0.4s							
MESJ	**Messejana**	**3.65**	**80**	*e*Pn	**Pn**	**10 33 57.0**	**+2.3**
MESJ				*e*Sn	**Sn**	**10 34 37.0**	**-0.8**
MESJ				A	A	10 34 40.5	
comp=N,3.3nm,0.2s							
MESJ	**Messejana**	**3.65**	**80**	P	**Pn**	**10 33 56.2**	**+1.4**
MESJ				S	**Sn**	**10 34 37.0**	**-0.8**
comp=N,3.3nm,0.2s							
MESJ	**Messejana**	**3.65**	**80**	P	**Pn**	**10 33 56.2**	**+1.4**
MESJ	**Messejana**	**3.65**	**80**	*e*Pn	**Pn**	**10 33 57.0**	**+2.3**
MESJ				S	**Sn**	**10 34 37.0**	**-0.8**
comp=N,3.3nm,0.2s							
PCVE	**Castro Verde**	**3.77**	**84**	*e*Pn	**Pn**	**10 33 58.4**	**+2.0**
PCVE				*e*Sn	**Sn**	**10 34 39.8**	**-1.1**
PCVE				A	A	10 34 46.2	
comp=N,3.5nm,0.1s							
PCVE	**Castro Verde**	**3.77**	**84**	P	**Pn**	**10 33 58.4**	**+2.0**
PCVE				S	**Sn**	**10 34 39.8**	**-1.1**
comp=N,3.5nm,0.1s							
PCVE	**Castro Verde**	**3.77**	**84**	P	**Pn**	**10 33 58.4**	**+2.0**
PCVE				S	**Sn**	**10 34 39.8**	**-1.1**
comp=N,3.5nm,0.1s							
ALMR	**Almeirim**	**3.78**	**59**	*e*P	**Pn**	**10 33 58.2**	**+1.7**
ALMR				*e*S	**Sn**	**10 34 39.1**	**-1.9**
ALMR				AML	AML	10 34 44.4	
comp=N,21nm,0.5s							
ALMR	**Almeirim**	**3.78**	**59**	*e*Pn	**Pn**	**10 33 58.7**	**+2.2**
ALMR				*e*Sn	**Sn**	**10 34 41.7**	**+0.7**
ALMR				A	A	10 34 51.8	
comp=N,14nm,0.4s							
ALMR	**Almeirim**	**3.78**	**59**	P	**Pn**	**10 33 58.2**	**+1.7**
ALMR				P	Pb	10 33 58.7	-6.3
ALMR				S	**Sn**	**10 34 41.7**	**+0.7**
comp=N,7.1nm,0.4s							
ALMR	**Almeirim**	**3.78**	**59**	P	**Pn**	**10 33 58.7**	**+2.2**
ALMR				S	**Sn**	**10 34 41.7**	**+0.7**
comp=N,7.1nm,0.4s							
PBDV	**Barranco-do-Ve**	**3.85**	**89**	*e*Pn	**Pn**	**10 33 59.4**	**+1.8**
PBDV				*e*Sn	**Sn**	**10 34 43.0**	**+0.1**
PBDV				A	A	10 34 54.0	
comp=N,3.3nm,1.0s							
PBDV	**Barranco-do-Ve**	**3.85**	**89**	P	**Pn**	**10 33 59.4**	**+1.8**
PBDV				S	**Sn**	**10 34 43.0**	**+0.1**
comp=N,3.3nm,1.0s							
PBDV	**Barranco-do-Ve**	**3.85**	**89**	P	**Pn**	**10 33 59.4**	**+1.8**
PBDV				S	**Sn**	**10 34 43.0**	**+0.1**
comp=N,3.3nm,1.0s							
EVO	**Evora**	**3.95**	**70**	*e*Pn	**Pn**	**10 34 01.1**	**+2.2**
EVO				*e*Sn	**Sn**	**10 34 44.7**	**-0.6**
EVO				A	A	10 34 49.9	
comp=N,8.0nm,0.1s							
EVO	**Evora**	**3.95**	**70**	P	**Pn**	**10 34 00.5**	**+1.6**
EVO				S	**Sn**	**10 34 44.7**	**-0.6**
comp=N,8.0nm,0.1s							
EVO	**Evora**	**3.95**	**70**	P	**Pn**	**10 34 00.5**	**+1.6**
EVO	**Evora**	**3.95**	**70**	*e*Pn	**Pn**	**10 34 01.1**	**+2.2**
EVO				S	**Sn**	**10 34 44.7**	**-0.6**
comp=N,8.0nm,0.1s							
PBEJ	**Beja**	**3.95**	**78**	*e*Pn	**Pn**	**10 34 00.7**	**+1.8**
PBEJ				*e*Sn	**Sn**	**10 34 43.7**	**-1.6**
PBEJ				A	A	10 34 49.5	
comp=N,7.1nm,0.2s							
PBEJ	**Beja**	**3.95**	**78**	P	**Pn**	**10 34 00.7**	**+1.8**
PBEJ				Sn	**Sn**	**10 34 43.7**	**-1.6**
comp=N,3.6nm,0.2s							
PBEJ	**Beja**	**3.95**	**78**	P	**Pn**	**10 34 00.7**	**+1.8**
PBEJ				Sn	**Sn**	**10 34 43.7**	**-1.6**
comp=N,3.6nm,0.2s							
PVAQ	**Vaqueiros**	**4.02**	**87**	*e*Pn	**Pn**	**10 34 01.2**	**+1.3**
PVAQ				*e*Sn	**Sn**	**10 34 46.0**	**-1.0**
PVAQ				A	A	10 34 51.3	
comp=N,5.2nm,0.1s							
PVAQ	**Vaqueiros**	**4.02**	**87**	P	**Pn**	**10 34 01.2**	**+1.3**
PVAQ				S	**Sn**	**10 34 46.0**	**-1.0**
comp=N,5.2nm,0.1s							
PVAQ	**Vaqueiros**	**4.02**	**87**	P	**Pn**	**10 34 01.2**	**+1.3**
PVAQ				S	**Sn**	**10 34 46.0**	**-1.0**
comp=N,5.2nm,0.1s							
PTOM	**Tomar**	**4.12**	**55**	*e*Pn	**Pn**	**10 34 03.9**	**+2.6**
PTOM				*e*Sn	**Sn**	**10 34 49.9**	**+0.3**
PTOM				A	A	10 34 56.0	
comp=N,10nm,0.3s							
PTOM	**Tomar**	**4.12**	**55**	P	**Pn**	**10 34 03.9**	**+2.6**
PTOM				S	**Sn**	**10 34 49.9**	**+0.3**
comp=N,5.2nm,0.3s							
PTOM	**Tomar**	**4.12**	**55**	P	**Pn**	**10 34 03.9**	**+2.6**
PTOM				S	**Sn**	**10 34 49.9**	**+0.3**
comp=N,5.2nm,0.3s							
EGRO	**El Granado**	**4.21**	**85**	P	**Pn**	**10 34 03.6**	**+1.2**
comp=N,1.9nm,0.1s,SNR=32							
EGRO				S	**Sn**	**10 34 50.9**	**-0.7**
comp=N,4.5nm,0.1s,SNR=6.9							
EGRO	**El Granado**	**4.21**	**85**	P	**Pn**	**10 34 03.6**	**+1.2**
comp=N,1.9nm,0.1s,SNR=32							
EGRO				S	**Sn**	**10 34 50.9**	**-0.7**
comp=N,4.5nm,0.1s,SNR=6.9							
PCAS	**Casmilo, Conde**	**4.32**	**49**	*e*Pn	**Pn**	**10 34 06.0**	**+2.0**
PCAS				*e*Sn	**Sn**	**10 34 54.9**	**+0.5**
PCAS				A	A	10 35 10.5	
comp=N,3.5nm,0.4s							
PCAS	**Casmilo, Conde**	**4.32**	**49**	*e*Pn	**Pn**	**10 34 06.0**	**+2.0**
PCAS				*e*Sn	**Sn**	**10 34 54.9**	**+0.5**
PESTR	**Estremoz**	**4.37**	**67**	*e*Pn	**Pn**	**10 34 06.5**	**+1.8**
PESTR				*e*Sn	**Sn**	**10 34 55.0**	**-0.6**
PESTR				A	A	10 35 00.4	
comp=N,2.9nm,0.6s							
PESTR	**Estremoz**	**4.37**	**67**	*e*Pn	**Pn**	**10 34 06.5**	**+1.8**
PESTR				*e*Sn	**Sn**	**10 34 55.0**	**-0.6**
PBAR	**Barrancos**	**4.62**	**77**	*e*Pn	**Pn**	**10 34 09.8**	**+1.7**
PBAR				*e*Sn	**Sn**	**10 35 00.9**	**-0.9**
PBAR				A	A	10 35 07.0	
comp=N,5.8nm,0.4s							
PBAR	**Barrancos**	**4.62**	**77**	P	**Pn**	**10 34 09.8**	**+1.7**
PBAR				S	**Sn**	**10 35 00.9**	**-0.9**
comp=N,5.8nm,0.4s							
PBAR	**Barrancos**	**4.62**	**77**	P	**Pn**	**10 34 09.8**	**+1.7**
PBAR				S	**Sn**	**10 35 00.9**	**-0.9**
comp=N,5.8nm,0.4s							
PMRV	**Marv??o**	**4.72**	**62**	*e*Pn	**Pn**	**10 34 11.1**	**+1.6**
PMRV				*e*Sn	**Sn**	**10 35 03.5**	**-0.9**
PMRV				A	A	10 35 10.2	
comp=N,3.3nm,0.4s							
PMRV	**Marv??o**	**4.72**	**62**	P	**Pn**	**10 34 11.1**	**+1.6**
PMRV				S	**Sn**	**10 35 03.5**	**-0.9**
comp=N,3.3nm,0.4s							
PMRV	**Marv??o**	**4.72**	**62**	P	**Pn**	**10 34 11.1**	**+1.6**
PMRV				S	**Sn**	**10 35 03.5**	**-0.9**
comp=N,3.3nm,0.4s							
EBAD	**Badajoz**	**4.76**	**71**	P	**Pn**	**10 34 11.8**	**+1.7**
comp=N,2.2nm,0.1s,SNR=7.9							
EBAD				S	**Sn**	**10 35 03.0**	**-2.4**
comp=N,2.5nm,0.1s,SNR=7.9							
EBAD	**Badajoz**	**4.76**	**71**	P	**Pn**	**10 34 11.8**	**+1.7**
comp=N,2.2nm,0.1s,SNR=7.9							
EBAD				S	**Sn**	**10 35 03.0**	**-2.4**
comp=N,2.5nm,0.1s,SNR=7.9							
PCBR	**Castelo Branco**	**4.85**	**57**	*e*Pn	**Pn**	**10 34 13.4**	**+2.1**
PCBR				*e*Sn	**Sn**	**10 35 07.1**	**-0.5**
PCBR				A	A	10 35 13.1	
comp=N,2.5nm,0.3s							
PCBR	**Castelo Branco**	**4.85**	**57**	P	**Pn**	**10 34 13.4**	**+2.1**
PCBR				S	**Sn**	**10 35 07.1**	**-0.5**
comp=N,1.2nm,0.3s							
PCBR	**Castelo Branco**	**4.85**	**57**	P	**Pn**	**10 34 13.4**	**+2.1**
PCBR				S	**Sn**	**10 35 07.1**	**-0.5**
comp=N,1.2nm,0.3s							
EMIN	**Mina Concepcio**	**4.86**	**83**	P	**Pn**	**10 34 12.6**	**+1.2**
comp=N,1.3nm,0.1s,SNR=19							
EMIN				S	**Sn**	**10 35 05.9**	**-1.8**
comp=N,1.5nm,0.1s,SNR=6.6							
EMIN	**Mina Concepcio**	**4.86**	**83**	P	**Pn**	**10 34 12.6**	**+1.2**
comp=N,1.3nm,0.1s,SNR=19							
EMIN				S	**Sn**	**10 35 05.9**	**-1.8**
comp=N,1.5nm,0.1s,SNR=6.6							
PVIS	**Viseu**	**5.10**	**47**	*e*Sn	**Sn**	**10 35 13.4**	**-0.2**

MVO				S	Sn	10 35 30.6	-2.6
	comp=N,0.7nm,0.1s,SNR=7.9						
MVO				eSn	Sn	10 35 31.3	-1.9
EPLA	**Plasencia**	**5.91**	**60**	P	Pn	10 34 27.5	+1.7
	comp=N,1.5nm,0.2s,SNR=8.6						
EPLA				S	Sn	10 35 32.2	-1.4
	comp=N,0.2nm,0.2s						
EPLA	**Plasencia**	**5.91**	**60**	P	Pn	10 34 27.5	+1.7
	comp=N,1.5nm,0.2s,SNR=8.6						
EPLA				S	Sn	10 35 32.2	-1.4
	comp=N,0.2nm,0.2s						
EMAZ	**Mazaricos**	**6.34**	**26**	S	Sn	10 35 39.7	-4.5
	comp=N,3.0nm,0.3s,SNR=7.9						
PBRG	**Braganca**	**6.47**	**44**	ePn	Pn	10 34 35.9	+2.4
PBRG	**Braganca**	**6.47**	**44**	P	Pn	10 34 35.9	+2.4
PBRG	**Braganca**	**6.47**	**44**	P	Pn	10 34 35.9	+2.4
EAGO	**Agolada(Pontev**	**6.56**	**32**	P	Pn	10 34 35.9	+1.2
	comp=N,0.5nm,0.1s,SNR=7.9						
EAGO				S	Sn	10 35 44.5	-5.1
	comp=N,0.4nm,0.1s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.56**	**32**	P	Pn	10 34 35.9	+1.2
	comp=N,0.5nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**6.56**	**43**	P	Pn	10 34 36.6	+1.7
	comp=N,1.5nm,0.3s,SNR=4.0						
ECAL				S	Sn	10 35 46.4	-3.4
	comp=N,0.8nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**6.56**	**43**	P	Pn	10 34 36.6	+1.7
	comp=N,1.5nm,0.3s,SNR=4.0						
PAB	**San Pablo**	**6.97**	**69**	P	Pn	10 34 41.8	+1.3
	comp=N,1.0nm,0.1s,SNR=7.9						
PAB				S	Sn	10 35 56.0	-3.9
	comp=N,0.3nm,0.1s,SNR=7.9						
PAB	**San Pablo**	**6.97**	**69**	P	Pn	10 34 41.8	+1.3
	comp=N,1.0nm,0.1s,SNR=7.9						
PAB				S	Sn	10 35 56.0	-3.9
	comp=N,0.3nm,0.1s,SNR=7.9						
ESDC	**Sonseca Array**	**7.29**	**68**	P	Pn	10 34 46.0	+1.1
	comp=N,2.1nm,0.2s,baz=253,slow=13,SNR=11						
ESDC	**Sonseca Array**	**7.29**	**68**	P	Pn	10 34 46.0	+1.1
	comp=N,2.1nm,0.2s,baz=253,slow=13,SNR=11						
ETOR	**Torete**	**9.04**	**64**	P	Pn	10 35 10.4	+1.6
	comp=N,1.1nm,0.1s,SNR=7.5						
ETOR				S	Sn	10 36 45.5	-5.2
	comp=N,1.4nm,0.6s,SNR=7.9						
ETOR	**Torete**	**9.04**	**64**	P	Pn	10 35 10.4	+1.6
	comp=N,1.1nm,0.1s,SNR=7.5						

*IDC **02** 10:38:14.8±6.2, 55°.45N×154°.18W, h0km, mb2.8/2, mb1 3.2/4, mb1mx3.1/74, mbtmp2.9/4, ML2.6/2, Error ellipse: s-maj=112.7km s-min=27.0km az=82.0*
*ISCJB **02** 10:38:15.5±1.0, 55°.70N±0°.09×154°.3W±0°.1, h33km, mb2.6/2, Error ellipse: s-maj=13.7km s-min=8.0km az=151.7*
*NEIC **02** 10:38:17.1±0.0, 55°.51N×154°.30W, h7km, ML2.8(AEIC), After AEIC.*

ISC 02 10:38:18.0±1.6, 55°.7N±0°.1×154°.3W±0°.1, h35km, n20, σ19°60/18, South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**1.62**	**20**	P	Pn	10 38 43.8	-0.2
OHAK				S	Sn	10 39 04.9	+1.4
KDAK	**Kodiak Island**	**2.28**	**24**	Pn	Pn	10 38 52.9	-0.2
	1.0nm,0.3s,baz=184,slow=7.9,SNR=36						
KDAK				Sn	Sn	10 39 20.6	+0.6
	5.2nm,0.3s,baz=331,slow=22,SNR=40						
ANNE	**Aniakchak Nort**	**2.42**	**301**	P	Pn	10 38 53.6	-1.4
AZAC	**Aniakchak**	**2.49**	**300**	P	Pn	10 38 54.9	-1.2
VNHG	**Veniaminof 1**	**2.78**	**283**	P	Pn	10 38 58.2	-1.9
SEW	**Seward**	**5.11**	**28**	P	Pn	10 39 31.5	-0.4
GHO	**Glory Hole Cre**	**6.69**	**22**	P	Pn	10 39 53.7	0.0
GHO				S	Sn	10 41 07.3	-1.3
SCM	**Sheep Creek Mo**	**7.13**	**28**	P	Pn	10 39 59.6	0.0
KIAG	**Kiagna River**	**8.17**	**45**	P	Pn	10 40 12.9	-1.1
BALM	**Baldy**	**8.24**	**45**	P	Pn	10 40 14.0	-0.9
PNL	**Peninsula**	**8.91**	**57**	P	Pn	10 40 21.5	-2.5
ILAR	**Eielson Array**	**9.80**	**19**	Pn	Pn	10 40 36.8	+0.6
	0.1nm,0.3s,baz=201,slow=12,SNR=4.6						
ILAR				Sn	Sn	10 42 21.6	-3.2
	0.1nm,0.3s,baz=210,slow=23,SNR=2.9						
YKA	**Yellowknife Ar**	**21.19**	**55**	P	P	10 43 02.9	+2.9
	0.1nm,0.5s,baz=265,slow=12,SNR=2.9						
TXAR	**Lajitas Array**	**44.33**	**105**	P	P	10 46 24.9	+0.3
	0.1nm,0.6s,baz=325,slow=4.4,SNR=3.6						
H11N2	**WAKE ISLAND Hy**	**46.20**	**235**	T	T	11 36 11.0	
	baz=29,slow=76,SNR=16						
H11N3	**WAKE ISLAND Hy**	**46.20**	**235**	T	T	11 36 05.7	
	baz=29,slow=76,SNR=21						
H11N1	**WAKE ISLAND Hy**	**46.22**	**235**	T	T	11 36 10.1	
	baz=29,slow=76,SNR=14						
H11S1	**WAKE ISLAND Hy**	**47.35**	**234**	T	T	11 37 37.7	
	baz=29,slow=76,SNR=63						
H11S2	**WAKE ISLAND Hy**	**47.37**	**234**	T	T	11 37 37.6	
	baz=29,slow=76,SNR=26						
H11S3	**WAKE ISLAND Hy**	**47.37**	**234**	T	T	11 37 27.3	
	baz=29,slow=76,SNR=35						

*ISK **02** 10:51:14.3, 37°.78N×26°.72E, h5km, ML2.7/5*
*CSEM **02** 10:51:15.2±0.2, 37°.80N×26°.72E, h2km, ML2.2, Error ellipse: s-maj=4.7km s-min=3.5km az=60.0*
*ISCJB **02** 10:51:15.2±0.5, 37°.80N±0°.02×26°.75E±0°.04, h6km±5km, Error ellipse: s-maj=5.3km s-min=3.4km az=156.8*
*THE **02** 10:51:15.6, 37°.78N×26°.76E, h11km±1km, ML2.2/5, Error ellipse: s-maj=2.2km s-min=0.8km az=71.0*
*DDA **02** 10:51:15.4, 37°.80N×26°.72E, h7km, Ml2.8*
*ATH **02** 10:51:15.7, 37°.75N×26°.73E, h10km±31km, ML2.4/5, Error ellipse: s-maj=31.6km s-min=1.1km az=0.0*

ISC 02 10:51:15.2±0.8, 37°.77N±0°.02×26°.73E±0°.02, h11km±5km, n53, σ0°75/76, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.11**	**127**	P	Pg	10 51 18.0	0.0
SMG				S	Sg	10 51 20.0	-0.1
SMG				AML	AML	10 51 20.2	
	comp=N,14567μm,0.3s						
SMG				AML	AML	10 51 20.6	
	comp=E,9195μm,0.2s						
SMG	**Samos**	**0.11**	**127**	P	Pg	10 51 18.2	+0.1
SMG				S	Sg	10 51 20.1	0.0
SMG	**Samos**	**0.11**	**127**	P	Pg	10 51 18.2	+0.1
SMG				S	Sg	10 51 20.1	0.0
DGB	**˜zmir**	**0.30**	**24**	*i* P	Pg	10 51 21.2	-0.2
GMLD	**Gumuldur**	**0.34**	**26**	PG	Pg	10 51 21.5	-0.5
GMLD				SG	Sg	10 51 26.4	-0.1
GMLD	**Gumuldur**	**0.34**	**26**	*e*Pg	Pg	10 51 21.5	-0.5
GMLD				*e*Sg	Sg	10 51 26.4	-0.1
GCAM	**G?zelcaml?**	**0.41**	**100**	PG	Pg	10 51 22.9	-0.4
GCAM				SG	Sg	10 51 29.3	+0.6
GCAM	**G?zelcaml?**	**0.41**	**100**	*i* P	Pg	10 51 23.3	0.0
GCAM	**G?zelcaml?**	**0.41**	**100**	*e*Pg	Pg	10 51 22.9	-0.4
GCAM	**G?zelcaml?**	**0.41**	**100**	P	Pg	10 51 23.3	0.0
GCAM				*e*Sg	Sg	10 51 29.3	+0.6
ZEY	**˜zmir**	**0.50**	**339**	*i* P	Pg	10 51 25.1	+0.1
URLA	**Izmir**	**0.59**	**350**	PG	Pg	10 51 25.8	-1.0
URLA	**Izmir**	**0.59**	**350**	*i* P	Pg	10 51 25.8	-1.0
URLA	**Izmir**	**0.59**	**350**	P	Pg	10 51 25.8	-1.0
BLCB	**Balcova**	**0.66**	**22**	PG	Pg	10 51 27.6	-0.4
BLCB	**Balcova**	**0.66**	**22**	*e*Pg	Pg	10 51 27.6	-0.4
CHOS	**Chios island**	**0.81**	**319**	P	Pb	10 51 31.9	+0.5
CHOS				S	Sb	10 51 42.2	-0.2
CHOS				AML	AML	10 51 44.4	
	comp=E,463μm,0.2s						
CHOS				AML	AML	10 51 45.5	
	comp=N,352μm,0.2s						
CHOS	**Chios island**	**0.81**	**319**	P	Pb	10 51 31.9	+0.5
CHOS				S	Sb	10 51 43.2	+0.8
CHOS	**Chios island**	**0.81**	**319**	P	Pb	10 51 31.7	+0.3
CHOS				S	Sb	10 51 42.6	+0.2
KRBN	**Karaburun**	**0.83**	**350**	PG	Pg	10 51 30.6	-0.7
KRBN	**Karaburun**	**0.83**	**350**	*e*Pg	Pg	10 51 30.6	-0.7
BODT	**Bodrum**	**0.85**	**147**	PG	Pg	10 51 31.3	-0.3
BODT	**Bodrum**	**0.85**	**147**	P	Pg	10 51 32.0	+0.4
BODT				S	Sb	10 51 44.1	+0.7
BODT	**Bodrum**	**0.85**	**147**	*e*Pg	Pg	10 51 31.3	-0.3
BODT	**Bodrum**	**0.85**	**147**	P	Pg	10 51 32.0	+0.4
BODT				S	Sb	10 51 44.1	+0.7
BDRM	**Kayabasi**	**0.91**	**141**	*i* P	Pb	10 51 33.8	+0.8
BDRM	**Kayabasi**	**0.91**	**141**	P	Pb	10 51 33.8	+0.8
AYDN	**Tasoluk**	**0.92**	**97**	*i* P	Pg	10 51 32.6	-0.3
AYDN	**Tasoluk**	**0.92**	**97**	P	Pg	10 51 32.7	-0.3
AYDB	**Zeytinkoy-Aydi**	**0.94**	**79**	PG	Pg	10 51 32.6	-0.7
AYDB	**Zeytinkoy-Aydi**	**0.94**	**79**	*e*Pg	Pg	10 51 32.6	-0.7
MLSB	**Milas**	**0.96**	**120**	PG	Pg	10 51 33.4	-0.3
MLSB	**Milas**	**0.96**	**120**	*e*Pg	Pg	10 51 33.4	-0.3
APE	**Apeiranthos**	**1.19**	**234**	P	Pg	10 51 37.1	-0.9
APE				S	Sb	10 51 53.8	+0.7
APE				AML	AML	10 51 56.1	
	comp=E,130μm,0.5s						
APE				AML	AML	10 51 57.4	
	comp=N,128μm,0.3s						
APE	**Apeiranthos**	**1.19**	**234**	P	Pg	10 51 37.5	-0.5
APE				S	Sg	10 51 53.3	-0.1
APE	**Apeiranthos**	**1.19**	**234**	P	Pg	10 51 37.5	-0.5
APE				S	Sb	10 51 53.8	+0.7
YER	**Yerkesik**	**1.39**	**117**	P	Pn	10 51 39.0	-1.7
AKHS	**Akhisar**	**1.40**	**37**	*i* P	Pg	10 51 43.3	+1.3
AKHS	**Akhisar**	**1.40**	**37**	P	Pg	10 51 43.3	+1.3
PRK	**Paraskevi**	**1.51**	**346**	P	Pg	10 51 46.9	+2.6
PRK				S	Sg	10 52 03.9	0.0
PRK				AML	AML	10 52 06.2	
	comp=N,306μm,0.8s						
PRK				AML	AML	10 52 06.4	
	comp=E,191μm,0.5s						
PRK	**Paraskevi**	**1.51**	**346**	P	Pn	10 51 41.5	-0.8
PRK				S	Sn	10 52 00.6	-1.4
PRK	**Paraskevi**	**1.51**	**346**	P	Pn	10 51 41.5	-0.8
PRK				S	Sn	10 52 00.6	-1.4
SIGR	**SIGRI**	**1.59**	**335**	PN	Pb	10 51 44.4	-0.2
SIGR	**SIGRI**	**1.59**	**335**	P	Pg	10 51 46.6	+0.9
SIGR				S	Sg	10 52 09.0	+2.6
SIGR	**SIGRI**	**1.59**	**335**	P	Pn	10 51 42.8	-0.5
SIGR				S	Sn	10 52 03.4	-0.5
SIGR	**SIGRI**	**1.59**	**335**	P	Pn	10 51 42.8	-0.5
SIGR	**SIGRI**	**1.59**	**335**	*e*Pn	Pb	10 51 44.4	-0.2
SIGR				S	Sn	10 52 03.4	-0.5
ANAF	**Anafi Island**	**1.61**	**209**	P	Pg	10 51 46.6	+0.6
ANAF				S	Sg	10 52 07.5	+0.6
ANAF				AML	AML	10 52 15.8	
	comp=E,319μm,0.3s						
ANAF				AML	AML	10 52 16.1	
	comp=N,319μm,0.2s						
ANAF	**Anafi Island**	**1.61**	**209**	P	Pg	10 51 46.0	-0.1
ANAF				S	Sg	10 52 07.3	+0.4
MANT	**Manisa**	**1.61**	**63**	*i* P	Pg	10 51 46.5	+0.3
MANT	**Manisa**	**1.61**	**63**	P	Pg	10 51 46.5	+0.3
DEMI	**Demirci**	**2.01**	**50**	*i* P	Pn	10 51 49.0	-0.2
DEMI	**Demirci**	**2.01**	**50**	P	Pn	10 51 49.0	-0.2

*CSEM **02** 10:54:05.6, 35°.37N×27°.90E, h18km, ML2.0/1*

ATH 02 10:54:05.6, 35°.37N×27°.90E, h18km±5km, ML2.0/1, Error ellipse: s-maj=6.5km s-min=1.8km az=323.0, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.63**	**287**	P	Pb	10 54 17.6	-0.4
KARP				S	Sg	10 54 27.1	+0.6
KARP				AML	AML	10 54 29.3	
	comp=E,280μm,0.2s						
KARP				AML	AML	10 54 30.3	
	comp=N,343μm,0.3s						
KARP	**Karpathos**	**0.63**	**287**	P	Pb	10 54 17.7	-0.3
KARP				S	Sg	10 54 26.9	+0.4
ARG	**Arkhangelos**	**0.86**	**12**	P	Pn	10 54 23.1	+0.3
ARG				S	Sg	10 54 33.7	-0.3
ARG	**Arkhangelos**	**0.86**	**12**	P	Pg	10 54 22.6	+0.1
ARG				S	Sg	10 54 33.9	-0.1
ZKR	**Zakros**	**1.40**	**260**	P	Pg	10 54 32.2	-0.4
ZKR	**Zakros**	**1.40**	**260**	P	Pg	10 54 32.1	-0.5
ANAF	**Anafi Island**	**1.99**	**300**	P	Pb	10 54 40.6	-0.6
ANAF	**Anafi Island**	**1.99**	**300**	P	Pb	10 54 40.6	-0.6

JMA 02 10:59:42.0, 41°.98N×139°.33E, h13km±1km, M3.6, 1C-4D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOSM	**Okushiri--Mats**	**0.15**	**46**	↓↓P	Pg	10 59 45.6	0.0
JOSM				*e*S	Sg	10 59 48.3	+0.1
JYM2	**Yakumo 2**	**0.79**	**80**	↓↓P	Pg	10 59 56.8	-0.4
JYM2				*e*S	Sg	11 00 07.5	-0.1
JSH	**Shimam**	**0.85**	**38**	↑↑P	Pg	10 59 57.9	-0.5
JSH				*e*S	Sg	11 00 09.2	-0.3
JSR	**Shiriuchi**	**0.93**	**119**	↓↓P	Pg	10 59 59.3	-0.7
JSR				*e*S	Sg	11 00 11.4	-0.7
JSI2	**Shiura 2**	**1.23**	**138**	P	Pn	11 00 03.4	-1.4
JSI2				*e*S	Sb	11 00 19.5	-1.3
JKB	**Kayabe**	**1.27**	**94**	↓↓P	Pn	11 00 04.3	-1.2

*IDC **02** 11:02:41.8±2.5, 9°.12S×113°.95E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.4/52, mbtmp3.6/5, ML3.3/1, Error ellipse: s-maj=160.2km s-min=25.0km az=49.0*
*ISCJB **02** 11:02:48.0±0.6, 8°.24S±0°.06×114°.95E±0°.03, h18km, mb3.6/4, Error ellipse: s-maj=8.8km s-min=4.8km az=2.0*
*DJA **02** 11:02:48.8±0.3, 8°S±3°×11°5E±°, h10km, M3.6/10, MLv3.6/10*

ISC 02 11:02:47.9±0.8, 8°20S±0°.06×114°.90E±0°.04, h18km, n13, σ0°94/16, mb3.6/4, Bali region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRBI	**Singaraja**	**0.33**	**70**	P	Pg	11 02 55.0	+0.1
SRBI				S	Sg	11 03 00.8	+1.2
DNP	**Denpasar**	**0.56**	**148**	P	Pg	11 02 59.9	+0.7
DNP				S	Sn	11 03 10.2	+0.3
IGBI	**Denpasar**	**0.66**	**159**	P	Pb	11 03 00.7	-0.2
JAGI	**Jajag, Banyuwa**	**0.79**	**250**	P	Pb	11 03 02.6	-0.6
JAGI				S	Sg	11 03 15.1	+1.1
BLJI	**Banyuglugur**	**1.37**	**289**	P	Pn	11 03 13.2	+1.0
BLJI				S	Sg	11 03 32.9	+0.5
GMJI	**Gumukmas**	**1.45**	**267**	P	Pn	11 03 13.9	+0.7
GRJI	**Gresik**	**2.72**	**298**	P	Pn	11 03 31.7	+0.9
PLAI	**Plampang**	**2.91**	**103**	P	Pn	11 03 34.6	+1.2
FITZ	**Fitzroy Crossi**	**14.35**	**134**	Pn	Pn	11 06 08.9	-1.4
	0.1nm,0.3s,baz=319,slow=11,SNR=2.5						
FITZ				Sn	Sn	11 08 41.0	-8.1
	0.0nm,0.3s,baz=225,slow=17,SNR=1.9						
WRA	**Warramunga Arr**	**22.14**	**124**	P	P	11 07 41.8	-1.2
	0.6nm,0.3s,baz=299,slow=12,SNR=6.0						
ASAR	**Alice Springs**	**23.83**	**132**	P	P	11 07 59.6	-0.7
	0.5nm,0.4s,baz=304,slow=9.4,SNR=6.8						
STKA	**Stephens Creek**	**34.22**	**137**	P	P	11 09 28.5	-4.2
	1.1nm,0.8s,baz=322,slow=12,SNR=2.7						
MKAR	**Makanchi Array**	**61.97**	**335**	P	P	11 13 06.5	-0.3
	0.4nm,0.6s,baz=134,slow=8.7,SNR=3.7						

*SFS **02** 11:13:40.0, 37°.25N×12°.60W, h0km, ML3.9*
*MDD **02** 11:13:40.8±1.7, 37°.27N×12°.70W, h0km, mb4.0/7, Error ellipse: s-maj=15.9km s-min=14.0km az=37.0, PRXIMO*
*INMG **02** 11:13:41.9±1.1, 37°.10N×13°.12W, h10km, ML2.4, Error ellipse: s-maj=6.6km s-min=5.4km az=94.0*
*IGIL **02** 11:13:41.9, 37°.26N×12°.67W, h0km, ML2.3*
*CSEM **02** 11:13:43.3±0.4, 37°.39N×12°.50W, h10km, mb4.0, Error ellipse: s-maj=6.8km s-min=5.8km az=49.0*

ISC 02 11:13:38.0±2.8, 37°32N±0°.07×12°7W±0°.1, h10km, n85, σ8°89/163, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.07**	**92**	*e*Pn	Pn	11 14 28.8	+2.2
PFVI				*e*Sn	Sn	11 15 05.0	+1.6
PFVI				A	A	11 15 20.1	
	7.0nm,0.7s						
PFVI	**Vila Bisbo**	**3.07**	**92**	P	Pn	11 14 28.7	+2.2
	2.7nm,0.2s,SNR=7.1						
PFVI				S	Sn	11 15 04.2	+0.8
	2.9nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**3.07**	**92**	*e*Pn	Pn	11 14 28.8	+2.2
PFVI				S	Sn	11 15 04.2	+0.8
	2.9nm,0.1s,SNR=7.9						
PFVI				*e*Sn	Sn	11 15 05.0	+1.6
PMAFR	**Mafra**	**3.13**	**58**	*e*Pn	Pb	11 14 31.0	-2.8
PMAFR				*e*Sn	Sb	11 15 08.7	-3.2
PMAFR				A	A	11 15 16.1	
	14nm,0.5s						
PMAFR	**Mafra**	**3.13**	**58**	P	Pb	11 14 30.9	-2.8
	7.0nm,0.2s,SNR=7.9						
PMAFR				S	Sn	11 15 07.8	+3.0
	8.1nm,0.2s,SNR=7.9						
PMAFR	**Mafra**	**3.13**	**58**	P	Pb	11 14 30.9	-2.8
	7.0nm,0.2s,SNR=7.9						
PMAFR				S	Sn	11 15 07.8	+3.0
	8.1nm,0.2s,SNR=7.9						
PMAFR				*e*Sn	Sb	11 15 08.7	-3.2
MORF	**Marmelete**	**3.20**	**89**	*e*P	Pn	11 14 31.4	+2.9
MORF	**Marmelete**	**3.20**	**89**	*e*Pn	Pn	11 14 31.4	+2.9
MORF				*e*Sn	Sn	11 15 09.3	+2.6
MORF				A	A	11 15 16.8	
	5.5nm,0.3s						
MORF	**Marmelete**	**3.20**	**89**	P	Pn	11 14 31.4	+2.9
MORF				S	Sn	11 15 09.3	+2.6
	5.5nm,0.3s						
MORF	**Marmelete**	**3.20**	**89**	P	Pn	11 14 31.4	+2.9
MORF				S	Sn	11 15 09.3	+2.6
	5.5nm,0.3s						
PNCL	**Nicolau / Gran**	**3.37**	**75**	*e*Pn	Pn	11 14 33.8	+3.0
PNCL				*e*Sn	Sn	11 15 13.0	+2.1
PNCL				A	A	11 15 20.0	
	4.4nm,0.3s						
PNCL	**Nicolau / Gran**	**3.37**	**75**	*e*Pn	Pn	11 14 33.8	+3.0
PNCL				*e*Sn	Sn	11 15 13.0	+2.1
MESJ	**Messejana**	**3.57**	**80**	*e*P	Pn	11 14 36.5	+3.0
MESJ				*e*S	Sn	11 15 17.0	+1.3
MESJ				AML	AML	11 15 19.3	
	comp=N,2.8nm,0.3s						
MESJ	**Messejana**	**3.57**	**80**	*e*Pn	Pb	11 14 37.7	-3.6
MESJ				*e*Sn	Sn	11 15 17.7	+2.0
MESJ				A	A	11 15 24.3	
	comp=N,2.5nm,0.2s						
MESJ	**Messejana**	**3.57**	**80**	P	Pn	11 14 36.5	+3.0
MESJ				S	Sn	11 15 17.0	+1.3
	comp=N,2.8nm,0.3s						
MESJ	**Messejana**	**3.57**	**80**	P	Pn	11 14 36.5	+3.0
MESJ	**Messejana**	**3.57**	**80**	*e*Pn	Pb	11 14 37.7	-3.6
MESJ				S	Sn	11 15 17.0	+1.3
	comp=N,2.8nm,0.3s						
MESJ				*e*Sn	Sn	11 15 17.7	+2.0
PCVE	**Castro Verde**	**3.69**	**84**	*e*Pn	Pn	11 14 39.0	+3.8
PCVE				*e*Sn	Sn	11 15 21.1	+2.3
PCVE	**Castro Verde**	**3.69**	**84**	P	Pn	11 14 39.0	+3.8
PCVE				S	Sn	11 15 21.1	+2.3
PCVE	**Castro Verde**	**3.69**	**84**	P	Pn	11 14 39.0	+3.8
PCVE				S	Sn	11 15 21.1	+2.3
ALMR	**Almeirim**	**3.70**	**59**	*e*P	Pn	11 14 39.2	+3.9
ALMR				*e*S	Sn	11 15 21.0	+2.0
ALMR				AML	AML	11 15 25.9	
	comp=N,20nm,0.4s						
ALMR	**Almeirim**	**3.70**	**59**	*e*Pn	Pn	11 14 39.4	+4.1
ALMR				*e*Sn	Sn	11 15 21.8	+2.8
ALMR				A	A	11 15 29.2	
	comp=N,19nm,0.5s						
ALMR	**Almeirim**	**3.70**	**59**	P	Pn	11 14 39.2	+3.9
ALMR				S	Sn	11 15 21.0	+2.0
	comp=N,10nm,0.4s						
ALMR	**Almeirim**	**3.70**	**59**	P	Pn	11 14 39.2	+3.9
ALMR				S	Sn	11 15 21.0	+2.0
	comp=N,10nm,0.4s						
ALMR				*e*Sn	Sn	11 15 21.8	+2.8
PBDV	**Barranco-do-Ve**	**3.78**	**90**	*e*Pn	Pb	11 14 40.6	-4.2
PBDV				*e*Sn	Sn	11 15 24.1	+3.2
PBDV				A	A	11 15 32.5	
	comp=N,2.9nm,0.5s						
PBDV	**Barranco-do-Ve**	**3.78**	**90**	P	Pb	11 14 40.6	-4.2
PBDV				S	Sn	11 15 24.1	+3.2
	comp=N,2.9nm,0.5s						
PBDV	**Barranco-do-Ve**	**3.78**	**90**	P	Pb	11 14 40.6	-4.2
PBDV				S	Sn	11 15 24.1	+3.2
	comp=N,2.9nm,0.5s						
EVO	**Evora**	**3.87**	**70**	*e*Pn	Pn	11 14 41.5	+3.9
EVO				*e*Sn	Sn	11 15 24.9	+1.7
EVO	**Evora**	**3.87**	**70**	P	Pn	11 14 41.2	+3.6
EVO				S	Sn	11 15 24.4	+1.2
EVO	**Evora**	**3.87**	**70**	P	Pn	11 14 41.2	+3.6
EVO	**Evora**	**3.87**	**70**	*e*Pn	Pn	11 14 41.5	+3.9
EVO				S	Sn	11 15 24.4	+1.2
PBEJ	**Beja**	**3.87**	**78**	*e*Pn	Pn	11 14 41.7	+4.1
PBEJ				*e*Sn	Sn	11 15 26.4	+3.2
PBEJ				A	A	11 15 30.0	
	comp=N,7.2nm,0.3s						
PBEJ	**Beja**	**3.87**	**78**	P	Pn	11 14 41.7	+4.1
PBEJ				S	Sn	11 15 26.4	+3.2
	comp=N,3.6nm,0.3s						
PBEJ	**Beja**	**3.87**	**78**	P	Pn	11 14 41.7	+4.1
PBEJ				S	Sn	11 15 26.4	+3.2
	comp=N,3.6nm,0.3s						
PVAQ	**Vaqueiros**	**3.94**	**87**	*e*Pn	Pn	11 14 42.2	+3.6
PVAQ				*e*Sn	Sn	11 15 27.1	+2.2
PVAQ				A	A	11 15 32.2	
	comp=N,3.6nm,0.1s						
PVAQ	**Vaqueiros**	**3.94**	**87**	P	Pn	11 14 42.2	+3.6
PVAQ				S	Sn	11 15 27.1	+2.2
	comp=N,3.6nm,0.1s						
PVAQ	**Vaqueiros**	**3.94**	**87**	P	Pn	11 14 42.2	+3.6
PVAQ				S	Sn	11 15 27.1	+2.2
	comp=N,3.6nm,0.1s						
PTOM	**Tomar**	**4.05**	**54**	*e*Pn	Pn	11 14 44.6	+4.5
PTOM				*e*Sn	Sn	11 15 31.5	+3.9
PTOM	**Tomar**	**4.05**	**54**	P	Pn	11 14 44.6	+4.5
PTOM				S	Sn	11 15 31.5	+3.9
PTOM	**Tomar**	**4.05**	**54**	P	Pn	11 14 44.6	+4.5
PTOM	

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMIN				S	Sn	11 15 45.0	-0.7
	comp=N,1.8nm,0.3s,SNR=6.5						
PVIS	**Viseu**	**5.03**	**46**	*e*Pn	**Pn**	**11 14 56.9**	**+3.3**
PVIS				*e*Sn	**Sn**	**11 15 53.0**	**+1.2**
PVIS				A	A	11 15 56.3	
	comp=N,3.3nm,0.3s						
PVIS	**Viseu**	**5.03**	**46**	P	**Pn**	**11 14 56.9**	**+3.3**
PVIS				Sn	**Sn**	**11 15 53.0**	**+1.2**
	comp=N,1.7nm,0.3s						
PVIS	**Viseu**	**5.03**	**46**	P	**Pn**	**11 14 56.9**	**+3.3**
PVIS				Sn	**Sn**	**11 15 53.0**	**+1.2**
	comp=N,1.7nm,0.3s						
POLO	**Lamas de Olo**	**5.53**	**42**	*e*Pn	**Pn**	**11 15 03.7**	**+3.1**
POLO				*e*Sn	**Sn**	**11 16 05.6**	**+1.3**
POLO				A	A	11 16 06.4	
	comp=N,0.8nm,1.0s						
POLO	**Lamas de Olo**	**5.53**	**42**	*e*Pn	**Pn**	**11 15 03.7**	**+3.1**
POLO				*e*Sn	**Sn**	**11 16 05.6**	**+1.3**
PGAV	**Gavieira, Arco**	**5.75**	**35**	*e*Pn	**Pn**	**11 15 07.1**	**+3.6**
PGAV				*e*Sn	**Sn**	**11 16 09.4**	**-0.1**
PGAV				A	A	11 16 12.0	
	comp=N,2.6nm,0.5s						
PGAV	**Gavieira, Arco**	**5.75**	**35**	*e*Pn	**Pn**	**11 15 07.1**	**+3.6**
PGAV				*e*Sn	**Sn**	**11 16 09.4**	**-0.1**
ELOB	**Lobios**	**5.77**	**37**	P	**Pn**	**11 15 06.6**	**+2.9**
	comp=N,0.4nm,0.2s,SNR=7.9						
ELOB				S	**Sn**	**11 16 09.2**	**-0.8**
	comp=N,0.9nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.77**	**37**	P	**Pn**	**11 15 06.6**	**+2.9**
	comp=N,0.4nm,0.2s,SNR=7.9						
ELOB				S	**Sn**	**11 16 09.2**	**-0.8**
	comp=N,0.9nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**5.80**	**80**	P	**Pn**	**11 15 06.7**	**+2.6**
	comp=N,0.8nm,0.1s,SNR=18						
ECAB				S	**Sn**	**11 16 10.0**	**-0.6**
	comp=N,1.1nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**5.80**	**80**	P	**Pn**	**11 15 06.7**	**+2.6**
	comp=N,0.8nm,0.1s,SNR=18						
ECAB				S	**Sn**	**11 16 10.0**	**-0.6**
	comp=N,1.1nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**5.82**	**47**	*e*Sn	**Sn**	**11 16 11.3**	**0.0**
MVO				A	A	11 16 18.2	
	comp=N,1.9nm,0.2s						
MVO	**Moncorvo**	**5.82**	**47**	P	**Pn**	**11 15 07.8**	**+3.3**
	comp=N,0.8nm,0.1s,SNR=7.9						
MVO				S	**Sn**	**11 16 11.2**	**-0.1**
	comp=N,1.4nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**5.82**	**47**	P	**Pn**	**11 15 07.8**	**+3.3**
	comp=N,0.8nm,0.1s,SNR=7.9						
MVO				*e*Sn	**Sn**	**11 16 11.3**	**0.0**
EPLA	**Plasencia**	**5.83**	**60**	P	**Pn**	**11 15 07.5**	**+2.9**
	comp=N,1.5nm,0.3s,SNR=5.6						
EPLA				S	**Sn**	**11 16 12.5**	**+0.9**
	comp=N,1.1nm,0.1s						
EPLA	**Plasencia**	**5.83**	**60**	P	**Pn**	**11 15 07.5**	**+2.9**
	comp=N,1.5nm,0.3s,SNR=5.6						
EPLA				S	**Sn**	**11 16 12.5**	**+0.9**
	comp=N,1.1nm,0.1s						
EADA	**Adamuz**	**6.47**	**80**	P	**Pn**	**11 15 16.4**	**+3.1**
	comp=N,1.0nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**6.47**	**80**	P	**Pn**	**11 15 16.4**	**+3.1**
	comp=N,1.0nm,0.1s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.50**	**31**	P	**Pn**	**11 15 16.3**	**+2.5**
	comp=N,0.7nm,0.2s,SNR=7.9						
EAGO				S	**Sn**	**11 16 24.4**	**-3.6**
	comp=N,0.5nm,0.1s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.50**	**31**	P	**Pn**	**11 15 16.3**	**+2.5**
	comp=N,0.7nm,0.2s,SNR=7.9						
PAB	**San Pablo**	**6.90**	**69**	P	**Pn**	**11 15 22.2**	**+2.9**
	comp=N,0.7nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**11 16 37.6**	**-0.2**
	comp=N,0.3nm,0.2s,SNR=4.0						
PAB	**San Pablo**	**6.90**	**69**	P	**Pn**	**11 15 22.2**	**+2.9**
	comp=N,0.7nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**11 16 37.6**	**-0.2**
	comp=N,0.3nm,0.2s,SNR=4.0						
ESDC	**Sonseca Array**	**7.22**	**68**	P	**Pn**	**11 15 26.0**	**+2.4**
	comp=N,2.2nm,0.1s,baz=252,slow=13,SNR=10						
ESDC	**Sonseca Array**	**7.22**	**68**	P	**Pn**	**11 15 26.0**	**+2.4**
	comp=N,2.2nm,0.1s,SNR=10						
GUD	**Guadarrama**	**7.41**	**61**	P	**Pn**	**11 15 29.9**	**+3.5**
	comp=N,0.8nm,0.2s,SNR=7.9						
GUD	**Guadarrama**	**7.41**	**61**	P	**Pn**	**11 15 29.9**	**+3.5**
	comp=N,0.8nm,0.2s,SNR=7.9						

*SFS **02** 11:25:05.0, 37°.28N×12°.60W, h0km, ML4.0*
*MDD **02** 11:25:05.8±1.7, 37°.26N×12°.65W, h0km, mb4.0/5, Error ellipse: s-maj=14.9km s-min=13.3km az=52.0, PRXIMO*
*IGIL **02** 11:25:06.3, 37°.28N×12°.68W, h0km, ML2.3*
*INMG **02** 11:25:07.1±1.0, 37°.09N×13°.06W, h10km, ML2.4, Error ellipse: s-maj=5.5km s-min=4.5km az=90.0*
*CSEM **02** 11:25:08.4±0.3, 37°.39N×12°.45W, h10km, mb4.0, Error ellipse: s-maj=5.4km s-min=4.7km az=69.0*

ISC 02 11:25:04.4±3.3, 37°.32N±0°.09×12°.7W±0°.2, h10km, n92,
σ1§46/173, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.09**	**92**	*e*Pn	**Pn**	**11 25 53.2**	**0.0**
PFVI				*e*Sn	**Sn**	**11 26 29.0**	**-1.2**
PFVI				A	A	11 26 38.4	
	6.6nm,0.7s						
PFVI	**Vila Bisbo**	**3.09**	**92**	P	**Pn**	**11 25 53.4**	**+0.2**
	1.5nm,0.1s,SNR=7.9						
PFVI				S	**Sn**	**11 26 29.1**	**-1.2**
	1.0nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**3.09**	**92**	P	**Pn**	**11 25 53.4**	**+0.2**
	1.5nm,0.1s,SNR=7.9						
PFVI				S	**Sn**	**11 26 29.1**	**-1.2**
	1.0nm,0.1s,SNR=7.9						
PMST	**Lisbon--Monsan**	**3.11**	**62**	*e*Sn	**Sn**	**11 26 31.2**	**+0.4**
PMST				A	A	11 26 42.9	
	16nm,0.7s						
PMST	**Lisbon--Monsan**	**3.11**	**62**	*e*Sn	**Sn**	**11 26 31.2**	**+0.4**
PMAFR	**Mafra**	**3.15**	**58**	*e*Pn	**Pn**	**11 25 55.2**	**+1.2**
PMAFR				*e*Sn	**Sn**	**11 26 32.6**	**+1.0**
PMAFR				A	A	11 26 40.5	
	15nm,0.4s						
PMAFR	**Mafra**	**3.15**	**58**	P	**Pn**	**11 25 55.4**	**+1.3**
	4.0nm,0.1s,SNR=7.3						
PMAFR				S	**Sn**	**11 26 32.7**	**+1.0**
	12nm,0.2s,SNR=7.2						
PMAFR	**Mafra**	**3.15**	**58**	P	**Pn**	**11 25 55.4**	**+1.3**
	4.0nm,0.1s,SNR=7.3						
PMAFR				*e*Sn	**Sn**	**11 26 32.6**	**+1.0**
PTEO	**Sao Teotonio**	**3.17**	**85**	*e*Pn	**Pn**	**11 25 55.2**	**+0.9**
PTEO				*e*Sn	**Sn**	**11 26 31.1**	**-1.0**
PTEO				A	A	11 26 33.5	
	7.7nm,0.7s						
PTEO	**Sao Teotonio**	**3.17**	**85**	P	**Pn**	**11 25 55.2**	**+0.9**
PTEO				S	**Sn**	**11 26 31.1**	**-1.0**
	3.8nm,0.7s						
PTEO	**Sao Teotonio**	**3.17**	**85**	P	**Pn**	**11 25 55.2**	**+0.9**
PTEO				S	**Sn**	**11 26 31.1**	**-1.0**
	3.8nm,0.7s						
MORF	**Marmelete**	**3.22**	**89**	*e*P	**Pn**	**11 25 55.8**	**+0.7**
MORF	**Marmelete**	**3.22**	**89**	*e*Pn	**Pn**	**11 25 55.6**	**+0.5**
MORF				*e*Sn	**Sn**	**11 26 34.4**	**+0.8**
MORF				A	A	11 26 41.2	
	5.3nm,0.1s						
MORF	**Marmelete**	**3.22**	**89**	P	**Pn**	**11 25 55.8**	**+0.7**
MORF				Sn	**Sn**	**11 26 34.4**	**+0.8**
	5.3nm,0.1s						
MORF	**Marmelete**	**3.22**	**89**	P	**Pn**	**11 25 55.8**	**+0.7**
MORF				Sn	**Sn**	**11 26 34.4**	**+0.8**
	5.3nm,0.1s						
PNCL	**Nicolau / Gran**	**3.40**	**75**	*e*Pn	**Pn**	**11 25 58.9**	**+1.5**
PNCL				*e*Sn	**Sn**	**11 26 37.3**	**-0.5**
PNCL				A	A	11 26 43.5	
	3.7nm,0.1s						
PNCL	**Nicolau / Gran**	**3.40**	**75**	*e*Pn	**Pn**	**11 25 58.9**	**+1.5**
PNCL				*e*Sn	**Sn**	**11 26 37.3**	**-0.5**
MESJ	**Messejana**	**3.59**	**80**	*e*P	**Pn**	**11 26 01.4**	**+1.3**
MESJ				*e*S	**Sn**	**11 26 41.5**	**-1.0**
MESJ				AML	AML	11 26 43.5	
	comp=N,3.5nm,0.3s						
MESJ	**Messejana**	**3.59**	**80**	*e*Pn	**Pn**	**11 26 01.8**	**+1.7**
MESJ				*e*Sn	**Sn**	**11 26 41.6**	**-1.0**
MESJ				A	A	11 26 51.5	
	comp=N,2.8nm,0.3s						
MESJ	**Messejana**	**3.59**	**80**	P	**Pn**	**11 26 01.4**	**+1.3**
MESJ				S	**Sn**	**11 26 41.5**	**-1.0**
	comp=N,3.5nm,0.3s						
MESJ	**Messejana**	**3.59**	**80**	P	**Pn**	**11 26 01.4**	**+1.3**
MESJ				*e*Pn	**Pn**	**11 26 01.8**	**+1.7**
MESJ				*e*Sn	**Sn**	**11 26 41.6**	**-1.0**
PCVE	**Castro Verde**	**3.71**	**84**	*e*Pn	**Pn**	**11 26 03.4**	**+1.6**
PCVE				*e*Sn	**Sn**	**11 26 44.8**	**-0.9**
PCVE				A	A	11 26 46.5	
	comp=N,2.5nm,0.7s						
PCVE	**Castro Verde**	**3.71**	**84**	P	**Pn**	**11 26 03.4**	**+1.6**
PCVE				S	**Sn**	**11 26 44.8**	**-0.9**
	comp=N,2.5nm,0.7s						
PCVE	**Castro Verde**	**3.71**	**84**	P	**Pn**	**11 26 03.4**	**+1.6**
PCVE				S	**Sn**	**11 26 44.8**	**-0.9**
	comp=N,2.5nm,0.7s						
ALMR	**Almeirim**	**3.72**	**59**	*e*P	**Pn**	**11 26 03.4**	**+1.5**
ALMR				*e*S	**Sn**	**11 26 45.3**	**-0.6**
ALMR				AML	AML	11 26 47.4	
	comp=N,15nm,0.8s						
ALMR	**Almeirim**	**3.72**	**59**	*e*Pn	**Pn**	**11 26 03.5**	**+1.5**
ALMR				*e*Sn	**Sn**	**11 26 46.3**	**+0.4**
ALMR				A	A	11 26 53.8	
	comp=N,26nm,0.5s						
ALMR	**Almeirim**	**3.72**	**59**	P	**Pn**	**11 26 03.4**	**+1.5**
ALMR				S	**Sn**	**11 26 45.3**	**-0.6**
	comp=N,7.7nm,0.8s						
ALMR	**Almeirim**	**3.72**	**59**	P	**Pn**	**11 26 03.4**	**+1.5**
ALMR				S	**Sn**	**11 26 45.3**	**-0.6**
	comp=N,7.7nm,0.8s						
ALMR				*e*Sn	Sb	11 26 46.3	-9.1
PBDV	**Barranco-do-Ve**	**3.80**	**90**	*e*Pn	**Pn**	**11 26 04.6**	**+1.6**
PBDV				*e*Sn	**Sn**	**11 26 48.0**	**+0.2**
PBDV				A	A	11 26 53.0	
	comp=N,3.8nm,0.3s						
PBDV	**Barranco-do-Ve**	**3.80**	**90**	P	**Pn**	**11 26 04.6**	**+1.6**
PBDV				S	**Sn**	**11 26 48.0**	**+0.2**
	comp=N,3.8nm,0.3s						
PBDV	**Barranco-do-Ve**	**3.80**	**90**	P	**Pn**	**11 26 04.6**	**+1.6**
PBDV				S	**Sn**	**11 26 48.0**	**+0.2**
	comp=N,3.8nm,0.3s						
EVO	**Evora**	**3.89**	**70**	*e*Pn	**Pn**	**11 26 05.8**	**+1.5**
EVO				*e*Sn	**Sn**	**11 26 50.5**	**+0.4**
EVO				A	A	11 26 55.6	
	comp=N,5.9nm,0.1s						
EVO	**Evora**	**3.89**	**70**	P	**Pn**	**11 26 05.6**	**+1.3**
EVO				S	**Sn**	**11 26 50.5**	**+0.4**
	comp=N,5.9nm,0.1s						
EVO	**Evora**	**3.89**	**70**	P	**Pn**	**11 26 05.6**	**+1.3**
EVO				*e*S	**Sn**	**11 26 48.4**	**-1.7**
EVO				*e*Sn	Sb	11 26 50.5	-10
PBEJ	**Beja**	**3.89**	**78**	*e*Pn	**Pn**	**11 26 05.8**	**+1.5**
PBEJ				*e*Sn	**Sn**	**11 26 49.0**	**-1.1**
PBEJ				A	A	11 26 54.4	
	comp=N,6.8nm,0.2s						
PBEJ	**Beja**	**3.89**	**78**	P	**Pn**	**11 26 05.8**	**+1.5**
PBEJ				S	**Sn**	**11 26 49.0**	**-1.1**
	comp=N,3.4nm,0.2s						
PBEJ	**Beja**	**3.89**	**78**	P	**Pn**	**11 26 05.8**	**+1.5**
PBEJ				S	**Sn**	**11 26 49.0**	**-1.1**
	comp=N,3.4nm,0.2s						
PVAQ	**Vaqueiros**	**3.96**	**87**	*e*Pn	**Pn**	**11 26 06.6**	**+1.3**
PVAQ				*e*Sn	**Sn**	**11 26 51.4**	**-0.4**
PVAQ				A	A	11 26 58.1	
	comp=N,2.9nm,0.3s						
PVAQ	**Vaqueiros**	**3.96**	**87**	P	**Pn**	**11 26 06.6**	**+1.3**
PVAQ				S	**Sn**	**11 26 51.4**	**-0.4**
	comp=N,2.9nm,0.3s						
PVAQ	**Vaqueiros**	**3.96**	**87**	P	**Pn**	**11 26 06.6**	**+1.3**
PVAQ				S	**Sn**	**11 26 51.4**	**-0.4**
	comp=N,2.9nm,0.3s						
PTOM	**Tomar**	**4.07**	**54**	*e*Pn	**Pn**	**11 26 08.9**	**+2.2**
PTOM				*e*Sn	**Sn**	**11 26 55.2**	**+0.8**
PTOM				A	A	11 27 01.9	
	comp=N,7.0nm,0.2s						
PTOM	**Tomar**	**4.07**	**54**	P	**Pn**	**11 26 08.9**	**+2.2**
PTOM				S	**Sn**	**11 26 55.2**	**+0.8**
	comp=N,3.5nm,0.2s						
PTOM	**Tomar**	**4.07**	**54**	P	**Pn**	**11 26 08.9**	**+2.2**
PTOM				S	**Sn**	**11 26 55.2**	**+0.8**
	comp=N,3.5nm,0.2s						
EGRO	**El Granado**	**4.15**	**85**	P	**Pn**	**11 26 08.7**	**+0.9**
	comp=N,1.0nm,0.1s,SNR=9.9						
EGRO				S	**Sn**	**11 26 55.1**	**-1.3**
	comp=N,0.4nm,0.2s,SNR=8.8						
EGRO	**El Granado**	**4.15**	**85**	P	**Pn**	**11 26 08.7**	**+0.9**
	comp=N,1.0nm,0.1s,SNR=9.9						
EGRO				S	**Sn**	**11 26 55.1**	**-1.3**
	comp=N,0.4nm,0.2s,SNR=8.8						
PCAS	**Casmilo, Conde**	**4.27**	**49**	*e*Pn	**Pn**	**11 26 11.3**	**+1.8**
PCAS				*e*Sn	**Sn**	**11 26 59.9**	**+0.5**
PCAS				A	A	11 27 04.9	
	comp=N,2.2nm,0.8s						
PCAS	**Casmilo, Conde**	**4.27**	**49**	*e*Pn	**Pn**	**11 26 11.3**	**+1.8**
PCAS				*e*Sn	**Sn**	**11 26 59.9**	**+0.5**
PESTR	**Estremoz**	**4.31**	**67**	*e*Pn	**Pn**	**11 26 11.6**	**+1.5**
PESTR				*e*Sn	**Sn**	**11 27 00.1**	**-0.3**
PESTR				A	A	11 27 06.4	
	comp=N,3.2nm,0.6s						
PESTR	**Estremoz**	**4.31**	**67**	*e*Pn	**Pn**	**11 26 11.6**	**+1.5**
PESTR				*e*Sn	**Sn**	**11 27 00.1**	**-0.3**
PBAR	**Barrancos**	**4.56**	**77**	*e*Pn	**Pn**	**11 26 14.9**	**+1.4**
PBAR				*e*Sn	**Sn**	**11 27 05.8**	**-0.7**
PBAR				A	A	11 27 11.8	
	comp=N,4.5nm,0.5s						
PBAR	**Barrancos**	**4.56**	**77**	P	**Pn**	**11 26 14.9**	**+1.4**
PBAR				S	**Sn**	**11 27 05.8**	**-0.7**
	comp=N,4.5nm,0.5s						
PBAR	**Barrancos**	**4.56**	**77**	P	**Pn**	**11 26 14.9**	**+1.4**
PBAR				S	**Sn**	**11 27 05.8**	**-0.7**
	comp=N,4.5nm,0.5s						
PMRV	**Marv??o**	**4.67**	**62**	*e*Pn	**Pn**	**11 26 16.3**	**+1.3**
PMRV				*e*Sn	**Sn**	**11 27 08.7**	**-0.5**
PMRV				A	A	11 27 15.1	
	comp=N,3.5nm,0.5s						
PMRV	**Marv??o**	**4.67**	**62**	P	**Pn**	**11 26 16.3**	**+1.3**
PMRV				S	**Sn**	**11 27 08.7**	**-0.5**
	comp=N,3.5nm,0.5s						
PMRV	**Marv??o**	**4.67**	**62**	P	**Pn**	**11 26 16.3**	**+1.3**
PMRV				S	**Sn**	**11 27 08.7**	**-0.5**
	comp=N,3.5nm,0.5s						
EBAD	**Badajoz**	**4.71**	**71**	P	**Pn**	**11 26 17.0**	**+1.5**
	comp=N,1.5nm,0.1s,SNR=14						
EBAD				S	**Sn**	**11 27 08.9**	**-1.2**
	comp=N,4.2nm,0.2s,SNR=5.9						
EBAD	**Badajoz**	**4.71**	**71**	P	**Pn**	**11 26 17.0**	**+1.5**
	comp=N,1.5nm,0.1s,SNR=14						
EBAD				S	**Sn**	**11 27 08.9**	**-1.2**
	comp=N,4.2nm,0.2s,SNR=5.9						
PCBR	**Castelo Branco**	**4.80**	**57**	*e*Pn	**Pn**	**11 26 18.6**	**+1.9**
PCBR				*e*Sn	**Sn**	**11 27 11.4**	**-1.0**
PCBR	**Castelo Branco**	**4.80**	**57**	P	**Pn**	**11 26 18.6**	**+1.9**
PCBR				S	**Sn**	**11 27 11.4**	**-1.0**
PCBR	**Castelo Branco**	**4.80**	**57**	P	**Pn**	**11 26 18.6**	**+1.9**
PCBR				S	**Sn**	**11 27 11.4**	**-1.0**
EMIN	**Mina Concepcio**	**4.81**	**83**	P	**Pn**	**11 26 17.7**	**+0.9**
	comp=N,0.6nm,0.1s,SNR=13						
EMIN				S	**Sn**	**11 27 10.5**	**-2.1**
	comp=N,0.7nm,0.2s,SNR=7.4						
EMIN	**Mina Concepcio**	**4.81**	**83**	P	**Pn**	**11 26 17.7**	**+0.9**
	comp=N,0.6nm,0.1s,SNR=13						
EMIN				S	**Sn**	**11 27 10.5**	**-2.1**
	comp=N,0.7nm,0.2s,SNR=7.4						
PVIS	**Viseu**	**5.05**	**46**	*e*Pn	**Pn**	**11 26 22.4**	**+2.2**
PVIS				*e*Sn	**Sn**	**11 27 17.9**	**-0.7**
PVIS				A	A	11 27 22.6	
	comp=N,3.2nm,0.1s						
PVIS	**Viseu**	**5.05**	**46**	P	**Pn**	**11 26 22.4**	**+2.2**
PVIS				S	**Sn**	**11 27 17.9**	**-0.7**
	comp=N,1.6nm,0.1s						
PVIS	**Viseu**	**5.05**	**46**	P	**Pn**	**11 26 22.4**	**+2.2**
PVIS				S	**Sn**	**11 27 17.9**	**-0.7**
	comp=N,1.6nm,0.1s						
POLO	**Lamas de Olo**	**5.55**	**42**	*e*Pn	**Pn**	**11 26 28.9**	**+1.7**
POLO				*e*Sn	**Sn**	**11 27 30.1**	**-1.0**
POLO				A	A	11 27 40.2	
	comp=N,0.6nm,0.3s						
POLO	**Lamas de Olo**	**5.55**	**42**	*e*Pn	**Pn**	**11 26 28.9**	**+1.7**
POLO				*e*Sn	**Sn**	**11 27 30.1**	**-1.0**
PCAB	**Cabril**	**5.68**	**38**	*e*Pn	**Pn**	**11 26 30.7**	**+1.8**
PCAB				*e*Sn	**Sn**	**11 27 32.5**	**-1.6**
PCAB	**Cabril**	**5.68**	**38**	P	**Pn**	**11 26 30.7**	**+1.8**
PCAB				S	**Sn**	**11 27 32.5**	**-1.6**
PCAB	**Cabril**	**5.68**	**38**	P	**Pn**	**11 26 30.7**	**+1.8**
PCAB				S	**Sn**	**11 27 32.5**	**-1.6**
PGAV	**Gavieira, Arco**	**5.76**	**35**	*e*Pn	**Pn**	**11 26 31.3**	**+1.3**
PGAV				*e*Sn	**Sn**	**11 27 34.9**	**-1.3**
PGAV				A	A	11 27 37.5	
	comp=N,2.2nm,0.5s						
PGAV	**Gavieira, Arco**	**5.76**	**35**	*e*Pn	**Pn**	**11 26 31.3**	**+1.3**
PGAV				*e*Sn	**Sn**	**11 27 34.9**	**-1.3**
ELOB	**Lobios**	**5.78**	**37**	P	**Pn**	**11 26 32.0**	**+1.7**
	comp=N,0.4nm,0.2s,SNR=7.9						
ELOB				S	**Sn**	**11 27 34.6**	**-2.2**
	comp=N,0.6nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.78**	**37**	P	**Pn**	**11 26 32.0**	**+1.7**
	comp=N,0.4nm,0.2s,SNR=7.9						
ELOB				S	**Sn**	**11 27 34.6**	**-2.2**
	comp=N,0.6nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**5.82**	**80**	P	**Pn**	**11 26 31.5**	**+0.8**
	comp=N,0.8nm,0.1s,SNR=15						
ECAB				S	**Sn**	**11 27 35.3**	**-2.3**
	comp=N,0.1nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**5.82**	**80**	P	**Pn**	**11 26 31.5**	**+0.8**
	comp=N,0.8nm,0.1s,SNR=15						
ECAB				S	**Sn**	**11 27 35.3**	**-2.3**
	comp=N,0.1nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**5.84**	**47**	*e*Pn	**Pn**	**11 26 32.3**	**+1.2**
MVO				*e*Sn	**Sn**	**11 27 36.1**	**-2.0**
MVO				A	A	11 27 47.2	
	comp=N,2.1nm,0.6s						
MVO	**Moncorvo**	**5.84**	**47**	P	**Pn**	**11 26 32.2**	**+1.2**
	comp=N,1.1nm,0.2s,SNR=7.9						
MVO				S	**Sn**	**11 27 35.2**	**-2.9**
	comp=N,0.9nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**5.84**	**47**	*e*Pn	**Pn**	**11 26 32.3**	**+1.2**
MVO				S	**Sn**	**11 27 35.2**	**-2.9**
	comp=N,0.9nm,0.1s,SNR=7.9						
MVO				*e*Sn	**Sn**	**11 27 36.1**	**-2.0**
EPLA	**Plasencia**	**5.86**	**60**	P	**Pn**	**11 26 33.1**	**+1.8**
	comp=N,0.7nm,0.1s,SNR=5.7						
EPLA				S	**Sn**	**11 27 36.7**	**-1.8**
	comp=N,1.4nm,0.1s						
EPLA	**Plasencia**	**5.86**	**60**	P	**Pn**	**11 26 33.1**	**+1.8**
	comp=N,0.7nm,0.1s,SNR=5.7						
EPLA				S	**Sn**	**11 27 36.7**	**-1.8**
	comp=N,1.4nm,0.1s						
EMAZ	**Mazaricos**	**6.30**	**26**	S	**Sn**	**11 27 45.1**	**-4.3**
	comp=N,0.9nm,0.3s,SNR=4.0						
EADA	**Adamuz**	**6.49**	**80**	P	**Pn**	**11 26 40.8**	**+0.9**
	comp=N,0.8nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**6.49**	**80**	P	**Pn**	**11 26 40.8**	**+0.9**
	comp=N,0.8nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**6.51**	**43**	S	**Sn**	**11 27 53.2**	**-1.6**
	comp=N,0.6nm,0.0s,SNR=7.9						
ECAL	**Calabor**	**6.51**	**43**	S	**Sn**	**11 27 53.2**	**-1.6**
	comp=N,0.6nm,0.0s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.52**	**31**	S	**Sn**	**11 27 50.2**	**-4.6**
	comp=N,0.1nm,0.4s,SNR=7.9						
PAB	**San Pablo**	**6.92**	**69**	P	**Pn**	**11 26 46.7**	**+0.8**
	comp=N,0.6nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**11 28 01.2**	**-3.5**
	comp=N,0.7nm,0.2s,SNR=7.9						
PAB	**San Pablo**	**6.92**	**69**	P	**Pn**	**11 26 46.7**	**+0.8**
	comp=N,0.6nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**11 28 01.2**	**-3.5**
	comp=N,0.7nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	**7.24**	**68**	P	**Pn**	**11 26 50.8**	**+0.5**
	comp=N,4.5nm,0.3s,baz=255,slow=13,SNR=11						
ESDC	**Sonseca Array**	**7.24**	**68**	P	**Pn**	**11 26 50.8**	**+0.5**
	comp=N,4.5nm,0.3s,baz=255,slow=13,SNR=11						

*IDC **02** 11:28:28.9±1.3, 0°.22S×132°.52E, h0km, mb3.6/3, mb1 3.8/5, mb1mx3.5/47, mbtmp3.6/5, ML3.7/2, Error ellipse: s-maj=22.5km s-min=16.7km az=129.0*
*ISCJB **02** 11:28:32.9±0.9, 0°.19S±0°.08×132°.21E±0°.08, h33km, mb3.5/3, Error ellipse: s-maj=12.7km s-min=9.3km az=136.2*
*DJA **02** 11:28:33.2±1.5, 0°S±8°×13°2E± °, h67km±28km, M4.1/5, MLv4.1/5*

ISC 02 11:28:34.9±1.3, 0°.2S±0°.1×132°.24E±0°.08, h35km, n9,
σ0§96/11, mb3.4/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**1.16**	**237**	Pg	**Pn**	**11 28 54.8**	**+0.1**
	54nm,0.3s,baz=60,slow=20,SNR=67						
SIJI				Lg	Lg	11 29 14.1	
	58nm,0.3s,baz=162,slow=18,SNR=45						
RKPI	**Ransiki, Papua**	**2.32**	**123**	P	**Pn**	**11 29 10.5**	**-0.1**
RKPI				S	**Sn**	**11 29 39.1**	**+1.1**
FAKI	**Fak Fak**	**2.68**	**180**	P	**Pn**	**11 29 15.6**	**+0.1**
FAKI				S	**Sn**	**11 29 48.1**	**+1.3**
KMPI	**Kaimana, Papua**	**3.71**	**157**	P	**Pn**	**11 29 29.5**	**-0.3

SCTE			AML	AML	
	comp=N,243μm,0.6s				
SCTE			AML	AML	
	comp=E,361μm,1.3s				
SCTE			AML	AML	
	comp=N,243μm,0.6s				
SCTE			AML	AML	
	comp=E,361μm,1.3s				
SCTE			AML	AML	
	comp=N,243μm,0.6s				
PLAC	**Placanica**	**1.36 257**	P	**Pn**	**11 42 38.3 +0.2**
PLAC			S	**Sb**	**11 42 56.1 +0.1**
PLAC	**Placanica**	**1.36 257**	P	**Pn**	**11 42 38.3 +0.2**
PLAC			S	**Sb**	**11 42 56.1 +0.1**
PLAC			AML	AML	
	comp=E,124μm,1.0s				
PLAC			AML	AML	
	comp=N,114μm,1.0s				
PLAC			AML	AML	
	comp=E,124μm,1.0s				
PLAC			AML	AML	
	comp=N,114μm,1.0s				
PLAC			AML	AML	
	comp=E,124μm,1.0s				
PLAC			AML	AML	
	comp=N,114μm,1.0s				
CELI	**Celico**	**1.41 297**	⇑P	**Pn**	**11 42 39.3 +0.4**
CELI			S	**Sn**	**11 42 57.0 -0.2**
CELI	**Celico**	**1.41 297**	P	**Pn**	**11 42 39.3 +0.4**
CELI			S	**Sb**	**11 42 58.0 +0.4**
CELI			AML	AML	
	comp=E,296μm,0.9s				
CELI			AML	AML	
	comp=N,318μm,0.5s				
CELI			AML	AML	
	comp=E,296μm,0.9s				
CELI			AML	AML	
	comp=N,318μm,0.5s				
CELI			AML	AML	
	comp=N,318μm,0.5s				
CELI			AML	AML	
	comp=E,296μm,0.9s				
KEK	**Kerkira**	**1.61 53**	P	**Pg**	**11 42 45.2 +0.4**
KEK	**Kerkira**	**1.61 53**	P	**Pg**	**11 42 45.2 +0.4**
JOPP	**Joppolo**	**1.76 266**	P	**Pn**	**11 42 44.1 +0.5**
JOPP			S	**Sn**	**11 43 05.4 -0.2**
JOPP	**Joppolo**	**1.76 266**	P	**Pn**	**11 42 44.1 +0.5**
JOPP			S	**Sn**	**11 43 05.4 -0.2**
JOPP			AML	AML	
	comp=E,171μm,1.3s				
JOPP			AML	AML	
	comp=N,170μm,0.6s				
JOPP			AML	AML	
	comp=E,171μm,1.3s				
JOPP			AML	AML	
	comp=N,170μm,0.6s				
JOPP			AML	AML	
	comp=E,171μm,1.3s				
JOPP			AML	AML	
	comp=N,170μm,0.6s				
SOI	**Samo**	**1.77 248**	P	**Pn**	**11 42 44.1 +0.4**
SOI	**Samo**	**1.77 248**	P	**Pn**	**11 42 44.1 +0.4**
SOI			AML	AML	
	comp=E,81μm,1.0s				
SOI			AML	AML	
	comp=N,56μm,0.6s				
SOI			AML	AML	
	comp=N,56μm,0.6s				
SOI			AML	AML	
	comp=E,81μm,1.0s				
SRN	**Sarande**	**1.83 52**	P	**Pg**	**11 42 49.3 +0.3**
SRN	**Sarande**	**1.83 52**	P	**Pg**	**11 42 49.3 +0.3**
SGD	**Sagiada**	**1.84 62**	P	**Pg**	**11 42 48.9 -0.4**
SGD	**Sagiada**	**1.84 62**	P	**Pg**	**11 42 48.9 -0.4**
MPAZ	**Palizzi**	**1.85 245**	P	**Pn**	**11 42 45.3 +0.5**
MPAZ	**Palizzi**	**1.85 245**	P	**Pn**	**11 42 45.4 +0.5**
MPAZ			AML	AML	
	comp=E,188μm,0.4s				
MPAZ			AML	AML	
	comp=N,150μm,0.3s				
MPAZ			AML	AML	
	comp=E,188μm,0.4s				
MPAZ			AML	AML	
	comp=N,150μm,0.3s				
CET2	**Cetraro**	**1.85 295**	P	**Pn**	**11 42 45.8 +0.9**
CET2			S	**Sn**	**11 43 08.5 +0.5**
CET2	**Cetraro**	**1.85 295**	P	**Pn**	**11 42 45.8 +0.9**
CET2			S	**Sn**	**11 43 08.5 +0.5**
CET2			AML	AML	
	comp=E,532μm,0.7s				
CET2			AML	AML	
	comp=N,435μm,0.5s				
CET2			AML	AML	
	comp=E,532μm,0.7s				
CET2			AML	AML	
	comp=N,435μm,0.5s				
TAR1	**Taranto**	**1.88 340**	*e*Pn	**Pn**	**11 42 45.3 +0.2**
IGT	**Igoumenitsa**	**1.88 65**	P	**Pg**	**11 42 49.5 -0.5**
IGT	**Igoumenitsa**	**1.88 65**	*e*Pn	**Pg**	**11 42 49.4 -0.5**
MSCL	**Scilla**	**1.91 255**	P	**Pn**	**11 42 45.9 +0.3**
MSCL	**Scilla**	**1.91 255**	P	**Pn**	**11 42 45.9 +0.3**
MSCL			AML	AML	
	comp=E,304μm,1.0s				
MSCL			AML	AML	
	comp=N,209μm,0.5s				
MSCL			AML	AML	
	comp=N,209μm,0.5s				
MSCL			AML	AML	
	comp=E,304μm,1.0s				
FSK	**Fiskardo**	**1.93 98**	P	**Pg**	**11 42 50.8 -0.1**
CGL1	**Ceglie Messapi**	**1.95 345**	*e*Pn	**Pn**	**11 42 47.5 +1.3**
LKD2	**Lefkada island**	**1.98 88**	P	**Pg**	**11 42 51.5 -0.3**
LKD2	**Lefkada island**	**1.98 88**	P	**Pg**	**11 42 51.5 -0.3**
MASS	**Massafra**	**2.02 338**	*e*Pn	**Pn**	**11 42 48.1 +1.0**
VLS	**Valsamata**	**2.02 106**	P	**Pb**	**11 42 51.2 +1.2**
VLS	**Valsamata**	**2.02 106**	P	**Pb**	**11 42 51.3 +1.2**
VLS	**Valsamata**	**2.02 106**	P	**Pb**	**11 42 51.3 +1.2**
VLS			AML	AML	
	comp=E,27μm,0.4s				
VLS			AML	AML	
	comp=N,39μm,0.5s				
VLS			AML	AML	
	comp=E,27μm,0.4s				
VLS			AML	AML	
	comp=N,39μm,0.5s				
MTTG	**Motta San Giov**	**2.06 249**	P	**Pn**	**11 42 47.8 +0.2**
MTTG	**Motta San Giov**	**2.06 249**	P	**Pn**	**11 42 47.9 +0.2**
MTTG			AML	AML	
	comp=E,117μm,0.8s				
MTTG			AML	AML	
	comp=N,119μm,1.0s				
MTTG			AML	AML	
	comp=E,117μm,0.8s				
MTTG			AML	AML	
	comp=N,119μm,1.0s				
MSRU	**Castanea**	**2.11 257**	P	**Pn**	**11 42 48.3 -0.1**
MSRU	**Castanea**	**2.11 257**	P	**Pn**	**11 42 48.3 -0.1**
MSRU			AML	AML	
	comp=E,150μm,0.4s				
MSRU			AML	AML	
	comp=N,117μm,0.9s				
MSRU			AML	AML	
	comp=E,150μm,0.4s				
MSRU			AML	AML	
	comp=N,117μm,0.9s				
FASA	**Fasano**	**2.13 344**	*e*Pn	**Pn**	**11 42 49.7 +1.0**
CUC	**Castrocucco**	**2.17 305**	P	**Pn**	**11 42 50.3 +1.1**
CUC	**Castrocucco**	**2.17 305**	P	**Pn**	**11 42 50.4 +1.1**
CUC			AML	AML	
	comp=E,101μm,0.7s				
CUC			AML	AML	
	comp=N,76μm,0.7s				
CUC			AML	AML	
	comp=N,76μm,0.7s				
CUC			AML	AML	
	comp=E,101μm,0.7s				
ATN	**Antennamare**	**2.17 255**	P	**Pn**	**11 42 49.2 -0.2**
ATN	**Antennamare**	**2.17 255**	P	**Pn**	**11 42 49.2 -0.2**
ATN			AML	AML	
	comp=E,138μm,0.8s				
ATN			AML	AML	
	comp=N,126μm,0.4s				
ATN			AML	AML	
	comp=N,126μm,0.4s				
ATN			AML	AML	
	comp=E,138μm,0.8s				
NOCI	**Noci**	**2.18 338**	P	**Pn**	**11 42 50.4 +1.0**
NOCI	**Noci**	**2.18 338**	P	**Pn**	**11 42 50.4 +1.0**
NOCI			AML	AML	
	comp=E,296μm,1.0s				
NOCI			AML	AML	
	comp=N,322μm,0.3s				
NOCI			AML	AML	
	comp=E,296μm,1.0s				
NOCI			AML	AML	
	comp=N,322μm,0.3s				
KFL	**Anninata**	**2.19 107**	P	**Pb**	**11 42 54.0 +1.0**
KFL	**Anninata**	**2.19 107**	P	**Pb**	**11 42 54.0 +1.0**
MPNC	**Port Mandanici**	**2.26 255**	P	**Pn**	**11 42 50.2 -0.3**
MPNC	**Port Mandanici**	**2.26 255**	P	**Pn**	**11 42 50.2 -0.3**
MPNC			AML	AML	
	comp=E,144μm,0.6s				
MPNC			AML	AML	
	comp=N,231μm,1.0s				
MPNC			AML	AML	
	comp=N,231μm,1.0s				
MPNC			AML	AML	
	comp=E,144μm,0.6s				
MILZ	**Milazzo**	**2.32 259**	P	**Pn**	**11 42 50.9 -0.4**
MILZ	**Milazzo**	**2.32 259**	P	**Pn**	**11 42 50.9 -0.4**
SG1	**Sgolgore (BA)**	**2.35 332**	*e*Pn	**Pn**	**11 42 52.3 +0.5**
MCSR	**Castroreale**	**2.37 254**	P	**Pn**	**11 42 52.9 +0.9**
MCSR	**Castroreale**	**2.37 254**	P	**Pn**	**11 42 52.9 +0.9**
MCSR			AML	AML	
	comp=E,270μm,0.5s				
MCSR			AML	AML	
	comp=N,194μm,0.3s				
MCSR			AML	AML	
	comp=N,194μm,0.3s				
MCSR			AML	AML	
	comp=E,270μm,0.5s				
MTSN	**Montesano sull**	**2.37 310**	P	**Pn**	**11 42 53.4 +1.3**
MTSN	**Montesano sull**	**2.37 310**	P	**Pn**	**11 42 53.4 +1.3**
MTSN			AML	AML	
	comp=E,69μm,1.3s				
MTSN			AML	AML	
	comp=N,66μm,1.5s				
MTSN			AML	AML	
	comp=N,66μm,1.5s				
MTSN			AML	AML	
	comp=E,69μm,1.3s				
MCEL	**Monticello**	**2.38 312**	P	**Pn**	**11 42 53.3 +1.2**
MCEL	**Monticello**	**2.38 312**	P	**Pn**	**11 42 53.3 +1.2**
MCEL			AML	AML	
	comp=E,94μm,0.4s				
MCEL			AML	AML	
	comp=N,82μm,0.6s				
MCEL			AML	AML	
	comp=E,94μm,0.4s				
MCEL			AML	AML	
	comp=N,82μm,0.6s				
MGR	**Morigerati**	**2.42 305**	P	**Pn**	**11 42 53.7 +1.1**
MGR	**Morigerati**	**2.42 305**	P	**Pn**	**11 42 53.7 +1.1**
MGR			AML	AML	
	comp=E,63μm,0.6s				
MGR			AML	AML	
	comp=N,55μm,1.1s				
MGR			AML	AML	
	comp=E,63μm,0.6s				
MGR			AML	AML	
	comp=N,55μm,1.1s				
AMUR	**Altamura**	**2.44 332**	P	**Pn**	**11 42 53.4 +0.5**
AMUR	**Altamura**	**2.44 332**	P	**Pn**	**11 42 53.4 +0.5**
AMUR			AML	AML	
	comp=E,208μm,0.7s				
AMUR			AML	AML	
	comp=N,200μm,0.4s				
AMUR			AML	AML	
	comp=N,200μm,0.4s				
AMUR			AML	AML	
	comp=E,208μm,0.7s				
BULG	**Bulgheria - Ca**	**2.50 303**	P	**Pn**	**11 42 54.1 +0.3**
BULG	**Bulgheria - Ca**	**2.50 303**	P	**Pn**	**11 42 54.1 +0.3**
BULG			AML	AML	
	comp=E,89μm,0.5s				
BULG			AML	AML	
	comp=N,216μm,0.4s				
BULG			AML	AML	
	comp=N,216μm,0.4s				
BULG			AML	AML	
	comp=E,89μm,0.5s				
SLCN	**Sala Consilina**	**2.52 311**	AML	AML	
	comp=E,184μm,0.4s				
SLCN			AML	AML	
	comp=N,103μm,1.3s				
SLCN			AML	AML	
	comp=N,103μm,1.3s				
SLCN			AML	AML	
	comp=E,184μm,0.4s				
BAI	**Bari**	**2.53 338**	*e*Pn	**Pn**	**11 42 50.3 -3.8**
PALZ	**Palazzo San Ge**	**2.74 323**	P	**Pn**	**11 42 57.8 +0.7**
PALZ	**Palazzo San Ge**	**2.74 323**	P	**Pn**	**11 42 57.8 +0.7**
PALZ			AML	AML	
	comp=E,244μm,0.9s				
PALZ			AML	AML	
	comp=N,244μm,1.3s				
PALZ			AML	AML	
	comp=E,244μm,0.9s				
PALZ			AML	AML	
	comp=N,244μm,1.3s				
HCRL	**Carlentini**	**2.86 240**	P	**Pn**	**11 42 57.1 -1.5**
HCRL	**Carlentini**	**2.86 240**	P	**Pn**	**11 42 57.1 -1.5**
HCRL			AML	AML	
	comp=E,216μm,0.4s				
HCRL			AML	AML	
	comp=N,190μm,1.3s				
HCRL			AML	AML	
	comp=N,190μm,1.3s				
HCRL			AML	AML	
	comp=E,216μm,0.4s				
SSY	**Sortino**	**2.90 237**	P	**Pn**	**11 42 57.3 -2.0**
SSY	**Sortino**	**2.90 237**	P	**Pn**	**11 42 57.3 -2.0**
SSY			AML	AML	
	comp=E,140μm,0.8s				
SSY			AML	AML	
	comp=N,338μm,0.4s				
SSY			AML	AML	
	comp=N,338μm,0.4s				
SSY			AML	AML	
	comp=E,140μm,0.8s				
HAVL	**Avola**	**2.98 234**	⇑P	**Pn**	**11 42 58.8 -1.6**
HAVL	**Avola**	**2.98 234**	P	**Pn**	**11 42 58.8 -1.6**
HAVL			AML	AML	
	comp=E,206μm,1.0s				
HAVL			AML	AML	
	comp=N,218μm,1.0s				
HAVL			AML	AML	
	comp=E,206μm,1.0s				
HAVL			AML	AML	
	comp=N,218μm,1.0s				
MEU	**Monte Lauro**	**3.02 238**	P	**Pn**	**11 43 00.1 -0.9**
MEU	**Monte Lauro**	**3.02 238**	P	**Pn**	**11 43 00.1 -0.9**
HMDC	**Modica**	**3.20 237**	P	**Pn**	**11 43 01.8 -1.6**
HMDC	**Modica**	**3.20 237**	P	**Pn**	**11 43 01.8 -1.6**
HMDC			AML	AML	
	comp=E,152μm,0.8s				
HMDC			AML	AML	
	comp=N,128μm,1.3s				
HMDC			AML	AML	
	comp=N,128μm,1.3s				
HMDC			AML	AML	
	comp=E,152μm,0.8s				
FNA	**Florina**	**3.22 50**	*e*Pn	**Pb**	**11 43 09.0 -1.5**
MS1	**Monte Sant'Ang**	**3.38 331**	*e*Pn	**Pn**	**11 43 04.3 -1.6**
MSAG	**Monte S. Angel**	**3.40 331**	P	**Pn**	**11 43 06.6 +0.4**
MSAG	**Monte S. Angel**	**3.40 331**	P	**Pn**	**11 43 06.6 +0.4**
MSAG			AML	AML	
	comp=E,95μm,1.0s				
MSAG			AML	AML	
	comp=N,180μm,0.5s				
MSAG			AML	AML	
	comp=N,180μm,0.5s				
MSAG			AML	AML	
	comp=E,95μm,1.0s				
MELA	**Melanico ??? S**	**3.73 323**	AML	AML	
	comp=N,130μm,1.1s				
MELA			AML	AML	
	comp=E,101μm,0.6s				
MELA			AML	AML	
	comp=N,130μm,1.1s				
MELA			AML	AML	
	comp=E,101μm,0.6s				
STON	**Ston**	**4.12 356**	*e*Pn	**Pn**	**11 43 15.7 -0.2**
STON			Sn	**Sn**	**11 44 02.0 -1.6**
STON	**Ston**	**4.12 356**	*e*Pn	**Pn**	**11 43 15.7 -0.2**
STON			Sn	**Sn**	**11 44 02.0 -1.6**
VAY	**Valandovo**	**4.26 52**	*e*Pn	**Pn**	**11 43 15.1 -2.8**
SJES	**Sjenica**	**4.71 17**	*e*Pn	Pn	11 43 30.0 +5.9
IVAS	**Ivanjica**	**5.04 17**	*e*Pn	**Pn**	**11 43 33.2 +4.4**
BBLS	**Lazići**	**5.19 10**	*e*Pn	**Pn**	**11 43 32.9 +2.2**
UDBI	**Udbina**	**6.03 344**	*e*Pn	**Pn**	**11 43 44.5 +2.3**
UDBI	**Udbina**	**6.03 344**	*e*Pn	**Pn**	**11 43 44.5 +2.3**
NVLJ	**Novalja**	**6.29 338**	*e*Pn	**Pn**	**11 43 46.8 +1.0**
NVLJ	**Novalja**	**6.29 338**	*e*Pn	**Pn**	**11 43 46.7 +1.0**
OBKA	**Obir**	**8.18 342**	*e*Pn	**Pn**	**11 44 13.5 +1.7**
	comp=E,0.4nm,0.2s				
OBKA	**Obir**	**8.18 342**	Pn	**Pn**	**11 44 13.5 +1.7**
	comp=E,0.4nm,0.2s				
SOKA	**Soboth**	**8.23 345**	*e*Pn	**Pn**	**11 44 13.0 +0.5**
	comp=E,0.1nm,0.2s				
SOKA			*e*Sn	**Sn**	**11 45 43.0 -2.1**
	comp=E,0.4nm,0.2s				
SOKA	**Soboth**	**8.23 345**	Pn	**Pn**	**11 44 13.0 +0.5**
	comp=E,0.1nm,0.2s				
SOKA			Sn	**Sn**	**11 45 43.0 -2.1**
	comp=E,0.4nm,0.2s				
ARSA	**Arzberg**	**8.69 348**	*e*Pn	**Pn**	**11 44 19.4 +0.6**
	comp=E,1.8nm,0.3s				
ARSA			*e*Sn	**Sn**	**11 45 55.8 -0.6**
	comp=E,0.5nm,0.2s				
ARSA	**Arzberg**	**8.69 348**	Pn	**Pn**	**11 44 19.4 +0.6**
	comp=E,1.8nm,0.3s				
ARSA			Sn	**Sn**	**11 45 55.8 -0.6**
	comp=E,0.5nm,0.2s				
MOA	**Molln**	**9.51 344**	*e*Pn	**Pn**	**11 44 32.0 +2.1**
	comp=E,0.2nm,0.1s				
MOA	**Molln**	**9.51 344**	Pn	**Pn**	**11 44 32.0 +2.1**
	comp=E,0.2nm,0.1s				

SOME ***02*** *11:54:11.2, 44.°63N×82.°32E, h15km*
NNC ***02*** *11:54:13.3±1.1, 44.°63N×82.°07E, h0km, mb3.0, mpv2.5, Error ellipse: s-maj=14.1km s-min=4.1km az=118.0*
ISC 02 11:54:10.8±4.1**, 44.°6N**±0.°1×**82.°3E**±0.°1**, h0**km±24km**, n7,** σ0°**69**/12**, 2C-2D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.81**	**262**	*e*P	**Pb**	**11 54 44.8**	**0.0**
	7.8nm,0.2s						
DJR				*e*S	**Sg**	**11 55 09.1**	**+0.3**
	3.4nm,0.2s						
MK31	**Makanchi Array**	**2.17**	**0**	Pn	**Pb**	**11 54 50.7**	**-0.3**
	0.8nm,0.2s,baz=183,slow=13,SNR=110						
MK31				⇓Sn	**Sb**	**11 55 19.3**	**+0.8**
	0.6nm,0.2s,baz=188,slow=27,SNR=6.2						
MAKZ	**Makanchi**	**2.20**	**355**	⇓Pn	**Pb**	**11 54 50.6**	**-0.8**
	1.8nm,0.5s						
MAKZ				⇑Sn	**Sb**	**11 55 19.5**	**+0.3**
	1.4nm,0.3s						
PDGK	**Podgornoye**	**2.39**	**238**	⇑Lg	Lg	11 55 26.0	
	5.1nm,0.6s						
SHLS	**Shalkode**	**2.51**	**235**	*e*P	**Pn**	**11 54 53.4**	**+0.4**
	5.6nm,0.2s						
SHLS				*e*S	**Sn**	**11 55 23.8**	**-0.6**
	10nm,0.2s						
MNBS	**Baschi**	**2.84**	**260**	*e*P	**Pb**	**11 55 01.4**	**-0.9**
	1.4nm,0.4s						
MNBS				*e*S	**Sb**	**11 55 37.4**	**-0.2**
	3.9nm,0.4s						
KPKS	**Kokpek**	**2.84**	**247**	*e*P	**Pb**	**11 55 02.0**	**-0.4**
	4.4nm,0.1s						
KPKS				*e*S	**Sb**	**11 55 38.5**	**+0.8**
	7.4nm,0.3s						

IDC ***02*** *11:55:15.9±1.0, 54.°92N×164.°66E, h0km, mb3.9/9, mb1 4.1/11, mb1mx3.6/79, mbtmp3.9/11, ML3.7/2, MS2.9/5, Ms1 2.9/5, ms1mx2.5/71, Error ellipse: s-maj=32.5km s-min=15.4km az=159.0*
KRSC ***02*** *11:55:16.9±1.9, 54.°73N×164.°64E, h68km±24km, ML4.5*
NEIC ***02*** *11:55:17.2±0.5, 54.°88N×164.°69E, h10km, mb4.0/1, Error ellipse: s-maj=18.5km s-min=6.7km az=152.0*
ISCJB ***02*** *11:55:18.8±0.5, 54.°69N±0.°02×164.°62E±0.°04, h43km±7km, mb3.8/11, MS3.1/3, Error ellipse: s-maj=4.5km s-min=3.3km az=40.6*
MOS ***02*** *11:55:18.8±0.8, 54.°76N×164.°69E, h43km, mb4.2/6, Error ellipse: s-maj=6.0km s-min=5.4km az=79.8*
ISC 02 11:55:18.3±1.5**, 54.°72N**±0.°04×**164.°74E**±0.°05**, h23**km±13km**, n121**, σ1°**63**/189**, mb4.0**/11**, MS2.8**/3**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.86**	**55**	*e*P	**Pb**	**11 55 34.7**	**+0.2**
BKI				*e*S	**Sb**	**11 55 45.6**	**0.0**
BKI	**Bering**	**0.86**	**55**	PN	**Pb**	**11 55 34.7**	**+0.2**
BKI				S	**Sb**	**11 55 45.6**	**0.0**
MKZ	**Mys Kozlova**	**1.76**	**266**	*e*P	**Pn**	**11 55 46.8**	**-0.5**
MKZ				*e*S	**Sn**	**11 56 06.3**	**-2.7**
MKZ	**Mys Kozlova**	**1.76**	**266**	PN	**Pn**	**11 55 46.8**	**-0.5**
MKZ				S	**Sn**	**11 56 06.3**	**-2.7**
KBTR	**Krutoberegovo**	**1.85**	**325**	*e*P	**Pn**	**11 55 46.6**	**-2.1**
KBTR				*e*S	**Sn**	**11 56 06.7**	**-4.7**
KBTR	**Krutoberegovo**	**1.85**	**325**	PN	**Pn**	**11 55 46.6**	**-2.1**
KBTR				S	**Sn**	**11 56 06.7**	**-4.7**
KBG	**Krutoberegovo**	**1.93**	**324**	*e*P	**Pn**	**11 55 47.6**	**-2.1**
KBG				*e*S	**Sn**	**11 56 09.6**	**-3.6**
KBG	**Krutoberegovo**	**1.93**	**324**	PN	**Pn**	**11 55 47.6**	**-2.1**
KBG				S	**Sn**	**11 56 09.6**	**-3.6**
TUMD	**Tumrok D**	**2.55**	**283**	*e*P	**Pn**	**11 55 58.0**	**-0.3**
TUMD				*e*S	**Sn**	**11 56 25.8**	**-2.8**
KZV	**Kizimen**	**2.60**	**281**	*e*P	**Pn**	**11 55 58.9**	**-0.1**
KZV				*e*S	**Sn**	**11 56 27.4**	**-2.6**
KZV	**Kizimen**	**2.60**	**281**	PN	**Pn**	**11 55 58.9**	**-0.1**
KZV				S	**Sn**	**11 56 27.4**	**-2.6**
ZLN	**Zelenaya**	**2.60**	**302**	*e*P	**Pn**	**11 55 59.4**	**+0.4**
ZLN				*e*S	**Sn**	**11 56 30.0**	**+0.1**
ZLN	**Zelenaya**	**2.60**	**302**	PN	**Pn**	**11 55 59.4**	**+0.4**
ZLN				S	**Sn**	**11 56 30.0**	**+0.1**
BZGR	**Bezymyannyi-Gr**	**2.62**	**300**	*e*P	**Pn**	**11 55 59.6**	**+0.3**
BZGR				*e*S	**Sn**	**11 56 29.5**	**-0.9**
BZGR	**Bezymyannyi-Gr**	**2.62**	**300**	PN	**Pn**	**11 55 59.6**	**+0.3**
BZGR				S	**Sn**	**11 56 29.5**	**-0.9**
SMKR	**Semkarok**	**2.64**	**317**	*e*P	**Pn**	**11 55 59.2**	**-0.3**
SMKR				*e*S	**Sn**	**11 56 30.0**	**-0.7**
SMKR	**Semkarok**	**2.64**	**317**	PN	**Pn**	**11 55 59.2**	**-0.3**
SMKR				S	**Sn**	**11 56 30.0**	**-0.7**
CIRR	**Tsirk**	**2.67**	**303**	*e*P	**Pn**	**11 56 00.3**	**+0.2**
CIRR				*e*S	**Sn**	**11 56 30.9**	**-0.9**
CIRR	**Tsirk**	**2.67**	**303**	PN	**Pn**	**11 56 00.3**	**+0.2**
CIRR				S	**Sn**	**11 56 30.9**	**-0.9**
LGNR	**Loginova**	**2.69**	**302**	*e*P	**Pn**	**11 56 00.7**	**+0.3**
LGNR				*e*S	**Sn**	**11 56 31.1**	**-1.2**
LGNR	**Loginova**	**2.69**	**302**	PN	**Pn**	**11 56 00.7**	**+0.3**
LGNR				S	**Sn**	**11 56 31.1**	**-1.2**
TUMR	**Tumrok**	**2.71**	**284**	*e*P	**Pn**	**11 56 00.8**	**+0.3**
TUMR				*e*S	**Sn**	**11 56 31.7**	**-0.9**
TUMR	**Tumrok**	**2.71**	**284**	PN	**Pn**	**11 55 58.0**	**-2.5**
BZMR	**Bezymyannaya**	**2.72**	**298**	*e*P	**Pn**	**11 56 01.1**	**+0.4**
BZMR				*e*S	**Sn**	**11 56 31.8**	**-1.1**
BZMR	**Bezymyannaya**	**2.72**	**298**	PN	**Pn**	**11 56 01.1**	**+0.4**
BZMR				S	**Sn**	**11 56 31.8**	**-1.1**
BZWR	**Bezymyannyi-We**	**2.73**	**299**	*e*P	**Pn**	**11 56 01.4**	**+0.6**
BZWR				*e*S	**Sn**	**11 56 32.9**	**-0.3**
BZWR	**Bezymyannyi-We**	**2.73**	**299**	PN	**Pn**	**11 56 01.4**	**+0.6**
BZWR				S	**Sn**	**11 56 32.9**	**-0.3**
BDR	**Baidarnaya**	**2.73**	**314**	*e*P	**Pn**	**11 56 00.9**	**+0.1**
BDR				*e*S	**Sn**	**11 56 33.4**	**+0.3**
BDR	**Baidarnaya**	**2.73**	**314**	PN	**Pn**	**11 56 00.9**	**+0.1**
BDR				S	**Sn**	**11 56 33.4**	**+0.3**
KMNR	**Kamenistaya**	**2.78**	**294**	*e*P	**Pn**	**11 56 01.8**	**+0.3**
KMNR				*e*S	**Sn**	**11 56 34.2**	**-0.2**
KMNR	**Kamenistaya**	**2.78**	**294**	PN	**Pn**	**11 56 01.8**	**+0.3**
KMNR				S	**Sn**	**11 56 34.2**	**-0.2**
KIRR	**Kirishev**	**2.80**	**298**	*e*P	**Pn**	**11 56 03.0**	**+1.2**
KIRR				*e*S	**Sn**	**11 56 34.4**	**-0.6**
KIRR	**Kirishev**	**2.80**	**298**	PN	**Pn**	**11 56 03.0**	**+1.2**
KIRR				S	**Sn**	**11 56 34.4**	**-0.6**
SRKR	**Sorokina**	**2.81**	**315**	*e*P	**Pn**	**11 56 01.7**	**-0.1**
SRKR				*e*S	**Sn**	**11 56 34.3**	**-0.6**
SRKR	**Sorokina**	**2.81**	**315**	PN	**Pn**	**11 56 01.7**	**-0.1**
SRKR				S	**Sn**	**11 56 34.3**	**-0.6**

KRSR	**Krestovskiy**	**2.81**	**304**	*e*P	**Pn**	**11 56 01.5**	**-0.5**
KRSR				*e*S	**Sn**	**11 56 34.0**	**-1.2**
KRSR	**Krestovskiy**	**2.81**	**304**	PN	**Pn**	**11 56 01.5**	**-0.5**
KRSR				S	**Sn**	**11 56 34.0**	**-1.2**
KLY	**Klyuchi**	**2.83**	**306**	*e*P	**Pn**	**11 56 00.4**	**-1.6**
KLY				*e*S	**Sn**	**11 56 31.4**	**-3.8**
KLY	**Klyuchi**	**2.83**	**306**	PN	**Pn**	**11 56 00.4**	**-1.6**
KLY				S	**Sn**	**11 56 31.4**	**-3.8**
KPT	**Kopyto**	**2.87**	**298**	*e*P	**Pn**	**11 56 03.4**	**+0.7**
KPT				*e*S	**Sn**	**11 56 35.9**	**-0.7**
KPT	**Kopyto**	**2.87**	**298**	PN	**Pn**	**11 56 03.4**	**+0.7**
KPT				S	**Sn**	**11 56 35.9**	**-0.7**
KOZ	**Kozyrevsk**	**3.09**	**298**	*e*P	**Pn**	**11 56 06.9**	**+1.3**
KOZ				*e*S	**Sn**	**11 56 42.4**	**+0.6**
KOZ	**Kozyrevsk**	**3.09**	**298**	PN	**Pn**	**11 56 06.9**	**+1.3**
KOZ				S	**Sn**	**11 56 42.4**	**+0.6**
KII	**Karymskiy**	**3.17**	**260**	*e*P	**Pn**	**11 56 07.1**	**+0.3**
KII				*e*S	**Sn**	**11 56 42.3**	**-1.6**
KII	**Karymskiy**	**3.17**	**260**	PN	**Pn**	**11 56 07.1**	**+0.3**
KII				S	**Sn**	**11 56 42.3**	**-1.6**
SPN	**Mys Shipunski**	**3.23**	**242**	*e*P	**Pn**	**11 56 07.1**	**-0.4**
SPN				*e*S	**Sn**	**11 56 41.5**	**-3.7**
SPN	**Mys Shipunski**	**3.23**	**242**	PN	**Pn**	**11 56 07.1**	**-0.4**
NLC	**Nalytchevo**	**3.54**	**246**	*e*P	**Pn**	**11 56 12.1**	**+0.2**
NLC				*e*S	**Sn**	**11 56 50.2**	**-2.8**
NLC	**Nalytchevo**	**3.54**	**246**	PN	**Pn**	**11 56 12.1**	**+0.2**
ESO	**Esso**	**3.66**	**292**	*e*P	**Pn**	**11 56 13.5**	**0.0**
ESO				*e*S	**Sn**	**11 56 52.3**	**-3.6**
ESO	**Esso**	**3.66**	**292**	PN	**Pn**	**11 56 13.5**	**0.0**
SDLR	**Sedlovina**	**3.75**	**250**	*e*P	**Pn**	**11 56 15.3**	**+0.5**
SDLR				*e*S	**Sn**	**11 56 56.8**	**-1.4**
SDLR	**Sedlovina**	**3.75**	**250**	PN	**Pn**	**11 56 15.3**	**+0.5**
SDLR				S	**Sn**	**11 56 56.8**	**-1.4**
SMAR	**Somma**	**3.80**	**250**	*e*P	**Pn**	**11 56 16.7**	**+1.2**
SMAR				*e*S	**Sn**	**11 56 57.6**	**-2.0**
SMAR	**Somma**	**3.80**	**250**	PN	**Pn**	**11 56 16.7**	**+1.2**
SMAR				S	**Sn**	**11 56 57.6**	**-2.0**
KRER	**Koryakskii**	**3.81**	**251**	*e*P	**Pn**	**11 56 16.6**	**+0.9**
KRER				*e*S	**Sn**	**11 56 58.7**	**-1.1**
KRER	**Koryakskii**	**3.81**	**251**	PN	**Pn**	**11 56 16.6**	**+0.9**
KRER				S	**Sn**	**11 56 58.7**	**-1.1**
UGLR	**Uglovaya**	**3.81**	**249**	*e*P	**Pn**	**11 56 16.2**	**+0.6**
UGLR				*e*S	**Sn**	**11 56 58.0**	**-1.7**
UGLR	**Uglovaya**	**3.81**	**249**	PN	**Pn**	**11 56 16.2**	**+0.6**
UGLR				S	**Sn**	**11 56 58.0**	**-1.7**
AVH	**Avacha**	**3.83**	**250**	*e*P	**Pn**	**11 56 17.4**	**+1.5**
AVH				*e*S	**Sn**	**11 56 59.0**	**-1.2**
AVH	**Avacha**	**3.83**	**250**	PN	**Pn**	**11 56 17.4**	**+1.5**
AVH				S	**Sn**	**11 56 59.0**	**-1.2**
KRX	**Arik**	**3.84**	**252**	*e*P	**Pn**	**11 56 16.8**	**+0.7**
KRX				*e*S	**Sn**	**11 56 58.8**	**-1.8**
KRX	**Arik**	**3.84**	**252**	PN	**Pn**	**11 56 16.8**	**+0.7**
KRX				S	**Sn**	**11 56 58.8**	**-1.8**
KOK	**Koryaka**	**3.88**	**251**	*e*P	**Pn**	**11 56 17.6**	**+1.1**
KOK				*e*S	**Sn**	**11 56 59.0**	**-2.3**
KOK	**Koryaka**	**3.88**	**251**	PN	**Pn**	**11 56 17.6**	**+1.1**
DALK	**Dalny**	**3.93**	**247**	*e*P	**Pn**	**11 56 17.5**	**+0.4**
DALK				*e*S	**Sn**	**11 56 59.1**	**-3.3**
DALK	**Dalny**	**3.93**	**247**	PN	**Pn**	**11 56 17.5**	**+0.4**
PET	**Petropavlovsk**	**3.98**	**247**	*e*Pn	**Pn**	**11 56 18.6**	**+0.7**
PET				*e*Sn	**Sn**	**11 57 01.0**	**-2.8**
PET	**Petropavlovsk**	**3.98**	**247**	*e*P	**Pn**	**11 56 18.6**	**+0.7**
PET				*e*S	**Sn**	**11 57 00.6**	**-3.2**
PET	**Petropavlovsk**	**3.98**	**247**	PN	**Pn**	**11 56 18.6**	**+0.7**
GNL	**Ganaly**	**4.12**	**258**	*e*P	**Pn**	**11 56 21.5**	**+1.6**
GNL	**Ganaly**	**4.12**	**258**	PN	**Pn**	**11 56 21.5**	**+1.6**
KRMR	**Karymshinskiy**	**4.35**	**247**	*e*P	**Pn**	**11 56 24.1**	**+1.1**
KRMR				*e*S	**Sn**	**11 57 10.2**	**-2.7**
KRMR	**Karymshinskiy**	**4.35**	**247**	PN	**Pn**	**11 56 24.1**	**+1.1**
RUS	**Russkaya**	**4.36**	**241**	*e*P	**Pn**	**11 56 23.3**	**+0.2**
RUS				S	**Sn**	**11 57 07.9**	**-5.2**
RUS	**Russkaya**	**4.36**	**241**	PN	**Pn**	**11 56 23.3**	**+0.2**
PETK	**Petropavlovsk-**	**4.46**	**252**	Pn	**Pn**	**11 56 25.8**	**+1.2**
	26nm,0.3s,baz=70,slow=17,SNR=804						
PETK				Sn	**Sn**	**11 57 15.0**	**-0.7**
	5.1nm,0.3s,baz=78,slow=40,SNR=4.8						
PETK				LR	LR	11 58 16.5	
	comp=Z,49nm,21.7s,baz=91,slow=40						
MTVR	**Mutnovka**	**4.50**	**243**	*e*P	**Pn**	**11 56 26.1**	**+0.9**
MTVR				*e*S	**Sn**	**11 57 12.8**	**-4.0**
MTVR	**Mutnovka**	**4.50**	**243**	PN	**Pn**	**11 56 26.1**	**+0.9**
GRL	**Gorelyy**	**4.52**	**244**	*e*P	**Pn**	**11 56 26.3**	**+0.9**
GRL				S	**Sn**	**11 57 15.0**	**-2.3**
GRL	**Gorelyy**	**4.52**	**244**	PN	**Pn**	**11 56 26.3**	**+0.9**
OSSR	**Ossora**	**4.64**	**349**	*e*P	**Pn**	**11 56 26.5**	**-0.4**
OSSR				*e*S	**Sn**	**11 57 15.9**	**-4.0**
OSSR	**Ossora**	**4.64**	**349**	PN	**Pn**	**11 56 26.5**	**-0.4**
ASAK	**Asacha**	**4.70**	**243**	*e*P	**Pn**	**11 56 29.3**	**+1.5**
ASAK				*e*S	**Sn**	**11 57 19.5**	**-2.2**
ASAK	**Asacha**	**4.70**	**243**	PN	**Pn**	**11 56 29.3**	**+1.5**
APC	**Apacha**	**4.84**	**251**	*e*P	**Pn**	**11 56 31.6**	**+2.0**
APC				*e*S	**Sn**	**11 57 25.2**	**+0.3**
APC	**Apacha**	**4.84**	**251**	PN	**Pn**	**11 56 31.6**	**+2.0**
APC				S	**Sn**	**11 57 25.2**	**+0.3**
KDTR	**Khodutka, Kamc**	**4.95**	**237**	*e*P	**Pn**	**11 56 31.2**	**+0.1**
KDTR				*e*S	**Sn**	**11 57 23.0**	**-4.6**
PALN	**Palana**	**5.11**	**331**	*e*P	**Pn**	**11 56 33.0**	**-0.3**
PALN	**Palana**	**5.11**	**331**	PN	**Pn**	**11 56 33.0**	**-0.3**
MIPR	**Malaya Ipel'ka**	**5.36**	**246**	*e*P	**Pn**	**11 56 38.2**	**+1.4**
MIPR				*e*S	**Sn**	**11 57 35.0**	**-2.7**
MIPR	**Malaya Ipel'ka**	**5.36**	**246**	PN	**Pn**	**11 56 38.2**	**+1.4**
PAU	**Pauzhetka**	**5.78**	**239**	*e*P	**Pn**	**11 56 43.5**	**+0.9**
PAU	**Pauzhetka**	**5.78**	**239**	PN	**Pn**	**11 56 43.5**	**+0.9**
TILK	**Tilichiki**	**5.80**	**7**	*e*P	**Pn**	**11 56 44.0**	**+1.3**
TILK	**Tilichiki**	**5.80**	**7**	PN	**Pn**	**11 56 44.0**	**+1.3**
SKR	**Severo-Kuril's**	**6.62**	**236**	*e*P	**Pn**	**11 56 53.9**	**-0.1**
SKR				*e*S	**Sn**	**11 58 04.5**	**-4.1**
SKR	**Severo-Kuril's**	**6.62**	**236**	*e*PN	**Pn**	**11 56 55.1**	**+1.1**
SKR				pmax	pmax		
	comp=Z,50nm,0.4s						
KMSK	**Kamenskaya**	**7.81**	**5**	*e*P	**Pn**	**11 57 11.4**	**+1.0**
KMSK				*e*S	**Sn**	**11 58 35.1**	**-2.9**
KMSK	**Kamenskaya**	**7.81**	**5**	PN	**Pn**	**11 57 11.4**	**+1.0**
MA2	**Magadan**	**9.02**	**308**	LR	LR	12 01 15.2	
	comp=Z,30nm,20.3s,baz=84,slow=41						
ASAJ	**Asahikawa**	**17.81**	**243**	*e*P	**Pn**	**11 59 24.4**	**0.0**
	comp=Z,0.4nm,0.3s,baz=60,slow=8.1,SNR=6.0						
TIXI	**Tiksi**	**22.86**	**331**	P	**P**	**12 00 18.2**	**-1.4**
	comp=Z,1.3nm,0.5s,baz=117,slow=11,SNR=2.8						
KDAK	**Kodiak Island**	**23.61**	**65**	P	**P**	**12 00 26.7**	**-0.5**
	comp=Z,3.4nm,0.4s,baz=264,slow=3.9,SNR=13						
KDAK				LR	LR	12 10 31.2	
	comp=Z,31nm,18.4s,baz=284,slow=39						
ILAR	**Eielson Array**	**25.70**	**48**	P	**P**	**12 00 46.1**	**-0.2**
	comp=Z,2.7nm,0.8s,baz=260,slow=8.9,SNR=37						
MJAR	**Matsushiro Arr**	**25.73**	**236**	P	**P**	**12 00 48.6**	**+1.9**
	comp=Z,0.6nm,0.8s,baz=17,slow=9.9,SNR=3.4						
EGAK	**Eagle**	**28.15**	**47**	*e*P	**P**	**12 01 07.5**	**-0.8**
	comp=Z,2.1nm,0.7s						
INK	**Inuvik**	**30.88**	**40**	P	**P**	**12 01 32.9**	**+0.4**
	comp=Z,1.4nm,0.4s,baz=257,slow=4.0,SNR=8.9						
INK				LR	LR	12 14 39.2	
	comp=Z,21nm,18.1s,baz=224,slow=38						
H11N2	**WAKE ISLAND Hy**	**34.96**	**176**	T	T	12 39 53.1	
	baz=359,slow=76,SNR=101						
H11N3	**WAKE ISLAND Hy**	**34.98**	**176**	T	T	12 39 54.2	
	baz=359,slow=76,SNR=96						
H11N1	**WAKE ISLAND Hy**	**34.98**	**176**	T	T	12 39 55.8	
	baz=359,slow=76,SNR=118						
H11S1	**WAKE ISLAND Hy**	**36.17**	**177**	T	T	12 41 17.9	
	baz=0.3,slow=76,SNR=9.5						
H11S3	**WAKE ISLAND Hy**	**36.18**	**177**	T	T	12 41 22.5	
	baz=0.3,slow=76,SNR=2.9						
H11S2	**WAKE ISLAND Hy**	**36.19**	**177**	T	T	12 41 19.3	
	baz=0.3,slow=76,SNR=11						
YKA	**Yellowknife Ar**	**40.08**	**45**	P	**P**	**12 02 51.6**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=298,slow=8.1,SNR=6.0						
KURK	**Kurchatov**	**49.18**	**303**	P	**P**	**12 04 04.7**	**+0.6**
KURK	**Kurchatov**	**49.18**	**303**	P	**P**	**12 04 04.7**	**+0.6**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURBB	**Kurchatov Arra**	**49.29**	**303**	P	**P**	**12 04 04.7**	**-0.2**
	comp=Z,1.2nm,0.6s,baz=55,slow=7.8,SNR=9.6						
NVAR	**Mina Array Bea**	**52.63**	**74**	P	**P**	**12 04 32.2**	**+1.7**
	comp=Z,0.6nm,0.7s,baz=294,slow=6.5,SNR=6.0						
TXAR	**Lajitas Array**	**67.49**	**71**	P	**P**	**12 06 13.6**	**+1.2**
	comp=Z,1.3nm,0.5s,baz=299,slow=4.8,SNR=30						
WRA	**Warramunga Arr**	**78.78**	**209**	LR	LR	12 39 46.3	
	comp=Z,48nm,20.9s,baz=65,slow=34						

KRSC 02 12:07:06.4±3.3, 50°.12N×155°.14E, h335km±19km, ML3.9,

Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.84**	**47**	S	S	12 08 23.4	-1.2
PAU	**Pauzhetka**	**1.72**	**37**	S	S	12 08 37.5	+4.9
KDTR	**Khodutka, Kamc**	**2.51**	**46**	P	Pn	12 07 59.9	-0.3
KDTR				S	S	12 08 40.5	-2.9
RUS	**Russkaya**	**3.14**	**41**	*e*P	Pn	12 08 06.3	+0.5
RUS				*e*S	S	12 08 52.3	-1.2
DALK	**Dalny**	**3.69**	**36**	P	Pn	12 08 12.8	+1.7
DALK				S	S	12 09 03.5	+0.3
UGLR	**Uglovaya**	**3.85**	**35**	P	Pn	12 08 14.8	+1.9
UGLR				*e*S	S	12 09 07.4	+0.8
AVH	**Avacha**	**3.87**	**34**	P	Pn	12 08 15.1	+2.0
KRER	**Koryakskii**	**3.90**	**34**	P	Pn	12 08 16.0	+2.4
SDLR	**Sedlovina**	**3.93**	**35**	*e*P	Pn	12 08 13.6	-0.2
SPN	**Mys Shipunski**	**4.26**	**44**	*e*P	Pn	12 08 18.3	+1.2
SPN				*e*S	S	12 09 12.3	-1.8
TUMR	**Tumrok**	**6.00**	**28**	*e*P	Pn	12 08 38.9	+2.3
BKI	**Bering**	**8.32**	**48**	*e*P	P	12 09 08.4	+1.0

*IDC **02** 12:08:21.6±3.0, 21°.58S×169°.30E, h0km, mb3.8/5, mb1 4.1/6, mb1mx3.7/43, mbtmp3.8/6, ML3.4/1, MS3.5/13, Ms1 3.5/13, ms1mx3.2/49, Error ellipse: s-maj=156.3km s-min=22.4km az=157.0*

*ISCJB **02** 12:08:23.2±2.0, 21°.7S±0°.8×169°.3E±0°.3, h21km, mb3.8/5, MS3.6/10, Error ellipse: s-maj=114.8km s-min=11.5km az=163.9*

ISC 02 12:08:25.1±2.7, 21°.5S±1°.0×169°.2E±0°.4, h21km, n19, σ0§48/9, mb3.8/5, MS3.6/10, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.64**	**257**	Pn	**Pn**	**12 09 06.2**	**-0.4**
	6.0nm,0.3s,baz=95,slow=18,SNR=57						
DZM				LR	LR	12 09 33.7	
	comp=Z,409nm,18.5s,baz=163,slow=27						
DZM				Sn	**Sn**	**12 09 37.9**	**-0.1**
	18nm,0.3s,baz=85,slow=23,SNR=6.5						
RAO	**Raoul Island**	**13.94**	**126**	LR	LR	12 14 48.1	
	comp=Z,79nm,19.3s,baz=87,slow=28						
AFI	**Afiamalu**	**19.61**	**70**	LR	LR	12 19 19.6	
	comp=Z,110nm,18.3s,baz=188,slow=34						
STKA	**Stephens Creek**	**26.68**	**241**	LR	LR	12 23 31.3	
	comp=Z,116nm,19.5s,baz=30,slow=34						
WRA	**Warramunga Arr**	**32.62**	**266**	P	**P**	**12 14 55.2**	**-0.5**
	0.5nm,0.5s,baz=97,slow=8.2,SNR=9.3						
ASAR	**Alice Springs**	**32.63**	**259**	P	**P**	**12 14 56.0**	**+0.3**
	1.0nm,0.6s,baz=89,slow=9.4,SNR=17						
FITZ	**Fitzroy Crossi**	**41.05**	**267**	P	**P**	**12 16 08.1**	**+0.8**
	1.5nm,0.7s,baz=110,slow=12,SNR=5.0						
FITZ				LR	LR	12 32 36.4	
	comp=Z,100nm,18.7s,baz=108,slow=35						
VNDA	**Vanda**	**56.17**	**182**	LR	LR	12 39 00.7	
	comp=Z,47nm,18.0s,baz=338,slow=33						
MJAR	**Matsushiro Arr**	**64.75**	**333**	LR	LR	12 47 11.3	
	comp=Z,14nm,19.6s,baz=135,slow=36						
ASAJ	**Asahikawa**	**69.72**	**340**	LR	LR	12 47 15.5	
	comp=Z,23nm,18.9s,baz=167,slow=33						
PETK	**Petropavlovsk-**	**74.98**	**353**	LR	LR	12 49 31.5	
	comp=Z,31nm,18.6s,baz=129,slow=33						
YBH	**Yreka Blue Hor**	**88.94**	**44**	LR	LR	12 54 39.6	
	comp=Z,20nm,19.9s,baz=235,slow=31						
NVAR	**Mina Array Bea**	**90.31**	**49**	P	**P**	**12 21 24.6**	**-0.3**
	0.8nm,0.6s,baz=224,slow=6.3,SNR=7.3						
LPIG	**La Paz**	**90.41**	**64**	LR	LR	12 55 49.5	
	comp=Z,40nm,18.0s,baz=246,slow=32						
ILAR	**Eielson Array**	**92.40**	**17**	P	**P**	**12 21 33.7**	**+0.1**
	0.1nm,0.5s,baz=214,slow=6.2,SNR=3.3						
ANMO	**Albuquerque**	**97.60**	**56**	LR	LR	13 00 53.2	
	comp=Z,34nm,18.1s,baz=195,slow=32						
TXAR	**Lajitas Array**	**97.86**	**62**	LR	LR	13 00 18.4	
	comp=Z,18nm,18.0s,baz=0,slow=32						
EKA	**Eskdalemuir Ar**	**145.75**	**352**	PKPbc	**PKPdf**	**12 28 01.4**	**-0.3**
	0.7nm,0.5s,baz=0.0,slow=1.4,SNR=4.0						
GERES	**GERESS Array B**	**146.46**	**330**	PKPbc	**PKPbc**	**12 28 05.0**	**+0.3**
	0.2nm,0.3s,baz=146,slow=1.9,SNR=2.1						

*NEIC **02** 12:20:38.2±0.0, 16°.45N×98°.21W, h8km, MD4.2(MEX), After MEX.*

MEX 02 12:20:38.2±0.7, 16°.45N×98°.21W, h8km±37km, MD4.2, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.15**	**343**	*e*Pn	Pg	12 20 56.8	-3.6
TLIG				*e*Sn	Sg	12 21 12.4	-2.9
TLIG	**Tlapa**	**1.15**	**343**	*e*P	Pg	12 20 56.5	-3.8
TLIG				*i* S	Sg	12 21 11.6	-3.8
ACX	**Acapulco**	**1.63**	**285**	*e*Pn	Pn	12 21 00.7	-6.6
ACX				*e*Sn	Sn	12 21 21.3	-7.2
ACX	**Acapulco**	**1.63**	**285**	*e*P	Pn	12 21 00.7	-6.6
ACX				*e*S	Sn	12 21 21.3	-7.2
MEIG	**Mezcala**	**1.99**	**318**	*e*Pn	Pn	12 21 09.3	-2.9
MEIG				*e*Sn	Sn	12 21 33.1	-4.3
MEIG	**Mezcala**	**1.99**	**318**	*e*P	Pn	12 21 09.3	-2.9
MEIG				*e*S	Sn	12 21 33.1	-4.3
CAIG	**El Cayaco**	**2.05**	**287**	*e*Pn	Pn	12 21 09.7	-3.4
CAIG				*e*Sn	Sn	12 21 34.6	-4.3
CAIG	**El Cayaco**	**2.05**	**287**	*e*P	Pn	12 21 09.7	-3.4
CAIG				*e*S	Sn	12 21 34.6	-4.3
PLIG	**Platanillo**	**2.29**	**328**	*e*Pn	Pn	12 21 14.0	-2.3
PLIG				*e*Sn	Sn	12 21 40.5	-4.3
PLIG	**Platanillo**	**2.29**	**328**	*e*P	Pn	12 21 14.0	-2.3
PLIG				*e*S	Sn	12 21 40.5	-4.3
ARIG	**Puente Sto Nin**	**2.73**	**312**	*e*P	Pn	12 21 20.1	-2.3
ARIG				*i* S	Sn	12 21 52.0	-3.7
ARIG	**Puente Sto Nin**	**2.73**	**312**	*e*P	Pn	12 21 20.1	-2.3
ARIG				*i* S	Sn	12 21 52.0	-3.7
UNM	**Universidad Na**	**3.00**	**342**	*e*Pn	Pn	12 21 25.8	-0.6
UNM				*e*Sg	Sg	12 22 13.3	-1.4
LVIG	**Laguna Verde**	**3.67**	**27**	*e*Pn	Pn	12 21 35.1	-0.3
JRQG	**Juriquilla Cam**	**4.73**	**334**	*e*Pn	Pn	12 21 46.7	-3.4
HEC	**Hector,Ludlow**	**24.46**	**322**	*e*P	P	12 25 50.0	-7.8
FON	**Fontana**	**24.64**	**319**	*e*P	P	12 25 50.3	-9.2
TPO	**Tropico Hills**	**25.64**	**319**	*e*P	P	12 26 06.4	-2.1
STTC	**Scott Ranch**	**25.73**	**319**	*e*P	P	12 26 06.6	-2.8
BCWM	**Chews Ridge**	**28.65**	**318**	*e*P	P	12 26 34.4	-1.3
HRY	**Holter Researc**	**32.22**	**342**	*e*P	P	12 27 07.5	+0.4
BVW	**Beverly**	**35.20**	**334**	*e*P	P	12 27 25.4	-7.6

DJA 02 13:04:09.7±0.7, 3°.S±7°.×14°.0E±°, h10km, M4.0/3, MLv4.0/3, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**0.90**	**13**	P	Pg	13 04 25.4	-1.7
GENI				S	Sg	13 04 39.0	+0.1
JAY	**Jayapura**	**1.21**	**37**	P	Pb	13 04 30.1	-2.6
JAY				S	Sb	13 04 48.0	-0.4
WAMI	**Wamena**	**1.32**	**252**	P	Pn	13 04 31.1	-3.1
WAMI				S	Sb	13 04 46.9	-4.7

*ISCJB **02** 13:05:40.4±0.4, 24°.86N±0°.02×122°.03E±0°.02, h1km±4km, Error ellipse: s-maj=3.6km s-min=3.1km az=25.7*

*TAP **02** 13:05:40.3, 24°.84N×121°.97E, h4km, ML2.8, C*

*JMA **02** 13:05:41.0±0.1, 24°.88N×121°.94E, h31km, M2.3*

ISC 02 13:05:40.1±0.9, 24°.89N±0°.03×121°.98E±0°.02, h9km±4km, n49, σ0§84/70, 11C-5D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.06**	**227**	P	**Pg**	**13 05 40.9**	**-1.2**
	baz=267						
EGS				S	**Sg**	**13 05 42.6**	**-0.9**
	baz=267						
NTC	**Toucheng**	**0.14**	**257**	↓*e*P	**Pb**	**13 05 42.6**	**-0.6**
	baz=274						
NTC				*e*S	**Sb**	**13 05 44.5**	**-0.8**
	baz=274						
ILA	**Ilan**	**0.24**	**240**	*e*P	**Pb**	**13 05 46.2**	**+1.2**
	baz=247						
ILA				*e*S	**Sb**	**13 05 50.0**	**+1.8**
	baz=247						
NWF	**Wu-fen Shan**	**0.26**	**316**	⇑*i*P	**Pb**	**13 05 47.2**	**+0.2**
	baz=323						
NWF				S	**Sb**	**13 05 51.5**	**0.0**
	baz=323						
WFSB	**Wu-fen Shan**	**0.26**	**316**	⇑*i*P	**Pb**	**13 05 47.1**	**+0.3**
	baz=323						
WFSB				S	**Sb**	**13 05 51.4**	**0.0**
	baz=323						
TWC	**Suao**	**0.30**	**203**	⇑*i*P	**Pg**	**13 05 46.4**	**+0.3**
	baz=202						
TWE	**Neicheng**	**0.33**	**240**	↓↓P	**Pb**	**13 05 47.4**	**-0.6**
	baz=244						
TWE				S	**Sb**	**13 05 51.9**	**-1.5**
	baz=244						
SLBB	**Yuanshan**	**0.34**	**247**	⇑P	**Pb**	**13 05 47.8**	**-0.5**
	baz=253						
SLBB				*e*S	**Sb**	**13 05 52.8**	**-0.9**
	baz=253						
EOS1	**EOS1**	**0.36**	**158**	⇑P	**Pg**	**13 05 47.9**	**+0.7**
	baz=153						
EOS1				*e*S	**Sg**	**13 05 53.2**	**+1.2**
	baz=153						
TWA	**Mucha**	**0.37**	**285**	⇑P	**Pb**	**13 05 49.0**	**+0.2**
	baz=291						
TWA				S	**Sb**	**13 05 54.5**	**-0.2**
	baz=291						
YM07	**YM07**	**0.43**	**312**	⇑*i*P	**Pb**	**13 05 49.8**	**-0.2**
	baz=316						
NWLT	**Wulai**	**0.45**	**256**	*e*P	**Pb**	**13 05 49.8**	**-0.3**
	baz=261						
NWLT				*e*S	**Sb**	**13 05 55.7**	**-1.2**
	baz=261						
ENTT	**Nioudou**	**0.45**	**237**	↓*i*P	**Pb**	**13 05 49.8**	**-0.4**
	baz=240						
TAP	**Taipei**	**0.46**	**290**	*i* S	**Sb**	**13 05 57.8**	**+0.7**
	baz=295						
YM11	**YM11**	**0.46**	**307**	⇑*i*P	**Pb**	**13 05 51.3**	**+0.9**
	baz=312						
YM08	**YM08**	**0.47**	**310**	⇑*i*P	**Pb**	**13 05 51.1**	**+0.7**
	baz=315						
YM10	**YM10**	**0.47**	**305**	⇑*i*P	**Pb**	**13 05 51.4**	**+0.9**
	baz=310						
YM04	**YM04**	**0.48**	**304**	⇑*i*P	**Pb**	**13 05 51.6**	**+0.9**
	baz=308						
YM03	**YM03**	**0.49**	**306**	*e*P	**Pb**	**13 05 51.7**	**+0.7**
	baz=310						
NANB	**Nanao**	**0.50**	**205**	*e*P	**Pb**	**13 05 50.6**	**-0.4**
	baz=205						
NANB				*e*S	**Sb**	**13 05 58.5**	**+0.1**
	baz=205						
ENA	**Nanau**	**0.51**	**206**	*e*P	**Pb**	**13 05 50.6**	**-0.5**
	baz=205						
TWY	**Chenhua**	**0.52**	**319**	*e*P	**Pn**	**13 05 52.4**	**-1.2**
	baz=322						
TWS1	**Kuangyinshan**	**0.55**	**293**	↓↓P	**Pn**	**13 05 53.4**	**-0.7**
	baz=297						
NTST	**Danshui**	**0.56**	**300**	*e*P	**Pn**	**13 05 53.5**	**-0.6**
	baz=304						
YHNB	**Yeheng**	**0.59**	**249**	*e*P	**Pb**	**13 05 52.2**	**-0.4**
	baz=252						
YHNB				*e*S	**Sn**	**13 06 02.0**	**-2.4**
	baz=252						
NSK	**Sanguang**	**0.60**	**250**	↓↓P	**Pb**	**13 05 52.3**	**-0.5**
	baz=252						
NSK				*e*S	**Sn**	**13 06 02.2**	**-2.5**
	baz=252						
NNS	**Nan Shan**	**0.71**	**231**	*e*P	**Pb**	**13 05 54.5**	**-0.1**
	baz=232						
NNSH	**Datong**	**0.71**	**230**	*e*P	**Pb**	**13 05 54.5**	**-0.1**
	baz=232						
NNSB	**Datong**	**0.71**	**230**	*e*P	**Pb**	**13 05 54.4**	**-0.2**
	baz=232						
NACB	**Ninganchiao**	**0.79**	**206**	*e*P	**Pb**	**13 05 55.4**	**-0.6**
	baz=206						
NACB				*e*S	**Sg**	**13 06 06.0**	**+0.4**
	baz=206						
TWD	**Chiawan**	**0.88**	**204**	*e*P	**Pg**	**13 05 57.2**	**+0.3**
	baz=203						
TWD				*e*S	**Sg**	**13 06 08.4**	**+0.1**
	baz=203						
LIOB	**Emei**	**0.91**	**255**	*e*P	**Pb**	**13 05 57.5**	**-0.5**
	baz=257						
SBCB	**Hsinchu**	**0.91**	**264**	*e*P	**Pn**	**13 06 00.0**	**+1.1**
	baz=266						
SBCB				*e*S	**Sn**	**13 06 13.2**	**+1.1**
	baz=266						
NSTT	**Nanjuang**

σ1♀24/9, **mb3.8**/5, **MS3.0**/3, **Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTS	**JuntasAbangare**	**1.05**	**131**	Pg	**Pn**	**13 42 36.1**	**-0.4**
	30nm,0.3s,baz=337,slow=8.0,SNR=48						
JTS				Lg	Lg	13 42 52.2	
	66nm,0.3s,baz=6.7,slow=19,SNR=14						
APG	**El Apazote**	**6.09**	**312**	Pn	**Pn**	**13 43 45.0**	**-1.0**
	0.3nm,0.3s,baz=110,slow=12,SNR=2.8						
CMIG	**Matias Romero**	**10.74**	**305**	Pn	**Pn**	**13 44 48.8**	**-0.8**
	0.5nm,0.3s,baz=136,slow=9.7,SNR=3.6						
PCRV	**Puerto La Cruz**	**20.77**	**90**	LR	LR	13 57 13.4	
	comp=Z,66nm,20.3s,baz=266,slow=44						
NNA	**Nana**	**24.48**	**159**	LR	LR	13 56 11.2	
	comp=Z,17nm,18.5s,baz=346,slow=34						
TXAR	**Lajitas Array**	**24.76**	**320**	P	**P**	**13 47 37.8**	**+0.8**
	1.7nm,0.6s,baz=139,slow=9.2,SNR=20						
ANMO	**Albuquerque**	**30.40**	**325**	P	**P**	**13 48 29.1**	**+1.6**
	1.2nm,0.7s,baz=328,slow=15,SNR=5.4						
NVAR	**Mina Array Bea**	**39.89**	**319**	P	**P**	**13 49 50.7**	**+1.5**
	1.6nm,0.6s,baz=130,slow=8.5,SNR=15						
YKA	**Yellowknife Ar**	**55.46**	**344**	P	**P**	**13 51 48.6**	**-0.6**
	0.1nm,0.4s,baz=138,slow=6.8,SNR=5.6						
ILAR	**Eielson Array**	**68.02**	**336**	P	**P**	**13 53 12.7**	**-1.2**
	0.3nm,0.7s,baz=116,slow=4.1,SNR=4.6						
SEY	**Seymchan**	**93.94**	**337**	LR	LR	14 44 35.9	
	comp=Z,318nm,20.4s,baz=330,slow=40						
KSRS	**Korea Array**	**122.39**	**328**	PKP	**PKPdf**	**14 01 10.3**	**0.0**
	0.7nm,0.7s,baz=24,slow=2.0,SNR=4.4						

*IDC **02** 13:45:04.9±1.5, 3°.67N×92°.65E, h0km, mb3.8/7, mb1 4.0/10, mb1mx3.6/69, mbtmp3.9/10, ML3.8/3, Error ellipse: s-maj=41.3km s-min=22.0km az=41.0*
*ISCJB **02** 13:45:08.5±0.8, 3°.78N±0°.08×92°.84E±0°.06, h33km, mb3.9/7, Error ellipse: s-maj=12.0km s-min=7.5km az=19.1*
*DJA **02** 13:45:13.9±1.2, 4°N±6°×9°3E±°, h10km, M4.0/6, mB5.0/1, mb3.9/3, MLv4.0/6, Mw(mB)4.4/1*
ISC 02 13:45:09.5±0.9, 3°.72N±0°.10×92°.79E±0°.07, h35km, n18,
σ1♀37/21, **mb3.7/7, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**3.06**	**55**	P	**Pn**	**13 45 55.8**	**+0.3**
BSI				S	**Sn**	**13 46 28.7**	**-2.2**
MLSI	**Meulaboh, Aceh**	**3.65**	**81**	P	**Pn**	**13 46 04.2**	**+0.7**
MLSI				S	**Sn**	**13 46 43.7**	**-1.7**
TPTI		**4.41**	**96**	P	**Pn**	**13 46 14.2**	**+0.2**
LHMI	**Lhok Sumawe**	**4.41**	**70**	P	**Pn**	**13 46 14.2**	**+0.2**
KCSI	**Kotacane, Aceh**	**4.98**	**92**	P	**Pn**	**13 46 23.7**	**+1.9**
GSI	**Gunungsitoli**	**5.35**	**117**	P	**Pn**	**13 46 26.5**	**-0.5**
TSI	**Tuntungan**	**5.77**	**92**	P	**Pn**	**13 46 33.7**	**+1.0**
PSI	**Prapat**	**6.19**	**98**	Pn	**Pn**	**13 46 40.8**	**+2.2**
	1.4nm,0.3s,baz=360,slow=4.6,SNR=5.7						
PSI				Sn	**Sn**	**13 47 45.9**	**-2.5**
	2.8nm,0.3s,baz=180,slow=19,SNR=5.4						
MNSI	**Mandailing Nat**	**7.38**	**113**	P	**Pn**	**13 46 54.8**	**-0.1**
PALK	**Pallekele**	**12.54**	**287**	Pn	**Pn**	**13 48 03.4**	**-2.2**
	0.4nm,0.3s,baz=115,slow=14,SNR=6.5						
PALK				Sn	Sn	13 50 07.8	-16
	0.7nm,0.3s,baz=114,slow=20,SNR=3.7						
CMAR	**Chiang Mai Arr**	**15.84**	**22**	Pn	**Pn**	**13 48 49.4**	**-0.7**
	0.2nm,0.3s,baz=227,slow=14,SNR=4.5						
MKAR	**Makanchi Array**	**43.87**	**350**	P	**P**	**13 53 12.8**	**+0.3**
	1.0nm,0.7s,baz=169,slow=8.6,SNR=11						
SONM	**Songino Array**	**45.49**	**13**	P	**P**	**13 53 26.8**	**+1.3**
	0.4nm,0.5s,baz=189,slow=8.6,SNR=3.0						
WRA	**Warramunga Arr**	**47.10**	**122**	P	**P**	**13 53 39.3**	**+0.8**
	0.3nm,0.7s,baz=298,slow=8.6,SNR=3.1						
KURBB	**Kurchatov Arra**	**48.26**	**348**	P	**P**	**13 53 47.8**	**+0.8**
	2.1nm,0.2s,baz=178,slow=7.3,SNR=5.7						
ZALV	**Zalesovo Beam**	**50.50**	**354**	P	**P**	**13 54 04.9**	**+0.9**
	2.1nm,0.5s,baz=174,slow=7.1,SNR=9.0						
BVAR	**Borovoye Array**	**52.51**	**343**	P	**P**	**13 54 19.4**	**+0.3**
	0.5nm,0.7s,baz=142,slow=7.3,SNR=3.2						
GERES	**GERESS Array B**	**80.03**	**319**	P	**P**	**13 57 16.4**	**+0.7**
	1.0nm,0.9s,baz=97,slow=8.0,SNR=3.9						

*IDC **02** 13:50:22.3±0.6, 0°.25N×125°.96E, h0km, mb4.4/18, mb1 4.4/19, mb1mx4.3/53, mbtmp4.3/19, ML3.7/1, MS3.7/10, Ms1 3.7/10, ms1mx3.2/57, Error ellipse: s-maj=24.9km s-min=13.8km az=69.0*
*BJI **02** 13:50:24.5, 0°.15N×126°.33E, h33km, mb4.6/14, mB4.8/4, Ms4.0/2, Ms7 3.8/2*
*ISCJB **02** 13:50:26.6±0.3, 0°.33N±0°.04×126°.23E±0°.04, h47km, mb4.4/28, MS3.7/8, Error ellipse: s-maj=6.7km s-min=4.9km az=138.5*
*DJA **02** 13:50:27.1±0.3, 0°N±4°×12°6E±°, h10km, M4.2/6, MLv4.2/6*
*NEIC **02** 13:50:29.1±1.2, 0°.33N×126°.32E, h57km±13km, mb4.6/6, Error ellipse: s-maj=11.2km s-min=8.1km az=78.0*
ISC 02 13:50:28.2±0.5, 0°.21N±0°.05×126°.19E±0°.05, h47km, n57,
σ1♀58/53, **mb4.4**/28, **MS3.8**/8, **1C, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.30**	**65**	*e*Pn	**Pn**	**13 50 49.0**	**-0.9**
LBMI	**Labuha**	**1.56**	**123**	P	**Pn**	**13 50 52.4**	**-1.1**
KMSI	**Cibinong**	**2.24**	**279**	P	**Pn**	**13 51 02.7**	**-0.1**
SANI	**Sanana**	**2.25**	**185**	P	**Pn**	**13 51 03.3**	**+0.3**
SGSI	**Sangihe**	**3.52**	**349**	P	**Pn**	**13 51 23.0**	**+2.7**
NLAI	**Namlea**	**3.54**	**165**	P	**Pn**	**13 51 22.3**	**+1.5**
MRSI	**Marisa**	**4.26**	**274**	P	**Pn**	**13 51 33.4**	**+2.8**
AAI	**Ambon**	**4.36**	**153**	P	**Pn**	**13 51 32.9**	**+1.0**
MSAI	**Masohi**	**4.47**	**142**	P	**Pn**	**13 51 34.1**	**+0.7**
APSI	**Ampana**	**4.68**	**256**	P	**Pn**	**13 51 38.8**	**+2.5**
SIJI	**Sorong**	**5.19**	**102**	Pn	**Pn**	**13 51 44.5**	**+1.2**
	2.5nm,0.3s,baz=240,slow=12,SNR=9.6						
SIJI				Sn	**Sn**	**13 52 44.8**	**+2.8**
	0.4nm,0.3s,baz=286,slow=19,SNR=1.8						
SIJI				LR	LR	13 54 11.0	
	comp=Z,646nm,20.6s,baz=283,slow=42						
JAY	**Jayapura**	**14.76**	**101**	LR	LR	14 00 50.8	
	comp=Z,472nm,21.8s,baz=270,slow=42						
JAGI	**Jajag, Banyuwa**	**14.78**	**234**	*e*Pn	**P**	**13 53 57.0**	**-2.4**
KSM	**Kuching**	**15.93**	**275**	*e*Pn	**P**	**13 54 12.4**	**+0.2**
	20nm,1.0s						
WRAB	**Tennant Creek**	**21.56**	**159**	*e*P	**P**	**13 55 13.6**	**-0.2**
	39nm,1.0s						
WRA	**Warramunga Arr**	**21.56**	**159**	P	**P**	**13 55 13.7**	**-0.2**
	25nm,0.8s,baz=337,slow=11,SNR=50						
WB2	**Warramunga Arr**	**21.57**	**159**	*e*P	**P**	**13 55 13.1**	**-0.8**
COEN	**Coen**	**21.93**	**131**	*e*P	**P**	**13 55 18.9**	**+1.0**
	17nm,1.0s						
ASAR	**Alice Springs**	**24.89**	**163**	P	**P**	**13 55 49.2**	**+2.4**
	4.3nm,0.5s,baz=354,slow=15,SNR=44						
AS01	**Alice Springs**	**24.90**	**163**	*e*P	**P**	**13 55 47.8**	**+0.9**
CMAR	**Chiang Mai Arr**	**32.33**	**306**	P	**P**	**13 56 52.8**	**-0.4**
	0.6nm,0.6s,baz=130,slow=4.9,SNR=4.9						
CMAR				LR	LR	14 10 36.4	
	comp=Z,85nm,19.8s,baz=154,slow=38						
STKA	**Stephens Creek**	**35.09**	**157**	P	**P**	**13 57 18.5**	**+1.5**
	4.6nm,0.8s,baz=330,slow=10,SNR=6.7						
KSAR	**Wonju Array Be**	**37.08**	**2**	P	**P**	**13 57 34.9**	**+0.9**
KSRS	**Korea Array**	**37.09**	**2**	P	**P**	**13 57 34.9**	**+0.8**
	4.2nm,0.8s,baz=179,slow=9.8,SNR=25						
KS01	**Wonju Array Si**	**37.11**	**2**	*e*P	**P**	**13 57 31.5**	**-2.8**
CD2	**Chengdu**	**37.22**	**327**	P	**P**	**13 57 34.6**	**-0.7**
CD2				pmax	pmax		
	comp=Z,15nm,0.5s						
MAJO	**Matsushiro**	**37.83**	**16**	*e*P	**P**	**13 57 37.5**	**-2.9**
	6.7nm,0.9s						
MJAR	**Matsushiro Arr**	**37.83**	**16**	P	**P**	**13 57 39.2**	**-1.2**
	3.6nm,0.8s,baz=195,slow=10.0,SNR=12						
MJB9	**Matsu-Tunnel**	**37.83**	**16**	*e*P	**P**	**13 57 37.5**	**-2.8**
	7.1nm,0.9s						
CN2	**Changchun**	**43.40**	**359**	*e*P	**P**	**13 58 30.1**	**+3.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
USRK	**Ussuriysk Ar.**	**44.10**	**6**	P	**P**	**13 58 32.4**	**+0.6**
	6.6nm,0.8s,baz=192,slow=5.4,SNR=14						
GTA	**Gaotai**	**45.87**	**331**	*e*P	P	13 58 50.8	+4.7
GTA				pP	pP	13 58 56.1	-2.8
GTA				sP	sP	13 58 58.7	-5.7
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ASAJ	**Asahikawa**	**46.09**	**16**	P	**P**	**13 58 48.6**	**+1.0**
	6.7nm,0.9s,baz=224,slow=8.7,SNR=9.0						
SONM	**Songino Array**	**50.46**	**343**	P	**P**	**13 59 22.7**	**+1.3**
	2.9nm,0.9s,baz=159,slow=8.7,SNR=14						
SONM				PcP	**PcP**	**14 00 38.5**	**-0.6**
	1.1nm,0.8s,baz=149,slow=3.0,SNR=2.8						
SONM				LR	LR	14 22 49.9	
	comp=Z,121nm,20.7s,baz=176,slow=39						
SONA1	**Songino Array**	**50.47**	**343**	*e*P	**P**	**13 59 20.5**	**-0.9**
TLY	**Talaya**	**54.70**	**343**	LR	LR	14 25 38.4	
	comp=Z,48nm,20.0s,baz=164,slow=39						
WMQ	**Urumqi**	**55.32**	**327**	P	**P**	**13 59 57.8**	**+0.5**
WMQ				pmax	pmax		
	comp=Z,47nm,1.1s						
PETK	**Petropavlovsk-**	**58.87**	**22**	P	**P**	**14 00 23.8**	**+1.6**
	6.0nm,0.8s,baz=178,slow=5.8,SNR=9.6						
PETK	**Petropavlovsk-**	**58.87**	**22**	*e*P	**P**	**14 00 21.0**	**-1.1**
MK31	**Makanchi Array**	**60.15**	**327**	*e*P	**P**	**14 00 29.8**	**-1.4**
MKAR	**Makanchi Array**	**60.15**	**327**	P	**P**	**14 00 30.7**	**-0.4**
	1.4nm,0.4s,baz=122,slow=7.5,SNR=28						
MKAR				LR	LR	14 27 28.8	
	comp=Z,70nm,19.4s,baz=66,slow=37						
MAKZ	**Makanchi**	**60.33**	**327**	*e*P	**P**	**14 00 30.8**	**-1.6**
	6.9nm,1.1s						
ZALV	**Zalesovo Beam**	**63.48**	**334**	P	**P**	**14 00 52.6**	**-0.7**
	2.0nm,0.8s,baz=134,slow=6.4,SNR=7.4						
ZALV	**Zalesovo Beam**	**63.48**	**334**	*e*P	**P**	**14 00 51.3**	**-2.0**
KURBB	**Kurchatov Arra**	**64.42**	**329**	P	**P**	**14 00 58.5**	**-1.0**
	2.5nm,0.7s,baz=134,slow=6.4,SNR=21						
KURK	**Kurchatov**	**64.42**	**329**	P	**P**	**14 00 58.5**	**-1.1**
BVAR	**Borovoye Array**	**69.98**	**328**	P	**P**	**14 01 34.4**	**-0.3**
	3.6nm,0.9s,baz=126,slow=9.1,SNR=15						
AKTO	**Aktyubinsk**	**76.08**	**322**	P	**P**	**14 02 09.9**	**-1.0**
	4.7nm,0.7s,baz=95,slow=8.4,SNR=8.2						
AKTO				LR	LR	14 37 41.5	
	comp=Z,40nm,18.7s,baz=105,slow=37						
KBZ	**Khabaz**	**85.00**	**314**	P	**P**	**14 02 59.5**	**+0.7**
	2.6nm,0.9s,baz=46,slow=6.2,SNR=4.8						
KLMR	**Klimovskoe**	**88.19**	**331**	*e*P	**P**	**14 03 11.3**	**-2.7**
KLMR				AMP		14 03 15.8	
	comp=Z,12nm,1.2s						
ILAR	**Eielson Array**	**88.49**	**25**	P	**P**	**14 03 14.5**	**-0.9**
	comp=Z,0.4nm,0.9s,baz=270,slow=2.7,SNR=3.4						
ILAR				LR	LR	14 38 49.6	
	comp=Z,17nm,22.0s,baz=210,slow=33						
SYO	**Syowa Base**	**88.97**	**201**	⇑*e*pP	pP	14 03 33.0	+1.6
BRTR	**Keskin Array B**	**91.83**	**310**	P	**P**	**14 03 31.7**	**0.0**
	comp=Z,0.3nm,0.4s,baz=124,slow=4.2,SNR=2.9						
ARCES	**ARCESS Array B**	**93.54**	**340**	P	**P**	**14 03 39.0**	**+0.2**
	comp=Z,1.6nm,0.8s,baz=82,slow=6.5,SNR=3.9						
FINES	**FINESS Array B**	**94.66**	**332**	LR	LR	14 48 50.6	
	comp=Z,44nm,20.5s,baz=37,slow=37						
BOSA	**Boshof**	**99.70**	**241**	LR	LR	14 43 33.7	
	comp=Z,47nm,21.1s,baz=138,slow=32						
TORD	**Torodi Ar. Bea**	**123.43**	**286**	PKP	**PKPdf**	**14 09 21.6**	**+0.2**
	comp=Z,0.9nm,0.9s,baz=62,slow=3.1,SNR=3.8						

*IDC **02** 13:54:38.0±0.5, 16°.92S×173°.73W, h71km±3km, mb4.1/20, mb1 4.2/21, mb1mx4.1/48, mbtmp4.4/21, MS3.6/19, Ms1 3.6/19, ms1mx3.4/47, Error ellipse: s-maj=17.0km s-min=10.8km az=138.0*
*WEL **02** 13:54:50.6±1.4, 18°S±36°×17°4W±4°9, h103km±35km*
ISC 02 13:54:35.6±0.4, 17°.01S±0°.08×173°.7W±0°.1, h52km, n96,
σ2♀07/91, **mb4.4/20, MS3.7**/18, **8C-2D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.58**	**31**	P	Pn	13 55 23.3	-5.4
	21nm,0.3s,baz=195,slow=3.3,SNR=71						
AFI				S	Sn	13 55 57.7	-12
	267nm,0.3s,baz=21,slow=23,SNR=38						
RAR	**Rarotonga**	**13.79**	**110**	P	Pn	13 57 43.7	-4.6
	baz=260,slow=9.2,SNR=4.4						
DZM	**Mont Dzumac**	**19.40**	**252**	P	**P**	**13 58 58.0**	**+0.5**
	0.1nm,0.3s,baz=41,slow=19,SNR=2.2						
DZM				LR	LR	14 05 31.6	
	comp=Z,174nm,18.4s,baz=58,slow=34						
DZM	**Mont Dzumac**	**19.40**	**252**	*e*LR	LR	14 04 11.7	
	290nm,27.4s						
OUZ	**Omahuta**	**21.40**	**210**	P	**P**	**13 59 20.7**	**+1.7**
WCZ	**Waipu Caves**	**21.66**	**207**	P	**P**	**13 59 23.3**	**+1.6**
KUZ	**Kuaotunu**	**21.79**	**203**	P	**P**	**13 59 25.9**	**+2.8**
HAZ	**Te Kaha**	**22.00**	**198**	P	**P**	**13 59 28.1**	**+2.8**
PKGZ	**Pakihiroa**	**22.03**	**198**	P	**P**	**13 59 29.5**	**+3.7**
WIAZ	**Waiheke Island**	**22.06**	**205**	P	**P**	**13 59 29.6**	**+3.6**
PUZ	**Puketiti**	**22.15**	**197**	P	**P**	**13 59 29.6**	**+2.6**
RUGZ	**Raukumara Rang**	**22.22**	**198**	P	**P**	**13 59 30.8**	**+2.9**
ETAZ	**East Tamaki Re**	**22.28**	**205**	P	**P**	**13 59 32.4**	**+4.1**
MKAZ	**Moumakai**	**22.32**	**204**	P	**P**	**13 59 32.2**	**+3.4**
TWGZ	**Tauwhareparae**	**22.33**	**198**	P	**P**	**13 59 32.9**	**+3.9**
TWGZ				S	**S**	**14 03 24.1**	**-7.1**
OPRZ	**Ohinepanea**	**22.47**	**201**	P	**P**	**13 59 34.3**	**+3.9**
MWZ	**Matawai**	**22.61**	**198**	P	**P**	**13 59 34.5**	**+2.5**
MWZ				S	**S**	**14 03 30.1**	**-5.9**
URZ	**Urewera**	**22.66**	**199**	P	**P**	**13 59 33.4**	**+0.9**
	15nm,0.4s,baz=315,slow=2.0,SNR=41						
URZ				S	**S**	**14 03 32.6**	**-4.3**
	2.0nm,0.6s,baz=103,slow=18,SNR=4.7						
URZ	**Urewera**	**22.66**	**199**	P	**P**	**13 59 33.7**	**+1.3**
URZ				S	**S**	**14 03 34.4**	**-2.5**
KMRZ	**Kaimai**	**22.68**	**202**	P	**P**	**13 59 37.0**	**+4.2**
RIGZ	**Rimuhau**	**22.88**	**197**	P	**P**	**13 59 38.0**	**+3.2**
PPT2	**Papeete2**	**23.01**	**95**	*e*LR	LR	14 04 51.0	
	256nm,25.8s						
PPT	**Papeete**	**23.02**	**95**	LR	LR	14 06 29.5	
	comp=Z,42nm,20.7s,baz=255,slow=31						
RTZ	**Ruatahuna**	**23.03**	**199**	P	**P**	**13 59 38.6**	**+2.2**
HRRZ	**Handcock Road**	**23.05**	**200**	P	**P**	**13 59 40.3**	**+3.8**
SNGZ	**Shannon Statio**	**23.07**	**198**	P	**P**	**13 59 40.4**	**+3.6**
TLZ	**Tolley Road**	**23.25**	**202**	P	**P**	**13 59 39.0**	**+0.5**
RAHZ	**Arahi**	**23.27**	**198**	P	**P**	**13 59 41.1**	**+2.4**
NMHZ	**Naumai**	**23.53**	**199**	P	**P**	**13 59 44.9**	**+3.8**
TBI	**Tubuai**	**23.57**	**109**	*e*LR	LR	14 05 09.4	
	360nm,30.8s						
HIZ	**Hauiti**	**23.66**	**203**	P	**P**	**13 59 45.8**	**+3.4**
BKZ	**Black Stump Fm**	**23.69**	**199**	P	**P**	**13 59 45.1**	**+2.5**
HNR	**Honiara**	**26.74**	**283**	LR	LR	14 09 17.3	
	comp=Z,299nm,21.8s,baz=108,slow=33						
TAOE	**Nuku Hiva Isla**	**33.62**	**80**	*e*LR	LR	14 09 31.5	
	144nm,30.7s						
CTA	**Charters Tower**	**38.05**	**259**	P	**P**	**14 01 48.3**	**-1.0**
	2.6nm,0.7s,baz=75,slow=11,SNR=3.8						
STKA	**Stephens Creek**	**43.02**	**241**	P	**P**	**14 02 30.5**	**+0.2**
	12nm,0.9s,baz=68,slow=9.1,SNR=11						
JAY	**Jayapura**	**47.06**	**283**	P	**P**	**14 03 03.0**	**+0.4**
	3.1nm,0.6s,baz=94,slow=18,SNR=3.1						
WRA	**Warramunga Arr**	**49.24**	**258**	P	**P**	**14 03 18.5**	**-0.8**
	1.8nm,0.5s,baz=96,slow=7.1,SNR=50						
WRA				pP	**sP**	**14 03 37.6**	**-1.6**
	2.3nm,0.8s,baz=93,slow=7.0,SNR=5.8						
ASAR	**Alice Springs**	**49.38**	**253**	P	**P**	**14 03 20.0**	**-0.4**
	22nm,0.7s,baz=87,slow=8.7,SNR=245						
VNDA	**Vanda**	**61.76**	**186**	P	**P**	**14 04 50.6**	**+2.3**
	3.4nm,0.9s,baz=7.5,slow=6.6,SNR=11						
DAV	**Davao City (W)**	**64.63**	**287**	LR	LR	14 29 20.8	
	comp=Z,25nm,21.3s,baz=112,slow=32						
MJAR	**Matsushiro Arr**	**70.00**	**320**	LR	LR	14 31 28.8	
	comp=Z,41nm,21.9s,baz=185,slow=32						
JOW	**Kunigami**	**71.22**	**307**	LR	LR	14 31 29.1	
	comp=Z,88nm,21.9s,baz=107,slow=31						
JNU	**Nakatsue**	**72.70**	**314**	LR	LR	14 31 13.6	
	comp=Z,47nm,21.9s,baz=118,slow=30						
ASAJ	**Asahikawa**	**72.76**	**329**	P	**P**	**14 05 59.6**	**+1.3**
	4.8nm,0.9s,baz=153,slow=9.0,SNR=5.1						
ASAJ				LR	LR	14 31 33.9	
	comp=Z,50nm,21.7s,baz=164,slow=30						
QSPA	**South Pole Qui**	**73.05**	**180**	P	**P**	**14 06 01.2**	**+1.3**
	5.6nm,1.0s,baz=32,slow=4.7,SNR=10						
PETK	**Petropavlovsk-**	**74.07**	**343**	P	**P**	**14 06 06.2**	**+0.3**
	4.4nm,0.8s,baz=116,slow=9.7,SNR=5.6						
PETK				LR	LR	14 32 50.4	
	comp=Z,28nm,21.8s,baz=188,slow=31						
YBH	**Yreka Blue Hor**	**75.03**	**37**	P	**P**	**14 06 11.7**	**-0.1**
	4.2nm,1.1s,baz=201,slow=4.7,SNR=5.4						
YBH				pP	**sP**	**14 06 31.9**	**-0.5**
	2.6nm,0.8s,baz=328,slow=9.5,SNR=4.0						
YBH				LR	LR	14 31 21.9	
	comp=Z,65nm,19.1s,baz=242,slow=29						
NVAR	**Mina Array Bea**	**75.69**	**42**	P	**P**	**14 06 15.4**	**-0.4**
	4.7nm,1.0s,baz=228,slow=9.5,SNR=22						
NVAR				LR	LR	14 30 34.4	
	comp=Z,54nm,20.4s,baz=98,slow=28						
KSRS	**Korea Array**	**77.12**	**316**	LR	LR	14 33 42.5	
	comp=Z,34nm,21.2s,baz=140,slow=30						
USRK	**Ussuriysk Ar.**	**78.51**	**323**	LR	LR	14 34 25.9	
	comp=Z,66nm,21.6s,baz=128,slow=30						
TXAR	**Lajitas Array**	**81.72**	**56**	P	**P**	**14 06 49.0**	**-0.1**
	2.0nm,1.0s,baz=213,slow=6.7,SNR=13						
TXAR				pP	**sP**	**14 07 09.5**	**-0.3**
	0.6nm,0.8s,baz=187,slow=9.6,SNR=3.2						
ANMO	**Albuquerque**	**82.03**	**50**	P	**P**	**14 06 50.4**	**-0.3**
	1.3nm,0.6s,baz=241,slow=7.7,SNR=5.8						
PMSA	**Palmer Station**	**82.82**	**156**	LR	LR	14 33 54.5	
	comp=Z,44nm,21.8s,baz=252,slow=28						
PDAR	**Pinedale Array**	**83.63**	**42**	P	**P**	**14 06 58.1**	**-0.8**
	2.5nm,0.7s,baz=205,slow=3.1,SNR=18						
PDAR				pP	**sP**	**14 07 19.1**	**-0.5**
	2.1nm,0.8s,baz=219,slow=3.8,SNR=5.1						
PDAR				LR	LR	14 37 19.9	
	comp=Z,43nm,19.7s,baz=284,slow=31						
ILAR	**Eielson Array**	**84.06**	**11**	P	**P**	**14 06 58.9**	**-1.3**
	1.0nm,0.7s,baz=234,slow=6.1,SNR=14						
ILAR				pP	**sP**	**14 07 19.4**	**-1.6**
	1.8nm,0.9s,baz=217,slow=6.1,SNR=7.2						
MAW	**Mawson**	**86.19**	**199**	P	**P**	**14 07 11.9**	**+0.9**
	0.6nm,0.3s,baz=85,slow=12,SNR=3.1						
PLCA	**Paso Flores**	**88.63**	**132**	LR	LR	14 37 57.4	
	comp=Z,32nm,20.1s,baz=255,slow=29						
SNAA	**Sanae**	**91.32**	**177**	P	**P**	**14 07 35.7**	**+0.3**
	2.2nm,1.0s,baz=192,slow=6.1,SNR=4.1						
YKA	**Yellowknife Ar**	**91.67**	**23**	P	**P**	**14 07 36.3**	**-0.5**
	0.4nm,0.9s,baz=243,slow=3.1,SNR=4.7						
YKA				pP	**sP**	**14 07 57.1**	**-0.5**
	1.0nm,0.9s,baz=234,slow=4.5,SNR=6.1						
CMAR	**Chiang Mai Arr**	**92.87**	**288**	P	**P**	**14 07 44.5**	**+1.1**
	1.1nm,0.8s,baz=94,slow=1.8,SNR=9.2						
CMAR				LR	LR	14 48 31.8	
	comp=Z,17nm,20.7s,baz=192,slow=35						
ULM	**Lac du Bonnet**	**95.34**	**39**	LR	LR	14 43 48.0	
	comp=Z,51nm,18.6s,baz=268,slow=31						
SONM	**Songino Array**	**95.86**	**318**	LR	LR	14 45 50.4	
	comp=Z,17nm,21.5s,baz=144,slow=32						
KURBB	**Kurchatov Arra**	**114.23**	**318**	PKP	PKPdf	14 13 08.2	-0.9
	0.4nm,0.8s,baz=164,slow=0.7,SNR=6.2						
KURBB				pPKP	pPKiKP	14 13 29.2	+4.4
	0.7nm,0.7s,baz=124,slow=2.3,SNR=3.7						
BVAR	**Borovoye Array**	**118.98**	**322**	PKP	**PKPdf**	**14 13 17.9**	**-0.4**
	1.5nm,0.7s,baz=90,slow=1.4,SNR=9.6						
BVAR				pPKP	**sPKPdf**	**14 13 38.7**	**-0.8**
	1.4nm,0.7s,baz=82,slow=2.0,SNR=6.1						
ARCES	**ARCESS Array B**	**126.16**	**352**	PKP	**PKPdf**	**14 13 31.0**	**-0.6**
	1.5nm,0.7s,baz=112,slow=1.0,SNR=4.5						
BRG	**Berggiesshubel**	**145.67**	**351**	*e*P	**PKPdf**	**14 14 08.2**	**0.0**
	5.0nm,1.0s						
BURAR	**Bucovina Array**	**145.75**	**337**	⇑*i*P	**PKPab**	**14 14 10.0**	**+0.6**
DPC	**Dobruska-Polom**	**145.78**	**349**	*e*P	**PKPbc**	**14 14 09.4**	**+0.5**
DPC				*e*x	*x*	14 27.3	
MORC	**Moravsky Berou**	**146.08**	**347**	⇓*i*P	**PKPab**	**14 14 10.7**	**+0.2**
MORC	**Moravsky Berou**	**146.08**	**347**	*e*PKP	**PKPbc**	**14 14 10.3**	**+0.5**
MORC				*e*		14 14 30.7	
JAVC	**Velka Javorina**	**146.91**	**346**	*e*PKP	**PKPab**	**14 14 13.9**	**+0.2**
KRUC	**Moravsky**	**147.00**	**348**	*e*PKP	**PKPbc**	**14 14 12.8**	**+0.3**
KRUC				*e*		14 14 32.4	
DOPR	**Dopca**	**147.04**	**335**	⇑*i*P	**PKPbc**	**14 14 13.9**	**+1.2**
MLR	**Muntele Rosu**	**147.20**	**334**	⇑*i*P	pPKPbc	14 14 34.1	+5.2
BRTR	**Keskin Array B

2.4nm,0.8s,baz=96,slow=5.6,SNR=5.1
AKASG Malin Array Be 49.03 308 P **P 14 24 21.0 +1.1**
0.2nm,0.3s,baz=69,slow=7.2,SNR=4.0
WRA Warramunga Arr 67.14 143 P **P 14 26 25.6 -1.5**
0.7nm,0.9s,baz=345,slow=6.7,SNR=4.6
ASAR Alice Springs 70.16 145 P **P 14 26 44.4 -1.5**
0.2nm,0.7s,baz=335,slow=6.5,SNR=3.6
ESDC Sonseca Array 74.68 309 P **P 14 27 15.2 +2.3**
0.4nm,0.5s,baz=50,slow=5.4,SNR=5.9
YKA Yellowknife Ar 76.10 15 LR LR 15 04 07.6
comp=Z,4.8nm,18.2s,baz=262,slow=38

*ISCJB **02** 14:19:36.7±0.8,32°.12N±0°.05×115°.73W±0°.05, h9km±12km, Error ellipse: s-maj=10.4km s-min=4.1km az=34.3*
*MEX **02** 14:19:38.5±0.5,32°.23N×115°.63W, h9km±12km, MD3.8*
*ECX **02** 14:19:38.5±0.6,32°.10N×115°.76W, h7km, MD2.6, ML2.8*
ISC 02 14:19:35.7±1.4, 32°.16N±0°.05×115°.69W±0°.03, h10km±16km, n19, σ0s89/31, 1D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPBX	**Cerro Prieto**	**0.41**	**52**	*eP*	**Pn**	**14 19 47.1**	**-0.6**
CPBX				*eS*	**Sb**	**14 19 54.7**	**+3.3**
MBIG	**Mexicali**	**0.48**	**60**	*eP*	**Pb**	**14 19 46.7**	**+0.4**
MBIG				*eS*	**Sb**	**14 19 52.0**	**-1.4**
SGL	**Mount Signal**	**0.48**	**357**	*eP*	**Pn**	**14 19 48.2**	**-0.5**
YUH	**Yuha Desert**	**0.52**	**338**	*eP*	**Pn**	**14 19 48.6**	**-0.6**
RMX	**La Rumorosa**	**0.55**	**323**	*eP*	**Pb**	**14 19 47.7**	**+0.3**
RMX				*eP*	**Pn**	**14 19 48.1**	**-1.6**
RMX				*eS*	**Sb**	**14 19 54.5**	**-0.9**
IKP	**In-Ko-Pah, Jac**	**0.60**	**324**	*eP*	**Pn**	**14 19 49.2**	**-1.2**
ZAX	**El Zacaton**	**0.82**	**218**	*eP*	**Pg**	**14 19 51.1**	**-0.3**
CBX	**Cerro Bola**	**0.84**	**280**	*eP*	**Pb**	**14 19 52.8**	**+0.4**
CBX				*eS*	**Sb**	**14 20 03.7**	**0.0**
CBX				IAML		14 20 05.8	
	comp=N,394nm,0.5s						
CBX				‖*e*		14 20 05.8	
CBX	**Cerro Bola**	**0.84**	**280**	*eP*	**Pb**	**14 19 52.8**	**+0.4**
CBX				*eS*	**Sb**	**14 20 04.7**	**+1.0**
TJIG	**Tijuana**	**0.88**	**288**	*eP*	**Pb**	**14 19 53.5**	**+0.6**
TJIG				*eS*	**Sb**	**14 20 04.7**	**0.0**
ECBX	**El Chinero**	**0.88**	**142**	*eP*	**Pg**	**14 19 52.2**	**-0.4**
ECBX				*eS*	**Sg**	**14 20 03.8**	**-0.2**
ECBX				IAML		14 20 06.1	
	comp=N,254nm,0.5s						
ECBX				*e*		14 20 06.1	
ECNX	**Esteban Cantu**	**0.92**	**237**	*eP*	**Pg**	**14 19 53.2**	**-0.2**
PBX	**Punta Banda**	**0.97**	**245**	*eP*	**Pg**	**14 19 54.4**	**0.0**
BAR	**Barrett**	**0.98**	**302**	*eP*	**Pn**	**14 19 55.3**	**-0.2**
SPIG	**San Pedro Mart**	**1.13**	**170**	*eP*	**Pb**	**14 19 57.5**	**0.0**
SPIG				*eS*	**Sg**	**14 20 12.6**	**+0.4**
SPIG	**San Pedro Mart**	**1.13**	**170**	*eP*	**Pb**	**14 19 57.7**	**+0.2**
SPIG				*eS*	**Sg**	**14 20 12.3**	**+0.1**
SPX	**San Pedro Mart**	**1.13**	**170**	*eP*	**Pb**	**14 19 57.8**	**+0.2**
SPX				*eS*	**Sg**	**14 20 12.6**	**+0.4**
SPX	**San Pedro Mart**	**1.13**	**170**	*eP*	**Pb**	**14 19 57.5**	**0.0**
SPX				*eS*	**Sg**	**14 20 12.7**	**+0.5**
SDRC	**San Diego Road**	**1.20**	**299**	*eP*	**Pn**	**14 19 59.1**	**+0.6**

*IDC **02** 14:34:36.6±0.7,12°.07N×143°.72E, h0km, mb4.2/17, mb1 4.3/17, mb1mx4.1/60, mbtmp4.2/17, MS3.3/9, Ms1 3.3/9, ms1mx3.0/60, Error ellipse: s-maj=21.2km s-min=16.1km az=116.0*
*ISCJB **02** 14:34:38.8±0.6,12°.06N±0°.09×143°.6E±0°.1, h25km, mb4.2/17, MS3.2/8, Error ellipse: s-maj=16.9km s-min=9.0km az=40.9*
ISC 02 14:34:40.4±0.9, 12°.1N±0°.1×143°.7E±0°.1, h25km, n24, σ0s83/19, mb4.3/17, MS3.3/8, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.91**	**37**	Pn	**Pn**	**14 35 11.0**	**-0.3**
	159nm,0.3s,baz=14,slow=5.9,SNR=85						
GUMO				Sn	**Sn**	**14 35 35.1**	**+0.6**
	266nm,0.3s,baz=354,slow=20,SNR=5.5						
GUMO				LR	LR	14 35 44.9	
	comp=Z,97nm,21.2s,baz=210,slow=36						
JAY	**Jayapura**	**14.78**	**192**	LR	LR	14 43 39.9	
	comp=Z,119nm,18.6s,baz=346,slow=37						
JOW	**Kunigami**	**20.65**	**318**	LR	LR	14 46 37.2	
	comp=Z,52nm,20.7s,baz=126,slow=35						
PMG	**Port Moresby**	**21.59**	**171**	LR	LR	14 47 57.8	
	comp=Z,100nm,18.3s,baz=78,slow=37						
MJAR	**Matsushiro Arr**	**24.88**	**349**	P	**P**	**14 39 59.5**	**-1.7**
	1.3nm,0.8s,baz=186,slow=12,SNR=4.0						
MJAR				LR	LR	14 49 18.3	
	comp=Z,116nm,18.0s,baz=195,slow=36						
KSRS	**Korea Array**	**28.98**	**333**	P	**P**	**14 40 38.1**	**0.0**
	1.0nm,0.7s,baz=138,slow=9.5,SNR=7.5						
KSRS				LR	LR	14 52 30.8	
	comp=Z,30nm,18.0s,baz=142,slow=37						
ASAJ	**Asahikawa**	**31.96**	**358**	LR	LR	14 52 58.7	
	comp=Z,31nm,21.9s,baz=168,slow=34						
WRA	**Warramunga Arr**	**33.10**	**196**	P	**P**	**14 41 14.3**	**-0.3**
	1.7nm,0.6s,baz=20,slow=9.7,SNR=9.8						
ASAR	**Alice Springs**	**36.77**	**195**	P	**P**	**14 41 46.0**	**-0.3**
	0.6nm,0.7s,baz=20,slow=11,SNR=8.7						
PETK	**Petropavlovsk-**	**42.46**	**12**	LR	LR	15 03 08.9	
	comp=Z,34nm,18.3s,baz=184,slow=40						
CMAR	**Chiang Mai Arr**	**43.56**	**284**	P	**P**	**14 42 43.1**	**+0.4**
	0.8nm,0.7s,baz=87,slow=6.7,SNR=6.8						
SONM	**Songino Array**	**47.35**	**326**	P	**P**	**14 43 12.7**	**+0.3**
	1.7nm,0.7s,baz=153,slow=7.9,SNR=11						
SONM				LR	LR	15 03 44.1	
	comp=Z,46nm,18.4s,baz=166,slow=37						
MKAR	**Makanchi Array**	**61.81**	**317**	P	**P**	**14 44 58.0**	**+0.6**
	1.1nm,0.5s,baz=89,slow=8.4,SNR=12						
ZALV	**Zalesovo Beam**	**62.21**	**325**	P	**P**	**14 44 59.7**	**-0.2**
	1.5nm,0.6s,baz=101,slow=6.8,SNR=5.7						
KURBB	**Kurchatov Arra**	**65.06**	**320**	P	**P**	**14 45 19.3**	**+0.5**
	4.9nm,0.8s,baz=111,slow=6.6,SNR=50						
BVAR	**Borovoye Array**	**70.42**	**322**	P	**P**	**14 45 52.8**	**+0.2**
	3.4nm,0.6s,baz=100,slow=7.9,SNR=24						
ILAR	**Eielson Array**	**70.44**	**25**	P	**P**	**14 45 50.8**	**-1.6**
	1.7nm,0.7s,baz=254,slow=4.9,SNR=22						
INK	**Inuvik**	**76.21**	**22**	P	**P**	**14 46 26.1**	**-0.2**
	6.9nm,0.9s,baz=275,slow=6.9,SNR=10						
YBH	**Yreka Blue Hor**	**84.73**	**49**	P	**P**	**14 47 14.1**	**+1.3**
	1.5nm,0.5s,baz=277,slow=2.8,SNR=7.0						
YKA	**Yellowknife Ar**	**84.74**	**27**	P	**P**	**14 47 12.4**	**+0.2**
	1.0nm,0.5s,baz=287,slow=5.3,SNR=12						
ARCES	**ARCESS Array B**	**88.19**	**342**	P	**P**	**14 47 29.0**	**0.0**
	0.8nm,0.6s,baz=61,slow=6.6,SNR=7.6						
NVAR	**Mina Array Bea**	**88.77**	**51**	P	**P**	**14 47 33.8**	**+1.1**
	2.4nm,0.7s,baz=259,slow=6.1,SNR=18						
VNDA	**Vanda**	**90.02**	**176**	LR	LR	15 28 17.3	
	comp=Z,34nm,18.2s,baz=300,slow=36						
FINES	**FINESS Array B**	**92.06**	**335**	P	**P**	**14 47 46.2**	**-1.0**
	2.8nm,0.9s,baz=82,slow=4.0,SNR=9.0						

MAN 02 14:37:10.7, 15°.08N×119°.07E, h35km, mb4.8, ML3.7, MS3.7, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCZP	**Santa Cruz**	**1.07**	**49**	*eP*	Pn	14 37 29.2	0.0
SCZP				*eS*	Sn	14 37 42.8	+0.1
BOLP	**Bolinao**	**1.53**	**32**	*eP*	Pn	14 37 35.2	-0.4
BOLP				*eS*	Sn	14 37 55.1	+0.9
LUBP	**Lubang**	**1.75**	**139**	*eP*	Pn	14 37 39.8	+1.2
LUBP				*eS*	Sn	14 38 00.4	+0.7
ABRA	**Dolores**	**3.00**	**31**	*eP*	Pn	14 37 57.9	+2.1
ABRA				*eS*	Sn	14 38 32.5	+1.8

*ISCJB **02** 14:59:08.5±0.5,4°.74S±0°.08×154°.92E±0°.08, h500km, mb3.5/11, Error ellipse: s-maj=12.3km s-min=9.1km az=140.2*
*IDC **02** 14:59:09.0±1.3,4°.76S×154°.86E, h489km±16km, mb3.1/12, mb1 3.3/16, mb1mx3.1/53, mbtmp4.0/16, Error ellipse: s-maj=14.5km s-min=11.2km az=99.0*
ISC 02 14:59:09.5±0.6, 4°.78S±0°.09×154°.95E±0°.10, h500km, n18, σ1s06/22, mb3.5/11, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.78**	**133**	P	**P**	**15 00 52.4**	**-1.1**
	12nm,0.3s,baz=211,slow=3.1,SNR=9.9						
HNR				S	**S**	**15 02 17.3**	**-1.3**
	baz=262,slow=14,SNR=3.1						
PMG	**Port Moresby**	**8.99**	**239**	P	**P**	**15 01 15.4**	**-0.9**
	0.7nm,0.3s,baz=0.0,slow=5.1,SNR=3.8						
JAY	**Jayapura**	**14.39**	**278**	P	**P**	**15 02 13.8**	**+0.4**
	0.6nm,0.3s,baz=176,slow=2.4,SNR=4.1						
CTA	**Charters Tower**	**17.41**	**208**	P	**P**	**15 02 44.1**	**-0.4**
	0.4nm,0.3s,baz=33,slow=11,SNR=7.2						
DZM	**Mont Dzumac**	**20.48**	**148**	P	**P**	**15 03 14.5**	**+1.8**
	3.6nm,0.5s,baz=197,slow=15,SNR=9.0						
WRA	**Warramunga Arr**	**25.09**	**231**	P	**P**	**15 03 53.8**	**-0.2**
	4.5nm,0.4s,baz=55,slow=9.4,SNR=100						
WRA				PcP	**PcP**	**15 07 12.8**	**+0.9**
	0.5nm,0.6s,baz=54,slow=2.7,SNR=6.1						
ASAR	**Alice Springs**	**27.64**	**225**	P	**P**	**15 04 15.8**	**-0.7**
	1.6nm,0.4s,baz=54,slow=9.0,SNR=43						
ASAR				PcP	**PcP**	**15 07 18.9**	**+0.9**
	0.6nm,0.7s,baz=59,slow=3.0,SNR=5.0						
ASAR				S	**S**	**15 08 21.1**	**-1.8**
	0.5nm,0.7s,baz=54,slow=15,SNR=8.9						
MJAR	**Matsushiro Arr**	**43.99**	**340**	P	**P**	**15 06 30.3**	**-1.5**
	1.0nm,0.7s,baz=170,slow=8.3,SNR=5.8						
PETK	**Petropavlovsk-**	**57.72**	**2**	P	**P**	**15 08 11.9**	**+0.2**
	1.2nm,0.8s,baz=156,slow=7.7,SNR=4.4						
CMAR	**Chiang Mai Arr**	**59.81**	**294**	P	**P**	**15 08 27.6**	**+1.2**
	1.3nm,0.7s,baz=110,slow=4.8,SNR=9.5						
SONM	**Songino Array**	**67.46**	**327**	P	**P**	**15 09 15.5**	**+0.4**
	0.4nm,0.5s,baz=104,slow=6.1,SNR=3.3						
VNDA	**Vanda**	**72.78**	**178**	P	**P**	**15 09 47.6**	**+1.5**
	0.5nm,0.4s,baz=348,slow=6.7,SNR=6.0						
ILAR	**Eielson Array**	**81.34**	**22**	P	**P**	**15 10 32.1**	**-0.9**
	0.1nm,0.3s,baz=247,slow=4.6,SNR=4.2						
MKAR	**Makanchi Array**	**81.72**	**318**	P	**P**	**15 10 35.6**	**+0.2**
	0.5nm,0.6s,baz=109,slow=5.7,SNR=6.6						
ZALV	**Zalesovo Beam**	**82.33**	**326**	P	**P**	**15 10 37.6**	**-0.6**
	0.6nm,0.4s,baz=136,slow=5.7,SNR=3.2						
QSPA	**South Pole Qui**	**85.18**	**180**	P	**P**	**15 10 53.1**	**+0.7**
	1.5nm,0.7s,baz=132,slow=4.8,SNR=6.4						
LPAZ	**La Paz**	**132.53**	**117**	PKP	**PKPdf**	**15 17 29.6**	**+1.0**
	0.6nm,0.6s,baz=259,slow=5.2,SNR=3.9						
TORD	**Torodi Ar. Bea**	**152.33**	**289**	PKPbc	**PKPbc**	**15 18 09.0**	**-0.5**
	0.2nm,0.3s,baz=52,slow=1.8,SNR=6.3						

*IDC **02** 15:01:13.0±1.5,28°.60N×54°.52E, h0km, mb3.6/6, mb1 3.7/7, mb1mx3.4/59, mbtmp3.7/7, ML3.6/1, Error ellipse: s-maj=29.6km s-min=26.0km az=168.0*
*TEH **02** 15:01:14.3, 28°.46N×54°.54E, h11km, ML3.0*
*ISCJB **02** 15:01:15.4±0.6,28°.39N±0°.06×54°.48E±0°.07, h10km, mb3.6/5, Error ellipse: s-maj=12.0km s-min=4.2km az=42.8*
ISC 02 15:01:14.3±0.7, 28°.43N±0°.06×54°.55E±0°.05, h10km, n24, σ2s17/27, mb3.7/5, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISRV	**Sarvestan**	**1.58**	**308**	*e*		15 02 05.3	
	comp=Z,1μm,0.1s						
ISRV				*e*Pn	**Sn**	**15 02 02.4**	**-0.9**
GENO	**Geno**	**1.76**	**125**	*e*Pn	**Pg**	**15 01 48.1**	**-0.1**
GENO				*e*Sg	**Sg**	**15 02 14.8**	**+3.7**
GENO				*e*		15 02 17.3	
	comp=Z,99nm,0.3s						
IPAR	**Pars**	**1.93**	**318**	*e*Pn	**Pg**	**15 01 50.9**	**-0.4**
IPAR				*e*Sg	**Sg**	**15 02 18.7**	**+2.4**
IPAR				*e*		15 02 33.2	
	comp=Z,1μm,0.4s						
SHI	**Shiraz**	**2.15**	**305**	*e*Pn	**Pb**	**15 01 52.4**	**-1.1**
NIAN	**Nian**	**2.20**	**113**	*e*Pn	**Pb**	**15 01 53.7**	**-0.5**
NIAN				*e*		15 02 32.7	
	comp=Z,99nm,0.2s						
NGRK	**Negar Kerman**	**2.27**	**57**	*e*Pn	**Pn**	**15 01 54.1**	**+1.9**
NGRK				*e*		15 02 02.0	
	comp=Z,99nm,0.1s						
KHGB	**Koh Gabri**	**2.57**	**40**	*e*Pn	**Pb**	**15 01 59.1**	**-1.6**
KHGB				*e*		15 02 35.9	
	comp=Z,99nm,0.2s						
IKAZ	**Kazeroun**	**2.73**	**300**	*e*Pn	**Pn**	**15 02 00.9**	**+2.4**
IKAZ				*e*		15 02 03.8	
	comp=Z,1μm,0.1s						
KHSK	**Kohestak**	**2.78**	**126**	*e*Pn	**Pb**	**15 02 01.9**	**-2.1**
IMEH	**Mehriz**	**2.96**	**1**	*e*Pn	**Pn**	**15 02 04.3**	**+2.7**
IMEH				*e*		15 02 49.0	
	comp=Z,641nm,0.3s						
ISAD	**Sadrabad**	**3.56**	**348**	*e*Pn	**Pn**	**15 02 13.2**	**+3.3**
ISAD				*e*		15 03 24.5	
	comp=Z,379nm,0.3s						
ICHK	**Chekchek**	**3.81**	**358**	*e*Pn	**Pn**	**15 02 16.0**	**+2.7**
ICHK				*e*		15 03 33.4	
	comp=Z,408nm,0.3s						
IRAM	**Ramesheh**	**3.86**	**331**	*e*Pn	**Pn**	**15 02 16.4**	**+2.4**
IRAM				*e*		15 03 06.0	
	comp=Z,252nm,0.2s						
IGAR	**Gharneh**	**4.52**	**332**	*e*Pn	**Pn**	**15 02 25.6**	**+2.6**
ANAR	**Anarak**	**4.80**	**352**	*e*Pn	**Pn**	**15 02 29.0**	**+2.2**
IZEF	**Zefreh**	**4.85**	**337**	*e*Pn	**Pn**	**15 02 29.0**	**+1.4**
IZEF				*e*		15 03 05.4	
	comp=Z,75nm,0.2s						
IKLH	**Kolahrood**	**5.50**	**333**	*e*Pn	**Pn**	**15 02 39.3**	**+2.7**
IKLH				*e*		15 03 01.8	
	comp=Z,60nm,0.2s						
WSAR	**Wadi Sarin**	**6.34**	**144**	Pn	**Pn**	**15 02 50.8**	**+2.9**
	comp=Z,1.3nm,0.3s,baz=358,slow=13,SNR=23						
WSAR				Sn	**Sn**	**15 03 58.6**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=60,slow=20,SNR=2.4						
BRTR	**Keskin Array B**	**20.61**	**309**	P	**P**	**15 05 54.6**	**+0.7**
	comp=Z,0.7nm,0.6s,baz=126,slow=9.7,SNR=2.9						
AKTO	**Aktyubinsk**	**22.14**	**6**	P	**P**	**15 06 09.7**	**-0.3**
	comp=Z,1.3nm,0.7s,baz=213,slow=17,SNR=2.8						
MKAR	**Makanchi Array**	**28.40**	**42**	P	**P**	**15 07 08.0**	**-0.9**
	comp=Z,0.1nm,0.4s,baz=234,slow=9.7,SNR=2.6						
ZALV	**Zalesovo Beam**	**33.74**	**32**	P	**P**	**15 07 54.4**	**-1.4**
	comp=Z,0.9nm,0.6s,baz=231,slow=9.4,SNR=5.0						
HFS	**Hagfors**	**41.98**	**331**	P	**P**	**15 09 02.7**	**-2.6**
	comp=Z,2.7nm,0.9s,baz=132,slow=8.0,SNR=2.6						
TORD	**Torodi Ar. Bea**	**51.31**	**264**	P	**P**	**15 10 18.9**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=51,slow=7.8,SNR=4.9						

*ISK **02** 15:03:30.4, 40°.04N×32°.42E, h7km, ML2.3/7*
*CSEM **02** 15:03:31.2±0.3, 40°.01N×32°.37E, h5km, ML2.3*
*DDA **02** 15:03:31.8, 39°.92N×32°.40E, h7km, Ml2.5*
ISC 02 15:03:31.7±1.1, 39°.98N±0°.03×32°.41E±0°.02, h8km±9km, n33, σ0s90/52, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LOD	**Lodumlu**	**0.29**	**109**	PG	**Pg**	**15 03 36.6**	**-0.9**
LOD				SG	**Sg**	**15 03 41.5**	**+0.2**
LOD	**Lodumlu**	**0.29**	**109**	*e*Pg	**Pg**	**15 03 36.6**	**-0.9**
LOD				*e*Sg	**Sg**	**15 03 41.5**	**+0.2**
ANTO	**Ankara**	**0.32**	**111**	PG	**Pg**	**15 03 37.7**	**-0.3**
ANTO	**Ankara**	**0.32**	**111**	*e*Pg	**Pg**	**15 03 37.7**	**-0.3**
AFSR	**Af¨ar-Bala (A**	**0.74**	**136**	PG	**Pg**	**15 03 45.8**	**-0.2**
AFSR				SG	**Sb**	**15 03 57.0**	**-0.2**
AFSR	**Af¨ar-Bala (A**	**0.74**	**136**	*e*Pg	**Pg**	**15 03 45.8**	**-0.2**
AFSR				*e*Sg	**Sb**	**15 03 57.0**	**-0.2**
SVRH	**Sivrihisar-ESK**	**0.87**	**232**	PG	**Pg**	**15 03 47.8**	**-0.7**
SVRH	**Sivrihisar-ESK**	**0.87**	**232**	*e*Pg	**Pg**	**15 03 47.8**	**-0.7**
BCAM	**Yenicaga**	**0.87**	**343**	*e*P	**Pn**	**15 03 50.9**	**+0.5**
BCAM				*i* S	**Sn**	**15 04 06.5**	**+3.1**
BCAM	**Yenicaga**	**0.87**	**343**	P	**Pn**	**15 03 50.9**	**+0.5**
KKUL	**Konya-Kulu**	**0.90**	**154**	*i* P	**Pb**	**15 03 49.6**	**0.0**
KKUL				*i* S	**Sn**	**15 04 04.1**	**+0.1**
KKUL	**Konya-Kulu**	**0.90**	**154**	P	**Pb**	**15 03 49.7**	**0.0**
KKUL				S	**Sn**	**15 04 04.1**	**+0.1**
ELDT	**Eldivan**	**0.93**	**57**	*i* P	**Pn**	**15 03 50.2**	**-1.0**
ELDT				*i* S	**Sn**	**15 04 04.3**	**-0.5**
ELDT	**Eldivan**	**0.93**	**57**	P	**Pn**	**15 03 50.2**	**-1.0**
ELDT				S	**Sn**	**15 04 04.3**	**-0.5**
KULU	**Kulu**	**1.04**	**154**	PN	**Pg**	**15 03 51.8**	**0.0**
KULU				SN	**Sn**	**15 04 07.6**	**0.0**
KULU	**Kulu**	**1.04**	**154**	*e*Pn	**Pg**	**15 03 51.8**	**0.0**
KULU				*e*Sn	**Sn**	**15 04 07.6**	**0.0**
MDUB	**Mudurnu**	**1.05**	**298**	PG	**Pg**	**15 03 50.5**	**-1.4**
MDUB	**Mudurnu**	**1.05**	**298**	*e*Pg	**Pg**	**15 03 50.5**	**-1.4**
KIZT	**Kizilcal**	**1.18**	**201**	PN	**Pb**	**15 03 54.3**	**-0.1**
KIZT	**Kizilcal**	**1.18**	**201**	*e*Pn	**Pb**	**15 03 54.3**	**-0.1**
ESKT	**Eskisehir**	**1.29**	**249**	*i* P	**Pn**	**15 03 55.1**	**-1.1**
ESKT				*i* S	**Sn**	**15 04 13.3**	**-0.3**
SEYT	**Eskypehyr**	**1.29**	**249**	P	**Pn**	**15 03 55.1**	**-1.0**
SEYT				S	**Sn**	**15 04 13.3**	**-0.3**
KDHN	**Kadinhani**	**1.48**	**189**	*i* P	**Pb**	**15 03 59.3**	**-0.2**
KDHN				*i* S	**Sg**	**15 04 20.9**	**+1.6**
KDHN	**Kadinhani**	**1.48**	**189**	P	**Pb**	**15 03 59.3**	**-0.2**
KDHN				S	**Sg**	**15 04 20.9**	**+1.6**
YAYX	**Yaylak**	**1.50**	**133**	**Pn**	**Pn**	**15 03 58.9**	**-0.2**
YAYX	**Yaylak**	**1.50**	**133**	*e*Pn	**Pn**	**15 03 58.9**	**-0.2**
BORA	**Eskisehir**	**1.51**	**267**	PN	**Pn**	**15 03 58.6**	**-0.5**
BORA	**Eskisehir**	**1.51**	**267**	*i* P	**Pn**	**15 03 58.7**	**-0.4**
BORA				*i* S	**Sg**	**15 04 21.9**	**+1.7**
BORA	**Eskisehir**	**1.51**	**267**	*e*Pn	**Pn**	**15 03 58.6**	**-0.5**
BORA				S	**Sg**	**15 04 22.0**	**+1.7**
CDAG	**Cicekdag**	**1.55**	**103**	*i* P	**Pg**	**15 04 01.6**	**+0.1**
CDAG				*i* S	**Sg**	**15 04 23.0**	**+1.3**
CDAG	**Cicekdag**	**1.55**	**103**	P	**Pg**	**15 04 01.6**	**+0.1**
CDAG				S	**Sg**	**15 04 23.0**	**+1.3**
CORM	**Corum**	**1.71**	**83**	PN	**Pn**	**15 04 01.2**	**-0.8**
CORM	**Corum**	**1.71**	**83**	*e*Pn	**Pn**	**15 04 01.2**	**-0.8**

*ISCJB **02** 15:08:01.8±0.8, 13°.2N±0°.1×145°.7E±0°.1, h45km, mb3.5/8, Error ellipse: s-maj=18.9km s-min=12.0km az=31.3*
*IDC **02** 15:08:06.7±1.6, 13°.29N×145°.36E, h65km±10km, mb3.2/8, mb1 3.4/8, mb1mx3.2/58, mbtmp3.5/8, Error ellipse: s-maj=30.5km s-min=19.6km az=92.0*
ISC 02 15:08:03.9±1.0, 13°.2N±0°.2×145°.7E±0°.1, h45km, n16, σ1s16/11, mb3.5/8, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.87**	**296**	P	**Pn**	**15 08 21.7**	**+2.0**
	210nm,0.3s,baz=191,slow=21,SNR=140						
GUMO				S	**Sn**	**15 08 31.2**	**-0.1**
	866nm,0.3s,baz=162,slow=20,SNR=113						
GUMO				LR	LR	15 08 31.7	
	comp=Z,31nm,18.7s,baz=82,slow=44						
H11S3	**WAKE ISLAND Hy**	**20.88**	**73**	T	T	15 35 22.1	
	baz=262						
H11S1	**WAKE ISLAND Hy**	**20.90**	**73**	T	T	15 35 20.9	
	baz=262						
H11S2	**WAKE ISLAND Hy**	**20.90**	**73**	T	T	15 35 23.8	
	baz=262						
H11N1	**WAKE ISLAND Hy**	**21.34**	**70**	T	T	15 35 55.8	
	baz=257,slow=75,SNR=12						
H11N2	**WAKE ISLAND Hy**	**21.35**	**70**	T	T	15 35 55.8	
	baz=257,slow=75,SNR=3.9						
H11N3	**WAKE ISLAND Hy**	**21.36**	**70**	T	T	15 35 57.1	
	baz=257,slow=75,SNR=13						
WRA	**Warramunga Arr**	**34.78**	**199**	P	**P**	**15 14 50.6**	**+0.3**
	0.4nm,0.6s,baz=22,slow=9.9,SNR=7.0						
ASAR	**Alice Springs**	**38.41**	**198**	P	**P**	**15 15 21.9**	**+0.6**
	0.6nm,1.0s,baz=20,slow=12,SNR=4.4						
CMAR	**Chiang Mai Arr**	**45.16**	**283**	P	**P**	**15 16 14.8**	**-1.8**
	0.4nm,0.3s,baz=100,slow=6.3,SNR=4.3						
MKAR	**Makanchi Array**	**62.30**	**316**	P	**P**	**15 18 20.5**	**-1.1**
	0.3nm,0.7s,baz=90,slow=8.6,SNR=2.7						
KURBB	**Kurchatov Arra**	**65.42**	**320**	P	**P**	**15 18 41.0**	**-1.0**
	0.6nm,0.6s,baz=103,slow=6.8,SNR=6.3						
ILAR	**Eielson Array**	**68.58**	**25**	P	**P**	**15 19 02.3**	**+0.5**
	0.1nm,0.4s,baz=256,slow=4.8,SNR=3.7						
BVAR	**Borovoye Array**	**70.71**	**322**	P	**P**	**15 19 14.7**	**-0.5**
	0.5nm,0.4s,baz=109,slow=9.3,SNR=4.2						
YKA	**Yellowknife Ar**	**82.84**	**27**	P	**P**	**15 20 23.9**	**+0.6**
	0.2nm,0.5s,baz=266,slow=3.5,SNR=3.2						
DBIC	**Dimbokro**	**144.69**	**302**	PKP	**PKPab**	**15 27 35.7**	**+0.2**
	10nm,0.5s,baz=76,slow=22,SNR=30						

*ISN **02** 15:19:16.1±0.3, 37°.38N×42°.69E, h0km, ML2.9*
*CSEM **02** 15:19:20.3±0.2, 37°.28N×42°.69E, h0km±2km, ML3.0, Error ellipse: s-maj=8.3km s-min=3.3km az=61.0*
ISK 02 15:19:19.9, 37°.28N×42°.59E, h5km, ML3.0/6, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRT	**Sirnak**	**0.25**	**331**	PG	Pg	15 19 25.9	+1.0
SIRT				SG	Sb	15 19 30.8	-1.0
SIRT	**Sirnak**	**0.25**	**331**	*e*Pg	Pg	15 19 25.9	+1.0
SIRT				*e*Sg	Sb	15 19 30.8	-1.0
GURO	**Guroymak-BITLI**	**1.35**	**341**	PN	Pg	15 19 46.8	+1.1
GURO				SN	Sn	15 20 06.6	+2.8
GURO	**Guroymak-BITLI**	**1.35**	**341**	*e*Pn

comp=E,128μm,0.6s
CELB AML AML
comp=N,102μm,0.2s
CELB AML AML
comp=N,102μm,0.2s
CELB AML AML
comp=E,128μm,0.6s
NRCA Norcia 1.59 101 AML AML
comp=E,308μm,1.5s
NRCA AML AML
comp=N,387μm,0.9s
NRCA AML AML
comp=E,308μm,1.5s
NRCA AML AML
comp=N,387μm,0.9s
NDIM Novi di Modena 1.73 358 AML AML
comp=N,1278μm,0.2s
NDIM AML AML
comp=E,2630μm,0.1s
NDIM AML AML
comp=N,1278μm,0.2s
NDIM AML AML
comp=E,3010μm,0.1s
NDIM AML AML
comp=N,1260μm,0.2s
NDIM AML AML
comp=E,2630μm,0.1s
NDIM AML AML
comp=E,3010μm,0.1s
NDIM AML AML
comp=N,1260μm,0.2s

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*CSEM **02** 15:31:37.1, 44°.87N×11°.05E, h8km, ML1.8/4*
ROM 02 15:31:37.1±0.0, 44°.872N±0°.001×11°.046E±0°.001, h8km, ML1.8/2, 1C-2D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0818	**Loc. Fossa, Co**	**0.06**	**350**	⇑*e*P	Pg	15 31 39.6	+0.6
T0818				*i* S	Sg	15 31 42.6	+2.3
T0818	**Loc. Fossa, Co**	**0.06**	**350**	*e*P	Pg	15 31 39.6	+0.7
T0818				*i* S	Sg	15 31 42.6	+2.3
T0814	**Loc. Cortile,**	**0.10**	**215**	⇓*i*P	Pg	15 31 40.2	+0.8
T0814				*i* S	Sg	15 31 43.5	+2.6
T0814	**Loc. Cortile,**	**0.10**	**215**	*i* P	Pg	15 31 40.1	+0.8
T0814				*i* S	Sg	15 31 43.5	+2.5
T0802	**SanFelice sul**	**0.10**	**88**	*e*P	Pg	15 31 40.1	+0.7
T0802				*i* S	Sg	15 31 43.6	+2.6
T0802	**SanFelice sul**	**0.10**	**88**	*e*P	Pg	15 31 40.1	+0.7
T0802				*i* S	Sg	15 31 43.6	+2.7
T0828	**Loc. Fossoli,**	**0.10**	**247**	*e*P	Pg	15 31 40.2	+0.7
T0828				*i* S	Sg	15 31 43.5	+2.4
T0828	**Loc. Fossoli,**	**0.10**	**247**	*e*P	Pg	15 31 40.2	+0.7
T0828				*i* S	Sg	15 31 43.5	+2.4
T0827	**Moglia (MN)**	**0.10**	**309**	*e*P	Pg	15 31 40.5	+1.0
T0827				*i* S	Sg	15 31 43.0	+1.8
T0827	**Moglia (MN)**	**0.10**	**309**	*e*P	Pg	15 31 40.5	+1.0
T0827				*i* S	Sg	15 31 44.0	+2.8
T0813	**Massa Finalese**	**0.11**	**87**	*e*P	Pg	15 31 40.3	+0.7
T0813				*e*S	Sg	15 31 43.9	+2.6
T0813	**Massa Finalese**	**0.11**	**87**	*e*P	Pg	15 31 40.4	+0.8
T0813				*e*S	Sg	15 31 43.9	+2.6
RAVA	**Ravarino**	**0.13**	**156**	*e*P	Pg	15 31 40.8	+0.9
RAVA				*i* S	Sg	15 31 44.7	+3.0
RAVA	**Ravarino**	**0.13**	**156**	*e*P	Pg	15 31 40.8	+0.9
RAVA				*i* S	Sg	15 31 44.7	+3.0
RAVA				AML	AML		
	comp=E,984μm,0.3s						
RAVA				AML	AML		
	comp=N,637μm,0.2s						
RAVA				AML	AML		
	comp=N,637μm,0.2s						
RAVA				AML	AML		
	comp=E,984μm,0.3s						
T0812	**Loc. Stoppiaro**	**0.13**	**49**	*e*P	Pg	15 31 40.5	+0.6
T0812	**Loc. Stoppiaro**	**0.13**	**49**	*i*P	Pg	15 31 40.5	+0.6
T0824	**Loc. Limidi di**	**0.14**	**217**	⇓*i*P	Pg	15 31 41.1	+1.0
T0824				*i* S	Sg	15 31 45.2	+3.1
T0824	**Loc. Limidi di**	**0.14**	**217**	*i* P	Pg	15 31 41.1	+1.0
T0824				*i* S	Sg	15 31 45.1	+3.0
T0800	**Massa Finalese**	**0.14**	**99**	*e*P	Pg	15 31 40.9	+0.7
T0800				*i* S	Sg	15 31 44.8	+2.5
T0800	**Massa Finalese**	**0.14**	**99**	*e*P	Pg	15 31 40.9	+0.7
T0800				*i* S	Sg	15 31 44.8	+2.5
T0800				AML	AML		
	comp=E,2990μm,0.3s						
T0800				AML	AML		
	comp=N,1289μm,0.3s						
T0800				AML	AML		
	comp=E,2860μm,0.3s						
T0800				AML	AML		
	comp=N,1060μm,0.2s						
T0811	**Palata Pepoli**	**0.15**	**124**	*e*P	Pg	15 31 41.7	+1.3
T0811				*i* S	Sg	15 31 45.2	+2.6
T0811	**Palata Pepoli**	**0.15**	**124**	*e*P	Pg	15 31 41.7	+1.3
T0811				*i* S	Sg	15 31 45.2	+2.7
T0825	**Gonzaga (MN)**	**0.17**	**306**	*e*P	Pg	15 31 42.3	+1.6
T0825				*i* S	Sg	15 31 47.3	+4.2
T0825	**Gonzaga (MN)**	**0.17**	**306**	*e*P	Pg	15 31 42.3	+1.6
T0825				*i* S	Sg	15 31 47.4	+4.2
T0805	**Bondeno (FE)**	**0.20**	**76**	*e*P	Pg	15 31 41.8	+0.6
T0805	**Bondeno (FE)**	**0.20**	**76**	*e*P	Pg	15 31 41.8	+0.6
T0822	**Casumaru (Bond**	**0.22**	**100**	*e*P	Pg	15 31 42.2	+0.7
T0822				*i* S	Sg	15 31 47.1	+2.7
T0822	**Casumaru (Bond**	**0.22**	**100**	*e*P	Pg	15 31 42.2	+0.7
T0822				*i* S	Sg	15 31 47.1	+2.7
T0822				AML	AML		
	comp=E,382μm,0.3s						
T0822				AML	AML		
	comp=N,415μm,0.4s						
T0822				AML	AML		
	comp=E,382μm,0.3s						
T0822				AML	AML		
	comp=N,415μm,0.4s						
T0803	**Dosso, Cento (**	**0.24**	**116**	*e*P	Pg	15 31 42.7	+0.8
T0803	**Dosso, Cento (**	**0.24**	**116**	*e*P	Pg	15 31 42.7	+0.8
NOVE	**Novellara**	**0.25**	**253**	*e*P	Pg	15 31 42.9	+0.9
NOVE	**Novellara**	**0.25**	**253**	*e*P	Pg	15 31 42.9	+0.9
MAGA	**Magasa**	**0.95**	**342**	*e*P	Pn	15 31 56.5	-0.4
MAGA	**Magasa**	**0.95**	**342**	*e*P	Pn	15 31 56.5	-0.5

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*TIR **02** 15:32:32.3, 41°.94N×20°.41E, h2km, Md3.2/6*
*ISCJB **02** 15:32:37.1±0.3, 41°.89N±0°.01×20°.41E±0°.02, h0km±2km, Error ellipse: s-maj=2.4km s-min=1.7km az=144.0*
*SKO **02** 15:32:37.1, 41°.88N×20°.41E, h15km, M2.7, ML3.5*
*THE **02** 15:32:37.3, 41°.93N×20°.44E, h2km±1km, ML3.4/4, Error ellipse: s-maj=1.6km s-min=0.8km az=326.0*
*PDG **02** 15:32:37.8±0.7, 41°.90N×20°.39E, h3km±1km, MD3.3/2, ML3.4/10, Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*
*CSEM **02** 15:32:38.0±0.1, 41°.86N×20°.42E, h2km, ML3.5/5, Error ellipse: s-maj=3.4km s-min=2.4km az=51.0*
*PRU **02** 15:32:39.3, 41°.60N×20°.14E, h0km*
*BEO **02** 15:32:39.3±0.3, 41°.88N×20°.42E, h8km±2km*
ISC 02 15:32:37.6±1.0, 41°.88N±0°.01×20°.41E±0°.01, h5km±8km, n167, σ1§65/255, 22C-19D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.19**	**173**	P	**Pg**	**15 32 41.7**	**+0.3**
PHP				S	**Sg**	**15 32 45.2**	**+1.2**
PHP	**Peshkopia**	**0.19**	**173**	*i* PG	**Pg**	**15 32 41.6**	**+0.2**
PHP				*i* PG		15 32 45.4	
PHP	**Peshkopia**	**0.19**	**173**	P	**Pg**	**15 32 41.7**	**+0.3**
PHP				S	**Sg**	**15 32 45.2**	**+1.2**
PUK	**Puka**	**0.42**	**293**	*i* PG	**Pg**	**15 32 44.7**	**-1.1**
PUK				*i* SG	**Sg**	**15 32 50.7**	**-0.6**
PUK	**Puka**	**0.42**	**293**	*i* Pg	**Pg**	**15 32 44.7**	**-1.1**
PUK				*i* Sg	**Sg**	**15 32 50.7**	**-0.6**
PRZK	**Prizren**	**0.42**	**38**	P	**Pg**	**15 32 46.3**	**+0.5**
PRZK				S	**Sg**	**15 32 50.7**	**-0.6**
ZATK	**Zatriq**	**0.59**	**15**	P	**Pg**	**15 32 48.5**	**-0.5**
ZATK				S	**Sg**	**15 32 56.6**	**-0.1**
TIR	**Tirane**	**0.67**	**218**	*e*Pg	**Pb**	**15 32 51.1**	**-0.6**
TIR				*e*Sg	**Sb**	**15 33 01.8**	**+0.5**
TIR	**Tirane**	**0.67**	**218**	P	**Pg**	**15 32 50.7**	**+0.2**
TIR				S	**Sb**	**15 33 02.0**	**+0.7**
TIR	**Tirane**	**0.67**	**218**	*i* PG	**Pg**	**15 32 50.6**	**+0.1**
TIR				*i* SG	**Sb**	**15 33 00.2**	**-1.1**
TIR	**Tirane**	**0.67**	**218**	P	**Pg**	**15 32 50.7**	**+0.2**
TIR	**Tirane**	**0.67**	**218**	*e*Pg	**Pb**	**15 32 51.1**	**-0.6**
TIR				*i* Sg	**Sb**	**15 33 00.2**	**-1.1**
TIR				S	**Sb**	**15 33 02.0**	**+0.7**
PEJK	**Peje**	**0.77**	**353**	P	**Pg**	**15 32 51.6**	**-0.8**
SKO	**Skopje**	**0.77**	**83**	*e*Pg	**Pg**	**15 32 52.6**	**+0.1**
SKO				*e*Sg	**Sb**	**15 33 03.8**	**-0.5**
SKO	**Skopje**	**0.77**	**83**	P	**Pg**	**15 32 52.4**	**-0.1**
SKO				S	**Sb**	**15 33 04.5**	**+0.2**
SKO	**Skopje**	**0.77**	**83**	⇑*i*Pg	**Pg**	**15 32 52.2**	**-0.2**
SKO				*i* Sg	**Sb**	**15 33 04.0**	**-0.4**
SKO				*e*Lg	Lg	15 33 04.1	
	comp=N,104nm,0.4s						
SKO				*e*Lg	Lg	15 33 04.2	
	comp=E,63nm,0.3s						
SKO	**Skopje**	**0.77**	**83**	P	**Pg**	**15 32 52.4**	**-0.1**
SKO				*e*Sg	**Sb**	**15 33 03.8**	**-0.5**
SKO				S	**Sb**	**15 33 04.5**	**+0.2**
PVY	**Plav**	**0.79**	**335**	⇓*i*Pg	**Pg**	**15 32 51.9**	**-0.9**
PVY				*e*Sg	**Sg**	**15 33 03.9**	**+0.8**
OHR	**Ohrid**	**0.82**	**159**	⇓*i*Pg	**Pg**	**15 32 53.1**	**-0.2**
OHR				*i* Sg	**Sb**	**15 33 05.0**	**-0.7**
OHR				*e*Lg	Lg	15 33 05.8	
	comp=N,2μm,0.5s						
OHR				*e*Lg	Lg	15 33 06.0	
	comp=E,2μm,0.4s						
ULC	**Ulcinj**	**0.88**	**276**	⇑*i*Pg	**Pg**	**15 32 53.5**	**-0.9**
ULC				*e*Sg	**Sb**	**15 33 06.7**	**-0.6**
ULC	**Ulcinj**	**0.88**	**276**	⇑*i*Pg	**Pg**	**15 32 53.5**	**-0.9**
ULC	**Ulcinj**	**0.88**	**276**	P	**Pg**	**15 32 53.8**	**-0.6**
ULC				*e*Sg	**Sb**	**15 33 06.7**	**-0.6**
DRME	**Dracevica, Mon**	**0.96**	**289**	⇓*i*Pg	**Pg**	**15 32 55.3**	**-0.8**
DRME				*e*Sg	**Sb**	**15 33 10.0**	**+0.1**
PDG	**Podgorica**	**1.02**	**303**	*e*Pg	**Pg**	**15 32 56.9**	**-0.3**
PDG				*e*Sg	**Sn**	**15 33 12.6**	**-0.7**
PDG	**Podgorica**	**1.02**	**303**	P	**Pg**	**15 32 55.4**	**-1.8**
PDG				S	**Sb**	**15 33 11.1**	**-0.4**
PDG	**Podgorica**	**1.02**	**303**	*e*Pg	**Pg**	**15 32 56.9**	**-0.3**
PDG				S	**Sb**	**15 33 11.1**	**-0.4**
TTG	**Podgorica**	**1.02**	**303**	⇑*i*Pg	**Pg**	**15 32 56.2**	**-1.0**
TTG				*e*Sg	**Sb**	**15 33 11.6**	**+0.1**
BEY	**Berane**	**1.06**	**339**	*e*Sg	**Sn**	**15 33 13.5**	**-1.0**
IVA	**Berane**	**1.06**	**339**	⇓*i*Pg	**Pg**	**15 32 57.0**	**-1.1**
IVA				*e*Sg	**Sn**	**15 33 13.5**	**-1.0**
SMRK	**Smrekonice**	**1.07**	**21**	P	**Pn**	**15 32 58.6**	**-0.7**
BIA	**Bitola**	**1.10**	**141**	P	**Pg**	**15 32 58.1**	**-0.6**
BIA				S	**Sn**	**15 33 15.5**	**+0.3**
BIA	**Bitola**	**1.10**	**141**	⇑*i*Pg	**Pg**	**15 32 58.0**	**-0.6**
BIA				*i* Sg	**Sg**	**15 33 12.8**	**-0.1**
BIA				*e*Lg	Lg	15 33 15.6	
	comp=N,464nm,0.4s						
BIA				*e*Lg	Lg	15 33 15.7	
	comp=E,798nm,0.7s						
BIA	**Bitola**	**1.10**	**141**	P	**Pg**	**15 32 58.1**	**-0.6**
KOME	**Kolasin**	**1.18**	**326**	⇑*i*Pg	**Pb**	**15 32 59.0**	**-1.5**
KOME				*e*Sg	**Sn**	**15 33 17.2**	**-0.1**
KOME	**Kolasin**	**1.18**	**326**	⇑*i*Pg	**Pb**	**15 32 59.0**	**-1.5**
KOME				*e*Sg	**Sn**	**15 33 17.2**	**-0.1**
BUM	**Brajici-Budva**	**1.21**	**291**	⇓*i*Pg	**Pb**	**15 32 59.2**	**-1.8**
BUM				*e*Sg	**Sn**	**15 33 18.1**	**+0.1**
BUM	**Brajici-Budva**	**1.21**	**291**	⇓*i*Pg	**Pb**	**15 32 59.2**	**-1.8**
BUM				*e*Sg	**Sn**	**15 33 18.1**	**+0.1**
KBN	**Korca**	**1.28**	**167**	P	**Pb**	**15 33 01.8**	**-0.5**
KBN				S	**Sn**	**15 33 22.0**	**+2.1**
KBN	**Korca**	**1.28**	**167**	*i* PG	**Sg**	**15 33 15.6**	**-3.3**
KBN				*i* SG	**Sb**	**15 33 12.3**	**-6.8**
KBN	**Korca**	**1.28**	**167**	P	**Pb**	**15 33 01.8**	**-0.5**
CEME	**Cevo**	**1.30**	**302**	⇑*i*Pg	**Pn**	**15 33 00.9**	**-1.5**
CEME				*e*Sg	**Sg**	**15 33 21.1**	**+1.8**
CEME	**Cevo**	**1.30**	**302**	⇑*i*Pg	**Pn**	**15 33 00.9**	**-1.5**
CEME				*e*Sg	**Sg**	**15 33 21.1**	**+1.8**
FNA	**Florina**	**1.31**	**146**	P	**Pn**	**15 33 01.2**	**-1.4**
FNA				S	**Sg**	**15 33 20.9**	**+1.1**
FNA	**Florina**	**1.31**	**146**	P	**Pn**	**15 33 01.2**	**-1.4**
FNA				S	**Sg**	**15 33 20.9**	**+1.1**
NKME	**Niksic**	**1.40**	**310**	⇑*i*Pg	**Pn**	**15 33 02.4**	**-1.4**
NKME				*e*Sg	**Sg**	**15 33 24.6**	**+2.0**
NKME	**Niksic**	**1.40**	**310**	⇑*i*Pg	**Pn**	**15 33 02.4**	**-1.4**
NKME				*e*Sg	**Sg**	**15 33 24.6**	**+2.0**
BARS	**Barje**	**1.40**	**47**	*e*Pg	**Pg**	**15 33 05.3**	**+0.8**
BARS				*e*Sg	**Sg**	**15 33 24.6**	**+1.9**
BARS	**Barje**	**1.40**	**47**	*e*Pg	**Pg**	**15 33 05.3**	**+0.8**
BARS				*e*Sg	**Sg**	**15 33 24.6**	**+1.9**
NKY	**Niksic**	**1.41**	**312**	⇓*i*Pg	**Pn**	**15 33 03.2**	**-0.8**
NKY				*e*Sg	**Sg**	**15 33 24.9**	**+2.1**
NKY	**Niksic**	**1.41**	**312**	⇓*i*Pg	**Pn**	**15 33 03.2**	**-0.8**
NKY				*e*Sg	**Sg**	**15 33 24.9**	**+2.1**
SJES	**Sjenica**	**1.42**	**347**	*e*Pg	**Pb**	**15 33 04.1**	**-0.6**
SJES				*e*Sg	**Sg**	**15 33 25.0**	**+1.7**
SELS	**Selova**	**1.44**	**21**	*e*Pg	**Pb**	**15 33 04.3**	**-0.6**
SELS				*e*Sg	**Sg**	**15 33 25.0**	**+1.1**
HCY	**Herceg Novi**	**1.54**	**292**	⇓*i*Pg	**Pn**	**15 33 05.3**	**-0.3**
HCY				*e*Sg	**Sg**	**15 33 29.4**	**+2.5**
HCY	**Herceg Novi**	**1.54**	**292**	⇑*i*Pn	**Pn**	**15 33 04.6**	**-1.1**
HCY	**Herceg Novi**	**1.54**	**292**	⇓*i*Pg	**Pn**	**15 33 05.3**	**-0.3**
HCY				*e*Sg	**Sg**	**15 33 29.4**	**+2.5**
NEST	**Nestorio**	**1.54**	**162**	P	**Pb**	**15 33 05.9**	**-0.7**
NEST	**Nestorio**	**1.54**	**162**	P	**Pb**	**15 33 05.9**	**-0.7**
PLE	**Pljevlja**	**1.64**	**333**	⇑*i*Pn	**Pb**	**15 33 07.4**	**-0.9**
PLE				*e*Sn	**Sg**	**15 33 32.1**	**+1.9**
PLE	**Pljevlja**	**1.64**	**333**	⇑*i*Pn	**Pb**	**15 33 07.4**	**-0.9**
PLE				*e*Sn	**Sg**	**15 33 32.1**	**+1.9**
IVAS	**Ivanjica**	**1.71**	**354**	*e*Pn	**Pb**	**15 33 09.2**	**-0.3**
IVAS				*e*Sn	**Sg**	**15 33 31.9**	**-0.6**
IVAS	**Ivanjica**	**1.71**	**354**	*e*Pn	**Pb**	**15 33 09.2**	**-0.3**
IVAS				*e*Sn	**Sg**	**15 33 31.9**	**-0.6**
VAY	**Valandovo**	**1.71**	**108**	*e*Pn	**Pb**	**15 33 09.4**	**-0.1**
VAY				*e*Sn	**Sg**	**15 33 31.9**	**-0.7**
VAY	**Valandovo**	**1.71**	**108**	P	**Pn**	**15 33 08.0**	**-0.1**
VAY	**Valandovo**	**1.71**	**108**	⇑*i*Pg	**Pb**	**15 33 08.9**	**-0.6**
VAY				*i* Sg	**Sg**	**15 33 33.0**	**+0.4**
VAY				*e*Lg	Lg	15 33 35.6	
	comp=E,455nm,0.7s						
VAY				*e*Lg	Lg	15 33 35.8	
	comp=N,382nm,0.8s						
VAY	**Valandovo**	**1.71**	**108**	P	**Pn**	**15 33 08.0**	**-0.1**
VAY	**Valandovo**	**1.71**	**108**	*e*Pn	**Pb**	**15 33 09.4**	**-0.1**
VAY				*e*Sn	**Sg**	**15 33 31.9**	**-0.7**
BRY	**Bratogost**	**1.72**	**307**	⇓*i*Pn	**Pn**	**15 33 08.5**	**+0.1**
BRY				*e*Sn	**Sg**	**15 33 35.0**	**+2.0**
BRY	**Bratogost**	**1.72**	**307**	⇓*i*Pn	**Pn**	**15 33 08.5**	**+0.1**
BRY				*e*Sn	**Sg**	**15 33 35.0**	**+2.0**
UPM	**Unac-Piva**	**1.73**	**320**	⇓*i*Pn	**Pb**	**15 33 09.1**	**-0.9**
UPM				*e*Sn	**Sg**	**15 33 35.1**	**+1.9**
UPM	**Unac-Piva**	**1.73**	**320**	⇓*i*Pn	**Pb**	**15 33 09.1**	**-0.9**
UPM	**Unac-Piva**	**1.73**	**320**	P	**Pg**	**15 33 10.9**	**+0.1**
UPM				*e*Sn	**Sg**	**15 33 35.1**	**+1.9**
GRG	**Griva**	**1.76**	**121**	P	**Pn**	**15 33 08.9**	**+0.2**
GRG				S	**Sb**	**15 33 31.3**	**-1.4**
GRG	**Griva**	**1.76**	**121**	P	**Pn**	**15 33 08.9**	**+0.2**
GRG				S	**Sb**	**15 33 31.3**	**-1.4**
PENT	**Pentalofos**	**1.77**	**162**	P	**Pb**	**15 33 09.7**	**-0.8**
PENT	**Pentalofos**	**1.77**	**162**	P	**Pb**	**15 33 09.7**	**-0.8**
KZN	**Kozani**	**1.88**	**146**	P	**Pb**	**15 33 11.3**	**-1.1**
KZN				S	**Sb**	**15 33 35.6**	**-0.5**
KZN	**Kozani**	**1.88**	**146**	P	**Pb**	**15 33 11.3**	**-1.1**
KZN				S	**Sb**	**15 33 35.6**	**-0.5**
KTI	**Kastanea**	**1.96**	**138**	P	**Pn**	**15 33 12.1**	**+0.4**
KTI	**Kastanea**	**1.96**	**138**	P	**Pn**	**15 33 12.1**	**+0.4**
KNT	**Kendrikon**	**2.00**	**110**	P	**Pn**	**15 33 12.1**	**+0.1**
KNT	**Kendrikon**	**2.00**	**110**	P	**Pn**	**15 33 12.1**	**+0.1**
SRN	**Sarande**	**2.02**	**189**	P	**Pn**	**15 33 12.6**	**+0.3**
SRN				S	**Sb**	**15 33 38.6**	**-1.6**
SRN	**Sarande**	**2.02**	**189**	*i* PG	Pn	15 33 03.5	-8.8
SRN				*i* SG	Sn	15 33 23.4	-14
SRN	**Sarande**	**2.02**	**189**	P	**Pn**	**15 33 12.6**	**+0.3**
SRN				S	**Sb**	**15 33 38.6**	**-1.6**
GRUS	**Gruza**	**2.02**	**6**	*e*Pn	**Pb**	**15 33 13.9**	**-0.9**
GRUS	**Gruza**	**2.02**	**6**	*e*Pn	**Pb**	**15 33 13.9**	**-0.9**
BBLS	**Lazići**	**2.12**	**340**	*e*Pn	**Pb**	**15 33 15.4**	**-1.2**
BBLS				*e*Sg	**Sg**	**15 33 46.8**	**+1.1**
BBLS	**Lazići**	**2.12**	**340**	*e*Pn	**Pb**	**15 33 15.4**	**-1.2**
BBLS				*e*Sg	**Sg**	**15 33 46.8**	**+1.1**
ZAPS	**Zavoj**	**2.15**	**49**	*e*Pn	**Pb**	**15 33 15.3**	**-1.8**
ZAPS	**Zavoj**	**2.15**	**49**	*e*Pn	**Pb**	**15 33 15.3**	**-1.8**
VTS	**Vitosha**	**2.20**	**70**	⇑*i*P	**Pn**	**15 33 15.6**	**+0.7**
KEK	**Kerkira**	**2.21**	**192**	P	**Pn**	**15 33 15.6**	**+0.7**
KEK				S	**Sb**	**15 33 45.1**	**-0.6**
KEK	**Kerkira**	**2.21**	**192**	P	**Pn**	**15 33 15.6**	**+0.7**
KEK				S	**Sb**	**15 33 45.1**	**-0.6**
DIVS	**Divibare**	**2.24**	**352**	*e*Pn	**Pn**	**15 33 15.9**	**+0.5**
DIVS	**Divibare**	**2.24**	**352**	*e*Pn	**Pn**	**15 33 15.9**	**+0.5**
STON	**Ston**	**2.24**	**297**	*e*Pn	**Pn**	**15 33 15.3**	**0.0**
TRUS	**Trudelj**	**2.34**	**360**	*e*Pn	**Pb**	**15 33 18.8**	**-1.5**
TRUS	**Trudelj**	**2.34**	**360**	*e*Pn	**Pb**	**15 33 18.8**	**-1.5**
ZAGS	**Zajecar**	**2.35**	**34**	*e*Pn	**Pb**	**15 33 18.3**	**-2.2**
ZAGS				*e*Sn	**Sn**	**15 33 47.0**	**+0.9**
LIT	**Litokhoron**	**2.37**	**138**	P	**Pn**	**15 33 17.4**	**+0.2**
LIT	**Litokhoron**	**2.37**	**138**	P	**Pn**	**15 33 17.4**	**+0.2**
HAPS	**Han Pijesak,Bl**	**2.45**	**335**	⇑*i*Pn	**Pb**	**15 33 21.3**	**-1.0**
SVIS	**Svilajnac**	**2.46**	**14**	*e*Pn	**Pn**	**15 33 19.6**	**+1.3**
SRS	**Serrai**	**2.51**	**107**	P	**Pn**	**15 33 19.0**	**0.0**
SRS	**Serrai**	**2.51**	**107**	P	**Pn**	**15 33 19.0**	**0.0**
THL	**Klokotos Trika**	**2.61**	**152**	P	**Pn**	**15 33 20.9**	**+0.5**
THL	**Klokotos Trika**	**2.61**	**152**	P	**Pn**	**15 33 20.9**	**+0.5**
KUBS	**Kucevo**	**2.70**	**20**	*e*Pn	**Pn**	**15 33 22.5**	**+0.9**
KUBS	**Kucevo**	**2.70**	**20**	*e*Pn	**Pn**	**15 33 22.5**	**+0.9**
TEKS	**Tekeris**	**2.75**	**347**	*e*Pn	**Pn**	**15 33 23.6**	**+1.3**
TEKS	**Tekeris**	**2.75**	**347**	*e*Pn	**Pn**	**15 33 23.6**	**+1.3**
MATE	**Matera**	**3.05**	**248**	S	Sg	15 34 28.1	+12
MDVR	**Moldovita**	**3.05**	**18**	⇓*i*P	**Pb**	**15 33 32.2**	**-0.3**
MDVR	**Moldovita**	**3.05**	**18**	S	**Sg**	**15 34 14.4**	**-1.3**
AGG	**Agios Georgios**	**3.21**	**152**	P	**Pn**	**15 33 29.6**	**+1.0**
AGG	**Agios Georgios**	**3.21**	**152**	P	**Pn**	**15 33 29.6**	**+1.0**
FGSL	**Fruska Gora**	**3.31**	**353**	*e*Pn	**Pn**	**15 33 30.1**	**+0.1**
FGSL				*e*Sn	**Sn**	**15 34 09.9**	**+0.2**
FRGS	**Fruska Gora**	**3.31**	**353**	*e*Pn	**Pn**	**15 33 30.1**	**+0.1**
FRGS				*e*Sn	**Sn**	**15 34 09.9**	**+0.2**
BLY	**Banja Luka**	**3.71**	**322**	⇑*i*P	**Pn**	**15 33 38.8**	**+3.2**
BLY	**Banja Luka**	**3.71**	**322**	S	**Sg**	**15 34 36.0**	**-0.8**
BLY	**Banja Luka**	**3.71**	**322**	*e*Pn	**Pn**	**15 33 38.5**	**+2.9**
BZS	**Buzias**	**3.84**	**13**	*e*Pn	**Pn**	**15 33 37.6**	**+0.3**
BZS				*e*Sn	**Sn**	**15 34 22.5**	**-0.3**
BZS	**Buzias**	**3.84**	**13**	⇑*i*P	**Pn**	**15 33 36.9**	**-0.4**
BZS	**Buzias**	**3.84**	**13**	S	**Sg**	**15 34 44.2**	**+3.3**
BZS	**Buzias**	**3.84**	**13**	*e*Pn	**Pn**	**15 33 37.6**	**+0.3**
BZS				*e*Sn	**Sn**	**15 34 22.5**	**-0.3**
TIP	**Timpagrande**	**3.88**	**227**	⇑*i*P	**Pn**	**15 33 38.0**	**+0.1**
TIP	**Timpagrande**	**3.88**	**227**	S	**Sn**	**15 34 24.5**	**+0.7**
UDBI	**Udbina**	**4.31**	**310**	*e*Pn	**Pn**	**15 33 47.1**	**+3.2**
UDBI				Sn	**Sb**	**15 34 39.9**	**-6.3**
UDBI	**Udbina**	**4.31**	**310**	*e*Pn	**Pn**	**15 33 47.0**	**+3.2**
UDBI				Sn	**Sb**	**15 34 39.8**	**-6.3**
DEV	**Deva**	**4.39**	**23**	S	**Sb**	**15 34 51.5**	**+3.1**
SIRR	**Siria**	**4.48**	**11**	⇑*i*P	Pn	15 33 50.8	+4.7
MORH	**M¯‡r^¡gy, Hung**	**4.52**	**344**	⇓*e*Pn	**Pn**	**15 33 46.8**	**+0.2**
MORH				*e*Sn	**Sn**	**15 34 39.4**	**-0.1**
MORH	**M¯‡r^¡gy, Hung**	**4.52**	**344**	⇓*e*Pn	**Pn**	**15 33 46.8**	**+0.2**
MORH				*e*Sn	**Sn**	**15 34 39.4**	**-0.1**
ARR	**Arges**	**4.64**	**40**	⇓*i*P	**Pn**	**15 33 50.0**	**+1.6**
NVLJ	**Novalja**	**4.86**	**305**	*e*Pn	**Pn**	**15 33 52.9**	**+1.6**
NVLJ				Sn	**Sn**	**15 34 48.9**	**+1.1**
NVLJ	**Novalja**	**4.86**	**305**	*e*Pn	**Pn**	**15 33 52.8**	**+1.6**
NVLJ				Sn	**Sn**	**15 34 48.9**	**+1.1**
VOIR		**4.90**	**42**	⇑*i*P	**Pn**	**15 33 53.8**	**+1.9**
OZLJ	**Ozalj**	**5.17**	**318**	*e*Pn	**Pn**	**15 33 58.9**	**+3.3**
OZLJ	**Ozalj**	**5.17**	**318**	*e*Pn	**Pn**	**15 33 58.9**	**+3.3**
DRGR		**5.18**	**18**	S	**Sb**	**15 35 04.6**	**-6.7**
AQU	**L'Aquila**	**5.24**	**278**	*e*Pn	**Pn**	**15 33 57.2**	**+0.6**
CRES	**Cresnjev**	**5.33**	**319**	*e*Pn	**Pn**	**15 33 58.7**	**+0.9**
MLR	**Muntele Rosu**	**5.40**	**46**	⇓*i*P	**Pn**	**15 34 00.4**	**+1.5**
CSKK	**Cs¯‡kako**	**5.70**	**345**	*ex*	**Sn**	**15 35 13.2**	**+4.7**
PSZ	**Piszkesteto**	**6.05**	**357**	*e*Pn	**Pn**	**15 34 09.6**	**+1.8**
PSZ				*e*Sn	**Sn**	**15 35 16.2**

2.9nm,0.9s,baz=168,slow=4.2,SNR=4.1
ILAR Eielson Array 88.57 11 P P 15 46 32.0 -0.3
0.2nm,0.4s,baz=227,slow=6.2,SNR=4.9
CMAR Chiang Mai Arr 93.75 288 P P 15 46 59.4 +1.9
0.6nm,0.5s,baz=122,slow=2.9,SNR=5.1
AKASG Malin Array Be 145.54 333 PKPbc PKPdf 15 53 17.5 -0.4
0.7nm,0.5s,baz=38,slow=3.6,SNR=5.6
BRTR Keskin Array B 150.09 314 PKPbc PKPbc 15 53 28.9 -2.1
1.1nm,1.0s,baz=48,slow=1.8,SNR=4.8

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*NIED **02** 15:44:00,41°.80N×142°.30E,h92km,Mw3.7 Best double couple: M0=4.66000×10^14 NP1:φ0=62.00000°,δ43.00000°, λ-126.00000°. NP2:φ0=286.00000°,δ57.00000°, λ-62.00000°.*
*ISCJB **02** 15:44:20.7±0.4,41°.76N±0°.03×142°.33E±0°.04,h93km±3km, mb3.8/15,Error ellipse: s-maj=6.5km s-min=4.1km az=140.4*
*JMA **02** 15:44:21.5±0.2,41°.74N×142°.29E,h91km±3km,M3.7 Broadband fault plane solution: P waves. NP1: φ0=310.00000°,δ64.00000°,λ-29.00000°. NP2:φ0=54.00000°, δ64.00000°,λ-151.00000°. Principal axes: T Plg0.0000°, Azm2.0000°; N Plg52.0000°, Azm92.0000°; P Plg38.0000°, Azm272.0000°;*
JMA Felt I J1.
*IDC **02** 15:44:21.5±1.6,41°.79N×142°.32E,h79km±13km,mb3.6/14, mb1 3.6/18,mb1mx3.4/68,mbtmp3.8/18,MS3.1/1, Ms1 3.1/1,ms1mx2.1/62 Error ellipse: s-maj=17.7km s-min=11.0km az=112.0*
ISC 02 15:44:21.4±0.7,41°.71N±0°.04×142°.32E±0°.04,h86km±7km, n46,σ1°59/56,mb4.0/15,7C-6D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.66**	**30**	⇓P	**Pn**	**15 44 37.4**	**+0.3**
JNBK				*e*S	**Sn**	15 44 49.6	+0.9
JEM	**Erimo**	**0.70**	**64**	⇓P	**Pn**	**15 44 38.1**	**+0.7**
JEM				*e*S	**Sn**	15 44 49.8	+0.4
JKB	**Kayabe**	**0.98**	**281**	⇓P	**Pn**	**15 44 40.5**	**+0.1**
JKB				*e*S	**Sn**	15 44 54.6	-0.1
JOT	**Ohata**	**1.01**	**251**	P	**Pn**	**15 44 41.4**	**+0.6**
JOT				*e*S	**Sn**	15 44 55.8	+0.4
JBT2	**Biratori 2**	**1.07**	**2**	⇑P	**Pn**	**15 44 41.7**	**+0.1**
JBT2				*e*S	**Sn**	15 44 56.5	-0.2
JCH	**Churui**	**1.19**	**40**	⇓P	**Pn**	**15 44 43.4**	**+0.3**
JCH				*e*S	**Sn**	15 44 58.8	-0.6
JNB	**Noboribetsu**	**1.22**	**309**	⇑P	**Pn**	**15 44 43.0**	**-0.3**
JNB				*e*S	**Sn**	15 44 58.6	-1.3
JEW	**Eniwo**	**1.30**	**331**	⇑P	**Pn**	**15 44 44.4**	**0.0**
JEW				*e*S	**Sn**	15 45 01.1	-0.6
JANG	**Nango**	**1.47**	**205**	⇑P	**Pn**	**15 44 47.3**	**+0.8**
JANG				*e*S	**Sn**	15 45 06.4	+1.0
JFR	**Furan**	**1.47**	**8**	⇑P	**Pn**	**15 44 46.3**	**-0.2**
JFR				*e*S	**Sn**	15 45 05.0	-0.5
JAR	**Ashorobuto**	**1.92**	**34**	⇑P	**Pn**	**15 44 51.9**	**-0.4**
JAR				*e*S	**Sn**	15 45 13.5	-2.4
JHR	**Hokuryu**	**2.08**	**348**	⇑P	**Pn**	**15 44 55.0**	**+0.5**
JSK	**Shakotan**	**2.13**	**321**	P	**Pn**	**15 44 55.1**	**0.0**
JOSM	**Okushiri--Mats**	**2.15**	**281**	⇓P	**Pn**	**15 44 55.7**	**+0.3**
JOSM				*e*S	**Sn**	15 45 21.6	+0.2
JAK	**Akkeshi**	**2.18**	**53**	⇓P	**Pn**	**15 44 55.0**	**-0.8**
JAK				*e*S	**Sn**	15 45 19.4	-2.7
JKK2	**Kamakawa 2**	**2.19**	**8**	P	**Pn**	**15 44 56.0**	**+0.1**
JKK2				*e*S	**Sn**	15 45 22.6	+0.3
ASAJ	**Asahikawa**	**2.42**	**5**	P	**Pn**	**15 44 59.2**	**+0.3**
	58nm,0.3s,baz=207,slow=11,SNR=1053						
ASAJ				S	**Sn**	**15 45 25.3**	**-2.4**
	11nm,0.3s,baz=178,slow=13,SNR=5.7						
MJAR	**Matsushiro Arr**	**6.07**	**213**	P	**Pn**	**15 45 50.6**	**+2.1**
	0.9nm,0.3s,baz=95,slow=1.1,SNR=12						
USRK	**Ussuriysk Ar.**	**7.97**	**292**	P	**Pn**	**15 46 16.2**	**+1.8**
	0.2nm,0.3s,baz=91,slow=16,SNR=3.6						
JHJ	**Hachijo jima 2**	**8.81**	**194**	P	**Pn**	**15 46 22.8**	**-3.1**
	14nm,0.3s,baz=276,slow=23,SNR=14						
JHJ				S	**Sn**	**15 47 56.2**	**-7.2**
	12nm,0.3s,baz=43,slow=17,SNR=5.6						
KLR	**Kul'dur**	**10.56**	**319**	P	**Pn**	**15 46 48.9**	**-0.7**
	0.0nm,0.3s,baz=138,slow=7.6,SNR=5.3						
KSRS	**Korea Array**	**11.89**	**254**	P	**Pn**	**15 47 10.2**	**+2.4**
	0.1nm,0.3s,baz=68,slow=13,SNR=3.5						
PETK	**Petropavlovsk-**	**15.40**	**37**	P	**Pn**	**15 47 50.4**	**-3.3**
	0.2nm,0.3s,baz=206,slow=8.2,SNR=4.5						
MA2	**Magadan**	**18.65**	**14**	P	**P**	**15 48 30.7**	**-1.3**
	0.3nm,0.3s,baz=198,slow=10,SNR=5.5						
SEY	**Seymchan**	**22.08**	**12**	P	**P**	**15 49 05.9**	**-3.1**
	2.2nm,0.6s,baz=169,slow=7.4,SNR=8.5						
SONM	**Songino Array**	**26.06**	**296**	P	**P**	**15 49 48.0**	**+1.2**
	0.2nm,0.4s,baz=116,slow=9.8,SNR=2.5						
SONM				LR	LR	16 01 44.5	
	comp=Z,43nm,19.0s,baz=89,slow=40						
H11N2	**WAKE ISLAND Hy**	**30.25**	**129**	T	T	16 22 18.7	
	baz=320						
H11N1	**WAKE ISLAND Hy**	**30.26**	**129**	T	T	16 22 11.2	
	baz=320,slow=74,SNR=20						
H11N3	**WAKE ISLAND Hy**	**30.27**	**129**	T	T	16 22 13.5	
	baz=320,slow=74,SNR=14						
H11S1	**WAKE ISLAND Hy**	**31.10**	**131**	T	T	16 23 08.1	
	baz=324,slow=76,SNR=11						
H11S3	**WAKE ISLAND Hy**	**31.10**	**131**	T	T	16 23 10.3	
	baz=324,slow=76,SNR=8.1						
H11S2	**WAKE ISLAND Hy**	**31.12**	**131**	T	T	16 23 13.7	
	baz=324,slow=76,SNR=9.7						
ZALV	**Zalesovo Beam**	**39.42**	**308**	P	**P**	**15 51 42.4**	**-0.3**
	0.7nm,0.3s,baz=96,slow=7.4,SNR=7.1						
MKAR	**Makanchi Array**	**42.38**	**298**	P	**P**	**15 52 06.4**	**-0.7**
	0.5nm,0.6s,baz=93,slow=6.3,SNR=5.8						
KURBB	**Kurchatov Arra**	**43.81**	**304**	P	**P**	**15 52 18.9**	**+0.4**
	1.5nm,0.5s,baz=76,slow=8.5,SNR=5.4						
ILAR	**Eielson Array**	**45.22**	**35**	P	**P**	**15 52 30.9**	**+1.3**
	1.7nm,0.9s,baz=273,slow=7.2,SNR=15						
BVAR	**Borovoye Array**	**48.04**	**309**	P	**P**	**15 52 52.4**	**+0.6**
	0.6nm,0.4s,baz=83,slow=8.3,SNR=4.9						
INK	**Inuvik**	**49.94**	**29**	P	**P**	**15 53 06.9**	**+1.0**
	1.6nm,0.6s,baz=298,slow=6.8,SNR=7.1						
SPITS	**Spitsbergen Ar**	**56.08**	**348**	P	**P**	**15 53 51.3**	**+0.2**
	1.4nm,0.8s,baz=30,slow=6.7,SNR=10						
YKA	**Yellowknife Ar**	**59.44**	**32**	P	**P**	**15 54 15.3**	**+0.6**
	0.2nm,0.3s,baz=302,slow=6.5,SNR=4.0						
ARCES	**ARCESS Array B**	**59.89**	**339**	P	**P**	**15 54 17.9**	**+0.3**
	1.7nm,0.8s,baz=30,slow=7.3,SNR=4.1						
WRA	**Warramunga Arr**	**61.78**	**189**	P	**P**	**15 54 31.3**	**+0.3**
	0.6nm,0.4s,baz=7.0,slow=6.9,SNR=21						
FINES	**FINESS Array B**	**65.02**	**332**	P	**P**	**15 54 52.5**	**+0.5**
	2.4nm,0.5s,baz=51,slow=8.2,SNR=15						
ASAR	**Alice Springs**	**65.51**	**188**	P	**P**	**15 54 56.4**	**+0.9**
	0.2nm,0.5s,baz=3.8,slow=7.6,SNR=6.7						
HFS	**Hagfors**	**70.13**	**335**	P	**P**	**15 55 24.4**	**+0.3**
	1.1nm,0.3s,baz=57,slow=5.3,SNR=7.0						
SNAA	**Sanae**	**145.41**	**199**	PKPbc	**PKPbc**	**16 03 48.8**	**+0.5**
	0.7nm,0.8s,baz=143,slow=20,SNR=3.5						

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*ISCJB **02** 15:55:37.7±0.5,32°.11N±0°.03×115°.69W±0°.04,h21km±7km, Error ellipse: s-maj=5.9km s-min=4.9km az=152.1*
*ECX **02** 15:55:38.5±0.6,32°.08N×115°.69W,h7km,MD3.0,ML3.2*
ISC 02 15:55:36.6±1.3,32°.10N±0°.03×115°.68W±0°.04, h12km±12km,n27,σ0°55/34,8C-2D,California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPBX	**Cerro Prieto**	**0.45**	**45**	*e*P	**Pb**	**15 55 47.2**	**+0.7**
SGL	**Mount Signal**	**0.55**	**356**	⇑*i*P	**Pb**	**15 55 48.4**	**+0.2**
YUH	**Yuha Desert**	**0.58**	**340**	⇑*i*P	**Pb**	**15 55 48.7**	**-0.1**
RMX	**La Rumorosa**	**0.60**	**326**	*e*P	**Pg**	**15 55 47.9**	**-0.5**
RMX				*e*P	**Pb**	**15 55 48.5**	**-0.7**
ERPC	**Ernies Place**	**0.64**	**1**	⇑*i*P	**Pn**	**15 55 50.7**	**-0.8**
IKP	**In-Ko-Pah, Jac**	**0.66**	**327**	P	**Pb**	**15 55 50.1**	**-0.1**
	baz=151,SNR=30						
IKP				S	**Sg**	**15 55 58.2**	**+0.1**
	baz=151						
IKP	**In-Ko-Pah, Jac**	**0.66**	**327**	*e*P	**Pb**	**15 55 50.0**	**-0.1**
ZAX	**El Zacaton**	**0.77**	**221**	⇑*e*P	**Pb**	**15 55 52.0**	**0.0**
ECBX	**El Chinero**	**0.82**	**139**	*i* P	**Pn**	**15 55 53.1**	**-0.9**
SWSC	**Sam W. Stewart**	**0.85**	**353**	P	**Pn**	**15 55 53.8**	**-0.6**
	baz=177,SNR=53						
CBX	**Cerro Bola**	**0.86**	**285**	⇑*i*P	**Pg**	**15 55 53.7**	**+0.4**
CBX				IAML		15 56 06.1	
	comp=N,1μm,0.5s						
CBX				⇓*e*		15 56 06.1	
CBX				⇓*e*		15 56 08.0	
CBX				IAML		15 56 08.0	
	comp=E,943nm,0.6s						

ECNX	**Esteban Cantu**	**0.90**	**241**	⇑*i*P	**Pg**	**15 55 54.1**	**+0.2**
ECNX				⇑*e*P	**Pb**	**15 55 53.2**	**-0.9**
TJIG	**Tijuana**	**0.90**	**292**	*e*P	**Pb**	**15 55 53.9**	**-0.4**
PBX	**Punta Banda**	**0.96**	**248**	*e*P	**Pg**	**15 55 55.1**	**0.0**
MONP2	**Monument Peak**	**1.01**	**322**	P	**Pn**	**15 55 56.4**	**-0.3**
	baz=144,SNR=59						
MONP2				S	**Sb**	**15 56 08.9**	**-0.5**
	baz=144						
BAR	**Barrett**	**1.02**	**305**	⇑*i*P	**Pn**	**15 55 56.2**	**-0.5**
SPIG	**San Pedro Mart**	**1.07**	**170**	*e*P	**Pn**	**15 55 58.1**	**+0.5**
SPX	**San Pedro Mart**	**1.07**	**170**	*e*P	**Pn**	**15 55 58.1**	**+0.5**
GLA	**Glamis**	**1.19**	**37**	P	**Pb**	**15 55 58.8**	**-0.3**
	baz=220,SNR=25						
GLA				S	**Sb**	**15 56 14.3**	**-0.3**
	baz=220						
SDRC	**San Diego Road**	**1.24**	**301**	*e*P	**Pb**	**15 56 00.1**	**+0.2**
109C	**Camp Elliot, M**	**1.44**	**304**	P	**Pb**	**15 56 03.2**	**-0.1**
	baz=124,SNR=18						
109C				S	**Sn**	**15 56 21.0**	**-0.2**
	baz=124						
PFO	**Pinyon Flats O**	**1.64**	**337**	P	**Pn**	**15 56 05.5**	**+0.1**
	baz=158						
BELC	**Belle Mtn. Jos**	**1.91**	**352**	P	**Pn**	**15 56 09.9**	**+0.7**
	baz=174,SNR=13						
MURC	**Murrieta**	**1.96**	**320**	Pb	**Pb**	**15 56 12.5**	**+0.2**
	baz=141,SNR=9.5						
MURC				Sb	**Sb**	**15 56 37.7**	**+0.9**
	baz=141						
IRM	**Iron Mountain**	**2.10**	**12**	P	**Pn**	**15 56 12.0**	**+0.4**
	baz=194,SNR=15						
214A	**Organ Pipe Nat**	**2.44**	**93**	P	**Pn**	**15 56 16.3**	**0.0**
	baz=274						
CIS	**Catalina Islan**	**2.64**	**300**	P	**Pn**	**15 56 20.4**	**+1.3**
	baz=119						

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*ISCJB **02** 15:56:05.7±0.5,3°.08S±0°.07×139°.51E±0°.05,h46km, mb3.4/5,MS3.1/3,Error ellipse: s-maj=10.6km s-min=5.5km az=156.9*
*IDC **02** 15:56:07.3±1.9,3°.05S×139°.59E,h52km±24km,mb3.2/6, mb1 3.5/8,mb1mx3.3/45,mbtmp3.6/8,ML3.9/2,MS3.0/4, Ms1 3.0/4,ms1mx2.6/22,Error ellipse: s-maj=26.7km s-min=13.3km az=133.0*
*DJA **02** 15:56:08.5±0.5,3°S±7°×14°E±°,h30km±9km,M4.2/2, mb4.5/1,MLv4.1/2*
ISC 02 15:56:06.5±0.7,3°.06S±0°.08×139°.48E±0°.06,h46km,n20, σ2°50/22,mb3.2/5,MS3.1/3,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**0.83**	**56**	P	**Pn**	**15 56 22.1**	**+0.3**
GENI				S	**Sn**	**15 56 32.1**	**-0.9**
WAMI	**Wamena**	**1.12**	**223**	P	Pn	15 56 32.4	+6.6
JAY	**Jayapura**	**1.34**	**66**	P	**Pn**	**15 56 29.2**	**+0.4**
	39nm,0.3s,baz=229,slow=11,SNR=316						
JAY				S	**Sn**	**15 56 43.8**	**-1.6**
	38nm,0.3s,baz=318,slow=23,SNR=18						
JAY	**Jayapura**	**1.34**	**66**	P	**Pn**	**15 56 29.2**	**+0.4**
JAY				S	**Sn**	**15 56 45.2**	**-0.3**
SRPI	**Serui, Papua**	**3.44**	**290**	P	**Pn**	**15 56 58.9**	**+1.3**
BAKI	**Biak**	**3.84**	**299**	P	**Pn**	**15 57 04.5**	**+1.4**
RKPI	**Ransiki, Papua**	**5.51**	**286**	P	**Pn**	**15 57 28.6**	**+2.5**
KMPI	**Kaimana, Papua**	**5.79**	**264**	P	**Pn**	**15 57 33.8**	**+3.9**
FAKI	**Fak Fak**	**7.22**	**271**	P	**Pn**	**15 57 52.4**	**+2.9**
SIJI	**Sorong**	**8.49**	**285**	P	**Pn**	**15 58 09.3**	**+2.4**
	1.6nm,0.3s,baz=183,slow=18,SNR=16						
SIJI				S	**Sn**	**15 59 36.4**	**-5.0**
	0.5nm,0.3s,baz=163,slow=3.3,SNR=3.7						
GUMO	**Guam**	**17.38**	**18**	LR	LR	16 07 35.6	
	comp=Z,14nm,18.1s,baz=214,slow=40						
WRA	**Warramunga Arr**	**17.52**	**196**	P	**Pn**	**16 00 07.9**	**+0.4**
	0.5nm,0.3s,baz=17,slow=13,SNR=23						
WRA				S	Sn	16 03 12.8	-8.9
	0.1nm,0.3s,baz=23,slow=23,SNR=4.2						
FITZ	**Fitzroy Crossi**	**20.18**	**221**	P	**P**	**16 00 37.5**	**+0.1**
	1.3nm,0.6s,baz=48,slow=9.1,SNR=7.7						
FITZ				S	**S**	**16 04 15.3**	**-6.3**
	1.8nm,0.8s,baz=34,slow=15,SNR=2.3						
FITZ				LR	LR	16 08 57.3	
	comp=Z,43nm,19.1s,baz=68,slow=38						
ASAR	**Alice Springs**	**21.19**	**194**	P	**P**	**16 00 50.1**	**+1.9**
	0.5nm,0.4s,baz=21,slow=11,SNR=14						
ASAR				S	**S**	**16 04 40.2**	**-1.2**
	0.4nm,0.8s,baz=12,slow=27,SNR=3.6						
STKA	**Stephens Creek**	**28.74**	**176**	LR	LR	16 15 06.2	
	comp=Z,94nm,19.6s,baz=26,slow=40						
JHJ	**Hachijo jima 2**	**35.98**	**0**	LR	LR	16 15 56.7	
	comp=Z,30nm,19.8s,baz=280,slow=33						
KSRS	**Korea Array**	**41.71**	**346**	P	**P**	**16 03 51.4**	**+0.5**
	0.4nm,0.7s,baz=156,slow=9.3,SNR=3.2						
PETK	**Petropavlovsk-**	**58.02**	**13**	P	**P**	**16 05 55.4**	**+0.9**
	1.1nm,0.7s,baz=197,slow=4.5,SNR=2.6						
SONM	**Songino Array**	**58.36**	**334**	P	**P**	**16 05 58.6**	**+1.4**
	0.2nm,0.5s,baz=134,slow=8.3,SNR=2.3						
MKAR	**Makanchi Array**	**70.53**	**322**	P	**P**	**16 07 15.3**	**-1.4**
	0.1nm,0.5s,baz=117,slow=5.4,SNR=3.7						

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*IGQ **02** 15:58:09.5±1.7,0°N±5°×8°0W±1°1,h9km±6km,MLv4.1/3*
ISC 02 15:58:06.2±2.8,0°.03S±0°.08×80°.5W±0°.2,h9km,n29, σ1°27/30,Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAG1	**Magdalena**	**0.77**	**93**	P	**Pb**	**15 58 22.8**	**+1.0**
QUEV	**Quevedo**	**1.60**	**129**	P	**Pb**	**15 58 36.2**	**+0.2**
QUEV				S	**Sg**	**15 58 56.0**	**-1.7**
ILLI	**Illinizas Sur**	**1.94**	**111**	P	**Pn**	**15 58 41.4**	**+1.6**
PINO	**Pino**	**1.94**	**94**	P	**Pn**	**15 58 40.0**	**+0.2**
YANA	**Yana**	**1.97**	**93**	P	**Pn**	**15 58 40.3**	**+0.1**
OTAV	**Otavalo**	**2.10**	**83**	*e*P	**Pn**	**15 58 41.6**	**-0.5**
OTAV	**Otavalo**	**2.10**	**83**	P	**Pn**	**15 58 41.5**	**-0.5**
BNAS	**Cotopaxi Volca**	**2.15**	**107**	P	**Pb**	**15 58 45.2**	**-0.6**
NAS2	**Nasa**	**2.16**	**107**	P	**Pn**	**15 58 45.0**	**+2.1**
PITA	**Cotopaxi Volc**	**2.17**	**104**	P	**Pb**	**15 58 45.5**	**-0.5**
BREF	**Cotopaxi Volca**	**2.19**	**107**	P	**Pb**	**15 58 45.8**	**-0.6**
BMOR	**Cotopaxi Volca**	**2.19**	**109**	P	**Pn**	**15 58 45.6**	**+2.2**
CUIC	**Cuicocha-Domo**	**2.20**	**81**	P	**Pn**	**15 58 43.7**	**+0.3**
BVC2	**Cotopaxi Volca**	**2.22**	**106**	P	**Pn**	**15 58 45.7**	**+2.0**
VC1	**Cotopaxi 1**	**2.22**	**106**	P	**Pn**	**15 58 45.9**	**+2.2**
BTAM	**Cotopaxi Volca**	**2.24**	**107**	P	**Pb**	**15 58 46.4**	**-0.8**
COV1	**Cotopaxi Volc**	**2.28**	**106**	P	**Pn**	**15 58 45.8**	**+1.1**
LITE1	**Lita**	**2.33**	**69**	P	**Pn**	**15 58 43.8**	**-1.0**
URCU	**Urcuqui**	**2.33**	**79**	P	**Pn**	**15 58 45.0**	**-0.1**
IMBA	**Imbabura, San**	**2.36**	**83**	P	**Pn**	**15 58 47.2**	**+1.7**
PISA	**Pisayambo**	**2.38**	**115**	P	**Pb**	**15 58 48.9**	**-0.7**
ANTS	**Antisana-Sarah**	**2.41**	**101**	P	**Pn**	**15 58 47.5**	**+1.0**
YAHU	**Yahuarcocha**	**2.50**	**81**	P	**Pn**	**15 58 49.7**	**+2.3**
POND	**Pondoa**	**2.50**	**124**	P	**Pb**	**15 58 51.5**	**-0.1**
BMAS	**Trigal station**	**2.53**	**125**	P	**Pb**	**15 58 51.1**	**-0.9**
COHC	**Cochancay**	**2.74**	**152**	P	**Pb**	**15 58 54.3**	**-1.2**
GCUF	**Volcan Galeras**	**3.43**	**69**	*e*P	**Pn**	**15 59 01.1**	**+0.8**
CRUC	**La Cruz**	**3.92**	**66**	*e*P	**Pn**	**15 59 07.6**	**+0.6**
SOTA	**Rioblanco**	**4.48**	**61**	*e*P	**Pn**	**15 59 15.8**	**+1.1**

MEX 02 16:09:39.0±0.6,16°.20N×93°.14W,h154km±11km,MD3.7, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**0.57**	**2**	*e*P	Pn	16 10 00.1	-1.1
TGIG				*i* S	Sn	16 10 15.9	-2.3
CCIG	**Comitan**	**0.97**	**85**	*e*P	Pn	16 10 02.9	-1.2
CCIG				*i* S	Sn	16 10 20.4	-2.7

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*ISCJB **02** 16:26:09.9±0.8,37°.78N±0°.04×26°.73E±0°.05,h5km±9km, Error ellipse: s-maj=8.0km s-min=5.2km az=44.9*
*ISK **02** 16:26:09.7,37°.81N×26°.76E,h11km,ML2.2/4*
*CSEM **02** 16:26:10.1±0.2,37°.78N×26°.71E,h5km,ML2.2,Error ellipse: s-maj=3.8km s-min=2.3km az=51.0*
*DDA **02** 16:26:10.1,37°.79N×26°.75E,h7km,Ml2.5*
ISC 02 16:26:10.3±1.1,37°.80N±0°.03×26°.76E±0°.04,h13km±11km, n22,σ0°37/36,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGB	**˜zmir**	**0.27**	**21**	*i* P	**Pg**	**16 26 15.9**	**-0.2**
DGB				*i* S	**Sg**	**16 26 19.9**	**+0.1**
GCAM	**G?zelcaml?**	**0.39**	**104**	PG	**Pg**	**16 26 18.0**	**-0.1**
GCAM				SG	**Sb**	**16 26 24.4**	**-0.5**
GCAM	**G?zelcaml?**	**0.39**	**104**	*i* P	**Pg**	**16 26 18.3**	**+0.2**
GCAM				*i* S	**Sb**	**16 26 24.7**	**-0.2**
GCAM	**G?zelcaml?**	**0.39**	**104**	*e*Pg	**Pg**	**16 26 18.0**	**-0.1**
GCAM	**G?zelcaml?**	**0.39**	**104**	P	**Pg**	**16 26 18.3**	**+0.2**
GCAM				*e*Sg	**Sb**	**16 26 24.4**	**-0.5**
ZEY	**˜zmir**	**0.48**	**336**	*i* P	**Pg**	**16 26 19.8**	**-0.1**
ZEY				*i* S	**Sb**	**16 26 27.3**	**-0.5**
URLA	**Izmir**	**0.58**	**347**	PG	**Pg**	**16 26 21.2**	**-0.4**
URLA				SG	**Sg**	**16 26 29.2**	**-0.1**
URLA	**Izmir**	**0.58**	**347**	*i* P	**Pg**	**16 26 21.9**	**+0.3**
URLA				*i* S	**Sg**	**16 26 29.2**	**-0.1**
URLA	**Izmir**	**0.58**	**347**	*e*Pg	**Pg**	**16 26 21.2**	**-0.4**
URLA	**Izmir**	**0.58**	**347**	P	**Pg**	**16 26 21.9**	**+0.3**
URLA				S	**Sg**	**16 26 29.2**	**-0.1**
BLCB	**Balcova**	**0.63**	**21**	PG	**Pg**	**16 26 22.2**	**-0.4**
BLCB				SG	**Sg**	**16 26 31.1**	**+0.2**
BLCB	**Balcova**	**0.63**	**21**	*e*Pg	**Pg**	**16 26 22.2**	**-0.4**
BLCB				*e*Sg	**Sg**	**16 26 31.1**	**+0.2**
CHOS	**Chios island**	**0.81**	**317**	PG	**Pg**	**16 26 25.9**	**-0.1**
CHOS	**Chios island**	**0.81**	**317**	*e*Pg	**Pg**	**16 26 25.9**	**-0.1**
BODT	**Bodrum**	**0.85**	**149**	PG	**Pg**	**16 26 26.2**	**-0.6**
BODT	**Bodrum**	**0.85**	**149**	*e*Pg	**Pg**	**16 26 26.2**	**-0.6**
AYDN	**Tasoluk**	**0.90**	**98**	*i* P	Pn	16 26 28.9	+0.2
AYDN				*i* S	**Sg**	**16 26 39.7**	**+0.2**
AYDN	**Tasoluk**	**0.90**	**98**	P	Pn	16 26 28.9	+0.2
AYDN				S	**Sg**	**16 26 39.7**	**+0.2**
BDRM	**Kayabasi**	**0.91**	**143**	*i* P	**Pg**	**16 26 27.4**	**-0.5**
BDRM				*i* S	**Sb**	**16 26 40.6**	**+0.6**
BDRM	**Kayabasi**	**0.91**	**143**	P	**Pg**	**16 26 27.4**	**-0.5**
BDRM				S	**Sb**	**16 26 40.6**	**+0.6**
APE	**Apeiranthos**	**1.22**	**234**	PN	**Pn**	**16 26 33.4**	**+0.3**
APE	**Apeiranthos**	**1.22**	**234**	*e*Pn	**Pn**	**16 26 33.4**	**+0.3**

IDC 02 16:26:59.4±1.6,1°.32N×127°.09E,h0km,mb3.2/4, mb1 3.4/4,mb1mx3.2/55,mbtmp3.2/4,Error ellipse: s-maj=164.0km s-min=20.8km az=67.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.29**	**162**	P	P	16 31 57.9	-0.6
	0.4nm,0.4s,baz=340,slow=11,SNR=17						
WRA				ScP	ScP	16 39 32.7	-1.1
	0.3nm,0.7s,baz=334,slow=2.4,SNR=3.3						
ASAR	**Alice Springs**	**25.70**	**165**	P	P	16 32 32.1	+0.7
	0.2nm,0.3s,baz=347,slow=11,SNR=8.5						
MKAR	**Makanchi Array**	**59.73**	**326**	P	P	16 37 06.1	+0.1
	0.1nm,0.3s,baz=118,slow=5.8,SNR=2.4						
KURBB	**Kurchatov Arra**	**63.95**	**328**	P	P	16 37 34.3	-0.1
	0.2nm,0.6s,baz=110,slow=8.0,SNR=2.9						

IDC 02 16:30:09.4±1.0,3°.71S×122°.90E,h0km,mb3.4/5, mb1 3.6/6,mb1mx3.4/52,mbtmp3.4/6,ML3.0/1,Error ellipse: s-maj=195.4km s-min=19.9km az=61.0, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.61**	**146**	P	P	16 34 38.1	-1.5
	0.0nm,0.3s,baz=317,slow=12,SNR=7.6						
ASAR	**Alice Springs**	**22.50**	**153**	P	P	16 35 10.6	-0.3
	1.6nm,1.0s,baz=341,slow=15,SNR=8.3						
ASAR				PcP	PcP	16 39 07.0	+1.6
	0.4nm,0.9s,baz=330,slow=1.9,SNR=5.7						
MKAR	**Makanchi Array**	**61.72**	**329**	P	P	16 40 29.0	-0.6
	0.1nm,0.3s,baz=122,slow=7.0,SNR=2.5						
ZALV	**Zalesovo Beam**	**65.64**	**336**	P	P	16 40 54.4	-0.9
	0.4nm,0.4s,baz=140,slow=7.4,SNR=2.2						
KURBB	**Kurchatov Arra**	**66.12**	**331**	P	P	16 40 58.4	-0.1
	0.3nm,0.7s,baz=138,slow=6.2,SNR=2.9						
BVAR	**Borovoye Array**	**71.61**	**330**	P	P	16 41 33.7	+1.1
	0.2nm,0.4s,baz=140,slow=7.6,SNR=2.5						

IDC 02 16:41:20.6±1.6,12°.19N×142°.89E,h0km,mb3.4/3, mb1 3.7/4,mb1mx3.3/59,mbtmp3.5/4,ML3.7/1,Error ellipse: s-maj=88.1km s-min=22.0km az=118.0,South of Mariana Islands

| Code | Station Name | Δ

UCH ⇓iS **Sb** **17 25 24.9 -0.1**
baz=5.0
KBK Karagaybulak 0.73 356 ⇓P **Pb** **17 25 21.3 -0.6**
8.3nm,0.1s,SNR=38
KBK ⇓S **Sg** **17 25 31.2 -0.2**
17nm,0.1s
KBK Karagaybulak 0.73 356 ⇓iP **Pb** **17 25 21.1 -0.8**
baz=55
KBK ⇓iS **Sg** **17 25 30.6 -0.8**
baz=55
KBK Karagaybulak 0.73 356 ⇑iP **Pg** **17 25 22.6 +0.9**
baz=53
KBK ⇑iS **Sb** **17 25 32.5 +0.7**
baz=53
AAK Ala-Archa 0.81 331 ⇓P **Pb** **17 25 22.6 -0.6**
2.4nm,0.3s
AAK ⇓S **Sb** **17 25 32.9 -1.2**
4.2nm,0.4s
AAK Ala-Archa 0.81 331 ⇓P **Pb** **17 25 22.8 -0.5**
2.5nm,0.2s,SNR=8.2
AAK ⇑S **Sb** **17 25 33.4 -0.7**
5.8nm,0.3s
AAK Ala-Archa 0.81 331 ⇑iP **Pb** **17 25 22.6 -0.6**
baz=29
AAK ⇑iS **Sb** **17 25 32.9 -1.2**
baz=29
AAK Ala-Archa 0.81 331 ⇑iP **Pb** **17 25 23.7 +0.4**
baz=29
AAK ⇑iS **Sg** **17 25 34.7 +0.7**
baz=29
NRN Naryn 0.88 124 ⇑iP **Pb** **17 25 24.2 -0.3**
baz=27
NRN ⇑iS **Sb** **17 25 36.1 -0.1**
baz=27
NRN Naryn 0.88 124 ⇓iP **Pb** **17 25 24.5 0.0**
baz=27
NRN ⇓eS **Sb** **17 25 36.2 0.0**
baz=27
BOOM Boomskoye usch 0.88 50 ⇓eP **Pb** **17 25 23.7 -0.8**
baz=52
BOOM ⇓iS **Sb** **17 25 35.1 -1.0**
baz=52
BOOM Boomskoye usch 0.88 50 ⇓iP **Pb** **17 25 24.3 -0.2**
baz=50
BOOM ⇓eS **Sb** **17 25 35.4 -0.7**
baz=50
ULHL Ulahol 0.96 70 P **Pb** **17 25 25.0 -0.8**
0.9nm,0.2s,SNR=9.9
ULHL Ulahol 0.96 70 ⇓iP **Pb** **17 25 25.0 -0.8**
baz=72
ULHL ⇓iS **Sb** **17 25 38.0 -0.4**
baz=72
AML Almayashu 1.01 282 ⇑P **Pb** **17 25 26.8 0.0**
1.6nm,0.2s,SNR=10.0
AML ⇓S **Sb** **17 25 40.5 +0.4**
3.1nm,0.2s
AML Almayashu 1.01 282 ⇓iP **Pb** **17 25 26.4 -0.4**
baz=80
AML ⇓iS **Sb** **17 25 40.0 -0.1**
baz=80
TKM2 Tokmak 2 1.08 23 ⇓P **Pb** **17 25 26.8 -1.0**
0.7nm,0.2s
TKM2 ⇑S **Sb** **17 25 41.5 -0.4**
1.0nm,0.2s
TKM2 Tokmak 2 1.08 23 ⇓P **Pb** **17 25 27.1 -0.8**
1.4nm,0.1s,SNR=15
TKM2 Tokmak 2 1.08 23 ⇑iP **Pb** **17 25 26.9 -1.0**
baz=23
TKM2 ⇑iS **Sb** **17 25 41.1 -0.8**
baz=23
CHMS Chumysh 1.09 349 ⇓P **Pb** **17 25 27.3 -0.6**
0.7nm,0.1s,SNR=16
CHMS ⇑S **Sb** **17 25 41.8 -0.2**
9.2nm,0.1s
CHMS Chumysh 1.09 349 ⇓eP **Pb** **17 25 27.3 -0.6**
baz=49
CHMS ⇓iS **Sb** **17 25 41.1 -0.9**
baz=49
CHMS Chumysh 1.09 349 ⇑iP **Pn** **17 25 28.6 +0.5**
baz=48
CHMS ⇑iS **Sn** **17 25 42.9 0.0**
baz=48
EKS2 Erkin-Say 1.18 309 ⇓iP **Pn** **17 25 28.7 -0.7**
baz=7.0
EKS2 ⇓iS **Sb** **17 25 44.6 -0.1**
baz=7.0
BMNS Besmoynak 1.27 22 eP **Pn** **17 25 30.8 0.0**
6.4nm,0.0s
BMNS eS **Sb** **17 25 47.7 +0.4**
13nm,0.1s
KST Kastek 1.31 32 eP **Pn** **17 25 31.1 -0.1**
2.4nm,0.2s
KST ⇓iS **Sn** **17 25 48.5 -0.1**
6.6nm,0.4s
USP Ospenovka 1.39 344 ⇓eP **Pn** **17 25 32.6 +0.3**
baz=43
USP ⇓iS **Sn** **17 25 50.4 -0.1**
baz=43
DGS Degeres 1.43 23 eP **Pn** **17 25 33.6 +0.8**
DGS eS **Sb** **17 25 52.7 +1.0**
MRKS Merke 1.56 302 eP **Pb** **17 25 35.8 -0.2**
2.6nm,0.2s
MRKS eS **Sb** **17 25 56.4 +0.7**
5.8nm,0.2s
MTBS Maitube 1.59 40 eP **Pb** **17 25 36.5 0.0**
4.1nm,0.1s
MTBS eS **Sb** **17 25 57.5 +1.1**
8.3nm,0.2s
MNAS Manas 1.95 287 ⇑P **Pb** **17 25 43.8 +1.0**
1.4nm,0.8s
MNAS ⇑S **Sg** **17 26 10.4 +0.1**
2.5nm,0.7s
MNAS Manas 1.95 287 ⇑eP **Pb** **17 25 42.2 -0.5**
baz=86
MNAS ⇑eS **Sb** **17 26 07.3 +0.4**
baz=86
MNAS Manas 1.95 287 ⇑iP **Pb** **17 25 42.6 -0.1**
baz=87
MNAS ⇑eS **Sb** **17 26 07.3 +0.4**
baz=87
KOTS Kotyrbulak 2.02 49 eP **Pb** **17 25 45.1 +1.3**
1.2nm,0.1s
KOTS eS **Sg** **17 26 12.4 0.0**
5.4nm,0.3s
KTBS Karatobe 2.16 34 eP **Pb** **17 25 46.7 +0.5**
2.0nm,0.2s
KTBS eS **Sb** **17 26 15.2 +2.3**
12nm,0.4s
KUU Kurty 2.19 26 eP **Pb** **17 25 47.1 +0.5**
1.0nm,0.2s
KUU eS **Sb** **17 26 15.8 +2.2**
6.1nm,0.2s
MNBS Baschi 3.28 48 eP **Pb** **17 26 07.0 +1.7**
0.6nm,0.1s
MNBS eS **Sg** **17 26 49.7 -3.0**
2.4nm,0.1s
KK31 Karatay Array 3.54 291 ⇓Lg Lg 17 26 58.8
0.2nm,0.3s,baz=101,slow=28,SNR=5.2

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*IDC **02** 17:27:11.3±0.9, 1°.63N×127°.82E, h0km, mb3.7/6, mb1 3.8/7, mb1mx3.6/56, mbtmp3.7/7, ML3.3/1, MS3.0/1, Ms1 3.0/1, ms1mx2.2/54, Error ellipse: s-maj=42.5km s-min=16.8km az=63.0*
*DJA **02** 17:27:11.6±0.7, 2°N±5°×12°8E±°, h26km±5km, M4.1/2, MLv4.1/2*
*ISCJB **02** 17:27:17.0±0.7, 1°.44N±0°.08×127°.74E±0°.08, h69km, mb3.7/6, Error ellipse: s-maj=13.0km s-min=9.2km az=44.2*
ISC 02 17:27:18.6±0.9, 1°.53N±0°.08×127°.86E±0°.07, h69km, n11, σ2°44/12, mb3.8/6, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**2.18**	**189**	P	**Pn**	**17 27 50.2**	**-2.6**
LBMI				S	**Sn**	**17 28 21.3**	**+2.5**
SGSI	**Sangihe**	**3.16**	**313**	P	Pn	17 27 58.4	-7.7
KMSI	**Cibinong**	**3.99**	**256**	P	**Pn**	**17 28 14.1**	**-3.3**
SANI	**Sanana**	**4.02**	**208**	P	**Pn**	**17 28 15.0**	**-2.8**
SIJI	**Sorong**	**4.16**	**125**	Pn	**Pn**	**17 28 16.4**	**-3.3**
	1.9nm,0.3s,baz=330,slow=17,SNR=11						
SIJI				Sn	**Sn**	**17 29 07.7**	**+0.6**
	baz=347,slow=19,SNR=2.6						
SIJI				LR	LR	17 30 11.4	
	comp=Z,207nm,21.3s,baz=230,slow=42						
WRA	**Warramunga Arr**	**22.27**	**164**	P	**P**	**17 32 10.7**	**+0.5**
	2.7nm,1.0s,baz=340,slow=11,SNR=8.3						
ASAR	**Alice Springs**	**25.73**	**167**	P	**P**	**17 32 45.6**	**+2.7**
	0.7nm,0.8s,baz=342,slow=8.9,SNR=8.1						
MJAR	**Matsushiro Arr**	**36.13**	**14**	P	**P**	**17 34 14.5**	**+0.3**
	1.1nm,0.8s,baz=199,slow=10.0,SNR=3.8						
MKAR	**Makanchi Array**	**59.99**	**325**	P	**P**	**17 37 18.9**	**+0.8**
	0.9nm,0.6s,baz=119,slow=8.5,SNR=13						
KURBB	**Kurchatov Arra**	**64.19**	**328**	P	**P**	**17 37 46.8**	**+0.7**
	0.8nm,0.6s,baz=129,slow=6.0,SNR=11						
BVAR	**Borovoye Array**	**69.77**	**327**	P	**P**	**17 38 22.9**	**+1.4**
	1.1nm,0.7s,baz=123,slow=7.2,SNR=5.8						

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*IDC **02** 17:31:48.0±0.8, 38°.44N×20°.43E, h0km, mb3.7/12, mb1 3.7/18, mb1mx3.6/60, mbtmp3.6/18, ML3.3/6, MS2.8/3, Ms1 2.8/3, ms1mx2.3/66, Error ellipse: s-maj=16.4km s-min=14.6km az=1.0*
*ISCJB **02** 17:31:50.0±0.4, 38°.43N±0°.02×20°.36E±0°.03, h21km±3km, mb3.8/13, MS2.7/2, Error ellipse: s-maj=3.9km s-min=2.5km az=138.7*
*TIR **02** 17:31:50.0, 38°.37N×19°.86E, h18km, Md0.8/6*
*ATH **02** 17:31:50.4, 38°.40N×20°.45E, h16km±1km, ML3.6/9, Error ellipse: s-maj=2.0km s-min=0.9km az=74.0*
*CSEM **02** 17:31:50.4±0.2, 38°.41N×20°.43E, h10km, ML3.7, Error ellipse: s-maj=4.3km s-min=2.0km az=40.0*
*THE **02** 17:31:51.3, 38°.41N×20°.51E, h10km, ML3.7/16, Error ellipse: s-maj=0.8km s-min=0.5km az=255.0*
*BEO **02** 17:31:52.3±1.2, 38°.44N×20°.26E, h19km±7km*
*PDG **02** 17:31:52.5±0.4, 38°.55N×20°.10E, h13km±2km, ML3.7/8, Error ellipse: s-maj=2.3km s-min=1.3km az=90.0*
ISC 02 17:31:50.3±0.8, 38°.41N±0°.02×20°.42E±0°.02, h17km±5km, n194, σ1°30/278, mb3.7/13, 10C-9D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FSK	**Fiskardo**	**0.13**	**66**	P	**Pb**	**17 31 53.6**	**-0.7**
FSK				S	**Sb**	**17 31 55.3**	**-1.7**
FSK	**Fiskardo**	**0.13**	**66**	P	**Pb**	**17 31 53.7**	**-0.6**
FSK				S	**Sb**	**17 31 55.0**	**-1.9**
VLS	**Valsamata**	**0.27**	**149**	P	**Pg**	**17 31 56.2**	**0.0**
VLS				S	**Sg**	**17 32 00.2**	**-0.1**
VLS				AML	AML	17 32 00.6	
	comp=N,33422μm,0.2s						
VLS				AML	AML	17 32 00.6	
	comp=E,41593μm,0.2s						
VLS	**Valsamata**	**0.27**	**149**	P	**Pg**	**17 31 56.0**	**-0.3**
VLS				S	**Sg**	**17 32 00.0**	**-0.3**
VLS	**Valsamata**	**0.27**	**149**	P	**Pg**	**17 31 56.0**	**-0.3**
VLS				S	**Sg**	**17 32 00.0**	**-0.3**
MGNA	**Meganis¸,,**	**0.39**	**50**	P	**Pg**	**17 31 58.2**	**-0.1**
MGNA				S	**Sg**	**17 32 04.3**	**+0.6**
MGNA				AML	AML	17 32 04.5	
	comp=N,45637μm,0.2s						
MGNA				AML	AML	17 32 04.6	
	comp=E,30058μm,0.3s						
MGNA	**Meganis¸,,**	**0.39**	**50**	P	**Pg**	**17 31 58.1**	**-0.2**
MGNA				S	**Sg**	**17 32 03.9**	**+0.2**
KFL	**Anninata**	**0.42**	**135**	P	**Pg**	**17 31 58.9**	**0.0**
KFL				S	**Sg**	**17 32 04.8**	**+0.2**
KFL				AML	AML	17 32 05.4	
	comp=N,70312μm,0.4s						
KFL				AML	AML	17 32 05.5	
	comp=E,65561μm,0.3s						
KFL	**Anninata**	**0.42**	**135**	P	**Pg**	**17 31 58.6**	**-0.3**
KFL				S	**Sg**	**17 32 04.2**	**-0.4**
KFL	**Anninata**	**0.42**	**135**	P	**Pg**	**17 31 58.6**	**-0.3**
KFL				S	**Sg**	**17 32 04.2**	**-0.4**
LKD2	**Lefkada island**	**0.43**	**26**	P	**Pg**	**17 31 59.1**	**+0.1**
LKD2				S	**Sg**	**17 32 05.7**	**+0.8**
LKD2				AML	AML	17 32 06.8	
	comp=N,14993μm,0.3s						
LKD2				AML	AML	17 32 09.8	
	comp=E,11358μm,0.2s						
LKD2	**Lefkada island**	**0.43**	**26**	P	**Pg**	**17 31 59.0**	**-0.1**
LKD2				S	**Sg**	**17 32 05.5**	**+0.5**
LKD2	**Lefkada island**	**0.43**	**26**	P	**Pg**	**17 31 59.0**	**-0.1**
LKD2				S	**Sg**	**17 32 05.4**	**+0.5**
PDO	**Prodromos**	**0.63**	**72**	P	**Pb**	**17 32 02.6**	**-0.3**
PDO	**Prodromos**	**0.63**	**72**	P	**Pb**	**17 32 02.3**	**-0.6**
PDO				S	**Sb**	**17 32 09.9**	**-1.6**
PDO	**Prodromos**	**0.63**	**72**	P	**Pb**	**17 32 02.3**	**-0.6**
PDO				S	**Sb**	**17 32 09.9**	**-1.6**
VTN	**Vitineika**	**0.78**	**129**	P	**Pg**	**17 32 05.9**	**+0.4**
VTN	**Vitineika**	**0.78**	**129**	P	**Pg**	**17 32 05.6**	**0.0**
VTN	**Vitineika**	**0.78**	**129**	P	**Pb**	**17 32 05.4**	**0.0**
PVO	**Paravola**	**0.90**	**76**	P	**Pg**	**17 32 07.9**	**+0.2**
PVO				AML	AML	17 32 25.9	
	comp=N,11505μm,0.4s						
PVO				AML	AML	17 32 26.5	
	comp=E,12398μm,0.4s						
PVO	**Paravola**	**0.90**	**76**	P	**Pb**	**17 32 07.4**	**0.0**
PVO				S	**Sb**	**17 32 19.3**	**+0.2**
PVO	**Paravola**	**0.90**	**76**	P	**Pb**	**17 32 07.4**	**0.0**
PVO				S	**Sb**	**17 32 19.3**	**+0.2**
RLS	**Riolos of Patr**	**0.90**	**113**	P	**Pb**	**17 32 07.0**	**-0.4**
RLS				AML	AML	17 32 26.7	
	comp=N,3859μm,0.7s						
RLS				AML	AML	17 32 28.1	
	comp=E,3684μm,0.4s						
RLS	**Riolos of Patr**	**0.90**	**113**	P	**Pb**	**17 32 06.6**	**-0.9**
RLS				S	**Sb**	**17 32 18.6**	**-0.5**
RLS	**Riolos of Patr**	**0.90**	**113**	P	**Pb**	**17 32 07.0**	**-0.4**
RLS				S	**Sb**	**17 32 18.6**	**-0.5**
DSL	**Palaion Diasel**	**0.90**	**36**	P	**Pb**	**17 32 07.2**	**-0.3**
DSL				AML	AML	17 32 25.9	
	comp=N,9443μm,0.6s						
DSL				AML	AML	17 32 29.3	
	comp=E,8238μm,0.4s						
DSL	**Palaion Diasel**	**0.90**	**36**	P	**Pb**	**17 32 07.1**	**-0.4**
DSL				S	**Sg**	**17 32 20.1**	**+0.4**
DSL	**Palaion Diasel**	**0.90**	**36**	P	**Pb**	**17 32 07.1**	**-0.4**
DSL				S	**Sg**	**17 32 20.1**	**+0.4**
UPR	**University Cam**	**1.08**	**96**	P	**Pg**	**17 32 11.4**	**+0.1**
UPR	**University Cam**	**1.08**	**96**	P	**Pn**	**17 32 10.9**	**+0.2**
DRO	**Drossia**	**1.12**	**114**	P	**Pn**	**17 32 10.0**	**-1.2**
DRO	**Drossia**	**1.12**	**114**	P	**Pn**	**17 32 10.7**	**-0.5**
DRO				S	**Sg**	**17 32 27.0**	**+0.4**
DRO	**Drossia**	**1.12**	**114**	P	**Pn**	**17 32 10.7**	**-0.5**
DRO				S	**Sg**	**17 32 27.0**	**+0.4**
IGT	**Igoumenitsa**	**1.13**	**357**	P	**Pb**	**17 32 11.9**	**+0.4**
IGT				AML	AML	17 32 33.2	
	comp=E,2385μm,0.3s						
IGT				AML	AML	17 32 34.1	
	comp=N,2781μm,0.2s						
IGT	**Igoumenitsa**	**1.13**	**357**	P	**Pb**	**17 32 11.8**	**+0.4**
IGT				S	**Sg**	**17 32 29.1**	**+2.2**
IGT	**Igoumenitsa**	**1.13**	**357**	P	**Pb**	**17 32 11.8**	**+0.4**
EFP	**Efpalio**	**1.17**	**89**	P	**Pn**	**17 32 11.2**	**-0.8**
EFP				S	**Sg**	**17 32 29.4**	**+1.1**
EFP				AML	AML	17 32 34.7	
	comp=E,31918μm,0.6s						
EFP				AML	AML	17 32 34.9	
	comp=N,12744μm,0.7s						
EFP	**Efpalio**	**1.17**	**89**	P	**Pn**	**17 32 11.5**	**-0.4**
EFP				S	**Sn**	**17 32 27.9**	**+0.4**
EFP	**Efpalio**	**1.17**	**89**	P	**Pn**	**17 32 11.6**	**-0.4**
EFP				S	**Sn**	**17 32 27.9**	**+0.4**
ANX	**Ano Chora**	**1.20**	**81**	P	**Pn**	**17 32 12.2**	**-0.2**
ANX	**Ano Chora**	**1.20**	**81**	P	**Pn**	**17 32 11.9**	**-0.5**
ANX				S	**Sn**	**17 32 28.5**	**+0.2**
ANX	**Ano Chora**	**1.20**	**81**	P	**Pn**	**17 32 12.4**	**0.0**
ANX				S	**Sn**	**17 32 28.5**	**+0.2**
EVR	**Evrytania**	**1.20**	**65**	P	**Pn**	**17 32 12.3**	**-0.2**
EVR	**Evrytania**	**1.20**	**65**	P	**Pn**	**17 32 12.1**	**-0.4**
EVR				S	**Sb**	**17 32 28.4**	**+0.3**
EVR	**Evrytania**	**1.20**	**65**	P	**Pn**	**17 32 12.6**	**+0.1**
EVR				S	**Sb**	**17 32 28.4**	**+0.3**
SGD	**Sagiada**	**1.21**	**353**	P	**Pg**	**17 32 14.2**	**+0.4**
SGD	**Sagiada**	**1.21**	**353**	P	**Pg**	**17 32 13.6**	**-0.2**
SGD	**Sagiada**	**1.21**	**353**	P	**Pg**	**17 32 13.6**	**-0.2**
LAKA	**Lakka**	**1.24**	**97**	P	**Pn**	**17 32 12.4**	**-0.5**
LAKA	**Lakka**	**1.24**	**97**	P	**Pn**	**17 32 12.6**	**-0.3**
LAKA				S	**Sn**	**17 32 29.5**	**+0.2**
LAKA	**Lakka**	**1.24**	**97**	P	**Pn**	**17 32 12.9**	**0.0**
LAKA				S	**Sn**	**17 32 29.5**	**+0.2**
SERG	**Sergoula**	**1.29**	**89**	P	**Pn**	**17 32 13.4**	**-0.2**
SERG	**Sergoula**	**1.29**	**89**	P	**Pn**	**17 32 13.4**	**-0.2**
TRIZ	**Trizonia**	**1.30**	**91**	P	**Pn**	**17 32 13.2**	**-0.6**
TRIZ	**Trizonia**	**1.30**	**91**	P	**Pn**	**17 32 13.6**	**-0.1**
TRIZ	**Trizonia**	**1.30**	**91**	P	**Pn**	**17 32 13.8**	**+0.1**
AMT	**Artemida-Makis**	**1.34**	**130**	P	**Pg**	**17 32 16.0**	**-0.3**
AMT	**Artemida-Makis**	**1.34**	**130**	P	**Pb**	**17 32 14.9**	**-0.2**
AMT	**Artemida-Makis**	**1.34**	**130**	P	**Pb**	**17 32 14.9**	**-0.2**
KALE	**Kalithea**	**1.35**	**90**	P	**Pn**	**17 32 13.8**	**-0.8**
KALE	**Kalithea**	**1.35**	**90**	P	**Pn**	**17 32 14.5**	**0.0**
KALE	**Kalithea**	**1.35**	**90**	P	**Pn**	**17 32 14.6**	**0.0**
KEK	**Kerkira**	**1.39**	**340**	P	**Pb**	**17 32 16.4**	**+0.5**
KEK	**Kerkira**	**1.39**	**340**	P	**Pb**	**17 32 15.7**	**-0.2**
KEK	**Kerkira**	**1.39**	**340**	P	**Pb**	**17 32 15.7**	**-0.2**
SRN	**Sarande**	**1.51**	**348**	*i* PN	**Pg**	**17 32 19.3**	**-0.1**
SRN				*i* SN	**Sg**	**17 32 40.0**	**+1.0**
SRN	**Sarande**	**1.51**	**348**	*i* Pn	**Pg**	**17 32 19.3**	**-0.1**
SRN				*i* Sn	**Sg**	**17 32 40.0**	**+1.0**
MES3	**Kyparissia**	**1.52**	**139**	P	**Pb**	**17 32 17.5**	**-0.6**
MES3	**Kyparissia**	**1.52**	**139**	P	**Pb**	**17 32 18.2**	**0.0**
GUR	**Goura**	**1.59**	**107**	P	**Pn**	**17 32 18.1**	**+0.3**
GUR	**Goura**	**1.59**	**107**	P	**Pn**	**17 32 18.4**	**+0.6**
GUR				S	**Sb**	**17 32 39.3**	**+0.1**
GUR	**Goura**	**1.59**	**107**	P	**Pn**	**17 32 18.4**	**+0.6**
GUR				S	**Sb**	**17 32 39.3**	**+0.1**
DSF	**Desfina**	**1.66**	**89**	P	**Pn**	**17 32 19.2**	**+0.5**
DSF				S	**Sn**	**17 32 39.7**	**+0.1**
DSF	**Desfina**	**1.66**	**89**	P	**Pn**	**17 32 19.2**	**+0.5**
DSF				S	**Sn**	**17 32 39.7**	**+0.1**
TRIP	**Tripoli**	**1.71**	**120**	P	**Pg**	**17 32 22.4**	**-0.9**
TRIP	**Tripoli**	**1.71**	**120**	P	**Pb**	**17 32 21.9**	**+0.6**
ITM	**Ithomi**	**1.71**	**135**	P	**Pb**	**17 32 21.7**	**+0.3**
ITM	**Ithomi**	**1.71**	**135**	P	**Pn**	**17 32 20.2**	**+0.8**
ITM	**Ithomi**	**1.71**	**135**	P	**Pn**	**17 32 20.2**	**+0.8**
LKR	**Lokris**	**2.04**	**82**	P	**Pb**	**17 32 27.4**	**+0.4**
LKR	**Lokris**	**2.04**	**82**	P	**Pb**	**17 32 26.8**	**-0.2**
BIA	**Bitola**	**2.70**	**15**	*e*Pn	**Pb**	**17 32 36.0**	**-2.2**
OHR	**Ohrid**	**2.72**	**6**	*e*Pn	**Pn**	**17 32 35.8**	**+2.5**
TIR	**Tirane**	**2.97**	**352**	*e*Pn	**Pn**	**17 32 37.1**	**+0.4**
TIR	**Tirane**	**2.97**	**352**	*e*Pn	**Pn**	**17 32 37.1**	**+0.4**
CGL1	**Ceglie Messapi**	**3.19**	**316**	*e*Pn	**Pb**	**17 32 44.7**	**-1.9**
TAR1	**Taranto**	**3.22**	**312**	*e*Pn	**Pn**	**17 32 40.9**	**+0.8**
TAR1				Sn	**Sn**	**17 33 17.5**	**-0.5**
VAY	**Valandovo**	**3.35**	**29**	*e*Pn	**Pn**	**17 32 44.4**	**+2.5**
VAY	**Valandovo**	**3.35**	**29**	*e*Pn	**Pn**	**17 32 44.3**	**+2.4**
VAY	**Valandovo**	**3.35**	**29**	*e*Pn	**Pn**	**17 32 44.4**	**+2.5**
MASS	**Massafra**	**3.37**	**312**	*e*Pn	**Pn**	**17 32 43.7**	**+1.5**
FASA	**Fasano**	**3.37**	**316**	*e*Pn	**Pn**	**17 32 43.9**	**+1.7**
FASA				Sn	**Sn**	**17 33 21.1**	**-0.7**
SKO	**Skopje**	**3.65**	**12**	*e*Pn	**Pn**	**17 32 48.0**	**+2.0**
SKO	**Skopje**	**3.65**	**12**	*e*Pn	**Pn**	**17 32 47.6**	**+1.6**
SKO	**Skopje**	**3.65**	**12**	*e*Pn	**Pn**	**17 32 48.0**	**+2.0**
ULC	**Ulcinj**	**3.66**	**346**	⇑*i*Pn	**Pn**	**17 32 46.9**	**+0.6**
ULC				*e*Sn	**Sn**	**17 33 28.8**	**-0.3**
ULC	**Ulcinj**	**3.66**	**346**	⇑*i*Pn	**Pn**	**17 32 46.9**	**+0.6**
ULC				*e*Sn	**Sn**	**17 33 28.8**	**-0.3**
SG1	**Sgolgore (BA)**	**3.77**	**311**	*e*Pn	**Pn**	**17 32 48.1**	**+0.4**
SG1				Sn	**Sn**	**17 33 31.3**	**-0.4**
BAI	**Bari**	**3.83**	**316**	*e*Pn	**Pn**	**17 32 50.2**	**+1.7**
DRME	**Dracevica, Mon**	**3.89**	**346**	⇓*i*Pn	**Pn**	**17 32 50.9**	**+1.6**
DRME				*e*Sn	**Sn**	**17 33 35.5**	**+0.9**
DRME	**Dracevica, Mon**	**3.89**	**346**	⇓*i*Pn	**Pn**	**17 32 50.9**	**+1.6**
DRME				*e*Sn	**Sn**	**17 33 35.5**	**+0.9**
KKB	**Krupnik**	**4.01**	**30**	P	**Pn**	**17 32 53.0**	**+1.9**
BUM	**Brajici-Budva**	**4.06**	**344**	⇑*i*Pn	**Pn**	**17 32 52.2**	**+0.5**
BUM				*e*Sn	**Sn**	**17 33 38.9**	**0.0**
BUM	**Brajici-Budva**	**4.06**	**344**	⇑*i*Pn	**Pn**	**17 32 52.2**	**+0.5**
BUM				*e*Sn	**Sn**	**17 33 38.9**	**0.0**
MMB	**Musomiste**	**4.07**	**38**	P	**Pb**	**17 32 58.0**	**-3.6**
PDG	**Podgorica**	**4.12**	**348**	*e*Pn	**Pn**	**17 32 54.0**	**+1.6**
PDG				*e*Sn	**Sn**	**17 33 39.7**	**-0.4**
PDG	**Podgorica**	**4.12**	**348**	*e*Pn	**Pn**	**17 32 54.0**	**+1.6**
PDG				*e*Sn	**Sn**	**17 33 40.0**	**-0.1**
TTG	**Podgorica**	**4.12**	**348**	⇓*i*Pn	**Pn**	**17 32 54.5**	**+2.1**
TTG				*e*Sn	**Sn**	**17 33 40.0**	**-0.1**
PVY	**Plav**	**4.20**	**355**	⇑*i*Pn	**Pn**	**17 32 55.6**	**+1.9**
PVY				*e*Sn	**Sn**	**17 33 43.2**	**+0.8**
PVY	**Plav**	**4.20**	**355**	⇑*i*Pn	**Pn**	**17 32 55.6**	**+1.9**
PVY				*e*Sn	**Sn**	**17 33 43.2**	**+0.8**
CEME	**Cevo**	**4.29**	**345**	*e*Pn	**Pn**	**17 32 55.2**	**+0.3**
CEME				*e*Sn	**Sn**	**17 33 44.4**	**-0.2**
CEME	**Cevo**	**4.29**	**345**	*e*Pn	**Pn**	**17 32 55.2**	**+0.3**
CEME				*e*Sn	**Sn**	**17 33 44.4**	**-0.2**
HCY	**Herceg Novi**	**4.29**	**341**	⇓*i*Pn	**Pn**	**17 32 56.6**	**+1.7**
HCY				*e*Sn	**Sn**	**17 33 43.9**	**-0.7**
HCY	**Herceg Novi**	**4.29**	**341**	⇓*i*Pn	**Pn**	**17 32 56.6**	**+1.7**
HCY				*e*Sn	**Sn**	**17 33 43.9**	**-0.7**
BEY	**Berane**	**4.48**	**355**	*e*Pn	**Pn**	**17 32 59.1**	**+1.6**
BEY				*e*Sn	**Sn**	**17 33 49.8**	**+0.6**
IVA	**Berane**	**4.48**	**355**	*e*Pn	**Pn**	**17 32 59.1**	**+1.6**
IVA				*e*Sn	**Sn**	**17 33 49.8**	**+0.6**
KOME	**Kolasin**	**4.49**	**352**	⇑*i*Pn	**Pn**	**17 33 00.2**	**+2.5**
KOME				*e*Sn	**Sn**	**17 33 49.4**	**-0.2**
KOME	**Kolasin**	**4.49**	**352**	⇑*i*Pn	**Pn**	**17 33 00.2**	**+2.5**
KOME				*e*Sn	**Sn**	**17 33 49.4**	**-0.2**
NKME	**Niksic**	**4.50**	**346**	⇓*i*Pn	**Pn**	**17 32 59.1**	**+1.4**
NKME				*e*Sn	**Sn**	**17 33 49.6**	**0.0**
NKME	**Niksic**	**4.50**	**346**	⇓*i*Pn	**Pn**	**17 32 59.1**	**+1.4**
NKME				*e*Sn	**Sn**	**17 33 49.6**	**0.0**
BARS	**Barje**	**4.53**	**13**	*e*Pn	**Pn**	**17 32 59.7**	**+1.5**
BARS	**Barje**	**4.53**	**13**	*e*Pn	**Pn**	**17 32 59.7**	**+1.5**
VTS	**Vitosha**	**4.69**	**26**	*e*Pn	**Pn**	**17 33 02.0**	**+1.5**
VTS	**Vitosha**	**4.69**	**26**	*i* P	**Pn**	**17 32 56.9**	**-3.6**
VTS	**Vitosha**	**4.69**	**26**	*e*Pn	**Pn**	**17 33 02.0**	**+1.5**
BRY	**Bratogost**	**4.71**	**343**	⇓*i*Pn	**Pn**	**17 33 01.0**	**+0.3**
BRY				*e*Sn	**Sn**	**17 33 54.5**	**-0.6**
BRY	**Bratogost**	**4.71**	**343**	⇓*i*Pn	**Pn**	**17 33 01.0**	**+0.3**
BRY				*e*Sn	**Sn**	**17 33 54.5**	**-0.6**
IDI	**Anoyia**	**4.75**	**130**	Pn	**Pn**	**17 33 02.7**	**+1.5**
	comp=N,0.3nm,0.3s,baz=275,slow=12,SNR=4.1						
IDI				Sn	**Sn**	**17 33 58.6**	**+2.7**
	comp=N,2.8nm,0.3s,baz=282,slow=6.7,SNR=7.7						
MS1	**Monte Sant'Ang**	**4.76**	**315**	*e*Pn	**Pn**	**17 33 03.5**	**+2.2**
MS1				Sn	**Sn**	**17 33 53.7**	**-2.4**
VAE	**Valguarnera**	**4.83**	**261**	Pn	**Pn**	**17 33 05.0**	**+2.6**
	comp=N,0.9nm,0.3s,baz=14,slow=9.2,SNR=2.1						
VAE				Sn	**Sn**	**17 34 00.3**	**+2.3**
	comp=N,2.8nm,0.3s,baz=89,slow=5.0,SNR=3.5						
SELS	**Selova**	**4.84**	**6**	*e*Pn	**Pn**	**17 33 03.0**	**+0.6**
SJES	**Sjenica**	**4.86**	**356**	*e*Pn	**Pn**	**17 33 04.1**	**+1.3**
STON	**Ston**	**4.92**	**336**	*e*Pn	**Pn**	**17 33 02.8**	**-0.6**

comp=N,1.2nm,0.4s
SOKA Soboth 9.17 336 Pn **Pn 17 34 02.1 +0.2**
comp=N,1.5nm,0.3s
OBKA Obir 9.18 334 *e*Pn **Pn 17 34 04.2 +2.1**
comp=N,0.5nm,0.2s
OBKA *e*Sn **Sn 17 35 41.4 -3.5**
comp=N,4.9nm,0.3s
OBKA Obir 9.18 334 Pn **Pn 17 34 04.2 +2.1**
comp=N,0.5nm,0.2s
KEST Kesra 9.24 257 Pn **Pn 17 34 04.9 +2.0**
comp=N,0.4nm,0.3s,baz=21,slow=8.6,SNR=3.3
KEST Sn **Sn 17 35 45.1 -1.4**
comp=N,0.2nm,0.3s,baz=105,slow=19,SNR=2.4
KBA Koelnbreinsper 10.10 331 *e*Sn **Sn 17 36 03.6 -4.0**
comp=N,0.7nm,0.3s
VYHS Vyhne 10.15 354 *e*SN **Sn 17 36 04.7 -3.9**
BRTR Keskin Array B 10.37 79 Pn **Pn 17 34 17.6 -0.8**
comp=N,0.0nm,0.3s,baz=273,slow=12,SNR=2.4
MOA Molln 10.45 337 *e*Pn **Pn 17 34 20.2 +0.9**
comp=N,1.3nm,0.4s
MOA *e*Sn **Sn 17 36 12.2 -3.7**
comp=N,1.0nm,0.3s
MOA Molln 10.45 337 Pn **Pn 17 34 20.2 +0.9**
comp=N,1.3nm,0.4s
GERES GERESS Array B 11.51 337 Pn **Pn 17 34 33.2 -0.7**
comp=N,0.1nm,0.3s,baz=155,slow=15,SNR=3.3
KHC Kasperske Hory 11.80 338 *e*PN **Pn 17 34 39.5 +1.7**
KHC *e*SN **Sn 17 36 44.1 -4.9**
KHC Kasperske Hory 11.80 338 Pn **Pn 17 34 39.5 +1.7**
KVAR Kislovodsk Arr 17.64 65 LR LR 17 45 12.7
comp=N,27nm,18.5s,baz=62,slow=46
ESDC Sonseca Array 18.97 281 P **P 17 36 11.1 +0.3**
comp=N,0.1nm,0.3s,baz=77,slow=11,SNR=3.7
HFS Hagfors 22.16 351 P **P 17 36 44.9 -0.2**
comp=N,1.6nm,0.5s,baz=138,slow=11,SNR=8.5
EKA Eskdalemuir Ar 23.19 325 P **P 17 36 56.7 +0.6**
comp=N,1.4nm,0.8s,baz=122,slow=10,SNR=3.1
FINES FINESS Array B 23.33 7 P **P 17 36 56.4 -0.9**
comp=N,2.5nm,0.6s,baz=173,slow=11,SNR=12
NOA NORSAR Array B 23.38 349 P **P 17 36 58.5 +0.6**
comp=N,0.9nm,0.5s,baz=162,slow=11,SNR=3.4
NOA LR LR 17 46 07.6
comp=N,14nm,19.1s,baz=160,slow=37
GEYT Alibeck 29.51 79 P **P 17 37 54.9 +1.1**
comp=N,32nm,0.4s,baz=282,slow=7.2,SNR=6.5
TORD Torodi Ar. Bea 30.16 218 P **P 17 37 59.3 -0.3**
comp=N,0.4nm,0.6s,baz=29,slow=10,SNR=3.4
ARCES ARCESS Array B 31.31 3 P **P 17 38 09.0 -0.3**
comp=N,1.0nm,0.7s,baz=187,slow=11,SNR=5.0
BVAR Borovoye Array 37.03 50 P **P 17 39 00.6 +1.5**
comp=N,0.3nm,0.4s,baz=264,slow=8.3,SNR=2.7
SPITS Spitsbergen Ar 39.92 359 P **P 17 39 24.0 +1.1**
comp=N,0.5nm,0.5s,baz=159,slow=9.1,SNR=5.5
KURBB Kurchatov Arra 42.16 54 P **P 17 39 41.0 -0.7**
comp=N,0.3nm,0.5s,baz=284,slow=9.3,SNR=3.6
KURBB PcP **PcP 17 41 35.9 +0.1**
comp=N,0.2nm,0.6s,baz=273,slow=4.3,SNR=3.0
MKAR Makanchi Array 45.25 59 P **P 17 40 06.5 -0.2**
comp=N,0.7nm,0.5s,baz=284,slow=6.9,SNR=14
MKAR PcP **PcP 17 41 45.6 -0.8**
comp=N,0.2nm,0.6s,baz=294,slow=5.9,SNR=2.3
MKAR LR LR 18 01 44.9
comp=N,16nm,19.1s,baz=192,slow=40
ZALV Zalesovo Beam 45.60 48 P **P 17 40 09.3 0.0**
comp=N,3.0nm,0.4s,baz=271,slow=8.7,SNR=13
SONM Songino Array 60.38 51 P **P 17 41 57.5 -1.1**
comp=N,0.3nm,0.5s,baz=286,slow=5.2,SNR=3.3
WRA Warramunga Arr 120.63 92 PKP **PKPdf 17 50 40.4 -1.1**
comp=N,0.2nm,0.7s,baz=325,slow=2.0,SNR=2.8
ASAR Alice Springs 122.28 96 PKP **PKPdf 17 50 44.6 -0.1**
comp=N,0.3nm,0.9s,baz=297,slow=1.9,SNR=3.0

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*CSEM **02** 17:33:42.2, 36°.87N×28°.96E, h10km, ML2.0*
ISK 02 17:33:42.3, 36°.87N×28°.96E, h10km, ML2.0/6, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DALY	**Dalyan (Mu¨la**	**0.25**	**258**	PG	Pg	17 33 47.8	+0.4
DALY				SG	Sg	17 33 52.4	+1.6
DALY	**Dalyan (Mu¨la**	**0.25**	**258**	*e*Pg	Pg	17 33 47.8	+0.4
DALY				*e*Sg	Sg	17 33 52.4	+1.6
FETY	**Fethiye**	**0.25**	**157**	PG	Pg	17 33 47.4	-0.1
FETY				SG	Sg	17 33 52.2	+1.3
FETY	**Fethiye**	**0.25**	**157**	*e*Pg	Pg	17 33 47.4	-0.1
FETY				*e*Sg	Sg	17 33 52.2	+1.3
TURN	**Turunc**	**0.28**	**271**	PG	Pn	17 33 53.9	+1.3
TURN				SG	Sb	17 34 02.2	+7.8
TURN	**Turunc**	**0.28**	**271**	*e*Pg	Pn	17 33 53.9	+1.3
TURN				*e*Sg	Sb	17 34 02.2	+7.8
YER	**Yerkesik**	**0.60**	**296**	PG	Pg	17 33 54.3	+0.3
YER	**Yerkesik**	**0.60**	**296**	*e*Pg	Pg	17 33 54.3	+0.3
ELL	**Elmali**	**0.77**	**99**	PG	Pb	17 33 57.6	-0.3
ELL	**Elmali**	**0.77**	**99**	*e*Pg	Pb	17 33 57.6	-0.3
KORT	**Korkueli**	**1.12**	**83**	PN	Pn	17 34 04.6	+0.4
KORT	**Korkueli**	**1.12**	**83**	*e*Pn	Pn	17 34 04.6	+0.4
AYDB	**Zeytinkoy-Aydi**	**1.37**	**322**	PN	Pb	17 34 08.0	-0.1
AYDB	**Zeytinkoy-Aydi**	**1.37**	**322**	*e*Pn	Pb	17 34 08.0	-0.1

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*BJI **02** 18:16:55.3, 5°.86S×141°.67E, h38km, mb4.7/36, mB5.0/23, Ms4.4/6, Ms7 4.1/3*
*MOS **02** 18:16:57.2±1.1, 5°.62S×141°.29E, h38km, mb4.9/21, Error ellipse: s-maj=10.8km s-min=6.2km az=108.3*
*ISCJB **02** 18:16:57.8±0.7, 5°.73S±0°.03×141°.33E±0°.04, h47km±6km, mb4.7/70, MS3.6/17, Error ellipse: s-maj=6.0km s-min=4.5km az=10.1*
*IDC **02** 18:16:58.5±3.2, 5°.60S×141°.34E, h33km±24km, mb4.4/22, mb1 4.4/31, mb1mx4.3/53, mbtmp4.5/31, ML4.4/5, MS3.6/25, Ms1 3.6/25, ms1mx3.5/49, Error ellipse: s-maj=15.1km s-min=10.5km az=76.0*
*NEIC **02** 18:16:59.5±0.6, 5°.61S×141°.34E, h46km±6km, mb4.9/36, Error ellipse: s-maj=5.4km s-min=5.0km az=101.0*
NEIC Felt at Kiunga.
*DJA **02** 18:17:04.3±0.4, 6°S±3°×14°E±°, h45km±10km, M4.8/8, mb4.9/8, mB5.3/4, MLv4.9/1, Mw(mB)4.7/4*
ISC 02 18:16:59.9±0.8, 5°.80S±0°.04×141°.26E±0°.04, h50km±7km, n209, σ1°83/215, mb4.8/69, MS3.6/17, 9C-1D, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**3.31**	**350**	Pn	**Pn**	**18 17 47.5**	**-1.9**
	25nm,0.3s,baz=187,slow=10,SNR=153						
JAY				Lg	Lg	18 18 27.3	
	43nm,0.3s,baz=258,slow=19,SNR=11						
JAY				LR	LR	18 18 53.5	
	comp=Z,722nm,18.3s,baz=144,slow=37						
JAY	**Jayapura**	**3.31**	**350**	P	**Pn**	**18 17 50.2**	**+0.9**
JAY				S	**Sn**	**18 18 25.7**	**-1.8**
GENI	**Genyem**	**3.37**	**341**	P	**Pn**	**18 17 50.5**	**+0.4**
SRPI	**Serui, Papua**	**6.35**	**308**	P	**Pn**	**18 18 31.6**	**+0.6**
PMG	**Port Moresby**	**6.86**	**122**	Pn	**Pn**	**18 18 37.5**	**-0.5**
	2.2nm,0.3s,baz=340,slow=9.6,SNR=12						
PMG				Sn	**Sn**	**18 19 49.3**	**-5.5**
	2.7nm,0.3s,baz=352,slow=9.8,SNR=3.6						
PMG				LR	LR	18 21 57.6	
	comp=Z,266nm,20.3s,baz=294,slow=43						
PMG	**Port Moresby**	**6.86**	**122**	*e*Pn	**Pn**	**18 18 38.0**	**0.0**
PMG				*e*Sn	Sn	18 19 44.0	-11
PMG				*e*		18 19 49.3	
PMG	**Port Moresby**	**6.86**	**122**	*ce*P	**Pn**	**18 18 37.7**	**-0.3**
PMG				pmax	pmax		
	comp=Z,180nm,1.0s						
BAKI	**Biak**	**6.88**	**312**	P	**Pn**	**18 18 37.9**	**-0.4**
MANU	**Manus Island**	**7.15**	**59**	*e*Pn	Pn	18 18 37.4	-4.6
COEN	**Coen**	**8.32**	**167**	*e*Pn	Pn	18 19 01.3	+3.2
FAKI	**Fak Fak**	**9.43**	**287**	P	**Pn**	**18 19 14.0**	**+0.8**
FAKI	**Fak Fak**	**9.43**	**287**	*e*Pn	**Pn**	**18 19 13.1**	**-0.1**
RABL	**Rabaul**	**10.98**	**82**	*e*Pn	**Pn**	**18 19 33.4**	**-1.2**
SIJI	**Sorong**	**11.11**	**296**	Pn	**Pn**	**18 19 35.2**	**-1.0**
	comp=Z,5.3nm,0.3s,baz=60,slow=14,SNR=23						
SIJI				Sn	**Sn**	**18 21 36.4**	**-2.7**
	comp=Z,0.6nm,0.3s,baz=183,slow=14,SNR=3.7						
SIJI				LR	LR	18 24 53.0	
	comp=Z,610nm,18.6s,baz=211,slow=43						
MTN	**Manton Dam**	**12.19**	**234**	*e*Pn	**Pn**	**18 19 52.2**	**+1.2**
LBMI	**Labuha**	**14.66**	**290**	P	P	18 20 43.3	+14
CTA	**Charters Tower**	**15.01**	**162**	Pn	**Pn**	**18 20 31.9**	**+2.8**
	comp=Z,0.1nm,0.3s,baz=354,slow=10,SNR=2.2						
CTA				Lg	Lg	18 24 55.1	
	comp=Z,0.4nm,0.3s,baz=45,slow=20,SNR=3.0						
CTAO	**Charters Tower**	**15.01**	**162**	*e*Pn	**Pn**	**18 20 31.9**	**+2.8**
	comp=Z,16nm,1.0s						
CTAO	**Charters Tower**	**15.01**	**162**	*e*P	**Pn**	**18 20 31.9**	**+2.8**
CTAO				pmax	pmax		
	comp=Z,15nm,1.0s						
WRAB	**Tennant Creek**	**15.57**	**205**	*e*Pn	**Pn**	**18 20 36.2**	**-0.1**
	comp=Z,44nm,0.8s						
WRAB	**Tennant Creek**	**15.57**	**205**	*ce*P	**Pn**	**18 20 36.0**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,9.0nm,1.0s						
WB2	**Warramunga Arr**	**15.58**	**205**	*e*Pn	**Pn**	**18 20 35.1**	**-1.3**
WR1	**Warramunga Arr**	**15.58**	**205**	*e*Pn	**Pn**	**18 20 36.8**	**+0.3**
	comp=Z,98nm,1.4s						
WR1				*e*Sn	**Sn**	**18 23 26.7**	**-1.5**
WR1				*e*		18 25 21.2	
WRA	**Warramunga Arr**	**15.58**	**205**	Pn	**Pn**	**18 20 36.8**	**+0.3**
	comp=Z,0.9nm,0.3s,baz=23,slow=13,SNR=57						
WRA				Sn	**Sn**	**18 23 26.7**	**-1.5**
	comp=Z,2.0nm,0.3s,baz=38,slow=22,SNR=6.1						
WRA				Lg	Lg	18 25 21.2	
	comp=Z,0.5nm,0.3s,baz=29,slow=25,SNR=3.4						
WRA				LR	LR	18 27 22.9	
	comp=Z,436nm,21.2s,baz=20,slow=40						
WRA	**Warramunga Arr**	**15.58**	**205**	*i* P	**Pn**	**18 20 36.0**	**-0.5**
WRA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SOEI	**Soe**	**17.28**	**256**	P	**Pn**	**18 20 58.2**	**+0.2**
SOEI	**Soe**	**17.28**	**256**	*e*Pn	**Pn**	**18 20 58.6**	**+0.5**
	comp=Z,96nm,1.0s						
BATI	**Baumata**	**17.96**	**255**	P	**P**	**18 21 05.6**	**-0.7**
	baz=143,slow=10,SNR=2.0						
BATI				S	**Sn**	**18 24 22.8**	**-3.1**
	comp=Z,4.1nm,0.3s,baz=131,slow=20,SNR=4.8						
BATI				LR	LR	18 28 05.7	
	comp=Z,212nm,18.6s,baz=96,slow=37						
HNR	**Honiara**	**18.87**	**102**	P	**P**	**18 21 17.0**	**+0.7**
HNR	**Honiara**	**18.87**	**102**	P	**Pn**	**18 21 17.8**	**+0.5**
	comp=Z,5.4nm,0.3s,baz=217,slow=1.9,SNR=11						
HNR				LR	LR	18 29 09.2	
	comp=Z,98nm,19.3s,baz=239,slow=39						
HNR	**Honiara**	**18.87**	**102**	*e*P	**P**	**18 21 17.5**	**+1.2**
	comp=Z,114nm,0.9s						
HNR	**Honiara**	**18.87**	**102**	*e*P	**P**	**18 21 17.5**	**+1.2**
HNR				pmax	pmax		
	comp=Z,114nm,0.9s						
MMRI	**Maumere**	**19.08**	**260**	P	**P**	**18 21 20.6**	**+2.1**
	comp=Z,94nm,0.9s						
MMRI	**Maumere**	**19.08**	**260**	*e*P	**P**	**18 21 20.6**	**+2.1**
	comp=Z,74nm,0.9s						
AS01	**Alice Springs**	**19.10**	**201**	*e*P	**Pn**	**18 21 22.6**	**+2.6**
AS31	**Alice Springs**	**19.12**	**201**	*e*P	**Pn**	**18 21 23.0**	**+2.7**
	comp=Z,14nm,0.9s						
AS31				*e*S	**S**	**18 24 45.5**	**-7.9**
ASAR	**Alice Springs**	**19.12**	**201**	P	**Pn**	**18 21 23.2**	**+3.0**
	comp=Z,2.0nm,0.3s,baz=30,slow=8.5,SNR=232						
ASAR				S	**S**	**18 24 46.8**	**-6.6**
	comp=Z,0.5nm,0.3s,baz=19,slow=26,SNR=4.6						
ASAR				Lg	Lg	18 27 12.5	
	baz=17,slow=29,SNR=3.3						
ASAR				LR	LR	18 29 14.5	
	comp=Z,499nm,18.2s,baz=24,slow=38						
FITZ	**Fitzroy Crossi**	**19.54**	**230**	P	**P**	**18 21 26.6**	**+3.0**
	comp=Z,1.3nm,0.3s,baz=51,slow=9.8,SNR=44						
FITZ				S	**S**	**18 24 54.8**	**-7.0**
	comp=Z,0.8nm,0.3s,baz=21,slow=23,SNR=5.8						
FITZ				Lg	Lg	18 27 26.7	
	comp=Z,0.7nm,0.3s,baz=319,slow=20,SNR=3.7						
FITZ				LR	LR	18 29 41.1	
	comp=Z,383nm,19.0s,baz=78,slow=39						
FITZ	**Fitzroy Crossi**	**19.54**	**230**	*e*P	**P**	**18 21 26.5**	**+3.0**
	comp=Z,28nm,0.6s						
FITZ				*e*S	**S**	**18 24 54.5**	**-7.3**
FITZ				Lg	Lg	18 27 26.7	
GUMO	**Guam**	**19.59**	**11**	LR	LR	18 28 09.7	
	comp=Z,79nm,21.3s,baz=200,slow=35						
EDFI	**Ende, Flores**	**19.63**	**260**	P	**P**	**18 21 26.0**	**+1.3**
MRSI	**Marisa**	**20.27**	**287**	P	Pn	18 21 42.6	+8.7
BASI	**Baing, Sumba**	**20.94**	**257**	P	**P**	**18 21 41.8**	**+3.0**
BKSI	**Bulukumba**	**21.04**	**270**	P	**P**	**18 21 42.3**	**+2.4**
	comp=Z,31nm,1.0s,comp=Z,298nm						
WSI	**Waingapu**	**21.12**	**258**	P	**P**	**18 21 44.0**	**+3.3**
MYLDM	**Lahad Datu**	**25.20**	**295**	*e*P	**P**	**18 22 20.8**	**-0.5**
	comp=Z,44nm,1.1s						
STKA	**Stephens Creek**	**25.94**	**179**	P	**P**	**18 22 28.9**	**+1.1**
	comp=Z,3.3nm,0.7s,baz=344,slow=8.3,SNR=5.8						
STKA				LR	LR	18 33 39.6	
	comp=Z,109nm,21.4s,baz=23,slow=38						
STKA	**Stephens Creek**	**25.94**	**179**	*e*P	**P**	**18 22 28.7**	**+0.9**
	comp=Z,5.7nm,1.8s						
STKA	**Stephens Creek**	**25.94**	**179**	*e*P	**P**	**18 22 28.7**	**+0.9**
STKA				pmax	pmax		
	comp=Z,6.0nm,1.8s						
DZM	**Mont Dzumac**	**29.23**	**126**	LR	LR	18 34 44.1	
	comp=Z,202nm,19.2s,baz=5.0,slow=36						
LEM	**Lembang**	**33.45**	**266**	P	**P**	**18 23 35.0**	**+0.3**
	comp=Z,21nm,0.8s,baz=163,slow=19,SNR=5.0						
JOW	**Kunigami**	**34.79**	**339**	LR	LR	18 34 43.7	
	comp=Z,125nm,21.4s,baz=104,slow=31						
JHJ	**Hachijo jima 2**	**38.73**	**358**	LR	LR	18 36 58.5	
	comp=Z,142nm,20.9s,baz=319,slow=31						
JNU	**Nakatsue**	**39.94**	**346**	LR	LR	18 38 10.2	
	comp=Z,61nm,21.9s,baz=124,slow=32						
JNU	**Nakatsue**	**39.94**	**346**	*e*P	**P**	**18 24 27.1**	**-2.4**
	comp=Z,52nm,1.6s						
MJAR	**Matsushiro Arr**	**42.22**	**356**	LR	LR	18 42 08.3	
	comp=Z,41nm,18.3s,baz=180,slow=36						
PSI	**Prapat**	**43.13**	**280**	P	**P**	**18 24 56.0**	**-0.2**
	comp=Z,9.1nm,0.9s,baz=180,slow=5.3,SNR=6.3						
PSI	**Prapat**	**43.13**	**280**	*e*P	**P**	**18 24 56.0**	**-0.2**
	comp=Z,19nm,1.1s						
PSI	**Prapat**	**43.13**	**280**	*e*P	**P**	**18 24 56.0**	**-0.2**
PSI				pmax	pmax		
	comp=Z,19nm,1.1s						
NJ2	**Nanjing**	**43.27**	**332**	*e*P	**P**	**18 24 56.3**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
KSAR	**Wonju Array Be**	**44.79**	**345**	P	**P**	**18 25 07.0**	**-1.9**
KSAR				PcP	**PcP**	**18 26 51.0**	**+0.7**
KSAR	**Wonju Array Be**	**44.79**	**345**	P	**P**	**18 25 07.0**	**-1.9**
KSAR						18 26 51.0	
KSRS	**Korea Array**	**44.79**	**345**	P	**P**	**18 25 07.0**	**-1.9**
	comp=Z,1.3nm,0.8s,baz=165,slow=8.3,SNR=7.3						
KSRS				PcP	**PcP**	**18 26 51.0**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=172,slow=2.5,SNR=4.7						
KSRS				LR	LR	18 40 58.7	
	comp=Z,56nm,20.4s,baz=154,slow=32						
KS01	**Wonju Array Si**	**44.82**	**345**	*e*P	**P**	**18 25 06.5**	**-2.7**
KS01				*e*PcP	**PcP**	**18 26 50.6**	**+0.2**
RPZ	**Rata Peaks**	**45.96**	**150**	P	**P**	**18 25 18.7**	**+0.6**
	comp=Z,14nm,0.8s,baz=324,slow=3.8,SNR=4.4						
CM01	**Chiang Mai Arr**	**48.15**	**301**	*e*P	**P**	**18 25 35.5**	**-0.1**
CM01				*e*PcP	**PcP**	**18 27 04.5**	**+1.9**
CM31	**Chiang Mai Arr**	**48.18**	**301**	*e*P	**P**	**18 25 35.5**	**-0.3**
CM31				*e*PcP	**PcP**	**18 27 04.1**	**+1.5**
CMAR	**Chiang Mai Arr**	**48.18**	**301**	P	**P**	**18 25 36.3**	**+0.5**
	comp=Z,3.6nm,0.7s,baz=118,slow=6.1,SNR=29						
CMAR				PcP	**PcP**	**18 27 04.3**	**+1.6**
	comp=Z,1.1nm,0.9s,baz=134,slow=2.6,SNR=3.8						
CMAR				LR	LR	18 45 09.0	
	comp=Z,33nm,21.9s,baz=174,slow=35						
CHTO	**Chiang Mai**	**48.34**	**301**	*e*P	**P**	**18 25 37.1**	**+0.1**
	comp=Z,4.0nm,0.8s						
CHTO	**Chiang Mai**	**48.34**	**301**	*e*P	**P**	**18 25 37.1**	**+0.1**
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KMI	**Kunming**	**48.45**	**311**	P	**P**	**18 25 39.4**	**+1.4**
KMI				pP	pP	18 25 47.3	-4.2
KMI				sP	sP	18 25 54.6	-2.6
KMI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KMI				pmax	pmax		
	comp=Z,53nm,5.7s						
MSHR	**Mys Shultsa**	**49.02**	**350**	*e*P	**P**	**18 25 40.9**	**-0.9**
ASAJ	**Asahikawa**	**49.70**	**1**	LR	LR	18 43 42.6	
	comp=Z,46nm,21.4s,baz=160,slow=32						
USRK	**Ussuriysk Ar.**	**50.47**	**351**	P	**P**	**18 25 50.1**	**-2.7**
	comp=Z,2.5nm,1.0s,baz=159,slow=8.5,SNR=6.3						
CD2	**Chengdu**	**51.16**	**318**	P	**P**	**18 25 57.8**	**-0.6**
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
CN2	**Changchun**	**51.40**	**345**	*e*P	**P**	**18 25 59.0**	**-0.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC	**Hu-ho-hao-te**	**53.83**	**332**	*e*P	**P**	**18 26 20.4**	**+2.4**
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,52nm,6.9s						
LZH	**Lanzhou**	**54.46**	**323**	*e*P	**P**	**18 26 24.2**	**+1.4**
LZH				pP	pP	18 26 34.6	-1.8
LZH				sP	sP	18 26 40.4	-1.7
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
LZH				pmax	pmax		
	comp=Z,110nm,4.2s						
KLR	**Kul'dur**	**55.43**	**352**	*i* P	**P**	**18 26 28.2**	**-1.1**
GTA	**Gaotai**	**59.05**	**323**	P	**P**	**18 26 56.3**	**+1.1**
GTA				pP	pP	18 27 07.6	-1.4
GTA				sP	sP	18 27 12.7	-2.0
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
LSA	**Lhasa**	**59.62**	**309**	*e*P	**P**	**18 27 00.8**	**+1.0**
	comp=Z,7.7nm,1.1s						
LSA	**Lhasa**	**59.62**	**309**	*e*P	**P**	**18 27 00.8**	**+1.0**
LSA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
PETK	**Petropavlovsk-**	**60.32**	**11**	P	**P**	**18 27 02.6**	**-0.9**
	comp=Z,8.2nm,1.0s,baz=162,slow=5.6,SNR=7.9						
PETK	**Petropavlovsk-**	**60.32**	**11**	*e*P	**P**	**18 27 02.5**	**-1.0**
PETK				*e*PcP	**PcP**	**18 27 46.6**	**-1.7**
PETK	**Petropavlovsk-**	**60.32**	**11**	*e*P	**P**	**18 27 02.5**	**-1.0**
PETK				*e*		18 27 46.6	
PEA1	**Petropavlovsk-**	**60.32**	**11**	*e*P	**P**	**18 27 02.6**	**-0.9**
ZEA	**Zeya**	**60.48**	**350**	*e*P	**P**	**18 27 04.0**	**-0.6**
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
ULN	**Ulaanbaatar**	**61.33**	**334**	*e*P	**P**	**18 27 09.9**	**-0.7**
	comp=Z,4.6nm,0.9s						
ULN	**Ulaanbaatar**	**61.33**	**334**	*ce*P	**P**	**18 27 09.5**	**-1.2**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SONA0	**Songino Array**	**61.59**	**334**	*e*P	**P**	**18 27 12.8**	**+0.4**
SONM	**Songino Array**	**61.59**	**334**	P	**P**	**18 27 12.8**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=145,slow=5.3,SNR=7.4						
SONM				LR	LR	18 52 31.7	
	comp=Z,41nm,21.8s,baz=146,slow=35						
SONA1	**Songino Array**	**61.59**	**334**	*e*P	**P**	**18 27 12.4**	**0.0**
JIRN	**Jiri**	**62.68**	**305**	*e*P	**P**	**18 27 21.4**	**+1.0**
GUN	**Gumba**	**63.03**	**305**	*e*P	**P**	**18 27 23.8**	**+1.1**
	comp=Z,27nm,0.9s						
KKN	**Kakani**	**63.47**	**305**	*e*P	**P**	**18 27 26.5**	**+1.0**
	comp=Z,25nm,0.9s						
DMN	**Daman**	**63.54**	**305**	*e*P	**P**	**18 27 27.1**	**+1.1**
	comp=Z,34nm,1.0s						
GKN	**Gorkha**	**64.08**	**305**	*e*P	**P**	**18 27 30.6**	**+1.2**
	comp=Z,35nm,0.9s						
KOLN	**Koldanda**	**64.84**	**304**	*e*P	**P**	**18 27 35.6**	**+1.1**
	comp=Z,30nm,0.9s						
ZAK	**Zakamensk**	**64.85**	**334**	*e*P	**P**	**18 27 33.4**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
DANN	**Dangsing**	**64.93**	**305**	*e*P	**P**	**18 27 35.9**	**+0.8**
	comp=Z,26nm,0.9s						
PYUN	**Piuthan**	**65.46**	**304**	*e*P	**P**	**18 27 39.5**	**+1.0**
	comp=Z,62nm,0.9s						
MA2	**Magadan**	**65.61**	**5**	P	**P**	**18 27 37.8**	**-0.7**
	comp=Z,3.3nm,0.2s,baz=174,slow=12,SNR=4.1						
MA2				LR	LR	18 54 48.5	
	comp=Z,24nm,18.5s,baz=148,slow=35						
MA2	**Magadan**	**65.61**	**5**	*e*P	**P**	**18 27 37.1**	**-1.4**
MA2				pmax	pmax		
	comp=Z,8.0nm,1.3s						
TLY	**Talaya**	**65.66**	**335**	LR	LR	18 56 09.6	
	comp=Z,46nm,19.3s,baz=134,slow=36						
TLY	**Talaya**	**65.66**	**335**	*e*P	**P**	**18 27 37.9**	**-1.1**
TLY				pmax	pmax		
	comp=Z,6.0nm,2.5s						
YAK	**Yakutsk**	**68.22**	**354**	*i* P	**P**	**18 27 54.6**	**-0.4**
YAK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
WMQ	**Urumqi**	**68.99**	**321**	P	**P**	**18 28 01.8**	**+1.4**
WMQ				pP	pP	18 28 13.7	-0.7
WMQ				pmax	pmax		
	comp=Z,26nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,180nm,5.1s						
SEY	**Seymchan**	**69.06**	**5**	P	**P**	**18 27 59.6**	**-0.6**
	comp=Z,1.8nm,1.0s,baz=271,slow=2.6,SNR=5.5						
VNDA	**Vanda**	**72.51**	**175**	P	**P**	**18 28 23.1**	**+2.1**
	comp=Z,3.4nm,0.6s,baz=322,slow=7.1,SNR=21						
VNDA				LR	LR	18 59 53.4	
	comp=Z,66nm,18.2s,baz=344,slow=35						
VNDA	**Vanda**	**72.51**	**175**	*e*P	**P**	**18 28 22.4**	**+1.3**
VNDA	**Vanda**	**72.51**	**175**	*e*P	**P**	**18 28 22.4**	**+1.3**
MK01	**Makanchi Array**	**73.77**	**322**	*e*P	**P**	**18 28 29.2**	**+0.2**
MK31	**Makanchi Array**	**73.77**	**322**	*e*P	**P**	**18 28 29.1**	**0.0**
MK31	**Makanchi Array**	**73.77**	**322**	*e*P	**P**	**18 28 29.1**	**0.0**
MK32	**Makanchi Array**	**73.77**	**322**	*e*P	**P**	**18 28 29.9**	**+0.8**
MKAR	**Makanchi Array**	**73.77**	**322**	P	**P**	**18 28 29.9**	**+0.8**
	comp=Z,7.7nm,0.8s,baz=108,slow=7.8,SNR=60						
MKAR	**Makanchi Array**	**73.77**	**322**	*e*P	**P**	**18 28 29.6**	**+0.5**
	comp=Z,43nm,0.9s						
MKAR	**Makanchi Array**	**73.77**	**322**	*i* P	**P**	**18 28 29.8**	**+0.7**
MKAR

comp=Z,2.0nm,1.0s
MNAS Manas 78.51 315 P **P 18 28 57.6 +1.3**
MNAS pmax pmax
comp=Z,8.0nm,1.2s
MAW Mawson 80.24 202 P **P 18 29 06.5 +1.5**
comp=Z,3.6nm,0.8s,baz=340,slow=12,SNR=5.8
MAW Mawson 80.24 202 *eP* **P 18 29 06.4 +1.4**
comp=Z,1.0nm,0.9s
MAW Mawson 80.24 202 *eP* **P 18 29 06.4 +1.4**
MAW pmax pmax
comp=Z,1.0nm,0.9s
OTUK Ortayu 80.53 321 P **P 18 29 07.7 +0.7**
OTUK pmax pmax
comp=Z,8.0nm,0.8s
BVAR Borovoye Array 83.28 325 P **P 18 29 21.4 +0.1**
comp=Z,10.0nm,0.8s,baz=111,slow=6.3,SNR=43
BRVK Borovoye 83.36 325 *eP* **P 18 29 21.5 -0.1**
comp=Z,14nm,0.9s
BRVK Borovoye 83.36 325 *ceP* **P 18 29 21.7 0.0**
BRVK pmax pmax
comp=Z,18nm,1.0s
QSPA South Pole Qui 84.17 180 P **P 18 29 26.8 +1.0**
comp=Z,10nm,0.8s,baz=340,slow=2.2,SNR=33
QSPA South Pole Qui 84.17 180 *eP* **P 18 29 26.7 +1.0**
comp=Z,10nm,0.8s
CAST Castle Rocks 84.97 24 *eP* **P 18 29 27.9 -1.8**
comp=Z,4.6nm,0.7s
IM3 Indian Mountai 85.38 22 *eP* **P 18 29 30.7 -1.0**
MLY Manley 86.14 23 *eP* **P 18 29 34.4 -1.2**
comp=Z,3.4nm,0.7s
RND Reindeer 86.31 25 *eP* **P 18 29 34.7 -1.7**
comp=Z,16nm,0.8s
RND Reindeer 86.31 25 *eP* **P 18 29 34.7 -1.7**
RND pmax pmax
comp=Z,17nm,0.8s
MCK McKinley 86.39 25 *eP* **P 18 29 35.1 -1.6**
comp=Z,11nm,0.8s
MCK McKinley 86.39 25 *eP* **P 18 29 35.1 -1.6**
MCK pmax pmax
comp=Z,11nm,0.8s
DHY Denali Highway 86.83 26 *eP* **P 18 29 37.7 -1.4**
comp=Z,10.0nm,0.8s
DIV Divide 86.93 28 *eP* **P 18 29 38.3 -1.2**
comp=Z,6.6nm,0.9s
WRH Wood River Hil 87.00 24 *eP* **P 18 29 37.4 -2.2**
comp=Z,5.6nm,0.8s
CCB Clear Creek Bu 87.17 24 *eP* **P 18 29 38.0 -2.5**
comp=Z,7.7nm,0.7s
COLD Coldfoot 87.18 21 *eP* **P 18 29 40.8 +0.3**
comp=Z,3.3nm,0.7s
COLA College 87.23 24 *eP* **P 18 29 39.2 -1.5**
COLA pmax pmax
comp=Z,4.0nm,0.9s
IL1 Eielson Array 87.59 24 *eP* **P 18 29 39.6 -2.9**
ILAR Eielson Array 87.59 24 P **P 18 29 40.3 -2.2**
comp=Z,2.4nm,0.8s,baz=259,slow=5.2,SNR=24
ILAR LR LR 19 08 14.7
comp=Z,38nm,19.6s,baz=236,slow=35
ILB Eielson Array 87.59 24 *eP* **P 18 29 40.3 -2.2**
RIDG Independ'e Rid 88.12 25 *eP* **P 18 29 43.5 -1.6**
comp=Z,9.0nm,1.1s
GEYT Alibeck 88.14 308 P **P 18 29 45.9 +0.2**
comp=Z,44nm,0.5s,baz=132,slow=2.2,SNR=5.1
DOT Dot Lake 88.43 26 *eP* **P 18 29 45.4 -1.2**
comp=Z,14nm,0.8s
ABKAR Akbulak array 88.70 320 *eP* **P 18 29 47.1 -1.1**
SYO Syowa Base 88.79 201‖ *eP* **P 18 29 45.2 -2.9**
EGAK Eagle 89.95 25 *eP* **P 18 29 52.8 -0.8**
comp=Z,6.1nm,0.9s
AKTO Aktyubinsk 90.13 321 P **P 18 29 53.2 -1.6**
comp=Z,1.4nm,0.8s,baz=76,slow=6.3,SNR=4.6
DAWY Dawson 90.53 26 *eP* **P 18 29 56.2 -0.2**
comp=Z,5.3nm,0.8s
ARU Arti 90.76 327 *eP* **P 18 29 56.3 -1.3**
comp=Z,8.9nm,1.1s
ARU Arti 90.76 327 *ciP* **P 18 29 55.7 -1.8**
ARU 18 33 31.3
ARU PPP PPP 18 35 27.7
ARU S **SKSac 18 40 24.3 -0.8**
ARU SP **SP 18 41 57.6 +0.4**
ARU SS **SS 18 46 49.3 -3.8**
ARU pmax pmax
comp=Z,8.0nm,1.0s
OPO Ambohidratompo 92.02 251 P **P 18 30 04.5 0.0**
comp=Z,2.8nm,0.9s,baz=76,slow=14,SNR=2.9
YBH Yreka Blue Hor 98.33 49 LR LR 19 05 46.8
comp=Z,44nm,21.9s,baz=301,slow=30
GNI Garni 98.69 310 *eP* **P 18 30 32.4 -2.0**
GNI pmax pmax
comp=Z,12nm,1.1s
ALCT Alcott Element 98.77 43 *eP* P 18 30 30.2 -4.2
GSM Grass Mountain 98.95 43 *eP* **P 18 30 36.0 +0.6**
GSM Grass Mountain 98.95 43 *eP* **P 18 30 36.0 +0.6**
SNAA Sanae 99.19 191 P **Pdif 18 30 37.5 +1.6**
comp=Z,1.7nm,1.0s,baz=87,slow=7.1,SNR=3.5
SNAA Sanae 99.19 191 *eP* **Pdif 18 30 37.3 +1.4**
comp=Z,11nm,1.7s
SNAA Sanae 99.19 191 *eP* **Pdif 18 30 37.3 +1.4**
SNAA pmax pmax
comp=Z,11nm,1.7s
GERES GERESS Array B 118.42 323 PKP **PKPdf 18 35 42.6 +0.3**
comp=Z,0.3nm,0.6s,baz=350,slow=5.0,SNR=2.8
KVTX Kingsville 119.95 62 *e*PKPdf **PKPdf 18 35 44.4 -1.3**
V40A Witts Springs 122.20 51 *e*PKPdf **PKPdf 18 35 49.5 -0.4**
TORD Torodi Ar. Bea 139.50 283 PKhKP PKPpre 18 36 11.9
comp=Z,0.6nm,0.6s,baz=73,slow=2.5,SNR=4.2
TOA1 Torodi Ar. Sit 139.50 283 *e*PKPpre PKPpre 18 36 11.9
CPUP Villa Florida 143.32 151 PKP PKPbc 18 36 29.1 +2.4
comp=Z,3.7nm,1.1s,baz=270,slow=1.0,SNR=3.4
LPAZ La Paz 143.57 127 PKP PKPbc 18 36 29.8 +1.3
comp=Z,1.7nm,0.7s,baz=271,slow=4.2,SNR=9.9
LPAZ La Paz 143.57 127 *e*PKPdf PKPbc 18 36 30.5 +2.0
LPAZ La Paz 143.57 127 *e*PKIKP PKPbc 18 36 30.5 +2.0
ROSC El Rosal 144.57 90 PKP PKPbc 18 36 32.5 +1.2
comp=Z,16nm,0.6s,baz=121,slow=7.8,SNR=7.7
ROSC El Rosal 144.57 90 *e*PKPdf **PKPab 18 36 32.1 +1.0**
KOWA Kowa 144.79 287 PKP **PKPab 18 36 32.5 +1.1**
comp=Z,15nm,0.6s,baz=70,slow=5.4,SNR=41
KOWA Kowa 144.79 287 *e*PKPdf **PKPab 18 36 32.3 +0.9**
KOWA *e*PKPdf PKPbc 18 36 32.5 +1.0
RUSC La Rusia 145.84 88 *e*PKPdf **PKPdf 18 36 34.5 -0.4**
KIC Kosan Boka 146.19 273 *e*PKP1 **PKPbc 18 36 37.0 +1.0**
comp=Z,20nm,1.0s
DBIC Dimbokro 146.31 273 PKPbc **PKPbc 18 36 37.6 +1.3**
comp=Z,10.0nm,0.8s,baz=120,slow=1.3,SNR=9.3
DBIC Dimbokro 146.31 273 *e*PKPdf **PKPdf 18 36 36.5 +1.4**
DBIC Dimbokro 146.31 273 *e*PKP2 **PKPdf 18 36 36.5 +1.4**
TIC Toumodi 146.47 273 *e*PKP1 **PKPbc 18 36 37.6 +0.8**
LIC Lamto 146.47 273 *e*PKP1 **PKPbc 18 36 37.6 +0.8**
comp=Z,48nm,1.3s
SDV Santo Domingo 148.23 83 PKPbc **PKPdf 18 36 41.0 +2.5**
comp=Z,13nm,0.7s,baz=308,slow=3.8,SNR=5.8
SIV San Ignacio 149.06 135 PKPbc **PKPbc 18 36 45.1 +1.4**
comp=Z,3.4nm,0.9s,baz=254,slow=2.4,SNR=15
SJG San Juan 150.58 63 PKPbc **PKPbc 18 36 46.8 -0.6**
comp=Z,12nm,0.6s,baz=78,slow=6.0,SNR=6.5
CBYP Canovanas 150.78 63 *e*PKPdf **PKPdf 18 36 40.2 -2.1**
CBYP *e*PKPbc **PKPbc 18 36 48.0 +0.1**
HUMP Col San Antoni 150.84 63 *e*PKPdf **PKPdf 18 36 41.5 -0.8**
HUMP *e*PKPbc **PKPbc 18 36 47.5 -0.4**
SAML Samuel 151.57 121 *e*PKPdf **PKPdf 18 36 42.5 -1.0**
SAML *e*PKPbc **PKPbc 18 36 49.8 0.0**
SAML Samuel 151.57 121 *e*PKIKP **PKPdf 18 36 42.6 -1.0**
SAML *e* 18 36 49.8

*IDC **02** 18:26:15.7±1.5, 17°.92N×120°.52E, h0km, mb3.1/4, mb1 3.4/4, mb1mx3.1/64, mbtmp3.2/4, MS3.3/1, Ms1 3.3/1, ms1mx2.5/20, Error ellipse: s-maj=41.2km s-min=26.9km az=69.0*
*ISCJB **02** 18:26:21.1±0.9, 18°.33N±0°.08×120°.32E±0°.08, h35km, mb3.2/2, MS3.1/1, Error ellipse: s-maj=12.5km s-min=8.4km az=40.2*
*MAN **02** 18:26:23.8, 18°.19N×120°.46E, h31km, mb4.6, ML3.5, MS3.4*
ISC 02 18:26:22.0±1.0, 18°.22N±0°.09×120°.36E±0°.09, h35km, n10, σ1§95/12, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABRA	**Dolores**	**0.66**	**149**	*eP*	**Pn**	**18 26 36.3**	**+1.4**
ABRA				*eS*	**Sn**	**18 26 45.9**	**+1.7**
APYP	**Conner**	**0.92**	**113**	*eP*	**Pn**	**18 26 38.7**	**+0.3**
APYP				*eS*	**Sn**	**18 26 50.0**	**-0.4**
CVP	**Callao Caves**	**1.49**	**110**	*eP*	**Pn**	**18 26 46.9**	**+0.7**
SGCP	**Mt. Cagua**	**1.61**	**89**	*eP*	**Pn**	**18 26 48.7**	**+0.8**
SGCP				*eS*	**Sn**	**18 27 08.2**	**+0.8**
CAUP	**Cauayan**	**1.89**	**132**	*eP*	**Pn**	**18 26 53.7**	**+1.9**
KSRS	**Korea Array**	**20.28**	**18**	P	**P**	**18 30 54.0**	**-0.5**
	0.6nm,0.6s,baz=203,slow=11,SNR=5.2						
CMAR	**Chiang Mai Arr**	**20.33**	**274**	P	**P**	**18 30 54.2**	**-1.1**
	0.3nm,0.5s,baz=84,slow=10,SNR=2.8						
USRK	**Ussuriysk Ar.**	**27.68**	**18**	LR	LR	18 44 31.9	
	comp=Z,55nm,19.9s,baz=150,slow=39						
ASAR	**Alice Springs**	**43.69**	**162**	P	**P**	**18 34 19.8**	**-3.9**
	0.3nm,0.5s,baz=340,slow=6.9,SNR=4.5						
KURBB	**Kurchatov Arra**	**46.31**	**324**	P	**P**	**18 34 46.9**	**+2.7**
	0.2nm,0.6s,baz=119,slow=8.8,SNR=2.9						

MEX 02 18:31:10.1±0.3, 17°.22N×99°.79W, h7km±10km, MD3.5, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.36**	**191**	*eP*	Pg	18 31 17.2	+0.1
ACX				*i* S	Sb	18 31 23.6	-1.0
CAIG	**El Cayaco**	**0.49**	**249**	*eP*	Pg	18 31 19.1	-0.4
CAIG				*eS*	Sg	18 31 26.4	+0.5
MEIG	**Mezcala**	**0.72**	**13**	*eP*	Pg	18 31 22.7	-1.3
MEIG				*eS*	Sg	18 31 32.4	-1.0
PLIG	**Platanillo**	**1.20**	**13**	*eP*	Pg	18 31 29.6	-3.5
PLIG				*i* S	Sg	18 31 43.7	-5.0
TLIG	**Tlapa**	**1.22**	**74**	*eP*	Pg	18 31 29.8	-3.7
TLIG				*eS*	Sg	18 31 45.3	-4.0

IDC 02 18:32:37.8±2.2, 8°.31N×124°.64E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.2/58, mbtmp3.4/4, Error ellipse: s-maj=150.0km s-min=24.4km az=67.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**26.25**	**178**	P	P	18 38 15.1	+0.3
	3.4nm,1.1s,baz=354,slow=10,SNR=2.5						
WRA	**Warramunga Arr**	**29.65**	**161**	P	P	18 38 44.9	-0.4
	0.4nm,0.9s,baz=340,slow=9.7,SNR=8.6						
ASAR	**Alice Springs**	**33.04**	**164**	P	P	18 39 15.3	+0.1
	0.1nm,0.5s,baz=339,slow=7.0,SNR=5.7						
MKAR	**Makanchi Array**	**52.64**	**324**	P	P	18 41 53.6	-0.1
	0.2nm,0.6s,baz=134,slow=6.2,SNR=2.9						

*NEIC **02** 18:35:23.6±0.0, 16°.99N×95°.51W, h132km, MD4.1(MEX), After MEX.*
MEX 02 18:35:24.8±0.5, 17°.02N×95°.48W, h114km±11km, MD4.1, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**1.20**	**273**	*eP*	Pn	18 35 47.4	-1.3
VHO				*eS*	Sn	18 36 04.9	-1.8
HUIG	**Huatulco**	**1.38**	**206**	*eSn*	Sn	18 36 08.6	-1.5
HUIG	**Huatulco**	**1.38**	**206**	*eP*	Pn	18 35 49.0	-1.6
HUIG				*eS*	Sn	18 36 08.6	-1.5
TGIG		**2.27**	**96**	*ePn*	Pn	18 36 00.4	-1.1
TGIG				*eSn*	Sn	18 36 28.0	-1.6
TGIG		**2.27**	**96**	*eP*	Pn	18 36 00.4	-1.1
TGIG				*i* S	Sn	18 36 28.0	-1.6
LVIG	**Laguna Verde**	**2.83**	**342**	*ePn*	Pn	18 36 05.2	-3.5
LVIG				*eSn*	Sn	18 36 31.8	-11
TLIG	**Tlapa**	**3.00**	**281**	*ePn*	Pn	18 36 08.9	-2.1
TLIG				*eSn*	Sn	18 36 38.5	-8.1
CCIG	**Comitan**	**3.29**	**102**	*ePn*	Pn	18 36 15.1	+0.2
CCIG				*eSn*	Sn	18 36 45.9	-7.7
MEIG	**Mezcala**	**4.05**	**283**	*eSn*	Sn	18 37 04.5	-7.2
MEIG	**Mezcala**	**4.05**	**283**	*eP*	Pn	18 36 21.2	-3.9
MEIG				*eS*	Sn	18 37 04.5	-7.2
CAIG	**El Cayaco**	**4.58**	**271**	*ePn*	Pn	18 36 27.4	-4.7
CAIG				*eSn*	Sn	18 37 16.3	-8.0
CAIG	**El Cayaco**	**4.58**	**271**	*eP*	Pn	18 36 27.4	-4.7
CAIG				*eS*	Sn	18 37 16.3	-8.0

KRSC 02 18:36:48.1±2.8, 54°.04N×168°.52E, h32km±43km, ML3.8, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**1.89**	**309**	*eP*	Pn	18 37 19.8	+1.8
BKI				*eS*	Sb	18 37 43.4	-1.5
KBTR	**Krutoberegovo**	**3.93**	**306**	P	Pn	18 37 50.3	+4.2
KBTR				S	Sn	18 38 35.9	+4.8
MKZ	**Mys Kozlova**	**4.01**	**280**	*eP*	Pn	18 37 51.8	+4.5
MKZ				*eS*	Sn	18 38 36.4	+3.3
TUMD	**Tumrok D**	**4.86**	**287**	S	Sn	18 38 58.7	+4.6
BZGR	**Bezymyannyi-Gr**	**4.89**	**296**	*eS*	Sn	18 39 01.8	+6.8
KZV	**Kizimen**	**4.91**	**286**	P	Pn	18 38 05.0	+5.3
KZV				S	Sn	18 38 58.1	+2.7
LGNR	**Loginova**	**4.94**	**298**	S	Sn	18 39 02.8	+6.3
BZMR	**Bezymyannaya**	**5.00**	**296**	S	Sn	18 39 03.7	+6.0
KMNR	**Kamenistaya**	**5.08**	**293**	P	Pn	18 38 08.3	+6.2
KMNR				S	Sn	18 39 07.0	+7.4
KIRR	**Kirishev**	**5.08**	**295**	S	Sn	18 39 06.9	+7.1
SPN	**Mys Shipunski**	**5.15**	**263**	P	Pn	18 38 07.5	+4.6
SPN				S	Sn	18 39 04.5	+3.3
NLC	**Nalytchevo**	**5.53**	**265**	S	Sn	18 39 14.5	+3.9
SDLR	**Sedlovina**	**5.78**	**266**	P	Pn	18 38 17.3	+5.6
SDLR				S	Sn	18 39 22.2	+5.3
UGLR	**Uglovaya**	**5.83**	**266**	S	Sn	18 39 24.1	+6.0
KRER	**Koryakskii**	**5.86**	**267**	*eP*	Pn	18 38 18.4	+5.6
KRER				S	Sn	18 39 24.9	+6.0
AVH	**Avacha**	**5.87**	**266**	*eP*	Pn	18 38 18.6	+5.7
AVH				*eS*	Sn	18 39 24.9	+5.9
KRX	**Arik**	**5.90**	**267**	S	Sn	18 39 26.0	+6.0
OSSR	**Ossora**	**6.03**	**332**	P	Pn	18 38 18.2	+3.3
RUS	**Russkaya**	**6.22**	**259**	P	Pn	18 38 23.6	+6.0
RUS				S	Sn	18 39 30.9	+3.4
GNL	**Ganaly**	**6.27**	**271**	*eP*	Pn	18 38 24.1	+5.7
KRMR	**Karymshinskiy**	**6.33**	**263**	S	Sn	18 39 35.2	+5.0
KDTR	**Khodutka, Kamc**	**6.70**	**255**	S	Sn	18 39 42.7	+3.4

*NIED **02** 18:46:00, 38°.60N×141°.90E, h53km, Mw3.8 Best double couple: M_0=4.81000×10^{14} NP1:ϕ_s=207.00000°, δ21.00000°, λ102.00000°. NP2:ϕ_s15.00000°, δ70.00000°, λ86.00000°.*
*ISCJB **02** 18:46:45.3±0.8, 38°.61N±0°.04×141°.97E±0°.09, h57km±5km, mb3.7/7, Error ellipse: s-maj=12.0km s-min=5.1km az=15.6*
*JMA **02** 18:46:46.9±0.1, 38°.62N×141°.90E, h48km±1km, M3.6*
JMA Felt II J1.
*IDC **02** 18:46:46.7±2.2, 38°.63N×142°.10E, h58km±17km, mb3.5/7, mb1 3.6/13, mb1mx3.3/73, mbtmp3.8/13, MS2.2/2, Ms1 2.2/2, ms1mx2.1/54, Error ellipse: s-maj=31.5km s-min=13.8km az=98.0*
ISC 02 18:46:46.3±1.5, 38°.58N±0°.05×142°.0E±0°.1, h48km±11km, n31, σ1§15/36, mb3.8/7, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**0.52**	**256**	P	**Pn**	**18 46 57.6**	**0.0**
JIO				S	**Sn**	**18 47 04.8**	**-0.9**
OFUJ	**Ofunato**	**0.56**	**333**	P	**Pn**	**18 46 58.1**	**0.0**
OFUJ				*eS*	**Sn**	**18 47 05.8**	**-0.8**
JMK	**Ichinoseki**	**0.71**	**302**	P	**Pn**	**18 46 59.9**	**-0.1**
JMK				*eS*	**Sn**	**18 47 09.0**	**-0.9**
JOM	**Ohasama**	**1.04**	**329**	P	**Pn**	**18 47 04.5**	**0.0**
JOM				S	**Sn**	**18 47 17.5**	**-0.5**
JOU	**Okura**	**1.06**	**259**	P	**Pn**	**18 47 04.7**	**-0.1**
JOU				*eS*	**Sn**	**18 47 17.7**	**-0.8**
JMM	**Marumori**	**1.18**	**233**	P	**Pn**	**18 47 06.2**	**-0.2**
JMM				*eS*	**Sn**	**18 47 20.3**	**-1.1**
JYK	**Kaneyama**	**1.32**	**285**	P	**Pn**	**18 47 08.1**	**-0.1**
JRG	**Rokugo**	**1.33**	**308**	P	**Pn**	**18 47 08.2**	**-0.2**
JRG				*eS*	**Sn**	**18 47 24.0**	**-1.0**
JFK	**Kawauchi**	**1.50**	**216**	P	**Pn**	**18 47 10.9**	**+0.1**
JFK				*eS*	**Sn**	**18 47 28.6**	**-0.6**
JYS	**Shiratake**	**1.55**	**257**	P	**Pn**	**18 47 11.7**	**+0.2**
JYS				*eS*	**Sn**	**18 47 29.7**	**-0.8**
MJAR	**Matsushiro Arr**	**3.63**	**237**	P	**Pn**	**18 47 41.9**	**+1.9**
	3.4nm,0.3s,baz=42,slow=11,SNR=58						
MAT	**Matsushiro**	**3.63**	**237**	P	**Pn**	**18 47 41.9**	**+1.9**
MAT				S	**Sn**	**18 48 22.7**	**+1.1**
ASAJ	**Asahikawa**	**5.55**	**5**	P	**Pn**	**18 48 07.2**	**+1.0**
	0.7nm,0.3s,baz=202,slow=18,SNR=12						
ASAJ				S	**Sn**	**18 49 07.7**	**-1.0**
	0.4nm,0.3s,baz=37,slow=20,SNR=2.6						
JHJ	**Hachijo jima 2**	**5.74**	**199**	P	**Pn**	**18 48 09.4**	**+0.5**
	5.0nm,0.3s,baz=30,slow=20,SNR=4.4						
JHJ				S	**Sn**	**18 49 09.9**	**-3.5**
	8.9nm,0.3s,baz=85,slow=19,SNR=4.0						
USRK	**Ussuriysk Ar.**	**9.38**	**310**	P	**Pn**	**18 48 59.5**	**+0.9**
	0.2nm,0.3s,baz=112,slow=14,SNR=3.9						
JNU	**Nakatsue**	**10.53**	**242**	P	**Pn**	**18 49 15.6**	**+1.0**
	0.3nm,0.3s,baz=33,slow=6.2,SNR=3.9						
KSRS	**Korea Array**	**11.16**	**269**	P	**Pn**	**18 49 26.1**	**+3.0**
	0.1nm,0.3s,baz=79,slow=13,SNR=6.0						
KSRS				LR	LR	18 53 07.4	
	comp=Z,28nm,19.2s,baz=160,slow=34						
KLR	**Kul'dur**	**12.94**	**329**	LR	LR	18 54 04.9	
	comp=Z,4.6nm,19.6s,baz=158,slow=34						
SONM	**Songino Array**	**27.34**	**301**	P	**P**	**18 52 26.3**	**-0.4**
	0.2nm,0.4s,baz=104,slow=6.1,SNR=2.5						
H11N2	**WAKE ISLAND Hy 28.59**	**124**		T	T	19 23 00.3	
	baz=317,slow=76,SNR=48						
H11N1	**WAKE ISLAND Hy 28.60**	**124**		T	T	19 22 57.4	
	baz=317,slow=76,SNR=92						
H11N3	**WAKE ISLAND Hy 28.61**	**124**		T	T	19 23 01.4	
	baz=317,slow=76,SNR=76						
H11S1	**WAKE ISLAND Hy 29.36**	**126**		T	T	19 24 00.3	
	baz=318,slow=76,SNR=63						
H11S3	**WAKE ISLAND Hy 29.36**	**126**		T	T	19 24 00.3	
	baz=318,slow=76,SNR=128						
H11S2	**WAKE ISLAND Hy 29.37**	**126**		T	T	19 24 02.0	
	baz=318,slow=76,SNR=55						
ZALV	**Zalesovo Beam**	**41.23**	**311**	P	**P**	**18 54 25.8**	**-0.3**
	1.0nm,0.4s,baz=104,slow=6.3,SNR=5.6						
MKAR	**Makanchi Array**	**43.70**	**301**	P	**P**	**18 54 46.0**	**-0.5**
	1.0nm,0.9s,baz=85,slow=10,SNR=8.3						
KURBB	**Kurchatov Arra**	**45.42**	**307**	P	**P**	**18 55 00.1**	**0.0**
	3.2nm,0.4s,baz=82,slow=8.2,SNR=34						
BVAR	**Borovoye Array**	**49.88**	**311**	P	**P**	**18 55 33.4**	**-1.2**
	0.6nm,0.6s,baz=64,slow=8.6,SNR=6.0						
AKTO	**Aktyubinsk**	**57.99**	**311**	P	**P**	**18 56 33.6**	**-0.2**
	0.8nm,0.7s,baz=54,slow=16,SNR=3.3						
WRA	**Warramunga Arr**	**58.66**	**188**	P	**P**	**18 56 38.5**	**-0.2**
	0.5nm,0.7s,baz=5.7,slow=6.8,SNR=7.1						

GUC 02 19:34:37.1±0.5, 35°.00S×72°.68W, h20km, ML3.5, 1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO05	**HualaæØ**	**0.61**	**92**‖	*eP*	Pb	19 34 46.0	-3.2
GO05				*eS*	Sb	19 34 51.0	-6.5
CCHI	**Chillan**	**1.68**	**163**	*eP*	Pn	19 35 05.2	-0.1
CCHI				*eS*	Sn	19 35 25.9	-0.3
CCHI				IAML		19 35 28.2	
	comp=E,606nm,0.3s						
LMEL	**Las Melosas**	**2.34**	**61**	*eP*	Pn	19 35 13.9	-0.8
LMEL				*eS*	Sn	19 35 41.2	-1.8
LMEL				IAML		19 35 46.6	
	comp=N,385nm,0.2s						
CLCH	**Cerro Calan**	**2.38**	**49**	*eP*	Pn	19 35 15.8	+0.6
CLCH				*eS*	Sn	19 35 45.4	+1.6
CLCH				IAML		19 35 49.7	
	comp=N,452nm,1.0s						
ROCH	**El Roble**	**2.45**	**35**	*eP*	Pn	19 35 17.0	+0.9
ROCH				*eS*	Sn	19 35 47.2	+1.7
ROCH				IAML		19 35 55.1	
	comp=E,223nm,0.5s						
FCH	**Farellones**	**2.58**	**51**	*eP*	Pn	19 35 18.7	+0.6
FCH				*eS*	Sn	19 35 47.4	-1.7

*ISCJB **02** 20:26:09.0±0.5, 7°.06S±0°.05×127°.55E±0°.05, h315km, mb3.6/7, Error ellipse: s-maj=7.1km s-min=6.9km az=21.5*
*IDC **02** 20:26:10.2±1.3, 7°.08S×127°.54E, h311km±14km, mb3.4/7, mb1 3.6/14, mb1mx3.2/60, mbtmp4.3/14, Error ellipse: s-maj=15.1km s-min=12.0km az=86.0*
*DJA **02** 20:26:10.9±0.4, 7°.5±6°.×12°.8E±°, h315km±10km, M4.4/7, mb4.4/6, mB4.8/3, MLv4.4/7, Mw(mB)4.0/3*
ISC 02 20:26:10.2±0.6, 7°.15S±0°.06×127°.52E±0°.08, h315km, n23, σ1§25/28, mb3.7/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**3.91**	**354**	P	**Pn**	**20 27 19.6**	**+3.3**
SOEI	**Soe**	**4.13**	**231**	P	**Pn**	**20 27 19.4**	**+0.6**
BATI	**Baumata**	**4.88**	**231**	P	**Pn**	**20 27 28.0**	**+1.0**
	116nm,0.3s,baz=77,slow=2.9,SNR=180						
BATI				S	**S**	**20 28 26.6**	**-2.2**
	45nm,0.3s,baz=299,slow=19,SNR=8.8						
BATI	**Baumata**	**4.88**	**231**	P	**Pn**	**20 27 27.9**	**+1.0**
MMRI	**Maumere**	**5.44**	**254**	P	**Pn**	**20 27 34.4**	**+1.0**
	64nm,0.5s,2μm0.4nm						
EDFI	**Ende, Flores**	**5.99**	**254**	P	**Pn**	**20 27 40.4**	**+0.4**
	44nm,0.7s,958nm0.2nm						
SIJI	**Sorong**	**7.27**	**31**	P	**Pn**	**20 27 52.6**	**-2.7**
	1.7nm,0.3s,baz=55,slow=3.7,SNR=32						
SIJI				S	S	20 29 10.1	-10
	4.9nm,0.3s,baz=77,slow=22,SNR=19						
BASI	**Baing, Sumba**	**7.51**	**246**	P	**Pn**	**20 27 57.5**	**-0.6**
	119nm,1.0s,2μm						
PLAI	**Plampang**	**9.79**	**260**	P	**Pn**	**20 28 25.0**	**-0.9**
	32nm,1.1s						
BAKI	**Biak**	**10.41**	**56**	P	**P**	**20 28 36.7**	**+0.9**
FITZ	**Fitzroy Crossi**	**11.03**	**189**	P	**Pn**	**20 28 40.4**	**-0.5**
	1.2nm,0.3s,baz=13,slow=6.9,SNR=46						
FITZ				S	**S**	**20 30 45.9**	**+1.4**
	0.4nm,0.3s,baz=262,slow=19,SNR=3.7						
JAY	**Jayapura**	**13.92**	**71**	P	**P**	**20 29 14.3**	**-0.5**
	0.9nm,0.3s,baz=187,slow=9.3,SNR=5.4						
WRA	**Warramunga Arr**	**14.33**	**153**	P	**P**	**20 29 19.6**	**+0.4**
	1.1nm,0.3s,baz=331,slow=12,SNR=86						
WRA				S	**S**	**20 31 54.6**	**-1.7**
	0.4nm,0.3s,baz=331,slow=22,SNR=6.8						
ASAR	**Alice Springs**	**17.53**	**160**	P	**P**	**20 29 55.4**	**+1.3**
	3.1nm,0.3s,baz=345,slow=12,SNR=337						
ASAR				S	**S**	**20 32 59.1**	**-0.7**
	0.3nm,0.3s,baz=340,slow=18,SNR=9.0						
ASAR				ScP	**ScP**	**20 37 21.4**	**-0.9**
	0.1nm,0.3s,baz=359,slow=1.8,SNR=4.3						
PMG	**Port Moresby**	**19.56**	**98**	P	**P**	**20 30 16.7**	**+0.9**
	0.5nm,0.3s,baz=298,slow=1.8,SNR=3.7						
LEM	**Lembang**	**19.76**	**270**	P	**P**	**20 30 19.2**	**+1.1**
	1.9nm,0.3s,baz=332,slow=21,SNR=4.4						
NWAO	**Narrogin (SRO)**	**27.37**	**199**	P	**P**	**20 31 27.8**	**+0.5**
	14nm,0.9s,baz=269,slow=6.9,SNR=8.3						
**STK

SML	**Sawmill**	**14.98**	**42**	*e*Pn	Pn	20 32 08.9	-2.6
GLI	**Glacier Island**	**15.09**	**47**	*e*Pn	Pn	20 32 08.8	-4.2
TRF	**Thorofare Moun**	**15.15**	**35**	*e*Pn	Pn	20 32 13.5	-0.5
BPAW	**Bear Paw Mtn.**	**15.33**	**32**	*e*Pn	Pn	20 32 16.7	+0.5
SCM	**Sheep Creek Mo**	**15.41**	**43**	*e*Pn	Pn	20 32 12.4	-4.9
DIV	**Divide**	**15.78**	**47**	*e*Pn	Pn	20 32 20.8	-1.4
KLU	**Klutina**	**15.86**	**45**	*e*Pn	Pn	20 32 19.9	-3.3
IM3	**Indian Mountai**	**15.90**	**24**	*e*Pn	Pn	20 32 19.3	-4.3
DHY	**Denali Highway**	**16.01**	**39**	*e*Pn	Pn	20 32 19.7	-5.5
MLY	**Manley**	**16.04**	**30**	*e*Pn	Pn	20 32 22.5	-2.9
BMRM	**Bremner River**	**16.25**	**48**	*e*Pn	Pn	20 32 26.2	-1.9
WRH	**Wood River Hil**	**16.54**	**34**	*e*Pn	Pn	20 32 28.2	-3.6
CCB	**Clear Creek Bu**	**16.75**	**34**	*e*Pn	Pn	20 32 32.4	-2.0
IL1	**Eielson Array**	**17.14**	**35**	*e*Pn	Pn	20 32 38.6	-0.8
ILB	**Eielson Array**	**17.14**	**35**	*e*Pn	Pn	20 32 38.1	-1.3
COLD	**Coldfoot**	**17.77**	**25**	*e*Pn	Pn	20 32 47.2	+0.1
SCRK	**Sand Creek**	**17.78**	**39**	*e*Pn	Pn	20 32 46.4	-1.1
MARYW	**Marymoor Park**	**30.57**	**79**	*e*P	P	20 34 57.4	+3.8

ISCJB ***02*** *20:29:12.0±0.7, 27°.2N±0°.1×140°.2E±0°.1, h450km, mb3.4/14, Error ellipse: s-maj=17.6km s-min=12.7km az=33.6*
IDC ***02*** *20:29:12.8±0.7, 27°.28N×140°.20E, h443km±8km, mb3.2/13, mb1 3.3/15, mb1mx3.0/72, mbtmp4.1/15, Error ellipse: s-maj=22.1km s-min=19.2km az=50.0*
ISC 02 20:29:13.2±0.8, 27°.2N±0°.1×140°.2E±0°.1, h450km, n19, σ1§31/21, mb3.6/14, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**1.74**	**92**	P	**P**	**20 30 13.1**	**+0.8**
	16nm,0.3s,baz=348,slow=17,SNR=38						
JCJ				S	**S**	**20 30 59.0**	**-1.4**
	60nm,0.3s,baz=110,slow=24,SNR=24						
MJAR	**Matsushiro Arr**	**9.49**	**350**	P	**P**	**20 31 27.7**	**+3.1**
	0.6nm,0.3s,baz=194,slow=7.2,SNR=9.0						
JNU	**Nakatsue**	**10.03**	**308**	P	**P**	**20 31 32.8**	**+2.2**
	0.7nm,0.3s,baz=75,slow=2.1,SNR=13						
JOW	**Kunigami**	**10.67**	**271**	P	**P**	**20 31 38.9**	**+1.3**
	2.6nm,0.3s,baz=313,slow=28,SNR=6.4						
USRK	**Ussuriysk Ar.**	**18.23**	**341**	P	**P**	**20 32 57.9**	**-0.1**
	0.3nm,0.3s,baz=132,slow=12,SNR=6.2						
KLR	**Kul'dur**	**22.97**	**346**	P	**P**	**20 33 41.0**	**-0.2**
	0.1nm,0.4s,baz=176,slow=7.0,SNR=4.5						
SONM	**Songino Array**	**33.46**	**317**	P	**P**	**20 35 11.3**	**-2.0**
	0.2nm,0.5s,baz=116,slow=6.6,SNR=2.3						
SONM				PcP	**PcP**	**20 37 42.8**	**+0.9**
	0.2nm,0.5s,baz=129,slow=2.0,SNR=3.1						
WRA	**Warramunga Arr**	**47.19**	**188**	P	**P**	**20 37 04.7**	**+0.8**
	0.2nm,0.3s,baz=5.7,slow=7.3,SNR=3.6						
ZALV	**Zalesovo Beam**	**48.28**	**319**	P	**P**	**20 37 11.0**	**-0.7**
	0.6nm,0.5s,baz=101,slow=7.6,SNR=3.4						
MKAR	**Makanchi Array**	**49.08**	**310**	P	**P**	**20 37 17.3**	**-0.5**
	0.3nm,0.4s,baz=90,slow=9.6,SNR=4.9						
KURBB	**Kurchatov Arra**	**51.73**	**314**	P	**P**	**20 37 36.3**	**-0.9**
	3.1nm,0.6s,baz=92,slow=8.1,SNR=37						
BVAR	**Borovoye Array**	**56.80**	**317**	P	**P**	**20 38 12.6**	**-0.5**
	2.7nm,0.4s,baz=88,slow=7.1,SNR=24						
ARU	**Arti**	**63.29**	**322**	P	**P**	**20 38 55.5**	**-0.9**
	1.3nm,0.3s,baz=79,slow=7.0,SNR=4.0						
SPITS	**Spitsbergen Ar**	**69.98**	**350**	P	**P**	**20 39 38.0**	**+0.3**
	0.4nm,0.4s,baz=54,slow=6.3,SNR=9.9						
ARCES	**ARCESS Array B**	**72.88**	**340**	P	**P**	**20 39 54.5**	**-0.4**
	1.2nm,0.5s,baz=70,slow=8.6,SNR=13						
YKA	**Yellowknife Ar**	**72.89**	**28**	P	**P**	**20 39 55.2**	**+0.2**
	0.6nm,0.5s,baz=296,slow=5.8,SNR=7.4						
FINES	**FINESS Array B**	**77.09**	**333**	P	**P**	**20 40 17.9**	**-0.8**
	2.7nm,0.4s,baz=70,slow=5.0,SNR=34						
HFS	**Hagfors**	**82.65**	**336**	P	**P**	**20 40 46.8**	**-1.2**
	3.7nm,1.0s,baz=106,slow=5.2,SNR=6.7						
NOA	**NORSAR Array B**	**82.88**	**338**	P	**P**	**20 40 47.8**	**-1.4**
	1.7nm,0.7s,baz=63,slow=1.0,SNR=3.0						

IDC 02 20:40:26.9±2.3, 6°.17S×130°.45E, h0km, mb3.6/1, mb1 4.0/4, mb1mx3.5/49, mbtmp3.9/4, ML3.9/3, MS2.7/1, Ms1 2.7/1, ms1mx2.3/38, Error ellipse: s-maj=92.7km s-min=28.1km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.33**	**9**	Sn	Sn	20 42 43.7	-6.2
	6.2nm,0.3s,baz=134,slow=23,SNR=8.3						
FITZ	**Fitzroy Crossi**	**12.75**	**201**	Pn	Pn	20 43 31.5	+2.0
	0.5nm,0.3s,baz=32,slow=14,SNR=36						
FITZ				Sn	Sn	20 45 47.3	-5.0
	0.1nm,0.3s,baz=264,slow=18,SNR=2.4						
FITZ				LR	LR	20 48 34.2	
	comp=Z,39nm,20.9s,baz=62,slow=38						
WRA	**Warramunga Arr**	**14.20**	**165**	Pn	Pn	20 43 47.8	-1.6
	0.5nm,0.3s,baz=345,slow=13,SNR=36						
WRA				Sn	Sn	20 46 18.2	-10
	0.5nm,0.3s,baz=343,slow=21,SNR=6.1						
ASAR	**Alice Springs**	**17.71**	**170**	P	Pn	20 44 34.7	-0.3
	0.5nm,0.3s,baz=351,slow=11,SNR=30						
ASAR				S	Sn	20 47 43.0	-10
	0.1nm,0.3s,baz=358,slow=28,SNR=3.9						
MKAR	**Makanchi Array**	**67.78**	**326**	P	P	20 51 26.6	0.0
	0.3nm,0.4s,baz=114,slow=7.4,SNR=6.6						

SFS ***02*** *20:44:43.0, 37°.26N×12°.70W, h0km, ML3.5*
MDD ***02*** *20:44:44.3±1.8, 37°.26N×12°.67W, h0km, mb3.8/5, Error ellipse: s-maj=15.5km s-min=14.2km az=44.0, PRXIMO*
INMG ***02*** *20:44:45.9±1.2, 37°.11N×13°.07W, h10km, ML2.2, Error ellipse: s-maj=6.6km s-min=4.7km az=79.0*
IGIL ***02*** *20:44:45.2, 37°.25N×12°.68W, h0km, ML2.2*
CSEM ***02*** *20:44:46.9±0.3, 37°.39N×12°.46W, h10km, mb3.8, Error ellipse: s-maj=6.1km s-min=5.3km az=64.0*
ISC 02 20:44:38.5±3.1, 37°.25N±0°.09×12°.9W±0°.2, h10km, n90, σ2§68/158, 1D, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.25**	**91**	*e*Pn	**Pn**	**20 45 32.1**	**+2.5**
PFVI				*e*Sn	**Sn**	**20 46 07.8**	**-0.4**
PFVI				A	A	20 46 09.7	
	3.7nm,0.8s						
PFVI	**Vila Bisbo**	**3.25**	**91**	P	**Pn**	**20 45 32.0**	**+2.5**
	1.2nm,0.1s,SNR=7.9						
PFVI				S	**Sn**	**20 46 07.5**	**-0.7**
	1.8nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**3.25**	**91**	P	**Pn**	**20 45 32.0**	**+2.5**
	1.2nm,0.1s,SNR=7.9						
PFVI				S	**Sn**	**20 46 07.5**	**-0.7**
	1.8nm,0.1s,SNR=7.9						
PFVI				*e*Sn	**Sn**	**20 46 07.8**	**-0.4**
PMST	**Lisbon--Monsan**	**3.28**	**62**	*e*Sn	**Sn**	**20 46 10.2**	**+1.1**
PMST	**Lisbon--Monsan**	**3.28**	**62**	*e*Sn	**Sn**	**20 46 10.2**	**+1.1**
PMAFR	**Mafra**	**3.32**	**58**	*e*Pn	**Pb**	**20 45 34.9**	**-2.5**
PMAFR				*e*Sn	**Sn**	**20 46 11.3**	**+1.3**
PMAFR				A	A	20 46 13.5	
	11nm,0.3s						
PMAFR	**Mafra**	**3.32**	**58**	P	**Pn**	**20 45 33.8**	**+3.3**
	3.3nm,0.1s,SNR=7.9						
PMAFR				S	**Sn**	**20 46 11.2**	**+1.3**
	8.1nm,0.2s,SNR=7.9						
PMAFR	**Mafra**	**3.32**	**58**	P	**Pn**	**20 45 33.8**	**+3.3**
	3.3nm,0.1s,SNR=7.9						
PMAFR	**Mafra**	**3.32**	**58**	*e*Pn	**Pb**	**20 45 34.9**	**-2.5**
PMAFR				S	**Sn**	**20 46 11.2**	**+1.3**
	8.1nm,0.2s,SNR=7.9						
PTEO	**Sao Teotonio**	**3.33**	**84**	*e*Pn	**Pn**	**20 45 33.7**	**+3.0**
PTEO				*e*Sn	**Sn**	**20 46 10.0**	**-0.3**
PTEO				A	A	20 46 14.7	
	3.7nm,0.6s						
PTEO	**Sao Teotonio**	**3.33**	**84**	Pn	**Pn**	**20 45 33.7**	**+3.0**
PTEO				Sn	**Sn**	**20 46 10.0**	**-0.3**
	1.9nm,0.6s						
PTEO	**Sao Teotonio**	**3.33**	**84**	Pn	**Pn**	**20 45 33.7**	**+3.0**
PTEO				Sn	**Sn**	**20 46 10.0**	**-0.3**
	1.9nm,0.6s						
MORF	**Marmelete**	**3.38**	**88**	*e*P	**Pn**	**20 45 35.0**	**+3.6**
MORF	**Marmelete**	**3.38**	**88**	*e*Pn	**Pn**	**20 45 35.0**	**+3.6**
MORF				*e*Sn	**Sn**	**20 46 11.4**	**-0.2**
MORF				A	A	20 46 20.1	
	3.3nm,0.6s						
MORF	**Marmelete**	**3.38**	**88**	P	**Pn**	**20 45 35.0**	**+3.6**
MORF				S	**Sn**	**20 46 11.4**	**-0.2**
	3.3nm,0.6s						
MORF	**Marmelete**	**3.38**	**88**	P	**Pn**	**20 45 35.0**	**+3.6**
MORF				S	**Sn**	**20 46 11.4**	**-0.2**
	3.3nm,0.6s						
PNCL	**Nicolau / Gran**	**3.56**	**75**	*e*Pn	**Pb**	**20 45 38.4**	**-3.3**
PNCL				*e*Sn	**Sn**	**20 46 15.8**	**-0.3**
PNCL				A	A	20 46 24.6	
	3.0nm,0.2s						
PNCL	**Nicolau / Gran**	**3.56**	**75**	*e*Pn	**Pb**	**20 45 38.4**	**-3.3**
PNCL				*e*Sn	**Sn**	**20 46 15.8**	**-0.3**
MESJ	**Messejana**	**3.76**	**80**	*e*P	**Pn**	**20 45 40.2**	**+3.7**
MESJ				*e*S	**Sn**	**20 46 20.5**	**-0.3**
MESJ				AML	AML	20 46 23.9	
	comp=N,3.3nm,0.3s						
MESJ	**Messejana**	**3.76**	**80**	*e*Pn	**Pb**	**20 45 40.8**	**-4.2**
MESJ				*e*Sn	**Sn**	**20 46 20.4**	**-0.4**
MESJ				A	A	20 46 27.8	
	comp=N,2.4nm,0.7s						
MESJ	**Messejana**	**3.76**	**80**	P	**Pn**	**20 45 40.2**	**+3.7**
MESJ				S	**Sn**	**20 46 20.5**	**-0.3**
	comp=N,3.3nm,0.3s						
MESJ	**Messejana**	**3.76**	**80**	P	**Pn**	**20 45 40.2**	**+3.7**
MESJ	**Messejana**	**3.76**	**80**	*e*Pn	**Pb**	**20 45 40.8**	**-4.2**
MESJ				S	**Sn**	**20 46 20.5**	**-0.3**
	comp=N,3.3nm,0.3s						
ALMR	**Almeirim**	**3.89**	**59**	*e*P	**Pn**	**20 45 42.3**	**+3.9**
ALMR				*e*S	**Sn**	**20 46 24.7**	**+0.5**
ALMR				AML	AML	20 46 28.1	
	comp=N,13nm,0.4s						
ALMR	**Almeirim**	**3.89**	**59**	*e*Pn	**Pn**	**20 45 42.5**	**+4.1**
ALMR				*e*Sn	**Sn**	**20 46 24.9**	**+0.7**
ALMR				A	A	20 46 31.2	
	comp=N,7.2nm,0.3s						
ALMR	**Almeirim**	**3.89**	**59**	P	**Pn**	**20 45 42.3**	**+3.9**
ALMR				S	**Sn**	**20 46 24.7**	**+0.5**
	comp=N,6.7nm,0.4s						
ALMR	**Almeirim**	**3.89**	**59**	P	**Pn**	**20 45 42.3**	**+3.9**
ALMR				S	**Sn**	**20 46 24.7**	**+0.5**
	comp=N,6.7nm,0.4s						
PBDV	**Barranco-do-Ve**	**3.96**	**89**	*e*Pn	**Pn**	**20 45 43.4**	**+4.1**
PBDV				*e*Sn	**Sn**	**20 46 27.2**	**+1.4**
PBDV				A	A	20 46 28.5	
	comp=N,2.3nm,0.6s						
PBDV	**Barranco-do-Ve**	**3.96**	**89**	Pn	**Pn**	**20 45 43.4**	**+4.1**
PBDV				Sn	**Sn**	**20 46 27.2**	**+1.4**
	comp=N,2.3nm,0.6s						
PBDV	**Barranco-do-Ve**	**3.96**	**89**	Pn	**Pn**	**20 45 43.4**	**+4.1**
PBDV				Sn	**Sn**	**20 46 27.2**	**+1.4**
	comp=N,2.3nm,0.6s						
PBEJ	**Beja**	**4.06**	**77**	*e*Pn	**Pn**	**20 45 44.5**	**+3.8**
PBEJ				*e*Sn	**Sn**	**20 46 27.6**	**-0.8**
PBEJ				A	A	20 46 33.2	
	comp=N,2.4nm,0.2s						
PBEJ	**Beja**	**4.06**	**77**	P	**Pn**	**20 45 44.5**	**+3.8**
PBEJ				S	**Sn**	**20 46 27.6**	**-0.8**
	comp=N,1.2nm,0.2s						
PBEJ	**Beja**	**4.06**	**77**	P	**Pn**	**20 45 44.5**	**+3.8**
PBEJ				S	**Sn**	**20 46 27.6**	**-0.8**
	comp=N,1.2nm,0.2s						
EVO	**Evora**	**4.07**	**70**	*e*Pn	**Pn**	**20 45 44.9**	**+4.1**
EVO				*e*Sn	**Sn**	**20 46 28.9**	**+0.5**
EVO				A	A	20 46 33.7	
	comp=N,4.5nm,0.4s						
EVO	**Evora**	**4.07**	**70**	P	**Pn**	**20 45 44.4**	**+3.6**
EVO				S	**Sn**	**20 46 27.8**	**-0.6**
EVO	**Evora**	**4.07**	**70**	P	**Pn**	**20 45 44.4**	**+3.6**
EVO	**Evora**	**4.07**	**70**	*e*Pn	**Pn**	**20 45 44.9**	**+4.1**
EVO				S	**Sn**	**20 46 27.8**	**-0.6**
EVO				*e*Sn	Sb	20 46 28.9	-10
PVAQ	**Vaqueiros**	**4.13**	**86**	‖*e*Pn	**Pn**	**20 45 45.5**	**+3.9**
PVAQ				*e*Sn	**Sn**	**20 46 30.1**	**+0.2**
PVAQ				A	A	20 46 34.9	
	comp=N,3.1nm,0.6s						
PVAQ	**Vaqueiros**	**4.13**	**86**	P	**Pn**	**20 45 45.5**	**+3.9**
PVAQ				S	**Sn**	**20 46 30.1**	**+0.2**
	comp=N,3.1nm,0.6s						
PVAQ	**Vaqueiros**	**4.13**	**86**	P	**Pn**	**20 45 45.5**	**+3.9**
PVAQ				S	**Sn**	**20 46 30.1**	**+0.2**
	comp=N,3.1nm,0.6s						
PTOM	**Tomar**	**4.24**	**55**	*e*Pn	**Pn**	**20 45 47.7**	**+4.6**
PTOM				*e*Sn	**Sn**	**20 46 33.7**	**+1.0**
PTOM				A	A	20 46 39.7	
	comp=N,4.3nm,0.3s						
PTOM	**Tomar**	**4.24**	**55**	P	**Pn**	**20 45 47.7**	**+4.6**
PTOM				S	**Sn**	**20 46 33.7**	**+1.0**
	comp=N,2.2nm,0.3s						
PTOM	**Tomar**	**4.24**	**55**	P	**Pn**	**20 45 47.7**	**+4.6**
PTOM				S	**Sn**	**20 46 33.7**	**+1.0**
	comp=N,2.2nm,0.3s						
EGRO	**El Granado**	**4.32**	**85**	P	**Pn**	**20 45 47.5**	**+3.3**
	comp=N,1.1nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**20 46 34.9**	**+0.3**
	comp=N,0.6nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**4.32**	**85**	P	**Pn**	**20 45 47.5**	**+3.3**
	comp=N,1.1nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**20 46 34.9**	**+0.3**
	comp=N,0.6nm,0.1s,SNR=7.9						
PCAS	**Casmilo, Conde**	**4.43**	**50**	*e*Pn	**Pn**	**20 45 49.9**	**+4.1**
PCAS				*e*Sn	**Sn**	**20 46 38.4**	**+0.9**
PCAS				A	A	20 46 43.9	
	comp=N,1.8nm,0.6s						
PCAS	**Casmilo, Conde**	**4.43**	**50**	*e*Pn	**Pn**	**20 45 49.9**	**+4.1**
PCAS				*e*Sn	**Sn**	**20 46 38.4**	**+0.9**
PESTR	**Estremoz**	**4.48**	**67**	*e*Pn	**Pn**	**20 45 50.2**	**+3.7**
PESTR				*e*Sn	**Sn**	**20 46 38.8**	**0.0**
PESTR				A	A	20 46 43.8	
	comp=N,2.1nm,0.8s						
PESTR	**Estremoz**	**4.48**	**67**	*e*Pn	**Pn**	**20 45 50.2**	**+3.7**
PBAR	**Barrancos**	**4.73**	**77**	*e*Pn	**Pn**	**20 45 53.5**	**+3.6**
PBAR				*e*Sn	**Sn**	**20 46 44.8**	**0.0**
PBAR				A	A	20 46 50.3	
	comp=N,2.8nm,0.5s						
PBAR	**Barrancos**	**4.73**	**77**	P	**Pn**	**20 45 53.5**	**+3.6**
PBAR				S	**Sn**	**20 46 44.8**	**0.0**
	comp=N,2.8nm,0.5s						
PBAR	**Barrancos**	**4.73**	**77**	P	**Pn**	**20 45 53.5**	**+3.6**
PBAR				S	**Sn**	**20 46 44.8**	**0.0**
	comp=N,2.8nm,0.5s						
PMRV	**Marv??o**	**4.84**	**62**	*e*Pn	**Pn**	**20 45 55.0**	**+3.6**
PMRV				*e*Sn	**Sn**	**20 46 47.4**	**-0.1**
PMRV				A	A	20 46 53.9	
	comp=N,2.8nm,0.5s						
PMRV	**Marv??o**	**4.84**	**62**	P	**Pn**	**20 45 55.0**	**+3.6**
PMRV				S	**Sn**	**20 46 47.4**	**-0.1**
	comp=N,2.8nm,0.5s						
PMRV	**Marv??o**	**4.84**	**62**	P	**Pn**	**20 45 55.0**	**+3.6**
PMRV				S	**Sn**	**20 46 47.4**	**-0.1**
	comp=N,2.8nm,0.5s						
EBAD	**Badajoz**	**4.88**	**70**	P	**Pn**	**20 45 55.6**	**+3.7**
	comp=N,1.6nm,0.2s,SNR=7.9						
EBAD				S	**Sn**	**20 46 46.5**	**-2.0**
	comp=N,0.9nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**4.88**	**70**	P	**Pn**	**20 45 55.6**	**+3.7**
	comp=N,1.6nm,0.2s,SNR=7.9						
EBAD				S	**Sn**	**20 46 46.5**	**-2.0**
	comp=N,0.9nm,0.1s,SNR=7.9						
PCBR	**Castelo Branco**	**4.97**	**57**	*e*Sn	**Sn**	**20 46 50.5**	**-0.2**
PCBR	**Castelo Branco**	**4.97**	**57**	Sn	**Sn**	**20 46 50.5**	**-0.2**
PCBR	**Castelo Branco**	**4.97**	**57**	Sn	**Sn**	**20 46 50.5**	**-0.2**
EMIN	**Mina Concepcio**	**4.97**	**82**	P	**Pn**	**20 45 56.4**	**+3.2**
	comp=N,0.7nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**20 46 49.1**	**-1.6**
	comp=N,0.3nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.97**	**82**	P	**Pn**	**20 45 56.4**	**+3.2**
	comp=N,0.7nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**20 46 49.1**	**-1.6**
	comp=N,0.3nm,0.1s,SNR=7.9						
MTE	**Manteigas**	**5.23**	**51**	*e*Sn	**Sn**	**20 46 57.3**	**+0.2**
MTE	**Manteigas**	**5.23**	**51**	Sn	**Sn**	**20 46 57.3**	**+0.2**
MTE	**Manteigas**	**5.23**	**51**	Sn	**Sn**	**20 46 57.3**	**+0.2**
POLO	**Lamas de Olo**	**5.71**	**42**	*e*Pn	**Pn**	**20 46 07.2**	**+3.8**
POLO				*e*Sn	**Sn**	**20 47 08.5**	**-0.5**
POLO	**Lamas de Olo**	**5.71**	**42**	*e*Pn	**Pn**	**20 46 07.2**	**+3.8**
POLO				*e*Sn	**Sn**	**20 47 08.5**	**-0.5**
PCAB	**Cabril**	**5.83**	**39**	*e*Sn	**Sn**	**20 47 12.6**	**+0.6**
PCAB	**Cabril**	**5.83**	**39**	Sn	**Sn**	**20 47 12.6**	**+0.6**
PCAB	**Cabril**	**5.83**	**39**	Sn	**Sn**	**20 47 12.6**	**+0.6**
PGAV	**Gavieira, Arco**	**5.91**	**36**	*e*Sn	**Sn**	**20 47 13.4**	**-0.6**
PGAV				A	A	20 47 17.1	
	comp=N,2.4nm,0.9s						
PGAV	**Gavieira, Arco**	**5.91**	**36**	*e*Sn	**Sn**	**20 47 13.4**	**-0.6**
ELOB	**Lobios**	**5.93**	**37**	P	**Pn**	**20 46 09.9**	**+3.4**
	comp=N,0.1nm,0.1s,SNR=7.9						
ELOB				S	**Sn**	**20 47 13.1**	**-1.4**
	comp=N,0.1nm,0.2s,SNR=7.9						
ELOB	**Lobios**	**5.93**	**37**	P	**Pn**	**20 46 09.9**	**+3.4**
	comp=N,0.1nm,0.1s,SNR=7.9						
ELOB				S	**Sn**	**20 47 13.1**	**-1.4**
	comp=N,0.1nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**5.99**	**80**	P	**Pn**	**20 46 10.4**	**+3.2**
	comp=N,0.8nm,0.1s,SNR=7.9						
ECAB				S	**Sn**	**20 47 13.3**	**-2.5**
	comp=N,0.3nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**5.99**	**80**	P	**Pn**	**20 46 10.4**	**+3.2**
	comp=N,0.8nm,0.1s,SNR=7.9						
ECAB				S	**Sn**	**20 47 13.3**	**-2.5**
	comp=N,0.3nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**6.00**	**48**	P	**Pn**	**20 46 10.7**	**+3.3**
	comp=N,0.8nm,0.1s,SNR=7.9						
MVO				S	**Sn**	**20 47 15.5**	**-0.7**
	comp=N,0.2nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**6.00**	**48**	P	**Pn**	**20 46 10.7**	**+3.3**
	comp=N,0.8nm,0.1s,SNR=7.9						
MVO				*e*Sn	**Sn**	**20 47 14.8**	**-1.4**
MVO				S	**Sn**	**20 47 15.5**	**-0.7**
	comp=N,0.2nm,0.2s,SNR=7.9						
EPLA	**Plasencia**	**6.03**	**60**	P	**Pn**	**20 46 11.1**	**+3.4**
	comp=N,1.0nm,0.3s,SNR=7.9						
EPLA				S	**Sn**	**20 47 16.1**	**-0.7**
	comp=N,1.3nm,0.2s,SNR=7.9						
EPLA	**Plasencia**	**6.03**	**60**	P	**Pn**	**20 46 11.1**	**+3.4**
	comp=N,1.0nm,0.3s,SNR=7.9						
EPLA				S	**Sn**	**20 47 16.1**	**-0.7**
	comp=N,1.3nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	**6.43**	**27**	S	**Sn**	**20 47 21.6**	**-5.2**
	comp=N,0.9nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**6.43**	**27**	S	**Sn**	**20 47 21.6**	**-5.2**
	comp=N,0.9nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**6.65**	**80**	P	**Pn**	**20 46 19.5**	**+3.1**
	comp=N,0.6nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**20 47 29.6**	**-2.7**
	comp=N,0.1nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**6.65**	**80**	P	**Pn**	**20 46 19.5**	**+3.1**
	comp=N,0.6nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**20 47 29.6**	**-2.7**
	comp=N,0.1nm,0.1s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.66**	**32**	P	**Pn**	**20 46 20.3**	**+3.9**
	comp=N,0.3nm,0.1s,SNR=7.9						
EAGO				S	**Sn**	**20 47 28.9**	**-3.4**
	comp=N,0.3nm,0.2s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.66**	**32**	P	**Pn**	**20 46 20.3**	**+3.9**
	comp=N,0.3nm,0.1s,SNR=7.9						
EAGO				S	**Sn**	**20 47 28.9**	**-3.4**
	comp=N,0.3nm,0.2s,SNR=7.9						
PAB	**San Pablo**	**7.09**	**69**	P	**Pn**	**20 46 25.8**	**+3.4**
	comp=N,0.4nm,0.3s,SNR=7.9						
PAB	**San Pablo**	**7.09**	**69**	P	**Pn**	**20 46 25.8**	**+3.4**
	comp=N,0.4nm,0.3s,SNR=7.9						
ESDC	**Sonseca Array**	**7.41**	**68**	P	**Pn**	**20 46 29.4**	**+2.6**
	comp=N,0.4nm,0.1s,SNR=7.9						
ESDC	**Sonseca Array**	**7.41**	**68**	P	**Pn**	**20 46 29.4**	**+2.6**
	comp=N,0.4nm,0.1s,SNR=7.9						

SFS ***02*** *20:49:21.0, 37°.30N×12°.70W, h0km, ML3.6*
MDD ***02*** *20:49:22.9±1.6, 37°.25N×12°.71W, h0km, mb4.0/9, Error ellipse: s-maj=14.4km s-min=12.1km az=50.0, PRXIMO*
IGIL ***02*** *20:49:22.9, 37°.31N×12°.79W, h4km, ML2.1*
INMG ***02*** *20:49:24.4±1.1, 37°.07N×13°.10W, h10km, ML2.4, Error ellipse: s-maj=5.4km s-min=3.9km az=111.0*
CSEM ***02*** *20:49:25.7±0.3, 37°.39N×12°.49W, h10km, mb4.0, Error ellipse: s-maj=6.2km s-min=5.0km az=51.0*
ISC 02 20:49:21.1±3.1, 37°.29N±0°.08×12°.8W±0°.1, h10km, n108, σ1§68/191, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.14**	**92**	*e*Pn	**Pn**	**20 50 11.2**	**+0.6**
PFVI				*e*Sn	**Sn**	**20 50 47.7**	**-0.5**
PFVI				A	A	20 50 56.1	
	4.3nm,1.0s						
PFVI	**Vila Bisbo**	**3.14**	**92**	P	**Pn**	**20 50 11.2**	**+0.6**
	1.9nm,0.1s,SNR=7.9						
PFVI				S	**Sn**	**20 50 47.1**	**-1.1**

PBDV Sn **Sn** **20 51 06.5 +0.7**
comp=N,4.2nm,0.7s
PBEJ Beja 3.95 78 *e*Pn **Pn** **20 50 23.8 +2.0**
PBEJ *e*Sn **Sn** **20 51 09.1 +0.9**
PBEJ A A 20 51 12.4
comp=N,6.1nm,0.2s
PBEJ Beja 3.95 78 P **Pn** **20 50 23.8 +2.0**
PBEJ S **Sn** **20 51 09.1 +0.9**
comp=N,3.1nm,0.2s
PBEJ Beja 3.95 78 P **Pn** **20 50 23.8 +2.0**
PBEJ S **Sn** **20 51 09.1 +0.9**
comp=N,3.1nm,0.2s
EVO Evora 3.96 70 *e*Pn **Pn** **20 50 24.2 +2.4**
EVO *e*Sn **Sn** **20 51 07.1 -1.2**
EVO A A 20 51 13.5
comp=N,5.9nm,0.4s
EVO Evora 3.96 70 P **Pn** **20 50 23.5 +1.7**
EVO S **Sn** **20 51 07.1 -1.2**
comp=N,5.9nm,0.4s
EVO Evora 3.96 70 P **Pn** **20 50 23.5 +1.7**
EVO Evora 3.96 70 *e*Pn **Pn** **20 50 24.2 +2.4**
EVO S **Sn** **20 51 07.1 -1.2**
comp=N,5.9nm,0.4s
PVAQ Vaqueiros 4.02 87 *e*Pn **Pn** **20 50 24.4 +1.7**
PVAQ *e*Sn **Sn** **20 51 09.0 -0.9**
PVAQ A A 20 51 14.6
comp=N,5.4nm,0.7s
PVAQ Vaqueiros 4.02 87 P **Pn** **20 50 24.4 +1.7**
PVAQ S **Sn** **20 51 09.0 -0.9**
comp=N,5.4nm,0.7s
PVAQ Vaqueiros 4.02 87 P **Pn** **20 50 24.4 +1.7**
PVAQ S **Sn** **20 51 09.0 -0.9**
comp=N,5.4nm,0.7s
PTOM Tomar 4.13 54 *e*Pn **Pn** **20 50 26.9 +2.6**
PTOM *e*Sn **Sn** **20 51 13.4 +0.8**
PTOM A A 20 51 19.0
comp=N,8.7nm,0.2s
PTOM Tomar 4.13 54 P **Pn** **20 50 26.9 +2.6**
PTOM S **Sn** **20 51 13.4 +0.8**
comp=N,4.3nm,0.2s
PTOM Tomar 4.13 54 P **Pn** **20 50 26.9 +2.6**
PTOM S **Sn** **20 51 13.4 +0.8**
comp=N,4.3nm,0.2s
EGRO El Granado 4.21 85 P **Pn** **20 50 27.0 +1.7**
comp=N,1.8nm,0.1s,SNR=7.9
EGRO S **Sn** **20 51 14.2 -0.3**
comp=N,1.3nm,0.2s,SNR=7.9
EGRO El Granado 4.21 85 P **Pn** **20 50 27.0 +1.7**
comp=N,1.8nm,0.1s,SNR=7.9
EGRO S **Sn** **20 51 14.2 -0.3**
comp=N,1.3nm,0.2s,SNR=7.9
PCAS Casmilo, Conde 4.33 49 *e*Pn **Pn** **20 50 29.0 +2.0**
PCAS *e*Sn **Sn** **20 51 17.6 0.0**
PCAS A A 20 51 29.3
comp=N,2.0nm,0.5s
PCAS Casmilo, Conde 4.33 49 *e*Pn **Pn** **20 50 29.0 +2.0**
PCAS *e*Sn **Sn** **20 51 17.6 0.0**
PESTR Estremoz 4.38 67 *e*Pn **Pn** **20 50 29.2 +1.6**
PESTR *e*Sn **Sn** **20 51 18.0 -0.6**
PESTR A A 20 51 24.1
comp=N,2.9nm,0.7s
PESTR Estremoz 4.38 67 *e*Pn **Pn** **20 50 29.2 +1.6**
PESTR *e*Sn **Sn** **20 51 18.0 -0.6**
PBAR Barrancos 4.62 77 *e*Pn **Pn** **20 50 32.7 +1.7**
PBAR *e*Sn **Sn** **20 51 23.5 -1.2**
PBAR A A 20 51 33.5
comp=N,4.8nm,0.2s
PBAR Barrancos 4.62 77 P **Pn** **20 50 32.7 +1.7**
PBAR S **Sn** **20 51 23.5 -1.2**
comp=N,4.8nm,0.2s
PBAR Barrancos 4.62 77 P **Pn** **20 50 32.7 +1.7**
PBAR S **Sn** **20 51 23.5 -1.2**
comp=N,4.8nm,0.2s
PMRV Marv??o 4.73 61 *e*Pn **Pn** **20 50 34.0 +1.5**
PMRV *e*Sn **Sn** **20 51 26.4 -1.0**
PMRV A A 20 51 32.0
comp=N,3.7nm,0.3s
PMRV Marv??o 4.73 61 P **Pn** **20 50 34.0 +1.5**
PMRV S **Sn** **20 51 26.4 -1.0**
comp=N,3.7nm,0.3s
PMRV Marv??o 4.73 61 P **Pn** **20 50 34.0 +1.5**
PMRV S **Sn** **20 51 26.4 -1.0**
comp=N,3.7nm,0.3s
EBAD Badajoz 4.77 70 P **Pn** **20 50 34.9 +1.9**
comp=N,1.6nm,0.1s,SNR=7.9
EBAD S **Sn** **20 51 25.9 -2.4**
comp=N,2.6nm,0.1s,SNR=7.9
EBAD Badajoz 4.77 70 P **Pn** **20 50 34.9 +1.9**
comp=N,1.6nm,0.1s,SNR=7.9
EBAD S **Sn** **20 51 25.9 -2.4**
comp=N,2.6nm,0.1s,SNR=7.9
EMIN Mina Concepcio 4.86 82 P **Pn** **20 50 35.5 +1.2**
comp=N,0.8nm,0.1s,SNR=7.9
EMIN S **Sn** **20 51 27.9 -2.7**
comp=N,1.2nm,0.3s,SNR=7.9
EMIN Mina Concepcio 4.86 82 P **Pn** **20 50 35.5 +1.2**
comp=N,0.8nm,0.1s,SNR=7.9
EMIN S **Sn** **20 51 27.9 -2.7**
comp=N,1.2nm,0.3s,SNR=7.9
PCBR Castelo Branco 4.86 57 *e*Pn **Pn** **20 50 36.3 +2.0**
PCBR *e*Sn **Sn** **20 51 30.3 -0.3**
PCBR A A 20 51 36.0
comp=N,1.8nm,0.3s
PCBR Castelo Branco 4.86 57 P **Pn** **20 50 36.3 +2.0**
PCBR S **Sn** **20 51 30.3 -0.3**
comp=N,0.9nm,0.3s
PCBR Castelo Branco 4.86 57 P **Pn** **20 50 36.3 +2.0**
PCBR S **Sn** **20 51 30.3 -0.3**
comp=N,0.9nm,0.3s
PVIS Viseu 5.11 46 *e*Pn **Pn** **20 50 39.5 +1.8**
PVIS *e*Sn **Sn** **20 51 35.8 -1.0**
PVIS A A 20 51 41.6
comp=N,3.5nm,0.3s
PVIS Viseu 5.11 46 P **Pn** **20 50 39.5 +1.8**
PVIS S **Sn** **20 51 35.8 -1.0**
comp=N,1.8nm,0.3s
PVIS Viseu 5.11 46 P **Pn** **20 50 39.5 +1.8**
PVIS S **Sn** **20 51 35.8 -1.0**
comp=N,1.8nm,0.3s
MTE Manteigas 5.12 51 *e*Sn **Sn** **20 51 37.5 +0.3**
MTE A A 20 51 41.8
comp=N,5.1nm,0.6s
MTE Manteigas 5.12 51 S **Sn** **20 51 37.5 +0.3**
comp=N,2.6nm,0.6s
MTE Manteigas 5.12 51 S **Sn** **20 51 37.5 +0.3**
comp=N,2.6nm,0.6s
PMPS Porto Santo 5.13 216 *e*Sn Sn 20 51 19.9 -17
POLO Lamas de Olo 5.61 42 *e*Pn **Pn** **20 50 46.3 +1.6**
POLO *e*Sn **Sn** **20 51 48.8 -0.4**
POLO A A 20 51 50.0
comp=N,0.5nm,0.2s
POLO Lamas de Olo 5.61 42 *e*Pn **Pn** **20 50 46.3 +1.6**
POLO *e*Sn **Sn** **20 51 48.8 -0.4**
PMAR Madeira 5.68 218 *e*Sn Sn 20 51 33.7 -17
PCAB Cabril 5.74 38 *e*Sn **Sn** **20 51 50.9 -1.3**
PCAB Cabril 5.74 38 S **Sn** **20 51 50.9 -1.3**
PCAB Cabril 5.74 38 S **Sn** **20 51 50.9 -1.3**
PGAV Gavieira, Arco 5.82 35 *e*Pn **Pn** **20 50 49.2 +1.7**
PGAV *e*Sn **Sn** **20 51 52.8 -1.5**
PGAV A A 20 51 56.1
comp=N,2.6nm,0.4s
PGAV Gavieira, Arco 5.82 35 *e*Pn **Pn** **20 50 49.2 +1.7**
PGAV *e*Sn **Sn** **20 51 52.8 -1.5**
ELOB Lobios 5.84 37 P **Pn** **20 50 50.2 +2.4**
comp=N,0.3nm,0.1s,SNR=7.9
ELOB S **Sn** **20 51 52.3 -2.5**
comp=N,1.0nm,0.1s,SNR=7.9
ELOB Lobios 5.84 37 P **Pn** **20 50 50.2 +2.4**
comp=N,0.3nm,0.1s,SNR=7.9
ELOB S **Sn** **20 51 52.3 -2.5**
comp=N,1.0nm,0.1s,SNR=7.9
ECAB El Cabril 5.88 80 P **Pn** **20 50 49.6 +1.4**
comp=N,0.9nm,0.1s,SNR=7.9
ECAB S **Sn** **20 51 53.4 -2.3**
comp=N,0.3nm,0.1s,SNR=7.9
ECAB El Cabril 5.88 80 P **Pn** **20 50 49.6 +1.4**
comp=N,0.9nm,0.1s,SNR=7.9
ECAB S **Sn** **20 51 53.4 -2.3**
comp=N,0.3nm,0.1s,SNR=7.9
MVO Moncorvo 5.90 47 *e*Pn **Pn** **20 50 50.5 +1.9**
MVO *e*Sn **Sn** **20 51 54.1 -2.2**
MVO A A 20 51 59.0
comp=N,2.3nm,0.3s
MVO Moncorvo 5.90 47 P **Pn** **20 50 50.2 +1.6**
comp=N,1.4nm,0.2s,SNR=7.9
MVO S **Sn** **20 51 53.5 -2.8**
comp=N,0.8nm,0.1s,SNR=7.9
MVO Moncorvo 5.90 47 P **Pn** **20 50 50.2 +1.6**
comp=N,1.4nm,0.2s,SNR=7.9
MVO Moncorvo 5.90 47 *e*Pn **Pn** **20 50 50.5 +1.9**
MVO S **Sn** **20 51 53.5 -2.8**
comp=N,0.8nm,0.1s,SNR=7.9
MVO *e*Sn **Sn** **20 51 54.1 -2.2**
EPLA Plasencia 5.92 60 P **Pn** **20 50 50.2 +1.4**
comp=N,0.9nm,0.2s,SNR=7.9
EPLA S **Sn** **20 51 54.1 -2.6**
comp=N,1.3nm,0.1s,SNR=7.9
EPLA Plasencia 5.92 60 P **Pn** **20 50 50.2 +1.4**
comp=N,0.9nm,0.2s,SNR=7.9
EPLA S **Sn** **20 51 54.1 -2.6**
comp=N,1.3nm,0.1s,SNR=7.9
EMAZ Mazaricos 6.36 26 P **Pn** **20 50 54.9 +0.1**
comp=N,0.4nm,0.1s,SNR=7.9
EMAZ S **Sn** **20 52 02.6 -4.9**
comp=N,1.8nm,0.1s,SNR=7.9
EMAZ Mazaricos 6.36 26 P **Pn** **20 50 54.9 +0.1**
comp=N,0.4nm,0.1s,SNR=7.9
PBRG Braganca 6.48 44 *e*Pn **Pn** **20 50 58.7 +2.2**
PBRG Braganca 6.48 44 P **Pn** **20 50 58.7 +2.2**
PBRG Braganca 6.48 44 P **Pn** **20 50 58.7 +2.2**
EADA Adamuz 6.55 80 P **Pn** **20 50 59.0 +1.6**
comp=N,1.0nm,0.1s,SNR=7.9
EADA S **Sn** **20 52 09.1 -3.1**
comp=N,0.3nm,0.2s,SNR=7.9
EADA Adamuz 6.55 80 P **Pn** **20 50 59.0 +1.6**
comp=N,1.0nm,0.1s,SNR=7.9
EADA S **Sn** **20 52 09.1 -3.1**
comp=N,0.3nm,0.2s,SNR=7.9
EAGO Agolada(Pontev 6.57 32 P **Pn** **20 50 59.4 +1.6**
comp=N,0.7nm,0.1s,SNR=7.9
EAGO S **Sn** **20 52 09.3 -3.5**
comp=N,0.1nm,0.2s,SNR=7.9
EAGO Agolada(Pontev 6.57 32 P **Pn** **20 50 59.4 +1.6**
comp=N,0.7nm,0.1s,SNR=7.9
ECAL Calabor 6.58 43 P **Pn** **20 51 00.1 +2.2**
comp=N,1.3nm,0.3s,SNR=7.9
ECAL S **Sn** **20 52 11.3 -1.6**
comp=N,0.4nm,0.1s,SNR=7.9
ECAL Calabor 6.58 43 P **Pn** **20 51 00.1 +2.2**
comp=N,1.3nm,0.3s,SNR=7.9
ECAL S **Sn** **20 52 11.3 -1.6**
comp=N,0.4nm,0.1s,SNR=7.9
PAB San Pablo 6.98 69 P **Pn** **20 51 05.0 +1.6**
comp=N,0.3nm,0.1s,SNR=7.9
PAB S **Sn** **20 52 19.1 -3.8**
comp=N,0.1nm,0.2s,SNR=7.9
PAB San Pablo 6.98 69 P **Pn** **20 51 05.1 +1.6**
comp=N,0.3nm,0.1s,SNR=7.9
PAB S **Sn** **20 52 19.1 -3.8**
comp=N,0.1nm,0.2s,SNR=7.9
ESDC Sonseca Array 7.30 68 P **Pn** **20 51 08.4 +0.6**
comp=N,0.1nm,0.2s,SNR=7.9
ESDC Sonseca Array 7.30 68 P **Pn** **20 51 08.4 +0.6**
comp=N,0.1nm,0.2s,SNR=7.9
GUD Guadarrama 7.50 61 P **Pn** **20 51 11.4 +0.8**
comp=N,0.9nm,0.3s,SNR=7.9
GUD S **Sn** **20 52 32.7 -3.0**
comp=N,0.2nm,0.2s,SNR=7.9
GUD Guadarrama 7.50 61 P **Pn** **20 51 11.4 +0.8**
comp=N,0.9nm,0.3s,SNR=7.9
GUD S **Sn** **20 52 32.7 -3.0**
comp=N,0.2nm,0.2s,SNR=7.9
ETOB Tobarra 8.96 78 P **Pn** **20 51 31.2 +0.6**
comp=N,0.3nm,0.2s,SNR=7.9
ETOB Tobarra 8.96 78 P **Pn** **20 51 31.2 +0.6**
comp=N,0.3nm,0.2s,SNR=7.9
ETOR Torete 9.04 64 P **Pn** **20 51 33.4 +1.6**
comp=N,0.2nm,0.3s,SNR=7.9
ETOR Torete 9.04 64 P **Pn** **20 51 33.4 +1.6**
comp=N,0.2nm,0.3s,SNR=7.9

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*IDC **02** 20:51:44.5±1.4, 29°.37N×139°.46E, h388km±68km, mb2.9/4, mb1 2.9/6, mb1mx2.6/62, mbtmp3.6/6, Error ellipse: s-maj=188.8km s-min=15.0km az=70.0*
ISC 02 20:51:44.9±1.0, 29°.5N±0°.2×140°.0E±0°.3, h414km, n6, σ0°79/7, mb3.1/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**3.10**	**141**	P	**P**	**20 52 50.6**	**+0.7**
	14nm,0.3s,baz=252,slow=18,SNR=31						
JCJ				S	**S**	**20 53 41.6**	**-1.0**
	33nm,0.3s,baz=287,slow=20,SNR=14						
MJAR	**Matsushiro Arr**	**7.14**	**348**	P	**P**	**20 53 30.6**	**-0.1**
	0.2nm,0.3s,baz=173,slow=10,SNR=5.2						
MKAR	**Makanchi Array**	**47.46**	**308**	P	**P**	**20 59 39.5**	**-0.6**
	0.2nm,0.3s,baz=87,slow=8.8,SNR=8.6						
WRA	**Warramunga Arr**	**49.50**	**187**	P	**P**	**20 59 55.7**	**+0.1**
	0.4nm,0.5s,baz=7.0,slow=7.6,SNR=12						
KURBB	**Kurchatov Arra**	**49.98**	**313**	P	**P**	**20 59 58.4**	**-0.5**
	0.5nm,0.4s,baz=94,slow=7.0,SNR=12						
BVAR	**Borovoye Array**	**54.96**	**316**	P	**P**	**21 00 35.4**	**+0.5**
	0.7nm,0.5s,baz=84,slow=7.2,SNR=8.9						

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*CNRM **02** 20:54:15.4, 36°.89N×12°.82W, h50km*
*SFS **02** 20:54:18.0, 37°.33N×12°.60W, h0km, ML4.1*
*MDD **02** 20:54:18.2±1.3, 37°.29N×12°.69W, h0km, mb4.4/25, Error ellipse: s-maj=12.0km s-min=9.1km az=60.0, PRXIMO*
*INMG **02** 20:54:19.0±1.9, 37°.11N×13°.14W, h10km, ML2.9, Error ellipse: s-maj=4.2km s-min=3.1km az=116.0*
*IGIL **02** 20:54:19.4, 37°.34N×12°.69W, h0km, ML2.9*
*CSEM **02** 20:54:21.0±0.3, 37°.40N×12°.45W, h10km, mb4.4, Error ellipse: s-maj=5.8km s-min=4.4km az=56.0*
*LDG **02** 20:54:27.4±0.1, 37°.46N×12°.09W, h10km, Ml3.3/3, Error ellipse: s-maj=9999.9km s-min=9999.9km az=99.0*
ISC 02 20:54:13.0±1.0, 37°.22N±0°.03×12°.80W±0°.04, h10km, n163, σ3°06/276, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.17**	**90**	*e*Pn	**Pn**	**20 55 06.3**	**+3.3**
PFVI				*e*Sn	**Sn**	**20 55 43.2**	**+2.3**
PFVI				A	A	20 55 46.9	
	10.0nm,0.2s						
PFVI	**Vila Bisbo**	**3.17**	**90**	P	**Pn**	**20 55 06.3**	**+3.3**
	3.9nm,0.1s,SNR=14						
PFVI				S	**Sn**	**20 55 42.6**	**+1.7**
	3.7nm,0.2s,SNR=7.9						
PFVI	**Vila Bisbo**	**3.17**	**90**	P	**Pn**	**20 55 06.3**	**+3.3**
	3.9nm,0.1s,SNR=14						
PFVI				S	**Sn**	**20 55 42.6**	**+1.7**
	3.7nm,0.2s,SNR=7.9						
PFVI				*e*Sn	**Sn**	**20 55 43.2**	**+2.3**
PMST	**Lisbon--Monsan**	**3.23**	**61**	*e*Pn	**Pn**	**20 55 08.1**	**+4.3**
PMST				*e*Sn	**Sn**	**20 55 44.7**	**+2.4**
PMST				A	A	20 55 47.5	
	38nm,0.2s						
PMST	**Lisbon--Monsan**	**3.23**	**61**	*e*Pn	**Pn**	**20 55 08.1**	**+4.3**
PMST				*e*Sn	**Sn**	**20 55 44.7**	**+2.4**
PTEO	**Sao Teotonio**	**3.26**	**83**	*e*Pn	**Pn**	**20 55 07.9**	**+3.7**
PTEO				*e*Sn	**Sn**	**20 55 44.2**	**+1.2**
PTEO				A	A	20 55 52.9	
	16nm,0.4s						
PTEO	**Sao Teotonio**	**3.26**	**83**	P	**Pn**	**20 55 07.9**	**+3.7**
PTEO				S	**Sn**	**20 55 44.2**	**+1.2**
	8.1nm,0.4s						
PTEO	**Sao Teotonio**	**3.26**	**83**	P	**Pn**	**20 55 07.9**	**+3.7**
PTEO				S	**Sn**	**20 55 44.2**	**+1.2**
	8.1nm,0.4s						
PMAFR	**Mafra**	**3.27**	**57**	*e*Pn	**Pn**	**20 55 08.3**	**+4.0**
PMAFR				*e*Sn	**Sn**	**20 55 45.8**	**+2.5**
PMAFR				A	A	20 55 53.9	
	49nm,0.5s						
PMAFR	**Mafra**	**3.27**	**57**	P	**Pn**	**20 55 08.4**	**+4.1**
	15nm,0.2s,SNR=24						
PMAFR				S	**Sn**	**20 55 44.2**	**+1.0**
	36nm,0.3s,SNR=12						
PMAFR	**Mafra**	**3.27**	**57**	*e*Pn	**Pn**	**20 55 08.3**	**+4.0**
PMAFR				S	**Sn**	**20 55 44.2**	**+1.0**
	36nm,0.3s,SNR=12						
PMAFR				*e*Sn	**Sn**	**20 55 45.8**	**+2.5**
MORF	**Marmelete**	**3.31**	**87**	*e*P	**Pn**	**20 55 08.6**	**+3.7**
MORF				*e*S	**Sn**	**20 55 46.0**	**+1.7**
MORF				AML	AML	20 55 50.0	
	comp=N,23nm,0.3s						
MORF	**Marmelete**	**3.31**	**87**	*e*Pn	**Pn**	**20 55 08.6**	**+3.7**
MORF				*e*Sn	**Sn**	**20 55 46.5**	**+2.2**
MORF				A	A	20 55 53.8	
	comp=N,14nm,0.5s						
MORF	**Marmelete**	**3.31**	**87**	P	**Pn**	**20 55 08.6**	**+3.7**
MORF				S	**Sn**	**20 55 46.0**	**+1.7**
	comp=N,23nm,0.3s						
MORF	**Marmelete**	**3.31**	**87**	P	**Pn**	**20 55 08.6**	**+3.7**
MORF				S	**Sn**	**20 55 46.0**	**+1.7**
	comp=N,23nm,0.3s						
MORF				*e*Sn	**Sn**	**20 55 46.5**	**+2.2**
PNCL	**Nicolau / Gran**	**3.50**	**74**	*e*Pn	**Pn**	**20 55 10.9**	**+3.4**
PNCL				*e*Sn	**Sn**	**20 55 50.5**	**+1.5**
PNCL				A	A	20 55 57.5	
	comp=N,14nm,0.3s						
PNCL	**Nicolau / Gran**	**3.50**	**74**	*e*Pn	**Pn**	**20 55 10.9**	**+3.4**
PNCL				*e*Sn	**Sn**	**20 55 50.5**	**+1.5**
MESJ	**Messejana**	**3.69**	**79**	*e*P	**Pn**	**20 55 13.8**	**+3.7**
MESJ				*e*S	**Sn**	**20 55 54.6**	**+1.0**
MESJ				AML	AML	20 55 58.3	
	comp=N,20nm,0.2s						
MESJ	**Messejana**	**3.69**	**79**	*e*Pn	**Pn**	**20 55 13.8**	**+3.7**
MESJ				*e*Sn	**Sn**	**20 55 54.7**	**+1.0**
MESJ				A	A	20 56 03.0	
	comp=N,12nm,0.3s						
MESJ	**Messejana**	**3.69**	**79**	P	**Pn**	**20 55 13.8**	**+3.7**
MESJ				S	**Sn**	**20 55 54.6**	**+1.0**
	comp=N,20nm,0.2s						
MESJ	**Messejana**	**3.69**	**79**	P	**Pn**	**20 55 13.8**	**+3.7**
MESJ				*e*Sn	**Sn**	**20 55 54.7**	**+1.0**
ALMR	**Almeirim**	**3.85**	**59**	*e*P	**Pn**	**20 55 15.9**	**+3.7**
ALMR				*e*S	**Sn**	**20 55 58.6**	**+1.1**
ALMR				AML	AML	20 56 02.2	
	comp=E,76nm,0.5s						
ALMR	**Almeirim**	**3.85**	**59**	*e*Pn	**Pn**	**20 55 16.1**	**+3.9**
ALMR				*e*Sn	**Sn**	**20 55 59.3**	**+1.9**
ALMR				A	A	20 56 05.6	
	comp=E,50nm,0.3s						
ALMR	**Almeirim**	**3.85**	**59**	P	**Pn**	**20 55 15.9**	**+3.7**
ALMR				S	**Sn**	**20 55 58.6**	**+1.1**
	comp=E,38nm,0.5s						
ALMR	**Almeirim**	**3.85**	**59**	*e*Pn	**Pn**	**20 55 16.1**	**+3.9**
ALMR				S	**Sn**	**20 55 58.6**	**+1.1**
	comp=E,38nm,0.5s						
ALMR				*e*Sn	**Sn**	**20 55 59.3**	**+1.9**
PBDV	**Barranco-do-Ve**	**3.89**	**88**	*e*Pn	**Pn**	**20 55 16.9**	**+4.1**
PBDV				*e*Sn	**Sn**	**20 56 02.0**	**+3.5**
PBDV				A	A	20 56 05.7	
	comp=E,11nm,0.5s						
PBDV	**Barranco-do-Ve**	**3.89**	**88**	P	**Pn**	**20 55 16.9**	**+4.1**
PBDV				S	**Sn**	**20 56 02.0**	**+3.5**
	comp=E,11nm,0.5s						
PBDV	**Barranco-do-Ve**	**3.89**	**88**	P	**Pn**	**20 55 16.9**	**+4.1**
PBDV				S	**Sn**	**20 56 02.0**	**+3.5**
	comp=E,11nm,0.5s						
PBEJ	**Beja**	**4.00**	**77**	*e*Pn	**Pn**	**20 55 18.9**	**+4.6**
PBEJ				*e*Sn	**Sn**	**20 56 02.6**	**+1.4**
PBEJ				A	A	20 56 07.6	
	comp=E,20nm,0.2s						
PBEJ	**Beja**	**4.00**	**77**	P	**Pn**	**20 55 18.9**	**+4.6**
PBEJ				S	**Sn**	**20 56 02.6**	**+1.4**
	comp=E,10nm,0.2s						
PBEJ	**Beja**	**4.00**	**77**	P	**Pn**	**20 55 18.9**	**+4.6**
PBEJ				S	**Sn**	**20 56 02.6**	**+1.4**
	comp=E,10nm,0.2s						
EVO	**Evora**	**4.01**	**70**	*e*Pn	**Pn**	**20 55 18.2**	**+3.8**
EVO				*e*Sn	**Sn**	**20 56 02.1**	**+0.7**
EVO				A	A	20 56 08.1	
	comp=E,13nm,0.3s						
EVO	**Evora**	**4.01**	**70**	P	**Pn**	**20 55 17.9**	**+3.5**
EVO				S	**Sn**	**20 56 02.1**	**+0.7**
	comp=E,13nm,0.3s						
EVO	**Evora**	**4.01**	**70**	P	**Pn**	**20 55 17.9**	**+3.5**
EVO	**Evora**	**4.01**	**70**	*e*Pn	**Pn**	**20 55 18.2**	**+3.8**
EVO				S	**Sn**	**20 56 02.1**	**+0.7**
	comp=E,13nm,0.3s						
PVAQ	**Vaqueiros**	**4.06**	**86**	*e*Pn	**Pn**	**20 55 19.2**	**+4.1**
PVAQ				*e*Sn	**Sn**	**20 56 03.8**	**+1.2**
PVAQ				A	A	20 56 09.9	
	comp=E,13nm,0.2s						
PVAQ	**Vaqueiros**	**4.06**	**86**	P	**Pn**	**20 55 19.2**	**+4.1**
PVAQ				S	**Sn**	**20 56 03.8**	**+1.2**
	comp=E,13nm,0.2s						
PVAQ	**Vaqueiros**	**4.06**	**86**	P	**Pn**	**20 55 19.2**	**+4.1**
PVAQ				S	**Sn**	**20 56 03.8**	**+1.2**
	comp=E,13nm,0.2s						
PTOM	**Tomar**	**4.20**	**54**	*e*Pn	**Pn**	**20 55 21.5**	**+4.5**
PTOM				*e*Sn	**Sn**	**20 56 07.8**	**+1.8**
PTOM				A	A	20 56 14.3	
	comp=E,25nm,0.4s						
PTOM	**Tomar**	**4.20**	**54**	P	**Pn**	**20 55 21.5**	**+4.5**
PTOM				S	**Sn**	**20 56 07.8**	**+1.8**
	comp=E,13nm,0.4s						
PTOM	**Tomar**	**4.20**	**54**	P	**Pn**	**20 55 21.5**	**+4.5**
PTOM				S	**Sn**	**20 56 07.8**	**+1.8**
	comp=E,13nm,0.4s						
EGRO	**El Granado**	**4.25**	**84**	P	**Pn**	**20 55 22.0**	**+4.3**
	comp=E,13nm,0.2s,SNR=21						
EGRO				S	**Sn**	**20 56 08.1**	**+0.8**
	comp=E,15nm,0.4s						
EGRO	**El Granado**	**4.25**	**84**	P	**Pn**	**20 55 22.0**	**+4.3**
	comp=E,13nm,0.2s,SNR=21						
EGRO				S	**Sn**	**20 56 08.1**	**+0.8**
	comp=E,15nm,0.4s						
PCAS	**Casmilo, Conde**	**4.39**	**49**	*e*Pn	**Pn**	**20 55 23.4**	**+3.6**
PCAS				*e*Sn	**Sn**	**20 56 11.7**	**+0.7**
PCAS				A	A	20 56 23.7	
	comp=E,10nm,0.5s						
PCAS	**Casmilo, Conde**	**4.39**	**49**	*e*Pn	**Pn**	**20 55 23.4**	**+3.6**
PCAS				*e*Sn	**Sn**	**20 56 11.7**	**+0.7**
PESTR	**Estremoz**	**4.43**	**67**	*e*Pn	**Pn**	**20 55 24.1**	**+3.9**
PESTR				*e*Sn	**Sn**	**20 56 12.9**	**+1.1**
PESTR				A	A	20 56 18.4	
	comp=E,11nm,0.5s						
PESTR	**Estremoz**	**4.43**	**67**	*e*Pn	**Pn**	**20 55 24.1**	**+3.9**
PESTR				*e*Sn	**Sn**	**20 56 12.9**	**+1.1**
COI	**Coimbra**	**4.54**	**48**	S	**Sn**	**20 56 15.0**	**+0.3**
COI	**Coimbra**	**4.54**	**48**	S	**Sn**	**20 56 15.0**	**+0.3**
PBAR	**Barrancos**	**4.67**	**77**	*e*Pn	**Pn**	**20 55 27.8**	**+4.3**
PBAR				*e*Sn	**Sn**	**20 56 18.7**	**+1.0**
PBAR				A	A	20 56 25.4	
	comp=E,17nm,0.2s						
PBAR	**Barrancos**	**4.67**	**77**	P	**Pn**	**20 55 27.8**	**+4.3**
PBAR				S	**Sn**	**20 56 18.7**	**+1.0**
	comp=E,17nm,0.2s						
PBAR	**Barrancos**	**4.67**	**77**	P	**Pn**	**20 55 27.8**	**+4.3**
PBAR				S	**Sn**	**20 56 18.7**	**+1.0**
	comp=E,17nm,0.2s						
PMRV	**Marv??o**	**4.79**	**61**	*e*Pn	**Pn**	**20 55 29.2**	**+4.0**
PMRV				*e*Sn	**Sn**	**20 56 21.8**	**+1.1**
PMRV				A	A	20 56 28.4	
	comp=E,18nm,0.5s						
PMRV	**Marv??o**	**4.79**	**61**	P	**Pn**	**20 55 29.2**	**+4.0**
PMRV				S	**Sn**	**20 56 21.8**	**+1.1**
	comp=E,18nm,0.5s						
PMRV	**Marv??o**	**4.79**	**61**	P	**Pn**	**20 55 29.2**	**+4.0**
PMRV				S	**Sn**	**20 56 21.8**	**+1.1**
	comp=E,18nm,0.5s						
EBAD	**Badajoz**	**4.82**	**70**	P	**Pn**	**20 55 29.2**	**+3.6**
	comp=E,5.5nm,0.1s,SNR=43						
EBAD				S	**Sn**	**20 56 21.2**	**-0.3**
	comp=E,4.4nm,0.3s,SNR=4.8						
EBAD	**Badajoz**	**4.82**	**70**	P	**Pn**	**20 55 29.2**	**+3.6**
	comp=E,5.5nm,0.1s,SNR=43						
EBAD				S	**Sn**	**20 56 21.2**	**-0.3**
	comp=E,4.4nm,0.3s,SNR=4.8						
EMIN	**Mina Concepcio**	**4.90**	**82**	P	**Pn**	**20 55 30.8**	**+4.0**
	comp=E,10nm,0.4s,SNR=40						
EMIN				S	**Sn**	**20 56 23.4**	**-0.1**
	comp=E,6.5nm,0.2s						
EMIN	**Mina Concepcio**	**4.90**	**82**	P	**Pn**	**20 55 30.8**	**+4.0**
	comp=E,10nm,0.4s,SNR=40						
EMIN				S	**Sn**	**20 56 23.4**	**-0.1**
	comp=E,6.5nm,0.2s						
PCBR	**Castelo Branco**	**4.92**	**56**	*e*Pn	**Pn**	**20 55 31.3**	**+4.3**
PCBR				*e*Sn	**Sn**	**20 56 24.2**	**+0.2**
PCBR				A	A	20 56 31.4	
	comp=E,7.8nm,0.3s						
PCBR	**Castelo Branco**	**4.92**	**56**	P	**Pn**	**20 55 31.3**	**+4.3**
PCBR				S	**Sn**	**20 56 24.2**	**+0.2**
	comp=E,3.9nm,0.3s						
PCBR	**Castelo Branco**	**4.92**	**56**	P	**Pn**	**20 55 31.3**	**+4.3**
PCBR				S	**Sn**	**

PMPS	**Porto Santo**	**5.07**	**216**	*e*Pn	Pn	20 55 23.4	-5.6
PMPS				*e*Sn	Sn	20 56 13.4	-14
PTO	**Porto**	**5.09**	**39**	*e*Sn	**Sn**	**20 56 28.8**	**+0.7**
PTO	**Porto**	**5.09**	**39**	S	**Sn**	**20 56 28.8**	**+0.7**
PTO	**Porto**	**5.09**	**39**	S	**Sn**	**20 56 28.8**	**+0.7**
PVIS	**Viseu**	**5.17**	**46**	*e*Pn	**Pn**	**20 55 33.8**	**+3.3**
PVIS				*e*Sn	**Sn**	**20 56 29.3**	**-1.0**
PVIS				A	A	20 56 35.0	
	comp=E,9.0nm,0.6s						
PVIS	**Viseu**	**5.17**	**46**	P	**Pn**	**20 55 33.8**	**+3.3**
PVIS				S	**Sn**	**20 56 29.3**	**-1.0**
	comp=E,4.5nm,0.6s						
PVIS	**Viseu**	**5.17**	**46**	P	**Pn**	**20 55 33.8**	**+3.3**
PVIS				S	**Sn**	**20 56 29.3**	**-1.0**
	comp=E,4.5nm,0.6s						
MTE	**Manteigas**	**5.19**	**51**	*e*Pn	**Pn**	**20 55 34.4**	**+3.7**
MTE				*e*Sn	**Sn**	**20 56 30.9**	**+0.3**
MTE				A	A	20 56 38.3	
	comp=E,15nm,0.4s						
MTE	**Manteigas**	**5.19**	**51**	P	**Pn**	**20 55 34.4**	**+3.7**
MTE				S	**Sn**	**20 56 30.9**	**+0.3**
	comp=E,7.4nm,0.4s						
MTE	**Manteigas**	**5.19**	**51**	P	**Pn**	**20 55 34.4**	**+3.7**
MTE				S	**Sn**	**20 56 30.9**	**+0.3**
	comp=E,7.4nm,0.4s						
PMAR	**Madeira**	**5.62**	**218**	*e*Pn	**Pn**	**20 55 32.7**	**-4.0**
PMAR				*e*Sn	Sn	20 56 27.9	-14
PMAR				A	A	20 56 36.5	
	comp=E,9.2nm,0.5s						
PMAR	**Madeira**	**5.62**	**218**	P	Pn	20 55 32.5	-4.2
PMAR				*e*Sn	Sn	20 56 27.9	-14
PVRL	**Vila Real**	**5.65**	**43**	*e*Pn	**Pn**	**20 55 40.5**	**+3.5**
PVRL				*e*Sn	**Sn**	**20 56 40.4**	**-1.6**
PVRL				A	A	20 56 48.8	
	comp=E,6.2nm,0.4s						
PVRL	**Vila Real**	**5.65**	**43**	P	**Pn**	**20 55 40.5**	**+3.5**
PVRL				S	**Sn**	**20 56 40.4**	**-1.6**
	comp=E,3.1nm,0.4s						
PVRL	**Vila Real**	**5.65**	**43**	P	**Pn**	**20 55 40.5**	**+3.5**
PVRL				S	**Sn**	**20 56 40.4**	**-1.6**
	comp=E,3.1nm,0.4s						
POLO	**Lamas de Olo**	**5.68**	**42**	*e*Pn	**Pn**	**20 55 40.9**	**+3.4**
POLO				*e*Sn	**Sn**	**20 56 42.1**	**-0.7**
POLO				A	A	20 56 44.8	
	comp=E,2.0nm,0.4s						
POLO	**Lamas de Olo**	**5.68**	**42**	*e*Pn	**Pn**	**20 55 40.9**	**+3.4**
POLO				*e*Sn	**Sn**	**20 56 42.1**	**-0.7**
PMOZ	**Porto Moniz, M**	**5.68**	**221**	*e*Pn	Pn	20 55 33.3	-4.2
PMOZ				*e*Sn	Sn	20 56 28.1	-15
PMOZ				A	A	20 56 36.5	
	comp=E,24nm,0.4s						
PMOZ	**Porto Moniz, M**	**5.68**	**221**	*e*Pn	Pn	20 55 33.3	-4.2
PMOZ				*e*Sn	Sn	20 56 28.1	-15
PCAB	**Cabril**	**5.80**	**38**	*e*Pn	**Pn**	**20 55 42.6**	**+3.4**
PCAB				*e*Sn	**Sn**	**20 56 45.8**	**0.0**
PCAB				A	A	20 57 03.5	
	comp=E,6.0nm,0.6s						
PCAB	**Cabril**	**5.80**	**38**	P	**Pn**	**20 55 42.6**	**+3.4**
PCAB				S	**Sn**	**20 56 45.8**	**0.0**
	comp=E,3.0nm,0.6s						
PCAB	**Cabril**	**5.80**	**38**	P	**Pn**	**20 55 42.6**	**+3.4**
PCAB				S	**Sn**	**20 56 45.8**	**0.0**
	comp=E,3.0nm,0.6s						
PGAV	**Gavieira, Arco**	**5.89**	**35**	*e*Pn	**Pn**	**20 55 44.1**	**+3.8**
PGAV				*e*Sn	**Sn**	**20 56 46.2**	**-1.7**
PGAV				A	A	20 56 51.9	
	comp=E,6.3nm,0.4s						
PGAV	**Gavieira, Arco**	**5.89**	**35**	*e*Pn	**Pn**	**20 55 44.1**	**+3.8**
PGAV				*e*Sn	**Sn**	**20 56 46.2**	**-1.7**
ELOB	**Lobios**	**5.91**	**37**	P	**Pn**	**20 55 44.2**	**+3.6**
	comp=E,1.6nm,0.2s,SNR=43						
ELOB				S	**Sn**	**20 56 46.8**	**-1.6**
	comp=E,3.8nm,0.4s,SNR=5.4						
ELOB	**Lobios**	**5.91**	**37**	P	**Pn**	**20 55 44.2**	**+3.6**
	comp=E,1.6nm,0.2s,SNR=43						
ELOB				S	**Sn**	**20 56 46.8**	**-1.6**
	comp=E,3.8nm,0.4s,SNR=5.4						
ECAB	**El Cabril**	**5.92**	**80**	P	**Pn**	**20 55 44.5**	**+3.8**
	comp=E,4.5nm,0.3s,SNR=51						
ECAB				S	**Sn**	**20 56 48.0**	**-0.6**
	comp=E,5.4nm,0.6s						
ECAB	**El Cabril**	**5.92**	**80**	P	**Pn**	**20 55 44.5**	**+3.8**
	comp=E,4.5nm,0.3s,SNR=51						
ECAB				S	**Sn**	**20 56 48.0**	**-0.6**
	comp=E,5.4nm,0.6s						
MVO	**Moncorvo**	**5.96**	**47**	*e*Pn	**Pn**	**20 55 45.3**	**+3.9**
MVO				*e*Sn	**Sn**	**20 56 49.2**	**-0.6**
MVO				A	A	20 56 57.2	
	comp=E,8.7nm,0.7s						
MVO	**Moncorvo**	**5.96**	**47**	P	**Pn**	**20 55 44.6**	**+3.2**
	comp=E,3.4nm,0.2s,SNR=11						
MVO				S	**Sn**	**20 56 47.8**	**-2.0**
	comp=E,7.6nm,0.4s,SNR=7.1						
MVO	**Moncorvo**	**5.96**	**47**	P	**Pn**	**20 55 44.6**	**+3.2**
	comp=E,3.4nm,0.2s,SNR=11						
MVO	**Moncorvo**	**5.96**	**47**	*e*Pn	**Pn**	**20 55 45.3**	**+3.9**
MVO				S	**Sn**	**20 56 47.8**	**-2.0**
	comp=E,7.6nm,0.4s,SNR=7.1						
MVO				*e*Sn	**Sn**	**20 56 49.2**	**-0.6**
EPLA	**Plasencia**	**5.97**	**60**	P	**Pn**	**20 55 45.5**	**+4.0**
	comp=E,6.7nm,0.3s,SNR=32						
EPLA				S	**Sn**	**20 56 48.9**	**-1.1**
	comp=E,6.3nm,0.6s,SNR=5.8						
EPLA	**Plasencia**	**5.97**	**60**	P	**Pn**	**20 55 45.5**	**+4.0**
	comp=E,6.7nm,0.3s,SNR=32						
EPLA				S	**Sn**	**20 56 48.9**	**-1.1**
	comp=E,6.3nm,0.6s,SNR=5.8						
HORN	**Hornachuelos**	**6.03**	**82**	P	**Pn**	**20 55 46.0**	**+3.8**
HORN				S	**Sn**	**20 56 49.9**	**-1.3**
EMAZ	**Mazaricos**	**6.42**	**26**	P	**Pn**	**20 55 50.4**	**+2.8**
	comp=E,1.6nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**20 56 55.7**	**-5.3**
	comp=E,11nm,0.3s,SNR=7.9						
EMAZ	**Mazaricos**	**6.42**	**26**	P	**Pn**	**20 55 50.4**	**+2.8**
	comp=E,1.6nm,0.1s,SNR=7.9						
EMIJ	**Mijas**	**6.47**	**93**	P	**Pn**	**20 55 51.9**	**+3.7**
	comp=E,0.9nm,0.2s,SNR=7.9						
EMIJ				S	**Sn**	**20 57 01.9**	**-0.2**
	comp=E,3.0nm,0.4s,SNR=7.9						
EMIJ	**Mijas**	**6.47**	**93**	P	**Pn**	**20 55 51.9**	**+3.7**
	comp=E,0.9nm,0.2s,SNR=7.9						
EMIJ				S	**Sn**	**20 57 01.9**	**-0.2**
	comp=E,3.0nm,0.4s,SNR=7.9						
PBRG	**Braganca**	**6.55**	**44**	*e*Pn	**Pn**	**20 55 53.2**	**+3.9**
PBRG				*e*Sn	**Sn**	**20 57 03.0**	**-1.1**
PBRG				A	A	20 57 06.6	
	comp=E,4.6nm,0.2s						
PBRG	**Braganca**	**6.55**	**44**	P	**Pn**	**20 55 53.2**	**+3.9**
PBRG				S	**Sn**	**20 57 03.0**	**-1.1**
	comp=E,2.3nm,0.2s						
PBRG	**Braganca**	**6.55**	**44**	P	**Pn**	**20 55 53.2**	**+3.9**
PBRG				S	**Sn**	**20 57 03.0**	**-1.1**
	comp=E,2.3nm,0.2s						
EADA	**Adamuz**	**6.59**	**79**	P	**Pn**	**20 55 53.9**	**+4.0**
	comp=E,3.4nm,0.3s,SNR=28						
EADA				S	**Sn**	**20 57 03.6**	**-1.5**
	comp=E,5.4nm,0.6s						
EADA	**Adamuz**	**6.59**	**79**	P	**Pn**	**20 55 53.9**	**+4.0**
	comp=E,3.4nm,0.3s,SNR=28						
EADA				S	**Sn**	**20 57 03.6**	**-1.5**
	comp=E,5.4nm,0.6s						
EAGO	**Agolada(Pontev**	**6.64**	**32**	P	**Pn**	**20 55 53.6**	**+3.0**
	comp=E,1.5nm,0.1s,SNR=7.9						
EAGO				S	**Sn**	**20 57 02.6**	**-3.8**
	comp=E,4.4nm,0.3s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.64**	**32**	P	**Pn**	**20 55 53.6**	**+3.0**
	comp=E,1.5nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**6.64**	**43**	P	**Pn**	**20 55 54.8**	**+4.1**
	comp=E,2.6nm,0.2s,SNR=11						
ECAL				S	**Sn**	**20 57 04.9**	**-1.6**
	comp=E,5.0nm,0.3s,SNR=11						
ECAL	**Calabor**	**6.64**	**43**	P	**Pn**	**20 55 54.8**	**+4.1**
	comp=E,2.6nm,0.2s,SNR=11						
ECAL				S	**Sn**	**20 57 04.9**	**-1.6**
	comp=E,5.0nm,0.3s,SNR=11						
EGOR	**Sierra Gorda,**	**6.94**	**88**	P	**Pn**	**20 55 58.5**	**+3.6**
	comp=E,0.9nm,0.3s,SNR=7.9						
EGOR				S	**Sn**	**20 57 13.6**	**-0.3**
	comp=E,2.7nm,0.4s,SNR=7.9						
EGOR	**Sierra Gorda,**	**6.94**	**88**	P	**Pn**	**20 55 58.5**	**+3.6**
	comp=E,0.9nm,0.3s,SNR=7.9						
EGOR				S	**Sn**	**20 57 13.6**	**-0.3**
	comp=E,2.7nm,0.4s,SNR=7.9						
PAB	**San Pablo**	**7.03**	**68**	P	**Pn**	**20 55 59.6**	**+3.6**
	comp=E,2.5nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**20 57 14.5**	**-1.6**
	comp=E,2.9nm,0.5s,SNR=7.9						
PAB	**San Pablo**	**7.03**	**68**	P	**Pn**	**20 55 59.6**	**+3.6**
	comp=E,2.5nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**20 57 14.5**	**-1.6**
	comp=E,2.9nm,0.5s,SNR=7.9						
OUK	**Oukaimeden**	**7.26**	**144**	P	Pn	20 55 53.6	-5.8
OUK				S	**Sn**	**20 57 15.0**	**-7.0**
ELGU	**Los Guajares,**	**7.34**	**90**	P	**Pn**	**20 56 04.7**	**+4.3**
	comp=E,1.0nm,0.2s,SNR=7.9						
ELGU				S	**Sn**	**20 57 22.4**	**-1.4**
	comp=E,1.9nm,0.5s,SNR=7.9						
ELGU	**Los Guajares,**	**7.34**	**90**	P	**Pn**	**20 56 04.7**	**+4.3**
	comp=E,1.0nm,0.2s,SNR=7.9						
ELGU				S	**Sn**	**20 57 22.4**	**-1.4**
	comp=E,1.9nm,0.5s,SNR=7.9						
ESDC	**Sonseca Array**	**7.35**	**68**	P	**Pn**	**20 56 03.9**	**+3.4**
	comp=E,2.1nm,0.3s,baz=254,slow=13,SNR=50						
ESDC				S	**Sn**	**20 57 21.9**	**-2.1**
	comp=E,0.6nm,0.3s,baz=256,slow=23,SNR=5.1						
ESDC	**Sonseca Array**	**7.35**	**68**	P	**Pn**	**20 56 03.9**	**+3.4**
	comp=E,2.1nm,0.3s,SNR=50						
ESDC				S	**Sn**	**20 57 21.9**	**-2.1**
	comp=E,0.6nm,0.3s,SNR=5.1						
EQUE	**Quentar**	**7.47**	**87**	P	**Pn**	**20 56 05.2**	**+3.1**
	comp=E,0.6nm,0.2s,SNR=6.8						
EQUE				S	**Sn**	**20 57 25.1**	**-1.8**
	comp=E,3.2nm,0.8s						
EQUE	**Quentar**	**7.47**	**87**	P	**Pn**	**20 56 05.2**	**+3.1**
	comp=E,0.6nm,0.2s,SNR=6.8						
EQUE				S	**Sn**	**20 57 25.1**	**-1.8**
	comp=E,3.2nm,0.8s						
EPON	**Pontenova**	**7.47**	**34**	P	**Pn**	**20 56 05.4**	**+3.4**
	comp=E,0.7nm,0.2s,SNR=7.9						
EPON				S	**Sn**	**20 57 24.2**	**-2.6**
	comp=E,3.2nm,0.3s,SNR=7.9						
EPON	**Pontenova**	**7.47**	**34**	P	**Pn**	**20 56 05.4**	**+3.4**
	comp=E,0.7nm,0.2s,SNR=7.9						
EPON				S	**Sn**	**20 57 24.2**	**-2.6**
	comp=E,3.2nm,0.3s,SNR=7.9						
GUD	**Guadarrama**	**7.55**	**60**	P	**Pn**	**20 56 06.9**	**+3.6**
	comp=E,3.6nm,0.2s,SNR=7.9						
GUD				S	**Sn**	**20 57 26.8**	**-2.2**
	comp=E,1.3nm,0.7s,SNR=7.9						
GUD	**Guadarrama**	**7.55**	**60**	P	**Pn**	**20 56 06.9**	**+3.6**
	comp=E,3.6nm,0.2s,SNR=7.9						
GUD				S	**Sn**	**20 57 26.8**	**-2.2**
	comp=E,1.3nm,0.7s,SNR=7.9						
CZD	**Col de Zad**	**7.61**	**121**	S	**Sn**	**20 57 28.1**	**-2.4**
EQES	**Quesada**	**7.75**	**83**	P	**Pn**	**20 56 09.3**	**+3.3**
	comp=E,1.2nm,0.2s,SNR=8.1						
EQES				S	**Sn**	**20 57 32.2**	**-1.7**
	comp=E,2.1nm,0.5s						
EQES	**Quesada**	**7.75**	**83**	P	**Pn**	**20 56 09.3**	**+3.3**
	comp=E,1.2nm,0.2s,SNR=8.1						
EQES				S	**Sn**	**20 57 32.2**	**-1.7**
	comp=E,2.1nm,0.5s						
SESP	**Santiago Espad**	**8.18**	**81**	P	**Pn**	**20 56 10.7**	**-1.2**
EARI	**Arriondas**	**8.39**	**41**	P	Pn	20 56 20.1	+5.4
	comp=E,0.4nm,0.2s,SNR=7.9						
EARI				S	**Sn**	**20 57 46.2**	**-3.4**
	comp=E,4.3nm,0.6s,SNR=7.9						
EARI	**Arriondas**	**8.39**	**41**	P	Pn	20 56 20.1	+5.4
	comp=E,0.4nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**9.00**	**78**	P	**Pn**	**20 56 26.7**	**+3.6**
	comp=E,1.1nm,0.2s,SNR=14						
ETOB				S	**Sn**	**20 58 01.8**	**-2.8**
	comp=E,1.8nm,0.5s,SNR=7.9						
ETOB	**Tobarra**	**9.00**	**78**	P	**Pn**	**20 56 26.7**	**+3.6**
	comp=E,1.1nm,0.2s,SNR=14						
ETOB				S	**Sn**	**20 58 01.8**	**-2.8**
	comp=E,1.8nm,0.5s,SNR=7.9						
ETOR	**Torete**	**9.10**	**63**	P	**Pn**	**20 56 28.4**	**+4.0**
	comp=E,8.6nm,0.3s,SNR=22						
ETOR				S	**Sn**	**20 58 03.6**	**-3.4**
	comp=E,3.1nm,0.3s,SNR=5.5						
ETOR	**Torete**	**9.10**	**63**	P	**Pn**	**20 56 28.4**	**+4.0**
	comp=E,8.6nm,0.3s,SNR=22						
ETOR				S	**Sn**	**20 58 03.6**	**-3.4**
	comp=E,3.1nm,0.3s,SNR=5.5						
EMUR	**La Murta**	**9.20**	**83**	P	**Pn**	**20 56 29.1**	**+3.3**
	comp=E,1.7nm,0.4s,SNR=4.0						
EMUR	**La Murta**	**9.20**	**83**	P	**Pn**	**20 56 29.1**	**+3.3**
	comp=E,1.7nm,0.4s,SNR=4.0						
ELAN	**Lanestosa**	**9.34**	**47**	P	**Pn**	**20 56 30.2**	**+2.6**
	comp=E,0.7nm,0.2s,SNR=4.0						
ELAN				S	**Sn**	**20 58 08.2**	**-4.6**
	comp=E,10nm,1.2s,SNR=7.9						
ELAN	**Lanestosa**	**9.34**	**47**	P	**Pn**	**20 56 30.2**	**+2.6**
	comp=E,0.7nm,0.2s,SNR=4.0						
EMOS	**Mosqueruela**	**10.12**	**68**	P	**Pn**	**20 56 42.1**	**+3.6**
	comp=E,1.1nm,0.3s,SNR=7.9						
EMOS				S	**Sn**	**20 58 27.8**	**-4.4**
	comp=E,2.5nm,0.6s,SNR=7.9						
EMOS	**Mosqueruela**	**10.12**	**68**	P	**Pn**	**20 56 42.1**	**+3.6**
	comp=E,1.1nm,0.3s,SNR=7.9						
EORO	**Oroz-Betelu**	**10.47**	**54**	P	**Pn**	**20 56 46.4**	**+3.3**
	comp=E,1.8nm,0.4s,SNR=7.9						
EORO	**Oroz-Betelu**	**10.47**	**54**	P	**Pn**	**20 56 46.4**	**+3.3**
	comp=E,1.8nm,0.4s,SNR=7.9						
IELO	**Elcoad**	**10.49**	**54**	P	**Pn**	**20 56 46.9**	**+3.5**
	comp=E,2.5nm,0.2s,SNR=7.9						
IELO				S	**Sn**	**20 58 35.6**	**-5.4**
	comp=E,4.4nm,0.6s,SNR=7.9						
IELO	**Elcoad**	**10.49**	**54**	P	**Pn**	**20 56 46.9**	**+3.5**
	comp=E,2.5nm,0.2s,SNR=7.9						
EALK	**Alkurruntz**	**10.50**	**52**	P	Pn	20 56 48.4	+4.7
	comp=E,2.7nm,0.4s,SNR=4.0						
EALK	**Alkurruntz**	**10.50**	**52**	P	Pn	20 56 48.4	+4.7
	comp=E,2.7nm,0.4s,SNR=4.0						
ESAC	**San Caprasio**	**10.54**	**61**	P	**Pn**	**20 56 48.1**	**+4.0**
	comp=E,4.7nm,0.2s,SNR=4.0						
ESAC				S	**Sn**	**20 58 36.9**	**-5.2**
	comp=E,7.8nm,0.5s,SNR=4.0						
ESAC	**San Caprasio**	**10.54**	**61**	P	**Pn**	**20 56 48.1**	**+4.0**
	comp=E,4.7nm,0.2s,SNR=4.0						
SJPF	**Ste Jean**	**10.63**	**53**	*e*Pn	**Pn**	**20 56 49.2**	**+3.9**
SJPF				*e*Sn	Sn	20 58 33.9	-10
	comp=E,1.7nm,0.4s						
SJPF	**Ste Jean**	**10.63**	**53**	P	**Pn**	**20 56 49.2**	**+3.9**
SJPF	**Ste Jean**	**10.63**	**53**	P	**Pn**	**20 56 49.2**	**+3.9**
ATE	**Arette**	**10.95**	**54**	P	**Pn**	**20 56 54.3**	**+4.6**
	comp=E,1.5nm,0.2s,SNR=7.9						
ATE				S	**Sn**	**20 58 47.4**	**-4.8**
	comp=E,13nm,1.2s,SNR=7.9						
ATE	**Arette**	**10.95**	**54**	P	**Pn**	**20 56 54.3**	**+4.6**
	comp=E,1.5nm,0.2s,SNR=7.9						
ETSF	**Etsaut**	**10.96**	**55**	*e*Pn	**Pn**	**20 56 54.4**	**+4.6**
ETSF				*e*Sn	Sn	20 58 42.3	-10
	comp=E,0.6nm,0.3s						
ETSF	**Etsaut**	**10.96**	**55**	P	**Pn**	**20 56 54.4**	**+4.6**
ETSF	**Etsaut**	**10.96**	**55**	P	**Pn**	**20 56 54.4**	**+4.6**
EPF	**Esparros**	**11.61**	**56**	*e*Pn	Pn	20 57 03.5	+4.8
EPF				*e*Sn	Sn	20 58 58.0	-10
	comp=E,1.8nm,0.5s						
EPF	**Esparros**	**11.61**	**56**	P	Pn	20 57 03.5	+4.8
EPF	**Esparros**	**11.61**	**56**	P	Pn	20 57 03.5	+4.8
MTLF	**Montolieu**	**12.98**	**57**	*e*Pn	Pn	20 57 22.8	+5.3
MTLF	**Montolieu**	**12.98**	**57**	Pn	Pn	20 57 22.8	+5.3

MAN 02 20:56:26.4, 9°.88N×125°.98E, h97km, mb4.3, ML3.1, MS2.8, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.49**	**258**	‖ *e*P	Pn	20 56 39.1	-2.7
SCPH				*e*S	Sn	20 56 48.4	-4.9
BUTP	**Butuan**	**0.97**	**201**	*e*P	Pn	20 56 46.7	+0.3
BUTP				*e*S	Sn	20 57 02.1	+0.8
MSLP	**Maasin**	**1.13**	**283**	*e*P	Pn	20 56 48.7	+0.6
MSLP				*e*S	Sn	20 57 05.0	+0.6
BESP	**Borongan**	**1.79**	**343**	*e*P	Pn	20 56 56.8	+0.6
BESP				*e*S	Sn	20 57 19.1	+0.3
CNP	**Catarman**	**2.91**	**334**	*e*P	Pn	20 57 11.9	+0.9

*ISCJB **02** 20:59:12.8±0.3, 49°.97N±0°.02×17°.13E±0°.03, h7km±4km, Error ellipse: s-maj=3.6km s-min=2.6km az=21.5*
*CSEM **02** 20:59:13.3±0.3, 49°.99N×17°.18E, h10km, ML2.6/15, Error ellipse: s-maj=6.4km s-min=4.7km az=3.0*
*IPEC **02** 20:59:14.2±0.1, 50°.02N×17°.22E, h6km±1km, ML1.7/8, Error ellipse: s-maj=0.4km s-min=0.3km az=14.0*
*PRU **02** 20:59:14.4, 50°.00N×17°.17E, h0km, Near Sumperk*
*VIE **02** 20:59:14.2±0.7, 49°.88N×17°.09E, h4km±5km, mb1.1/3, ml2.3/5, Error ellipse: s-maj=6.4km s-min=3.0km az=165.0*

29 km NNW of Olomouc

ISC 02 20:59:13.3±0.8, 50°.01N±0°.02×17°.22E±0°.02, h13km±5km, n43, o0°98/81, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANAC	**Anensky vrch**	**0.12**	**56**	Pg	**Pg**	**20 59 16.9**	**+0.2**
	baz=64						
ANAC				Sg	**Sg**	**20 59 18.8**	**-0.2**
	120nm,0.0s,baz=64						
ANAC	**Anensky vrch**	**0.12**	**56**	Pg	**Pg**	**20 59 16.9**	**+0.2**
	baz=64						
ANAC				Sg	**Sg**	**20 59 18.8**	**-0.2**
	120nm,0.0s,baz=64						
MUTC	**Mutkov**	**0.21**	**169**	Pg	**Pb**	**20 59 18.5**	**-0.5**
	baz=170						
MUTC				Sg	**Sg**	**20 59 21.5**	**+0.4**
	182nm,0.1s,baz=170						
MUTC	**Mutkov**	**0.21**	**169**	Pg	**Pb**	**20 59 18.5**	**-0.5**
	baz=170						
MUTC				Sg	**Sg**	**20 59 21.5**	**+0.4**
	182nm,0.1s,baz=170						
KRLC	**Kraliky**	**0.29**	**284**	*e*PG	**Pg**	**20 59 19.0**	**-0.4**
KRLC				*e*SG	**Sg**	**20 59 22.5**	**-1.0**
KRLC	**Kraliky**	**0.29**	**284**	Pg	**Pg**	**20 59 19.0**	**-0.4**
KRLC				Sg	**Sg**	**20 59 22.5**	**-1.0**
MORC	**Moravsky Berou**	**0.31**	**138**	Pg	**Pb**	**20 59 20.3**	**-0.4**
	baz=140						
MORC				Sg	**Sb**	**20 59 24.6**	**-1.1**
	36nm,0.1s,baz=140						
MORC	**Moravsky Berou**	**0.31**	**138**	*e*PG	**Pb**	**20 59 20.4**	**-0.3**
MORC				*e*SG	**Sb**	**20 59 24.6**	**-1.1**
MORC	**Moravsky Berou**	**0.31**	**138**	Pg	**Pb**	**20 59 20.3**	**-0.4**
	baz=140						
MORC				Sg	**Sb**	**20 59 24.6**	**-1.1**
	36nm,0.1s,baz=140						
OKC	**Ostrava-Krasne**	**0.62**	**105**	*e*PG	**Pb**	**20 59 26.0**	**0.0**
OKC				*e*SG	**Sb**	**20 59 34.4**	**-0.2**
OKC	**Ostrava-Krasne**	**0.62**	**105**	Pg	**Pb**	**20 59 26.0**	**0.0**
OKC				Sg	**Sb**	**20 59 34.4**	**-0.2**
DPC	**Dobruska-Polom**	**0.67**	**301**	*e*PG	**Pg**	**20 59 26.4**	**0.0**
DPC				*e*SG	**Sg**	**20 59 34.3**	**-1.0**
	comp=Z,10nm,0.2s						
DPC	**Dobruska-Polom**	**0.67**	**301**	Pg	**Pg**	**20 59 26.4**	**0.0**
DPC				Sg	**Sg**	**20 59 34.3**	**-1.0**
	10nm,0.2s						
VRAC	**Vranov**	**0.81**	**211**	Pg	**Pg**	**20 59 28.9**	**0.0**
	baz=210						
VRAC				Sg	**Sg**	**20 59 39.5**	**0.0**
	18nm,0.2s,baz=210						
VRAC	**Vranov**	**0.81**	**211**	*e*PG	**Pg**	**20 59 28.9**	**0.0**
VRAC				*e*SG	**Sg**	**20 59 39.5**	**0.0**
VRAC	**Vranov**	**0.81**	**211**	Pg	**Pg**	**20 59 28.9**	**0.0**
	baz=210						
VRAC				Sg	**Sg**	**20 59 39.5**	**0.0**
	18nm,0.2s,baz=210						
UPC	**Upice**	**0.93**	**303**	*e*PG	**Pg**	**20 59 31.5**	**+0.3**
UPC				*e*SG	**Sb**	**20 59 43.1**	**-0.3**
	comp=Z,10nm,0.2s						
KSP	**Ksiaz**	**1.03**	**325**	*e*Pg	**Pg**	**20 59 33.4**	**+0.3**
KSP				*e*Sg	**Sn**	**20 59 47.6**	**0.0**
KRUC	**Moravsky**	**1.09**	**210**	Pg	**Pn**	**20 59 33.7**	**-0.5**
	baz=210						
KRUC				Sg	**Sg**	**20 59 47.9**	**-0.5**
	9.5nm,0.1s,baz=210						
KRUC	**Moravsky**	**1.09**	**210**	*e*PG	**Pn**	**20 59 33.8**	**-0.5**
KRUC				*e*SG	**Sg**	**20 59 48.0**	**-0.5**
KRUC	**Moravsky**	**1.09**	**210**	Pg	**Pn**	**20 59 33.7**	**-0.5**
	baz=210						
KRUC				Sg	**Sg**	**20 59 47.9**	**-0.5**
	9.5nm,0.1s,baz=210						
JAVC	**Velka Javorina**	**1.19**	**166**	*e*PG	**Pg**	**20 59 38.0**	**+1.9**
JAVC				*e*SG	**Sg**	**20 59 55.9**	**+4.4**
GOPC	**GO Pecny, Ondr**	**1.57**	**268**	*e*PG	**Pb**	**20 59 42.7**	**+0.4**
GOPC				*e*SG	**Sb**	**21 00 02.3**	**+0.2**
	comp=Z,9.3nm,0.2s						
GOPC	**GO Pecny, Ondr**	**1.57**	**268**	Pg	**Pb**	**20 59 42.7**	**+0.4**
GOPC				Sg	**Sb**	**21 00 02.3**	**+0.2**
	9.3nm,0.2s						
OJC	**Ojcow**	**1.67**	**82**	*e*Pn	**Pb**	**20 59 43.1**	**-0.9**
OJC				*e*Pg	**Pg**	**20 59 44.1**	**-1.3**
OJC				*e*Sg	**Sg**	**21 00 07.5**	**+0.5**
OJC	**Ojcow**	**1.67**	**82**	*e*Pn	**Pb**	**20 59 43.0**	**-0.9**
LANS	**Liptovska Anna**	**1.69**	**120**	*e*PG	**

ellipse: s-maj=21.4km s-min=13.6km az=106.0

ISC 02 21:28:31.0±0.8, 31°.93S±0°.06×177°.9W±0°.2, h24km, n16, σ1s67/19, mb4.3/8, 1D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.67**	**359**	Pn	**Pn**	**21 29 11.7**	**-0.8**
	82nm,0.3s,baz=143,slow=21,SNR=4.1						
RAO				Sn	**Sb**	**21 29 48.4**	**-2.0**
	92nm,0.3s,baz=103,slow=21,SNR=2.6						
RAO	**Raoul Island**	**2.67**	**359**	*e*Pn	**Pn**	**21 29 12.5**	**-0.1**
RAO				Sn	**Sb**	**21 29 48.4**	**-2.0**
URZ	**Urewera**	**7.54**	**212**	Pn	**Pn**	**21 30 18.2**	**-1.2**
	0.8nm,0.3s,baz=50,slow=16,SNR=4.2						
URZ				Sn	**Sn**	**21 31 39.9**	**-4.2**
	5.1nm,0.3s,baz=167,slow=23,SNR=12						
CTA	**Charters Tower**	**34.18**	**281**	P	**P**	**21 35 16.9**	**+2.2**
	2.5nm,0.6s,baz=96,slow=9.2,SNR=3.0						
ASAR	**Alice Springs**	**43.16**	**268**	P	**P**	**21 36 30.6**	**+0.6**
	1.0nm,0.5s,baz=105,slow=7.9,SNR=12						
WRAB	**Tennant Creek**	**44.28**	**274**	*e*P	**P**	**21 36 39.4**	**+0.4**
	1.0nm,0.3s						
WRA	**Warramunga Arr**	**44.29**	**274**	P	**P**	**21 36 39.3**	**+0.2**
	1.1nm,0.3s,baz=113,slow=8.0,SNR=66						
CASY	**Casey**	**53.85**	**208**	P	**P**	**21 37 53.3**	**+1.6**
	0.8nm,0.6s						
POHA	**Pohakuloa**	**55.67**	**26**	P	**P**	**21 38 05.9**	**+0.3**
	59nm,0.6s						
QSPA	**South Pole Qui**	**58.19**	**180**	P	**P**	**21 38 24.1**	**+1.3**
	2.1nm,0.5s						
SYO	**Syowa Base**	**75.66**	**193⇓**	*e*P	**P**	**21 40 14.2**	**+0.5**
TRQA	**Tornquist**	**88.28**	**135**	*e*P	**P**	**21 41 18.4**	**-2.3**
	3.6nm,0.7s						
KURK	**Kurchatov**	**122.18**	**313**	PKP	**PKPdf**	**21 47 24.2**	**+0.9**
KURBB	**Kurchatov Arra**	**122.22**	**313**	PKP	**PKPdf**	**21 47 24.2**	**+0.9**
	0.2nm,0.5s,baz=115,slow=2.1,SNR=2.9						
FINES	**FINESS Array B**	**146.61**	**339**	PKPbc	**PKPab**	**21 48 11.0**	**+0.1**
	2.1nm,0.5s,baz=56,slow=3.5,SNR=21						
BRTR	**Keskin Array B**	**153.40**	**296**	PKPbc	**PKPbc**	**21 48 28.0**	**+0.6**
	0.4nm,0.8s,baz=87,slow=2.6,SNR=3.1						

*NIED **02** 21:35:00, 35°.60N×141°.10E, h14km, Mw3.5 Best double couple: M₀2.10000×10¹⁴ NP1:φs180.00000°, δ31.00000°, λ-87.00000°. NP2:φs357.00000°, δ59.00000°, λ-92.00000°.*

*ISCJB **02** 21:35:25.0±1.3, 35°.64N±0°.05×141°.15E±0°.10, h18km±7km, mb3.5/4, MS3.6/1, Error ellipse: s-maj=14.0km s-min=7.0km az=163.9*

*IDC **02** 21:35:24.2±2.5, 35°.56N×141°.07E, h0km, mb3.4/4, mb1 3.5/6, mb1mx3.3/74, mbtmp3.4/6, ML3.1/2, MS2.6/4, Ms1 2.6/4, ms1mx2.4/42, Error ellipse: s-maj=64.0km s-min=23.8km az=73.0*

*JMA **02** 21:35:27.0±0.1, 35°.63N×140°.97E, h18km±1km, M3.7*

JMA Felt I J1.

ISC 02 21:35:26.2±1.2, 35°.61N±0°.04×141°.07E±0°.08, h19km±3km, n18, σ1s46/20, mb3.5/4, 4C-2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.20**	**299**	⇑P	**Pb**	**21 35 30.8**	**+0.4**
CHOJ				S	**Sb**	**21 35 33.4**	**+0.3**
JCN	**Nagara**	**0.73**	**255**	⇑P	**Pb**	**21 35 40.5**	**+0.2**
KTR	**Katsuura**	**0.77**	**233**	P	**Pb**	**21 35 40.7**	**-0.2**
KTR				S	**Sb**	**21 35 50.9**	**-0.1**
BSO4	**Boso 4**	**0.86**	**224**	P	**Pg**	**21 35 43.1**	**+0.2**
BSO3	**Boso 3**	**0.93**	**210**	⇓P	**Pb**	**21 35 43.9**	**+0.4**
JYT	**Yasato**	**0.94**	**311**	⇑P	**Pb**	**21 35 42.8**	**-1.1**
JYT				S	**Sb**	**21 35 54.5**	**-1.5**
BSO1	**Boso 1**	**0.96**	**184**	⇑P	**Pb**	**21 35 44.1**	**+0.3**
JHO	**Hitachi**	**1.08**	**338**	⇓P	**Pb**	**21 35 45.4**	**-0.9**
MJAR	**Matsushiro Arr**	**2.50**	**293**	Pn	**Pn**	**21 36 06.0**	**+0.1**
	5.1nm,0.3s,baz=111,slow=16,SNR=28						
MJAR				LR	LR	21 37 01.4	
	comp=Z,28nm,20.9s,baz=105,slow=39						
MAT	**Matsushiro**	**2.50**	**293**	P	**Pn**	**21 36 06.2**	**+0.4**
MAT				eS	**Sb**	**21 36 39.3**	**-1.6**
JHJ	**Hachijo jima 2**	**2.70**	**204**	Pn	**Pn**	**21 36 08.6**	**0.0**
	7.1nm,0.3s,baz=97,slow=22,SNR=3.8						
JHJ				Sn	**Sn**	**21 36 36.1**	**-4.7**
	8.3nm,0.3s,baz=73,slow=19,SNR=2.4						
JNU	**Nakatsue**	**8.78**	**257**	LR	LR	21 40 15.1	
	comp=Z,23nm,19.3s,baz=296,slow=33						
JOW	**Kunigami**	**14.00**	**235**	LR	LR	21 44 09.4	
	comp=Z,22nm,19.0s,baz=91,slow=38						
MKAR	**Makanchi Array**	**44.65**	**303**	P	**P**	**21 43 38.2**	**+0.7**
	0.3nm,0.7s,baz=90,slow=5.8,SNR=3.6						
KURBB	**Kurchatov Arra**	**46.67**	**309**	P	**P**	**21 43 53.9**	**+0.5**
	0.5nm,0.6s,baz=82,slow=8.1,SNR=4.4						
BVAR	**Borovoye Array**	**51.33**	**313**	P	**P**	**21 44 31.2**	**+2.1**
	0.2nm,0.5s,baz=86,slow=4.5,SNR=2.5						
WRA	**Warramunga Arr**	**55.61**	**188**	P	**P**	**21 45 01.0**	**+0.3**
	0.7nm,0.8s,baz=2.2,slow=7.2,SNR=4.7						
KBZ	**Khabaz**	**71.62**	**311**	LR	LR	22 23 20.8	
	comp=Z,32nm,18.0s,baz=264,slow=40						

*IDC **02** 21:35:19.3±0.8, 16°.30S×173°.62W, h0km, mb4.0/8, mb1 4.3/8, mb1mx3.8/58, mbtmp4.0/8, MS3.4/9, Ms1 3.4/9, ms1mx3.0/59, Error ellipse: s-maj=38.3km s-min=20.2km az=133.0*

*NEIC **02** 21:35:20.8±0.2, 16°.28S×173°.61W, h10km, mb4.3/8, Error ellipse: s-maj=9.1km s-min=7.4km az=133.0*

*ISCJB **02** 21:35:26.7±0.5, 16°.25S±0°.1×173°.8W±0°.2, h66km, mb4.0/17, Error ellipse: s-maj=25.3km s-min=12.6km az=35.4*

ISC 02 21:35:28.1±0.6, 16°.3S±0°.1×173°.7W±0°.2, h66km, n29, σ0s51/20, mb4.1/17, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.98**	**38**	LR	LR	21 36 33.9	
	comp=Z,157nm,21.1s,baz=272,slow=25						
RAO	**Raoul Island**	**13.49**	**196**	LR	LR	21 43 08.5	
	comp=Z,86nm,18.1s,baz=352,slow=35						
RAR	**Rarotonga**	**14.03**	**113**	LR	LR	21 43 47.7	
	comp=Z,178nm,18.4s,baz=114,slow=36						
RAR	**Rarotonga**	**14.03**	**113**	Pn	Pn	21 38 39.0	-4.8
DZM	**Mont Dzumac**	**19.65**	**250**	LR	LR	21 47 14.5	
	comp=Z,84nm,18.1s,baz=251,slow=36						
URZ	**Urewera**	**23.35**	**199**	P	**P**	**21 40 29.6**	**-1.1**
	4.5nm,0.6s,baz=28,slow=15,SNR=5.0						
HNR	**Honiara**	**26.60**	**282**	LR	LR	21 49 59.5	
	comp=Z,188nm,19.8s,baz=136,slow=33						
PMG	**Port Moresby**	**38.76**	**275**	LR	LR	21 55 29.7	
	comp=Z,118nm,18.7s,baz=78,slow=31						
WRA	**Warramunga Arr**	**49.41**	**258**	P	**P**	**21 44 11.4**	**-0.3**
	0.3nm,0.4s,baz=96,slow=7.0,SNR=8.3						
ASAR	**Alice Springs**	**49.60**	**253**	P	**P**	**21 44 12.4**	**-0.7**
	1.4nm,0.6s,baz=90,slow=8.3,SNR=23						
VNDA	**Vanda**	**62.47**	**186**	LR	LR	22 09 11.4	
	comp=Z,35nm,20.1s,baz=20,slow=32						
MAJO	**Matsushiro**	**69.46**	**320**	P	**P**	**21 46 29.2**	**-0.3**
	1.1nm,0.3s						
CASY	**Casey**	**69.50**	**205**	P	**P**	**21 46 29.6**	**+0.2**
	0.4nm,0.4s						
CMB	**Columbia Colle**	**73.59**	**41**	P	**P**	**21 46 54.5**	**+0.1**
	1.3nm,0.5s						
QSPA	**South Pole Qui**	**73.76**	**180**	P	**P**	**21 46 55.6**	**+0.4**
	7.9nm,0.8s						
NVAR	**Mina Array Bea**	**75.15**	**42**	P	**P**	**21 47 03.9**	**+0.3**
	0.9nm,0.7s,baz=231,slow=9.9,SNR=5.9						
ELK	**Elko**	**78.41**	**41**	LR	LR	22 16 46.1	
	comp=Z,27nm,20.2s,baz=240,slow=32						
NEW	**Newport**	**81.58**	**34**	*e*P	**P**	**21 47 38.5**	**-0.2**
	1.6nm,0.8s						
PDAR	**Pinedale Array**	**83.09**	**42**	P	**P**	**21 47 47.0**	**+0.1**
	1.6nm,0.7s,baz=195,slow=2.9,SNR=12						
PDAR				LR	LR	22 17 10.0	
	comp=Z,24nm,20.6s,baz=247,slow=30						
ILAR	**Eielson Array**	**83.36**	**11**	P	**P**	**21 47 47.2**	**-0.4**
	0.4nm,0.7s,baz=216,slow=6.1,SNR=4.4						
WALA	**Waterton Lakes**	**83.78**	**35**	P	**P**	**21 47 50.2**	**0.0**
	2.0nm,0.7s						
COCO	**West Island**	**86.18**	**258**	P	**P**	**21 48 04.0**	**+1.1**
	96nm,0.5s						
MAW	**Mawson**	**86.88**	**199**	P	**P**	**21 48 05.5**	**+0.3**
	1.7nm,0.5s,baz=253,slow=21,SNR=4.8						
RSSD	**Black Hills**	**87.28**	**43**	P	**P**	**21 48 07.3**	**-0.5**
	1.5nm,0.7s						
INK	**Inuvik**	**89.19**	**14**	*e*P	**P**	**21 48 15.5**	**-0.4**
	0.4nm,0.7s						
YKA	**Yellowknife Ar**	**91.01**	**23**	P	**P**	**21 48 24.7**	**+0.1**
	0.2nm,0.6s,baz=224,slow=4.2,SNR=3.5						
BRTR	**Keskin Array B**	**146.68**	**320**	PKPbc	**PKPab**	**21 55 04.5**	**+0.4**
	0.7nm,0.7s,baz=103,slow=2.1,SNR=6.8						
GERES	**GERESS Array B**	**146.98**	**351**	PKPbc	**PKPbc**	**21 55 03.7**	**+0.3**
	0.4nm,0.5s,baz=23,slow=5.3,SNR=4.5						
TORD	**Torodi Ar. Bea**	**174.53**	**124**	PKPab	**PKPab**	**21 57 04.4**	**-0.3**
	0.6nm,0.8s,baz=261,slow=3.8,SNR=4.1						

*IDC **02** 21:36:11.1±1.0, 36°.08S×73°.54W, h0km, mb4.1/8, mb1 4.1/9, mb1mx3.9/36, mbtmp4.1/9, ML4.0/1, MS3.2/3, Ms1 3.2/3, ms1mx3.0/33, Error ellipse: s-maj=36.3km s-min=17.4km az=81.0*

*NEIC **02** 21:36:12.0±0.0, 36°.17S×73°.73W, h56km, mb4.1/2, ML4.4(GUC), After GUC.*

NEIC Felt [III] at Concepcion and Talcahuano.

*GUC **02** 21:36:12.4±0.5, 36°.18S×73°.73W, h56km±10km, ML4.4*

*ISCJB **02** 21:36:14.0±0.6, 36°.11S±0°.04×73°.59W±0°.07, h33km, mb4.1/9, MS3.2/2, Error ellipse: s-maj=8.3km s-min=6.0km az=7.7*

ISC 02 21:36:15.8±0.8, 36°.13S±0°.05×73°.61W±0°.09, h35km, n23, σ1s37/28, mb4.2/9, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COCH	**Cobquecura**	**0.67**	**91**	*e*P	**Pn**	**21 36 26.9**	**-1.8**
COCH				*i*S	**Sn**	**21 36 37.9**	**0.0**
CCSP	**San Pedro de C**	**0.82**	**151**	*e*P	**Pn**	**21 36 28.0**	**-2.9**
CCSP				*i*S	**Sn**	**21 36 39.3**	**-2.5**
CCSP				IAML		21 36 46.4	
	comp=N,14μm,0.6s						
CCHI	**Chillan**	**1.33**	**111**	*e*P	**Pn**	**21 36 36.8**	**-1.0**
CCHI				*i*S	**Sn**	**21 36 57.6**	**+3.4**
CCHI				IAML		21 37 06.1	
	comp=E,9μm,0.8s						
LMEL	**Las Melosas**	**3.61**	**52**	*e*P	**Pn**	**21 37 08.8**	**-0.5**
LMEL				*i*S	**Sn**	**21 37 50.0**	**-0.7**
LMEL				IAML		21 38 19.7	
	comp=E,457nm,0.7s						
CLCH	**Cerro Calan**	**3.72**	**44**	*e*P	**Pn**	**21 37 08.8**	**-2.0**
CLCH				*i*S	Sn	21 38 08.5	+15
FCH	**Farellones**	**3.91**	**45**	*e*P	**Pn**	**21 37 12.0**	**-1.6**
FCH				*i*S	**Sn**	**21 37 57.2**	**-1.2**
FCH				IAML		21 38 24.9	
	comp=E,221nm,0.8s						
PLCA	**Paso Flores**	**5.19**	**153**	Pn	**Pn**	**21 37 31.6**	**+0.6**
	comp=E,1.1nm,0.3s,baz=341,slow=10,SNR=22						
PLCA				Lg	Lg	21 38 57.5	
	comp=E,1.6nm,0.3s,baz=285,slow=22,SNR=4.3						
LCO	**Las Campanas**	**7.51**	**20**	Pn	**Pn**	**21 38 01.9**	**-1.1**
TRQA	**Tornquist**	**9.49**	**105**	*e*Pn	**Pn**	**21 38 28.9**	**-1.1**
CPUP	**Villa Florida**	**16.99**	**59**	Pn	**P**	**21 40 12.5**	**+0.3**
	comp=E,0.3nm,0.3s,baz=258,slow=8.4,SNR=4.3						
CPUP				LR	LR	21 46 16.3	
	comp=E,68nm,21.1s,baz=236,slow=36						
LPAZ	**La Paz**	**20.35**	**15**	P	**P**	**21 40 50.5**	**+0.7**
	comp=E,1.9nm,0.6s,baz=158,slow=7.3,SNR=10						
SIV	**San Ignacio**	**22.96**	**32**	P	**P**	**21 41 16.2**	**-0.9**
	comp=E,9.8nm,1.0s,baz=236,slow=12,SNR=28						
SIV				LR	LR	21 52 01.3	
	comp=E,190nm,19.9s,baz=211,slow=42						
NNA	**Nana**	**24.21**	**352**	LR	LR	21 48 55.0	
	comp=E,29nm,18.9s,baz=184,slow=32						
QSPA	**South Pole Qui**	**54.11**	**180**	P	**P**	**21 45 37.7**	**+0.8**
	comp=E,3.8nm,0.9s,baz=158,slow=6.5,SNR=8.7						
TXAR	**Lajitas Array**	**70.99**	**332**	P	**P**	**21 47 30.5**	**+0.6**
	comp=E,0.2nm,0.6s,baz=153,slow=8.1,SNR=3.8						
ANMO	**Albuquerque**	**77.05**	**333**	P	**P**	**21 48 06.2**	**+0.9**
	comp=E,2.5nm,1.3s						
DBIC	**Dimbokro**	**77.08**	**72**	P	**P**	**21 48 06.2**	**+0.5**
	comp=E,2.5nm,0.7s,baz=202,slow=10,SNR=3.9						
SDCO	**Great Sand Dun**	**79.22**	**335**	*e*P	**P**	**21 48 17.8**	**+0.4**
	comp=E,1.7nm,0.6s						
BOSA	**Boshof**	**80.22**	**118**	P	**P**	**21 48 23.2**	**+0.1**
	comp=E,2.8nm,0.9s,baz=166,slow=8.3,SNR=3.3						
KOWA	**Kowa**	**82.68**	**66**	P	**P**	**21 48 36.6**	**+0.6**
	comp=E,1.9nm,0.8s,baz=256,slow=5.1,SNR=4.4						
TORD	**Torodi Ar. Bea**	**86.14**	**71**	P	**P**	**21 48 52.7**	**-0.8**
	comp=E,0.9nm,0.9s,baz=227,slow=3.3,SNR=3.5						
BVAR	**Borovoye Array**	**149.71**	**45**	PKPbc	**PKPbc**	**21 56 02.0**	**+0.8**
	comp=E,0.9nm,0.6s,baz=315,slow=2.5,SNR=7.6						
ZALV	**Zalesovo Beam**	**156.71**	**33**	PKP	**PKPdf**	**21 56 06.7**	**+0.2**
	comp=E,0.3nm,0.3s,baz=169,slow=0.8,SNR=3.8						
ZALV				PKPab	**PKPab**	**21 56 36.1**	**0.0**
	comp=E,0.3nm,0.3s,baz=337,slow=3.3,SNR=3.6						

*ISCJB **02** 21:52:54.2±0.6, 36°.30N±0°.04×70°.62E±0°.08, h200km, mb3.4/5, Error ellipse: s-maj=9.9km s-min=4.6km az=157.6*

*IDC **02** 21:52:55.5±4.4, 36°.25N×70°.77E, h204km±39km, mb3.2/6, mb1 3.3/10, mb1mx2.9/66, mbtmp3.8/10, Error ellipse: s-maj=32.5km s-min=22.5km az=26.0*

*NNC **02** 21:53:03.5±1.8, 36°.96N×70°.84E, h240km±17km, mb2.5, mpv3.9, Error ellipse: s-maj=18.7km s-min=15.1km az=65.0*

ISC 02 21:52:55.4±0.9, 36°.39N±0°.06×70°.82E±0°.09, h200km, n32, σ1s82/38, mb3.3/5, 5C-5D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**4.19**	**29**	⇑P	**Pn**	**21 54 02.9**	**+3.2**
	13nm,0.7s						
SFK				⇓S	**Sn**	**21 54 51.7**	**+1.3**
	24nm,0.4s						
DHRM	**DHARAMSHALA**	**6.13**	**131**	*e*P	Pn	21 54 29.9	+5.3
DHRM				*e*S	**Sn**	**21 55 37.2**	**+2.1**
DHRM				IAML		21 55 41.3	
	comp=N,89nm,0.4s						
DHRM				IAML		21 55 41.9	
	comp=E,118nm,0.6s						
AML	**Almayashu**	**6.16**	**20**	P	**Pn**	**21 54 26.3**	**+1.4**
	SNR=50						
MNAS	**Manas**	**6.23**	**12**	⇑P	**Pn**	**21 54 27.4**	**+1.8**
	comp=E,8.9nm,0.5s						
MNAS				⇓S	**Sn**	**21 55 33.9**	**-3.3**
	comp=E,20nm,0.9s						
UCH	**Uchtor**	**6.50**	**25**	P	**Pn**	**21 54 31.3**	**+1.9**
	SNR=24						
KZA	**Kyzart**	**6.64**	**30**	P	**Pn**	**21 54 32.9**	**+1.6**
	SNR=5.4						
EKS2	**Erkin-Say**	**6.67**	**19**	P	**Pn**	**21 54 33.6**	**+2.2**
	SNR=14						
KK31	**Karatay Array**	**6.71**	**358**	P	**Pn**	**21 54 33.4**	**+1.6**
	comp=E,2.2nm,0.3s,baz=190,slow=13,SNR=96						
KK31				S	**Sn**	**21 55 45.2**	**-3.1**
	comp=E,2.5nm,0.3s,baz=188,slow=25,SNR=6.2						
AAK	**Ala-Archa**	**6.86**	**23**	P	**Pn**	**21 54 35.9**	**+2.1**
	comp=E,3.8nm,0.3s,baz=190,slow=5.4,SNR=32						
AAK				S	**Sn**	**21 55 49.4**	**-2.5**
	comp=E,2.0nm,0.3s,baz=305,slow=22,SNR=7.3						
AAK	**Ala-Archa**	**6.86**	**23**	⇑P	**Pn**	**21 54 35.5**	**+1.7**
	comp=E,5.8nm,0.3s						
AAK				⇓S	**Sn**	**21 55 49.5**	**-2.5**
	comp=E,5.6nm,0.5s						
AAK	**Ala-Archa**	**6.86**	**23**	P	**Pn**	**21 54 35.7**	**+1.9**
	SNR=13						
KBK	**Karagaybulak**	**7.03**	**26**	P	**Pn**	**21 54 38.1**	**+2.1**
	SNR=7.6						
ULHL	**Ulahol**	**7.20**	**34**	P	**Pn**	**21 54 40.1**	**+1.8**
	SNR=6.6						
CHMS	**Chumysh**	**7.27**	**23**	P	**Pn**	**21 54 40.9**	**+1.9**
	SNR=5.2						
SMLA	**Simla**	**7.44**	**133**	*e*P	Pn	21 54 47.3	+5.9
SMLA				*e*S	**Sn**	**21 56 05.2**	**-0.4**
SMLA				IAML		21 56 13.2	
	comp=E,46nm,0.2s						
SMLA				IAML		21 56 14.0	
	comp=N,46nm,0.8s						
TKM2	**Tokmak 2**	**7.49**	**28**	⇑P	**Pn**	**21 54 43.5**	**+1.4**
	comp=N,5.5nm,0.5s						
TKM2				⇓S	**Sn**	**21 56 04.3**	**-2.6**
	comp=N,9.5nm,0.8s						
TKM2	**Tokmak 2**	**7.49**	**28**	P	**Pn**	**21 54 43.7**	**+1.6**
	SNR=13						
DDI	**Dehra Dun**	**8.55**	**133**	*e*S	**Sn**	**21 56 31.4**	**-0.7**
KHET	**Khetri**	**9.30**	**152**	*e*P	Pn	21 55 11.1	+5.5
KHET				*e*S	**Sn**	**21 56 47.4**	**-2.3**
MAKZ	**Makanchi**	**13.33**	**35**	⇓P	**Pn**	**21 55 56.9**	**0.0**
	comp=N,3.6nm,1.2s						
MK31	**Makanchi Array**	**13.47**	**36**	⇑P	**P**	**21 56 00.2**	**-0.9**
	comp=N,0.3nm,0.5s,baz=210,slow=9.7,SNR=5.3						
MKAR	**Makanchi Array**	**13.47**	**36**	P	**Pn**	**21 55 59.8**	**+1.2**
	comp=N,0.1nm,0.3s,baz=202,slow=10.0,SNR=6.3						
KURBB	**Kurchatov Arra**	**15.28**	**19**	P	**Pn**	**21 56 19.6**	**-1.2**
	comp=N,0.1nm,0.3s,baz=207,slow=12,SNR=4.0						
BVA0	**Borovoye Array**	**16.64**	**359**	P	**Pn**	**21 56 37.7**	**+0.6**
	comp=N,0.1nm,0.3s,baz=150,slow=5.6,SNR=9.3						
BVAR	**Borovoye Array**	**16.64**	**359**	P	**Pn**	**21 56 37.8**	**+0.7**
	comp=N,0.5nm,0.3s,baz=161,slow=10,SNR=9.5						
AKTO	**Aktyubinsk**	**16.81**	**331**	P	**Pn**	**21 56 39.5**	**+0.4**
	comp=N,0.6nm,0.3s,baz=137,slow=8.7,SNR=9.0						
ZALV	**Zalesovo Beam**	**20.08**	**25**	P	**P**	**21 57 14.8**	**+1.5**
	comp=N,1.0nm,0.3s,baz=226,slow=9.3,SNR=6.7						
FINES	**FINESS Array B**	**37.50**	**326**	P	**P**	**21 59 49.8**	**+0.4**
	comp=N,6.0nm,1.1s,baz=113,slow=9.2,SNR=3.4						
ARCES	**ARCESS Array B**	**41.20**	**338**	P	**P**	**22 00 20.2**	**+0.3**
	comp=N,0.8nm,0.6s,baz=96,slow=7.4,SNR=6.0						
TORD	**Torodi Ar. Bea**	**65.57**	**269**	P	**P**	**22 03 17.4**	**-0.6**
	comp=N,0.2nm,0.4s,baz=55,slow=5.4,SNR=5.2						
YKA	**Yellowknife Ar**	**81.36**	**3**	P	**P**	**22 04 49.7**	**+0.5**
	comp=N,0.3nm,0.5s,baz=351,slow=5.7,SNR=5.5						
WRA	**Warramunga Arr**	**82.05**	**122**	P	**P**	**22 04 53.0**	**-0.4**
	comp=N,0.2nm,0.4s,baz=324,slow=5.1,SNR=7.1						

*IDC **02** 22:00:00.2±1.8, 6°.19S×103°.32E, h0km, mb3.8/9, mb1 3.9/10, mb1mx3.6/59, mbtmp3.8/10, ML3.9/1, Error ellipse: s-maj=64.1km s-min=16.0km az=43.0*

*DJA **02** 22:00:07.4±0.8, 6°S±4°×10°3E±°, h24km±10km, M3.9/4, MLv3.9/4*

ISC 02 22:00:02.4±2.4, 6°.18S±0°.07×103°.29E±0°.07, h13km±13km, n27, σ1s77/30, mb3.8/8, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**1.37**	**62**	P	**Pg**	**22 00 29.7**	**+1.0**
KASI				S	**Sb**	**22 00 45.8**	**+0.5**
LWLI	**Liwa**	**1.38**	**34**	P	**Pn**	**22 00 28.1**	**+0.5**
LWLI				S	**Sg**	**22 00 46.8**	**-0.3**
MNAI	**Manna**	**1.83**	**350**	P	**Pn**	**22 00 34.9**	**+1.2**
MDSI	**Maura Dua**	**1.90**	**28**	P	**Pb**	**22 00 36.9**	**-0.1**
MDSI				S	**Sg**	**22 01 02.1**	**-1.4**
KLI	**Kotabumi**	**2.04**	**50**	P	**Pb**	**22 00 39.1**	**-0.2**
KLI				S	**Sb**	**22 01 03.1**	**-1.5**
BLSI	**Bandar Lampung**	**2.11**	**68**	P	**Pn**	**22 00 38.7**	**+1.3**
CGJI	**Cibinong**	**2.43**	**100**	P	**Pn**	**22 00 40.9**	**-1.0**
CGJI				S	**Sb**	**22 01 17.9**	**+2.0**
SBJI	**Serang**	**2.83**	**89**	P	**Pn**	**22 00 51.1**	**+3.8**
MASI	**Maura Aman, Be**	**3.19**	**341**	P	**Pn**	**22 00 54.7**	**+2.3**
TNG	**Tangerang**	**3.34**	**90**	P	**Pb**	**22 00 58.5**	**-3.1**
TNG				P	**Pn**	**22 00 57.3**	**+2.9**
SKJI	**Sukabumi**	**3.35**	**104**	P	**Pn**	**22 00 58.7**	**+4.1**
DBJI	**Dramaga**	**3.46**	**96**	P	**Pb**	**22 01 02.4**	**-1.2**
LEM	**Lembang**	**4.35**	**99**	Pn	**Pn**	**22 01 07.9**	**-0.6**
	7.0nm,0.3s,baz=281,slow=16,SNR=9.4						
LEM				Sn	**Sn**	**22 02 01.1**	**+1.9**
	1.5nm,0.3s,baz=288,slow=20,SNR=3.1						
RGRI	**Rengat**	**5.87**	**351**	P	Pn	22 01 36.0	+6.8
BATI	**Baumata**	**20.56**	**103**	P	**P**	**22 04 39.8**	**-1.4**
	22nm,0.6s,baz=292,slow=16,SNR=4.8						
CMAR	**Chiang Mai Arr**	**24.85**	**350**	P	**P**	**22 05 25.9**	**+1.1**
	0.6nm,0.3s,baz=174,slow=8.9,SNR=2.7						
H08S2	**Diego Garcia H**	**30.60**	**265**	T	T	22 38 13.9	
	baz=89,slow=75,SNR=28						
H08S3	**Diego Garcia H**	**30.61**	**265**	T	T	22 38 14.5	
	baz=89,slow=75,SNR=35						
H08S1	**Diego Carcia H**	**30.62**	**265**	T	T	22 38 16.0	
	baz=89,slow=75,SNR=34						
WRA	**Warramunga Arr**	**33.12**	**117**	P	**P**	**22 06 37.6**	**-1.0**
	0.3nm,0.6s,baz=292,slow=10,SNR=3.3						
ASAR	**Alice Springs**	**34.19**	**124**	P	**P**	**22 06 48.0**	**+0.1**
	0.3nm,0.7s,baz=297,slow=7.8,SNR=4.2						
SONM	**Songino Array**	**53.85**	**3**	P	**P**	**22 09 24.4**	**-0.9**
	0.6nm,0.6s,baz=180,slow=8.1,SNR=5.0						
MKAR	**Makanchi Array**	**55.94**	**343**	P	**P**	**22 09 39.7**	**-0.7**
	0.3nm,0.5s,baz=148,slow=8.7,SNR=3.6						
KURBB	**Kurchatov Arra**	**60.48**	**342**	P	**P**	**22 10 13.1**	**+1.1**
	0.4nm,0.2s,baz=161,slow=5.9,SNR=3.9						
ZALV	**Zalesovo Beam**	**61.88**	**348**	P	**P**	**22 10 20.5**	**-0.9**
	0.5nm,0.5s,baz=176,slow=5.8,SNR=2.9						
BVAR	**Borovoye Array**	**65.22**	**339**	P	**P**	**22 10 43.6**	**+0.1**
	0.4nm,0.4s,baz=130,slow=6.2,SNR=3.6						
TXAR	**Lajitas Array**	**145.69**	**45**	PKPbc	**PKPdf**	**22 19 41.0**	**-0

YKA	Yellowknife Ar	18.71	347	P	P	22 13 07.1	-1.7
	0.0nm,0.3s,baz=162,slow=13,SNR=3.6						

ISCJB ***02*** *22:14:57.0±0.4, 3°.45N±0°.07×126°.66E±0°.10, h53km, mb4.0/18, MS3.1/2, Error ellipse: s-maj=15.6km s-min=6.6km az=149.3*
IDC ***02*** *22:14:59.0±3.5, 3°.45N×126°.64E, h54km±33km, mb3.8/16, mb1 4.0/18, mb1mx3.8/65, mbtmp4.2/18, ML4.2/2, MS3.1/5, Ms1 3.1/5, ms1mx2.7/57, Error ellipse: s-maj=27.1km s-min=11.6km az=77.0*
NEIC ***02*** *22:15:00.1±2.3, 3°.43N×126°.65E, h66km±23km, mb4.0/1, Error ellipse: s-maj=13.9km s-min=6.8km az=82.0*
ISC 02 22:14:58.8±0.6, 3°.45N±0°.09×126°.6E±0°.1, h53km, n26, σ0§57/25, mb4.0/18, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	6.31	133	P	Pn	22 16 29.9	+0.5
	8.6nm,0.3s,baz=330,slow=17,SNR=23						
SIJI				S	Sn	22 17 38.9	-1.2
	2.6nm,0.3s,baz=170,slow=22,SNR=7.0						
JAY	Jayapura	15.25	113	P	Pn	22 18 31.7	+0.7
	0.8nm,0.3s,baz=284,slow=17,SNR=7.8						
GUMO	Guam	20.62	60	LR	LR	22 26 24.8	
	comp=Z,36nm,20.4s,baz=190,slow=33						
FITZ	Fitzroy Crossi	21.44	183	P	P	22 19 43.0	+0.2
	3.7nm,0.5s,baz=9.3,slow=5.7,SNR=15						
WRAB	Tennant Creek	24.44	162	eP	P	22 20 12.3	-0.5
	2.9nm,0.4s						
WRA	Warramunga Arr	24.45	162	P	P	22 20 12.1	-0.8
	15nm,0.8s,baz=343,slow=10,SNR=85						
WRA				PcP	PcP	22 23 51.4	+0.5
	0.4nm,0.7s,baz=326,slow=2.3,SNR=3.7						
ASAR	Alice Springs	27.87	166	P	P	22 20 43.5	-0.3
	1.8nm,0.5s,baz=348,slow=7.2,SNR=36						
ASAR				PcP	PcP	22 23 58.7	-0.1
	0.4nm,0.5s,baz=337,slow=2.1,SNR=3.4						
JNU	Nakatsue	29.78	7	LR	LR	22 34 01.6	
	comp=Z,19nm,20.1s,baz=128,slow=38						
CMAR	Chiang Mai Arr	30.94	301	P	P	22 21 11.0	-0.1
	0.8nm,0.3s,baz=113,slow=6.9,SNR=4.8						
KSAR	Wonju Array Be	33.84	2	P	P	22 21 36.9	+0.7
KSRS	Korea Array	33.86	2	P	P	22 21 36.9	+0.6
	0.8nm,0.6s,baz=184,slow=9.9,SNR=4.1						
KSRS				LR	LR	22 36 18.0	
	comp=Z,18nm,19.6s,baz=175,slow=38						
STKA	Stephens Creek	37.90	159	P	P	22 22 11.1	+0.1
	6.7nm,0.8s,baz=330,slow=6.6,SNR=9.6						
ASAJ	Asahikawa	42.88	17	P	P	22 22 52.1	0.0
	2.6nm,0.7s,baz=213,slow=14,SNR=4.1						
KLR	Kul'dur	45.82	5	P	P	22 23 15.3	-0.2
	0.1nm,0.6s,baz=180,slow=5.1,SNR=3.4						
SONM	Songino Array	47.53	342	P	P	22 23 29.4	+0.3
	0.4nm,0.6s,baz=161,slow=9.2,SNR=2.9						
PETK	Petropavlovsk-	55.72	22	P	P	22 24 29.4	-0.5
	1.5nm,0.7s,baz=238,slow=8.3,SNR=3.0						
MKAR	Makanchi Array	57.73	325	P	P	22 24 45.1	+0.7
	0.8nm,0.5s,baz=119,slow=7.5,SNR=16						
KURBB	Kurchatov Arra	61.92	327	P	P	22 25 12.7	-0.3
	3.1nm,0.8s,baz=126,slow=6.5,SNR=25						
KURK	Kurchatov	61.93	328	eP	P	22 25 13.2	+0.2
BVAR	Borovoye Array	67.50	327	P	P	22 25 49.1	-0.3
	1.7nm,0.8s,baz=127,slow=6.3,SNR=9.9						
AKTO	Aktyubinsk	73.82	322	LR	LR	23 00 37.0	
	comp=Z,20nm,19.4s,baz=84,slow=37						
VNDA	Vanda	83.17	173	P	P	22 27 19.6	+0.8
	0.7nm,0.6s,baz=325,slow=12,SNR=7.7						
ATD	Arta Tunnel	83.25	281	LR	LR	23 05 37.6	
	comp=Z,20nm,18.4s,baz=3.5,slow=36						
ILAR	Eielson Array	85.39	25	P	P	22 27 30.0	-0.3
	0.4nm,0.8s,baz=260,slow=5.4,SNR=4.9						
BRTR	Keskin Array B	90.13	310	P	P	22 27 52.7	-1.1
	0.7nm,0.8s,baz=108,slow=5.9,SNR=5.2						
ARCES	ARCESS Array B	90.68	340	P	P	22 27 55.3	-0.2
	1.8nm,0.9s,baz=81,slow=5.8,SNR=2.7						

IDC 02 22:27:56.2±8.1, 14°.68S×166°.99E, h98km±85km, mb4.0/4, mb1 4.0/5, mb1mx3.4/56, mbtmp4.2/5, ML3.3/1, Error ellipse: s-maj=75.5km s-min=49.9km az=124.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.37	184	P	Pn	22 29 41.2	0.0
	0.4nm,0.3s,baz=24,slow=20,SNR=2.7						
DZM				S	Sn	22 31 03.6	+0.4
	0.4nm,0.3s,baz=343,slow=19,SNR=3.1						
STKA	Stephens Creek	28.82	229	P	P	22 33 45.5	+0.3
	3.0nm,0.5s,baz=76,slow=8.3,SNR=12						
ASAR	Alice Springs	32.43	249	P	P	22 34 17.1	-0.2
	1.8nm,0.5s,baz=80,slow=9.0,SNR=22						
FITZ	Fitzroy Crossi	39.75	259	P	P	22 35 19.5	-0.2
	2.2nm,0.5s,baz=81,slow=9.1,SNR=13						
MKAR	Makanchi Array	96.98	316	P	P	22 41 16.7	-0.2
	0.2nm,0.6s,baz=108,slow=3.3,SNR=3.4						

IDC 02 22:29:00.3±1.8, 2°.27N×127°.76E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.4/58, mbtmp3.7/5, Error ellipse: s-maj=162.7km s-min=20.3km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.00	164	P	P	22 34 08.0	+1.1
	0.7nm,0.3s,baz=342,slow=11,SNR=21						
ASAR	Alice Springs	26.47	167	P	P	22 34 38.6	-0.7
	0.4nm,0.6s,baz=6.3,slow=9.3,SNR=4.4						
STKA	Stephens Creek	36.41	160	P	P	22 36 06.0	-0.7
	0.9nm,0.3s,baz=328,slow=9.5,SNR=3.8						
MKAR	Makanchi Array	59.33	325	P	P	22 39 04.8	+0.6
	0.2nm,0.4s,baz=115,slow=7.8,SNR=7.6						
KURBB	Kurchatov Arra	63.51	327	P	P	22 39 31.6	-0.8
	0.4nm,0.4s,baz=124,slow=6.5,SNR=3.2						

IDC ***02*** *22:37:19.2±1.8, 0°.44N×96°.98E, h0km, mb3.7/6, mb1 3.8/8, mb1mx3.5/60, mbtmp3.7/8, ML4.1/2, Error ellipse: s-maj=50.9km s-min=20.9km az=63.0*
ISCJB ***02*** *22:37:21.7±1.0, 0°.62N±0°.06×97°.0E±0°.1, h23km, mb3.7/6, Error ellipse: s-maj=16.4km s-min=7.1km az=166.3*
DJA ***02*** *22:37:29.2±0.9, 1°N±4°×9°7E±°, h12km±4km, M3.1/3, MLv3.1/3*
ISC 02 22:37:23.7±1.1, 0°.68N±0°.06×97°.13E±0°.09, h23km, n23, σ1§41/21, mb3.7/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	Gunungsitoli	0.76	36	P	Pb	22 37 37.2	-1.1
GSI				S	Sb	22 37 45.0	-3.3
PBSI	Pulau Batu	1.37	122	P	Pn	22 37 46.8	-0.6
MNSI	Mandailing Nat	2.45	87	P	Pb	22 38 07.0	-0.2
TPTI		2.56	1	P	Pn	22 38 04.2	+0.4
TPTI				S	Sn	22 38 34.9	+0.6
PSI	Prapat	2.77	40	Pn	Pn	22 38 07.0	+0.2
	4.0nm,0.3s,baz=180,slow=9.3,SNR=15						
KCSI	Kotacane, Aceh	2.89	13	P	Pn	22 38 08.8	+0.4
KCSI				S	Sn	22 38 44.7	+2.2
TSI	Tuntungan	3.15	27	P	Pn	22 38 13.3	+1.4
PPI	Padang Panjang	3.46	109	P	Pb	22 38 23.9	-0.5
MLSI	Meulaboh, Aceh	3.63	349	P	Pb	22 38 25.1	-2.2
MLSI				S	Sn	22 38 59.9	-0.9
PDSI	Padang	3.69	115	P	Pb	22 38 27.6	-0.7
CMAR	Chiang Mai Arr	17.75	6	P	P	22 41 31.6	+1.4
	0.8nm,0.3s,baz=197,slow=11,SNR=8.1						
H08S2	Diego Garcia H	25.92	251	T	T	23 09 42.9	
	baz=72,slow=75,SNR=95						
H08S3	Diego Garcia H	25.93	251	T	T	23 09 42.9	
	baz=72,slow=75,SNR=72						
H08S1	Diego Carcia H	25.94	251	T	T	23 09 45.2	
	baz=72,slow=75,SNR=92						
H01W3	Cape Leeuwin H	38.80	157	T	T	23 25 51.4	
	baz=334,slow=76,SNR=14						
H01W2	Cape Leeuwin H	38.81	157	T	T	23 25 58.7	
	baz=334,slow=76,SNR=14						
H01W1	Cape Leeuwin H	38.81	157	T	T	23 25 53.4	
	baz=334,slow=76,SNR=13						
WRA	Warramunga Arr	41.83	121	P	P	22 45 10.6	-1.6
	0.4nm,0.8s,baz=303,slow=8.8,SNR=4.4						
ASAR	Alice Springs	43.15	127	P	P	22 45 22.0	-1.0
	0.4nm,0.8s,baz=297,slow=8.3,SNR=6.2						
KSRS	Korea Array	46.31	34	P	P	22 45 49.0	+1.2
	0.9nm,0.7s,baz=226,slow=9.6,SNR=5.0						
SONM	Songino Array	47.65	8	P	P	22 45 59.9	+1.6
	0.5nm,0.9s,baz=212,slow=7.8,SNR=4.1						
MKAR	Makanchi Array	47.72	346	P	P	22 45 59.4	+0.6
	1.1nm,0.5s,baz=159,slow=8.5,SNR=19						
ZALV	Zalesovo Beam	54.05	351	P	P	22 46 46.2	-0.1
	1.2nm,0.3s,baz=167,slow=5.9,SNR=6.2						

ISCJB ***02*** *22:38:28.3±0.4, 41°.93N±0°.03×142°.31E±0°.05, h72km±3km, mb3.7/14, Error ellipse: s-maj=7.1km s-min=4.4km az=39.5*
JMA ***02*** *22:38:28.5±0.2, 41°.92N×142°.32E, h68km±3km, M3.3*
JMA Felt I J1.
IDC ***02*** *22:38:30.3±1.8, 42°.01N×142°.47E, h80km±13km, mb3.6/14, mb1 3.6/19, mb1mx3.4/68, mbtmp3.8/19, MS2.7/2, Ms1 2.7/2, ms1mx2.3/62, Error ellipse: s-maj=19.0km s-min=12.3km az=120.0*
ISC 02 22:38:29.1±0.8, 41°.94N±0°.04×142°.32E±0°.04, h68km±7km, n42, σ1§15/47, mb3.8/14, 2C-6D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNBK	Urakawa-nobuka	0.47	43	P	Pn	22 38 40.3	-1.2
JEM	Erimo	0.63	82	⇑P	Pn	22 38 42.7	-0.3
JBT2	Biratori 2	0.84	2	⇓P	Pn	22 38 45.0	-0.6
JKB	Kayabe	0.96	268	⇓P	Pn	22 38 46.3	-0.7
JKB				eS	Sn	22 38 59.3	-1.0
JCH	Churui	1.03	48	⇑P	Pn	22 38 47.7	-0.1
JCH				eS	Sn	22 39 01.6	-0.2
JNB	Noboribetsu	1.09	300	⇓P	Pn	22 38 47.6	-1.1
JNB				eS	Sn	22 39 01.8	-1.4
JOT	Ohata	1.10	240	⇓P	Pn	22 38 48.3	-0.5
JOT				eS	Sn	22 39 02.5	-0.9
JEW	Eniwo	1.11	325	P	Pn	22 38 48.8	-0.1
JEW				eS	Sn	22 39 03.4	-0.3
JFR	Furan	1.24	9	⇓P	Pn	22 38 50.1	-0.6
JFR				eS	Sn	22 39 06.2	-0.6
JYM2	Yakumo 2	1.47	278	⇓P	Pn	22 38 52.9	-0.6
JOB	Onbets	1.48	49	P	Pn	22 38 54.7	+1.0
JSR	Shiriuchi	1.48	255	P	Pn	22 38 53.3	-0.4
JSR				eS	Sn	22 39 12.4	+0.1
JTM	Tenmabayashi	1.49	220	P	Pn	22 38 53.7	-0.1
JAB	Ashibetsu	1.57	357	P	Pn	22 38 55.5	+0.6
JAB				eS	Sn	22 39 16.1	+1.7
JANG	Nango	1.68	202	P	Pn	22 38 56.3	-0.1
JANG				eS	Sn	22 39 17.1	+0.1
JAR	Ashorobuto	1.73	38	P	Pn	22 38 57.1	0.0
JHR	Hokuryu	1.86	347	P	Pn	22 38 59.6	+0.8
ASAJ	Asahikawa	2.19	5	P	Pn	22 39 04.2	+1.0
	8.2nm,0.3s,baz=217,slow=11,SNR=40						
ASAJ				S	Sn	22 39 29.2	-0.1
	6.8nm,0.3s,baz=195,slow=31,SNR=6.2						
MJAR	Matsushiro Arr	6.26	212	P	Pn	22 40 02.6	+3.7
	0.5nm,0.3s,baz=28,slow=13,SNR=13						
MJAR				LR	LR	22 43 25.1	
	comp=Z,17nm,18.2s,baz=15,slow=46						
USRK	Ussuriysk Ar.	7.90	290	P	Pn	22 40 24.0	+2.9
	0.3nm,0.3s,baz=91,slow=15,SNR=9.4						
KLR	Kul'dur	10.39	318	P	Pn	22 40 57.6	+2.5
	0.0nm,0.3s,baz=133,slow=15,SNR=11						
KSRS	Korea Array	11.96	253	P	Pn	22 41 18.7	+2.1
	0.3nm,0.3s,baz=65,slow=13,SNR=11						
SONM	Songino Array	25.96	295	P	P	22 43 55.1	-0.2
	0.8nm,0.5s,baz=70,slow=8.5,SNR=7.5						
H11N2	WAKE ISLAND Hy	30.39	129	T	T	23 17 14.4	
	baz=321,slow=75,SNR=20						
H11N1	WAKE ISLAND Hy	30.40	129	T	T	23 17 15.2	
	baz=321,slow=75,SNR=18						
H11N3	WAKE ISLAND Hy	30.41	129	T	T	23 17 15.7	
	baz=321,slow=75,SNR=23						
H11S1	WAKE ISLAND Hy	31.25	131	T	T	23 18 16.4	
	baz=323,slow=76,SNR=4.2						
H11S3	WAKE ISLAND Hy	31.25	131	T	T	23 18 14.2	
	baz=323,slow=76,SNR=3.9						
H11S2	WAKE ISLAND Hy	31.26	131	T	T	23 18 29.7	
	baz=323,slow=76,SNR=9.9						
ZALV	Zalesovo Beam	39.29	308	P	P	22 45 51.2	+0.2
	1.0nm,0.5s,baz=85,slow=9.0,SNR=5.8						
ZALV				PcP	PcP	22 47 57.8	-0.7
	1.0nm,0.7s,baz=42,slow=2.3,SNR=2.7						
MKAR	Makanchi Array	42.28	298	P	P	22 46 16.2	+0.4
	1.4nm,0.7s,baz=87,slow=7.4,SNR=11						
MKAR				LR	LR	23 07 15.9	
	comp=Z,27nm,18.0s,baz=63,slow=41						
KURBB	Kurchatov Arra	43.68	304	P	P	22 46 27.1	0.0
	2.6nm,0.7s,baz=77,slow=8.9,SNR=16						
ILAR	Eielson Array	45.03	35	P	P	22 46 37.8	+0.2
	0.7nm,1.0s,baz=275,slow=8.0,SNR=6.6						
BVAR	Borovoye Array	47.90	309	P	P	22 47 00.7	+0.4
	1.4nm,0.4s,baz=74,slow=7.7,SNR=25						
YKA	Yellowknife Ar	59.25	32	P	P	22 48 20.4	-2.6
	0.3nm,0.6s,baz=310,slow=6.5,SNR=5.4						
WRA	Warramunga Arr	62.01	189	P	P	22 48 42.0	-0.2
	0.5nm,0.7s,baz=6.9,slow=7.0,SNR=4.0						
FINES	FINESS Array B	64.83	332	P	P	22 49 00.0	-0.3
	4.3nm,0.9s,baz=52,slow=7.3,SNR=31						
HFS	Hagfors	69.92	335	P	P	22 49 32.4	-0.2
	1.0nm,0.3s,baz=25,slow=4.8,SNR=11						
NOA	NORSAR Array B	69.95	337	P	P	22 49 32.7	-0.2
	0.5nm,0.4s,baz=50,slow=5.9,SNR=3.4						
AKASG	Malin Array Be	70.87	322	P	P	22 49 37.5	-1.1
	0.5nm,0.4s,baz=46,slow=6.1,SNR=6.7						
BRTR	Keskin Array B	76.14	311	P	P	22 50 10.5	+0.6
	0.3nm,0.6s,baz=56,slow=4.3,SNR=2.8						
TXAR	Lajitas Array	86.59	53	P	P	22 51 04.7	-0.5
	0.2nm,0.5s,baz=292,slow=2.8,SNR=2.8						

IDC 02 22:54:19.6±4.1, 15°.65S×173°.32W, h0km, mb3.7/3, mb1 3.9/4, mb1mx3.5/51, mbtmp3.7/4, ML3.1/1, Error ellipse: s-maj=213.6km s-min=29.7km az=141.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.29	41	Pn	Pn	22 54 58.6	-0.2
	5.6nm,0.3s,baz=207,slow=11,SNR=2.8						
AFI				Sn	Sn	22 55 19.4	-8.2
	25nm,0.3s,baz=197,slow=11,SNR=6.9						
STKA	Stephens Creek	43.98	240	P	P	23 02 29.1	+0.1
	0.7nm,0.5s,baz=72,slow=16,SNR=3.2						
WRA	Warramunga Arr	49.86	257	P	P	23 03 14.8	-0.4
	0.2nm,0.5s,baz=94,slow=7.9,SNR=5.0						
ASAR	Alice Springs	50.11	252	P	P	23 03 17.0	0.0
	1.4nm,0.6s,baz=89,slow=8.4,SNR=4.4						

IDC ***02*** *23:14:28.1±1.4, 30°.74N×131°.24E, h0km, mb3.6/5, mb1 3.6/7, mb1mx3.4/65, mbtmp3.5/7, ML1.9/1, MS2.3/2, Ms1 2.3/2, ms1mx2.2/51, Error ellipse: s-maj=48.0km s-min=17.8km az=80.0*
ISCJB ***02*** *23:14:31.0±1.2, 30°.80N±0°.05×131°.6E±0°.1, h42km±11km, mb3.5/5, MS2.7/1, Error ellipse: s-maj=16.6km s-min=6.7km az=20.4*
JMA ***02*** *23:14:31.4±0.1, 30°.83N×131°.57E, h43km±2km, M2.9*
ISC 02 23:14:31.0±2.0, 30°.80N±0°.05×131°.59E±0°.10, h27km±12km, n15, σ1§01/21, mb3.7/5, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTN	Tanegashima 3	0.54	255	P	Pb	23 14 42.8	+0.9
JTN				eS	Sn	23 14 51.5	+0.3
JTSR	Tashiro 2	0.68	303	P	Pb	23 14 43.8	-0.5
JTSR				eS	Sb	23 14 53.3	-0.1
JNAR	Kushima--Naru	0.78	340	P	Pn	23 14 45.6	-0.6
JNAR				eS	Sb	23 14 56.1	0.0
JYAK	Yakushimahirau	1.08	239	P	Pn	23 14 50.5	+0.1
JYAK				eS	Sn	23 15 05.1	+0.6
JTZ	Takazaki	1.18	339	P	Pn	23 14 51.4	-0.4
JTZ				eS	Sn	23 15 06.7	-0.3
JSU	Suzuyama	1.20	306	P	Pn	23 14 51.7	-0.4
JKC	Kuchinoerabu	1.24	255	eS	Sn	23 15 08.6	+0.1
JTSN	Tsuno	1.45	357	P	Pn	23 14 54.8	-0.6
JNU	Nakatsue	2.40	346	Pn	Pn	23 15 09.2	+0.7
	0.5nm,0.3s,baz=244,slow=10.0,SNR=11						
JNU				LR	LR	23 15 48.3	
	comp=Z,21nm,18.8s,baz=122,slow=34						
JOW	Kunigami	4.90	217	Pn	Pn	23 15 41.9	-1.0
	baz=358,slow=15,SNR=6.0						
JOW				Sn	Sn	23 16 36.5	-2.4
	0.7nm,0.3s,baz=0.0,slow=20,SNR=3.7						
SONM	Songino Array	25.70	319	P	P	23 19 58.4	-0.5
	0.4nm,0.6s,baz=120,slow=6.4,SNR=2.9						
SONM				LR	LR	23 29 48.6	
	comp=Z,20nm,18.1s,baz=303,slow=36						
KURBB	Kurchatov Arra	43.77	313	P	P	23 22 32.4	-1.6
	0.3nm,0.6s,baz=102,slow=8.7,SNR=4.8						
WRA	Warramunga Arr	50.52	177	P	P	23 23 27.3	+0.4
	0.8nm,0.8s,baz=353,slow=8.1,SNR=3.8						
ASAR	Alice Springs	54.20	177	P	P	23 23 55.1	+0.8
	0.4nm,0.5s,baz=12,slow=12,SNR=8.3						
FINES	FINESS Array B	70.35	331	P	P	23 25 44.0	+2.0
	1.8nm,0.9s,baz=76,slow=5.9,SNR=3.5						

TRN 02 23:23:31.9, 14°.70N×58°.94W, h22km, MD3.8, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBGH	Gun Hill	1.66	201	eS	Sb	23 24 23.1	+0.8
BBSP	Saint Philip	1.67	198	eS	Sb	23 24 21.8	-0.6
LPMF	Morne Lapointe	1.96	267	eP	Pn	23 24 05.1	+1.1
ZAM	Aeronautique	2.02	267	eP	Pn	23 24 05.9	+1.2
TRMF	Trois Ilets	2.05	266	eP	Pn	23 24 06.5	+1.4
BAMF	Morne Balai	2.14	273	eP	Pn	23 24 08.0	+1.6
FDF	Fort de France	2.14	271	eP	Pn	23 24 07.9	+1.6
FDF				eS	Sn	23 24 34.1	+1.8
PCM	Pelee Case Pet	2.20	273	eP	Pn	23 24 07.6	+0.5
PCM	Pelee Case Pet	2.20	273	eP	Pn	23 24 08.6	+1.5
PCM				eS	Sn	23 24 34.6	+0.9
SVCV	St. Vincent, C	2.57	237	eP	Pn	23 24 13.3	+1.1
SVCV				eS	Sn	23 24 44.5	+1.7
SVV	Soufriere Volc	2.60	238	eP	Pn	23 24 14.7	+2.0
SVV				eS	Sn	23 24 45.7	+2.0
SVB	Belmont	2.66	238	eP	Pn	23 24 14.2	+0.7
SVB				eS	Sn	23 24 46.0	+0.9

TAP 03 00:01:02.0, 23°.21N×121°.01E, h7km, ML3.6, 14C-13D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELDTW	Lidau	0.02	164	⇓iP	Pg	00 01 03.8	+0.4
	baz=148						
ELDTW				i S	Sg	00 01 04.7	+0.3
	baz=259						
STYT	Tauyuan	0.24	259	⇑iP	Pg	00 01 07.3	+0.5
	baz=259						
STYT				i S	Sg	00 01 10.5	+0.5
	baz=82						
FULB	Fuli	0.26	92	⇓eP	Pb	00 01 08.6	-0.5
	baz=82						
FULB				eS	Sb	00 01 13.0	-0.9
	baz=62						
TWF1	Yuli	0.30	61	⇑iP	Pg	00 01 08.6	+0.7
	baz=62						
TWF1				S	Sg	00 01 12.3	+0.4
	baz=54						
YULB	Yu-li	0.32	55	⇑P	Pg	00 01 08.7	+0.4
	baz=54						
YULB				S	Sg	00 01 12.5	-0.1
	baz=107						
CHKT	Chengkung	0.34	108	⇓P	Pb	00 01 10.5	0.0
	baz=107						
CHKT				eS	Sb	00 01 16.0	-0.2
	baz=330						
ALS	Alishan	0.36	328	⇓iP	Pg	00 01 09.7	+0.6
	baz=330						
ALS				S	Sg	00 01 14.9	+1.1
	baz=293						
TPUB	Ta-pu	0.36	285	⇓P	Pb	00 01 10.0	-0.8
	baz=293						
TPUB				S	Sb	00 01 15.4	-1.4
	baz=272						
WTP	Ta-pu	0.37	276	⇓P	Pb	00 01 10.2	-0.8
	baz=272						
WTP				S	Sg	00 01 15.4	+1.4
	baz=163						
TWG	Pinlang	0.39	172	⇓P	Pg	00 01 10.3	+0.7
	baz=163						
TWG				S	Sg	00 01 15.4	+0.7
	baz=163						
TWGBT	Beinan	0.39	171	⇓P	Pg	00 01 10.3	+0.6
	baz=163						
TWGBT				S	Sg	00 01 15.2	+0.3
	baz=238						
SLGT	Liugui	0.40	238	⇑P	Pg	00 01 10.6	+0.8
	baz=238						
SLGT				eS	Sg	00 01 16.0	+1.0
	baz=54						
EHY	Hungye	0.41	44	⇑iP	Pg	00 01 10.3	+0.3
	baz=54						
EHY				eS	Sg	00 01 15.6	+0.2
	baz=290						
CHN1	Nanshi	0.45	267	⇑P	Pb	00 01 12.1	-0.2
	baz=261						
CHN1				eS	Sb	00 01 18.6	-0.6
	baz=261						
TTN	Taitung	0.47	164	eP	Pb	00 01 13.0	+0.3
	baz=163						
TTN				eS	Sb	00 01 19.7	-0.1
	baz=163						
HGSD	Ruisui	0.47	53	⇑P	Pb	00 01 12.2	-0.5
	baz=44						
HGSD				eS	Sb	00 01 19.8	-0.2
	baz=44						
TWK	Hsinying	0.48	277	⇓iP	Pb	00 01 12.7	-0.3
	baz=290						
TWK				S	Sb	00 01 19.9	-0.4
	baz=290						
VWDT	VWDT	0.56	12	⇑P	Pg	00 01 12.5	-0.3
	baz=10.0						
VWDT				eS	Sb	00 01 22.7	+0.4
	baz=10.0						
SSD	Sandimen	0.58	217	⇑iP	Pg	00 01 13.2	0.0
	baz=222						
SSD				eS	Sg	00 01 21.0	+0.3
	baz=222						
SSLB	Suanglung	0.58	355	P	Pg	00 01 12.9	-0.3
	baz=355						
SSLB				eS	Sg	00 01 20.7	-0.1
	baz=355						
CHN2	Minshiung	0.59	303	eP	Pb	00 01 15.0	+0.3
	baz=303						
EGFH	Guangfu	0.60	40	eP	Pg	00 01 13.6	+0.1
	baz=39						
EGFH				eS	Sg	00 01 21.7	+0.3
	baz=272						
CHN3	Shinhua	0.61	258	eP	Pn	00 01 16.4	-0

	baz=359					
WLGB	Puzi	0.71	292	eP	Pb	00 01 16.6 -0.1
	baz=294					
WLGB				eS	Sn	00 01 28.7 -1.0
	baz=294					
ESL	Shilin	0.72	33⇓	eP	Pg	00 01 15.7 -0.1
	baz=39					
ESL				eS	Sb	00 01 26.2 -0.8
	baz=39					
WNT	Mingjian	0.73	336	eP	Pb	00 01 17.6 +0.4
	baz=338					
WNT				eS	Sb	00 01 28.6 +1.2
	baz=338					
TAI1	Yung-k'ang	0.74	257	eP	Pn	00 01 18.4 -0.5
	baz=270					
TAI1				eS	Sn	00 01 31.1 +0.7
	baz=270					
CHN8	Yiju	0.75	281	eP	Pg	00 01 16.5 0.0
	baz=281					
SCLT	Jiali	0.75	268	eP	Pb	00 01 18.1 +0.7
	baz=267					
DPDB	Guoxing	0.82	355	eP	Pg	00 01 17.7 -0.2
	baz=5.0					
SSPT	Xinbi	0.83	210	eP	Pg	00 01 18.1 +0.2
	baz=202					
EAST	Anshuo	0.83	190	⇑P	Pg	00 01 18.3 +0.2
	baz=184					
EAST				eS	Sg	00 01 29.6 +0.7
	baz=184					
WSF	Szhu	0.84	301	eP	Pb	00 01 18.8 -0.2
	baz=302					
WSF				eS	Sb	00 01 30.7 +0.1
	baz=302					
TAW	Tawu	0.85	187	eP	Pg	00 01 18.4 0.0
	baz=196					
CHGB	Renai	0.86	10	eP	Pg	00 01 17.7 -0.9
	baz=11					
ENLB	Shoufeng	0.88	38	eP	Pg	00 01 18.8 -0.2
	baz=32					
RLNB	Erlin	0.91	319	eP	Pg	00 01 19.7 +0.2
	baz=318					
SCZT	Fangliau	0.91	204⇑	eP	Pg	00 01 19.4 -0.1
	baz=219					
WTCT	Ta-ch'eng	0.94	314	eP	Pb	00 01 20.4 -0.2
	baz=314					
HWA	Hwalien	0.94	35	eP	Pb	00 01 20.6 -0.1
	baz=47					
WCHH	Zhanghua	0.96	335	eP	Pn	00 01 21.9 -0.1
	baz=321					
TCU	Taichung	0.98	342	eP	Pb	00 01 21.5 0.0
	baz=328					
TWD	Chiawan	1.02	32	⇓P	Pg	00 01 21.3 -0.4
	baz=48					
WLCH	Liuqiu	1.03	214	eP	Pn	00 01 25.6 +2.6
	baz=214					
TWP	Hsiaoliuchiu	1.05	215	eP	Pn	00 01 24.6 +1.4
	baz=215					
TDCB	Techi	1.05	7	eP	Pg	00 01 20.9 -1.3
NACB	Ninganchiao	1.10	29	eP	Pg	00 01 22.3 -0.9
	baz=29					
NACB				eS	Sg	00 01 36.9 -0.6
	baz=29					
TWQ1	Liyutan	1.16	349	eP	Pn	00 01 25.1 +0.4
	baz=351					
TWQ1				eS	Sn	00 01 41.4 +0.6
	baz=351					
HEN	Hengchun	1.22	192	eP	Pn	00 01 25.9 +0.4
	baz=179					
WDGT	Dungji	1.24	273	eP	Pb	00 01 25.1 -0.8
	baz=274					
WDGT				S	Sb	00 01 42.1 0.0
	baz=274					
NNSB	Datong	1.26	16	eP	Pn	00 01 25.1 -1.2
	baz=25					
NNSB				eS	Sn	00 01 45.1 +1.5
	baz=25					
NNSH	Datong	1.26	16	eP	Pn	00 01 25.0 -1.3
	baz=4.0					
LAY	Lan-yu	1.27	157	eP	Pn	00 01 24.2 -2.0
	baz=156					
NNS	Nan Shan	1.27	15	eP	Pn	00 01 25.7 -0.7
	baz=3.0					
TWK1	Hengchun	1.27	189	eP	Pg	00 01 26.7 +0.2
	baz=176					
TWK1				eS	Sn	00 01 46.1 +2.5
	baz=176					
TWKBT	Hengchun	1.27	188	eP	Pg	00 01 26.6 +0.1
	baz=178					
TSEB	Hengchuen, Pin	1.31	185	eP	Pg	00 01 28.4 +1.3
	baz=173					
TSEB				eS	Sn	00 01 48.3 +3.8
	baz=173					
NMLH	Miaoli	1.34	351	eP	Pg	00 01 28.5 +0.8
	baz=350					
PHUB	P'eng-hu	1.36	283	eP	Pn	00 01 26.7 -0.7
	baz=285					
PHUB				eS	Sb	00 01 44.5 -0.9
	baz=285					
PNG	Penghu	1.39	285	eP	Pn	00 01 27.3 -0.6
	baz=287					
PNG				eS	Sb	00 01 46.2 +0.1
	baz=287					
ENA	Nanau	1.39	29	eP	Pn	00 01 27.5 -0.3
	baz=43					
NANB	Nanao	1.39	29	eP	Pn	00 01 26.9 -1.0
	baz=43					
NSTT	Nanjuang	1.42	360	eP	Pb	00 01 28.6 -0.3
	baz=349					
NSTT				eS	Sg	00 01 49.4 +1.8
	baz=349					
LIOB	Emei	1.43	0	eP	Pn	00 01 28.7 +0.2
	baz=350					
LIOB				eS	Sg	00 01 49.0 +0.9
	baz=350					
VCHM	Qimei	1.46	270	eP	Pn	00 01 27.9 -0.9
	baz=272					
VCHM				eS	Sn	00 01 47.1 -1.0
	baz=272					
YHNB	Yeheng	1.49	13	eP	Pn	00 01 29.5 +0.1
	baz=15					
NSK	Sanguang	1.50	12	eP	Pn	00 01 29.6 +0.2
	baz=13					
NSK				eS	Sb	00 01 49.7 +0.3
	baz=13					
ENTT	Nioudou	1.51	19	eP	Pb	00 01 30.4 -0.1
	baz=39					
SBCB	Hsinchu	1.58	359	eP	Pg	00 01 33.3 +1.0
	baz=357					
TWC	Suao	1.59	29	eP	Pb	00 01 31.4 -0.4
	baz=41					
TWE	Neicheng	1.62	22	eP	Pb	00 01 32.2 -0.1
	baz=40					
NWLT	Wulai	1.63	16	eP	Pb	00 01 32.0 -0.4
	baz=5.0					
EOS1	EOS1	1.68	37	eP	Pb	00 01 32.6 -0.7
	baz=56					
NCU	National Centr	1.76	5	eP	Pn	00 01 32.8 -0.2
	baz=4.0					
TATO	Taipei	1.81	14	eP	Pb	00 01 35.5 0.0
	baz=15					
TATO				eS	Sg	00 02 01.3 +1.0
	baz=15					
TIPB	Shuangxi	1.91	23	eP	Pn	00 01 35.6 +0.5
	baz=42					
TWS1	Kuangyinshan	1.92	11	eP	Pg	00 01 38.8 -0.1
	baz=25					
NWF	Wu-fen Shan	1.98	21	eP	Pb	00 01 37.5 -1.0
	baz=42					
WFSB	Wu-fen Shan	1.98	21	eP	Pb	00 01 37.4 -1.1
	baz=42					
YM04	YM04	2.00	14	eP	Pb	00 01 38.6 -0.1
	baz=39					
YM10	YM10	2.00	14	eP	Pn	00 01 37.5 +1.1
	baz=40					
YM11	YM11	2.02	15	eP	Pb	00 01 39.3 +0.2
	baz=40					
YM03	YM03	2.02	14	eP	Pb	00 01 39.9 +0.7
	baz=348					
YM07	YM07	2.04	16	eP	Pn	00 01 37.2 +0.4
	baz=354					
VWUC	VWUC	2.28	322	eP	Pn	00 01 39.5 -0.6
	baz=318					
KNMB	Chin-men Tao	2.71	298	eP	Pn	00 01 45.5 -0.5
	baz=296					
MATB	Ma-tsu	3.09	342	eP	Pn	00 01 50.5 -0.7
	baz=337					

*ISCJB **03** 00:23:18.7±0.9, 32°.28S±0°.04×71°.73W±0°.09, h33km±49km, Error ellipse: s-maj=13.8km s-min=5.2km az=165.0*
*GUC **03** 00:23:19.0±0.7, 32°.19S×71°.20W, h39km±4km, ML3.7*
*SJA **03** 00:23:20.3±0.9, 32°.13S×71°.29W, h10km, ML3.4, MW3.5*
ISC 03 00:23:17.7±2.8, 32°.29S±0°.04×71°.77W±0°.08, h23km±24km, n24, σ1°51/34, 13D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROCH	El Roble	0.94	137	⇓iP	Pn	00 23 35.5	-0.1
ROCH				eS	Sb	00 23 47.4	-0.1
ROCH				IAML		00 23 48.4	
	comp=N,5μm,0.6s						
PEL	Peldehue	1.25	133	eP	Pn	00 23 38.9	-0.9
PEL				eS	Sn	00 23 53.5	-2.5
PEL				IAML		00 23 55.0	
	comp=E,2μm,0.2s						
CLCH	Cerro Calan	1.52	137	⇓iP	Pn	00 23 43.4	-0.1
CLCH				i S	Sn	00 24 01.3	-1.2
CLCH				IAML		00 24 02.4	
	comp=E,4μm,0.5s						
ANTU	Antumapu	1.60	143	eP	Pn	00 23 45.1	+0.5
ANTU				eS	Sn	00 24 04.5	0.0
ANTU				IAML		00 24 10.4	
	comp=E,2μm,0.3s						
FCH	Farellones	1.62	130	⇓eP	Pn	00 23 44.5	-0.7
FCH				eS	Sn	00 24 03.4	-2.1
FCH				IAML		00 24 04.6	
	comp=E,1μm,0.8s						
AUSP	Uspallata	2.02	89	⇓eP	Pn	00 23 50.8	+0.1
AUSP				⇓eS	Sn	00 24 14.1	-1.3
LMEL	Las Melosas	2.04	140	⇓eP	Pn	00 23 51.5	+0.7
LMEL				eS	Sn	00 24 15.5	-0.1
RTLS	Leoncito	2.16	78	eP	Pn	00 23 52.7	+0.2
RTLS				IAML		00 24 22.1	
	comp=Z,378nm,0.5s						
GO04	Tololo Observa	2.27	22	⇓iP	Pn	00 23 53.6	-0.4
GO04				eS	Sn	00 24 21.0	-0.4
TLL	Tololo Astrono	2.27	22	eP	Pn	00 23 53.9	-0.2
TLL				eS	Sn	00 24 20.8	-0.7
TLL				IAML		00 24 29.2	
	comp=N,927nm,0.3s						
ARCO	CERRO ARCO	2.46	104	eP	Pn	00 23 58.4	+1.8
ARCO				eS	Sn	00 24 28.1	+2.1
ARCO				IAML		00 24 31.3	
	comp=Z,238nm,0.4s						
ASAL	Salagasta	2.50	98	eP	Pn	00 23 59.0	+1.9
ASAL				⇓eS	Sn	00 24 31.8	+4.9
AAGR	Agrelo	2.61	109	⇓eP	Pn	00 24 00.1	+1.6
GO05	HualaæØ	2.72	183	eP	Pn	00 24 01.5	+1.6
ZON	Zonda	2.73	75	⇓eP	Pn	00 24 01.1	+0.8
RTCV	Cerro Valdivia	2.78	82	⇓eP	Pn	00 24 01.1	+0.3
RTLL	Cerro Villicun	2.97	72	eP	Pn	00 24 03.9	+0.5
AVIZ	Vizcacheras	2.98	114	eS	Sn	00 24 22.0	-17
AMOG	MOGNA	3.10	65	eP	Pn	00 24 05.3	0.0
AMOG				⇓eS	Sn	00 24 22.3	-19
LCO	Las Campanas	3.40	16	eP	Pn	00 24 10.2	+0.7
ACAN	Cantantal	3.88	91	⇓eP	Pn	00 24 15.4	-0.6
AGUA	GUANDACOL	3.97	46	eP	Pn	00 24 19.1	+1.9
MRA	San Martin	5.13	93	eP	Pn	00 24 31.3	-1.8
CYA	Choya	6.43	55	eP	Pn	00 24 49.1	-1.8

*SOME **03** 00:25:21.8, 43°.78N×82°.08E, h5km*
*NNC **03** 00:25:33.5±4.2, 44°.34N×81°.60E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=54.7km s-min=15.7km az=128.0*
ISC 03 00:25:21.9±2.5, 43°.81N±0°.09×82°.06E±0°.08, h4km±16km, n17, σ2°05/29, 2C-1D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	Shalkode	2.00	252	eP	Pn	00 25 55.2	-1.4
	27nm,0.2s						
SHLS				eS	Sn	00 26 19.5	-2.6
	116nm,0.6s						
UZB	Uzynbulak	2.31	254	eP	Pb	00 26 04.4	+0.2
	2.5nm,0.3s						
UZB				eS	Sb	00 26 35.0	+1.9
	11nm,0.4s						
KAPS	Kapalarasan	2.43	308	eP	Pb	00 26 06.5	+0.3
	2.7nm,0.1s						
KAPS				eS	Sg	00 26 38.4	-1.5
	12nm,0.6s						
KPKS	Kokpek	2.47	263	eP	Pb	00 26 06.2	-0.8
	17nm,0.1s						
KPKS				eS	Sb	00 26 38.5	+0.6
	64nm,0.5s						
SATY	Saty	2.77	255	eP	Pb	00 26 12.3	+0.4
	2.9nm,0.1s						
SATY				eS	Sb	00 26 48.6	+2.4
	40nm,0.2s						
KURS	Kuram	2.84	265	eP	Pb	00 26 14.9	+1.7
	1.2nm,0.5s						
KURS				eS	Sg	00 26 53.4	+0.2
	6.6nm,0.5s						
MK31	Makanchi Array	2.99	3	Pn	Pb	00 26 16.4	+0.7
	0.9nm,0.3s,baz=184,slow=16,SNR=30						
MK31				Lg	Lg	00 26 53.8	
	4.1nm,0.5s,baz=187,slow=26,SNR=12						
MAKZ	Makanchi	3.00	359	⇓Pg	Pb	00 26 16.6	+0.8
	0.3nm,0.2s						
MAKZ				⇑Lg	Lg	00 26 53.7	
	3.0nm,0.6s						
ARXS	Arharly	3.08	279	eP	Pg	00 26 20.9	0.0
	6.1nm,0.3s						
ARXS				eS	Sg	00 27 03.7	+2.9
	11nm,0.4s						
KOTS	Kotyrbulak	3.64	263	eP	Pb	00 26 28.3	+1.3
	2.7nm,0.3s						
KOTS				eS	Sg	00 27 16.5	-2.5
	8.3nm,0.4s						
MDOK	Medeo	3.70	262	Pn	Pb	00 26 30.6	+2.6
	3.8nm,0.5s						
MDOK				Lg	Lg	00 27 21.7	
	3.1nm,0.5s						
MDOK	Medeo	3.70	262	eP	Pb	00 26 30.9	+2.9
	6.2nm,0.5s						
MDOK				eS	Sg	00 27 20.9	0.0
	6.6nm,0.7s						
KTBS	Karatobe	3.90	270	eP	Pb	00 26 33.7	+2.5
	1.1nm,0.3s						
KTBS				eS	Sg	00 27 25.7	-1.4
	6.8nm,0.4s						
ZSN	Zaisan	4.14	27	eP	Pb	00 26 35.3	0.0
	0.3nm,0.2s						
ZSN				eS	Sb	00 27 28.3	+2.7
	2.0nm,0.5s						
KUU	Kurty	4.14	273	eP	Pb	00 26 36.6	+1.3
	3.1nm,1.2s						
KUU				eS	Sg	00 27 30.6	-4.2
	6.3nm,0.3s						
DGS	Degeres	4.61	265	eP	Pb	00 26 46.6	+3.2
	14nm,0.4s						
DGS				eS	Sg	00 27 48.2	-1.7
	7.3nm,0.4s						
TKM2	Tokmak 2	4.79	262	⇑Lg	Lg	00 27 59.7	
	2.4nm,0.6s						

*ISCJB **03** 00:33:03.4±0.3, 17°.97N±0°.04×63°.19W±0°.03, h110km±2km, mb4.0/17, Error ellipse: s-maj=7.5km s-min=2.9km az=33.9*
*TRN **03** 00:33:03.3, 17°.99N×63°.16W, h103km, MD3.9*
*IDC **03** 00:33:04.1±0.8, 17°.86N×63°.27W, h105km±7km, mb3.5/10, mb1 3.7/13, mb1mx3.4/59, mbtmp3.9/13, MS3.1/3, Ms1 3.1/3, ms1mx2.6/35, Error ellipse: s-maj=20.2km s-min=9.9km az=10.0*
*NEIC **03** 00:33:04.4±0.3, 18°.03N×63°.17W, h102km±3km, mb4.1/9, MD3.9(TRN), Error ellipse: s-maj=8.3km s-min=3.3km az=209.0*
NEIC Felt [II] at Marigot. Also felt at Cupe Coy, Duth Cul de Sac and Nazareth. Felt on Saint-Barthelemy.
ISC 03 00:33:04.0±0.6, 17°.96N±0°.05×63°.24W±0°.04, h103km±5km, n92, σ1°15/126, mb4.0/18, 5C-5D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMRT	St. Maarten	0.18	59	ePn	Pn	00 33 19.5	+0.9
SMRT				eSn	Sn	00 33 30.1	+0.6
SMRT	St. Maarten	0.18	59	⇓iP	Pn	00 33 19.5	+0.9
SMRT				eS	Sn	00 33 29.6	+0.1
SABA	Saba	0.34	181	ePn	Pn	00 33 20.0	+0.8
SABA				eSn	Sn	00 33 31.1	+0.5
SABA	Saba	0.34	181	eP	Pn	00 33 20.1	+0.8
SABA				eS	Sn	00 33 31.1	+0.5
SEUS	St. Eustatius	0.52	152	ePn	Pn	00 33 20.9	+0.5
SEUS				eSn	Sn	00 33 33.0	+0.4
SEUS	St. Eustatius	0.52	152	eP	Pn	00 33 20.8	+0.5
SEUS				eS	Sn	00 33 32.8	+0.3
NEV	Hard Times	1.04	142	⇓iP	Pn	00 33 27.1	+1.9
NEV				eS	Sn	00 33 42.7	+1.7
ABVI	Anegada Island	1.29	307	ePn	Pn	00 33 29.2	+1.2
ABVI				eSn	Sn	00 33 47.6	+1.4
ANWB	Willy Bob	1.41	102	ePn	Pn	00 33 29.1	-0.3
ANWB				eSn	Sn	00 33 47.8	-0.8
ANWB	Willy Bob	1.41	102	⇓iP	Pn	00 33 29.4	0.0
ANWB				eS	Sn	00 33 47.7	-1.0
CDVI	St. Croix	1.47	262	ePn	Pn	00 33 31.4	+1.3
MBWH		1.57	140	⇑iP	Pn	00 33 31.9	+0.5
MLYT	Lee's Yard	1.58	141	⇑iP	Pn	00 33 32.2	+0.7
MLYT				eS	Sn	00 33 52.4	0.0
BPA	Boggy Peak	1.60	124	i P	Pn	00 33 32.6	+0.9
BPA				eS	Sn	00 33 52.5	-0.3
BPA	Boggy Peak	1.60	124	⇑iP	Pn	00 33 32.6	+0.9
BPA				eS	Sn	00 33 52.5	-0.3
STVI	Saint Thomas	1.68	284	ePn	Pn	00 33 33.4	+0.7
STVI				eSn	Sn	00 33 54.1	-0.4
GDHS	Morne Mazeau,	2.19	140	ePn	Pn	00 33 39.7	+0.4
GDHS				eS	Sn	00 34 05.9	-0.4
MTP	Monte Pirata	2.21	274	ePn	Pn	00 33 40.5	+1.0
MTP				eSn	Sn	00 34 06.4	-0.2
HUMP	Col San Antoni	2.49	275	ePn	Pn	00 33 43.5	+0.4
CBYP	Canovanas	2.51	278	ePn	Pn	00 33 44.0	+0.5
TBG	Guadaloupe-3	2.59	144	⇑iP	Pn	00 33 44.8	+0.3
TBG				eS	Sn	00 34 14.7	-0.8
DEG	La Desirade	2.65	128	eP	Pn	00 33 44.7	-0.6
DEG				eS	Sn	00 34 16.5	-0.5
DEG	La Desirade	2.65	128	eP	Pn	00 33 44.7	-0.6
DEG				eS	Sn	00 34 16.5	-0.5
H05N1	Guadeloupe/Mar	2.65	128	P	Pn	00 33 44.6	-0.6
H05N1				S	Sn	00 34 13.9	-3.0
MGG	Marie-Galante	2.74	138	i P	Pn	00 33 47.0	+0.6
MGG				eS	Sn	00 34 18.4	-0.6
MGG	Marie-Galante	2.74	138	⇓iP	Pn	00 33 47.0	+0.6
MGG				eS	Sn	00 34 18.4	-0.6
SJG	San Juan	2.78	274	P	Pn	00 33 48.3	+1.4
	34nm,0.3s,baz=107,slow=16,SNR=69						
SJG				S	Sn	00 34 20.1	+0.2
	78nm,0.3s,baz=342,slow=16,SNR=61						
SJG	San Juan	2.78	274	ePn	Pn	00 33 48.2	+1.3
MDVC	Dominica, Viel	2.92	143	eP	Pn	00 33 49.3	+0.5
MDVC				eS	Sn	00 34 23.4	+0.1
MDPO	Dominica; Chan	2.92	144	⇑iP	Pn	00 33 49.5	+0.6
MDPO				eS	Sn	00 34 23.4	0.0
BBL	Barber's Block	2.95	145	i P	Pn	00 33 49.9	+0.6
BBL				eS	Sn	00 34 27.0	+2.8
BBL	Barber's Block	2.95	145	i P	Pn	00 33 49.9	+0.6
BBL				eS	Sn	00 34 24.5	+0.3
OBIP	Obispado Ponce	3.21	272	ePn	Pn	00 33 53.7	+1.0
DLPL	La Plaine	3.23	144	eP	Pn	00 33 53.4	+0.4
DLPL				eS	Sn	00 34 30.3	-0.5
DLPL	La Plaine	3.23	144	eP	Pn	00 33 53.4	+0.4
DLPL				eS	Sn	00 34 30.3	-0.5
AOPR	Arecibo Observ	3.37	277	ePn	Pn	00 33 56.3	+1.5
PCM	Pelee Case Pet	3.68	148	eP	Pn	00 33 59.3	+0.2
PCM	Pelee Case Pet	3.68	148	eP	Pn	00 33 59.8	+0.7
CRPR	Cabo Rojo, PR	3.69	271	ePn	Pn	00 33 59.5	+0.5
CXM	Morne La Croix	3.71	147	⇓iP	Pn	00 33 59.9	+0.4
BAMF	Morne Balai	3.71	147	eP	Pn	00 33 59.9	+0.3
MPR	Mayaguez	3.72	274	ePn	Pn	00 34 02.3	+2.8
PML	Morne Lenard	3.72	148	eP	Pn	00 34 00.0	+0.4
AGP	Aguadilla	3.74	277	ePn	Pn	00 34 01.0	+1.2
FDF	Fort de France	3.78	148	ePn	Pn	00 34 00.5	+0.1
FDF				eS	Sn	00 34 42.4	-1.7
FDF	Fort de France	3.78	148	eP	Pn	00 34 00.7	+0.2
FDF				eS	Sn	00 34 42.8	-1.2
BIM	Bigot	4.00	148	eP	Pn	00 34 03.8	+0.4
LPMF	Morne Lapointe	4.01	147	eP	Pn	00 34 03.7	+0.2
H05S1	Guadeloupe/Mar	4.20	146	P	Pn	00 34 06.8	+0.7
H05S1				S	Sn	00 34 52.7	-1.4
SVB	Belmont	5.04	157	ePn	Pn	00 34 17.7	+0.3
SVB	Belmont	5.04	157	eP	Pn	00 34 17.9	+0.5
SDDR	Presa de Saban	7.71	279	ePn	Pn	00 34 54.0	+0.3
GRTK	Grand Turk	8.23	297	ePn	Pn	00 34 59.0	-1.7
GRTK				eSn	Sn	00 36 25.2	-6.9
SDV	Santo Domingo	11.53	220	P	Pn	00 35 42.7	-3.1
	0.7nm,0.3s,baz=292,slow=15,SNR=3.3						
OCAC	Ocana	13.77	227	eP	P	00 36 19.7	-0.4
PAMC	Pamplona, Colo	14.02	222	eP	P	00 36 22.2	-1.0
SJCC	San Jacinto, C	14.09	237	eP	P	00 36 23.0	-0.6
BARC	Barichara	14.89	222	eP	Pn	00 36 31.6	+2.0
MOTC	Monteria, Cord	15.14	235	eP	Pn	00 36 34.6	+2.1
RUSC	La Rusia	15.37	220	ePn	P	00 36 38.7	+0.4
	4.4nm,0.7s						
RUSC	La Rusia	15.37	220	eP	P	00 36 38.6	+0.3
ZARC	Zaragoza, Cauc	15.38	229	eP	P	00 36 38.1	+0.2
PTBC	PUERTO BERRIO,	15.77	225	eP	Pn	00 36 38.9	-1.6
HELC	Santa Helena	16.76	227	ePn	Pn	00 36 53.8	+0.9
	50nm,1.3s						
HELC	Santa Helena	16.76	227	eP	Pn	00 36 53.6	+0.6
NORC	Norcasia	16.76	224	eP	Pn	00 36 52.7	0.0
ROSC	El Rosal	16.96	221	P	Pn	00 36 53.0	-2.5
	0.4nm,0.3s,baz=139,slow=20,SNR=2.4						
APG	El Apazote	26.27	268	P	P	00 38 29.2	-1.0
	3.0nm,0.7s,baz=23,slow=6.1,SNR=5.3						
APG				LR	LR	00 50 40.4	
	comp=Z,41nm,18.1s,baz=229,slow=40						
ECSD	EROS Data Cent	38.07	320	eP	P	00 40 13.4	+0.8
	2.2nm,0.8s						
TXAR	Lajitas Array	38.55	295	P	P	00 40 17.0	0.0
	0.5nm,0.6s,baz=129,slow=8.2,SNR=8.2						
TXAR				PcP	PcP	00 42 27.7	0.0
	0.2nm,0.7s,baz=101,slow=4.9,SNR=3.2						
TX31	Lajitas Ar. Si	38.55	295	eP	P	00 40 17.7	+0.8
MNTX	Cornudas Mount	40.37	298	eP	P	00 40 32.5	+0.5
	1.4nm,0.7s						
ULM	Lac du Bonnet	41.45	328	P	P	00 40 40.0	-0.4
	0.7nm,0.4s,baz=131,slow=12,SNR=2.8						
BNM	Barren Site	41.85	301	eP	P	00 40 45.7	+1.4
ANMO	Albuquerque	41.88	303	P	P	00 40 45.3	+0.8
	1.8nm,0.7s,baz=92,slow=9.9,SNR=7.0						
LPM	Los Pinos Moun	41.89	302	eP	P	00 40 45.3	+0.8
BW06	Boulder Array	46.26	313	eP	P	00 41 20.2	+0.8
	2.3nm,0.9s						
PDAR	Pinedale Array	46.26	313	P	P	00 41 20.4	+1.0
	1.2nm,0.6s,baz=112,slow=8.3,SNR=8.0						
PDAR				pP	pP	00 41 43.6	-0.1
	0.2nm,0.4s,baz=120,slow=5.3,SNR=1.7						
PDAR	Pinedale Array	46.26	313	eP	P	00 41 20.1	+0.8
TCUT	Toone Canyon	47.13	310	eP	P	00 41 26.3	+0.1
	19nm,0.8s						
PSUT	Pine Spring	48.41	306	eP	P	00 41 36.5	+0.4
	1.9nm,0.7s						
MCMT	McKenzie Canyo	49.14	314	eP	P	00 41 42.1	+0.4
TPNV	Topopah Spring	50.04	303	eP	P	00 41 49.0	+0.4
	2.9nm,0.8s						
NVAR	Mina Array Bea	51.84	305	P	P	00 42 02.9	+0.8
	0.7nm,0.6s,baz=104,slow=6.6,SNR=4.4						
NEW	Newport	52.92	317	LR	LR	01 06 10.7	
	comp=Z,33nm,19.2s,baz=26,slow=38						
RUBR	Rubicon Trail	53.35	306	eP	P	00 42 13.3	+0.1
	50nm,0.7s						
YBH	Yreka Blue Hor	55.59	309	P	P	00 42 28.3	-0.8
	1.5nm,0.7s,baz=114,slow=10.0,SNR=4.0						
KOWA	Kowa	56.77	84	pP	pP	00 43 03.3	+0.3
	0.9nm,0.5s,baz=301,slow=7.8,SNR=2.0						
YKA	Yellowknife Ar	56.81

mb1 3.9/16, mb1mx3.7/72, mbtmp3.8/16, ML3.6/4, MS2.8/5, Ms1 2.8/5, ms1mx2.5/68, Error ellipse: s-maj=19.4km s-min=16.4km az=117.0
*JMA **03** 00:36:09.6±0.2, 38°.25N×143°.89E, h40km, M3.9*
*ISCJB **03** 00:36:10.1±0.5, 38°.17N±0°.04×143°.85E±0°.05, h33km, mb3.8/12, MS3.0/1, Error ellipse: s-maj=6.1km s-min=5.0km az=143.6*
ISC 03 00:36:12.4±0.8, 38°.26N±0°.05×143°.88E±0°.07, h35km, n39, σ1§89/44, mb3.7/12, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**1.91**	**296**	P	**Pn**	**00 36 41.0**	**-1.5**
JIO	**Ouri**	**2.00**	**276**	P	**Pn**	**00 36 42.3**	**-1.4**
JIO				S	**Sn**	**00 37 05.8**	**-1.7**
MIYJ	**Miyakonagasawa**	**2.08**	**310**	P	**Pn**	**00 36 42.9**	**-1.8**
MIYJ				*e*S	**Sn**	**00 37 07.8**	**-1.6**
JMK	**Ichinoseki**	**2.19**	**289**	P	**Pn**	**00 36 45.2**	**-1.2**
JOM	**Ohasama**	**2.35**	**302**	P	**Pn**	**00 36 47.4**	**-1.2**
JANG	**Nango**	**2.79**	**320**	*e*S	**Sn**	**00 37 25.9**	**-1.2**
JYK	**Kaneyama**	**2.84**	**284**	P	**Pn**	**00 36 54.8**	**-0.4**
JYK				*e*S	**Sn**	**00 37 29.2**	**+1.0**
JFT	**Otama**	**2.90**	**256**	P	**Pn**	**00 36 55.3**	**-0.8**
JFT				*e*S	**Sn**	**00 37 28.8**	**-1.0**
JAW	**Awa shima**	**3.65**	**274**	P	**Pn**	**00 37 06.3**	**0.0**
JOT	**Ohata**	**3.80**	**326**	P	**Pn**	**00 37 08.6**	**+0.1**
JOT				*e*S	**Sn**	**00 37 48.8**	**-3.1**
JKB	**Kayabe**	**4.23**	**330**	P	**Pn**	**00 37 14.5**	**+0.2**
JKB				*e*S	**Sn**	**00 37 59.2**	**-3.2**
BSO1	**Boso 1**	**4.30**	**214**	P	**Pn**	**00 37 12.9**	**-1.9**
JCH	**Churui**	**4.36**	**355**	P	**Pn**	**00 37 14.0**	**-2.2**
JCH				*e*S	**Sn**	**00 38 02.2**	**-3.6**
JRY	**Ryogami san**	**4.57**	**242**	P	**Pn**	**00 37 17.4**	**-1.6**
JRY				S	**Sn**	**00 38 07.0**	**-3.9**
MJAR	**Matsushiro Arr**	**4.83**	**251**	**Pn**	**Pn**	**00 37 22.8**	**+0.1**
	3.0nm,0.3s,baz=121,slow=17,SNR=27						
MJAR				Sn	**Sn**	**00 38 15.7**	**-1.7**
	0.7nm,0.3s,baz=88,slow=23,SNR=2.7						
MJAR				LR	LR	00 39 35.2	
	comp=Z,57nm,20.0s,baz=95,slow=42						
MAT	**Matsushiro**	**4.83**	**251**	P	**Pn**	**00 37 22.5**	**-0.2**
MAT				S	**Sn**	**00 38 16.0**	**-1.4**
JOD2	**Odawara 2**	**4.88**	**234**	P	**Pn**	**00 37 21.3**	**-2.0**
NEM2	**Nemuro 2**	**5.29**	**15**	P	**Pn**	**00 37 24.9**	**-4.0**
ASAJ	**Asahikawa**	**5.93**	**351**	Pn	**Pn**	**00 37 37.4**	**-0.2**
	1.9nm,0.3s,baz=198,slow=8.5,SNR=8.4						
ASAJ				Sn	**Sn**	**00 38 42.2**	**-2.1**
	0.8nm,0.3s,baz=42,slow=27,SNR=4.0						
JHJ	**Hachijo jima 2**	**6.12**	**214**	Pn	**Pn**	**00 37 38.0**	**-2.4**
	5.5nm,0.3s,baz=74,slow=19,SNR=5.1						
JHJ				Sn	Sn	00 38 36.5	-13
	12nm,0.3s,baz=108,slow=20,SNR=2.2						
JCJ	**Chichijima**	**11.23**	**188**	Pn	Pn	00 38 37.8	-13
	2.3nm,0.3s,baz=323,slow=18,SNR=2.8						
JNU	**Nakatsue**	**11.75**	**248**	LR	LR	00 43 38.7	
	comp=Z,49nm,19.9s,baz=117,slow=38						
KSRS	**Korea Array**	**12.64**	**271**	Pn	**Pn**	**00 39 11.6**	**+1.9**
	0.1nm,0.3s,baz=92,slow=14,SNR=6.5						
KSRS				LR	LR	00 43 05.2	
	comp=Z,32nm,20.8s,baz=82,slow=33						
PETK	**Petropavlovsk-**	**17.66**	**28**	LR	LR	00 49 00.3	
	comp=Z,38nm,18.3s,baz=127,slow=44						
SEY	**Seymchan**	**25.24**	**9**	P	**P**	**00 41 36.1**	**+1.3**
	1.5nm,0.7s,baz=260,slow=3.2,SNR=4.1						
H11N2	**WAKE ISLAND Hy**	**27.19**	**126**	T	T	01 10 58.0	
	baz=318,slow=75						
H11N1	**WAKE ISLAND Hy**	**27.20**	**126**	T	T	01 10 33.0	
	baz=318						
H11N3	**WAKE ISLAND Hy**	**27.21**	**126**	T	T	01 10 25.4	
	baz=318,slow=75						
SONM	**Songino Array**	**28.77**	**302**	P	**P**	**00 42 09.8**	**+3.0**
	0.3nm,0.3s,baz=93,slow=8.7,SNR=2.9						
ZALV	**Zalesovo Beam**	**42.55**	**311**	P	**P**	**00 44 06.8**	**+2.3**
	0.8nm,0.5s,baz=68,slow=10,SNR=4.8						
ZALV				LR	LR	01 01 13.6	
	comp=Z,18nm,18.2s,baz=70,slow=35						
MKAR	**Makanchi Array**	**45.14**	**302**	P	**P**	**00 44 26.0**	**+0.6**
	0.9nm,0.7s,baz=97,slow=10,SNR=4.3						
KURBB	**Kurchatov Arra**	**46.80**	**307**	P	**P**	**00 44 38.9**	**+0.5**
	0.5nm,0.7s,baz=80,slow=7.9,SNR=5.5						
ILAR	**Eielson Array**	**47.40**	**33**	P	**P**	**00 44 43.2**	**+0.3**
	0.4nm,0.6s,baz=279,slow=4.9,SNR=4.0						
WRA	**Warramunga Arr**	**58.59**	**191**	P	**P**	**00 46 04.0**	**-1.8**
	3.6nm,0.6s,baz=11,slow=7.3,SNR=30						
ASAR	**Alice Springs**	**62.31**	**190**	P	**P**	**00 46 28.7**	**-2.5**
	0.6nm,0.8s,baz=0.3,slow=6.0,SNR=7.4						
NVAR	**Mina Array Bea**	**72.68**	**55**	P	**P**	**00 47 37.5**	**+0.6**
	0.3nm,0.3s,baz=319,slow=5.0,SNR=2.7						
HFS	**Hagfors**	**73.76**	**337**	P	**P**	**00 47 43.9**	**+1.3**
	5.1nm,1.0s,baz=40,slow=9.9,SNR=2.7						
PDAR	**Pinedale Array**	**75.40**	**47**	P	**P**	**00 47 52.9**	**0.0**
	0.5nm,0.5s,baz=252,slow=3.0,SNR=4.8						
TXAR	**Lajitas Array**	**87.82**	**54**	P	**P**	**00 48 58.2**	**-0.2**
	0.1nm,0.5s,baz=321,slow=3.6,SNR=2.4						

IDC 03 00:47:34.5±1.7, 0°.03N×125°.65E, h0km, mb3.2/4, mb1 3.4/4, mb1mx3.3/49, mbtmp3.3/4, Error ellipse: s-maj=182.6km s-min=23.8km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.60**	**157**	P	P	00 52 25.4	-0.8
	0.8nm,0.7s,baz=335,slow=11,SNR=5.8						
ASAR	**Alice Springs**	**24.89**	**162**	P	P	00 52 59.8	+0.6
	0.3nm,0.3s,baz=345,slow=12,SNR=7.3						
MKAR	**Makanchi Array**	**60.00**	**327**	P	P	00 57 42.6	-0.4
	0.2nm,0.6s,baz=124,slow=8.0,SNR=1.8						
KURBB	**Kurchatov Arra**	**64.28**	**329**	P	P	00 58 11.9	+0.3
	0.2nm,0.5s,baz=127,slow=6.4,SNR=2.1						

*ISK **03** 00:54:13.9, 34°.62N×32°.94E, h12km, ML2.3/4*
*ISCJB **03** 00:54:15.0±1.1, 34°.62N±0°.07×32°.96E±0°.07, h16km±10km, Error ellipse: s-maj=11.0km s-min=9.2km az=1.6*
*CSEM **03** 00:54:15.2±0.2, 34°.65N×32°.96E, h12km, ML3.0, Error ellipse: s-maj=3.4km s-min=2.5km az=13.0*
*NIC **03** 00:54:15.2±0.2, 34°.66N×32°.96E, h15km, ML3.0*
ISC 03 00:54:15.6±1.2, 34°.67N±0°.05×32°.96E±0°.04, h16km±7km, n24, σ0§41/33, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SZAC	**Souni**	**0.11**	**322**	P	**Pb**	**00 54 19.0**	**-0.4**
	baz=145						
SZAC				S	**Sg**	**00 54 21.9**	**+0.4**
SZAC	**Souni**	**0.11**	**322**	P	**Pb**	**00 54 19.0**	**-0.4**
SZAC				S	**Sg**	**00 54 21.9**	**+0.4**
CSS	**Mathiatis**	**0.42**	**46**	PG	**Pg**	**00 54 23.8**	**-0.3**
CSS				SG	**Sb**	**00 54 30.8**	**-0.1**
CSS	**Mathiatis**	**0.42**	**46**	P	**Pg**	**00 54 24.0**	**-0.1**
	baz=225						
CSS				S	**Sb**	**00 54 30.7**	**-0.1**
CSS	**Mathiatis**	**0.42**	**46**	*e*Pg	**Pg**	**00 54 23.8**	**-0.3**
CSS	**Mathiatis**	**0.42**	**46**	P	**Pg**	**00 54 24.0**	**-0.1**
CSS				S	**Sb**	**00 54 30.7**	**-0.1**
LEF	**Lefka**	**0.45**	**352**	PG	**Pg**	**00 54 24.2**	**-0.5**
LEF				SG	**Sb**	**00 54 31.8**	**+0.1**
LEF	**Lefka**	**0.45**	**352**	*e*Pg	**Pg**	**00 54 24.2**	**-0.5**
LEF				*e*Sg	**Sb**	**00 54 31.8**	**+0.1**
MAMC	**Mammari**	**0.54**	**23**	P	**Pg**	**00 54 25.8**	**-0.6**
	baz=202						
MAMC	**Mammari**	**0.54**	**23**	P	**Pg**	**00 54 25.8**	**-0.6**
PPCY	**Paphos**	**0.55**	**293**	P	**Pg**	**00 54 26.4**	**-0.2**
	baz=113						
PPCY	**Paphos**	**0.55**	**293**	P	**Pg**	**00 54 26.4**	**-0.2**
ALFC	**Alefka**	**0.57**	**328**	P	**Pg**	**00 54 26.3**	**-0.6**
	baz=148						
ALFC				S	**Sg**	**00 54 34.9**	**+0.4**
ALFC	**Alefka**	**0.57**	**328**	P	**Pg**	**00 54 26.3**	**-0.6**
ALFC				S	**Sg**	**00 54 34.9**	**+0.4**
AKMC	**Akamas**	**0.63**	**305**	P	**Pg**	**00 54 27.9**	**-0.1**
	baz=124						
AKMC	**Akamas**	**0.63**	**305**	P	**Pg**	**00 54 27.9**	**-0.1**
AKKU	**Akkuyu-Mersin**	**1.56**	**18**	PN	**Pn**	**00 54 43.1**	**+0.4**
AKKU	**Akkuyu-Mersin**	**1.56**	**18**	*e*Pn	**Pn**	**00 54 43.1**	**+0.4**
IKL	**Isikli**	**1.67**	**20**	PN	**Pn**	**00 54 44.5**	**+0.3**
IKL	**Isikli**	**1.67**	**20**	*e*Pn	**Pn**	**00 54 44.5**	**+0.3**
YAYL	**Yayladag**	**2.91**	**61**	PN	**Pn**	**00 55 02.1**	**+0.8**
YAYL	**Yayladag**	**2.91**	**61**	*e*Pn	**Pn**	**00 55 02.1**	**+0.8**
MMLI	**Mount Malkishu**	**3.03**	**137**	PN	**Pn**	**00 55 02.9**	**0.0**
MMLI	**Mount Malkishu**	**3.03**	**137**	*e*Pn	**Pn**	**00 55 02.9**	**0.0**

*IDC **03** 00:58:38.6±0.7, 29°.63N×131°.54E, h0km, mb3.9/12, mb1 4.1/17, mb1mx3.8/71, mbtmp4.0/17, ML3.9/5, MS3.2/6, Ms1 3.2/6, ms1mx2.7/67, Error ellipse: s-maj=23.2km s-min=13.8km az=74.0*
*ISCJB **03** 00:58:41.4±0.5, 29°.64N±0°.05×131°.72E±0°.07, h38km, mb3.9/14, MS3.1/6, Error ellipse: s-maj=9.0km s-min=6.9km az=161.2*
*NEIC **03** 00:58:42.2±2.5, 29°.59N×131°.62E, h26km±19km, mb4.4/2, Error ellipse: s-maj=11.1km s-min=8.5km az=84.0*
ISC 03 00:58:43.2±0.6, 29°.55N±0°.06×131°.59E±0°.08, h38km, n30, σ1§41/26, mb4.0/14, MS3.1/6, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNU	**Nakatsue**	**3.61**	**351**	Pn	**Pn**	**00 59 36.5**	**-0.1**
	7.2nm,0.3s,baz=205,slow=4.9,SNR=42						
JNU				Sn	**Sn**	**01 00 15.1**	**-2.9**
	4.0nm,0.3s,baz=183,slow=18,SNR=4.7						
JOW	**Kunigami**	**3.99**	**228**	Pn	**Pn**	**00 59 41.0**	**-0.8**
	11nm,0.3s,baz=312,slow=26,SNR=42						
JOW				Sn	**Sn**	**01 00 24.2**	**-3.1**
	20nm,0.3s,baz=276,slow=27,SNR=7.1						
JHJ	**Hachijo jima 2**	**7.86**	**61**	Pn	**Pn**	**01 00 35.2**	**+0.3**
	16nm,0.3s,baz=86,slow=15,SNR=6.5						
KSRS	**Korea Array**	**8.45**	**340**	Pn	**Pn**	**01 00 43.8**	**+0.8**
	0.1nm,0.3s,baz=157,slow=15,SNR=2.8						
KSAR	**Wonju Array Be**	**8.45**	**340**	Pn	**Pn**	**01 00 43.8**	**+0.7**
MAJO	**Matsushiro**	**8.91**	**37**	*e*Pn	**Pn**	**01 00 48.4**	**-1.0**
MJAR	**Matsushiro Arr**	**8.91**	**37**	Pn	**Pn**	**01 00 49.1**	**-0.3**
	0.7nm,0.3s,baz=236,slow=15,SNR=9.0						
CBIJ	**Chichi jima**	**9.65**	**102**	Pn	**Pn**	**01 00 58.4**	**-1.2**
JCJ	**Chichijima**	**9.66**	**102**	Pn	**Pn**	**01 00 58.4**	**-1.2**
	7.2nm,0.3s,baz=280,slow=22,SNR=4.9						
SONM	**Songino Array**	**26.64**	**320**	P	**P**	**01 04 18.5**	**+0.2**
	0.4nm,0.4s,baz=141,slow=9.3,SNR=3.8						
TLY	**Talaya**	**30.32**	**325**	LR	LR	01 19 10.7	
	comp=Z,30nm,18.2s,baz=131,slow=41						
PETK	**Petropavlovsk-**	**30.32**	**32**	LR	LR	01 18 38.7	
	comp=Z,36nm,18.1s,baz=126,slow=40						
CMAR	**Chiang Mai Arr**	**31.70**	**257**	LR	LR	01 19 40.1	
	comp=Z,13nm,18.1s,baz=200,slow=40						
MKAR	**Makanchi Array**	**41.67**	**308**	P	**P**	**01 06 27.9**	**-0.1**
	0.8nm,0.8s,baz=94,slow=10,SNR=6.2						
KURK	**Kurchatov**	**44.57**	**314**	P	**P**	**01 06 51.2**	**-0.1**
KURBB	**Kurchatov Arra**	**44.61**	**314**	P	**P**	**01 06 51.2**	**-0.5**
	0.3nm,0.5s,baz=98,slow=9.2,SNR=3.4						
FITZ	**Fitzroy Crossi**	**47.72**	**188**	P	**P**	**01 07 17.7**	**+1.4**
	2.1nm,0.9s,baz=9.1,slow=12,SNR=2.9						
WRA	**Warramunga Arr**	**49.28**	**177**	P	**P**	**01 07 29.2**	**+0.9**
	1.0nm,0.5s,baz=354,slow=8.3,SNR=8.1						
ASAR	**Alice Springs**	**52.96**	**177**	P	**P**	**01 07 58.4**	**+2.4**
	1.2nm,0.7s,baz=11,slow=10,SNR=18						
AKTO	**Aktyubinsk**	**57.66**	**313**	LR	LR	01 34 57.0	
	comp=Z,40nm,19.2s,baz=85,slow=38						
COLA	**College**	**59.69**	**29**	P	**P**	**01 08 43.4**	**+0.1**
	1.2nm,0.5s						
STKA	**Stephens Creek**	**61.83**	**170**	P	**P**	**01 08 59.8**	**+1.4**
	1.2nm,0.6s,baz=344,slow=15,SNR=2.6						
ARCES	**ARCESS Array B**	**68.01**	**339**	P	**P**	**01 09 37.8**	**-0.3**
	1.1nm,0.8s,baz=81,slow=11,SNR=3.3						
KBZ	**Khabaz**	**69.36**	**309**	P	**P**	**01 09 49.4**	**+2.4**
	1.3nm,0.6s,baz=40,slow=7.9,SNR=3.4						
FINES	**FINESS Array B**	**71.43**	**331**	P	**P**	**01 09 58.7**	**-0.6**
	4.9nm,1.1s,baz=49,slow=5.8,SNR=6.9						
RES	**Resolute Bay**	**71.72**	**12**	LR	LR	01 43 26.1	
	comp=Z,23nm,18.8s,baz=246,slow=38						
BRTR	**Keskin Array B**	**77.32**	**308**	P	**P**	**01 10 35.4**	**+1.2**
	1.2nm,0.8s,baz=94,slow=5.7,SNR=9.7						
MLR	**Muntele Rosu**	**79.42**	**316**	LR	LR	01 50 25.5	
	comp=Z,10nm,19.3s,baz=76,slow=39						
SFJD	**Kangerlussuaq**	**83.74**	**1**	*e*P	**P**	**01 11 06.2**	**-1.6**
	1.6nm,0.5s						
GERES	**GERESS Array B**	**84.31**	**324**	P	**P**	**01 11 12.2**	**+0.9**
	0.2nm,0.5s,baz=41,slow=3.1,SNR=2.9						

*SFS **03** 01:05:08.0, 37°.26N×12°.70W, h0km, ML3.7*
*MDD **03** 01:05:09.0±1.6, 37°.28N×12°.69W, h0km, mb3.7/11, Error ellipse: s-maj=14.2km s-min=9.3km az=64.0, PRXIMO*
*IGIL **03** 01:05:09.7, 37°.26N×12°.70W, h0km, ML2.3*
*INMG **03** 01:05:10.8±1.8, 37°.10N×13°.06W, h10km, ML2.2, Error ellipse: s-maj=5.5km s-min=3.8km az=116.0*
*CSEM **03** 01:05:11.7±0.3, 37°.41N×12°.48W, h10km, mb3.7, Error ellipse: s-maj=6.1km s-min=5.0km az=58.0*
ISC 03 01:05:08.6±2.9, 37°.34N±0°.08×12°.6W±0°.1, h10km, n113, σ1§56/196, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.03**	**93**	*e*Pn	**Pn**	**01 05 56.9**	**+0.3**
PFVI				*e*Sn	**Sn**	**01 06 32.6**	**-0.3**
PFVI				A	A	01 06 42.3	
	4.3nm,0.4s						
PFVI	**Vila Bisbo**	**3.03**	**93**	P	**Pn**	**01 05 56.8**	**+0.2**
	1.4nm,0.2s,SNR=7.9						
PFVI				S	**Sn**	**01 06 32.5**	**-0.4**
	4.5nm,0.2s,SNR=7.9						
PFVI	**Vila Bisbo**	**3.03**	**93**	*e*Pn	**Pn**	**01 05 56.9**	**+0.3**
PFVI				*e*Sn	**Sn**	**01 06 32.6**	**-0.3**
PMST	**Lisbon--Monsan**	**3.04**	**62**	*e*Sn	**Sn**	**01 06 35.5**	**+2.2**
PMST				A	A	01 06 40.5	
	14nm,0.8s						
PMST	**Lisbon--Monsan**	**3.04**	**62**	*e*Sn	**Sn**	**01 06 35.5**	**+2.2**
PMAFR	**Mafra**	**3.08**	**57**	*e*Pn	**Pn**	**01 05 58.9**	**+1.6**
PMAFR				*e*Sn	**Sn**	**01 06 36.2**	**+2.0**
PMAFR				A	A	01 06 41.2	
	12nm,0.7s						
PMAFR	**Mafra**	**3.08**	**57**	P	**Pn**	**01 05 58.6**	**+1.3**
	5.1nm,0.2s,SNR=7.9						
PMAFR				S	**Sn**	**01 06 35.6**	**+1.4**
	16nm,0.3s,SNR=8.2						
PMAFR	**Mafra**	**3.08**	**57**	P	**Pn**	**01 05 58.6**	**+1.3**
	5.1nm,0.2s,SNR=7.9						
PMAFR	**Mafra**	**3.08**	**57**	*e*Pn	**Pn**	**01 05 58.9**	**+1.6**
PMAFR				S	**Sn**	**01 06 35.6**	**+1.4**
	16nm,0.3s,SNR=8.2						
PMAFR				*e*Sn	**Sn**	**01 06 36.2**	**+2.0**
PTEO	**Sao Teotonio**	**3.10**	**85**	*e*Pn	**Pn**	**01 05 59.1**	**+1.5**
PTEO				*e*Sn	**Sb**	**01 06 39.1**	**-2.6**
PTEO				A	A	01 06 41.4	
	3.2nm,0.3s						
PTEO	**Sao Teotonio**	**3.10**	**85**	P	**Pn**	**01 05 59.1**	**+1.5**
PTEO	**Sao Teotonio**	**3.10**	**85**	P	**Pn**	**01 05 59.1**	**+1.5**
PTEO				*e*Sn	**Sb**	**01 06 39.1**	**-2.6**
MORF	**Marmelete**	**3.16**	**89**	*e*P	**Pn**	**01 05 59.6**	**+1.2**
MORF				*e*S	**Sn**	**01 06 36.2**	**0.0**
MORF				AML	AML	01 06 40.5	
	comp=N,5.8nm,0.1s						
MORF	**Marmelete**	**3.16**	**89**	*e*Pn	**Pn**	**01 05 59.6**	**+1.2**
MORF				*e*Sn	**Sn**	**01 06 35.8**	**-0.4**
MORF				A	A	01 06 41.3	
	comp=N,3.3nm,0.6s						
MORF	**Marmelete**	**3.16**	**89**	P	**Pn**	**01 05 59.6**	**+1.2**
MORF				S	**Sn**	**01 06 36.2**	**0.0**
	comp=N,5.8nm,0.1s						
MORF	**Marmelete**	**3.16**	**89**	P	**Pn**	**01 05 59.6**	**+1.2**
MORF				*e*Sn	**Sn**	**01 06 35.8**	**-0.4**
MORF				S	**Sn**	**01 06 36.2**	**0.0**
	comp=N,5.8nm,0.1s						
PNCL	**Nicolau / Gran**	**3.33**	**75**	*e*Pn	**Pn**	**01 06 03.1**	**+2.4**
PNCL				*e*Sn	**Sn**	**01 06 40.9**	**+0.6**
PNCL				A	A	01 06 41.9	
	comp=N,3.1nm,0.4s						
PNCL	**Nicolau / Gran**	**3.33**	**75**	*e*Pn	**Pn**	**01 06 03.1**	**+2.4**
PNCL				*e*Sn	**Sn**	**01 06 40.9**	**+0.6**
MESJ	**Messejana**	**3.52**	**81**	*e*P	**Pn**	**01 06 05.2**	**+1.8**
MESJ				*e*S	**Sn**	**01 06 45.4**	**+0.3**
MESJ				AML	AML	01 06 51.4	
	comp=E,5.2nm,0.5s						
MESJ	**Messejana**	**3.52**	**81**	*e*Pn	**Pn**	**01 06 05.5**	**+2.1**
MESJ				*e*Sn	**Sn**	**01 06 45.4**	**+0.3**
MESJ				A	A	01 06 53.3	
	comp=E,2.3nm,0.2s						
MESJ	**Messejana**	**3.52**	**81**	P	**Pn**	**01 06 05.2**	**+1.8**
MESJ				S	**Sn**	**01 06 45.4**	**+0.3**
	comp=E,5.2nm,0.5s						
MESJ	**Messejana**	**3.52**	**81**	P	**Pn**	**01 06 05.2**	**+1.8**
MESJ	**Messejana**	**3.52**	**81**	*e*Pn	**Pn**	**01 06 05.5**	**+2.1**
MESJ				S	**Sn**	**01 06 45.4**	**+0.3**
	comp=E,5.2nm,0.5s						
PCVE	**Castro Verde**	**3.65**	**84**	*e*Pn	**Pn**	**01 06 06.9**	**+1.8**
PCVE				*e*Sn	**Sn**	**01 06 49.9**	**+1.7**
PCVE				A	A	01 06 57.7	
	comp=E,2.1nm,0.5s						
PCVE	**Castro Verde**	**3.65**	**84**	P	**Pn**	**01 06 06.9**	**+1.8**
PCVE				S	**Sn**	**01 06 49.9**	**+1.7**
	comp=E,2.1nm,0.5s						
PCVE	**Castro Verde**	**3.65**	**84**	P	**Pn**	**01 06 06.9**	**+1.8**
PCVE				S	**Sn**	**01 06 49.9**	**+1.7**
	comp=E,2.1nm,0.5s						
ALMR	**Almeirim**	**3.65**	**59**	*e*P	**Pn**	**01 06 07.0**	**+1.8**
ALMR				*e*S	**Sn**	**01 06 49.2**	**+0.8**
ALMR				AML	AML	01 06 52.6	
	comp=E,17nm,0.4s						
ALMR	**Almeirim**	**3.65**	**59**	*e*Pn	**Pn**	**01 06 07.4**	**+2.2**
ALMR				*e*Sn	**Sn**	**01 06 50.3**	**+1.9**
ALMR				A	A	01 06 55.8	
	comp=E,9.8nm,0.6s						
ALMR	**Almeirim**	**3.65**	**59**	P	**Pn**	**01 06 07.0**	**+1.8**
ALMR				S	**Sn**	**01 06 49.2**	**+0.8**
	comp=E,8.4nm,0.4s						
ALMR	**Almeirim**	**3.65**	**59**	P	**Pn**	**01 06 07.0**	**+1.8**
ALMR	**Almeirim**	**3.65**	**59**	*e*Pn	**Pn**	**01 06 07.4**	**+2.2**
ALMR				S	**Sn**	**01 06 49.2**	**+0.8**
	comp=E,8.4nm,0.4s						
ALMR				*e*Sn	**Sn**	**01 06 50.3**	**+1.9**
PBDV	**Barranco-do-Ve**	**3.73**	**90**	*e*Pn	**Pn**	**01 06 08.3**	**+2.0**
PBDV				*e*Sn	**Sn**	**01 06 52.4**	**+2.0**
PBDV				A	A	01 06 56.3	
	comp=E,2.6nm,0.6s						
PBDV	**Barranco-do-Ve**	**3.73**	**90**	P	**Pn**	**01 06 08.3**	**+2.0**
PBDV				S	**Sn**	**01 06 52.4**	**+2.0**
	comp=E,2.6nm,0.6s						
PBDV	**Barranco-do-Ve**	**3.73**	**90**	P	**Pn**	**01 06 08.3**	**+2.0**
PBDV				S	**Sn**	**01 06 52.4**	**+2.0**
	comp=E,2.6nm,0.6s						
EVO	**Evora**	**3.82**	**71**	*e*Pn	**Pn**	**01 06 09.1**	**+1.6**
EVO				*e*Sn	**Sn**	**01 06 54.0**	**+1.5**
EVO				A	A	01 07 00.5	
	comp=E,2.5nm,0.4s						
EVO	**Evora**	**3.82**	**71**	P	**Pn**	**01 06 09.1**	**+1.6**
EVO				S	**Sn**	**01 06 52.7**	**+0.2**
EVO	**Evora**	**3.82**	**71**	P	**Pn**	**01 06 09.1**	**+1.6**
EVO				S	**Sn**	**01 06 52.7**	**+0.2**
EVO				*e*Sn	**Sn**	**01 06 54.0**	**+1.5**
PBEJ	**Beja**	**3.82**	**78**	*e*Pn	**Pn**	**01 06 09.4**	**+1.8**
PBEJ				*e*Sn	**Sn**	**01 06 54.2**	**+1.6**
PBEJ				A	A	01 06 57.9	
	comp=E,4.3nm,0.2s						
PBEJ	**Beja**	**3.82**	**78**	P	**Pn**	**01 06 09.4**	**+1.8**
PBEJ				S	**Sn**	**01 06 54.2**	**+1.6**
	comp=E,2.2nm,0.2s						
PBEJ	**Beja**	**3.82**	**78**	P	**Pn**	**01 06 09.4**	**+1.8**
PBEJ				S	**Sn**	**01 06 54.2**	**+1.6**
	comp=E,2.2nm,0.2s						
PVAQ	**Vaqueiros**	**3.90**	**88**	*e*Pn	**Pn**	**01 06 10.0**	**+1.4**
PVAQ				*e*Sn	**Sn**	**01 06 54.8**	**+0.4**
PVAQ				A	A	01 06 59.3	
	comp=E,2.6nm,0.2s						
PVAQ	**Vaqueiros**	**3.90**	**88**	P	**Pn**	**01 06 10.0**	**+1.4**
PVAQ				S	**Sn**	**01 06 54.8**	**+0.4**
	comp=E,2.6nm,0.2s						
PVAQ	**Vaqueiros**	**3.90**	**88**	P	**Pn**	**01 06 10.0**	**+1.4**
PVAQ				S	**Sn**	**01 06 54.8**	**+0.4**
	comp=E,2.6nm,0.2s						
PTOM	**Tomar**	**4.00**	**54**	*e*Pn	**Pn**	**01 06 12.6**	**+2.6**
PTOM				*e*Sn	**Sn**	**01 06 58.4**	**+1.5**
PTOM				A	A	01 07 03.9	
	comp=E,4.6nm,0.3s						
PTOM	**Tomar**	**4.00**	**54**	P	**Pn**	**01 06 12.6**	**+2.6**
PTOM				S	**Sn**	**01 06 58.4**	**+1.5**
	comp=E,2.3nm,0.3s						
PTOM	**Tomar**	**4.00**	**54**	P	**Pn**	**01 06 12.6**	**+2.6**
PTOM				S	**Sn**	**01 06 58.4**	**+1.5**
	comp=E,2.3nm,0.3s						
EGRO	**El Granado**	**4.08**	**86**	P	**Pn**	**01 06 12.6**	**+1.5**
	comp=E,4.5nm,0.4s,SNR=5.2						
EGRO				S	**Sn**	**01 06 59.2**	**+0.2**
	comp=E,3.5nm,0.2s,SNR=4.9						
EGRO	**El Granado**	**4.08**	**86**	P	**Pn**	**01 06 12.6**

comp=E,0.2nm,0.2s,SNR=7.9
ELOB S **Sn** **01 07 38.5 -1.0**
comp=E,0.8nm,0.2s,SNR=7.9
ELOB Lobios 5.72 36 P **Pn** **01 06 35.0 +1.3**
comp=E,0.2nm,0.2s,SNR=7.9
ELOB S **Sn** **01 07 38.5 -1.0**
comp=E,0.8nm,0.2s,SNR=7.9
ECAB El Cabril 5.75 81 P **Pn** **01 06 34.7 +0.7**
comp=E,1.8nm,0.4s,SNR=9.5
ECAB S **Sn** **01 07 39.0 -1.1**
comp=E,1.8nm,0.3s,SNR=5.6
ECAB El Cabril 5.75 81 P **Pn** **01 06 34.7 +0.7**
comp=E,1.8nm,0.4s,SNR=9.5
ECAB S **Sn** **01 07 39.0 -1.1**
comp=E,1.8nm,0.3s,SNR=5.6
MVO Moncorvo 5.77 47 *e*Pn **Pn** **01 06 35.9 +1.5**
MVO *e*Sn **Sn** **01 07 39.5 -1.2**
MVO A A 01 07 41.4
comp=E,1.9nm,0.6s
MVO Moncorvo 5.77 47 P **Pn** **01 06 35.4 +1.0**
comp=E,1.0nm,0.3s,SNR=6.8
MVO S **Sn** **01 07 39.4 -1.3**
comp=E,4.7nm,0.6s,SNR=7.9
MVO Moncorvo 5.77 47 P **Pn** **01 06 35.4 +1.0**
comp=E,1.0nm,0.3s,SNR=6.8
MVO Moncorvo 5.77 47 *e*Pn **Pn** **01 06 35.9 +1.5**
MVO *e*Sn **Sn** **01 07 39.5 -1.2**
EPLA Plasencia 5.78 60 P **Pn** **01 06 36.1 +1.6**
comp=E,1.4nm,0.4s,SNR=6.8
EPLA S **Sn** **01 07 40.2 -0.7**
comp=E,1.7nm,0.2s
EPLA Plasencia 5.78 60 P **Pn** **01 06 36.2 +1.6**
comp=E,1.4nm,0.4s,SNR=6.8
EPLA S **Sn** **01 07 40.2 -0.7**
comp=E,1.7nm,0.2s
PMAR Madeira 5.80 219 *e*Sn Sn 01 07 21.6 -20
PMAR Madeira 5.80 219 *e*Sn Sn 01 07 21.6 -20
EMAZ Mazaricos 6.25 25 P **Pn** **01 06 41.8 +0.9**
comp=E,0.2nm,0.2s,SNR=7.9
EMAZ S **Sn** **01 07 48.5 -3.9**
comp=E,1.5nm,0.3s,SNR=7.9
EMAZ Mazaricos 6.25 25 P **Pn** **01 06 41.8 +0.9**
comp=E,0.2nm,0.2s,SNR=7.9
PBRG Braganca 6.36 44 *e*Pn **Pn** **01 06 44.2 +1.8**
PBRG Braganca 6.36 44 Pn **Pn** **01 06 44.2 +1.8**
PBRG Braganca 6.36 44 Pn **Pn** **01 06 44.2 +1.8**
EADA Adamuz 6.42 80 P **Pn** **01 06 44.4 +1.2**
comp=E,0.6nm,0.2s,SNR=7.9
EADA S **Sn** **01 07 54.2 -2.4**
comp=E,1.5nm,0.3s,SNR=7.9
EADA Adamuz 6.42 80 P **Pn** **01 06 44.4 +1.2**
comp=E,0.6nm,0.2s,SNR=7.9
EADA S **Sn** **01 07 54.2 -2.4**
comp=E,1.5nm,0.3s,SNR=7.9
ECAL Calabor 6.45 43 P **Pn** **01 06 45.5 +1.8**
comp=E,1.8nm,0.4s,SNR=4.5
ECAL S **Sn** **01 07 55.6 -1.8**
comp=E,1.2nm,0.3s,SNR=7.9
ECAL Calabor 6.45 43 P **Pn** **01 06 45.5 +1.8**
comp=E,1.8nm,0.4s,SNR=4.5
ECAL S **Sn** **01 07 55.6 -1.8**
comp=E,1.2nm,0.3s,SNR=7.9
EAGO Agolada(Pontev 6.46 31 P **Pn** **01 06 45.2 +1.4**
comp=E,0.4nm,0.2s,SNR=7.9
EAGO S **Sn** **01 07 56.4 -1.2**
comp=E,1.1nm,0.3s,SNR=7.9
EAGO Agolada(Pontev 6.46 31 P **Pn** **01 06 45.2 +1.4**
comp=E,0.4nm,0.2s,SNR=7.9
EAGO S **Sn** **01 07 56.4 -1.2**
comp=E,1.1nm,0.3s,SNR=7.9
PAB San Pablo 6.85 69 P **Pn** **01 06 50.1 +0.9**
comp=E,0.6nm,0.4s,SNR=7.9
PAB S **Sn** **01 08 04.7 -2.5**
comp=E,0.9nm,0.6s,SNR=7.9
PAB San Pablo 6.85 69 P **Pn** **01 06 50.1 +0.9**
comp=E,0.6nm,0.4s,SNR=7.9
PAB S **Sn** **01 08 04.7 -2.5**
comp=E,0.9nm,0.6s,SNR=7.9
ESDC Sonseca Array 7.17 68 P **Pn** **01 06 54.8 +1.2**
comp=E,2.8nm,0.3s,baz=253,slow=13,SNR=19
ESDC S **Sn** **01 08 11.9 -3.2**
comp=E,0.4nm,0.5s,baz=254,slow=13,SNR=4.1
ESDC Sonseca Array 7.17 68 P **Pn** **01 06 54.8 +1.2**
comp=E,2.8nm,0.3s,baz=253,slow=13,SNR=19
ESDC S **Sn** **01 08 11.9 -3.2**
comp=E,0.4nm,0.5s,SNR=4.1
GUD Guadarrama 7.36 61 P **Pn** **01 06 57.9 +1.6**
comp=E,1.1nm,0.4s,SNR=7.9
GUD Guadarrama 7.36 61 P **Pn** **01 06 57.9 +1.6**
comp=E,1.1nm,0.4s,SNR=7.9
ETOB Tobarra 8.83 78 P **Pn** **01 07 17.0 +0.6**
comp=E,0.3nm,0.3s,SNR=4.0
ETOB Tobarra 8.83 78 P **Pn** **01 07 17.0 +0.6**
comp=E,0.3nm,0.3s,SNR=4.0
IELO Elcoad 10.30 54 P **Pn** **01 07 38.1 +1.7**
comp=E,1.0nm,0.2s,SNR=7.9
IELO Elcoad 10.30 54 P **Pn** **01 07 38.1 +1.7**
comp=E,1.0nm,0.2s,SNR=7.9
ATE Arette 10.76 54 P **Pn** **01 07 45.2 +2.5**
comp=E,0.7nm,0.3s,SNR=7.9
ATE Arette 10.76 54 P **Pn** **01 07 45.2 +2.5**
comp=E,0.7nm,0.3s,SNR=7.9

*IDC **03** 01:13:27.4±0.5, 21°.39S×174°.38W, h0km, mb4.3/20, mb1 4.5/21, mb1mx4.4/47, mbtmp4.3/21, ML4.3/1, MS4.0/16, Ms1 4.0/16, ms1mx3.7/49, Error ellipse: s-maj=20.7km s-min=14.2km az=144.0*
*ISCJB **03** 01:13:28.9±0.2, 21°.08S±0°.06×174°.65W±0°.06, h10km, mb4.6/65, MS3.9/15, Error ellipse: s-maj=10.1km s-min=6.2km az=43.5*
*BJI **03** 01:13:29.1, 21°.025×174°.71W, h9km, mb5.0/21, mB5.2/9, Ms4.7/5, Ms7 4.5/4*
*NEIC **03** 01:13:30.2±0.2, 21°.09S×174°.61W, h10km, mb4.7/41, Error ellipse: s-maj=9.6km s-min=5.4km az=134.0*
ISC 03 01:13:32.2±0.4, 21°.08S±0°.07×174°.30W±0°.07, h27km, n177, σ1§73/171, mb4.7/65, MS4.0/15, 9C-8D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.52**	**19**	P	**Pn**	**01 15 17.8**	**-2.5**
	12nm,0.3s,baz=209,slow=2.5,SNR=10						
AFI				Sn	Sn	01 16 35.3	-9.5
	6.4nm,0.3s,baz=218,slow=19,SNR=2.3						
AFI	**Afiamalu**	**7.52**	**19**	*e*Pn	**Pn**	**01 15 16.8**	**-3.4**
AFI				Sn	Sn	01 16 35.3	-9.5
AFI				*e*Sn	**Sn**	**01 16 40.8**	**-3.9**
MSVF	**Nonsavu**	**7.95**	**293**	*e*Pn	Pn	01 15 33.6	+7.5
RAR	**Rarotonga**	**13.55**	**93**	Pn	Pn	01 16 30.9	-12
	1.6nm,0.3s,baz=78,slow=7.0,SNR=3.2						
RAR				Sn	**Sn**	**01 19 08.3**	**-4.2**
	5.8nm,0.3s,baz=54,slow=14,SNR=3.1						
RAR				LR	LR	01 22 21.7	
	comp=Z,511nm,18.8s,baz=293,slow=39						
MXZ	**Matakaoa Point**	**17.64**	**200**	*e*Pn	**P**	**01 17 36.9**	**+0.1**
	61nm,1.2s						
DZM	**Mont Dzumac**	**17.94**	**263**	P	**P**	**01 17 40.7**	**+0.3**
	0.6nm,0.3s,baz=75,slow=18,SNR=8.1						
DZM				LR	LR	01 23 30.7	
	comp=Z,640nm,18.1s,baz=96,slow=34						
DZM	**Mont Dzumac**	**17.94**	**263**	*e*P	**P**	**01 17 41.6**	**+1.2**
	62nm,1.3s						
DZM				*e*LR	LR	01 21 58.9	
	799nm,26.1s						
URZ	**Urewera**	**18.66**	**202**	P	**P**	**01 17 44.5**	**-3.6**
	1.0nm,0.3s,baz=254,slow=1.7,SNR=6.7						
BKZ	**Black Stump Fm**	**19.69**	**202**	*e*P	**P**	**01 17 59.4**	**0.0**
	27nm,1.3s						
TBI	**Tubuai**	**23.10**	**100**	*e*LR	LR	01 23 51.8	
	434nm,25.0s						
THZ	**Tophouse**	**23.28**	**205**	*e*P	**P**	**01 18 37.2**	**-0.6**
	24nm,1.0s						
PPT2	**Papeete2**	**23.58**	**86**	*e*LR	LR	01 24 16.9	
	356nm,21.5s						
PPT	**Papeete**	**23.58**	**86**	LR	LR	01 26 35.5	
	comp=Z,393nm,18.4s,baz=318,slow=33						
RPZ	**Rata Peaks**	**25.66**	**205**	P	**P**	**01 19 00.4**	**+0.7**
	22nm,0.8s,baz=334,slow=4.6,SNR=4.7						
HNR	**Honiara**	**27.36**	**291**	LR	LR	01 28 52.9	
	comp=Z,116nm,20.4s,baz=148,slow=34						
TAOE	**Nuku Hiva Isla**	**35.07**	**75**	*e*LR	LR	01 29 32.6	
	193nm,21.4s						
RKT	**Rikitea**	**36.42**	**101**	*e*LR	LR	01 29 56.9	
	337nm,26.5s						
CTA	**Charters Tower**	**36.88**	**264**	P	**P**	**01 20 37.5**	**-1.3**
	2.4nm,0.5s,baz=94,slow=11,SNR=4.7						
CTAO	**Charters Tower**	**36.88**	**264**	*e*P	**P**	**01 20 37.6**	**-1.1**
PMG	**Port Moresby**	**38.85**	**281**	P	**P**	**01 20 54.3**	**-1.1**
	13nm,0.9s,baz=98,slow=5.0,SNR=7.4						
PMG				LR	LR	01 35 49.0	
	comp=Z,225nm,18.5s,baz=171,slow=34						
PMG	**Port Moresby**	**38.85**	**281**	*e*P	**P**	**01 20 53.7**	**-1.7**
	16nm,1.0s						
STKA	**Stephens Creek**	**40.68**	**245**	P	**P**	**01 21 06.3**	**-4.1**
	5.7nm,0.8s,baz=102,slow=9.3,SNR=7.1						
STKA				LR	LR	01 37 24.8	
	comp=Z,91nm,19.4s,baz=37,slow=36						
AS01	**Alice Springs**	**47.72**	**257**	*e*P	**P**	**01 22 04.0**	**-3.0**
AS31	**Alice Springs**	**47.76**	**257**	*e*P	**P**	**01 22 05.1**	**-2.2**
	2.2nm,0.8s						
ASAR	**Alice Springs**	**47.76**	**257**	P	**P**	**01 22 05.2**	**-2.2**
	9.2nm,0.9s,baz=90,slow=8.5,SNR=60						
ASAR				LR	LR	01 42 04.3	
	comp=Z,157nm,18.4s,baz=98,slow=36						
WB2	**Warramunga Arr**	**47.94**	**262**	*e*P	**P**	**01 22 06.8**	**-2.0**
	12nm,0.9s						
WRAB	**Tennant Creek**	**47.94**	**262**	*e*P	**P**	**01 22 05.9**	**-2.8**
	5.6nm,0.9s						
WRA	**Warramunga Arr**	**47.95**	**262**	P	**P**	**01 22 06.5**	**-2.4**
	6.3nm,1.0s,baz=91,slow=5.8,SNR=81						
WRA				LR	LR	01 40 29.7	
	comp=Z,162nm,20.3s,baz=105,slow=34						
FITZ	**Fitzroy Crossi**	**56.38**	**262**	P	**P**	**01 23 10.6**	**-0.9**
	3.0nm,0.8s,baz=152,slow=7.9,SNR=5.7						
SBA	**Scott Base**	**57.55**	**185**	*e*P	**P**	**01 23 21.8**	**+2.9**
	18nm,1.2s						
VNDA	**Vanda**	**57.67**	**186**	P	**P**	**01 23 15.9**	**-3.9**
	0.4nm,0.7s,baz=352,slow=7.1,SNR=1.8						
VNDA	**Vanda**	**57.67**	**186**	*e*P	**P**	**01 23 21.1**	**+1.4**
	5.6nm,1.1s						
MBWA	**Marble Bar**	**61.10**	**257**	*e*P	**P**	**01 23 43.2**	**-1.2**
QSPA	**South Pole Qui**	**69.00**	**180**	P	**P**	**01 24 33.9**	**-1.2**
	4.2nm,1.0s,baz=73,slow=4.8,SNR=6.3						
QSPA	**South Pole Qui**	**69.00**	**180**	*e*P	**P**	**01 24 35.8**	**+0.7**
MJAR	**Matsushiro Arr**	**72.77**	**322**	P	**P**	**01 24 59.0**	**+0.8**
	4.8nm,0.9s,baz=168,slow=6.5,SNR=9.6						
MAJO	**Matsushiro**	**72.77**	**322**	*e*P	**P**	**01 24 57.5**	**-0.7**
	3.4nm,0.5s						
MAT	**Matsushiro**	**72.77**	**322**	P	**P**	**01 24 58.4**	**+0.2**
ASAJ	**Asahikawa**	**75.93**	**330**	LR	LR	01 53 11.2	
	comp=Z,74nm,22.0s,baz=162,slow=31						
LEM	**Lembang**	**76.49**	**268**	LR	LR	01 59 14.4	
	comp=Z,89nm,18.1s,baz=212,slow=36						
LPIG	**La Paz**	**76.76**	**58**	LR	LR	01 54 52.4	
	comp=Z,172nm,18.0s,baz=204,slow=32						
PETK	**Petropavlovsk-**	**77.77**	**343**	P	**P**	**01 25 27.8**	**+1.2**
	4.1nm,0.9s,baz=137,slow=7.7,SNR=3.8						
WAKR	**Walker**	**78.46**	**41**	*e*P	**P**	**01 25 33.1**	**+2.0**
	17nm,1.4s						
YBH	**Yreka Blue Hor**	**78.62**	**37**	P	**P**	**01 25 32.5**	**+0.8**
	2.4nm,0.8s,baz=175,slow=5.9,SNR=6.9						
BEKR	**Beckworth**	**78.76**	**39**	*e*P	**P**	**01 25 33.7**	**+1.0**
	9.5nm,1.3s						
NV01	**Mina Array Sit**	**79.11**	**42**	*e*P	**P**	**01 25 35.5**	**+0.9**
NVAR	**Mina Array Bea**	**79.11**	**42**	P	**P**	**01 25 35.9**	**+1.2**
	2.2nm,0.8s,baz=226,slow=9.9,SNR=6.8						
NV11	**Mina Array Sit**	**79.20**	**42**	*e*P	**P**	**01 25 36.1**	**+1.1**
	0.7nm,1.1s						
PAHR	**Pah Rah Range**	**79.24**	**40**	*e*P	**P**	**01 25 37.5**	**+2.2**
	12nm,1.3s						
KVN	**Kaiserville**	**79.62**	**41**	*e*P	**P**	**01 25 39.4**	**+2.0**
	9.7nm,1.5s						
KSRS	**Korea Array**	**79.64**	**317**	P	**P**	**01 25 38.9**	**+1.7**
	3.5nm,0.9s,baz=137,slow=6.1,SNR=18						
KSAR	**Wonju Array Be**	**79.66**	**317**	P	**P**	**01 25 38.9**	**+1.6**
KS01	**Wonju Array Si**	**79.67**	**317**	*e*P	**P**	**01 25 38.4**	**+1.0**
SHPR	**Sheep Range**	**79.97**	**45**	*e*P	**P**	**01 25 41.3**	**+2.0**
	8.9nm,1.5s						
MOD	**Modoc Plateau**	**80.10**	**38**	*e*P	**P**	**01 25 40.7**	**+0.9**
	4.9nm,0.8s						
K05A	**Summer Lake**	**80.30**	**37**	*e*P	**P**	**01 25 42.5**	**+1.6**
	28nm,1.4s						
PINE	**Pine Mountain**	**80.96**	**36**	*e*P	**P**	**01 25 46.2**	**+1.7**
	8.8nm,0.9s						
USRK	**Ussuriysk Ar.**	**81.42**	**324**	LR	LR	01 59 52.8	
	comp=Z,94nm,18.8s,baz=134,slow=34						
U15A	**North Rim**	**81.83**	**46**	*e*P	**P**	**01 25 51.9**	**+2.5**
	10nm,1.4s						
J08A	**Circle Bar Ran**	**82.06**	**38**	*e*P	**P**	**01 25 52.2**	**+2.0**
	11nm,1.4s						
MTPU	**Mount Pierson**	**82.79**	**45**	*e*P	**P**	**01 25 57.9**	**+3.4**
	6.5nm,1.1s						
NJ2	**Nanjing**	**82.94**	**308**	*e*P	**P**	**01 25 53.2**	**-1.7**
NJ2				pmax	pmax		
	comp=Z,22nm,0.7s						
G08A	**Pilot Rock**	**83.01**	**36**	*e*P	**P**	**01 25 56.4**	**+1.3**
	6.8nm,1.0s						
HAWA	**Hanford**	**83.40**	**35**	*e*P	**P**	**01 25 59.6**	**+2.7**
	9.9nm,1.1s						
BMO	**Blue Mountains**	**83.65**	**37**	*e*P	**P**	**01 26 00.2**	**+1.8**
	4.3nm,1.0s						
TMUT	**Trail Mountain**	**84.12**	**44**	*e*P	**P**	**01 26 03.5**	**+2.3**
	6.8nm,1.0s						
D08A	**Wollman Farm,**	**84.15**	**34**	*e*P	**P**	**01 26 04.2**	**+3.5**
	9.3nm,0.9s						
F10A	**Beach Ranch, E**	**84.39**	**36**	*e*P	**P**	**01 26 02.8**	**+0.6**
	10nm,1.0s						
SUA	**Susitna One**	**84.40**	**11**	*e*P	**P**	**01 26 02.1**	**+0.2**
	7.1nm,0.8s						
TXAR	**Lajitas Array**	**84.48**	**56**	P	**P**	**01 26 03.3**	**+0.3**
	0.3nm,0.9s,baz=233,slow=7.5,SNR=3.0						
TXAR				LR	LR	01 57 12.5	
	comp=Z,108nm,19.6s,baz=0.0,slow=31						
HLID	**Hailey**	**84.54**	**39**	*e*P	**P**	**01 26 06.8**	**+3.7**
	3.7nm,1.0s						
JLU	**Jordanelle**	**84.68**	**43**	*e*P	**P**	**01 26 05.2**	**+1.3**
	6.6nm,1.4s						
SKT	**Skwentna**	**84.75**	**11**	*e*P	**P**	**01 26 05.7**	**+2.3**
	6.3nm,0.9s						
KLR	**Kul'dur**	**84.82**	**328**	LR	LR	01 58 06.3	
	comp=Z,5.5nm,20.0s,baz=187,slow=32						
CN2	**Changchun**	**84.90**	**321**	*e*P	**P**	**01 26 04.6**	**0.0**
ANMO	**Albuquerque**	**85.09**	**50**	P	**P**	**01 26 06.0**	**-0.1**
	1.3nm,0.9s,baz=217,slow=5.8,SNR=5.7						
ANMO	**Albuquerque**	**85.09**	**50**	*e*P	**P**	**01 26 08.2**	**+2.1**
	8.8nm,1.4s						
CAST	**Castle Rocks**	**86.00**	**10**	*e*P	**P**	**01 26 09.4**	**-0.3**
	5.3nm,1.0s						
DHY	**Denali Highway**	**86.52**	**12**	*e*P	**P**	**01 26 13.7**	**+1.3**
	5.7nm,1.2s						
VNA3	**Neumayer Olymp**	**87.31**	**175**	P	**P**	**01 26 14.5**	**-1.7**
SNAA	**Sanae**	**87.31**	**177**	P	**P**	**01 26 17.8**	**+1.5**
SNAA	**Sanae**	**87.31**	**177**	P	**P**	**01 26 17.1**	**+0.8**
	2.3nm,1.1s,baz=191,slow=10,SNR=4.0						
MLY	**Manley**	**87.73**	**10**	*e*P	**P**	**01 26 18.5**	**+0.4**
	14nm,1.8s						
SEY	**Seymchan**	**87.76**	**345**	P	**P**	**01 26 19.0**	**+0.8**
	4.4nm,0.9s,baz=161,slow=5.0,SNR=8.2						
CCB	**Clear Creek Bu**	**87.87**	**11**	*e*P	**P**	**01 26 19.3**	**+0.7**
	19nm,1.7s						
VNA1	**Neumayer--Stat**	**88.00**	**175**	P	**P**	**01 26 21.0**	**+1.6**
SCRK	**Sand Creek**	**88.00**	**13**	*e*P	**P**	**01 26 21.3**	**+1.7**
	7.8nm,1.4s						
COLA	**College**	**88.07**	**11**	*e*P	**P**	**01 26 20.3**	**+0.7**
ILAR	**Eielson Array**	**88.15**	**11**	P	**P**	**01 26 20.7**	**+0.6**
	2.5nm,1.0s,baz=213,slow=5.8,SNR=10						
IL1	**Eielson Array**	**88.15**	**11**	*e*P	**P**	**01 26 20.2**	**+0.2**
IM3	**Indian Mountai**	**88.18**	**8**	*e*P	**P**	**01 26 21.1**	**+0.9**
DAWY	**Dawson**	**89.10**	**15**	*e*P	**P**	**01 26 25.9**	**+1.2**
	6.9nm,1.1s						
ENH	**Enshi**	**89.24**	**303**	*e*P	**P**	**01 26 25.9**	**-0.1**
EGAK	**Eagle**	**89.31**	**14**	*e*P	**P**	**01 26 26.8**	**+1.3**
APG	**El Apazote**	**89.72**	**74**	P	**P**	**01 26 29.9**	**+1.1**
	1.4nm,0.6s,baz=336,slow=16,SNR=3.4						
GYA	**Guiyang**	**89.96**	**298**	*e*P	**P**	**01 26 29.0**	**-0.6**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN	**Xi'an**	**91.25**	**306**	P	**P**	**01 26 37.6**	**+2.2**
XAN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC	**Hu-ho-hao-te**	**92.25**	**313**	*e*P	**P**	**01 26 40.1**	**+0.2**
HHC				PP	**PP**	**01 30 23.2**	**+2.3**
HHC				S	**S**	**01 37 42.1**	**+0.7**
HHC				sS	pS	01 37 50.7	-1.9
HHC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,66nm,5.3s						
KMI	**Kunming**	**92.71**	**296**	P	**P**	**01 26 42.0**	**-0.6**
KMI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
JTS	**JuntasAbangare**	**93.04**	**80**	LR	LR	01 59 25.0	
	comp=Z,52nm,19.5s,baz=345,slow=30						
JTS	**JuntasAbangare**	**93.04**	**80**	*e*P	**P**	**01 26 47.2**	**+3.2**
	3.3nm,0.7s						
CM01	**Chiang Mai Arr**	**93.55**	**288**	*e*P	**P**	**01 26 44.1**	**-2.2**
CMAR	**Chiang Mai Arr**	**93.58**	**288**	P	**P**	**01 26 48.8**	**+2.3**
	3.6nm,0.7s,baz=130,slow=2.9,SNR=17						
CMAR				LR	LR	02 08 18.3	
	comp=Z,14nm,19.6s,baz=170,slow=35						
CHTO	**Chiang Mai**	**93.70**	**289**	*e*P	**P**	**01 26 47.7**	**+0.7**
	3.3nm,0.9s						
INK	**Inuvik**	**93.95**	**14**	P	**P**	**01 26 47.9**	**+0.9**
	1.9nm,0.8s,baz=135,slow=4.3,SNR=4.2						
CD2	**Chengdu**	**94.03**	**301**	P	**P**	**01 26 46.8**	**-1.5**
CD2				pmax	pmax		
	comp=Z,3.0nm,0.6s						
YKA	**Yellowknife Ar**	**95.61**	**24**	P	**P**	**01 26 56.3**	**+1.6**
	1.1nm,1.1s,baz=234,slow=4.0,SNR=6.1						
ULM	**Lac du Bonnet**	**98.85**	**40**	LR	LR	02 07 23.0	
	comp=Z,107nm,18.1s,baz=284,slow=33						
MKAR	**Makanchi Array**	**114.12**	**313**	PKP	**PKiKP**	**01 32 09.1**	**+0.1**
	0.2nm,0.4s,baz=135,slow=1.0,SNR=4.3						
KURK	**Kurchatov**	**116.77**	**317**	*e*PKPdf	**PKPdf**	**01 32 13.2**	**-0.7**
KURBB	**Kurchatov Arra**	**116.82**	**317**	PKP	**PKPdf**	**01 32 13.3**	**-0.7**
	0.2nm,0.5s,baz=102,slow=1.9,SNR=4.5						
KSH	**Kashi**	**118.06**	**304**	PKP	**PKPdf**	**01 32 17.5**	**+0.5**
KSH				PP	**PP**	**01 33 36.7**	**+4.5**
AAK	**Ala-Archa**	**119.38**	**308**	*e*PKPdf	**PKPdf**	**01 32 19.7**	**+0.3**
BVAR	**Borovoye Array**	**121.74**	**320**	PKP	**PKPdf**	**01 32 22.9**	**-0.5**
	0.8nm,0.6s,baz=132,slow=2.1,SNR=4.5						
BRVK	**Borovoye**	**121.80**	**320**	*e*PKPdf	**PKPdf**	**01 32 23.1**	**-0.4**
ARU	**Arti**	**127.63**	**326**	*e*PKPdf	**PKPdf**	**01 32 34.9**	**+0.3**
ARCES	**ARCESS Array B**	**130.07**	**351**	PKP	**PKPdf**	**01 32 38.6**	**-0.3**
	1.5nm,0.9s,baz=64,slow=2.1,SNR=3.7						
LSZ	**Lusaka**	**137.66**	**213**	*e*PKPdf	**PKPdf**	**01 32 55.8**	**+0.9**
RAYN	**Ar Rayn**	**143.17**	**281**	*e*PKPdf	**PKPdf**	**01 33 04.7**	**+0.2**
SUW	**Suwalki**	**144.52**	**342**	*e*PKP	**PKPdf**	**01 33 05.6**	**-0.3**
SUW	**Suwalki**	**144.52**	**342**	*e*PKPdf	**PKPdf**	**01 33 05.4**	**-0.5**
AKASG	**Malin Array Be**	**145.13**	**334**	PKPbc	**PKPbc**	**01 33 06.2**	**-0.3**
	2.6nm,0.6s,baz=40,slow=4.0,SNR=19						
AKBB	**Malin Array Si**	**145.13**	**334**	*e*PKPdf	**PKPab**	**01 33 06.7**	**+0.1**
AK11	**Malin Array Si**	**145.17**	**334**	*e*PKPdf	**PKPbc**	**01 33 06.7**	**0.0**
SORM	**Soroca**	**147.44**	**331**	↓*i*P	**PKPbc**	**01 33 13.7**	**+0.2**
KWP	**Kalwaria Pacla**	**148.46**	**339**	*e*PKP	**PKPab**	**01 33 20.9**	**+1.3**
KSP	**Ksiaz**	**149.15**	**347**	*e*PKP	**PKPdf**	**01 33 14.4**	**+0.6**
BUR04	**Bucovina Ar. S**	**149.18**	**334**	*e*PKPbc	**PKPbc**	**01 33 20.3**	**+2.0**
BURAR	**Bucovina Array**	**149.18**	**334**	↑*i*P	**PKPbc**	**01 33 20.2**	**+1.9**
CLL	**Collm**	**149.29**	**351**	*e*PKPdf	**PKPdf**	**01 33 15.0**	**+1.0**
CLL				*e*PKPab	**PKPab**	**01 33 22.0**	**-0.8**
	comp=Z,11nm,1.0s						
CLL				*e*PPS	PPS	01 49 36.0	
TESR	**Tescani**	**149.42**	**331**	↓*i*P	**PKPbc**	**01 33 19.7**	**+0.9**
CRVS	**Cervenica-Dubn**	**149.51**	**339**	*e*PKP	**PKPab**	**01 33 25.0**	**+1.1**
UPC	**Upice**	**149.52**	**347**	*e*PKPAB	**PKPab**	**01 33 24.2**	**+0.4**
BRG	**Berggiesshubel**	**149.56**	**350**	*e*PKP	**PKPbc**	**01 33 19.1**	**+0.1**
	comp=Z,10.0nm,1.5s						
BRG				*e*		01 33 32.5	
	comp=Z,8.4nm,1.0s						
DPC	**Dobruska-Polom**	**149.60**	**347**	↑*e*PKP	**PKPbc**	**01 33 20.2**	**+1.0**
DPC				*e*PKPAB	**PKPab**	**01 33 25.1**	**+0.9**
CFR	**Carcaliu**	**149.69**	**328**	↓*i*P	**PKPbc**	**01 33 19.6**	**+0.2**
BR131	**Keskin Array S**	**149.76**	**314**	*e*PKPbc	**PKPbc**	**01 33 20.3**	**+0.2**
BRTR	**Keskin Array B**	**149.76**	**314**	PKPbc	**PKPbc**	**01 33 20.2**	**+0.2**
	comp=Z,1.9nm,0.9s,baz=146,slow=3.3,SNR=11						
TRPA	**Tarpa**	**149.80**	**337**	↓*i*P	**PKPbc**	**01 33 20.1**	**+0.5**
MORC	**Moravsky Berou**	**149.86**	**345**	↓*i*P	**PKPbc**	**01 33 21.5**	**+1.7**
MORC	**Moravsky Berou**	**149.86**	**345**	*e*PKPbc	**PKPbc**	**01 33 20.5**	**+0.7**
MORC	**Moravsky Berou**	**149.86**	**345**	*e*PKP	**PKPbc**	**01 33 19.2**	**-0.6**
VRI	**Vrincioaia**	**149.87**	**330**	↓*i*P	**PKPbc**	**01 33 18.9**	**-1.0**
ASF	**Jabal al Asfar**	**150.10**	**298**	PKPbc	**PKPbc**	**01 33 19.7**	**-1.4**
	comp=Z,1.8nm,0.8s,baz=102,slow=7.8,SNR=3.3						
TLB	**Topalu**	**150.15**	**327**	↑*i*P	**PKPbc**	**01 33 20.7**	**+0.1**
ANTO	**Ankara**	**150.25**	**315**	*e*PKPbc	**PKPbc**	**01 33 21.2**	**+0.1**
PRU	**Pruhonice**	**150.31**	**348**	↑*e*PKP	**PKPbc**	**01 33 21.3**	**+0.5**
PRU				*e*pPKP	**sPKPbc**	**01 33 31.6**	**-1.3**
DOPR	**Dopca**	**150.40**	**332**	↓*i*P	**PKPbc**	**01 33 22.4**	**+1.2**
MLR	**Muntele Rosu**	**150.51**	**330**	PKPbc	**PKPbc**	**01 33 21.6**	**-0.1**
	comp=Z,1.0nm,1.0s,baz=64,slow=6.7,SNR=6.9						
MLR	**Muntele Rosu**	**150.51**	**330**	↓*i*P	**PKPbc**	**01 33 21.6**	**0.0**
MLR	**Muntele Rosu**	**150.51**	**330**	*e*PKPbc	**PKPbc**	**01 33 22.1**	**+0.5**
JAVC	**Velka Javorina**	**150.67**	**344**	*e*PKP	**PKPbc**	**01 33 23.5**	**+1.7**
VYHS	**Vyhne**	**150.68**	**342**	*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.41**	**352**	P	**Pn**	**01 54 15.4**	**-0.3**
	baz=184,slow=19						
JCJ				S	**S**	**01 55 19.6**	**-2.4**
	baz=294,slow=20						
JHJ	**Hachijo jima 2**	**11.72**	**346**	P	**Pn**	**01 55 31.9**	**-0.6**
	4.4nm,0.3s,baz=209,slow=19,SNR=2.2						
MJAR	**Matsushiro Arr**	**15.36**	**345**	P	**Pn**	**01 56 16.3**	**+0.3**
	0.7nm,0.3s,baz=278,slow=28,SNR=7.9						
WRA	**Warramunga Arr**	**42.26**	**192**	P	**P**	**02 00 17.1**	**-1.1**
	1.4nm,0.3s,baz=16,slow=9.6,SNR=30						
FITZ	**Fitzroy Crossi**	**43.07**	**205**	P	**P**	**02 00 23.9**	**-0.8**
	1.3nm,0.6s,baz=37,slow=6.8,SNR=5.1						
ASAR	**Alice Springs**	**45.97**	**192**	P	**P**	**02 00 46.1**	**-1.4**
	0.5nm,0.6s,baz=16,slow=9.3,SNR=8.3						
MKAR	**Makanchi Array**	**54.58**	**313**	P	**P**	**02 01 50.5**	**-0.8**
	0.2nm,0.5s,baz=81,slow=8.9,SNR=2.7						
KURBB	**Kurchatov Arra**	**57.41**	**317**	P	**P**	**02 02 12.5**	**+1.4**
	0.3nm,0.5s,baz=97,slow=7.5,SNR=4.5						
ILAR	**Eielson Array**	**62.09**	**27**	P	**P**	**02 02 41.9**	**-0.7**
	0.4nm,0.8s,baz=243,slow=5.8,SNR=4.5						
BVAR	**Borovoye Array**	**62.56**	**319**	P	**P**	**02 02 47.6**	**+1.6**
	0.6nm,0.4s,baz=51,slow=7.6,SNR=3.2						
SPITS	**Spitsbergen Ar**	**75.79**	**350**	P	**P**	**02 04 07.4**	**+1.1**
	1.4nm,0.8s,baz=17,slow=11,SNR=2.3						
YKA	**Yellowknife Ar**	**76.51**	**28**	P	**P**	**02 04 10.2**	**-0.3**
	0.7nm,0.5s,baz=289,slow=5.7,SNR=9.0						
ARCES	**ARCESS Array B**	**78.86**	**341**	P	**P**	**02 04 24.4**	**+1.1**
	1.9nm,0.9s,baz=76,slow=7.7,SNR=4.1						
FINES	**FINESS Array B**	**83.10**	**334**	P	**P**	**02 04 45.7**	**+0.1**
	2.8nm,0.9s,baz=83,slow=4.6,SNR=5.1						
PDAR	**Pinedale Array**	**87.49**	**45**	P	**P**	**02 05 08.6**	**+0.6**
	0.3nm,0.5s,baz=306,slow=7.7,SNR=3.1						
TORD	**Torodi Ar. Bea**	**128.61**	**309**	PKP	**PKPdf**	**02 11 26.7**	**+0.9**
	0.5nm,1.1s,baz=89,slow=0.8,SNR=5.6						
PLCA	**Paso Flores**	**145.88**	**131**	PKPbc	**PKPdf**	**02 11 57.2**	**+0.4**
	0.9nm,0.4s,baz=272,slow=4.4,SNR=5.1						
LPAZ	**La Paz**	**150.09**	**85**	PKPbc	**PKPbc**	**02 12 10.4**	**0.0**
	0.7nm,0.5s,baz=309,slow=6.5,SNR=5.0						

CSEM ***03*** *02:12:14.8±0.3,36°.59N×9°.76W,h30km,ML2.8,Error ellipse: s-maj=5.8km s-min=5.3km az=80.0*
ISCJB ***03*** *02:12:14.1±0.7,36°.66N±0°.03×9°.75W±0°.04,h30km,Error ellipse: s-maj=5.3km s-min=4.7km az=135.4*
MDD ***03*** *02:12:15.7±1.1,36°.58N×9°.86W,h44km±40km,mb3.9/19, Error ellipse: s-maj=9.8km s-min=8.3km az=43.0,PRXIMO*
SFS ***03*** *02:12:15.0,36°.65N×9°.80W,h21km,ML2.5*
IGIL ***03*** *02:12:16.6,36°.57N×9°.80W,h31km,ML2.5*
INMG ***03*** *02:12:16.8±1.3,36°.59N×9°.82W,h31km±12km,ML2.4, Error ellipse: s-maj=6.8km s-min=3.6km az=57.0*
CNRM ***03*** *02:12:17.9,36°.27N×9°.24W,h30km,ML2.8*

ISC 03 02:12:12.4±1.7,36°.55N±0°.07×9°.87W±0°.06,h30km,n126, σ1§92/231,9C,West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**1.02**	**55**	⇑*iP*	**Pn**	**02 12 32.6**	**+1.9**
PFVI				*eS*	**Sn**	**02 12 44.2**	**+0.2**
PFVI				A	A	02 12 45.2	
	80nm,0.1s						
PFVI	**Vila Bisbo**	**1.02**	**55**	⇑P	**Pn**	**02 12 32.6**	**+1.9**
	35nm,0.1s,SNR=18						
PFVI				S	**Sn**	**02 12 44.2**	**+0.2**
	138nm,0.2s,SNR=23						
PFVI	**Vila Bisbo**	**1.02**	**55**	P	**Pn**	**02 12 32.6**	**+1.9**
	35nm,0.1s,SNR=18						
PFVI				*eS*	**Sn**	**02 12 44.2**	**+0.2**
MORF	**Marmelete**	**1.23**	**52**	*eP*	**Pn**	**02 12 35.7**	**+2.0**
MORF				*eS*	**Sn**	**02 12 49.5**	**+0.1**
MORF				AML	AML	02 12 51.6	
	comp=N,138nm,0.3s						
MORF	**Marmelete**	**1.23**	**52**	⇑*iP*	**Pn**	**02 12 35.7**	**+2.0**
MORF				*eS*	**Sn**	**02 12 49.8**	**+0.4**
MORF				A	A	02 12 50.6	
	comp=N,64nm,0.1s						
MORF	**Marmelete**	**1.23**	**52**	P	**Pn**	**02 12 35.7**	**+2.0**
MORF				S	**Sn**	**02 12 49.8**	**+0.4**
	comp=N,64nm,0.1s						
MORF	**Marmelete**	**1.23**	**52**	P	**Pn**	**02 12 35.7**	**+2.0**
MORF				S	**Sn**	**02 12 49.8**	**+0.4**
	comp=N,64nm,0.1s						
PTEO	**Sao Teotonio**	**1.35**	**43**	⇑*iP*	**Pn**	**02 12 37.2**	**+1.9**
PTEO				*eS*	**Sn**	**02 12 52.6**	**+0.4**
PTEO				A	A	02 12 54.1	
	comp=N,29nm,0.2s						
PTEO	**Sao Teotonio**	**1.35**	**43**	P	**Pn**	**02 12 37.2**	**+1.9**
PTEO				S	**Sn**	**02 12 52.6**	**+0.4**
	comp=N,14nm,0.2s						
PTEO	**Sao Teotonio**	**1.35**	**43**	P	**Pn**	**02 12 37.2**	**+1.9**
PTEO				S	**Sn**	**02 12 52.6**	**+0.4**
	comp=N,14nm,0.2s						
PBDV	**Barranco-do-Ve**	**1.70**	**66**	⇑*iP*	**Pn**	**02 12 42.3**	**+2.2**
PBDV				*eS*	**Sn**	**02 13 00.9**	**0.0**
PBDV				A	A	02 13 11.2	
	comp=N,13nm,0.2s						
PBDV	**Barranco-do-Ve**	**1.70**	**66**	P	**Pn**	**02 12 42.3**	**+2.2**
PBDV				S	**Sn**	**02 13 00.9**	**0.0**
	comp=N,13nm,0.2s						
PBDV	**Barranco-do-Ve**	**1.70**	**66**	P	**Pn**	**02 12 42.3**	**+2.2**
PBDV				S	**Sn**	**02 13 00.9**	**0.0**
	comp=N,13nm,0.2s						
PCVE	**Castro Verde**	**1.82**	**53**	⇑*iP*	**Pn**	**02 12 44.0**	**+2.3**
PCVE				*eS*	**Sn**	**02 13 04.3**	**+0.5**
PCVE				A	A	02 13 06.1	
	comp=N,35nm,0.4s						
PCVE	**Castro Verde**	**1.82**	**53**	P	**Pn**	**02 12 44.0**	**+2.3**
PCVE				S	**Sn**	**02 13 04.3**	**+0.5**
	comp=N,35nm,0.4s						
PCVE	**Castro Verde**	**1.82**	**53**	P	**Pn**	**02 12 44.0**	**+2.3**
PCVE				S	**Sn**	**02 13 04.3**	**+0.5**
	comp=N,35nm,0.4s						
MESJ	**Messejana**	**1.84**	**45**	*eP*	**Pn**	**02 12 44.0**	**+2.0**
MESJ				*eS*	**Sn**	**02 13 04.2**	**-0.1**
MESJ				AML	AML	02 13 05.8	
	comp=N,26nm,0.2s						
MESJ	**Messejana**	**1.84**	**45**	*eP*	**Pn**	**02 12 44.0**	**+2.0**
MESJ				*eS*	**Sn**	**02 13 04.2**	**-0.1**
MESJ				A	A	02 13 07.7	
	comp=N,20nm,0.3s						
MESJ	**Messejana**	**1.84**	**45**	P	**Pn**	**02 12 44.0**	**+2.0**
MESJ				S	**Sn**	**02 13 04.2**	**-0.1**
	comp=N,20nm,0.3s						
MESJ	**Messejana**	**1.84**	**45**	P	**Pn**	**02 12 44.0**	**+2.0**
MESJ				S	**Sn**	**02 13 04.2**	**-0.1**
	comp=N,20nm,0.3s						
PNCL	**Nicolau / Gran**	**1.89**	**34**	*eP*	**Pn**	**02 12 44.5**	**+1.8**
PNCL				*eS*	**Sn**	**02 13 05.6**	**+0.1**
PNCL				A	A	02 13 07.9	
	comp=N,14nm,0.1s						
PNCL	**Nicolau / Gran**	**1.89**	**34**	*eP*	**Pn**	**02 12 44.5**	**+1.8**
PNCL				*eS*	**Sn**	**02 13 05.6**	**+0.1**
PVAQ	**Vaqueiros**	**1.92**	**63**	⇑*iP*	**Pn**	**02 12 45.3**	**+2.2**
PVAQ				*eS*	**Sn**	**02 13 06.2**	**-0.1**
PVAQ				A	A	02 13 07.9	
	comp=N,31nm,0.1s						
PVAQ	**Vaqueiros**	**1.92**	**63**	P	**Pn**	**02 12 45.3**	**+2.2**
PVAQ				S	**Sn**	**02 13 06.2**	**-0.1**
	comp=N,31nm,0.1s						
PVAQ	**Vaqueiros**	**1.92**	**63**	P	**Pn**	**02 12 45.3**	**+2.2**
PVAQ				S	**Sn**	**02 13 06.2**	**-0.1**
	comp=N,31nm,0.1s						
EGRO	**El Granado**	**2.15**	**62**	P	**Pn**	**02 12 48.2**	**+2.0**
	comp=N,2.0nm,0.1s,SNR=10						
EGRO				S	**Sn**	**02 13 12.1**	**+0.2**
	comp=N,26nm,0.1s,SNR=12						
EGRO	**El Granado**	**2.15**	**62**	P	**Pn**	**02 12 48.2**	**+2.0**
	comp=N,2.0nm,0.1s,SNR=10						
EGRO				S	**Sn**	**02 13 12.1**	**+0.2**
	comp=N,26nm,0.1s,SNR=12						
PBEJ	**Beja**	**2.17**	**47**	*eP*	**Pn**	**02 12 48.3**	**+1.7**
PBEJ				*eS*	**Sn**	**02 13 12.0**	**-0.5**
PBEJ				A	A	02 13 15.6	
	comp=N,7.3nm,0.1s						
PBEJ	**Beja**	**2.17**	**47**	P	**Pn**	**02 12 48.3**	**+1.7**
PBEJ				S	**Sn**	**02 13 12.0**	**-0.5**
	comp=N,3.7nm,0.1s						
PBEJ	**Beja**	**2.17**	**47**	P	**Pn**	**02 12 48.3**	**+1.7**
PBEJ				S	**Sn**	**02 13 12.0**	**-0.5**
	comp=N,3.7nm,0.1s						
PMST	**Lisbon--Monsan**	**2.25**	**14**	*eP*	**Pn**	**02 12 49.5**	**+1.9**
PMST				*eS*	**Sn**	**02 13 14.1**	**-0.2**
PMST				A	A	02 13 15.9	
	comp=N,16nm,0.4s						
PMST	**Lisbon--Monsan**	**2.25**	**14**	*eP*	**Pn**	**02 12 49.5**	**+1.9**
PMST				*eS*	**Sn**	**02 13 14.1**	**-0.2**
PMAFR	**Mafra**	**2.44**	**11**	*eP*	**Pn**	**02 12 52.0**	**+1.7**
PMAFR				*eS*	**Sn**	**02 13 19.0**	**-0.2**
PMAFR				A	A	02 13 21.5	
	comp=N,42nm,0.1s						
PMAFR	**Mafra**	**2.44**	**11**	P	**Pn**	**02 12 52.2**	**+1.9**
	comp=N,6.4nm,0.1s,SNR=12						
PMAFR				S	**Sn**	**02 13 19.4**	**+0.2**
	comp=N,50nm,0.2s,SNR=18						
PMAFR	**Mafra**	**2.44**	**11**	*eP*	**Pn**	**02 12 52.0**	**+1.7**
PMAFR				*eS*	**Sn**	**02 13 19.0**	**-0.2**
EVO	**Evora**	**2.47**	**36**	*eP*	**Pn**	**02 12 52.4**	**+1.8**
EVO				*eS*	**Sn**	**02 13 19.2**	**-0.5**
EVO				A	A	02 13 20.6	
	comp=N,26nm,0.1s						
EVO	**Evora**	**2.47**	**36**	P	**Pn**	**02 12 52.1**	**+1.5**
EVO				S	**Sn**	**02 13 19.2**	**-0.5**
	comp=N,26nm,0.1s						
EVO	**Evora**	**2.47**	**36**	*eP*	**Pn**	**02 12 52.4**	**+1.8**
EVO				S	**Sn**	**02 13 19.2**	**-0.5**
	comp=N,26nm,0.1s						
PBAR	**Barrancos**	**2.78**	**54**	*eP*	**Pn**	**02 12 56.5**	**+1.6**
PBAR				*eS*	**Sn**	**02 13 27.0**	**-0.4**
PBAR				A	A	02 13 29.1	
	comp=N,18nm,0.3s						
PBAR	**Barrancos**	**2.78**	**54**	P	**Pn**	**02 12 56.5**	**+1.6**
PBAR				S	**Sn**	**02 13 27.0**	**-0.4**
	comp=N,18nm,0.3s						
PBAR	**Barrancos**	**2.78**	**54**	P	**Pn**	**02 12 56.5**	**+1.6**
PBAR				S	**Sn**	**02 13 27.0**	**-0.4**
	comp=N,18nm,0.3s						
ALMR	**Almeirim**	**2.79**	**21**	*eP*	**Pn**	**02 12 57.4**	**+2.3**
ALMR				*eS*	**Sn**	**02 13 27.0**	**-0.8**
ALMR				AML	AML	02 13 27.9	
	comp=E,14nm,0.3s						
ALMR	**Almeirim**	**2.79**	**21**	*eP*	**Pn**	**02 12 57.6**	**+2.5**
ALMR				*eS*	**Sn**	**02 13 27.0**	**-0.8**
ALMR				A	A	02 13 27.2	
	comp=E,9.7nm,0.2s						
ALMR	**Almeirim**	**2.79**	**21**	P	**Pn**	**02 12 57.4**	**+2.3**
ALMR				S	**Sn**	**02 13 27.0**	**-0.8**
	comp=E,4.8nm,0.2s						
ALMR	**Almeirim**	**2.79**	**21**	*eP*	**Pn**	**02 12 57.6**	**+2.5**
ALMR				S	**Sn**	**02 13 27.0**	**-0.8**
	comp=E,4.8nm,0.2s						
EMIN	**Mina Concepcio**	**2.83**	**64**	P	**Pn**	**02 12 57.2**	**+1.6**
	comp=E,1.6nm,0.1s,SNR=19						
EMIN				S	**Sn**	**02 13 28.0**	**-0.7**
	comp=E,4.6nm,0.1s,SNR=16						
EMIN	**Mina Concepcio**	**2.83**	**64**	P	**Pn**	**02 12 57.2**	**+1.6**
	comp=E,1.6nm,0.1s,SNR=19						
EMIN				S	**Sn**	**02 13 28.0**	**-0.7**
	comp=E,4.6nm,0.1s,SNR=16						
PESTR	**Estremoz**	**2.94**	**37**	*eP*	**Pn**	**02 12 58.5**	**+1.4**
PESTR				*eS*	**Sn**	**02 13 30.4**	**-0.9**
PESTR				A	A	02 13 32.7	
	comp=E,4.3nm,0.1s						
PESTR	**Estremoz**	**2.94**	**37**	*eP*	**Pn**	**02 12 58.5**	**+1.4**
PESTR				*eS*	**Sn**	**02 13 30.4**	**-0.9**
EBAD	**Badajoz**	**3.16**	**45**	⇑P	**Pn**	**02 13 01.5**	**+1.4**
	comp=E,2.2nm,0.1s,SNR=18						
EBAD				S	**Sn**	**02 13 35.4**	**-1.4**
	comp=E,6.5nm,0.0s,SNR=16						
EBAD	**Badajoz**	**3.16**	**45**	P	**Pn**	**02 13 01.5**	**+1.4**
	comp=E,2.2nm,0.1s,SNR=18						
EBAD				S	**Sn**	**02 13 35.4**	**-1.4**
	comp=E,6.5nm,0.0s,SNR=16						
PTOM	**Tomar**	**3.27**	**20**	*eP*	**Pn**	**02 13 03.7**	**+2.1**
PTOM				*eS*	**Sn**	**02 13 38.1**	**-1.4**
PTOM				A	A	02 13 43.5	
	comp=E,11nm,0.2s						
PTOM	**Tomar**	**3.27**	**20**	P	**Pn**	**02 13 03.7**	**+2.1**
PTOM				S	**Sn**	**02 13 38.1**	**-1.4**
	comp=E,5.3nm,0.2s						
PTOM	**Tomar**	**3.27**	**20**	P	**Pn**	**02 13 03.7**	**+2.1**
PTOM				S	**Sn**	**02 13 38.1**	**-1.4**
	comp=E,5.3nm,0.2s						
PMRV	**Marv??o**	**3.48**	**34**	*eP*	**Pn**	**02 13 06.3**	**+1.8**
PMRV				*eS*	**Sn**	**02 13 43.1**	**-1.6**
PMRV				A	A	02 13 45.5	
	comp=E,8.8nm,0.3s						
PMRV	**Marv??o**	**3.48**	**34**	P	**Pn**	**02 13 06.3**	**+1.8**
PMRV				S	**Sn**	**02 13 43.1**	**-1.6**
	comp=E,8.8nm,0.3s						
PMRV	**Marv??o**	**3.48**	**34**	P	**Pn**	**02 13 06.3**	**+1.8**
PMRV				S	**Sn**	**02 13 43.1**	**-1.6**
	comp=E,8.8nm,0.3s						
PCAS	**Casmilo, Conde**	**3.66**	**17**	*eP*	**Pn**	**02 13 08.9**	**+1.9**
PCAS				*eS*	**Sn**	**02 13 47.1**	**-2.0**
PCAS				A	A	02 13 51.4	
	comp=E,3.9nm,0.5s						
PCAS	**Casmilo, Conde**	**3.66**	**17**	*eP*	**Pn**	**02 13 08.9**	**+1.9**
PCAS				*eS*	**Sn**	**02 13 47.1**	**-2.0**
PCBR	**Castelo Branco**	**3.79**	**29**	*eP*	**Pn**	**02 13 10.9**	**+2.2**
PCBR				*eS*	**Sn**	**02 13 51.3**	**-0.9**
PCBR				A	A	02 13 53.0	
	comp=E,3.1nm,0.3s						
PCBR	**Castelo Branco**	**3.79**	**29**	P	**Pn**	**02 13 10.9**	**+2.2**
PCBR				S	**Sn**	**02 13 51.3**	**-0.9**
	comp=E,1.6nm,0.3s						
PCBR	**Castelo Branco**	**3.79**	**29**	P	**Pn**	**02 13 10.9**	**+2.2**
PCBR				S	**Sn**	**02 13 51.3**	**-0.9**
	comp=E,1.6nm,0.3s						
AVE	**Averroes**	**3.83**	**147**	P	Pn	02 13 08.7	-0.6
ECAB	**El Cabril**	**3.86**	**66**	⇑P	**Pn**	**02 13 11.9**	**+2.1**
	comp=E,0.9nm,0.1s,SNR=18						
ECAB				S	**Sn**	**02 13 52.6**	**-1.6**
	comp=E,14nm,0.4s,SNR=15						
ECAB	**El Cabril**	**3.86**	**66**	P	**Pn**	**02 13 11.9**	**+2.1**
	comp=E,0.9nm,0.1s,SNR=18						
ECAB				S	**Sn**	**02 13 52.6**	**-1.6**
	comp=E,14nm,0.4s,SNR=15						
HORN	**Hornachuelos**	**3.91**	**69**	P	**Pn**	**02 13 10.5**	**+0.1**
EMIJ	**Mijas**	**4.11**	**88**	S	**Sn**	**02 13 55.1**	**-5.1**
	comp=E,1.5nm,0.3s,SNR=7.9						
EMIJ	**Mijas**	**4.11**	**88**	S	**Sn**	**02 13 55.1**	**-5.1**
	comp=E,1.5nm,0.3s,SNR=7.9						
MTE	**Manteigas**	**4.25**	**25**	*eP*	**Pn**	**02 13 16.9**	**+1.7**
MTE				*eS*	**Sn**	**02 14 02.0**	**-1.9**
MTE				A	A	02 14 04.7	
	comp=E,3.4nm,0.1s						
MTE	**Manteigas**	**4.25**	**25**	P	**Pn**	**02 13 16.9**	**+1.7**
MTE				S	**Sn**	**02 14 02.0**	**-1.9**
	comp=E,1.7nm,0.1s						
MTE	**Manteigas**	**4.25**	**25**	P	**Pn**	**02 13 16.9**	**+1.7**
MTE				S	**Sn**	**02 14 02.0**	**-1.9**
	comp=E,1.7nm,0.1s						
PVIS	**Viseu**	**4.44**	**20**	*eP*	**Pn**	**02 13 19.1**	**+1.4**
PVIS				*eS*	**Sn**	**02 14 07.7**	**-0.7**
PVIS				A	A	02 14 11.3	
	comp=E,4.4nm,0.3s						
PVIS	**Viseu**	**4.44**	**20**	P	**Pn**	**02 13 19.1**	**+1.4**
PVIS				S	**Sn**	**02 14 07.7**	**-0.7**
	comp=E,2.2nm,0.3s						
PVIS	**Viseu**	**4.44**	**20**	P	**Pn**	**02 13 19.1**	**+1.4**
PVIS				S	**Sn**	**02 14 07.7**	**-0.7**
	comp=E,2.2nm,0.3s						
EADA	**Adamuz**	**4.52**	**68**	P	**Pn**	**02 13 20.9**	**+2.1**
	comp=E,0.7nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**02 14 08.1**	**-2.3**
	comp=E,12nm,0.3s,SNR=5.8						
EADA	**Adamuz**	**4.52**	**68**	P	**Pn**	**02 13 20.9**	**+2.1**
	comp=E,0.7nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**02 14 08.1**	**-2.3**
	comp=E,12nm,0.3s,SNR=5.8						
EPLA	**Plasencia**	**4.60**	**39**	P	**Pn**	**02 13 21.9**	**+1.9**
	comp=E,0.4nm,0.1s,SNR=7.9						
EPLA				S	**Sn**	**02 14 10.3**	**-2.2**
	comp=E,6.7nm,0.1s,SNR=16						
EPLA	**Plasencia**	**4.60**	**39**	P	**Pn**	**02 13 21.9**	**+1.9**
	comp=E,0.4nm,0.1s,SNR=7.9						
EPLA				S	**Sn**	**02 14 10.3**	**-2.2**
	comp=E,6.7nm,0.1s,SNR=16						
EGOR	**Sierra Gorda,**	**4.66**	**81**	P	**Pn**	**02 13 23.7**	**+2.9**
	comp=E,0.3nm,0.3s,SNR=7.9						
EGOR				S	**Sn**	**02 14 11.6**	**-2.3**
	comp=E,3.7nm,0.4s,SNR=7.9						
EGOR	**Sierra Gorda,**	**4.66**	**81**	P	**Pn**	**02 13 23.7**	**+2.9**
	comp=E,0.3nm,0.3s,SNR=7.9						
EGOR				S	**Sn**	**02 14 11.6**	**-2.3**
	comp=E,3.7nm,0.4s,SNR=7.9						
PTO	**Porto**	**4.69**	**12**	*eS*	**Sn**	**02 14 11.5**	**-2.9**
PTO	**Porto**	**4.69**	**12**	*eS*	**Sn**	**02 14 11.5**	**-2.9**
ELGU	**Los Guajares,**	**5.03**	**85**	S	**Sn**	**02 14 21.2**	**-1.9**
	comp=E,2.5nm,0.2s,SNR=7.9						
ELGU	**Los Guajares,**	**5.03**	**85**	S	**Sn**	**02 14 21.2**	**-1.9**
	comp=E,2.5nm,0.2s,SNR=7.9						
POLO	**Lamas de Olo**	**5.08**	**18**	*eP*	**Pn**	**02 13 28.3**	**+1.7**
POLO				*eS*	**Sn**	**02 14 22.3**	**-2.0**
POLO				A	A	02 14 25.7	
	comp=E,1.3nm,0.4s						
POLO	**Lamas de Olo**	**5.08**	**18**	*eP*	**Pn**	**02 13 28.3**	**+1.7**
POLO				*eS*	**Sn**	**02 14 22.3**	**-2.0**
MVO	**Moncorvo**	**5.11**	**25**	*eP*	**Pn**	**02 13 28.7**	**+1.7**
MVO				*eS*	**Sn**	**02 14 22.7**	**-2.3**
MVO				A	A	02 14 26.4	
	comp=E,3.5nm,0.4s						
MVO	**Moncorvo**	**5.11**	**25**	P	**Pn**	**02 13 28.4**	**+1.4**
	comp=E,1.7nm,0.2s,SNR=9.7						
MVO				S	**Sn**	**02 14 22.4**	**-2.7**
	comp=E,3.6nm,0.3s,SNR=8.6						
MVO	**Moncorvo**	**5.11**	**25**	*eP*	**Pn**	**02 13 28.7**	**+1.7**
MVO				*eS*	**Sn**	**02 14 22.7**	**-2.3**
EQUE	**Quentar**	**5.20**	**81**	S	**Sn**	**02 14 26.1**	**-1.1**
	comp=E,1.1nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**5.20**	**81**	S	**Sn**	**02 14 26.1**	**-1.1**
	comp=E,1.1nm,0.3s,SNR=7.9						
PAB	**San Pablo**	**5.29**	**54**	P	**Pn**	**02 13 31.3**	**+1.9**
	comp=E,0.7nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**02 14 26.5**	**-2.9**
	comp=E,3.9nm,0.3s,SNR=7.9						
PAB	**San Pablo**	**5.29**	**54**	P	**Pn**	**02 13 31.3**	**+1.9**
	comp=E,0.7nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**02 14 26.5**	**-2.9**
	comp=E,3.9nm,0.3s,SNR=7.9						
CZD	**Col de Zad**	**5.30**	**130**	P	**Pn**	**02 13 30.0**	**+0.1**
CZD				S	Sn	02 14 22.2	-7.9
PCAB	**Cabril**	**5.35**	**15**	*eP*	**Pn**	**02 13 31.7**	**+1.5**
PCAB				*eS*	**Sn**	**02 14 29.0**	**-1.8**
PCAB				A	A	02 14 30.5	
	comp=E,3.2nm,0.3s						
PCAB	**Cabril**	**5.35**	**15**	P	**Pn**	**02 13 31.7**	**+1.5**
PCAB				S	**Sn**	**02 14 29.0**	**-1.8**
	comp=E,1.6nm,0.3s						
PCAB	**Cabril**	**5.35**	**15**	P	**Pn**	**02 13 31.7**	**+1.5**
PCAB				S	**Sn**	**02 14 29.0**	**-1.8**
	comp=E,1.6nm,0.3s						
ELOB	**Lobios**	**5.49**	**14**	P	**Pn**	**02 13 33.8**	**+1.6**
	comp=E,0.6nm,0.1s,SNR=7.5						
ELOB				S	**Sn**	**02 14 30.2**	**-4.2**
	comp=E,1.3nm,0.3s,SNR=8.5						
ELOB	**Lobios**	**5.49**	**14**	P	**Pn**	**02 13 33.8**	**+1.6**
	comp=E,0.6nm,0.1s,SNR=7.5						
ELOB				S	**Sn**	**02 14 30.2**	**-4.2**
	comp=E,1.3nm,0.3s,SNR=8.5						
GORA	**Gorafe**	**5.54**	**78**	S	**Sn**	**02 14 33.3**	**-2.5**
	comp=E,2.8nm,0.2s,SNR=7.9						
GORA	**Gorafe**	**5.54**	**78**	S	**Sn**	**02 14 33.3**	**-2.5**
	comp=E,2.8nm,0.2s,SNR=7.9						
PGAV	**Gavieira, Arco**	**5.55**	**12**	*eP*	**Pn**	**02 13 34.6**	**+1.6**
PGAV				*eS*	**Sn**	**02 14 33.3**	**-2.5**
PGAV				A	A	02 14 34.3	
	comp=E,3.0nm,0.5s						
PGAV	**Gavieira, Arco**	**5.55**	**12**	*eP*	**Pn**	**02 13 34.6**	**+1.6**
PGAV				*eS*	**Sn**	**02 14 33.3**	**-2.5**
EQES	**Quesada**	**5.57**	**75**	P	**Pn**	**02 13 35.2**	**+1.8**
	comp=E,0.2nm,0.1s,SNR=7.9						
EQES				S	**Sn**	**02 14 34.4**	**-2.1**
	comp=E,3.4nm,0.2s,SNR=23						
EQES	**Quesada**	**5.57**	**75**	P	**Pn**	**02 13 35.2**	**+1.8**
	comp=E,0.2nm,0.1s,SNR=7.9						
EQES				S	**Sn**	**02 14 34.4**	**-2.1**
	comp=E,3.4nm,0.2s,SNR=23						
OUK	**Oukaimeden**	**5.58**	**162**	P	Pn	02 13 32.3	-1.5
ESDC	**Sonseca Array**	**5.61**	**54**	P	**Pn**	**02 13 35.5**	**+1.7**
	comp=E,0.6nm,0.2s,baz=240,slow=13,SNR=33						
ESDC				S	**Sn**	**02 14 34.9**	**-2.3**
	comp=E,1.8nm,0.3s,baz=241,slow=24,SNR=70						
ESDC	**Sonseca Array**	**5.61**	**54**	P	**Pn**	**02 13 35.5**	**+1.7**
	comp=E,0.6nm,0.2s,SNR=33						
ESDC				S	**Sn**	**02 14 34.9**	**-2.3**
	comp=E,1.8nm,0.3s,SNR=70						
PBRG	**Braganca**	**5.78**	**24**	*eP*	**Pn**	**02 13 37.9**	**+1.7**
PBRG				*eS*	**Sn**	**02 14 39.2**	**-2.3**
PBRG				A	A	02 14 41.6	
	comp=E,1.9nm,0.3s						
PBRG	**Braganca**	**5.78**	**24**	P	**Pn**	**02 13 37.9**	**+1.7**
PBRG				S	**Sn**	**02 14 39.2**	**-2.3**
	comp=E,0.9nm,0.3s

CHKT	**Chengkung**	**0.86**	**243**	*e*P	Pn	02 28 01.5 -1.6
	baz=235					
CHKT				*e*S	Sn	02 28 12.7 -1.8
	baz=235					
FULB	**Fuli**	**0.88**	**250**	*e*P	Pn	02 28 02.6 -0.8
	baz=242					
FULB				*e*S	Sn	02 28 14.3 -0.7
	baz=242					
TWH	**Lutao**	**1.02**	**220**	*e*P	Pn	02 28 05.0 -0.4
	baz=218					
TWH				*e*S	Sn	02 28 17.0 -1.5
	baz=218					
OWD	**Renai**	**1.04**	**296**	*e*P	Pn	02 28 05.6 -0.2
	baz=295					
OWD				*e*S	Sn	02 28 18.5 -0.6
	baz=295					
ELDTW	**Lidau**	**1.12**	**254**	*e*P	Pn	02 28 06.5 -0.4
	baz=245					
ELDTW				*e*S	Sn	02 28 20.0 -1.2
	baz=245					
TWT	**Tachien**	**1.20**	**309**	*e*P	Pn	02 28 08.0 0.0
	baz=307					
TWT				*e*S	Sn	02 28 23.5 +0.4
	baz=307					
NNS	**Nan Shan**	**1.20**	**322**	*e*P	Pn	02 28 08.2 +0.2
	baz=320					
NNS				*e*S	Sn	02 28 22.8 -0.4
	baz=320					
TWG	**Pinlang**	**1.23**	**237**	*e*P	Pn	02 28 08.1 -0.2
	baz=250					
TWG				*e*S	Sn	02 28 23.4 -0.3
	baz=250					
ALS	**Alishan**	**1.27**	**271**	*e*P	Pn	02 28 09.9 +0.8
	baz=270					
WTP	**Ta-pu**	**1.47**	**261**	*e*P	Pn	02 28 13.4 +1.8
	baz=260					

JMA 03 02:28:31.1±0.2, 24°.69N×123°.22E, h13km, M1.9, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.30**	**220**	P	Pg	02 28 37.0	-0.2
YOJ				S	Sg	02 28 40.9	-0.4
JYNG	**Yonagunijimaku**	**0.34**	**227**	P	Pg	02 28 38.0	-0.1
JYNG				*e*S	Sg	02 28 43.1	+0.3
IRIF	**Iriomote-Funau**	**0.58**	**127**	P	Pg	02 28 42.5	0.0
IRIF				*e*S	Sg	02 28 50.3	0.0
JKRS	**Kuro-shima**	**0.85**	**122**	P	Pg	02 28 47.1	-0.4
JKRS				S	Sg	02 28 58.0	-0.7
JIJ	**Ishigaki jima**	**0.90**	**111**	P	Pg	02 28 48.0	-0.5
JIJ				S	Sg	02 28 59.0	-1.3
JISG	**Ishigakijimahi**	**1.00**	**96**	S	Sb	02 29 02.5	-0.8
JTJ	**Tarama**	**1.35**	**92**	*e*S	Sn	02 29 12.6	-0.8

IDC 03 02:30:37.1±1.6, 2°.16N×128°.72E, h0km, mb3.4/4, mb1 3.5/5, mb1mx3.4/53, mbtmp3.4/5, ML3.0/1, Error ellipse: s-maj=104.4km s-min=22.0km az=64.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.94**	**140**	Pn	Pn	02 31 38.7	-0.1
	1.0nm,0.3s,baz=306,slow=19,SNR=2.1						
SIJI				Sn	Sn	02 32 22.4	-3.4
	1.2nm,0.3s,baz=94,slow=19,SNR=2.3						
WRA	**Warramunga Arr**	**22.64**	**166**	P	P	02 35 40.3	+0.3
	0.7nm,0.6s,baz=345,slow=9.9,SNR=7.4						
ASAR	**Alice Springs**	**26.16**	**169**	P	P	02 36 12.0	-1.4
	0.5nm,0.9s,baz=359,slow=9.3,SNR=2.8						
MKAR	**Makanchi Array**	**59.97**	**325**	P	P	02 40 45.6	+0.2
	0.2nm,0.4s,baz=119,slow=5.3,SNR=3.3						
KURBB	**Kurchatov Arra**	**64.13**	**327**	P	P	02 41 13.8	+0.6
	0.2nm,0.4s,baz=124,slow=5.6,SNR=1.5						

*SOME **03** 02:31:49.9, 44°.27N×81°.48E, h5km*
*NNC **03** 02:31:49.2±3.2, 44°.25N×81°.62E, h0km, mb2.5, mpv2.1, Error ellipse: s-maj=38.2km s-min=15.0km az=128.0*
ISC 03 02:31:47.9±1.9, 44°.21N±0°.06×81°.75E±0°.08, h9km±13km, n13, σ1§12/24, 3C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.27**	**234**	*e*P	**Pg**	**02 32 12.4**	**+0.1**
	6.9nm,0.2s						
KTMS				*e*S	**Sn**	**02 32 28.9**	**-0.3**
	19nm,0.1s						
DJR	**Jarkent**	**1.42**	**276**	*e*P	**Pg**	**02 32 14.9**	**-0.2**
	3.7nm,0.1s						
DJR				*e*S	**Sg**	**02 32 32.8**	**-0.7**
	11nm,0.2s						
PDGK	**Podgornoye**	**1.86**	**243**	⇓P	**Pn**	**02 32 21.1**	**+1.0**
	1.6nm,0.5s						
PDGK				⇓S	**Sb**	**02 32 45.7**	**+0.1**
	2.9nm,0.4s						
SHLS	**Shalkode**	**1.97**	**239**	*e*P	**Pn**	**02 32 20.5**	**-1.0**
	2.5nm,0.1s						
SHLS				*e*S	**Sn**	**02 32 42.7**	**-3.7**
	28nm,0.3s						
KAPS	**Kapalarasan**	**2.02**	**303**	*e*P	**Pb**	**02 32 24.6**	**-0.3**
	2.5nm,0.2s						
KAPS				*e*S	**Sb**	**02 32 50.1**	**-0.1**
	10nm,0.2s						
UZB	**Uzynbulak**	**2.25**	**243**	*e*P	**Pb**	**02 32 28.9**	**+0.1**
	1.0nm,0.2s						
UZB				*e*S	**Sb**	**02 32 57.1**	**+0.3**
	4.9nm,0.2s						
KPKS	**Kokpek**	**2.34**	**253**	*e*P	**Pn**	**02 32 28.4**	**+1.7**
	3.0nm,0.1s						
KPKS				*e*S	**Sn**	**02 32 56.8**	**+1.1**
	24nm,0.2s						
MNBS	**Baschi**	**2.42**	**268**	*e*P	**Pb**	**02 32 31.6**	**-0.1**
	1.0nm,0.1s						
MNBS				*e*S	**Sb**	**02 33 02.2**	**+0.6**
	6.0nm,0.1s						
MAKZ	**Makanchi**	**2.61**	**3**	⇑Pg	**Pg**	**02 32 38.0**	**+0.1**
	0.7nm,0.6s						
MAKZ				⇑Lg	Lg	02 33 07.8	
	1.3nm,0.5s						
MK31	**Makanchi Array**	**2.62**	**8**	Pg	**Pg**	**02 32 37.9**	**-0.1**
	0.2nm,0.2s,baz=184,slow=16,SNR=8.1						
MK31				⇑Lg	Lg	02 33 09.3	
	0.2nm,0.2s,baz=192,slow=29,SNR=6.8						
ARXS	**Arharly**	**2.82**	**272**	*e*P	**Pb**	**02 32 38.0**	**-0.5**
	0.6nm,0.2s						
ARXS				*e*S	**Sb**	**02 33 13.0**	**-0.3**
	5.4nm,0.2s						
KOTS	**Kotyrbulak**	**3.50**	**256**	*e*P	**Pb**	**02 32 50.4**	**+0.2**
	1.1nm,0.4s						
KOTS				*e*S	**Sb**	**02 33 34.0**	**+1.1**
	3.4nm,0.6s						
KTBS	**Karatobe**	**3.69**	**264**	*e*P	**Pb**	**02 32 53.7**	**+0.3**
	0.3nm,0.2s						
KTBS				*e*S	**Sb**	**02 33 39.8**	**+1.4**
	1.5nm,0.3s						

IDC 03 02:38:20.0±2.4, 19°.63S×169°.34E, h0km, mb3.4/2, mb1 3.7/3, mb1mx3.4/45, mbtmp3.5/3, ML3.6/1, Error ellipse: s-maj=101.8km s-min=31.5km az=140.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.64**	**228**	Pn	Pn	02 39 18.5	+0.7
	4.8nm,0.3s,baz=134,slow=16,SNR=148						
DZM				Sn	Sn	02 40 02.7	+1.2
	5.7nm,0.3s,baz=306,slow=20,SNR=11						
WRA	**Warramunga Arr**	**32.91**	**263**	P	P	02 44 55.9	-0.4
	0.3nm,0.7s,baz=101,slow=7.7,SNR=1.9						
ASAR	**Alice Springs**	**33.13**	**257**	P	P	02 44 58.0	-0.3
	0.4nm,0.7s,baz=82,slow=9.6,SNR=6.3						
ARCES	**ARCESS Array B**	**125.47**	**345**	PKP	PKPdf	02 57 21.2	-1.3
	2.1nm,0.9s,baz=46,slow=2.9,SNR=4.2						
EKA	**Eskdalemuir Ar**	**143.90**	**353**	PKP	PKPdf	02 57 56.7	-0.5
	0.5nm,0.4s,baz=5.7,slow=2.9,SNR=2.6						
GERES	**GERESS Array B**	**144.88**	**332**	PKP	PKPdf	02 58 00.6	+1.4
	0.4nm,0.6s,baz=31,slow=3.1,SNR=4.8						

JMA 03 03:30:25.1±0.2, 28°.46N×143°.45E, h71km, M3.9, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.76**	**220**	P	Pn	03 30 54.2	+0.6
CBIJ				*e*S	Sn	03 31 15.8	+0.6
JHHJ	**Haha-jima-NKT**	**2.15**	**212**	*e*S	Sn	03 31 24.8	+0.4
JHU	**Hanno**	**8.17**	**335**	P	Pn	03 32 22.2	+1.3
JHU				*e*S	Sn	03 33 51.4	-0.3
JAG	**Ashikaga**	**8.63**	**338**	P	Pn	03 32 28.3	+1.1
JAG				*e*S	Sn	03 34 02.2	-0.7

*NIED **03** 03:54:00, 39°.80N×142°.40E, h5km, Mw4.0 Best double couple: M0=1.20000×10^15 NP1:φs=314.00000°, δ=48.00000°, λ=43.00000°. NP2:φs=193.00000°, δ=60.00000°, λ=129.00000°.*
*JMA **03** 03:54:58.9, 39°.80N×142°.37E, h20km±1km, M4.3*
JMA Felt I J1.
*ISCJB **03** 03:54:59.2±1.2, 39°.77N±0°.03×142°.37E±0°.08, h17km±8km, mb3.9/16, Error ellipse: s-maj=10.7km s-min=5.3km az=6.3*
*IDC **03** 03:55:06.2±2.3, 39°.65N×142°.21E, h62km±21km, mb3.7/16, mb1 3.8/20, mb1mx3.6/67, mbtmp4.0/20, MS2.9/6, Ms1 2.9/6, ms1mx2.6/68, Error ellipse: s-maj=19.0km s-min=14.1km az=89.0*
ISC 03 03:55:00.0±1.8, 39.77N±0°.03×142°.32E±0°.08, h9km±10km, n38, σ1§50/40, mb4.0/16, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.39**	**296**	P	**Pg**	**03 55 07.5**	**-0.2**
JTH				S	**Sg**	**03 55 13.5**	**+0.6**
MIYJ	**Miyakonagasawa**	**0.43**	**244**	P	**Pg**	**03 55 08.5**	**0.0**
MIYJ				S	**Sg**	**03 55 15.1**	**+0.9**
JKZ	**Kuzumaki**	**0.79**	**286**	P	**Pg**	**03 55 14.5**	**-0.8**
JKZ				*e*S	**Sg**	**03 55 25.4**	**-0.2**
JOM	**Ohasama**	**0.85**	**250**	P	**Pg**	**03 55 15.4**	**-1.0**
JOM				*e*S	**Sg**	**03 55 27.2**	**-0.2**
OFUJ	**Ofunato**	**0.85**	**216**	P	**Pg**	**03 55 15.3**	**-1.2**
OFUJ				S	**Sg**	**03 55 26.8**	**-0.8**
JANG	**Nango**	**0.86**	**315**	P	**Pg**	**03 55 14.7**	**-2.0**
JANG				S	**Sg**	**03 55 25.9**	**-2.0**
JMK	**Ichinoseki**	**1.18**	**227**	P	**Pn**	**03 55 21.0**	**-1.7**
JMK				S	**Sb**	**03 55 36.8**	**-1.2**
ASAJ	**Asahikawa**	**4.35**	**3**	P	**Pn**	**03 56 05.8**	**-0.4**
	1.8nm,0.3s,baz=214,slow=10,SNR=15						
ASAJ				S	**Sb**	**03 57 06.2**	**-3.0**
	1.6nm,0.3s,baz=128,slow=19,SNR=4.1						
ASAJ				LR	LR	03 58 23.6	
	comp=Z,199nm,19.2s,baz=188,slow=44						
MAT	**Matsushiro**	**4.57**	**226**	P	**Pn**	**03 56 11.3**	**+1.9**
MAT				S	**Sn**	**03 57 02.3**	**-0.3**
MJAR	**Matsushiro Arr**	**4.57**	**226**	P	**Pn**	**03 56 11.3**	**+1.9**
	3.0nm,0.3s,baz=32,slow=12,SNR=42						
MJAR				S	**Sb**	**03 57 16.8**	**+1.2**
	baz=23,slow=20,SNR=2.8						
MJAR				LR	LR	03 58 23.8	
	comp=Z,50nm,18.2s,baz=55,slow=45						
JHJ	**Hachijo jima 2**	**6.95**	**198**	P	**Pn**	**03 56 42.8**	**+0.8**
	6.4nm,0.3s,baz=60,slow=20,SNR=2.5						
JHJ				S	**Sn**	**03 57 59.3**	**-1.8**
	5.9nm,0.3s,baz=59,slow=19,SNR=3.0						
USRK	**Ussuriysk Ar.**	**8.88**	**303**	P	**Pn**	**03 57 12.1**	**+3.7**
	0.2nm,0.3s,baz=96,slow=16,SNR=5.0						
USRK				LR	LR	04 00 26.1	
	comp=Z,58nm,19.3s,baz=117,slow=36						
JNU	**Nakatsue**	**11.35**	**238**	LR	LR	04 02 26.7	
	comp=Z,86nm,19.9s,baz=118,slow=39						
KSRS	**Korea Array**	**11.50**	**263**	P	Pn	03 57 48.3	+3.9
	0.3nm,0.3s,baz=69,slow=13,SNR=4.9						
KSRS				LR	LR	04 01 40.5	
	comp=Z,90nm,19.5s,baz=112,slow=34						
KLR	**Kul'dur**	**12.09**	**325**	P	**Pn**	**03 57 55.5**	**+3.1**
	0.0nm,0.3s,baz=163,slow=18,SNR=1.8						
PETK	**Petropavlovsk-**	**16.99**	**33**	LR	LR	04 05 04.6	
	comp=Z,22nm,19.0s,baz=206,slow=35						
SEY	**Seymchan**	**23.97**	**11**	P	**P**	**04 00 16.5**	**+2.0**
	2.9nm,0.8s,baz=183,slow=11,SNR=5.0						
SONM	**Songino Array**	**26.99**	**299**	P	**P**	**04 00 40.6**	**-1.4**
	0.4nm,0.5s,baz=90,slow=9.4,SNR=2.9						
H11N2	**WAKE ISLAND Hy 29.06**	**126**		T	T	04 31 32.0	
	baz=319,slow=76,SNR=2093						
H11N1	**WAKE ISLAND Hy 29.07**	**126**		T	T	04 31 30.2	
	baz=319,slow=76,SNR=1540						
H11N3	**WAKE ISLAND Hy 29.08**	**126**		T	T	04 31 33.7	
	baz=319,slow=76,SNR=1530						
H11S1	**WAKE ISLAND Hy 29.87**	**128**		T	T	04 32 32.6	
	baz=320,slow=76,SNR=175						
H11S3	**WAKE ISLAND Hy 29.87**	**128**		T	T	04 32 34.9	
	baz=320,slow=76,SNR=86						
H11S2	**WAKE ISLAND Hy 29.88**	**128**		T	T	04 32 34.9	
	baz=320,slow=76,SNR=123						
ZALV	**Zalesovo Beam**	**40.65**	**310**	P	**P**	**04 02 40.0**	**-0.2**
	3.0nm,0.4s,baz=89,slow=9.1,SNR=1.8						
MKAR	**Makanchi Array**	**43.32**	**300**	P	**P**	**04 03 01.1**	**-1.1**
	1.4nm,0.7s,baz=83,slow=9.1,SNR=16						
KURBB	**Kurchatov Arra**	**44.93**	**306**	P	**P**	**04 03 13.8**	**-1.2**
	4.4nm,0.5s,baz=81,slow=8.6,SNR=15						
ILAR	**Eielson Array**	**46.81**	**34**	P	**P**	**04 03 29.4**	**-0.4**
	0.8nm,0.7s,baz=268,slow=6.2,SNR=12						
BVAR	**Borovoye Array**	**49.29**	**311**	P	**P**	**04 03 48.1**	**-0.9**
	0.6nm,0.5s,baz=70,slow=8.3,SNR=3.3						
INK	**Inuvik**	**51.64**	**28**	P	**P**	**04 04 06.6**	**+0.1**
	1.0nm,0.6s,baz=260,slow=5.6,SNR=2.2						
WRA	**Warramunga Arr**	**59.87**	**189**	P	**P**	**04 05 03.9**	**-2.2**
	2.8nm,0.7s,baz=7.1,slow=7.1,SNR=14						
YKA	**Yellowknife Ar**	**61.09**	**31**	P	**P**	**04 05 15.0**	**+1.0**
	0.3nm,0.7s,baz=299,slow=6.5,SNR=3.6						
ASAR	**Alice Springs**	**63.59**	**189**	P	**P**	**04 05 30.1**	**-1.1**
	1.1nm,0.8s,baz=0.9,slow=5.0,SNR=8.8						
FINES	**FINESS Array B**	**66.73**	**332**	P	**P**	**04 05 51.2**	**+0.1**
	1.2nm,0.6s,baz=51,slow=7.7,SNR=8.0						
KBZ	**Khabaz**	**69.67**	**310**	P	**P**	**04 06 09.7**	**-0.1**
	1.6nm,0.8s,baz=21,slow=17,SNR=4.1						
NOA	**NORSAR Array B**	**71.94**	**337**	P	**P**	**04 06 24.1**	**+0.6**
	1.0nm,0.6s,baz=36,slow=6.0,SNR=3.5						
AKASG	**Malin Array Be**	**72.57**	**322**	P	**P**	**04 06 26.4**	**-0.9**
	1.4nm,0.5s,baz=47,slow=6.0,SNR=5.6						
BRTR	**Keskin Array B**	**77.57**	**312**	P	**P**	**04 06 57.2**	**+0.6**
	0.4nm,0.6s,baz=46,slow=6.2,SNR=3.8						

*SFS **03** 04:01:31.0, 37°.29N×12°.70W, h0km, ML3.6*
*IGIL **03** 04:01:31.8, 37°.29N×12°.76W, h2km, ML2.0*
*MDD **03** 04:01:32.4±1.7, 37°.31N×12°.69W, h0km, mb3.7/8, Error ellipse: s-maj=14.7km s-min=14.2km az=82.0, PRXIMO*
*INMG **03** 04:01:33.8±1.1, 37°.14N×13°.08W, h10km, ML2.0, Error ellipse: s-maj=6.2km s-min=4.9km az=93.0*
*CSEM **03** 04:01:34.8±0.3, 37°.40N×12°.48W, h10km, mb3.7, Error ellipse: s-maj=6.4km s-min=5.6km az=82.0*
ISC 03 04:01:30.4±3.4, 37°.34N±0°.09×12°.8W±0°.2, h10km, n89, σ1§57/169, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.15**	**93**	*e*Pn	**Pn**	**04 02 19.7**	**-0.3**
PFVI	**Vila Bisbo**	**3.15**	**93**	*e*Pn	**Pn**	**04 02 19.7**	**-0.3**
PMST	**Lisbon--Monsan**	**3.15**	**63**	*e*Pn	**Pn**	**04 02 21.7**	**+1.6**
PMST				*e*Sn	**Sn**	**04 02 58.5**	**+0.8**
PMST				A	A	04 03 15.0	
	12nm,0.7s						
PMST	**Lisbon--Monsan**	**3.15**	**63**	*e*Pn	**Pn**	**04 02 21.7**	**+1.6**
PMST				*e*Sn	**Sn**	**04 02 58.5**	**+0.8**
PMAFR	**Mafra**	**3.18**	**59**	*e*Pn	**Pn**	**04 02 22.0**	**+1.5**
PMAFR				*e*Sn	**Sn**	**04 02 59.8**	**+1.3**
PMAFR				A	A	04 03 01.0	
	11nm,0.6s						
PMAFR	**Mafra**	**3.18**	**59**	P	**Pn**	**04 02 21.9**	**+1.5**
	2.2nm,0.2s,SNR=7.9						
PMAFR				S	**Sn**	**04 02 59.8**	**+1.3**
	5.3nm,0.3s,SNR=7.9						
PMAFR	**Mafra**	**3.18**	**59**	*e*Pn	**Pn**	**04 02 22.0**	**+1.5**
PMAFR				S	**Sn**	**04 02 59.8**	**+1.3**
	5.3nm,0.3s,SNR=7.9						
PTEO	**Sao Teotonio**	**3.22**	**85**	*e*Pn	**Pn**	**04 02 21.6**	**+0.6**
PTEO				*e*Sn	**Sn**	**04 02 57.8**	**-1.6**
PTEO				A	A	04 03 06.2	
	3.1nm,0.8s						
PTEO	**Sao Teotonio**	**3.22**	**85**	P	**Pn**	**04 02 21.6**	**+0.6**
PTEO				S	**Sn**	**04 02 57.8**	**-1.6**
	1.6nm,0.8s						
PTEO	**Sao Teotonio**	**3.22**	**85**	P	**Pn**	**04 02 21.6**	**+0.6**
PTEO				S	**Sn**	**04 02 57.8**	**-1.6**
	1.6nm,0.8s						
MORF	**Marmelete**	**3.28**	**89**	*e*P	**Pn**	**04 02 22.4**	**+0.5**
MORF	**Marmelete**	**3.28**	**89**	*e*Pn	**Pn**	**04 02 24.2**	**+2.3**
MORF	**Marmelete**	**3.28**	**89**	P	**Pn**	**04 02 22.4**	**+0.5**
MORF				P	**Pn**	**04 02 24.2**	**+2.3**
MORF	**Marmelete**	**3.28**	**89**	P	**Pn**	**04 02 22.4**	**+0.5**
MORF	**Marmelete**	**3.28**	**89**	*e*Pn	**Pn**	**04 02 24.2**	**+2.3**
PNCL	**Nicolau / Gran**	**3.44**	**76**	*e*Pn	**Pn**	**04 02 26.1**	**+2.0**
PNCL				*e*Sn	**Sn**	**04 03 04.0**	**-0.9**
PNCL				A	A	04 03 15.2	
	2.1nm,0.7s						
PNCL	**Nicolau / Gran**	**3.44**	**76**	*e*Pn	**Pn**	**04 02 26.1**	**+2.0**
PNCL				*e*Sn	**Sn**	**04 03 04.0**	**-0.9**
MESJ	**Messejana**	**3.64**	**81**	*e*P	**Pn**	**04 02 27.5**	**+0.7**
MESJ				*e*S	**Sn**	**04 03 08.0**	**-1.9**
MESJ				AML	AML	04 03 12.5	
	comp=N,2.0nm,0.4s						
MESJ	**Messejana**	**3.64**	**81**	*e*Pn	**Pn**	**04 02 28.6**	**+1.8**
MESJ				*e*Sn	**Sn**	**04 03 08.6**	**-1.2**
MESJ				A	A	04 03 16.5	
	comp=N,1.1nm,0.1s						
MESJ	**Messejana**	**3.64**	**81**	P	**Pn**	**04 02 27.5**	**+0.7**
MESJ				P	**Pn**	**04 02 28.6**	**+1.8**
MESJ				S	**Sn**	**04 03 08.0**	**-1.9**
	comp=N,2.0nm,0.4s						
MESJ				S	**Sn**	**04 03 08.6**	**-1.2**
	comp=N,1.1nm,0.1s						
MESJ	**Messejana**	**3.64**	**81**	P	**Pn**	**04 02 28.6**	**+1.8**
MESJ				S	**Sn**	**04 03 08.6**	**-1.2**
	comp=N,1.1nm,0.1s						
ALMR	**Almeirim**	**3.76**	**60**	*e*P	**Pn**	**04 02 29.6**	**+1.2**
ALMR				*e*S	**Sn**	**04 03 11.0**	**-1.7**
ALMR				AML	AML	04 03 13.8	
	comp=E,7.9nm,0.5s						
ALMR	**Almeirim**	**3.76**	**60**	*e*Pn	**Pn**	**04 02 30.3**	**+1.9**
ALMR				*e*Sn	**Sn**	**04 03 12.6**	**-0.1**
ALMR				A	A	04 03 20.4	
	comp=E,4.3nm,0.8s						
ALMR	**Almeirim**	**3.76**	**60**	P	**Pn**	**04 02 29.6**	**+1.2**
ALMR				P	**Pn**	**04 02 30.3**	**+1.9**
ALMR				S	**Sn**	**04 03 11.0**	**-1.7**
	comp=E,4.0nm,0.5s						
ALMR				S	**Sn**	**04 03 12.6**	**-0.1**
	comp=E,2.2nm,0.8s						
ALMR	**Almeirim**	**3.76**	**60**	P	**Pn**	**04 02 30.3**	**+1.9**
ALMR				S	**Sn**	**04 03 12.6**	**-0.1**
	comp=E,2.2nm,0.8s						
PCVE	**Castro Verde**	**3.77**	**84**	*e*Pn	**Pn**	**04 02 29.9**	**+1.3**
PCVE				*e*Sn	**Sn**	**04 03 11.8**	**-1.2**
PCVE				A	A	04 03 21.3	
	comp=E,1.5nm,0.4s						
PCVE	**Castro Verde**	**3.77**	**84**	P	**Pn**	**04 02 29.9**	**+1.3**
PCVE				S	**Sn**	**04 03 11.8**	**-1.2**
	comp=E,1.5nm,0.4s						
PCVE	**Castro Verde**	**3.77**	**84**	P	**Pn**	**04 02 29.9**	**+1.3**
PCVE				S	**Sn**	**04 03 11.8**	**-1.2**
	comp=E,1.5nm,0.4s						
PBDV	**Barranco-do-Ve**	**3.85**	**90**	*e*Pn	**Pn**	**04 02 30.8**	**+1.0**
PBDV				*e*Sn	**Sn**	**04 03 16.0**	**+0.9**
PBDV				A	A	04 03 22.9	
	comp=E,2.2nm,0.6s						
PBDV	**Barranco-do-Ve**	**3.85**	**90**	P	**Pn**	**04 02 30.8**	**+1.0**
PBDV				S	**Sn**	**04 03 16.0**	**+0.9**
	comp=E,2.2nm,0.6s						
PBDV	**Barranco-do-Ve**	**3.85**	**90**	P	**Pn**	**04 02 30.8**	**+1.0**
PBDV				S	**Sn**	**04 03 16.0**	**+0.9**
	comp=E,2.2nm,0.6s						
EVO	**Evora**	**3.94**	**71**	*e*Pn	**Pn**	**04 02 32.5**	**+1.6**
EVO				*e*Sn	**Sn**	**04 03 16.0**	**-1.1**
EVO				A	A	04 03 21.4	
	comp=E,2.9nm,0.1s						
EVO	**Evora**	**3.94**	**71**	P	**Pn**	**04 02 32.3**	**+1.4**
EVO				S	**Sn**	**04 03 15.9**	**-1.3**
EVO	**Evora**	**3.94**	**71**	P	**Pn**	**04 02 32.3**	**+1.4**
EVO				*e*Sn	**Sn**	**04 03 16.0**	**-1.1**
PBEJ	**Beja**	**3.94**	**79**	*e*Pn	**Pn**	**04 02 32.4**	**+1.4**
PBEJ				*e*Sn	**Sn**	**04 03 17.4**	**+0.1**
PBEJ				A	A	04 03 21.1	
	comp=E,2.5nm,0.2s						
PBEJ	**Beja**	**3.94**	**79**	P	**Pn**	**04 02 32.4**	**+1.4**
PBEJ				S	**Sn**	**04 03 17.4**	**+0.1**
	comp=E,1.2nm,0.2s						
PBEJ	**Beja**	**3.94**	**79**	P	**Pn**	**04 02 32.4**	**+1.4**
PBEJ				S	**Sn**	**04 03 17.4**	**+0.1**
	comp=E,1.2nm,0.2s						
PVAQ	**Vaqueiros**	**4.02**	**88**	*e*Pn	**Pn**	**04 02 33.1**	**+1.1**
PVAQ				*e*Sn	**Sn**	**04 03 18.1**	**-1.0**
PVAQ				A	A	04 03 19.1	
	comp=E,2.2nm,0.8s						
PVAQ	**Vaqueiros**	**4.02**	**88**	P	**Pn**	**04 02 33.1**	**+1.1**
PVAQ				S	**Sn**	**04 03 18.1**	**-1.0**
	comp=E,2.2nm,0.8s						
PVAQ	**Vaqueiros**	**4.02**	**88**	P	**Pn**	**04 02 33.1**	**+1.1**
PVAQ				S	**Sn**	**04 03 18.1**	**-1.0**
	comp=E,2.2nm,0.8s						
PTOM	**Tomar**	**4.10**	**55**	*e*Pn	**Pn**	**04 02 35.5**	**+2.3**
PTOM				*e*Sn	**Sn**	**04 03 20.9**	**-0.3**
PTOM				A	A	04 03 27.4	
	comp=E,3.5nm,0.4s						
PTOM	**Tomar**	**4.10**	**55**	P	**Pn**	**04 02 35.5**	**+2.3**
PTOM				S	**Sn**	**04 03 20.9**	**-0.3**
	comp=E,1.8nm,0.4s						
PTOM	**Tomar**	**4.10**	**55**	P	**Pn**	**04 02 35.5**	**+2.3**
PTOM				S	**Sn**	**04 03 20.9**	**-0.3**
	comp=E,1.8nm,0.4s						
EGRO	**El Granado**	**4.20**	**86**	P	**Pn**	**04 02 35.7**	**+1.1**
	comp=E,1.2nm,0.2s,SNR=7.9						
EGRO				S	**Sn**	**04 03 23.6**	**-0.1**
	comp=E,1.0nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**4.20**	**86**	P	**Pn**	**04 02 35.7**	**+1.1**
	comp=E,1.2nm,0.2s,SNR=7.9						
EGRO				S	**Sn**	**04 03 23.6**	**-0.1**
	comp=E,1.0nm,0.1s,SNR=7.9						
PCAS	**Casmilo, Conde**	**4.29**

EMIN S **Sn** **04 03 37.6 -2.2**
comp=E,0.3nm,0.1s,SNR=7.9
PVIS Viseu 5.07 47 *e*Pn **Pn** **04 02 47.4 +0.9**
PVIS *e*Sn **Sn** **04 03 44.5 -0.7**
PVIS A A 04 03 49.1
comp=E,1.5nm,0.5s
PVIS Viseu 5.07 47 P **Pn** **04 02 47.4 +0.9**
PVIS S **Sn** **04 03 44.5 -0.7**
comp=E,0.8nm,0.5s
PVIS Viseu 5.07 47 P **Pn** **04 02 47.4 +0.9**
PVIS S **Sn** **04 03 44.5 -0.7**
comp=E,0.8nm,0.5s
MTE Manteigas 5.09 52 *e*Pn **Pn** **04 02 49.4 +2.6**
MTE *e*Sn **Sn** **04 03 44.4 -1.2**
MTE A A 04 03 51.9
comp=E,1.0nm,0.3s
MTE Manteigas 5.09 52 P **Pn** **04 02 49.4 +2.6**
MTE S **Sn** **04 03 44.4 -1.2**
comp=E,0.5nm,0.3s
MTE Manteigas 5.09 52 P **Pn** **04 02 49.4 +2.6**
MTE S **Sn** **04 03 44.4 -1.2**
comp=E,0.5nm,0.3s
POLO Lamas de Olo 5.57 42 *e*Pn **Pn** **04 02 55.4 +2.0**
POLO *e*Sn **Sn** **04 03 55.6 -1.9**
POLO Lamas de Olo 5.57 42 *e*Pn **Pn** **04 02 55.4 +2.0**
POLO *e*Sn **Sn** **04 03 55.6 -1.9**
PGAV Gavieira, Arco 5.77 35 *e*Sn **Sn** **04 04 00.9 -1.6**
PGAV A A 04 04 03.7
comp=E,1.2nm,0.3s
PGAV Gavieira, Arco 5.77 35 *e*Sn **Sn** **04 04 00.9 -1.6**
ELOB Lobios 5.79 37 P **Pn** **04 02 58.4 +1.9**
comp=E,0.4nm,0.3s,SNR=7.9
ELOB S **Sn** **04 04 01.2 -1.9**
comp=E,0.1nm,0.1s,SNR=7.9
ELOB Lobios 5.79 37 P **Pn** **04 02 58.4 +1.9**
comp=E,0.4nm,0.3s,SNR=7.9
ELOB S **Sn** **04 04 01.2 -1.9**
comp=E,0.1nm,0.1s,SNR=7.9
MVO Moncorvo 5.86 48 *e*Pn **Pn** **04 02 59.2 +1.8**
MVO *e*Sn **Sn** **04 04 02.3 -2.4**
MVO A A 04 04 06.9
comp=E,0.9nm,0.3s
MVO Moncorvo 5.86 48 P **Pn** **04 02 58.9 +1.5**
comp=E,0.8nm,0.3s,SNR=7.9
MVO S **Sn** **04 04 02.8 -1.9**
comp=E,0.4nm,0.1s,SNR=7.9
MVO Moncorvo 5.86 48 P **Pn** **04 02 58.9 +1.5**
comp=E,0.8nm,0.3s,SNR=7.9
MVO Moncorvo 5.86 48 *e*Pn **Pn** **04 02 59.2 +1.8**
MVO *e*Sn **Sn** **04 04 02.3 -2.4**
MVO S **Sn** **04 04 02.8 -1.9**
comp=E,0.4nm,0.1s,SNR=7.9
ECAB El Cabril 5.87 81 P **Pn** **04 02 58.3 +0.8**
comp=E,0.5nm,0.1s,SNR=11
ECAB S **Sn** **04 04 01.6 -3.2**
comp=E,0.2nm,0.1s,SNR=7.9
ECAB El Cabril 5.87 81 P **Pn** **04 02 58.3 +0.8**
comp=E,0.5nm,0.1s,SNR=11
ECAB S **Sn** **04 04 01.6 -3.2**
comp=E,0.2nm,0.1s,SNR=7.9
EPLA Plasencia 5.89 60 P **Pn** **04 02 59.4 +1.6**
comp=E,0.5nm,0.2s,SNR=7.9
EPLA S **Sn** **04 04 03.6 -1.7**
comp=E,0.7nm,0.2s,SNR=7.9
EPLA Plasencia 5.89 60 P **Pn** **04 02 59.4 +1.6**
comp=E,0.5nm,0.2s,SNR=7.9
EPLA S **Sn** **04 04 03.6 -1.7**
comp=E,0.7nm,0.2s,SNR=7.9
EMAZ Mazaricos 6.30 26 S **Sn** **04 04 10.0 -5.6**
SNR=7.9
EAGO Agolada(Pontev 6.52 32 S **Sn** **04 04 17.5 -3.4**
comp=E,0.3nm,0.1s,SNR=4.0
EADA Adamuz 6.54 80 S **Sn** **04 04 22.1 +0.8**
comp=E,0.1nm,0.1s,SNR=4.0
PAB San Pablo 6.96 69 P **Pn** **04 03 13.5 +1.0**
comp=E,0.3nm,0.2s,SNR=7.9
PAB S **Sn** **04 04 29.3 -2.4**
comp=E,0.1nm,0.1s,SNR=7.9
PAB San Pablo 6.96 69 P **Pn** **04 03 13.5 +1.0**
comp=E,0.3nm,0.2s,SNR=7.9
PAB S **Sn** **04 04 29.3 -2.4**
comp=E,0.1nm,0.1s,SNR=7.9
ESDC Sonseca Array 7.28 69 P **Pn** **04 03 17.8 +0.9**
comp=E,0.9nm,0.3s,baz=254,slow=13,SNR=8.0
ESDC Sonseca Array 7.28 69 P **Pn** **04 03 17.8 +0.9**
comp=E,0.9nm,0.3s,baz=254,slow=13,SNR=8.0

NIED ***03*** *04:07:00,40.°10N×142.°10E,h50km,Mw4.3 Best double couple: M0:3.38000×10^15 NP1:φs=189.00000°,δ17.00000°, λ74.00000°. NP2:φs=26.00000°,δ74.00000°,λ95.00000°.*
MOS ***03*** *04:07:04.3±0.9,39.°98N×142.°09E,h37km,mb4.8/63, Error ellipse: s-maj=7.5km s-min=4.3km az=102.6*
ISCJB ***03*** *04:07:06.7±0.3,40.°13N±0.°02×142.°12E±0.°04,h52km±2km, mb4.5/116,MS3.4/17, Error ellipse: s-maj=5.4km s-min=2.9km az=39.9*
JMA ***03*** *04:07:07.7±0.1,40.°07N×142.°12E,h48km±1km,M4.2*
JMA Felt IV J1.
BJI ***03*** *04:07:08.1,40.°20N×141.°90E,h60km,mb4.6/41,mB4.9/24, Ms4.1/6,Ms7.3/8/5*
IDC ***03*** *04:07:09.2±1.7,40.°06N×142.°02E,h64km±15km,mb4.1/32, mb1.4.2/37,mb1mx4.0/71,mbtmp4.4/37,MS3.2/20, Ms1.3.2/20,ms1mx3.0/69, Error ellipse: s-maj=13.9km s-min=11.2km az=120.0*
NEIC ***03*** *04:07:10.2±0.5,40.°16N×141.°96E,h66km±4km,mb4.6/40, Error ellipse: s-maj=6.0km s-min=4.2km az=130.0*
NEIC Felt at Misawa and Shichinohe. Recorded [4 JMA] in Aomori.

ISC 03 04:07:07.4±0.6,40.°11N±0.°03×142.°09E±0.°04,h47km±5km, n308,σ1§45/332,mb4.6/116,MS3.5/19,34C-9D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.24**	**226**	P	**Pn**	**04 07 16.3**	**+0.5**
JTH				S	**Sn**	**04 07 22.2**	**+0.5**
JANG	**Nango**	**0.51**	**301**	P	**Pn**	**04 07 19.4**	**+0.7**
JANG				S	**Sn**	**04 07 27.6**	**+0.9**
MIYJ	**Miyakonagasawa**	**0.57**	**201**	P	**Pn**	**04 07 19.3**	**-0.1**
MIYJ				S	**Sn**	**04 07 27.5**	**-0.5**
JKZ	**Kuzumaki**	**0.60**	**258**	P	**Pn**	**04 07 20.4**	**+0.6**
JKZ				S	**Sn**	**04 07 29.3**	**+0.7**
JOM	**Ohasama**	**0.88**	**224**	P	**Pn**	**04 07 23.7**	**+0.2**
JOM				S	**Sn**	**04 07 35.4**	**+0.1**
JTM	**Tenmabayashi**	**1.03**	**311**	P	**Pn**	**04 07 26.4**	**+0.9**
JTM				S	**Sn**	**04 07 40.1**	**+1.2**
JAH	**Hinai**	**1.12**	**275**	P	**Pn**	**04 07 27.7**	**+1.0**
JAH				S	**Sn**	**04 07 42.0**	**+1.1**
JRG	**Rokugo**	**1.33**	**238**	P	**Pn**	**04 07 29.8**	**+0.2**
JMK	**Ichinoseki**	**1.34**	**210**	P	**Pn**	**04 07 29.8**	**+0.1**
JMK				S	**Sn**	**04 07 46.1**	**-0.2**
ERM	**Erimo**	**2.07**	**23**	*e*Pn	**Pn**	**04 07 41.4**	**+1.8**
ERM				*e*Sn	**Sn**	**04 08 02.8**	**-1.4**
ERM	**Erimo**	**2.07**	**23**	*ce*P	**Pn**	**04 07 40.1**	**+0.5**
ERM				pmax	pmax		
comp=Z,523nm,0.8s
ASAJ Asahikawa 4.02 5 P **Pn** **04 08 08.2 +1.7**
comp=Z,16nm,0.3s,baz=226,slow=9.6,SNR=66
ASAJ S **Sn** **04 08 53.6 +1.3**
comp=Z,9.3nm,0.3s,baz=106,slow=18,SNR=5.3
ASAJ LR LR 04 09 24.8
comp=Z,46nm,19.7s,baz=160,slow=33
GLVR Golovnino 4.44 34 *c i*P **Pn** **04 08 13.1 +1.0**
GLVR *i* S **Sn** **04 09 01.9 -0.6**
GLVR pmax pmax
comp=Z,160nm,0.4s
GLVR pmax pmax
comp=N,89nm,0.3s
GLVR pmax pmax
comp=E,137nm,0.3s
GLVR smax smax
comp=N,2μm,0.3s
GLVR smax smax
comp=E,462nm,0.3s
MJB9 Matsu-Tunnel 4.69 222 *e*Pn **Pn** **04 08 18.2 +2.5**
MAJO Matsushiro 4.69 222 *e*Pn **Pn** **04 08 17.9 +2.2**
MAJO Matsushiro 4.69 222 *c i*P **Pn** **04 08 18.0 +2.3**
MAT Matsushiro 4.69 222 P **Pn** **04 08 17.7 +2.0**
MAT *e*S **Sn** **04 09 14.2 +5.4**
MJAR Matsushiro Arr 4.69 222 P **Pn** **04 08 18.1 +2.4**
comp=E,4.7nm,0.3s,baz=32,slow=12,SNR=154
MJAR LR LR 04 09 49.1
comp=E,67nm,18.9s,baz=40,slow=35
GRPR Tuman 4.75 34 *e*P **Pn** **04 08 16.3 -0.1**
GRPR *i* S **Sn** **04 09 08.1 -2.1**
GRPR pmax pmax
comp=E,94nm,0.3s
GRPR pmax pmax
comp=Z,177nm,0.3s
GRPR pmax pmax
comp=N,75nm,0.1s
GRPR smax smax
comp=E,790nm,0.2s
GRPR smax smax
comp=N,1μm,0.3s
LAGR Lagunnoye 4.81 34 ⇑ *i*P **Pn** **04 08 19.2 +2.0**
LAGR *i* S **Sn** **04 09 10.5 -1.1**
LAGR pmax pmax
comp=N,192nm,0.4s
LAGR pmax pmax
comp=E,256nm,0.4s
LAGR pmax pmax
comp=Z,274nm,0.4s
LAGR smax smax
comp=E,1μm,0.5s
LAGR smax smax
comp=N,580nm,0.3s
YUK Yuzh-Kuril'sk 4.82 34 *c i*P **Pn** **04 08 17.8 +0.4**
YUK *i* S **Sn** **04 09 10.4 -1.6**
YUK pmax pmax
comp=Z,213nm,0.2s
YUK pmax pmax
comp=N,101nm,0.1s
YUK pmax pmax
comp=E,71nm,0.1s
YUK smax smax
comp=N,967nm,0.4s
YUK smax smax
comp=E,739nm,0.3s
SHO Shikotan 5.16 42 ⇑ *i*P **Pn** **04 08 19.8 -2.2**
SHO *i* S **Sn** **04 09 14.2 -6.0**
SHO pmax pmax
comp=Z,47nm,0.3s
SHO pmax pmax
comp=N,29nm,0.4s
SHO pmax pmax
comp=E,52nm,0.4s
SHO smax smax
comp=E,435nm,0.2s
SHO smax smax
comp=N,320nm,0.4s
INU Inuyama 6.22 222 *e*Pn **Pn** **04 08 39.3 +2.6**
TEY Ternei 6.37 322 *e*P **Pn** **04 08 41.8 +3.1**
TEY pmax pmax
comp=N,59nm,0.7s
TEY pmax pmax
comp=E,49nm,0.7s
TEY pmax pmax
comp=Z,85nm,0.7s
KUR Kuril'sk 6.66 38 *e*P **Pn** **04 08 43.2 +0.6**
KUR *e*S **Sn** **04 09 54.7 -2.4**
KUR pmax pmax
comp=Z,128nm,0.5s
KUR pmax pmax
comp=N,35nm,0.3s
KUR pmax pmax
comp=E,48nm,0.3s
KUR smax smax
comp=E,128nm,0.5s
KUR smax smax
comp=N,101nm,0.4s
YSS Yuzh-Sakhalins 6.86 4 *e*P **Pn** **04 08 46.6 +1.3**
YSS *e*S **Sn** **04 10 01.3 -0.7**
YSS pmax pmax
comp=Z,20nm,0.9s
JHJ Hachijo jima 2 7.22 196 P **Pn** **04 08 49.9 -0.5**
comp=Z,11nm,0.3s,baz=94,slow=19,SNR=3.5
JHJ S **Sn** **04 10 04.0 -7.0**
comp=Z,14nm,0.3s,baz=52,slow=19,SNR=3.5
USRK Ussuriysk Ar. 8.54 302 P **Pn** **04 09 10.7 +2.3**
comp=Z,3.4nm,0.3s,baz=115,slow=14,SNR=55
USRK LR LR 04 12 15.0
comp=Z,189nm,21.6s,baz=110,slow=36
MSHR Mys Shultsa 8.59 290 *i*P **Pn** **04 09 04.4 -4.6**
MDJ Mudanjiang 10.28 300 *e*Pn **Pn** **04 09 32.5 +0.3**
KSRS Korea Array 11.37 261 P **Pn** **04 09 51.8 +4.6**
comp=Z,0.7nm,0.3s,baz=64,slow=14,SNR=23
KSRS S **Sn** **04 11 54.3 +1.6**
comp=Z,0.1nm,0.3s,baz=71,slow=24,SNR=2.1
KSRS LR LR 04 13 58.1
comp=Z,110nm,18.1s,baz=98,slow=36
JNU Nakatsue 11.39 236 P **Pn** **04 09 49.0 +1.5**
comp=Z,0.5nm,0.3s,baz=36,slow=3.4,SNR=4.9
JNU LR LR 04 14 38.6
comp=Z,76nm,18.6s,baz=119,slow=40
KS01 Wonju Array Si 11.39 261 *e*Pn **Pn** **04 09 49.9 +2.5**
KS15 Wonju Array Si 11.40 261 *e*Pn **Pn** **04 09 49.7 +2.1**
KSAR Wonju Array Be 11.40 261 P **Pn** **04 09 51.8 +4.2**
KSAR S **Sn** **04 11 54.3 +0.8**
KSAR Wonju Array Be 11.40 261 P **Pn** **04 09 51.8 +4.2**
KSAR S **Sn** **04 11 54.3 +0.8**
KLR Kul'dur 11.71 325 P **Pn** **04 09 53.5 +1.8**
comp=Z,0.0nm,0.3s,baz=134,slow=14,SNR=6.0
KLR LR LR 04 14 28.5
comp=Z,13nm,18.7s,baz=124,slow=38
TJN Taejon 12.16 257 *e*P **Pn** **04 09 56.5 -1.4**
CN2 Changchun 12.92 292 *e*P **Pn** **04 10 12.8 +4.5**
PETK Petropavlovsk- 16.80 34 LR LR 04 17 10.9
comp=Z,34nm,20.6s,baz=218,slow=36
ZEA Zeya 16.94 329 *e*P **P** **04 11 02.9 +0.7**
ZEA pmax pmax
comp=Z,22nm,0.9s
TIA Tai'an 19.99 267 P **P** **04 11 35.3 -0.6**
TIA pmax pmax
comp=Z,4.0nm,0.8s
MA2 Magadan 20.24 13 P **P** **04 11 39.2 +0.9**
comp=Z,5.8nm,0.5s,baz=203,slow=10.0,SNR=8.0
MA2 LR LR 04 19 18.1
comp=Z,42nm,21.3s,baz=165,slow=36
MA2 Magadan 20.24 13 *e*P **P** **04 11 39.0 +0.6**
comp=Z,28nm,0.6s
MA2 Magadan 20.24 13 *i*P **P** **04 11 38.2 -0.2**
MA2 pmax pmax
comp=Z,4.0nm,0.7s
NJ2 Nanjing 20.39 254 *e*P **P** **04 11 40.7 +0.5**
NJ2 pmax pmax
comp=Z,17nm,0.6s
HHC Hu-ho-hao-te 23.18 282 *e*P **P** **04 12 09.4 -0.6**
HHC sP sP 04 12 29.9 +2.6
HHC S **S** **04 16 12.8 -5.4**
HHC sS Sn 04 16 36.3 -2.1
HHC pmax pmax
comp=Z,6.0nm,1.0s
HHC pmax pmax
comp=Z,47nm,5.5s
YAK Yakutsk 23.21 345 *e*P **P** **04 12 08.5 -1.4**
YAK *e**PP **pP** **04 12 14.2 -7.2**
YAK *e* 04 12 26.2
YAK *e*S **S** **04 16 14.5 -3.5**
YAK pmax pmax
comp=Z,40nm,1.3s
YAK pmax pmax
comp=E,6.0nm,1.2s
YAK pmax pmax
comp=N,15nm,1.5s
YAK smax smax
comp=N,49nm,2.5s
YAK smax smax
comp=E,30nm,2.6s
YAK MLR MLR
comp=N,330nm,24.0s
YAK MLR MLR
comp=Z,62nm,14.0s
SEY Seymchan 23.68 12 P **P** **04 12 14.0 -0.3**
comp=Z,10nm,1.0s,baz=208,slow=7.8,SNR=13
WHN Wuhan 24.48 256 ⇑P **P** **04 12 21.4 -0.6**
ULN Ulaanbaatar 26.20 299 *e*P **P** **04 12 37.2 -0.5**
ULN Ulaanbaatar 26.20 299 *ce*P **P** **04 12 37.1 -0.6**
ULN pmax pmax
comp=Z,2.0nm,0.7s
SONA1 Songino Array 26.63 299 *e*P **P** **04 12 41.0 -0.6**
SONM Songino Array 26.64 299 P **P** **04 12 41.2 -0.4**
comp=Z,2.7nm,0.5s,baz=86,slow=8.6,SNR=20
SONM LR LR 04 23 49.8
comp=Z,94nm,18.2s,baz=94,slow=38
TLY Talaya 28.82 307 LR LR 04 25 09.7
comp=Z,30nm,19.6s,baz=108,slow=38
TLY Talaya 28.82 307 *e*P **P** **04 13 00.1 -0.9**
comp=Z,11nm,0.7s
TLY Talaya 28.82 307 ⇑ *e*P **P** **04 13 00.0 -0.9**
TLY pmax pmax
comp=Z,7.0nm,0.6s
ZAK Zakamensk 28.89 304 *e*P **P** **04 13 01.3 -0.3**
ZAK pmax pmax
comp=Z,7.0nm,1.0s
H11N2 WAKE ISLAND Hy 29.41 126 T T 04 43 53.3
baz=318,slow=75,SNR=526
H11N1 WAKE ISLAND Hy 29.42 126 T T 04 43 54.0
baz=318,slow=75,SNR=604
H11N3 WAKE ISLAND Hy 29.43 126 T T 04 43 53.9
baz=318,slow=75,SNR=561
LZH Lanzhou 30.21 275 *e*P **P** **04 13 15.4 +1.8**
LZH pP pP 04 13 27.7 +1.7
LZH sP sP 04 13 32.8 +1.2
LZH pmax pmax
comp=Z,12nm,1.4s
LZH pmax pmax
comp=Z,86nm,4.2s
H11S1 WAKE ISLAND Hy 30.22 128 T T 04 45 00.4
baz=321,slow=76,SNR=100
H11S3 WAKE ISLAND Hy 30.22 128 T T 04 45 03.4
baz=321,slow=76,SNR=78
H11S2 WAKE ISLAND Hy 30.23 128 T T 04 44 58.7
baz=321,slow=76,SNR=73
BILL Bilibino 30.93 17 ⇓ *e*P **P** **04 13 19.9 +0.5**
BILL *e* 04 14 19.4
BILL pmax pmax
comp=Z,2.0nm,1.0s
BILL MLR MLR
comp=Z,36nm,19.0s
GTA Gaotai 32.28 283 P **P** **04 13 32.7 +0.9**
GTA pP pP 04 13 41.5 -2.7
GTA S **S** **04 18 43.5 +1.4**
GTA sS sS 04 19 01.4 -1.6
GTA pmax pmax
comp=Z,3.0nm,1.1s
GTA pmax pmax
comp=Z,27nm,5.1s
GTA LR LR
comp=Z,100nm,18.2s
GTA LR LR
comp=Z,130nm,16.1s
GTA LR LR
comp=Z,120nm,17.2s
TIXI Tiksi 32.31 352 *e*P **P** **04 13 30.8 -0.6**
TIXI pmax pmax
comp=Z,1.0nm,0.7s
CD2 Chengdu 32.32 266 P **P** **04 13 31.2 -0.8**
CD2 pmax pmax
comp=Z,1.0nm,0.5s
GYA Guiyang 32.37 256 ⇑ *i*P **P** **04 13 32.8 +0.2**
GYA pP pP 04 13 45.2 +0.2
GYA PP **PnPn** **04 14 42.0 +1.5**
GYA S **S** **04 18 42.6 -1.0**
GYA pmax pmax
comp=Z,10.0nm,0.8s
KMI Kunming 36.04 258 P **P** **04 14 05.6 +1.0**
KMI pmax pmax
comp=Z,5.0nm,0.7s
KMI pmax pmax
comp=Z,130nm,4.0s
WMQ Urumqi 40.01 294 P **P** **04 14 38.3 +0.7**
WMQ pP sP 04 14 54.7 -1.1
WMQ pmax pmax
comp=Z,24nm,1.1s
WMQ pmax pmax
comp=Z,250nm,4.5s
WMQ LR LR
comp=Z,95nm,39.3s
WMQ LR LR
comp=Z,91nm,28.7s
ZAA0 Zalesovo Array 40.30 310 *e*P **P** **04 14 39.8 +0.1**
comp=Z,6.5nm,0.9s
ZALV Zalesovo Beam 40.30 310 P **P** **04 14 39.9 +0.2**
comp=Z,4.8nm,0.5s,baz=85,slow=7.8,SNR=24
ZALV PcP **PcP** **04 16 42.5 0.0**
comp=Z,2.4nm,0.4s,baz=102,slow=3.3,SNR=6.2
ZALV LR LR 04 32 12.2
comp=Z,44nm,18.8s,baz=72,slow=37
ZALV Zalesovo Beam 40.30 310 *e*P **P** **04 14 39.5 -0.3**
ZALV *e*PcP **PcP** **04 16 42.2 -0.2**
NRIK Noril'sk 40.72 334 LR LR 04 32 30.5
comp=Z,91nm,19.4s,baz=111,slow=37
CHTO Chiang Mai 42.63 253 *e*P **P** **04 14 58.6 -0.7**
comp=Z,4.3nm,0.7s
CHTO Chiang Mai 42.63 253 *e*P **P** **04 14 58.6 -0.7**
CHTO pmax pmax
comp=Z,4.0nm,0.7s
CMAR Chiang Mai Arr 42.85 253 P **P** **04 15 01.2 +0.1**
comp=Z,1.5nm,0.4s,baz=44,slow=7.9,SNR=7.1
MK01 Makanchi Array 43.00 299 *e*P **P** **04 15 01.9 -0.1**
MK31 Makanchi Array 43.00 299 *e*P **P** **04 15 01.5 -0.5**
MK31 Makanchi Array 43.00 299 *i*P **P** **04 15 01.8 -0.2**
MK31 pmax pmax
comp=Z,3.0nm,0.5s
MKAR Makanchi Array 43.00 299 P **P** **04 15 01.9 -0.1**
comp=Z,5.5nm,0.8s,baz=84,slow=9.6,SNR=48
MKAR PcP **PcP** **04 16 51.1 -0.5**
comp=Z,1.1nm,0.7s,baz=90,slow=3.3,SNR=3.7
MKAR LR LR 04 33 46.7
comp=Z,63nm,18.7s,baz=73,slow=37
MAKZ Makanchi 43.21 300 *e*P **P** **04 15 04.0 +0.3**
comp=Z,7.6nm,0.8s
MAKZ Makanchi 43.21 300 *e*P **P** **04 15 04.0 +0.3**
MAKZ pmax pmax
comp=Z,8.0nm,0.8s
IM3 Indian Mountai 43.75 32 *e*P **P** **04 15 09.7 +1.9**
KDAK Kodiak Island 44.49 44 P **P** **04 15 14.6 +0.9**
comp=Z,2.6nm,0.7s,baz=317,slow=5.9,SNR=5.7
KDAK Kodiak Island 44.49 44 *e*P **P** **04 15 13.7 0.0**
KURK Kurchatov 44.51 306 *e*P **P** **04 15 13.9 -0.1**
KURK *e*PcP **PcP** **04 16 56.0 -0.6**
KURK Kurchatov 44.51 306 *c i*P **P** **04 15 13.7 -0.3**
KURK pmax pmax
comp=Z,7.0nm,0.6s
KURBB Kurchatov Arra 44.58 306 P **P** **04 15 14.4 -0.2**
comp=Z,11nm,0.6s,baz=80,slow=8.6,SNR=65
PDGK Podgornoye 45.87 295 P **P** **04 15 26.2 +1.1**
PDGK pmax pmax
comp=Z,8.0nm,1.0s
COLA College 46.21 34 *i*P **P** **04 15 28.7 +1.4**
COLA pmax pmax
comp=Z,1.0nm,1.0s
IL1 Eielson Array 46.63 34 *e*P **P** **04 15 31.6 +1.0**
ILAR Eielson Array 46.63 34 P **P** **04 15 31.6 +0.9**
comp=Z,1.4nm,0.8s,baz=268,slow=6.1,SNR=16
JIRN Jiri 47.33 273 *e*P **P** **04 15 37.2 +0.2**
GUN Gumba 47.45 273 *e*P **P** **04 15 37.9 0.0**
comp=Z,29nm,0.5s
KKN Kakani 47.97 273 *e*P **P** **04 15 41.9 +0.2**
comp=Z,45nm,0.7s
DMN Daman 48.19 273 *e*P **P** **04 15 43.8 +0.3**
GKN Gorkha 48.35 274 *e*P **P** **04 15 44.1 -0.5**
comp=Z,15nm,0.4s
TKM2 Tokmak 2 48.69 296 P **P** **04 15 47.4 +0.3**
TKM2 pmax pmax
comp=Z,10.0nm,0.7s
DANN Dangsing 48.85 275 *e*P **P** **04 15 49.0 +0.4**
comp=Z,66nm,0.6s
BVAR Borovoye Array 48.94 310 P **P** **04 15 48.6 0.0**
comp=Z,2.6nm,0.5s,baz=68,slow=8.6,SNR=21
BVAR PcP **PcP** **04 17 12.0 -0.2**
comp=Z,1.4nm,0.6s,baz=86,slow=3.0,SNR=3.9
BVAR LR LR 04 36 55.4
comp=Z,34nm,19.4s,baz=32,slow=36
BRVK Borovoye 48.99 311 *e*P **P** **04 15 48.4 -0.6**
comp=Z,3.9nm,0.9s
BRVK Borovoye 48.99 311 *ce*P **P** **04 15 48.6 -0.4**
BRVK pmax pmax
comp=Z,3.0nm,0.8s
EGAK Eagle 49.07 34 *e*P **P** **04 15 50.2 +0.7**
comp=Z,4.7nm,1.1s
OTUK Ortayu 49.10 304 P **P** **04 15 51.6 +1.6**
OTUK pmax pmax
comp=Z,5.0nm,1.2s
KOLN Koldanda 49.26 274 *e*P **P** **04 15 51.8 +0.1**
comp=Z,9.5nm,0.4s
PMG Port Moresby 49.49 173 *e*P **P** **04 15 55.9 +2.8**
comp=Z,3.9nm,0.6s
PMG Port Moresby 49.49 173 *e*P **P** **04 15 55.9 +2.8**
PMG pmax pmax
comp=Z,4.0nm,0.6s
AAK Ala-Archa 49.55 296 *e*P **P** **04 15 52.8 -0.8**
comp=Z,2.0nm,0.3s

AAK **Ala-Archa** 49.55 296 *i* P P 04 15 53.0 -0.6
AAK pmax pmax
comp=Z,3.0nm,0.9s
PYUN **Piuthan** 49.56 275 *e*P P 04 15 54.0 0.0
comp=Z,18nm,0.7s
KSH **Kashi** 49.69 292 P P 04 15 58.1 +3.4
KSH pP sP 04 16 11.1 -2.1
KSH sP pP 04 16 15.3 +7.6
KSH pmax pmax
comp=Z,220nm,4.8s
MNAS **Manas** 50.97 297 P P 04 16 04.8 +0.4
MNAS pmax pmax
comp=Z,11nm,0.9s
SFK **Sufi-Kurgan** 51.24 294 P P 04 16 07.0 +0.4
SFK pmax pmax
comp=Z,8.0nm,0.7s
INK **Inuvik** 51.42 28 P P 04 16 07.8 +0.6
comp=Z,2.0nm,0.6s,baz=260,slow=11,SNR=4.8
HNR **Honiara** 51.99 157 LR LR 04 39 27.7
comp=Z,59nm,18.1s,baz=320,slow=37
SVE **Sverdlovsk** 53.22 317⇑*i*P P 04 16 21.7 +1.0
SVE pmax pmax
comp=Z,16nm,0.8s
NIL **Nilore** 54.20 286 *e*P P 04 16 29.0 +0.7
NIL **Nilore** 54.20 286 *e*P P 04 16 29.0 +0.7
ARU **Arti** 54.44 317 *e*P P 04 16 29.8 +0.2
ARU **Arti** 54.44 317*c i*P P 04 16 29.6 +0.1
ARU 04 18 27.8
ARU S S 04 24 06.3 +1.8
ARU SS SS 04 27 43.6 -3.1
ARU pmax pmax
comp=Z,20nm,1.7s
AB31 **Akbulak array** 56.40 309 P P 04 16 43.4 -0.3
AB31 pmax pmax
comp=Z,3.0nm,0.6s
ABKAR **Akbulak array** 56.40 309 *e*P P 04 16 43.7 0.0
KBL **Kabul** 56.85 289 *e*P P 04 16 47.7 +0.2
comp=Z,12nm,0.8s
KBL **Kabul** 56.85 289 *e*P P 04 16 47.7 +0.2
KBL pmax pmax
comp=Z,12nm,0.8s
AKTO **Aktyubinsk** 57.04 311 P P 04 16 47.9 -0.5
comp=Z,2.7nm,0.7s,baz=77,slow=14,SNR=9.2
SPITS **Spitsbergen Ar** 57.62 349 P P 04 16 52.2 +0.2
comp=Z,6.8nm,0.9s,baz=64,slow=9.8,SNR=8.1
PRGR **Permogore** 58.49 326 *e*P P 04 16 57.5 -0.8
PRGR pmax pmax
comp=Z,10.0nm,0.9s
RES **Resolute Bay** 59.50 15 P P 04 17 05.2 +0.2
comp=Z,2.4nm,0.7s,baz=307,slow=6.6,SNR=8.1
RES **Resolute Bay** 59.50 15 *e*P P 04 17 05.7 +0.6
comp=Z,3.7nm,0.8s
RES **Resolute Bay** 59.50 15 *e*P P 04 17 05.7 +0.6
RES pmax pmax
comp=Z,4.0nm,0.8s
WRA **Warramunga Arr** 60.18 188 P P 04 17 09.2 -1.2
comp=Z,2.0nm,0.7s,baz=5.5,slow=7.0,SNR=9.9
YKA **Yellowknife Ar** 60.90 31 P P 04 17 15.6 +0.8
comp=Z,0.9nm,0.8s,baz=303,slow=6.5,SNR=11
ARCES **ARCESS Array B** 61.31 339 P P 04 17 17.7 +0.1
comp=Z,1.2nm,0.5s,baz=57,slow=8.3,SNR=16
KLMR **Klimovskoe** 61.45 327 *e*P P 04 17 16.8 -1.8
KLMR pmax pmax
comp=Z,19nm,1.3s
KLMR **Klimovskoe** 61.45 327 *e*P P 04 17 16.9 -1.7
KLMR AMP 04 17 19.6
comp=Z,19nm,1.3s
DAG **Danmarks Havn** 62.76 355 *i* P P 04 17 27.1 0.0
comp=Z,3.5nm,0.9s
ASAR **Alice Springs** 63.90 188 P P 04 17 34.7 -0.6
comp=Z,1.4nm,0.7s,baz=11,slow=6.6,SNR=8.8
OBN **Obninsk** 65.96 323⇑*e*P P 04 17 47.9 -0.5
OBN *e* 04 20 15.1
OBN *e*S S 04 26 25.2 -6.9
OBN pmax pmax
comp=Z,34nm,2.5s
OBN MLR MLR
comp=Z,40nm,19.0s
FINES **FINESS Array B** 66.35 332 P P 04 17 50.5 -0.2
comp=Z,9.6nm,0.7s,baz=30,slow=9.7,SNR=30
FINES LR LR 04 48 23.4
comp=Z,35nm,19.1s,baz=10,slow=37
FINES **FINESS Array B** 66.35 332 *i* P P 04 17 50.7 0.0
FINES pmax pmax
comp=Z,10.0nm,0.7s
VSR **Storozhevoye** 66.98 318 *e*P P 04 17 54.8 -0.2
VSR pmax pmax
comp=Z,10.0nm,0.7s
G06A **Carlson Farm,** 67.33 49 *e*P P 04 18 00.3 +2.9
comp=Z,13nm,0.9s
SUMG **Summit** 67.61 0 *i* P P 04 17 59.3 +0.2
comp=Z,5.2nm,0.7s
SUMG **Summit** 67.61 0 *e*P P 04 17 59.7 +0.6
comp=Z,5.5nm,0.7s
SUMG **Summit** 67.61 0 *e*P P 04 17 59.7 +0.6
SUMG pmax pmax
comp=Z,6.0nm,0.7s
ZEI **Tsey** 69.27 309 *e*P P 04 18 08.3 -1.5
ZEI pmax pmax
comp=Z,5.0nm,0.5s
KIV **Kislovodsk** 69.31 310 *e*P P 04 18 10.8 +1.0
KIV **Kislovodsk** 69.31 310 *e*P P 04 18 10.5 +0.7
KIV pmax pmax
comp=Z,32nm,1.1s
KIV MLR MLR
comp=Z,26nm,17.0s
KBZ **Khabaz** 69.32 310 P P 04 18 10.3 +0.6
comp=Z,6.2nm,0.5s,baz=50,slow=4.8,SNR=17
NEY **Neytrino** 69.70 310 *i* P P 04 18 12.9 +0.5
NEY pmax pmax
comp=Z,1.0nm,0.8s
WVOR **Wild Horse Val** 70.13 51 *e*P P 04 18 18.6 +3.6
comp=Z,6.3nm,0.9s
WVOR **Wild Horse Val** 70.13 51 *e*P P 04 18 18.6 +3.6
WVOR pmax pmax
comp=Z,6.0nm,0.9s
GNI **Garni** 70.31 306 P P 04 18 16.2 +0.1
comp=Z,4.8nm,0.5s,baz=78,slow=9.3,SNR=2.7
GNI LR LR 04 52 26.7
comp=Z,30nm,18.5s,baz=78,slow=39
GNI **Garni** 70.31 306 *e*P P 04 18 15.9 -0.3
GNI **Garni** 70.31 306*ce*P P 04 18 15.4 -0.7
GNI pmax pmax
comp=Z,22nm,1.2s
FFC **Flin Flon** 70.84 34 *e*P P 04 18 19.3 +0.4
comp=Z,1.2nm,0.6s
FFC **Flin Flon** 70.84 34 *e*P P 04 18 19.3 +0.4
FFC pmax pmax
comp=Z,1.0nm,0.6s
HFS **Hagfors** 71.51 336 P P 04 18 22.6 -0.2
comp=Z,3.6nm,0.4s,baz=45,slow=6.3,SNR=24
HFS LR LR 04 54 41.8
comp=Z,32nm,18.4s,baz=38,slow=40
NB2 **NORSAR Subarra** 71.56 337 P P 04 18 22.9 -0.3
comp=Z,4.0nm,0.7s,baz=38,slow=6.2
NB2 **NORSAR Subarra** 71.56 337 P P 04 18 22.6 -0.6
NB2 pmax pmax
comp=Z,5.0nm,0.7s
NOA **NORSAR Array B** 71.56 337 P P 04 18 23.1 -0.1
comp=Z,5.8nm,0.8s,baz=37,slow=6.0,SNR=11
NOA LR LR 04 53 18.3
comp=Z,10nm,21.1s,baz=355,slow=39
EGMT **Eagleton** 71.63 42 *e*P P 04 18 25.0 +1.2
AKASG **Malin Array Be** 72.20 322 P P 04 18 27.0 -0.1
comp=Z,5.2nm,0.5s,baz=45,slow=6.2,SNR=43
AKASG **Malin Array Be** 72.20 322 P P 04 18 27.0 -0.1
AKASG pmax pmax
comp=Z,5.0nm,0.5s
AKBB **Malin Array Si** 72.20 322 *e*P P 04 18 27.0 -0.1
comp=Z,9.9nm,0.7s
AKBB **Malin Array Si** 72.20 322 *e*P P 04 18 27.0 -0.1
AKBB pmax pmax
comp=Z,10.0nm,0.7s
AK11 **Malin Array Si** 72.24 322 *e*P P 04 18 27.0 -0.3
SORM **Soroca** 74.36 320⇑*i*P P 04 18 39.9 0.0
SORM **Soroca** 74.36 320⇑P P 04 18 39.9 0.0
PDAR **Pinedale Array** 75.15 46 P P 04 18 46.6 +1.8
comp=Z,0.2nm,0.4s,baz=292,slow=2.8,SNR=2.7
BEL **Belsk** 75.17 327 *e*P P 04 18 45.3 +0.8
BEL **Belsk** 75.17 327 *e*P P 04 18 45.3 +0.8
KWP **Kalwaria Pacla** 75.94 324 *e*P P 04 18 49.8 +0.8
KWP **Kalwaria Pacla** 75.94 324 *e*P P 04 18 49.8 +0.8
BUR08 **Bucovina Ar. S** 76.22 322 *e*P P 04 18 51.6 +0.8
BUR04 **Bucovina Ar. S** 76.23 322 *e*P P 04 18 51.1 +0.3
BURAR **Bucovina Array** 76.23 322⇑*i*P P 04 18 51.0 +0.2
BURAR **Bucovina Array** 76.23 322 P P 04 18 51.9 +1.1

TESR **Tescani** 76.32 320⇓*i*P P 04 18 51.1 -0.1
CFR **Carcaliu** 76.50 318⇑*i*P P 04 18 52.4 +0.2
CFR **Carcaliu** 76.50 318⇑P P 04 18 52.4 +0.2
VRI **Vrincioaia** 76.73 320⇓*i*P P 04 18 54.4 +0.8
VRI **Vrincioaia** 76.73 320⇓P P 04 18 54.4 +0.8
OJC **Ojcow** 76.78 326 *e*P P 04 18 54.4 +0.7
OJC **Ojcow** 76.78 326 *e*P P 04 18 54.5 +0.7
comp=Z,14nm,0.9s
OJC **Ojcow** 76.78 326 *e*P P 04 18 54.5 +0.7
OJC pmax pmax
comp=Z,14nm,0.9s
TIRR **Tirgusor** 76.86 318⇑*i*P P 04 18 54.8 +0.6
TIRR **Tirgusor** 76.86 318⇑P P 04 18 54.8 +0.6
TLB **Topalu** 76.96 318⇑*i*P P 04 18 55.8 +1.0
TLB **Topalu** 76.96 318⇑P P 04 18 55.8 +1.0
CRVS **Cervenica-Dubn** 77.03 324 *e*P P 04 18 55.8 +0.6
CRVS pmax pmax
comp=Z,4.0nm,0.9s
CRVS **Cervenica-Dubn** 77.03 324 *e*P P 04 18 55.8 +0.6
TRPA **Tarpa** 77.11 323⇑*i*P P 04 18 56.0 +0.4
NIE **Niedzica** 77.17 325 *e*P P 04 18 57.0 +1.0
NIE **Niedzica** 77.17 325 *e*P P 04 18 57.0 +1.0
BR131 **Keskin Array S** 77.22 311 *e*P P 04 18 57.1 +0.5
BRTR **Keskin Array B** 77.22 311 P P 04 18 56.8 +0.2
comp=Z,2.1nm,0.6s,baz=81,slow=3.5,SNR=15
DOPR **Dopca** 77.32 320⇓*i*P P 04 18 57.7 +0.8
MLR **Muntele Rosu** 77.39 320 P P 04 18 57.9 +0.5
comp=Z,0.5nm,0.4s,baz=351,slow=13,SNR=12
MLR **Muntele Rosu** 77.39 320⇑*i*P P 04 18 58.4 +1.0
MLR **Muntele Rosu** 77.39 320 *e*P P 04 18 58.1 +0.7
comp=Z,8.2nm,1.3s
MLR **Muntele Rosu** 77.39 320 ⇑P P 04 18 58.4 +1.0
ANTO **Ankara** 77.60 312⇑*i*P P 04 18 59.2 +0.6
ANTO **Ankara** 77.60 312 ⇑P P 04 18 59.2 +0.6
KSP **Ksiaz** 77.77 328 *e*P P 04 19 00.1 +0.8
KSP **Ksiaz** 77.77 328 *e*P P 04 19 00.1 +0.8
VOIR 77.86 320⇑*i*P P 04 19 00.6 +0.6
VOIR 77.86 320 ⇑P P 04 19 00.6 +0.6
MORC **Moravsky Berou** 78.07 327⇑*i*P P 04 19 01.8 +0.7
MORC **Moravsky Berou** 78.07 327 P P 04 19 02.7 +1.7
MORC **Moravsky Berou** 78.07 327 *e*P P 04 19 01.7 +0.7
ARR **Arges** 78.12 320⇑*i*P P 04 19 02.5 +1.1
DPC **Dobruska-Polom** 78.14 328 *e*P P 04 19 02.6 +1.2
DPC **Dobruska-Polom** 78.14 328 *e*P P 04 19 02.6 +1.2
UPC **Upice** 78.14 328 *e*P P 04 19 02.3 +0.9
UPC **Upice** 78.14 328 *e*P P 04 19 02.3 +0.9
KRLC **Kraliky** 78.16 328 *e*P P 04 19 02.5 +1.0
KRLC **Kraliky** 78.16 328 *e*P P 04 19 02.5 +1.0
PSZ **Piszkesteto** 78.47 324 *e*P P 04 19 04.3 +1.0
comp=Z,5.8nm,0.9s
PSZ **Piszkesteto** 78.47 324 *e*P P 04 19 04.3 +1.0
PSZ pmax pmax
comp=Z,6.0nm,0.9s
VYHS **Vyhne** 78.50 325 *e*P P 04 19 04.2 +0.8
VYHS pmax pmax
comp=Z,2.0nm,1.0s
VYHS **Vyhne** 78.50 325 *e*P P 04 19 04.1 +0.7
BRG **Berggiesshubel** 78.68 329 *e*P P 04 19 04.6 +0.3
comp=Z,3.5nm,0.8s
BRG **Berggiesshubel** 78.68 329 *e*P P 04 19 04.6 +0.3
BRG pmax pmax
comp=Z,4.0nm,0.8s
CLL **Collm** 78.69 330 *i* P P 04 19 04.1 -0.3
comp=Z,9.0nm,1.0s
CLL **Collm** 78.69 330 *e*P P 04 19 04.5 +0.1
comp=Z,8.4nm,0.9s
CLL **Collm** 78.69 330 *e*P P 04 19 04.5 +0.1
CLL pmax pmax
comp=Z,8.0nm,0.9s
PVCC **Panska Ves** 78.70 329 *e*P P 04 19 04.8 +0.4
PVCC **Panska Ves** 78.70 329 *e*P P 04 19 04.8 +0.4
JAVC **Velka Javorina** 78.72 326 *e*P P 04 19 06.2 +1.5
GOPC **GO Pecny, Ondr** 79.10 328 *e*P P 04 19 07.7 +1.1
GOPC **GO Pecny, Ondr** 79.10 328 *e*P P 04 19 07.7 +1.1
KRUC **Moravsky** 79.10 327 *e*P P 04 19 07.3 +0.6
PRU **Pruhonice** 79.14 329 *e*P P 04 19 06.7 -0.1
PRU **Pruhonice** 79.14 329 *e*P P 04 19 06.7 -0.1
MDVR **Moldovita** 79.96 321⇓*i*P P 04 19 11.5 0.0
RAYN **Ar Rayn** 79.98 292 *e*P P 04 19 11.2 -0.7
comp=Z,2.2nm,0.3s
SOP **Sopron** 80.10 326 P P 04 19 13.9 +1.8
SOP pmax pmax
comp=Z,9.0nm,1.0s
KHC **Kasperske Hory** 80.20 329 *e*P P 04 19 13.5 +0.8
KHC **Kasperske Hory** 80.20 329 *e*P P 04 19 13.0 +0.3
comp=Z,3.1nm,0.7s
KHC **Kasperske Hory** 80.20 329 *e*P P 04 19 13.5 +0.8
CONA **Conrad Observa** 80.21 327 *i* P P 04 19 14.0 +1.2
comp=Z,4.5nm,0.8s
GEC2 **GERESS Array S** 80.38 328 *e*P P 04 19 14.3 +0.6
comp=Z,3.1nm,0.6s
GEC2 **GERESS Array S** 80.38 328 *e*P P 04 19 14.3 +0.6
GEC2 pmax pmax
comp=Z,3.0nm,0.6s
GERES **GERESS Array B** 80.38 328 P P 04 19 13.9 +0.3
comp=Z,2.2nm,0.6s,baz=39,slow=5.6,SNR=28
GERES LR LR 05 00 35.7
comp=Z,24nm,18.6s,baz=335,slow=40
GERES **GERESS Array B** 80.38 328 P P 04 19 14.0 +0.3
GERES pmax pmax
comp=Z,2.0nm,0.6s
GEA0 **GERESS Array S** 80.39 328 *e*P P 04 19 13.9 +0.2
EKA **Eskdalemuir Ar** 80.41 341 P P 04 19 13.8 +0.2
comp=Z,2.2nm,0.7s,baz=18,slow=4.8,SNR=7.5
WET **Wettzell** 80.47 329 P P 04 19 15.6 +1.5
WET pmax pmax
comp=Z,6.0nm,0.4s
CSS **Mathiatis** 80.59 308 *e*P P 04 19 15.2 +0.3
comp=Z,1.6nm,0.6s
ALN **Alexandroupoli** 80.60 316 *e*P P 04 19 15.5 +0.6
comp=Z,2.2nm,1.0s
ALN **Alexandroupoli** 80.60 316 *e*P P 04 19 15.5 +0.6
ALN pmax pmax
comp=Z,2.0nm,1.0s
GRF **Grafenberg Arr** 80.67 330 P P 04 19 16.6 +1.4
GRF pmax pmax
comp=Z,16nm,0.8s
GRFO **Grafenberg** 80.67 330 *e*P P 04 19 15.9 +0.7
comp=Z,9.7nm,0.8s
GRFO **Grafenberg** 80.67 330 *e*P P 04 19 15.9 +0.7
GRFO pmax pmax
comp=Z,10.0nm,0.8s
VTS **Vitosha** 80.84 319⇓*i*P P 04 19 16.5 +0.1
VTS **Vitosha** 80.84 319 *e*P P 04 19 16.2 -0.2
comp=Z,8.9nm,0.9s
VTS **Vitosha** 80.84 319 ⇓P P 04 19 16.5 +0.1
ARSA **Arzberg** 80.88 326 *i* P P 04 19 17.3 +0.9
comp=Z,3.8nm,0.8s
MOA **Moln** 80.94 327 *e*P P 04 19 16.8 +0.2
comp=Z,2.5nm,1.0s
DIVS **Divibare** 81.29 322 *e*P P 04 19 18.8 +0.1
comp=Z,2.9nm,0.9s
GROS **Grobnik** 81.51 326 *i* P P 04 19 19.8 +0.1
SOKA **Soboth** 81.54 326 *e*P P 04 19 20.4 +0.5
comp=Z,6.9nm,0.6s,SNR=5.6
SRS **Serrai** 81.73 318 P P 04 19 22.8 +1.9
OBKA **Obir** 81.88 326 *e*P P 04 19 22.1 +0.4
comp=Z,4.9nm,0.7s
KBA **Koelnbreinsper** 81.93 327 *e*P P 04 19 22.6 +0.5
comp=Z,8.0nm,1.0s,SNR=6.6
KBA **Koelnbreinsper** 81.93 327 P P 04 19 23.4 +1.3
LEGS **Legarje** 81.99 326 *i* P P 04 19 22.0 -0.2
MYKA **Terra Mystica** 82.16 327 *e*P P 04 19 23.1 -0.1
comp=Z,3.7nm,0.5s
STU **Stuttgart** 82.19 331 *e*P P 04 19 23.9 +0.7
comp=Z,10nm,0.8s
STU **Stuttgart** 82.19 331 *e*P P 04 19 23.9 +0.7
STU pmax pmax
comp=Z,10.0nm,0.8s
WATA **Walderalm** 82.44 329 *e*P P 04 19 25.4 +0.7
comp=Z,2.9nm,0.5s
GRG **Griva** 82.45 318 P P 04 19 27.5 +2.8
WTTA **Wattenberg** 82.47 328 *e*P P 04 19 25.8 +0.9
comp=Z,3.6nm,0.6s
ABTA **Abfaltersbach** 82.54 328 *e*P P 04 19 25.3 +0.2
comp=Z,5.4nm,1.2s
JAVS **Javornik** 82.57 326 *i* P P 04 19 24.7 -0.7
RETA **Reutte** 82.64 329 *e*P P 04 19 26.3 +0.6
comp=Z,6.6nm,0.7s
BFO **Black Forest** 82.88 331 *e*P P 04 19 27.4 +0.6
comp=Z,29nm,2.0s
BFO **Black Forest** 82.88 331 *e*P P 04 19 27.4 +0.6
BFO pmax pmax
comp=Z,29nm,2.0s

PDG **Podgorica** 82.91 321⇓*i*P P 04 19 27.4 +0.4
TTG **Podgorica** 82.91 321 *e*P P 04 19 27.4 +0.4
comp=Z,14nm,0.9s
TTG **Podgorica** 82.91 321 *e*P P 04 19 27.4 +0.4
TTG pmax pmax
comp=Z,14nm,0.9s
FETA **Feichten** 83.03 329 *e*P P 04 19 26.6 -1.2
comp=Z,3.2nm,0.6s
LIT **Litokhoron** 83.04 318 *e*P P 04 19 27.4 -0.4
comp=Z,7.2nm,1.0s
LIT **Litokhoron** 83.04 318 *e*P P 04 19 27.4 -0.4
LIT pmax pmax
comp=Z,7.0nm,1.0s
FNA **Florina** 83.10 319 *e*P P 04 19 28.3 +0.2
comp=Z,7.4nm,1.3s
FNA **Florina** 83.10 319 *e*P P 04 19 28.3 +0.2
FNA pmax pmax
comp=Z,7.0nm,1.3s
DAVA **Damuels** 83.15 329 *e*P P 04 19 28.9 +0.5
comp=Z,5.4nm,0.8s
ECH **Echery** 83.41 332 *e*P P 04 19 29.8 +0.3
comp=Z,4.9nm,0.8s
ECH **Echery** 83.41 332 *e*P P 04 19 29.8 +0.3
ECH pmax pmax
comp=Z,5.0nm,0.8s
FUORN **Ofenpass-Fuorn** 83.55 329 *e*P P 04 19 31.5 +0.9
comp=Z,14nm,0.9s
KARP **Karpathos** 83.81 312 *e*P P 04 19 32.0 +0.1
comp=Z,4.4nm,1.1s
AGG **Agios Georgios** 83.92 317 *e*P P 04 19 31.5 -0.9
comp=Z,10nm,0.8s
AGG **Agios Georgios** 83.92 317 *e*P P 04 19 31.5 -0.9
AGG pmax pmax
comp=Z,11nm,0.8s
IGT **Igoumenitsa** 84.57 319 P P 04 19 35.1 -0.5
SENIN **Lac Senin/Sane** 84.91 330 *e*P P 04 19 37.8 +0.3
comp=Z,5.2nm,0.8s
IDI **Anoyia** 85.28 313 P P 04 19 38.3 -1.0
comp=Z,3.0nm,0.4s,baz=36,slow=6.8,SNR=18
IDI **Anoyia** 85.28 313 *e*P P 04 19 38.0 -1.3
comp=Z,6.6nm,1.0s
ITM **Ithomi** 85.50 316 *e*P P 04 19 39.8 -0.5
comp=Z,8.8nm,0.8s
TXAR **Lajitas Array** 87.83 53 P P 04 19 52.4 +0.5
comp=Z,0.3nm,0.6s,baz=263,slow=7.2,SNR=3.2
ES19 **SONSECA Array** 94.71 334 *e*P P 04 20 23.8 +0.1
ESDC **Sonseca Array** 94.76 334 P P 04 20 23.8 -0.1
comp=Z,0.9nm,0.7s,baz=20,slow=4.5,SNR=7.7
TORD **Torodi Ar. Bea** 115.50 317 PKP PKPdf 04 25 43.4 -1.2
comp=Z,0.2nm,0.5s,baz=352,slow=0.6,SNR=5.8
SNAA **Sanae** 143.84 198 PKP PKPab 04 26 33.1 -0.2
comp=Z,1.4nm,0.5s,baz=182,slow=5.8,SNR=7.6
LPAZ **La Paz** 144.62 57 PKP PKPbc 04 26 38.8 +0.1
comp=Z,0.5nm,0.4s,baz=315,slow=2.9,SNR=5.8

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*ISCJB **03** 04:13:02.4±1.0, 22°.2N±0°.1×143°.6E±0°.2, h150km, mb3.5/10, Error ellipse: s-maj=29.8km s-min=14.5km az=163.5*
*IDC **03** 04:13:02.8±5.3, 22°.13N×143°.65E, h144km±39km, mb3.4/10, mb1 3.5/11, mb1mx3.2/65, mbtmp3.8/11, Error ellipse: s-maj=50.7km s-min=23.2km az=19.0*

ISC 03 04:13:03.7±1.0, 22°.2N±0°.2×143°.7E±0°.2, h150km, n15, σ0°82/16, mb3.6/10, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	5.03	345	P	**Pn**	04 14 17.1	-0.4
	4.4nm,0.3s,baz=107,slow=19,SNR=5.0						
JCJ				S	**Sn**	04 15 14.1	-1.0
	7.1nm,0.3s,baz=287,slow=19,SNR=4.5						
KSRS	**Korea Array**	20.38	322	P	Pn	04 17 32.6	+0.3
	1.6nm,0.6s,baz=147,slow=8.8,SNR=11						
KLR	**Kul'dur**	28.55	344	P	**P**	04 18 46.9	+1.6
	0.1nm,0.5s,baz=168,slow=9.3,SNR=4.9						
SONM	**Songino Array**	39.23	320	P	**P**	04 20 17.6	+0.2
	0.3nm,0.4s,baz=128,slow=9.3,SNR=2.3						
ZALV	**Zalesovo Beam**	54.08	321	P	**P**	04 22 12.5	-0.2
	0.5nm,0.3s,baz=116,slow=9.8,SNR=2.7						
MKAR	**Makanchi Array**	54.68	312	P	**P**	04 22 17.4	+0.1
	0.3nm,0.6s,baz=91,slow=7.9,SNR=4.7						
KURBB	**Kurchatov Arra**	57.45	317	P	**P**	04 22 37.2	+0.4
	1.5nm,0.7s,baz=94,slow=7.5,SNR=17						
KURBB				pP	**pP**	04 23 12.5	+0.7
	0.5nm,0.5s,baz=94,slow=7.6,SNR=3.0						
BVAR	**Borovoye Array**	62.57	319	P	**P**	04 23 12.1	+0.5
	0.9nm,0.4s,baz=96,slow=6.1,SNR=9.8						
YKA	**Yellowknife Ar**	75.76	28	P	**P**	04 24 33.3	+0.6
	0.2nm,0.4s,baz=293,slow=5.8,SNR=6.8						
NVAR	**Mina Array Bea**	82.44	52	P	**P**	04 25 10.1	+0.3
	0.3nm,0.5s,baz=268,slow=5.9,SNR=3.4						
FINES	**FINESS Array B**	82.90	335	P	**P**	04 25 10.6	-0.7
	1.1nm,0.4s,baz=71,slow=5.6,SNR=20						
HFS	**Hagfors**	88.41	337	P	**P**	04 25 37.2	-1.4
	5.4nm,1.1s,baz=83,slow=12,SNR=3.5						
TORD	**Torodi Ar. Bea**	128.76	310	PKP	**PKPdf**	04 31 53.7	-0.5
	0.2nm,0.6s,baz=5.2,slow=2.9,SNR=3.2						
PLCA	**Paso Flores**	145.75	131	PKPbc	**PKPbc**	04 32 24.6	-0.8
	1.9nm,0.7s,baz=307,slow=5.1,SNR=3.5						
LPAZ	**La Paz**	149.43	84	PKPbc	**PKPbc**	04 32 36.2	-0.4
	0.3nm,0.5s,baz=333,slow=4.5,SNR=4.1						

IDC 03 04:17:11.3±1.4, 19°.85S×133°.92E, h0km, mb3.5/1, mb1 3.4/3, mb1mx3.1/41, mbtmp3.3/3, ML2.9/2, MS3.2/1, Ms1 3.2/1, ms1mx2.5/31, Error ellipse: s-maj=9.6km s-min=4.0km az=102.0, Northern Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	0.40	103	Pg	Pg	04 17 19.1	+0.1
	6.9nm,0.3s,baz=285,slow=19,SNR=34						
WRA				Lg	Lg	04 17 24.3	
	30nm,0.3s,baz=282,slow=30,SNR=102						
ASAR	**Alice Springs**	3.79	180	Pn	Pn	04 18 12.3	+1.2
	1.3nm,0.3s,baz=8.2,slow=8.1,SNR=20						
ASAR				Sn	Sn	04 18 50.2	-6.2
	1.0nm,0.3s,baz=358,slow=28,SNR=4.8						
ASAR				Lg	Lg	04 19 08.6	
	4.9nm,0.3s,baz=1.2,slow=29,SNR=12						
FITZ	**Fitzroy Crossi**	8.03	281	Pn	Pn	04 19 07.2	-2.0
	0.1nm,0.3s,baz=104,slow=11,SNR=2.5						
FITZ				Sn	Sn	04 20 31.6	-9.2
	0.5nm,0.3s,baz=9.5,slow=18,SNR=5.3						
FITZ				Lg	Lg	04 21 22.5	
	0.5nm,0.3s,baz=198,slow=20,SNR=3.1						
PMG	**Port Moresby**	16.48	53	LR	LR	04 28 06.2	
	comp=Z,75nm,19.0s,baz=172,slow=40						
MKAR	**Makanchi Array**	81.02	327	P	P	04 29 28.1	+0.2
	0.2nm,0.5s,baz=124,slow=7.2,SNR=2.8						

IDC 03 04:26:50.4±1.5, 3°.66N×124°.48E, h0km, mb3.3/5, mb1 3.5/5, mb1mx3.2/57, mbtmp3.3/5, MS3.3/1, Ms1 3.3/1, ms1mx2.4/27, Error ellipse: s-maj=131.4km s-min=19.3km az=67.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	**Lembang**	19.79	238	LR	LR	04 39 39.6	
	comp=Z,77nm,19.2s,baz=136,slow=39						
FITZ	**Fitzroy Crossi**	21.65	177	P	P	04 31 43.0	+0.5
	3.6nm,1.1s,baz=9.5,slow=12,SNR=2.1						
WRA	**Warramunga Arr**	25.37	158	P	P	04 32 19.6	+0.1
	0.4nm,0.7s,baz=335,slow=10,SNR=4.1						
ASAR	**Alice Springs**	28.67	162	P	P	04 32 48.6	-0.5
	0.1nm,0.4s,baz=340,slow=7.1,SNR=2.6						
MKAR	**Makanchi Array**	56.35	326	P	P	04 36 32.9	-0.4
	0.1nm,0.6s,baz=122,slow=8.3,SNR=2.7						
KURBB	**Kurchatov Arra**	60.61	328	P	P	04 37 03.3	+0.4
	0.3nm,0.7s,baz=121,slow=7.1,SNR=2.8						

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*MDD **03** 04:58:45.8±1.8, 37°.29N×12°.65W, h0km, mb3.8/11, Error ellipse: s-maj=15.9km s-min=15.1km az=83.0, PRXIMO*
*SFS **03** 04:58:46.0, 37°.32N×12°.50W, h0km, ML3.5*
*INMG **03** 04:58:46.8±1.3, 37°.11N×13°.08W, h10km, ML2.1, Error ellipse: s-maj=8.5km s-min=6.0km az=96.0*
*IGIL **03** 04:58:46.8, 37°.33N×12°.60W, h2km, ML1.5*
*CSEM **03** 04:58:48.4±0.4, 37°.38N×12°.44W, h10km, mb3.8, Error ellipse: s-maj=7.2km s-min=6.2km az=76.0*

ISC 03 04:58:47.9±2.6, 37°.42N±0°.07×12°.3W±0°.1, h10km, n87, σ2°76/155, Azores-Cape St. Vincent Ridge

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

PMST	**Lisbon--Monsan**	**2.78**	**61**	*e*Pn	**Pn**	**04 59 30.3**	**-2.1**
PMST				*e*Sn	**Sb**	**05 00 10.7**	**-1.1**
PMST				A	A	05 00 16.7	
	14nm,0.6s						
PMST	**Lisbon--Monsan**	**2.78**	**61**	*e*Pn	**Pn**	**04 59 30.3**	**-2.1**
PMAFR	**Mafra**	**2.82**	**56**	*e*Pn	**Pn**	**04 59 35.2**	**+2.2**
PMAFR				*e*Sn	**Sb**	**05 00 12.5**	**-0.4**
PMAFR				A	A	05 00 13.6	
	6.4nm,0.2s						
PMAFR	**Mafra**	**2.82**	**56**	P	**Pn**	**04 59 35.0**	**+2.0**
	4.8nm,0.2s,SNR=7.9						
PMAFR				S	**Sb**	**05 00 11.9**	**-1.0**
	6.1nm,0.2s,SNR=6.7						
PMAFR	**Mafra**	**2.82**	**56**	*e*Pn	**Pn**	**04 59 35.2**	**+2.2**
PMAFR				S	**Sb**	**05 00 11.9**	**-1.0**
	6.1nm,0.2s,SNR=6.7						
PTEO	**Sao Teotonio**	**2.84**	**86**	*e*Pn	**Pn**	**04 59 35.0**	**+1.8**
PTEO				*e*Sn	**Sb**	**05 00 12.4**	**-0.9**
PTEO				A	A	05 00 15.9	
	1.6nm,0.2s						
PTEO	**Sao Teotonio**	**2.84**	**86**	P	**Pn**	**04 59 35.0**	**+1.8**
PTEO				S	**Sb**	**05 00 12.4**	**-0.9**
	0.8nm,0.2s						
PTEO	**Sao Teotonio**	**2.84**	**86**	P	**Pn**	**04 59 35.0**	**+1.8**
PTEO				S	**Sb**	**05 00 12.4**	**-0.9**
	0.8nm,0.2s						
MORF	**Marmelete**	**2.90**	**91**	*e*P	**Pn**	**04 59 35.3**	**+1.2**
MORF	**Marmelete**	**2.90**	**91**	*e*Pn	**Pb**	**04 59 37.4**	**-2.3**
MORF	**Marmelete**	**2.90**	**91**	P	**Pn**	**04 59 35.3**	**+1.2**
MORF	**Marmelete**	**2.90**	**91**	P	**Pn**	**04 59 35.3**	**+1.2**
MORF	**Marmelete**	**2.90**	**91**	*e*Pn	**Pb**	**04 59 37.4**	**-2.3**
PNCL	**Nicolau / Gran**	**3.06**	**76**	*e*Pn	**Pn**	**04 59 38.4**	**+2.2**
PNCL				*e*Sn	**Sb**	**05 00 17.2**	**-2.5**
PNCL				A	A	05 00 23.4	
	1.1nm,0.1s						
PNCL	**Nicolau / Gran**	**3.06**	**76**	*e*Pn	**Pn**	**04 59 38.4**	**+2.2**
PNCL				*e*Sn	**Sb**	**05 00 17.2**	**-2.5**
MESJ	**Messejana**	**3.26**	**81**	*e*P	**Pn**	**04 59 40.8**	**+1.9**
MESJ				*e*S	**Sn**	**05 00 19.9**	**+2.2**
MESJ				AML	AML	05 00 24.3	
	comp=N,1.4nm,0.2s						
MESJ	**Messejana**	**3.26**	**81**	*e*Pn	**Pn**	**04 59 40.9**	**+1.9**
MESJ				*e*Sn	**Sb**	**05 00 21.8**	**-3.6**
MESJ				A	A	05 00 32.8	
	comp=N,1.9nm,0.7s						
MESJ	**Messejana**	**3.26**	**81**	P	**Pn**	**04 59 40.8**	**+1.9**
MESJ				S	**Sn**	**05 00 19.9**	**+2.2**
	comp=N,1.4nm,0.2s						
MESJ	**Messejana**	**3.26**	**81**	*e*Pn	**Pn**	**04 59 40.9**	**+1.9**
MESJ				S	**Sn**	**05 00 19.9**	**+2.2**
	comp=N,1.4nm,0.2s						
MESJ				*e*Sn	**Sb**	**05 00 21.8**	**-3.6**
ALMR	**Almeirim**	**3.40**	**58**	*e*Pn	**Pn**	**04 59 43.5**	**+2.6**
ALMR				*e*Sn	**Sb**	**05 00 26.1**	**-3.4**
ALMR	**Almeirim**	**3.40**	**58**	P	**Pn**	**04 59 43.5**	**+2.6**
ALMR				S	**Sb**	**05 00 26.1**	**-3.4**
ALMR	**Almeirim**	**3.40**	**58**	P	**Pn**	**04 59 43.5**	**+2.6**
ALMR				S	**Sb**	**05 00 26.1**	**-3.4**
PBDV	**Barranco-do-Ve**	**3.48**	**92**	*e*Pn	**Pn**	**04 59 44.7**	**+2.7**
PBDV				*e*Sn	**Sb**	**05 00 28.2**	**-3.6**
PBDV	**Barranco-do-Ve**	**3.48**	**92**	P	**Pn**	**04 59 44.7**	**+2.7**
PBDV				S	**Sb**	**05 00 28.2**	**-3.6**
PBDV	**Barranco-do-Ve**	**3.48**	**92**	P	**Pn**	**04 59 44.7**	**+2.7**
PBDV				S	**Sb**	**05 00 28.2**	**-3.6**
EVO	**Evora**	**3.56**	**70**	*e*Pn	**Pn**	**04 59 46.1**	**+3.0**
EVO				*e*Sn	**Sn**	**05 00 28.7**	**+3.5**
EVO				A	A	05 00 34.8	
	comp=N,2.3nm,0.4s						
EVO	**Evora**	**3.56**	**70**	P	**Pn**	**04 59 44.7**	**+1.6**
EVO				S	**Sn**	**05 00 28.6**	**+3.4**
EVO	**Evora**	**3.56**	**70**	P	**Pn**	**04 59 44.7**	**+1.6**
EVO	**Evora**	**3.56**	**70**	*e*Pn	**Pn**	**04 59 46.1**	**+3.0**
EVO				*e*Sn	**Sn**	**05 00 28.7**	**+3.5**
PBEJ	**Beja**	**3.56**	**79**	*e*Pn	**Pn**	**04 59 45.8**	**+2.7**
PBEJ				*e*Sn	**Sb**	**05 00 31.4**	**-2.7**
PBEJ				A	A	05 00 34.3	
	comp=N,2.3nm,0.3s						
PBEJ	**Beja**	**3.56**	**79**	P	**Pn**	**04 59 45.8**	**+2.7**
PBEJ				S	**Sb**	**05 00 31.4**	**-2.7**
	comp=N,1.2nm,0.3s						
PBEJ	**Beja**	**3.56**	**79**	P	**Pn**	**04 59 45.8**	**+2.7**
PBEJ				S	**Sb**	**05 00 31.4**	**-2.7**
	comp=N,1.2nm,0.3s						
PVAQ	**Vaqueiros**	**3.64**	**89**	*e*Pn	**Pn**	**04 59 46.5**	**+2.3**
PVAQ				*e*Sn	**Sn**	**05 00 30.6**	**+3.4**
PVAQ				A	A	05 00 35.9	
	comp=N,2.3nm,0.3s						
PVAQ	**Vaqueiros**	**3.64**	**89**	P	**Pn**	**04 59 46.5**	**+2.3**
PVAQ				S	**Sn**	**05 00 30.6**	**+3.4**
	comp=N,2.3nm,0.3s						
PVAQ	**Vaqueiros**	**3.64**	**89**	P	**Pn**	**04 59 46.5**	**+2.3**
PVAQ				S	**Sn**	**05 00 30.6**	**+3.4**
	comp=N,2.3nm,0.3s						
PTOM	**Tomar**	**3.75**	**53**	*e*Pn	**Pn**	**04 59 48.8**	**+3.0**
PTOM				*e*Sn	**Sn**	**05 00 35.1**	**+5.1**
PTOM				A	A	05 00 40.0	
	comp=N,3.3nm,0.2s						
PTOM	**Tomar**	**3.75**	**53**	P	**Pn**	**04 59 48.8**	**+3.0**
PTOM				S	**Sn**	**05 00 35.1**	**+5.1**
	comp=N,1.7nm,0.2s						
PTOM	**Tomar**	**3.75**	**53**	P	**Pn**	**04 59 48.8**	**+3.0**
PTOM				S	**Sn**	**05 00 35.1**	**+5.1**
	comp=N,1.7nm,0.2s						
EGRO	**El Granado**	**3.82**	**87**	P	**Pn**	**04 59 48.6**	**+1.9**
	comp=N,1.4nm,0.3s,SNR=4.0						
EGRO				S	**Sn**	**05 00 35.3**	**+3.6**
	comp=N,0.8nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**3.82**	**87**	P	**Pn**	**04 59 48.7**	**+1.9**
	comp=N,1.4nm,0.3s,SNR=4.0						
EGRO				S	**Sn**	**05 00 35.3**	**+3.6**
	comp=N,0.8nm,0.1s,SNR=7.9						
PCAS	**Casmilo, Conde**	**3.96**	**47**	*e*Pn	**Pn**	**04 59 51.0**	**+2.3**
PCAS				*e*Sn	**Sn**	**05 00 39.1**	**+3.9**
PCAS				A	A	05 00 40.1	
	comp=N,1.1nm,0.8s						
PCAS	**Casmilo, Conde**	**3.96**	**47**	*e*Pn	**Pn**	**04 59 51.0**	**+2.3**
PCAS				*e*Sn	**Sn**	**05 00 39.1**	**+3.9**
PESTR	**Estremoz**	**3.98**	**67**	*e*Pn	**Pn**	**04 59 51.5**	**+2.6**
PESTR				*e*Sn	**Sn**	**05 00 39.9**	**+4.3**
PESTR				A	A	05 00 46.0	
	comp=N,1.0nm,0.7s						
PESTR	**Estremoz**	**3.98**	**67**	*e*Pn	**Pn**	**04 59 51.5**	**+2.6**
PESTR				*e*Sn	**Sn**	**05 00 39.9**	**+4.3**
PBAR	**Barrancos**	**4.22**	**78**	*e*Pn	**Pn**	**04 59 54.8**	**+2.5**
PBAR				*e*Sn	**Sb**	**05 00 47.1**	**-6.2**
PBAR				A	A	05 00 51.9	
	comp=N,2.6nm,0.5s						
PBAR	**Barrancos**	**4.22**	**78**	P	**Pn**	**04 59 54.8**	**+2.5**
PBAR				S	**Sb**	**05 00 47.1**	**-6.2**
	comp=N,2.6nm,0.5s						
PBAR	**Barrancos**	**4.22**	**78**	P	**Pn**	**04 59 54.8**	**+2.5**
PBAR				S	**Sb**	**05 00 47.1**	**-6.2**
	comp=N,2.6nm,0.5s						
PMRV	**Marv??o**	**4.34**	**61**	*e*Pn	**Pn**	**04 59 56.2**	**+2.3**
PMRV				*e*Sn	**Sn**	**05 00 48.1**	**+3.6**
PMRV				A	A	05 00 54.8	
	comp=N,1.5nm,0.3s						
PMRV	**Marv??o**	**4.34**	**61**	P	**Pn**	**04 59 56.2**	**+2.3**
PMRV				S	**Sn**	**05 00 48.1**	**+3.6**
	comp=N,1.5nm,0.3s						
PMRV	**Marv??o**	**4.34**	**61**	P	**Pn**	**04 59 56.2**	**+2.3**
PMRV				S	**Sn**	**05 00 48.1**	**+3.6**
	comp=N,1.5nm,0.3s						
EBAD	**Badajoz**	**4.37**	**71**	P	**Pn**	**04 59 56.6**	**+2.3**
	comp=N,0.8nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**05 00 47.9**	**+2.6**
	comp=N,1.7nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**4.37**	**71**	P	**Pn**	**04 59 56.6**	**+2.3**
	comp=N,0.8nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**05 00 47.9**	**+2.6**
	comp=N,1.7nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.47**	**84**	P	**Pn**	**04 59 57.5**	**+1.8**
	comp=N,0.3nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**05 00 49.5**	**+1.7**
	comp=N,0.3nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.47**	**84**	P	**Pn**	**04 59 57.5**	**+1.8**
	comp=N,0.3nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**05 00 49.5**	**+1.7**
	comp=N,0.3nm,0.2s,SNR=7.9						
PCBR	**Castelo Branco**	**4.48**	**56**	*e*Pn	**Pn**	**04 59 58.6**	**+2.9**
PCBR				*e*Sn	**Sn**	**05 00 51.2**	**+3.3**
PCBR				A	A	05 00 57.4	
	comp=N,1.3nm,0.6s						
PCBR	**Castelo Branco**	**4.48**	**56**	P	**Pn**	**04 59 58.6**	**+2.9**
PCBR				S	**Sn**	**05 00 51.2**	**+3.3**
	comp=N,0.6nm,0.6s						
PCBR	**Castelo Branco**	**4.48**	**56**	P	**Pn**	**04 59 58.6**	**+2.9**
PCBR				S	**Sn**	**05 00 51.2**	**+3.3**
	comp=N,0.6nm,0.6s						
PVIS	**Viseu**	**4.75**	**45**	*e*Pn	**Pn**	**05 00 02.6**	**+3.1**
PVIS				*e*Sn	**Sn**	**05 00 56.6**	**+2.0**
PVIS				A	A	05 01 08.7	
	comp=N,1.4nm,0.3s						
PVIS	**Viseu**	**4.75**	**45**	P	**Pn**	**05 00 02.6**	**+3.1**
PVIS				S	**Sn**	**05 00 56.6**	**+2.0**
	comp=N,0.7nm,0.3s						
PVIS	**Viseu**	**4.75**	**45**	P	**Pn**	**05 00 02.6**	**+3.1**
PVIS				S	**Sn**	**05 00 56.6**	**+2.0**
	comp=N,0.7nm,0.3s						
MTE	**Manteigas**	**4.75**	**50**	*e*Pn	**Pn**	**05 00 01.9**	**+2.3**
MTE				*e*Sn	**Sn**	**05 00 58.7**	**+4.0**
MTE	**Manteigas**	**4.75**	**50**	P	**Pn**	**05 00 01.9**	**+2.3**
MTE				S	**Sn**	**05 00 58.7**	**+4.0**
MTE	**Manteigas**	**4.75**	**50**	P	**Pn**	**05 00 01.9**	**+2.3**
MTE				S	**Sn**	**05 00 58.7**	**+4.0**
POLO	**Lamas de Olo**	**5.26**	**40**	*e*Sn	**Sn**	**05 01 09.0**	**+1.5**
POLO	**Lamas de Olo**	**5.26**	**40**	*e*Sn	**Sn**	**05 01 09.0**	**+1.5**
PCAB	**Cabril**	**5.41**	**36**	*e*Sn	**Sn**	**05 01 13.0**	**+2.2**
PCAB	**Cabril**	**5.41**	**36**	Sn	**Sn**	**05 01 13.0**	**+2.2**
PCAB	**Cabril**	**5.41**	**36**	Sn	**Sn**	**05 01 13.0**	**+2.2**
ECAB	**El Cabril**	**5.48**	**81**	P	**Pn**	**05 00 11.7**	**+2.1**
	comp=N,0.4nm,0.1s,SNR=8.6						
ECAB				S	**Sn**	**05 01 12.8**	**+0.1**
	comp=N,0.2nm,0.3s,SNR=7.9						
ECAB	**El Cabril**	**5.48**	**81**	P	**Pn**	**05 00 11.7**	**+2.1**
	comp=N,0.4nm,0.1s,SNR=8.6						
PGAV	**Gavieira, Arco**	**5.50**	**33**	*e*Pn	**Pn**	**05 00 13.1**	**+3.2**
PGAV				*e*Sn	**Sn**	**05 01 14.6**	**+1.4**
PGAV	**Gavieira, Arco**	**5.50**	**33**	*e*Pn	**Pn**	**05 00 13.1**	**+3.2**
PGAV				*e*Sn	**Sn**	**05 01 14.6**	**+1.4**
ELOB	**Lobios**	**5.51**	**35**	P	**Pn**	**05 00 11.7**	**+1.6**
	comp=N,0.1nm,0.1s,SNR=7.9						
ELOB				S	**Sn**	**05 01 12.8**	**-0.7**
	comp=N,0.4nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.51**	**35**	P	**Pn**	**05 00 11.7**	**+1.6**
	comp=N,0.1nm,0.1s,SNR=7.9						
EPLA	**Plasencia**	**5.53**	**60**	P	**Pn**	**05 00 11.6**	**+1.4**
	comp=N,0.4nm,0.1s,SNR=7.9						
EPLA				S	**Sn**	**05 01 15.7**	**+1.9**
	comp=N,0.9nm,0.1s,SNR=7.9						
EPLA	**Plasencia**	**5.53**	**60**	P	**Pn**	**05 00 11.6**	**+1.4**
	comp=N,0.4nm,0.1s,SNR=7.9						
EPLA				S	**Sn**	**05 01 15.7**	**+1.9**
	comp=N,0.9nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**5.54**	**46**	*e*Pn	**Pn**	**05 00 12.2**	**+1.8**
MVO				*e*Sn	**Sn**	**05 01 15.7**	**+1.6**
MVO	**Moncorvo**	**5.54**	**46**	P	**Pn**	**05 00 12.1**	**+1.7**
	comp=N,0.7nm,0.2s,SNR=4.0						
MVO				S	**Sn**	**05 01 14.3**	**+0.2**
	comp=N,0.4nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**5.54**	**46**	*e*Pn	**Pn**	**05 00 12.2**	**+1.8**
MVO				S	**Sn**	**05 01 14.3**	**+0.2**
	comp=N,0.4nm,0.1s,SNR=7.9						
MVO				*e*Sn	**Sn**	**05 01 15.7**	**+1.6**
EMAZ	**Mazaricos**	**6.08**	**24**	S	**Sn**	**05 01 23.1**	**-4.3**
	comp=N,0.4nm,0.1s,SNR=4.0						
EADA	**Adamuz**	**6.15**	**81**	P	**Pn**	**05 00 20.5**	**+1.7**
	comp=N,0.4nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**6.15**	**81**	P	**Pn**	**05 00 20.5**	**+1.7**
	comp=N,0.4nm,0.1s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.27**	**30**	S	**Sn**	**05 01 28.8**	**-3.2**
	comp=N,0.5nm,0.1s,SNR=4.0						
PAB	**San Pablo**	**6.58**	**69**	P	**Pn**	**05 00 27.2**	**+2.5**
	comp=N,0.1nm,0.1s,SNR=4.0						
PAB				S	**Sn**	**05 01 40.1**	**+0.2**
	comp=N,0.2nm,0.2s,SNR=4.0						
PAB	**San Pablo**	**6.58**	**69**	P	**Pn**	**05 00 27.2**	**+2.5**
	comp=N,0.1nm,0.1s,SNR=4.0						
ESDC	**Sonseca Array**	**6.90**	**68**	P	**Pn**	**05 00 30.5**	**+1.4**
	comp=N,1.3nm,0.1s,baz=254,slow=12,SNR=7.3						
ESDC	**Sonseca Array**	**6.90**	**68**	P	**Pn**	**05 00 30.5**	**+1.4**
	comp=N,1.3nm,0.1s,baz=254,slow=12,SNR=7.3						

SFS ***03*** *05:00:40.0,37.°29N×12.°50W,h0km,ML3.6*
MDD ***03*** *05:00:41.1±1.8,37.°32N×12.°62W,h0km,mb3.7/9,Error ellipse: s-maj=16.2km s-min=15.9km az=132.0,PRXIMO*
INMG ***03*** *05:00:41.8±1.4,37.°14N×13.°08W,h10km,ML2.2,Error ellipse: s-maj=8.5km s-min=6.4km az=106.0*
IGIL ***03*** *05:00:42.5,37.°30N×12.°60W,h0km,ML1.9*
CSEM ***03*** *05:00:43.3±0.4,37.°40N×12.°44W,h10km,mb3.7,Error ellipse: s-maj=6.6km s-min=6.4km az=112.0*
ISC 03 05:00:39.2±3.4,37.°37N±0.°09×12.°7W±0.°2,h10km,n83,
σ1§71/151,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMST	**Lisbon--Monsan**	**3.09**	**63**	*e*Sn	**Sn**	**05 02 05.8**	**+0.8**
PMST	**Lisbon--Monsan**	**3.09**	**63**	*e*Sn	**Sn**	**05 02 05.8**	**+0.8**
PMAFR	**Mafra**	**3.12**	**59**	*e*Pn	**Pn**	**05 01 30.0**	**+1.5**
PMAFR				*e*Sn	**Sn**	**05 02 07.2**	**+1.4**
PMAFR				A	A	05 02 09.7	
	11nm,0.6s						
PMAFR	**Mafra**	**3.12**	**59**	P	**Pn**	**05 01 29.9**	**+1.4**
	2.9nm,0.1s,SNR=7.9						
PMAFR				S	**Sn**	**05 02 06.4**	**+0.6**
	10nm,0.2s,SNR=8.4						
PMAFR	**Mafra**	**3.12**	**59**	*e*Pn	**Pn**	**05 01 30.0**	**+1.5**
PMAFR				S	**Sn**	**05 02 06.4**	**+0.6**
	10nm,0.2s,SNR=8.4						
PMAFR				*e*Sn	**Sn**	**05 02 07.2**	**+1.4**
PTEO	**Sao Teotonio**	**3.17**	**86**	*e*Pn	**Pn**	**05 01 29.8**	**+0.7**
PTEO				*e*Sn	**Sn**	**05 02 06.0**	**-0.9**
PTEO				A	A	05 02 10.3	
	2.8nm,0.2s						
PTEO	**Sao Teotonio**	**3.17**	**86**	P	**Pn**	**05 01 29.8**	**+0.7**
PTEO				S	**Sn**	**05 02 06.0**	**-0.9**
	1.4nm,0.2s						
PTEO	**Sao Teotonio**	**3.17**	**86**	P	**Pn**	**05 01 29.8**	**+0.7**
PTEO				S	**Sn**	**05 02 06.0**	**-0.9**
	1.4nm,0.2s						
MORF	**Marmelete**	**3.22**	**90**	*e*Pn	**Pn**	**05 01 32.1**	**+2.2**
MORF	**Marmelete**	**3.22**	**90**	P	**Pn**	**05 01 32.1**	**+2.2**
MORF	**Marmelete**	**3.22**	**90**	P	**Pn**	**05 01 32.1**	**+2.2**
PNCL	**Nicolau / Gran**	**3.38**	**76**	*e*Pn	**Pn**	**05 01 34.0**	**+1.9**
PNCL				*e*Sn	**Sn**	**05 02 11.9**	**-0.4**
PNCL				A	A	05 02 18.2	
	2.4nm,0.4s						
PNCL	**Nicolau / Gran**	**3.38**	**76**	*e*Pn	**Pn**	**05 01 34.0**	**+1.9**
PNCL				*e*Sn	**Sn**	**05 02 11.9**	**-0.4**
MESJ	**Messejana**	**3.58**	**81**	*e*P	**Pn**	**05 01 36.4**	**+1.5**
MESJ				*e*S	**Sn**	**05 02 16.3**	**-0.9**
MESJ				AML	AML	05 02 18.3	
	comp=E,1.6nm,0.9s						
MESJ	**Messejana**	**3.58**	**81**	*e*Pn	**Pn**	**05 01 36.6**	**+1.8**
MESJ				*e*Sn	**Sn**	**05 02 16.9**	**-0.3**
MESJ				A	A	05 02 23.5	
	comp=E,2.4nm,0.2s						
MESJ	**Messejana**	**3.58**	**81**	P	**Pn**	**05 01 36.4**	**+1.5**
MESJ				S	**Sn**	**05 02 16.3**	**-0.9**
	comp=E,1.6nm,0.9s						
MESJ	**Messejana**	**3.58**	**81**	P	**Pn**	**05 01 36.3**	**+1.5**
MESJ	**Messejana**	**3.58**	**81**	*e*Pn	**Pn**	**05 01 36.6**	**+1.8**
MESJ				S	**Sn**	**05 02 16.3**	**-0.9**
	comp=E,1.6nm,0.9s						
MESJ				*e*Sn	**Sn**	**05 02 16.9**	**-0.3**
ALMR	**Almeirim**	**3.70**	**60**	*e*P	**Pn**	**05 01 38.3**	**+1.9**
ALMR				*e*S	**Sn**	**05 02 20.0**	**0.0**
ALMR				AML	AML	05 02 21.9	
	comp=N,6.5nm,0.5s						
ALMR	**Almeirim**	**3.70**	**60**	*e*Pn	**Pn**	**05 01 38.4**	**+2.0**
ALMR				*e*Sn	**Sn**	**05 02 20.5**	**+0.5**
ALMR				A	A	05 02 24.3	
	comp=N,10nm,0.4s						
ALMR	**Almeirim**	**3.70**	**60**	P	**Pn**	**05 01 38.3**	**+1.9**
ALMR				S	**Sn**	**05 02 20.0**	**0.0**
	comp=N,3.2nm,0.5s						
ALMR	**Almeirim**	**3.70**	**60**	P	**Pn**	**05 01 38.3**	**+1.9**
ALMR				S	**Sn**	**05 02 20.0**	**0.0**
	comp=N,3.2nm,0.5s						
ALMR				*e*Sn	**Sn**	**05 02 20.5**	**+0.5**
PBDV	**Barranco-do-Ve**	**3.80**	**91**	*e*Pn	**Pn**	**05 01 39.3**	**+1.5**
PBDV				*e*Sn	**Sn**	**05 02 22.8**	**+0.2**
PBDV				A	A	05 02 25.3	
	comp=N,1.7nm,0.4s						
PBDV	**Barranco-do-Ve**	**3.80**	**91**	P	**Pn**	**05 01 39.3**	**+1.5**
PBDV				S	**Sn**	**05 02 22.8**	**+0.2**
	comp=N,1.7nm,0.4s						
PBDV	**Barranco-do-Ve**	**3.80**	**91**	P	**Pn**	**05 01 39.3**	**+1.5**
PBDV				S	**Sn**	**05 02 22.8**	**+0.2**
	comp=N,1.7nm,0.4s						
EVO	**Evora**	**3.88**	**71**	*e*Pn	**Pn**	**05 01 40.8**	**+1.9**
EVO				*e*Sn	**Sn**	**05 02 24.9**	**+0.4**
EVO				A	A	05 02 29.3	
	comp=N,4.5nm,0.3s						
EVO	**Evora**	**3.88**	**71**	P	**Pn**	**05 01 40.0**	**+1.1**
EVO				S	**Sn**	**05 02 23.1**	**-1.4**
EVO	**Evora**	**3.88**	**71**	P	**Pn**	**05 01 40.0**	**+1.1**
EVO	**Evora**	**3.88**	**71**	*e*Pn	**Pn**	**05 01 40.8**	**+1.9**
EVO				S	**Sn**	**05 02 23.1**	**-1.4**
EVO				*e*Sn	**Sn**	**05 02 24.9**	**+0.4**
PBEJ	**Beja**	**3.88**	**79**	*e*Pn	**Pn**	**05 01 40.5**	**+1.5**
PBEJ				*e*Sn	**Sn**	**05 02 25.0**	**+0.3**
PBEJ				A	A	05 02 29.0	
	comp=N,2.4nm,0.1s						
PBEJ	**Beja**	**3.88**	**79**	P	**Pn**	**05 01 40.5**	**+1.5**
PBEJ				S	**Sn**	**05 02 25.0**	**+0.3**
	comp=N,1.2nm,0.1s						
PBEJ	**Beja**	**3.88**	**79**	P	**Pn**	**05 01 40.5**	**+1.5**
PBEJ				S	**Sn**	**05 02 25.0**	**+0.3**
	comp=N,1.2nm,0.1s						
PVAQ	**Vaqueiros**	**3.96**	**88**	*e*Pn	**Pn**	**05 01 41.2**	**+1.1**
PVAQ				*e*Sn	**Sn**	**05 02 25.4**	**-1.2**
PVAQ				A	A	05 02 30.7	
	comp=N,2.8nm,0.5s						
PVAQ	**Vaqueiros**	**3.96**	**88**	P	**Pn**	**05 01 41.2**	**+1.1**
PVAQ				S	**Sn**	**05 02 25.4**	**-1.2**
	comp=N,2.8nm,0.5s						
PVAQ	**Vaqueiros**	**3.96**	**88**	P	**Pn**	**05 01 41.2**	**+1.1**
PVAQ				S	**Sn**	**05 02 25.4**	**-1.2**
	comp=N,2.8nm,0.5s						
PTOM	**Tomar**	**4.04**	**55**	*e*Pn	**Pn**	**05 01 43.5**	**+2.4**
PTOM				*e*Sn	**Sn**	**05 02 29.4**	**+0.9**
PTOM				A	A	05 02 35.0	
	comp=N,4.8nm,0.3s						
PTOM	**Tomar**	**4.04**	**55**	P	**Pn**	**05 01 43.5**	**+2.4**
PTOM				S	**Sn**	**05 02 29.4**	**+0.9**
	comp=N,2.4nm,0.3s						
PTOM	**Tomar**	**4.04**	**55**	P	**Pn**	**05 01 43.5**	**+2.4**
PTOM				S	**Sn**	**05 02 29.4**	**+0.9**
	comp=N,2.4nm,0.3s						
EGRO	**El Granado**	**4.15**	**86**	P	**Pn**	**05 01 43.4**	**+0.8**
	comp=N,1.1nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**05 02 29.5**	**-1.7**
	comp=N,2.6nm,0.2s,SNR=7.9						
EGRO	**El Granado**	**4.15**	**86**	P	**Pn**	**05 01 43.4**	**+0.8**
	comp=N,1.1nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**05 02 29.5**	**-1.7**
	comp=N,2.6nm,0.2s,SNR=7.9						
PCAS	**Casmilo, Conde**	**4.24**	**50**	*e*Pn	**Pn**	**05 01 45.9**	**+2.1**
PCAS				*e*Sn	**Sn**	**05 02 34.0**	**+0.7**
PCAS				A	A	05 02 45.5	
	comp=N,1.8nm,0.8s						
PCAS	**Casmilo, Conde**	**4.24**	**50**	*e*Pn	**Pn**	**05 01 45.9**	**+2.1**
PCAS				*e*Sn	**Sn**	**05 02 34.0**	**+0.7**
PESTR	**Estremoz**	**4.29**	**68**	*e*Pn	**Pn**	**05 01 46.5**	**+1.9**
PESTR				*e*Sn	**Sn**	**05 02 34.5**	**-0.3**
PESTR				A	A	05 02 39.6	
	comp=N,1.6nm,0.6s						
PESTR	**Estremoz**	**4.29**	**68**	*e*Pn	**Pn**	**05 01 46.5**	**+1.9**
PESTR				*e*Sn	**Sn**	**05 02 34.5**	**-0.3**
PBAR	**Barrancos**	**4.55**	**78**	*e*Pn	**Pn**	**05 01 49.5**	**+1.4**
PBAR				*e*Sn	**Sn**	**05 02 40.5**	**-0.6**
PBAR				A	A	05 02 47.8	
	comp=N,2.3nm,0.3s						
PBAR	**Barrancos**	**4.55**	**78**	P	**Pn**	**05 01 49.5**	**+1.4**
PBAR				S	**Sn**	**05 02 40.5**	**-0.6**
	comp=N,2.3nm,0.3s						
PBAR	**Barrancos**	**4.55**	**78**	P	**Pn**	**05 01 49.5**	**+1.4**
PBAR				S	**Sn**	**05 02 40.5**	**-0.6**
	comp=N,2.3nm,0.3s						
PMRV	**Marv??o**	**4.64**	**62**	*e*Pn	**Pn**	**05 01 51.0**	**+1.6**
PMRV				*e*Sn	**Sn**	**05 02 42.5**	**-0.9**
PMRV				A

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EPLA				S	**Sn**	**05 03 09.9**	**-2.7**
	comp=N,1.7nm,0.2s,SNR=5.8						
EMAZ	**Mazaricos**	**6.25**	**26**	S	**Sn**	**05 03 17.9**	**-5.1**
	comp=N,0.6nm,0.1s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.47**	**32**	S	**Sn**	**05 03 23.2**	**-5.2**
	comp=N,0.4nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**6.48**	**43**	S	**Sn**	**05 03 26.5**	**-2.1**
	comp=N,0.4nm,0.2s,SNR=4.0						
ECAL	**Calabor**	**6.48**	**43**	S	**Sn**	**05 03 26.5**	**-2.1**
	comp=N,0.4nm,0.2s,SNR=4.0						
PAB	**San Pablo**	**6.90**	**69**	P	**Pn**	**05 02 20.9**	**+0.4**
	comp=N,0.3nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**05 03 35.2**	**-3.9**
	comp=N,0.1nm,0.1s,SNR=4.0						
PAB	**San Pablo**	**6.90**	**69**	P	**Pn**	**05 02 20.9**	**+0.4**
	comp=N,0.3nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**05 03 35.2**	**-3.9**
	comp=N,0.1nm,0.1s,SNR=4.0						
ESDC	**Sonseca Array**	**7.22**	**69**	P	**Pn**	**05 02 25.4**	**+0.6**
	comp=N,1.3nm,0.2s,baz=253,slow=12,SNR=6.8						
ESDC	**Sonseca Array**	**7.22**	**69**	P	**Pn**	**05 02 25.4**	**+0.6**
	comp=N,1.3nm,0.2s,baz=253,slow=12,SNR=6.8						

*ROM **03** 05:23:22.7±0.2, 44°.500N±0°.004×6°.88E±0°.01, h8km, ML2.1/16*
*ISCJB **03** 05:23:23.0±0.3, 44°.50N±0°.01×6°.87E±0°.02, h10km±2km, Error ellipse: s-maj=2.7km s-min=2.2km az=149.1*
*CSEM **03** 05:23:23.0±0.1, 44°.52N×6°.91E, h10km, ML2.6/11, Error ellipse: s-maj=1.4km s-min=1.2km az=63.0*
*GEN **03** 05:23:23.2, 44°.50N×6°.88E, h4km, ML1.9*
*LDG **03** 05:23:23.5±0.1, 44°.51N×6°.88E, h2km, Md2.7/1, Ml2.8/8, Error ellipse: s-maj=1.3km s-min=1.0km az=64.0*
*STR **03** 05:23:25.1±0.5, 44°.N±3°×°±°, h5km, M2.3/8, MLv2.3/8*
ISC 03 05:23:23.4±0.8, 44°.51N±0°.01×6°.90E±0°.02, h13km±5km, n82, σ0°76/139, 3C-1D, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PZZ	**Stroppo**	**0.16**	**89**	P	**Pg**	**05 23 27.0**	**-0.3**
PZZ				S	**Sg**	**05 23 29.6**	**-0.4**
PZZ	**Stroppo**	**0.16**	**89**	P	**Pg**	**05 23 27.0**	**-0.3**
PZZ				S	**Sg**	**05 23 29.6**	**-0.4**
PZZ				AML	AML		
	comp=E,2635μm,0.3s						
PZZ				AML	AML		
	comp=N,2440μm,0.3s						
PZZ				AML	AML		
	comp=E,2635μm,0.3s						
PZZ				AML	AML		
	comp=N,2440μm,0.3s						
PZZ				AML	AML		
	comp=E,2635μm,0.3s						
PZZ				AML	AML		
	comp=N,2440μm,0.3s						
MBDF	**Montbardon**	**0.24**	**338**	*e*Pg	**Pg**	**05 23 28.0**	**-0.6**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**05 23 31.4**	**-0.8**
	comp=N,162nm,0.2s						
MBDF	**Montbardon**	**0.24**	**338**	*e*Pg	**Pg**	**05 23 28.0**	**-0.6**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**05 23 31.4**	**-0.8**
	comp=N,81nm,0.2s						
DOI	**San Damiano**	**0.25**	**90**	⇑P	**Pg**	**05 23 28.5**	**-0.3**
DOI				S	**Sg**	**05 23 32.0**	**-0.4**
DOI	**San Damiano**	**0.25**	**90**	P	**Pg**	**05 23 28.5**	**-0.3**
DOI				S	**Sg**	**05 23 33.0**	**+0.5**
DOI				AML	AML		
	comp=E,622μm,0.2s						
DOI				AML	AML		
	comp=N,742μm,0.1s						
DOI				AML	AML		
	comp=E,622μm,0.2s						
DOI				AML	AML		
	comp=N,742μm,0.1s						
ISO	**Isola**	**0.34**	**161**	Pg	**Pg**	**05 23 29.8**	**-0.5**
ISO	**Isola**	**0.34**	**161**	Pg	**Pg**	**05 23 29.8**	**-0.5**
ISO				Sg	**Sg**	**05 23 34.7**	**-0.3**
STV	**Sant Anna di V**	**0.40**	**130**	P	**Pg**	**05 23 31.1**	**-0.4**
STV				S	**Sg**	**05 23 37.1**	**+0.2**
STV	**Sant Anna di V**	**0.40**	**130**	P	**Pg**	**05 23 31.8**	**+0.3**
STV				S	**Sg**	**05 23 37.6**	**+0.7**
STV				AML	AML		
	comp=E,270μm,1.6s						
STV				AML	AML		
	comp=N,256μm,0.5s						
STV				AML	AML		
	comp=E,270μm,1.6s						
STV				AML	AML		
	comp=N,256μm,0.5s						
STV				AML	AML		
	comp=N,256μm,0.5s						
STV				AML	AML		
	comp=E,270μm,1.6s						
RRL	**Rocca Remolon**	**0.42**	**350**	P	**Pg**	**05 23 31.5**	**-0.4**
RRL				S	**Sg**	**05 23 37.9**	**+0.3**
RRL	**Rocca Remolon**	**0.42**	**350**	P	**Pg**	**05 23 31.5**	**-0.4**
RRL				S	**Sg**	**05 23 38.3**	**+0.7**
RRL				AML	AML		
	comp=E,170μm,0.1s						
RRL				AML	AML		
	comp=N,166μm,1.1s						
RRL				AML	AML		
	comp=E,170μm,0.1s						
RRL				AML	AML		
	comp=N,166μm,1.1s						
RRL				AML	AML		
	comp=E,170μm,0.1s						
RRL				AML	AML		
	comp=N,166μm,1.1s						
BHB	**Bricherasio**	**0.43**	**38**	⇑P	**Pg**	**05 23 31.5**	**-0.4**
BHB				S	**Sg**	**05 23 37.2**	**-0.4**
BHB	**Bricherasio**	**0.43**	**38**	P	**Pg**	**05 23 31.5**	**-0.4**
BHB				S	**Sg**	**05 23 38.5**	**+0.9**
BHB				AML	AML		
	comp=E,249μm,0.2s						
BHB				AML	AML		
	comp=N,179μm,0.2s						
BHB				AML	AML		
	comp=E,249μm,0.2s						
BHB				AML	AML		
	comp=N,179μm,0.2s						
BHB				AML	AML		
	comp=E,249μm,0.2s						
BHB				AML	AML		
	comp=N,179μm,0.2s						
ENR	**Entracque**	**0.47**	**126**	P	**Pg**	**05 23 32.2**	**-0.4**
ENR				S	**Sg**	**05 23 38.7**	**-0.2**
ENR	**Entracque**	**0.47**	**126**	P	**Pg**	**05 23 32.2**	**-0.4**
ENR				S	**Sg**	**05 23 39.4**	**+0.4**
ENR				AML	AML		
	comp=E,546μm,1.4s						
ENR				AML	AML		
	comp=N,564μm,0.1s						
ENR				AML	AML		
	comp=E,546μm,1.4s						
ENR				AML	AML		
	comp=N,564μm,0.1s						
ENR				AML	AML		
	comp=N,564μm,0.1s						
ENR				AML	AML		
	comp=E,546μm,1.4s						
OGDI	**Digne**	**0.58**	**227**	Pg	**Pb**	**05 23 36.3**	**+0.9**
LUCF	**Luceram**	**0.69**	**152**	Pg	**Pg**	**05 23 36.8**	**-0.1**
LUCF	**Luceram**	**0.69**	**152**	Pg	**Pg**	**05 23 36.8**	**-0.1**
RSP	**Reno Superiore**	**0.69**	**22**	P	**Pg**	**05 23 36.5**	**-0.4**
RSP				S	**Sg**	**05 23 46.0**	**-0.1**
RSP	**Reno Superiore**	**0.69**	**22**	P	**Pg**	**05 23 36.5**	**-0.4**
RSP				S	**Sg**	**05 23 46.5**	**+0.4**
RSP				AML	AML		
	comp=E,132μm,1.0s						
RSP				AML	AML		
	comp=N,95μm,1.1s						
RSP				AML	AML		
	comp=E,132μm,1.0s						
RSP				AML	AML		
	comp=N,95μm,1.1s						
RSP				AML	AML		
	comp=E,132μm,1.0s						
RSP				AML	AML		
	comp=N,95μm,1.1s						
SAOF	**Saorge**	**0.70**	**137**	⇑P	**Pg**	**05 23 36.8**	**-0.2**
SAOF				S	**Sg**	**05 23 46.4**	**+0.1**
SAOF	**Saorge**	**0.70**	**137**	P	**Pg**	**05 23 36.8**	**-0.2**
SAOF				S	**Sg**	**05 23 46.4**	**+0.1**
SAOF				AML	AML		
	comp=E,158μm,0.9s						
SAOF				AML	AML		
	comp=N,216μm,1.2s						
SAOF				AML	AML		
	comp=E,158μm,0.9s						
SAOF				AML	AML		
	comp=N,216μm,1.2s						
SAOF				AML	AML		
	comp=N,216μm,1.2s						
SAOF				AML	AML		
	comp=E,158μm,0.9s						
SAOF				AML	AML		
	comp=N,216μm,1.2s						
SAOF				AML	AML		
	comp=E,158μm,0.9s						
SBF	**Sospel**	**0.75**	**149**	*e*Pg	**Pg**	**05 23 37.8**	**-0.1**
	SNR=1.0						
SBF				*e*Sg	**Sg**	**05 23 48.0**	**+0.2**
	comp=E,40nm,0.2s,SNR=1.0						
SBF	**Sospel**	**0.75**	**149**	*e*Pg	**Pg**	**05 23 37.8**	**-0.1**
	SNR=1.0						
SBF				*e*Sg	**Sg**	**05 23 48.0**	**+0.2**
	comp=E,20nm,0.2s,SNR=1.0						
CALF	**Calern**	**0.75**	**179**	Pg	**Pg**	**05 23 37.7**	**-0.3**
CALF	**Calern**	**0.75**	**179**	Pg	**Pg**	**05 23 37.7**	**-0.3**
CALF				Sg	**Sb**	**05 23 48.5**	**-0.1**
ORIF	**Oris-en-Rattie**	**0.83**	**300**	*e*Pg	**Pg**	**05 23 38.7**	**-0.8**
	SNR=1.0						
ORIF				*e*Sg	**Sg**	**05 23 50.3**	**-0.2**
	comp=E,20nm,0.2s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**0.83**	**300**	*e*Pg	**Pg**	**05 23 38.7**	**-0.8**
	SNR=1.0						
ORIF				*e*Sg	**Sg**	**05 23 50.3**	**-0.2**
	comp=E,9.9nm,0.2s,SNR=1.0						
REVF	**Revere**	**0.84**	**156**	Pg	**Pg**	**05 23 39.7**	**+0.1**
REVF	**Revere**	**0.84**	**156**	Pg	**Pg**	**05 23 39.7**	**+0.1**
NEGI	**Seborga**	**0.88**	**138**	P	**Pg**	**05 23 40.1**	**-0.2**
NEGI				S	**Sg**	**05 23 51.8**	**-0.1**
NEGI	**Seborga**	**0.88**	**138**	P	**Pb**	**05 23 40.8**	**+0.3**
NEGI				S	**Sg**	**05 23 51.8**	**-0.1**
NEGI				AML	AML		
	comp=E,336μm,0.6s						
NEGI				AML	AML		
	comp=N,302μm,0.8s						
NEGI				AML	AML		
	comp=E,336μm,0.6s						
NEGI				AML	AML		
	comp=N,302μm,0.8s						
NEGI				AML	AML		
	comp=E,336μm,0.6s						
NEGI				AML	AML		
	comp=N,302μm,0.8s						
RORO	**Rocca Rossa**	**0.93**	**115**	⇓P	**Pg**	**05 23 40.6**	**-0.7**
RORO				S	**Sg**	**05 23 53.2**	**-0.2**
RORO	**Rocca Rossa**	**0.93**	**115**	P	**Pg**	**05 23 40.6**	**-0.7**
RORO				S	**Sg**	**05 23 53.2**	**-0.2**
RORO				AML	AML		
	comp=E,112μm,0.2s						
RORO				AML	AML		
	comp=N,137μm,1.1s						
RORO				AML	AML		
	comp=N,137μm,1.1s						
RORO				AML	AML		
	comp=E,112μm,0.2s						
MONC	**Moncucco Torin**	**0.93**	**52**	P	**Pg**	**05 23 40.9**	**-0.4**
MONC	**Moncucco Torin**	**0.93**	**52**	P	**Pg**	**05 23 40.9**	**-0.4**
MONC				AML	AML		
	comp=E,117μm,0.3s						
MONC				AML	AML		
	comp=N,116μm,1.3s						
MONC				AML	AML		
	comp=N,116μm,1.3s						
MONC				AML	AML		
	comp=E,117μm,0.3s						
IMI	**Imperia**	**0.93**	**129**	P	**Pg**	**05 23 40.8**	**-0.6**
IMI				S	**Sg**	**05 23 53.6**	**0.0**
IMI	**Imperia**	**0.93**	**129**	P	**Pg**	**05 23 40.8**	**-0.6**
IMI				S	**Sg**	**05 23 53.6**	**0.0**
ANTF	**Antibes**	**0.95**	**170**	Pg	**Pb**	**05 23 41.9**	**+0.2**
ANTF	**Antibes**	**0.95**	**170**	Pg	**Pb**	**05 23 41.9**	**+0.2**
FRF	**La Foret Royal**	**0.96**	**191**	*e*Pg	**Pb**	**05 23 42.0**	**+0.1**
	SNR=1.0						
FRF				*e*Sg	**Sb**	**05 23 55.6**	**+1.2**
	comp=E,55nm,0.2s,SNR=1.0						
FRF	**La Foret Royal**	**0.96**	**191**	*e*Pg	**Pb**	**05 23 42.0**	**+0.1**
	SNR=1.0						
FRF				*e*Sg	**Sb**	**05 23 55.6**	**+1.2**
	comp=E,28nm,0.2s,SNR=1.0						
LSD	**Lago del Serru**	**0.97**	**10**	P	**Pg**	**05 23 41.7**	**-0.4**
LSD				S	**Sg**	**05 23 54.0**	**-0.8**
LSD	**Lago del Serru**	**0.97**	**10**	P	**Pg**	**05 23 41.7**	**-0.4**
LSD				S	**Sg**	**05 23 55.0**	**+0.1**
LSD				AML	AML		
	comp=E,60μm,0.2s						
LSD				AML	AML		
	comp=N,59μm,0.4s						
LSD				AML	AML		
	comp=N,59μm,0.4s						
LSD				AML	AML		
	comp=E,60μm,0.2s						
LPG	**La Plagne**	**1.00**	**354**	*e*Pn	**Pg**	**05 23 42.0**	**-0.7**
	SNR=1.0						
LPG				*e*Sn	**Sb**	**05 23 57.6**	**+1.8**
	comp=E,20nm,0.5s						
LPG	**La Plagne**	**1.00**	**354**	*e*Pn	**Pg**	**05 23 42.0**	**-0.7**
	SNR=1.0						
LPG				*e*Sn	**Sb**	**05 23 57.6**	**+1.8**
	comp=E,10nm,0.5s						
LPL	**La Plagne**	**1.02**	**354**	*e*Pn	**Pg**	**05 23 42.9**	**-0.2**
	SNR=1.0						
LPL				*e*Sn	**Sb**	**05 23 57.8**	**+1.5**
	comp=E,16nm,0.4s						
LPL	**La Plagne**	**1.02**	**354**	*e*Pn	**Pg**	**05 23 42.9**	**-0.2**
	SNR=1.0						
LPL				*e*Sn	**Sb**	**05 23 57.8**	**+1.5**
	comp=E,7.8nm,0.4s						
QLNO	**Quiliano**	**1.05**	**99**	P	**Pg**	**05 23 43.1**	**-0.6**
QLNO				S	**Sg**	**05 23 57.6**	**+0.1**
QLNO	**Quiliano**	**1.05**	**99**	P	**Pg**	**05 23 43.1**	**-0.6**
QLNO				S	**Sg**	**05 23 57.6**	**+0.1**
QLNO				AML	AML		
	comp=E,81μm,0.6s						
QLNO				AML	AML		
	comp=N,81μm,0.4s						
QLNO				AML	AML		
	comp=E,81μm,0.6s						
QLNO				AML	AML		
	comp=N,81μm,0.4s						
FINB	**Finale Ligure**	**1.08**	**107**	P	**Pg**	**05 23 43.5**	**-0.6**
FINB				S	**Sg**	**05 23 57.8**	**-0.4**
FINB	**Finale Ligure**	**1.08**	**107**	P	**Pg**	**05 23 43.5**	**-0.6**
FINB				S	**Sg**	**05 23 57.8**	**-0.4**
FINB				AML	AML		
	comp=E,254μm,1.5s						
FINB				AML	AML		
	comp=N,250μm,1.5s						
FINB				AML	AML		
	comp=E,254μm,1.5s						
FINB				AML	AML		
	comp=N,250μm,1.5s						
SMRF	**Simiane la Rot**	**1.09**	**241**	*e*Pn	**Pb**	**05 23 44.5**	**+0.5**
	SNR=1.0						
SMRF				*e*Sg	**Sg**	**05 23 57.6**	**-0.9**
	comp=N,29nm,0.3s,SNR=1.0						
SMRF				*e*Sn	**Sb**	**05 23 59.1**	**+1.0**
	comp=N,44nm,0.4s,SNR=1.0						
SMRF	**Simiane la Rot**	**1.09**	**241**	*e*Pn	**Pb**	**05 23 44.5**	**+0.5**
	SNR=1.0						
SMRF				*e*Sg	**Sg**	**05 23 57.6**	**-0.9**
	comp=N,14nm,0.3s,SNR=1.0						
SMRF				*e*Sn	**Sb**	**05 23 59.1**	**+1.0**
	comp=N,22nm,0.4s,SNR=1.0						
BSTF	**la Bastide-des**	**1.09**	**236**	Pg	**Pn**	**05 23 46.0**	**+1.6**
ROTM	**Rocchetta Tana**	**1.09**	**71**	AML	AML		
	comp=E,194μm,0.5s						
ROTM				AML	AML		
	comp=N,211μm,0.6s						
ROTM				AML	AML		
	comp=N,211μm,0.6s						
ROTM				AML	AML		
	comp=E,194μm,0.5s						
RUSF	**Rustrel**	**1.16**	**241**	Pg	**Pn**	**05 23 46.0**	**+0.7**
RUSF	**Rustrel**	**1.16**	**241**	Pg	**Pg**	**05 23 45.0**	**-0.7**
PCP	**Piancastagn**	**1.18**	**88**	P	**Pg**	**05 23 45.1**	**-1.0**
PCP				S	**Sg**	**05 24 01.3**	**-0.2**
PCP	**Piancastagn**	**1.18**	**88**	P	**Pg**	**05 23 45.1**	**-1.0**
PCP				S	**Sg**	**05 24 01.3**	**-0.2**
PCP				AML	AML		
	comp=E,56μm,0.4s						
PCP				AML	AML		
	comp=N,76μm,0.2s						
PCP				AML	AML		
	comp=N,76μm,0.2s						
PCP				AML	AML		
	comp=E,56μm,0.4s						
CIRO	**Champorcher**	**1.20**	**23**	P	**Pg**	**05 23 45.1**	**-1.3**
CIRO				S	**Sg**	**05 24 01.6**	**-0.4**
CIRO	**Champorcher**	**1.20**	**23**	P	**Pg**	**05 23 45.1**	**-1.3**
CIRO				S	**Sg**	**05 24 01.6**	**-0.4**
LMR	**La Mourre**	**1.20**	**194**	*e*Pn	**Pg**	**05 23 46.0**	**-0.5**
	SNR=1.0						
LMR				*e*Sn	**Sg**	**05 24 01.6**	**-0.6**
	comp=E,27nm,0.2s,SNR=1.0						
LMR	**La Mourre**	**1.20**	**194**	*e*Pn	**Pg**	**05 23 46.0**	**-0.5**
	SNR=1.0						
LMR				*e*Sn	**Sg**	**05 24 01.6**	**-0.6**
	comp=E,13nm,0.2s,SNR=1.0						
VIVF	**Saint-Julien-l**	**1.62**	**283**	*e*Pn	**Pn**	**05 23 52.6**	**+0.9**
	SNR=1.0						
VIVF				*e*Sn	**Sn**	**05 24 12.0**	**-0.5**
	comp=E,8.2nm,0.3s,SNR=1.0						
VIVF	**Saint-Julien-l**	**1.62**	**283**	*e*Pn	**Pn**	**05 23 52.6**	**+0.9**
	SNR=1.0						
VIVF				*e*Sn	**Sn**	**05 24 12.0**	**-0.5**
	comp=E,4.1nm,0.3s,SNR=1.0						
OG35	**Corcelles**	**1.80**	**329**	Pn	**Pb**	**05 23 56.8**	**+0.6**
OG35	**Corcelles**	**1.80**	**329**	Pn	**Pb**	**05 23 56.8**	**+0.6**
TRBF	**Trabuc cave**	**2.15**	**260**	Pn	**Pn**	**05 23 59.5**	**+0.7**
TRBF	**Trabuc cave**	**2.15**	**260**	Pn	**Pn**	**05 23 59.5**	**+0.7**
LASF	**Ste Croix**	**2.22**	**260**	*e*Pn	**Pn**	**05 24 00.1**	**+0.2**
	SNR=1.0						
LASF				*e*Sn	**Sn**	**05 24 24.7**	**-2.5**
	SNR=1.0						
LASF	**Ste Croix**	**2.22**	**260**	*e*Pn	**Pn**	**05 24 00.1**	**+0.2**
	SNR=1.0						
LASF				*e*Sn	**Sn**	**05 24 24.7**	**-2.5**
	SNR=1.0						
PGF	**Pioggiola**	**2.48**	**141**	*e*Pn	**Pn**	**05 24 03.5**	**-0.1**
	SNR=1.0						
PGF				*e*Sn	**Sn**	**05 24 33.0**	**-0.8**
	comp=E,5.0nm,0.3s,SNR=1.0						
PGF	**Pioggiola**	**2.48**	**141**	*e*Pn	**Pn**	**05 24 03.5**	**-0.1**
	SNR=1.0						
PGF				*e*Sn	**Sn**	**05 24 33.0**	**-0.8**
	comp=E,2.5nm,0.3s,SNR=1.0						
LBL	**Lubilhac**	**2.69**	**287**	Pn	**Pn**	**05 24 07.9**	**+1.5**
LBL	**Lubilhac**	**2.69**	**287**	Pn	**Pn**	**05 24 07.9**	**+1.5**
NDIM	**Novi di Modena**	**2.88**	**81**	AML	AML		
	comp=N,699μm,0.5s						
NDIM				AML	AML		
	comp=E,1095μm,0.1s						
NDIM				AML	AML		
	comp=N,699μm,0.5s						
NDIM				AML	AML		
	comp=E,1095μm,0.1s						
CAF	**Calviac**	**3.47**	**279**	*e*Pn	**Pn**	**05 24 18.1**	**+1.0**
	SNR=1.0						
CAF	**Calviac**	**3.47**	**279**	*e*Pn	**Pn**	**05 24 18.1**	**+1.0**
	SNR=1.0						
KHC	**Kasperske Hory**	**6.51**	**42**	*e*PN	**Pn**	**05 24 59.0**	**+0.2**
KHC				*ex*	x	05 25 34.0	
KHC				*e*SN	**Sn**	**05 26 10.0**	**-2.9**
KHC	**Kasperske Hory**	**6.51**	**42**	Pn	**Pn**	**05 24 59.0**	**+0.2**

*SFS **03** 05:27:41.0, 37°.20N×12°.70W, h0km, ML3.6*
*MDD **03** 05:27:42.2±1.7, 37°.32N×12°.72W, h0km, mb3.7/14, Error ellipse: s-maj=14.8km s-min=13.6km az=51.0, PRXIMO SOLUCIN POBRE*
*IGIL **03** 05:27:42.6, 37°.29N×12°.74W, h0km, ML2.1*
*INMG **03** 05:27:44.0±1.3, 37°.18N×13°.09W, h10km, ML2.2, Error ellipse: s-maj=6.4km s-min=5.1km az=81.0*
*CSEM **03** 05:27:45.1±0.3, 37°.44N×12°.48W, h10km, mb3.7, Error ellipse: s-maj=6.2km s-min=5.4km az=55.0*
ISC 03 05:27:41.0±2.7, 37°.42N±0°.07×12°.6W±0°.1, h10km, n98, σ2°71/179, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.02**	**94**	*e*Sn	**Sn**	**05 29 06.1**	**+1.1**
PFVI	**Vila Bisbo**	**3.02**	**94**	*e*Sn	**Sn**	**05 29 06.1**	**+1.1**
PMAFR	**Mafra**	**3.02**	**59**	*e*Pn	**Pb**	**05 28 32.0**	**-2.9**
PMAFR				*e*Sn	**Sb**	**05 29 09.4**	**-2.5**
PMAFR				A	A	05 29 10.5	
	13nm,0.2s						
PMAFR	**Mafra**	**3.02**	**59**	P	**Pb**	**05 28 31.8**	**-3.2**
	6.7nm,0.3s,SNR=4.0						
PMAFR				S	**Sn**	**05 29 09.0**	**+3.8**
	12nm,0.2s,SNR=10						
PMAFR	**Mafra**	**3.02**	**59**	*e*Pn	**Pb**	**05 28 32.0**	**-2.9**
PMAFR				S	**Sn**	**05 29 09.0**	**+3.8**
	12nm,0.2s,SNR=10						
PMAFR				*e*Sn	**Sb**	**05 29 09.4**	**-2.5**
PTEO	**Sao Teotonio**	**3.08**	**87**	*e*Pn	**Pn**	**05 28 31.8**	**+2.1**
PTEO				*e*Sn	**Sn**	**05 29 09.0**	**+2.4**
PTEO				A	A	05 29 15.5	
	4.5nm,0.7s						
PTEO	**Sao Teotonio**	**3.08**	**87**	P	**Pn**	**05 28 31.8**	**+2.1**
PTEO				S	**Sn**	**05 29 09.0**	**+2.4**
	2.2nm,0.7s						
PTEO	**Sao Teotonio**	**3.08**	**87**	P	**Pn**	**05 28 31.8**	**+2.1**
PTEO				S	**Sn**	**05 29 09.0**	**+2.4**
	2.2nm,0.7s						
MORF	**Marmelete**	**3.14**	**91**	*e*Pn	**Pb**	**05 28 34.5**	**-2.5**
MORF	**Marmelete**	**3.14**	**91**	P	**Pb**	**05 28 34.5**	**-2.5**
MORF	**Marmelete**	**3.14**	**91**	P	**Pb**	**05 28 34.5**	**-2.5**
PNCL	**Nicolau / Gran**	**3.29**	**77**	*e*Pn	**Pb**	**05 28 36.2**	**-3.3**
PNCL				*e*Sn	**Sn**	**05 29 14.3**	**+2.5**
PNCL				A	A	05 29 21.1	
	2.8nm,0.1s						
PNCL	**Nicolau / Gran**	**3.29**	**77**	*e*Pn	**Pb**	**05 28 36.2**	**-3.3**
PNCL				*e*Sn	**Sn**	**05 29 14.3**	**+2.5**
MESJ	**Messejana**	**3.50**	**82**	*e*P	**Pn**	**05 28 38.1**	**+2.7**
MESJ				*e*S	**Sn**	**05 29 19.2**	**+2.3**
MESJ				AML	AML	05 29 22.3	
	comp=N,2.2nm,0.5s						
MESJ	**Messejana**	**3.50**	**82**	*e*Pn	**Pb**	**05 28 38.8**	**-4.2**
MESJ				*e*Sn	**Sn**	**05 29 18.6**	**+1.8**
MESJ				A	A	05 29 24.9	
	comp=N,2.1nm,0.1s						
MESJ	**Messejana**	**3.50**	**82**	P	**Pn**	**05 28 38.1**	**+2.7**
MESJ				S	**Sn**	**05 29 19.2**	**+2.3**
	comp=N,2.2nm,0.5s						
MESJ	**Messejana**	**3.50**	**82**	P	**Pn**	**05 28 38.1**	**+2.7**
MESJ	**Messejana**	**3.50**	**82**	*e*Pn	**Pb**	**05 28 38.8**	**-4.2**
MESJ				*e*Sn	**Sn**	**05 29 18.6**	**+1.8**
MESJ				S	**Sn**	**05 29 19.2**	**+2.3**
	comp=N,2.2nm,0.5s						
ALMR	**Almeirim**	**3.60**	**60**	*e*P	**Pn**	**05 28 39.9**	**+3.0**
ALMR				*e*S	**Sn**	**05 29 22.1**	**+2.7**
ALMR				AML	AML	05 29 26.3	
	comp=N,11nm,0.6s						
ALMR	**Almeirim**	**3.60**	**60**	*e*Pn	**Pb**	**05 28 40.5**	**-4.3**
ALMR				*e*Sn	**Sn**	**05 29 22.8**	**+3.3**
ALMR				A	A	05 29 27.8	
	comp=N,7.1nm,0.2s						
ALMR	**Almeirim**	**3.60**	**60**	P	**Pn**	**05 28 39.9**	**+3.0**
ALMR				S	**Sn**	**05 29 22.1**	**+2.7**
	comp=N,5.5nm,0.6s						
ALMR	**Almeirim**	**3.60**	**60**	P	**Pn**	**05 28 39.8**	**+3.0**
ALMR	**Almeirim**	**3.60**	**60**	*e*Pn	**Pb**	**05 28 40.5**	**-4.3**
ALMR				S	**Sn**	**05 29 22.1**	**+2.7**
	comp=N,5.5nm,0.6s						
ALMR				*e*Sn	**Sn**	**05 29 22.8**	**+3.3**
PCVE	**Castro Verde**	**3.63**	**85**	*e*Pn	**Pn**	**05 28 40.2**	**+3.0**
PCVE				*e*Sn	**Sn**	**05 29 21.5**	**+1.4**
PCVE				A	A	05 29 29.8	
	comp=N,1.7nm,0.3s						
PCVE	**Castro Verde**	**3.63**	**85**	P	**Pn**	**05 28 40.2**	**+3.0**
PCVE				S	**Sn**	**05 29 21.5**	**+1.4**
	comp=N,1.7nm,0.3s		

PBDV				S		Sn	05 29 26.1 +3.7
	comp=N,1.8nm,0.3s						
PBDV	**Barranco-do-Ve**	**3.72**	**91**	P		**Pn**	05 28 41.5 +3.0
PBDV				S		**Sn**	05 29 26.1 +3.7
	comp=N,1.8nm,0.3s						
EVO	**Evora**	**3.78**	**72**	*e*Pn		**Pn**	05 28 43.0 +3.6
EVO				*e*Sn		**Sn**	05 29 26.3 +2.3
EVO				A		A	05 29 32.0
	comp=N,4.0nm,0.1s						
EVO	**Evora**	**3.78**	**72**	P		**Pn**	05 28 42.4 +2.9
EVO				S		**Sn**	05 29 25.8 +1.9
EVO	**Evora**	**3.78**	**72**	P		**Pn**	05 28 42.3 +2.9
EVO	**Evora**	**3.78**	**72**	*e*Pn		**Pn**	05 28 43.0 +3.6
EVO				S		**Sn**	05 29 25.8 +1.9
EVO				*e*Sn		**Sn**	05 29 26.3 +2.3
PBEJ	**Beja**	**3.79**	**79**	*e*Pn		**Pn**	05 28 42.7 +3.2
PBEJ				*e*Sn		**Sn**	05 29 27.4 +3.2
PBEJ				A		A	05 29 31.3
	comp=N,2.9nm,0.2s						
PBEJ	**Beja**	**3.79**	**79**	P		**Pn**	05 28 42.7 +3.2
PBEJ				S		**Sn**	05 29 27.4 +3.2
	comp=N,1.4nm,0.2s						
PBEJ	**Beja**	**3.79**	**79**	P		**Pn**	05 28 42.7 +3.2
PBEJ				S		**Sn**	05 29 27.4 +3.2
	comp=N,1.4nm,0.2s						
PVAQ	**Vaqueiros**	**3.88**	**89**	*e*Pn		**Pn**	05 28 43.5 +2.8
PVAQ				*e*Sn		**Sn**	05 29 28.2 +1.8
PVAQ				A		A	05 29 33.4
	comp=N,3.4nm,0.3s						
PVAQ	**Vaqueiros**	**3.88**	**89**	P		**Pn**	05 28 43.5 +2.8
PVAQ				S		**Sn**	05 29 28.2 +1.8
	comp=N,3.4nm,0.3s						
PVAQ	**Vaqueiros**	**3.88**	**89**	P		**Pn**	05 28 43.5 +2.8
PVAQ				S		**Sn**	05 29 28.2 +1.8
	comp=N,3.4nm,0.3s						
PTOM	**Tomar**	**3.94**	**55**	*e*Pn		**Pn**	05 28 45.7 +4.1
PTOM				*e*Sn		**Sn**	05 29 31.8 +3.9
PTOM				A		A	05 29 37.1
	comp=N,5.3nm,0.3s						
PTOM	**Tomar**	**3.94**	**55**	P		**Pn**	05 28 45.7 +4.1
PTOM				S		**Sn**	05 29 31.8 +3.9
	comp=N,2.7nm,0.3s						
PTOM	**Tomar**	**3.94**	**55**	P		**Pn**	05 28 45.7 +4.1
PTOM				S		**Sn**	05 29 31.8 +3.9
	comp=N,2.7nm,0.3s						
EGRO	**El Granado**	**4.07**	**87**	P		**Pn**	05 28 45.6 +2.4
	comp=N,1.1nm,0.2s,SNR=13						
EGRO				S		**Sn**	05 29 33.0 +2.1
	comp=N,3.5nm,0.2s						
EGRO	**El Granado**	**4.07**	**87**	P		**Pn**	05 28 45.6 +2.4
	comp=N,1.1nm,0.2s,SNR=13						
EGRO				S		**Sn**	05 29 33.0 +2.1
	comp=N,3.5nm,0.2s						
PCAS	**Casmilo, Conde**	**4.14**	**49**	*e*Pn		**Pn**	05 28 48.6 +4.3
PCAS				*e*Sn		**Sn**	05 29 36.3 +3.5
PCAS				A		A	05 29 43.6
	comp=N,1.5nm,0.3s						
PESTR	**Estremoz**	**4.20**	**68**	*e*Pn		**Pn**	05 28 48.3 +3.2
PESTR				*e*Sn		**Sn**	05 29 36.4 +2.2
PESTR				A		A	05 29 42.1
	comp=N,1.9nm,0.7s						
PESTR	**Estremoz**	**4.20**	**68**	*e*Pn		**Pn**	05 28 48.3 +3.2
PESTR				*e*Sn		**Sn**	05 29 36.4 +2.2
PBAR	**Barrancos**	**4.46**	**79**	*e*Pn		**Pn**	05 28 51.8 +3.1
PBAR				*e*Sn		**Sn**	05 29 42.8 +2.1
PBAR				A		A	05 29 50.5
	comp=N,3.2nm,0.4s						
PBAR	**Barrancos**	**4.46**	**79**	Pn		**Pn**	05 28 51.8 +3.1
PBAR				S		**Sn**	05 29 42.8 +2.1
	comp=N,3.2nm,0.4s						
PBAR	**Barrancos**	**4.46**	**79**	Pn		**Pn**	05 28 51.8 +3.1
PBAR				S		**Sn**	05 29 42.8 +2.1
	comp=N,3.2nm,0.4s						
PMRV	**Marv??o**	**4.55**	**62**	*e*Pn		**Pn**	05 28 53.2 +3.3
PMRV				*e*Sn		**Sn**	05 29 45.5 +2.7
PMRV				A		A	05 29 49.8
	comp=N,2.2nm,0.2s						
PMRV	**Marv??o**	**4.55**	**62**	P		**Pn**	05 28 53.2 +3.3
PMRV				S		**Sn**	05 29 45.5 +2.7
	comp=N,2.2nm,0.2s						
PMRV	**Marv??o**	**4.55**	**62**	P		**Pn**	05 28 53.2 +3.3
PMRV				S		**Sn**	05 29 45.5 +2.7
	comp=N,2.2nm,0.2s						
EBAD	**Badajoz**	**4.60**	**71**	P		**Pn**	05 28 53.0 +2.4
	comp=N,0.6nm,0.2s,SNR=9.1						
EBAD				S		**Sn**	05 29 44.7 +0.7
	comp=N,2.2nm,0.2s,SNR=5.2						
EBAD	**Badajoz**	**4.60**	**71**	P		**Pn**	05 28 53.0 +2.4
	comp=N,0.6nm,0.2s,SNR=9.1						
EBAD				S		**Sn**	05 29 44.7 +0.7
	comp=N,2.2nm,0.2s,SNR=5.2						
PCBR	**Castelo Branco**	**4.67**	**57**	*e*Pn		**Pn**	05 28 55.5 +3.9
PCBR				*e*Sn		**Sn**	05 29 47.8 +1.9
PCBR				A		A	05 29 55.9
	comp=N,1.7nm,0.7s						
PCBR	**Castelo Branco**	**4.67**	**57**	P		**Pn**	05 28 55.5 +3.9
PCBR				S		**Sn**	05 29 47.8 +1.9
	comp=N,0.9nm,0.7s						
PCBR	**Castelo Branco**	**4.67**	**57**	P		**Pn**	05 28 55.5 +3.9
PCBR				S		**Sn**	05 29 47.8 +1.9
	comp=N,0.9nm,0.7s						
EMIN	**Mina Concepcio**	**4.71**	**84**	P		**Pn**	05 28 54.3 +2.1
	comp=N,0.5nm,0.1s,SNR=8.7						
EMIN				S		**Sn**	05 29 47.3 +0.4
	comp=N,0.9nm,0.2s,SNR=9.1						
EMIN	**Mina Concepcio**	**4.71**	**84**	P		**Pn**	05 28 54.3 +2.1
	comp=N,0.5nm,0.1s,SNR=8.7						
EMIN				S		**Sn**	05 29 47.3 +0.4
	comp=N,0.9nm,0.2s,SNR=9.1						
PVIS	**Viseu**	**4.92**	**47**	*e*Pn		**Pn**	05 28 58.6 +3.6
PVIS				*e*Sn		**Sn**	05 29 54.0 +2.0
PVIS				A		A	05 29 58.3
	comp=N,2.2nm,0.3s						
PVIS	**Viseu**	**4.92**	**47**	P		**Pn**	05 28 58.6 +3.6
PVIS				S		**Sn**	05 29 54.0 +2.0
	comp=N,1.1nm,0.3s						
PVIS	**Viseu**	**4.92**	**47**	P		**Pn**	05 28 58.6 +3.6
PVIS				S		**Sn**	05 29 54.0 +2.0
	comp=N,1.1nm,0.3s						
MTE	**Manteigas**	**4.93**	**51**	*e*Sn		**Sn**	05 29 55.6 +3.2
MTE	**Manteigas**	**4.93**	**51**	S		**Sn**	05 29 55.6 +3.2
MTE	**Manteigas**	**4.93**	**51**	S		**Sn**	05 29 55.6 +3.2
POLO	**Lamas de Olo**	**5.42**	**42**	*e*Pn		**Pn**	05 29 05.7 +3.7
POLO				*e*Sn		**Sn**	05 30 05.4 +1.0
POLO				A		A	05 30 08.7
	comp=N,0.6nm,0.8s						
POLO	**Lamas de Olo**	**5.42**	**42**	*e*Pn		**Pn**	05 29 05.7 +3.7
POLO				*e*Sn		**Sn**	05 30 05.4 +1.0
PCAB	**Cabril**	**5.55**	**38**	*e*Sn		**Sn**	05 30 09.9 +2.4
PCAB	**Cabril**	**5.55**	**38**	S		**Sn**	05 30 09.9 +2.4
PCAB	**Cabril**	**5.55**	**38**	S		**Sn**	05 30 09.9 +2.4
PGAV	**Gavieira, Arco**	**5.63**	**35**	*e*Pn		**Pn**	05 29 08.4 +3.6
PGAV				*e*Sn		**Sn**	05 30 10.4 +0.8
PGAV				A		A	05 30 31.4
	comp=N,1.5nm,0.8s						
PGAV	**Gavieira, Arco**	**5.63**	**35**	*e*Pn		**Pn**	05 29 08.4 +3.6
PGAV				*e*Sn		**Sn**	05 30 10.4 +0.8
ELOB	**Lobios**	**5.65**	**37**	P		**Pn**	05 29 07.5 +2.5
	comp=N,0.2nm,0.2s,SNR=7.9						
ELOB				S		**Sn**	05 30 10.3 +0.2
	comp=N,1.2nm,0.2s,SNR=7.9						
ELOB	**Lobios**	**5.65**	**37**	P		**Pn**	05 29 07.6 +2.5
	comp=N,0.2nm,0.2s,SNR=7.9						
ELOB				S		**Sn**	05 30 10.3 +0.2
	comp=N,1.2nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**5.71**	**47**	*e*Sn		**Sn**	05 30 12.6 +1.1
MVO				A		A	05 30 14.4
	comp=N,1.9nm,0.5s						
MVO	**Moncorvo**	**5.71**	**47**	P		**Pn**	05 29 08.9 +3.0
	comp=N,0.6nm,0.2s,SNR=7.9						
MVO				S		**Sn**	05 30 12.4 +0.9
	comp=N,1.1nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**5.71**	**47**	P		**Pn**	05 29 08.9 +3.0
	comp=N,0.6nm,0.2s,SNR=7.9						
MVO				*e*Sn		**Sn**	05 30 12.6 +1.1
ECAB	**El Cabril**	**5.72**	**81**	P		**Pn**	05 29 08.2 +2.1
	comp=N,0.4nm,0.1s,SNR=11						
ECAB				S		**Sn**	05 30 11.8 0.0
	comp=N,0.7nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**5.72**	**81**	P		**Pn**	05 29 08.2 +2.1
	comp=N,0.4nm,0.1s,SNR=11						
ECAB				S		**Sn**	05 30 11.8 0.0
	comp=N,0.7nm,0.2s,SNR=7.9						
EPLA	**Plasencia**	**5.73**	**61**	P		**Pn**	05 29 09.2 +3.0
	comp=N,0.9nm,0.3s,SNR=5.9						
EPLA				S		**Sn**	05 30 13.5 +1.4
	comp=N,1.4nm,0.2s						
EPLA	**Plasencia**	**5.73**	**61**	P		**Pn**	05 29 09.2 +3.0
	comp=N,0.9nm,0.3s,SNR=5.9						
EPLA				S		**Sn**	05 30 13.5 +1.4
	comp=N,1.4nm,0.2s						
EMAZ	**Mazaricos**	**6.17**	**26**	S		**Sn**	05 30 19.9 -3.0
	comp=N,1.2nm,0.1s,SNR=7.9						
PBRG	**Braganca**	**6.29**	**44**	*e*Pn		**Pn**	05 29 17.1 +3.3
PBRG	**Braganca**	**6.29**	**44**	Pn		**Pn**	05 29 17.1 +3.3
PBRG	**Braganca**	**6.29**	**44**	Pn		**Pn**	05 29 17.1 +3.3
ECAL	**Calabor**	**6.38**	**43**	P		**Pn**	05 29 18.2 +3.0
	comp=N,0.4nm,0.2s,SNR=7.9						
ECAL				S		**Sn**	05 30 28.7 +0.6
	comp=N,0.8nm,0.2s,SNR=4.0						
ECAL	**Calabor**	**6.38**	**43**	P		**Pn**	05 29 18.2 +3.0
	comp=N,0.4nm,0.2s,SNR=7.9						
ECAL				S		**Sn**	05 30 28.7 +0.6
	comp=N,0.8nm,0.2s,SNR=4.0						
EAGO	**Agolada(Pontev**	**6.38**	**31**	P		**Pn**	05 29 17.4 +2.3
	comp=N,0.3nm,0.1s,SNR=7.9						
EAGO				S		**Sn**	05 30 25.4 -2.7
	comp=N,0.6nm,0.1s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.38**	**31**	P		**Pn**	05 29 17.4 +2.3
	comp=N,0.3nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**6.39**	**81**	P		**Pn**	05 29 17.3 +2.1
	comp=N,0.6nm,0.1s,SNR=7.9						
EADA				S		**Sn**	05 30 27.5 -0.8
	comp=N,0.5nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**6.39**	**81**	P		**Pn**	05 29 17.3 +2.1
	comp=N,0.6nm,0.1s,SNR=7.9						
EADA				S		**Sn**	05 30 27.5 -0.8
	comp=N,0.5nm,0.1s,SNR=7.9						
PAB	**San Pablo**	**6.80**	**69**	P		**Pn**	05 29 23.1 +2.1
	comp=N,0.2nm,0.2s,SNR=7.9						
PAB				S		**Sn**	05 30 38.8 +0.2
	comp=N,0.3nm,0.2s,SNR=4.0						
PAB	**San Pablo**	**6.80**	**69**	P		**Pn**	05 29 23.1 +2.1
	comp=N,0.2nm,0.2s,SNR=7.9						
PAB				S		**Sn**	05 30 38.8 +0.2
	comp=N,0.3nm,0.2s,SNR=4.0						
ESDC	**Sonseca Array**	**7.13**	**69**	P		**Pn**	05 29 27.5 +2.1
	comp=N,1.3nm,0.1s,baz=252,slow=12,SNR=9.3						
ESDC				S		**Sn**	05 30 46.7 +0.3
	comp=N,0.2nm,0.2s,baz=348,slow=39,SNR=4.0						
ESDC	**Sonseca Array**	**7.13**	**69**	P		**Pn**	05 29 27.5 +2.1
	comp=N,1.3nm,0.1s,baz=252,slow=12,SNR=9.3						
ESDC				S		**Sn**	05 30 46.7 +0.3
	comp=N,0.2nm,0.2s,SNR=4.0						
GUD	**Guadarrama**	**7.31**	**61**	P		**Pn**	05 29 29.9 +1.9
	comp=N,0.5nm,0.2s,SNR=7.9						
GUD				S		**Sn**	05 30 48.1 -3.0
	comp=N,0.4nm,0.3s,SNR=4.0						
GUD	**Guadarrama**	**7.31**	**61**	P		**Pn**	05 29 29.9 +1.9
	comp=N,0.5nm,0.2s,SNR=7.9						

*ISK **03** 05:30:04.9, 37.°07N×28.°52E, h13km, ML2.1/5*
*ISCJB **03** 05:30:05.5±0.6, 37.°11N±0.°04×28.°55E±0.°04, h0km, Error ellipse: s-maj=6.8km s-min=3.4km az=39.2*
*CSEM **03** 05:30:05.7±0.3, 37.°10N×28.°55E, h1km, ML2.1, Error ellipse: s-maj=8.4km s-min=4.3km az=41.0, Suspected Mining explosion.*
*DDA **03** 05:30:05.3, 37.°07N×28.°53E, h7km, Ml2.3, Suspected Mining explosion.*

ISC 03 05:30:06.0±0.9, **37.°11N**±0.°03×**28.°53E**±0.°03, **h0**km, **n27**, σ1°**75**/43, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.20**	**278**	PG	**Pg**	05 30 09.7	-0.1
YER				SG	**Sg**	05 30 13.5	+1.1
YER	**Yerkesik**	**0.20**	**278**	*e*Pg	**Pg**	05 30 09.7	-0.1
YER				*e*Sg	**Sg**	05 30 13.5	+1.1
TURN	**Turunc**	**0.24**	**166**	PG	**Pg**	05 30 12.6	+1.9
TURN				SG	**Sg**	05 30 18.7	+4.9
TURN	**Turunc**	**0.24**	**166**	*i* P	**Pg**	05 30 12.3	+1.7
TURN				*i* S	**Sg**	05 30 18.7	+4.9
TURN	**Turunc**	**0.24**	**166**	P	**Pg**	05 30 12.4	+1.7
TURN				S	**Sg**	05 30 18.7	+4.9
DALY	**Dalyan (Mu¨la**	**0.31**	**161**	PG	**Pg**	05 30 11.3	-0.6
DALY				SG	**Sg**	05 30 15.7	-0.2
DALY	**Dalyan (Mu¨la**	**0.31**	**161**	*i* P	**Pg**	05 30 10.4	-1.5
DALY				*i* S	**Sg**	05 30 16.1	+0.3
DALY	**Dalyan (Mu¨la**	**0.31**	**161**	P	**Pg**	05 30 10.4	-1.5
DALY	**Dalyan (Mu¨la**	**0.31**	**161**	*e*Pg	**Pg**	05 30 11.3	-0.6
DALY				*e*Sg	**Sg**	05 30 15.7	-0.2
DALY				S	**Sg**	05 30 16.1	+0.3
TAVA	**DENIZLI_Tavas**	**0.47**	**40**	*i* P	**Pg**	05 30 15.7	+0.7
TAVA	**DENIZLI_Tavas**	**0.47**	**40**	*i* P	**Pg**	05 30 15.8	+0.7
TAVA	**DENIZLI_Tavas**	**0.47**	**40**	P	**Pg**	05 30 15.7	+0.7
FETY	**Fethiye**	**0.65**	**137**	PG	**Pg**	05 30 16.8	-1.6
FETY				SG	**Sb**	05 30 26.9	-2.9
FETY	**Fethiye**	**0.65**	**137**	*e*Pg	**Pg**	05 30 16.8	-1.6
FETY	**Fethiye**	**0.65**	**137**	P	**Pg**	05 30 17.1	-1.3
FETY				S	**Sg**	05 30 26.4	-0.4
AYDN	**Tasoluk**	**0.76**	**317**	*i* P	**Pg**	05 30 20.4	-0.2
AYDN				*i* S	**Sg**	05 30 31.1	+0.7
AYDN	**Tasoluk**	**0.76**	**317**	P	**Pg**	05 30 20.4	-0.2
AYDN				S	**Sg**	05 30 31.1	+0.7
BDRM	**Kayabasi**	**0.87**	**268**	*i* P	**Pb**	05 30 23.7	-0.3
BDRM				*i* S	**Sb**	05 30 34.9	-1.3
BDRM	**Kayabasi**	**0.87**	**268**	P	**Pb**	05 30 23.7	-0.3
BDRM				S	**Sb**	05 30 34.9	-1.3
BODT	**Bodrum**	**0.98**	**268**	PG	**Pg**	05 30 23.9	-0.8
BODT	**Bodrum**	**0.98**	**268**	*e*Pg	**Pg**	05 30 23.9	-0.8
AYDB	**Zeytinkoy-Aydi**	**0.98**	**329**	PG	**Pg**	05 30 24.8	0.0
AYDB	**Zeytinkoy-Aydi**	**0.98**	**329**	*e*Pg	**Pg**	05 30 24.8	0.0
AKAS	**Kas**	**1.23**	**135**	PN	**Pg**	05 30 28.1	-1.5
AKAS	**Kas**	**1.23**	**135**	*i* P	**Pn**	05 30 30.5	-0.1
AKAS				*i* S	**Sn**	05 30 49.9	+1.9
AKAS	**Kas**	**1.23**	**135**	*e*Pn	**Pg**	05 30 28.1	-1.5
AKAS	**Kas**	**1.23**	**135**	P	**Pn**	05 30 30.5	-0.1

*DDA **03** 05:30:06.0, 37.°94N×29.°02E, h8km, Ml2.0*
*ISK **03** 05:30:36.8, 39.°15N×29.°13E, h10km, ML1.9/4*
*ISCJB **03** 05:30:37.2±0.5, 39.°10N±0.°04×29.°13E±0.°04, h13km±3km, Error ellipse: s-maj=6.3km s-min=5.1km az=151.1*
*CSEM **03** 05:30:37.1±0.1, 39.°11N×29.°14E, h12km, ML1.9, Error ellipse: s-maj=3.6km s-min=2.5km az=127.0*

ISC 03 05:30:36.6±0.9, **39.°11N**±0.°03×**29.°14E**±0.°03, **h10**km±7km, **n21**, σ1°**04**/32, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHAP	**Saphane-Kutahy**	**0.10**	**143**	PG	**Pb**	05 30 40.9	+0.1
SHAP				SG	**Sg**	05 30 43.0	+1.6
SHAP	**Saphane-Kutahy**	**0.10**	**143**	*e*Pg	**Pb**	05 30 40.9	+0.1
SHAP				*e*Sg	**Sg**	05 30 43.0	+1.6
SMAA	**Simav-Kutahya**	**0.12**	**267**	PG	**Pb**	05 30 40.6	-0.5
SMAA				SG	**Sg**	05 30 42.7	+0.9
SMAA	**Simav-Kutahya**	**0.12**	**267**	*e*Pg	**Pb**	05 30 40.6	-0.5
SMAA				*e*Sg	**Sg**	05 30 42.7	+0.9
SIMA	**Simav-Kutahya**	**0.12**	**259**	PG	**Pb**	05 30 40.5	-0.6
SIMA				SG	**Sg**	05 30 42.4	+0.6
SIMA	**Simav-Kutahya**	**0.12**	**259**	*e*Pg	**Pb**	05 30 40.5	-0.6
SIMA				*e*Sg	**Sg**	05 30 42.4	+0.6
GDZ	**Gediz**	**0.27**	**94**	*i* P	**Pg**	05 30 37.7	-4.4
GDZ				*i* S	**Sg**	05 30 46.1	+0.4
TVSB	**Tavsanli**	**0.42**	**36**	PG	**Pg**	05 30 45.1	+0.1
TVSB	**Tavsanli**	**0.42**	**36**	*e*Pg	**Pg**	05 30 45.1	+0.1
KULA	**Kula-Manisa**	**0.70**	**212**	PG	**Pb**	05 30 50.9	0.0
KULA	**Kula-Manisa**	**0.70**	**212**	*e*Pg	**Pb**	05 30 50.9	0.0
MANT	**Manisa**	**0.77**	**217**	*i* P	**Pb**	05 30 52.0	-0.1
MANT				*i* S	**Sg**	05 31 01.6	+0.2
MANT	**Manisa**	**0.77**	**217**	P	**Pb**	05 30 52.0	-0.1
MANT				S	**Sg**	05 31 01.6	+0.2
KHAL	**Karahalli**	**0.79**	**159**	*i* P	**Pg**	05 30 52.2	+0.4
KHAL				*i* S	**Sg**	05 31 02.0	0.0
KHAL	**Karahalli**	**0.79**	**159**	P	**Pg**	05 30 52.2	+0.4
BORA	**Eskisehir**	**1.28**	**52**	PN	**Pb**	05 31 01.0	+0.2
BORA	**Eskisehir**	**1.28**	**52**	*e*Pn	**Pb**	05 31 01.0	+0.2
BORA				S	**Sg**	05 31 18.7	+1.0
YLV	**Yalova**	**1.47**	**7**	PN	**Pn**	05 31 03.3	+0.1
YLV	**Yalova**	**1.47**	**7**	*e*Pn	**Pn**	05 31 03.3	+0.1
ARMT	**Armutlu**	**1.47**	**352**	PN	**Pn**	05 31 03.6	+0.4
ARMT	**Armutlu**	**1.47**	**352**	*e*Pn	**Pn**	05 31 03.6	+0.4

MEX 03 05:47:01.1±0.4, **18.°05N**×**97.°73W**, **h56**km±5km, **MD3.8**,

Central Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPIG	**Tehuac#an**	**0.51**	**44**	*e*P	Pn	05 47 11.7	-1.3
TPIG				*e*S	Sn	05 47 19.9	-1.8
HMTT	**Tlapaneco**	**0.83**	**253**	*e*P	Pn	05 47 15.2	-1.7
HMTT				*e*S	Sn	05 47 26.3	-2.1
TLIG	**Tlapa**	**0.93**	**239**	*e*P	Pn	05 47 17.1	-1.1
TLIG				*e*S	Sn	05 47 29.0	-1.9
VHO	**Vista Hermosa**	**1.36**	**135**	*i* S	Sn	05 47 22.9	-18
PLIG	**Platanillo**	**1.72**	**282**	*e*P	Pn	05 47 26.7	-2.1
PLIG				*e*S	Sn	05 47 47.8	-1.9
MEIG	**Mezcala**	**1.80**	**266**	*e*P	Pn	05 47 26.6	-3.4
MEIG				*e*S	Sn	05 47 46.3	-5.4
LVIG	**Laguna Verde**	**2.08**	**37**	*i* P	Pn	05 47 38.5	+4.9
PANG	**Puerto Angel**	**2.66**	**153**	*e*P	Pn	05 47 25.4	-16

*ISK **03** 05:47:41.1, 36.°78N×31.°23E, h26km±1km, ML2.6/4*
*CSEM **03** 05:47:42.3, 37.°01N×30.°89E, h8km, ML2.7*
*DDA **03** 05:47:42.3, 37.°01N×30.°89E, h8km, Ml2.7*

ISC 03 05:47:43.1±1.1, **36.°87N**±0.°05×**31.°13E**±0.°03, **h32**km±13km, **n27**, σ2°**65**/36, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEPZ	**Antalya-Kepez**	**0.38**	**84**	*i* P	Pn	05 47 58.4	+5.9
KEPZ				*i* S	Sn	05 48 12.0	+13
SUTC	**Sutluce-Ispart**	**0.62**	**350**	PG	**Pn**	05 47 56.0	+0.2
SUTC				SG	**Sn**	05 48 07.1	+2.4
SUTC	**Sutluce-Ispart**	**0.62**	**350**	*e*Pg	**Pn**	05 47 56.0	+0.2
SUTC				*e*Sg	**Sn**	05 48 07.1	+2.4
KORT	**Korkueli**	**0.64**	**283**	PG	**Pn**	05 47 56.9	+0.8
KORT	**Korkueli**	**0.64**	**283**	*i* P	**Pn**	05 47 58.3	+2.2
KORT				*i* S	**Sn**	05 48 11.3	+6.1
KORT	**Korkueli**	**0.64**	**283**	P	**Pn**	05 47 58.3	+2.2
KORT				S	**Sn**	05 48 11.3	+6.1
KORT	**Korkueli**	**0.64**	**283**	*e*Pg	**Pn**	05 47 56.9	+0.8
BCK	**Bucak**	**0.73**	**324**	PG	**Pb**	05 47 57.1	-0.5
BCK				SG	**Sn**	05 48 09.8	+2.3
BCK	**Bucak**	**0.73**	**324**	*e*Pg	**Pb**	05 47 57.1	-0.5
BCK				*e*Sg	**Sn**	05 48 09.8	+2.3
ELL	**Elmali**	**0.99**	**264**	PG	**Pb**	05 48 00.8	-1.0
ELL	**Elmali**	**0.99**	**264**	*e*Pg	**Pb**	05 48 00.8	-1.0
GAZI	**Gazipasa**	**1.14**	**123**	*i* P	Pb	05 48 06.7	+2.4
GAZI				*i* S	Sn	05 48 28.7	+11
BAGO	**Egridir - ISPA**	**1.16**	**347**	*i* P	**Pn**	05 48 00.5	-2.7
BAGO				*i* S	**Sn**	05 48 15.2	-2.7
GOLH	**Golhisar**	**1.31**	**287**	*i* P	**Pn**	05 48 02.0	-3.2
GOLH	**Golhisar**	**1.31**	**287**	P	**Pn**	05 48 02.0	-3.2
DOGA	**KONYA_Doganhis**	**1.31**	**19**	*i* P	**Pn**	05 48 03.4	-1.9
DOGA				*i* S	**Sn**	05 48 18.9	-2.9
AKAS	**Kas**	**1.38**	**243**	PN	**Pn**	05 48 05.8	-0.5
AKAS	**Kas**	**1.38**	**243**	*i* P	**Pn**	05 48 05.7	-0.6
AKAS				*i* S	**Sb**	05 48 24.7	-1.1
AKAS	**Kas**	**1.38**	**243**	P	**Pn**	05 48 05.7	-0.5
AKAS				S	**Sb**	05 48 24.7	-1.1
AKAS	**Kas**	**1.38**	**243**	*e*Pn	**Pn**	05 48 05.8	-0.5
ERMK	**Ermenek**	**1.45**	**98**	*i* P	Pb	05 48 10.8	+1.1
ERMK				*i* S	**Sb**	05 48 31.8	+4.0
ERMK	**Ermenek**	**1.45**	**98**	P	Pb	05 48 10.8	+1.1
ERMK				S	**Sb**	05 48 31.8	+4.0
KONT	**Konya--Tatoy**	**1.46**	**42**	PN	**Pn**	05 48 06.2	-1.1
KONT	**Konya--Tatoy**	**1.46**	**42**	*e*Pn	**Pn**	05 48 06.2	-1.1
FETY	**Fethiye**	**1.66**	**263**	P	**Pn**	05 48 06.7	-3.3
FETY				S	**Sn**	05 48 26.6	-3.6
TEVE	**Tevekalti-Mers**	**1.91**	**102**	PN	**Pn**	05 48 11.7	-1.8
TEVE	**Tevekalti-Mers**	**1.91**	**102**	*e*Pn	**Pn**	05 48 11.7	-1.8

*SOME **03** 05:57:53.2, 43.°35N×74.°55E, h10km*
*KRNET **03** 05:57:53.2±0.1, 43.°36N×74.°57E, h18km, mb2.4*
*NNC **03** 05:57:53.4±1.3, 43.°34N×74.°61E

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	baz=41						
MNAS				⇑*i*S	**Sg**	**05 58 48.6**	**-0.6**
	baz=41						
NRN	**Naryn**	**2.17**	**151**	⇓*i*P	**Pb**	**05 58 31.7**	**-1.1**
	baz=51						
NRN				⇓*i*S	**Sb**	**05 58 59.7**	**-0.3**
	baz=51						
KK31	**Karatay Array**	**2.98**	**267**	⇑Pg	**Pb**	**05 58 48.0**	**+1.6**
	0.3nm,0.3s,baz=244,slow=7.2,SNR=7.7						
KK31				Sn	**Sb**	**05 59 22.5**	**-0.4**
	2.0nm,0.7s,baz=79,slow=29,SNR=7.1						
KK31				⇑Lg	Lg	05 59 33.6	
	0.8nm,0.4s,baz=79,slow=26,SNR=7.3						

*SFS **03** 06:11:59.0, 37.°22N×12.°60W, h0km, ML3.6*
*MDD **03** 06:12:00.0±1.7, 37.°25N×12.°67W, h0km, mb3.7/14, Error ellipse: s-maj=15.6km s-min=12.6km az=62.0, PRXIMO*
*IGIL **03** 06:12:01.3, 37.°22N×12.°64W, h0km, ML2.1*
*CSEM **03** 06:12:02.8±0.4, 37.°41N×12.°47W, h10km, mb3.7, Error ellipse: s-maj=7.5km s-min=6.4km az=71.0*
*INMG **03** 06:12:02.0±1.2, 37.°13N×13.°05W, h10km, ML2.2, Error ellipse: s-maj=7.8km s-min=5.2km az=98.0*

ISC 03 06:11:58.3±3.3, 37.°32N±0.°09×12.°7W±0.°2, h10km, n97, σ1§67/167, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.12**	**92**	*e*Pn	**Pn**	**06 12 48.0**	**+0.4**
PFVI				*e*Sn	**Sn**	**06 13 22.6**	**-2.2**
PFVI	**Vila Bisbo**	**3.12**	**92**	P	**Pn**	**06 12 47.8**	**+0.2**
	2.3nm,0.2s,SNR=7.9						
PFVI				S	**Sn**	**06 13 22.4**	**-2.5**
	4.2nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**3.12**	**92**	*e*Pn	**Pn**	**06 12 48.0**	**+0.4**
PFVI				*e*Sn	**Sn**	**06 13 22.6**	**-2.2**
PMAFR	**Mafra**	**3.17**	**58**	*e*Pn	**Pn**	**06 12 50.7**	**+2.4**
PMAFR				*e*Sn	**Sn**	**06 13 27.3**	**+1.1**
PMAFR				A	A	06 13 28.3	
	10.0nm,0.2s						
PMAFR	**Mafra**	**3.17**	**58**	P	**Pn**	**06 12 49.4**	**+1.1**
	1.9nm,0.1s,SNR=5.7						
PMAFR				S	**Sn**	**06 13 26.3**	**+0.1**
	9.0nm,0.2s,SNR=8.4						
PMAFR	**Mafra**	**3.17**	**58**	P	**Pn**	**06 12 49.4**	**+1.1**
	1.9nm,0.1s,SNR=5.7						
PMAFR	**Mafra**	**3.17**	**58**	*e*Pn	**Pn**	**06 12 50.7**	**+2.4**
PMAFR				S	**Sn**	**06 13 26.3**	**+0.1**
	9.0nm,0.2s,SNR=8.4						
PMAFR				*e*Sn	**Sn**	**06 13 27.3**	**+1.1**
PTEO	**Sao Teotonio**	**3.19**	**85**	*e*Pn	**Pn**	**06 12 49.8**	**+1.2**
PTEO	**Sao Teotonio**	**3.19**	**85**	P	**Pn**	**06 12 49.8**	**+1.2**
PTEO	**Sao Teotonio**	**3.19**	**85**	P	**Pn**	**06 12 49.8**	**+1.2**
MORF	**Marmelete**	**3.25**	**89**	*e*P	**Pn**	**06 12 50.2**	**+0.8**
MORF	**Marmelete**	**3.25**	**89**	*e*Pn	**Pn**	**06 12 50.1**	**+0.7**
MORF	**Marmelete**	**3.25**	**89**	P	**Pn**	**06 12 50.2**	**+0.8**
MORF	**Marmelete**	**3.25**	**89**	P	**Pn**	**06 12 50.2**	**+0.8**
PNCL	**Nicolau / Gran**	**3.42**	**75**	*e*Pn	**Pn**	**06 12 54.3**	**+2.6**
PNCL				*e*Sn	**Sn**	**06 13 32.2**	**-0.1**
PNCL				A	A	06 13 40.3	
	2.8nm,0.4s						
PNCL	**Nicolau / Gran**	**3.42**	**75**	*e*Pn	**Pn**	**06 12 54.3**	**+2.6**
PNCL				*e*Sn	**Sn**	**06 13 32.2**	**-0.1**
MESJ	**Messejana**	**3.62**	**80**	*e*P	**Pn**	**06 12 56.0**	**+1.6**
MESJ				*e*S	**Sn**	**06 13 36.4**	**-0.8**
MESJ				AML	AML	06 13 39.2	
	comp=N,2.2nm,0.1s						
MESJ	**Messejana**	**3.62**	**80**	*e*Pn	**Pn**	**06 12 56.7**	**+2.3**
MESJ				*e*Sn	**Sn**	**06 13 36.4**	**-0.8**
MESJ				A	A	06 13 43.4	
	comp=N,2.0nm,0.3s						
MESJ	**Messejana**	**3.62**	**80**	P	**Pn**	**06 12 56.0**	**+1.6**
MESJ				S	**Sn**	**06 13 36.4**	**-0.8**
	comp=N,2.2nm,0.1s						
MESJ	**Messejana**	**3.62**	**80**	P	**Pn**	**06 12 56.0**	**+1.6**
MESJ	**Messejana**	**3.62**	**80**	*e*Pn	**Pn**	**06 12 56.7**	**+2.3**
MESJ				S	**Sn**	**06 13 36.4**	**-0.8**
	comp=N,2.2nm,0.1s						
PCVE	**Castro Verde**	**3.74**	**84**	*e*Pn	**Pn**	**06 12 58.0**	**+1.9**
PCVE				*e*Sn	**Sn**	**06 13 40.7**	**+0.4**
PCVE				A	A	06 13 49.1	
	comp=N,1.5nm,0.3s						
PCVE	**Castro Verde**	**3.74**	**84**	P	**Pn**	**06 12 58.0**	**+1.9**
PCVE				S	**Sn**	**06 13 40.7**	**+0.4**
	comp=N,1.5nm,0.3s						
PCVE	**Castro Verde**	**3.74**	**84**	P	**Pn**	**06 12 58.0**	**+1.9**
PCVE				S	**Sn**	**06 13 40.7**	**+0.4**
	comp=N,1.5nm,0.3s						
ALMR	**Almeirim**	**3.75**	**59**	*e*P	**Pn**	**06 12 58.1**	**+1.9**
ALMR				*e*S	**Sn**	**06 13 40.4**	**0.0**
ALMR				AML	AML	06 13 42.6	
	comp=N,10nm,0.5s						
ALMR	**Almeirim**	**3.75**	**59**	*e*Pn	**Pn**	**06 12 58.5**	**+2.3**
ALMR				*e*Sn	**Sn**	**06 13 40.6**	**+0.2**
ALMR				A	A	06 13 46.6	
	comp=N,8.8nm,0.8s						
ALMR	**Almeirim**	**3.75**	**59**	P	**Pn**	**06 12 58.1**	**+1.9**
ALMR				S	**Sn**	**06 13 40.4**	**0.0**
	comp=N,5.1nm,0.5s						
ALMR	**Almeirim**	**3.75**	**59**	P	**Pn**	**06 12 58.1**	**+1.9**
ALMR	**Almeirim**	**3.75**	**59**	*e*Pn	**Pn**	**06 12 58.5**	**+2.3**
ALMR				S	**Sn**	**06 13 40.4**	**0.0**
	comp=N,5.1nm,0.5s						
PBDV	**Barranco-do-Ve**	**3.83**	**90**	*e*Pn	**Pn**	**06 12 59.4**	**+2.1**
PBDV				*e*Sn	**Sn**	**06 13 43.2**	**+0.9**
PBDV				A	A	06 13 45.4	
	comp=N,2.3nm,1.0s						
PBDV	**Barranco-do-Ve**	**3.83**	**90**	P	**Pn**	**06 12 59.4**	**+2.1**
PBDV				S	**Sn**	**06 13 43.2**	**+0.9**
	comp=N,2.3nm,1.0s						
PBDV	**Barranco-do-Ve**	**3.83**	**90**	P	**Pn**	**06 12 59.4**	**+2.1**
PBDV				S	**Sn**	**06 13 43.2**	**+0.9**
	comp=N,2.3nm,1.0s						
EVO	**Evora**	**3.92**	**71**	*e*Pn	**Pn**	**06 13 00.8**	**+2.2**
EVO				*e*Sn	**Sn**	**06 13 43.7**	**-0.9**
EVO				A	A	06 13 49.8	
	comp=N,4.0nm,0.1s						
EVO	**Evora**	**3.92**	**71**	P	**Pn**	**06 13 00.2**	**+1.6**
EVO				S	**Sn**	**06 13 42.9**	**-1.7**
EVO	**Evora**	**3.92**	**71**	P	**Pn**	**06 13 00.2**	**+1.6**
EVO	**Evora**	**3.92**	**71**	*e*Pn	**Pn**	**06 13 00.8**	**+2.2**
EVO				S	**Sn**	**06 13 42.9**	**-1.7**
EVO				*e*Sn	**Sn**	**06 13 43.7**	**-0.9**
PBEJ	**Beja**	**3.92**	**78**	*e*Pn	**Pn**	**06 13 00.5**	**+1.9**
PBEJ				*e*Sn	**Sn**	**06 13 44.1**	**-0.6**
PBEJ				A	A	06 13 49.0	
	comp=N,3.3nm,0.2s						
PBEJ	**Beja**	**3.92**	**78**	P	**Pn**	**06 13 00.5**	**+1.9**
PBEJ				S	**Sn**	**06 13 44.1**	**-0.6**
	comp=N,1.7nm,0.2s						
PBEJ	**Beja**	**3.92**	**78**	P	**Pn**	**06 13 00.5**	**+1.9**
PBEJ				S	**Sn**	**06 13 44.1**	**-0.6**
	comp=N,1.7nm,0.2s						
PVAQ	**Vaqueiros**	**3.99**	**87**	*e*Pn	**Pn**	**06 13 00.8**	**+1.2**
PVAQ				*e*Sn	**Sn**	**06 13 46.6**	**+0.2**
PVAQ				A	A	06 13 52.9	
	comp=N,2.7nm,0.4s						
PVAQ	**Vaqueiros**	**3.99**	**87**	P	**Pn**	**06 13 00.8**	**+1.2**
PVAQ				S	**Sn**	**06 13 46.6**	**+0.2**
	comp=N,2.7nm,0.4s						
PVAQ	**Vaqueiros**	**3.99**	**87**	P	**Pn**	**06 13 00.8**	**+1.2**
PVAQ				S	**Sn**	**06 13 46.6**	**+0.2**
	comp=N,2.7nm,0.4s						
PTOM	**Tomar**	**4.09**	**55**	*e*Pn	**Pn**	**06 13 03.7**	**+2.7**
PTOM				*e*Sn	**Sn**	**06 13 49.6**	**+0.7**
PTOM				A	A	06 13 55.6	
	comp=N,4.0nm,0.3s						
PTOM	**Tomar**	**4.09**	**55**	P	**Pn**	**06 13 03.7**	**+2.7**
PTOM				S	**Sn**	**06 13 49.6**	**+0.7**
	comp=N,2.0nm,0.3s						
PTOM	**Tomar**	**4.09**	**55**	P	**Pn**	**06 13 03.7**	**+2.7**
PTOM				S	**Sn**	**06 13 49.6**	**+0.7**
	comp=N,2.0nm,0.3s						
EGRO	**El Granado**	**4.18**	**85**	P	**Pn**	**06 13 03.2**	**+1.0**
	comp=N,1.0nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**06 13 50.1**	**-0.9**
	comp=N,1.8nm,0.2s,SNR=7.9						
EGRO	**El Granado**	**4.18**	**85**	P	**Pn**	**06 13 03.2**	**+1.0**
	comp=N,1.0nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**06 13 50.1**	**-0.9**
	comp=N,1.8nm,0.2s,SNR=7.9						
PCAS	**Casmilo, Conde**	**4.29**	**49**	*e*Pn	**Pn**	**06 13 06.0**	**+2.3**
PCAS				*e*Sn	**Sn**	**06 13 53.2**	**-0.6**
PCAS				A	A	06 14 04.3	
	comp=N,1.4nm,0.5s						
PCAS	**Casmilo, Conde**	**4.29**	**49**	*e*Pn	**Pn**	**06 13 06.0**	**+2.3**
PCAS				*e*Sn	**Sn**	**06 13 53.2**	**-0.6**
PESTR	**Estremoz**	**4.34**	**68**	*e*Pn	**Pn**	**06 13 06.5**	**+2.2**
PESTR				*e*Sn	**Sn**	**06 13 54.3**	**-0.7**
PESTR				A	A	06 14 02.6	
	comp=N,1.3nm,0.5s						
PESTR	**Estremoz**	**4.34**	**68**	*e*Pn	**Pn**	**06 13 06.5**	**+2.2**
PESTR				*e*Sn	**Sn**	**06 13 54.3**	**-0.7**
PBAR	**Barrancos**	**4.59**	**77**	*e*Pn	**Pn**	**06 13 09.4**	**+1.6**
PBAR				*e*Sn	**Sn**	**06 14 01.0**	**-0.1**
PBAR				A	A	06 14 10.3	
	comp=N,3.0nm,0.6s						
PBAR	**Barrancos**	**4.59**	**77**	P	**Pn**	**06 13 09.4**	**+1.6**
PBAR				S	**Sn**	**06 14 01.0**	**-0.1**
	comp=N,3.0nm,0.6s						
PBAR	**Barrancos**	**4.59**	**77**	P	**Pn**	**06 13 09.4**	**+1.6**
PBAR				S	**Sn**	**06 14 01.0**	**-0.1**
	comp=N,3.0nm,0.6s						
PMRV	**Marv??o**	**4.69**	**62**	*e*Pn	**Pn**	**06 13 10.9**	**+1.7**
PMRV				*e*Sn	**Sn**	**06 14 03.1**	**-0.6**
PMRV				A	A	06 14 09.6	
	comp=N,1.8nm,0.3s						
PMRV	**Marv??o**	**4.69**	**62**	P	**Pn**	**06 13 10.9**	**+1.7**
PMRV				S	**Sn**	**06 14 03.1**	**-0.6**
	comp=N,1.8nm,0.3s						
PMRV	**Marv??o**	**4.69**	**62**	P	**Pn**	**06 13 10.9**	**+1.7**
PMRV				S	**Sn**	**06 14 03.1**	**-0.6**
	comp=N,1.8nm,0.3s						
EBAD	**Badajoz**	**4.73**	**71**	P	**Pn**	**06 13 11.1**	**+1.3**
	comp=N,1.7nm,0.2s,SNR=11						
EBAD				S	**Sn**	**06 14 02.1**	**-2.6**
	comp=N,1.6nm,0.1s,SNR=5.0						
EBAD	**Badajoz**	**4.73**	**71**	P	**Pn**	**06 13 11.1**	**+1.3**
	comp=N,1.7nm,0.2s,SNR=11						
EBAD				S	**Sn**	**06 14 02.1**	**-2.6**
	comp=N,1.6nm,0.1s,SNR=5.0						
PCBR	**Castelo Branco**	**4.82**	**57**	*e*Pn	**Pn**	**06 13 13.4**	**+2.4**
PCBR				*e*Sn	**Sn**	**06 14 05.7**	**-1.2**
PCBR				A	A	06 14 12.6	
	comp=N,1.3nm,0.5s						
PCBR	**Castelo Branco**	**4.82**	**57**	P	**Pn**	**06 13 13.4**	**+2.4**
PCBR				S	**Sn**	**06 14 05.7**	**-1.2**
	comp=N,0.6nm,0.5s						
PCBR	**Castelo Branco**	**4.82**	**57**	P	**Pn**	**06 13 13.4**	**+2.4**
PCBR				S	**Sn**	**06 14 05.7**	**-1.2**
	comp=N,0.6nm,0.5s						
EMIN	**Mina Concepcio**	**4.83**	**83**	P	**Pn**	**06 13 12.1**	**+1.0**
	comp=N,0.8nm,0.2s,SNR=10.0						
EMIN				S	**Sn**	**06 14 04.8**	**-2.4**
	comp=N,1.0nm,0.2s,SNR=7.3						
EMIN	**Mina Concepcio**	**4.83**	**83**	P	**Pn**	**06 13 12.1**	**+1.0**
	comp=N,0.8nm,0.2s,SNR=10.0						
EMIN				S	**Sn**	**06 14 04.8**	**-2.4**
	comp=N,1.0nm,0.2s,SNR=7.3						
PVIS	**Viseu**	**5.07**	**46**	*e*Sn	**Sn**	**06 14 11.8**	**-1.2**
PVIS				A	A	06 14 16.8	
	comp=N,2.0nm,0.1s						
PVIS	**Viseu**	**5.07**	**46**	S	**Sn**	**06 14 11.8**	**-1.2**
	comp=N,1.0nm,0.1s						
PVIS	**Viseu**	**5.07**	**46**	S	**Sn**	**06 14 11.8**	**-1.2**
	comp=N,1.0nm,0.1s						
POLO	**Lamas de Olo**	**5.57**	**42**	*e*Pn	**Pn**	**06 13 23.2**	**+1.8**
POLO				*e*Sn	**Sn**	**06 14 24.5**	**-1.0**
POLO				A	A	06 14 25.6	
	comp=N,0.5nm,0.8s						
POLO	**Lamas de Olo**	**5.57**	**42**	*e*Pn	**Pn**	**06 13 23.2**	**+1.8**
POLO				*e*Sn	**Sn**	**06 14 24.5**	**-1.0**
PCAB	**Cabril**	**5.70**	**38**	*e*Sn	**Sn**	**06 14 26.9**	**-1.6**
PCAB	**Cabril**	**5.70**	**38**	Sn	**Sn**	**06 14 26.9**	**-1.6**
PCAB	**Cabril**	**5.70**	**38**	Sn	**Sn**	**06 14 26.9**	**-1.6**
PGAV	**Gavieira, Arco**	**5.78**	**35**	*e*Sn	**Sn**	**06 14 28.6**	**-2.0**
PGAV				A	A	06 14 32.2	
	comp=N,1.5nm,0.3s						
PGAV	**Gavieira, Arco**	**5.78**	**35**	*e*Sn	**Sn**	**06 14 28.6**	**-2.0**
ELOB	**Lobios**	**5.80**	**37**	P	**Pn**	**06 13 26.4**	**+2.0**
	comp=N,0.3nm,0.2s,SNR=7.9						
ELOB				S	**Sn**	**06 14 27.4**	**-3.6**
	comp=N,0.4nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.80**	**37**	P	**Pn**	**06 13 26.5**	**+2.0**
	comp=N,0.3nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**5.84**	**80**	P	**Pn**	**06 13 25.9**	**+0.8**
	comp=N,0.5nm,0.1s,SNR=12						
ECAB				S	**Sn**	**06 14 29.4**	**-2.8**
	comp=N,0.4nm,0.1s,SNR=6.1						
ECAB	**El Cabril**	**5.84**	**80**	P	**Pn**	**06 13 25.9**	**+0.8**
	comp=N,0.5nm,0.1s,SNR=12						
ECAB				S	**Sn**	**06 14 29.4**	**-2.8**
	comp=N,0.4nm,0.1s,SNR=6.1						
MVO	**Moncorvo**	**5.86**	**47**	*e*Pn	**Pn**	**06 13 26.4**	**+1.1**
MVO				*e*Sn	**Sn**	**06 14 30.5**	**-2.0**
MVO				A	A	06 14 34.3	
	comp=N,1.1nm,0.2s						
MVO	**Moncorvo**	**5.86**	**47**	P	**Pn**	**06 13 25.8**	**+0.5**
	comp=N,0.4nm,0.1s,SNR=7.9						
MVO				S	**Sn**	**06 14 30.0**	**-2.5**
	comp=N,0.7nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**5.86**	**47**	P	**Pn**	**06 13 25.8**	**+0.5**
	comp=N,0.4nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**5.86**	**47**	*e*Pn	**Pn**	**06 13 26.4**	**+1.1**
MVO				S	**Sn**	**06 14 30.0**	**-2.5**
	comp=N,0.7nm,0.1s,SNR=7.9						
MVO				*e*Sn	**Sn**	**06 14 30.5**	**-2.0**
EPLA	**Plasencia**	**5.88**	**60**	P	**Pn**	**06 13 27.5**	**+2.0**
	comp=N,0.7nm,0.1s,SNR=7.9						
EPLA				S	**Sn**	**06 14 30.6**	**-2.4**
	comp=N,1.9nm,0.2s,SNR=7.9						
EPLA	**Plasencia**	**5.88**	**60**	P	**Pn**	**06 13 27.5**	**+2.0**
	comp=N,0.7nm,0.1s,SNR=7.9						
EPLA				S	**Sn**	**06 14 30.6**	**-2.4**
	comp=N,1.9nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	**6.32**	**26**	S	Sn	06 14 37.7	-6.0
	comp=N,0.8nm,0.1s,SNR=4.0						
EADA	**Adamuz**	**6.51**	**80**	P	**Pn**	**06 13 35.1**	**+0.8**
	comp=N,0.5nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**6.51**	**80**	P	**Pn**	**06 13 35.1**	**+0.8**
	comp=N,0.5nm,0.1s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.53**	**32**	P	**Pn**	**06 13 34.7**	**+0.2**
	comp=N,0.2nm,0.1s,SNR=4.0						
EAGO				S	**Sn**	**06 14 44.0**	**-5.0**
	comp=N,0.6nm,0.1s,SNR=4.0						
EAGO	**Agolada(Pontev**	**6.53**	**32**	P	**Pn**	**06 13 34.7**	**+0.2**
	comp=N,0.2nm,0.1s,SNR=4.0						
ECAL	**Calabor**	**6.53**	**43**	P	**Pn**	**06 13 35.7**	**+1.1**
	comp=N,0.5nm,0.2s,SNR=7.9						
ECAL				S	**Sn**	**06 14 49.4**	**+0.2**
	comp=N,0.9nm,0.3s,SNR=4.0						
ECAL	**Calabor**	**6.53**	**43**	P	**Pn**	**06 13 35.7**	**+1.1**
	comp=N,0.5nm,0.2s,SNR=7.9						
ECAL				S	**Sn**	**06 14 49.4**	**+0.2**
	comp=N,0.9nm,0.3s,SNR=4.0						
PAB	**San Pablo**	**6.94**	**69**	P	**Pn**	**06 13 41.3**	**+1.1**
	comp=N,0.3nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**06 14 55.3**	**-4.0**
	comp=N,0.2nm,0.2s,SNR=4.0						
PAB	**San Pablo**	**6.94**	**69**	P	**Pn**	**06 13 41.3**	**+1.1**
	comp=N,0.3nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**06 14 55.3**	**-4.0**
	comp=N,0.2nm,0.2s,SNR=4.0						
ESDC	**Sonseca Array**	**7.26**	**68**	P	**Pn**	**06 13 45.3**	**+0.7**
	comp=N,1.4nm,0.2s,baz=252,slow=13,SNR=7.4						
ESDC	**Sonseca Array**	**7.26**	**68**	P	**Pn**	**06 13 45.3**	**+0.7**
	comp=N,1.4nm,0.2s,SNR=7.4						
GUD	**Guadarrama**	**7.46**	**61**	P	**Pn**	**06 13 48.2**	**+0.9**
	comp=N,0.5nm,0.2s,SNR=7.9						
GUD	**Guadarrama**	**7.46**	**61**	P	**Pn**	**06 13 48.2**	**+0.9**
	comp=N,0.5nm,0.2s,SNR=7.9						

*IDC **03** 06:25:54.0±0.7, 31.°34N×141.°70E, h0km, mb3.7/13, mb1 3.8/16, mb1mx3.7/72, mbtmp3.7/16, ML3.4/3, MS2.8/5, Ms1 2.8/5, ms1mx2.5/64, Error ellipse: s-maj=22.9km s-min=16.1km az=67.0*
*ISCJB **03** 06:25:57.8±0.6, 31.°31N±0.°07×141.°6E±0.°1, h40km, mb3.7/13, MS3.0/1, Error ellipse: s-maj=17.8km s-min=7.6km az=152.6*

ISC 03 06:25:59.5±0.7, 31.°32N±0.°07×141.°5E±0.°1, h40km, n19, σ1§26/19, mb3.8/13, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**2.33**	**321**	Pn	**Pn**	**06 26 34.4**	**-0.9**
	8.1nm,0.3s,baz=107,slow=19,SNR=3.6						
JHJ				LR	LR	06 27 02.0	
	comp=Z,178nm,18.0s,baz=299,slow=28						
JHJ				Sn	**Sn**	**06 27 02.0**	**-0.6**
	9.8nm,0.3s,baz=233,slow=20,SNR=3.1						
JCJ	**Chichijima**	**4.25**	**172**	Pn	**Pn**	**06 27 01.8**	**+0.1**
	9.7nm,0.3s,baz=303,slow=17,SNR=6.7						
JCJ				Sn	**Sn**	**06 27 47.1**	**-3.0**
	baz=288,slow=20						
MJAR	**Matsushiro Arr**	**5.89**	**333**	Pn	**Pn**	**06 27 23.9**	**-0.4**
	0.7nm,0.3s,baz=157,slow=11,SNR=10						
MJAR				Sn	**Sn**	**06 28 28.1**	**-2.5**
	baz=147,slow=30,SNR=2.3						
MJAR				LR	LR	06 29 37.9	
	comp=Z,68nm,20.5s,baz=140,slow=38						
JNU	**Nakatsue**	**9.20**	**284**	LR	LR	06 31 32.7	
	comp=Z,53nm,20.5s,baz=118,slow=36						
KSRS	**Korea Array**	**12.79**	**302**	LR	LR	06 32 58.7	
	comp=Z,33nm,19.2s,baz=151,slow=33						
SONM	**Songino Array**	**31.38**	**312**	P	**P**	**06 32 17.7**	**+1.1**
	1.3nm,0.8s,baz=113,slow=8.5,SNR=7.9						
CMAR	**Chiang Mai Arr**	**40.46**	**262**	LR	LR	06 51 26.8	
	comp=Z,18nm,18.0s,baz=185,slow=38						
ZALV	**Zalesovo Beam**	**45.98**	**317**	P	**P**	**06 34 20.2**	**+1.6**
	0.7nm,0.5s,baz=106,slow=6.8,SNR=2.8						
MKAR	**Makanchi Array**	**47.42**	**307**	P	**P**	**06 34 30.9**	**+0.9**
	0.5nm,0.5s,baz=86,slow=10,SNR=8.6						
KURBB	**Kurchatov Arra**	**49.74**	**312**	P	**P**	**06 34 48.0**	**+0.3**
	1.2nm,0.8s,baz=87,slow=7.8,SNR=7.4						
WRA	**Warramunga Arr**	**51.44**	**189**	P	**P**	**06 35 00.7**	**0.0**
	1.2nm,0.7s,baz=7.1,slow=7.7,SNR=12						
ILAR	**Eielson Array**	**54.32**	**30**	P	**P**	**06 35 21.0**	**-0.6**
	0.3nm,0.8s,baz=267,slow=6.7,SNR=4.4						
BVAR	**Borovoye Array**	**54.60**	**315**	P	**P**	**06 35 24.6**	**+0.8**
	0.5nm,0.5s,baz=71,slow=9.3,SNR=3.2						
ASAR	**Alice Springs**	**55.16**	**189**	P	**P**	**06 35 28.5**	**+0.3**
	0.3nm,0.5s,baz=1.0,slow=5.8,SNR=7.3						
ARU	**Arti**	**60.77**	**321**	P	**P**	**06 36 07.1**	**0.0**
	1.4nm,0.3s,baz=90,slow=14,SNR=3.6						
YKA	**Yellowknife Ar**	**68.72**	**29**	P	**P**	**06 36 58.5**	**-0.2**
	0.1nm,0.6s,baz=291,slow=7.0,SNR=2.6						
NVAR	**Mina Array Bea**	**78.37**	**52**	P	**P**	**06 37 56.1**	**-0.1**
	0.2nm,0.6s,baz=298,slow=5.7,SNR=2.3						
BRTR	**Keskin Array B**	**82.73**	**312**	P	**P**	**06 38 21.0**	**+1.5**
	0.2nm,0.4s,baz=54,slow=7.3,SNR=2.5						
TXAR	**Lajitas Array**	**93.52**	**53**	P	**P**	**06 39 12.0**	**+0.5**
	0.5nm,0.9s,baz=297,slow=6.0,SNR=5.6						

*NNC **03** 06:26:05.7±6.1, 39.°84N×75.°18E, h0km, mb3.5, mpv3.3, Error ellipse: s-maj=52.9km s-min=19.5km az=151.0*
*KRNET **03** 06:26:06.1±0.1, 39.°88N×75.°11E, mb3.2*

ISC 03 06:26:07.0±2.1, 39.°93N±0.°07×75.°07E±0.°04, h2km±13km, n28, σ1§89/42, 26C-10D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**1.21**	**275**	⇑P	**Pn**	**06 26 29.8**	**-1.3**
	11nm,0.2s						
SFK				⇓S	**Sb**	**06 26 46.7**	**-0.1**
	49nm,0.4s						
SFK	**Sufi-Kurgan**	**1.21**	**275**	⇑*i*P	**Pn**	**06 26 30.0**	**-1.1**
	baz=77						
SFK				⇑*i*S	**Sn**	**06 26 47.6**	**-0.5**
	baz=77						
NRN	**Naryn**	**1.67**	**25**	⇓*i*P	**Pn**	**06 26 37.3**	**-0.2**
	baz=23						
NRN				⇓*i*S	**Sg**	**06 27 00.6**	**0.0**
	baz=23						
ARSB	**Arslanbob**	**2.11**	**312**	⇓*i*P	**Pb**	**06 26 44.9**	**-1.2**
	baz=12						
ARSB				⇓*i*S	**Sb**	**06 27 13.6**	**+0.7**
	baz=12						
KZA	**Kyzart**	**2.15**	**4**	P	**Pb**	**06 26 45.5**	**-1.5**
	SNR=15						
KZA	**Kyzart**	**2.15**	**4**	⇑*i*P	**Pb**	**06 26 45.6**	**-1.4**
	baz=3.0						
KZA				⇑*i*S	**Sg**	**06 27 15.3**	**-1.0**
	baz=3.0						
UCH	**Uchtor**	**2.34**	**350**	P	**Pb**	**06 26 48.6**	**-1.5**
	SNR=12						
UCH	**Uchtor**	**2.34**	**350**	⇑*i*P	**Pb**	**06 26 48.5**	**-1.6**
	baz=49						
UCH				⇑*i*S	**Sb**	**06 27 19.9**	**+0.3**
	baz=49						
AML	**Almayashu**	**2.44**	**335**	P	**Pb**	**06 26 50.2**	**-1.6**
	SNR=13						
AML	**Almayashu**	**2.44**	**335**	⇑*i*P	**Pb**	**06 26 50.0**	**-1.8**
	baz=35						
AML				⇑*i

*MDD **03** 06:46:26.2±2.0, 37.°37N×12.°74W, h0km, mb3.6/7, Error ellipse: s-maj=17.8km s-min=16.7km az=36.0, PRXIMO*
*IGIL **03** 06:46:27.8, 37.°28N×12.°70W, h7km, ML2.0*
*INMG **03** 06:46:28.5±1.2, 37.°12N×13.°01W, h10km, ML1.9, Error ellipse: s-maj=9.7km s-min=7.4km az=122.0*
*CSEM **03** 06:46:29.5±0.4, 37.°41N×12.°44W, h10km, ML2.7/4, Error ellipse: s-maj=8.2km s-min=8.0km az=10.0*
ISC 03 06:46:30.5±3.1, 37.°50N±0.°08×12.°3W±0.°1, h10km, n68, σ1§45/121, 1C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMAFR	**Mafra**	2.81	58	ePn	Pn	06 47 16.8	+1.3
PMAFR				eSn	Sb	06 47 53.2	-2.0
PMAFR				A	A	06 48 03.5	
	7.0nm,0.6s						
PMAFR	**Mafra**	2.81	58	P	Pn	06 47 15.2	-0.3
	1.4nm,0.1s,SNR=7.9						
PMAFR				S	Sb	06 47 53.1	-2.0
	3.1nm,0.1s,SNR=6.1						
PMAFR	**Mafra**	2.81	58	P	Pn	06 47 15.2	-0.3
	1.4nm,0.1s,SNR=7.9						
PMAFR	**Mafra**	2.81	58	ePn	Pn	06 47 16.8	+1.3
PMAFR				S	Sb	06 47 53.1	-2.0
	3.1nm,0.1s,SNR=6.1						
PTEO	**Sao Teotonio**	2.87	88	ePn	Pn	06 47 17.7	+1.4
PTEO				eSn	Sb	06 47 55.5	-1.4
PTEO	**Sao Teotonio**	2.87	88	Pn	Pn	06 47 17.7	+1.4
PTEO				Sn	Sb	06 47 55.5	-1.4
PTEO	**Sao Teotonio**	2.87	88	Pn	Pn	06 47 17.7	+1.4
PTEO				eSn	Sb	06 47 55.5	-1.4
MORF	**Marmelete**	2.94	93	ePn	Pn	06 47 18.1	+0.8
MORF	**Marmelete**	2.94	93	Pn	Pn	06 47 18.1	+0.8
MORF	**Marmelete**	2.94	93	Pn	Pn	06 47 18.1	+0.8
PNCL	**Nicolau / Gran**	3.07	77	ePn	Pn	06 47 20.1	+1.0
PNCL				eSn	Sn	06 47 57.5	+1.6
PNCL				A	A	06 48 06.3	
	1.6nm,0.2s						
PNCL	**Nicolau / Gran**	3.07	77	ePn	Pn	06 47 20.1	+1.0
PNCL				eSn	Sn	06 47 57.5	+1.6
MESJ	**Messejana**	3.28	83	eP	Pn	06 47 22.4	+0.5
MESJ				eS	Sn	06 48 01.9	+0.9
MESJ				eS	Sn	06 48 02.2	+1.2
MESJ				AML	AML	06 48 05.0	
	comp=E,1.7nm,0.5s						
MESJ	**Messejana**	3.28	83	ePn	Pn	06 47 22.6	+0.6
MESJ				eSn	Sn	06 48 01.9	+0.9
MESJ				A	A	06 48 06.4	
	comp=E,1.6nm,0.9s						
MESJ	**Messejana**	3.28	83	P	Pn	06 47 22.4	+0.5
MESJ				S	Sn	06 48 02.2	+1.2
	comp=E,1.7nm,0.5s						
MESJ	**Messejana**	3.28	83	P	Pn	06 47 22.4	+0.5
MESJ				eSn	Sn	06 48 01.9	+0.9
MESJ				S	Sn	06 48 02.2	+1.2
	comp=E,1.7nm,0.5s						
ALMR	**Almeirim**	3.38	60	eP	Pn	06 47 24.2	+0.8
ALMR				eS	Sn	06 48 05.8	+2.2
ALMR				AML	AML	06 48 09.9	
	comp=N,7.9nm,0.4s						
ALMR	**Almeirim**	3.38	60	ePn	Pn	06 47 24.9	+1.5
ALMR				eSn	Sn	06 48 06.5	+2.9
ALMR	**Almeirim**	3.38	60	P	Pn	06 47 24.2	+0.8
ALMR				S	Sn	06 48 05.8	+2.2
	comp=N,4.0nm,0.4s						
ALMR	**Almeirim**	3.38	60	P	Pn	06 47 24.2	+0.8
ALMR	**Almeirim**	3.38	60	ePn	Pn	06 47 24.9	+1.5
ALMR				S	Sn	06 48 05.8	+2.2
	comp=N,4.0nm,0.4s						
ALMR				eSn	Sn	06 48 06.5	+2.9
PCVE	**Castro Verde**	3.41	86	ePn	Pn	06 47 23.9	+0.1
PCVE				eSn	Sn	06 48 06.7	+2.4
PCVE	**Castro Verde**	3.41	86	Pn	Pn	06 47 23.9	+0.1
PCVE				Sn	Sn	06 48 06.7	+2.4
PCVE	**Castro Verde**	3.41	86	Pn	Pn	06 47 23.9	+0.1
PCVE				Sn	Sn	06 48 06.7	+2.4
PBDV	**Barranco-do-Ve**	3.51	93	ePn	Pn	06 47 25.3	+0.1
PBDV				eSn	Sn	06 48 09.4	+2.5
PBDV				A	A	06 48 14.8	
	comp=N,1.1nm,0.1s						
PBDV	**Barranco-do-Ve**	3.51	93	Pn	Pn	06 47 25.3	+0.1
PBDV				Sn	Sn	06 48 09.4	+2.5
	comp=N,1.1nm,0.1s						
PBDV	**Barranco-do-Ve**	3.51	93	Pn	Pn	06 47 25.3	+0.1
PBDV				Sn	Sn	06 48 09.4	+2.5
	comp=N,1.1nm,0.1s						
EVO	**Evora**	3.56	72	ePn	Pn	06 47 26.9	+1.0
EVO				eSn	Sn	06 48 09.9	+1.9
EVO	**Evora**	3.56	72	Pn	Pn	06 47 26.9	+1.0
EVO				Sn	Sn	06 48 09.9	+1.9
EVO	**Evora**	3.56	72	Pn	Pn	06 47 26.9	+1.0
EVO				Sn	Sn	06 48 09.9	+1.9
PBEJ	**Beja**	3.58	80	eSn	Sb	06 48 14.6	-2.7
PBEJ	**Beja**	3.58	80	Sn	Sb	06 48 14.6	-2.7
PVAQ	**Vaqueiros**	3.67	90	ePn	Pn	06 47 27.3	-0.1
PVAQ				eSn	Sn	06 48 11.1	+0.4
PVAQ				A	A	06 48 17.2	
	comp=N,1.7nm,0.3s						
PVAQ	**Vaqueiros**	3.67	90	Pn	Pn	06 47 27.3	-0.1
PVAQ				Sn	Sn	06 48 11.1	+0.4
	comp=N,1.7nm,0.3s						
PVAQ	**Vaqueiros**	3.67	90	Pn	Pn	06 47 27.3	-0.1
PVAQ				Sn	Sn	06 48 11.1	+0.4
	comp=N,1.7nm,0.3s						
PTOM	**Tomar**	3.73	54	ePn	Pn	06 47 29.6	+1.4
PTOM	**Tomar**	3.73	54	Pn	Pn	06 47 29.6	+1.4
PTOM	**Tomar**	3.73	54	Pn	Pn	06 47 29.6	+1.4
EGRO	**El Granado**	3.85	88	P	Pn	06 47 29.6	-0.3
	comp=N,0.7nm,0.1s,SNR=7.9						
EGRO				S	Sn	06 48 18.0	+2.8
	comp=N,1.7nm,0.4s,SNR=4.0						
EGRO	**El Granado**	3.85	88	P	Pn	06 47 29.5	-0.3
	comp=N,0.7nm,0.1s,SNR=7.9						
EGRO				S	Sn	06 48 18.0	+2.8
	comp=N,1.7nm,0.4s,SNR=4.0						
PCAS	**Casmilo, Conde**	3.93	48	ePn	Pn	06 47 32.3	+1.3
PCAS				eSn	Sn	06 48 20.7	+3.5
PCAS	**Casmilo, Conde**	3.93	48	ePn	Pn	06 47 32.3	+1.3
PCAS				eSn	Sn	06 48 20.7	+3.5
PESTR	**Estremoz**	3.98	68	ePn	Pn	06 47 31.8	+0.2
PESTR				eSn	Sn	06 48 20.2	+1.9
PESTR				A	A	06 48 25.6	
	comp=N,1.1nm,0.7s						
PESTR	**Estremoz**	3.98	68	ePn	Pn	06 47 31.8	+0.2
PESTR				eSn	Sn	06 48 20.2	+1.9
PBAR	**Barrancos**	4.24	79	ePn	Pn	06 47 34.4	-0.8
PBAR				eSn	Sn	06 48 26.1	+1.3
PBAR				A	A	06 48 34.5	
	comp=N,1.5nm,0.2s						
PBAR	**Barrancos**	4.24	79	Pn	Pn	06 47 34.4	-0.8
PBAR				Sn	Sn	06 48 26.1	+1.3
	comp=N,1.5nm,0.2s						
PBAR	**Barrancos**	4.24	79	Pn	Pn	06 47 34.4	-0.8
PBAR				Sn	Sn	06 48 26.1	+1.3
	comp=N,1.5nm,0.2s						
PMRV	**Marv??o**	4.33	62	ePn	Pn	06 47 36.9	+0.5
PMRV				eSn	Sn	06 48 28.6	+1.7
PMRV				A	A	06 48 35.7	
	comp=N,0.9nm,0.3s						
PMRV	**Marv??o**	4.33	62	Pn	Pn	06 47 36.9	+0.5
PMRV				Sn	Sn	06 48 28.6	+1.7
	comp=N,0.9nm,0.3s						
PMRV	**Marv??o**	4.33	62	Pn	Pn	06 47 36.9	+0.5
PMRV				Sn	Sn	06 48 28.6	+1.7
	comp=N,0.9nm,0.3s						
EBAD	**Badajoz**	4.38	72	P	Pn	06 47 37.0	-0.1
	comp=N,0.4nm,0.1s,SNR=7.9						
EBAD				S	Sn	06 48 28.4	+0.3
	comp=N,1.8nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	4.38	72	P	Pn	06 47 37.0	-0.1
	comp=N,0.4nm,0.1s,SNR=7.9						
EBAD				S	Sn	06 48 28.4	+0.3
	comp=N,1.8nm,0.2s,SNR=7.9						
PCBR	**Castelo Branco**	4.46	57	ePn	Pn	06 47 39.2	+1.0
PCBR	**Castelo Branco**	4.46	57	Pn	Pn	06 47 39.2	+1.0
PCBR	**Castelo Branco**	4.46	57	Pn	Pn	06 47 39.2	+1.0
EMIN	**Mina Concepcio**	4.50	85	P	Pn	06 47 38.2	-0.6
	comp=N,0.4nm,0.2s,SNR=7.9						
EMIN				S	Sn	06 48 31.6	+0.5
	comp=N,0.9nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	4.50	85	P	Pn	06 47 38.2	-0.6
	comp=N,0.4nm,0.2s,SNR=7.9						
EMIN				S	Sn	06 48 31.6	+0.5
	comp=N,0.9nm,0.2s,SNR=7.9						
ELOB	**Lobios**	5.46	36	S	Sn	06 48 55.5	+0.5
	comp=N,0.3nm,0.1s,SNR=7.9						
ELOB	**Lobios**	5.46	36	S	Sn	06 48 55.5	+0.5
	comp=N,0.3nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	5.50	47	P	Pn	06 47 52.9	+0.3
	comp=N,0.3nm,0.1s,SNR=7.9						
MVO				S	Sn	06 48 56.3	+0.4
	comp=N,0.4nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	5.50	47	P	Pn	06 47 52.9	+0.3
	comp=N,0.3nm,0.1s,SNR=7.9						
MVO				S	Sn	06 48 56.3	+0.4
	comp=N,0.4nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	5.50	82	P	Pn	06 47 52.5	-0.1
	comp=N,0.3nm,0.2s,SNR=6.6						
ECAB				S	Sn	06 48 55.1	-0.9
	comp=N,0.4nm,0.3s,SNR=7.9						
ECAB	**El Cabril**	5.50	82	P	Pn	06 47 52.5	-0.1
	comp=N,0.3nm,0.2s,SNR=6.6						
ECAB				S	Sn	06 48 55.1	-0.9
	comp=N,0.4nm,0.3s,SNR=7.9						
EPLA	**Plasencia**	5.51	60	P	Pn	06 47 52.6	-0.1
	comp=N,0.3nm,0.1s,SNR=7.9						
EPLA				S	Sn	06 48 57.7	+1.5
	comp=N,0.2nm,0.1s,SNR=7.9						
EPLA	**Plasencia**	5.51	60	P	Pn	06 47 52.6	-0.1
	comp=N,0.3nm,0.1s,SNR=7.9						
EPLA				S	Sn	06 48 57.7	+1.5
	comp=N,0.2nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	6.02	24	S	Sn	06 49 05.2	-3.4
	comp=N,0.2nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	6.90	69	P	Pn	06 48 11.4	-0.5
	comp=N,0.8nm,0.2s,baz=253,slow=13,SNR=3.9						
ESDC	**Sonseca Array**	6.90	69	P	Pn	06 48 11.4	-0.5
	comp=N,0.8nm,0.2s,baz=253,slow=13,SNR=3.9						

*ISCJB **03** 06:47:28.6±0.3, 43.°53S±0.°03×172.°81E±0.°03, h23km±3km, mb3.8/3, MS3.5/2, Error ellipse: s-maj=4.9km s-min=3.2km az=137.6*
*IDC **03** 06:47:28.7±1.0, 43.°28S×172.°61E, h0km, mb3.9/3, mb1 4.0/4, mb1mx3.7/42, mbtmp3.9/4, ML3.4/1, MS3.5/2, Ms1 3.4/2, ms1mx2.8/35, Error ellipse: s-maj=29.2km s-min=14.5km az=155.0*
*WEL **03** 06:47:28.3, 44.°S±1.°×172.°7E±1.°0, h12km±1km, ML4.2/9*
*NEIC **03** 06:47:29.3±0.0, 43.°51S×172.°76E, h9km, ML4.2(WEL), After WEL.*
NEIC Felt at Christchurch and Kaiapoi.
ISC 03 06:47:29.1±0.8, 43.°50S±0.°03×172.°77E±0.°03, h14km±5km, n100, σ1§16/111, mb3.9/3, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRLZ	**Canterbury Las**	0.13	234	ePg	Pg	06 47 33.3	+0.5
CRLZ	**Canterbury Las**	0.13	234	P	Pg	06 47 33.2	+0.5
CRLZ				S	Sg	06 47 35.3	+0.1
MQZ	**McQueen's Vall**	0.23	202	ePg	Pg	06 47 34.0	-0.2
MQZ				eSg	Sg	06 47 37.1	-0.4
MQZ	**McQueen's Vall**	0.23	202	P	Pg	06 47 33.8	-0.3
MQZ				S	Sg	06 47 37.2	-0.4
OKCZ	**Okains Bay**	0.31	138	P	Pb	06 47 36.1	-0.4
OKCZ				S	Sb	06 47 41.1	-0.3
EYCZ	**Eyrewell**	0.31	284	P	Pb	06 47 35.7	-0.8
EYCZ				S	Sb	06 47 40.4	-1.0
AKCZ	**Akaroa Harbour**	0.39	165	P	Pb	06 47 37.4	-0.5
OXZ	**Oxford**	0.56	287	ePg	Pb	06 47 40.2	-0.5
OXZ	**Oxford**	0.56	287	P	Pb	06 47 40.1	-0.5
OXZ				S	Sb	06 47 48.5	-0.1
LTZ	**Lake Taylor**	0.80	333	ePg	Pn	06 47 45.4	-0.6
LTZ				eSg	Sb	06 47 56.7	+1.1
LTZ	**Lake Taylor**	0.80	333	P	Pn	06 47 45.4	-0.6
KHZ	**Kahutara**	1.22	28	ePn	Pn	06 47 51.6	-0.1
KHZ				eSn	Sb	06 48 08.1	+0.7
KHZ	**Kahutara**	1.22	28	P	Pn	06 47 51.6	-0.1
KHZ				P	Pn	06 47 51.5	-0.2
INZ	**Inchbonnie**	1.24	308	P	Pn	06 47 51.6	-0.4
RPZ	**Rata Peaks**	1.27	259	Pg	Pn	06 47 51.8	-0.6
	96nm,0.3s,baz=85,slow=2.6,SNR=639						
RPZ				Lg	Lg	06 48 07.5	
	262nm,0.3s,baz=13,slow=18,SNR=27						
RPZ	**Rata Peaks**	1.27	259	P	Pn	06 47 51.9	-0.6
WVZ	**Waitaha Valley**	1.54	285	P	Pn	06 47 56.2	0.0
THZ	**Tophouse**	1.73	3	ePn	Pn	06 47 58.9	0.0
THZ				eSn	Sn	06 48 19.9	-0.9
THZ	**Tophouse**	1.73	3	P	Pn	06 47 58.8	0.0
DSZ	**Denniston Nort**	1.89	337	P	Pn	06 48 01.3	+0.3
BSWZ	**Blackbirch Sta**	1.96	25	P	Pn	06 48 02.2	+0.3
LBZ	**Lake Benmore**	2.07	244	ePn	Pn	06 48 03.4	-0.1
LBZ	**Lake Benmore**	2.07	244	P	Pn	06 48 03.5	0.0
FOZ	**Fox Glacier**	2.15	268	ePn	Pb	06 48 05.7	-2.1
FOZ	**Fox Glacier**	2.15	268	P	Pb	06 48 05.7	-2.1
ODZ	**Otahua Downs**	2.17	224	ePn	Pn	06 48 04.6	-0.3
ODZ	**Otahua Downs**	2.17	224	P	Pn	06 48 04.3	-0.5
TUWZ	**Tuamarina**	2.24	23	P	Pn	06 48 05.7	-0.1
NNZ	**Nelson**	2.32	11	P	Pn	06 48 07.5	+0.6
TCW	**Tory Channel**	2.54	27	P	Pn	06 48 09.7	-0.2
BHW	**Baring Head**	2.60	37	P	Pn	06 48 10.4	-0.3
SNZO	**South Karori**	2.61	34	ePn	Pn	06 48 10.4	-0.5
PLWZ	**Palliser**	2.66	44	P	Pn	06 48 10.9	-0.7
QRZ	**Quartz Range**	2.67	356	P	Pn	06 48 11.7	0.0
MSWZ	**Moikau Station**	2.77	42	P	Pn	06 48 12.3	-0.8
DUWZ	**D'Urville Isla**	2.82	18	P	Pn	06 48 14.9	+1.1
HHSZ	**Highcliff Hill**	2.85	212	P	Pn	06 48 13.8	-0.3
PAWZ	**Paruwai Farm**	2.88	44	P	Pn	06 48 13.8	-0.9
CAW	**Cannon Point**	2.93	36	P	Pn	06 48 14.8	-0.5
JCZ	**Jackson Bay**	2.94	257	P	Pn	06 48 15.4	-0.2
TRWZ	**Traveller**	3.01	47	P	Pn	06 48 15.4	-0.9
WKZ	**Wanaka**	3.01	242	ePn	Pn	06 48 16.1	-0.3
WKZ	**Wanaka**	3.01	242	P	Pn	06 48 15.9	-0.5
EAZ	**Earnscleugh**	3.03	234	P	Pn	06 48 16.3	-0.4
KIW	**Kapiti Island**	3.08	32	P	Pn	06 48 17.0	-0.3
MTW	**Mount Morrison**	3.09	42	P	Pn	06 48 16.4	-1.1
OGWZ	**Otaki Gorge**	3.22	34	P	Pn	06 48 19.6	+0.4
HOWZ	**Holdsworth Sta**	3.30	39	P	Pn	06 48 19.7	-0.6
HOWZ				P	Pb	06 48 20.0	-7.4
TMWZ	**Te Maipa**	3.32	45	P	Pn	06 48 20.7	0.0
TUZ	**Tuapeka**	3.32	221	P	Pn	06 48 20.2	-0.5
MRZ	**Mangatainoka R**	3.52	37	P	Pn	06 48 23.2	-0.2
MRZ				P	Pn	06 48 23.2	-0.2
TIWZ	**Tintock**	3.57	41	P	Pn	06 48 24.0	-0.1
MSZ	**Milford Sound**	3.68	250	P	Pn	06 48 25.2	-0.4
PRWZ	**Pori Road**	3.78	40	P	Pn	06 48 27.3	+0.3
BFZ	**Birch Farm**	3.82	44	ePn	Pn	06 48 25.7	-1.8
BFZ	**Birch Farm**	3.82	44	P	Pn	06 48 25.6	-1.8
MLZ	**Mavora Lakes**	3.82	239	ePn	Pn	06 48 27.1	-0.4
MLZ	**Mavora Lakes**	3.82	239	P	Pn	06 48 26.8	-0.7
MLZ				P	Pb	06 48 27.1	-9.2
SYZ	**Scrubby Hill**	3.98	219	P	Pn	06 48 29.7	0.0
DVHZ	**Dannevirke**	4.08	40	P	Pn	06 48 30.1	-0.9
ANWZ	**Angora Road**	4.10	44	P	Pn	06 48 31.1	-0.2
TSZ	**Takapari Road**	4.18	36	P	Pn	06 48 33.7	+1.2
WHZ	**Wether Hill Ro**	4.19	233	ePn	Pn	06 48 31.3	-1.4
WHZ	**Wether Hill Ro**	4.19	233	P	Pn	06 48 31.2	-1.4
PNHZ	**Pukenui**	4.40	37	P	Pn	06 48 35.3	-0.3
DCZ	**Deep Cove**	4.48	242	ePn	Pn	06 48 35.8	-0.7
DCZ	**Deep Cove**	4.48	242	P	Pn	06 48 36.0	-0.5
VRZ	**Vera Road**	4.62	20	P	Pn	06 48 39.6	+1.1
PKVZ	**Pokaka**	4.63	26	P	Pn	06 48 40.3	+1.7
MOVZ	**Moawhango**	4.66	30	P	Pn	06 48 40.1	+1.0
TRVZ	**Turoa**	4.68	27	P	Pn	06 48 40.9	+1.3
KRHZ	**Kereru**	4.70	36	P	Pn	06 48 38.7	-0.9
BHHZ	**Black Hill Sta**	4.70	33	P	Pn	06 48 40.1	+0.4
WHVZ	**Whangaehu Hut**	4.71	28	P	Pn	06 48 41.2	+1.3
FWVZ	**Far West T-bar**	4.72	27	P	Pn	06 48 41.5	+1.4
TUVZ	**Tukino**	4.75	28	P	Pn	06 48 42.0	+1.6
APZ	**The Paps**	4.75	224	P	Pn	06 48 39.6	-0.7
COVZ	**Chateau Observ**	4.77	27	P	Pn	06 48 41.7	+1.0
NGZ	**Ngauruhoe**	4.81	27	P	Pn	06 48 42.1	+0.8
KWHZ	**Kaweka Forest**	4.91	35	P	Pn	06 48 43.7	+1.2
MCHZ	**McNeill Hill**	5.01	37	P	Pn	06 48 43.0	-0.8
PYZ	**Puysegur Point**	5.09	236	ePn	Pn	06 48 45.6	+0.7
BKZ	**Black Stump Fm**	5.15	34	ePn	Pn	06 48 44.6	-1.3
BKZ	**Black Stump Fm**	5.15	34	P	Pn	06 48 44.7	-1.2
HIZ	**Hauiti**	5.22	18	ePn	Pn	06 48 47.2	+0.5
HIZ	**Hauiti**	5.22	18	P	Pn	06 48 47.3	+0.5
MRHZ	**Matea Rd**	5.41	32	P	Pn	06 48 48.5	-0.9
URZ	**Urewera**	6.18	34	Pn	Pn	06 48 58.2	-1.7
	1.0nm,0.3s,baz=248,slow=7.0,SNR=6.8						
URZ				Sn	Sn	06 50 05.2	-5.1
	3.6nm,0.3s,baz=77,slow=16,SNR=9.0						
URZ	**Urewera**	6.18	34	ePn	Pn	06 48 58.4	-1.5
URZ				eSn	Sn	06 50 04.7	-5.6
STKA	**Stephens Creek**	27.11	285	LR	LR	07 01 28.9	
	comp=Z,44nm,19.8s,baz=23,slow=31						
ASAR	**Alice Springs**	37.51	289	P	P	06 54 43.0	+0.4
	0.7nm,0.6s,baz=129,slow=7.4,SNR=15						
WRA	**Warramunga Arr**	39.75	294	P	P	06 55 01.6	+0.1
	1.6nm,0.6s,baz=132,slow=7.9,SNR=27						
QSPA	**South Pole Qui**	46.63	180	P	P	06 55 59.7	+3.0
	1.3nm,0.7s,baz=36,slow=3.4,SNR=4.9						
JOW	**Kunigami**	81.03	321	LR	LR	07 32 17.3	
	comp=Z,68nm,21.4s,baz=144,slow=33						
CN2	**Changchun**	96.65	328	eP	P	07 01 00.0	+1.7
HHC	**Hu-ho-hao-te**	100.43	317	eP	Pdif	07 01 17.2	+1.8
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,64nm,4.9s						
MMAI	**Mount Meron Ar**	145.26	267	PKPbc	PKPdf	07 07 07.1	+0.8
	comp=Z,0.7nm,0.3s,baz=122,slow=5.4,SNR=2.9						
TORD	**Torodi Ar. Bea**	148.80	197	PKPbc	PKPab	07 07 19.0	-1.2
	comp=Z,0.5nm,0.8s,baz=169,slow=3.8,SNR=2.4						
ARCES	**ARCESS Array B**	149.02	338	PKPbc	PKPbc	07 07 15.9	+0.5
	comp=Z,1.0nm,0.7s,baz=48,slow=1.3,SNR=3.3						
BRTR	**Keskin Array B**	149.43	277	PKPbc	PKPbc	07 07 18.1	+0.6
	comp=Z,0.6nm,0.7s,baz=138,slow=5.0,SNR=3.8						

*CSEM **03** 07:15:05.2, 44.°86N×11.°05E, h9km, ML2.4/20*
ROM 03 07:15:05.2±0.1, 44.°857N±0.°008×11.°052E±0.°009, h9km, ML2.4/9, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0802	**SanFelice sul**	0.09	79	P	Pg	07 15 10.2	+2.6
T0802				S	Sg	07 15 13.8	+4.5
T0802	**SanFelice sul**	0.09	79	P	Pg	07 15 10.2	+2.5
T0802				S	Sg	07 15 13.8	+4.5
T0802				AML	AML		
	comp=E,5080μm,0.2s						
T0802				AML	AML		
	comp=N,5450μm,0.4s						
T0802				AML	AML		
	comp=N,5450μm,0.4s						
T0802				AML	AML		
	comp=E,5080μm,0.2s						
RAVA	**Ravarino**	0.11	155	P	Pg	07 15 10.6	+2.7
RAVA				S	Sg	07 15 14.2	+4.5
RAVA	**Ravarino**	0.11	155	P	Pg	07 15 10.6	+2.7
RAVA				S	Sg	07 15 14.2	+4.5
RAVA				AML	AML		
	comp=E,2570μm,0.6s						
RAVA				AML	AML		
	comp=N,3105μm,0.3s						
RAVA				AML	AML		
	comp=N,3105μm,0.3s						
RAVA				AML	AML		
	comp=E,2570μm,0.6s						
T0800	**Massa Finalese**	0.14	94	P	Pg	07 15 10.8	+2.5
T0800				S	Sg	07 15 15.1	+4.7
T0800	**Massa Finalese**	0.14	94	P	Pg	07 15 10.8	+2.5
T0800				S	Sg	07 15 15.1	+4.7
T0800				AML	AML		
	comp=E,3390μm,0.2s						
T0800				AML	AML		
	comp=N,2810μm,0.2s						
T0800				AML	AML		
	comp=E,3690μm,0.2s						
T0800				AML	AML		
	comp=N,2025μm,0.7s						
T0800				AML	AML		
	comp=N,2810μm,0.2s						
T0800				AML	AML		
	comp=E,3690μm,0.2s						
T0800				AML	AML		
	comp=N,2025μm,0.7s						
T0800				AML	AML		
	comp=E,3390μm,0.2s						
T0826	**Rio Saliceto (**	0.17	264	P	Pg	07 15 10.6	+1.7
	comp=E,1303μm,0.5s						
T0826				S	Sg	07 15 14.7	+3.4
	comp=E,1303μm,0.5s						
T0826	**Rio Saliceto (**	0.17	264	P	Pg	07 15 10.6	+1.7
T0826				S	Sg	07 15 14.7	+3.3
T0826				AML	AML		
	comp=E,1303μm,0.5s						
T0826				AML	AML		
	comp=N,1325μm,0.8s						
T0826				AML	AML		
	comp=N,1325μm,0.8s						
T0826				AML	AML		
	comp=E,1303μm,0.5s						
T0825	**Gonzaga (MN)**	0.19	308	P	Pg	07 15 11.4	+2.3
	comp=E,2660μm,1.4s						
T0825				S	Sg	07 15 16.2	+4.4
	comp=E,2660μm,1.4s						
T0825	**Gonzaga (MN)**	0.19	308	P	Pg	07 15 11.4	+2.3
T0825				S	Sg	07 15 16.2	+4.4
T0825				AML	AML		
	comp=E

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0803	**Dosso, Cento (**	**0.07**	**254**	*i* P	Pg	07 15 41.4	+0.3
T0803				*i* S	Sg	07 15 44.3	+1.4
T0803	**Dosso, Cento (**	**0.07**	**254**	*i* P	Pg	07 15 41.4	+0.3
T0803				*i* S	Sg	07 15 44.3	+1.4
T0820	**Chiesuol del F**	**0.09**	**87**	⇓*i*P	Pg	07 15 41.9	+0.6
T0820				*i* S	Sg	07 15 45.1	+1.9
T0820	**Chiesuol del F**	**0.09**	**87**	*i* P	Pg	07 15 41.9	+0.5
T0820				*i* S	Sg	07 15 45.1	+1.9
T0820				AML	AML		
	comp=E,7910μm,0.2s						
T0820				AML	AML		
	comp=N,11285μm,0.1s						
T0820				AML	AML		
	comp=E,9805μm,0.2s						
T0820				AML	AML		
	comp=N,9155μm,0.1s						
T0816	**San Bartolomeo**	**0.12**	**122**	*i* P	Pg	07 15 42.1	+0.3
T0816				*i* S	Sg	07 15 45.4	+1.4
T0816	**San Bartolomeo**	**0.12**	**122**	*i* P	Pg	07 15 42.1	+0.3
T0816				*i* S	Sg	07 15 45.4	+1.4
T0821	**Loc. Casaglia**	**0.13**	**29**	*i* P	Pb	07 15 42.9	-0.4
T0821				*i* S	Sg	07 15 44.0	-0.3
T0821	**Loc. Casaglia**	**0.13**	**29**	*i* P	Pb	07 15 42.9	-0.4
T0821				*i* S	Sg	07 15 45.0	+0.7
T0821				AML	AML		
	comp=E,1235μm,0.3s						
T0821				AML	AML		
	comp=N,2155μm,0.4s						
FIU	**Minerbio Fiu**	**0.15**	**168**	*i* P	Pg	07 15 42.8	+0.6
FIU				*i* S	Sg	07 15 46.8	+2.2
FIU	**Minerbio Fiu**	**0.15**	**168**	*i* P	Pg	07 15 42.8	+0.6
FIU				*i* S	Sg	07 15 46.8	+2.2
T0800	**Massa Finalese**	**0.15**	**294**	AML	AML		
	comp=E,1530μm,0.8s						
T0800				AML	AML		
	comp=N,1305μm,0.7s						
T0800				AML	AML		
	comp=E,1530μm,0.8s						
T0800				AML	AML		
	comp=N,1305μm,0.7s						
T0811	**Palata Pepoli**	**0.16**	**269**	⇓*i*P	Pg	07 15 42.9	+0.6
T0811	**Palata Pepoli**	**0.16**	**269**	*i* P	Pg	07 15 42.9	+0.6
T0823	**Castello D'Arg**	**0.16**	**231**	⇓*i*P	Pb	07 15 43.2	-0.5
T0823				*i* S	Sg	07 15 47.7	+2.9
T0823	**Castello D'Arg**	**0.16**	**231**	*i* P	Pb	07 15 43.2	-0.5
T0823				*i* S	Sg	07 15 47.7	+2.9
T0805	**Bondeno (FE)**	**0.16**	**326**	⇑*i*P	Pg	07 15 42.9	+0.5
T0805	**Bondeno (FE)**	**0.16**	**326**	*i* P	Pg	07 15 42.9	+0.5
T0817	**Loc. Veratica,**	**0.20**	**2**	*i* P	Pg	07 15 43.8	+0.7
T0817	**Loc. Veratica,**	**0.20**	**2**	*i* P	Pg	07 15 43.8	+0.6
T0802	**SanFelice sul**	**0.21**	**295**	⇑*i*P	Pg	07 15 43.7	+0.5
T0802	**SanFelice sul**	**0.21**	**295**	*i* P	Pg	07 15 43.7	+0.5
T0815	**Correggio (RE)**	**0.21**	**66**	⇓*i*P	Pg	07 15 43.0	-0.2
T0815				*i* S	Sg	07 15 48.5	+2.2
T0815	**Correggio (RE)**	**0.21**	**66**	*i* P	Pb	07 15 44.0	-0.6
T0815				*i* S	Sg	07 15 48.5	+2.2
TEOL	**Teolo**	**0.59**	**15**	*i* P	Pg	07 15 50.7	+0.4
TEOL	**Teolo**	**0.59**	**15**	*i* P	Pg	07 15 50.7	+0.3
TEOL				AML	AML		
	comp=E,436μm,0.6s						
TEOL				AML	AML		
	comp=N,356μm,0.3s						
TEOL				AML	AML		
	comp=N,356μm,0.3s						
TEOL				AML	AML		
	comp=E,436μm,0.6s						
CRMI	**Carmignano**	**1.05**	**199**	AML	AML		
	comp=E,33μm,1.5s						
CRMI				AML	AML		
	comp=N,26μm,1.1s						
CRMI				AML	AML		
	comp=N,26μm,1.1s						
CRMI				AML	AML		
	comp=E,33μm,1.5s						
MAIM	**Mastiano**	**1.11**	**219**	AML	AML		
	comp=E,34μm,0.7s						
MAIM				AML	AML		
	comp=E,34μm,0.7s						
MAIM				AML	AML		
	comp=N,37μm,0.5s						
MAIM				AML	AML		
	comp=N,37μm,0.5s						
MAIM				AML	AML		
	comp=N,37μm,0.5s						
MAIM				AML	AML		
	comp=E,34μm,0.7s						
LATE	**Laterza**	**2.19**	**173**	AML	AML		
	comp=N,97μm,0.3s						
LATE				AML	AML		
	comp=E,51μm,1.2s						
LATE				AML	AML		
	comp=N,97μm,0.3s						
LATE				AML	AML		
	comp=E,51μm,1.2s						
FAGN	**Fagnano**	**2.96**	**148**	AML	AML		
	comp=N,47μm,0.2s						
FAGN				AML	AML		
	comp=E,56μm,0.2s						
FAGN				AML	AML		
	comp=N,47μm,0.2s						
FAGN				AML	AML		
	comp=E,56μm,0.2s						

CSEM ***03*** *07:42:57.7±0.9, 51°.48N×16°.15E, h1km, ML2.8/5, Error ellipse: s-maj=13.1km s-min=7.5km az=12.0*
PRU ***03*** *07:42:59.8, 51°.42N×16°.14E, h0km*
ISC 03 07:42:58.4±1.8, 51°.47N±0°.08×16°.19E±0°.05, h0km, n22, σ0.85/38, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.63**	**174**	*e*Pg	**Pg**	**07 43 11.0**	**+0.5**
KSP				*e*Sg	**Sg**	**07 43 18.9**	**+0.3**
KSP	**Ksiaz**	**0.63**	**174**	*e*Pg	**Pg**	**07 43 11.0**	**+0.5**
KSP				*e*Sg	**Sg**	**07 43 18.9**	**+0.3**
UPC	**Upice**	**0.97**	**187**	*e*PG	**Pg**	**07 43 17.3**	**+0.3**
UPC				*e*SG	**Sg**	**07 43 29.3**	**-0.2**
	comp=Z,20nm,0.3s						
UPC	**Upice**	**0.97**	**187**	Pg	**Pg**	**07 43 17.3**	**+0.3**
UPC				Sg	**Sg**	**07 43 29.3**	**-0.2**
	20nm,0.3s						
DPC	**Dobruska-Polom**	**1.12**	**176**	*e*PG	**Pg**	**07 43 20.0**	**+0.1**
DPC				*e*SG	**Sg**	**07 43 34.1**	**-0.4**
	comp=Z,5.6nm,0.3s						
DPC	**Dobruska-Polom**	**1.12**	**176**	Pg	**Pg**	**07 43 20.0**	**+0.1**
DPC				Sg	**Sg**	**07 43 34.1**	**-0.4**
	5.6nm,0.3s						
PVCC	**Panska Ves**	**1.39**	**228**	*e*PG	**Pb**	**07 43 25.7**	**+0.5**
PVCC				*e*SG	**Sg**	**07 43 43.4**	**+0.4**
	comp=Z,30nm,0.3s						
PVCC	**Panska Ves**	**1.39**	**228**	Pg	**Pb**	**07 43 25.7**	**+0.5**
PVCC				Sg	**Sg**	**07 43 43.4**	**+0.4**
	30nm,0.3s						
KRLC	**Kraliky**	**1.45**	**165**	*e*PG	**Pn**	**07 43 25.9**	**0.0**
KRLC				*e*SG	**Sg**	**07 43 44.5**	**-0.3**
KRLC	**Kraliky**	**1.45**	**165**	Pg	**Pn**	**07 43 25.9**	**0.0**
KRLC				Sg	**Sg**	**07 43 44.5**	**-0.3**
BRG	**Berggiesshubel**	**1.53**	**248**	PG	**Pg**	**07 43 28.2**	**+0.4**
BRG				SG	**Sb**	**07 43 48.7**	**+1.1**
	8.2nm,0.4s						
GOPC	**GO Pecny, Ondr**	**1.79**	**210**	*e*PG	**Pb**	**07 43 32.5**	**+0.4**
GOPC	**GO Pecny, Ondr**	**1.79**	**210**	Pg	**Pb**	**07 43 32.5**	**+0.4**
PRU	**Pruhonice**	**1.81**	**216**	*e*SG	**Sb**	**07 43 55.5**	**-0.2**
	comp=Z,7.5nm,0.6s						
PRU	**Pruhonice**	**1.81**	**216**	Sg	**Sb**	**07 43 55.5**	**-0.2**
	7.5nm,0.6s						
MORC	**Moravsky Berou**	**1.90**	**152**	*e*Pn	**Pn**	**07 43 31.7**	**-0.4**
MORC				*e*Sg	**Sb**	**07 43 57.9**	**-0.4**
MORC	**Moravsky Berou**	**1.90**	**152**	*e*PN	**Pn**	**07 43 31.7**	**-0.4**
MORC				*e*SG	**Sb**	**07 43 57.9**	**-0.4**
CLL	**Collm**	**2.00**	**267**	*e*Pg	**Pg**	**07 43 37.0**	**+0.3**
CLL				*e*Sg	**Sg**	**07 44 03.0**	**+0.3**
NKC	**Novy Kostel**	**2.67**	**244**	*e*SG	**Sg**	**07 44 23.5**	**-0.7**
	comp=Z,6.0nm,0.3s						
NKC	**Novy Kostel**	**2.67**	**244**	Sg	**Sg**	**07 44 23.5**	**-0.7**
	6.0nm,0.3s						
KHC	**Kasperske Hory**	**2.88**	**217**	*e*PN	**Pn**	**07 43 43.0**	**-2.5**
KHC				*e*PG	**Pb**	**07 43 51.8**	**+1.2**
KHC				*e*SG	**Sb**	**07 44 28.6**	**+2.2**
KHC	**Kasperske Hory**	**2.88**	**217**	Pn	**Pn**	**07 43 43.0**	**-2.5**

ISCJB ***03*** *07:45:20.5±0.4, 13°.55N±0°.03×120°.58E±0°.05, h96km±3km, mb4.1/16, Error ellipse: s-maj=8.9km s-min=5.5km az=164.1*
IDC ***03*** *07:45:21.4±0.8, 13°.62N×120°.88E, h94km±6km, mb3.8/16, mb1 3.9/16, mb1mx3.6/67, mbtmp4.2/16, MS2.7/2, Ms1 2.8/2, ms1mx2.4/63, Error ellipse: s-maj=34.4km s-min=12.4km az=67.0*
MAN ***03*** *07:45:21.3, 13°.56N×120°.53E, h72km, mb4.2, ML3.0, MS2.7*
ISC 03 07:45:21.3±0.7, 13°.54N±0°.04×120°.56E±0°.05, h88km±6km, n31, σ2.05/38, mb4.2/16, 2C-1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.36**	**303**	*e*P	**Pn**	**07 45 35.0**	**+0.2**
LUBP				*e*S	**Sn**	**07 45 44.5**	**-0.4**
TGY	**Tagaytay City**	**0.67**	**33**	P	**Pn**	**07 45 37.8**	**+0.3**
	501nm,0.3s,baz=243,slow=0.6,SNR=19						
TGY				S	**Sn**	**07 45 49.5**	**+0.1**
	967nm,0.3s,baz=180,slow=19,SNR=33						
TGY	**Tagaytay City**	**0.67**	**33**	⇑*i*P	**Pn**	**07 45 38.1**	**+0.7**
TGY				*i* S	**Sn**	**07 45 49.5**	**+0.1**
SJMP	**San Jose**	**1.20**	**153**	*e*P	**Pn**	**07 45 44.2**	**+0.9**
SJMP				*e*S	**Sn**	**07 46 00.3**	**+0.6**
BOAC	**Boac**	**1.25**	**93**	*e*P	Pn	07 45 32.0	-12
BOAC				*e*S	**Sn**	**07 46 00.5**	**-0.3**
BUSP	**Coron**	**1.56**	**193**	*e*P	**Pn**	**07 45 48.2**	**+0.4**
BUSP				*e*S	**Sn**	**07 46 08.8**	**+0.9**
OTRP	**Odiongan**	**1.84**	**129**	*e*P	**Pn**	**07 45 51.9**	**+0.5**
OTRP				*e*S	**Sn**	**07 46 12.5**	**-1.8**
GQP	**Guinayangan**	**1.87**	**78**	⇓*e*P	**Pn**	**07 45 53.1**	**+1.4**
GQP				*e*S	**Sn**	**07 46 18.4**	**+3.6**
PCPH	**Palayan**	**2.08**	**14**	⇑*i*P	Pn	07 45 60.0	+5.5
PCPH				*e*S	**Sn**	**07 46 11.3**	**-8.5**
SCZP	**Santa Cruz**	**2.31**	**344**	*e*P	**Pn**	**07 45 57.4**	**-0.2**
SCZP				*e*S	**Sn**	**07 46 24.8**	**-0.6**
ENPP	**El Nido**	**2.57**	**206**	*e*P	**Pn**	**07 46 01.7**	**+0.6**
BOLP	**Bolinao**	**2.90**	**348**	*e*P	**Pn**	**07 46 10.1**	**+4.6**
APYP	**Conner**	**4.35**	**9**	*e*P	Pn	07 46 30.3	+5.2
APYP				*e*S	**Sn**	**07 47 18.1**	**+3.5**
CMAR	**Chiang Mai Arr**	**21.34**	**286**	P	**P**	**07 50 03.9**	**+2.4**
	1.7nm,0.3s,baz=92,slow=8.3,SNR=5.3						
CMAR				LR	LR	07 59 04.0	
	comp=Z,15nm,19.6s,baz=190,slow=38						
BATI	**Baumata**	**23.79**	**172**	P	**P**	**07 50 26.5**	**+0.3**
	25nm,0.5s,baz=327,slow=4.6,SNR=3.1						
KSRS	**Korea Array**	**24.71**	**14**	LR	LR	08 00 52.7	
	comp=Z,21nm,18.7s,baz=230,slow=38						
WRA	**Warramunga Arr**	**35.93**	**158**	P	**P**	**07 52 11.8**	**-1.7**
	0.5nm,0.7s,baz=332,slow=10,SNR=6.5						
SONM	**Songino Array**	**36.17**	**344**	P	**P**	**07 52 15.1**	**-0.4**
	1.9nm,0.6s,baz=167,slow=10,SNR=8.2						
ASAR	**Alice Springs**	**39.21**	**160**	P	**P**	**07 52 40.4**	**-0.8**
	0.4nm,0.5s,baz=334,slow=6.5,SNR=8.0						
TLY	**Talaya**	**40.42**	**344**	P	**P**	**07 52 51.0**	**+0.1**
	1.3nm,0.4s,baz=180,slow=5.1,SNR=3.0						
MKAR	**Makanchi Array**	**46.08**	**324**	P	**P**	**07 53 37.3**	**+0.7**
	2.7nm,0.6s,baz=134,slow=8.9,SNR=25						
ZALV	**Zalesovo Beam**	**49.14**	**333**	P	**P**	**07 53 59.3**	**-0.7**
	1.7nm,0.4s,baz=123,slow=6.3,SNR=4.1						
KURBB	**Kurchatov Arra**	**50.25**	**326**	P	**P**	**07 54 09.0**	**+0.5**
	6.1nm,0.7s,baz=131,slow=7.7,SNR=35						
BVAR	**Borovoye Array**	**55.83**	**326**	P	**P**	**07 54 49.6**	**0.0**
	1.1nm,0.6s,baz=99,slow=9.1,SNR=6.7						
GEYT	**Alibeck**	**60.12**	**306**	P	**P**	**07 55 21.1**	**+1.2**
	5.2nm,0.4s,baz=158,slow=4.3,SNR=6.9						
AKTO	**Aktyubinsk**	**62.25**	**320**	P	**P**	**07 55 33.9**	**-0.1**
	1.3nm,0.5s,baz=101,slow=8.2,SNR=4.2						
BRTR	**Keskin Array B**	**79.14**	**308**	P	**P**	**07 57 16.5**	**-0.4**
	0.3nm,0.5s,baz=104,slow=6.1,SNR=3.1						
ARCES	**ARCESS Array B**	**79.19**	**339**	P	**P**	**07 57 15.3**	**-1.0**
	0.6nm,0.5s,baz=78,slow=8.4,SNR=8.4						
SPITS	**Spitsbergen Ar**	**79.72**	**348**	P	**P**	**07 57 18.3**	**-0.8**
	3.2nm,0.9s,baz=106,slow=3.1,SNR=4.9						
FINES	**FINESS Array B**	**80.36**	**331**	P	**P**	**07 57 21.8**	**-1.0**
	2.3nm,0.9s,baz=69,slow=7.6,SNR=2.7						
TXAR	**Lajitas Array**	**119.68**	**45**	PKP	**PKPdf**	**08 04 01.1**	**-0.8**
	0.1nm,0.7s,baz=336,slow=2.0,SNR=3.3						

ISCJB ***03*** *07:51:41.9±1.2, 11°.11S±0°.09×164°.3E±0°.1, h29km, mb3.7/4, Error ellipse: s-maj=19.0km s-min=8.8km az=142.0*
IDC ***03*** *07:51:48.9±3.4, 11°.06S×164°.12E, h73km±28km, mb3.4/4, mb1 3.8/6, mb1mx3.3/57, mbtmp3.9/6, Error ellipse: s-maj=31.7km s-min=21.7km az=48.0*
ISC 03 07:51:44.4±1.2, 10°.9S±0°.1×164°.3E±0°.1, h29km, n12, σ2.18/8, mb3.7/4, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.55**	**289**	P	**Pn**	**07 52 52.0**	**+0.7**
	41nm,0.3s,baz=126,slow=6.9,SNR=7.6						
HNR				S	**Sn**	**07 53 44.7**	**+1.5**
	10nm,0.3s,baz=180,slow=20,SNR=2.6						
DZM	**Mont Dzumac**	**11.25**	**170**	P	**Pn**	**07 54 26.3**	**+2.9**
	0.7nm,0.3s,baz=281,slow=17,SNR=14						
DZM				S	**Sn**	**07 56 26.5**	**-1.8**
	0.1nm,0.3s,baz=315,slow=17,SNR=2.1						
H11S2	**WAKE ISLAND Hy**	**29.34**	**5**	T	T	08 28 10.3	
	baz=185						
H11S3	**WAKE ISLAND Hy**	**29.35**	**5**	T	T	08 28 12.8	
	baz=185						
H11S1	**WAKE ISLAND Hy**	**29.36**	**5**	T	T	08 28 10.7	
	baz=185						
WRA	**Warramunga Arr**	**30.20**	**249**	P	**P**	**07 57 51.0**	**-1.6**
	1.0nm,0.4s,baz=80,slow=9.4,SNR=21						
H11N1	**WAKE ISLAND Hy**	**30.57**	**5**	T	T	08 29 52.4	
	baz=186						
H11N3	**WAKE ISLAND Hy**	**30.58**	**5**	T	T	08 29 53.0	
	baz=186						
H11N2	**WAKE ISLAND Hy**	**30.59**	**5**	T	T	08 29 42.5	
	baz=186						
ASAR	**Alice Springs**	**31.58**	**242**	P	**P**	**07 58 02.5**	**-2.2**
	0.3nm,0.4s,baz=62,slow=10,SNR=6.6						
ILAR	**Eielson Array**	**83.87**	**19**	P	**P**	**08 04 11.4**	**+0.4**
	0.3nm,0.6s,baz=236,slow=5.4,SNR=4.7						
MKAR	**Makanchi Array**	**92.48**	**317**	P	**P**	**08 04 51.4**	**-1.4**
	0.2nm,0.7s,baz=102,slow=6.2,SNR=2.8						

IDC 03 07:59:23.9±8.1, 1°.86N×97°.32W, h0km, mb3.4/4, mb1 3.9/4, mb1mx3.5/42, mbtmp3.4/4, MS3.4/4, Ms1 3.3/4, ms1mx2.9/33, Error ellipse: s-maj=367.1km s-min=138.2km az=90.0, West of Galapagos Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**24.56**	**125**	LR	LR	08 12 38.9	
	comp=Z,54nm,18.3s,baz=274,slow=32						
TXAR	**Lajitas Array**	**27.98**	**348**	P	P	08 05 15.7	-0.8
	0.6nm,0.9s,baz=155,slow=9.5,SNR=5.6						
PDAR	**Pinedale Array**	**42.17**	**347**	P	P	08 07 19.3	+0.6
	0.1nm,0.3s,baz=146,slow=6.6,SNR=2.0						
YKA	**Yellowknife Ar**	**61.86**	**351**	P	P	08 09 45.1	+0.4
	0.2nm,0.8s,baz=153,slow=6.9,SNR=3.4						
YKA				LR	LR	08 35 51.7	
	comp=Z,6.0nm,18.9s,baz=174,slow=35						
ILAR	**Eielson Array**	**72.12**	**340**	P	P	08 10 49.5	-0.5
	0.6nm,0.7s,baz=148,slow=5.2,SNR=8.0						
SFJD	**Kangerlussuaq**	**72.60**	**17**	LR	LR	08 45 13.2	
	comp=Z,56nm,18.6s,baz=240,slow=38						
SPITS	**Spitsbergen Ar**	**92.94**	**11**	LR	LR	08 57 44.4	
	comp=Z,35nm,18.5s,baz=270,slow=38						

MEX 03 08:05:07.0±0.6, 14°.81N×93°.26W, h59km±31km, MD3.9, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.89**	**3**	*e*P	Pn	08 05 22.2	-1.4
PCIG				*e*S	Sn	08 05 33.9	-1.9
THIG		**0.97**	**84**	*e*P	Pn	08 05 21.0	-3.6
THIG				*e*S	Sn	08 05 36.5	-1.1
CCIG	**Comitan**	**1.82**	**36**	*e*P	Pn	08 05 36.7	+0.5
CCIG				*e*S	Sn	08 05 51.0	-7.3
TGIG		**1.96**	**4**	*e*P	Pn	08 05 37.3	-0.7
TGIG				*e*S	Sn	08 06 01.0	-0.6

SJA ***03*** *08:21:42.0±0.5, 26°.73S×63°.28W, h615km±9km, ML4.8, MW4.9*

ISCJB ***03*** *08:21:48.5±0.3, 26°.49S±0°.04×63°.31W±0°.05, h566km, mb3.9/34, Error ellipse: s-maj=5.9km s-min=5.0km az=20.3*
IDC ***03*** *08:21:49.6±1.0, 26°.38S×63°.36W, h564km±10km, mb3.5/16, mb1 3.6/19, mb1mx3.5/42, mbtmp4.5/19, Error ellipse: s-maj=15.4km s-min=10.6km az=61.0*
NEIC ***03*** *08:21:49.2±0.5, 26°.50S×63°.39W, h560km±7km, mb4.0/21, Error ellipse: s-maj=11.2km s-min=9.8km az=89.0*
ISC 03 08:21:49.0±0.4, 26°.43S±0°.07×63°.42W±0°.07, h566km, n81, σ19.93/93, mb3.9/34, Santiago del Estero Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AHML	**Horco Molle**	**1.75**	**258**	*i* P	**P**	**08 22 59.1**	**-0.2**
CYA	**Choya**	**2.92**	**226**	*i* P	**P**	**08 23 04.6**	**-0.3**
CYA				IAML		08 23 05.0	
	comp=Z,217nm,0.3s						
VCA	**Vinchina**	**4.83**	**241**	*i* P	**P**	**08 23 19.1**	**+0.5**
VCA				IAML		08 23 20.3	
	comp=Z,383nm,0.2s						
VCA				*i* S	**S**	**08 24 30.6**	**-1.1**
TCA	**Tanti**	**5.00**	**192**	*i* P	**P**	**08 23 18.3**	**-1.5**
TCA				IAML		08 23 20.4	
	comp=Z,35nm,0.5s						
AGUA	**GUANDACOL**	**5.42**	**235**	*i* P	**P**	**08 23 24.1**	**+0.7**
AGUA				*i* S	**S**	**08 24 39.4**	**-1.2**
CPUP	**Villa Florida**	**5.46**	**90**	P	**P**	**08 23 24.8**	**+1.1**
	comp=Z,6.1nm,0.3s,baz=257,slow=7.9,SNR=313						
CPUP	**Villa Florida**	**5.46**	**90**	*e*P	**P**	**08 23 24.8**	**+1.1**
CPUP				*e*S	**S**	**08 24 43.6**	**+2.5**
GO02	**Mina Guanaco**	**5.71**	**281**	*e*P	**P**	**08 23 27.6**	**+1.4**
GO02				*e*S	**S**	**08 24 46.6**	**+1.0**
GO03	**Copiap**	**6.19**	**258**	*e*P	**P**	**08 23 30.8**	**+0.6**
AMOG	**MOGNA**	**6.33**	**224**	*i* P	**P**	**08 23 31.7**	**+0.3**
RTLL	**Cerro Villicun**	**6.59**	**221**	*i* P	**P**	**08 23 34.1**	**+0.3**
LCO	**Las Campanas**	**6.95**	**247**	*e*P	**P**	**08 23 37.3**	**-0.1**
RTCV	**Cerro Valdivia**	**7.02**	**218**	*i* P	**P**	**08 23 38.3**	**+0.5**
PB10	**IPOC Station P**	**7.10**	**293**	*e*P	**P**	**08 23 39.6**	**+0.9**
PB10				*e*S	**S**	**08 25 08.2**	**-0.1**
PB04	**IPOC Station P**	**7.37**	**302**	*e*P	**P**	**08 23 42.2**	**+0.7**
RTLS	**Leoncito**	**7.42**	**223**	*i* P	**P**	**08 23 43.0**	**+1.2**
RTLS				IAML		08 23 46.1	
	comp=Z,89nm,0.4s						
GO04	**Tololo Observa**	**7.50**	**239**	*e*P	**P**	**08 23 43.0**	**+0.4**
PB01	**IPOC Station P**	**7.73**	**313**	*e*P	**P**	**08 23 45.3**	**+0.5**
MNMC	**Minye Minye**	**9.23**	**321**	*e*P	**P**	**08 24 00.8**	**+0.9**
ROC1	**El Roble**	**9.28**	**224**	*e*P	**P**	**08 23 59.7**	**-0.4**
SIV	**San Ignacio**	**10.62**	**12**	P	**P**	**08 24 14.6**	**+0.9**
	comp=Z,4.2nm,0.3s,baz=208,slow=8.9,SNR=205						
LPAZ	**La Paz**	**11.01**	**336**	P	**P**	**08 24 18.8**	**+0.5**
	comp=Z,14nm,0.3s,baz=126,slow=4.8,SNR=748						
LPAZ				S	**S**	**08 26 18.5**	**-2.3**
	comp=Z,0.3nm,0.3s,baz=180,slow=7.3,SNR=2.7						
GO05	**Hualaæ∅**	**11.25**	**219**	*e*P	**P**	**08 24 18.7**	**-1.2**
TRQA	**Tornquist**	**11.65**	**174**	*e*P	**P**	**08 24 21.8**	**-2.1**
SPB	**Sao Paulo**	**14.76**	**82**	*e*P	**P**	**08 24 57.0**	**+1.1**
PLCA	**Paso Flores**	**15.44**	**201**	P	**P**	**08 25 00.8**	**-1.7**
	comp=Z,0.5nm,0.3s,baz=29,slow=6.2,SNR=12						
PLCA	**Paso Flores**	**15.44**	**201**	*e*P	**P**	**08 25 01.0**	**-1.4**
	comp=Z,53nm,1.8s						
SAML	**Samuel**	**17.39**	**1**	*e*P	**P**	**08 25 21.3**	**+0.6**
	comp=Z,18nm,1.2s						
PTGA	**Pitinga**	**25.77**	**8**	P	**P**	**08 26 36.0**	**+0.1**
	comp=Z,19nm,0.5s,baz=197,slow=12,SNR=40						
PTGA	**Pitinga**	**25.77**	**8**	*e*P	**P**	**08 26 36.2**	**+0.3**
	comp=Z,19nm,0.6s						
OTAV	**Otavalo**	**30.22**	**329**	*e*P	**P**	**08 27 15.4**	**+0.2**
	comp=Z,8.8nm,1.5s						
CHIC	**Chingaza**	**32.45**	**341**	*e*P	**P**	**08 27 34.1**	**-0.1**
ROSC	**El Rosal**	**32.83**	**340**	P	**P**	**08 27 37.5**	**+0.2**
	comp=Z,6.1nm,0.5s,baz=139,slow=12,SNR=7.2						
ROSC	**El Rosal**	**32.83**	**340**	*e*P	**P**	**08 27 38.2**	**+0.9**
	comp=Z,6.1nm,0.5s						
RUSC	**La Rusia**	**33.47**	**342**	*e*P	**P**	**08 27 43.2**	**+0.3**
	comp=Z,4.6nm,0.5s						
RUSC	**La Rusia**	**33.47**	**342**	*e*P	**P**	**08 27 42.5**	**-0.3**
BARC	**Barichara**	**34.17**	**343**	*e*P	**P**	**08 27 46.6**	**-1.8**
PTBC	**PUERTO BERRIO,**	**34.48**	**340**	*e*P	**P**	**08 27 47.9**	**-2.9**
HELC	**Santa Helena**	**34.49**	**338**	*e*P	**P**	**08 27 50.3**	**-0.9**
	comp=Z,7.7nm,0.8s						
PAMC	**Pamplona, Colo**	**34.76**	**344**	*e*P	**P**	**08 27 52.7**	**-0.9**
ZARC	**Zaragoza, Cauc**	**35.51**	**340**	*e*P	**P**	**08 27 57.3**	**-2.0**
SDV	**Santo Domingo**	**35.80**	**348**	P	**P**	**08 28 01.1**	**-0.8**
	comp=Z,7.0nm,0.4s,baz=153,slow=4.5,SNR=15						
SDV	**Santo Domingo**	**35.80**	**348**	*e*P	**P**	**08 28 01.4**	**-0.5**
	comp=Z,8.3nm,0.4s						
APG	**El Apazote**	**48.87**	**324**	P	**P**	**08 29 45.1**	**+0.9**
	comp=Z,2.7nm,0.7s,baz=121,slow=12,SNR=3.1						
SNAA	**Sanae**	**55.99**	**161**	P	**P**	**08 30 34.5**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=299,slow=8.3,SNR=4.1						
QSPA	**South Pole Qui**	**63.78**	**180**	P	**P**	**08 31 26.9**	**+1.0**
	comp=Z,2.4nm,0.4s,baz=114,slow=3.0,SNR=16						
LIC	**Lamto**	**65.19**	**69**	*e*P	**P**	**08 31 35.5**	**0.0**
	comp=Z,50nm,1.6s						
TIC	**Toumodi**	**65.42**	**68**	*e*P	**P**	**08 31 36.9**	**-0.1**
KIC	**Kosan Boka**	**65.50**	**69**	*e*P	**P**	**08 31 37.3**	**-0.1**
	comp=Z,9.1nm,0.4s						
**DBI

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH				SKKS	**SKKSac**	**08 49 26.9**	**-10**
KSH	**Kashi**	**143.82**	**59**	SS	SS	09 01 32.0	-8.5
KSH				AMB	AMB		
	comp=Z,260nm,7.7s						
KSH				LR	LR		
	comp=N,420nm,8.8s						
KSH				LR	LR		
	comp=E,300nm,5.0s						
KSH				LR	LR		
	comp=Z,290nm,6.5s						
ZALV	**Zalesovo Beam**	**143.88**	**32**	PKP	**PKPdf**	**08 40 20.0**	**+0.1**
	comp=Z,1.8nm,0.3s,baz=286,slow=4.2,SNR=10						
ZALV				SKPbc	**SKiKP**	**08 43 06.8**	**+0.4**
	comp=Z,2.0nm,0.5s,baz=305,slow=5.0,SNR=7.6						
MKAR	**Makanchi Array**	**146.17**	**44**	PKPbc	**PKPbc**	**08 40 27.0**	**+0.7**
	comp=Z,2.6nm,0.4s,baz=342,slow=2.2,SNR=41						
MKAR				pPKPbc	pPKPbc	08 42 36.0	+0.1
	comp=Z,1.1nm,0.7s,baz=294,slow=3.6,SNR=11						
MKAR				SKPbc	**SKiKP**	**08 43 12.2**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=301,slow=0.7,SNR=4.6						

IDC 03 08:54:35.9±4.2, 5°.00S×150°.80E, h0km, mb3.1/2, mb1 3.5/2, mb1mx3.2/50, mbtmp3.2/2, Error ellipse: s-maj=154.4km s-min=55.7km az=116.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.84**	**226**	P	P	08 59 30.9	+0.6
	0.9nm,0.8s,baz=51,slow=10,SNR=6.0						
ASAR	**Alice Springs**	**24.69**	**220**	P	P	08 59 58.2	-0.6
	0.3nm,0.6s,baz=55,slow=9.4,SNR=2.5						
TORD	**Torodi Ar. Bea**	**148.47**	**287**	PKPbc	PKPbc	09 14 25.1	-0.6
	0.3nm,0.8s,baz=103,slow=3.1,SNR=1.9						

MEX 03 09:01:48.4±0.7, 15°.37N×93°.58W, h68km±13km, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCIG		**0.48**	**46**	*e*P	Pn	09 01 59.6	-1.3
PCIG				*e*S	Sn	09 02 08.4	-1.6
TGIG		**1.47**	**17**	*e*P	Pn	09 02 12.8	-0.2
TGIG				*e*S	Sn	09 02 29.4	-2.1
CCIG	**Comitan**	**1.66**	**57**	*e*P	Pn	09 02 16.3	+0.7
CCIG				*e*S	Sn	09 02 32.1	-4.1

*CSEM **03** 09:07:04.8±0.1, 42°.81N×46°.00E, h10km, mb3.9, Error ellipse: s-maj=3.5km s-min=2.1km az=12.0*
*MOS **03** 09:07:04.5±1.1, 42°.84N×46°.05E, h12km, mb3.9/1, Error ellipse: s-maj=6.4km s-min=4.8km az=34.1*
*TIF **03** 09:07:05.4, 42°.79N×45°.83E, h9km±5km*
ISC 03 09:07:04.6±1.0, 42°.79N±0°.02×45°.99E±0°.01, h4km±9km, n86, σ1°.01/146, 5C-6D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVE	**Vedeno**	**0.19**	**31**	⇓*i*PG	**Pg**	**09 07 08.2**	**-0.1**
DVE				*e*S	**Sg**	**09 07 11.7**	**+0.8**
DVE	**Vedeno**	**0.19**	**31**	*i* Pg	**Pg**	**09 07 08.2**	**-0.1**
DVE				*e*Sg	**Sg**	**09 07 11.7**	**+0.8**
BTLR	**Botlikh**	**0.21**	**127**	*e*PG	**Pg**	**09 07 08.6**	**-0.1**
BTLR				pmax	pmax		
	comp=Z,412nm,0.4s						
BTLR	**Botlikh**	**0.21**	**127**	*e*Pg	**Pg**	**09 07 08.6**	**-0.1**
	comp=Z,412nm,0.4s						
GROC	**Groznyy**	**0.43**	**341**	*e*PG	**Pg**	**09 07 13.3**	**+0.4**
GROC				*e*		09 07 20.9	
GROC				pmax	pmax		
	comp=Z,222nm,0.2s						
GROC				smax	smax		
	comp=E,3μm,0.7s						
GROC				smax	smax		
	comp=E,3μm,0.7s						
GROC	**Groznyy**	**0.43**	**341**	*e*Pg	**Pg**	**09 07 13.3**	**+0.4**
	comp=E,222nm,0.2s						
GROC				*e*Sg	**Sb**	**09 07 20.9**	**-0.8**
DLMR	**Dylym**	**0.54**	**59**	*e*PG	**Pg**	**09 07 15.0**	**0.0**
DLMR				*e*S	**Sb**	**09 07 23.7**	**-1.2**
DLMR				pmax	pmax		
	comp=Z,64nm,0.2s						
DLMR	**Dylym**	**0.54**	**59**	*e*Pg	**Pg**	**09 07 15.0**	**0.0**
	comp=Z,64nm,0.2s						
DLMR				*e*Sg	**Sb**	**09 07 23.7**	**-1.2**
XNZR	**Khunzakh**	**0.58**	**115**	*e*PG	**Pg**	**09 07 15.9**	**+0.1**
XNZR				*e*S	**Sb**	**09 07 25.7**	**-0.5**
XNZR	**Khunzakh**	**0.58**	**115**	*e*Pg	**Pg**	**09 07 15.9**	**+0.1**
XNZR				*e*Sg	**Sb**	**09 07 25.7**	**-0.5**
UNCR	**Uncukul**	**0.60**	**97**	⇓*i*PG	**Pg**	**09 07 15.8**	**-0.2**
UNCR				*e*S	**Sb**	**09 07 25.0**	**-1.4**
UNCR				pmax	pmax		
	comp=Z,286nm,0.2s						
UNCR	**Uncukul**	**0.60**	**97**	*i* Pg	**Pg**	**09 07 15.8**	**-0.2**
	comp=Z,286nm,0.2s						
UNCR				*e*Sg	**Sb**	**09 07 25.0**	**-1.4**
DBC	**Dubki**	**0.66**	**70**	⇑*i*PG	**Pg**	**09 07 16.7**	**-0.5**
DBC				*i* S	**Sb**	**09 07 26.7**	**-1.5**
DBC				pmax	pmax		
	comp=Z,33nm,0.1s						
DBC	**Dubki**	**0.66**	**70**	*i* Pg	**Pg**	**09 07 16.7**	**-0.5**
	comp=Z,33nm,0.1s						
DBC				*i* Sg	**Sb**	**09 07 26.7**	**-1.5**
KRNR	**Karanay**	**0.67**	**87**	*e*PG	**Pg**	**09 07 17.0**	**-0.5**
KRNR				*i* S	**Sg**	**09 07 27.0**	**+0.7**
KRNR				pmax	pmax		
	comp=Z,66nm,0.1s						
KRNR	**Karanay**	**0.67**	**87**	*e*Pg	**Pg**	**09 07 17.0**	**-0.5**
	comp=Z,66nm,0.1s						
KRNR				*i* Sg	**Sg**	**09 07 27.0**	**+0.7**
ARKR	**Arakani**	**0.76**	**104**	*i* PG	**Pg**	**09 07 18.7**	**-0.5**
ARKR				*i* S	**Sb**	**09 07 31.0**	**-0.2**
ARKR				pmax	pmax		
	comp=Z,58nm,0.1s						
ARKR	**Arakani**	**0.76**	**104**	*i* Pg	**Pg**	**09 07 18.7**	**-0.5**
	comp=Z,58nm,0.1s						
ARKR				*i* Sg	**Sb**	**09 07 31.0**	**-0.2**
BUJR	**Buynaksk**	**0.82**	**87**	*e*PG	**Pb**	**09 07 21.0**	**-0.4**
BUJR				*i* S	**Sn**	**09 07 34.0**	**-1.6**
BUJR	**Buynaksk**	**0.82**	**87**	*e*Pg	**Pb**	**09 07 21.0**	**-0.4**
GNBR	**Gunib**	**0.82**	**119**	*e*PG	**Pg**	**09 07 20.4**	**0.0**
GNBR				*e*S	**Sg**	**09 07 31.8**	**+0.7**
GNBR	**Gunib**	**0.82**	**119**	*e*Pg	**Pg**	**09 07 20.4**	**0.0**
GNBR				*e*Sg	**Sg**	**09 07 31.8**	**+0.7**
VLKR	**Vladikavkaz**	**1.00**	**285**	*e*PG	**Pb**	**09 07 24.2**	**-0.3**
VLKR				*e*S	**Sn**	**09 07 39.7**	**-0.3**
VLKR	**Vladikavkaz**	**1.00**	**285**	*e*Pg	**Pb**	**09 07 24.2**	**-0.3**
KMKR	**Kumukh**	**1.05**	**129**	*e*PG	**Pg**	**09 07 25.0**	**+0.2**
KMKR				*e*S	**Sg**	**09 07 39.0**	**+0.6**
KMKR				pmax	pmax		
	comp=Z,46nm,0.1s						
KMKR	**Kumukh**	**1.05**	**129**	*e*Pg	**Pg**	**09 07 25.0**	**+0.2**
	comp=Z,46nm,0.1s						
KMKR				*e*Sg	**Sg**	**09 07 39.0**	**+0.6**
MAK	**Makhachkala**	**1.12**	**81**	*e*PG	**Pn**	**09 07 27.2**	**+0.1**
MAK				*e*		09 07 44.3	
MAK				pmax	pmax		
	comp=Z,99nm,0.3s						
MAK				smax	smax		
	comp=E,453nm,0.6s						
MAK				smax	smax		
	comp=E,392nm,0.8s						
MAK	**Makhachkala**	**1.12**	**81**	*e*Pg	**Pn**	**09 07 27.2**	**+0.1**
	comp=E,99nm,0.3s						
GUDG	**Gudauri**	**1.17**	**254**	P	**Pb**	**09 07 26.5**	**-0.9**
GUDG				S	**Sg**	**09 07 40.8**	**-1.2**
GUDG	**Gudauri**	**1.17**	**254**	P	**Pb**	**09 07 26.5**	**-0.9**
GUDG				S	**Sg**	**09 07 40.8**	**-1.2**
DUS	**Dusheti**	**1.19**	**234**	P	**Pb**	**09 07 27.0**	**-0.7**
DUS				S	**Sb**	**09 07 43.0**	**-0.4**
DUS	**Dusheti**	**1.19**	**234**	*e*PG	**Pb**	**09 07 27.0**	**-0.7**
DUS				*e*S	**Sb**	**09 07 43.0**	**-0.4**
DUS	**Dusheti**	**1.19**	**234**	P	**Pb**	**09 07 27.0**	**-0.7**
DUS				S	**Sb**	**09 07 43.0**	**-0.4**
BTKR	**Batakoyurt**	**1.21**	**299**	*e*PG	**Pg**	**09 07 27.9**	**+0.1**
BTKR				*e*S	**Sn**	**09 07 46.6**	**+1.4**
BTKR	**Batakoyurt**	**1.21**	**299**	*e*Pg	**Pg**	**09 07 27.9**	**+0.1**
TRKR	**Terskaya**	**1.31**	**316**	*e*PG	**Pg**	**09 07 29.7**	**+0.1**
TRKR				*e*S	**Sg**	**09 07 48.9**	**+2.3**
TRKR	**Terskaya**	**1.31**	**316**	*e*Pg	**Pg**	**09 07 29.7**	**+0.1**
TRKR				*e*Sg	**Sg**	**09 07 48.9**	**+2.3**
ARNR	**Ardon**	**1.31**	**288**	*e*PG	**Pn**	**09 07 29.1**	**-0.6**
ARNR				*e*S	**Sg**	**09 07 48.8**	**+2.1**
ARNR	**Ardon**	**1.31**	**288**	*e*Pg	**Pn**	**09 07 29.1**	**-0.6**
ARNR				*e*Sg	**Sg**	**09 07 48.8**	**+2.1**
DDFL	**Dedoflistskaro**	**1.35**	**176**	P	**Pg**	**09 07 32.3**	**+1.8**
DDFL	**Dedoflistskaro**	**1.35**	**176**	P	**Pg**	**09 07 32.3**	**+1.8**
SEAG	**Tbilisi Sea**	**1.35**	**221**	P	**Pn**	**09 07 29.9**	**-0.4**
SEAG				S	**Sg**	**09 07 49.2**	**+1.1**
SEAG	**Tbilisi Sea**	**1.35**	**221**	P	**Pn**	**09 07 29.9**	**-0.4**
SEAG				S	**Sg**	**09 07 49.0**	**+0.9**
URKR	**Urkarakh**	**1.37**	**117**	*i* PG	**Pg**	**09 07 31.0**	**+0.2**
URKR				*e*S	**Sg**	**09 07 51.0**	**+2.5**
URKR	**Urkarakh**	**1.37**	**117**	*i* Pg	**Pg**	**09 07 31.0**	**+0.2**
URKR				*e*Sg	**Sg**	**09 07 51.0**	**+2.5**
TBLG	**Delisi**	**1.41**	**222**	P	**Pn**	**09 07 30.4**	**-0.7**
TBLG				S	**Sb**	**09 07 49.8**	**-0.1**
TBLG	**Delisi**	**1.41**	**222**	*e*PG	**Pn**	**09 07 30.4**	**-0.7**
TBLG				*e*S	**Sb**	**09 07 49.7**	**-0.1**
TBLG	**Delisi**	**1.41**	**222**	P	**Pn**	**09 07 30.4**	**-0.7**
TBLG				*e*Sg	**Sb**	**09 07 49.7**	**-0.1**
DGRG	**David-gareji**	**1.42**	**199**	P	**Pn**	**09 07 30.9**	**-0.3**
DGRG				S	**Sg**	**09 07 51.0**	**+0.9**
DGRG	**David-gareji**	**1.42**	**199**	*e*PG	**Pn**	**09 07 30.9**	**-0.3**
DGRG				*e*S	**Sg**	**09 07 51.0**	**+0.9**
DGRG	**David-gareji**	**1.42**	**199**	P	**Pn**	**09 07 30.9**	**-0.3**
DGRG				S	**Sg**	**09 07 51.0**	**+0.9**
BTNK	**Botanikuri**	**1.42**	**219**	P	**Pn**	**09 07 30.5**	**-0.7**
BTNK	**Botanikuri**	**1.42**	**219**	P	**Pn**	**09 07 30.5**	**-0.7**
STDR	**Stavd-Durt**	**1.52**	**293**	⇓*i*PG	**Pb**	**09 07 33.2**	**-0.2**
STDR				*e*S	**Sg**	**09 07 54.2**	**+0.6**
STDR	**Stavd-Durt**	**1.52**	**293**	*i* Pg	**Pb**	**09 07 33.2**	**-0.2**
STDR				*e*Sg	**Sg**	**09 07 54.2**	**+0.6**
ZEI	**Tsey**	**1.54**	**270**	*e*PG	**Pn**	**09 07 32.3**	**-0.7**
ZEI				*e*S	**Sb**	**09 07 53.2**	**-0.5**
ZEI	**Tsey**	**1.54**	**270**	*e*Pg	**Pn**	**09 07 32.3**	**-0.7**
ZEI				*e*Sg	**Sb**	**09 07 53.2**	**-0.5**
PRTR	**Priterechnaya**	**1.57**	**308**	*e*PG	**Pb**	**09 07 34.0**	**-0.2**
PRTR				*e*S	**Sg**	**09 07 56.1**	**+1.0**
PRTR	**Priterechnaya**	**1.57**	**308**	*e*Pg	**Pb**	**09 07 34.0**	**-0.2**
PRTR				*e*Sg	**Sg**	**09 07 56.1**	**+1.0**
LSNR	**Lesken**	**1.66**	**288**	*e*PN	**Pb**	**09 07 35.0**	**-0.7**
LSNR				*e*S	**Sg**	**09 07 58.1**	**+0.2**
LSNR	**Lesken**	**1.66**	**288**	*e*Pn	**Pb**	**09 07 35.0**	**-0.7**
LSNR				*e*Sg	**Sg**	**09 07 58.1**	**+0.2**
DIGR	**Digorskoe uzhe**	**1.78**	**274**	*e*PN	**Pn**	**09 07 35.9**	**-0.4**
DIGR	**Digorskoe uzhe**	**1.78**	**274**	*e*Pn	**Pn**	**09 07 35.9**	**-0.4**
AKT	**Akhty**	**1.84**	**135**	*e*PN	**Pn**	**09 07 37.3**	**+0.2**
AKT				*e*S	**Sb**	**09 08 03.0**	**+0.7**
AKT	**Akhty**	**1.84**	**135**	*e*Pn	**Pn**	**09 07 37.3**	**+0.2**
AKT				*e*Sg	**Sb**	**09 08 03.0**	**+0.7**
ONI	**Oni**	**1.88**	**265**	P	**Pb**	**09 07 38.3**	**-1.3**
ONI				S	**Sb**	**09 08 02.3**	**-1.1**
ONI	**Oni**	**1.88**	**265**	*e*PN	**Pb**	**09 07 38.3**	**-1.3**
ONI	**Oni**	**1.88**	**265**	P	**Pb**	**09 07 38.3**	**-1.3**
ONI				S	**Sb**	**09 08 02.3**	**-1.1**
NCK	**Nalchik**	**1.89**	**293**	⇑*e*PN	**Pn**	**09 07 38.2**	**+0.6**
NCK	**Nalchik**	**1.89**	**293**	*e*Pn	**Pn**	**09 07 38.2**	**+0.6**
AKH	**Akhalkalaki**	**2.32**	**234**	P	**Pb**	**09 07 45.6**	**-1.4**
AKH				S	**Sb**	**09 08 15.8**	**-0.3**
AKH	**Akhalkalaki**	**2.32**	**234**	*e*PN	**Pb**	**09 07 45.6**	**-1.4**
AKH				*e*S	**Sb**	**09 08 15.7**	**-0.3**
AKH	**Akhalkalaki**	**2.32**	**234**	P	**Pb**	**09 07 45.6**	**-1.4**
AKH				S	**Sb**	**09 08 14.3**	**-1.8**
NEY	**Neytrino**	**2.44**	**282**	*e*PN	**Pn**	**09 07 46.0**	**+0.6**
NEY				*e*S	**Sb**	**09 08 17.3**	**-2.3**
NEY	**Neytrino**	**2.44**	**282**	*e*Pn	**Pn**	**09 07 46.0**	**+0.6**
NEY				*e*Sn	**Sb**	**09 08 17.3**	**-2.3**
KIV	**Kislovodsk**	**2.67**	**297**	⇓*e*PN	**Pn**	**09 07 48.3**	**-0.2**
KIV	**Kislovodsk**	**2.67**	**297**	*e*Pn	**Pn**	**09 07 48.3**	**-0.2**
GNI	**Garni**	**2.80**	**200**	⇓*e*PN	**Pb**	**09 07 53.9**	**-1.4**
GOF	**Gofitskoye**	**3.11**	**318**	⇑*e*PN	**Pn**	**09 07 53.9**	**-0.5**
GOF				*e*S	**Sn**	**09 08 31.7**	**-0.3**
GOF				pmax	pmax		
	comp=Z,12nm,0.2s						
GOF				smax	smax		
	comp=N,122nm,0.2s						
GOF				smax	smax		
	comp=E,58nm,0.1s						
GOF	**Gofitskoye**	**3.11**	**318**	*e*Pn	**Pn**	**09 07 53.9**	**-0.5**
	comp=E,12nm,0.2s						
GOF				*e*Sn	**Sn**	**09 08 31.7**	**-0.3**
	comp=E,122nm,0.2s						
OBN	**Obninsk**	**13.78**	**337**	⇑*e*P	**Pn**	**09 10 20.9**	**+0.4**
OBN				*i* S	**Sn**	**09 12 59.0**	**+5.1**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.5s						
OBN	**Obninsk**	**13.78**	**337**	*e*P	**Pn**	**09 10 20.9**	**+0.4**
	comp=Z,5.0nm,0.5s						
AKASG	**Malin Array Be**	**13.93**	**310**	*i* P	**Pn**	**09 10 21.7**	**-0.9**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	**Malin Array Be**	**13.93**	**310**	*i* P	**Pn**	**09 10 21.7**	**-0.9**
	comp=Z,1.0nm,0.5s						
ARU	**Arti**	**15.86**	**26**	⇓*e*P	**P**	**09 10 50.8**	**-1.5**
ARU				pmax	pmax		
	comp=Z,5.0nm,1.3s						
AAK	**Ala-Archa**	**20.91**	**81**	⇑*e*P	Pn	09 11 48.7	-1.9
AAK				pmax	pmax		
	comp=Z,1.0nm,0.9s						

*DDA **03** 09:25:21.3, 36°.99N×27°.60E, h7km, Ml3.3, Suspected Mining explosion.*
*CSEM **03** 09:25:21.2±0.1, 36°.99N×27°.56E, h1km, ML3.3, Error ellipse: s-maj=2.2km s-min=1.8km az=25.0, Suspected Mining explosion.*
*ATH **03** 09:25:21.0, 36°.98N×27°.59E, h29km±1km, ML3.1/7, Error ellipse: s-maj=1.7km s-min=0.9km az=63.0*
*IDC **03** 09:25:21.1±1.1, 37°.03N×27°.55E, h0km, mb3.5/4, mb1 3.5/7, mb1mx3.3/55, mbtmp3.4/7, ML3.2/3, Error ellipse: s-maj=39.4km s-min=17.8km az=155.0*
*THE **03** 09:25:21.0, 37°.02N×27°.59E, h0km±1km, ML3.2/7, Error ellipse: s-maj=1.0km s-min=0.6km az=23.0*
*ISK **03** 09:25:21.0, 36°.98N×27°.57E, h6km, ML3.4/29*
ISC 03 09:25:21.7±0.8, 36°.97N±0°.01×27°.58E±0°.01, h13km±5km, n146, σ1°.33/194, mb3.3/4, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BDRM	**Kayabasi**	**0.14**	**311**	*i* P	**Pg**	**09 25 24.9**	**-0.3**
BDRM				*i* S	**Sg**	**09 25 27.3**	**-0.4**
BDRM	**Kayabasi**	**0.14**	**311**	P	**Pg**	**09 25 24.9**	**-0.3**
BDRM				S	**Sg**	**09 25 27.3**	**-0.4**
DATC	**Datca-Mugla**	**0.22**	**163**	PG	**Pg**	**09 25 25.7**	**-0.8**
DATC				SG	**Sg**	**09 25 29.8**	**+0.1**
DATC	**Datca-Mugla**	**0.22**	**163**	*e*Pg	**Pg**	**09 25 25.7**	**-0.8**
DATC				*e*Sg	**Sg**	**09 25 29.8**	**+0.1**
BODT	**Bodrum**	**0.23**	**293**	PG	**Pg**	**09 25 25.7**	**-1.0**
BODT				SG	**Sg**	**09 25 30.5**	**+0.5**
BODT	**Bodrum**	**0.23**	**293**	P	**Pg**	**09 25 25.6**	**-1.1**
BODT				S	**Sg**	**09 25 29.5**	**-0.5**
BODT	**Bodrum**	**0.23**	**293**	P	**Pg**	**09 25 25.6**	**-1.1**
BODT				S	**Sg**	**09 25 29.5**	**-0.5**
BODT				*e*Sg	**Sg**	**09 25 30.5**	**+0.5**
YKAV	**Yalikavak-Bodr**	**0.28**	**302**	PG	**Pg**	**09 25 26.8**	**-0.7**
YKAV				SG	**Sg**	**09 25 30.7**	**-0.8**
YKAV	**Yalikavak-Bodr**	**0.28**	**302**	*e*Pg	**Pg**	**09 25 26.8**	**-0.7**
YKAV				*e*Sg	**Sg**	**09 25 30.7**	**-0.8**
MLSB	**Milas**	**0.36**	**26**	PG	**Pg**	**09 25 28.1**	**-0.8**
MLSB	**Milas**	**0.36**	**26**	*e*Pg	**Pg**	**09 25 28.1**	**-0.8**
DIDI	**Didim-Aydin**	**0.48**	**326**	PG	**Pb**	**09 25 31.1**	**-1.0**
DIDI	**Didim-Aydin**	**0.48**	**326**	*e*Pg	**Pb**	**09 25 31.1**	**-1.0**
NISR	**Nisiros**	**0.51**	**225**	P	**Pb**	**09 25 31.8**	**-0.7**
NISR				S	**Sb**	**09 25 40.4**	**+0.6**
NISR				AML	AML	09 25 41.2	
	comp=E,11034μm,0.7s						
NISR				AML	AML	09 25 46.0	
	comp=N,7322μm,0.5s						
NISR	**Nisiros**	**0.51**	**225**	P	**Pb**	**09 25 32.2**	**-0.3**
NISR				S	**Sb**	**09 25 40.4**	**+0.6**
NISR	**Nisiros**	**0.51**	**225**	P	**Pb**	**09 25 31.8**	**-0.7**
NISR				S	**Sb**	**09 25 40.1**	**+0.3**
MRSB	**Marmaris-Mugla**	**0.56**	**117**	PG	**Pb**	**09 25 32.7**	**-0.6**
MRSB	**Marmaris-Mugla**	**0.56**	**117**	*e*Pg	**Pb**	**09 25 32.7**	**-0.6**
YER	**Yerkesik**	**0.59**	**74**	PG	**Pg**	**09 25 32.0**	**-1.2**
YER	**Yerkesik**	**0.59**	**74**	P	**Pg**	**09 25 32.4**	**-0.8**
YER				S	**Sg**	**09 25 41.1**	**+0.2**
YER	**Yerkesik**	**0.59**	**74**	*e*Pg	**Pg**	**09 25 32.0**	**-1.2**
YER	**Yerkesik**	**0.59**	**74**	P	**Pg**	**09 25 32.4**	**-0.8**
YER				S	**Sg**	**09 25 41.1**	**+0.2**
AYDN	**Tasoluk**	**0.73**	**19**	*i* P	**Pg**	**09 25 34.9**	**-0.9**
AYDN				*i* S	**Sg**	**09 25 44.8**	**-0.6**
AYDN	**Tasoluk**	**0.73**	**19**	P	**Pg**	**09 25 34.9**	**-0.9**
AYDN				S	**Sg**	**09 25 44.8**	**-0.6**
GCAM	**G?zelcaml?**	**0.78**	**339**	PG	**Pg**	**09 25 35.9**	**-0.8**
GCAM	**G?zelcaml?**	**0.78**	**339**	*i* P	**Pb**	**09 25 36.1**	**-0.9**
GCAM				*i* S	**Sb**	**09 25 47.5**	**0.0**
GCAM	**G?zelcaml?**	**0.78**	**339**	*e*Pg	**Pg**	**09 25 35.9**	**-0.8**
GCAM				S	**Sb**	**09 25 47.5**	**0.0**
TURN	**Türünc**	**0.83**	**97**	PG	**Pg**	**09 25 32.9**	**-4.8**
TURN	**Türünc**	**0.83**	**97**	*i* P	Pg	09 25 31.8	-5.9
TURN				*i* S	**Sg**	**09 25 40.1**	**-8.4**
TURN	**Türünc**	**0.83**	**97**	*e*Pg	**Pg**	**09 25 32.9**	**-4.8**
ARG	**Arkhangelos**	**0.88**	**150**	PG	**Pb**	**09 25 38.7**	**0.0**
ARG	**Arkhangelos**	**0.88**	**150**	P	**Pg**	**09 25 37.8**	**-0.7**
ARG				S	**Sb**	**09 25 50.9**	**+0.6**
ARG				AML	AML	09 25 54.6	
	comp=N,3872μm,0.6s						
ARG				AML	AML	09 25 58.7	
	comp=E,4880μm,0.5s						
ARG	**Arkhangelos**	**0.88**	**150**	P	**Pb**	**09 25 38.3**	**-0.4**
ARG				S	**Sn**	**09 25 53.1**	**+0.8**
ARG	**Arkhangelos**	**0.88**	**150**	P	**Pb**	**09 25 38.3**	**-0.4**
ARG	**Arkhangelos**	**0.88**	**150**	*e*Pg	**Pb**	**09 25 38.7**	**0.0**
ARG				S	**Sb**	**09 25 50.8**	**+0.5**
DALY	**Dalyan (Mu¨la**	**0.88**	**100**	PG	**Pb**	**09 25 39.3**	**+0.6**
DALY	**Dalyan (Mu¨la**	**0.88**	**100**	*i* P	**Pb**	**09 25 38.6**	**-0.1**
DALY	**Dalyan (Mu¨la**	**0.88**	**100**	P	**Pb**	**09 25 38.6**	**-0.1**
DALY	**Dalyan (Mu¨la**	**0.88**	**100**	*e*Pg	**Pb**	**09 25 39.3**	**+0.6**
SMG	**Samos**	**0.94**	**321**	P	**Pg**	**09 25 39.0**	**-0.9**
SMG				S	**Sb**	**09 25 52.6**	**+0.3**
SMG				AML	AML	09 25 54.8	
	comp=E,2177μm,0.7s						
SMG				AML	AML	09 25 56.5	
	comp=N,1934μm,0.3s						
SMG	**Samos**	**0.94**	**321**	P	**Pb**	**09 25 39.1**	**-0.8**
SMG				S	**Sb**	**09 25 52.7**	**+0.3**
SMG	**Samos**	**0.94**	**321**	P	**Pb**	**09 25 39.1**	**-0.8**
SMG				S	**Sb**	**09 25 52.6**	**+0.3**
AYDB	**Zeytinkoy-Aydi**	**1.00**	**14**	PG	**Pg**	**09 25 39.9**	**-1.2**
AYDB	**Zeytinkoy-Aydi**	**1.00**	**14**	*e*Pg	**Pg**	**09 25 39.9**	**-1.2**
TAVA	**DENIZLI_Tavas**	**1.17**	**65**	*i* P	**Pg**	**09 25 43.4**	**-0.9**
TAVA				*i* S	**Sb**	**09 25 60.0**	**+0.9**
TAVA	**DENIZLI_Tavas**	**1.17**	**65**	P	**Pg**	**09 25 43.4**	**-0.9**
TAVA				S	**Sb**	**09 26 00.0**	**+0.9**
DGB	**¨zmir**	**1.21**	**333**	*i* P	**Pb**	**09 25 43.9**	**-0.5**
DGB				*i* S	**Sb**	**09 26 00.6**	**+0.6**
GMLD	**Gumuldur**	**1.22**	**335**	PN	**Pn**	**09 25 45.2**	**+0.7**
GMLD	**Gumuldur**	**1.22**	**335**	*e*Pn	**Pn**	**09 25 45.2**	**+0.7**
FETY	**Fethiye**	**1.25**	**105**	PN	**Pn**	**09 25 45.9**	**+0.9**
FETY	**Fethiye**	**1.25**	**105**	P	**Pg**	**09 25 44.8**	**-1.0**
FETY				S	**Sb**	**09 26 02.1**	**+0.8**
FETY	**Fethiye**	**1.25**	**105**	P	**Pn**	**09 25 45.5**	**+0.5**
FETY	**Fethiye**	**1.25**	**105**	*e*Pn	**Pn**	**09 25 45.9**	**+0.9**
FETY				S	**Sb**	**09 26 02.1**	**+0.8**
DNZL	**Cakiroluk**	**1.37**	**58**	*i* P	**Pg**	**09 25 46.4**	**-1.7**
DNZL				*i* S	**Sn**	**09 26 06.6**	**+1.7**
DNZL	**Cakiroluk**	**1.37**	**58**	P	**Pg**	**09 25 46.4**	**-1.7**
DNZL				S	**Sn**	**09 26 06.6**	**+1.7**
DENT	**Denizli**	**1.40**	**56**	PN	**Pg**	**09 25 47.1**	**-1.4**
DENT	**Denizli**	**1.40**	**56**	*e*Pn	**Pg**	**09 25 47.1**	**-1.4**
KARP	**Karpathos**	**1.46**	**193**	PN	**Pn**	**09 25 48.5**	**+0.7**
KARP	**Karpathos**	**1.46**	**193**	P	**Pn**	**09 25 47.7**	**-0.1**
KARP				S	**Sg**	**09 26 06.8**	**-2.0**
KARP				AML	AML	09 26 14.0	
	comp=N,2257μm,0.8s						
KARP				AML	AML	09 26 16.9	
	comp=E,1055μm,1.2s						
KARP	**Karpathos**	**1.46**	**193**	P	**Pn**	**09 25 47.9**	**+0.1**
KARP				S	**Sn**	**09 26 08.7**	**+1.8**
KARP	**Karpathos**	**1.46**	**193**	P	**Pn**	**09 25 47.9**	**+0.1**
KARP	**Karpathos**	**1.46**	**193**	*e*Pn	**Pn**	**09 25 48.5**	**+0.7**
KARP				S	**Sg**

EZN	Ezine	3.01	341	PN	Pn	09 26 09.8	+0.7
EZN	Ezine	3.01	341	*e*Pn	Pn	09 26 09.8	+0.7
DION	Dionisos Attik	3.10	292	P	Pn	09 26 12.1	+1.7
DION	Dionisos Attik	3.10	292	P	Pn	09 26 11.3	+1.0
KCTX	Karacabey (Bur	3.34	10	PN	Pn	09 26 15.5	+1.8
KCTX	Karacabey (Bur	3.34	10	*e*Pn	Pn	09 26 15.5	+1.8
KRBG	Karabiga-Canak	3.42	356	PN	Pn	09 26 15.4	+0.7
KRBG	Karabiga-Canak	3.42	356	*e*Pn	Pn	09 26 15.4	+0.7
GADA	Gvkgeada	3.47	338	P	Pn	09 26 15.9	+0.5
GADA	Gvkgeada	3.47	338	P	Pn	09 26 15.9	+0.5
LIA	Limnos Island	3.47	328	P	Pn	09 26 16.3	+0.9
LIA	Limnos Island	3.47	328	P	Pn	09 26 16.0	+0.6
GELI	Tayfur-Gelibol	3.53	346	PN	Pn	09 26 16.1	-0.1
GELI	Tayfur-Gelibol	3.53	346	*e*Pn	Pn	09 26 16.1	-0.1
SMTH	Samothraki Isl	3.84	336	P	Pn	09 26 19.8	-0.8
SMTH	Samothraki Isl	3.84	336	P	Pn	09 26 20.3	-0.2
BRTR	Keskin Array B	5.50	58	Pn	Pn	09 26 44.7	+1.3
	comp=N,0.7nm,0.3s,baz=237,slow=16,SNR=14						
MMAI	Mount Meron Ar	7.54	119	Pn	Pn	09 27 13.3	+1.9
	comp=N,1.2nm,0.3s,baz=320,slow=15,SNR=3.7						
MMAI				Sn	Sn	09 28 33.6	-3.1
	comp=N,3.3nm,0.3s,baz=328,slow=19,SNR=3.8						
ESDC	Sonseca Array	24.83	286	P	P	09 30 44.5	+0.9
	comp=N,0.4nm,0.5s,baz=80,slow=9.9,SNR=4.9						
TORD	Torodi Ar. Bea	33.15	231	P	P	09 31 58.3	+0.4
	comp=N,0.8nm,0.6s,baz=35,slow=9.0,SNR=5.7						
KURBB	Kurchatov Arra	38.46	53	P	P	09 32 44.9	+1.8
	comp=N,0.4nm,0.6s,baz=277,slow=9.1,SNR=5.2						
MKAR	Makanchi Array	41.15	58	P	P	09 33 07.5	+1.9
	comp=N,0.4nm,0.7s,baz=267,slow=7.3,SNR=3.5						

NEIC ***03*** *09:38:25.8±0.0, 15°.94N×98°.43W, h4km, MD4.0(MEX), After MEX.*

MEX 03 09:38:25.8±0.6, 15°.94N×98°.43W, h4km±37km, MD4.0, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	Tlapa	1.62	356	*e*P	Pn	09 38 51.4	-3.9
TLIG				*e*S	Sn	09 39 11.8	-4.9
TLIG	Tlapa	1.62	356	*e*P	Pn	09 38 51.4	-3.9
TLIG				*e*S	Sn	09 39 11.8	-4.9
VHO	Vista Hermosa	1.98	55	*e*P	Pn	09 38 56.2	-4.1
VHO				*e*S	Sn	09 39 21.1	-4.6
VHO	Vista Hermosa	1.98	55	*e*P	Pn	09 38 56.2	-4.1
VHO				*e*S	Sn	09 39 21.1	-4.6
CAIG	El Cayaco	2.08	302	*e*P	Pn	09 38 58.7	-2.7
CAIG				*e*S	Sn	09 39 21.2	-6.6
CAIG	El Cayaco	2.08	302	*e*P	Pn	09 38 58.7	-2.7
CAIG				*e*S	Sn	09 39 21.2	-6.6
HUIG	Huatulco	2.25	94	*e*P	Pn	09 38 56.5	-7.2
HUIG				*e*S	Sn	09 39 24.8	-7.1
HUIG	Huatulco	2.25	94	*e*P	Pn	09 38 56.5	-7.2
HUIG				*e*S	Sn	09 39 24.8	-7.1

NIED ***03*** *09:40:00, 39°.50N×143°.70E, h11km, Mw3.7 Best double couple: M=3.72000×10^14 NP1:φ=190.00000°, δ=38.00000°, λ=80.00000°. NP2:φ=22.00000°, δ=52.00000°, λ=98.00000°.*
ISCJB ***03*** *09:40:36.8±0.7, 39°.49N±0°.04×143°.66E±0°.07, h11km, mb3.6/8, Error ellipse: s-maj=8.7km s-min=4.2km az=35.9*
IDC ***03*** *09:40:36.3±1.0, 39°.34N×143°.65E, h0km, mb3.7/8, mb1 3.8/12, mb1mx3.6/66, mbtmp3.6/12, ML3.2/4, MS2.4/1, Ms1 2.4/1, ms1mx2.0/63, Error ellipse: s-maj=24.1km s-min=19.2km az=149.0*
JMA ***03*** *09:40:38.6±0.2, 39°.46N×143°.67E, h38km, M3.7*

ISC 03 09:40:38.5±0.9, 39°.49N±0°.06×143°.61E±0°.07, h11km, n25, σ19°27/31, mb3.7/8, Off east of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	1.39	274	*e*S	Sg	09 41 20.9	-2.2
JTH	Tanohata	1.42	289	P	Pn	09 41 03.4	-0.8
OFUJ	Ofunato	1.56	255	P	Pn	09 41 05.2	-1.0
JOM	Ohasama	1.79	270	P	Pn	09 41 09.2	-0.2
JANG	Nango	1.83	299	P	Pn	09 41 09.1	-0.8
JMK	Ichinoseki	1.93	255	P	Pn	09 41 10.7	-0.6
JMK				*e*S	Sn	09 41 34.5	-1.1
JYK	Kaneyama	2.59	258	P	Pn	09 41 20.3	0.0
JOT	Ohata	2.72	315	P	Pn	09 41 22.1	+0.1
JNBK	Urakawa-nobuka	2.86	347	P	Pn	09 41 24.7	+0.7
JNBK				*e*S	Sn	09 41 59.1	+0.7
JCH	Churui	3.12	357	P	Pn	09 41 27.1	-0.5
JCH				*e*S	Sn	09 42 03.9	-1.0
JFT	Otama	3.24	234	P	Pn	09 41 28.3	-0.9
JAK	Akkeshi	3.59	13	P	Pn	09 41 32.6	-1.5
JAK				*e*S	Sn	09 42 14.1	-2.4
ASAJ	Asahikawa	4.68	351	Pn	Pn	09 41 49.5	+0.4
	1.3nm,0.3s,baz=246,slow=12,SNR=9.3						
ASAJ				Sn	Sn	09 42 44.8	+1.4
	0.6nm,0.3s,baz=298,slow=25,SNR=3.7						
MAT	Matsushiro	5.18	237	P	Pn	09 41 56.5	+0.5
MAT				*e*S	Sn	09 42 58.4	+2.6
MJAR	Matsushiro Arr	5.18	237	Pn	Pn	09 41 56.3	+0.3
	2.5nm,0.3s,baz=33,slow=14,SNR=51						
USRK	Ussuriysk Ar.	9.86	302	Pn	Pn	09 43 01.9	+1.8
	0.3nm,0.3s,baz=99,slow=12,SNR=7.6						
KSRS	Korea Array	12.46	266	Pn	Pn	09 43 37.8	+2.0
	0.2nm,0.3s,baz=82,slow=14,SNR=5.4						
KSRS				LR	LR	09 48 12.8	
	comp=Z,19nm,21.1s,baz=160,slow=36						
SEY	Seymchan	24.06	10	P	P	09 45 54.5	+1.1
	1.8nm,0.9s,baz=170,slow=3.8,SNR=3.6						
ZALV	Zalesovo Beam	41.59	310	P	P	09 48 26.4	+0.3
	1.4nm,0.5s,baz=101,slow=7.9,SNR=6.6						
MKAR	Makanchi Array	44.32	300	P	P	09 48 47.8	-0.6
	1.2nm,0.8s,baz=82,slow=8.8,SNR=8.6						
KURBB	Kurchatov Arra	45.89	306	P	P	09 49 00.7	-0.1
	1.8nm,0.7s,baz=78,slow=8.3,SNR=15						
ILAR	Eielson Array	46.49	34	P	P	09 49 05.8	+0.4
	0.3nm,0.6s,baz=255,slow=6.6,SNR=4.4						
WRA	Warramunga Arr	59.76	190	P	P	09 50 41.0	-2.4
	0.3nm,0.5s,baz=9.6,slow=7.1,SNR=6.5						
YKA	Yellowknife Ar	60.81	31	P	P	09 50 50.5	+0.3
	0.2nm,0.6s,baz=300,slow=6.3,SNR=3.7						
NVAR	Mina Array Bea	72.14	55	P	P	09 52 04.3	+0.9
	0.2nm,0.5s,baz=284,slow=4.5,SNR=3.2						

IDC 03 09:56:38.1±3.4, 5°.70S×154°.24E, h0km, mb3.4/2, mb1 3.7/2, mb1mx3.3/46, mbtmp3.4/2, Error ellipse: s-maj=165.1km s-min=46.8km az=126.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.98	232	P	P	10 01 54.8	+0.3
	0.8nm,0.5s,baz=58,slow=9.7,SNR=13						
ASAR	Alice Springs	26.50	226	P	P	10 02 17.3	-0.2
	0.3nm,0.7s,baz=56,slow=9.3,SNR=5.1						
TORD	Torodi Ar. Bea	151.95	287	PKPbc	PKPbc	10 16 36.0	-0.3
	0.3nm,0.7s,baz=54,slow=3.3,SNR=2.6						

ISCJB ***03*** *10:02:05.0±0.6, 39°.19N±0°.05×29°.10E±0°.04, h3km±11km, Error ellipse: s-maj=8.7km s-min=5.6km az=171.7*
ISK ***03*** *10:02:04.9, 39°.16N×29°.12E, h7km, ML2.3/4*
CSEM ***03*** *10:02:05.0±0.1, 39°.19N×29°.11E, h2km, ML2.3, Error ellipse: s-maj=2.5km s-min=2.0km az=141.0*
DDA ***03*** *10:02:05.5, 39°.19N×29°.03E, h7km, Ml2.6*

ISC 03 10:02:05.0±0.9, 39°.18N±0°.04×29°.11E±0°.03, h9km±9km, n26, σ0°37/33, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMAA	Simav-Kutahya	0.12	233	PG	Pg	10 02 07.9	0.0
SMAA				SG	Sg	10 02 10.4	+0.5
SMAA	Simav-Kutahya	0.12	233	*e*Pg	Pg	10 02 07.9	0.0
SMAA				*e*Sg	Sg	10 02 10.4	+0.5
SIMA	Simav-Kutahya	0.13	226	PG	Pg	10 02 07.9	-0.2
SIMA				SG	Sg	10 02 09.9	-0.3
SIMA	Simav-Kutahya	0.13	226	*e*Pg	Pg	10 02 07.9	-0.2
SIMA				*e*Sg	Sg	10 02 09.9	-0.3
SHAP	Saphane-Kutahy	0.18	150	PG	Pg	10 02 08.7	-0.1
SHAP				SG	Sg	10 02 11.3	-0.1
SHAP	Saphane-Kutahy	0.18	150	*e*Pg	Pg	10 02 08.7	-0.1
SHAP				*e*Sg	Sg	10 02 11.3	-0.1
GEDZ	Gediz	0.27	119	PG	Pg	10 02 10.4	0.0
GEDZ	Gediz	0.27	119	*e*Pg	Pg	10 02 10.4	0.0
DEMI	Demirci	0.33	247	*i* P	Pg	10 02 11.5	-0.1
DEMI				*i* S	Sg	10 02 15.7	-0.3
TVSB	Tavsanli	0.39	45	PG	Pg	10 02 12.3	-0.3
TVSB	Tavsanli	0.39	45	*e*Pg	Pg	10 02 12.3	-0.3
DURS	Dursunbey	0.65	311	*i* P	Pg	10 02 17.9	+0.4
DURS	Dursunbey	0.65	311	P	Pg	10 02 17.9	+0.4
AKHS	Akhisar	1.05	254	*i* P	Pb	10 02 25.5	+0.2
AKHS	Akhisar	1.05	254	P	Pb	10 02 25.5	+0.2
IGD	Bursa	1.09	4	*i* P	Pb	10 02 26.2	+0.2
CAVI	Cavuskoy	1.17	29	PN	Pn	10 02 28.0	+0.5
CAVI	Cavuskoy	1.17	29	*e*Pn	Pn	10 02 28.0	+0.5
BORA	Eskisehir	1.26	56	PN	Pn	10 02 29.4	+0.6
BORA	Eskisehir	1.26	56	*e*Pn	Pn	10 02 29.4	+0.6
BALY	Balya	1.28	297	*i* P	Pn	10 02 28.4	-0.7
BALY	Balya	1.28	297	P	Pn	10 02 28.4	-0.7
YLV	Yalova	1.40	8	PN	Pg	10 02 31.8	-0.1
YLV	Yalova	1.40	8	*e*Pn	Pg	10 02 31.8	-0.1
GULT	Gulveren	1.66	40	PN	Pb	10 02 35.3	-0.4
GULT	Gulveren	1.66	40	*e*Pn	Pb	10 02 35.3	-0.4

MAN 03 10:04:28.7, 5°.80N×125°.68E, h112km, mb3.9, ML2.6, MS2.1, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	General Santos	0.78	292	⇓*i*P	Pn	10 04 48.1	0.0
GSPH				*i* S	Sn	10 05 02.0	-0.7
MATI	Mati	1.28	27	*e*P	Pn	10 04 32.1	-21
MATI				*e*S	Sn	10 05 05.3	-6.3
DMPH	Davao City--Mi	1.29	353	⇑*e*P	Pn	10 04 53.0	-0.3
DMPH				*e*S	Sn	10 05 13.6	+1.8
BUKP	Musuan	2.15	344	*e*P	Pn	10 05 05.1	+1.2
BUKP				*e*S	Sn	10 05 30.9	+0.1

ISK ***03*** *10:16:19.7, 36°.99N×27°.57E, h15km±1km, ML2.4/9*
CSEM ***03*** *10:16:20.8±0.1, 36°.99N×27°.60E, h1km, ML2.4, Error ellipse: s-maj=3.1km s-min=2.3km az=48.0, Suspected Mining explosion.*
DDA ***03*** *10:16:21.4, 37°.04N×27°.61E, h7km, Ml2.6, Suspected Mining explosion.*

ISC 03 10:16:20.4±1.6, 36°.98N±0°.03×27°.58E±0°.03, h15km±11km, n27, σ0°40/38, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	Kayabasi	0.14	307	*i* P	Pg	10 16 24.4	+0.2
BDRM				*i* S	Sg	10 16 26.9	+0.2
BDRM	Kayabasi	0.14	307	P	Pg	10 16 24.4	+0.2
BDRM				S	Sg	10 16 26.9	+0.2
BODT	Bodrum	0.23	290	PG	Pg	10 16 25.0	-0.6
BODT				SG	Sg	10 16 29.1	0.0
BODT	Bodrum	0.23	290	*e*Pg	Pg	10 16 25.0	-0.6
BODT				*e*Sg	Sg	10 16 29.1	0.0
DATC	Datca-Mugla	0.23	164	PG	Pg	10 16 25.2	-0.4
DATC				SG	Sg	10 16 29.5	+0.5
DATC	Datca-Mugla	0.23	164	*e*Pg	Pg	10 16 25.2	-0.4
DATC				*e*Sg	Sg	10 16 29.5	+0.5
YKAV	Yalikavak-Bodr	0.28	301	PG	Pg	10 16 25.9	-0.5
YKAV				SG	Sg	10 16 30.4	0.0
YKAV	Yalikavak-Bodr	0.28	301	*e*Pg	Pg	10 16 25.9	-0.5
YKAV				*e*Sg	Sg	10 16 30.4	0.0
MLSB	Milas	0.35	27	PG	Pg	10 16 27.2	-0.4
MLSB				SG	Sg	10 16 32.9	+0.3
MLSB	Milas	0.35	27	*e*Pg	Pg	10 16 27.2	-0.4
MLSB				*e*Sg	Sg	10 16 32.9	+0.3
MRSB	Marmaris-Mugla	0.56	118	PG	Pg	10 16 31.5	0.0
MRSB	Marmaris-Mugla	0.56	118	*e*Pg	Pg	10 16 31.5	0.0
YER	Yerkesik	0.58	75	PG	Pg	10 16 31.5	-0.4
YER	Yerkesik	0.58	75	*e*Pg	Pg	10 16 31.5	-0.4
AYDN	Tasoluk	0.72	19	*i* P	Pg	10 16 34.4	-0.1
AYDN				*i* S	Sg	10 16 44.1	+0.2
AYDN	Tasoluk	0.72	19	P	Pg	10 16 34.4	-0.1
AYDN				S	Sg	10 16 44.2	+0.2
GCAM	G?zelcaml?	0.77	339	PG	Pg	10 16 35.5	+0.1
GCAM	G?zelcaml?	0.77	339	*i* P	Pg	10 16 36.2	+0.8
GCAM	G?zelcaml?	0.77	339	*e*Pg	Pg	10 16 35.5	+0.1
GCAM	G?zelcaml?	0.77	339	P	Pg	10 16 36.2	+0.8
TURN	Turunc	0.83	97	PG	Pg	10 16 31.8	-4.7
DALY	Dalyan (Mu¨la	0.88	101	PG	Pg	10 16 37.3	-0.1
DALY	Dalyan (Mu¨la	0.88	101	*e*Pg	Pg	10 16 37.3	-0.1
ARG	Arkhangelos	0.88	150	PG	Pg	10 16 37.4	-0.1
ARG	Arkhangelos	0.88	150	*e*Pg	Pg	10 16 37.4	-0.1
AYDB	Zeytinkoy-Aydi	0.99	14	PG	Pg	10 16 39.0	-0.7
AYDB	Zeytinkoy-Aydi	0.99	14	*e*Pg	Pg	10 16 39.0	-0.7

NNC ***03*** *10:27:22.8±2.9, 39°.19N×72°.99E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=27.6km s-min=10.8km az=141.0*
KRNET ***03*** *10:27:23.6±0.1, 39°.42N×72°.74E, h12km, mb3.3*
ISCJB ***03*** *10:27:24.1±1.1, 39°.28N±0°.06×72°.75E±0°.04, h10km, Error ellipse: s-maj=9.2km s-min=4.5km az=164.0*

ISC 03 10:27:24.6±1.4, 39°.35N±0°.08×72°.78E±0°.04, h10km, n20, σ2°05/39, 30C-8D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	Karamyk	0.77	280	⇑*i*P	Pg	10 27 37.5	-2.0
	baz=75						
DRK				⇑*i*S	Sg	10 27 48.1	-1.6
	baz=75						
SFK	Sufi-Kurgan	0.87	40	⇑P	Pg	10 27 39.9	-1.5
	12nm,0.1s						
SFK				⇑S	Sg	10 27 52.3	-0.4
	59nm,0.1s						
SFK	Sufi-Kurgan	0.87	40	⇑*i*P	Pg	10 27 39.9	-1.5
	baz=44						
SFK				⇑*i*S	Sg	10 27 51.9	-0.8
	baz=44						
BTK	Batken	1.67	296	⇑*i*P	Pb	10 27 54.1	-1.4
	baz=94						
BTK				⇑*i*S	Sb	10 28 16.0	-0.7
	baz=94						
ARSB	Arslanbob	1.98	4	⇑*i*P	Pb	10 27 59.7	-1.1
	baz=6.0						
ARSB				⇑*i*S	Sn	10 28 24.6	+1.3
	baz=6.0						
ARK	Arkit	2.53	346	⇓*e*P	Pn	10 28 06.9	+1.1
	baz=47						
ARK				⇓*i*S	Sn	10 28 38.1	+1.4
	baz=47						
TOKL	Toktogul	2.59	1	⇑*i*P	Pn	10 28 07.3	+0.6
	baz=2.0						
TOKL				⇑*i*S	Sn	10 28 40.6	+2.3
	baz=2.0						
AML	Almayashu	2.87	14	⇑*i*P	Pn	10 28 12.0	+1.3
	baz=15						
AML				⇑*i*S	Sn	10 28 47.7	+2.2
	baz=15						
DZET	Dzherino	3.12	261	Pg	Pb	10 28 20.2	-0.1
	22nm,0.4s						
DZET				⇑Lg	Lg	10 29 05.9	
	54nm,0.4s						
MNAS	Manas	3.14	356	⇓Pn	Pb	10 28 17.8	-2.9
	5.4nm,0.4s						
MNAS				⇑Sn	Sb	10 28 58.4	-0.7
	10.0nm,0.4s						
MNAS	Manas	3.14	356	⇑*i*P	Pn	10 28 15.8	+1.5
	baz=57						
MNAS				⇑*i*S	Sn	10 28 54.3	+2.3
	baz=57						
UCH	Uchtor	3.16	24	⇑*i*P	Pn	10 28 16.7	+1.8
	baz=25						
UCH				⇑*i*S	Sn	10 28 55.4	+2.5
	baz=25						
NRN	Naryn	3.22	49	⇑*i*P	Pn	10 28 17.1	+1.6
	baz=50						
NRN				⇑*i*S	Sn	10 28 56.1	+2.0
	baz=50						
KZA	Kyzart	3.31	34	⇑*i*P	Pn	10 28 18.8	+2.0
	baz=35						
KZA				⇑*i*S	Sn	10 28 58.9	+2.5
	baz=35						
EKS2	Erkin-Say	3.40	12	⇑*i*P	Pn	10 28 19.0	+1.3
	baz=13						
EKS2				⇑*i*S	Sn	10 29 00.2	+2.0
	baz=13						
AAK	Ala-Archa	3.53	21	⇓Pn	Pn	10 28 22.5	+2.8
	9.1nm,0.6s						
AAK				⇓Sn	Sb	10 29 06.3	-4.0
	11nm,0.7s						
AAK	Ala-Archa	3.53	21	⇑*i*P	Pn	10 28 21.3	+1.6
	baz=22						
AAK				⇑*i*S	Sn	10 29 03.6	+2.0
	baz=22						
ULHL	Ulahol	3.91	41	⇓*i*P	Pn	10 28 26.7	+1.8
	baz=42						
ULHL				⇓*i*S	Sn	10 29 13.1	+2.2
	baz=42						
KK31	Karatay Array	4.12	336	Pn	Pn	10 28 30.6	+3.0
	2.1nm,0.3s,baz=144,slow=12,SNR=33						
KK31				Pg	Pb	10 28 39.6	+2.4
	1.5nm,0.3s,baz=153,slow=14,SNR=6.6						
KK31				⇓Sn	Sn	10 29 19.6	+3.6
	3.5nm,0.4s,baz=144,slow=22,SNR=4.5						
TKM2	Tokmak 2	4.16	30	⇑Pg	Pg	10 28 42.1	-2.0
	2.3nm,0.5s						
TKM2				⇑Lg	Lg	10 29 35.2	
	12nm,0.8s						

MAN 03 10:32:08.3, 8°.53N×124°.41E, h24km, mb4.2, ML3.0, MS2.8, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGP	Cagayan de Oro	0.29	104	⇑*i*P	Pb	10 32 15.3	+0.1
CGP				*i* S	Sb	10 32 20.2	+0.3
BUKP	Musuan	0.92	135	*e*P	Pb	10 32 25.5	-0.1
BUKP				*e*S	Sn	10 32 38.9	+0.7
DCPH	Dipolog City	1.04	273	⇑*e*P	Pn	10 32 27.2	-0.2
DCPH				*e*S	Sn	10 32 42.0	+0.8
PAGZ	Pagadian	1.22	236	*e*P	Pn	10 32 29.2	-0.7
PAGZ				*e*S	Sn	10 32 44.5	-1.1

IDC ***03*** *10:49:38.6±0.7, 35°.74N×99°.94E, h0km, mb4.0/17, mb1 4.2/20, mb1mx3.9/73, mbtmp4.0/20, ML3.7/3, MS3.2/8, Ms1 3.2/8, ms1mx2.9/69, Error ellipse: s-maj=20.7km s-min=13.8km az=45.0*
ISCJB ***03*** *10:49:40.3±0.2, 35°.96N±0°.03×99°.84E±0°.03, h11km, mb4.3/51, MS3.4/9, Error ellipse: s-maj=4.4km s-min=3.6km az=137.2*
BJI ***03*** *10:49:40.8, 35°.71N×99°.86E, h6km, mb4.4/24, mB4.6/16, ML4.0/15, Ms3.9/25, Ms7 3.8/19*
NEIC ***03*** *10:49:41.2±0.2, 35°.81N×99°.84E, h10km, mb4.5/24, ML4.0(BJI), Error ellipse: s-maj=5.8km s-min=4.7km az=212.0*
MOS ***03*** *10:49:43.3±0.9, 36°.07N×99°.86E, h29km, mb4.3/28, Error ellipse: s-maj=7.9km s-min=5.8km az=115.7*

ISC 03 10:49:42.4±0.3, 35°.93N±0°.03×99°.88E±0°.03, h11km, n140, σ2°08/164, mb4.4/51, MS3.3/9, 10C-6D, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	Lanzhou	3.21	86	Pn	Pn	10 50 33.9	+0.9
LZH				Pg	Pb	10 50 40.1	+0.5
LZH				Sn	Sn	10 51 14.6	+3.2
LZH				Sg	Sb	10 51 21.9	+3.1
LZH				smax	smax		
	comp=N,2μm,0.8s						
LZH				smax	smax		
	comp=E,2μm,0.9s						
LZH				LR	LR		
	comp=N,1μm,6.0s						
LZH				LR	LR		
	comp=E,2μm,5.4s						
LZH				LR	LR		
	comp=Z,2μm,6.3s						
LZH	Lanzhou	3.21	86	Pn	Pn	10 50 33.9	+0.9
LZH				Pg	Pb	10 50 40.1	+0.5
LZH				Sn	Sn	10 51 14.6	+3.2
LZH				Sg	Sb	10 51 21.9	+3.1
LZH	Lanzhou	3.21	86	P	Pn	10 50 33.9	+0.9
LZH						10 51 14.6	
GTA	Gaotai	3.47	359	Pn	Pn	10 50 39.6	+3.1
GTA				Pg	Pg	10 50 47.9	-1.1
GTA				Sn	Sb	10 51 25.3	-1.0
GTA				Sg	Sg	10 51 36.5	+2.5
GTA				smax	smax		
	comp=N,290nm,1.1s						
GTA				smax	smax		
	comp=E,310nm,1.4s						
GTA				LR	LR		
	comp=N,1μm,7.3s						
GTA				LR	LR		
	comp=E,1μm,10.4s						
GTA				LR	LR		
	comp=Z,1μm,9.6s						
GTA	Gaotai	3.47	359	Pn	Pn	10 50 39.6	+3.1
GTA				Pg	Pg	10 50 47.9	-1.1
GTA				Sn	Sb	10 51 25.3	-1.0
GTA				Sg	Sg	10 51 36.5	+2.5
CD2	Chengdu	5.96	146	Pn	Pn	10 51 15.5	+4.8
CD2				Pg	Pg	10 51 33.2	-3.4
CD2				Sg	Sg	10 52 49.6	-4.2
CD2				smax	smax		
	comp=N,70nm,1.2s						
CD2				smax	smax		
	comp=E,70nm,1.6s						
CD2				LR	LR		
	comp=E,2μm,6.9s						
CD2				LR	LR		
	comp=Z,2μm,8.8s						
XAN	Xi'an	7.65	102	Pn	Pn	10 51 34.5	+0.6
XAN				Sg	Sg	10 53 39.4	-8.6
XAN				smax	smax		
	comp=Z,54nm,1.1s						
XAN				smax	smax		
	comp=Z,58nm,1.1s						
BTO	Baotou	9.23	57	*e*P	Pn	10 51 58.5	+2.9
LSA	Lhasa	9.62	232	*e*Pn	Pn	10 52 03.4	+2.2
LSA	Lhasa	9.62	232	*e*P	Pn	10 52 03.4	+2.2
ENH	Enshi	9.83	122	*e*Pn	Pn	10 52 03.0	-0.7
HHC	Hu-ho-hao-te	10.40	58	*e*P	Pn	10 52 13.8	+2.3
HHC				PP	PnPn	10 52 22.8	+3.7
HHC				S	Sn	10 54 13.5	+5.4
HHC				sS		10 54 18.8	
HHC				pmax	pmax		
	comp=Z,18nm,1.0s						
HHC				pmax	pmax		
	comp=Z,49nm,5.5s						
HHC				LR	LR		
	comp=Z,230nm,7.7s						
HHC				LR	LR		
	comp=Z,220nm,9.2s						
HHC				LR	LR		
	comp=Z,200nm,9.3s						
KMI	Kunming	11.05	166	P	Pn	10 52 23.1	+2.5
KMI				pP		10 52 25.6	
KMI				sP		10 52 27.2	
KMI				S	Sn	10 54 30.2	+5.9
KMI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,100nm,5.6s						
KMI				LR	LR		
	comp=Z,250nm,7

WMQ				LR	LR		
	comp=Z,250nm,21.7s						
SHL	**Shillong**	**12.40**	**216**	P	**Pn**	**10 52 42.0**	**+2.9**
SHL				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SONM	**Songino Array**	**12.84**	**20**	Pn	**Pn**	**10 52 46.1**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=201,slow=15,SNR=3.5						
SONM				Lg	Lg	10 56 30.6	
	baz=208,slow=29,SNR=3.2						
ULN	**Ulaanbaatar**	**13.06**	**22**	*e*Pn	**Pn**	**10 52 49.2**	**+1.3**
ULN	**Ulaanbaatar**	**13.06**	**22⇑**	*e*P	**Pn**	**10 52 47.5**	**-0.4**
ZAK	**Zakamensk**	**14.65**	**9**	*e*P	**Pn**	**10 53 07.5**	**-2.1**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
MOY	**Mondy**	**15.75**	**3**	*e*P	**P**	**10 53 30.6**	**+2.4**
MOY				pmax	pmax		
	comp=Z,25nm,1.4s						
HVS	**Khovu-Aksy**	**15.84**	**346⇑**	*e*P	**Pn**	**10 53 24.1**	**-1.2**
HVS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TLY	**Talaya**	**15.97**	**9**	LR	LR	10 59 58.0	
	comp=Z,112nm,18.2s,baz=190,slow=38						
TLY	**Talaya**	**15.97**	**9⇓**	*e*P	**Pn**	**10 53 26.0**	**-1.0**
TLY				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NJ2	**Nanjing**	**16.20**	**98**	*e*P	**P**	**10 53 31.4**	**-1.7**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
MK01	**Makanchi Array**	**17.04**	**315**	*e*Pn	**Pn**	**10 53 39.6**	**-1.0**
MK31	**Makanchi Array**	**17.05**	**315**	*e*Pn	**Pn**	**10 53 39.0**	**-1.7**
MK31	**Makanchi Array**	**17.05**	**315**	*e*P	**Pn**	**10 53 39.0**	**-1.7**
MKAR	**Makanchi Array**	**17.05**	**315**	P	**Pn**	**10 53 39.2**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=131,slow=15,SNR=9.9						
MKAR				LR	LR	11 00 51.0	
	comp=Z,161nm,18.6s,baz=66,slow=39						
MKAR	**Makanchi Array**	**17.05**	**315**	*e*Pn	**Pn**	**10 53 39.0**	**-1.8**
	comp=Z,34nm,0.9s						
MKAR	**Makanchi Array**	**17.05**	**315**	*e*P	**Pn**	**10 53 39.0**	**-1.8**
MKAR				pmax	pmax		
	comp=Z,34nm,0.9s						
CHTO	**Chiang Mai**	**17.07**	**183**	*e*Pn	**Pn**	**10 53 39.3**	**-1.8**
	comp=Z,20nm,1.3s						
CHTO	**Chiang Mai**	**17.07**	**183**	*e*P	**Pn**	**10 53 39.3**	**-1.8**
CHTO				pmax	pmax		
	comp=Z,20nm,1.3s						
MAKZ	**Makanchi**	**17.24**	**315**	*e*Pn	**Pn**	**10 53 41.4**	**-1.7**
	comp=Z,25nm,1.4s						
MAKZ	**Makanchi**	**17.24**	**315**	*e*P	**Pn**	**10 53 41.4**	**-1.7**
MAKZ				pmax	pmax		
	comp=Z,25nm,1.4s						
PDGK	**Podgornoye**	**17.34**	**301**	P	**P**	**10 53 46.5**	**+0.7**
PDGK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**17.43**	**183**	P	**Pn**	**10 53 42.6**	**-2.9**
	comp=Z,0.1nm,0.3s,baz=360,slow=11,SNR=10						
CMAR				LR	LR	10 59 56.4	
	comp=Z,25nm,20.3s,baz=270,slow=36						
CM01	**Chiang Mai Arr**	**17.46**	**183**	*e*Pn	**Pn**	**10 53 44.8**	**-1.1**
QIZ	**Qiongzhong**	**18.99**	**150**	P	**Pn**	**10 54 05.8**	**+1.1**
QIZ				pmax	pmax		
	comp=Z,11nm,1.3s						
QIZ				LR	LR		
	comp=Z,220nm,7.1s						
QIZ				LR	LR		
	comp=Z,160nm,5.9s						
KSH	**Kashi**	**19.24**	**288**	P	**Pn**	**10 54 12.4**	**+4.7**
KSH				pP	sP	10 54 16.6	+5.3
KSH				PP	**PnPn**	**10 54 28.7**	**+8.2**
KSH				S	**S**	**10 57 46.5**	**+1.9**
KSH				sS	sS	10 57 53.2	+3.6
KSH				SS	SnSn	10 58 12.4	+15
KSH				pmax	pmax		
	comp=Z,180nm,4.9s						
KSH				LR	LR		
	comp=Z,1μm,8.6s						
KSH				LR	LR		
	comp=Z,570nm,6.2s						
KSH				LR	LR		
	comp=Z,450nm,5.2s						
AAK	**Ala-Archa**	**20.72**	**297**	P	**P**	**10 54 23.3**	**+0.4**
	comp=Z,4.3nm,0.8s,baz=114,slow=5.7,SNR=8.1						
AAK				LR	LR	11 03 31.9	
	comp=Z,90nm,20.2s,baz=114,slow=40						
AAK	**Ala-Archa**	**20.72**	**297**	*e*P	Pn	10 54 23.9	-1.3
	comp=Z,5.0nm,0.9s						
ZAA0	**Zalesovo Array**	**20.86**	**334**	*e*P	**P**	**10 54 23.9**	**-0.2**
	comp=Z,6.8nm,0.8s						
ZALV	**Zalesovo Beam**	**20.86**	**334**	P	**P**	**10 54 23.8**	**-0.3**
	comp=Z,5.8nm,0.7s,baz=144,slow=11,SNR=21						
ZALV				LR	LR	11 02 51.6	
	comp=Z,93nm,18.7s,baz=243,slow=38						
ZALV	**Zalesovo Beam**	**20.86**	**334**	*e*P	**P**	**10 54 23.2**	**-0.8**
CN2	**Changchun**	**21.08**	**60**	*e*P	**P**	**10 54 20.4**	**-6.2**
SFK	**Sufi-Kurgan**	**21.16**	**289**	P	**P**	**10 54 28.5**	**+0.7**
SFK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KURBB	**Kurchatov Arra**	**21.28**	**320**	P	**P**	**10 54 28.0**	**-0.7**
	comp=Z,4.4nm,0.8s,baz=127,slow=11,SNR=16						
KURK	**Kurchatov**	**21.28**	**321**	*e*P	**P**	**10 54 28.4**	**-0.3**
	comp=Z,12nm,0.8s						
KURK	**Kurchatov**	**21.28**	**321**	P	**P**	**10 54 28.0**	**-0.7**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NIL	**Nilore**	**21.97**	**272**	*e*P	**P**	**10 54 34.7**	**-1.6**
	comp=Z,16nm,1.0s						
NIL	**Nilore**	**21.97**	**272**	*e*P	**P**	**10 54 34.7**	**-1.6**
NIL				pmax	pmax		
	comp=Z,16nm,1.0s						
NVS	**Novosibirsk**	**22.13**	**334**	*e*P	**P**	**10 54 37.1**	**-0.7**
MNAS	**Manas**	**22.15**	**296**	P	**P**	**10 54 41.0**	**+2.7**
MNAS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TJN	**Taejon**	**22.17**	**81⇑**	*e*P	**P**	**10 54 37.8**	**-0.6**
KS15	**Wonju Array Si**	**22.48**	**78**	*e*P	**P**	**10 54 41.4**	**-0.3**
KSAR	**Wonju Array Be**	**22.48**	**78**	P	**P**	**10 54 41.1**	**-0.6**
KSAR	**Wonju Array Be**	**22.48**	**78**	P	**P**	**10 54 41.1**	**-0.6**
KS01	**Wonju Array Si**	**22.48**	**78**	*e*P	**P**	**10 54 41.2**	**-0.5**
KSRS	**Korea Array**	**22.51**	**78**	P	**P**	**10 54 41.1**	**-0.9**
	comp=Z,6.5nm,0.7s,baz=268,slow=8.8,SNR=26						
KSRS				LR	LR	11 03 23.8	
	comp=Z,39nm,19.8s,baz=274,slow=37						
KSRS	**Korea Array**	**22.51**	**78**	P	**P**	**10 54 41.1**	**-0.9**
KSRS				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KK31	**Karatay Array**	**23.68**	**297**	*e*P	**P**	**10 54 53.4**	**-0.6**
KK31	**Karatay Array**	**23.68**	**297**	*e*P	**P**	**10 54 53.4**	**-0.6**
KKAR	**Karatay Array**	**23.68**	**297**	*e*P	**P**	**10 54 53.1**	**-0.9**
KKAR	**Karatay Array**	**23.68**	**297**	*e*P	**P**	**10 54 53.1**	**-0.9**
OTUK	**Ortayu**	**23.72**	**310**	P	**P**	**10 54 54.4**	**+0.1**
OTUK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
DZET	**Dzherino**	**24.79**	**286**	P	**P**	**10 55 04.0**	**-0.4**
DZET				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KBL	**Kabul**	**25.18**	**276**	*e*P	**P**	**10 55 08.5**	**+0.4**
	comp=Z,7.6nm,0.8s						
KBL	**Kabul**	**25.18**	**276**	*e*P	**P**	**10 55 08.5**	**+0.4**
KBL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
JNU	**Nakatsue**	**25.64**	**87**	LR	LR	11 06 12.5	
	comp=Z,50nm,18.1s,baz=297,slow=39						
ZEA	**Zeya**	**26.09**	**38**	*e*P	**P**	**10 55 20.0**	**+4.1**
ZEA				pmax	pmax		
	comp=Z,40nm,1.8s						
ZEA				MLR	MLR		
	comp=Z,400nm,11.0s						
ZEA				MLR	MLR		
	comp=E,200nm,10.0s						
KLR	**Kul'dur**	**26.74**	**50⇑**	*e*P	**P**	**10 55 21.0**	**-0.9**
BVAR	**Borovoye Array**	**26.84**	**319**	P	**P**	**10 55 22.3**	**-0.4**
	comp=E,1.3nm,0.8s,baz=108,slow=9.5,SNR=7.5						
BRVK	**Borovoye**	**26.91**	**319**	*e*P	**P**	**10 55 23.4**	**+0.1**
	comp=E,6.0nm,1.3s						
BRVK	**Borovoye**	**26.91**	**319⇓**	*e*P	**P**	**10 55 22.3**	**-1.0**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YAK	**Yakutsk**	**32.09**	**26⇓**	*e*P	**P**	**10 56 09.3**	**+0.2**
YAK				pmax	pmax		
	comp=Z,16nm,0.6s						
GYA0B	**ALIBECK ARRAY**	**33.25**	**286**	*e*P	**P**	**10 56 20.4**	**+0.7**
	comp=Z,4.9nm,0.8s						
YSS	**Yuzh-Sakhalins**	**33.58**	**57⇓**	*e*P	**P**	**10 56 22.5**	**+0.1**
YSS				pmax	pmax		
	comp=Z,57nm,1.8s						
ARU	**Arti**	**34.47**	**320**	*e*P	**P**	**10 56 29.9**	**-0.1**
	comp=Z,7.7nm,0.8s						
ARU	**Arti**	**34.47**	**320**	*c i*P	**P**	**10 56 29.8**	**-0.2**
ARU						10 57 38.0	
ARU				S	**S**	**11 01 59.7**	**+1.6**
ARU				SS	**SnSn**	**11 04 10.5**	**+1.9**
ARU				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TIXI	**Tiksi**	**38.83**	**14⇓**	*e*P	**P**	**10 57 05.2**	**-1.7**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.7s						
MA2	**Magadan**	**40.23**	**38**	LR	LR	11 13 31.7	
	comp=Z,40nm,18.3s,baz=316,slow=36						
GNI	**Garni**	**43.05**	**293⇑**	*e*P	**P**	**10 57 42.6**	**+0.2**
GNI				pmax	pmax		
	comp=Z,24nm,1.2s						
KIV	**Kislovodsk**	**43.81**	**299**	*e*P	**P**	**10 57 46.9**	**-1.5**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,33nm,16.0s						
NEY	**Neytrino**	**43.91**	**298⇑**	*e*P	**P**	**10 57 50.0**	**+0.7**
NEY				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KLMR	**Klimovskoe**	**45.10**	**323**	*e*P	**P**	**10 57 55.8**	**-2.5**
KLMR				pmax	pmax		
	comp=Z,22nm,1.5s						
KLMR	**Klimovskoe**	**45.10**	**323**	*e*P	**P**	**10 57 55.9**	**-2.4**
KLMR				AMP		10 58 00.4	
	comp=Z,22nm,1.5s						
OBN	**Obninsk**	**46.56**	**315⇑**	*e*P	**P**	**10 58 07.9**	**-2.0**
OBN				*e*		10 59 59.6	
OBN				*e*S	**S**	**11 05 01.3**	**+3.1**
OBN				*e*SS	SnSn	11 09 21.0	+22
OBN				pmax	pmax		
	comp=Z,5.0nm,0.5s						
OBN				MLR	MLR		
	comp=Z,54nm,20.0s						
ANN	**Anapa**	**47.35**	**301**	*e*P	**P**	**10 58 13.8**	**-2.4**
ANN				*e**PP	**pP**	**10 58 18.5**	**-1.2**
ANN				*e*		11 00 04.4	
ANN				*e*PPP	PPP	11 00 47.5	
ANN				*e*S	**S**	**11 05 07.4**	**-2.4**
ANN				*e*SS	**SS**	**11 08 35.1**	**-1.9**
ANN				pmax	pmax		
	comp=Z,39nm,1.1s						
BILL	**Bilibino**	**48.42**	**27⇓**	*e*P	**P**	**10 58 24.7**	**+0.5**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.4s						
BILL				MLR	MLR		
	comp=Z,63nm,17.0s						
BR131	**Keskin Array S**	**51.39**	**295**	*e*P	**P**	**10 58 46.7**	**-0.7**
BRTR	**Keskin Array B**	**51.39**	**295**	P	**P**	**10 58 46.9**	**-0.5**
	comp=Z,1.8nm,0.7s,baz=105,slow=7.1,SNR=9.9						
ARCES	**ARCESS Array B**	**51.41**	**334**	P	**P**	**10 58 45.8**	**-1.1**
	comp=Z,2.8nm,0.8s,baz=87,slow=6.2,SNR=5.7						
ARCES	**ARCESS Array B**	**51.41**	**334**	*e*P	**P**	**10 58 46.2**	**-0.7**
ASF	**Jabal al Asfar**	**51.52**	**285**	P	**P**	**10 58 47.8**	**-0.6**
	comp=Z,1.7nm,0.5s,baz=102,slow=9.8,SNR=4.0						
AKASG	**Malin Array Be**	**51.55**	**310**	P	**P**	**10 58 46.8**	**-1.4**
	comp=Z,0.9nm,0.6s,baz=68,slow=6.6,SNR=7.1						
AKASG	**Malin Array Be**	**51.55**	**310**	*ce*P	**P**	**10 58 47.2**	**-1.0**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	**51.60**	**324**	P	**P**	**10 58 47.4**	**-1.0**
	comp=Z,2.4nm,0.9s,baz=72,slow=12,SNR=4.5						
KWP	**Kalwaria Pacla**	**55.88**	**310**	*e*P	**P**	**10 59 19.9**	**0.0**
	comp=Z,91nm,0.8s						
KWP	**Kalwaria Pacla**	**55.88**	**310**	*e*P	**P**	**10 59 19.9**	**0.0**
NC602	**NORSAR Array S**	**58.64**	**325**	*e*P	**P**	**10 59 38.1**	**-1.2**
VYHS	**Vyhne**	**58.65**	**310**	*e*P	**P**	**10 59 39.7**	**+0.1**
VYHS				pmax	pmax		
	comp=Z,3.0nm,1.3s						
VYHS	**Vyhne**	**58.65**	**310**	*e*P	**P**	**10 59 39.7**	**+0.1**
NB2	**NORSAR Subarra**	**58.70**	**325**	P	**P**	**10 59 38.4**	**-1.3**
	comp=Z,0.9nm,0.7s,baz=72,slow=7.4						
NOA	**NORSAR Array B**	**58.70**	**325**	P	**P**	**10 59 38.5**	**-1.3**
	comp=Z,1.7nm,0.7s,baz=267,slow=2.9,SNR=3.9						
DPC	**Dobruska-Polom**	**59.54**	**312**	*e*P	**P**	**10 59 45.8**	**0.0**
DPC	**Dobruska-Polom**	**59.54**	**312**	*e*P	**P**	**10 59 45.8**	**0.0**
BRG	**Berggiesshubel**	**60.77**	**314**	*e*P	**P**	**10 59 53.5**	**-0.6**
	comp=Z,2.1nm,0.7s						
BRG	**Berggiesshubel**	**60.77**	**314**	*e*P	**P**	**10 59 53.5**	**-0.6**
BRG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CLL	**Collm**	**61.15**	**314**	*e*P	**P**	**10 59 56.0**	**-0.7**
	comp=Z,4.0nm,0.9s						
CLL	**Collm**	**61.15**	**314**	*e*P	**P**	**10 59 56.0**	**-0.7**
CLL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KHC	**Kasperske Hory**	**61.65**	**312**	*e*P	**P**	**10 59 59.6**	**-0.5**
KHC	**Kasperske Hory**	**61.65**	**312**	*e*P	**P**	**10 59 59.6**	**-0.5**
GERES	**GERESS Array B**	**61.69**	**312**	P	**P**	**10 59 59.5**	**-1.0**
	comp=Z,1.4nm,0.9s,baz=52,slow=8.6,SNR=7.6						
GEA0	**GERESS Array S**	**61.69**	**312**	*e*P	**P**	**10 59 60.0**	**-0.5**
IM3	**Indian Mountai**	**63.93**	**26**	*e*P	**P**	**11 00 14.4**	**-0.6**
TOLK	**Toolik Lake Re**	**63.94**	**22**	*e*P	**P**	**11 00 14.8**	**-0.3**
	comp=Z,3.8nm,1.0s						
WRA	**Warramunga Arr**	**64.44**	**144**	P	**P**	**11 00 14.8**	**-4.1**
	comp=Z,1.8nm,0.8s,baz=339,slow=7.1,SNR=11						
WRA	**Warramunga Arr**	**64.44**	**144**	*ce*P	**P**	**11 00 21.2**	**+2.3**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
COLD	**Coldfoot**	**64.50**	**24**	*e*P	**P**	**11 00 18.9**	**+0.1**
	comp=Z,3.5nm,0.9s						
BFO	**Black Forest**	**65.14**	**313**	*i* P	**P**	**11 00 23.7**	**+0.5**
MLY	**Manley**	**65.50**	**26**	*e*P	**P**	**11 00 25.3**	**0.0**
	comp=Z,3.6nm,0.9s						
BPAW	**Bear Paw Mtn.**	**65.92**	**27**	*e*P	**P**	**11 00 27.2**	**-0.8**
	comp=Z,5.6nm,1.0s						
MDM	**Murphy Dome**	**66.43**	**26**	*e*P	**P**	**11 00 31.6**	**+0.3**
	comp=Z,1.9nm,0.8s						
COLA	**College**	**66.61**	**25**	*e*P	**P**	**11 00 32.4**	**0.0**
	comp=Z,7.6nm,0.8s						
COLA	**College**	**66.61**	**25**	*e*P	**P**	**11 00 32.4**	**0.0**
COLA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SENIN	**Lac Senin/Sane**	**66.66**	**311**	*e*P	**P**	**11 00 33.9**	**+0.5**
	comp=Z,8.7nm,1.4s						
IL1	**Eielson Array**	**67.00**	**25**	*e*P	**P**	**11 00 34.1**	**-0.8**
ILAR	**Eielson Array**	**67.00**	**25**	P	**P**	**11 00 33.7**	**-1.2**
	comp=Z,2.1nm,0.9s,baz=290,slow=5.8,SNR=21						
ILB	**Eielson Array**	**67.00**	**25**	*e*P	**P**	**11 00 33.9**	**-1.0**
ASAR	**Alice Springs**	**67.44**	**146**	P	**P**	**11 00 34.8**	**-3.5**
	comp=Z,1.0nm,0.8s,baz=328,slow=6.2,SNR=10						
AS01	**Alice Springs**	**67.46**	**146**	*e*P	**P**	**11 00 35.7**	**-2.6**
DHY	**Denali Highway**	**67.83**	**27**	*e*P	**P**	**11 00 39.6**	**-0.8**
	comp=Z,4.4nm,1.2s						
SCRK	**Sand Creek**	**68.49**	**25**	*e*P	**P**	**11 00 43.6**	**-0.9**
	comp=Z,5.8nm,1.1s						
KLU	**Klutina**	**69.33**	**28**	*e*P	**P**	**11 00 49.2**	**-0.5**
	comp=Z,9.9nm,0.9s						
BMRM	**Bremner River**	**70.16**	**28**	*e*P	**P**	**11 00 53.9**	**-0.8**
	comp=Z,8.9nm,1.0s						
SKAG	**Skagway**	**74.58**	**26**	*e*P	**P**	**11 01 21.6**	**+0.5**
	comp=Z,3.4nm,0.8s						
ES19	**SONSECA Array**	**77.14**	**310**	*e*P	**P**	**11 01 35.9**	**-0.3**
ESDC	**Sonseca Array**	**77.20**	**310**	P	**P**	**11 01 35.5**	**-0.9**
	comp=Z,0.4nm,0.6s,baz=53,slow=5.6,SNR=8.1						
C09A	**Chrisman Ranch**	**89.93**	**25**	*e*P	**P**	**11 02 41.2**	**-0.4**
	comp=Z,5.5nm,0.9s						

ISCJB ***03*** *10:51:58.9±0.6, 43°.02N±0°.06×145°.40E±0°.06, h93km±3km, mb3.8/9, Error ellipse: s-maj=11.2km s-min=4.6km az=150.5*
MOS ***03*** *10:51:58.7±2.1, 42°.94N×145°.47E, h88km, mb4.1/6, Error ellipse: s-maj=17.1km s-min=9.9km az=83.8*
SKHL ***03*** *10:51:58.7±0.0, 42°.91N×145°.42E, h79km±7km, mb4.2/7*
JMA ***03*** *10:51:59.7±0.1, 43°.04N×145°.37E, h92km±1km, M3.1*
JMA Felt I J1.
IDC ***03*** *10:52:02.5±6.8, 43°.11N×145°.15E, h112km±31km, mb3.4/5, mb1 3.6/6, mb1mx3.2/66, mbtmp3.8/6, Error ellipse: s-maj=96.6km s-min=27.1km az=176.0*
ISC 03 10:52:00.6±0.9, 42°.99N±0°.07×145°.43E±0°.04, h80km±6km, n41, σ1°59/61, mb3.8/9, 2C-7D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.44**	**31**	P	**Pn**	**10 52 14.0**	**+0.2**
NEM2				*e*S	**Sn**	**10 52 24.4**	**+0.8**
JAK	**Akkeshi**	**0.54**	**271**	P	**Pn**	**10 52 14.5**	**-0.2**
JAK				*e*S	**Sn**	**10 52 25.5**	**+0.4**
GLVR	**Golovnino**	**0.75**	**5**	*i* P	**Pn**	**10 52 16.0**	**-0.8**
GLVR				AMB	AMB	10 52 17.0	
	287nm,0.3s						
GLVR				AMB	AMB	10 52 17.0	
	83nm,0.3s						
GLVR				AMB	AMB	10 52 17.0	
	179nm,0.3s						
GLVR				*i* S	**Sn**	**10 52 29.0**	**+0.2**
GLVR				A	A	10 52 30.0	
	573nm,0.3s						
GLVR				A	A	10 52 30.0	
	696nm,0.3s						
GLVR	**Golovnino**	**0.75**	**5**	*d i*PN	**Pn**	**10 52 16.5**	**-0.3**
GLVR				*i* S	**Sn**	**10 52 29.4**	**+0.6**
GLVR				pmax	pmax		
	comp=N,287nm,0.1s						
GLVR				pmax	pmax		
	comp=E,83nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,2μm,0.1s						
GLVR				smax	smax		
	comp=N,6μm,0.2s						
GLVR				smax	smax		
	comp=E,7μm,0.3s						
JNK	**Nakash**	**0.79**	**319**	P	**Pn**	**10 52 16.3**	**-1.0**
JNK				*e*S	**Sn**	**10 52 28.8**	**-0.9**
JRA	**Rausu**	**0.97**	**347**	P	**Pn**	**10 52 18.7**	**-0.6**
JRA				*e*S	**Sn**	**10 52 33.2**	**-0.1**
GRPR	**Tuman**	**1.03**	**14**	*i* P	**Pn**	**10 52 19.0**	**-1.0**
GRPR				AMB	AMB	10 52 19.0	
	comp=E,80nm,0.3s						
GRPR				AMB	AMB	10 52 19.0	
	comp=E,57nm,0.3s						
GRPR				AMB	AMB	10 52 19.0	
	comp=E,501nm,0.3s						
GRPR				*i* S	**Sn**	**10 52 33.0**	**-1.6**
GRPR				A	A	10 52 36.0	
	comp=E,218nm,0.3s						
GRPR				A	A	10 52 36.0	
	comp=E,144nm,0.3s						
GRPR	**Tuman**	**1.03**	**14**	*c i*PN	**Pn**	**10 52 19.4**	**-0.6**
GRPR				*i* S	**Sn**	**10 52 33.9**	**-0.7**
GRPR				pmax	pmax		
	comp=N,80nm,0.1s						
GRPR				pmax	pmax		
	comp=Z,501nm,0.1s						
GRPR				pmax	pmax		
	comp=E,57nm,0.2s						
GRPR				smax	smax		
	comp=E,1μm,0.1s						
GRPR				smax	smax		
	comp=N,2μm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.09**	**16**	*i* P	**Pn**	**10 52 20.0**	**-0.7**
YUK				AMB	AMB	10 52 21.0	
	comp=N,329nm,0.3s						
YUK				AMB	AMB	10 52 21.0	
	comp=N,320nm,0.3s						
YUK				AMB	AMB	10 52 21.0	
	comp=N,53nm,0.3s						
YUK				*i* S	**Sn**	**10 52 35.0**	**-0.8**
YUK				A	A	10 52 36.0	
	comp=N,374nm,0.3s						
YUK				A	A	10 52 36.0	
	comp=N,235nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.09**	**16**	*d i*PN	**Pn**	**10 52 20.2**	**-0.5**
YUK				*i* S	**Sn**	**10 52 35.7**	**-0.1**
YUK				pmax	pmax		
	comp=E,320nm,0.1s						
YUK				pmax	pmax		
	comp=Z,529nm,0.4s						
YUK				pmax	pmax		
	comp=N,328nm,0.1s						
YUK				smax	smax		
	comp=E,2μm,0.2s						
YUK				smax	smax		
	comp=N,4μm,0.4s						
LAGR	**Lagunnoye**	**1.10**	**13**	*i* P	**Pn**	**10 52 20.0**	**-0.8**
LAGR				AMB	AMB	10 52 24.0	
	comp=N,32nm,0.3s						
LAGR				AMB	AMB	10 52 24.0	
	comp=N,132nm,0.3s						
LAGR				AMB	AMB	10 52 24.0	
	comp=N,42nm,0.3s						
LAGR				*i* S	**Sn**	**10 52 36.0**	**+0.1**
LAGR				A	A	10 52 38.0	
	comp=N,208nm,0.3s						
LAGR				A	A	10 52 38.0	
	comp=N,203nm,0.3s						
LAGR	**Lagunnoye**	**1.10**	**13⇑**	*i*PN	**Pn**	**10 52 20.6**	**-0.2**
LAGR				*i* S	**Sn**	**10 52 36.1**	**+0.1**
LAGR				pmax	pmax		
	comp=N,32nm,0.1s						
LAGR				pmax	pmax		
	comp=E,132nm,0.1s						
LAGR				pmax	pmax		
	comp=Z,416nm,0.1s						
LAGR				smax	smax		
	comp=N,2μm,0.4s						
LAGR				smax	smax		
	comp=E,2μm,0.2s						
JOB	**Onbets**	**1.18**	**266**	P	**Pn**	**10 52 21.1**	**-0.7**
JOB				*e*S	**Sn**	**10 52 37.1**	**-0.6**
JAR	**Ashorobuto**	**1.25**	**285**	P	**Pn**	**10 52 21.9**	**-0.9**
JAR				*e*S	**Sn**	**10 52 38.3**	**-1.2**
SHO	**Shikotan**	**1.34**	**49**	*i* P	**Pn**	**10 52 22.0**	**-1.9**
SHO				AMB	AMB	10 52 27.0	
	comp=E,13nm,0.3s						
SHO				AMB	AMB	10 52 27.0	
	comp=E,17nm,0.3s						
SHO				AMB	AMB	10 52 27.0	
	comp=E,25nm,0.3s						
SHO				*i* S	**Sn**	**10 52 39.0**	**-2.5**
SHO				A	A	10 52 41.0	
	comp=E,491nm,0.3s						
SHO				A	A	10 52 41.0	
	comp=E,141nm,0.3s						
SHO	**Shikotan**	**1.34**	**49**	*d i*PN	**Pn**	**10 52 22.5**	**-1.4**
SHO				*i* S	**Sn**	**10 52 39.4**	**-2.1**
SHO				pmax	pmax		
	comp=N,13nm,0.2s						
SHO				pmax	pmax		
	comp=Z,25nm,0.2s						
SHO				pmax	pmax		
	comp=E,17nm,0.3s						
SHO				smax	smax		
	comp=N,491nm,0.1s						
SHO				smax	smax		
	comp=E,141nm,0.2s						
JTKR	**Abashiri--Toko**	**1.48**	**312**	P	**Pn**	**10 52 24.7**	**-0.9**
JCH	**Churui**	**1.57**

ZALV Zalesovo Beam 40.46 307 P **P 10 59 27.9 -3.1**
comp=Z,0.4nm,0.3s,baz=88,slow=8.7,SNR=2.9
ILAR Eielson Array 42.84 36 P **P 10 59 49.4 -0.9**
comp=Z,0.7nm,0.7s,baz=266,slow=7.6,SNR=9.6
KURK Kurchatov 44.92 304 *eP* **P 11 00 04.8 -2.3**
KURK Kurchatov 44.92 304 P **P 11 00 04.8 -2.3**
KURK pmax pmax
comp=Z,1.0nm,0.7s
KURBB Kurchatov Arra 45.00 304 P **P 11 00 04.8 -3.0**
comp=Z,0.5nm,0.4s,baz=71,slow=8.9,SNR=5.0
BVAR Borovoye Array 49.02 309 P **P 11 00 35.8 -3.1**
comp=Z,0.5nm,0.5s,baz=77,slow=6.5,SNR=3.5
BRVK Borovoye 49.06 309 *eP* **P 11 00 40.0 +0.7**
BRVK Borovoye 49.06 309 || *eP* **P 11 00 40.0 +0.7**
BRVK pmax pmax
comp=Z,1.0nm,0.7s
YKA Yellowknife Ar 57.12 33 P **P 11 01 39.8 +1.5**
comp=Z,1.0nm,1.0s,baz=330,slow=5.2,SNR=7.7
YKA Yellowknife Ar 57.12 33 *eP* **P 11 01 39.7 +1.4**
YKA Yellowknife Ar 57.12 33 *i* P **P 11 01 39.7 +1.4**
YKA pmax pmax
comp=Z,1.0nm,1.0s
FINES FINESS Array B 64.98 332 P **P 11 02 28.0 -3.4**
comp=Z,2.0nm,0.6s,baz=52,slow=7.5,SNR=12

IDC ***03*** *11:00:53.5±1.8, 18°.85N×39°.38E, h0km, mb3.9/14, mb1 4.0/14, mb1mx3.8/63, mbtmp3.9/14, MS2.9/5, Ms1 2.9/5, ms1mx2.6/57, Error ellipse: s-maj=40.5km s-min=19.6km az=169.0*
ISCJB ***03*** *11:00:54.0±0.7, 18°.96N±0°.09×39°.39E±0°.07, h10km, mb4.0/22, Error ellipse: s-maj=13.8km s-min=8.7km az=168.9*
CSEM ***03*** *11:00:54.6, 18°.73N×39°.41E, h10km, mb4.2/13*
NEIC ***03*** *11:00:54.6±0.5, 18°.73N×39°.41E, h10km, mb4.2/13, Error ellipse: s-maj=11.2km s-min=6.2km az=175.0*
SGS ***03*** *11:00:55.4, 18°.94N×39°.29E, h8km*
ISC 03 11:00:56.2±0.9, 19°.1N±0°.1×39°.40E±0°.10, h10km, n72, σ1§21/68, mb4.2/22, Red Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBNS	**Jabal Laban**	**2.02**	**13**	P	**Pn**	**11 01 30.5**	**+0.1**
LBNS	**Jabal Laban**	**2.02**	**13**	P	**Pn**	**11 01 30.5**	**+0.1**
FRAS	**Faraa**	**2.24**	**28**	P	**Pn**	**11 01 31.8**	**-1.8**
FRAS	**Faraa**	**2.24**	**28**	P	**Pn**	**11 01 31.8**	**-1.8**
RHT05	**RHT05**	**4.82**	**357**	P	**Pn**	**11 02 08.1**	**-0.9**
RHT05				S	**Sn**	**11 03 02.7**	**-2.2**
RHT05	**RHT05**	**4.82**	**357**	P	**Pn**	**11 02 08.1**	**-0.9**
RHT05				S	**Sn**	**11 03 02.7**	**-2.2**
RHT07	**RHT07**	**5.58**	**357**	P	**Pn**	**11 02 18.3**	**-1.1**
RHT07	**RHT07**	**5.58**	**357**	P	**Pn**	**11 02 18.3**	**-1.1**
EIL	**Elat**	**11.30**	**340**	LR	LR	11 06 46.3	
comp=Z,39nm,19.8s,baz=36,slow=31							
MMAI	**Mount Meron Ar**	**14.34**	**346**	LR	LR	11 09 26.4	
comp=Z,60nm,18.6s,baz=135,slow=35							
UOSS	**Minazif**	**16.64**	**66**	*e*Pn	**P**	**11 04 51.2**	**-0.9**
12nm,0.9s							
IDI	**Anoyia**	**20.63**	**324**	P	**P**	**11 05 36.2**	**+0.2**
0.8nm,0.3s,baz=185,slow=11,SNR=2.8							
IDI	**Anoyia**	**20.63**	**324**	*e*P	Pn	11 05 38.4	+0.1
5.4nm,1.0s							
BRTR	**Keskin Array B**	**21.17**	**348**	P	**P**	**11 05 43.9**	**+1.9**
3.5nm,0.8s,baz=168,slow=15,SNR=21							
BR101	**Keskin Array S**	**21.18**	**348**	*e*P	**P**	**11 05 43.9**	**+1.9**
BR131	**Keskin Array S**	**21.18**	**348**	*e*P	**P**	**11 05 44.2**	**+2.3**
GNI	**Garni**	**21.50**	**11**	LR	LR	11 14 38.6	
comp=Z,73nm,19.6s,baz=182,slow=38							
MANT	**Manisa**	**21.52**	**336**	*e*P	**P**	**11 05 47.8**	**+2.0**
27nm,1.0s							
TBLG	**Delisi**	**23.04**	**10**	*e*P	**P**	**11 06 05.3**	**+3.6**
7.3nm,0.6s							
TBLG	**Delisi**	**23.04**	**10**	*e*P	**P**	**11 06 05.3**	**+3.6**
7.3nm,0.6s							
ALN	**Alexandroupoli**	**24.58**	**335**	*e*P	**P**	**11 06 17.9**	**+1.5**
1.4nm,0.9s							
KBZ	**Khabaz**	**24.76**	**6**	LR	LR	11 16 08.3	
comp=Z,7.3nm,21.1s,baz=206,slow=37							
AGG	**Agios Georgios**	**24.77**	**327**	*e*P	**P**	**11 06 19.6**	**+1.3**
8.2nm,1.0s							
AGG	**Agios Georgios**	**24.77**	**327**	*e*P	**P**	**11 06 19.6**	**+1.3**
8.2nm,1.0s							
GEYT	**Alibeck**	**24.89**	**37**	LR	LR	11 15 39.8	
comp=Z,67nm,18.6s,baz=185,slow=35							
GYA0B	**ALIBECK ARRAY**	**24.89**	**37**	*e*P	**P**	**11 06 20.9**	**+1.6**
4.9nm,1.1s							
GYA0B	**ALIBECK ARRAY**	**24.89**	**37**	*e*P	**P**	**11 06 20.9**	**+1.6**
4.9nm,1.1s							
KIV	**Kislovodsk**	**24.96**	**6**	*e*P	**P**	**11 06 21.4**	**+1.4**
6.6nm,1.0s							
FNA	**Florina**	**26.58**	**328**	*e*P	**P**	**11 06 35.9**	**+1.3**
5.7nm,0.4s							
AKASG	**Malin Array Be**	**32.58**	**348**	P	**P**	**11 07 27.4**	**-0.3**
0.3nm,0.4s,baz=158,slow=7.1,SNR=4.0							
ABKAR	**Akbulak array**	**34.35**	**24**	*e*P	**P**	**11 07 42.9**	**-0.2**
ABKAR	**Akbulak array**	**34.35**	**24**	*e*P	**P**	**11 07 42.9**	**-0.2**
GEA0	**GERESS Array S**	**36.21**	**331**	*e*P	**P**	**11 07 59.2**	**0.0**
GEA0	**GERESS Array S**	**36.21**	**331**	*e*P	**P**	**11 07 59.2**	**0.0**
GEC2	**GERESS Array S**	**36.21**	**331**	*e*P	**P**	**11 07 59.3**	**0.0**
1.2nm,0.8s							
GEC2	**GERESS Array S**	**36.21**	**331**	*e*P	**P**	**11 07 59.3**	**0.0**
1.2nm,0.8s							
GERES	**GERESS Array B**	**36.21**	**331**	P	**P**	**11 07 59.3**	**0.0**
0.8nm,0.7s,baz=112,slow=5.9,SNR=6.3							
KHC	**Kasperske Hory**	**36.47**	**331**	*e*P	**P**	**11 08 02.5**	**+1.0**
1.0nm,1.1s							
KHC	**Kasperske Hory**	**36.47**	**331**	*e*P	**P**	**11 08 02.5**	**+1.0**
1.0nm,1.1s							
TOA0	**Torodi Ar. Sit**	**36.65**	**266**	*e*P	**P**	**11 08 02.3**	**-1.0**
TORD	**Torodi Ar. Bea**	**36.65**	**266**	P	**P**	**11 08 01.9**	**-1.4**
4.8nm,0.9s,baz=78,slow=8.0,SNR=22							
TOA1	**Torodi Ar. Sit**	**36.65**	**266**	*e*P	**P**	**11 08 01.9**	**-1.4**
BVAR	**Borovoye Array**	**41.53**	**28**	P	**P**	**11 08 44.5**	**+0.7**
0.9nm,0.6s,baz=246,slow=11,SNR=3.5							
ESDC	**Sonseca Array**	**42.50**	**308**	P	**P**	**11 08 52.3**	**+0.3**
0.1nm,0.3s,baz=103,slow=5.7,SNR=3.8							
KURBB	**Kurchatov Arra**	**44.14**	**35**	P	**P**	**11 09 05.7**	**+0.8**
1.9nm,0.7s,baz=243,slow=7.7,SNR=12							
KURK	**Kurchatov**	**44.23**	**35**	*e*P	**P**	**11 09 05.7**	**+0.1**
KURK	**Kurchatov**	**44.23**	**35**	*e*P	**P**	**11 09 05.7**	**+0.1**
MAKZ	**Makanchi**	**44.41**	**42**	*e*P	**P**	**11 09 07.7**	**+0.5**
3.3nm,0.9s							
MAKZ	**Makanchi**	**44.41**	**42**	*e*P	**P**	**11 09 07.7**	**+0.5**
3.3nm,0.9s							
MK01	**Makanchi Array**	**44.59**	**42**	*e*P	**P**	**11 09 08.9**	**+0.2**
MK01	**Makanchi Array**	**44.59**	**42**	*e*P	**P**	**11 09 08.9**	**+0.2**
MK31	**Makanchi Array**	**44.60**	**42**	*e*P	**P**	**11 09 09.4**	**+0.7**
MK31	**Makanchi Array**	**44.60**	**42**	*e*P	**P**	**11 09 09.4**	**+0.7**
MK32	**Makanchi Array**	**44.60**	**42**	*e*P	**P**	**11 09 09.3**	**+0.6**
MK32	**Makanchi Array**	**44.60**	**42**	*e*P	**P**	**11 09 09.3**	**+0.6**
MKAR	**Makanchi Array**	**44.60**	**42**	P	**P**	**11 09 09.3**	**+0.6**
2.2nm,0.7s,baz=242,slow=6.9,SNR=23							
MKAR	**Makanchi Array**	**44.60**	**42**	*e*P	**P**	**11 09 08.8**	**+0.1**
18nm,0.8s							
MKAR	**Makanchi Array**	**44.60**	**42**	*e*P	**P**	**11 09 08.8**	**+0.1**
18nm,0.8s							
ZALV	**Zalesovo Beam**	**49.13**	**34**	P	**P**	**11 09 44.0**	**+0.1**
2.2nm,0.8s,baz=245,slow=9.9,SNR=9.0							
ZALV	**Zalesovo Beam**	**49.13**	**34**	*e*P	**P**	**11 09 43.6**	**-0.4**
ZALV	**Zalesovo Beam**	**49.13**	**34**	*e*P	**P**	**11 09 43.6**	**-0.4**
ZAA1	**Zalesovo Array**	**49.13**	**34**	*e*P	**P**	**11 09 44.0**	**0.0**
ZAA1	**Zalesovo Array**	**49.13**	**34**	*e*P	**P**	**11 09 44.0**	**0.0**
SPITS	**Spitsbergen Ar**	**60.18**	**355**	P	**P**	**11 11 04.1**	**+0.2**
5.8nm,1.1s,baz=132,slow=8.3,SNR=3.3							
SONA0	**Songino Array**	**60.72**	**45**	*e*P	**P**	**11 11 08.1**	**-0.1**
SONA0	**Songino Array**	**60.72**	**45**	*e*P	**P**	**11 11 08.1**	**-0.1**
SONM	**Songino Array**	**60.72**	**45**	P	**P**	**11 11 08.1**	**-0.1**
1.3nm,0.9s,baz=257,slow=8.8,SNR=5.8							
SONA1	**Songino Array**	**60.73**	**45**	*e*P	**P**	**11 11 08.2**	**-0.1**
SONA1	**Songino Array**	**60.73**	**45**	*e*P	**P**	**11 11 08.2**	**-0.1**
TIXI	**Tiksi**	**71.89**	**19**	P	**P**	**11 12 18.6**	**-0.5**
1.2nm,0.7s,baz=298,slow=7.6,SNR=3.7							
SEY	**Seymchan**	**83.11**	**25**	P	**P**	**11 13 21.8**	**-0.3**
1.7nm,0.8s,baz=63,slow=5.9,SNR=3.9							
SBLHI	**Steaming Bluff**	**139.12**	**21**	*e*PKPdf	**PKPdf**	**11 20 22.6**	**-1.8**

IDC ***03*** *11:14:45.4±0.6, 16°.26S×67°.26E, h0km, mb4.3/25, mb1 4.3/26, mb1mx4.2/70, mbtmp4.3/26, ML3.9/1, MS4.6/53, Ms1 4.6/53, ms1mx4.6/61, Error ellipse: s-maj=18.5km s-min=13.4km az=172.0*
ISCJB ***03*** *11:14:46.3±0.3, 16°.36S±0°.05×67°.28E±0°.04, h13km, mb4.7/91, MS4.9/190, Error ellipse: s-maj=7.5km s-min=6.1km az=12.3*
MOS ***03*** *11:14:46.7±1.7, 16°.30S×67°.41E, h10km, mb4.9/30, MS4.6/10, Error ellipse: s-maj=11.4km s-min=6.6km az=101.9*
NEIC ***03*** *11:14:47.8±0.2, 16°.24S×67°.21E, h10km, mb5.0/46, MS4.9/124, Error ellipse: s-maj=8.7km s-min=6.5km az=192.0*
GCMT ***03*** *11:14:47.8±0.1, 16°.16S×67°.06E, h14km, MW5.5/132, Moment Tensor Solution. s97,c161; s132,c246; Duration: 1§3 Moment tensor: Scale 10^17^Nm; M_{rr}-0.15±.02; $M_{\theta\theta}$-1.62±.03; $M_{\phi\phi}$1.77±.03; $M_{r\theta}$-0.15±.04; $M_{r\phi}$0.73±.02; $M_{\theta r}$-0.00±.04; Best double couple: $M_0$1.85200×10^17^ NP1:ϕ_s57.00000°, δ87.00000°, λ-4.00000°. NP2:ϕ_s147.00000°, δ86.00000°, λ-177.00000°. Principal axes: T 1.9210, Plg1.0000°, Azm102.0000°; N -0.1380, Plg85.0000°, Azm201.0000°; P -1.7840, Plg5.0000°, Azm12.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
BJI ***03*** *11:14:49.5, 16°.36S×67°.63E, h22km, mb4.8/24, mB5.2/18, Ms5.0/12, Ms7 4.7/11*
ISC 03 11:14:48.1±0.3, 16°.34S±0°.07×67°.20E±0°.06, h13km, n407, σ1§94/271, mb4.8/91, MS4.9/190, 22C-22D, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**10.06**	**31**	T	T	11 27 16.3	
baz=211,slow=75,SNR=2062							
H08S2	**Diego Garcia H**	**10.07**	**32**	T	T	11 27 13.8	
baz=211,slow=75,SNR=1767							
H08S3	**Diego Garcia H**	**10.08**	**31**	T	T	11 27 17.8	
baz=211,slow=75,SNR=3495							
H08N3	**Diego Garcia H**	**10.60**	**21**	T	T	11 28 03.4	
baz=200,slow=75,SNR=1158							
H08N1	**Diego Garcia H**	**10.61**	**21**	T	T	11 27 56.9	
baz=200,slow=75,SNR=1280							
H08N2	**Diego Garcia H**	**10.62**	**21**	T	T	11 28 04.9	
baz=200,slow=75,SNR=1307							
ABPO	**Ambohimpanom**	**19.21**	**259**	*e*P	**P**	**11 19 11.1**	**-1.1**
23nm,1.1s							
ABPO	**Ambohimpanom**	**19.21**	**259**	*e*P	**P**	**11 19 11.1**	**-1.1**
ABPO				pmax	pmax		
comp=Z,23nm,1.1s							
OPO	**Ambohidratompo**	**19.22**	**260**	P	**P**	**11 19 10.3**	**-1.9**
comp=Z,0.4nm,0.3s,baz=97,slow=8.9,SNR=4.6							
OPO				LR	LR	11 24 53.5	
comp=Z,3μm,19.1s,baz=90,slow=32							
HMDM	**Hanimaadhoo**	**23.71**	**15**	*e*P	**P**	**11 19 53.6**	**-6.3**
comp=Z,3.4nm,0.8s							
PALK	**Pallekele**	**27.00**	**31**	LR	LR	11 29 14.1	
comp=Z,2μm,18.6s,baz=269,slow=32							
COCO	**West Island**	**29.00**	**86**	PFAKE		11 21 00.0	+12
COCO				LR	LR		
comp=Z,3μm,20.0s							
GSI	**Gunungsitoli**	**34.74**	**63**	PFAKE		11 21 50.0	+12
GSI				LR	LR		
comp=Z,2μm,22.0s							
PSI	**Prapat**	**36.67**	**62**	LR	LR	11 33 46.5	
comp=Z,2μm,20.4s,baz=269,slow=31							
ATD	**Arta Tunnel**	**36.70**	**317**	LR	LR	11 35 04.6	
comp=Z,2μm,19.7s,baz=130,slow=33							
BKNI	**Bangkinang**	**37.26**	**67**	PFAKE		11 22 10.0	+10
BKNI				LR	LR		
comp=Z,2μm,22.0s							
LSZ	**Lusaka**	**37.51**	**266**	P	**P**	**11 22 02.1**	**-0.1**
comp=Z,1.7nm,0.5s,baz=116,slow=9.6,SNR=3.1							
LSZ	**Lusaka**	**37.51**	**266**	P	**P**	**11 22 02.1**	**-0.1**
LSZ				LR	LR		
comp=Z,2μm,21.0s							
LSZ	**Lusaka**	**37.51**	**266**	P	**P**	**11 22 02.1**	**-0.1**
LSZ				MLR	MLR		
comp=Z,2μm,21.0s							
PBA	**Port Blair**	**37.58**	**44**	PFAKE		11 22 10.0	+7.4
PBA				LR	LR		
comp=Z,3μm,18.0s							
FURI	**Furi**	**37.75**	**310**	PFAKE		11 22 20.0	+16
FURI				LR	LR		
comp=Z,1μm,20.0s							
DAMY	**Dhamar**	**38.09**	**323**	PFAKE		11 22 20.0	+13
DAMY				LR	LR		
comp=Z,1μm,22.0s							
MBAR	**Mbarara**	**39.19**	**290**	PFAKE		11 22 30.0	+14
MBAR				LR	LR		
comp=Z,3μm,20.0s							
IPM	**Ipoh**	**39.33**	**61**	*e*P	**P**	**11 22 17.1**	**-0.3**
comp=Z,23nm,1.2s							
IPM				LR	LR		
comp=Z,700nm,22.0s							
KULM	**Kulim**	**39.46**	**60**	PFAKE		11 22 30.0	+12
KULM				LR	LR		
comp=Z,1μm,20.0s							
LBTB	**Lobatse**	**39.74**	**250**	P	**P**	**11 22 20.9**	**0.0**
comp=Z,7.3nm,1.0s,baz=150,slow=7.6,SNR=4.7							
WSAR	**Wadi Sarin**	**40.22**	**348**	LR	LR	11 34 08.2	
comp=Z,1μm,21.5s,baz=185,slow=29							
MYKOM	**Kota Tinggi**	**40.43**	**67**	*e*P	**P**	**11 22 27.0**	**+0.5**
comp=Z,21nm,0.9s							
MYKOM				LR	LR		
comp=Z,1μm,18.0s							
BOSA	**Boshof**	**40.44**	**245**	P	**P**	**11 22 28.1**	**+1.4**
comp=Z,3.2nm,0.9s,baz=30,slow=8.1,SNR=2.5							
BOSA				LR	LR	11 35 13.6	
comp=Z,941nm,21.6s,baz=82,slow=30							
BOSA	**Boshof**	**40.44**	**245**	*e*P	**P**	**11 22 28.6**	**+1.9**
comp=Z,21nm,1.3s							
BOSA	**Boshof**	**40.44**	**245**	*e*P	**P**	**11 22 28.6**	**+1.9**
BOSA				pmax	pmax		
comp=Z,21nm,1.3s							
CISI	**Cisompet, Garu**	**40.62**	**82**	PFAKE		11 22 40.0	+12
CISI				LR	LR		
comp=Z,2μm,20.0s							
LEM	**Lembang**	**40.64**	**81**	LR	LR	11 35 44.2	
comp=Z,2μm,21.6s,baz=230,slow=31							
UOSS	**Minazif**	**42.41**	**345**	PFAKE		11 22 50.0	+7.4
UOSS				LR	LR		
comp=Z,800nm,18.0s							
UGM	**Wanagama**	**43.10**	**84**	PFAKE		11 23 00.0	+11
UGM				LR	LR		
comp=Z,2μm,18.0s							
RAYN	**Ar Rayn**	**44.93**	**331**	*e*P	**P**	**11 23 02.6**	**-0.4**
comp=Z,23nm,1.7s							
H01W3	**Cape Leeuwin H**	**45.73**	**123**	T	T	12 12 07.5	
baz=282,slow=75,SNR=14							
H01W2	**Cape Leeuwin H**	**45.73**	**123**	T	T	12 12 08.5	
baz=282,slow=75,SNR=14							
H01W1	**Cape Leeuwin H**	**45.74**	**123**	T	T	12 12 09.5	
baz=282,slow=75,SNR=14							
KSM	**Kuching**	**46.09**	**72**	PFAKE		11 23 20.0	+7.7
KSM				LR	LR		
comp=Z,1μm,20.0s							
JAGI	**Jajag, Banyuwa**	**46.43**	**86**	PFAKE		11 23 30.0	+15
JAGI				LR	LR		
comp=Z,2μm,22.0s							
CM01	**Chiang Mai Arr**	**46.59**	**43**	*e*P	**P**	**11 23 14.6**	**-1.5**
CMAR	**Chiang Mai Arr**	**46.60**	**43**	P	**P**	**11 23 15.2**	**-1.0**
comp=Z,2.2nm,0.8s,baz=233,slow=8.3,SNR=10							
CMAR				LR	LR	11 40 50.7	
comp=Z,578nm,19.1s,baz=230,slow=34							
KOLN	**Koldanda**	**46.64**	**20**	*e*P	**P**	**11 23 16.9**	**+0.3**
comp=Z,19nm,0.7s							
PYUN	**Piuthan**	**46.75**	**19**	*e*P	**P**	**11 23 17.7**	**+0.2**
DMN	**Daman**	**47.01**	**22**	*e*P	**P**	**11 23 19.9**	**+0.3**
PKIN	**Phulchoki**	**47.09**	**22**	*e*P	**P**	**11 23 20.3**	**+0.1**
GKN	**Gorkha**	**47.20**	**21**	*e*P	**P**	**11 23 19.3**	**-1.7**
TSUM	**Tsumeb**	**47.21**	**259**	PFAKE		11 23 30.0	+8.8
TSUM				LR	LR		
comp=Z,1μm,20.0s							
DANN	**Dangsing**	**47.23**	**20**	*e*P	**P**	**11 23 17.7**	**-3.6**
KKN	**Kakani**	**47.24**	**22**	*e*P	**P**	**11 23 19.4**	**-1.9**
NWAO	**Narrogin (SRO)**	**47.94**	**120**	LR	LR	11 39 10.4	
comp=Z,2μm,20.7s,baz=156,slow=31							
SHL	**Shillong**	**48.09**	**30**	*e*P	**P**	**11 23 26.5**	**-1.4**
comp=Z,64nm,1.4s							
SHL	**Shillong**	**48.09**	**30**	*e*P	**P**	**11 23 26.9**	**-1.0**
SHL				pmax	pmax		
comp=Z,65nm,1.4s							
SBUM	**Sibu**	**48.23**	**71**	*e*P	**P**	**11 23 28.6**	**-0.4**
comp=Z,46nm,1.2s							
SBUM				LR	LR		
comp=Z,1μm,20.0s							
MBWA	**Marble Bar**	**49.80**	**104**	*e*P	**P**	**11 23 42.2**	**+1.1**
comp=Z,44nm,1.6s							
MBWA				LR	LR		
comp=Z,1μm,22.0s							
NIL	**Nilore**	**50.04**	**7**	PFAKE		11 23 50.0	+7.4
NIL				LR	LR		
comp=Z,800nm,19.0s							
KBL	**Kabul**	**50.62**	**2**	PFAKE		11 24 00.0	+13
KBL				LR	LR		
comp=Z,700nm,21.0s							
LSA	**Lhasa**	**51.27**	**27**	PFAKE		11 24 00.0	+7.5
LSA				LR	LR		
comp=Z,800nm,20.0s							
MAW	**Mawson**	**51.31**	**182**	LR	LR	11 40 24.1	
comp=Z,518nm,21.4s,baz=20,slow=30							
KAPI	**Kappang**	**52.71**	**84**	PFAKE		11 24 20.0	+17
KAPI				LR	LR		
comp=Z,1μm,21.0s							
KKM	**Kota Kinabalu**	**53.35**	**69**	*e*P	**P**	**11 24 08.7**	**+1.0**
comp=Z,43nm,1.1s							
KKM				LR	LR		
comp=Z,1μm,21.0s							
MMRI	**Maumere**	**54.15**	**89**	PFAKE		11 24 30.0	+16
MMRI				LR	LR		
comp=Z,600nm,19.0s							
GEYT	**Alibeck**	**54.65**	**351**	LR	LR	11 44 55.7	
comp=Z,740nm,21.2s,baz=135,slow=33							
GYA0B	**ALIBECK ARRAY**	**54.65**	**351**	PFAKE		11 24 30.0	+13
GYA0B				LR	LR		
comp=Z,800nm,20.0s							
QIZ	**Qiongzhong**	**54.73**	**52**	PFAKE		11 24 30.0	+12
QIZ				LR	LR		
comp=Z,600nm,19.0s							
BATI	**Baumata**	**55.16**	**91**	LR	LR	11 44 15.3	
comp=Z,877nm,21.4s,baz=258,slow=32							
EIL	**Elat**	**55.32**	**326**	LR	LR	11 44 24.2	
comp=Z,842nm,20.8s,baz=172,slow=32							
SYO	**Syowa Base**	**55.43**	**192** ‖ *e*X		**P**	**11 24 19.6**	**-2.3**
SYO	**Syowa Base**	**55.43**	**192** ‖ *e*sP		sP	11 24 30.0	+2.3
FITZ	**Fitzroy Crossi**	**55.65**	**101**	LR	LR	11 44 43.7	
comp=Z,2μm,20.9s,baz=274,slow=32							
FITZ	**Fitzroy Crossi**	**55.65**	**101**	*e*P	**P**	**11 24 25.0**	**+0.6**
comp=Z,24nm,1.3s							
SOEI	**Soe**	**55.84**	**91**	*e*P	**P**	**11 24 26.9**	**+1.0**
comp=Z,115nm,1.1s							
SOEI				LR	LR		
comp=Z,2μm,22.0s							
FORT	**Forrest**	**56.99**	**116**	*e*P	**P**	**11 24 34.9**	**+1.1**
comp=Z,48nm,1.3s							
FORT				LR	LR		
comp=Z,2μm,19.0s							
GYA	**Guiyang**	**57.28**	**43**	P	**P**	**11 24 37.2**	**+1.3**
GYA				PP	**PP**	**11 26 46.4**	**+3.1**
GYA				S	**S**	**11 32 31.8**	**-0.2**
GYA				SS	**SS**	**11 36 21.2**	**-0.5**
GYA				pmax	pmax		
comp=Z,30nm,1.0s							
GYA				pmax	pmax		
comp=Z,140nm,5.9s							
GYA				LR	LR		
comp=Z,720nm,18.2s							
GYA				LR	LR		
comp=Z,640nm,19.0s							
GYA				LR	LR		
comp=Z,680nm,18.8s							
MMAI	**Mount Meron Ar**	**57.72**	**328**	LR	LR	11 46 25.2	
comp=Z,362nm,21.2s,baz=150,slow=33							
NRN	**Naryn**	**58.05**	**8**	PFAKE		11 24 50.0	+8.7
NRN				LR	LR		
comp=Z,900nm,20.0s							
TARG	**Taragay, Kyrgy**	**58.60**	**9**	*e*P	**P**	**11 24 46.5**	**+1.3**
comp=Z,4.3nm,0.8s							
TARG				LR	LR		
comp=Z,600nm,21.0s							
MNAS	**Manas**	**58.73**	**5**	P	**P**	**11 24 48.0**	**+2.2**
MNAS				pmax	pmax		
comp=Z,8.0nm,1.0s							
KDJ	**Kajisay**	**58.90**	**9**	PFAKE		11 25 00.0	+13
KDJ				LR	LR		
comp=Z,1μm,22.0s							
AAK	**Ala-Archa**	**59.06**	**6**	LR	LR	11 48 55.7	
comp=Z,835nm,19.1s,baz=194,slow=35							
AAK	**Ala-Archa**	**59.06**	**6**	*e*P	**P**	**11 24 46.4**	**-1.8**
comp=Z,7.4nm,1.0s							
AAK	**Ala-Archa**	**59.06**	**6** ‖ *e*P		**P**	**11 24 49.3**	**+1.2**
AAK				pmax	pmax		
comp=Z,6.0nm,1.3s							
KK31	**Karatay Array**	**59.22**	**3**	*e*P	**P**	**11 24 47.5**	**-1.6**
KK31	**Karatay Array**	**59.22**	**3**	*e*P	**P**	**11 24 47.5**	**-1.6**
KKAR	**Karatay Array**	**59.22**	**3**	*e*P	**P**	**11 24 48.0**	**-1.0**
KKAR	**Karatay Array**	**59.22**	**3**	*e*P	**P**	**11 24 48.0**	**-1.0**
FRU	**Bishkek**	**59.27**	**6**	*e*P	P	11 24 56.0	+6.6
FRU				*e*		11 25 02.0	
FRU				*e*		11 32 49.0	
FRU				*e*		11 33 10.0	
PRZ	**Przheval'sk**	**59.43**	**10**	PFAKE		11 25 00.0	+9.3
PRZ				LR	LR		
comp=Z,800nm,20.0s							
GNI	**Garni**	**59.96**	**340**	*e*P	**P**	**11 24 55.8**	**+1.4**
comp=Z,16nm,0.9s							
GNI	**Garni**	**59.96**	**340** ‖ *e*P		**P**	**11 24 56.3**	**+1.9**
GNI				pmax	pmax		
comp=Z,51nm,1.3s							
CSS	**Mathiatis**	**60.31**	**328**	PFAKE		11 25 10.0	+13
CSS				LR	LR		
comp=Z,100nm,19.0s							
AKH	**Akhalkalaki**	**61.51**	**340**	*e*P	**P**	**11 25 06.7**	**+1.8**
comp=Z,7.5nm,1.0s							
AKH	**Akhalkalaki**	**61.51**	**340**	*e*P	**P**	**11 25 06.7**	**+1.8**
AKH				pmax	pmax		
comp=Z,8.0nm,1.0s							
ENH	**Enshi**	**61.69**	**41**	PFAKE		11 25 20.0	+14
ENH				LR	LR		
comp=Z,600nm,19.0s							
TNTI	**Ternate**	**61.72**	**80**	PFAKE

WRAB Tennant Creek 63.55 104 *eP* **P 11 25 18.5 -0.4**
comp=Z,20nm,0.8s
WRAB LR LR
comp=Z,1μm,20.0s
WRAB Tennant Creek 63.55 104⇓*eP* **P 11 25 18.4 -0.4**
WRAB pmax pmax
comp=Z,28nm,1.2s
WB3 Warramunga Arr 63.55 104 PFAKE 11 25 30.0 +11
WB3 LR LR
comp=Z,1μm,20.0s
WR2 Warramunga Arr 63.55 104 PFAKE 11 25 30.0 +11
WR2 LR LR
comp=Z,1μm,18.0s
WR4 Warramunga Arr 63.60 104 PFAKE 11 25 30.0 +11
WR4 LR LR
comp=Z,1μm,20.0s
WR5 Warramunga Arr 63.62 104 PFAKE 11 25 30.0 +11
WR5 LR LR
comp=Z,1μm,18.0s
WR6 Warramunga Arr 63.64 104 PFAKE 11 25 30.0 +11
WR6 LR LR
comp=Z,1μm,18.0s
WR7 Warramunga Arr 63.66 104 PFAKE 11 25 30.0 +10
WR7 LR LR
comp=Z,1μm,19.0s
WR8 Warramunga Arr 63.68 104 PFAKE 11 25 30.0 +10
WR8 LR LR
comp=Z,2μm,18.0s
BBOO Buckleboo 63.75 119 PFAKE 11 25 30.0 +10
BBOO LR LR
comp=Z,2μm,22.0s
KBZ Khabaz 63.78 341 LR LR 11 51 13.2
comp=Z,355nm,20.7s,baz=175,slow=34
XAN Xi'an 63.94 38 P **P 11 25 20.2 -0.9**
XAN pmax pmax
comp=Z,16nm,1.4s
BR131 Keskin Array S 63.95 332 *eP* **P 11 25 22.1 +0.9**
BRTR Keskin Array B 63.95 332 P **P 11 25 22.1 +0.9**
comp=Z,1.6nm,0.8s,baz=159,slow=7.9,SNR=8.9
BRTR LR LR 11 51 49.3
comp=Z,296nm,19.4s,baz=136,slow=35
BRTR Keskin Array B 63.95 332 *i P* **P 11 25 24.6 +3.4**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
KVAR Kislovodsk Arr 64.05 341 LR LR 11 51 20.2
comp=Z,456nm,20.5s,slow=34
KIV Kislovodsk 64.05 341 *eP* **P 11 25 24.6 +2.9**
KIV *eS* **S 11 33 58.5 +0.5**
KIV pmax pmax
comp=Z,6.0nm,0.9s
MAKZ Makanchi 64.25 11 *eP* **P 11 25 22.1 -0.7**
comp=Z,7.0nm,1.0s
MAKZ LR LR
comp=Z,600nm,19.0s
MAKZ Makanchi 64.25 11 *eP* **P 11 25 22.1 -0.7**
MAKZ pmax pmax
comp=Z,7.0nm,1.0s
MK01 Makanchi Array 64.27 11 *eP* **P 11 25 21.2 -1.8**
MK31 Makanchi Array 64.29 11 *eP* **P 11 25 22.4 -0.7**
MK31 Makanchi Array 64.29 11 *eP* **P 11 25 22.4 -0.7**
MKAR Makanchi Array 64.29 11 P **P 11 25 22.4 -0.8**
comp=Z,2.7nm,1.0s,baz=216,slow=8.1,SNR=10
MKAR LR LR 11 53 04.1
comp=Z,398nm,19.1s,baz=208,slow=36
MKAR Makanchi Array 64.29 11 *eP* **P 11 25 22.4 -0.8**
comp=Z,56nm,1.4s
OTUK Ortayu 64.45 4 P **P 11 25 25.5 +1.4**
OTUK pmax pmax
comp=Z,9.0nm,1.2s
IDI Anoyia 65.16 323 *eP* **P 11 25 29.1 0.0**
comp=Z,18nm,1.2s
IDI LR LR
comp=Z,300nm,22.0s
ABKAR Akbulak array 65.62 355 *eP* **P 11 25 30.4 -1.3**
APE Apeiranthos 66.05 324⇑*iP* P 11 25 28.7 -6.1
APE Apeiranthos 66.05 324 ⇑P P 11 25 28.7 -6.1
AKTO Aktyubinsk 66.97 354 P **P 11 25 40.0 -0.3**
comp=Z,2.4nm,0.9s,baz=154,slow=6.2,SNR=6.3
AKTO LR LR 11 54 29.5
comp=Z,113nm,18.3s,baz=169,slow=36
KURBB Kurchatov Arra 67.41 8 P **P 11 25 41.1 -1.9**
comp=Z,2.4nm,0.9s,baz=203,slow=6.8,SNR=9.7
KURK Kurchatov 67.51 8 *eP* **P 11 25 43.0 -0.7**
comp=Z,13nm,1.1s
KURK LR LR
comp=Z,500nm,18.0s
KURK Kurchatov 67.51 8⇑*eP* **P 11 25 43.7 0.0**
KURK pmax pmax
comp=Z,9.0nm,1.3s
SNAA Sanae 68.35 199 P **P 11 25 47.9 -1.1**
SNAA Sanae 68.35 199 LR LR 11 48 22.6
comp=Z,410nm,21.1s,baz=10,slow=30
STKA Stephens Creek 68.49 118 P **P 11 25 49.4 -1.1**
comp=Z,5.5nm,1.1s,baz=54,slow=1.5,SNR=3.9
STKA LR LR 11 51 29.7
comp=Z,1μm,21.3s,baz=252,slow=32
BVAR Borovoye Array 69.13 2 P **P 11 25 52.2 -1.6**
comp=Z,2.4nm,0.8s,baz=157,slow=7.9,SNR=9.7
BVAR LR LR 11 55 26.4
comp=Z,272nm,19.3s,baz=186,slow=35
BRVK Borovoye 69.16 2 *eP* **P 11 25 54.1 +0.1**
comp=Z,7.6nm,1.0s
BRVK LR LR
comp=Z,500nm,22.0s
BRVK Borovoye 69.16 2⇓*eP* **P 11 25 55.0 +1.0**
BRVK pmax pmax
comp=Z,8.0nm,1.7s
BTO Baotou 69.21 34 *eP* **P 11 25 53.6 -1.2**
AGG Agios Georgios 69.22 324 *eP* **P 11 25 54.7 -0.1**
comp=Z,30nm,1.0s
AGG Agios Georgios 69.22 324 *eP* **P 11 25 55.4 +0.6**
AGG pmax pmax
comp=Z,30nm,1.0s
LIT Litokhoron 69.88 325 *eP* **P 11 25 59.4 +0.6**
comp=Z,14nm,1.2s
LIT Litokhoron 69.88 325 *eP* **P 11 25 59.7 +0.9**
LIT pmax pmax
comp=Z,14nm,1.1s
TIRR Tirgusor 70.07 332⇑*iP* **P 11 26 01.2 +1.4**
TIRR Tirgusor 70.07 332 *eP* **P 11 26 00.5 +0.7**
comp=Z,9.4nm,0.9s
TIRR LR LR
comp=Z,400nm,22.0s
TIRR Tirgusor 70.07 332 ⇑P **P 11 26 01.2 +1.4**
HHC Hu-ho-hao-te 70.21 34 *eP* **P 11 26 04.1 +3.2**
HHC sP PcP 11 26 16.5 -6.2
HHC sS sS 11 35 26.2 +6.8
HHC pmax pmax
comp=Z,16nm,0.9s
HHC pmax pmax
comp=Z,120nm,5.4s
HHC LR LR
comp=Z,220nm,13.1s
HHC LR LR
comp=Z,160nm,14.1s
HHC LR LR
comp=Z,180nm,16.8s
TLB Topalu 70.34 331⇓*iP* **P 11 26 02.9 +1.4**
TLB Topalu 70.34 331 ⇓P **P 11 26 02.9 +1.4**
VNA3 Neumayer Olymp 70.42 200 P **P 11 26 03.4 +1.7**
CFR Carcaliu 70.75 332⇓*iP* **P 11 26 06.3 +2.3**
CFR Carcaliu 70.75 332 ⇓P **P 11 26 06.3 +2.3**
FNA Florina 70.96 325 *eP* **P 11 26 07.0 +1.5**
comp=Z,11nm,1.1s
FNA Florina 70.96 325 *eP* **P 11 26 07.0 +1.5**
FNA pmax pmax
comp=Z,11nm,1.1s
TOC3 Torodi Ar. Sit 71.03 290 PFAKE 11 26 20.0 +14
TOC3 LR LR
comp=Z,700nm,20.0s
TOC2 Torodi Ar. Sit 71.04 290 PFAKE 11 26 20.0 +14
TOC2 LR LR
comp=Z,700nm,20.0s
TOC4 Torodi Ar. Sit 71.04 290 PFAKE 11 26 20.0 +14
TOC4 LR LR
comp=Z,800nm,20.0s
TOB3 Torodi Ar. Sit 71.04 290 PFAKE 11 26 20.0 +14
TOB3 LR LR
comp=Z,700nm,20.0s
TOB2 Torodi Ar. Sit 71.05 290 PFAKE 11 26 20.0 +14
TOB2 LR LR
comp=Z,700nm,20.0s
TOA2 Torodi Ar. Sit 71.05 290 PFAKE 11 26 20.0 +14
TOA2 LR LR
comp=Z,700nm,20.0s
TOA0 Torodi Ar. Sit 71.06 290 *eP* **P 11 26 05.0 -1.5**

TORD Torodi Ar. Bea 71.06 290 P **P 11 26 05.0 -1.5**
comp=Z,2.5nm,1.0s,baz=111,slow=1.1,SNR=6.8
TORD LR LR 11 55 55.9
comp=Z,647nm,18.9s,baz=75,slow=35
TOC1 Torodi Ar. Sit 71.06 290 PFAKE 11 26 20.0 +13
TOC1 LR LR
comp=Z,800nm,20.0s
TOA1 Torodi Ar. Sit 71.06 290 PFAKE 11 26 20.0 +13
TOA1 LR LR
comp=Z,700nm,19.0s
TOB4 Torodi Ar. Sit 71.06 290 PFAKE 11 26 20.0 +13
TOB4 LR LR
comp=Z,800nm,19.0s
TOC5 Torodi Ar. Sit 71.07 290 PFAKE 11 26 20.0 +13
TOC5 LR LR
comp=Z,900nm,19.0s
VTS Vitosha 71.24 327⇓*iP* **P 11 26 11.2 +4.0**
VTS Vitosha 71.24 327 *eP* **P 11 26 06.5 -0.7**
comp=Z,8.2nm,1.1s
VTS Vitosha 71.24 327 *eP* **P 11 26 06.5 -0.7**
VTS pmax pmax
comp=Z,8.0nm,1.1s
ZAA0 Zalesovo Array 71.61 11 *eP* **P 11 26 08.1 -0.9**
comp=Z,18nm,1.1s
ZAA0 LR LR
comp=Z,400nm,20.0s
ZALV Zalesovo Beam 71.61 11 P **P 11 26 08.3 -0.7**
comp=Z,2.9nm,0.6s,baz=187,slow=4.1,SNR=8.5
ZALV LR LR 11 56 41.6
comp=Z,197nm,21.6s,baz=246,slow=35
TAM Tamanrasset 71.78 301 PFAKE 11 26 20.0 +9.1
TAM LR LR
comp=Z,600nm,21.0s
VRI Vrincioaia 71.92 332⇓*iP* **P 11 26 14.7 +3.6**
VRI Vrincioaia 71.92 332 ⇓P **P 11 26 14.7 +3.6**
WDD Wied Dalam 71.94 317 PFAKE 11 26 20.0 +8.7
WDD LR LR
comp=Z,300nm,21.0s
PLOR Plostina 71.94 331⇓*iP* **P 11 26 14.1 +2.9**
PLOR Plostina 71.94 331 ⇓P **P 11 26 14.1 +2.9**
MLR Muntele Rosu 72.00 331 LR LR 11 58 04.4
comp=Z,64nm,18.1s,baz=128,slow=36
MLR Muntele Rosu 72.00 331⇑*iP* **P 11 26 14.8 +3.1**
MLR Muntele Rosu 72.00 331 *eP* **P 11 26 11.4 -0.2**
comp=Z,17nm,1.4s
MLR Muntele Rosu 72.00 331 *eP* **P 11 26 11.5 -0.2**
MLR pmax pmax
comp=Z,17nm,1.4s
NVS Novosibirsk 72.20 10 *eP* **P 11 26 13.9 +1.4**
NVS pmax pmax
comp=Z,21nm,1.4s
NVS pmax pmax
comp=N,17nm,1.7s
NVS pmax pmax
comp=E,7.0nm,1.3s
VOIR 72.38 330⇓*iP* **P 11 26 17.9 +4.0**
VOIR 72.38 330 ⇓P **P 11 26 17.9 +4.0**
ARR Arges 72.53 330⇓*iP* **P 11 26 17.2 +2.4**
TIP Timpagrande 72.58 321⇓*iP* **P 11 26 18.9 +3.7**
DOPR Dopca 72.61 331⇑*iP* **P 11 26 18.9 +3.7**
ARU Arti 72.85 355 P **P 11 26 16.2 -0.2**
comp=E,1.3nm,0.4s,baz=332,slow=1.1,SNR=4.1
ARU Arti 72.85 355 *eP* **P 11 26 16.5 +0.1**
comp=E,7.6nm,1.0s
ARU Arti 72.85 355*d iP* **P 11 26 20.2 +3.9**
ARU 11 28 59.3
ARU S **S 11 35 40.8 -1.2**
ARU pmax pmax
comp=Z,12nm,1.7s
ARU MLR MLR
comp=Z,364nm,18.0s
SONM Songino Array 72.86 26 P **P 11 26 16.6 -0.2**
comp=Z,3.0nm,0.8s,baz=214,slow=7.2,SNR=9.9
SONM LR LR 11 57 15.7
comp=Z,708nm,20.2s,baz=215,slow=35
SONA1 Songino Array 72.87 26 *eP* **P 11 26 16.3 -0.6**
SORM Soroca 72.94 334⇓*iP* **P 11 26 21.5 +4.4**
SORM Soroca 72.94 334 ⇓P **P 11 26 21.5 +4.4**
COEN Coen 72.97 100 PFAKE 11 26 30.0 +12
COEN LR LR
comp=Z,1μm,20.0s
VAE Valguarnera 72.99 319 LR LR 11 55 23.5
comp=Z,193nm,21.3s,baz=154,slow=33
SVE Sverdlovsk 73.09 356 *eP* **P 11 26 18.9 +1.1**
SVE pmax pmax
comp=Z,19nm,1.5s
ULN Ulaanbaatar 73.17 27 *eP* **P 11 26 18.2 -0.4**
comp=Z,17nm,1.5s
ULN LR LR
comp=Z,600nm,20.0s
ULN Ulaanbaatar 73.17 27⇓*eP* **P 11 26 19.3 +0.7**
ULN pmax pmax
comp=Z,7.0nm,1.5s
PDG Podgorica 73.25 325⇑*iP* **P 11 26 21.0 +2.0**
HERR Herculane 73.27 328⇑*iP* **P 11 26 20.4 +1.3**
ZAK Zakamensk 73.62 23 *eP* **P 11 26 21.8 +0.6**
ZAK pmax pmax
comp=Z,5.0nm,1.4s
CUC Castrocucco 73.66 321 PFAKE 11 26 30.0 +8.4
CUC LR LR
comp=Z,200nm,22.0s
QSPA South Pole Qui 73.75 180 LR LR 11 55 18.4
comp=Z,531nm,19.4s,baz=264,slow=33
QSPA South Pole Qui 73.75 180 *eP* **P 11 26 23.6 +1.7**
comp=Z,30nm,1.3s
BURAR Bucovina Array 73.92 332⇑*iP* P 11 26 31.3 +8.3
BURAR Bucovina Array 73.92 332 P P 11 26 31.2 +8.2
DIVS Divibare 73.97 327 *eP* **P 11 26 22.5 -0.9**
comp=Z,12nm,1.0s
BZS Buzias 74.19 329⇑*iP* **P 11 26 26.6 +2.1**
BZS Buzias 74.19 329 ⇑P **P 11 26 26.6 +2.1**
DRGR 74.48 330⇑*iP* **P 11 26 29.2 +2.9**
DRGR 74.48 330 ⇑P **P 11 26 29.2 +2.9**
CTAO Charters Tower 74.53 107 *eP* **P 11 26 27.2 +0.1**
comp=Z,12nm,1.1s
CTAO LR LR
comp=Z,1μm,20.0s
CTAO Charters Tower 74.53 107 *eP* **P 11 26 27.2 +0.1**
CTAO pmax pmax
comp=Z,12nm,1.1s
AKASG Malin Array Be 74.60 336 P **P 11 26 25.0 -1.7**
comp=Z,1.6nm,0.7s,baz=136,slow=5.0,SNR=13
AKASG LR LR 12 01 39.3
comp=Z,95nm,18.2s,baz=95,slow=38
AKBB Malin Array Si 74.60 336 *eP* **P 11 26 25.8 -0.9**
comp=Z,8.2nm,0.8s
AKBB Malin Array Si 74.60 336 *eP* **P 11 26 25.8 -0.9**
AKBB pmax pmax
comp=Z,8.0nm,0.8s
AK11 Malin Array Si 74.60 336 *eP* **P 11 26 27.0 +0.2**
TLY Talaya 74.81 23 *eP* **P 11 26 29.3 +1.3**
comp=Z,9.3nm,1.3s
TLY LR LR
comp=Z,700nm,21.0s
TLY Talaya 74.81 23⇑*eP* **P 11 26 29.7 +1.7**
TLY pmax pmax
comp=Z,6.0nm,2.1s
DBIC Dimbokro 74.83 282 P **P 11 26 29.9 +1.0**
comp=Z,4.2nm,0.9s,baz=74,slow=5.9,SNR=2.9
DBIC LR LR 11 58 33.6
comp=Z,439nm,18.1s,baz=96,slow=35
VNDA Vanda 75.17 167 LR LR 11 55 50.5
comp=Z,415nm,18.7s,baz=266,slow=33
KEST Kesra 75.34 315 LR LR 11 57 52.0
comp=Z,619nm,21.9s,baz=72,slow=34
OBN Obninsk 75.77 342 *eP* **P 11 26 33.3 0.0**
comp=Z,38nm,1.3s
OBN Obninsk 75.77 342⇑*eP* P 11 26 38.8 +5.5
OBN *e* 11 26 49.1
OBN *e* 11 29 27.9
OBN *eS* **S 11 36 13.8 -0.9**
OBN pmax pmax
comp=Z,30nm,1.3s
OBN MLR MLR
comp=Z,193nm,21.0s
LVV L'vov 76.08 333 *eP* P 11 26 42.3 +7.0
KWP Kalwaria Pacla 76.53 332 *eP* **P 11 26 36.6 -1.3**
comp=Z,143nm,1.1s
KWP Kalwaria Pacla 76.53 332 *eP* **P 11 26 36.6 -1.3**
AQU L'Aquila 76.54 322 *eP* **P 11 26 37.4 -0.8**
comp=Z,20nm,1.1s
AQU L'Aquila 76.54 322 *eP* **P 11 26 37.4 -0.8**
AQU pmax pmax
comp=Z,20nm,1.1s
CRVS Cervenica-Dubn 76.58 331 *eP* P 11 26 44.3 +6.1

CRVS pmax pmax
comp=Z,9.0nm,1.2s
CRVS Cervenica-Dubn 76.58 331 *e* P 11 26 44.3 +6.1
KOWA Kowa 76.71 290 P **P 11 26 37.5 -2.1**
comp=Z,5.8nm,0.9s,baz=109,slow=9.3,SNR=4.6
KOWA LR LR 11 59 27.3
comp=Z,777nm,18.5s,baz=108,slow=35
KOWA Kowa 76.71 290 *eP* **P 11 26 39.1 -0.5**
comp=Z,14nm,1.1s
VYHS Vyhne 77.55 329 *eP* **P 11 26 44.9 +1.3**
VYHS pmax pmax
comp=Z,9.0nm,1.6s
VYHS Vyhne 77.55 329 *eP* **P 11 26 44.9 +1.3**
EIDS Eidsvold 77.78 113 PFAKE 11 27 00.0 +14
EIDS LR LR
comp=Z,2μm,19.0s
SNY Shenyang 77.79 40 *eP* P 11 26 50.4 +5.3
SNY S **S 11 36 40.6 +3.2**
SNY LR LR
comp=Z,310nm,18.9s
SNY LR LR
comp=Z,410nm,16.4s
SNY LR LR
comp=Z,540nm,20.6s
PMG Port Moresby 77.85 96 LR LR 11 59 29.1
comp=Z,692nm,20.1s,baz=205,slow=34
KSAR Wonju Array Be 78.18 45 P **P 11 26 45.7 -1.7**
KSAR Wonju Array Be 78.18 45 P **P 11 26 45.7 -1.7**
KS01 Wonju Array Si 78.20 45 *eP* **P 11 26 46.1 -1.4**
KSRS Korea Array 78.21 45 P **P 11 26 45.7 -1.8**
comp=Z,1.1nm,0.9s,baz=229,slow=6.8,SNR=6.5
KSRS LR LR 11 59 47.2
comp=Z,223nm,20.5s,baz=238,slow=35
OKC Ostrava-Krasne 78.79 330 *eS* **S 11 36 51.6 +3.7**
MORC Moravsky Berou 79.04 330 *eP* **P 11 26 50.7 -1.2**
comp=Z,29nm,1.0s
MORC Moravsky Berou 79.04 330 *eP* **P 11 26 51.8 -0.1**
MORC pmax pmax
comp=Z,29nm,1.0s
MORC Moravsky Berou 79.04 330 *eP* **P 11 26 50.1 -1.8**
KRUC Moravsky 79.13 329 *eP* **P 11 26 51.2 -1.2**
KRLC Kraliky 79.61 330 *eP* **P 11 26 58.5 +3.5**
KRLC Kraliky 79.61 330 *eP* **P 11 26 58.5 +3.5**
DPC Dobruska-Polom 80.01 330 *eP* **P 11 27 00.5 +3.3**
DPC *eS* **S 11 37 00.8 -0.1**
DPC Dobruska-Polom 80.01 330 *eP* **P 11 27 00.5 +3.3**
DPC *eS* **S 11 37 00.8 -0.1**
KLMR Klimovskoe 80.07 347 *eP* **P 11 26 55.3 -1.9**
KLMR pmax pmax
comp=Z,53nm,1.4s
KLMR Klimovskoe 80.07 347 *eP* **P 11 26 55.4 -1.8**
KLMR AMP 11 27 14.5
comp=Z,53nm,1.4s
UPC Upice 80.26 330 *eS* **S 11 37 05.0 +1.5**
GERES GERESS Array B 80.36 327 P **P 11 26 57.7 -1.5**
comp=Z,0.6nm,0.7s,baz=123,slow=6.6,SNR=4.7
GERES LR LR 12 02 33.9
comp=Z,112nm,21.7s,baz=129,slow=36
GOPC GO Pecny, Ondr 80.48 329 *eP* **P 11 27 01.8 +2.1**
GOPC *eS* **S 11 37 04.0 -1.9**
GOPC AMS AMS 12 03 40.0
comp=Z,200nm,17.4s
GOPC GO Pecny, Ondr 80.48 329 *eP* **P 11 27 01.8 +2.1**
GOPC *eS* **S 11 37 04.0 -1.9**
GOPC MLR MLR
comp=Z,200nm,17.4s
KHC Kasperske Hory 80.60 328 *eP* **P 11 27 02.5 +2.1**
KHC *ex* x 11 27 30.0
KHC *eS* **S 11 37 04.6 -2.6**
KHC AMS AMS 12 02 10.0
comp=Z,200nm,26.0s
KHC Kasperske Hory 80.60 328 *eP* **P 11 27 02.5 +2.1**
KHC *eS* **S 11 37 04.6 -2.6**
KHC MLR MLR
comp=Z,200nm,26.0s
PRU Pruhonice 80.65 329 *eP* **P 11 27 03.4 +2.8**
PRU *eS* **S 11 37 06.7 -0.9**
PRU AMS AMS 12 02 40.0
comp=Z,300nm,24.6s
PRU Pruhonice 80.65 329 *eP* **P 11 27 03.4 +2.8**
PRU *eS* **S 11 37 06.7 -0.9**
PRU MLR MLR
comp=Z,300nm,24.6s
FUORN Ofenpass-Fuorn 80.88 324 *eP* **P 11 27 01.8 -0.4**
comp=Z,7.7nm,1.0s
FUR Furstenfeldbru 81.23 326 P P 11 27 10.6 +6.9
FUR pmax pmax
comp=Z,33nm,0.9s
BRG Berggiesshubel 81.51 329 *eP* P 11 27 09.9 +4.8
comp=Z,3.9nm,1.1s
BRG *e* 11 27 21.5
comp=Z,8.8nm,1.4s
BRG Berggiesshubel 81.51 329 S **S 11 37 22.0 +5.5**
BRG SS **SS 11 42 38.0 +4.3**
comp=N,231nm,25.8s
comp=E,174nm,29.1s
comp=Z,167nm,25.9s
BRG Berggiesshubel 81.51 329 *eP* P 11 27 09.9 +4.8
BRG S **S 11 37 22.0 +5.5**
BRG SS **SS 11 42 38.0 +4.3**
BRG pmax pmax
comp=Z,4.0nm,1.1s
BRG MLR MLR
comp=N,231nm,25.8s
BRG MLR MLR
comp=Z,167nm,25.9s
VSU Vasula 81.60 340⇑*eP* P 11 27 11.4 +6.0
VSU pmax pmax
comp=Z,50nm,1.0s
CLL Collm 82.24 329 *eP* **P 11 27 11.0 +2.0**
comp=Z,56nm,2.2s
CLL *i* pP **PcP 11 27 13.8 -0.5**
comp=Z,56nm,2.2s
CLL *i* 11 27 21.5
CLL *i* 11 27 24.6
comp=Z,12nm,1.2s
CLL *eS* **S 11 37 26.0 +2.0**
comp=N,200nm,25.3s
CLL *eS* **S 11 37 26.0 +2.0**
comp=E,200nm,27.1s
CLL *eP*S **PnS 11 38 19.0 +5.3**
CLL *eP*PS PPS 11 38 43.0
CLL *eS*S **SS 11 42 39.0 -5.6**
CLL *eS*SS SSS 11 46 00.0
CLL *eS*SSS 11 48 54.0
CLL Collm 82.24 329 *eP* **P 11 27 08.7 -0.3**
comp=E,11nm,1.1s
CLL Collm 82.24 329 *eP* **P 11 27 11.0 +2.0**
CLL *i* 11 27 13.8
CLL *eS* **S 11 37 26.0 +2.0**
CLL pmax pmax
comp=Z,56nm,2.2s
SENIN Lac Senin/Sane 82.43 323 *eP* **P 11 27 10.6 +0.2**
comp=Z,9.0nm,1.0s
CART Cartagena 83.48 312 PFAKE 11 27 30.0 +14
CART LR LR
comp=Z,300nm,18.0s
FINES FINESS Array B 84.12 341 P **P 11 27 16.7 -1.7**
comp=Z,2.3nm,0.9s,baz=132,slow=2.1,SNR=2.6
FINES LR LR 12 06 03.0
comp=Z,139nm,20.4s,baz=112,slow=37
FINES FINESS Array B 84.12 341 *i P* P 11 27 25.2 +6.8
FINES pmax pmax
comp=Z,2.0nm,0.7s
MDT Midelt 84.17 306 LR LR 12 02 56.8
comp=Z,521nm,21.8s,baz=122,slow=34
USRK Ussuriysk Ar. 84.27 41 P **P 11 27 18.5 -1.1**
comp=Z,2.2nm,0.8s,baz=224,slow=4.0,SNR=3.1
USRK LR LR 12 06 59.1
comp=Z,159nm,18.2s,baz=231,slow=37
MJAR Matsushiro Arr 85.07 50 P **P 11 27 22.0 -1.9**
comp=Z,4.5nm,1.1s,baz=228,slow=5.5,SNR=7.3
MJAR LR LR 12 04 52.4
comp=Z,95nm,20.3s,baz=255,slow=35
MJAR Matsushiro Arr 85.07 50 P **P 11 27 22.0 -1.9**
RTC Rabat Centre 86.35 307 PFAKE 11 27 40.0 +10
RTC LR LR
comp=Z,4μm,18.0s
ES19 SONSECA Array 86.44 313 *eP* **P 11 27 29.7 -1.0**
ESDC Sonseca Array 86.47 313 P **P 11 27 29.9 -0.9**
comp=Z,1.2nm,0.6s,baz=111,slow=4.4,SNR=11
ESDC LR LR 12 08 28.6
comp=Z,210nm,18.1s,baz=105,slow=37
ESLA Sonseca Array 86.47 313 PFAKE 11 27 40.0 +9.2
ESLA LR LR

comp=Z,400nm,20.0s
ZEA Zeya 86.57 31 *e*P **P 11 27 34.8 +3.9**
ZEA pmax pmax
comp=Z,14nm,1.2s
ZEA MLR MLR
comp=Z,500nm,15.0s
ZEA MLR MLR
comp=E,200nm,14.0s
ZEA MLR MLR
comp=N,200nm,12.0s
KLR Kul'dur 86.60 36⇑ *e*P **P 11 27 31.9 +0.8**
NRIK Noril'sk 86.67 7 P **P 11 27 32.4 +1.4**
comp=N,3.1nm,0.6s,baz=131,slow=4.1,SNR=2.8
NRIK LR LR 12 07 52.6
comp=N,363nm,18.1s,baz=202,slow=37
PAB San Pablo 86.69 313 PFAKE 11 27 40.0 +8.1
PAB LR LR
comp=Z,400nm,21.0s
RPZ Rata Peaks 88.52 135 LR LR 11 59 51.6
comp=Z,420nm,18.8s,baz=252,slow=31
PESTR Estremoz 88.74 311 PFAKE 11 27 50.0 +8.3
PESTR LR LR
comp=Z,200nm,18.0s
KONO Kongsberg 88.83 335 PFAKE 11 27 50.0 +8.4
KONO LR LR
comp=Z,400nm,21.0s
MTE Manteigas 89.28 313 PFAKE 11 28 00.0 +16
MTE LR LR
comp=Z,400nm,21.0s
HNR Honiara 90.00 100 LR LR 12 07 57.3
comp=Z,627nm,18.9s,baz=224,slow=36
ARCES ARCESS Array B 90.55 346 LR LR 12 08 06.3
comp=Z,180nm,19.7s,baz=138,slow=35
PMSA Palmer Station 91.07 199 LR LR 12 00 52.5
comp=Z,179nm,18.9s,baz=108,slow=30
ASAJ Asahikawa 91.12 44 LR LR 12 09 05.9
comp=Z,142nm,19.6s,baz=248,slow=36
YAK Yakutsk 92.14 25 PFAKE 11 28 10.0 +13
YAK LR LR
comp=Z,400nm,20.0s
YAK Yakutsk 92.14 25⇓ *e*P **P 11 28 00.1 +3.2**
YAK pmax pmax
comp=Z,18nm,0.9s
DZM Mont Dzumac 92.22 114 LR LR 12 08 00.6
comp=Z,1μm,19.1s,baz=246,slow=35
DZM Mont Dzumac 92.22 114 *e*SS SS 11 45 17.0 +5.6
comp=Z,532nm,29.6s
DZM Mont Dzumac 92.22 114 *e*LR LR 11 57 29.8
comp=Z,1μm,22.6s
YSS Yuzh-Sakhalins 92.27 42 *e*P **P 11 27 53.4 -4.5**
YSS *e* 11 27 58.4
YSS pmax pmax
comp=Z,10.0nm,1.5s
YSS pmax pmax
comp=E,20nm,1.2s
YSS MLR MLR
comp=Z,200nm,15.0s
YSS MLR MLR
comp=N,200nm,10.0s
TIXI Tiksi 96.94 16⇑ *e*P **P 11 28 21.8 +3.1**
TIXI pmax pmax
comp=Z,2.0nm,1.1s
SPITS Spitsbergen Ar 98.54 351 LR LR 12 16 07.0
comp=Z,139nm,19.6s,baz=60,slow=37
KBS Kingsbay 99.70 351 PFAKE 11 28 40.0 +9.0
KBS LR LR
comp=Z,300nm,19.0s
RCBR Riachuelo 100.85 261 PFAKE 11 28 50.0 +12
RCBR LR LR
comp=Z,1μm,20.0s
WAKE Wake Island 103.93 74 PFAKE 11 29 00.0 +8.9
WAKE LR LR
comp=Z,900nm,21.0s
RDOG Red Dog Mine 119.38 19 PFAKE 11 33 50.0 +13
RDOG LR LR
comp=Z,300nm,21.0s
TOLK Toolik Lake Re 122.81 15 PFAKE 11 33 50.0 +6.6
TOLK LR LR
comp=Z,300nm,19.0s
IM3 Indian Mountai 123.50 19 *e*PKPdf **PKPdf 11 33 43.9 -0.9**
PTGA Pitinga 125.20 257 PFAKE 11 34 00.0 +10
PTGA LR LR
comp=Z,600nm,20.0s
FYU Fort Yukon 125.47 15 PFAKE 11 34 00.0 +12
FYU LR LR
comp=Z,200nm,22.0s
CAST Castle Rocks 125.73 21 PFAKE 11 34 00.0 +11
CAST LR LR
comp=Z,200nm,18.0s
MDM Murphy Dome 125.87 18 PFAKE 11 34 00.0 +11
MDM LR LR
comp=Z,200nm,19.0s
TRF Thorofare Moun 126.31 20 PFAKE 11 34 00.0 +10
TRF LR LR
comp=Z,300nm,22.0s
IL1 Eielson Array 126.40 17 *e*PKPdf **PKPdf 11 33 50.4 +0.1**
ILAR Eielson Array 126.40 17 PKP **PKPdf 11 33 50.4 +0.1**
comp=Z,0.5nm,0.8s,baz=300,slow=2.0,SNR=2.7
CHGN Chignik 127.33 30 *e*PKPdf **PKPdf 11 33 50.4 -1.9**
RIDG Independ'e Rid 127.76 17 PFAKE 11 34 00.0 +7.0
RIDG LR LR
comp=Z,300nm,22.0s
DOT Dot Lake 128.06 17 *e*PKPdf **PKPdf 11 33 54.7 +1.1**
RC01 Rabbit Creek A 128.12 22 PFAKE 11 34 10.0 +16
RC01 LR LR
comp=Z,200nm,20.0s
PAX Paxson 128.17 18 PFAKE 11 34 10.0 +16
PAX LR LR
comp=Z,200nm,18.0s
DAWY Dawson 128.95 15 *e*PKPdf **PKPdf 11 33 57.8 +2.5**
KLU Klutina 129.13 20 PFAKE 11 34 10.0 +14
KLU LR LR
comp=Z,200nm,20.0s
DIV Divide 129.45 20 PFAKE 11 34 10.0 +14
DIV LR LR
comp=Z,300nm,22.0s
SVB Belmont 130.17 274 PFAKE 11 34 10.0 +11
SVB LR LR
comp=Z,600nm,22.0s
PPT2 Papeete2 130.51 131 *e*LR LR 12 15 14.2
comp=Z,642nm,26.8s
TGL Tana Glacier 130.67 19 PFAKE 11 34 10.0 +11
TGL LR LR
comp=Z,400nm,18.0s
SEUS St. Eustatius 132.43 279 PFAKE 11 34 10.0 +6.9
SEUS LR LR
comp=Z,300nm,21.0s
SMRT St. Maarten 132.58 280 PFAKE 11 34 20.0 +17
SMRT LR LR
comp=Z,400nm,19.0s
SABA Saba 132.69 279 PFAKE 11 34 20.0 +16
SABA LR LR
comp=Z,300nm,20.0s
YKA Yellowknife Ar 133.88 1 PKP **PKPdf 11 34 02.4 -2.1**
comp=Z,0.1nm,0.5s,baz=344,slow=2.2,SNR=3.2
YKA PP **PP 11 36 34.8 +1.1**
comp=Z,0.8nm,1.0s,baz=355,slow=6.7,SNR=5.4
STVI Saint Thomas 134.38 280 PFAKE 11 34 20.0 +13
STVI LR LR
comp=Z,400nm,22.0s
RKT Rikitea 135.19 150 *e*LR LR 12 17 33.9
comp=Z,365nm,33.2s
SJG San Juan 135.49 279 PFAKE 11 34 20.0 +11
SJG LR LR
comp=Z,300nm,20.0s
CRPR Cabo Rojo, PR 136.40 279 PFAKE 11 34 20.0 +9.5
CRPR LR LR
comp=Z,700nm,22.0s
AGP Aguadilla 136.46 280 PFAKE 11 34 20.0 +9.3
AGP LR LR
comp=Z,900nm,19.0s
YLE Yale 137.65 314 PFAKE 11 34 20.0 +7.8
YLE LR LR
comp=Z,700nm,22.0s
SDV Santo Domingo 138.25 265 PFAKE 11 34 30.0 +16
SDV LR LR
comp=Z,300nm,19.0s
KKO Keanakako'i 139.54 79 PFAKE 11 34 30.0 +14
KKO LR LR
comp=Z,2μm,21.0s
SBLHI Steaming Bluff 139.54 79 PFAKE 11 34 30.0 +14
SBLHI LR LR
comp=Z,3μm,22.0s
RUSC La Rusia 139.75 260 PFAKE 11 34 30.0 +13
RUSC LR LR
comp=Z,200nm,19.0s
MVL Millersville 140.56 314 PFAKE 11 34 30.0 +12
MVL LR LR
comp=Z,1μm,20.0s
ROSC El Rosal 140.57 257 PFAKE 11 34 30.0 +11
ROSC LR LR
comp=Z,400nm,19.0s
PRAC Prado 140.70 256 PFAKE 11 34 30.0 +11
PRAC LR LR
comp=Z,600nm,20.0s
HELC Santa Helena 142.15 259 PFAKE 11 34 30.0 +8.3
HELC LR LR
comp=Z,800nm,21.0s
TAOE Nuku Hiva Isla 143.13 131 *e*LR LR 12 21 06.8
comp=Z,374nm,22.9s
ACSO Alum Creek Sta 144.84 319 *e*PKPdf **PKPdf 11 34 25.4 +0.3**
LLLB Lillooet 145.04 10 *e*PKPdf **PKPbc 11 34 23.8 -0.8**
AGMN Agassiz Nation 145.22 340 *e*PKPbc **PKPbc 11 34 24.3 -0.9**
H41A Junction City 145.71 330 *e*PKPdf **PKPdf 11 34 26.0 -0.6**
KMSC Kings Mountain 146.24 310 PFAKE 11 34 40.0 +10
KMSC LR LR
comp=Z,300nm,22.0s
PAULI Pauline 146.73 309 PFAKE 11 34 40.0 +8.6
PAULI LR LR
comp=Z,400nm,18.0s
WALA Waterton Lakes 147.35 1 PFAKE 11 34 40.0 +6.5
WALA LR LR
comp=Z,400nm,19.0s
NEW Newport 147.96 5 *e*PKPdf **PKPdf 11 34 30.7 +0.4**
NEW Newport 147.96 5 *e*PKIKP **PKPdf 11 34 30.7 +0.4**
EGMT Eagleton 148.30 356 *e*PKPbc **PKPbc 11 34 33.2 -1.1**
DWPF Disney Wildern 148.78 297 PFAKE 11 34 40.0 +0.2
DWPF LR LR
comp=Z,400nm,20.0s
OLIL Olney 148.91 321 *ep*PKPdf **PKPbc 11 34 35.2 -0.8**
LAO LASA Array 149.25 351 *ep*PKPdf **PKPbc 11 34 34.9 -1.8**
ECSD EROS Data Cent 149.42 337 *e*PKPbc **PKPbc 11 34 36.5 -0.6**
MSO Missoula 149.58 2 *ep*PKPdf pPKPdf 11 34 36.3 -1.2
HRY Holter Researc 149.70 359 *ep*PKPdf pPKPdf 11 34 36.7 -1.1
FVM French Village 150.79 322 *e*PKPdf **PKPdf 11 34 35.2 +0.1**
FVM French Village 150.79 322 *e*PKIKP **PKPdf 11 34 35.2 +0.1**
BOZ Bozeman (W) 150.81 358 *e*PKPdf **PKPdf 11 34 37.5 +2.4**
BOZ Bozeman (W) 150.81 358 *e*PKIKP **PKPdf 11 34 37.3 +2.2**
DLMT Dillon 151.06 360 *e*PKPdf **PKPdf 11 34 36.7 +1.3**
PLAL Pickwick Lake 151.12 315 *e*PKPdf **PKPdf 11 34 36.1 +0.5**
PLAL LR LR
comp=Z,400nm,20.0s
RLMT Red Lodge 151.15 355 *e*PKPdf **PKPdf 11 34 35.9 +0.2**
CCM Cathedral Cave 151.23 323 *e*PKPdf **PKPdf 11 34 35.5 -0.1**
CCM Cathedral Cave 151.23 323 *e*PKIKP **PKPdf 11 34 35.6 -0.1**
RSSD Black Hills 151.32 347 *e*PKPdf **PKPdf 11 34 35.8 -0.2**
RSSD Black Hills 151.32 347 *e*PKIKP **PKPdf 11 34 35.8 -0.2**
PBMO Poplar Bluff 151.58 320 *e*PKPbc **PKPbc 11 34 42.5 0.0**
YHH Holmes Hill 151.59 357 *e*PKPab **PKPab 11 34 49.6 -1.5**
MCMT McKenzie Canyo 151.60 0 *e*PKPdf **PKPdf 11 34 35.5 -0.9**
MCMT *e*PKPab **sPKPbc 11 34 48.5 -0.1**
YHB Horse Butte 151.64 358 PFAKE 11 34 50.0 -1.2
YHB LR LR
comp=Z,400nm,19.0s
LKWY Lake 151.79 356 PFAKE 11 34 50.0 -1.9
LKWY LR LR
comp=Z,4μm,22.0s
HUMO Hull Mountain 152.41 16 *e*PKPbc **PKPbc 11 34 43.0 -1.2**
J08A Circle Bar Ran 152.64 9 *e*PKPbc **PKPbc 11 34 45.3 +0.4**
FXWY Fox Creek 152.75 357 *e*PKPdf **PKPdf 11 34 39.9 +1.8**
LOHW Long Hollow 152.75 357 PFAKE 11 34 50.0 +4.8
LOHW LR LR
comp=Z,500nm,18.0s
HLID Hailey 152.83 3 *e*PKPdf **PKPdf 11 34 40.5 +2.3**
TPAW Teton Pass 152.89 357 *e*PKPdf **PKPdf 11 34 41.0 +2.6**
KSU1 Kansas State U 153.26 331 *e*PKPdf **PKPdf 11 34 40.9 +2.2**
PD31 Pinedale Array 153.51 355 *e*PKPdf **PKPdf 11 34 41.0 +1.7**
PDAR Pinedale Array 153.51 355 PKP **PKPdf 11 34 39.9 +0.6**
comp=Z,0.2nm,0.4s,baz=60,slow=2.4,SNR=2.2
WVOR Wild Horse Val 153.51 10 *e*PKPdf **PKPdf 11 34 40.1 +1.0**
WVOR Wild Horse Val 153.51 10 *e*PKIKP **PKPdf 11 34 40.1 +1.0**
VCNR Virginia City 156.35 13 PFAKE 11 34 50.0 +6.7
VCNR LR LR
comp=Z,400nm,20.0s
NLU North Lily Min 156.46 359 PFAKE 11 34 50.0 +6.6
NLU LR LR
comp=Z,700nm,22.0s
NV01 Mina Array Sit 157.47 11 *e*PKPdf **PKPdf 11 34 44.4 -0.3**
NVAR Mina Array Bea 157.47 11 PKP **PKPdf 11 34 45.3 +0.6**
comp=Z,0.1nm,0.4s,baz=90,slow=0.9,SNR=2.7
NVAR PKPab **PKPab 11 35 15.8 -0.4**
comp=Z,1.5nm,1.0s,baz=41,slow=0.6,SNR=5.0
RDG13 Poverty Ridge 157.55 19 PFAKE 11 35 00.0 +15
RDG13 LR LR
comp=Z,700nm,22.0s
S22A 4UR Ranch, Cre 158.03 347 PFAKE 11 35 00.0 +14
S22A LR LR
comp=Z,500nm,22.0s
MNTX Cornudas Mount 163.28 337 *e*PKPdf **PKPdf 11 34 53.4 +2.3**
TX31 Lajitas Ar. Si 164.58 329 *e*PKPdf **PKPdf 11 34 54.6 +2.1**
TXAR Lajitas Array 164.58 329 PKP **PKPdf 11 34 53.5 +1.1**
comp=Z,0.9nm,1.2s,baz=147,slow=1.8,SNR=2.9
TXAR PKPab **PKPab 11 35 46.0 -1.3**
comp=Z,0.3nm,0.9s,baz=45,slow=5.2,SNR=2.4

MAN 03 11:26:27.8,8°.44N×124°.29E,h0km,mb4.7,ML3.6,MS3.6, 4C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGP	**Cagayan de Oro**	**0.41**	**87**⇑	*i*P	Pg	11 26 35.3	-0.3
CGP				*i* S	Sg	11 26 40.0	-0.8
DCPH	**Dipolog City**	**0.94**	**279**⇑	*e*P	Pb	11 26 47.1	+0.2
DCPH				*i* S	Sn	11 27 04.1	+1.8
BUKP	**Musuan**	**0.95**	**126**	*e*P	Pg	11 26 45.5	-0.5
BUKP				*e*S	Sg	11 26 57.0	-1.3
PAGZ	**Pagadian**	**1.07**	**237**	*e*P	Pb	11 26 49.2	+0.1
PAGZ				*e*S	Sb	11 27 04.4	+0.7
CTBH	**Cotabato--PC H**	**1.21**	**182**	*e*P	Pb	11 26 51.5	0.0
CTBH				*i* S	Sn	11 27 09.0	0.0
SNPH	**Sibulan**	**1.37**	**311**⇓	*i*P	Pg	11 26 54.2	0.0
SNPH				*i* S	Sn	11 27 13.0	-0.3
BUTP	**Butuan**	**1.42**	**68**	*e*P	Pn	11 26 54.0	-0.9
BUTP				*e*S	Sn	11 27 15.4	+1.0
MSLP	**Maasin**	**1.78**	**19**	*e*P	Pn	11 26 58.5	-1.3
MSLP				*e*S	Sn	11 27 20.5	-2.7
LLP	**Lapu-Lapu**	**1.90**	**350**⇑	*e*P	Pn	11 27 00.1	-1.4
LLP				*e*S	Sn	11 27 23.8	-2.3
BIPH	**Bislig**	**2.07**	**97**⇑	*e*P	Pn	11 27 33.4	-0.4
BIPH				*e*S	Sb	11 27 31.9	-0.6
GUIM	**Jordan**	**2.75**	**323**	*e*P	Pb	11 27 16.2	-1.6
GUIM				*e*S	Sn	11 27 48.6	+1.5

IDC 03 11:30:55.1±9.6,12°.83S×166°.11E,h118km±77km,mb3.3/4, mb1 3.5/5,mb1mx3.2/55,mbtmp3.8/5,MS3.1/1,Ms1 3.1/1, ms1mx2.8/25,Error ellipse: s-maj=73.7km s-min=29.4km az=126.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.93**	**299**	P	Pn	11 32 33.4	-0.7
9.1nm,0.3s,baz=354,slow=9.5,SNR=2.3							
HNR				S	Sn	11 33 52.6	+1.1
19nm,0.3s,baz=149,slow=18,SNR=3.8							
HNR				LR	LR	11 34 52.6	
comp=Z,160nm,19.9s,baz=132,slow=34							
CTA	**Charters Tower**	**20.36**	**247**	P	P	11 35 23.6	+1.2
1.2nm,0.6s,baz=78,slow=15,SNR=2.2							
WRA	**Warramunga Arr**	**31.25**	**253**	P	P	11 37 03.2	-0.7
0.8nm,0.7s,baz=84,slow=8.6,SNR=10							
ASAR	**Alice Springs**	**32.36**	**246**	P	P	11 37 13.6	0.0
1.5nm,0.7s,baz=70,slow=9.6,SNR=32							
ILAR	**Eielson Array**	**85.08**	**18**	P	P	11 43 17.4	+0.2
0.2nm,0.6s,baz=223,slow=4.9,SNR=4.4							

*ISCJB **03** 11:39:22.1±0.3,21°.30S±0°.02×68°.04W±0°.03,h105km±3km, mb5.0/283,Error ellipse: s-maj=5.4km s-min=3.1km az=162.1*
*NEIC **03** 11:39:23.9±0.4,21°.34S×68°.03W,h101km±3km,mb5.0/259, Error ellipse: s-maj=4.4km s-min=2.8km az=72.0*
*SCB **03** 11:39:23.2±1.1,21°.33S×68°.07W,h124km,Ml4.8/1,Error ellipse: s-maj=36.0km s-min=6.7km az=37.0*
*GCMT **03** 11:39:24.3±0.2,21°.41S×68°.42W,h142km±2km, MW5.2/96, Moment Tensor Solution. s42,c56; s96,c145; Duration: 1s0 Moment tensor: Scale 10^{16}Nm; M_{rr}-5.67±.18; $M_{\theta\theta}$0.56±.22; $M_{\phi\phi}$5.11±.27; $M_{r\theta}$1.64±.14; $M_{\theta\phi}$-2.89±.21; $M_{r\phi}$-3.94±.20; Best double couple: $M_0$7.43900×10^{16} NP1:ϕ_s336.00000°,δ63.00000°,λ-88.00000°. NP2: ϕ_s152.00000°,δ28.00000°,λ-94.00000°. Principal axes: T 7.8570, Plg17.0000°, Azm65.0000°; N -0.8310, Plg2.0000°, Azm155.0000°; P -7.0210, Plg72.0000°, Azm251.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*BJI **03** 11:39:25.7,21°.30S×68°.00W,h100km,mB5.3/17*
*SJA **03** 11:39:25.3±0.8,21°.54S×68°.44W,h58km±19km,ML4.5, MW4.4*
*GUC **03** 11:39:26.1±0.6,21°.32S×68°.75W,h153km±4km,ML4.6*
*MOS **03** 11:39:27.7±1.1,21°.02S×68°.08W,h135km,mb4.9/43, Error ellipse: s-maj=18.2km s-min=6.2km az=116.0*
*IDC **03** 11:39:27.2±0.5,21°.26S×68°.11W,h128km±3km,mb4.6/26, mb1 4.7/29,mb1mx4.5/46,mbtmp5.0/29,MS4.0/7, Ms1 3.9/7,ms1mx3.5/38,Error ellipse: s-maj=12.1km s-min=8.2km az=74.0*

ISC 03 11:39:26.1±0.4,21°.45S±0°.03×68°.34W±0°.04,h124km±3km, h124km:pP-P,n1014,σ1s29/1069,mb5.0/283,21C-15D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**1.14**	**291**	*e*Pn	**Pn**	**11 39 49.5**	**-0.5**
PB01				*e*Sn	**Sn**	**11 40 08.0**	**-0.1**
PB01	**IPOC Station P**	**1.14**	**291**⇑	*i*P	**Pn**	**11 39 49.5**	**-0.5**
PB01				*i* S	**Sn**	**11 40 07.5**	**-0.6**
PB01				IAML		11 40 09.4	
comp=E,15μm,0.2s							
PB02	**IPOC Station P**	**1.45**	**275**⇑	*i*P	**Pn**	**11 39 53.0**	**-0.3**
PB02				*i* S	**Sn**	**11 40 12.7**	**-1.3**
PB02				IAML		11 40 15.4	
comp=E,27μm,0.7s							
PB07	**IPOC Station P**	**1.46**	**259**⇑	*i*P	**Pn**	**11 39 53.3**	**-0.2**
PB07				*i* S	**Sn**	**11 40 14.0**	**-0.4**
PB07				IAML		11 40 15.5	
comp=E,9μm,0.2s							
PB08	**IPOC Station P**	**1.51**	**330**⇓	*i*P	**Pn**	**11 39 54.6**	**+0.3**
PB08				*i* S	**Sn**	**11 40 16.3**	**+0.5**
PB08				IAML		11 40 19.2	
comp=E,5μm,0.2s							
PB04	**IPOC Station P**	**1.89**	**242**	*e*Pn	**Pn**	**11 39 58.4**	**-0.2**
PB04	**IPOC Station P**	**1.89**	**242**⇑	*i*P	**Pn**	**11 39 58.1**	**-0.5**
PB04				*i* S	**Sn**	**11 40 23.3**	**-0.1**
PB04				IAML		11 40 32.0	
comp=E,5μm,0.8s							
PSGC	**Pisagua**	**2.49**	**318**⇑	*i*P	**Pn**	**11 40 04.4**	**-1.7**
PSGC				*i* S	**Sn**	**11 40 33.2**	**-3.5**
PSGC				IAML		11 40 37.5	
comp=E,2μm,0.4s							
MOCB	**Mochara**	**2.53**	**86**⇑	*i*Pn	**Pn**	**11 40 05.2**	**-1.6**
MOCB				⇑ *i*Sn	**Sn**	**11 40 36.1**	**-2.0**
comp=E,4μm,1.0s							
MNMC	**Minye Minye**	**2.59**	**333**	*e*Pn	**Pn**	**11 40 08.0**	**+0.4**
MNMC				*e*Sn	**Sn**	**11 40 37.2**	**-2.1**
MNMC	**Minye Minye**	**2.59**	**333**⇑	*i*P	**Pn**	**11 40 07.0**	**-0.5**
MNMC				*i* S	**Sn**	**11 40 37.3**	**-2.1**
MNMC				IAML		11 40 42.3	
comp=E,6μm,0.5s							
YJA	**Yavi**	**2.73**	**106**	*e*P	**Pn**	**11 40 10.4**	**+1.1**
YJA				IAML		11 40 16.2	
comp=Z,515nm,0.4s							
YJA				*e*S	**Sn**	**11 40 44.6**	**+2.0**
PB10	**IPOC Station P**	**2.90**	**225**	*e*Pn	**Pn**	**11 40 11.2**	**0.0**
PB10	**IPOC Station P**	**2.90**	**225**	*e*P	**Pn**	**11 40 09.8**	**-1.4**
PB10				*e*S	**Sn**	**11 40 41.8**	**-4.1**
PB10	**IPOC Station P**	**2.90**	**225**⇑	*i*P	**Pn**	**11 40 09.8**	**-1.4**
PB10				*i* S	**Sn**	**11 40 44.4**	**-1.5**
PB10				IAML		11 40 56.6	
comp=N,2μm,0.9s							
HJA	**Humahuaca**	**3.23**	**123**	*e*P	**Pn**	**11 40 17.4**	**+1.6**
PB16	**IPOC Station P**	**3.29**	**340**⇑	*i*P	**Pn**	**11 40 16.9**	**0.0**
PB16				*i* S	**Sn**	**11 40 54.9**	**-1.1**
PB16				IAML		11 41 07.9	
comp=N,594nm,0.3s							
PB12	**IPOC Station P**	**3.39**	**326**	*e*P	**Pn**	**11 40 15.6**	**-2.1**
PB12				*i* S	Sn	11 40 47.0	-11
PB12				IAML		11 41 05.8	
comp=E,2μm,0.3s							
PB14	**IPOC Station P**	**3.68**	**211**	*e*P	**Pn**	**11 40 22.3**	**+0.5**
PB14				*e*S	Sn	11 40 53.9	-11
PB14	**IPOC Station P**	**3.68**	**211**⇑	*i*P	**Pn**	**11 40 20.5**	**-1.3**
PB14				*i* S	Sn	11 40 53.4	-12
GO02	**Mina Guanaco**	**3.87**	**197**	*e*Pn	**Pn**	**11 40 24.2**	**0.0**
GO02				*e*Sn	**Sn**	**11 41 02.7**	**-6.5**
SLA	**San Lorenzo**	**4.17**	**142**	*e*P	**Pn**	**11 40 30.1**	**+1.9**
SLA				*e*S	**Sn**	**11 41 20.0**	**+3.7**
BBOJ	**La Paz, Jacaqu**	**4.46**	**2**⇑	*i*Pn	**Pn**	**11 40 32.9**	**+0.5**
BBOD	**La Paz, Gloria**	**4.80**	**357**⇑	*i*Pn	**Pn**	**11 40 38.0**	**+1.1**
FSA	**Cafayete**	**5.12**	**155**	*e*P	**Pn**	**11 40 41.2**	**+0.4**
FSA				*e*S	**Sn**	**11 41 46.1**	**+7.1**
LPAZ	**La Paz**	**5.14**	**2**	P	**Pn**	**11 40 41.9**	**+0.3**
comp=E,22nm,0.3s,baz=179,slow=5.4,SNR=229							
LPAZ				S	**Sn**	**11 41 37.6**	**-2.7**
baz=33,slow=20,SNR=1.5							
LPAZ				LR	LR	11 43 07.7	
comp=E,1μm,19.0s,baz=212,slow=45							
LPAZ	**La Paz**	**5.14**	**2**	*e*P	**Pn**	**11 40 42.1**	**+0.4**
LPAZ	**La Paz**	**5.14**	**2**⇑	*i*Pn	**Pn**	**11 40 41.7**	**+0.1**
BBOB	**La Paz, Bander**	**5.29**	**2**⇑	*i*Pn	**Pn**	**11 40 43.3**	**-0.2**
ARE	**Arequipa**	**5.79**	**329**	*e*P	**Pn**	**11 40 48.0**	**-2.1**
ARE				*i* S	**Sn**	**11 41 51.1**	**-4.4**
ARE	**Arequipa**	**5.79**	**329**	*e*P	**Pn**	**11 40 48.0**	**-2.1**
ARE				*i* S	**Sn**	**11 41 51.1**	**-4.4**
AHML	**Horco Molle**	**5.97**	**153**	*e*P	**Pn**	**11 40 53.0**	**+0.8**
GO03	**Copiap**	**6.35**	**195**	*e*Pn	**Pn**	**11 40 54.8**	**-2.5**
GO03				*e*Sn	**Sn**	**11 42 06.8**	**-1.8**
VCA	**Vinchina**	**7.25**	**179**	*e*P	**Pn**	**11 41 09.0**	**-0.6**
VCA				IAML		11 42 35.7	
comp=Z,74nm,0.4s							
CYA	**Choya**	**7.33**	**162**	*e*P	**Pn**	**11 41 09.9**	**-0.6**
CYA				IAML		11 41 12.6	
comp=Z,22nm,0.6s							
LCO	**Las Campanas**	**7.82**	**195**	*e*Pn	**Pn**	**11 41 13.5**	**-3.9**
LCO				*e*Sn	**Sn**	**11 42 40.4**	**-4.1**
LCO	**Las Campanas**	**7.82**	**195**	*e*P	Pn	11 41 12.8	-4.5
LCO				*e*S	**Sn**	**11 42 39.1**	**-5.3**
AGUA	**GUANDACOL**	**8.00**	**181**	*e*P	**Pn**	**11 41 18.2**	**-1.4**
SIV	**San Ignacio**	**8.77**	**53**	P	**Pn**	**11 41 25.7**	**-4.4**
comp=Z,152nm,0.3s,baz=253,slow=13,SNR=1513							
SIV	**San Ignacio**	**8.77**	**53**⇓	*i*P	Pn	11 41 24.7	-5.4
GO04	**Tololo Observa**	**8.96**	**194**	*e*Pn	**Pn**	**11 41 28.8**	**-3.9**
GO04				*e*Sn	**Sn**	**11 43 06.3**	**-5.7**
AMOG	**MOGNA**	**9.45**	**181**	*e*P	**Pn**	**11 41 36.2**	**-2.9**
AMOG				*e*S	**Sn**	**11 43 19.5**	**-4.1**
RTLL	**Cerro Villicun**	**9.84**	**181**	*e*P	**Pn**	**11 41 41.2**	**-3.1**
RTLS	**Leoncito**	**10.34**	**185**	*e*P	**Pn**	**11 41 48.5**	**-2.8**
RTLS				*e*		11 41 48.5	
RTLS				IAML		11 44 26.6	
comp=Z,36nm,0.7s							
RTCV	**Cerro Valdivia**	**10.37**	**181**	*e*P	**Pn**	**11 41 48.3**	**-3.2**
TCA	**Tanti**	**10.40**	**162**	*e*P	**Pn**	**11 41 48.9**	**-3.1**
AUSP	**Uspallata**	**10.77**	**185**	*e*P	**Pn**	**11 41 54.0**	**-3.1**
ACAN	**Cantantal**	**10.83**	**175**	*e*P	**Pn**	**11 41 53.5**	**-4.1**
ASAL	**Salagasta**	**11.10**	**182**	*e*P	**Pn**	**11 41 59.1**	**-2.3**
MRA	**San Martin**	**11.17**	**168**	*e*P	**Pn**	**11 41 58.2**	**-4.1**
MRA				IAML		11 42 05.0	
comp=Z,18nm,0.4s							
CPUP	**Villa Florida**	**11.18**	**118**	P	**Pn**	**11 41 59.5**	**-2.9**
comp=Z,2.7nm,0.3s,baz=299,slow=12,SNR=31							
CPUP				LR	LR	11 47 25.5	
comp=Z,493nm,18.7s,baz=298,slow=43							
CPUP	**Villa Florida**	**11.18**	**118**	*e*Pn	**Pn**	**11 41 60.0**	**-2.4**
CPUP	**Villa Florida**	**11.18**	**118**	*e*P	**Pn**	**11 42 00.0**	**-2.4**
ARCO	**CERRO ARCO**	**11.36**	**183**	*e*P	**Pn**	**11 42 04.3**	**-0.5**
AAGR	**Agrelo**	**11.59**	**182**	*e*P	**Pn**	**11 42 05.2**	**-2.6**
ROC1	**El Roble**	**11.72**	**191**	*e*Pn	**Pn**	**11 42 10.8**	**+1.1**
AVIZ	**Vizcacheras**	**11.97**	**181**	*e*P	**Pn**	**11 42 09.8**	**-3.0**
NNA	**Nana**	**12.44**	**318**	P	**Pn**	**11 42 21.4**	**+2.3**
comp=Z,0.5nm,0.3s,baz=180,slow=11,SNR=3.7							
NNA	**Nana**	**12.44**	**318**	*e*Pn	**P**	**11 42 23.3**	**-2.5**
SAML	**Samuel**	**13.39**	**23**	*e*Pn	**Pn**	**11 42 27.7**	**-3.6**
GO05	**Hualaæ∅**	**13.87**	**192**	*e*Pn	**Pn**	**11 42 37.4**	**0.0**
ATAH	**Atahualpa**	**17.23**	**324**	P	**Pn**	**11 43 22.1**	**+2.4**
comp=Z,0.4nm,0.3s,baz=166,slow=15,SNR=6.0							
TRQA	**Tornquist**	**17.43**	**163**	*e*P	**P**	**11 43 18.8**	**-2.2**
comp=Z,86nm,0.6s							
PLCA	**Paso Flores**	**19.31**	**185**	P	**P**	**11 43 42.1**	**+0.6**
comp=Z,1.7nm,0.3s,baz=23,slow=12,SNR=53							
PLCA				LR	LR	11 51 53.1	

comp=Z,320nm,21.0s,baz=36,slow=38
PLCA Paso Flores 19.31 185 *eP* **P 11 43 42.2 +0.7**
comp=Z,86nm,0.9s
PLCA Paso Flores 19.31 185 *eP* **P 11 43 42.2 +0.7**
PLCA pmax pmax
comp=Z,87nm,0.9s
SPB Sao Paulo 19.43 100 *eP* **P 11 43 39.5 -3.5**
comp=Z,124nm,1.0s
PTGA Pitinga 22.16 23 P **P 11 44 08.7 -3.4**
comp=Z,30nm,0.3s,baz=202,slow=16,SNR=68
PTGA Pitinga 22.16 23 *eP* **P 11 44 08.0 -4.1**
comp=Z,45nm,0.8s
OTAV Otavalo 23.71 334 *eP* **P 11 44 28.9 +1.5**
comp=Z,25nm,1.2s
OTAV Otavalo 23.71 334 *eP* **P 11 44 27.6 +0.2**
OTAV Otavalo 23.71 334 P **P 11 44 28.9 +1.5**
OTAV pmax pmax
comp=Z,25nm,1.2s
FLOC Florencia 23.99 342 *eP* **P 11 44 28.2 -1.1**
SOTA Rioblanco 24.80 340 *eP* **P 11 44 38.2 +1.0**
PRAC Prado 25.82 345 *eP* **P 11 44 45.3 -0.7**
comp=Z,13nm,0.9s
CHRN Cochrane 25.96 187 *eP* **P 11 44 47.7 +0.8**
comp=Z,18nm,0.9s
HORQ Saladito 26.08 341 *eP* **P 11 44 47.6 -1.0**
CHIC Chingaza 26.45 348 *eP* **P 11 44 51.4 -0.8**
YOTC Yotoco, Valle 26.47 342 *eP* **P 11 44 53.6 +1.6**
ROSC El Rosal 26.78 347 P **P 11 44 55.0 0.0**
comp=Z,4.9nm,0.7s,baz=150,slow=20,SNR=4.0
ROSC El Rosal 26.78 347 *eP* **P 11 44 55.6 +0.6**
comp=Z,21nm,1.4s
RUSC La Rusia 27.57 350 *eP* **P 11 45 02.0 -0.3**
comp=Z,36nm,1.2s
RUSC La Rusia 27.57 350 *eP* **P 11 45 01.9 -0.3**
HELC Santa Helena 28.36 345 *eP* **P 11 45 07.7 -1.4**
comp=Z,30nm,0.6s
PTBC PUERTO BERRIO, 28.46 347 *eP* **P 11 45 06.5 -3.1**
ZARC Zaragoza, Cauc 29.47 347 *eP* **P 11 45 16.0 -2.5**
SDV Santo Domingo 30.23 356 P **P 11 45 23.9 -1.6**
comp=Z,6.8nm,0.6s,baz=171,slow=12,SNR=9.3
SDV Santo Domingo 30.23 356 *eP* **P 11 45 24.0 -1.4**
comp=Z,9.5nm,0.8s
EFI East Falkland 31.21 168 *eP* **P 11 45 33.9 +0.4**
comp=Z,142nm,1.7s
EFI East Falkland 31.21 168 *eP* **P 11 45 33.8 +0.4**
PCRV Puerto La Cruz 31.64 7 P **P 11 45 36.7 -1.0**
comp=Z,15nm,0.5s,baz=44,slow=2.0,SNR=11
PCRV LR LR 12 01 05.7
comp=Z,200nm,21.5s,baz=189,slow=41
GRGR Grenville 34.02 12 *eP* **P 11 45 57.6 -0.7**
comp=Z,223nm,1.1s
RCBR Riachuelo 35.03 68 P **P 11 46 05.4 -1.8**
comp=Z,58nm,0.9s,baz=222,slow=0.3,SNR=18
RCBR Riachuelo 35.03 68 *eP* **P 11 46 05.9 -1.3**
comp=Z,36nm,0.7s
SVB Belmont 35.20 12 *eP* **P 11 46 07.1 -1.5**
comp=Z,78nm,1.0s
SVB Belmont 35.20 12 *eP* **P 11 46 06.9 -1.6**
JTS JuntasAbangare 35.52 331 P **P 11 46 12.6 +1.4**
comp=Z,5.6nm,0.8s,baz=309,slow=4.8,SNR=5.6
ZAM Aeronautique 36.52 12 *eP* **P 11 46 18.1 -1.5**
MVM Montagne Vaucl 36.52 12 *eP* **P 11 46 18.0 -1.8**
LPMF Morne Lapointe 36.53 12 *eP* **P 11 46 18.2 -1.6**
FDF Fort de France 36.65 12 *eP* **P 11 46 19.4 -1.5**
comp=Z,253nm,1.5s
FDF Fort de France 36.65 12 *eP* **P 11 46 19.1 -1.8**
FDF Fort de France 36.65 12 *eP* **P 11 46 19.4 -1.5**
FDF pmax pmax
comp=Z,253nm,1.5s
PML Morne Lenard 36.69 12 *eP* **P 11 46 19.6 -1.6**
PCM Pelee Case Pet 36.72 12 *eP* **P 11 46 19.8 -1.6**
CXM Morne La Croix 36.72 12 *eP* **P 11 46 20.1 -1.5**
BAMF Morne Balai 36.73 12 *eP* **P 11 46 20.1 -1.5**
CRPR Cabo Rojo, PR 39.24 2 *eP* **P 11 46 40.5 -2.0**
comp=Z,107nm,1.2s
OBIP Obispado Ponce 39.29 3 *eP* **P 11 46 42.2 -0.8**
comp=Z,25nm,0.7s
SJG San Juan 39.38 3 P **P 11 46 40.9 -2.9**
comp=Z,23nm,0.6s,baz=106,slow=6.4,SNR=16
SJG San Juan 39.38 3 *eP* **P 11 46 40.8 -2.9**
comp=Z,27nm,0.7s
MTP Monte Pirata 39.40 4 *eP* **P 11 46 40.9 -3.0**
comp=Z,69nm,1.8s
HUMP Col San Antoni 39.43 4 *eP* **P 11 46 42.1 -2.0**
comp=Z,13nm,1.0s
MPR Mayaguez 39.44 2 *eP* **P 11 46 41.5 -2.7**
comp=Z,19nm,0.7s
CBYP Canovanas 39.56 4 *eP* **P 11 46 42.4 -2.9**
comp=Z,45nm,1.2s
AOPR Arecibo Observ 39.59 2 *eP* **P 11 46 42.7 -2.8**
comp=Z,77nm,1.4s
SMRT St. Maarten 39.60 8 *eP* **P 11 46 41.8 -3.7**
comp=Z,36nm,1.1s
AGP Aguadilla 39.63 2 *eP* **P 11 46 44.1 -1.7**
comp=Z,138nm,1.2s
STVI Saint Thomas 39.70 5 *eP* **P 11 46 44.1 -2.2**
comp=Z,13nm,0.9s
HOPE Hope Point 40.67 152 *eP* **P 11 46 55.7 +1.7**
comp=Z,101nm,1.2s
APG El Apazote 42.24 327 P **P 11 47 07.0 -0.4**
comp=Z,7.6nm,0.9s,baz=179,slow=4.1,SNR=9.1
CMIG Matias Romero 46.31 324 P **P 11 47 39.8 +0.2**
comp=Z,8.8nm,1.0s,baz=132,slow=5.6,SNR=9.9
061Z Ochoppi 48.59 345 P **P 11 47 57.5 +0.3**
baz=164
059Z Ave Maria 49.18 344 P **P 11 48 02.0 +0.4**
baz=164
059A Moore Haven 49.71 345 P **P 11 48 05.8 +0.2**
baz=164
058A Arcadia 49.95 344 P **P 11 48 07.7 +0.2**
baz=163,SNR=8.2
958A Wauchula 50.45 345 P **P 11 48 12.0 +0.8**
baz=163
957A Wimauma 50.65 344 P **P 11 48 13.1 +0.4**
baz=163,SNR=8.2
859A Kempfer Cattle 50.70 346 P **P 11 48 13.4 +0.4**
baz=164
DWPF Disney Wildern 50.87 345 P **P 11 48 14.5 +0.2**
baz=164
DWPF Disney Wildern 50.87 345 *eP* **P 11 48 14.3 -0.1**
comp=Z,44nm,0.8s
857A Zephyrhills 51.22 344 P **P 11 48 17.0 +0.1**
baz=163
758A Lake Helen 51.63 346 P **P 11 48 20.5 +0.4**
baz=164
757A Oxford 51.82 345 P **P 11 48 21.7 +0.3**
baz=163
MOIG Morelia 51.99 320 *eP* **P 11 48 25.0 +1.9**
comp=Z,33nm,0.9s
656A Willston 52.35 344 P **P 11 48 25.6 +0.3**
baz=163,SNR=5.2
657A Interlachen 52.39 345 P **P 11 48 26.0 +0.4**
baz=164
557A Orange Park 52.77 345 P **P 11 48 28.6 +0.2**
baz=164,SNR=5.2
556A Lake Butler 52.92 345 P **P 11 48 29.6 +0.1**
baz=163
555A McAlpin 53.17 344 P **P 11 48 31.5 +0.2**
baz=163
554A Perry 53.33 343 P **P 11 48 32.8 +0.3**
baz=162
456A Hilliard 53.52 345 P **P 11 48 34.4 +0.5**
baz=164
553A Crawfordville 53.63 343 P **P 11 48 35.3 +0.6**
baz=161,SNR=5.8
455A Stateville 53.78 344 P **P 11 48 36.0 +0.2**
baz=163
552A Lynn Haven 53.82 342 P **P 11 48 36.3 +0.2**
baz=160
454A Quitman 53.91 344 P **P 11 48 36.9 +0.1**
baz=162,SNR=5.6
356A Blackshear 54.12 345 P **P 11 48 38.2 0.0**
baz=164
453A Whigham 54.23 343 P **P 11 48 39.3 +0.3**
baz=161,SNR=7.8
355A Pearson 54.31 345 P **P 11 48 39.6 0.0**
baz=163
451A Vernon 54.41 342 P **P 11 48 40.3 -0.1**
baz=160
452A Marianna 54.46 342 P **P 11 48 40.5 -0.2**
baz=160
257A Skidaway Islan 54.50 347 P **P 11 48 41.2 +0.3**
baz=165
TIGA Tifton 54.59 344 P **P 11 48 41.4 -0.3**
baz=162
TIGA Tifton 54.59 344 *eP* **P 11 48 41.3 -0.3**
comp=Z,29nm,0.8s
353A Camilla 54.66 343 P **P 11 48 42.1 -0.1**
baz=162,SNR=11
256A Glennville 54.69 346 P **P 11 48 42.2 -0.1**
baz=164
255A Hazlehurst 54.78 345 P **P 11 48 42.7 -0.3**
baz=164
351A Pinckard 54.98 342 P **P 11 48 44.1 -0.4**
baz=160,SNR=7.1
352A Blakely 54.98 343 P **P 11 48 44.1 -0.4**
baz=161,SNR=10
LNIG Linares 55.11 325 *eP* **P 11 48 44.7 -0.9**
ZAIG Zacatecas 55.18 321 *eP* **P 11 48 47.8 +1.3**
comp=Z,29nm,1.0s
RGRS Roger Stewart 55.23 348 *eP* **P 11 48 46.5 +0.3**
comp=Z,694nm,0.5s
BRAL Brewton 55.32 340 P **P 11 48 46.7 -0.2**
baz=158,SNR=5.9
BRAL Brewton 55.32 340 *eP* **P 11 48 47.0 +0.2**
comp=Z,77nm,1.0s
350A Dozier 55.33 341 P **P 11 48 46.8 -0.2**
baz=159
252A Lumpkin 55.42 343 P **P 11 48 47.2 -0.4**
baz=161
NHSC New Hope 55.42 348 P **P 11 48 48.0 +0.4**
baz=166
NHSC New Hope 55.42 348 *eP* **P 11 48 47.6 0.0**
comp=Z,81nm,0.9s
155A Kite 55.44 346 P **P 11 48 47.5 -0.2**
baz=164
447A Lucedale 55.49 339 P **P 11 48 48.1 -0.1**
baz=157
349A Repton 55.53 340 P **P 11 48 48.4 0.0**
baz=158,SNR=8.7
154A Montrose 55.59 345 P **P 11 48 48.3 -0.4**
baz=163,SNR=5.5
251A Midway 55.70 342 P **P 11 48 48.8 -0.8**
baz=160,SNR=16
348A Jackson 55.81 340 P **P 11 48 50.0 -0.5**
baz=158
250A Grady 55.83 342 P **P 11 48 49.9 -0.7**
baz=159,SNR=6.1
Z55A Blythe 55.94 346 P **P 11 48 51.5 +0.2**
baz=164
347A Saraland 56.01 339 P **P 11 48 51.6 -0.2**
baz=157,SNR=7.6
152A Waverly Hall 56.05 343 P **P 11 48 51.3 -0.8**
baz=161,SNR=7.8
151A Opelika 56.08 343 P **P 11 48 51.6 -0.8**
baz=161,SNR=6.9
249A Camden 56.09 341 P **P 11 48 51.9 -0.5**
baz=158
Z54A Sparta 56.12 345 P **P 11 48 52.2 -0.4**
baz=163,SNR=5.6
Z53A Monticello 56.34 345 P **P 11 48 53.5 -0.6**
baz=163
150A Eclectic 56.35 342 P **P 11 48 53.6 -0.6**
baz=160,SNR=12
248A Dixon Mills 56.39 340 P **P 11 48 53.6 -1.0**
baz=158,SNR=7.1
GOGA Godfrey 56.44 345 P **P 11 48 54.0 -0.8**
baz=163
GOGA Godfrey 56.44 345 *eP* **P 11 48 53.9 -0.9**
comp=Z,10nm,0.9s
GOGA Godfrey 56.44 345 *eP* **P 11 48 53.9 -0.9**
GOGA pmax pmax
comp=Z,10.0nm,0.9s
Z52A Williamson 56.46 344 P **P 11 48 54.5 -0.6**
baz=162,SNR=7.0
149A Jones 56.57 341 P **P 11 48 55.0 -0.8**
baz=159,SNR=8.6
247A Quitman 56.63 339 P **P 11 48 55.9 -0.4**
baz=157,SNR=5.6
Y54A Tignall 56.68 346 P **P 11 48 55.8 -0.7**
baz=164,SNR=9.3
JSC Jenkinsville 56.77 347 *eP* **P 11 48 57.2 0.0**
comp=Z,17nm,0.8s
JSC Jenkinsville 56.77 347 *eP* **P 11 48 57.2 0.0**
JSC pmax pmax
comp=Z,17nm,0.8s
148A Greensboro 56.85 341 P **P 11 48 57.1 -0.6**
baz=158
Y53A Monroe 56.89 345 P **P 11 48 57.1 -0.9**
baz=163,SNR=5.2
Z50A Ashland 56.93 342 P **P 11 48 57.6 -0.8**
baz=160,SNR=23
Y52A Lilburn 57.01 344 P **P 11 48 58.3 -0.6**
baz=162,SNR=6.2
LRAL Lakeview Retre 57.04 341 P **P 11 48 58.4 -0.7**
baz=159,SNR=11
LRAL Lakeview Retre 57.04 341 *eP* **P 11 48 58.0 -1.0**
comp=Z,17nm,0.9s
Z49A Columbiana 57.05 342 P **P 11 48 58.4 -0.8**
baz=159,SNR=14
147A Livingston 57.09 340 P **P 11 48 59.0 -0.5**
baz=158
Y51A Rockmart 57.30 343 P **P 11 49 00.1 -0.9**
baz=161,SNR=15
244A Avery, Jackson 57.34 337 P **P 11 49 01.0 -0.2**
baz=155
342A Flagon Creek P 57.34 336 P **P 11 49 01.9 +0.6**
baz=153,SNR=7.9
PAULI Pauline 57.41 347 *eP* **P 11 49 01.8 +0.1**
comp=Z,35nm,1.7s
X53A Estanollee 57.44 345 P **P 11 49 01.6 -0.3**
baz=163,SNR=5.3
243A Waterproof 57.48 337 P **P 11 49 02.8 +0.6**
baz=154
Y50A Piedmont 57.48 343 P **P 11 49 01.2 -1.0**
baz=160,SNR=7.9
Z47A Carrollton 57.52 340 P **P 11 49 01.2 -1.2**
baz=158,SNR=8.7
Z48A Northport 57.52 341 P **P 11 49 01.6 -0.9**
baz=158,SNR=14
HKT Hockley 57.55 332 *eP* **P 11 49 03.4 +0.7**
comp=Z,21nm,1.1s
HKT Hockley 57.55 332 *eP* **P 11 49 03.4 +0.7**
HKT pmax pmax
comp=Z,21nm,1.1s
145A Houston Renfro 57.58 338 P **P 11 49 02.6 -0.3**
baz=156
KMSC Kings Mountain 57.62 347 P **P 11 49 03.1 -0.1**
baz=165,SNR=8.6
KMSC Kings Mountain 57.62 347 *eP* **P 11 49 03.2 +0.1**
341A Kurthwood 57.64 335 P **P 11 49 03.7 +0.3**
baz=152,SNR=6.5
341A Kurthwood 57.64 335 *eP* **P 11 49 04.2 +0.9**
comp=Z,72nm,1.3s
Y49A Blount Mountai 57.64 342 P **P 11 49 02.5 -0.8**
baz=160,SNR=8.7
X52A Dahlonega 57.67 345 P **P 11 49 03.1 -0.5**
baz=162,SNR=7.4
144A Alexander Plac 57.77 338 P **P 11 49 04.4 +0.2**
baz=155
Z46A Louisville 57.79 340 P **P 11 49 04.2 -0.2**
baz=157
BG3 Lake Jocassee 57.82 346 *eP* **P 11 49 04.7 +0.1**
comp=Z,15nm,0.9s
833A Chaparral WMA, 57.86 328 P **P 11 49 05.1 +0.2**
baz=145,SNR=11
X51A Calhoun 57.88 344 P **P 11 49 04.0 -1.0**
baz=162,SNR=12
Y48A Jasper 57.91 342 P **P 11 49 04.0 -1.2**
baz=159,SNR=7.9
X50B Fort Payne 57.99 343 P **P 11 49 04.8 -1.0**
baz=161,SNR=14
W53A Cullowhee 58.04 346 P **P 11 49 06.0 -0.2**
baz=163,SNR=19
Y47A UCPARC, Winfie 58.10 341 P **P 11 49 05.7 -0.8**
baz=158,SNR=19
241A Mo Tay, Goldon 58.15 335 P **P 11 49 07.4 +0.5**
baz=153,SNR=14
W52A Murphy 58.15 345 P **P 11 49 06.7 -0.2**
baz=163,SNR=6.5
Z45A Winona 58.20 339 P **P 11 49 07.2 0.0**
baz=156
X49A Woodville 58.23 343 P **P 11 49 06.3 -1.1**
baz=160,SNR=12
Z44A Pea Ridge, Bel 58.37 338 P **P 11 49 08.1 -0.3**
baz=155
X48A Hartselle 58.37 342 P **P 11 49 07.4 -1.0**
baz=159,SNR=31
Y46A Houston 58.40 340 P **P 11 49 07.4 -1.2**
baz=157,SNR=7.1
V53A Saluda 58.44 346 P **P 11 49 08.6 -0.4**
baz=164,SNR=10.0
240A Hunter Patters 58.49 335 P **P 11 49 10.2 +0.9**
baz=152,SNR=6.3
240A Hunter Patters 58.49 335 *eP* **P 11 49 10.5 +1.2**
comp=Z,76nm,0.9s
W50A Signal Mountai 58.60 344 P **P 11 49 09.3 -0.7**
baz=161,SNR=22
Y45A Yeager Farm, C 58.60 339 P **P 11 49 09.4 -0.6**
baz=156,SNR=6.8
NATX Nacogdoches 58.61 334 P **P 11 49 10.7 +0.6**
baz=151,SNR=8.4
NATX Nacogdoches 58.61 334 *eP* **P 11 49 10.9 +0.7**
comp=Z,60nm,0.9s
CPCT Cooper Cave 58.64 345 *eP* **P 11 49 09.5 -0.7**
comp=Z,27nm,1.0s
141A Papa Simpson, 58.66 336 P **P 11 49 10.9 +0.5**
baz=153,SNR=8.4
X47A Russelville 58.67 341 P **P 11 49 09.4 -1.2**
baz=158,SNR=19
W49A Belvidere 58.78 343 P **P 11 49 10.2 -1.0**
baz=160,SNR=7.3
SWET Sewanee 58.78 343 *eP* **P 11 49 10.6 -0.7**
comp=Z,46nm,0.8s
V52A Sevierville 58.79 346 P **P 11 49 10.3 -1.0**
baz=163,SNR=15
Y44A Strider, Charl 58.91 339 P **P 11 49 11.1 -1.1**
baz=156,SNR=5.3
V51A Loudon 58.93 345 P **P 11 49 11.4 -0.9**
baz=162,SNR=10
X46A Booneville 58.93 341 P **P 11 49 11.0 -1.3**
baz=158,SNR=10.0
140A Cam and Jess, 58.95 335 P **P 11 49 13.2 +0.8**
baz=152,SNR=6.8
140A Cam and Jess, 58.95 335 *eP* **P 11 49 13.6 +1.2**
comp=Z,84nm,0.9s
W48A Pulaski 58.98 342 P **P 11 49 11.8 -0.8**
baz=159,SNR=22
V50A Pikevile 58.99 344 P **P 11 49 11.9 -0.8**
baz=161,SNR=34
435B Jarrell 59.05 331 P **P 11 49 13.3 +0.1**
baz=148
435B Jarrell 59.05 331 *eP* **P 11 49 13.5 +0.3**
comp=Z,15nm,0.8s
X45A UM Field Stati 59.07 340 P **P 11 49 11.9 -1.3**
baz=157,SNR=13
Y43A Makayla and Ka 59.11 338 P **P 11 49 13.2 -0.4**
baz=155
OXF Oxford 59.15 340 P **P 11 49 12.3 -1.5**
baz=157,SNR=16
OXF Oxford 59.15 340 *eP* **P 11 49 12.6 -1.2**
comp=Z,70nm,0.9s
OXF Oxford 59.15 340 *eP* **P 11 49 12.6 -1.2**
OXF pmax pmax
comp=Z,70nm,0.9s
PLAL Pickwick Lake 59.17 341 *eP* **P 11 49 12.8 -1.1**
comp=Z,31nm,0.9s
W47A Westpoint 59.28 342 P **P 11 49 13.3 -1.3**
baz=159,SNR=20
V49A McMinnville 59.29 343 P **P 11 49 13.6 -1.2**
baz=161,SNR=34
Y42A Garnett, Star 59.35 337 P **P 11 49 14.7 -0.4**
baz=154
X44A Crenshaw 59.38 339 P **P 11 49 14.4 -1.0**
baz=156
W46A Michie 59.40 341 P **P 11 49 14.1 -1.5**
baz=158
Z40A Long Farm, Mag 59.43 336 P **P 11 49 16.5 +0.8**
baz=152,SNR=22
TZTN Tazewell 59.45 346 P **P 11 49 14.8 -1.0**
baz=163,SNR=5.8
TZTN Tazewell 59.45 346 *eP* **P 11 49 15.2 -0.6**
comp=Z,18nm,0.9s
BLA Blacksburg 59.45 349 P **P 11 49 16.0 +0.1**
baz=167
BLA Blacksburg 59.45 349 *eP* **P 11 49 16.3 +0.4**
comp=Z,23nm,1.1s
BLA Blacksburg 59.45 349 *eP* **P 11 49 16.3 +0.4**
BLA pmax pmax
comp=Z,23nm,1.1s
V48A Smith Brothers 59.52 343 P **P 11 49 15.3 -1.0**
baz=160,SNR=25
X43A Marvell 59.65 338 P **P 11 49 16.7 -0.5**
baz=155,SNR=7.8
X43A Marvell 59.65 338 *eP* **P 11 49 17.2 0.0**
comp=Z,77nm,0.9s
W45A Hickory Valley 59.67 340 P **P 11 49 16.1 -1.2**
baz=157,SNR=16
Y41A Eaglette Beard 59.69 337 P **P 11 49 17.3 -0.2**
baz=153,SNR=13
IP07 Quail 59.76 351 *eP* **P 11 49 18.2 +0.3**
comp=Z,38nm,1.8s
V47A Nunnelly 59.80 342 P **P 11 49 16.8 -1.4**
baz=159,SNR=12
JCT Junction City 59.84 329 P **P 11 49 18.3 -0.3**
baz=146,SNR=9.1
JCT Junction City 59.84 329 *eP* **P 11 49 19.7 +1.0**
comp=Z,20nm,0.8s
JCT Junction City 59.84 329 *eP* **P 11 49 19.7 +1.0**
JCT pmax pmax
comp=Z,20nm,0.8s
SPRD Spring Road, M 59.84 351 *eP* **P 11 49 18.7 +0.2**
comp=Z,13nm,1.2s
IP03 Louisa 59.85 351 *eP* **P 11 49 19.0 +0.5**
comp=Z,10.0nm,0.8s
T52A Hallie 59.86 346 P **P 11 49 17.8 -0.9**
baz=164,SNR=6.5
V46A Holladay 59.95 341 P **P 11 49 17.3 -1.9**
baz=158,SNR=9.6
VNA3 Neumayer Olymp 59.95 161 P **P 11 49 20.0 +1.2**
U49A Red Boiling Sp 59.96 344 P **P 11 49 18.3 -1.0**
baz=161,SNR=15
WHTX Lake Whitney, 60.01 331 P **P 11 49 19.5 -0.2**
baz=148,SNR=5.4
WHTX Lake Whitney, 60.01 331 *eP* **P 11 49 20.0 +0.3**
comp=Z,31nm,0.8s
Y40A Okolona 60.05 336 P **P 11 49 20.0 0.0**
baz=153,SNR=11
V45A Humboldt 60.14 341 P **P 11 49 19.3 -1.3**
baz=158,SNR=14
VNA1 Neumayer--Stat 60.15 161 P **P 11 49 21.9 +1.7**
U48A Cassie Pea, Po 60.16 343 P **P 11 49 19.8 -0.9**
baz=160,SNR=14
HPIG 60.17 321 *eP* **P 11 49 22.4 +1.2**
comp=Z,23nm,1.2s
WVT Waverly 60.17 342 P **P 11 49 19.2 -1.5**
baz=159
WVT Waverly 60.17 342 *eP* **P 11 49 19.9 -0.8**
comp=Z,49nm,0.7s
WVT Waverly 60.17 342 *eP* **P 11 49 19.9 -0.8**
WVT pmax pmax
comp=Z,49nm,0.7s
X41A Kaden, Bauxite 60.20 337 P **P 11 49 20.1 -0.8**
baz=154,SNR=9.6
T50A Nancy 60.21 345 P **P 11 49 19.9 -1.1**
baz=162,SNR=17
U47A Clarksville 60.30 342 P **P 11 49 20.6 -1.1**
baz=159,SNR=24
X40A Basin Creek Fa 60.31 337 P **P 11 49 21.2 -0.6**
baz=153
X40A Basin Creek Fa 60.31 337 *eP* **P 11 49 22.0 +0.2**
comp=Z,20nm,1.8s
S52A Salyersville 60.43 347 P **P 11 49 21.6 -1.0**
baz=164
SLBS Sierra La Lagu 60.44 316 *eP* **P 11 49 22.4 -0.5**
comp=Z,24nm,0.8s
T49A Edmonton 60.46 344 P **P 11 49 21.7 -1.0**
baz=161,SNR=35
U46A Springville 60.48 342 P **P 11 49 21.7 -1.2**
baz=158,SNR=8.9
S51A Beattyville 60.51 346 P **P 11 49 22.3 -0.7**
baz=163,SNR=7.2
W42A Bald Knob 60.55 338 P **P 11 49 22.6 -0.7**
baz=155
MIAR Mount Ida 60.64 336 P **P 11 49 23.6 -0.4**
baz=153,SNR=21
MIAR Mount Ida 60.64 336 *eP* **P 11 49 23.6 -0.4**
comp=Z,33nm,0.8s
MIAR Mount Ida 60.64 336 *eP* **P 11 49 23.6 -0.4**
MIAR pmax pmax
comp=Z,33nm,0.8s
U45A Rockin P Farm, 60.65 341 P **P 11 49 23.1 -0.8**
baz=158,SNR=10
UTMT University of 60.67 341 *eP* **P 11 49 23.8 -0.4**
comp=Z,107nm,0.9s
GNAR Gosnell 60.68 340 *eP* **P 11 49 24.2 0.0**
comp=Z,68nm,0.7s
T48A Bowling Green 60.69 343 P **P 11 49 23.2 -1.1**
baz=160,SNR=15
V43A Jonesboro 60.69 339 P **P 11 49 23.6 -0.7**
baz=156
W41B Gary Mavity, V 60.72 338 P **P 11 49 23.8 -0.7**
baz=154,SNR=14

W41B **Gary Mavity, V** 60.72 338 *e*P P 11 49 24.0 -0.5
comp=Z,25nm,1.0s
GLAT **Glass** 60.73 341 *e*P P 11 49 24.0 -0.5
comp=Z,114nm,1.2s
T47A **Sharon Grove** 60.76 343 P P 11 49 23.8 -0.9
baz=160,SNR=30
X39A **Fountain Ranch** 60.81 336 P P 11 49 25.2 0.0
baz=152
U44B **Burton Farm, H** 60.82 341 P P 11 49 24.4 -0.7
baz=157
WHAR **Wooly Hollow** 60.84 338 *e*P P 11 49 24.8 -0.5
comp=Z,24nm,0.9s
TXAR **Lajitas Array** 60.90 325 P P 11 49 25.8 -0.2
comp=Z,1.9nm,0.6s,baz=151,slow=8.8,SNR=34
TX31 **Lajitas Ar. Si** 60.90 325 *e*P P 11 49 25.9 -0.1
V42A **Cord** 60.99 339 P P 11 49 24.9 -1.4
baz=155,SNR=7.3
PVMO **Portageville** 60.99 340 *e*P P 11 49 26.3 0.0
comp=Z,260nm,0.3s
W40A **Ferguson Farm,** 61.03 337 P P 11 49 26.6 0.0
baz=153,SNR=21
W40A **Ferguson Farm,** 61.03 337 *e*P P 11 49 27.2 +0.6
comp=Z,67nm,1.0s
T46A **Princeton** 61.03 342 P P 11 49 25.4 -1.2
baz=159,SNR=28
U44A **Portageville** 61.07 340 P P 11 49 26.3 -0.6
baz=157
S48A **Wiedeman Farm,** 61.12 344 P P 11 49 25.4 -1.7
baz=161,SNR=22
U43A **Rector** 61.18 340 P P 11 49 26.6 -0.9
baz=156,SNR=6.1
T45A **Paducah** 61.23 342 P P 11 49 27.0 -0.9
baz=158,SNR=9.6
V41A **Mountainview** 61.23 338 P P 11 49 27.4 -0.6
baz=154,SNR=27
PARMO **Parma** 61.24 340 *e*P P 11 49 27.9 0.0
comp=Z,71nm,0.7s
W39A **Magazine** 61.30 336 P P 11 49 27.9 -0.5
baz=153,SNR=34
W39A **Magazine** 61.30 336 *e*P P 11 49 28.9 +0.5
comp=Z,49nm,0.9s
U42A **Revenden** 61.43 339 P P 11 49 28.2 -1.1
baz=155,SNR=18
V40A **Witts Springs** 61.49 337 P P 11 49 28.8 -0.9
baz=154,SNR=13
V40A **Witts Springs** 61.49 337 *e*P P 11 49 28.8 -0.9
comp=Z,21nm,0.9s
ABTX **Abilene, Hawle** 61.54 330 P P 11 49 30.0 -0.2
baz=146,SNR=9.4
ABTX **Abilene, Hawle** 61.54 330 *e*P P 11 49 30.3 +0.1
comp=Z,31nm,1.1s
PBMO **Poplar Bluff** 61.56 340 *e*P P 11 49 29.2 -0.9
comp=Z,36nm,0.8s
T44A **Benton** 61.58 341 P P 11 49 29.5 -0.8
baz=157
S46A **Don Dixon Farm** 61.59 343 P P 11 49 29.0 -1.2
baz=159,SNR=9.8
U41A **Viola** 61.66 338 P P 11 49 29.8 -1.1
baz=155,SNR=24
WCI **Wyandotte Cave** 61.72 344 P P 11 49 29.7 -1.5
baz=161
WCI **Wyandotte Cave** 61.72 344 *e*P P 11 49 30.0 -1.2
comp=Z,34nm,0.7s
WCI **Wyandotte Cave** 61.72 344 *e*P P 11 49 30.0 -1.2
WCI pmax pmax
comp=Z,34nm,0.7s
MCWV **Mont Chateau** 61.74 350 P P 11 49 31.1 -0.2
baz=168,SNR=6.8
MCWV **Mont Chateau** 61.74 350 *e*P P 11 49 31.6 +0.4
comp=Z,17nm,0.7s
R48A **Northridge Ran** 61.77 344 P P 11 49 30.3 -1.2
baz=161,SNR=7.5
T43A **Greenville** 61.79 340 P P 11 49 30.4 -1.3
baz=156,SNR=27
V39A **Pettigrew** 61.81 337 P P 11 49 31.5 -0.5
baz=153,SNR=44
S45A **Carrier Mills** 61.82 342 P P 11 49 30.7 -1.2
baz=158,SNR=10
USIN **University of** 61.83 343 *e*P P 11 49 30.7 -1.3
comp=Z,42nm,1.0s
R47A **Wooly Knot Far** 61.84 344 P P 11 49 30.5 -1.4
baz=160,SNR=16
U40A **Yellville** 61.99 338 P P 11 49 32.1 -1.0
baz=154,SNR=18
T42A **Van Buren** 62.00 339 P P 11 49 31.9 -1.2
baz=156,SNR=14
S44A **Carbondale** 62.04 341 P P 11 49 32.4 -0.9
baz=158,SNR=8.0
O56A **Blue Knob Stat** 62.14 351 P P 11 49 33.5 -0.5
baz=169
SNAA **Sanae** 62.15 161 P P 11 49 34.8 +1.0
SNAA **Sanae** 62.15 161 P P 11 49 34.4 +0.6
comp=Z,34nm,0.8s,baz=281,slow=5.6,SNR=107
SNAA **Sanae** 62.15 161 *e*P P 11 49 34.7 +0.9
comp=Z,44nm,0.8s
SNAA **Sanae** 62.15 161 *d i*P P 11 49 34.2 +0.4
S43A **Fulton Ridge,** 62.17 341 P P 11 49 33.1 -1.1
baz=157,SNR=29
T41A **Mountain View** 62.24 339 P P 11 49 33.5 -1.2
baz=155,SNR=12
U39A **Green Forest** 62.24 337 P P 11 49 33.9 -0.9
baz=153,SNR=23
R45A **Skylar, Fairfi** 62.31 342 P P 11 49 33.6 -1.5
baz=159,SNR=23
Q47A **Bedord North L** 62.42 344 P P 11 49 34.7 -1.1
baz=161,SNR=12
R44A **Waltonville** 62.50 342 P P 11 49 35.1 -1.3
baz=158,SNR=7.0
S42A **Caledonia** 62.58 340 P P 11 49 35.8 -1.1
baz=156,SNR=17
T40A **Mansfield** 62.59 338 P P 11 49 35.9 -1.1
baz=154,SNR=14
FVM **French Village** 62.66 340 *e*P P 11 49 36.6 -0.8
comp=Z,68nm,0.7s
FVM **French Village** 62.66 340 *e*P P 11 49 36.7 -0.8
FVM pmax pmax
comp=Z,68nm,0.7s
BLO **Bloomington** 62.66 344 *e*P P 11 49 36.5 -1.0
comp=Z,37nm,0.6s
BLO **Bloomington** 62.66 344 *e*P P 11 49 36.5 -1.0
BLO pmax pmax
comp=Z,37nm,0.6s
OLIL **Olney** 62.67 343 *e*P P 11 49 36.3 -1.2
comp=Z,23nm,0.8s
TUL1 **Leonard** 62.69 335 P P 11 49 37.2 -0.5
baz=151,SNR=8.8
TUL1 **Leonard** 62.69 335 *e*P P 11 49 37.8 0.0
comp=Z,29nm,1.0s
S41A **Jillco Farms,** 62.73 339 P P 11 49 37.0 -0.9
baz=155,SNR=27
T39A **Clever** 62.78 338 P P 11 49 37.4 -0.9
baz=153,SNR=18
R43A **Red Bud** 62.78 341 P P 11 49 37.0 -1.3
baz=157,SNR=9.0
Q45A **Warren Harvey,** 62.84 343 P P 11 49 36.9 -1.7
baz=159,SNR=14
ACSO **Alum Creek Sta** 62.87 347 P P 11 49 37.8 -1.0
baz=164,SNR=8.8
ACSO **Alum Creek Sta** 62.87 347 *e*P P 11 49 38.2 -0.6
comp=Z,35nm,0.9s
P47A **Martinsville** 62.90 344 P P 11 49 37.5 -1.5
baz=161,SNR=14
WMOK **Wichita Mounta** 62.92 332 P P 11 49 38.4 -0.9
baz=148,SNR=6.3
WMOK **Wichita Mounta** 62.92 332 *e*P P 11 49 38.6 -0.7
comp=Z,11nm,1.4s
WMOK **Wichita Mounta** 62.92 332 *e*P P 11 49 38.6 -0.7
WMOK pmax pmax
comp=Z,11nm,1.4s
CCM **Cathedral Cave** 62.99 340 P P 11 49 38.6 -1.0
baz=156
CCM **Cathedral Cave** 62.99 340 *e*P P 11 49 38.6 -1.0
comp=Z,48nm,0.8s
CCM **Cathedral Cave** 62.99 340 *e*P P 11 49 38.6 -1.0
CCM pmax pmax
comp=Z,48nm,0.8s
S40A **Lebanon** 62.99 339 P P 11 49 38.8 -0.9
baz=154,SNR=22
N54A **Moraine State** 63.03 350 P P 11 49 40.0 +0.1
baz=168
R42A **Luebbering** 63.05 340 P P 11 49 39.0 -1.0
baz=156,SNR=22
Q44A **Meyer Farm, Va** 63.09 342 P P 11 49 38.8 -1.5
baz=158,SNR=11
T38A **Diamond** 63.12 337 P P 11 49 39.9 -0.7
baz=153,SNR=26
SLM **Saint Louis** 63.20 341 *e*P P 11 49 40.4 -0.6
comp=Z,18nm,0.6s
SLM **Saint Louis** 63.20 341 *e*P P 11 49 40.4 -0.6
SLM pmax pmax
comp=Z,18nm,0.6s
R41A **Rosebud** 63.25 340 P P 11 49 40.4 -1.0
baz=156,SNR=33
P46A **Rosedale** 63.26 344 P P 11 49 39.8 -1.6
baz=160,SNR=6.7
P45A **Graceland, Par** 63.32 343 P P 11 49 40.1 -1.6
baz=160,SNR=14
Q43A **New Douglas** 63.32 341 P P 11 49 40.6 -1.2
baz=157
S39A **Bolivar** 63.35 338 P P 11 49 41.4 -0.7
baz=154,SNR=41
P44A **Sand Creek, Wi** 63.50 343 P P 11 49 41.7 -1.3
baz=159,SNR=5.8
S38A **Stockton** 63.51 337 P P 11 49 42.3 -0.8
baz=153,SNR=18
M54A **Oil Creek Stat** 63.52 351 P P 11 49 42.7 -0.4
baz=168
M54A **Oil Creek Stat** 63.52 351 *e*P P 11 49 43.2 +0.1
comp=Z,19nm,0.9s
R40A **Maddies Statio** 63.54 339 P P 11 49 42.3 -0.9
baz=155,SNR=24
Q42A **Golden Eagle** 63.55 341 P P 11 49 42.4 -0.9
baz=157,SNR=7.9
O47A **Sheridan** 63.58 345 P P 11 49 41.8 -1.8
baz=161,SNR=9.3
MNTX **Cornudas Mount** 63.66 325 P P 11 49 43.6 -0.7
baz=141,SNR=20
MNTX **Cornudas Mount** 63.66 325 *e*P P 11 49 44.3 0.0
comp=Z,12nm,1.0s
BINY **Binghamton** 63.73 354 P P 11 49 44.3 -0.1
baz=172
ALLY **Alegheny Colle** 63.73 350 *e*P P 11 49 44.4 -0.1
comp=Z,24nm,0.9s
Q41A **Truxton** 63.80 340 P P 11 49 43.9 -1.1
baz=156,SNR=22
R39A **Chumby, Stover** 63.81 339 P P 11 49 44.4 -0.7
baz=154,SNR=18
P43A **Skaggs, Pawnee** 63.92 342 P P 11 49 44.4 -1.3
baz=158,SNR=5.7
SFIN **Lafayette** 63.95 344 P P 11 49 44.0 -1.9
baz=160,SNR=5.9
SFIN **Lafayette** 63.95 344 *e*P P 11 49 44.3 -1.6
comp=Z,26nm,0.9s
O45A **Potomac** 63.99 344 P P 11 49 44.4 -1.8
baz=160,SNR=6.2
R38A **Fenwick Farm,** 64.00 338 P P 11 49 45.6 -0.8
baz=153,SNR=33
O44A **Mansfield** 64.10 343 P P 11 49 44.9 -2.0
baz=159
P42A **Winchester** 64.11 341 P P 11 49 45.3 -1.6
baz=157,SNR=8.8
Q40A **Laux Farm, Aux** 64.11 340 P P 11 49 46.4 -0.6
baz=155,SNR=8.3
MSTX **Muleshoe** 64.13 329 P P 11 49 46.9 -0.5
baz=144,SNR=20
MSTX **Muleshoe** 64.13 329 *e*P P 11 49 47.3 -0.1
comp=Z,46nm,1.0s
ERPA **Erie** 64.16 350 P P 11 49 46.8 -0.5
baz=168
EPT **El Paso** 64.32 324 *e*P P 11 49 48.6 -0.1
comp=Z,15nm,1.1s
N46A **Monticello** 64.34 345 P P 11 49 47.0 -1.5
baz=161,SNR=5.1
AMTX **Amarillo** 64.36 330 P P 11 49 48.4 -0.4
baz=145
AMTX **Amarillo** 64.36 330 *e*P P 11 49 48.6 -0.2
comp=Z,18nm,1.2s
P41A **Barry, Barry** 64.41 341 P P 11 49 47.5 -1.4
baz=156,SNR=9.7
Q39A **Willow Grove F** 64.45 339 P P 11 49 48.3 -0.9
baz=154,SNR=9.6
O43A **Sugar Creek Fa** 64.46 342 P P 11 49 47.6 -1.6
baz=158,SNR=5.6
N45A **Kentland** 64.50 344 P P 11 49 47.8 -1.7
baz=160
P40A **Paris** 64.59 340 P P 11 49 49.2 -0.9
baz=155,SNR=16
O42A **Bath** 64.59 342 P P 11 49 49.0 -1.2
baz=157
Q38A **Cooks Store, C** 64.59 338 P P 11 49 49.9 -0.3
baz=154,SNR=25
N44A **Piper City** 64.61 343 P P 11 49 48.8 -1.4
baz=159
HDIL **Hopedale** 64.70 342 P P 11 49 49.6 -1.3
baz=158,SNR=7.0
HDIL **Hopedale** 64.70 342 *e*P P 11 49 49.7 -1.1
comp=Z,24nm,0.8s
M46A **Old House Fiel** 64.74 345 P P 11 49 49.5 -1.5
baz=161
O41A **Passleys Farm,** 64.76 341 P P 11 49 49.7 -1.5
baz=156,SNR=7.4
P39B **Salisbury** 64.78 339 P P 11 49 50.4 -0.9
baz=155,SNR=10
Q37A **Longview Farm,** 64.81 338 P P 11 49 50.9 -0.7
baz=153,SNR=8.1
HSIG 64.85 319 *e*P P 11 49 53.0 +1.0
comp=Z,47nm,1.6s
N43A **Stutzman Famil** 65.03 343 P P 11 49 51.6 -1.3
baz=158,SNR=10
O40A **La Belle** 65.07 340 P P 11 49 52.2 -1.0
baz=156,SNR=10
P38A **Dawn** 65.16 339 P P 11 49 53.0 -0.9
baz=154,SNR=9.9
N42A **Yates City** 65.17 342 P P 11 49 52.4 -1.4
baz=157,SNR=8.0
N41A **Harden Midland** 65.30 341 P P 11 49 53.2 -1.5
baz=157,SNR=7.1
P37A **Lathrop** 65.41 338 P P 11 49 54.6 -0.8
baz=153,SNR=12
M43A **Waltham Townsh** 65.43 343 P P 11 49 54.1 -1.4
baz=159,SNR=8.4
319A **Douglas** 65.58 322 *e*P P 11 49 58.4 +1.5
comp=Z,33nm,0.8s
O38A **Galt** 65.59 339 P P 11 49 55.9 -0.7
baz=154,SNR=5.0
121A **Cookes Peak, D** 65.60 324 P P 11 49 58.4 +1.3
baz=139,SNR=13
N40A **Mertquake, Sal** 65.68 341 P P 11 49 55.6 -1.5
baz=156,SNR=9.8
KSU1 **Kansas State U** 65.80 336 P P 11 49 57.0 -0.9
baz=151,SNR=6.3
KSU1 **Kansas State U** 65.80 336 *e*P P 11 49 57.6 -0.3
comp=Z,21nm,0.9s
M41A **Milan** 65.82 342 P P 11 49 56.4 -1.6
baz=157
L44A **Lake County Fo** 65.85 344 P P 11 49 56.6 -1.5
baz=160
O37A **Wolven Farm, M** 65.86 339 P P 11 49 57.5 -0.8
baz=153,SNR=6.6
N39A **Derby Farms, D** 65.96 340 P P 11 49 57.9 -1.0
baz=155,SNR=7.2
LONY **Lake Ozonia** 66.00 355 *e*P P 11 49 59.5 +0.4
comp=Z,17nm,1.0s
L43A **Garden Prairie** 66.07 344 P P 11 49 58.5 -1.1
baz=159,SNR=6.7
N38A **Joes South For** 66.11 340 P P 11 49 59.1 -0.8
baz=154
M40A **Post Highland** 66.13 341 P P 11 49 58.7 -1.3
baz=156,SNR=9.6
BNM **Barren Site** 66.22 326 *e*P P 11 50 02.0 +1.0
LPM **Los Pinos Moun** 66.35 326 *e*P P 11 50 02.5 +0.7
M39A **Webster** 66.40 341 P P 11 50 00.4 -1.3
baz=156,SNR=5.2
N37A **Lee Faris, Mou** 66.41 339 P P 11 50 00.9 -0.9
baz=153,SNR=5.7
K43A **Burlington** 66.45 344 P P 11 50 00.6 -1.4
baz=159,SNR=8.1
L41A **Preston** 66.45 342 P P 11 50 00.5 -1.5
baz=157,SNR=9.4
L40A **Anamosa** 66.65 342 P P 11 50 02.0 -1.3
baz=156,SNR=11
M38A **Pleasantville** 66.67 340 P P 11 50 02.4 -1.0
baz=154,SNR=20
LAZ **Ladron** 66.68 326 *e*P P 11 50 05.4 +1.4
NVL **N'lazarevskaya** 66.69 159 *j i*P P 11 50 02.9 -0.3
NVL *e*PP PcP 11 50 31.0 -0.4
NVL *e*S S 11 58 54.0 +9.3
NVL pmax pmax
comp=Z,61nm,0.9s
N36A **Muff Farm, Cla** 66.71 338 P P 11 50 03.1 -0.7
baz=153
ANMO **Albuquerque** 66.75 327 P P 11 50 05.0 +0.6
baz=141
ANMO **Albuquerque** 66.75 327 *e*P P 11 50 05.4 +1.1
comp=Z,10.0nm,1.0s
ANMO **Albuquerque** 66.75 327 *d i*P P 11 50 04.6 +0.2
ANMO pmax pmax
comp=Z,25nm,1.8s
TASL **Snake Pit, Alb** 66.75 327 P P 11 50 04.8 +0.5
baz=141,SNR=20
TASM **ASL Pad, Albuq** 66.75 327 P P 11 50 04.8 +0.5
baz=141,SNR=19
CBKS **Cedar Bluff** 66.78 334 P P 11 50 04.3 0.0
baz=148,SNR=9.0
CBKS **Cedar Bluff** 66.78 334 *e*P P 11 50 04.8 +0.5
comp=Z,40nm,0.8s
CBKS **Cedar Bluff** 66.78 334 *e*P P 11 50 04.8 +0.5
CBKS pmax pmax
comp=Z,40nm,0.8s
K42A **Prairie Point,** 66.78 343 P P 11 50 03.0 -1.2
baz=158,SNR=14
K41A **Shullsburg** 66.89 343 P P 11 50 03.6 -1.2
baz=158,SNR=9.7
M37A **Trindle Farm,** 66.93 339 P P 11 50 04.4 -0.7
baz=154,SNR=13
L39A **Vinton** 66.94 341 P P 11 50 03.8 -1.3
baz=156,SNR=7.4
J43A **Natural Harves** 67.11 344 P P 11 50 05.3 -0.9
baz=159,SNR=7.4
SCIA **State Center** 67.11 340 P P 11 50 05.5 -0.8
baz=155
SCIA **State Center** 67.11 340 *e*P P 11 50 06.0 -0.3
comp=Z,33nm,0.8s
TUC **Tucson** 67.13 322 P P 11 50 07.7 +1.1
baz=137
TUC **Tucson** 67.13 322 *e*P P 11 50 07.6 +0.9
comp=Z,46nm,1.6s
TUC **Tucson** 67.13 322 *e*P P 11 50 07.6 +0.9
TUC pmax pmax
comp=Z,46nm,1.6s
JFWS **Jewell Farm** 67.16 343 P P 11 50 05.3 -1.2
baz=158,SNR=11
JFWS **Jewell Farm** 67.16 343 *e*P P 11 50 06.1 -0.4
comp=Z,33nm,0.8s
JFWS **Jewell Farm** 67.16 343 *e*P P 11 50 06.1 -0.4
JFWS pmax pmax
comp=Z,33nm,0.8s
K40A **Colesburg** 67.21 342 P P 11 50 05.4 -1.4
baz=157,SNR=9.6
J42A **Columbus** 67.23 344 P P 11 50 06.0 -0.9
baz=159
M36A **Felix, Anita** 67.23 339 P P 11 50 06.3 -0.7
baz=153
L38A **Oak Wood Farm,** 67.25 340 P P 11 50 06.1 -1.0
baz=155,SNR=5.7
K39A **Oelwein** 67.43 341 P P 11 50 07.0 -1.3
baz=156,SNR=18
T25A **Trinidad** 67.47 329 P P 11 50 09.5 +0.6
baz=143,SNR=7.8
T25A **Trinidad** 67.47 329 *e*P P 11 50 09.6 +0.7
comp=Z,19nm,1.3s
L37A **Phoenix Point,** 67.48 340 P P 11 50 07.7 -0.9
baz=154
I43A **Langenfeld Bro** 67.51 345 P P 11 50 07.7 -0.9
baz=160
J41A **Loganville** 67.51 343 P P 11 50 07.7 -1.0
baz=158,SNR=14
TRQ **Mont Tremblant** 67.59 355 *e*P P 11 50 09.7 +0.4
K38A **Parkersburg** 67.65 341 P P 11 50 08.5 -1.0
baz=155
I42A **Draeger Farm,** 67.71 344 P P 11 50 09.0 -1.0
baz=159,SNR=6.6
I42A **Draeger Farm,** 67.71 344 *e*P P 11 50 09.4 -0.6
comp=Z,22nm,0.8s
J40A **Soldiers Grove** 67.74 343 P P 11 50 09.3 -0.9
baz=157,SNR=15
L36A **Harm Buss Farm** 67.76 339 P P 11 50 09.6 -0.7
baz=153
LIC **Lamto** 67.87 74 *e*P P 11 50 10.0 -1.6
comp=Z,96nm,0.7s
J39A **Decorah** 67.96 342 P P 11 50 10.3 -1.2
baz=156,SNR=19
H43A **Windswept, Lux** 67.97 345 P P 11 50 10.7 -0.9
baz=160
H43A **Windswept, Lux** 67.97 345 *e*P P 11 50 11.2 -0.4
comp=Z,23nm,0.8s
K37A **Belmond** 68.03 340 P P 11 50 10.8 -1.2
baz=154,SNR=7.4
TIC **Toumodi** 68.06 73 *e*P P 11 50 11.3 -1.5
214A **Organ Pipe Nat** 68.06 320 P P 11 50 14.0 +1.5
baz=135,SNR=7.7
I41A **Arkdale** 68.11 343 P P 11 50 11.8 -0.7
baz=158
I40A **Norwalk** 68.16 343 P P 11 50 11.8 -1.0
baz=157
K36A **Gilmore City** 68.17 340 P P 11 50 12.3 -0.6
baz=154,SNR=5.9
KSCO **Kaye Shedlock'** 68.18 332 P P 11 50 13.7 +0.5
baz=145
KSCO **Kaye Shedlock'** 68.18 332 *e*P P 11 50 13.7 +0.5
comp=Z,60nm,1.5s
KIC **Kosan Boka** 68.18 74 *e*P P 11 50 12.2 -1.4
comp=Z,160nm,0.6s
H42A **Shiocton** 68.19 345 P P 11 50 12.3 -0.6
baz=160,SNR=5.2
H42A **Shiocton** 68.19 345 *e*P P 11 50 12.1 -0.8
comp=Z,26nm,0.8s
DBIC **Dimbokro** 68.22 73 P P 11 50 12.7 -1.1
comp=Z,80nm,0.6s,baz=221,slow=6.2,SNR=89
DBIC LR LR 12 20 17.2
comp=Z,114nm,18.2s,baz=320,slow=36
DBIC **Dimbokro** 68.22 73 *e*P P 11 50 12.8 -1.0
comp=Z,98nm,0.8s
DBIC **Dimbokro** 68.22 73 *e*P P 11 50 12.8 -1.0
DBIC pmax pmax
comp=Z,98nm,0.8s
X18A **Snowflake** 68.29 324 *e*P P 11 50 15.3 +1.2
comp=Z,64nm,1.9s
I39A **Houston** 68.38 342 P P 11 50 13.2 -1.0
baz=156,SNR=11
BGNE **Belgrade** 68.38 336 P P 11 50 14.1 -0.1
baz=150
BGNE **Belgrade** 68.38 336 *e*P P 11 50 14.6 +0.3
comp=Z,120nm,0.9s
SDCO **Great Sand Dun** 68.48 329 P P 11 50 15.9 +0.6
baz=143,SNR=45
SDCO **Great Sand Dun** 68.48 329 *e*P P 11 50 15.9 +0.6
comp=Z,16nm,0.9s
J37A **Redenius Farm,** 68.49 340 P P 11 50 14.0 -0.9
baz=154
H41A **Junction City** 68.58 344 P P 11 50 14.3 -1.1
baz=158
H41A **Junction City** 68.58 344 *e*P P 11 50 14.8 -0.6
comp=Z,19nm,0.8s
W18A **Petrified Fore** 68.61 324 P P 11 50 17.0 +1.0
baz=138
W18A **Petrified Fore** 68.61 324 *e*P P 11 50 17.1 +1.1
comp=Z,26nm,1.1s
QSPA **South Pole Qui** 68.74 180 P P 11 50 17.7 +1.3
comp=Z,44nm,0.6s,baz=155,slow=2.6,SNR=133
J36A **Seneca 1, Swea** 68.75 340 P P 11 50 15.6 -0.9
baz=154,SNR=5.3
H40A **Chili** 68.78 343 P P 11 50 15.6 -1.0
baz=158,SNR=14
I38A **Scanlan Farm,** 68.78 342 P P 11 50 15.7 -1.0
baz=156,SNR=12
G42A **Mountain** 68.85 345 P P 11 50 16.0 -1.1
baz=160
G42A **Mountain** 68.85 345 *e*P P 11 50 16.7 -0.4
comp=Z,37nm,1.5s
G41A **Antigo** 69.01 344 P P 11 50 17.5 -0.6
baz=159
X16A **Lo Mia Camp, P** 69.04 323 *e*P P 11 50 20.2 +1.5
comp=Z,14nm,1.0s
I37A **Lemond, Waseca** 69.08 341 P P 11 50 17.8 -0.7
baz=155,SNR=5.9
F44A **Big Bay de Noc** 69.09 347 P P 11 50 17.4 -1.0
baz=162
F43A **Flat Rock, Esc** 69.11 346 P P 11 50 17.3 -1.3
baz=161
S22A **4UR Ranch, Cre** 69.12 328 P P 11 50 19.9 +0.6
baz=141,SNR=7.1
S22A **4UR Ranch, Cre** 69.12 328 *e*P P 11 50 20.2 +0.9
comp=Z,6.9nm,1.1s
E45A **Wooded Hills,** 69.19 348 P P 11 50 18.2 -0.9
baz=163
113A **Mohawk Valley,** 69.21 320 *e*P P 11 50 21.1 +1.6
comp=Z,29nm,1.7s
I36A **Fitzsimmons Fa** 69.27 340 P P 11 50 18.7 -1.0
baz=154
Q24A **Divide** 69.28 330 P P 11 50 20.8 +0.6
baz=143,SNR=10.0
Q24A **Divide** 69.28 330 *e*P P 11 50 21.1 +0.8
comp=Z,20nm,1.0s

G40A	Rib Lake baz=158	69.33	344	P	P	11 50 19.4 -0.6
H38A	Maiden Rock baz=156	69.35	342	P	P	11 50 19.0 -1.2
H37A	Dierke Farm, C baz=155	69.45	341	P	P	11 50 20.0 -0.7
F41A	Three Lakes baz=159,SNR=9.2	69.48	345	P	P	11 50 20.4 -0.5
OGNE	Ogallala comp=Z,14nm,0.9s	69.53	333	eP	P	11 50 22.8 +1.4
MVCO	Mesa Verde baz=140,SNR=11	69.55	327	P	P	11 50 22.6 +0.8
MVCO	Mesa Verde comp=Z,14nm,0.8s	69.55	327	eP	P	11 50 23.1 +1.3
Y14A	Wickenburg comp=Z,32nm,1.4s	69.59	321	eP	P	11 50 23.2 +1.3
E43A	Lone Tree Farm baz=161	69.59	346	P	P	11 50 20.9 -0.6
G39A	Holcombe baz=157,SNR=10	69.60	343	P	P	11 50 20.7 -1.0
G38A	Ridgeland baz=156,SNR=7.3	69.68	342	P	P	11 50 21.0 -1.1
H36A	Jessenland, He baz=154,SNR=12	69.75	341	P	P	11 50 21.9 -0.7
WUAZ	Wupatki baz=137,SNR=19	69.81	324	P	P	11 50 24.9 +1.5
WUAZ	Wupatki comp=Z,24nm,0.9s	69.81	324	eP	P	11 50 24.9 +1.5
COWI	Conover comp=Z,22nm,1.4s	69.83	345	eP	P	11 50 22.6 -0.5
E42A	Champion baz=160	69.85	346	P	P	11 50 22.6 -0.6
ECSD	EROS Data Cent baz=152,SNR=10	69.87	339	P	P	11 50 22.4 -0.9
ECSD	EROS Data Cent comp=Z,28nm,1.5s	69.87	339	eP	P	11 50 23.0 -0.3
F40A	Park Falls baz=158,SNR=21	69.91	344	P	P	11 50 22.9 -0.6
SPMN	Marine on St. baz=156,SNR=6.0	70.00	342	P	P	11 50 23.1 -1.0
SPMN	Marine on St. comp=Z,38nm,1.4s	70.00	342	eP	P	11 50 23.1 -1.0
GLA	Glamis baz=134	70.04	320	P	P	11 50 26.3 +1.6
F39A	Loretta baz=157,SNR=7.8	70.11	343	P	P	11 50 24.2 -0.6
H35A	Sunnyside Ranc baz=154,SNR=12	70.14	340	P	P	11 50 24.0 -1.0
ISCO	Idaho Springs baz=143,SNR=12	70.17	330	P	P	11 50 26.3 +0.6
ISCO	Idaho Springs comp=Z,26nm,1.6s	70.17	330	eP	P	11 50 26.5 +0.8
ISCO	Idaho Springs comp=Z,26nm,1.6s	70.17	330	eP	P	11 50 26.5 +0.8
				pmax	pmax	
PV01	Paradox Valley comp=Z,15nm,1.1s	70.29	327	eP	P	11 50 27.5 +1.1
SMCO	Snowmass comp=Z,10nm,1.0s	70.32	329	eP	P	11 50 27.8 +1.1
E40A	Wakefield baz=158,SNR=15	70.34	344	P	P	11 50 25.8 -0.4
Y12C	Blythe baz=134,SNR=8.0	70.35	320	P	P	11 50 28.2 +1.7
Y12C	Blythe comp=Z,47nm,1.3s	70.35	320	eP	P	11 50 28.5 +2.0
PV15	Paradox Valley comp=Z,24nm,1.1s	70.41	327	eP	P	11 50 28.3 +1.2
F37A	Hinrichs Farm, baz=156	70.41	342	P	P	11 50 25.8 -0.8
F38A	Pierce - Schro baz=156,SNR=6.7	70.41	343	P	P	11 50 25.9 -0.7
H34A	Spellman Lake, baz=153,SNR=9.6	70.42	340	P	P	11 50 25.8 -0.8
PV02	Paradox Valley comp=Z,54nm,2.0s	70.43	327	eP	P	11 50 28.7 +1.4
E39A	Mellen baz=158,SNR=10	70.45	344	P	P	11 50 26.1 -0.7
PDMCI	Parker Dam,Lak baz=135	70.51	321	P	P	11 50 28.7 +1.2
PV05	Paradox Valley comp=Z,31nm,1.4s	70.52	327	eP	P	11 50 28.7 +1.0
PV03	Paradox Valley comp=Z,37nm,1.8s	70.52	327	eP	P	11 50 28.3 +0.6
IKP	In-Ko-Pah, Jac baz=133,SNR=8.0	70.55	319	P	P	11 50 29.3 +1.4
PV07	Paradox Valley comp=Z,8.6nm,1.0s	70.56	327	eP	P	11 50 29.4 +1.4
D41A	Chassel baz=160,SNR=5.6	70.60	345	P	P	11 50 27.3 -0.4
PV04	Paradox Valley comp=Z,5.8nm,0.9s	70.66	327	eP	P	11 50 29.2 +0.7
H33A	Prehn Over Nor baz=152,SNR=9.9	70.75	339	P	P	11 50 28.1 -0.6
F36A	Milaca baz=155,SNR=15	70.79	342	P	P	11 50 27.9 -1.0
PV09	Paradox Valley	70.86	327	eP	P	11 50 31.2 +1.4
G34A	Benson baz=153	70.88	340	P	P	11 50 28.6 -0.8
MONP2	Monument Peak baz=133,SNR=12	70.91	319	P	P	11 50 31.7 +1.5
BAR	Barrett comp=Z,33nm,1.0s	70.92	318	eP	P	11 50 31.8 +1.8
E38A	The Farm, Brul baz=157,SNR=5.9	70.92	343	P	P	11 50 28.8 -0.9
W13A	Hualapai Mount comp=Z,7.4nm,0.8s	70.92	322	eP	P	11 50 31.9 +1.7
U15A	North Rim comp=Z,91nm,1.8s	70.98	324	eP	P	11 50 32.3 +1.7
IRM	Iron Mountain baz=134,SNR=16	71.00	320	P	P	11 50 32.1 +1.6
G33A	Ortonville baz=152,SNR=6.2	71.10	339	P	P	11 50 30.0 -0.8
F35A	Swanville baz=154,SNR=5.1	71.10	341	P	P	11 50 29.9 -0.9
N23A	Red Feather La baz=143	71.19	331	P	P	11 50 32.7 +0.8
N23A	Red Feather La comp=Z,6.5nm,0.8s	71.19	331	eP	P	11 50 33.0 +1.1
F34A	Alexandria baz=153	71.26	340	P	P	11 50 30.9 -0.9
PHWY	Pilot Hill comp=Z,38nm,1.8s	71.30	331	eP	P	11 50 32.8 +0.3
E36A	McGregor baz=155,SNR=8.7	71.31	342	P	P	11 50 31.3 -0.7
109C	Camp Elliot, M baz=132	71.33	318	P	P	11 50 33.7 +1.3
CPE	Camp Elliot comp=Z,22nm,1.4s	71.33	318	eP	P	11 50 33.4 +1.0
BELC	Belle Mtn. Jos baz=133,SNR=12	71.41	320	P	P	11 50 34.7 +1.6
PFO	Pinyon Flats O baz=133,SNR=13	71.42	319	P	P	11 50 34.6 +1.4
PFO	Pinyon Flats O comp=Z,22nm,1.1s	71.42	319	eP	P	11 50 34.4 +1.2
PFO	Pinyon Flats O comp=Z,22nm,1.1s	71.42	319	eP	P	11 50 34.4 +1.2
				pmax	pmax	
C40A	Isle Royale Na baz=159,SNR=5.2	71.53	345	P	P	11 50 33.2 -0.1
LDFC	Landfair comp=Z,28nm,1.0s	71.62	321	eP	P	11 50 36.7 +2.4
F33A	5 Mile Ranch, baz=152,SNR=7.6	71.62	340	P	P	11 50 32.8 -1.1
D37A	Cotton baz=156,SNR=7.3	71.67	343	P	P	11 50 33.4 -0.7
O20A	White River Ci baz=141,SNR=11	71.67	329	P	P	11 50 35.3 +0.7
O20A	White River Ci comp=Z,16nm,0.8s	71.67	329	eP	P	11 50 35.6 +0.9
E35A	Pequot Lakes baz=154	71.68	341	P	P	11 50 33.6 -0.7
KNB	Kanab comp=Z,57nm,1.2s	71.70	324	eP	P	11 50 36.6 +1.9
KNB	Kanab comp=Z,57nm,1.2s	71.70	324	eP	P	11 50 36.7 +1.9
				pmax	pmax	
GMRC	Granite Mounta baz=134,SNR=36	71.74	320	P	P	11 50 36.6 +1.6
MURC	Murrieta baz=132,SNR=6.4	71.86	319	P	P	11 50 37.2 +1.5
C38A	Sawbill Land. baz=157	71.87	344	P	P	11 50 34.1 -1.3
E34A	Wadena baz=154,SNR=7.5	71.87	341	P	P	11 50 34.5 -0.9
F32A	Veblen baz=152	71.92	339	P	P	11 50 34.5 -1.2
LCMT	Little Creek M comp=Z,65nm,1.9s	71.93	324	eP	P	11 50 37.6 +1.5
SRU	San Rafael Swe comp=Z,22nm,0.7s	72.03	327	eP	P	11 50 37.5 +0.8
SRU	San Rafael Swe comp=Z,22nm,0.7s	72.03	327	eP	P	11 50 37.6 +0.8
				pmax	pmax	
D35A	Remer baz=155,SNR=5.3	72.05	342	P	P	11 50 36.3 -0.2
MTPU	Mount Pierson comp=Z,9.3nm,0.7s	72.10	325	eP	P	11 50 39.0 +1.6
C37A	Emarrass baz=156,SNR=8.6	72.12	343	P	P	11 50 36.2 -0.7
E33A	Westby DABS, E baz=153	72.12	340	P	P	11 50 35.9 -1.0
BBRC	Big Bear Solar baz=133,SNR=6.1	72.14	319	P	P	11 50 39.5 +1.9
EYMN	Ely baz=157,SNR=8.4	72.14	344	P	P	11 50 35.7 -1.3
EYMN	Ely comp=Z,19nm,0.8s	72.14	344	eP	P	11 50 36.1 -0.9
HEC	Hector,Ludlow baz=133,SNR=6.9	72.17	320	P	P	11 50 39.3 +1.7
SZCU	Shurtz Canyon comp=Z,58nm,1.9s	72.26	324	eP	P	11 50 39.3 +1.0
F31A	Hecla baz=151	72.29	339	P	P	11 50 37.7 -0.2
SCI2	San Clemente I baz=131	72.29	317	P	P	11 50 39.7 +1.5
C36A	Pine Crest Far baz=156,SNR=16	72.33	343	P	P	11 50 37.5 -0.5
TUQ	Turquoise Moun baz=134,SNR=9.1	72.35	321	P	P	11 50 39.9 +1.3
CCUT	Cedar City comp=Z,23nm,0.9s	72.38	324	eP	P	11 50 40.9 +2.0
D34A	Park Rapids baz=154	72.39	341	P	P	11 50 37.5 -1.0
RWWY	Rawlins comp=Z,13nm,1.1s	72.41	330	eP	P	11 50 39.1 +0.1
P17A	Butcher Ranch, comp=Z,23nm,0.8s	72.41	327	eP	P	11 50 40.6 +1.6
MSU	Marysvale	72.44	325	eP	P	11 50 40.6 +1.3
MSU	Marysvale	72.44	325	eP	P	11 50 40.6 +1.3
CIS	Catalina Islan baz=131	72.49	318	P	P	11 50 40.9 +1.5
KOWA	Kowa comp=Z,36nm,0.7s,baz=246,slow=5.9,SNR=66	72.52	66	P	P	11 50 38.9 -1.0
KOWA				LR	LR	12 21 56.0
KOWA	Kowa comp=Z,168nm,18.4s,baz=214,slow=35	72.52	66	eP	P	11 50 38.5 -1.4
TMUT	Trail Mountain comp=Z,6.6nm,0.7s	72.52	326	eP	P	11 50 41.2 +1.4
BFSC	Mount Baldy Ra baz=132,SNR=16	72.58	319	P	P	11 50 41.3 +1.2
C35A	Jirik Farms, M baz=155,SNR=16	72.59	342	P	P	11 50 38.4 -1.3
D33A	AnnSam, Waubun baz=153	72.64	341	P	P	11 50 39.1 -0.8
SHPR	Sheep Range comp=Z,13nm,1.0s	72.65	322	eP	P	11 50 42.2 +1.7
TCRU	Three Creeks R comp=Z,9.0nm,0.9s	72.66	325	eP	P	11 50 42.0 +1.4
GSC	Goldstone, Bar baz=133,SNR=11	72.78	320	P	P	11 50 43.1 +2.0
GSC	Goldstone, Bar comp=Z,34nm,1.4s	72.78	320	eP	P	11 50 43.2 +2.0
GSC	Goldstone, Bar comp=Z,34nm,1.4s	72.78	320	eP	P	11 50 43.2 +2.0
				pmax	pmax	
E31A	Nome baz=151,SNR=5.9	72.78	339	P	P	11 50 40.2 -0.6
MWC	Mount Wilson comp=Z,37nm,1.1s	72.81	319	eP	P	11 50 42.8 +1.3
MWC	Mount Wilson comp=Z,37nm,1.1s	72.81	319	eP	P	11 50 42.8 +1.3
				pmax	pmax	
C34A	RKJ Ranch, Bem baz=154	72.82	342	P	P	11 50 40.9 -0.1
PASC	Pasadena Art C comp=Z,34nm,1.0s	72.86	318	eP	P	11 50 43.1 +1.6
K22A	Casper baz=143	72.86	331	P	P	11 50 42.1 +0.6
K22A	Casper comp=Z,12nm,1.1s	72.86	331	eP	P	11 50 42.0 +0.5
SHOC	Shoshone, Teco baz=134,SNR=6.1	72.88	321	P	P	11 50 43.0 +1.4
RSSD	Black Hills baz=145	72.99	334	P	P	11 50 42.9 +0.5
RSSD	Black Hills comp=Z,7.1nm,0.9s	72.99	334	eP	P	11 50 42.7 +0.3
RSSD	Black Hills comp=Z,7.0nm,0.9s	72.99	334	eP	P	11 50 42.7 +0.3
				pmax	pmax	
DECC	Green Verdugo baz=132,SNR=12	73.00	318	P	P	11 50 44.0 +1.6
B35A	Bob, Littlefor baz=155,SNR=20	73.12	343	P	P	11 50 42.0 -0.7
C33A	Trail baz=153,SNR=6.4	73.17	341	P	P	11 50 42.4 -0.7
EDW2	Edwards Air Fo baz=132,SNR=10.0	73.21	319	P	P	11 50 44.7 +1.0
MPU	Maple Canyon comp=Z,12nm,0.9s	73.27	327	eP	P	11 50 45.1 +1.0
PSUT	Pine Spring comp=Z,16nm,1.2s	73.36	324	eP	P	11 50 46.4 +1.8
BLG	Laguna Peak, P baz=131	73.36	318	P	P	11 50 45.4 +0.9
LRMC	Laurel Mtn Rad baz=132,SNR=8.3	73.42	320	P	P	11 50 46.1 +1.1
NLU	North Lily Min comp=Z,44nm,1.8s	73.45	326	eP	P	11 50 46.3 +1.1
OSI	Osito Audit: C baz=131	73.48	318	P	P	11 50 46.7 +1.4
OSI	Osito Audit: C comp=Z,22nm,1.0s	73.48	318	eP	P	11 50 46.2 +0.9
B34A	Aery, Baudette baz=154,SNR=6.4	73.50	342	P	P	11 50 44.6 -0.4
B33A	Robert and Kas baz=153	73.58	341	P	P	11 50 45.2 -0.3
TPNV	Topopah Spring baz=134,SNR=23	73.58	322	P	P	11 50 47.5 +1.6
TPNV	Topopah Spring comp=Z,29nm,1.1s	73.58	322	eP	P	11 50 47.8 +1.8
TPNV	Topopah Spring comp=Z,29nm,1.1s	73.58	322	eP	P	11 50 47.8 +1.8
				pmax	pmax	
FURC	Furnace Creek, baz=133,SNR=21	73.61	321	P	P	11 50 47.8 +2.0
JLU	Jordanelle comp=Z,64nm,1.8s	73.61	327	eP	P	11 50 47.6 +1.4
SCZ2	Santa Cruz Isl baz=131	73.64	317	P	P	11 50 48.0 +1.8
AGMN	Agassiz Nation baz=153,SNR=11	73.68	341	P	P	11 50 45.7 -0.3
AGMN	Agassiz Nation comp=Z,14nm,0.8s	73.68	341	eP	P	11 50 45.2 -0.8
MPMC	Manual Prospec baz=133,SNR=9.1	73.70	320	P	P	11 50 47.9 +1.2
C31A	Landman Farms, baz=151	73.81	340	P	P	11 50 47.0 +0.2
CTU	Camp Tracy comp=Z,19nm,1.6s	73.83	327	eP	P	11 50 48.4 +1.1
ARVC	Arvin baz=131	73.89	319	P	P	11 50 49.6 +2.1
DAC	Darwin (Calif) comp=Z,21nm,1.0s	73.91	320	eP	P	11 50 49.1 +1.2
DAC	Darwin (Calif) comp=Z,21nm,1.0s	73.91	320	eP	P	11 50 49.1 +1.2
				pmax	pmax	
B32A	Ashes, Strandq baz=152,SNR=13	73.97	341	P	P	11 50 47.3 -0.4
TCUT	Toone Canyon comp=Z,12nm,0.8s	73.98	328	eP	P	11 50 48.7 +0.4
DUG	Dugway, Tooele baz=137,SNR=9.7	74.01	326	P	P	11 50 49.6 +1.2
DUG	Dugway, Tooele comp=Z,58nm,1.9s	74.01	326	eP	P	11 50 49.5 +1.1
DUG	Dugway, Tooele comp=Z,58nm,1.9s	74.01	326	eP	P	11 50 49.5 +1.1
				pmax	pmax	
ISA	Isabella, Lake baz=132,SNR=17	74.03	319	P	P	11 50 50.1 +1.6
ISA	Isabella, Lake comp=Z,26nm,0.9s	74.03	319	eP	P	11 50 49.9 +1.5
ISA	Isabella, Lake comp=Z,26nm,0.9s	74.03	319	eP	P	11 50 49.9 +1.5
				pmax	pmax	
R11A	Troy Canyon, C baz=134,SNR=20	74.18	323	P	P	11 50 50.7 +1.2
R11A	Troy Canyon, C comp=Z,22nm,1.4s	74.18	323	eP	P	11 50 51.0 +1.5
CWC	Cottonwood Cre baz=132	74.31	320	P	P	11 50 51.8 +1.6
PD31	Pinedale Array	74.33	330	eP	P	11 50 50.4 +0.1
PDAR	Pinedale Array comp=Z,1.3nm,0.6s,baz=147,slow=6.5,SNR=8.9	74.33	330	P	P	11 50 49.7 -0.6
PDAR	Pinedale Array	74.33	330	eP	P	11 50 50.4 +0.1
BW06	Boulder Array baz=140	74.34	330	P	P	11 50 50.7 +0.4
BW06	Boulder Array comp=Z,23nm,1.8s	74.34	330	eP	P	11 50 50.9 +0.6
PKM	Mcpherson Peak baz=131,SNR=7.3	74.34	318	P	P	11 50 51.7 +1.3
HWUT	Hardware Ranch comp=Z,9.5nm,0.8s	74.42	328	eP	P	11 50 51.4 +0.6
MDND	Maddock baz=150	74.48	339	P	P	11 50 51.1 +0.4
MDND	Maddock comp=Z,57nm,0.8s	74.48	339	eP	P	11 50 51.2 +0.5
VES	Vestal, Richgr baz=131,SNR=13	74.52	319	P	P	11 50 52.4 +1.3
SPUT	South Promonto comp=Z,12nm,0.7s	74.65	327	eP	P	11 50 53.5 +1.5
BGU	Big Grassy Mou comp=Z,37nm,1.8s	74.66	326	eP	P	11 50 53.3 +1.2
SMMC	Simmler baz=131,SNR=8.5	74.73	318	P	P	11 50 54.1 +1.6
TIN	Tinemaha, Big baz=132	74.81	321	P	P	11 50 54.8 +1.8
AHID	Auburn Hatcher comp=Z,15nm,0.8s	75.07	329	eP	P	11 50 54.8 +0.3
PAGB	Antelope Grade comp=Z,19nm,0.9s	75.16	319	eP	P	11 50 56.6 +1.7
HVU	Hansel Valley comp=Z,12nm,1.0s	75.16	327	eP	P	11 50 55.9 +1.0
HVU	Hansel Valley comp=Z,12nm,1.0s	75.16	327	eP	P	11 50 55.9 +1.0
				pmax	pmax	
REDW	Red Top Meadow comp=Z,62nm,1.9s	75.40	329	eP	P	11 50 57.1 +0.7
SNOW	Snow King Moun comp=Z,11nm,1.0s	75.43	330	eP	P	11 50 57.8 +1.2
ULM	Lac du Bonnet comp=Z,16nm,0.5s,baz=154,slow=6.0,SNR=46	75.43	342	P	P	11 50 55.1 -1.0
ULM	Lac du Bonnet comp=Z,18nm,0.6s	75.43	342	eP	P	11 50 55.6 -0.5
ULM	Lac du Bonnet comp=Z,18nm,0.6s	75.43	342	eP	P	11 50 55.6 -0.5
				pmax	pmax	
LOHW	Long Hollow comp=Z,57nm,1.9s	75.47	330	eP	P	11 50 57.5 +0.7
TPAW	Teton Pass comp=Z,51nm,1.8s	75.55	329	eP	P	11 50 58.2 +0.9
MLAC	Mammoth, Mammo baz=132,SNR=6.6	75.56	321	P	P	11 50 58.7 +1.3
OMMB	Old Mammoth Mi comp=Z,21nm,0.9s	75.64	321	eP	P	11 50 59.3 +1.3
MOOW	Moose Ponds comp=Z,46nm,1.9s	75.64	330	eP	P	11 50 58.3 +0.5
FXWY	Fox Creek comp=Z,34nm,1.9s	75.69	329	eP	P	11 50 58.7 +0.6
NV11	Mina Array Sit comp=Z,0.7nm,1.1s	75.70	322	eP	P	11 50 59.4 +1.3
MDPB	Devils Postpil comp=Z,14nm,1.0s	75.70	321	eP	P	11 50 59.9 +1.6
NV01	Mina Array Sit	75.78	322	eP	P	11 50 59.7 +1.0
NVAR	Mina Array Bea comp=Z,8.2nm,1.0s,baz=154,slow=6.9,SNR=39	75.78	322	P	P	11 50 59.9 +1.2
PMPB	Monarch Peak comp=Z,29nm,1.0s	75.81	319	eP	P	11 51 01.0 +2.3
IMW	Indian Meadow comp=Z,70nm,1.9s	75.85	330	eP	P	11 51 00.0 +1.0
SBA	Scott Base comp=Z,24nm,1.2s	75.97	190	eP	P	11 51 01.3 +2.4
SBA	Scott Base comp=Z,24nm,1.2s	75.97	190	eP	P	11 51 01.3 +2.4
				pmax	pmax	
LAO	LASA Array baz=144	75.97	334	P	P	11 50 59.8 +0.4
LAO	LASA Array comp=Z,34nm,1.5s	75.97	334	eP	P	11 50 59.8 +0.4
SCHQ	Schefferville comp=Z,8.3nm,0.8s,baz=232,slow=9.1,SNR=4.8	75.98	1	P	P	11 50 58.4 -0.8
RYN	Ryan comp=Z,18nm,1.2s	76.05	322	eP	P	11 51 01.1 +1.0
H17A	Grant Village baz=140	76.06	330	P	P	11 51 01.4 +1.3
H17A	Grant Village comp=Z,12nm,1.4s	76.06	330	eP	P	11 50 59.8 -0.4
YPP	Pitchstone Pla comp=Z,18nm,1.6s	76.07	330	eP	P	11 51 01.3 +1.0
KVN	Kaiserville comp=Z,20nm,1.0s	76.09	322	eP	P	11 51 01.3 +1.0
KVN	Kaiserville comp=Z,20nm,1.0s	76.09	322	eP	P	11 51 01.3 +1.0
				pmax	pmax	
YFT	Old Faithful comp=Z,9.5nm,1.0s	76.22	330	eP	P	11 51 03.6 +2.6
SYO	Syowa Base	76.36	159↑	eP	P	11 50 59.0 -2.2
YMR	Madison River comp=Z,56nm,1.4s	76.45	330	eP	P	11 51 03.5 +1.1
YHH	Holmes Hill comp=Z,28nm,1.2s	76.49	330	eP	P	11 51 03.7 +1.0
WAKR	Walker comp=Z,32nm,1.5s	76.49	321	eP	P	11 51 04.8 +2.1
BMN	Battle Mountai comp=Z,9.9nm,1.4s	76.54	324	eP	P	11 51 03.4 +0.5
BMN	Battle Mountai comp=Z,10.0nm,1.4s	76.54	324	eP	P	11 51 03.4 +0.5
				pmax	pmax	
YHB	Horse Butte comp=Z,11nm,1.0s	76.62	330	eP	P	11 51 05.1 +1.8
DGMT	Dagmar baz=146	76.64	336	P	P	11 51 03.9 +0.8
DGMT	Dagmar comp=Z,120nm,1.8s	76.64	336	eP	P	11 51 04.3 +1.3
YERR	Yerington comp=Z,47nm,1.5s	76.70	322	eP	P	11 51 05.7 +1.8
GCMT	Greycliff	76.72	332	eP	P	11 51 04.8 +1.1
CMB	Columbia Colle comp=Z,6.5nm,1.1s	76.74	320	eP	P	11 51 05.1 +1.2
CMB	Columbia Colle comp=Z,6.0nm,1.1s	76.74	320	eP	P	11 51 05.1 +1.2
				pmax	pmax	
QLMT	Earthquake Lak	76.79	330	eP	P	11 51 05.8 +1.6
TOA0	Torodi Ar. Sit	76.84	70	eP	P	11 51 03.6 -1.3
TORD	Torodi Ar. Bea comp=Z,46nm,0.6s,baz=252,slow=5.4,SNR=275	76.84	70	P	P	11 51 03.7 -1.2
TORD				pP	pP	11 51 35.9 -0.1
	comp=Z,10.0nm,0.9s,baz=248,slow=5.6,SNR=1.9					
PNTR	Pine Nut comp=Z,21nm,0.9s	76.98	321	eP	P	11 51 07.1 +1.7
VNDA	Vanda comp=Z,7.2nm,0.9s,baz=139,slow=4.7,SNR=21	76.98	190	P	P	11 51 06.9 +2.3
VNDA	Vanda comp=Z,9.9nm,0.9s	76.98	190	eP	P	11 51 06.9 +2.3
VCNR	Virginia City comp=Z,19nm,1.2s	77.14	322	eP	P	11 51 08.3 +2.0
PAHR	Pah Rah Range comp=Z,41nm,0.9s	77.26	322	eP	P	11 51 08.5 +1.6
RUBR	Rubicon Trail comp=Z,16nm,0.9s	77.28	321	eP	P	11 51 08.6 +1.5
HLID	Hailey baz=136,SNR=27	77.29	328	P	P	11 51 08.3 +1.3
HLID	Hailey comp=Z,15nm,0.9s	77.29	328	eP	P	11 51 08.3 +1.3
MCMT	McKenzie Canyo	77.45	329	eP	P	11 51 09.4 +1.5
BOZ	Bozeman (W) baz=139,SNR=7.6	77.46	330	P	P	11 51 08.5 +0.6
BOZ	Bozeman (W) comp=Z,26nm,1.7s	77.46	330	eP	P	11 51 08.9 +1.0
BOZ	Bozeman (W) comp=Z,26nm,1.7s	77.46	330	eP	P	11 51 08.9 +1.0
				pmax	pmax	
AFDM	Forest Hills D comp=Z,15nm,1.0s	77.69	321	eP	P	11 51 10.4 +1.3
DLMT	Dillon comp=Z,26nm,1.5s	77.73	330	eP	P	11 51 10.8 +1.5
MFID	Camas Ranch comp=Z,32nm,1.4s	77.90	327	eP	P	11 51 12.0 +1.7
BEKR	Beckworth comp=Z,18nm,1.1s	77.93	322	eP	P	11 51 11.5 +0.9
LRM	Limekiln Ridge	78.01	330	eP	P	11 51 12.2 +1.2
HRY	Holter Researc	78.39	331	eP	P	11 51 14.4 +1.4
ORV	Oroville comp=Z,51nm,1.2s	78.39	321	eP	P	11 51 14.2 +1.2

ORV Oroville 78.39 321 *e*P **P 11 51 14.2 +1.2**
ORV pmax pmax
comp=Z,51nm,1.2s
EGMT Eagleton 78.49 333 P **P 11 51 13.6 +0.2**
baz=141,SNR=6.0
EGMT Eagleton 78.49 333 *e*P **P 11 51 13.9 +0.5**
comp=Z,33nm,1.6s
WVOR Wild Horse Val 78.69 324 *e*P **P 11 51 15.8 +1.1**
comp=Z,4.7nm,1.1s
WVOR Wild Horse Val 78.69 324 *e*P **P 11 51 15.8 +1.1**
WVOR pmax pmax
comp=Z,5.0nm,1.1s
O03D Paynes Creek 79.05 321 P **P 11 51 16.7 0.0**
baz=130,SNR=13
J08A Circle Bar Ran 79.23 325 *e*P **P 11 51 19.1 +1.5**
comp=Z,33nm,1.6s
MOD Modoc Plateau 79.25 323 *e*P **P 11 51 19.3 +1.5**
comp=Z,24nm,1.1s
MSO Missoula 79.45 330 P **P 11 51 19.7 +1.0**
baz=137,SNR=6.7
MSO Missoula 79.45 330 *e*P **P 11 51 20.1 +1.4**
comp=Z,16nm,1.4s
TSUM Tsumeb 79.55 107 *e*P **P 11 51 20.5 +0.5**
comp=Z,19nm,1.0s
BMO Blue Mountains 79.66 327 *e*P **P 11 51 20.8 +0.9**
comp=Z,17nm,1.0s
BMO Blue Mountains 79.66 327 *e*P **P 11 51 20.8 +0.9**
BMO pmax pmax
comp=Z,17nm,1.0s
WDC Whiskeytown Da 79.66 321 *e*P **P 11 51 19.5 -0.4**
comp=Z,14nm,0.8s
WDC Whiskeytown Da 79.66 321 *e*P **P 11 51 19.5 -0.4**
WDC pmax pmax
comp=Z,14nm,0.8s
KCPM Cahto Peak 79.72 320 *e*P **P 11 51 21.8 +1.4**
comp=Z,34nm,1.1s
N02D Trinity Center 80.01 321 P **P 11 51 21.7 -0.2**
baz=130,SNR=10
M04C Macdoel 80.03 322 P **P 11 51 23.1 +1.0**
baz=130,SNR=13
K05A Summer Lake 80.12 324 *e*P **P 11 51 24.0 +1.5**
comp=Z,44nm,1.0s
KMRM Mail Ridge 80.13 320 *e*P **P 11 51 24.4 +1.9**
comp=Z,36nm,1.1s
I07A Izee 80.28 325 *e*P **P 11 51 24.5 +1.2**
comp=Z,18nm,1.3s
JTMT Jette 80.28 331 *e*P **P 11 51 23.7 +0.5**
comp=Z,32nm,2.0s
M02C Callahan 80.36 322 P **P 11 51 24.5 +0.7**
baz=130
F10A Beach Ranch, E 80.41 328 *e*P **P 11 51 24.5 +0.6**
comp=Z,35nm,1.8s
YBH Yreka Blue Hor 80.50 322 P **P 11 51 24.1 -0.3**
comp=Z,6.0nm,0.9s,baz=90,slow=2.6,SNR=23
YBH Yreka Blue Hor 80.50 322 *e*P **P 11 51 24.5 0.0**
comp=Z,6.1nm,0.8s
YBH Yreka Blue Hor 80.50 322 *e*P **P 11 51 24.5 0.0**
YBH pmax pmax
comp=Z,6.0nm,0.8s
K04D Chiloquin, OR 80.53 323 P **P 11 51 25.4 +0.7**
baz=130,SNR=5.6
J05D Fort Rock, OR 80.68 324 P **P 11 51 26.4 +0.9**
baz=131,SNR=20
G08A Pilot Rock 80.81 326 *e*P **P 11 51 26.9 +0.8**
comp=Z,31nm,1.8s
PINE Pine Mountain 80.85 324 *e*P **P 11 51 27.6 +1.2**
comp=Z,31nm,0.9s
MORF Marmelete 81.06 44 *e*P **P 11 51 27.6 +0.1**
comp=Z,32nm,1.5s
WALA Waterton Lakes 81.08 332 *e*P **P 11 51 27.9 +0.5**
comp=Z,8.6nm,0.8s
J04D Umpqua Nationa 81.13 323 P **P 11 51 28.9 +0.9**
baz=130
FFC Flin Flon 81.16 341 *e*P **P 11 51 27.5 0.0**
comp=Z,10nm,1.1s
FFC Flin Flon 81.16 341 *e*P **P 11 51 27.5 0.0**
FFC pmax pmax
comp=Z,10.0nm,1.1s
HUMO Hull Mountain 81.20 322 *e*P **P 11 51 28.5 +0.4**
comp=Z,10nm,1.3s
E09A Wood Farm, Sta 81.24 328 *e*P **P 11 51 28.6 +0.4**
comp=Z,26nm,1.5s
L02D Cave Junction, 81.28 322 P **P 11 51 29.5 +1.0**
baz=129
MDT Midelt 81.31 50 P **P 11 51 28.3 -0.7**
comp=Z,8.3nm,1.0s,baz=258,slow=5.9,SNR=6.5
MDT *e*pP **pP 11 52 01.6 +1.2**
comp=Z,6.9nm,1.0s,baz=230,slow=7.3,SNR=4.3
I05D Terrebonne, OR 81.43 325 P **P 11 51 30.7 +1.5**
baz=131,SNR=16
G06A Carlson Farm, 81.65 326 *e*P **P 11 51 32.2 +1.8**
comp=Z,15nm,1.1s
I04A Tendick Farm, 81.66 324 P **P 11 51 30.5 +0.1**
baz=130
PVAQ Vaqueiros 81.72 45 *e*P **P 11 51 32.1 +1.2**
comp=Z,15nm,1.7s
HAWA Hanford 81.86 327 *e*P **P 11 51 31.9 +0.5**
comp=Z,16nm,1.0s
NEW Newport 81.97 329 P **P 11 51 32.1 +0.1**
baz=135
NEW Newport 81.97 329 *e*P **P 11 51 32.0 0.0**
comp=Z,16nm,1.6s
NEW Newport 81.97 329 *e*P **P 11 51 32.0 0.0**
NEW pmax pmax
comp=Z,17nm,1.6s
D08A Wollman Farm, 82.00 328 *e*P **P 11 51 32.4 +0.2**
comp=Z,20nm,1.2s
G05D Wamic, OR 82.01 325 P **P 11 51 33.8 +1.5**
baz=131
I03D Drain, OR 82.12 323 P **P 11 51 33.7 +0.9**
baz=129
C09A Chrisman Ranch 82.20 329 *e*P **P 11 51 34.1 +0.9**
comp=Z,23nm,0.8s
PTOM Tomar 82.56 42 *e*P **P 11 51 36.6 +1.4**
comp=Z,18nm,1.6s
PTOM *e*pP **pP 11 52 09.1 +2.4**
PBAR Barrancos 82.61 44 *e*P **P 11 51 35.9 +0.4**
comp=Z,18nm,1.3s
PBAR *e*pP **pP 11 52 07.8 +0.8**
PESTR Estremoz 82.64 43 *e*P **P 11 51 36.1 +0.4**
comp=Z,12nm,1.9s
PESTR *e*pP **pP 11 52 09.8 +2.6**
COR Corvallis 82.66 324 *e*P **P 11 51 36.2 +0.6**
comp=Z,72nm,1.4s
COR Corvallis 82.66 324 *e*P **P 11 51 36.2 +0.6**
COR pmax pmax
comp=Z,72nm,1.4s
BOSA Boshof 83.00 118 P **P 11 51 37.8 -0.3**
comp=Z,22nm,0.9s,baz=258,slow=3.8,SNR=21
BOSA LR LR 12 26 09.1
comp=Z,67nm,19.7s,baz=48,slow=34
BOSA Boshof 83.00 118 *e*P **P 11 51 38.2 +0.1**
comp=Z,21nm,0.9s
BOSA Boshof 83.00 118 *e*P **P 11 51 38.2 +0.1**
BOSA pmax pmax
comp=Z,21nm,0.9s
B08A Colville Reser 83.10 329 *e*P **P 11 51 37.6 -0.2**
comp=Z,26nm,1.8s
PCBR Castelo Branco 83.27 43 *e*P **P 11 51 37.7 -1.2**
comp=Z,10nm,1.8s
D05A Enumclaw 83.64 326 *e*P **P 11 51 39.4 -1.2**
comp=Z,20nm,0.9s
MAW Mawson 84.22 163 P **P 11 51 44.3 +1.0**
comp=Z,19nm,0.7s,baz=220,slow=5.5,SNR=28
MAW Mawson 84.22 163 *e*P **P 11 51 43.4 +0.1**
comp=Z,7.3nm,1.0s
MVO Moncorvo 84.31 42 *e*P **P 11 51 44.8 +0.6**
comp=Z,11nm,1.7s
TAM Tamanrasset 84.33 63 *e*P **P 11 51 45.4 +0.5**
comp=Z,15nm,1.3s
TAM Tamanrasset 84.33 63 *e*P **P 11 51 45.4 +0.5**
TAM pmax pmax
comp=Z,15nm,1.3s
B05A Bryant 84.41 327 P **P 11 51 44.3 -0.1**
baz=131
LBTB Lobatse 84.56 115 *e*P **P 11 51 45.5 -0.6**
comp=Z,21nm,0.8s
LBTB Lobatse 84.56 115 *e*P **P 11 51 45.5 -0.6**
LBTB pmax pmax
comp=Z,21nm,0.8s
PBRG Braganca 84.85 41 *e*P **P 11 51 47.3 +0.4**
comp=Z,12nm,2.0s
PAB San Pablo 85.11 44 *e*P **P 11 51 46.5 -1.8**
comp=Z,13nm,1.2s
PAB San Pablo 85.11 44 *e*P **P 11 51 46.5 -1.8**
PAB pmax pmax
comp=Z,13nm,1.2s
ESDC Sonseca Array 85.43 44 P **P 11 51 48.9 -1.0**
comp=Z,1.0nm,0.7s,baz=255,slow=4.4,SNR=9.2
ESDC pP **pP 11 52 23.2 +1.6**
comp=Z,3.4nm,1.0s,baz=237,slow=5.3,SNR=3.9
ES19 SONSECA Array 85.49 44 *e*P **P 11 51 49.3 -0.8**
LLLB Lillooet 85.84 329 *e*P **P 11 51 51.9 +0.2**
comp=Z,26nm,1.2s
YKA Yellowknife Ar 91.32 340 P **P 11 52 17.0 -0.2**
comp=Z,19nm,0.6s,baz=133,slow=4.6,SNR=250
YKA pP **pP 11 52 50.2 +1.0**
comp=Z,5.6nm,1.0s,baz=134,slow=4.7,SNR=2.4
YKW3 Yellowknife Ar 91.37 340 *e*P **P 11 52 17.4 -0.1**
comp=Z,24nm,0.6s
CASY Casey 92.53 180 *e*P **P 11 52 24.6 +1.6**
comp=Z,32nm,0.9s
DLBC Dease Lake 94.41 332 *e*P **P 11 52 32.5 +0.8**
comp=Z,7.6nm,1.1s
INK Inuvik 101.08 340 P **Pdif 11 53 00.9 -0.4**
comp=Z,1.8nm,1.0s,baz=103,slow=9.7,SNR=3.7
ILAR Eielson Array 104.43 334 PP PP 11 57 38.1 +1.3
comp=Z,1.8nm,1.1s,baz=67,slow=4.5,SNR=9.8
VSU Vasula 110.65 34⇓ *i* PKIKP **PKiKP 11 57 45.5 +1.9**
AKASG Malin Array Be 111.02 42 PP PP 11 58 18.2 -7.0
comp=Z,0.2nm,0.3s,baz=264,slow=7.5,SNR=4.7
BRTR Keskin Array B 112.37 55 PKiKP **PKiKP 11 57 45.9 -1.9**
comp=Z,0.6nm,0.7s,baz=192,slow=4.8,SNR=3.9
BRTR PP **PP 11 58 31.4 -4.1**
comp=Z,1.2nm,0.9s,baz=271,slow=7.2,SNR=5.2
KLMR Klimovskoe 117.19 32 *e*PKIKP **PKPdf 11 57 52.1 -4.0**
KLMR pmax pmax
comp=Z,12nm,1.6s
KLMR Klimovskoe 117.19 32 *e*PKPdf **PKPdf 11 57 52.2 -3.9**
KLMR AMP 11 57 59.0
comp=Z,12nm,1.6s
KIV Kislovodsk 119.53 51 *i* PKIKP **PKPdf 11 58 00.4 -0.9**
KIV pmax pmax
comp=Z,5.0nm,1.1s
KBZ Khabaz 119.68 51 PKP **PKPdf 11 58 01.2 -0.2**
comp=Z,3.9nm,0.9s,baz=243,slow=2.3,SNR=8.2
STKA Stephens Creek 119.71 209 PKP **PKPdf 11 58 03.6 +1.6**
comp=Z,1.8nm,0.7s,baz=149,slow=5.6,SNR=3.8
BILL Bilibino 122.67 339⇓ *e*PKIKP **PKPdf 11 58 07.0 +0.5**
BILL *e* 11 59 47.6
BILL pmax pmax
comp=Z,7.0nm,2.0s
BILL MLR MLR
comp=Z,73nm,17.0s
NWAO Narrogin (SRO) 125.66 186 PKP **PKPdf 11 58 13.8 +0.4**
comp=Z,5.2nm,0.7s,baz=63,slow=11,SNR=3.7
CTA Charters Tower 126.62 222 PKP **PKPdf 11 58 15.7 +0.1**
comp=Z,5.3nm,0.9s,baz=203,slow=6.2,SNR=6.5
ARU Arti 127.81 34 *e*PKPdf **PKPdf 11 58 17.1 +0.5**
ARU Arti 127.81 34 *i* PKIKP **PKPdf 11 58 17.3 +0.7**
ARU 12 00 19.0
TIXI Tiksi 128.81 353 *e*PKPdf **PKPdf 11 58 17.6 -0.5**
TIXI Tiksi 128.81 353⇑ *e*PKIKP **PKPdf 11 58 17.5 -0.6**
AKTO Aktyubinsk 129.25 42 PKP **PKPdf 11 58 19.7 +0.1**
comp=Z,2.4nm,0.7s,baz=302,slow=2.8,SNR=10.0
AS01 Alice Springs 130.18 207 *e*PKPdf **PKPdf 11 58 22.4 +0.1**
ASAR Alice Springs 130.19 207 PKhKP PKPpre 11 58 10.2
comp=Z,0.5nm,0.7s,baz=127,slow=1.5,SNR=6.6
ASAR PKP **PKPdf 11 58 22.1 -0.3**
comp=Z,7.5nm,0.8s,baz=125,slow=1.7,SNR=65
ASAR pPKP pPKPdf 11 58 57.5 +1.7
comp=Z,2.3nm,0.8s,baz=151,slow=2.2,SNR=3.8
ASAR SKPbc **SKPbc 12 01 34.5 +0.3**
comp=Z,2.7nm,1.1s,baz=150,slow=4.7,SNR=5.6
AS31 Alice Springs 130.20 207 *e*PKPdf **PKPdf 11 58 22.6 +0.2**
SEY Seymchan 130.26 337⇓ *i* PKIKP **PKPdf 11 58 21.9 +0.8**
ABKAR Abkulak array 130.76 43 *e*PKPdf **PKPdf 11 58 23.3 +0.9**
MA2 Magadan 132.91 334⇓ *e*PKIKP **PKPdf 11 58 26.8 +0.6**
WC3 Warramunga Arr 133.23 210 *e*PKPdf **PKPdf 11 58 28.4 +0.3**
WB2 Warramunga Arr 133.25 210 *e*PKPdf **PKPdf 11 58 28.9 +0.8**
WRA Warramunga Arr 133.26 210 PKhKP PKPpre 11 58 14.8
comp=Z,0.3nm,0.5s,baz=130,slow=2.6,SNR=7.3
WRA PKP **PKPdf 11 58 28.4 +0.2**
comp=Z,7.7nm,0.6s,baz=154,slow=1.7,SNR=73
WRA SKPbc **SKPbc 12 01 46.0 +0.9**
comp=Z,3.7nm,1.0s,baz=146,slow=2.8,SNR=7.5
WRAB Tennant Creek 133.26 210 *e*PKPdf **PKPdf 11 58 28.7 +0.5**
WRAB Tennant Creek 133.26 210⇓ *e*PKIKP **PKPdf 11 58 28.1 -0.1**
BRVK Borovoye 135.39 35 *d i* PKIKP **PKPdf 11 58 31.8 +0.7**
BVAR Borovoye Array 135.46 35 PKP **PKPdf 11 58 31.8 +0.6**
comp=Z,2.8nm,0.7s,baz=256,slow=4.3,SNR=16
BVAR SKPbc **SKPbc 12 01 51.8 +0.7**
comp=Z,0.3nm,0.4s,baz=32,slow=5.9,SNR=4.3
YAK Yakutsk 137.59 348 *i* PKIKP **PKPdf 11 58 34.9 +0.1**
NVS Novosibirsk 140.40 26 *e*PKIKP **PKPdf 11 58 40.5 +0.3**
NVS pmax pmax
comp=Z,13nm,1.4s
NVS pmax pmax
comp=E,6.0nm,1.3s
KURK Kurchatov 141.00 33 *e*PKPdf **PKPdf 11 58 39.1 -2.3**
KURK PP **PP 12 01 47.0 +3.4**
KURK SKPbc **SKiKP 12 02 08.0 -0.9**
KURK Kurchatov 141.00 33 *de*PKIKP **PKPdf 11 58 42.1 +0.7**
KURBB Kurchatov Arra 141.01 34 PKhKP PKPpre 11 58 37.2
comp=E,1.6nm,0.9s,baz=309,slow=3.4,SNR=9.3
KURBB PP **PP 12 01 47.0 +3.4**
comp=E,0.8nm,0.9s,baz=293,slow=5.8,SNR=4.0
KURBB SKPbc **SKiKP 12 02 08.0 -0.9**
comp=E,3.9nm,1.1s,baz=301,slow=3.2,SNR=11
ZAA0 Zalesovo Array 141.69 25 *e*PKPpre PKPpre 11 58 38.4
ZALV Zalesovo Beam 141.69 25 PKhKP PKPpre 11 58 37.8
comp=E,5.9nm,0.6s,baz=298,slow=3.5,SNR=18
ZALV SKPbc **SKPbc 12 02 08.9 +0.5**
comp=E,3.0nm,0.7s,baz=290,slow=4.4,SNR=9.1
ZALV Zalesovo Beam 141.69 25 *e*PKHKP PKPpre 11 58 38.0
AAK Ala-Archa 142.49 47 SKPbc **SKiKP 12 02 12.5 0.0**
comp=E,2.7nm,0.6s,baz=139,slow=2.6,SNR=6.8
AAK Ala-Archa 142.49 47 *e*PKPdf **PKPdf 11 58 44.7 +0.1**
AAK SKPbc **SKiKP 12 02 12.5 0.0**
AAK Ala-Archa 142.49 47⇑ *e*PKIKP **PKPdf 11 58 45.1 +0.5**
GENI Genyem 143.26 233 PKP **PKPdf 11 58 45.9 -0.7**
NRN Naryn 143.98 48 *e*PKPdf PKPbc 11 58 46.4 +0.7
NRN Naryn 143.98 48 *e*PKIKP PKPbc 11 58 46.4 +0.7
NIL Nilore 144.04 62 *e*PKPdf PKPbc 11 58 45.4 -0.4
NIL Nilore 144.04 62 *e*PKIKP PKPbc 11 58 45.4 -0.3
YSS Yuzh-Sakhalins 144.23 323⇑ *e*PKIKP **PKPdf 11 58 46.5 -0.8**
KDJ Kajisay 144.51 46 *e*PKPdf **PKPdf 11 58 48.4 +0.1**
KDJ Kajisay 144.51 46 PKIKP **PKPdf 11 58 48.3 +0.1**
KSH Kashi 144.66 51 PKP **PKPdf 11 58 48.0 -0.5**
KSH pPKP pPKPdf 11 59 15.3 -6.6
KSH PP **PP 12 02 07.6 +1.1**
KSH PKS **PKSdf 12 02 23.3 -0.8**
KSH SKS **SKSdf 12 05 46.3 -0.3**
KSH SKKS **SKKSac 12 08 46.5 -0.6**
KSH SS **SS 12 20 44.0 -0.7**
KSH AMB AMB
comp=E,320nm,7.8s
KSH LR LR
comp=E,290nm,4.8s
KSH LR LR
comp=E,320nm,5.8s
KSH LR LR
comp=E,290nm,5.8s
MAKZ Makanchi 145.10 36 *e*PKPbc **PKPdf 11 58 48.9 0.0**
MAKZ Makanchi 145.10 36 *e*PKIKP **PKPdf 11 58 48.9 0.0**
TARG Taragay, Kyrgy 145.10 47 *e*PKPbc **PKPbc 11 58 47.7 -1.6**
PRZ Przheval'sk 145.18 45 *e*PKPbc **PKPdf 11 58 51.0 +1.7**
PRZ Przheval'sk 145.18 45 *e*PKIKP **PKPdf 11 58 51.1 +1.7**
MK31 Makanchi Array 145.29 36 *e*PKPbc **PKPab 11 58 49.5 0.0**
MK31 Makanchi Array 145.29 36 *e*PKIKP **PKPab 11 58 49.5 0.0**
MKAR Makanchi Array 145.29 36 PKPbc **PKPab 11 58 49.4 0.0**
comp=E,36nm,0.7s,baz=321,slow=2.8,SNR=310
MKAR pPKPbc **pPKPdf 11 59 23.2 +0.6**
comp=E,7.1nm,0.8s,baz=326,slow=3.7,SNR=2.6
MKAR SKPbc **SKiKP 12 02 18.3 +0.3**
comp=E,5.3nm,1.0s,baz=282,slow=2.4,SNR=7.5
MK01 Makanchi Array 145.31 36 *e*PKPbc **PKPdf 11 58 49.1 -0.1**
ZEA Zeya 145.64 344 *e*PKIKP **PKPab 11 58 50.2 -0.3**
ZEA pmax pmax
comp=N,46nm,1.4s
ZEA pmax pmax
comp=Z,75nm,1.2s
ZEA pmax pmax
comp=Z,400nm,3.0s
ASAJ Asahikawa 145.87 319 PKPbc **PKPab 11 58 51.7 +0.1**
comp=Z,6.2nm,0.4s,baz=243,slow=4.5,SNR=25
ASAJ Asahikawa 145.87 319 *e*PKPdf **PKPbc 11 58 51.1 +0.1**
BATI Baumata 146.40 202 PKP **PKPab 11 58 54.9 +0.4**
BATI PKP **PKiKP 11 58 56.6 +0.2**
ERM Erimo 146.55 315 *e*PKPdf **PKPab 11 58 54.2 -0.2**
ERM Erimo 146.55 315⇓ *e*PKP2 **PKPab 11 58 53.7 -0.6**
SOEI Soe 146.60 203 PKP **PKPab 11 58 55.8 +0.4**
SOEI PKP **PKiKP 11 58 56.8 -0.1**

KLR Kul'dur 148.00 335 *d i* PKIKP **PKPdf 11 58 54.0 +0.4**
RKPI Ransiki, Papua 148.29 227 PKP **PKPab 11 59 00.7 -1.3**
MMRI Maumere 148.34 200 PKP **PKPbc 11 58 59.3 +0.5**
MMRI PKP **PKiKP 11 58 59.7 -0.7**
MMRI Maumere 148.34 200 *e*PKPbc **PKPbc 11 58 59.4 +0.5**
EDFI Ende, Flores 148.41 199 PKP **PKPbc 11 58 59.2 +0.2**
EDFI PKP **PKPbc 11 58 59.3 +0.2**
FAKI Fak Fak 148.49 222 PKP **PKPbc 11 59 00.8 +1.6**
FAKI Fak Fak 148.49 222 *e*PKPdf **PKPdf 11 58 57.0 +1.5**
MOY Mondy 148.72 13 *e*PKP2 **PKPbc 11 58 59.8 +1.0**
MOY pmax pmax
comp=Z,40nm,1.6s
IRK Irkutsk 148.74 9 *e*PKP2 **PKPbc 11 58 57.9 -0.8**
IRK pmax pmax
comp=Z,56nm,1.8s
TLY Talaya 149.19 10 *e*PKPdf **PKPdf 11 58 56.0 +0.5**
TLY Talaya 149.19 10 *e*PKIKP **PKPdf 11 58 56.0 +0.5**
PLAI Plampang 149.31 192 PKP **PKPbc 11 59 02.1 +0.9**
WMQ Urumqi 150.12 36 *e*PKPbc **PKPbc 11 59 00.7 -1.7**
JAGI Jajag, Banyuwa 150.16 185 PKP **PKPbc 11 59 03.9 +0.5**
JAGI Jajag, Banyuwa 150.16 185 *e*PKPbc **PKPbc 11 59 03.8 +0.5**
ZAK Zakamensk 150.38 11 *e*PKHKP PKPpre 11 58 58.0
ZAK pmax pmax
comp=Z,2.0nm,1.6s
GMJI Gumukmas 150.41 184 PKP **PKPab 11 59 13.0 +2.5**
BLJI Banyuglugur 150.92 184 PKP **PKPab 11 59 15.5 +2.9**
CISI Cisompet, Garu 150.93 172 PKP **PKPbc 11 59 06.2 +1.0**
CISI Cisompet, Garu 150.93 172 *e*PKPbc **PKPbc 11 59 05.4 +0.2**
HIA Hailar 151.51 349⇑ *e*PKIKP **PKPdf 11 58 59.9 +0.7**
LEM Lembang 151.62 172 PKPbc **PKPbc 11 59 07.7 +0.7**
comp=Z,71nm,0.7s,baz=18,slow=1.5,SNR=18
USRK Ussuriysk Ar. 151.75 328 PKPbc **PKPbc 11 59 06.5 +0.4**
comp=Z,8.0nm,0.7s,baz=346,slow=1.0,SNR=16
BKSI Bulukumba 152.12 198 PKP **PKPbc 11 59 08.9 +1.0**
MJAR Matsushiro Arr 152.46 309 PKPbc **PKPbc 11 59 08.1 0.0**
comp=Z,11nm,0.9s,baz=123,slow=0.9,SNR=33
MJAR pPKPbc **pPKPbc 11 59 42.9 +1.7**
comp=Z,3.7nm,0.9s,baz=42,slow=0.6,SNR=4.0
MAJO Matsushiro 152.46 309 *e*PKPbc **PKPbc 11 59 08.5 +0.5**
MAJO Matsushiro 152.46 309⇓ *e*PKIKP **PKPdf 11 59 02.5 +1.5**
MAT Matsushiro 152.46 309 PKP **PKPbc 11 59 08.4 +0.4**
MJB9 Matsu-Tunnel 152.46 309 *e*PKPbc **PKPbc 11 59 08.6 +0.5**
SANI Sanana 152.76 213 PKP **PKPbc 11 59 10.3 +1.0**
SONA1 Songino Array 153.33 8 *e*PKPdf **PKPdf 11 59 02.8 +0.7**
SONA1 *e*PKPbc **PKiKP 11 59 10.1 +0.2**
SONM Songino Array 153.34 8 PKP **PKPdf 11 59 02.2 +0.1**
comp=Z,2.9nm,0.8s,baz=260,slow=0.8,SNR=14
SONM PKPbc **PKiKP 11 59 09.7 -0.2**
comp=Z,4.9nm,0.7s,baz=338,slow=0.9,SNR=16
SONM PKPab **PKPab 11 59 21.5 -0.6**
comp=Z,3.1nm,0.8s,baz=304,slow=2.6,SNR=6.6
SONM pPKPbc **pPKPbc 11 59 45.0 +2.0**
comp=Z,2.8nm,1.0s,baz=335,slow=2.1,SNR=2.2
ULN Ulaanbaatar 153.39 7 *e*PKPdf **PKPdf 11 59 03.1 +0.9**
ULN *e*PKPbc **PKiKP 11 59 10.7 +0.7**
ULN *e*PKPab **PKPab 11 59 22.5 +0.1**
ULN Ulaanbaatar 153.39 7 *c i* PKIKP **PKPdf 11 59 03.4 +1.2**
ULN pmax pmax
comp=Z,8.0nm,1.7s
PSI Prapat 157.70 145 PKPab **PKPab 11 59 41.8 +0.1**
comp=Z,14nm,0.9s,baz=180,slow=8.3,SNR=4.3
PSI Prapat 157.70 145 *e*PKPab **PKPab 11 59 42.0 +0.3**
KSRS Korea Array 158.73 322 PKP **PKPdf 11 59 10.1 +0.8**
comp=Z,3.3nm,0.8s,baz=55,slow=1.4,SNR=24
KSRS PKPab **PKPab 11 59 45.9 +0.5**
comp=Z,5.5nm,1.0s,baz=64,slow=3.2,SNR=12
KS01 Wonju Array Si 158.73 322 *e*PKPdf **PKPdf 11 59 09.4 +0.1**
KS01 *e*PKPab **PKPab 11 59 46.0 +0.6**
KSAR Wonju Array Be 158.76 322 PKP **PKPdf 11 59 10.1 +0.7**
KSAR PKPab **PKPab 11 59 45.9 +0.3**
KSAR Wonju Array Be 158.76 322 PKIKP **PKPdf 11 59 10.1 +0.7**
KSAR 11 59 45.9
GTA Gaotai 159.43 27 PKP **PKPdf 11 59 11.4 +1.1**
GTA pPKP pPKPdf 11 59 38.1 -5.7
GTA sPKP 11 59 48.6
GTA PKPab **PKPab 11 59 51.1 +2.5**
HHC Hu-ho-hao-te 160.66 0 *e*PKP **PKPdf 11 59 10.8 -0.8**
HHC PP **PP 12 03 35.1 -0.6**
HHC SS SS 12 23 40.2 +2.8
HHC AMB AMB
comp=Z,82nm,10.8s
LZH Lanzhou 163.90 23 *e*PKP PKPdf 11 59 25.8 +11
LZH pPKP pPKPdf 11 59 49.0 +0.4
LZH sPKP 12 00 02.6
LZH LR LR
comp=N,52nm,16.0s
LZH LR LR
comp=E,57nm,18.1s
LZH LR LR
comp=Z,69nm,20.0s
XAN Xi'an 167.23 10 PKP **PKPdf 11 59 18.5 +0.8**
NJ2 Nanjing 167.65 330 *e*PKP **PKPdf 11 59 20.9 +3.0**
CMAR Chiang Mai Arr 167.68 102 PKP **PKPdf 11 59 18.2 -0.1**
comp=Z,2.3nm,1.0s,baz=272,slow=3.0,SNR=10
CMAR Chiang Mai Arr 167.68 102 PKIKP **PKPdf 11 59 18.3 -0.1**
CMAR pmax pmax
comp=Z,3.0nm,1.1s
CM01 Chiang Mai Arr 167.68 102 *e*PKPdf **PKPdf 11 59 18.4 +0.1**
CD2 Chengdu 168.22 35 PKP **PKPdf 11 59 18.2 -0.3**
KMI Kunming 171.03 64 PKP **PKPdf 11 59 19.6 -0.9**
KMI AMB AMB
comp=Z,120nm,4.7s
GYA Guiyang 173.24 42 *e*PKP **PKPdf 11 59 21.0 -0.4**
GYA pPKP pPKPdf 11 59 48.2 -6.8
GYA PKPab **PKPab 12 00 50.4 +0.6**
GYA PKS **PKSdf 12 02 51.5 -2.3**
GYA PP **PP 12 04 42.8 +1.6**
GYA AMB AMB
comp=Z,120nm,8.2s

NEIC ***03*** *11:43:44.0±0.0, 21°.40S×68°.52W, h133km, mb4.5/53, ML4.2(GUC), After GUC.*
GUC ***03*** *11:43:44.8±0.6, 21°.38S×68°.58W, h139km±4km, ML4.2*
IDC ***03*** *11:43:48.0±2.6, 21°.31S×68°.17W, h150km±22km, mb3.9/12, mb1 4.0/13, mb1mx3.7/46, mbtmp4.3/13, Error ellipse: s-maj=22.1km s-min=14.9km az=54.0*
ISC 03 11:43:45.8±0.8, 21°.44S±0°.03×68°.46W±0°.08, h130km±6km, n226, σ1§25/244, mb4.4/60, 9C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.81**	**244⇑**	*i*P	**Pn**	**11 44 07.1**	**-0.1**
PB09				*i* S	**Sn**	**11 44 23.9**	**+0.4**
PB09				IAML		11 44 24.5	
comp=N,4μm,1.1s							
PB01	**IPOC Station P**	**1.03**	**292**	*e*Pn	**Pn**	**11 44 08.4**	**-0.7**
PB01				*e*Sn	**Sn**	**11 44 26.6**	**-0.2**
PB01	**IPOC Station P**	**1.03**	**292⇑**	*i*P	**Pn**	**11 44 08.4**	**-0.7**
PB01				*i* S	**Sn**	**11 44 26.0**	**-0.8**
PB01				IAML		11 44 28.1	
comp=N,5μm,0.5s							
PB02	**IPOC Station P**	**1.34**	**275⇑**	*i*P	**Pn**	**11 44 11.6**	**-0.6**
PB02				*i* S	**Sn**	**11 44 31.4**	**-0.9**
PB02				IAML		11 44 33.2	
comp=N,8μm,0.5s							
PB07	**IPOC Station P**	**1.35**	**257⇑**	*i*P	**Pn**	**11 44 12.2**	**-0.3**
PB07				*i* S	**Sn**	**11 44 32.5**	**-0.3**
PB07				IAML		11 44 36.5	
comp=N,3μm,0.4s							
PB08	**IPOC Station P**	**1.44**	**333⇑**	*i*P	**Pn**	**11 44 13.4**	**-0.3**
PB08				*e*S	**Sn**	**11 44 35.0**	**+0.1**
PB08				IAML		11 44 35.8	
comp=N,3μm,0.5s							
PB04	**IPOC Station P**	**1.80**	**240**	*e*Pn	**Pn**	**11 44 17.2**	**-0.4**
PB04				*e*Sn	**Sn**	**11 44 44.6**	**+2.8**
PB04	**IPOC Station P**	**1.80**	**240⇑**	*i*P	**Pn**	**11 44 17.0**	**-0.5**
PB04				*i* S	**Sn**	**11 44 41.8**	**0.0**
PB04				IAML		11 44 50.9	
comp=N,2μm,0.2s							
PSGC	**Pisagua**	**2.40**	**319⇑**	*i*P	**Pn**	**11 44 23.6**	**-1.3**
PSGC				*i* S	**Sn**	**11 44 53.7**	**-1.2**
PSGC				IAML		11 44 53.9	
comp=N,1μm,0.6s							
MNMC	**Minye Minye**	**2.53**	**335**	*e*Pn	**Pn**	**11 44 26.6**	**-0.1**
MNMC				*e*Sn	**Sn**	**11 44 57.7**	**-0.3**
MNMC	**Minye Minye**	**2.53**	**335⇓**	*i*P	**Pn**	**11 44 26.1**	**-0.5**
MNMC				*i* S	**Sn**	**11 44 57.3**	**-0.7**
MNMC				IAML		11 44 59.2	
comp=E,2μm,0.6s							
PB10	**IPOC Station P**	**2.83**	**223**	*e*Pn	**Pn**	**11 44 30.6**	**+0.4**

PB10 eSn Sn 11 45 02.1 -2.4
PB10 IPOC Station P 2.83 223 ⇑iP Pn 11 44 28.9 -1.3
PB10 iS Sn 11 45 01.8 -2.7
PB10 IAML 11 45 16.9
comp=N,663nm,0.2s
PB16 IPOC Station P 3.24 342 ⇓iP Pn 11 44 35.7 -0.4
PB16 eS Sn 11 45 13.0 -1.8
PB16 IAML 11 45 22.4
comp=E,180nm,0.3s
PB12 IPOC Station P 3.31 328 ⇑iP Pn 11 44 34.5 -2.0
PB12 iS Sn 11 45 12.6 -3.2
PB12 IAML 11 45 23.2
comp=E,624nm,0.3s
PB14 IPOC Station P 3.64 209 eP Pn 11 44 40.3 -0.8
PB14 iS Sn 11 45 12.4 -12
GO02 Mina Guanaco 3.85 195 ePn Pn 11 44 42.9 -1.0
GO02 eSn Sn 11 45 17.5 -11
LPAZ La Paz 5.13 4 P Pn 11 45 01.8 +0.5
comp=E,8.4nm,0.3s,baz=152,slow=4.6,SNR=19
LPAZ S Sn 11 46 00.6 +0.7
baz=156,slow=24,SNR=2.4
LPAZ La Paz 5.13 4 ePn Pn 11 45 01.2 0.0
LPAZ S Sn 11 46 00.6 +0.7
ARE Arequipa 5.72 329 eP Pn 11 45 06.0 -2.8
ARE eS Sn 11 46 11.0 -2.5
GO03 Copiap 6.34 194 ePn Pn 11 45 13.7 -3.2
SIV San Ignacio 8.85 54 P Pn 11 45 44.8 -6.0
comp=E,18nm,0.3s,baz=238,slow=8.4,SNR=19
NNA Nana 12.35 318 P P 11 46 46.4 +2.4
comp=E,1.4nm,0.3s,baz=146,slow=8.2,SNR=4.0
TRQA Tornquist 17.48 163 eP Pn 11 47 41.4 -0.1
comp=E,18nm,1.3s
PLCA Paso Flores 19.32 185 eP P 11 47 60.0 -0.8
comp=E,14nm,1.2s
PLCA Paso Flores 19.32 185 PcP P 11 47 60.0 -0.8
PLCA Paso Flores 19.32 185 PcP P 11 47 60.0 -0.8
comp=E,0.2nm,0.3s,baz=4.1,slow=5.9,SNR=4.8
OTAV Otavalo 23.65 334 eP P 11 48 48.1 +2.2
comp=E,14nm,1.3s
RUSC La Rusia 27.54 350 eP P 11 49 21.4 +0.5
comp=E,7.7nm,1.2s
HELC Santa Helena 28.32 345 eP P 11 49 26.6 -1.2
comp=E,11nm,0.6s
FDF Fort de France 36.66 12 eP P 11 50 39.3 -0.7
comp=E,116nm,1.4s
CRPR Cabo Rojo, PR 39.22 2 eP P 11 50 59.1 -2.3
comp=E,20nm,0.8s
OBIP Obispado Ponce 39.28 3 eP P 11 51 01.4 -0.5
comp=E,28nm,1.5s
353A Camilla 54.62 343 P P 11 52 59.7 -1.2
baz=162
ZAIG Zacatecas 55.09 321 eP P 11 53 06.6 +1.8
comp=E,5.6nm,1.0s
RGRS Roger Stewart 55.19 348 eP P 11 53 05.3 +0.4
comp=E,280nm,0.5s
251A Midway 55.64 343 P P 11 53 06.9 -1.3
baz=161
250A Grady 55.78 342 P P 11 53 07.6 -1.6
baz=160
152A Waverly Hall 56.00 343 P P 11 53 09.8 -1.0
baz=162
150A Eclectic 56.30 342 P P 11 53 11.4 -1.5
baz=160
149A Jones 56.52 341 P P 11 53 13.5 -0.9
baz=160
Y54A Tignall 56.64 346 P P 11 53 14.4 -0.8
baz=164
JSC Jenkinsville 56.73 347 eP P 11 53 16.1 +0.2
comp=E,9.9nm,1.0s
Z50A Ashland 56.88 343 P P 11 53 16.1 -0.9
baz=161
Y51A Rockmart 57.26 344 P P 11 53 18.6 -1.0
baz=162
X53A Estanollee 57.39 345 P P 11 53 19.8 -0.8
baz=164
Z48A Northport 57.47 341 P P 11 53 19.6 -1.6
baz=159
Y49A Blount Mountai 57.59 342 P P 11 53 20.5 -1.4
baz=160
X51A Calhoun 57.83 344 P P 11 53 23.0 -0.6
baz=162
W53A Cullowhee 58.00 346 P P 11 53 24.2 -0.7
baz=164
Y47A UCPARC, Winfie 58.05 341 P P 11 53 24.1 -1.1
baz=159
X49A Woodville 58.18 343 P P 11 53 24.8 -1.2
baz=160
X48A Hartselle 58.32 342 P P 11 53 26.4 -0.7
baz=160
V53A Saluda 58.40 346 P P 11 53 27.2 -0.4
baz=164
W50A Signal Mountai 58.55 344 P P 11 53 27.8 -0.9
baz=162
CPCT Cooper Cave 58.59 345 eP P 11 53 28.7 -0.2
comp=E,15nm,1.4s
X47A Russelville 58.62 341 P P 11 53 28.1 -1.1
baz=159
W49A Belvidere 58.73 343 P P 11 53 29.2 -0.7
baz=161
SWET Sewanee 58.73 343 eP P 11 53 29.2 -0.7
comp=E,9.4nm,0.6s
V52A Sevierville 58.74 346 P P 11 53 28.2 -1.7
baz=164
X46A Booneville 58.88 341 P P 11 53 30.1 -0.8
baz=158
W48A Pulaski 58.93 342 P P 11 53 30.6 -0.6
baz=160
V50A Pikeville 58.94 344 P P 11 53 30.8 -0.5
baz=162
OXF Oxford 59.10 340 P P 11 53 31.7 -0.7
baz=157
OXF Oxford 59.10 340 eP P 11 53 31.4 -1.0
comp=E,16nm,1.0s
PLAL Pickwick Lake 59.12 341 eP P 11 53 31.4 -1.2
comp=E,12nm,1.2s
W47A Westpoint 59.23 342 P P 11 53 31.5 -1.8
baz=159
V49A McMinnville 59.24 344 P P 11 53 32.6 -0.8
baz=161
Z40A Long Farm, Mag 59.37 336 P P 11 53 35.1 +0.9
baz=153
V48A Smith Brothers 59.47 343 P P 11 53 34.2 -0.7
baz=160
X43A Marvell 59.59 339 eP P 11 53 36.1 +0.3
comp=E,14nm,0.8s
W45A Hickory Valley 59.62 340 P P 11 53 35.3 -0.7
baz=158
Y41A Eaglette Beard 59.63 337 P P 11 53 36.5 +0.5
baz=154
V47A Nunnelly 59.74 342 P P 11 53 35.3 -1.6
baz=160
U49A Red Boiling Sp 59.91 344 P P 11 53 36.7 -1.3
baz=161
Y40A Okolona 59.99 336 P P 11 53 39.0 +0.5
baz=153
U48A Cassie Pea, Po 60.11 343 P P 11 53 38.7 -0.6
baz=161
WVT Waverly 60.12 342 P P 11 53 38.2 -1.1
baz=159
WVT Waverly 60.12 342 eP P 11 53 38.3 -1.1
comp=E,12nm,1.0s
T50A Nancy 60.16 345 P P 11 53 38.7 -1.0
baz=162
U47A Clarksville 60.25 343 P P 11 53 39.5 -0.8
baz=160
SLBS Sierra La Lagu 60.35 316 eP P 11 53 44.2 +2.8
comp=E,14nm,1.3s
S52A Salyersville 60.39 347 P P 11 53 40.4 -0.8
baz=164
T49A Edmonton 60.41 344 P P 11 53 40.6 -0.8
baz=162,SNR=6.8
MIAR Mount Ida 60.58 336 P P 11 53 42.0 -0.5
baz=153,SNR=6.5
MIAR Mount Ida 60.58 336 eP P 11 53 42.8 +0.2
comp=E,5.7nm,0.8s
T48A Bowling Green 60.64 344 P P 11 53 41.8 -1.0
baz=161
W41B Gary Mavity, V 60.66 338 P P 11 53 42.3 -0.8
baz=155
T47A Sharon Grove 60.71 343 P P 11 53 42.7 -0.8
baz=160,SNR=5.6
X39A Fountain Ranch 60.75 336 P P 11 53 44.2 +0.5
baz=153
TXAR Lajitas Array 60.81 325 P P 11 53 45.0 +0.6
comp=E,0.3nm,0.6s,baz=148,slow=7.7,SNR=4.5
TX31 Lajitas Ar. Si 60.82 325 eP P 11 53 45.3 +0.9
W40A Ferguson Farm, 60.97 337 P P 11 53 45.5 +0.3
baz=154
W40A Ferguson Farm, 60.97 337 eP P 11 53 45.8 +0.6
comp=E,14nm,1.0s
T46A Princeton 60.98 342 P P 11 53 44.2 -1.0
baz=159,SNR=5.8
S48A Wiedeman Farm, 61.07 344 P P 11 53 44.5 -1.3
baz=161
V41A Mountainview 61.17 338 P P 11 53 45.5 -1.1
baz=155
W39A Magazine 61.23 336 P P 11 53 46.5 -0.4
baz=153
U42A Revenden 61.38 339 P P 11 53 46.6 -1.3
baz=156
PBMO Poplar Bluff 61.50 340 eP P 11 53 48.4 -0.4
comp=E,12nm,1.3s
S46A Don Dixon Farm 61.53 343 P P 11 53 47.8 -1.1
baz=160
U41A Viola 61.60 339 P P 11 53 48.3 -1.2
baz=155
WCI Wyandotte Cave 61.67 344 P P 11 53 48.6 -1.2
baz=161
WCI Wyandotte Cave 61.67 344 eP P 11 53 49.2 -0.7
comp=E,18nm,1.3s
R48A Northridge Ran 61.72 345 P P 11 53 49.4 -0.8
baz=162
T43A Greenville 61.74 340 P P 11 53 49.5 -0.8
baz=157
V39A Pettigrew 61.76 337 P P 11 53 50.1 -0.4
baz=153,SNR=7.7
S45A Carrier Mills 61.77 342 P P 11 53 49.3 -1.2
baz=159
R47A Wooly Knot Far 61.79 344 P P 11 53 49.4 -1.2
baz=161
T42A Van Buren 61.95 340 P P 11 53 50.5 -1.2
baz=156
S43A Fulton Ridge, 62.12 341 P P 11 53 51.9 -1.0
baz=157,SNR=6.3
U39A Green Forest 62.18 337 P P 11 53 52.5 -0.9
baz=154
SNAA Sanae 62.20 161 P P 11 53 53.4 +0.3
comp=E,2.4nm,0.9s,baz=275,slow=8.1,SNR=5.3
SNAA Sanae 62.20 161 eP P 11 53 53.4 +0.3
comp=E,12nm,1.5s
R45A Skylar, Fairfi 62.26 342 P P 11 53 52.8 -1.0
baz=159
Q47A Bedord North L 62.37 344 P P 11 53 53.1 -1.4
baz=161
R44A Waltonville 62.45 342 P P 11 53 53.6 -1.4
baz=158
S42A Caledonia 62.53 340 P P 11 53 54.5 -1.0
baz=157
FVM French Village 62.61 341 eP P 11 53 55.1 -1.0
comp=E,28nm,1.3s
S41A Jillco Farms, 62.67 339 P P 11 53 56.1 -0.4
baz=156
ACSO Alum Creek Sta 62.83 348 P P 11 53 56.2 -1.3
baz=165
ACSO Alum Creek Sta 62.83 348 eP P 11 53 56.7 -0.8
comp=E,12nm,1.0s
P47A Martinsville 62.85 345 P P 11 53 55.7 -2.0
baz=161
S40A Lebanon 62.93 339 P P 11 53 57.5 -0.8
baz=155
CCM Cathedral Cave 62.93 340 P P 11 53 57.3 -1.0
baz=156
CCM Cathedral Cave 62.93 340 eP P 11 53 57.5 -0.7
comp=E,8.2nm,0.8s
R42A Luebbering 62.99 340 P P 11 53 58.3 -0.3
baz=157
T38A Diamond 63.06 337 P P 11 53 58.4 -0.7
baz=153,SNR=5.6
R41A Rosebud 63.20 340 P P 11 53 59.1 -0.9
baz=156,SNR=6.2
S39A Bolivar 63.30 338 P P 11 54 00.1 -0.6
baz=154,SNR=8.1
R40A Maddies Statio 63.48 339 P P 11 54 00.7 -1.2
baz=155
MNTX Cornudas Mount 63.58 325 P P 11 54 02.7 -0.1
baz=142
Q41A Truxton 63.75 340 P P 11 54 02.7 -0.8
baz=156
R39A Chumby, Stover 63.76 339 P P 11 54 03.3 -0.4
baz=154
R38A Fenwick Farm, 63.94 338 P P 11 54 04.0 -0.9
baz=154,SNR=5.6
MSTX Muleshoe 64.06 329 P P 11 54 05.6 -0.3
baz=144
MSTX Muleshoe 64.06 329 eP P 11 54 06.0 +0.1
comp=E,5.8nm,0.8s
Q39A Willow Grove F 64.40 339 P P 11 54 07.6 -0.3
baz=155
P40A Paris 64.53 340 P P 11 54 07.5 -1.2
baz=156
Q38A Cooks Store, C 64.54 338 P P 11 54 08.4 -0.3
baz=154,SNR=5.5
L43A Garden Prairie 66.02 344 P P 11 54 17.3 -0.9
baz=159
L40A Anamosa 66.60 342 P P 11 54 21.4 -0.5
baz=157
LAZ Ladron 66.61 326 eP P 11 54 23.8 +1.4
M38A Pleasantville 66.61 340 P P 11 54 21.4 -0.7
baz=155
TASL Snake Pit, Alb 66.67 327 P P 11 54 23.1 +0.3
baz=142
ANMO Albuquerque 66.67 327 P P 11 54 23.8 +1.0
comp=E,1.1nm,0.7s,baz=100,slow=6.2,SNR=4.6
ANMO Albuquerque 66.67 327 P P 11 54 23.5 +0.6
baz=142
ANMO Albuquerque 66.67 327 eP P 11 54 24.3 +1.5
comp=E,3.7nm,1.4s
TASM ASL Pad, Albuq 66.67 327 P P 11 54 23.4 +0.6
baz=142
K42A Prairie Point, 66.73 343 P P 11 54 21.9 -0.9
baz=159
JFWS Jewell Farm 67.11 343 P P 11 54 24.2 -1.0
baz=158
L38A Oak Wood Farm, 67.19 340 P P 11 54 24.8 -0.9
baz=155
K39A Oelwein 67.38 341 P P 11 54 25.5 -1.4
baz=156
I42A Draeger Farm, 67.66 344 P P 11 54 27.9 -0.7
baz=160
J40A Soldiers Grove 67.69 343 P P 11 54 27.9 -0.9
baz=158
J39A Decorah 67.91 342 P P 11 54 29.2 -1.0
baz=157
DBIC Dimbokro 68.32 73 P P 11 54 31.7 -1.7
comp=E,11nm,0.6s,baz=227,slow=4.8,SNR=13
DBIC Dimbokro 68.32 73 eP P 11 54 31.7 -1.7
comp=E,12nm,0.7s
SDCO Great Sand Dun 68.41 329 P P 11 54 34.3 +0.6
baz=143
SDCO Great Sand Dun 68.41 329 eP P 11 54 35.0 +1.2
comp=E,7.6nm,1.4s
QSPA South Pole Qui 68.75 180 P P 11 54 36.6 +1.1
comp=E,2.2nm,0.5s,baz=194,slow=2.7,SNR=9.9
MVCO Mesa Verde 69.47 327 P P 11 54 40.2 -0.1
baz=140
MVCO Mesa Verde 69.47 327 eP P 11 54 42.6 +2.2
comp=E,3.0nm,1.2s
WUAZ Wupatki 69.73 324 eP P 11 54 44.2 +2.4
comp=E,4.3nm,1.0s
F40A Park Falls 69.86 344 P P 11 54 41.6 -0.6
baz=159
H35A Sunnyside Ranc 70.09 340 P P 11 54 43.0 -0.6
baz=154
E40A Wakefield 70.30 344 P P 11 54 44.5 -0.4
baz=159
E39A Mellen 70.40 344 P P 11 54 45.2 -0.3
baz=158
F36A Milaca 70.74 342 P P 11 54 46.7 -0.8
baz=155
U15A North Rim 70.90 324 eP P 11 54 51.4 +2.3
comp=E,2.7nm,0.8s
IRM Iron Mountain 70.92 320 P P 11 54 51.2 +2.3
baz=134
KNB Kanab 71.62 324 eP P 11 54 56.0 +2.7
comp=E,7.9nm,1.1s
GMRC Granite Mounta 71.66 320 P P 11 54 55.1 +1.6
baz=134
SRU San Rafael Swe 71.95 327 eP P 11 54 56.7 +1.5
comp=E,3.4nm,0.7s
EYMN Ely 72.09 344 eP P 11 54 55.2 -0.4
comp=E,14nm,1.4s
FON Fontana 72.26 319 eP P 11 54 59.1 +2.1
CCUT Cedar City 72.30 324 eP P 11 55 00.0 +2.6
comp=E,4.1nm,0.8s
MSU Marysvale 72.36 325 eP P 11 54 59.8 +2.0
KOWA Kowa 72.61 66 P P 11 54 57.4 -2.1
comp=E,4.4nm,0.7s,baz=248,slow=8.2,SNR=5.5
B35A Bob, Littlefor 73.07 343 P P 11 55 00.8 -0.6
baz=156
TPNV Topopah Spring 73.50 322 P P 11 55 06.5 +2.0
baz=134
TPNV Topopah Spring 73.50 322 eP P 11 55 06.8 +2.3
comp=E,6.3nm,1.1s
FURC Furnace Creek, 73.53 321 P P 11 55 06.2 +1.9
baz=134
JLU Jordanelle 73.54 327 eP P 11 55 06.7 +2.0
comp=E,1.5nm,0.9s
B32A Ashes, Strandq 73.92 341 P P 11 55 05.9 -0.4
baz=153
ISA Isabella, Lake 73.94 320 eP P 11 55 09.4 +2.5
comp=E,2.1nm,0.8s
R11A Troy Canyon, C 74.10 323 P P 11 55 09.9 +2.0
baz=135
CWC Cottonwood Cre 74.22 320 P P 11 55 10.3 +1.7
baz=133
FIGC Figueroa Mtn. 74.25 318 eP P 11 55 11.3 +2.6
PDAR Pinedale Array 74.26 330 P P 11 55 08.4 -0.4
comp=E,0.2nm,0.4s,baz=101,slow=8.4,SNR=2.5
VES Vestal, Richgr 74.43 319 P P 11 55 11.4 +1.8
baz=132
SPUT South Promonto 74.57 327 eP P 11 55 12.4 +1.8
comp=E,13nm,1.1s
SNOW Snow King Moun 75.36 330 eP P 11 55 15.6 +0.5
comp=E,3.6nm,0.6s
ULM Lac du Bonnet 75.38 342 P P 11 55 14.2 -0.5
comp=E,3.3nm,0.5s,baz=153,slow=5.1,SNR=9.1
ULM Lac du Bonnet 75.38 342 eP P 11 55 14.3 -0.4
comp=E,3.5nm,0.5s
OMMB Old Mammoth Mi 75.56 321 eP P 11 55 17.9 +1.5
comp=E,8.8nm,1.4s
NV01 Mina Array Sit 75.70 322 eP P 11 55 18.8 +1.7
NVAR Mina Array Bea 75.70 322 P P 11 55 18.3 +1.1
comp=E,0.7nm,0.8s,baz=147,slow=7.3,SNR=5.7
KVN Kaiserville 76.00 322 eP P 11 55 20.1 +1.3
comp=E,2.3nm,0.9s
YHH Holmes Hill 76.42 330 eP P 11 55 22.7 +1.5
comp=E,2.6nm,0.9s
TOA0 Torodi Ar. Sit 76.94 70 eP P 11 55 22.7 -1.7
TOA1 Torodi Ar. Sit 76.94 70 eP P 11 55 22.7 -1.7
TORD Torodi Ar. Bea 76.94 70 P P 11 55 22.7 -1.7
comp=E,3.7nm,0.5s,baz=255,slow=5.3,SNR=26
PAHR Pah Rah Range 77.18 322 eP P 11 55 27.3 +1.9
comp=E,5.7nm,0.9s
HLID Hailey 77.21 328 P P 11 55 27.4 +1.9
baz=137
HLID Hailey 77.21 328 eP P 11 55 27.7 +2.2
comp=E,4.7nm,1.3s
BEKR Beckworth 77.85 322 eP P 11 55 31.0 +1.9
comp=E,5.1nm,1.3s
ORV Oroville 78.31 321 eP P 11 55 33.3 +1.8
comp=E,9.4nm,1.3s
BMO Blue Mountains 79.59 327 eP P 11 55 39.6 +1.2
comp=E,2.9nm,1.0s
K05A Summer Lake 80.04 324 eP P 11 55 43.2 +2.2
comp=E,21nm,1.4s
YBH Yreka Blue Hor 80.42 322 P P 11 55 43.1 +0.2
comp=E,1.0nm,0.7s,baz=128,slow=12,SNR=3.6
PINE Pine Mountain 80.77 324 eP P 11 55 47.2 +2.2
comp=E,7.4nm,1.2s
YKA Yellowknife Ar 91.27 340 P P 11 56 36.0 +0.2
comp=E,3.0nm,0.6s,baz=133,slow=4.5,SNR=38
YKA pP pP 11 57 09.6 +0.3
comp=E,0.8nm,0.9s,baz=137,slow=4.7,SNR=3.7
YKW3 Yellowknife Ar 91.32 340 eP P 11 56 36.5 +0.4
comp=E,8.3nm,1.4s
AS01 Alice Springs 130.14 207 ePKPdf **PKPdf** 12 02 41.6 +0.4
WR1 Warramunga Arr 133.22 210 ePKPdf **PKPdf** 12 02 47.5 +0.5
WRA Warramunga Arr 133.22 210 PKP **PKPdf** 12 02 47.5 +0.5
comp=E,0.4nm,0.4s,baz=155,slow=1.9,SNR=6.2
MAKZ Makanchi 145.16 36 ePKPbc **PKPab** 12 03 07.9 +0.1
MK31 Makanchi Array 145.34 36 ePKPbc **PKPab** 12 03 08.5 -0.1
MK32 Makanchi Array 145.34 36 ePKPbc **PKPbc** 12 03 08.3 +0.1
MKAR Makanchi Array 145.34 36 PKPbc **PKPbc** 12 03 08.3 +0.1
comp=E,2.9nm,0.7s,baz=5.8,slow=2.9,SNR=7.9
MKAR Makanchi Array 145.34 36 ePKPbc **PKPab** 12 03 08.5 -0.1
MK01 Makanchi Array 145.36 36 ePKPbc **PKPab** 12 03 08.6 0.0
MJAR Matsushiro Arr 152.36 309 PKPbc **PKPbc** 12 03 26.4 -0.3
comp=E,0.9nm,0.7s,baz=215,slow=0.5,SNR=4.5
MAJO Matsushiro 152.36 309 ePKPbc **PKPbc** 12 03 27.3 +0.6
MJB9 Matsu-Tunnel 152.36 309 ePKPbc **PKPbc** 12 03 27.5 +0.8

*IDC **03** 11:54:29.7±0.7, 3°.39N×82°.91W, h0km, mb4.4/18, mb1 4.5/22, mb1mx4.4/48, mbtmp4.4/22, ML3.6/4, MS3.7/6, Ms1 3.7/6, ms1mx3.2/44, Error ellipse: s-maj=30.4km s-min=12.0km az=46.0*

*NEIC **03** 11:54:31.5±0.2, 3°.31N×82°.88W, h10km, mb4.7/180, Error ellipse: s-maj=5.6km s-min=3.1km az=213.0*

*ISCJB **03** 11:54:34.1±1.6, 3°.58N±0°.04×82°.75W±0°.04, h33km±11km, mb4.6/196, Error ellipse: s-maj=8.1km s-min=4.6km az=34.4*

ISC 03 11:54:34.0±3.0, 3°.35N±0°.07×82°.94W±0°.08, h27km±21km, n488, σ0.99/494, mb4.7/196, 3C-2D, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTAV	**Otavalo**	**5.45**	**124**	ePn	**Pn**	**11 55 52.1**	**-1.8**
OTAV	**Otavalo**	**5.45**	**124**	eP	**Pn**	**11 55 52.1**	**-1.8**
OTAV	**Otavalo**	**5.45**	**124**	eP	**Pn**	**11 55 52.1**	**-1.8**
SOTA	**Rioblanco**	**6.44**	**101**	eP	**Pn**	**11 56 05.8**	**-1.8**
SOTA	**Rioblanco**	**6.44**	**101**	eP	**Pn**	**11 56 05.8**	**-1.8**
BCIP	**Isla Barro Col**	**6.55**	**28**	ePn	**Pn**	**11 56 07.2**	**-1.5**
BCIP	**Isla Barro Col**	**6.55**	**28**	eP	**Pn**	**11 56 08.5**	**-0.2**
BCIP	**Isla Barro Col**	**6.55**	**28**	eP	**Pn**	**11 56 08.5**	**-0.2**
YOTC	**Yotoco, Valle**	**6.61**	**84**	eP	**Pn**	**11 56 08.5**	**-1.1**
YOTC	**Yotoco, Valle**	**6.61**	**84**	eP	**Pn**	**11 56 08.5**	**-1.1**
PCON	**Cinco Dias**	**6.61**	**99**	eP	**Pn**	**11 56 09.3**	**-0.7**
PCON	**Cinco Dias**	**6.61**	**99**	eP	**Pn**	**11 56 09.3**	**-0.7**
HDC	**Heredia**	**6.71**	**350**	ePn	**Pn**	**11 56 08.6**	**-2.3**
JTS	**Juntasabangare**	**7.18**	**344**	Pn	**Pn**	**11 56 13.8**	**-3.5**
5.0nm,0.3s,baz=251,slow=3.9,SNR=21							
FLOC	**Florencia**	**7.49**	**103**	eP	**Pn**	**11 56 19.8**	**-1.7**
FLOC	**Florencia**	**7.49**	**103**	eP	**Pn**	**11 56 19.8**	**-1.7**
HELC	**Santa Helena**	**7.91**	**69**	ePn	**Pn**	**11 56 28.2**	**+0.6**
HELC	**Santa Helena**	**7.91**	**69**	eP	**Pn**	**11 56 27.6**	**0.0**
HELC	**Santa Helena**	**7.91**	**69**	eP	**Pn**	**11 56 27.6**	**0.0**
PRAC	**Prado**	**8.05**	**87**	ePn	**Pn**	**11 56 29.6**	**+0.3**
ROSC	**El Rosal**	**8.72**	**80**	Pn	**Pn**	**11 56 40.9**	**+2.0**
1.6nm,0.3s,baz=246,slow=7.6,SNR=13							
ROSC	**El Rosal**	**8.72**	**80**	ePn	**Pn**	**11 56 41.9**	**+3.0**
ROSC	**El Rosal**	**8.72**	**80**	eP	**Pn**	**11 56 40.0**	**+1.1**
ROSC	**El Rosal**	**8.72**	**80**	eP	**Pn**	**11 56 40.0**	**+1.1**
PTBC	**PUERTO BERRIO,**	**9.03**	**69**	eP	**Pn**	**11 56 44.0**	**+1.4**
PTBC	**PUERTO BERRIO,**	**9.03**	**69**	eP	**Pn**	**11 56 44.0**	**+1.4**
RUSC	**La Rusia**	**10.14**	**75**	ePn	**Pn**	**11 57 00.8**	**+2.4**
RUSC	**La Rusia**	**10.14**	**75**	eP	**Pn**	**11 56 55.5**	**-3.0**
RUSC	**La Rusia**	**10.14**	**75**	eP	**Pn**	**11 56 55.5**	**-3.0**
SDV	**Santo Domingo**	**13.41**	**65**	Pn	**Pn**	**11 57 42.9**	**0.0**
0.4nm,0.3s,baz=210,slow=11,SNR=6.7							
SDV				LR	LR	12 02 45.2	
comp=Z,330nm,21.7s,baz=244,slow=37							
SDV	**Santo Domingo**	**13.41**	**65**	ePn	**Pn**	**11 57 43.1**	**+0.2**
APG	**El Apazote**	**13.75**	**328**	Pn	**Pn**	**11 57 48.9**	**+1.4**
0.2nm,0.3s,baz=148,slow=18,SNR=5.9							
APG				LR	LR	12 02 15.7	
comp=Z,391nm,19.2s,baz=150,slow=34							
CCIG	**Comitan**	**15.71**	**325**	ePn	**P**	**11 58 16.2**	**-1.4**
14nm,1.2s							
NNA	**Nana**	**16.40**	**158**	Pn	**Pn**	**11 58 23.0**	**+0.5**
0.5nm,0.3s,baz=306,slow=14,SNR=2.2							
NNA				LR	LR	12 04 19.0	
comp=Z,259nm,20.3s,baz=320,slow=36							
CMIG	**Matias Romero**	**18.00**	**320**	P	**Pn**	**11 58 41.4**	**-1.0**
0.2nm,0.3s,baz=132,slow=12,SNR=9.4							
TLIG	**Tlapa**	**20.84**	**314**	eP	Pn	11 59 16.1	-0.5
32nm,1.1s							
OBIP	**Obispado Ponce**	**21.66**	**46**	eP	**P**	**11 59 23.1**	**+0.4**
38nm,1.2s							
AOPR	**Arecibo Observ**	**21.76**	**46**	eP	**P**	**11 59 24.6**	**+0.9**
55nm,1.1s							
SJG	**San Juan**	**22.04**	**47**	LR	LR	12 07 09.5	
comp=Z,86nm,20.9s,baz=236,slow=35							
SJG	**San Juan**	**22.04**	**47**	eP	**P**	**11 59 27.0**	**+0.2**
77nm,1.5s							
HUMP	**Col San Antoni**	**22.28**	**47**	eP	**P**	**11 59 29.2**	**-0.1**
49nm,1.2s							
CBYP	**Canovanas**	**22.36**	**47**	eP	**P**	**11 59 31.1**	**+0.9**
46nm,1.3s							
MTP	**Monte Pirata**	**22.47**	**48**	eP	**P**	**11 59 32.0**	**+0.6**
46nm,1.3s							

SAML	Samuel 19nm,1.3s	23.18	122	eP	P	11 59 36.8	-2.0
PTGA	Pitinga 8.1nm,1.0s,baz=295,slow=12,SNR=5.6	23.32	100	P	P	11 59 39.8	-0.4
PTGA	Pitinga 28nm,1.2s	23.32	100	eP	P	11 59 40.5	+0.3
JRQG	Juriquilla Cam 19nm,1.0s	24.25	317	eP	P	11 59 50.8	+1.5
SMRT	St. Maarten 97nm,1.4s	24.34	52	eP	P	11 59 49.5	-0.3
LPAZ	La Paz 9.2nm,1.0s,baz=340,slow=10,SNR=20	24.39	144	P	P	11 59 51.6	+0.7
LPAZ	La Paz 17nm,1.1s	24.39	144	eP	P	11 59 51.7	+0.7
MNMC	Minye Minye 35nm,1.4s	25.91	150	eP	P	12 00 05.4	+1.0
LNIG	Linares 23nm,1.5s	26.69	325	eP	P	12 00 12.9	+1.9
SIV	San Ignacio 1.5nm,1.0s,baz=334,slow=9.7,SNR=3.4	28.93	132	P	P	12 00 31.3	+0.1
LRAL	Lakeview Retre baz=172	29.78	353	P	P	12 00 38.6	+0.1
LRAL	Lakeview Retre 18nm,1.4s	29.78	353	eP	P	12 00 38.3	-0.2
Z53A	Monticello baz=179	29.78	359	P	P	12 00 38.6	0.0
Z47A	Carrollton baz=170	30.08	351	P	P	12 00 40.7	-0.5
Y53A	Monroe baz=179	30.36	359	P	P	12 00 43.2	-0.5
Y54A	Tignall baz=180	30.36	0	P	P	12 00 42.2	-1.4
Y51A	Rockmart baz=176	30.46	357	P	P	12 00 44.8	+0.3
Y46A	Houston baz=168	30.88	350	P	P	12 00 48.4	+0.2
Y45A	Yeager Farm, C baz=167	30.98	349	P	P	12 00 49.5	+0.4
X49A	Woodville baz=173	31.17	355	P	P	12 00 50.5	-0.3
JCT	Junction City baz=146,SNR=5.5	31.34	331	P	P	12 00 53.3	+0.8
JCT	Junction City 21nm,1.3s	31.34	331	eP	P	12 00 53.8	+1.3
X47A	Russelville baz=170	31.35	352	P	P	12 00 51.9	-0.5
BG3	Lake Jocassee 20nm,1.1s	31.49	0	eP	P	12 00 53.5	-0.1
X45A	UM Field Stati baz=168	31.50	350	P	P	12 00 54.0	+0.3
OXF	Oxford baz=168	31.59	350	P	P	12 00 53.9	-0.5
OXF	Oxford 26nm,1.1s	31.59	350	eP	P	12 00 54.3	-0.1
W52A	Murphy baz=178	31.60	358	P	P	12 00 54.8	+0.2
W53A	Cullowhee baz=180,SNR=6.2	31.66	360	P	P	12 00 55.5	+0.2
KMSC	Kings Mountain baz=183	31.67	3	P	P	12 00 55.4	+0.2
KMSC	Kings Mountain 13nm,1.1s	31.67	3	eP	P	12 00 55.4	+0.2
SWET	Sewanee 11nm,1.3s	31.83	355	eP	P	12 00 56.3	-0.3
CPCT	Cooper Cave 19nm,1.3s	31.98	358	eP	P	12 00 58.2	+0.3
W47A	Westpoint baz=171	32.03	353	P	P	12 00 57.8	-0.6
V53A	Saluda baz=180	32.16	0	P	P	12 00 58.7	-0.9
V51A	Loudon baz=177,SNR=6.5	32.32	358	P	P	12 01 00.6	-0.3
V52A	Sevierville baz=179	32.34	359	P	P	12 01 00.4	-0.7
V49A	McMinnville baz=174	32.37	355	P	P	12 01 00.9	-0.5
V48A	Smith Brothers baz=173	32.43	354	P	P	12 01 01.6	-0.3
TXAR	Lajitas Array 0.6nm,1.1s,baz=120,slow=7.4,SNR=4.2	32.48	325	P	P	12 01 02.1	-0.4
TXAR	1.4nm,1.0s,baz=137,slow=3.1,SNR=8.2			PcP	PcP	12 03 49.5	+0.2
MIAR	Mount Ida baz=160	32.58	344	P	P	12 01 03.4	+0.2
MIAR	Mount Ida 12nm,1.3s	32.58	344	eP	P	12 01 03.4	+0.2
V47A	Nunnelly baz=171	32.59	353	P	P	12 01 02.7	-0.7
V46A	Holladay baz=170	32.65	352	P	P	12 01 02.6	-1.2
W41B	Gary Mavity, V baz=163	32.82	346	P	P	12 01 05.2	-0.1
W41B	Gary Mavity, V 18nm,1.3s	32.82	346	eP	P	12 01 05.6	+0.3
WVT	Waverly baz=171	32.93	353	P	P	12 01 05.2	-1.1
WHAR	Wooly Hollow 29nm,1.4s	32.94	346	eP	P	12 01 06.6	+0.2
W40A	Ferguson Farm, baz=161	33.05	345	P	P	12 01 07.7	+0.4
U49A	Red Boiling Sp baz=175	33.11	356	P	P	12 01 07.5	-0.3
U48A	Cassie Pea, Po baz=173	33.17	355	P	P	12 01 08.0	-0.3
W39A	Magazine baz=160	33.25	344	P	P	12 01 09.2	+0.2
W39A	Magazine 14nm,1.3s	33.25	344	eP	P	12 01 09.5	+0.5
V41A	Mountainview baz=163,SNR=6.0	33.38	346	P	P	12 01 09.9	-0.3
T50A	Nancy baz=176	33.55	357	P	P	12 01 11.3	-0.4
V40A	Witts Springs baz=162	33.56	345	P	P	12 01 11.5	-0.4
V40A	Witts Springs 11nm,1.4s	33.56	345	eP	P	12 01 10.9	-0.9
T52A	Hallie baz=180	33.60	360	P	P	12 01 11.7	-0.4
T49A	Edmonton baz=175,SNR=6.7	33.68	356	P	P	12 01 12.2	-0.6
U42A	Revenden baz=165,SNR=5.8	33.72	348	P	P	12 01 12.8	-0.3
T48A	Bowling Green baz=174	33.75	355	P	P	12 01 13.2	-0.2
V39A	Pettigrew baz=160	33.81	344	P	P	12 01 13.9	-0.1
T46A	Princeton baz=171	33.84	353	P	P	12 01 13.4	-0.7
PBMO	Poplar Bluff 13nm,1.3s	33.98	349	eP	P	12 01 14.9	-0.4
U40A	Yellville baz=162	34.10	346	P	P	12 01 16.3	-0.1
S51A	Beattyville baz=179	34.13	359	P	P	12 01 16.4	-0.3
S52A	Salyersville baz=180	34.17	360	P	P	12 01 16.8	-0.2
T43A	Greenville baz=167	34.24	350	P	P	12 01 17.2	-0.4
S48A	Wiedeman Farm, baz=174	34.26	356	P	P	12 01 17.1	-0.8
U39A	Green Forest baz=161	34.28	345	P	P	12 01 18.0	0.0
T42A	Van Buren baz=165,SNR=6.8	34.35	348	P	P	12 01 17.3	-1.3
T41A	Mountain View baz=164	34.50	347	P	P	12 01 19.6	-0.3
USIN	University of 57nm,1.4s	34.72	353	eP	P	12 01 21.2	-0.6
T40A	Mansfield baz=163,SNR=5.0	34.77	347	P	P	12 01 21.9	-0.3
WCI	Wyandotte Cave baz=174	34.85	355	P	P	12 01 22.2	-0.6
WCI	Wyandotte Cave 25nm,1.4s	34.85	355	eP	P	12 01 22.3	-0.6
T39A	Clever baz=162	34.86	345	P	P	12 01 23.5	+0.5
R47A	Wooly Knot Far baz=174	34.94	355	P	P	12 01 22.8	-0.8
R46A	Gibon Southern baz=172	34.95	354	P	P	12 01 23.8	0.0
S42A	Caledonia baz=166	35.01	349	P	P	12 01 23.3	-1.0
S41A	Jillco Farms, baz=164	35.02	348	P	P	12 01 23.7	-0.7
T38A	Diamond baz=160	35.11	344	P	P	12 01 24.8	-0.4
R45A	Skylar, Fairfi baz=171	35.12	353	P	P	12 01 24.8	-0.4
FVM	French Village 14nm,1.3s	35.15	350	eP	P	12 01 24.9	-0.5
R44A	Waltonville baz=169	35.19	352	P	P	12 01 25.5	-0.3
S40A	Lebanon baz=163	35.20	347	P	P	12 01 25.7	-0.3
MNTX	Cornudas Mount baz=139,SNR=6.4	35.23	326	P	P	12 01 26.6	+0.3
MNTX	Cornudas Mount 7.7nm,1.3s	35.23	326	eP	P	12 01 26.8	+0.5
R43A	Red Bud baz=168,SNR=5.7	35.34	350	P	P	12 01 27.1	0.0
CCM	Cathedral Cave baz=166	35.37	349	P	P	12 01 26.7	-0.7
CCM	Cathedral Cave 24nm,1.2s	35.37	349	eP	P	12 01 26.4	-1.0
S39A	Bolivar baz=152,SNR=6.7	35.48	346	P	P	12 01 28.1	-0.2
R42A	Luebbering baz=166	35.50	349	P	P	12 01 28.0	-0.5
OLIL	Olney 55nm,1.5s	35.53	353	eP	P	12 01 28.2	-0.5
Q47A	Bedord North L baz=174	35.56	355	P	P	12 01 28.2	-0.8
S38A	Stockton baz=161	35.57	345	P	P	12 01 28.6	-0.5
R41A	Rosebud baz=165,SNR=6.6	35.63	349	P	P	12 01 29.1	-0.5
MSTX	Muleshoe baz=144,SNR=7.2	35.64	331	P	P	12 01 30.3	+0.4
MSTX	Muleshoe 20nm,1.1s	35.64	331	eP	P	12 01 30.6	+0.7
Q45A	Warren Harvey, baz=171,SNR=5.3	35.70	353	P	P	12 01 28.7	-1.5
R40A	Maddies Statio baz=164	35.81	347	P	P	12 01 30.6	-0.5
Q44A	Meyer Farm, Va baz=170	35.82	352	P	P	12 01 30.5	-0.7
AMTX	Amarillo baz=147	35.88	333	P	P	12 01 32.4	+0.5
AMTX	Amarillo 36nm,1.3s	35.88	333	eP	P	12 01 32.4	+0.5
R39A	Chumby, Stover baz=163	36.00	346	P	P	12 01 31.1	-1.7
R38A	Fenwick Farm, baz=161	36.09	345	P	P	12 01 32.8	-0.8
Q41A	Truxton baz=166,SNR=5.2	36.23	349	P	P	12 01 34.2	-0.6
P45A	Graceland, Par baz=172	36.28	354	P	P	12 01 34.0	-1.1
P46A	Rosedale baz=173	36.31	354	P	P	12 01 34.7	-0.7
P44A	Sand Creek, Wi baz=170	36.32	353	P	P	12 01 35.1	-0.4
Q40A	Laux Farm, Aux baz=164	36.44	348	P	P	12 01 35.7	-0.9
P43A	Skaggs, Pawnee baz=169	36.62	351	P	P	12 01 37.5	-0.5
Q39A	Willow Grove F baz=163	36.69	347	P	P	12 01 38.2	-0.4
P42A	Winchester baz=168	36.69	350	P	P	12 01 37.4	-1.3
ACSO	Alum Creek Sta baz=180	36.72	360	P	P	12 01 38.4	-0.5
Q38A	Cooks Store, C baz=162,SNR=5.0	36.76	346	P	P	12 01 38.7	-0.5
P40A	Paris baz=165	36.95	348	P	P	12 01 40.2	-0.7
O56A	Blue Knob Stat baz=187	36.97	6	P	P	12 01 41.4	+0.4
O44A	Mansfield baz=171	36.98	353	P	P	12 01 40.3	-0.8
SFIN	Lafayette baz=173	37.05	355	P	P	12 01 40.8	-0.9
SFIN	Lafayette 14nm,1.0s	37.05	355	eP	P	12 01 40.9	-0.9
P39B	Salisbury baz=164	37.06	347	P	P	12 01 41.4	-0.5
O43A	Sugar Creek Fa baz=169	37.22	352	P	P	12 01 42.7	-0.5
121A	Cookes Peak, D baz=136	37.22	324	P	P	12 01 45.3	+1.8
O42A	Bath baz=168	37.24	351	P	P	12 01 43.3	-0.1
O41A	Passleys Farm, baz=167	37.30	350	P	P	12 01 43.3	-0.5
SSPA	Standing Stone baz=188	37.40	6	P	P	12 01 44.7	0.0
SSPA	Standing Stone 22nm,1.2s	37.40	6	eP	P	12 01 44.8	+0.1
HDIL	Hopedale baz=170	37.48	352	P	P	12 01 43.9	-1.4
HDIL	Hopedale 39nm,1.4s	37.48	352	eP	P	12 01 44.5	-0.9
N44A	Piper City baz=171	37.57	354	P	P	12 01 44.8	-1.3
BNM	Barren Site	37.76	327	eP	P	12 01 49.3	+1.2
N43A	Stutzman Famil baz=170	37.84	352	P	P	12 01 47.9	-0.5
N42A	Yates City baz=168,SNR=7.5	37.86	351	P	P	12 01 47.6	-0.9
N41A	Harden Midland baz=167	37.87	350	P	P	12 01 47.6	-1.0
TASL	Snake Pit, Alb baz=140,SNR=9.0	38.27	328	P	P	12 01 53.7	+1.3
ANMO	Albuquerque 4.7nm,1.1s,baz=144,slow=10.0,SNR=9.6	38.27	328	P	P	12 01 53.3	+1.0
ANMO	0.3nm,0.3s,baz=181,slow=7.5,SNR=5.9			PcP	PcP	12 04 06.1	-0.2
ANMO	Albuquerque baz=140	38.27	328	P	P	12 01 53.1	+0.7
ANMO	Albuquerque 6.0nm,1.1s	38.27	328	eP	P	12 01 53.6	+1.2
ANMO				ePcP	PcP	12 04 06.5	+0.2
TASM	ASL Pad, Albuq baz=140,SNR=8.7	38.27	328	P	P	12 01 53.8	+1.4
M43A	Waltham Townsh baz=170	38.30	353	P	P	12 01 51.3	-1.0
N39A	Derby Farms, D baz=164	38.34	348	P	P	12 01 52.0	-0.6
N38A	Joes South For baz=163	38.42	347	P	P	12 01 53.0	-0.3
M41A	Milan baz=168	38.47	351	P	P	12 01 52.7	-1.0
CBKS	Cedar Bluff baz=152	38.48	339	P	P	12 01 55.5	+1.6
CPUP	Villa Florida 4.3nm,1.1s,baz=166,slow=3.2,SNR=3.1	38.53	141	PcP	PcP	12 04 07.2	+0.2
M39A	Webster baz=165	38.86	349	P	P	12 01 56.1	-0.9
TUC	Tucson baz=132	38.89	321	P	P	12 01 57.8	+0.3
TUC	Tucson 6.8nm,1.3s	38.89	321	eP	P	12 01 58.6	+1.1
L42A	Oliver, Polo baz=169	38.95	352	P	P	12 01 56.9	-0.9
T25A	Trinidad baz=145,SNR=11	38.99	332	P	P	12 01 59.9	+1.5
T25A	Trinidad 26nm,1.3s	38.99	332	eP	P	12 02 00.3	+1.9
L43A	Garden Prairie baz=171	39.01	353	P	P	12 01 57.0	-1.2
L41A	Preston baz=168	39.15	351	P	P	12 01 58.6	-0.8
L40A	Anamosa baz=167	39.25	350	P	P	12 01 59.4	-0.8
SCIA	State Center 18nm,1.1s	39.48	348	eP	P	12 02 01.8	-0.4
L38A	Oak Wood Farm, baz=164	39.65	348	P	P	12 02 02.6	-1.0
K42A	Prairie Point, baz=170	39.67	353	P	P	12 02 02.4	-1.4
KSCO	Kaye Shedlock' 45nm,1.0s	39.76	336	eP	P	12 02 06.7	+1.9
K40A	Colesburg baz=167	39.86	351	P	P	12 02 04.0	-1.3
X18A	Snowflake 11nm,1.4s	39.91	324	eP	P	12 02 07.7	+1.6
JFWS	Jewell Farm baz=169	39.93	352	P	P	12 02 05.4	-0.5
JFWS	Jewell Farm 27nm,1.4s	39.93	352	eP	P	12 02 05.2	-0.7
SDCO	Great Sand Dun baz=144,SNR=28	39.99	332	P	P	12 02 08.1	+1.3
SDCO	Great Sand Dun 16nm,1.1s	39.99	332	eP	P	12 02 08.1	+1.3
K39A	Oelwein baz=166	39.99	350	P	P	12 02 05.2	-1.2
J41A	Loganville baz=169	40.34	352	P	P	12 02 07.9	-1.4
K37A	Belmond baz=163	40.39	348	P	P	12 02 08.9	-0.8
J40A	Soldiers Grove baz=168	40.48	351	P	P	12 02 09.2	-1.2
J39A	Decorah baz=166	40.57	350	P	P	12 02 09.8	-1.5
S22A	4UR Ranch, Cre baz=142,SNR=6.3	40.63	330	P	P	12 02 13.4	+1.3
S22A	4UR Ranch, Cre 11nm,1.5s	40.63	330	eP	P	12 02 13.6	+1.4
I43A	Langenfeld Bro baz=172	40.63	354	P	P	12 02 09.9	-1.7
I42A	Draeger Farm, 45nm,1.4s	40.72	353	eP	P	12 02 11.8	-0.6
X16A	Lo Mia Camp, P 6.9nm,1.2s	40.72	323	eP	P	12 02 13.6	+0.8
Q24A	Divide 7.6nm,1.2s	40.81	333	eP	P	12 02 14.8	+1.1
I40A	Norwalk baz=168	40.94	352	P	P	12 02 13.1	-1.2
I41A	Arkdale baz=169	41.00	352	P	P	12 02 13.1	-1.7
I39A	Houston baz=167	41.05	351	P	P	12 02 13.7	-1.4
MVCO	Mesa Verde baz=139,SNR=7.4	41.06	328	P	P	12 02 17.0	+1.3
MVCO	Mesa Verde 18nm,1.3s	41.06	328	eP	P	12 02 17.0	+1.3
J36A	Seneca 1, Swea baz=162	41.08	347	P	P	12 02 14.5	-0.9
OGNE	Ogallala baz=150	41.19	338	P	P	12 02 17.9	+1.4
OGNE	Ogallala 45nm,1.2s	41.19	338	eP	P	12 02 18.3	+1.8
Y14A	Wickenburg 9.0nm,1.3s	41.36	321	eP	P	12 02 18.6	+0.7
WUAZ	Wupatki baz=134,SNR=9.6	41.43	324	P	P	12 02 20.0	+1.3
WUAZ	Wupatki 17nm,1.2s	41.43	324	eP	P	12 02 20.1	+1.5
H40A	Chili baz=169	41.62	352	P	P	12 02 18.9	-0.9
ISCO	Idaho Springs baz=145,SNR=8.0	41.70	333	P	P	12 02 22.1	+1.2
ISCO	Idaho Springs 6.1nm,1.1s	41.70	333	eP	P	12 02 22.3	+1.4
LONY	Lake Ozonia baz=192	41.76	9	P	P	12 02 20.2	-0.8
PV01	Paradox Valley 9.3nm,1.4s	41.80	329	eP	P	12 02 22.5	+0.8
H39A	Augusta baz=167,SNR=5.5	41.81	351	P	P	12 02 20.4	-1.0
SMCO	Snowmass 9.9nm,1.1s	41.82	332	eP	P	12 02 23.2	+1.2
PV15	Paradox Valley 16nm,1.1s	41.91	330	eP	P	12 02 24.3	+1.7
PV02	Paradox Valley 13nm,1.2s	41.94	329	eP	P	12 02 24.8	+1.9
H38A	Maiden Rock baz=166	41.97	350	P	P	12 02 21.3	-1.4
ECSD	EROS Data Cent baz=159	42.00	345	P	P	12 02 22.6	-0.4
ECSD	EROS Data Cent 8.4nm,1.3s	42.00	345	eP	P	12 02 22.8	-0.2
PV05	Paradox Valley 13nm,1.2s	42.03	329	eP	P	12 02 23.9	+0.4
PV03	Paradox Valley 14nm,1.2s	42.03	329	eP	P	12 02 24.7	+1.1
PV07	Paradox Valley 11nm,1.1s	42.07	329	eP	P	12 02 25.4	+1.6
PV04	Paradox Valley 19nm,1.4s	42.17	329	eP	P	12 02 25.0	+0.4
H36A	Jessenland, He baz=164	42.19	348	P	P	12 02 23.4	-1.0
G40A	Rib Lake baz=169	42.23	352	P	P	12 02 23.6	-1.2
G39A	Holcombe baz=168,SNR=7.6	42.39	351	P	P	12 02 25.1	-1.0
H35A	Sunnyside Ranc baz=162	42.49	347	P	P	12 02 25.2	-1.7
F41A	Three Lakes baz=171	42.56	354	P	P	12 02 26.3	-1.2
SPMN	Marine on St. baz=165	42.60	350	P	P	12 02 26.6	-1.2
SPMN	Marine on St. 20nm,1.1s	42.60	350	eP	P	12 02 26.6	-1.2
U15A	North Rim 16nm,1.2s	42.60	324	eP	P	12 02 30.0	+1.7
W13A	Hualapai Mount 7.9nm,1.3s	42.67	322	eP	P	12 02 30.1	+1.3
H34A	Spellman Lake, baz=161	42.67	346	P	P	12 02 27.9	-0.5
N23A	Red Feather La baz=145,SNR=5.4	42.74	334	P	P	12 02 30.6	+1.3
N23A	Red Feather La 11nm,1.2s	42.74	334	eP	P	12 02 30.1	+0.7
F40A	Park Falls baz=169	42.86	353	P	P	12 02 28.6	-1.3
PHWY	Pilot Hill 10nm,1.2s	42.86	335	eP	P	12 02 31.1	+0.7
IRM	Iron Mountain baz=129,SNR=6.6	42.87	319	P	P	12 02 31.5	+1.3
H33A	Prehn Over Nor baz=160	42.92	346	P	P	12 02 29.9	-0.6
MONP2	Monument Peak baz=126	42.95	317	P	P	12 02 31.9	+0.8
F39A	Loretta baz=168	42.97	352	P	P	12 02 29.0	-1.7
E42A	Champion baz=173	43.13	355	P	P	12 02 31.4	-0.7
F38A	Pierce - Schro baz=167,SNR=7.1	43.15	351	P	P	12 02 31.3	-1.0
O20A	White River Ci baz=142	43.18	331	P	P	12 02 34.1	+1.3
O20A	White River Ci 11nm,1.2s	43.18	331	eP	P	12 02 34.1	+1.3
KNB	Kanab 12nm,1.2s	43.31	324	eP	P	12 02 35.2	+1.2
BELC	Belle Mtn. Jos baz=128,SNR=7.3	43.33	319	P	P	12 02 35.3	+1.2
F36A	Milaca baz=164	43.34	349	P	P	12 02 32.6	-1.2
E40A	Wakefield baz=170	43.35	353	P	P	12 02 32.9	-1.0
E39A	Mellen baz=169,SNR=6.0	43.37	352	P	P	12 02 33.2	-0.9
PFO	Pinyon Flats O baz=127,SNR=5.4	43.40	318	P	P	12 02 35.8	+1.1
PFO	Pinyon Flats O 11nm,1.2s	43.40	318	eP	P	12 02 35.8	+1.1
CPE	Camp Elliot 11nm,1.1s	43.42	317	eP	P	12 02 35.5	+0.9
LDFC	Landfair 12nm,1.4s	43.42	321	eP	P	12 02 36.1	+1.3
SRU	San Rafael Swe 16nm,1.2s	43.54	328	eP	P	12 02 36.8	+1.0
F35A	Swanville baz=163	43.54	348	P	P	12 02 34.3	-1.1
LCMT	Little Creek M 6.3nm,1.4s	43.56	324	eP	P	12 02 37.0	+1.1
GMRC	Granite Mounta baz=129,SNR=5.3	43.59	320	P	P	12 02 37.1	+1.0
E38A	The Farm, Brul baz=168	43.73	351	P	P	12 02 36.2	-0.8
D41A	Chassel baz=172	43.81	354	P	P	12 02 36.8	-0.8
SZCU	Shurtz Canyon 8.8nm,1.1s	43.87	325	eP	P	12 02 39.2	+0.8
MURC	Murrieta baz=126	43.89	317	P	P	12 02 39.8	+1.3
F33A	5 Mile Ranch, baz=161	43.90	347	P	P	12 02 36.6	-1.7
P17A	Butcher Ranch, 14nm,1.3s	43.92	329	eP	P	12 02 39.3	+0.5
RWWY	Rawlins 21nm,1.3s	43.94	334	eP	P	12 02 39.2	+0.2
CCUT	Cedar City 13nm,1.2s	43.99	325	eP	P	12 02 41.4	+2.0
MSU	Marysvale	43.99	327	eP	P	12 02 40.6	+1.2
BBRC	Big Bear Solar baz=127	44.10	318	P	P	12 02 41.6	+1.2
TUQ	Turquoise Moun baz=129	44.17	320	P	P	12 02 41.2	+0.4
TCRU	Three Creeks R 13nm,1.2s	44.21	326	eP	P	12 02 42.4	+1.2
SHPR	Sheep Range	44.37	322	eP	P	12 02 43.1	+0.7

11nm,1.2s
BFSC Mount Baldy Ra 44.58 318 P **P 12 02 44.7 +0.6**
baz=126
GSC Goldstone, Bar 44.65 320 P **P 12 02 45.2 +0.6**
baz=128,SNR=6.4
GSC Goldstone, Bar 44.65 320 *eP* **P 12 02 45.5 +0.9**
16nm,1.4s
RSSD Black Hills 44.68 338 P **P 12 02 45.7 +0.9**
baz=149
RSSD Black Hills 44.68 338 *eP* **P 12 02 46.3 +1.5**
14nm,1.1s
C40A Isle Royale Na 44.72 354 P **P 12 02 44.3 -0.5**
baz=171,SNR=5.4
D34A Park Rapids 44.84 348 P **P 12 02 44.5 -1.3**
baz=162
PASC Pasadena Art C 44.89 317 *eP* **P 12 02 48.3 +1.8**
20nm,1.4s
C37A Embarrass 44.92 351 P **P 12 02 44.9 -1.6**
baz=167
PSUT Pine Spring 44.95 325 *eP* **P 12 02 48.4 +1.3**
9.5nm,1.1s
D33A AnnSam, Waubun 45.03 348 P **P 12 02 46.8 -0.6**
baz=162
DECC Green Verdugo 45.04 317 P **P 12 02 48.5 +0.8**
baz=125
C36A Pine Crest Far 45.06 351 P **P 12 02 47.1 -0.4**
baz=166
JLU Jordanelle 45.12 329 *eP* **P 12 02 49.0 +0.5**
8.4nm,1.3s
EDW2 Edwards Air Fo 45.18 318 P **P 12 02 49.7 +1.0**
baz=126
PLCA Paso Flores 45.31 167 P **P 12 02 53.1 +3.4**
4.3nm,1.0s,baz=15,slow=6.1,SNR=3.6
TPNV Topopah Spring 45.32 322 P **P 12 02 51.0 +1.0**
baz=130
TPNV Topopah Spring 45.32 322 *eP* **P 12 02 51.4 +1.4**
11nm,1.4s
LRMC Laurel Mtn Rad 45.33 319 P **P 12 02 50.7 +0.7**
baz=127
CTU Camp Tracy 45.35 329 *eP* **P 12 02 50.8 +0.7**
15nm,1.3s
FURC Furnace Creek, 45.40 321 P **P 12 02 51.2 +0.8**
baz=129,SNR=6.6
TCUT Toone Canyon 45.49 330 *eP* **P 12 02 52.3 +1.0**
18nm,1.2s
MPMC Manual Prospec 45.55 320 P **P 12 02 52.4 +0.5**
baz=128
DAC Darwin (Calif) 45.75 320 *eP* **P 12 02 53.9 +0.4**
2.8nm,1.0s
R11A Troy Canyon, C 45.83 324 P **P 12 02 54.7 +0.7**
baz=131,SNR=9.8
R11A Troy Canyon, C 45.83 324 *eP* **P 12 02 55.3 +1.2**
13nm,1.5s
BW06 Boulder Array 45.85 333 P **P 12 02 53.9 -0.3**
baz=142
BW06 Boulder Array 45.85 333 *eP* **P 12 02 54.4 +0.2**
7.3nm,1.3s
PD31 Pinedale Array 45.85 333 *eP* **P 12 02 54.0 -0.2**
PDAR Pinedale Array 45.85 333 P **P 12 02 54.4 +0.2**
2.2nm,1.0s,baz=140,slow=7.6,SNR=12
PDAR PcP **PcP 12 04 30.9 -0.4**
2.1nm,0.9s,baz=150,slow=4.5,SNR=8.0
PDAR Pinedale Array 45.85 333 *eP* **P 12 02 54.1 -0.2**
PDAR PcP **PcP 12 04 30.9 -0.4**
HWUT Hardware Ranch 45.93 330 *eP* **P 12 02 54.8 0.0**
9.6nm,1.0s
C31A Landman Farms, 46.08 346 P **P 12 02 54.8 -0.8**
baz=159
AGMN Agassiz Nation 46.14 348 P **P 12 02 55.2 -0.8**
baz=162,SNR=5.2
AGMN Agassiz Nation 46.14 348 *eP* **P 12 02 55.5 -0.6**
9.6nm,1.1s
BGU Big Grassy Mou 46.18 328 *eP* **P 12 02 57.2 +0.5**
6.3nm,1.1s
B32A Ashes, Strandq 46.37 348 P **P 12 02 57.6 -0.3**
baz=161,SNR=6.9
VES Vestal, Richgr 46.46 319 P **P 12 02 59.5 +0.7**
baz=126,SNR=5.9
MDND Maddock 46.60 345 P **P 12 03 00.2 +0.5**
baz=157
MDND Maddock 46.60 345 *eP* **P 12 03 00.4 +0.7**
91nm,1.4s
A33A Warroad 46.65 349 P **P 12 02 59.6 -0.5**
baz=163
HVU Hansel Valley 46.67 329 *eP* **P 12 03 01.0 +0.4**
10nm,1.3s
REDW Red Top Meadow 46.91 332 *eP* **P 12 03 03.0 +0.5**
28nm,1.4s
SNOW Snow King Moun 46.95 332 *eP* **P 12 03 03.2 +0.4**
14nm,1.4s
LOHW Long Hollow 46.99 333 *eP* **P 12 03 03.5 +0.3**
3.4nm,1.2s
TPAW Teton Pass 47.06 332 *eP* **P 12 03 05.3 +1.6**
9.3nm,1.3s
MOOW Moose Ponds 47.16 333 *eP* **P 12 03 04.2 -0.2**
8.6nm,1.5s
FXWY Fox Creek 47.21 332 *eP* **P 12 03 05.1 +0.3**
3.4nm,1.1s
ELK Elko 47.24 326 P **P 12 03 07.3 +2.1**
2.7nm,0.8s,baz=144,slow=3.9,SNR=11
NV11 Mina Array Sit 47.43 322 *eP* **P 12 03 07.7 +1.2**
1.1nm,1.2s
OMMB Old Mammoth Mi 47.46 321 *eP* **P 12 03 07.9 +1.0**
15nm,1.4s
MDPB Devils Postpil 47.52 321 *eP* **P 12 03 08.5 +1.1**
16nm,1.4s
NV01 Mina Array Sit 47.52 322 *eP* **P 12 03 08.0 +0.7**
NVAR Mina Array Bea 47.52 322 P **P 12 03 08.4 +1.1**
6.5nm,1.0s,baz=135,slow=7.0,SNR=36
NVAR PcP **PcP 12 04 37.1 -0.1**
1.0nm,0.7s,baz=136,slow=5.2,SNR=4.8
H17A Grant Village 47.59 333 P **P 12 03 09.2 +1.4**
baz=141
H17A Grant Village 47.59 333 *eP* **P 12 03 08.2 +0.4**
6.9nm,1.3s
RLMT Red Lodge 47.59 335 P **P 12 03 08.0 +0.3**
baz=143
RLMT Red Lodge 47.59 335 *eP* **P 12 03 08.1 +0.4**
4.9nm,1.0s
YPP Pitchstone Pla 47.59 333 *eP* **P 12 03 08.7 +0.9**
6.8nm,1.3s
YFT Old Faithful 47.75 333 *eP* **P 12 03 10.9 +1.9**
7.1nm,1.0s
RYN Ryan 47.78 322 *eP* **P 12 03 10.4 +1.1**
12nm,1.3s
KVN Kaiserville 47.78 323 *eP* **P 12 03 10.1 +0.7**
7.8nm,1.1s
YMR Madison River 47.97 333 *eP* **P 12 03 12.0 +1.2**
ULM Lac du Bonnet 48.00 349 P **P 12 03 09.6 -0.9**
10nm,1.0s,baz=161,slow=8.2,SNR=11
ULM Lac du Bonnet 48.00 349 *eP* **P 12 03 09.7 -0.9**
16nm,1.1s
YHH Holmes Hill 48.02 333 *eP* **P 12 03 12.3 +1.2**
6.8nm,1.1s
BMN Battle Mountai 48.15 325 *eP* **P 12 03 12.9 +0.8**
11nm,1.1s
WAKR Walker 48.27 321 *eP* **P 12 03 14.2 +1.1**
10nm,1.2s
GCMT Greycliff 48.29 335 *eP* **P 12 03 13.5 +0.4**
QLMT Earthquake Lak 48.31 333 *eP* **P 12 03 14.8 +1.5**
YERR Yerington 48.44 322 *eP* **P 12 03 15.3 +0.9**
9.7nm,1.2s
DGMT Dagmar 48.51 341 *eP* **P 12 03 15.5 +0.9**
32nm,1.4s
HLID Hailey 48.79 330 P **P 12 03 17.4 +0.4**
baz=136,SNR=5.4
HLID Hailey 48.79 330 *eP* **P 12 03 17.8 +0.7**
6.9nm,1.3s
VCNR Virginia City 48.88 322 *eP* **P 12 03 18.5 +0.7**
9.4nm,1.4s
MCMT McKenzie Canyo 48.96 332 *eP* **P 12 03 19.5 +1.1**
PAHR Pah Rah Range 48.97 323 *eP* **P 12 03 19.4 +0.9**
4.0nm,1.3s
BOZ Bozeman (W) 48.99 333 P **P 12 03 19.1 +0.6**
baz=141,SNR=14
BOZ Bozeman (W) 48.99 333 *eP* **P 12 03 18.9 +0.5**
9.3nm,1.0s
DLMT Dillon 49.25 333 *eP* **P 12 03 20.4 -0.1**
4.9nm,1.2s
MFID Camas Ranch 49.41 329 *eP* **P 12 03 22.1 +0.4**
10nm,1.3s
AFDM Forest Hills D 49.50 321 *eP* **P 12 03 23.2 +0.9**
3.7nm,1.1s
LRM Limekiln Ridge 49.53 333 *eP* **P 12 03 22.8 0.0**
BEKR Beckworth 49.66 322 *eP* **P 12 03 24.5 +0.7**
8.2nm,1.2s
HRY Holter Researc 49.94 334 *eP* **P 12 03 26.1 +0.4**
EGMT Eagleton 50.12 337 P **P 12 03 27.5 +0.5**
baz=144,SNR=7.3
EGMT Eagleton 50.12 337 *eP* **P 12 03 27.5 +0.5**
16nm,1.2s
ORV Oroville 50.18 321 *eP* **P 12 03 28.5 +1.0**
12nm,1.1s
WVOR Wild Horse Val 50.27 326 *eP* **P 12 03 28.5 +0.3**
J08A Circle Bar Ran 50.78 327 *eP* **P 12 03 32.2 +0.1**
6.8nm,1.0s
O03D Paynes Creek 50.80 322 P **P 12 03 32.1 -0.2**
baz=126
MSO Missoula 50.97 333 P **P 12 03 33.5 +0.1**
baz=139
MSO Missoula 50.97 333 *eP* **P 12 03 33.8 +0.4**
9.9nm,1.1s
BMO Blue Mountains 51.18 329 *eP* **P 12 03 34.4 -0.6**
6.4nm,1.2s
M04C Macdoel 51.71 323 P **P 12 03 39.2 0.0**
baz=127
F10A Beach Ranch, E 51.91 330 *eP* **P 12 03 40.6 +0.1**
11nm,1.1s
YBH Yreka Blue Hor 52.21 323 P **P 12 03 41.5 -1.3**
4.0nm,0.9s,baz=87,slow=9.8,SNR=14
YBH Yreka Blue Hor 52.21 323 *eP* **P 12 03 41.7 -1.0**
5.6nm,0.9s
J05D Fort Rock, OR 52.28 325 P **P 12 03 43.6 +0.3**
baz=129,SNR=7.5
G08A Pilot Rock 52.33 328 *eP* **P 12 03 44.2 +0.6**
14nm,1.4s
KHMM Horse Mountain 52.34 321 *eP* **P 12 03 44.5 +0.7**
34nm,1.5s
PINE Pine Mountain 52.43 326 *eP* **P 12 03 44.6 +0.1**
8.2nm,1.3s
WALA Waterton Lakes 52.64 335 *eP* **P 12 03 46.3 +0.4**
8.6nm,1.1s
E09A Wood Farm, Sta 52.75 330 *eP* **P 12 03 47.0 +0.4**
35nm,1.3s
I05D Terreonne, OR 53.00 326 P **P 12 03 49.0 +0.5**
baz=129
G06A Carlson Farm, 53.19 327 *eP* **P 12 03 50.6 +0.8**
30nm,1.5s
F07A Phinny Hill Vi 53.24 328 *eP* **P 12 03 50.4 +0.2**
12nm,1.1s
NEW Newport 53.49 332 P **P 12 03 51.1 -0.9**
6.4nm,1.1s,baz=141,slow=7.9,SNR=6.9
NEW Newport 53.49 332 P **P 12 03 52.0 0.0**
baz=136,SNR=6.9
NEW Newport 53.49 332 *eP* **P 12 03 52.0 0.0**
10nm,1.3s
D08A Wollman Farm, 53.51 330 *eP* **P 12 03 52.5 +0.4**
4.9nm,1.0s
LTY Liberty 54.53 329 *eP* **P 12 03 59.9 +0.2**
14nm,1.4s
B08A Colville Reser 54.60 331 *eP* **P 12 04 00.3 +0.1**
5.0nm,1.1s
LLLB Lillooet 57.35 332 *eP* **P 12 04 20.5 +0.7**
13nm,1.4s
BBB Bella Bella 61.38 330 P **P 12 04 48.4 +0.9**
11nm,1.1s,baz=140,slow=10,SNR=3.7
YKA Yellowknife Ar 63.52 344 P **P 12 05 01.1 -0.5**
3.7nm,1.0s,baz=139,slow=6.7,SNR=32
YKA PcP **PcP 12 05 37.7 -0.4**
1.5nm,0.9s,baz=140,slow=4.9,SNR=5.7
YKW3 Yellowknife Ar 63.58 344 *eP* **P 12 05 01.3 -0.7**
10nm,1.2s
DLBC Dease Lake 65.99 335 P **P 12 05 18.4 +0.5**
10nm,1.0s,baz=121,slow=4.7,SNR=18
DLBC Dease Lake 65.99 335 *eP* **P 12 05 18.8 +0.9**
20nm,1.3s
MACI Morro de la Ar 67.70 61 *eP* **P 12 05 29.6 0.0**
60nm,1.0s
JIS Juneau Island 67.79 333 *eP* **P 12 05 30.2 +1.0**
11nm,1.2s
SKAG Skagway 68.84 334 *eP* **P 12 05 35.9 0.0**
8.9nm,1.4s
DAWY Dawson 72.86 337 *eP* **P 12 06 00.6 +0.3**
7.8nm,1.2s
CRQM Cirque 72.89 334 *eP* **P 12 06 01.6 +0.8**
12nm,1.2s
INK Inuvik 73.17 343 P **P 12 06 02.3 +0.4**
7.2nm,1.1s,baz=135,slow=6.5,SNR=8.9
INK Inuvik 73.17 343 *eP* **P 12 06 02.6 +0.7**
15nm,1.3s
RAGM Raggged Mountai 73.43 333 *eP* **P 12 06 05.1 +1.3**
27nm,1.2s
BMRM Bremner River 73.63 333 *eP* **P 12 06 05.7 +0.8**
20nm,1.2s
EGAK Eagle 73.88 338 *eP* **P 12 06 06.7 +0.5**
8.2nm,1.3s
SUMG Summit 74.34 13⇓ *iP* **P 12 06 08.1 -1.2**
27nm,1.2s
SUMG Summit 74.34 13 *eP* **P 12 06 08.7 -0.6**
22nm,1.1s
KLU Klutina 74.42 334 *eP* **P 12 06 10.2 +0.6**
12nm,1.2s
DOT Dot Lake 74.51 336 *eP* **P 12 06 10.3 +0.4**
41nm,1.3s
SCRK Sand Creek 74.62 336 *eP* **P 12 06 11.3 +0.6**
8.0nm,1.1s
PAX Paxson 74.81 335 *eP* **P 12 06 12.1 +0.3**
12nm,1.2s
RIDG Indpend'e Rid 74.86 336 *eP* **P 12 06 12.3 +0.3**
12nm,1.2s
SML Sawmill 75.61 334 *eP* **P 12 06 16.6 +0.3**
25nm,1.3s
PNCL Nicolau / Gran 75.68 52 *eP* **P 12 06 18.1 +0.9**
19nm,1.5s
PCAS Casmilo, Conde 75.95 50 *eP* **P 12 06 19.6 +0.9**
25nm,1.4s
IL1 Eielson Array 76.09 337 *eP* **P 12 06 18.6 -0.4**
ILAR Eielson Array 76.09 337 P **P 12 06 18.6 -0.4**
4.7nm,1.1s,baz=128,slow=3.4,SNR=29
ILAR PP **PP 12 09 10.5 +0.6**
1.2nm,1.2s,baz=115,slow=3.9,SNR=6.1
ILB Eielson Array 76.09 337 *eP* **P 12 06 18.4 -0.6**
FYU Fort Yukon 76.18 339 *eP* **P 12 06 20.1 +0.6**
RND Reindeer 76.40 335 *eP* **P 12 06 21.0 +0.2**
28nm,1.3s
PESTR Estremoz 76.50 51 *eP* **P 12 06 21.5 -0.4**
25nm,1.5s
PESTR Estremoz 76.50 51 *eP* **P 12 06 21.6 -0.3**
9.7nm,1.2s
MCK McKinley 76.55 335 *eP* **P 12 06 22.0 +0.4**
18nm,1.3s
MDM Murphy Dome 76.69 337 *eP* **P 12 06 22.6 +0.1**
8.9nm,1.3s
PMRV Marv??o 76.72 50 *eP* **P 12 06 23.2 +0.1**
13nm,1.5s
BWN Browne 76.92 336 *eP* **P 12 06 23.7 0.0**
50nm,1.0s
TRF Thorofare Moun 77.02 335 *eP* **P 12 06 24.7 +0.2**
11nm,1.2s
SKT Skwentna 77.10 333 *eP* **P 12 06 25.1 +0.3**
19nm,1.2s
SCO Scoresbysund 77.45 18 *i* P **P 12 06 24.6 -1.9**
2.0nm,1.0s
BPAW Bear Paw Mtn. 77.52 335 *eP* **P 12 06 27.2 +0.1**
17nm,1.1s
PPLA Purkeypile 77.67 334 *eP* **P 12 06 28.2 +0.1**
38nm,1.4s
MLY Manley 77.72 336 *eP* **P 12 06 28.4 +0.1**
13nm,1.3s
CAST Castle Rocks 77.78 335 *eP* **P 12 06 28.3 -0.2**
18nm,1.3s
COLD Coldfoot 78.25 338 *eP* **P 12 06 32.3 +1.3**
10nm,1.2s
KOWA Kowa 78.45 76 P **P 12 06 33.4 +0.2**
9.9nm,1.0s,baz=270,slow=8.7,SNR=11
KOWA Kowa 78.45 76 *eP* **P 12 06 33.8 +0.6**
27nm,1.4s
TOLK Toolik Lake Re 78.52 340 P **P 12 06 32.4 -0.2**
baz=111
TOLK Toolik Lake Re 78.52 340 *eP* **P 12 06 32.9 +0.3**
6.6nm,1.4s
IM3 Indian Mountai 79.21 337 *eP* **P 12 06 36.1 -0.2**
ESDC Sonseca Array 79.39 50 P **P 12 06 38.2 +0.3**
9.3nm,1.3s,baz=271,slow=5.0,SNR=11
ESLA Sonseca Array 79.39 50 *eP* **P 12 06 38.2 +0.2**
9.4nm,1.3s
ES19 SONSECA Array 79.44 50 *eP* **P 12 06 38.5 +0.3**
DAG Danmarks Havn 81.01 12 *i* P **P 12 06 44.5 -1.4**
8.3nm,1.3s
TOA0 Torodi Ar. Sit 84.03 77 *eP* **P 12 07 02.0 -0.9**
TORD Torodi Ar. Bea 84.03 77 P **P 12 07 01.9 -0.9**
8.8nm,1.2s,baz=276,slow=4.1,SNR=16
SNF Seneffe 85.67 40⇑ P **P 12 07 10.2 -0.2**
BCLA Clavier 86.32 40⇑ P **P 12 07 13.6 0.0**
MEM Membach 86.77 40⇓ P **P 12 07 16.3 +0.5**
comp=Z,9.6nm,1.4s
WLF Walferdange 86.88 41⇑ P **P 12 07 16.6 +0.2**
comp=Z,19nm,1.3s
WLF Walferdange 86.88 41 *eP* **P 12 07 15.7 -0.7**
comp=Z,28nm,1.2s
FINES FINESS Array B 96.05 27 LR LR 12 46 14.4
comp=Z,29nm,20.6s,baz=270,slow=32
VNDA Vanda 98.58 191 LR LR 12 44 36.8
comp=Z,41nm,19.4s,baz=78,slow=30
ZALV Zalesovo Beam 122.00 8 PKP **PKPdf 12 13 24.8 -1.2**
comp=Z,1.6nm,0.3s,baz=299,slow=3.0,SNR=7.0
KURK Kurchatov 123.87 14 *e*PKPdf **PKPdf 12 13 29.1 -0.6**
KURBB Kurchatov Arra 123.93 14 PKP **PKPdf 12 13 29.0 -0.8**
comp=Z,1.4nm,1.0s,baz=347,slow=3.2,SNR=6.6
MKAR Makanchi Array 128.40 13 PKP **PKPdf 12 13 37.0 -1.5**
comp=Z,1.3nm,1.1s,baz=338,slow=2.9,SNR=4.7
MK01 Makanchi Array 128.42 13 *e*PKPdf **PKPdf 12 13 38.1 -0.5**
KS01 Wonju Array Si 130.30 328 *e*PKPdf **PKPdf 12 13 41.7 -0.7**
KSRS Korea Array 130.30 328 PKP **PKPdf 12 13 41.0 -1.4**
comp=Z,2.0nm,1.1s,baz=64,slow=2.9,SNR=7.8
KSAR Wonju Array Be 130.33 328 PKP **PKPdf 12 13 41.0 -1.4**
WMQ Urumqi 132.29 9 PKP **PKPdf 12 13 46.5 +0.4**
KSH Kashi 133.14 22 PKP **PKPdf 12 13 49.3 +1.4**
KSH PP **PP 12 16 17.7 +4.5**
HHC Hu-ho-hao-te 134.06 345 *e*PKP **PKPdf 12 13 50.2 +0.7**
AS01 Alice Springs 139.05 237 *e*PKPdf **PKPdf 12 13 58.0 -1.1**
ASAR Alice Springs 139.08 237 PKP **PKPdf 12 13 57.6 -1.6**
comp=Z,0.8nm,0.8s,baz=106,slow=1.9,SNR=6.1
NJ2 Nanjing 139.16 331 *e*PKP **PKPdf 12 13 59.8 +0.7**
WRA Warramunga Arr 140.08 243 PKP **PKPdf 12 13 58.7 -2.4**
comp=Z,1.4nm,0.9s,baz=96,slow=2.4,SNR=5.7
CD2 Chengdu 145.34 350 PKPbc **PKPbc 12 14 09.0 -0.9**
SHL Shillong 150.82 10 *e*PKPbc **PKPbc 12 14 23.9 -1.1**
CMAR Chiang Mai Arr 158.25 355 PKP **PKPdf 12 14 29.2 -0.5**
comp=Z,0.3nm,0.3s,baz=310,slow=2.5,SNR=4.3
CMAR PKPab **PKPab 12 15 01.9 -1.5**
comp=Z,1.8nm,0.9s,baz=342,slow=6.6,SNR=6.9

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*NEIC **03** 12:03:23.0±0.0, 16°.71N×94°.95W, h159km, MD4.2(MEX), After MEX.*
MEX 03 12:03:23.0±0.5, **16°.71N×94°.95W, h159**km±17km, **MD4.2, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.45**	**230**	*e*P	Pn	12 03 51.1	-1.7
HUIG				*e*S	Sn	12 04 13.8	-1.9
HUIG	**Huatulco**	**1.45**	**230**	*e*P	Pn	12 03 51.1	-1.7
HUIG				*e*S	Sn	12 04 13.8	-1.9
VHO	**Vista Hermosa**	**1.75**	**282**	*e*P	Pn	12 03 54.8	-1.3
VHO				*e*S	Sn	12 04 18.9	-2.6
VHO	**Vista Hermosa**	**1.75**	**282**	*e*P	Pn	12 03 54.8	-1.3
VHO				*e*S	Sn	12 04 18.9	-2.6
TGIG		**1.75**	**87**	*e*P	Pn	12 03 54.7	-1.3
TGIG				*e*S	Sn	12 04 19.5	-1.8
TGIG		**1.75**	**87**	*e*P	Pn	12 03 54.7	-1.3
TGIG				*e*S	Sn	12 04 19.5	-1.8
PCIG		**1.94**	**121**	*e*P	Pn	12 03 58.6	+0.6
PCIG				*e*S	Sn	12 04 25.5	+0.6
PCIG		**1.94**	**121**	*e*P	Pn	12 03 58.6	+0.6
PCIG				*e*S	Sn	12 04 25.5	+0.6
CCIG	**Comitan**	**2.73**	**99**	*e*P	Pn	12 04 08.4	+0.8
CCIG				*e*S	Sn	12 04 37.7	-4.4
CCIG	**Comitan**	**2.73**	**99**	*e*P	Pn	12 04 08.4	+0.8
CCIG				*e*S	Sn	12 04 37.7	-4.4

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*CSEM **03** 12:08:05.6, 39°.88N×16°.12E, h9km, ML1.3/14*
ROM 03 12:08:05.6±0.1, **39°.877N**±0°.005×**16°.124E**±0°.005, **h9**km, **ML1.3**/7, **2C, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0715	**Campotenese**	**0.06**	**228**	P	Pg	12 08 07.4	-0.2
T0715				S	Sg	12 08 08.6	-0.4
T0715	**Campotenese**	**0.06**	**228**	P	Pg	12 08 07.4	-0.2
T0715				S	Sg	12 08 08.6	-0.4
T0715				AML	AML		
	comp=E,1288μm,1.5s						
T0715				AML	AML		
	comp=N,1072μm,0.3s						
T0715				AML	AML		
	comp=E,2700μm,0.5s						
T0715				AML	AML		
	comp=N,2092μm,0.9s						
T0715				AML	AML		
	comp=E,1288μm,1.5s						
T0715				AML	AML		
	comp=E,2700μm,0.5s						
T0715				AML	AML		
	comp=N,1072μm,0.3s						
T0715				AML	AML		
	comp=N,2092μm,0.9s						
MMN	**Mormanno**	**0.10**	**277**	⇑P	Pg	12 08 08.1	0.0
MMN				S	Sg	12 08 09.9	+0.1
MMN	**Mormanno**	**0.10**	**277**	P	Pg	12 08 08.1	+0.1
MMN				S	Sg	12 08 09.9	+0.1
MMN				AML	AML		
	comp=E,194μm,0.2s						
MMN				AML	AML		
	comp=N,345μm,0.2s						
MMN				AML	AML		
	comp=N,345μm,0.2s						
MMN				AML	AML		
	comp=E,194μm,0.2s						
T0716	**Rotonda - Cont**	**0.11**	**312**	P	Pg	12 08 07.0	-1.2
T0716				S	Sg	12 08 09.8	-0.2
T0716	**Rotonda - Cont**	**0.11**	**312**	P	Pg	12 08 08.0	-0.2
T0716				S	Sg	12 08 09.8	-0.2
T0716				AML	AML		
	comp=E,278μm,1.6s						
T0716				AML	AML		
	comp=N,214μm,0.7s						
T0716				AML	AML		
	comp=E,278μm,1.6s						
T0716				AML	AML		
	comp=N,214μm,0.7s						
SALB	**San Lorenzo Be**	**0.17**	**90**	⇑P	Pg	12 08 09.4	+0.2
SALB				S	Sg	12 08 12.2	+0.4
SALB	**San Lorenzo Be**	**0.17**	**90**	P	Pg	12 08 09.4	+0.1
SALB				S	Sg	12 08 12.2	+0.4
SALB				AML	AML		
	comp=E,175μm,0.9s						
SALB				AML	AML		
	comp=N,92μm,1.4s						
SALB				AML	AML		
	comp=N,92μm,1.4s						
SALB				AML	AML		
	comp=E,175μm,0.9s						
T0712	**Santa Domenica**	**0.22**	**255**	P	Pg	12 08 10.2	+0.2
T0712				S	Sg	12 08 14.8	+1.8
T0712	**Santa Domenica**	**0.22**	**255**	P	Pg	12 08 10.2	+0.2
T0712				S	Sg	12 08 14.8	+1.8
T0712				AML	AML		
	comp=E,57μm,0.7s						
T0712				AML	AML		
	comp=N,39μm,0.2s						
T0712				AML	AML		
	comp=N,39μm,0.2s						
T0712				AML	AML		
	comp=E,57μm,0.7s						
CUC	**Castrocucco**	**0.26**	**296**	P	Pb	12 08 11.9	-0.7
CUC				S	Sb	12 08 15.9	-1.4
CUC	**Castrocucco**	**0.26**	**296**	P	Pb	12 08 11.9	-0.7
CUC				S	Sb	12 08 15.9	-1.4
CUC				AML	AML		
	comp=E,56μm,0.6s						
CUC				AML	AML		
	comp=N,57μm,0.7s						
CUC				AML	AML		
	comp=N,57μm,0.7s						
CUC				AML	AML		
	comp=E,56μm,0.6s						
CET2	**Cetraro**	**0.37**	**201**	P	Pg	12 08 13.3	+0.4
CET2				S	Sg	12 08 18.7	+0.9
CET2	**Cetraro**	**0.37**	**201**	P	Pg	12 08 13.3	+0.4
CET2				S	Sg	12 08 18.7	+0.9
CET2				AML	AML		
	comp=E,112μm,0.2s						
CET2				AML	AML		
	comp=N,118μm,1.0s						
CET2				AML	AML		
	comp=N,118μm,1.0s						
CET2				AML	AML		
	comp=E,112μm,0.2s						

*CSEM **03** 12:08:22.9, 38°.92N×15°.41E, h240km, ML2.8/34*
ROM 03 12:08:22.9±0.2, 38°.92N±0°.02×15°.41E±0°.04, h240km±2km, ML2.8/17, 14D, Sicily

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
JOPP	**Joppolo**	**0.48**	**130**	⇓*i*P	Pn	12 08 54.0	-0.7
JOPP				S	S	12 09 18.5	-1.1
JOPP	**Joppolo**	**0.48**	**130**	*i*P	Pn	12 08 55.0	+0.2
JOPP				S	S	12 09 18.5	-1.1
JOPP				AML	AML		
	comp=E,125μm,0.3s						
JOPP				AML	AML		
	comp=N,166μm,0.5s						
JOPP				AML	AML		
	comp=E,126μm,0.3s						
JOPP				AML	AML		
	comp=N,166μm,0.5s						
JOPP				AML	AML		
	comp=E,126μm,0.3s						
JOPP				AML	AML		
	comp=N,166μm,0.5s						
JOPP				AML	AML		
	comp=N,166μm,0.5s						
JOPP				AML	AML		
	comp=E,126μm,0.3s						
VPL	**Vulcano Piano**	**0.63**	**212**	P	Pn	12 08 56.1	+0.9
VPL	**Vulcano Piano**	**0.63**	**212**	P	Pn	12 08 56.1	+0.9
MSRU	**Castanea**	**0.66**	**173**	⇓*i*P	Pn	12 08 55.4	+0.1
MSRU				S	S	12 09 19.8	-0.9
MSRU	**Castanea**	**0.66**	**173**	*i*P	Pn	12 08 55.4	0.0
MSRU				S	S	12 09 19.8	-0.8
MSRU				AML	AML		
	comp=E,186μm,0.3s						
MSRU				AML	AML		
	comp=N,156μm,1.4s						
MSRU				AML	AML		
	comp=E,188μm,0.3s						
MSRU				AML	AML		
	comp=N,156μm,1.4s						
MSRU				AML	AML		
	comp=E,188μm,0.3s						
MSRU				AML	AML		
	comp=N,156μm,1.4s						
MSRU				AML	AML		
	comp=N,156μm,1.4s						
MSRU				AML	AML		
	comp=E,188μm,0.3s						
CET2	**Cetraro**	**0.74**	**35**	⇓*e*P	Pn	12 08 55.8	+0.2
CET2				S	S	12 09 19.0	-2.4
CET2	**Cetraro**	**0.74**	**35**	*e*P	Pn	12 08 55.8	+0.2
CET2				S	S	12 09 19.9	-1.4
CET2				AML	AML		
	comp=E,112μm,0.2s						
CET2				AML	AML		
	comp=N,119μm,1.0s						
CET2				AML	AML		
	comp=E,112μm,0.2s						
CET2				AML	AML		
	comp=N,118μm,1.0s						
CET2				AML	AML		
	comp=E,112μm,0.2s						
CET2				AML	AML		
	comp=N,118μm,1.0s						
CET2				AML	AML		
	comp=N,118μm,1.0s						
CET2				AML	AML		
	comp=E,112μm,0.2s						
MSCL	**Scilla**	**0.75**	**156**	⇓*i*P	Pn	12 08 55.9	+0.1
MSCL				S	S	12 09 20.4	-1.1
MSCL	**Scilla**	**0.75**	**156**	*i*P	Pn	12 08 55.9	+0.2
MSCL				S	S	12 09 20.4	-1.0
MSCL				AML	AML		
	comp=E,225μm,0.3s						
MSCL				AML	AML		
	comp=N,172μm,0.3s						
MSCL				AML	AML		
	comp=E,276μm,0.6s						
MSCL				AML	AML		
	comp=N,181μm,0.3s						
MSCL				AML	AML		
	comp=E,277μm,0.6s						
MSCL				AML	AML		
	comp=N,181μm,0.3s						
MSCL				AML	AML		
	comp=E,277μm,0.6s						
MSCL				AML	AML		
	comp=N,181μm,0.3s						
ATN	**Antennamare**	**0.76**	**177**	P	Pn	12 08 55.7	-0.2
ATN				S	S	12 09 20.2	-1.5
ATN	**Antennamare**	**0.76**	**177**	P	Pn	12 08 55.7	-0.1
ATN				S	S	12 09 20.2	-1.5
ATN				AML	AML		
	comp=E,141μm,0.4s						
ATN				AML	AML		
	comp=N,124μm,0.6s						
ATN				AML	AML		
	comp=E,140μm,0.4s						
ATN				AML	AML		
	comp=N,125μm,0.6s						
ATN				AML	AML		
	comp=E,140μm,0.4s						
ATN				AML	AML		
	comp=N,125μm,0.6s						
MPNC	**Port Mandanici**	**0.77**	**183**	P	Pn	12 08 56.6	+0.8
MPNC	**Port Mandanici**	**0.77**	**183**	P	Pn	12 08 56.6	+0.8
MPNC				AML	AML		
	comp=E,111μm,1.5s						
MPNC				AML	AML		
	comp=N,142μm,0.4s						
MPNC				AML	AML		
	comp=E,111μm,1.5s						
MPNC				AML	AML		
	comp=N,142μm,0.4s						
MPNC				AML	AML		
	comp=N,142μm,0.4s						
MPNC				AML	AML		
	comp=E,111μm,1.5s						
MCSR	**Castroreale**	**0.86**	**188**	⇓*e*P	Pn	12 08 56.9	+0.6
MCSR	**Castroreale**	**0.86**	**188**	*e*P	Pn	12 08 56.9	+0.6
MCSR				AML	AML		
	comp=E,126μm,0.3s						
MCSR				AML	AML		
	comp=N,158μm,0.2s						
MCSR				AML	AML		
	comp=E,164μm,0.4s						
MCSR				AML	AML		
	comp=N,192μm,0.4s						
MCSR				AML	AML		
	comp=E,164μm,0.4s						
MCSR				AML	AML		
	comp=N,192μm,0.4s						
MCSR				AML	AML		
	comp=E,164μm,0.4s						
MCSR				AML	AML		
	comp=N,192μm,0.4s						
PLAC	**Placanica**	**0.93**	**120**	⇓*i*P	Pn	12 08 57.2	+0.6
PLAC				S	S	12 09 22.4	-0.5
PLAC	**Placanica**	**0.93**	**120**	*i*P	Pn	12 08 57.2	+0.6
PLAC				S	S	12 09 22.4	-0.5
PLAC				AML	AML		
	comp=E,180μm,0.3s						
PLAC				AML	AML		
	comp=N,103μm,0.2s						
PLAC				AML	AML		
	comp=E,180μm,0.3s						
PLAC				AML	AML		
	comp=N,103μm,0.2s						
PLAC				AML	AML		
	comp=N,103μm,0.2s						
PLAC				AML	AML		
	comp=E,180μm,0.3s						
MTTG	**Motta San Giov**	**0.94**	**166**	⇓*e*P	Pn	12 08 57.3	+0.6
MTTG				S	S	12 09 22.9	-0.2
MTTG	**Motta San Giov**	**0.94**	**166**	*e*P	Pn	12 08 57.3	+0.7
MTTG				S	S	12 09 22.9	-0.2
MTTG				AML	AML		
	comp=E,51μm,0.5s						
MTTG				AML	AML		
	comp=N,80μm,0.5s						
MTTG				AML	AML		
	comp=E,51μm,0.5s						
MTTG				AML	AML		
	comp=N,80μm,0.5s						
MTTG				AML	AML		
	comp=E,51μm,0.5s						
MTTG				AML	AML		
	comp=N,80μm,0.5s						
SOI	**Samo**	**0.98**	**149**	⇓*i*P	Pn	12 08 57.3	+0.4
SOI				S	S	12 09 22.6	-0.8
SOI	**Samo**	**0.98**	**149**	*i*P	Pn	12 08 57.3	+0.5
SOI				S	S	12 09 22.6	-0.8
SOI				AML	AML		
	comp=E,74μm,0.4s						
SOI				AML	AML		
	comp=N,57μm,1.0s						
MMME	**Mongiuffi-Meli**	**0.99**	**187**	P	Pn	12 08 57.9	+0.9
MMME				S	S	12 09 24.2	+0.5
MMME	**Mongiuffi-Meli**	**0.99**	**187**	P	Pn	12 08 57.9	+0.9
MMME				S	S	12 09 24.2	+0.5
MMME				AML	AML		
	comp=E,198μm,0.3s						
MMME				AML	AML		
	comp=N,140μm,0.5s						
MMME				AML	AML		
	comp=E,198μm,0.3s						
MMME				AML	AML		
	comp=N,140μm,0.5s						
MMME				AML	AML		
	comp=N,140μm,0.5s						
MMME				AML	AML		
	comp=E,198μm,0.3s						
SERS	**Sersale**	**1.00**	**83**	⇓P	Pn	12 08 57.8	+0.8
SERS				S	S	12 09 23.3	-0.5
SERS	**Sersale**	**1.00**	**83**	P	Pn	12 08 57.8	+0.8
SERS				S	S	12 09 23.3	-0.5
SERS				AML	AML		
	comp=E,63μm,0.3s						
SERS				AML	AML		
	comp=N,73μm,0.5s						
SERS				AML	AML		
	comp=E,63μm,0.3s						
SERS				AML	AML		
	comp=N,73μm,0.5s						
SERS				AML	AML		
	comp=N,73μm,0.5s						
SERS				AML	AML		
	comp=E,63μm,0.3s						
MPAZ	**Palizzi**	**1.07**	**154**	P	Pn	12 08 58.1	+0.7
MPAZ	**Palizzi**	**1.07**	**154**	P	Pn	12 08 58.1	+0.7
MPAZ				AML	AML		
	comp=E,107μm,1.1s						
MPAZ				AML	AML		
	comp=N,146μm,0.3s						
MPAZ				AML	AML		
	comp=E,107μm,1.1s						
MPAZ				AML	AML		
	comp=N,146μm,0.3s						
MPAZ				AML	AML		
	comp=E,107μm,1.1s						
MPAZ				AML	AML		
	comp=N,146μm,0.3s						
TIP	**Timpagrande**	**1.08**	**76**	⇓*i*P	Pn	12 08 58.3	+0.9
TIP				S	S	12 09 23.7	-0.8
TIP	**Timpagrande**	**1.08**	**76**	*i*P	Pn	12 08 58.3	+0.8
TIP				S	S	12 09 23.7	-0.8
TIP				AML	AML		
	comp=E,37μm,1.1s						
TIP				AML	AML		
	comp=N,32μm,1.0s						
TIP				AML	AML		
	comp=E,37μm,1.1s						
TIP				AML	AML		
	comp=N,32μm,1.0s						
TIP				AML	AML		
	comp=N,32μm,1.0s						
TIP				AML	AML		
	comp=E,37μm,1.1s						
SALB	**San Lorenzo Be**	**1.20**	**37**	⇓*i*P	Pn	12 08 59.9	+1.7
SALB				S	S	12 09 25.8	-0.2
SALB	**San Lorenzo Be**	**1.20**	**37**	*i*P	Pn	12 08 59.9	+1.7
SALB				S	S	12 09 25.8	-0.2
SALB				AML	AML		
	comp=E,55μm,0.3s						
SALB				AML	AML		
	comp=N,29μm,1.4s						
SALB				AML	AML		
	comp=E,55μm,0.3s						
SALB				AML	AML		
	comp=N,29μm,1.4s						
SALB				AML	AML		
	comp=N,29μm,1.4s						
SALB				AML	AML		
	comp=E,55μm,0.3s						
PIPA	**Pietrapaola**	**1.23**	**62**	⇓*e*P	Pn	12 08 59.2	+0.9
PIPA	**Pietrapaola**	**1.23**	**62**	*e*P	Pn	12 08 59.1	+0.8
PIPA				AML	AML		
	comp=E,98μm,1.3s						
PIPA				AML	AML		
	comp=N,69μm,1.6s						
PIPA				AML	AML		
	comp=E,98μm,1.3s						
PIPA				AML	AML		
	comp=N,69μm,1.6s						
PIPA				AML	AML		
	comp=E,98μm,1.3s						
PIPA				AML	AML		
	comp=N,69μm,1.6s						
LADO	**San Nicola del**	**1.27**	**73**	⇓*i*P	Pn	12 08 59.1	+0.5
LADO	**San Nicola del**	**1.27**	**73**	*i*P	Pn	12 08 59.1	+0.5
LADO				AML	AML		
	comp=E,19μm,1.3s						
LADO				AML	AML		
	comp=N,20μm,0.5s						
GALF	**Gagliano Caste**	**1.38**	**209**	P	Pn	12 09 01.8	+2.3
GALF	**Gagliano Caste**	**1.38**	**209**	P	Pn	12 09 01.8	+2.3
HLNI	**Lentini**	**1.62**	**195**	P	Pn	12 09 02.3	+1.0
HLNI	**Lentini**	**1.62**	**195**	P	Pn	12 09 02.3	+1.0
HCRL	**Carlentini**	**1.66**	**190**	⇓*i*P	Pn	12 09 02.4	+0.8
HCRL	**Carlentini**	**1.66**	**190**	*i*P	Pn	12 09 02.4	+0.8
HCRL				AML	AML		
	comp=E,106μm,1.3s						
HCRL				AML	AML		
	comp=N,103μm,1.0s						
HCRL				AML	AML		
	comp=E,106μm,1.3s						
HCRL				AML	AML		
	comp=N,102μm,1.0s						
HCRL				AML	AML		
	comp=N,102μm,1.0s						
HCRL				AML	AML		
	comp=E,106μm,1.3s						
PZUN	**Potenza**	**1.75**	**10**	AML	AML		
	comp=E,59μm,0.6s						
PZUN				AML	AML		
	comp=E,59μm,0.6s						
PZUN				AML	AML		
	comp=N,70μm,1.5s						
PZUN				AML	AML		
	comp=N,70μm,1.5s						
SSY	**Sortino**	**1.78**	**189**	P	Pn	12 09 03.5	+0.8
SSY	**Sortino**	**1.78**	**189**	P	Pn	12 09 03.5	+0.7

WEL 03 13:12:17.2, 44°.S±1°×172°.7E±0°.8, h13km±1km, ML3.8/5, South Island

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
MQZ	**McQueen's Vall**	**0.20**	**198**	P	Pb	13 12 23.3	+0.5
MQZ				S	Sb	13 12 27.0	+0.4
EYCZ	**Eyrewell**	**0.29**	**288**	P	Pb	13 12 25.1	+0.7
EYCZ				S	Sb	13 12 30.0	+0.9
OKCZ	**Okains Bay**	**0.32**	**133**	P	Pb	13 12 24.9	+0.2
AKCZ	**Akaroa Harbour**	**0.38**	**161**	P	Pb	13 12 26.5	+0.6
AKCZ				S	Sb	13 12 32.4	+0.7
OXZ	**Oxford**	**0.54**	**290**	P	Pb	13 12 29.4	+0.8
LTZ	**Lake Taylor**	**0.81**	**335**	P	Pn	13 12 34.0	-0.3
LTZ				S	Sn	13 12 45.2	-1.0
INZ	**Inchbonnie**	**1.23**	**309**	P	Pb	13 12 40.4	+0.1
KHZ	**Kahutara**	**1.24**	**28**	P	Pn	13 12 39.3	-0.9
RPZ	**Rata Peaks**	**1.24**	**260**	P	Pg	13 12 41.0	-0.1
WVZ	**Waitaha Valley**	**1.53**	**286**	P	Pb	13 12 45.3	-0.1
THZ	**Tophouse**	**1.75**	**4**	P	Pn	13 12 47.1	-0.2
DSZ	**Denniston Nort**	**1.89**	**338**	P	Pn	13 12 50.0	+0.8
BSWZ	**Blackbirch Sta**	**1.98**	**25**	P	Pn	13 12 50.2	-0.2
LBZ	**Lake Benmore**	**2.04**	**244**	P	Pb	13 12 53.0	-1.2
CMWZ	**Cape Campbell**	**2.07**	**32**	P	Pn	13 12 51.6	0.0
FOZ	**Fox Glacier**	**2.13**	**268**	P	Pb	13 12 54.7	-0.9
ODZ	**Otahua Downs**	**2.15**	**224**	P	Pn	13 12 53.5	+0.8
TUWZ	**Tuamarina**	**2.26**	**24**	P	Pn	13 12 53.7	-0.6
NNZ	**Nelson**	**2.34**	**12**	P	Pn	13 12 55.5	+0.1
TCW	**Tory Channel**	**2.56**	**27**	P	Pn	13 12 57.6	-0.8
BHW	**Baring Head**	**2.63**	**38**	P	Pn	13 12 58.2	-1.1
PLWZ	**Palliser**	**2.69**	**45**	P	Pn	13 12 58.6	-1.6
QRZ	**Quartz Range**	**2.69**	**357**	P	Pn	13 13 00.6	+0.4
MSWZ	**Moikau Station**	**2.80**	**42**	P	Pn	13 13 00.1	-1.6
DUWZ	**D'Urville Isla**	**2.85**	**18**	P	Pn	13 13 02.6	+0.2
PAWZ	**Paruwai Farm**	**2.91**	**44**	P	Pn	13 13 01.6	-1.7
JCZ	**Jackson Bay**	**2.92**	**258**	P	Pn	13 13 05.4	+2.0
CAW	**Cannon Point**	**2.96**	**36**	P	Pn	13 13 02.5	-1.3
WKZ	**Wanaka**	**2.98**	**243**	P	Pn	13 13 05.9	+1.6
WKZ				P	Pb	13 13 06.6	-3.6
EAZ	**Earnscleugh**	**3.00**	**234**	P	Pn	13 13 05.3	+0.8
TRWZ	**Traveller**	**3.04**	**47**	P	Pn	13 13 03.2	-1.8
KIW	**Kapiti Island**	**3.10**	**32**	P	Pn	13 13 04.8	-1.0
MTW	**Mount Morrison**	**3.12**	**42**	P	Pn	13 13 04.3	-1.8
OGWZ	**Otaki Gorge**	**3.24**	**35**	P	Pn	13 13 07.1	-0.7
TUZ	**Tuapeka**	**3.30**	**221**	P	Pn	13 13 09.4	+0.9
HOWZ	**Holdsworth Sta**	**3.33**	**39**	P	Pn	13 13 07.4	-1.5
TMWZ	**Te Maipa**	**3.35**	**45**	P	Pn	13 13 07.5	-1.8
MRZ	**Mangatainoka R**	**3.55**	**38**	P	Pn	13 13 10.2	-1.8
TIWZ	**Tintock**	**3.60**	**42**	P	Pn	13 13 10.9	-1.8
MSZ	**Milford Sound**	**3.66**	**250**	P	Pn	13 13 16.5	+3.0
MLZ	**Mavora Lakes**	**3.79**	**239**	P	Pn	13 13 17.0	+1.6
PRWZ	**Pori Road**	**3.81**	**40**	P	Pn	13 13 13.9	-1.7
BFZ	**Birch Farm**	**3.85**	**44**	P	Pn	13 13 14.0	-2.1
POWZ	**Post Office Ro**	**3.85**	**37**	P	Pn	13 13 15.0	-1.1
SYZ	**Scrubby Hill**	**3.96**	**219**	P	Pn	13 13 18.7	+1.1
DVHZ	**Dannevirke**	**4.10**	**40**	P	Pn	13 13 17.1	-2.5
WAZ	**Wanganui**	**4.11**	**25**	P	Pn	13 13 21.3	+1.5
ANWZ	**Angora Road**	**4.13**	**44**	P	Pn	13 13 17.8	-2.1
WHZ	**Wether Hill Ro**	**4.16**	**233**	P	Pn	13 13 20.5	0.0
TSZ	**Takapari Road**	**4.21**	**36**	P	Pn	13 13 19.6	-1.5
PREZ	**Palmer Road**	**4.30**	**15**	P	Pn	13 13 23.4	+1.1
PRHZ	**Porangahau**	**4.35**	**43**	P	Pn	13 13 21.5	-1.6
PKE	**Pukeiti**	**4.41**	**13**	P	Pn	13 13 25.4	+1.5
PNHZ	**Pukenui**	**4.43**	**37**	P	Pn	13 13 21.8	-2.3
VRZ	**Vera Road**	**4.64**	**20**	P	Pn	13 13 28.2	+1.3
PKVZ	**Pokaka**	**4.65**	**26**	P	Pn	13 13 27.2	0.0
MOVZ	**Moawhango**	**4.68**	**30**	P	Pn	13 13 27.1	-0.6
TRVZ	**Turoa**	**4.71**	**28**	P	Pn	13 13 28.4	+0.2
APZ	**The Paps**	**4.72**	**224**	P	Pn	13 13 30.1	+1.9
KRHZ	**Kereru**	**4.73**	**36**	P	Pn	13 13 25.7	-2.5
BHHZ	**Black Hill Sta**	**4.73**	**33**	P	Pn	13 13 27.1	-1.2
WHVZ	**Whangaehu Hut**	**4.74**	**28**	P	Pn	13 13 27.7	-0.8
FWVZ	**Far West T-bar**	**4.75**	**27**	P	Pn	13 13 29.0	+0.3
TUVZ	**Tukino**	**4.77**	**28**	P	Pn	13 13 28.8	-0.2
COVZ	**Chateau Observ**	**4.79**	**27**	P	Pn	13 13 30.0	+0.8
NGZ	**Ngauruhoe**	**4.84**	**27**	P	Pn	13 13 29.7	-0.2
TWVZ	**Taurewa**	**4.88**	**26**	P	Pn	13 13 30.4	0.0
WTVZ	**West Tongariro**	**4.89**	**27**	P	Pn	13 13 30.6	+0.1
KWHZ	**Kaweka Forest**	**4.93**	**35**	P	Pn	13 13 30.1	-1.0
MCHZ	**McNeill Hill**	**5.03**	**38**	P	Pn	13 13 31.6	-0.8
HIZ	**Hauiti**	**5.24**	**18**	P	Pn	13 13 35.3	0.0
MRHZ	**Matea Rd**	**5.43**	**32**	P	Pn	13 13 36.0	-1.9

MEX 03 13:22:51.4±0.5, 17°.12N×101°.29W, h20km±13km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.52**	**341**	*e*P	Pb	13 23 00.1	-1.8
ZIIG				*i*S	Sb	13 23 07.0	-1.9
CAIG	**El Cayaco**	**0.98**	**94**	*e*P	Pb	13 23 06.7	-3.0
CAIG				*e*S	Sb	13 23 18.8	-3.4
ACX	**Acapulco**	**1.39**	**100**	*e*P	Pn	13 23 14.2	-1.5
ACX				*e*S	Sn	13 23 31.1	-2.4
ARIG	**Puente Sto Nin**	**1.47**	**38**	*e*P	Pn	13 23 13.7	-3.1
ARIG				*e*S	Sn	13 23 30.9	-4.5
MEIG	**Mezcala**	**1.78**	**63**	*e*P	Pn	13 23 19.3	-1.9
MEIG				*e*S	Sn	13 23 40.5	-2.9
PLIG	**Platanillo**	**2.12**	**53**	*e*P	Pn	13 23 22.9	-2.9
PLIG				*e*S	Sb	13 23 54.0	-1.2
TLIG	**Tlapa**	**2.64**	**80**	*e*P	Pn	13 23 31.8	-1.1
TLIG				*e*S	Sb	13 24 09.9	-0.2

IDC 03 13:30:52.8±16.0, 9°.03S×116°.22E, h290km±102km, mb3.1/3, mb1 3.3/3, mb1mx2.7/56, mbtmp3.7/3, Error ellipse: s-maj=155.1km s-min=101.7km az=143.0, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.84**	**136**	P	P	13 33 46.6	0.0
	baz=325,slow=13						
WRA	**Warramunga Arr**	**20.60**	**124**	P	P	13 35 10.1	-0.6
	1.3nm,0.5s,baz=299,slow=12,SNR=20						
ASAR	**Alice Springs**	**22.32**	**133**	P	P	13 35 26.9	+0.3
	1.2nm,0.5s,baz=304,slow=9.0,SNR=44						
STKA	**Stephens Creek**	**32.73**	**138**	P	P	13 36 59.2	+0.3
	2.3nm,0.8s,baz=312,slow=11,SNR=3.5						

MAN 03 13:34:01.1, 10°.92N×125°.61E, h13km, mb4.3, ML3.1, MS2.8, 1C, Leyte

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
PLP	**Palo**	**0.67**	**292**	*e*P	Pg	13 34 14.1	0.0
PLP				*i*S	Sg	13 34 20.9	-2.0
BESP	**Borongan**	**0.70**	**346**	*e*P	Pg	13 34 14.5	-0.1
BESP				*e*S	Sg	13 34 22.7	-1.2
CNP	**Catarman**	**1.83**	**330**	*e*P	Pn	13 34 32.1	-0.1
CNP				*e*S	Sn	13 34 56.2	+0.9

*ISCJB **03** 13:45:42.8±0.8, 51°.40N±0°.08×176°.80E±0°.05, h42km±6km, mb4.1/41, MS3.3/3, Error ellipse: s-maj=13.9km s-min=4.9km az=5.1*
*IDC **03** 13:45:45.9±1.1, 51°.39N×176°.73E, h51km±7km, mb3.8/25, mb1 3.9/28, mb1mx3.7/91, mbtmp4.0/28, MS3.3/3, Ms1 3.4/3, ms1mx2.6/77, Error ellipse: s-maj=23.1km s-min=11.2km az=1.0*
*NEIC **03** 13:45:45.6±0.5, 51°.44N×176°.86E, mb4.0/16, Error ellipse: s-maj=12.6km s-min=4.2km az=2.0*
ISC 03 13:45:46.1±0.8, 51°.6N±0°.1×176°.83E±0°.04, h50km±6km, h50km:pP-P, n78, σ1°62/83, mb4.0/39, MS3.2/3, Rat Islands

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
SMY	**Shemya**	**2.02**	**305**	P	**Pn**	**13 46 16.5**	**-1.1**
SMY				S	**Sn**	**13 46 43.0**	**+1.4**
GALAA	**Gareloi Lava P**	**2.74**	**85**	P	**Pn**	**13 46 26.8**	**-0.7**
GALAA				S	**Sn**	**13 47 02.0**	**+2.6**
TAPA	**Tanaga Point A**	**3.34**	**84**	P	**Pn**	**13 46 34.8**	**-0.9**
KICM	**Kanaga Island**	**3.72**	**83**	P	**Pn**	**13 46 40.5**	**-0.5**
KINC	**Kanaga Island**	**3.77**	**83**	P	**Pn**	**13 46 41.2**	**-0.3**
ETKA	**Kagalaska Isla**	**4.21**	**84**	P	**Pn**	**13 46 46.8**	**-0.9**
GSMY	**Great Sitkin M**	**4.43**	**82**	P	**Pn**	**13 46 49.6**	**-1.1**
GSTR	**Great Sitkin T**	**4.43**	**81**	*e*Pn	**Pn**	**13 46 47.4**	**-3.4**
ATKA	**Atka Island**	**5.59**	**80**	P	**Pn**	**13 47 05.6**	**-0.9**
ATKA				S	**Sn**	**13 48 12.0**	**+2.7**
KOKL	**Mount Kliuchef**	**5.59**	**79**	P	**Pn**	**13 47 06.6**	**0.0**
NIKH	**Nikolski High**	**8.88**	**76**	P	**Pn**	**13 47 51.9**	**+0.3**
OKAK	**Okmok**	**9.23**	**72**	P	**Pn**	**13 47 57.6**	**+1.2**
OKTU	**Okmok Mt. Tuli**	**9.40**	**73**	P	**Pn**	**13 47 60.0**	**+1.3**
UNV	**Unalaska Valle**	**10.35**	**71**	*e*Pn	**Pn**	**13 48 12.4**	**+0.6**
AKUT	**Akutan**	**10.81**	**70**	*e*Pn	**Pn**	**13 48 18.9**	**+0.9**
PETK	**Petropavlovsk-**	**11.79**	**285**	P	**Pn**	**13 48 30.6**	**-0.8**
	0.3nm,0.3s,baz=103,slow=18,SNR=8.2						
PETK				S	Sn	13 50 31.5	-10
	0.4nm,0.3s,baz=88,slow=39,SNR=5.2						
FALS	**False Pass**	**12.26**	**67**	*e*Pn	**Pn**	**13 48 39.3**	**+1.5**
SDPT	**Sand Point**	**14.00**	**66**	*e*Pn	**Pn**	**13 48 59.1**	**-2.3**
	66nm,0.3s						
CHGN	**Chignik**	**15.27**	**62**	*e*Pn	**Pn**	**13 49 17.8**	**-0.3**
	87nm,1.0s						
MA2	**Magadan**	**16.66**	**309**	P	**P**	**13 49 37.6**	**+0.1**
	0.2nm,0.3s,baz=110,slow=9.1,SNR=4.2						
BILL	**Bilibino**	**17.26**	**347**	*e*P	**Pn**	**13 49 42.7**	**-0.5**
	3.3nm,1.1s						
SEY	**Seymchan**	**17.28**	**320**	P	**P**	**13 49 45.4**	**+1.1**
	0.1nm,0.3s,baz=202,slow=24,SNR=5.0						
SII	**Sitkinak Islan**	**17.63**	**62**	*e*P	**Pn**	**13 49 46.0**	**-1.9**
	120nm,1.2s						
KDAK	**Kodiak Island**	**18.61**	**59**	P	**P**	**13 49 57.1**	**-1.9**
	3.5nm,0.3s,baz=287,slow=5.4,SNR=50						
KDAK				S	**Sn**	**13 53 19.9**	**-6.8**
	0.1nm,0.3s,baz=323,slow=20,SNR=1.9						

KDAK Kodiak Island 18.61 59 *eP* **P 13 49 57.5 -1.5**
15nm,1.0s
KDAK S **Sn 13 53 19.9 -6.8**
SKT Skwentna 19.98 46 *eP* **P 13 50 13.4 -0.6**
8.6nm,1.0s
CAST Castle Rocks 20.21 42 *eP* **P 13 50 18.8 +2.3**
5.6nm,0.7s
IM3 Indian Mountai 20.67 35 *eP* **P 13 50 23.3 +1.9**
BPAW Bear Paw Mtn. 20.91 41 *eP* **P 13 50 26.3 +2.3**
6.6nm,1.1s
TRF Thorofare Moun 20.98 43 *eP* **P 13 50 26.4 +1.5**
4.5nm,0.7s
MLY Manley 21.36 39 *eP* **P 13 50 31.7 +2.8**
2.7nm,1.0s
DHY Denali Highway 22.13 45 *eP* **P 13 50 37.4 +0.1**
3.9nm,0.6s
MDM Murphy Dome 22.33 40 *eP* **P 13 50 39.9 +0.6**
4.6nm,0.8s
COLA College 22.45 40 P **P 13 50 40.7 +0.2**
1.7nm,0.6s
ILAR Eielson Array 22.81 41 P **P 13 50 43.1 -1.2**
0.7nm,0.5s,baz=252,slow=9.6,SNR=12
RAGM Ragged Mountai 22.93 52 *eP* **P 13 50 45.2 -0.5**
18nm,1.4s
TOLK Toolik Lake Re 23.40 31 *eP* **P 13 50 51.4 +1.2**
3.6nm,0.8s
DOT Dot Lake 23.71 44 *eP* **P 13 50 52.6 -0.5**
8.9nm,0.7s
CRQM Cirque 23.72 52 *eP* **P 13 50 53.2 -0.2**
9.0nm,0.9s
SCRK Sand Creek 23.82 44 *eP* **P 13 50 53.5 -0.6**
3.0nm,0.8s
ASAJ Asahikawa 23.99 265 P **P 13 50 55.1 -0.6**
11nm,0.8s,baz=66,slow=8.4,SNR=13
EGAK Eagle 25.19 42 *eP* **P 13 51 07.1 +0.6**
8.6nm,1.0s
DAWY Dawson 25.82 44 *eP* **P 13 51 12.5 +0.2**
3.6nm,0.8s
KLR Kul'dur 28.48 283 P **P 13 51 35.5 -0.8**
0.2nm,0.6s,baz=55,slow=8.9,SNR=7.8
TIXI Tiksi 29.10 331 P **P 13 51 42.7 +1.3**
1.1nm,0.5s,baz=127,slow=9.8,SNR=7.0
MJAR Matsushiro Arr 31.15 256 LR LR 14 02 50.5
comp=Z,13nm,21.9s,baz=95,slow=33
H11N2 WAKE ISLAND Hy 32.76 197 T T 14 27 09.6
baz=10
H11N3 WAKE ISLAND Hy 32.77 197 T T 14 27 10.5
baz=10
H11N1 WAKE ISLAND Hy 32.78 197 T T 14 27 14.6
baz=10
KSRS Korea Array 36.91 267 P **P 13 52 49.0 -0.8**
1.2nm,0.9s,baz=54,slow=8.1,SNR=5.7
KSRS pP **pP 13 53 02.4 -0.4**
0.5nm,0.6s,baz=56,slow=8.5,SNR=3.1
KSAR Wonju Array Be 36.94 267 P **P 13 52 49.0 -1.1**
KSAR pP **pP 13 53 02.5 -0.7**
YKA Yellowknife Ar 37.04 46 P **P 13 52 51.0 +0.4**
0.5nm,0.7s,baz=283,slow=8.3,SNR=5.5
NEW Newport 41.34 68 LR LR 14 08 40.1
comp=Z,30nm,18.2s,baz=218,slow=33
YBH Yreka Blue Hor 41.53 79 P **P 13 53 29.6 +1.1**
1.6nm,0.9s,baz=258,slow=3.8,SNR=5.8
SONM Songino Array 44.08 294 P **P 13 53 49.1 +0.1**
0.7nm,0.6s,baz=60,slow=8.0,SNR=4.3
NVAR Mina Array Bea 46.22 80 P **P 13 54 06.4 +0.1**
1.5nm,0.8s,baz=290,slow=8.0,SNR=13
ELK Elko 46.66 75 P **P 13 54 11.8 +2.0**
0.6nm,0.4s,baz=316,slow=11,SNR=6.8
PDAR Pinedale Array 48.81 70 P **P 13 54 25.5 -0.9**
0.3nm,0.3s,baz=322,slow=7.2,SNR=2.8
SPITS Spitsbergen Ar 49.92 355 P **P 13 54 34.9 +0.8**
1.8nm,0.5s,baz=3.2,slow=10,SNR=14
SPITS pP **pP 13 54 48.3 +0.8**
1.4nm,0.5s,baz=19,slow=8.8,SNR=2.5
DPP Dos Picos Cty 50.58 85 *eP* P 13 54 29.4 -10
ZALV Zalesovo Beam 51.85 311 P **P 13 54 48.2 -0.7**
0.6nm,0.5s,baz=52,slow=9.3,SNR=2.8
KURK Kurchatov 56.85 311 *eP* **P 13 55 25.2 0.0**
40nm,0.9s
KURK pP **pP 13 55 40.6 +1.8**
KURK PcP **PcP 13 56 20.6 +0.4**
KURBB Kurchatov Arra 56.95 311 P **P 13 55 26.2 +0.3**
2.9nm,0.8s,baz=46,slow=6.9,SNR=19
KURBB pP **pP 13 55 40.6 +1.1**
0.6nm,0.7s,baz=42,slow=6.7,SNR=2.8
KURBB PcP **PcP 13 56 20.6 -0.1**
0.5nm,0.7s,baz=39,slow=4.0,SNR=3.4
ARCES ARCESS Array B 57.35 348 P **P 13 55 29.5 +1.0**
2.9nm,0.9s,baz=36,slow=6.7,SNR=3.7
MKAR Makanchi Array 57.71 306 P **P 13 55 30.6 -0.7**
0.6nm,0.6s,baz=44,slow=7.1,SNR=6.7
BVAR Borovoye Array 58.91 317 P **P 13 55 40.4 +0.8**
6.7nm,0.5s,baz=53,slow=6.9,SNR=59
BRVK Borovoye 58.93 318 *eP* **P 13 55 40.4 +0.7**
23nm,0.5s
ARU Arti 60.92 326 P **P 13 55 54.9 +1.6**
2.7nm,0.6s,baz=63,slow=3.7,SNR=5.9
TXAR Lajitas Array 61.30 78 P **P 13 55 56.4 -0.1**
0.4nm,0.6s,baz=298,slow=4.9,SNR=8.4
SCHQ Schefferville 61.47 36 LR LR 14 22 38.6
comp=Z,156nm,19.6s,baz=122,slow=36
FINES FINESS Array B 64.90 345 P **P 13 56 20.0 +0.4**
5.1nm,1.1s,baz=15,slow=6.5,SNR=5.2
AKTO Aktyubinsk 65.87 322 P **P 13 56 27.0 +0.9**
4.3nm,0.6s,baz=49,slow=7.4,SNR=12
NOA NORSAR Array B 67.11 352 P **P 13 56 35.0 +1.1**
1.7nm,0.9s,baz=0.5,slow=6.4,SNR=5.1
HFS Hagfors 67.78 351 P **P 13 56 38.5 +0.4**
6.2nm,1.1s,baz=3.8,slow=8.7,SNR=4.8
CMAR Chiang Mai Arr 68.27 272 P **P 13 56 40.1 -1.7**
0.6nm,0.4s,baz=30,slow=7.5,SNR=8.5
AKASG Malin Array Be 74.42 339 P **P 13 57 19.2 +0.8**
0.6nm,0.4s,baz=24,slow=5.8,SNR=5.7
BRTR Keskin Array B 83.53 332 P **P 13 58 09.3 +0.7**
1.3nm,0.7s,baz=67,slow=2.9,SNR=8.8
BOSA Boshof 148.71 306 PKPbc **PKPbc 14 05 27.2 -0.4**
4.8nm,1.0s,baz=53,slow=5.1,SNR=3.5

ISCJB ***03*** *13:46:19.8±0.5,50°.72S±0°.07×162°.5E±0°.1,h16km, mb4.2/9,MS3.6/7,Error ellipse: s-maj=11.6km s-min=8.4km az=33.9*
IDC ***03*** *13:46:19.2±0.7,50°.76S×162°.39E,h0km,mb4.2/8, mb1 4.4/10,mb1mx4.2/44,mbtmp4.2/10,ML3.5/2,MS3.6/8, Ms1 3.6/8,ms1mx3.2/42,Error ellipse: s-maj=30.9km s-min=16.7km az=73.0*
NEIC ***03*** *13:46:20.7±0.4,50°.77S×162°.34E,h10km,mb4.4/1,Error ellipse: s-maj=10.0km s-min=9.1km az=84.0*
ISC 03 13:46:21.4±0.6,50°.67S±0°.09×162°.53E±0°.09,h16km,n51, σ1§02/46,mb4.3/9,MS3.5/7,9C-5D,Auckland Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	**9.06**	**43**	Pn	**Pn**	**13 48 32.9**	**+1.6**
	0.6nm,0.3s,baz=198,slow=6.4,SNR=3.2						
RPZ				Sn	**Sn**	**13 50 10.1**	**-2.9**
	0.7nm,0.3s,baz=348,slow=19,SNR=2.6						
TAU	**Tasmania Unive**	**12.98**	**301**	*e*Pn	**Pn**	**13 49 23.5**	**-1.5**
URZ	**Urewera**	**16.16**	**45**	Pn	**P**	**13 50 10.0**	**-0.8**
	0.2nm,0.3s,baz=205,slow=17,SNR=2.3						
URZ				Sn	**Sn**	**13 53 06.6**	**+0.2**
	0.2nm,0.3s,baz=194,slow=17,SNR=2.2						
URZ				LR	LR	13 56 41.3	
	comp=Z,252nm,18.9s,baz=235,slow=38						
STKA	**Stephens Creek**	**24.35**	**313**	P	**P**	**13 51 39.3**	**+0.8**
	2.1nm,0.7s,baz=152,slow=15,SNR=2.4						
STKA				LR	LR	14 00 32.2	
	comp=Z,79nm,18.6s,baz=205,slow=35						
VNDA	**Vanda**	**26.95**	**180**	P	**P**	**13 52 00.7**	**-0.9**
	3.1nm,1.1s,baz=335,slow=10,SNR=5.9						
VNDA				LR	LR	14 00 43.6	
	comp=Z,108nm,18.2s,baz=359,slow=32						
DZM	**Mont Dzumac**	**28.71**	**8**	LR	LR	14 01 26.0	
	comp=Z,94nm,18.5s,baz=297,slow=32						
CTA	**Charters Tower**	**33.12**	**331**	P	**P**	**13 52 58.9**	**+2.3**
	2.1nm,0.9s,baz=143,slow=15,SNR=2.6						
ASAR	**Alice Springs**	**34.91**	**310**	P	**P**	**13 53 12.8**	**+0.6**
	4.3nm,0.8s,baz=145,slow=8.3,SNR=55						
ASAR				PcP	**PcP**	**13 55 44.6**	**-0.1**
	1.6nm,1.1s,baz=142,slow=3.1,SNR=5.0						
WRA	**Warramunga Arr**	**37.89**	**314**	P	**P**	**13 53 37.4**	**-0.3**
	7.8nm,1.0s,baz=141,slow=7.1,SNR=16						
WRA				PcP	**PcP**	**13 55 53.6**	**0.0**
	1.3nm,0.7s,baz=151,slow=2.9,SNR=9.2						
WRAB	**Tennant Creek**	**37.90**	**314**	*e*P	**P**	**13 53 37.1**	**-0.6**
	6.1nm,0.8s						
H01W1	**Cape Leeuwin H**	**38.12**	**275**	T	T	14 33 40.8	
	baz=130,slow=76,SNR=92						
H01W2	**Cape Leeuwin H**	**38.13**	**275**	T	T	14 33 40.8	
	baz=130,slow=76,SNR=99						
H01W3	**Cape Leeuwin H**	**38.14**	**275**	T	T	14 33 41.4	
	baz=130,slow=76,SNR=99						
QSPA	**South Pole Qui**	**39.45**	**180**	P	**P**	**13 53 51.1**	**+0.6**
	3.8nm,0.8s,baz=4.8,slow=2.8,SNR=8.7						
QSPA				PcP	**PcP**	**13 55 58.6**	**+0.6**
	4.9nm,1.0s,baz=105,slow=1.5,SNR=7.8						
HNR	**Honiara**	**41.17**	**356**	LR	LR	14 09 21.4	
	comp=Z,80nm,18.5s,baz=182,slow=34						
FITZ	**Fitzroy Crossi**	**43.76**	**304**	LR	LR	14 11 19.2	
	comp=Z,55nm,19.1s,baz=166,slow=34						
BATI	**Baumata**	**51.43**	**308**	LR	LR	14 15 50.3	
	comp=Z,127nm,18.2s,baz=231,slow=34						
SNAA	**Sanae**	**57.52**	**185**	P	**P**	**13 56 09.4**	**+0.2**
SNAA	**Sanae**	**57.52**	**185**	P	**P**	**13 56 08.9**	**-0.3**
	3.4nm,1.1s,baz=193,slow=12,SNR=4.8						
SNAA				LR	LR	14 19 34.0	
	comp=Z,58nm,18.9s,baz=328,slow=35						
VNA3	**Neumayer Olymp**	**58.26**	**183**	P	**P**	**13 56 14.6**	**+0.1**
VNA1	**Neumayer--Stat**	**58.80**	**184**	P	**P**	**13 56 18.7**	**+0.5**
H08S2	**Diego Garcia H**	**84.17**	**265**	T	T	15 31 14.2	
	baz=141,slow=76,SNR=78						
H08S1	**Diego Garcia H**	**84.18**	**265**	T	T	15 31 17.5	
	baz=141,slow=76,SNR=98						
H08S3	**Diego Garcia H**	**84.19**	**265**	T	T	15 31 19.7	
	baz=141,slow=76,SNR=94						
CMAR	**Chiang Mai Arr**	**88.52**	**302**	P	**P**	**13 59 13.7**	**+0.7**
	1.8nm,0.8s,baz=170,slow=3.7,SNR=7.9						
MKAR	**Makanchi Array**	**119.11**	**309**	PKP	**PKPdf**	**14 05 07.1**	**-1.5**
	1.0nm,0.9s,baz=126,slow=2.5,SNR=4.2						
ILAR	**Eielson Array**	**121.59**	**23**	PKP	**PKPdf**	**14 05 13.3**	**+0.6**
	0.8nm,0.9s,baz=280,slow=3.9,SNR=6.5						
KURBB	**Kurchatov Arra**	**123.53**	**311**	PKP	**PKPdf**	**14 05 16.7**	**-0.1**
	0.7nm,0.7s,baz=126,slow=2.7,SNR=6.7						
KURK	**Kurchatov**	**123.55**	**311**	PKP	**PKPdf**	**14 05 16.7**	**-0.2**
TORD	**Torodi Ar. Bea**	**139.45**	**209**	PKhKP	PKPpre	14 05 38.6	
	1.2nm,0.8s,baz=177,slow=1.5,SNR=6.2						
TORD				PKP	**PKPdf**	**14 05 46.0**	**-2.0**
	2.0nm,0.9s,baz=154,slow=1.7,SNR=6.7						
IDI	**Anoyia**	**145.93**	**260**	PKPbc	**PKPbc**	**14 05 59.9**	**+0.2**
	17nm,0.8s,baz=110,slow=4.3,SNR=26						
IDI	**Anoyia**	**145.93**	**260**	‖*iP*	**PKPbc**	**14 06 00.0**	**+0.3**
APE	**Apeiranthos**	**146.64**	**263**	‖*iP*	**PKPbc**	**14 06 01.1**	**-0.6**
TIRR	**Tirgusor**	**148.83**	**277**	‖*iP*	**PKPbc**	**14 06 07.2**	**-0.1**
TLB	**Topalu**	**149.13**	**277**	‖*iP*	**PKPbc**	**14 06 08.7**	**+0.6**
CFR	**Carcaliu**	**149.34**	**278**	‖*iP*	**PKPbc**	**14 06 08.8**	**+0.2**
SPITS	**Spitsbergen Ar**	**149.75**	**347**	PKPbc	**PKPbc**	**14 06 09.6**	**+0.9**
	8.9nm,0.9s,baz=46,slow=4.2,SNR=3.7						
SORM	**Soroca**	**150.44**	**283**	‖*iP*	**PKPbc**	**14 06 11.8**	**+0.7**
VRI	**Vrincioaia**	**150.53**	**278**	‖*iP*	**PKPbc**	**14 06 12.9**	**+1.4**
AKASG	**Malin Array Be**	**150.80**	**288**	PKPbc	**PKPbc**	**14 06 11.6**	**-0.3**
	2.8nm,0.8s,baz=75,slow=2.5,SNR=11						
TESR	**Tescani**	**150.86**	**279**	‖*iP*	**PKPbc**	**14 06 12.3**	**+0.1**
MLR	**Muntele Rosu**	**150.86**	**277**	PKPbc	**PKPbc**	**14 06 12.5**	**+0.1**
	1.3nm,0.9s,baz=92,slow=2.3,SNR=8.2						
MLR	**Muntele Rosu**	**150.86**	**277**	‖*iP*	**PKPbc**	**14 06 12.8**	**+0.4**
VTS	**Vitosha**	**151.23**	**270**	‖*iP*	**PKPbc**	**14 06 13.8**	**+0.4**
MTUR	**Matau**	**151.30**	**276**	‖*iP*	**PKPbc**	**14 06 13.9**	**+0.5**
DOPR	**Dopca**	**151.42**	**277**	‖*iP*	**PKPbc**	**14 06 13.6**	**0.0**
BURAR	**Bucovina Array**	**152.19**	**280**	‖*iP*	**PKPab**	**14 06 22.1**	**-3.2**
ARCES	**ARCESS Array B**	**152.36**	**329**	PKPbc	**PKPbc**	**14 06 15.4**	**+0.5**
	5.0nm,0.8s,baz=33,slow=2.2,SNR=10						
DRGR		**153.45**	**277**	‖*iP*	**PKPbc**	**14 06 18.5**	**+0.3**
FINES	**FINESS Array B**	**153.92**	**311**	PKPbc	**PKPbc**	**14 06 18.5**	**-0.1**
	3.4nm,0.9s,baz=165,slow=7.9,SNR=4.0						
GERES	**GERESS Array B**	**159.85**	**277**	PKPab	**PKPab**	**14 06 57.3**	**-0.8**
	0.5nm,0.7s,baz=86,slow=4.4,SNR=5.3						

BJI ***03*** *13:51:39.3,5°.99N×124°.20E,h595km,mb4.4/27,mB4.5/14*
MAN ***03*** *13:51:42.2,6°.58N×124°.02E,h631km,mb5.9,ML4.9, MS5.3*
MOS ***03*** *13:51:46.4±0.9,6°.78N×123°.74E,h605km,mb4.7/30,Error ellipse: s-maj=13.8km s-min=6.6km az=117.4*
ISCJB ***03*** *13:51:46.2±0.2,6°.83N±0°.02×123°.85E±0°.03,h598km±2km, mb4.3/125,Error ellipse: s-maj=5.3km s-min=3.2km az=169.0*
NEIC ***03*** *13:51:46.7±0.3,6°.76N×123°.84E,h594km±3km,mb4.6/67, Error ellipse: s-maj=5.0km s-min=3.4km az=71.0*
NEIC Felt at Cagayan de Oro.
IDC ***03*** *13:51:47.2±0.5,6°.77N×123°.71E,h596km±6km,mb3.7/46, mb1 3.8/48,mb1mx3.7/68,mbtmp4.6/48,Error ellipse: s-maj=10.8km s-min=5.5km az=73.0*
DJA ***03*** *13:51:47.8±0.3,7°N±3°×12°4E±°,h592km±4km,M4.4/42, mb4.9/42,mB5.0/28,MLv4.8/7,Mw(mB)4.3/28*
ISC 03 13:51:46.7±0.4,6.78N±0°.04×123°.88E±0°.06,h591km±4km, n326,σ1§21/370,mb4.3/123,14C-17D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.57**	**40**	‖*iP*	**P**	**13 52 56.3**	**0.0**
CTBH				*i*S	**P**	**13 52 59.2**	**+2.9**
PAGZ	**Pagadian**	**1.17**	**335**	*e*P	**P**	**13 52 57.0**	**-0.4**
GSPH	**General Santos**	**1.27**	**123**	‖*iP*	**P**	**13 52 57.8**	**-0.1**
BUKP	**Musuan**	**1.60**	**47**	*e*P	**P**	**13 52 58.7**	**0.0**
DAV	**Davao City (W)**	**1.71**	**80**	P	**P**	**13 52 59.2**	**+0.1**
	59nm,0.3s,baz=2.4,slow=0.7,SNR=7.4						
DAV				S	**S**	**13 54 01.0**	**+3.1**
	40nm,0.3s,baz=90,slow=17,SNR=1.8						
DAV	**Davao City (W)**	**1.71**	**80**	*e*P	**P**	**13 52 59.1**	**0.0**
DCPH	**Dipolog City**	**1.87**	**344**	‖*e*P	**P**	**13 52 58.9**	**-0.8**
MATI	**Mati**	**2.37**	**86**	*e*P	**P**	**13 53 00.6**	**-1.2**
BUTP	**Butuan**	**2.77**	**38**	*e*P	**P**	**13 53 04.2**	**+0.3**
BUTP				*e*S	**S**	**13 54 07.7**	**+1.0**
BIPH	**Bislig**	**2.83**	**60**	‖*e*P	**P**	**13 53 02.8**	**-1.3**
BIPH				*e*S	**S**	**13 54 03.5**	**-3.7**
SGSI	**Sangihe**	**3.48**	**152**	P	**P**	**13 53 07.1**	**-1.0**
LLP	**Lapu-Lapu**	**3.52**	**1**	*e*P	**P**	**13 53 08.1**	**-0.2**
LLP				*e*S	**S**	**13 54 13.3**	**-1.4**
GUIM	**Jordan**	**4.03**	**342**	*e*P	**P**	**13 53 09.2**	**-2.5**
OCLP	**Ormoc**	**4.30**	**10**	*e*P	**P**	**13 53 13.9**	**+0.1**
BESP	**Borongan**	**5.03**	**18**	*e*P	**P**	**13 53 17.1**	**-2.2**
MYLDM	**Lahad Datu**	**5.58**	**254**	*e*P	**P**	**13 53 25.0**	**+1.1**
CNP	**Cataman**	**5.75**	**8**	*e*P	**P**	**13 53 24.6**	**-0.6**
OTRP	**Odiongan**	**5.84**	**342**	*e*P	**P**	**13 53 26.6**	**+0.6**
KMSI	**Cibinong**	**6.17**	**179**	P	**P**	**13 53 31.0**	**+2.1**
SJMP	**San Jose**	**6.27**	**334**	*e*P	**P**	**13 53 29.9**	**+0.2**
BUSP	**Coron**	**6.33**	**325**	*e*P	**P**	**13 53 29.9**	**-0.4**
MRSI	**Marisa**	**6.55**	**197**	P	**P**	**13 53 33.0**	**+0.6**
AUQP	**San Andres**	**6.61**	**350**	*e*P	**P**	**13 53 33.1**	**+0.3**
TNTI	**Ternate**	**6.91**	**150**	*e*P	**P**	**13 53 35.8**	**+0.2**
BOAC	**Boac**	**6.93**	**343**	*e*P	**P**	**13 53 35.2**	**-0.5**
MPSI	**Mapaga**	**7.53**	**212**	P	**P**	**13 53 41.2**	**-0.2**
KKM	**Kota Kinabalu**	**7.65**	**265**	*e*P	**P**	**13 53 41.9**	**-0.7**
LUBP	**Lubang**	**7.78**	**333**	*e*P	**P**	**13 53 43.1**	**-0.5**
TGY	**Tagaytay City**	**7.83**	**339**	P	**P**	**13 53 44.0**	**-0.2**
	208nm,0.3s,baz=207,slow=1.0,SNR=34						
TGY				S	**S**	**13 55 19.7**	**-0.7**
	baz=345,slow=15,SNR=3.2						
APSI	**Ampana**	**7.96**	**196**	P	**P**	**13 53 46.3**	**+0.9**
LBMI	**Labuha**	**8.21**	**154**	P	**P**	**13 53 49.4**	**+1.6**
PCI	**Palu**	**8.64**	**208**	P	**P**	**13 53 50.9**	**-1.0**
	179nm,1.1s,2μm						
PCI	**Palu**	**8.64**	**208**	P	**P**	**13 53 51.3**	**-0.6**
PCI				pmax	pmax		
	comp=Z,179nm,1.1s						
SANI	**Sanana**	**9.02**	**166**	P	**P**	**13 53 53.1**	**-2.6**
SMKI	**Samarinda**	**9.79**	**223**	P	**P**	**13 54 06.5**	**+3.2**
	comp=Z,154nm,0.5s						
TTSI	**Tana Toraja**	**10.57**	**203**	P	**P**	**13 54 12.4**	**+1.3**
SIJI	**Sorong**	**10.59**	**136**	P	**P**	**13 54 12.4**	**+1.1**
	comp=Z,10.0nm,0.3s,baz=297,slow=8.5,SNR=47						
SIJI				S	**S**	**13 56 13.0**	**+3.0**
	comp=Z,0.3nm,0.3s,baz=162,slow=20,SNR=4.0						
KDI	**Kendari**	**10.74**	**187**	P	**P**	**13 54 14.6**	**+1.8**
	comp=Z,119nm,1.1s,comp=Z,1μm						
ABRA	**Dolores**	**11.24**	**344**	*e*P	**P**	**13 54 15.8**	**-1.9**
MSAI	**Masohi**	**11.25**	**153**	P	**P**	**13 54 20.2**	**+2.3**
	comp=Z,90nm,0.8s,comp=Z,868nm						
AAI	**Ambon**	**11.26**	**157**	P	**P**	**13 54 19.0**	**+1.0**
	comp=Z,267nm,0.6s,comp=Z,3μm						
AAI	**Ambon**	**11.26**	**157**	P	**P**	**13 54 19.4**	**+1.4**
AAI				pmax	pmax		
	comp=Z,260nm,0.6s						
APYP	**Conner**	**11.31**	**347**	*e*P	**P**	**13 54 16.6**	**-1.9**
SPSI	**Sidrap Palu**	**11.44**	**201**	P	**P**	**13 54 19.1**	**-0.7**
MTKI	**Muara Teweh, K**	**11.80**	**230**	P	**P**	**13 54 24.1**	**+0.6**
SBUM	**Sibu**	**12.39**	**250**	*e*P	**P**	**13 54 29.6**	**+0.2**
KAPI	**Kappang**	**12.42**	**199**	P	**P**	**13 54 27.9**	**-1.9**
	comp=Z,16nm,0.7s						
KAPI	**Kappang**	**12.42**	**199**	P	**P**	**13 54 27.9**	**-1.9**
KAPI				pmax	pmax		
	comp=Z,16nm,0.7s						
BKSI	**Bulukumba**	**12.59**	**197**	P	**P**	**13 54 33.8**	**+2.3**
	comp=Z,19nm,0.7s						
KBKI	**Kotabaru**	**12.63**	**218**	P	**P**	**13 54 35.5**	**+3.6**
	comp=Z,30nm,0.6s,comp=Z,271nm						
BNDI	**Bandanaira**	**12.74**	**152**	P	**P**	**13 54 35.1**	**+2.1**
	comp=Z,420nm,1.0s						
FAKI	**Fak Fak**	**12.75**	**139**	P	**P**	**13 54 34.5**	**+1.3**
	comp=Z,231nm,0.7s,comp=Z,2μm						
FAKI	**Fak Fak**	**12.75**	**139**	*e*P	**P**	**13 54 33.7**	**+0.6**
STKI	**Sintang**	**14.06**	**242**	P	P	13 54 55.7	+9.3
KMPI	**Kaimana, Papua**	**14.28**	**136**	P	**P**	**13 54 49.3**	**+0.8**
	comp=Z,235nm,0.9s						
KSM	**Kuching**	**14.52**	**249**	*e*P	**P**	**13 54 50.4**	**-0.5**
MMRI	**Maumere**	**15.40**	**186**	P	**P**	**13 55 00.2**	**+1.2**
	comp=Z,135nm,0.7s,comp=Z,2μm						
MMRI	**Maumere**	**15.40**	**186**	*e*P	**P**	**13 54 58.9**	**-0.1**
	comp=Z,107nm,0.8s						
PBKI	**Pangkalan Bun**	**15.41**	**233**	P	**P**	**13 55 00.1**	**+1.0**
	comp=Z,154nm,1.0s,comp=Z,2μm						
EDFI	**Ende, Flores**	**15.58**	**188**	P	**P**	**13 55 01.0**	**+0.2**
	comp=Z,178nm,0.8s,comp=Z,2μm						
TWG	**Pinlang**	**16.18**	**351**	*e*P	**P**	**13 55 04.1**	**-1.9**
	comp=Z,294nm,0.5s						
SAUI	**Saumlaki**	**16.43**	**153**	*e*P	**P**	**13 55 08.9**	**+0.4**
	comp=Z,402nm,1.0s						
SOEI	**Soe**	**16.43**	**179**	P	**P**	**13 55 13.3**	**+4.7**
	comp=Z,90nm,0.9s						
SOEI	**Soe**	**16.43**	**179**	*e*P	**P**	**13 55 08.1**	**-0.5**
	comp=Z,64nm,0.8s						
PLAI	**Plampang**	**16.66**	**202**	P	**P**	**13 55 11.1**	**+0.5**
	comp=Z,840nm,0.8s,comp=Z,7μm						
YULB	**Yu-li**	**16.70**	**352**	*e*P	**P**	**13 55 09.2**	**-1.6**
	comp=Z,40nm,0.7s						
TPUB	**Ta-pu**	**16.72**	**350**	*e*P	**P**	**13 55 11.0**	**0.0**
	comp=Z,337nm,0.9s						
WSI	**Waingapu**	**16.73**	**192**	P	**P**	**13 55 10.4**	**-0.8**
	comp=Z,549nm,0.4s,comp=Z,21μm						
BATI	**Baumata**	**16.88**	**181**	P	**P**	**13 55 12.3**	**-0.3**
	comp=Z,40nm,0.3s,baz=22,slow=0.8,SNR=60						
BATI				S	**S**	**13 58 00.9**	**+0.7**
	comp=Z,2.5nm,0.3s,baz=300,slow=20,SNR=3.8						
BATI	**Baumata**	**16.88**	**181**	P	**P**	**13 55 12.3**	**-0.3**
	comp=Z,144nm,0.6s,comp=Z,2μm						
SSLB	**Suanglung**	**17.14**	**351**	*e*P	**P**	**13 55 14.0**	**-0.9**
	comp=Z,50nm,0.7s						
BASI	**Baing, Sumba**	**17.20**	**191**	P	**P**	**13 55 16.6**	**+1.1**
	comp=Z,162nm,0.6s,comp=Z,2μm						
NACB	**Ninganchiao**	**17.43**	**353**	*e*P	**P**	**13 55 16.9**	**-0.6**
	comp=Z,164nm,2.0s						
YOJ	**Yonaguni jima**	**17.60**	**357**	*e*P	**P**	**13 55 20.2**	**+1.2**
	comp=Z,139nm,0.7s						
YOJ	**Yonaguni jima**	**17.60**	**357**	*e*P	**P**	**13 55 20.2**	**+1.2**
YOJ				pmax	pmax		
	comp=Z,139nm,0.7s						
YHNB	**Yeheng**	**17.95**	**353**	*e*P	**P**	**13 55 22.3**	**0.0**
	comp=Z,86nm,0.5s						
JAGI	**Jajag, Banyuwa**	**17.99**	**213**	P	**P**	**13 55 24.0**	**+1.3**
	comp=Z,56nm,1.0s						
JAGI	**Jajag, Banyuwa**	**17.99**	**213**	*e*P	**P**	**13 55 22.9**	**+0.1**
	comp=Z,41nm,0.9s						
TATO	**Taipei**	**18.24**	**353**	*e*P	**P**	**13 55 24.4**	**-0.4**
	comp=Z,526nm,1.8s						
GZH	**Guangzhou**	**19.12**	**329**	P	**P**	**13 55 36.4**	**+3.5**
JAY	**Jayapura**	**19.17**	**118**	P	**P**	**13 55 36.7**	**+3.2**
	comp=Z,1.0nm,0.3s,baz=241,slow=10,SNR=3.8						
JOW	**Kunigami**	**20.38**	**11**	P	**P**	**13 55 45.5**	**+1.3**
	comp=Z,21nm,0.5s,baz=128,slow=16,SNR=3.3						
JOW	**Kunigami**	**20.38**	**11**	*e*P	**P**	**13 55 45.3**	**+1.1**
	comp=Z,69nm,1.2s						
MYKOM	**Kota Tinggi**	**20.57**	**257**	*e*P	**P**	**13 55 46.0**	**-0.2**
	comp=Z,29nm,1.7s						
MTN	**Manton Dam**	**20.79**	**160**	*e*P	**P**	**13 55 47.4**	**-0.7**
	comp=Z,22nm,0.4s						
PBKT	**Sadao Pong**	**24.43**	**295**	*e*P	**P**	**13 56 20.4**	**-0.1**
	comp=Z,21nm,1.8s						
FITZ	**Fitzroy Crossi**	**24.78**	**176**	P	**P**	**13 56 23.3**	**-0.2**
	comp=Z,8.8nm,0.3s,baz=5.5,slow=7.3,SNR=152						
FITZ				PcP	**PcP**	**13 59 39.0**	**-0.3**
	comp=Z,2.2nm,0.5s,baz=0.0,slow=8.1,SNR=3.9						
FITZ				ScP	**ScP**	**14 02 22.6**	**-0.4**
	comp=Z,2.2nm,0.6s,baz=303,slow=6.0,SNR=4.6						
FITZ	**Fitzroy Crossi**	**24.78**	**176**	*e*P	**P**	**13 56 23.4**	**-0.2**
	comp=Z,17nm,1.1s						
NJ2	**Nanjing**	**25.58**	**350**	*e*P	**P

comp=Z,1.2nm,0.5s,baz=302,slow=1.7,SNR=3.5
CTA ScP **ScP** **14 02 55.3 +0.1**
comp=Z,1.6nm,0.7s,baz=294,slow=5.4,SNR=4.7
HHC Hu-ho-hao-te 35.66 344 *e*P **P** **13 57 57.6 +1.0**
HHC S **S** **14 02 58.9 +6.7**
HHC pmax pmax
comp=Z,10.0nm,1.0s
HHC pmax pmax
comp=Z,37nm,5.3s
CN2 Changchun 36.90 2 *e*P **P** **13 58 08.1 +1.6**
USRK Ussuriysk Ar. 37.94 9 P **P** **13 58 15.8 +0.8**
comp=Z,1.2nm,0.5s,baz=180,slow=7.8,SNR=3.4
USRK PcP **PcP** **14 00 14.8 -0.2**
comp=Z,1.2nm,0.6s,baz=214,slow=3.3,SNR=3.9
LSA Lhasa 38.31 311 *e*P **P** **13 58 19.5 +0.7**
comp=Z,3.2nm,0.8s
LSA Lhasa 38.31 311 *e*P **P** **13 58 19.5 +0.7**
LSA pmax pmax
comp=Z,3.0nm,0.8s
GTA Gaotai 39.05 330 *e*P **P** **13 58 24.9 +0.8**
GTA pP pP 14 00 07.0 +2.3
GTA PcP **PcP** **14 00 19.4 +0.6**
GTA sP sP 14 01 14.3 +2.4
GTA S **S** **14 03 44.7 +2.6**
GTA sS sS 14 06 52.6 +5.7
GTA pmax pmax
comp=Z,4.0nm,0.9s
GTA pmax pmax
comp=Z,43nm,4.6s
NWAO Narrogin (SRO) 39.99 189 P **P** **13 58 31.8 +0.2**
comp=Z,9.1nm,0.5s,baz=255,slow=8.3,SNR=18
ASAJ Asahikawa 40.64 21 P **P** **13 58 37.7 +1.1**
comp=Z,1.6nm,0.3s,baz=211,slow=9.1,SNR=12
ASAJ PcP **PcP** **14 00 24.2 +0.5**
comp=Z,3.4nm,0.7s,baz=274,slow=6.9,SNR=4.8
JIRN Jiri 41.30 305 *e*P **P** **13 58 43.0 +0.4**
comp=Z,15nm,0.5s
GUN Gumba 41.65 305 *e*P **P** **13 58 45.6 +0.3**
comp=Z,14nm,0.4s
PKIN Phulchoki 41.92 304 *e*P **P** **13 58 46.9 -0.4**
comp=Z,5.4nm,0.4s
STKA Stephens Creek 42.00 157 P **P** **13 58 48.3 +0.8**
comp=Z,5.5nm,0.5s,baz=334,slow=7.9,SNR=12
STKA PcP **PcP** **14 00 27.9 -0.6**
comp=Z,1.5nm,0.5s,baz=304,slow=4.9,SNR=3.1
KKN Kakani 42.10 304 *e*P **P** **13 58 48.6 -0.1**
comp=Z,8.4nm,0.4s
DMN Daman 42.17 304 *e*P **P** **13 58 49.8 +0.5**
GKN Gorkha 42.70 304 *e*P **P** **13 58 53.2 -0.1**
comp=Z,6.8nm,0.4s
KLR Kul'dur 42.82 8 P **P** **13 58 54.0 +0.3**
comp=Z,0.1nm,0.4s,baz=174,slow=9.7,SNR=4.9
KLR PcP **PcP** **14 00 30.8 -0.2**
comp=Z,0.1nm,0.5s,baz=250,slow=4.4,SNR=4.3
KLR Kul'dur 42.82 8 ⇓*i*P **P** **13 58 53.7 0.0**
ULN Ulaanbaatar 43.38 344 ⇓*i*P **P** **13 58 59.6 +1.4**
ULN pmax pmax
comp=Z,1.0nm,0.5s
KOLN Koldanda 43.47 304 *e*P **P** **13 58 59.7 +0.4**
comp=Z,15nm,0.3s
SONM Songino Array 43.54 343 P **P** **13 58 59.6 +0.2**
comp=Z,0.5nm,0.4s,baz=152,slow=9.4,SNR=4.1
SONM PcP **PcP** **14 00 33.3 -0.3**
comp=Z,2.4nm,0.7s,baz=159,slow=4.2,SNR=9.3
DANN Dangsing 43.55 304 *e*P **P** **13 59 00.2 +0.1**
comp=Z,29nm,0.6s
SONA1 Songino Array 43.55 343 *e*P **P** **13 58 59.5 0.0**
SONA1 *e*PcP **PcP** **14 00 33.2 -0.5**
PYUN Piuthan 44.09 304 *e*P **P** **13 59 04.5 +0.4**
comp=Z,12nm,0.5s
WMQ Urumqi 48.62 325 P **P** **13 59 38.0 +0.2**
WMQ pP pP 14 01 27.5 +2.3
WMQ pmax pmax
comp=Z,44nm,1.3s
WMQ pmax pmax
comp=Z,230nm,5.3s
DZM Mont Dzumac 50.61 126 P **P** **13 59 54.3 +1.5**
comp=Z,4.1nm,0.5s,baz=264,slow=19,SNR=7.8
PDGK Podgornoye 53.27 320 P **P** **14 00 11.6 +0.1**
PDGK pmax pmax
comp=Z,7.0nm,0.7s
MK01 Makanchi Array 53.43 325 *e*P **P** **14 00 12.6 +0.1**
MK01 *e*PcP **PcP** **14 01 09.0 -0.9**
MK31 Makanchi Array 53.45 325 *e*P **P** **14 00 12.8 +0.2**
MK31 Makanchi Array 53.45 325 P **P** **14 00 12.9 +0.3**
MK31 pmax pmax
comp=Z,8.0nm,0.5s
MKAR Makanchi Array 53.45 325 P **P** **14 00 13.0 +0.4**
comp=Z,14nm,0.4s,baz=120,slow=7.8,SNR=259
MKAR PcP **PcP** **14 01 09.2 -0.8**
comp=Z,4.3nm,0.5s,baz=118,slow=4.2,SNR=12
MKAR ScP **ScP** **14 04 10.1 -1.6**
comp=Z,1.1nm,0.6s,baz=109,slow=5.2,SNR=5.3
MKAR S **S** **14 07 02.6 +1.0**
comp=Z,1.3nm,1.1s,baz=145,slow=15,SNR=5.3
MKAR Makanchi Array 53.45 325 *e*P **P** **14 00 12.8 +0.3**
comp=Z,121nm,0.5s
TARG Taragay, Kyrgy 53.60 318 *e*P **P** **14 00 14.9 +0.6**
comp=Z,4.6nm,0.8s
MAKZ Makanchi 53.63 325 *e*P **P** **14 00 14.0 +0.1**
comp=Z,13nm,0.5s
MAKZ Makanchi 53.63 325 *e*P **P** **14 00 14.0 +0.1**
MAKZ pmax pmax
comp=Z,13nm,0.5s
PETK Petropavlovsk- 53.77 25 P **P** **14 00 15.8 +1.1**
comp=Z,7.0nm,0.6s,baz=175,slow=1.8,SNR=6.5
PETK PcP **PcP** **14 01 11.1 +0.1**
comp=Z,4.9nm,0.9s,baz=241,slow=1.5,SNR=4.1
NIL Nilore 53.83 307 *e*P **P** **14 00 15.7 +0.1**
comp=Z,14nm,0.4s
NIL Nilore 53.83 307 *e*P **P** **14 00 15.7 +0.1**
NIL pmax pmax
comp=Z,14nm,0.4s
KSH Kashi 53.89 315 P **P** **14 00 16.7 +0.7**
KSH pP pP 14 02 10.1 +3.2
KSH PP **PP** **14 02 31.1 +4.9**
KSH sS sS 14 10 27.7 +0.4
KSH SS **SS** **14 11 04.7 +3.5**
KSH pmax pmax
comp=Z,290nm,4.8s
YAK Yakutsk 55.30 3 *e*P **P** **14 00 24.9 -0.3**
YAK pmax pmax
comp=Z,21nm,1.0s
KZA Kyzart 55.46 317 P **P** **14 00 27.8 +0.6**
SNR=5.3
TKM2 Tokmak 2 55.60 318 P **P** **14 00 28.5 +0.6**
SNR=8.3
TKM2 Tokmak 2 55.60 318 P **P** **14 00 28.1 +0.2**
TKM2 pmax pmax
comp=Z,4.0nm,0.5s
SFK Sufi-Kurgan 55.84 314 P **P** **14 00 30.1 +0.4**
SFK pmax pmax
comp=Z,6.0nm,0.5s
UCH Uchtor 56.02 317 P **P** **14 00 32.6 +1.4**
SNR=9.4
AAK Ala-Archa 56.21 318 *e*P **P** **14 00 32.5 +0.4**
comp=Z,17nm,1.7s
AAK Ala-Archa 56.21 318 *d i*P **P** **14 00 32.6 +0.5**
AAK pmax pmax
comp=Z,9.0nm,1.7s
USP Ospenovka 56.47 318 P **P** **14 00 34.0 +0.4**
SNR=8.8
MA2 Magadan 56.51 16 P **P** **14 00 34.7 +1.1**
comp=Z,7.5nm,0.6s,baz=220,slow=8.7,SNR=10
MA2 PcP **PcP** **14 01 22.1 +0.5**
comp=Z,6.1nm,0.6s,baz=186,slow=1.1,SNR=5.1
AML Almayashu 56.54 317 P **P** **14 00 35.4 +0.8**
SNR=8.8
ZAA0 Zalesovo Array 56.60 334 *e*P **P** **14 00 33.5 -0.8**
comp=Z,13nm,1.5s
ZALV Zalesovo Beam 56.60 334 P **P** **14 00 33.6 -0.7**
comp=Z,3.2nm,0.4s,baz=120,slow=6.1,SNR=14
ZALV PcP **PcP** **14 01 19.8 -2.3**
comp=Z,0.8nm,0.3s,baz=144,slow=4.7,SNR=3.6
ZALV Zalesovo Beam 56.60 334 *e*P **P** **14 00 33.4 -0.9**
ZALV Zalesovo Beam 56.60 334 *e*P **P** **14 00 33.4 -0.9**
EKS2 Erkin-Say 56.70 317 P **P** **14 00 36.1 +0.8**
SNR=7.5
KBL Kabul 57.43 307 *e*P **P** **14 00 40.2 -0.4**
comp=Z,10nm,0.8s
KBL Kabul 57.43 307 *e*P **P** **14 00 40.2 -0.4**
KBL pmax pmax
comp=Z,10.0nm,0.8s
MNAS Manas 57.49 317 P **P** **14 00 41.2 +0.4**
MNAS pmax pmax
comp=Z,9.0nm,1.1s

KURBB Kurchatov Arra 57.66 328 P **P** **14 00 41.7 +0.1**
comp=Z,16nm,0.6s,baz=128,slow=6.9,SNR=202
KURBB PcP **PcP** **14 01 25.3 -1.1**
comp=Z,1.1nm,0.6s,baz=126,slow=3.9,SNR=2.3
KURK Kurchatov 57.66 328 *e*P **P** **14 00 41.5 -0.1**
comp=Z,29nm,0.6s
KURK Kurchatov 57.66 328 *d i*P **P** **14 00 41.6 0.0**
KURK pmax pmax
comp=Z,18nm,0.5s
NVS Novosibirsk 57.89 334 *e*P **P** **14 00 41.3 -1.7**
NVS *e*S **S** **14 07 58.0 -0.5**
NVS pmax pmax
comp=Z,6.0nm,0.7s
NVS pmax pmax
comp=N,5.0nm,0.7s
NVS pmax pmax
comp=E,4.0nm,0.4s
NVS smax smax
comp=N,10.0nm,2.1s
NVS smax smax
comp=E,13nm,1.7s
KK31 Karatay Array 59.08 317 *e*P **P** **14 00 51.3 0.0**
KK31 Karatay Array 59.08 317 *i*P **P** **14 00 51.4 +0.1**
KK31 pmax pmax
comp=Z,5.0nm,0.6s
KKAR Karatay Array 59.08 317 *e*P **P** **14 00 51.3 0.0**
KKAR Karatay Array 59.08 317 *e*P **P** **14 00 51.3 0.0**
SEY Seymchan 59.77 15 P **P** **14 00 56.6 +1.2**
comp=Z,3.2nm,0.8s,baz=208,slow=12,SNR=9.6
SEY Seymchan 59.77 15 ⇓*e*P **P** **14 00 56.3 +0.9**
OTUK Ortayu 59.99 323 P **P** **14 00 57.3 0.0**
OTUK pmax pmax
comp=Z,6.0nm,0.5s
BVA0 Borovoye Array 63.23 327 *i*P **P** **14 01 17.7 -0.5**
BVA0 pmax pmax
comp=Z,13nm,1.2s
BVAR Borovoye Array 63.23 327 P **P** **14 01 18.1 -0.1**
comp=Z,7.2nm,0.8s,baz=102,slow=4.9,SNR=41
BRVK Borovoye 63.30 327 *e*P **P** **14 01 18.4 -0.3**
comp=Z,11nm,0.8s
BRVK Borovoye 63.30 327 *d i*P **P** **14 01 18.5 -0.1**
BRVK pmax pmax
comp=Z,13nm,0.9s
TIXI Tiksi 64.87 2 P **P** **14 01 27.6 -0.6**
comp=Z,8.2nm,0.3s,baz=187,slow=5.6,SNR=63
TIXI Tiksi 64.87 2 *e*P **P** **14 01 27.3 -0.9**
comp=Z,12nm,0.5s
TIXI Tiksi 64.87 2 ⇑*i*P **P** **14 01 26.7 -1.5**
RPZ Rata Peaks 65.88 144 P **P** **14 01 35.6 +0.6**
comp=Z,8.3nm,0.7s,baz=360,slow=5.1,SNR=4.1
URZ Urewera 66.69 137 P **P** **14 01 40.7 +0.6**
comp=Z,3.8nm,0.5s,baz=270,slow=6.1,SNR=5.1
BKZ Black Stump Fm 66.73 138 *e*P **P** **14 01 40.6 +0.2**
comp=Z,18nm,0.5s
GEYT Alibeck 66.78 308 P **P** **14 01 40.7 -0.1**
comp=Z,12nm,0.8s,baz=145,slow=3.5,SNR=3.7
GYA0B ALIBECK ARRAY 66.78 308 *e*P **P** **14 01 40.8 0.0**
comp=Z,6.1nm,0.8s
NRIK Noril'sk 66.82 347 P **P** **14 01 40.3 0.0**
comp=Z,10nm,0.5s,baz=130,slow=7.5,SNR=10
BILL Bilibino 67.38 16 *e*P **P** **14 01 43.2 -0.6**
comp=Z,3.3nm,0.4s
BILL Bilibino 67.38 16 ⇑*i*P **P** **14 01 43.4 -0.4**
BILL *e**PP **pP** **14 03 40.2 -2.2**
BILL *e* 14 04 24.7
BILL pmax pmax
comp=Z,7.0nm,1.1s
ABKAR Abkulak array 68.01 321 *e*P **P** **14 01 47.4 -0.5**
AKTO Aktyubinsk 69.52 321 P **P** **14 01 56.7 -0.3**
comp=Z,7.2nm,0.5s,baz=97,slow=10,SNR=31
AKTO Aktyubinsk 69.52 321 P **P** **14 01 56.6 -0.4**
AKTO pmax pmax
comp=Z,7.0nm,0.6s
ARU Arti 70.86 328 *e*P **P** **14 02 03.5 -1.2**
comp=Z,12nm,0.6s
ARU Arti 70.86 328 *e*P **P** **14 02 03.6 -1.2**
ARU pmax pmax
comp=Z,12nm,0.6s
RAYN Ar Rayn 76.69 293 *e*P **P** **14 02 37.5 -1.0**
comp=Z,9.4nm,0.8s
RAYN Ar Rayn 76.69 293 *e*P **P** **14 02 37.5 -1.0**
RAYN pmax pmax
comp=Z,9.0nm,0.8s
GNI Garni 77.36 310 ⇑*e*P **P** **14 02 41.9 -0.1**
GNI pmax pmax
comp=Z,7.0nm,0.6s
ZEI Tsey 78.08 312 *e*P **P** **14 02 44.9 -0.9**
ZEI pmax pmax
comp=Z,9.0nm,0.6s
PRGR Permogore 78.49 332 *e*P **P** **14 02 45.8 -1.5**
PRGR *e* 14 05 53.6
PRGR pmax pmax
comp=Z,10.0nm,0.5s
KBZ Khabaz 78.83 313 P **P** **14 02 49.1 -0.4**
comp=Z,1.9nm,0.7s,baz=124,slow=3.6,SNR=3.0
NEY Neytrino 78.95 313 ⇑*e*P **P** **14 02 50.9 +0.4**
NEY pmax pmax
comp=Z,1.0nm,0.7s
KIV Kislovodsk 78.99 313 *e*P **P** **14 02 51.0 +0.5**
KIV pmax pmax
comp=Z,6.0nm,1.0s
OPO Ambohidratompo 79.65 250 P **P** **14 02 53.6 -0.9**
comp=Z,2.2nm,0.5s,baz=71,slow=6.4,SNR=5.3
IM3 Indian Mountai 80.74 24 *e*P **P** **14 02 59.9 +0.8**
KDAK Kodiak Island 80.86 33 P **P** **14 03 00.6 +0.9**
comp=Z,17nm,0.7s,baz=250,slow=3.7,SNR=32
KDAK Kodiak Island 80.86 33 *e*P **P** **14 03 00.7 +0.9**
comp=Z,19nm,0.7s
KDAK Kodiak Island 80.86 33 *i*P **P** **14 03 00.3 +0.5**
PPLA Purkeypile 81.24 27 *e*P **P** **14 03 02.5 +0.6**
comp=Z,9.2nm,0.7s
CAST Castle Rocks 81.31 27 *e*P **P** **14 03 02.5 +0.5**
comp=Z,13nm,0.6s
KLMR Klimovskoe 81.37 330 *e*P **P** **14 02 59.7 -2.6**
KLMR pmax pmax
comp=Z,17nm,0.6s
KLMR Klimovskoe 81.37 330 *e*P **P** **14 02 59.8 -2.6**
KLMR AMP 14 03 02.1
comp=Z,17nm,0.6s
SKT Skwentna 81.51 28 *e*P **P** **14 03 02.8 -0.4**
comp=Z,7.7nm,0.7s
BRLK Bradley Lake 81.78 31 *e*P **P** **14 03 04.3 -0.2**
comp=Z,25nm,0.7s
BPAW Bear Paw Mtn. 81.82 26 *e*P **P** **14 03 05.2 +0.5**
comp=Z,22nm,0.7s
SUA Susitna One 81.88 29 *e*P **P** **14 03 05.0 -0.1**
comp=Z,17nm,0.8s
MLY Manley 81.94 25 *e*P **P** **14 03 06.0 +0.7**
comp=Z,16nm,0.7s
TRF Thorofare Moun 82.11 27 *e*P **P** **14 03 06.3 -0.1**
comp=Z,11nm,0.7s
TMCR Tamitsa 82.13 334 *e*P **P** **14 03 04.4 -1.7**
TMCR pmax pmax
comp=Z,10.0nm,0.4s
COLD Coldfoot 82.21 23 *e*P **P** **14 03 07.6 +1.1**
comp=Z,15nm,1.0s
TOLK Toolik Lake Re 82.47 22 *e*P **P** **14 03 09.0 +1.1**
comp=Z,22nm,0.7s
SEW Seward 82.51 30 *e*P **P** **14 03 08.2 +0.1**
comp=Z,9.3nm,0.6s
MCK McKinley 82.72 27 *e*P **P** **14 03 09.5 +0.3**
comp=Z,25nm,0.7s
RND Reindeer 82.76 27 *e*P **P** **14 03 09.2 -0.3**
comp=Z,14nm,0.7s
RND *e*pP **pP** **14 05 10.4 -4.5**
RND Reindeer 82.76 27 *e*P **P** **14 03 09.2 -0.3**
RND pmax pmax
comp=Z,14nm,0.7s
OBN Obninsk 82.95 325 ⇑*e*P **P** **14 03 09.7 -0.7**
OBN *e**PP **pP** **14 05 16.3 +0.3**
OBN *e* 14 06 29.2
OBN *e*S **S** **14 12 39.0 -2.1**
OBN pmax pmax
comp=Z,20nm,1.2s
MDM Murphy Dome 83.01 25 *e*P **P** **14 03 11.1 +0.5**
comp=Z,6.6nm,1.1s
SML Sawmill 83.03 29 *e*P **P** **14 03 10.9 +0.1**
comp=Z,13nm,0.8s
SML Sawmill 83.03 29 *e*P **P** **14 03 10.9 +0.1**
SML pmax pmax
comp=Z,13nm,0.8s
WRH Wood River Hil 83.08 26 *e*P **P** **14 03 10.7 -0.2**
comp=Z,8.4nm,1.0s
COLA College 83.17 25 *i*P **P** **14 03 11.6 +0.2**
COLA pmax pmax
comp=Z,3.0nm,0.7s

CCB Clear Creek Bu 83.20 26 *e*P **P** **14 03 10.9 -0.6**
comp=Z,12nm,1.4s
DHY Denali Highway 83.44 27 *e*P **P** **14 03 12.8 -0.1**
comp=Z,3.7nm,0.8s
IL1 Eielson Array 83.59 26 *e*P **P** **14 03 12.3 -1.2**
ILAR Eielson Array 83.59 26 P **P** **14 03 12.3 -1.2**
comp=Z,1.8nm,0.5s,baz=259,slow=4.5,SNR=45
ILB Eielson Array 83.59 26 *e*P **P** **14 03 12.6 -0.8**
ASF Jabal al Asfar 83.85 302 P **P** **14 03 15.7 -0.1**
comp=Z,3.1nm,0.5s,baz=132,slow=6.3,SNR=7.0
PAX Paxson 84.31 27 *e*P **P** **14 03 17.1 -0.1**
comp=Z,12nm,1.9s
PAX Paxson 84.31 27 *e*P **P** **14 03 17.1 -0.1**
PAX pmax pmax
comp=Z,12nm,1.9s
RIDG Independ'e Rid 84.54 27 *e*P **P** **14 03 17.9 -0.4**
comp=Z,6.4nm,0.5s
BMRM Bremner River 84.86 29 *e*P **P** **14 03 19.8 0.0**
comp=Z,6.3nm,1.1s
SCRK Sand Creek 84.90 26 *e*P **P** **14 03 20.0 0.0**
comp=Z,2.9nm,0.6s
MMAI Mount Meron Ar 85.08 303 P **P** **14 03 22.0 +0.4**
comp=Z,0.9nm,0.4s,baz=93,slow=8.7,SNR=3.1
CRQM Cirque 85.59 29 *e*P **P** **14 03 23.6 0.0**
comp=Z,5.3nm,0.8s
MAW Mawson 85.64 200 P **P** **14 03 23.1 -0.1**
comp=Z,1.4nm,0.7s,baz=45,slow=4.3,SNR=3.1
BR131 Keskin Array S 85.90 309 *e*P **P** **14 03 23.7 -1.7**
BRTR Keskin Array B 85.90 309 P **P** **14 03 24.0 -1.4**
comp=Z,2.2nm,0.5s,baz=112,slow=5.4,SNR=15
BRTR Keskin Array B 85.90 309 *c e*P **P** **14 03 24.0 -1.4**
BRTR pmax pmax
comp=Z,2.0nm,0.5s
EGAK Eagle 86.03 25 *e*P **P** **14 03 25.2 -0.1**
comp=Z,2.7nm,0.8s
ARCES ARCESS Array B 86.62 340 P **P** **14 03 26.6 -1.4**
comp=Z,3.1nm,0.7s,baz=74,slow=6.3,SNR=12
VNDA Vanda 86.80 172 P **P** **14 03 28.5 -0.1**
comp=Z,2.6nm,0.5s,baz=316,slow=6.6,SNR=34
VNDA Vanda 86.80 172 *e*P **P** **14 03 28.3 -0.3**
comp=Z,7.5nm,1.4s
VNDA Vanda 86.80 172 *e*P **P** **14 03 28.3 -0.3**
VNDA pmax pmax
comp=Z,8.0nm,1.4s
DAWY Dawson 86.89 26 *e*P **P** **14 03 29.2 -0.2**
comp=Z,5.3nm,1.2s
SPITS Spitsbergen Ar 86.95 349 P **P** **14 03 28.8 -0.6**
comp=Z,4.6nm,0.5s,baz=57,slow=8.8,SNR=23
AKASG Malin Array Be 87.75 321 P **P** **14 03 31.9 -1.7**
comp=Z,1.2nm,0.5s,baz=68,slow=4.3,SNR=7.3
AKASG Malin Array Be 87.75 321 *c e*P **P** **14 03 32.0 -1.7**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AK11 Malin Array Si 87.79 321 *e*P **P** **14 03 31.2 -2.6**
FINES FINESS Array B 87.82 332 P **P** **14 03 32.4 -1.3**
comp=Z,3.0nm,0.5s,baz=65,slow=4.4,SNR=37
FINES FINESS Array B 87.82 332 *i*P **P** **14 03 32.2 -1.5**
FINES pmax pmax
comp=Z,3.0nm,0.5s
VSU Vasula 88.00 329 ⇑*e*P **P** **14 03 34.3 -0.3**
VSU pmax pmax
comp=Z,51nm,1.5s
INK Inuvik 88.38 21 P **P** **14 03 35.5 -0.7**
comp=Z,2.3nm,0.7s,baz=296,slow=2.0,SNR=5.2
WHY Whitehorse 89.61 29 *e*P **P** **14 03 42.8 +0.5**
comp=Z,5.9nm,0.7s
SKAG Skagway 89.66 30 *e*P **P** **14 03 42.7 +0.3**
comp=Z,4.4nm,0.7s
TESR Tescani 90.09 317 ⇓*i*P **P** **14 03 42.9 -1.7**
VRI Vrincioaia 90.14 316 ⇓*i*P **P** **14 03 43.9 -1.0**
VRI Vrincioaia 90.14 316 ⇓P **P** **14 03 43.9 -1.0**
PLOR Plostina 90.20 316 ⇓*i*P **P** **14 03 44.8 -0.4**
PLOR Plostina 90.20 316 ⇓P **P** **14 03 44.8 -0.4**
MLR Muntele Rosu 90.75 316 P **P** **14 03 46.5 -1.4**
comp=Z,0.4nm,0.6s,baz=95,slow=12,SNR=3.7
BURAR Bucovina Array 90.85 318 ⇓*i*P **P** **14 03 47.7 -0.6**
BURAR Bucovina Array 90.85 318 ⇓P **P** **14 03 47.7 -0.6**
BUR04 Bucovina Ar. S 90.85 318 *e*P **P** **14 03 47.6 -0.7**
BUR08 Bucovina Ar. S 90.86 318 *e*P **P** **14 03 47.4 -0.9**
TRPA Tarpa 92.51 319 ⇑*i*P P 14 03 47.7 -8.0
DLBC Dease Lake 92.58 30 P **P** **14 03 56.7 +0.7**
comp=Z,0.6nm,0.5s,baz=262,slow=7.1,SNR=4.6
DRGR 92.69 318 ⇑*i*P **P** **14 03 55.1 -1.6**
DRGR 92.69 318 ⇑P **P** **14 03 55.1 -1.6**
CRVS Cervenica-Dubn 93.03 320 *e*P **P** **14 03 58.0 -0.1**
CRVS Cervenica-Dubn 93.03 320 *e*P **P** **14 03 58.0 -0.1**
BZS Buzias 93.70 317 ⇓*i*P **P** **14 04 00.2 -1.0**
BZS Buzias 93.70 317 ⇓P **P** **14 04 00.2 -1.0**
MDVR Moldovita 93.83 316 ⇓*i*P **P** **14 04 01.0 -0.9**
HFS Hagfors 94.01 332 P **P** **14 04 00.6 -1.7**
comp=Z,1.8nm,0.5s,baz=90,slow=1.4,SNR=11
NB2 NORSAR Subarra 94.81 333 P **P** **14 04 04.1 -1.9**
comp=Z,1.8nm,0.7s,baz=67,slow=4.4
NB2 NORSAR Subarra 94.81 333 P **P** **14 04 04.1 -1.9**
baz=67,slow=4.4
NOA NORSAR Array B 94.81 333 P **P** **14 04 04.3 -1.7**
comp=Z,2.0nm,0.7s,baz=77,slow=4.1,SNR=4.3
CLL Collm 97.52 324 *e*PP PP 14 08 23.0 -2.4
YKA Yellowknife Ar 97.88 24 P Pdif 14 04 19.1 -0.5
comp=Z,0.6nm,0.8s,baz=303,slow=4.6,SNR=6.4
YKA PKiKP **PKiKP** **14 08 48.8 -0.4**
comp=Z,0.3nm,0.6s,baz=316,slow=2.5,SNR=3.9
GERES GERESS Array B 97.95 321 P Pdif 14 04 19.5 -0.9
comp=Z,0.3nm,0.5s,baz=64,slow=6.1,SNR=4.3
ULM Lac du Bonnet 113.59 27 PKiKP **PKiKP** **14 09 18.0 -0.7**
comp=Z,1.1nm,0.5s,baz=342,slow=2.9,SNR=6.8
SCHQ Schefferville 117.96 7 PKP **PKPdf** **14 09 26.8 -0.2**
comp=Z,3.6nm,0.6s,baz=34,slow=3.6,SNR=2.7
TOA0 Torodi Ar. Sit 119.26 289 *e*PKPdf **PKPdf** **14 09 29.1 -1.5**
TORD Torodi Ar. Bea 119.26 289 PKP **PKPdf** **14 09 29.7 -0.9**
comp=Z,1.5nm,0.4s,baz=61,slow=1.8,SNR=28
TORD PKKPbc **PKKPbc** **14 19 46.3 +0.8**
comp=Z,0.9nm,0.9s,baz=266,slow=3.5,SNR=4.6
KSU1 Kansas State U 120.93 36 *e*PKPdf **PKPdf** **14 09 31.9 -1.3**
JFWS Jewell Farm 121.62 29 *e*PKPdf **PKPdf** **14 09 33.0 -1.4**
JFWS Jewell Farm 121.62 29 *e*PKIKP **PKPdf** **14 09 33.0 -1.4**
TXAR Lajitas Array 121.88 49 PKP **PKPdf** **14 09 35.6 +0.1**
comp=Z,0.5nm,0.6s,baz=1.7,slow=1.0,SNR=8.7
JCT Junction City 124.11 46 *e*PKPdf **PKPdf** **14 09 38.9 -0.7**
JCT Junction City 124.11 46 *e*PKIKP **PKPdf** **14 09 38.9 -0.7**
KOWA Kowa 124.17 293 PKP **PKPdf** **14 09 39.5 -0.5**
comp=Z,1.7nm,0.3s,baz=95,slow=2.5,SNR=5.5
V40A Witts Springs 125.37 37 *e*PKPdf **PKPdf** **14 09 41.1 -0.7**
MIAR Mount Ida 125.77 38 *e*PKPdf **PKPdf** **14 09 42.7 +0.1**
MIAR Mount Ida 125.77 38 *e*PKIKP **PKPdf** **14 09 42.7 +0.1**
DBIC Dimbokro 127.14 284 PKP **PKPdf** **14 09 45.6 -0.1**
comp=Z,3.4nm,0.9s,baz=304,slow=2.0,SNR=3.9
WVT Waverly 127.96 33 *e*PKPdf **PKPdf** **14 09 46.6 0.0**
WVT Waverly 127.96 33 *e*PKIKP **PKPdf** **14 09 46.7 0.0**
BINY Binghamton 127.99 19 *e*PKPdf **PKPdf** **14 09 46.9 +0.3**
341A Kurthwood 128.14 41 *e*PKPdf **PKPdf** **14 09 46.3 -0.9**
PLAL Pickwick Lake 128.68 34 *e*PKPdf **PKPdf** **14 09 47.6 -0.5**
LRAL Lakeview Retre 130.72 35 *e*PKPdf **PKPdf** **14 09 51.8 -0.3**
PLCA Paso Flores 143.81 161 PKP **PKPdf** **14 10 16.0 +0.1**
comp=Z,12nm,0.8s,baz=250,slow=3.5,SNR=24
PLCA Paso Flores 143.81 161 *e*PKPbc PKPab 14 10 15.3 +0.1
PLCA Paso Flores 143.81 161 *e*PKIKP PKPab 14 10 15.3 +0.1
JTS JuntasAbangare 146.65 60 PKPbc **PKPbc** **14 10 23.9 -0.1**
comp=Z,9.1nm,0.4s,baz=45,slow=2.9,SNR=20
JTS JuntasAbangare 146.65 60 *e*PKPbc **PKPbc** **14 10 23.8 -0.3**
JTS JuntasAbangare 146.65 60 *e*PKP2 **PKPbc** **14 10 23.8 -0.3**
TRQA Tornquist 148.41 171 *e*PKPbc **PKPbc** **14 10 27.9 -0.1**
TRQA Tornquist 148.41 171 *e*PKP2 **PKPbc** **14 10 27.9 -0.1**
ROC1 El Roble 150.49 154 *e*PKPbc **PKPbc** **14 10 33.5 +0.1**
LPAZ La Paz 164.92 130 PKP **PKPdf** **14 10 46.4 +0.8**
comp=Z,2.5nm,0.9s,baz=36,slow=5.3,SNR=8.3
LPAZ PKPab **PKPab** **14 11 48.5 +2.4**
comp=Z,2.5nm,0.7s,baz=221,slow=5.7,SNR=9.0
LPAZ La Paz 164.92 130 *e*PKPdf **PKPdf** **14 10 46.2 +0.7**
LPAZ La Paz 164.92 130 *e*PKIKP **PKPdf** **14 10 46.2 +0.7**

*CSEM **03** 14:04:27.2, 40°.09N×31°.89E, h7km, ML2.1*
DDA 03 14:04:27.2, 40°.09N×31°.89E, h7km, Ml2.1, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUMIH	**MIHALICIK**	**0.39**	**235**	*i* P	Pg	14 04 35.0	+0.3
AUMIH	**MIHALICIK**	**0.39**	**235**	P	Pg	14 04 35.0	+0.2
BCAM	**Yenicaga**	**0.73**	**10**	*i* P	Pg	14 04 41.8	+0.5
BCAM				*i* S	Sb	14 04 52.2	-0.5
BTAS	**Taskesti**	**0.83**	**305**	*i* P	Pg	14 04 42.6	-0.6
BTAS				*i* S	Sb	14 04 55.8	+0.3
BTAS	**Taskesti**	**0.83**	**305**	P	Pg	14 04 42.6	-0.6
BTAS				S	Sb	14 04 55.8	+0.3

ESKT	**Eskisehir**	**0.99 235**	*i* P		Pg	14 04 43.5	-2.6
SEYT	**Eskypehyr**	**0.99 235**	P		Pg	14 04 43.5	-2.6
SAHE	**Sakarya_HENDEK**	**1.10 314**	*i* P		Pg	14 04 47.7	-0.6
SAHE			*i* S		Sn	14 05 05.2	+0.7
SAHE	**Sakarya_HENDEK**	**1.10 314**	P		Pg	14 04 47.7	-0.6
SAHE			S		Sn	14 05 05.2	+0.7
BORA	**Eskisehir**	**1.13 260**	*i* P		Pb	14 04 49.0	0.0
BORA			*i* S		Sn	14 05 05.0	-0.2
BORA	**Eskisehir**	**1.13 260**	P		Pb	14 04 49.0	0.0
BORA			S		Sn	14 05 05.0	-0.2

*ISCJB **03** 14:07:34.9±0.5, 50.°90N±0.°06×156.°7E±0.°1, h144km±3km, mb3.6/14, Error ellipse: s-maj=14.0km s-min=5.6km az=37.4*
*MOS **03** 14:07:34.9±1.0, 50.°88N×156.°62E, h146km, mb3.9/6, Error ellipse: s-maj=16.1km s-min=5.0km az=74.1*
*KRSC **03** 14:07:35.7±1.7, 50.°78N×157.°18E, h122km±17km, ML4.0*
*IDC **03** 14:07:38.0±1.2, 51.°06N×156.°50E, h156km±11km, mb3.3/12, mb1 3.4/15, mb1mx3.2/79, mbtmp3.7/15, Error ellipse: s-maj=20.2km s-min=12.3km az=120.0*

ISC 03 14:07:34.8±0.8, 50.°82N±0.°07×156.°95E±0.°07, h139km±5km, n82, σ1§65/100, mb3.6/14, 3C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.55**	**256**	*e*P	**Pn**	**14 07 55.3**	**+0.1**
SKR				*e*S	**Sn**	**14 08 09.6**	**-1.0**
SKR	**Severo-Kuril's**	**0.55**	**256**	*e*PN	**Pn**	**14 07 55.4**	**+0.2**
SKR				*e*S	**Sn**	**14 08 09.5**	**-1.0**
SKR				pmax	pmax		
	comp=Z,1μm,0.2s						
SKR				smax	smax		
	comp=N,6μm,0.4s						
SKR				smax	smax		
	comp=E,8μm,0.6s						
PAU	**Pauzhetka**	**0.66**	**352**	*e*P	**Pn**	**14 07 56.5**	**+0.7**
PAU				*e*S	**Sn**	**14 08 12.0**	**+0.1**
PAU	**Pauzhetka**	**0.66**	**352**	PN	**Pn**	**14 07 56.5**	**+0.7**
PAU				S	**Sn**	**14 08 12.0**	**+0.1**
KDTR	**Khodutka, Kamc**	**1.22**	**35**	*e*P	**Pn**	**14 08 01.4**	**+0.8**
KDTR				*e*S	**Sn**	**14 08 19.7**	**-0.5**
MIPR	**Malaya Ipel'ka**	**1.47**	**355**	*e*P	**Pn**	**14 08 04.0**	**+0.8**
MIPR	**Malaya Ipel'ka**	**1.47**	**355**	PN	**Pn**	**14 08 04.0**	**+0.8**
ASAK	**Asacha**	**1.67**	**20**	*e*P	**Pn**	**14 08 07.1**	**+1.5**
ASAK				*e*S	**Sn**	**14 08 30.0**	**+0.9**
ASAK	**Asacha**	**1.67**	**20**	PN	**Pn**	**14 08 07.1**	**+1.5**
ASAK				S	**Sn**	**14 08 30.0**	**+0.9**
MTVR	**Mutnovka**	**1.83**	**24**	*e*P	**Pn**	**14 08 09.0**	**+1.5**
MTVR				*e*S	**Sn**	**14 08 33.3**	**+0.8**
MTVR	**Mutnovka**	**1.83**	**24**	PN	**Pn**	**14 08 09.0**	**+1.5**
MTVR				S	**Sn**	**14 08 33.3**	**+0.8**
RUS	**Russkaya**	**1.89**	**30**	*e*P	**Pn**	**14 08 08.8**	**+0.9**
RUS				*e*S	**Sn**	**14 08 33.1**	**-0.2**
RUS	**Russkaya**	**1.89**	**30**	PN	**Pn**	**14 08 08.8**	**+0.9**
RUS				S	**Sn**	**14 08 33.1**	**-0.2**
APC	**Apacha**	**2.11**	**3**	*e*P	**Pn**	**14 08 12.9**	**+2.3**
APC	**Apacha**	**2.11**	**3**	PN	**Pn**	**14 08 12.9**	**+2.3**
KRMR	**Karymshinskiy**	**2.14**	**19**	*e*P	**Pn**	**14 08 12.8**	**+1.9**
KRMR				*e*S	**Sn**	**14 08 39.3**	**+0.6**
KRMR	**Karymshinskiy**	**2.14**	**19**	PN	**Pn**	**14 08 12.8**	**+1.9**
KRMR				S	**Sn**	**14 08 39.3**	**+0.6**
PETK	**Petropavlovsk-**	**2.34**	**11**	P	**Pn**	**14 08 15.0**	**+1.7**
	comp=E,6.4nm,0.3s,baz=175,slow=11,SNR=45						
PETK				S	**Sn**	**14 08 45.3**	**+2.2**
	comp=E,3.1nm,0.3s,baz=151,slow=17,SNR=6.4						
PET	**Petropavlovsk**	**2.45**	**25**	*e*P	**Pn**	**14 08 16.1**	**+1.4**
PET				*e*S	**Sn**	**14 08 45.2**	**-0.2**
PET	**Petropavlovsk**	**2.45**	**25**	*e*PN	**Pn**	**14 08 15.8**	**+1.1**
PET				*e*S	**Sn**	**14 08 43.2**	**-2.2**
PET				pmax	pmax		
	comp=Z,24nm,0.4s						
PET				smax	smax		
	comp=N,153nm,0.6s						
PET				smax	smax		
	comp=E,96nm,0.6s						
DALK	**Dalny**	**2.48**	**26**	*e*P	**Pn**	**14 08 16.7**	**+1.6**
DALK				*e*S	**Sn**	**14 08 46.6**	**+0.5**
DALK	**Dalny**	**2.48**	**26**	PN	**Pn**	**14 08 16.7**	**+1.6**
DALK				S	**Sn**	**14 08 46.6**	**+0.5**
UGLR	**Uglovaya**	**2.66**	**25**	*e*P	**Pn**	**14 08 19.9**	**+2.4**
UGLR	**Uglovaya**	**2.66**	**25**	PN	**Pn**	**14 08 19.9**	**+2.4**
KOK	**Koryaka**	**2.69**	**22**	*e*P	**Pn**	**14 08 20.4**	**+2.6**
KOK	**Koryaka**	**2.69**	**22**	PN	**Pn**	**14 08 20.4**	**+2.6**
AVH	**Avacha**	**2.69**	**24**	*e*P	**Pn**	**14 08 20.1**	**+2.3**
AVH	**Avacha**	**2.69**	**24**	PN	**Pn**	**14 08 20.1**	**+2.3**
SMAR	**Somma**	**2.70**	**24**	*e*P	**Pn**	**14 08 20.3**	**+2.2**
SMAR	**Somma**	**2.70**	**24**	PN	**Pn**	**14 08 20.3**	**+2.2**
KRER	**Koryakskii**	**2.73**	**23**	*e*P	**Pn**	**14 08 20.7**	**+2.3**
KRER	**Koryakskii**	**2.73**	**23**	PN	**Pn**	**14 08 20.7**	**+2.3**
SDLR	**Sedlovina**	**2.74**	**25**	*e*P	**Pn**	**14 08 20.4**	**+1.9**
SDLR	**Sedlovina**	**2.74**	**25**	PN	**Pn**	**14 08 20.4**	**+1.9**
KRX	**Arik**	**2.75**	**22**	*e*P	**Pn**	**14 08 21.0**	**+2.3**
KRX	**Arik**	**2.75**	**22**	PN	**Pn**	**14 08 21.0**	**+2.3**
NLC	**Nalytchevo**	**2.78**	**31**	*e*P	**Pn**	**14 08 19.3**	**+0.4**
NLC				*e*S	**Sn**	**14 08 50.7**	**-2.2**
NLC	**Nalytchevo**	**2.78**	**31**	PN	**Pn**	**14 08 19.3**	**+0.4**
NLC				S	**Sn**	**14 08 50.7**	**-2.2**
GNL	**Ganaly**	**2.94**	**12**	*e*P	**Pn**	**14 08 22.6**	**+1.5**
GNL	**Ganaly**	**2.94**	**12**	PN	**Pn**	**14 08 22.6**	**+1.5**
SPN	**Mys Shipunski**	**2.97**	**39**	*e*P	**Pn**	**14 08 22.7**	**+1.4**
SPN				*e*S	**Sn**	**14 08 56.5**	**-0.7**
SPN	**Mys Shipunski**	**2.97**	**39**	PN	**Pn**	**14 08 22.7**	**+1.4**
SPN				S	**Sn**	**14 08 56.5**	**-0.7**
MKZ	**Mys Kozlova**	**4.74**	**36**	*e*P	**Pn**	**14 08 45.6**	**+1.2**
MKZ				*e*S	**Sn**	**14 09 36.1**	**-2.5**
MKZ	**Mys Kozlova**	**4.74**	**36**	PN	**Pn**	**14 08 45.6**	**+1.2**
MKZ				S	**Sn**	**14 09 36.1**	**-2.5**
KBTR	**Krutoberegovo**	**6.43**	**31**	*e*P	**Pn**	**14 09 08.2**	**+1.2**
KBTR	**Krutoberegovo**	**6.43**	**31**	PN	**Pn**	**14 09 08.2**	**+1.2**
MA2	**Magadan**	**9.46**	**341**	*i* PN	**Pn**	**14 09 48.6**	**+1.1**
MA2				pmax	pmax		
	comp=Z,30nm,1.9s						
SHO	**Shikotan**	**9.77**	**229**	*e*PN	**Pn**	**14 09 49.0**	**-2.8**
YSS	**Yuzh-Sakhalins**	**10.12**	**253**	*e*PN	Pn	14 09 45.1	-11
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
YSS				pmax	pmax		
	comp=E,20nm,1.4s						
ASAJ	**Asahikawa**	**11.79**	**241**	P	**Pn**	**14 10 19.0**	**+0.4**
	comp=E,0.2nm,0.3s,baz=63,slow=14,SNR=4.0						
ASAJ	**Asahikawa**	**11.79**	**241**	PN	**Pn**	**14 10 19.0**	**+0.4**
KLR	**Kul'dur**	**16.25**	**274**	P	**Pn**	**14 11 14.3**	**-0.7**
	comp=E,0.0nm,0.3s,baz=104,slow=12,SNR=2.0						
KLR	**Kul'dur**	**16.25**	**274⇑**	*e*P	**P**	**14 11 17.4**	**+2.0**
BILL	**Bilibino**	**17.87**	**11⇑**	*e*P	**P**	**14 11 34.1**	**+1.1**
BILL				*e*S	**S**	**14 14 45.8**	**-5.2**
BILL				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YAK	**Yakutsk**	**18.64**	**317**	*e*P	**P**	**14 11 40.0**	**-1.4**
YAK				pmax	pmax		
	comp=Z,19nm,0.7s						
MJA0	**Matsu Arr-Jizo**	**19.58**	**230**	*e*P	**Pn**	**14 11 55.2**	**+0.5**
MJAR	**Matsushiro Arr**	**19.60**	**230**	P	**P**	**14 11 53.4**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=28,slow=7.1,SNR=8.4						
TIXI	**Tiksi**	**24.42**	**339**	P	**P**	**14 12 38.5**	**-1.4**
	comp=Z,0.8nm,0.5s,baz=128,slow=10,SNR=6.3						
TIXI	**Tiksi**	**24.42**	**339**	*i* P	**P**	**14 12 38.2**	**-1.7**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KSRS	**Korea Array**	**24.56**	**248**	P	**P**	**14 12 40.5**	**-1.0**
	comp=Z,0.6nm,0.7s,baz=50,slow=9.7,SNR=3.2						
H11N2	**WAKE ISLAND Hy**	**32.01**	**162**	T	T	14 48 05.7	
	baz=349,slow=75						
H11N3	**WAKE ISLAND Hy**	**32.02**	**162**	T	T	14 47 52.4	
	baz=349,slow=75						
H11N1	**WAKE ISLAND Hy**	**32.02**	**162**	T	T	14 48 02.6	
	baz=349						
ULN	**Ulaanbaatar**	**32.15**	**285⇑**	*e*P	**P**	**14 13 49.1**	**0.0**
ULN				pmax	pmax		
	comp=Z,6.0nm,2.0s						
H11S1	**WAKE ISLAND Hy**	**33.16**	**163**	T	T	14 49 09.9	
	baz=347,slow=76						
H11S3	**WAKE ISLAND Hy**	**33.17**	**163**	T	T	14 49 10.9	
	baz=347,slow=76						
H11S2	**WAKE ISLAND Hy**	**33.18**	**163**	T	T	14 49 08.0	
	baz=347,slow=76						
KURK	**Kurchatov**	**47.29**	**302**	*i* P	**P**	**14 15 53.7**	**-0.1**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KURBB	**Kurchatov Arra**	**47.39**	**302**	P	**P**	**14 15 53.0**	**-1.6**
	comp=Z,0.5nm,0.3s,baz=61,slow=7.4,SNR=10						
MKAR	**Makanchi Array**	**47.39**	**296**	P	**P**	**14 15 53.5**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=66,slow=7.0,SNR=5.1						
BVAR	**Borovoye Array**	**50.28**	**308**	P	**P**	**14 16 14.8**	**-1.8**
	comp=Z,1.3nm,0.5s,baz=80,slow=7.5,SNR=6.0						
CMAR	**Chiang Mai Arr**	**55.79**	**257**	P	**P**	**14 16 58.5**	**+1.2**
	comp=Z,1.5nm,0.6s,baz=24,slow=7.4,SNR=9.3						
CMAR	**Chiang Mai Arr**	**55.79**	**257**	*e*P	**P**	**14 16 59.1**	**+1.8**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BORG	**Borgarnes**	**64.76**	**359**	*i* P	**P**	**14 17 57.8**	**+0.1**
NOA	**NORSAR Array B**	**65.15**	**342**	P	**P**	**14 17 59.0**	**-1.4**
	comp=Z,2.2nm,0.9s,baz=22,slow=5.2,SNR=3.5						
NOA	**NORSAR Array B**	**65.15**	**342**	P	**P**	**14 17 59.0**	**-1.4**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
EKA	**Eskdalemuir Ar**	**72.93**	**348**	P	**P**	**14 18 48.5**	**+0.2**
	comp=Z,0.9nm,0.5s,baz=21,slow=5.3,SNR=8.1						
WRA	**Warramunga Arr**	**73.22**	**202**	P	**P**	**14 18 51.8**	**+1.5**
	comp=Z,0.4nm,0.6s,baz=18,slow=6.8,SNR=4.1						
TXAR	**Lajitas Array**	**73.35**	**64**	P	**P**	**14 18 53.5**	**+2.1**
	comp=Z,0.2nm,0.5s,baz=293,slow=4.4,SNR=5.1						
ASAR	**Alice Springs**	**76.90**	**202**	P	**P**	**14 19 14.0**	**+2.5**
	comp=Z,0.4nm,0.6s,baz=12,slow=4.9,SNR=12						
ASAR	**Alice Springs**	**76.90**	**202**	*e*P	**P**	**14 19 14.3**	**+2.8**
ESDC	**Sonseca Array**	**88.34**	**345**	P	**P**	**14 20 09.7**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=356,slow=5.1,SNR=2.6						

*ISCJB **03** 14:10:33.3±0.6, 18.°93N±0.°09×39.°34E±0.°07, h10km, mb4.1/27, MS3.5/21, Error ellipse: s-maj=12.6km s-min=10.1km az=9.9*
*IDC **03** 14:10:33.4±0.8, 18.°93N×39.°35E, h0km, mb4.0/24, mb1 4.1/26, mb1mx3.9/64, mbtmp4.0/26, ML3.6/2, MS3.6/24, Ms1 3.6/24, ms1mx3.4/59, Error ellipse: s-maj=16.9km s-min=15.3km az=150.0*
*NEIC **03** 14:10:35.0±0.6, 18.°89N×39.°32E, h10km, mb4.5/2, Error ellipse: s-maj=11.6km s-min=10.3km az=195.0*
*CSEM **03** 14:10:35.0, 18.°89N×39.°32E, h10km, mb4.5/2*

ISC 03 14:10:35.1±0.7, 18.°9N±0.°1×39.°32E±0.°09, h10km, n48, σ1§08/37, mb4.1/27, MS3.5/21, Red Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATD	**Arta Tunnel**	**8.10**	**155**	LR	LR	14 15 14.4	
	comp=Z,259nm,19.9s,baz=3.0,slow=35						
EIL	**Elat**	**11.41**	**340**	LR	LR	14 17 02.6	
	comp=Z,213nm,19.6s,baz=264,slow=34						
ASF	**Jabal al Asfar**	**13.37**	**351**	Pn	**Pn**	**14 13 46.0**	**+1.0**
	0.2nm,0.3s,baz=135,slow=5.0,SNR=7.2						
MMAI	**Mount Meron Ar**	**14.46**	**347**	LR	LR	14 19 07.1	
	comp=Z,201nm,18.6s,baz=170,slow=36						
WSAR	**Wadi Sarin**	**18.53**	**73**	P	**P**	**14 14 51.4**	**-0.5**
	0.2nm,0.3s,baz=288,slow=11,SNR=2.6						
WSAR				LR	LR	14 23 10.7	
	comp=Z,451nm,18.6s,baz=283,slow=41						
IDI	**Anoyia**	**20.71**	**325**	P	**P**	**14 15 15.6**	**-0.1**
	4.3nm,1.0s,baz=143,slow=12,SNR=3.2						
BRTR	**Keskin Array B**	**21.30**	**348**	P	**P**	**14 15 23.6**	**+1.5**
	3.6nm,0.9s,baz=159,slow=12,SNR=21						
BRTR				LR	LR	14 23 11.8	
	comp=Z,85nm,19.3s,baz=146,slow=36						
GNI	**Garni**	**21.66**	**11**	P	**P**	**14 15 26.8**	**+0.8**
	4.9nm,0.5s,baz=163,slow=11,SNR=1.8						
GNI				LR	LR	14 24 28.6	
	comp=Z,196nm,19.6s,baz=200,slow=39						
GNI	**Garni**	**21.66**	**11**	*e*P	**P**	**14 15 28.9**	**+2.9**
	32nm,0.7s						
GNI	**Garni**	**21.66**	**11**	*e*P	**P**	**14 15 28.9**	**+2.9**
	32nm,0.7s						
KBZ	**Khabaz**	**24.91**	**6**	P	**P**	**14 15 59.5**	**+1.3**
	2.2nm,0.9s,baz=206,slow=11,SNR=5.0						
KBZ				LR	LR	14 26 31.7	
	comp=Z,164nm,19.6s,baz=194,slow=38						
KVAR	**Kislovodsk Arr**	**25.12**	**6**	P	**P**	**14 16 01.4**	**+1.2**
	11nm,1.1s,baz=195,slow=12,SNR=2.1						
MLR	**Muntele Rosu**	**28.72**	**340**	LR	LR	14 29 40.2	
	comp=Z,9.6nm,18.6s,baz=192,slow=40						
KEST	**Kesra**	**31.28**	**308**	LR	LR	14 32 20.1	
	comp=Z,86nm,18.3s,baz=322,slow=42						
AKASG	**Malin Array Be**	**32.71**	**348**	P	**P**	**14 17 06.4**	**-1.2**
	0.9nm,0.7s,baz=161,slow=7.3,SNR=5.6						
NIL	**Nilore**	**33.60**	**57**	*e*P	**P**	**14 17 15.9**	**+0.2**
	24nm,0.4s						
AKTO	**Aktyubinsk**	**34.79**	**21**	P	**P**	**14 17 24.6**	**-1.2**
	1.2nm,0.6s,baz=195,slow=12,SNR=3.5						
AKTO				LR	LR	14 34 29.1	
	comp=Z,74nm,19.7s,baz=202,slow=41						
GERES	**GERESS Array B**	**36.30**	**331**	P	**P**	**14 17 38.7**	**-0.2**
	1.0nm,0.6s,baz=126,slow=6.8,SNR=9.1						
TORD	**Torodi Ar. Bea**	**36.56**	**267**	P	**P**	**14 17 41.6**	**+0.2**
	2.9nm,0.8s,baz=78,slow=7.5,SNR=17						
TORD				LR	LR	14 33 31.1	
	comp=Z,167nm,21.6s,baz=60,slow=38						
KHC	**Kasperske Hory**	**36.57**	**331**	*e*P	**P**	**14 17 41.2**	**+0.1**
AAK	**Ala-Archa**	**37.95**	**44**	LR	LR	14 35 04.2	
	comp=Z,85nm,20.2s,baz=192,slow=39						
OPO	**Ambohidratompo**	**38.05**	**168**	P	**P**	**14 17 55.2**	**+1.1**
	4.2nm,0.5s,baz=255,slow=3.1,SNR=9.8						
CLL	**Collm**	**38.41**	**333**	*e*P	**P**	**14 17 58.0**	**+1.4**
MDT	**Midelt**	**41.59**	**298**	LR	LR	14 36 55.2	
	comp=Z,55nm,18.6s,baz=116,slow=38						
KOWA	**Kowa**	**41.66**	**271**	LR	LR	14 36 41.6	
	comp=Z,130nm,18.2s,baz=40,slow=38						
BVAR	**Borovoye Array**	**41.70**	**28**	P	**P**	**14 18 22.9**	**-1.1**
	1.0nm,0.6s,baz=239,slow=8.2,SNR=3.6						
BVAR				LR	LR	14 38 19.9	
	comp=Z,63nm,19.2s,baz=224,slow=40						
ESDC	**Sonseca Array**	**42.53**	**308**	P	**P**	**14 18 31.2**	**+0.2**
	0.1nm,0.4s,baz=104,slow=6.3,SNR=4.1						
ESDC				LR	LR	14 37 06.2	
	comp=Z,26nm,18.8s,baz=160,slow=37						
FINES	**FINESS Array B**	**43.49**	**351**	P	**P**	**14 18 37.5**	**-0.9**
	5.3nm,1.0s,baz=142,slow=7.0,SNR=4.2						
KURBB	**Kurchatov Arra**	**44.30**	**35**	P	**P**	**14 18 45.4**	**+0.4**
	1.6nm,0.7s,baz=239,slow=7.9,SNR=12						
KURK	**Kurchatov**	**44.40**	**35**	*e*P	**P**	**14 18 46.1**	**+0.3**
	42nm,1.1s						
KURK	**Kurchatov**	**44.40**	**35**	*e*P	**P**	**14 18 46.1**	**+0.3**
	42nm,1.1s						
DBIC	**Dimbokro**	**44.63**	**260**	P	**P**	**14 18 47.6**	**-0.6**
	3.1nm,0.8s,baz=63,slow=6.8,SNR=2.7						
DBIC				LR	LR	14 37 22.0	
	comp=Z,127nm,19.7s,baz=21,slow=36						
MKAR	**Makanchi Array**	**44.76**	**42**	P	**P**	**14 18 48.9**	**+0.1**
	1.2nm,0.4s,baz=224,slow=6.8,SNR=8.7						
MKAR				LR	LR	14 38 18.5	
	comp=Z,46nm,21.9s,baz=246,slow=37						
NOA	**NORSAR Array B**	**46.53**	**342**	LR	LR	14 39 41.0	
	comp=Z,22nm,18.9s,baz=335,slow=38						
BOSA	**Boshof**	**49.17**	**196**	LR	LR	14 40 45.2	
	comp=Z,160nm,18.7s,baz=16,slow=37						
ZALV	**Zalesovo Beam**	**49.29**	**34**	P	**P**	**14 19 23.5**	**-0.5**
	1.7nm,0.6s,baz=254,slow=8.6,SNR=7.9						
ZALV				LR	LR	14 43 31.1	
	comp=Z,53nm,18.5s,baz=250,slow=40						
ARCES	**ARCESS Array B**	**51.31**	**354**	P	**P**	**14 19 38.7**	**-0.5**
	2.0nm,0.9s,baz=119,slow=5.6,SNR=4.6						
GTA	**Gaotai**	**55.60**	**55**	*e*P	**P**	**14 20 11.6**	**+0.3**
GTA				pP	sP	14 20 15.9	+0.2
GTA				sP	pP	14 20 18.6	+4.1
GTA				pmax	pmax		
	comp=Z,4.0nm,1.3s						
CMAR	**Chiang Mai Arr**	**56.24**	**80**	P	**P**	**14 20 15.3**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=263,slow=7.0,SNR=3.7						
CMAR				LR	LR	14 46 35.6	
	comp=Z,53nm,18.3s,baz=229,slow=38						
NRIK	**Noril'sk**	**58.32**	**18**	P	**P**	**14 20 29.4**	**-0.6**
	comp=Z,1.5nm,0.5s,baz=235,slow=5.8,SNR=3.7						
NRIK				LR	LR	14 48 31.1	
	comp=Z,74nm,19.6s,baz=262,slow=39						
SPITS	**Spitsbergen Ar**	**60.32**	**355**	P	**P**	**14 20 43.3**	**-0.3**
	comp=Z,2.7nm,0.7s,baz=199,slow=8.4,SNR=2.9						
SONM	**Songino Array**	**60.88**	**45**	P	**P**	**14 20 47.4**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=270,slow=7.7,SNR=5.5						
SONM				LR	LR	14 49 53.6	
	comp=Z,67nm,20.1s,baz=244,slow=39						
ULN	**Ulaanbaatar**	**61.33**	**45**	P	**P**	**14 20 50.9**	**-0.2**
	comp=Z,0.8nm,0.4s						
ULN	**Ulaanbaatar**	**61.33**	**45**	P	**P**	**14 20 50.9**	**-0.2**
	comp=Z,0.8nm,0.4s						
TIXI	**Tiksi**	**72.05**	**19**	P	**P**	**14 21 58.1**	**-0.9**
	comp=Z,1.2nm,0.7s,baz=322,slow=5.1,SNR=4.4						
INCN	**Inchon**	**76.67**	**55**	*e*P	**P**	**14 22 28.5**	**+2.0**
KSRS	**Korea Array**	**77.67**	**55**	LR	LR	15 01 33.7	
	comp=Z,58nm,18.4s,baz=215,slow=39						
MJAR	**Matsushiro Arr**	**85.80**	**53**	P	**P**	**14 23 14.4**	**-0.7**
	comp=Z,0.8nm,0.7s,baz=284,slow=5.5,SNR=3.9						

*ISCJB **03** 14:14:48.8±0.9, 3.°8S±0.°1×103.°5W±0.°1, h10km, mb4.0/22, MS4.0/12, Error ellipse: s-maj=23.5km s-min=10.3km az=136.8*
*IDC **03** 14:14:48.8±0.9, 3.°79S×103.°55W, h0km, mb4.0/18, mb1 4.1/18, mb1mx4.1/45, mbtmp4.0/18, MS4.1/12, Ms1 4.1/12, ms1mx3.7/42, Error ellipse: s-maj=26.2km s-min=15.5km az=49.0*
*NEIC **03** 14:14:50.0±0.6, 3.°83S×103.°55W, h10km, mb4.5/6, Error ellipse: s-maj=17.1km s-min=10.2km az=47.0*
*GCMT **03** 14:14:50.0±0.5, 3.°69S×103.°00W, h29km±1km, MW5.0/72, Moment Tensor Solution. s26,c31; s72,c95; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.52±.18; $M_{\theta\theta}$1.10±.14; $M_{\phi\phi}$-0.58±.16; $M_{r\theta}$1.25±.23; $M_{\theta\phi}$3.30±.12; $M_{\phi r}$-0.73±.22; Best double couple: $M_0$3.72700×10^{16} NP1:ϕ_s275.00000°, δ80.00000°, λ-22.00000°. NP2: ϕ_s9.00000°, δ68.00000°, λ-169.00000°. Principal axes: T 3.7380, Plg8.0000°, Azm324.0000°; N -0.0200, Plg66.0000°, Azm71.0000°; P -3.7160, Plg23.0000°, Azm230.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 03 14:14:50.3±0.9, 3.°8S±0.°1×103.°5W±0.°1, h10km, n43, σ1§25/33, mb4.2/22, MS4.0/12, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**22.40**	**22**	P	**P**	**14 19 51.0**	**+1.8**
	2.1nm,0.8s,baz=173,slow=12,SNR=3.7						
APG	**El Apazote**	**22.69**	**34**	P	**P**	**14 19 53.3**	**+0.9**
	17nm,1.0s,baz=211,slow=4.2,SNR=12						
APG				LR	LR	14 26 26.6	
	comp=Z,680nm,21.8s,baz=138,slow=31						
JTS	**JuntasAbangare**	**23.16**	**53**	P	**P**	**14 19 57.4**	**+0.2**
	10nm,1.1s,baz=298,slow=10,SNR=3.7						
JTS				LR	LR	14 26 16.4	
	comp=Z,1μm,20.1s,baz=290,slow=30						
JTS	**JuntasAbangare**	**23.16**	**53**	*e*P	**P**	**14 19 58.2**	**+1.0**
ATAH	**Atahualpa**	**25.22**	**99**	P	**P**	**14 20 18.1**	**+1.0**
	5.6nm,0.7s,baz=272,slow=7.1,SNR=4.7						
OTAV	**Otavalo**	**25.36**	**82**	P	**P**	**14 20 16.4**	**-1.9**
	13nm,1.3s						
BCIP	**Isla Barro Col**	**26.87**	**61**	P	**P**	**14 20 27.9**	**-3.5**
LPIG	**La Paz**	**28.48**	**347**	LR	LR	14 29 17.2	
	comp=Z,432nm,21.2s,baz=196,slow=30						
ROSC	**El Rosal**	**30.39**	**74**	LR	LR	14 30 30.7	
	comp=Z,302nm,20.8s,baz=252,slow=31						
TXAR	**Lajitas Array**	**32.91**	**360**	P	**P**	**14 21 25.5**	**+0.6**
	0.7nm,1.0s,baz=181,slow=10.0,SNR=4.3						
TXAR				PcP	**PcP**	**14 24 10.1**	**+0.6**
	0.2nm,0.7s,baz=212,slow=3.2,SNR=3.5						
TXAR				LR	LR	14 33 37.8	
	comp=Z,307nm,18.2s,baz=0.0,slow=34						
SDV	**Santo Domingo**	**35.10**	**69**	P	**P**	**14 21 44.2**	**-0.2**
	3.6nm,0.4s,baz=244,slow=8.7,SNR=5.9						
SDV				LR	LR	14 33 21.5	
	comp=Z,411nm,21.2s,baz=237,slow=32						
SDV	**Santo Domingo**	**35.10**	**69**	*e*P	**P**	**14 21 45.3**	**+0.9**
	6.7nm,0.8s						
RKT	**Rikitea**	**36.00**	**235**	*e*LR	LR	14 31 44.5	
	668nm,25.0s,baz=66						
TAOE	**Nuku Hiva Isla**	**36.75**	**260**	*e*LR	LR	14 32 01.3	
	572nm,25.3s						
LPAZ	**La Paz**	**36.92**	**112**	P	**P**	**14 22 01.5**	**+1.1**
	1.4nm,0.8s,baz=309,slow=7.6,SNR=4.0						
LPAZ				LR	LR	14 34 05.5	
	comp=Z,128nm,19.1s,baz=285,slow=31						
ANMO	**Albuquerque**	**38.60**	**356**	P	**P**	**14 22 14.1**	**+0.2**
	0.3nm,0.4s,baz=158,slow=11,SNR=2.9						
ANMO

*ISN **03** 14:25:12.1±0.3, 37.°50N×41.°87E, h0km, ML3.0*
*CSEM **03** 14:25:14.8±0.2, 37.°60N×41.°76E, h5km, ML2.8, Error ellipse: s-maj=5.1km s-min=3.6km az=23.0*
*ISK **03** 14:25:15.3, 37.°65N×41.°71E, h10km, ML2.8/5*
*DDA **03** 14:25:15.8, 37.°69N×41.°72E, h6km, Ml2.8*

ISC 03 14:25:15.0±1.5, 37.°64N±0.°04×41.°74E±0.°03, h4km±12km, n25, σ0°38/39, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRTM	Siirt_Merkez	0.38	23	*i* P	Pg	14 25 23.0	+0.6
SRTM	Siirt_Merkez	0.38	23	P	Pg	14 25 23.0	+0.6
BTMN	Batman	0.45	304	*i* P	Pg	14 25 23.7	0.0
BTMN	Batman	0.45	304	P	Pg	14 25 23.7	0.0
SIRT	Sirnak	0.57	104	PG	Pb	14 25 27.1	-0.6
SIRT				SG	Sb	14 25 36.3	+0.1
SIRT	Sirnak	0.57	104	*e*Pg	Pb	14 25 27.1	-0.6
SIRT				*e*Sg	Sb	14 25 36.3	+0.1
SVAN	Silvan-Diyarba	0.67	320	PG	Pg	14 25 28.0	+0.2
SVAN				SG	Sb	14 25 38.4	-0.4
SVAN	Silvan-Diyarba	0.67	320	*e*Pg	Pg	14 25 28.0	+0.2
SVAN				*e*Sg	Sb	14 25 38.4	-0.4
MARD	Mardin	0.83	247	*i* P	Pg	14 25 30.3	-0.6
MARD				*i* S	Sb	14 25 44.5	+0.9
GURO	Guroymak-BITLI	0.94	14	PG	Pg	14 25 33.4	+0.3
GURO				SG	Sb	14 25 46.6	-0.2
GURO	Guroymak-BITLI	0.94	14	*e*Pg	Pg	14 25 33.4	+0.3
GURO				*e*Sg	Sb	14 25 46.6	-0.2
MAZI	Mazidag	1.04	261	PG	Pg	14 25 35.3	+0.3
MAZI				SG	Sb	14 25 49.9	+0.2
MAZI	Mazidag	1.04	261	*e*Pg	Pg	14 25 35.3	+0.3
MAZI				*e*Sg	Sb	14 25 49.9	+0.2
HANI	Diyarbakir_Han	1.31	307	*i* P	Pn	14 25 39.9	-0.3
HANI				*i* S	Sn	14 25 58.0	-0.1
HANI	Diyarbakir_Han	1.31	307	P	Pn	14 25 39.9	-0.3
HANI				S	Sn	14 25 58.0	-0.1
DIYA	Diyarbakir	1.31	283	*i* P	Pn	14 25 40.1	-0.1
DIYA				*i* S	Sn	14 25 58.8	+0.7
DIYA	Diyarbakir	1.31	283	P	Pn	14 25 40.1	-0.1
DIYA				S	Sn	14 25 58.8	+0.7
SVRC	Sivrice-ELAZID	2.06	292	PN	Pn	14 25 50.5	0.0
SVRC	Sivrice-ELAZID	2.06	292	*e*Pn	Pn	14 25 50.5	0.0
PTK	Pertek	2.23	305	PN	Pn	14 25 53.0	+0.1
PTK	Pertek	2.23	305	*e*Pn	Pn	14 25 53.0	+0.1
ELZG	Elazig	2.34	292	*i* P	Pn	14 25 54.4	+0.1
ELZG				*i* S	Sb	14 26 27.1	0.0
ELZG	Elazig	2.34	292	P	Pn	14 25 54.4	+0.1
MALT	Malatya	2.70	285	PN	Pn	14 25 59.7	+0.4
MALT	Malatya	2.70	285	*e*Pn	Pn	14 25 59.7	+0.4

IDC 03 14:30:33.5±1.5, 3.°01N×125.°45E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.3/58, mbtmp3.5/5, MS4.0/1, Ms1 4.0/1, ms1mx2.6/43, Error ellipse: s-maj=114.2km s-min=19.0km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.98	180	P	P	14 35 18.7	+0.3
	1.4nm,0.3s,baz=24,slow=10.0,SNR=19						
WRA	Warramunga Arr	24.42	159	P	P	14 35 54.4	+0.4
	0.4nm,0.3s,baz=338,slow=10,SNR=22						
ASAR	Alice Springs	27.76	163	P	P	14 36 23.8	-0.4
	0.4nm,0.6s,baz=340,slow=7.3,SNR=15						
DZM	Mont Dzumac	47.18	124	LR	LR	14 58 44.1	
	comp=Z,156nm,18.4s,baz=84,slow=36						
MKAR	Makanchi Array	57.43	326	P	P	14 40 24.6	+0.5
	0.2nm,0.3s,baz=124,slow=8.1,SNR=7.1						
KURBB	Kurchatov Arra	61.66	328	P	P	14 40 52.5	-0.7
	0.2nm,0.4s,baz=134,slow=6.9,SNR=3.7						

*ISCJB **03** 14:36:52.0±0.5, 3.°87S±0.°07×103.°08W±0.°07, h10km, mb4.5/71, MS4.3/41, Error ellipse: s-maj=12.4km s-min=6.7km az=135.5*
*IDC **03** 14:36:52.8±0.7, 3.°80S×103.°01W, h0km, mb4.0/18, mb1 4.2/18, mb1mx4.1/45, mbtmp4.1/18, MS4.3/39, Ms1 4.3/39, ms1mx4.3/46, Error ellipse: s-maj=22.5km s-min=13.9km az=63.0*
*NEIC **03** 14:36:54.0±0.3, 3.°81S×103.°03W, h10km, mb4.7/58, Error ellipse: s-maj=9.8km s-min=5.3km az=52.0*
*GCMT **03** 14:36:54.0±0.3, 3.°78S×102.°83W, h22km±1km, MW5.1/101, Moment Tensor Solution. s48,c61; s101,c153; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.37±.16; $M_{\theta\theta}$1.29±.14; $M_{\phi\phi}$-1.66±.17; $M_{r\theta}$0.91±.23; $M_{\theta\phi}$4.84±.13; $M_{\phi r}$0.07±.23; Best double couple: $M_0$5.14600×10^{16} NP1:ϕ_s99.00000°, δ87.00000°, λ10.00000°. NP2: ϕ_s8.00000°, δ80.00000°, λ177.00000°. Principal axes: T 5.0060, Plg10.0000°, Azm324.0000°; N 0.2810, Plg79.0000°, Azm116.0000°; P -5.2870, Plg5.0000°, Azm233.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 03 14:36:54.0±0.5, 3.°79S±0.°09×103.°06W±0.°10, h10km, n129, σ1°04/93, mb4.7/71, MS4.4/41, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	22.26	21	P	P	14 41 53.4	+2.0
	3.6nm,0.9s,baz=215,slow=12,SNR=4.0						
APG	El Apazote	22.45	33	P	P	14 41 55.4	+1.7
	28nm,1.2s,baz=204,slow=14,SNR=11						
APG				LR	LR	14 48 30.6	
	comp=Z,2μm,21.9s,baz=205,slow=31						
CCIG	Comitan	22.68	28	*e*P	P	14 41 57.4	+1.4
	43nm,0.3s						
JTS	JuntasAbangare	22.82	52	P	P	14 41 59.0	+1.6
	5.1nm,0.9s,baz=352,slow=5.8,SNR=2.9						
JTS				LR	LR	14 48 19.9	
	comp=Z,3μm,19.9s,baz=303,slow=30						
JTS	JuntasAbangare	22.82	52	P	P	14 41 58.3	+1.0
	40nm,1.4s						
ATAH	Atahualpa	24.77	99	P	P	14 42 18.4	+1.7
	4.1nm,0.7s,baz=274,slow=14,SNR=3.7						
ATAH				LR	LR	14 48 27.3	
	comp=Z,282nm,18.1s,baz=271,slow=28						
OTAV	Otavalo	24.91	81	*e*P	P	14 42 18.1	0.0
	44nm,1.4s						
NNA	Nana	27.19	109	LR	LR	14 50 34.1	
	comp=Z,473nm,18.7s,baz=288,slow=30						
LPIG	La Paz	28.61	346	LR	LR	14 51 21.9	
	comp=Z,740nm,20.7s,baz=199,slow=30						
ROSC	El Rosal	29.96	74	LR	LR	14 52 34.3	
	comp=Z,641nm,21.0s,baz=230,slow=32						
RUSC	La Rusia	31.44	72	*e*P	P	14 43 16.3	-0.1
	24nm,2.0s						
TXAR	Lajitas Array	32.94	359	P	P	14 43 29.8	+0.9
	1.3nm,1.0s,baz=177,slow=8.5,SNR=6.2						
TXAR				LR	LR	14 55 41.6	
	comp=Z,561nm,18.1s,baz=0.0,slow=34						
TX31	Lajitas Ar. Si	32.94	359	*e*P	P	14 43 28.9	0.0
SDV	Santo Domingo	34.69	69	LR	LR	14 55 24.7	
	comp=Z,891nm,21.1s,baz=250,slow=32						
SDV	Santo Domingo	34.69	69	*e*P	P	14 43 43.6	-0.9
	11nm,1.1s						
MNMC	Minye Minye	36.06	118	*e*P	P	14 43 55.9	-0.4
	26nm,1.3s						
RKT	Rikitea	36.35	235	*e*LR	LR	14 53 37.8	
	2μm,26.2s,baz=56						
LPAZ	La Paz	36.49	112	P	P	14 43 59.9	-0.5
	1.4nm,0.9s,baz=298,slow=9.5,SNR=4.2						
LPAZ				LR	LR	14 56 18.3	
	comp=Z,367nm,18.9s,baz=288,slow=32						
LPAZ	La Paz	36.49	112	*e*P	P	14 43 59.3	-1.1
	20nm,1.5s						
PB01	IPOC Station P	36.86	121	*e*P	P	14 44 02.5	-0.5
	76nm,1.8s						
TAOE	Nuku Hiva Isla	37.19	260	*e*LR	LR	14 54 06.5	
	1μm,25.3s						
ANMO	Albuquerque	38.66	356	LR	LR	14 58 01.3	
	comp=Z,166nm,18.3s,baz=175,slow=33						
Y14A	Wickenburg	38.68	347	*e*P	P	14 44 19.6	+1.5
	18nm,1.5s						
WUAZ	Wupatki	39.87	349	*e*P	P	14 44 28.7	+0.5
	6.8nm,1.0s						
SAML	Samuel	39.94	99	*e*P	P	14 44 25.4	-3.4
	48nm,1.9s						
PCRV	Puerto La Cruz	40.70	70	LR	LR	15 00 23.6	
	comp=Z,518nm,21.1s,baz=253,slow=35						
GSC	Goldstone, Bar	40.97	343	*e*P	P	14 44 38.7	+1.5
	36nm,1.9s						
PLAL	Pickwick Lake	41.05	19	*e*P	P	14 44 37.7	-0.1
	25nm,1.4s						
MVCO	Mesa Verde	41.10	353	*e*P	P	14 44 38.6	+0.2
	23nm,1.6s						
S22A	4UR Ranch, Cre	41.47	355	*e*P	P	14 44 42.6	+1.1
	22nm,1.8s						
SHPR	Sheep Range	41.65	345	*e*P	P	14 44 43.0	+0.1
	8.7nm,1.2s						
PBMO	Poplar Bluff	42.04	15	*e*P	P	14 44 44.9	-0.9
	20nm,1.3s						
PV03	Paradox Valley	42.17	353	*e*P	P	14 44 47.6	+0.5
	19nm,1.8s						
WVT	Waverly	42.19	18	*e*P	P	14 44 46.5	-0.6
	16nm,1.4s						
SJG	San Juan	42.39	58	LR	LR	14 59 29.2	
	comp=Z,362nm,18.7s,baz=257,slow=32						
SIV	San Ignacio	43.00	109	P	P	14 44 52.4	-1.7
	1.3nm,1.0s,baz=270,slow=11,SNR=3.9						
KSU1	Kansas State U	43.09	7	P	P	14 44 54.2	-0.1
PTGA	Pitinga	43.16	87	P	P	14 44 53.8	-1.5
	9.2nm,0.9s,baz=278,slow=9.6,SNR=7.1						
PTGA	Pitinga	43.16	87	*e*P	P	14 44 53.9	-1.4
	47nm,1.5s						
SRU	San Rafael Swe	43.24	352	*e*P	P	14 44 56.9	+1.2
	26nm,2.0s						
PSUT	Pine Spring	43.28	348	*e*P	P	14 44 56.1	0.0
	11nm,1.6s						
R11A	Troy Canyon, C	43.50	346	*e*P	P	14 44 58.1	+0.2
	9.4nm,1.4s						
O20A	White River Ci	43.97	354	*e*P	P	14 45 02.8	+1.1
	17nm,1.5s						
NV01	Mina Array Sit	44.31	343	*e*P	P	14 45 04.7	+0.3
NVAR	Mina Array Bea	44.31	343	P	P	14 45 04.9	+0.4
	1.4nm,1.0s,baz=155,slow=8.1,SNR=6.3						
NVAR				LR	LR	14 59 46.0	
	comp=Z,408nm,19.0s,baz=234,slow=31						
DUG	Dugway, Tooele	44.67	349	*e*P	P	14 45 06.9	-0.4
	11nm,1.4s						
KVN	Kaiserville	44.83	343	*e*P	P	14 45 09.1	+0.5
	13nm,1.5s						
YERR	Yerington	45.11	342	*e*P	P	14 45 10.5	-0.3
	28nm,1.9s						
PNTR	Pine Nut	45.31	342	*e*P	P	14 45 13.5	+1.0
	8.3nm,1.0s						
VCNR	Virginia City	45.52	342	*e*P	P	14 45 14.4	+0.4
	18nm,1.7s						
AFDM	Forest Hills D	45.63	340	*e*P	P	14 45 16.2	+1.5
	13nm,1.6s						
PAHR	Pah Rah Range	45.81	342	*e*P	P	14 45 16.9	+0.6
	29nm,1.8s						
HWUT	Hardware Ranch	45.84	351	*e*P	P	14 45 16.6	+0.1
	23nm,1.4s						
HVU	Hansel Valley	46.21	350	*e*P	P	14 45 19.7	+0.3
	19nm,1.4s						
BEKR	Beckworth	46.26	342	*e*P	P	14 45 20.7	+0.8
	8.0nm,1.4s						
ORV	Oroville	46.35	340	*e*P	P	14 45 21.5	+1.1
	21nm,1.5s						
PDAR	Pinedale Array	46.71	353	P	P	14 45 24.0	+0.6
	0.9nm,0.8s,baz=171,slow=6.3,SNR=8.2						
PDAR				LR	LR	15 02 28.9	
	comp=Z,90nm,20.6s,baz=182,slow=33						
PDAR	Pinedale Array	46.71	353	*e*P	P	14 45 22.0	-1.4
PLCA	Paso Flores	46.99	146	P	P	14 45 25.6	+0.1
	9.2nm,1.2s,baz=346,slow=9.1,SNR=5.0						
PLCA				LR	LR	15 00 09.4	
	comp=Z,661nm,19.7s,baz=340,slow=30						
PLCA	Paso Flores	46.99	146	*e*P	P	14 45 26.3	+0.8
	33nm,1.4s						
PPT	Papeete	47.57	250	LR	LR	15 00 56.3	
	comp=Z,466nm,18.0s,baz=122,slow=30						
PPT2	Papeete2	47.58	250	*e*S	S	14 52 23.4	-2.7
	174nm,26.2s						
PPT2				*e*LR	LR	14 58 52.8	
	1μm,25.0s,baz=66						
FXWY	Fox Creek	47.75	352	*e*P	P	14 45 31.1	-0.4
	9.9nm,1.5s						
MOOW	Moose Ponds	47.82	352	*e*P	P	14 45 31.9	-0.2
	7.7nm,1.4s						
IMW	Indian Meadow	47.99	352	*e*P	P	14 45 32.7	-0.8
	18nm,1.6s						
WVOR	Wild Horse Val	48.13	345	*e*P	P	14 45 34.4	+0.1
	7.2nm,1.0s						
HLID	Hailey	48.23	349	*e*P	P	14 45 35.1	-0.1
	7.9nm,1.2s						
YBH	Yreka Blue Hor	48.71	340	P	P	14 45 39.5	+0.7
	1.3nm,0.9s,baz=132,slow=7.8,SNR=3.1						
YBH				LR	LR	15 01 51.8	
	comp=Z,394nm,22.0s,baz=169,slow=31						
YHH	Holmes Hill	48.86	353	*e*P	P	14 45 40.7	+0.5
	6.5nm,1.2s						
CPUP	Villa Florida	49.15	122	P	P	14 45 41.4	-1.0
	3.0nm,1.0s,baz=202,slow=7.6,SNR=2.9						
CPUP				LR	LR	15 03 48.7	
	comp=Z,174nm,18.4s,baz=294,slow=33						
MCMT	McKenzie Canyo	49.19	351	*e*P	P	14 45 43.1	+0.5
I07A	Izee	49.89	345	*e*P	P	14 45 48.7	+0.9
	20nm,1.4s						
PINE	Pine Mountain	50.02	343	*e*P	P	14 45 49.6	+0.6
	40nm,1.8s						
F10A	Beach Ranch, E	51.12	347	*e*P	P	14 45 56.9	-0.2
	11nm,1.4s						
NEW	Newport	53.28	348	*e*P	P	14 46 11.9	-1.1
	6.7nm,1.1s						
ULM	Lac du Bonnet	54.18	6	P	P	14 46 18.1	-1.4
	3.4nm,1.0s,baz=186,slow=9.2,SNR=4.0						
ULM				LR	LR	15 08 28.6	
	comp=Z,503nm,18.2s,baz=198,slow=35						
RAR	Rarotonga	57.69	247	LR	LR	15 05 44.5	
	comp=Z,356nm,18.2s,baz=108,slow=30						
SCHQ	Schefferville	65.66	22	LR	LR	15 15 09.1	
	comp=Z,467nm,20.2s,baz=246,slow=35						
YKA	Yellowknife Ar	66.68	354	P	P	14 47 44.4	-0.4
	4.2nm,1.1s,baz=163,slow=6.2,SNR=20						
YKA				LR	LR	15 15 44.9	
	comp=Z,18nm,20.5s,baz=166,slow=35						
YKW3	Yellowknife Ar	66.75	354	*e*P	P	14 47 44.7	-0.5
	7.0nm,1.1s						
PMSA	Palmer Station	66.95	163	LR	LR	15 08 28.2	
	comp=Z,252nm,18.2s,baz=302,slow=28						
AFI	Afiamalu	68.45	257	LR	LR	15 09 33.8	
	comp=Z,210nm,19.6s,baz=97,slow=29						
BMRM	Bremner River	72.12	340	*e*P	P	14 48 17.8	-0.7
	10nm,1.1s						
SCRK	Sand Creek	74.12	343	*e*P	P	14 48 27.7	-2.7
	13nm,1.7s						
INK	Inuvik	75.00	349	LR	LR	15 20 16.0	
	comp=Z,315nm,18.1s,baz=138,slow=35						
INK	Inuvik	75.00	349	*e*P	P	14 48 35.5	+0.3
	10nm,1.1s						
RND	Reindeer	75.25	341	*e*P	P	14 48 37.4	+0.5
	27nm,1.6s						
IL1	Eielson Array	75.57	342	*e*P	P	14 48 37.7	-0.9
ILAR	Eielson Array	75.57	342	P	P	14 48 38.8	+0.1
	1.2nm,1.0s,baz=156,slow=4.6,SNR=9.4						
WRH	Wood River Hil	75.73	342	*e*P	P	14 48 39.6	0.0
	6.2nm,1.1s						
CAST	Castle Rocks	76.36	340	*e*P	P	14 48 43.6	+0.4
	29nm,1.7s						
MLY	Manley	76.95	341	*e*P	P	14 48 45.8	-0.7
	9.3nm,1.4s						
COLD	Coldfoot	78.24	343	*e*P	P	14 48 53.9	+0.2
	31nm,1.8s						
RES	Resolute Bay	78.51	2	LR	LR	15 22 23.8	
	comp=Z,228nm,20.4s,baz=178,slow=35						
RES	Resolute Bay	78.51	2	*e*P	P	14 48 54.1	-0.8
	4.6nm,1.0s						
URZ	Urewera	79.68	232	LR	LR	15 18 43.7	
	comp=Z,232nm,18.2s,baz=175,slow=32						
SFJD	Kangerlussuaq	79.70	18	LR	LR	15 23 39.4	
	comp=Z,258nm,20.1s,baz=228,slow=35						
RDOG	Red Dog Mine	82.67	341	*e*P	P	14 49 18.0	+0.6
	11nm,1.2s						
QSPA	South Pole Qui	86.27	180	P	P	14 49 37.2	+1.3
	6.0nm,1.1s,baz=93,slow=4.3,SNR=5.1						
QSPA				LR	LR	15 21 22.6	
	comp=Z,146nm,18.1s,baz=112,slow=31						
QSPA	South Pole Qui	86.27	180	*e*P	P	14 49 37.1	+1.2
	44nm,1.6s						
VNDA	Vanda	87.43	193	P	P	14 49 43.6	+2.4
	1.3nm,1.2s,baz=153,slow=2.3,SNR=2.2						
VNDA				LR	LR	15 21 43.8	
	comp=Z,99nm,18.4s,baz=107,slow=31						
DZM	Mont Dzumac	89.06	248	LR	LR	15 23 51.7	
	comp=Z,94nm,18.3s,baz=144,slow=32						
DZM	Mont Dzumac	89.06	248	*e*LR	LR	15 18 05.7	
	209nm,23.3s						
SNAA	Sanae	89.64	162	LR	LR	15 21 48.1	
	comp=Z,98nm,20.9s,baz=209,slow=30						
H11N3	WAKE ISLAND Hy	91.29	290	T	T	16 31 18.3	
	baz=94,slow=74,SNR=10						
H11N2	WAKE ISLAND Hy	91.31	290	T	T	16 31 17.3	
	baz=94,slow=74,SNR=9.6						
H11N1	WAKE ISLAND Hy	91.31	290	T	T	16 31 13.9	
	baz=94,slow=74,SNR=6.8						
H11S2	WAKE ISLAND Hy	91.41	288	T	T	16 31 27.7	
	baz=94						
H11S1	WAKE ISLAND Hy	91.42	288	T	T	16 31 32.7	
	baz=94						
H11S3	WAKE ISLAND Hy	91.43	288	T	T	16 31 30.1	
	baz=94						
JMIC	Jan Mayen	95.04	19	LR	LR	15 28 48.1	
	comp=Z,8.0nm,21.6s,baz=258,slow=33						
HNR	Honiara	96.27	260	LR	LR	15 25 05.9	
	comp=Z,126nm,20.1s,baz=57,slow=30						
DBIC	Dimbokro	98.56	84	LR	LR	15 33 37.0	
	comp=Z,72nm,18.4s,baz=248,slow=35						
PETK	Petropavlovsk-	98.57	323	LR	LR	15 26 49.2	
	comp=Z,146nm,20.5s,baz=89,slow=30						
EKA	Eskdalemuir Ar	98.73	35	LR	LR	15 33 27.1	
	comp=Z,49nm,19.1s,baz=260,slow=34						
MDT	Midelt	99.13	58	LR	LR	15 30 08.5	
	comp=Z,128nm,18.9s,baz=330,slow=32						
ESDC	Sonseca Array	99.41	51	LR	LR	15 27 48.2	
	comp=Z,108nm,21.6s,baz=345,slow=31						
SPITS	Spitsbergen Ar	99.51	10	LR	LR	15 34 59.7	
	comp=Z,173nm,21.8s,baz=310,slow=35						
KOWA	Kowa	99.68	76	LR	LR	15 30 30.0	
	comp=Z,83nm,21.5s,baz=220,slow=32						
BRTR	Keskin Array B	127.00	41	PKP	PKPdf	14 55 59.0	0.0
	0.9nm,0.9s,baz=194,slow=0.6,SNR=3.4						
SONM	Songino Array	129.34	335	PKP	PKPdf	14 56 02.3	-0.9
	0.4nm,0.5s,baz=111,slow=3.3,SNR=3.5						
ZALV	Zalesovo Beam	129.58	354	PKP	PKPdf	14 56 02.6	-0.7
	0.3nm,0.2s,baz=56,slow=2.6,SNR=2.4						
KBZ	Khabaz	130.13	32	PKP	PKPdf	14 56 05.8	+1.2
	0.7nm,0.5s,baz=27,slow=2.3,SNR=3.1						
BVAR	Borovoye Array	130.62	5	PKP	PKPdf	14 56 06.3	+1.0
	1.2nm,0.9s,baz=321,slow=2.0,SNR=5.0						
KURK	Kurchatov	133.21	359	PKP	PKPdf	14 56 09.9	-0.3
KURBB	Kurchatov Arra	133.31	359	PKP	PKPdf	14 56 09.9	-0.5
	1.0nm,1.0s,baz=11,slow=1.9,SNR=4.7						
MKAR	Makanchi Array	136.91	355	PKP	PKPdf	14 56 17.7	+0.3
	1.6nm,1.0s,baz=342,slow=3.1,SNR=7.3						
MK01	Makanchi Array	136.93	355	*e*PKPdf	PKPdf	14 56 17.4	0.0
CM01	Chiang Mai Arr	154.01	306	*e*PKPbc	PKPbc	14 56 55.2	+0.3

*BJI **03** 14:51:21.5, 21.°91S×178.°70W, h536km, mb4.5/12, mB4.8/6*
*ISCJB **03** 14:51:26.2±0.2, 21.°93S±0.°02×179.°42W±0.°04, h576km, mb4.4/74, Error ellipse: s-maj=5.3km s-min=2.8km az=12.0*
*NEIC **03** 14:51:26.4±0.4, 21.°94S×179.°30W, h573km±5km, mb4.6/58, Error ellipse: s-maj=7.0km s-min=4.9km az=129.0*
*WEL **03** 14:51:26.0, 21.°94S×179.°30W, h573km*
*IDC **03** 14:51:26.4±1.2, 21.°91S×179.°29W, h572km±13km, mb3.8/27, mb1 3.9/30, mb1mx3.8/50, mbtmp4.7/30, Error ellipse: s-maj=10.2km s-min=9.8km az=100.0*

ISC 03 14:51:26.5±0.3, 21.°94S±0.°05×179.°21W±0.°06, h576km, n223, σ1°76/247, mb4.4/74, 5C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	Raoul Island	7.37	171	P	P	14 53 19.8	+1.0
RIZ				S	S	14 54 52.2	+1.3
RAO	Raoul Island	7.38	171	P	P	14 53 18.9	0.0
	185nm,0.3s,baz=312,slow=14,SNR=12						
RAO				S	S	14 54 52.1	+1.1
	63nm,0.3s,baz=101,slow=23,SNR=11						
RAO	Raoul Island	7.38	171	*e*P	P	14 53 20.0	+1.1
RAO				*e*S	S	14 54 52.0	+0.9
GLKZ	Green Lake	7.39	171	P	P	14 53 20.3	+1.3
GLKZ				S	S	14 54 52.0	+0.7
AFI	Afiamalu	10.66	43	P	P	14 53 51.2	-0.6
	2.4nm,0.3s,baz=42,slow=18,SNR=4.6						
AFI				S	S	14 55 45.9	-5.1
	0.7nm,0.3s,baz=252,slow=19,SNR=2.7						
AFI	Afiamalu	10.66	43	*e*P	P	14 53 51.5	-0.3
AFI				S	S	14 55 45.9	-5.1
DZM	Mont Dzumac	13.31	267	P	P	14 54 17.2	-1.5
	4.4nm,0.3s,baz=98,slow=15,SNR=15						
DZM	Mont Dzumac	13.31	267	*e*P	P	14 54 18.4	-0.3
FUNA	Funafuti	13.42	353	*e*P	P	14 54 18.8	-1.1
OUZ	Omahuta	14.66	204	*e*P	P	14 54 33.6	+1.7
OUZ	Omahuta	14.66	204	P	P	14 54 34.2	+2.3
WCZ	Waipu Caves	15.04	201	P	P	14 54 38.4	+2.8
KUZ	Kuaotunu	15.40	196	P	P	14 54 40.4	+1.4
MXZ	Matakaoa Point	15.72	187	*e*P	P	14 54 41.2	-0.9
	56nm,1.1s						
MXZ	Matakaoa Point	15.72	187	P	P	14 54 40.9	-1.2
HAZ	Te Kaha	15.98	189	P	P	14 54 43.1	-1.4
HAZ				S	S	14 57 19.3	-6.7
RUGZ	Raukumara Rang	16.20	189	P	P	14 54 44.8	-2.0
WHRZ	Whale Island	16.20	191	P	P	14 54 48.8	+2.1
TGRZ	Tauranga	16.22	193	P	P	14 54 48.6	+1.8
PUZ	Puketiti	16.23	187	P	P	14 54 46.4	-0.5
PUZ				S	S	14 57 25.4	-4.8
OPRZ	Ohinepanea	16.27	192	P	P	14 54 47.7	+0.5
TWGZ	Tauwhareparae	16.36	188	P	P	14 54 47.5	-0.7
TWGZ				S	S	14 57 29.8	-2.7
MARZ	Manawahe	16.38	192	P	P	14 54 49.2	+0.8
TOZ	Tahuroa Road	16.39	195	P	P	14 54 50.3	+1.9
KMRZ	Kaimai	16.40	194	P	P	14 54 50.5	+2.1
KARZ	Kaharoa	16.50	193	P	P	14 54 50.7	+1.3
OMRZ	Omania	16.56	192	P	P	14 54 50.9	+1.0
URZ	Urewera

FWVZ	Far West T-bar	17.83	193	P	P	14 55 01.5	-0.2
WHVZ	Whangaehu Hut	17.85	193	P	P	14 55 01.0	-0.9
TRVZ	Turoa	17.88	193	P	P	14 55 01.4	-0.8
VRZ	Vera Road	17.89	195	P	P	14 55 03.8	+1.8
PKVZ	Pokaka	17.91	194	P	P	14 55 01.8	-0.4
MOVZ	Moawhango	17.94	193	P	P	14 55 01.7	-0.8
BHHZ	Black Hill Sta	17.96	192	P	P	14 55 00.5	-2.2
KRHZ	Kereru	18.05	191	P	P	14 55 01.8	-1.6
KAHZ	Kahuranaki	18.11	190	P	P	14 55 03.4	-0.7
PNHZ	Pukenui	18.34	191	P	P	14 55 05.1	-1.0
PXZ	Pawanui	18.34	190	P	P	14 55 05.4	-0.6
WAZ	Wanganui	18.44	194	P	P	14 55 06.6	-0.4
BFZ	Birch Farm	19.08	191	eP	P	14 55 11.5	-1.3
	52nm,1.1s						
SNZO	South Karori	19.99	194	eP	P	14 55 19.8	-1.2
	141nm,1.3s						
THZ	Tophouse	20.85	197	eP	P	14 55 27.7	-1.2
	21nm,0.6s						
KHZ	Kahutara	21.30	195	eP	P	14 55 31.7	-1.1
	52nm,1.2s						
LTZ	Lake Taylor	21.97	197	eP	P	14 55 37.0	-1.9
	30nm,0.8s						
OXZ	Oxford	22.54	197	eP	P	14 55 42.6	-1.3
	23nm,0.8s						
RPZ	Rata Peaks	23.17	198	P	P	14 55 48.3	-1.3
	11nm,0.5s,baz=15,slow=8.4,SNR=12						
HNR	Honiara	23.57	299	P	P	14 55 53.5	+0.1
	16nm,0.5s,baz=164,slow=7.4,SNR=3.7						
WHZ	Wether Hill Ro	26.09	201	eP	P	14 56 15.0	-0.3
	56nm,0.6s						
EIDS	Eidsvold	27.40	257	eP	P	14 56 26.8	-0.2
	24nm,0.6s						
ARMA	Armidale	27.44	246	eP	P	14 56 28.7	+1.3
	34nm,0.6s						
CAN	Canberra	30.78	237	eP	P	14 56 57.0	+0.8
	32nm,1.2s						
CTA	Charters Tower	32.25	267	P	P	14 57 08.7	-0.2
	32nm,0.5s,baz=94,slow=6.2,SNR=87						
CTAO	Charters Tower	32.25	267	eP	P	14 57 08.9	-0.1
	33nm,0.6s						
PMG	Port Moresby	34.60	286	P	P	14 57 28.3	-0.4
	55nm,0.7s,baz=114,slow=10.0,SNR=22						
PMG	Port Moresby	34.60	286	eP	P	14 57 28.1	-0.6
	61nm,0.8s						
TAU	Tasmania Unive	34.81	225	eP	P	14 57 30.5	+0.4
	35nm,1.3s						
STKA	Stephens Creek	36.16	246	P	P	14 57 41.9	+0.5
	13nm,0.5s,baz=94,slow=10,SNR=41						
STKA	Stephens Creek	36.16	246	eP	P	14 57 41.4	+0.1
	5.5nm,1.1s						
COEN	Coen	36.58	276	eP	P	14 57 45.1	0.0
	32nm,0.8s						
BBOO	Buckleboo	40.91	245	eP	P	14 58 19.2	-0.5
	25nm,0.9s						
AS01	Alice Springs	43.06	258	eP	P	14 58 36.1	-0.7
AS31	Alice Springs	43.11	258	eP	P	14 58 36.5	-0.7
	9.9nm,0.7s						
ASAR	Alice Springs	43.11	258	P	P	14 58 36.8	-0.4
	41nm,0.8s,baz=98,slow=8.2,SNR=487						
ASAR				PcP	PcP	15 00 13.6	-0.2
	1.3nm,0.5s,baz=98,slow=5.7,SNR=3.2						
ASAR				ScP	ScP	15 03 11.1	+0.5
	2.2nm,0.8s,baz=107,slow=4.8,SNR=5.8						
ASAR				S	S	15 04 18.6	-3.9
	3.7nm,0.9s,baz=95,slow=16,SNR=15						
WB2	Warramunga Arr	43.29	264	eP	P	14 58 37.5	-1.1
	49nm,0.8s						
WRAB	Tennant Creek	43.30	264	eP	P	14 58 37.3	-1.4
	44nm,0.9s						
WRA	Warramunga Arr	43.30	264	P	P	14 58 37.6	-1.0
	35nm,0.8s,baz=100,slow=8.8,SNR=263						
WRA				ScP	ScP	15 03 12.2	+0.7
	4.3nm,0.9s,baz=95,slow=4.2,SNR=11						
WRA				S	S	15 04 20.1	-5.2
	1.2nm,0.7s,baz=101,slow=15,SNR=4.7						
MTN	Manton Dam	48.07	272	eP	P	14 59 13.7	-1.2
	39nm,0.6s						
FITZ	Fitzroy Crossi	51.73	264	P	P	14 59 40.9	-0.8
	8.1nm,0.6s,baz=104,slow=9.3,SNR=34						
FITZ	Fitzroy Crossi	51.73	264	eP	P	14 59 41.3	-0.4
	30nm,1.3s						
SOEI	Soe	55.43	273	eP	P	15 00 08.1	+0.1
	74nm,0.8s						
BATI	Baumata	55.84	272	P	P	15 00 10.8	0.0
	40nm,0.6s,baz=100,slow=6.1,SNR=6.5						
SBA	Scott Base	56.37	184	eP	P	15 00 15.8	+2.6
	16nm,1.0s						
VNDA	Vanda	56.39	185	P	P	15 00 14.5	+1.1
	4.0nm,0.7s,baz=4.0,slow=6.8,SNR=47						
VNDA	Vanda	56.39	185	eP	P	15 00 15.3	+2.0
	5.0nm,0.7s						
MBWA	Marble Bar	56.45	259	eP	P	15 00 13.6	-1.1
	23nm,0.7s						
CASY	Casey	62.19	205	eP	P	15 00 52.3	+0.2
	6.7nm,0.6s						
QSPA	South Pole Qui	68.14	180	P	P	15 01 30.8	+1.2
	22nm,0.8s,baz=294,slow=8.4,SNR=54						
QSPA	South Pole Qui	68.14	180	eP	P	15 01 30.4	+0.8
	27nm,0.9s						
MJAR	Matsushiro Arr	70.71	325	P	P	15 01 44.4	-0.9
	2.6nm,0.8s,baz=168,slow=6.3,SNR=10						
LEM	Lembang	71.89	270	P	P	15 01 52.5	-0.3
	26nm,0.6s,baz=63,slow=4.5,SNR=6.2						
KSM	Kuching	72.50	279	eP	P	15 01 55.3	-0.9
	17nm,0.7s						
ASAJ	Asahikawa	74.46	332	P	P	15 02 06.9	+0.4
	3.0nm,0.7s,baz=164,slow=4.9,SNR=5.1						
KSRS	Korea Array	77.23	319	P	P	15 02 21.9	0.0
	0.9nm,0.9s,baz=126,slow=6.4,SNR=4.2						
KSAR	Wonju Array Be	77.24	319	P	P	15 02 21.9	-0.1
PETK	Petropavlovsk-	77.38	346	P	P	15 02 22.2	-0.2
	2.9nm,0.5s,baz=135,slow=4.5,SNR=6.9						
USRK	Ussuriysk Ar.	79.53	327	P	P	15 02 33.9	-0.1
	2.3nm,0.8s,baz=99,slow=4.5,SNR=4.7						
MAW	Mawson	79.83	200	P	P	15 02 35.6	+0.3
	3.9nm,0.6s,baz=129,slow=6.3,SNR=9.9						
OSI	Osito Audit: C	80.38	47	eP	P	15 02 43.7	+4.8
	19nm,0.3s						
PSRC	Puddingstone R	80.70	48	eP	P	15 02 41.4	+1.0
MONP2	Monument Peak	81.00	49	P	P	15 02 43.8	+1.5
	baz=237						
EDW2	Edwards Air Fo	81.02	47	P	P	15 02 44.2	+2.0
	baz=235						
ISA	Isabella, Lake	81.14	46	P	P	15 02 44.9	+2.1
	baz=235						
WDC	Whiskeytown Da	81.50	40	eP	P	15 02 45.6	+1.2
	5.9nm,1.1s						
N02D	Trinity Center	81.64	40	P	P	15 02 46.4	+1.1
	baz=231						
O03D	Paynes Creek	81.77	41	P	P	15 02 47.7	+1.8
	baz=232						
M02C	Callahan	81.82	39	P	P	15 02 47.9	+1.8
	baz=231						
CWC	Cottonwood Cre	81.85	46	P	P	15 02 48.1	+1.6
	baz=235						
MDPB	Devils Postpil	81.88	44	eP	P	15 02 47.5	+0.7
	4.1nm,1.0s						
BELC	Belle Mtn. Jos	81.90	49	P	P	15 02 48.4	+1.6
	baz=237						
MPMC	Manual Prospec	82.03	46	P	P	15 02 48.9	+1.4
	baz=236						
GSC	Goldstone, Bar	82.06	47	P	P	15 02 48.7	+1.2
	baz=236						
YBH	Yreka Blue Hor	82.11	39	P	P	15 02 49.3	+1.7
	2.4nm,0.8s,baz=59,slow=2.1,SNR=8.7						
HEC	Hector,Ludlow	82.12	48	P	P	15 02 49.4	+1.5
	baz=236						
IPM	Ipoh	82.20	278	eP	P	15 02 48.2	-0.4
	8.2nm,0.7s						
BEKR	Beckworth	82.39	42	eP	P	15 02 50.2	+1.0
	2.9nm,1.0s						
PNTR	Pine Nut	82.40	43	eP	P	15 02 50.5	+1.2
	8.4nm,0.8s						
YERR	Yerington	82.56	43	eP	P	15 02 51.0	+0.9
	3.6nm,0.7s						
CN2	Changchun	82.76	323	eP	P	15 02 51.9	+1.2
NV01	Mina Array Sit	82.84	44	eP	P	15 02 52.5	+0.9
NVAR	Mina Array Bea	82.84	44	P	P	15 02 52.7	+1.2
	1.9nm,0.8s,baz=224,slow=9.1,SNR=16						
PAHR	Pah Rah Range	82.90	42	eP	P	15 02 52.6	+0.9
	2.6nm,1.0s						
KVN	Kaiserville	83.33	43	eP	P	15 02 54.6	+0.7
	2.7nm,1.0s						
TPNV	Topopah Spring	83.35	46	P	P	15 02 55.8	+1.8
	baz=236						
J05D	Fort Rock, OR	83.93	39	P	P	15 02 58.4	+1.7
	baz=232						
PINE	Pine Mountain	84.41	38	eP	P	15 03 00.3	+1.1
	7.2nm,1.1s						
TUC	Tucson	84.75	52	P	P	15 03 03.0	+2.1
	baz=240						
TUC	Tucson	84.75	52	eP	P	15 03 02.4	+1.5
	7.8nm,1.3s						
U15A	North Rim	85.76	48	eP	P	15 03 07.3	+1.3
	4.7nm,0.9s						
PSUT	Pine Spring	85.80	46	eP	P	15 03 09.0	+3.0
	2.3nm,1.0s						
GYA	Guiyang	86.39	300	eP	P	15 03 10.0	+1.1
GYA				PP	PP	15 06 43.6	+2.2
GYA				SKS	SKSac	15 12 40.8	-0.3
GYA				S	S	15 12 57.7	+0.2
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
G08A	Pilot Rock	86.44	38	eP	P	15 03 09.4	+0.7
	5.1nm,1.1s						
SNAA	Sanae	86.61	179	P	P	15 03 08.6	-0.5
SNAA	Sanae	86.61	179	P	P	15 03 08.1	-1.0
	2.3nm,0.8s,baz=146,slow=3.6,SNR=7.2						
VNA3	Neumayer Olymp	86.78	177	P	P	15 03 09.5	-0.4
GHO	Glory Hole Cre	86.88	14	eP	P	15 03 10.1	-0.2
	6.3nm,0.8s						
PBKT	Sadao Pong	87.01	289	eP	P	15 03 13.6	+1.7
	19nm,1.5s						
VNA1	Neumayer--Stat	87.44	177	P	P	15 03 12.6	-0.3
CAST	Castle Rocks	87.71	12	eP	P	15 03 12.7	-1.4
	3.5nm,0.7s						
F10A	Beach Ranch, E	87.83	38	eP	P	15 03 16.2	+1.0
	6.3nm,1.0s						
TRF	Thorofare Moun	88.09	13	eP	P	15 03 15.0	-1.1
	3.7nm,0.8s						
HLID	Hailey	88.15	41	P	P	15 03 18.5	+1.6
	baz=237						
HLID	Hailey	88.15	41	eP	P	15 03 17.4	+0.5
	2.5nm,0.9s						
SRU	San Rafael Swe	88.33	46	eP	P	15 03 18.3	+0.5
	5.4nm,1.1s						
RND	Reindeer	88.34	13	eP	P	15 03 16.7	-0.4
	4.4nm,0.9s						
P17A	Butcher Ranch,	88.36	46	eP	P	15 03 18.3	+0.3
	9.9nm,1.3s						
MNTX	Cornudas Mount	88.50	55	P	P	15 03 20.1	+1.5
	baz=243						
MNTX	Cornudas Mount	88.50	55	eP	P	15 03 19.6	+1.0
	3.1nm,0.8s						
TX31	Lajitas Ar. Si	88.78	58	eP	P	15 03 20.9	+0.9
TXAR	Lajitas Array	88.78	58	P	P	15 03 20.9	+0.9
	2.3nm,0.9s,baz=205,slow=5.5,SNR=20						
BWN	Browne	88.90	13	epP	pP	15 05 24.0	-0.8
PLCA	Paso Flores	89.10	134	P	P	15 03 22.9	+1.5
	3.7nm,0.8s,baz=234,slow=4.7,SNR=6.4						
TASM	ASL Pad, Albuq	89.18	52	P	P	15 03 23.3	+1.4
	baz=242						
ANMO	Albuquerque	89.18	52	P	P	15 03 22.7	+0.8
	1.2nm,0.7s,baz=258,slow=4.6,SNR=3.8						
ANMO	Albuquerque	89.18	52	P	P	15 03 22.6	+0.7
	baz=242						
ANMO	Albuquerque	89.18	52	eP	P	15 03 21.7	-0.2
	3.8nm,1.3s						
TASL	Snake Pit, Alb	89.18	52	P	P	15 03 22.6	+0.7
	baz=242						
CM01	Chiang Mai Arr	89.51	290	eP	P	15 03 24.2	+0.7
CMAR	Chiang Mai Arr	89.54	290	P	P	15 03 24.0	+0.4
	3.9nm,0.8s,baz=138,slow=3.4,SNR=21						
HHC	Hu-ho-hao-te	89.55	315	eP	P	15 03 23.8	+0.4
HHC				sP	sP	15 06 17.1	-9.1
HHC				S	S	15 13 27.5	+1.4
HHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,71nm,5.0s						
ILAR	Eielson Array	89.96	13	P	P	15 03 23.7	-0.8
	0.3nm,0.6s,baz=218,slow=4.0,SNR=7.5						
S22A	4UR Ranch, Cre	90.21	49	P	P	15 03 27.7	+1.0
	baz=242						
REDW	Red Top Meadow	90.25	43	eP	P	15 03 27.6	+0.9
	5.4nm,1.1s						
O20A	White River Ci	90.37	46	P	P	15 03 28.7	+1.4
	baz=241						
CD2	Chengdu	90.62	303	P	P	15 03 29.8	+1.4
CD2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
PDAR	Pinedale Array	90.78	44	P	P	15 03 29.2	+0.1
	1.0nm,0.8s,baz=204,slow=3.3,SNR=7.0						
PDAR	Pinedale Array	90.78	44	eP	P	15 03 28.9	-0.2
SDCO	Great Sand Dun	91.14	50	P	P	15 03 32.2	+1.2
	baz=243						
240A	Hunter Patters	97.67	59	epP	pP	15 06 05.9	-0.6
KSH	Kashi	114.78	305	PKP	PKPdf	15 09 03.3	+0.8
KSH				PP	PP	15 10 18.6	+6.6
BVAR	Borovoye Array	119.44	319	PKP	PKPdf	15 09 09.6	-1.3
	0.9nm,0.4s,baz=94,slow=2.3,SNR=6.0						
SPITS	Spitsbergen Ar	123.22	356	PKP	PKPdf	15 09 17.1	-0.5
	0.7nm,0.5s,baz=316,slow=4.0,SNR=5.1						
ARCES	ARCESS Array B	130.12	349	PKP	PKPdf	15 09 29.9	-1.0
	0.7nm,0.5s,baz=308,slow=4.0,SNR=4.9						
HFS	Hagfors	140.76	350	PKhKP	PKPpre	15 09 44.1	
	7.0nm,1.1s,baz=57,slow=5.5,SNR=11						
AKASG	Malin Array Be	143.69	329	PKP	PKPbc	15 09 54.4	-0.9
	1.2nm,0.5s,baz=40,slow=4.2,SNR=8.7						
AK11	Malin Array Si	143.74	329	ePKPbc	PKPbc	15 09 53.9	-1.6
EKA	Eskdalemuir Ar	146.52	4	PKPbc	PKPbc	15 10 02.0	-1.5
	0.9nm,0.7s,baz=313,slow=2.5,SNR=3.5						
BRTR	Keskin Array B	146.93	310	PKPbc	PKPbc	15 10 04.8	-0.5
	1.0nm,0.6s,baz=135,slow=6.1,SNR=5.9						
MMAI	Mount Meron Ar	147.50	297	PKPbc	PKPbc	15 10 06.3	-0.7
	1.1nm,0.4s,baz=63,slow=3.9,SNR=3.3						
LANS	Liptovska Anna	149.06	336	ePKP	PKPbc	15 10 11.1	+0.8
DPC	Dobruska-Polom	149.12	340⇑	ePKP	PKPbc	15 10 11.1	+0.7
CLL	Collm	149.18	345	ePKPdf	PKPdf	15 10 07.0	+1.6
CLL				⇑ *i* PKPbc	PKiKP	15 10 10.5	-0.7
	comp=Z,5.0nm,0.8s						
CLL				*i* (PKiKP)		15 10 13.2	
CLL				ePKPab	PKPab	15 10 17.0	-0.2
BRG	Berggiesshubel	149.34	344	*i* PKP	PKPbc	15 10 11.3	+0.4
	comp=Z,5.1nm,0.9s						
PVCC	Panska Ves	149.48	343⇑	ePKP	PKPbc	15 10 12.1	+0.9
GOPC	GO Pecny, Ondr	149.97	342⇑	ePKP	PKPbc	15 10 12.7	+0.3
KHC	Kasperske Hory	151.02	343⇑	ePKP	PKPbc	15 10 15.4	+0.5
KHC				ePKPAB	PKPab	15 10 26.3	+1.2
GERES	GERESS Array B	151.25	342	PKPbc	PKPbc	15 10 14.8	-0.6
	comp=Z,0.7nm,0.5s,baz=52,slow=2.2,SNR=5.5						
DBIC	Dimbokro	163.87	159	PKPab	PKPab	15 11 21.9	+0.4
	comp=Z,3.0nm,0.6s,baz=168,slow=3.3,SNR=5.1						
TOA0	Torodi Ar. Sit	171.22	186	ePKPdf	PKPdf	15 10 28.4	-1.7
TOA0				ePKPab	PKPab	15 11 53.8	-0.1
TORD	Torodi Ar. Bea	171.22	186	PKP	PKPdf	15 10 28.3	-1.9
	comp=Z,1.4nm,0.9s,baz=288,slow=1.5,SNR=6.0						
TORD				PKPab	PKPab	15 11 53.1	-0.9
	comp=Z,1.9nm,0.7s,baz=162,slow=4.8,SNR=9.5						

*IDC **03** 14:57:30.5±0.7, 36°.53N×5°.15E, h0^{km}, mb3.8/12, mb1 3.8/18, mb1mx3.6/67, mbtmp3.7/18, ML3.7/6, Error ellipse: s-maj=16.9km s-min=14.1km az=139.0*

*CRAAG **03** 14:57:31.2, 36°.55N×5°.18E, Ml4.1*

*CSEM **03** 14:57:32.9±0.1, 36°.54N×5°.31E, h10^{km}, mb4.4, Error ellipse: s-maj=3.8km s-min=2.6km az=5.0*

*ISCJB **03** 14:57:32.8±0.2, 36°.72N±0°.02×5°.23E±0°.02, h19^{km}, mb3.8/13, Error ellipse: s-maj=2.8km s-min=2.0km az=14.9*

*NEIC **03** 14:57:32.5±0.3, 36°.54N×5°.24E, h10^{km}, mb4.0/3, ML4.1(ALG), Error ellipse: s-maj=5.1km s-min=3.7km az=177.0*

*MDD **03** 14:57:33.3±0.3, 36°.54N×5°.28E, h0^{km}, mb4.4/57, Error ellipse: s-maj=4.7km s-min=2.9km az=34.0, PRXIMO*

*LDG **03** 14:57:38.0, 36°.55N×5°.28E, h30^{km}*

ISC 03 14:57:33.7±0.5, 36°.56N±0°.04×5°.27E±0°.03, h19^{km}, n343, σ1.986/402, mb3.9/13, 5C-6D, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SET	Setif	0.37	163	P	Pg	14 57 39.0	-2.6
SET	Setif	0.37	163	P	Pg	14 57 39.0	-2.6
SET	Setif	0.37	163	P	Pg	14 57 39.0	-2.6
DFRA	Djebel Bou Aff	0.49	91	P	Pg	14 57 42.7	-1.0
DFRA	Djebel Bou Aff	0.49	91	P	Pg	14 57 42.7	-1.0
DFRA	Djebel Bou Aff	0.49	91	P	Pg	14 57 42.7	-1.0
CKHR	Kef el Ahmar	0.57	160	P	Pb	14 57 43.5	-1.6
CKHR	Kef el Ahmar	0.57	160	P	Pb	14 57 43.5	-1.6
CKHR	Kef el Ahmar	0.57	160	P	Pb	14 57 43.6	-1.6
CKHR	Kef el Ahmar	0.57	160	P	Pb	14 57 43.6	-1.6
CASM	Ain Smara	1.03	106	P	Pb	14 57 52.2	-0.7
CASM	Ain Smara	1.03	106	P	Pb	14 57 52.2	-0.7
CASM	Ain Smara	1.03	106	P	Pb	14 57 52.2	-0.7
CASM	Ain Smara	1.03	106	P	Pb	14 57 52.2	-0.7
CTEI	Djebel Teioual	1.04	118	P	Pb	14 57 53.2	0.0
CTEI	Djebel Teioual	1.04	118	P	Pb	14 57 53.2	0.0
CTEI	Djebel Teioual	1.04	118	P	Pn	14 57 53.5	+0.1
CTEI	Djebel Teioual	1.04	118	P	Pb	14 57 53.2	0.0
CKFL	Kef-Lekhel	1.18	97	P	Pn	14 57 55.0	-0.3
CKFL	Kef-Lekhel	1.18	97	P	Pn	14 57 55.0	-0.3
CKFL	Kef-Lekhel	1.18	97	P	Pn	14 57 55.0	-0.3
CAEH	'Ain El Ouahch	1.29	80	P	Pn	14 57 56.6	-0.1
CAEH	'Ain El Ouahch	1.29	80	P	Pn	14 57 56.6	-0.1
CAEH	'Ain El Ouahch	1.29	80	P	Pn	14 57 56.6	-0.1
CAEH	'Ain El Ouahch	1.29	80	P	Pn	14 57 56.7	-0.1
CMAH	Djebel Manchou	1.73	87	P	Pn	14 58 02.8	0.0
CMAH	Djebel Manchou	1.73	87	P	Pn	14 58 02.8	0.0
CMAH	Djebel Manchou	1.73	87	P	Pn	14 58 02.8	0.0
ABSA	Djebel Ababsia	1.80	98	P	Pn	14 58 04.2	+0.4
ABSA	Djebel Ababsia	1.80	98	P	Pn	14 58 04.2	+0.4
CABS	Djebel Ababsia	1.80	98	P	Pn	14 58 04.2	+0.4
CABS	Djebel Ababsia	1.80	98	P	Pn	14 58 04.2	+0.4
ABA	Alger-Bouzarea	1.81	278	P	Pn	14 58 03.4	-0.5
ABA	Alger-Bouzarea	1.81	278	P	Pn	14 58 03.4	-0.5
ABA	Alger-Bouzarea	1.81	278	P	Pn	14 58 03.4	-0.5
EMHD	Djebel Mahouad	1.90	260	P	Pn	14 58 06.0	+0.8
EMHD	Djebel Mahouad	1.90	260	P	Pn	14 58 06.0	+0.8
EMHD	Djebel Mahouad	1.90	260	P	Pn	14 58 06.0	+0.8
EMHD	Djebel Mahouad	1.90	260	P	Pn	14 58 06.0	+0.8
EBNR	Beni Rached	3.03	266	P	Pb	14 58 28.0	+1.0
ECHA	Ech Chlef	3.18	264	P	Pn	14 58 25.0	+2.4
ECHA	Ech Chlef	3.18	264	P	Pn	14 58 25.0	+2.4
ECHF	Ech Chlef	3.20	264	P	Pn	14 58 25.7	+2.1
ECHF	Ech Chlef	3.20	264	P	Pn	14 58 25.7	+2.8
ECHF	Ech Chlef	3.20	264	P	Pn	14 58 25.0	+2.1
KEST	Kesra	3.40	103	Pn	Pn	14 58 26.0	+0.2
	8.0nm,0.3s,baz=249,slow=4.5,SNR=55						
KEST				Sn	Sn	14 59 09.8	+4.1
	5.5nm,0.3s,baz=150,slow=20,SNR=3.4						
KEST	Kesra	3.40	103	ePn	Pn	14 58 26.7	+0.9
KEST				Sn	Sn	14 59 09.8	+4.1
KEST	Kesra	3.40	103	ePn	Pn	14 58 26.7	+0.9
KEST				Sn	Sn	14 59 09.8	+4.1
ETRT	Tiaret	3.42	251	P	Pn	14 58 26.7	+0.6
ETRT	Tiaret	3.42	251	P	Pn	14 58 26.7	+0.6
ETRT	Tiaret	3.42	251	P	Pn	14 58 26.7	+0.6
EANR	'Ain N'Sour	3.42	261	P	Pn	14 58 25.9	-0.2
EANR	'Ain N'Sour	3.42	261	P	Pn	14 58 25.9	-0.2
EANR	'Ain N'Sour	3.42	261	P	Pn	14 58 25.4	-0.7
EANR	'Ain N'Sour	3.42	261	P	Pn	14 58 25.9	-0.2
ETOS	Mallorca	3.74	330	P	Pn	14 58 31.1	+0.6
	19nm,0.2s,SNR=204						
ETOS				S	Sn	14 59 13.5	-0.5
	138nm,0.5s,SNR=6.2						
ETOS	Mallorca	3.74	330	P	Pn	14 58 31.1	+0.6
	19nm,0.2s,SNR=204						
ETOS				S	Sn	14 59 13.5	-0.5
	138nm,0.5s,SNR=6.2						
OJGS	Djebel Guires	3.81	255	P	Pn	14 58 30.0	-1.4
OJGS	Djebel Guires	3.81	255	P	Pn	14 58 30.0	-1.4
OJGS	Djebel Guires	3.81	255	P	Pn	14 58 30.0	-1.4
OJGS	Djebel Guires	3.81	255	P	Pn	14 58 30.0	-1.4
EIBI	Ibiza	3.97	310	P	Pn	14 58 34.0	+0.5
	5.0nm,0.2s,SNR=46						
EIBI				S	Sn	14 59 18.8	-0.7
	39nm,0.3s,SNR=7.9						
EIBI	Ibiza	3.97	310	P	Pn	14 58 34.0	+0.5
	5.0nm,0.2s,SNR=46						
EIBI				S	Sn	14 59 18.8	-0.7
	39nm,0.3s,SNR=7.9						
OJBR	Djebel Berber	4.11	258	P	Pn	14 58 37.0	+1.5
OJBR	Djebel Berber	4.11	258	P	Pn	14 58 37.0	+1.5
OJBR	Djebel Berber	4.11	258	Pn	Pn	14 58 37.0	+1.5
OJBR	Djebel Berber	4.11	258	P	Pn	14 58 37.0	+1.5
VSL	Villasalto	4.37	47	ePn	Pn	14 58 39.0	-0.1
VSL	Villasalto	4.37	47	ePn	Pn	14 58 39.0	-0.1
ODJA	Bouhanifia	4.56	256	P	Pn	14 58 39.0	-2.8
ODJA	Bouhanifia	4.56	256	P	Pn	14 58 39.0	-2.8
EBEN2	Beniarda presa	4.82	298	P	Pn	14 58 45.5	+0.2
	6.6nm,0.2s,SNR=7.9						
EBEN2				S	Sn	14 59 40.1	-0.5
	8.6nm,0.3s,SNR=7.9						
AFON	Font Roja	5.07	296	P	Pn	14 58 49.1	+0.4
	4.2nm,0.3s,SNR=13						
AFON				S	Sn	14 59 47.1	+0.2
	17nm,0.3s,SNR=7.9						
AFON	Font Roja	5.07	296	P	Pn	14 58 49.1	+0.4
	4.2nm,0.3

5.4nm,0.4s,SNR=7.9
SESP S Sn 15 00 18.8 -1.4
7.6nm,0.3s,SNR=7.9
SESP Santiago Espad 6.42 286 P Pn 14 59 08.8 +1.5
5.4nm,0.4s,SNR=7.9
SESP S Sn 15 00 18.8 -1.4
7.6nm,0.3s,SNR=7.9
CLTB Caltabellotta 6.43 79 *e*Pn Pn 14 59 08.2 +0.7
CLTB Caltabellotta 6.43 79 *e*Pn Pn 14 59 08.2 +0.7
CLLI Llivia 6.44 338 P Pn 14 59 08.8 +1.2
1.3nm,0.2s,SNR=21
CLLI S Sn 15 00 17.5 -3.1
4.4nm,0.2s,SNR=7.9
CLLI Llivia 6.44 338 P Pn 14 59 08.8 +1.2
1.3nm,0.2s,SNR=21
CSOR Sort 6.63 332 P Pn 14 59 11.6 +1.4
4.6nm,0.3s,SNR=40
CSOR S Sn 15 00 22.1 -3.2
14nm,0.3s,SNR=7.9
CSOR Sort 6.63 332 P Pn 14 59 11.6 +1.4
4.6nm,0.3s,SNR=40
PGF Pioggiola 6.64 25 *e*Pn Pn 14 59 09.4 -0.9
SNR=1.0
PGF *e*Sn Sn 15 00 18.1 -7.4
16nm,0.4s,SNR=1.0
PGF Pioggiola 6.64 25 P Pn 14 59 09.4 -0.9
PGF Pioggiola 6.64 25 P Pn 14 59 09.4 -0.9
GORA Gorafe 6.71 280 S Sn 15 00 28.8 +1.5
12nm,0.4s,SNR=7.9
GORA Gorafe 6.71 280 S Sn 15 00 28.8 +1.5
12nm,0.4s,SNR=7.9
EQES Quesada 6.77 283 P Pn 14 59 14.3 +2.2
9.6nm,0.6s,SNR=59
EQES S Sn 15 00 27.1 -1.7
25nm,0.8s,SNR=7.9
EQES Quesada 6.77 283 P Pn 14 59 14.3 +2.2
9.6nm,0.6s,SNR=59
FNEB N^bias 6.79 340 Pn Pn 14 59 14.6 +2.3
ESAC San Caprasio 6.82 321 ⇑P Pn 14 59 14.1 +1.4
33nm,0.4s,SNR=18
ESAC S Sn 15 00 27.9 -1.9
83nm,0.4s,SNR=7.9
ESAC San Caprasio 6.82 321 P Pn 14 59 14.1 +1.4
33nm,0.4s,SNR=18
LMR La Mourre 6.84 8 *e*Pn Pn 14 59 12.4 -0.5
SNR=1.0
LMR *e*Sn Sn 15 00 23.6 -6.5
15nm,0.3s,SNR=1.0
LMR La Mourre 6.84 8 P Pn 14 59 12.4 -0.5
LMR La Mourre 6.84 8 P Pn 14 59 12.4 -0.5
EQUE Quentar 7.01 278 P Pn 14 59 17.8 +2.4
0.3nm,0.2s,SNR=19
EQUE S Sn 15 00 35.4 +0.7
SNR=7.9
EQUE Quentar 7.01 278 P Pn 14 59 17.8 +2.4
0.3nm,0.2s,SNR=19
EQUE S Sn 15 00 35.4 +0.7
SNR=7.9
FRF La Foret Royal 7.08 8 *e*Pn Pn 14 59 16.4 +0.2
SNR=1.0
FRF *e*Sn Sn 15 00 30.2 -5.8
25nm,0.4s,SNR=1.0
FRF La Foret Royal 7.08 8 P Pn 14 59 16.4 +0.2
FRF La Foret Royal 7.08 8 P Pn 14 59 16.4 +0.2
ELGU Los Guajares, 7.15 275 P Pn 14 59 18.7 +1.4
3.4nm,0.3s,SNR=7.9
ELGU S Sn 15 00 36.1 -2.0
5.3nm,0.3s,SNR=7.9
ELGU Los Guajares, 7.15 275 P Pn 14 59 18.7 +1.4
3.4nm,0.3s,SNR=7.9
MLS Moulis 7.16 335 Pn Pn 14 59 20.2 +2.9
MTLF Montolieu 7.17 342 *e*Pn Pn 14 59 15.4 -2.1
SNR=1.0
MTLF *e*Sn Sn 15 00 34.2 -4.2
7.4nm,0.5s
ECHI Chisagues Biel 7.25 329 P Pn 14 59 20.3 +1.6
2.3nm,0.2s,SNR=7.9
ECHI S Sn 15 00 38.8 -1.7
7.8nm,0.5s,SNR=7.9
ECHI Chisagues Biel 7.25 329 P Pn 14 59 20.3 +1.6
2.3nm,0.2s,SNR=7.9
CALF Calern 7.30 9 Pn Pn 14 59 18.8 -0.5
RUSF Rustrel 7.38 1 P Pn 14 59 21.2 +0.8
SBF Sospel 7.48 12 *e*Pn Pn 14 59 18.4 -3.4
SNR=1.0
SBF *e*Sn Sn 15 00 40.3 -5.9
26nm,0.4s
SBF Sospel 7.48 12 S Sn 15 00 40.3 -5.9
13nm,0.4s
EPF Esparros 7.50 331 *e*Pn Pn 14 59 23.9 +1.9
SNR=1.0
EPF *e*Sn Sn 15 00 43.6 -2.9
22nm,0.4s,SNR=1.0
EPF Esparros 7.50 331 P Pn 14 59 23.9 +1.9
EPF S Sn 15 00 43.6 -2.9
11nm,0.4s
EPF Esparros 7.50 331 P Pn 14 59 23.9 +1.9
EGOR Sierra Gorda, 7.54 277 P Pn 14 59 25.8 +3.1
26nm,1.1s,SNR=7.9
EGOR S Sn 15 00 44.5 -3.3
4.3nm,0.5s,SNR=7.9
EGOR Sierra Gorda, 7.54 277 P Pn 14 59 25.8 +3.1
26nm,1.1s,SNR=7.9
LASF Ste Croix 7.59 352 *e*Pn Pn 14 59 21.9 -1.3
SNR=1.0
LASF *e*Sn Sn 15 00 44.4 -4.3
4.6nm,0.4s,SNR=1.0
LASF Ste Croix 7.59 352 P Pn 14 59 21.9 -1.3
LASF S Sn 15 00 44.4 -4.3
2.3nm,0.4s
LASF Ste Croix 7.59 352 P Pn 14 59 21.9 -1.3
TRBF Trabuc cave 7.61 353 Pn Pn 14 59 22.9 -0.5
ETSF Etsaut 7.76 326 *e*Sn Sn 15 00 49.8 -3.3
19nm,0.4s
ETSF Etsaut 7.76 326 S Sn 15 00 49.8 -3.3
9.7nm,0.4s
ES19 SONSECA Array 7.88 296 *e*Pn Pn 14 59 27.1 -0.2
ES19 SONSECA Array 7.88 296 *e*Pn Pn 14 59 27.0 -0.2
ESDC Sonseca Array 7.92 296 Pn Pn 14 59 27.2 -0.5
1.8nm,0.3s,baz=110,slow=13,SNR=34
ESDC Sn Sn 15 00 55.7 -1.1
0.3nm,0.3s,baz=110,slow=24,SNR=2.8
ESDC Sonseca Array 7.92 296 P Pn 14 59 28.5 +0.7
4.0nm,0.6s,baz=109,slow=14,SNR=21
ESDC Sonseca Array 7.92 296 P Pn 14 59 28.5 +0.7
4.0nm,0.6s,SNR=21
ESDC Sn Sn 15 00 55.7 -1.1
ESLA Sonseca Array 7.92 296 *e*Pn Pn 14 59 27.7 -0.1
ESLA Sonseca Array 7.92 296 *e*Pn Pn 14 59 27.7 -0.1
ATE Arette 7.97 327 P Pn 14 59 30.4 +1.9
3.7nm,0.3s,SNR=7.9
ATE S Sn 15 00 55.5 -2.7
18nm,0.4s,SNR=7.9
ATE Arette 7.97 327 P Pn 14 59 30.4 +1.9
3.7nm,0.3s,SNR=7.9
EADA Adamuz 8.00 285 P Pn 14 59 30.1 +1.1
0.9nm,0.4s,SNR=7.9
EADA Adamuz 8.00 285 P Pn 14 59 30.1 +1.1
0.9nm,0.4s,SNR=7.9
IELO Elcoad 8.03 323 ⇑P Pn 14 59 30.1 +0.7
3.0nm,0.3s,SNR=18
IELO S Sn 15 00 56.2 -3.5
8.6nm,0.4s,SNR=7.9
IELO Elcoad 8.03 323 P Pn 14 59 30.1 +0.7
3.0nm,0.3s,SNR=18
IPRE Itoiz 8.06 323 P Pn 14 59 29.0 -0.7
6.0nm,0.2s,SNR=7.9
IPRE Itoiz 8.06 323 P Pn 14 59 29.0 -0.7
6.0nm,0.2s,SNR=7.9
EMIJ Mijas 8.08 273 P Pn 14 59 30.4 +0.4
2.3nm,0.4s,SNR=7.9
EMIJ Mijas 8.08 273 P Pn 14 59 30.4 +0.4
2.3nm,0.4s,SNR=7.9
EORO Oroz-Betelu 8.11 323 P Pn 14 59 31.1 +0.7
6.2nm,0.3s,SNR=35
EORO S Sn 15 00 59.0 -2.5
20nm,0.4s,SNR=9.3
EORO Oroz-Betelu 8.11 323 P Pn 14 59 31.1 +0.7
6.2nm,0.3s,SNR=35
EARA Aranguren 8.15 322 P Pn 14 59 32.3 +1.4
12nm,0.3s,SNR=4.0
EARA S Sn 15 00 59.8 -2.7
10nm,0.3s,SNR=7.9
EARA Aranguren 8.15 322 P Pn 14 59 32.3 +1.4
12nm,0.3s,SNR=4.0
PAB San Pablo 8.15 294 P Pn 14 59 31.8 +0.7
0.8nm,0.3s,SNR=7.9
PAB San Pablo 8.15 294 *e*Pn Pn 14 59 31.2 +0.1
PAB San Pablo 8.15 294 *e*Pn Pn 14 59 31.2 +0.1
PAB San Pablo 8.15 294 P Pn 14 59 31.8 +0.7
0.8nm,0.3s,SNR=7.9
SJPF Ste Jean 8.23 325 *e*Pn Pn 14 59 34.0 +1.9
SNR=1.0
SJPF *e*Sn Sn 15 01 00.3 -4.3
23nm,0.4s,SNR=1.0
SJPF Ste Jean 8.23 325 P Pn 14 59 34.0 +1.9
SJPF S Sn 15 01 00.3 -4.3
12nm,0.4s
SJPF Ste Jean 8.23 325 P Pn 14 59 34.0 +1.9
MBDF Montbardon 8.24 7 *e*Pn Pn 14 59 34.5 +2.2
SNR=1.0
MBDF *e*Sn Sn 15 01 00.4 -4.5
19nm,0.5s
MBDF Montbardon 8.24 7 P Pn 14 59 34.5 +2.2
MBDF S Sn 15 01 00.4 -4.5
9.4nm,0.5s
MBDF Montbardon 8.24 7 P Pn 14 59 34.5 +2.2
VIVF Saint-Julien-l 8.30 357 *e*Pn Pn 14 59 31.5 -1.6
SNR=1.0
VIVF *e*Sn Sn 15 01 01.9 -4.4
5.2nm,0.3s
VIVF Saint-Julien-l 8.30 357 P Pn 14 59 31.5 -1.6
VIVF S Sn 15 01 01.9 -4.4
2.6nm,0.3s
ORIF Oris-en-Rattie 8.37 3 *e*Pn Pn 14 59 34.5 +0.5
SNR=1.0
ORIF *e*Sn Sn 15 01 03.8 -4.1
4.2nm,0.5s,SNR=1.0
ORIF Oris-en-Rattie 8.37 3 P Pn 14 59 34.5 +0.5
ORIF S Sn 15 01 03.8 -4.1
2.1nm,0.5s
ORIF Oris-en-Rattie 8.37 3 P Pn 14 59 34.5 +0.5
GUD Guadarrama 8.43 302 P Pn 14 59 37.2 +2.3
SNR=7.9
GUD Guadarrama 8.43 302 P Pn 14 59 37.2 +2.3
SNR=7.9
EALK Alkurruntz 8.45 324 P Pn 14 59 36.8 +1.7
23nm,0.5s,SNR=67
EALK S Sn 15 01 07.0 -3.0
32nm,0.3s,SNR=39
EALK Alkurruntz 8.45 324 P Pn 14 59 36.8 +1.7
23nm,0.5s,SNR=67
VLC Villacollemand 8.54 26 *e*Pn Pn 14 59 37.1 +0.8
VLC Villacollemand 8.54 26 *e*Pn Pn 14 59 37.1 +0.8
ECAB El Cabril 8.65 283 P Pn 14 59 37.6 -0.2
2.6nm,0.5s,SNR=9.2
ECAB El Cabril 8.65 283 P Pn 14 59 37.6 -0.2
2.6nm,0.5s,SNR=9.2
CAF Calviac 8.71 345 *e*Pn Pn 14 59 39.5 +0.9
SNR=1.0
CAF Calviac 8.71 345 P Pn 14 59 39.5 +0.9
CAF Calviac 8.71 345 P Pn 14 59 39.5 +0.9
SSB Saint Sauveur 8.73 357 *e*Pn Pn 14 59 38.4 -0.5
SSB Saint Sauveur 8.73 357 *e*Pn Pn 14 59 38.4 -0.5
MDT Midelt 8.95 248 Pn Pn 14 59 39.8 -2.3
0.2nm,0.3s,baz=346,slow=18,SNR=2.9
MDT Lg Lg 15 02 07.5
0.2nm,0.3s,baz=255,slow=20,SNR=2.0
CUC Castrocucco 8.97 64 *e*Pn Pn 14 59 42.8 +0.5
CUC Castrocucco 8.97 64 *e*Pn Pn 14 59 42.8 +0.5
LPG La Plagne 9.00 7 *e*Pn Pn 14 59 45.0 +2.1
SNR=1.0
LPG La Plagne 9.00 7 P Pn 14 59 45.0 +2.1
LPG La Plagne 9.00 7 P Pn 14 59 45.0 +2.1
LPL La Plagne 9.02 7 *e*Pn Pn 14 59 43.0 0.0
SNR=1.0
LPL *e*Sn Sn 15 01 23.5 -0.6
13nm,0.5s
LPL La Plagne 9.02 7 P Pn 14 59 43.0 0.0
LPL La Plagne 9.02 7 P Pn 14 59 43.0 0.0
LPL *e*Sn Sn 15 01 23.5 -0.6
6.6nm,0.5s
LFF La Frestale 9.05 339 *e*Pn Pn 14 59 44.7 +1.5
LFF La Frestale 9.05 339 P Pn 14 59 44.7 +1.5
LFF La Frestale 9.05 339 P Pn 14 59 44.7 +1.5
ELAN Lanestosa 9.44 318 P Pn 14 59 49.9 +1.3
2.2nm,0.2s,SNR=15
ELAN S Sn 15 01 30.1 -4.2
3.9nm,0.4s,SNR=5.0
ELAN Lanestosa 9.44 318 P Pn 14 59 49.9 +1.3
2.2nm,0.2s,SNR=15
TIP Timpagrande 9.45 70 *e*Pn Pn 14 59 50.8 +1.9
TIP Timpagrande 9.45 70 *e*Pn Pn 14 59 50.8 +1.9
OG35 Corcelles 9.48 1 P Pn 14 59 51.4 +2.2
EPLA Plasencia 9.58 295 P Pn 14 59 53.7 +3.1
0.3nm,0.2s,SNR=7.9
EPLA Plasencia 9.58 295 P Pn 14 59 53.7 +3.1
0.3nm,0.2s,SNR=7.9
EMIN Mina Concepcio 9.61 281 P Pn 14 59 50.9 -0.1
9.0nm,1.0s,SNR=8.9
EMIN Mina Concepcio 9.61 281 P Pn 14 59 50.9 -0.1
9.0nm,1.0s,SNR=8.9
SENIN Lac Senin/Sane 9.91 8 *e*Pn Pn 14 59 56.5 +1.2
SENIN Lac Senin/Sane 9.91 8 *e*Pn Pn 14 59 56.5 +1.2
PBAR Barrancos 9.93 283 *e*P Pn 14 59 57.0 +1.6
30nm,2.3s
PBAR Barrancos 9.93 283 P Pn 14 59 57.0 +1.6
30nm,2.3s
PBAR Barrancos 9.93 283 P Pn 14 59 57.0 +1.6
30nm,2.3s
EGRO El Granado 10.24 279 P Pn 14 59 59.7 +0.1
SNR=7.9
EGRO El Granado 10.24 279 P Pn 14 59 59.7 +0.1
SNR=7.9
PMRV Marv??o 10.40 290 *e*P Pn 15 00 03.8 +2.1
16nm,1.3s
PMRV Marv??o 10.40 290 P Pn 15 00 03.8 +2.1
16nm,1.3s
PMRV Marv??o 10.40 290 P Pn 15 00 03.8 +2.1
16nm,1.3s
PVAQ Vaqueiros 10.43 279 *e*P Pn 15 00 02.4 +0.3
25nm,1.8s
PVAQ Vaqueiros 10.43 279 P Pn 15 00 02.4 +0.3
25nm,1.8s
PVAQ Vaqueiros 10.43 279 P Pn 15 00 02.4 +0.3
25nm,1.8s
PESTR Estremoz 10.45 287 *e*P Pn 15 00 04.4 +2.0
14nm,1.4s
PESTR Estremoz 10.45 287 *e*Pn Pn 15 00 02.6 +0.1
PESTR Estremoz 10.45 287 *e*Pn Pn 15 00 02.6 +0.1
PESTR Estremoz 10.45 287 *e*P Pn 15 00 04.4 +2.0
EARI Arriondas 10.49 313 P Pn 15 00 05.2 +2.2
1.4nm,0.2s,SNR=21
EARI Arriondas 10.49 313 P Pn 15 00 05.2 +2.2
1.4nm,0.2s,SNR=21
PCBR Castelo Branco 10.55 292 *e*P Pn 15 00 06.5 +2.6
18nm,1.2s
PCBR Castelo Branco 10.55 292 P Pn 15 00 06.5 +2.6
9.2nm,1.2s
PCBR Castelo Branco 10.55 292 P Pn 15 00 06.5 +2.6
9.2nm,1.2s
PBEJ Beja 10.57 282 *e*P Pn 15 00 01.2 -2.9
7.0nm,1.1s
PBDV Barranco-do-Ve 10.60 278 *e*P Pn 15 00 05.2 +0.7
16nm,1.9s
PBDV Barranco-do-Ve 10.60 278 P Pn 15 00 05.2 +0.7
16nm,1.9s
PBDV Barranco-do-Ve 10.60 278 P Pn 15 00 05.2 +0.7
16nm,1.9s
MVO Moncorvo 10.63 299 *e*P Pn 15 00 06.7 +1.7
31nm,1.2s
MVO Moncorvo 10.63 299 P Pn 15 00 06.3 +1.3
0.3nm,0.2s,SNR=10.0
MVO Moncorvo 10.63 299 P Pn 15 00 06.3 +1.3
0.3nm,0.2s,SNR=10.0
PCVE Castro Verde 10.69 280 *e*P Pn 15 00 05.8 +0.1
21nm,1.6s
PCVE Castro Verde 10.69 280 P Pn 15 00 05.8 +0.1
21nm,1.6s
PCVE Castro Verde 10.69 280 P Pn 15 00 05.8 +0.1
21nm,1.6s
PBRG Braganca 10.69 303 *e*P Pn 15 00 07.9 +2.1
13nm,1.2s
PBRG Braganca 10.69 303 P Pn 15 00 07.9 +2.1
6.3nm,1.2s
PBRG Braganca 10.69 303 P Pn 15 00 07.9 +2.1
6.3nm,1.2s
ECAL Calabor 10.75 304 P Pn 15 00 07.6 +1.0
8.6nm,0.3s,SNR=14
ECAL Calabor 10.75 304 P Pn 15 00 07.6 +1.0
8.6nm,0.3s,SNR=14
MTE Manteigas 10.75 295 *e*P Pn 15 00 06.8 +0.2
16nm,2.0s
MTE Manteigas 10.75 295 P Pn 15 00 06.8 +0.2
8.1nm,2.0s
MTE Manteigas 10.75 295 *e*Pn Pn 15 00 08.3 +1.6
MTE Manteigas 10.75 295 P Pn 15 00 08.3 +1.6
8.1nm,2.0s
MTE Manteigas 10.75 295 *e*Pn Pn 15 00 08.3 +1.6
MFF Saint Martin d 10.82 340 *e*Pn Pn 15 00 08.9 +1.4
SNR=1.0
MFF Saint Martin d 10.82 340 P Pn 15 00 08.9 +1.4
MFF Saint Martin d 10.82 340 P Pn 15 00 08.9 +1.4
MESJ Messejana 10.84 281 *e*P Pn 15 00 08.3 +0.5
20nm,1.2s
MESJ Messejana 10.84 281 P Pn 15 00 08.3 +0.5
20nm,1.2s
MESJ Messejana 10.84 281 P Pn 15 00 08.3 +0.5
20nm,1.2s
PNCL Nicolau / Gran 11.10 282 *e*P Pn 15 00 13.5 +2.2
15nm,1.2s
PNCL Nicolau / Gran 11.10 282 *e*P Pn 15 00 13.5 +2.2
PVIS Viseu 11.10 296 *e*P Pn 15 00 12.8 +1.4
10nm,1.4s
PVIS Viseu 11.10 296 P Pn 15 00 12.8 +1.4
5.2nm,1.4s
PVIS Viseu 11.10 296 P Pn 15 00 12.8 +1.4
5.2nm,1.4s
PVRL Vila Real 11.16 299 *e*P Pn 15 00 13.8 +1.6
16nm,1.5s
PVRL Vila Real 11.16 299 P Pn 15 00 13.8 +1.6
8.1nm,1.5s
PVRL Vila Real 11.16 299 P Pn 15 00 13.8 +1.6
8.1nm,1.5s
PTOM Tomar 11.21 290 *e*P Pn 15 00 13.6 +0.8
11nm,1.3s
PTOM Tomar 11.21 290 P Pn 15 00 13.6 +0.8
5.7nm,1.3s
PTOM Tomar 11.21 290 P Pn 15 00 13.6 +0.8
5.7nm,1.3s
POLO Lamas de Olo 11.25 299 *e*P Pn 15 00 15.0 +1.5
8.0nm,1.5s
POLO Lamas de Olo 11.25 299 *e*P Pn 15 00 15.0 +1.5
PFVI Vila Bisbo 11.31 277 P Pn 15 00 15.9 +1.6
2.5nm,0.3s,SNR=7.9
PFVI Vila Bisbo 11.31 277 *e*Pn Pn 15 00 13.7 -0.6
PFVI Vila Bisbo 11.31 277 *e*Pn Pn 15 00 13.7 -0.6
PFVI Vila Bisbo 11.31 277 P Pn 15 00 15.9 +1.6
2.5nm,0.3s,SNR=7.9
HINF Hinteralfeld 11.31 5 *e*Pn Pn 15 00 14.0 -0.3
SNR=1.0
HINF Hinteralfeld 11.31 5 P Pn 15 00 14.0 -0.3
HINF Hinteralfeld 11.31 5 P Pn 15 00 14.0 -0.3
PCAS Casmilo, Conde 11.37 292 *e*P Pn 15 00 16.2 +1.2
21nm,1.2s
PCAS Casmilo, Conde 11.37 292 *e*P Pn 15 00 16.2 +1.2
HAU Haudompre 11.47 4 *e*Pn Pn 15 00 15.1 -1.3
SNR=1.0
HAU Haudompre 11.47 4 Pn Pn 15 00 15.1 -1.3
HAU Haudompre 11.47 4 Pn Pn 15 00 15.1 -1.3
ELOB Lobios 11.62 301 P Pn 15 00 21.0 +2.5
3.2nm,0.5s,SNR=11
ELOB Lobios 11.62 301 P Pn 15 00 21.0 +2.5
3.2nm,0.5s,SNR=11
EPON Pontenova 11.68 309 P Pn 15 00 21.5 +2.2
0.9nm,0.1s,SNR=5.6
EPON Pontenova 11.68 309 P Pn 15 00 21.5 +2.2
0.9nm,0.1s,SNR=5.6
ECH Echery 11.73 6 *e*Pn Pn 15 00 18.7 -1.3
ECH Echery 11.73 6 *e*Pn Pn 15 00 18.7 -1.3
ECH Echery 11.73 6 P Pn 15 00 21.1 +1.1
PGAV Gavieira, Arco 11.80 301 *e*P Pn 15 00 21.5 +0.5
PGAV Gavieira, Arco 11.80 301 *e*P Pn 15 00 21.5 +0.5
EAGO Agolada(Pontev 12.03 305 P Pn 15 00 26.0 +1.9
0.0nm,0.3s,SNR=7.9
EAGO Agolada(Pontev 12.03 305 P Pn 15 00 26.0 +1.9
SNR=7.9
QUIF Quistinic 12.95 334 *e*Pn Pn 15 00 38.5 +2.0
SNR=1.0
QUIF Quistinic 12.95 334 P Pn 15 00 38.5 +2.0
QUIF Quistinic 12.95 334 P Pn 15 00 38.5 +2.0
TAM Tamanrasset 13.72 179 *e*Pn Pn 15 00 47.6 +0.3
TAM Tamanrasset 13.72 179 *e*Pn Pn 15 00 47.7 +0.3
GERES GERESS Array B 13.74 24 Pn Pn 15 00 46.4 -1.2
0.1nm,0.3s,baz=198,slow=12,SNR=4.2
KHC Kasperske Hory 13.95 23 *e*P P 15 00 58.0 -0.3
MORC Moravsky Berou 15.93 30 ⇓*j*P P 15 01 25.9 +5.6
IDI Anoyia 15.95 89 Pn Pn 15 01 15.6 -1.4
0.1nm,0.3s,baz=254,slow=15,SNR=2.7
IDI Anoyia 15.95 89 ⇑*j*P P 15 01 24.0 +3.4
VOIR 17.33 53 ⇓*j*P P 15 01 39.4 +3.5
DOPR Dopca 17.77 52 ⇓*j*P P 15 01 51.0 +10
MLR Muntele Rosu 17.93 54 P Pn 15 01 41.0 -1.0
0.0nm,0.3s,baz=246,slow=10.0,SNR=1.8
MLR Muntele Rosu 17.93 54 ⇓*j*P P 15 01 47.9 +5.4
MLR Muntele Rosu 17.93 54 P Pn 15 01 41.0 -1.0
PLOR Plostina 18.53 53 ⇑*j*P P 15 01 47.5 -1.5
VRI Vrincioaia 18.59 53 ⇑*j*P P 15 01 46.9 -2.7
HARR Harsova 18.98 58 ⇓*j*P P 15 01 43.5 -10
TIRR Tirgusor 19.24 59 *e*P Pn 15 01 58.2 +0.4
4.6nm,1.0s
TIRR Tirgusor 19.24 59 *e*P Pn 15 01 58.2 +0.4
4.6nm,1.0s
AKASG Malin Array Be 22.24 43 P P 15 02 29.9 +0.8
0.7nm,0.6s,baz=241,slow=10,SNR=6.3
AKASG Malin Array Be 22.24 43 P P 15 02 30.0 +0.8
AKBB Malin Array Si 22.24 43 *e*P P 15 02 30.4 +1.3
6.0nm,1.1s
AKBB Malin Array Si 22.24 43 *e*P P 15 02 30.4 +1.3
6.0nm,1.1s
BRTR Keskin Array B 22.50 73 P P 15 02 32.0 -0.2
0.2nm,0.5s,baz=274,slow=11,SNR=2.0
KOWA Kowa 23.48 203 P P 15 02 41.3 -1.0
3.1nm,0.5s,baz=10,slow=11,SNR=10
KOWA Kowa 23.48 203 *e*P P 15 02 42.3 0.0
33nm,1.6s
TOA0 Torodi Ar. Sit 23.53 189 *e*P P 15 02 41.8 -0.9
TOA0 Torodi Ar. Sit 23.53 189 *e*P P 15 02 41.8 -0.9
TORD Torodi Ar. Bea 23.53 189 P P 15 02 41.5 -1.3
5.0nm,0.6s,baz=3.3,slow=9.8,SNR=36
MMAI Mount Meron Ar 24.95 89 P P 15 02 58.3 +2.4
1.5nm,0.5s,baz=294,slow=11,SNR=2.6
ARCES ARCESS Array B 34.83 12 P P 15 04 21.7 -1.3
1.4nm,0.8s,baz=202,slow=6.8,SNR=3.6
KURBB Kurchatov Arra 52.78 50 P P 15 06 48.5 +1.1
0.8nm,0.2s,baz=300,slow=7.4,SNR=3.2
KURK Kurchatov 52.81 50 P P 15 06 48.5 +0.9
ZALV Zalesovo Beam 55.62 45 P P 15 07 08.9 +1.0
0.3nm,0.5s,baz=258,slow=7.2,SNR=2.6
MKAR Makanchi Array 56.28 54 P P 15 07 13.9 +1.0
0.8nm,0.6s,baz=282,slow=5.7,SNR=6.0
MK01 Makanchi Array 56.29 54 *e*P P 15 07 13.5 +0.5
BOSA Boshof 67.50 161 P P 15 08 28.4 -0.1
4.1nm,1.1s,baz=0.0,slow=6.1,SNR=3.1
YKA Yellowknife Ar 70.18 335 P P 15 08 44.9 +0.2
0.4nm,0.6s,baz=48,slow=6.7,SNR=5.0
PDAR Pinedale Array 81.24 317 P P 15 09 48.8 +0.1
0.2nm,0.4s,baz=39,slow=5.8,SNR=3.8
WRA Warramunga Arr 132.73 84 PKP **PKPdf 15 16 47.7 0.0**
0.4nm,0.8s,baz=313,slow=2.3,SNR=3.0
ASAR Alice Springs 134.24 89 PKP **PKPdf 15 16 48.6 -1.9**
0.2nm,0.8s,baz=265,slow=0.9,SNR=2.5

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*NEIC **03** 15:16:36.7±0.0, 16°.64N×98°.37W, h14km, MD4.0(MEX), After MEX.*

MEX 03 15:16:36.7±0.4, 16°.64N×98°.37W, h14km±8km, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**0.94**	**349**	*e*P	Pb	15 16 51.6	-3.2
TLIG				*e*S	Sb	15 17 03.1	-4.0
TLIG	**Tlapa**	**0.94**	**349**	*e*P	Pb	15 16 51.6	-3.2
TLIG				*e*S	Sb	15 17 03.1	-4.0
ACX	**Acapulco**	**1.44**	**279**	*e*P	Pn	15 16 58.1	-4.3
ACX				*e*S	Sn	15 17 16.1	-5.0
ACX	**Acapulco**	**1.44**	**279**	*e*P	Pn	15 16 58.1	-4.3
ACX				*e*S	Sn	15 17 16.1	-5.0
VHO	**Vista Hermosa**	**1.63**	**74**	*e*P	Pn	15 17 01.7	-3.4
VHO				*e*S	Sn	15 17 20.6	-5.3
VHO	**Vista Hermosa**	**1.63**	**74**	*e*P	Pn	15 17 01.7	-3.4
VHO				*e*S	Sn	15 17 20.6	-5.3
MEIG	**Mezcala**	**1.75**	**317**	*e*P	Pn	15 17 03.1	-3.6
MEIG				*e*S	Sn	15 17 24.2	-4.6
MEIG	**Mezcala**	**1.75**	**317**	*e*P	Pn	15 17 03.1	-3.6
MEIG				*e*S	Sn	15 17 24.2	-4.6
CAIG	**El Cayaco**	**1.86**	**283**	*e*P	Pn	15 17 04.7	-3.4
CAIG				*e*S	Sn	15 17 26.6	-4.8

CAIG	**El Cayaco**	**1.86 283**	*e*P	Pn	15 17 04.7	-3.4
CAIG			*e*S	Sn	15 17 26.6	-4.8
PLIG	**Platanillo**	**2.05 328**	*e*P	Pn	15 17 07.9	-2.9
PLIG			*e*S	Sn	15 17 31.0	-5.2
PLIG	**Platanillo**	**2.05 328**	*e*P	Pn	15 17 07.9	-2.9
PLIG			*e*S	Sn	15 17 31.0	-5.2
ARIG	**Puente Sto Nin**	**2.49 311**	*e*P	Pn	15 17 10.2	-6.6
ARIG			*e*S	Sn	15 17 43.1	-4.0
ARIG	**Puente Sto Nin**	**2.49 311**	*e*P	Pn	15 17 10.2	-6.6
ARIG			*e*S	Sn	15 17 43.1	-4.0

NIED ***03*** *15:23:00,41°.10N×146°.00E,h8km,Mw3.7 Best double couple: M₀3.50000×10¹⁴ NP1:φs208.00000°,δ44.00000°, λ-145.00000°. NP2:φs92.00000°,δ67.00000°, λ-51.00000°.*
IDC ***03*** *15:23:49.3±1.1,40°.91N×146°.08E,h0km,md3.5/7, mb1 3.6/10,mb1mx3.4/65,mbtmp3.5/10,ML3.0/3,Error ellipse: s-maj=24.5km s-min=21.8km az=140.0*
ISCJB ***03*** *15:23:52.8±0.7,41°.03N±0°.03×145°.92E±0°.06,h33km, mb3.6/7,Error ellipse: s-maj=6.6km s-min=5.0km az=175.8*
JMA ***03*** *15:23:52.8±0.2,41°.05N×146°.02E,h53km±4km,M3.7*

ISC 03 15:23:54.7±0.9,41°.02N±0°.06×145°.95E±0°.07,h35km,n27, σ1°19/41,mb3.5/7,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAK	**Akkeshi**	**2.19**	**335**	P	**Pn**	**15 24 27.6**	**-1.0**
JAK				*e*S	**Sn**	**15 24 53.7**	**-0.7**
JEM	**Erimo**	**2.32**	**296**	P	**Pn**	**15 24 30.1**	**-0.3**
JEM				*e*S	**Sn**	**15 24 58.1**	**+0.3**
NEM2	**Nemuro 2**	**2.35**	**356**	P	**Pn**	**15 24 29.8**	**-1.0**
NEM2				*e*S	**Sn**	**15 24 56.5**	**-1.9**
JOB	**Onbets**	**2.46**	**321**	P	**Pn**	**15 24 31.8**	**-0.5**
JOB				*e*S	**Sn**	**15 25 00.0**	**-1.1**
JCH	**Churui**	**2.51**	**310**	P	**Pn**	**15 24 32.3**	**-0.7**
JCH				*e*S	**Sn**	**15 25 00.2**	**-2.1**
JNBK	**Urakawa-nobuka**	**2.71**	**299**	P	**Pn**	**15 24 35.8**	**+0.1**
JNBK				*e*S	**Sn**	**15 25 07.0**	**-0.3**
JNK	**Nakash**	**2.72**	**341**	P	**Pn**	**15 24 34.4**	**-1.6**
JNK				*e*S	**Sn**	**15 25 04.9**	**-2.8**
JAR	**Ashorobuto**	**2.80**	**325**	P	**Pn**	**15 24 35.7**	**-1.3**
JAR				*e*S	**Sn**	**15 25 07.4**	**-2.0**
JRA	**Rausu**	**2.98**	**348**	P	**Pn**	**15 24 38.7**	**-0.8**
JRA				*e*S	**Sn**	**15 25 13.8**	**-0.2**
JBT2	**Biratori 2**	**3.21**	**304**	P	**Pn**	**15 24 41.6**	**-1.0**
JBT2				*e*S	**Sn**	**15 25 19.2**	**-0.3**
JFR	**Furan**	**3.29**	**312**	P	**Pn**	**15 24 43.4**	**-0.4**
JFR				*e*S	**Sn**	**15 25 19.5**	**-2.2**
JTKR	**Abashiri--Toko**	**3.31**	**334**	P	**Pn**	**15 24 44.0**	**-0.1**
JTKR				*e*S	**Sn**	**15 25 21.7**	**-0.5**
JANG	**Nango**	**3.44**	**261**	P	**Pn**	**15 24 43.4**	**-2.3**
JMP	**Maruseppu**	**3.55**	**328**	*e*S	**Sn**	**15 25 27.3**	**-0.7**
JKK2	**Kamakawa 2**	**3.71**	**321**	P	**Pn**	**15 24 49.8**	**+0.3**
JAB	**Ashibetsu**	**3.72**	**313**	P	**Pn**	**15 24 50.6**	**+1.0**
ASAJ	**Asahikawa**	**3.97**	**322**	Pn	**Pn**	**15 24 54.0**	**+1.0**
	1.4nm,0.3s,baz=169,slow=15,SNR=15						
ASAJ				Sn	**Sn**	**15 25 38.5**	**+0.2**
	1.9nm,0.3s,baz=231,slow=29,SNR=7.4						
MJAR	**Matsushiro Arr**	**7.52**	**236**	Pn	**Pn**	**15 25 40.6**	**-1.3**
	0.4nm,0.3s,baz=42,slow=11,SNR=7.0						
MJAR				Sn	**Sn**	**15 27 07.4**	**+1.5**
	0.3nm,0.3s,baz=90,slow=16,SNR=4.7						
USRK	**Ussuriysk Ar.**	**10.77**	**292**	Pn	**Pn**	**15 26 25.6**	**-0.7**
	0.1nm,0.3s,baz=112,slow=16,SNR=2.5						
SONM	**Songino Array**	**28.82**	**297**	P	**P**	**15 29 50.2**	**+0.7**
	0.3nm,0.7s,baz=81,slow=9.1,SNR=2.0						
ZALV	**Zalesovo Beam**	**41.99**	**309**	PcP	**PcP**	**15 33 38.4**	**+1.6**
	0.7nm,0.7s,baz=103,slow=4.6,SNR=3.5						
ILAR	**Eielson Array**	**44.23**	**34**	P	**P**	**15 32 00.2**	**+0.1**
	0.4nm,0.7s,baz=251,slow=7.2,SNR=6.8						
MKAR	**Makanchi Array**	**45.11**	**300**	P	**P**	**15 32 08.3**	**+0.8**
	0.4nm,0.8s,baz=54,slow=7.3,SNR=3.6						
KURBB	**Kurchatov Arra**	**46.45**	**306**	P	**P**	**15 32 18.9**	**+1.1**
	0.7nm,0.6s,baz=76,slow=8.8,SNR=4.5						
WRA	**Warramunga Arr**	**61.60**	**192**	P	**P**	**15 34 07.9**	**-0.7**
	0.6nm,0.7s,baz=8.8,slow=6.8,SNR=9.6						
FINES	**FINESS Array B**	**66.91**	**333**	P	**P**	**15 34 43.3**	**+0.4**
	3.1nm,1.1s,baz=44,slow=5.8,SNR=4.9						
NVAR	**Mina Array Bea**	**69.81**	**56**	P	**P**	**15 35 01.6**	**-0.2**
	0.3nm,0.6s,baz=297,slow=6.0,SNR=2.8						

IGQ 03 15:43:25.2±0.6,2°S±4°×8°0W±°,h75km±4km,MLv4.2/6, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MILO	**Milagro-Astudi**	**0.18**	**96**	P	Pn	15 43 37.7	+1.3
MILO				S	Sn	15 43 47.9	+3.3
AMIL	**Milagro (Trans**	**0.19**	**49**	P	Pn	15 43 37.6	+1.2
AMIL				S	Sn	15 43 47.6	+3.0
COHC	**Cochancay**	**0.52**	**113**	P	Pn	15 43 39.5	+0.8
COHC				S	Sn	15 43 50.0	+1.3
RIOE1	**Riobamba**	**1.22**	**65**	P	Pn	15 43 47.1	+0.1
RIOE1				S	Sn	15 44 02.5	-0.9
BMAS	**Trigal station**	**1.46**	**59**	P	Pn	15 43 50.3	0.0
ARRY	**Arrayan**	**1.48**	**60**	P	Pn	15 43 50.3	-0.2
BPAT	**Tungurahua Vol**	**1.50**	**60**	P	Pn	15 43 51.0	+0.1
BPAT				S	Sn	15 44 10.1	-0.1
RETU	**Refugio**	**1.52**	**58**	P	Pn	15 43 51.3	+0.2
POND	**Pondoa**	**1.53**	**57**	P	Pn	15 43 51.2	+0.1
POND				S	Sn	15 44 09.8	-0.8
PISA	**Pisayambo**	**1.80**	**49**	P	Pn	15 43 54.9	+0.1
ILLI	**Illinizas Sur**	**1.84**	**33**	P	Pn	15 43 55.1	-0.2
ILLI				S	Sn	15 44 17.6	-0.5
BNAS	**Cotopaxi Volca**	**2.02**	**39**	P	Pn	15 43 57.5	-0.2
BREF	**Cotopaxi Volca**	**2.04**	**39**	P	Pn	15 43 58.1	0.0
NAS2	**Nasa**	**2.04**	**38**	P	Pn	15 43 57.4	-0.7
BTAM	**Cotopaxi Volca**	**2.07**	**40**	P	Pn	15 43 58.0	-0.4
BVC2	**Cotopaxi Volca**	**2.07**	**40**	P	Pn	15 43 58.2	-0.3
VC1	**Cotopaxi 1**	**2.09**	**40**	P	Pn	15 43 58.7	0.0
COV1	**Cotopaxi Volc**	**2.11**	**41**	P	Pn	15 43 58.3	-0.8
PITA	**Cotopaxi Volc**	**2.13**	**38**	P	Pn	15 43 59.3	0.0
MAG1	**Magdalena**	**2.17**	**359**	P	Pn	15 43 57.8	-1.6
ANTS	**Antisana-Sarah**	**2.35**	**42**	P	Pn	15 44 01.5	-0.8
PINO	**Pino**	**2.37**	**28**	P	Pn	15 44 02.0	-0.6
YANA	**Yana**	**2.42**	**29**	P	Pn	15 44 02.8	-0.4
OTAV	**Otavalo**	**2.79**	**27**	P	Pn	15 44 07.1	-1.1
OTAV				S	Sn	15 44 39.9	-1.1
CUIC	**Cuicocha-Domo**	**2.89**	**28**	P	Pn	15 44 08.7	-0.7
IMBA	**Imbabura, San**	**2.95**	**31**	P	Pn	15 44 10.4	+0.1
URCU	**Urcuqui**	**3.06**	**29**	P	Pn	15 44 11.2	-0.6
YAHU	**Yahuarcocha**	**3.10**	**33**	P	Pn	15 44 11.7	-0.5
LITE1	**Lita**	**3.33**	**24**	P	Pn	15 44 14.9	-0.3

NIED ***03*** *16:10:00,27°.90N×128°.10E,h98km,Mw3.8 Best double couple: M₀6.37000×10¹⁴ NP1:φs218.00000°,δ10.00000°, λ-116.00000°. NP2:φs64.00000°,δ81.00000°, λ-86.00000°.*
ISCJB ***03*** *16:10:13.5±0.3,27°.86N±0°.04×128°.10E±0°.06, h116km±4km,mb3.7/20,Error ellipse: s-maj=10.9km s-min=4.4km az=32.8*
IDC ***03*** *16:10:13.8±0.6,27°.85N×127°.99E,h105km±7km,mb3.5/20, mb1 3.6/22,mb1mx3.5/68,mbtmp3.8/22,MS3.1/2, Ms1 3.2/2,ms1mx2.4/52,Error ellipse: s-maj=20.0km s-min=9.8km az=87.0*
JMA ***03*** *16:10:15.3±0.1,27°.89N×128°.09E,h97km±3km,M3.6*

ISC 03 16:10:14.3±0.7,27°.86N±0°.05×128°.09E±0°.07,h108km±7km, n35,σ0°89/51,mb3.7/20,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOKE	**Okinoerabujima**	**0.66**	**139**	P	**Pn**	**16 10 32.3**	**+0.2**
JOKE				*e*S	**Sn**	**16 10 45.4**	**-0.1**
JTK	**Tokunoshima**	**0.77**	**95**	P	**Pn**	**16 10 33.2**	**+0.1**
JTK				S	**Sn**	**16 10 46.4**	**-0.8**
JIH	**Iheya**	**0.83**	**187**	P	**Pn**	**16 10 34.3**	**+0.7**
JIH				S	**Sn**	**16 10 48.3**	**+0.1**
JAMN	**Amaminishikomi**	**1.03**	**68**	P	**Pn**	**16 10 35.9**	**+0.2**
JAMN				S	**Sn**	**16 10 50.9**	**-0.9**
JOW	**Kunigami**	**1.04**	**171**	P	**Pn**	**16 10 36.2**	**+0.5**
	459nm,0.3s,baz=245,slow=5.2,SNR=960						
JOW				S	**Sn**	**16 10 51.2**	**-0.7**
	736nm,0.3s,baz=347,slow=26,SNR=73						
JOW	**Kunigami**	**1.04**	**171**	P	**Pn**	**16 10 36.3**	**+0.5**
JOW				S	**Sn**	**16 10 51.8**	**-0.1**
JNTH	**Nagotoyohara**	**1.34**	**182**	P	**Pn**	**16 10 40.0**	**+0.9**
JNTH				S	**Sn**	**16 10 58.1**	**+0.3**
JAM	**Amami Oshima**	**1.45**	**67**	P	**Pn**	**16 10 41.0**	**+0.6**
JAM				S	**Sn**	**16 11 00.5**	**+0.4**
JAGN	**Aguni-jima**	**1.47**	**211**	P	**Pn**	**16 10 41.6**	**+0.9**
JAGN				*e*S	**Sn**	**16 11 00.9**	**+0.2**
JTAJ	**Takarajima**	**1.62**	**37**	P	**Pn**	**16 10 42.8**	**+0.4**
JTAJ				S	**Sn**	**16 11 04.6**	**+0.8**
JZK	**Kikaishima**	**1.73**	**74**	P	**Pn**	**16 10 45.2**	**+1.5**
JZK				S	**Sn**	**16 11 07.6**	**+1.4**
JJT3	**Tamagusuku3**	**1.73**	**189**	P	**Pn**	**16 10 45.3**	**+1.4**
JJT3				S	**Sn**	**16 11 07.7**	**+1.4**
JKE	**Kume jima 2**	**1.92**	**218**	P	**Pn**	**16 10 47.0**	**+0.8**
JKE				*e*S	**Sn**	**16 11 11.1**	**+0.6**
JNU	**Nakatsue**	**5.77**	**24**	P	**Pn**	**16 11 39.5**	**+1.9**
	1.8nm,0.3s,baz=313,slow=2.4,SNR=22						
JNU				S	**Sn**	**16 12 44.0**	**+1.5**
	0.4nm,0.3s,baz=356,slow=14,SNR=2.0						
KSRS	**Korea Array**	**9.57**	**359**	P	**Pn**	**16 12 30.1**	**+1.2**
	baz=180,slow=15,SNR=7.1						
SONM	**Songino Array**	**26.13**	**326**	P	**P**	**16 15 39.7**	**+1.4**
	1.3nm,0.6s,baz=142,slow=10,SNR=7.2						
MKAR	**Makanchi Array**	**40.37**	**310**	P	**P**	**16 17 41.3**	**-0.2**
	0.3nm,0.4s,baz=88,slow=11,SNR=7.4						
ZALV	**Zalesovo Beam**	**40.88**	**322**	P	**P**	**16 17 43.7**	**-1.9**
	0.6nm,0.4s,baz=94,slow=7.3,SNR=3.1						
KURBB	**Kurchatov Arra**	**43.60**	**315**	P	**P**	**16 18 06.0**	**-1.6**
	0.7nm,0.3s,baz=102,slow=9.0,SNR=9.0						
KURBB				PcP	**PP**	**16 19 51.2**	**+0.2**
	0.4nm,0.9s,baz=86,slow=3.8,SNR=3.1						
FITZ	**Fitzroy Crossi**	**45.75**	**183**	P	**P**	**16 18 25.9**	**+0.9**
	4.4nm,1.0s,baz=13,slow=14,SNR=3.9						
FITZ				LR	LR	16 38 08.7	
	comp=Z,23nm,19.7s,baz=301,slow=37						
WRA	**Warramunga Arr**	**47.91**	**172**	P	**P**	**16 18 42.2**	**+0.4**
	0.5nm,0.6s,baz=352,slow=8.6,SNR=6.4						
BVAR	**Borovoye Array**	**48.98**	**317**	P	**P**	**16 18 49.4**	**-0.3**
	0.5nm,0.6s,baz=77,slow=6.5,SNR=4.0						
BVAR				PcP	**PcP**	**16 20 12.2**	**0.0**
	0.6nm,0.4s,baz=100,slow=4.5,SNR=5.6						
ASAR	**Alice Springs**	**51.53**	**173**	P	**P**	**16 19 09.8**	**+0.5**
	0.3nm,0.6s,baz=359,slow=7.4,SNR=7.6						
STKA	**Stephens Creek**	**60.78**	**167**	P	**P**	**16 20 14.8**	**-0.1**
	1.2nm,0.7s,baz=353,slow=18,SNR=3.0						
ILAR	**Eielson Array**	**63.07**	**29**	P	**P**	**16 20 29.4**	**-0.4**
	0.5nm,0.6s,baz=294,slow=10,SNR=13						
SPITS	**Spitsbergen Ar**	**67.21**	**348**	P	**P**	**16 20 55.7**	**-0.7**
	1.1nm,0.7s,baz=45,slow=6.3,SNR=2.2						
FINES	**FINESS Array B**	**71.39**	**330**	P	**P**	**16 21 21.0**	**-1.3**
	2.3nm,0.8s,baz=66,slow=4.6,SNR=5.2						
AKASG	**Malin Array Be**	**74.22**	**319**	P	**P**	**16 21 39.1**	**-0.1**
	0.4nm,0.5s,baz=55,slow=8.0,SNR=3.2						
BRTR	**Keskin Array B**	**75.94**	**308**	P	**P**	**16 21 49.7**	**+0.1**
	0.3nm,0.6s,baz=34,slow=5.4,SNR=2.4						
YKA	**Yellowknife Ar**	**77.11**	**25**	P	**P**	**16 21 55.3**	**-0.2**
	1.0nm,0.6s,baz=302,slow=5.7,SNR=8.3						
HFS	**Hagfors**	**77.32**	**332**	P	**P**	**16 21 55.6**	**-1.2**
	3.5nm,1.0s,baz=77,slow=6.2,SNR=3.1						
NOA	**NORSAR Array B**	**77.80**	**334**	P	**P**	**16 21 58.9**	**-0.6**
	1.4nm,0.8s,baz=56,slow=4.7,SNR=2.5						
NOA				LR	LR	17 00 09.0	
	comp=Z,11nm,20.6s,baz=110,slow=38						
GERES	**GERESS Array B**	**83.83**	**323**	P	**P**	**16 22 31.8**	**-0.1**
	0.5nm,0.8s,baz=49,slow=4.4,SNR=3.4						
EKA	**Eskdalemuir Ar**	**87.25**	**335**	P	**P**	**16 22 48.0**	**-0.5**
	1.5nm,0.9s,baz=37,slow=5.5,SNR=2.5						
NVAR	**Mina Array Bea**	**89.47**	**46**	P	**P**	**16 23 00.0**	**+0.3**
	0.1nm,0.5s,baz=132,slow=39,SNR=2.4						

ISK ***03*** *16:11:40.7,37°.34N×30°.60E,h6km,ML2.5/12*
ISCJB ***03*** *16:11:41.2±0.5,37°.34N±0°.03×30°.60E±0°.04,h6km±5km, Error ellipse: s-maj=6.6km s-min=4.6km az=38.4*
CSEM ***03*** *16:11:41.4±0.1,37°.35N×30°.61E,h8km,ML2.5,Error ellipse: s-maj=3.3km s-min=2.5km az=127.0*
DDA ***03*** *16:11:41.7,37°.36N×30°.58E,h7km,Ml2.0*

ISC 03 16:11:41.4±1.0,37°.34N±0°.02×30°.61E±0°.03,h5km±10km, n39,σ0°57/47,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCK	**Bucak**	**0.12**	**351**	PG	**Pg**	**16 11 43.5**	**-0.4**
BCK				SG	**Sg**	**16 11 45.9**	**+0.3**
BCK	**Bucak**	**0.12**	**351**	*e*Pg	**Pg**	**16 11 43.5**	**-0.4**
BCK				*e*Sg	**Sg**	**16 11 45.9**	**+0.3**
SUTC	**Sutluce-Ispart**	**0.34**	**67**	PG	**Pg**	**16 11 47.7**	**-0.2**
SUTC				SG	**Sg**	**16 11 53.7**	**+1.3**
SUTC	**Sutluce-Ispart**	**0.34**	**67**	*e*Pg	**Pg**	**16 11 47.7**	**-0.2**
SUTC				*e*Sg	**Sg**	**16 11 53.7**	**+1.3**
KORT	**Korkueli**	**0.40**	**212**	PG	**Pg**	**16 11 48.6**	**-0.6**
KORT				SG	**Sg**	**16 11 55.4**	**+0.9**
KORT	**Korkueli**	**0.40**	**212**	*i* P	**Pg**	**16 11 48.7**	**-0.5**
KORT				*i* S	**Sb**	**16 11 57.2**	**-0.3**
KORT	**Korkueli**	**0.40**	**212**	P	**Pg**	**16 11 48.7**	**-0.5**
KORT				*e*Sg	**Sg**	**16 11 55.4**	**+0.9**
KORT				S	**Sb**	**16 11 57.2**	**-0.3**
ANTB	**Antalya**	**0.44**	**176**	PG	**Pg**	**16 11 49.5**	**-0.4**
ANTB	**Antalya**	**0.44**	**176**	*e*Pg	**Pg**	**16 11 49.5**	**-0.4**
ISP	**Isparta**	**0.48**	**351**	PG	**Pg**	**16 11 50.8**	**+0.1**
ISP	**Isparta**	**0.48**	**351**	*e*Pg	**Pg**	**16 11 50.8**	**+0.1**
BRDR	**BURDUR-Merkez**	**0.56**	**309**	*i* P	**Pg**	**16 11 51.7**	**-0.5**
BRDR	**BURDUR-Merkez**	**0.56**	**309**	P	**Pg**	**16 11 51.7**	**-0.5**
BAGO	**Egridir - ISPA**	**0.66**	**12**	*i* P	**Pb**	**16 11 54.8**	**-0.6**
ELL	**Elmali**	**0.82**	**224**	PG	**Pg**	**16 11 56.6**	**-0.5**
ELL	**Elmali**	**0.82**	**224**	*e*Pg	**Pg**	**16 11 56.6**	**-0.5**
KEPZ	**Antalya-Kepez**	**0.91**	**119**	*i* P	**Pb**	**16 11 59.4**	**-0.2**
KEPZ	**Antalya-Kepez**	**0.91**	**119**	P	**Pb**	**16 11 59.4**	**-0.2**
GLHS	**Glhisar (BURDU**	**0.91**	**258**	PG	**Pb**	**16 11 59.3**	**-0.4**
GLHS	**Glhisar (BURDU**	**0.91**	**258**	*e*Pg	**Pb**	**16 11 59.3**	**-0.4**
KZIL	**AFYON_Kizioren**	**0.99**	**338**	*i* P	**Pb**	**16 12 00.8**	**-0.2**
KZIL	**AFYON_Kizioren**	**0.99**	**338**	P	**Pb**	**16 12 00.8**	**-0.2**
AKAS	**Kas**	**1.37**	**216**	PN	**Pn**	**16 12 07.1**	**-0.2**
AKAS	**Kas**	**1.37**	**216**	*e*Pn	**Pn**	**16 12 07.1**	**-0.2**
FETY	**Fethiye**	**1.41**	**240**	PN	**Pn**	**16 12 07.6**	**-0.1**
FETY	**Fethiye**	**1.41**	**240**	*e*Pn	**Pn**	**16 12 07.6**	**-0.1**
KONT	**Konya--Tatoy**	**1.51**	**66**	PN	**Pn**	**16 12 09.1**	**0.0**
KONT	**Konya--Tatoy**	**1.51**	**66**	*e*Pn	**Pn**	**16 12 09.1**	**0.0**
LADK	**Ladik-KONYA**	**1.63**	**58**	PN	**Pn**	**16 12 10.8**	**0.0**
LADK	**Ladik-KONYA**	**1.63**	**58**	*e*Pn	**Pn**	**16 12 10.8**	**0.0**
DALY	**Dalyan (Mu¨la**	**1.65**	**252**	PN	**Pn**	**16 12 11.1**	**+0.1**
DALY	**Dalyan (Mu¨la**	**1.65**	**252**	*e*Pn	**Pn**	**16 12 11.1**	**+0.1**
TURN	**Turunc**	**1.68**	**254**	PN	**Pg**	**16 12 15.6**	**+2.1**
KIZT	**Kizilcal**	**1.83**	**33**	PN	**Pn**	**16 12 13.3**	**-0.3**
KIZT	**Kizilcal**	**1.83**	**33**	*e*Pn	**Pn**	**16 12 13.3**	**-0.3**
YER	**Yerkesik**	**1.87**	**264**	PN	**Pn**	**16 12 13.8**	**-0.3**
YER	**Yerkesik**	**1.87**	**264**	*e*Pn	**Pn**	**16 12 13.8**	**-0.3**
KULA	**Kula-Manisa**	**1.94**	**308**	PN	**Pn**	**16 12 14.9**	**-0.1**
KULA	**Kula-Manisa**	**1.94**	**308**	*e*Pn	**Pn**	**16 12 14.9**	**-0.1**

IDC 03 16:15:49.3±3.3,3°.70S×151°.37E,h0km,mb2.9/2, mb1 3.2/2,mb1mx2.9/55,mbtmp2.9/2,Error ellipse: s-maj=136.2km s-min=46.6km az=119.0,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.17**	**224**	P	P	16 20 58.9	+1.2
	0.3nm,0.4s,baz=51,slow=10.0,SNR=1.7						
ASAR	**Alice Springs**	**26.06**	**219**	P	P	16 21 24.0	-0.7
	0.2nm,0.8s,baz=49,slow=9.6,SNR=3.9						
TORD	**Torodi Ar. Bea**	**148.61**	**289**	PKPbc	PKPbc	16 35 38.6	-0.8
	0.1nm,0.4s,baz=48,slow=2.1,SNR=4.3						

IDC ***03*** *16:22:59.6±1.4,35°.52N×141°.35E,h0km,mb3.7/8, mb1 3.7/12,mb1mx3.5/81,mbtmp3.6/12,ML3.3/4,MS3.1/4, Ms1 3.1/4,ms1mx2.6/64,Error ellipse: s-maj=35.8km s-min=18.3km az=78.0*
ISCJB ***03*** *16:23:03.0±0.8,35°.54N±0°.05×141°.28E±0°.08,h33km, mb3.6/8,MS3.3/2,Error ellipse: s-maj=10.1km s-min=6.8km az=164.8*
JMA ***03*** *16:23:05.8±0.1,35°.56N×141°.02E,h38km±1km,M3.1*

ISC 03 16:23:05.1±1.0,35°.51N±0°.06×141°.15E±0°.10,h33km,n26, σ0°69/21,mb3.6/8,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.31**	**309**	P	**Pn**	**16 23 12.7**	**-0.5**
CHOJ				S	**Sn**	**16 23 17.5**	**-0.8**
KTR	**Katsuura**	**0.77**	**242**	P	**Pn**	**16 23 19.5**	**-0.2**
BSO4	**Boso 4**	**0.84**	**232**	P	**Pb**	**16 23 20.7**	**-0.5**
BSO1	**Boso 1**	**0.86**	**189**	P	**Pb**	**16 23 21.3**	**0.0**
BSO1				*e*X		16 23 33.6	
JYT	**Yasato**	**1.06**	**313**	P	**Pn**	**16 23 22.7**	**-0.9**
MJAR	**Matsushiro Arr**	**2.60**	**294**	Pn	**Pn**	**16 23 45.8**	**+1.0**
	6.1nm,0.3s,baz=99,slow=7.7,SNR=95						
MJAR				LR	LR	16 24 51.2	
	comp=Z,173nm,19.5s,baz=135,slow=41						
MAT	**Matsushiro**	**2.60**	**294**	P	**Pn**	**16 23 46.2**	**+1.4**
MAT				S	**Sn**	**16 24 15.7**	**+0.4**
JHJ	**Hachijo jima 2**	**2.64**	**206**	Pn	**Pn**	**16 23 45.8**	**+0.5**
	14nm,0.3s,baz=313,slow=23,SNR=13						
JHJ				Sn	**Sn**	**16 24 15.0**	**-1.2**
	24nm,0.3s,baz=250,slow=24,SNR=8.0						
ASAJ	**Asahikawa**	**8.67**	**7**	Pn	**Pn**	**16 25 07.3**	**-0.9**
	0.6nm,0.3s,baz=266,slow=16,SNR=8.9						
KSRS	**Korea Array**	**10.83**	**284**	Pn	**Pn**	**16 25 37.7**	**0.0**
	0.1nm,0.3s,baz=99,slow=13,SNR=2.9						
KSRS				LR	LR	16 29 49.1	
	comp=Z,80nm,20.0s,baz=106,slow=37						
H11N2	**WAKE ISLAND Hy 27.59**	**118**		T	T	16 58 02.0	
	baz=310,slow=75,SNR=27						
H11N1	**WAKE ISLAND Hy 27.59**	**118**		T	T	16 58 02.5	
	baz=310,slow=75,SNR=25						
H11N3	**WAKE ISLAND Hy 27.61**	**118**		T	T	16 57 53.9	
	baz=310,slow=75,SNR=24						
H11S1	**WAKE ISLAND Hy 28.25**	**120**		T	T	16 58 46.1	
	baz=312,slow=75,SNR=40						
H11S3	**WAKE ISLAND Hy 28.25**	**120**		T	T	16 58 35.3	
	baz=312,slow=75,SNR=28						
H11S2	**WAKE ISLAND Hy 28.26**	**120**		T	T	16 58 46.7	
	baz=312,slow=75,SNR=16						
SONM	**Songino Array**	**28.49**	**306**	LR	LR	16 40 07.3	
	comp=Z,62nm,18.7s,baz=240,slow=36						
CMAR	**Chiang Mai Arr**	**40.92**	**257**	P	**P**	**16 30 45.0**	**+0.5**
	0.4nm,0.8s,baz=74,slow=7.6,SNR=3.7						
ZALV	**Zalesovo Beam**	**42.80**	**314**	P	**P**	**16 30 59.5**	**+0.1**
	0.7nm,0.5s,baz=99,slow=6.8,SNR=3.6						
MKAR	**Makanchi Array**	**44.76**	**303**	P	**P**	**16 31 15.3**	**-0.1**
	0.4nm,0.5s,baz=87,slow=8.8,SNR=5.4						
KURBB	**Kurchatov Arra**	**46.78**	**309**	P	**P**	**16 31 30.8**	**-0.5**
	0.7nm,0.4s,baz=82,slow=7.4,SNR=7.8						
WRA	**Warramunga Arr**	**55.52**	**188**	P	**P**	**16 32 36.8**	**-0.3**
	0.6nm,0.6s,baz=6.7,slow=8.3,SNR=7.4						
ASAR	**Alice Springs**	**59.25**	**188**	P	**P**	**16 33 02.8**	**-0.6**
	0.2nm,0.5s,baz=0.6,slow=6.7,SNR=6.5						
FINES	**FINESS Array B**	**70.06**	**332**	P	**P**	**16 34 13.7**	**+0.3**
	3.8nm,1.0s,baz=66,slow=6.7,SNR=4.0						
AKASG	**Malin Array Be**	**75.37**	**322**	LR	LR	17 08 36.6	
	comp=Z,17nm,18.1s,baz=170,slow=36						
BRTR	**Keskin Array B**	**79.70**	**312**	P	**P**	**16 35 10.2**	**+0.5**
	0.3nm,0.6s,baz=56,slow=5.4,SNR=2.5						

ISCJB ***03*** *16:23:33.5±0.6,38°.76N±0°.04×104°.67E±0°.09,h10km, mb3.5/6,Error ellipse: s-maj=9.6km s-min=6.4km az=1.9*
IDC ***03*** *16:23:33.9±0.9,38°.77N×104°.58E,h0km,mb3.4/7, mb1 3.5/10,mb1mx3.3/84,mbtmp3.4/10,ML3.2/3,Error ellipse: s-maj=29.6km s-min=16.5km az=58.0*
BJI ***03*** *16:23:35.5,38°.85N×104°.67E,h7km,mb3.9/1,ML4.0/18, Ms3.9/3*

ISC 03 16:23:35.4±0.6,38°.80N±0°.05×104°.68E±0°.05,h10km,n15, σ2°11/20,mb3.6/6,1C,Western Nei Mongol

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

Azm99.0000°; N Plg17.0000°, Azm218.0000°; P Plg26.0000°, Azm316.0000°;
JMA Felt I J1.

ISC 03 16:44:24.2±0.5, 36°.55N±0°.05×138°.53E±0°.05, h173km±4km, n127, σ1§55/145, mb4.0/42, 15C-12D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JGK	Kuni	0.09	83	⇑P	Pn	16 44 47.9	+0.7
MJAR	Matsushiro Arr	0.26	268	P	Pn	16 44 47.6	+0.2
288nm,0.3s,baz=226,slow=3.2,SNR=5855							
MJAR				S	Sn	16 45 05.9	+0.7
43nm,0.3s,baz=178,slow=6.0,SNR=16							
MAJO	Matsushiro	0.26	268	*e*Pn	Pn	16 44 47.6	+0.2
MAJO	Matsushiro	0.26	268	*c i*P	Pn	16 44 47.8	+0.4
MAT	Matsushiro	0.26	268	P	Pn	16 44 47.7	+0.3
MAT				*e*S	Sn	16 45 05.2	0.0
MAT	Matsushiro	0.26	268	P	Pn	16 44 47.7	+0.3
MAT				S	Sn	16 45 05.2	0.0
MJB9	Matsu-Tunnel	0.26	269	*e*Pn	Pn	16 44 47.7	+0.2
JNG	Nsakai	0.37	247	⇑P	Pn	16 44 48.1	+0.3
JNG				S	Sn	16 45 05.7	-0.2
JRY	Ryogami san	0.61	150	⇓P	Pn	16 44 49.1	+0.3
JRY				*e*S	Sn	16 45 07.4	-0.3
JAG	Ashikaga	0.76	99	⇓P	Pn	16 44 50.4	+0.9
JAG				S	Sn	16 45 09.7	+0.7
JYN	Shimob	1.05	179	⇓P	Pn	16 44 51.6	-0.1
JYN				S	Sn	16 45 13.0	+0.1
JSZ	Suzu	1.29	314	⇑P	Pn	16 44 54.3	+0.7
JSZ				*e*S	Sn	16 45 16.5	+0.1
JOD2	Odawara 2	1.36	160	⇓P	Pn	16 44 54.5	+0.2
JNS	Sasagawa	1.41	26	⇑P	Pn	16 44 56.6	+1.9
JSD	Sado	1.50	352	⇑P	Pn	16 44 56.8	+1.3
JSD				*e*S	Sn	16 45 20.5	+0.6
INU	Inuyama	1.72	226	*e*Pn	Pn	16 44 57.0	-0.7
JFT	Otama	1.74	56	⇓P	Pn	16 45 00.4	+2.5
JKG	Kaga	1.79	262	⇑P	Pn	16 44 58.8	+0.3
JKG				*e*S	Sn	16 45 24.6	-0.4
JHG	Hegura jima	1.82	316	P	Pn	16 44 59.5	+0.7
JHG				*e*S	Sn	16 45 25.7	0.0
JAW	Awa shima	1.99	17	P	Pn	16 45 02.6	+2.1
JIE	Ise	2.62	215	⇑P	Pn	16 45 07.2	-0.7
JHJ	Hachijo jima 2	3.58	163	P	Pn	16 45 19.4	-0.3
46nm,0.3s,baz=334,slow=16,SNR=36							
JHJ				S	Sn	16 46 03.5	+0.4
baz=326,slow=11,SNR=2.2							
JHJ2	Mitsune	3.59	162	*e*Pn	Pn	16 45 19.1	-0.7
ERM	Erimo	6.53	32	*e*Pn	Pn	16 45 57.4	-0.6
ERM	Erimo	6.53	32	⇑*e*P	Pn	16 45 57.4	-0.6
JNU	Nakatsue	7.16	244	P	Pn	16 46 05.7	-0.7
0.5nm,0.3s,baz=120,slow=8.4,SNR=13							
JNU	Nakatsue	7.16	244	*e*Pn	Pn	16 46 06.4	0.0
ASAJ	Asahikawa	8.17	21	P	Pn	16 46 19.1	-0.5
1.8nm,0.3s,baz=212,slow=12,SNR=34							
ASAJ				S	Sn	16 47 46.6	-4.3
1.1nm,0.3s,baz=90,slow=20,SNR=4.2							
ASAJ	Asahikawa	8.17	21	*e*Pn	Pn	16 46 18.9	-0.7
MSHR	Mys Shultsa	8.28	319	*d i*P	Pn	16 46 21.8	+0.7
KSRS	Korea Array	8.53	279	P	Pn	16 46 26.2	+1.8
0.4nm,0.3s,baz=98,slow=13,SNR=47							
KS01	Wonju Array Si	8.56	279	*e*Pn	Pn	16 46 22.5	-2.2
KS15	Wonju Array Si	8.56	279	*e*Pn	Pn	16 46 26.3	+1.5
USRK	Ussuriysk Ar.	9.12	329	P	Pn	16 46 34.7	+2.6
0.5nm,0.3s,baz=148,slow=13,SNR=18							
YUK	Yuzh-Kuril'sk	9.34	35	*d i*P	Pn	16 46 34.8	-0.1
YUK				*e*S	Sn	16 48 11.9	-6.9
SHO	Shikotan	9.68	38	*e*P	Pn	16 46 35.9	-3.5
SHO				*e*S	Sn	16 48 17.8	-9.2
SHO				pmax	pmax		
comp=Z,7.0nm,0.4s							
SHO				pmax	pmax		
comp=E,6.0nm,0.3s							
SHO				pmax	pmax		
comp=N,6.0nm,0.2s							
SHO				smax	smax		
comp=E,90nm,1.3s							
SHO				smax	smax		
comp=N,64nm,1.8s							
CBIJ	Chichi jima	9.93	161	*e*Pn	Pn	16 46 36.5	-6.4
JCJ	Chichijima	9.93	161	P	Pn	16 46 36.4	-6.5
comp=N,6.7nm,0.3s,baz=290,slow=23,SNR=7.1							
JCJ				S	Sn	16 48 22.2	-11
comp=N,12nm,0.3s,baz=295,slow=22,SNR=6.3							
MDJ	Mudanjiang	10.53	323	*e*Pn	Pn	16 46 51.9	+1.3
YSS	Yuzh-Sakhalins	10.86	16	*e*Pn	Pn	16 46 52.8	-2.0
YSS	Yuzh-Sakhalins	10.86	16	*e*P	Pn	16 46 53.1	-1.7
YSS				pmax	pmax		
comp=Z,20nm,0.8s							
KUR	Kuril'sk	11.18	36	P	Pn	16 46 59.2	+0.2
KUR				S	Sn	16 49 00.6	-2.4
KLR	Kul'dur	13.60	341	P	Pn	16 47 30.1	+0.2
comp=Z,0.2nm,0.3s,baz=159,slow=11,SNR=41							
KLR	Kul'dur	13.60	341	*de*P	Pn	16 47 30.8	+0.9
GRNR	Gornyy	14.29	355	*e*P	P	16 47 40.2	-0.5
ZEA	Zeya	18.89	339	*e*P	P	16 48 29.2	-2.0
ZEA				pmax	pmax		
comp=Z,10.0nm,0.7s							
MA2	Magadan	24.37	15	P	P	16 49 26.7	+0.9
comp=Z,6.6nm,0.8s,baz=213,slow=9.6,SNR=5.9							
YAK	Yakutsk	26.10	351	*e*P	P	16 49 41.0	-0.4
comp=Z,24nm,0.5s							
YAK	Yakutsk	26.10	351	*e*P	P	16 49 40.0	-1.4
YAK				pmax	pmax		
comp=Z,17nm,1.0s							
YAK				pmax	pmax		
comp=E,2.0nm,0.9s							
YAK				pmax	pmax		
comp=N,4.0nm,1.4s							
SONM	Songino Array	26.16	306	P	P	16 49 41.3	-1.1
comp=N,1.2nm,0.8s,baz=106,slow=9.8,SNR=5.1							
TIXI	Tiksi	35.52	355	*e*P	P	16 51 03.6	-0.3
comp=N,2.8nm,0.5s							
TIXI	Tiksi	35.52	355	*ce*P	P	16 51 04.5	+0.6
TIXI				pmax	pmax		
comp=Z,2.0nm,0.5s							
CMAR	Chiang Mai Arr	39.14	253	P	P	16 51 33.6	-1.3
comp=Z,0.4nm,0.6s,baz=214,slow=30,SNR=4.6							
ZALV	Zalesovo Beam	40.53	313	P	P	16 51 44.9	-1.2
comp=Z,1.5nm,0.3s,baz=96,slow=6.9,SNR=8.2							
ZALV	Zalesovo Beam	40.53	313	*e*P	P	16 51 45.2	-0.9
MK01	Makanchi Array	42.41	302	*e*P	P	16 52 00.9	-0.6
MK31	Makanchi Array	42.41	302	*e*P	P	16 52 01.1	-0.4
MK31	Makanchi Array	42.41	302	*e*P	P	16 52 01.1	-0.4
MKAR	Makanchi Array	42.41	302	P	P	16 52 01.2	-0.3
comp=Z,2.7nm,0.6s,baz=83,slow=9.9,SNR=30							
MKAR	Makanchi Array	42.41	302	*e*P	P	16 52 01.0	-0.5
comp=Z,18nm,0.6s							
NRIK	Noril'sk	42.75	336	P	P	16 52 04.2	+0.3
comp=Z,2.2nm,0.4s,baz=78,slow=18,SNR=4.8							
NRIK	Noril'sk	42.75	336	P	P	16 52 04.2	+0.3
NRIK				pmax	pmax		
comp=Z,4.0nm,0.6s							
KURK	Kurchatov	44.41	308	*e*P	P	16 52 16.9	-0.5
comp=Z,17nm,0.6s							
KURK	Kurchatov	44.41	308	*d i*P	P	16 52 17.0	-0.3
KURK				pmax	pmax		
comp=Z,13nm,0.6s							
KURBB	Kurchatov Arra	44.47	308	P	P	16 52 17.8	-0.1
comp=Z,12nm,0.5s,baz=84,slow=7.7,SNR=152							
JIRN	Jiri	44.75	274	*e*P	P	16 52 20.7	-0.1
comp=Z,7.1nm,0.3s							
GUN	Gumba	44.89	275	*e*P	P	16 52 22.3	+0.4
comp=Z,5.6nm,0.4s							
PKI	Pulchoki	45.41	274	*e*P	P	16 52 23.6	-2.4
PKIN	Phulchoki	45.42	274	*e*P	P	16 52 24.4	-1.6
KKN	Kakani	45.42	275	*e*P	P	16 52 24.4	-1.5
DMN	Daman	45.64	275	*e*P	P	16 52 26.2	-1.5
GKN	Gorkha	45.85	275	*e*P	P	16 52 28.6	-0.6
comp=Z,13nm,0.6s							
DANN	Dangsing	46.41	276	*e*P	P	16 52 33.4	-0.3
comp=Z,18nm,0.8s							
PYUN	Piuthan	47.13	276	*e*P	P	16 52 38.9	-0.3
comp=Z,25nm,0.9s							
AAK	Ala-Archa	48.67	298	⇓*e*P	P	16 52 50.9	+0.1
AAK				pmax	pmax		
comp=Z,3.0nm,1.1s							
KDAK	Kodiak Island	49.00	41	*i* P	P	16 52 54.7	+1.9
BVAR	Borovoye Array	49.18	312	P	P	16 52 54.2	-0.2
comp=Z,1.0nm,0.3s,baz=79,slow=7.5,SNR=12							
BRVK	Borovoye	49.24	312	*c i*P	P	16 52 56.4	+1.6
BRVK				pmax	pmax		
comp=Z,6.0nm,1.8s							
MDM	Murphy Dome	50.55	32	*e*P	P	16 53 06.7	+2.1
comp=Z,8.7nm,1.5s							
ILAR	Eielson Array	51.14	32	P	P	16 53 10.0	+1.2
comp=Z,0.7nm,0.7s,baz=270,slow=5.6,SNR=10							
KK31	Karatay Array	51.35	300	*e*P	P	16 53 10.6	-0.2
KK31	Karatay Array	51.35	300	*e*P	P	16 53 10.6	-0.2
KKAR	Karatay Array	51.35	300	*e*P	P	16 53 10.8	-0.1
KKAR	Karatay Array	51.35	300	*e*P	P	16 53 10.8	-0.1
EGAK	Eagle	53.57	32	*e*P	P	16 53 28.1	+1.3
ARU	Arti	55.18	318	*e*P	P	16 53 38.6	+0.1
comp=Z,7.2nm,0.8s							
ARU	Arti	55.18	318	*d i*P	P	16 53 38.4	-0.1
ARU				*PP	pP	16 54 16.6	-1.4
ARU						16 54 32.2	
ARU						16 55 41.9	
ARU				S	S	17 01 10.9	+3.1
ARU				SS	SS	17 04 57.0	+3.1
ARU				pmax	pmax		
comp=Z,9.0nm,1.0s							
WRAB	Tennant Creek	56.32	185	*c i*P	P	16 53 46.1	-0.8
WRAB				pmax	pmax		
comp=Z,3.0nm,0.7s							
WB2	Warramunga Arr	56.33	185	*e*P	P	16 53 46.0	-1.0
WRA	Warramunga Arr	56.33	185	P	P	16 53 46.4	-0.6
comp=Z,2.3nm,0.5s,baz=0.5,slow=7.7,SNR=38							
ABKAR	Akbulak array	56.47	310	*e*P	P	16 53 47.1	-0.6
AKTO	Aktyubinsk	57.27	311	P	P	16 53 52.5	-0.8
comp=Z,1.4nm,0.6s,baz=80,slow=13,SNR=5.4							
WHY	Whitehorse	57.34	36	*e*P	P	16 53 56.4	+2.5
comp=Z,1.9nm,0.6s							
ASAR	Alice Springs	60.05	185	P	P	16 54 12.2	-0.7
comp=Z,1.2nm,0.8s,baz=359,slow=6.8,SNR=14							
SPITS	Spitsbergen Ar	60.54	348	P	P	16 54 15.8	+0.3
comp=Z,2.5nm,0.7s,baz=13,slow=14,SNR=3.2							
ARCES	ARCESS Array B	63.62	339	P	P	16 54 35.2	-0.9
comp=Z,0.9nm,0.5s,baz=49,slow=7.9,SNR=6.9							
YKA	Yellowknife Ar	65.37	29	P	P	16 54 49.1	+1.6
comp=Z,0.8nm,0.8s,baz=298,slow=6.4,SNR=6.9							
YKA	Yellowknife Ar	65.37	29	*ce*P	P	16 54 49.0	+1.5
YKA				pmax	pmax		
comp=Z,1.0nm,0.8s							
OBN	Obninsk	67.08	322	⇑*e*P	P	16 54 57.2	-1.2
OBN				*e*PP	pP	16 55 43.0	+3.5
OBN				*e*		16 57 30.3	
OBN				*e*S	S	17 03 30.2	-7.8
OBN				pmax	pmax		
comp=Z,7.0nm,0.7s							
STKA	Stephens Creek	68.13	177	P	P	16 55 04.7	-0.5
comp=Z,2.2nm,0.8s,baz=330,slow=14,SNR=3.0							
FINES	FINESS Array B	68.14	331	P	P	16 55 05.3	+0.3
comp=Z,1.5nm,0.3s,baz=58,slow=6.5,SNR=31							
NEY	Neytrino	69.80	309	⇓*e*P	P	16 55 17.5	+1.7
NEY				pmax	pmax		
comp=Z,3.0nm,2.3s							
PINE	Pine Mountain	72.40	48	*e*P	P	16 55 33.1	+1.6
comp=Z,4.8nm,0.8s							
AKASG	Malin Array Be	73.24	321	P	P	16 55 35.5	-0.5
comp=Z,0.7nm,0.4s,baz=48,slow=6.2,SNR=8.8							
AKASG	Malin Array Be	73.24	321	*ce*P	P	16 55 35.9	-0.1
AKASG				pmax	pmax		
comp=Z,1.0nm,0.4s							
HFS	Hagfors	73.55	335	P	P	16 55 38.0	+0.4
comp=Z,1.2nm,0.5s,baz=79,slow=9.0,SNR=9.4							
NB2	NORSAR Subarra	73.71	336	P	P	16 55 38.9	+0.2
comp=Z,1.0nm,0.5s,baz=43,slow=5.9							
NOA	NORSAR Array B	73.71	336	P	P	16 55 39.2	+0.6
comp=Z,1.8nm,0.6s,baz=55,slow=7.5,SNR=5.1							
NOA	NORSAR Array B	73.71	336	P	P	16 55 39.3	+0.6
NOA				pmax	pmax		
comp=Z,1.0nm,0.5s							
KVN	Kaiserville	76.88	51	*e*P	P	16 55 59.0	+1.7
comp=Z,4.8nm,1.2s							
KVN	Kaiserville	76.88	51	*e*P	P	16 55 59.0	+1.7
KVN				pmax	pmax		
comp=Z,5.0nm,1.2s							
NV01	Mina Array Sit	77.12	52	*e*P	P	16 56 00.7	+2.0
NVAR	Mina Array Bea	77.12	52	P	P	16 56 00.5	+1.8
comp=Z,1.6nm,0.8s,baz=296,slow=5.3,SNR=10							
BRTR	Keskin Array B	77.42	310	P	P	16 55 59.9	-0.3
comp=Z,0.5nm,0.4s,baz=87,slow=4.2,SNR=4.7							
BRTR	Keskin Array B	77.42	310	*i* P	P	16 56 00.8	+0.6
BRTR				pmax	pmax		
comp=Z,1.0nm,0.4s							
PDAR	Pinedale Array	79.64	44	P	P	16 56 14.3	+1.9
comp=Z,1.1nm,0.8s,baz=285,slow=1.9,SNR=7.9							
PDAR	Pinedale Array	79.64	44	*e*P	P	16 56 14.1	+1.6
CLL	Collm	80.33	329	*e*P	P	16 56 16.0	+0.3
P17A	Butcher Ranch,	81.09	47	*e*P	P	16 56 22.0	+1.8
comp=Z,7.6nm,1.3s							
SRU	San Rafael Swe	81.46	47	*e*P	P	16 56 23.7	+1.5
comp=Z,3.3nm,0.9s							
SRU	San Rafael Swe	81.46	47	*e*P	P	16 56 23.7	+1.5
SRU				pmax	pmax		
comp=Z,3.0nm,0.9s							
PV01	Paradox Valley	83.25	47	*e*P	P	16 56 33.2	+1.6
comp=Z,2.7nm,0.8s							
WUAZ	Wupatki	83.27	50	*e*P	P	16 56 33.9	+2.3
comp=Z,2.9nm,0.8s							
S22A	4UR Ranch, Cre	84.53	46	*e*P	P	16 56 40.3	+2.2
comp=Z,2.3nm,0.9s							
TXAR	Lajitas Array	92.23	51	P	P	16 57 15.9	+1.3
comp=Z,0.5nm,0.5s,baz=298,slow=3.4,SNR=9.6							
SAML	Samuel	146.18	41	*e*PKPbc	PKPab	17 03 45.1	-0.3
LPAZ	La Paz	148.91	57	PKPbc	PKPbc	17 03 53.7	+1.1
comp=Z,1.1nm,0.7s,baz=2.7,slow=4.4,SNR=5.1							

IDC 03 16:44:38.1±2.5, 1°.86S×135°.54E, h0km, mb3.0/2, mb1 3.4/3, mb1mx3.2/46, mbtmp3.1/3, ML3.1/1, Error ellipse: s-maj=203.8km s-min=30.1km az=100.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.01	184	P	Pn	16 48 49.5	-0.6
0.1nm,0.3s,baz=2.9,slow=11,SNR=9.6							
ASAR	Alice Springs	21.74	184	P	P	16 49 30.9	-0.5
0.4nm,0.5s,baz=18,slow=10,SNR=6.5							
ILAR	Eielson Array	86.38	25	P	P	16 57 22.5	+0.4
0.2nm,0.6s,baz=241,slow=6.8,SNR=3.3							

*ISCJB **03** 16:44:50.1±1.1, 22°.50S±0°.04×70°.56W±0°.07, h23km±8km, mb4.0/1, Error ellipse: s-maj=11.1km s-min=5.8km az=15.8*
*GUC **03** 16:44:50.6±0.7, 22°.48S×70°.51W, h31km±4km, ML3.6*
*IDC **03** 16:45:33.6±3.4, 13°.59S×69°.86W, h250km±49km, mb3.5/2, mb1 3.2/3, mb1mx2.9/38, mbtmp3.7/3, Error ellipse: s-maj=189.2km s-min=31.4km az=58.0*

ISC 03 16:44:50.4±1.7, 22°.51S±0°.04×70°.51W±0°.10, h30km±10km, n15, σ1§29/21, 2C-7D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	IPOC Station P	0.38	63	⇓*i*P	Pb	16 44 59.1	-0.1
PB04				*i* S	Sb	16 45 05.2	+0.1
PB06	IPOC Station P	0.89	103	⇓*i*P	Pn	16 45 07.3	+0.2
PB06				*i* S	Sb	16 45 19.3	+0.2
PB06				IAML		16 45 19.5	
comp=N,4μm,0.3s							
PB07	IPOC Station P	0.97	37	⇓*i*P	Pn	16 45 07.9	-0.3
PB07				*i* S	Sn	16 45 20.4	-0.7
PB07				IAML		16 45 22.1	
comp=E,3μm,0.4s							
PB10	IPOC Station P	1.00	182	⇓*i*P	Pn	16 45 08.6	+0.2
PB10				*i* S	Sn	16 45 22.1	+0.5
PB10				IAML		16 45 28.1	
comp=E,2μm,0.3s							
ANCH	Antofagasta	1.17	175	⇑*i*P	Pb	16 45 37.5	+25
ANCH				*i* S	Sb	16 45 52.5	+26
PB15	IPOC Station P	1.19	126	⇓*i*P	Pb	16 45 12.0	-0.5
PB15				*i* S	Sb	16 45 27.9	+0.3
PB02	IPOC Station P	1.31	26	⇓*i*P	Pn	16 45 13.1	+0.2
PB02				*i* S	Sb	16 45 30.3	-0.8
PB02				IAML		16 45 34.9	
comp=N,3μm,0.3s							
PB09	IPOC Station P	1.38	59	⇓*i*P	Pb	16 45 15.0	-0.7
PB09				*i* S	Sb	16 45 33.1	+0.2
PB09				IAML		16 45 36.9	
comp=N,2μm,0.4s							
PB01	IPOC Station P	1.74	33	*e*P	Pn	16 45 19.5	+0.8
PB01				*i* S	Sn	16 45 41.4	+1.3
PB01				IAML		16 45 46.6	
comp=E,864nm,0.5s							
PB14	IPOC Station P	2.11	177	IAML		16 46 03.8	
comp=E,664nm,0.5s							
PB08	IPOC Station P	2.68	29	⇑*i*P	Pn	16 45 34.1	+2.2
PB08				*i* S	Sb	16 46 07.3	-3.2
PSGC	Pisagua	2.92	7	IAML		16 46 25.8	
comp=E,301nm,0.8s							
LPAZ	La Paz	6.58	20	P	Pn	16 46 28.6	+2.8
comp=E,0.4nm,0.3s,baz=308,slow=19,SNR=10							
TORD	Torodi Ar. Bea	79.09	71	P	P	16 56 52.3	-0.2
comp=E,1.5nm,0.8s,baz=249,slow=6.0,SNR=7.0							
MKAR	Makanchi Array	147.32	36	PKP	PKPab	17 04 32.0	-1.0
comp=E,0.8nm,0.7s,baz=319,slow=3.5,SNR=6.0							

MAN 03 16:48:59.7, 10°.32N×125°.03E, h28km, mb3.8, ML2.6, MS2.1, 2C, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	Maasin	0.25	223	*e*P	Pn	16 49 08.3	+0.7
MSLP				*e*S	Sn	16 49 15.2	+2.6
SCPH	Surigao	0.70	140	⇑*e*P	Pb	16 49 13.4	+0.1
OCLP	Ormoc	0.84	330	*e*P	Pn	16 49 15.0	-0.7
PLP	Palo	0.84	356	⇑*e*P	Pn	16 49 15.6	-0.1
PLP				*i* S	Sn	16 49 27.9	+0.7
BESP	Borongan	1.33	17	*e*P	Pn	16 49 22.3	-0.2
CNP	Catarman	2.21	351	*e*P	Pb	16 49 38.7	-0.2

*IDC **03** 16:52:54.6±1.5, 26°.69N×54°.52E, h0km, mb3.6/5, mb1 3.6/6, mb1mx3.2/57, mbtmp3.6/6, ML3.0/1, Error ellipse: s-maj=33.3km s-min=25.8km az=179.0*
*OMAN **03** 16:52:54.6±0.5, 26°.82N×54°.27E, h30km, Error ellipse: s-maj=9.2km s-min=4.0km az=354.0*
*ISCJB **03** 16:52:55.8±0.5, 26°.64N±0°.04×54°.52E±0°.04, h10km, mb3.5/5, Error ellipse: s-maj=6.6km s-min=4.3km az=140.6*
*TEH **03** 16:52:59.6, 26°.67N×54°.77E, h28km, ML3.1*
*CSEM **03** 16:53:00.1±0.5, 26.65N×54°.68E, h30km, ML3.1, Error ellipse: s-maj=15.0km s-min=9.6km az=77.0*

ISC 03 16:52:55.8±0.7, 26°.66N±0°.03×54°.69E±0°.04, h10km, n32, σ1§80/38, mb3.5/5, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHME	Shamm	1.44	115	P	Pg	16 53 23.7	+0.3
SNR=12							
SHME				S	Sg	16 53 44.2	+2.2
BNDS	Bandar-Abbas	1.51	60	*e*Pg	Pg	16 53 24.7	-0.2
GENO	Geno	1.52	60	*e*Pn	Pg	16 53 26.7	+1.8
GENO				*e*Sg	Sg	16 53 49.4	+4.8
GENO				*e*		16 53 55.9	
comp=Z,99nm,0.2s							
BANOM	Banah	1.62	116	P	Pg	16 53 26.6	-0.3
SNR=16							
BANOM	Banah	1.62	116	P	Pg	16 53 26.6	-0.3
IBND	Bandar-abas	1.83	64	*e*Pn	Pg	16 53 31.1	+0.2
IBND				*e*		16 54 11.8	
comp=Z,4μm,0.2s							
MSFE	Esma-Masafi	1.85	134	P	Pb	16 53 30.0	+0.3
MSFE				S	Sg	16 53 54.3	-1.0
NAZ	Nazwa, Dubai	1.88	152	P	Pg	16 53 31.1	-0.7
NAZ	Nazwa, Dubai	1.88	152	P	Pg	16 53 31.1	-0.7
MDH	Madha	1.98	133	P	Pg	16 53 33.0	-0.8
JHRM	Jahrom	2.09	332	*e*Pn	Pg	16 53 36.0	+0.1
ASUD	Al Ashush, Dub	2.10	164	P	Pb	16 53 34.0	0.0
SNR=15							
ASUD	Al Ashush, Dub	2.10	164	P	Pb	16 53 34.0	0.0
SNR=15							
NIAN	Nian	2.11	64	*e*Pn	Pg	16 53 34.5	-1.8
NIAN				*e*		16 54 18.6	
comp=Z,99nm,0.3s							
KHSK	Kohestak	2.12	87	*e*Pn	Pg	16 53 34.8	-1.6
KHSK				*e*		16 54 23.4	
comp=Z,99nm,0.2s							
UOSS	Minazif	2.18	141	P	Pb	16 53 33.9	-1.5
UOSS	Minazif	2.18	141	P	Pb	16 53 33.9	-1.5
GHIR	Ghir-Karzin	2.22	317	*e*Pn	Pb	16 53 36.5	+0.4
GHIR				*e*Sg	Sg	16 54 07.9	+0.8
SOHO	SOHO	3.02	146	P	Pn	16 53 45.0	+1.4
NGRK	Negar Kerman	3.48	31	*e*Pn	Pb	16 53 54.1	-3.6
NGRK				*e*		16 53 58.1	
comp=Z,99nm,0.1s							
KRBR	Kerman	3.78	28	*e*P	Pn	16 53 56.3	+1.9
KHGB	Kohb Gabri	4.02	23	*e*		16 54 03.3	
comp=Z,99nm,0.1s							
KHGB				*e*Pn	Pb	16 54 02.3	-4.6
WSAR	Wadi Sarin	4.94	133	Pn	Pn	16 54 12.8	+2.8
comp=Z,0.5nm,0.3s,baz=335,slow=11,SNR=4.7							
WSAR				Sn	Sn	16 55 06.7	-0.6
comp=Z,0.8nm,0.3s,baz=166,slow=8.3,SNR=5.1							
IRAM	Ramesheh	5.51	339	*e*Pn	Pn	16 54 20.0	+1.8
IRAM				*e*		16 54 22.2	
comp=Z,160nm,0.1s							
ZHSF	Zahedan	6.12	60	*e*Pn	Pn	16 54 28.6	+2.1
MHTO	MHTO	6.39	151	P	Pn	16 54 31.6	+1.5
MHTO				S	Sn	16 55 40.6	-2.5
DMTO	DMTO	8.90	178	P	Pn	16 55 04.1	-0.4
SNR=5.7							
BRTR	Keskin Array B	21.85	312	P	P	16 57 49.0	+0.3
comp=Z,0.9nm,0.7s,baz=125,slow=14,SNR=6.6							
MKAR	Makanchi Array	29.64	40	P	P	16 59 02.8	+1.3
comp=Z,0.1nm,0.4s,baz=224,slow=8.1,SNR=2.8							
ZALV	Zalesovo Beam	35.17	31	P	P	16 59 49.7	0.0
comp=Z,0.5nm,0.3s,baz=241,slow=9.0,SNR=3.7

Plg47.0000°, Azm292.0000°;
ISC 03 17:06:04.9±0.6, 41°.07N±0°.04×140°.09E±0°.05, h164km±4km, n120, σ1$22/138, mb4.0/46, 9C-23D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSI2	**Shiura 2**	**0.25**	**92**	‖P	**Pn**	**17 06 27.2**	**+0.2**
JSI2				*e*S	**Sn**	**17 06 43.6**	**-0.2**
JIW	**Iwasaki**	**0.48**	**187**	‖P	**Pn**	**17 06 27.9**	**+0.1**
JIW				S	**Sn**	**17 06 45.1**	**-0.2**
JSR	**Shiriuchi**	**0.53**	**28**	‖P	**Pn**	**17 06 28.1**	**+0.1**
JSR				*e*S	**Sn**	**17 06 45.2**	**-0.6**
JOT	**Ohata**	**0.79**	**66**	‖P	**Pn**	**17 06 29.9**	**+0.4**
JTM	**Tenmabayashi**	**0.80**	**110**	‖P	**Pn**	**17 06 29.9**	**+0.4**
JAH	**Hinai**	**0.97**	**154**	‖P	**Pn**	**17 06 31.2**	**+0.4**
JAH				S	**Sn**	**17 06 51.0**	**+0.3**
JYM2	**Yakumo 2**	**1.07**	**11**	‖P	**Pn**	**17 06 32.2**	**+0.6**
JYM2				*e*S	**Sn**	**17 06 52.1**	**-0.2**
JKB	**Kayabe**	**1.09**	**41**	‖P	**Pn**	**17 06 32.2**	**+0.5**
JOSM	**Okushiri--Mats**	**1.11**	**336**	‖P	**Pn**	**17 06 32.0**	**+0.1**
JOSM				S	**Sn**	**17 06 52.1**	**-0.8**
JANG	**Nango**	**1.29**	**122**	‖P	**Pn**	**17 06 33.4**	**-0.1**
JANG				*e*S	**Sn**	**17 06 54.9**	**-0.6**
JOM	**Ohasama**	**1.84**	**149**	‖P	**Pn**	**17 06 38.8**	**-0.4**
JOM				*e*S	**Sn**	**17 07 05.2**	**-0.3**
JEW	**Eniwo**	**2.04**	**29**	‖P	**Pn**	**17 06 42.8**	**+1.4**
JEW				*e*S	**Sn**	**17 07 12.0**	**+2.3**
JYK	**Kaneyama**	**2.15**	**174**	‖P	**Pn**	**17 06 42.8**	**+0.1**
JMK	**Ichinoseki**	**2.28**	**157**	‖P	**Pn**	**17 06 43.5**	**-0.7**
JNBK	**Urakawa-nobuka**	**2.34**	**58**	P	**Pn**	**17 06 45.3**	**+0.5**
JNBK				S	**Sn**	**17 07 16.6**	**+1.0**
ERM	**Erimo**	**2.49**	**67**	*e*Pn	**Pn**	**17 06 47.4**	**+0.8**
ERM	**Erimo**	**2.49**	**67**	*c i*P	**Pn**	**17 06 47.2**	**+0.6**
ASAJ	**Asahikawa**	**3.57**	**30**	P	**Pn**	**17 07 00.8**	**+0.8**
	16nm,0.3s,baz=213,slow=15,SNR=375						
ASAJ				S	**Sn**	**17 07 41.7**	**-1.2**
	9.4nm,0.3s,baz=99,slow=32,SNR=17						
MJB9	**Matsu-Tunnel**	**4.75**	**199**	*e*Pn	**Pn**	**17 07 16.1**	**+0.8**
MAJO	**Matsushiro**	**4.75**	**199**	*e*Pn	**Pn**	**17 07 15.6**	**+0.2**
MAJO	**Matsushiro**	**4.75**	**199**	*c i*P	**Pn**	**17 07 16.4**	**+1.1**
MJAR	**Matsushiro Arr**	**4.75**	**199**	P	**Pn**	**17 07 15.4**	**+0.1**
	1.3nm,0.3s,baz=250,slow=16,SNR=21						
YUK	**Yuzh-Kuril'sk**	**5.20**	**53**	*c i*P	**Pn**	**17 07 21.0**	**0.0**
YUK				*e*S	**Sn**	**17 08 18.2**	**-2.5**
YUK				pmax	pmax		
	comp=Z,246nm,0.2s						
YUK				pmax	pmax		
	comp=N,29nm,0.1s						
YUK				pmax	pmax		
	comp=E,95nm,0.1s						
YUK				smax	smax		
	comp=N,508nm,0.5s						
YUK				smax	smax		
	comp=E,788nm,0.5s						
SHO	**Shikotan**	**5.72**	**58**	*d i*P	**Pn**	**17 07 25.9**	**-2.1**
SHO				*i* S	**Sn**	**17 08 25.8**	**-7.3**
SHO				pmax	pmax		
	comp=Z,48nm,0.2s						
SHO				pmax	pmax		
	comp=N,10.0nm,0.1s						
SHO				pmax	pmax		
	comp=E,31nm,0.1s						
SHO				smax	smax		
	comp=N,408nm,0.5s						
SHO				smax	smax		
	comp=E,398nm,0.2s						
YSS	**Yuzh-Sakhalins**	**6.19**	**17**	*e*Pn	**Pn**	**17 07 34.3**	**+0.1**
YSS	**Yuzh-Sakhalins**	**6.19**	**17**	‖*e*P	**Pn**	**17 07 34.6**	**+0.4**
YSS				pmax	pmax		
	comp=N,30nm,0.4s						
YSS				pmax	pmax		
	comp=E,20nm,0.4s						
YSS				pmax	pmax		
	comp=Z,40nm,0.4s						
YSS				pmax	pmax		
	comp=Z,100nm,2.2s						
USRK	**Ussuriysk Ar.**	**6.74**	**300**	P	**Pn**	**17 07 42.1**	**+0.6**
	comp=Z,0.9nm,0.3s,baz=103,slow=14,SNR=12						
MSHR	**Mys Shultsa**	**6.84**	**286**	‖*e*P	**Pn**	**17 07 43.1**	**+0.3**
KUR	**Kuril'sk**	**7.05**	**51**	*e*P	**Pn**	**17 07 46.3**	**+0.8**
KUR				*e*S	**Sn**	**17 09 04.9**	**+0.2**
KUR				smax	smax		
	comp=E,51nm,0.4s						
KUR				smax	smax		
	comp=N,27nm,0.2s						
JHJ	**Hachijo jima 2**	**7.94**	**182**	P	**Pn**	**17 07 57.5**	**+0.1**
	comp=N,9.2nm,0.3s,baz=276,slow=16,SNR=2.9						
KLR	**Kul'dur**	**10.06**	**327**	P	**Pn**	**17 08 26.1**	**+0.8**
	comp=N,0.0nm,0.3s,baz=145,slow=6.0,SNR=3.4						
KLR	**Kul'dur**	**10.06**	**327**	‖*e*P	**Pn**	**17 08 26.0**	**+0.7**
KSRS	**Korea Array**	**10.10**	**253**	P	**Pn**	**17 08 25.9**	**0.0**
	comp=N,0.1nm,0.3s,baz=69,slow=12,SNR=6.7						
CN2	**Changchun**	**11.16**	**289**	*e*P	**P**	**17 08 47.8**	**+0.4**
ZEA	**Zeya**	**15.34**	**330**	*e*P	**Pn**	**17 09 32.7**	**+0.1**
ZEA				pmax	pmax		
	comp=Z,11nm,0.9s						
MA2	**Magadan**	**19.70**	**16**	P	**P**	**17 10 21.3**	**0.0**
	comp=Z,0.3nm,0.3s,baz=195,slow=20,SNR=2.5						
HHC	**Hu-ho-hao-te**	**21.51**	**279**	*e*P	**P**	**17 10 39.9**	**-1.0**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,48nm,5.8s						
YAK	**Yakutsk**	**21.91**	**347**	‖*e*P	**P**	**17 10 44.5**	**-0.2**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SEY	**Seymchan**	**23.09**	**14**	P	**P**	**17 10 56.1**	**+0.3**
	comp=Z,3.2nm,0.6s,baz=207,slow=10.0,SNR=20						
SEY	**Seymchan**	**23.09**	**14**	‖*e*P	**P**	**17 10 56.5**	**+0.7**
ULN	**Ulaanbaatar**	**24.40**	**297**	‖*e*P	**P**	**17 11 08.4**	**+0.3**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.6s						
SONM	**Songino Array**	**24.84**	**297**	P	**P**	**17 11 11.4**	**-0.7**
	comp=Z,0.8nm,0.3s,baz=85,slow=8.6,SNR=8.7						
TLY	**Talaya**	**27.02**	**306**	P	**P**	**17 11 31.5**	**0.0**
	comp=Z,0.9nm,0.4s,baz=116,slow=6.1,SNR=3.9						
BILL	**Bilibino**	**30.51**	**19**	‖*e*P	**P**	**17 12 02.4**	**+0.3**
BILL				*e**PP	**pP**	**17 12 33.4**	**-3.0**
BILL				*e*		17 13 04.6	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.9s						
GTA	**Gaotai**	**30.60**	**280**	*e*P	**P**	**17 12 01.6**	**-1.8**
GTA				pP	pP	17 12 39.2	+1.4
GTA				sP	sP	17 12 58.8	+2.1
GTA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
WMQ	**Urumqi**	**38.23**	**292**	P	**P**	**17 13 09.1**	**+0.3**
ZAA0	**Zalesovo Array**	**38.51**	**309**	*e*P	**P**	**17 13 10.9**	**0.0**
ZALV	**Zalesovo Beam**	**38.51**	**309**	P	**P**	**17 13 10.9**	**0.0**
	comp=Z,1.9nm,0.4s,baz=88,slow=8.5,SNR=17						
ZALV				PcP	**PcP**	**17 15 20.6**	**+0.4**
	comp=Z,1.4nm,0.4s,baz=103,slow=2.7,SNR=6.6						
ZALV	**Zalesovo Beam**	**38.51**	**309**	*e*P	**P**	**17 13 10.3**	**-0.6**
ZALV	**Zalesovo Beam**	**38.51**	**309**	*e*P	**P**	**17 13 10.3**	**-0.6**
NVS	**Novosibirsk**	**39.38**	**310**	*e*P	**P**	**17 13 18.5**	**+0.4**
MK01	**Makanchi Array**	**41.20**	**298**	*e*P	**P**	**17 13 32.8**	**-0.5**
MK31	**Makanchi Array**	**41.20**	**298**	*e*P	**P**	**17 13 33.1**	**-0.2**
MK31	**Makanchi Array**	**41.20**	**298**	*e*P	**P**	**17 13 33.1**	**-0.2**
MKAR	**Makanchi Array**	**41.20**	**298**	P	**P**	**17 13 33.2**	**-0.1**
	comp=Z,7.9nm,0.7s,baz=84,slow=10,SNR=67						
MAKZ	**Makanchi**	**41.41**	**298**	*e*P	**P**	**17 13 34.8**	**-0.2**
	comp=Z,9.2nm,0.8s						
MAKZ	**Makanchi**	**41.41**	**298**	*e*P	**P**	**17 13 34.8**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**41.72**	**250**	P	**P**	**17 13 37.9**	**+0.1**
	comp=Z,1.2nm,0.6s,baz=41,slow=7.4,SNR=16						
KURK	**Kurchatov**	**42.71**	**305**	*e*P	**P**	**17 13 44.2**	**-1.2**
	comp=Z,14nm,0.8s						
KURK	**Kurchatov**	**42.71**	**305**	*d i*P	**P**	**17 13 45.3**	**-0.1**
KURK				pmax	pmax		
	comp=Z,15nm,0.8s						
KURBB	**Kurchatov Arra**	**42.79**	**304**	P	**P**	**17 13 45.9**	**-0.1**
	comp=Z,13nm,0.7s,baz=81,slow=8.6,SNR=80						
IM3	**Indian Mountai**	**43.77**	**33**	*e*P	**P**	**17 13 54.6**	**+0.9**
PDGK	**Podgornoye**	**44.08**	**294**	P	**P**	**17 13 55.8**	**-0.9**
PDGK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CAST	**Castle Rocks**	**44.54**	**36**	*e*P	**P**	**17 14 01.3**	**+1.4**
	comp=Z,17nm,1.8s						
KDAK	**Kodiak Island**	**44.87**	**44**	*i* P	**P**	**17 14 03.4**	**+0.9**
JIRN	**Jiri**	**45.78**	**271**	*e*P	**P**	**17 14 10.8**	**+0.3**
	comp=Z,31nm,0.6s						
GUN	**Gumba**	**45.88**	**271**	*e*P	**P**	**17 14 11.4**	**+0.1**
	comp=Z,74nm,0.5s						
MDM	**Murphy Dome**	**46.11**	**34**	*e*P	**P**	**17 14 13.5**	**+1.4**
	comp=Z,6.0nm,0.6s						
COLA	**College**	**46.28**	**34**	‖*e*P	**P**	**17 14 16.1**	**+2.7**
COLA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KKN	**Kakani**	**46.40**	**271**	*e*P	**P**	**17 14 15.1**	**-0.1**
	comp=Z,33nm,0.7s						
PKIN	**Phulchoki**	**46.42**	**271**	*e*P	**P**	**17 14 15.1**	**-0.3**
	comp=Z,3.9nm,0.3s						
DMN	**Daman**	**46.63**	**271**	*e*P	**P**	**17 14 17.2**	**+0.2**
	comp=Z,18nm,0.7s						
IL1	**Eielson Array**	**46.70**	**34**	*e*P	**P**	**17 14 17.2**	**+0.5**
ILAR	**Eielson Array**	**46.70**	**34**	P	**P**	**17 14 18.2**	**+1.5**
	comp=Z,2.4nm,0.6s,baz=276,slow=6.6,SNR=28						
ILB	**Eielson Array**	**46.70**	**34**	*e*P	**P**	**17 14 18.1**	**+1.4**
GKN	**Gorkha**	**46.78**	**272**	*e*P	**P**	**17 14 17.9**	**-0.2**
	comp=Z,23nm,0.4s						
TKM2	**Tokmak 2**	**46.90**	**295**	P	**P**	**17 14 19.5**	**+0.6**
TKM2				pmax	pmax		
	comp=Z,12nm,0.6s						
BVA0	**Borovoye Array**	**47.16**	**309**	*i* P	**P**	**17 14 20.5**	**0.0**
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.4s						
BVAR	**Borovoye Array**	**47.16**	**309**	P	**P**	**17 14 20.8**	**+0.3**
	comp=Z,5.1nm,0.4s,baz=65,slow=8.2,SNR=71						
BRVK	**Borovoye**	**47.21**	**309**	*e*P	**P**	**17 14 20.4**	**-0.5**
	comp=Z,3.3nm,0.4s						
BRVK	**Borovoye**	**47.21**	**309**	*d i*P	**P**	**17 14 21.2**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
DANN	**Dangsing**	**47.26**	**273**	*e*P	**P**	**17 14 22.4**	**+0.4**
	comp=Z,69nm,0.4s						
OTUK	**Ortayu**	**47.30**	**303**	P	**P**	**17 14 21.6**	**-0.1**
OTUK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
KOLN	**Koldanda**	**47.68**	**272**	*e*P	**P**	**17 14 24.4**	**-0.7**
	comp=Z,8.1nm,0.4s						
AAK	**Ala-Archa**	**47.76**	**295**	*de*P	**P**	**17 14 25.9**	**+0.4**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
PYUN	**Piuthan**	**47.97**	**273**	*e*P	**P**	**17 14 27.6**	**+0.3**
	comp=Z,20nm,0.3s						
MNAS	**Manas**	**49.18**	**295**	P	**P**	**17 14 37.1**	**+0.8**
MNAS				pmax	pmax		
	comp=Z,7.0nm,0.6s						
SFK	**Sufi-Kurgan**	**49.47**	**292**	P	**P**	**17 14 38.9**	**+0.3**
SFK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KK31	**Karatay Array**	**50.29**	**297**	*e*P	**P**	**17 14 44.6**	**0.0**
KK31	**Karatay Array**	**50.29**	**297**	P	**P**	**17 14 44.8**	**+0.2**
KK31				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KKAR	**Karatay Array**	**50.29**	**297**	*e*P	**P**	**17 14 44.6**	**0.0**
KKAR	**Karatay Array**	**50.29**	**297**	*e*P	**P**	**17 14 44.6**	**0.0**
INK	**Inuvik**	**51.30**	**28**	P	**P**	**17 14 53.1**	**+1.5**
	comp=Z,1.8nm,0.5s,baz=312,slow=5.0,SNR=8.4						
ARU	**Arti**	**52.70**	**316**	*e*P	**P**	**17 15 01.4**	**-0.7**
	comp=Z,5.8nm,0.9s						
ARU	**Arti**	**52.70**	**316**	*c i*P	**P**	**17 15 02.2**	**+0.1**
ARU						17 16 08.9	
ARU				S	**S**	**17 22 16.9**	**+0.1**
ARU				SS	**SS**	**17 25 49.4**	**-7.5**
ARU				pmax	pmax		
	comp=Z,7.0nm,1.0s						
AB31	**Akbulak array**	**54.61**	**308**	P	**P**	**17 15 16.1**	**0.0**
AB31				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ABKAR	**Akbulak array**	**54.61**	**308**	*e*P	**P**	**17 15 16.1**	**-0.1**
AKTO	**Aktyubinsk**	**55.26**	**310**	P	**P**	**17 15 20.4**	**-0.4**
	comp=Z,1.8nm,0.6s,baz=67,slow=14,SNR=6.9						
YKA	**Yellowknife Ar**	**60.86**	**31**	P	**P**	**17 16 00.5**	**+1.0**
	comp=Z,0.5nm,0.6s,baz=303,slow=7.0,SNR=4.2						
WRAB	**Tennant Creek**	**60.92**	**186**	‖*e*P	**P**	**17 15 59.8**	**-0.6**
WRA	**Warramunga Arr**	**60.93**	**186**	P	**P**	**17 15 59.9**	**-0.6**
	comp=Z,1.1nm,0.5s,baz=4.1,slow=6.9,SNR=32						
ASAR	**Alice Springs**	**64.66**	**186**	P	**P**	**17 16 25.1**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=1.5,slow=6.4,SNR=8.1						
FINES	**FINESS Array B**	**64.78**	**331**	P	**P**	**17 16 25.1**	**-0.3**
	comp=Z,2.5nm,0.6s,baz=38,slow=9.6,SNR=17						
FINES	**FINESS Array B**	**64.78**	**331**	*i* P	**P**	**17 16 25.7**	**+0.3**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KIV	**Kislovodsk**	**67.52**	**309**	*e*P	**P**	**17 16 44.4**	**+1.1**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KBZ	**Khabaz**	**67.53**	**309**	P	**P**	**17 16 43.0**	**-0.2**
	comp=Z,1.0nm,0.5s,baz=164,slow=6.1,SNR=3.4						
GNI	**Garni**	**68.51**	**305**	‖*e*P	**P**	**17 16 52.1**	**+2.5**
GNI				pmax	pmax		
	comp=Z,33nm,1.2s						
HFS	**Hagfors**	**70.00**	**335**	P	**P**	**17 16 58.1**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=129,slow=21,SNR=17						
NOA	**NORSAR Array B**	**70.08**	**336**	P	**P**	**17 16 58.7**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=31,slow=2.7,SNR=3.0						
AKASG	**Malin Array Be**	**70.50**	**321**	P	**P**	**17 17 00.5**	**-0.9**
	comp=Z,0.7nm,0.4s,baz=45,slow=6.7,SNR=6.8						
DLMT	**Dillon**	**72.22**	**45**	*e*P	**P**	**17 17 13.5**	**+1.5**
NV01	**Mina Array Sit**	**73.41**	**53**	*e*P	**P**	**17 17 19.9**	**+0.6**
NVAR	**Mina Array Bea**	**73.41**	**53**	P	**P**	**17 17 20.6**	**+1.4**
	comp=Z,0.8nm,0.6s,baz=298,slow=5.4,SNR=10						
BUR04	**Bucovina Ar. S**	**74.53**	**320**	*e*P	**P**	**17 17 25.8**	**+0.3**
BRTR	**Keskin Array B**	**75.44**	**310**	P	**P**	**17 17 30.7**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=84,slow=7.5,SNR=3.1						
PDAR	**Pinedale Array**	**75.58**	**45**	P	**P**	**17 17 32.7**	**+1.0**
	comp=Z,0.8nm,0.5s,baz=283,slow=1.7,SNR=6.5						
GERES	**GERESS Array B**	**78.76**	**327**	P	**P**	**17 17 49.4**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=21,slow=5.7,SNR=1.1						
TXAR	**Lajitas Array**	**88.45**	**52**	P	**P**	**17 18 40.1**	**+1.3**
	comp=Z,0.4nm,0.7s,baz=289,slow=2.9,SNR=5.0						
SNAA	**Sanae**	**144.26**	**199**	PKP	**PKPab**	**17 25 18.6**	**+0.2**
	comp=Z,3.1nm,0.5s,baz=79,slow=5.2,SNR=13						
LPAZ	**La Paz**	**145.31**	**53**	PKPbc	**PKPdf**	**17 25 24.6**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=162,slow=3.2,SNR=3.1						

GCMT ***03*** *17:14:40.0±0.3, 36°.28S×99°.91W, h22km±1km, MW4.9/83, Moment Tensor Solution. s31,c35; s83,c104; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=0.05±.16; Mθθ=0.79±.13; Mφφ=0.83±.13; Mrθ=0.12±.21; Mrφ=-3.03±.12; Mθφ=0.55±.20; Best double couple: M=3.18700×10^16 NP1:φs=188.00000°, δ87.00000°, λ.9.00000°. NP2: φs=97.00000°, δ81.00000°, λ177.00000°. Principal axes: T 3.2430, Plg9.0000°, Azm53.0000°; N -0.1110, Plg80.0000°, Azm206.0000°; P -3.1320, Plg4.0000°, Azm322.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISCJB ***03*** *17:14:45.4±0.6, 36°.30S±0°.10×100°.1W±0°.2, h10km, mb4.1/13, MS3.8/17 Error ellipse: s-maj=20.0km s-min=13.9km az=2.1*

IDC ***03*** *17:14:45.6±0.7, 36°.26S×100°.02W, h0km, mb4.2/13, mb1 4.4/13, mb1mx4.2/36, mbtmp4.2/13, MS3.8/18, Ms1 3.8/18, ms1mx3.7/32, Error ellipse: s-maj=23.4km s-min=17.2km az=96.0*

ISC 03 17:14:47.2±0.7, 36°.3S±0°.1×100°.0W±0°.2, h10km, n32, σ0$92/16, mb4.2/12, MS4.0/17, 1C, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**12.11**	**316**	LR	LR	17 20 53.3	
	comp=Z,822nm,20.8s,baz=143,slow=30						
PLCA	**Paso Flores**	**23.40**	**110**	P	**P**	**17 19 57.5**	**+1.2**
	6.5nm,1.0s,baz=287,slow=9.0,SNR=4.7						
PLCA				LR	LR	17 25 43.2	
	comp=Z,62nm,21.9s,baz=295,slow=28						
LPAZ	**La Paz**	**34.58**	**63**	P	**P**	**17 21 37.2**	**+0.2**
	5.5nm,1.0s,baz=220,slow=7.0,SNR=17						
LPAZ				LR	LR	17 33 08.5	
	comp=Z,61nm,18.5s,baz=218,slow=32						
ATAH	**Atahualpa**	**35.09**	**39**	P	**P**	**17 21 40.9**	**-0.3**
	4.8nm,0.8s,baz=257,slow=2.2,SNR=4.3						
PMSA	**Palmer Station**	**35.64**	**154**	LR	LR	17 32 31.2	
	comp=Z,266nm,18.9s,baz=266,slow=30						
CPUP	**Villa Florida**	**37.52**	**87**	LR	LR	17 34 58.0	
	comp=Z,49nm,20.4s,baz=246,slow=32						
SIV	**San Ignacio**	**40.01**	**70**	P	**P**	**17 22 21.4**	**-1.0**
	3.4nm,0.9s,baz=234,slow=7.2,SNR=9.7						
ROSC	**El Rosal**	**47.45**	**36**	LR	LR	17 40 08.8	
	comp=Z,113nm,18.5s,baz=144,slow=32						
JTS	**JuntasAbangare**	**48.45**	**20**	LR	LR	17 39 10.8	
	comp=Z,155nm,18.3s,baz=258,slow=30						
SDV	**Santo Domingo**	**52.74**	**37**	LR	LR	17 45 01.6	
	comp=Z,133nm,18.1s,baz=112,slow=34						
QSPA	**South Pole Qui**	**53.93**	**180**	P	**P**	**17 24 11.6**	**+0.9**
	1.8nm,0.8s,baz=125,slow=2.8,SNR=3.5						
VNDA	**Vanda**	**56.62**	**195**	P	**P**	**17 24 30.1**	**+0.4**
	1.8nm,1.0s,baz=93,slow=8.0,SNR=6.6						
VNDA				LR	LR	17 43 59.2	
	comp=Z,84nm,18.1s,baz=110,slow=31						
SNAA	**Sanae**	**58.19**	**158**	LR	LR	17 45 25.1	
	comp=Z,110nm,20.6s,baz=350,slow=32						
TXAR	**Lajitas Array**	**65.36**	**356**	P	**P**	**17 25 31.0**	**+1.2**
	1.7nm,0.9s,baz=179,slow=7.4,SNR=12						
SYO	**Syowa Base**	**70.85**	**166**	‖*e*P	**P**	**17 26 02.3**	**-1.4**
MAW	**Mawson**	**75.62**	**173**	P	**P**	**17 26 30.9**	**-0.9**
	1.7nm,0.9s,baz=173,slow=17,SNR=2.2						
MAW				LR	LR	17 57 54.9	
	comp=Z,49nm,18.1s,baz=252,slow=34						
NVAR	**Mina Array Bea**	**76.25**	**345**	P	**P**	**17 26 35.3**	**-0.6**
	2.8nm,0.9s,baz=178,slow=7.0,SNR=15						
PDAR	**Pinedale Array**	**79.16**	**353**	P	**P**	**17 26 51.1**	**-1.0**
	1.9nm,0.6s,baz=160,slow=4.7,SNR=15						
DZM	**Mont Dzumac**	**80.01**	**250**	LR	LR	17 58 02.8	
	comp=Z,80nm,18.1s,baz=40,slow=32						
YBH	**Yreka Blue Hor**	**80.38**	**343**	P	**P**	**17 26 58.1**	**-0.5**
	1.2nm,0.8s,baz=94,slow=9.0,SNR=4.8						
YBH				LR	LR	17 54 43.9	
	comp=Z,36nm,18.8s,baz=176,slow=30						
ULM	**Lac du Bonnet**	**86.24**	**3**	P	**P**	**17 27 29.1**	**+0.6**
	1.5nm,0.7s,baz=171,slow=7.6,SNR=3.0						
STKA	**Stephens Creek**	**91.00**	**228**	LR	LR	18 00 22.5	
	comp=Z,84nm,18.3s,baz=198,slow=30						
HNR	**Honiara**	**92.49**	**257**	LR	LR	18 03 13.9	
	comp=Z,44nm,18.3s,baz=343,slow=32						
SCHQ	**Schefferville**	**95.12**	**19**	LR	LR	18 06 42.0	
	comp=Z,75nm,19.5s,baz=253,slow=33						
BOSA	**Boshof**	**97.42**	**134**	LR	LR	18 06 11.5	
	comp=Z,28nm,19.3s,baz=204,slow=32						
DBIC	**Dimbokro**	**98.03**	**88**	LR	LR	18 07 44.6	
	comp=Z,49nm,21.7s,baz=179,slow=32						
YKA	**Yellowknife Ar**	**99.14**	**353**	P	**Pdif**	**17 28 28.9**	**+0.9**
	0.3nm,0.7s,baz=354,slow=27,SNR=3.5						
H01W1	**Cape Leeuwin H**	**102.36**	**208**	T	T	19 23 51.5	
	baz=150,slow=74						
H01W2	**Cape Leeuwin H**	**102.37**	**208**	T	T	19 23 46.4	
	baz=150,slow=74						
H01W3	**Cape Leeuwin H**	**102.38**	**208**	T	T	19 23 54.6	
	baz=150						
BRTR	**Keskin Array B**	**143.61**	**70**	PKP	**PKPdf**	**17 34 21.5**	**-0.8**
	0.5nm,0.6s,baz=205,slow=3.4,SNR=4.1						
CMAR	**Chiang Mai Arr**	**155.62**	**228**	PKPab	**PKPab**	**17 35 07.5**	**-0.2**
	1.4nm,0.8s,baz=157,slow=4.9,SNR=7.2						

IDC ***03*** *17:16:32.3±1.1, 30°.87N×103°.38E, h0km, mb3.3/7, mb1 3.5/8, mb1mx3.3/75, mbtmp3.4/8, ML3.6/1, MS2.9/1, Ms1 2.9/1, ms1mx2.3/45, Error ellipse: s-maj=42.0km s-min=18.3km az=54.0*

BJI ***03*** *17:16:35.0, 31°.28N×103°.21E, h17km, ML3.5/11, Ms3.3/2*

ISC 03 17:16:34.4±1.0, 31°.02N±0°.09×103°.43E±0°.07, h16km, n12, σ2$30/14, mb3.3/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.31**	**112**	Pg	**Pn**	**17 16 44.0**	**-0.2**
CD2				Sg	**Sn**	**17 16 52.7**	**+2.2**
CD2				smax	smax		
	comp=N,4μm,0.5s						
CD2				smax	smax		
	comp=E,3μm,0.7s						
LZH	**Lanzhou**	**5.06**	**4**	*e*P	**Pb**	**17 18 06.0**	**+3.3**
LZH				pP	Pg	17 18 11.4	+0.1
LZH				sP	Pn	17 18 14.9	+25
LZH				pmax	pmax		
	comp=Z,22nm,1.1s						
XAN	**Xi'an**	**5.53**	**56**	Pg	**Pg**	**17 18 17.5**	**-2.7**
XAN				Sg	**Sg**	**17 19 31.3**	**-0.5**
XAN				smax	smax		
	comp=Z,38nm,0.7s						
XAN				smax	smax		
	comp=Z,50nm,0.8s						
SONM	**Songino Array**	**16.94**	**7**	P	**P**	**17 20 32.8**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=179,slow=12,SNR=3.3						
SONM				LR	LR	17 27 35.1	
	comp=Z,42nm,19.2s,baz=176,slow=39						
WMQ	**Urumqi**	**17.83**	**320**	*e*P	**Pn**	**17 20 36.9**	**-4.9**
KSRS	**Korea Array**	**21.21**	**66**	P	**P**	**17 21 20.4**	**+1.0**

RDG13				*e*Sg	Sg	17 31 44.8	+0.6
HSPM	**Sheep**	0.19	133	*e*Pg	Pg	17 31 41.0	-0.4
HLPM	**Lions Peak**	0.21	166	*e*Pg	Pg	17 31 41.9	+0.3
CVR	**Calaveras Rese**	0.22	338	*e*Pg	Pg	17 31 41.9	+0.1
CMLM	**Mount Lewis**	0.23	8	*e*Pg	Pg	17 31 41.8	-0.3
GHS	**Gilroy Hot Spr**	0.25	127	*e*Pg	Pg	17 31 41.7	-0.6
CMMM	**Mount Mocho**	0.26	37	*e*Pg	Pg	17 31 41.9	-0.7
CDC	**Canada Road**	0.28	143	*e*Pg	Pg	17 31 42.6	-0.2
CMPM	**Mikes Peak**	0.32	70	*e*Pg	Pg	17 31 42.7	-0.9
COSM	**Mount Oso**	0.36	44	*e*Pg	Pg	17 31 43.7	-0.7
ANZ	**Anzar Road**	0.37	167	*e*Pg	Pb	17 31 45.1	-0.5
HPCM	**Pacheco Lake**	0.38	119	*e*Pg	Pg	17 31 44.1	-0.6
CVLM	**Vallecito**	0.40	343	*e*Pg	Pb	17 31 45.4	-0.7
HBTM	**San Juan Bauti**	0.41	164	*e*Pg	Pb	17 31 45.9	-0.4
SLD	**San Luis Dam**	0.41	114	*e*Pg	Pg	17 31 44.6	-0.7
HTUM	**Tustin Road**	0.42	174	*e*Pg	Pg	17 31 45.9	+0.5
HJGM	**San Juan Grade**	0.46	168	*e*Pg	Pg	17 31 46.6	+0.4
SFJWR	**San Luis Fatjo**	0.46	115	*e*Pg	Pg	17 31 45.5	-0.7
SCKWR	**San Luis Creek**	0.50	97	*e*Pg	Pg	17 31 46.6	-0.3
HSLM	**San Luis Dam**	0.51	109	*e*Pg	Pg	17 31 47.1	+0.1
FRP	**Fremont Peak**	0.52	162	*e*Pg	Pg	17 31 47.6	+0.4
SAO	**San Andreas Ge**	0.52	158	*e*Pg	Pb	17 31 47.9	-0.2
SAO				*e*Sg	Sg	17 31 53.9	-0.3
BVYM	**Vineyard**	0.55	156	*e*Pg	Pb	17 31 48.4	-0.2
CBSNC	**Byron Hot Spri**	0.57	4	*e*Pg	Pb	17 31 48.8	-0.3
CLCB	**Lake Chabot**	0.57	329	*e*Pg	Pb	17 31 48.7	-0.4
BSRM	**Salinas Radio**	0.60	166	*e*Pg	Pg	17 31 48.8	+0.1
JCPM	**Coyote Point**	0.60	304	*e*Pg	Pb	17 31 49.1	-0.5
BCGM	**Cienega Road**	0.61	152	*e*Pg	Pg	17 31 49.2	+0.4
JCHM	**Cahill Ridge**	0.61	297	*e*Pg	Pg	17 31 49.1	+0.1
BGC	**Bolinger Road**	0.64	333	*e*Pg	Pb	17 31 50.1	-0.2
SAC	**San Andreas**	0.67	300	*e*Pg	Pb	17 31 50.1	-0.5
BPCNC	**Pine Canyon**	0.68	175	*e*Pg	Pb	17 31 50.5	-0.3
JSBM	**San Bruno Moun**	0.71	308	*e*Pg	Pg	17 31 50.6	-0.2
BDM	**Black Diamond**	0.72	349	*e*Pg	Pb	17 31 51.6	+0.1
JHC	**Johnson Canyon**	0.74	161	*e*Pg	Pg	17 31 51.1	-0.3
EMT	**Emmet**	0.76	140	*e*Pg	Pg	17 31 51.2	-0.5
BKS	**Berkeley--Byer**	0.76	326	*e*Pg	Pb	17 31 52.3	0.0
CVPM	**Vollmer Peak**	0.76	327	*e*Pg	Pb	17 31 52.2	-0.1
CYBM	**Yerba Buena Is**	0.77	317	*e*Pg	Pg	17 31 52.0	-0.1
BVL	**Bear Valley**	0.78	149	*e*Pg	Pg	17 31 52.1	-0.1
BAVM	**Antelope Valle**	0.80	138	*e*Pg	Pg	17 31 51.9	-0.7
BRMM	**Rolling Bench**	0.81	120	*e*Pg	Pg	17 31 52.3	-0.4
JPRM	**Presidio of Sa**	0.83	312	*e*Pg	Pb	17 31 53.0	-0.4
BPRM	**Ponciano Ridge**	0.84	182	*e*Pg	Pg	17 31 53.4	0.0
CPIM	**Pinole Ridge**	0.85	331	*e*Pg	Pb	17 31 53.7	-0.1
BBGB	**Big Mountain B**	0.85	142	*e*Pg	Pg	17 31 53.1	-0.4
CSPM	**San Pablo Ridg**	0.86	326	*e*Pg	Pb	17 31 54.1	+0.1
BPIM	**Pinnacles**	0.86	151	*e*Pg	Pg	17 31 53.1	-0.7
BSMM	**Soledad Missio**	0.89	166	*e*Pg	Pg	17 31 54.0	-0.2
CPMM	**Point Molate**	0.90	321	*e*Pg	Pg	17 31 54.3	-0.2
SHG	**Shirttail Gulc**	0.90	157	*e*Pg	Pg	17 31 53.6	-0.9
BCWM	**Chews Ridge**	0.94	174	*e*Pg	Pg	17 31 55.0	-0.3
LRV	**Little Rabbit**	0.98	146	*e*Pg	Pb	17 31 55.6	-0.5
BPOM	**Post Ranch**	1.02	183	*e*Pg	Pb	17 31 56.2	-0.5
SNT	**Sears Point**	1.11	327	*e*Pg	Pb	17 31 57.6	-0.6
LRC	**Lone Oak Road**	1.13	152	*e*Pg	Pb	17 31 57.5	-1.0
NADM	**Allendale**	1.23	350	*e*Pg	Pn	17 31 59.5	-0.6
PCCM	**Crazy Canyon**	1.23	160	*e*Pg	Pn	17 31 59.0	-1.1
CVS	**Carmenet Viney**	1.25	331	*e*Pg	Pn	17 31 59.9	-0.6
PMPB	**Monarch Peak**	1.25	145	*e*Pg	Pn	17 31 59.4	-1.1
MCCM	**Marconi Confer**	1.30	314	*e*Pg	Pn	17 31 59.9	-1.1
MCCM				*e*Sn	Sb	17 32 17.4	-0.7
CMB	**Columbia Colle**	1.30	52	*e*Pn	Pn	17 32 00.1	-1.0
CMB				*e*Sn	Sb	17 32 17.1	-1.1
PAPM	**Alder Peak**	1.36	169	*e*Pn	Pn	17 32 01.2	-0.8
PTV	**Peach Tree Val**	1.38	145	*e*Pn	Pn	17 32 01.3	-0.9
NIMB	**Iron Mountain**	1.39	341	*e*Pn	Pb	17 32 02.8	-0.2
PSMM	**Smith Mountain**	1.47	143	*e*Pn	Pn	17 32 03.5	0.0
NBPM	**Berryessa Peak**	1.47	345	*e*Pn	Pn	17 32 02.8	-0.6
MMIM	**Miami Mountain**	1.56	83	*e*Pn	Pn	17 32 03.9	-1.0
FRI	**Friant**	1.61	99	*e*Pn	Pn	17 32 04.3	-1.0
PPO	**Portuguese Can**	1.63	147	*e*Pn	Pg	17 32 07.7	-0.6
NMCNC	**Mill Creek, So**	1.65	325	*e*Pn	Pn	17 32 04.7	-1.2
FTR	**Fort Ross**	1.72	318	*e*Pn	Pn	17 32 05.9	-1.0
GBGM	**Boggs Mountain**	1.75	334	*e*Pn	Pn	17 32 06.7	-0.7
GARM	**Arbuckle**	1.76	346	*e*Pn	Pn	17 32 07.1	-0.3
GDXM	**Geysers**	1.78	331	*e*Pn	Pn	17 32 06.7	-1.1
GDXM				*e*Sn	Sg	17 32 35.9	+1.4
AFDM	**Forest Hills D**	1.79	18	*e*Pn	Pn	17 32 07.2	-0.7
AFDM				*e*Sn	Sn	17 32 30.5	-0.1
GHCM	**House Creek**	1.80	319	*e*Pn	Pn	17 32 06.8	-1.2
PAGB	**Antelope Grade**	1.91	142	*e*Pn	Pn	17 32 07.9	-1.6
EBP	**Ebbets Pass**	2.00	48	*e*Pn	Pn	17 32 11.9	+0.9
HOPS	**Hopland Field**	2.06	328	*e*Pn	Pn	17 32 10.2	-0.9
HOPS				*e*Sn	Sb	17 32 39.7	-0.2
GHLM	**Highland Sprin**	2.07	330	*e*Pn	Pn	17 32 10.9	-0.9
MDPB	**Devils Postpil**	2.12	79	*e*Pn	Pn	17 32 13.0	+0.4
MDPB				*e*Sn	Sn	17 32 38.6	-0.3
MRDM	**Red Cones**	2.13	80	*e*Pn	Pn	17 32 13.5	+0.8
EMB	**Emerald Bay**	2.13	36	*e*Pn	Pb	17 32 14.2	-1.7
MINS	**Minaret Summit**	2.13	78	*e*Pn	Pn	17 32 13.4	+0.5
RUBR	**Rubicon Trail**	2.17	33	*e*Pn	Pn	17 32 14.5	+1.2
RUBR				*e*Sn	Sb	17 32 41.8	-1.7
MDYM	**Dry Creek**	2.17	78	*e*Pn	Pn	17 32 14.3	+1.0
OMMB	**Old Mammoth Mi**	2.17	80	*e*Pn	Pn	17 32 14.1	+0.7
OMMB				*e*Sn	Sn	17 32 40.8	+0.4
WAKR	**Walker**	2.18	54	*e*Pn	Pn	17 32 14.8	+1.4
WAKR				*e*Sn	Sn	17 32 41.0	+0.5
MSLM	**Sherwin Lakes**	2.21	80	*e*Pn	Pn	17 32 15.0	+1.2
MEMM	**East Mammoth H**	2.23	78	*e*Pn	Pn	17 32 15.5	+1.3
LMCR	**Lookout Mounta**	2.24	77	*e*Pn	Pn	17 32 15.5	+1.3
MLCM	**Laurel Creek C**	2.24	80	*e*Pn	Pn	17 32 15.5	+1.2
TAHR	**Tahoe**	2.25	32	*e*Pn	Pn	17 32 15.4	+1.1
MCBM	**Casa Benchmark**	2.26	79	*e*Pn	Pn	17 32 15.9	+1.4
MCMM	**Convict Lake**	2.27	80	*e*Pn	Pn	17 32 15.8	+1.1
MCVM	**Convict Lake**	2.31	81	*e*Pn	Pn	17 32 16.5	+1.3
MLAC	**Mammoth, Mammo**	2.31	80	P	Pn	17 32 16.5	+1.3
	baz=261						
MLAC				S	Sb	17 32 46.0	-1.4
	baz=261						
MLAC	**Mammoth, Mammo**	2.31	80	*e*Pn	Pb	17 32 17.1	-1.7
MDRNC	**Doe Ridge**	2.31	79	*e*Pn	Pn	17 32 16.8	+1.7
ORV	**Oroville**	2.31	4	*e*Pn	Pn	17 32 14.1	-0.9
BFC	**Buffalo Canyon**	2.33	44	*e*Pn	Pb	17 32 17.6	-1.5
RCCR	**Rock Creek Can**	2.38	83	*e*Pn	Pn	17 32 17.5	+1.3
SCHCA	**Scheelite**	2.40	86	*e*Pn	Pn	17 32 17.7	+1.2
ORO	**Owens River**	2.45	80	*e*Pn	Pn	17 32 19.0	+1.9
PNTR	**Pine Nut**	2.47	41	*e*Pn	Pb	17 32 20.1	-1.5
PNTR				*e*Sn	Sn	17 32 48.5	+0.9
GNAM	**Navarro Ridge**	2.47	323	*e*Pn	Pn	17 32 16.3	-1.0
MTUM	**Tungsten Hills**	2.50	87	*e*Pn	Pn	17 32 19.3	+1.6
VES	**Vestal, Richgr**	2.53	123	P	Pn	17 32 17.6	-0.3
	baz=306						
MGL	**Magalia**	2.56	2	*e*Pn	Pn	17 32 18.6	0.0
YERR	**Yerington**	2.60	47	*e*Pn	Pn	17 32 20.7	+1.6
YERR				*e*Sn	Sb	17 32 53.5	-2.3
VCNR	**Virginia City**	2.60	38	*e*Pn	Pn	17 32 20.7	+1.5
TIN	**Tinemaha, Big**	2.77	93	S	Sb	17 32 59.1	-1.6
	baz=275						
BEKR	**Beckworth**	2.82	21	*e*Pn	Pn	17 32 22.7	+0.6
KCPM	**Cahto Peak**	2.85	329	*e*Pn	Pn	17 32 22.6	0.0
RYN	**Ryan**	2.86	60	*e*Pn	Pn	17 32 23.4	+0.7
NV01	**Mina Array Sit**	2.93	65	*e*Pn	Pn	17 32 23.9	+0.2
CWC	**Cottonwood Cre**	3.01	104	P	Pn	17 32 25.8	+1.1
	baz=287						
ISA	**Isabella, Lake**	3.04	120	P	Pn	17 32 25.2	+0.1
	baz=303						
ISA	**Isabella, Lake**	3.04	120	*e*Pn	Pn	17 32 24.9	-0.2
ISA				*e*Sn	Sn	17 33 01.1	-0.3
NV11	**Mina Array Sit**	3.04	66	*e*Pn	Pn	17 32 25.9	+0.8
NV11				*e*Sn	Sn	17 33 03.2	+1.6
O03D	**Paynes Creek**	3.04	358	P	Pn	17 32 25.4	+0.3
	baz=178						
PAHR	**Pah Rah Range**	3.05	36	*e*Pn	Pn	17 32 26.0	+0.7
WBSM	**Bird Springs**	3.34	120	*e*Pg	Pb	17 32 37.4	+1.0
KVN	**Kaiserville**	3.36	56	*e*Pn	Pn	17 32 29.9	+0.4
KMRM	**Mail Ridge**	3.36	333	*e*Pn	Pn	17 32 30.1	+0.6
WDC	**Whiskeytown Da**	3.39	349	*e*Pn	Pn	17 32 28.4	-1.4
DAC	**Darwin (Calif)**	3.43	105	*e*Pn	Pn	17 32 32.1	+1.5
DAC				*e*Sn	Sn	17 33 08.5	-2.8
OSI	**Osito Audit: C**	3.56	137	*e*Pn	Pn	17 32 30.8	-1.5
MPMC	**Manual Prospec**	3.58	108	P	Pn	17 32 34.3	+1.6
	baz=291						
KHMM	**Horse Mountain**	3.95	337	*e*Pn	Pn	17 32 37.3	-0.4
MWC	**Mount Wilson**	4.22	134	*e*Pn	Pn	17 32 45.6	+4.1
TPNV	**Topopah Spring**	4.36	92	*e*Pn	Pn	17 32 46.0	+2.7
GSC	**Goldstone, Bar**	4.40	115	*e*Pn	Pn	17 32 45.1	+1.3
YBH	**Yreka Blue Hor**	4.55	350	*e*Pn	Pn	17 32 47.6	+1.8
BMN	**Battle Mountai**	4.72	46	*e*Pn	Pn	17 32 51.2	+2.9
MOD	**Modoc Plateau**	4.77	13	*e*Pn	Pn	17 32 50.3	+1.4
MOD				*e*Sn	Sn	17 33 38.8	-5.4
R11A	**Troy Canyon, C**	4.96	75	*e*Pn	Pn	17 32 54.1	+2.6
SNDA	**J Saunders Pla**	5.55	130	*e*Pg	Pb	17 33 17.0	+3.0
BEND	**Bend**	6.82	2	*e*Pn	Pn	17 33 18.6	+1.6
BEND				*e*Sg	Sb	17 35 04.3	+7.4

MAN 03 17:43:58.8, 15°.75N×121°.31E, h33km, mb4.5, ML3.4, MS3.2, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALP	**Baler**	**0.26**	**93**	*e*P	Pn	17 44 07.9	+1.8
BALP				*e*S	Sb	17 44 13.4	+2.5
CAUP	**Cauayan**	**1.28**	**22**	*e*P	Pn	17 44 17.2	-3.2
ABRA	**Dolores**	**1.97**	**343**	*e*P	Pn	17 44 30.4	+0.5
ABRA				*e*S	Sn	17 44 53.0	-0.5
APYP	**Conner**	**2.10**	**358**	*e*P	Pn	17 44 31.4	-0.2
APYP				*e*S	Sn	17 44 58.2	+1.6

*ROM **03** 17:48:27.8±0.0, 44°.881N±0°.001×10°.973E±0°.001, h9km, ML3.4/12*
*ISCJB **03** 17:48:27.4±0.2, 45°.00N±0°.01×10°.99E±0°.02, h13km±1km, Error ellipse: s-maj=2.5km s-min=2.0km az=44.3*
*LDG **03** 17:48:27.9±0.2, 44°.90N×11°.17E, h2km, Ml3.5/12, Error ellipse: s-maj=5.5km s-min=3.7km az=65.0*
*CSEM **03** 17:48:28.2±0.1, 44°.94N×11°.04E, h10km, ML3.5/20, Error ellipse: s-maj=3.0km s-min=2.4km az=137.0*
*IASPEI **03** 17:48:28.0±0.8, 44°.92N±0°.02×10°.97E±0°.02, h14km±4km, Error ellipse: s-maj=3.3km s-min=3.1km az=116.7, GT5 selection from ISC bulletin GT5 identified by Bond˙ir and McLaughlin (2009) selection criteria Bond˙ir and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
*PRU **03** 17:48:28.2, 44°.98N×10°.80E, h10km*
*STR **03** 17:48:33.4±0.9, 45°.N±4°.×1°.1E±°., h5km, M3.5/7, mb3.5/1, MLv3.5/7*

ISC 03 17:48:28.2±0.7, 44°.93N±0°.02×10°.98E±0°.02, h16km±3km, n231, σ1°.26/278, 25C-16D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0827	**Moglia (MN)**	**0.03**	**277**	⇑*i*P	Pg	17 48 30.6	-0.5
T0827				⇑*i*S	Sg	17 48 33.7	+0.6
T0827	**Moglia (MN)**	**0.03**	**277**	*i* P	Pg	17 48 30.6	-0.5
T0827				*i* S	Sg	17 48 33.7	+0.6
T0818	**Loc. Fossa, Co**	**0.04**	**88**	⇑*i*P	Pg	17 48 30.5	-0.7
T0818				⇑*i*S	Sg	17 48 33.5	+0.4
T0818	**Loc. Fossa, Co**	**0.04**	**88**	*i* P	Pg	17 48 30.5	-0.7
T0818				*i* S	Sg	17 48 33.5	+0.4
NDIM	**Novi di Modena**	**0.07**	**230**	*e*P	Pg	17 48 29.9	-1.5
NDIM				*e*S	Sg	17 48 32.1	-1.3
T0825	**Gonzaga (MN)**	**0.10**	**293**	AML	AML		
T0825				AML	AML		
	comp=E,89750μm,1.4s						
T0825				AML	AML		
T0825				AML	AML		
	comp=E,89800μm,1.4s						
T0825				AML	AML		
	comp=E,89800μm,1.4s						
T0825				AML	AML		
T0825				AML	AML		
T0825				AML	AML		
	comp=E,89800μm,1.4s						
T0828	**Loc. Fossoli,**	**0.11**	**203**	⇓*i*P	Pg	17 48 30.3	-1.5
T0828				⇓*i*S	Sg	17 48 33.2	-0.9
T0828	**Loc. Fossoli,**	**0.11**	**203**	*i* P	Pg	17 48 30.3	-1.5
T0828				*i* S	Sg	17 48 33.2	-0.9
SBPO	**S.Benedetto Po**	**0.12**	**341**	*e*P	Pb	17 48 32.7	+0.5
SBPO	**S.Benedetto Po**	**0.12**	**341**	*e*P	Pb	17 48 32.7	+0.5
SBPO				AML	AML		
	comp=E,23400μm,0.9s						
SBPO				AML	AML		
	comp=N,58050μm,0.3s						
SBPO				AML	AML		
	comp=E,23400μm,0.9s						
SBPO				AML	AML		
	comp=N,58000μm,0.3s						
SBPO				AML	AML		
	comp=E,23400μm,0.9s						
SBPO				AML	AML		
	comp=N,58050μm,0.3s						
T0814	**Loc. Cortile,**	**0.14**	**182**	⇓*i*P	Pg	17 48 30.7	-1.4
T0814				⇓*i*S	Sg	17 48 33.0	-1.7
T0814	**Loc. Cortile,**	**0.14**	**182**	*i* P	Pg	17 48 30.7	-1.4
T0814				*i* S	Sg	17 48 34.0	-0.7
T0812	**Loc. Stoppiaro**	**0.15**	**82**	⇑*e*P	Pg	17 48 31.8	-0.4
T0812	**Loc. Stoppiaro**	**0.15**	**82**	*e*P	Pg	17 48 31.8	-0.4
T0826	**Rio Saliceto (**	**0.15**	**231**	AML	AML		
	comp=E,61950μm,0.1s						
T0826				AML	AML		
	comp=E,61950μm,0.1s						
T0826				AML	AML		
	comp=N,83200μm,0.3s						
T0826				AML	AML		
	comp=E,62000μm,0.1s						
T0826				AML	AML		
	comp=N,83250μm,0.3s						
T0826				AML	AML		
	comp=N,83250μm,0.3s						
T0826				AML	AML		
	comp=E,62000μm,0.1s						
T0802	**SanFelice sul**	**0.16**	**112**	⇓*e*P	Pg	17 48 31.5	-0.8
T0802				⇑*e*S	Sg	17 48 35.7	+0.6
T0802	**SanFelice sul**	**0.16**	**112**	*e*P	Pg	17 48 31.5	-0.8
T0802				*e*S	Sg	17 48 35.7	+0.6
T0802				AML	AML		
	comp=E,80150μm,0.6s						
T0802				AML	AML		
	comp=N,90000μm,0.2s						
T0802				AML	AML		
	comp=E,80150μm,0.6s						
T0802				AML	AML		
	comp=N,90050μm,0.2s						
T0802				AML	AML		
	comp=E,80200μm,0.6s						
T0802				AML	AML		
	comp=N,90000μm,0.2s						
T0802				AML	AML		
	comp=N,90050μm,0.2s						
T0802				AML	AML		
	comp=E,80150μm,0.6s						
T0813	**Massa Finalese**	**0.17**	**109**	⇑*e*P	Pg	17 48 31.9	-0.6
T0813				⇑*e*S	Sg	17 48 36.2	+0.8
T0813	**Massa Finalese**	**0.17**	**109**	*e*P	Pg	17 48 31.9	-0.6
T0813				*e*S	Sg	17 48 36.1	+0.8
T0824	**Loc. Limidi di**	**0.18**	**191**	⇑*i*P	Pg	17 48 31.5	-1.1
T0824				⇑*i*S	Sg	17 48 35.5	-0.1
T0824	**Loc. Limidi di**	**0.18**	**191**	*i* P	Pg	17 48 31.5	-1.1
T0824				*i* S	Sg	17 48 35.5	-0.1
GAZZ	**Gazzo Veronese**	**0.20**	**25**	⇑*e*Pg	Pb	17 48 33.7	+0.3
GAZZ	**Gazzo Veronese**	**0.20**	**25**	*e*Pg	Pb	17 48 33.7	+0.3
RAVA	**Ravarino**	**0.20**	**150**	⇓*i*P	Pg	17 48 32.3	-0.7
RAVA				⇓*i*S	Sg	17 48 36.5	+0.2
RAVA	**Ravarino**	**0.20**	**150**	*i* P	Pg	17 48 32.3	-0.7
RAVA				*i* S	Sg	17 48 36.5	+0.2
RAVA				AML	AML		
	comp=E,56150μm,0.5s						
RAVA				AML	AML		
	comp=N,52800μm,0.4s						
RAVA				AML	AML		
	comp=E,56150μm,0.5s						
RAVA				AML	AML		
	comp=N,52800μm,0.4s						
RAVA				AML	AML		
	comp=E,56150μm,0.5s						
RAVA				AML	AML		
	comp=N,52800μm,0.4s						
RAVA				AML	AML		
	comp=N,52800μm,0.4s						
RAVA				AML	AML		
	comp=E,56150μm,0.5s						
T0800	**Massa Finalese**	**0.21**	**114**	⇑*e*P	Pg	17 48 32.4	-0.7
T0800				⇑*e*S	Sg	17 48 37.2	+0.8
T0800	**Massa Finalese**	**0.21**	**114**	*e*P	Pg	17 48 32.4	-0.7
T0800				*e*S	Sg	17 48 37.2	+0.8
T0800				AML	AML		
	comp=E,39000μm,0.2s						
T0800				AML	AML		
	comp=N,44050μm,0.2s						
T0800				AML	AML		
	comp=E,36850μm,0.2s						
T0800				AML	AML		
	comp=N,44500μm,0.2s						
T0800				AML	AML		
	comp=E,39000μm,0.2s						
T0800				AML	AML		
	comp=N,44050μm,0.2s						
T0800				AML	AML		
	comp=E,36900μm,0.2s						
T0800				AML	AML		
	comp=N,44500μm,0.2s						
T0800				AML	AML		
	comp=E,39000μm,0.2s						
T0800				AML	AML		
	comp=N,44000μm,0.2s						
T0800				AML	AML		
	comp=E,36850μm,0.2s						
T0800				AML	AML		
	comp=N,44500μm,0.2s						
T0800				AML	AML		
	comp=N,44500μm,0.2s						
T0800				AML	AML		
	comp=N,44050μm,0.2s						
T0800				AML	AML		
	comp=E,39000μm,0.2s						
T0800				AML	AML		
	comp=E,36900μm,0.2s						
NOVE	**Novellara**	**0.23**	**234**	⇑*e*P	Pg	17 48 32.7	-0.7
NOVE				⇑*e*S	Sg	17 48 37.8	+0.8
NOVE	**Novellara**	**0.23**	**234**	*e*P	Pg	17 48 32.7	-0.7
NOVE				*e*S	Sg	17 48 37.8	+0.8
NOVE				AML	AML		
	comp=E,32150μm,0.3s						
NOVE				AML	AML		
	comp=N,22250μm,0.9s						
NOVE				AML	AML		
	comp=E,32100μm,0.3s						
NOVE				AML	AML		
	comp=N,22300μm,0.9s						
NOVE				AML	AML		
	comp=E,32150μm,0.3s						
NOVE				AML	AML		
	comp=N,22250μm,0.9s						
NOVE				AML	AML		
	comp=E,32100μm,0.3s						
NOVE				AML	AML		
	comp=N,22300μm,0.9s						
T0811	**Palata Pepoli**	**0.23**	**130**	⇑*e*P	Pg	17 48 32.5	-1.0
T0811				⇑*e*S	Sg	17 48 37.6	+0.6
T0811	**Palata Pepoli**	**0.23**	**130**	*e*P	Pg	17 48 32.5	-1.0
T0811				*e*S	Sg	17 48 37.6	+0.6
SERM	**Sermide**	**0.24**	**71**	*e*P	Pg	17 48 33.8	+0.2
SERM	**Sermide**	**0.24**	**71**	*e*P	Pg	17 48 33.8	+0.2
SERM				AML	AML		
	comp=E,3670μm,1.0s						
SERM				AML	AML		
	comp=N,4835μm,0.5s						
SERM				AML	AML		
	comp=E,7915μm,0.9s						
SERM				AML	AML		
	comp=N,7335μm,1.1s						
SERM				AML	AML		
	comp=E,3670μm,1.0s						
SERM				AML	AML		
	comp=N,4835μm,0.5s						
SERM				AML	AML		
	comp=E,7915μm,0.9s						
SERM				AML	AML		
	comp=N,7315μm,1.1s						
SERM				AML	AML		
	comp=E,3670μm,1.0s						
SERM				AML	AML		
	comp=N,4835μm,0.5s						
SERM				AML	AML		
	comp=E,7925μm,0.9s						
SERM				AML	AML		
	comp=N,7315μm,1.1s						
SERM				AML	AML		
	comp=E,7915μm,0.9s						
SERM				AML	AML		
	comp=E,3670μm,1.0s						
SERM				AML	AML		
	comp=N,7315μm,1.1s						
SERM				AML	AML		
	comp=N,4835μm,0.5s						
T0805	**Bondeno (FE)**	**0.25**	**93**	*e*P	Pg	17 48 33.3	-0.4
T0805	**Bondeno (FE)**	**0.25**	**93**	*e*P	Pg	17 48 33.3	-0.4
MODE	**Modena**	**0.30**	**184**	⇑*e*P	Pg	17 48 34.1	-0.6
MODE	**Modena**	**0.30**	**184**	*e*P	Pg	17 48 34.1	-0.6
MODE				AML	AML		
	comp=E,46650μm,0.7s						
MODE				AML	AML		
	comp=N,34750μm,0.4s						
MODE				AML	AML		
	comp=E,46650μm,0.7s						
MODE				AML	AML		
	comp=N,34750μm,0.4s						
MODE				AML	AML		
	comp=E,46650μm,0.7s						
MODE				AML	AML		
	comp=N,34700μm,0.4s						
MODE				AML	AML		
	comp=N,34750μm,0.4s						
MODE				AML	AML		
	comp

comp=N,3385µm,0.4s
TEOL Teolo 0.65 49⇓ ePg Pb 17 48 41.4 +0.2
TEOL eSg **Sb 17 48 51.9 +1.9**
TEOL Teolo 0.65 49⇓ eP Pb 17 48 41.3 +0.2
TEOL eSg **Sb 17 48 51.9 +1.9**
TEOL Teolo 0.65 49 eP Pb 17 48 41.4 +0.2
TEOL AML AML
comp=E,3655µm,1.2s
TEOL AML AML
comp=N,2995µm,0.3s
TEOL AML AML
comp=E,3655µm,1.2s
TEOL AML AML
comp=N,2995µm,0.3s
TEOL AML AML
comp=N,2995µm,0.3s
TEOL AML AML
comp=E,3655µm,1.2s
CMPO Campotto Po 0.69 121 AML AML
comp=E,1845µm,1.3s
CMPO AML AML
comp=E,1845µm,1.3s
CMPO AML AML
comp=N,2435µm,1.2s
CMPO AML AML
comp=E,1845µm,1.3s
CMPO AML AML
comp=N,2435µm,1.2s
CMPO AML AML
comp=N,2435µm,1.2s
ROVR Rover¯¤ Verone 0.72 5 AML AML
comp=N,6885µm,0.2s
ROVR AML AML
comp=E,3875µm,1.0s
ROVR AML AML
comp=N,6885µm,0.2s
ROVR AML AML
comp=E,3875µm,1.0s
ROVR AML AML
comp=N,6885µm,0.2s
ROVR AML AML
comp=E,3875µm,1.0s
MARN Marana (Italy) 0.72 13 ePg **Pb 17 48 42.8 +0.4**
MARN eSg **Sn 17 48 54.6 +0.1**
MARN Marana (Italy) 0.72 13 ePg **Pb 17 48 42.8 +0.4**
MARN eSg **Sn 17 48 54.6 +0.1**
SALO Salr 0.76 335 AML AML
comp=E,3605µm,0.2s
SALO AML AML
comp=E,3605µm,0.2s
SALO AML AML
comp=N,3835µm,0.3s
SALO AML AML
comp=E,3605µm,0.2s
SALO AML AML
comp=N,3835µm,0.3s
SALO AML AML
comp=N,3835µm,0.3s
BALD Monte Baldo 0.76 352 ePg **Pb 17 48 44.0 +0.8**
BALD eSg **Sn 17 48 56.4 +0.7**
BALD Monte Baldo 0.76 352 ePg **Pb 17 48 44.0 +0.8**
BALD eSg **Sn 17 48 56.4 +0.7**
VOBA Vobarno 0.78 335 AML AML
comp=N,4370µm,0.8s
VOBA AML AML
comp=E,3835µm,0.2s
VOBA AML AML
comp=N,4370µm,0.8s
VOBA AML AML
comp=E,3830µm,0.2s
VOBA AML AML
comp=N,4370µm,0.8s
VOBA AML AML
comp=E,3835µm,0.2s
IMOL Imola, Italy 0.79 136 AML AML
comp=E,1810µm,1.6s
IMOL AML AML
comp=N,1455µm,1.1s
IMOL AML AML
comp=E,1805µm,1.6s
IMOL AML AML
comp=N,1455µm,1.1s
IMOL AML AML
comp=E,1810µm,1.6s
IMOL AML AML
comp=N,1455µm,1.1s
MAGA Magasa 0.88 344 AML AML
comp=E,18450µm,0.3s
MAGA AML AML
comp=E,18450µm,0.3s
MAGA AML AML
comp=N,15950µm,0.5s
MAGA AML AML
comp=N,15950µm,0.5s
MAGA AML AML
comp=N,15950µm,0.5s
MAGA AML AML
comp=E,18450µm,0.3s
VLC Villacollemand 0.88 209 AML AML
comp=N,730µm,0.7s
VLC AML AML
comp=E,527µm,1.0s
VLC AML AML
comp=N,730µm,0.7s
VLC AML AML
comp=E,527µm,1.0s
VLC AML AML
comp=N,730µm,0.7s
VLC AML AML
comp=E,527µm,1.0s
POPM Popiglio 0.90 190 AML AML
comp=N,1275µm,0.6s
POPM AML AML
comp=E,1275µm,0.4s
POPM AML AML
comp=E,1275µm,0.4s
POPM AML AML
comp=N,1275µm,0.6s
POPM AML AML
comp=N,1275µm,0.6s
POPM AML AML
comp=E,1275µm,0.4s
BDI Bagni Di Lucca 0.91 197 AML AML
comp=N,1230µm,0.5s
BDI AML AML
comp=E,1300µm,1.2s
BDI AML AML
comp=E,1240µm,0.4s
BDI AML AML
comp=N,1470µm,0.3s
BDI AML AML
comp=E,1295µm,1.2s
BDI AML AML
comp=N,1235µm,0.5s
BDI AML AML
comp=E,1240µm,0.4s
BDI AML AML
comp=N,1470µm,0.3s
BDI AML AML
comp=N,1230µm,0.5s
BDI AML AML
comp=N,1470µm,0.3s
BDI AML AML
comp=E,1300µm,1.2s
BDI AML AML
comp=E,1240µm,0.4s
CTL8 Castelleone 0.93 292 AML AML
comp=N,2805µm,0.3s
CTL8 AML AML
comp=E,2280µm,0.3s
CTL8 AML AML
comp=N,2805µm,0.3s
CTL8 AML AML
comp=E,815µm,0.4s
CTL8 AML AML
comp=N,562µm,1.0s
CTL8 AML AML
comp=E,2285µm,0.3s
CTL8 AML AML
comp=E,815µm,0.4s
CTL8 AML AML
comp=N,563µm,1.0s
CTL8 AML AML
comp=N,562µm,1.0s
CTL8 AML AML
comp=N,2805µm,0.3s
CTL8 AML AML
comp=E,815µm,0.4s
CTL8 AML AML
comp=E,2280µm,0.3s
DOSS Dosso del Somm 0.96 9⇓ ePg Pb 17 48 46.9 +0.3
DOSS Dosso del Somm 0.96 9 ePg Pb 17 48 46.9 +0.3
RNI Roncone 1.08 347 ePg **Pg 17 48 48.3 -0.8**
RNI Roncone 1.08 347 ePg **Pg 17 48 48.3 -0.8**
MAIM Mastiano 1.08 199 AML AML
comp=N,1500µm,0.7s
MAIM AML AML
comp=E,764µm,1.0s
MAIM AML AML
comp=E,764µm,1.0s
MAIM AML AML
comp=N,1500µm,0.7s
MAIM AML AML
comp=N,1500µm,0.7s
MAIM AML AML
comp=E,764µm,1.0s
CGRP Cima Grappa 1.11 31⇓ ePg **Pg 17 48 49.3 -0.4**
CGRP eSg **Sn 17 49 06.1 +1.8**
CGRP Cima Grappa 1.11 31⇓ eP **Pg 17 48 49.3 -0.4**
CGRP eSg **Sn 17 49 06.1 +1.8**
CGRP Cima Grappa 1.11 31 eP **Pg 17 48 49.3 -0.4**
CGRP AML AML
comp=E,1180µm,0.3s
CGRP AML AML
comp=N,1069µm,1.2s
CGRP AML AML
comp=E,1180µm,0.3s
CGRP AML AML
comp=N,1069µm,1.2s
CGRP AML AML
comp=N,1069µm,1.2s
CGRP AML AML
comp=E,1180µm,0.3s
CRMI Carmignano 1.14 180 AML AML
comp=N,330µm,0.4s
CRMI AML AML
comp=E,448µm,0.4s
PANI Panarotta 1.14 13⇑ ePg **Pb 17 48 49.5 -0.3**
PANI Panarotta 1.14 13 ePg **Pb 17 48 49.5 -0.3**
MABI Malga Bissina 1.17 344 AML AML
comp=N,422µm,0.2s
MABI AML AML
comp=E,526µm,1.6s
MTLO Montello 1.18 41⇓ ePg **Pb 17 48 50.6 +0.3**
MTLO Montello 1.18 41 ePg **Pb 17 48 50.6 +0.3**
SFI Santa Sofia 1.20 148 AML AML
comp=E,672µm,0.7s
SFI AML AML
comp=E,638µm,0.7s
SFI AML AML
comp=N,667µm,0.7s
SFI AML AML
comp=N,707µm,0.6s
CTI Castel Tesino 1.21 23 AML AML
comp=E,2865µm,0.2s
CTI AML AML
comp=E,2865µm,0.2s
CTI AML AML
comp=N,4940µm,0.2s
CTI AML AML
comp=E,2865µm,0.2s
CTI AML AML
comp=N,4940µm,0.2s
CTI AML AML
comp=N,4940µm,0.2s
MSSA Maissana 1.21 240 AML AML
comp=E,872µm,1.1s
MSSA AML AML
comp=E,872µm,1.1s
MSSA AML AML
comp=N,972µm,0.7s
MSSA AML AML
comp=E,872µm,1.1s
MSSA AML AML
comp=N,972µm,0.7s
MSSA AML AML
comp=N,972µm,0.7s
ASQU Asqua 1.28 153 AML AML
comp=N,425µm,0.5s
ASQU AML AML
comp=E,386µm,0.3s
OZOL Ozolo 1.47 2⇑ ePg **Pn 17 48 54.5 +0.3**
OZOL Ozolo 1.47 2 ePg **Pn 17 48 54.5 +0.3**
FAU Forcella Aurin 1.48 28 ePg **Pn 17 48 54.9 +0.7**
FAU Forcella Aurin 1.48 28 ePg **Pn 17 48 54.9 +0.7**
CAE Caneva 1.48 43 ePg **Pn 17 48 54.9 +0.6**
CAE Caneva 1.48 43 ePg **Pn 17 48 54.9 +0.6**
CARE Lago del Cares 1.50 353 ePg **Pn 17 48 55.3 +0.5**
CARE Lago del Cares 1.50 353 ePg **Pn 17 48 55.3 +0.5**
POLC Polcenigo 1.53 44 AML AML
comp=N,1063µm,0.5s
POLC AML AML
comp=E,1056µm,0.6s
AGOR Agordo 1.54 29 ePg **Pn 17 48 55.9 +0.8**
AGOR Agordo 1.54 29 AML AML
comp=N,904µm,0.4s
AGOR AML AML
comp=E,494µm,1.2s
APPI Appiano 1.56 6 AML AML
comp=E,2515µm,0.4s
APPI AML AML
comp=N,1575µm,0.3s
KOSI Kohlern 1.56 10⇓ ePg **Pb 17 48 56.7 0.0**
KOSI Kohlern 1.56 10 ePg **Pb 17 48 56.7 0.0**
KOSI Kohlern 1.56 10 AML AML
comp=E,731µm,0.5s
KOSI AML AML
comp=N,802µm,0.2s
BRMO Bormio 1.60 345 AML AML
comp=E,282µm,0.8s
BRMO AML AML
comp=N,421µm,0.4s
MLNI Malnisio 1.67 43 ePg **Pn 17 48 57.5 +0.7**
MLNI Malnisio 1.67 43 ePg **Pn 17 48 57.5 +0.7**
BADI Badiali 1.69 147 AML AML
comp=N,300µm,1.1s
BADI AML AML
comp=E,297µm,1.3s
MOSI Grossmontoni 1.71 350 AML AML
comp=E,812µm,0.9s
MOSI AML AML
comp=N,1360µm,0.3s
CIMO Cimolais 1.72 36⇓ ePn **Pn 17 48 57.5 +0.1**
CIMO Cimolais 1.72 36 ePn **Pn 17 48 57.5 +0.1**
CAFI Castiglion Fio 1.75 156 AML AML
comp=N,126µm,0.8s
CAFI AML AML
comp=E,184µm,0.6s
PCP Piancastagn 1.78 258 AML AML
comp=E,342µm,0.7s
PCP AML AML
comp=N,291µm,0.4s
STAL STALIGIAL 1.80 42 AML AML
comp=N,809µm,0.3s
STAL AML AML
comp=E,804µm,0.2s
STAL AML AML
comp=E,742µm,1.1s
STAL AML AML
comp=N,659µm,0.3s
ATPC Poggio Castell 1.80 143 AML AML
comp=E,406µm,0.5s
ATPC AML AML
comp=N,339µm,0.6s
ABSI Aberstueckl 1.81 7 AML AML
comp=E,1570µm,0.6s
ABSI AML AML
comp=N,1290µm,0.5s
VARE Varese 1.81 302 AML AML
comp=E,278µm,0.2s
VARE AML AML
comp=N,290µm,0.6s
ATBU Serra di Buran 1.84 142 AML AML
comp=E,550µm,0.5s
ATBU AML AML
comp=N,734µm,0.5s
ATVO AVT- Monte Val 1.86 146 AML AML
comp=N,266µm,0.4s
ATVO AML AML
comp=E,332µm,1.2s
QLNO Quiliano 1.98 253 AML AML
comp=N,181µm,1.4s
QLNO AML AML
comp=E,184µm,0.5s
ROSI Rosskopf 2.02 8 AML AML
comp=N,630µm,1.4s
ROSI AML AML
comp=E,648µm,0.5s
VINO Villanova 2.09 50⇓ ePn **Pn 17 49 02.7 +0.1**
VINO Villanova 2.09 50 ePn **Pn 17 49 02.7 +0.1**
VINO Villanova 2.09 50 AML AML
comp=E,262µm,0.4s
VINO AML AML
comp=N,264µm,0.6s
FETA Feichten 2.10 355 ePn **Pb 17 49 05.6 -0.3**
comp=N,2.7nm,0.3s,SNR=20
FETA Feichten 2.10 355 Pn **Pb 17 49 05.6 -0.3**
comp=N,2.7nm,0.3s,SNR=20
ABTA Abfaltersbach 2.11 30 Pn **Pn 17 49 04.3 +1.4**
comp=N,1.7nm,0.3s,SNR=13
ABTA Abfaltersbach 2.11 30 Pn **Pn 17 49 04.3 +1.4**
comp=N,1.7nm,0.3s,SNR=13
SABO M.te Sabotino 2.12 60⇑ ePn **Pn 17 49 03.6 +0.6**
SABO M.te Sabotino 2.12 60 ePn **Pn 17 49 03.6 +0.6**
CASP Castiglione de 2.14 182 AML AML
comp=N,138µm,0.9s
CASP AML AML
comp=E,95µm,0.3s
RISI Rein 2.16 20 AML AML
comp=N,882µm,1.6s
RISI AML AML
comp=E,743µm,0.5s
MGAB Montegabbione 2.18 158 AML AML
comp=E,162µm,0.7s
MGAB AML AML
comp=N,138µm,0.5s
MGAB AML AML
comp=E,167µm,0.5s
MGAB AML AML
comp=N,128µm,0.5s
SKDS Skadanscina 2.23 73 i Pn **Pn 17 49 04.0 -0.5**
SKDS eSn **Sn 17 49 30.9 -0.8**
comp=Z,65nm,0.3s
SKDS Skadanscina 2.23 73 i Pn **Pn 17 49 04.0 -0.5**
SKDS eSn **Sn 17 49 30.9 -0.8**
comp=Z,65nm,0.3s
WTTA Wattenberg 2.38 11 ePn **Pb 17 49 09.4 -1.3**
comp=Z,1.2nm,0.2s,SNR=9.7
WTTA Wattenberg 2.38 11 Pn **Pb 17 49 09.4 -1.3**
comp=Z,1.2nm,0.2s,SNR=9.7
WTTA Wattenberg 2.38 11 Pg **Pb 17 49 10.2 -0.5**
WTTA Sg **Sg 17 49 43.1 -1.5**
WTTA Wattenberg 2.38 11 AML AML
comp=E,216µm,0.7s
WTTA AML AML
comp=N,151µm,0.4s
JAVS Javornik 2.38 65 i Pn **Pn 17 49 06.5 -0.1**
JAVS eSn **Sn 17 49 36.6 +1.2**
comp=Z,30nm,0.3s
JAVS Javornik 2.38 65 i Pn **Pn 17 49 06.5 -0.1**
JAVS eSn **Sn 17 49 36.6 +1.2**
comp=Z,30nm,0.3s
WATA Walderalm 2.44 10 ePn **Pn 17 49 09.7 +2.2**
SNR=25
WATA Walderalm 2.44 10 Pn **Pn 17 49 09.7 +2.2**
SNR=25
DAVA Damuels 2.47 342 ePn **Pb 17 49 11.3 -1.1**
comp=Z,5.6nm,0.2s
DAVA Damuels 2.47 342 Pn **Pb 17 49 11.3 -1.1**
comp=Z,5.6nm,0.2s
MYKA Terra Mystica 2.52 47 ePg **Pg 17 49 15.7 -0.9**
comp=Z,12nm,0.3s,SNR=10.0
MYKA Terra Mystica 2.52 47 Pg **Pg 17 49 15.7 -0.9**
comp=Z,12nm,0.3s,SNR=10.0
RETA Reutte 2.56 357 Pn **Pb 17 49 12.2 -1.6**
comp=Z,9.6nm,0.4s,SNR=12
RETA Reutte 2.56 357 Pn **Pb 17 49 12.2 -1.6**
comp=Z,9.6nm,0.4s,SNR=12
NEGI Seborga 2.59 246 AML AML
comp=E,208µm,0.4s
NEGI AML AML
comp=N,328µm,1.4s
SAOF Saorge 2.63 250 AML AML
comp=N,186µm,0.4s
SAOF AML AML
comp=E,166µm,0.5s
KBA Koelnbreinsper 2.71 37 ePg **Pg 17 49 18.9 -1.2**
comp=E,9.6nm,0.3s,SNR=13
KBA Koelnbreinsper 2.71 37 Pg **Pg 17 49 18.9 -1.2**
comp=E,9.6nm,0.3s,SNR=13
SBF Sospel 2.75 248 ePn **Pn 17 49 14.0 +2.2**
SBF eSn **Sb 17 49 49.1 -1.5**
comp=E,138nm,0.5s
SBF Sospel 2.75 248 ePn **Pn 17 49 14.0 +2.2**
SBF eSn **Sb 17 49 49.1 -1.5**
comp=E,69nm,0.5s
PGF Pioggiola 2.78 212 ePn **Pn 17 49 12.5 +0.3**
PGF eSn **Sn 17 49 46.3 +0.9**
comp=E,43nm,0.4s
PGF Pioggiola 2.78 212 ePn **Pn 17 49 12.5 +0.3**
PGF eSn **Sn 17 49 46.3 +0.9**
comp=E,21nm,0.4s
NVLJ Novalja 2.80 96 ePn **Pn 17 49 12.7 +0.5**
NVLJ Sn **Sn 17 49 44.5 -1.1**
NVLJ Novalja 2.80 96 ePn **Pn 17 49 12.7 +0.5**
NVLJ Sn **Sn 17 49 44.5 -1.1**
VISS Visnje 2.86 71 i Pn **Pn 17 49 13.6 +0.5**
VISS i Sn **Sn 17 49 47.2 0.0**
comp=Z,44nm,0.5s
VISS Visnje 2.86 71 i Pn **Pn 17 49 13.6 +0.5**
VISS i Sn **Sn 17 49 47.2 0.0**
comp=Z,44nm,0.5s
MVIF Mont Vial 2.93 251 P **Pn 17 49 16.2 +2.0**
MVIF Mont Vial 2.93 251 P **Pn 17 49 16.2 +2.0**
OBKA Obir 2.96 57 ePn **Pn 17 49 15.4 +0.8**
comp=Z,1.5nm,0.2s
OBKA Obir 2.96 57 Pn **Pn 17 49 15.4 +0.8**
comp=Z,1.5nm,0.2s
SURF Saint Ours 3.00 263 P **Pn 17 49 16.6 +1.3**
SURF Saint Ours 3.00 263 P **Pn 17 49 16.6 +1.3**
LPG La Plagne 3.04 282 ePn **Pb 17 49 20.3 -1.8**
LPG La Plagne 3.04 282 ePn **Pb 17 49 20.3 -1.8**
CALF Calern 3.14 249 P **Pn 17 49 18.9 +1.8**
CALF Calern 3.14 249 P **Pn 17 49 18.9 +1.8**
OZLJ Ozalj 3.24 76 ePn **Pn 17 49 18.9 +0.5**
OZLJ Sn **Sn 17 49 56.3 -0.3**
OZLJ Ozalj 3.24 76 ePn **Pn 17 49 18.8 +0.5**
OZLJ Sn **Sn 17 49 56.3 -0.3**
SOKA Soboth 3.33 57 i Pn **Pn 17 49 20.5 +0.8**
comp=Z,2.7nm,0.3s
SOKA Soboth 3.33 57 Pn **Pn 17 49 20.5 +0.8**
comp=Z,2.7nm,0.3s
FRF La Foret Royal 3.40 248 ePn **Pn 17 49 21.4 +0.8**
FRF eSn **Sn 17 50 03.4 +2.9**
comp=Z,52nm,0.4s
FRF La Foret Royal 3.40 248 ePn **Pn 17 49 21.4 +0.8**
FRF eSn **Sn 17 50 03.4 +2.9**
comp=Z,26nm,0.4s
UDBI Udbina 3.44 95 ePn **Pn 17 49 22.1 +1.0**
UDBI Sn **Sn 17 49 58.9 -2.6**
UDBI Udbina 3.44 95 ePn **Pn 17 49 22.1 +1.0**
UDBI Sn **Sn 17 49 58.9 -2.6**
LMR La Mourre 3.59 245 ePn **Pn 17 49 24.2 +1.0**
LMR eSn **Sn 17 50 05.6 +0.4**
comp=Z,42nm,0.4s
LMR La Mourre 3.59 245 ePn **Pn 17 49 24.2 +1.0**
LMR eSn **Sn 17 50 05.6 +0.4**
comp=Z,21nm,0.4s
ORIF Oris-en-Rattie 3.62 272 ePn **Pn 17 49 25.7 +2.0**
ORIF eSn **Sn 17 50 08.4 +2.3**
comp=Z,20nm,0.4s
ORIF Oris-en-Rattie 3.62 272 P **Pn 17 49 26.0 +2.3**
ORIF Oris-en-Rattie 3.62 272 ePn **Pn 17 49 25.7 +2.0**
ORIF eSn **Sn 17 50 08.4 +2.3**
comp=Z,10nm,0.4s
KIZ Kirchzarten 3.69 326 P **Pn 17 49 26.0 +1.4**
KIZ Kirchzarten 3.69 326 P **Pn 17 49 25.0 +0.5**
MOA Molln 3.70 37 i Pn **Pn 17 49 26.6 +1.9**
comp=Z,3.0nm,0.3s
MOA Molln 3.70 37 Pn **Pn 17 49 26.6 +1.9**
comp=Z,3.0nm,0.3s
ARSA Arzberg 3.92 52 ePn **Pn 17 49 28.2 +0.5**
comp=Z,2.6nm,0.3s
ARSA Arzberg 3.92 52 Pn **Pn 17 49 28.2 +0.5**
comp=Z,2.6nm,0.3s
OG35 Corcelles 3.96 288 P **Pn 17 49 30.4 +2.1**
OG35 Corcelles 3.96 288 P **Pn 17 49 30.4 +2.1**
OG35 S **Sn 17 50 15.8 +1.4**
SMRF Simiane la Rot 3.98 258 ePn **Pn 17 49 32.4 +3.8**
SMRF Simiane la Rot 3.98 258 ePn **Pn 17 49 32.4 +3.8**
OPP Oppenau 4.05 333 P **Pn 17 49 31.1 +1.6**

OPP	Oppenau	4.05	333	P	Pn	17 49 31.1	+1.6
HINF	Hinteralfeld	4.06	317	*e*Pn	Pn	17 49 30.5	+0.9
HINF				*e*Sn	Sn	17 50 16.4	-0.4
	comp=Z,13nm,0.3s						
HINF	Hinteralfeld	4.06	317	*e*Pn	Pn	17 49 30.5	+0.9
HINF				*e*Sn	Sn	17 50 16.4	-0.4
	comp=Z,6.6nm,0.3s						
ECH	Echery	4.21	323	P	Pn	17 49 33.0	+1.3
ECH	Echery	4.21	323	P	Pn	17 49 33.0	+1.3
ECH				S	Sn	17 50 22.2	+1.7
CDF	Champ du Feu	4.31	325	*e*Pn	Pn	17 49 34.2	+1.0
CDF	Champ du Feu	4.31	325	*e*Pn	Pn	17 49 34.2	+1.0
HAU	Haudompre	4.43	315	*e*Pn	Pn	17 49 35.7	+0.9
HAU				*e*Sn	Sn	17 50 28.2	+2.1
	comp=Z,28nm,0.3s						
HAU	Haudompre	4.43	315	*e*Pn	Pn	17 49 35.7	+0.9
HAU				*e*Sn	Sn	17 50 28.2	+2.1
	comp=Z,14nm,0.3s						
VIVF	Saint-Julien-l	4.48	271	*e*Pn	Pn	17 49 37.0	+1.6
VIVF				*e*Sn	Sn	17 50 27.6	+0.4
	comp=Z,4.0nm,0.3s						
VIVF	Saint-Julien-l	4.48	271	*e*Pn	Pn	17 49 37.0	+1.6
VIVF				*e*Sn	Sn	17 50 27.6	+0.4
	comp=Z,2.0nm,0.3s						
CONA	Conrad Observa	4.51	47	*e*Pn	Pn	17 49 36.8	+0.9
	comp=Z,1.8nm,0.4s						
CONA	Conrad Observa	4.51	47	Pn	Pn	17 49 36.8	+0.9
	comp=Z,1.8nm,0.4s						
KHC	Kasperske Hory	4.56	22	*e*PN	Pn	17 49 37.3	+0.8
KHC				*e*PG	Pg	17 49 56.4	+0.9
KHC				*e*SN	Sn	17 50 28.6	-0.6
KHC				*e*SG	Sg	17 50 53.8	-0.7
	comp=Z,16nm,0.7s						
KHC	Kasperske Hory	4.56	22	Pn	Pn	17 49 37.3	+0.8
SMF	Signal de Mont	5.28	291	*e*Pn	Pn	17 49 47.5	+1.2
SMF				*e*Sn	Sn	17 50 47.2	+0.4
	comp=Z,14nm,0.4s						
SMF	Signal de Mont	5.28	291	*e*Pn	Pn	17 49 47.5	+1.2
SMF				*e*Sn	Sn	17 50 47.2	+0.4
	comp=Z,6.9nm,0.4s						
STON	Ston	5.28	111	*e*Pn	Pn	17 49 45.8	-0.6
STON				Sn	Sn	17 50 42.5	-4.2
STON	Ston	5.28	111	*e*Pn	Pn	17 49 45.7	-0.6
NKC	Novy Kostel	5.39	10	*e*PN	Pn	17 49 48.1	+0.1
NKC				*e*PG	Pg	17 50 11.5	0.0
NKC				*e*SN	Sn	17 50 49.1	-0.6
NKC				*e*SG	Sg	17 51 18.5	-2.8
	comp=Z,7.4nm,0.4s						
NKC	Novy Kostel	5.39	10	Pn	Pn	17 49 48.1	+0.1
NKC				Sn	Sn	17 50 49.1	-0.6
NKC				Sg	Sg	17 51 18.5	-2.8
	comp=Z,7.4nm,0.4s						
LOR	Lormes	5.47	298	*e*Pn	Pn	17 49 50.1	+1.1
LOR				*e*Sn	Sn	17 50 52.6	+1.0
	comp=Z,6.3nm,0.2s						
LOR	Lormes	5.47	298	P	Pn	17 49 50.4	+1.3
LOR	Lormes	5.47	298	*e*Pn	Pn	17 49 50.1	+1.1
LOR				*e*Sn	Sn	17 50 52.6	+1.0
	comp=Z,3.2nm,0.2s						
PRU	Pruhonice	5.60	24	*e*PN	Pn	17 49 52.8	+2.0
PRU				*e*SN	Sn	17 50 52.7	-2.1
PRU				*e*SG	Sg	17 51 27.2	-0.8
	comp=Z,5.3nm,0.5s						
PRU	Pruhonice	5.60	24	Pn	Pn	17 49 52.8	+2.0
PRU				Sn	Sn	17 50 52.7	-2.1
PRU				Sg	Sg	17 51 27.2	-0.8
	comp=Z,5.3nm,0.5s						
GOPC	GO Pecny, Ondr	5.61	26	*e*SG	Sg	17 51 26.0	-2.3
	comp=Z,7.0nm,0.5s						
GOPC	GO Pecny, Ondr	5.61	26	Sg	Sg	17 51 26.0	-2.3
	comp=Z,7.0nm,0.5s						
SSF	Saint Saulge	5.62	295	*e*Pn	Pn	17 49 52.0	+0.9
SSF	Saint Saulge	5.62	295	*e*Pn	Pn	17 49 52.0	+0.9
AVF	Avril sur Loir	5.64	292	*e*Pn	Pn	17 49 52.3	+1.0
AVF	Avril sur Loir	5.64	292	*e*Pn	Pn	17 49 52.3	+1.0
BGF	Bois d'Agland	5.92	289	*e*Pn	Pn	17 49 56.5	+1.4
BGF				*e*Sn	Sn	17 51 03.5	+0.9
	comp=Z,19nm,0.6s						
BGF	Bois d'Agland	5.92	289	*e*Pn	Pn	17 49 56.5	+1.4
BGF				*e*Sn	Sn	17 51 03.5	+0.9
	comp=Z,9.3nm,0.6s						
BRG	Berggiesshubel	6.27	17	Pn	Pn	17 50 00.8	+0.9
BRG				PG	Pg	17 50 27.1	-1.0
BRG				SG	Sg	17 51 51.2	+2.0
	comp=Z,5.3nm,0.7s						
VYHS	Vyhne	6.47	54	*e*PN	Pn	17 50 02.6	-0.1
VYHS				*e*SN	Sn	17 51 14.1	-2.1
VYHS	Vyhne	6.47	54	*e*Pn	Pn	17 50 02.6	-0.1
VYHS				*e*Sn	Sn	17 51 14.1	-2.1
KRLC	Kraliky	6.47	35	*e*SN	Sn	17 51 14.9	-1.4
KRLC				*e*SG	Sg	17 51 57.5	+1.7
	comp=Z,2.2nm,0.8s						
KRLC	Kraliky	6.47	35	Sn	Sn	17 51 14.9	-1.4
DPC	Dobruska-Polom	6.51	32	*e*SN	Sn	17 51 14.6	-2.6
DPC				*e*SG	Sg	17 51 55.1	-1.9
	comp=Z,4.3nm,0.6s						
CLL	Collm	6.52	11	*e*Pn	Pn	17 50 04.0	+0.6
CLL				*e*Pg	Pg	17 50 35.0	+2.0
CLL				*e*		17 51 35.0	
CLL				*e*Sg	Sg	17 51 54.0	-3.3
	comp=Z,13nm,1.2s						
UPC	Upice	6.53	30	*e*SG	Sg	17 51 55.3	-2.3
	comp=Z,10.0nm,0.6s						
UPC	Upice	6.53	30	Sg	Sg	17 51 55.3	-2.3
	comp=Z,10.0nm,0.6s						

MAN 03 17:50:30.8, 6°.02N×127°.38E, h108km, mb4.8, ML3.7, MS3.6, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	Mati	1.45	310	*e*P	Pn	17 50 57.8	+0.9
MATI				*e*S	Sn	17 51 17.7	+1.1
GSPH	General Santos	2.42	272	⇓P	Pn	17 51 05.9	-3.4
GSPH				*i* S	Sn	17 51 33.5	-5.2
BUKP	Musuan	2.95	309	*e*P	Pn	17 51 14.9	-1.2
BUKP				*e*S	Sn	17 51 51.8	+0.7
BUTP	Butuan	3.41	329	*e*P	Pn	17 51 23.9	+1.7
BUTP				*e*S	Sn	17 52 06.2	+4.2

ISCJB ***03*** *17:52:32.1±0.4, 35°.85N±0°.05×79°.72E±0°.09, h9km, mb3.3/9, MS3.2/5, Error ellipse: s-maj=11.6km s-min=4.5km az=152.8*
IDC ***03*** *17:52:32.1±0.9, 35°.95N×79°.67E, h0km, mb3.4/9, mb1 3.6/14, mb1mx3.4/75, mbtmp3.5/14, ML3.2/5, MS3.3/5, Ms1 3.2/5, ms1mx2.6/52, Error ellipse: s-maj=22.9km s-min=15.8km az=50.0*
BJI ***03*** *17:52:33.0, 35°.79N×79°.75E, h8km, ML3.9/6*
NNC ***03*** *17:52:36.5±3.0, 35°.97N×79°.80E, h0km, mb4.1, mpv4.0, Error ellipse: s-maj=25.1km s-min=22.9km az=148.0*
ISC 03 17:52:34.0±0.7, 35°.89N±0°.06×79°.81E±0°.07, h9km, n39, σ2°58/38, mb3.4/9, MS3.3/5, 12C-6D, Kashmir-Xizang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	6.47	311	⇑Pn	Pn	17 54 12.4	+2.8
	5.3nm,0.6s						
SFK				⇑Pg	Pb	17 54 29.2	+2.4
	5.4nm,0.4s						
SFK				⇑Sn	Sn	17 55 29.0	+5.4
	9.0nm,0.5s						
SFK				⇑Lg	Lg	17 55 55.7	
	17nm,0.5s						
PDGK	Podgornoye	7.44	358	⇓Pn	Pn	17 54 25.5	+2.7
	3.2nm,0.4s						
PDGK				⇓Sn	Sn	17 55 54.0	+6.7
	37nm,1.3s						
PDGK				⇑Lg	Lg	17 56 24.3	
	39nm,1.2s						
MDOK	Medeo	7.57	344	Pg	Pb	17 54 52.2	+6.6
	9.1nm,0.6s						
MDOK				Lg	Lg	17 56 29.6	
	19nm,0.7s						
TKM2	Tokmak 2	7.74	336	⇑Pn	Pn	17 54 30.1	+3.0
	2.1nm,0.6s						
TKM2				⇓Lg	Lg	17 56 34.3	
	28nm,1.2s						
AAK	Ala-Archa	7.90	330	Pn	Pn	17 54 29.5	+0.3
	0.3nm,0.3s,baz=135,slow=8.6,SNR=2.0						
AAK				Lg	Lg	17 56 38.7	
	1.1nm,0.3s,baz=263,slow=8.1,SNR=3.7						
AAK	Ala-Archa	7.90	330	⇑Pg	Pg	17 55 03.3	-2.0
	9.2nm,0.7s						
AAK				⇑Lg	Lg	17 56 44.4	
	43nm,0.9s						
PYUN	Piuthan	8.22	160	*e*P	Pn	17 54 33.1	-0.5
	26nm,0.8s						
DANN	Dangsing	8.22	155	*e*P	Pn	17 54 34.4	+0.6
	13nm,0.6s						
MNAS	Manas	8.69	322	⇓Pg	Pg	17 55 18.1	-2.3
	3.7nm,0.6s						
MNAS				⇓Lg	Lg	17 57 11.0	
	9.0nm,0.9s						
KOLN	Koldanda	8.71	157	*e*P	Pn	17 54 40.0	-0.4
	9.2nm,0.4s						
GKN	Gorkha	8.86	151	*e*P	Pn	17 54 42.6	+0.2
	8.4nm,0.4s						
KKN	Kakani	9.31	149	*e*P	Pn	17 54 50.0	+1.3
	7.6nm,0.5s						
DMN	Daman	9.40	150	*e*P	Pn	17 54 50.1	+0.2
	6.9nm,0.4s						
GUN	Gumba	9.47	145	*e*P	Pn	17 54 53.3	+2.3
JIRN	Jiri	9.83	145	*e*P	Pn	17 54 58.7	+2.8
	18nm,0.4s						
WMQ	Urumqi	9.97	35	*e*P	Pn	17 55 01.8	+4.3
KK31	Karatay Array	10.17	318	Pn	Pn	17 55 03.7	+3.5
	0.9nm,0.4s,baz=120,slow=12,SNR=20						
KK31				⇑Sn	Sn	17 56 56.1	+1.7
	1.7nm,0.7s,baz=140,slow=22,SNR=2.6						
MK31	Makanchi Array	11.05	9	⇓Pn	Pn	17 55 13.8	+1.5
	0.9nm,0.4s,baz=190,slow=13,SNR=36						
MK31				⇑Sn	Sn	17 57 13.8	-2.2
	2.0nm,0.6s,baz=185,slow=23,SNR=4.7						
MKAR	Makanchi Array	11.05	9	Pn	Pn	17 55 13.3	+1.0
	0.6nm,0.3s,baz=198,slow=14,SNR=27						
MKAR				Sn	Sn	17 57 11.1	-4.9
	0.2nm,0.3s,baz=178,slow=10,SNR=2.7						
KURBB	Kurchatov Arra	14.76	357	Pn	Pn	17 56 00.8	-2.0
	0.0nm,0.3s,baz=182,slow=12,SNR=9.6						
GTA	Gaotai	16.23	72	*e*P	P	17 56 33.7	+8.3
GTA				pP	sP	17 56 37.4	+8.3
GTA				sP	pP	17 56 40.6	+13
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BVAR	Borovoye Array	18.38	342	P	P	17 56 48.3	-0.7
	comp=Z,0.2nm,0.3s,baz=150,slow=12,SNR=10.0						
ZALV	Zalesovo Beam	18.40	9	P	P	17 56 46.9	-2.2
	comp=Z,0.2nm,0.3s,baz=190,slow=11,SNR=6.5						
AB31	Akbulak array	19.73	319	⇑P	Pn	17 57 05.5	+0.1
	comp=Z,0.7nm,0.5s						
AKTO	Aktyubinsk	21.43	319	P	P	17 57 20.9	-1.3
	comp=Z,0.6nm,0.5s,baz=117,slow=16,SNR=3.3						
AKTO	Aktyubinsk	21.43	319	⇑P	P	17 57 25.5	+3.2
	comp=Z,2.0nm,0.6s						
SONM	Songino Array	23.00	51	P	P	17 57 39.5	+0.3
	comp=Z,0.4nm,0.5s,baz=243,slow=10,SNR=3.0						
KBZ	Khabaz	29.23	297	LR	LR	18 13 47.0	
	comp=Z,14nm,19.1s,baz=120,slow=44						
BRTR	Keskin Array B	36.37	290	P	P	17 59 38.6	0.0
	comp=Z,0.3nm,0.9s,baz=92,slow=12,SNR=2.5						
EIL	Elat	37.97	274	LR	LR	18 16 05.0	
	comp=Z,79nm,21.2s,baz=63,slow=37						
AKASG	Malin Array Be	38.90	309	P	P	17 59 57.7	-2.0
	comp=Z,0.1nm,0.2s,baz=313,slow=25,SNR=2.7						
FINES	FINESS Array B	42.05	325	P	P	18 00 24.6	-0.9
	comp=Z,0.5nm,0.4s,baz=124,slow=17,SNR=3.4						
VRAC	Vranov	47.10	307	LR	LR	18 24 20.9	
	comp=Z,29nm,19.7s,baz=278,slow=41						
GERES	GERESS Array B	49.05	307	LR	LR	18 25 18.4	
	comp=Z,31nm,19.8s,baz=260,slow=40						
SPITS	Spitsbergen Ar	49.77	346	LR	LR	18 27 15.5	
	comp=Z,47nm,18.5s,baz=350,slow=42						
TORD	Torodi Ar. Bea	72.86	274	P	P	18 04 01.4	-2.2
	comp=Z,0.6nm,0.7s,baz=37,slow=5.1,SNR=3.8						
ILAR	Eielson Array	73.23	19	P	P	18 04 02.6	-2.4
	comp=Z,0.4nm,0.8s,baz=308,slow=4.0,SNR=4.3						
WRA	Warramunga Arr	75.79	128	P	P	18 04 21.5	+1.0
	comp=Z,0.3nm,0.8s,baz=314,slow=6.9,SNR=3.3						
ASAR	Alice Springs	78.25	131	P	P	18 04 34.7	+0.4
	comp=Z,0.2nm,0.7s,baz=328,slow=5.5,SNR=3.6						

IDC ***03*** *17:57:50.8±1.1, 44°.74N×11°.41E, h0km, mb3.6/5, mb1 3.6/9, mb1mx3.3/74, mbtmp3.4/9, ML3.4/4, MS2.4/3, Ms1 2.4/3, ms1mx2.2/52, Error ellipse: s-maj=23.1km s-min=11.9km az=118.0*
PRU ***03*** *17:57:52.1, 44°.94N×10°.80E, h4km*
LDG ***03*** *17:57:52.9±0.1, 44°.95N×11°.12E, h2km, Ml4.0/12, Error ellipse: s-maj=3.2km s-min=2.6km az=56.0*
ROM ***03*** *17:57:52.8±0.0, 44°.882N±0°.001×10°.974E±0°.001, h9km, ML3.8/17*
ISCJB ***03*** *17:57:52.3±0.2, 45°.01N±0°.01×11°.01E±0°.02, h13km±1km, mb3.6/5, MS2.4/1, Error ellipse: s-maj=2.3km s-min=1.8km az=141.8*
CSEM ***03*** *17:57:53.3±0.1, 44°.94N×11°.02E, h10km, ML4.0/20, Error ellipse: s-maj=2.4km s-min=2.0km az=154.0*
IASPEI ***03*** *17:57:53.1±0.8, 44°.92N±0°.02×10°.99E±0°.02, h14km±4km, mb3.7/5, Error ellipse: s-maj=3.1km s-min=2.9km az=133.8, GT5 selection from ISC bulletin GT5 identified by Bond¨¡r and McLaughlin (2009) selection criteria Bond¨¡r and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
STR ***03*** *17:57:53.8±1.4, 45°.N±5°.×1°.1E±1°.3, h5km, M4.0/11, mB4.3/2, mb4.0/1, MLv4.0/11, Mw(mB)3.4/2*
ISC 03 17:57:53.1±0.7, 44°.94N±0°.02×11°.01E±0°.02, h15km±3km, n308, σ1°.15/348, mb3.7/5, 23C-24D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0818	Loc. Fossa, Co	0.01	92	⇑*i*P	Pg	17 57 55.5	-0.3
T0818				⇑*i*S	Sg	17 57 58.5	+1.0
T0818	Loc. Fossa, Co	0.01	92	*i* P	Pg	17 57 55.5	-0.3
T0818				*i* S	Sg	17 57 58.5	+1.0
T0827	Moglia (MN)	0.06	272	⇑*i*P	Pg	17 57 55.5	-0.5
T0827				⇑*i*S	Sg	17 57 58.6	+0.7
T0827	Moglia (MN)	0.06	272	*i* P	Pg	17 57 55.5	-0.5
T0827				*i* S	Sg	17 57 58.6	+0.7
NDIM	Novi di Modena	0.09	239	*e*P	Pg	17 57 54.8	-1.5
NDIM				*e*S	Sg	17 57 57.5	-0.9
NDIM				AML	AML		
NDIM				AML	AML		
NDIM				AML	AML		
NDIM				AML	AML		
T0812	Loc. Stoppiaro	0.12	81	⇑*e*P	Pg	17 57 56.8	+0.1
T0812	Loc. Stoppiaro	0.12	81	*e*P	Pg	17 57 56.8	+0.1
T0825	Gonzaga (MN)	0.12	288	AML	AML		
T0825				AML	AML		
T0825				AML	AML		
T0825				AML	AML		
T0825				AML	AML		
T0825				AML	AML		
T0825				AML	AML		
T0825				AML	AML		
T0828	Loc. Fossoli,	0.13	214	⇓*i*P	Pg	17 57 55.3	-1.4
T0828				⇓*i*S	Sg	17 57 58.2	-0.8
T0828	Loc. Fossoli,	0.13	214	*i* P	Pg	17 57 55.3	-1.4
T0828				*i* S	Sg	17 57 58.2	-0.8
SBPO	S.Benedetto Po	0.13	330	⇓*e*P	Pb	17 57 57.6	+0.3
SBPO	S.Benedetto Po	0.13	330	*e*P	Pb	17 57 57.6	+0.3
SBPO				AML	AML		
	comp=E,72450μm,0.5s						
SBPO				AML	AML		
SBPO				AML	AML		
	comp=E,72450μm,0.5s						
SBPO				AML	AML		
SBPO				AML	AML		
	comp=E,72450μm,0.5s						
SBPO				AML	AML		
T0802	SanFelice sul	0.13	117	*e*P	Pg	17 57 56.5	-0.3
T0802				*e*S	Sb	17 58 00.9	+0.8
T0802	SanFelice sul	0.13	117	*e*P	Pg	17 57 56.5	-0.3
T0802				*e*S	Sb	17 58 00.9	+0.8
T0813	Massa Finalese	0.14	113	⇑*e*P	Pg	17 57 56.9	0.0
T0813				⇑*e*S	Sb	17 58 01.3	+0.9
T0813	Massa Finalese	0.14	113	*e*P	Pg	17 57 56.9	0.0
T0813				*e*S	Sb	17 58 01.3	+0.9
T0814	Loc. Cortile,	0.14	192	⇓*i*P	Pg	17 57 55.7	-1.2
T0814				⇓*i*S	Sg	17 57 58.0	-1.5
T0814	Loc. Cortile,	0.14	192	*i* P	Pg	17 57 55.7	-1.2
T0814				*i* S	Sg	17 57 59.0	-0.5
T0826	Rio Saliceto (	0.17	236	AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0824	Loc. Limidi di	0.19	199	⇑*i*P	Pg	17 57 56.5	-1.0
T0824				⇑*i*S	Sg	17 58 00.5	0.0
T0824	Loc. Limidi di	0.19	199	*i* P	Pg	17 57 56.5	-1.0
T0824				*i* S	Sg	17 58 00.5	0.0
GAZZ	Gazzo Veronese	0.19	18	⇑*e*Pg	Pb	17 57 58.7	+0.4
GAZZ	Gazzo Veronese	0.19	18	*e*Pg	Pb	17 57 58.7	+0.4
T0800	Massa Finalese	0.19	117	⇓*e*P	Pg	17 57 57.3	-0.2
T0800				⇓*e*S	Sb	17 58 02.2	+0.5
T0800	Massa Finalese	0.19	117	*e*P	Pg	17 57 57.3	-0.2
T0800				*e*S	Sb	17 58 02.1	+0.5
T0800				AML	AML		
	comp=E,65100μm,0.2s						
T0800				AML	AML		
T0800				AML	AML		
	comp=E,69000μm,0.2s						
T0800				AML	AML		
T0800				AML	AML		
	comp=E,65100μm,0.2s						
T0800				AML	AML		
T0800				AML	AML		
	comp=E,69000μm,0.2s						
T0800				AML	AML		
T0800				AML	AML		
	comp=E,65100μm,0.2s						
T0800				AML	AML		
T0800				AML	AML		
	comp=E,69050μm,0.2s						
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
	comp=E,69000μm,0.2s						
T0800				AML	AML		
	comp=E,65100μm,0.2s						
RAVA	Ravarino	0.20	157	⇓*e*P	Pg	17 57 57.7	0.0
RAVA				⇓*e*S	Sb	17 58 01.6	-0.2
RAVA	Ravarino	0.20	157	*e*P	Pg	17 57 57.7	0.0
RAVA				*e*S	Sb	17 58 01.6	-0.2
RAVA				AML	AML		
	comp=E,99300μm,0.3s						
RAVA				AML	AML		
	comp=N,97150μm,0.9s						
RAVA				AML	AML		
	comp=E,99400μm,0.3s						
RAVA				AML	AML		
	comp=N,97150μm,0.9s						
RAVA				AML	AML		
	comp=E,99350μm,0.3s						
RAVA				AML	AML		
	comp=N,97150μm,0.9s						
RAVA				AML	AML		
	comp=E,99400μm,0.3s						
RAVA				AML	AML		
	comp=N,97150μm,0.9s						
SERM	Sermide	0.21	70	AML	AML		
	comp=E,9640μm,0.8s						
SERM				AML	AML		
	comp=N,6570μm,0.7s						
SERM				AML	AML		
	comp=E,13500μm,0.9s						
SERM				AML	AML		
	comp=N,11565μm,1.1s						
SERM				AML	AML		
	comp=E,9640μm,0.8s						
SERM				AML	AML		
	comp=N,6570μm,0.7s						
SERM				AML	AML		
	comp=E,13500μm,0.9s						
SERM				AML	AML		
	comp=N,11590μm,1.1s						
SERM				AML	AML		
	comp=E,9645μm,0.8s						
SERM				AML	AML		
	comp=N,6570μm,0.7s						
SERM				AML	AML		
	comp=E,13510μm,0.9s						
SERM				AML	AML		
	comp=N,11580μm,1.1s						
SERM				AML	AML		
	comp=E,13500μm,0.9s						
SERM				AML	AML		
	comp=E,9640μm,0.8s						
SERM				AML	AML		
	comp=N,11590μm,1.1s						
SERM				AML	AML		
	comp=N,6570μm,0.7s						
T0811	Palata Pepoli	0.21	135	*e*P	Pg	17 57 57.4	-0.6
T0811				*e*S	Sb	17 58 02.6	+0.2
T0811	Palata Pepoli	0.21	135	*e*P	Pg	17 57 57.4	-0.6
T0811				*e*S	Sb	17 58 02.6	+0.2
T0805	Bondeno (FE)	0.22	94	*e*P	Pg	17 57 58.3	+0.2
T0805	Bondeno (FE)	0.22	94	*e*P	Pg	17 57 58.3	+0.2
T0805				AML	AML		
	comp=E,51250μm,0.7s						
T0805				AML	AML		
	comp=N,36300μm,0.4s						
T0805				AML	AML		
	comp=E,51300μm,0.7s						
T0805				AML	AML		
	comp=N,36300μm,0.4s						
T0805				AML	AML		
	comp=E,51250μm,0.7s						
T0805				AML	AML		
	comp=N,36300μm,0.4s						
NOVE	Novellara	0.25	237	⇑*i*P	Pg	17 57 57.7	-0.9
NOVE				⇑*i*S	Sg	17 58 02.8	+0.5
NOVE	Novellara	0.25	237	*i* P	Pg	17 57 57.7	-0.9
NOVE				*i* S	Sg	17 58 02.8	+0.5
NOVE				AML	AML		
NOVE				AML	AML		
	comp=N,88300μm,1.0s						
NOVE				AML	AML		
NOVE				AML	AML		
	comp=N,88250μm,1.0s						
NOVE				AML	AML		
NOVE				AML	AML		
	comp=N,88250μm,1.0s						
NOVE				AML	AML		
NOVE				AML	AML		
	comp=N,88250μm,1.0s						
MNTV	Mantova	0.27	324	AML	AML		
MNTV				AML	AML		
MNTV				AML	AML		
MNTV				AML	AML		
MNTV				AML	AML		
MNTV				AML	AML		
T0803	Dosso, Cento (	0.29	125	*e*P	Pg	17 57 59.2	-0.1
T0803	Dosso, Cento (	0.29	125	*e*P	Pg	17 57 59.2	-0.1
MODE	Modena	0.31	188	⇑*e*P	Pg	17 57 59.1	-0.4
MODE				⇑*e*S	Sb	17 58 05.2	+0.1
MODE	Modena	0.31	188	*e*P	Pg	17 57 59.1	-0.4
MODE				*e*S	Sb	17 58 05.2	+0.1
MODE				AML	AML		
	comp=E,99250μm,0.6s						
MODE				AML	AML		
	comp=N,74450μm,0.6s						
MODE				AML	AML		
	comp=E,98800μm,0.6s						
MODE				AML	AML		
	comp=N,74450μm,0.6s						
MODE				AML	AML		
	comp=E,98850μm,0.6s						
MODE				AML	AML		
	comp=N,74400μm,0.6s						
MODE				AML	AML		
	comp=N,74450μm,0.6s						
MODE				AML	AML		
	comp=E,98800μm,0.6s						
T0823	Castello D'Arg	0.31	143	*e*P	Pg	17 57 59.7	+0.1
T0823	Castello D'Arg	0.31	143	*e*P	Pg	17 57 59.7	+0.1
T0817	Loc. Veratica,	0.32	80	*e*P	Pb	17 58 00.5	0.0
T0817	Loc. Veratica,	0.32	80	*e*P	Pb	17 58 00.5	0.0
T0821	Loc. Casaglia	0.38	95	AML	AML		
	comp=N,6870μm,1.4s						
T0821				AML	AML		
	comp=E,7340μm,0.4s						
T0821				AML	AML		
	comp=N

T0821				AML	AML	
	comp=E,7650µm,0.4s					
T0821				AML	AML	
	comp=N,6870µm,1.4s					
T0821				AML	AML	
	comp=E,7345µm,0.4s					
T0821				AML	AML	
	comp=N,6710µm,1.4s					
T0821				AML	AML	
	comp=E,7650µm,0.4s					
T0821				AML	AML	
	comp=E,7340µm,0.4s					
T0821				AML	AML	
	comp=E,7650µm,0.4s					
T0821				AML	AML	
	comp=N,6870µm,1.4s					
T0821				AML	AML	
	comp=N,6710µm,1.4s					
T0815	**Correggio (RE)**	**0.51**	**97**	*e*P	**Pn**	**17 58 04.5 -1.2**
T0815	**Correggio (RE)**	**0.51**	**97**	*e*P	**Pn**	**17 58 04.5 -1.2**
PRMA	**PARMA**	**0.53**	**251⇑**	*e*P	**Pg**	**17 58 03.3 -0.2**
PRMA	**PARMA**	**0.53**	**251**	*e*P	**Pg**	**17 58 03.4 -0.2**
PRMA				*e*S	**Sb**	**17 58 13.0 +1.6**
PRMA				AML	AML	
	comp=E,13800µm,0.6s					
PRMA				AML	AML	
	comp=N,11350µm,1.1s					
PRMA				AML	AML	
	comp=E,13800µm,0.6s					
PRMA				AML	AML	
	comp=N,11350µm,1.1s					
PRMA				AML	AML	
	comp=E,13800µm,0.6s					
PRMA				AML	AML	
	comp=N,11350µm,1.1s					
ZCCA	**Zocca**	**0.58**	**183⇑**	*e*P	**Pb**	**17 58 05.2 +0.2**
ZCCA	**Zocca**	**0.58**	**183**	*e*P	**Pb**	**17 58 05.2 +0.2**
ZCCA				AML	AML	
	comp=E,7330µm,1.4s					
ZCCA				AML	AML	
	comp=N,8450µm,0.9s					
ZCCA				AML	AML	
	comp=E,6955µm,1.3s					
ZCCA				AML	AML	
	comp=N,8970µm,0.9s					
ZCCA				AML	AML	
	comp=E,7330µm,1.4s					
ZCCA				AML	AML	
	comp=N,8445µm,0.9s					
ZCCA				AML	AML	
	comp=E,6955µm,1.3s					
ZCCA				AML	AML	
	comp=N,8970µm,0.9s					
ZCCA				AML	AML	
	comp=N,8450µm,0.9s					
ZOVE	**Zovencedo**	**0.62**	**33**	AML	AML	
	comp=E,2900µm,0.2s					
ZOVE				AML	AML	
	comp=N,5740µm,0.2s					
ZOVE				AML	AML	
	comp=E,2900µm,0.2s					
ZOVE				AML	AML	
	comp=N,5740µm,0.2s					
ZOVE				AML	AML	
	comp=E,2900µm,0.2s					
ZOVE				AML	AML	
	comp=N,5740µm,0.2s					
TEOL	**Teolo**	**0.63**	**47⇓**	*e*Pg	**Pb**	**17 58 06.4 +0.5**
TEOL				*e*Sg	**Sn**	**17 58 16.4 -0.9**
TEOL	**Teolo**	**0.63**	**47⇓**	*e*P	**Pb**	**17 58 06.3 +0.5**
TEOL				*e*Sg	**Sn**	**17 58 16.4 -0.9**
TEOL	**Teolo**	**0.63**	**47**	*e*P	**Pb**	**17 58 06.3 +0.5**
TEOL				AML	AML	
	comp=E,10950µm,0.9s					
TEOL				AML	AML	
	comp=N,7750µm,0.5s					
TEOL				AML	AML	
	comp=E,10950µm,0.9s					
TEOL				AML	AML	
	comp=N,7750µm,0.5s					
TEOL				AML	AML	
	comp=E,10950µm,0.9s					
TEOL				AML	AML	
	comp=N,7750µm,0.5s					
CMPO	**Campotto Po**	**0.67**	**122**	AML	AML	
	comp=N,6985µm,1.3s					
CMPO				AML	AML	
	comp=E,5655µm,1.1s					
CMPO				AML	AML	
	comp=N,6985µm,1.3s					
CMPO				AML	AML	
	comp=E,5655µm,1.1s					
CMPO				AML	AML	
	comp=N,6985µm,1.3s					
CMPO				AML	AML	
	comp=E,5655µm,1.1s					
ROVR	**Rover¯¤ Verone**	**0.71**	**3⇓**	*e*P	**Pb**	**17 58 07.6 +0.3**
ROVR	**Rover¯¤ Verone**	**0.71**	**3**	*e*P	**Pb**	**17 58 07.6 +0.3**
ROVR				AML	AML	
	comp=E,11450µm,0.9s					
ROVR				AML	AML	
	comp=N,22400µm,0.5s					
ROVR				AML	AML	
	comp=E,11450µm,0.9s					
ROVR				AML	AML	
	comp=N,22400µm,0.5s					
ROVR				AML	AML	
	comp=N,22400µm,0.5s					
ROVR				AML	AML	
	comp=E,11450µm,0.9s					
MARN	**Marana (Italy)**	**0.72**	**11⇓**	*e*Pg	**Pb**	**17 58 07.7 +0.4**
MARN				*e*Sg	**Sn**	**17 58 19.4 -0.1**
MARN	**Marana (Italy)**	**0.72**	**11**	*e*Pg	**Pb**	**17 58 07.7 +0.4**
MARN				*e*Sg	**Sn**	**17 58 19.4 -0.1**
ADRI	**Adria, Italy**	**0.72**	**81⇑**	*e*Pg	**Pn**	**17 58 08.4 -0.3**
ADRI	**Adria, Italy**	**0.72**	**81**	*e*Pg	**Pn**	**17 58 08.4 -0.3**
BALD	**Monte Baldo**	**0.76**	**350⇑**	*e*Pg	**Pb**	**17 58 08.7 +0.6**
BALD	**Monte Baldo**	**0.76**	**350**	*e*Pg	**Pb**	**17 58 08.7 +0.6**
SALO	**Salr**	**0.77**	**333**	AML	AML	
	comp=N,7505µm,0.7s					
SALO				AML	AML	
	comp=E,10925µm,0.5s					
SALO				AML	AML	
	comp=N,7505µm,0.7s					
SALO				AML	AML	
	comp=E,10925µm,0.5s					
SALO				AML	AML	
	comp=N,7505µm,0.7s					
SALO				AML	AML	
	comp=E,10925µm,0.5s					
FNVD	**Fontana Vidola**	**0.77**	**174**	AML	AML	
	comp=E,3795µm,0.9s					
FNVD				AML	AML	
	comp=N,4560µm,1.1s					
FNVD				AML	AML	
	comp=E,3795µm,0.9s					
FNVD				AML	AML	
	comp=N,4560µm,1.1s					
FNVD				AML	AML	
	comp=N,4560µm,1.1s					
FNVD				AML	AML	
	comp=E,3795µm,0.9s					
IMOL	**Imola, Italy**	**0.78**	**138**	AML	AML	
	comp=N,380µm,1.6s					
IMOL				AML	AML	
	comp=E,3840µm,0.4s					
IMOL				AML	AML	
	comp=N,3470µm,1.1s					
IMOL				AML	AML	
	comp=E,530µm,0.5s					
IMOL				AML	AML	
	comp=E,3840µm,0.4s					
IMOL				AML	AML	
	comp=N,3475µm,1.1s					
IMOL				AML	AML	
	comp=E,530µm,0.5s					
IMOL				AML	AML	
	comp=N,376µm,1.6s					
IMOL				AML	AML	
	comp=E,530µm,0.5s					
IMOL				AML	AML	
	comp=E,3840µm,0.4s					
IMOL				AML	AML	
	comp=N,3470µm,1.1s					
IMOL				AML	AML	
	comp=N,380µm,1.6s					
VOBA	**Vobarno**	**0.79**	**333**	AML	AML	
	comp=N,8585µm,1.1s					
VOBA				AML	AML	
	comp=E,7080µm,0.5s					
MAGA	**Magasa**	**0.88**	**342**	AML	AML	
	comp=E,65500µm,0.5s					
MAGA				AML	AML	
	comp=E,65500µm,0.5s					
MAGA				AML	AML	
	comp=N,44000µm,0.5s					
MAGA				AML	AML	
	comp=N,44000µm,0.5s					
MAGA				AML	AML	
	comp=E,65500µm,0.5s					
MAGA				AML	AML	
	comp=N,44000µm,0.5s					
VLC	**Villacollemand**	**0.90**	**210**	AML	AML	
	comp=N,4030µm,0.9s					
VLC				AML	AML	
	comp=E,2365µm,0.7s					
VLC				AML	AML	
	comp=N,4030µm,0.9s					
VLC				AML	AML	
	comp=E,2365µm,0.7s					
VLC				AML	AML	
	comp=N,4030µm,0.9s					
VLC				AML	AML	
	comp=E,2365µm,0.7s					
POPM	**Popiglio**	**0.91**	**192**	AML	AML	
	comp=N,5025µm,0.7s					
POPM				AML	AML	
	comp=E,4010µm,0.6s					
POPM				AML	AML	
	comp=N,5025µm,0.7s					
POPM				AML	AML	
	comp=E,4010µm,0.6s					
POPM				AML	AML	
	comp=N,5025µm,0.7s					
POPM				AML	AML	
	comp=E,4010µm,0.6s					
CTL8	**Castelleone**	**0.95**	**292**	AML	AML	
	comp=E,3385µm,0.5s					
CTL8				AML	AML	
	comp=E,7030µm,0.4s					
CTL8				AML	AML	
	comp=N,9870µm,0.5s					
CTL8				AML	AML	
	comp=E,3385µm,0.5s					
CTL8				AML	AML	
	comp=N,2405µm,0.8s					
CTL8				AML	AML	
	comp=E,7030µm,0.4s					
CTL8				AML	AML	
	comp=N,9860µm,0.5s					
CTL8				AML	AML	
	comp=N,2405µm,0.8s					
CTL8				AML	AML	
	comp=N,9870µm,0.5s					
CTL8				AML	AML	
	comp=N,2405µm,0.8s					
CTL8				AML	AML	
	comp=E,3385µm,0.5s					
CTL8				AML	AML	
	comp=E,7030µm,0.4s					
DOSS	**Dosso del Somm**	**0.95**	**7**	*e*Pg	**Pb**	**17 58 11.6 +0.2**
DOSS	**Dosso del Somm**	**0.95**	**7**	*e*Pg	**Pb**	**17 58 11.6 +0.2**
RNI	**Roncone**	**1.08**	**345⇑**	*e*Pg	**Pb**	**17 58 13.3 -0.3**
RNI	**Roncone**	**1.08**	**345**	*e*Pg	**Pb**	**17 58 13.3 -0.3**
MAIM	**Mastiano**	**1.09**	**200**	AML	AML	
	comp=E,2910µm,1.3s					
MAIM				AML	AML	
	comp=N,6020µm,1.0s					
MAIM				AML	AML	
	comp=E,2910µm,1.3s					
MAIM				AML	AML	
	comp=N,6020µm,1.0s					
MAIM				AML	AML	
	comp=N,6020µm,1.0s					
MAIM				AML	AML	
	comp=E,2910µm,1.3s					
CGRP	**Cima Grappa**	**1.10**	**30⇑**	*e*Pg	**Pn**	**17 58 14.2 +0.1**
CGRP				Sg	**Sn**	**17 58 31.1 +2.1**
CGRP	**Cima Grappa**	**1.10**	**30**	*e*Pg	**Pn**	**17 58 14.2 +0.1**
CGRP				Sg	**Sn**	**17 58 31.1 +2.1**
CGRP	**Cima Grappa**	**1.10**	**30**	AML	AML	
	comp=E,2495µm,0.7s					
CGRP				AML	AML	
	comp=E,2495µm,0.7s					
CGRP				AML	AML	
	comp=N,2925µm,0.8s					
CGRP				AML	AML	
	comp=N,2925µm,0.8s					
CGRP				AML	AML	
	comp=N,2925µm,0.8s					
CGRP				AML	AML	
	comp=E,2495µm,0.7s					
BOB	**Bobbio (Coli)**	**1.13**	**262**	AML	AML	
	comp=N,8310µm,1.4s					
BOB				AML	AML	
	comp=E,3160µm,0.6s					
BOB				AML	AML	
	comp=E,4085µm,0.4s					
BOB				AML	AML	
	comp=N,8385µm,1.4s					
PANI	**Panarotta**	**1.14**	**11⇓**	*e*Pg	**Pn**	**17 58 14.2 -0.5**
PANI	**Panarotta**	**1.14**	**11**	*e*Pg	**Pn**	**17 58 14.2 -0.5**
MTLO	**Montello**	**1.16**	**41⇑**	*e*Pg	**Pg**	**17 58 15.7 +0.1**
MTLO	**Montello**	**1.16**	**41**	*e*Pg	**Pg**	**17 58 15.7 +0.1**
MABI	**Malga Bissina**	**1.17**	**343**	AML	AML	
	comp=E,1174µm,0.6s					
MABI				AML	AML	
	comp=N,1210µm,0.8s					
SFI	**Santa Sofia**	**1.19**	**150**	AML	AML	
	comp=E,1336µm,0.7s					
SFI				AML	AML	
	comp=E,1308µm,0.7s					
SFI				AML	AML	
	comp=N,1895µm,1.4s					
SFI				AML	AML	
	comp=N,1990µm,0.7s					
CTI	**Castel Tesino**	**1.20**	**22**	AML	AML	
	comp=N,6435µm,0.6s					
CTI				AML	AML	
	comp=E,4905µm,0.2s					
CTI				AML	AML	
	comp=N,6435µm,0.6s					
CTI				AML	AML	
	comp=E,4905µm,0.2s					
CTI				AML	AML	
	comp=N,6435µm,0.6s					
CTI				AML	AML	
	comp=E,4905µm,0.2s					
MSSA	**Maissana**	**1.23**	**240**	AML	AML	
	comp=E,3570µm,1.3s					
MSSA				AML	AML	
	comp=N,4125µm,0.7s					
ASQU	**Asqua**	**1.27**	**154**	AML	AML	
	comp=E,1088µm,0.8s					
ASQU				AML	AML	
	comp=N,823µm,0.9s					
VARN	**Col Varnada, M**	**1.31**	**36⇑**	*e*Pg	**Pb**	**17 58 17.8 +0.4**
VARN	**Col Varnada, M**	**1.31**	**36**	*e*Pg	**Pb**	**17 58 17.8 +0.4**
FAU	**Forcella Aurin**	**1.46**	**27⇓**	*e*Pg	**Pb**	**17 58 19.8 -0.3**
FAU	**Forcella Aurin**	**1.46**	**27**	*e*Pg	**Pb**	**17 58 19.8 -0.3**
CAE	**Caneva**	**1.47**	**43⇓**	*e*Pg	**Pn**	**17 58 19.4 +0.3**
CAE	**Caneva**	**1.47**	**43**	*e*Pg	**Pn**	**17 58 19.4 +0.3**
OZOL	**Ozolo**	**1.47**	**1⇑**	*e*Pg	**Pn**	**17 58 19.5 +0.4**
OZOL	**Ozolo**	**1.47**	**1**	*e*Pg	**Pn**	**17 58 19.5 +0.4**
CARE	**Lago del Cares**	**1.51**	**352**	*e*Pg	**Pn**	**17 58 20.0 +0.2**
CARE	**Lago del Cares**	**1.51**	**352**	*e*Pg	**Pn**	**17 58 20.0 +0.2**
POLC	**Polcenigo**	**1.51**	**43**	AML	AML	
	comp=E,2340µm,0.9s					
POLC				AML	AML	
	comp=N,2440µm,0.6s					
AGOR	**Agordo**	**1.53**	**28**	*e*Pg	**Pb**	**17 58 21.0 -0.2**
AGOR	**Agordo**	**1.53**	**28**	AML	AML	
	comp=E,1320µm,0.6s					
AGOR				AML	AML	
	comp=N,1615µm,0.4s					
KOSI	**Kohlern**	**1.55**	**9**	AML	AML	
	comp=E,2325µm,0.9s					
KOSI				AML	AML	
	comp=N,2925µm,0.6s					
APPI	**Appiano**	**1.55**	**6**	AML	AML	
	comp=N,4355µm,0.5s					
APPI				AML	AML	
	comp=E,7280µm,0.5s					
PARC	**Parchiule**	**1.56**	**145**	AML	AML	
	comp=E,502µm,1.2s					
PARC				AML	AML	
	comp=N,713µm,1.1s					
BRMO	**Bormio**	**1.60**	**344**	AML	AML	
	comp=N,1675µm,0.7s					
BRMO				AML	AML	
	comp=E,1375µm,0.9s					
MLNI	**Malnisio**	**1.65**	**42**	*e*Pg	**Pn**	**17 58 22.0 +0.4**
MLNI	**Malnisio**	**1.65**	**42**	*e*Pg	**Pn**	**17 58 22.0 +0.4**
BADI	**Badiali**	**1.68**	**148**	AML	AML	
	comp=E,954µm,1.4s					
BADI				AML	AML	
	comp=N,624µm,0.9s					
CIMO	**Cimolais**	**1.70**	**36**	*e*Pg	**Pn**	**17 58 22.5 +0.2**
CIMO	**Cimolais**	**1.70**	**36**	*e*Pg	**Pn**	**17 58 22.5 +0.2**
MOSI	**Grossmontoni**	**1.71**	**349**	AML	AML	
	comp=N,4155µm,0.6s					
MOSI				AML	AML	
	comp=E,3355µm,0.8s					
CAFI	**Castiglion Fio**	**1.75**	**157**	AML	AML	
	comp=E,534µm,0.8s					
CAFI				AML	AML	
	comp=N,393µm,1.1s					
FSSB	**Fossombrone**	**1.77**	**134**	AML	AML	
	comp=E,908µm,0.6s					
FSSB				AML	AML	
	comp=N,987µm,0.9s					
PIEI	**Pieia**	**1.78**	**141**	AML	AML	
	comp=E,480µm,1.6s					
PIEI				AML	AML	
	comp=N,455µm,1.1s					
STAL	**STALIGIAL**	**1.78**	**41**	AML	AML	
	comp=E,1118µm,1.3s					
STAL				AML	AML	
	comp=N,1490µm,0.2s					
STAL				AML	AML	
	comp=E,1340µm,1.4s					
STAL				AML	AML	
	comp=N,1345µm,0.2s					
ATPC	**Poggio Castell**	**1.79**	**144**	AML	AML	
	comp=E,1066µm,1.6s					
ATPC				AML	AML	
	comp=N,714µm,1.6s					
ATPI	**Pietralunga -**	**1.79**	**146**	AML	AML	
	comp=N,624µm,1.0s					
ATPI				AML	AML	
	comp=E,494µm,0.6s					
PCP	**Piancastagn**	**1.80**	**258**	AML	AML	
	comp=E,1985µm,0.8s					
PCP				AML	AML	
	comp=N,1280µm,0.5s					
ABSI	**Aberstueckl**	**1.81**	**7**	AML	AML	
	comp=E,5620µm,0.6s					
ABSI				AML	AML	
	comp=N,3465µm,0.5s					
MPAG	**Monte Paganucc**	**1.81**	**136**	AML	AML	
	comp=N,678µm,1.3s					
MPAG				AML	AML	
	comp=E,670µm,0.8s					
TRIF	**Trifonti**	**1.82**	**183**	AML	AML	
	comp=E,732µm,0.8s					
TRIF				AML	AML	
	comp=N,522µm,1.0s					
ATBU	**Serra di Buran**	**1.83**	**142**	AML	AML	
	comp=N,1260µm,1.1s					
ATBU				AML	AML	
	comp=E,1076µm,0.5s					
VARE	**Varese**	**1.83**	**301**	AML	AML	
	comp=E,1095µm,1.3s					
VARE				AML	AML	
	comp=N,1485µm,0.7s					
ATVO	**AVT- Monte Val**	**1.85**	**147**	AML	AML	
	comp=N,488µm,1.0s					
ATVO				AML	AML	
	comp=E,864µm,1.6s					
FRON	**Frontone**	**1.88**	**138**	AML	AML	
	comp=E,672µm,0.8s					
FRON				AML	AML	
	comp=N,657µm,1.6s					
ARVD	**Arcevia**	**2.00**	**135**	AML	AML	
	comp=N,518µm,0.8s					
ARVD				AML	AML	
	comp=E,386µm,1.1s					
QLNO	**Quiliano**	**2.00**	**253**	AML	AML	
	comp=N,788µm,0.7s					
QLNO				AML	AML	
	comp=E,734µm,0.5s					
ROSI	**Rosskopf**	**2.01**	**8**	AML	AML	
	comp=N,1685µm,0.5s					
ROSI				AML	AML	
	comp=E,1820µm,0.5s					
VINO	**Villanova**	**2.07**	**50**	AML	AML	
	comp=N,556µm,0.9s					
VINO				AML	AML	
	comp=E,618µm,1.5s					
FVI	**Forni Avoltri**	**2.07**	**36**	AML	AML	
	comp=E,522µm,0.6s					
FVI				AML	AML	
	comp=N,639µm,0.5s					
ABTA	**Abfaltersbach**	**2.09**	**30**	Pn	**Pb**	**17 58 29.6 -1.2**
	comp=N,5.7nm,0.3s,SNR=24					
ABTA	**Abfaltersbach**	**2.09**	**30**	Pn	**Pb**	**17 58 29.6 -1.2**
	comp=N,5.7nm,0.3s,SNR=24					
FETA	**Feichten**	**2.10**	**355**	Pn	**Pb**	**17 58 30.5 -0.4**
	comp=N,9.2nm,0.6s,SNR=100					
FETA	**Feichten**	**2.10**	**355**	Pn	**Pb**	**17 58 30.5 -0.4**
	comp=N,9.2nm,0.6s,SNR=100					
RISI	**Rein**	**2.15**	**20**	AML	AML	
	comp=N,1945µm,0.6s					
RISI				AML	AML	
	comp=E,2525µm,0.5s					
CASP	**Castiglione de**	**2.15**	**183**	AML	AML	
	comp=E,271µm,1.2s					
CASP				AML	AML	
	comp=N,392µm,0.8s					
MGAB	**Montegabbione**	**2.17**	**158**	AML	AML	
	comp=N,387µm,0.7s					
MGAB				AML	AML	
	comp=E,345µm,0.8s					
MGAB				AML	AML	
	comp=E,358µm,1.5s					
MGAB				AML	AML	
	comp=N,370µm,0.7s					
MONC	**Moncucco Torin**	**2.19**	**275**	AML	AML	
	comp=E,1660µm,0.6s					
MONC				AML	AML	
	comp=N,2020µm,0.6s					
SKDS	**Skadanscina**	**2.21**	**73**	*i* Pn	**Pn**	**17 58 29.0 -0.2**
SKDS				*e*Sn	**Sn**	**17 58 56.2 0.0**
	comp=Z,53nm,0.2s					
SKDS	**Skadanscina**	**2.21**	**73**	*i* Pn	**Pn**	**17 58 29.0 -0.2**
SKDS				*e*Sn	**Sn**	**17 58 56.2 0.0**
	comp=Z,53nm,0.2s					
ASSB	**Assisi San Ben**	**2.23**	**147**	AML	AML	
	comp=E,290µm,0.8s					
ASSB				AML	AML	
	comp=N,348µm,1.2s					
JAVS	**Javornik**	**2.35**	**65**	*i* Pn	**Pn**	**17 58 31.5 +0.2**
JAVS				*e*Sn	**Sn**	**17 59 01.6 +1.7**
	comp=Z,62nm,0.3s					
JAVS	**Javornik**	**2.35**	**65**	*i* Pn	**Pn**	**17 58 31.5 +0.2**
JAVS				*e*Sn	**Sn**	**17 59 01.6 +1.7**
	comp=Z,62nm,0.3s					
WTTA	**Wattenberg**	**2.37**	**10**	Pn	**Pb**	**17 58 34.4 -1.2**
	comp=Z,2.4nm,0.2s,SNR=27					
WTTA	**Wattenberg**	**2.37**	**10**	Pn	**Pb**	**17 58 34.4 -1.2**
	comp=Z,2.4nm,0.2s,SNR=27					
WTTA	**Wattenberg**	**2.37**	**10**	Pg	**Pb**	**17 58 34.7 -0.9**
WTTA				Sg	**Sb**	**17 59 06.9 +2.2**
SATI	**Passo dei Sala**	**2.41**	**294**	AML	AML	
	comp=E,861µm,0.8s					
SATI				AML	AML	
	comp=N,470µm,0.7s					
MOMA	**Monte Martano**	**2.41**	**152**	AML	AML	
	comp=N,306µm,1.0s					
MOMA				AML	AML	
	comp=E,309µm,0.8s					
WATA	**Walderalm**	**2.43**	**9**	Pn	**Pb**	**17 58 35.2 -1.4**
	comp=E,1.5nm,0.2s,SNR=52					
WATA	**Walderalm**	**2.43**	**9**	Pn	**Pb**	**17 58 35.2 -1.4**
	comp=E,1.5nm,0.2s,SNR=52					
IMI	**Imperia**	**2.46**	**246**	AML	AML	

comp=N,1425μm,0.7s
IMI AML AML
comp=E,792μm,0.4s
DAVA Damuels 2.48 342 Pn **Pb 17 58 36.1 -1.3**
comp=E,50nm,0.6s,SNR=18
DAVA Damuels 2.48 342 Pn **Pb 17 58 36.1 -1.3**
comp=E,50nm,0.6s,SNR=18
MYKA Terra Mystica 2.50 46 Pn **Pn 17 58 35.2 +1.9**
comp=E,0.9nm,0.1s,SNR=25
MYKA Terra Mystica 2.50 46 Pn **Pn 17 58 35.2 +1.9**
comp=E,0.9nm,0.1s,SNR=25
CEY Cerknica 2.54 70 ⇓ *i*Pn **Pn 17 58 33.7 -0.1**
RETA Reutte 2.56 356 Pn **Pb 17 58 37.1 -1.6**
comp=E,6.7nm,0.3s,SNR=23
RETA Reutte 2.56 356 Pn **Pb 17 58 37.1 -1.6**
comp=E,6.7nm,0.3s,SNR=23
NRCA Norcia 2.59 143 AML AML
comp=N,240μm,1.4s
NRCA AML AML
comp=E,340μm,0.4s
NEGI Seborga 2.61 247 AML AML
comp=E,954μm,0.5s
NEGI AML AML
comp=N,1550μm,0.5s
SAOF Saorge 2.65 250 AML AML
comp=N,862μm,1.4s
SAOF AML AML
comp=E,840μm,0.5s
KBA Koelnbreinsper 2.69 36 Pn **Pb 17 58 38.5 -2.5**
comp=E,0.9nm,0.1s,SNR=24
KBA Koelnbreinsper 2.69 36 Pn **Pb 17 58 38.5 -2.5**
comp=E,0.9nm,0.1s,SNR=24
LJU Ljubljana 2.71 65 ⇓ *i*Pn **Pn 17 58 36.8 +0.7**
LNSS Leonessa 2.76 147 AML AML
comp=N,282μm,1.4s
LNSS AML AML
comp=E,372μm,0.8s
NVLJ Novalja 2.77 96 *e*Pn **Pn 17 58 38.2 +1.3**
NVLJ Sn **Sn 17 59 09.8 -0.3**
NVLJ Novalja 2.77 96 *e*Pn **Pn 17 58 38.2 +1.3**
NVLJ Sn **Sn 17 59 09.8 -0.3**
SBF Sospel 2.78 249 *e*Pn **Pn 17 58 39.1 +2.0**
SBF *e*Sn **Sb 17 59 15.8 -0.5**
comp=E,554nm,0.5s
SBF Sospel 2.78 249 *e*Pn **Pn 17 58 39.1 +2.0**
SBF *e*Sn **Sb 17 59 15.8 -0.5**
comp=E,277nm,0.5s
PGF Pioggiola 2.80 212 *e*Pn **Pn 17 58 38.2 +0.8**
PGF *e*Sn **Sn 17 59 11.3 +0.4**
comp=E,108nm,0.4s
PGF Pioggiola 2.80 212 *e*Pn **Pn 17 58 38.2 +0.8**
PGF *e*Sn **Sn 17 59 11.3 +0.4**
comp=E,54nm,0.4s
GUMA Gualdo di Mace 2.82 131 AML AML
comp=N,1030μm,1.6s
GUMA AML AML
comp=E,1715μm,0.7s
LUCF Luceram 2.83 250 P **Pn 17 58 39.3 +1.5**
LUCF Luceram 2.83 250 P **Pn 17 58 39.3 +1.5**
VISS Visnje 2.83 71 *i*Pn **Pn 17 58 38.6 +0.8**
VISS *i*Sn **Sn 17 59 12.5 +0.9**
comp=Z,150nm,0.7s
VISS Visnje 2.83 71 *i*Pn **Pn 17 58 38.6 +0.8**
VISS *i*Sn **Sn 17 59 12.5 +0.9**
comp=Z,150nm,0.7s
ISO Isola 2.93 257 P **Pn 17 58 39.9 +0.7**
ISO Isola 2.93 257 P **Pn 17 58 39.9 +0.7**
OBKA Obir 2.94 56 Pn **Pn 17 58 40.4 +1.2**
comp=Z,1.9nm,0.2s
OBKA Obir 2.94 56 Pn **Pn 17 58 40.4 +1.2**
comp=Z,1.9nm,0.2s
MBDF Montbardon 3.02 268 *e*Pn **Pn 17 58 42.5 +1.9**
MBDF Montbardon 3.02 268 *e*Pn **Pn 17 58 42.5 +1.9**
LPG La Plagne 3.06 282 *e*Pn **Pb 17 58 45.4 -2.1**
LPG La Plagne 3.06 282 *e*Pn **Pb 17 58 45.4 -2.1**
LPL La Plagne 3.08 282 *e*Pn **Pn 17 58 44.6 +3.2**
LPL La Plagne 3.08 282 *e*Pn **Pn 17 58 44.6 +3.2**
AQU L'Aquila 3.11 145 *e*Pn **Pn 17 58 44.2 +2.6**
CALF Calern 3.16 249 P **Pn 17 58 43.4 +1.0**
CALF Calern 3.16 249 P **Pn 17 58 43.4 +1.0**
RSL Roselend 3.19 285 P **Pn 17 58 44.6 +1.8**
RSL Roselend 3.19 285 P **Pn 17 58 44.6 +1.8**
OZLJ Ozalj 3.22 76 *e*Pn **Pn 17 58 44.0 +0.9**
OZLJ Sn **Sn 17 59 22.2 +1.2**
OZLJ Ozalj 3.22 76 *e*Pn **Pn 17 58 43.9 +0.9**
OZLJ Sn **Sn 17 59 22.2 +1.2**
CRES Cresnjev 3.26 73 ⇓ *i*Pn **Pn 17 58 44.0 +0.4**
SOKA Soboth 3.31 57 *e*Pn **Pn 17 58 45.5 +1.1**
comp=Z,3.7nm,0.4s
SOKA Soboth 3.31 57 Pn **Pn 17 58 45.5 +1.1**
comp=Z,3.7nm,0.4s
UDBI Udbina 3.41 95 *e*Pn **Pn 17 58 47.8 +2.0**
UDBI Sn **Sn 17 59 25.5 -0.5**
UDBI Udbina 3.41 95 *e*Pn **Pn 17 58 47.7 +2.0**
UDBI Sn **Sn 17 59 25.5 -0.5**
FRF La Foret Royal 3.42 248 *e*Pn **Pn 17 58 46.5 +0.6**
FRF *e*Sn **Sn 17 59 28.9 +2.7**
comp=Z,357nm,0.7s
FRF La Foret Royal 3.42 248 *e*Pn **Pn 17 58 46.5 +0.6**
FRF *e*Sn **Sn 17 59 28.9 +2.7**
comp=Z,178nm,0.7s
LMR La Mourre 3.62 245 *e*Pn **Pn 17 58 49.3 +0.8**
LMR *e*Sn **Sn 17 59 31.3 +0.4**
comp=Z,155nm,0.4s
LMR La Mourre 3.62 245 *e*Pn **Pn 17 58 49.3 +0.8**
LMR *e*Sn **Sn 17 59 31.3 +0.4**
comp=Z,77nm,0.4s
ORIF Oris-en-Rattie 3.65 272 *e*Pn **Pn 17 58 50.6 +1.6**
ORIF Oris-en-Rattie 3.65 272 P **Pn 17 58 51.1 +2.1**
ORIF Oris-en-Rattie 3.65 272 *e*Pn **Pn 17 58 50.6 +1.6**
MOA Molln 3.68 37 *i*Pn **Pn 17 58 51.6 +2.1**
comp=Z,2.9nm,0.2s
MOA Molln 3.68 37 Pn **Pn 17 58 51.6 +2.1**
comp=Z,2.9nm,0.2s
KIZ Kirchzarten 3.70 326 P **Pn 17 58 50.7 +1.0**
KIZ Kirchzarten 3.70 326 P **Pn 17 58 50.7 +1.0**
LOMF Lomont 3.78 311 P **Pn 17 58 52.5 +1.6**
LOMF Lomont 3.78 311 P **Pn 17 58 52.5 +1.6**
CABF La Chapelle 3.83 298 *e*Pn **Pn 17 58 53.3 +1.7**
CABF La Chapelle 3.83 298 *e*Pn **Pn 17 58 53.3 +1.7**
ARSA Arzberg 3.90 52 *e*Pn **Pn 17 58 53.2 +0.7**
comp=Z,3.0nm,0.2s,SNR=7.0
ARSA Arzberg 3.90 52 P **Pn 17 58 53.2 +0.7**
comp=Z,3.0nm,0.2s,SNR=7.0
MOF Molkenrain 3.96 319 P **Pn 17 58 54.8 +1.4**
MOF Molkenrain 3.96 319 P **Pn 17 58 54.8 +1.4**
OG35 Corcelles 3.98 288 P **Pn 17 58 55.2 +1.6**
OG35 Corcelles 3.98 288 P **Pn 17 58 55.2 +1.6**
SMRF Simiane la Rot 4.01 258 *e*Pn **Pn 17 58 55.4 +1.4**
SMRF Simiane la Rot 4.01 258 *e*Pn **Pn 17 58 55.4 +1.4**
OPP Oppenau 4.06 332 P **Pn 17 58 56.0 +1.4**
OPP Oppenau 4.06 332 P **Pn 17 58 55.0 +0.4**
HINF Hinteralfeld 4.07 317 *e*Pn **Pn 17 58 55.3 +0.4**
HINF *e*Sn **Sn 17 59 43.0 +0.7**
comp=Z,56nm,0.4s
HINF Hinteralfeld 4.07 317 *e*Pn **Pn 17 58 55.3 +0.4**
HINF *e*Sn **Sn 17 59 43.0 +0.7**
comp=Z,28nm,0.4s
RUSF Rustrel 4.08 258 P **Pn 17 58 56.3 +1.3**
RUSF Rustrel 4.08 258 P **Pn 17 58 56.3 +1.3**
ECH Echery 4.22 322 P **Pn 17 58 58.0 +1.1**
ECH Echery 4.22 322 P **Pn 17 58 57.0 +0.1**
WLS Welschbruch 4.29 325 P **Pn 17 58 59.2 +1.3**
WLS Welschbruch 4.29 325 P **Pn 17 58 59.2 +1.3**
GERES GERESS Array B 4.32 24 Pn **Pn 17 58 59.0 +0.6**
comp=Z,0.6nm,0.3s,baz=202,slow=14,SNR=27
GERES Pg **Pg 17 59 14.1 -1.8**
comp=Z,2.2nm,0.3s,baz=207,slow=17,SNR=24
GERES Sn **Sn 17 59 48.9 +0.4**
comp=Z,2.7nm,0.3s,baz=210,slow=23,SNR=8.4
GERES Lg Lg 18 00 09.7
comp=Z,2.6nm,0.3s,baz=209,slow=21,SNR=6.2
CDF Champ du Feu 4.33 325 *e*Pn **Pn 17 58 59.1 +0.7**
CDF *e*Sn **Sn 17 59 49.0 +0.5**
comp=Z,43nm,0.5s
CDF Champ du Feu 4.33 325 *e*Pn **Pn 17 58 59.1 +0.7**
CDF *e*Sn **Sn 17 59 49.0 +0.5**
comp=Z,21nm,0.5s
BLY Banja Luka 4.39 90 *e*Pn **Pn 17 58 59.8 +0.6**
HAU Haudompre 4.45 315 *e*Pn **Pn 17 59 00.7 +0.7**
HAU *e*Sn **Sn 17 59 52.0 +0.5**
comp=Z,193nm,0.4s
HAU Haudompre 4.45 315 *e*Pn **Pn 17 59 00.7 +0.7**
HAU *e*Sn **Sn 17 59 52.0 +0.5**
comp=Z,97nm,0.4s
CONA Conrad Observa 4.49 47 *e*Pn **Pn 17 59 01.6 +0.9**
comp=Z,4.6nm,0.4s,SNR=8.7
CONA Conrad Observa 4.49 47 P **Pn 17 59 01.6 +0.9**
comp=Z,4.6nm,0.4s,SNR=8.7
VIVF Saint-Julien-l 4.51 271 *e*Pn **Pn 17 59 01.5 +0.7**
VIVF *e*Sn **Sn 17 59 53.2 +0.3**
comp=Z,20nm,0.5s
VIVF Saint-Julien-l 4.51 271 *e*Pn **Pn 17 59 01.5 +0.7**
VIVF *e*Sn **Sn 17 59 53.2 +0.3**
comp=Z,10nm,0.5s
KHC Kasperske Hory 4.55 22 *e*Pn **Pn 17 59 02.2 +0.8**
KHC *e*PG **Pg 17 59 20.8 +0.6**
KHC *e*SN **Sn 17 59 54.4 +0.4**
KHC *e*SG **Sg 18 00 19.2 +0.1**
comp=Z,54nm,0.6s
KHC AMS AMS 18 01 00.0
comp=Z,400nm,10.2s
KHC Kasperske Hory 4.55 22 Pn **Pn 17 59 02.2 +0.8**
THEF They Montfort 4.78 315 P **Pn 17 59 05.5 +1.0**
LASF Ste Croix 5.19 263 *e*Pn **Pn 17 59 10.3 +0.1**
LASF *e*Sn **Sn 18 00 09.9 +0.1**
comp=Z,13nm,0.4s
LASF Ste Croix 5.19 263 *e*Pn **Pn 17 59 10.3 +0.1**
LASF *e*Sn **Sn 18 00 09.9 +0.1**
comp=Z,6.3nm,0.4s
STON Ston 5.25 111 *e*Pn **Pn 17 59 11.2 +0.1**
STON Sn **Sn 18 00 08.6 -2.7**
STON Ston 5.25 111 *e*Pn **Pn 17 59 11.1 +0.1**
STON Sn **Sn 18 00 08.5 -2.7**
SMF Signal de Mont 5.30 291 *e*Pn **Pn 17 59 12.5 +0.8**
SMF *e*Sn **Sn 18 00 13.2 +0.8**
comp=Z,52nm,0.5s
SMF Signal de Mont 5.30 291 *e*Pn **Pn 17 59 12.5 +0.8**
SMF *e*Sn **Sn 18 00 13.2 +0.8**
comp=Z,26nm,0.5s
ZST Bratislava 5.32 50 *e*PG **Pg 17 59 34.4 -0.5**
ZST Bratislava 5.32 50 *e*Pg **Pg 17 59 34.4 -0.5**
NKC Novy Kostel 5.39 10 *e*PN **Pn 17 59 13.5 +0.6**
NKC *e*PG **Pg 17 59 36.0 -0.2**
NKC *e*SN **Sn 18 00 14.0 -0.6**
NKC *e*SG **Sg 18 00 43.6 -2.4**
comp=Z,83nm,1.2s
NKC AMS AMS 18 01 40.0
comp=Z,400nm,6.8s
NKC Novy Kostel 5.39 10 Pn **Pn 17 59 13.5 +0.6**
NKC Sn **Sn 18 00 14.0 -0.6**
NKC Sg **Sg 18 00 43.6 -2.4**
comp=Z,83nm,1.2s
LOR Lormes 5.50 298 *e*Pn **Pn 17 59 15.1 +0.7**
LOR *e*Sn **Sn 18 00 17.3 +0.1**
comp=Z,28nm,0.3s
LOR Lormes 5.50 298 P **Pn 17 59 15.4 +1.0**
LOR Lormes 5.50 298 *e*Pn **Pn 17 59 15.1 +0.7**
LOR *e*Sn **Sn 18 00 17.3 +0.1**
comp=Z,14nm,0.3s
MORH M¨†r¡gy, Hung 5.51 74 *ex* **Pn 17 59 13.5 -1.0**
MODS Modra-Piesok 5.51 49 *e*PN **Pn 17 59 14.0 -0.6**
MODS *e*SG **Sg 18 00 51.7 +1.7**
MODS Modra-Piesok 5.51 49 *e*Pn **Pn 17 59 14.0 -0.6**
KRUC Moravsky 5.53 40 *e*PN **Pn 17 59 15.2 +0.4**
PRU Pruhonice 5.59 24 *e*PN **Pn 17 59 17.4 +1.7**
PRU *e*PG **Pg 17 59 38.7 -1.4**
PRU *e*SN **Sn 18 00 18.7 -0.9**
PRU *e*SG **Sg 18 00 53.0 +0.5**
comp=Z,47nm,1.1s
PRU AMS AMS 18 01 40.0
comp=Z,400nm,9.2s
PRU Pruhonice 5.59 24 Pn **Pn 17 59 17.4 +1.7**
PRU Sn **Sn 18 00 18.7 -0.9**
PRU Sg **Sg 18 00 53.0 +0.5**
comp=Z,47nm,1.1s
GOPC GO Pecny, Ondr 5.60 26 *e*PN **Pn 17 59 16.7 +0.9**
GOPC *e*PG **Pg 17 59 39.7 -0.6**
GOPC *e*SG **Sg 18 00 51.4 -1.3**
comp=Z,126nm,1.5s
GOPC AMS AMS 18 01 40.0
comp=Z,500nm,9.6s
GOPC GO Pecny, Ondr 5.60 26 Pn **Pn 17 59 16.7 +0.9**
GOPC Sg **Sg 18 00 51.4 -1.3**
comp=Z,126nm,1.5s
PRA Prague 5.64 23 *e*SG **Sg 18 00 53.5 -0.4**
comp=Z,79nm,0.9s
PRA AMS AMS 18 01 40.0
comp=Z,400nm,7.9s
PRA Prague 5.64 23 Sg **Sg 18 00 53.5 -0.4**
comp=Z,79nm,0.9s
SSF Saint Saulge 5.64 295 *e*Pn **Pn 17 59 17.0 +0.6**
SSF Saint Saulge 5.64 295 *e*Pn **Pn 17 59 17.0 +0.6**
AGO Saint Agoulin 5.65 284 P **Pn 17 59 17.0 +0.5**
AGO Saint Agoulin 5.65 284 P **Pn 17 59 17.0 +0.5**
AVF Avril sur Loir 5.66 292 *e*Pn **Pn 17 59 17.3 +0.7**
AVF Avril sur Loir 5.66 292 *e*Pn **Pn 17 59 17.3 +0.7**
VRAC Vranov 5.80 39 Pn **Pn 17 59 18.6 0.0**
comp=Z,0.2nm,0.3s,baz=86,slow=15,SNR=2.4
VRAC Sn **Sn 18 00 24.8 +0.1**
comp=Z,0.5nm,0.3s,baz=254,slow=11,SNR=3.9
VRAC Lg Lg 18 00 56.8
comp=Z,0.5nm,0.3s,baz=289,slow=22,SNR=4.8
VRAC LR LR 18 02 13.7
comp=Z,40nm,18.6s,baz=203,slow=46
VRAC Vranov 5.80 39 ⇓ *i*P **Pg 17 59 39.7 -4.4**
BRY Bratogost 5.80 108 *e*Pn **Pn 17 59 19.7 +1.0**
BGF Bois d'Agland 5.94 289 *e*Pn **Pn 17 59 21.5 +1.0**
BGF *e*Sn **Sn 18 00 28.1 -0.1**
comp=Z,120nm,0.6s
BGF Bois d'Agland 5.94 289 *e*Pn **Pn 17 59 21.5 +1.0**
BGF *e*Sn **Sn 18 00 28.1 -0.1**
comp=Z,60nm,0.6s
UPM Unac-Piva 5.94 104 *e*Pn **Pn 17 59 22.0 +1.3**
HCY Herceg Novi 5.97 112 *e*Pn **Pn 17 59 21.8 +1.0**
MATE Matera 5.99 134 ⇓ *i*P **Pn 17 59 18.5 -2.6**
TEKS Tekeris 6.08 91 *e*Pn **Pn 17 59 23.0 +0.6**
PVCC Panska Ves 6.09 22 *e*PN **Pn 17 59 24.4 +1.9**
PVCC *e*PG **Pg 17 59 51.0 +1.4**
PVCC *e*SN **Sn 18 00 33.1 +1.3**
PVCC *e*SG **Sg 18 01 08.1 -0.3**
comp=Z,96nm,1.0s
PVCC AMS AMS 18 02 00.0
comp=Z,400nm,9.9s
PVCC Panska Ves 6.09 22 Pn **Pn 17 59 24.4 +1.9**
PVCC Sn **Sn 18 00 33.1 +1.3**
PVCC Sg **Sg 18 01 08.1 -0.3**
comp=Z,96nm,1.0s
BBLS Lazići 6.11 97 ⇓ *i*Pn **Pn 17 59 23.6 +0.8**
BRG Berggiesshubel 6.26 17 PN **Pn 17 59 26.6 +1.8**
BRG PG **Pg 17 59 52.4 -0.5**
BRG SG **Sg 18 01 14.6 +0.7**
comp=Z,56nm,1.2s
comp=N,314nm,7.6s
comp=E,227nm,8.3s
comp=Z,512nm,8.8s
VYHS Vyhne 6.45 54 *e*PN **Pn 17 59 27.6 +0.2**
VYHS Vyhne 6.45 54 *e*Pn **Pn 17 59 27.6 +0.2**
KRLC Kraliky 6.46 35 *e*SN **Sn 18 00 39.7 -1.3**
KRLC *ex* x 18 01 22.3
KRLC Kraliky 6.46 35 Sn **Sn 18 00 39.7 -1.3**
PDG Podgorica 6.48 110 *e*Pn **Pn 17 59 27.4 -0.4**
DPC Dobruska-Polom 6.50 32 *e*PN **Pn 17 59 28.3 +0.2**
DPC *e*PG **Pg 17 59 58.1 +0.7**
DPC *e*SN **Sn 18 00 40.6 -1.3**
DPC *e*SG **Sg 18 01 17.9 -3.5**
comp=Z,30nm,0.9s
DPC AMS AMS 18 02 10.0
comp=Z,400nm,7.0s
DPC Dobruska-Polom 6.50 32 Pn **Pn 17 59 28.3 +0.2**
DPC Sn **Sn 18 00 40.6 -1.3**
CLL Collm 6.51 11 *e*Pn **Pn 17 59 29.0 +0.7**
comp=Z,8.0nm,1.1s
CLL *e*Pg **Pg 17 59 58.0 +0.3**
CLL *e* 18 00 13.0
CLL *e* 18 01 00.0
CLL *e*Sg **Sg 18 01 19.0 -3.0**
comp=Z,45nm,1.1s
UPC Upice 6.51 29 *e*SN **Sn 18 00 40.5 -1.8**
UPC *e*SG **Sg 18 01 18.3 -3.7**
comp=Z,259nm,1.8s
UPC AMS AMS 18 02 10.0
comp=Z,400nm,10.0s
DRME Dracevica, Mon 6.54 112 *e*Pn **Pn 17 59 29.2 +0.5**
MORC Moravsky Berou 6.57 40 ⇓ *i*P **Pb 17 59 45.8 -1.2**
PSZ Piszkesteto 6.82 61 ⇓ *i*P **Pn 17 59 30.3 -2.4**
KEST Kesra 9.28 188 Pn Pn 18 00 11.6 +5.2
comp=Z,0.5nm,0.3s,baz=298,slow=4.4,SNR=6.6

MLR Muntele Rosu 10.55 82 Pn **Pn 18 00 20.4 -3.5**
comp=Z,0.1nm,0.3s,baz=76,slow=17,SNR=4.7
MLR LR LR 18 04 40.0
comp=Z,14nm,18.1s,baz=319,slow=40
ESDC Sonseca Array 12.27 250 Pn **Pn 18 00 48.4 +1.1**
comp=Z,0.2nm,0.3s,baz=62,slow=14,SNR=8.0
MMAI Mount Meron Ar 22.30 114 LR LR 18 13 52.3
comp=Z,14nm,19.0s,baz=75,slow=44
TORD Torodi Ar. Bea 32.66 197 P **P 18 04 23.1 -1.4**
comp=Z,0.5nm,0.6s,baz=8.7,slow=7.4,SNR=4.4
KURBB Kurchatov Arra 44.30 57 P **P 18 06 02.5 +0.5**
comp=Z,0.6nm,0.8s,baz=290,slow=9.2,SNR=3.6
ZALV Zalesovo Beam 46.77 51 P **P 18 06 22.4 +0.9**
comp=Z,0.3nm,0.3s,baz=252,slow=7.4,SNR=2.8
MKAR Makanchi Array 48.08 61 P **P 18 06 31.8 -0.1**
comp=Z,0.8nm,0.8s,baz=292,slow=6.4,SNR=4.7
TXAR Lajitas Array 85.17 307 P **P 18 10 30.6 +1.6**
comp=Z,0.5nm,1.0s,baz=46,slow=5.4,SNR=3.8

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*SJA **03** 17:59:01.5±0.4, 32°.68S×70°.47W, h11km±8km, ML2.3, MW2.8*
*GUC **03** 17:59:02.8±0.7, 32°.79S×70°.46W, h21km±4km, ML2.6*

ISC 03 17:59:02.0±1.2, 32°.76S±0°.04×70°.46W±0°.03, h13km±11km, n16, σ0°78/28, 1C-3D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PEL	**Peldehue**	**0.43**	**206**	⇓ *i*P	**Pg**		**17 59 10.6**	**0.0**
PEL				*i* S	**Sg**		**17 59 16.9**	**+0.5**
ROCH	**El Roble**	**0.51**	**245**	⇓ *i*P	**Pb**		**17 59 13.1**	**0.0**
ROCH				*i* S	**Sb**		**17 59 20.8**	**+0.3**
ROCH				IAML			17 59 22.6	
comp=E,673nm,0.4s								
ROC1	**El Roble**	**0.52**	**245**	*e*P	**Pb**		**17 59 13.0**	**-0.1**
ROC1				*e*S	**Sb**		**17 59 20.8**	**+0.2**
FCH	**Farellones**	**0.59**	**166**	⇑ *i*P	**Pg**		**17 59 13.2**	**-0.3**
FCH				*i* S	**Sg**		**17 59 21.2**	**-0.2**
FCH				IAML			17 59 21.5	
comp=E,1μm,0.1s								
CLCH	**Cerro Calan**	**0.64**	**186**	⇓ *i*P	**Pg**		**17 59 14.7**	**+0.1**
CLCH				*i* S	**Sb**		**17 59 23.7**	**-0.4**
CLCH				IAML			17 59 24.1	
comp=E,668nm,0.1s								
ANTU	**Antumapu**	**0.82**	**190**	*e*P	**Pg**		**17 59 17.9**	**-0.1**
ANTU				*i* S	**Sg**		**17 59 29.0**	**+0.2**
ANTU				IAML			17 59 29.5	
comp=N,333nm,0.6s								
AUSP	**Uspallata**	**1.05**	**60**	*e*P	**Pb**		**17 59 21.3**	**-0.9**
AUSP				*e*S	**Sb**		**17 59 34.6**	**-1.4**
LMEL	**Las Melosas**	**1.11**	**169**	*e*P	**Pb**		**17 59 22.5**	**-0.7**
LMEL				*i* S	**Sb**		**17 59 37.2**	**-0.4**
LMEL				IAML			17 59 41.1	
comp=N,190nm,0.1s								
ARCO	**CERRO ARCO**	**1.29**	**94**	*e*P	**Pg**		**17 59 26.6**	**-0.3**
ARCO				IAML			17 59 46.2	
comp=Z,80nm,0.8s								
RTLS	**Leoncito**	**1.37**	**46**	*e*P	**Pb**		**17 59 27.8**	**+0.1**
RTLS				*e*S	**Sn**		**17 59 45.6**	**+0.3**
RTLS				IAML			17 59 46.6	
comp=Z,54nm,0.2s								
ASAL	**Salagasta**	**1.38**	**84**	*e*P	**Pb**		**17 59 27.9**	**+0.1**
ASAL				*e*S	**Sg**		**17 59 46.6**	**+0.1**
AAGR	**Agrelo**	**1.41**	**104**	*e*P	**Pg**		**17 59 29.1**	**-0.1**
AAGR				*e*S	**Sg**		**17 59 48.5**	**+1.1**
RTCV	**Cerro Valdivia**	**1.85**	**62**	*e*P	**Pg**		**17 59 38.8**	**+1.2**
RTCV				*e*S	**Sg**		**18 00 01.0**	**-0.6**
RTLL	**Cerro Villicun**	**2.21**	**50**	IAML			17 59 44.6	
comp=Z,12nm,0.4s								
AMOG	**MOGNA**	**2.47**	**43**	*e*P	**Pg**		**17 59 48.3**	**-1.0**
ACAN	**Cantantal**	**2.81**	**81**	*e*P	**Pb**		**17 59 51.8**	**-0.2**
ACAN				*e*S	**Sb**		**18 00 28.8**	**+2.5**

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*DJA **03** 18:01:25.9±1.8, 2°N±10°×12°8E±1°4, h70km±20km, M4.5/7, mb4.7/5, mB4.7/4, MLv4.7/7, Mw(mB)4.0/4*
*ISCJB **03** 18:01:26.9±0.3, 2°.13N±0°.04×127°.48E±0°.05, h100km, mb4.0/16, Error ellipse: s-maj=7.8km s-min=4.6km az=159.4*
*NEIC **03** 18:01:26.5±3.3, 2°.10N×127°.54E, h79km±32km, mb4.0/1, Error ellipse: s-maj=25.0km s-min=9.5km az=78.0*
*IDC **03** 18:01:28.0±1.9, 2°.07N×127°.50E, h92km±16km, mb3.8/16, mb1 3.9/17, mb1mx3.6/64, mbtmp4.1/17, MS2.3/1, Ms1 2.3/1, ms1mx2.1/53, Error ellipse: s-maj=26.9km s-min=7.9km az=68.0*

ISC 03 18:01:28.6±0.5, 2°.12N±0°.06×127°.44E±0°.09, h100km, n37, σ1°31/40, mb4.0/16, 2C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**2.46**	**309**	P	**Pn**		**18 02 04.7**	**-2.5**
LBMI	**Labuha**	**2.74**	**179**	P	**Pn**		**18 02 10.7**	**-0.3**
KMSI	**Cibinong**	**3.78**	**246**	P	**Pn**		**18 02 25.4**	**+0.5**
SANI	**Sanana**	**4.39**	**199**	P	**Pn**		**18 02 31.6**	**-1.5**
GSPH	**General Santos**	**4.66**	**328**	⇑ *i*P	**Pn**		**18 02 33.9**	**-3.0**
GSPH				*i* S	**Sn**		**18 03 26.3**	**-3.5**
SIJI	**Sorong**	**4.85**	**128**	P	**Pn**		**18 02 38.7**	**-0.6**
2.1nm,0.3s,baz=135,slow=24,SNR=13								
SIJI				S	**Sn**		**18 03 32.5**	**-1.8**
0.6nm,0.3s,baz=343,slow=19,SNR=1.2								
MATI	**Mati**	**4.94**	**346**	*e*P	**Pn**		**18 02 41.4**	**+0.9**
DAV	**Davao City (W)**	**5.25**	**339**	LR	LR		18 04 25.0	
comp=Z,30nm,19.7s,baz=120,slow=33								
DMPH	**Davao City--Mi**	**5.29**	**339**	‖ *e*P	**Pn**		**18 02 46.6**	**+1.3**
DMPH				*e*S	**Sn**		**18 03 45.3**	**+0.2**
MRSI	**Marisa**	**5.73**	**254**	P	**Pn**		**18 02 52.1**	**+0.8**
BUKP	**Musuan**	**6.19**	**338**	*e*P	**Pn**		**18 02 56.6**	**-1.0**
APSI	**Ampana**	**6.52**	**243**	P	**Pn**		**18 03 03.5**	**+1.4**
PAGZ	**Pagadian**	**6.98**	**325**	*e*P	**Pn**		**18 03 06.7**	**-1.6**
MPSI	**Mapaga**	**7.74**	**257**	P	Pn		18 03 24.6	+5.9
TTSI	**Tana Toraja**	**9.18**	**236**	P	**Pn**		**18 03 38.2**	**-0.1**
SPSI	**Sidrap Palu**	**9.76**	**232**	P	**Pn**		**18 03 46.1**	**0.0**
FITZ	**Fitzroy Crossi**	**20.17**	**185**	P	Pn		18 05 54.9	-3.2
2.9nm,0.6s,baz=13,slow=8.7,SNR=40								
WRAB	**Tennant Creek**	**22.94**	**163**	*e*P	**P**		**18 06 23.6**	**-0.9**
2.9nm,0.4s								
WRA	**Warramunga Arr**	**22.95**	**163**	P	**P**		**18 06 23.6**	**-1.0**
3.2nm,0.4s,baz=339,slow=10,SNR=92								
WRA				S	**S**		**18 10 27.8**	**+0.6**
0.4nm,0.8s,baz=342,slow=16,SNR=2.5								
ASAR	**Alice Springs**	**26.39**	**167**	P	**P**		**18 06 55.4**	**-0.6**
1.3nm,0.4s,baz=342,slow=7.3,SNR=70								
ASAR				S	**S**		**18 11 22.1**	**-0.1**
0.2nm,0.7s,baz=3.6,slow=21,SNR=2.3								
ASAR				ScP	**ScP**		**18 13 52.0**	**+1.8**
0.3nm,0.8s,baz=348,slow=2.8,SNR=5.2								
KSAR	**Wonju Array Be**	**35.15**	**1**	P	**P**		**18 08 13.3**	**+0.6**
KSRS	**Korea Array**	**35.16**	**1**	P	**P**		**18 08 13.3**	**+0.5**
0.4nm,0.6s,baz=173,slow=8.6,SNR=2.9								
MJAR	**Matsushiro Arr**	**35.67**	**15**	P	**P**		**18 08 15.8**	**-1.4**
1.2nm,0.7s,baz=192,slow=10,SNR=7.6								
STKA	**Stephens Creek**	**36.38**	**159**	P	**P**		**18 08 22.7**	**-0.7**
1.1nm,0.3s,baz=331,slow=8.1,SNR=15								
SONM	**Songino Array**	**49.04**	**341**	P	**P**		**18 10 06.9**	**+1.3**
1.2nm,0.6s,baz=152,slow=8.3,SNR=6.1								
MKAR	**Makanchi Array**	**59.27**	**325**	P	**P**		**18 11 21.4**	**+1.6**
3.9nm,0.4s,baz=118,slow=8.0,SNR=123								
ZALV	**Zalesovo Beam**	**62.33**	**333**	P	**P**		**18 11 39.9**	**-0.5**
0.6nm,0.3s,baz=155,slow=10,SNR=3.4								
KURBB	**Kurchatov Arra**	**63.47**	**328**	P	**P**		**18 11 48.8**	**+0.9**
4.9nm,0.7s,baz=128,slow=6.1,SNR=47								
KURK	**Kurchatov**	**63.47**	**328**	P	**P**		**18 11 48.9**	**+0.9**
BVAR	**Borovoye Array**	**69.05**	**327**	P	**P**		**18 12 24.6**	**+1.0**
1.3nm,0.6s,baz=116,slow=6.6,SNR=6.7								
AKTO	**Aktyubinsk**	**75.35**	**322**	P	**P**		**18 13 01.8**	**+0.6**
1.1nm,0.6s,baz=105,slow=11,SNR=4.7								
VNDA	**Vanda**	**81.75**	**173**	P	**P**		**18 13 35.6**	**-0.1**
1.0nm,0.8s,baz=332,slow=5.4,SNR=3.7								
KDAK	**Kodiak Island**	**82.87**	**32**	P	**P**		**18 13 42.9**	**+1.0**
2.9nm,0.9s,baz=339,slow=3.9,SNR=4.3								
BRTR	**Keskin Array B**	**91.58**	**310**	P	**P**		**18 14 24.9**	**+0.1**
0.4nm,0.6s,baz=107,slow=4.8,SNR=3.1								
ARCES	**ARCESS Array B**	**92.19**	**340**	P	**P**		**18 14 25.5**	**-1.3**
2.5nm,0.9s,baz=68,slow=7.1,SNR=3.2								

s-min=36.4km az=121.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.88**	**215**	Pn	Pn	18 04 23.2	-1.0
	1.1nm,0.3s,baz=45,slow=7.4,SNR=20						
DZM				Sn	Sn	18 05 07.5	-3.1
	14nm,0.3s,baz=134,slow=21,SNR=20						
CTA	**Charters Tower**	**21.33**	**263**	P	P	18 08 13.7	+1.7
	3.7nm,0.8s,baz=91,slow=13,SNR=5.8						
WRA	**Warramunga Arr**	**32.53**	**262**	P	P	18 09 55.0	-1.1
	1.0nm,0.9s,baz=86,slow=8.3,SNR=3.5						
ASAR	**Alice Springs**	**32.85**	**255**	P	P	18 09 58.5	-0.4
	4.0nm,0.6s,baz=86,slow=8.8,SNR=27						
GUMO	**Guam**	**40.00**	**322**	LR	LR	18 26 56.6	
	comp=Z,20nm,20.0s,baz=146,slow=35						
FITZ	**Fitzroy Crossi**	**40.91**	**264**	P	P	18 11 07.7	+0.1
	3.7nm,0.7s,baz=100,slow=6.1,SNR=5.5						
CMAR	**Chiang Mai Arr**	**78.03**	**294**	P	P	18 15 24.5	+0.4
	0.7nm,0.9s,baz=94,slow=3.6,SNR=3.3						
SONM	**Songino Array**	**86.72**	**323**	P	P	18 16 09.1	0.0
	1.0nm,0.8s,baz=134,slow=6.4,SNR=4.7						

*ISCJB **03** 18:05:56.9±0.7,29.°60S±0.°03×67.°69W±0.°04,h117km±8km, Error ellipse: s-maj=6.1km s-min=4.9km az=34.4*
*GUC **03** 18:05:56.7±0.4,29.°61S×67.°68W,h128km±5km,ML3.8*
*SJA **03** 18:05:56.6±1.1,29.°62S×67.°65W,h122km±9km,ML3.5, MW3.6*

ISC 03 18:05:57.4±1.5,29.°59S±0.°04×67.°69W±0.°04, h119km±12km,n22,σ0°90/39,1C-9D,La Rioja Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGUA	**GUANDACOL**	**0.70**	**278**	*eP*	**Pn**	**18 06 16.6**	**-0.1**
AGUA				*eS*	**Sn**	**18 06 29.9**	**-1.6**
VCA	**Vinchina**	**0.96**	**332**	*eP*	**Pn**	**18 06 19.6**	**+0.4**
VCA				*eS*	**Sn**	**18 06 37.6**	**+2.1**
VCA				IAML		18 06 38.9	
	comp=Z,1μm,0.2s						
VCA	**Vinchina**	**0.96**	**332**	⇑*iP*	**Pn**	**18 06 19.6**	**+0.4**
VCA				*i* S	**Sn**	**18 06 35.7**	**+0.1**
VCA				IAML		18 06 39.3	
	comp=E,1μm,0.4s						
AMOG	**MOGNA**	**1.51**	**207**	*eP*	**Pn**	**18 06 24.9**	**0.0**
AMOG				*eS*	**Sn**	**18 06 45.8**	**-0.1**
RTLL	**Cerro Villicun**	**1.86**	**201**	*eP*	**Pn**	**18 06 29.4**	**+0.3**
RTLL				*eS*	**Sn**	**18 06 53.1**	**-0.2**
RTLL				IAML		18 06 54.8	
	comp=Z,434nm,0.3s						
CYA	**Choya**	**2.01**	**56**	*eP*	**Pn**	**18 06 31.5**	**+0.6**
CYA				*eS*	**Sn**	**18 06 56.2**	**-0.5**
CYA				IAML		18 06 56.4	
	comp=Z,252nm,0.2s						
CYA	**Choya**	**2.01**	**56**	*eP*	**Pn**	**18 06 31.1**	**+0.1**
CYA				*i* S	**Sn**	**18 06 56.0**	**-0.6**
CYA				IAML		18 06 56.2	
	comp=N,449nm,0.6s						
SJA	**San Juan**	**2.07**	**201**	⇓*eP*	**Pn**	**18 06 32.3**	**+0.6**
SJA				⇓*eS*	**Sn**	**18 06 58.9**	**+0.9**
ZON	**Zonda**	**2.12**	**203**	*eP*	**Pn**	**18 06 32.7**	**+0.3**
ZON				*eS*	**Sn**	**18 06 59.0**	**-0.2**
ZON				IAML		18 07 01.7	
	comp=Z,130nm,0.7s						
RTCV	**Cerro Valdivia**	**2.38**	**198**	*eP*	**Pn**	**18 06 36.1**	**+0.5**
RTCV				⇓*eS*	**Sn**	**18 07 04.8**	**-0.2**
RTLS	**Leoncito**	**2.60**	**212**	*eP*	**Pn**	**18 06 39.3**	**+0.6**
RTLS				*eS*	**Sn**	**18 07 09.5**	**-0.9**
RTLS				IAML		18 07 12.1	
	comp=Z,140nm,0.3s						
LCO	**Las Campanas**	**2.69**	**282**	⇓*iP*	**Pn**	**18 06 40.0**	**+0.1**
LCO				*i* S	**Sn**	**18 07 11.6**	**-0.9**
LCO				IAML		18 07 11.9	
	comp=E,315nm,0.4s						
GO04	**Tololo Observa**	**2.76**	**257**	⇓*iP*	**Pn**	**18 06 41.0**	**+0.3**
GO04				*i* S	**Sn**	**18 07 13.1**	**-1.0**
TLL	**Tololo Astrono**	**2.76**	**257**	⇓*iP*	**Pn**	**18 06 41.1**	**+0.3**
TLL				*i* S	**Sn**	**18 07 13.2**	**-0.9**
TLL				IAML		18 07 18.3	
	comp=N,348nm,0.4s						
AUSP	**Uspallata**	**3.00**	**209**	*eP*	**Pn**	**18 06 44.6**	**+0.7**
AUSP				*eS*	**Sn**	**18 07 18.6**	**-1.2**
ASAL	**Salagasta**	**3.15**	**198**	*eP*	**Pn**	**18 06 46.0**	**+0.4**
TCA	**Tanti**	**3.19**	**124**	⇓*iP*	**Pn**	**18 06 46.2**	**+0.1**
TCA				*i* S	**Sn**	**18 07 22.1**	**-1.8**
TCA				IAML		18 07 23.7	
	comp=E,215nm,0.4s						
MRA	**San Martin**	**3.29**	**149**	⇓*eP*	**Pn**	**18 06 47.9**	**+0.4**
MRA				IAML		18 07 40.6	
	comp=Z,63nm,0.3s						
ARCO	**CERRO ARCO**	**3.41**	**198**	*eP*	**Pn**	**18 06 49.5**	**+0.3**
ARCO				IAML		18 06 49.7	
	comp=Z,157nm,0.3s						
FSA	**Cafayete**	**3.78**	**24**	*eP*	**Pn**	**18 06 54.5**	**+0.3**
ROC1	**El Roble**	**4.41**	**219**	⇓*eP*	**Pn**	**18 07 01.3**	**-1.3**
LMEL	**Las Melosas**	**4.75**	**206**	*eP*	**Pn**	**18 07 07.8**	**+0.7**
LMEL				*eS*	**Sn**	**18 08 03.9**	**+2.6**

*ISCJB **03** 18:08:26.6±0.6,43.°84N±0.°05×105.°20W±0.°07,h0km, mb3.9/2, Error ellipse: s-maj=8.1km s-min=7.1km az=138.9*
*NEIC **03** 18:08:28.4±0.6,43.°75N×105.°22W,h0km,ML3.4, Error ellipse: s-maj=8.0km s-min=7.3km az=195.0, Suspected Mining explosion.*
NEIC 64 km [40 miles] SSE of Gillette.
*IDC **03** 18:08:28.4±0.9,43.°88N×105.°47W,h0km,mb3.8/2, mb1 3.7/9,mb1mx3.4/77,mbtmp3.5/9,ML3.0/6, Error ellipse: s-maj=21.0km s-min=7.7km az=147.0*

ISC 03 18:08:26.6±0.9,43.°72N±0.°07×105.°05W±0.°07,h0km,n24, σ1°69/23,Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.84**	**61**	*eP*g	**Pn**	**18 08 46.4**	**+0.5**
LAO	**LASA Array**	**3.09**	**345**	*eP*n	**Pn**	**18 09 16.9**	**+0.3**
LAO				*eS*n	Sn	18 09 43.7	-11
RLMT	**Red Lodge**	**3.33**	**296**	*eP*n	**Pn**	**18 09 20.1**	**-0.1**
PDAR	**Pinedale Array**	**3.43**	**255**	Pn	**Pn**	**18 09 22.4**	**+1.0**
	5.3nm,0.3s,baz=72,slow=18,SNR=37						
PDAR				Lg	Lg	18 10 08.0	
	22nm,0.3s,baz=74,slow=33,SNR=9.9						
BW06	**Boulder Array**	**3.43**	**255**	*eP*n	**Pn**	**18 09 22.2**	**+0.8**
OGNE	**Ogallala**	**3.56**	**140**	*eP*n	**Pn**	**18 09 27.7**	**+4.6**
ISCO	**Idaho Springs**	**3.94**	**186**	*eP*n	**Pn**	**18 09 30.9**	**+2.4**
BOZ	**Bozeman (W)**	**5.06**	**294**	*eP*n	**Pn**	**18 09 43.6**	**-0.1**
HWUT	**Hardware Ranch**	**5.24**	**249**	Pn	**Pn**	**18 09 47.1**	**+0.8**
EGMT	**Eagleton**	**5.42**	**324**	*eP*n	**Pn**	**18 09 48.5**	**-0.1**
SDCO	**Great Sand Dun**	**5.97**	**183**	Pn	**Pn**	**18 09 56.2**	**-0.3**
ECSD	**EROS Data Cent**	**6.11**	**87**	Pn	**Pn**	**18 09 55.5**	**-2.6**
DUG	**Dugway, Tooele**	**6.77**	**241**	*eP*n	**Pn**	**18 10 07.3**	**0.0**
HLID	**Hailey**	**6.79**	**272**	Pn	**Pn**	**18 10 07.7**	**0.0**
ELK	**Elko**	**8.12**	**252**	Pn	**Pn**	**18 10 28.2**	**+2.3**
	0.5nm,0.3s,baz=107,slow=9.7,SNR=6.8						
ULM	**Lac du Bonnet**	**9.05**	**41**	Pn	**Pn**	**18 10 39.5**	**+1.1**
	1.2nm,0.3s,baz=230,slow=12,SNR=16						
ULM				Pg		18 11 05.4	
	0.5nm,0.3s,baz=222,slow=18,SNR=3.1						
ULM				Lg	Lg	18 13 09.8	
	0.7nm,0.3s,baz=133,slow=19,SNR=5.0						
WUAZ	**Wupatki**	**9.53**	**213**	*eP*n	**Pn**	**18 10 42.6**	**-2.5**
I56US	**NEWPORT INFRAS**	**9.55**	**303**	*i*		19 05 40.0	
	baz=114,slow=318,SNR=0.9						
NVAR	**Mina Array Bea**	**11.31**	**247**	Pn	**Pn**	**18 11 10.5**	**+1.0**
	baz=57,slow=11,SNR=4.2						
YBH	**Yreka Blue Hor**	**13.14**	**267**	Pn	**Pn**	**18 11 36.0**	**+1.5**
	0.0nm,0.3s,baz=90,slow=7.1,SNR=2.8						
TXAR	**Lajitas Array**	**14.40**	**175**	Pn	**P**	**18 11 57.1**	**-1.7**
	0.0nm,0.3s,baz=358,slow=12,SNR=2.5						
TXAR				Pg	Pg	18 12 53.4	
	0.1nm,0.3s,baz=9.0,slow=18,SNR=3.0						
TXAR				Lg	Lg	18 16 01.2	
	0.0nm,0.3s,baz=90,slow=3.6,SNR=2.9						
YKA	**Yellowknife Ar**	**19.62**	**347**	P	**P**	**18 12 55.4**	**-0.9**
	0.1nm,0.3s,baz=158,slow=12,SNR=3.5						
ARCES	**ARCESS Array B**	**61.39**	**18**	P	**P**	**18 18 44.0**	**+0.1**
	0.6nm,0.5s,baz=318,slow=8.3,SNR=3.8						
MKAR	**Makanchi Array**	**89.64**	**355**	P	**P**	**18 21 27.1**	**+1.0**
	0.4nm,0.7s,baz=27,slow=5.7,SNR=3.6						

MEX 03 18:12:59.6±0.4,16.°30N×98.°19W,h12km±7km,MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.31**	**344**	*eP*	Pn	18 13 20.0	-3.9
TLIG				*eS*	Sb	18 13 36.2	-4.9
VHO	**Vista Hermosa**	**1.59**	**61**	*eP*	Pn	18 13 24.3	-3.6
VHO				*eS*	Sn	18 13 43.8	-4.7
HUIG	**Huatulco**	**2.07**	**104**	*eP*	Pn	18 13 30.9	-3.3
CAIG	**El Cayaco**	**2.13**	**291**	*eP*	Pn	18 13 32.7	-2.3
CAIG				*i* S	Sn	18 13 57.2	-4.3

*IDC **03** 18:31:10.5±2.5,43.°74N×105.°27W,h0km,mb1 3.4/2, mb1mx3.1/67,mbtmp3.2/2,ML2.7/2, Error ellipse: s-maj=68.5km s-min=8.7km az=151.0*
*ISCJB **03** 18:31:11.1±0.6,44.°30N±0.°06×105.°48W±0.°06,h0km, Error ellipse: s-maj=8.4km s-min=5.9km az=17.5*
*NEIC **03** 18:31:12.3±0.6,44.°24N×105.°46W,h0km,ML3.0, Error ellipse: s-maj=10.0km s-min=8.0km az=178.0, Suspected Mining explosion.*
NEIC 6 km [4 miles] SSE of Gillette.

ISC 03 18:31:10.6±0.9,44.°22N±0.°06×105.°61W±0.°04,h0km,n11, σ1°80/13,Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.14**	**94**	*eP*g	**Pg**	**18 31 31.6**	**-0.7**
RSSD				*eS*g	**Sg**	**18 31 47.0**	**-0.1**
LAO	**LASA Array**	**2.51**	**350**	Pn	**Pn**	**18 31 54.2**	**+1.5**
LAO				*eS*n	**Sn**	**18 32 23.0**	**-1.0**
RLMT	**Red Lodge**	**2.76**	**290**	*eP*n	**Pb**	**18 31 59.2**	**-1.8**
BW06	**Boulder Array**	**3.22**	**245**	Pn	**Pn**	**18 32 03.7**	**+1.1**
PDAR	**Pinedale Array**	**3.22**	**245**	Pn	**Pb**	**18 32 06.9**	**-1.9**
	0.4nm,0.3s,baz=70,slow=16,SNR=5.1						
PDAR				Pg	**Pg**	**18 32 12.1**	**-0.1**
	2.1nm,0.3s,baz=74,slow=19,SNR=21						
PDAR				Lg	Lg	18 32 54.5	
	4.8nm,0.3s,baz=62,slow=32,SNR=15						
AHID	**Auburn Hatcher**	**4.25**	**252**	*eP*n	**Pg**	**18 32 31.9**	**-0.2**
ISCO	**Idaho Springs**	**4.41**	**180**	*eP*n	**Pn**	**18 32 21.7**	**+2.6**
BOZ	**Bozeman (W)**	**4.49**	**290**	*eP*n	**Pn**	**18 32 22.9**	**+2.8**
EGMT	**Eagleton**	**4.78**	**324**	*eP*n	**Pn**	**18 32 26.2**	**+2.3**
I56US	**NEWPORT INFRAS**	**8.95**	**301**	*i*		19 25 00.0	
	baz=113,slow=317,SNR=3.1						
ULM	**Lac du Bonnet**	**8.96**	**44**	Pn	**Pn**	**18 33 21.8**	**+0.6**
	0.3nm,0.3s,baz=236,slow=14,SNR=3.3						
ULM				Lg	Lg	18 35 50.6	
	0.3nm,0.3s,baz=334,slow=16,SNR=4.2						

*ISCJB **03** 18:31:21.7±0.4,6.°84N±0.°04×126.°83E±0.°07,h227km±3km, mb3.9/17, Error ellipse: s-maj=11.4km s-min=5.6km az=165.2*
*IDC **03** 18:31:23.2±0.7,6.°78N×126.°88E,h227km±6km,mb3.6/16, mb1 3.7/17,mb1mx3.5/59,mbtmp4.2/17, Error ellipse: s-maj=17.6km s-min=7.5km az=81.0*
*MAN **03** 18:31:23.9,6.°94N×126.°83E,h210km,mb4.9,ML3.9, MS3.9*
*DJA **03** 18:31:28.1±1.7,7.°N±15.°×12.°7E±.°,h155km±23km,M4.3/7, mb4.0/7,MLv4.5/7*

ISC 03 18:31:22.3±0.7,6.°81N±0.°05×126.°81E±0.°08,h221km±6km, n45,σ1°42/58,mb3.9/17,2C-3D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.57**	**283**	*eP*	**Pn**	**18 31 51.8**	**-0.3**
DAV	**Davao City (W)**	**1.25**	**282**	P	**Pn**	**18 31 56.8**	**+0.8**
	136nm,0.3s,baz=90,slow=1.9,SNR=24						
DAV				S	**S**	**18 32 25.2**	**+3.1**
	63nm,0.3s,baz=120,slow=18,SNR=3.9						
DMPH	**Davao City--Mi**	**1.32**	**282**	⇓*eP*	**Pn**	**18 31 59.4**	**+2.8**
DMPH				*eS*	**S**	**18 32 22.2**	**-0.9**
BIPH	**Bislig**	**1.43**	**342**	⇑*eP*	**Pn**	**18 31 56.5**	**-0.9**
BIPH				*i* S	**S**	**18 32 21.0**	**-3.7**
GSPH	**General Santos**	**1.99**	**249**	⇑*iP*	**Pn**	**18 32 01.7**	**-0.8**
GSPH				*i* S	**S**	**18 32 31.7**	**-2.0**
BUKP	**Musuan**	**2.04**	**301**	*eP*	**Pn**	**18 32 02.9**	**0.0**
BUTP	**Butuan**	**2.45**	**331**	*eP*	**Pn**	**18 32 08.3**	**+1.3**
BUTP				*eS*	**S**	**18 32 41.1**	**-0.7**
CGP	**Cagayan de Oro**	**2.66**	**308**	⇓*eP*	**Pn**	**18 32 10.5**	**+1.2**
SCPH	**Surigao**	**3.23**	**336**	⇓*eP*	**Pn**	**18 32 17.0**	**+1.3**
SCPH				*eS*	**S**	**18 32 55.7**	**-1.8**
SGSI	**Sangihe**	**3.36**	**202**	P	**Pn**	**18 32 17.9**	**+0.6**
PAGZ	**Pagadian**	**3.56**	**287**	*eP*	**Pn**	**18 32 20.3**	**+0.7**
LBMI	**Labuha**	**7.43**	**175**	P	**Pn**	**18 33 11.8**	**+3.4**
	30nm,1.2s						
MRSI	**Marisa**	**7.95**	**218**	P	**Pn**	**18 33 16.5**	**+1.5**
SIJI	**Sorong**	**8.83**	**150**	P	**Pn**	**18 33 29.6**	**+3.2**
	1.3nm,0.3s,baz=86,slow=23,SNR=15						
SIJI				S	**S**	**18 35 04.3**	**-1.7**
	0.7nm,0.3s,baz=205,slow=22,SNR=6.1						
SANI	**Sanana**	**8.84**	**185**	P	**Pn**	**18 33 24.4**	**-2.1**
APSI	**Ampana**	**9.24**	**214**	P	**Pn**	**18 33 33.5**	**+1.8**
	16nm,1.1s						
MPSI	**Mapaga**	**9.43**	**227**	P	**P**	**18 33 39.4**	**-2.6**
BATI	**Baumata**	**17.20**	**191**	P	**Pn**	**18 35 10.1**	**+0.1**
	12nm,0.3s,baz=32,slow=2.6,SNR=19						
FITZ	**Fitzroy Crossi**	**24.78**	**183**	P	**P**	**18 36 24.8**	**+0.6**
	4.6nm,1.0s,baz=5.4,slow=8.2,SNR=18						
JCJ	**Chichijima**	**24.91**	**34**	P	**P**	**18 36 24.1**	**-1.2**
	71nm,0.5s,baz=198,slow=18,SNR=3.3						
WRA	**Warramunga Arr**	**27.60**	**165**	P	**P**	**18 36 48.8**	**-0.6**
	0.7nm,0.5s,baz=345,slow=7.9,SNR=18						
WRA				PcP	**PcP**	**18 40 01.5**	**+0.3**
	0.2nm,0.4s,baz=340,slow=2.5,SNR=4.0						
WRA				S	**S**	**18 41 12.5**	**-2.1**
	0.4nm,0.6s,baz=345,slow=14,SNR=4.6						
WRA				ScP	**SS**	**18 43 21.1**	**-0.9**
	0.6nm,1.1s,baz=344,slow=2.9,SNR=5.8						
CMAR	**Chiang Mai Arr**	**29.50**	**296**	P	**P**	**18 37 07.2**	**+0.9**
	2.0nm,0.5s,baz=99,slow=7.2,SNR=25						
ASAR	**Alice Springs**	**31.08**	**167**	P	**P**	**18 37 20.2**	**+0.1**
	0.8nm,0.3s,baz=340,slow=7.4,SNR=55						
ASAR				PcP	**PcP**	**18 40 10.6**	**+0.5**
	0.7nm,0.4s,baz=344,slow=2.4,SNR=9.0						
ASAR				S	**S**	**18 42 09.1**	**+0.2**
	0.5nm,0.8s,baz=140,slow=28,SNR=4.3						
ASAR				ScP	**ScP**	**18 43 32.0**	**0.0**
	0.6nm,0.8s,baz=336,slow=2.5,SNR=6.0						
USRK	**Ussuriysk Ar.**	**37.51**	**6**	P	**P**	**18 38 15.8**	**+0.8**
	1.8nm,0.4s,baz=179,slow=8.9,SNR=4.6						
ASAJ	**Asahikawa**	**39.64**	**18**	P	**P**	**18 38 34.3**	**+1.7**
	2.9nm,0.4s,baz=238,slow=11,SNR=14						
STKA	**Stephens Creek**	**40.98**	**161**	P	**P**	**18 38 43.6**	**-0.1**
	2.6nm,0.5s,baz=348,slow=7.4,SNR=14						
JIRN	**Jiri**	**43.70**	**303**	*eP*	**P**	**18 39 06.0**	**-0.3**
	12nm,0.3s						
GUN	**Gumba**	**44.05**	**303**	*eP*	**P**	**18 39 09.3**	**+0.3**
	8.8nm,0.4s						
PKIN	**Phulchoki**	**44.33**	**303**	*eP*	**P**	**18 39 10.9**	**-0.3**
	5.9nm,0.6s						
SONM	**Songino Array**	**44.43**	**340**	P	**P**	**18 39 12.1**	**+0.7**
	0.7nm,0.6s,baz=148,slow=8.5,SNR=3.9						
KKN	**Kakani**	**44.50**	**303**	*eP*	**P**	**18 39 12.4**	**0.0**
	9.9nm,0.8s						
DMN	**Daman**	**44.59**	**303**	*eP*	**P**	**18 39 13.2**	**0.0**
KOLN	**Koldanda**	**45.90**	**302**	*eP*	**P**	**18 39 23.7**	**+0.3**
	13nm,0.3s						
DANN	**Dangsing**	**45.95**	**303**	*eP*	**P**	**18 39 24.0**	**+0.1**
	13nm,0.4s						
PYUN	**Piuthan**	**46.52**	**303**	*eP*	**P**	**18 39 28.6**	**+0.4**
	14nm,0.6s						
PETK	**Petropavlovsk-**	**52.57**	**23**	P	**P**	**18 40 14.1**	**+0.9**
	3.8nm,0.8s,baz=239,slow=8.1,SNR=4.8						
MKAR	**Makanchi Array**	**55.10**	**324**	P	**P**	**18 40 32.7**	**+1.0**
	0.7nm,0.4s,baz=112,slow=7.8,SNR=21						
KURBB	**Kurchatov Arra**	**59.22**	**326**	P	**P**	**18 41 01.1**	**+0.8**
	0.8nm,0.7s,baz=126,slow=6.6,SNR=8.6						
BVAR	**Borovoye Array**	**64.81**	**326**	P	**P**	**18 41 37.0**	**-0.4**
	0.3nm,0.4s,baz=124,slow=6.3,SNR=4.0						
ILAR	**Eielson Array**	**82.30**	**26**	P	**P**	**18 43 18.4**	**-0.5**
	1.6nm,0.5s,baz=244,slow=5.2,SNR=32						
ARCES	**ARCESS Array B**	**87.60**	**340**	P	**P**	**18 43 44.4**	**-0.8**
	1.3nm,0.8s,baz=86,slow=6.2,SNR=5.4						
FINES	**FINESS Array B**	**89.17**	**332**	P	**P**	**18 43 51.7**	**-0.9**
	1.1nm,0.6s,baz=98,slow=3.6,SNR=5.1						
YKA	**Yellowknife Ar**	**96.67**	**24**	P	**P**	**18 44 26.9**	**-0.2**
	0.5nm,0.7s,baz=310,slow=4.8,SNR=5.1						
TXAR	**Lajitas Array**	**119.62**	**51**	PKP	**PKPdf**	**18 49 46.0**	**-0.7**
	0.1nm,0.6s,baz=292,slow=2.9,SNR=3.0						
TORD	**Torodi Ar. Bea**	**122.00**	**290**	PKP	**PKPdf**	**18 49 50.6**	**-0.9**
	0.3nm,0.4s,baz=133,slow=1.6,SNR=4.5						

*IDC **03** 18:35:05.1±5.3,14.°62N×92.°62W,h0km,mb3.5/2, mb1 3.8/5,mb1mx3.5/48,mbtmp3.4/5,ML3.4/3, Error ellipse: s-maj=110.5km s-min=21.5km az=16.0*
*ISCJB **03** 18:35:06.7±1.2,14.°34N±0.°08×92.°76W±0.°05,h35km, mb3.5/2, Error ellipse: s-maj=11.3km s-min=7.1km az=15.6*
*NEIC **03** 18:35:09.4±0.0,14.°36N×92.°81W,h22km,MD4.0(MEX), After MEX.*
*MEX **03** 18:35:09.4±0.4,14.°36N×92.°81W,h22km±66km,MD4.0*

ISC 03 18:35:08.1±1.4,14.°36N±0.°10×92.°74W±0.°06,h35km,n13, σ0°92/21,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.41**	**341**	*eP*	**Pn**	**18 35 30.5**	**-0.9**
PCIG				*i* S	**Sn**	**18 35 47.4**	**-1.4**
PCIG		**1.41**	**341**	*eP*	**Pn**	**18 35 30.5**	**-0.9**
PCIG				*i* S	**Sn**	**18 35 47.4**	**-1.4**
CCIG	**Comitan**	**2.00**	**17**	*eP*	**Pn**	**18 35 39.7**	**+0.2**
CCIG				*eS*	**Sn**	**18 36 03.4**	**0.0**
CCIG	**Comitan**	**2.00**	**17**	*eP*	**Pn**	**18 35 39.7**	**+0.2**
CCIG				*eS*	**Sn**	**18 36 03.4**	**0.0**
APG	**El Apazote**	**2.29**	**74**	Pn	**Pn**	**18 35 42.7**	**-1.0**
	4.8nm,0.3s,baz=193,slow=13,SNR=73						
APG				Sn	**Sn**	**18 36 11.3**	**+0.5**
	16nm,0.3s,baz=316,slow=18,SNR=10						
TGIG		**2.43**	**351**	*eP*	**Pn**	**18 35 45.9**	**+0.5**
TGIG				*eS*	**Sn**	**18 36 13.5**	**-0.5**
TGIG		**2.43**	**351**	*eP*	**Pn**	**18 35 45.9**	**+0.5**
TGIG				*eS*	**Sn**	**18 36 13.5**	**-0.5**
CMIG	**Matias Romero**	**3.41**	**323**	Pn	**Pn**	**18 35 58.5**	**-0.3**
	6.0nm,0.3s,baz=163,slow=11,SNR=48						
CMIG				Sn	**Sn**	**18 36 39.5**	**+1.4**
	9.4nm,0.3s,baz=52,slow=21,SNR=11						
HUIG	**Huatulco**	**3.54**	**294**	*eP*	**Pn**	**18 36 00.2**	**-0.4**
HUIG	**Huatulco**	**3.54**	**294**	*eP*	**Pn**	**18 36 00.2**	**-0.4**
TXAR	**Lajitas Array**	**18.00**	**328**	P	**P**	**18 39 16.7**	**+0.7**
	0.0nm,0.3s,baz=144,slow=14,SNR=5.3						
NVAR	**Mina Array Bea**	**32.94**	**321**	P	**P**	**18 41 41.4**	**+1.7**
	0.3nm,0.5s,baz=128,slow=7.3,SNR=3.4						
YKA	**Yellowknife Ar**	**50.51**	**347**	P	**P**	**18 44 01.1**	**-1.4**
	0.5nm,0.6s,baz=150,slow=7.9,SNR=5.5						

IDC 03 18:36:53.5±8.0,17.°69N×144.°42E,h62km±67km,mb3.2/4, mb1 3.6/5,mb1mx3.1/68,mbtmp3.6/5,ML4.0/1,Error ellipse: s-maj=94.8km s-min=27.5km az=114.0,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.10**	**174**	P	Pn	18 37 55.7	+1.9
	8.2nm,0.3s,baz=343,slow=14,SNR=8.1						
GUMO				S	Sn	18 38 40.3	-0.3
	2.9nm,0.3s,baz=352,slow=15,SNR=2.2						
WRA	**Warramunga Arr**	**38.69**	**195**	P	P	18 44 11.4	-0.2
	0.1nm,0.4s,baz=8.0,slow=8.5,SNR=6.5						
ASAR	**Alice Springs**	**42.37**	**194**	P	P	18 44 42.4	+0.5
	0.5nm,0.9s,baz=11,slow=8.2,SNR=3.3						
YKA	**Yellowknife Ar**	**79.44**	**28**	P	P	18 48 53.3	+0.3
	0.5nm,0.7s,baz=288,slow=5.6,SNR=5.1						
NVAR	**Mina Array Bea**	**84.72**	**51**	P	P	18 49 20.3	-1.1
	0.3nm,0.5s,baz=267,slow=6.3,SNR=3.6						

IDC 03 18:38:46.8±8.6,17.°80S×175.°98W,h0km,mb3.6/2, mb1 3.8/2,mb1mx3.4/48,mbtmp3.6/2,Error ellipse: s-maj=389.8km s-min=61.5km az=143.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**46.92**	**259**	P	P	18 47 18.9	-0.7
	0.3nm,0.8s,baz=96,slow=6.6,SNR=5.4						
ASAR	**Alice Springs**	**47.05**	**254**	P	P	18 47 20.8	+0.2
	0.8nm,0.5s,baz=89,slow=7.9,SNR=30						
BRTR	**Keskin Array B**	**146.32**	**317**	PKPbc	PKPdf	18 58 29.2	+0.4
	0.1nm,0.5s,baz=22,slow=1.6,SNR=2.8						

NNC 03 18:41:46.5±2.7,36.°98N×71.°07E,h183km±56km,mb2.6, mpv3.6,3C-4D,Error ellipse: s-maj=42.2km s-min=25.1km az=80.0,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.58**	**32**	⇑P	Pn	18 42 42.3	-0.4
	2.4nm,0.2s						
SFK				⇓S	Sn	18 43 27.3	+0.7
	18nm,0.3s						
MNAS	**Manas**	**5.61**	**11**	⇓P	Pn	18 43 08.9	+0.3
	2.1n

LCO	**Las Campanas**	**4.92**	**185**	*e*Pn	**Pn**	**19 12 35.6**	**+0.3**
LCO	**Las Campanas**	**4.92**	**185**	*e*P	**Pn**	**19 12 35.8**	**+0.6**
LCO				*e*S	**Sb**	**19 13 43.6**	**-4.3**
VCA	**Vinchina**	**4.95**	**160**	*e*P	**Pn**	**19 12 40.0**	**+4.5**
VCA				*e*S	**Sb**	**19 13 48.6**	**-0.1**
VCA				IAML		19 13 53.5	
	comp=Z,1μm,1.0s						
MNMC	**Minye Minye**	**4.97**	**6**	*e*Pn	**Pn**	**19 12 36.7**	**+0.7**
MNMC				*e*Sn	**Sn**	**19 13 34.6**	**+2.3**
AHML	**Horco Molle**	**5.13**	**122**	*e*P	Pn	19 12 43.3	+5.3
AHML				IAML		19 12 46.6	
	comp=Z,46nm,0.5s						
CYA	**Choya**	**5.84**	**139**	*e*P	Pn	19 12 52.9	+5.2
CYA				IAML		19 12 56.2	
	comp=Z,114nm,0.5s						
GO04	**Tololo Observa**	**6.08**	**185**	*e*Pn	**Pn**	**19 12 50.2**	**-1.0**
RTLL	**Cerro Villicun**	**7.36**	**169**	*e*P	**Pn**	**19 13 05.8**	**-2.8**
RTLL				*e*S	Sb	19 14 45.9	-12
RTLS	**Leoncito**	**7.71**	**174**	*e*P	**Pn**	**19 13 14.7**	**+1.0**
RTLS				*e*S	Sb	19 14 57.0	-11
RTLS				IAML		19 15 03.2	
	comp=Z,228nm,0.6s						
RTCV	**Cerro Valdivia**	**7.87**	**170**	*e*P	**Pn**	**19 13 16.6**	**+1.0**
RTCV				*e*S	Sn	19 14 56.6	+13
LPAZ	**La Paz**	**8.00**	**14**	P	**Pn**	**19 13 20.8**	**+2.9**
	comp=Z,3.0nm,0.3s,baz=200,slow=2.9,SNR=105						
LPAZ				LR	LR	19 17 07.6	
	comp=Z,276nm,18.1s,baz=206,slow=43						
LPAZ	**La Paz**	**8.00**	**14**	*e*Pn	**Pn**	**19 13 20.5**	**+2.5**
ACAN	**Cantantal**	**8.56**	**163**	*e*P	**Pn**	**19 13 26.4**	**+1.3**
AAGR	**Agrelo**	**9.04**	**173**	*e*P	**Pn**	**19 13 32.8**	**+1.2**
SIV	**San Ignacio**	**11.75**	**48**	P	**Pn**	**19 14 09.5**	**+0.7**
	comp=Z,5.1nm,0.3s,baz=263,slow=11,SNR=50						
SIV				S	**Sn**	**19 16 11.8**	**-7.0**
	comp=Z,1.1nm,0.3s,baz=263,slow=17,SNR=1.9						
CPUP	**Villa Florida**	**11.84**	**104**	P	**Pn**	**19 14 10.9**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=287,slow=14,SNR=10						
CPUP	**Villa Florida**	**11.84**	**104**	*e*Pn	**Pn**	**19 14 12.2**	**+2.3**
NNA	**Nana**	**13.60**	**331**	S	**Sn**	**19 16 58.1**	**-6.0**
	comp=Z,1.2nm,0.3s,baz=16,slow=20,SNR=3.2						
NNA				LR	LR	19 19 23.9	
	comp=Z,44nm,20.5s,baz=174,slow=35						
TRQA	**Tornquist**	**15.58**	**155**	*e*Pn	**P**	**19 15 02.8**	**-1.6**
	comp=Z,12nm,0.8s						
SAML	**Samuel**	**16.48**	**25**	*e*Pn	**P**	**19 15 15.7**	**+1.2**
	comp=Z,7.2nm,0.8s						
PLCA	**Paso Flores**	**16.59**	**181**	P	**P**	**19 15 15.8**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=4.1,slow=14,SNR=4.3						
PLCA				LR	LR	19 22 10.4	
	comp=Z,171nm,19.5s,baz=36,slow=39						
ATAH	**Atahualpa**	**18.61**	**334**	P	**Pn**	**19 15 40.2**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=29,slow=12,SNR=1.7						
PTGA	**Pitinga**	**25.25**	**25**	P	**P**	**19 16 47.2**	**+0.7**
	comp=Z,5.6nm,0.6s,baz=197,slow=11,SNR=13						
PTGA				pP	**sP**	**19 16 59.4**	**-1.2**
	comp=Z,3.6nm,0.5s,baz=208,slow=13,SNR=2.6						
ROSC	**El Rosal**	**29.04**	**351**	LR	LR	19 29 26.0	
	comp=Z,47nm,19.4s,baz=218,slow=37						
HELC	**Santa Helena**	**30.55**	**349**	*e*P	**P**	**19 17 34.8**	**+0.5**
	comp=Z,9.3nm,0.7s						
SDV	**Santo Domingo**	**32.78**	**359**	LR	LR	19 32 27.6	
	comp=Z,74nm,19.6s,baz=124,slow=38						
PCRV	**Puerto La Cruz**	**34.49**	**10**	P	**P**	**19 18 08.7**	**+0.3**
	comp=Z,4.6nm,0.6s,baz=351,slow=13,SNR=2.5						
VNA3	**Neumayer Olymp**	**58.02**	**161**	P	**P**	**19 21 13.0**	**+0.5**
VNA1	**Neumayer--Stat**	**58.25**	**160**	P	**P**	**19 21 14.4**	**+0.3**
SNAA	**Sanae**	**60.23**	**160**	P	**P**	**19 21 27.8**	**0.0**
SNAA	**Sanae**	**60.23**	**160**	P	**P**	**19 21 27.9**	**0.0**
	comp=Z,4.4nm,0.7s,baz=289,slow=5.7,SNR=18						
SNAA	**Sanae**	**60.23**	**160**	*e*P	**P**	**19 21 26.5**	**-1.4**
	comp=Z,5.0nm,0.7s						
TXAR	**Lajitas Array**	**62.12**	**327**	P	**P**	**19 21 41.3**	**+0.1**
	comp=Z,0.2nm,0.7s,baz=161,slow=6.7,SNR=2.6						
TXAR				pP	**pP**	**19 21 53.5**	**+1.7**
	comp=Z,0.7nm,1.0s,baz=145,slow=4.6,SNR=3.8						
QSPA	**South Pole Qui**	**66.11**	**180**	P	**P**	**19 22 07.4**	**+0.4**
	comp=Z,3.1nm,0.6s,baz=152,slow=1.8,SNR=12						
QSPA				pP	**sP**	**19 22 20.7**	**-1.1**
	comp=Z,1.9nm,0.7s,baz=306,slow=2.9,SNR=3.0						
DBIC	**Dimbokro**	**70.60**	**73**	P	**P**	**19 22 35.6**	**-0.1**
	comp=Z,5.7nm,0.9s,baz=210,slow=5.9,SNR=4.6						
PPT	**Papeete**	**73.61**	**258**	P	**P**	**19 22 54.2**	**+0.4**
	comp=Z,16nm,0.6s,baz=75,slow=19,SNR=2.6						
KOWA	**Kowa**	**75.12**	**66**	P	**P**	**19 23 02.5**	**0.0**
	comp=Z,3.8nm,0.6s,baz=224,slow=4.2,SNR=9.2						
KOWA				pP	**PcP**	**19 23 16.1**	**0.0**
	comp=Z,3.3nm,0.6s,baz=235,slow=6.1,SNR=4.6						
NVAR	**Mina Array Bea**	**76.83**	**323**	P	**P**	**19 23 13.3**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=141,slow=5.8,SNR=2.2						
NVAR				pP	**sP**	**19 23 25.9**	**-1.0**
	comp=Z,0.6nm,0.9s,baz=135,slow=7.1,SNR=2.5						
TOA0	**Torodi Ar. Sit**	**79.33**	**70**	*e*P	**P**	**19 23 26.2**	**+0.1**
TORD	**Torodi Ar. Bea**	**79.33**	**70**	P	**P**	**19 23 26.2**	**0.0**
	comp=Z,9.6nm,0.7s,baz=256,slow=4.9,SNR=72						
TORD				pP	**sP**	**19 23 39.8**	**-1.2**
	comp=Z,3.1nm,0.6s,baz=253,slow=5.0,SNR=8.4						
MAW	**Mawson**	**82.19**	**164**	P	**P**	**19 23 40.6**	**+0.1**
	comp=Z,3.7nm,1.0s,baz=215,slow=8.7,SNR=8.6						
BOSA	**Boshof**	**83.26**	**118**	P	**P**	**19 23 46.5**	**-0.6**
	comp=Z,2.9nm,0.7s,baz=294,slow=2.7,SNR=8.0						
YKA	**Yellowknife Ar**	**93.24**	**341**	pP	pP	19 24 46.5	+1.6
	comp=Z,1.5nm,0.7s,baz=138,slow=4.3,SNR=13						
ASAR	**Alice Springs**	**127.08**	**208**	PKP	**PKPdf**	**19 30 23.4**	**-1.3**
	comp=Z,0.8nm,0.9s,baz=148,slow=2.1,SNR=6.2						
WRA	**Warramunga Arr**	**130.14**	**211**	PKP	**PKPdf**	**19 30 29.6**	**-1.1**
	comp=Z,0.8nm,0.9s,baz=156,slow=1.7,SNR=6.9						
KURK	**Kurchatov**	**144.13**	**34**	PKP	**PKPdf**	**19 30 54.4**	**-0.9**
KURBB	**Kurchatov Arra**	**144.13**	**34**	PKP	**PKPdf**	**19 30 54.4**	**-0.9**
	comp=Z,0.8nm,0.8s,baz=313,slow=3.4,SNR=2.8						
ZALV	**Zalesovo Beam**	**144.79**	**26**	PKP	PKPbc	19 30 55.4	0.0
	comp=Z,1.5nm,0.5s,baz=288,slow=2.5,SNR=3.2						
KSH	**Kashi**	**147.61**	**54**	PKPbc	**PKPab**	**19 31 06.7**	**-0.1**
KSH				PP	**PP**	**19 34 37.1**	**+5.8**
KSH				AMB	AMB		
	comp=Z,230nm,4.5s						
MKAR	**Makanchi Array**	**148.40**	**37**	PKPbc	**PKPbc**	**19 31 06.0**	**-0.3**
	comp=Z,2.0nm,0.9s,baz=276,slow=3.1,SNR=2.1						
HHC	**Hu-ho-hao-te**	**163.23**	**355**	*e*P	**PKPdf**	**19 31 22.7**	**+0.1**
CD2	**Chengdu**	**171.34**	**37**	PKP	**PKPdf**	**19 31 26.5**	**-2.2**

IDC 03 19:12:16.1±3.1, 23°.67S×177°.73W, h0km, mb4.1/5, mb1 4.3/5, mb1mx3.7/44, mbtmp4.1/5, Error ellipse: s-maj=144.7km s-min=28.2km az=149.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**33.55**	**269**	P	P	19 18 59.5	+1.4
	5.6nm,0.4s,baz=94,slow=12,SNR=29						
STKA	**Stephens Creek**	**36.73**	**248**	P	P	19 19 26.7	+1.4
	1.0nm,0.4s,baz=99,slow=4.4,SNR=4.6						
ASAR	**Alice Springs**	**44.12**	**260**	P	P	19 20 26.1	-0.5
	1.1nm,0.8s,baz=96,slow=7.1,SNR=24						
WRA	**Warramunga Arr**	**44.50**	**265**	P	P	19 20 28.9	-0.8
	1.9nm,0.6s,baz=96,slow=8.4,SNR=75						
FITZ	**Fitzroy Crossi**	**52.92**	**265**	P	P	19 21 33.2	-1.2
	baz=76,slow=4.2						
ILAR	**Eielson Array**	**91.34**	**13**	P	P	19 25 23.9	+0.7
	0.2nm,0.6s,baz=210,slow=3.1,SNR=2.9						
AKASG	**Malin Array Be**	**145.87**	**329**	PKPbc	PKPdf	19 31 56.9	+0.2
	0.6nm,0.6s,baz=53,slow=4.5,SNR=3.5						
BRTR	**Keskin Array B**	**149.08**	**309**	PKPbc	PKPbc	19 32 04.7	-2.0
	0.2nm,0.6s,baz=63,slow=0.9,SNR=2.8						
MMAI	**Mount Meron Ar**	**149.49**	**295**	PKPbc	PKPbc	19 32 07.5	-0.4
	1.2nm,0.4s,baz=76,slow=6.5,SNR=9.5						

NNC ***03*** *19:14:05.7±5.3, 36°.97N×77°.08E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=41.7km s-min=36.5km az=171.0*
ISCJB ***03*** *19:14:06.4±0.9, 36°.78N±0°.07×77°.0E±0°.1, h86km, mb3.6/7, Error ellipse: s-maj=12.1km s-min=9.1km az=163.8*
IDC ***03*** *19:14:07.1±5.5, 36°.60N×76°.70E, h87km±44km, mb3.5/7, mb1 3.4/11, mb1mx3.1/70, mbtmp3.7/11, Error ellipse: s-maj=51.7km s-min=20.1km az=30.0*
ISC 03 19:14:07.9±1.3, 36°.8N±0°.1×77.05E±0°.09, h86km, n19, σ1°79/27, mb3.9/7, 7C-6D, Kashmir-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**4.25**	**320**	⇑Pn	**Pn**	**19 15 12.1**	**+1.6**
	2.1nm,0.3s						
SFK				⇑Sn	**Sn**	**19 16 03.1**	**+4.0**
	18nm,0.3s						

AAK	**Ala-Archa**	**6.16**	**342**	P	**Pn**	**19 15 38.9**	**+2.5**
	0.8nm,0.3s,baz=150,slow=8.5,SNR=5.8						
AAK				S	**Sn**	**19 16 44.1**	**-1.4**
	0.5nm,0.3s,baz=350,slow=16,SNR=4.2						
AAK	**Ala-Archa**	**6.16**	**342**	⇓Pn	**Pn**	**19 15 38.4**	**+2.0**
	1.0nm,0.3s						
AAK				⇑Sn	**Sn**	**19 16 44.2**	**-1.3**
	3.8nm,0.7s						
TKM2	**Tokmak 2**	**6.22**	**350**	⇑Pn	**Pn**	**19 15 39.2**	**+1.9**
	1.5nm,0.5s						
TKM2				⇓Sn	**Sn**	**19 16 47.7**	**+0.7**
	2.2nm,0.6s						
MNAS	**Manas**	**6.68**	**330**	⇑Pn	**Pn**	**19 15 44.2**	**+0.7**
	1.3nm,0.5s						
MNAS				⇓Sn	**Sn**	**19 16 60.0**	**+1.8**
	2.8nm,0.6s						
PDGK	**Podgornoye**	**6.79**	**15**	⇑Pn	**Pn**	**19 15 46.8**	**+1.8**
	1.3nm,0.4s						
PDGK				⇑Sn	**Sn**	**19 17 00.5**	**-0.3**
	4.1nm,0.6s						
KK31	**Karatay Array**	**8.05**	**323**	Pn	**Pn**	**19 16 01.8**	**-0.3**
	0.6nm,0.2s,baz=124,slow=13,SNR=17						
KK31				⇓Sn	**Sn**	**19 17 28.9**	**-2.6**
	2.5nm,0.5s,baz=145,slow=25,SNR=6.2						
MKAR	**Makanchi Array**	**10.73**	**20**	P	**Pn**	**19 16 39.7**	**+1.2**
	0.2nm,0.3s,baz=205,slow=13,SNR=14						
MKAR				S	**Sn**	**19 18 34.4**	**-2.2**
	0.2nm,0.3s,baz=196,slow=24,SNR=5.1						
KURBB	**Kurchatov Arra**	**13.87**	**4**	P	**Pn**	**19 17 21.4**	**+1.0**
	0.0nm,0.3s,baz=196,slow=9.8,SNR=3.0						
AB31	**Akbulak array**	**17.60**	**320**	⇓P	**Pn**	**19 18 06.3**	**-1.1**
	0.8nm,0.4s,baz=128,slow=11,SNR=26						
AKTO	**Aktyubinsk**	**19.31**	**321**	P	**P**	**19 18 24.8**	**-1.2**
	0.5nm,0.3s,baz=114,slow=11,SNR=7.5						
AKTO	**Aktyubinsk**	**19.31**	**321**	⇓P	**P**	**19 18 24.7**	**-1.2**
	1.8nm,0.6s						
ARU	**Arti**	**23.25**	**333**	P	**P**	**19 19 06.2**	**-1.4**
	1.0nm,0.3s,baz=166,slow=4.6,SNR=4.7						
SONM	**Songino Array**	**24.20**	**54**	P	**P**	**19 19 19.3**	**+2.9**
	0.4nm,0.6s,baz=262,slow=10.0,SNR=2.5						
FINES	**FINESS Array B**	**40.02**	**325**	P	**P**	**19 21 33.1**	**-0.9**
	1.0nm,0.4s,baz=113,slow=9.7,SNR=16						
ARCES	**ARCESS Array B**	**42.79**	**336**	P	**P**	**19 21 56.1**	**-0.6**
	4.6nm,1.0s,baz=108,slow=9.4,SNR=6.2						
HFS	**Hagfors**	**45.86**	**321**	P	**P**	**19 22 20.2**	**-1.0**
	1.0nm,0.5s,baz=73,slow=11,SNR=5.4						
NOA	**NORSAR Array B**	**47.09**	**323**	P	**P**	**19 22 29.5**	**-1.3**
	1.7nm,0.8s,baz=76,slow=7.3,SNR=3.4						
WRA	**Warramunga Arr**	**78.12**	**126**	P	**P**	**19 25 57.4**	**-0.4**
	0.4nm,1.0s,baz=331,slow=5.0,SNR=2.9						

ISK ***03*** *19:19:36.7, 39°.74N×39°.98E, h8km, ML2.1/7*
CSEM ***03*** *19:19:37.4±0.2, 39°.75N×39°.98E, h5km, ML2.8, Error ellipse: s-maj=4.0km s-min=3.0km az=150.0*
DDA ***03*** *19:19:37.8, 39°.78N×39°.92E, h10km, Ml2.8*
ISC 03 19:19:37.2±1.1, 39°.77N±0°.02×39°.97E±0°.02, h3km±10km, n40, σ1°34/67, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EUZM	**Uzumlu**	**0.22**	**253**	*i* P	**Pg**	**19 19 42.4**	**+1.0**
EUZM				*i* S	**Sg**	**19 19 45.1**	**+0.8**
EUZM	**Uzumlu**	**0.22**	**253**	P	**Pg**	**19 19 42.4**	**+1.0**
EUZM				S	**Sg**	**19 19 45.1**	**+0.8**
ERZN	**Erzincan**	**0.26**	**226**	PG	**Pg**	**19 19 42.1**	**-0.2**
ERZN				SG	**Sg**	**19 19 45.9**	**+0.1**
EZC	**Erzincan**	**0.47**	**268**	*e*Pg	**Pg**	**19 19 42.1**	**-4.2**
EZC				*e*Sg	**Sg**	**19 19 45.9**	**-6.6**
KOPT	**Kop Dagi**	**0.48**	**59**	*i* P	**Pg**	**19 19 47.4**	**+1.0**
KOPT				*i* S	**Sb**	**19 19 55.5**	**-0.6**
KOPT	**Kop Dagi**	**0.48**	**59**	P	**Pg**	**19 19 47.4**	**+1.0**
KOPT				S	**Sb**	**19 19 55.5**	**-0.6**
YEDI	**Yedisu-Bingol**	**0.56**	**126**	PG	**Pg**	**19 19 47.6**	**-0.3**
YEDI				SG	**Sg**	**19 19 55.2**	**0.0**
YEDI	**Yedisu-Bingol**	**0.56**	**126**	*e*Pg	**Pg**	**19 19 47.6**	**-0.3**
YEDI				*e*Sg	**Sg**	**19 19 55.2**	**0.0**
BAYT	**Ayd¨–ntepe-Bay**	**0.64**	**12**	PG	**Pg**	**19 19 50.2**	**+0.7**
BAYT				SG	**Sb**	**19 19 59.5**	**-1.1**
BAYT	**Ayd¨–ntepe-Bay**	**0.64**	**12**	*e*Pg	**Pg**	**19 19 50.2**	**+0.7**
BAYT				*e*Sg	**Sb**	**19 19 59.5**	**-1.1**
KELT	**Kelkit**	**0.66**	**305**	*i* P	**Pg**	**19 19 50.9**	**+0.9**
KELT				*i* S	**Sg**	**19 19 59.2**	**+0.6**
KELT	**Kelkit**	**0.66**	**305**	P	**Pg**	**19 19 50.9**	**+0.9**
KELT				S	**Sg**	**19 19 59.2**	**+0.6**
TNCL	**Tunceli-Merkez**	**0.73**	**207**	*i* S	**Sg**	**19 20 01.4**	**+0.6**
TNCL				*i* P	**Sn**	**19 20 08.3**	**+1.9**
TNCL	**Tunceli-Merkez**	**0.73**	**207**	S	**Sg**	**19 20 01.4**	**+0.6**
PTK	**Pertek**	**0.98**	**207**	PG	**Pg**	**19 19 56.4**	**+0.3**
PTK				SG	**Sb**	**19 20 09.6**	**-1.0**
PTK	**Pertek**	**0.98**	**207**	*e*Pg	**Pg**	**19 19 56.4**	**+0.3**
PTK				*e*Sg	**Sb**	**19 20 09.6**	**-1.0**
REFA	**Refahiye_ERZ¨**	**1.00**	**248**	*i* P	**Pn**	**19 20 01.3**	**+2.9**
REFA	**Refahiye_ERZ¨**	**1.00**	**248**	P	**Pn**	**19 20 01.3**	**+2.9**
ERZM	**Erzurum**	**1.09**	**82**	*i* P	**Pg**	**19 19 57.5**	**-0.6**
ERZM				*i* S	**Sb**	**19 20 13.0**	**-0.6**
ERZM	**Erzurum**	**1.09**	**82**	P	**Pg**	**19 19 57.5**	**-0.6**
ERZM				S	**Sb**	**19 20 13.0**	**-0.6**
ILIC	**ilic-Erzincan**	**1.13**	**254**	PN	**Pg**	**19 19 58.5**	**-0.3**
ILIC	**ilic-Erzincan**	**1.13**	**254**	*e*Pn	**Pg**	**19 19 58.5**	**-0.3**
KEMA	**Kemaliye**	**1.25**	**247**	*i* P	**Pg**	**19 20 00.9**	**-0.2**
KEMA				*i* S	**Sb**	**19 20 17.6**	**-0.4**
KEMA	**Kemaliye**	**1.25**	**247**	P	**Pg**	**19 20 00.9**	**-0.2**
KEMA				S	**Sb**	**19 20 17.6**	**-0.4**
SUSE	**Susehri**	**1.42**	**288**	*i* P	**Pn**	**19 20 04.1**	**-0.1**
SUSE				*i* S	**Sn**	**19 20 23.6**	**0.0**
SUSE	**Susehri**	**1.42**	**288**	P	**Pn**	**19 20 04.1**	**-0.1**
SUSE				S	**Sn**	**19 20 23.6**	**0.0**
CHOM	**Cayeli-Rize**	**1.46**	**24**	PN	**Pn**	**19 20 04.3**	**-0.2**
CHOM	**Cayeli-Rize**	**1.46**	**24**	*e*Pn	**Pn**	**19 20 04.3**	**-0.2**
ELZG	**Elazig**	**1.48**	**211**	*i* P	**Pb**	**19 20 05.3**	**-0.3**
ELZG				*i* S	**Sg**	**19 20 26.6**	**+1.6**
ELZG	**Elazig**	**1.48**	**211**	P	**Pb**	**19 20 05.3**	**-0.3**
ELZG				S	**Sg**	**19 20 26.5**	**+1.6**
ESPY	**Espiye-Giresun**	**1.48**	**321**	PN	**Pn**	**19 20 05.1**	**+0.2**
ESPY	**Espiye-Giresun**	**1.48**	**321**	*e*Pn	**Pn**	**19 20 05.1**	**+0.2**
CUZAR	**Zara_SIVAS**	**1.69**	**275**	*e*P	**Pn**	**19 20 08.1**	**+0.2**
CUZAR				*e*S	**Sg**	**19 20 33.6**	**+1.9**
CUZAR	**Zara_SIVAS**	**1.69**	**275**	P	**Pn**	**19 20 08.1**	**+0.2**
CUZAR				S	**Sg**	**19 20 33.6**	**+1.9**
MALT	**Malatya**	**1.89**	**220**	PN	**Pn**	**19 20 09.8**	**-0.7**
MALT	**Malatya**	**1.89**	**220**	*e*Pn	**Pn**	**19 20 09.8**	**-0.7**
CUKAN	**kangal_SIVAS**	**1.98**	**258**	*i* P	**Pb**	**19 20 13.6**	**-0.5**
CUKAN				*e*S	**Sg**	**19 20 41.4**	**+0.3**
CUKAN	**kangal_SIVAS**	**1.98**	**258**	P	**Pb**	**19 20 13.6**	**-0.5**
CUKAN				S	**Sg**	**19 20 41.3**	**+0.3**
BTMN	**Batman**	**2.14**	**151**	*i* P	**Pg**	**19 20 17.6**	**-0.6**
BTMN	**Batman**	**2.14**	**151**	P	**Pg**	**19 20 17.5**	**-0.6**

BJI ***03*** *19:20:40.1, 45°.03N×10°.63E, h6km, mb4.8/51, mB5.1/36, Ms5.1/27, Ms7 4.8/27*
IDC ***03*** *19:20:42.1±0.4, 44°.83N×10°.95E, h0km, mb4.6/32, mb1 4.6/42, mb1mx4.6/65, mbtmp4.5/42, ML4.2/9, MS4.3/53, Ms1 4.3/53, ms1mx4.2/69, Error ellipse: s-maj=9.5km s-min=7.4km az=137.0*
PRU ***03*** *19:20:42.3, 44°.85N×10°.79E, h7km, M5.1*
NEIC ***03*** *19:20:43.0±0.0, 44°.90N×10°.94E, h9km, mb5.1/62, ML5.0(ZUR), ML5.1(ROM), ML5.2(LDG), After ROM.*
NEIC Felt [V] in the Campogalliano-Guastalla-Sermide area; [IV] at Mantova, Modena, Parma and Reggio nell'Emilia; [III] at Bologna, Brescia, Ferrara, Florence, Forli, La Spezia, Livorno, Padova, Trieste, Venice and Verona. Felt throughout northern Italy and as far as Rome. Also felt at Ljubljana, Slovenia and in Ticino, Switzerland.
ROM ***03*** *19:20:43.4±0.0, 44°.886N±0°.001×10°.950E±0°.001, h9km, ML5.1/27*
MOS ***03*** *19:20:43.1±1.1, 44°.93N×11°.02E, h17km, mb5.1/56, MS4.5/32, Error ellipse: s-maj=3.2km s-min=2.5km az=79.1*
ZUR ***03*** *19:20:43.8, 44°.90N×10°.91E, h12km±1km, ML5.0/20*
ISCJB ***03*** *19:20:43.5±0.1, 44°.905N±0°.009×11°.006E±0°.009, h21km±1km, mb4.8/129, MS4.4/60, Error ellipse: s-maj=1.6km s-min=1.1km az=8.2*
CSEM ***03*** *19:20:43.8±0.1, 44°.92N×10°.97E, h10km, mb5.1/80, ML5.4/19, Mw4.8, Error ellipse: s-maj=1.5km s-min=1.2km az=13.0*
PDG ***03*** *19:20:43.9±0.9, 44°.95N×11°.02E, h18km±1km, ML5.0/10, Error ellipse: s-maj=0.5km s-min=0.8km az=0.0*

GCMT ***03*** *19:20:43.0±0.4, 45°.12N×10°.95E, h12km, MW5.0/56, Moment Tensor Solution. s20,c25; s56,c78; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr1.26±.08; Mθθ-1.26±.07; Mφφ0.00±.06; Mrθ-3.18±.18; Mrφ0.28±.06; Mθφ0.41±.22; Best double couple: M0 3.45600×10^16 NP1:φs278.00000°, δ79.00000°, λ88.00000°. NP2: φs107.00000°, δ11.00000°, λ99.00000°. Principal axes: T 3.4300, Plg56.0000°, Azm185.0000°; N 0.0530, Plg2.0000°, Azm278.0000°; P -3.4820, Plg34.0000°, Azm9.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
LDG ***03*** *19:20:44.4±0.2, 44°.91N×11°.07E, h2km, Ml5.2/17 Error ellipse: s-maj=3.8km s-min=2.1km az=90.0*
CRAAG ***03*** *19:20:44.5, 44°.95N×11°.00E, Mw4.9*
IASPEI ***03*** *19:20:44.3±0.7, 44°.91N±0°.01×10°.94E±0°.02, h13km±2km, mb5.0/129, MS4.4/60, Error ellipse: s-maj=2.5km s-min=2.1km az=107.6, GT5 selection from ISC bulletin GT5 identified by Bond¨jr and McLaughlin (2009) selection criteria Bond¨jr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
STR ***03*** *19:20:45.6±0.8, 45°.N±4°.×1°.1E±°, h5km, M5.1/19, mB5.2/7, mb5.0/8, MLv5.7/19, Mw(mB)4.5/7*
BNS ***03*** *19:20:45.1±0.6, 45°.01N×11°.42E, h10km, ML4.6*
BEO ***03*** *19:20:46.1±0.8, 44°.99N×11°.13E, h8km±9km*
BGR ***03*** *19:20:46.1±0.5, 44°.94N×10°.94E, h10km, ML5.3/11, Error ellipse: s-maj=11.1km s-min=6.7km az=177.0*
BGS ***03*** *19:20:49.2±2.9, 45°.50N×10°.84E, h10km, MS4.9*
ISC 03 19:20:44.4±0.5, 44°.92N±0°.01×10°.93E±0°.01, h14km±2km, n1647, σ1°15/1800, mb5.0/129, MS4.4/60, 73C-144D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0827	**Moglia (MN)**	**0.02**	**357**	⇑*e*P	**Pg**	**19 20 46.2**	**-0.7**
T0827				⇑*e*S	**Sg**	**19 20 49.7**	**+1.2**
T0827	**Moglia (MN)**	**0.02**	**357**	*e*P	**Pg**	**19 20 46.2**	**-0.7**
T0827				*e*S	**Sg**	**19 20 49.7**	**+1.2**
NDIM	**Novi di Modena**	**0.04**	**222**	*e*P	**Pg**	**19 20 45.3**	**-1.6**
NDIM				*e*S	**Sg**	**19 20 47.5**	**-1.1**
T0818	**Loc. Fossa, Co**	**0.07**	**74**	⇑*i*P	**Pg**	**19 20 46.1**	**-1.1**
T0818				⇑*i*S	**Sg**	**19 20 50.4**	**+1.3**
T0818	**Loc. Fossa, Co**	**0.07**	**74**	*i* P	**Pg**	**19 20 46.1**	**-1.1**
T0818				*i* S	**Sg**	**19 20 50.4**	**+1.3**
T0825	**Gonzaga (MN)**	**0.09**	**313**	AML	AML		
T0825				AML	AML		
T0825				AML	AML		
T0825				AML	AML		
T0825				AML	AML		
T0825				AML	AML		
T0825				AML	AML		
T0825				AML	AML		
T0828	**Loc. Fossoli,**	**0.09**	**189**	⇓*i*P	**Pg**	**19 20 45.8**	**-1.5**
T0828				⇓*i*S	**Sg**	**19 20 48.7**	**-0.6**
T0828	**Loc. Fossoli,**	**0.09**	**189**	*i* P	**Pg**	**19 20 45.8**	**-1.5**
T0828				*i* S	**Sg**	**19 20 48.7**	**-0.6**
T0826	**Rio Saliceto (**	**0.12**	**229**	AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0814	**Loc. Cortile,**	**0.12**	**168**	⇓*i*P	**Pg**	**19 20 46.3**	**-1.5**
T0814				⇓*i*S	**Sg**	**19 20 50.6**	**+0.5**
T0814	**Loc. Cortile,**	**0.12**	**168**	*i* P	**Pg**	**19 20 46.3**	**-1.5**
T0814				*i* S	**Sg**	**19 20 50.6**	**+0.5**
SBPO	**S.Benedetto Po**	**0

T0805				AML	AML		
T0805				AML	AML		
T0805				AML	AML		
T0805				AML	AML		
T0805				AML	AML		
T0805				AML	AML		
T0805				AML	AML		
T0805				AML	AML		
MODE	**Modena**	**0.29**	**178**⇑	*e*P	**Pg**	**19 20 49.8**	**-0.6**
MODE			⇑	*e*S	**Sb**	**19 20 56.8**	**+0.9**
MODE	**Modena**	**0.29**	**178**	*e*P	**Pg**	**19 20 49.8**	**-0.6**
MODE				*e*S	**Sb**	**19 20 56.8**	**+0.9**
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
T0803	**Dosso, Cento (**	**0.33**	**116**	*e*P	**Pg**	**19 20 49.7**	**-1.5**
T0803	**Dosso, Cento (**	**0.33**	**116**	*e*P	**Pg**	**19 20 49.7**	**-1.5**
T0803				*e*S	**Sb**	**19 20 57.9**	**+0.7**
T0803				AML	AML		
T0803				AML	AML		
T0803				AML	AML		
T0803				AML	AML		
T0803				AML	AML		
T0803				AML	AML		
T0823	**Castello D'Arg**	**0.34**	**133**⇓	*e*P	**Pg**	**19 20 50.3**	**-0.9**
T0823	**Castello D'Arg**	**0.34**	**133**	*e*P	**Pg**	**19 20 50.3**	**-0.9**
T0823				*e*S	**Sb**	**19 20 58.7**	**+1.3**
T0817	**Loc. Veratica,**	**0.38**	**78**	*e*P	**Pg**	**19 20 51.4**	**-0.6**
T0817	**Loc. Veratica,**	**0.38**	**78**	*e*P	**Pg**	**19 20 51.4**	**-0.6**
T0817				*e*S	**Sn**	**19 21 00.7**	**-1.8**
OPPE	**Oppeano**	**0.43**	**23**	AML	AML		
OPPE				AML	AML		
OPPE				AML	AML		
OPPE				AML	AML		
OPPE				AML	AML		
OPPE				AML	AML		
T0821	**Loc. Casaglia**	**0.43**	**91**⇓	*e*P	**Pg**	**19 20 52.6**	**-0.4**
T0821	**Loc. Casaglia**	**0.43**	**91**	*e*P	**Pg**	**19 20 52.6**	**-0.4**
T0821				*e*S	**Sb**	**19 21 00.8**	**+0.7**
T0821				AML	AML		
T0821				AML	AML		
T0821				AML	AML		
T0821				AML	AML		
T0821				AML	AML		
T0821				AML	AML		
T0821				AML	AML		
T0821				AML	AML		
T0821				AML	AML		
T0821				AML	AML		
T0821				AML	AML		
T0821				AML	AML		
PRMA	**PARMA**	**0.47**	**251**⇑	*e*P	**Pg**	**19 20 53.9**	**+0.3**
PRMA	**PARMA**	**0.47**	**251**	*e*P	**Pg**	**19 20 53.9**	**+0.3**
PRMA				*e*S	**Sn**	**19 21 03.6**	**-1.1**
PRMA				AML	AML		
PRMA				AML	AML		
PRMA				AML	AML		
PRMA				AML	AML		
PRMA				AML	AML		
PRMA				AML	AML		
T0820	**Chiesuol del F**	**0.47**	**105**	*e*P	**Pb**	**19 20 54.9**	**+0.4**
T0820	**Chiesuol del F**	**0.47**	**105**	*e*P	**Pb**	**19 20 54.9**	**+0.4**
T0820				*e*S	**Sb**	**19 21 03.0**	**+1.7**
T0820				AML	AML		
T0820				AML	AML		
T0820				AML	AML		
T0820				AML	AML		
T0820				AML	AML		
T0820				AML	AML		
T0820				AML	AML		
T0820				AML	AML		
T0820				AML	AML		
T0820				AML	AML		
T0820				AML	AML		
T0820				AML	AML		
T0820				AML	AML		
FIU	**Minerbio Fiu**	**0.48**	**125**	*e*P	**Pg**	**19 20 53.8**	**-0.2**
FIU	**Minerbio Fiu**	**0.48**	**125**	*e*P	**Pg**	**19 20 53.8**	**-0.2**
FIU				*e*S	**Sn**	**19 21 04.3**	**-0.8**
FIU				AML	AML		
FIU				AML	AML		
FIU				AML	AML		
FIU				AML	AML		
FIU				AML	AML		
FIU				AML	AML		
T0816	**San Bartolomeo**	**0.51**	**112**	*e*P	**Pg**	**19 20 53.2**	**-1.3**
T0816	**San Bartolomeo**	**0.51**	**112**	*e*P	**Pg**	**19 20 53.2**	**-1.3**
T0815	**Correggio (RE)**	**0.56**	**94**⇓	*e*P	**Pg**	**19 20 55.4**	**0.0**
T0815	**Correggio (RE)**	**0.56**	**94**	*e*P	**Pg**	**19 20 55.4**	**0.0**
T0815				*e*S	**Sn**	**19 21 05.8**	**-1.2**
ZCCA	**Zocca**	**0.56**	**177**⇑	*e*P	**Pb**	**19 20 56.3**	**+0.2**
ZCCA	**Zocca**	**0.56**	**177**	*e*P	**Pb**	**19 20 56.3**	**+0.2**
ZCCA				AML	AML		
ZCCA				AML	AML		
ZCCA				AML	AML		
ZCCA				AML	AML		
ZCCA				AML	AML		
ZCCA				AML	AML		
ZCCA				AML	AML		
ZCCA				AML	AML		
ZCCA				AML	AML		
ZCCA				AML	AML		
ZCCA				AML	AML		
TREG	**Tregnago**	**0.63**	**15**	AML	AML		
	comp=N,83900µm,0.5s						
TREG				AML	AML		
	comp=E,60050µm,1.3s						
TREG				AML	AML		
	comp=E,60050µm,1.3s						
TREG				AML	AML		
	comp=N,83900µm,0.5s						
TREG				AML	AML		
	comp=N,83900µm,0.5s						
TREG				AML	AML		
	comp=E,60050µm,1.3s						
ZOVE	**Zovencedo**	**0.67**	**36**	AML	AML		
ZOVE				AML	AML		
	comp=E,85250µm,0.5s						
TEOL	**Teolo**	**0.69**	**49**⇓	*e*Pg	**Pg**	**19 20 57.0**	**-0.8**
TEOL				*e*Sg	**Sn**	**19 21 10.2**	**0.0**
TEOL	**Teolo**	**0.69**	**49**⇓	*e*P	**Pg**	**19 20 56.0**	**-1.8**
TEOL	**Teolo**	**0.69**	**49**	*e*Pg	**Pg**	**19 20 57.0**	**-0.8**
TEOL				*e*Sg	**Sn**	**19 21 10.2**	**0.0**
TEOL	**Teolo**	**0.69**	**49**	*e*P	**Pg**	**19 20 57.0**	**-0.8**
TEOL				AML	AML		
TEOL				AML	AML		
TEOL				AML	AML		
TEOL				AML	AML		
TEOL				AML	AML		
TEOL				AML	AML		
CMPO	**Campotto Po**	**0.70**	**118**	*e*P	**Pg**	**19 20 58.2**	**+0.1**
CMPO	**Campotto Po**	**0.70**	**118**	*e*P	**Pg**	**19 20 58.2**	**+0.1**
CMPO				*e*S	**Sn**	**19 21 10.8**	**+0.2**
CMPO				AML	AML		
CMPO				AML	AML		
CMPO				AML	AML		
CMPO				AML	AML		
CMPO				AML	AML		
CMPO				AML	AML		
ZEN8	**San Zeno di Mo**	**0.74**	**349**	AML	AML		
	comp=E,27950µm,1.6s						
ZEN8				AML	AML		
	comp=E,27950µm,1.6s						
ZEN8				AML	AML		
	comp=N,24550µm,1.2s						
ZEN8				AML	AML		
	comp=E,27950µm,1.6s						
ZEN8				AML	AML		
	comp=N,24550µm,1.2s						
ZEN8				AML	AML		
	comp=N,24550µm,1.2s						
ROVR	**Rover¨¤ Verone**	**0.74**	**8**⇓	*e*P	**Pg**	**19 20 58.2**	**-0.6**
ROVR	**Rover¨¤ Verone**	**0.74**	**8**	*e*P	**Pg**	**19 20 58.2**	**-0.6**
ROVR				AML	AML		
	comp=E,88100µm,0.2s						
ROVR				AML	AML		
ROVR				AML	AML		
	comp=E,88100µm,0.2s						
ROVR				AML	AML		
ROVR				AML	AML		
ROVR				AML	AML		
	comp=E,88100µm,0.2s						
MARN	**Marana (Italy)**	**0.75**	**15**⇑	*e*Pg	**Pg**	**19 20 58.0**	**-1.0**
MARN				*e*Sg	**Sn**	**19 21 12.1**	**+0.3**
MARN	**Marana (Italy)**	**0.75**	**15**	*e*Pg	**Pg**	**19 20 58.0**	**-1.0**
MARN				*e*Sg	**Sn**	**19 21 12.1**	**+0.3**
FNVD	**Fontana Vidola**	**0.76**	**170**⇑	*e*P	**Pg**	**19 20 58.1**	**-1.1**
FNVD	**Fontana Vidola**	**0.76**	**170**	*e*P	**Pg**	**19 20 58.1**	**-1.1**
SALO	**Salr**	**0.76**	**338**⇓	*i*Pn	**Pg**	**19 20 58.9**	**-0.3**
	comp=E,46µm,1.0s						
SALO	**Salr**	**0.76**	**338**⇓	*e*P	**Pg**	**19 20 58.9**	**-0.3**
SALO	**Salr**	**0.76**	**338**	*e*P	**Pg**	**19 20 58.9**	**-0.3**
SALO				AML	AML		
	comp=E,95150µm,1.5s						
SALO				AML	AML		
SALO				AML	AML		
	comp=E,95150µm,1.5s						
SALO				AML	AML		
SALO				AML	AML		
	comp=E,95150µm,1.5s						
SALO				AML	AML		
BALD	**Monte Baldo**	**0.77**	**354**⇓	*e*Pg	**Pg**	**19 20 58.9**	**-0.6**
BALD				*e*Sg	**Sn**	**19 21 12.2**	**-0.5**
BALD	**Monte Baldo**	**0.77**	**354**	*e*Pg	**Pg**	**19 20 58.9**	**-0.6**
BALD				*e*Sg	**Sn**	**19 21 12.2**	**-0.5**
BOTT	**Botticino**	**0.77**	**325**	AML	AML		
	comp=N,44700µm,1.4s						
BOTT				AML	AML		
	comp=E,42800µm,0.6s						
ADRI	**Adria, Italy**	**0.78**	**81**	*e*Pg	**Pg**	**19 20 58.6**	**-0.9**
ADRI				*e*Sg	**Sn**	**19 21 12.0**	**-0.4**
ADRI	**Adria, Italy**	**0.78**	**81**	*e*Pg	**Pg**	**19 20 58.6**	**-0.9**
ADRI				*e*Sg	**Sn**	**19 21 12.0**	**-0.4**
VOBA	**Vobarno**	**0.79**	**338**	AML	AML		
	comp=E,70250µm,1.5s						
VOBA				AML	AML		
IMOL	**Imola, Italy**	**0.80**	**134**	AML	AML		
IMOL				AML	AML		
IMOL				AML	AML		
IMOL				AML	AML		
	comp=E,25450µm,1.1s						
IMOL				AML	AML		
	comp=N,17700µm,0.6s						
IMOL				AML	AML		
IMOL				AML	AML		
IMOL				AML	AML		
	comp=E,25400µm,1.1s						
IMOL				AML	AML		
	comp=N,17700µm,0.6s						
IMOL				AML	AML		
	comp=E,25450µm,1.1s						
IMOL				AML	AML		
IMOL				AML	AML		
	comp=N,17700µm,0.6s						
VLC	**Villacollemand**	**0.85**	**208**	*e*Pg	**Pg**	**19 21 01.4**	**+0.5**
VLC	**Villacollemand**	**0.85**	**208**⇑	*e*P	**Pb**	**19 21 00.1**	**-0.9**
VLC	**Villacollemand**	**0.85**	**208**	*e*Pg	**Pg**	**19 21 01.4**	**+0.5**
VLC	**Villacollemand**	**0.85**	**208**	*e*P	**Pb**	**19 21 00.1**	**-0.9**
VLC				AML	AML		
	comp=E,69300µm,1.5s						
VLC				AML	AML		
	comp=N,50600µm,1.0s						
CNCS	**Concesio**	**0.86**	**324**	AML	AML		
CNCS				AML	AML		
CNCS				AML	AML		
CNCS				AML	AML		
CNCS				AML	AML		
CNCS				AML	AML		
ORZI	**Orzinuovi**	**0.86**	**305**	AML	AML		
ORZI				AML	AML		
POPM	**Popiglio**	**0.88**	**188**⇑	*e*P	**Pb**	**19 20 59.9**	**-1.5**
POPM	**Popiglio**	**0.88**	**188**	*e*P	**Pb**	**19 20 59.9**	**-1.5**
POPM				AML	AML		
	comp=E,43600µm,1.6s						
POPM				AML	AML		
	comp=N,57750µm,1.2s						
POPM				AML	AML		
	comp=E,43600µm,1.6s						
POPM				AML	AML		
	comp=N,57750µm,1.2s						
POPM				AML	AML		
	comp=N,57750µm,1.2s						
POPM				AML	AML		
	comp=E,43600µm,1.6s						
BDI	**Bagni Di Lucca**	**0.89**	**196**	P	**Pb**	**19 21 00.1**	**-1.5**
BDI	**Bagni Di Lucca**	**0.89**	**196**⇑	*e*P	**Pb**	**19 21 00.3**	**-1.3**
BDI	**Bagni Di Lucca**	**0.89**	**196**	*e*P	**Pb**	**19 21 00.3**	**-1.3**
BDI				AML	AML		
	comp=E,74750µm,0.6s						
BDI				AML	AML		
	comp=N,82500µm,1.1s						
BDI				AML	AML		
	comp=E,80350µm,0.8s						
BDI				AML	AML		
	comp=N,90250µm,1.0s						
MAGA	**Magasa**	**0.89**	**346**⇓	*e*P	**Pb**	**19 21 00.6**	**-1.1**
MAGA	**Magasa**	**0.89**	**346**	*e*P	**Pb**	**19 21 00.6**	**-1.1**
MAGA				AML	AML		
MAGA				AML	AML		
MAGA				AML	AML		
MAGA				AML	AML		
MAGA				AML	AML		
MAGA				AML	AML		
CTL8	**Castelleone**	**0.91**	**294**	AML	AML		
	comp=E,60350µm,0.8s						
CTL8				AML	AML		
CTL8				AML	AML		
CTL8				AML	AML		
	comp=N,36400µm,0.3s						
SEI	**Scarperia**	**0.91**	**160**⇓	*e*P	**Pb**	**19 21 01.5**	**-0.5**
SEI	**Scarperia**	**0.91**	**160**	*e*P	**Pb**	**19 21 01.5**	**-0.5**
BAG8	**Bagolino**	**0.97**	**340**	AML	AML		
	comp=E,44150µm,0.9s						
BAG8				AML	AML		
	comp=N,43950µm,0.3s						
DOSS	**Dosso del Somm**	**0.98**	**10**⇑	*e*Pg	**Pb**	**19 21 02.0**	**-1.3**
DOSS				*e*Sg	**Sn**	**19 21 17.9**	**+0.1**
DOSS	**Dosso del Somm**	**0.98**	**10**	*e*Pg	**Pb**	**19 21 02.0**	**-1.3**
DOSS				*e*Sg	**Sn**	**19 21 17.9**	**+0.1**
MAIM	**Mastiano**	**1.05**	**198**	AML	AML		
	comp=E,42800µm,0.8s						
MAIM				AML	AML		
	comp=N,79750µm,1.0s						
BOB	**Bobbio (Coli)**	**1.07**	**263**⇑	*e*Pn	**Pb**	**19 21 04.9**	**+0.2**
	comp=N,168µm,2.0s						
BOB	**Bobbio (Coli)**	**1.07**	**263**	*e*P	**Pb**	**19 21 04.9**	**+0.2**
BOB	**Bobbio (Coli)**	**1.07**	**263**	*e*P	**Pb**	**19 21 04.9**	**+0.2**
BOB	**Bobbio (Coli)**	**1.07**	**263**	*e*P	**Pb**	**19 21 04.9**	**+0.2**
BOB	**Bobbio (Coli)**	**1.07**	**263**	AML	AML		
BOB				AML	AML		
	comp=E,64200µm,1.1s						
BOB				AML	AML		
	comp=E,72550µm,0.7s						
BOB				AML	AML		
RNI	**Roncone**	**1.09**	**348**⇑	*e*Pg	**Pb**	**19 21 03.8**	**-1.3**
RNI				*e*Sg	**Sn**	**19 21 21.4**	**+1.0**
RNI	**Roncone**	**1.09**	**348**	*e*Pg	**Pb**	**19 21 03.8**	**-1.3**
RNI				*e*Sg	**Sn**	**19 21 21.4**	**+1.0**
CRMI	**Carmignano**	**1.12**	**179**	AML	AML		
	comp=N,33550µm,1.3s						
CRMI				AML	AML		
	comp=E,23100µm,1.2s						
CGRP	**Cima Grappa**	**1.14**	**32**⇓	*i*Pn	**Pb**	**19 21 05.1**	**-1.0**
	comp=E,71µm,2.0s						
CGRP	**Cima Grappa**	**1.14**	**32**⇑	*e*Pg	**Pb**	**19 21 04.7**	**-1.3**
CGRP				*e*Sg	**Sn**	**19 21 23.3**	**+1.6**
CGRP	**Cima Grappa**	**1.14**	**32**⇓	*i*P	**Pb**	**19 21 04.9**	**-1.1**
CGRP				*e*Sg	**Sn**	**19 21 23.3**	**+1.6**
CGRP	**Cima Grappa**	**1.14**	**32**	*e*P	**Pb**	**19 21 05.0**	**-1.1**
CGRP				AML	AML		
	comp=E,59600µm,0.7s						
CGRP				AML	AML		
	comp=N,59600µm,0.7s						
PLMA	**Palmaria, Port**	**1.16**	**222**	AML	AML		
	comp=E,61850µm,1.3s						
PLMA				AML	AML		
	comp=N,60200µm,1.2s						
FIR	**Firenze**	**1.16**	**168**	P	**Pn**	**19 21 05.4**	**-0.8**
FIR	**Firenze**	**1.16**	**168**	P	**Pn**	**19 21 05.4**	**-0.8**
PANI	**Panarotta**	**1.17**	**14**⇓	*e*Pg	**Pn**	**19 21 04.9**	**-1.7**
PANI	**Panarotta**	**1.17**	**14**	*e*Pg	**Pn**	**19 21 04.9**	**-1.7**
MSSA	**Maissana**	**1.18**	**240**	AML	AML		
MSSA				AML	AML		
	comp=E,62300µm,1.6s						
MABI	**Malga Bissina**	**1.18**	**346**⇓	*i*Pg	**Pn**	**19 21 05.7**	**-1.0**
	comp=N,21µm,1.0s						
MABI	**Malga Bissina**	**1.18**	**346**⇓	*i*Pg	**Pn**	**19 21 05.7**	**-1.0**
MABI	**Malga Bissina**	**1.18**	**346**	AML	AML		
	comp=N,18950µm,0.8s						
MABI				AML	AML		
	comp=E,18800µm,1.1s						
SFI	**Santa Sofia**	**1.20**	**147**	P	**Pn**	**19 21 06.4**	**-0.5**
SFI	**Santa Sofia**	**1.20**	**147**	P	**Pn**	**19 21 06.4**	**-0.5**
SFI	**Santa Sofia**	**1.20**	**147**	AML	AML		
	comp=E,72900µm,1.0s						
SFI				AML	AML		
	comp=E,70100µm,1.0s						
SFI				AML	AML		
	comp=N,77050µm,1.0s						
SFI				AML	AML		
	comp=N,79850µm,1.0s						
MTLO	**Montello**	**1.22**	**42**⇓	*e*Pg	**Pn**	**19 21 06.1**	**-0.9**
MTLO				*e*Sg	**Sg**	**19 21 25.0**	**+1.3**
MTLO	**Montello**	**1.22**	**42**	*e*Pg	**Pn**	**19 21 06.1**	**-0.9**
MTLO				*e*Sg	**Sg**	**19 21 25.0**	**+1.3**
CTI	**Castel Tesino**	**1.24**	**24**	P	**Pn**	**19 21 06.5**	**-0.9**
CTI	**Castel Tesino**	**1.24**	**24**	P	**Pn**	**19 21 06.5**	**-0.9**
CTI	**Castel Tesino**	**1.24**	**24**	AML	AML		
	comp=N,97750µm,0.4s						
CTI				AML	AML		
	comp=E,69250µm,0.8s						
CTI				AML	AML		
	comp=N,97750µm,0.4s						
CTI				AML	AML		
	comp=E,69250µm,0.8s						
CTI				AML	AML		
	comp=N,97750µm,0.4s						
CTI				AML	AML		
	comp=E,69250µm,0.8s						
ASQU	**Asqua**	**1.27**	**151**	AML	AML		
	comp=N,38850µm,1.6s						
ASQU				AML	AML		
	comp=E,31750µm,0.6s						
IESO	**Jesolo**	**1.29**	**62**⇓	*e*Pg	**Pn**	**19 21 08.2**	**+0.2**
IESO	**Jesolo**	**1.29**	**62**	*e*Pg	**Pn**	**19 21 08.2**	**+0.2**
BLLA	**Bellaria**	**1.34**	**125**	AML	AML		
	comp=E,58050µm,1.5s						
BLLA				AML	AML		
	comp=N,38200µm,1.4s						
VARN	**Col Varnada, M**	**1.36**	**37**	*e*Pg	**Pn**	**19 21 08.0**	**-1.0**
VARN				*e*Sg	**Sg**	**19 21 28.7**	**+0.5**
VARN	**Col Varnada, M**	**1.36**	**37**	*e*Pg	**Pn**	**19 21 08.0**	**-1.0**
VARN				*e*Sg	**Sg**	**19 21 28.7**	**+0.5**
RSM	**Repubblica di**	**1.47**	**132**	AML	AML		
	comp=E,54400µm,1.4s						
RSM				AML	AML		
	comp=N,36950µm,0.7s						
OZOL	**Ozolo**	**1.49**	**3**⇑	*e*Pg	**Pn**	**19 21 10.0**	**-0.9**
OZOL	**Ozolo**	**1.49**	**3**	*e*Pg	**Pn**	**19 21 10.0**	**-0.9**
FAU	**Forcella Aurin**	**1.51**	**29**⇓	*e*Pg	**Pn**	**19 21 10.4**	**-0.7**
FAU				*e*Sg	**Sg**	**19 21 32.6**	**-0.4**
FAU	**Forcella Aurin**	**1.51**	**29**	*e*Pg	**Pn**	**19 21 10.4**	**-0.7**
FAU				*e*Sg	**Sg**	**19 21 32.6**	**-0.4**
CAE	**Caneva**	**1.52**	**44**	*e*Pg	**Pn**	**19 21 10.2**	**-1.1**
CAE				*e*Sg	**Sb**	**19 21 32.5**	**+0.9**
CAE	**Caneva**	**1.52**	**44**	*e*Pg	**Pn**	**19 21 10.2**	**-1.1**
CAE				*e*Sg	**Sb**	**19 21 32.5**	**+0.9**
CARE	**Lago del Cares**	**1.52**	**354**⇓	*e*Pg	**Pn**	**19 21 10.8**	**-0.7**
CARE				*e*Sg	**Sg**	**19 21 33.0**	**-0.4**
CARE	**Lago del Cares**	**1.52**	**354**	*e*Pg	**Pn**	**19 21 10.8**	**-0.7**
CARE				*e*Sg	**Sg**	**19 21 33.0**	**-0.4**
POLC	**Polcenigo**	**1.57**	**44**	AML	AML		
	comp=E,50150µm,0.9s						
POLC				AML	AML		
	comp=N,67300µm,1.1s						
AGOR	**Agordo**	**1.58**	**29**⇑	*e*Pg	**Pn**	**19 21 11.2**	**-0.8**
AGOR				*e*Sg	**Sg**	**19 21 34.4**	**-0.8**
AGOR	**Agordo**	**1.58**	**29**	AML	AML		
	comp=E,28700µm,1.3s						
AGOR				AML	AML		
	comp=N,24200µm,0.9s						
APPI	**Appiano**	**1.58**	**7**	AML	AML		
	comp=N,55800µm,0.4s						
APPI				AML	AML		
	comp=E,58150µm,0.4s						
KOSI	**Kohlern**	**1.58**	**11**⇓	*i*Pn	**Pn**	**19 21 11.3**	**-0.9**
	comp=E,46µm,2.0s						
KOSI	**Kohlern**	**1.58**	**11**⇓	*i*P	**Pn**	**19 21 12.2**	**0.0**
KOSI	**Kohlern**	**1.58**	**11**	AML	AML		
	comp=E,35300µm,1.3s						
KOSI				AML	AML		
	comp=N,39750µm,1.0s						
SSP9	**Sansepolcro**	**1.59**	**147**	AML	AML		
	comp=N,35700µm,1.6s						
SSP9				AML	AML		
	comp=E,29200µm,0.9s						
BOSI	**Bolzano**	**1.60**	**10**⇓	*i*Pn	**Pn**	**19 21 12.2**	**-0.1**
	comp=E,106µm,2.0s						
BOSI	**Bolzano**	**1.60**	**10**⇓	*i*P	**Pn**	**19 21 12.7**	**+0.4**
BOSI	**Bolzano**	**1.60**	**10**	AML	AML		
	comp=N,97300µm,1.4s						
BOSI				AML	AML		
	comp=E,85900µm,1.4s						
BRMO	**Bormio**	**1.61**	**346**⇓	*i*P	**Pn**	**19 21 13.0**	**+0.4**
BRMO	**Bormio**	**1.61**	**346**	AML	AML		
	comp=E,21600µm,1.3s						
BRMO				AML	AML		
	comp=N,15300µm,0.8s						
BERNI	**Berninapass**	**1.63**	**337**⇓	*i*Pn	**Pn**	**19 21 12.7**	**-0.2**
	comp=N,23µm,2.0s						
BERNI	**Berninapass**	**1.63**	**337**	*i* P	**Pn**	**19 21 12.7**	**-0.2**
BERNI	**Berninapass**	**1.63**	**337**⇓	*i*P	**Pn**	**19 21 13.3**	**+0.4**
ATCA	**Cantone**	**1.65**	**144**	AML	AML		
	comp=N,19750µm,0.8s						
ATCA				AML	AML		
	comp=E,25600µm,0.7s						
MUGIO	**Muggio**	**1.67**	**308**⇓	*i*Pn	**Pn**	**19 21 12.8**	**-0.5**
	comp=E,32µm,2.0s						
MUGIO	**Muggio**	**1.67**	**308**⇓	*i*P	**Pn**	**19 21 12.8**	**-0.5**
CSO	**Casso**	**1.67**	**35**⇓	*e*Pn	**Pn**	**19 21 12.2**	**-1.3**
CSO				*e*Sn	**Sg**	**19 21 37.4**	**-0.8**
CSO	**Casso**	**1.67**	**35**	*e*Pn	**Pn**	**19 21 12.1**	**-1.3**
CSO				*e*Sn	**Sg**	**19 21 37.4**	**-0.8**
BADI	**Badiali**	**1.69**	**146**	AML	AML		
	comp=E,27300µm,0.9s						
BADI				AML	AML		
	comp=N,25750µm,0.8s						
MLNI	**Malnisio**	**1.71**	**43**	*e*Pn	**Pn**	**19 21 13.0**	**-0.8**
MLNI	**Malnisio**	**1.71**	**43**	*e*Pn	**Pn**	**19 21 13.0**	**-0.8**
FROS	**Frosini**	**1.71**	**175**	AML	AML		
	comp=E,20050µm,1.6s						
FROS				AML	AML		
	comp=N,21050µm,1.6s						
MOSI	**Grossmontoni**	**1.72**	**351**⇓	*i*Pn	**Pn**	**19 21 13.3**	**-0.9**
	comp=N,134µm,2.0s						
MOSI	**Grossmontoni**	**1.72**	**351**⇓	*i*P	**Pb**	**19 21 15.1**	**-0.9**
MOSI	**Grossmontoni**	**1.72**	**351**	AML	AML		
	comp=E,69100µm,1.2s						
MOSI				AML	AML		
ATMC	**Monte Cedrone**	**1.73**	**148**	AML	AML		
	comp=E,29650µm,1.1s						
ATMC				AML	AML		
	comp=N,28200µm,1.0s						
PCP	**Piancastagn**	**1.74**	**258**	AML	AML		
	comp=N,28850µm,1.6s						
PCP				AML	AML		
	comp=E,24650µm,1.5s						
CIMO	**Cimolais**	**1.75**	**37**	*e*Pn	**Pn**	**19 21 13.2**	**-1.2**
CIMO	**Cimolais**	**1.75**	**37**	*e*Pn	**Pn**	**19 21 13.2**	**-1.2**
CAFI	**Castiglion Fio**	**1.75**	**155**	AML	AML		
	comp=N,12400µm,0.7s						
CAFI				AML	AML		
	comp=E,13105µm,0.7s						
CAFI				AML	AML		
	comp=N,11465µm,0.7s						
CAFI				AML	AML		
	comp=E,13340µm,0.7s						
FUORN	**Ofenpass-Fuorn**	**1.77**	**345**⇓	*i*Pn	**Pn**	**19 21 14.8**	**-0.1**
	comp=E,26µm,2.0s						
FUORN	**Ofenpass-Fuorn**	**1.77**	**345**	*e*Pn	**Pb**	**19 21 16.4**	**-0.4**
FUORN	**Ofenpass-Fuorn**	**1.77**	**345**⇓	*i*P	**Pn**	**19 21 15.5**	**+0.6**
FUORN	**Ofenpass-Fuorn**	**1.77**	**345**	*e*Pn	**Pb**	**19 21 16.4**	**-0.4**
PIEI	**Pieia**	**1.80**	**140**	AML	AML		
	comp=E,20200µm,1.5s						
PIEI				AML	AML		
	comp=N,15750µm,1.5s						
VARE	**Varese**	**1.80**	**303**	AML	AML		

comp=E,36250µm,0.8s
VARE AML AML
TRIF Trifonti 1.80 181 AML AML
comp=E,8960µm,1.0s
TRIF AML AML
comp=N,13950µm,1.6s
FSSB Fossombrone 1.80 132 AML AML
comp=N,41300µm,0.6s
FSSB AML AML
comp=E,35450µm,0.6s
ATPC Poggio Castell 1.81 142 AML AML
comp=E,30500µm,1.3s
ATPC AML AML
comp=E,8535µm,1.3s
ATPC AML AML
comp=N,20450µm,1.6s
ATPC AML AML
comp=N,20800µm,1.3s
ATPI Pietralunga - 1.81 144 AML AML
comp=E,21950µm,1.1s
ATPI AML AML
comp=N,21150µm,0.7s
ABSI Aberstueckl 1.83 8 ⇓*i*Pn **Pn 19 21 15.1 -0.6**
comp=N,88µm,2.0s
ABSI Aberstueckl 1.83 8 ⇓*i*P **Pn 19 21 15.5 -0.2**
ABSI Aberstueckl 1.83 8 AML AML
comp=E,71550µm,0.7s
ABSI AML AML
comp=N,52850µm,0.8s
STAL STALIGIAL 1.83 42 AML AML
comp=N,39950µm,1.3s
STAL AML AML
comp=E,24400µm,0.3s
STAL AML AML
comp=E,39050µm,0.9s
STAL AML AML
comp=N,35600µm,1.3s
MPAG Monte Paganucc 1.84 134 AML AML
comp=N,22750µm,0.6s
MPAG AML AML
comp=E,18850µm,1.1s
MPAG AML AML
comp=E,18150µm,1.1s
MPAG AML AML
comp=N,23100µm,0.6s
ROTM Rocchetta Tana 1.84 269 AML AML
comp=N,85250µm,1.6s
ROTM AML AML
comp=E,91550µm,0.9s
ATBU Serra di Buran 1.85 141 AML AML
comp=E,43850µm,0.7s
ATBU AML AML
comp=N,52250µm,0.7s
ATVO AVT- Monte Val 1.86 145 AML AML
comp=N,21950µm,0.8s
ATVO AML AML
comp=E,27500µm,0.6s
VDL Val di Lei 1.88 327 ⇓*i*Pn **Pn 19 21 15.5 -0.9**
comp=E,16µm,2.0s
VDL Val di Lei 1.88 327 P **Pn 19 21 17.2 +0.8**
FRON Frontone 1.90 137 AML AML
comp=E,33600µm,0.7s
FRON AML AML
comp=N,28100µm,0.6s
ATVA AVT- Monte Val 1.90 149 AML AML
comp=N,12300µm,0.6s
ATVA AML AML
comp=E,10495µm,1.0s
QLNO Quiliano 1.94 253 AML AML
comp=E,11400µm,0.8s
QLNO AML AML
comp=N,15500µm,1.6s
COR1 Corinaldo 1.96 130 AML AML
comp=N,59000µm,1.2s
COR1 AML AML
comp=E,55250µm,0.7s
COR1 AML AML
comp=N,62500µm,1.2s
COR1 AML AML
comp=E,30000µm,0.7s
SSFR Montelago di S 1.99 137 AML AML
comp=E,27950µm,1.4s
SSFR AML AML
comp=N,22100µm,0.7s
ATTE AVT- Monte Tez 2.00 149 AML AML
comp=N,18400µm,0.8s
ATTE AML AML
comp=E,15550µm,0.9s
DAVOX Davos/Dischmat 2.01 339 ⇓*i*Pn **Pn 19 21 15.5 -2.5**
comp=E,18µm,2.0s
DAVOX Davos/Dischmat 2.01 339 P **Pn 19 21 18.5 +0.5**
DAVOX Davos/Dischmat 2.01 339 ⇓*i*P **Pb 19 21 19.4 -1.4**
MURB Monte Urbino 2.01 145 AML AML
comp=E,33750µm,0.9s
MURB AML AML
comp=N,26200µm,0.7s
MURB AML AML
comp=E,34950µm,0.8s
MURB AML AML
comp=N,26500µm,0.7s
ARVD Arcevia 2.02 134 AML AML
comp=N,14800µm,0.7s
ARVD AML AML
comp=E,15100µm,1.0s
ROSI Rosskopf 2.04 9 ⇓*i*Pn **Pn 19 21 17.0 -1.5**
comp=E,37µm,2.0s
ROSI Rosskopf 2.04 9 ⇓*i*P **Pn 19 21 18.5 0.0**
ROSI Rosskopf 2.04 9 AML AML
comp=E,25700µm,1.6s
ROSI AML AML
comp=N,29800µm,1.1s
SENI Senigallia 2.05 125 AML AML
comp=E,25850µm,0.9s
SENI AML AML
comp=E,62750µm,0.4s
SENI AML AML
comp=N,63700µm,0.4s
SENI AML AML
comp=N,29950µm,1.0s
GEPF Gemona 2.06 48 AML AML
comp=N,14750µm,0.9s
GEPF AML AML
comp=E,17700µm,0.7s
FETA Feichten 2.11 356 *e*Pn **Pn 19 21 20.9 +1.4**
comp=E,128nm,0.6s,SNR=2193
FETA Feichten 2.11 356 Pn **Pn 19 21 20.9 +1.4**
comp=E,127nm,0.5s,SNR=1000
FVI Forni Avoltri 2.12 37 P **Pn 19 21 16.8 -2.7**
FVI Forni Avoltri 2.12 37 P **Pn 19 21 16.8 -2.7**
FVI Forni Avoltri 2.12 37 AML AML
comp=E,14100µm,0.8s
FVI AML AML
comp=N,14500µm,0.8s
ATCC AVT- Casa Cast 2.12 144 AML AML
comp=E,40200µm,0.9s
ATCC AML AML
comp=N,20950µm,1.0s
CASP Castiglione de 2.12 181 AML AML
comp=E,5495µm,1.1s
CASP AML AML
comp=N,7900µm,1.6s
VINO Villanova 2.12 50 AML AML
comp=N,17950µm,0.7s
VINO AML AML
comp=E,13000µm,1.2s
ABTA Abfaltersbach 2.14 30 Pn **Pn 19 21 19.9 +0.1**
SNR=702
ABTA Abfaltersbach 2.14 30 Pn **Pn 19 21 19.9 +0.1**
SNR=702
MONC Moncucco Torin 2.14 275 ⇓*i*Pn **Pn 19 21 18.5 -1.2**
comp=E,32µm,2.0s
MONC Moncucco Torin 2.14 275 ⇓*i*P **Pn 19 21 21.2 +1.5**
MONC Moncucco Torin 2.14 275 AML AML
comp=N,33800µm,0.8s
MONC AML AML
comp=E,33900µm,1.0s
MGAB Montegabbione 2.17 157 AML AML
comp=E,12950µm,0.7s
MGAB AML AML
comp=N,16800µm,0.9s
SACS San Casciano d 2.18 161 AML AML
comp=N,8140µm,1.2s
SACS AML AML
comp=E,8560µm,1.2s
SACS AML AML
comp=E,8400µm,1.2s
SACS AML AML
comp=N,8080µm,1.2s
RISI Rein 2.19 21 ⇓*i*Pn **Pn 19 21 19.4 -1.1**
comp=N,49µm,2.0s
RISI Rein 2.19 21 ⇓*i*P **Pn 19 21 21.5 +1.0**
RISI Rein 2.19 21 AML AML
comp=N,36000µm,0.5s
RISI AML AML
comp=E,28950µm,0.5s
SNTG Esanatoglia 2.20 138 AML AML
comp=E,11700µm,0.8s
SNTG AML AML
comp=N,14500µm,0.8s
MCIV Monte Civitell 2.20 166 AML AML
comp=E,3645µm,1.4s
MCIV AML AML
comp=N,2700µm,1.3s
RORO Rocca Rossa 2.20 250 AML AML
comp=N,8760µm,1.4s
RORO AML AML
comp=E,6965µm,1.1s
FUSIO Fusio 2.21 315 ⇓*i*Pn **Pn 19 21 20.8 -0.1**
comp=E,35µm,2.0s
FUSIO Fusio 2.21 315 ⇓*i*P **Pn 19 21 20.8 -0.1**
CELB S.Piero in Cam 2.23 194 AML AML
comp=N,7910µm,1.0s
CELB AML AML
comp=E,5430µm,0.5s
CING Cingoli 2.24 133 AML AML
comp=E,10580µm,1.4s
CING AML AML
comp=N,9420µm,0.5s
ASSB Assisi San Ben 2.25 146 AML AML
comp=E,10990µm,1.0s
ASSB AML AML
comp=N,12270µm,1.0s
PTCC Patocco-Chiusa 2.26 48 AML AML
comp=N,9015µm,0.7s
PTCC AML AML
comp=E,9600µm,0.4s
SKDS Skadanscina 2.27 73 *i* Pn **Pn 19 21 19.7 -1.8**
SKDS *e*Sn **Sn 19 21 47.8 -1.4**
comp=Z,5µm,0.4s
SKDS Skadanscina 2.27 73 Pn **Pn 19 21 19.7 -1.8**
SKDS *e*Sn **Sn 19 21 47.8 -1.4**
comp=Z,5µm,0.4s
AOI Ancona 2.35 125 AML AML
comp=N,13150µm,0.9s
AOI AML AML
comp=E,7175µm,1.2s
LLS Linth-Limmern 2.35 326 ⇓*e*Pn **Pn 19 21 21.2 -1.6**
comp=E,9µm,2.0s
LLS Linth-Limmern 2.35 326 P **Pn 19 21 23.4 +0.6**
LLS pmax pmax
comp=Z,9µm,2.0s
SATI Passo dei Sala 2.36 295 AML AML
comp=E,13500µm,0.7s
SATI AML AML
comp=N,11100µm,0.9s
CESI CESI - Serrava 2.38 143 AML AML
comp=E,1990µm,0.5s
CESI AML AML
comp=N,7075µm,0.9s
LATE Laterza 2.38 164 AML AML
comp=E,5355µm,1.0s
LATE AML AML
comp=N,6230µm,1.3s
PLONS Plons/SG 2.39 334 ⇓*e*Pn **Pn 19 21 21.5 -1.8**
comp=N,11µm,2.0s
PLONS Plons/SG 2.39 334 *e*Pn **Pb 19 21 25.4 -1.9**
PLONS *e*Sg **Sb 19 21 57.2 +0.5**
PLONS Plons/SG 2.39 334 ⇓*e*P **Pn 19 21 25.1 +1.8**
PLONS Plons/SG 2.39 334 Pn **Pb 19 21 25.4 -1.9**
PLONS Sg **Sb 19 21 57.2 +0.5**
WTTA Wattenberg 2.40 12 *e*Pn **Pn 19 21 25.0 +1.5**
WTTA *e*Sg **Sg 19 22 01.0 -0.6**
WTTA Wattenberg 2.40 12 Pn **Pn 19 21 24.8 +1.3**
comp=N,175nm,0.2s,SNR=240
WTTA Wattenberg 2.40 12 Pn **Pn 19 21 25.0 +1.5**
WTTA Wattenberg 2.40 12 Pg **Pb 19 21 25.5 -2.0**
WTTA Sg **Sg 19 22 01.0 -0.6**
WTTA Wattenberg 2.40 12 AML AML
comp=N,10670µm,0.8s
WTTA AML AML
comp=E,13950µm,1.2s
JAVS Javornik 2.41 65 *i* Pn **Pn 19 21 22.1 -1.4**
JAVS *e*Sn **Sn 19 21 53.2 +0.2**
comp=Z,6µm,0.7s
JAVS Javornik 2.41 65 *i* Pn **Pn 19 21 22.1 -1.4**
JAVS *e*Sn **Sn 19 21 53.2 +0.2**
comp=Z,6µm,0.7s
MOMA Monte Martano 2.42 150 AML AML
comp=E,7770µm,1.2s
MOMA AML AML
comp=N,7860µm,0.9s
MOMA AML AML
comp=E,8095µm,1.2s
MOMA AML AML
comp=N,7855µm,0.9s
ACOM Acomizza, Ital 2.44 47 AML AML
comp=E,31000µm,1.5s
ACOM AML AML
comp=N,17950µm,1.5s
WATA Walderalm 2.46 10 Pn **Pn 19 21 25.5 +1.2**
comp=N,1µm,0.5s,SNR=667
WATA Walderalm 2.46 10 Pn **Pn 19 21 25.5 +1.2**
comp=N,1µm,0.5s,SNR=667
CIRO Champorcher 2.47 287 AML AML
comp=N,11045µm,1.4s
CIRO AML AML
comp=E,11200µm,0.9s
DAVA Damuels 2.48 343 ⇓*e*Pn **Pn 19 21 21.7 -2.9**
comp=E,12µm,2.0s
DAVA Damuels 2.48 343 *e*Pn **Pb 19 21 26.8 -2.1**
DAVA Damuels 2.48 343 Pn **Pn 19 21 26.5 +1.9**
comp=E,464nm,0.7s,SNR=408
DAVA Damuels 2.48 343 ⇓*e*P **Pn 19 21 26.6 +2.0**
NEGI Seborga 2.55 246 AML AML
comp=N,22050µm,0.9s
NEGI AML AML
comp=E,14400µm,1.1s
MYKA Terra Mystica 2.56 47 Pn **Pn 19 21 25.0 -0.5**
comp=E,95nm,0.4s,SNR=68
MYKA Terra Mystica 2.56 47 Pn **Pn 19 21 25.0 -0.5**
comp=E,95nm,0.4s,SNR=68
RETA Reutte 2.58 357 Pn **Pn 19 21 27.4 +1.6**
comp=E,198nm,0.4s,SNR=371
RETA Reutte 2.58 357 Pn **Pn 19 21 27.4 +1.6**
comp=E,198nm,0.4s,SNR=371
CESX Cesi 2.59 152 AML AML
comp=E,6700µm,0.7s
CESX AML AML
comp=N,6880µm,0.8s
CEY Cerknica 2.60 70 *e*Pn **Pn 19 21 25.6 -0.4**
CEY *e*Sn **Sn 19 21 57.1 -0.3**
CEY Cerknica 2.60 70 *e*Pn **Pn 19 21 25.6 -0.4**
CEY *e*Sn **Sn 19 21 57.1 -0.3**
ENR Entracque 2.60 256 AML AML
comp=E,7400µm,1.2s
ENR AML AML
comp=N,8610µm,1.0s
NRCA Norcia 2.61 142 AML AML
comp=N,7400µm,1.0s
NRCA AML AML
comp=E,9290µm,0.9s
NRCA AML AML
comp=N,6805µm,1.0s
NRCA AML AML
comp=E,11085µm,0.9s
DOI San Damiano 2.66 262 AML AML
comp=E,12900µm,0.8s
DOI AML AML
comp=N,12105µm,0.6s
ARRO Arrone 2.69 150 AML AML
comp=N,6270µm,1.0s
ARRO AML AML
comp=E,9310µm,1.5s
SBF Sospel 2.72 248 *e*Pn **Pn 19 21 28.5 +0.8**
SBF *e*Sn **Sn 19 22 01.2 +0.7**
comp=E,10µm,0.7s
SBF Sospel 2.72 248 *e*Pn **Pn 19 21 28.5 +0.8**
SBF *e*Sn **Sn 19 22 01.2 +0.7**
comp=E,5µm,0.7s
KBA Koelnbreinsper 2.74 37 *e*Pn **Pn 19 21 29.2 +1.1**
KBA *e*Pg **Pg 19 21 37.2 +0.3**
KBA *e*Sg **Sg 19 22 11.5 -0.9**
KBA Koelnbreinsper 2.74 37 Pn **Pn 19 21 28.1 0.0**
comp=E,1.0nm,0.2s,SNR=132
KBA Koelnbreinsper 2.74 37 Pn **Pn 19 21 29.2 +1.1**
PGF Pioggiola 2.75 211 *e*Pn **Pn 19 21 28.3 +0.1**
PGF *e*Sn **Sn 19 22 01.6 +0.3**
comp=E,4µm,0.9s
PGF Pioggiola 2.75 211 *e*Sn **Sn 19 22 01.6 +0.3**
PGF Pioggiola 2.75 211 *e*Pn **Pn 19 21 28.3 +0.1**
PGF *e*Sn **Sn 19 22 01.6 +0.3**
comp=E,2µm,0.9s
LUCF Luceram 2.77 250 P **Pn 19 21 29.7 +1.3**
LUCF Luceram 2.77 250 P **Pn 19 21 29.7 +1.3**
LUCF S **Sb 19 22 05.3 -2.2**
LJU Ljubljana 2.77 65 *e*Pn **Pn 19 21 28.5 +0.1**
LJU *e*Sn **Sn 19 22 00.4 -1.2**
LJU Ljubljana 2.77 65 *e*Pn **Pn 19 21 28.5 +0.1**
LJU *e*Sn **Sn 19 22 00.4 -1.2**
LNSS Leonessa 2.77 146 AML AML
comp=N,10640µm,0.5s
LNSS AML AML
comp=E,11075µm,0.7s
MON Monaco 2.78 246 P **Pn 19 21 29.8 +1.3**
MON Monaco 2.78 246 P **Pn 19 21 29.8 +1.3**
NVLJ Novalja 2.83 96 *e*Pn **Pn 19 21 28.3 -0.9**
NVLJ Sn **Sn 19 22 01.1 -1.9**
NVLJ Novalja 2.83 96 *e*Pn **Pn 19 21 28.2 -0.9**
NVLJ Sn **Sn 19 22 01.0 -1.9**
GUMA Gualdo di Mace 2.85 129 AML AML
comp=E,55300µm,0.6s
GUMA AML AML
comp=N,35400µm,0.5s
WILA Wila 2.87 331 *e*Pn **Pn 19 21 31.0 +1.2**
WILA *e*Sn **Sb 19 22 07.3 -3.1**
WILA Wila 2.87 331 Pn **Pn 19 21 31.0 +1.2**
WILA Sn **Sb 19 22 07.3 -3.1**
ISO Isola 2.87 257 P **Pn 19 21 30.3 +0.5**
ISO Isola 2.87 257 P **Pn 19 21 30.3 +0.5**
VISS Visnje 2.89 71 *i* Pn **Pn 19 21 29.2 -0.8**
VISS *e*Sn **Sn 19 22 04.5 -0.1**
comp=Z,5µm,0.9s
VISS Visnje 2.89 71 *i* Pn **Pn 19 21 29.2 -0.8**
VISS *e*Sn **Sn 19 22 04.5 -0.1**
comp=Z,5µm,0.9s
MVIF Mont Vial 2.90 251 P **Pn 19 21 31.5 +1.3**
MVIF Mont Vial 2.90 251 P **Pn 19 21 31.5 +1.3**
MVIF S **Sb 19 22 09.4 -1.8**
SENIN Lac Senin/Sane 2.93 301 *e*Pn **Pn 19 21 32.0 +1.2**
SENIN Lac Senin/Sane 2.93 301 *e*Pn **Pn 19 21 32.0 +1.2**
MBDF Montbardon 2.97 268 *e*Pn **Pn 19 21 30.8 -0.4**
MBDF *e*Sn **Sn 19 22 05.4 -1.3**
comp=Z,4µm,0.8s
MBDF Montbardon 2.97 268 *e*Pn **Pn 19 21 30.8 -0.4**
MBDF *e*Sn **Sn 19 22 05.4 -1.3**
comp=Z,2µm,0.8s
OBKA Obir 2.99 57 *e*Pn **Pn 19 21 31.4 -0.1**
OBKA *e*Sg **Sg 19 22 22.1 +1.6**
OBKA Obir 2.99 57 Pn **Pn 19 21 31.2 -0.3**
comp=Z,133nm,0.6s,SNR=101
OBKA Obir 2.99 57 Pn **Pn 19 21 31.4 -0.1**
OBKA Sg **Sg 19 22 22.1 +1.6**
LPG La Plagne 3.01 283 *e*Pn **Pn 19 21 33.9 +1.9**
LPG *e*Sn **Sn 19 22 09.1 +1.1**
comp=Z,9µm,1.1s
LPG La Plagne 3.01 283 *e*Sn **Sn 19 22 09.1 +1.1**
LPG La Plagne 3.01 283 *e*Pn **Pn 19 21 33.9 +1.9**
LPG *e*Sn **Sn 19 22 09.1 +1.1**
comp=Z,4µm,1.1s
LPL La Plagne 3.03 283 *e*Pn **Pn 19 21 34.6 +2.5**
LPL *e*Sn **Sn 19 22 08.8 +0.5**
comp=Z,2µm,0.5s
LPL La Plagne 3.03 283 *e*Pn **Pn 19 21 34.6 +2.5**
LPL *e*Sn **Sn 19 22 08.8 +0.5**
LPL La Plagne 3.03 283 *e*P **Pn 19 21 34.6 +2.5**
LPL *e* 19 22 08.8
LPL La Plagne 3.03 283 *e*Pn **Pn 19 21 34.6 +2.5**
LPL *e*Sn **Sn 19 22 08.8 +0.5**
comp=Z,974nm,0.5s
RJOB Jochberg 3.10 24 *e*Pn **Pn 19 21 34.1 +1.1**
RJOB Jochberg 3.10 24 Pn **Pn 19 21 34.1 +1.1**
BOJS Bojanci 3.11 78 *e*Pn **Pn 19 21 33.5 +0.5**
BOJS *e*Sn **Sn 19 22 08.7 -1.2**
BOJS Bojanci 3.11 78 *e*Pn **Pn 19 21 33.5 +0.5**
BOJS *e*Sn **Sn 19 22 08.7 -1.2**
AQU L'Aquila 3.12 144 *e*Pn **Pn 19 21 34.6 +1.3**
AQU L'Aquila 3.12 144 *e*P **Pn 19 21 34.6 +1.3**
AQU L'Aquila 3.12 144 *e*Pn **Pn 19 21 34.6 +1.3**
FUR Furstenfeldbru 3.26 4 *e*Pn **Pn 19 21 35.9 +0.8**
FUR *e*Pg **Pg 19 21 47.6 +0.8**
FUR Furstenfeldbru 3.26 4 Pn **Pn 19 21 35.9 +0.8**
SULZ Cheisacher 3.27 324 *e*Pn **Pn 19 21 35.6 +0.4**
SULZ Cheisacher 3.27 324 Pn **Pn 19 21 35.6 +0.4**
OZLJ Ozalj 3.28 76 *i* Pn **Pn 19 21 34.9 -0.4**
OZLJ Sn **Sn 19 22 13.3 -0.8**
OZLJ Ozalj 3.28 76 *i* Pn **Pn 19 21 34.9 -0.4**
OZLJ Sn **Sn 19 22 13.2 -0.8**
BALST Balsthal 3.31 318 *e*Pn **Pn 19 21 36.2 +0.4**
BALST Balsthal 3.31 318 Pn **Pn 19 21 36.2 +0.4**
SLE Schleitheim 3.31 330 *e*Pn **Pn 19 21 35.9 0.0**
SLE *e*Pg **Pg 19 21 47.0 -0.9**
SLE Schleitheim 3.31 330 P **Pn 19 21 35.9 0.0**
SLE Schleitheim 3.31 330 Pn **Pn 19 21 35.9 0.0**
CRES Cresnjev 3.31 72 ⇓*i*Pn **Pn 19 21 35.0 -0.9**
FRF La Foret Royal 3.37 248 *e*Pn **Pn 19 21 37.5 +0.9**
FRF *e*Sn **Sn 19 22 16.1 -0.2**
comp=Z,2µm,0.4s
FRF La Foret Royal 3.37 248 P **Pn 19 21 37.4 +0.9**
FRF S **Sn 19 22 16.1 -0.2**
FRF smax smax
comp=N,908nm,0.4s
FRF La Foret Royal 3.37 248 P **Pn 19 21 37.4 +0.9**
comp=N,908nm,0.4s
FRF *e*Sn **Sn 19 22 16.1 -0.2**
comp=N,962nm,0.4s
SOKA Soboth 3.37 57 *e*Pn **Pn 19 21 36.2 -0.5**
comp=N,5.7nm,0.3s,SNR=199
SOKA Soboth 3.37 57 Pn **Pn 19 21 36.2 -0.5**
comp=N,5.7nm,0.3s,SNR=199
UDBI Udbina 3.46 95 *e*Pn **Pn 19 21 38.2 +0.2**
UDBI Sn **Sn 19 22 17.7 -1.2**
UDBI Udbina 3.46 95 *e*Pn **Pn 19 21 38.2 +0.2**
UDBI Sn **Sn 19 22 17.6 -1.2**
LMR La Mourre 3.56 245 *e*Pn **Pn 19 21 40.1 +0.9**
LMR *e*Sn **Sn 19 22 21.5 +0.5**
comp=N,2µm,0.3s
LMR La Mourre 3.56 245 *e*Pn **Pn 19 21 40.1 +0.9**
LMR *e*Sn **Sn 19 22 21.5 +0.5**
LMR La Mourre 3.56 245 *e*P **Pn 19 21 40.1 +0.9**
LMR *e* 19 22 21.5
LMR La Mourre 3.56 245 *e*Pn **Pn 19 21 40.1 +0.9**
LMR *e*Sn **Sn 19 22 21.5 +0.5**
comp=N,1µm,0.3s
ORIF Oris-en-Rattie 3.59 272 *e*Pn **Pn 19 21 41.1 +1.4**
ORIF *e*Sn **Sn 19 22 22.2 +0.2**
comp=N,5µm,1.0s
ORIF Oris-en-Rattie 3.59 272 *e*Pn **Pn 19 21 41.1 +1.4**
ORIF *e*Sn **Sn 19 22 22.2 +0.2**
ORIF Oris-en-Rattie 3.59 272 P **Pn 19 21 40.8 +1.0**
ORIF Oris-en-Rattie 3.59 272 *e*P **Pn 19 21 41.1 +1.4**
ORIF *e* 19 22 22.2
ORIF Oris-en-Rattie 3.59 272 *e*Pn **Pn 19 21 41.1 +1.4**
ORIF *e*Sn **Sn 19 22 22.2 +0.2**
comp=N,3µm,1.0s
ZAG Zagreb 3.68 74 P **Pn 19 21 42.7 +1.9**
ZAG Zagreb 3.68 74 ⇓*i*Pn **Pn 19 21 40.6 -0.2**
ZAG Zagreb 3.68 74 P **Pn 19 21 42.7 +1.9**
KIZ Kirchzarten 3.69 327 P **Pn 19 21 40.8 -0.2**
KIZ Kirchzarten 3.69 327 P **Pn 19 21 40.8 -0.2**
MOA Molln 3.73 37 *e*Pn **Pn 19 21 42.4 +0.8**
MOA *e*Pg **Pg 19 21 56.3 +0.4**
MOA Molln 3.73 37 *e*Pn **Pn 19 21 41.7 +0.1**
comp=N,132nm,0.3s,SNR=120
MOA Molln 3.73 37 Pn **Pn 19 21 42.4 +0.8**
LOMF Lomont 3.75 312 P **Pn 19 21 42.1 +0.2**
LOMF Lomont 3.75 312 P **Pn 19 21 42.1 +0.2**
CABF La Chapelle 3.79 298 *e*Pn **Pn 19 21 43.2 +0.7**
CABF La Chapelle 3.79 298 *e*Pn **Pn 19 21 43.2 +0.7**
BFO Black Forest 3.86 333 *e*Pn **Pn 19 21 43.9 +0.6**
BFO Black Forest 3.86 333 *e*Pn **Pn 19 21 44.0 +0.6**
BFO Black Forest 3.86 333 *i* P **Pn 19 21 43.9 +0.6**
BFO Black Forest 3.86 333 Pn **Pn 19 21 43.9 +0.6**
BSTF la Bastide-des 3.93 257 P **Pn 19 21 45.4 +1.1**
MOF Molkenrain 3.94 320 P **Pn 19 21 44.7 +0.1**
MOF Molkenrain 3.94 320 P **Pn 19 21 44.6 0.0**
MOF Molkenrain 3.94 320 P **Pn 19 21 44.7 +0.1**

SMRF	**Simiane la Rot**	**3.95 258**	*e*Pn	**Pn**	**19 21 45.8**	**+1.2**
SMRF			*e*Sn	**Sn**	**19 22 31.6**	**+0.8**
	comp=N,13µm,1.7s					
SMRF	**Simiane la Rot**	**3.95 258**	*e*Pn	**Pn**	**19 21 45.8**	**+1.2**
SMRF			*e*Sn	**Sn**	**19 22 31.6**	**+0.8**
SMRF	**Simiane la Rot**	**3.95 258**	*e*Pn	**Pn**	**19 21 45.8**	**+1.2**
SMRF			*e*Sn	**Sn**	**19 22 31.6**	**+0.8**
	comp=N,6µm,1.7s					
ARSA	**Arzberg**	**3.96 52**	*e*Pn	**Pn**	**19 21 44.6**	**-0.1**
ARSA	**Arzberg**	**3.96 52**	*e*Pn	**Pn**	**19 21 44.5**	**-0.1**
ARSA			*e*Pg	**Pg**	**19 21 58.5**	**-1.6**
ARSA	**Arzberg**	**3.96 52**	*e*Pn	**Pn**	**19 21 43.7**	**-1.0**
	comp=N,59nm,0.4s,SNR=187					
ARSA	**Arzberg**	**3.96 52**	*e*Pn	**Pn**	**19 21 44.6**	**-0.1**
STU	**Stuttgart**	**4.04 343**	*e*Pn	**Pn**	**19 21 46.2**	**+0.4**
STU	**Stuttgart**	**4.04 343**	*e*Pn	**Pn**	**19 21 45.9**	**+0.1**
STU	**Stuttgart**	**4.04 343**	*e*P	**Pn**	**19 21 45.9**	**+0.1**
STU	**Stuttgart**	**4.04 343**	*e*Pn	**Pn**	**19 21 45.9**	**+0.1**
HINF	**Hinteralfeld**	**4.05 317**	*e*Pn	**Pn**	**19 21 45.9**	**-0.1**
HINF	**Hinteralfeld**	**4.05 317**	P	**Pn**	**19 21 46.5**	**+0.5**
HINF	**Hinteralfeld**	**4.05 317**	*e*Pn	**Pn**	**19 21 45.9**	**-0.1**
HINF	**Hinteralfeld**	**4.05 317**	P	**Pn**	**19 21 46.5**	**+0.5**
OPP	**Oppenau**	**4.05 333**	P	**Pn**	**19 21 46.1**	**+0.1**
OPP	**Oppenau**	**4.05 333**	P	**Pn**	**19 21 46.1**	**+0.1**
ECH	**Echery**	**4.21 323**	*e*Pn	**Pn**	**19 21 48.2**	**+0.1**
ECH	**Echery**	**4.21 323**	P	**Pn**	**19 21 48.1**	**+0.1**
ECH	**Echery**	**4.21 323**	*e*P	**Pn**	**19 21 48.2**	**+0.1**
ECH	**Echery**	**4.21 323**	*e*Pn	**Pn**	**19 21 48.2**	**+0.1**
WLS	**Welschbruch**	**4.28 326**	P	**Pn**	**19 21 49.3**	**+0.2**
WLS	**Welschbruch**	**4.28 326**	P	**Pn**	**19 21 49.3**	**+0.2**
CDF	**Champ du Feu**	**4.31 326**	*e*Pn	**Pn**	**19 21 49.8**	**+0.2**
CDF	**Champ du Feu**	**4.31 326**	*e*Pn	**Pn**	**19 21 49.8**	**+0.2**
CDF	**Champ du Feu**	**4.31 326**	*e*P	**Pn**	**19 21 49.8**	**+0.2**
CDF	**Champ du Feu**	**4.31 326**	*e*Pn	**Pn**	**19 21 49.8**	**+0.2**
GEA0	**GERESS Array S**	**4.36 25**	*e*Pn	**Pn**	**19 21 50.0**	**-0.3**
GEA0	**GERESS Array S**	**4.36 25**	*e*Pn	**Pn**	**19 21 50.0**	**-0.3**
GEC2	**GERESS Array S**	**4.37 25**	*e*Pn	**Pn**	**19 21 49.6**	**-0.8**
GEC2			*e*Pg	**Pg**	**19 22 07.9**	**-0.1**
GEC2			*e*Sn	**Sn**	**19 22 41.1**	**0.0**
GEC2	**GERESS Array S**	**4.37 25**	*e*Pn	**Pn**	**19 21 50.2**	**-0.1**
GEC2	**GERESS Array S**	**4.37 25**	*e*P	**Pn**	**19 21 50.3**	**-0.1**
GEC2	**GERESS Array S**	**4.37 25**	*e*P	**Pn**	**19 21 50.3**	**-0.1**
GERES	**GERESS Array B**	**4.37 25**	Pn	**Pn**	**19 21 49.6**	**-0.8**
	comp=N,26nm,0.3s,baz=197,slow=14,SNR=185					
GERES			Pg	**Pg**	**19 22 05.4**	**-2.6**
	comp=N,34nm,0.3s,baz=204,slow=16,SNR=24					
GERES			Sn	**Sn**	**19 22 42.0**	**+0.9**
	comp=N,68nm,0.3s,baz=212,slow=21,SNR=6.3					
GERES			Lg	Lg	19 23 02.6	
	comp=N,46nm,0.3s,baz=209,slow=20,SNR=3.2					
BEHE	**Becsehely**	**4.38 67**	‖*e*Pn	**Pn**	**19 21 49.9**	**-0.6**
BEHE			*e*Sn	**Sb**	**19 22 58.4**	**+4.7**
BEHE	**Becsehely**	**4.38 67**	‖*e*Pn	**Pn**	**19 21 49.9**	**-0.6**
HAU	**Haudompre**	**4.43 316**	*e*Pn	**Pn**	**19 21 51.2**	**0.0**
HAU	**Haudompre**	**4.43 316**	P	**Pn**	**19 21 52.0**	**+0.8**
HAU	**Haudompre**	**4.43 316**	*e*Pn	**Pn**	**19 21 51.2**	**0.0**
HAU	**Haudompre**	**4.43 316**	P	**Pn**	**19 21 52.0**	**+0.8**
WET	**Wettzell**	**4.43 17**	*e*Pn	**Pn**	**19 21 50.9**	**-0.4**
WET	**Wettzell**	**4.43 17**	P	**Pn**	**19 21 51.7**	**+0.4**
WET	**Wettzell**	**4.43 17**	Pn	**Pn**	**19 21 50.9**	**-0.4**
WET	**Wettzell**	**4.43 17**	P	**Pn**	**19 21 51.7**	**+0.4**
BLY	**Banja Luka**	**4.45 90**	*e*Pn	**Pn**	**19 21 51.4**	**0.0**
BLY			*e*Sn	**Sn**	**19 22 40.6**	**-2.4**
BLY	**Banja Luka**	**4.45 90**	‖*i*P	**Pn**	**19 21 51.2**	**-0.2**
BLY	**Banja Luka**	**4.45 90**	S	**Sn**	**19 22 40.0**	**-3.0**
BLY	**Banja Luka**	**4.45 90**	*e*Pn	**Pn**	**19 21 50.9**	**-0.5**
BLY	**Banja Luka**	**4.45 90**	*e*Pn	**Pn**	**19 21 50.9**	**-0.5**
BLY			*e*Sn	**Sn**	**19 22 40.6**	**-2.4**
VIVF	**Saint-Julien-l**	**4.45 271**	*e*Pn	**Pn**	**19 21 51.6**	**+0.1**
VIVF			*e*Sn	**Sn**	**19 22 42.5**	**-0.6**
VIVF	**Saint-Julien-l**	**4.45 271**	*e*Pn	**Pn**	**19 21 51.6**	**+0.1**
VIVF			*e*Sn	**Sn**	**19 22 42.5**	**-0.6**
VIVF	**Saint-Julien-l**	**4.45 271**	*e*P	**Pn**	**19 21 51.6**	**+0.1**
VIVF			*e*		19 22 42.5	
VIVF	**Saint-Julien-l**	**4.45 271**	*e*Pn	**Pn**	**19 21 51.6**	**+0.1**
VIVF			*e*Sn	**Sn**	**19 22 42.5**	**-0.6**
SUBF	**Surbourg**	**4.53 333**	P	**Pn**	**19 21 53.8**	**+1.3**
SUBF	**Surbourg**	**4.53 333**	P	**Pn**	**19 21 53.8**	**+1.3**
SSB	**Saint Sauveur**	**4.54 277**	*e*Pn	**Pn**	**19 21 52.7**	**-0.1**
SSB	**Saint Sauveur**	**4.54 277**	*e*P	**Pn**	**19 21 52.7**	**-0.1**
SSB	**Saint Sauveur**	**4.54 277**	*e*Pn	**Pn**	**19 21 52.7**	**-0.1**
CONA	**Conrad Observa**	**4.55 47**	*e*Pn	**Pn**	**19 21 52.3**	**-0.6**
	comp=N,1.3nm,0.3s,SNR=201					
CONA	**Conrad Observa**	**4.55 47**	Pn	**Pn**	**19 21 52.3**	**-0.6**
	comp=N,1.3nm,0.3s,SNR=201					
KHC	**Kasperske Hory**	**4.59 22**	*e*PN	**Pn**	**19 21 52.9**	**-0.5**
KHC			*e*PG	**Pg**	**19 22 11.4**	**-0.8**
KHC			*e*SN	**Sn**	**19 22 47.0**	**+0.5**
KHC			*ex*	x	19 22 55.3	
KHC			*e*SG	**Sg**	**19 23 12.5**	**+0.8**
	comp=N,9µm,1.8s					
KHC			AMS	AMS	19 23 50.0	
	comp=N,24µm,9.9s					
KHC	**Kasperske Hory**	**4.59 22**	*e*Pn	**Pn**	**19 21 53.1**	**-0.3**
KHC	**Kasperske Hory**	**4.59 22**	*e*P	**Pn**	**19 21 53.1**	**-0.3**
KHC	**Kasperske Hory**	**4.59 22**	*e*Pn	**Pn**	**19 21 53.1**	**-0.3**
KHC			Sn	**Sn**	**19 22 47.0**	**+0.5**
KHC			Sg	**Sg**	**19 23 12.5**	**+0.8**
	comp=N,9µm,1.8s					
LANF	**Langenberg**	**4.60 333**	P	**Pn**	**19 21 54.6**	**+1.1**
LANF	**Langenberg**	**4.60 333**	P	**Pn**	**19 21 54.6**	**+1.1**
THEF	**They Montfort**	**4.75 316**	P	**Pn**	**19 21 56.7**	**+1.1**
THEF	**They Montfort**	**4.75 316**	P	**Pn**	**19 21 56.7**	**+1.1**
SOP	**Sopron**	**4.78 53**	‖*e*Pn	**Pn**	**19 21 55.7**	**-0.3**
SOP			*e*Sn	**Sn**	**19 22 51.5**	**+0.3**
SOP	**Sopron**	**4.78 53**	P	**Pn**	**19 21 56.4**	**+0.4**
SOP	**Sopron**	**4.78 53**	‖*e*Pn	**Pn**	**19 21 55.7**	**-0.3**
SOP	**Sopron**	**4.78 53**	P	**Pn**	**19 21 56.4**	**+0.4**
SOP			*e*Sn	**Sn**	**19 22 51.5**	**+0.3**
GRFO	**Grafenberg**	**4.78 2**	*e*Pn	**Pn**	**19 21 54.9**	**-1.1**
GRFO	**Grafenberg**	**4.78 2**	*e*P	**Pn**	**19 21 54.9**	**-1.1**
GRFO	**Grafenberg**	**4.78 2**	*e*Pn	**Pn**	**19 21 54.9**	**-1.1**
GRA1	**Grafenberg Arr**	**4.78 2**	P	**Pn**	**19 21 54.9**	**-1.2**
GRA1	**Grafenberg Arr**	**4.78 2**	Pg	**Pg**	**19 22 17.6**	**+1.6**
GRF	**Grafenberg Arr**	**4.78 2**	*e*Pn	**Pn**	**19 21 54.8**	**-1.2**
GRF			*e*Pg	**Pg**	**19 22 17.6**	**+1.6**
GRF	**Grafenberg Arr**	**4.78 2**	P	**Pn**	**19 21 54.9**	**-1.2**
MS1	**Monte Sant'Ang**	**4.86 130**	*e*Pn	**Pn**	**19 21 55.8**	**-1.4**
TOD	**Tromm**	**4.91 344**	P	**Pn**	**19 21 57.6**	**-0.2**
TOD	**Tromm**	**4.91 344**	P	**Pn**	**19 21 57.6**	**-0.2**
DOB	**Doboj**	**5.10 90**	*e*Pn	**Pn**	**19 21 59.3**	**-1.1**
PAGF	**Fort de Pagny**	**5.11 317**	*e*Pn	**Pn**	**19 22 01.2**	**+0.7**
PAGF	**Fort de Pagny**	**5.11 317**	*e*Pn	**Pn**	**19 22 01.2**	**+0.7**
LASF	**Ste Croix**	**5.13 263**	*e*Pn	**Pn**	**19 22 00.4**	**-0.4**
LASF			*e*Sn	**Sn**	**19 22 58.8**	**-1.1**
LASF	**Ste Croix**	**5.13 263**	*e*Pn	**Pn**	**19 22 00.4**	**-0.4**
LASF			*e*Sn	**Sn**	**19 22 58.8**	**-1.1**
SFTF	**Sexfontaines**	**5.23 311**	*e*Pn	**Pn**	**19 22 02.6**	**+0.4**
SFTF	**Sexfontaines**	**5.23 311**	*e*Pn	**Pn**	**19 22 02.6**	**+0.4**
SFTF	**Sexfontaines**	**5.23 311**	*e*Pn	**Pn**	**19 22 02.6**	**+0.4**
SMF	**Signal de Mont**	**5.25 292**	*e*Pn	**Pn**	**19 22 03.0**	**+0.5**
SMF			*e*Sn	**Sn**	**19 23 01.4**	**-1.5**
	comp=N,2µm,0.7s					
SMF	**Signal de Mont**	**5.25 292**	*e*Sn	**Sn**	**19 23 01.4**	**-1.5**
SMF	**Signal de Mont**	**5.25 292**	P	**Pn**	**19 22 03.5**	**+1.0**
SMF	**Signal de Mont**	**5.25 292**	*e*Pn	**Pn**	**19 22 03.0**	**+0.5**
SMF	**Signal de Mont**	**5.25 292**	P	**Pn**	**19 22 03.5**	**+1.0**
SMF			*e*Sn	**Sn**	**19 23 01.4**	**-1.5**
	comp=N,1µm,0.7s					
STON	**Ston**	**5.30 110**	*e*Pn	**Pn**	**19 22 01.6**	**-1.5**
STON			Sn	**Sn**	**19 22 59.2**	**-4.8**
STON	**Ston**	**5.30 110**	*e*Pn	**Pn**	**19 22 01.5**	**-1.5**
STON			Sn	**Sn**	**19 22 59.1**	**-4.8**
ZST	**Bratislava**	**5.37 50**	*e*P	**Pn**	**19 22 02.6**	**-1.5**
ZST	**Bratislava**	**5.37 50**	*e*PN	**Pn**	**19 22 02.6**	**-1.5**
ZST			*e*PG	**Pg**	**19 22 24.3**	**-2.9**
ZST	**Bratislava**	**5.37 50**	*e*Pn	**Pn**	**19 22 02.6**	**-1.5**
MEZF	**Maizieres J'vi**	**5.41 314**	*e*Pn	**Pn**	**19 22 05.3**	**+0.7**
MEZF	**Maizieres J'vi**	**5.41 314**	*e*Pn	**Pn**	**19 22 05.3**	**+0.7**
MEZF	**Maizieres J'vi**	**5.41 314**	*e*Pn	**Pn**	**19 22 05.3**	**+0.7**
NKC	**Novy Kostel**	**5.42 10**	*e*PN	**Pn**	**19 22 04.0**	**-0.8**
NKC			*e*PG	**Pg**	**19 22 29.2**	**+1.1**
NKC			*e*SN	**Sn**	**19 23 05.6**	**-1.3**
NKC			*e*SG	**Sg**	**19 23 38.0**	**-0.2**
	comp=N,4µm,1.4s					
NKC			AMS	AMS	19 24 30.0	
	comp=N,25µm,7.6s					
NKC	**Novy Kostel**	**5.42 10**	*e*P	**Pn**	**19 22 04.0**	**-0.8**
NKC			*e*		19 23 05.6	
NKC			smax	smax		
	comp=N,4µm,1.4s					
NKC			MLR	MLR		
	comp=Z,25µm,7.6s					
NKC	**Novy Kostel**	**5.42 10**	Pn	**Pn**	**19 22 04.0**	**-0.8**
NKC			Sn	**Sn**	**19 23 05.6**	**-1.3**
NKC			Sg	**Sg**	**19 23 38.0**	**-0.2**
	comp=Z,4µm,1.4s					
LBL	**Lubilhac**	**5.45 276**	P	**Pn**	**19 22 06.1**	**+0.8**
LBL	**Lubilhac**	**5.45 276**	P	**Pn**	**19 22 06.1**	**+0.8**
LOR	**Lormes**	**5.46 298**	*e*Pn	**Pn**	**19 22 05.5**	**+0.2**
LOR	**Lormes**	**5.46 298**	P	**Pn**	**19 22 05.4**	**+0.2**
LOR	**Lormes**	**5.46 298**	*e*Pn	**Pn**	**19 22 05.5**	**+0.2**
WERN	**Wernitzgruen**	**5.46 10**	*e*Pn	**Pn**	**19 22 04.3**	**-1.1**
WERN	**Wernitzgruen**	**5.46 10**	Pn	**Pn**	**19 22 04.3**	**-1.1**
ABH	**Alteburg**	**5.47 336**	P	**Pn**	**19 22 06.4**	**+0.9**
ABH	**Alteburg**	**5.47 336**	P	**Pn**	**19 22 06.4**	**+0.9**
GUNZ	**Gunzen**	**5.53 9**	*e*Pn	**Pn**	**19 22 05.1**	**-1.2**
GUNZ	**Gunzen**	**5.53 9**	Pn	**Pn**	**19 22 05.1**	**-1.2**
VSL	**Villasalto**	**5.54 193**	*e*Pn	**Pn**	**19 22 07.7**	**+1.3**
VSL	**Villasalto**	**5.54 193**	*e*Pn	**Pn**	**19 22 07.7**	**+1.3**
MORH	**M¯‡ˆgy, Hung**	**5.57 74**	‖*e*Pb	**Pb**	**19 22 20.6**	**-0.7**
TNS	**Taunus Mts**	**5.57 343**	*e*Pn	**Pn**	**19 22 07.1**	**+0.2**
TNS	**Taunus Mts**	**5.57 343**	Pn	**Pn**	**19 22 07.1**	**+0.2**
MODS	**Modra-Piesok**	**5.57 49**	*e*P	**Pn**	**19 22 05.5**	**-1.4**
MODS	**Modra-Piesok**	**5.57 49**	*e*PN	**Pn**	**19 22 05.5**	**-1.4**
MODS	**Modra-Piesok**	**5.57 49**	*e*Pn	**Pn**	**19 22 05.5**	**-1.4**
KRUC	**Moravsky**	**5.58 40**	*e*PN	**Pn**	**19 22 06.0**	**-1.0**
KRUC			*e*PG	**Pg**	**19 22 28.9**	**-2.3**
KRUC			*e*SG	**Sg**	**19 23 45.5**	**+2.0**
AGO	**Saint Agoulin**	**5.60 284**	P	**Pn**	**19 22 07.6**	**+0.3**
AGO	**Saint Agoulin**	**5.60 284**	P	**Pn**	**19 22 07.6**	**+0.3**
SSF	**Saint Saulge**	**5.60 295**	*e*Pn	**Pn**	**19 22 07.3**	**0.0**
SSF			*e*Sn	**Sn**	**19 23 09.5**	**-1.9**
	comp=Z,684nm,0.8s					
SSF	**Saint Saulge**	**5.60 295**	*e*Pn	**Pn**	**19 22 07.3**	**0.0**
SSF			*e*Sn	**Sn**	**19 23 09.5**	**-1.9**
SSF	**Saint Saulge**	**5.60 295**	*e*P	**Pn**	**19 22 07.3**	**0.0**
SSF			*e*		19 23 09.5	
SSF	**Saint Saulge**	**5.60 295**	*e*Pn	**Pn**	**19 22 07.3**	**0.0**
WERD	**Werda**	**5.61 9**	*e*Pn	**Pn**	**19 22 05.9**	**-1.6**
WERD	**Werda**	**5.61 9**	Pn	**Pn**	**19 22 05.9**	**-1.6**
AVF	**Avril sur Loir**	**5.62 292**	*e*Pn	**Pn**	**19 22 07.7**	**+0.2**
AVF			*e*Sn	**Sn**	**19 23 10.4**	**-1.4**
	comp=Z,1µm,0.9s					
AVF	**Avril sur Loir**	**5.62 292**	*e*Sn	**Sn**	**19 23 10.4**	**-1.4**
AVF	**Avril sur Loir**	**5.62 292**	*e*P	**Pn**	**19 22 08.5**	**+1.0**
AVF	**Avril sur Loir**	**5.62 292**	*e*Pn	**Pn**	**19 22 07.7**	**+0.2**
AVF	**Avril sur Loir**	**5.62 292**	*e*P	**Pn**	**19 22 08.5**	**+1.0**
AVF			*e*Sn	**Sn**	**19 23 10.4**	**-1.4**
	comp=Z,507nm,0.9s					
PLN	**Plauen**	**5.63 8**	*e*Pn	**Pn**	**19 22 06.1**	**-1.6**
PLN	**Plauen**	**5.63 8**	Pn	**Pn**	**19 22 06.1**	**-1.6**
PRU	**Pruhonice**	**5.63 24**	*e*PN	**Pn**	**19 22 07.6**	**-0.1**
PRU			*e*PG	**Pg**	**19 22 28.4**	**-3.8**
PRU			*e*SN	**Sn**	**19 23 12.2**	**0.0**
PRU			*e*SG	**Sg**	**19 23 45.4**	**+0.3**
	comp=Z,1µm,1.2s					
PRU			AMS	AMS	19 24 30.0	
	comp=Z,26µm,10.3s					
PRU	**Pruhonice**	**5.63 24**	*e*P	**Pn**	**19 22 07.6**	**-0.1**
PRU			*e*		19 23 12.2	
PRU			smax	smax		
	comp=N,1µm,1.2s					
PRU			MLR	MLR		
	comp=Z,26µm,10.3s					
PRU	**Pruhonice**	**5.63 24**	Pn	**Pn**	**19 22 07.6**	**-0.1**
PRU			Sn	**Sn**	**19 23 12.2**	**0.0**
GOPC	**GO Pecny, Ondr**	**5.64 26**	*e*PN	**Pn**	**19 22 08.0**	**+0.2**
GOPC			*ex*	x	19 22 30.3	
GOPC			*e*SG	**Sg**	**19 23 44.2**	**-1.2**
	comp=Z,7µm,2.0s					
GOPC			AMS	AMS	19 24 30.0	
	comp=Z,30µm,9.7s					
GOPC	**GO Pecny, Ondr**	**5.64 26**	*e*P	**Pn**	**19 22 08.0**	**+0.2**
GOPC			MLR	MLR		
	comp=Z,30µm,9.7s					
GOPC	**GO Pecny, Ondr**	**5.64 26**	Pn	**Pn**	**19 22 08.0**	**+0.2**
CSKK	**Cs¯‡kako**	**5.65 62**	‖*e*Pn	**Pn**	**19 22 07.1**	**-0.8**
CSKK	**Cs¯‡kako**	**5.65 62**	‖*e*Pn	**Pn**	**19 22 07.1**	**-0.8**
PYM	**Petit Puy Mans**	**5.65 281**	P	**Pn**	**19 22 08.5**	**+0.5**
PYM	**Petit Puy Mans**	**5.65 281**	P	**Pn**	**19 22 08.5**	**+0.5**
PRA	**Prague**	**5.68 23**	*e*PN	**Pn**	**19 22 08.4**	**+0.1**
PRA			*e*PG	**Pg**	**19 22 30.5**	**-2.5**
PRA			*e*SG	**Sg**	**19 23 46.4**	**-0.1**
	comp=Z,6µm,1.6s					
PRA			AMS	AMS	19 24 30.0	
	comp=Z,24µm,10.6s					
PRA	**Prague**	**5.68 23**	*e*P	**Pn**	**19 22 08.4**	**+0.1**
PRA			MLR	MLR		
	comp=Z,24µm,10.6s					
PRA	**Prague**	**5.68 23**	Pn	**Pn**	**19 22 08.4**	**+0.1**
SMOL	**Smolenice**	**5.74 49**	*e*P	**Pn**	**19 22 09.1**	**0.0**
SMOL	**Smolenice**	**5.74 49**	*e*PN	**Pn**	**19 22 09.1**	**0.0**
SMOL	**Smolenice**	**5.74 49**	*e*Pn	**Pn**	**19 22 09.1**	**0.0**
MOX	**Moxa**	**5.75 4**	*e*Pn	**Pn**	**19 22 07.6**	**-1.8**
MOX	**Moxa**	**5.75 4**	P	**Pn**	**19 22 07.5**	**-1.8**
MOX			pmax	pmax		
	comp=Z,347nm,1.0s					
MOX	**Moxa**	**5.75 4**	Pn	**Pn**	**19 22 07.6**	**-1.8**
WLF	**Walferdange**	**5.76 327**	⇑PN	**Pn**	**19 22 10.3**	**+0.9**
WLF	**Walferdange**	**5.76 327**	⇑SN	**Sn**	**19 23 17.6**	**+2.4**
	comp=N,464nm,0.0s					
WLF	**Walferdange**	**5.76 327**	*e*Pn	**Pn**	**19 22 10.7**	**+1.3**
WLF	**Walferdange**	**5.76 327**	*e*Pn	**Pn**	**19 22 10.3**	**+0.9**
WLF	**Walferdange**	**5.76 327**	*e*P	**Pn**	**19 22 10.3**	**+0.9**
WLF	**Walferdange**	**5.76 327**	*e*Pn	**Pn**	**19 22 10.3**	**+0.9**
HAPS	**Han Pijesak,BI**	**5.79 95**	*e*Pn	**Pn**	**19 22 09.4**	**-0.6**
HAPS	**Han Pijesak,BI**	**5.79 95**	*e*Pn	**Pn**	**19 22 09.4**	**-0.6**
BGG	**Burgeitz**	**5.83 337**	*e*Pn	**Pn**	**19 22 10.9**	**+0.6**
BGG	**Burgeitz**	**5.83 337**	Pn	**Pn**	**19 22 10.9**	**+0.6**
VRAC	**Vranov**	**5.85 39**	Pn	**Pn**	**19 22 09.7**	**-1.0**
	comp=N,2.8nm,0.3s,baz=229,slow=13,SNR=17					
VRAC			Pg	**Pb**	**19 22 30.6**	**+4.4**
	comp=N,13nm,0.3s,baz=227,slow=14,SNR=24					
VRAC			Sn	**Sn**	**19 23 14.5**	**-3.0**
	comp=N,12nm,0.3s,baz=278,slow=8.5,SNR=4.2					
VRAC			Lg	Lg	19 23 50.1	
	comp=N,11nm,0.3s,baz=303,slow=5.7,SNR=3.6					
VRAC			LR	LR	19 25 07.1	
	comp=N,4µm,19.4s,baz=218,slow=45					
VRAC	**Vranov**	**5.85 39**	‖*i*P	**Pn**	**19 22 10.0**	**-0.7**
VRAC	**Vranov**	**5.85 39**	‖P	**Pn**	**19 22 10.0**	**-0.7**
VRAC	**Vranov**	**5.85 39**	P	**Pn**	**19 22 10.0**	**-0.7**
VRAC	**Vranov**	**5.85 39**	*e*PN	**Pn**	**19 22 09.5**	**-1.2**
VRAC			*e*PG	**Pg**	**19 22 32.3**	**-4.1**
VRAC			*e*SG	**Sg**	**19 23 54.0**	**+1.9**
BRY	**Bratogost**	**5.85 107**	‖*i*Pn	**Pn**	**19 22 10.8**	**0.0**
BRY			*e*Sn	**Sn**	**19 23 16.4**	**-1.4**
BRY	**Bratogost**	**5.85 107**	‖*i*Pn	**Pn**	**19 22 10.8**	**0.0**
BRY			*e*Sn	**Sn**	**19 23 16.4**	**-1.4**
BGF	**Bois d'Agland**	**5.89 289**	*e*Pn	**Pn**	**19 22 11.6**	**+0.3**
BGF			*e*Sn	**Sn**	**19 23 16.6**	**-2.0**
	comp=N,2µm,0.5s					
BGF	**Bois d'Agland**	**5.89 289**	*e*Pn	**Pn**	**19 22 11.6**	**+0.3**
BGF			*e*Sn	**Sn**	**19 23 16.6**	**-2.0**
BGF	**Bois d'Agland**	**5.89 289**	*e*P	**Pn**	**19 22 11.6**	**+0.3**
BGF			*e*		19 23 16.6	
BGF	**Bois d'Agland**	**5.89 289**	*e*Pn	**Pn**	**19 22 11.6**	**+0.3**
SRO2	**Moca**	**5.90 58**	*e*P	**Pn**	**19 22 09.8**	**-1.5**
SRO2	**Moca**	**5.90 58**	*e*PN	**Pn**	**19 22 09.8**	**-1.5**
SRO2	**Moca**	**5.90 58**	*e*Pn	**Pn**	**19 22 09.8**	**-1.5**
KOE	**Koeppel**	**5.92 340**	*e*Pn	**Pn**	**19 22 12.0**	**+0.3**
KOE	**Koeppel**	**5.92 340**	Pn	**Pn**	**19 22 12.0**	**+0.3**
UBBA	**Unterbreizbach**	**5.94 354**	*e*Pn	**Pn**	**19 22 09.0**	**-2.8**
UPM	**Unac-Piva**	**5.99 104**	⇑*i*Pn	**Pn**	**19 22 13.4**	**+0.6**
UPM			*e*Sn	**Sn**	**19 23 19.5**	**-1.8**
UPM	**Unac-Piva**	**5.99 104**	⇑*i*Pn	**Pn**	**19 22 13.4**	**+0.6**
UPM			*e*Sn	**Sn**	**19 23 19.5**	**-1.8**
HCY	**Herceg Novi**	**6.01 112**	⇑*i*Pn	**Pn**	**19 22 13.3**	**+0.4**
HCY			*e*Sn	**Sn**	**19 23 20.3**	**-1.2**
HCY	**Herceg Novi**	**6.01 112**	⇑*i*Pn	**Pn**	**19 22 13.3**	**+0.4**
HCY			*e*Sn	**Sn**	**19 23 20.3**	**-1.2**
MATE	**Matera**	**6.02 133**	‖*i*P	**Pn**	**19 22 12.7**	**-0.2**
MATE	**Matera**	**6.02 133**	S	**Sn**	**19 23 18.1**	**-3.5**
JAVC	**Velka Javorina**	**6.07 47**	*e*PN	**Pn**	**19 22 14.5**	**+0.7**
HILG	**Hillesheim**	**6.10 333**	*e*Pn	**Pn**	**19 22 15.4**	**+1.3**
HILG	**Hillesheim**	**6.10 333**	Pn	**Pn**	**19 22 15.4**	**+1.3**
CUC	**Castrocucco**	**6.10 142**	*e*Pn	**Pn**	**19 22 14.1**	**-0.1**
CUC	**Castrocucco**	**6.10 142**	*e*Pn	**Pn**	**19 22 14.1**	**-0.1**
PVCC	**Panska Ves**	**6.13 22**	*e*PN	**Pn**	**19 22 14.3**	**-0.2**
PVCC			*e*PG	**Pg**	**19 22 41.6**	**-0.1**
PVCC			*ex*	x	19 23 18.9	
PVCC			*e*SN	**Sn**	**19 23 23.8**	**-0.5**
PVCC			*e*SG	**Sg**	**19 23 57.9**	**-3.0**
	comp=N,7µm,1.9s					
PVCC			AMS	AMS	19 24 50.0	
	comp=N,22µm,9.3s					
PVCC	**Panska Ves**	**6.13 22**	*e*P	**Pn**	**19 22 14.3**	**-0.2**
PVCC			*e*		19 23 23.8	
PVCC			smax	smax		
	comp=N,7µm,1.9s					
PVCC			MLR	MLR		
	comp=Z,22µm,9.3s					
PVCC	**Panska Ves**	**6.13 22**	Pn	**Pn**	**19 22 14.3**	**-0.2**
PVCC			Sn	**Sn**	**19 23 23.8**	**-0.5**
TEKS	**Tekeris**	**6.13 90**	*e*Pn	**Pn**	**19 22 14.3**	**-0.3**
TEKS	**Tekeris**	**6.13 90**	*e*Pn	**Pn**	**19 22 14.3**	**-0.3**
BBLS	**Lazići**	**6.16 97**	*e*Pn	**Pn**	**19 22 14.6**	**-0.4**
BBLS	**Lazići**	**6.16 97**	*e*Pn	**Pn**	**19 22 14.6**	**-0.4**
BUD	**Budapest**	**6.17 63**	‖*e*Pn	**Pn**	**19 22 15.4**	**+0.3**
BUD	**Budapest**	**6.17 63**	P	**Pn**	**19 22 14.7**	**-0.4**
BUD			pmax	pmax		
	comp=Z,114nm,0.6s					
BUD	**Budapest**	**6.17 63**	P	**Pn**	**19 22 14.7**	**-0.4**
	comp=Z,114nm,0.6s					
BUD	**Budapest**	**6.17 63**	‖*e*Pn	**Pn**	**19 22 15.4**	**+0.3**
NKME	**Niksic**	**6.18 108**	‖*i*Pn	**Pn**	**19 22 16.1**	**+0.8**
NKME			*e*Sn	**Sn**	**19 23 23.8**	**-2.0**
NKME	**Niksic**	**6.18 108**	‖*i*Pn	**Pn**	**19 22 16.1**	**+0.8**
NKME			*e*Sn	**Sn**	**19 23 23.8**	**-2.0**
NKY	**Niksic**	**6.19 107**	‖*i*Pn	**Pn**	**19 22 15.9**	**+0.4**
NKY			*e*Sn	**Sn**	**19 23 24.1**	**-2.0**
NKY	**Niksic**	**6.19 107**	‖*i*Pn	**Pn**	**19 22 15.9**	**+0.4**
NKY			*e*Sn	**Sn**	**19 23 24.1**	**-2.0**
AHRW	**Bad

BNS Sn Sn 19 23 34.3 -0.6
UPC Upice 6.56 30 *e*PN Pn 19 22 19.1 -1.3
UPC *e*PG Pg 19 22 47.4 -2.5
UPC *e*SN Sn 19 23 33.3 -1.7
UPC *ex* x 19 23 43.5
UPC *e*SG Sg 19 24 14.2 -0.6
comp=Z,12µm,1.9s
UPC AMS AMS 19 25 00.0
comp=Z,26µm,10.9s
DRME Dracevica, Mon 6.58 112 ⇓*i*Pn Pn 19 22 20.8 0.0
DRME *e*Sn Sn 19 23 34.0 -1.6
DRME Dracevica, Mon 6.58 112 ⇓Pn Pn 19 22 20.8 0.0
DRME *e*Sn Sn 19 23 34.0 -1.6
MEM Membach 6.59 332 ⇓PN Pn 19 22 21.1 +0.3
MEM ⇓SN Sn 19 23 39.3 +3.6
comp=N,290nm,0.0s
MEM Membach 6.59 332 P Pn 19 22 21.5 +0.7
MEM pmax pmax
comp=Z,357nm,1.0s
MEM Membach 6.59 332 P Pn 19 22 21.5 +0.7
comp=Z,357nm,1.0s
MORC Moravsky Berou 6.62 40 ⇑*i*P Pn 19 22 20.8 -0.4
MORC Moravsky Berou 6.62 40 *e*Pn Pn 19 22 20.7 -0.6
MORC Moravsky Berou 6.62 40 ⇑P Pn 19 22 20.8 -0.4
MORC Moravsky Berou 6.62 40 P Pn 19 22 20.8 -0.4
MORC Moravsky Berou 6.62 40 *e*PN Pn 19 22 20.6 -0.6
GIVF Givet 6.64 324 *e*Pn Pn 19 22 22.1 +0.7
GIVF Givet 6.64 324 *e*Pn Pn 19 22 22.1 +0.7
GIVF Givet 6.64 324 *e*P Pn 19 22 22.1 +0.7
GIVF Givet 6.64 324 *e*Pn Pn 19 22 22.1 +0.7
GTTG Gvttingen 6.67 355 *e*Pn Pn 19 22 21.5 -0.4
GTTG Gvttingen 6.67 355 Pn Pn 19 22 21.5 -0.4
RJF Les Rejaudoux 6.68 277 *e*Pn Pn 19 22 23.3 +1.3
RJF *e*Sn Sn 19 23 35.1 -2.8
comp=Z,403nm,0.9s
RJF Les Rejaudoux 6.68 277 *e*P Pn 19 22 25.6 +3.6
RJF S Sn 19 23 36.8 -1.1
RJF Les Rejaudoux 6.68 277 *e*Pn Pn 19 22 23.3 +1.3
RJF S Sn 19 23 36.8 -1.1
BCLA Clavier 6.69 327 ⇓PN Pn 19 22 23.6 +1.4
SJES Sjenica 6.72 101 *e*Pn Pn 19 22 22.8 +0.1
DOU Dourbes 6.73 323 ⇓PN Pn 19 22 23.1 +0.4
DOU Dourbes 6.73 323 P Pn 19 22 23.4 +0.7
DOU Dourbes 6.73 323 P Pn 19 22 25.0 +2.3
DOU Dourbes 6.73 323 P Pn 19 22 23.4 +0.7
ULC Ulcinj 6.73 113 ⇑*i*Pn Pn 19 22 22.8 0.0
ULC *e*Sn Sn 19 23 37.7 -1.5
ULC Ulcinj 6.73 113 ⇑*i*Pn Pn 19 22 22.8 0.0
ULC *e*Sn Sn 19 23 37.7 -1.5
HGN Heimansgroeve 6.75 332 *e*P Pn 19 22 23.1 +0.1
comp=Z,44nm,0.8s
HGN *e*S Sg 19 24 20.9 0.0
IVAS Ivanjica 6.75 98 *e*Pn Pn 19 22 23.2 0.0
IVAS Ivanjica 6.75 98 *e*Pn Pn 19 22 23.2 0.0
BEY Berane 6.79 104 ⇑*i*Pn Pn 19 22 24.7 +1.1
BEY *e*Sn Sn 19 23 38.1 -2.6
IVA Berane 6.79 104 ⇑*i*Pn Pn 19 22 24.7 +1.1
IVA *e*Sn Sn 19 23 38.1 -2.6
TRUS Trudelj 6.80 93 *e*Pn Pn 19 22 23.8 +0.1
TRUS Trudelj 6.80 93 *e*Pn Pn 19 22 23.8 +0.1
BEBN Eben Émael 6.86 331 ⇓PN Pn 19 22 26.2 +1.7
BEBN ⇓SN Sn 19 23 46.3 +3.9
BAIF Baives 6.87 321 *e*Pn Pn 19 22 27.2 +2.5
BAIF Baives 6.87 321 *e*P Pn 19 22 27.6 +2.9
BAIF Baives 6.87 321 *e*Pn Pn 19 22 27.2 +2.5
PSZ Piszkesteto 6.88 61 ⇓*i*P Pn 19 22 24.7 -0.2
PSZ Piszkesteto 6.88 61 ⇓*e*Pn Pn 19 22 24.6 -0.3
PSZ Piszkesteto 6.88 61 *e*Pn Pn 19 22 24.0 -0.9
PSZ Piszkesteto 6.88 61 ⇓P Pn 19 22 24.7 -0.2
PSZ Piszkesteto 6.88 61 *e*Pn Pn 19 22 24.0 -0.9
PSZ Piszkesteto 6.88 61 P Pn 19 22 24.7 -0.2
PVY Plav 6.93 106 ⇑*i*Pn Pn 19 22 26.6 +0.9
PVY *e*Sn Sn 19 23 42.7 -1.7
KSP Ksiaz 6.94 29 *e*Pn Pn 19 22 24.6 -1.0
KSP Ksiaz 6.94 29 *e*P Pn 19 22 24.6 -1.0
OKC Ostrava-Krasne 6.94 42 *e*PN Pn 19 22 25.3 -0.4
OKC *ex* x 19 22 43.9
OKC *e*SN Sn 19 23 43.9 -0.5
OKC AMS AMS 19 25 50.0
comp=Z,10µm,11.0s
OKC Ostrava-Krasne 6.94 42 *e*P Pn 19 22 25.3 -0.4
OKC *e* 19 23 43.9
OKC MLR MLR
comp=Z,10µm,11.0s
OKC Ostrava-Krasne 6.94 42 Pn Pn 19 22 25.3 -0.4
OKC Sn Sn 19 23 43.9 -0.5
MONQ Montcuq 6.97 269 P Pn 19 22 27.2 +1.1
MONQ Montcuq 6.97 269 P Pn 19 22 27.2 +1.1
LAUG Laupendahl 6.97 339 *e*Pn Pn 19 22 27.2 +1.2
LAUG Laupendahl 6.97 339 Pn Pn 19 22 27.2 +1.2
BUG Bochum--Univer 6.97 341 *e*Pn Pn 19 22 27.6 +1.5
GRUS Gruza 7.08 95 *e*Pn Pn 19 22 27.6 0.0
GRUS Gruza 7.08 95 *e*Pn Pn 19 22 27.6 0.0
BCI Bajram Curri 7.10 108 *i*PN Pn 19 22 29.3 +1.4
PUK Puka 7.12 111 *i*PN Pn 19 22 29.5 +1.3
RAC Raciborz 7.13 41 *e*P Pn 19 22 32.0 +3.7
RAC *e* 19 23 53.5
RAC MLR MLR
comp=Z,8µm,15.9s
SNF Seneffe 7.17 324 ⇑PN Pn 19 22 30.1 +1.3
TIP Timpagrande 7.18 141 ⇓*i*P Pn 19 22 29.9 +0.8
TIP Timpagrande 7.18 141 *e*Pn Pn 19 22 30.9 +1.8
TIP Timpagrande 7.18 141 *e*Pn Pn 19 22 30.9 +1.8
LANS Liptovska Anna 7.21 51 *e*P Pn 19 22 29.0 -0.3
LANS Liptovska Anna 7.21 51 *e*PN Pn 19 22 29.0 -0.3
LANS Liptovska Anna 7.21 51 *e*Pn Pn 19 22 29.0 -0.3
ASSE Asse, Remlinge 7.22 359 *e*Pn Pn 19 22 29.6 +0.2
ASSE Asse, Remlinge 7.22 359 Pn Pn 19 22 29.6 +0.2
LFF La Frestale 7.24 274 *e*Pn Pn 19 22 31.0 +1.3
LFF La Frestale 7.24 274 *e*Pn Pn 19 22 31.0 +1.3
GRI Girifalco 7.33 144 P Pn 19 22 33.0 +1.9
GRI Girifalco 7.33 144 P Pn 19 22 33.0 +1.9
UCC Uccle 7.36 325 ⇑PN Pn 19 22 32.5 +1.1
UCC Uccle 7.36 325 *e*Pn Pn 19 22 30.3 -1.1
UCC Uccle 7.36 325 *e*P Pn 19 22 30.3 -1.1
UCC Uccle 7.36 325 *e*Pn Pn 19 22 30.3 -1.1
MLS Moulis 7.37 258 P Pn 19 22 32.1 +0.6
MLS Moulis 7.37 258 P Pn 19 22 32.1 +0.6
SVIS Svilajnac 7.37 91 *e*Pn Pn 19 22 30.9 -0.6
SVIS Svilajnac 7.37 91 *e*Pn Pn 19 22 30.9 -0.6
TIR Tirane 7.44 116 ⇓*i*P Pn 19 22 32.3 -0.2
TIR Tirane 7.44 116 S Sn 19 23 52.4 -4.3
TIR Tirane 7.44 116 *e*Pn Pn 19 22 31.2 -1.3
TIR Tirane 7.44 116 P Pn 19 22 32.1 -0.4
TIR Tirane 7.44 116 *i*PN Pn 19 22 32.3 -0.2
TIR Tirane 7.44 116 ⇓P Pn 19 22 32.3 -0.2
TIR Tirane 7.44 116 *e*Pn Pn 19 22 31.2 -1.3
TIR Tirane 7.44 116 P Pn 19 22 32.3 -0.2
KECS Kecovo 7.47 58 *e*P Pn 19 22 31.7 -1.2
KECS Kecovo 7.47 58 *e*PN Pn 19 22 31.7 -1.2
KECS Kecovo 7.47 58 *e*Pn Pn 19 22 31.7 -1.2
MNO Monte Soro 7.53 157 P Pn 19 22 34.5 +0.6
MNO Monte Soro 7.53 157 P Pn 19 22 34.5 +0.6
SELS Selova 7.53 99 *e*Pn Pn 19 22 33.5 -0.2
SELS Selova 7.53 99 *e*Pn Pn 19 22 33.6 -0.2
SELS Selova 7.53 99 *e*Pn Pn 19 22 33.5 -0.2
BZS Buzias 7.57 81 *e*Pn Pn 19 22 33.8 -0.5
BZS Buzias 7.57 81 ⇓P Pn 19 22 33.7 -0.5
BZS Buzias 7.57 81 ⇓P Pn 19 22 33.7 -0.5
BZS Buzias 7.57 81 *e*Pn Pn 19 22 33.8 -0.5
WTSB Winterswijk 7.57 340 *e*P Pn 19 22 36.0 +1.8
comp=Z,38nm,0.6s
WTSB *e*S Sb 19 24 49.5 +24
WTSB Winterswijk 7.57 340 *e*P Pn 19 22 36.0 +1.8
comp=Z,38nm,0.6s
NRDL Niedersach Rie 7.61 356 *e*Pn Pn 19 22 34.4 -0.2
NRDL Niedersach Rie 7.61 356 Pn Pn 19 22 34.4 -0.2
PHP Peshkopia 7.65 112 P Pn 19 22 36.7 +1.3
PHP Peshkopia 7.65 112 *i*PN Pn 19 22 36.7 +1.3
MDVR Moldovita 7.66 87 ⇓*i*P Pn 19 22 35.8 +0.2
KUBS Kucevo 7.68 90 *e*Pn Pn 19 22 34.5 -1.2
KUBS Kucevo 7.68 90 *e*Pn Pn 19 22 34.5 -1.2
NIE Niedzica 7.81 51 *e*Pn Pn 19 22 39.0 +1.4
NIE Niedzica 7.81 51 *e*P Pn 19 22 39.0 +1.4
NIE Niedzica 7.81 51 *e*Pn Pn 19 22 39.0 +1.4
SOI Samo 7.84 149 P Pn 19 22 39.7 +1.7
SOI Samo 7.84 149 P Pn 19 22 39.7 +1.7
EPF Esparros 7.87 260 *e*Pn Pn 19 22 38.3 -0.2
EPF Esparros 7.87 260 *e*Pn Pn 19 22 38.3 -0.2
EPF Esparros 7.87 260 *e*P Pn 19 22 38.3 -0.2
EPF Esparros 7.87 260 *e*Pn Pn 19 22 38.3 -0.2
VAE Valguarnera 7.88 159 Pn Pn 19 22 44.3 +5.7
comp=Z,1.1nm,0.3s,baz=169,slow=5.3,SNR=9.6
MFF Saint Martin d 7.93 286 *e*Pn Pn 19 22 38.9 -0.3
MFF Saint Martin d 7.93 286 *e*Pn Pn 19 22 38.9 -0.3
OJC Ojcow 8.00 45 *e*Pn Pn 19 22 39.1 -1.1
OJC Ojcow 8.00 45 *e*Pn Pn 19 22 38.0 -2.2
OJC Ojcow 8.00 45 *e*P Pn 19 22 39.1 -1.1
OJC Ojcow 8.00 45 *e*Pn Pn 19 22 38.0 -2.2
OJC Ojcow 8.00 45 *e*P Pn 19 22 39.1 -1.1
LTVH L^tav^rtes, 8.01 68 ⇓*e*Pn Pn 19 22 42.0 +1.8
LTVH L^tav^rtes, 8.01 68 ⇓*e*Pn Pn 19 22 42.0 +1.8
CHIF Chize 8.06 283 P Pn 19 22 41.9 +0.9
CHIF Chize 8.06 283 P Pn 19 22 41.9 +0.9
BARS Barje 8.14 101 *e*Pn Pn 19 22 41.7 -0.4
BARS Barje 8.14 101 *e*Pn Pn 19 22 41.7 -0.4
OHR Ohrid 8.17 114 *i*Pn Pn 19 22 43.1 +0.6
ZAGS Zajecar 8.17 94 *e*Pn Pn 19 22 42.4 -0.1
ZAGS Zajecar 8.17 94 *e*Pn Pn 19 22 42.4 -0.1
SKO Skopje 8.19 107 P Pn 19 22 43.2 +0.4
SKO Skopje 8.19 107 *i*Pn Pn 19 22 43.5 +0.7
KEK Kerkira 8.37 125 *e*Pn Pn 19 22 44.1 -1.2
KEK Kerkira 8.37 125 P Pn 19 22 44.1 -1.2
KEK Kerkira 8.37 125 *e*Pn Pn 19 22 44.1 -1.2
SRN Sarande 8.38 124 P Pn 19 22 45.2 -0.2
SRN Sarande 8.38 124 *i*PN Pn 19 22 46.8 +1.3
KBN Korca 8.42 117 *i*PN Pn 19 22 46.0 0.0
DRGR 8.43 73 ⇑*i*P Pn 19 22 46.8 +0.6
DRGR 8.43 73 ⇑P Pn 19 22 46.8 +0.6
DRGR 8.43 73 P Pn 19 22 46.8 +0.6
LDF La Druitiere 8.44 300 *e*Pn Pn 19 22 44.9 -1.2
LDF La Druitiere 8.44 300 *e*Pn Pn 19 22 44.9 -1.2
DEV Deva 8.48 79 P Pn 19 22 48.6 +1.8
DEV pmax pmax
comp=Z,77nm,1.7s
DEV Deva 8.48 79 P Pn 19 22 48.6 +1.8
comp=Z,77nm,1.7s
ETSF Etsaut 8.54 260 *e*Pn Pn 19 22 50.5 +2.8
ETSF Etsaut 8.54 260 *e*Pn Pn 19 22 50.5 +2.8
BIA Bitola 8.55 113 *e*Pn Pn 19 22 48.8 +1.0
BIA Bitola 8.55 113 P Pn 19 22 48.8 +1.0
BIA Bitola 8.55 113 *i*Pn Pn 19 22 48.6 +0.8
BIA Bitola 8.55 113 *e*Pn Pn 19 22 48.8 +1.0
ZAPS Zavoj 8.58 97 ⇓*i*Pn Pn 19 22 47.7 -0.5
TRPA Tarpa 8.62 64 ⇑*i*P Pn 19 22 47.8 -0.9
TRPA Tarpa 8.62 64 ⇓*e*Pn Pn 19 22 49.1 +0.4
TRPA Tarpa 8.62 64 ⇓*e*Pn Pn 19 22 49.1 +0.4
UZH Uzhgorod 8.64 60 *d i*P Pn 19 22 49.9 +1.0
UZH *e*S Sn 19 24 26.5 +0.5
UZH MLR MLR
comp=N,1µm,12.0s
UZH MLR MLR
comp=Z,400nm,12.0s
UZH Uzhgorod 8.64 60 *i*P Pn 19 22 49.9 +1.0
UZH *e*S Sn 19 24 26.5 +0.5
SGD Sagiada 8.69 124 P Pn 19 22 48.8 -0.9
CAEH `Ain El Ouahch 8.69 202 P Pn 19 22 58.2 +8.5
CMAH Djebel Manchou 8.70 199 P Pn 19 22 52.4 +2.5
CMAH Djebel Manchou 8.70 199 P Pn 19 22 52.4 +2.5
NEST Nestorio 8.70 118 P Pn 19 22 50.4 +0.5
FNA Florina 8.71 115 *e*Pn Pn 19 22 49.5 -0.5
FNA Florina 8.71 115 P Pn 19 22 50.5 +0.5
FNA Florina 8.71 115 *e*P Pn 19 22 49.5 -0.5
FNA Florina 8.71 115 *e*Pn Pn 19 22 49.5 -0.5
FLN La Foliniere 8.72 300 *e*Pn Pn 19 22 49.2 -0.8
FLN La Foliniere 8.72 300 *e*Pn Pn 19 22 49.2 -0.8
SRE Strehaia 8.73 87 P Pn 19 22 51.5 +1.3
IGT Igoumenitsa 8.80 124 *e*Pn Pn 19 22 50.8 -0.4
IGT Igoumenitsa 8.80 124 P Pn 19 22 50.8 -0.4
IGT Igoumenitsa 8.80 124 *e*P Pn 19 22 50.8 -0.4
IGT Igoumenitsa 8.80 124 *e*Pn Pn 19 22 50.8 -0.4
GRR Gorron 8.82 297 *e*Pn Pn 19 22 50.9 -0.5
GRR Gorron 8.82 297 *e*Pn Pn 19 22 50.9 -0.5
SJPF Ste Jean 8.95 263 *e*Pn Pn 19 22 52.9 -0.3
SJPF Ste Jean 8.95 263 *e*Pn Pn 19 22 52.9 -0.3
CJR Cluj-Napoca 9.03 74 ⇓*i*P Pn 19 22 54.5 +0.2
CJR Cluj-Napoca 9.03 74 ⇓P Pn 19 22 54.5 +0.2
CJR Cluj-Napoca 9.03 74 P Pn 19 22 54.5 +0.2
LOT Lotru 9.08 82 ⇑*i*P Pn 19 22 52.7 -2.4
LOT Lotru 9.08 82 S Sn 19 24 34.4 -2.8
CKFL Kef-Lekhel 9.09 202 P Pn 19 22 58.5 +3.3
VTS Vitosha 9.18 100 ⇓*i*P Pn 19 22 56.1 -0.4
VTS Vitosha 9.18 100 *e*Pn Pn 19 22 55.5 -1.1
VTS Vitosha 9.18 100 *i*P Pn 19 22 55.9 -0.6
VTS Vitosha 9.18 100 P Pn 19 22 55.8 -0.7
VTS Vitosha 9.18 100 ⇓P Pn 19 22 56.1 -0.4
VTS Vitosha 9.18 100 *e*Pn Pn 19 22 55.5 -1.1
VTS Vitosha 9.18 100 P Pn 19 22 56.1 -0.4
DFRA Djebel Bou Aff 9.20 206 P Pn 19 23 00.4 +3.7
KZN Kozani 9.22 116 P Pn 19 22 58.7 +1.7
VAY Valandovo 9.24 109 *e*Pn Pn 19 22 56.6 -0.5
VAY Valandovo 9.24 109 P Pn 19 22 56.6 -0.5
VAY Valandovo 9.24 109 *i*Pn Pn 19 22 57.1 0.0
VAY Valandovo 9.24 109 *e*P Pn 19 22 56.6 -0.5
VAY Valandovo 9.24 109 *e*Pn Pn 19 22 56.6 -0.5
KEST Kesra 9.25 188 Pn Pn 19 23 02.5 +5.1
comp=Z,12nm,0.3s,baz=303,slow=1.9,SNR=56
KEST LR LR 19 26 28.5
comp=Z,1µm,21.9s,baz=30,slow=38
HMNX Herstmonceux 9.28 314 *e*P Pn 19 22 58.1 +0.5
HMNX IAMs_20 IAMs_20 19 27 29.9
comp=Z,19µm,6.6s
KWP Kalwaria Pacla 9.29 55 *e*Pn Pn 19 22 59.2 +1.5
KWP Kalwaria Pacla 9.29 55 *e*Pn Pn 19 22 58.5 +0.7
KWP Kalwaria Pacla 9.29 55 *e*P Pn 19 22 59.3 +1.5
KWP Kalwaria Pacla 9.29 55 *e*Pn Pn 19 22 58.5 +0.7
KWP Kalwaria Pacla 9.29 55 *e*P Pn 19 22 59.3 +1.5
GRG Griva 9.29 111 P Pn 19 22 57.2 -0.8
GKP Gorka Klasztor 9.32 24 *e*Pn Pn 19 22 59.7 +1.4
GKP Gorka Klasztor 9.32 24 *e*P Pn 19 22 59.7 +1.4
GKP Gorka Klasztor 9.32 24 *e*Pn Pn 19 22 59.7 +1.4
KKB Krupnik 9.36 105 *i*P Pn 19 22 55.9 -2.9
LKD2 Lefkada island 9.49 127 *e*Pn Pn 19 22 59.8 -0.8
LKD2 Lefkada island 9.49 127 P Pn 19 22 59.8 -0.8
LKD2 Lefkada island 9.49 127 *e*Pn Pn 19 22 59.8 -0.8
THTN Thala 9.50 191 *e*Pn Pn 19 23 01.4 +0.5
THTN Thala 9.50 191 *e*Pn Pn 19 23 01.4 +0.5
DSL Palaion Diasel 9.51 124 P Pn 19 23 01.2 +0.2
KNT Kendrikon 9.53 109 *e*Pn Pn 19 23 00.8 -0.4
KNT Kendrikon 9.53 109 P Pn 19 23 00.8 -0.4
KNT Kendrikon 9.53 109 *e*P Pn 19 23 00.8 -0.4
KNT Kendrikon 9.53 109 *e*Pn Pn 19 23 00.8 -0.4
FSK Fiskardo 9.66 129 P Pn 19 23 01.9 -1.1
ARR Arges 9.70 82 ⇑*i*P Pn 19 23 03.0 -0.5
LIT Litokhoron 9.79 115 *e*Pn Pn 19 23 03.4 -1.4
LIT Litokhoron 9.79 115 P Pn 19 23 04.6 -0.2
LIT Litokhoron 9.79 115 *e*P Pn 19 23 03.4 -1.4
LIT Litokhoron 9.79 115 *e*Pn Pn 19 23 03.4 -1.4
THL Klokotos Trika 9.80 119 P Pn 19 23 04.7 -0.1
THE Thessaloniki 9.82 112 *e*Pn Pn 19 23 05.1 -0.1
THE Thessaloniki 9.82 112 P Pn 19 23 05.1 -0.1
THE Thessaloniki 9.82 112 *e*P Pn 19 23 05.1 -0.1
THE Thessaloniki 9.82 112 *e*Pn Pn 19 23 05.1 -0.1
JRS Jersey 9.86 300 *e*P Pn 19 23 06.2 +0.6
JRS Jersey 9.86 300 *e*P Pn 19 23 06.2 +0.6
SGMF Saint Gilles 9.87 295 *e*Pn Pn 19 23 04.9 -0.9
SGMF Saint Gilles 9.87 295 *e*Pn Pn 19 23 04.9 -0.9
VLS Valsamata 9.88 130 P Pn 19 23 05.0 -1.0
MMB Musomiste 9.91 105 *i*P Pn 19 23 06.3 -0.1
PDO Prodromos 9.92 126 P Pn 19 23 05.3 -1.2
HORT Hortiatis 9.93 111 P Pn 19 23 06.0 -0.7
VOIR 9.98 82 ⇓*i*P Pn 19 23 07.6 +0.1
VOIR 9.98 82 ⇓P Pn 19 23 07.6 +0.1
VOIR 9.98 82 P Pn 19 23 07.6 +0.1
SOH Sokhos 9.99 110 P Pn 19 23 07.0 -0.5
SRS Serrai 10.02 108 *e*Pn Pn 19 23 07.6 -0.2
SRS Serrai 10.02 108 P Pn 19 23 07.6 -0.2
SRS Serrai 10.02 108 *e*P Pn 19 23 07.6 -0.2
SRS Serrai 10.02 108 *e*Pn Pn 19 23 07.6 -0.2
KFL Anninata 10.04 129 P Pn 19 23 07.3 -0.8
EVR Evrytania 10.07 123 *e*Pn Pn 19 23 08.9 +0.2
EVR Evrytania 10.07 123 P Pn 19 23 08.9 +0.2
EVR Evrytania 10.07 123 *e*Pn Pn 19 23 08.9 +0.2
NVR Nevrokopi 10.10 106 *e*Pn Pn 19 23 09.1 +0.1
NVR Nevrokopi 10.10 106 P Pn 19 23 09.1 +0.1
NVR Nevrokopi 10.10 106 *e*Pn Pn 19 23 09.1 +0.1
PVO Paravola 10.11 125 P Pn 19 23 08.5 -0.5
LVV L'vov 10.14 56 *e*P Pn 19 23 08.8 -0.8
LVV *e*S Sn 19 25 02.8 -0.3
LVV L'vov 10.14 56 *e*P Pn 19 23 08.8 -0.8
LVV *e*S Sn 19 25 02.8 -0.3
QUIF Quistinic 10.19 292 *e*Pn Pn 19 23 10.2 +0.1
QUIF Quistinic 10.19 292 *e*Pn Pn 19 23 10.2 +0.1
QUIF Quistinic 10.19 292 *e*P Pn 19 23 10.2 +0.1
QUIF Quistinic 10.19 292 *e*Pn Pn 19 23 10.2 +0.1
DOPR Dopca 10.22 79 ⇑*i*P Pn 19 23 10.4 -0.2
BUR08 Bucovina Ar. S 10.25 70 *e*Pn Pn 19 23 11.2 +0.1
BUR08 Bucovina Ar. S 10.25 70 *e*Pn Pn 19 23 11.2 +0.1
BUR04 Bucovina Ar. S 10.25 70 *e*Pn Pn 19 23 10.1 -1.0
BUR04 Bucovina Ar. S 10.25 70 *e*Pn Pn 19 23 10.1 -1.0
BURAR Bucovina Array 10.25 70 ⇑*i*P Pn 19 23 11.6 +0.5
BURAR Bucovina Array 10.25 70 ⇑P Pn 19 23 11.6 +0.5
PLG Polygyros 10.27 112 *e*Pn Pn 19 23 11.2 -0.2
PLG Polygyros 10.27 112 P Pn 19 23 11.2 -0.2
PLG Polygyros 10.27 112 *e*P Pn 19 23 11.2 -0.2
PLG Polygyros 10.27 112 *e*Pn Pn 19 23 11.2 -0.2
AGG Agios Georgios 10.32 121 *e*Pn Pn 19 23 10.7 -1.4
AGG Agios Georgios 10.32 121 P Pn 19 23 12.6 +0.5
AGG Agios Georgios 10.32 121 *e*P Pn 19 23 10.7 -1.4
AGG Agios Georgios 10.32 121 *e*Pn Pn 19 23 10.7 -1.4
WOL Wolverton 10.34 313 *e*P Pn 19 23 11.2 -1.0
WOL IAMs_20 IAMs_20 19 28 08.1
comp=Z,16µm,7.2s
WOL Wolverton 10.34 313 *e*P Pn 19 23 11.2 -1.0
ANX Ano Chora 10.35 124 P Pn 19 23 12.6 +0.1
ROSF Rostrenen 10.35 294 *e*Pn Pn 19 23 12.9 +0.5
ROSF Rostrenen 10.35 294 *e*Pn Pn 19 23 12.9 +0.5
ROSF Rostrenen 10.35 294 *e*P Pn 19 23 12.9 +0.5
ROSF Rostrenen 10.35 294 *e*Pn Pn 19 23 12.9 +0.5
EFP Efpalio 10.45 125 P Pn 19 23 14.2 +0.4
PVL Pavlikeni 10.50 94 P Pn 19 23 12.2 -2.3
PVL Pavlikeni 10.50 94 P Pn 19 23 12.2 -2.3
BSD Bornholm Skovb 10.52 13 *i*P Pn 19 23 15.3 +0.6
BSD Bornholm Skovb 10.52 13 *e*P Pn 19 23 15.3 +0.6
SERG Sergoula 10.55 124 P Pn 19 23 16.4 +1.2
RZN Rozhen 10.55 103 *i*P Pn 19 23 14.9 -0.4
MLR Muntele Rosu 10.61 82 Pn Pn 19 23 17.4 +1.3
comp=Z,0.2nm,0.3s,baz=187,slow=6.1,SNR=26
MLR Sn Sn 19 25 14.2 -0.6
comp=Z,0.1nm,0.3s,baz=135,slow=20,SNR=1.5
MLR LR LR 19 27 24.6
comp=Z,372nm,19.2s,baz=276,slow=38
MLR Muntele Rosu 10.61 82 ⇓*i*P Pn 19 23 16.4 +0.3
MLR Muntele Rosu 10.61 82 *e*Pn Pn 19 23 16.8 +0.7
MLR Sn Sn 19 25 14.2 -0.6
MLR Muntele Rosu 10.61 82 *e*Pn Pn 19 23 16.8 +0.7
OUR Ouranopolis 10.65 111 *e*Pn Pn 19 23 15.2 -1.2
OUR Ouranopolis 10.65 111 P Pn 19 23 15.2 -1.2
OUR Ouranopolis 10.65 111 *e*P Pn 19 23 15.2 -1.2
OUR Ouranopolis 10.65 111 *e*Pn Pn 19 23 15.2 -1.2
XOR Xorichti 10.65 117 *e*Pn Pn 19 23 14.0 -2.6
XOR Xorichti 10.65 117 P Pn 19 23 14.0 -2.6
XOR Xorichti 10.65 117 *e*Pn Pn 19 23 14.0 -2.6
PAIG Paliouri 10.66 113 *e*Pn Pn 19 23 15.6 -1.0
PAIG Paliouri 10.66 113 P Pn 19 23 15.6 -1.0
PAIG Paliouri 10.66 113 *e*P Pn 19 23 15.6 -1.0
PAIG Paliouri 10.66 113 *e*Pn Pn 19 23 15.6 -1.0
DRO Drossia 10.66 127 P Pn 19 23 17.3 +0.6
DIM Dimitrovgrad 10.99 100 *i*P Pn 19 23 20.9 -0.2
BATH Bath 10.99 311 *e*P Pn 19 23 21.4 +0.3
BATH IAMs_20 IAMs_20 19 28 27.5
comp=Z,8µm,7.6s
GUR Goura 11.04 125 *e*Pn Pn 19 23 22.4 +0.5
GUR Goura 11.04 125 P Pn 19 23 22.4 +0.5
GUR Goura 11.04 125 *e*Pn Pn 19 23 22.4 +0.5
KDZ Kurdzhali 11.05 102 P Pn 19 23 21.8 -0.2
KDZ Kurdzhali 11.05 102 P Pn 19 23 21.8 -0.2
STRD Stroud 11.09 313 *e*P Pn 19 23 20.9 -1.5
STRD IAMs_20 IAMs_20 19 28 20.6
comp=Z,12µm,10.5s
PLOR Plostina 11.10 80 ⇑*i*P Pn 19 23 22.3 -0.3
PLOR Plostina 11.10 80 ⇑P Pn 19 23 22.3 -0.3
PLOR Plostina 11.10 80 P Pn 19 23 22.3 -0.3
ITM Ithomi 11.33 129 *e*Pn Pn 19 23 25.2 -0.7
ITM Ithomi 11.33 129 *e*Pn Pn 19 23 25.2 -0.7
RDO Rodhopi 11.33 104 *e*Pn Pn 19 23 25.2 -0.6
RDO Rodhopi 11.33 104 P Pn 19 23 25.2 -0.6
RDO Rodhopi 11.33 104 *e*Pn Pn 19 23 25.2 -0.6
PYL PYLOS 11.44 131 *e*Pn Pn 19 23 27.0 -0.3
PYL PYLOS 11.44 131 P Pn 19 23 27.0 -0.3
PYL PYLOS 11.44 131 *e*Pn Pn 19 23 27.0 -0.3
MONM Monmouth 11.46 312 *e*P Pn 19 23 26.3 -1.1
MONM IAMs_20 IAMs_20 19 28 33.5
comp=Z,8µm,10.7s
MUD Monsted U'grnd 11.61 355 *i*P Pn 19 23 30.2 +0.7
MCH1 Michaelchurch 11.64 312 *e*P Pn 19 23 27.8 -2.2
MCH1 IAMs_20 IAMs_20 19 28 39.4
comp=Z,10µm,11.0s
ALN Alexandroupoli 11.79 105 *e*Pn Pn 19 23 31.7 -0.3
ALN Alexandroupoli 11.79 105 *e*P Pn 19 23 31.7 -0.3
ALN Alexandroupoli 11.79 105 *e*Pn Pn 19 23 31.7 -0.3
HLM1 Long Mynd 11.87 315 *e*P Pn 19 23 33.1 0.0
HLM1 IAMs_20 IAMs_20 19 28 44.7
comp=Z,10µm,10.5s
HLM1 Long Mynd 11.87 315 *e*P Pn 19 23 33.1 0.0
PRD Provadia 11.97 92 *i*P Pn 19 23 35.8 +1.2
ES19 SONSECA Array 12.15 250 *e*Pn Pn 19 23 35.6 -1.5
ES19 SONSECA Array 12.15 250 *e*Pn Pn 19 23 35.6 -1.5
CFR Carcaliu 12.18 83 ⇑*i*P Pn 19 23 36.9 -0.4
CFR Carcaliu 12.18 83 ⇑P Pn 19 23 36.9 -0.4
CFR Carcaliu 12.18 83 P Pn 19 23 36.9 -0.4
HPK Haverah Park 12.18 322 *e*P Pn 19 23 37.8 +0.5
HPK IAMs_20 IAMs_20 19 28 48.6
comp=Z,5µm,11.4s
HPK Haverah Park 12.18 322 *e*P Pn 19 23 37.8 +0.5
ESDC Sonseca Array 12.21 250 Pn Pn 19 23 37.8 0.0
comp=Z,1.8nm,0.3s,baz=67,slow=13,SNR=35
ESLA Sonseca Array 12.21 250 *e*Pn Pn 19 23 39.1 +1.3
ESLA Sonseca Array 12.21 250 *e*Pn Pn 19 23 39.1 +1.3
LLW Llanuwychllyn 12.45 315 *e*P Pn 19 23 39.8 -1.2
TIRR Tirgusor 12.45 86 *e*Pn Pn 19 23 38.6 -2.4
TIRR Tirgusor 12.45 86 *e*P Pn 19 23 38.7 -2.4
TIRR Tirgusor 12.45 86 *e*Pn Pn 19 23 38.7 -2.4
PAB San Pablo 12.53 250 *e*Pn Pn 19 23 42.6 +0.4
PAB San Pablo 12.53 250 *e*P Pn 19 23 42.6 +0.4
PAB San Pablo 12.53 250 *e*Pn Pn 19 23 42.6 +0.4
KIS Kishinev 12.62 74 *e*P Pn 19 23 42.0 -1.4
KIS Kishinev 12.62 74 *e*PP P 19 23 54.0 -0.8
KIS *i* Lg Lg 19 27 20.0
KIS *i* Rg Rg 19 28 23.0
KIS LRM MLR 19 30 02.0
comp=Z,4µm,9.0s
KIS Kishinev 12.62 74 *e*P Pn 19 23 42.0 -1.4
KIS MLR MLR
comp=N,3µm,9.0s
KIS MLR MLR
comp=E,4µm,9.0s
KIS MLR MLR
comp=Z,5µm,9.0s
KIS MLR MLR
comp=Z,5µm,10.0s
PBRG Braganca 13.23 263 *e*P Pn 19 23 53.0 +1.2
comp=Z,35nm,1.5s
PBRG Braganca 13.23 263 *e*P Pn 19 23 53.0 +1.2
APE Apeiranthos 13.51 120 ⇑*i*P Pn 19 23 55.2 -0.5
APE Apeiranthos 13.51 120 ⇑P Pn 19 23 55.2 -0.5
APE Apeiranthos 13.51 120 P Pn 19 23 55.2 -0.5
AKASG Malin Array Be 13.57 58 Pn Pn 19 23 55.3 -1.0
comp=Z,0.4nm,0.3s,baz=248,slow=13,SNR=20
AKASG LR LR 19 28 56.5
comp=Z,268nm,21.6s,baz=270,slow=

POLO Lamas de Olo 14.12 262 *e*P **Pn 19 24 05.2 +1.2**
comp=Z,15nm,1.4s
POLO Lamas de Olo 14.12 262 *e*P **Pn 19 24 05.2 +1.2**
PCAB Cabril 14.17 264 *e*P **Pn 19 24 05.7 +1.1**
EDI Edinburgh 14.19 326 *e*P **Pn 19 24 03.5 -1.4**
EDI IAMs_20 IAMs_20 19 30 06.6
comp=Z,3μm,12.0s
NACGM Naroch 14.26 40 *e*P **Pn 19 24 03.0 -2.7**
NACGM *e*LQ LQ 19 28 36.0
NACGM *e*LR LR 19 29 52.0
NACGM LRM MLR 19 30 07.0
comp=Z,4.6nm,12.0s
PGAV Gavieira, Arco 14.26 265 *e*P **Pn 19 24 08.9 +3.0**
comp=Z,19nm,1.7s
PGAV *e*LQ LQ 19 27 23.0
PGAV *e*LR LR 19 29 11.6
comp=Z,2μm,16.0s
IIGN Ignalina 14.29 38 *e*P **Pn 19 24 05.2 -0.9**
IIGN IAmb IAmb 19 24 08.5
comp=Z,19nm,1.4s
MTE Manteigas 14.32 258 *e*P **P 19 24 11.1 -2.8**
comp=Z,27nm,1.3s
MTE *e*LQ LQ 19 26 58.4
MTE *e*LR LR 19 29 26.0
comp=Z,2μm,14.0s
MTE Manteigas 14.32 258 *e*P **P 19 24 11.1 -2.8**
IDI Anoyia 14.35 127 Pn **Pn 19 24 06.1 -1.1**
comp=Z,0.9nm,0.3s,baz=351,slow=8.9,SNR=8.2
IDI Sn Sn 19 26 30.8 -15
comp=Z,1.5nm,0.3s,baz=48,slow=14,SNR=4.1
IDI LR LR 19 31 08.0
comp=Z,1μm,18.1s,baz=312,slow=44
IDI Anoyia 14.35 127⇑*i*P **Pn 19 24 06.3 -0.9**
IDI Anoyia 14.35 127 *e*Pn **Pn 19 24 06.0 -1.1**
IDI Sn Sn 19 26 30.8 -15
IDI *e*Sn Sn 19 26 34.1 -12
ISAL Salakas 14.39 37 *e*P **Pn 19 24 06.4 -1.1**
ISAL IAmb IAmb 19 24 08.5
comp=Z,29nm,1.5s
ISAL Salakas 14.39 37 *e*P **Pn 19 24 06.4 -1.1**
PVIS Viseu 14.44 260 *e*P **P 19 24 18.2 +3.1**
comp=Z,27nm,1.5s
PVIS Viseu 14.44 260 *e*P **P 19 24 18.2 +3.1**
IDID Didziasalis 14.49 38 *e*P **Pn 19 24 08.2 -0.7**
IDID IAmb IAmb 19 24 19.3
comp=Z,8.7nm,0.9s
IDID Didziasalis 14.49 38 *e*P **Pn 19 24 08.2 -0.7**
PCBR Castelo Branco 14.52 256 *e*P **P 19 24 13.5 -2.4**
comp=Z,27nm,1.1s
MICGM Minsk 14.53 43 *e*P **Pn 19 24 08.0 -1.5**
MICGM *e*PP **PnPn 19 24 20.0 +2.7**
MICGM *e*S **Sn 19 26 48.0 -2.2**
MICGM *e*SS **S 19 27 10.0 +0.3**
MICGM *e*LR LR 19 28 44.0
MICGM LRM MLR 19 30 42.0
comp=Z,6.8nm,8.0s
MICGM LRM MLR 19 30 44.0
comp=E,6.2nm,6.0s
IZAR Zarasai 14.56 36 *e*P **Pn 19 24 09.0 -0.9**
IZAR IAmb IAmb 19 24 19.2
comp=Z,19nm,1.0s
IZAR Zarasai 14.56 36 *e*P **Pn 19 24 09.0 -0.9**
PMRV Marv??o 14.64 254 *e*P **Pn 19 24 13.6 +2.5**
comp=Z,42nm,1.3s
PMRV *e*LQ LQ 19 27 20.5
PMRV *e*LR LR 19 29 13.6
comp=Z,2μm,16.0s
PBAR Barrancos 15.03 250 *e*P **Pn 19 24 18.3 +1.9**
comp=Z,104nm,1.5s
PESTR Estremoz 15.05 253 *e*P **P 19 24 19.9 -2.0**
comp=Z,30nm,1.1s
PESTR Estremoz 15.05 253 *e*Pn **Pn 19 24 16.5 -0.1**
comp=Z,11nm,1.0s
PESTR Estremoz 15.05 253 *e*Pn **Pn 19 24 16.5 -0.1**
comp=Z,11nm,1.0s
PESTR Estremoz 15.05 253 *e*P **P 19 24 19.9 -2.0**
PCAS Casmilo, Conde 15.13 258 *e*P **Pn 19 24 17.8 +0.2**
comp=Z,43nm,1.7s
MME1 Meikle Cairn 15.13 330 *e*P **Pn 19 24 14.1 -3.5**
HFS Hagfors 15.33 5 Pn **Pn 19 24 20.2 0.0**
comp=Z,0.1nm,0.3s,baz=169,slow=9.1,SNR=16
HFS LR LR 19 30 17.1
comp=Z,589nm,20.1s,baz=192,slow=37
EVO Evora 15.50 252 *e*P **P 19 24 25.1 -1.8**
comp=Z,21nm,1.3s
EVO Evora 15.50 252 *e*P **P 19 24 25.1 -1.8**
KARP Karpathos 15.50 122 *e*Pn **Pn 19 24 22.6 0.0**
comp=Z,23nm,0.8s
KARP Karpathos 15.50 122 *e*Pn **Pn 19 24 22.6 0.0**
comp=Z,23nm,0.8s
PBEJ Beja 15.66 250 *e*P **P 19 24 32.0 +3.3**
comp=Z,18nm,1.8s
PVAQ Vaqueiros 15.90 248 *e*P **P 19 24 29.8 -1.6**
comp=Z,32nm,1.4s
PVAQ *e*LQ LQ 19 27 42.6
PVAQ *e*LR LR 19 29 40.6
comp=Z,1μm,14.0s
PVAQ Vaqueiros 15.90 248 *e*P **P 19 24 29.8 -1.6**
MESJ Messejana 16.00 250 *e*P **P 19 24 31.9 -0.5**
comp=Z,20nm,2.4s
MESJ Messejana 16.00 250 *e*P **P 19 24 31.9 -0.5**
PNCL Nicolau / Gran 16.07 252 *e*P **P 19 24 36.6 +3.5**
comp=Z,29nm,1.5s
NB2 NORSAR Subarra 16.16 0 P **Pn 19 24 29.9 -1.0**
comp=Z,91nm,1.1s,baz=181,slow=11
NB2 NORSAR Subarra 16.16 0 P **Pn 19 24 29.9 -1.0**
baz=181,slow=11
NB200 NORSAR Array S 16.16 0 *e*Pn **Pn 19 24 30.2 -0.7**
NOA NORSAR Array B 16.16 0 Pn **Pn 19 24 30.2 -0.7**
comp=Z,0.2nm,0.3s,baz=204,slow=18,SNR=4.8
NOA LR LR 19 31 35.2
comp=Z,1μm,20.2s,baz=170,slow=40
KPL Plockton 16.16 326 *e*P **Pn 19 24 30.5 -0.4**
KPL IAMs_20 IAMs_20 19 32 25.0
comp=Z,4μm,8.0s
NB201 NORSAR Array S 16.16 1 *e*Pn **Pn 19 24 29.6 -1.4**
NC405 NORSAR Array S 16.23 1 *e*Pn **Pn 19 24 29.3 -2.6**
ISP Isparta 16.30 109 *e*P **Pn 19 24 33.5 +0.6**
ISP Isparta 16.30 109 *e*P **Pn 19 24 33.5 +0.6**
NC303 NORSAR Array S 16.34 1 *e*Pn **Pn 19 24 30.8 -2.5**
NC204 NORSAR Array S 16.39 360 *e*Pn **Pn 19 24 32.1 -1.7**
SIM Simferopol' 16.41 82 P **P 19 24 36.5 -0.4**
SIM S **Sn 19 27 38.5 +2.5**
SIM pmax pmax
comp=Z,8.0nm,1.1s
SIM MLR MLR
comp=Z,2μm,13.0s
VSU Vasula 16.67 30⇓*e*P **Pn 19 24 36.6 -0.7**
MDT Midelt 17.07 230 P **P 19 24 45.5 +1.1**
comp=Z,0.2nm,0.3s,baz=70,slow=10,SNR=11
MDT LR LR 19 30 58.7
comp=Z,536nm,19.6s,baz=48,slow=36
BR101 Keskin Array S 17.55 99 *e*Pn **P 19 24 50.0 +0.2**
BR101 Keskin Array S 17.55 99 *e*Pn **P 19 24 50.0 +0.2**
BR131 Keskin Array S 17.55 99 *e*Pn **P 19 24 49.6 -0.2**
BR131 Keskin Array S 17.55 99 *e*Pn **P 19 24 49.6 -0.2**
BRTR Keskin Array B 17.55 99 P **P 19 24 50.0 +0.3**
comp=Z,0.3nm,0.3s,baz=293,slow=9.7,SNR=27
BRTR LR LR 19 33 14.5
comp=Z,1μm,20.1s,baz=290,slow=43
ANN Anapa 18.76 81 *e*P **P 19 24 58.0 -4.9**
ANN *e*S **Sn 19 28 24.5 -8.4**
ANN pmax pmax
comp=Z,37nm,1.1s
ANN MLR MLR
comp=Z,2μm,13.0s
ANN MLR MLR
comp=N,1μm,13.0s
ANN MLR MLR
comp=E,196nm,13.0s
FIA0 FINESS Array S 18.80 23 *e*P **P 19 25 02.5 -0.6**
FIA0 *e*PcP **PcP 19 29 29.4 -0.3**
FIA0 FINESS Array S 18.80 23 *e*P **P 19 25 02.5 -0.6**
FINES FINESS Array B 18.80 23 P **P 19 25 02.5 -0.6**
comp=E,0.8nm,0.3s,baz=243,slow=13,SNR=29
FINES PcP **PcP 19 29 29.4 -0.3**
comp=E,0.2nm,0.3s,baz=188,slow=1.3,SNR=5.3
FIA1 FINESS Array S 18.80 23 *e*P **P 19 25 02.2 -1.0**
PUL Pulkovo 18.90 31⇓*e*P **P 19 25 04.5 +0.3**
PUL pmax pmax
comp=Z,68nm,0.9s
OBN Obninsk 19.27 49 LR LR 19 34 07.7
comp=Z,1μm,18.6s,baz=251,slow=42
OBN Obninsk 19.27 49 *e*P **P 19 25 06.4 -1.9**
comp=Z,95nm,1.2s
OBN Obninsk 19.27 49*c e*P **P 19 25 07.8 -0.5**
OBN *i* S **Sn 19 28 42.4 -2.5**
OBN pmax pmax
comp=Z,139nm,1.7s
OBN MLR MLR
comp=Z,1μm,18.0s
VAF Ylistaro 19.37 16 P **Pn 19 25 10.2 -0.3**
VAF pmax pmax
comp=Z,61nm,0.9s
CSS Mathiatis 19.79 112 *e*P **P 19 25 13.4 -0.8**
comp=Z,5.9nm,0.8s
CSS Mathiatis 19.79 112 *e*P **P 19 25 13.4 -0.8**
comp=Z,5.9nm,0.8s
VSR Storozhevoye 19.82 61 *e*P **P 19 25 13.6 -0.8**
VSR pmax pmax
comp=Z,50nm,0.9s
VSR MLR MLR
comp=Z,4μm,13.0s
VORR Voronezh 19.91 60 *e*P **P 19 25 15.0 -0.3**
MOS Moscow 20.06 48 *e*P **P 19 25 15.9 -1.0**
MOS *e*S Sn 19 29 04.1 +0.1
MOS pmax pmax
comp=Z,155nm,1.5s
MOS pmax pmax
comp=Z,600nm,3.0s
MOS smax smax
comp=E,1μm,4.5s
MOS smax smax
comp=N,1μm,4.6s
MOS MLR MLR
comp=E,1μm,11.0s
MOS MLR MLR
comp=N,400nm,10.0s
SOC Sochi 20.62 83*d i*P **P 19 25 23.8 +0.6**
SOC *e*PPP PPP 19 25 53.6
SOC *e*S **S 19 29 13.3 +0.1**
SOC *e*SS **SnSn 19 29 33.7 +1.5**
SOC pmax pmax
comp=Z,43nm,0.6s
SOC MLR MLR
comp=Z,546nm,13.0s
HWQ Hawqa 21.92 110 *e*P **P 19 25 39.9 +2.5**
BHL Bhannes 21.95 112 *e*P **P 19 25 39.9 +2.1**
MMAI Mount Meron Ar 22.34 114 P **P 19 25 42.5 +0.7**
comp=Z,8.3nm,0.6s,baz=326,slow=10,SNR=14
MMAI LR LR 19 36 53.2
comp=Z,513nm,20.8s,baz=330,slow=44
SHBL Chebaa 22.35 113 *e*P **P 19 25 41.8 -0.3**
TAM Tamanrasset 22.51 193 *e*P **P 19 25 44.1 +0.3**
comp=Z,31nm,1.2s
TAM Tamanrasset 22.51 193 *e*P **P 19 25 44.1 +0.3**
TAM pmax pmax
comp=Z,31nm,1.2s
TAM Tamanrasset 22.51 193 *e*P **P 19 25 44.1 +0.3**
comp=Z,31nm,1.2s
KIV Kislovodsk 22.62 81 *e*P **P 19 25 44.8 0.0**
comp=Z,33nm,1.0s
KIV Kislovodsk 22.62 81 *e*P **P 19 25 43.6 -1.2**
KIV *e*S **S 19 29 51.7 -0.5**
KIV pmax pmax
comp=Z,34nm,1.1s
KIV MLR MLR
comp=Z,354nm,14.0s
KVAR Kislovodsk Arr 22.63 81 P **P 19 25 45.8 +0.9**
comp=Z,12nm,0.7s,baz=282,slow=18,SNR=14
KVAR LR LR 19 35 58.3
comp=Z,431nm,18.7s,baz=270,slow=40
GOF Gofitskoye 22.64 78⇑*e*P **P 19 25 42.9 -1.9**
GOF pmax pmax
comp=Z,73nm,1.6s
NEY Neytrino 22.82 83⇓*e*P **P 19 25 46.3 -0.7**
NEY pmax pmax
comp=Z,3.0nm,1.6s
KBZ Khabaz 22.82 82 P **P 19 25 47.8 +1.0**
comp=Z,12nm,0.9s,baz=288,slow=8.1,SNR=14
KBZ LR LR 19 36 14.0
comp=Z,390nm,18.3s,baz=287,slow=41
KLMR Klimovskoe 23.22 36*d i*P **P 19 25 50.3 -0.4**
KLMR S S 19 29 46.6 -15
KLMR S S 19 29 46.7 -15
KLMR pmax pmax
comp=Z,137nm,1.4s
KLMR MLR MLR
comp=Z,2μm,11.0s
KLMR Klimovskoe 23.22 36⇓*i*P **P 19 25 50.4 -0.3**
KLMR ⇓*i*P **P 19 25 50.4 -0.3**
KLMR ⇓*i*P **P 19 25 50.4 -0.3**
KLMR AMP 19 25 53.3
comp=Z,137nm,1.4s
KLMR S S 19 29 46.7 -15
KLMR S S 19 29 46.8 -15
KLMR LQ LQ 19 32 18.6
KLMR LQ LQ 19 32 18.6
KLMR LR LR 19 33 45.4
KLMR AMP 19 35 31.4
comp=Z,2μm,10.9s
NCK Nalchik 23.38 82⇓*e*P **P 19 25 52.9 +0.4**
NCK pmax pmax
comp=Z,2.0nm,0.3s
ZEI Tsey 23.78 83 *e*P **P 19 25 56.9 +0.2**
ZEI pmax pmax
comp=Z,39nm,1.4s
ASF Jabal al Asfar 23.85 113 P **P 19 25 59.5 +2.3**
comp=Z,19nm,0.9s,baz=254,slow=3.5,SNR=26
EIL Elat 24.30 121 P **P 19 26 03.5 +2.1**
comp=Z,15nm,0.7s,baz=337,slow=6.6,SNR=15
TMCR Tamitsa 24.54 29 *e*P **P 19 26 03.5 +0.3**
TMCR pmax pmax
comp=Z,72nm,1.1s
PMOZ Porto Moniz, M 24.88 251 *e*LR LR 19 30 59.2
comp=Z,368nm,18.0s
GROC Groznyy 25.00 81 *e*P **P 19 26 06.2 -1.4**
GROC *e* 19 26 38.9
GROC *e* 19 29 40.7
GROC *e*S **S 19 30 30.2 -0.8**
GROC pmax pmax
comp=Z,35nm,1.5s
GNI Garni 25.25 89 P **P 19 26 11.2 +1.1**
comp=Z,13nm,0.7s,baz=212,slow=2.6,SNR=18
GNI LR LR 19 37 51.7
comp=Z,400nm,19.0s,baz=262,slow=41
GNI Garni 25.25 89 *e*P **P 19 26 10.9 +0.8**
comp=Z,118nm,1.5s
GNI Garni 25.25 89 P **P 19 26 10.5 +0.4**
SNR=14
GNI Garni 25.25 89*d i*P **P 19 26 11.9 +1.8**
GNI pmax pmax
comp=Z,286nm,1.6s
APA Apatity 25.61 20⇑*i*P **P 19 26 12.2 -0.7**
APA *i* S **S 19 30 34.0 -6.2**
APA pmax pmax
comp=Z,12nm,1.3s
APA MLR MLR
comp=Z,4μm,10.0s
ARA0 ARCESS Array S 25.77 12 *e*P **P 19 26 15.5 +1.1**
ARCES ARCESS Array B 25.77 12 P **P 19 26 15.5 +1.1**
comp=Z,8.0nm,1.0s,baz=204,slow=10,SNR=10.0
ARCES LR LR 19 36 39.6
comp=Z,336nm,18.0s,baz=186,slow=37
PRGR Permogore 26.20 38⇑*i*P **P 19 26 19.1 +0.8**
PRGR pmax pmax
comp=Z,32nm,0.6s
MAK Makhachkala 26.27 81 *e*P **P 19 26 19.1 0.0**
MAK *e* 19 26 56.3
MAK *e*S **S 19 30 53.3 +2.2**
MAK pmax pmax
comp=Z,140nm,1.5s
MAK MLR MLR
comp=Z,620nm,14.0s
MAK Makhachkala 26.27 81 *e*P **P 19 26 19.1 0.0**
comp=Z,140nm,1.5s
MAK *e*S **S 19 30 53.3 +2.2**
JMIC Jan Mayen 27.82 346 LR LR 19 39 01.9
comp=Z,337nm,18.8s,baz=78,slow=39
SCO Scoresbysund 30.31 339 *i* P **P 19 26 56.6 +1.7**
comp=Z,18nm,1.3s
SOKR Solikamsk 30.96 45*c i*P **P 19 27 00.2 -0.5**
SOKR pmax pmax
comp=Z,52nm,1.8s
SOKR MLR MLR
comp=Z,866nm,16.0s
ARU Arti 31.67 51 P **P 19 27 06.9 -0.1**
comp=Z,25nm,0.6s,baz=269,slow=6.8,SNR=80
ARU Arti 31.67 51 *e*P **P 19 27 06.5 -0.5**
comp=Z,43nm,0.7s
ARU Arti 31.67 51*d i*P **P 19 27 06.2 -0.8**
ARU 19 28 05.2
ARU S **S 19 32 15.6 0.0**
ARU pmax pmax
comp=Z,131nm,1.7s
ARU MLR MLR
comp=Z,2μm,15.0s
AKTO Aktyubinsk 31.75 63 P **P 19 27 07.8 +0.1**
comp=Z,9.3nm,0.8s,baz=281,slow=9.1,SNR=35
AKTO LR LR 19 41 50.9
comp=Z,532nm,20.6s,baz=276,slow=40
TOA1 Torodi Ar. Sit 32.62 197 *e*P **P 19 27 14.3 -1.4**
TOA1 *e*PcP **PcP 19 30 01.0 -0.7**
TOA0 Torodi Ar. Sit 32.63 197 *e*P **P 19 27 14.4 -1.3**
TOA0 Torodi Ar. Sit 32.63 197 *e*P **P 19 27 14.4 -1.3**
TORD Torodi Ar. Bea 32.63 197 P **P 19 27 14.3 -1.5**
comp=Z,29nm,1.1s,baz=12,slow=8.8,SNR=54
TORD PcP **PcP 19 30 01.0 -0.8**
comp=Z,1.5nm,0.8s,baz=326,slow=3.0,SNR=4.8
TORD LR LR 19 41 54.8
comp=Z,450nm,18.1s,baz=20,slow=39
SVE Sverdlovsk 32.81 51⇓*e*P **P 19 27 17.3 +0.2**
SVE pmax pmax
comp=Z,136nm,1.3s
SVE MLR MLR
comp=Z,3μm,14.0s
KOWA Kowa 32.87 207 P **P 19 27 16.5 -1.4**
comp=Z,6.2nm,0.8s,baz=18,slow=10,SNR=12
ABKAR Akbulak array 33.18 65 *e*P **P 19 27 20.5 +0.2**
SPA0 Spitsbergen Ar 33.45 2 *e*P **P 19 27 21.1 -1.3**
SPITS Spitsbergen Ar 33.45 2 P **P 19 27 22.8 +0.4**
comp=Z,36nm,1.1s,baz=166,slow=18,SNR=14
SPITS LR LR 19 43 13.4
comp=Z,269nm,18.7s,baz=200,slow=40
DAG Danmarks Havn 34.20 348⇓*i*P **P 19 27 29.9 +1.0**
comp=Z,11nm,1.1s
GEYT Alibeck 35.65 84 P **P 19 27 43.0 +1.1**
comp=Z,6.0nm,0.8s,baz=293,slow=7.9,SNR=7.0
SUMG Summit 35.87 337⇓*i*P **P 19 27 45.6 +1.8**
SUMG Summit 35.87 337 *e*P **P 19 27 43.9 +0.1**
comp=Z,27nm,1.3s
SUMG Summit 35.87 337 *e*P **P 19 27 43.9 +0.1**
SUMG pmax pmax
comp=Z,27nm,1.3s
SFJD Kangerlussuaq 38.73 326 P **P 19 28 08.0 +0.4**
comp=Z,21nm,1.0s,baz=91,slow=8.4,SNR=14
SFJD LR LR 19 45 19.6
comp=Z,621nm,18.0s,baz=102,slow=38
SFJD Kangerlussuaq 38.73 326⇓*i*P **P 19 28 08.3 +0.7**
comp=Z,36nm,1.1s
SFJD Kangerlussuaq 38.73 326 *e*P **P 19 28 07.1 -0.6**
comp=Z,61nm,1.3s
SFJD Kangerlussuaq 38.73 326 P **P 19 28 08.0 +0.4**
SFJD pmax pmax
comp=Z,18nm,0.9s
SFJD MLR MLR
comp=Z,621nm,18.0s
BRVK Borovoye 38.77 56 *e*P **P 19 28 07.1 -1.1**
comp=Z,16nm,0.9s
BRVK Borovoye 38.77 56 P **P 19 28 08.8 +0.7**
SNR=16
BRVK Borovoye 38.77 56*d i*P **P 19 28 09.1 +1.0**
BRVK pmax pmax
comp=Z,49nm,1.8s
BRVK MLR MLR
comp=Z,929nm,17.0s
BVAR Borovoye Array 38.84 56 P **P 19 28 09.6 +0.9**
comp=Z,2.6nm,0.7s,baz=300,slow=6.7,SNR=21
BVAR LR LR 19 45 14.0
comp=Z,859nm,18.0s,baz=284,slow=38
ILULI Ilulissat 39.08 330 *i* P **P 19 28 10.7 +0.2**
comp=Z,51nm,1.1s
ILULI Ilulissat 39.08 330 *e*P **P 19 28 09.7 -0.9**
comp=Z,59nm,1.2s
ILULI Ilulissat 39.08 330 *e*P **P 19 28 09.7 -0.9**
ILULI pmax pmax
comp=Z,59nm,1.2s
DBIC Dimbokro 40.51 205 P **P 19 28 20.7 -2.3**
comp=Z,14nm,1.0s,baz=350,slow=11,SNR=7.9
DBIC LR LR 19 46 08.9
comp=Z,509nm,18.2s,baz=357,slow=38
DBIC Dimbokro 40.51 205 *e*P **P 19 28 20.7 -2.3**
comp=Z,25nm,1.2s
TIC Toumodi 40.58 205 *e*P **P 19 28 25.4 +1.8**
KIC Kosan Boka 40.77 204 *e*P **P 19 28 22.9 -2.2**
comp=Z,55nm,1.2s
LIC Lamto 40.98 205 *e*P **P 19 28 25.1 -1.7**
comp=Z,78nm,1.1s
UOSS Minazif 41.49 103 P **P 19 28 29.2 -1.9**
UOSS Minazif 41.49 103 P **P 19 28 29.2 -1.9**
HATD Hatta, Dubai 41.52 103 P **P 19 28 30.5 -0.8**
HATD Hatta, Dubai 41.52 103 P **P 19 28 30.5 -0.8**
KK31 Karatay Array 42.05 71 *e*P **P 19 28 35.8 +0.4**
KK31 Karatay Array 42.05 71 *e*P **P 19 28 35.8 +0.4**
KKAR Karatay Array 42.05 71 *e*P **P 19 28 35.8 +0.4**
KKAR Karatay Array 42.05 71 *e*P **P 19 28 35.8 +0.4**
SOHO SOHO 42.24 104 P **P 19 28 36.0 -1.2**
NRIK Noril'sk 44.26 30 P **P 19 28 54.3 +1.4**
comp=Z,6.1nm,0.6s,baz=275,slow=5.0,SNR=13
NRIK LR LR 19 49 51.7
comp=Z,897nm,18.1s,baz=252,slow=40
NRIK Noril'sk 44.26 30 P **P 19 28 54.3 +1.4**
NRIK pmax pmax
comp=Z,9.0nm,0.8s
NRIK MLR MLR
comp=Z,897nm,18.1s
KURBB Kurchatov Arra 44.36 57 P **P 19 28 54.1 +0.1**
comp=Z,7.1nm,0.7s,baz=304,slow=7.8,SNR=65
KURK Kurchatov 44.38 57 *e*P **P 19 28 53.8 -0.4**
comp=Z,22nm,0.8s
KURK Kurchatov 44.38 57 P **P 19 28 54.1 0.0**
SNR=14
KURK Kurchatov 44.38 57 P **P 19 28 54.1 0.0**
KURK pmax pmax
comp=Z,7.0nm,0.7s
FRU Bishkek 44.90 69 *e*P **P 19 28 59.0 +0.6**
FRU *e* 19 35 40.0
FRU pmax pmax
comp=Z,60nm,1.9s
AAK Ala-Archa 44.90 69 *e*P **P 19 28 58.1 -0.5**
comp=Z,16nm,1.0s
AAK Ala-Archa 44.90 69 P **P 19 29 00.4 +1.8**
SNR=16
AAK Ala-Archa 44.90 69*c e*P **P 19 28 59.5 +0.9**
AAK pmax pmax
comp=Z,404nm,17.4s
NVS Novosibirsk 45.66 50 *e*P **P 19 29 04.6 +0.4**
NVS *e* 19 30 53.1
NVS pmax pmax
comp=E,17nm,1.8s
NVS pmax pmax
comp=Z,59nm,1.8s
ZAA1 Zalesovo Array 46.83 51 *e*P **P 19 29 13.8 +0.3**
ZAA0 Zalesovo Array 46.83 51 *e*P **P 19 29 12.5 -1.0**
comp=Z,8.3nm,1.0s
ZALV Zalesovo Beam 46.83 51 P **P 19 29 13.8 +0.3**
comp=Z,3.7nm,0.7s,baz=289,slow=8.6,SNR=22
ZALV LR LR 19 51 38.4
comp=Z,606nm,20.9s,baz=252,slow=40
ZALV Zalesovo Beam 46.83 51 *e*P **P 19 29 12.2 -1.3**
KSH Kashi 47.32 73 P **P 19 29 18.9 +1.2**
KSH PP **PP 19 31 10.8 +2.2**
KSH S **S 19 36 09.9 -1.0**
KSH SS **SS 19 39 31.7 -6.3**
KSH pmax pmax
comp=Z,24nm,0.7s
KSH LR LR
comp=Z,470nm,6.4s
KSH LR LR
comp=Z,240nm,5.1s
KSH LR LR
comp=Z,380nm,6.4s
TARG Taragay, Kyrgy 47.51 69 *e*P **P 19 29 19.6 +0.2**
comp=Z,16nm,1.1s
MAKZ Makanchi 47.94 61 *e*P **P 19 29 22.2 0.0**
comp=Z,11nm,0.9s
MAKZ Makanchi 47.94 61 *e*P **P 19 29 22.2 0.0**
MAKZ pmax pmax
comp=Z,11nm,0.9s
MK31 Makanchi Array 48.14 61 *e*P **P 19 29 23.4 -0.4**
MK31 Makanchi Array 48.14 61 *e*P **P 19 29 23.4 -0.4**
MK32 Makanchi Array 48.14 61 *e*P **P 19 29 24.1 +0.3**
MKAR Makanchi Array 48.14 61 P **P 19 29 24.1 +0.3**
comp=Z,9.4nm,0.8s,baz=292,slow=6.4,SNR=54
MKAR LR LR 19 51 48.2
comp=Z,175nm,19.6s,baz=276,slow=39
MKAR Makanchi Array 48.14 61 *e*P **P 19 29 23.3 -0.5**

comp=Z,55nm,0.8s
MKAR Makanchi Array 48.14 61 *e*P **P 19 29 23.3 -0.5**
MKAR pmax pmax
comp=Z,55nm,0.8s
MK01 Makanchi Array 48.15 61 *e*P **P 19 29 23.7 -0.2**
SCHQ Schefferville 48.62 311 LR LR 19 48 04.3
comp=Z,195nm,20.1s,baz=91,slow=34
RES Resolute Bay 51.18 341 *e*P **P 19 29 45.9 -0.6**
comp=Z,10nm,1.4s
RES Resolute Bay 51.18 341 *e*P **P 19 29 45.9 -0.6**
RES pmax pmax
comp=Z,10.0nm,1.4s
WMQ Urumqi 52.89 62 P **P 19 30 01.1 +1.3**
WMQ pP sP 19 30 06.8 +0.9
WMQ S **S 19 37 29.5 +1.2**
WMQ SS **SS 19 41 02.2 -4.5**
WMQ pmax pmax
comp=Z,26nm,1.3s
WMQ pmax pmax
comp=Z,170nm,3.7s
WMQ LR LR
comp=Z,2μm,12.3s
WMQ LR LR
comp=Z,2μm,11.3s
WMQ LR LR
comp=Z,860nm,20.1s
TIXI Tiksi 55.80 20 *e*P **P 19 30 21.1 +0.6**
comp=Z,29nm,1.4s
TIXI Tiksi 55.80 20 *d i*P **P 19 30 21.4 +0.9**
TIXI pmax pmax
comp=Z,31nm,1.7s
TIXI MLR MLR
comp=Z,465nm,16.0s
TRQ Mont Tremblant 56.96 304 *e*P **P 19 30 28.6 -0.6**
LONY Lake Ozonia 57.84 303 P **P 19 30 35.2 -0.1**
baz=57
TLY Talaya 58.01 47 P **P 19 30 35.0 -1.5**
SNR=8.2
TLY Talaya 58.01 47 *i* P **P 19 30 38.1 +1.6**
TLY pmax pmax
comp=Z,35nm,1.6s
IRK Irkutsk 58.03 46 *e*P **P 19 30 36.8 +0.2**
IRK pmax pmax
comp=Z,32nm,2.0s
ZAK Zakamensk 58.54 49 *e*P **P 19 30 39.9 -0.4**
ZAK pmax pmax
comp=Z,7.0nm,1.6s
BINY Binghamton 60.05 301 P **P 19 30 50.1 -0.7**
baz=55
N59A State Game Lan 60.66 300 P **P 19 30 55.6 +0.7**
baz=54
SONA1 Songino Array 61.67 50 *e*P **P 19 31 02.3 +0.4**
SONA0 Songino Array 61.68 50 *e*P **P 19 31 02.7 +0.9**
SONM Songino Array 61.68 50 P **P 19 31 02.7 +0.9**
comp=Z,6.5nm,1.0s,baz=287,slow=7.7,SNR=32
SONM LR LR 20 00 31.6
comp=Z,1μm,18.1s,baz=299,slow=39
ULN Ulaanbaatar 62.02 49 *e*P **P 19 31 02.5 -1.7**
comp=Z,9.3nm,1.2s
ULN Ulaanbaatar 62.02 49 P **P 19 31 03.4 -0.8**
SNR=5.9
ULN Ulaanbaatar 62.02 49 *d i*P **P 19 31 04.7 +0.5**
ULN pmax pmax
comp=Z,19nm,1.7s
SSPA Standing Stone 62.12 301 P **P 19 31 05.3 +0.5**
baz=53
YAK Yakutsk 62.65 28 *e*P **P 19 31 06.9 -1.0**
comp=Z,26nm,0.9s
YAK Yakutsk 62.65 28 *e*P **P 19 31 05.9 -2.0**
YAK *e**PP **pP 19 31 10.4 -2.0**
YAK *e*S **S 19 39 34.4 -0.9**
YAK *e*SSS SSS 19 46 29.6
YAK pmax pmax
comp=Z,28nm,1.3s
YAK pmax pmax
comp=N,10.0nm,1.3s
YAK pmax pmax
comp=E,11nm,1.2s
YAK smax smax
comp=N,22nm,2.5s
YAK smax smax
comp=E,63nm,5.1s
YAK MLR MLR
comp=Z,2μm,18.0s
YAK MLR MLR
comp=N,1μm,16.0s
YAK MLR MLR
comp=E,793nm,18.0s
M54A Oil Creek Stat 62.68 302 P **P 19 31 09.0 +0.5**
baz=53
O56A Blue Knob Stat 62.76 301 P **P 19 31 09.1 0.0**
baz=53
GTA Gaotai 62.89 60 P **P 19 31 10.7 +0.6**
GTA pP sP 19 31 17.7 +1.4
GTA sP pP 19 31 21.0 +6.4
GTA S **S 19 39 40.1 +0.7**
GTA sS sS 19 39 51.3 +4.5
GTA pmax pmax
comp=E,7.0nm,1.8s
GTA pmax pmax
comp=E,110nm,4.8s
GTA LR LR
comp=E,370nm,19.6s
GTA LR LR
comp=E,340nm,18.9s
GTA LR LR
comp=E,300nm,16.5s
E45A Wooded Hills, 62.92 309 P **P 19 31 11.4 +1.4**
baz=52
LSA Lhasa 63.13 74 P **P 19 31 13.1 +0.8**
LSA pmax pmax
comp=E,6.0nm,0.9s
N54A Moraine State 63.20 302 P **P 19 31 12.2 +0.1**
baz=53
E43A Lone Tree Farm 63.90 310 P **P 19 31 16.3 -0.3**
baz=52
MCWV Mont Chateau 63.91 301 P **P 19 31 17.2 +0.5**
baz=52
D41A Chassel 64.32 312 P **P 19 31 19.6 +0.4**
baz=51
F43A Flat Rock, Esc 64.34 310 P **P 19 31 19.8 +0.4**
baz=51
E42A Champion 64.37 311 P **P 19 31 18.5 -1.1**
baz=51
YKW3 Yellowknife Ar 64.39 335 *e*P **P 19 31 20.1 +0.7**
comp=E,21nm,1.2s
YKA Yellowknife Ar 64.44 335 P **P 19 31 20.4 +0.7**
comp=E,10nm,1.1s,baz=43,slow=6.5,SNR=44
YKA LR LR 20 00 37.5
comp=E,30nm,18.1s,baz=48,slow=37
YKA Yellowknife Ar 64.44 335 P **P 19 31 20.4 +0.7**
YKA pmax pmax
comp=Z,12nm,1.1s
YKA MLR MLR
comp=Z,30nm,18.1s
E41A Kenton 64.91 311 P **P 19 31 23.4 +0.2**
baz=50
G43A Wallace 64.98 310 P **P 19 31 24.1 +0.5**
baz=51
EYMN Ely 65.28 314 P **P 19 31 25.9 +0.3**
baz=50
E40A Wakefield 65.42 312 P **P 19 31 27.5 +1.0**
baz=50,SNR=7.5
ACSO Alum Creek Sta 65.44 303 P **P 19 31 27.0 +0.3**
baz=51,SNR=6.2
F41A Three Lakes 65.44 311 P **P 19 31 27.1 +0.4**
baz=50
C37A Embarrass 65.78 314 P **P 19 31 29.6 +0.8**
baz=49
E39A Mellen 65.81 312 P **P 19 31 29.6 +0.7**
baz=50
TOLK Toolik Lake Re 65.83 352 P **P 19 31 30.0 +1.2**
baz=15
BILL Bilibino 65.85 10⇓ *i*P **P 19 31 29.3 +0.4**
BILL *e* 19 33 57.6
BILL pmax pmax
comp=Z,14nm,1.6s
BILL MLR MLR
comp=Z,142nm,20.0s
F40A Park Falls 65.88 311 P **P 19 31 30.1 +0.7**
baz=50
ULM Lac du Bonnet 65.94 318 P **P 19 31 29.9 +0.2**
comp=Z,8.6nm,0.9s,baz=45,slow=4.8,SNR=14
ULM Lac du Bonnet 65.94 318 *e*P **P 19 31 28.5 -1.3**
comp=Z,22nm,1.3s
ULM Lac du Bonnet 65.94 318 P **P 19 31 30.0 +0.2**
ULM pmax pmax
comp=Z,9.0nm,0.9s
C36A Pine Crest Far 66.09 314 P **P 19 31 30.7 -0.1**
baz=49
I43A Langenfeld Bro 66.11 309 P **P 19 31 31.6 +0.6**
baz=50
B35A Bob, Littlefor 66.15 315 P **P 19 31 32.0 +0.9**
baz=49,SNR=5.6
E38A The Farm, Brul 66.19 313 P **P 19 31 31.3 0.0**
baz=49
F39A Loretta 66.30 312 P **P 19 31 32.2 0.0**
baz=49,SNR=6.3
G40A Rib Lake 66.34 311 P **P 19 31 33.4 +1.0**
baz=50
B34A Aery, Baudette 66.52 316 P **P 19 31 33.6 +0.1**
baz=48,SNR=5.8
I42A Draeger Farm, 66.53 309 P **P 19 31 33.9 +0.3**
baz=50
J43A Natural Harves 66.58 308 P **P 19 31 35.0 +1.0**
baz=50
A33A Warroad 66.59 316 P **P 19 31 33.9 0.0**
baz=48
D36A Goodland 66.64 314 P **P 19 31 34.3 0.0**
baz=49
M46A Old House Fiel 66.68 306 P **P 19 31 34.7 +0.1**
baz=50
C35A Jirik Farms, M 66.71 315 P **P 19 31 34.6 -0.1**
baz=48
F38A Pierce - Schro 66.78 312 P **P 19 31 35.8 +0.7**
baz=49,SNR=10
G39A Holcombe 66.84 311 P **P 19 31 35.9 +0.2**
baz=49,SNR=5.9
H40A Chili 66.86 310 P **P 19 31 36.2 +0.4**
baz=49,SNR=6.1
I41A Arkdale 66.94 310 P **P 19 31 36.4 +0.1**
baz=49
K43A Burlington 66.97 308 P **P 19 31 36.9 +0.4**
baz=50,SNR=5.3
J42A Columbus 67.02 309 P **P 19 31 37.0 +0.2**
baz=49
S52A Salyersville 67.12 301 P **P 19 31 37.9 +0.4**
baz=50
E36A McGregor 67.13 313 P **P 19 31 37.2 -0.3**
baz=48
A32A Rocking H Ranc 67.14 317 P **P 19 31 37.9 +0.4**
baz=47
N46A Monticello 67.23 305 P **P 19 31 38.4 +0.3**
baz=50,SNR=6.0
AGMN Agassiz Nation 67.25 316 P **P 19 31 38.6 +0.4**
baz=48
COLD Coldfoot 67.27 352 *e*P **P 19 31 37.3 -0.6**
comp=Z,8.9nm,1.2s
G38A Ridgeland 67.29 312 P **P 19 31 38.7 +0.2**
baz=49
H39A Augusta 67.30 311 P **P 19 31 38.5 -0.1**
baz=48
O47A Sheridan 67.33 305 P **P 19 31 38.5 -0.2**
baz=50,SNR=5.9
T52A Hallie 67.42 300 P **P 19 31 40.2 +0.8**
baz=50
LZH Lanzhou 67.45 61 *e*P **P 19 31 41.4 +1.6**
LZH pP sP 19 31 46.5 +0.5
LZH sP pP 19 31 49.2 +4.8
LZH pmax pmax
comp=Z,16nm,1.3s
S51A Beattyville 67.46 301 P **P 19 31 40.0 +0.4**
baz=50
J41A Loganville 67.48 309 P **P 19 31 39.8 +0.1**
baz=49,SNR=5.5
K42A Prairie Point, 67.49 308 P **P 19 31 39.8 +0.1**
baz=49,SNR=6.7
B32A Ashes, Strandq 67.52 317 P **P 19 31 39.9 +0.1**
baz=47
L43A Garden Prairie 67.54 308 P **P 19 31 40.1 0.0**
baz=49
C33A Trail 67.57 316 P **P 19 31 40.5 +0.3**
baz=47
KMSC Kings Mountain 67.66 298 P **P 19 31 41.1 +0.2**
baz=50
M44A Midewin, Midew 67.66 307 P **P 19 31 40.8 -0.1**
baz=49
F36A Milaca 67.70 313 P **P 19 31 40.4 -0.7**
baz=48
D34A Park Rapids 67.74 315 P **P 19 31 41.0 -0.3**
baz=47
H38A Maiden Rock 67.84 311 P **P 19 31 42.3 +0.3**
baz=48
J40A Soldiers Grove 67.86 310 P **P 19 31 42.5 +0.4**
baz=49
P47A Martinsville 67.87 304 P **P 19 31 41.6 -0.6**
baz=50
JFWS Jewell Farm 67.90 309 P **P 19 31 42.2 -0.1**
baz=49
N44A Piper City 68.10 306 P **P 19 31 43.8 +0.2**
baz=49
TZTN Tazewell 68.13 300 P **P 19 31 44.3 +0.3**
baz=50
K41A Shullsburg 68.14 309 P **P 19 31 44.0 +0.2**
baz=49
M43A Waltham Townsh 68.15 307 P **P 19 31 44.1 +0.2**
baz=49
L42A Oliver, Polo 68.18 308 P **P 19 31 44.2 +0.1**
baz=49
SEY Seymchan 68.19 18⇑ *e*P **P 19 31 45.5 +1.7**
O45A Potomac 68.22 305 P **P 19 31 44.0 -0.4**
baz=49
V53A Saluda 68.24 299 P **P 19 31 44.8 +0.1**
baz=50
G36A St. Michael 68.24 313 P **P 19 31 45.0 +0.5**
baz=48
I38A Scanlan Farm, 68.29 311 P **P 19 31 45.1 +0.3**
baz=48
P46A Rosedale 68.33 305 P **P 19 31 44.8 -0.3**
baz=49
R48A Northridge Ran 68.34 303 P **P 19 31 44.5 -0.6**
baz=49
J39A Decorah 68.42 310 P **P 19 31 45.1 -0.5**
baz=48,SNR=9.1
C31A Landman Farms, 68.51 317 P **P 19 31 45.9 -0.3**
baz=46
K40A Colesburg 68.53 309 P **P 19 31 46.2 -0.2**
baz=48
L41A Preston 68.60 308 P **P 19 31 46.7 0.0**
baz=48,SNR=7.3
T50A Nancy 68.61 301 P **P 19 31 46.7 -0.2**
baz=49,SNR=7.2
V52A Sevierville 68.62 300 P **P 19 31 46.6 -0.4**
baz=49
WCI Wyandotte Cave 68.70 303 P **P 19 31 47.3 -0.1**
baz=49
WCI Wyandotte Cave 68.70 303 *e*P **P 19 31 47.4 -0.1**
comp=Z,21nm,0.9s
WCI Wyandotte Cave 68.70 303 *e*P **P 19 31 47.4 -0.1**
WCI pmax pmax
comp=Z,21nm,0.9s
P45A Graceland, Par 68.71 305 P **P 19 31 46.7 -0.7**
baz=49,SNR=6.7
O44A Mansfield 68.72 306 P **P 19 31 47.1 -0.4**
baz=49
W53A Cullowhee 68.78 299 P **P 19 31 48.1 -0.1**
baz=49
R47A Wooly Knot Far 68.80 303 P **P 19 31 48.1 +0.1**
baz=49,SNR=5.9
IM3 Indian Mountai 68.80 353 *e*P **P 19 31 47.2 -0.4**
J38A Wedel Dairy, R 68.85 310 P **P 19 31 48.1 -0.2**
baz=48,SNR=7.4
DAWY Dawson 68.87 347 *e*P **P 19 31 48.8 +0.7**
comp=Z,21nm,1.1s
HDIL Hopedale 68.92 307 P **P 19 31 48.4 -0.4**
baz=48
S48A Wiedeman Farm, 68.93 302 P **P 19 31 48.3 -0.6**
baz=49
K39A Oelwein 68.94 310 P **P 19 31 48.9 +0.1**
baz=48
HHC Hu-ho-hao-te 68.96 53 *e*P **P 19 31 49.6 +0.5**
HHC pP pP 19 31 54.1 +0.4
HHC PP **PP 19 34 26.4 +5.4**
HHC S **S 19 40 52.6 -0.7**
HHC pmax pmax
comp=Z,16nm,1.0s
HHC pmax pmax
comp=Z,70nm,4.9s
HHC LR LR
comp=Z,250nm,15.7s
HHC LR LR
comp=Z,330nm,15.9s
HHC LR LR
comp=Z,370nm,17.3s
T49A Edmonton 68.98 302 P **P 19 31 49.1 -0.1**
baz=49,SNR=9.6
L40A Anamosa 69.01 309 P **P 19 31 49.4 +0.2**
baz=48
V51A Loudon 69.11 300 P **P 19 31 50.3 +0.3**
baz=49,SNR=7.3
F33A 5 Mile Ranch, 69.14 314 P **P 19 31 50.1 +0.1**
baz=46,SNR=6.9
N42A Yates City 69.16 307 P **P 19 31 49.9 -0.3**
baz=48
H35A Sunnyside Ranc 69.17 313 P **P 19 31 50.4 +0.2**
baz=47,SNR=6.1
P44A Sand Creek, Wi 69.26 305 P **P 19 31 50.7 -0.2**
baz=48
MDM Murphy Dome 69.26 351 *e*P **P 19 31 50.9 +0.4**
comp=Z,27nm,1.4s
IL1 Eielson Array 69.28 350 *e*P **P 19 31 50.3 -0.3**
ILAR Eielson Array 69.28 350 P **P 19 31 51.8 +1.2**
comp=Z,3.9nm,1.0s,baz=9.7,slow=5.4,SNR=26
ILAR LR LR 20 03 41.3
comp=Z,78nm,20.1s,baz=353,slow=37
ILB Eielson Array 69.28 350 *e*P **P 19 31 50.5 -0.1**
COLA College 69.30 350 *i* P **P 19 31 51.7 +1.1**
COLA pmax pmax
comp=Z,12nm,1.5s
X53A Estanollee 69.30 298 P **P 19 31 51.4 +0.2**
baz=49
Y54A Tignall 69.33 297 P **P 19 31 51.8 +0.4**
baz=49,SNR=7.2
Q45A Warren Harvey, 69.36 305 P **P 19 31 51.1 -0.4**
baz=48,SNR=10.0
L39A Vinton 69.40 309 P **P 19 31 51.3 -0.4**
baz=48,SNR=6.0
R46A Gibon Southern 69.44 304 P **P 19 31 51.9 -0.1**
baz=48,SNR=5.5
J37A Redenius Farm, 69.44 311 P **P 19 31 52.1 +0.2**
baz=47
E31A Nome 69.44 316 P **P 19 31 51.7 -0.2**
baz=46
MLY Manley 69.46 352 *e*P **P 19 31 51.8 0.0**
comp=Z,18nm,1.2s
T48A Bowling Green 69.50 302 P **P 19 31 52.1 -0.3**
baz=49,SNR=11
U49A Red Boiling Sp 69.52 301 P **P 19 31 52.4 -0.2**
baz=49
X52A Dahlonega 69.61 299 P **P 19 31 52.7 -0.4**
baz=49,SNR=6.6
V50A Pikeville 69.65 300 P **P 19 31 53.2 -0.2**
baz=49
P43A Skaggs, Pawnee 69.66 306 P **P 19 31 53.1 -0.3**
baz=48
H34A Spellman Lake, 69.68 313 P **P 19 31 53.8 +0.4**
baz=46
N41A Harden Midland 69.71 307 P **P 19 31 53.3 -0.3**
baz=48,SNR=6.0
R45A Skylar, Fairfi 69.84 304 P **P 19 31 53.9 -0.6**
baz=48
Z54A Sparta 69.84 297 P **P 19 31 54.6 +0.1**
baz=49
J36A Seneca 1, Swea 69.84 311 P **P 19 31 54.2 -0.2**
baz=47
K37A Belmond 69.85 311 P **P 19 31 54.4 -0.1**
baz=47,SNR=6.9
Q44A Meyer Farm, Va 69.86 305 P **P 19 31 54.4 -0.2**
baz=48
Y53A Monroe 69.90 298 P **P 19 31 55.2 +0.2**
baz=49
S46A Don Dixon Farm 69.90 303 P **P 19 31 54.3 -0.5**
baz=48,SNR=12
L38A Oak Wood Farm, 69.91 310 P **P 19 31 54.7 -0.2**
baz=47,SNR=6.1
M39A Webster 69.92 309 P **P 19 31 54.9 0.0**
baz=47
U48A Cassie Pea, Po 69.98 302 P **P 19 31 55.1 -0.2**
baz=48,SNR=7.5
N40A Mertquake, Sal 70.00 308 P **P 19 31 55.3 -0.1**
baz=48
T47A Sharon Grove 70.00 302 P **P 19 31 54.9 -0.6**
baz=48,SNR=20
155A Kite 70.00 296 P **P 19 31 55.9 +0.3**
baz=49
V49A McMinnville 70.08 301 P **P 19 31 55.7 -0.3**
baz=48,SNR=11
W50A Signal Mountai 70.09 300 P **P 19 31 56.0 -0.1**
baz=49,SNR=7.5
GOGA Godfrey 70.12 298 P **P 19 31 56.4 +0.1**
baz=49
O41A Passleys Farm, 70.12 307 P **P 19 31 55.8 -0.3**
baz=48,SNR=7.9
P42A Winchester 70.17 306 P **P 19 31 55.8 -0.7**
baz=48,SNR=5.7
H33A Prehn Over Nor 70.17 314 P **P 19 31 56.0 -0.5**
baz=46
Y52A Lilburn 70.20 298 P **P 19 31 56.8 0.0**
baz=49
X51A Calhoun 70.23 299 P **P 19 31 56.5 -0.4**
baz=49
Z53A Monticello 70.27 297 P **P 19 31 56.6 -0.6**
baz=49
R44A Waltonville 70.33 305 P **P 19 31 56.5 -1.0**
baz=48
L37A Phoenix Point, 70.35 310 P **P 19 31 57.1 -0.4**
baz=47
BPAW Bear Paw Mtn. 70.39 352 *e*P **P 19 31 56.9 -0.5**
comp=Z,27nm,1.4s
S45A Carrier Mills 70.42 304 P **P 19 31 57.7 -0.3**
baz=48
T46A Princeton 70.44 303 P **P 19 31 57.5 -0.6**
baz=48,SNR=13
255A Hazlehurst 70.46 296 P **P 19 31 58.3 -0.1**
baz=49
U47A Clarksville 70.47 302 P **P 19 31 57.9 -0.5**
baz=48,SNR=16
N39A Derby Farms, D 70.52 309 P **P 19 31 58.3 -0.3**
baz=47
P41A Barry, Barry 70.52 307 P **P 19 31 58.4 -0.2**
baz=47,SNR=7.1
MCK McKinley 70.53 351 *e*P **P 19 31 58.3 0.0**
comp=Z,35nm,1.2s
MCK McKinley 70.53 351 *e*P **P 19 31 58.3 0.0**
MCK pmax pmax
comp=Z,35nm,1.2s
M38A Pleasantville 70.53 309 P **P 19 31 58.2 -0.4**
baz=47
H32A Carlson Farm, 70.65 314 P **P 19 31 59.0 -0.4**
baz=46
V48A Smith Brothers 70.66 301 P **P 19 31 59.3 -0.3**
baz=48,SNR=10
O40A La Belle 70.68 308 P **P 19 31 59.0 -0.6**
baz=47
W49A Belvidere 70.73 301 P **P 19 31 59.5 -0.5**
baz=48
CD2 Chengdu 70.76 65 P **P 19 31 59.5 -0.8**
CD2 pmax pmax
comp=Z,10.0nm,0.6s
ECSD EROS Data Cent 70.76 313 P **P 19 31 59.9 -0.2**
baz=46,SNR=12
MA2 Magadan 70.77 20 LR LR 20 06 53.6
comp=Z,241nm,20.3s,baz=312,slow=39
MA2 Magadan 70.77 20⇑ *i*P **P 19 32 00.9 +1.1**
MA2 pmax pmax
comp=Z,37nm,1.3s
X50B Fort Payne 70.79 300 P **P 19 31 59.6 -0.8**
baz=48
Y51A Rockmart 70.80 299 P **P 19 32 00.6 +0.2**
baz=48,SNR=8.8
S44A Carbondale 70.81 304 P **P 19 31 59.5 -0.9**
baz=48,SNR=7.3
R43A Red Bud 70.81 305 P **P 19 31 59.7 -0.7**
baz=48,SNR=6.4
Z52A Williamson 70.86 298 P **P 19 32 01.2 +0.4**
baz=48
254A Abbeville 70.97 296 P **P 19 32 02.7 +1.2**
baz=48
WVT Waverly 71.01 302 P **P 19 32 01.0 -0.6**
baz=48
M37A Trindle Farm, 71.01 310 P **P 19 32 01.7 +0.1**
baz=46
V47A Nunnelly 71.02 302 P **P 19 32 00.9 -0.8**
baz=48,SNR=8.1
U46A Springville 71.06 303 P **P 19 32 01.3 -0.7**
baz=48
DGMT Dagmar 71.07 320 P **P 19 32 01.6 -0.3**
baz=43
Q41A Truxton 71.10 306 P **P 19 32 01.7 -0.5**
baz=47
W48A Pulaski 71.13 301 P **P 19 32 01.3 -1.1**
baz=48,SNR=8.1
X49A Woodville 71.17 300 P **P 19 32 02.5 -0.2**

baz=48,SNR=9.6
P40A Paris 71.18 307 P P 19 32 01.8 -0.8
baz=47,SNR=6.1
Y50A Piedmont 71.22 299 P P 19 32 03.5 +0.5
baz=48,SNR=5.2
S43A Fulton Ridge, 71.37 305 P P 19 32 03.2 -0.6
baz=47,SNR=14
152A Waverly Hall 71.40 298 P P 19 32 04.2 +0.1
baz=48
V46A Holladay 71.40 302 P P 19 32 03.4 -0.6
baz=48,SNR=27
253A Americus 71.43 297 P P 19 32 04.8 +0.5
baz=48
W47A Westpoint 71.45 301 P P 19 32 03.3 -1.1
baz=48,SNR=5.9
N37A Lee Faris, Mou 71.54 309 P P 19 32 05.0 +0.2
baz=46
Q40A Laux Farm, Aux 71.56 307 P P 19 32 05.1 +0.2
baz=47
P39B Salisbury 71.61 308 P P 19 32 04.7 -0.5
baz=47
R41A Rosebud 71.64 306 P P 19 32 04.9 -0.5
baz=47,SNR=11
X48A Hartselle 71.65 300 P P 19 32 05.4 -0.2
baz=48,SNR=15
S42A Caledonia 71.66 305 P P 19 32 04.7 -0.8
baz=47,SNR=6.0
Y49A Blount Mountai 71.66 300 P P 19 32 05.5 -0.2
baz=48,SNR=7.9
CCM Cathedral Cave 71.72 306 P P 19 32 05.5 -0.5
baz=47
CCM Cathedral Cave 71.72 306 eP P 19 32 04.1 -1.8
comp=Z,26nm,1.2s
CCM Cathedral Cave 71.72 306 eP P 19 32 04.1 -1.8
CCM pmax pmax
comp=Z,27nm,1.2s
Z50A Ashland 71.76 299 P P 19 32 06.0 -0.2
baz=48,SNR=7.1
T43A Greenville 71.83 304 P P 19 32 06.2 -0.4
baz=47
252A Lumpkin 71.86 297 P P 19 32 07.2 +0.4
baz=48
151A Opelika 71.87 298 P P 19 32 07.2 +0.3
baz=48
O37A Wolven Farm, M 71.91 309 P P 19 32 07.0 -0.1
baz=46
PLAL Pickwick Lake 71.93 301 eP P 19 32 06.0 -1.2
comp=Z,36nm,1.1s
XAN Xi'an 71.94 60 P P 19 32 07.8 +0.4
XAN pP sP 19 32 16.4 +2.8
XAN pmax pmax
comp=Z,12nm,0.9s
P38A Dawn 71.95 308 P P 19 32 07.5 +0.2
baz=46,SNR=9.5
353A Camilla 71.96 296 P P 19 32 07.4 -0.1
baz=48
W46A Michie 72.01 302 P P 19 32 06.6 -1.1
baz=47,SNR=7.8
Q39A Willow Grove F 72.03 307 P P 19 32 07.9 +0.1
baz=46,SNR=5.4
Y48A Jasper 72.09 300 P P 19 32 08.2 0.0
baz=48,SNR=9.5
X47A Russelville 72.11 301 P P 19 32 07.7 -0.6
baz=47
R40A Maddies Statio 72.15 306 P P 19 32 08.0 -0.5
baz=46,SNR=13
Z49A Columbiana 72.18 299 P P 19 32 08.5 -0.2
baz=48,SNR=7.3
251A Midway 72.22 298 P P 19 32 08.6 -0.4
baz=48
150A Eclectic 72.26 298 P P 19 32 09.4 +0.2
baz=48
SML Sawmill 72.32 350 eP P 19 32 09.5 +0.3
comp=Z,29nm,1.0s
SML Sawmill 72.32 350 eP P 19 32 09.5 +0.3
SML pmax pmax
comp=Z,29nm,1.0s
S41A Jillco Farms, 72.33 306 P P 19 32 09.1 -0.6
baz=47,SNR=22
T42A Van Buren 72.33 305 P P 19 32 09.0 -0.6
baz=47
SKAG Skagway 72.35 343 eP P 19 32 09.9 +0.6
comp=Z,27nm,1.4s
P37A Lathrop 72.43 309 P P 19 32 09.6 -0.5
baz=46
Q38A Cooks Store, C 72.45 308 P P 19 32 10.2 -0.1
baz=46,SNR=11
W45A Hickory Valley 72.48 302 P P 19 32 09.7 -0.9
baz=47
Y47A UCPARC, Winfie 72.52 300 P P 19 32 10.0 -0.8
baz=47,SNR=5.6
X46A Booneville 72.52 301 P P 19 32 10.0 -0.8
baz=47
SKT Skwentna 72.52 351 eP P 19 32 10.6 +0.3
comp=Z,18nm,1.3s
R39A Chumby, Stover 72.57 307 P P 19 32 10.8 -0.3
baz=46,SNR=13
LRAL Lakeview Retre 72.58 299 P P 19 32 11.0 -0.1
baz=47,SNR=13
LRAL Lakeview Retre 72.58 299 eP P 19 32 10.4 -0.7
comp=Z,21nm,1.1s
BMRM Bremner River 72.61 348 eP P 19 32 11.5 +0.6
comp=Z,47nm,1.3s
PMR Palmer 72.63 350 eP P 19 32 11.4 +0.5
comp=Z,17nm,1.3s
PMR Palmer 72.63 350 eP P 19 32 11.4 +0.5
PMR pmax pmax
comp=Z,17nm,1.3s
Z48A Northport 72.69 300 P P 19 32 11.5 -0.3
baz=47,SNR=23
T41A Mountain View 72.71 305 P P 19 32 11.7 -0.2
baz=46,SNR=22
149A Jones 72.74 299 P P 19 32 12.4 +0.2
baz=47,SNR=9.1
S40A Lebanon 72.76 306 P P 19 32 11.8 -0.4
baz=46,SNR=21
U42A Revenden 72.88 304 P P 19 32 12.7 -0.2
baz=46,SNR=11
SUA Susitna One 72.94 351 eP P 19 32 12.8 -0.1
comp=Z,30nm,1.0s
KLR Kul'dur 72.98 36 LR LR 20 07 07.8
comp=Z,49nm,18.8s,slow=38
KLR Kul'dur 72.98 36d iP P 19 32 13.6 +0.4
Q37A Longview Farm, 72.98 308 P P 19 32 13.8 +0.4
baz=46
T40A Mansfield 73.08 306 P P 19 32 14.0 -0.1
baz=46,SNR=6.1
X45A UM Field Stati 73.10 302 P P 19 32 13.4 -0.8
baz=47,SNR=6.6
Z47A Carrollton 73.13 300 P P 19 32 13.7 -0.7
baz=47
Y46A Houston 73.14 301 P P 19 32 13.5 -1.0
baz=47
R38A Fenwick Farm, 73.15 307 P P 19 32 14.2 -0.3
baz=46,SNR=13
S39A Bolivar 73.17 307 P P 19 32 14.1 -0.4
baz=46,SNR=14
148A Greensboro 73.19 299 P P 19 32 14.9 +0.1
baz=47,SNR=5.0
U41A Viola 73.29 305 P P 19 32 15.4 0.0
baz=46,SNR=8.3
LAO LASA Array 73.31 320 P P 19 32 16.5 +1.1
baz=41
V42A Cord 73.35 304 P P 19 32 15.5 -0.2
baz=46,SNR=15
S38A Stockton 73.54 307 P P 19 32 16.6 -0.2
baz=46,SNR=13
Y45A Yeager Farm, C 73.57 301 P P 19 32 16.3 -0.7
baz=47,SNR=11
GRNR Gornyy 73.64 33 eP P 19 32 17.8 +0.7
GRNR pmax pmax
comp=Z,31nm,1.0s
T39A Clever 73.66 306 P P 19 32 16.9 -0.6
baz=46,SNR=9.2
248A Dixon Mills 73.67 299 P P 19 32 17.6 0.0
baz=47
V41A Mountainview 73.81 304 P P 19 32 18.1 -0.3
baz=46,SNR=21
U40A Yellville 73.82 305 P P 19 32 18.4 -0.1
baz=46,SNR=17
EGMT Eagleton 73.85 323 P P 19 32 19.9 +1.3
baz=39
KMI Kunming 73.93 71 P P 19 32 20.6 +1.1
KMI pmax pmax
comp=Z,7.0nm,1.4s
KMI pmax pmax
comp=Z,140nm,4.5s
Z45A Winona 74.00 301 P P 19 32 19.3 -0.2
baz=46
KSU1 Kansas State U 74.02 309 P P 19 32 19.3 -0.2
baz=45,SNR=5.3
KSU1 Kansas State U 74.02 309 eP P 19 32 18.1 -1.4
comp=Z,46nm,1.1s
U39A Green Forest 74.17 306 P P 19 32 20.2 -0.2
baz=46,SNR=14
T38A Diamond 74.18 307 P P 19 32 20.2 -0.3
baz=45,SNR=9.6
V40A Witts Springs 74.19 305 P P 19 32 20.6 -0.1
baz=46,SNR=19
RSSD Black Hills 74.21 317 P P 19 32 19.7 -1.1
baz=42
247A Quitman 74.24 300 P P 19 32 21.5 +0.6
baz=47
W41B Gary Mavity, V 74.29 304 P P 19 32 21.4 +0.2
baz=46,SNR=16
BOSA Boshof 74.33 167 P P 19 32 19.3 -2.1
comp=Z,1.8nm,0.4s,baz=345,slow=6.0,SNR=12
BOSA LR LR 20 09 20.3
comp=Z,187nm,18.6s,baz=354,slow=39
Z44A Pea Ridge, Bel 74.52 302 P P 19 32 22.0 -0.5
baz=46
V39A Pettigrew 74.64 305 P P 19 32 23.0 -0.3
baz=45
347A Saraland 74.64 299 P P 19 32 23.2 -0.1
baz=46,SNR=5.7
145A Houston Renfro 74.67 301 P P 19 32 24.0 +0.6
baz=46
WALA Waterton Lakes 74.75 326 eP P 19 32 22.7 -1.1
comp=Z,18nm,1.1s
W40A Ferguson Farm, 74.76 305 P P 19 32 24.7 +0.8
baz=46,SNR=8.5
Y42A Garnett, Star 74.94 303 P P 19 32 23.9 -1.1
baz=46
X40A Basin Creek Fa 75.11 304 P P 19 32 26.1 +0.2
baz=46,SNR=19
X40A Basin Creek Fa 75.11 304 eP P 19 32 25.0 -0.9
comp=Z,34nm,1.2s
W39A Magazine 75.17 305 P P 19 32 26.6 +0.3
baz=45,SNR=16
Y41A Eaglette Beard 75.40 303 P P 19 32 28.1 +0.5
baz=45
MIAR Mount Ida 75.51 304 P P 19 32 28.6 +0.4
baz=45,SNR=31
244A Avery, Jackson 75.52 301 P P 19 32 28.6 +0.3
baz=46
OGNE Ogallala 75.56 314 P P 19 32 29.1 +0.6
baz=42
GYA Guiyang 75.63 67 eP P 19 32 30.0 +0.8
GYA pmax pmax
comp=Z,10.0nm,1.0s
Y40A Okolona 75.71 304 P P 19 32 29.4 +0.1
baz=45
TUL1 Leonard 75.82 307 P P 19 32 30.0 -0.1
baz=44,SNR=6.8
TUL1 Leonard 75.82 307 eP P 19 32 30.2 +0.2
comp=Z,45nm,1.4s
CMAR Chiang Mai Arr 75.83 78 P P 19 32 30.2 0.0
comp=Z,1.4nm,0.8s,baz=308,slow=7.3,SNR=9.5
CMAR LR LR 20 13 08.0
comp=Z,97nm,19.3s,baz=281,slow=42
CMAR Chiang Mai Arr 75.83 78 P P 19 32 30.3 0.0
CMAR pmax pmax
comp=Z,2.0nm,0.8s
CMAR MLR MLR
comp=Z,97nm,19.3s
X39A Fountain Ranch 75.85 305 P P 19 32 30.7 +0.5
baz=45
RLMT Red Lodge 75.88 321 P P 19 32 32.0 +1.5
baz=39
CBKS Cedar Bluff 75.92 311 P P 19 32 30.7 +0.1
baz=43
344A Westbrook Farm 75.96 300 P P 19 32 32.2 +1.3
baz=46
Z40A Long Farm, Mag 76.31 303 P P 19 32 33.4 +0.6
baz=45
K22A Casper 76.51 318 P P 19 32 34.0 0.0
baz=40,SNR=10
MSO Missoula 76.55 325 P P 19 32 34.2 +0.1
baz=37
MSO Missoula 76.55 325 eP P 19 32 33.7 -0.4
comp=Z,14nm,1.4s
BOZ Bozeman (W) 76.55 323 P P 19 32 36.0 +1.7
baz=38
NEW Newport 76.65 327 P P 19 32 35.3 +0.7
baz=35,SNR=12
NEW Newport 76.65 327 eP P 19 32 35.3 +0.7
comp=Z,22nm,1.3s
NEW Newport 76.65 327 eP P 19 32 35.3 +0.7
NEW pmax pmax
comp=Z,22nm,1.3s
KDAK Kodiak Island 76.75 351 eP P 19 32 36.1 +1.2
comp=Z,57nm,1.4s
KDAK Kodiak Island 76.75 351 iP P 19 32 37.0 +2.1
241A Mo Tay, Goldon 76.89 302 P P 19 32 37.1 +1.0
baz=45
USRK Ussuriysk Ar. 76.98 39 P P 19 32 37.4 +1.0
comp=Z,3.2nm,0.7s,baz=294,slow=5.2,SNR=15
USRK LR LR 20 09 43.9
comp=Z,168nm,19.0s,baz=312,slow=38
342A Flagon Creek P 76.99 301 P P 19 32 37.2 +0.5
baz=45
DLMT Dillon 77.15 323 eP P 19 32 39.0 +1.4
comp=Z,24nm,1.4s
KSCO Kaye Shedlock' 77.30 313 P P 19 32 39.4 +0.9
baz=42
KSCO Kaye Shedlock' 77.30 313 eP P 19 32 39.6 +1.1
comp=Z,48nm,1.3s
B08A Colville Reser 77.41 329 eP P 19 32 39.4 +0.6
comp=Z,18nm,1.4s
N23A Red Feather La 77.56 316 P P 19 32 41.2 +1.1
baz=40,SNR=6.3
MOOW Moose Ponds 77.62 321 eP P 19 32 40.3 0.0
comp=Z,13nm,1.3s
MCMT McKenzie Canyo 77.69 323 eP P 19 32 40.3 -0.4
SDV Santo Domingo 77.82 270 LR LR 20 01 57.4
comp=Z,64nm,21.6s,baz=64,slow=32
PDAR Pinedale Array 77.84 320 P P 19 32 41.6 0.0
comp=Z,1.4nm,0.7s,baz=57,slow=5.5,SNR=13
PDAR LR LR 20 06 31.0
comp=Z,234nm,18.7s,baz=56,slow=35
PDAR Pinedale Array 77.84 320 eP P 19 32 40.7 -1.0
BW06 Boulder Array 77.84 320 P P 19 32 42.0 +0.3
baz=39
ISCO Idaho Springs 78.23 315 P P 19 32 44.8 +0.9
baz=40,SNR=11
ISCO Idaho Springs 78.23 315 eP P 19 32 43.9 0.0
comp=Z,16nm,1.3s
ISCO Idaho Springs 78.23 315 eP P 19 32 43.9 0.0
ISCO pmax pmax
comp=Z,16nm,1.3s
PETK Petropavlovsk- 78.28 20 LR LR 20 12 05.3
comp=Z,403nm,18.5s,baz=324,slow=39
WMOK Wichita Mounta 78.36 308 P P 19 32 45.2 +0.8
baz=43,SNR=15
WMOK Wichita Mounta 78.36 308 eP P 19 32 44.5 +0.1
WMOK Wichita Mounta 78.36 308 eP P 19 32 44.5 +0.1
E09A Wood Farm, Sta 78.49 327 eP P 19 32 46.3 +1.5
comp=Z,20nm,1.1s
PET Petropavlovsk 78.58 19⇑ eP P 19 32 47.4 +2.2
PET pmax pmax
comp=Z,15nm,0.9s
Q24A Divide 78.63 314 P P 19 32 47.1 +1.0
baz=40,SNR=8.6
HAWA Hanford 79.12 328 eP P 19 32 48.8 +0.5
comp=Z,17nm,1.1s
YSS Yuzh-Sakhalins 79.16 31κ iP P 19 32 49.7 +1.2
YSS pmax pmax
comp=Z,70nm,1.7s
YSS pmax pmax
comp=N,20nm,1.1s
YSS pmax pmax
comp=Z,200nm,3.5s
YSS MLR MLR
comp=Z,600nm,13.0s
O20A White River Ci 79.27 317 P P 19 32 50.4 +0.9
baz=39
NJ2 Nanjing 79.28 55 eP P 19 32 50.2 +0.8
NJ2 pmax pmax
comp=Z,18nm,0.5s
HLID Hailey 79.37 323 P P 19 32 51.2 +1.3
baz=36
T25A Trinidad 79.63 313 P P 19 32 52.2 +0.7
baz=41
HWUT Hardware Ranch 79.68 320 eP P 19 32 52.9 +1.2
comp=Z,21nm,1.1s
SDCO Great Sand Dun 79.73 314 P P 19 32 53.2 +1.0
baz=40,SNR=14
SDCO Great Sand Dun 79.73 314 eP P 19 32 53.2 +1.0
comp=Z,15nm,1.3s
KS01 Wonju Array Si 80.21 46 eP P 19 32 54.5 +0.1
KSAR Wonju Array Be 80.23 46 P P 19 32 54.6 +0.1
KSAR Wonju Array Be 80.23 46 P P 19 32 54.6 +0.1
KSRS Korea Array 80.24 46 P P 19 32 54.6 +0.1
comp=Z,5.1nm,1.2s,baz=326,slow=4.7,SNR=12
KSRS LR LR 20 12 44.2
comp=Z,426nm,20.3s,baz=322,slow=39
ABTX Abilene, Hawle 80.40 307 P P 19 32 56.6 +1.1
baz=42
S22A 4UR Ranch, Cre 80.41 315 P P 19 32 56.8 +0.9
baz=40
435B Jarrell 80.55 304 P P 19 32 57.0 +0.7
baz=43
BGU Big Grassy Mou 80.89 320 eP P 19 32 59.0 +0.8
comp=Z,16nm,1.1s
PV09 Paradox Valley 80.97 317 eP P 19 32 58.8 -0.1
MSTX Muleshoe 81.14 310 P P 19 33 00.2 +0.6
baz=41
DUG Dugway, Tooele 81.37 320 P P 19 33 01.9 +1.2
baz=37
ASAJ Asahikawa 81.49 33 P P 19 33 00.9 -0.2
comp=Z,9.3nm,0.7s,baz=300,slow=8.1,SNR=13
ASAJ LR LR 20 12 41.8
comp=Z,453nm,19.3s,baz=342,slow=38
G03D McMinnville, O 81.51 329 P P 19 33 02.2 +1.0
baz=31
MVCO Mesa Verde 81.66 315 P P 19 33 03.3 +0.8
baz=39
JCT Junction City 82.07 305 P P 19 33 06.0 +1.5
baz=42
ANMO Albuquerque 82.37 313 P P 19 33 07.6 +1.4
comp=Z,3.2nm,0.9s,baz=248,slow=12,SNR=9.7
ANMO LR LR 20 09 26.0
comp=Z,368nm,18.2s,baz=44,slow=36
ANMO Albuquerque 82.37 313 P P 19 33 07.1 +0.9
baz=39
ANMO Albuquerque 82.37 313⇓ iP P 19 33 07.8 +1.6
ANMO pmax pmax
comp=Z,10.0nm,1.7s
TASL Snake Pit, Alb 82.37 313 P P 19 33 07.3 +1.2
baz=39,SNR=6.3
TASM ASL Pad, Albuq 82.38 313 P P 19 33 07.0 +0.8
baz=39,SNR=6.4
YUK Yuzh-Kuril'sk 82.79 31⇑ eP P 19 33 07.1 -0.8
ROSC El Rosal 83.25 270 LR LR 20 07 45.4
comp=Z,65nm,19.7s,baz=82,slow=34
ERM Erimo 83.49 34⇓ eP P 19 33 12.8 +1.3
ERM pmax pmax
comp=Z,38nm,1.4s
CCUT Cedar City 83.75 319 eP P 19 33 15.4 +2.1
comp=Z,19nm,1.3s
M04C Macdoel 83.90 326 P P 19 33 15.2 +1.3
baz=32
R11A Troy Canyon, C 84.13 321 P P 19 33 16.3 +1.2
baz=35
R11A Troy Canyon, C 84.13 321 eP P 19 33 16.5 +1.4
comp=Z,24nm,1.3s
LCMT Little Creek M 84.13 318 eP P 19 33 15.9 +0.8
comp=Z,7.6nm,1.2s
U15A North Rim 84.14 317 eP P 19 33 16.4 +1.1
comp=Z,16nm,1.2s
L02D Cave Junction, 84.26 328 P P 19 33 16.6 +1.1
baz=30
YBH Yreka Blue Hor 84.28 327 LR LR 20 10 45.3
comp=Z,155nm,20.0s,baz=38,slow=36
MNTX Cornudas Mount 84.29 310 P P 19 33 16.5 +0.7
baz=40
WUAZ Wupatki 84.42 316 P P 19 33 18.1 +1.4
baz=37
WUAZ Wupatki 84.42 316 eP P 19 33 18.4 +1.8
comp=Z,45nm,1.5s
121A Cookes Peak, D 84.94 312 P P 19 33 20.8 +1.4
baz=39,SNR=8.9
JNU Nakatsue 85.12 47 LR LR 20 16 14.1
comp=Z,550nm,18.0s,baz=300,slow=39
TXAR Lajitas Array 85.14 307 P P 19 33 22.0 +1.7
comp=Z,23nm,1.1s,baz=66,slow=4.3,SNR=82
TXAR LR LR 20 10 58.1
comp=Z,190nm,19.3s,baz=0.0,slow=35
TX31 Lajitas Ar. Si 85.14 307 eP P 19 33 21.7 +1.4
NVAR Mina Array Bea 85.26 322 P P 19 33 20.5 -0.4
comp=Z,1.2nm,0.8s,baz=56,slow=5.8,SNR=13
NVAR LR LR 20 10 37.0
comp=Z,150nm,19.8s,baz=290,slow=35
TPNV Topopah Spring 85.58 320 P P 19 33 24.1 +1.7
baz=34
MAJO Matsushiro 85.95 40⇑ iP P 19 33 24.4 +0.3
MAJO pmax pmax
comp=Z,22nm,1.8s
MAT Matsushiro 85.95 40 P P 19 33 23.6 -0.5
MAT S S 19 43 53.4 -3.9
MJAR Matsushiro Arr 85.95 40 P P 19 33 23.9 -0.2
comp=Z,4.6nm,1.1s,baz=320,slow=4.7,SNR=10
MJAR LR LR 20 14 44.4
comp=Z,271nm,19.5s,baz=320,slow=38
PSI Prapat 86.61 89 LR LR 20 18 45.0
comp=Z,143nm,18.1s,baz=271,slow=40
TUC Tucson 86.68 314 P P 19 33 28.7 +0.9
baz=37
MPMC Manual Prospec 86.87 321 P P 19 33 30.0 +1.1
baz=34
GMRC Granite Mounta 87.08 319 P P 19 33 31.3 +1.5
baz=35
Y12C Blythe 87.38 317 P P 19 33 33.1 +2.0
baz=35
APG El Apazote 87.40 289 P P 19 33 30.9 -0.8
comp=Z,12nm,0.9s,baz=28,slow=8.9,SNR=6.5
PFO Pinyon Flats O 88.42 318 iP P 19 33 37.0 +0.8
JOW Kunigami 88.61 53 LR LR 20 17 03.1
comp=Z,513nm,18.9s,baz=140,slow=38
OTAV Otavalo 89.40 270 P P 19 33 44.2 +2.7
OTAV pmax pmax
comp=Z,21nm,0.8s
JHJ Hachijo jima 2 89.50 41 LR LR 20 16 47.4
comp=Z,199nm,19.1s,baz=275,slow=38
LPIG La Paz 92.92 309 LR LR 20 15 56.0
comp=Z,118nm,18.0s,baz=32,slow=36
LPAZ La Paz 93.82 251 LR LR 20 14 44.8
comp=Z,87nm,20.3s,baz=40,slow=35
CPUP Villa Florida 94.26 237 LR LR 20 14 38.5
comp=Z,80nm,19.9s,baz=38,slow=34
LEM Lembang 99.51 90 LR LR 20 25 27.9
comp=Z,65nm,18.1s,baz=310,slow=39
FITZ Fitzroy Crossi 119.98 86 PKP PKPdf 19 39 34.1 -0.5
comp=Z,2.5nm,0.8s,baz=4.6,slow=7.0,SNR=2.6
WR1 Warramunga Arr 127.34 81 ePKPdf PKPdf 19 39 47.4 -1.4
WRA Warramunga Arr 127.34 81 PKP PKPdf 19 39 47.4 -1.4
comp=Z,0.9nm,0.8s,baz=331,slow=2.0,SNR=10
ASAR Alice Springs 129.45 85 PKP PKPdf 19 39 52.3 -0.5
comp=Z,0.8nm,0.7s,baz=326,slow=1.8,SNR=11
RPN Rapa Nui 129.67 270 PKP PKPdf 19 39 54.1 +1.2
comp=Z,133nm,0.9s,baz=335,slow=2.3,SNR=3.7
VNDA Vanda 145.28 169 PKPbc PKPab 19 40 20.1 0.0
comp=Z,12nm,1.0s,baz=267,slow=5.1,SNR=13
VNDA Vanda 145.28 169 ePKPbc PKPdf 19 40 20.4 +0.3

IDC 03 19:27:56.3±26.0, 23°.69S×173°.98W, h0km, mb4.1/4, mb1 4.2/4, mb1mx3.7/44, mbtmp4.1/4, Error ellipse: s-maj=480.0km s-min=141.2km az=79.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**36.99**	**268**	P	P	P	19 35 08.3	+0.5
	1.6nm,0.3s,baz=99,slow=8.9,SNR=7.2							
STKA	**Stephens Creek**	**39.92**	**248**	P	P	P	19 35 30.8	-1.5
	0.9nm,0.4s,baz=100,slow=12,SNR=6.0							
ASAR	**Alice Springs**	**47.50**	**259**	P	P	P	19 36 33.7	+0.2
	0.9nm,0.3s,baz=92,slow=7.6,SNR=42							
WRA	**Warramunga Arr**	**47.92**	**264**	P	P	P	19 36 37.0	+0.2
	0.7nm,0.3s,baz=102,slow=7.6,SNR=42							

*IDC **03** 19:30:18.9±1.8, 44°.88N×11°.06E, h0km, mb3.3/2, mb1 3.6/4, mb1mx3.2/58, mbtmp3.5/4, ML2.9/2, Error ellipse: s-maj=72.4km s-min=16.2km az=110.0*
*STR **03** 19:30:19.9±1.5, 45°.N±5°×1°.1E±1°.5, h5km, M3.8/7, mb3.6/1, MLv3.9/7*
*ROM **03** 19:30:19.9±0.0, 44°.887N±0°.002×10°.905E±0°.001, h8km, ML3.3/27*
*ISCJB **03** 19:30:20.1±0.2, 44°.90N±0°.02×10°.90E±0°.02, h19km±2km, mb3.1/2, Error ellipse: s-maj=3.1km s-min=2.2km*

az=151.2
CSEM ***03*** *19:30:20.4±0.1, 44.°93N×10.°94E, h10km, ML3.4/21, Error ellipse: s-maj=2.7km s-min=2.1km az=158.0*
PRU ***03*** *19:30:20.3, 44.°98N×10.°76E, h10km*
VIE ***03*** *19:30:21.0±0.4, 44.°92N×10.°97E, h8km±3km, mb3.1/11, ml3.3/18, Error ellipse: s-maj=4.9km s-min=2.5km az=120.0 55 km NNW of Bologna*
LDG ***03*** *19:30:21.3±0.1, 44.°91N×10.°99E, h2km, Ml3.5/21, Error ellipse: s-maj=3.6km s-min=2.7km az=60.0*
ISC 03 19:30:20.4±0.7, 44.°92N±0.°01×10.°94E±0.°02, h13km±3km, n215, σ1§22/300, 12C-19D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
T0827	**Moglia (MN)**	**0.02**	**348**	*i*P			**Pg**	**19 30 22.5**	**-0.2**
T0827				⇑*i*S			**Sg**	**19 30 24.9**	**+0.6**
T0827	**Moglia (MN)**	**0.02**	**348**	*i* P			**Pg**	**19 30 22.4**	**-0.2**
T0827				*i* S			**Sg**	**19 30 24.9**	**+0.6**
NDIM	**Novi di Modena**	**0.04**	**224**	*e*P			**Pg**	**19 30 21.5**	**-1.2**
NDIM				*e*S			**Sg**	**19 30 23.4**	**-1.0**
T0818	**Loc. Fossa, Co**	**0.07**	**74**	⇑*e*P			**Pg**	**19 30 23.1**	**+0.1**
T0818				⇑*e*S			**Sg**	**19 30 26.7**	**+1.8**
T0818	**Loc. Fossa, Co**	**0.07**	**74**	*e*P			**Pg**	**19 30 23.1**	**+0.1**
T0818				*e*S			**Sg**	**19 30 26.7**	**+1.8**
T0825	**Gonzaga (MN)**	**0.09**	**311**	AML			AML		
T0825				AML			AML		
T0825				AML			AML		
T0825				AML			AML		
T0828	**Loc. Fossoli,**	**0.09**	**191**	⇓*i*P			**Pg**	**19 30 22.2**	**-1.0**
T0828				⇓*i*S			**Sg**	**19 30 24.7**	**-0.5**
T0828	**Loc. Fossoli,**	**0.09**	**191**	*i* P			**Pg**	**19 30 22.2**	**-1.0**
T0828				*i* S			**Sg**	**19 30 24.7**	**-0.5**
T0826	**Rio Saliceto (**	**0.12**	**229**	AML			AML		
T0826				AML			AML		
T0826				AML			AML		
	comp=N,77250μm,0.5s								
T0826				AML			AML		
	comp=N,77250μm,0.5s								
T0814	**Loc. Cortile,**	**0.12**	**170**	⇓*i*P			**Pg**	**19 30 23.7**	**+0.1**
T0814				⇓*i*S			**Sg**	**19 30 26.6**	**+0.7**
T0814	**Loc. Cortile,**	**0.12**	**170**	*i* P			**Pg**	**19 30 23.7**	**+0.1**
T0814				*i* S			**Sg**	**19 30 26.6**	**+0.7**
SBPO	**S.Benedetto Po**	**0.14**	**355**	⇓*e*P			**Pg**	**19 30 24.5**	**+0.7**
SBPO	**S.Benedetto Po**	**0.14**	**355**	*e*P			**Pg**	**19 30 24.5**	**+0.7**
SBPO				AML			AML		
	comp=E,17000μm,0.4s								
SBPO				AML			AML		
SBPO				AML			AML		
SBPO				AML			AML		
	comp=E,17000μm,0.4s								
T0824	**Loc. Limidi di**	**0.16**	**183**	⇓*i*P			**Pg**	**19 30 23.7**	**-0.4**
T0824				⇓*i*S			**Sg**	**19 30 27.6**	**+0.9**
T0824	**Loc. Limidi di**	**0.16**	**183**	*i* P			**Pg**	**19 30 23.7**	**-0.4**
T0824				*i* S			**Sg**	**19 30 27.6**	**+0.9**
T0812	**Loc. Stoppiaro**	**0.18**	**77**	*e*P			**Pg**	**19 30 24.8**	**+0.4**
T0812	**Loc. Stoppiaro**	**0.18**	**77**	*e*P			**Pg**	**19 30 24.8**	**+0.4**
T0802	**SanFelice sul**	**0.18**	**103**	⇑*e*P			**Pg**	**19 30 24.7**	**+0.2**
T0802				⇑*e*S			**Sb**	**19 30 29.5**	**+0.6**
T0802	**SanFelice sul**	**0.18**	**103**	*e*P			**Pg**	**19 30 24.7**	**+0.2**
T0802				*e*S			**Sb**	**19 30 29.5**	**+0.6**
T0802				AML			AML		
	comp=E,46200μm,1.1s								
T0802				AML			AML		
	comp=N,42750μm,0.2s								
T0802				AML			AML		
	comp=E,46200μm,1.1s								
T0802				AML			AML		
	comp=N,42750μm,0.2s								
T0813	**Massa Finalese**	**0.19**	**102**	⇓*e*P			**Pg**	**19 30 24.9**	**+0.3**
T0813				⇓*e*S			**Sb**	**19 30 29.9**	**+0.6**
T0813	**Massa Finalese**	**0.19**	**102**	*e*P			**Pg**	**19 30 24.9**	**+0.3**
T0813				*e*S			**Sb**	**19 30 29.9**	**+0.6**
NOVE	**Novellara**	**0.20**	**233**	⇓*e*P			**Pg**	**19 30 24.2**	**-0.6**
NOVE				⇓*e*S			**Sg**	**19 30 28.7**	**+1.0**
NOVE	**Novellara**	**0.20**	**233**	*e*P			**Pg**	**19 30 24.2**	**-0.6**
NOVE				*e*S			**Sg**	**19 30 28.7**	**+1.0**
NOVE				AML			AML		
	comp=E,33250μm,1.0s								
NOVE				AML			AML		
	comp=N,36150μm,0.7s								
NOVE				AML			AML		
	comp=E,33250μm,1.0s								
NOVE				AML			AML		
	comp=N,36150μm,0.7s								
RAVA	**Ravarino**	**0.21**	**141**	⇓*i*P			**Pg**	**19 30 24.9**	**0.0**
RAVA				⇓*i*S			**Sg**	**19 30 29.0**	**+1.0**
RAVA	**Ravarino**	**0.21**	**141**	*i* P			**Pg**	**19 30 24.9**	**0.0**
RAVA				*i* S			**Sb**	**19 30 30.0**	**+0.3**
RAVA				AML			AML		
	comp=E,56050μm,0.3s								
RAVA				AML			AML		
	comp=N,46500μm,0.2s								
RAVA				AML			AML		
	comp=N,46500μm,0.2s								
RAVA				AML			AML		
	comp=E,56050μm,0.3s								
GAZZ	**Gazzo Veronese**	**0.23**	**29**	⇑*e*Pg			**Pg**	**19 30 26.0**	**+0.7**
GAZZ	**Gazzo Veronese**	**0.23**	**29**	*e*Pg			**Pg**	**19 30 26.0**	**+0.7**
T0800	**Massa Finalese**	**0.23**	**107**	⇑*e*P			**Pg**	**19 30 25.4**	**+0.1**
T0800				⇑*e*S			**Sb**	**19 30 30.9**	**+0.5**
T0800	**Massa Finalese**	**0.23**	**107**	*e*P			**Pg**	**19 30 25.4**	**+0.1**
T0800				*e*S			**Sb**	**19 30 30.9**	**+0.5**
T0800				AML			AML		
	comp=E,39800μm,0.6s								
T0800				AML			AML		
	comp=N,44650μm,0.2s								
T0800				AML			AML		
	comp=E,37600μm,0.2s								
T0800				AML			AML		
	comp=N,44150μm,0.4s								
T0800				AML			AML		
	comp=N,44150μm,0.4s								
T0800				AML			AML		
	comp=E,37600μm,0.2s								
T0800				AML			AML		
	comp=N,44650μm,0.2s								
T0800				AML			AML		
	comp=E,39800μm,0.6s								
T0811	**Palata Pepoli**	**0.24**	**123**	*e*P			**Pg**	**19 30 25.4**	**-0.1**
T0811				*e*S			**Sb**	**19 30 30.9**	**+0.1**
T0811	**Palata Pepoli**	**0.24**	**123**	*e*P			**Pg**	**19 30 25.4**	**-0.1**
T0811				*e*S			**Sb**	**19 30 30.9**	**+0.1**
SERM	**Sermide**	**0.27**	**70**	*e*P			**Pg**	**19 30 26.7**	**+0.7**
SERM	**Sermide**	**0.27**	**70**	*e*P			**Pg**	**19 30 26.7**	**+0.7**
SERM				AML			AML		
	comp=E,2855μm,0.5s								
SERM				AML			AML		
	comp=N,3095μm,1.1s								
SERM				AML			AML		
	comp=E,6255μm,1.2s								
SERM				AML			AML		
	comp=N,5248μm,1.2s								
SERM				AML			AML		
	comp=E,6255μm,1.2s								
SERM				AML			AML		
	comp=E,2855μm,0.5s								
SERM				AML			AML		
	comp=N,3095μm,1.1s								
SERM				AML			AML		
	comp=N,5248μm,1.2s								
T0805	**Bondeno (FE)**	**0.27**	**89**	*e*P			**Pg**	**19 30 26.3**	**+0.2**
T0805	**Bondeno (FE)**	**0.27**	**89**	*e*P			**Pg**	**19 30 26.3**	**+0.2**
MODE	**Modena**	**0.29**	**178**	⇓*e*P			**Pg**	**19 30 26.5**	**+0.2**
MODE	**Modena**	**0.29**	**178**	*e*P			**Pg**	**19 30 26.4**	**+0.2**
MODE				AML			AML		
	comp=E,29300μm,0.5s								
MODE				AML			AML		
	comp=N,20800μm,0.6s								
MODE				AML			AML		
	comp=E,29300μm,0.5s								
MODE				AML			AML		
	comp=N,20800μm,0.6s								
T0803	**Dosso, Cento (**	**0.33**	**117**	*e*P			**Pg**	**19 30 27.2**	**+0.1**
T0803	**Dosso, Cento (**	**0.33**	**117**	*e*P			**Pg**	**19 30 27.2**	**+0.1**
T0823	**Castello D'Arg**	**0.33**	**134**	⇑*e*P			**Pg**	**19 30 27.5**	**+0.4**
T0823	**Castello D'Arg**	**0.33**	**134**	*e*P			**Pg**	**19 30 27.5**	**+0.4**
T0817	**Loc. Veratica,**	**0.38**	**78**	*e*P			**Pg**	**19 30 28.0**	**+0.1**
T0817	**Loc. Veratica,**	**0.38**	**78**	*e*P			**Pb**	**19 30 29.0**	**+0.1**
T0820	**Chiesuol del F**	**0.47**	**105**	AML			AML		
	comp=N,7285μm,0.3s								
T0820				AML			AML		
	comp=E,4905μm,0.9s								
T0820				AML			AML		
	comp=N,7285μm,0.3s								
T0820				AML			AML		
	comp=E,7140μm,0.9s								
T0820				AML			AML		
	comp=N,6220μm,0.3s								
T0820				AML			AML		
	comp=E,4905μm,0.9s								
T0820				AML			AML		
	comp=E,7140μm,0.9s								
T0820				AML			AML		
	comp=N,6220μm,0.3s								
T0816	**San Bartolomeo**	**0.51**	**112**	*e*P			**Pb**	**19 30 31.3**	**+0.1**
T0816	**San Bartolomeo**	**0.51**	**112**	*e*P			**Pb**	**19 30 31.3**	**+0.1**
T0815	**Correggio (RE)**	**0.56**	**94**	*e*P			**Pb**	**19 30 32.8**	**+0.8**
T0815	**Correggio (RE)**	**0.56**	**94**	*e*P			**Pb**	**19 30 32.8**	**+0.8**
TEOL	**Teolo**	**0.68**	**49**	⇓*e*Pg			**Pg**	**19 30 34.0**	**+0.4**
TEOL				*e*Sg			**Sb**	**19 30 44.8**	**+1.3**
TEOL	**Teolo**	**0.68**	**49**	⇓*e*P			**Pg**	**19 30 33.0**	**-0.6**
TEOL	**Teolo**	**0.68**	**49**	*e*Pg			**Pg**	**19 30 34.0**	**+0.4**
TEOL				*e*Sg			**Sb**	**19 30 44.8**	**+1.3**
TEOL	**Teolo**	**0.68**	**49**	*e*P			**Pg**	**19 30 34.0**	**+0.4**
CMPO	**Campotto Po**	**0.70**	**118**	AML			AML		
	comp=E,3635μm,0.2s								
CMPO				AML			AML		
	comp=N,8525μm,1.2s								
CMPO				AML			AML		
	comp=N,8525μm,1.2s								
CMPO				AML			AML		
	comp=E,3635μm,0.2s								
MARN	**Marana (Italy)**	**0.75**	**15**	*e*Pg			**Pg**	**19 30 35.0**	**+0.1**
MARN				*e*Sg			**Sb**	**19 30 46.5**	**+1.1**
MARN	**Marana (Italy)**	**0.75**	**15**	*e*Pg			**Pg**	**19 30 35.0**	**+0.1**
MARN				*e*Sg			**Sb**	**19 30 46.5**	**+1.1**
FNVD	**Fontana Vidola**	**0.76**	**170**	AML			AML		
	comp=N,2320μm,0.9s								
FNVD				AML			AML		
	comp=E,1545μm,0.2s								
FNVD				AML			AML		
	comp=E,1545μm,0.2s								
FNVD				AML			AML		
	comp=N,2320μm,0.9s								
BALD	**Monte Baldo**	**0.77**	**354**	⇑*e*Pg			**Pg**	**19 30 35.4**	**-0.1**
BALD				Sg			**Sb**	**19 30 46.7**	**+0.5**
BALD	**Monte Baldo**	**0.77**	**354**	*e*Pg			**Pg**	**19 30 35.3**	**-0.1**
BALD				Sg			**Sb**	**19 30 46.7**	**+0.5**
VLC	**Villacollemand**	**0.85**	**208**	AML			AML		
	comp=N,722μm,0.9s								
VLC				AML			AML		
	comp=E,700μm,1.2s								
VLC				AML			AML		
	comp=E,700μm,1.2s								
VLC				AML			AML		
	comp=N,722μm,0.9s								
POPM	**Popiglio**	**0.88**	**189**	AML			AML		
	comp=E,1014μm,0.4s								
POPM				AML			AML		
	comp=E,1014μm,0.4s								
POPM				AML			AML		
	comp=N,1060μm,0.3s								
POPM				AML			AML		
	comp=N,1060μm,0.3s								
BDI	**Bagni Di Lucca**	**0.89**	**196**	AML			AML		
	comp=N,1465μm,0.7s								
BDI				AML			AML		
	comp=E,1395μm,1.1s								
BDI				AML			AML		
	comp=N,1315μm,1.1s								
BDI				AML			AML		
	comp=E,1425μm,1.1s								
BDI				AML			AML		
	comp=N,1465μm,0.7s								
BDI				AML			AML		
	comp=E,1425μm,1.1s								
BDI				AML			AML		
	comp=E,1395μm,1.1s								
BDI				AML			AML		
	comp=N,1315μm,1.1s								
DOSS	**Dosso del Somm**	**0.98**	**10**	⇓*e*Pg			**Pb**	**19 30 38.9**	**-0.4**
DOSS				*e*Sg			**Sn**	**19 30 53.2**	**-0.6**
DOSS	**Dosso del Somm**	**0.98**	**10**	*e*Pg			**Pb**	**19 30 38.9**	**-0.4**
DOSS				*e*Sg			**Sn**	**19 30 53.2**	**-0.6**
MAIM	**Mastiano**	**1.05**	**198**	AML			AML		
	comp=E,856μm,0.5s								
MAIM				AML			AML		
	comp=N,1286μm,1.0s								
MAIM				AML			AML		
	comp=E,856μm,0.5s								
MAIM				AML			AML		
	comp=N,1286μm,1.0s								
CRMI	**Carmignano**	**1.13**	**179**	AML			AML		
	comp=E,715μm,0.3s								
CRMI				AML			AML		
	comp=N,376μm,0.4s								
CRMI				AML			AML		
	comp=N,376μm,0.4s								
CRMI				AML			AML		
	comp=E,715μm,0.3s								
CGRP	**Cima Grappa**	**1.14**	**32**	⇓*e*Pg			**Pb**	**19 30 42.0**	**0.0**
CGRP				*e*Sg			**Sn**	**19 30 58.4**	**+0.6**
CGRP	**Cima Grappa**	**1.14**	**32**	*e*Pg			**Pb**	**19 30 42.0**	**0.0**
CGRP				*e*Sg			**Sn**	**19 30 58.4**	**+0.6**
PANI	**Panarotta**	**1.17**	**14**	⇑*e*Pg			**Pb**	**19 30 41.6**	**-0.9**
PANI				*e*Sg			**Sn**	**19 30 58.7**	**+0.2**
SFI	**Santa Sofia**	**1.20**	**147**	AML			AML		
	comp=N,1380μm,0.9s								
SFI				AML			AML		
	comp=E,1136μm,0.5s								
SFI				AML			AML		
	comp=N,1340μm,0.9s								
SFI				AML			AML		
	comp=E,1245μm,0.5s								
SFI				AML			AML		
	comp=N,1340μm,0.9s								
SFI				AML			AML		
	comp=N,1380μm,0.9s								
SFI				AML			AML		
	comp=E,1136μm,0.5s								
SFI				AML			AML		
	comp=E,1245μm,0.5s								
MTLO	**Montello**	**1.21**	**42**	⇓*e*Pg			**Pn**	**19 30 43.1**	**0.0**
MTLO				*e*Sg			**Sg**	**19 31 01.5**	**+2.0**
MTLO	**Montello**	**1.21**	**42**	*e*Pg			**Pn**	**19 30 43.1**	**0.0**
MTLO				*e*Sg			**Sg**	**19 31 01.5**	**+2.0**
ASQU	**Asqua**	**1.27**	**151**	AML			AML		
	comp=N,648μm,0.4s								
ASQU				AML			AML		
	comp=E,739μm,0.6s								
ASQU				AML			AML		
	comp=N,648μm,0.4s								
ASQU				AML			AML		
	comp=E,739μm,0.6s								
VARN	**Col Varnada, M**	**1.35**	**37**	*e*Pg			**Pn**	**19 30 44.7**	**-0.4**
VARN	**Col Varnada, M**	**1.35**	**37**	*e*Pg			**Pn**	**19 30 44.7**	**-0.4**
OZOL	**Ozolo**	**1.49**	**3**	*e*Pg			**Pn**	**19 30 46.5**	**-0.5**
OZOL	**Ozolo**	**1.49**	**3**	*e*Pg			**Pn**	**19 30 46.5**	**-0.5**
CAE	**Caneva**	**1.52**	**44**	*e*Pg			**Pn**	**19 30 47.5**	**+0.2**
CAE	**Caneva**	**1.52**	**44**	*e*Pg			**Pn**	**19 30 47.5**	**+0.2**
CARE	**Lago del Cares**	**1.52**	**354**	*e*Pg			**Pn**	**19 30 47.1**	**-0.3**
CARE	**Lago del Cares**	**1.52**	**354**	*e*Pg			**Pn**	**19 30 47.2**	**-0.3**
POLC	**Polcenigo**	**1.56**	**44**	AML			AML		
	comp=E,981μm,0.5s								
POLC				AML			AML		
	comp=E,981μm,0.5s								
POLC				AML			AML		
	comp=N,1270μm,0.4s								
POLC				AML			AML		
	comp=N,1270μm,0.4s								
AGOR	**Agordo**	**1.57**	**29**	*e*Pg			**Pn**	**19 30 48.7**	**+0.7**
PARC	**Parchiule**	**1.57**	**143**	AML			AML		
	comp=N,368μm,1.1s								
PARC				AML			AML		
	comp=E,314μm,0.5s								
PARC				AML			AML		
	comp=N,368μm,1.1s								
PARC				AML			AML		
	comp=E,314μm,0.5s								
MLNI	**Malnisio**	**1.70**	**43**	*e*Pg			**Pn**	**19 30 49.5**	**-0.3**
MLNI	**Malnisio**	**1.70**	**43**	*e*Pg			**Pn**	**19 30 49.5**	**-0.3**
CAFI	**Castiglion Fio**	**1.75**	**155**	AML			AML		
	comp=N,155μm,0.5s								
CAFI				AML			AML		
	comp=E,246μm,1.1s								
CAFI				AML			AML		
	comp=N,155μm,0.5s								
CAFI				AML			AML		
	comp=E,246μm,1.1s								
PIEI	**Pieia**	**1.79**	**140**	AML			AML		
	comp=E,372μm,0.5s								
PIEI				AML			AML		
	comp=N,223μm,0.4s								
PIEI				AML			AML		
	comp=N,223μm,0.4s								
PIEI				AML			AML		
	comp=E,372μm,0.5s								
ATBU	**Serra di Buran**	**1.85**	**141**	AML			AML		
	comp=E,887μm,0.5s								
ATBU				AML			AML		
	comp=N,726μm,1.4s								
ATBU				AML			AML		
	comp=E,887μm,0.5s								
ATBU				AML			AML		
	comp=N,726μm,1.4s								
ATTE	**AVT- Monte Tez**	**2.00**	**149**	AML			AML		
	comp=E,100μm,1.6s								
ATTE				AML			AML		
	comp=N,119μm,0.4s								
ATTE				AML			AML		
	comp=E,100μm,1.6s								
ATTE				AML			AML		
	comp=N,119μm,0.4s								
ARVD	**Arcevia**	**2.02**	**134**	AML			AML		
	comp=E,221μm,1.6s								
ARVD				AML			AML		
	comp=N,182μm,1.3s								
ARVD				AML			AML		
	comp=N,182μm,1.3s								
ARVD				AML			AML		
	comp=E,221μm,1.6s								
FETA	**Feichten**	**2.11**	**356**	Pn			**Pb**	**19 30 57.5**	**-1.1**
	comp=E,26nm,0.4s,SNR=31								
FETA				*e*Sg			**Sg**	**19 31 29.6**	**+1.4**
	comp=E,7.8nm,0.2s								
FETA	**Feichten**	**2.11**	**356**	Pn			**Pb**	**19 30 57.5**	**-1.1**
	comp=E,26nm,0.4s,SNR=31								
FETA				Sg			**Sg**	**19 31 29.6**	**+1.4**
	comp=E,7.8nm,0.2s								
ATCC	**AVT- Casa Cast**	**2.12**	**144**	AML			AML		
	comp=N,328μm,0.4s								
ATCC				AML			AML		
	comp=E,376μm,0.6s								
ATCC				AML			AML		
	comp=N,328μm,0.4s								
ATCC				AML			AML		
	comp=E,376μm,0.6s								
ABTA	**Abfaltersbach**	**2.14**	**30**	Pn			**Pn**	**19 30 57.5**	**+1.7**
	comp=E,22nm,0.5s,SNR=9.6								
ABTA				Sg			**Sg**	**19 31 31.8**	**+2.8**
	comp=E,17nm,0.2s								
ABTA	**Abfaltersbach**	**2.14**	**30**	Pn			**Pn**	**19 30 57.5**	**+1.7**
	comp=E,22nm,0.5s,SNR=9.6								
ABTA				Sg			**Sg**	**19 31 31.8**	**+2.8**
	comp=E,17nm,0.2s								
SKDS	**Skadanscina**	**2.26**	**73**	*i* Pn			**Pn**	**19 30 56.9**	**-0.6**
SKDS				*i* Sn			**Sn**	**19 31 23.8**	**-1.5**
	comp=Z,54nm,0.3s								
SKDS	**Skadanscina**	**2.26**	**73**	*i* Pn			**Pn**	**19 30 56.9**	**-0.6**
SKDS				*i* Sn			**Sn**	**19 31 23.8**	**-1.5**
	comp=Z,54nm,0.3s								
WTTA	**Wattenberg**	**2.40**	**11**	Pn			**Pn**	**19 31 01.4**	**+1.9**
	comp=Z,11nm,0.3s,SNR=12								
WTTA	**Wattenberg**	**2.40**	**11**	Pg			**Pn**	**19 31 01.4**	**+1.9**
WTTA				Sg			**Sb**	**19 31 35.2**	**+2.2**
WATA	**Walderalm**	**2.46**	**10**	Pn			**Pn**	**19 31 02.4**	**+2.1**
	comp=Z,36nm,0.3s,SNR=53								
WATA	**Walderalm**	**2.46**	**10**	Pn			**Pn**	**19 31 02.4**	**+2.1**
	comp=Z,36nm,0.3s,SNR=53								
DAVA	**Damuels**	**2.48**	**343**	Pn			**Pb**	**19 31 03.0**	**-1.9**
	comp=Z,18nm,0.6s,SNR=6.1								
DAVA	**Damuels**	**2.48**	**343**	Pn			**Pb**	**19 31 03.0**	**-1.9**
	comp=Z,18nm,0.6s,SNR=6.1								
MYKA	**Terra Mystica**	**2.55**	**47**	Pn			**Pn**	**19 31 01.9**	**+0.4**
	comp=Z,15nm,0.4s,SNR=13								
MYKA	**Terra Mystica**	**2.55**	**47**	Pn			**Pn**	**19 31 01.9**	**+0.4**
	comp=Z,15nm,0.4s,SNR=13								
RETA	**Reutte**	**2.57**	**357**	Pn			**Pn**	**19 31 03.6**	**+1.8**
	comp=Z,9.2nm,0.3s								
RETA	**Reutte**	**2.57**	**357**	Pn			**Pn**	**19 31 03.6**	**+1.8**
	comp=Z,9.2nm,0.3s								
SBF	**Sospel**	**2.72**	**248**	*e*Pn			**Pn**	**19 31 05.3**	**+1.4**
SBF				*e*Sn			**Sn**	**19 31 37.6**	**+0.9**
	comp=Z,152nm,0.5s								
SBF	**Sospel**	**2.72**	**248**	*e*Pn			**Pn**	**19 31 05.3**	**+1.4**
SBF				*e*Sn			**Sn**	**19 31 37.6**	**+0.9**
	comp=Z,76nm,0.5s								
KBA	**Koelnbreinsper**	**2.74**	**37**	Pn			**Pn**	**19 31 05.0**	**+0.9**
	comp=Z,14nm,0.3s								
KBA	**Koelnbreinsper**	**2.74**	**37**	Pn			**Pn**	**19 31 05.0**	**+0.9**
	comp=Z,14nm,0.3s								
PGF	**Pioggiola**	**2.75**	**211**	*e*Pn			**Pn**	**19 31 04.3**	**0.0**
PGF				*e*Sn			**Sn**	**19 31 37.4**	**-0.1**
	comp=Z,48nm,0.5s								
PGF	**Pioggiola**	**2.75**	**211**	*e*Pn			**Pn**	**19 31 04.3**	**0.0**
PGF				*e*Sn			**Sn**	**19 31 37.4**	**-0.1**
	comp=Z,24nm,0.5s								
LUCF	**Luceram**	**2.77**	**250**	P			**Pn**	**19 31 06.1**	**+1.6**
LUCF	**Luceram**	**2.77**	**250**	P			**Pn**	**19 31 06.1**	**+1.6**
NVLJ	**Novalja**	**2.83**	**96**	*e*Pn			**Pn**	**19 31 05.3**	**+0.1**
NVLJ				Sn			**Sn**	**19 31 37.5**	**-1.5**
NVLJ	**Novalja**	**2.83**	**96**	*e*Pn			**Pn**	**19 31 05.2**	**+0.1**
NVLJ				Sn			**Sn**	**19 31 37.5**	**-1.5**
MVIF	**Mont Vial**	**2.90**	**251**	P			**Pn**	**19 31 08.3**	**+2.0**
MVIF	**Mont Vial**	**2.90**	**251**	P			**Pn**	**19 31 08.3**	**+2.0**
MBDF	**Montbardon**	**2.97**	**268**	*e*Pn			**Pn**	**19 31 06.5**	**-0.8**
MBDF				*e*Sn			**Sn**	**19 31 41.6**	**-1.3**
	comp=Z,52nm,0.5s								
MBDF	**Montbardon**	**2.97**	**268**	*e*Pn			**Pn**	**19 31 06.5**	**-0.8**
MBDF				*e*Sn			**Sn**	**19 31 41.6**	**-1.3**
	comp=Z,26nm,0.5s								
OBKA	**Obir**	**2.99**	**57**	*e*Pn			**Pn**	**19 31 08.2**	**+0.6**
	comp=Z,2.4nm,0.3s								
OBKA	**Obir**	**2.99**	**57**	Pn			**Pn**	**19 31 08.2**	**+0.6**
	comp=Z,2.4nm,0.3s								
LPG	**La Plagne**	**3.02**	**283**	*e*Pn			**Pn**	**19 31 09.7**	**+1.6**
LPG				*e*Sn			**Sn**	**19 31 45.3**	**+1.1**
	comp=Z,47nm,0.4s								
LPG	**La Plagne**	**3.02**	**283**	*e*Pn			**Pn**	**19 31 09.7**	**+1.6**
LPG				*e*Sn			**Sn**	**19 31 45.3**	**+1.1**
	comp=Z,24nm,0.4s								
LPL	**La Plagne**	**3.03**	**283**	*e*Pn			**Pn**	**19 31 10.1**	**+1.8**
LPL				*e*Sn			**Sn**	**19 31 45.3**	**+0.8**
	comp=Z,36nm,0.4s								
LPL	**La Plagne**	**3.03**	**283**	*e*Pn			**Pn**	**19 31 10.1**	**+1.8**
LPL				*e*Sn			**Sn**	**19 31 45.3**	**+0.8**
	comp=Z,18nm,0.4s								

ARSA	**Arzberg**	**3.95**	**52**	*e*Pn	**Pn**	**19 31 22.1**	**+1.4**
	comp=Z,1.1nm,0.3s						
ARSA	**Arzberg**	**3.95**	**52**	Pn	**Pn**	**19 31 22.1**	**+1.4**
	comp=Z,1.1nm,0.3s						
SMRF	**Simiane la Rot**	**3.95**	**258**	*e*Pn	**Pn**	**19 31 21.9**	**+1.1**
SMRF				*e*Sn	**Sn**	**19 32 08.1**	**+1.1**
	comp=Z,19nm,0.5s						
SMRF	**Simiane la Rot**	**3.95**	**258**	*e*Pn	**Pn**	**19 31 21.9**	**+1.1**
SMRF				*e*Sn	**Sn**	**19 32 08.1**	**+1.1**
	comp=Z,9.5nm,0.5s						
HINF	**Hinteralfeld**	**4.05**	**317**	*e*Pn	**Pn**	**19 31 21.9**	**-0.2**
HINF				*e*Sn	**Sn**	**19 32 06.4**	**-3.0**
	comp=Z,18nm,0.4s						
HINF	**Hinteralfeld**	**4.05**	**317**	*e*Pn	**Pn**	**19 31 21.9**	**-0.2**
HINF				*e*Sn	**Sn**	**19 32 06.4**	**-3.0**
	comp=Z,8.8nm,0.4s						
OPP	**Oppenau**	**4.05**	**333**	P	**Pn**	**19 31 22.4**	**+0.4**
OPP	**Oppenau**	**4.05**	**333**	P	**Pn**	**19 31 22.4**	**+0.4**
ECH	**Echery**	**4.21**	**323**	P	**Pn**	**19 31 24.1**	**-0.1**
ECH	**Echery**	**4.21**	**323**	P	**Pn**	**19 31 24.1**	**-0.1**
CDF	**Champ du Feu**	**4.31**	**326**	*e*Pn	**Pn**	**19 31 25.6**	**-0.1**
CDF				*e*Sn	**Sn**	**19 32 15.4**	**-0.4**
	comp=Z,8.7nm,0.3s						
CDF	**Champ du Feu**	**4.31**	**326**	*e*Pn	**Pn**	**19 31 25.6**	**-0.1**
CDF				*e*Sn	**Sn**	**19 32 15.4**	**-0.4**
	comp=Z,4.3nm,0.3s						
GERES	**GERESS Array B**	**4.36**	**25**	Pn	**Pn**	**19 31 26.4**	**0.0**
	comp=Z,1.3nm,0.3s,baz=201,slow=13,SNR=16						
GERES				Pg	**Pg**	**19 31 42.6**	**-1.3**
	comp=Z,1.6nm,0.3s,baz=209,slow=17,SNR=7.5						
GERES				Sn	**Sn**	**19 32 17.3**	**+0.1**
	comp=Z,2.3nm,0.3s,baz=207,slow=22,SNR=4.4						
GERES				Lg	Lg	19 32 38.1	
	comp=Z,2.2nm,0.3s,baz=198,slow=31,SNR=3.7						
HAU	**Haudompre**	**4.43**	**316**	*e*Pn	**Pn**	**19 31 27.2**	**0.0**
HAU				*e*Sn	**Sn**	**19 32 16.9**	**-1.7**
	comp=Z,34nm,0.3s						
HAU	**Haudompre**	**4.43**	**316**	*e*Pn	**Pn**	**19 31 27.2**	**0.0**
HAU				*e*Sn	**Sn**	**19 32 16.9**	**-1.7**
	comp=Z,17nm,0.3s						
VIVF	**Saint-Julien-l**	**4.45**	**271**	*e*Pn	**Pn**	**19 31 27.9**	**+0.3**
VIVF				*e*Sn	**Sn**	**19 32 18.8**	**-0.5**
	comp=Z,7.0nm,0.3s						
VIVF	**Saint-Julien-l**	**4.45**	**271**	*e*Pn	**Pn**	**19 31 27.9**	**+0.3**
VIVF				*e*Sn	**Sn**	**19 32 18.8**	**-0.5**
	comp=Z,3.5nm,0.3s						
CONA	**Conrad Observa**	**4.55**	**47**	*i* Pn	**Pn**	**19 31 29.4**	**+0.5**
	comp=Z,1.1nm,0.4s						
CONA	**Conrad Observa**	**4.55**	**47**	Pn	**Pn**	**19 31 29.4**	**+0.5**
	comp=Z,1.1nm,0.4s						
KHC	**Kasperske Hory**	**4.59**	**22**	*e*PN	**Pn**	**19 31 29.6**	**+0.2**
KHC				*e*PG	**Pg**	**19 31 47.5**	**-0.7**
KHC				*e*SN	**Sn**	**19 32 21.2**	**-1.4**
KHC				*e*SG	**Sg**	**19 32 45.7**	**-1.8**
	comp=Z,14nm,0.6s						
KHC	**Kasperske Hory**	**4.59**	**22**	Pn	**Pn**	**19 31 29.6**	**+0.2**
KHC				Sn	**Sn**	**19 32 21.2**	**-1.4**
KHC				Sg	**Sg**	**19 32 45.7**	**-1.8**
	comp=Z,14nm,0.6s						
PAGF	**Fort de Pagny**	**5.11**	**317**	*e*Pn	**Pn**	**19 31 37.1**	**+0.6**
PAGF	**Fort de Pagny**	**5.11**	**317**	*e*Pn	**Pn**	**19 31 37.1**	**+0.6**
LASF	**Ste Croix**	**5.13**	**263**	*e*Pn	**Pn**	**19 31 37.0**	**0.0**
LASF				*e*Sn	**Sn**	**19 32 35.3**	**-0.8**
	comp=Z,14nm,0.9s						
LASF	**Ste Croix**	**5.13**	**263**	*e*Pn	**Pn**	**19 31 37.0**	**0.0**
LASF				*e*Sn	**Sn**	**19 32 35.3**	**-0.8**
	comp=Z,6.8nm,0.9s						
SFTF	**Sexfontaines**	**5.23**	**311**	*e*Pn	**Pn**	**19 31 38.4**	**+0.1**
SFTF	**Sexfontaines**	**5.23**	**311**	*e*Pn	**Pn**	**19 31 38.4**	**+0.1**
SMF	**Signal de Mont**	**5.26**	**292**	*e*Pn	**Pn**	**19 31 39.0**	**+0.4**
SMF				*e*Sn	**Sn**	**19 32 36.9**	**-2.2**
	comp=Z,20nm,0.4s						
SMF	**Signal de Mont**	**5.26**	**292**	*e*Pn	**Pn**	**19 31 39.0**	**+0.4**
SMF				*e*Sn	**Sn**	**19 32 36.9**	**-2.2**
	comp=Z,10nm,0.4s						
STON	**Ston**	**5.30**	**110**	*e*Pn	**Pn**	**19 31 38.5**	**-0.7**
STON				Sn	**Sn**	**19 32 35.8**	**-4.2**
STON	**Ston**	**5.30**	**110**	*e*Pn	**Pn**	**19 31 38.4**	**-0.7**
STON				Sn	**Sn**	**19 32 35.8**	**-4.2**
ZST	**Bratislava**	**5.37**	**50**	*e*PG	**Pg**	**19 32 01.7**	**-1.4**
ZST	**Bratislava**	**5.37**	**50**	*e*Pg	**Pg**	**19 32 01.7**	**-1.4**
MEZF	**Maizieres J'vi**	**5.41**	**314**	*e*Pn	**Pn**	**19 31 41.4**	**+0.7**
MEZF				*e*Sn	**Sn**	**19 32 42.0**	**-0.7**
	comp=Z,17nm,0.6s						
MEZF	**Maizieres J'vi**	**5.41**	**314**	*e*Pn	**Pn**	**19 31 41.4**	**+0.7**
MEZF				*e*Sn	**Sn**	**19 32 42.0**	**-0.7**
	comp=Z,8.6nm,0.6s						
NKC	**Novy Kostel**	**5.42**	**10**	*e*PN	**Pn**	**19 31 40.5**	**-0.3**
NKC				*e*PG	**Pg**	**19 32 03.4**	**-0.6**
NKC	**Novy Kostel**	**5.42**	**10**	Pn	**Pn**	**19 31 40.5**	**-0.3**
LOR	**Lormes**	**5.46**	**298**	*e*Pn	**Pn**	**19 31 41.5**	**+0.1**
LOR				*e*Sn	**Sn**	**19 32 40.6**	**-3.4**
	comp=Z,16nm,0.4s						
LOR	**Lormes**	**5.46**	**298**	P	**Pn**	**19 31 41.3**	**-0.1**
LOR	**Lormes**	**5.46**	**298**	*e*Pn	**Pn**	**19 31 41.5**	**+0.1**
MODS	**Modra-Piesok**	**5.57**	**49**	*e*PN	**Pn**	**19 31 42.0**	**-0.9**
MODS				*e*PG	**Pg**	**19 32 06.7**	**-0.2**
MODS				*e*		20 04 37.9	
MODS	**Modra-Piesok**	**5.57**	**49**	*e*Pn	**Pn**	**19 31 42.0**	**-0.9**
SSF	**Saint Saulge**	**5.61**	**295**	*e*Pn	**Pn**	**19 31 43.4**	**0.0**
SSF				*e*Sn	**Sn**	**19 32 45.8**	**-1.8**
	comp=Z,9.4nm,0.4s						
SSF	**Saint Saulge**	**5.61**	**295**	*e*Pn	**Pn**	**19 31 43.4**	**0.0**
SSF				*e*Sn	**Sn**	**19 32 45.8**	**-1.8**
	comp=Z,4.7nm,0.4s						
AVF	**Avril sur Loir**	**5.62**	**292**	*e*Pn	**Pn**	**19 31 43.9**	**+0.3**
AVF				*e*Sn	**Sn**	**19 32 46.5**	**-1.5**
AVF	**Avril sur Loir**	**5.62**	**292**	*e*Pn	**Pn**	**19 31 43.9**	**+0.3**
AVF				*e*Sn	**Sn**	**19 32 46.5**	**-1.5**
PRU	**Pruhonice**	**5.63**	**24**	*e*PN	**Pn**	**19 31 45.0**	**+1.3**
PRU				*ex*	x	19 32 05.2	
PRU				*e*SN	**Sn**	**19 32 47.6**	**-0.6**
PRU				*e*SG	**Sg**	**19 33 20.3**	**-0.7**
	comp=Z,12nm,0.9s						
PRU	**Pruhonice**	**5.63**	**24**	Pn	**Pn**	**19 31 45.0**	**+1.3**
PRU				Sn	**Sn**	**19 32 47.6**	**-0.6**
PRU				Sg	**Sg**	**19 33 20.3**	**-0.7**
	comp=Z,12nm,0.9s						
GOPC	**GO Pecny, Ondr**	**5.64**	**26**	*e*PN	**Pn**	**19 31 44.7**	**+0.8**
GOPC				*ex*	x	19 32 04.1	
GOPC				*e*SN	**Sn**	**19 32 45.1**	**-3.4**
GOPC				*e*SG	**Sg**	**19 33 17.9**	**-3.4**
GOPC	**GO Pecny, Ondr**	**5.64**	**26**	Pn	**Pn**	**19 31 44.7**	**+0.8**
BGF	**Bois d'Agland**	**5.90**	**289**	*e*Pn	**Pn**	**19 31 47.8**	**+0.4**
BGF				*e*Sn	**Sn**	**19 32 52.6**	**-2.2**
	comp=Z,54nm,0.5s						
BGF	**Bois d'Agland**	**5.90**	**289**	*e*Pn	**Pn**	**19 31 47.8**	**+0.4**
HYF	**Humbligny**	**6.23**	**295**	*e*Sn	**Sn**	**19 33 02.1**	**-1.0**
HYF	**Humbligny**	**6.23**	**295**	*e*Sn	**Sn**	**19 33 02.1**	**-1.0**
TCF	**Toulx Ste Croi**	**6.28**	**286**	*e*Pn	**Pn**	**19 31 53.5**	**+0.9**
TCF				*e*Sn	**Sn**	**19 33 02.9**	**-1.3**
	comp=Z,24nm,0.7s						
TCF	**Toulx Ste Croi**	**6.28**	**286**	*e*Pn	**Pn**	**19 31 53.5**	**+0.9**
TCF				*e*Sn	**Sn**	**19 33 02.9**	**-1.3**
	comp=Z,12nm,0.7s						
BRG	**Berggiesshubel**	**6.29**	**18**	SG	**Sg**	**19 33 48.2**	**+6.0**
	comp=Z,22nm,1.3s						
MTLF	**Montolieu**	**6.47**	**259**	*e*Pn	**Pn**	**19 31 55.8**	**+0.5**
MTLF	**Montolieu**	**6.47**	**259**	*e*Pn	**Pn**	**19 31 55.8**	**+0.5**
DPC	**Dobruska-Polom**	**6.54**	**32**	*e*PN	**Pn**	**19 31 56.0**	**-0.3**
DPC				*ex*	x	19 32 23.0	
DPC				*e*SN	**Sn**	**19 33 06.2**	**-4.5**
DPC				*e*SG	**Sg**	**19 33 47.4**	**-2.7**
DPC	**Dobruska-Polom**	**6.54**	**32**	Pn	**Pn**	**19 31 56.0**	**-0.3**
CLL	**Collm**	**6.54**	**11**	*e*Pn	**Pn**	**19 31 56.0**	**-0.2**
CLL				*e*Sg	**Sg**	**19 33 52.0**	**+1.8**
	comp=Z,17nm,1.2s						
UPC	**Upice**	**6.56**	**30**	*e*SG	**Sg**	**19 33 47.4**	**-3.3**
FINES	**FINESS Array B**	**18.79**	**23**	P	**Pn**	**19 34 39.9**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=223,slow=11,SNR=1.9						
TORD	**Torodi Ar. Bea**	**32.63**	**197**	P	**P**	**19 36 52.1**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=5.7,slow=9.8,SNR=2.9						
KURBB	**Kurchatov Arra**	**44.36**	**57**	P	**P**	**19 38 30.3**	**+0.3**
	comp=Z,0.1nm,0.5s,baz=282,slow=6.2,SNR=2.7						

*CSEM **03** 19:33:56.6, 44°.87N×10°.95E, h7km, ML2.3/11*
ROM 03 19:33:56.6±0.1, 44°.874N±0°.005×10°.947E±0°.006, h7km, ML2.4/5, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0826	**Rio Saliceto (**	**0.10**	**250**	P	Pg	19 34 00.0	+1.1
T0826				S	Sg	19 34 04.2	+3.7
T0826	**Rio Saliceto (**	**0.10**	**250**	P	Pg	19 34 01.0	+2.1
T0826				S	Sg	19 34 04.2	+3.8
	comp=E,15700μm,0.2s			AML	AML		
T0826				AML	AML		
	comp=N,18100μm,0.1s						
T0826				AML	AML		
	comp=N,18100μm,0.1s						
T0826				AML	AML		
	comp=E,15700μm,0.2s						
T0825	**Gonzaga (MN)**	**0.12**	**324**	P	Pg	19 34 01.8	+2.6
T0825				S	Sg	19 34 05.8	+4.8
T0825	**Gonzaga (MN)**	**0.12**	**324**	P	Pg	19 34 01.8	+2.6
T0825				S	Sg	19 34 05.8	+4.8
	comp=E,20250μm,0.5s			AML	AML		
T0825				AML	AML		
	comp=N,15800μm,0.9s						
T0825				AML	AML		
	comp=N,15800μm,0.9s						
T0825				AML	AML		
	comp=E,20250μm,0.5s						
RAVA	**Ravarino**	**0.17**	**134**	P	Pg	19 34 02.8	+2.8
RAVA				S	Sg	19 34 06.9	+4.5
RAVA	**Ravarino**	**0.17**	**134**	P	Pg	19 34 02.9	+2.8
RAVA				S	Sg	19 34 06.9	+4.5
RAVA				AML	AML		
	comp=E,1730μm,0.5s						
RAVA				AML	AML		
	comp=N,1700μm,0.8s						
RAVA				AML	AML		
	comp=N,1700μm,0.8s						
RAVA				AML	AML		
	comp=E,1730μm,0.5s						
SBPO	**S.Benedetto Po**	**0.18**	**354**	P	Pg	19 34 02.6	+2.4
SBPO	**S.Benedetto Po**	**0.18**	**354**	P	Pg	19 34 02.6	+2.4
SBPO				AML	AML		
	comp=E,1810μm,0.2s						
SBPO				AML	AML		
	comp=N,9295μm,0.5s						
SBPO				AML	AML		
	comp=E,1810μm,0.2s						
SBPO				AML	AML		
	comp=N,9295μm,0.5s						
NOVE	**Novellara**	**0.18**	**245**	P	Pg	19 34 02.5	+2.3
NOVE				S	Sg	19 34 07.2	+4.5
NOVE	**Novellara**	**0.18**	**245**	P	Pg	19 34 02.5	+2.2
NOVE				S	Sg	19 34 07.2	+4.5
NOVE				AML	AML		
	comp=E,2660μm,1.2s						
NOVE				AML	AML		
	comp=N,2305μm,0.7s						
NOVE				AML	AML		
	comp=N,2305μm,0.7s						
NOVE				AML	AML		
	comp=E,2660μm,1.2s						
T0800	**Massa Finalese**	**0.22**	**97**	P	Pg	19 34 03.3	+2.4
T0800				S	Sg	19 34 08.5	+4.7
T0800	**Massa Finalese**	**0.22**	**97**	P	Pg	19 34 03.3	+2.4
T0800				S	Sg	19 34 08.5	+4.7
T0800				AML	AML		
	comp=E,1600μm,0.2s						
T0800				AML	AML		
	comp=N,1190μm,0.3s						
T0800				AML	AML		
	comp=N,1190μm,0.3s						
T0800				AML	AML		
	comp=E,1600μm,0.2s						
MNTV	**Mantova**	**0.30**	**338**	AML	AML		
	comp=E,1730μm,1.1s						
MNTV				AML	AML		
	comp=N,1674μm,0.7s						
MNTV				AML	AML		
	comp=E,1730μm,1.1s						
MNTV				AML	AML		
	comp=N,1674μm,0.7s						
TEOL	**Teolo**	**0.71**	**46**	P	Pn	19 34 12.7	-0.2
TEOL	**Teolo**	**0.71**	**46**	P	Pn	19 34 12.7	-0.3
TEOL				AML	AML		
	comp=E,756μm,0.3s						
TEOL				AML	AML		
	comp=N,382μm,0.3s						
TEOL				AML	AML		
	comp=N,382μm,0.3s						
TEOL				AML	AML		
	comp=E,756μm,0.3s						
IMOL	**Imola, Italy**	**0.77**	**132**	AML	AML		
	comp=N,62μm,1.6s						
IMOL				AML	AML		
	comp=E,70μm,1.6s						
IMOL				AML	AML		
	comp=E,70μm,1.6s						
IMOL				AML	AML		
	comp=N,62μm,1.6s						
ROVR	**Rover¨¤ Verone**	**0.78**	**7**	P	Pn	19 34 14.2	+0.1
ROVR	**Rover¨¤ Verone**	**0.78**	**7**	P	Pn	19 34 14.2	+0.2
SALO	**Salr**	**0.80**	**338**	P	Pn	19 34 15.5	+1.2
SALO	**Salr**	**0.80**	**338**	P	Pn	19 34 15.5	+1.2
MAGA	**Magasa**	**0.93**	**346**	P	Pn	19 34 16.3	+0.2
MAGA	**Magasa**	**0.93**	**346**	P	Pn	19 34 16.3	+0.2

*CSEM **03** 19:34:28.6, 44°.88N×10°.94E, h7km, ML2.5/12*
ROM 03 19:34:28.6±0.1, 44°.879N±0°.005×10°.939E±0°.008, h7km, ML2.5/3, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0826	**Rio Saliceto (**	**0.10**	**247**	P	Pg	19 34 32.9	+2.0
T0826				S	Sg	19 34 36.5	+4.0
T0826	**Rio Saliceto (**	**0.10**	**247**	P	Pg	19 34 32.9	+2.0
T0826				S	Sg	19 34 36.5	+4.0
T0826				AML	AML		
	comp=E,15700μm,0.2s						
T0826				AML	AML		
	comp=N,18100μm,0.1s						
T0826				AML	AML		
	comp=E,15700μm,0.2s						
T0826				AML	AML		
	comp=N,18100μm,0.1s						
T0826				AML	AML		
	comp=N,18100μm,0.1s						
T0826				AML	AML		
	comp=E,15700μm,0.2s						
T0825	**Gonzaga (MN)**	**0.12**	**325**	P	Pg	19 34 33.7	+2.5
T0825				S	Sg	19 34 37.7	+4.8
T0825	**Gonzaga (MN)**	**0.12**	**325**	P	Pg	19 34 33.7	+2.6
T0825				S	Sg	19 34 37.7	+4.8
T0802	**SanFelice sul**	**0.17**	**91**	P	Pg	19 34 34.7	+2.5
T0802				S	Sg	19 34 39.3	+4.8
T0802	**SanFelice sul**	**0.17**	**91**	P	Pg	19 34 34.7	+2.6
T0802				S	Sg	19 34 39.3	+4.8
SBPO	**S.Benedetto Po**	**0.17**	**355**	P	Pg	19 34 34.8	+2.6
SBPO				S	Sg	19 34 38.5	+3.9
SBPO	**S.Benedetto Po**	**0.17**	**355**	P	Pg	19 34 34.8	+2.6
SBPO				S	Sg	19 34 38.5	+3.9
RAVA	**Ravarino**	**0.18**	**134**	P	Pg	19 34 34.0	+1.8
RAVA				S	Sg	19 34 39.8	+5.1
RAVA	**Ravarino**	**0.18**	**134**	P	Pg	19 34 35.0	+2.7
RAVA				S	Sg	19 34 39.8	+5.1
NOVE	**Novellara**	**0.18**	**243**	P	Pg	19 34 34.5	+2.2
NOVE				S	Sg	19 34 39.1	+4.4
NOVE	**Novellara**	**0.18**	**243**	P	Pg	19 34 34.5	+2.2
NOVE				S	Sg	19 34 39.1	+4.4
NOVE				AML	AML		
	comp=E,2660μm,1.2s						
NOVE				AML	AML		
	comp=N,2300μm,0.7s						
NOVE				AML	AML		
	comp=E,2660μm,1.2s						
NOVE				AML	AML		
	comp=N,2305μm,0.7s						
NOVE				AML	AML		
	comp=N,2305μm,0.7s						
NOVE				AML	AML		
	comp=E,2660μm,1.2s						
T0800	**Massa Finalese**	**0.22**	**98**	P	Pg	19 34 35.4	+2.3
T0800				S	Sg	19 34 40.5	+4.5
T0800	**Massa Finalese**	**0.22**	**98**	P	Pg	19 34 35.4	+2.4
T0800				S	Sg	19 34 40.5	+4.5
T0800				AML	AML		
	comp=E,1600μm,0.2s						
T0800				AML	AML		
	comp=N,1188μm,0.3s						
T0800				AML	AML		
	comp=E,1600μm,0.2s						
T0800				AML	AML		
	comp=N,1190μm,0.3s						
T0800				AML	AML		
	comp=E,1600μm,0.2s						
T0800				AML	AML		
	comp=N,1190μm,0.3s						
MODE	**Modena**	**0.25**	**178**	P	Pg	19 34 36.7	+3.1
MODE	**Modena**	**0.25**	**178**	P	Pg	19 34 36.7	+3.1
T0805	**Bondeno (FE)**	**0.28**	**82**	P	Pb	19 34 36.4	+0.5
T0805	**Bondeno (FE)**	**0.28**	**82**	P	Pb	19 34 36.4	+0.5
SERM	**Sermide**	**0.28**	**62**	P	Pb	19 34 36.8	+0.8
SERM	**Sermide**	**0.28**	**62**	P	Pb	19 34 36.8	+0.7
SERM				AML	AML		
	comp=E,818μm,1.6s						
SERM				AML	AML		
	comp=N,760μm,1.6s						
SERM				AML	AML		
	comp=E,818μm,1.6s						
SERM				AML	AML		
	comp=N,760μm,1.6s						
T0803	**Dosso, Cento (**	**0.31**	**111**	P	Pb	19 34 37.2	+0.7
T0803	**Dosso, Cento (**	**0.31**	**111**	P	Pb	19 34 37.2	+0.7
TEOL	**Teolo**	**0.71**	**47**	P	Pn	19 34 45.5	+0.5
TEOL	**Teolo**	**0.71**	**47**	P	Pn	19 34 45.5	+0.5
ROVR	**Rover¨¤ Verone**	**0.77**	**7**	P	Pn	19 34 46.7	+0.6
ROVR	**Rover¨¤ Verone**	**0.77**	**7**	P	Pn	19 34 46.7	+0.6
CTI	**Castel Tesino**	**1.27**	**23**	P	Pg	19 34 54.8	+1.8
CTI	**Castel Tesino**	**1.27**	**23**	P	Pg	19 34 54.8	+1.8
CTI				AML	AML		
	comp=E,266μm,0.5s						
CTI				AML	AML		
	comp=N,328μm,1.1s						
CTI				AML	AML		
	comp=N,328μm,1.1s						
CTI				AML	AML		
	comp=E,266μm,0.5s						
AGOR	**Agordo**	**1.60**	**29**	AML	AML		
	comp=N,50μm,0.5s						
AGOR				AML	AML		
	comp=E,51μm,0.3s						
AGOR				AML	AML		
	comp=N,50μm,0.5s						
AGOR				AML	AML		
	comp=E,51μm,0.3s						
KOSI	**Kohlern**	**1.61**	**11**	P	Pg	19 34 59.6	0.0
KOSI	**Kohlern**	**1.61**	**11**	P	Pg	19 34 59.6	0.0

*IDC **03** 19:36:06.2±0.9, 30°.57N×65°.90E, h0km, mb3.5/9, mb1 3.7/10, mb1mx3.5/63, mbtmp3.6/10, ML3.7/1, Error ellipse: s-maj=30.4km s-min=20.4km az=118.0*
*ISCJB **03** 19:36:07.6±0.7, 30°.24N±0°.10×66°.38E±0°.08, h33km, mb3.5/8, Error ellipse: s-maj=14.3km s-min=9.7km az=172.3*
ISC 03 19:36:08.9±0.8, 30°.2N±0°.1×66°.42E±0°.07, h35km, n18, σ1§43/19, mb3.5/8, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHET	**Khetri**	**8.47**	**102**	*ex*	**Sn**	**19 39 44.6**	**+1.1**
DHRM	**DHARAMSHALA**	**8.71**	**74**	*e*P	**Pn**	**19 38 12.6**	**-0.1**
DHRM				*e*S	**Sn**	**19 39 49.8**	**0.0**
DHRM				IAML		19 39 53.2	
	comp=E,27nm,0.7s						
DHRM				IAML		19 39 53.8	
	comp=N,35nm,0.7s						
SMLA	**Simla**	**9.31**	**81**	*ex*	**Pn**	**19 38 17.7**	**-2.8**
SMLA				*ex*	**Sn**	**19 40 03.3**	**-0.7**
SMLA				IAML		19 40 10.2	
	comp=E,24nm,1.4s						
SMLA				IAML		19 40 10.6	
	comp=N,560nm,1.2s						
WSAR	**Wadi Sarin**	**9.80**	**227**	Pn	**Pn**	**19 38 29.5**	**+2.1**
	comp=N,0.7nm,0.3s,baz=84,slow=8.7,SNR=11						
WSAR				Sn	**Sn**	**19 40 13.1**	**-3.1**
	comp=N,0.0nm,0.3s,baz=257,slow=19,SNR=2.3						
KOLN	**Koldanda**	**15.23**	**95**	*e*P	**P**	**19 39 45.3**	**-0.8**
	comp=N,5.4nm,0.4s						
DANN	**Dangsing**	**15.24**	**93**	*e*P	**Pn**	**19 39 42.6**	**+0.8**
	comp=N,25nm,0.7s						
GKN	**Gorkha**	**16.07**	**93**	*e*P	**Pn**	**19 39 53.0**	**+0.6**
KKN	**Kakani**	**16.67**	**93**	*e*P	**Pn**	**19 40 01.1**	**+1.0**
	comp=N,9.1nm,0.6s						
GUN	**Gumba**	**17.16**	**93**	*e*P	**P**	**19 40 07.2**	**-0.6**
	comp=N,11nm,0.4s						
MKAR	**Makanchi Array**	**20.67**	**32**	P	**P**	**19 40 45.9**	**+0.1**
	comp=N,0.7nm,0.4s,baz=210,slow=12,SNR=17						
KURBB	**Kurchatov Arra**	**22.37**	**21**	P	**P**	**19 41 04.5**	**+0.7**
	comp=N,1.0nm,0.6s,baz=212,slow=9.4,SNR=10						
BVAR	**Borovoye Array**	**23.03**	**6**	P	**P**	**19 41 09.5**	**-1.2**
	comp=N,1.4nm,0.7s,baz=178,slow=11,SNR=9.0						
ZALV	**Zalesovo Beam**	**27.25**	**24**	P	**P**	**19 41 50.3**	**+0.8**
	comp=N,0.4nm,0.4s,baz=222,slow=11,SNR=2.4						
TORD	**Torodi Ar. Bea**	**61.76**	**269**	P	**P**	**19 46 23.4**	**-0.9**
	comp=N,0.5nm,0.9s,baz=46,slow=6.2,SNR=2.7						
ILAR	**Eielson Array**	**81.87**	**14**	P	**P**	**19 48 24.5**	**+0.2**
	comp=N,0.2nm,0.6s,baz=336,slow=4.2,SNR=3.2						
WRA	**Warramunga Arr**	**82.14**	**118**	P	P	19 48 33.3	+7.0
	comp=N,0.4nm,0.7s,baz=173,slow=24,SNR=7.9						
ASAR	**Alice Springs**	**84.00**	**122**	P	P	19 48 40.7	+4.8
	comp=N,0.2nm,0.6s,baz=305,slow=5.8,SNR=4.0						
YKA	**Yellowknife Ar**	**87.67**	**0**	P	**P**	**19 48 55.1**	**+1.7**
	comp=N,0.3nm,0.6s,baz=2.4,slow=4.9,SNR=4.1						

MAN 03 19:46:48.3, 8°.49N×125°.44E, h18km, mb3.7, ML2.4, MS1.9, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.51**	**21**	*e*P	Pb	19 46 58.9	+0.1
BUTP				*e*S	Sn	19 47 10.2	+1.2
BUKP	**Musuan**	**0.71**	**212**	*e*P	Pb	19 47 02.1	-0.1
BUKP				*e*S	Sn	19 47 15.1	+1.0
CGP	**Cagayan de Oro**	**0.74**	**267‖**	*e*P	Pg	19 47 02.9	+0.2
CGP				*i* S	Sn	19 47 15.3	+0.7

MAN 03 19:49:31.7, 11°.82N×124°.20E, h37km, mb4.5, ML3.3, MS3.1, 2D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.82**	**34**	*e*P	Pn	19 49 46.9	+0.1
CNP				*e*S	Sn	19 49 59.5	+1.8
OCLP	**Ormoc**	**0.87**	**152**	*e*P	Pn	19 49 46.9	-0.5
OCLP				*e*S	Sn	19 50 00.2	+

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T0800                                  AML     AML
        comp=E,2020μm,0.2s
T0800                                  AML     AML
        comp=N,1685μm,0.3s
T0800                                  AML     AML
        comp=E,2020μm,0.2s
T0800                                  AML     AML
        comp=N,1685μm,0.3s
SBPO  S.Benedetto Po   0.20 345  P       Pg      19 51 31.2 +3.0
SBPO  S.Benedetto Po   0.20 345  P       Pg      19 51 31.2 +3.0
NOVE  Novellara        0.21 252  P       Pg      19 51 30.9 +2.5
NOVE                             S       Sg      19 51 36.4 +5.2
NOVE  Novellara        0.21 252  P       Pg      19 51 30.9 +2.5
NOVE                             S       Sg      19 51 36.4 +5.2
MODE  Modena           0.23 187  P       Pg      19 51 32.8 +3.9
MODE  Modena           0.23 187  P       Pg      19 51 32.8 +3.8
T0805 Bondeno (FE)     0.24  76  P       Pg      19 51 31.6 +2.5
T0805 Bondeno (FE)     0.24  76  P       Pg      19 51 31.6 +2.5
SALO  Salr             0.82 337  P       Pn      19 51 43.9 +1.5
SALO  Salr             0.82 337  P       Pn      19 51 43.9 +1.5
SALO                             AML     AML
        comp=E,138μm,0.5s
SALO                             AML     AML
        comp=N,178μm,0.9s
SALO                             AML     AML
        comp=E,138μm,0.5s
SALO                             AML     AML
        comp=N,178μm,0.9s
MAGA  Magasa           0.95 344  P       Pn      19 51 45.1 +0.9
MAGA  Magasa           0.95 344  P       Pn      19 51 45.1 +0.9
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CSEM ***03*** *19:52:03.6, 44°.88N×10°.93E, h7km, ML2.4/8*
ROM 03 19:52:03.6±0.1, 44°.875N±0°.005×10°.933E±0°.008, h7km, ML2.4/4, 2D, Northern Italy

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Code  Station Name     Δ°   AZ°  Phase ID                Time      Res
                                Op      ISC             h m s     ISC
T0826 Rio Saliceto (   0.09 248 ⇓P      Pg              19 52 07.6 +1.9
T0826                           S       Sg              19 52 10.8 +3.6
T0826 Rio Saliceto (   0.09 248 P       Pg              19 52 07.6 +1.9
T0826                           S       Sg              19 52 10.8 +3.5
T0826                           AML     AML
        comp=E,4410μm,0.2s
T0826                           AML     AML
        comp=N,6045μm,0.1s
T0826                           AML     AML
        comp=N,6045μm,0.1s
T0826                           AML     AML
        comp=E,4410μm,0.2s
T0825 Gonzaga (MN)     0.12 328 ⇓P      Pg              19 52 08.5 +2.4
T0825                           S       Sg              19 52 12.4 +4.6
T0825 Gonzaga (MN)     0.12 328 P       Pg              19 52 08.5 +2.4
T0825                           S       Sg              19 52 12.4 +4.6
T0825                           AML     AML
        comp=E,5425μm,1.0s
T0825                           AML     AML
        comp=N,8030μm,0.9s
T0825                           AML     AML
        comp=N,8030μm,0.9s
T0825                           AML     AML
        comp=E,5425μm,1.0s
NOVE  Novellara        0.17 244  P       Pg      19 52 09.2 +2.1
NOVE                             S       Sg      19 52 13.7 +4.3
NOVE  Novellara        0.17 244  P       Pg      19 52 09.2 +2.1
NOVE                             S       Sg      19 52 13.7 +4.2
NOVE                             AML     AML
        comp=E,864μm,0.2s
NOVE                             AML     AML
        comp=N,776μm,0.2s
NOVE                             AML     AML
        comp=N,776μm,0.2s
NOVE                             AML     AML
        comp=E,864μm,0.2s
SBPO  S.Benedetto Po   0.18 357  P       Pg      19 52 09.6 +2.5
SBPO  S.Benedetto Po   0.18 357  P       Pg      19 52 09.6 +2.5
SBPO                             AML     AML
        comp=E,538μm,0.3s
SBPO                             AML     AML
        comp=N,3150μm,0.2s
SBPO                             AML     AML
        comp=E,538μm,0.3s
SBPO                             AML     AML
        comp=N,3150μm,0.2s
T0802 SanFelice sul    0.18  90  P       Pg      19 52 09.6 +2.5
T0802                           S       Sg      19 52 14.2 +4.6
T0802 SanFelice sul    0.18  90  P       Pg      19 52 09.6 +2.5
T0802                           S       Sg      19 52 14.2 +4.6
RAVA  Ravarino         0.18 132  P       Pg      19 52 09.8 +2.6
RAVA                             S       Sg      19 52 14.6 +5.0
RAVA  Ravarino         0.18 132  P       Pg      19 52 09.8 +2.6
RAVA                             S       Sg      19 52 14.6 +5.0
T0800 Massa Finalese   0.23  97  P       Pg      19 52 10.3 +2.3
T0800                            S       Sg      19 52 15.7 +4.6
T0800 Massa Finalese   0.23  97  P       Pg      19 52 10.3 +2.3
T0800                            S       Sg      19 52 15.7 +4.7
MODE  Modena           0.25 177  P       Pg      19 52 12.9 +4.5
MODE  Modena           0.25 177  P       Pg      19 52 12.9 +4.5
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SFS ***03*** *19:59:06.0, 37°.25N×12°.70W, h0km, ML3.7*
MDD ***03*** *19:59:07.7±1.7, 37°.28N×12°.67W, h0km, mb3.9/5, Error ellipse: s-maj=15.6km s-min=14.5km az=31.0, PRXIMO*
IGIL ***03*** *19:59:08.2, 37°.25N×12°.74W, h7km, ML1.8*
INMG ***03*** *19:59:09.0±1.2, 37°.11N×13°.07W, h10km, ML2.2, Error ellipse: s-maj=6.9km s-min=5.6km az=98.0*
CSEM ***03*** *19:59:10.1±0.3, 37°.38N×12°.47W, h10km, mb3.9, Error ellipse: s-maj=5.0km s-min=4.9km az=61.0*
ISC 03 19:59:05.6±3.2, 37°.31N±0°.09×12°.7W±0°.2, h10km, n87, σ1§84/157, 1C, Azores-Cape St. Vincent Ridge

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Code  Station Name     Δ°   AZ°  Phase ID                Time      Res
                                Op      ISC             h m s     ISC
PMAFR Mafra            3.14  57  eP      Pn              19 59 57.1 +2.0
PMAFR                           eSn     Sn              20 00 34.6 +2.0
PMAFR                           A       A               20 00 37.3
        8.2nm,0.2s
PMAFR Mafra            3.14  57 ⇑P       Pn              19 59 57.1 +2.0
        5.1nm,0.2s,SNR=18
PMAFR                           S       Sn              20 00 34.1 +1.5
        9.6nm,0.2s,SNR=6.4
PMAFR Mafra            3.14  57  P       Pn              19 59 57.1 +2.0
        5.1nm,0.2s,SNR=18
PMAFR                           S       Sn              20 00 34.1 +1.5
        9.6nm,0.2s,SNR=6.4
PMAFR                           eSn     Sn              20 00 34.6 +2.0
PTEO  Sao Teotonio     3.15  85  ePn     Pn              19 59 57.1 +1.8
PTEO                            eSn     Sn              20 00 34.4 +1.4
PTEO                            A       A               20 00 38.5
        5.1nm,0.6s
PTEO  Sao Teotonio     3.15  85  Pn      Pn              19 59 57.1 +1.8
PTEO                            S       Sn              20 00 34.4 +1.4
        2.6nm,0.6s
PTEO  Sao Teotonio     3.15  85  Pn      Pn              19 59 57.1 +1.8
PTEO                            S       Sn              20 00 34.4 +1.4
        2.6nm,0.6s
MORF  Marmelete        3.21  89  eP      Pn              19 59 57.8 +1.7
MORF  Marmelete        3.21  89  ePn     Pb              19 59 59.6 -3.1
MORF  Marmelete        3.21  89  P       Pn              19 59 57.8 +1.7
MORF  Marmelete        3.21  89  P       Pn              19 59 57.8 +1.7
MORF  Marmelete        3.21  89  ePn     Pb              19 59 59.6 -3.1
PNCL  Nicolau / Gran   3.38  75  ePn     Pn              20 00 00.5 +2.0
PNCL                            eSn     Sn              20 00 39.0 +0.3
PNCL                            A       A               20 00 47.7
        2.0nm,0.2s
PNCL  Nicolau / Gran   3.38  75  ePn     Pn              20 00 00.5 +2.0
PNCL                            eSn     Sn              20 00 39.0 +0.3
MESJ  Messejana        3.58  80  eP      Pn              20 00 03.5 +2.3
MESJ                            eS      Sn              20 00 43.5  0.0
MESJ                            AML     AML             20 00 46.3
        comp=N,2.7nm,0.4s
MESJ  Messejana        3.58  80  ePn     Pn              20 00 03.9 +2.7
MESJ                            eSn     Sn              20 00 43.6 +0.1
MESJ                            A       A               20 00 50.5
        comp=N,2.3nm,0.2s
MESJ  Messejana        3.58  80  P       Pn              20 00 03.5 +2.3
MESJ                            S       Sn              20 00 43.5  0.0
        comp=N,2.7nm,0.4s
MESJ  Messejana        3.58  80  P       Pn              20 00 03.5 +2.3
MESJ  Messejana        3.58  80  ePn     Pn              20 00 03.9 +2.7
MESJ                            eSn     Sn              20 00 43.6 +0.1
PCVE  Castro Verde     3.70  84  ePn     Pn              20 00 05.4 +2.5
PCVE                            eSn     Sn              20 00 46.0 -0.6
PCVE                            A       A               20 00 53.1
        comp=N,2.2nm,0.2s
PCVE  Castro Verde     3.70  84  P       Pn              20 00 05.4 +2.5
PCVE                            S       Sn              20 00 46.0 -0.6
        comp=N,2.2nm,0.2s
PCVE  Castro Verde     3.70  84  P       Pn              20 00 05.4 +2.5
PCVE                            S       Sn              20 00 46.0 -0.6
        comp=N,2.2nm,0.2s
ALMR  Almeirim         3.71  59  eP      Pn              20 00 05.3 +2.3
ALMR  Almeirim         3.71  59  ePn     Pn              20 00 05.9 +2.9
ALMR                            eSn     Sn              20 00 48.2 +1.4
ALMR                            A       A               20 00 54.1
        comp=N,11nm,0.5s
ALMR  Almeirim         3.71  59  P       Pn              20 00 05.3 +2.3
ALMR                            S       Sn              20 00 48.2 +1.4
        comp=N,5.7nm,0.5s
ALMR  Almeirim         3.71  59  P       Pn              20 00 05.3 +2.3
ALMR  Almeirim         3.71  59  ePn     Pn              20 00 05.9 +2.9
ALMR                            S       Sn              20 00 48.2 +1.4
        comp=N,5.7nm,0.5s
PBDV  Barranco-do-Ve   3.79  90  ePn     Pn              20 00 06.1 +2.1
PBDV                            eSn     Sn              20 00 50.9 +2.3
PBDV                            A       A               20 01 01.1
        comp=N,2.6nm,0.9s
PBDV  Barranco-do-Ve   3.79  90  P       Pn              20 00 06.1 +2.1
PBDV                            S       Sn              20 00 50.9 +2.3
        comp=N,2.6nm,0.9s
PBDV  Barranco-do-Ve   3.79  90  P       Pn              20 00 06.1 +2.1
PBDV                            S       Sn              20 00 50.9 +2.3
        comp=N,2.6nm,0.9s
PBEJ  Beja             3.88  78  ePn     Pn              20 00 07.7 +2.4
PBEJ                            eSn     Sn              20 00 50.8 -0.2
PBEJ                            A       A               20 00 56.4
        comp=N,6.0nm,0.3s
PBEJ  Beja             3.88  78  P       Pn              20 00 07.7 +2.4
PBEJ                            S       Sn              20 00 50.8 -0.2
        comp=N,3.0nm,0.3s
PBEJ  Beja             3.88  78  P       Pn              20 00 07.7 +2.4
PBEJ                            S       Sn              20 00 50.8 -0.2
        comp=N,3.0nm,0.3s
EVO   Evora            3.88  70  ePn     Pn              20 00 08.1 +2.8
EVO                             eSn     Sn              20 00 50.8 -0.2
EVO                             A       A               20 00 57.0
        comp=N,5.8nm,0.1s
EVO   Evora            3.88  70  P       Pn              20 00 07.5 +2.2
EVO                             S       Sn              20 00 50.5 -0.5
EVO   Evora            3.88  70  P       Pn              20 00 07.5 +2.2
EVO   Evora            3.88  70  ePn     Pn              20 00 08.1 +2.8
EVO                             S       Sn              20 00 50.5 -0.5
PMTG  Montargil        3.92  62  ePn     Pn              20 00 08.1 +2.2
PMTG                            eSn     Sn              20 00 52.5 +0.6
PMTG                            A       A               20 00 59.2
        comp=N,2.4nm,0.1s
PMTG  Montargil        3.92  62  ePn     Pn              20 00 08.1 +2.2
PMTG                            eSn     Sn              20 00 52.5 +0.6
PVAQ  Vaqueiros        3.95  87  ePn     Pn              20 00 08.5 +2.2
PVAQ                            eSn     Sn              20 00 53.6 +0.9
PVAQ                            A       A               20 00 59.7
        comp=N,2.4nm,0.2s
PVAQ  Vaqueiros        3.95  87  P       Pn              20 00 08.5 +2.2
PVAQ                            S       Sn              20 00 53.6 +0.9
        comp=N,2.4nm,0.2s
PVAQ  Vaqueiros        3.95  87  P       Pn              20 00 08.5 +2.2
PVAQ                            S       Sn              20 00 53.6 +0.9
        comp=N,2.4nm,0.2s
PTOM  Tomar            4.06  54  ePn     Pn              20 00 10.6 +2.8
PTOM                            eSn     Sn              20 00 56.8 +1.4
PTOM                            A       A               20 01 07.2
        comp=N,5.5nm,0.2s
PTOM  Tomar            4.06  54  P       Pn              20 00 10.6 +2.8
PTOM                            S       Sn              20 00 56.8 +1.4
        comp=N,2.8nm,0.2s
PTOM  Tomar            4.06  54  P       Pn              20 00 10.6 +2.8
PTOM                            S       Sn              20 00 56.8 +1.4
        comp=N,2.8nm,0.2s
EGRO  El Granado       4.14  85  P       Pn              20 00 10.2 +1.4
        comp=N,1.9nm,0.2s,SNR=7.9
EGRO                            S       Sn              20 00 57.9 +0.6
        comp=N,1.8nm,0.1s,SNR=7.9
EGRO  El Granado       4.14  85  P       Pn              20 00 10.2 +1.4
        comp=N,1.9nm,0.2s,SNR=7.9
EGRO                            S       Sn              20 00 57.9 +0.6
        comp=N,1.8nm,0.1s,SNR=7.9
PCAS  Casmilo, Conde   4.26  49  ePn     Pn              20 00 12.9 +2.3
PCAS                            eSn     Sn              20 01 01.4 +1.0
PCAS                            A       A               20 01 13.5
        comp=N,1.9nm,0.6s
PCAS  Casmilo, Conde   4.26  49  ePn     Pn              20 00 12.9 +2.3
PCAS                            eSn     Sn              20 01 01.4 +1.0
PESTR Estremoz         4.30  67  ePn     Pn              20 00 13.2 +2.1
PESTR                           eSn     Sn              20 01 01.6 +0.2
PESTR                           A       A               20 01 07.1
        comp=N,1.8nm,0.6s
PESTR Estremoz         4.30  67  ePn     Pn              20 00 13.2 +2.1
PESTR                           eSn     Sn              20 01 01.6 +0.2
PBAR  Barrancos        4.55  77  ePn     Pn              20 00 17.1 +2.6
PBAR                            eSn     Sn              20 01 07.8 +0.4
PBAR                            A       A               20 01 12.9
        comp=N,3.2nm,0.3s
PBAR  Barrancos        4.55  77  P       Pn              20 00 17.1 +2.6
PBAR                            S       Sn              20 01 07.8 +0.4
        comp=N,3.2nm,0.3s
PBAR  Barrancos        4.55  77  P       Pn              20 00 17.1 +2.6
PBAR                            S       Sn              20 01 07.8 +0.4
        comp=N,3.2nm,0.3s
PMRV  Marv??o          4.66  61  ePn     Pn              20 00 18.1 +2.1
PMRV                            eSn     Sn              20 01 10.3 +0.1
PMRV                            A       A               20 01 17.1
        comp=N,2.3nm,0.5s
PMRV  Marv??o          4.66  61  P       Pn              20 00 18.1 +2.1
PMRV                            S       Sn              20 01 10.3 +0.1
        comp=N,2.3nm,0.5s
PMRV  Marv??o          4.66  61  P       Pn              20 00 18.1 +2.1
PMRV                            S       Sn              20 01 10.3 +0.1
        comp=N,2.3nm,0.5s
EBAD  Badajoz          4.70  70  P       Pn              20 00 18.9 +2.4
        comp=N,0.9nm,0.1s,SNR=12
EBAD                            S       Sn              20 01 10.1 -1.0
        comp=N,2.4nm,0.2s,SNR=5.2
EBAD  Badajoz          4.70  70  P       Pn              20 00 18.9 +2.4
        comp=N,0.9nm,0.1s,SNR=12
EBAD                            S       Sn              20 01 10.1 -1.0
        comp=N,2.4nm,0.2s,SNR=5.2
PCBR  Castelo Branco   4.79  57  ePn     Pn              20 00 20.1 +2.3
PCBR                            eSn     Sn              20 01 14.2 +0.8
PCBR                            A       A               20 01 17.2
        comp=N,1.3nm,0.4s
PCBR  Castelo Branco   4.79  57  P       Pn              20 00 20.1 +2.3
PCBR                            S       Sn              20 01 14.2 +0.8
        comp=N,0.6nm,0.4s
PCBR  Castelo Branco   4.79  57  P       Pn              20 00 20.1 +2.3
PCBR                            S       Sn              20 01 14.2 +0.8
        comp=N,0.6nm,0.4s
EMIN  Mina Concepcio   4.79  83  P       Pn              20 00 19.5 +1.7
        comp=N,0.7nm,0.1s,SNR=11
EMIN                            S       Sn              20 01 12.7 -0.7
        comp=N,0.2nm,0.1s,SNR=7.9
EMIN  Mina Concepcio   4.79  83  P       Pn              20 00 19.5 +1.7
        comp=N,0.7nm,0.1s,SNR=11
EMIN                            S       Sn              20 01 12.7 -0.7
        comp=N,0.2nm,0.1s,SNR=7.9
PVIS  Viseu            5.04  46  ePn     Pn              20 00 23.5 +2.2
PVIS                            eSn     Sn              20 01 19.1 -0.5
PVIS                            A       A               20 01 23.1
        comp=N,2.0nm,0.3s
PVIS  Viseu            5.04  46  P       Pn              20 00 23.5 +2.2
PVIS                            S       Sn              20 01 19.1 -0.5
        comp=N,1.0nm,0.3s
PVIS  Viseu            5.04  46  P       Pn              20 00 23.5 +2.2
PVIS                            S       Sn              20 01 19.1 -0.5
        comp=N,1.0nm,0.3s
MTE   Manteigas        5.05  51  eSn     Sn              20 01 20.2 +0.2
MTE   Manteigas        5.05  51  S       Sn              20 01 20.2 +0.2
MTE   Manteigas        5.05  51  S       Sn              20 01 20.2 +0.2
PVRL  Vila Real        5.52  43  eSn     Sn              20 01 33.8 +2.4
POLO  Lamas de Olo     5.55  42  eSn     Sn              20 01 30.7 -1.4
POLO                            A       A               20 01 42.0
        comp=N,0.6nm,0.4s
PGAV  Gavieira, Arco   5.76  35  eSn     Sn              20 01 36.1 -1.2
ELOB  Lobios           5.78  37  P       Pn              20 00 33.6 +2.1
        comp=N,0.3nm,0.2s,SNR=7.9
ELOB                            S       Sn              20 01 36.1 -1.8
        comp=N,1.5nm,0.2s,SNR=7.9
ELOB  Lobios           5.78  37  P       Pn              20 00 33.6 +2.1
        comp=N,0.3nm,0.2s,SNR=7.9
ECAB  El Cabril        5.80  80  P       Pn              20 00 33.5 +1.7
        comp=N,0.7nm,0.2s,SNR=12
ECAB                            S       Sn              20 01 37.2 -1.2
        comp=N,0.6nm,0.2s,SNR=7.9
ECAB  El Cabril        5.80  80  P       Pn              20 00 33.5 +1.7
        comp=N,0.7nm,0.2s,SNR=12
ECAB                            S       Sn              20 01 37.2 -1.2
        comp=N,0.6nm,0.2s,SNR=7.9
MVO   Moncorvo         5.83  47  ePn     Pn              20 00 34.1 +1.9
MVO                             eSn     Sn              20 01 38.4 -0.7
MVO                             A       A               20 01 41.9
        comp=N,1.7nm,0.4s
MVO   Moncorvo         5.83  47  P       Pn              20 00 33.9 +1.7
        comp=N,0.8nm,0.1s,SNR=7.9
MVO                             S       Sn              20 01 38.0 -1.1
        comp=N,0.8nm,0.2s,SNR=7.9
MVO   Moncorvo         5.83  47  ePn     Pn              20 00 34.1 +1.9
MVO                             S       Sn              20 01 38.0 -1.1
        comp=N,0.8nm,0.2s,SNR=7.9
MVO                             eSn     Sn              20 01 38.4 -0.7
EPLA  Plasencia        5.84  60  P       Pn              20 00 34.6 +2.3
        comp=N,1.1nm,0.3s,SNR=7.9
EPLA                            S       Sn              20 01 39.0 -0.4
        comp=N,1.8nm,0.2s,SNR=7.9
EPLA  Plasencia        5.84  60  P       Pn              20 00 34.6 +2.3
        comp=N,1.1nm,0.3s,SNR=7.9
EPLA                            S       Sn              20 01 39.0 -0.4
        comp=N,1.8nm,0.2s,SNR=7.9
EADA  Adamuz           6.47  80  P       Pn              20 00 42.7 +1.7
        comp=N,0.7nm,0.2s,SNR=7.9
EADA                            S       Sn              20 01 52.7 -2.2
        comp=N,0.2nm,0.1s,SNR=7.9
EADA  Adamuz           6.47  80  P       Pn              20 00 42.7 +1.7
        comp=N,0.7nm,0.2s,SNR=7.9
EAGO  Agolada(Pontev   6.51  31  P       Pn              20 00 44.0 +2.5
        comp=N,0.2nm,0.1s,SNR=7.9
EAGO                            S       Sn              20 01 51.1 -4.8
        comp=N,0.3nm,0.1s,SNR=7.9
EAGO  Agolada(Pontev   6.51  31  P       Pn              20 00 44.0 +2.5
        comp=N,0.2nm,0.1s,SNR=7.9
PAB   San Pablo        6.91  69  P       Pn              20 00 49.1 +2.2
        comp=N,0.3nm,0.2s,SNR=7.9
PAB                             S       Sn              20 02 03.0 -2.6
        comp=N,0.1nm,0.2s,SNR=7.9
PAB   San Pablo        6.91  69  P       Pn              20 00 49.1 +2.2
        comp=N,0.3nm,0.2s,SNR=7.9
```

IDC 03 20:00:00.4±2.0, 18°.85N×39°.43E, h0km, mb3.6/7, mb1 3.6/7, mb1mx3.3/67, mbtmp3.6/7, MS3.4/10, Ms1 3.4/10, ms1mx3.0/45, Error ellipse: s-maj=50.7km s-min=25.1km az=157.0, Red Sea

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Code  Station Name     Δ°   AZ°  Phase ID                Time      Res
                                Op      ISC             h m s     ISC
MMAI  Mount Meron Ar   14.57 346 LR      LR              20 08 13.6
        comp=Z,74nm,19.5s,baz=170,slow=34
WSAR  Wadi Sarin       18.45  73 LR      LR              20 12 38.4
        comp=Z,125nm,18.6s,baz=262,slow=41
BRTR  Keskin Array B   21.40 348 P       P               20 04 51.1 +1.3
        2.2nm,1.0s,baz=169,slow=13,SNR=13
GNI   Garni            21.72  11 LR      LR              20 13 45.6
        comp=Z,63nm,18.1s,baz=192,slow=38
GEYT  Alibeck          25.05  37 LR      LR              20 15 59.4
        comp=Z,92nm,19.9s,baz=325,slow=38
AKASG Malin Array Be   32.81 348 P       P               20 06 34.0 -1.3
        0.6nm,0.4s,baz=144,slow=9.8,SNR=5.0
AKTO  Aktyubinsk       34.83  21 LR      LR              20 22 20.2
        comp=Z,47nm,18.2s,baz=181,slow=38
TORD  Torodi Ar. Bea   36.66 267 P       P               20 07 09.2 +0.1
        2.1nm,1.0s,baz=78,slow=8.8,SNR=10
TORD                             LR      LR              20 23 04.7
        comp=Z,66nm,19.0s,baz=110,slow=38
AAK   Ala-Archa        37.94  44 LR      LR              20 25 16.4
        comp=Z,56nm,18.4s,baz=246,slow=40
BVAR  Borovoye Array   41.72  28 P       P               20 07 50.5 -0.4
        0.1nm,0.3s,baz=234,slow=7.3,SNR=2.5
KOWA  Kowa             41.77 271 LR      LR              20 26 39.9
        comp=Z,61nm,18.9s,baz=77,slow=38
MKAR  Makanchi Array   44.74  42 P       P               20 08 16.7 +1.1
        0.9nm,0.9s,baz=256,slow=5.2,SNR=4.8
MKAR                             LR      LR              20 27 30.3
        comp=Z,41nm,19.4s,baz=278,slow=37
ZALV  Zalesovo Beam    49.30  34 P       P               20 08 51.1 +0.1
        0.3nm,0.3s,baz=260,slow=7.4,SNR=3.8
ZALV                             LR      LR              20 31 45.8
        comp=Z,34nm,19.7s,baz=70,slow=39
SONM  Songino Array    60.86  45 P       P               20 10 14.1 -0.7
        0.4nm,0.7s,baz=259,slow=6.9,SNR=2.7
```

CSEM ***03*** *20:00:56.4, 45°.58N×0°.73E, h6km, ML2.2/4*
LDG 03 20:00:56.4±0.1, 45°.58N×0°.73E, h6km, Md2.1/2, Ml2.2/4, Error ellipse: s-maj=3.0km s-min=2.2km az=60.0, France

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Code  Station Name     Δ°   AZ°  Phase ID                Time      Res
                                Op      ISC             h m s     ISC
RJF   Les Rejaudoux    0.62 116 ePg     Pg              20 01 07.9 -0.4
RJF                             eSg     Sg              20 01 15.8 -0.5
        4.6nm,0.2s
RJF   Les Rejaudoux    0.62 116 ePg     Pg              20 01 07.9 -0.4
RJF                             eSg     Sg              20 01 15.8 -0.5
        2.3nm,0.2s
LFF   La Frestale      0.64 179 ePg     Pg              20 01 08.8 +0.2
LFF                             eSg     Sg              20 01 17.0 +0.1
        5.3nm,0.3s
LFF   La Frestale      0.64 179 ePg     Pg              20 01 08.8 +0.2
LFF                             eSg     Sg              20 01 17.0 +0.1
        2.7nm,0.3s
CAF   Calviac          1.15 124 ePg     Pg              20 01 17.5 -0.8
CAF                             eSg     Sg              20 01 33.1 -0.1
        3.3nm,0.2s
CAF   Calviac          1.15 124 ePg     Pg              20 01 17.5 -0.8
CAF                             eSg     Sg              20 01 33.1 -0.1
        1.6nm,0.2s
MFF   Saint Martin d   1.19 330 ePn     Pg              20 01 17.9 -1.4
MFF                             eSn     Sg              20 01 33.6 -1.2
        4.6nm,0.4s
MFF   Saint Martin d   1.19 330 ePn     Pg              20 01 17.9 -1.4
MFF                             eSn     Sg              20 01 33.6 -1.2
        2.3nm,0.4s
TCF   Toulx Ste Croi   1.26  55 ePn     Pg              20 01 18.9 -1.6
TCF                             eSn     Sg              20 01 35.3 -1.5
TCF   Toulx Ste Croi   1.26  55 ePn     Pg              20 01 18.9 -1.6
TCF                             eSn     Sg              20 01 35.3 -1.5
BGF   Bois d'Agland    1.77  56 ePn     Pn              20 01 25.7 -1.9
BGF                             eSn     Sn              20 01 47.4 -3.1
        7.2nm,0.4s
BGF   Bois d'Agland    1.77  56 ePn     Pn              20 01 25.7 -1.9
BGF                             eSn     Sn              20 01 47.4 -3.1
        3.6nm,0.4s
AVF   Avril sur Loir   2.19  55 ePn     Pn              20 01 31.7 -1.6
AVF   Avril sur Loir   2.19  55 ePn     Pn              20 01 31.7 -1.6
SJPF  Ste Jean         2.83 210 ePn     Pn              20 01 40.3 -1.9
SJPF  Ste Jean         2.83 210 P       Pn              20 01 40.3 -1.9
SJPF  Ste Jean         2.83 210 ePn     Pn              20 01 40.3 -1.9
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ISK ***03*** *20:08:49.9, 42°.21N×24°.03E, h12km, ML3.7/26*
CSEM ***03*** *20:08:50.9±0.1, 42°.22N×24°.01E, h10km, ML3.7, Error ellipse: s-maj=4.9km s-min=2.7km az=24.0*
BEO ***03*** *20:08:50.9±0.3, 42°.24N×23°.97E, h3km±2km*
SKO ***03*** *20:08:51.0, 42°.23N×23°.96E, h2km*
ISC 03 20:08:50.0±1.1, 42°.22N±0°.02×23°.98E±0°.02, h7km±9km, n196, σ1§26/223, 12C-21D, Bulgaria

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Code  Station Name     Δ°   AZ°  Phase ID                Time      Res
                                Op      ISC             h m s     ISC
PLD   Plovdiv          0.55 101 PG      Pb              20 09 01.5 -0.4
PLD                             SG      Sb              20 09 09.0 -1.0
PLD   Plovdiv          0.55 101 ePg     Pg              20 09 00.6 +0.1
PLD                             eSg     Sg              20 09 08.6 +1.0
PLD   Plovdiv          0.55 101 ePg     Pg              20 09 00.6 +0.1
        baz=3.0
PLD                             eSg     Sg              20 09 08.6 +1.0
        baz=5.0
VTS   Vitosha          0.69 303 ePg     Pg              20 09 03.1 -0.1
VTS                             eSg     Sg              20 09 12.0 -0.2
VTS   Vitosha          0.69 303 ⇑P      Pg              20 09 03.1 -0.1
VTS                             S       Sg              20 09 12.0 -0.2
VTS   Vitosha          0.69 303 ePg     Pg              20 09 03.1 -0.1
        baz=3.0
VTS                             eSg     Sg              20 09 12.0 -0.2
        baz=3.0
SRS   Serrai           1.14 195 ePg     Pg              20 09 11.5 -0.3
```

SRS				*e*Sg	**Sb**	**20 09 27.5**	**+0.5**
SRS	**Serrai**	**1.14**	**195**	*e*Pg	**Pg**	**20 09 11.5**	**-0.3**
	baz=2.0						
SRS				*e*Sg	**Sb**	**20 09 27.5**	**+0.5**
	baz=3.0						
KDZ	**Kurdzhali**	**1.21**	**117**	PN	**Pb**	**20 09 11.9**	**-1.3**
KDZ				SN	**Sg**	**20 09 27.8**	**-1.1**
KDZ	**Kurdzhali**	**1.21**	**117**	*e*Pn	**Pb**	**20 09 11.9**	**-1.3**
KNT	**Kendrikon**	**1.33**	**218**	PN	**Pb**	**20 09 15.4**	**+0.1**
KNT	**Kendrikon**	**1.33**	**218**	*e*Pn	**Pb**	**20 09 15.4**	**+0.1**
VAY	**Valandovo**	**1.38**	**230**	*e*Pg	**Pg**	**20 09 16.8**	**+0.3**
VAY	**Valandovo**	**1.38**	**230**	*i* Pn	**Pb**	**20 09 16.1**	**-0.2**
VAY				*i* Sn	**Sg**	**20 09 35.2**	**+0.8**
VAY	**Valandovo**	**1.38**	**230**	*e*Pg	**Pg**	**20 09 16.8**	**+0.3**
ZAPS	**Zavoj**	**1.45**	**317**	*e*Pg	**Pg**	**20 09 18.2**	**+0.4**
ZAPS				*e*Sg	**Sb**	**20 09 36.2**	**+0.1**
RDO	**Rodhopi**	**1.58**	**132**	PN	**Pn**	**20 09 18.9**	**+0.5**
RDO	**Rodhopi**	**1.58**	**132**	*e*Pn	**Pn**	**20 09 18.9**	**+0.5**
BARS	**Barje**	**1.71**	**291**	*e*Pn	**Pb**	**20 09 21.8**	**0.0**
BARS				*e*Sg	**Sb**	**20 09 43.6**	**0.0**
BARS	**Barje**	**1.71**	**291**	*e*Pn	**Pb**	**20 09 21.8**	**0.0**
	baz=6.0						
BARS				*e*Sg	**Sb**	**20 09 43.6**	**0.0**
	baz=1.0						
GRG	**Griva**	**1.73**	**224**	PN	**Pn**	**20 09 20.9**	**+0.3**
GRG	**Griva**	**1.73**	**224**	*e*Pn	**Pn**	**20 09 20.9**	**+0.3**
HORT	**Hortiatis**	**1.75**	**203**	PN	**Pn**	**20 09 21.2**	**+0.4**
HORT	**Hortiatis**	**1.75**	**203**	*e*Pn	**Pn**	**20 09 21.2**	**+0.4**
ZIMR		**1.76**	**35**	⇓*i*P	**Pg**	**20 09 24.5**	**+0.7**
ZIMR		**1.76**	**35**	S	**Sg**	**20 09 48.0**	**+1.4**
OUR	**Ouranopolis**	**1.88**	**180**	PN	**Pn**	**20 09 22.8**	**+0.2**
OUR	**Ouranopolis**	**1.88**	**180**	*e*Pn	**Pn**	**20 09 22.8**	**+0.2**
SKO	**Skopje**	**1.91**	**264**	*e*Pn	**Pb**	**20 09 24.2**	**-1.0**
SKO				*e*Sn	**Sn**	**20 09 47.6**	**+0.3**
SKO	**Skopje**	**1.91**	**264**	*e*Pn	**Pn**	**20 09 24.1**	**+1.1**
SKO				*i* Sn	**Sg**	**20 09 51.0**	**-0.3**
SKO	**Skopje**	**1.91**	**264**	*e*Pn	**Pb**	**20 09 24.2**	**-1.0**
	baz=2.0						
SKO				*e*Sn	**Sn**	**20 09 47.6**	**+0.3**
ALN	**Alexandroupoli**	**2.03**	**130**	PN	**Pn**	**20 09 24.8**	**+0.1**
ALN	**Alexandroupoli**	**2.03**	**130**	*e*Pn	**Pn**	**20 09 24.8**	**+0.1**
ZAGS	**Zajecar**	**2.05**	**322**	*e*Pn	**Pn**	**20 09 25.9**	**+1.0**
ZAGS				*e*Sn	**Sn**	**20 09 51.5**	**+0.7**
ZAGS	**Zajecar**	**2.05**	**322**	*e*Pn	**Pn**	**20 09 25.9**	**+1.0**
	baz=3.0						
ZAGS				*e*Sn	**Sn**	**20 09 51.5**	**+0.7**
	baz=1.0						
EDRB	**Edirne**	**2.09**	**99**	PN	**Pn**	**20 09 25.5**	**0.0**
EDRB	**Edirne**	**2.09**	**99**	*e*Pn	**Pn**	**20 09 25.5**	**0.0**
CRAR	**CRAIOVA**	**2.11**	**356**	⇓*i*P	**Pb**	**20 09 29.0**	**+0.4**
CRAR	**CRAIOVA**	**2.11**	**356**	S	**Sg**	**20 09 59.4**	**+1.5**
ENEZ	**Enez**	**2.20**	**131**	PN	**Pn**	**20 09 27.4**	**+0.4**
ENEZ	**Enez**	**2.20**	**131**	*e*Pn	**Pn**	**20 09 27.4**	**+0.4**
BIA	**Bitola**	**2.33**	**240**	*e*Pn	**Pn**	**20 09 30.1**	**+1.3**
SELS	**Selova**	**2.34**	**296**	*e*Pn	**Pn**	**20 09 29.3**	**+0.4**
HUMR	**Humele**	**2.42**	**17**	⇑*i*P	**Pb**	**20 09 34.2**	**+0.3**
HUMR	**Humele**	**2.42**	**17**	S	**Sg**	**20 10 07.9**	**+0.1**
FNA	**Florina**	**2.42**	**235**	PN	**Pn**	**20 09 30.5**	**+0.4**
FNA	**Florina**	**2.42**	**235**	*e*Pn	**Pn**	**20 09 30.7**	**+0.6**
FNA				*e*Sn	**Sn**	**20 10 00.8**	**+0.7**
FNA	**Florina**	**2.42**	**235**	*e*Pn	**Pn**	**20 09 30.5**	**+0.4**
FNA				*e*Sn	**Sn**	**20 10 00.8**	**+0.7**
	baz=9.0						
ERIK	**Erikli-Kesan**	**2.45**	**128**	PN	**Pn**	**20 09 30.4**	**0.0**
ERIK	**Erikli-Kesan**	**2.45**	**128**	*e*Pn	**Pn**	**20 09 30.4**	**0.0**
SGRR	**Singureni**	**2.48**	**35**	⇓*i*P	**Pb**	**20 09 34.6**	**-0.3**
SGRR	**Singureni**	**2.48**	**35**	S	**Sg**	**20 10 10.1**	**+0.5**
GADA	**Gvkgeada**	**2.48**	**144**	PN	**Pn**	**20 09 31.5**	**+0.6**
GADA	**Gvkgeada**	**2.48**	**144**	*e*Pn	**Pn**	**20 09 31.5**	**+0.6**
GOKC	**Gokceada-Canak**	**2.49**	**143**	PN	**Pn**	**20 09 31.4**	**+0.5**
GOKC	**Gokceada-Canak**	**2.49**	**143**	*e*Pn	**Pn**	**20 09 31.4**	**+0.5**
SRE	**Strehaia**	**2.51**	**347**	⇑*i*P	**Pb**	**20 09 34.4**	**-1.0**
SRE	**Strehaia**	**2.51**	**347**	S	**Sb**	**20 10 07.3**	**+0.7**
BUC1	**Bucharest**	**2.60**	**34**	⇓*i*P	**Pb**	**20 09 36.3**	**-0.7**
BUC1	**Bucharest**	**2.60**	**34**	S	**Sg**	**20 10 13.2**	**-0.4**
GELI	**Tayfur-Gelibol**	**2.61**	**133**	PN	**Pn**	**20 09 32.9**	**+0.3**
GELI	**Tayfur-Gelibol**	**2.61**	**133**	*e*Pn	**Pn**	**20 09 32.9**	**+0.3**
PHSR	**Pinarhisar**	**2.71**	**101**	PN	**Pn**	**20 09 33.9**	**0.0**
PHSR	**Pinarhisar**	**2.71**	**101**	*e*Pn	**Pn**	**20 09 33.9**	**0.0**
GOLR		**2.72**	**15**	⇓*i*P	**Pb**	**20 09 38.6**	**-0.4**
KUBS	**Kucevo**	**2.77**	**323**	*e*Pn	**Pn**	**20 09 34.5**	**-0.3**
KUBS	**Kucevo**	**2.77**	**323**	*e*Pn	**Pn**	**20 09 34.5**	**-0.3**
	baz=3.0						
LPK	**Lapseki**	**2.79**	**130**	PN	**Pn**	**20 09 35.3**	**+0.2**
LPK	**Lapseki**	**2.79**	**130**	*e*Pn	**Pn**	**20 09 35.3**	**+0.2**
RKY	**Sarkoy-Tekirda**	**2.84**	**121**	PN	**Pn**	**20 09 36.3**	**+0.4**
RKY	**Sarkoy-Tekirda**	**2.84**	**121**	*e*Pn	**Pn**	**20 09 36.3**	**+0.4**
SVIS	**Svilajnac**	**2.88**	**316**	*e*Pn	**Pn**	**20 09 37.8**	**+1.5**
SVIS				*e*Sn	**Sn**	**20 10 12.5**	**+1.3**
GRUS	**Gruza**	**2.92**	**306**	*e*Pn	**Pn**	**20 09 37.6**	**+0.7**
GRUS	**Gruza**	**2.92**	**306**	*e*Pn	**Pn**	**20 09 37.6**	**+0.7**
	baz=3.0						
SULR		**2.97**	**33**	⇑*i*P	**Pb**	**20 09 42.0**	**-1.2**
SULR		**2.97**	**33**	S	**Sb**	**20 10 20.9**	**+1.3**
CRLT	**Corlu**	**3.01**	**110**	PN	**Pn**	**20 09 38.5**	**+0.3**
CRLT	**Corlu**	**3.01**	**110**	*e*Pn	**Pn**	**20 09 38.5**	**+0.3**
MDVR	**Moldovita**	**3.05**	**328**	⇑*i*P	**Pn**	**20 09 39.7**	**+0.9**
KRBG	**Karabiga-Canak**	**3.09**	**125**	PN	**Pn**	**20 09 39.5**	**+0.3**
KRBG	**Karabiga-Canak**	**3.09**	**125**	*e*Pn	**Pn**	**20 09 39.5**	**+0.3**
IVAS	**Ivanjica**	**3.13**	**297**	*e*Pn	**Pn**	**20 09 41.2**	**+1.4**
IVAS	**Ivanjica**	**3.13**	**297**	*e*Pn	**Pn**	**20 09 41.2**	**+1.4**
	baz=5.0						
SJES	**Sjenica**	**3.13**	**291**	*e*Pn	**Pn**	**20 09 41.0**	**+1.1**
ARR	**Arges**	**3.19**	**8**	⇓*i*P	**Pn**	**20 09 41.3**	**+0.7**
TIR	**Tirane**	**3.20**	**256**	*e*Pn	**Pn**	**20 09 42.1**	**+1.4**
TIR	**Tirane**	**3.20**	**256**	⇑*i*P	**Pn**	**20 09 38.0**	**-2.7**
TIR	**Tirane**	**3.20**	**256**	S	**Sn**	**20 10 15.7**	**-3.4**
TIR	**Tirane**	**3.20**	**256**	*e*Pn	**Pn**	**20 09 42.1**	**+1.4**
	baz=2.0						
LOT	**Lotru**	**3.24**	**357**	PN	**Pn**	**20 09 42.4**	**+1.0**
LOT	**Lotru**	**3.24**	**357**	⇓*i*P	**Pn**	**20 09 42.1**	**+0.7**
LOT	**Lotru**	**3.24**	**357**	*e*Pn	**Pn**	**20 09 42.4**	**+1.0**
SBT3	**Marmara-Eregli**	**3.28**	**113**	PN	**Pn**	**20 09 41.9**	**+0.3**
SBT3	**Marmara-Eregli**	**3.28**	**113**	*e*Pn	**Pn**	**20 09 41.9**	**+0.3**
TRUS	**Trudelj**	**3.30**	**309**	*e*Pn	**Pn**	**20 09 43.7**	**+1.6**
TRUS				*e*Sn	**Sn**	**20 10 21.8**	**+0.3**
TRUS	**Trudelj**	**3.30**	**309**	*e*Pn	**Pn**	**20 09 43.7**	**+1.6**
	baz=8.0						
TRUS				*e*Sn	**Sn**	**20 10 21.8**	**+0.3**
	baz=2.0						
CTYL	**Yalikoy Yolu**	**3.30**	**102**	PN	**Pn**	**20 09 42.7**	**+0.6**
CTYL	**Yalikoy Yolu**	**3.30**	**102**	*e*Pn	**Pn**	**20 09 42.7**	**+0.6**
VOIR		**3.31**	**13**	⇓*i*P	**Pn**	**20 09 43.5**	**+1.1**
VOIR		**3.31**	**13**	S	**Sn**	**20 10 23.0**	**+1.0**
SLVT	**Silivri**	**3.31**	**106**	PN	**Pn**	**20 09 43.1**	**+0.8**
SLVT	**Silivri**	**3.31**	**106**	*e*Pn	**Pn**	**20 09 43.1**	**+0.8**
PSN	**Preselentsi**	**3.41**	**63**	PN	**Pn**	**20 09 43.6**	**-0.1**
PSN	**Preselentsi**	**3.41**	**63**	*e*Pn	**Pn**	**20 09 43.6**	**-0.1**
AMRR	**Amara**	**3.42**	**44**	⇓*i*P	**Pb**	**20 09 48.8**	**-2.1**
AMRR	**Amara**	**3.42**	**44**	S	**Sb**	**20 10 33.7**	**+1.0**
AGG	**Agios Georgios**	**3.43**	**202**	PN	**Pn**	**20 09 44.3**	**+0.4**
AGG	**Agios Georgios**	**3.43**	**202**	*e*Pn	**Pn**	**20 09 44.3**	**+0.4**
ISR	**Istrita**	**3.45**	**32**	⇑*i*P	**Pb**	**20 09 48.9**	**-2.5**
PGOR	**Pogoanele**	**3.46**	**38**	S	**Sb**	**20 10 36.7**	**+2.7**
EDC	**Edincik**	**3.47**	**121**	PN	**Pn**	**20 09 45.0**	**+0.6**
EDC	**Edincik**	**3.47**	**121**	*e*Pn	**Pn**	**20 09 45.0**	**+0.6**
DIVS	**Divibare**	**3.47**	**304**	*e*Pn	**Pn**	**20 09 44.8**	**+0.2**
DIVS	**Divibare**	**3.47**	**304**	*e*Pn	**Pn**	**20 09 44.8**	**+0.2**
	baz=5.0						
PDG	**Podgorica**	**3.51**	**275**	*e*Pn	**Pn**	**20 09 46.9**	**+1.9**
PDG	**Podgorica**	**3.51**	**275**	⇓*i*P	**Pn**	**20 09 43.8**	**-1.2**
PDG	**Podgorica**	**3.51**	**275**	S	**Sn**	**20 10 24.7**	**-2.1**
PDG	**Podgorica**	**3.51**	**275**	*e*Pn	**Pn**	**20 09 46.9**	**+1.9**
CTKS	**Kestanelik-??a**	**3.52**	**105**	PN	**Pn**	**20 09 45.2**	**0.0**
CTKS	**Kestanelik-??a**	**3.52**	**105**	*e*Pn	**Pn**	**20 09 45.2**	**0.0**
DRME	**Dracevica, Mon**	**3.57**	**271**	*e*Pn	**Pn**	**20 09 48.2**	**+2.4**
MLR	**Muntele Rosu**	**3.57**	**23**	⇓*i*P	**Pn**	**20 09 48.4**	**+2.5**
BGKT	**Bogazkoy**	**3.73**	**104**	PN	**Pn**	**20 09 47.9**	**-0.1**
BGKT	**Bogazkoy**	**3.73**	**104**	*e*Pn	**Pn**	**20 09 47.9**	**-0.1**
BBLS	**Lazići**	**3.74**	**298**	*e*Pn	**Pn**	**20 09 49.8**	**+1.6**
BBLS	**Lazići**	**3.74**	**298**	*e*Pn	**Pn**	**20 09 49.8**	**+1.6**
	baz=8.0						
DEV	**Deva**	**3.75**	**348**	⇓*i*P	**Pn**	**20 09 50.0**	**+1.7**
TLB	**Topalu**	**3.79**	**50**	⇑*i*P	**Pn**	**20 09 50.8**	**+2.0**
TLB	**Topalu**	**3.79**	**50**	S	**Sb**	**20 10 44.8**	**+1.5**
HARR	**Harsova**	**3.79**	**48**	⇑*i*P	**Pn**	**20 09 50.7**	**+1.8**
BZS	**Buzias**	**3.81**	**334**	*e*Pn	**Pn**	**20 09 49.6**	**+0.5**
BZS	**Buzias**	**3.81**	**334**	⇑*i*P	**Pn**	**20 09 49.7**	**+0.6**
BZS	**Buzias**	**3.81**	**334**	S	**Sb**	**20 10 40.7**	**-3.1**
BZS	**Buzias**	**3.81**	**334**	*e*Pn	**Pn**	**20 09 49.6**	**+0.5**
	baz=2.0						
KCTX	**Karacabey (Bur**	**3.83**	**119**	PN	**Pn**	**20 09 50.1**	**+0.7**
KCTX	**Karacabey (Bur**	**3.83**	**119**	*e*Pn	**Pn**	**20 09 50.1**	**+0.7**
IGT	**Igoumenitsa**	**3.85**	**227**	*e*Pn	**Pn**	**20 09 52.5**	**+2.8**
IGT				*e*Sn	**Sn**	**20 10 36.7**	**+1.4**
IGT	**Igoumenitsa**	**3.85**	**227**	*e*Pn	**Pn**	**20 09 52.5**	**+2.8**
	baz=5.0						
IGT				*e*Sn	**Sn**	**20 10 36.7**	**+1.4**
	baz=7.0						
UPM	**Unac-Piva**	**3.87**	**286**	*e*Pn	**Pn**	**20 09 51.0**	**+0.9**
DOPR	**Dopca**	**3.88**	**15**	⇓*i*P	**Pn**	**20 09 52.1**	**+1.9**
KLYT	**Kilyos**	**3.91**	**103**	PN	**Pn**	**20 09 51.2**	**+0.8**
KLYT	**Kilyos**	**3.91**	**103**	*e*Pn	**Pn**	**20 09 51.2**	**+0.8**
BALB	**Balikesir**	**3.92**	**130**	PN	**Pn**	**20 09 51.1**	**+0.5**
BALB	**Balikesir**	**3.92**	**130**	*e*Pn	**Pn**	**20 09 51.1**	**+0.5**
TIRR	**Tirgusor**	**3.93**	**54**	⇑*i*P	**Pb**	**20 09 55.7**	**-3.9**
TIRR	**Tirgusor**	**3.93**	**54**	S	**Sb**	**20 10 46.3**	**-1.1**
MDB	**Medias**	**3.94**	**4**	⇓*i*P	**Pn**	**20 09 55.0**	**+4.1**
MDB	**Medias**	**3.94**	**4**	S	**Sb**	**20 10 42.7**	**-4.9**
ISK	**Istanbul-Kandi**	**3.97**	**105**	PN	**Pn**	**20 09 51.4**	**0.0**
ISK	**Istanbul-Kandi**	**3.97**	**105**	*e*Pn	**Pn**	**20 09 51.4**	**0.0**
KAVV	**Kandilli-Istan**	**3.97**	**105**	PN	**Pn**	**20 09 51.6**	**+0.2**
KAVV	**Kandilli-Istan**	**3.97**	**105**	*e*Pn	**Pn**	**20 09 51.6**	**+0.2**
TEKS	**Tekeris**	**4.00**	**307**	*e*Pn	**Pn**	**20 09 52.1**	**+0.4**
TEKS	**Tekeris**	**4.00**	**307**	*e*Pn	**Pn**	**20 09 52.1**	**+0.4**
	baz=3.0						
SBT5	**Esenkoy-Cinarc**	**4.01**	**112**	PN	**Pn**	**20 09 52.5**	**+0.7**
SBT5	**Esenkoy-Cinarc**	**4.01**	**112**	*e*Pn	**Pn**	**20 09 52.5**	**+0.7**
ARMT	**Armutlu**	**4.02**	**113**	PN	**Pn**	**20 09 52.3**	**+0.2**
ARMT	**Armutlu**	**4.02**	**113**	*e*Pn	**Pn**	**20 09 52.3**	**+0.2**
HCY	**Herceg Novi**	**4.08**	**275**	*e*Pn	**Pn**	**20 09 55.4**	**+2.6**
BUY	**Buyukada**	**4.09**	**108**	PN	**Pn**	**20 09 53.9**	**+1.0**
BUY	**Buyukada**	**4.09**	**108**	*e*Pn	**Pn**	**20 09 53.9**	**+1.0**
PLOR	**Plostina**	**4.11**	**27**	⇓*i*P	**Pn**	**20 09 55.8**	**+2.5**
HAPS	**Han Pijesak,Bl**	**4.13**	**299**	*e*Pn	**Pn**	**20 09 53.8**	**+0.2**
HAPS	**Han Pijesak,Bl**	**4.13**	**299**	*e*Pn	**Pn**	**20 09 53.8**	**+0.2**
	baz=5.0						
VRI	**Vrincioaia**	**4.15**	**28**	PN	**Pn**	**20 09 54.5**	**+0.7**
VRI	**Vrincioaia**	**4.15**	**28**	⇓*i*P	**Pn**	**20 09 56.8**	**+3.0**
VRI	**Vrincioaia**	**4.15**	**28**	S	**Sb**	**20 10 51.5**	**-2.3**
VRI	**Vrincioaia**	**4.15**	**28**	*e*Pn	**Pn**	**20 09 54.5**	**+0.7**
PETR	**Petresti**	**4.22**	**33**	S	**Sb**	**20 10 55.2**	**-0.4**
FGSL	**Fruska Gora**	**4.22**	**316**	*e*Pn	**Pn**	**20 09 54.6**	**-0.2**
	baz=8.0						
FRGS	**Fruska Gora**	**4.22**	**316**	*e*Pn	**Pn**	**20 09 54.6**	**-0.2**
CFR	**Carcaliu**	**4.22**	**44**	⇓*i*P	**Pn**	**20 09 56.8**	**+2.0**
CFR	**Carcaliu**	**4.22**	**44**	S	**Sb**	**20 10 55.3**	**-0.5**
SILT	**Sile**	**4.37**	**102**	PN	**Pn**	**20 09 57.2**	**+0.4**
SILT	**Sile**	**4.37**	**102**	*e*Pn	**Pn**	**20 09 57.2**	**+0.4**
YLV	**Yalova**	**4.38**	**110**	PN	**Pn**	**20 09 56.9**	**-0.1**
YLV	**Yalova**	**4.38**	**110**	*e*Pn	**Pn**	**20 09 56.9**	**-0.1**
SIRR	**Siria**	**4.38**	**338**	⇑*i*P	**Pn**	**20 09 59.6**	**+2.6**
SIRR	**Siria**	**4.38**	**338**	S	**Sb**	**20 10 54.9**	**-5.5**
HRT	**Hereke**	**4.49**	**106**	PN	**Pn**	**20 09 59.1**	**+0.6**
HRT	**Hereke**	**4.49**	**106**	*e*Pn	**Pn**	**20 09 59.1**	**+0.6**
CJR	**Cluj-Napoca**	**4.51**	**357**	⇓*i*P	**Pn**	**20 10 02.2**	**+3.5**
TLCR		**4.59**	**48**	⇓*i*P	**Pn**	**20 10 03.0**	**+3.2**
TLCR		**4.59**	**48**	S	**Sb**	**20 11 04.9**	**-1.5**
DRGR		**4.67**	**349**	⇓*i*P	**Pn**	**20 10 01.8**	**+0.8**
ADVT	**Abdulvahap**	**4.69**	**110**	PN	**Pn**	**20 10 01.5**	**+0.4**
ADVT	**Abdulvahap**	**4.69**	**110**	*e*Pn	**Pn**	**20 10 01.5**	**+0.4**
STON	**Ston**	**4.69**	**280**	*e*Pn	**Pn**	**20 10 01.5**	**+0.3**
STON	**Ston**	**4.69**	**280**	*e*Pn	**Pn**	**20 10 01.4**	**+0.2**
STON				Sn	**Sn**	**20 10 54.3**	**-1.5**
STON	**Ston**	**4.69**	**280**	*e*Pn	**Pn**	**20 10 01.5**	**+0.3**
	baz=3.0						
STON				Sn	**Sn**	**20 10 54.3**	**-1.5**
SAUV	**Serdivan-Sakar**	**4.99**	**105**	PN	**Pn**	**20 10 06.2**	**+0.9**
SAUV	**Serdivan-Sakar**	**4.99**	**105**	*e*Pn	**Pn**	**20 10 06.2**	**+0.9**
TVSB	**Tavsanli**	**4.99**	**122**	PN	**Pn**	**20 10 06.1**	**+0.7**
TVSB	**Tavsanli**	**4.99**	**122**	*e*Pn	**Pn**	**20 10 06.1**	**+0.7**
APE	**Apeiranthos**	**5.28**	**166**	⇓*i*P	**Pn**	**20 10 09.1**	**-0.2**
APE	**Apeiranthos**	**5.28**	**166**	S	**Sn**	**20 11 12.2**	**+1.8**

*VIE **03** 20:10:56.9±0.8, 44°.85N×10°.88E, h8km±4km, mb2.0/9, ml2.4/10, Error ellipse: s-maj=4.6km s-min=3.2km az=175.0 53 km NW of Bologna*
*CSEM **03** 20:10:59.2±0.2, 44°.94N×10°.96E, h10km, ML2.5, Error ellipse: s-maj=5.8km s-min=3.3km az=100.0*
*PRU **03** 20:11:04.3, 45°.03N×11°.15E, h32km*
ROM 03 20:10:58.9±0.0, **44°.887N**±0°.001×**10°.969E**±0°.001, **h4km, ML2.5**/29, **11C-8D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0827	**Moglia (MN)**	**0.06**	**333**	⇓*i*P	Pg	20 11 01.2	+1.1
T0827				*e*S	Sg	20 11 03.9	+2.9
T0827	**Moglia (MN)**	**0.06**	**333**	*i* P	Pg	20 11 01.2	+1.1
T0827				*e*S	Sg	20 11 03.9	+2.9
T0818	**Loc. Fossa, Co**	**0.07**	**42**	⇓*i*P	Pg	20 11 01.3	+1.0
T0818				*e*S	Sg	20 11 04.1	+2.9
T0818	**Loc. Fossa, Co**	**0.07**	**42**	*i* P	Pg	20 11 01.3	+1.1
T0818				*e*S	Sg	20 11 04.1	+2.9
T0828	**Loc. Fossoli,**	**0.07**	**215**	⇓*i*P	Pg	20 11 01.3	+1.0
T0828				*e*S	Sg	20 11 04.9	+3.6
T0828	**Loc. Fossoli,**	**0.07**	**215**	*i* P	Pg	20 11 01.3	+1.0
T0828				*e*S	Sg	20 11 04.9	+3.6
T0814	**Loc. Cortile,**	**0.09**	**180**	⇓*i*P	Pg	20 11 01.9	+1.2
T0814	**Loc. Cortile,**	**0.09**	**180**	*i* P	Pg	20 11 01.9	+1.1
T0825	**Gonzaga (MN)**	**0.12**	**315**	⇓*i*P	Pg	20 11 02.9	+1.6
T0825	**Gonzaga (MN)**	**0.12**	**315**	*i* P	Pg	20 11 02.9	+1.6
T0825				*e*S	Sg	20 11 07.2	+4.3
T0825				AML	AML		
	comp=E,29550μm,0.7s						
T0825				AML	AML		
	comp=N,28550μm,1.6s						
T0825				AML	AML		
	comp=E,29550μm,0.7s						
T0825				AML	AML		
	comp=N,28550μm,1.6s						
T0825				AML	AML		
	comp=E,29550μm,0.7s						
T0825				AML	AML		
	comp=N,28550μm,1.6s						
T0825				AML	AML		
	comp=N,28550μm,1.6s						
T0825				AML	AML		
	comp=E,29550μm,0.7s						
T0826	**Rio Saliceto (**	**0.12**	**247**	⇑*i*P	Pg	20 11 02.2	+0.9
T0826				*e*S	Sg	20 11 05.8	+2.9
T0826	**Rio Saliceto (**	**0.12**	**247**	*i* P	Pg	20 11 02.2	+1.0
T0826				*e*S	Sg	20 11 05.8	+3.0
T0826				AML	AML		
	comp=E,9260μm,0.7s						
T0826				AML	AML		
	comp=N,6870μm,0.5s						
T0826				AML	AML		
	comp=E,9275μm,0.7s						
T0826				AML	AML		
	comp=N,6870μm,0.5s						
T0826				AML	AML		
	comp=E,9240μm,0.7s						
T0826				AML	AML		
	comp=N,6875μm,0.4s						
T0826				AML	AML		
	comp=E,9240μm,0.7s						
T0826				AML	AML		
	comp=N,6875μm,0.4s						
T0824	**Loc. Limidi di**	**0.13**	**193**	⇓*i*P	Pg	20 11 02.7	+1.3
T0824				*e*S	Sg	20 11 06.7	+3.5
T0824	**Loc. Limidi di**	**0.13**	**193**	*i* P	Pg	20 11 02.7	+1.3
T0824				*e*S	Sg	20 11 06.7	+3.6
T0802	**SanFelice sul**	**0.15**	**94**	*e*P	Pg	20 11 02.0	+0.2
T0802				*e*S	Sg	20 11 07.1	+3.3
T0802	**SanFelice sul**	**0.15**	**94**	*e*P	Pg	20 11 03.0	+1.1
T0802				*e*S	Sg	20 11 07.1	+3.3
T0813	**Massa Finalese**	**0.16**	**93**	⇑*e*P	Pg	20 11 03.1	+1.0
T0813				*e*S	Sg	20 11 07.4	+3.2
T0813	**Massa Finalese**	**0.16**	**93**	*e*P	Pg	20 11 03.1	+1.1
T0813				*e*S	Sg	20 11 07.4	+3.1
T0812	**Loc. Stoppiaro**	**0.17**	**66**	*e*P	Pg	20 11 03.6	+1.5
T0812	**Loc. Stoppiaro**	**0.17**	**66**	*e*P	Pg	20 11 03.6	+1.5
SBPO	**S.Benedetto Po**	**0.17**	**348**	⇑*e*P	Pg	20 11 03.7	+1.5
SBPO	**S.Benedetto Po**	**0.17**	**348**	*e*P	Pg	20 11 03.7	+1.5
SBPO				AML	AML		
	comp=E,3050μm,0.2s						
SBPO				AML	AML		
	comp=N,12345μm,0.4s					

SALO AML AML
comp=E,219μm,0.1s
BALD Monte Baldo 0.80 352⇑ *e*Pg Pb 20 11 15.3 -0.3
BALD *e*Sg Sb 20 11 27.1 +0.2
BALD Monte Baldo 0.80 352 *e*Sg Sb 20 11 27.1 +0.2
VLC Villacollemand 0.84 210 *e*P Pn 20 11 16.8 -0.7
VLC Villacollemand 0.84 210 *e*P Pn 20 11 16.8 -0.7
POPM Popiglio 0.85 190 *e*P Pn 20 11 17.1 -0.7
POPM Popiglio 0.85 190 *e*P Pn 20 11 17.1 -0.6
POPM AML AML
comp=E,185μm,0.9s
POPM AML AML
comp=N,305μm,0.6s
POPM AML AML
comp=E,185μm,0.9s
POPM AML AML
comp=N,305μm,0.6s
POPM AML AML
comp=N,305μm,0.6s
POPM AML AML
comp=E,185μm,0.9s
BDI Bagni Di Lucca 0.87 198 *e*P Pn 20 11 17.3 -0.7
BDI Bagni Di Lucca 0.87 198 *e*P Pn 20 11 17.3 -0.6
BDI AML AML
comp=E,247μm,1.3s
BDI AML AML
comp=N,246μm,0.5s
BDI AML AML
comp=E,242μm,1.2s
BDI AML AML
comp=N,283μm,1.1s
BDI AML AML
comp=E,246μm,1.3s
BDI AML AML
comp=N,246μm,0.5s
BDI AML AML
comp=E,242μm,1.2s
BDI AML AML
comp=N,283μm,1.1s
BDI AML AML
comp=N,246μm,0.5s
BDI AML AML
comp=N,283μm,1.1s
BDI AML AML
comp=E,242μm,1.2s
BDI AML AML
comp=E,246μm,1.3s
SEI Scarperia 0.88 161 *e*P Pn 20 11 18.7 +0.6
SEI Scarperia 0.88 161 *e*P Pn 20 11 18.7 +0.6
MAGA Magasa 0.92 345 *e*P Pg 20 11 16.6 +0.1
MAGA Magasa 0.92 345 *e*P Pg 20 11 16.6 0.0
MAGA AML AML
comp=E,974μm,1.5s
MAGA AML AML
comp=N,928μm,0.3s
MAGA AML AML
comp=E,974μm,1.5s
MAGA AML AML
comp=N,928μm,0.3s
MAGA AML AML
comp=N,928μm,0.3s
MAGA AML AML
comp=E,974μm,1.5s
DOSS Dosso del Somm 1.01 9⇑ *e*Pg Pg 20 11 18.3 +0.1
DOSS *e*Sg Sn 20 11 33.9 -0.9
MAIM Mastiano 1.03 200 AML AML
comp=E,186μm,1.3s
MAIM AML AML
comp=E,186μm,1.3s
MAIM AML AML
comp=N,346μm,1.0s
MAIM AML AML
comp=N,346μm,1.0s
MAIM AML AML
comp=E,186μm,1.3s
MAIM AML AML
comp=N,346μm,1.0s
CRMI Carmignano 1.10 180 AML AML
comp=E,80μm,1.4s
CRMI AML AML
comp=E,80μm,1.4s
CRMI AML AML
comp=N,68μm,1.3s
CRMI AML AML
comp=N,68μm,1.3s
CRMI AML AML
comp=N,68μm,1.3s
CRMI AML AML
comp=E,80μm,1.4s
RNI Roncone 1.12 348 *e*Pg Pg 20 11 19.6 -0.8
CGRP Cima Grappa 1.15 30⇑ *e*Pg Pg 20 11 20.9 -0.1
CGRP *e*Sg Sn 20 11 39.7 +1.3
CGRP Cima Grappa 1.15 30 *e*Pg Pg 20 11 20.9 -0.1
CGRP Cima Grappa 1.15 30 *e*P Pg 20 11 20.8 -0.2
CGRP AML AML
comp=E,195μm,0.3s
CGRP AML AML
comp=N,140μm,0.5s
CGRP AML AML
comp=E,195μm,0.3s
CGRP AML AML
comp=N,140μm,0.5s
CGRP AML AML
comp=E,195μm,0.3s
CGRP AML AML
comp=N,140μm,0.5s
SFI Santa Sofia 1.17 147 AML AML
comp=E,68μm,0.7s
SFI AML AML
comp=N,90μm,0.8s
SFI AML AML
comp=E,68μm,0.7s
SFI AML AML
comp=N,90μm,0.8s
SFI AML AML
comp=E,68μm,0.7s
SFI AML AML
comp=N,90μm,0.8s
MSSA Maissana 1.18 242 AML AML
comp=N,118μm,1.5s
MSSA AML AML
comp=E,103μm,1.3s
MSSA AML AML
comp=N,118μm,1.5s
MSSA AML AML
comp=E,103μm,1.3s
MSSA AML AML
comp=N,118μm,1.5s
MSSA AML AML
comp=E,103μm,1.3s
PANI Panarotta 1.19 12 *e*Pg Pg 20 11 20.8 -1.0
PANI Panarotta 1.19 12 *e*Pg Pg 20 11 20.8 -0.9
MABI Malga Bissina 1.21 345 AML AML
comp=E,56μm,0.7s
MABI AML AML
comp=E,56μm,0.7s
MABI AML AML
comp=N,67μm,0.3s
MABI AML AML
comp=E,56μm,0.7s
MABI AML AML
comp=N,67μm,0.3s
MABI AML AML
comp=N,67μm,0.3s
CTI Castel Tesino 1.26 22 AML AML
comp=E,230μm,0.3s
CTI AML AML
comp=E,230μm,0.3s
CTI AML AML
comp=N,366μm,0.3s
CTI AML AML
comp=E,230μm,0.3s
CTI AML AML
comp=N,366μm,0.3s
CTI AML AML
comp=N,366μm,0.3s
VARN Col Varnada, M 1.36 35 *e*Pg Pn 20 11 24.3 -0.5
VARN Col Varnada, M 1.36 35 *e*Pg Pn 20 11 24.3 -0.5
OZOL Ozolo 1.52 2 *e*Pg Pn 20 11 25.7 -1.3
OZOL Ozolo 1.52 2 *e*Pg Pn 20 11 25.7 -1.3
CARE Lago del Cares 1.55 353 *e*Pg Pn 20 11 26.4 -1.2
POLC Polcenigo 1.57 43 AML AML
comp=N,140μm,0.6s
POLC AML AML
comp=E,130μm,0.5s
POLC AML AML
comp=E,130μm,0.5s
POLC AML AML
comp=N,140μm,0.6s
POLC AML AML
comp=E,130μm,0.5s
POLC AML AML
comp=N,140μm,0.6s
AGOR Agordo 1.59 28 AML AML
comp=E,78μm,1.2s
AGOR AML AML
comp=E,78μm,1.2s
AGOR AML AML
comp=N,85μm,0.3s
AGOR AML AML
comp=N,85μm,0.3s
KOSI Kohlern 1.60 10 AML AML
comp=N,76μm,0.7s
KOSI AML AML
comp=E,81μm,0.4s
KOSI AML AML
comp=E,81μm,0.4s
KOSI AML AML
comp=N,76μm,0.7s
KOSI AML AML
comp=E,81μm,0.4s
KOSI AML AML
comp=N,76μm,0.7s
APPI Appiano 1.60 6 AML AML
comp=E,168μm,0.7s
APPI AML AML
comp=E,168μm,0.7s
APPI AML AML
comp=N,130μm,0.3s
APPI AML AML
comp=N,130μm,0.3s
APPI AML AML
comp=E,168μm,0.7s
APPI AML AML
comp=N,130μm,0.3s
BRMO Bormio 1.64 345 AML AML
comp=E,51μm,1.3s
BRMO AML AML
comp=E,51μm,1.3s
BRMO AML AML
comp=N,58μm,0.4s
BRMO AML AML
comp=E,51μm,1.3s
BRMO AML AML
comp=N,58μm,0.4s
BRMO AML AML
comp=N,58μm,0.4s
MOSI Grossmontoni 1.75 351 AML AML
comp=N,143μm,0.6s
MOSI AML AML
comp=E,140μm,1.0s
MOSI AML AML
comp=N,143μm,0.6s
MOSI AML AML
comp=E,140μm,1.0s
MOSI AML AML
comp=N,143μm,0.6s
MOSI AML AML
comp=E,140μm,1.0s
ABSI Aberstueckl 1.86 7 AML AML
comp=E,199μm,0.5s
ABSI AML AML
comp=N,132μm,0.9s
ABSI AML AML
comp=E,199μm,0.5s
ABSI AML AML
comp=N,132μm,0.9s
ROSI Rosskopf 2.06 8 AML AML
comp=N,99μm,0.3s
ROSI AML AML
comp=E,81μm,0.7s
ROSI AML AML
comp=E,81μm,0.7s
ROSI AML AML
comp=N,99μm,0.3s
FETA Feichten 2.14 356 Pg Pb 20 11 38.7 +0.3
comp=N,0.5nm,0.1s
FETA *e*Sg Sg 20 12 09.0 +1.4
FETA Feichten 2.14 356 Pg Pb 20 11 38.7 +0.3
comp=N,0.5nm,0.1s
FETA Sg Sg 20 12 09.0 +1.3
ABTA Abfaltersbach 2.15 30 *e*Pg Pb 20 11 39.1 +0.7
comp=N,5.0nm,0.5s
ABTA *e*Sg Sg 20 12 10.5 +2.5
ABTA Abfaltersbach 2.15 30 Pg Pb 20 11 39.1 +0.6
comp=N,5.0nm,0.5s
ABTA Sg Sg 20 12 10.5 +2.5
comp=N,3.4nm,0.4s
RISI Rein 2.20 20 AML AML
comp=N,120μm,0.4s
RISI AML AML
comp=E,87μm,0.4s
RISI AML AML
comp=N,120μm,0.4s
RISI AML AML
comp=E,87μm,0.4s
WTTA Wattenberg 2.42 11 Pn Pn 20 11 37.7 -1.8
comp=E,2.7nm,0.2s,SNR=4.5
WTTA Wattenberg 2.42 11 Pn Pn 20 11 37.7 -1.8
comp=E,2.7nm,0.2s,SNR=4.5
WATA Walderalm 2.49 10 *e*Pn Pn 20 11 38.5 -1.8
comp=E,3.7nm,0.2s,SNR=11
WATA Walderalm 2.49 10 Pn Pn 20 11 38.5 -1.8
comp=E,3.7nm,0.2s,SNR=11
DAVA Damuels 2.52 343 Pn Pn 20 11 32.3 -8.4
comp=E,3.5nm,0.3s
MYKA Terra Mystica 2.56 46 Pg Pg 20 11 47.1 -0.8
comp=E,2.2nm,0.2s
MYKA Terra Mystica 2.56 46 Pg Pg 20 11 47.1 -0.8
comp=E,2.2nm,0.2s
CEY Cerknica 2.58 70 *e*Pn Pn 20 11 40.8 -0.8
RETA Reutte 2.60 357 *e*Pn Pn 20 11 42.8 +0.9
comp=E,3.2nm,0.3s,SNR=9.0
RETA Reutte 2.60 357 Pn Pn 20 11 42.8 +0.9
comp=E,3.2nm,0.3s,SNR=9.0
KBA Koelnbreinsper 2.75 36 Pg Pg 20 11 50.6 -0.9
comp=E,4.2nm,0.2s,SNR=7.6
KBA Koelnbreinsper 2.75 36 Pg Pg 20 11 50.6 -0.9
comp=E,4.2nm,0.2s,SNR=7.6
CRES Cresnjev 3.30 72 *e*Pn Pn 20 11 50.7 -0.7
MOA Molln 3.74 36 *i* Pn Pn 20 11 57.5 +0.1
comp=E,0.3nm,0.1s
MOA Molln 3.74 36 Pn Pn 20 11 57.5 +0.1
comp=E,0.3nm,0.1s
KHC Kasperske Hory 4.61 22 *e*PN Pn 20 12 09.2 -0.1
KHC *e*PG Pb 20 12 23.6 +3.3
KHC *e*SN Sn 20 12 58.5 -4.8
KHC *e*SG Sg 20 13 24.6 -2.1
KHC Kasperske Hory 4.61 22 Pn Pn 20 12 09.2 -0.1

LDG ***03*** *20:19:30.8±0.1, 44°.92N×11°.15E, h2km, Ml3.2/15, Error ellipse: s-maj=3.8km s-min=2.6km az=164.0*
ISCJB ***03*** *20:19:30.9±0.2, 44°.96N±0°.01×10°.86E±0°.01, h10km, Error ellipse: s-maj=1.8km s-min=1.5km az=7.5*
ROM ***03*** *20:19:30.9±0.0, 44°.883N±0°.001×10°.941E±0°.001, h4km, ML3.5/1*
IASPEI ***03*** *20:19:32.0±0.8, 44°.91N±0°.01×10°.95E±0°.02, h10km±4km, Error ellipse: s-maj=2.4km s-min=2.0km az=103.7, GT5 selection from ISC bulletin GT5 identified by Bond¨¡r and McLaughlin (2009) selection criteria Bond¨¡r and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
STR ***03*** *20:19:31.9±1.5, 45°.N±5°.×1°.1E±1°.6, h5km, M3.5/7, mb3.6/1, MLv3.5/7*
VIE ***03*** *20:19:31.6±0.3, 44°.98N×10°.84E, h8km, mb2.6/17, ml3.0/18, Error ellipse: s-maj=3.4km s-min=2.4km az=116.0 66 km NW of Bologna*
CSEM ***03*** *20:19:31.5±0.1, 44°.94N×10°.95E, h10km, ML3.1/16, Error ellipse: s-maj=2.4km s-min=2.2km az=154.0*
PRU ***03*** *20:19:33.4, 44°.88N×10°.99E, h27km*
ISC 03 20:19:31.7±0.7, 44°.92N±0°.01×10°.95E±0°.01, h10km, n199, σ1§22/306, 10C-17D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
T0827	**Moglia (MN)**	**0.02**	**322**	⇓*i*P		**Pg**	**20 19 33.2**	**-0.3**
T0827				*i* S		**Sg**	**20 19 36.4**	**+1.7**
T0827	**Moglia (MN)**	**0.02**	**322**	*i* P		**Pg**	**20 19 33.2**	**-0.3**
T0827				*i* S		**Sg**	**20 19 36.4**	**+1.7**
T0818	**Loc. Fossa, Co**	**0.06**	**75**	⇓*e*P		**Pg**	**20 19 33.6**	**-0.1**
T0818				*e*S		**Sg**	**20 19 36.8**	**+1.6**
T0818	**Loc. Fossa, Co**	**0.06**	**75**	*e*P		**Pg**	**20 19 33.6**	**-0.1**
T0818				*e*S		**Sg**	**20 19 36.8**	**+1.6**
T0825	**Gonzaga (MN)**	**0.09**	**306⇑**	*e*P		**Pg**	**20 19 34.7**	**+0.6**
T0825	**Gonzaga (MN)**	**0.09**	**306**	*e*P		**Pg**	**20 19 34.7**	**+0.6**
T0825				*e*S		**Sg**	**20 19 38.8**	**+2.9**
T0825				AML	AML			
	comp=E,84400μm,0.4s							
T0825				AML	AML			
T0828	**Loc. Fossoli,**	**0.09**	**197**	*i* P		**Pg**	**20 19 33.0**	**-1.2**
T0828				*i* S		**Sg**	**20 19 35.6**	**-0.3**
T0814	**Loc. Cortile,**	**0.13**	**174**	⇓*i*P		**Pg**	**20 19 33.7**	**-0.9**
T0814				*i* S		**Sg**	**20 19 36.9**	**+0.2**
T0814	**Loc. Cortile,**	**0.13**	**174**	*i* P		**Pg**	**20 19 33.6**	**-0.9**
T0814				*i* S		**Sg**	**20 19 36.9**	**+0.2**
T0826	**Rio Saliceto (**	**0.13**	**231**	⇓*i*P		**Pg**	**20 19 33.8**	**-0.8**
T0826				*i* S		**Sg**	**20 19 37.2**	**+0.5**
T0826	**Rio Saliceto (**	**0.13**	**231**	*i* P		**Pg**	**20 19 33.8**	**-0.8**
T0826				*i* S		**Sg**	**20 19 37.2**	**+0.5**
SBPO	**S.Benedetto Po**	**0.13**	**350**	*e*P		**Pg**	**20 19 35.7**	**+0.9**
SBPO	**S.Benedetto Po**	**0.13**	**350**	*e*P		**Pg**	**20 19 35.6**	**+0.9**
SBPO				AML	AML			
	comp=E,15700μm,0.8s							
SBPO				AML	AML			
	comp=N,58100μm,0.5s							
T0824	**Loc. Limidi di**	**0.16**	**186**	⇓*i*P		**Pg**	**20 19 34.4**	**-0.8**
T0824				*i* S		**Sg**	**20 19 38.3**	**+0.7**
T0824	**Loc. Limidi di**	**0.16**	**186**	*i* P		**Pg**	**20 19 34.4**	**-0.8**
T0824				*i* S		**Sg**	**20 19 38.3**	**+0.7**
T0812	**Loc. Stoppiaro**	**0.17**	**78**	⇓*e*P		**Pg**	**20 19 35.2**	**-0.1**
T0812				*e*S		**Sg**	**20 19 40.1**	**+2.4**
T0812	**Loc. Stoppiaro**	**0.17**	**78**	*e*P		**Pg**	**20 19 35.2**	**-0.1**
T0812				*e*S		**Sg**	**20 19 40.1**	**+2.4**
T0802	**SanFelice sul**	**0.17**	**105**	*e*P		**Pg**	**20 19 35.1**	**-0.2**
T0802				*e*S		**Sg**	**20 19 39.6**	**+1.8**
T0802	**SanFelice sul**	**0.17**	**105**	*e*P		**Pg**	**20 19 35.1**	**-0.2**
T0802				*e*S		**Sg**	**20 19 39.6**	**+1.8**
T0813	**Massa Finalese**	**0.18**	**103⇑**	*e*P		**Pg**	**20 19 35.3**	**-0.2**
T0813				*e*S		**Sg**	**20 19 39.9**	**+1.8**
T0813	**Massa Finalese**	**0.18**	**103**	*e*P		**Pg**	**20 19 35.3**	**-0.2**
T0813				*e*S		**Sg**	**20 19 39.9**	**+1.8**
RAVA	**Ravarino**	**0.20**	**144**	⇓*e*P		**Pg**	**20 19 35.3**	**-0.6**
RAVA				*e*S		**Sg**	**20 19 40.1**	**+1.4**
RAVA	**Ravarino**	**0.20**	**144**	*e*P		**Pg**	**20 19 35.3**	**-0.6**
RAVA				*e*S		**Sg**	**20 19 40.1**	**+1.4**
RAVA				AML	AML			
	comp=E,16000μm,0.8s							
RAVA				AML	AML			
	comp=N,24650μm,0.5s							
NOVE	**Novellara**	**0.21**	**234**	⇓*i*P		**Pg**	**20 19 35.3**	**-0.7**
NOVE				*i* S		**Sg**	**20 19 40.0**	**+1.1**
NOVE	**Novellara**	**0.21**	**234**	*i* P		**Pg**	**20 19 35.3**	**-0.7**
NOVE				*i* S		**Sg**	**20 19 40.0**	**+1.1**
GAZZ	**Gazzo Veronese**	**0.22**	**28**	⇓*e*Pg		**Pg**	**20 19 36.8**	**+0.6**
GAZZ	**Gazzo Veronese**	**0.22**	**28**	*e*Pg		**Pg**	**20 19 36.8**	**+0.6**
T0800	**Massa Finalese**	**0.22**	**109**	⇓*e*P		**Pg**	**20 19 35.8**	**-0.4**
T0800				*e*S		**Sg**	**20 19 41.1**	**+1.8**
T0800	**Massa Finalese**	**0.22**	**109**	*e*P		**Pg**	**20 19 35.8**	**-0.4**
T0800				*e*S		**Sg**	**20 19 41.1**	**+1.8**
T0800				AML	AML			
	comp=E,13650μm,1.2s							
T0800				AML	AML			
	comp=N,13400μm,0.4s							
T0800				AML	AML			
	comp=E,14200μm,1.2s							
T0800				AML	AML			
	comp=N,12750μm,0.4s							
T0811	**Palata Pepoli**	**0.24**	**125**	⇓*e*P		**Pg**	**20 19 35.8**	**-0.7**
T0811				*e*S		**Sg**	**20 19 41.2**	**+1.4**
T0811	**Palata Pepoli**	**0.24**	**125**	*e*P		**Pg**	**20 19 35.8**	**-0.7**
T0811				*e*S		**Sg**	**20 19 41.2**	**+1.4**
SERM	**Sermide**	**0.26**	**70**	*e*P		**Pg**	**20 19 37.2**	**+0.2**
SERM				*e*S		**Sb**	**20 19 43.5**	**+0.5**
SERM	**Sermide**	**0.26**	**70**	*e*P		**Pg**	**20 19 37.2**	**+0.2**
SERM				*e*S		**Sb**	**20 19 43.5**	**+0.5**
T0805	**Bondeno (FE)**	**0.26**	**90**	*e*P		**Pg**	**20 19 36.8**	**-0.2**
T0805	**Bondeno (FE)**	**0.26**	**90**	*e*P		**Pg**	**20 19 36.8**	**-0.2**
MODE	**Modena**	**0.29**	**180**	⇓*e*P		**Pg**	**20 19 37.8**	**+0.3**
MODE				*e*S		**Sg**	**20 19 41.7**	**+0.3**
MODE	**Modena**	**0.29**	**180**	*e*P		**Pg**	**20 19 37.8**	**+0.3**
MODE				*e*S		**Sg**	**20 19 41.7**	**+0.3**
T0823	**Castello D'Arg**	**0.33**	**135**	⇓*e*P		**Pg**	**20 19 38.1**	**-0.1**
T0823				*e*S		**Sb**	**20 19 45.4**	**+0.5**
T0823	**Castello D'Arg**	**0.33**	**135**	*e*P		**Pg**	**20 19 38.1**	**-0.1**
T0823				*e*S		**Sb**	**20 19 45.4**	**+0.5**
T0817	**Loc. Veratica,**	**0.36**	**78**	*e*P		**Pg**	**20 19 39.4**	**+0.5**
T0817				*e*S		**Sb**	**20 19 46.0**	**0.0**
T0817	**Loc. Veratica,**	**0.36**	**78**	*e*P		**Pg**	**20 19 39.4**	**+0.5**
T0817				*e*S		**Sb**	**20 19 47.0**	**+1.0**
PRMA	**PARMA**	**0.48**	**251**	*e*P		**Pg**	**20 19 41.1**	**+0.1**
PRMA	**PARMA**	**0.48**	**251**	*e*P		**Pg**	**20 19 41.1**	**+0.1**
PRMA				*e*S		**Sb**	**20 19 50.4**	**+1.1**
T0816	**San Bartolomeo**	**0.50**	**113**	*e*P		**Pg**	**20 19 41.8**	**+0.4**
T0816	**San Bartolomeo**	**0.50**	**113**	*e*P		**Pg**	**20 19 41.8**	**+0.4**
T0815	**Correggio (RE)**	**0.55**	**95**	*e*P		**Pb**	**20 19 42.7**	**-0.6**
T0815				*e*S		**Sb**	**20 19 51.0**	**-0.2**
T0815	**Correggio (RE)**	**0.55**	**95**	*e*P		**Pb**	**20 19 42.7**	**-0.6**
T0815				*e*S		**Sb**	**20 19 52.0**	**+0.8**
ZCCA	**Zocca**	**0.57**	**178**	⇓*e*P		**Pb**	**20 19 43.6**	**-0.1**
ZCCA	**Zocca**	**0.57**	**178**	*e*P		**Pb**	**20 19 43.6**	**-0.1**
MTRZ	**Monterenzio**	**0.66**	**146**	*e*P		**Pn**	**20 19 46.5**	**-0.6**
MTRZ	**Monterenzio**	**0.66**	**146**	*e*P		**Pn**	**20 19 46.5**	**-0.6**
TEOL	**Teolo**	**0.67**	**49⇑**	*e*Pg		**Pb**	**20 19 45.5**	**0.0**
TEOL				Sg		**Sn**	**20 19 57.0**	**-0.9**
TEOL	**Teolo**	**0.67**	**49⇑**	*e*P		**Pg**	**20 19 44.7**	**0.0**
TEOL	**Teolo**	**0.67**	**49**	*e*Pg		**Pb**	**20 19 45.5**	**0.0**
TEOL				Sg		**Sn**	**20 19 57.0**	**-0.9**
TEOL	**Teolo**	**0.67**	**49**	*e*P		**Pg**	**20 19 44.7**	**0.0**
TEOL				*e*S		**Sn**	**20 19 58.3**	**+0.4**
CMPO	**Campotto Po**	**0.70**	**119**	*e*P		**Pn**	**20 19 47.7**	**+0.1**
CMPO	**Campotto Po**	**0.70**	**119**	*e*P		**Pn**	**20 19 47.7**	**+0.1**
CMPO				*e*S		**Sn**	**20 19 58.2**	**-0.1**
ROVR	**Rover¨¤ Verone**	**0.73**	**7**	⇓*e*P		**Pb**	**20 19 46.2**	**-0.4**
ROVR	**Rover¨¤ Verone**	**0.73**	**7**	*e*P		**Pb**	**20 19 46.2**	**-0.4**
ROVR				*e*S		**Sn**	**20 19 60.0**	**+0.4**
MARN	**Marana (Italy)**	**0.74**	**14**	*e*Pg		**Pb**	**20 19 46.2**	**-0.5**
MARN				*e*Sg		**Sn**	**20 19 58.9**	**-0.8**
MARN	**Marana (Italy)**	**0.74**	**14**	*e*Pg		**Pb**	**20 19 46.2**	**-0.5**
MARN				*e*Sg		**Sn**	**20 19 58.8**	**-0.8**
SALO	**Salr**	**0.76**	**337**	⇓*e*P		**Pb**	**20 19 46.7**	**-0.3**
SALO	**Salr**	**0.76**	**337**	*e*P		**Pb**	**20 19 46.7**	**-0.3**
SALO				*e*S		**Sn**	**20 19 59.4**	**-0.7**
ADRI	**Adria, Italy**	**0.77**	**81⇑**	*e*Pg		**Pb**	**20 19 46.7**	**-0.4**
ADRI				*e*Sg		**Sn**	**20 20 00.6**	**+0.5**
ADRI	**Adria, Italy**	**0.77**	**81**	*e*Pg		**Pb**	**20 19 46.7**	**-0.4**
ADRI				*e*Sg		**Sn**	**20 20 00.6**	**+0.5**
BALD	**Monte Baldo**	**0.77**	**353**	*e*Pg		**Pb**	**20 19 47.2**	**-0.1**
BALD				*e*Sg		**Sb**	**20 19 58.9**	**+1.0**
BALD	**Monte Baldo**	**0.77**	**353**	*e*Pg		**Pb**	**20 19 47.2**	**-0.1**
BALD				*e*Sg		**Sb**	**20 19 58.9**	**+1.0**
MAGA	**Magasa**	**0.89**	**345**	⇓*e*P		**Pg**	**20 19 48.3**	**-0.4**
MAGA	**Magasa**	**0.89**	**345**	*e*P		**Pg**	**20 19 48.3**	**-0.4**
MAGA				*e*S		**Sn**	**20 20 03.9**	**+0.6**
POPM	**Popiglio**	**0.89**	**189⇑**	*e*P		**Pb**	**20 19 48.8**	**-0.3**
POPM	**Popiglio**	**0.89**	**189**	*e*P		**Pb**	**20 19 48.8**	**-0.3**
POPM				*e*S		**Sn**	**20 20 06.8**	**+3.7**
BDI	**Bagni Di Lucca**	**0.89**	**197⇑**	*e*P		**Pg**	**20 19 48.5**	**-0.3**
BDI	**Bagni Di Lucca**	**0.89**	**197**	*e*P		**Pg**	**20 19 48.5**	**-0.3**
BDI				*e*S		**Sn**	**20 20 05.8**	**+2.4**
SEI	**Scarperia**	**0.91**	**161**	*e*P		**Pb**	**20 19 49.8**	**+0.2**
SEI	**Scarperia**	**0.91**	**161**	*e*P		**Pb**	**20 19 49.8**	**+0.2**
SEI				*e*S		**Sn**	**20 20 05.8**	**+2.0**
DOSS	**Dosso del Somm**	**0.97**	**10⇑**	*e*Pg		**Pg**	**20 19 50.4**	**-0.1**
DOSS				*e*Sg		**Sn**	**20 20 05.6**	**0.0**
DOSS	**Dosso del Somm**	**0.97**	**10**	*e*Pg		**Pg**	**20 19 50.4**	**-0.1**
DOSS				*e*Sg		**Sn**	**20 20 05.6**	**0.0**
CGRP	**Cima Grappa**	**1.13**	**32⇑**	*e*Pg		**Pg**	**20 19 52.6**	**-0.8**
CGRP	**Cima Grappa**	**1.13**	**32**	*e*Pg		**Pg**	**20 19 52.6**	**-0.8**
CGRP	**Cima Grappa**	**1.13**	**32**	*e*P		**Pg**	**20 19 52.8**	**-0.6**
CGRP				*e*S		**Sn**	**20 20 10.7**	**+1.3**
CGRP	**Cima Grappa**	**1.13**	**32**	*e*P		**Pg**	**20 19 52.8**	**-0.6**
CGRP				*e*S		**Sn**	**20 20 10.7**	**+1.3**
PANI	**Panarotta**	**1.16**	**13**	*e*Pg		**Pb**	**20 19 53.1**	**-0.9**
PANI				*e*Sg		**Sn**	**20 20 11.3**	**+1.0**
PANI	**Panarotta**	**1.16**	**13**	*e*Pg		**Pb**	**20 19 53.1**	**-0.9**
PANI				*e*Sg		**Sn**	**20 20 11.3**	**+1.0**
MTLO	**Montello**	**1.20**	**42⇑**	*e*Pg		**Pb**	**20 19 54.0**	**-0.6**
MTLO				*e*Sg		**Sn**	**20 20 13.5**	**+2.5**

MTLO	**Montello**	**1.20**	**42**	*e*Pg	**Pb**	**20 19 54.0**	**-0.6**
MTLO				*e*Sg	**Sn**	**20 20 13.5**	**+2.5**
VARN	**Col Varnada, M**	**1.35**	**37**	*e*Pg	**Pb**	**20 19 56.7**	**-0.3**
VARN	**Col Varnada, M**	**1.35**	**37**	*e*Pg	**Pb**	**20 19 56.7**	**-0.3**
OZOL	**Ozolo**	**1.49**	**3**	*e*Pg	**Pn**	**20 19 57.7**	**-0.8**
OZOL	**Ozolo**	**1.49**	**3**	*e*Pg	**Pn**	**20 19 57.7**	**-0.8**
FAU	**Forcella Aurin**	**1.50**	**28**	*e*Pg	**Pn**	**20 19 58.1**	**-0.6**
FAU	**Forcella Aurin**	**1.50**	**28**	*e*Pg	**Pn**	**20 19 58.1**	**-0.6**
CAE	**Caneva**	**1.51**	**43**	*e*Pg	**Pb**	**20 19 59.4**	**-0.4**
CAE	**Caneva**	**1.51**	**43**	*e*Pg	**Pb**	**20 19 59.4**	**-0.4**
CARE	**Lago del Cares**	**1.52**	**353**	*e*Pg	**Pn**	**20 19 58.3**	**-0.8**
CARE	**Lago del Cares**	**1.52**	**353**	*e*Pg	**Pn**	**20 19 58.3**	**-0.8**
MLNI	**Malnisio**	**1.69**	**43**	*e*Pn	**Pn**	**20 20 00.9**	**-0.5**
MLNI	**Malnisio**	**1.69**	**43**	*e*Pn	**Pn**	**20 20 00.9**	**-0.5**
FETA	**Feichten**	**2.11**	**356**	*e*Pg	**Pb**	**20 20 10.8**	**+0.7**
	comp=N,11nm,0.6s,SNR=9.2						
FETA	**Feichten**	**2.11**	**356**	Pg	**Pb**	**20 20 10.8**	**+0.7**
	comp=N,11nm,0.6s,SNR=9.2						
ABTA	**Abfaltersbach**	**2.13**	**30**	Pn	**Pn**	**20 20 07.9**	**+0.5**
	comp=N,0.7nm,0.1s,SNR=12						
ABTA	**Abfaltersbach**	**2.13**	**30**	Pn	**Pn**	**20 20 07.9**	**+0.5**
	comp=N,0.7nm,0.1s,SNR=12						
WTTA	**Wattenberg**	**2.39**	**11**	*e*Pn	**Pn**	**20 20 11.0**	**-0.1**
	comp=N,7.0nm,0.3s						
WTTA	**Wattenberg**	**2.39**	**11**	Pn	**Pn**	**20 20 11.0**	**-0.1**
	comp=N,7.0nm,0.3s						
JAVS	**Javornik**	**2.40**	**65**	*i* Pn	**Pn**	**20 20 09.9**	**-1.2**
JAVS				*e*Sn	**Sn**	**20 20 39.5**	**-1.1**
	comp=Z,31nm,0.4s						
JAVS	**Javornik**	**2.40**	**65**	Pn	**Pn**	**20 20 09.9**	**-1.2**
JAVS				*e*Sn	**Sn**	**20 20 39.5**	**-1.1**
	comp=Z,31nm,0.4s						
WATA	**Walderalm**	**2.46**	**10**	Pn	**Pn**	**20 20 12.4**	**+0.5**
	comp=Z,24nm,0.4s,SNR=30						
WATA	**Walderalm**	**2.46**	**10**	Pn	**Pn**	**20 20 12.4**	**+0.5**
	comp=Z,24nm,0.4s,SNR=30						
DAVA	**Damuels**	**2.48**	**343**	Pn	**Pn**	**20 20 11.5**	**-0.8**
	comp=Z,11nm,0.7s						
DAVA	**Damuels**	**2.48**	**343**	Pn	**Pn**	**20 20 11.5**	**-0.8**
	comp=Z,11nm,0.7s						
MYKA	**Terra Mystica**	**2.54**	**47**	*e*Pn	**Pn**	**20 20 13.5**	**+0.5**
	comp=Z,17nm,0.3s,SNR=13						
MYKA	**Terra Mystica**	**2.54**	**47**	Pn	**Pn**	**20 20 13.5**	**+0.5**
	comp=Z,17nm,0.3s,SNR=13						
RETA	**Reutte**	**2.57**	**357**	*e*Pn	**Pn**	**20 20 13.4**	**0.0**
	comp=Z,6.2nm,0.4s						
RETA	**Reutte**	**2.57**	**357**	Pn	**Pn**	**20 20 13.4**	**0.0**
	comp=Z,6.2nm,0.4s						
KBA	**Koelnbreinsper**	**2.73**	**37**	*e*Pn	**Pn**	**20 20 16.9**	**+1.2**
	comp=Z,0.9nm,0.2s,SNR=9.4						
KBA	**Koelnbreinsper**	**2.73**	**37**	Pn	**Pn**	**20 20 16.9**	**+1.2**
	comp=Z,0.9nm,0.2s,SNR=9.4						
SBF	**Sospel**	**2.73**	**248**	*e*Pn	**Pn**	**20 20 16.2**	**+0.6**
SBF				*e*Sn	**Sn**	**20 20 48.7**	**-0.1**
	comp=Z,91nm,0.5s						
SBF	**Sospel**	**2.73**	**248**	*e*Pn	**Pn**	**20 20 16.2**	**+0.6**
SBF				*e*Sn	**Sn**	**20 20 48.7**	**-0.1**
	comp=Z,46nm,0.5s						
PGF	**Pioggiola**	**2.76**	**212**	*e*Pn	**Pn**	**20 20 15.9**	**-0.2**
PGF				*e*Sn	**Sn**	**20 20 48.7**	**-0.8**
	comp=Z,29nm,0.6s						
PGF	**Pioggiola**	**2.76**	**212**	*e*Pn	**Pn**	**20 20 15.9**	**-0.2**
PGF				*e*Sn	**Sn**	**20 20 48.7**	**-0.8**
	comp=Z,14nm,0.6s						
LUCF	**Luceram**	**2.78**	**250**	P	**Pn**	**20 20 17.9**	**+1.6**
LUCF	**Luceram**	**2.78**	**250**	P	**Pn**	**20 20 17.9**	**+1.6**
NVLJ	**Novalja**	**2.81**	**96**	*i* Pn	**Pn**	**20 20 16.2**	**-0.5**
NVLJ				Sn	**Sn**	**20 20 48.4**	**-2.2**
NVLJ	**Novalja**	**2.81**	**96**	*i* Pn	**Pn**	**20 20 16.1**	**-0.5**
NVLJ				Sn	**Sn**	**20 20 48.4**	**-2.2**
OBKA	**Obir**	**2.98**	**56**	*i* Pn	**Pn**	**20 20 19.0**	**0.0**
	comp=Z,0.5nm,0.1s						
OBKA	**Obir**	**2.98**	**56**	Pn	**Pn**	**20 20 19.0**	**0.0**
	comp=Z,0.5nm,0.1s						
MBDF	**Montbardon**	**2.98**	**268**	*e*Pn	**Pn**	**20 20 18.1**	**-1.0**
MBDF				*e*Sn	**Sn**	**20 20 52.8**	**-2.2**
	comp=Z,16nm,0.5s						
MBDF	**Montbardon**	**2.98**	**268**	*e*Pn	**Pn**	**20 20 18.1**	**-1.0**
MBDF				*e*Sn	**Sn**	**20 20 52.8**	**-2.2**
	comp=Z,8.1nm,0.5s						
LPG	**La Plagne**	**3.02**	**282**	*e*Pn	**Pn**	**20 20 21.6**	**+1.7**
LPG				*e*Sn	**Sn**	**20 20 56.4**	**+0.1**
	comp=Z,14nm,0.4s						
LPG	**La Plagne**	**3.02**	**282**	*e*Pn	**Pn**	**20 20 21.6**	**+1.7**
LPG				*e*Sn	**Sn**	**20 20 56.4**	**+0.1**
	comp=Z,6.9nm,0.4s						
LPL	**La Plagne**	**3.04**	**283**	*e*Pn	**Pn**	**20 20 22.2**	**+2.2**
LPL				*e*Sn	**Sn**	**20 20 56.4**	**-0.2**
	comp=Z,17nm,0.5s						
LPL	**La Plagne**	**3.04**	**283**	*e*Pn	**Pn**	**20 20 22.2**	**+2.2**
LPL				*e*Sn	**Sn**	**20 20 56.4**	**-0.2**
	comp=Z,8.6nm,0.5s						
CALF	**Calern**	**3.12**	**249**	P	**Pn**	**20 20 22.2**	**+1.2**
CALF	**Calern**	**3.12**	**249**	P	**Pn**	**20 20 22.2**	**+1.2**
OZLJ	**Ozalj**	**3.26**	**76**	*i* Pn	**Pn**	**20 20 22.3**	**-0.6**
OZLJ	**Ozalj**	**3.26**	**76**	*i* Pn	**Pn**	**20 20 22.2**	**-0.6**
SOKA	**Soboth**	**3.35**	**57**	*e*Pn	**Pn**	**20 20 24.8**	**+0.6**
	comp=Z,2.3nm,0.3s						
SOKA	**Soboth**	**3.35**	**57**	Pn	**Pn**	**20 20 24.8**	**+0.6**
	comp=Z,2.3nm,0.3s						
FRF	**La Foret Royal**	**3.38**	**248**	*e*Pn	**Pn**	**20 20 25.3**	**+0.8**
FRF				*e*Sn	**Sn**	**20 21 03.8**	**-0.8**
	comp=Z,22nm,0.4s						
FRF	**La Foret Royal**	**3.38**	**248**	*e*Pn	**Pn**	**20 20 25.3**	**+0.8**
FRF				*e*Sn	**Sn**	**20 21 03.8**	**-0.8**
	comp=Z,11nm,0.4s						
UDBI	**Udbina**	**3.45**	**95**	*e*Pn	**Pn**	**20 20 26.5**	**+1.0**
UDBI	**Udbina**	**3.45**	**95**	*e*Pn	**Pn**	**20 20 26.5**	**+1.0**
LMR	**La Mourre**	**3.57**	**245**	*e*Pn	**Pn**	**20 20 27.7**	**+0.6**
LMR				*e*Sn	**Sn**	**20 21 09.2**	**-0.1**
	comp=Z,34nm,0.4s						
LMR	**La Mourre**	**3.57**	**245**	*e*Pn	**Pn**	**20 20 27.7**	**+0.6**
LMR				*e*Sn	**Sn**	**20 21 09.2**	**-0.1**
	comp=Z,17nm,0.4s						
ORIF	**Oris-en-Rattie**	**3.60**	**272**	*e*Pn	**Pn**	**20 20 28.1**	**+0.5**
ORIF				*e*Sn	**Sn**	**20 21 10.0**	**-0.3**
	comp=Z,16nm,0.6s						
ORIF	**Oris-en-Rattie**	**3.60**	**272**	P	**Pn**	**20 20 28.3**	**+0.7**
ORIF	**Oris-en-Rattie**	**3.60**	**272**	*e*Pn	**Pn**	**20 20 28.1**	**+0.5**
ORIF				*e*Sn	**Sn**	**20 21 10.0**	**-0.3**
	comp=Z,7.8nm,0.6s						
KIZ	**Kirchzarten**	**3.69**	**326**	P	**Pn**	**20 20 28.9**	**+0.1**
KIZ	**Kirchzarten**	**3.69**	**326**	P	**Pn**	**20 20 28.9**	**+0.1**
MOA	**Molln**	**3.72**	**37**	*i* Pn	**Pn**	**20 20 30.1**	**+0.9**
	comp=Z,1.2nm,0.2s						
MOA	**Molln**	**3.72**	**37**	Pn	**Pn**	**20 20 30.1**	**+0.9**
	comp=Z,1.2nm,0.2s						
CHMF	**Charmoille**	**3.79**	**309**	P	**Pn**	**20 20 29.9**	**-0.3**
CHMF	**Charmoille**	**3.79**	**309**	P	**Pn**	**20 20 29.9**	**-0.3**
CABF	**La Chapelle**	**3.80**	**298**	*e*Pn	**Pn**	**20 20 30.7**	**+0.4**
CABF	**La Chapelle**	**3.80**	**298**	*e*Pn	**Pn**	**20 20 30.7**	**+0.4**
ARSA	**Arzberg**	**3.94**	**52**	*e*Pn	**Pn**	**20 20 32.4**	**+0.2**
	comp=Z,0.5nm,0.3s						
ARSA	**Arzberg**	**3.94**	**52**	Pn	**Pn**	**20 20 32.4**	**+0.2**
	comp=Z,0.5nm,0.3s						
SMRF	**Simiane la Rot**	**3.96**	**258**	*e*Pn	**Pn**	**20 20 33.7**	**+1.2**
SMRF				*e*Sn	**Sn**	**20 21 19.4**	**+0.3**
	comp=Z,9.7nm,0.6s						
SMRF	**Simiane la Rot**	**3.96**	**258**	*e*Pn	**Pn**	**20 20 33.7**	**+1.2**
SMRF				*e*Sn	**Sn**	**20 21 19.4**	**+0.3**
	comp=Z,4.8nm,0.6s						
OPP	**Oppenau**	**4.05**	**333**	P	**Pn**	**20 20 33.2**	**-0.5**
OPP	**Oppenau**	**4.05**	**333**	P	**Pn**	**20 20 33.2**	**-0.5**
HINF	**Hinteralfeld**	**4.05**	**317**	*e*Pn	**Pn**	**20 20 33.2**	**-0.6**
HINF				*e*Sn	**Sn**	**20 21 18.8**	**-2.5**
	comp=Z,9.2nm,0.4s						
HINF	**Hinteralfeld**	**4.05**	**317**	*e*Pn	**Pn**	**20 20 33.2**	**-0.6**
HINF				*e*Sn	**Sn**	**20 21 18.8**	**-2.5**
	comp=Z,4.6nm,0.4s						
ECH	**Echery**	**4.21**	**323**	P	**Pn**	**20 20 35.6**	**-0.3**
ECH	**Echery**	**4.21**	**323**	P	**Pn**	**20 20 35.6**	**-0.3**
CDF	**Champ du Feu**	**4.31**	**325**	*e*Pn	**Pn**	**20 20 37.0**	**-0.4**
CDF	**Champ du Feu**	**4.31**	**325**	*e*Pn	**Pn**	**20 20 37.0**	**-0.4**
HAU	**Haudompre**	**4.43**	**316**	*e*Pn	**Pn**	**20 20 38.5**	**-0.4**
HAU				*e*Sn	**Sn**	**20 21 27.0**	**-3.6**
	comp=Z,19nm,0.3s						
HAU	**Haudompre**	**4.43**	**316**	*e*Pn	**Pn**	**20 20 38.5**	**-0.4**
HAU				*e*Sn	**Sn**	**20 21 27.0**	**-3.6**
	comp=Z,9.7nm,0.3s						
VIVF	**Saint-Julien-l**	**4.46**	**271**	*e*Pn	**Pn**	**20 20 39.0**	**-0.4**
VIVF				*e*Sn	**Sn**	**20 21 30.7**	**-0.7**
	comp=Z,2.9nm,0.3s						
VIVF	**Saint-Julien-l**	**4.46**	**271**	*e*Pn	**Pn**	**20 20 39.0**	**-0.4**
VIVF				*e*Sn	**Sn**	**20 21 30.7**	**-0.7**
	comp=Z,1.5nm,0.3s						
CONA	**Conrad Observa**	**4.54**	**47**	*e*Pn	**Pn**	**20 20 40.9**	**+0.5**
CONA	**Conrad Observa**	**4.54**	**47**	Pn	**Pn**	**20 20 40.9**	**+0.5**
KHC	**Kasperske Hory**	**4.58**	**22**	*e*PN	**Pn**	**20 20 40.5**	**-0.5**
KHC				*e*PG	**Pg**	**20 20 56.6**	**-2.7**
KHC				*e*SN	**Sn**	**20 21 32.0**	**-2.2**
KHC				*e*SG	**Sg**	**20 21 58.8**	**+0.2**
	comp=Z,12nm,0.6s						
KHC	**Kasperske Hory**	**4.58**	**22**	Pn	**Pn**	**20 20 40.5**	**-0.5**
PAGF	**Fort de Pagny**	**5.11**	**317**	*e*Pn	**Pn**	**20 20 48.5**	**+0.2**
PAGF	**Fort de Pagny**	**5.11**	**317**	*e*Pn	**Pn**	**20 20 48.5**	**+0.2**
LASF	**Ste Croix**	**5.14**	**263**	*e*Pn	**Pn**	**20 20 47.8**	**-0.9**
LASF				*e*Sn	**Sn**	**20 21 46.9**	**-1.3**
LASF	**Ste Croix**	**5.14**	**263**	*e*Pn	**Pn**	**20 20 47.8**	**-0.9**
LASF				*e*Sn	**Sn**	**20 21 46.9**	**-1.3**
SMF	**Signal de Mont**	**5.26**	**292**	*e*Pn	**Pn**	**20 20 50.2**	**-0.2**
SMF				*e*Sn	**Sn**	**20 21 48.8**	**-2.3**
	comp=Z,11nm,0.5s						
SMF	**Signal de Mont**	**5.26**	**292**	*e*Pn	**Pn**	**20 20 50.2**	**-0.2**
SMF				*e*Sn	**Sn**	**20 21 48.8**	**-2.3**
	comp=Z,5.4nm,0.5s						
STON	**Ston**	**5.29**	**110**	*e*Pn	**Pn**	**20 20 49.6**	**-1.1**
STON				Sn	**Sn**	**20 21 48.2**	**-3.5**
STON	**Ston**	**5.29**	**110**	*e*Pn	**Pn**	**20 20 49.6**	**-1.1**
STON				Sn	**Sn**	**20 21 48.1**	**-3.5**
LOR	**Lormes**	**5.46**	**298**	*e*Pn	**Pn**	**20 20 53.1**	**0.0**
LOR				*e*Sn	**Sn**	**20 21 55.0**	**-1.0**
	comp=Z,7.7nm,0.3s						
LOR	**Lormes**	**5.46**	**298**	P	**Pn**	**20 20 52.8**	**-0.3**
LOR	**Lormes**	**5.46**	**298**	*e*Pn	**Pn**	**20 20 53.1**	**0.0**
LOR				*e*Sn	**Sn**	**20 21 55.0**	**-1.0**
	comp=Z,3.8nm,0.3s						
SSF	**Saint Saulge**	**5.61**	**295**	*e*Pn	**Pn**	**20 20 55.0**	**-0.1**
SSF				*e*Sn	**Sn**	**20 21 57.1**	**-2.6**
SSF	**Saint Saulge**	**5.61**	**295**	*e*Pn	**Pn**	**20 20 55.0**	**-0.1**
SSF				*e*Sn	**Sn**	**20 21 57.1**	**-2.6**
AVF	**Avril sur Loir**	**5.63**	**292**	*e*Pn	**Pn**	**20 20 55.2**	**-0.1**
AVF	**Avril sur Loir**	**5.63**	**292**	*e*Pn	**Pn**	**20 20 55.2**	**-0.1**
BGF	**Bois d'Agland**	**5.91**	**289**	*e*Sn	**Sn**	**20 22 04.4**	**-2.5**
	comp=Z,11nm,0.4s						
BGF	**Bois d'Agland**	**5.91**	**289**	*e*Sn	**Sn**	**20 22 04.4**	**-2.5**
	comp=Z,5.3nm,0.4s						
HYF	**Humbligny**	**6.24**	**295**	*e*Pn	**Pn**	**20 21 04.4**	**+0.6**
HYF				*e*Sn	**Sn**	**20 22 12.5**	**-2.6**
HYF	**Humbligny**	**6.24**	**295**	*e*Pn	**Pn**	**20 21 04.4**	**+0.6**
HYF				*e*Sn	**Sn**	**20 22 12.5**	**-2.6**
BRG	**Berggiesshubel**	**6.29**	**18**	SG	**Sg**	**20 22 58.2**	**+4.9**
	comp=Z,13nm,1.4s						
VYHS	**Vyhne**	**6.49**	**54**	*e*PN	**Pn**	**20 21 06.6**	**-0.6**
VYHS				*e*SN	**Sn**	**20 22 17.7**	**-3.6**
VYHS	**Vyhne**	**6.49**	**54**	*e*Pn	**Pn**	**20 21 06.6**	**-0.6**
DPC	**Dobruska-Polom**	**6.53**	**32**	*e*PN	**Pn**	**20 21 07.4**	**-0.4**
DPC	**Dobruska-Polom**	**6.53**	**32**	Pn	**Pn**	**20 21 07.4**	**-0.4**
CLL	**Collm**	**6.54**	**11**	*e*Pn	**Pn**	**20 21 06.0**	**-1.8**
CLL				*e*Pg	**Pg**	**20 21 39.0**	**+2.2**
CLL				*e*Sg	**Sg**	**20 22 54.0**	**-7.4**
	comp=Z,9.0nm,1.1s						
CLL				LmV		22 04 00.0	
	comp=Z,200nm,20.2s						

KRSC 03 20:35:27.7±1.5, 49°.50N×156°.58E, h80km±27km, ML3.9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.23**	**346**	*e*P	Pn	20 35 49.9	+0.5
SKR				*e*S	Sn	20 36 06.5	+0.8
PAU	**Pauzhetka**	**1.98**	**4**	*e*S	Sn	20 36 26.3	+3.0
KDTR	**Khodutka, Kamc**	**2.50**	**22**	*e*P	Pn	20 36 08.4	+2.1
KDTR				*e*S	Sn	20 36 39.1	+3.3
ASAK	**Asacha**	**3.01**	**16**	*e*P	Pn	20 36 16.5	+3.3
MTVR	**Mutnovka**	**3.16**	**18**	*e*P	Pn	20 36 18.2	+3.0
RUS	**Russkaya**	**3.19**	**22**	*e*P	Pn	20 36 17.3	+1.9
RUS				*e*S	Sn	20 36 54.4	+2.1
UGLR	**Uglovaya**	**3.98**	**20**	*e*P	Pn	20 36 29.3	+3.0
SMAR	**Somma**	**4.02**	**19**	*e*P	Pn	20 36 30.4	+3.4
NLC	**Nalytchevo**	**4.07**	**24**	*e*S	Sn	20 37 15.4	+1.6
SPN	**Mys Shipunski**	**4.21**	**30**	*e*P	Pn	20 36 31.5	+2.2
SPN				*e*S	Sn	20 37 20.6	+3.5
GNL	**Ganaly**	**4.29**	**11**	*e*P	Pn	20 36 33.2	+2.6

*ATH **03** 20:45:22.6, 39°.69N×21°.60E, h27km±1km, ML3.2/9, Error ellipse: s-maj=1.2km s-min=0.7km az=281.0*
*ISCJB **03** 20:45:23.1±0.6, 39°.67N±0°.01×21°.65E±0°.02, h13km±4km, Error ellipse: s-maj=2.9km s-min=2.4km az=163.2*
*THE **03** 20:45:23.3, 39°.67N×21°.58E, h4km±1km, ML3.2/10, Error ellipse: s-maj=1.3km s-min=0.5km az=282.0*
*CSEM **03** 20:45:23.0±0.1, 39°.67N×21°.64E, h10km, ML3.2, Error ellipse: s-maj=3.4km s-min=2.8km az=62.0*
*TIR **03** 20:45:23.6, 39°.63N×21°.55E, h26km, Md3.5/5*

ISC 03 20:45:23.1±1.0, 39°.66N±0°.01×21°.63E±0°.01, h13km±8km, n164, σ0°98/203, 9C-9D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THL	**Klokotos Trika**	**0.31**	**108**	P	**Pg**	**20 45 29.1**	**-0.2**
THL				S	**Sn**	**20 45 37.3**	**-2.4**
THL				AML	AML	20 45 37.9	
	comp=N,6747μm,0.2s						
THL				AML	AML	20 45 38.5	
	comp=E,8630μm,0.2s						
THL	**Klokotos Trika**	**0.31**	**108**	P	**Pb**	**20 45 29.8**	**-0.7**
THL				S	**Sb**	**20 45 35.1**	**-0.3**
THL	**Klokotos Trika**	**0.31**	**108**	P	**Pb**	**20 45 29.8**	**-0.7**
THL				S	**Sb**	**20 45 35.1**	**-0.3**
JAN	**Janina**	**0.60**	**270**	P	**Pg**	**20 45 33.5**	**-1.3**
JAN				S	**Sb**	**20 45 43.8**	**-0.2**
JAN				AML	AML	20 45 48.9	
	comp=N,3774μm,0.3s						
JAN				AML	AML	20 45 49.5	
	comp=E,2448μm,0.4s						
JAN	**Janina**	**0.60**	**270**	P	**Pg**	**20 45 33.8**	**-1.1**
JAN				S	**Sg**	**20 45 42.1**	**-0.8**
JAN	**Janina**	**0.60**	**270**	P	**Pg**	**20 45 34.0**	**-0.9**
JAN				S	**Sg**	**20 45 42.1**	**-0.8**
KZN	**Kozani**	**0.66**	**9**	P	**Pg**	**20 45 35.2**	**-0.7**
KZN				S	**Sb**	**20 45 46.0**	**+0.5**
KZN				AML	AML	20 45 47.0	
	comp=N,11400μm,0.3s						
KZN				AML	AML	20 45 47.3	
	comp=E,25296μm,0.5s						
KZN	**Kozani**	**0.66**	**9**	P	**Pg**	**20 45 35.2**	**-0.7**
KZN				S	**Sb**	**20 45 45.2**	**-0.3**
KZN	**Kozani**	**0.66**	**9**	P	**Pg**	**20 45 35.2**	**-0.7**
KZN				S	**Sb**	**20 45 45.2**	**-0.3**
PENT	**Pentalofos**	**0.66**	**325**	P	**Pg**	**20 45 34.9**	**-1.0**
PENT				S	**Sb**	**20 45 45.5**	**-0.1**
PENT				AML	AML	20 45 48.1	
	comp=E,2528μm,0.3s						
PENT				AML	AML	20 45 48.7	
	comp=N,2638μm,0.3s						
PENT	**Pentalofos**	**0.66**	**325**	P	**Pg**	**20 45 35.0**	**-0.9**
PENT				S	**Sb**	**20 45 45.0**	**-0.6**
PENT	**Pentalofos**	**0.66**	**325**	P	**Pg**	**20 45 35.0**	**-0.9**
PENT				S	**Sb**	**20 45 44.9**	**-0.6**
DSL	**Palaion Diasel**	**0.67**	**219**	P	**Pg**	**20 45 35.6**	**-0.5**
DSL				S	**Sb**	**20 45 45.8**	**-0.1**
DSL				AML	AML	20 45 51.3	
	comp=E,3503μm,0.3s						
DSL				AML	AML	20 45 51.9	
	comp=N,4033μm,0.3s						
DSL	**Palaion Diasel**	**0.67**	**219**	P	**Pg**	**20 45 35.4**	**-0.7**
DSL				S	**Sb**	**20 45 45.5**	**-0.3**
DSL	**Palaion Diasel**	**0.67**	**219**	P	**Pg**	**20 45 35.8**	**-0.3**
DSL				S	**Sb**	**20 45 45.5**	**-0.3**
EVR	**Evrytania**	**0.75**	**170**	P	**Pb**	**20 45 37.5**	**-0.6**
EVR				S	**Sn**	**20 45 50.6**	**-0.2**
EVR				AML	AML	20 45 50.8	
	comp=E,3172μm,0.4s						
EVR				AML	AML	20 45 51.5	
	comp=N,3908μm,0.2s						
EVR	**Evrytania**	**0.75**	**170**	P	**Pb**	**20 45 37.5**	**-0.6**
EVR				S	**Sn**	**20 45 49.9**	**-0.9**
EVR	**Evrytania**	**0.75**	**170**	P	**Pb**	**20 45 37.8**	**-0.3**
EVR				S	**Sn**	**20 45 49.9**	**-0.9**
LIT	**Litokhoron**	**0.79**	**56**	P	**Pb**	**20 45 37.9**	**-0.8**
LIT	**Litokhoron**	**0.79**	**56**	P	**Pb**	**20 45 38.0**	**-0.8**
LIT				S	**Sn**	**20 45 51.2**	**-0.5**
LIT	**Litokhoron**	**0.79**	**56**	P	**Pb**	**20 45 38.1**	**-0.6**
AGG	**Agios Georgios**	**0.83**	**139**	P	**Pn**	**20 45 40.2**	**-0.3**
AGG				S	**Sn**	**20 45 53.5**	**+0.8**
AGG				AML	AML	20 45 56.0	
	comp=E,7477μm,0.3s						
AGG				AML	AML	20 45 57.5	
	comp=N,4795μm,0.2s						
AGG	**Agios Georgios**	**0.83**	**139**	P	**Pn**	**20 45 39.6**	**-1.0**
AGG				S	**Sn**	**20 45 52.9**	**+0.2**
AGG	**Agios Georgios**	**0.83**	**139**	P	**Pn**	**20 45 39.6**	**-1.0**
AGG				S	**Sn**	**20 45 52.8**	**+0.1**
NEST	**Nestorio**	**0.88**	**329**	P	**Pg**	**20 45 38.7**	**-1.3**
NEST	**Nestorio**	**0.88**	**329**	P	**Pg**	**20 45 39.0**	**-1.1**
NEST	**Nestorio**	**0.88**	**329**	P	**Pg**	**20 45 39.0**	**-1.1**
IGT	**Igoumenitsa**	**1.01**	**263**	P	**Pb**	**20 45 41.4**	**-1.1**
IGT	**Igoumenitsa**	**1.01**	**263**	P	**Pb**	**20 45 41.4**	**-1.1**
IGT	**Igoumenitsa**	**1.01**	**263**	P	**Pb**	**20 45 41.6**	**-0.9**
PVO	**Paravola**	**1.04**	**185**	P	**Pb**	**20 45 42.0**	**-1.0**
PVO	**Paravola**	**1.04**	**185**	P	**Pb**	**20 45 42.6**	**-0.4**
PVO	**Paravola**	**1.04**	**185**	P	**Pb**	**20 45 42.6**	**-0.4**
SGD	**Sagiada**	**1.08**	**268**	P	**Pn**	**20 45 43.5**	**-0.5**
SGD	**Sagiada**	**1.08**	**268**	P	**Pn**	**20 45 43.4**	**-0.5**
SGD	**Sagiada**	**1.08**	**268**	P	**Pb**	**20 45 43.2**	**-0.4**
ANX	**Ano Chora**	**1.09**	**168**	P	**Pn**	**20 45 43.4**	**-0.7**
ANX				AML	AML	20 46 02.6	
	comp=N,2228μm,0.4s						
ANX				AML	AML	20 46 06.0	
	comp=E,2784μm,0.3s						
ANX	**Ano Chora**	**1.09**	**168**	P	**Pg**	**20 45 43.8**	**-0.2**
ANX	**Ano Chora**	**1.09**	**168**	P	**Pg**	**20 45 43.8**	**-0.2**
PDO	**Prodromos**	**1.12**	**198**	P	**Pg**	**20 45 44.8**	**+0.3**
PDO	**Prodromos**	**1.12**	**198**	P	**Pg**	**20 45 44.5**	**0.0**
PDO	**Prodromos**	**1.12**	**198**	P	**Pg**	**20 45 44.5**	**0.0**
FNA	**Florina**	**1.14**	**350**	P	**Pb**	**20 45 43.9**	**-0.8**
FNA	**Florina**	**1.14**	**350**	P	**Pb**	**20 45 43.6**	**-1.1**
FNA	**Florina**	**1.14**	**350**	P	**Pb**	**20 45 43.8**	**-0.8**
LKD2	**Lefkada island**	**1.15**	**221**	P	**Pg**	**20 45 44.9**	**-0.3**
LKD2	**Lefkada island**	**1.15**	**221**	P	**Pb**	**20 45 44.7**	**-0.1**
LKD2				S	**Sg**	**20 46 00.4**	**+0.1**
LKD2	**Lefkada island**	**1.15**	**221**	P	**Pb**	**20 45 44.8**	**-0.1**
LKD2				S	**Sg**	**20 46 00.4**	**+0.1**
KBN	**Korca**	**1.16**	**326**	P	**Pn**	**20 45 44.4**	**-0.7**
KBN	**Korca**	**1.16**	**326**	*i* PG	**Pg**	**20 45 45.9**	**+0.4**
KBN				*i* SG	**Sg**	**20 46 02.0**	**+1.5**
KBN	**Korca**	**1.16**	**326**	P	**Pn**	**20 45 44.4**	**-0.7**
KBN	**Korca**	**1.16**	**326**	*i* Pg	**Pg**	**20 45 45.8**	**+0.4**
KBN				*i* Sg	**Sg**	**20 46 02.0**	**+1.5**
MGNA	**Meganis**	**1.20**	**213**	P	**Pb**	**20 45 45.4**	**-0.2**
MGNA	**Meganis**	**1.20**	**213**	P	**Pb**	**20 45 45.4**	**-0.2**
XOR	**Xorichti**	**1.24**	**103**	P	**Pg**	**20 45 46.4**	**-0.5**
XOR	**Xorichti**	**1.24**	**103**	P	**Pg**	**20 45 46.4**	**-0.5**
XOR				S	**Sg**	**20 46 05.9**	**+2.8**
XOR	**Xorichti**	**1.24**	**103**	P	**Pg**	**20 45 46.4**	**-0.5**
XOR				S	**Sg**	**20 46 05.9**	**+2.8**
EFP	**Efpalio**	**1.25**	**170**	P	**Pg**	**20 45 46

STON	Ston	4.37	319	*e*Pn	Pn	20 46 27.3	-1.8
STON	Ston	4.37	319	*e*Pn	Pn	20 46 27.2	-1.8
MS1	Monte Sant'Ang	4.79	297	*e*Pn	Pn	20 46 36.3	+1.4
IDI	Anoyia	5.07	148	⇓*i*P	Pn	20 46 38.7	-0.2
IDI	Anoyia	5.07	148	S	Sn	20 47 38.0	+0.6
BZS	Buzias	5.95	360	⇓*i*P	Pn	20 46 51.7	+0.8
LOT	Lotru	6.00	15	⇑*i*P	Pn	20 46 52.4	+0.8
BLY	Banja Luka	6.06	328	⇑*i*P	Pn	20 46 53.2	+0.8
SULR		6.08	33	⇓*i*P	Pn	20 46 52.1	-0.5
MTUR	Matau	6.11	23	⇓*i*P	Pn	20 46 54.3	+1.1
ARR	Arges	6.12	20	⇑*i*P	Pn	20 46 53.8	+0.6
VOIR		6.30	22	⇓*i*P	Pn	20 46 57.0	+1.3
MLR	Muntele Rosu	6.64	27	⇑*i*P	Pn	20 47 01.7	+1.3
NVLJ	Novalja	7.02	316	Sn	Sn	20 48 22.1	-3.0
PLOR	Plostina	7.20	29	⇓*i*P	Pn	20 47 08.0	-0.1
VRI	Vrincioaia	7.25	29	⇓*i*P	Pn	20 47 08.6	0.0
CFR	Carcaliu	7.32	39	⇑*i*P	Pn	20 47 10.7	+1.1

*ISCJB **03** 20:55:46.2±0.5, 13°.14N±0°.04×89°.48W±0°.04, h67km±2km, mb4.1/21, Error ellipse: s-maj=8.9km s-min=3.2km az=136.5*
*UCR **03** 20:55:46.5±2.3, 13°.16N×89°.51W, h58km±20km, MD4.9, ML4.7, mb4.2(NEIC)*
*NEIC **03** 20:55:48.5±0.9, 13°.28N×89°.30W, h75km±8km, mb4.2/7, Error ellipse: s-maj=16.3km s-min=8.0km az=215.0*
NEIC Felt [III] at San Salvador.
*IDC **03** 20:55:48.5±1.3, 13°.44N×89°.03W, h68km±10km, mb3.8/16, mb1 4.0/18, mb1mx3.8/45, mbtmp4.1/18, MS3.4/7, Ms1 3.4/7, ms1mx3.0/45, Error ellipse: s-maj=26.8km s-min=8.7km az=45.0*

ISC 03 20:55:47.7±0.9, 13°.21N±0°.06×89°.44W±0°.05, h67km±6km, n188, σ1$28/188, mb4.2/21, 2C-20D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIES	Las Flores	0.46	57	⇓*i*P	Pn	20 55 58.5	-1.2
AIES				AML	AML	20 55 58.9	
	comp=Z,15μm,0.3s						
AIES				*e*S	Sn	20 56 08.6	0.0
COLS	Colinas	0.48	17	⇓*i*P	Pn	20 55 58.7	-1.4
LOMA	San Marcos	0.52	30	⇓*i*P	Pn	20 55 59.5	-0.9
LOMA				IAML		20 55 59.8	
	comp=Z,90μm,0.2s						
SANM	San Marcos	0.52	29	⇓*e*P	Pn	20 55 59.3	-1.2
SANM				IAML		20 55 59.6	
	comp=Z,71μm,0.1s						
SNET	Serv Nac Est T	0.52	23	⇓*i*P	Pn	20 55 59.4	-1.1
SNET				IAML		20 55 59.7	
	comp=Z,67μm,0.2s						
SNET				*e*S	Sn	20 56 09.5	-0.4
UTEC	San Salvador	0.55	25	⇓*i*P	Pn	20 55 59.8	-0.9
UTEC				IAML		20 56 11.8	
	comp=Z,83μm,0.2s						
UESS	San Salvador	0.55	25	⇓*i*P	Pn	20 56 00.1	-0.7
UESS				IAML		20 56 00.5	
	comp=Z,70μm,0.2s						
BOQS	Boqueron	0.55	17	⇑*i*P	Pn	20 55 59.9	-1.1
UEES	San Salvador	0.55	21	⇓*i*P	Pn	20 55 59.8	-1.1
UEES				IAML		20 56 11.2	
	comp=Z,53μm,0.3s						
LFRS	El Faro	0.56	42	⇓*i*P	Pn	20 56 00.2	-0.7
OPAM	San Salvador	0.56	25	⇓*i*P	Pn	20 56 00.1	-0.8
OPAM				IAML		20 56 12.3	
	comp=Z,72μm,0.2s						
UDBS	Soyapango	0.59	28	⇓*i*P	Pn	20 56 00.4	-0.7
UDBS				IAML		20 56 12.9	
	comp=Z,67μm,0.3s						
LFU	La Fuente	0.63	31	⇓*i*P	Pn	20 56 01.3	-0.3
SBLS	San Blas	0.65	344	⇓*i*P	Pn	20 56 00.2	-1.9
LBRS	Las Brisas	0.66	36	⇓*i*P	Pn	20 56 01.8	-0.1
UESV	Ojushtada	0.66	74	⇓*e*P	Pn	20 56 03.0	+1.1
SNJE	San Jose	0.68	346	⇓*i*P	Pn	20 56 00.6	-1.7
SNVI	San Vicente	0.71	55	*e*P	Pn	20 56 02.3	-0.3
RTR	El Retiro	0.71	344	*e*P	Pn	20 56 01.1	-1.6
UNIC	Santa Ana	0.79	352	*e*P	Pn	20 56 02.2	-1.3
UNIC				*e*S	Sn	20 56 14.8	-0.3
TECA	Tecapa	0.96	72	⇓*i*P	Pn	20 56 05.3	-0.4
LLGN	La Laguna	1.07	26	⇓*e*P	Pn	20 56 07.5	+0.4
LLGN				IAML		20 56 10.4	
	comp=Z,6μm,0.3s						
PACA	Pacayal	1.12	76	*e*P	Pn	20 56 07.8	+0.1
LCY	Lacayo	1.14	79	*e*P	Pn	20 56 08.1	+0.2
VSM	San Miguel	1.16	79	*e*P	Pn	20 56 08.5	+0.2
MTO3	Montecristo	1.19	4	⇓*i*P	Pn	20 56 08.7	0.0
MTO3				IAML		20 56 09.5	
	comp=Z,4μm,0.2s						
IXG	Ixpaco	1.38	315	⇑*i*P	Pn	20 56 08.0	-3.1
LCND	La Ca˜–ada	1.52	86	⇓*e*P	Pn	20 56 10.4	-2.3
LCND				*e*S	Sn	20 56 31.3	-0.3
LCND				IAML		20 56 33.5	
	comp=Z,9μm,0.4s						
CNCH	Conchagua	1.57	87	*e*P	Pn	20 56 13.9	+0.3
CNCH				IAML		20 56 38.9	
	comp=Z,81μm,0.4s						
APG	El Apazote	2.04	331	P	Pn	20 56 19.6	-0.4
	comp=Z,29nm,0.3s,baz=149,slow=9.2,SNR=190						
APG				S	Sn	20 56 47.1	+2.4
	comp=Z,109nm,0.3s,baz=352,slow=18,SNR=8.8						
TGUH	Tegucigalpa,Un	2.27	68	*e*Pn	Pn	20 56 24.0	+1.0
TGUH	Tegucigalpa,Un	2.27	68	*e*P	Pn	20 56 23.9	+1.0
CNGN	Cerro Negro	2.77	104	*e*P	Pn	20 56 28.7	-1.0
CNGN				AML	AML	20 57 00.4	
	comp=E,443nm,0.4s						
MOMN	Momotombo	2.94	105	*e*P	Pn	20 56 31.0	-1.1
COPN	Copaltepe	2.96	110	*e*P	Pn	20 56 31.8	-0.6
COPN				AML	AML	20 57 08.7	
	comp=Z,1μm,0.6s						
ESTN	Estel	3.00	92	*e*P	Pn	20 56 33.3	+0.4
RCON	San Juan de Ri	3.21	85	*e*P	Pn	20 56 36.6	+0.7
XAVN	Gruta Xavier	3.22	109	*e*P	Pn	20 56 36.0	+0.2
MGAN	Managua	3.29	108	*e*P	Pn	20 56 37.2	+0.4
MGAN				*e*S	Sn	20 57 12.9	-1.9
MATN	Matagalpa	3.44	94	*e*P	Pn	20 56 38.7	-0.2
BOAB	BOACO BROADBAN	3.76	101	*e*P	Pn	20 56 42.3	-0.9
CCIG	Comitan	4.02	320	*e*Pn	Pn	20 56 47.0	+0.1
CONN	Concepcion	4.07	113	*e*P	Pn	20 56 47.8	+0.3
CRZ1	La Cruz	4.28	119	*e*P	Pn	20 56 50.3	-0.2
GPS2	Hotel Rinc˜‡n	4.69	121	*e*P	Pn	20 56 57.0	+1.1
MESS	Mesas	4.83	120	*e*P	Pn	20 56 55.1	-2.8
VCR	Vista de Mar	4.83	129	*e*P	Pn	20 56 60.0	+2.0
CUI	Cuipilapa	4.89	121	*e*P	Pn	20 56 59.0	+0.2
JTS	JuntasAbangare	5.26	123	P	Pn	20 57 03.2	-0.7
	comp=Z,10nm,0.3s,baz=19,slow=14,SNR=19						
JTS				S	Sn	20 58 00.1	-3.2
	comp=Z,6.1nm,0.3s,baz=294,slow=18,SNR=1.5						
JTS	JuntasAbangare	5.26	123	*e*P	Pn	20 57 05.4	+1.6
SRA1	San Ram˜‡n	5.77	122	*e*S	Sn	20 58 15.2	-0.5
CGA2	Cerro Gallo 2	5.82	123	*e*P	Pn	20 57 13.8	+2.3
HDC	Heredia	6.12	121	*e*P	Pn	20 57 17.4	+1.8
CVTR	Volcan Turrial	6.41	119	*e*P	Pn	20 57 21.3	+1.4
CMIG	Matias Romero	6.52	307	P	Pn	20 57 21.4	+0.3
	comp=Z,7.3nm,0.3s,baz=98,slow=9.2,SNR=80						
CMIG				S	Sn	20 58 31.6	-2.5
	comp=Z,7.2nm,0.3s,baz=123,slow=13,SNR=4.0						
CMIG				LR	LR	21 00 19.3	
	comp=Z,345nm,21.3s,baz=120,slow=40						
BUS	Buena Vista	6.65	122	*e*P	Pn	20 57 24.8	+1.6
EDPN	Palmar Norte	7.23	125	*e*P	Pn	20 57 33.5	+2.8
BRU2	Volcan	7.95	123	*e*P	Pn	20 57 41.9	+1.2
BRU2				*e*S	Sn	20 59 08.1	-1.1
TLIG	Tlapa	9.81	297	*e*Pn	Pn	20 58 08.1	+2.0
ROSC	El Rosal	17.08	118	P	P	20 59 45.5	+2.0
	comp=Z,0.4nm,0.3s,baz=165,slow=20,SNR=2.5						
SDV	Santo Domingo	18.95	101	P	Pn	21 00 04.2	-1.0
	comp=Z,1.2nm,0.3s,baz=289,slow=9.3,SNR=18						
SDV				LR	LR	21 07 46.0	
	comp=Z,77nm,21.9s,baz=236,slow=39						
149A	Jones	19.46	7	P	Pn	21 00 12.8	+2.1
	baz=187						
150A	Eclectic	19.56	9	P	Pn	21 00 14.2	+2.2
	baz=190						
151A	Opelika	19.60	10	P	Pn	21 00 13.3	+0.8
	baz=192						
152A	Waverly Hall	19.85	12	P	Pn	21 00 16.5	+1.1
	baz=193						
Z47A	Carrollton	19.94	3	P	Pn	21 00 18.8	+2.3
	baz=184						
Z49A	Columbiana	20.07	7	P	Pn	21 00 19.5	+1.4
	baz=188						
WHTX	Lake Whitney,	20.09	340	P	P	21 00 17.3	+1.4
	baz=156,SNR=5.2						
WHTX	Lake Whitney,	20.09	340	*e*P	P	21 00 17.1	+1.2
	comp=Z,23nm,0.6s						
Z48A	Northport	20.15	5	P	Pn	21 00 19.9	+1.0
	baz=185						
Z50A	Ashland	20.21	9	P	Pn	21 00 19.1	-0.6
	baz=190						
155A	Kite	20.35	17	P	Pn	21 00 22.2	+0.9
	baz=200						
Y47A	UCPARC, Winfie	20.66	4	P	P	21 00 22.9	+1.0
	baz=184						
Y48A	Jasper	20.72	5	P	Pn	21 00 24.8	-0.9
	baz=186						
Y49A	Blount Mountai	20.74	7	P	Pn	21 00 25.3	-0.6
	baz=188						
TXAR	Lajitas Array	20.78	323	P	Pn	21 00 26.2	-0.3
	comp=Z,3.7nm,0.6s,baz=144,slow=11,SNR=70						
TXAR				PcP	PcP	21 04 31.9	+1.4
	comp=Z,0.2nm,0.5s,baz=134,slow=4.7,SNR=6.1						
TXAR				LR	LR	21 09 53.7	
	comp=Z,46nm,22.0s,baz=0.0,slow=41						
TX31	Lajitas Ar. Si	20.78	323	*e*P	P	21 00 25.6	+2.0
GOGA	Godfrey	20.84	14	P	Pn	21 00 27.3	+0.2
	baz=196						
Y50A	Piedmont	20.87	9	P	Pn	21 00 26.7	-0.7
	baz=190						
Y51A	Rockmart	20.98	10	P	Pn	21 00 27.6	-1.2
	baz=192,SNR=5.8						
Y53A	Monroe	21.24	14	P	P	21 00 30.6	+2.4
	baz=196						
X48A	Hartselle	21.26	5	P	P	21 00 30.4	+1.9
	baz=186						
X47A	Russelville	21.27	4	P	P	21 00 30.9	+2.4
	baz=184						
X46A	Booneville	21.27	2	P	P	21 00 31.8	+3.2
	baz=182,SNR=7.8						
X49A	Woodville	21.40	7	P	P	21 00 32.0	+2.0
	baz=188						
MIAR	Mount Ida	21.57	351	P	P	21 00 35.0	+3.2
	baz=169						
MIAR	Mount Ida	21.57	351	*e*P	P	21 00 35.0	+3.2
	comp=Z,6.0nm,0.9s						
X39A	Fountain Ranch	21.63	349	P	P	21 00 35.9	+3.5
	baz=167						
V46A	Holladay	22.53	3	P	P	21 00 42.7	+0.7
	baz=183						
V48A	Smith Brothers	22.56	6	P	P	21 00 43.8	+1.3
	baz=186						
V47A	Nunnelly	22.59	4	P	P	21 00 43.9	+1.1
	baz=184						
V41A	Mountainview	22.61	354	P	P	21 00 43.6	+0.6
	baz=173						
V49A	McMinnville	22.69	7	P	P	21 00 44.5	+0.7
	baz=189						
V40A	Witts Springs	22.71	353	P	P	21 00 44.9	+0.9
	baz=171,SNR=7.6						
V40A	Witts Springs	22.71	353	*e*P	P	21 00 44.9	+0.9
	comp=Z,7.6nm,0.6s						
V50A	Pikevile	22.71	9	P	P	21 00 43.6	-0.3
	baz=191						
WVT	Waverly	22.87	3	P	P	21 00 46.9	+1.2
	baz=184						
U44B	Burton Farm, H	23.04	0	P	P	21 00 48.2	+0.9
	baz=180						
WMOK	Wita Mounta	23.05	340	P	P	21 00 47.6	+0.2
	baz=156						
WMOK	Wichita Mounta	23.05	340	*e*P	P	21 00 47.0	-0.5
	comp=Z,12nm,1.1s						
U46A	Springville	23.08	3	P	P	21 00 48.6	+0.9
	baz=183						
U42A	Revenden	23.10	356	P	P	21 00 48.7	+0.7
	baz=175						
U47A	Clarksville	23.22	4	P	P	21 00 49.3	+0.2
	baz=185						
U40A	Yellville	23.26	353	P	P	21 00 49.6	+0.2
	baz=171						
U48A	Cassie Pea, Po	23.35	6	P	P	21 00 52.4	+2.1
	baz=187						
U49A	Red Boiling Sp	23.44	7	P	P	21 00 51.7	+0.6
	baz=189						
PBMO	Poplar Bluff	23.49	358	*e*P	P	21 00 52.9	+1.3
	comp=Z,8.0nm,0.8s						
MNTX	Cornudas Mount	23.52	324	P	P	21 00 52.5	+0.5
	baz=138						
MNTX	Cornudas Mount	23.52	324	*e*P	P	21 00 52.3	+0.4
	comp=Z,1.8nm,0.6s						
T42A	Van Buren	23.77	357	P	P	21 00 53.8	-0.3
	baz=176						
T47A	Sharon Grove	23.78	5	P	P	21 00 54.5	+0.4
	baz=185						
T46A	Princeton	23.78	3	P	P	21 00 54.2	0.0
	baz=183						
T43A	Greenville	23.79	358	P	P	21 00 55.4	+1.1
	baz=178,SNR=8.5						
T41A	Mountain View	23.83	355	P	P	21 00 55.3	+0.6
	baz=174						
MSTX	Muleshoe	23.96	332	P	P	21 00 57.4	+1.4
	baz=146						
T39A	Clever	23.98	352	P	P	21 00 56.5	+0.5
	baz=170						
T49A	Edmonton	24.06	8	P	P	21 00 57.4	+0.7
	baz=189						
S43A	Fulton Ridge,	24.27	359	P	P	21 00 58.9	+0.2
	baz=178						
S44A	Carbondale	24.39	0	P	P	21 01 00.4	+0.7
	baz=180						
S42A	Caledonia	24.49	357	P	P	21 01 01.2	+0.5
	baz=176						
S39A	Bolivar	24.63	353	P	P	21 01 02.2	+0.3
	baz=171,SNR=14						
S38A	Stockton	24.65	351	P	P	21 01 02.3	+0.2
	baz=169						
CCM	Cathedral Cave	24.80	357	P	P	21 01 03.6	+0.1
	baz=176						
CCM	Cathedral Cave	24.80	357	*e*P	P	21 01 01.9	-1.6
	comp=Z,16nm,1.1s						
R44A	Waltonville	24.94	1	P	P	21 01 05.1	+0.3
	baz=180						
R43A	Red Bud	24.97	359	P	P	21 01 05.9	+0.9
	baz=179						
R42A	Luebbering	25.00	357	P	P	21 01 05.3	0.0
	baz=177						
R41A	Rosebud	25.05	356	P	P	21 01 06.3	+0.5
	baz=175,SNR=8.6						
WCI	Wyandotte Cave	25.08	6	P	P	21 01 06.3	+0.3
	baz=187						
R40A	Maddies Statio	25.11	355	P	P	21 01 06.2	0.0
	baz=173						
R38A	Fenwick Farm,	25.20	352	P	P	21 01 07.0	-0.1
	baz=169						
R39A	Chumby, Stover	25.21	353	P	P	21 01 07.5	+0.3
	baz=171,SNR=5.3						
Q44A	Meyer Farm, Va	25.60	1	P	P	21 01 11.4	+0.7
	baz=181						
Q38A	Cooks Store, C	25.92	353	P	P	21 01 13.5	-0.1
	baz=170,SNR=7.1						
Q39A	Willow Grove F	25.93	354	P	P	21 01 13.5	-0.2
	baz=172						
P40A	Paris	26.32	355	P	P	21 01 17.2	0.0
	baz=174						
J42A	Columbus	30.01	0	P	P	21 01 49.9	-0.2
	baz=180						
I42A	Draeger Farm,	30.58	1	P	P	21 01 55.2	+0.1
	baz=181						
I43A	Langenfeld Bro	30.59	2	P	P	21 01 55.4	+0.2
	baz=182						
I41A	Arkdale	30.75	359	P	P	21 01 56.6	0.0
	baz=179						
ECSD	EROS Data Cent	31.04	350	P	P	21 01 58.6	-0.6
	baz=166						
H40A	Chili	31.32	359	P	P	21 02 01.8	+0.1
	baz=178						
G42A	Mountain	31.94	1	P	P	21 02 05.8	-1.2
	baz=182						
G43A	Wallace	31.98	2	P	P	21 02 07.2	-0.2
	baz=183						
G39A	Holcombe	32.01	358	P	P	21 02 07.5	-0.2
	baz=177,SNR=5.5						
SPMN	Marine on St.	32.04	356	P	P	21 02 07.8	-0.1
	baz=174						
F41A	Three Lakes	32.43	0	P	P	21 02 10.8	-0.6
	baz=180						
F40A	Park Falls	32.61	359	P	P	21 02 12.7	-0.3
	baz=178						
SADO	Sadowa	32.66	14	P	P	21 02 12.4	-0.9
	comp=Z,3.5nm,0.5s,baz=196,slow=8.5,SNR=7.1						
F38A	Pierce - Schro	32.71	357	P	P	21 02 13.5	-0.3
	baz=175						
E43A	Lone Tree Farm	33.13	3	P	P	21 02 17.1	-0.3
	baz=184						
E40A	Wakefield	33.13	359	P	P	21 02 17.1	-0.4
	baz=179,SNR=6.0						
E38A	The Farm, Brul	33.34	357	P	P	21 02 18.7	-0.6
	baz=176						
MPMC	Manual Prospec	33.95	317	P	P	21 02 26.5	+1.5
	baz=125,SNR=6.1						
PDAR	Pinedale Array	34.21	333	PcP	PcP	21 05 03.0	+0.3
	comp=Z,0.5nm,0.5s,baz=140,slow=6.8,SNR=4.0						
PDAR				LR	LR	21 19 31.5	
	comp=Z,50nm,20.2s,baz=170,slow=42						
C35A	Jirik Farms, M	34.60	355	P	P	21 02 29.3	-0.9
	baz=172						
EYMN	Ely	34.68	358	P	P	21 02 30.2	-0.7
	baz=176						
AGMN	Agassiz Nation	35.39	353	P	P	21 02 36.6	-0.4
	baz=169,SNR=5.3						
B34A	Aery, Baudette	35.44	354	P	P	21 02 37.0	-0.4
	baz=171						
B32A	Ashes, Strandq	35.58	352	P	P	21 02 38.1	-0.5
	baz=168						
NV01	Mina Array Sit	35.87	320	*e*P	P	21 02 43.5	+2.0
NVAR	Mina Array Bea	35.87	320	P	P	21 02 43.5	+2.1
	comp=Z,2.2nm,0.7s,baz=134,slow=8.8,SNR=16						
NVAR				PcP	PcP	21 05 08.6	+1.0
	comp=Z,0.9nm,0.6s,baz=125,slow=3.5,SNR=5.9						
NVAR				LR	LR	21 19 19.3	
	comp=Z,88nm,18.3s,baz=260,slow=39						
A33A	Warroad	35.97	353	P	P	21 02 41.5	-0.4
	baz=170						
LPAZ	La Paz	36.09	144	P	P	21 02 44.6	+0.5
	comp=Z,0.6nm,0.6s,baz=345,slow=15,SNR=4.1						
DGMT	Dagmar	37.23	344	P	P	21 02 53.4	+0.6
	baz=156						
MCMT	McKenzie Canyo	37.30	332	*e*P	P	21 02 54.1	+0.4
ULM	Lac du Bonnet	37.31	353	P	P	21 02 51.9	-1.5
	comp=Z,1.6nm,0.4s,baz=177,slow=10,SNR=6.1						
YBH	Yreka Blue Hor	40.53	321	LR	LR	21 22 07.2	
	comp=Z,64nm,19.4s,baz=160,slow=39						
SCHQ	Schefferville	45.15	18	P	P	21 03 55.5	-2.0
	comp=Z,5.7nm,0.5s,baz=256,slow=18,SNR=3.6						
YKA	Yellowknife Ar	52.39	346	P	P	21 04 52.5	-0.4
	comp=Z,2.5nm,0.4s,baz=131,slow=7.9,SNR=38						
FRB	Frobisher Bay	52.56	12	P	P	21 04 52.7	-1.4
	comp=Z,5.6nm,0.3s,baz=209,slow=7.2,SNR=24						
SFJD	Kangerlussuaq	59.54	17	LR	LR	21 31 56.2	
	comp=Z,47nm,18.4s,baz=244,slow=37						
INK	Inuvik	61.91	343	P	P	21 05 59.6	-0.3
	comp=Z,2.3nm,0.7s,baz=161,slow=3.6,SNR=5.7						
ILAR	Eielson Array	64.55	336	P	P	21 06 16.7	-0.8
	comp=Z,0.7nm,0.6s,baz=165,slow=4.4,SNR=9.7						
EKA	Eskdalemuir Ar	77.15	36	P	P	21 07 31.2	-2.9
	comp=Z,0.5nm,0.5s,baz=270,slow=5.8,SNR=3.8						
ESDC	Sonseca Array	78.25	52	P	P	21 07 38.0	-2.6
	comp=Z,0.3nm,0.6s,baz=288,slow=6.2,SNR=4.2						
SPITS	Spitsbergen Ar	80.36	12	P	P	21 07 50.7	-0.7
	comp=Z,0.4nm,0.4s,baz=322,slow=11,SNR=10						
ARCES	ARCESS Array B	86.10	19	P	P	21 08 19.9	-1.1
	comp=Z,2.8nm,1.1s,baz=273,slow=6.2,SNR=3.1						
TORD	Torodi Ar. Bea	88.14	77	P	P	21 08 28.8	-3.1
	comp=Z,0.2nm,0.5s,baz=297,slow=5.3,SNR=5.4						
FINES	FINESS Array B	90.14	26	P	P	21 08 40.3	-0.1
	comp=Z,1.6nm,0.9s,baz=297,slow=4.6,SNR=2.6						
KURK	Kurchatov	115.50	8	PKP	PKPdf	21 14 21.8	-0.3
KURBB	Kurchatov Arra	115.58	8	PKP	PKPdf	21 14 21.8	-0.4
	comp=Z,0.5nm,0.6s,baz=344,slow=1.7,SNR=6.4						
KSRS	Korea Array	118.59	327	PKP	PKPdf	21 14 28.8	+0.4
	comp=Z,0.4nm,0.3s,baz=267,slow=1.0,SNR=3.6						
KSAR	Wonju Array Be	118.62	327	PKP	PKPdf	21 14 28.8	+0.3
MKAR	Makanchi Array	119.82	7	PKP	PKPdf	21 14 29.1	-1.5
	comp=Z,0.2nm,0.5s,baz=337,slow=2.8,SNR=5.5						
WRA	Warramunga Arr	137.60	255	PKP	PKPdf	21 15 05.3	+0.3
	comp=Z,1.0nm,0.5s,baz=89,slow=2.6,SNR=14						
ASAR	Alice Springs	137.73	249	PKP	PKPdf	21 15 07.0	+1.8
	comp=Z,0.5nm,0.6s,baz=180,slow=2.7,SNR=2.8						
CMAR	Chiang Mai Arr	147.47	345	PKPbc	PKPdf	21 15 23.9	+1.4
	comp=Z,3.9nm,0.7s,baz=340,slow=3.2,SNR=25						

*IDC **03** 21:00:53.3±0.4, 60°.66S×25°.83W, h0km, mb5.2/16, mb1 5.2/16, mb1mx5.0/27, mbtmp5.2/16, MS4.6/25, Ms1 4.6/25, ms1mx4.5/30, Error ellipse: s-maj=17.7km s-min=13.0km az=57.0*
*ISCJB **03** 21:00:54.8±0.2, 60°.53S±0°.05×25°.78W±0°.10, h19km, mb5.2/55, MS4.6/29, Error ellipse: s-maj=8.4km s-min=5.5km az=39.8*
*MOS **03** 21:00:57.9±1.2, 60°.61S×25°.64W, h33km, mb5.3/36, MS4.4/10, Error ellipse: s-maj=22.5km s-min=11.5km az=97.6*
*GCMT **03** 21:00:59.3±0.1, 60°.99S×24°.95W, h12km, MW5.3/122, Moment Tensor Solution. s70,c101; s122,c212; Duration: 1$1 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.01±.02; $M_{\theta\theta}$0.71±.02; $M_{\phi\phi}$0.30±.02; $M_{r\theta}$0.50±.05; $M_{\theta\phi}$0.57±.01; $M_{\phi r}$0.07±.05; Best double couple: $M_0$1.17600×10^{17} NP1:ϕ_s246.00000°, δ58.00000°, λ-77.00000°. NP2:ϕ_s42.00000°, δ35.00000°, λ-110.00000°. Principal axes: T 1.2050, Plg12.0000°, Azm327.0000°; N -0.0590, Plg11.0000°, Azm59.0000°; P -1.1480, Plg74.0000°, Azm192.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **03** 21:00:59.4±0.1, 60°.56S×25°.57W, h35km, mb5.3/44 Error ellipse: s-maj=8.4km s-min=6.3km az=213.0*

ISC 03 21:00:56.4±0.2, 60°.62S±0°.06×25°.63W±0°.06, h19km, n387, σ1$69/388, mb5.3/55, MS4.6/29, 8C-13D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	8.63	313	*e*Pn	Pn	21 03 05.7	+5.6
VNA1	Neumayer--Stat	12.29	152	P	Pn	21 03 46.5	-3.5
VNA3	Neumayer Olymp	12.43	156	P	Pn	21 03 48.0	-4.0
VNA3				S	Sn	21 05 56.6	-13
SNAA	Sanae	14.28	150	P	Pn	21 04

GO05 HualaæØ 39.06 290 eP P 21 08 21.4 -0.4
comp=Z,66nm,0.8s
GO05 HualaæØ 39.06 290 eP P 21 08 20.6 -1.2
ACAN Cantantal 39.21 297 eP P 21 08 21.1 -2.0
AAGR Agrelo 39.25 295 eP P 21 08 24.4 +0.9
ASAL Salagasta 39.67 295 eP P 21 08 25.8 -1.2
SPB Sao Paulo 39.99 328 eP P 21 08 28.1 -1.4
comp=Z,43nm,1.1s
RTCV Cerro Valdivia 40.16 296 eP P 21 08 29.9 -1.1
AUSP Uspallata 40.23 295 eP P 21 08 31.6 -0.3
ROC1 El Roble 40.33 292 eP P 21 08 34.3 +1.6
comp=Z,52nm,0.6s
ROC1 El Roble 40.33 292 eP P 21 08 33.2 +0.6
CPUP Villa Florida 40.51 313 P P 21 08 32.9 -1.1
comp=Z,26nm,0.7s,baz=163,slow=8.1,SNR=37
CPUP LR LR 21 23 48.0
comp=Z,856nm,21.9s,baz=164,slow=34
CPUP Villa Florida 40.51 313 eP P 21 08 32.8 -1.1
comp=Z,102nm,1.3s
CPUP Villa Florida 40.51 313 eP P 21 08 32.5 -1.4
RTLS Leoncito 40.55 295 eP P 21 08 34.4 -0.1
RTLL Cerro Villicun 40.58 297 eP P 21 08 33.6 -0.9
AMOG MOGNA 40.92 297 eP P 21 08 37.0 -0.4
SBA Scott Base 41.56 184 eP P 21 08 44.2 +2.2
comp=Z,86nm,1.4s
SBA Scott Base 41.56 184 eP P 21 08 44.2 +2.2
SBA pmax pmax
comp=Z,86nm,1.4s
CYA Choya 41.93 302 eP P 21 08 43.5 -2.1
VNDA Vanda 42.03 182 P P 21 08 47.2 +1.3
comp=Z,27nm,1.1s,baz=188,slow=7.2,SNR=67
VNDA LR LR 21 24 59.6
comp=Z,537nm,20.6s,baz=174,slow=34
VNDA Vanda 42.03 182 eP P 21 08 47.6 +1.8
comp=Z,51nm,1.1s
AGUA GUANDACOL 42.17 298 eP P 21 08 47.7 0.0
GO04 Tololo Observa 42.60 295 eP P 21 08 51.0 -0.3
comp=Z,80nm,1.1s
VCA Vinchina 42.70 299 eP P 21 08 52.1 +0.1
LCO Las Campanas 43.55 296 eP P 21 08 58.8 -0.3
comp=Z,42nm,1.0s
LCO Las Campanas 43.55 296 eP P 21 08 58.7 -0.3
GO03 Copiap 44.57 297 eP P 21 09 06.1 -0.9
comp=Z,26nm,0.7s
MIR Mirnyy 45.35 150⇓ iP P 21 09 13.0 +0.3
MIR pmax pmax
comp=Z,84nm,1.0s
GO02 Mina Guanaco 46.41 300 eP P 21 09 20.9 -1.0
BOSA Boshof 46.53 70 P P 21 09 22.1 -0.4
comp=Z,19nm,0.9s,baz=206,slow=7.3,SNR=21
BOSA LR LR 21 25 17.7
comp=Z,263nm,18.5s,baz=204,slow=31
BOSA Boshof 46.53 70 eP P 21 09 22.4 -0.1
SHEL Horse Pasture 46.86 27 eP P 21 09 27.1 +2.0
comp=Z,133nm,1.0s
SHEL Horse Pasture 46.86 27 eP P 21 09 27.1 +2.0
SHEL pmax pmax
comp=Z,133nm,1.0s
PB10 IPOC Station P 48.27 300 eP P 21 09 35.7 -0.3
comp=Z,68nm,1.3s
PB04 IPOC Station P 49.14 301 eP P 21 09 42.4 -0.5
comp=Z,94nm,1.3s
CASY Casey 49.33 158 eP P 21 09 44.5 +0.9
comp=Z,52nm,1.1s
LBTB Lobatse 49.76 68 LR LR 21 26 51.6
comp=Z,588nm,19.3s,baz=206,slow=31
LBTB Lobatse 49.76 68 eP P 21 09 47.4 -0.1
comp=Z,20nm,1.0s
LBTB Lobatse 49.76 68 eP P 21 09 47.4 -0.1
LBTB pmax pmax
comp=Z,20nm,1.0s
PB01 IPOC Station P 50.01 302 eP P 21 09 48.4 -1.1
comp=Z,129nm,1.4s
SIV San Ignacio 51.35 314 LR LR 21 30 27.3
comp=Z,443nm,21.5s,baz=178,slow=35
TSUM Tsumeb 51.39 56 eP P 21 10 00.2 +0.3
comp=Z,11nm,1.0s
MNMC Minye Minye 51.76 303 eP P 21 10 02.6 -0.2
comp=Z,56nm,0.8s
H10S2 ASCENSION HYDR 52.21 14 T T 22 06 48.0
baz=187,slow=75,SNR=25
H10S3 ASCENSION HYDR 52.21 14 T T 22 06 55.0
baz=187,slow=75,SNR=20
H10S1 ASCENSION HYDR 52.22 14 T T 22 06 53.1
baz=187,slow=75,SNR=24
H10N1 ASCENSION HYDR 53.32 14 T T 22 08 24.7
baz=186
H10N3 ASCENSION HYDR 53.33 14 T T 22 08 08.6
baz=186,slow=74
H10N2 ASCENSION HYDR 53.34 14 T T 22 08 22.2
baz=186,slow=74
LPAZ La Paz 53.73 306 P P 21 10 17.5 -0.3
comp=Z,26nm,0.9s,baz=147,slow=5.8,SNR=65
LPAZ LR LR 21 34 55.5
comp=Z,321nm,19.1s,baz=159,slow=38
LPAZ La Paz 53.73 306 eP P 21 10 17.5 -0.3
comp=Z,70nm,1.3s
SAML Samuel 58.63 315 eP P 21 10 50.8 -1.2
comp=Z,60nm,1.1s
LSZ Lusaka 59.42 65 eP P 21 10 57.5 -0.2
comp=Z,12nm,0.9s
LSZ Lusaka 59.42 65 eP P 21 10 57.5 -0.2
LSZ pmax pmax
comp=Z,12nm,0.9s
PTGA Pitinga 65.28 322 eP P 21 11 35.1 -1.7
comp=Z,10nm,0.8s
OPO Ambohidratompo 65.57 84 P P 21 11 40.1 +1.2
comp=Z,8.4nm,0.8s,baz=218,slow=6.8,SNR=8.9
OPO LR LR 21 32 56.0
comp=Z,257nm,21.8s,baz=187,slow=29
LIC Lamto 68.58 22 eP P 21 11 58.4 +0.7
comp=Z,98nm,0.9s
KIC Kosan Boka 68.77 22 eP P 21 11 59.7 +0.8
comp=Z,65nm,0.9s
TIC Toumodi 68.99 22 eP P 21 12 01.1 +0.8
DBIC Dimbokro 69.05 22 P P 21 12 01.8 +1.2
comp=Z,25nm,0.8s,baz=178,slow=7.5,SNR=22
DBIC LR LR 21 35 34.4
comp=Z,155nm,20.5s,baz=176,slow=30
DBIC Dimbokro 69.05 22 eP P 21 12 01.9 +1.2
comp=Z,26nm,0.8s
OTAV Otavalo 72.88 304 eP P 21 12 25.2 +0.7
comp=Z,58nm,1.4s
OTAV Otavalo 72.88 304 eP P 21 12 24.9 +0.4
OTAV Otavalo 72.88 304 P P 21 12 25.2 +0.7
OTAV pmax pmax
comp=Z,58nm,1.4s
FLOC Florencia 72.98 307 eP P 21 12 22.9 -1.7
CRUC La Cruz 73.48 306 eP P 21 12 26.9 -1.0
MBAR Mbarara 73.61 60 eP P 21 12 31.5 +3.0
comp=Z,14nm,1.2s
MBAR Mbarara 73.61 60 eP P 21 12 31.5 +3.0
MBAR pmax pmax
comp=Z,14nm,1.2s
MLZ Mavora Lakes 73.78 190 eP P 21 12 30.4 +1.4
comp=Z,101nm,1.5s
SOTA Rioblanco 73.86 306 eP P 21 12 30.9 +0.5
BETC Betania 73.90 307 eP P 21 12 26.9 -3.1
PCON Cinco Dias 73.95 306 eP P 21 12 31.5 +0.6
PRAC Prado 74.62 308 eP P 21 12 33.1 -1.1
comp=Z,86nm,1.5s
CHIC Chingaza 75.02 310 eP P 21 12 34.8 -2.1
HORQ Saladito 75.09 307 eP P 21 12 34.8 -2.4
ROSC El Rosal 75.44 309 LR LR 21 46 34.6
comp=Z,217nm,21.7s,baz=160,slow=36
YOTC Yotoco, Valle 75.44 307 eP P 21 12 36.2 -2.8
ANIL Santa Ana 75.54 308 eP P 21 12 37.5 -2.3
LTZ Lake Taylor 75.92 193 eP P 21 12 42.8 +1.4
comp=Z,59nm,1.1s
RUSC La Rusia 75.94 311 eP P 21 12 40.8 -1.5
comp=Z,29nm,1.5s
RUSC La Rusia 75.94 311 eP P 21 12 38.8 -3.5
PLMC San Jos¨ del 76.26 308 eP P 21 12 42.1 -1.5
TAU Tasmania Unive 76.66 175 eP P 21 12 45.9 +0.4
comp=Z,56nm,1.1s
TAU Tasmania Unive 76.66 175 eP P 21 12 45.9 +0.4
TAU pmax pmax
comp=Z,56nm,1.1s
TOA0 Torodi Ar. Sit 76.70 27 eP P 21 12 46.9 +1.0
TORD Torodi Ar. Bea 76.70 27 P P 21 12 47.1 +1.2
comp=Z,50nm,0.8s,baz=194,slow=6.5,SNR=211
TORD LR LR 21 42 31.6
comp=Z,151nm,18.3s,baz=195,slow=32
TOA1 Torodi Ar. Sit 76.70 27 eP P 21 12 47.1 +1.2
KOWA Kowa 76.84 21 P P 21 12 48.3 +1.6
comp=Z,17nm,0.7s,baz=206,slow=5.7,SNR=38

THZ Tophouse 76.85 194 eP P 21 12 47.9 +1.2
comp=Z,54nm,1.0s
PCRV Puerto La Cruz 77.03 321 P P 21 12 48.0 +0.1
comp=Z,58nm,1.2s,baz=160,slow=4.4,SNR=5.6
PCRV LR LR 21 46 32.7
comp=Z,438nm,21.5s,baz=143,slow=36
PTBC PUERTO BERRIO, 77.05 310 eP P 21 12 45.5 -2.5
PAMC Pamplona, Colo 77.13 312 eP P 21 12 46.1 -2.9
HELC Santa Helena 77.14 309 eP P 21 12 46.9 -2.0
comp=Z,25nm,1.3s
SDV Santo Domingo 77.82 314 P P 21 12 51.8 -0.7
comp=Z,8.7nm,0.8s,baz=219,slow=3.6,SNR=11
SDV LR LR 21 47 40.8
comp=Z,1µm,20.9s,baz=150,slow=36
SDV Santo Domingo 77.82 314 eP P 21 12 51.8 -0.7
comp=Z,19nm,1.0s
ZARC Zaragoza, Cauc 78.08 310 eP P 21 12 51.5 -2.3
MOTC Monteria, Cord 79.57 310 eP P 21 13 00.8 -1.1
SJCC San Jacinto, C 80.41 310 eP P 21 13 06.1 -0.4
OUZ Omahuta 83.21 196 eP P 21 13 21.7 +0.6
comp=Z,59nm,1.1s
CAN Canberra 84.30 176 P P 21 13 28.7 +2.0
CAN pmax pmax
comp=Z,59nm,1.3s
JTS JuntasAbangare 84.66 302 LR LR 21 50 51.9
comp=Z,143nm,21.8s,baz=200,slow=35
FORT Forrest 86.41 158 eP P 21 13 37.8 +0.6
comp=Z,79nm,1.1s
TAM Tamanrasset 86.89 29 eP P 21 13 42.0 +2.4
comp=Z,18nm,1.5s
TAM Tamanrasset 86.89 29 eP P 21 13 42.0 +2.4
TAM pmax pmax
comp=Z,18nm,1.5s
STKA Stephens Creek 87.24 169 P P 21 13 41.0 -0.3
comp=Z,16nm,1.0s,baz=169,slow=9.1,SNR=10
STKA LR LR 21 50 57.6
comp=Z,592nm,18.5s,baz=191,slow=34
STKA Stephens Creek 87.24 169 eP P 21 13 41.3 -0.1
comp=Z,9.7nm,1.3s
STKA Stephens Creek 87.24 169 eP P 21 13 41.2 -0.1
ATD Arta Tunnel 89.74 66 LR LR 21 50 54.9
comp=Z,224nm,19.2s,baz=190,slow=33
PPT2 Papeete2 90.08 232 eLR LR 21 42 46.8
comp=Z,141nm,20.5s
PPT Papeete 90.10 232 LR LR 21 47 49.4
comp=Z,179nm,18.6s,baz=136,slow=31
ASAR Alice Springs 94.38 161 P P 21 14 13.8 -1.0
comp=Z,8.0nm,0.9s,baz=183,slow=4.1,SNR=41
ASAR PP PP 21 17 59.0 -2.1
comp=Z,1.6nm,0.9s,baz=198,slow=7.3,SNR=5.7
ASAR LR LR 21 53 39.1
comp=Z,1µm,20.6s,baz=186,slow=34
AS31 Alice Springs 94.38 161 eP P 21 14 14.1 -0.7
comp=Z,4.8nm,1.1s
AS31 ePP PP 21 17 59.0 -2.1
AS01 Alice Springs 94.38 161 eP P 21 14 14.0 -0.8
MDT Midelt 94.68 18 LR LR 21 51 12.3
comp=Z,303nm,20.6s,baz=203,slow=32
DZM Mont Dzumac 97.02 191 LR LR 21 53 21.8
comp=Z,198nm,21.6s,baz=206,slow=32
DZM Mont Dzumac 97.02 191 eLR LR 21 46 01.0
comp=Z,373nm,22.2s
WR1 Warramunga Arr 98.09 161 eP P 21 14 30.4 -1.2
comp=Z,13nm,1.4s
WRA Warramunga Arr 98.09 161 P P 21 14 30.4 -1.2
comp=Z,4.0nm,1.0s,baz=194,slow=3.8,SNR=11
WRA LR LR 21 56 14.9
comp=Z,1µm,20.3s,baz=180,slow=34
WB2 Warramunga Arr 98.10 161 eP P 21 14 31.4 -0.2
WRAB Tennant Creek 98.11 161⇑ eP P 21 14 30.9 -0.8
WRAB pmax pmax
comp=Z,14nm,1.4s
CTA Charters Tower 99.31 172 LR LR 21 58 47.5
comp=Z,658nm,19.2s,baz=191,slow=35
ESDC Sonseca Array 101.51 17 P Pdif 21 14 47.6 +1.4
comp=Z,1.0nm,1.0s,baz=180,slow=6.0,SNR=3.3
TXAR Lajitas Array 109.56 295 PKiKP PKiKP 21 19 24.4 -0.8
comp=Z,0.7nm,1.0s,baz=149,slow=4.0,SNR=4.9
BRTR Keskin Array B 111.07 45 PP PP 21 20 03.4 -4.0
comp=Z,1.3nm,1.0s,baz=180,slow=4.3,SNR=5.2
BRTR PKKP PKKPab 21 30 33.8 +2.1
comp=Z,0.4nm,0.6s,baz=209,slow=1.5,SNR=4.5
BR101 Keskin Array S 111.07 45 ePP PP 21 20 03.4 -4.0
BR101 ePKKPab PKKPab 21 30 33.8 +2.1
GEC2 GERESS Array S 113.65 27 ePP PP 21 20 22.7 -3.0
GERES GERESS Array B 113.65 27 PP PP 21 20 22.7 -3.0
comp=Z,2.0nm,1.0s,baz=190,slow=4.9,SNR=3.8
KIV Kislovodsk 118.04 49 ePKPdf PKPdf 21 19 41.4 +0.5
KIV Kislovodsk 118.04 49 i PKIKP PKPdf 21 19 39.2 -1.7
KIV pmax pmax
comp=Z,6.0nm,1.1s
KIV MLR MLR
comp=Z,112nm,21.0s
MYLDM Lahad Datu 118.42 138 ePKPdf PKPdf 21 19 42.6 +0.1
MAK Makhachkala 119.06 53 eP Pdif 21 16 11.4 +7.3
MAK i 21 19 41.9
MAK e 21 21 05.9
MAK ePS PS 21 30 57.8 +7.6
MAK pmax pmax
comp=Z,34nm,1.0s
AK11 Malin Array Si 119.36 37 ePKPdf PKPdf 21 19 42.6 -0.5
AKASG Malin Array Be 119.40 37 PKP PKPdf 21 19 42.2 -1.0
comp=Z,0.9nm,0.7s,baz=237,slow=1.5,SNR=7.9
AKASG PP PP 21 21 03.6 -2.1
comp=Z,0.1nm,0.3s,baz=209,slow=6.8,SNR=5.6
AKBB Malin Array Si 119.40 37 ePKPdf PKPdf 21 19 42.2 -0.9
AKBB ePP PP 21 21 03.6 -2.1
AKBB Malin Array Si 119.40 37 ePKIKP PKPdf 21 19 42.2 -0.9
AKBB e 21 21 03.6
SHPR Sheep Range 120.80 290 ePKPdf PKPdf 21 19 48.3 +1.8
SRU San Rafael Swe 120.83 296 ePKPdf PKPdf 21 19 47.6 +1.0
SRU San Rafael Swe 120.83 296 ePKIKP PKPdf 21 19 47.6 +1.0
CCUT Cedar City 120.83 292 ePKPdf PKPdf 21 19 48.5 +1.9
MSU Marysvale 121.08 294 ePKPdf PKPdf 21 19 48.8 +1.7
MSU Marysvale 121.08 294 ePKIKP PKPdf 21 19 48.8 +1.7
TMUT Trail Mountain 121.29 295 ePKPdf PKPdf 21 19 49.2 +1.6
TPNV Topopah Spring 121.67 290 ePKPdf PKPdf 21 19 50.0 +1.8
TPNV Topopah Spring 121.67 290 ePKIKP PKPdf 21 19 50.0 +1.8
PSUT Pine Spring 121.86 293 ePKPdf PKPdf 21 19 50.2 +1.6
PBKT Sadao Pong 121.90 115 ePKPdf PKPdf 21 19 48.4 -0.6
RSSD Black Hills 122.16 304 ePKPdf PKPdf 21 19 49.2 +0.2
RSSD Black Hills 122.16 304 ePKIKP PKPdf 21 19 49.2 +0.2
AGMN Agassiz Nation 122.43 312 ePKPdf PKPdf 21 19 49.0 -0.1
CM01 Chiang Mai Arr 122.61 112 ePKPdf PKPdf 21 19 50.2 -0.1
CM31 Chiang Mai Arr 122.64 112 ePKPdf PKPdf 21 19 51.1 +0.7
CMAR Chiang Mai Arr 122.64 112 PKP PKPdf 21 19 50.4 0.0
comp=Z,7.1nm,0.9s,baz=238,slow=3.6,SNR=28
DUG Dugway, Tooele 122.73 295 ePKPdf PKPdf 21 19 51.3 +1.2
DUG Dugway, Tooele 122.73 295 ePKIKP PKPdf 21 19 51.3 +1.2
VORD Divnogorie 122.81 43 ePKIKP PKPdf 21 19 49.0 -0.7
VORD pmax pmax
comp=Z,6.0nm,1.0s
NIL Nilore 122.91 79 ePKPdf PKPdf 21 19 50.6 +0.1
NIL Nilore 122.91 79 ePKIKP PKPdf 21 19 50.6 +0.1
CHTO Chiang Mai 122.95 112 ePKPdf PKPdf 21 19 50.8 -0.2
CHTO Chiang Mai 122.95 112 ePKIKP PKPdf 21 19 50.8 -0.2
VSR Storozhevoye 122.98 43 ePKIKP PKPdf 21 19 49.1 -0.9
VSR pmax pmax
comp=Z,8.0nm,1.1s
HWUT Hardware Ranch 123.32 296 ePKPdf PKPdf 21 19 51.9 +0.7
PD31 Pinedale Array 123.38 299 ePKPdf PKPdf 21 19 51.1 -0.3
PDAR Pinedale Array 123.38 299 PKP PKPdf 21 19 51.1 -0.3
comp=Z,1.0nm,0.6s,baz=131,slow=4.3,SNR=5.8
PDAR Pinedale Array 123.38 299 ePKPdf PKPdf 21 19 50.9 -0.5
BGU Big Grassy Mou 123.42 295 ePKPdf PKPdf 21 19 52.9 +1.4
SPUT South Promonto 123.47 296 ePKPdf PKPdf 21 19 52.7 +1.2
NV11 Mina Array Sit 123.75 289 ePKPdf PKPdf 21 19 53.8 +1.6
NV01 Mina Array Sit 123.82 289 ePKPdf PKPdf 21 19 53.8 +1.4
NVAR Mina Array Bea 123.82 289 PKP PKPdf 21 19 54.0 +1.6
comp=Z,1.0nm,0.7s,baz=161,slow=2.6,SNR=8.7
ULM Lac du Bonnet 124.06 313 PKP PKPdf 21 19 51.3 -0.8
comp=Z,3.6nm,0.8s,baz=141,slow=3.1,SNR=6.2
ULM Lac du Bonnet 124.06 313 ePKPdf PKPdf 21 19 51.6 -0.5
ULM Lac du Bonnet 124.06 313 ePKIKP PKPdf 21 19 51.6 -0.5
KVN Kaiserville 124.23 290 ePKPdf PKPdf 21 19 54.8 +1.7
KVN Kaiserville 124.23 290 ePKIKP PKPdf 21 19 54.8 +1.7
REDW Red Top Meadow 124.42 298 ePKPdf PKPdf 21 19 52.5 -0.9
CMB Columbia Colle 124.48 287 ePKPdf PKPdf 21 19 55.0 +1.6
CMB Columbia Colle 124.48 287 ePKIKP PKPdf 21 19 55.0 +1.6
LOHW Long Hollow 124.52 299 ePKPdf PKPdf 21 19 54.6 +1.1
TPAW Teton Pass 124.57 298 ePKPdf PKPdf 21 19 54.9 +1.1
NB2 NORSAR Subarra 124.61 21 PKPdf PKPdf 21 19 52.4 -0.5
comp=Z,3.7nm,1.1s,baz=202,slow=1.9
NB200 NORSAR Array S 124.61 21 ePKPdf PKPdf 21 19 52.5 -0.5

NOA NORSAR Array B 124.61 21 PKP PKPdf 21 19 52.5 -0.5
comp=Z,4.6nm,0.8s,baz=198,slow=1.9,SNR=6.3
MOOW Moose Ponds 124.69 299 ePKPdf PKPdf 21 19 55.0 +1.1
YERR Yerington 124.70 289 ePKPdf PKPdf 21 19 56.5 +2.5
FXWY Fox Creek 124.72 298 ePKPdf PKPdf 21 19 54.8 +0.8
BMN Battle Mountai 124.93 291 ePKPdf PKPdf 21 19 55.7 +1.4
BMN Battle Mountai 124.93 291 ePKIKP PKPdf 21 19 55.7 +1.4
LAO LASA Array 125.14 304 ePKPdf PKPdf 21 19 55.6 +1.2
SHL Shillong 125.39 101 ePKPdf PKPdf 21 19 55.8 +0.1
SHL Shillong 125.39 101 ePKIKP PKPdf 21 19 55.8 +0.1
OBN Obninsk 125.44 39⇓ i PKIKP PKPdf 21 19 55.2 +0.6
OBN i 21 21 44.4
OBN i 21 27 01.2
OBN pmax pmax
comp=Z,27nm,2.1s
OBN MLR MLR
comp=Z,83nm,16.0s
AFDM Forest Hills D 125.48 288 ePKPdf PKPdf 21 19 57.4 +2.1
VSU Vasula 125.58 31⇑ iPKIKP PKPdf 21 19 54.7 0.0
HLID Hailey 126.15 296 ePKPdf PKPdf 21 19 58.8 +2.2
BOZ Bozeman (W) 126.54 299 ePKPdf PKPdf 21 19 59.3 +2.0
BOZ Bozeman (W) 126.54 299 ePKIKP PKPdf 21 19 59.3 +2.0
MFID Camas Ranch 126.66 295 ePKPdf PKPdf 21 19 59.6 +2.1
DLMT Dillon 126.77 298 ePKPdf PKPdf 21 19 59.6 +1.9
LRM Limekiln Ridge 127.07 299 ePKPdf PKPdf 21 20 00.1 +1.7
WDC Whiskeytown Da 127.52 288 ePKPpre PKPpre 21 19 46.7
WDC Whiskeytown Da 127.52 288 ePKHKP PKPpre 21 19 46.7
EGMT Eagleton 127.66 302 ePKPdf PKPdf 21 20 00.3 +1.1
J08A Circle Bar Ran 127.81 293 ePKPdf PKPdf 21 20 01.5 +1.8
FIA0 FINESS Array S 128.03 29 ePKPdf PKPdf 21 19 59.1 -0.2
FIA0 eSKPdf SKPdf 21 23 24.8 -8.5
FIA0 FINESS Array S 128.03 29 ePKIKP PKPdf 21 19 59.1 -0.2
FINES FINESS Array B 128.03 29 PKP PKPdf 21 19 59.1 -0.2
comp=Z,11nm,0.8s,baz=119,slow=2.4,SNR=19
FINES SKPbc SKPdf 21 23 24.8 -8.5
comp=Z,2.8nm,0.9s,baz=225,slow=3.7,SNR=3.8
FIA1 FINESS Array S 128.04 29 ePKPdf PKPdf 21 19 59.1 -0.2
FIA1 ePKPdf PKiKP 21 19 59.6 -0.3
K05A Summer Lake 128.43 291 ePKPdf PKPdf 21 20 03.7 +2.7
BMO Blue Mountains 128.45 295 ePKPdf PKPdf 21 20 01.8 +1.0
BMO Blue Mountains 128.45 295 ePKIKP PKPdf 21 20 01.8 +1.0
LSA Lhasa 128.47 97 ePKPdf PKPdf 21 20 02.2 +0.3
LSA Lhasa 128.47 97 ePKIKP PKPdf 21 20 02.2 +0.3
MSO Missoula 128.50 299 ePKPdf PKPdf 21 20 02.2 +1.3
KSH Kashi 128.91 77 PKP PKPdf 21 20 00.8 -1.1
KSH sPKP 21 20 17.8
KSH PKS PKSdf 21 23 36.4 -2.1
KSH SKS SKSdf 21 27 10.8 -1.4
KSH SKKS SKKSac 21 29 02.7 -2.4
KSH SS SS 21 39 23.8 -3.9
KSH AMB AMB
comp=Z,290nm,4.3s
KSH LR LR
comp=Z,280nm,4.2s
KSH LR LR
comp=Z,210nm,4.5s
KSH LR LR
comp=Z,390nm,5.9s
ABKAR Akbulak array 129.22 57 ePKPdf PKPdf 21 20 02.0 0.0
PINE Pine Mountain 129.28 291 ePKPdf PKPdf 21 20 04.6 +2.0
F10A Beach Ranch, E 129.28 296 ePKPdf PKPdf 21 20 03.5 +1.1
HUMO Hull Mountain 129.29 289 ePKPdf PKPdf 21 20 04.5 +2.1
AKTO Aktyubinsk 129.34 55 PKP PKPdf 21 20 01.9 -0.3
comp=Z,9.5nm,1.1s,baz=220,slow=2.4,SNR=19
JTMT Jette 129.36 299 ePKPdf PKPdf 21 20 03.5 +1.0
G08A Pilot Rock 129.53 294 ePKPdf PKPdf 21 20 04.5 +1.6
KMI Kunming 130.15 112 PKP PKPdf 21 20 06.0 +1.1
AAK Ala-Archa 130.62 73 ePKPdf PKPdf 21 20 05.7 +0.5
AAK Ala-Archa 130.62 73⇑ iPKIKP PKPdf 21 20 05.3 +0.2
FRU Bishkek 130.83 73 ePKIKP PKPdf 21 20 06.0 +0.6
KLMR Klimovskoe 131.08 36 ePKIKP PKPdf 21 20 04.4 -0.7
KLMR pmax pmax
comp=Z,21nm,1.4s
KLMR Klimovskoe 131.08 36 ePKPdf PKPdf 21 20 04.4 -0.7
KLMR AMP 21 20 06.9
comp=Z,21nm,1.4s
B08A Colville Reser 132.03 296 ePKPdf PKPdf 21 20 08.4 +1.0
GYA Guiyang 133.07 115 ePdif Pdif 21 17 06.7 -0.3
GYA PKP PKiKP 21 20 11.8 +0.4
GYA PP PP 21 22 41.0 +4.4
GYA AMB AMB
comp=Z,130nm,7.6s
SUMG Summit 133.21 355 ePKPdf PKPdf 21 20 10.2 +0.8
SUMG Summit 133.21 355 ePKIKP PKPdf 21 20 10.2 +0.8
TMCR Tamitsa 133.33 33 ePKIKP PKPdf 21 20 09.0 -0.3
TMCR pmax pmax
comp=Z,14nm,0.9s
PRGR Permogore 133.53 39 ePKIKP PKPdf 21 20 09.1 -0.6
PRGR pmax pmax
comp=Z,9.0nm,1.0s
ARU Arti 134.08 50 i PKIKP PKPdf 21 20 08.5 -2.5
ARA0 ARCESS Array S 134.88 23 ePKPdf PKPdf 21 20 11.9 -0.2
ARA0 eSKPbc SKiKP 21 23 48.0 -0.2
ARCES ARCESS Array B 134.88 23 PKP PKPdf 21 20 12.0 -0.1
comp=Z,4.9nm,0.8s,baz=215,slow=1.1,SNR=8.3
ARCES SKP 21 23 48.0
comp=Z,2.3nm,0.6s,baz=199,slow=2.5,SNR=13
ARCES ARCESS Array B 134.88 23 PKIKP PKPdf 21 20 12.0 -0.1
ARCES pmax pmax
comp=Z,5.0nm,0.8s
SVE Sverdlovsk 135.16 51 ePKIKP PKPdf 21 20 12.9 -0.1
SVE pmax pmax
comp=Z,11nm,1.2s
CD2 Chengdu 135.53 109 PKP PKPdf 21 20 14.8 +0.2
BRVK Borovoye 136.41 61 ePKPdf PKPdf 21 20 15.1 -0.3
BRVK Borovoye 136.41 61⇑ iPKIKP PKPdf 21 20 15.6 +0.2
BVAR Borovoye Array 136.43 61 PKhKP PKPpre 21 20 03.8
comp=Z,1.2nm,0.8s,baz=228,slow=1.7,SNR=8.4
BVAR PKP PKPdf 21 20 13.9 -1.6
comp=Z,4.8nm,0.8s,baz=280,slow=0.8,SNR=13
DAG Danmarks Havn 137.21 2 PKIKP PKPdf 21 20 16.7 +0.5
MAKZ Makanchi 137.28 75 ePKPdf PKPdf 21 20 16.5 -0.8
MAKZ Makanchi 137.28 75 ePKIKP PKPdf 21 20 16.5 -0.8
MK01 Makanchi Array 137.41 75 ePKPpre PKPpre 21 20 08.6
MK31 Makanchi Array 137.42 75 ePKPdf PKPdf 21 20 16.7 -0.9
MK31 Makanchi Array 137.42 75 ePKIKP PKPdf 21 20 16.7 -0.9
MK32 Makanchi Array 137.42 75 ePKPpre PKPpre 21 20 08.6
MK32 ePKPdf PKPdf 21 20 16.4 -1.2
MKAR Makanchi Array 137.42 75 PKhKP PKPpre 21 20 08.6
comp=Z,1.0nm,0.8s,baz=236,slow=2.3,SNR=8.1
MKAR PKP PKPdf 21 20 16.4 -1.2
comp=Z,2.9nm,0.8s,baz=257,slow=3.5,SNR=11
MKAR Makanchi Array 137.42 75 PKPpre PKPpre 21 20 08.6
MKAR ePKPdf PKPdf 21 20 16.7 -0.9
MKAR Makanchi Array 137.42 75c i PKIKP PKPdf 21 20 16.7 -0.9
MKAR pmax pmax
comp=Z,3.0nm,0.8s
ENH Enshi 137.61 115 ePKPdf PKPdf 21 20 20.2 +1.7
WMQ Urumqi 137.87 82 PKP PKPdf 21 20 19.6 +1.1
WMQ LR LR
comp=Z,190nm,26.3s
WMQ LR LR
comp=Z,180nm,30.1s
WMQ LR LR
comp=Z,170nm,26.3s
KURBB Kurchatov Arra 138.37 68 PKhKP PKPpre 21 20 12.3
comp=Z,0.6nm,0.7s,baz=237,slow=2.8,SNR=6.9
KURK Kurchatov 138.48 68 ePKPpre PKPpre 21 20 12.3
KURK ePKPpre PKPpre 21 20 13.8
KURK Kurchatov 138.48 68⇓ ePKIKP PKPdf 21 20 17.5 -1.8
LZH Lanzhou 139.82 104 ePKP PKPdf 21 20 23.4 +0.9
LZH sPKP 21 20 39.9
LZH LR LR
comp=Z,28nm,16.0s
LZH LR LR
comp=Z,32nm,18.1s
YKA Yellowknife Ar 140.04 314 PKP PKPdf 21 20 21.4 -0.4
comp=Z,4.4nm,0.9s,baz=123,slow=2.6,SNR=14
YKA PP PP 21 23 14.6 -5.4
comp=Z,1.7nm,0.9s,baz=128,slow=6.1,SNR=7.9
YKA SKPbc SKiKP 21 23 58.3 -0.6
comp=Z,1.7nm,0.9s,baz=122,slow=1.9,SNR=6.5
YKB5 Yellowknife Ar 140.04 314 ePKPdf PKPdf 21 20 21.4 -0.4
YKB5 ePP PP 21 23 14.6 -5.4
YKB5 eSKPbc SKiKP 21 23 58.3 -0.6
YKW3 Yellowknife Ar 140.08 314 ePKPdf PKPdf 21 20 22.2 +0.3
GTA Gaotai 140.50 97 PKP PKPdf 21 20 23.9 +0.3
GTA sPKP 21 20 38.4
GTA PP PP 21 23 26.5 +3.3
GTA SS SS 21 41 45.4 -1.6
GTA AMB AMB
comp=Z,83nm,6.0s
GTA LR LR

comp=Z,83nm,16.8s
GTA LR LR
comp=Z,100nm,18.9s
XAN Xi'an 140.53 111 PKP **PKPdf 21 20 23.2 -0.5**
SPA0 Spitsbergen Ar 140.87 13 *e*PKPpre PKPpre 21 20 17.1
SPITS Spitsbergen Ar 140.87 13 PKhKP PKPpre 21 20 17.2
comp=Z,5.8nm,0.9s,baz=222,slow=1.9,SNR=5.6
RES Resolute Bay 142.40 336 *e*PKPpre PKPpre 21 20 22.3
NJ2 Nanjing 143.15 125 *e*PKP **PKPdf 21 20 28.9 +0.5**
NVS Novosibirsk 143.31 66 *e*PKIKP PKPbc 21 20 26.5 +0.4
NVS *e* 21 36 02.4
NVS pmax pmax
comp=Z,38nm,2.1s
NVS pmax pmax
comp=E,9.0nm,1.6s
ZAA0 Zalesovo Array 143.47 69 *e*PKPpre PKPpre 21 20 24.6
ZALV Zalesovo Beam 143.47 69 PKhKP PKPpre 21 20 24.1
comp=E,3.4nm,0.8s,baz=230,slow=3.7,SNR=11
ZAA1 Zalesovo Array 143.47 69 *e*PKPpre PKPpre 21 20 24.1
DLBC Dease Lake 143.56 301 *e*PKPdf **PKPdf 21 20 27.6 -0.7**
BESE Bessie Mountai 145.70 299 *e*PKPdf **PKPab 21 20 34.2 +1.3**
HVS Khovu-Aksy 145.87 78||*e*PKIKP **PKPdf 21 20 32.0 -0.6**
TIA Tai'an 146.01 119 PKPbc **PKPdf 21 20 33.5 +0.3**
BTO Baotou 146.35 106 *e*PKPbc **PKPbc 21 20 34.9 -0.2**
WHY Whitehorse 146.85 302 *e*PKPdf **PKPbc 21 20 36.2 +0.3**
HHC Hu-ho-hao-te 147.27 108 *e*PKPbc **PKPdf 21 20 35.8 +0.5**
HHC PP **PP 21 24 05.1 +1.3**
HHC AMB AMB
comp=E,51nm,10.2s
HHC LR LR
comp=E,64nm,18.0s
HHC LR LR
comp=E,73nm,20.0s
JNU Nakatsue 148.50 140 PKPbc **PKPbc 21 20 40.8 -0.3**
comp=E,14nm,1.0s,baz=298,slow=1.9,SNR=4.6
JNU Nakatsue 148.50 140 *e*PKPbc **PKPbc 21 20 41.8 +0.7**
BJT Baijiatuau 148.73 114 *e*PKPbc **PKPbc 21 20 42.0 +0.6**
BJT Baijiatuau 148.73 114 *e*PKP2 **PKPbc 21 20 42.0 +0.6**
MOY Mondy 149.75 83 *e*PKP2 **PKPbc 21 20 43.9 +0.1**
MOY pmax pmax
comp=Z,70nm,2.3s
INK Inuvik 149.76 315 *e*PKPdf **PKPdf 21 20 38.6 +0.3**
SONA0 Songino Array 149.91 93 *e*PKPdf **PKPdf 21 20 39.1 -0.4**
SONA0 *e*PKPbc **PKPbc 21 20 44.3 0.0**
SONM Songino Array 149.91 93 PKP **PKPdf 21 20 39.1 -0.4**
comp=Z,2.0nm,0.9s,baz=200,slow=0.7,SNR=10
SONM PKPbc **PKPbc 21 20 44.3 0.0**
comp=Z,33nm,1.0s,baz=216,slow=2.5,SNR=97
SONA1 Songino Array 149.93 93 *e*PKPdf **PKPdf 21 20 38.8 -0.7**
ZAK Zakamensk 150.06 87 *e*PKIKP **PKPdf 21 20 38.6 -0.9**
ZAK pmax pmax
comp=Z,36nm,1.2s
TJN Taejon 150.26 132||*i*PKIKP **PKPbc 21 20 44.2 -1.1**
ULN Ulaanbaatar 150.26 94 *e*PKPdf **PKPdf 21 20 39.7 -0.4**
ULN Ulaanbaatar 150.26 94 *de*PKIKP **PKPdf 21 20 39.4 -0.6**
DAWY Dawson 150.31 306 *e*PKPdf **PKPdf 21 20 37.8 -1.7**
CRQM Cirque 150.43 298 *e*PKPbc **PKPbc 21 20 46.4 +1.2**
RAGM Ragged Mountai 150.93 297 *e*PKPbc **PKPbc 21 20 48.0 +1.8**
TLY Talaya 151.06 85 PKPbc **PKPbc 21 20 47.2 +0.4**
comp=Z,11nm,0.6s,baz=231,slow=4.4,SNR=7.2
TLY Talaya 151.06 85 *e*PKPbc **PKPbc 21 20 47.6 +0.9**
BMRM Bremner River 151.16 298 *e*PKPdf **PKPdf 21 20 40.2 -0.7**
EGAK Eagle 151.30 306 *e*PKPbc **PKPbc 21 20 45.6 -1.3**
KS15 Wonju Array Si 151.39 132 *e*PKPdf **PKPdf 21 20 41.8 -0.1**
KS15 *e*PKPbc **PKiKP 21 20 48.6 +0.1**
KS15 *e*PKPab **sPKPbc 21 20 57.8 +1.1**
KSAR Wonju Array Be 151.39 132 PKP **PKPdf 21 20 41.8 -0.1**
KSAR PKPbc **PKPbc 21 20 48.1 +0.1**
KSAR Wonju Array Be 151.39 132 PKIKP **PKPdf 21 20 41.8 -0.1**
KSAR 21 20 48.1
KSRS Korea Array 151.42 132 PKP **PKPdf 21 20 41.8 -0.1**
comp=Z,2.9nm,1.0s,baz=215,slow=2.4,SNR=7.8
KSRS PKPbc **PKPbc 21 20 48.1 +0.1**
comp=Z,9.7nm,0.9s,baz=210,slow=2.1,SNR=30
KS01 Wonju Array Si 151.43 132 *e*PKPdf **PKPdf 21 20 41.1 -0.8**
EYAK Cordova Ski Ar 151.48 296 *e*PKPbc **PKPbc 21 20 49.1 +1.8**
IRK Irkutsk 151.71 84 *e*PKIKP **PKPbc 21 20 47.9 -0.3**
IRK pmax pmax
comp=Z,42nm,2.0s
NRIK Noril'sk 151.91 44 PKPbc **PKPbc 21 20 48.7 +0.6**
comp=Z,7.5nm,0.8s,baz=219,slow=1.2,SNR=11
KLU Klutina 151.97 298 *e*PKPbc **PKPbc 21 20 50.1 +1.5**
HARP HAARP 152.02 300 *e*PKPbc **PKPbc 21 20 51.1 +2.5**
DOT Dot Lake 152.05 303 *e*PKPbc **PKPbc 21 20 49.9 +1.2**
SCRK Sand Creek 152.14 304 *e*PKPbc **PKPbc 21 20 49.4 +0.4**
INU Inuyama 152.35 148 *e*PKPbc **PKPbc 21 20 51.2 +1.0**
PAX Paxson 152.37 301 *e*PKPbc **PKPbc 21 20 51.1 +1.6**
PAX Paxson 152.37 301 *e*PKIKP **PKPbc 21 20 51.1 +1.6**
RIDG Independ'e Rid 152.40 303 *e*PKPbc **PKPbc 21 20 50.8 +1.3**
SCM Sheep Creek Mo 152.72 298 *e*PKPbc **PKPbc 21 20 51.4 +1.1**
SCM Sheep Creek Mo 152.72 298 *e*PKIKP **PKPbc 21 20 51.4 +1.1**
SML Sawmill 153.15 298 *e*PKPbc **PKPbc 21 20 52.3 +1.1**
SML Sawmill 153.15 298 *e*PKIKP **PKPbc 21 20 52.3 +1.1**
DHY Denali Highway 153.22 301 *e*PKPdf **PKPdf 21 20 46.2 +2.2**
KDAK Kodiak Island 153.31 288 *e*PKPbc **PKPbc 21 20 54.5 +2.9**
KDAK Kodiak Island 153.31 288 *e*PKIKP **PKPbc 21 20 54.5 +2.9**
OHAK Old Harbor 153.37 286 *e*PKPbc **PKPbc 21 20 53.3 +1.6**
GHO Glory Hole Cre 153.39 297 *e*PKPbc **PKPbc 21 20 53.0 +1.3**
PMR Palmer 153.41 297 *e*PKPbc **PKPbc 21 20 51.4 -0.2**
PMR Palmer 153.41 297 *e*PKIKP **PKPbc 21 20 51.4 -0.2**
RC01 Rabbit Creek A 153.47 296 *e*PKPbc **PKPbc 21 20 53.7 +1.8**
HDA Harding Lake 153.51 304 *e*PKPbc **PKPbc 21 20 53.5 +1.6**
ILAR Eielson Array 153.60 305 PKP **PKPdf 21 20 42.3 -2.0**
comp=Z,1.0nm,0.9s,baz=341,slow=1.9,SNR=8.6
ILAR PKPbc **PKiKP 21 20 52.4 +0.3**
comp=Z,16nm,1.1s,baz=150,slow=1.6,SNR=19
ILB Eielson Array 153.60 305 *e*PKPdf **PKPdf 21 20 42.3 -2.0**
ILB *e*PKPbc **sPKPdf 21 20 52.8 -0.2**
MJAR Matsushiro Arr 153.78 149 PKP **PKPdf 21 20 44.5 -1.0**
comp=Z,1.6nm,0.9s,baz=179,slow=2.3,SNR=6.6
MJAR PKPbc **PKPbc 21 20 53.2 -0.2**
comp=Z,7.6nm,1.0s,baz=209,slow=3.9,SNR=19
MJAR PKPab **PKPab 21 21 05.2 -1.2**
comp=Z,1.6nm,0.9s,baz=203,slow=5.5,SNR=5.3
MJAR Matsushiro Arr 153.78 149 PKIKP **PKPdf 21 20 44.5 -1.0**
MJAR 21 20 53.2
MJAR 21 21 05.2
MJAR pmax pmax
comp=Z,2.0nm,1.0s
MJAR pmax pmax
comp=Z,2.0nm,1.0s
MAJO Matsushiro 153.78 149 *e*PKPdf **PKPdf 21 20 44.5 -1.0**
MAJO *e*PKPbc **PKiKP 21 20 53.7 +0.3**
MAJO *e*PKPab **PKPab 21 21 06.9 +0.5**
MAJO Matsushiro 153.78 149⇑*e*PKIKP **PKPdf 21 20 45.3 -0.2**
MAT Matsushiro 153.78 149 PKP **PKPbc 21 20 53.1 -0.3**
MJB9 Matsu-Tunnel 153.79 149 *e*PKPbc **PKPbc 21 20 53.9 +0.5**
MJB9 *e*PKPab **PKPab 21 21 07.0 +0.6**
CCB Clear Creek Bu 153.93 304 *e*PKPbc **PKPbc 21 20 53.4 +0.7**
RND Reindeer 153.96 301 *e*PKPbc **PKPbc 21 20 53.3 +0.3**
RND Reindeer 153.96 301 *e*PKIKP **PKPbc 21 20 53.3 +0.3**
COLA College 154.02 304||*e*PKIKP **PKPdf 21 20 47.1 +2.3**
MCK McKinley 154.11 302 *e*PKPbc **PKPbc 21 20 54.0 +0.8**
MCK McKinley 154.11 302 *e*PKIKP **PKPbc 21 20 54.0 +0.8**
MDM Murphy Dome 154.20 305 *e*PKPbc **PKPbc 21 20 53.7 +0.3**
BWN Browne 154.47 302 *e*PKPbc **PKPbc 21 20 55.1 +1.2**
TRF Thorofare Moun 154.58 301 *e*PKPbc **PKPbc 21 20 54.9 +0.5**
SKT Skwentna 154.61 297 *e*PKPbc **PKPbc 21 20 55.8 +1.5**
BPAW Bear Paw Mtn. 155.08 302 *e*PKPbc PKPbc 21 20 56.1
PPLA Purkeypile 155.22 299 *e*PKPbc PKPbc 21 20 59.0
MLY Manley 155.25 304 *e*PKPbc PKPbc 21 20 58.3
CAST Castle Rocks 155.34 300 *e*PKPdf **PKPdf 21 20 45.3 -1.5**
COLD Coldfoot 155.55 309 *e*PKPdif PKPbc 21 20 57.8
TOLK Toolik Lake Re 155.56 313 *e*PKPdf **PKPdf 21 20 46.0 -0.9**
TOLK *e*PKPdif **sPKPdf 21 20 57.0 +1.3**
HIA Hailar 157.38 105 *e*PKPab **PKPab 21 21 29.1 +0.4**
HIA Hailar 157.38 105 *e*PKP2 **PKPab 21 21 29.1 +0.4**
USRK Ussuriysk Ar. 158.80 131 PKP **PKPdf 21 20 50.9 -0.8**
comp=Z,1.3nm,0.6s,baz=140,slow=47,SNR=3.9
USRK PKPab **PKPab 21 21 27.6 -0.1**
comp=Z,4.9nm,0.9s,baz=242,slow=3.1,SNR=9.0
YUK Yuzh-Kuril'sk 162.62 159 *e*PKIKP **PKPdf 21 20 51.9 -4.0**
KLR Kul'dur 162.81 121 PKP **PKPdf 21 20 55.0 -0.9**
comp=Z,0.4nm,1.1s,baz=274,slow=4.2,SNR=6.2
KLR PKPab **PKPab 21 21 44.0 -1.1**
comp=Z,0.7nm,0.9s,baz=209,slow=5.4,SNR=11
KLR Kul'dur 162.81 121||*e*PKIKP **PKPdf 21 20 54.4 -1.5**
ZEA Zeya 163.85 103 *e*PKP2 **PKPab 21 21 49.1 -0.5**
ZEA pmax pmax
comp=Z,21nm,1.2s
YSS Yuzh-Sakhalins 164.72 148||*e*PKIKP **PKPdf 21 20 51.6 -6.1**
TIXI Tiksi 165.05 32 PKPab **PKPab 21 21 55.4 +1.0**
comp=Z,4.0nm,1.0s,baz=8.4,slow=3.4,SNR=5.3
TIXI Tiksi 165.05 32 *e*PKPab **PKPab 21 21 55.6 +1.3**
TIXI Tiksi 165.05 32||*e*PKIKP **PKPdf 21 20 52.2 -5.0**
BILL Bilibino 170.96 330||*e*PKIKP **PKPdf 21 21 04.4 +3.0**
SEY Seymchan 177.50 21||*e*PKIKP **PKPdf 21 21 06.6 +2.9**

*NEIC **03** 21:01:35.1±0.0, 17°.73N×101°.47W, h28km, MD4.1(MEX), After MEX.*
MEX 03 21:01:35.1±0.6, **17°.73N**×**101°.47W, h28**km±12km, **MD4.1, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.12**	**180**	*i* P	Pb	21 01 38.6	-1.6
ZIIG				*i* S	Sb	21 01 42.8	-1.0
ZIIG	**Zihuatanejo**	**0.12**	**180**	*i* P	Pb	21 01 38.6	-1.6
ZIIG				*i* S	Sb	21 01 42.8	-1.0
ARIG	**Puente Sto Nin**	**1.20**	**63**	*e*P	Pn	21 01 53.9	-2.2
ARIG				*e*S	Sn	21 02 07.5	-3.9
ARIG	**Puente Sto Nin**	**1.20**	**63**	*e*P	Pn	21 01 53.9	-2.2
ARIG				*e*S	Sn	21 02 07.5	-3.9
CAIG	**El Cayaco**	**1.33**	**120**	*e*P	Pn	21 01 54.8	-3.1
CAIG				*e*S	Sn	21 02 11.5	-3.2
CAIG	**El Cayaco**	**1.33**	**120**	*e*P	Pn	21 01 54.8	-3.1
CAIG				*e*S	Sn	21 02 11.5	-3.2
MEIG	**Mezcala**	**1.77**	**83**	*e*P	Pn	21 02 02.1	-1.9
MEIG				*i* S	Sn	21 02 23.1	-2.6
MEIG	**Mezcala**	**1.77**	**83**	*e*P	Pn	21 02 02.1	-1.9
MEIG				*i* S	Sn	21 02 23.1	-2.6
MMIG	**Aquila**	**1.87**	**288**	*i* P	Pn	21 02 03.3	-2.0
MMIG				*i* S	Sn	21 02 24.9	-3.2
MMIG	**Aquila**	**1.87**	**288**	*i* P	Pn	21 02 03.3	-2.0
MMIG				*i* S	Sn	21 02 24.9	-3.2
PLIG	**Platanillo**	**1.98**	**70**	*e*P	Pn	21 02 05.5	-1.4
PLIG				*e*S	Sn	21 02 28.0	-2.9
PLIG	**Platanillo**	**1.98**	**70**	*e*P	Pn	21 02 05.5	-1.4
PLIG				*e*S	Sn	21 02 28.0	-2.9
EZ5V		**2.67**	**311**	*e*P	Pn	21 02 14.6	-2.0
EZ5V				*e*S	Sn	21 02 45.2	-3.0

*IDC **03** 21:11:16.9±1.4, 60°.76S×25°.09W, h0km, mb3.6/2, mb1 3.9/3, mb1mx3.7/30, mbtmp3.9/3, ML4.3/1, Error ellipse: s-maj=81.0km s-min=31.7km az=93.0*
ISC 03 21:11:18.7±1.4, **60°.8S**±0°.2×**24°.7W**±0°.4, **h10**km, **n8**, σ0**86/8, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**11.91**	**153**	P	**Pn**	**21 14 08.4**	**+0.1**
VNA3	**Neumayer Olymp**	**12.07**	**156**	P	**Pn**	**21 14 09.8**	**-0.7**
SNAA	**Sanae**	**13.89**	**151**	P	**Pn**	**21 14 34.9**	**-0.4**
SNAA	**Sanae**	**13.89**	**151**	Pn	**Pn**	**21 14 35.0**	**-0.4**
1.3nm,0.3s,baz=312,slow=16,SNR=28							
SNAA				Sn	Sn	21 16 55.4	-14
0.4nm,0.3s,baz=299,slow=20,SNR=2.2							
VNDA	**Vanda**	**41.86**	**182**	P	**P**	**21 19 09.0**	**+0.9**
0.5nm,0.8s,baz=198,slow=3.2,SNR=2.0							
TORD	**Torodi Ar. Bea**	**76.66**	**26**	P	**P**	**21 23 09.9**	**+0.5**
0.6nm,0.5s,baz=202,slow=6.2,SNR=15							
SONM	**Songino Array**	**149.45**	**93**	PKPbc	**PKPbc**	**21 31 07.0**	**0.0**
0.3nm,0.8s,baz=207,slow=1.6,SNR=2.0							
ILAR	**Eielson Array**	**154.08**	**304**	PKPbc	**PKPbc**	**21 31 15.5**	**-1.4**
0.3nm,0.6s,baz=132,slow=1.7,SNR=3.1							

*IDC **03** 21:28:45.3±7.0, 6°.36S×151°.97E, h51km±55km, mb3.4/4, mb1 3.7/5, mb1mx3.2/59, mbtmp3.7/5, ML1.8/1, MS3.8/1, Ms1 4.0/1, ms1mx2.8/25, Error ellipse: s-maj=97.7km s-min=34.2km az=132.0*
ISC 03 21:28:43.3±1.9, **6°.4S**±0°.6×**152°.1E**±0°.5, **h37**km, **n7**, σ1**9/07/7, mb3.6/4, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.77**	**239**	P	**Pn**	**21 30 07.5**	**+1.2**
1.7nm,0.3s,baz=223,slow=14,SNR=3.8							
PMG				S	**Sn**	**21 31 11.2**	**-0.1**
1.7nm,0.3s,baz=146,slow=21,SNR=2.6							
WRA	**Warramunga Arr**	**21.91**	**230**	P	**P**	**21 33 32.1**	**-1.4**
0.6nm,0.8s,baz=56,slow=10.0,SNR=10							
ASAR	**Alice Springs**	**24.54**	**224**	P	**P**	**21 34 00.2**	**+0.5**
1.5nm,0.8s,baz=54,slow=9.3,SNR=9.8							
FITZ	**Fitzroy Crossi**	**28.34**	**243**	P	**P**	**21 34 33.0**	**-1.0**
3.3nm,1.0s,baz=78,slow=10,SNR=2.6							
CMAR	**Chiang Mai Arr**	**57.98**	**296**	LR	LR	22 05 53.1	
comp=Z,78nm,18.1s,baz=211,slow=38							
ILAR	**Eielson Array**	**83.88**	**22**	P	**P**	**21 41 09.0**	**+0.1**
0.4nm,0.6s,baz=256,slow=4.9,SNR=5.3							
TORD	**Torodi Ar. Bea**	**150.14**	**285**	PKPbc	**PKPbc**	**21 48 31.6**	**+0.3**
0.4nm,0.7s,baz=71,slow=2.6,SNR=2.6							

*IDC **03** 21:31:38.9±2.5, 36°.29N×70°.89E, h174km±23km, mb3.5/19, mb1 3.6/24, mb1mx3.4/78, mbtmp4.0/24, Error ellipse: s-maj=17.3km s-min=11.9km az=17.0*
*ISCJB **03** 21:31:40.0±0.3, 36°.50N±0°.03×70°.89E±0°.04, h188km, mb3.9/26, Error ellipse: s-maj=4.9km s-min=3.3km az=159.5*
*MOS **03** 21:31:39.8±1.0, 36°.46N×70°.86E, h190km, mb4.0/18, Error ellipse: s-maj=10.7km s-min=5.7km az=92.8*
*NNC **03** 21:31:44.6±3.4, 36°.86N×70°.68E, h188km±49km, mb3.4, mpv4.6, Error ellipse: s-maj=35.3km s-min=27.3km az=41.0*
ISC 03 21:31:40.1±0.5, **36°.44N**±0°.05×**70°.87E**±0°.05, **h188**km, **n92**, σ1**9/94**/105, **mb3.9/26, 11C-12D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.75**	**162**	P	**Pn**	**21 32 28.9**	**+2.6**
CEP				S	**Sn**	**21 33 04.0**	**+1.7**
CHCP	**Chirah Chowk**	**3.40**	**144**	P	**Pn**	**21 32 36.7**	**+2.7**
THW	**Thamme Wali**	**3.71**	**169**	P	**Pn**	**21 32 40.1**	**+2.2**
SFK	**Sufi-Kurgan**	**4.12**	**29**	⇑P	**Pn**	**21 32 44.2**	**+1.0**
44nm,0.5s							
SFK				⇑S	**Sn**	**21 33 31.8**	**-0.9**
259nm,0.8s							
SFK	**Sufi-Kurgan**	**4.12**	**29**	*i* PN	**Pn**	**21 32 44.1**	**+1.0**
SFK				pmax	pmax		
comp=Z,44nm,0.4s							
KSH	**Kashi**	**5.07**	**51**	Pn	**Pn**	**21 32 51.9**	**-3.2**
KSH				Sn	Sn	21 33 39.7	-14
KSH				smax	smax		
comp=N,360nm,0.5s							
KSH				smax	smax		
comp=E,450nm,0.5s							
THN	**Thein Dam**	**5.66**	**134**	*e*P	**Pn**	**21 33 02.8**	**+0.1**
THN				*e*S	**Sn**	**21 34 05.5**	**-2.3**
AML	**Almayashu**	**6.09**	**20**	P	**Pn**	**21 33 08.9**	**+0.3**
SNR=205							
DHRM	**DHARAMSHALA**	**6.13**	**131**	*e*P	**Pn**	**21 33 09.7**	**+0.5**
DHRM				*e*S	**Sn**	**21 34 17.2**	**-2.2**
DHRM				IAML		21 34 20.2	
comp=E,589nm,0.1s							
DHRM				IAML		21 34 20.7	
comp=N,367nm,0.3s							
MNAS	**Manas**	**6.17**	**11**	||P	**Pn**	**21 33 09.6**	**+0.2**
comp=N,38nm,0.6s							
MNAS				||S	**Sn**	**21 34 16.4**	**-3.6**
comp=N,173nm,0.8s							
MNAS	**Manas**	**6.17**	**11**	*i* PN	**Pn**	**21 33 09.6**	**+0.2**
MNAS				pmax	pmax		
comp=Z,38nm,0.5s							
UCH	**Uchtor**	**6.43**	**25**	P	**Pn**	**21 33 13.4**	**+0.3**
SNR=66							
KZA	**Kyzart**	**6.57**	**30**	P	**Pn**	**21 33 14.8**	**-0.2**
SNR=7.5							
EKS2	**Erkin-Say**	**6.61**	**19**	P	**Pn**	**21 33 15.6**	**+0.5**
SNR=45							
KK31	**Karatay Array**	**6.66**	**358**	⇑P	**Pn**	**21 33 15.6**	**-0.2**
comp=Z,24nm,0.5s,baz=178,slow=13,SNR=102							
KK31				⇑S	**Sn**	**21 34 26.2**	**-5.2**
comp=Z,28nm,0.6s,baz=184,slow=21,SNR=10							
KK31	**Karatay Array**	**6.66**	**358**	*ce*Pn	**Pn**	**21 33 15.5**	**-0.2**
KK31				pmax	pmax		
comp=Z,24nm,0.5s							
AAK	**Ala-Archa**	**6.79**	**23**	P	**Pn**	**21 33 18.1**	**+0.6**
comp=Z,11nm,0.3s,baz=168,slow=5.6,SNR=62							
AAK				S	**Sn**	**21 34 32.0**	**-2.7**
comp=Z,3.5nm,0.3s,baz=148,slow=23,SNR=14							
AAK	**Ala-Archa**	**6.79**	**23**	||P	**Pn**	**21 33 18.0**	**+0.4**
comp=Z,8.5nm,0.3s							
AAK				||S	**Sn**	**21 34 33.2**	**-1.5**
comp=Z,22nm,0.5s							
AAK	**Ala-Archa**	**6.79**	**23**	P	**Pn**	**21 33 18.2**	**+0.6**
SNR=34							
AAK	**Ala-Archa**	**6.79**	**23**	*d i* PN	**Pn**	**21 33 18.0**	**+0.4**
AAK				pmax	pmax		
comp=Z,9.0nm,0.3s							
KBK	**Karagaybulak**	**6.96**	**26**	P	**Pn**	**21 33 20.6**	**+0.8**
SNR=33							
FRU	**Bishkek**	**7.01**	**23**	*e*PN	**Pn**	**21 33 20.0**	**-0.3**
ULHL	**Ulahol**	**7.13**	**34**	P	**Pn**	**21 33 22.5**	**+0.4**
SNR=6.8							
CHMS	**Chumysh**	**7.20**	**23**	P	**Pn**	**21 33 23.4**	**+0.6**
SNR=8.9							
TKM2	**Tokmak 2**	**7.42**	**28**	||P	**Pn**	**21 33 26.1**	**+0.2**
comp=Z,57nm,0.6s							
TKM2				⇑S	**Sn**	**21 34 45.6**	**-4.2**
comp=Z,11nm,0.7s							
TKM2	**Tokmak 2**	**7.42**	**28**	P	**Pn**	**21 33 26.5**	**+0.6**
SNR=11							
TKM2	**Tokmak 2**	**7.42**	**28**	*i* PN	**Pn**	**21 33 25.9**	**0.0**
TKM2				pmax	pmax		
comp=Z,57nm,0.6s							
SMLA	**Simla**	**7.45**	**134**	*e*P	**Pn**	**21 33 27.1**	**+0.9**
SMLA				*e*S	**Sn**	**21 34 46.2**	**-4.0**
DDI	**Dehra Dun**	**8.56**	**133**	*e*P	**Pn**	**21 33 41.8**	**+1.1**
DDI				*e*S	**Sn**	**21 35 11.5**	**-5.2**
DDI				IAML		21 35 17.1	
comp=N,166nm,0.4s							
DDI				IAML		21 35 17.1	
comp=E,184nm,0.5s							
NDI	**New Delhi**	**9.40**	**144**	*e*S	**Sn**	**21 35 30.0**	**-6.8**
PDGK	**Podgornoye**	**9.54**	**41**	||P	**Pn**	**21 33 53.5**	**-0.1**
comp=E,2.1nm,0.7s							
PDGK	**Podgornoye**	**9.54**	**41**	P	**Pn**	**21 33 53.5**	**-0.1**
PDGK				pmax	pmax		
comp=Z,2.0nm,0.7s							
GEYT	**Alibeck**	**10.29**	**282**	P	**Pn**	**21 34 01.4**	**-1.8**
comp=Z,0.5nm,0.3s,baz=91,slow=10,SNR=3.1							
GEYT				S	**Sn**	**21 35 52.6**	**-5.1**
comp=Z,0.4nm,0.3s,baz=92,slow=32,SNR=3.5							
MK31	**Makanchi Array**	**13.40**	**36**	*ce*P	**P**	**21 34 44.7**	**-1.1**
MK31				pmax	pmax		
comp=Z,1.0nm,0.6s							
MKAR	**Makanchi Array**	**13.40**	**36**	P	**Pn**	**21 34 43.3**	**+0.4**
comp=Z,0.2nm,0.3s,baz=225,slow=15,SNR=8.7							
MKAR	**Makanchi Array**	**13.40**	**36**	*e*P	**Pn**	**21 34 43.8**	**+1.0**
DANN	**Dangsing**	**13.54**	**123**	*e*P	**Pn**	**21 34 45.9**	**+0.8**
comp=Z,40nm,0.4s							
KOLN	**Koldanda**	**13.81**	**125**	*e*P	**Pn**	**21 34 48.2**	**-0.2**
comp=Z,12nm,0.3s							
BHPL	**Bhopal**	**14.32**	**155**	*e*P	**P**	**21 34 57.6**	**+1.3**
GKN	**Gorkha**	**14.36**	**122**	*e*P	**Pn**	**21 34 55.6**	**+0.5**
comp=Z,61nm,0.4s							
DMN	**Daman**	**14.93**	**122**	*e*P	**P**	**21 35 03.6**	**+0.3**
KKN	**Kakani**	**14.94**	**121**	*e*P	**P**	**21 35 03.0**	**-0.3**
comp=Z,61nm,0.8s							
AB31	**Akbulak array**	**15.09**	**331**	⇑P	**Pn**	**21 35 02.9**	**-0.7**
comp=Z,0.7nm,0.4s							
AB31	**Akbulak array**	**15.09**	**331**	*ce*P	**Pn**	**21 35 02.7**	**-0.9**
AB31				pmax	pmax		
comp=Z,2.0nm,0.5s							
PKIN	**Phulchoki**	**15.15**	**122**	*e*P	**P**	**21 35 05.4**	**-0.3**
comp=Z,68nm,0.5s							
KURBB	**Kurchatov Arra**	**15.21**	**19**	P	**Pn**	**21 35 03.5**	**-1.7**
comp=Z,0.1nm,0.3s,baz=210,slow=10.0,SNR=8.5							
GUN	**Gumba**	**15.28**	**120**	*e*P	**P**	**21 35 08.1**	**+0.9**
comp=Z,21nm,0.3s							
KURK	**Kurchatov**	**15.32**	**19**⇑	*e*P	**P**	**21 35 07.5**	**+0.5**
JIRN	**Jiri**	**15.65**	**120**	*e*P	**P**	**21 35 12.3**	**+1.0**
comp=Z,69nm,0.4s							
BVAR	**Borovoye Array**	**16.59**	**359**	P	**Pn**	**21 35 21.8**	**+0.1**
comp=Z,0.4nm,0.3s,baz=161,slow=12,SNR=16							
BRVK	**Borovoye**	**16.62**	**359**	*de*P	**Pn**	**21 35 22.9**	**+0.7**
BRVK				pmax	pmax		
comp=Z,8.0nm,1.7s							
AKTO	**Aktyubinsk**	**16.78**	**330**	P	**Pn**	**21 35 24.6**	**+0.5**
comp=Z,1.1nm,0.3s,baz=141,slow=11,SNR=64							
AKTO	**Aktyubinsk**	**16.78**	**330**	||P	**Pn**	**21 35 24.4**	**+0.2**
comp=Z,22nm,0.8s							
AKTO	**Aktyubinsk**	**16.78**	**330**	*i* P	**Pn**	**21 35 24.3**	**+0.2**
AKTO				pmax	pmax		
comp=Z,22nm,0.8s							
BOK	**Bokaro**	**18.07**	**130**	*e*P	Pn	21 35 49.4	+10
TURI	**Tura**	**19.87**	**118**	*e*P	Pn	21 36 10.3	+9.4
ZALV	**Zalesovo Beam**	**20.01**	**25**	P	**P**	**21 35 58.7**	**+0.5**
comp=Z,4.0nm,0.6s,baz=221,slow=12,SNR=24							
SHL	**Shillong**	**20.98**	**115**	*e*P	Pn	21 36 21.7	+6.8
SVE	**Sverdlovsk**	**21.52**	**345**	*e*P	**P**	**21 36 15.2**	**+1.1**
SVE				pmax	pmax		
comp=Z,9.0nm,1.0s							
ARU	**Arti**	**21.65**	**341**	P	**P**	**21 36 16.8**	**+1.3**
comp=Z,4.4nm,0.6s,baz=197,slow=3.4,SNR=10							
ARU	**Arti**	**21.65**	**341**	*d i* P	**P**	**21 36 16.5**	**+1.0**
ARU				*PP	**pP**	**21 36 46.6**	**-1.1**
ARU				S	**S**	**21 40 06.6**	**+4.3**
ARU				pmax	pmax		
comp=Z,15nm,1.2s							
NCK	**Nalchik**	**22.00**	**297**	||*e*P	**P**	**21 36 20.1**	**+1.0**
NCK				pmax	pmax		
comp=Z,2.0nm,0.3s							
KBZ	**Khabaz**	**22.54**	**297**	P	**P**	**21 36 25.6**	**+1.6**
comp=Z,1.0nm,0.5s,baz=133,slow=7.0,SNR=4.4						

comp=Z,0.4nm,0.4s,baz=323,slow=4.7,SNR=6.7
ASAR Alice Springs 84.31 125 P P 21 43 50.6 -0.4
comp=Z,1.2nm,1.1s,baz=314,slow=5.1,SNR=5.8
ASAR Alice Springs 84.31 125 *e*P **P 21 43 51.5 +0.5**
ASAR pmax pmax
comp=Z,1.0nm,1.1s

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*SKO **03** 21:34:25.1,41.′24N×20.°32E,h15km,M1.8,ML2.5*
*TIR **03** 21:34:25.1,41.′25N×20.°39E,h7km,Md2.8/5*
*BEO **03** 21:34:26.7±0.5,41.′20N×20.°35E,h0km*
*CSEM **03** 21:34:26.1±0.4,41.′20N×20.°27E,h2km,ML2.8,Error ellipse: s-maj=7.1km s-min=4.9km az=24.0*
*PDG **03** 21:34:26.4±0.4,41.′29N×20.°30E,h4km,ML2.7/12,Error ellipse: s-maj=0.7km s-min=0.9km az=0.0*
ISC 03 21:34:26.4±1.0,41.′29N±0.′02×20.°35E±0.°02,h6km±9km, n74,σ1§40/137,16C-14D,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.37**	**279**	*e*Pg	**Pg**	**21 34 32.7**	**-0.9**
TIR				*e*Sg	**Sg**	**21 34 39.3**	**+0.8**
TIR	**Tirane**	**0.37**	**279**	⇑*i*P	**Pg**	**21 34 33.0**	**-0.6**
TIR	**Tirane**	**0.37**	**279**	*i* PG	**Pg**	**21 34 32.2**	**-1.4**
TIR				*i* SG	**Sg**	**21 34 38.0**	**-0.5**
TIR	**Tirane**	**0.37**	**279**	*e*Pg	**Pg**	**21 34 32.7**	**-0.9**
TIR				*i* Sg	**Sg**	**21 34 38.0**	**-0.5**
OHR	**Ohrid**	**0.38**	**118**	⇑*i*Pg	**Pg**	**21 34 33.2**	**-0.6**
OHR				*i* Sg	**Sg**	**21 34 40.1**	**+1.2**
OHR				*e*Lg	Lg	21 34 40.2	
	comp=E,470nm,0.6s						
OHR				*e*Lg	Lg	21 34 40.3	
	comp=N,420nm,0.5s						
PHP	**Peshkopia**	**0.40**	**10**	*i* PG	**Pg**	**21 34 34.1**	**-0.1**
PHP				*i* SG	**Sg**	**21 34 41.0**	**+1.5**
PHP	**Peshkopia**	**0.40**	**10**	*i* Pg	**Pg**	**21 34 34.1**	**-0.1**
PHP				*i* Sg	**Sg**	**21 34 41.0**	**+1.5**
KBN	**Korca**	**0.74**	**153**	*i* PG	**Pg**	**21 34 40.3**	**-0.4**
KBN				*i* SG	**Sb**	**21 34 52.3**	**+0.1**
KBN	**Korca**	**0.74**	**153**	*i* Pg	**Pg**	**21 34 40.3**	**-0.4**
BIA	**Bitola**	**0.78**	**110**	⇑*i*Pg	**Pg**	**21 34 40.5**	**-1.0**
BIA				*i* Sg	**Sb**	**21 34 52.6**	**-0.7**
BIA				*e*Lg	Lg	21 34 53.5	
	comp=N,54nm,0.3s						
BIA				*e*Lg	Lg	21 34 53.8	
	comp=E,62nm,0.4s						
PUK	**Puka**	**0.83**	**336**	*i* PG	**Pg**	**21 34 41.6**	**-0.7**
PUK				*i* SG	**Sb**	**21 34 55.2**	**+0.5**
PUK	**Puka**	**0.83**	**336**	*i* Pg	**Pg**	**21 34 41.7**	**-0.7**
PUK				*i* Sg	**Sb**	**21 34 55.2**	**+0.5**
PRZK	**Prizren**	**0.97**	**18**	P	**Pn**	**21 34 47.6**	**+1.0**
SKO	**Skopje**	**1.06**	**50**	*e*Pg	**Pg**	**21 34 44.6**	**-2.2**
SKO				*e*Sg	**Sb**	**21 35 01.7**	**+0.3**
SKO	**Skopje**	**1.06**	**50**	*e*Pg	**Pg**	**21 34 46.4**	**-0.4**
SKO				*i* Sg	**Sb**	**21 35 01.9**	**+0.5**
SKO				*e*Lg	Lg	21 35 02.9	
	comp=E,5.2nm,0.3s						
SKO				*e*Lg	Lg	21 35 03.0	
	comp=N,6.8nm,0.4s						
SKO	**Skopje**	**1.06**	**50**	*e*Pg	**Pg**	**21 34 44.6**	**-2.2**
SKO				*e*Sg	**Sb**	**21 35 01.7**	**+0.3**
ULC	**Ulcinj**	**1.07**	**309**	⇑*i*Pg	**Pg**	**21 34 45.1**	**-1.8**
ULC				*e*Sg	**Sn**	**21 35 02.6**	**-0.5**
ULC	**Ulcinj**	**1.07**	**309**	⇑*i*Pg	**Pg**	**21 34 45.1**	**-1.8**
ULC	**Ulcinj**	**1.07**	**309**	P	**Pg**	**21 34 45.6**	**-1.3**
ULC				*e*Sg	**Sn**	**21 35 02.6**	**-0.5**
BCI	**Bajram Curri**	**1.10**	**349**	*i* PG	**Pg**	**21 34 47.9**	**+0.3**
BCI				*i* SG	**Sn**	**21 35 03.6**	**-0.2**
BCI	**Bajram Curri**	**1.10**	**349**	*i* Pg	**Pg**	**21 34 47.8**	**+0.3**
BCI				*i* Sg	**Sn**	**21 35 03.7**	**-0.2**
DRME	**Dracevica, Mon**	**1.25**	**316**	⇑*i*Pg	**Pn**	**21 34 48.8**	**-1.6**
DRME				*e*Sg	**Sn**	**21 35 08.9**	**+1.3**
DRME	**Dracevica, Mon**	**1.25**	**316**	⇑*i*Pg	**Pn**	**21 34 48.8**	**-1.6**
DRME				*e*Sg	**Sn**	**21 35 08.9**	**+1.3**
PVY	**Plav**	**1.34**	**347**	⇓*i*Pg	**Pn**	**21 34 51.2**	**-0.5**
PVY				*e*Sg	**Sg**	**21 35 12.0**	**+2.6**
PVY	**Plav**	**1.34**	**347**	⇓*i*Pg	**Pn**	**21 34 51.2**	**-0.5**
PVY				*e*Sg	**Sg**	**21 35 12.0**	**+2.6**
PEJK	**Peje**	**1.35**	**358**	P	**Pn**	**21 34 50.2**	**-1.7**
PDG	**Podgorica**	**1.40**	**325**	*e*Pg	**Pn**	**21 34 51.8**	**-0.7**
PDG				*e*Sg	**Sg**	**21 35 14.9**	**+3.4**
PDG	**Podgorica**	**1.40**	**325**	⇑*i*P	**Pn**	**21 34 49.2**	**-3.3**
PDG	**Podgorica**	**1.40**	**325**	*e*Pg	**Pn**	**21 34 51.8**	**-0.7**
PDG				*e*Sg	**Sg**	**21 35 13.9**	**+2.4**
TTG	**Podgorica**	**1.40**	**325**	⇑*i*Pg	**Pn**	**21 34 51.8**	**-0.7**
TTG				*e*Sg	**Sg**	**21 35 13.9**	**+2.4**
SRN	**Sarande**	**1.43**	**191**	*i* PN	**Pg**	**21 34 54.6**	**+0.8**
SRN				*i* SN	**Sg**	**21 35 14.5**	**+2.1**
BUM	**Brajici-Budva**	**1.49**	**313**	⇑*i*Pg	**Pn**	**21 34 53.1**	**-0.6**
BUM				*e*Sg	**Sg**	**21 35 16.3**	**+2.1**
BUM	**Brajici-Budva**	**1.49**	**313**	⇑*i*Pg	**Pn**	**21 34 53.1**	**-0.6**
BUM				*e*Sg	**Sg**	**21 35 16.3**	**+2.1**
BEY	**Berane**	**1.62**	**348**	⇓*i*Pn	**Pb**	**21 34 56.6**	**-0.1**
BEY				*e*Sn	**Sg**	**21 35 21.2**	**+2.8**
IVA	**Berane**	**1.62**	**348**	⇓*i*Pn	**Pb**	**21 34 56.6**	**-0.1**
IVA				*e*Sn	**Sg**	**21 35 21.2**	**+2.8**
SMRK	**Smrekonice**	**1.64**	**15**	P	**Pb**	**21 34 57.3**	**+0.2**
CEME	**Cevo**	**1.65**	**320**	⇑*i*Pn	**Pn**	**21 34 56.0**	**0.0**
CEME				*e*Sn	**Sg**	**21 35 21.4**	**+1.9**
CEME	**Cevo**	**1.65**	**320**	⇑*i*Pn	**Pn**	**21 34 56.0**	**0.0**
CEME				*e*Sn	**Sg**	**21 35 21.4**	**+1.9**
VAY	**Valandovo**	**1.67**	**88**	*e*Pn	**Pb**	**21 34 57.7**	**+0.1**
VAY				*e*Sg	**Sg**	**21 35 21.1**	**+0.9**
VAY	**Valandovo**	**1.67**	**88**	⇑*i*Pn	**Pn**	**21 34 56.1**	**-0.1**
VAY				*i* Sg	**Sg**	**21 35 20.5**	**+0.4**
VAY				*e*Lg	Lg	21 35 21.0	
	comp=N,40nm,0.5s						
VAY				*e*Lg	Lg	21 35 21.2	
	comp=E,21nm,0.5s						
VAY	**Valandovo**	**1.67**	**88**	*e*Pn	**Pb**	**21 34 57.7**	**+0.1**
VAY				*e*Sg	**Sg**	**21 35 21.1**	**+0.9**
KOME	**Kolasin**	**1.68**	**339**	⇓*i*Pn	**Pb**	**21 34 57.0**	**-0.8**
KOME				*e*Sn	**Sg**	**21 35 22.1**	**+1.7**
KOME	**Kolasin**	**1.68**	**339**	⇓*i*Pn	**Pb**	**21 34 57.0**	**-0.8**
KOME				*e*Sn	**Sg**	**21 35 22.1**	**+1.7**
HCY	**Herceg Novi**	**1.81**	**310**	⇓*i*Pn	**Pn**	**21 34 58.2**	**+0.1**
HCY				*e*Sn	**Sg**	**21 35 24.9**	**+0.4**
HCY	**Herceg Novi**	**1.81**	**310**	⇓*i*Pn	**Pn**	**21 34 58.2**	**+0.1**
HCY				*e*Sn	**Sg**	**21 35 24.9**	**+0.4**
NKME	**Niksic**	**1.81**	**325**	*e*Pn	**Pn**	**21 34 58.7**	**+0.6**
NKME				*e*Sn	**Sg**	**21 35 25.4**	**+0.9**
NKME	**Niksic**	**1.81**	**325**	*e*Pn	**Pn**	**21 34 58.7**	**+0.6**
NKME				*e*Sn	**Sg**	**21 35 25.4**	**+0.9**
NKY	**Niksic**	**1.83**	**327**	⇓*i*Pn	**Pb**	**21 34 59.5**	**-0.8**
NKY				*e*Sn	**Sg**	**21 35 26.2**	**+1.0**
NKY	**Niksic**	**1.83**	**327**	⇓*i*Pn	**Pb**	**21 34 59.5**	**-0.8**
NKY				*e*Sn	**Sg**	**21 35 26.2**	**+1.0**
SJES	**Sjenica**	**1.99**	**352**	*e*Pn	**Pb**	**21 35 03.1**	**0.0**
SJES				*e*Sn	**Sg**	**21 35 30.1**	**-0.3**
SELS	**Selova**	**2.01**	**16**	*e*Pn	**Pb**	**21 35 03.3**	**-0.1**
BRY	**Bratogost**	**2.10**	**321**	⇓*i*Pn	**Pn**	**21 35 03.1**	**+0.8**
BRY				*e*Sn	**Sb**	**21 35 32.2**	**+0.8**
BRY	**Bratogost**	**2.10**	**321**	⇓*i*Pn	**Pn**	**21 35 03.1**	**+0.8**
BRY				*e*Sn	**Sb**	**21 35 32.2**	**+0.8**
PLE	**Pljevlja**	**2.16**	**341**	⇓*i*Pn	**Pn**	**21 35 04.0**	**+0.9**
PLE				*e*Sn	**Sb**	**21 35 34.0**	**+0.9**
PLE	**Pljevlja**	**2.16**	**341**	⇓*i*Pn	**Pn**	**21 35 04.0**	**+0.9**
PLE				*e*Sn	**Sb**	**21 35 34.0**	**+0.9**
UPM	**Unac-Piva**	**2.19**	**331**	⇑*i*Pn	**Pn**	**21 35 04.5**	**+0.9**
UPM				*e*Sn	**Sb**	**21 35 34.5**	**+0.4**
UPM	**Unac-Piva**	**2.19**	**331**	⇑*i*Pn	**Pn**	**21 35 04.5**	**+0.9**
UPM				*e*Sn	**Sb**	**21 35 34.5**	**+0.4**
IVAS	**Ivanjica**	**2.29**	**356**	*e*Pn	**Pb**	**21 35 07.3**	**-0.9**
IVAS				*e*Sn	**Sb**	**21 35 36.6**	**-0.2**
IVAS	**Ivanjica**	**2.29**	**356**	*e*Pn	**Pb**	**21 35 07.3**	**-0.9**
IVAS				*e*Sn	**Sb**	**21 35 36.6**	**-0.2**
STON	**Ston**	**2.53**	**310**	*e*Pn	**Pb**	**21 35 10.2**	**-2.0**
STON	**Ston**	**2.53**	**310**	*e*Pn	**Pn**	**21 35 09.2**	**+1.3**
STON				Sn	**Sn**	**21 35 39.6**	**+0.6**
STON	**Ston**	**2.53**	**310**	*e*Pn	**Pn**	**21 35 09.2**	**+1.3**
STON				Sn	**Sn**	**21 35 39.6**	**+0.6**
ZAPS	**Zavoj**	**2.61**	**40**	*e*Pn	**Pb**	**21 35 11.5**	**-2.1**
ZAPS				*e*Sn	**Sb**	**21 35 43.6**	**-2.3**
ZAPS	**Zavoj**	**2.61**	**40**	*e*Pn	**Pb**	**21 35 11.5**	**-2.1**
ZAPS				*e*Sn	**Sb**	**21 35 43.6**	**-2.3**
GRUS	**Gruza**	**2.61**	**6**	*e*Pn	**Pb**	**21 35 11.8**	**-1.8**
GRUS				*e*Sn	**Sb**	**21 35 45.2**	**-0.7**
GRUS	**Gruza**	**2.61**	**6**	*e*Pn	**Pb**	**21 35 11.8**	**-1.8**
GRUS				*e*Sn	**Sb**	**21 35 45.2**	**-0.7**
BBLS	**Lazići**	**2.67**	**345**	*e*Pn	**Pn**	**21 35 11.8**	**+1.8**
BBLS				*e*Sn	**Sb**	**21 35 45.9**	**-1.7**
BBLS	**Lazići**	**2.67**	**345**	*e*Pn	**Pn**	**21 35 11.8**	**+1.8**
BBLS				*e*Sn	**Sb**	**21 35 45.9**	**-1.7**
DIVS	**Divibare**	**2.82**	**355**	*e*Pn	**Pn**	**21 35 14.3**	**+2.2**
DIVS				*e*Sn	**Sb**	**21 35 49.3**	**-2.7**
DIVS	**Divibare**	**2.82**	**355**	*e*Pn	**Pn**	**21 35 14.3**	**+2.2**
DIVS				*e*Sn	**Sb**	**21 35 49.3**	**-2.7**
ZAGS	**Zajecar**	**2.88**	**28**	*e*Pn	**Pn**	**21 35 15.2**	**+2.4**
ZAGS				*e*Sn	**Sb**	**21 35 50.7**	**-2.9**
ZAGS	**Zajecar**	**2.88**	**28**	*e*Pn	**Pn**	**21 35 15.2**	**+2.4**
ZAGS				*e*Sn	**Sb**	**21 35 50.7**	**-2.9**
KUBS	**Kucevo**	**3.27**	**17**	*e*Pn	**Pn**	**21 35 19.0**	**+0.8**
KUBS	**Kucevo**	**3.27**	**17**	*e*Pn	**Pn**	**21 35 19.0**	**+0.8**

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*ISCJB **03** 21:59:48.7±0.7,44.°81N±0.°03×10.°81E±0.°05,h21km±3km, Error ellipse: s-maj=6.4km s-min=5.0km az=42.5*
*CSEM **03** 21:59:48.4±0.3,44.°89N×10.°79E,h15km,ML2.2,Error ellipse: s-maj=6.5km s-min=4.0km az=75.0*
*ROM **03** 21:59:49.5±0.0,44.°887N±0.°001×10.°907E±0.°001, h7km,ML2.3/16*
*VIE **03** 21:59:49.5±0.3,45.°01N×10.°69E,h7km±4km,mb1.8/5, ml2.2/7,Error ellipse: s-maj=5.4km s-min=2.0km az=108.0 76 km NW of Bologna*
ISC 03 21:59:50.4±0.8,44.°90N±0.°02×10.°88E±0.°02,h13km±4km, n72,σ1§08/105,7C-14D,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NDIM	**Novi di Modena**	**0.02**	**136**	*i* P	**Pg**	**21 59 51.3**	**-1.3**
NDIM				*i* S	**Sg**	**21 59 52.8**	**-1.3**
T0827	**Moglia (MN)**	**0.05**	**43**	⇑*i*P	**Pg**	**21 59 51.9**	**-0.9**
T0827				*i* S	**Sg**	**21 59 54.8**	**+0.2**
T0827	**Moglia (MN)**	**0.05**	**43**	*i* P	**Pg**	**21 59 51.9**	**-0.9**
T0827				*i* S	**Sg**	**21 59 54.8**	**+0.2**
T0828	**Loc. Fossoli,**	**0.07**	**162**	⇓*i*P	**Pg**	**21 59 51.7**	**-1.3**
T0828				*i* S	**Sg**	**21 59 54.5**	**-0.3**
T0828	**Loc. Fossoli,**	**0.07**	**162**	*i* P	**Pg**	**21 59 51.7**	**-1.3**
T0828				*i* S	**Sg**	**21 59 54.5**	**-0.3**
T0825	**Gonzaga (MN)**	**0.08**	**341**	⇓*i*P	**Pg**	**21 59 53.8**	**+0.7**
T0825				*i* S	**Sg**	**21 59 57.7**	**+2.7**
T0825	**Gonzaga (MN)**	**0.08**	**341**	*i* P	**Pg**	**21 59 53.8**	**+0.7**
T0825				*i* S	**Sg**	**21 59 57.7**	**+2.7**
T0826	**Rio Saliceto (**	**0.08**	**220**	⇓*i*P	**Pg**	**21 59 52.2**	**-0.8**
T0826				*i* S	**Sg**	**21 59 55.4**	**+0.4**
T0826	**Rio Saliceto (**	**0.08**	**220**	*i* P	**Pg**	**21 59 52.2**	**-0.8**
T0826				*i* S	**Sg**	**21 59 55.4**	**+0.4**
T0826				AML	AML		
	comp=E,9935μm,0.5s						
T0826				AML	AML		
	comp=N,15900μm,0.2s						
T0826				AML	AML		
	comp=E,9900μm,0.5s						
T0826				AML	AML		
	comp=N,15950μm,0.2s						
T0826				AML	AML		
	comp=N,15950μm,0.2s						
T0826				AML	AML		
	comp=E,9900μm,0.5s						
T0818	**Loc. Fossa, Co**	**0.11**	**71**	⇑*i*P	**Pg**	**21 59 52.6**	**-0.8**
T0818				*i* S	**Sg**	**21 59 56.1**	**+0.5**
T0818	**Loc. Fossa, Co**	**0.11**	**71**	*i* P	**Pg**	**21 59 52.6**	**-0.8**
T0818				*i* S	**Sg**	**21 59 56.1**	**+0.5**
T0814	**Loc. Cortile,**	**0.12**	**150**	⇓*i*P	**Pg**	**21 59 52.6**	**-1.0**
T0814				*i* S	**Sg**	**21 59 56.9**	**+1.0**
T0814	**Loc. Cortile,**	**0.12**	**150**	*i* P	**Pg**	**21 59 52.6**	**-1.0**
T0814				*i* S	**Sg**	**21 59 56.9**	**+1.0**
T0824	**Loc. Limidi di**	**0.14**	**167**	⇓*i*P	**Pg**	**21 59 53.2**	**-0.7**
T0824				*i* S	**Sg**	**21 59 57.2**	**+0.8**
T0824	**Loc. Limidi di**	**0.14**	**167**	*i* P	**Pg**	**21 59 53.2**	**-0.7**
T0824				*i* S	**Sg**	**21 59 57.2**	**+0.8**
SBPO	**S.Benedetto Po**	**0.15**	**10**	⇓*i*P	**Pg**	**21 59 53.9**	**-0.1**
SBPO	**S.Benedetto Po**	**0.15**	**10**	*i* P	**Pg**	**21 59 53.9**	**-0.1**
NOVE	**Novellara**	**0.16**	**229**	⇓*e*P	**Pg**	**21 59 53.7**	**-0.4**
NOVE				*e*S	**Sg**	**21 59 58.3**	**+1.7**
NOVE	**Novellara**	**0.16**	**229**	*e*P	**Pg**	**21 59 53.7**	**-0.4**
NOVE				*e*S	**Sg**	**21 59 58.3**	**+1.7**
NOVE				AML	AML		
	comp=E,2585μm,0.7s						
NOVE				AML	AML		
	comp=N,2335μm,0.3s						
NOVE				AML	AML		
	comp=E,2585μm,0.7s						
NOVE				AML	AML		
	comp=N,2335μm,0.3s						
NOVE				AML	AML		
	comp=N,2335μm,0.3s						
NOVE				AML	AML		
	comp=E,2585μm,0.7s						
T0802	**SanFelice sul**	**0.21**	**96**	⇓*i*P	**Pg**	**21 59 54.2**	**-0.8**
T0802				*i* S	**Sg**	**21 59 59.7**	**+1.5**
T0802	**SanFelice sul**	**0.21**	**96**	*i* P	**Pg**	**21 59 54.2**	**-0.8**
T0802				*i* S	**Sg**	**21 59 59.7**	**+1.5**
T0802				AML	AML		
	comp=E,1870μm,0.2s						
T0802				AML	AML		
	comp=N,2165μm,1.5s						
T0802				AML	AML		
	comp=E,1870μm,0.2s						
T0802				AML	AML		
	comp=N,2165μm,1.4s						
T0802				AML	AML		
	comp=N,2165μm,1.4s						
T0802				AML	AML		
	comp=E,1870μm,0.2s						
T0812	**Loc. Stoppiaro**	**0.22**	**75**	*i* P	**Pg**	**21 59 54.3**	**-0.8**
T0812				*i* S	**Sb**	**22 00 02.4**	**+2.2**
T0812	**Loc. Stoppiaro**	**0.22**	**75**	*i* P	**Pg**	**21 59 54.3**	**-0.8**
T0812				*i* S	**Sb**	**22 00 02.4**	**+2.2**
RAVA	**Ravarino**	**0.22**	**130**	⇑*i*P	**Pg**	**21 59 54.5**	**-0.7**
RAVA				*i* S	**Sg**	**21 59 59.8**	**+1.4**
RAVA	**Ravarino**	**0.22**	**130**	*i* P	**Pg**	**21 59 54.5**	**-0.7**
RAVA				*i* S	**Sg**	**21 59 59.8**	**+1.4**
RAVA				AML	AML		
	comp=E,2000μm,0.3s						
RAVA				AML	AML		
	comp=N,1505μm,0.9s						
RAVA				AML	AML		
	comp=E,2005μm,0.3s						
RAVA				AML	AML		
	comp=N,1500μm,0.9s						
RAVA				AML	AML		
	comp=E,2005μm,0.3s						
RAVA				AML	AML		
	comp=N,1500μm,0.9s						
T0813	**Massa Finalese**	**0.23**	**95**	⇑*i*P	**Pg**	**21 59 54.4**	**-0.8**
T0813				*i* S	**Sg**	**21 59 59.3**	**+0.8**
T0813	**Massa Finalese**	**0.23**	**95**	*i* P	**Pg**	**21 59 54.4**	**-0.8**
T0813				*i* S	**Sg**	**21 59 59.3**	**+0.8**
GAZZ	**Gazzo Veronese**	**0.26**	**35**	⇑*e*Pg	**Pg**	**21 59 55.5**	**-0.4**
GAZZ	**Gazzo Veronese**	**0.26**	**35**	*e*Pg	**Pg**	**21 59 55.5**	**-0.4**
T0800	**Massa Finalese**	**0.27**	**101**	⇓*e*P	**Pg**	**21 59 54.9**	**-1.0**
T0800				*e*S	**Sg**	**22 00 00.3**	**+0.7**
T0800	**Massa Finalese**	**0.27**	**101**	*e*P	**Pg**	**21 59 54.9**	**-1.0**
T0800				*e*S	**Sg**	**22 00 00.3**	**+0.7**
T0800				AML	AML		
	comp=E,2245μm,0.3s						
T0800				AML	AML		
	comp=N,1665μm,0.3s						
T0800				AML	AML		
	comp=E,1915μm,0.3s						
T0800				AML	AML		
	comp=N,1605μm,0.5s						
T0800				AML	AML		
	comp=E,2250μm,0.3s						
T0800				AML	AML		
	comp=N,1670μm,0.3s						
T0800				AML	AML		
	comp=E,1920μm,0.3s						
T0800				AML	AML		
	comp=N,1610μm,0.5s						
T0800				AML	AML		
	comp=N,1610μm,0.5s						
T0800				AML	AML		
	comp=N,1670μm,0.3s						
T0800				AML	AML		
	comp=E,2250μm,0.3s						
T0800				AML	AML		
	comp=E,1920μm,0.3s						
T0811	**Palata Pepoli**	**0.27**	**115**	*i* P	**Pg**	**21 59 55.3**	**-0.7**
T0811				*i* S	**Sg**	**22 00 00.9**	**+1.1**
T0811	**Palata Pepoli**	**0.27**	**115**	*i* P	**Pg**	**21 59 55.3**	**-0.7**
T0811				*i* S	**Sg**	**22 00 00.9**	**+1.1**
T0805	**Bondeno (FE)**	**0.31**	**86**	*i* P	**Pg**	**21 59 55.7**	**-1.1**
T0805	**Bondeno (FE)**	**0.31**	**86**	*i* P	**Pg**	**21 59 55.7**	**-1.1**
T0823	**Castello D'Arg**	**0.35**	**127**	⇓*i*P	**Pg**	**21 59 57.1**	**-0.4**
T0823				*i* S	**Sb**	**22 00 05.5**	**+1.5**
T0823	**Castello D'Arg**	**0.35**	**127**	*i* P	**Pg**	**21 59 57.1**	**-0.4**
T0823				*i* S	**Sb**	**22 00 05.5**	**+1.5**
T0817	**Loc. Veratica,**	**0.42**	**77**	⇓*i*P	**Pg**	**21 59 58.8**	**+0.1**
T0817				*i* S	**Sb**	**22 00 06.6**	**+0.7**
T0817	**Loc. Veratica,**	**0.42**	**77**	*i* P	**Pg**	**21 59 58.8**	**+0.1**
T0817				*i* S	**Sb**	**22 00 06.6**	**+0.7**
PRMA	**PARMA**	**0.43**	**252**	AML	AML		
	comp=N,154μm,0.4s						
PRMA				AML	AML		
	comp=E,184μm,0.5s						
PRMA				AML	AML		
	comp=N,154μm,0.4s						
PRMA				AML	AML		
	comp=E,184μm,0.5s						
PRMA				AML	AML		
	comp=E,184μm,0.5s						
PRMA				AML	AML		
	comp=N,154μm,0.4s						
TEOL	**Teolo**	**0.72**	**50**	⇑*e*Pg	**Pg**	**22 00 03.6**	**-0.8**
TEOL				*e*Sg	**Sb**	**22 00 15.4**	**+0.7**
TEOL	**Teolo**	**0.72**	**50**	*e*Pg	**Pg**	**22 00 03.6**	**-0.8**
TEOL				*e*Sg	**Sb**	**22 00 15.4**	**+0.7**
TEOL	**Teolo**	**0.72**	**50**	AML	AML		
	comp=E,238μm,0.4s						
TEOL				AML	AML		
	comp=E,238μm,0.4s						
TEOL				AML	AML		
	comp=N,334μm,0.3s						
TEOL				AML	AML		
	comp=N,334μm,0.3s						
ROVR	**Rover¨¤ Verone**	**0.76**	**10**	AML	AML		
	comp=N,319μm,0.2s						
ROVR				AML	AML		
	comp=E,155μm,0.6s						
ROVR				AML	AML		
	comp=E,155μm,0.6s						
ROVR				AML	AML		
	comp=N,319μm,0.2s						
SALO	**Salr**	**0.76**	**341**	AML	AML		
	comp=E,117μm,1.5s						
SALO				AML	AML		
	comp=N,159μm,0.6s						
SALO				AML	AML		
	comp=E,117μm,1.5s						
SALO				AML	AML		
	comp=N,159μm,0.6s						
MARN	**Marana (Italy)**	**0.77**	**17**	⇓*e*Pg	**Pg**	**22 00 05.0**	**-0.4**
MARN				*e*Sg	**Sn**	**22 00 18.6**	**0.0**
MARN	**Marana (Italy)**	**0.77**	**17**	*e*Pg	**Pg**	**22 00 05.0**	**-0.4**
MARN				*e*Sg	**Sn**	**22 00 18.6**	**0.0**
BALD	**Monte Baldo**	**0.79**	**357**	⇓*e*Pg	**Pb**	**22 00 05.9**	**-0.1**
BALD				*e*Sg	**Sb**	**22 00 17.9**	**+1.2**
BALD	**Monte Baldo**	**0.79**	**357**	*e*Pg	**Pb**	**22 00 05.9**	**-0.1**
MAGA	**Magasa**	**0.89**	**349**	AML	AML		
	comp=E,427μm,1.2s						
MAGA				AML	AML		
	comp=E,427μm,1.2s						
MAGA				AML	AML		
	comp=N,248μm,0.3s						
MAGA				AML	AML		
	comp=N,248μm,0.3s						
MAGA				AML	AML		
	comp=E,427μm,1.2s						
MAGA				AML	AML		
	comp=N,248μm,0.3s						
DOSS	**Dosso del Somm**	**1.00**	**12**	*e*Pg	**Pg**	**22 00 08.8**	**-1.0**
DOSS				*e*Sg	**Sb**	**22 00 23.4**	**+0.4**
DOSS	**Dosso del Somm**	**1.00**	**12**	*e*Pg	**Pg**	**22 00 08.8**	**-1.0**
DOSS				*e*Sg	**Sb**	**22 00 23.4**	**+0.4**
MAIM	**Mastiano**	**1.02**	**196**	AML	AML		
	comp=E,46μm,1.6s						
MAIM				AML	AML		
	comp=E,46μm,1.6s						
MAIM				AML	AML		
	comp=N,70μm,1.0s						
MAIM				AML	AML		
	comp=N,70μm,1.0s						
CGRP	**Cima Grappa**	**1.18**	**33**	⇓*e*Pg	**Pg**	**22 00 11.6**	**-1.4**
CGRP				*e*Sg	**Sb**	**22 00 28.9**	**+1.0**
CGRP	**Cima Grappa**	**1.18**	**33**	*e*Pg	**Pg**	**22 00 11.6**	**-1.4**
CGRP				*e*Sg	**Sb**	**22 00 28.9**	**+1.0**
CGRP	**Cima Grappa**	**1.18**	**33**	AML	AML		
	comp=N,49μm,0.5s						
CGRP				AML	AML		
	comp=E,63μm,1.2s						
CGRP				AML	AML		
	comp=N,49μm,0.5s						
CGRP				AML	AML		
	comp=E,63μm,1.2s						
MABI	**Malga Bissina**	**1.18**	**348**	AML	AML		
	comp=N,27μm,1.4s						
MABI				AML	AML		
	comp=E,34μm,0.5s						
MABI				AML	AML		
	comp=N,27μm,1.4s						
MABI				AML	AML		
	comp=E,34μm,0.5s						
PANI	**Panarotta**	**1.19**	**15**	⇑*e*Pg	**Pg**	**22 00 11.1**	**-2.3**
PANI	**Panarotta**	**1.19**	**15**	*e*Pg	**Pg**	**22 00 11.1**	**-2.3**
CTI	**Castel Tesino**	**1.27

	comp=E,301μm,0.2s					
PARC			AML	AML		
	comp=N,427μm,0.1s					
SSP9	**Sansepolcro**	**0.10 210**	P	Pg	22 00 06.4	+0.6
SSP9			S	Sg	22 00 08.3	+0.8
SSP9	**Sansepolcro**	**0.10 210**	P	Pg	22 00 06.4	+0.6
SSP9			S	Sg	22 00 08.3	+0.8
SSP9			AML	AML		
	comp=E,69μm,1.6s					
SSP9			AML	AML		
	comp=N,76μm,1.6s					
SSP9			AML	AML		
	comp=E,69μm,1.6s					
SSP9			AML	AML		
	comp=N,76μm,1.6s					
BADI	**Badiali**	**0.15 167**	P	Pg	22 00 07.4	+0.7
BADI			S	Sg	22 00 10.1	+1.2
BADI	**Badiali**	**0.15 167**	P	Pg	22 00 07.4	+0.7
BADI			S	Sg	22 00 10.1	+1.2
BADI			AML	AML		
	comp=E,124μm,1.2s					
BADI			AML	AML		
	comp=N,103μm,1.3s					
ATMC	**Monte Cedrone**	**0.21 181**	P	Pg	22 00 08.4	+0.7
ATMC			S	Sg	22 00 11.7	+1.0
ATMC	**Monte Cedrone**	**0.21 181**	P	Pg	22 00 08.4	+0.7
ATMC			S	Sg	22 00 11.7	+1.0
ATMC			AML	AML		
	comp=E,137μm,1.0s					
ATMC			AML	AML		
	comp=N,59μm,0.1s					
ATMC			AML	AML		
	comp=E,138μm,1.0s					
ATMC			AML	AML		
	comp=N,59μm,0.1s					
ATMC			AML	AML		
	comp=E,138μm,1.0s					
ATMC			AML	AML		
	comp=N,59μm,0.1s					
ATPI	**Pietralunga -**	**0.26 144**	P	Pg	22 00 09.2	+0.7
ATPI			S	Sb	22 00 13.6	-1.2
ATPI	**Pietralunga -**	**0.26 144**	P	Pg	22 00 09.2	+0.7
ATPI			S	Sb	22 00 13.6	-1.1
ATPC	**Poggio Castell**	**0.26 133**	P	Pg	22 00 09.4	+0.8
ATPC			S	Sb	22 00 14.2	-0.7
ATPC	**Poggio Castell**	**0.26 133**	P	Pg	22 00 09.4	+0.8
ATPC			S	Sb	22 00 14.2	-0.7
ATPC			AML	AML		
	comp=E,63μm,1.2s					
ATPC			AML	AML		
	comp=N,42μm,1.4s					
ATPC			AML	AML		
	comp=E,63μm,1.2s					
ATPC			AML	AML		
	comp=N,42μm,1.4s					
ATPC			AML	AML		
	comp=N,42μm,1.4s					
ATPC			AML	AML		
	comp=E,63μm,1.2s					
PIEI	**Pieia**	**0.27 116**	P	Pg	22 00 09.5	+0.6
PIEI			S	Sb	22 00 14.2	-1.1
PIEI	**Pieia**	**0.27 116**	P	Pg	22 00 09.5	+0.6
PIEI			S	Sb	22 00 14.2	-1.1
PIEI			AML	AML		
	comp=E,37μm,0.7s					
PIEI			AML	AML		
	comp=N,26μm,0.2s					
PIEI			AML	AML		
	comp=E,37μm,0.7s					
PIEI			AML	AML		
	comp=N,26μm,0.2s					
PIEI			AML	AML		
	comp=E,37μm,0.7s					
PIEI			AML	AML		
	comp=N,26μm,0.2s					
ATVO	**AVT- Monte Val**	**0.32 151**	P	Pg	22 00 10.3	+0.6
ATVO			S	Sg	22 00 15.0	+1.2
ATVO	**AVT- Monte Val**	**0.32 151**	P	Pg	22 00 10.3	+0.7
ATVO			S	Sb	22 00 16.0	-0.5
ATVO			AML	AML		
	comp=E,40μm,1.4s					
ATVO			AML	AML		
	comp=N,32μm,1.5s					
ATVO			AML	AML		
	comp=E,40μm,1.4s					
ATVO			AML	AML		
	comp=N,31μm,1.5s					
ATVO			AML	AML		
	comp=E,40μm,1.4s					
ATVO			AML	AML		
	comp=N,31μm,1.5s					
CAFI	**Castiglion Fio**	**0.37 207**	P	Pg	22 00 11.2	+0.5
CAFI			S	Sb	22 00 17.5	-0.5
CAFI	**Castiglion Fio**	**0.37 207**	P	Pg	22 00 11.2	+0.6
CAFI			S	Sb	22 00 17.5	-0.6
CAFI			AML	AML		
	comp=E,14μm,1.0s					
CAFI			AML	AML		
	comp=N,19μm,1.5s					
CAFI			AML	AML		
	comp=E,14μm,1.6s					
CAFI			AML	AML		
	comp=N,19μm,1.5s					
CAFI			AML	AML		
	comp=N,19μm,1.5s					
CAFI			AML	AML		
	comp=E,14μm,1.6s					

CSEM ***03*** *22:00:23.7, 44°.87N×10°.91E, h23km, MD1.1/2*
ROM 03 22:00:23.7±0.5, 44°.865N±0°.009×10°.91E±0°.01, h23km±2km, Md1.1/2, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0826	**Rio Saliceto (**	**0.07**	**250**	P	Pb	22 00 27.2	-0.7
T0826				S	Sb	22 00 30.3	-0.4
T0826	**Rio Saliceto (**	**0.07**	**250**	P	Pb	22 00 27.2	-0.6
T0826				S	Sb	22 00 30.3	-0.4
T0826				END			
T0826				END			
T0825	**Gonzaga (MN)**	**0.12**	**338**	P	Pb	22 00 28.2	0.0
T0825				S	Sb	22 00 31.9	+0.6
T0825	**Gonzaga (MN)**	**0.12**	**338**	P	Pb	22 00 28.1	-0.1
T0825				S	Sb	22 00 31.9	+0.7
T0825				END			
T0825				END			
NOVE	**Novellara**	**0.15**	**244**	P	Pb	22 00 28.6	+0.1
NOVE	**Novellara**	**0.15**	**244**	P	Pb	22 00 28.6	0.0
RAVA	**Ravarino**	**0.19**	**126**	P	Pn	22 00 30.1	-1.0
RAVA				S	Sb	22 00 35.1	+2.6
RAVA	**Ravarino**	**0.19**	**126**	P	Pn	22 00 30.1	-1.0
RAVA				S	Sb	22 00 35.1	+2.6
T0802	**SanFelice sul**	**0.20**	**87**	P	Pb	22 00 29.5	+0.4
T0802				S	Sb	22 00 34.2	+1.5
T0802	**SanFelice sul**	**0.20**	**87**	P	Pb	22 00 29.5	+0.4
T0802				S	Sb	22 00 34.2	+1.5

JMA 03 22:16:54.9±0.1, 39°.17N×142°.40E, h31km±1km, M3.8, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.58**	**261**	P	Pb	22 17 06.4	-0.2
OFUJ				*e*S	Sb	22 17 14.3	-0.3
MIYJ	**Miyakonagasawa**	**0.61**	**312**	P	Pb	22 17 06.3	-0.8
MIYJ				*e*S	Sb	22 17 14.9	-0.6
JTH	**Tanohata**	**0.87**	**332**	P	Pn	22 17 10.7	-0.3
JOM	**Ohasama**	**0.91**	**290**	P	Pn	22 17 11.8	+0.2
JOM				*e*S	Sb	22 17 24.0	0.0
JMK	**Ichinoseki**	**0.94**	**257**	P	Pn	22 17 12.0	0.0
JMK				*e*S	Sb	22 17 24.8	-0.1
JIO	**Ouri**	**1.09**	**229**	P	Pn	22 17 13.5	-0.5
JIO				*e*S	Sn	22 17 26.3	-1.7
JKZ	**Kuzumaki**	**1.16**	**315**	P	Pn	22 17 15.7	+0.7
JKZ				*e*S	Sb	22 17 30.6	-0.5
JANG	**Nango**	**1.38**	**331**	P	Pn	22 17 18.3	+0.2
JANG				*e*S	Sn	22 17 36.3	+1.0
JRG	**Rokugo**	**1.39**	**280**	P	Pn	22 17 19.1	+1.0
JRG				*e*S	Sb	22 17 38.0	+0.4

ISCJB ***03*** *22:16:54.2±0.8, 39°.18N±0°.05×142°.58E±0°.07, h27km, mb3.7/6, Error ellipse: s-maj=7.9km s-min=7.1km az=137.9*
JMA ***03*** *22:16:57.8±0.1, 39°.17N×142°.34E, h31km±1km, M3.9*
JMA Felt I J1.
IDC ***03*** *22:17:01.0±2.2, 39°.14N×142°.43E, h80km±19km, mb3.4/5, mb1 3.5/8, mb1mx3.2/66, mbtmp3.7/8, Error ellipse: s-maj=25.3km s-min=11.0km az=111.0*
ISC 03 22:16:56.4±1.0, 39°.09N±0°.05×142°.45E±0°.08, h27km, n21, σ2§55/21, mb3.8/6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.61**	**269**	P	Pn	22 17 08.6	-0.6
OFUJ				*e*S	Sb	22 17 16.2	-0.5
MIYJ	**Miyakonagasawa**	**0.69**	**315**	P	Pb	22 17 08.9	-0.9
MIYJ				*e*S	Sb	22 17 16.9	-2.0
JMK	**Ichinoseki**	**0.97**	**262**	P	Pb	22 17 14.3	-0.2
JOM	**Ohasama**	**0.97**	**293**	P	Pb	22 17 13.9	-0.7
JOM				*e*S	Sb	22 17 25.9	-1.2
JIO	**Ouri**	**1.07**	**234**	*e*S	Sb	22 17 30.1	+0.3
MJAR	**Matsushiro Arr**	**4.21**	**234**	P	Pn	22 18 01.3	+2.5
	2.2nm,0.3s,baz=40,slow=10,SNR=36						
MJAR				S	Sn	22 18 52.1	+4.9
	baz=51,slow=21,SNR=2.4						
MAT	**Matsushiro**	**4.21**	**234**	P	Pn	22 18 02.0	+3.1
MAT				*e*S	Sb	22 18 55.5	-4.7
ASAJ	**Asahikawa**	**5.02**	**1**	P	Pn	22 18 11.8	+1.8
	1.2nm,0.3s,baz=200,slow=19,SNR=5.2						
ASAJ				S	Sn	22 19 11.1	+4.1
	1.1nm,0.3s,baz=246,slow=32,SNR=4.9						
KSRS	**Korea Array**	**11.54**	**266**	P	Pn	22 19 43.1	+3.8
	0.1nm,0.3s,baz=74,slow=14,SNR=5.4						
H11N2	**WAKE ISLAND Hy**	**28.59**	**125**	T	T	22 53 16.4	
	baz=318,slow=75,SNR=120						
H11N1	**WAKE ISLAND Hy**	**28.59**	**125**	T	T	22 53 17.1	
	baz=318,slow=75,SNR=93						
H11N3	**WAKE ISLAND Hy**	**28.60**	**125**	T	T	22 53 17.7	
	baz=318,slow=75,SNR=113						
H11S1	**WAKE ISLAND Hy**	**29.37**	**127**	T	T	22 54 23.6	
	baz=319,slow=76,SNR=6.4						
H11S3	**WAKE ISLAND Hy**	**29.38**	**127**	T	T	22 54 24.4	
	baz=319,slow=76,SNR=11						
H11S2	**WAKE ISLAND Hy**	**29.39**	**127**	T	T	22 54 22.5	
	baz=319,slow=76,SNR=8.8						
ZALV	**Zalesovo Beam**	**41.16**	**311**	P	P	22 24 36.7	-1.5
	1.0nm,0.5s,baz=94,slow=8.2,SNR=5.2						
MKAR	**Makanchi Array**	**43.75**	**300**	P	P	22 24 57.2	-2.2
	0.5nm,0.7s,baz=76,slow=6.6,SNR=3.8						
KURBB	**Kurchatov Arra**	**45.41**	**307**	P	P	22 25 11.2	-1.2
	0.9nm,0.3s,baz=79,slow=8.5,SNR=8.9						
ILAR	**Eielson Array**	**47.33**	**33**	P	P	22 25 26.1	-1.3
	0.6nm,0.7s,baz=260,slow=5.8,SNR=6.2						
WRA	**Warramunga Arr**	**59.21**	**189**	P	P	22 26 54.1	-1.1
	1.2nm,0.7s,baz=7.0,slow=7.1,SNR=13						
ASAR	**Alice Springs**	**62.94**	**189**	P	P	22 27 19.4	-1.1
	0.5nm,0.7s,baz=9.1,slow=14,SNR=5.1						

ISCJB ***03*** *22:19:18.7±1.0, 7°.53N±0°.09×81°.13W±0°.03, h10km, Error ellipse: s-maj=13.0km s-min=4.1km az=0.6*
UCR ***03*** *22:19:19.4±2.0, 7°.58N×81°.14W, h6km±15km, MD4.7*
ISC 03 22:19:20.9±2.0, 7°.7N±0°.1×81°.16W±0°.04, h10km, n22, σ1§15/31, 2C-5D, Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZANG	**Zanguenga, Cho**	**1.77**	**46**	⇓*i*P	Pn	22 19 51.0	-0.6
ZANG				*e*S	Sb	22 20 15.6	-0.1
BRU2	**Volcan**	**1.85**	**305**	⇑*e*P	Pn	22 19 52.2	-0.7
BRU2				*e*S	Sg	22 20 19.6	-0.9
PINA	**Piqa, Costa Ab**	**1.86**	**35**	⇓*i*P	Pn	22 19 52.6	-0.3
BCIP	**Isla Barro Col**	**1.94**	**42**	⇓*i*P	Pn	22 19 53.5	-0.4
BCIP				*e*S	Sb	22 20 19.6	-1.0
BCIP	**Isla Barro Col**	**1.94**	**42**	⇓*i*P	Pn	22 19 53.6	-0.4
BCIP				*e*S	Sb	22 20 20.7	+0.1
EDSV	**San Vito**	**2.10**	**301**	*e*P	Pn	22 19 55.7	-0.6
EDSV				*e*S	Sn	22 20 23.5	+1.0
ACR	**Cerro Adams**	**2.19**	**295**	*e*P	Pn	22 19 55.4	-2.1
ACR				*e*S	Sn	22 20 25.1	+0.4
PTJ1	**Puerto Jim¨ne**	**2.27**	**291**	*e*P	Pn	22 19 59.6	+1.1
PTJ1				*e*S	Sb	22 20 29.1	-1.0
EDBA	**Buenos Aires**	**2.53**	**304**	*e*P	Pn	22 20 02.5	+0.3
EDPN	**Palmar Norte**	**2.58**	**298**	⇓*e*P	Pn	22 20 03.4	+0.6
EDPN				*e*S	Sb	22 20 37.4	-1.9
EDDO	**Dominical**	**3.08**	**300**	*e*P	Pn	22 20 09.9	+0.3
BUS	**Buena Vista**	**3.15**	**305**	*e*P	Pn	22 20 09.9	-1.1
URSC	**Urasca**	**3.33**	**309**	*e*P	Pn	22 20 13.5	+0.2
URSC				*e*S	Sn	22 20 55.1	+2.1
VTR0	**Volcan Turrial**	**3.43**	**312**	*e*P	Pn	22 20 15.4	+0.5
CVTR	**Volcan Turrial**	**3.43**	**312**	*e*P	Pn	22 20 15.7	+0.8
HDC	**Heredia**	**3.69**	**308**	*e*P	Pn	22 20 19.3	+1.0
CAPC	**Capurgana**	**3.88**	**76**	*e*P	Pn	22 20 20.4	-0.3
CGA2	**Cerro Gallo 2**	**3.98**	**305**	*e*P	Pn	22 20 23.0	+0.8
JTS	**JuntasAbangare**	**4.53**	**304**	⇑*e*P	Pn	22 20 32.8	+3.2
CUI	**Cuipilapa**	**4.91**	**307**	*e*P	Pn	22 20 36.1	+1.1
MOTC	**Monteria, Cord**	**5.54**	**79**	*e*P	Pn	22 20 44.9	+1.4
SJCC	**San Jacinto, C**	**6.29**	**70**	*e*P	Pn	22 20 53.8	-0.1

PRU ***03*** *22:27:26.1, 44°.46N×11°.44E, h0km*
CSEM ***03*** *22:27:31.5±0.1, 44°.94N×10°.98E, h10km, ML3.4/15, Error ellipse: s-maj=2.8km s-min=2.3km az=165.0*
ISCJB ***03*** *22:27:31.2±0.2, 44°.88N±0°.02×10°.95E±0°.02, h21km±1km, Error ellipse: s-maj=2.9km s-min=2.0km az=164.0*
STR ***03*** *22:27:31.5±1.4, 45°.N±5°.×1°.1E±1°.4, h5km, M3.7/10, MLv3.7/10*
ROM ***03*** *22:27:31.1±0.0, 44°.886N±0°.001×10°.947E±0°.001, h9km, ML3.1/54*
LDG ***03*** *22:27:31.3±0.1, 44°.92N×11°.11E, h2km, Ml3.5/17, Error ellipse: s-maj=3.7km s-min=2.5km az=60.0*
ISC 03 22:27:31.8±0.7, 44°.91N±0°.02×10°.96E±0°.01, h12km±3km, n255, σ1§26/306, 20C-21D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0827	**Moglia (MN)**	**0.03**	**325**	⇑*i*P	Pg	22 27 33.6	-0.3
T0827				⇑*i*S	Sg	22 27 36.6	+1.1
T0827	**Moglia (MN)**	**0.03**	**325**	*i* P	Pg	22 27 33.6	-0.3
T0827				*i* S	Sg	22 27 36.6	+1.1
NDIM	**Novi di Modena**	**0.05**	**241**	*i* P	Pg	22 27 32.9	-1.1
NDIM				*i* S	Sg	22 27 34.8	-0.8
T0818	**Loc. Fossa, Co**	**0.06**	**65**	⇑*i*P	Pg	22 27 33.9	-0.2
T0818				⇑*i*S	Sg	22 27 37.2	+1.4
T0818	**Loc. Fossa, Co**	**0.06**	**65**	*i* P	Pg	22 27 33.9	-0.2
T0818				*i* S	Sg	22 27 37.2	+1.4
T0828	**Loc. Fossoli,**	**0.09**	**201**	⇓*i*P	Pg	22 27 33.5	-0.9
T0828				⇓*i*S	Sg	22 27 35.8	-0.5
T0828	**Loc. Fossoli,**	**0.09**	**201**	*i* P	Pg	22 27 33.5	-0.9
T0828				*i* S	Sg	22 27 35.8	-0.5
T0814	**Loc. Cortile,**	**0.12**	**176**	⇓*i*P	Pg	22 27 34.8	0.0
T0814				⇓*i*S	Sb	22 27 37.4	+0.4
T0814	**Loc. Cortile,**	**0.12**	**176**	*i* P	Pg	22 27 34.8	0.0
T0814				*i* S	Sb	22 27 37.4	+0.4
T0826	**Rio Saliceto (**	**0.13**	**236**	AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
SBPO	**S.Benedetto Po**	**0.14**	**349**	⇓*i*P	Pg	22 27 35.8	+0.6
SBPO	**S.Benedetto Po**	**0.14**	**349**	*i* P	Pg	22 27 35.8	+0.6
T0824	**Loc. Limidi di**	**0.15**	**188**	⇓*i*P	Pg	22 27 34.8	-0.5
T0824				⇓*i*S	Sb	22 27 38.7	+0.9
T0824	**Loc. Limidi di**	**0.15**	**188**	*i* P	Pg	22 27 34.8	-0.5
T0824				*i* S	Sb	22 27 38.7	+0.9
T0802	**SanFelice sul**	**0.16**	**103**	*e*P	Pg	22 27 35.3	-0.2
T0802				*e*S	Sb	22 27 39.7	+1.6
T0802	**SanFelice sul**	**0.16**	**103**	*e*P	Pg	22 27 35.3	-0.2
T0802				*e*S	Sb	22 27 39.7	+1.6
T0812	**Loc. Stoppiaro**	**0.16**	**74**	⇓*e*P	Pg	22 27 35.3	-0.2
T0812	**Loc. Stoppiaro**	**0.16**	**74**	*e*P	Pg	22 27 35.4	-0.2
T0813	**Massa Finalese**	**0.17**	**101**	⇑*e*P	Pg	22 27 35.4	-0.2
T0813				⇑*e*S	Sb	22 27 39.9	+1.5
T0813	**Massa Finalese**	**0.17**	**101**	*e*P	Pg	22 27 35.4	-0.2
T0813				*e*S	Sb	22 27 39.9	+1.5
RAVA	**Ravarino**	**0.19**	**143**	⇑*e*P	Pg	22 27 35.7	-0.3
RAVA				⇑*e*S	Sb	22 27 39.9	+1.1
RAVA	**Ravarino**	**0.19**	**143**	*e*P	Pg	22 27 35.6	-0.3
RAVA				*e*S	Sb	22 27 39.9	+1.1
RAVA				AML	AML		
	comp=E,83150μm,0.4s						
RAVA				AML	AML		
	comp=N,58400μm,0.3s						
RAVA				AML	AML		
	comp=E,83200μm,0.4s						
RAVA				AML	AML		
	comp=N,58400μm,0.3s						
RAVA				AML	AML		
	comp=E,83200μm,0.4s						
RAVA				AML	AML		
	comp=N,58400μm,0.3s						
RAVA				AML	AML		
	comp=E,83200μm,0.4s						
RAVA				AML	AML		
	comp=N,58400μm,0.3s						
NOVE	**Novellara**	**0.21**	**237**	⇓*i*P	Pg	22 27 35.7	-0.5
NOVE				⇓*i*S	Sb	22 27 40.5	+1.3
NOVE	**Novellara**	**0.21**	**237**	*i* P	Pg	22 27 35.7	-0.5
NOVE				*i* S	Sb	22 27 40.5	+1.3
NOVE				AML	AML		
	comp=E,48450μm,0.3s						
NOVE				AML	AML		
	comp=N,34050μm,0.2s						
NOVE				AML	AML		
	comp=E,48450μm,0.3s						
NOVE				AML	AML		
	comp=N,34050μm,0.2s						
NOVE				AML	AML		
	comp=E,48450μm,0.3s						
NOVE				AML	AML		
	comp=N,34050μm,0.2s						
NOVE				AML	AML		
	comp=E,48450μm,0.3s						
T0800	**Massa Finalese**	**0.21**	**107**	⇑*e*P	Pg	22 27 36.1	-0.3
T0800				⇑*e*S	Sb	22 27 41.2	+1.7
T0800	**Massa Finalese**	**0.21**	**107**	*e*P	Pg	22 27 36.1	-0.3
T0800				*e*S	Sb	22 27 41.2	+1.7
T0800				AML	AML		
	comp=E,38300μm,0.3s						
T0800				AML	AML		
	comp=N,21100μm,0.5s						
T0800				AML	AML		
	comp=E,33700μm,0.4s						
T0800				AML	AML		
	comp=N,25850μm,0.9s						
T0800				AML	AML		
	comp=E,38300μm,0.3s						
T0800				AML	AML		
	comp=N,21150μm,0.5s						
T0800				AML	AML		
	comp=E,33700μm,0.4s						
T0800				AML	AML		
	comp=N,25850μm,0.9s						
T0800				AML	AML		
	comp=E,38300μm,0.3s						
T0800				AML	AML		
	comp=N,21150μm,0.5s						
T0800				AML	AML		
	comp=E,33700μm,0.4s						
T0800				AML	AML		
	comp=N,25850μm,0.9s						
T0800				AML	AML		
	comp=E,38300μm,0.3s						
T0800				AML	AML		
	comp=N,21150μm,0.5s						
GAZZ	**Gazzo Veronese**	**0.23**	**25**	⇑*e*Pg	Pg	22 27 37.0	+0.5
GAZZ	**Gazzo Veronese**	**0.23**	**25**	*e*Pg	Pg	22 27 37.0	+0.5
T0811	**Palata Pepoli**	**0.23**	**123**	⇑*e*P	Pg	22 27 36.1	-0.5
T0811				⇑*e*S	Sb	22 27 41.2	+1.4
T0811	**Palata Pepoli**	**0.23**	**123**	*e*P	Pg	22 27 36.1	-0.5
T0811				*e*S	Sb	22 27 41.2	+1.4
SERM	**Sermide**	**0.26**	**67**	*e*P	Pg	22 27 37.4	+0.3
SERM	**Sermide**	**0.26**	**67**	*e*P	Pg	22 27 37.4	+0.3
SERM				AML	AML		
	comp=E,3200μm,0.3s						
SERM				AML	AML		
	comp=N,2875μm,0.3s						
SERM				AML	AML		
	comp=E,4550μm,0.5s						
SERM				AML	AML		
	comp=N,4035μm,0.5s						
SERM				AML	AML		
	comp=E,3200μm,0.3s						
SERM				AML	AML		
	comp=N,2875μm,0.3s						
SERM				AML	AML		
	comp=E,4550μm,0.5s						
SERM				AML	AML		
	comp=N,4030μm,0.5s						
SERM				AML	AML		
	comp=E,3200μm,0.3s						
SERM				AML	AML		
	comp=N,2875μm,0.3s						
SERM				AML	AML		
	comp=E,4545μm,0.5s						
SERM				AML	AML		
	comp=N,4035μm,0.5s						
SERM				AML	AML		
	comp=N,4035μm,0.5s						
SERM				AML	AML		
	comp=E,4545μm,0.5s						
SERM				AML	AML		
	comp=N,2875μm,0.3s						
SERM				AML	AML		
	comp=E,3200μm,0.3s						
T0805	**Bondeno (FE)**	**0.26**	**88**	*e*P	Pg	22 27 36.0	-1.1
T0805	**Bondeno (FE)**	**0.26**	**88**	*e*P	Pg	22 27 37.0	-0.2
MNTV	**Mantova**	**0.27**	**333**	AML	AML		
	comp=E,26950μm,0.5s						
MNTV				AML	AML		
	comp=N,35300μm,0.4s						
MNTV				AML	AML		
	comp=E,26950μm,0.5s						
MNTV				AML	AML		
	comp=N,35300μm,0.4s						
MODE	**Modena**	**0.28**	**181**	*e*P	Pg	22 27 37.6	+0.1
MODE	**Modena**	**0.28**	**181**	*e*P	Pg	22 27 37.6	+0.1
MODE				AML	AML		
	comp=E,40400μm,0.4s						
MODE				AML	AML		
	comp=N,23950μm,0.6s						
MODE				AML	AML		
	comp=E,40400μm,0.4s						
MODE				AML	AML		
	comp=N,23950μm,0.6s						
MODE				AML	AML		
	comp=E,40400μm,0.4s						
MODE				AML	AML		
	comp=N,23950μm,0.6s						
MODE				AML	AML		
	comp=N,23950μm,0.6s						
MODE				AML	AML		
	comp=E,40400μm,0.4s						
T0803	**Dosso, Cento (**	**0.31**	**117**	⇓*e*P	Pg	22 27 37.8	-0.4
T0803	**Dosso, Cento (**	**0.31**	**117**	*e*P	Pg	22 27 37.8	-0.4
T0803				AML	AML		
	comp=E,8930μm,0.4s						
T0803				AML	AML		
	comp=N,10665μm,1.5s						
T0803				AML	AML		
	comp=E,8930μm,0.4s						
T0803				AML	AML		
	comp=N,10710μm,1.5s						
T0803				AML	AML		
	comp=E,8930μm,0.4s						
T0803				AML	AML		
	comp=N,10710μm,1.5s						
T0823	**Castello D'Arg**	**0.32**	**135**	⇑*e*P	Pg	22 27 38.2	0.0
T0823	**Castello D'Arg**	**0.32**	**135**	*e*P	Pg	22 27 38.2	0.0
T0817	**Loc. Veratica,**	**0.36**	**77**	*e*P	Pb	22 27 39.6	-0.6
T0817	**Loc. Veratica,**	**0.36**	**77**	*e*P	Pb	22 27 39.6	-0.6
T0817				*e*S	Sb	22 27 46.6	+0.9
T0821	**Loc. Casaglia**	**0.41**	**91**	AML	AML		
	comp=E,2780μm,1.0s						
T0821				AML	AML		
	comp=N,4460μm,1.2s						
T0821				AML	AML		
	comp=E,2780μm,1.0s						
T0821				AML	AML		
	comp=N,4455μm,1.2s						

T0821				AML	AML		
	comp=E,2780µm,1.0s						
T0821				AML	AML		
	comp=N,4455µm,1.2s						
FIU	**Minerbio Fiu**	**0.47**	**125**	*e*P	**Pb**	**22 27 41.9**	**0.0**
FIU	**Minerbio Fiu**	**0.47**	**125**	*e*P	**Pb**	**22 27 41.9**	**0.0**
FIU				AML	AML		
	comp=E,3165µm,0.7s						
FIU				AML	AML		
	comp=N,1750µm,0.5s						
FIU				AML	AML		
	comp=E,3170µm,0.7s						
FIU				AML	AML		
	comp=N,1755µm,0.5s						
FIU				AML	AML		
	comp=E,3170µm,0.7s						
FIU				AML	AML		
	comp=N,1755µm,0.5s						
PRMA	**PARMA**	**0.48**	**253**	AML	AML		
	comp=E,2015µm,1.4s						
PRMA				AML	AML		
	comp=E,2015µm,1.4s						
PRMA				AML	AML		
	comp=N,1895µm,0.6s						
PRMA				AML	AML		
	comp=E,2015µm,1.4s						
PRMA				AML	AML		
	comp=N,1895µm,0.6s						
PRMA				AML	AML		
	comp=E,2015µm,1.4s						
PRMA				AML	AML		
	comp=N,1895µm,0.6s						
PRMA				AML	AML		
	comp=N,1895µm,0.6s						
T0816	**San Bartolomeo**	**0.49**	**112**	*e*P	**Pg**	**22 27 41.1**	**-0.3**
T0816	**San Bartolomeo**	**0.49**	**112**	*e*P	**Pg**	**22 27 41.1**	**-0.3**
T0815	**Correggio (RE)**	**0.54**	**94**	*e*P	**Pb**	**22 27 43.4**	**+0.2**
T0815	**Correggio (RE)**	**0.54**	**94**	*e*P	**Pb**	**22 27 43.4**	**+0.2**
T0815				*e*S	**Sn**	**22 27 52.2**	**-2.2**
ZCCA	**Zocca**	**0.56**	**179⇑**	*e*P	**Pn**	**22 27 44.7**	**-0.9**
ZCCA	**Zocca**	**0.56**	**179**	*e*P	**Pn**	**22 27 44.7**	**-0.9**
ZCCA				AML	AML		
	comp=E,2265µm,1.6s						
ZCCA				AML	AML		
	comp=N,2210µm,1.6s						
ZCCA				AML	AML		
	comp=E,2170µm,0.5s						
ZCCA				AML	AML		
	comp=N,2350µm,1.6s						
ZCCA				AML	AML		
	comp=E,2265µm,1.6s						
ZCCA				AML	AML		
	comp=N,2215µm,1.6s						
ZCCA				AML	AML		
	comp=E,2170µm,0.5s						
ZCCA				AML	AML		
	comp=N,2350µm,1.6s						
ZCCA				AML	AML		
	comp=E,2170µm,0.5s						
ZCCA				AML	AML		
	comp=E,2265µm,1.6s						
ZCCA				AML	AML		
	comp=N,2215µm,1.6s						
ZCCA				AML	AML		
	comp=N,2350µm,1.6s						
TEOL	**Teolo**	**0.68**	**48⇓**	*e*Pg	**Pg**	**22 27 44.8**	**-0.1**
TEOL				*e*Sg	**Sb**	**22 27 55.2**	**+0.3**
TEOL	**Teolo**	**0.68**	**48⇓**	*e*P	**Pg**	**22 27 44.8**	**-0.1**
TEOL				*e*Sg	**Sb**	**22 27 55.2**	**+0.3**
TEOL	**Teolo**	**0.68**	**48**	*e*P	**Pg**	**22 27 44.8**	**-0.1**
TEOL				AML	AML		
	comp=E,6725µm,1.2s						
TEOL				AML	AML		
	comp=N,8670µm,0.4s						
TEOL				AML	AML		
	comp=E,6725µm,1.2s						
TEOL				AML	AML		
	comp=N,8670µm,0.4s						
TEOL				AML	AML		
	comp=E,6725µm,1.2s						
TEOL				AML	AML		
	comp=N,8670µm,0.4s						
CMPO	**Campotto Po**	**0.69**	**118**	AML	AML		
	comp=E,2785µm,0.7s						
CMPO				AML	AML		
	comp=E,2785µm,0.7s						
CMPO				AML	AML		
	comp=N,3250µm,1.0s						
CMPO				AML	AML		
	comp=N,3250µm,1.0s						
CMPO				AML	AML		
	comp=N,3250µm,1.0s						
CMPO				AML	AML		
	comp=E,2785µm,0.7s						
ROVR	**Rover˜¤ Verone**	**0.74**	**6⇓**	*e*P	**Pg**	**22 27 45.8**	**-0.3**
ROVR	**Rover˜¤ Verone**	**0.74**	**6**	*e*P	**Pg**	**22 27 45.8**	**-0.3**
ROVR				AML	AML		
	comp=E,1775µm,0.2s						
ROVR				AML	AML		
	comp=N,4360µm,1.4s						
ROVR				AML	AML		
	comp=E,1775µm,0.2s						
ROVR				AML	AML		
	comp=N,4360µm,1.4s						
ROVR				AML	AML		
	comp=E,1775µm,0.2s						
ROVR				AML	AML		
	comp=N,4360µm,1.4s						
MARN	**Marana (Italy)**	**0.75**	**14⇓**	*e*Pg	**Pg**	**22 27 46.0**	**-0.3**
MARN				*e*Sg	**Sn**	**22 27 58.7**	**-0.9**
MARN	**Marana (Italy)**	**0.75**	**14**	*e*Pg	**Pg**	**22 27 46.0**	**-0.3**
MARN				*e*Sg	**Sn**	**22 27 58.7**	**-0.9**
ADRI	**Adria, Italy**	**0.76**	**80⇑**	*e*Pg	**Pb**	**22 27 46.9**	**-0.1**
ADRI	**Adria, Italy**	**0.76**	**80**	*e*Pg	**Pb**	**22 27 46.9**	**-0.1**
SALO	**Salr**	**0.77**	**337**	AML	AML		
	comp=N,1835µm,0.2s						
SALO				AML	AML		
	comp=E,1720µm,1.4s						
SALO				AML	AML		
	comp=N,1835µm,0.2s						
SALO				AML	AML		
	comp=E,1720µm,1.4s						
SALO				AML	AML		
	comp=N,1835µm,0.2s						
SALO				AML	AML		
	comp=E,1720µm,1.4s						
BALD	**Monte Baldo**	**0.78**	**353⇑**	*e*Pg	**Pg**	**22 27 47.0**	**+0.1**
BALD				*e*Sg	**Sn**	**22 27 59.5**	**-1.0**
BALD	**Monte Baldo**	**0.78**	**353**	*e*Pg	**Pg**	**22 27 47.0**	**+0.1**
BALD				*e*Sg	**Sn**	**22 27 59.5**	**-1.0**
VOBA	**Vobarno**	**0.80**	**337**	AML	AML		
	comp=E,2390µm,1.5s						
VOBA				AML	AML		
	comp=E,2390µm,1.5s						
VOBA				AML	AML		
	comp=N,2095µm,0.2s						
VOBA				AML	AML		
	comp=E,2390µm,1.5s						
VOBA				AML	AML		
	comp=N,2095µm,0.2s						
VOBA				AML	AML		
	comp=N,2095µm,0.2s						
VLC	**Villacollemand**	**0.85**	**209**	AML	AML		
	comp=N,710µm,1.0s						
VLC				AML	AML		
	comp=E,522µm,0.8s						
VLC				AML	AML		
	comp=N,710µm,1.0s						
VLC				AML	AML		
	comp=E,522µm,0.8s						
VLC				AML	AML		
	comp=N,710µm,1.0s						
VLC				AML	AML		
	comp=E,522µm,0.8s						
POPM	**Popiglio**	**0.88**	**190**	AML	AML		
	comp=N,2805µm,0.3s						
POPM				AML	AML		
	comp=E,1650µm,0.3s						
POPM				AML	AML		
	comp=N,2805µm,0.3s						
POPM				AML	AML		
	comp=E,1650µm,0.3s						
POPM				AML	AML		
	comp=N,2805µm,0.3s						
POPM				AML	AML		
	comp=E,1650µm,0.3s						
BDI	**Bagni Di Lucca**	**0.89**	**197**	AML	AML		
	comp=E,1945µm,0.8s						
BDI				AML	AML		
	comp=E,2155µm,0.9s						
BDI				AML	AML		
	comp=N,2480µm,0.4s						
BDI				AML	AML		
	comp=E,1945µm,0.8s						
BDI				AML	AML		
	comp=N,2555µm,0.3s						
BDI				AML	AML		
	comp=N,2555µm,0.3s						
BDI				AML	AML		
	comp=N,2480µm,0.4s						
BDI				AML	AML		
	comp=E,2155µm,0.9s						
MAGA	**Magasa**	**0.90**	**345**	AML	AML		
	comp=N,4710µm,0.3s						
MAGA				AML	AML		
	comp=E,5390µm,1.4s						
MAGA				AML	AML		
	comp=N,4710µm,0.3s						
MAGA				AML	AML		
	comp=E,5390µm,1.4s						
MAGA				AML	AML		
	comp=N,4710µm,0.3s						
MAGA				AML	AML		
	comp=E,5390µm,1.4s						
CTL8	**Castelleone**	**0.92**	**294**	AML	AML		
	comp=N,798µm,0.3s						
CTL8				AML	AML		
	comp=E,2160µm,0.3s						
CTL8				AML	AML		
	comp=N,2230µm,0.6s						
CTL8				AML	AML		
	comp=E,682µm,0.5s						
CTL8				AML	AML		
	comp=N,798µm,0.3s						
CTL8				AML	AML		
	comp=E,2155µm,0.3s						
CTL8				AML	AML		
	comp=N,2225µm,0.6s						
CTL8				AML	AML		
	comp=E,682µm,0.5s						
CTL8				AML	AML		
	comp=E,2155µm,0.3s						
CTL8				AML	AML		
	comp=E,682µm,0.5s						
CTL8				AML	AML		
	comp=N,2225µm,0.6s						
CTL8				AML	AML		
	comp=N,798µm,0.3s						
DOSS	**Dosso del Somm**	**0.98**	**9⇓**	*e*Pg	**Pg**	**22 27 50.0**	**-0.7**
DOSS				*e*Sg	**Sn**	**22 28 05.4**	**-0.2**
DOSS	**Dosso del Somm**	**0.98**	**9**	*e*Pg	**Pg**	**22 27 50.0**	**-0.7**
DOSS				*e*Sg	**Sn**	**22 28 05.4**	**-0.2**
MAIM	**Mastiano**	**1.05**	**199**	AML	AML		
	comp=E,2115µm,0.5s						
MAIM				AML	AML		
	comp=E,2115µm,0.5s						
MAIM				AML	AML		
	comp=N,1995µm,0.4s						
MAIM				AML	AML		
	comp=N,1995µm,0.4s						
MAIM				AML	AML		
	comp=N,1995µm,0.4s						
MAIM				AML	AML		
	comp=E,2115µm,0.5s						
RNI	**Roncone**	**1.10**	**348⇑**	*e*Pg	**Pb**	**22 27 51.1**	**-1.7**
RNI				*e*Sg	**Sg**	**22 28 08.0**	**+0.8**
RNI	**Roncone**	**1.10**	**348**	*e*Pg	**Pb**	**22 27 51.1**	**-1.7**
RNI				*e*Sg	**Sg**	**22 28 08.0**	**+0.8**
CRMI	**Carmignano**	**1.12**	**180**	AML	AML		
	comp=E,482µm,0.5s						
CRMI				AML	AML		
	comp=E,482µm,0.5s						
CRMI				AML	AML		
	comp=N,309µm,0.3s						
CRMI				AML	AML		
	comp=N,309µm,0.3s						
CRMI				AML	AML		
	comp=N,309µm,0.3s						
CRMI				AML	AML		
	comp=E,482µm,0.5s						
CGRP	**Cima Grappa**	**1.14**	**31⇑**	*e*Pg	**Pb**	**22 27 52.6**	**-0.9**
CGRP				*e*Sg	**Sn**	**22 28 09.5**	**+0.2**
CGRP	**Cima Grappa**	**1.14**	**31**	*e*Pg	**Pb**	**22 27 52.6**	**-0.9**
CGRP				*e*Sg	**Sn**	**22 28 09.5**	**+0.2**
CGRP	**Cima Grappa**	**1.14**	**31**	AML	AML		
	comp=E,913µm,0.5s						
CGRP				AML	AML		
	comp=N,972µm,0.4s						
CGRP				AML	AML		
	comp=E,913µm,0.5s						
CGRP				AML	AML		
	comp=N,972µm,0.4s						
CGRP				AML	AML		
	comp=E,913µm,0.5s						
CGRP				AML	AML		
	comp=N,972µm,0.4s						
PANI	**Panarotta**	**1.17**	**13⇓**	*e*Pg	**Pb**	**22 27 52.7**	**-1.4**
PANI				*e*Sg	**Sn**	**22 28 10.8**	**+0.6**
PLMA	**Palmaria, Port**	**1.17**	**223**	AML	AML		
	comp=N,1098µm,0.8s						
PLMA				AML	AML		
	comp=E,770µm,1.4s						
PLMA				AML	AML		
	comp=N,1098µm,0.8s						
PLMA				AML	AML		
	comp=E,770µm,1.4s						
PLMA				AML	AML		
	comp=N,1098µm,0.8s						
PLMA				AML	AML		
	comp=E,770µm,1.4s						
MABI	**Malga Bissina**	**1.19**	**345**	AML	AML		
	comp=N,284µm,0.2s						
MABI				AML	AML		
	comp=E,328µm,0.1s						
MABI				AML	AML		
	comp=E,328µm,0.1s						
MABI				AML	AML		
	comp=N,284µm,0.2s						
MABI				AML	AML		
	comp=N,284µm,0.2s						
MABI				AML	AML		
	comp=E,328µm,0.1s						
MSSA	**Maissana**	**1.19**	**241**	AML	AML		
	comp=N,680µm,0.7s						
MSSA				AML	AML		
	comp=E,801µm,0.5s						
MSSA				AML	AML		
	comp=N,680µm,0.7s						
MSSA				AML	AML		
	comp=E,801µm,0.5s						
SFI	**Santa Sofia**	**1.19**	**147**	AML	AML		
	comp=E,467µm,0.7s						
SFI				AML	AML		
	comp=N,568µm,0.6s						
SFI				AML	AML		
	comp=E,468µm,0.7s						
SFI				AML	AML		
	comp=N,568µm,0.6s						
SFI				AML	AML		
	comp=E,468µm,0.7s						
SFI				AML	AML		
	comp=N,568µm,0.6s						
MTLO	**Montello**	**1.21**	**41⇓**	*e*Pg	**Pn**	**22 27 54.1**	**-0.4**
MTLO				*e*Sg	**Sg**	**22 28 11.6**	**+0.9**
MTLO	**Montello**	**1.21**	**41**	*e*Pg	**Pn**	**22 27 54.1**	**-0.4**
MTLO				*e*Sg	**Sg**	**22 28 11.6**	**+0.9**
CTI	**Castel Tesino**	**1.24**	**23**	AML	AML		
	comp=N,2505µm,0.2s						
CTI				AML	AML		
	comp=E,1605µm,0.2s						
CTI				AML	AML		
	comp=N,2500µm,0.2s						
CTI				AML	AML		
	comp=E,1605µm,0.2s						
CTI				AML	AML		
	comp=E,1605µm,0.2s						
CTI				AML	AML		
	comp=N,2505µm,0.2s						
ASQU	**Asqua**	**1.26**	**152**	AML	AML		
	comp=N,376µm,0.6s						
ASQU				AML	AML		
	comp=E,640µm,1.2s						
ASQU				AML	AML		
	comp=N,376µm,0.6s						
ASQU				AML	AML		
	comp=E,640µm,1.2s						
VARN	**Col Varnada, M**	**1.35**	**36⇓**	*e*Pg	**Pn**	**22 27 55.6**	**-0.9**
VARN				*e*Sg	**Sg**	**22 28 15.8**	**+0.5**
VARN	**Col Varnada, M**	**1.35**	**36**	*e*Pg	**Pn**	**22 27 55.6**	**-0.9**
VARN				*e*Sg	**Sg**	**22 28 15.8**	**+0.5**
OZOL	**Ozolo**	**1.50**	**2⇑**	*e*Pg	**Pn**	**22 27 57.8**	**-0.8**
OZOL	**Ozolo**	**1.50**	**2**	*e*Pg	**Pn**	**22 27 57.8**	**-0.8**
FAU	**Forcella Aurin**	**1.50**	**28⇓**	*e*Pg	**Pn**	**22 27 58.2**	**-0.5**
FAU	**Forcella Aurin**	**1.50**	**28**	*e*Pg	**Pn**	**22 27 58.2**	**-0.5**
CAE	**Caneva**	**1.51**	**43⇓**	*e*Pg	**Pn**	**22 27 57.9**	**-0.9**
CAE	**Caneva**	**1.51**	**43**	*e*Pg	**Pn**	**22 27 57.9**	**-0.9**
CARE	**Lago del Cares**	**1.53**	**353**	*e*Pg	**Pn**	**22 27 58.5**	**-0.7**
CARE	**Lago del Cares**	**1.53**	**353**	*e*Pg	**Pn**	**22 27 58.5**	**-0.7**
PARC	**Parchiule**	**1.56**	**143**	AML	AML		
	comp=N,202µm,1.6s						
PARC				AML	AML		
	comp=E,225µm,0.5s						
PARC				AML	AML		
	comp=N,202µm,1.6s						
PARC				AML	AML		
	comp=E,225µm,0.5s						
AGOR	**Agordo**	**1.57**	**29**	*e*Pg	**Pn**	**22 27 59.1**	**-0.4**
AGOR	**Agordo**	**1.57**	**29**	AML	AML		
	comp=N,352µm,0.4s						
AGOR				AML	AML		
	comp=E,498µm,0.4s						
AGOR				AML	AML		
	comp=N,352µm,0.4s						
AGOR				AML	AML		
	comp=E,498µm,0.4s						
APPI	**Appiano**	**1.58**	**7**	AML	AML		
	comp=N,791µm,0.4s						
APPI				AML	AML		
	comp=E,1160µm,0.4s						
APPI				AML	AML		
	comp=N,791µm,0.4s						
APPI				AML	AML		
	comp=E,1160µm,0.4s						
KOSI	**Kohlern**	**1.58**	**11**	AML	AML		
	comp=N,430µm,0.6s						
KOSI				AML	AML		
	comp=E,408µm,0.4s						
KOSI				AML	AML		
	comp=N,430µm,0.6s						
KOSI				AML	AML		
	comp=E,408µm,0.4s						
SSP9	**Sansepolcro**	**1.58**	**147**	AML	AML		
	comp=E,290µm,1.2s						
SSP9				AML	AML		
	comp=N,253µm,0.6s						
SSP9				AML	AML		
	comp=N,253µm,0.6s						
SSP9				AML	AML		
	comp=E,290µm,1.2s						
BRMO	**Bormio**	**1.62**	**346**	AML	AML		
	comp=N,222µm,0.6s						
BRMO				AML	AML		
	comp=E,228µm,0.6s						
BRMO				AML	AML		
	comp=N,222µm,0.6s						
BRMO				AML	AML		
	comp=E,228µm,0.6s						
CSO	**Casso**	**1.67**	**35**	*e*Pn	**Pn**	**22 27 59.9**	**-1.0**
CSO	**Casso**	**1.67**	**35**	*e*Pn	**Pn**	**22 27 59.9**	**-1.0**
MLNI	**Malnisio**	**1.70**	**43**	*e*Pn	**Pn**	**22 28 00.4**	**-0.9**
MLNI	**Malnisio**	**1.70**	**43**	*e*Pn	**Pn**	**22 28 00.4**	**-0.9**
MOSI	**Grossmontoni**	**1.73**	**351**	AML	AML		
	comp=N,1019µm,0.8s						
MOSI				AML	AML		
	comp=E,672µm,0.8s						
MOSI				AML	AML		
	comp=E,672µm,0.8s						
MOSI				AML	AML		
	comp=N,1019µm,0.8s						
CIMO	**Cimolais**	**1.74**	**36**	*e*Pn	**Pn**	**22 28 00.9**	**-1.0**
CIMO	**Cimolais**	**1.74**	**36**	*e*Pn	**Pn**	**22 28 00.9**	**-1.0**
PCP	**Piancastagn**	**1.76**	**259**	AML	AML		
	comp=N,330µm,0.9s						
PCP				AML	AML		
	comp=E,313µm,1.6s						
PCP				AML	AML		
	comp=N,330µm,0.9s						
PCP				AML	AML		
	comp=E,313µm,1.6s						
VARE	**Varese**	**1.81**	**303**	AML	AML		
	comp=N,437µm,0.5s						
VARE				AML	AML		
	comp=E,398µm,1.1s						
VARE				AML	AML		
	comp=N,437µm,0.5s						
VARE				AML	AML		
	comp=E,398µm,1.1s						
STAL	**STALIGIAL**	**1.83**	**42**	AML	AML		
	comp=N,517µm,1.3s						
STAL				AML	AML		
	comp=E,505µm,0.4s						
STAL				AML	AML		
	comp=N,528µm,0.3s						
STAL				AML	AML		
	comp=E,590µm,0.4s						
STAL				AML	AML		
	comp=N,517µm,1.3s						
STAL				AML	AML		
	comp=N,528µm,0.3s						
STAL				AML	AML		
	comp=E,590µm,0.4s						
STAL				AML	AML		
	comp=E,505µm,0.4s						
ABSI	**Aberstueckl**	**1.84**	**8**	AML	AML		
	comp=E,706µm,0.5s						
ABSI				AML	AML		
	comp=N,672µm,0.6s						
ABSI				AML	AML		
	comp=E,706µm,0.5s						
ABSI				AML	AML		
	comp=N,672µm,0.6s						
QLNO	**Quiliano**	**1.96**	**253**	AML	AML		
	comp=E,162µm,0.3s						
QLNO				AML	AML		
	comp=N,252µm,0.4s						
QLNO				AML	AML		
	comp=N,252µm,0.4s						
QLNO				AML	AML		
	comp=E,162µm,0.3s						
SSFR	**Montelago di S**	**1.97**	**138**	AML	AML		
	comp=N,340µm,0.3s						
SSFR				AML	AML		
	comp=E,338µm,0.3s						
SSFR				AML	AML		
	comp=N,340µm,0.3s						
SSFR				AML	AML		
	comp=E,338µm,0.3s						
ARVD	**Arcevia**	**2.01**	**134**	AML	AML		
	comp=E,142µm,0.7s						
ARVD				AML	AML		
	comp=E,142µm,0.7s						
ARVD				AML	AML		
	comp=N,116µm,0.5s						
ARVD				AML	AML		
	comp=N,116µm,0.5s						
ROSI	**Rosskopf**	**2.04**	**9**	AML	AML		
	comp=E,446µm,0.3s						
ROSI				AML	AML		
	comp=N,470µm,1.5s						
ROSI				AML	AML		
	comp=E,446µm,0.3s						
ROSI				AML	AML		
	comp=N,470µm,1.5s						
FVI	**Forni Avoltri**	**2.11**	**36**	AML	AML		
	comp=E,201µm,0.6s						
FVI				AML	AML		
	comp=N,219µm,0.7s						
FVI				AML	AML		
	comp=E,201µm,0.6s						
FVI				AML	AML		
	comp=N,219µm,0.7s						
FETA	**Feichten**	**2.12**	**356**	*e*Pn	**Pb**	**22 28 08.8**	**-1.4**
	comp=N,3.4nm,0.4s,SNR=25						
FETA	**Feichten**	**2.12**	**356**	Pn	**Pb**	**22 28 08.8**	**-1.4**
	comp=N,3.4nm,0.4s,SNR=25						
CASP	**Castiglione de**	**2.12**	**182**	AML	AML		
	comp=E,148µm,0.7s						
CASP				AML	AML		
	comp=E,148µm,0.7s						
CASP				AML	AML		
	comp=N,161µm,0.6s						

CASP					AML	AML		
	comp=N,161μm,0.6s							
ABTA	**Abfaltersbach**	**2.13**	**30**	*e*Pn		**Pn**	**22 28 07.8**	**+0.5**
	comp=N,1.9nm,0.2s,SNR=20							
ABTA	**Abfaltersbach**	**2.13**	**30**	Pn		**Pn**	**22 28 07.8**	**+0.5**
	comp=N,1.9nm,0.2s,SNR=20							
MGAB	**Montegabbione**	**2.16**	**157**		AML	AML		
	comp=N,172μm,0.3s							
MGAB					AML	AML		
	comp=E,166μm,0.7s							
MGAB					AML	AML		
	comp=N,172μm,0.3s							
MGAB					AML	AML		
	comp=E,166μm,0.7s							
RISI	**Rein**	**2.18**	**21**		AML	AML		
	comp=E,500μm,0.4s							
RISI					AML	AML		
	comp=E,500μm,0.4s							
RISI					AML	AML		
	comp=N,724μm,1.6s							
RISI					AML	AML		
	comp=N,724μm,1.6s							
CELB	**S.Piero in Cam**	**2.23**	**194**		AML	AML		
	comp=N,238μm,0.6s							
CELB					AML	AML		
	comp=E,174μm,0.7s							
CELB					AML	AML		
	comp=N,238μm,0.6s							
CELB					AML	AML		
	comp=E,174μm,0.7s							
ASSB	**Assisi San Ben**	**2.23**	**146**		AML	AML		
	comp=E,104μm,0.4s							
ASSB					AML	AML		
	comp=E,104μm,0.4s							
ASSB					AML	AML		
	comp=N,97μm,0.5s							
ASSB					AML	AML		
	comp=N,97μm,0.5s							
SKDS	**Skadanscina**	**2.25**	**73**	*i* Pn		**Pn**	**22 28 07.8**	**-1.1**
SKDS				*i* Sn		**Sn**	**22 28 34.1**	**-2.4**
	comp=Z,44nm,0.3s							
SKDS	**Skadanscina**	**2.25**	**73**	Pn		**Pn**	**22 28 07.8**	**-1.1**
SKDS				*i* Sn		**Sn**	**22 28 34.2**	**-2.4**
	comp=Z,44nm,0.3s							
JAVS	**Javornik**	**2.40**	**65**	*i* Pn		**Pn**	**22 28 10.1**	**-0.9**
JAVS				*e*Sn		**Sn**	**22 28 38.8**	**-1.5**
	comp=Z,62nm,0.6s							
JAVS	**Javornik**	**2.40**	**65**	*i* Pn		**Pn**	**22 28 10.1**	**-0.9**
JAVS				*e*Sn		**Sn**	**22 28 38.8**	**-1.5**
	comp=Z,62nm,0.6s							
WTTA	**Wattenberg**	**2.40**	**11**	*e*Pn		**Pn**	**22 28 13.0**	**+1.9**
	comp=Z,5.1nm,0.2s,SNR=9.1							
WTTA	**Wattenberg**	**2.40**	**11**	Pn		**Pn**	**22 28 13.0**	**+1.9**
	comp=Z,5.1nm,0.2s,SNR=9.1							
WTTA	**Wattenberg**	**2.40**	**11**		AML	AML		
	comp=E,160μm,0.9s							
WTTA					AML	AML		
	comp=N,103μm,0.8s							
WTTA					AML	AML		
	comp=E,160μm,0.9s							
WTTA					AML	AML		
	comp=N,103μm,0.8s							
FDMO	**Fiordimonte**	**2.42**	**140**		AML	AML		
	comp=E,81μm,1.5s							
FDMO					AML	AML		
	comp=E,81μm,1.5s							
FDMO					AML	AML		
	comp=N,75μm,0.5s							
FDMO					AML	AML		
	comp=N,75μm,0.5s							
WATA	**Walderalm**	**2.46**	**10**	*e*Pn		**Pn**	**22 28 13.4**	**+1.5**
	comp=N,3.3nm,0.2s,SNR=21							
WATA	**Walderalm**	**2.46**	**10**	Pn		**Pn**	**22 28 13.4**	**+1.5**
	comp=N,3.3nm,0.2s,SNR=21							
DAVA	**Damuels**	**2.49**	**343**	*e*Pn		**Pb**	**22 28 14.7**	**-1.9**
	comp=N,3.4nm,0.2s,SNR=9.1							
DAVA	**Damuels**	**2.49**	**343**	Pn		**Pb**	**22 28 14.7**	**-1.9**
	comp=N,3.4nm,0.2s,SNR=9.1							
MYKA	**Terra Mystica**	**2.55**	**47**	*e*pPb		**Pb**	**22 28 18.8**	**+1.4**
	comp=N,27nm,0.5s,SNR=10							
RETA	**Reutte**	**2.58**	**357**	*e*Pn		**Pn**	**22 28 14.1**	**+0.6**
	comp=N,15nm,0.3s,SNR=8.4							
RETA	**Reutte**	**2.58**	**357**	Pn		**Pn**	**22 28 14.1**	**+0.6**
	comp=N,15nm,0.3s,SNR=8.4							
CEY	**Cerknica**	**2.58**	**70**	*e*Pn		**Pn**	**22 28 11.9**	**-1.5**
KBA	**Koelnbreinsper**	**2.73**	**37**	Pn		**Pn**	**22 28 16.2**	**+0.6**
	comp=N,2.1nm,0.2s,SNR=16							
KBA	**Koelnbreinsper**	**2.73**	**37**	Pn		**Pn**	**22 28 16.2**	**+0.6**
	comp=N,2.1nm,0.2s,SNR=16							
SBF	**Sospel**	**2.73**	**249**	*e*Pn		**Pn**	**22 28 15.9**	**+0.4**
SBF				*e*Sn		**Sn**	**22 28 48.2**	**-0.4**
	comp=N,164nm,0.4s							
SBF	**Sospel**	**2.73**	**249**	*e*Pn		**Pn**	**22 28 15.9**	**+0.4**
SBF				*e*Sn		**Sn**	**22 28 48.2**	**-0.4**
	comp=N,82nm,0.4s							
LJU	**Ljubljana**	**2.75**	**64**	*e*Pn		**Pn**	**22 28 15.4**	**-0.4**
PGF	**Pioggiola**	**2.75**	**212**	*e*Pn		**Pn**	**22 28 15.7**	**-0.2**
PGF				*e*Sn		**Sn**	**22 28 49.0**	**-0.1**
	comp=N,60nm,0.4s							
PGF	**Pioggiola**	**2.75**	**212**	*e*Pn		**Pn**	**22 28 15.7**	**-0.2**
PGF				*e*Sn		**Sn**	**22 28 49.0**	**-0.1**
	comp=N,30nm,0.4s							
LUCF	**Luceram**	**2.78**	**250**	P		**Pn**	**22 28 17.8**	**+1.6**
LUCF	**Luceram**	**2.78**	**250**	P		**Pn**	**22 28 17.8**	**+1.6**
NVLJ	**Novalja**	**2.81**	**96**	*e*Pn		**Pn**	**22 28 16.1**	**-0.4**
NVLJ				Sn		**Sn**	**22 28 48.3**	**-2.0**
NVLJ	**Novalja**	**2.81**	**96**	*e*Pn		**Pn**	**22 28 16.1**	**-0.4**
NVLJ				Sn		**Sn**	**22 28 48.2**	**-2.0**
VISS	**Visnje**	**2.88**	**71**	*i* Pn		**Pn**	**22 28 17.1**	**-0.3**
VISS				*i* Sn		**Sn**	**22 28 50.7**	**-1.3**
	comp=Z,12nm,0.2s							
VISS	**Visnje**	**2.88**	**71**	*i* Pn		**Pn**	**22 28 17.1**	**-0.3**
VISS				*i* Sn		**Sn**	**22 28 50.7**	**-1.3**
	comp=Z,12nm,0.2s							
MVIF	**Mont Vial**	**2.91**	**251**	P		**Pn**	**22 28 20.3**	**+2.2**
MVIF	**Mont Vial**	**2.91**	**251**	P		**Pn**	**22 28 20.3**	**+2.2**
OBKA	**Obir**	**2.98**	**56**	*e*Pn		**Pn**	**22 28 19.1**	**+0.2**
	comp=Z,1.0nm,0.2s							
OBKA	**Obir**	**2.98**	**56**	Pn		**Pn**	**22 28 19.1**	**+0.2**
	comp=Z,1.0nm,0.2s							
MBDF	**Montbardon**	**2.98**	**268**	*e*Pn		**Pn**	**22 28 18.1**	**-1.0**
MBDF				*e*Sn		**Sn**	**22 28 52.8**	**-2.1**
	comp=Z,31nm,0.5s							
MBDF	**Montbardon**	**2.98**	**268**	*e*Pn		**Pn**	**22 28 18.1**	**-1.0**
MBDF				*e*Sn		**Sn**	**22 28 52.8**	**-2.1**
	comp=Z,15nm,0.5s							
LPG	**La Plagne**	**3.03**	**283**	*e*Pn		**Pn**	**22 28 21.7**	**+1.9**
LPG				*e*Sn		**Sn**	**22 28 55.8**	**-0.4**
	comp=Z,40nm,0.6s							
LPG	**La Plagne**	**3.03**	**283**	*e*Pn		**Pn**	**22 28 21.7**	**+1.9**
LPG				*e*Sn		**Sn**	**22 28 55.8**	**-0.4**
	comp=Z,20nm,0.6s							
LPL	**La Plagne**	**3.05**	**283**	*e*Pn		**Pn**	**22 28 22.2**	**+2.2**
LPL				*e*Sn		**Sn**	**22 28 55.9**	**-0.6**
	comp=Z,23nm,0.4s							
LPL	**La Plagne**	**3.05**	**283**	*e*Pn		**Pn**	**22 28 22.2**	**+2.2**
LPL				*e*Sn		**Sn**	**22 28 55.9**	**-0.6**
	comp=Z,11nm,0.4s							
AQU	**L'Aquila**	**3.11**	**144**	*e*Pn		**Pn**	**22 28 21.8**	**+1.1**
CALF	**Calern**	**3.12**	**250**	P		**Pn**	**22 28 23.2**	**+2.3**
CALF	**Calern**	**3.12**	**250**	P		**Pn**	**22 28 23.2**	**+2.3**
RSL	**Roselend**	**3.15**	**286**	P		**Pn**	**22 28 24.0**	**+2.6**
RSL	**Roselend**	**3.15**	**286**	P		**Pn**	**22 28 24.0**	**+2.6**
OZLJ	**Ozalj**	**3.26**	**76**	*e*Pn		**Pn**	**22 28 22.5**	**-0.2**
OZLJ				Sn		**Sn**	**22 28 59.8**	**-1.7**
OZLJ	**Ozalj**	**3.26**	**76**	*e*Pn		**Pn**	**22 28 22.4**	**-0.2**
OZLJ				Sn		**Sn**	**22 28 59.7**	**-1.7**
CRES	**Cresnjev**	**3.30**	**72**	*e*Pn		**Pn**	**22 28 22.9**	**-0.4**
SOKA	**Soboth**	**3.35**	**57**	*e*Pn		**Pn**	**22 28 23.7**	**-0.4**
	comp=Z,2.4nm,0.3s							
SOKA	**Soboth**	**3.35**	**57**	Pn		**Pn**	**22 28 23.7**	**-0.4**
	comp=Z,2.4nm,0.3s							
FRF	**La Foret Royal**	**3.38**	**248**	*e*Pn		**Pn**	**22 28 24.9**	**+0.5**
FRF				*e*Sn		**Sn**	**22 29 05.5**	**+1.1**
	comp=Z,58nm,0.4s							
FRF	**La Foret Royal**	**3.38**	**248**	*e*Pn		**Pn**	**22 28 24.9**	**+0.5**
FRF				*e*Sn		**Sn**	**22 29 05.5**	**+1.1**
	comp=Z,29nm,0.4s							
UDBI	**Udbina**	**3.45**	**95**	*e*Pn		**Pn**	**22 28 27.1**	**+1.7**
UDBI				Sn		**Sn**	**22 29 02.7**	**-3.5**
UDBI	**Udbina**	**3.45**	**95**	*e*Pn		**Pn**	**22 28 27.0**	**+1.7**
UDBI				Sn		**Sn**	**22 29 02.6**	**-3.5**
LMR	**La Mourre**	**3.57**	**245**	*e*Pn		**Pn**	**22 28 27.3**	**+0.3**
LMR				*e*Sn		**Sn**	**22 29 08.9**	**-0.2**
	comp=Z,37nm,0.4s							
LMR	**La Mourre**	**3.57**	**245**	*e*Pn		**Pn**	**22 28 27.3**	**+0.3**
LMR				*e*Sn		**Sn**	**22 29 08.9**	**-0.2**
	comp=Z,18nm,0.4s							
ORIF	**Oris-en-Rattie**	**3.61**	**272**	*e*Pn		**Pn**	**22 28 28.0**	**+0.4**
ORIF				*e*Sn		**Sn**	**22 29 09.5**	**-0.6**
	comp=Z,21nm,0.4s							
ORIF	**Oris-en-Rattie**	**3.61**	**272**	*e*Pn		**Pn**	**22 28 28.0**	**+0.4**
ORIF				*e*Sn		**Sn**	**22 29 09.5**	**-0.6**
	comp=Z,10nm,0.4s							
KIZ	**Kirchzarten**	**3.70**	**326**	P		**Pn**	**22 28 28.4**	**-0.4**
KIZ	**Kirchzarten**	**3.70**	**326**	P		**Pn**	**22 28 28.4**	**-0.4**
MOA	**Molln**	**3.73**	**37**	*e*Pn		**Pn**	**22 28 29.6**	**+0.5**
	comp=Z,7.7nm,0.3s							
MOA	**Molln**	**3.73**	**37**	Pn		**Pn**	**22 28 29.6**	**+0.5**
	comp=Z,7.7nm,0.3s							
CABF	**La Chapelle**	**3.81**	**298**	*e*Pn		**Pn**	**22 28 30.7**	**+0.4**
CABF				*e*Sn		**Sn**	**22 29 12.1**	**-3.0**
CABF	**La Chapelle**	**3.81**	**298**	*e*Pn		**Pn**	**22 28 30.7**	**+0.4**
CABF				*e*Sn		**Sn**	**22 29 12.1**	**-3.0**
ARSA	**Arzberg**	**3.94**	**52**	*e*Pn		**Pn**	**22 28 31.6**	**-0.6**
	comp=Z,3.7nm,0.2s							
ARSA	**Arzberg**	**3.94**	**52**	Pn		**Pn**	**22 28 31.6**	**-0.6**
	comp=Z,3.7nm,0.2s							
OG35	**Corcelles**	**3.96**	**289**	P		**Pn**	**22 28 33.0**	**+0.7**
OG35	**Corcelles**	**3.96**	**289**	P		**Pn**	**22 28 33.0**	**+0.7**
MOF	**Molkenrain**	**3.96**	**319**	P		**Pn**	**22 28 32.7**	**+0.3**
MOF	**Molkenrain**	**3.96**	**319**	P		**Pn**	**22 28 32.7**	**+0.3**
SMRF	**Simiane la Rot**	**3.97**	**258**	*e*Pn		**Pn**	**22 28 33.5**	**+1.0**
SMRF				*e*Sn		**Sn**	**22 29 20.3**	**+1.4**
	comp=Z,11nm,0.3s							
SMRF	**Simiane la Rot**	**3.97**	**258**	*e*Pn		**Pn**	**22 28 33.5**	**+1.0**
SMRF				*e*Sn		**Sn**	**22 29 20.3**	**+1.4**
	comp=Z,5.7nm,0.3s							
OPP	**Oppenau**	**4.06**	**333**	P		**Pn**	**22 28 33.7**	**0.0**
OPP	**Oppenau**	**4.06**	**333**	P		**Pn**	**22 28 33.7**	**0.0**
HINF	**Hinteralfeld**	**4.07**	**317**	*e*Pn		**Pn**	**22 28 33.1**	**-0.7**
HINF				*e*Sn		**Sn**	**22 29 18.9**	**-2.4**
	comp=Z,17nm,0.4s							
HINF	**Hinteralfeld**	**4.07**	**317**	*e*Pn		**Pn**	**22 28 33.1**	**-0.7**
HINF				*e*Sn		**Sn**	**22 29 18.9**	**-2.4**
	comp=Z,8.6nm,0.4s							
ECH	**Echery**	**4.22**	**323**	P		**Pn**	**22 28 35.8**	**-0.1**
ECH	**Echery**	**4.22**	**323**	P		**Pn**	**22 28 35.8**	**-0.1**
WLS	**Welschbruch**	**4.29**	**326**	P		**Pn**	**22 28 36.8**	**-0.2**
WLS	**Welschbruch**	**4.29**	**326**	P		**Pn**	**22 28 36.8**	**-0.2**
CDF	**Champ du Feu**	**4.32**	**325**	*e*Pn		**Pn**	**22 28 37.0**	**-0.4**
CDF	**Champ du Feu**	**4.32**	**325**	*e*Pn		**Pn**	**22 28 37.0**	**-0.4**
BLY	**Banja Luka**	**4.43**	**90**	*e*Pn		**Pn**	**22 28 37.8**	**-1.0**
HAU	**Haudompre**	**4.44**	**316**	*e*Pn		**Pn**	**22 28 38.6**	**-0.4**
HAU				*e*Sn		**Sn**	**22 29 27.1**	**-3.5**
	comp=Z,26nm,0.2s							
HAU	**Haudompre**	**4.44**	**316**	*e*Pn		**Pn**	**22 28 38.6**	**-0.4**
HAU				*e*Sn		**Sn**	**22 29 27.1**	**-3.5**
	comp=Z,13nm,0.2s							
VIVF	**Saint-Julien-l**	**4.47**	**272**	*e*Pn		**Pn**	**22 28 39.1**	**-0.2**
VIVF				*e*Sn		**Sn**	**22 29 30.2**	**-1.1**
	comp=Z,6.1nm,0.4s							
VIVF	**Saint-Julien-l**	**4.47**	**272**	*e*Pn		**Pn**	**22 28 39.1**	**-0.2**
VIVF				*e*Sn		**Sn**	**22 29 30.2**	**-1.1**
	comp=Z,3.0nm,0.4s							
CONA	**Conrad Observa**	**4.54**	**47**	*e*Pn		**Pn**	**22 28 40.6**	**+0.2**
	comp=Z,1.5nm,0.3s							
CONA	**Conrad Observa**	**4.54**	**47**	Pn		**Pn**	**22 28 40.6**	**+0.2**
	comp=Z,1.5nm,0.3s							
KHC	**Kasperske Hory**	**4.59**	**22**	*e*PN		**Pn**	**22 28 40.6**	**-0.4**
KHC				*e*PG		**Pg**	**22 28 57.6**	**-2.0**
KHC				*e*SN		**Sn**	**22 29 33.0**	**-1.2**
KHC				*e*SG		**Sg**	**22 30 05.1**	**+6.1**
	comp=Z,15nm,0.8s							
KHC	**Kasperske Hory**	**4.59**	**22**	Pn		**Pn**	**22 28 40.6**	**-0.4**
THEF	**They Montfort**	**4.77**	**316**	P		**Pn**	**22 28 43.7**	**+0.2**
THEF	**They Montfort**	**4.77**	**316**	P		**Pn**	**22 28 43.7**	**+0.2**
PAGF	**Fort de Pagny**	**5.12**	**317**	*e*Pn		**Pn**	**22 28 48.6**	**+0.3**
PAGF	**Fort de Pagny**	**5.12**	**317**	*e*Pn		**Pn**	**22 28 48.6**	**+0.3**
LASF	**Ste Croix**	**5.15**	**263**	*e*Pn		**Pn**	**22 28 47.0**	**-1.7**
LASF	**Ste Croix**	**5.15**	**263**	*e*Pn		**Pn**	**22 28 47.0**	**-1.7**
SMF	**Signal de Mont**	**5.27**	**292**	*e*Pn		**Pn**	**22 28 50.4**	**0.0**
SMF				*e*Sn		**Sn**	**22 29 48.3**	**-2.7**
	comp=Z,20nm,0.5s							
SMF	**Signal de Mont**	**5.27**	**292**	*e*Pn		**Pn**	**22 28 50.4**	**0.0**
SMF				*e*Sn		**Sn**	**22 29 48.3**	**-2.7**
	comp=Z,10nm,0.5s							
STON	**Ston**	**5.28**	**110**	*e*Pn		**Pn**	**22 28 49.7**	**-0.7**
STON	**Ston**	**5.28**	**110**	*e*Pn		**Pn**	**22 28 49.7**	**-0.7**
NKC	**Novy Kostel**	**5.42**	**10**	*e*PN		**Pn**	**22 28 51.2**	**-1.2**
NKC	**Novy Kostel**	**5.42**	**10**	Pn		**Pn**	**22 28 51.2**	**-1.2**
LOR	**Lormes**	**5.47**	**298**	*e*Pn		**Pn**	**22 28 53.0**	**-0.1**
LOR				*e*Sn		**Sn**	**22 29 54.2**	**-1.8**
	comp=Z,10nm,0.3s							
LOR	**Lormes**	**5.47**	**298**	*e*Pn		**Pn**	**22 28 53.0**	**-0.1**
LOR				*e*Sn		**Sn**	**22 29 54.2**	**-1.8**
	comp=Z,5.2nm,0.3s							
MODS	**Modra-Piesok**	**5.56**	**49**	*e*PN		**Pn**	**22 28 52.7**	**-1.6**
MODS				*e*SN		**Sn**	**22 29 54.8**	**-3.4**
MODS	**Modra-Piesok**	**5.56**	**49**	*e*Pn		**Pn**	**22 28 52.7**	**-1.6**
KRUC	**Moravsky**	**5.57**	**40**	*e*PN		**Pn**	**22 28 53.3**	**-1.2**
SSF	**Saint Saulge**	**5.62**	**295**	*e*Pn		**Pn**	**22 28 54.9**	**-0.2**
SSF				*e*Sn		**Sn**	**22 29 55.9**	**-3.7**
	comp=Z,3.7nm,0.3s							
SSF	**Saint Saulge**	**5.62**	**295**	*e*Pn		**Pn**	**22 28 54.9**	**-0.2**
AVF	**Avril sur Loir**	**5.64**	**292**	*e*Pn		**Pn**	**22 28 55.3**	**0.0**
AVF	**Avril sur Loir**	**5.64**	**292**	*e*Pn		**Pn**	**22 28 55.3**	**0.0**
GOPC	**GO Pecny, Ondr**	**5.64**	**26**	*e*PN		**Pn**	**22 28 55.5**	**+0.1**
GOPC	**GO Pecny, Ondr**	**5.64**	**26**	Pn		**Pn**	**22 28 55.5**	**+0.1**
BGF	**Bois d'Agland**	**5.91**	**289**	*e*Pn		**Pn**	**22 28 59.2**	**+0.1**
BGF				*e*Sn		**Sn**	**22 30 03.8**	**-3.0**
	comp=Z,32nm,0.5s							
BGF	**Bois d'Agland**	**5.91**	**289**	*e*Pn		**Pn**	**22 28 59.2**	**+0.1**
UPM	**Unac-Piva**	**5.97**	**104**	*e*Pn		**Pn**	**22 29 00.4**	**+0.2**
HYF	**Humbligny**	**6.25**	**295**	*e*Pn		**Pn**	**22 29 04.2**	**+0.5**
HYF				*e*Sn		**Sn**	**22 30 12.8**	**-2.3**
HYF	**Humbligny**	**6.25**	**295**	*e*Pn		**Pn**	**22 29 04.2**	**+0.5**
HYF				*e*Sn		**Sn**	**22 30 12.8**	**-2.3**
BRG	**Berggiesshubel**	**6.29**	**18**	PG		**Pg**	**22 29 32.6**	**+0.4**
BRG				SG		**Sg**	**22 30 54.8**	**+1.1**
	comp=Z,6.9nm,0.9s							
VYHS	**Vyhne**	**6.50**	**54**	*e*PN		**Pn**	**22 29 06.0**	**-1.1**
VYHS				*e*SN		Sn	22 30 10.8	-10
VYHS	**Vyhne**	**6.50**	**54**	*e*Pn		**Pn**	**22 29 06.0**	**-1.1**
CLL	**Collm**	**6.55**	**11**	*i* Pn		**Pn**	**22 29 07.0**	**-0.8**
CLL				*e*Pg		**Pg**	**22 29 37.0**	**0.0**
CLL				*e*Sg		**Sb**	**22 30 49.0**	**+5.4**
	comp=Z,11nm,1.0s							
DRME	**Dracevica, Mon**	**6.57**	**112**	*e*Pn		**Pn**	**22 29 07.5**	**-0.6**

*ROM **03** 22:46:36.9±0.1, 44°.881N±0°.001×10°.944E±0°.001, h4km, ML2.1/9*
*CSEM **03** 22:46:36.2±0.2, 44°.84N×10°.90E, h15km, ML2.1, Error ellipse: s-maj=5.8km s-min=4.4km az=69.0*
*ISCJB **03** 22:46:37.6±0.3, 44°.86N±0°.02×10°.91E±0°.03, h13km±2km, Error ellipse: s-maj=3.7km s-min=2.8km az=167.5*
ISC 03 22:46:37.5±0.8, **44°.89N**±0°.02×**10°.93E**±0°.02, **h11**km±4km, **n56**, σ1§09/101, **4C-2D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NDIM	**Novi di Modena**	**0.02**	**271**	*e*P	**Pg**	**22 46 38.3**	**-1.1**
NDIM				*e*S	**Sg**	**22 46 40.2**	**-0.6**
NDIM				AML	AML		
	comp=E,27950μm,0.2s						
NDIM				AML	AML		
	comp=N,20500μm,1.1s						
NDIM				AML	AML		
	comp=E,27600μm,0.2s						
NDIM				AML	AML		
	comp=N,21000μm,1.1s						
NDIM				AML	AML		
	comp=E,29300μm,0.2s						
NDIM				AML	AML		
	comp=N,20650μm,1.1s						
NDIM				AML	AML		
	comp=E,29400μm,0.2s						
NDIM				AML	AML		
	comp=N,21000μm,1.1s						
T0827	**Moglia (MN)**	**0.05**	**2⇑**	*i*P	**Pg**	**22 46 39.1**	**-0.5**
T0827				*e*S	**Sg**	**22 46 41.9**	**+0.7**
T0827	**Moglia (MN)**	**0.05**	**2**	*i* P	**Pg**	**22 46 39.1**	**-0.5**
T0827				*e*S	**Sg**	**22 46 41.9**	**+0.7**
T0828	**Loc. Fossoli,**	**0.06**	**191⇓**	*i*P	**Pg**	**22 46 38.9**	**-0.8**
T0828				*e*S	**Sg**	**22 46 41.6**	**+0.4**
T0828	**Loc. Fossoli,**	**0.06**	**191**	*i* P	**Pg**	**22 46 38.9**	**-0.8**
T0828				*e*S	**Sg**	**22 46 41.6**	**+0.4**
T0818	**Loc. Fossa, Co**	**0.09**	**56⇑**	*i*P	**Pg**	**22 46 39.5**	**-0.5**
T0818				*e*S	**Sg**	**22 46 42.6**	**+0.8**
T0818	**Loc. Fossa, Co**	**0.09**	**56**	*i* P	**Pg**	**22 46 39.5**	**-0.5**
T0818				*e*S	**Sg**	**22 46 42.6**	**+0.8**
T0826	**Rio Saliceto (**	**0.10**	**241**	*e*P	**Pg**	**22 46 39.7**	**-0.4**
T0826				*e*S	**Sg**	**22 46 43.8**	**+1.8**
T0826	**Rio Saliceto (**	**0.10**	**241**	*e*P	**Pg**	**22 46 39.7**	**-0.4**
T0826				*e*S	**Sg**	**22 46 43.8**	**+1.8**
T0826				AML	AML		
	comp=E,7105μm,0.1s						
T0826				AML	AML		
	comp=N,9560μm,0.2s						
T0826				AML	AML		
	comp=E,7100μm,0.1s						
T0826				AML	AML		
	comp=N,9850μm,0.2s						
T0826				AML	AML		
	comp=E,7100μm,0.1s						
T0826				AML	AML		
	comp=N,9850μm,0.2s						
T0814	**Loc. Cortile,**	**0.10**	**163**	*e*P	**Pg**	**22 46 39.6**	**-0.5**
T0814				*i* S	**Sg**	**22 46 42.9**	**+0.9**
T0814	**Loc. Cortile,**	**0.10**	**163**	*e*P	**Pg**	**22 46 39.6**	**-0.5**
T0814				*i* S	**Sg**	**22 46 42.9**	**+0.9**
T0825	**Gonzaga (MN)**	**0.10**	**326**	*e*P	**Pg**	**22 46 40.6**	**+0.3**
T0825				*e*S	**Sg**	**22 46 44.7**	**+2.5**
T0825	**Gonzaga (MN)**	**0.10**	**326**	*e*P	**Pg**	**22 46 40.6**	**+0.3**
T0825				*e*S	**Sg**	**22 46 44.7**	**+2.5**
T0825				AML	AML		
	comp=E,13345μm,0.5s						
T0825				AML	AML		
	comp=N,9595μm,0.2s						
T0825				AML	AML		
	comp=E,14770μm,0.2s						
T0825				AML	AML		
	comp=N,9610μm,0.2s						
T0825				AML	AML		
	comp=N,9610μm,0.2s						
T0825				AML	AML		
	comp=E,14770μm,0.2s						
T0824	**Loc. Limidi di**	**0.13**	**181**	*e*P	**Pg**	**22 46 40.3**	**-0.3**
T0824				*e*S	**Sg**	**22 46 44.2**	**+1.5**
T0824	**Loc. Limidi di**	**0.13**	**181**	*e*P	**Pg**	**22 46 40.3**	**-0.3**
T0824				*e*S	**Sg**	**22 46 44.2**	**+1.5**
SBPO	**S.Benedetto Po**	**0.16**	**358**	AML	AML		
	comp=E,950μm,0.9s						
SBPO				AML	AML		
	comp=E,950μm,0.9s						
SBPO				AML	AML		
	comp=N,4985μm,1.1s						
SBPO				AML	AML		
	comp=E,950μm,0.9s						
SBPO				AML	AML		
	comp=N,5395μm,0.3s						
SBPO				AML	AML		
	comp=N,5395μm,0.3s						
NOVE	**Novellara**	**0.18**	**240**	*e*P	**Pg**	**22 46 41.2**	**-0.1**
NOVE	**Novellara**	**0.18**	**240**	*e*P	**Pg**	**22 46 41.2**	**-0.1**
NOVE				*e*S	**Sg**	**22 46 45.9**	**+2.0**
NOVE				AML	AML		
	comp=E,1205μm,1.3s						
NOVE				AML	AML		
	comp=N,1285μm,0.3s						
NOVE				AML	AML		
	comp=E,1295μm,0.3s						
NOVE				AML	AML		
	comp=N,1285μm,0.3s						
NOVE				AML	AML		
	comp=N,1285μm,0.3s						
NOVE				AML	AML		
	comp=E,1295μm,0.3s						
T0802	**SanFelice sul**	**0.18**	**94**	*e*P	**Pg**	**22 46 41.1**	**-0.3**
T0802				*e*S	**Sg**	**22 46 45.4**	**+1.3**
T0802	**SanFelice sul**	**0.18**	**94**	*e*P	**Pg**	**22 46 41.1**	**-0.3**
T0802				*e*S	**Sg**	**22 46 45.4**	**+1.3**
RAVA	**Ravarino**	**0.19**	**134**	*e*P	**Pg**	**22 46 41.2**	**-0.3**
RAVA				*e*S	**Sg**	**22 46 45.9**	**+1.6**
RAVA	**Ravarino**	**0.19**	**134**	*e*P	**Pg**	**22 46 41.2**	**-0.3**
RAVA				*e*S	**Sg**	**22 46 45.9**	**+1.6**
RAVA				AML	AML		
	comp=E,2210μm,0.4s						
RAVA				AML	AML		
	comp=N,1615μm,0.3s						
T0812	**Loc. Stoppiaro**	**0.19**	**69**	*e*P	**Pg**	**22 46 41.1**	**-0.5**
T0812				*e*S	**Sg**	**22 46 48.4**	**+4.0**
T0812	**Loc. Stoppiaro**	**0.19**	**69**	*e*P	**P

MAGA	**Magasa**	**0.91**	**347**	*eP*	**Pg**	**22 46 54.7**	**-0.5**
MAGA				*eS*	**Sn**	**22 47 09.4**	**-0.3**
MAGA	**Magasa**	**0.91**	**347**	*eP*	**Pg**	**22 46 54.7**	**-0.5**
MAGA				*eS*	**Sn**	**22 47 09.4**	**-0.3**
MAGA				AML	AML		
	comp=E,487μm,0.3s						
MAGA				AML	AML		
	comp=N,298μm,0.2s						
MAGA				AML	AML		
	comp=E,487μm,0.3s						
MAGA				AML	AML		
	comp=N,298μm,0.2s						
DOSS	**Dosso del Somm**	**1.01**	**10⇓**	*eP*	**Pg**	**22 46 56.2**	**-0.8**
DOSS				*eS*	**Sn**	**22 47 13.2**	**+1.0**
DOSS	**Dosso del Somm**	**1.01**	**10**	*eP*	**Pg**	**22 46 56.2**	**-0.8**
DOSS				*eS*	**Sn**	**22 47 13.2**	**+1.0**
CGRP	**Cima Grappa**	**1.17**	**31**	*eP*	**Pb**	**22 46 58.6**	**-1.3**
CGRP	**Cima Grappa**	**1.17**	**31**	*eP*	**Pb**	**22 46 58.6**	**-1.3**
CGRP	**Cima Grappa**	**1.17**	**31**	AML	AML		
	comp=N,47μm,1.4s						
CGRP				AML	AML		
	comp=E,44μm,1.5s						
CGRP				AML	AML		
	comp=N,47μm,1.4s						
CGRP				AML	AML		
	comp=E,44μm,1.5s						
KOSI	**Kohlern**	**1.61**	**11**	AML	AML		
	comp=E,26μm,0.8s						
KOSI				AML	AML		
	comp=E,26μm,0.8s						
KOSI				AML	AML		
	comp=N,26μm,1.6s						
KOSI				AML	AML		
	comp=N,26μm,1.6s						

*CSEM **03** 22:47:21.3, 44°.88N×10°.95E, h6km, ML2.1/6*
ROM 03 22:47:21.3±0.0, 44°.882N±0°.002×10°.947E±0°.001, h6km, ML2.1/3, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NDIM	**Novi di Modena**	**0.04**	**279**	*eP*	Pg	22 47 22.7	+0.2
NDIM				*eS*	Sg	22 47 24.6	+1.3
NDIM				AML	AML		
	comp=E,29300μm,0.2s						
NDIM				AML	AML		
	comp=N,20650μm,1.1s						
NDIM				AML	AML		
	comp=E,29400μm,0.2s						
NDIM				AML	AML		
	comp=N,21000μm,1.1s						
T0828	**Loc. Fossoli,**	**0.06**	**205**	*eP*	Pg	22 47 23.3	+0.6
T0828				*eS*	Sg	22 47 26.6	+2.9
T0828	**Loc. Fossoli,**	**0.06**	**205**	*eP*	Pg	22 47 23.3	+0.6
T0828				*eS*	Sg	22 47 26.6	+2.9
T0827	**Moglia (MN)**	**0.06**	**349**	*eP*	Pg	22 47 23.5	+0.7
T0827				*eS*	Sg	22 47 26.4	+2.6
T0827	**Moglia (MN)**	**0.06**	**349**	*eP*	Pg	22 47 23.5	+0.7
T0827				*eS*	Sg	22 47 26.4	+2.6
T0818	**Loc. Fossa, Co**	**0.08**	**48**	*eP*	Pg	22 47 23.9	+0.8
T0818				*eS*	Sg	22 47 26.0	+1.7
T0818	**Loc. Fossa, Co**	**0.08**	**48**	*eP*	Pg	22 47 23.9	+0.8
T0818				*eS*	Sg	22 47 27.0	+2.7
T0814	**Loc. Cortile,**	**0.09**	**170**	*eP*	Pg	22 47 24.1	+0.9
T0814				*eS*	Sg	22 47 27.3	+2.7
T0814	**Loc. Cortile,**	**0.09**	**170**	*eP*	Pg	22 47 24.1	+0.9
T0814				*eS*	Sg	22 47 27.3	+2.8
T0826	**Rio Saliceto (**	**0.11**	**246**	*eP*	Pg	22 47 24.1	+0.6
T0826				*eS*	Sg	22 47 27.5	+2.5
T0826	**Rio Saliceto (**	**0.11**	**246**	*eP*	Pg	22 47 24.1	+0.6
T0826				*eS*	Sg	22 47 27.5	+2.5
T0826				AML	AML		
	comp=E,6545μm,0.1s						
T0826				AML	AML		
	comp=N,9850μm,0.2s						
T0825	**Gonzaga (MN)**	**0.12**	**322**	*eP*	Pg	22 47 24.0	+0.3
T0825				*eS*	Sg	22 47 29.1	+3.8
T0825	**Gonzaga (MN)**	**0.12**	**322**	*eP*	Pg	22 47 25.0	+1.3
T0825				*eS*	Sg	22 47 29.1	+3.8
T0824	**Loc. Limidi di**	**0.12**	**186**	*eP*	Pg	22 47 24.7	+0.9
T0824				*i S*	Sg	22 47 28.7	+3.2
T0824	**Loc. Limidi di**	**0.12**	**186**	*eP*	Pg	22 47 24.7	+0.9
T0824				*i S*	Sg	22 47 28.7	+3.2
T0802	**SanFelice sul**	**0.17**	**92**	*eP*	Pg	22 47 25.5	+0.9
T0802				*eS*	Sg	22 47 29.8	+3.0
T0802	**SanFelice sul**	**0.17**	**92**	*eP*	Pg	22 47 25.5	+0.9
T0802				*eS*	Sg	22 47 29.8	+2.9
SBPO	**S.Benedetto Po**	**0.17**	**353**	*eP*	Pg	22 47 25.7	+1.0
SBPO				*eS*	Sg	22 47 32.7	+5.7
SBPO	**S.Benedetto Po**	**0.17**	**353**	*eP*	Pg	22 47 25.7	+1.0
SBPO				*eS*	Sg	22 47 32.7	+5.7
RAVA	**Ravarino**	**0.18**	**136**	*eP*	Pg	22 47 25.6	+0.8
RAVA				*eS*	Sg	22 47 30.1	+3.0
RAVA	**Ravarino**	**0.18**	**136**	*eP*	Pg	22 47 25.6	+0.9
RAVA				*eS*	Sg	22 47 30.1	+3.0
RAVA				AML	AML		
	comp=E,1645μm,0.4s						
RAVA				AML	AML		
	comp=N,1072μm,0.4s						
RAVA				AML	AML		
	comp=E,1645μm,0.4s						
RAVA				AML	AML		
	comp=N,1072μm,0.4s						
T0813	**Massa Finalese**	**0.18**	**91**	*eP*	Pg	22 47 25.7	+0.9
T0813				*eS*	Sg	22 47 30.3	+3.1
T0813	**Massa Finalese**	**0.18**	**91**	*eP*	Pg	22 47 25.7	+0.8
T0813				*eS*	Sg	22 47 30.3	+3.1
T0812	**Loc. Stoppiaro**	**0.18**	**66**	*eP*	Pg	22 47 26.8	+1.9
T0812				*eS*	Sg	22 47 32.5	+5.2
T0812	**Loc. Stoppiaro**	**0.18**	**66**	*eP*	Pg	22 47 26.8	+1.9
T0812				*eS*	Sg	22 47 32.5	+5.2
NOVE	**Novellara**	**0.18**	**243**	*eP*	Pg	22 47 25.6	+0.7
NOVE				*eS*	Sg	22 47 29.9	+2.5
NOVE	**Novellara**	**0.18**	**243**	*eP*	Pg	22 47 25.6	+0.7
NOVE				*eS*	Sg	22 47 29.9	+2.6
NOVE				AML	AML		
	comp=E,1295μm,0.3s						
NOVE				AML	AML		
	comp=N,1100μm,0.3s						
NOVE				AML	AML		
	comp=N,1100μm,0.3s						
NOVE				AML	AML		
	comp=E,1295μm,0.3s						
T0800	**Massa Finalese**	**0.22**	**99**	*eP*	Pg	22 47 26.2	+0.7
T0800				*eS*	Sg	22 47 31.3	+2.9
T0800	**Massa Finalese**	**0.22**	**99**	*eP*	Pg	22 47 26.1	+0.6
T0800				*eS*	Sg	22 47 31.3	+2.9
T0800				AML	AML		
	comp=E,602μm,1.0s						
T0800				AML	AML		
	comp=N,658μm,1.0s						
T0800				AML	AML		
	comp=N,658μm,1.0s						
T0800				AML	AML		
	comp=E,602μm,1.0s						
T0811	**Palata Pepoli**	**0.22**	**116**	*eP*	Pg	22 47 26.4	+0.8
T0811				*eS*	Sg	22 47 31.6	+3.0
T0811	**Palata Pepoli**	**0.22**	**116**	*eP*	Pg	22 47 26.4	+0.8
T0811				*eS*	Sg	22 47 31.6	+3.0
T0823	**Castello D'Arg**	**0.31**	**130**	*eP*	Pb	22 47 28.6	-0.6
T0823				*eS*	Sb	22 47 35.8	+1.4
T0823	**Castello D'Arg**	**0.31**	**130**	*eP*	Pb	22 47 28.6	-0.6
T0823				*eS*	Sb	22 47 35.8	+1.4
ROVR	**Rover¤ Verone**	**0.77**	**7**	*eP*	Pb	22 47 37.7	+0.5
ROVR				*eS*	Sn	22 47 49.9	-1.0
ROVR	**Rover¤ Verone**	**0.77**	**7**	*eP*	Pb	22 47 37.7	+0.5
ROVR				*eS*	Sn	22 47 49.9	-1.0
SALO	**Salr**	**0.80**	**338**	*eP*	Pn	22 47 38.7	-0.4
SALO				*eS*	Sn	22 47 50.9	-0.5
SALO	**Salr**	**0.80**	**338**	*eP*	Pn	22 47 38.7	-0.4
SALO				*eS*	Sn	22 47 50.9	-0.4
POPM	**Popiglio**	**0.85**	**189**	*eP*	Pn	22 47 40.0	+0.2
POPM				*eS*	Sn	22 47 57.4	+4.8
POPM	**Popiglio**	**0.85**	**189**	*eP*	Pn	22 47 41.0	+1.1
POPM				*eS*	Sn	22 47 57.4	+4.8
BDI	**Bagni Di Lucca**	**0.86**	**197**	*eP*	Pn	22 47 40.9	+0.9
BDI				*eS*	Sn	22 47 55.9	+3.0
BDI	**Bagni Di Lucca**	**0.86**	**197**	*eP*	Pn	22 47 40.9	+0.9
BDI				*eS*	Sn	22 47 55.9	+3.0
MAGA	**Magasa**	**0.92**	**346**	*eP*	Pb	22 47 39.9	+0.1
MAGA				*eS*	Sn	22 47 53.8	-0.8
MAGA	**Magasa**	**0.92**	**346**	*eP*	Pb	22 47 39.9	+0.1
MAGA				*eS*	Sn	22 47 53.8	-0.8

*CSEM **03** 23:02:34.3, 44°.88N×10°.93E, h7km, ML2.4/20*
ROM 03 23:02:34.3±0.0, 44°.884N±0°.001×10°.929E±0°.001, h7km, ML2.4/8, 8C-1D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NDIM	**Novi di Modena**	**0.02**	**278**	*i P*	Pg	23 02 35.8	+0.2
NDIM				*i S*	Sg	23 02 37.6	+1.2
T0827	**Moglia (MN)**	**0.05**	**3**	*i P*	Pg	23 02 36.6	+0.7
T0827				*i S*	Sg	23 02 39.4	+2.4
T0827	**Moglia (MN)**	**0.05**	**3**	*i P*	Pg	23 02 36.6	+0.8
T0827				*i S*	Sg	23 02 39.4	+2.4
T0828	**Loc. Fossoli,**	**0.05**	**191**	*i P*	Pg	23 02 36.5	+0.7
T0828				*i S*	Sg	23 02 39.2	+2.3
T0828	**Loc. Fossoli,**	**0.05**	**191**	*i P*	Pg	23 02 36.5	+0.6
T0828				*i S*	Sg	23 02 39.2	+2.2
T0818	**Loc. Fossa, Co**	**0.09**	**55**	*i P*	Pg	23 02 37.2	+0.8
T0818				*eS*	Sg	23 02 40.3	+2.5
T0818	**Loc. Fossa, Co**	**0.09**	**55**	*i P*	Pg	23 02 37.2	+0.8
T0818				*eS*	Sg	23 02 40.4	+2.6
T0814	**Loc. Cortile,**	**0.10**	**162**	*i P*	Pg	23 02 37.3	+0.9
T0814				*i S*	Sg	23 02 40.7	+2.8
T0814	**Loc. Cortile,**	**0.10**	**162**	*i P*	Pg	23 02 37.3	+0.8
T0814				*i S*	Sg	23 02 40.7	+2.7
T0826	**Rio Saliceto (**	**0.10**	**242**	*i P*	Pg	23 02 37.2	+0.8
T0826				*eS*	Sg	23 02 40.4	+2.5
T0826	**Rio Saliceto (**	**0.10**	**242**	*i P*	Pg	23 02 37.1	+0.7
T0826				*eS*	Sg	23 02 40.4	+2.5
T0826				AML	AML		
	comp=E,8495μm,0.1s						
T0826				AML	AML		
	comp=N,8035μm,0.2s						
T0826				AML	AML		
	comp=E,14055μm,0.1s						
T0826				AML	AML		
	comp=N,12900μm,0.2s						
T0825	**Gonzaga (MN)**	**0.11**	**327**	*i P*	Pg	23 02 37.0	+0.3
T0825				*eS*	Sg	23 02 42.4	+4.1
T0825	**Gonzaga (MN)**	**0.11**	**327**	*i P*	Pg	23 02 38.0	+1.3
T0825				*eS*	Sg	23 02 42.4	+4.1
T0825				AML	AML		
	comp=E,4375μm,0.4s						
T0825				AML	AML		
	comp=N,4445μm,0.9s						
T0825				AML	AML		
	comp=E,24300μm,0.2s						
T0825				AML	AML		
	comp=N,20200μm,0.2s						
T0824	**Loc. Limidi di**	**0.12**	**180**	*i P*	Pg	23 02 37.0	+0.1
T0824				*i S*	Sg	23 02 41.9	+3.2
T0824	**Loc. Limidi di**	**0.12**	**180**	*i P*	Pg	23 02 38.0	+1.0
T0824				*i S*	Sg	23 02 41.9	+3.1
SBPO	**S.Benedetto Po**	**0.17**	**358**	*eP*	Pg	23 02 38.9	+1.2
SBPO	**S.Benedetto Po**	**0.17**	**358**	*eP*	Pg	23 02 38.9	+1.2
SBPO				AML	AML		
	comp=E,712μm,0.6s						
SBPO				AML	AML		
	comp=N,2700μm,0.4s						
SBPO				AML	AML		
	comp=E,1285μm,0.3s						
SBPO				AML	AML		
	comp=N,10400μm,0.4s						
NOVE	**Novellara**	**0.17**	**240**	*i P*	Pg	23 02 38.6	+0.8
NOVE				*eS*	Sg	23 02 43.3	+3.1
NOVE	**Novellara**	**0.17**	**240**	*i P*	Pg	23 02 38.6	+0.8
NOVE				*eS*	Sg	23 02 43.3	+3.1
NOVE				AML	AML		
	comp=E,460μm,0.9s						
NOVE				AML	AML		
	comp=N,624μm,0.4s						
NOVE				AML	AML		
	comp=E,3255μm,0.3s						
NOVE				AML	AML		
	comp=N,3060μm,0.2s						
NOVE				AML	AML		
	comp=N,3060μm,0.2s						
NOVE				AML	AML		
	comp=E,3255μm,0.3s						
T0802	**SanFelice sul**	**0.18**	**93**	*eP*	Pg	23 02 38.8	+0.9
T0802				*eS*	Sg	23 02 43.4	+3.0
T0802	**SanFelice sul**	**0.18**	**93**	*eP*	Pg	23 02 38.8	+0.9
T0802				*eS*	Sg	23 02 43.4	+3.0
RAVA	**Ravarino**	**0.19**	**133**	*eP*	Pg	23 02 39.0	+1.0
RAVA	**Ravarino**	**0.19**	**133**	*eP*	Pg	23 02 39.0	+1.0
RAVA				AML	AML		
	comp=E,668μm,0.3s						
RAVA				AML	AML		
	comp=N,578μm,0.6s						
RAVA				AML	AML		
	comp=E,6330μm,0.4s						
RAVA				AML	AML		
	comp=N,4245μm,0.3s						
T0812	**Loc. Stoppiaro**	**0.19**	**68**	*eP*	Pg	23 02 38.8	+0.6
T0812	**Loc. Stoppiaro**	**0.19**	**68**	*eP*	Pg	23 02 38.8	+0.7
T0813	**Massa Finalese**	**0.19**	**92**	*eP*	Pg	23 02 38.0	-0.2
T0813				*eS*	Sg	23 02 43.7	+2.9
T0813	**Massa Finalese**	**0.19**	**92**	*eP*	Pg	23 02 39.0	+0.8
T0813				*eS*	Sg	23 02 43.7	+2.9
T0800	**Massa Finalese**	**0.23**	**99**	*eP*	Pg	23 02 39.5	+0.7
T0800				*i S*	Sg	23 02 44.7	+2.8
T0800	**Massa Finalese**	**0.23**	**99**	*eP*	Pg	23 02 39.5	+0.6
T0800				*i S*	Sg	23 02 44.7	+2.8
T0800				AML	AML		
	comp=E,398μm,0.8s						
T0800				AML	AML		
	comp=N,628μm,0.3s						
T0800				AML	AML		
	comp=E,2660μm,1.1s						
T0800				AML	AML		
	comp=N,2230μm,0.2s						
T0800				AML	AML		
	comp=E,2560μm,1.1s						
T0800				AML	AML		
	comp=N,2315μm,0.2s						
T0800				AML	AML		
	comp=E,2560μm,1.1s						
T0800				AML	AML		
	comp=N,2315μm,0.2s						
T0800				AML	AML		
	comp=N,2230μm,0.2s						
T0800				AML	AML		
	comp=E,2660μm,1.1s						
T0811	**Palata Pepoli**	**0.23**	**115**	*eP*	Pg	23 02 39.6	+0.7
T0811				*eS*	Sg	23 02 45.3	+3.2
T0811	**Palata Pepoli**	**0.23**	**115**	*eP*	Pg	23 02 39.6	+0.7
T0811				*eS*	Sg	23 02 45.3	+3.2
T0805	**Bondeno (FE)**	**0.28**	**83**	*eP*	Pg	23 02 40.4	+0.6
T0805	**Bondeno (FE)**	**0.28**	**83**	*eP*	Pg	23 02 40.4	+0.5
SERM	**Sermide**	**0.29**	**64**	*eP*	Pg	23 02 40.8	+0.8
SERM	**Sermide**	**0.29**	**64**	*eP*	Pg	23 02 40.8	+0.8
SERM				AML	AML		
	comp=E,605μm,0.5s						
SERM				AML	AML		
	comp=N,446μm,0.3s						
SERM				AML	AML		
	comp=N,447μm,0.3s						
SERM				AML	AML		
	comp=E,607μm,0.5s						
T0803	**Dosso, Cento (**	**0.32**	**111**	*eP*	Pg	23 02 41.2	+0.6
T0803	**Dosso, Cento (**	**0.32**	**111**	*eP*	Pg	23 02 41.2	+0.6
T0817	**Loc. Veratica,**	**0.39**	**74**	*eP*	Pb	23 02 43.7	+0.1
T0817	**Loc. Veratica,**	**0.39**	**74**	*eP*	Pb	23 02 43.7	+0.1
TEOL	**Teolo**	**0.71**	**48**	*eP*	Pb	23 02 48.9	-0.1
TEOL	**Teolo**	**0.71**	**48**	*eP*	Pb	23 02 48.9	-0.2
TEOL				AML	AML		
	comp=E,1014μm,0.3s						
TEOL				AML	AML		
	comp=N,798μm,0.3s						
TEOL				AML	AML		
	comp=N,798μm,0.3s						
TEOL				AML	AML		
	comp=E,1014μm,0.3s						
ROVR	**Rover¤ Verone**	**0.77**	**8**	*eP*	Pb	23 02 50.9	+0.8
ROVR	**Rover¤ Verone**	**0.77**	**8**	*eP*	Pb	23 02 50.9	+0.8
ROVR				AML	AML		
	comp=E,210μm,0.2s						
ROVR				AML	AML		
	comp=N,582μm,0.2s						
ROVR				AML	AML		
	comp=E,210μm,0.2s						
ROVR				AML	AML		
	comp=N,582μm,0.2s						
SALO	**Salr**	**0.79**	**339**	*eP*	Pn	23 02 51.4	-0.5
SALO	**Salr**	**0.79**	**339**	*eP*	Pn	23 02 51.4	-0.6
SALO				AML	AML		
	comp=E,232μm,0.3s						
SALO				AML	AML		
	comp=N,252μm,0.5s						
SALO				AML	AML		
	comp=E,231μm,0.3s						
SALO				AML	AML		
	comp=N,252μm,0.5s						
POPM	**Popiglio**	**0.85**	**188**	*eP*	Pn	23 02 52.6	-0.1
POPM	**Popiglio**	**0.85**	**188**	*eP*	Pn	23 02 52.6	-0.1
BDI	**Bagni Di Lucca**	**0.85**	**196**	*eP*	Pb	23 02 52.2	+0.7
BDI	**Bagni Di Lucca**	**0.85**	**196**	*eP*	Pb	23 02 52.2	+0.7
MAGA	**Magasa**	**0.92**	**347**	*eP*	Pg	23 02 51.7	-0.2
MAGA				*eS*	Sn	23 03 06.8	-0.5
MAGA	**Magasa**	**0.92**	**347**	*eP*	Pg	23 02 51.7	-0.3
MAGA				*eS*	Sn	23 03 06.8	-0.5
CGRP	**Cima Grappa**	**1.17**	**31**	AML	AML		
	comp=N,109μm,0.9s						
CGRP				AML	AML		
	comp=E,85μm,0.7s						
CGRP				AML	AML		
	comp=N,109μm,0.9s						
CGRP				AML	AML		
	comp=E,85μm,0.7s						
KOSI	**Kohlern**	**1.61**	**11**	AML	AML		
	comp=E,53μm,1.0s						
KOSI				AML	AML		
	comp=E,53μm,1.0s						
KOSI				AML	AML		
	comp=N,56μm,1.1s						
KOSI				AML	AML		
	comp=N,56μm,1.1s						
ABSI	**Aberstueckl**	**1.86**	**8**	AML	AML		
	comp=E,71μm,0.7s						
ABSI				AML	AML		
	comp=N,61μm,0.4s						
ABSI				AML	AML		
	comp=E,71μm,0.7s						
ABSI				AML	AML		
	comp=N,61μm,0.4s						

*IASPEI **03** 23:03:21.9±0.8, 44°.89N±0°.02×10°.94E±0°.02, h10km±4km, Error ellipse: s-maj=2.9km s-min=2.6km az=42.7, GT5 selection from ISC bulletin GT5 identified by Bond˙¡r and McLaughlin (2009) selection criteria Bond˙¡r and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
*ISCJB **03** 23:03:21.6±0.3, 44°.90N±0°.01×10°.93E±0°.03, h15km±2km, Error ellipse: s-maj=3.3km s-min=2.5km az=5.5*
*ROM **03** 23:03:21.4±0.0, 44°.884N±0°.001×10°.941E±0°.001, h8km, ML2.2/10*
*CSEM **03** 23:03:21.3±0.2, 44°.90N×10°.92E, h12km, ML2.2, Error ellipse: s-maj=4.9km s-min=3.3km az=84.0*
*PRU **03** 23:03:23.7, 44°.69N×11°.31E, h39km*
ISC 03 23:03:21.7±0.8, 44°.89N±0°.02×10°.94E±0°.02, h10km±4km, n85, σ1°.903/125, 11C-5D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NDIM	**Novi di Modena**	**0.03**	**275**	*eP*	**Pg**	**23 03 22.8**	**-0.8**
NDIM				*i S*	**Sg**	**23 03 24.6**	**-0.3**
T0827	**Moglia (MN)**	**0.05**	**357**	*i P*	**Pg**	**23 03 23.5**	**-0.3**
T0827				*i S*	**Sg**	**23 03 26.4**	**+1.1**
T0827	**Moglia (MN)**	**0.05**	**357**	*i P*	**Pg**	**23 03 23.5**	**-0.3**
T0827				*i S*	**Sg**	**23 03 26.4**	**+1.1**
T0828	**Loc. Fossoli,**	**0.06**	**196**	*i P*	**Pg**	**23 03 23.3**	**-0.5**
T0828				*i S*	**Sg**	**23 03 26.0**	**+0.7**
T0828	**Loc. Fossoli,**	**0.06**	**196**	*i P*	**Pg**	**23 03 23.3**	**-0.5**
T0828				*i S*	**Sg**	**23 03 26.0**	**+0.7**
T0818	**Loc. Fossa, Co**	**0.08**	**53**	*i P*	**Pg**	**23 03 23.9**	**-0.2**
T0818				*i S*	**Sg**	**23 03 26.0**	**+0.1**
T0818	**Loc. Fossa, Co**	**0.08**	**53**	*i P*	**Pg**	**23 03 23.9**	**-0.2**
T0818				*i S*	**Sg**	**23 03 27.0**	**+1.1**
T0814	**Loc. Cortile,**	**0.10**	**165**	*i P*	**Pg**	**23 03 24.1**	**-0.2**
T0814				*i S*	**Sg**	**23 03 27.3**	**+1.2**
T0814	**Loc. Cortile,**	**0.10**	**165**	*i P*	**Pg**	**23 03 24.1**	**-0.2**
T0814				*i S*	**Sg**	**23 03 27.3**	**+1.2**
T0826	**Rio Saliceto (**	**0.10**	**243**	*eP*	**Pg**	**23 03 24.1**	**-0.2**
T0826				*i S*	**Sg**	**23 03 27.5**	**+1.3**
T0826	**Rio Saliceto (**	**0.10**	**243**	*eP*	**Pg**	**23 03 24.1**	**-0.2**
T0826				*i S*	**Sg**	**23 03 27.5**	**+1.3**
T0825	**Gonzaga (MN)**	**0.11**	**324**	*eP*	**Pg**	**23 03 24.8**	**+0.3**
T0825				*i S*	**Sg**	**23 03 29.2**	**+2.8**
T0825	**Gonzaga (MN)**	**0.11**	**324**	*eP*	**Pg**	**23 03 24.8**	**+0.3**
T0825				*i S*	**Sg**	**23 03 29.2**	**+2.8**
T0825				AML	AML		
	comp=E,24300μm,0.2s						
T0825				AML	AML		
	comp=N,20200μm,0.2s						
T0825				AML	AML		
	comp=E,24300μm,0.2s						
T0825				AML	AML		
	comp=N,20200μm,0.2s						
T0824	**Loc. Limidi di**	**0.13**	**183**	*i P*	**Pg**	**23 03 24.7**	**0.0**
T0824				*i S*	**Sg**	**23 03 28.6**	**+1.8**
T0824	**Loc. Limidi di**	**0.13**	**183**	*i P*	**Pg**	**23 03 24.7**	**0.0**
T0824				*i S*	**Sg**	**23 03 28.6**	**+1.8**
SBPO	**S.Benedetto Po**	**0.17**	**356**	*i P*	**Pg**	**23 03 25.7**	**+0.3**
SBPO	**S.Benedetto Po**	**0.17**	**356**	*i P*	**Pg**	**23 03 25.7**	**+0.3**
T0802	**SanFelice sul**	**0.17**	**93**	*eP*	**Pg**	**23 03 25.4**	**-0.1**
T0802				*i S*	**Sg**	**23 03 29.9**	**+1.8**
T0802	**SanFelice sul**	**0.17**	**93**	*eP*	**Pg**	**23 03 25.4**	**-0.1**
T0802				*i S*	**Sg**	**23 03 29.9**	**+1.8**
NOVE	**Novellara**	**0.18**	**241**	*eP*	**Pg**	**23 03 25.6**	**0.0**
NOVE				*i S*	**Sg**	**23 03 30.4**	**+2.2**
NOVE	**Novellara**	**0.18**	**241**	*eP*	**Pg**	**23 03 25.6**	**0.0**
NOVE				*i S*	**Sg**	**23 03 30.4**	**+2.2**
NOVE				AML	AML		
	comp=E,3255μm,0.3s						
NOVE				AML	AML		
	comp=N,3055μm,0.2s						
NOVE				AML	AML		
	comp=E,3255μm,0.3s						
NOVE				AML	AML		
	comp=N,3060μm,0.2s						
RAVA	**Ravarino**	**0.18**	**135**	*eP*	**Pg**	**23 03 25.7**	**+0.1**
RAVA				*i S*	**Sg**	**23 03 29.9**	**+1.6**
RAVA	**Ravarino**	**0.18**	**135**	*eP*	**Pg**	**23 03 25.7**	**+0.1**
RAVA				*i S*	**Sg**	**23 03 29.9**	**+1.6**
RAVA				AML	AML		
	comp=E,6330μm,0.4s						
RAVA				AML	AML		
	comp=N,4245μm,0.3s						
RAVA				AML	AML		
	comp=E,6330μm,0.4s						
RAVA				AML	AML		
	comp=N,4245μm,0.3s						
T0813	**Massa Finalese**	**0.19**	**92**	*eP*	**Pg**	**23 03 25.6**	**-0.1**
T0813				*i S*	**Sg**	**23 03 30.2**	**+1.8**
T0813	**Massa Finalese**	**0.19**	**92**	*eP*	**Pg**	**23 03 25.6**	**-0.1**
T0813				*i S*	**Sg**	**23 03 30.2**	**+1.8**
T0812	**Loc. Stoppiaro**	**0.19**	**68**	*eP*	**Pg**	**23 03 25.5**	**-0.2**
T0812	**Loc. Stoppiaro**	**0.19**	**68**	*eP*	**Pg**	**23 03 25.5**	**-0.2**
T0800	**Massa Finalese**	**0.23**	**99**	*eP*	**Pg**	**23 03 26.1**	**-0.3**
T0800				*i S*	**Sg**	**23 03 31.9**	**+2.4**
T0800	**Massa Finalese**	**0.23**	**99**	*eP*	**Pg**	**23 03 26.1**	**-0.3**
T0800				*i S*	**Sg**	**23 03 31.9**	**+2.4**
T0800				AML	AML		
	comp=E,2660μm,1.1s						
T0800				AML	AML		
	comp=N

GAZZ	**Gazzo Veronese**	**0.26**	**26**	⇑*e*Pg	**Pg**	**23 03 27.0**	**+0.1**
GAZZ	**Gazzo Veronese**	**0.26**	**26**	*e*Pg	**Pg**	**23 03 27.0**	**+0.1**
T0805	**Bondeno (FE)**	**0.28**	**83**	*e*P	**Pg**	**23 03 27.2**	**-0.1**
T0805	**Bondeno (FE)**	**0.28**	**83**	*e*P	**Pg**	**23 03 27.2**	**-0.1**
SERM	**Sermide**	**0.28**	**64**	*e*P	**Pg**	**23 03 27.3**	**-0.2**
SERM				*i* S	**Sb**	**23 03 33.7**	**0.0**
SERM	**Sermide**	**0.28**	**64**	*e*P	**Pg**	**23 03 27.3**	**-0.2**
SERM				*i* S	**Sb**	**23 03 33.7**	**0.0**
SERM				AML	AML		
	comp=E,605μm,0.5s						
SERM				AML	AML		
	comp=N,446μm,0.3s						
SERM				AML	AML		
	comp=N,447μm,0.3s						
SERM				AML	AML		
	comp=E,607μm,0.5s						
T0823	**Castello D'Arg**	**0.31**	**129**	*e*P	**Pb**	**23 03 28.5**	**-0.9**
T0823	**Castello D'Arg**	**0.31**	**129**	*e*P	**Pb**	**23 03 28.5**	**-0.9**
T0803	**Dosso, Cento (**	**0.32**	**112**	*e*P	**Pg**	**23 03 27.8**	**-0.3**
T0803	**Dosso, Cento (**	**0.32**	**112**	*e*P	**Pg**	**23 03 27.8**	**-0.3**
T0817	**Loc. Veratica,**	**0.38**	**74**	*e*P	**Pg**	**23 03 29.5**	**+0.2**
T0817				*i* S	**Sb**	**23 03 36.7**	**+0.1**
T0817	**Loc. Veratica,**	**0.38**	**74**	*e*P	**Pg**	**23 03 29.5**	**+0.2**
T0817				*i* S	**Sb**	**23 03 36.6**	**+0.1**
T0821	**Loc. Casaglia**	**0.43**	**87**	*e*P	**Pb**	**23 03 30.6**	**-0.8**
T0821	**Loc. Casaglia**	**0.43**	**87**	*e*P	**Pb**	**23 03 30.6**	**-0.8**
T0816	**San Bartolomeo**	**0.50**	**109**	*e*P	**Pb**	**23 03 31.9**	**-0.6**
T0816	**San Bartolomeo**	**0.50**	**109**	*e*P	**Pb**	**23 03 31.9**	**-0.6**
ZCCA	**Zocca**	**0.54**	**177**	*e*P	**Pn**	**23 03 35.2**	**-0.2**
ZCCA	**Zocca**	**0.54**	**177**	*e*P	**Pn**	**23 03 35.1**	**-0.2**
T0815	**Correggio (RE)**	**0.56**	**91**	*e*P	**Pb**	**23 03 32.8**	**-0.7**
T0815	**Correggio (RE)**	**0.56**	**91**	*e*P	**Pb**	**23 03 32.8**	**-0.7**
TEOL	**Teolo**	**0.70**	**47**	⇑*e*Pg	**Pg**	**23 03 35.0**	**-0.4**
TEOL				*e*Sg	**Sb**	**23 03 46.2**	**+0.4**
TEOL	**Teolo**	**0.70**	**47**	*e*P	**Pg**	**23 03 34.8**	**-0.5**
TEOL				*e*Sg	**Sb**	**23 03 46.2**	**+0.4**
TEOL	**Teolo**	**0.70**	**47**	*e*P	**Pg**	**23 03 34.8**	**-0.5**
TEOL				AML	AML		
	comp=E,1014μm,0.3s						
TEOL				AML	AML		
	comp=N,798μm,0.3s						
TEOL				AML	AML		
	comp=E,1014μm,0.3s						
TEOL				AML	AML		
	comp=N,798μm,0.3s						
ROVR	**Rover~¤ Verone**	**0.77**	**7**	*e*P	**Pb**	**23 03 36.6**	**-0.7**
ROVR	**Rover~¤ Verone**	**0.77**	**7**	*e*P	**Pb**	**23 03 36.6**	**-0.7**
ROVR				AML	AML		
	comp=E,210μm,0.2s						
ROVR				AML	AML		
	comp=N,582μm,0.2s						
ROVR				AML	AML		
	comp=E,210μm,0.2s						
ROVR				AML	AML		
	comp=N,582μm,0.2s						
MARN	**Marana (Italy)**	**0.78**	**14**	⇑*e*Pg	**Pb**	**23 03 36.8**	**-0.6**
MARN				*e*Sg	**Sb**	**23 03 48.6**	**+0.6**
MARN	**Marana (Italy)**	**0.78**	**14**	*e*Pg	**Pb**	**23 03 36.8**	**-0.6**
MARN				*e*Sg	**Sb**	**23 03 48.6**	**+0.6**
SALO	**Salr**	**0.79**	**339**	*e*P	**Pg**	**23 03 36.8**	**-0.1**
SALO	**Salr**	**0.79**	**339**	*e*P	**Pg**	**23 03 36.8**	**-0.1**
SALO				AML	AML		
	comp=E,232μm,0.3s						
SALO				AML	AML		
	comp=N,252μm,0.5s						
SALO				AML	AML		
	comp=E,231μm,0.3s						
SALO				AML	AML		
	comp=N,252μm,0.5s						
BALD	**Monte Baldo**	**0.80**	**354**	⇑*e*Pg	**Pb**	**23 03 38.0**	**+0.1**
BALD				*e*Sg	**Sn**	**23 03 49.9**	**-1.5**
BALD	**Monte Baldo**	**0.80**	**354**	*e*Pg	**Pb**	**23 03 38.0**	**+0.1**
BALD				*e*Sg	**Sn**	**23 03 49.9**	**-1.5**
POPM	**Popiglio**	**0.85**	**189**	AML	AML		
	comp=E,138μm,0.3s						
POPM				AML	AML		
	comp=N,249μm,0.3s						
POPM				AML	AML		
	comp=E,138μm,0.3s						
POPM				AML	AML		
	comp=N,249μm,0.3s						
BDI	**Bagni Di Lucca**	**0.86**	**197**	*e*P	**Pn**	**23 03 39.7**	**-0.2**
BDI	**Bagni Di Lucca**	**0.86**	**197**	*e*P	**Pn**	**23 03 39.7**	**-0.2**
MAGA	**Magasa**	**0.92**	**346**	*e*P	**Pg**	**23 03 38.4**	**-1.0**
MAGA	**Magasa**	**0.92**	**346**	*e*P	**Pg**	**23 03 38.4**	**-1.0**
DOSS	**Dosso del Somm**	**1.01**	**10**	⇓*e*Pg	**Pg**	**23 03 40.8**	**-0.4**
DOSS				*e*Sg	**Sn**	**23 03 56.0**	**-0.5**
DOSS	**Dosso del Somm**	**1.01**	**10**	*e*Pg	**Pg**	**23 03 40.8**	**-0.4**
DOSS				*e*Sg	**Sn**	**23 03 56.0**	**-0.5**
RNI	**Roncone**	**1.12**	**349**	⇑*e*Pg	**Pb**	**23 03 42.0**	**-1.2**
RNI				*e*Sg	**Sn**	**23 03 59.1**	**+0.1**
RNI	**Roncone**	**1.12**	**349**	*e*Pg	**Pb**	**23 03 42.0**	**-1.2**
RNI				*e*Sg	**Sn**	**23 03 59.2**	**+0.1**
MSSA	**Maissana**	**1.16**	**241**	AML	AML		
	comp=N,118μm,1.6s						
MSSA				AML	AML		
	comp=E,73μm,1.6s						
MSSA				AML	AML		
	comp=N,118μm,1.6s						
MSSA				AML	AML		
	comp=E,73μm,1.6s						
CGRP	**Cima Grappa**	**1.17**	**31**	⇑*e*Pg	**Pb**	**23 03 42.9**	**-1.2**
CGRP				*e*Sg	**Sn**	**23 04 00.9**	**+0.7**
CGRP	**Cima Grappa**	**1.17**	**31**	*e*P	**Pb**	**23 03 42.9**	**-1.2**
CGRP				*e*Sg	**Sn**	**23 04 01.0**	**+0.7**
CGRP	**Cima Grappa**	**1.17**	**31**	*e*P	**Pb**	**23 03 42.9**	**-1.2**
CGRP				AML	AML		
	comp=E,85μm,0.7s						
CGRP				AML	AML		
	comp=N,109μm,0.9s						
CGRP				AML	AML		
	comp=E,85μm,0.7s						
CGRP				AML	AML		
	comp=N,109μm,0.9s						
MABI	**Malga Bissina**	**1.21**	**346**	AML	AML		
	comp=E,49μm,1.4s						
MABI				AML	AML		
	comp=E,49μm,1.4s						
MABI				AML	AML		
	comp=N,47μm,0.8s						
MABI				AML	AML		
	comp=N,47μm,0.8s						
ASQU	**Asqua**	**1.25**	**150**	AML	AML		
	comp=N,40μm,1.1s						
ASQU				AML	AML		
	comp=E,39μm,1.2s						
ASQU				AML	AML		
	comp=N,40μm,1.1s						
ASQU				AML	AML		
	comp=E,39μm,1.2s						
VARN	**Col Varnada, M**	**1.38**	**36**	*e*Pg	**Pn**	**23 03 46.2**	**-0.9**
VARN	**Col Varnada, M**	**1.38**	**36**	*e*Pg	**Pn**	**23 03 46.2**	**-0.9**
OZOL	**Ozolo**	**1.52**	**3**	*e*Pg	**Pn**	**23 03 48.5**	**-0.6**
OZOL	**Ozolo**	**1.52**	**3**	*e*Pg	**Pn**	**23 03 48.5**	**-0.6**
KOSI	**Kohlern**	**1.61**	**11**	AML	AML		
	comp=N,56μm,1.1s						
KOSI				AML	AML		
	comp=E,53μm,1.0s						
KOSI				AML	AML		
	comp=N,56μm,1.1s						
KOSI				AML	AML		
	comp=E,53μm,1.0s						
ABSI	**Aberstueckl**	**1.86**	**8**	AML	AML		
	comp=N,61μm,0.4s						
ABSI				AML	AML		
	comp=E,71μm,0.7s						
ABSI				AML	AML		
	comp=N,61μm,0.4s						
ABSI				AML	AML		
	comp=E,71μm,0.7s						
KHC	**Kasperske Hory**	**4.62**	**22**	*e*PN	**Pn**	**23 04 31.8**	**+0.3**
KHC				*e*PG	**Pg**	**23 04 48.8**	**-1.3**
KHC				*e*SN	**Sn**	**23 05 23.1**	**-2.0**
KHC				*e*SG	**Sg**	**23 05 53.9**	**+4.0**
KHC	**Kasperske Hory**	**4.62**	**22**	Pn	**Pn**	**23 04 31.8**	**+0.3**

ISCJB ***03*** *23:16:59.5±0.4, 22°.39S±0°.04×67°.45W±0°.06, h183km±5km, mb3.9/9, Error ellipse: s-maj=9.8km s-min=5.3km az=158.4*
IDC ***03*** *23:17:00.7±3.5, 22°.27S×67°.18W, h174km±25km, mb3.8/7, mb1 3.9/10, mb1mx3.5/41, mbtmp4.2/10, Error ellipse: s-maj=42.9km s-min=16.0km az=40.0*

GUC ***03*** *23:17:01.0±0.5, 22°.33S×67°.71W, h193km±10km, ML3.9*
NEIC ***03*** *23:17:01.6±1.4, 22°.22S×67°.08W, h180km±11km, mb4.1/2, Error ellipse: s-maj=21.1km s-min=8.5km az=51.0*
SJA ***03*** *23:17:12.5±0.5, 23°.36S×67°.41W, h69km±17km, ML3.1, MW2.9*
ISC 03 23:16:59.0±0.8, **22°.36S**±0°.05×**67°.23W**±0°.06, **h162**km±8km, **n34**, σ**1995/46, mb4.0**/9, **11C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**1.95**	**286**	⇑*i*P	**Pn**	**23 17 36.1**	**+1.6**
PB09				*e*S	**Sn**	**23 18 02.5**	**+0.6**
PB09				IAML		23 18 04.8	
	comp=N,365nm,0.6s						
PB06	**IPOC Station P**	**2.19**	**261**	⇑*i*P	**Pn**	**23 17 37.7**	**+0.4**
PB06				IAML		23 18 08.9	
	comp=N,492nm,0.6s						
PB15	**IPOC Station P**	**2.23**	**247**	⇑*i*P	**Pn**	**23 17 38.7**	**+0.8**
PB15				*i* S	**Sn**	**23 18 07.7**	**-0.1**
PB01	**IPOC Station P**	**2.48**	**302**	⇑*i*P	**Pn**	**23 17 41.2**	**+0.7**
PB01				*i* S	**Sn**	**23 18 12.2**	**-0.5**
PB01				IAML		23 18 13.7	
	comp=E,458nm,0.1s						
PB07	**IPOC Station P**	**2.54**	**284**	⇑*i*P	**Pn**	**23 17 41.9**	**+0.4**
PB07				*i* S	**Sn**	**23 18 12.5**	**-1.7**
PB07				IAML		23 18 13.0	
	comp=N,1μm,0.5s						
PB02	**IPOC Station P**	**2.69**	**292**	⇑*i*P	**Pn**	**23 17 43.3**	**+0.2**
PB02				*i* S	**Sn**	**23 18 15.2**	**-2.0**
PB02				IAML		23 18 15.6	
	comp=N,726nm,0.5s						
PB04	**IPOC Station P**	**2.70**	**270**	⇑*i*P	**Pn**	**23 17 43.3**	**-0.1**
PB04				*i* S	**Sn**	**23 18 15.4**	**-2.3**
PB04				IAML		23 18 20.3	
	comp=N,999nm,0.6s						
SLA	**San Lorenzo**	**2.83**	**146**	⇓*e*P	**Pn**	**23 17 49.0**	**+4.0**
SLA				*e*S	**Sn**	**23 18 16.0**	**-4.7**
SLA				IAML		23 18 25.6	
	comp=Z,68nm,0.5s						
PB08	**IPOC Station P**	**2.85**	**321**	⇑*i*P	**Pn**	**23 17 47.4**	**+2.0**
PB08				*i* S	**Sn**	**23 18 22.2**	**+1.0**
PB08				IAML		23 18 23.7	
	comp=N,257nm,0.5s						
ANCH	**Antofagasta**	**3.21**	**245**	*e*P	Pn	23 18 15.5	+26
ANCH				*i* S	Sn	23 18 51.9	+23
PB10	**IPOC Station P**	**3.27**	**249**	⇑*i*P	**Pn**	**23 17 49.3**	**-1.0**
PB10				*e*S	**Sn**	**23 18 26.4**	**-3.8**
PB10				IAML		23 18 30.2	
	comp=N,210nm,0.5s						
PSGC	**Pisagua**	**3.86**	**315**	⇑*i*P	**Pn**	**23 17 56.6**	**-1.3**
PSGC				*i* S	**Sn**	**23 18 39.9**	**-3.8**
MNMC	**Minye Minye**	**3.90**	**325**	⇑*i*P	**Pn**	**23 17 59.3**	**+0.6**
MNMC				*i* S	**Sn**	**23 18 43.8**	**-1.2**
FSA	**Cafayete**	**3.90**	**163**	*e*P	**Pn**	**23 18 00.7**	**+2.1**
FSA				IAML		23 18 04.6	
	comp=Z,20nm,0.8s						
AHML	**Horco Molle**	**4.73**	**159**	*e*P	**Pn**	**23 18 11.8**	**+2.7**
AHML				IAML		23 18 12.9	
	comp=Z,13nm,0.4s						
LPAZ	**La Paz**	**6.10**	**352**	P	**Pn**	**23 18 29.9**	**+2.0**
	comp=Z,5.9nm,0.3s,baz=155,slow=6.4,SNR=134						
LPAZ				S	**Sn**	**23 19 37.9**	**+0.5**
	comp=Z,0.7nm,0.3s,baz=346,slow=18,SNR=2.6						
CYA	**Choya**	**6.19**	**168**	*e*P	**Pn**	**23 18 30.9**	**+2.5**
CYA				IAML		23 18 32.0	
	comp=Z,8.7nm,0.4s						
VCA	**Vinchina**	**6.41**	**188**	*e*P	**Pn**	**23 18 32.4**	**+1.0**
VCA				IAML		23 19 54.4	
	comp=Z,9.9nm,0.3s						
AGUA	**GUANDACOL**	**7.19**	**189**	*e*P	**Pn**	**23 18 39.5**	**-2.2**
SIV	**San Ignacio**	**8.60**	**44**	P	**Pn**	**23 18 59.8**	**-0.7**
	comp=Z,5.9nm,0.3s,baz=244,slow=8.8,SNR=74						
SIV				S	**Sn**	**23 20 30.8**	**-5.5**
	comp=Z,2.6nm,0.3s,baz=330,slow=20,SNR=14						
TCA	**Tanti**	**9.24**	**166**	*e*P	**Pn**	**23 19 07.9**	**-1.1**
TCA				IAML		23 19 08.9	
	comp=Z,6.8nm,0.3s						
CPUP	**Villa Florida**	**9.85**	**116**	P	**Pn**	**23 19 17.9**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=278,slow=11,SNR=4.1						
HOPE	**Hope Point**	**39.38**	**152**	P	**P**	**23 24 14.1**	**+1.5**
TXAR	**Lajitas Array**	**62.23**	**324**	P	**P**	**23 27 03.1**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=153,slow=8.1,SNR=5.7						
KOWA	**Kowa**	**71.94**	**65**	P	**P**	**23 28 05.1**	**-0.1**
	comp=Z,2.0nm,0.6s,baz=244,slow=7.4,SNR=4.8						
PDAR	**Pinedale Array**	**75.64**	**329**	P	**P**	**23 28 26.8**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=120,slow=8.8,SNR=4.0						
TORD	**Torodi Ar. Bea**	**76.19**	**69**	P	**P**	**23 28 29.9**	**0.0**
	comp=Z,5.9nm,0.7s,baz=253,slow=5.5,SNR=83						
ULM	**Lac du Bonnet**	**76.61**	**342**	P	**P**	**23 28 31.0**	**-0.5**
	comp=Z,3.3nm,0.6s,baz=166,slow=7.0,SNR=6.1						
TSUM	**Tsumeb**	**78.30**	**106**	*e*P	**P**	**23 28 42.0**	**+0.1**
	comp=Z,2.1nm,0.8s						
BOSA	**Boshof**	**81.67**	**117**	P	**P**	**23 29 00.2**	**+0.4**
	comp=Z,1.0nm,0.4s,baz=258,slow=4.0,SNR=5.1						
FFC	**Flin Flon**	**82.35**	**341**	P	**P**	**23 29 02.2**	**-0.1**
	comp=Z,1.3nm,0.2s						
YKA	**Yellowknife Ar**	**92.52**	**340**	P	**P**	**23 29 51.3**	**+0.1**
	comp=Z,1.0nm,0.6s,baz=136,slow=4.5,SNR=11						
INK	**Inuvik**	**102.28**	**340**	Pdif	**Pdif**	**23 30 36.0**	**+0.8**
MKAR	**Makanchi Array**	**145.38**	**38**	PKPbc	**PKPdf**	**23 36 17.4**	**-0.3**
	comp=Z,0.5nm,0.9s,baz=0.0,slow=1.4,SNR=2.5						

ISCJB ***03*** *23:19:10.8±0.2, 35°.80N±0°.02×79°.69E±0°.04, h10km, mb4.3/52, MS3.2/10, Error ellipse: s-maj=4.5km s-min=3.2km az=19.6*
IDC ***03*** *23:19:10.4±0.7, 35°.72N×79°.64E, h0km, mb4.1/22, mb1 4.2/27, mb1mx4.1/70, mbtmp4.1/27, ML3.9/5, MS3.2/14, Ms1 3.2/14, ms1mx2.9/68, Error ellipse: s-maj=17.9km s-min=12.9km az=30.0*
BJI ***03*** *23:19:12.9, 35°.89N×79°.82E, h7km, mb4.1/19, mB4.5/9, ML4.4/8, Ms3.7/5, Ms7 3.5/3*
NNC ***03*** *23:19:16.3±2.8, 36°.13N×79°.88E, h0km, mb4.7, mpv4.5, Error ellipse: s-maj=24.4km s-min=16.5km az=175.0*
MOS ***03*** *23:19:16.1±1.4, 35°.97N×79°.60E, h44km, mb4.5/27, Error ellipse: s-maj=7.9km s-min=4.2km az=115.2*
NEIC ***03*** *23:19:16.7±1.1, 35°.83N×79°.72E, h45km±8km, mb4.3/13, Error ellipse: s-maj=11.1km s-min=7.5km az=157.0*
ISC 03 23:19:12.3±0.3, **35°.81N**±0°.03×**79°.61E**±0°.04, **h10**km, **n212**, σ**2°.13/219, mb4.4/52, MS3.2/10, 29C-28D, Kashmir-Xizang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DHRM	**DHARAMSHALA**	**4.49**	**219**	*e*P	**Pn**	**23 20 23.0**	**+2.4**
DHRM				*e*S	**Sn**	**23 21 13.5**	**+0.4**
THN	**Thein Dam**	**4.67**	**225**	*ex*	**Pb**	**23 20 33.2**	**-1.1**
THN				*ex*	**Sg**	**23 21 40.4**	**-1.8**
KSH	**Kashi**	**4.69**	**323**	Pn	**Pn**	**23 20 26.4**	**+3.1**
KSH				smax	smax		
	comp=N,800nm,0.7s						
KSH				smax	smax		
	comp=E,710nm,0.7s						
SMLA	**Simla**	**5.10**	**204**	*e*P	**Pn**	**23 20 31.4**	**+2.6**
SMLA				*e*S	**Sn**	**23 21 28.6**	**+1.0**
DDI	**Dehra Dun**	**5.63**	**194**	*ex*	**Pn**	**23 20 33.0**	**-3.1**
DDI				*e*S	**Sn**	**23 21 38.8**	**-2.1**
DDI				IAML		23 22 31.2	
	comp=N,298nm,0.2s						
DDI				IAML		23 22 31.3	
	comp=E,290nm,0.2s						
CHCP	**Chirah Chowk**	**5.65**	**249**	⇓P	**Pn**	**23 20 39.3**	**+2.9**
NIL	**Nilore**	**5.66**	**249**	*e*Pn	**Pn**	**23 20 39.4**	**+2.8**
NIL	**Nilore**	**5.66**	**249**	*e*P	**Pn**	**23 20 39.4**	**+2.8**
KKR	**Kurukshetra**	**6.29**	**203**	*e*P	**Pn**	**23 20 47.0**	**+1.9**
KKR				IAML		23 22 03.1	
	comp=Z,242nm,0.3s						
SFK	**Sufi-Kurgan**	**6.39**	**313**	⇑Pn	**Pn**	**23 20 50.9**	**+4.1**
	comp=Z,16nm,0.6s						
SFK				⇑Pg	Pb	23 21 08.7	+4.9
	comp=Z,48nm,0.8s						
SFK				⇓Sn	**Sn**	**23 22 07.7**	**+7.7**
	comp=Z,52nm,0.5s						
SFK				⇓Lg	Lg	23 22 36.5	
	comp=Z,94nm,0.5s						
SFK	**Sufi-Kurgan**	**6.39**	**313**	*i* P	**Pn**	**23 20 50.8**	**+4.0**
SFK				pmax	pmax		
	comp=Z,21nm,0.6s						
KDJ	**Kajisay**	**6.59**	**344**	*e*Pn	Pn	23 20 54.1	+4.7
CEP	**Cherat**	**6.64**	**255**	P	**Pn**	**23 20 51.9**	**+1.8**
CEP				S	Sn	23 21 57.0	-8.9
PRZ	**Przheval'sk**	**6.73**	**352**	*e*Pn	**Pn**	**23 20 55.0**	**+3.6**
PRZ	**Przheval'sk**	**6.73**	**352**	*e*P	**Pn**	**23 20 55.0**	**+3.6**
KZA	**Kyzart**	**7.12**	**333**	P	Pn	23 21 01.5	+4.5
SNR=15							
THW	**Thamme Wali**	**7.17**	**247**	P	**Pn**	**23 21 00.1**	**+2.8**
NDI	**New Delhi**	**7.39**	**197**	*e*P	**Pn**	**23 21 01.0**	**+0.7**
BHGR	**Bahadurgarh**	**7.45**	**198**	*e*P	**Pn**	**23 21 01.8**	**+0.6**
BHGR				*ex*	x	23 22 11.8	
BHGR				IAML		23 23 11.2	
	comp=Z,154nm,0.2s						
PDGK	**Podgornoye**	**7.51**	**359**	⇑Pn	**Pn**	**23 21 03.7**	**+1.7**
	comp=Z,28nm,0.7s						
PDGK				⇓Lg	Lg	23 23 07.0	
	comp=Z,146nm,1.2s						
PDGK	**Podgornoye**	**7.51**	**359**	*i* P	**Pn**	**23 21 03.7**	**+1.7**
PDGK				pmax	pmax		
	comp=Z,28nm,0.7s						
UCH	**Uchtor**	**7.53**	**330**	P	**Pn**	**23 21 06.2**	**+3.6**
SNR=27							
MDOK	**Medeo**	**7.60**	**346**	⇑Pn	**Pn**	**23 21 06.6**	**+3.3**
	comp=Z,11nm,0.5s						
MDOK				⇑Pg	Pg	23 21 32.5	-5.4
	comp=Z,37nm,0.7s						
MDOK				⇓Lg	Lg	23 23 08.6	
	comp=Z,139nm,1.0s						
KBK	**Karagaybulak**	**7.73**	**334**	P	Pn	23 21 10.1	+5.0
SNR=8.6							
TKM2	**Tokmak 2**	**7.75**	**338**	⇓Pn	**Pn**	**23 21 09.1**	**+3.6**
	comp=Z,13nm,0.7s						
TKM2				⇓Pg	**Pg**	**23 21 36.7**	**-4.0**
	comp=Z,11nm,0.5s						
TKM2				⇓Lg	Lg	23 23 19.4	
	comp=Z,39nm,0.8s						
TKM2	**Tokmak 2**	**7.75**	**338**	P	**Pn**	**23 21 09.8**	**+4.4**
SNR=26							
TKM2	**Tokmak 2**	**7.75**	**338**	*i* P	**Pn**	**23 21 09.0**	**+3.6**
TKM2				pmax	pmax		
	comp=Z,13nm,0.7s						
AML	**Almayashu**	**7.81**	**326**	P	**Pn**	**23 21 09.8**	**+3.4**
SNR=36							
AAK	**Ala-Archa**	**7.89**	**331**	Pn	Pn	23 21 13.0	+5.8
	comp=Z,1.5nm,0.3s,baz=152,slow=7.8,SNR=20						
AAK				Lg	Lg	23 23 16.1	
	comp=Z,2.0nm,0.3s,baz=166,slow=18,SNR=2.7						
AAK				LR	LR	23 24 52.1	
	comp=Z,68nm,18.2s,baz=146,slow=43						
AAK	**Ala-Archa**	**7.89**	**331**	⇓Pn	**Pn**	**23 21 11.0**	**+3.8**
	comp=Z,20nm,0.9s						
AAK				⇓Pg	Pg	23 21 36.5	-6.8
	comp=Z,37nm,0.8s						
AAK				⇓Lg	Lg	23 23 21.2	
	comp=Z,149nm,0.9s						
AAK	**Ala-Archa**	**7.89**	**331**	P	**Pn**	**23 21 11.4**	**+4.2**
SNR=7.3							
AAK	**Ala-Archa**	**7.89**	**331**	*e*Pn	**Pn**	**23 21 10.7**	**+3.5**
AAK	**Ala-Archa**	**7.89**	**331**	⇑*e*P	Pn	23 21 14.3	+7.1
FRU	**Bishkek**	**8.01**	**333**	*e*P	**Pn**	**23 21 13.0**	**+4.2**
CHMS	**Chumysh**	**8.10**	**334**	P	**Pn**	**23 21 14.1**	**+4.1**
SNR=21							
EKS2	**Erkin-Say**	**8.20**	**328**	P	Pn	23 21 16.0	+4.5
SNR=12							
KHET	**Khetri**	**8.36**	**204**	*e*P	**Pn**	**23 21 14.4**	**+0.7**
KHET				*e*S	**Sn**	**23 22 42.6**	**-5.5**
MNAS	**Manas**	**8.65**	**323**	⇑Pn	**Pn**	**23 21 20.9**	**+3.1**
	comp=Z,5.2nm,0.6s						
MNAS				⇑Pg	**Pg**	**23 21 55.1**	**-2.9**
	comp=Z,18nm,0.7s						
MNAS				⇓Lg	Lg	23 23 50.9	
	comp=Z,44nm,1.0s						
MNAS	**Manas**	**8.65**	**323**	*i* P	**Pn**	**23 21 20.8**	**+3.1**
MNAS				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KBL	**Kabul**	**8.74**	**265**	*e*Pn	**Pn**	**23 21 21.3**	**+2.2**
KBL	**Kabul**	**8.74**	**265**	*e*P	**Pn**	**23 21 21.3**	**+2.2**
KK31	**Karatay Array**	**10.12**	**319**	Pn	**Pn**	**23 21 39.2**	**+1.5**
	comp=Z,9.4nm,0.6s,baz=126,slow=13,SNR=107						
KK31				⇓Sn	**Sn**	**23 23 31.8**	**+0.5**
	comp=Z,5.5nm,0.7s,baz=358,slow=11,SNR=2.5						
KK31	**Karatay Array**	**10.12**	**319**	*e*Pn	**Pn**	**23 21 41.9**	**+4.2**
KK31	**Karatay Array**	**10.12**	**319**	*i* P	**Pn**	**23 21 39.2**	**+1.5**
KK31				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KKAR	**Karatay Array**	**10.12**	**319**	*e*Pn	Pn	23 21 42.3	+4.6
KKAR	**Karatay Array**	**10.12**	**319**	*e*P	Pn	23 21 42.3	+4.6
WMQ	**Urumqi**	**10.13**	**35**	P	**Pn**	**23 21 39.4**	**+1.6**
WMQ				pP		23 21 43.8	
WMQ				sP		23 21 47.1	
WMQ				S	**Sn**	**23 23 33.5**	**+2.0**
WMQ				LR	LR		
	comp=Z,490nm,8.3s						
WMQ				LR	LR		
	comp=Z,610nm,12.3s						
MAKZ	**Makanchi**	**11.13**	**8**	⇓Pn	**Pn**	**23 21 51.0**	**-0.5**
	comp=Z,10nm,0.6s						
MAKZ				⇑Sn	**Sn**	**23 23 52.7**	**-3.3**
	comp=Z,9.1nm,0.8s						
MAKZ	**Makanchi**	**11.13**	**8**	*e*Pn	**Pn**	**23 21 50.7**	**-0.8**
MAKZ	**Makanchi**	**11.13**	**8**	*e*P	**Pn**	**23 21 50.7**	**-0.8**
MK01	**Makanchi Array**	**11.13**	**10**	*e*Pn	**Pn**	**23 21 51.4**	**-0.2**
MK31	**Makanchi Array**	**11.15**	**10**	Pn	**Pn**	**23 21 51.6**	**-0.3**
	comp=Z,2.7nm,0.5s,baz=189,slow=13,SNR=88						
MK31				⇑Sn	**Sn**	**23 23 51.7**	**-4.9**
	comp=Z,6.6nm,0.6s,baz=189,slow=24,SNR=4.9						
MK31	**Makanchi Array**	**11.15**	**10**	*e*Pn	**Pn**	**23 21 52.1**	**+0.2**
MK31	**Makanchi Array**	**11.15**	**10**	*i* P	**Pn**	**23 21 51.6**	**-0.3**
MK31				pmax	pmax		
	comp=Z,3.0nm,0.4s						
MKAR	**Makanchi Array**	**

ZALV *e*Pn **Pn** **23 23 26.4 -2.2**
NVS Novosibirsk 19.20 6 *e*P **P** **23 23 34.9 -1.2**
NVS *e* 23 27 14.0
NVS pmax pmax
comp=Z,16nm,1.1s
NVS pmax pmax
comp=N,15nm,1.0s
LZH Lanzhou 19.61 82 *e*P **P** **23 23 38.1 -3.0**
LZH pmax pmax
comp=N,16nm,1.0s
AB31 Akbulak array 19.68 319 *i* P **Pn** **23 23 43.3 +0.4**
AB31 pmax pmax
comp=Z,4.0nm,0.5s
ABKAR Akbulak array 19.68 319 *e*P **Pn** **23 23 43.5 +0.5**
CD2 Chengdu 20.73 97 P Pn 23 23 54.9 -0.6
CD2 pmax pmax
comp=Z,30nm,0.7s
AKTO Aktyubinsk 21.39 320 P **P** **23 24 00.7 +0.7**
comp=Z,8.3nm,0.8s,baz=115,slow=9.9,SNR=26
AKTO LR LR 23 33 16.9
comp=Z,94nm,18.7s,baz=131,slow=39
ZAK Zakamensk 22.47 42 *e*P **P** **23 24 10.8 -0.9**
ZAK pmax pmax
comp=Z,3.0nm,1.3s
KMI Kunming 22.55 112 P **P** **23 24 17.3 +4.4**
KMI pmax pmax
comp=Z,6.0nm,0.9s
KMI pmax pmax
comp=Z,170nm,5.5s
SONM Songino Array 23.17 51 P **P** **23 24 20.9 +1.8**
comp=Z,1.6nm,0.7s,baz=244,slow=10,SNR=9.8
SONM Songino Array 23.17 51 *e*P **P** **23 24 21.2 +2.1**
SONM pmax pmax
comp=Z,2.0nm,0.7s
SONA1 Songino Array 23.18 50 *e*P **P** **23 24 16.1 -3.1**
TLY Talaya 23.36 40 LR LR 23 34 29.6
comp=Z,82nm,18.5s,baz=251,slow=39
CMAR Chiang Mai Arr 24.31 130 P **P** **23 24 30.7 +0.5**
comp=Z,0.8nm,0.3s,baz=319,slow=9.8,SNR=6.8
CMAR LR LR 23 36 36.2
comp=Z,33nm,18.1s,baz=270,slow=43
CMAR Chiang Mai Arr 24.31 130 *e*P **P** **23 24 33.9 +3.7**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
SVE Sverdlovsk 24.61 335 *e*P **P** **23 24 33.1 +0.5**
LKRN Lenkeran, Azer 24.65 286 P **P** **23 24 32.0 -1.1**
ARU Arti 25.07 332 P **P** **23 24 37.0 +0.3**
comp=Z,6.1nm,0.5s,baz=132,slow=3.5,SNR=19
ARU LR LR 23 35 31.7
comp=Z,36nm,19.8s,baz=124,slow=39
ARU Arti 25.07 332 *e*P **P** **23 24 36.6 -0.2**
comp=Z,4.5nm,0.6s
ARU Arti 25.07 332*c i*P **P** **23 24 36.8 +0.1**
ARU S **S** **23 28 54.6 -6.3**
ARU pmax pmax
comp=Z,8.0nm,0.8s
HHC Hu-ho-hao-te 25.48 69 *e*P **P** **23 24 44.5 +3.7**
HHC pmax pmax
comp=Z,8.0nm,0.9s
HHC pmax pmax
comp=Z,73nm,5.2s
SEKA Sheki 25.84 292 P **P** **23 24 42.1 -1.8**
MNGR Mingechevir, A 25.91 291 P **P** **23 24 43.4 -1.2**
ZKTA Zakatala 26.28 293 P **P** **23 24 46.7 -1.2**
GANJ Ganja 26.50 291 P **P** **23 24 48.6 -1.3**
NAX Nakhchivan 27.18 287 P **P** **23 24 54.8 -1.3**
GNI Garni 27.71 290 P P 23 25 08.2 +7.2
comp=Z,7.2nm,0.9s,baz=155,slow=11,SNR=6.0
GNI Garni 27.71 290 *e*P **P** **23 25 02.6 +1.6**
comp=Z,50nm,1.0s
GNI Garni 27.71 290⇑*e*P **P** **23 25 05.5 +4.5**
GNI pmax pmax
comp=Z,34nm,1.0s
KVAR Kislovodsk Arr 29.28 298 LR LR 23 38 41.5
comp=Z,32nm,22.0s,baz=25,slow=40
KIV Kislovodsk 29.28 298 *e*P **P** **23 25 15.6 +0.8**
KIV pmax pmax
comp=Z,3.0nm,1.1s
KIV MLR MLR
comp=Z,18nm,15.0s
VSR Storozhevoye 32.65 311 *e*P **P** **23 25 44.3 0.0**
VSR pmax pmax
comp=Z,10.0nm,1.0s
ANN Anapa 33.08 299 *e*P **P** **23 25 47.0 -1.1**
ANN *e**PP sP 23 26 02.4 +10
ANN *e*SS **S** **23 30 59.9 -7.1**
ANN *e*SS **SnSn** **23 33 06.0 +0.8**
ANN pmax pmax
comp=Z,29nm,1.2s
PRGR Permogore 33.52 331 *e*P **P** **23 25 50.1 -1.7**
PRGR pmax pmax
comp=Z,8.0nm,0.7s
SIM Simferopol' 35.44 299 P **P** **23 26 09.1 +0.5**
SIM pmax pmax
comp=Z,10.0nm,0.7s
KLMR Klimovskoe 35.67 327 *e*P **P** **23 26 09.2 -1.1**
KLMR pmax pmax
comp=Z,7.0nm,1.3s
KLMR Klimovskoe 35.67 327 *e*P **P** **23 26 09.3 -1.1**
KLMR AMP 23 26 11.5
comp=Z,7.0nm,1.3s
BRTR Keskin Array B 36.24 290 P **P** **23 26 17.4 +1.6**
comp=Z,2.3nm,0.7s,baz=109,slow=8.1,SNR=17
AKASG Malin Array Be 38.82 309 P **P** **23 26 37.1 -0.1**
comp=Z,1.3nm,0.5s,baz=77,slow=7.9,SNR=15
AKASG Malin Array Be 38.82 309 *e*P **P** **23 26 37.1 -0.1**
AKASG pmax pmax
comp=Z,4.0nm,0.5s
AKBB Malin Array Si 38.82 309 *e*P **P** **23 26 37.5 +0.3**
comp=Z,15nm,1.4s
AKBB Malin Array Si 38.82 309 *e*P **P** **23 26 37.5 +0.3**
AKBB pmax pmax
comp=Z,15nm,1.4s
SORM Soroca 39.35 305⇓*i*P **P** **23 26 41.6 -0.1**
SORM Soroca 39.35 305⇓P **P** **23 26 41.6 -0.1**
CFR Carcaliu 39.66 300⇑*i*P **P** **23 26 45.0 +0.7**
CFR Carcaliu 39.66 300⇑P **P** **23 26 45.0 +0.7**
KLR Kul'dur 39.92 54 P **P** **23 26 47.2 +0.8**
comp=Z,0.2nm,0.7s,baz=278,slow=9.9,SNR=5.2
YAK Yakutsk 40.56 34⇑*e*P **P** **23 26 53.0 +1.4**
YAK pmax pmax
comp=Z,15nm,0.6s
VRI Vrincioaia 40.58 301⇓*i*P **P** **23 26 53.8 +1.8**
VRI Vrincioaia 40.58 301⇓P **P** **23 26 53.8 +1.8**
TESR Tescani 40.59 302⇑*i*P **P** **23 26 52.4 +0.4**
PLOR Plostina 40.64 301⇑*i*P **P** **23 26 54.5 +2.0**
PLOR Plostina 40.64 301⇑P **P** **23 26 54.5 +2.0**
MLR Muntele Rosu 41.17 301 P **P** **23 26 59.0 +2.0**
comp=Z,1.7nm,0.7s,baz=82,slow=15
MLR Muntele Rosu 41.17 301⇑*i*P **P** **23 26 59.3 +2.3**
MLR Muntele Rosu 41.17 301 *e*P **P** **23 26 57.8 +0.8**
comp=Z,10nm,0.9s
BURAR Bucovina Array 41.48 304⇑*i*P **P** **23 27 00.4 +0.9**
BURAR Bucovina Array 41.48 304⇑P **P** **23 27 00.4 +0.9**
BUR04 Bucovina Ar. S 41.49 304 *e*P **P** **23 27 00.1 +0.5**
BUR08 Bucovina Ar. S 41.49 304 *e*P **P** **23 26 59.4 -0.3**
DOPR Dopca 41.51 301⇓*i*P **P** **23 27 00.8 +1.2**
VOIR 41.80 301⇓*i*P **P** **23 27 03.3 +1.2**
VOIR 41.80 301⇓P **P** **23 27 03.3 +1.2**
FIA1 FINESS Array S 42.01 325 *e*P **P** **23 27 03.1 -0.3**
FINES FINESS Array B 42.01 325 P **P** **23 27 03.5 0.0**
comp=Z,1.1nm,0.5s,baz=105,slow=8.6,SNR=11
ARR Arges 42.10 301⇑*i*P **P** **23 27 05.6 +1.1**
KARP Karpathos 42.17 286 *e*P **P** **23 27 02.8 -2.4**
comp=Z,10nm,0.8s
CJR Cluj-Napoca 42.66 303⇓*i*P **P** **23 27 10.2 +1.1**
CJR Cluj-Napoca 42.66 303⇓P **P** **23 27 10.2 +1.1**
LOT Lotru 42.69 301⇓*i*P **P** **23 27 10.9 +1.5**
TRPA Tarpa 43.24 305⇓*i*P **P** **23 27 15.1 +1.4**
DRGR 43.26 303⇓*i*P **P** **23 27 15.5 +1.5**
DRGR 43.26 303⇓P **P** **23 27 15.5 +1.5**
TIXI Tiksi 43.90 20 LR LR 23 46 54.2
comp=Z,31nm,19.3s,baz=208,slow=38
IDI Anoyia 44.02 286 P **P** **23 27 21.1 +0.9**
comp=Z,4.4nm,0.9s,baz=73,slow=13,SNR=3.3
BZS Buzias 44.17 301⇑*i*P **P** **23 27 22.5 +1.3**
BZS Buzias 44.17 301⇑P **P** **23 27 22.5 +1.3**
MDVR Moldovita 44.23 300⇑*i*P **P** **23 27 23.1 +1.3**
ARCES ARCESS Array B 44.53 336 P **P** **23 27 24.0 +0.2**
comp=Z,6.9nm,0.7s,baz=99,slow=9.3,SNR=18
ARCES LR LR 23 46 44.1
comp=Z,96nm,20.4s,baz=242,slow=37
ARCES ARCESS Array B 44.53 336 *e*P **P** **23 27 24.0 +0.2**
ARCES ARCESS Array B 44.53 336 *e*P **P** **23 27 24.4 +0.7**
ARCES pmax pmax
comp=Z,7.0nm,0.7s
ARE0 ARCESS Array S 44.53 336 *e*P **P** **23 27 24.0 +0.3**
comp=Z,14nm,1.0s
OJC Ojcow 44.85 308 *e*P **P** **23 27 26.4 -0.2**
comp=Z,4.3nm,0.7s
OJC Ojcow 44.85 308 *e*P **P** **23 27 26.4 -0.2**
OJC pmax pmax
comp=Z,4.0nm,0.7s
PSZ Piszkesteto 45.03 305 *e*P **P** **23 27 29.3 +1.2**
comp=Z,4.4nm,0.8s
PSZ Piszkesteto 45.03 305 *e*P **P** **23 27 29.3 +1.2**
PSZ pmax pmax
comp=Z,4.0nm,0.8s
DIVS Divibare 45.56 299 *e*P **P** **23 27 32.3 -0.2**
comp=Z,4.4nm,1.0s
MORC Moravsky Berou 46.34 308 *e*P **P** **23 27 39.2 +0.8**
VRAC Vranov 47.02 307 *e*P **P** **23 27 44.9 +1.2**
DPC Dobruska-Polom 47.05 309 *e*P **P** **23 27 45.2 +1.2**
DPC *e*x x 23 27 49.6
DPC Dobruska-Polom 47.05 309 *e*P **P** **23 27 45.2 +1.2**
KRUC Moravsky 47.18 307 *e*P **P** **23 27 46.1 +1.1**
KRUC *e* 23 27 50.6
UPC Upice 47.23 309 *e*P **P** **23 27 46.3 +1.0**
UPC *e*x x 23 27 50.9
UPC Upice 47.23 309 *e*P **P** **23 27 46.3 +1.0**
HFS Hagfors 47.91 322 P **P** **23 27 48.7 -1.7**
comp=Z,2.3nm,0.7s,baz=110,slow=7.8,SNR=5.1
HFS LR LR 23 49 13.6
comp=Z,48nm,19.7s,baz=72,slow=38
PRU Pruhonice 48.23 308 *e*P **P** **23 27 54.0 +0.9**
PRU *e*x x 23 27 58.7
PRU Pruhonice 48.23 308 *e*P **P** **23 27 54.0 +0.9**
BRG Berggiesshubel 48.48 310 *e*P **P** **23 27 55.6 +0.7**
comp=Z,4.5nm,0.8s
BRG *e* 23 28 00.2
comp=Z,3.2nm,0.6s
BRG Berggiesshubel 48.48 310 *e*P **P** **23 27 55.7 +0.7**
BRG pmax pmax
comp=Z,5.0nm,0.8s
GEC2 GERESS Array S 48.97 307 *e*P **P** **23 27 58.5 -0.4**
comp=Z,2.6nm,0.8s
GEC2 GERESS Array S 48.97 307 *e*P **P** **23 27 58.5 -0.4**
GEC2 pmax pmax
comp=Z,3.0nm,0.8s
GERES GERESS Array B 48.97 307 P **P** **23 27 59.9 +1.0**
comp=Z,1.4nm,0.6s,baz=72,slow=8.6,SNR=12
GEA0 GERESS Array S 48.97 307 *e*P **P** **23 27 59.5 +0.6**
KHC Kasperske Hory 48.99 307 *e*P **P** **23 28 00.2 +1.1**
KHC *e*x x 23 28 04.1
KHC Kasperske Hory 48.99 307 *e*P **P** **23 27 59.1 0.0**
comp=Z,1.4nm,0.7s
KHC Kasperske Hory 48.99 307 *e*P **P** **23 28 00.2 +1.1**
CLL Collm 49.00 310 *i* P **P** **23 27 59.0 0.0**
comp=Z,4.0nm,0.8s
CLL Collm 49.00 310 *i* P **P** **23 27 59.0 0.0**
CLL pmax pmax
comp=Z,4.0nm,0.8s
NB2 NORSAR Subarra 49.12 323 P **P** **23 27 59.4 -0.4**
comp=Z,1.2nm,0.6s,baz=89,slow=7.9
NOA NORSAR Array B 49.12 323 P **P** **23 27 59.0 -0.8**
comp=Z,5.9nm,1.2s,baz=101,slow=7.2,SNR=4.3
NOA NORSAR Array B 49.12 323 *e*P **P** **23 28 00.0 +0.2**
NOA pmax pmax
comp=Z,6.0nm,1.2s
SPITS Spitsbergen Ar 49.80 346 P **P** **23 28 05.5 +0.8**
comp=Z,1.0nm,0.6s,baz=133,slow=10.0,SNR=5.3
SPITS LR LR 23 52 34.8
comp=Z,40nm,19.1s,baz=175,slow=40
WLF Walferdange 53.62 309 *e*P **P** **23 28 34.0 +0.4**
comp=Z,10nm,0.9s
WLF Walferdange 53.62 309 *e*P **P** **23 28 34.0 +0.4**
WLF pmax pmax
comp=Z,10.0nm,0.9s
BILL Bilibino 56.11 27⇑*e*P **P** **23 28 52.7 +1.3**
BILL *e* 23 31 01.4
BILL *e*S **S** **23 36 32.1 -7.9**
BILL pmax pmax
comp=Z,12nm,2.7s
EKA Eskdalemuir Ar 57.55 318 P **P** **23 29 01.6 -0.2**
comp=Z,1.4nm,0.6s,baz=82,slow=6.8,SNR=6.3
CART Cartagena 62.67 298 *e*P **P** **23 29 36.5 -0.7**
comp=Z,51nm,1.3s
ES19 SONSECA Array 63.80 301 *e*P **P** **23 29 44.3 -0.5**
ESDC Sonseca Array 63.86 301 P **P** **23 29 44.5 -0.7**
comp=Z,0.9nm,0.8s,baz=50,slow=6.5,SNR=5.7
TOLK Toolik Lake Re 69.67 17 *e*P **P** **23 30 22.3 +0.6**
comp=Z,6.9nm,0.7s
RES Resolute Bay 69.72 358 P **P** **23 30 20.9 -0.9**
comp=Z,0.4nm,0.7s
RES Resolute Bay 69.72 358 P **P** **23 30 20.9 -0.9**
IM3 Indian Mountai 70.55 20 *e*P **P** **23 30 27.2 +0.1**
COLD Coldfoot 70.59 18 *e*P **P** **23 30 28.2 +0.9**
comp=Z,4.7nm,0.8s
TOA0 Torodi Ar. Sit 72.70 274 *e*P **P** **23 30 40.7 -0.1**
TORD Torodi Ar. Bea 72.70 274 P **P** **23 30 40.4 -0.5**
comp=Z,2.0nm,0.6s,baz=45,slow=5.2,SNR=32
BPAW Bear Paw Mtn. 72.74 21 *e*P **P** **23 30 40.9 +0.6**
comp=Z,3.0nm,0.8s
MDM Murphy Dome 72.84 19 *e*P **P** **23 30 41.7 +0.7**
comp=Z,3.9nm,1.1s
COLA College 73.01 19 *i* P **P** **23 30 42.7 +0.8**
COLA pmax pmax
comp=Z,6.0nm,0.8s
ILAR Eielson Array 73.35 19 P **P** **23 30 43.8 -0.2**
comp=Z,2.3nm,0.9s,baz=313,slow=5.4,SNR=14
WRA Warramunga Arr 75.88 128 P **P** **23 30 57.8 -1.3**
comp=Z,1.1nm,0.7s,baz=327,slow=5.8,SNR=5.3
WRA Warramunga Arr 75.88 128 *e*P **P** **23 30 58.3 -0.9**
WRA pmax pmax
comp=Z,1.0nm,0.7s
KOWA Kowa 76.57 278 P **P** **23 31 03.1 -0.2**
comp=Z,2.8nm,0.6s,baz=49,slow=9.3,SNR=12
ASAR Alice Springs 78.32 131 P **P** **23 31 11.4 -1.5**
comp=Z,0.7nm,0.6s,baz=316,slow=5.5,SNR=6.6
ASAR Alice Springs 78.32 131 *e*P **P** **23 31 14.6 +1.7**
ASAR pmax pmax
comp=Z,1.0nm,0.6s
YKA Yellowknife Ar 81.37 7 P **P** **23 31 28.3 -0.5**
comp=Z,0.5nm,0.6s,baz=340,slow=5.4,SNR=4.7
LPAZ La Paz 145.33 296 PKPbc **PKPbc** **23 38 50.0 -1.5**
comp=Z,0.8nm,0.7s,baz=333,slow=2.3,SNR=4.5
LPAZ La Paz 145.33 296 *e*PKIKP **PKPdf** **23 38 52.0 +0.3**
LPAZ pmax pmax
comp=Z,1.0nm,0.7s

ISCJB ***03*** *23:28:29.4±0.3, 6°.83N±0°.04×73°.06W±0°.05, h165km±3km, mb3.7/12, Error ellipse: s-maj=9.0km s-min=5.7km az=35.0*
IDC ***03*** *23:28:30.9±1.1, 6°.83N×72°.98W, h165km±9km, mb3.4/10, mb1 3.6/15, mb1mx3.3/46, mbtmp3.9/15, Error ellipse: s-maj=13.9km s-min=11.7km az=152.0*
RSNC ***03*** *23:28:32.2±0.9, 6°.81N×73°.14W, h147km±6km, ML3.9*
ISC 03 23:28:29.9±0.6, 6°.82N±0°.05×73°.09W±0°.05, h158km±5km, n40, σ1°.06/49, mb3.9/12, 2C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.24**	**202**	*i* P	**Pn**	**23 28 52.1**	**+0.5**
BARC				*i*		23 28 52.4	
comp=Z,2μm,0.3s							
BARC				*e*S	**Sn**	**23 29 07.3**	**-0.8**
PAMC	**Pamplona, Colo**	**0.65**	**37**	*i* P	**Pn**	**23 28 54.8**	**+1.3**
PAMC				*e*S	**Sn**	**23 29 12.0**	**+0.4**
RUSC	**La Rusia**	**0.92**	**180⇑***i*P	**Pn**	**23 28 55.9**	**+0.5**
RUSC				*e*S	**Sn**	**23 29 14.4**	**-0.6**
RUSC				*i*		23 29 16.4	
comp=Z,587nm,0.6s							
PTBC	**PUERTO BERRIO,**	**1.39**	**258**	*e*S	**Sn**	**23 29 20.2**	**-1.0**
OCAC	**Ocana**	**1.43**	**351**	*e*P	**Pn**	**23 28 59.9**	**+0.4**
OCAC				*e*S	**Sn**	**23 29 23.0**	**+0.6**
ZARC	**Zaragoza, Cauc**	**1.88**	**291**	*e*P	**Pn**	**23 29 04.5**	**+0.3**
ZARC				*i*		23 29 35.9	
comp=Z,2μm,0.5s							
NORC	**Norcasia**	**2.17**	**235**	*e*P	**Pn**	**23 29 07.8**	**+0.3**
CHIC	**Chingaza**	**2.27**	**196**	*e*P	**Pn**	**23 29 09.8**	**+0.7**
CHIC				*i*		23 29 49.2	
comp=Z,301nm,0.5s							
ROSC	**El Rosal**	**2.32**	**212**	P	**Pn**	**23 29 11.9**	**+2.2**
comp=Z,53nm,0.3s,baz=97,slow=17,SNR=172							
ROSC				S	**Sn**	**23 29 40.5**	**+0.2**
comp=Z,53nm,0.3s,baz=191,slow=19,SNR=12							
ROSC	**El Rosal**	**2.32**	**212⇑***i*P	**Pn**	**23 29 11.7**	**+2.1**
ROSC				*i*		23 29 49.6	
comp=Z,800nm,0.4s							
HELC	**Santa Helena**	**2.50**	**256**	*e*P	**Pn**	**23 29 11.9**	**+0.1**
HELC				*i*		23 29 53.2	
comp=Z,460nm,0.2s							
VILC	**Villavicencio,**	**2.76**	**193**	*e*P	**Pn**	**23 29 14.9**	**+0.1**
RREF	**El Recreo**	**2.95**	**230**	*e*P	**Pn**	**23 29 19.4**	**+1.8**
RREF				*i*		23 30 04.8	
comp=Z,542nm,0.6s							
CODC	**Agust´›n Codaz**	**3.11**	**354**	*e*P	**Pn**	**23 29 19.8**	**+0.7**
CODC				*i*		23 30 04.8	
comp=Z,216nm,0.4s							
SDV	**Santo Domingo**	**3.18**	**50**	P	**Pn**	**23 29 21.4**	**+1.3**
comp=Z,49nm,0.3s,baz=214,slow=2.8,SNR=150							
SDV				S	**Sn**	**23 29 58.6**	**-0.4**
comp=Z,54nm,0.3s,baz=252,slow=20,SNR=37							
SDV	**Santo Domingo**	**3.18**	**50**	*e*P	**Pn**	**23 29 21.4**	**+1.3**
SDV				*i*		23 30 00.7	
comp=Z,138nm,0.5s							
ANIL	**Santa Ana**	**3.26**	**225**	*e*P	**Pn**	**23 29 22.5**	**+1.3**
ANIL				*i*		23 30 09.5	
comp=Z,1μm,0.5s							
PLMC	**San Jos´´ del**	**3.70**	**239**	*e*P	**Pn**	**23 29 27.7**	**+1.0**
YOTC	**Yotoco, Valle**	**4.29**	**229**	*e*P	**Pn**	**23 29 34.6**	**+0.2**
YOTC				*i*		23 29 37.4	
comp=Z,68nm,0.5s							
PCRV	**Puerto La Cruz**	**9.00**	**68**	P	**Pn**	**23 30 36.5**	**-0.2**
comp=Z,0.9nm,0.3s,baz=249,slow=5.7,SNR=11							
JTS	**JuntasAbangare**	**12.23**	**287**	P	**P**	**23 31 22.9**	**-2.1**
comp=Z,0.5nm,0.3s,baz=334,slow=21,SNR=3.2							
PTGA	**Pitinga**	**15.09**	**119**	P	**P**	**23 31 54.9**	**-1.8**
comp=Z,0.4nm,0.3s,baz=312,slow=22,SNR=2.8							
APG	**El Apazote**	**18.89**	**297**	P	**Pn**	**23 32 43.5**	**+2.4**
comp=Z,0.3nm,0.3s,baz=356,slow=11,SNR=5.0							
LPAZ	**La Paz**	**23.48**	**168**	P	**P**	**23 33 26.0**	**-0.2**
comp=Z,0.7nm,0.7s,baz=346,slow=8.1,SNR=3.9							
TXAR	**Lajitas Array**	**36.48**	**312**	P	**P**	**23 35 19.5**	**-0.7**
comp=Z,0.1nm,0.4s,baz=110,slow=7.8,SNR=3.9							
TXAR				PcP	**PcP**	**23 37 42.3**	**+1.6**
comp=Z,0.2nm,0.6s,baz=161,slow=4.7,SNR=3.4							
ULM	**Lac du Bonnet**	**47.30**	**340**	P	**P**	**23 36 47.7**	**+0.3**
comp=Z,1.4nm,0.4s,baz=156,slow=5.3,SNR=5.7							
PDAR	**Pinedale Array**	**48.10**	**324**	P	**P**	**23 36 53.4**	**-0.6**
comp=Z,0.3nm,0.4s,baz=133,slow=8.8,SNR=3.5							
YKA	**Yellowknife Ar**	**63.27**	**340**	P	**P**	**23 38 42.1**	**+0.6**
comp=Z,1.9nm,0.6s,baz=132,slow=6.7,SNR=23							
DBIC	**Dimbokro**	**67.70**	**86**	P	**P**	**23 39 10.2**	**-0.7**
comp=Z,2.6nm,0.7s,baz=293,slow=7.4,SNR=4.5							
KOWA	**Kowa**	**68.11**	**77**	P	**P**	**23 39 13.0**	**-0.4**
comp=Z,0.9nm,0.4s,baz=269,slow=4.6,SNR=4.0							
SUMG	**Summit**	**68.98**	**11**	*i* P	**P**	**23 39 18.9**	**+0.7**
comp=Z,7.3nm,0.6s							
TORD	**Torodi Ar. Bea**	**73.71**	**78**	P	**P**	**23 39 45.7**	**-1.5**
comp=Z,0.2nm,0.4s,baz=286,slow=6.5,SNR=8.6							
DAG	**Danmarks Havn**	**75.65**	**11**	*i* P	**P**	**23 39 57.0**	**-0.2**
comp=Z,2.0nm,0.8s							
ILAR	**Eielson Array**	**76.98**	**335**	P	**P**	**23 40 05.6**	**+0.7**
comp=Z,0.3nm,0.6s,baz=92,slow=5.7,SNR=4.7							
SPITS	**Spitsbergen Ar**	**83.26**	**12**	P	**P**	**23 40 39.6**	**+1.2**
comp=Z,4.4nm,1.1s,baz=256,slow=4.3,SNR=4.1							
KURBB	**Kurchatov Arra**	**117.75**	**20**	PKP	**PKPdf**	**23 46 57.9**	**+0.4**
comp=Z,0.4nm,0.6s,baz=313,slow=2.1,SNR=3.6							
MKAR	**Makanchi Array**	**122.31**	**20**	PKP	**PKPdf**	**23 47 06.4**	**-0.1**
comp=Z,0.4nm,0.5s,baz=275,slow=3.4,SNR=6.9							
ASAR	**Alice Springs**	**149.13**	**234**	PKP	**PKPdf**	**23 47 56.7**	**+0.5**
comp=Z,1.4nm,0.8s,baz=115,slow=3.8,SNR=7.4							
ASAR				PKPbc	**PKiKP**	**23 48 00.3**	**-1.5**
comp=Z,1.2nm,0.5s,baz=116,slow=3.8,SNR=11							
WRA	**Warramunga Arr**	**150.36**	**241**	PKPbc	**PKPbc**	**23 48 03.4**	**-0.2**
comp=Z,1.3nm,0.4s,baz=108,slow=2.6,SNR=33							
WRA				pPKPbc	**pPKPbc**	**23 48 44.7**	**-0.4**
comp=Z,0.8nm,0.5s,baz=106,slow=2.7,SNR=2.8							
CMAR	**Chiang Mai Arr**	**153.68**	**17**	PKPbc	**PKPbc**	**23 48 11.8**	**+0.7**
comp=Z,1.0nm,0.5s,baz=319,slow=3.9,SNR=5.4							

IDC 03 23:30:43.0±8.0, 21°.28S×176°.24W, h0km, mb4.0/2, mb1 4.3/2, mb1mx3.5/53, mbtmp4.0/2, MS3.6/2, Ms1 3.6/2, ms1mx2.8/46, Error ellipse: s-maj=408.6km s-min=65.0km az=150.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPZ	**Rata Peaks**	**24.75**	**202**	LR	LR	23 46 19.1	
comp=Z,136nm,18.2s,baz=16,slow=38							
ASAR	**Alice Springs**	**45.95**	**257**	P	P	23 39 07.8	-0.3
1.9nm,0.9s,baz=94,slow=7.4,SNR=11							
WRA	**Warramunga Arr**	**46.13**	**262**	P	P	23 39 09.5	0.0
2.2nm,0.8s,baz=100,slow=8.1,SNR=7.0							
ASAJ	**Asahikawa**	**75.20**	**331**	LR	LR	00 11 01.4	
comp=Z,33nm,20.1s,baz=30,slow=32							
BRTR	**Keskin Array B**	**148.58**	**313**	PKPbc	PKPbc	23 50 31.7	-0.6
0.6nm,0.8s,baz=98,slow=2.9,SNR=5.2							

IDC 03 23:34:24.2±8.0, 7°.57S×129°.30E, h169km±85km, mb2.8/1, mb1 3.3/5, mb1mx2.9/56, mbtmp3.7/5, Error ellipse: s-maj=78.6km s-min=24.1km az=38.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**6.15**	**244**	P	Pn	23 35 53.8	+0.7
4.3nm,0.3s,baz=45,slow=4.3,SNR=3.0							
BATI				S	Sn	23 37 02.2	-0.8
8.2nm,0.3s,baz=210,slow=23,SNR=8.3							
FITZ	**Fitzroy Crossi**	**11.05**	**198**	P	Pn	23 36 57.6	-0.1
0.8nm,0.3s,baz=36,slow=12,SNR=20							
FITZ				S	Sn	23 38 56.1	-4.2
0.2nm,0.3s,baz=162,slow=20,SNR=3.9							
WRA	**Warramunga Arr**	**13.23**	**159**	P	Pn	23 37 24.1	-1.7
0.7nm,0.3s,baz=345,slow=12,SNR=23							
WRA				S	Sn	23 39 46.5	-6.4
0.7nm,0.3s,baz=340,slow=20,SNR=10							
ASAR	**Alice Springs**	**16.60**	**165**	P	Pn	23 38 08.8	+1.4
0.2nm,0.3s,baz=334,slow=9.5,SNR=10							
ASAR				S	S	23 41 05.8	-5.3
0.2nm,0.3s,baz=332,slow=20,SNR=3.9							
MKAR	**Makanchi Array**	**68.32**	**327**	P	P	23 45 07.3	+0.1
0.2nm,0.5s,baz=113,slow=6.8,SNR=3.3							

ISK ***03*** *23:35:09.9, 38°.48N×39°.21E, h12km, ML1.7/5*
ISCJB ***03*** *23:35:11.0±0.5, 38°.48N±0°.03×39°.22E±0°.03, h8km±4km, Error ellipse: s-maj=4.7km s-min=4.2km az=149.7*
CSEM ***03*** *23:35:10.7±0.2, 38°.48N×39°.21E, h10km, ML1.7, Error ellipse: s-maj=4.3km s-min=3.7km az=56.0*
DDA ***03*** *23:35:11.1, 38°.48N×39°.22E, h7km, Ml2.7*
ISC 03 23:35:10.9±0.9, 38°.48N±0°.02×39°.23E±0°.02, h8km±7km, n26, σ0°.69/44, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SVRC	**Sivrice-ELAZID**	**0.12**	**148**	PG	**Pg**	**23 35 13.6**	**-0.1**
SVRC				SG	**Sg**	**23 35 15.6**	**-0.1**
SVRC	**Sivrice-ELAZID**	**0.12**	**148**	*e*Pg	**Pg**	**23 35 13.6**	**-0.1**
SVRC				*e*Sg	**Sg**	**23 35 15.6**	**-0.1**
ELZG	**Elazig**	**0.19**	**275**	*i* P	**Pg**	**23 35 15.3**	**+0.4**
ELZG				*i* S	**Sg**	**23 35 18.5**	**+0.9**
ELZG	**Elazig**	**0.19**	**275**	P	**Pg**	**23 35 15.3**	**+0.4**
ELZG				S	**Sg**	**23 35 18.5**	**+0.9**
PTK	**Pertek**	**0.43**	**18**	PG	**Pg**	**23 35 19.4**	**+0.1**
PTK				SG	**Sg**	**23 35 25.4**	**+0.4**
PTK	**Pertek**	**0.43**	**18**	*e*Pg	**Pg**	**23 35 19.4**	**+0.1**
PTK				*e*Sg	**Sg**	**23 35 25.4**	**+0.4**
MALT	**Malatya**	**0.65**	**255**	PG	**Pg**	**23 35 23.0**	**-0.4**
MALT				SG	**Sg**	**23 35 31.9**	**0.0**
MALT	**Malatya**	**0.65**	**255**	*e*Pg	**Pg**	**23 35 23.0**	**-0.4**
MALT				*e*Sg	**Sg**	**23 35 31.9**	**0.0**
TNCL	**Tunceli-Merkez**	**0.68**	**21**	*i* P	**Pg**	**23 35 24.2**	**+0.2**
TNCL				*i* S	**Sb**	**23 35 35.3**	**+0.6**
TNCL	**Tunceli-Merkez**	**0.68**	**21**	P	**Pg**	**23 35 24.2**	**+0.2**
TNCL				S	**Sb**	**23 35 35.3**	**+0.6**
DIYA	**Diyarbakir**	**0.90**	**128**	*i* P	**Pb**	**23 35 28.7**	**-0.1**
DIYA				*i* S	**Sb**

URFA	**Urfa**	**1.09 197**	*e*Pn	**Pg**	**23 35 31.3**	**-0.5**
SANL	**SANLIURFA_Merk**	**1.32 188**	*i* P	**Pg**	**23 35 36.9**	**+0.6**
SANL			*i* S	**Sg**	**23 35 54.7**	**+1.3**
SANL	**SANLIURFA_Merk**	**1.32 188**	P	**Pg**	**23 35 36.9**	**+0.6**
SANL			S	**Sg**	**23 35 54.7**	**+1.3**
DARE	**Darende-Malaty**	**1.37 274**	PN	**Pn**	**23 35 35.2**	**-1.2**
DARE	**Darende-Malaty**	**1.37 274**	*e*Pn	**Pn**	**23 35 35.2**	**-1.2**
MAZI	**Mazidag**	**1.41 136**	PN	**Pn**	**23 35 35.7**	**-1.2**
MAZI	**Mazidag**	**1.41 136**	*e*Pn	**Pn**	**23 35 35.7**	**-1.2**

PRU ***03*** *23:40:55.4, 44°.65N×10°.93E, h0km*
VIE ***03*** *23:40:59.5±0.3, 44°.93N×10°.96E, h8km, mb2.7/13, ml3.2/13, Error ellipse: s-maj=3.3km s-min=2.3km az=118.0 56 km NNW of Bologna*
ROM ***03*** *23:40:59.1±0.0, 44°.864N±0°.002×10°.956E±0°.001, h9km, ML3.1/39*
CSEM ***03*** *23:40:59.7±0.1, 44°.91N×10°.99E, h10km, ML3.5/8, Error ellipse: s-maj=3.1km s-min=2.5km az=163.0*
ISCJB ***03*** *23:40:59.4±0.2, 44°.87N±0°.02×10°.96E±0°.02, h19km±1km, Error ellipse: s-maj=3.3km s-min=2.3km az=164.5*
LDG ***03*** *23:41:00.7±0.1, 44°.85N×10°.93E, h2km, Ml3.6/21, Error ellipse: s-maj=4.1km s-min=2.3km az=47.0*
STR ***03*** *23:41:00.3±1.4, 45°.N±5°.×1°.1E±1°.4, h5km, M3.9/10, MLv3.9/10*

ISC 03 23:40:59.6±0.7, **44°.91N**±0°.02×**10°.99E**±0°.02, **h15**km±4km, **n217**, σ1♦**31**/265, **7C-23D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
T0818	**Loc. Fossa, Co**	**0.04**	**54**	⇑*e*P		**Pg**	**23 41 02.2**	**-0.2**
T0818	**Loc. Fossa, Co**	**0.04**	**54**	*e*P		**Pg**	**23 41 02.2**	**-0.2**
T0827	**Moglia (MN)**	**0.05**	**303**	⇑*e*P		**Pg**	**23 41 02.2**	**-0.2**
T0827				⇑*e*S		**Sg**	**23 41 05.2**	**+1.0**
T0827	**Moglia (MN)**	**0.05**	**303**	*e*P		**Pg**	**23 41 02.2**	**-0.2**
T0827				*e*S		**Sg**	**23 41 05.2**	**+1.0**
NDIM	**Novi di Modena**	**0.07**	**248**	*e*P		**Pg**	**23 41 01.0**	**-1.6**
NDIM				*e*S		**Sg**	**23 41 03.4**	**-1.1**
T0828	**Loc. Fossoli,**	**0.10**	**212**	⇓*i*P		**Pg**	**23 41 01.4**	**-1.4**
T0828				⇓*i*S		**Sg**	**23 41 04.5**	**-0.4**
T0828	**Loc. Fossoli,**	**0.10**	**212**	*i* P		**Pg**	**23 41 01.4**	**-1.4**
T0828				*i* S		**Sg**	**23 41 04.5**	**-0.4**
T0825	**Gonzaga (MN)**	**0.12**	**301**	AML		AML		
T0825				AML		AML		
T0825				AML		AML		
T0825				AML		AML		
T0825				AML		AML		
T0825				AML		AML		
T0825				AML		AML		
T0825				AML		AML		
T0814	**Loc. Cortile,**	**0.12**	**186**	⇓*i*P		**Pg**	**23 41 01.8**	**-1.3**
T0814				⇓*i*S		**Sg**	**23 41 04.8**	**-0.6**
T0814	**Loc. Cortile,**	**0.12**	**186**	*i* P		**Pg**	**23 41 01.8**	**-1.3**
T0814				*i* S		**Sg**	**23 41 04.8**	**-0.6**
T0802	**SanFelice sul**	**0.14**	**105**	*e*P		**Pb**	**23 41 03.9**	**0.0**
T0802				*e*S		**Sg**	**23 41 07.6**	**+1.7**
T0802	**SanFelice sul**	**0.14**	**105**	*e*P		**Pb**	**23 41 03.9**	**0.0**
T0802				*e*S		**Sg**	**23 41 07.6**	**+1.7**
T0812	**Loc. Stoppiaro**	**0.14**	**73**	⇓*e*P		**Pb**	**23 41 03.5**	**-0.5**
T0812				⇓*e*S		**Sg**	**23 41 07.8**	**+1.8**
T0812	**Loc. Stoppiaro**	**0.14**	**73**	*e*P		**Pb**	**23 41 03.5**	**-0.5**
T0812				*e*S		**Sg**	**23 41 07.8**	**+1.8**
T0826	**Rio Saliceto (**	**0.14**	**240**	AML		AML		
T0826				AML		AML		
T0826				AML		AML		
	comp=N,79750μm,0.5s							
T0826				AML		AML		
	comp=N,79750μm,0.5s							
SBPO	**S.Benedetto Po**	**0.15**	**341**	⇓*i*P		**Pb**	**23 41 04.2**	**+0.2**
SBPO	**S.Benedetto Po**	**0.15**	**341**	*i* P		**Pb**	**23 41 04.2**	**+0.2**
T0813	**Massa Finalese**	**0.15**	**103**	⇑*e*P		**Pb**	**23 41 03.5**	**-0.6**
T0813				⇑*e*S		**Sg**	**23 41 07.8**	**+1.6**
T0813	**Massa Finalese**	**0.15**	**103**	*e*P		**Pb**	**23 41 03.5**	**-0.6**
T0813				*e*S		**Sg**	**23 41 07.8**	**+1.6**
T0824	**Loc. Limidi di**	**0.16**	**195**	⇓*i*P		**Pg**	**23 41 02.5**	**-1.1**
T0824				⇓*i*S		**Sg**	**23 41 06.2**	**-0.1**
T0824	**Loc. Limidi di**	**0.16**	**195**	*i* P		**Pg**	**23 41 02.5**	**-1.1**
T0824				*i* S		**Sg**	**23 41 06.2**	**-0.1**
RAVA	**Ravarino**	**0.18**	**149**	⇓*i*P		**Pg**	**23 41 03.4**	**-0.6**
RAVA				⇓*i*S		**Sg**	**23 41 07.8**	**+0.9**
RAVA	**Ravarino**	**0.18**	**149**	*i* P		**Pg**	**23 41 03.4**	**-0.6**
RAVA				*i* S		**Sg**	**23 41 07.8**	**+0.9**
T0800	**Massa Finalese**	**0.20**	**109**	⇓*e*P		**Pg**	**23 41 03.0**	**-1.2**
T0800				⇓*e*S		**Sg**	**23 41 08.8**	**+1.5**
T0800	**Massa Finalese**	**0.20**	**109**	*e*P		**Pb**	**23 41 04.0**	**-0.9**
T0800				*e*S		**Sg**	**23 41 08.8**	**+1.5**
T0811	**Palata Pepoli**	**0.21**	**127**	⇓*e*P		**Pg**	**23 41 03.0**	**-1.4**
T0811				⇓*e*S		**Sg**	**23 41 09.4**	**+1.7**
T0811	**Palata Pepoli**	**0.21**	**127**	*e*P		**Pg**	**23 41 04.0**	**-0.5**
T0811				*e*S		**Sg**	**23 41 09.4**	**+1.7**
GAZZ	**Gazzo Veronese**	**0.21**	**21**	⇑*e*Pg		**Pb**	**23 41 05.4**	**+0.2**
GAZZ	**Gazzo Veronese**	**0.21**	**21**	*e*Pg		**Pb**	**23 41 05.4**	**+0.2**
NOVE	**Novellara**	**0.22**	**239**	⇓*e*P		**Pg**	**23 41 03.7**	**-0.9**
NOVE				⇓*e*S		**Sg**	**23 41 08.5**	**+0.5**
NOVE	**Novellara**	**0.22**	**239**	*e*P		**Pg**	**23 41 03.7**	**-0.9**
NOVE				*e*S		**Sg**	**23 41 08.5**	**+0.5**
NOVE				AML		AML		
	comp=E,72650μm,0.3s							
NOVE				AML		AML		
	comp=N,45400μm,0.2s							
NOVE				AML		AML		
	comp=E,72650μm,0.3s							
NOVE				AML		AML		
	comp=N,45400μm,0.2s							
NOVE				AML		AML		
	comp=E,72700μm,0.3s							
NOVE				AML		AML		
	comp=N,45400μm,0.2s							
NOVE				AML		AML		
	comp=N,45450μm,0.2s							
NOVE				AML		AML		
	comp=E,72650μm,0.3s							
T0805	**Bondeno (FE)**	**0.24**	**88**	*e*P		**Pb**	**23 41 04.8**	**-0.7**
T0805	**Bondeno (FE)**	**0.24**	**88**	*e*P		**Pb**	**23 41 04.8**	**-0.7**
SERM	**Sermide**	**0.24**	**66**	*e*P		**Pb**	**23 41 05.5**	**-0.1**
SERM	**Sermide**	**0.24**	**66**	*e*P		**Pb**	**23 41 05.5**	**-0.1**
SERM				AML		AML		
	comp=E,3910μm,1.2s							
SERM				AML		AML		
	comp=N,2910μm,0.9s							
SERM				AML		AML		
	comp=E,5175μm,0.5s							
SERM				AML		AML		
	comp=N,4815μm,0.9s							
SERM				AML		AML		
	comp=E,3910μm,1.2s							
SERM				AML		AML		
	comp=N,2910μm,0.9s							
SERM				AML		AML		
	comp=E,5170μm,0.5s							
SERM				AML		AML		
	comp=N,4770μm,0.9s							
SERM				AML		AML		
	comp=N,4770μm,0.9s							
SERM				AML		AML		
	comp=E,5170μm,0.5s							
SERM				AML		AML		
	comp=N,2910μm,0.9s							
SERM				AML		AML		
	comp=E,3910μm,1.2s							
MNTV	**Mantova**	**0.28**	**330**	AML		AML		
	comp=E,33150μm,0.7s							
MNTV				AML		AML		
	comp=N,33550μm,0.6s							
MNTV				AML		AML		
	comp=E,33150μm,0.7s							
MNTV				AML		AML		
	comp=N,33550μm,0.6s							
MNTV				AML		AML		
	comp=E,33150μm,0.7s							
MNTV				AML		AML		
	comp=N,33550μm,0.6s							
MNTV				AML		AML		
	comp=N,33550μm,0.6s							
MNTV				AML		AML		
	comp=E,33150μm,0.7s							
MODE	**Modena**	**0.28**	**185**	⇓*e*P		**Pg**	**23 41 05.2**	**-0.4**
MODE	**Modena**	**0.28**	**185**	*e*P		**Pg**	**23 41 05.2**	**-0.4**
MODE				AML		AML		
	comp=E,38500μm,0.6s							
MODE				AML		AML		
	comp=N,23500μm,0.5s							
MODE				AML		AML		
	comp=E,38500μm,0.6s							
MODE				AML		AML		
	comp=N,23500μm,0.5s							
MODE				AML		AML		
	comp=E,38550μm,0.6s							
MODE				AML		AML		
	comp=N,23500μm,0.5s							
MODE				AML		AML		
	comp=E,38550μm,0.6s							
MODE				AML		AML		
	comp=N,23500μm,0.5s							
T0803	**Dosso, Cento (**	**0.30**	**119**	*e*P		**Pb**	**23 41 05.5**	**-1.0**
T0803	**Dosso, Cento (**	**0.30**	**119**	*e*P		**Pb**	**23 41 05.5**	**-1.0**
T0823	**Castello D'Arg**	**0.31**	**137**	⇓*e*P		**Pb**	**23 41 05.9**	**-0.8**
T0823	**Castello D'Arg**	**0.31**	**137**	*e*P		**Pb**	**23 41 05.9**	**-0.8**
T0821	**Loc. Casaglia**	**0.39**	**91**	*e*P		**Pb**	**23 41 07.5**	**-0.7**
T0821	**Loc. Casaglia**	**0.39**	**91**	*e*P		**Pb**	**23 41 07.5**	**-0.7**
T0821				AML		AML		
	comp=E,2895μm,0.5s							
T0821				AML		AML		
	comp=N,3505μm,1.5s							
T0821				AML		AML		
	comp=E,2990μm,0.3s							
T0821				AML		AML		
	comp=N,3560μm,1.5s							
T0821				AML		AML		
	comp=E,2900μm,0.5s							
T0821				AML		AML		
	comp=N,3505μm,1.5s							
T0821				AML		AML		
	comp=E,2990μm,0.3s							
T0821				AML		AML		
	comp=N,3560μm,1.5s							
T0821				AML		AML		
	comp=N,3505μm,1.5s							
T0821				AML		AML		
	comp=N,3560μm,1.5s							
T0821				AML		AML		
	comp=E,2900μm,0.5s							
T0821				AML		AML		
	comp=E,2990μm,0.3s							
OPPE	**Oppeano**	**0.42**	**18**	AML		AML		
	comp=E,4190μm,0.5s							
OPPE				AML		AML		
	comp=N,5510μm,0.5s							
OPPE				AML		AML		
	comp=E,4190μm,0.5s							
OPPE				AML		AML		
	comp=N,8845μm,1.5s							
OPPE				AML		AML		
	comp=E,4185μm,0.5s							
OPPE				AML		AML		
	comp=N,8840μm,1.5s							
OPPE				AML		AML		
	comp=E,4185μm,0.5s							
OPPE				AML		AML		
	comp=N,8840μm,1.5s							
T0820	**Chiesuol del F**	**0.43**	**106**	*e*P		**Pb**	**23 41 09.5**	**+0.6**
T0820	**Chiesuol del F**	**0.43**	**106**	*e*P		**Pb**	**23 41 09.5**	**+0.6**
T0820				AML		AML		
	comp=E,3330μm,0.7s							
T0820				AML		AML		
	comp=N,2890μm,1.3s							
T0820				AML		AML		
	comp=E,3800μm,0.7s							
T0820				AML		AML		
	comp=N,3000μm,1.2s							
T0820				AML		AML		
	comp=E,3335μm,0.7s							
T0820				AML		AML		
	comp=N,2890μm,1.3s							
T0820				AML		AML		
	comp=E,3800μm,0.7s							
T0820				AML		AML		
	comp=N,3000μm,1.2s							
T0820				AML		AML		
	comp=E,3800μm,0.7s							
T0820				AML		AML		
	comp=E,3335μm,0.7s							
T0820				AML		AML		
	comp=N,2890μm,1.3s							
T0820				AML		AML		
	comp=N,3000μm,1.2s							
FIU	**Minerbio Fiu**	**0.45**	**127**	AML		AML		
	comp=E,2925μm,0.8s							
FIU				AML		AML		
	comp=E,2925μm,0.8s							
FIU				AML		AML		
	comp=N,2325μm,0.6s							
FIU				AML		AML		
	comp=N,2325μm,0.6s							
FIU				AML		AML		
	comp=E,2925μm,0.8s							
FIU				AML		AML		
	comp=N,2325μm,0.6s							
T0816	**San Bartolomeo**	**0.47**	**114**	*e*P		**Pn**	**23 41 10.7**	**-1.1**
T0816	**San Bartolomeo**	**0.47**	**114**	*e*P		**Pn**	**23 41 10.7**	**-1.1**
PRMA	**PARMA**	**0.50**	**253**	AML		AML		
	comp=E,2350μm,0.8s							
PRMA				AML		AML		
	comp=N,2640μm,0.3s							
PRMA				AML		AML		
	comp=E,2350μm,0.8s							
PRMA				AML		AML		
	comp=N,2640μm,0.3s							
PRMA				AML		AML		
	comp=E,2350μm,0.8s							
PRMA				AML		AML		
	comp=N,2640μm,0.3s							
PRMA				AML		AML		
	comp=N,2640μm,0.3s							
PRMA				AML		AML		
	comp=E,2350μm,0.8s							
T0815	**Correggio (RE)**	**0.52**	**94**	⇑*e*P		**Pb**	**23 41 10.9**	**+0.5**
T0815	**Correggio (RE)**	**0.52**	**94**	*e*P		**Pb**	**23 41 10.9**	**+0.5**
T0815				*e*S		**Sb**	**23 41 20.1**	**+2.4**
ZCCA	**Zocca**	**0.56**	**181**	⇓*e*P		**Pb**	**23 41 11.6**	**+0.5**
ZCCA	**Zocca**	**0.56**	**181**	*e*P		**Pb**	**23 41 11.6**	**+0.5**
TEOL	**Teolo**	**0.66**	**47**	*e*Pg		**Pb**	**23 41 13.2**	**+0.4**
TEOL				*e*Sg		**Sn**	**23 41 24.3**	**-0.1**
TEOL	**Teolo**	**0.66**	**47**	*e*Pg		**Pb**	**23 41 13.1**	**+0.4**
TEOL	**Teolo**	**0.66**	**47**	⇓*e*P		**Pn**	**23 41 13.6**	**-0.7**
TEOL				*e*Sg		**Sn**	**23 41 24.3**	**-0.1**
TEOL	**Teolo**	**0.66**	**47**	*e*P		**Pn**	**23 41 13.6**	**-0.7**
CMPO	**Campotto Po**	**0.67**	**119**	AML		AML		
	comp=N,3380μm,1.0s							
CMPO				AML		AML		
	comp=E,3175μm,0.8s							
CMPO				AML		AML		
	comp=N,2920μm,1.3s							
CMPO				AML		AML		
	comp=E,3175μm,0.8s							
CMPO				AML		AML		
	comp=N,2920μm,1.3s							
CMPO				AML		AML		
	comp=E,3175μm,0.8s							
CMPO				AML		AML		
	comp=N,3380μm,1.0s							
CMPO				AML		AML		
	comp=E,3175μm,0.8s							
ADRI	**Adria, Italy**	**0.74**	**80**	*e*Pg		**Pn**	**23 41 15.3**	**-0.1**
ADRI	**Adria, Italy**	**0.74**	**80**	*e*Pg		**Pn**	**23 41 15.3**	**-0.1**
MARN	**Marana (Italy)**	**0.74**	**12**	⇓*e*Pg		**Pb**	**23 41 14.4**	**+0.2**
MARN				*e*Sg		**Sn**	**23 41 26.6**	**+0.1**
MARN	**Marana (Italy)**	**0.74**	**12**	*e*Pg		**Pb**	**23 41 14.4**	**+0.2**
MARN				*e*Sg		**Sn**	**23 41 26.6**	**+0.1**
IMOL	**Imola, Italy**	**0.77**	**135**	AML		AML		
	comp=N,1765μm,1.3s							
IMOL				AML		AML		
	comp=E,2130μm,1.1s							
IMOL				AML		AML		
	comp=E,294μm,0.7s							
IMOL				AML		AML		
	comp=N,252μm,0.9s							
IMOL				AML		AML		
	comp=E,2130μm,1.1s							
IMOL				AML		AML		
	comp=N,1760μm,1.3s							
IMOL				AML		AML		
	comp=E,296μm,0.7s							
IMOL				AML		AML		
	comp=N,250μm,0.9s							
IMOL				AML		AML		
	comp=E,296μm,0.7s							
IMOL				AML		AML		
	comp=N,250μm,0.9s							
BALD	**Monte Baldo**	**0.78**	**351**	*e*Pg		**Pn**	**23 41 15.8**	**-0.4**
BALD				*e*Sg		**Sn**	**23 41 27.6**	**-0.1**
BALD	**Monte Baldo**	**0.78**	**351**	*e*Pg		**Pn**	**23 41 15.8**	**-0.4**
BALD				*e*Sg		**Sn**	**23 41 27.6**	**-0.1**
VLC	**Villacollemand**	**0.87**	**210**	AML		AML		
	comp=E,1160μm,0.6s							
VLC				AML		AML		
	comp=E,1160μm,0.6s							
VLC				AML		AML		
	comp=N,1340μm,0.9s							
VLC				AML		AML		
	comp=E,1160μm,0.6s							
VLC				AML		AML		
	comp=N,1340μm,0.9s							
VLC				AML		AML		
	comp=N,1340μm,0.9s							
POPM	**Popiglio**	**0.88**	**191**	AML		AML		
	comp=E,1555μm,0.7s							
POPM				AML		AML		
	comp=E,1555μm,0.7s							
POPM				AML		AML		
	comp=N,2240μm,0.6s							
POPM				AML		AML		
	comp=N,2240μm,0.6s							
POPM				AML		AML		
	comp=N,2240μm,0.6s							
POPM				AML		AML		
	comp=E,1555μm,0.7s							
BDI	**Bagni Di Lucca**	**0.89**	**198**	AML		AML		
	comp=E,2495μm,0.5s							
BDI				AML		AML		
	comp=E,2410μm,0.5s							
BDI				AML		AML		
	comp=N,1660μm,1.3s							
BDI				AML		AML		
	comp=N,1795μm,0.6s							
BDI				AML		AML		
	comp=E,2405μm,0.5s							
BDI				AML		AML		
	comp=N,1660μm,1.3s							
BDI				AML		AML		
	comp=E,2495μm,0.5s							
BDI				AML		AML		
	comp=N,1795μm,0.6s							
BDI				AML		AML		
	comp=E,2405μm,0.5s							
BDI				AML		AML		
	comp=E,2495μm,0.5s							
BDI				AML		AML		
	comp=N,1660μm,1.3s							
BDI				AML		AML		
	comp=N,1795μm,0.6s							
CTL8	**Castelleone**	**0.94**	**293**	AML		AML		
	comp=E,4220μm,0.4s							
CTL8				AML		AML		
	comp=E,4225μm,0.4s							
CTL8				AML		AML		
	comp=N,3975μm,0.7s							
CTL8				AML		AML		
	comp=E,1615μm,0.6s							
CTL8				AML		AML		
	comp=N,942μm,0.7s							
CTL8				AML		AML		
	comp=E,4220μm,0.4s							
CTL8				AML		AML		
	comp=N,3970μm,0.7s							
CTL8				AML		AML		
	comp=E,1615μm,0.6s							
CTL8				AML		AML		
	comp=N,942μm,0.7s							
CTL8				AML		AML		
	comp=N,942μm,0.7s							
CTL8				AML		AML		
	comp=N,3970μm,0.7s							
CTL8				AML		AML		
	comp=E,1615μm,0.6s							
MAIM	**Mastiano**	**1.06**	**200**	AML		AML		
	comp=E,1605μm,0.6s							
MAIM				AML		AML		
	comp=E,1605μm,0.6s							
MAIM				AML		AML		
	comp=N,3170μm,0.5s							
MAIM				AML		AML		
	comp=E,1605μm,0.6s							
MAIM				AML		AML		
	comp=N,3170μm,0.5s							
MAIM				AML		AML		
	comp=N,3170μm,0.5s							
RNI	**Roncone**	**1.10**	**347**	*e*Pg		**Pg**	**23 41 19.9**	**-0.9**
RNI	**Roncone**	**1.10**	**347**	*e*Pg		**Pg**	**23 41 19.9**	**-0.9**
CRMI	**Carmignano**	**1.12**	**181**	AML		AML		
	comp=E,392μm,1.1s							
CRMI				AML		AML		
	comp=E,392μm,1.1s							
CRMI				AML		AML		
	comp=N,339μm,0.6s							
CRMI				AML		AML		
	comp=N,339μm,0.6s							
CRMI				AML		AML		
	comp=E,392μm,1.1s							
CRMI				AML		AML		
	comp=N,339μm,0.6s							
PANI	**Panarotta**	**1.16**	**12**	*e*Pg		**Pb**	**23 41 21.1**	**-0.4**
PANI	**Panarotta**	**1.16**	**12**	*e*Pg		**Pb**	**23 41 21.1**	**-0.4**
SFI	**Santa Sofia**	**1.18**	**148**	AML		AML		
	comp=N,1290μm,1.3s							
SFI				AML		AML		
	comp=E,452μm,0.6s							
SFI				AML		AML		
	comp=N,1315μm,1.3s							
SFI				AML		AML		
	comp=E,461μm,0.7s							
SFI				AML		AML		
	comp=N,1290μm,1.3s							
SFI				AML		AML		
	comp=E,452μm,0.6s							
SFI				AML		AML		
	comp=N,1315μm,1.3s							
SFI				AML		AML		
	comp=E,461μm,0.7s							
SFI				AML		AML		
	comp=N,1290μm,1.3s							
SFI				AML		AML		
	comp=E,461μm,0.7s							
SFI				AML		AML		
	comp=N,1315μm,1.3s							
SFI				AML		AML		
	comp=E,452μm,0.6s							
PLMA	**Palmaria, Port**	**1.19**	**224**	AML		AML		
	comp=N,1615μm,0.5s							
PLMA				AML		AML		
	comp=E,1305μm,0.5s							
PLMA				AML		AML		
	comp=N,1615μm,0.5s							
PLMA				AML		AML		
	comp=E,1305μm,0.5s							
MABI	**Malga Bissina**	**1.19**	**344**	AML		AML		
	comp=N,478μm,0.2s							
MABI				AML		AML		
	comp=E,590μm,0.9s							
MABI				AML		AML		
	comp=N,478μm,0.2s							
MABI				AML		AML		
	comp=E,590μm,0.9s							
MTLO	**Montello**	**1.19**	**41**	*e*Pg		**Pg**	**23 41 22.5**	**-0.1**
MTLO	**Montello**	**1.19**	**41**	*e*Pg		**Pg**	**23 41 22.5**	**-0.1**
MSSA	**Maissana**	**1.21**	**241**	AML		AML		
	comp=E,904μm,1.4s							
MSSA				AML		AML		
	comp=N,1145μm,1.1s							
MSSA				AML		AML		
	comp=E,904μm,1.4s							
MSSA				AML		AML		
	comp=N,1145μm,1.1s							
MSSA				AML		AML		
	comp=E,904μm,1.4s							
MSSA				AML		AML		
	comp=N,1145μm,1.1s							
ASQU	**Asqua**	**1.25**	**152**	AML		AML		
	comp=N,548μm,1.2s							
ASQU				AML		AML		
	comp=E,518μm,0.9s							
ASQU				AML		AML		
	comp=E,518μm,0.9s							

ASQU				AML	AML		
	comp=N,548μm,1.2s						
VARN	**Col Varnada, M**	**1.34**	**36**	‖ *e*Pg	**Pg**	**23 41 24.9**	**-0.4**
VARN				*e*Sg	**Sg**	**23 41 43.6**	**+0.8**
VARN	**Col Varnada, M**	**1.34**	**36**	*e*Pg	**Pg**	**23 41 24.9**	**-0.4**
VARN				*e*Sg	**Sg**	**23 41 43.6**	**+0.8**
FAU	**Forcella Aurin**	**1.49**	**28**	*e*Pg	**Pb**	**23 41 26.7**	**-0.3**
FAU	**Forcella Aurin**	**1.49**	**28**	*e*Pg	**Pb**	**23 41 26.7**	**-0.3**
OZOL	**Ozolo**	**1.49**	**2**	*e*Pg	**Pb**	**23 41 26.6**	**-0.4**
OZOL	**Ozolo**	**1.49**	**2**	*e*Pg	**Pb**	**23 41 26.6**	**-0.4**
CAE	**Caneva**	**1.50**	**42**	*e*Pg	**Pg**	**23 41 27.1**	**-1.3**
CAE	**Caneva**	**1.50**	**42**	*e*Pg	**Pg**	**23 41 27.1**	**-1.3**
CARE	**Lago del Cares**	**1.53**	**352**	*e*Pg	**Pn**	**23 41 27.0**	**+0.4**
CARE	**Lago del Cares**	**1.53**	**352**	*e*Pg	**Pn**	**23 41 27.0**	**+0.4**
APPI	**Appiano**	**1.58**	**6**	AML	AML		
	comp=E,3300μm,0.4s						
APPI				AML	AML		
	comp=E,3300μm,0.4s						
APPI				AML	AML		
	comp=N,2430μm,1.1s						
APPI				AML	AML		
	comp=N,2435μm,1.1s						
APPI				AML	AML		
	comp=E,3300μm,0.4s						
APPI				AML	AML		
	comp=N,2435μm,1.1s						
BRMO	**Bormio**	**1.62**	**345**	AML	AML		
	comp=N,436μm,0.7s						
BRMO				AML	AML		
	comp=E,460μm,0.5s						
BRMO				AML	AML		
	comp=N,436μm,0.7s						
BRMO				AML	AML		
	comp=E,460μm,0.5s						
BRMO				AML	AML		
	comp=N,436μm,0.7s						
BRMO				AML	AML		
	comp=E,460μm,0.5s						
ATCA	**Cantone**	**1.63**	**145**	AML	AML		
	comp=N,238μm,1.1s						
ATCA				AML	AML		
	comp=E,214μm,0.6s						
ATCA				AML	AML		
	comp=N,238μm,1.1s						
ATCA				AML	AML		
	comp=E,214μm,0.6s						
FROS	**Frosini**	**1.71**	**176**	AML	AML		
	comp=E,340μm,1.5s						
FROS				AML	AML		
	comp=N,342μm,0.8s						
FROS				AML	AML		
	comp=E,340μm,1.5s						
FROS				AML	AML		
	comp=N,342μm,0.8s						
FROS				AML	AML		
	comp=E,340μm,1.5s						
FROS				AML	AML		
	comp=N,342μm,0.8s						
MOSI	**Grossmontoni**	**1.73**	**350**	AML	AML		
	comp=N,1915μm,0.5s						
MOSI				AML	AML		
	comp=E,1445μm,1.0s						
MOSI				AML	AML		
	comp=N,1915μm,0.5s						
MOSI				AML	AML		
	comp=E,1445μm,1.0s						
CAFI	**Castiglion Fio**	**1.73**	**156**	AML	AML		
	comp=N,156μm,1.1s						
CAFI				AML	AML		
	comp=E,195μm,1.6s						
CAFI				AML	AML		
	comp=N,156μm,1.1s						
CAFI				AML	AML		
	comp=E,195μm,1.6s						
PCP	**Piancastagn**	**1.78**	**259**	AML	AML		
	comp=E,464μm,0.6s						
PCP				AML	AML		
	comp=N,682μm,0.6s						
PCP				AML	AML		
	comp=E,464μm,0.6s						
PCP				AML	AML		
	comp=N,682μm,0.6s						
ATPC	**Poggio Castell**	**1.78**	**143**	AML	AML		
	comp=E,368μm,0.8s						
ATPC				AML	AML		
	comp=N,307μm,1.1s						
ATPC				AML	AML		
	comp=N,307μm,1.1s						
ATPC				AML	AML		
	comp=E,368μm,0.8s						
ATPI	**Pietralunga -**	**1.78**	**145**	AML	AML		
	comp=E,192μm,1.0s						
ATPI				AML	AML		
	comp=E,192μm,1.0s						
ATPI				AML	AML		
	comp=N,278μm,1.1s						
ATPI				AML	AML		
	comp=N,278μm,1.1s						
TRIF	**Trifonti**	**1.80**	**182**	AML	AML		
	comp=N,190μm,0.9s						
TRIF				AML	AML		
	comp=E,195μm,0.7s						
TRIF				AML	AML		
	comp=N,190μm,0.9s						
TRIF				AML	AML		
	comp=E,195μm,0.7s						
ATTE	**AVT- Monte Tez**	**1.98**	**150**	AML	AML		
	comp=E,210μm,1.4s						
ATTE				AML	AML		
	comp=E,210μm,1.4s						
ATTE				AML	AML		
	comp=N,143μm,1.0s						
ATTE				AML	AML		
	comp=N,143μm,1.0s						
ROSI	**Rosskopf**	**2.04**	**8**	AML	AML		
	comp=N,853μm,0.5s						
ROSI				AML	AML		
	comp=E,1022μm,0.3s						
ROSI				AML	AML		
	comp=N,853μm,0.5s						
ROSI				AML	AML		
	comp=E,1022μm,0.3s						
FINB	**Finale Ligure**	**2.04**	**250**	AML	AML		
	comp=N,933μm,1.3s						
FINB				AML	AML		
	comp=E,1265μm,1.6s						
FINB				AML	AML		
	comp=N,933μm,1.3s						
FINB				AML	AML		
	comp=E,1265μm,1.6s						
FETA	**Feichten**	**2.12**	**355**	*e*Pg	**Pg**	**23 41 39.6**	**-0.6**
	comp=E,103nm,0.6s,SNR=30						
FETA	**Feichten**	**2.12**	**355**	Pg	**Pg**	**23 41 39.6**	**-0.6**
	comp=E,103nm,0.6s,SNR=30						
ABTA	**Abfaltersbach**	**2.12**	**30**	*e*Pg	**Pg**	**23 41 40.0**	**-0.3**
	comp=E,14nm,0.3s,SNR=6.6						
ABTA	**Abfaltersbach**	**2.12**	**30**	Pg	**Pg**	**23 41 40.0**	**-0.3**
	comp=E,14nm,0.3s,SNR=6.6						
CASP	**Castiglione de**	**2.12**	**182**	AML	AML		
	comp=E,102μm,1.0s						
CASP				AML	AML		
	comp=N,164μm,0.7s						
CASP				AML	AML		
	comp=N,164μm,0.7s						
CASP				AML	AML		
	comp=E,102μm,1.0s						
RISI	**Rein**	**2.17**	**20**	AML	AML		
	comp=E,1280μm,0.5s						
RISI				AML	AML		
	comp=N,1670μm,0.4s						
RISI				AML	AML		
	comp=E,1280μm,0.5s						
RISI				AML	AML		
	comp=N,1670μm,0.4s						
SKDS	**Skadanscina**	**2.23**	**72**	*i* Pn	**Pn**	**23 41 35.8**	**-0.2**
SKDS				*e*Sn	**Sn**	**23 42 02.4**	**-0.8**
	comp=Z,46nm,0.3s						
SKDS	**Skadanscina**	**2.23**	**72**	Pn	**Pn**	**23 41 35.8**	**-0.2**
SKDS				*e*Sn	**Sn**	**23 42 02.4**	**-0.8**
	comp=Z,46nm,0.3s						
CELB	**S.Piero in Cam**	**2.24**	**195**	AML	AML		
	comp=E,146μm,0.6s						
CELB				AML	AML		
	comp=E,146μm,0.6s						
CELB				AML	AML		
	comp=N,290μm,1.2s						
CELB				AML	AML		
	comp=N,290μm,1.2s						
WTTA	**Wattenberg**	**2.40**	**11**	Pn	**Pb**	**23 41 42.0**	**-0.4**
	comp=N,15nm,0.2s,SNR=8.1						
WTTA	**Wattenberg**	**2.40**	**11**	Pn	**Pb**	**23 41 42.0**	**-0.4**
	comp=N,15nm,0.2s,SNR=8.1						
WATA	**Walderalm**	**2.46**	**9**	Pn	**Pb**	**23 41 42.6**	**-0.9**
	comp=N,20nm,0.3s,SNR=14						
WATA	**Walderalm**	**2.46**	**9**	Pn	**Pb**	**23 41 42.6**	**-0.9**
	comp=N,20nm,0.3s,SNR=14						
DAVA	**Damuels**	**2.50**	**342**	*e*Pn	**Pb**	**23 41 42.9**	**-1.3**
	comp=N,18nm,0.3s						
DAVA	**Damuels**	**2.50**	**342**	Pn	**Pb**	**23 41 42.9**	**-1.3**
	comp=N,18nm,0.3s						
MYKA	**Terra Mystica**	**2.53**	**46**	Pg	**Pg**	**23 41 47.7**	**-0.4**
	comp=N,22nm,0.4s,SNR=6.6						
MYKA	**Terra Mystica**	**2.53**	**46**	Pg	**Pg**	**23 41 47.7**	**-0.4**
	comp=N,22nm,0.4s,SNR=6.6						
RETA	**Reutte**	**2.58**	**357**	Pn	**Pn**	**23 41 42.2**	**+1.4**
	comp=N,11nm,0.3s,SNR=4.0						
RETA	**Reutte**	**2.58**	**357**	Pn	**Pn**	**23 41 42.2**	**+1.4**
	comp=N,11nm,0.3s,SNR=4.0						
KBA	**Koelnbreinsper**	**2.72**	**36**	Pg	**Pg**	**23 41 52.0**	**+0.3**
	comp=N,16nm,0.3s						
KBA	**Koelnbreinsper**	**2.72**	**36**	Pg	**Pg**	**23 41 52.0**	**+0.3**
	comp=N,16nm,0.3s						
SBF	**Sospel**	**2.75**	**249**	*e*Pn	**Pn**	**23 41 44.9**	**+1.7**
SBF				*e*Sn	**Sn**	**23 42 16.9**	**+0.7**
SBF	**Sospel**	**2.75**	**249**	*e*Pn	**Pn**	**23 41 44.9**	**+1.7**
SBF				*e*Sn	**Sn**	**23 42 16.9**	**+0.7**
PGF	**Pioggiola**	**2.77**	**212**	*e*Pn	**Pn**	**23 41 44.2**	**+0.8**
PGF				*e*Sn	**Sn**	**23 42 16.7**	**+0.1**
	comp=N,70nm,0.4s						
PGF	**Pioggiola**	**2.77**	**212**	*e*Pn	**Pn**	**23 41 44.2**	**+0.8**
PGF				*e*Sn	**Sn**	**23 42 16.7**	**+0.1**
	comp=N,35nm,0.4s						
NVLJ	**Novalja**	**2.79**	**96**	*e*Pn	**Pn**	**23 41 43.9**	**+0.2**
NVLJ				Sn	**Sn**	**23 42 16.0**	**-0.9**
NVLJ	**Novalja**	**2.79**	**96**	*e*Pn	**Pn**	**23 41 43.8**	**+0.2**
NVLJ				Sn	**Sn**	**23 42 16.0**	**-0.9**
LUCF	**Luceram**	**2.80**	**250**	P	**Pn**	**23 41 46.5**	**+2.6**
LUCF	**Luceram**	**2.80**	**250**	P	**Pn**	**23 41 46.5**	**+2.6**
OBKA	**Obir**	**2.96**	**56**	*e*Pg	**Pg**	**23 41 55.9**	**-0.4**
	comp=N,5.3nm,0.2s						
OBKA	**Obir**	**2.96**	**56**	Pg	**Pg**	**23 41 55.9**	**-0.4**
	comp=N,5.3nm,0.2s						
MBDF	**Montbardon**	**3.00**	**268**	*e*Pn	**Pn**	**23 41 47.0**	**+0.3**
MBDF				*e*Sn	**Sn**	**23 42 23.0**	**+0.5**
	comp=N,66nm,0.6s						
MBDF	**Montbardon**	**3.00**	**268**	*e*Pn	**Pn**	**23 41 47.0**	**+0.3**
MBDF				*e*Sn	**Sn**	**23 42 23.0**	**+0.5**
	comp=N,33nm,0.6s						
LPG	**La Plagne**	**3.05**	**283**	*e*Pn	**Pn**	**23 41 47.9**	**+0.4**
LPG				*e*Sn	**Sn**	**23 42 24.3**	**+0.5**
	comp=N,58nm,0.5s						
LPG	**La Plagne**	**3.05**	**283**	*e*Pn	**Pn**	**23 41 47.9**	**+0.4**
LPG				*e*Sn	**Sn**	**23 42 24.3**	**+0.5**
	comp=N,29nm,0.5s						
LPL	**La Plagne**	**3.07**	**283**	*e*Pn	**Pn**	**23 41 50.6**	**+3.0**
LPL				*e*Sn	**Sn**	**23 42 23.7**	**-0.4**
	comp=N,40nm,0.4s						
LPL	**La Plagne**	**3.07**	**283**	*e*Pn	**Pn**	**23 41 50.6**	**+3.0**
LPL				*e*Sn	**Sn**	**23 42 23.7**	**-0.4**
	comp=N,20nm,0.4s						
ANTF	**Antibes**	**3.09**	**245**	P	**Pn**	**23 41 49.1**	**+1.5**
ANTF	**Antibes**	**3.09**	**245**	P	**Pn**	**23 41 49.1**	**+1.5**
CALF	**Calern**	**3.14**	**250**	P	**Pn**	**23 41 50.6**	**+2.1**
CALF	**Calern**	**3.14**	**250**	P	**Pn**	**23 41 50.6**	**+2.1**
RSL	**Roselend**	**3.17**	**286**	P	**Pn**	**23 41 52.1**	**+3.1**
RSL	**Roselend**	**3.17**	**286**	P	**Pn**	**23 41 52.1**	**+3.1**
OZLJ	**Ozalj**	**3.24**	**76**	*i* Pn	**Pn**	**23 41 50.5**	**+0.6**
OZLJ				Sn	**Sn**	**23 42 27.1**	**-0.9**
OZLJ	**Ozalj**	**3.24**	**76**	*i* Pn	**Pn**	**23 41 50.4**	**+0.6**
OZLJ				Sn	**Sn**	**23 42 27.1**	**-0.9**
SOKA	**Soboth**	**3.34**	**57**	*i* Pn	**Pn**	**23 41 52.2**	**+1.0**
	comp=N,5.0nm,0.4s						
SOKA	**Soboth**	**3.34**	**57**	Pn	**Pn**	**23 41 52.2**	**+1.0**
	comp=N,5.0nm,0.4s						
FRF	**La Foret Royal**	**3.40**	**248**	*e*Pn	**Pn**	**23 41 53.0**	**+1.0**
FRF				*e*Sn	**Sn**	**23 42 33.3**	**+1.3**
	comp=N,45nm,0.2s						
FRF	**La Foret Royal**	**3.40**	**248**	*e*Pn	**Pn**	**23 41 53.0**	**+1.0**
FRF				*e*Sn	**Sn**	**23 42 33.3**	**+1.3**
	comp=N,22nm,0.2s						
UDBI	**Udbina**	**3.43**	**95**	*e*Pn	**Pn**	**23 41 53.7**	**+1.3**
UDBI				Sn	**Sn**	**23 42 32.2**	**-0.6**
UDBI	**Udbina**	**3.43**	**95**	*e*Pn	**Pn**	**23 41 53.7**	**+1.3**
UDBI				Sn	**Sn**	**23 42 32.2**	**-0.6**
LMR	**La Mourre**	**3.59**	**245**	*e*Pn	**Pn**	**23 41 55.3**	**+0.7**
LMR				*e*Sn	**Sn**	**23 42 37.3**	**+0.6**
LMR	**La Mourre**	**3.59**	**245**	*e*Pn	**Pn**	**23 41 55.3**	**+0.7**
LMR				*e*Sn	**Sn**	**23 42 37.3**	**+0.6**
ORIF	**Oris-en-Rattie**	**3.63**	**272**	*e*Pn	**Pn**	**23 41 56.7**	**+1.5**
ORIF				*e*Sn	**Sn**	**23 42 37.3**	**-0.5**
	comp=N,40nm,0.5s						
ORIF	**Oris-en-Rattie**	**3.63**	**272**	P	**Pn**	**23 41 57.0**	**+1.8**
ORIF	**Oris-en-Rattie**	**3.63**	**272**	*e*Pn	**Pn**	**23 41 56.7**	**+1.5**
ORIF				*e*Sn	**Sn**	**23 42 37.3**	**-0.5**
	comp=N,20nm,0.5s						
KIZ	**Kirchzarten**	**3.71**	**326**	P	**Pn**	**23 41 57.7**	**+1.4**
KIZ	**Kirchzarten**	**3.71**	**326**	P	**Pn**	**23 41 57.7**	**+1.4**
MOA	**Molln**	**3.71**	**37**	*i* Pn	**Pn**	**23 41 57.9**	**+1.6**
	comp=N,1.7nm,0.2s						
MOA	**Molln**	**3.71**	**37**	Pn	**Pn**	**23 41 57.9**	**+1.6**
	comp=N,1.7nm,0.2s						
CABF	**La Chapelle**	**3.83**	**298**	*e*Pn	**Pn**	**23 41 59.1**	**+1.1**
CABF				*e*Sn	**Sn**	**23 42 40.3**	**-2.4**
	comp=N,25nm,0.5s						
CABF	**La Chapelle**	**3.83**	**298**	*e*Pn	**Pn**	**23 41 59.1**	**+1.1**
CABF				*e*Sn	**Sn**	**23 42 40.3**	**-2.4**
	comp=N,12nm,0.5s						
ARSA	**Arzberg**	**3.93**	**52**	*e*Pn	**Pn**	**23 41 59.5**	**+0.2**
	comp=N,3.1nm,0.3s						
ARSA	**Arzberg**	**3.93**	**52**	Pn	**Pn**	**23 41 59.5**	**+0.2**
	comp=N,3.1nm,0.3s						
MOF	**Molkenrain**	**3.97**	**319**	P	**Pn**	**23 42 01.4**	**+1.5**
MOF	**Molkenrain**	**3.97**	**319**	P	**Pn**	**23 42 01.4**	**+1.5**
OPP	**Oppenau**	**4.07**	**333**	P	**Pn**	**23 42 02.6**	**+1.4**
OPP	**Oppenau**	**4.07**	**333**	P	**Pn**	**23 42 02.6**	**+1.4**
HINF	**Hinteralfeld**	**4.08**	**317**	*e*Pn	**Pn**	**23 42 01.7**	**+0.3**
HINF				*e*Sn	**Sn**	**23 42 46.3**	**-2.5**
	comp=N,30nm,0.3s						
HINF	**Hinteralfeld**	**4.08**	**317**	*e*Pn	**Pn**	**23 42 01.7**	**+0.3**
HINF				*e*Sn	**Sn**	**23 42 46.3**	**-2.5**
	comp=N,15nm,0.3s						
ECH	**Echery**	**4.23**	**323**	P	**Pn**	**23 42 04.4**	**+1.0**
ECH	**Echery**	**4.23**	**323**	P	**Pn**	**23 42 04.4**	**+1.0**
WLS	**Welschbruch**	**4.30**	**326**	P	**Pn**	**23 42 06.2**	**+1.7**
WLS	**Welschbruch**	**4.30**	**326**	P	**Pn**	**23 42 06.2**	**+1.7**
CDF	**Champ du Feu**	**4.33**	**325**	*e*Pn	**Pn**	**23 42 05.6**	**+0.7**
CDF				*e*Sn	**Sn**	**23 42 53.3**	**-1.9**
	comp=N,19nm,0.3s						
CDF	**Champ du Feu**	**4.33**	**325**	*e*Pn	**Pn**	**23 42 05.6**	**+0.7**
CDF				*e*Sn	**Sn**	**23 42 53.3**	**-1.9**
	comp=N,9.4nm,0.3s						
HAU	**Haudompre**	**4.45**	**316**	*e*Pn	**Pn**	**23 42 05.7**	**-0.8**
HAU				*e*Sn	**Sn**	**23 42 55.8**	**-2.3**
	comp=N,73nm,0.3s						
HAU	**Haudompre**	**4.45**	**316**	*e*Pn	**Pn**	**23 42 05.7**	**-0.8**
HAU				*e*Sn	**Sn**	**23 42 55.8**	**-2.3**
	comp=N,37nm,0.3s						
VIVF	**Saint-Julien-l**	**4.49**	**272**	*e*Pn	**Pn**	**23 42 06.9**	**-0.1**
VIVF				*e*Sn	**Sn**	**23 42 57.7**	**-1.2**
	comp=N,6.1nm,0.3s						
VIVF	**Saint-Julien-l**	**4.49**	**272**	*e*Pn	**Pn**	**23 42 06.9**	**-0.1**
VIVF				*e*Sn	**Sn**	**23 42 57.7**	**-1.2**
	comp=N,3.0nm,0.3s						
CONA	**Conrad Observa**	**4.52**	**46**	*e*Pn	**Pn**	**23 42 08.7**	**+1.2**
	comp=N,1.3nm,0.2s						
CONA	**Conrad Observa**	**4.52**	**46**	Pn	**Pn**	**23 42 08.7**	**+1.2**
	comp=N,1.3nm,0.2s						
KHC	**Kasperske Hory**	**4.58**	**22**	*e*PN	**Pn**	**23 42 08.9**	**+0.7**
KHC				*e*PG	**Pg**	**23 42 26.2**	**-1.0**
KHC				*e*SN	**Sn**	**23 43 00.6**	**-0.5**
KHC				*e*SG	**Sg**	**23 43 30.7**	**+4.3**
	comp=N,35nm,0.9s						
KHC	**Kasperske Hory**	**4.58**	**22**	Pn	**Pn**	**23 42 08.9**	**+0.7**
THEF	**They Montfort**	**4.78**	**316**	P	**Pn**	**23 42 12.4**	**+1.4**
THEF	**They Montfort**	**4.78**	**316**	P	**Pn**	**23 42 12.4**	**+1.4**
LASF	**Ste Croix**	**5.17**	**263**	*e*Pn	**Pn**	**23 42 16.7**	**+0.4**
LASF	**Ste Croix**	**5.17**	**263**	*e*Pn	**Pn**	**23 42 16.7**	**+0.4**
STON	**Ston**	**5.26**	**110**	*e*Pn	**Pn**	**23 42 17.7**	**+0.1**
STON				Sn	**Sn**	**23 43 15.2**	**-2.8**
STON	**Ston**	**5.26**	**110**	*e*Pn	**Pn**	**23 42 17.7**	**+0.1**
STON				Sn	**Sn**	**23 43 15.1**	**-2.8**
SMF	**Signal de Mont**	**5.29**	**292**	*e*Pn	**Pn**	**23 42 18.5**	**+0.5**
SMF				*e*Sn	**Sn**	**23 43 15.9**	**-2.7**
	comp=N,24nm,0.4s						
SMF	**Signal de Mont**	**5.29**	**292**	*e*Pn	**Pn**	**23 42 18.5**	**+0.5**
SMF				*e*Sn	**Sn**	**23 43 15.9**	**-2.7**
	comp=N,12nm,0.4s						
LOR	**Lormes**	**5.49**	**298**	*e*Pn	**Pn**	**23 42 21.3**	**+0.6**
LOR				*e*Sn	**Sn**	**23 43 20.5**	**-3.0**
	comp=N,16nm,0.4s						
LOR	**Lormes**	**5.49**	**298**	*e*Pn	**Pn**	**23 42 21.3**	**+0.6**
MODS	**Modra-Piesok**	**5.54**	**49**	*e*SG	Sg	23 44 07.2	+10
KRUC	**Moravsky**	**5.56**	**40**	*e*PG	**Pg**	**23 42 44.1**	**-1.9**
SSF	**Saint Saulge**	**5.64**	**295**	*e*Pn	**Pn**	**23 42 23.3**	**+0.5**
SSF				*e*Sn	**Sn**	**23 43 23.6**	**-3.6**
	comp=N,9.4nm,0.3s						
SSF	**Saint Saulge**	**5.64**	**295**	*e*Pn	**Pn**	**23 42 23.3**	**+0.5**
AVF	**Avril sur Loir**	**5.65**	**292**	*e*Pn	**Pn**	**23 42 23.8**	**+0.9**
AVF				*e*Sn	**Sn**	**23 43 24.6**	**-2.9**
	comp=N,8.3nm,0.6s						
AVF	**Avril sur Loir**	**5.65**	**292**	*e*Pn	**Pn**	**23 42 23.8**	**+0.9**
BGF	**Bois d'Agland**	**5.93**	**289**	*e*Pn	**Pn**	**23 42 27.4**	**+0.6**
BGF				*e*Sn	**Sn**	**23 43 29.0**	**-5.4**
	comp=N,39nm,0.4s						
BGF	**Bois d'Agland**	**5.93**	**289**	*e*Pn	**Pn**	**23 42 27.4**	**+0.6**
HYF	**Humbligny**	**6.26**	**295**	*e*Pn	**Pn**	**23 42 32.7**	**+1.3**
HYF				*e*Sn	**Sn**	**23 43 38.5**	**-4.1**
HYF	**Humbligny**	**6.26**	**295**	*e*Pn	**Pn**	**23 42 32.7**	**+1.3**
BRG	**Berggiesshubel**	**6.29**	**17**	PN	**Pn**	**23 42 33.3**	**+1.7**
BRG				PG	**Pg**	**23 42 58.6**	**-1.2**
BRG				SG	**Sg**	**23 44 22.3**	**+1.1**
	comp=N,16nm,1.2s						
TCF	**Toulx Ste Croi**	**6.31**	**286**	*e*Pn	**Pn**	**23 42 32.9**	**+0.9**
	comp=N,7.9nm,0.4s						
TCF				*e*Sn	**Sn**	**23 43 42.5**	**-1.3**
TCF	**Toulx Ste Croi**	**6.31**	**286**	*e*Pn	**Pn**	**23 42 32.9**	**+0.9**
	comp=N,4.0nm,0.4s						
VYHS	**Vyhne**	**6.48**	**54**	*e*PN	**Pn**	**23 42 34.7**	**+0.4**
VYHS				*e*SN	**Sn**	**23 43 45.2**	**-2.7**
VYHS	**Vyhne**	**6.48**	**54**	*e*Pn	**Pn**	**23 42 34.7**	**+0.4**
CLL	**Collm**	**6.54**	**11**	*e*Pn	**Pn**	**23 42 36.0**	**+0.9**
CLL				*e*Pg	**Pg**	**23 43 04.0**	**-0.7**
CLL				*e*		23 43 21.0	
CLL				*e*		23 43 47.0	
CLL				*e*Sg	**Sg**	**23 44 25.0**	**-4.3**
	comp=Z,17nm,1.0s						

ISCJB ***03*** *23:40:59.8±0.9, 46°.8N±0°.2×151°.1E±0°.2, h166km, mb3.2/6, Error ellipse: s-maj=26.4km s-min=14.3km az=44.6*
IDC ***03*** *23:41:02.3±2.5, 46°.82N×150°.97E, h175km±23km, mb3.0/6, mb1 3.2/8, mb1mx2.9/70, mbtmp3.6/8, Error ellipse: s-maj=24.3km s-min=17.7km az=131.0*

ISC 03 23:41:01.5±1.1, 46°.8N±0°.2×151°.1E±0°.2, h166km, n8, σ1§14/8, mb3.2/6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAJ	**Asahikawa**	**6.53**	**249**	P	**Pn**	**23 42 36.6**	**+1.2**
	0.8nm,0.3s,baz=56,slow=15,SNR=6.1						
PETK	**Petropavlovsk-**	**7.61**	**32**	P	**Pn**	**23 42 49.9**	**+0.3**
	0.7nm,0.3s,baz=200,slow=12,SNR=6.2						
ILAR	**Eielson Array**	**37.37**	**39**	P	**P**	**23 47 58.1**	**+0.4**
	0.2nm,0.4s,baz=262,slow=6.1,SNR=3.9						
MKAR	**Makanchi Array**	**45.65**	**296**	P	**P**	**23 49 04.2**	**-1.0**
	0.2nm,0.5s,baz=62,slow=7.7,SNR=3.8						
KURBB	**Kurchatov Arra**	**46.23**	**303**	P	**P**	**23 49 08.3**	**-1.4**
	0.4nm,0.6s,baz=73,slow=8.7,SNR=3.5						
WRA	**Warramunga Arr**	**68.15**	**197**	P	**P**	**23 51 42.3**	**-1.2**
	0.5nm,0.9s,baz=14,slow=6.4,SNR=4.6						
ASAR	**Alice Springs**	**71.85**	**197**	P	**P**	**23 52 06.3**	**+0.2**
	0.5nm,0.6s,baz=5.4,slow=5.0,SNR=4.3						
BRTR	**Keskin Array B**	**77.36**	**315**	P	**P**	**23 52 38.4**	**+0.5**
	0.4nm,0.8s,baz=72,slow=3.4,SNR=2.9						

IDC 03 23:43:00.9±13.0, 26°.43S×64°.94W, h0km, mb4.0/4, mb1 4.3/4, mb1mx3.7/33, mbtmp4.0/4, Error ellipse: s-maj=1323.0km s-min=34.6km az=41.0, Tucuman Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**66.73**	**324**	P	P	23 53 54.4	+0.2
	0.8nm,0.8s,baz=152,slow=8.6,SNR=11						
ANMO	**Albuquerque**	**72.60**	**325**	P	P	23 54 30.5	+0.2
	0.8nm,0.5s,baz=153,slow=6.8,SNR=4.0						
BOSA	**Boshof**	**77.98**	**116**	P	P	23 55 01.7	+0.1
	4.8nm,1.0s,baz=243,slow=9.0,SNR=3.9						
PDAR	**Pinedale Array**	**80.19**	**328**	P	P	23 55 12.8	-0.5
	0.6nm,0.8s,baz=133,slow=6.3,SNR=4.3						

IDC ***04*** *00:09:12.7±1.9, 3°.25N×125°.27E, h180km±19km, mb3.6/16, mb1 3.6/17, mb1mx3.5/61, mbtmp4.1/17, MS3.2/1, Ms1 3.2/1, ms1mx2.4/47, Error ellipse: s-maj=38.0km s-min=9.0km az=73.0*
DJA ***04*** *00:09:19.5±0.3, 3°N±2°×12°6E±°, h10km, M4.2/7, MLv4.2/7*

ISC 04 00:09:10.6±0.6, 3°32N±0°05×125°84E±0°09, h150km, n25, σ3§39/30, mb3.9/16, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**0.48**	**320**	P	**Pn**	**00 09 35.1**	**+3.2**
SGSI				S	**Sn**	**00 09 52.2**	**+4.1**
KMSI	**Cibinong**	**3.30**	**214**	P	**Pn**	**00 10 03.2**	**+1.4**
KMSI				S	**Sn**	**00 10 47.2**	**+5.8**
DAV	**Davao City (W)**	**3.74**	**356**	P	**Pn**	**00 10 09.9**	**+2.4**
	61nm,0.3s,baz=235,slow=15,SNR=2.7						
DAV				S	**Sn**	**00 10 58.9**	**+7.2**
	54nm,0.3s,baz=198,slow=20,SNR=3.2						
LBMI	**Labuha**	**4.26**	**157**	P	**Pn**	**00 10 17.5**	**+3.2**
LBMI				S	**Sn**	**00 11 07.0**	**+3.0**
MRSI	**Marisa**	**4.81**	**234**	P	**Pn**	**00 10 24.9**	**+3.4**
SANI	**Sanana**	**5.33**	**178**	P	**Pn**	**00 10 28.6**	**+0.1**
SANI				S	**Sn**	**00 11 24.3**	**-5.0**
SIJI	**Sorong**	**6.83**	**127**

DHBB			*i* S	Sg	00 13 59.3	-0.1
UDYN	**Al 'Udayn**	**0.52 203**	‖*i*P	Pg	00 13 59.7	-0.8
UDYN			*i* S	Sg	00 14 07.2	-0.3
UDYN	**Al 'Udayn**	**0.52 203**	‖*i*P	Pg	00 13 59.7	-0.8
UDYN			*i* S	Sg	00 14 07.2	-0.3
LBOS		**1.18 119**	*i* P	Pb	00 14 12.7	+0.1
LBOS			*i* S	Sg	00 14 29.4	+0.7
BDHA	**Al Bayda'**	**1.43 109**	*i* P	Pb	00 14 16.7	+0.1
BDHA			*i* S	Sb	00 14 35.5	+0.8
BDHA			AML	AML	00 14 36.9	
	comp=N,738nm,0.2s					
BDHA	**Al Bayda'**	**1.43 109**	*i* P	Pb	00 14 16.7	+0.1
BDHA			*i* S	Sg	00 14 35.5	-0.8
	comp=N,369nm,0.2s					

ISCJB ***04*** *00:14:12.0±1.2, 42°.99N±0°.06×145°.99E±0°.07, h50km±13km, Error ellipse: s-maj=11.9km s-min=6.7km az=146.5*
JMA ***04*** *00:14:12.8±0.1, 42°.98N×145°.92E, h48km±1km, M3.4*
MOS ***04*** *00:14:13.0±1.4, 43°.00N×146°.10E, h54km, mb4.2/1, Error ellipse: s-maj=81.6km s-min=20.8km az=94.4*
SKHL ***04*** *00:14:13.3±0.3, 42°.98N×146°.06E, h49km±9km, mb4.2/5*
ISC 04 00:14:11.3±2.0, 42°.93N±0°.10×146°.05E±0°.06, h48km±22km, n17, σ0°61/32, 1C-1D, Off southeast coast of Hokkaido

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.49**	**333**	P	**Pn**	**00 14 22.9**	**+0.5**
NEM2				*e*S	**Sn**	**00 14 29.9**	**-0.3**
GLVR	**Golovnino**	**0.90**	**335**	*e*P	**Pn**	**00 14 28.2**	**+0.6**
GLVR				AMB	AMB	00 14 28.3	
	220nm,0.4s						
GLVR				*e*S	**Sn**	**00 14 39.5**	**-0.1**
GLVR				A	A	00 14 40.6	
	140nm,0.2s						
GLVR				A	A	00 14 40.6	
	160nm,0.2s						
GLVR	**Golovnino**	**0.90**	**335**	*d* iPN	**Pn**	**00 14 28.2**	**+0.6**
GLVR				*i* S	**Sn**	**00 14 39.5**	**-0.1**
GLVR				pmax	pmax		
	comp=Z,219nm,0.1s						
GLVR				smax	smax		
	comp=N,1μm,0.3s						
GLVR				smax	smax		
	comp=E,2μm,0.3s						
JAK	**Akkeshi**	**1.00**	**274**	P	**Pn**	**00 14 29.2**	**+0.3**
JAK				*e*S	**Sn**	**00 14 41.5**	**-0.4**
GRPR	**Tuman**	**1.08**	**349**	*e*P	**Pn**	**00 14 30.6**	**+0.5**
GRPR				AMB	AMB	00 14 30.8	
	comp=E,91nm,0.3s						
GRPR				*e*S	**Sn**	**00 14 43.3**	**-0.8**
GRPR				A	A	00 14 43.7	
	comp=E,205nm,0.2s						
GRPR				A	A	00 14 43.7	
	comp=E,184nm,0.2s						
GRPR	**Tuman**	**1.08**	**349**	*i* PN	**Pn**	**00 14 30.6**	**+0.5**
GRPR				*i* S	**Sn**	**00 14 43.3**	**-0.8**
GRPR				pmax	pmax		
	comp=E,155nm,0.2s						
GRPR				pmax	pmax		
	comp=Z,906nm,0.2s						
GRPR				smax	smax		
	comp=N,2μm,0.3s						
GRPR				smax	smax		
	comp=E,2μm,0.3s						
SHO	**Shikotan**	**1.10**	**31**	*e*P	**Pn**	**00 14 30.6**	**+0.3**
SHO				AMB	AMB	00 14 30.8	
	comp=E,19nm,0.1s						
SHO				*i* S	**Sn**	**00 14 43.7**	**-0.7**
SHO				A	A	00 14 44.5	
	comp=E,176nm,0.3s						
SHO				A	A	00 14 44.5	
	comp=E,260nm,0.3s						
SHO	**Shikotan**	**1.10**	**31**	*e*PN	**Pn**	**00 14 30.6**	**+0.3**
SHO				*i* S	**Sn**	**00 14 43.9**	**-0.5**
SHO				pmax	pmax		
	comp=Z,19nm,0.1s						
SHO				smax	smax		
	comp=N,109nm,0.1s						
SHO				smax	smax		
	comp=E,213nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.12**	**353**	*e*P	**Pn**	**00 14 31.0**	**+0.4**
YUK				AMB	AMB	00 14 32.2	
	comp=E,307nm,0.3s						
YUK				AMB	AMB	00 14 32.2	
	comp=E,280nm,0.3s						
YUK				AMB	AMB	00 14 32.2	
	comp=E,83nm,0.3s						
YUK				*i* S	**Sn**	**00 14 44.5**	**-0.3**
YUK				A	A	00 14 44.9	
	comp=E,112nm,0.3s						
YUK				A	A	00 14 44.9	
	comp=E,620nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.12**	**353**	*c* iPN	**Pn**	**00 14 31.0**	**+0.4**
YUK				*i* S	**Sn**	**00 14 44.5**	**-0.3**
YUK				pmax	pmax		
	comp=Z,833nm,0.2s						
YUK				pmax	pmax		
	comp=N,307nm,0.1s						
YUK				pmax	pmax		
	comp=E,280nm,0.1s						
YUK				smax	smax		
	comp=E,1μm,0.4s						
YUK				smax	smax		
	comp=N,512nm,0.2s						
LAGR	**Lagunnoye**	**1.15**	**350**	*e*P	**Pn**	**00 14 31.6**	**+0.6**
LAGR				AMB	AMB	00 14 32.2	
	comp=N,97nm,0.4s						
LAGR				*i* S	**Sn**	**00 14 45.1**	**-0.4**
LAGR				A	A	00 14 45.7	
	comp=N,390nm,0.4s						
LAGR				A	A	00 14 45.7	
	comp=N,290nm,0.4s						
LAGR	**Lagunnoye**	**1.15**	**350**	*e*PN	**Pn**	**00 14 31.6**	**+0.6**
LAGR				*i* S	**Sn**	**00 14 45.1**	**-0.4**
LAGR				pmax	pmax		
	comp=Z,969nm,0.1s						
LAGR				smax	smax		
	comp=N,4μm,0.2s						
LAGR				smax	smax		
	comp=E,3μm,0.2s						
JNK	**Nakash**	**1.18**	**304**	P	**Pn**	**00 14 31.3**	**-0.1**
JNK				*e*S	**Sn**	**00 14 44.5**	**-1.8**
JRA	**Rausu**	**1.22**	**326**	*e*S	**Sn**	**00 14 46.7**	**-0.5**
JOB	**Onbets**	**1.63**	**270**	P	**Pn**	**00 14 38.0**	**+0.4**
JAR	**Ashorobuto**	**1.71**	**283**	P	**Pn**	**00 14 39.3**	**+0.6**
JAR				*e*S	**Sn**	**00 14 58.9**	**-0.5**
JTKR	**Abashiri--Toko**	**1.88**	**304**	P	**Pn**	**00 14 41.8**	**+0.8**
JTKR				*e*S	**Sn**	**00 15 03.4**	**0.0**

IDC ***04*** *00:15:34.5±0.6, 21°.78S×169°.30E, h0km, mb4.3/22, mb1 4.4/24, mb1mx4.4/45, mbtmp4.3/24, ML3.6/2, MS4.2/8, Ms1 4.2/8, ms1mx3.8/51, Error ellipse: s-maj=16.7km s-min=15.6km az=103.0*
ISCJB ***04*** *00:15:39.4±0.2, 22°.00S±0°.06×169°.11E±0°.04, h31km, mb4.9/89, MS4.5/11, Error ellipse: s-maj=8.8km s-min=5.7km az=166.3*
NEIC ***04*** *00:15:41.3±0.3, 21°.94S×169°.13E, h35km, mb5.0/63, Error ellipse: s-maj=12.8km s-min=8.3km az=162.0*
GCMT ***04*** *00:15:41.3±0.3, 21°.70S×169°.25E, h16km±1km, MW5.1/43, Moment Tensor Solution. s40,c46; s43,c66; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr3.97±.22; Mθθ-1.61±.18; Mφφ-2.36±.18; Mrθ1.67±.47; Mrφ1.80±.14; Mθφ-2.83±.52; Best double couple: M=5.09700×10^16 NP1:φs146.00000°, δ65.00000°, λ94.00000°. NP2: φs316.00000°, δ25.00000°, λ81.00000°. Principal axes: T 5.1870, Plg70.0000°, Azm65.0000°; N -0.1800, Plg4.0000°, Azm324.0000°; P -5.0060, Plg20.0000°, Azm233.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
BJI ***04*** *00:15:41.7, 21°.70S×169°.10E, h35km, mb4.9/31, mB5.2/25, Ms5.0/9, Ms7 4.7/9*
ISC 04 00:15:41.0±0.4, 21°.91S±0°.08×169°.15E±0°.06, h31km, n208, σ1°70/208, mb5.0/87, MS4.4/11, 4C-1D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.52**	**266**	Pn	**Pn**	**00 16 19.2**	**-0.7**
	16nm,0.3s,baz=138,slow=18,SNR=92						
DZM				Sn	**Sn**	**00 16 50.2**	**+0.6**
	29nm,0.3s,baz=54,slow=19,SNR=7.3						
DZM				LR	LR	00 17 00.2	
	comp=Z,2μm,20.5s,baz=120,slow=32						
DZM	**Mont Dzumac**	**2.52**	**266**	*e*Pn	**Pn**	**00 16 18.8**	**-1.1**
	106nm,0.2s						
DZM	**Mont Dzumac**	**2.52**	**266**	*e*Pn	**Pn**	**00 16 20.0**	**+0.1**
DZM				*e*Sn	**Sn**	**00 16 41.9**	**-7.7**
DZM				Sn	**Sn**	**00 16 50.2**	**+0.6**
URZ	**Urewera**	**17.68**	**159**	P	**Pn**	**00 19 43.8**	**-1.0**
	0.2nm,0.3s,baz=294,slow=10.0,SNR=1.8						
ARMA	**Armidale**	**17.85**	**238**	*e*Pn	**P**	**00 19 50.4**	**+2.7**
	55nm,1.5s						
BKZ	**Black Stump Fm**	**18.31**	**162**	*e*P	**Pn**	**00 19 57.4**	**+4.6**
	48nm,1.2s						
CTA	**Charters Tower**	**21.45**	**271**	P	**P**	**00 20 26.5**	**-0.5**
	15nm,1.0s,baz=94,slow=14,SNR=7.8						
CTAO	**Charters Tower**	**21.45**	**271**	*e*P	**P**	**00 20 27.9**	**+1.0**
	24nm,0.9s						
RPZ	**Rata Peaks**	**21.80**	**176**	P	**P**	**00 20 28.9**	**-1.5**
	4.0nm,0.4s,baz=33,slow=10,SNR=3.3						
PMG	**Port Moresby**	**24.51**	**297**	P	**P**	**00 20 56.8**	**-1.0**
	12nm,0.8s,baz=119,slow=11,SNR=3.4						
PMG				LR	LR	00 27 46.0	
	comp=Z,266nm,18.9s,baz=106,slow=30						
PMG	**Port Moresby**	**24.51**	**297**	*e*P	**P**	**00 20 58.8**	**+1.0**
	37nm,0.9s						
STKA	**Stephens Creek**	**26.44**	**242**	P	**P**	**00 21 13.4**	**-1.8**
	2.4nm,0.9s,baz=85,slow=8.5,SNR=2.4						
STKA				LR	LR	00 31 27.8	
	comp=Z,789nm,18.6s,baz=60,slow=36						
AS01	**Alice Springs**	**32.45**	**260**	*e*P	**P**	**00 22 08.8**	**0.0**
ASAR	**Alice Springs**	**32.50**	**260**	P	**P**	**00 22 08.6**	**-0.6**
	5.1nm,0.9s,baz=84,slow=9.0,SNR=18						
ASAR				LR	LR	00 34 34.8	
	comp=Z,410nm,21.9s,baz=95,slow=35						
WB2	**Warramunga Arr**	**32.52**	**267**	*e*P	**P**	**00 22 09.6**	**+0.2**
WRA	**Warramunga Arr**	**32.54**	**267**	P	**P**	**00 22 07.6**	**-1.9**
	3.5nm,1.1s,baz=97,slow=8.1,SNR=6.6						
WRA				LR	LR	00 34 40.8	
	comp=Z,740nm,21.6s,baz=110,slow=35						
JAY	**Jayapura**	**33.70**	**301**	P	**P**	**00 22 17.7**	**-2.0**
	9.8nm,0.9s,baz=136,slow=6.8,SNR=2.4						
PPT2	**Papeete2**	**39.00**	**91**	*e*LR	LR	00 33 14.2	
	876nm,25.8s						
FITZ	**Fitzroy Crossi**	**40.97**	**267**	P	**P**	**00 23 21.0**	**-0.2**
	6.4nm,0.9s,baz=94,slow=10.0,SNR=4.0						
FITZ	**Fitzroy Crossi**	**40.97**	**267**	*e*P	**P**	**00 23 22.8**	**+1.6**
	38nm,1.2s						
BATI	**Baumata**	**45.08**	**278**	LR	LR	00 42 37.1	
	comp=Z,450nm,19.6s,baz=142,slow=36						
NWAO	**Narrogin (SRO)**	**46.97**	**245**	LR	LR	00 44 52.2	
	comp=Z,678nm,18.1s,baz=339,slow=37						
TAOE	**Nuku Hiva Isla**	**50.36**	**83**	*e*S	**S**	**00 31 44.7**	**-2.4**
	201nm,25.0s						
TAOE				*e*LR	LR	00 38 53.4	
	522nm,21.6s						
RKT	**Rikitea**	**51.36**	**103**	*e*LR	LR	00 38 59.0	
	474nm,28.8s						
VNDA	**Vanda**	**55.77**	**182**	P	**P**	**00 25 14.3**	**-0.3**
	0.9nm,1.1s,baz=347,slow=7.0,SNR=3.0						
VNDA				LR	LR	00 45 12.8	
	comp=Z,108nm,20.4s,baz=20,slow=32						
SBA	**Scott Base**	**56.01**	**181**	*e*P	**P**	**00 25 18.3**	**+2.1**
	13nm,1.0s						
MJAR	**Matsushiro Arr**	**65.07**	**333**	P	**P**	**00 26 16.0**	**-2.5**
	1.0nm,0.3s,baz=171,slow=6.0,SNR=3.5						
NACB	**Ninganchiao**	**65.08**	**312**	*e*P	**P**	**00 26 19.7**	**+0.8**
	26nm,0.9s						
QSPA	**South Pole Qui**	**68.16**	**180**	P	**P**	**00 26 37.8**	**-0.3**
	4.0nm,1.2s,baz=57,slow=2.4,SNR=5.0						
ASAJ	**Asahikawa**	**70.06**	**340**	P	**P**	**00 26 48.2**	**-1.7**
	2.0nm,0.3s,baz=156,slow=20,SNR=2.6						
KSRS	**Korea Array**	**70.66**	**326**	P	**P**	**00 26 51.6**	**-2.0**
	0.5nm,0.3s,baz=144,slow=6.3,SNR=5.0						
KSAR	**Wonju Array Be**	**70.67**	**326**	P	**P**	**00 26 51.6**	**-2.1**
KS01	**Wonju Array Si**	**70.69**	**326**	*e*P	**P**	**00 26 54.6**	**+0.7**
NJ2	**Nanjing**	**72.07**	**317**	*e*P	**P**	**00 27 02.6**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
USRK	**Ussuriysk Ar.**	**74.06**	**333**	P	**P**	**00 27 11.9**	**-1.9**
	2.3nm,0.9s,baz=149,slow=4.5,SNR=2.5						
PETK	**Petropavlovsk-**	**75.36**	**353**	P	**P**	**00 27 20.4**	**-0.8**
	18nm,1.0s,baz=145,slow=5.3,SNR=7.3						
PETK	**Petropavlovsk-**	**75.36**	**353**	*e*P	**P**	**00 27 22.0**	**+0.8**
MDJ	**Mudanjiang**	**75.42**	**332**	P	**P**	**00 27 22.0**	**+0.3**
MDJ				S	**S**	**00 37 00.6**	**+1.0**
MDJ				sS	sS	00 37 18.8	+3.1
MDJ				pmax	pmax		
	comp=Z,12nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,230nm,3.8s						
MDJ				LR	LR		
	comp=N,140nm,15.5s						
MDJ				LR	LR		
	comp=E,110nm,11.9s						
MDJ				LR	LR		
	comp=Z,120nm,10.2s						
CN2	**Changchun**	**76.69**	**329**	*e*P	**P**	**00 27 29.8**	**+0.9**
CN2				*ep*P	PcP	00 27 40.2	0.0
CN2				*e*S	**S**	**00 37 13.7**	**+0.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GYA	**Guiyang**	**77.28**	**305**	*e*P	**P**	**00 27 35.4**	**+2.6**
GYA				pP	sP	00 27 45.6	-0.6
GYA				PP	**PP**	**00 30 31.3**	**+3.8**
GYA				S	**S**	**00 37 21.2**	**+0.2**
GYA				sS	sS	00 37 39.8	+2.6
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,5.6s						
CMAR	**Chiang Mai Arr**	**79.53**	**295**	P	**P**	**00 27 44.6**	**-0.7**
	0.9nm,0.3s,baz=125,slow=4.7,SNR=3.8						
KMI	**Kunming**	**79.62**	**302**	P	**P**	**00 27 48.7**	**+2.8**
KMI				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,120nm,4.6s						
XAN	**Xi'an**	**79.85**	**313**	P	P	00 27 57.8	+11
XAN				pP	sP	00 28 07.3	+7.1
XAN				pmax	pmax		
	comp=Z,17nm,1.6s						
CD2	**Chengdu**	**81.80**	**308**	P	**P**	**00 27 58.8**	**+1.6**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SYO	**Syowa Base**	**82.36**	**196**	‖*e*PcP	**PcP**	**00 28 04.8**	**+0.1**
SYO	**Syowa Base**	**82.36**	**196**	‖*es*P	sP	00 28 24.0	+11
LZH	**Lanzhou**	**84.45**	**312**	*e*P	**P**	**00 28 14.3**	**+3.3**
LZH				pP	pP	00 28 22.4	+1.5
LZH				sP	sP	00 28 27.4	+3.0
LZH				sS	sS	00 38 56.2	+4.3
LZH				pmax	pmax		
	comp=Z,22nm,0.8s						
LZH				pmax	pmax		
	comp=Z,110nm,4.3s						
LZH				LR	LR		
	comp=Z,310nm,14.4s						
LZH				LR	LR		
	comp=Z,340nm,15.0s						
OHAK	**Old Harbor**	**84.89**	**19**	*e*P	**P**	**00 28 12.0**	**-0.3**
	comp=Z,27nm,1.2s						
SNAA	**Sanae**	**86.50**	**183**	P	**P**	**00 28 24.1**	**+3.6**
SNAA	**Sanae**	**86.50**	**183**	P	**P**	**00 28 19.0**	**-1.6**
	comp=Z,1.0nm,0.8s,baz=153,slow=4.5,SNR=4.1						
SNAA	**Sanae**	**86.50**	**183**	*e*P	**P**	**00 28 23.5**	**+2.9**
	comp=Z,7.4nm,1.0s						
VNA3	**Neumayer Olymp**	**87.10**	**180**	P	**P**	**00 28 22.0**	**-1.4**
KCPM	**Cahto Peak**	**87.65**	**45**	*e*P	**P**	**00 28 28.0**	**+1.4**
	comp=Z,24nm,1.1s						
VNA1	**Neumayer–Stat**	**87.68**	**181**	P	**P**	**00 28 22.7**	**-3.5**
KHMM	**Horse Mountain**	**88.17**	**44**	*e*P	**P**	**00 28 30.2**	**+1.1**
	comp=Z,26nm,1.4s						
WDC	**Whiskeytown Da**	**88.79**	**45**	*e*P	**P**	**00 28 33.1**	**+1.2**
	comp=Z,21nm,1.4s						
VES	**Vestal, Richgr**	**88.86**	**51**	P	**P**	**00 28 32.7**	**+0.4**
	baz=242						
N02D	**Trinity Center**	**88.88**	**45**	P	**P**	**00 28 33.4**	**+1.0**
	baz=239						
GTA	**Gaotai**	**88.89**	**314**	*e*P	**P**	**00 28 35.6**	**+3.1**
GTA				pP	sP	00 28 45.7	-0.4
GTA				sP	pP	00 28 49.9	+7.4
GTA				S	**S**	**00 39 18.4**	**0.0**
GTA				SS	**SS**	**00 45 15.0**	**+3.1**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,35nm,5.5s						
GTA				LR	LR		
	comp=Z,940nm,10.8s						
ULN	**Ulaanbaatar**	**88.95**	**323**	*e*P	**P**	**00 28 35.3**	**+2.6**
	comp=Z,7.4nm,1.3s						
ORV	**Oroville**	**88.97**	**46**	*e*P	**P**	**00 28 33.4**	**+0.6**
	comp=Z,9.8nm,1.1s						
CMB	**Columbia Colle**	**88.99**	**48**	*e*P	**P**	**00 28 32.0**	**-0.9**
	comp=Z,6.7nm,0.9s						
M02C	**Callahan**	**89.00**	**44**	P	**P**	**00 28 34.2**	**+1.3**
	baz=239						
AFDM	**Forest Hills D**	**89.03**	**47**	*e*P	**P**	**00 28 30.6**	**-2.5**
	comp=Z,11nm,1.1s						
O03D	**Paynes Creek**	**89.14**	**46**	P	**P**	**00 28 34.2**	**+0.6**
	baz=240						
EDW2	**Edwards Air Fo**	**89.20**	**52**	P	**P**	**00 28 34.7**	**+0.7**
	baz=242						
ISA	**Isabella, Lake**	**89.22**	**51**	P	**P**	**00 28 35.0**	**+1.0**
	baz=242						
YBH	**Yreka Blue Hor**	**89.26**	**44**	P	**P**	**00 28 32.0**	**-2.2**
	comp=Z,4.5nm,0.9s,baz=152,slow=4.6,SNR=6.1						
YBH	**Yreka Blue Hor**	**89.26**	**44**	*e*P	**P**	**00 28 31.9**	**-2.3**
	comp=Z,10nm,1.1s						
SONM	**Songino Array**	**89.30**	**323**	P	**P**	**00 28 32.1**	**-2.1**
	comp=Z,1.7nm,0.9s,baz=142,slow=4.3,SNR=10.0						
SONA1	**Songino Array**	**89.30**	**323**	*e*P	**P**	**00 28 35.2**	**+1.0**
HUMO	**Hull Mountain**	**89.55**	**43**	*e*P	**P**	**00 28 33.4**	**-2.0**
	comp=Z,10nm,1.1s						
IKP	**In-Ko-Pah, Jac**	**89.60**	**54**	P	**P**	**00 28 37.2**	**+1.2**
	baz=244						
LRMC	**Laurel Mtn Rad**	**89.70**	**51**	P	**P**	**00 28 37.6**	**+1.1**
	baz=243						
BILL	**Bilibino**	**89.70**	**359**	*e*P	**P**	**00 28 35.8**	**+0.4**
	comp=Z,13nm,1.1s						
OMMB	**Old Mammoth Mi**	**89.75**	**49**	*e*P	**P**	**00 28 38.5**	**+1.7**
	comp=Z,13nm,1.3s						
PFO	**Pinyon Flats O**	**89.76**	**53**	*e*P	**P**	**00 28 37.7**	**+1.0**
	comp=Z,8.0nm,1.1s						
CWC	**Cottonwood Cre**	**89.86**	**50**	P	**P**	**00 28 38.0**	**+0.8**
	baz=242						
WAKR	**Walker**	**89.87**	**48**	*e*P	**P**	**00 28 38.6**	**+1.4**
	comp=Z,11nm,1.1s						
BEKR	**Beckworth**	**89.89**	**47**	*e*P	**P**	**00 28 38.3**	**+1.0**
	comp=Z,7.4nm,0.9s						
SWSC	**Sam W. Stewart**	**89.96**	**54**	P	**P**	**00 28 38.6**	**+1.1**
	baz=244						
MPMC	**Manual Prospec**	**90.11**	**51**	P	**P**	**00 28 39.1**	**+0.7**
	baz=243						
DAC	**Darwin (Calif)**	**90.13**	**51**	*e*P	**P**	**00 28 39.5**	**+1.0**
	comp=Z,10nm,1.2s						
GSC	**Goldstone, Bar**	**90.26**	**52**	P	**P**	**00 28 40.1**	**+1.1**
	baz=243						
GSC	**Goldstone, Bar**	**90.26**	**52**	*e*P	**P**	**00 28 40.6**	**+1.6**
	comp=Z,12nm,1.4s						
BELC	**Belle Mtn. Jos**	**90.28**	**53**	P	**P**	**00 28 39.9**	**+0.7**
	baz=244						
HEC	**Hector,Ludlow**	**90.40**	**52**	P	**P**	**00 28 40.4**	**+0.7**
	baz=243						
RYN	**Ryan**	**90.56**	**48**	*e*P	**P**	**00 28 39.4**	**-1.0**
	comp=Z,9.5nm,1.1s						
BMRM	**Bremner River**	**90.61**	**21**	*e*P	**P**	**00 28 39.9**	**0.0**
	comp=Z,12nm,1.5s						
NV01	**Mina Array Sit**	**90.62**	**49**	*e*P	**P**	**00 28 37.2**	**-3.6**
NVAR	**Mina Array Bea**	**90.62**	**49**	P	**P**	**00 28 37.5**	**-3.2**
	comp=Z,6.2nm,1.0s,baz=229,slow=7.9,SNR=16						
NV11	**Mina Array Sit**	**90.72**	**49**	*e*P	**P**	**00 28 38.1**	**-3.1**
	comp=Z,1.0nm,1.1s						
GLA	**Glamis**	**90.74**	**55**	P	**P**	**00 28 42.5**	**+1.3**
	baz=244						
GLA	**Glamis**	**90.74**	**55**	*e*P	**P**	**00 28 42.9**	**+1.7**
	comp=Z,14nm,0.9s						
GMRC	**Granite Mounta**	**90.87**	**53**	P	**P**	**00 28 42.6**	**+0.7**
	baz=244						
MOD	**Modoc Plateau**	**90.91**	**45**	*e*P	**P**	**00 28 43.0**	**+1.0**
	comp=Z,9.4nm,1.0s						
K05A	**Summer Lake**	**90.93**	**44**	*e*P	**P**	**00 28 43.0**	**+0.9**
	comp=Z,16nm,1.1s						
CRQM	**Cirque**	**90.94**	**21**	*e*P	**P**	**00 28 40.8**	**-0.9**
	comp=Z,8.2nm,1.2s						
IRM	**Iron Mountain**	**90.98**	**53**	P	**P**	**00 28 39.2**	**-3.2**
	baz=244						
J05D	**Fort Rock, OR**	**90.98**	**43**	P	**P**	**00 28 39.2**	**-3.1**
	baz=240						
KVN	**Kaiserville**	**91.05**	**48**	*e*P	**P**	**00 28 39.6**	**-3.1**
	comp=Z,8.6nm,0.9s						
H04A	**Detroit Lake**	**91.08**	**42**	*e*P	**P**	**00 28 43.2**	**+0.7**
	comp=Z,17nm,1.3s						
E03A	**Lebam**	**91.20**	**40**	*e*P	**P**	**00 28 44.8**	**+1.8**
	comp=Z,39nm,1.3s						
Y12C	**Blythe**	**91.27**	**54**	*e*P	**P**	**00 28 44.5**	**+1.0**
	comp=Z,11nm,1.0s						
TPNV	**Topopah Spring**	**91.40**	**51**	P	**P**	**00 28 41.1**	**-3.3**
	baz=244						
TPNV	**Topopah Spring**	**91.40**	**51**	*e*P	**P**	**00 28 41.4**	**-3.0**
	comp=Z,9.7nm,0.9s						
PINE	**Pine Mountain**	**91.42**	**43**	*e*P	**P**	**00 28 41.7**	**-2.6**
	comp=Z,26nm,1.4s						
PDMCI	**Parker Dam,Lak**	**91.80**	**54**	P	**P**	**00 28 43.6**	**-2.4**
	baz=245						
G05D	**Wamic, OR**	**91.90**	**41**	P	**P**	**00 28 43.9**	**-2.4**
	baz=240						
SHPR	**Sheep Range**	**91.99**	**51**	*e*P	**P**	**00 28 48.5**	**+1.4**
	comp=Z,10nm,1.2s						
IM3	**Indian Mountai**	**92.02**	**14**	*e*P	**P**	**00 28 45.7**	**-0.6**
WRAK	**Wrangell Islan**	**92.22**	**28**	*e*P	**P**	**00 28 48.4**	**+1.0**
	comp=Z,8.9nm,0.9s						
WVOR	**Wild Horse Val**	**92.25**	**45**	*e*P	**P**	**00 28 49.2**	**+1.1**
	comp=Z,8.6nm,1.0s						
BMN	**Battle Mountai**	**92.28**	**47**	*e*P	**P**	**00 28 49.9**	**+1.6**
	comp=Z,5.8nm,1.0s						
W13A	**Hualapai Mount**	**92.32**	**53**	*e*P	**P**	**00 28 47.8**	**-0.9**
	comp=Z,4.7nm,0.8s						
R11A	**Troy Canyon, C**	**92.49**	**50**	*e*P	**P**	**00 28 50.1**	**+0.8**
	comp=Z,2.9nm,1.0s						
BESE	**Bessie Mountai**	**92.52**	**26**	*e*P	**P**	**00 28 49.6**	**+0.7**
	comp=Z,15nm,1.2s						
RIDG	**Independ'e Rid**	**92.60**	**19**	*e*P	**P**	**00 28 50.0**	**+0.9**
	comp=Z,4.7nm,1.1s						
DOT	**Dot Lake**	**92.76**	**19**	*e*P	**P**	**00 28 49.3**	**-0.5**
	comp=Z,21nm,1.4s						
J08A	**Circle Bar Ran**	**92.79**	**44**	*e*P	**P**	**00 28 47.5**	**-3.1**
	comp=Z,5.2nm,0.8s						
ILAR	**Eielson Array**	**92.79**	**17**	P	**P**	**00 28 47.6**	**-2.3**
	comp=Z,1.0nm,0.9s,baz=234,slow=5.4,SNR=4.9						
SKAG	**Skagway**	**92.89**	**25**	*e

YKA Yellowknife Ar 103.06 28 P Pdif 00 29 33.8 -2.4
comp=Z,0.2nm,0.6s,baz=268,slow=4.3,SNR=3.5
ARCES ARCESS Array B 127.61 345 PKP PKPdf 00 34 41.6 -0.7
comp=Z,1.6nm,0.8s,baz=74,slow=1.3,SNR=2.2
FINES FINESS Array B 133.00 337 PKP PKPdf 00 34 52.0 -0.8
comp=Z,3.0nm,1.1s,baz=48,slow=2.1,SNR=2.3
BRTR Keskin Array B 138.34 306 PKP PKPdf 00 35 02.2 -1.5
comp=Z,0.2nm,0.5s,baz=114,slow=3.5,SNR=3.0
ALN Alexandroupoli 143.60 310 *e*PKPdf **PKPdf 00 35 12.6 -0.3**
SMTH Samothraki Isl 144.12 309 P PKPdf 00 35 13.1 -0.7
RZN Rozhen 144.25 312 *e*P **PKPdf 00 35 14.5 +0.3**
DPC Dobruska-Polom 144.50 330 *e*PKP **PKPdf 00 35 13.5 -0.7**
VTS Vitosha 144.91 314 *e*PKPdf **PKPdf 00 35 16.5 +1.2**
VTS Vitosha 144.91 314 *e*P PKPbc 00 35 14.7 +0.2
VTS Vitosha 144.91 314 P PKPdf 00 35 16.7 +1.4
MMB Musomiste 144.97 312 *e*P **PKPab 00 35 12.9 -1.7**
NVR Nevrokopi 144.97 312 P PKPab 00 35 12.5 -2.1
PVCC Panska Ves 145.18 331 *e*PKP **PKPdf 00 35 17.6 +2.3**
BRG Berggiesshubel 145.20 332 *e*P **PKPbc 00 35 12.1 -2.9**
comp=Z,3.5nm,1.0s
BRG *e* 00 35 16.4
comp=Z,15nm,1.3s
BRG *i* 00 35 24.7
comp=Z,24nm,1.3s
SRS Serrai 145.25 311 P PKPdf 00 35 16.9 +1.1
OUR Ouranopolis 145.27 310 P PKPdf 00 35 17.0 +1.2
CLL Collm 145.28 334 *e*PKPdf **PKPbc 00 35 13.0 -2.2**
CLL *i* 00 35 16.3
comp=Z,9.0nm,1.0s
CLL *i* 00 35 24.4
comp=Z,12nm,0.9s
KKB Krupnik 145.30 313 *e*P **PKPdf 00 35 17.2 +1.4**
KRUC Moravsky 145.33 328 *e*PKP **PKPab 00 35 16.9 +1.3**
MODS Modra-Piesok 145.34 326 *e*PKP **PKPab 00 35 17.0 +1.3**
MODS *e* 00 35 26.1
SANT Santorini 145.39 303 *e*PKPbc **PKPab 00 35 17.6 +1.2**
SOH Sokhos 145.53 311 P PKPab 00 35 17.6 +0.9
IDI Anoyia 146.10 301 PKPbc **PKPdf 00 35 17.5 0.0**
comp=Z,9.5nm,1.1s,baz=23,slow=23,SNR=5.5
EKA Eskdalemuir Ar 146.13 352 PKPbc **PKPdf 00 35 14.6 -2.2**
comp=Z,7.3nm,0.9s,baz=38,slow=3.9,SNR=4.7
PTL Penteli 146.13 306 P PKPab 00 35 19.5 +0.5
XOR Xorichti 146.19 309 P PKPbc 00 35 18.6 +0.1
XOR Xorichti 146.19 309 P PKPbc 00 35 18.6 +0.1
ATHU Athens Univers 146.22 306 P PKPbc 00 35 18.7 +0.1
CONA Conrad Observa 146.35 327 *e*PKiKP **PKiKP 00 35 21.5 -0.4**
comp=Z,7.4nm,1.4s
LIT Litokhoron 146.42 310 *e*PKPdf **PKPdf 00 35 18.2 +0.4**
LIT Litokhoron 146.42 310 P PKPab 00 35 20.2 +0.1
KHC Kasperske Hory 146.63 330 *e*PKP **PKPdf 00 35 17.9 0.0**
KHC *ex* x 00 35 20.5
KHC *ep*PKP pPKPbc 00 35 30.1 +0.5
KHC Kasperske Hory 146.63 330 *e*PKPdf **PKPab 00 35 20.8 +0.2**
GERES GERESS Array B 146.77 330 PKPbc **PKPdf 00 35 17.0 -1.2**
comp=Z,3.6nm,0.9s,baz=38,slow=1.7,SNR=8.0
DID Didima 146.78 306 P PKPbc 00 35 19.9 -0.4
DID Didima 146.78 306 P PKPbc 00 35 19.9 -0.4
GEA0 GERESS Array S 146.78 330 *e*PKPdf **PKPdf 00 35 17.9 -0.3**
AGG Agios Georgios 146.94 309 *e*PKPdf **PKPab 00 35 22.2 +0.1**
AGG Agios Georgios 146.94 309 P PKPab 00 35 21.5 -0.6
ARSA Arzberg 146.97 326 *e*PKPab **PKPbc 00 35 21.0 +0.5**
comp=Z,3.0nm,0.9s
PHP Peshkopia 147.16 314 P PKPab 00 35 22.8 -0.1
MOA Molln 147.20 328 *e*PKiKP **PKiKP 00 35 23.9 +0.4**
comp=Z,3.9nm,1.1s
GUR Goura 147.31 307 P PKPab 00 35 22.9 -0.8
EVR Evrytania 147.35 309 P PKPab 00 35 23.7 -0.2
ANX Ano Chora 147.39 308 P PKPdf 00 35 20.1 +0.5
EFP Efpalio 147.46 308 P PKPdf 00 35 19.2 -0.3
LAKA Lakka 147.47 307 P PKPab 00 35 24.4 +0.1
PDG Podgorica 147.58 316 P PKPdf 00 35 18.4 -1.2
PVO Paravola 147.67 308 P PKPab 00 35 25.1 +0.1
TIR Tirane 147.70 314 P PKPab 00 35 24.5 -0.5
JAN Janina 147.75 311 P PKPab 00 35 25.1 -0.2
DSL Palaion Diasel 147.78 309 P PKPab 00 35 25.1 -0.4
RLS Riolos of Patr 147.92 307 P PKPab 00 35 25.7 -0.2
PDO Prodromos 147.93 308 P PKPdf 00 35 19.5 -0.8
OBKA Obir 147.96 326 *e*PKPdf **PKPdf 00 35 20.4 +0.2**
comp=Z,8.3nm,1.5s
KBA Koelnbreinsper 148.18 328 *e*PKPbc **PKPbc 00 35 23.9 -0.1**
comp=Z,5.6nm,0.9s
SGD Sagiada 148.21 311 P PKPbc 00 35 24.9 +0.8
LKD2 Lefkada island 148.23 309 P PKPdf 00 35 22.3 +1.4
MEM Membach 148.45 339 ⇑PKP **PKPbc 00 35 25.2 +0.9**
ABTA Abfaltersbach 148.82 328 *e*PKiKP **PKiKP 00 35 27.2 +0.2**
comp=Z,4.9nm,1.2s
WTTA Wattenberg 148.87 330 *e*PKiKP **PKiKP 00 35 27.2 0.0**
comp=Z,5.2nm,1.1s
RETA Reutte 149.11 331 *e*PKiKP **PKiKP 00 35 27.4 -0.1**
comp=Z,4.0nm,1.3s
WLF Walferdange 149.21 338 ⇑PKP **PKPbc 00 35 27.1 +0.8**
DOU Dourbes 149.35 340 ⇓PKP **PKPbc 00 35 28.1 +1.5**
FETA Feichten 149.47 330 *e*PKiKP **PKPbc 00 35 27.7 +0.4**
comp=Z,6.0nm,1.2s
FUORN Ofenpass-Fuorn 149.98 330 *e*PKPbc **PKPbc 00 35 30.3 +1.6**
ESDC Sonseca Array 161.34 343 PKPab **PKPab 00 36 19.7 -3.0**
comp=Z,0.1nm,0.5s,baz=17,slow=4.7,SNR=3.7
TORD Torodi Ar. Bea 165.21 236 PKP **PKPdf 00 35 41.5 -1.6**
comp=Z,1.6nm,1.0s,baz=98,slow=2.1,SNR=3.3

ISCJB ***04*** *00:22:28.9±0.8, 13°.06N±0°.09×89°.19W±0°.07, h73km±7km, mb3.5/3, Error ellipse: s-maj=18.8km s-min=6.2km az=36.0*
IDC ***04*** *00:22:29.8±4.3, 12°.88N×89°.21W, h90km±21km, mb3.2/3, mb1 3.5/5, mb1mx3.3/40, mbtmp3.5/5, Error ellipse: s-maj=128.1km s-min=11.4km az=45.0*
UCR ***04*** *00:22:30.3±0.8, 13°.04N×89°.17W, h36km±66km, ML4.0*
ISC 04 00:22:29.2±1.3, 13°.04N±0°.09×89°.19W±0°.07, h66km±9km, n34, σ1§39/41, mb3.4/3, 1C, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UESV	**Ojushtada**	**0.52**	**48**	*e*P	**Pn**	**00 22 43.7**	**+1.8**
UESV				*e*S	**Sn**	**00 22 54.0**	**+2.9**
UESV				IAML		00 22 55.9	
comp=Z,7μm,0.1s							
LFRS	**El Faro**	**0.60**	**12**	*e*P	**Pn**	**00 22 42.3**	**-0.5**
LOMA	**San Marcos**	**0.61**	**1**	*e*P	**Pn**	**00 22 42.5**	**-0.3**
SANM	**San Marcos**	**0.62**	**1**	*e*P	**Pn**	**00 22 42.5**	**-0.5**
COLS	**Colinas**	**0.64**	**350**	*e*P	**Pn**	**00 22 43.1**	**-0.1**
COLS				*e*S	**Sn**	**00 22 52.0**	**-1.5**
SNET	**Serv Nac Est T**	**0.65**	**356**	*e*P	**Pn**	**00 22 43.1**	**-0.2**
SNET				*e*S	**Sn**	**00 22 52.9**	**-0.8**
SNET				IAML		00 22 56.0	
comp=Z,12μm,0.3s							
UTEC	**San Salvador**	**0.66**	**359**	*e*P	**Pn**	**00 22 43.2**	**-0.2**
UTEC				IAML		00 22 56.7	
comp=Z,10μm,0.2s							
SNVI	**San Vicente**	**0.67**	**31**	*e*P	**Pn**	**00 22 43.2**	**-0.4**
OPAM	**San Salvador**	**0.68**	**359**	*e*P	**Pn**	**00 22 43.5**	**-0.1**
OPAM				IAML		00 22 55.0	
comp=Z,18μm,0.2s							
UDBS	**Soyapango**	**0.69**	**3**	*e*P	**Pn**	**00 22 43.5**	**-0.3**
UDBS				IAML		00 22 56.0	
comp=Z,13μm,0.2s							
UEES	**San Salvador**	**0.69**	**356**	*e*P	**Pn**	**00 22 43.6**	**-0.2**
UEES				IAML		00 22 54.8	
comp=Z,21μm,0.1s							
BOQS	**Boqueron**	**0.70**	**353**	⇑*i*P	**Pn**	**00 22 44.2**	**+0.1**
BOQS				*e*S	**Sn**	**00 22 53.9**	**-1.0**
BOQS				AML	AML	00 22 55.6	
comp=Z,2μm,0.3s							
LBRS	**Las Brisas**	**0.71**	**11**	*e*P	**Pn**	**00 22 44.2**	**+0.1**
LFU	**La Fuente**	**0.71**	**6**	*e*P	**Pn**	**00 22 44.1**	**0.0**
CEDA	**San Andres**	**0.79**	**345**	*i*P	**Pn**	**00 22 45.0**	**+0.1**
SBLS	**San Blas**	**0.90**	**332**	*e*P	**Pn**	**00 22 46.8**	**+0.3**
SBLS				AML	AML	00 23 01.4	
comp=Z,749nm,0.3s							
SNJE	**San Jose**	**0.92**	**334**	*e*P	**Pn**	**00 22 47.0**	**+0.3**
RTR	**El Retiro**	**0.96**	**333**	*e*P	**Pn**	**00 22 47.8**	**+0.6**
VSM	**San Miguel**	**0.97**	**66**	*e*P	**Pn**	**00 22 48.0**	**+0.6**
UNIC	**Santa Ana**	**1.02**	**339**	*e*P	**Pn**	**00 22 48.4**	**+0.6**
UNIC				IAML		00 22 48.9	
comp=Z,3μm,0.4s							
UNIC				*e*S	**Sn**	**00 23 02.3**	**+0.8**
LLGN	**La Laguna**	**1.15**	**12**	*e*P	**Pn**	**00 22 49.8**	**+0.3**
MTO3	**Montecristo**	**1.37**	**353**	*e*P	**Pn**	**00 22 53.0**	**+0.6**
IXG	**Ixpaco**	**1.67**	**319**	*e*P	**Pn**	**00 22 57.1**	**+0.6**
TGUH	**Tegucigalpa,Un**	**2.12**	**61**	*e*P	**Pn**	**00 23 03.3**	**+0.9**
APG	**El Apazote**	**2.31**	**328**	P	**Pn**	**00 23 06.5**	**+1.3**
comp=Z,5.3nm,0.3s,baz=125,slow=7.2,SNR=22							
APG				S	**Sn**	**00 23 38.2**	**+5.4**
comp=Z,14nm,0.3s,baz=299,slow=15,SNR=2.9							
CNGN	**Cerro Negro**	**2.49**	**102**	*e*P	**Pn**	**00 23 08.0**	**+0.6**
CNGN				AML	AML	00 23 35.7	
comp=N,122nm,0.2s							
MOMN	**Momotombo**	**2.66**	**103**	*e*P	**Pn**	**00 23 10.3**	**+0.6**
COPN	**Copaltepe**	**2.67**	**108**	*e*P	**Pn**	**00 23 10.5**	**+0.6**
COPN				AML	AML	00 23 41.2	
comp=Z,218nm,0.4s							
RCON	**San Juan de Ri**	**2.99**	**81**	*e*P	**Pn**	**00 23 15.2**	**+0.9**
JTS	**JuntasAbangare**	**4.97**	**123**	P	**Pn**	**00 23 43.6**	**+2.3**
comp=Z,2.1nm,0.3s,baz=10,slow=22,SNR=3.9							
JTS				S	**Sn**	**00 24 36.3**	**-1.1**
comp=Z,0.5nm,0.3s,baz=248,slow=23,SNR=0.6							
TEIG	**Tepich**	**7.20**	**7**	*e*P	**Pn**	**00 24 13.3**	**+1.5**
TXAR	**Lajitas Array**	**21.06**	**323**	P	**P**	**00 27 09.2**	**+1.1**
comp=Z,0.7nm,0.5s,baz=151,slow=11,SNR=3.1							
YKA	**Yellowknife Ar**	**52.61**	**345**	P	**P**	**00 31 36.0**	**-0.1**
comp=Z,6.0nm,0.4s,baz=140,slow=7.8,SNR=9.3							
ILAR	**Eielson Array**	**64.81**	**336**	P	**P**	**00 32 57.7**	**-3.0**
comp=Z,0.2nm,0.5s,baz=134,slow=6.4,SNR=1.5							

IDC ***04*** *00:22:28.0±0.6, 22°.97S×175°.12W, h0km, mb4.5/19, mb1 4.7/21, mb1mx4.5/45, mbtmp4.5/21, ML4.6/2, MS4.2/5, Ms1 4.2/5, ms1mx3.7/54, Error ellipse: s-maj=20.6km s-min=15.9km az=128.0*
NEIC ***04*** *00:22:29.4±0.4, 22°.95S×175°.11W, h10km, mb4.8/3, Error ellipse: s-maj=15.1km s-min=9.8km az=112.0*
ISCJB ***04*** *00:22:31.3±0.5, 23°.06S±0°.07×175°.2W±0°.1, h30km, mb4.5/23, MS4.2/5, Error ellipse: s-maj=14.7km s-min=10.0km az=14.2*
ISC 04 00:22:32.6±0.5, 23°.06S±0°.08×175°.1W±0°.1, h30km, n49, σ1§17/51, mb4.6/23, MS4.3/5, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**6.67**	**202**	Pn	**Pn**	**00 24 08.3**	**-0.3**
60nm,0.3s,baz=45,slow=19,SNR=3.4							
RAO				Sn	**Sn**	**00 25 20.4**	**-3.2**
14nm,0.3s,baz=73,slow=19,SNR=2.7							
AFI	**Afiamalu**	**9.62**	**20**	Pn	Pn	00 24 40.8	-8.4
6.7nm,0.3s,baz=185,slow=13,SNR=7.4							
AFI				Sn	Sn	00 26 18.1	-18
6.4nm,0.3s,baz=76,slow=19,SNR=3.5							
URZ	**Urewera**	**16.56**	**202**	Pn	**Pn**	**00 26 22.6**	**0.0**
0.5nm,0.3s,baz=9.9,slow=5.0,SNR=2.7							
URZ				Sn	Sn	00 29 11.8	-14
0.5nm,0.3s,baz=308,slow=19,SNR=4.9							
DZM	**Mont Dzumac**	**17.09**	**270**	P	**P**	**00 26 33.3**	**+2.3**
0.5nm,0.3s,baz=90,slow=18,SNR=6.6							
RPZ	**Rata Peaks**	**23.57**	**206**	P	**P**	**00 27 43.7**	**+3.2**
6.9nm,0.7s,baz=23,slow=7.7,SNR=3.1							
HNR	**Honiara**	**27.47**	**295**	LR	LR	00 38 28.9	
comp=Z,169nm,19.6s,baz=162,slow=35							
CTA	**Charters Tower**	**36.00**	**267**	P	**P**	**00 29 30.5**	**-0.7**
9.8nm,0.7s,baz=93,slow=11,SNR=12							
CTAO	**Charters Tower**	**36.00**	**267**	*e*P	**P**	**00 29 30.9**	**-0.4**
54nm,0.8s							
PMG	**Port Moresby**	**38.57**	**284**	P	**P**	**00 29 52.4**	**-0.7**
32nm,0.9s,baz=130,slow=5.2,SNR=7.0							
PMG				LR	LR	00 43 16.3	
comp=Z,290nm,18.1s,baz=130,slow=32							
PMG	**Port Moresby**	**38.57**	**284**	*e*P	**P**	**00 29 52.6**	**-0.4**
STKA	**Stephens Creek**	**39.22**	**247**	P	**P**	**00 29 58.9**	**+0.6**
3.5nm,0.9s,baz=25,slow=4.5,SNR=3.2							
STKA				LR	LR	00 44 52.6	
comp=Z,502nm,18.9s,baz=54,slow=34							
ASAR	**Alice Springs**	**46.62**	**259**	P	**P**	**00 30 57.6**	**-0.9**
9.7nm,0.9s,baz=92,slow=8.4,SNR=46							
ASAR				PcP	**PcP**	**00 32 31.7**	**-0.5**
1.1nm,0.7s,baz=100,slow=3.1,SNR=3.3							
ASAR				LR	LR	00 49 54.0	
comp=Z,425nm,19.4s,baz=103,slow=35							
WRAB	**Tennant Creek**	**46.97**	**264**	*e*P	**P**	**00 30 59.7**	**-1.4**
6.4nm,0.8s							
WRA	**Warramunga Arr**	**46.97**	**264**	P	**P**	**00 30 59.5**	**-1.7**
11nm,0.7s,baz=103,slow=8.0,SNR=36							
WRA				LR	LR	00 51 00.1	
comp=Z,298nm,18.5s,baz=120,slow=36							
FITZ	**Fitzroy Crossi**	**55.40**	**263**	P	**P**	**00 32 03.9**	**-0.5**
8.4nm,0.9s,baz=142,slow=12,SNR=5.5							
VNDA	**Vanda**	**55.64**	**186**	P	**P**	**00 32 07.2**	**+1.9**
1.6nm,0.9s,baz=358,slow=7.2,SNR=7.7							
QSPA	**South Pole Qui**	**67.03**	**180**	P	**P**	**00 33 23.9**	**+1.3**
4.4nm,0.9s,baz=55,slow=1.7,SNR=3.8							
MJAR	**Matsushiro Arr**	**73.87**	**322**	P	**P**	**00 34 04.0**	**-0.6**
0.9nm,0.3s,baz=160,slow=5.2,SNR=3.6							
ASAJ	**Asahikawa**	**77.27**	**330**	P	**P**	**00 34 25.0**	**+1.2**
14nm,1.0s,baz=117,slow=2.3,SNR=7.0							
PETK	**Petropavlovsk-**	**79.45**	**344**	P	**P**	**00 34 35.7**	**-0.1**
5.1nm,0.7s,baz=130,slow=10,SNR=5.3							
KSRS	**Korea Array**	**80.59**	**317**	P	**P**	**00 34 43.3**	**+1.1**
2.1nm,0.7s,baz=142,slow=5.9,SNR=8.2							
KSAR	**Wonju Array Be**	**80.61**	**317**	P	**P**	**00 34 43.3**	**+1.0**
NVAR	**Mina Array Bea**	**81.07**	**42**	P	**P**	**00 34 45.4**	**+0.3**
1.7nm,0.7s,baz=222,slow=8.4,SNR=15							
USRK	**Ussuriysk Ar.**	**82.60**	**325**	P	**P**	**00 34 53.6**	**+0.9**
10nm,0.8s,baz=137,slow=3.4,SNR=15							
SNAA	**Sanae**	**85.37**	**178**	P	**P**	**00 35 05.2**	**-1.5**
SNAA	**Sanae**	**85.37**	**178**	P	**P**	**00 35 05.2**	**-1.5**
2.6nm,1.0s,baz=190,slow=7.7,SNR=5.2							
VNA3	**Neumayer Olymp**	**85.41**	**175**	P	**P**	**00 35 07.3**	**+0.5**
VNA1	**Neumayer--Stat**	**86.09**	**176**	P	**P**	**00 35 11.1**	**+1.0**
PSI	**Prapat**	**87.39**	**274**	P	**P**	**00 35 17.3**	**-0.4**
7.1nm,0.8s,baz=180,slow=19,SNR=4.3							
PDAR	**Pinedale Array**	**89.00**	**42**	P	**P**	**00 35 23.7**	**-1.0**
0.4nm,0.6s,baz=177,slow=2.7,SNR=3.7							
ILAR	**Eielson Array**	**90.22**	**12**	P	**P**	**00 35 29.4**	**-0.3**
1.1nm,0.9s,baz=224,slow=6.2,SNR=8.0							
DAWY	**Dawson**	**91.19**	**15**	*e*P	**P**	**00 35 34.7**	**+0.4**
1.4nm,0.8s							
CMAR	**Chiang Mai Arr**	**93.50**	**288**	P	**P**	**00 35 47.5**	**+1.5**
2.7nm,0.7s,baz=136,slow=2.6,SNR=12							
YKA	**Yellowknife Ar**	**97.71**	**24**	P	**P**	**00 36 03.1**	**-1.0**
0.4nm,0.7s,baz=243,slow=4.0,SNR=4.5							
MKAR	**Makanchi Array**	**114.91**	**312**	PKP	PKPdf	00 41 08.3	-2.1
0.6nm,0.7s,baz=95,slow=2.7,SNR=5.7							
KURK	**Kurchatov**	**117.70**	**316**	PKP	**PKPdf**	**00 41 13.7**	**-1.8**
KURBB	**Kurchatov Arra**	**117.75**	**316**	PKP	**PKPdf**	**00 41 13.7**	**-1.9**
4.3nm,0.2s,baz=56,slow=2.4,SNR=3.9							
BVAR	**Borovoye Array**	**122.77**	**319**	PKP	**PKPdf**	**00 41 24.7**	**-0.6**
0.6nm,0.5s,baz=225,slow=0.8,SNR=4.1							
AKTO	**Aktyubinsk**	**130.77**	**318**	PKP	**PKPdf**	**00 41 41.3**	**+0.7**
0.5nm,0.5s,baz=67,slow=13,SNR=3.6							
AKASG	**Malin Array Be**	**146.54**	**332**	PKPbc	**PKPdf**	**00 42 09.0**	**-0.3**
8.0nm,1.0s,baz=40,slow=4.2,SNR=20							
ASF	**Jabal al Asfar**	**150.33**	**295**	PKPbc	**PKPbc**	**00 42 21.8**	**+0.3**
3.4nm,0.9s,baz=63,slow=4.5,SNR=7.6							
BRTR	**Keskin Array B**	**150.55**	**311**	PKPbc	**PKPbc**	**00 42 21.6**	**-0.2**
2.4nm,0.8s,baz=134,slow=3.9,SNR=23							
CLL	**Collm**	**151.11**	**349**	*i* PKPbc	**PKPbc**	**00 42 22.4**	**-0.1**
comp=Z,6.0nm,1.0s							
CLL				*e*PKPab	**sPKPdf**	**00 42 30.0**	**0.0**
CLL				*i* pPKPab	**sPKPbc**	**00 42 34.7**	**-1.1**
comp=Z,11nm,1.1s							
BRG	**Berggiesshubel**	**151.36**	**348**	*i* PKP	**PKPbc**	**00 42 22.7**	**-0.4**
comp=Z,5.6nm,0.9s							
BRG				*e*		00 42 35.4	
comp=Z,6.8nm,1.0s							
MMAI	**Mount Meron Ar**	**151.41**	**297**	PKPbc	**PKPbc**	**00 42 24.7**	**+0.8**
comp=Z,11nm,1.0s,baz=35,slow=5.3,SNR=10							
MLR	**Muntele Rosu**	**151.82**	**328**	PKPbc	**PKPbc**	**00 42 24.4**	**-0.2**
baz=18,slow=3.2							
GERES	**GERESS Array B**	**153.34**	**347**	PKPbc	**PKPbc**	**00 42 27.2**	**-0.6**
comp=Z,0.2nm,0.4s,baz=22,slow=11,SNR=3.7							
ESDC	**Sonseca Array**	**161.80**	**22**	PKPab	**PKPab**	**00 43 16.0**	**-0.5**
comp=Z,0.0nm,0.3s,baz=310,slow=4.1,SNR=4.3							
TORD	**Torodi Ar. Bea**	**169.68**	**162**	PKP	**PKPdf**	**00 42 37.0**	**-1.1**
comp=Z,0.6nm,0.9s,baz=162,slow=1.4,SNR=2.7							
TORD				PKPab	**PKPab**	**00 43 51.8**	**+0.2**
comp=Z,0.5nm,0.8s,baz=195,slow=2.9,SNR=2.4							

MDD ***04*** *00:26:27.4±2.4, 37°.32N×12°.66W, h0km, mb3.2/4, Error ellipse: s-maj=25.7km s-min=19.7km az=135.0, PRXIMO*
INMG ***04*** *00:26:28.2±1.1, 37°.16N×13°.12W, h10km, ML1.9, Error ellipse: s-maj=12.0km s-min=7.9km az=112.0*
IGIL ***04*** *00:26:28.1, 37°.25N×12°.70W, h6km, ML1.8*
CSEM ***04*** *00:26:29.2±0.5, 37°.43N×12°.53W, h10km, mb3.2, Error ellipse: s-maj=10.3km s-min=8.5km az=132.0*
ISC 04 00:26:29.1±3.8, 37°.41N±0°.10×12°.5W±0°.2, h10km, n56, σ1§10/94, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMAFR	**Mafra**	**2.97**	**58**	*e*Pn	**Pn**	**00 27 17.3**	**+0.9**
PMAFR				*e*Sn	**Sn**	**00 27 53.3**	**+1.2**
PMAFR				A	A	00 27 56.1	
6.2nm,1.1s							
PMAFR	**Mafra**	**2.97**	**58**	P	**Pn**	**00 27 16.8**	**+0.4**
0.8nm,0.1s,SNR=7.9							
PMAFR				S	**Sn**	**00 27 52.9**	**+0.8**
0.0nm,0.4s,SNR=7.9							
PMAFR	**Mafra**	**2.97**	**58**	P	**Pn**	**00 27 16.8**	**+0.4**
0.8nm,0.1s,SNR=7.9							
PMAFR	**Mafra**	**2.97**	**58**	*e*Pn	**Pn**	**00 27 17.3**	**+0.9**
PMAFR				S	**Sn**	**00 27 52.9**	**+0.8**
SNR=7.9							
PMAFR				*e*Sn	**Sn**	**00 27 53.3**	**+1.2**
PTEO	**Sao Teotonio**	**3.02**	**86**	*e*Pn	**Pn**	**00 27 18.3**	**+1.4**
PTEO	**Sao Teotonio**	**3.02**	**86**	P	**Pn**	**00 27 18.3**	**+1.4**
PTEO	**Sao Teotonio**	**3.02**	**86**	P	**Pn**	**00 27 18.3**	**+1.4**
PNCL	**Nicolau / Gran**	**3.23**	**76**	*e*Pn	**Pn**	**00 27 20.8**	**+0.9**
PNCL				*e*Sn	**Sn**	**00 27 58.4**	**0.0**
PNCL				A	A	00 28 05.0	
1.9nm,0.8s							
PNCL	**Nicolau / Gran**	**3.23**	**76**	*e*Pn	**Pn**	**00 27 20.8**	**+0.9**
PNCL				*e*Sn	**Sn**	**00 27 58.4**	**0.0**
MESJ	**Messejana**	**3.43**	**82**	*e*P	**Pn**	**00 27 22.5**	**-0.2**
MESJ				*e*S	**Sn**	**00 28 02.7**	**-0.7**
MESJ				AML	AML	00 28 08.8	
comp=N,2.0nm,0.4s							
MESJ	**Messejana**	**3.43**	**82**	*e*Pn	**Pn**	**00 27 23.1**	**+0.4**
MESJ				*e*Sn	**Sn**	**00 28 05.5**	**+2.1**
MESJ				A	A	00 28 07.5	
comp=N,1.5nm,0.7s							
MESJ	**Messejana**	**3.43**	**82**	P	**Pn**	**00 27 22.5**	**-0.2**
MESJ				S	**Sn**	**00 28 02.7**	**-0.7**
comp=N,2.0nm,0.4s							
MESJ	**Messejana**	**3.43**	**82**	P	**Pn**	**00 27 22.5**	**-0.2**
MESJ	**Messejana**	**3.43**	**82**	*e*Pn	**Pn**	**00 27 23.1**	**+0.4**
MESJ				S	**Sn**	**00 28 02.7**	**-0.7**
comp=N,2.0nm,0.4s							
MESJ				*e*Sn	Sb	00 28 05.5	-6.3
ALMR	**Almeirim**	**3.55**	**59**	*e*P	**Pn**	**00 27 25.1**	**+0.8**
ALMR				*e*S	**Sn**	**00 28 06.3**	**0.0**
ALMR				AML	AML	00 28 11.8	
comp=N,3.6nm,0.5s							
ALMR	**Almeirim**	**3.55**	**59**	*e*Pn	**Pn**	**00 27 25.0**	**+0.8**
ALMR				*e*Sn	**Sn**	**00 28 07.6**	**+1.3**
ALMR	**Almeirim**	**3.55**	**59**	P	**Pn**	**00 27 25.1**	**+0.8**
ALMR				S	**Sn**	**00 28 06.3**	**0.0**
comp=N,1.8nm,0.5s							
ALMR				S	Sb	00 28 07.6	-7.6
ALMR	**Almeirim**	**3.55**	**59**	*e*Pn	**Pn**	**00 27 25.0**	**+0.8**
ALMR				S	**Sn**	**00 28 06.3**	**0.0**
comp=N,1.8nm,0.5s							
ALMR				*e*Sn	Sb	00 28 07.6	-7.6
PCVE	**Castro Verde**	**3.56**	**85**	*e*Pn	**Pn**	**00 27 24.4**	**0.0**
PCVE	**Castro Verde**	**3.56**	**85**	P	**Pn**	**00 27 24.4**	**0.0**
PCVE	**Castro Verde**	**3.56**	**85**	P	**Pn**	**00 27 24.4**	**0.0**
PBDV	**Barranco-do-Ve**	**3.65**	**91**	*e*Pn	**Pn**	**00 27 25.4**	**-0.3**
PBDV				*e*Sn	**Sn**	**00 28 11.1**	**+2.2**
PBDV	**Barranco-do-Ve**	**3.65**	**91**	P	**Pn**	**00 27 25.4**	**-0.3**
PBDV	**Barranco-do-Ve**	**3.65**	**91**	Sn	**Sn**	**00 28 11.1**	**+2.2**
PBDV	**Barranco-do-Ve**	**3.65**	**91**	Sn	**Sn**	**00 28 11.1**	**+2.2**
PBDV	**Barranco-do-Ve**	**3.65**	**91**	P	**Pn**	**00 27 25.4**	**-0.3**
PBDV				*e*Sn	**Sn**	**00 28 11.1**	**+2.2**
EVO	**Evora**	**3.73**	**71**	*e*Pn	**Pn**	**00 27 26.8**	**+0.1**
EVO				*e*Sn	**Sn**	**00 28 11.2**	**+0.6**
EVO				A	A	00 28 16.2	
comp=N,1.5nm,0.1s							
EVO	**Evora**	**3.73**	**71**	P	**Pn**	**00 27 26.8**	**+0.1**
EVO				S	**Sn**	**00 28 11.2**	**+0.6**
comp=N,1.5nm,0.1s							
EVO	**Evora**	**3.73**	**71**	P	**Pn**	**00 27 26.8**	**+0.1**
EVO				S	**Sn**	**00 28 11.2**	**+0.6**
comp=N,1.5nm,0.1s							
PMTG	**Montargil**	**3.76**	**63**	*e*Pn	**Pn**	**00 27 27.6**	**+0.5**
PMTG				*e*Sn

ELGU	**Los Guajares,** 1.1nm,0.2s,SNR=7.9	**0.29**	**153**	Pg	Pg	00 26 44.4	-0.1
ELGU	52nm,0.1s,SNR=7.9			Lg	Lg	00 26 48.9	
ELGU	**Los Guajares,** 1.1nm,0.2s,SNR=7.9	**0.29**	**153**	Pg	Pg	00 26 44.4	-0.2
ELGU	52nm,0.1s,SNR=7.9			Lg	Lg	00 26 48.9	
EQUE	**Quentar** 11nm,0.1s,SNR=18	**0.29**	**74**	Pg	Pg	00 26 44.2	-0.5
EQUE	7.4nm,0.2s,SNR=7.9			Lg	Lg	00 26 48.3	
EQUE	**Quentar** 11nm,0.1s,SNR=18	**0.29**	**74**	Pg	Pg	00 26 44.2	-0.4
EQUE	7.4nm,0.2s,SNR=7.9			Lg	Lg	00 26 48.3	
GORA	**Gorafe** 0.0nm,0.2s,SNR=7.9	**0.69**	**59**	Pg	Pg	00 26 51.7	-0.7
GORA	6.7nm,0.2s,SNR=7.9			Lg	Lg	00 27 01.9	
GORA	**Gorafe** SNR=7.9	**0.69**	**59**	Pg	Pg	00 26 51.7	-0.7
GORA	6.7nm,0.2s,SNR=7.9			Lg	Lg	00 27 01.9	
EQES	**Quesada** 0.7nm,0.1s,SNR=7.9	**0.89**	**40**	Pg	Pb	00 26 56.8	-0.6
EQES	3.7nm,0.3s,SNR=7.9			Lg	Lg	00 27 08.4	
EQES	**Quesada** 0.7nm,0.1s,SNR=7.9	**0.89**	**40**	Pg	Pb	00 26 56.8	-0.6
EQES	3.7nm,0.3s,SNR=7.9			Lg	Lg	00 27 08.4	
EMIJ	**Mijas** 0.2nm,0.2s,SNR=7.9	**0.97**	**235**	Pg	Pg	00 26 56.5	-1.2
EMIJ	1.4nm,0.2s,SNR=7.9			Lg	Lg	00 27 10.2	
EMIJ	**Mijas** 0.2nm,0.2s,SNR=7.9	**0.97**	**235**	Pg	Pg	00 26 56.5	-1.2
EMIJ	1.4nm,0.2s,SNR=7.9			Lg	Lg	00 27 10.2	
EADA	**Adamuz** 1.1nm,0.2s,SNR=7.9	**1.22**	**329**	Pg	Pg	00 27 01.8	-0.7
EADA	2.9nm,0.1s,SNR=7.9			Lg	Lg	00 27 17.3	
EADA	**Adamuz** 1.1nm,0.2s,SNR=7.9	**1.22**	**329**	Pg	Pg	00 27 01.8	-0.6
EADA	2.9nm,0.1s,SNR=7.9			Lg	Lg	00 27 17.3	
ENIJ	**Nijar** 0.6nm,0.3s,SNR=7.9	**1.27**	**96**	Pg	Pg	00 27 03.2	-0.3
ENIJ	2.0nm,0.3s,SNR=7.9			Lg	Lg	00 27 19.9	
ENIJ	**Nijar** 0.6nm,0.3s,SNR=7.9	**1.27**	**96**	Pg	Pg	00 27 03.2	-0.3
ENIJ	2.0nm,0.3s,SNR=7.9			Lg	Lg	00 27 19.9	
SESP	**Santiago Espad** 0.6nm,0.2s,SNR=7.9	**1.40**	**44**	Pg	Pg	00 27 05.0	-0.9
SESP	7.9nm,0.2s,SNR=7.9			Lg	Lg	00 27 24.7	
SESP	**Santiago Espad** 0.6nm,0.2s,SNR=7.9	**1.40**	**44**	Pg	Pg	00 27 05.0	-1.0
SESP	7.9nm,0.2s,SNR=7.9			Lg	Lg	00 27 24.7	
ECAB	**El Cabril** 0.3nm,0.2s,SNR=7.9	**1.61**	**307**	Pg	Pn	00 27 08.4	-0.4
ECAB	0.1nm,0.2s,SNR=7.9			Sn	Sn	00 27 27.3	-3.0
ECAB	0.5nm,0.2s,SNR=7.9			Lg	Lg	00 27 31.0	
ECAB	**El Cabril** 0.3nm,0.2s,SNR=7.9	**1.61**	**307**	Pg	Pn	00 27 08.4	-0.4
ECAB	0.1nm,0.2s,SNR=7.9			Sn	Sn	00 27 27.3	-3.0
ECAB	0.5nm,0.2s,SNR=7.9			Lg	Lg	00 27 31.0	
ETOB	**Tobarra** 0.0nm,0.2s,SNR=7.9	**2.33**	**49**	Pg	Pg	00 27 23.7	-0.1
ETOB	1.7nm,0.4s,SNR=7.9			Lg	Lg	00 27 54.5	
ETOB	**Tobarra** SNR=7.9	**2.33**	**49**	Pg	Pg	00 27 23.7	-0.1
ETOB	1.7nm,0.4s,SNR=7.9			Lg	Lg	00 27 54.5	
PAB	**San Pablo** 0.2nm,0.2s,SNR=7.9	**2.46**	**350**	Lg	Lg	00 27 54.0	
PAB	**San Pablo** 0.2nm,0.2s,SNR=7.9	**2.46**	**350**	Lg	Lg	00 27 54.0	

IDC ***04*** *00:45:13.9±0.4,5.36N×82.63W,h0km,mb5.5/38, mb1 5.6/44,mb1mx5.6/50,mbtmp5.5/44,ML4.3/6,MS5.7/34, Ms1 5.7/34,ms1mx5.7/39,Error ellipse: s-maj=14.7km s-min=8.9km az=52.0*

NEIC ***04*** *00:45:15.0±0.0,5.39N×82.38W,h15km,Moment Tensor Solution. s28 Moment tensor: Scale 1018Nm; Mrr0.21; Mθθ0.72; Mφφ-0.93; Mrθ-0.19; Mθφ2.90; Mφr-0.41; Best double couple: M0=3.10000×1018 NP1:φs188.00000°, δ87.00000°,λ172.00000°. NP2:φs278.00000°,δ82.00000°, λ3.00000°. Principal axes: T 2.9700, Plg8.0000°, Azm142.0000°; N 0.1700, Plg80.0000°, Azm346.0000°; P -3.1400, Plg3.0000°, Azm233.0000°;*

ISCJB ***04*** *00:45:15.7±0.1,5.52N±0.02×82.64W±0.01,h15km, mb5.8/528,MS5.9/422 Error ellipse: s-maj=2.6km s-min=1.5km az=39.7*

BJI ***04*** *00:45:15.6,5.26N×82.71W,h9km,mB6.1/50,Ms6.3/65, Ms7 6.1/57*

GCMT ***04*** *00:45:15.3±0.1,5.31N×82.64W,h24km,MW6.3/147, Moment Tensor Solution. s139,c331; s147,c585; Duration: 3s4 Moment tensor: Scale 1018Nm; Mrr-0.33±.02; Mθθ0.72±.01; Mφφ-0.39±.02; Mrθ0.37±.03; Mθφ3.34±.02; Mφr-0.03±.03; Best double couple: M0=3.40700×1018 NP1:φs275.00000°,δ89.00000°, λ-6.00000°. NP2:φs5.00000°,δ84.00000°,λ-179.00000°. Principal axes: T 3.5670, Plg4.0000°, Azm320.0000°; N -0.3200, Plg84.0000°, Azm86.0000°; P -3.2470, Plg5.0000°, Azm230.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

NEIC ***04*** *00:45:15.3±0.1,5.31N×82.63W,h7km,mb5.9/299,ME6.5, MS5.9/299,MW6.2,MW6.3 Error ellipse: s-maj=3.4km s-min=2.3km az=219.0,Moment Tensor Solution. s82 Moment tensor: Scale 1018Nm; Mrr-0.09; Mθθ-0.13; Mφφ0.22; Mrθ1.50; Mθφ2.10; Mφr0.62; Best double couple: M0=2.70000×1018 NP1:φs87.00000°,δ86.00000°, λ35.00000°. NP2:φs354.00000°,δ55.00000°,λ175.00000°. Principal axes: T 2.9000, Plg27.0000°, Azm317.0000°; N -0.5700, Plg55.0000°, Azm92.0000°; P -2.3300, Plg21.0000°, Azm215.0000°; Broadband fault plane solution: P waves. NP1:φs9.00000°,δ75.00000°, λ175.00000°. NP2:φs100.00000°,δ85.00000°,λ15.00000°. Principal axes: T Plg14.0000°, Azm325.0000°; N Plg0.0000°, Azm0.0000°; P Plg7.0000°, Azm233.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt [II] at Boquete. Also felt at Alcalde Diaz and in the David area. Felt at Jaco, Quepos, San Vito and in the Valle Central, Costa Rica.

MOS ***04*** *00:45:16.5±1.1,5.73N×82.66W,h10km,mb6.1/91, MS5.9/19 Error ellipse: s-maj=6.3km s-min=4.0km az=93.9*

UCR ***04*** *00:45:18.3±2.2,5.51N×82.59W,h35km±999km,MD4.6, ML5.3,mb5.9(NEIC)*

ISC 04 00:45:16.4±0.2,5°29N±0°03×82°63W±0°04,h15km,n1956, σ1**75**/1973**,mb5.9**/546**,MS6.0**/465**,70C-42D,South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC	Res
MAPC	**Malpelo**	**1.64**	**141**	*e*P	Pn	00 45 37.4		-7.3
PTJ1	**Puerto Jim¨ne**	**3.29**	**348**	⇑*i*P	**Pn**	**00 46 04.4**		**-3.0**
ACR	**Cerro Adams**	**3.38**	**351**	⇑*i*P	**Pn**	**00 46 04.8**		**-3.9**
BRU2	**Volcan**	**3.48**	**359**	⇑*i*P	**Pn**	**00 46 07.8**		**-2.3**
EDSV	**San Vito**	**3.52**	**355**	⇓*e*P	**Pn**	**00 46 09.0**		**-1.7**
EDPN	**Palmar Norte**	**3.73**	**347**	⇑*e*P	**Pn**	**00 46 11.1**		**-2.4**
EDPN				*e*S	**Sn**	**00 46 52.0**		**-5.3**
EDBA	**Buenos Aires**	**3.90**	**351**	⇑*e*P	**Pn**	**00 46 13.8**		**-2.0**
EDDO	**Dominical**	**4.12**	**343**	⇑*e*P	**Pn**	**00 46 16.3**		**-2.5**
BUS	**Buena Vista**	**4.38**	**345**	⇑*i*P	**Pn**	**00 46 20.5**		**-2.4**
QCR1	**Quepos**	**4.38**	**340**	⇑*i*P	**Pn**	**00 46 19.2**		**-3.1**
URSC	**Urasca**	**4.65**	**346**	⇑*i*P	**Pn**	**00 46 24.1**		**-2.2**
BCIP	**Isla Barro Col**	**4.74**	**36**	*e*Pn	**Pn**	**00 46 26.6**		**-0.8**
BCIP	**Isla Barro Col**	**4.74**	**36**	⇓*i*P	**Pn**	**00 46 25.5**		**-1.9**
BCIP				*e*S	**Sn**	**00 47 16.0**		**-6.1**
BCIP	**Isla Barro Col**	**4.74**	**36**	*e*P	**Pn**	**00 46 26.3**		**-1.1**
VTR0	**Volcan Turrial**	**4.82**	**347**	⇑*e*P	**Pn**	**00 46 27.2**		**-1.7**
SJS	**Escuela Geolog**	**4.83**	**343**	⇑*e*P	**Pn**	**00 46 27.0**		**-1.7**
CVTR	**Volcan Turrial**	**4.83**	**347**	⇑*e*P	**Pn**	**00 46 27.2**		**-1.7**
HDC	**Heredia**	**4.90**	**343**	*e*Pn	**Pn**	**00 46 28.2**		**-1.6**
HDC	**Heredia**	**4.90**	**343**	*e*P	**Pn**	**00 46 27.3**		**-2.4**
GRGC	**Isla de Gorgon**	**5.00**	**117**	*e*P	**Pn**	**00 46 26.3**		**-4.7**
CGA2	**Cerro Gallo 2**	**5.03**	**339**	⇑*e*P	**Pn**	**00 46 28.6**		**-2.9**
SRA1	**San Ram˜‡n**	**5.10**	**339**	⇑*i*P	**Pn**	**00 46 30.1**		**-2.4**
TUMC	**Tumaco**	**5.20**	**131**	*e*Pn	**Pn**	**00 46 30.4**		**-3.4**
TUMC	**Tumaco**	**5.20**	**131**	*e*P	**Pn**	**00 46 30.4**		**-3.4**
SOLC	**Bahia Solano**	**5.28**	**80**	*e*P	**Pn**	**00 46 33.3**		**-1.5**
MALC	**Bahia Malaga**	**5.43**	**103**	*e*P	**Pn**	**00 46 34.9**		**-2.0**
JTS	**JuntasAbangare** 2μm,0.3s,baz=209,slow=6.3,SNR=1933	**5.47**	**335**	Pn	**Pn**	**00 46 35.0**		**-2.4**
JTS	1μm,0.3s,baz=319,slow=20,SNR=5.1			Sn	**Sn**	**00 47 36.9**		**-3.3**
JTS	**JuntasAbangare** 11μm,0.4s	**5.47**	**335**	*e*Pn	**Pn**	**00 46 35.1**		**-2.4**
JTS				Sn	**Sn**	**00 47 36.9**		**-3.3**
JTS	**JuntasAbangare**	**5.47**	**335**	*e*P	**Pn**	**00 46 35.6**		**-1.9**
JTS				*e*S	**Sn**	**00 47 36.5**		**-3.7**
JTS	**JuntasAbangare**	**5.47**	**335**	*e*P	**Pn**	**00 46 35.1**		**-2.4**
JTS						00 47 36.9		
JTS	comp=Z,10μm,0.4s			pmax	pmax			
FORC	**Fortuna**	**5.52**	**339**	⇑*e*P	**Pn**	**00 46 36.9**		**-1.2**
CEDE	**Laguna Cede˜–o**	**5.55**	**338**	⇑*i*P	**Pn**	**00 46 37.2**		**-1.4**
VCR	**Vista de Mar**	**5.65**	**328**	⇑*e*P	**Pn**	**00 46 36.4**		**-3.5**
AMAS	**Alto Masis**	**5.78**	**336**	*e*P	**Pn**	**00 46 40.1**		**-1.6**
ACAL	**Aguas Claras**	**5.81**	**336**	*e*P	**Pn**	**00 46 41.0**		**-1.3**
PTEN	**Parque Tenorio**	**5.87**	**337**	⇑*e*P	**Pn**	**00 46 41.1**		**-1.8**
CUI	**Cuipilapa**	**5.89**	**335**	⇓*e*P	**Pn**	**00 46 41.7**		**-1.6**
CUI				*e*S	**Sn**	**00 47 47.5**		**-3.1**
COLC	**Colonia**	**5.91**	**335**	⇓*e*P	**Pn**	**00 46 42.0**		**-1.6**
HORNC	**Hornillas**	**5.94**	**335**	⇓*e*P	**Pn**	**00 46 42.4**		**-1.6**
GUAB	**Guayabo de Bag**	**5.96**	**335**	⇓*e*P	**Pn**	**00 46 42.6**		**-1.6**
LIM1	**Limonal**	**5.96**	**334**	*e*P	**Pn**	**00 46 42.2**		**-2.0**
MESS	**Mesas**	**5.98**	**335**	*e*P	**Pn**	**00 46 41.9**		**-2.6**
MESS				⇓*e*P	**Pn**	**00 46 42.9**		**-1.5**
MESS				*e*S	**Sn**	**00 47 48.4**		**-4.3**
NY14	**Universidad de**	**6.05**	**332**	⇑*e*P	**Pn**	**00 46 43.7**		**-1.7**
GPS2	**Hotel Rinc˜‡n**	**6.05**	**334**	⇑*e*P	**Pn**	**00 46 43.5**		**-2.1**
GPS2				*e*S	**Sn**	**00 47 50.0**		**-4.7**
GPS3	**Bodega del ICE**	**6.06**	**334**	⇓*e*P	**Pn**	**00 46 44.2**		**-1.4**
GPS1	**Guardaparques**	**6.07**	**334**	⇑*e*P	**Pn**	**00 46 44.1**		**-1.7**
BUEV	**Buena Vista**	**6.12**	**334**	*e*P	**Pn**	**00 46 44.7**		**-1.8**
BUEV				*e*S	**Sn**	**00 47 51.2**		**-5.1**
GBS3	**Finca Las lm˜¡**	**6.13**	**333**	*e*P	**Pn**	**00 46 44.7**		**-1.8**
BUAI	**Buenos Aires**	**6.16**	**334**	⇑*e*P	**Pn**	**00 46 44.6**		**-2.3**
CAPC	**Capurgana**	**6.20**	**57**	*e*P	**Pn**	**00 46 47.2**		**-0.3**
HORQ	**Saladito**	**6.25**	**106**	*e*P	**Pn**	**00 46 45.9**		**-2.6**
PLMC	**San Jos˜¨ del**	**6.34**	**93**	*e*P	**Pn**	**00 46 47.9**		**-1.5**
YOTC	**Yotoco, Valle**	**6.40**	**101**	*e*P	**Pn**	**00 46 47.7**		**-2.6**
CMBC	**Cumbal**	**6.46**	**132**	*e*P	**Pn**	**00 46 48.1**		**-3.4**
CRZ1	**La Cruz**	**6.46**	**333**	⇑*i*P	**Pn**	**00 46 48.9**		**-2.2**
OTAV	**Otavalo**	**6.53**	**140**	*e*Pn	**Pn**	**00 46 49.7**		**-2.8**
OTAV	**Otavalo**	**6.53**	**140**	*e*P	**Pn**	**00 46 50.4**		**-2.0**
OTAV	**Otavalo**	**6.53**	**140**	P	**Pn**	**00 46 49.6**		**-2.8**
POPC	**Popayan, Colom**	**6.54**	**114**	*e*P	**Pn**	**00 46 50.1**		**-2.3**
DBBC	**Dabeiba**	**6.61**	**75**	*e*P	**Pn**	**00 46 53.8**		**+0.6**
GCUF	**Volcan Galeras**	**6.65**	**127**	*e*P	**Pn**	**00 46 51.5**		**-2.5**
CPAS2	**Pasto**	**6.72**	**127**	*e*P	**Pn**	**00 46 55.2**		**+0.2**
CRUC	**La Cruz**	**6.77**	**123**	*e*P	**Pn**	**00 46 53.5**		**-2.2**
SOTA	**Rioblanco**	**6.78**	**117**	*e*P	**Pn**	**00 46 54.8**		**-1.1**
PCON	**Cinco Dias**	**6.88**	**115**	*e*P	**Pn**	**00 46 56.5**		**-0.8**
CONN	**Concepcion**	**6.90**	**335**	*e*P	**Pn**	**00 46 56.1**		**-1.0**
ESPN	**Las Esperanzas**	**7.05**	**347**	*e*P	**Pn**	**00 46 57.6**		**-1.6**
MARP	**Paez Belalcaza**	**7.09**	**110**	*e*P	**Pn**	**00 46 59.1**		**-0.9**
HELC	**Santa Helena**	**7.12**	**82**	*e*Pn	**Pn**	**00 47 00.3**		**-0.2**
HELC	**Santa Helena**	**7.12**	**82**	*e*P	**Pn**	**00 47 00.5**		**0.0**
HELC				*e*P	**Pn**	**00 47 01.0**		**+0.5**
GUYC	**Guyana, Colomb**	**7.21**	**90**	*e*P	**Pn**	**00 47 03.0**		**+1.2**
ANIL	**Santa Ana**	**7.25**	**96**	*e*P	**Pn**	**00 47 01.3**		**-0.9**
RREF	**El Recreo**	**7.27**	**93**	*e*P	**Pn**	**00 47 03.5**		**+0.9**
BETC	**Betania**	**7.63**	**110**	*e*P	**Pn**	**00 47 07.5**		**+0.3**
MGAN	**Managua**	**7.69**	**333**	*e*P	**Pn**	**00 47 07.0**		**-1.0**
BOAB	**BOACO BROADBAN**	**7.71**	**337**	*e*P	**Pn**	**00 47 07.1**		**-1.1**
XAVN	**Gruta Xavier**	**7.73**	**332**	*e*P	**Pn**	**00 47 06.8**		**-1.7**
MOTC	**Monteria, Cord**	**7.73**	**63**	*e*P	**Pn**	**00 47 09.8**		**+1.3**
MOTC				*e*P	**Pn**	**00 47 10.2**		**+1.7**
NORC	**Norcasia**	**7.73**	**88**	*e*P	**Pn**	**00 47 10.1**		**+1.5**
PRAC	**Prado**	**7.88**	**101**	*e*Pn	**Pn**	**00 47 09.9**		**-0.7**
PRAC	**Prado**	**7.88**	**101**	*e*P	**Pn**	**00 47 10.4**		**-0.2**
COPN	**Copaltepe**	**7.88**	**331**	*e*P	**Pn**	**00 47 08.6**		**-2.0**
COPN				AML	AML	00 48 39.9		
	comp=Z,3μm,0.5s							
FLOC	**Florencia**	**7.88**	**118**	*e*P	**Pn**	**00 47 09.0**		**-1.6**
ZARC	**Zaragoza, Cauc**	**8.03**	**74**	*e*P	**Pn**	**00 47 13.2**		**+0.6**
MOMN	**Momotombo**	**8.05**	**332**	*e*P	**Pn**	**00 47 11.8**		**-1.2**
PRVC	**Isla de Provid**	**8.13**	**9**	*e*P	**Pn**	**00 47 12.7**		**-1.3**
CNGN	**Cerro Negro**	**8.21**	**331**	*e*P	**Pn**	**00 47 13.2**		**-1.9**
PTBC	**PUERTO BERRIO,**	**8.23**	**81**	*e*P	**Pn**	**00 47 18.3**		**+3.0**
MATN	**Matagalpa**	**8.25**	**337**	*e*P	**Pn**	**00 47 14.6**		**-1.2**
ROSC	**El Rosal**	**8.29**	**93**	Pn	**Pn**	**00 47 17.5**		**+1.0**
	comp=Z,29nm,0.3s,baz=136,slow=21,SNR=50							
ROSC	**El Rosal**	**8.29**	**93**	*e*Pn	**Pn**	**00 47 18.8**		**+2.2**
ROSC	**El Rosal**	**8.29**	**93**	*e*P	**Pn**	**00 47 19.3**		**+2.7**
TELN	**Telica**	**8.36**	**331**	*e*P	**Pn**	**00 47 16.6**		**-0.7**
ESTN	**Estel**	**8.59**	**335**	*e*P	**Pn**	**00 47 19.0**		**-1.4**
SJCC	**San Jacinto, C**	**8.69**	**58**	*e*P	**Pn**	**00 47 22.9**		**+1.2**
RCON	**San Juan de Ri**	**8.85**	**337**	*e*P	**Pn**	**00 47 23.2**		**-0.8**
SJAC	**San Juan de Ar**	**8.89**	**103**	*e*P	**Pn**	**00 47 25.6**		**+1.1**
CHIC	**Chingaza**	**8.89**	**94**	*e*P	**Pn**	**00 47 25.6**		**+0.8**
VILC	**Villavicencio,**	**8.99**	**97**	*e*P	**Pn**	**00 47 27.4**		**+1.6**
CNCH	**Conchagua**	**9.45**	**327**	*e*P	**Pn**	**00 47 29.4**		**-2.7**
CNCH				*e*S	**Sn**	**00 49 15.8**		**-2.5**
BARC	**Barichara**	**9.49**	**82**	*e*P	**Pn**	**00 47 34.3**		**+1.4**
RUSC	**La Rusia**	**9.52**	**86**	*e*Pn	**Pn**	**00 47 34.5**		**+0.9**
RUSC	**La Rusia**	**9.52**	**86**	*e*P	**Pn**	**00 47 36.0**		**+2.5**
OCAC	**Ocana**	**9.70**	**72**	*e*P	**Pn**	**00 47 35.2**		**-0.4**
VSM	**San Miguel**	**9.81**	**326**	*e*P	**Pn**	**00 47 36.8**		**-0.5**
TGUH	**Tegucigalpa,Un**	**9.83**	**333**	*e*Pn	**Pn**	**00 47 36.6**		**-0.7**
TGUH	**Tegucigalpa,Un**	**9.83**	**333**	*e*P	**Pn**	**00 47 35.5**		**-1.9**
PACA	**Pacayal**	**9.87**	**326**	*e*S	**Sn**	**00 49 26.4**		**-2.4**
PAMC	**Pamplona, Colo**	**10.08**	**78**	*e*P	**Pn**	**00 47 42.5**		**+1.4**
CODC	**Agust˜n Codaz**	**10.21**	**63**	*e*P	**Pn**	**00 47 43.6**		**+1.1**
GUVC	**San Jose del G**	**10.35**	**105**	*e*P	**Pn**	**00 47 44.8**		**+0.3**
LFRS	**El Faro**	**10.42**	**323**	*e*P	**Pn**	**00 47 44.3**		**-1.3**
SNET	**Serv Nac Est T**	**10.58**	**323**	*e*S	**Sn**	**00 49 42.1**		**-3.8**
BOQS	**Boqueron**	**10.64**	**322**	*e*P	**Pn**	**00 47 49.2**		**+0.6**
BOQS				*e*S	**Sn**	**00 49 44.7**		**-3.1**
APG	**El Apazote**	**12.35**	**322**	Pn	**Pn**	**00 48 11.2**		**-0.8**
	comp=Z,2.5nm,0.3s,baz=148,slow=14,SNR=50							
APG				LR	LR	00 52 24.0		
	comp=Z,92μm,21.2s,baz=130,slow=35							
SDV	**Santo Domingo**	**12.43**	**73**	Pn	**Pn**	**00 48 13.5**		**+0.4**
	comp=Z,13nm,0.3s,baz=242,slow=10,SNR=150							
SDV				Sn	**Sn**	**00 50 28.5**		**-3.1**
	comp=Z,20nm,0.3s,baz=210,slow=20,SNR=4.8							
SDV				LR	LR	00 52 53.1		
	comp=Z,54μm,20.3s,baz=248,slow=37							
SDV	**Santo Domingo**	**12.43**	**73**	*e*P	**Pn**	**00 48 12.7**		**-0.4**
SDV	**Santo Domingo**	**12.43**	**73**	*e*P	**Pn**	**00 48 13.6**		**+0.4**
ATAH	**Atahualpa**	**13.05**	**161**	Pn	**Pn**	**00 48 22.6**		**+0.8**
	comp=Z,3.0nm,0.3s,baz=346,slow=8.4,SNR=38							
MCJ	**Malvern**	**13.45**	**21**	⇑*i*P	**Pn**	**00 48 24.9**		**-2.0**
PCJ	**Portland Cotta**	**13.48**	**23**	*i* P	**Pn**	**00 48 26.5**		**-0.8**
NEJ	**Negril**	**13.55**	**18**	*i* P	**Pn**	**00 48 30.4**		**+2.2**
MTDJ	**Mount Denham**	**13.78**	**21**	*e*Pn	**Pn**	**00 48 29.6**		**-1.9**
HOJ	**Hope**	**13.88**	**24**	*i* P	**Pn**	**00 48 34.2**		**+1.5**
STH	**Stony Hill**	**13.92**	**24**	*i* P	**Pn**	**00 48 32.1**		**-1.2**
FSCY	**Frank Sound, G**	**14.01**	**6**	*e*Pn	**Pn**	**00 48 36.7**		**+2.3**
BBJ	**Bamboo Saint A**	**14.03**	**21**	*i* P	**Pn**	**00 48 33.4**		**-1.4**
WBCY	**West Bay, Gran**	**14.05**	**5**	*e*Pn	**Pn**	**00 48 36.1**		**+1.1**
CCIG	**Comitan**	**14.36**	**320**	*e*Pn	**Pn**	**00 48 36.2**		**-3.3**
LCCY	**Blossom Villag**	**14.50**	**10**	*e*Pn	**Pn**	**00 48 42.9**		**+1.7**
CBCY	**The Bluff, Cay**	**14.63**	**11**	*e*Pn	**Pn**	**00 48 42.2**		**-0.7**
LGNH	**L0ogne**	**16.38**	**36**	*e*Pn	**Pn**	**00 49 05.9**		**0.0**
	comp=Z,4μm,1.1s							
CMIG	**Matias Romero**	**16.77**	**315**	Pn	**Pn**	**00 49 10.3**		**-0.7**
	comp=Z,1.2nm,0.3s,baz=112,slow=8.9,SNR=67							
CMIG				Sn	**Sn**	**00 52 15.4**		**-1.8**
	comp=Z,1.1nm,0.3s,baz=112,slow=19,SNR=1.6							
CMIG				LR	LR	00 54 39.9		
	comp=Z,63μm,19.6s,baz=122,slow=34							
MYIG	**MØrida**	**17.03**	**337**	*e*Pn	**Pn**	**00 49 13.5**		**-0.7**
	comp=Z,7μm,1.4s							
SDDR	**Presa de Saban**	**17.54**	**38**	*e*Pn	**Pn**	**00 49 20.6**		**+0.1**
	comp=Z,3μm,1.4s							
SDD	**Santo Domingo**	**18.04**	**42**	*e*Pn	**P**	**00 49 28.1**		**+1.1**
	comp=Z,7μm,1.8s							
NNA	**Nana**	**18.11**	**161**	P	**Pn**	**00 49 27.1**		**-0.6**
	comp=Z,3.0nm,0.3s,baz=333,slow=9.8,SNR=34							
NNA				S	**Sn**	**00 52 42.7**		**-7.0**
	baz=180,slow=20,SNR=2.6							
NNA	**Nana**	**18.11**	**161**	*e*Pn	**Pn**	**00 49 25.5**		**-2.1**
	comp=Z,314nm,0.9s							
NNA				S	**Sn**	**00 52 42.7**		**-7.0**
NNA	**Nana**	**18.11**	**161**	*i* P	**Pn**	**00 49 27.2**		**-0.4**
062Z	**Marathon**	**19.38**	**4**	P	**P**	**00 49 42.2**		**+0.4**
	baz=185,SNR=22							
GRTK	**Grand Turk**	**19.60**	**34**	*e*P	**Pn**	**00 49 45.3**		**-0.3**
	comp=Z,4μm,1.6s							
LVIG	**Laguna Verde**	**19.64**	**318**	*e*P	**Pn**	**00 49 46.7**		**+0.6**
	comp=Z,573nm,1.1s							
CRPR	**Cabo Rojo, PR**	**19.74**	**49**	*e*P	**P**	**00 49 46.2**		**+0.4**
	comp=Z,1μm,1.0s							
TLIG	**Tlapa**	**19.79**	**309**	*e*P	**Pn**	**00 49 47.5**		**-0.5**
	comp=Z,718nm,0.7s							
MPR	**Mayaguez**	**19.85**	**48**	*e*P	**P**	**00 49 47.6**		**+0.7**
	comp=Z,691nm,1.0s							
AGP	**Aguadilla**	**19.97**	**48**	*e*P	**Pn**	**00 49 49.9**		**-0.1**
	comp=Z,2μm,0.9s							
OBIP	**Obispado Ponce**	**20.14**	**50**	*e*P	**P**	**00 49 50.6**		**+0.4**
	comp=Z,1μm,0.9s							
OBIP				LR	LR			
	comp=Z,23μm,20.0s							
AOPR	**Arecibo Observ**	**20.22**	**49**	*e*P	**P**	**00 49 51.5**		**+0.4**
	comp=Z,2μm,0.9s							
AOPR				LR	LR			
	comp=Z,20μm,19.0s							
061Z	**Ochoppi**	**20.52**	**4**	P	**P**	**00 49 54.8**		**+0.6**
	baz=185,SNR=45							
SJG	**San Juan**	**20.53**	**50**	P	**P**	**00 49 55.0**		**+0.6**
	comp=Z,744nm,1.0s,baz=248,slow=7.8,SNR=144							
SJG				S	**S**	**00 53 36.2**		**-7.7**
	comp=Z,8.0nm,0.6s,baz=256,slow=19,SNR=2.0							
SJG				LR	LR	00 58 12.3		
	comp=Z,20μm,19.2s,baz=232,slow=38							
SJG	**San Juan**	**20.53**	**50**	*e*P	**P**	**00 49 53.6**		**-0.8**
	comp=Z,3μm,1.4s							
SJG				S	**S**	**00 53 36.2**		**-7.7**
SJG	**San Juan**	**20.53**	**50**	*e*P	**P**	**00 49 53.6**		**-0.8**
SJG				pmax	pmax			
	comp=Z,3μm,1.3s							
HUMP	**Col San Antoni**	**20.78**	**51**	*e*P	**P**	**00 49 56.7**		**-0.4**
	comp=Z,978nm,0.8s							
HUMP				LR	LR			
	comp=Z,29μm,20.0s							
CBYP	**Canovanas**	**20.85**	**50**	*e*P	**P**	**00 49 55.7**		**-2.3**
	comp=Z,2μm,1.2s							
CBYP				LR	LR			
	comp=Z,34μm,21.0s							
059Z	**Ave Maria**	**20.96**	**3**	P	**P**	**00 49 59.5**		**+0.5**
	baz=183,SNR=120							
MTP	**Monte Pirata**	**20.99**	**51**	*e*P	**P**	**00 49 59.2**		**-0.2**
	comp=Z,2μm,1.2s							
MTP				LR	LR			
	comp=Z,41μm,21.0s							
060Z	**West Palm Beac**	**21.09**	**5**	P	**P**	**00 50 01.0**		**+0.7**
	baz=186,SNR=35							

MDVC	Dominica, Viel	23.23	62	eP	P	00 50 22.6	-0.6
DLPL	La Plaine	23.26	63	eP	P	00 50 23.7	+0.1
MVM	Montagne Vaucl	23.28	65	eP	P	00 50 25.1	+1.2
PTGA	Pitinga	23.41	104	P	P	00 50 25.4	+0.2
	comp=Z,89nm,1.1s,baz=286,slow=12,SNR=33						
PTGA				LR	LR	00 59 41.1	
	comp=Z,30µm,18.3s,baz=286,slow=37						
PTGA	Pitinga	23.41	104	eP	P	00 50 23.3	-1.9
	comp=Z,200nm,1.2s						
MGG	Marie-Galante	23.43	62	eP	P	00 50 24.2	-1.1
BPA	Boggy Peak	23.46	58	eP	P	00 50 25.7	+0.1
757A	Oxford	23.53	1	P	P	00 50 26.1	0.0
	baz=181,SNR=46						
758A	Lake Helen	23.58	3	P	P	00 50 26.7	+0.1
	baz=184,SNR=23						
ANWB	Willy Bob	23.81	57	eP	P	00 50 27.9	-1.0
	comp=Z,549nm,0.9s						
ANWB				LR	LR		
	comp=Z,16µm,20.0s						
ANWB	Willy Bob	23.81	57	eP	P	00 50 25.7	-3.2
656A	Willston	23.95	0	P	P	00 50 30.1	0.0
	baz=180,SNR=44						
SAML	Samuel	24.00	126	eP	P	00 50 27.1	-3.7
	comp=Z,519nm,1.0s						
SAML				LR	LR		
	comp=Z,16µm,21.0s						
658A	Bunnell	24.03	3	P	P	00 50 30.8	-0.1
	baz=183,SNR=18						
BBGH	Gun Hill	24.06	69	eP	P	00 50 31.3	0.0
655A	Horseshoe Beac	24.09	359	P	P	00 50 31.2	-0.3
	baz=178,SNR=23						
657A	Interlachen	24.17	2	P	P	00 50 32.4	+0.2
	baz=182,SNR=85						
556A	Lake Butler	24.58	0	P	P	00 50 35.7	-0.2
	baz=180,SNR=80						
557A	Orange Park	24.61	2	P	P	00 50 36.2	+0.1
	baz=182,SNR=38						
554A	Perry	24.68	358	P	P	00 50 36.5	-0.3
	baz=178,SNR=66						
555A	McAlpin	24.70	359	P	P	00 50 36.5	-0.4
	baz=179,SNR=70						
553A	Crawfordville	24.82	356	P	P	00 50 38.3	+0.2
	baz=176,SNR=78						
552A	Lynn Haven	24.83	355	P	P	00 50 38.3	+0.1
	baz=174,SNR=17						
646A	Port Sulphur	25.10	345	P	P	00 50 40.9	+0.3
	baz=163						
645A	Chauvin	25.19	344	P	P	00 50 41.5	+0.1
	baz=161						
457A	Yulee	25.21	2	P	P	00 50 41.7	0.0
	baz=182,SNR=12						
456A	Hilliard	25.30	1	P	P	00 50 42.7	+0.2
	baz=181,SNR=22						
454A	Quitman	25.30	358	P	P	00 50 42.4	0.0
	baz=178,SNR=68						
455A	Stateville	25.32	359	P	P	00 50 42.3	-0.3
	baz=179,SNR=63						
LNIG	Linares	25.32	322	eP	P	00 50 42.8	+0.1
LNIG				epP	P	00 50 43.1	+0.4
LNIG				LR	LR		
	comp=Z,20µm,20.0s						
451A	Vernon	25.36	354	P	P	00 50 43.0	+0.1
	baz=173,SNR=45						
453A	Whigham	25.48	357	P	P	00 50 43.9	-0.1
	baz=176,SNR=48						
452A	Marianna	25.53	355	P	P	00 50 44.5	0.0
	baz=174,SNR=70						
450A	Crestview	25.65	352	P	P	00 50 45.9	+0.3
	baz=171,SNR=42						
546A	Slidell	25.69	346	P	P	00 50 46.3	+0.4
	baz=164						
449A	Pace	25.70	351	P	P	00 50 46.4	+0.4
	baz=170,SNR=27						
545A	Edgard	25.71	344	P	P	00 50 46.5	+0.3
	baz=162						
LPAZ	La Paz	25.80	146	P	P	00 50 48.1	+0.3
	comp=Z,118nm,1.1s,baz=333,slow=8.7,SNR=57						
LPAZ				LR	LR	01 02 12.4	
	comp=Z,44µm,21.4s,baz=312,slow=39						
LPAZ	La Paz	25.80	146	eP	P	00 50 46.5	-1.4
LPAZ				epP	P	00 50 46.9	-1.0
LPAZ	La Paz	25.80	146	⇑iP	P	00 50 47.7	-0.1
LPAZ	La Paz	25.80	146	eP	P	00 50 46.4	-1.4
356A	Blackshear	25.90	1	P	P	00 50 47.5	-0.4
	baz=181,SNR=21						
355A	Pearson	25.91	360	P	P	00 50 47.5	-0.5
	baz=180,SNR=34						
ZAIG	Zacatecas	25.93	314	eP	P	00 50 48.6	0.0
	comp=Z,180nm,1.0s						
ZAIG				LR	LR		
	comp=Z,75µm,19.0s						
353A	Camilla	25.96	357	P	P	00 50 48.1	-0.3
	baz=176,SNR=179						
544A	White Castle	25.96	343	P	P	00 50 48.7	+0.3
	baz=160						
448A	Bay Minette	25.97	350	P	P	00 50 48.6	+0.1
	baz=168,SNR=11						
447A	Lucedale	25.99	348	P	P	00 50 48.7	0.0
	baz=166,SNR=34						
351A	Pinckard	26.00	354	P	P	00 50 48.7	0.0
	baz=173,SNR=258						
357A	Townsend	26.02	2	P	P	00 50 48.5	-0.4
	baz=183,SNR=20						
TIGA	Tifton	26.02	358	P	P	00 50 48.5	-0.4
	baz=178,SNR=74						
TIGA	Tifton	26.02	358	eP	P	00 50 48.6	-0.4
	comp=Z,444nm,0.9s						
BRAL	Brewton	26.07	351	P	P	00 50 49.6	+0.2
	baz=170,SNR=28						
BRAL	Brewton	26.07	351	eP	P	00 50 50.3	+0.9
	comp=Z,4µm,1.7s						
352A	Blakely	26.14	356	P	P	00 50 49.9	-0.2
	baz=175,SNR=116						
446A	Poplarville	26.14	347	P	P	00 50 50.3	+0.2
	baz=165,SNR=11						
543A	St. Martinvill	26.15	342	P	P	00 50 50.6	+0.5
	baz=159						
350A	Dozier	26.22	353	P	P	00 50 51.1	+0.3
	baz=172,SNR=32						
349A	Repton	26.27	351	P	P	00 50 51.6	+0.4
	baz=170,SNR=155						
445A	Amite	26.32	345	P	P	00 50 51.7	0.0
	baz=162,SNR=6.5						
542A	Morse	26.41	340	P	P	00 50 53.0	+0.5
	baz=157						
444A	Pine Grove	26.42	344	P	P	00 50 52.6	0.0
	baz=162						
348A	Jackson	26.45	350	P	P	00 50 53.2	+0.4
	baz=168,SNR=37						
KVTX	Kingsville	26.47	328	eP	P	00 50 53.1	0.0
	comp=Z,670nm,0.9s						
KVTX				LR	LR		
	comp=Z,34µm,20.0s						
255A	Hazlehurst	26.50	0	P	P	00 50 53.1	-0.2
	baz=180,SNR=34						
254A	Abbeville	26.52	359	P	P	00 50 53.1	-0.4
	baz=178,SNR=74						
256A	Glennville	26.56	1	P	P	00 50 53.8	0.0
	baz=182,SNR=27						
347A	Saraland	26.56	349	P	P	00 50 53.9	+0.1
	baz=167,SNR=73						
541A	Lake Charles	26.57	339	P	P	00 50 54.3	+0.3
	baz=156						
257A	Skidaway Islan	26.59	3	P	P	00 50 53.7	-0.4
	baz=184						
252A	Lumpkin	26.64	356	P	P	00 50 54.1	-0.5
	baz=175,SNR=170						
253A	Americus	26.67	357	P	P	00 50 54.2	-0.6
	baz=177,SNR=32						
PB12	IPOC Station P	26.68	153	⇑iP	P	00 50 55.3	+0.2
346A	Big Creek Wild	26.74	347	P	P	00 50 55.3	-0.2
	baz=165						
443A	Delano Plantat	26.76	342	P	P	00 50 55.6	-0.1
	baz=160						
250A	Grady	26.76	353	P	P	00 50 55.5	-0.2
	baz=172,SNR=132						
251A	Midway	26.79	355	P	P	00 50 55.3	-0.6
	baz=174,SNR=301						
345A	Thompson Farm,	26.80	346	P	P	00 50 55.9	-0.1
	baz=164,SNR=8.2						
PB16	IPOC Station P	26.81	151	⇑iP	P	00 50 57.5	+0.6
249A	Camden	26.88	352	P	P	00 50 56.7	0.0
	baz=170,SNR=84						
442A	Mamou	26.91	341	P	P	00 50 57.1	+0.1
	baz=158						
248A	Dixon Mills	27.09	350	P	P	00 50 58.7	+0.1
	baz=169,SNR=69						
344A	Westbrook Farm	27.11	345	P	P	00 50 59.1	+0.3
	baz=162,SNR=106						
154A	Montrose	27.18	359	P	P	00 50 59.1	-0.3
	baz=179,SNR=29						
155A	Kite	27.19	0	P	P	00 50 59.2	-0.3
	baz=180,SNR=52						
343A	Vidalia	27.20	343	P	P	00 50 59.3	-0.3
	baz=160,SNR=17						
441A	DeRidder	27.20	340	P	P	00 50 59.4	-0.2
	baz=157,SNR=10						
247A	Quitman	27.20	349	P	P	00 50 59.8	+0.2
	baz=167,SNR=61						
151A	Opelika	27.21	355	P	P	00 50 59.2	-0.5
	baz=174,SNR=66						
153A	Fort Valley	27.24	358	P	P	00 50 59.5	-0.5
	baz=177,SNR=10						
156A	Sylvania	27.24	2	P	P	00 50 59.6	-0.4
	baz=182,SNR=16						
246A	Jackson Lee, B	27.27	348	P	P	00 51 00.0	-0.2
	baz=166						
152A	Waverly Hall	27.30	356	P	P	00 50 59.8	-0.8
	baz=176,SNR=119						
150A	Eclectic	27.36	354	P	P	00 51 00.6	-0.4
	baz=173,SNR=210						
149A	Jones	27.44	352	P	P	00 51 01.3	-0.5
	baz=171,SNR=78						
245A	Little AP, Sta	27.46	347	P	P	00 51 01.8	-0.2
	baz=164,SNR=23						
MNMC	Minye Minye	27.46	152	eP	P	00 51 00.5	-1.9
	comp=Z,468nm,1.3s						
MNMC				LR	LR		
	comp=Z,12µm,20.0s						
MNMCX	Minye Minye	27.46	152	⇑iP	P	00 51 03.1	+0.7
342A	Flagon Creek P	27.49	342	P	P	00 51 02.0	-0.3
	baz=159						
HKT	Hockley	27.51	335	eP	P	00 51 02.4	+0.1
	comp=Z,522nm,1.4s						
HKT				LR	LR		
	comp=Z,16µm,22.0s						
HKT	Hockley	27.51	335	eP	P	00 51 02.4	+0.1
HKT				pmax	pmax		
	comp=Z,520nm,1.4s						
RGRS	Roger Stewart	27.57	4	eP	P	00 51 03.5	+0.6
	comp=Z,2µm,1.0s						
148A	Greensboro	27.60	351	P	P	00 51 02.7	-0.5
	baz=169,SNR=19						
PSGCX	Pisagua	27.63	154	⇑iP	P	00 51 07.6	+3.8
CSU	Charleston Sou	27.66	5	eP	P	00 51 04.9	+1.2
244A	Avery, Jackson	27.66	345	P	P	00 51 03.1	-0.6
	baz=163,SNR=17						
243A	Waterproof	27.72	344	P	P	00 51 03.7	-0.6
	baz=161,SNR=12						
341A	Kurthwood	27.73	340	P	P	00 51 03.5	-0.8
	baz=157,SNR=15						
341A	Kurthwood	27.73	340	eP	P	00 51 03.5	-0.8
	comp=Z,383nm,1.0s						
341A				LR	LR		
	comp=Z,16µm,21.0s						
147A	Livingston	27.74	350	P	P	00 51 04.1	-0.4
	baz=168,SNR=51						
NHSC	New Hope	27.77	4	P	P	00 51 03.9	-0.7
	baz=185,SNR=18						
NHSC	New Hope	27.77	4	eP	P	00 51 04.8	+0.1
	comp=Z,484nm,1.0s						
NHSC				LR	LR		
	comp=Z,16µm,19.0s						
VBMS	Vicksburg	27.78	346	P	P	00 51 04.2	-0.6
	baz=163						
VBMS	Vicksburg	27.78	346	eP	P	00 51 04.8	-0.1
	comp=Z,429nm,1.1s						
Z55A	Blythe	27.79	1	P	P	00 51 04.5	-0.4
	baz=181,SNR=12						
Z54A	Sparta	27.80	360	P	P	00 51 04.2	-0.8
	baz=180,SNR=60						
Z52A	Williamson	27.80	357	P	P	00 51 04.4	-0.6
	baz=176,SNR=116						
146A	Union	27.86	348	P	P	00 51 05.3	-0.2
	baz=166,SNR=38						
Z53A	Monticello	27.86	358	P	P	00 51 04.8	-0.7
	baz=178,SNR=62						
833A	Chaparral WMA,	27.89	327	P	P	00 51 05.5	-0.3
	baz=142,SNR=271						
LRAL	Lakeview Retre	27.90	352	P	P	00 51 05.5	-0.4
	baz=171,SNR=195						
LRAL	Lakeview Retre	27.90	352	eP	P	00 51 05.4	-0.5
	comp=Z,223nm,0.8s						
Z51A	Franklin	27.98	355	P	P	00 51 06.2	-0.4
	baz=175						
GOGA	Godfrey	27.99	359	P	P	00 51 06.0	-0.6
	baz=178,SNR=54						
GOGA	Godfrey	27.99	359	eP	P	00 51 06.0	-0.6
	comp=Z,208nm,0.9s						
GOGA	Godfrey	27.99	359	eP	P	00 51 06.0	-0.6
GOGA				pmax	pmax		
	comp=Z,210nm,0.9s						
Z50A	Ashland	27.99	354	P	P	00 51 06.1	-0.6
	baz=173,SNR=203						
Z49A	Columbiana	28.00	353	P	P	00 51 06.3	-0.4
	baz=172,SNR=188						
145A	Houston Renfro	28.01	347	P	P	00 51 06.4	-0.5
	baz=164,SNR=9.1						
242A	Grayson	28.08	343	P	P	00 51 06.9	-0.6
	baz=160						
144A	Alexander Plac	28.15	346	P	P	00 51 07.4	-0.8
	baz=163						
Z47A	Carrollton	28.22	350	P	P	00 51 08.1	-0.7
	baz=168,SNR=198						
241A	Mo Tay, Goldon	28.28	341	P	P	00 51 08.5	-0.8
	baz=158						
Z48A	Northport	28.31	351	P	P	00 51 08.8	-0.8
	baz=170,SNR=201						
Z46A	Louisville	28.37	349	P	P	00 51 09.9	-0.2
	baz=167,SNR=27						
Y54A	Tignall	28.43	360	P	P	00 51 09.9	-0.7
	baz=180,SNR=53						
Y53A	Monroe	28.43	358	P	P	00 51 09.9	-0.8
	baz=178,SNR=58						
Y52A	Lilburn	28.46	358	P	P	00 51 10.0	-0.9
	baz=177,SNR=75						
143A	Socs Landing,	28.47	344	P	P	00 51 09.6	-1.4
	baz=162						
142A	Monroe	28.48	343	P	P	00 51 09.9	-1.2
	baz=160						
PB08	IPOC Station P	28.54	153	⇑iP	P	00 51 16.6	+4.4
Y51A	Rockmart	28.55	356	P	P	00 51 10.9	-0.8
	baz=175,SNR=157						
240A	Hunter Patters	28.57	340	P	P	00 51 11.0	-0.9
	baz=156,SNR=12						
240A	Hunter Patters	28.57	340	eP	P	00 51 12.3	+0.3
	comp=Z,681nm,1.6s						
240A				LR	LR		
	comp=Z,15µm,22.0s						
Y50A	Piedmont	28.60	355	P	P	00 51 11.5	-0.7
	baz=174,SNR=115						
Y49A	Blount Mountai	28.64	353	P	P	00 51 11.4	-1.0
	baz=172,SNR=70						
NATX	Nacogdoches	28.64	338	P	P	00 51 11.9	-0.7
	baz=154,SNR=20						
NATX	Nacogdoches	28.64	338	eP	P	00 51 12.3	-0.2
	comp=Z,1µm,1.7s						
NATX				LR	LR		
	comp=Z,14µm,21.0s						
Z45A	Winona	28.70	348	P	P	00 51 12.2	-0.8
	baz=165,SNR=14						
Z44A	Pea Ridge, Bel	28.77	346	P	P	00 51 12.6	-1.1
	baz=164,SNR=11						
Y48A	Jasper	28.79	352	P	P	00 51 12.8	-1.0
	baz=171,SNR=101						
HODGE	Hodges	28.80	1	eP	P	00 51 13.8	-0.1
	comp=Z,58nm,1.0s						
HODGE				LR	LR		
	comp=Z,27µm,20.0s						
141A	Papa Simpson,	28.82	342	P	P	00 51 13.4	-0.6
	baz=158,SNR=21						
JSC	Jenkinsville	28.87	2	eP	P	00 51 14.3	-0.2
	comp=Z,102nm,0.8s						
JSC	Jenkinsville	28.87	2	eP	P	00 51 14.4	-0.2
JSC				pmax	pmax		
	comp=Z,100nm,0.8s						
Y47A	UCPARC, Winfie	28.88	351	P	P	00 51 13.9	-0.7
	baz=169,SNR=187						
Z43A	Armstrong Fami	28.91	345	P	P	00 51 13.5	-1.3
	baz=162						
435B	Jarrell	29.00	333	P	P	00 51 15.4	-0.3
	baz=148,SNR=34						
435B	Jarrell	29.00	333	eP	P	00 51 15.5	-0.3
	comp=Z,371nm,1.1s						
435B				LR	LR		
	comp=Z,6µm,22.0s						
Y46A	Houston	29.03	349	P	P	00 51 15.3	-0.7
	baz=167,SNR=85						
140A	Cam and Jess,	29.06	341	P	P	00 51 15.4	-0.9
	baz=157,SNR=19						
140A	Cam and Jess,	29.06	341	eP	P	00 51 16.1	-0.1
	comp=Z,210nm,0.8s						
140A				LR	LR		
	comp=Z,11µm,21.0s						
X53A	Estanollee	29.07	359	P	P	00 51 15.5	-0.9
	baz=179,SNR=30						
Y45A	Yeager Farm, C	29.14	348	P	P	00 51 16.5	-0.5
	baz=166,SNR=60						
X50B	Fort Payne	29.16	355	P	P	00 51 16.1	-1.1
	baz=174,SNR=57						
Z42A	Norrel Spur, H	29.16	344	P	P	00 51 15.6	-1.5
	baz=161						
PB01	IPOC Station P	29.18	154	eP	P	00 51 16.7	-0.8
PB01				epP	P	00 51 17.0	-0.5
PB01				LR	LR		
	comp=Z,10µm,21.0s						
PB01	IPOC Station P	29.18	154	⇑iP	P	00 51 21.3	+3.8
X52A	Dahlonega	29.19	358	P	P	00 51 16.4	-1.0
	baz=177,SNR=80						
X51A	Calhoun	29.20	356	P	P	00 51 16.6	-0.8
	baz=176,SNR=84						
X49A	Woodville	29.27	354	P	P	00 51 17.1	-1.0
	baz=172,SNR=134						
X48A	Hartselle	29.30	353	P	P	00 51 17.2	-1.2
	baz=171						
Y44A	Strider, Charl	29.38	347	P	P	00 51 17.7	-1.4
	baz=164						
PAULI	Pauline	29.39	1	PFAKE		00 51 30.0	+11
PAULI				LR	LR		
	comp=Z,29µm,22.0s						
X47A	Russelville	29.48	351	P	P	00 51 18.8	-1.2
	baz=169,SNR=139						
Y43A	Makayla and Ka	29.50	346	P	P	00 51 19.0	-1.1
	baz=163,SNR=6.3						
BG3	Lake Jocassee	29.55	360	eP	P	00 51 20.0	-0.6
BG3				epP	P	00 51 20.5	-0.1
BG3				LR	LR		
	comp=Z,18µm,19.0s						
Z40A	Long Farm, Mag	29.58	342	P	P	00 51 19.8	-0.9
	baz=158,SNR=8.2						
PB07	IPOC Station P	29.62	155	⇑iP	P	00 51 25.8	+4.3
X46A	Booneville	29.64	350	P	P	00 51 20.1	-1.3
	baz=168,SNR=70						
Y42A	Garnett, Star	29.65	344	P	P	00 51 20.3	-1.1
	baz=161,SNR=11						
X45A	UM Field Stati	29.66	349	P	P	00 51 20.1	-1.4
	baz=166,SNR=48						
W52A	Murphy	29.68	358	P	P	00 51 21.0	-0.7
	baz=177,SNR=46						
CCAR	Cane Creek	29.72	345	eP	P	00 51 21.8	-0.3
	comp=Z,778nm,1.4s						
KMSC	Kings Mountain	29.73	2	P	P	00 51 21.8	-0.3
	baz=183,SNR=79						
KMSC	Kings Mountain	29.73	2	eP	P	00 51 21.8	-0.3
KMSC				epP	P	00 51 22.0	-0.1
KMSC				LR	LR		
	comp=Z,18µm,18.0s						
W53A	Cullowhee	29.73	359	P	P	00 51 21.9	-0.5
	baz=179,SNR=93						
OXF	Oxford	29.74	349	P	P	00 51 20.7	-1.6
	baz=166,SNR=58						
OXF	Oxford	29.74	349	eP	P	00 51 21.0	-1.3
	comp=Z,628nm,1.0s						
OXF	Oxford	29.74	349	eP	P	00 51 21.0	-1.3
OXF				pmax	pmax		
	comp=Z,630nm,1.0s						
JCT	Junction City	29.82	329	P	P	00 51 22.8	-0.3
	baz=144,SNR=45						
JCT	Junction City	29.82	329	eP	P	00 51 22.8	-0.3
	comp=Z,228nm,1.0s						
JCT				LR	LR		
	comp=Z,14µm,20.0s						
JCT	Junction City	29.82	329	eP	P	00 51 22.8	-0.3
JCT				pmax	pmax		
	comp=Z,230nm,1.0s						
W50A	Signal Mountai	29.86	356	P	P	00 51 22.5	-0.9
	baz=175,SNR=121						
W49A	Belvidere	29.87	354	P	P	00 51 22.2	-1.2
	baz=173,SNR=62						
X44A	Crenshaw	29.88	347	P	P	00 51 21.5	-2.1
	baz=165						
Y41A	Eaglette Beard	29.92	343	P	P	00 51 22.7	-1.1
	baz=160,SNR=6.7						
SWET	Sewanee	29.93	355	eP	P	00 51 22.8	-1.2
	comp=Z,231nm,0.9s						
PB09	IPOC Station P	29.95	154	⇑iP	P	00 51 29.1	+4.7
PB09				⇑iP	P	00 51 29.1	+4.7
W48A	Pulaski	29.96	353	P	P	00 51 23.4	-0.8
	baz=171,SNR=107						
PLAL	Pickwick Lake	29.97	351	eP	P	00 51 22.8	-1.5
	comp=Z,174nm,1.0s						
WHTX	Lake Whitney,	29.97	334	P	P	00 51 23.4	-0.8
	baz=149,SNR=20						
WHTX	Lake Whitney,	29.97	334	eP	P	00 51 23.1	-1.2
WHTX				esP	P	00 51 23.5	-0.8
WHTX				LR	LR		
	comp=Z,13µm,21.0s						
SIV	San Ignacio	30.05	135	P	P	00 51 24.4	-0.8
	comp=Z,20nm,0.8s,baz=315,slow=8.2,SNR=80						
SIV				LR	LR	01 03 29.7	
	comp=Z,44µm,21.2s,baz=326,slow=36						
PB04	IPOC Station P	30.05	156	eP	P	00 51 25.6	+0.3
	comp=Z,246nm,1.4s						
PB04	IPOC Station P	30.05	156	⇑iP	P	00 51 29.4	+4.0
CPCT	Cooper Cave	30.06	357	eP	P	00 51 24.7	-0.4
CPCT				epP	P	00 51 25.1	0.0
CPCT				LR	LR		
	comp=Z,10µm,20.0s						
X43A	Marvell	30.07	346	P	P	00 51 23.8	-1.3
	baz=164,SNR=6.3						
X43A	Marvell	30.07	346	eP	P	00 51 24.4	-0.7
X43A				esP	P	00 51 24.6	-0.6
CNNC	Cliffs of the	30.12	8	P	P	00 51 24.9	-0.6
	baz=189,SNR=6.9						
CNNC	Cliffs of the	30.12	8	eP	P	00 51 25.6	0.0
	comp=Z,147nm,1.0s						
CNNC				LR	LR		
	comp=Z,16µm,21.0s						
W47A	Westpoint	30.16	352	P	P	00 51 25.0	-1.0
	baz=170,SNR=140						
W46A	Michie	30.16	351	P	P	00 51 24.4	-1.6
	baz=169,SNR=5.7						
V53A	Saluda	30.23	360	P	P	00 51 26.2	-0.5
	baz=180,SNR=47						
X42A	Stuttgart	30.28	345	P	P	00 51 25.7	-1.3
	baz=162,SNR=6.5						
V50A	Pikevile	30.32	356	P	P	00 51 26.7	-0.7
	baz=175,SNR=36						
W45A	Hickory Valley	30.33	349	P	P	00 51 26.0	-1.4
	baz=167,SNR=58						
V51A	Loudon	30.40	357	P	P	00 51 27.6	-0.5
	baz=177,SNR=133						
V52A	Sevierville	30.41	358	P	P	00 51 27.4	-0.8
	baz=178,SNR=60						
W44A	Shelby Farms P	30.43	348	P	P	00 51 26.5	-1.8
	baz=166						
MET	Memphis--Engin	30.44	348	eP	P	00 51 29.5	+1.1
	comp=Z,930nm,1.5s						
X41A	Kaden, Bauxite	30.46	344	P	P	00 51 27.4	-1.3
	baz=160,SNR=30						
V49A	McMinnville	30.47	355	P	P	00 51 27.7	-1.1
	baz=174,SNR=136						
V48A	Smith Brothers	30.54	353	P	P	00 51 28.4	-0.9
	baz=172,SNR=226						
X40A	Basin Creek Fa	30.55	343	P	P	00 51 27.9	-1.5
	baz=160,SNR=20						
X40A	Basin Creek Fa	30.55	343	eP	P	00 51 28.3	-1.1
	comp=Z,159nm,1.4s						
W43A	Forest City	30.57	347	P	P	00 51 28.3	-1.3
	baz=164,SNR=5.5						
V47A	Nunnelly	30.72	352	P	P	00 51 29.5	-1.4
	baz=170,SNR=179						
HPIG		30.75	317	eP	P	00 51 31.9	+0.4
HPIG				LR	LR		
	comp=Z,68µm,19.0s						
NCAT	North Carolina	30.75	5	eP	P	00 51 30.5	-0.7
	comp=Z,202nm,1.3s						
NCAT				LR	LR		
	comp=Z,17µm,19.0s						
V46A	Holladay	30.78	351	P	P	00 51 29.4	-1.9
	baz=169,SNR=226						
MIAR	Mount Ida	30.82	342	P	P	00 51 30.4	-1.4

baz=158,SNR=67
MIAR Mount Ida 30.82 342 *eP* **P 00 51 30.4 -1.4**
comp=Z,85nm,0.9s
MIAR LR LR
comp=Z,8µm,21.0s
MIAR Mount Ida 30.82 342 *eP* **P**
MIAR pmax pmax
comp=Z,85nm,1.0s
V45A Humboldt 30.86 350 P **P 00 51 30.6 -1.5**
baz=168,SNR=26
W42A Bald Knob 30.94 346 P **P 00 51 31.2 -1.6**
baz=163
X39A Fountain Ranch 30.96 341 P **P 00 51 31.8 -1.2**
baz=157,SNR=52
PB10 IPOC Station P 30.96 158 *eP* **P 00 51 32.9 -0.3**
comp=Z,157nm,1.1s
PB10 IPOC Station P 30.96 158 *eP* **P 00 51 31.3 -1.9**
HBAR Harrisburg 31.01 347 *eP* **P 00 51 32.9 -0.5**
comp=Z,864nm,1.3s
W41B Gary Mavity, V 31.03 345 P **P 00 51 32.3 -1.3**
baz=161,SNR=105
W41B Gary Mavity, V 31.03 345 *eP* **P 00 51 32.3 -1.3**
comp=Z,209nm,0.9s
WVT Waverly 31.06 352 P **P 00 51 32.2 -1.8**
baz=170
WVT Waverly 31.06 352 *eP* **P 00 51 32.1 -1.8**
comp=Z,236nm,0.8s
WVT Waverly 31.06 352 *eP* **P 00 51 32.1 -1.8**
WVT pmax pmax
comp=Z,240nm,0.8s
HALT Halls 31.09 349 *eP* **P 00 51 33.4 -0.8**
comp=Z,867nm,1.1s
TXAR Lajitas Array 31.10 323 P **P 00 51 34.0 -0.5**
comp=Z,9.9nm,0.9s,baz=148,slow=7.3,SNR=21
TXAR Lajitas Array 31.10 323 P **P 00 51 34.0 -0.5**
TX31 Lajitas Ar. Si 31.10 323 *eP* **P 00 51 34.6 +0.1**
TZTN Tazewell 31.11 359 P **P 00 51 33.9 -0.5**
baz=178,SNR=57
TZTN Tazewell 31.11 359 *eP* **P 00 51 33.8 -0.5**
comp=Z,157nm,1.1s
TZTN LR LR
comp=Z,17µm,21.0s
V44A Blytheville 31.11 349 P **P 00 51 33.1 -1.2**
baz=166,SNR=8.9
WHAR Wooly Hollow 31.15 345 *eP* **P 00 51 33.4 -1.3**
comp=Z,191nm,0.9s
U49A Red Boiling Sp 31.20 355 P **P 00 51 34.2 -1.0**
baz=174,SNR=122
V43A Jonesboro 31.21 348 P **P 00 51 33.8 -1.4**
baz=165,SNR=12
GNAR Gosnell 31.27 348 *eP* **P 00 51 35.5 -0.2**
comp=Z,713nm,1.1s
U48A Cassie Pea, Po 31.27 354 P **P 00 51 34.8 -1.0**
baz=172,SNR=84
W40A Ferguson Farm, 31.27 343 P **P 00 51 34.8 -1.0**
baz=160,SNR=26
W40A Ferguson Farm, 31.27 343 *eP* **P 00 51 34.8 -1.0**
comp=Z,124nm,0.9s
W40A LR LR
comp=Z,8µm,21.0s
U47A Clarksville 31.29 353 P **P 00 51 34.3 -1.6**
baz=171,SNR=80
U46A Springville 31.33 351 P **P 00 51 34.8 -1.5**
baz=169,SNR=99
U45A Rockin P Farm, 31.41 350 P **P 00 51 35.6 -1.4**
baz=168,SNR=63
V42A Cord 31.42 346 P **P 00 51 35.2 -1.9**
baz=163,SNR=19
UTMT University of 31.43 350 *eP* **P 00 51 36.3 -0.8**
comp=Z,1µm,1.0s
GLAT Glass 31.43 350 *eP* **P 00 51 36.8 -0.4**
comp=Z,760nm,1.0s
W39A Magazine 31.49 342 P **P 00 51 36.7 -0.9**
baz=158,SNR=88
W39A Magazine 31.49 342 *eP* **P 00 51 36.9 -0.8**
comp=Z,180nm,0.9s
W39A LR LR
comp=Z,8µm,21.0s
ABTX Abilene, Hawle 31.49 332 P **P 00 51 37.1 -0.7**
baz=146,SNR=16
ABTX Abilene, Hawle 31.49 332 *eP* **P 00 51 37.1 -0.7**
comp=Z,368nm,1.4s
ABTX LR LR
comp=Z,6µm,20.0s
U44B Burton Farm, H 31.51 350 P **P 00 51 36.5 -1.3**
baz=167,SNR=5.0
V41A Mountainview 31.59 345 P **P 00 51 36.9 -1.7**
baz=162,SNR=131
T50A Nancy 31.64 357 P **P 00 51 37.8 -1.3**
baz=176,SNR=126
PVMO Portageville 31.64 349 *eP* **P 00 51 38.8 -0.2**
comp=Z,1µm,1.1s
T52A Hallie 31.66 359 P **P 00 51 38.5 -0.8**
baz=179,SNR=80
BBSR BB Station 31.73 30 *eP* **P 00 51 40.2 +0.4**
comp=Z,123nm,1.0s
BBSR LR LR
comp=Z,25µm,22.0s
U44A Portageville 31.73 349 P **P 00 51 38.6 -1.1**
baz=167,SNR=33
U43A Rector 31.74 348 P **P 00 51 38.4 -1.5**
baz=165
T49A Edmonton 31.77 356 P **P 00 51 39.0 -1.2**
baz=174,SNR=138
V40A Witts Springs 31.78 344 P **P 00 51 38.8 -1.6**
baz=160,SNR=66
V40A Witts Springs 31.78 344 *eP* **P 00 51 38.7 -1.6**
comp=Z,250nm,1.4s
T47A Sharon Grove 31.81 353 P **P 00 51 39.1 -1.4**
baz=172,SNR=125
BLA Blacksburg 31.83 3 P **P 00 51 40.5 -0.2**
baz=184,SNR=66
BLA Blacksburg 31.83 3 *eP* **P 00 51 40.5 -0.2**
comp=Z,194nm,0.9s
BLA LR LR
comp=Z,17µm,22.0s
BLA Blacksburg 31.83 3 *eP* **P 00 51 40.5 -0.2**
BLA pmax pmax
comp=Z,190nm,0.9s
T48A Bowling Green 31.85 354 P **P 00 51 39.6 -1.2**
baz=173,SNR=160
PARMO Parma 31.90 349 *eP* **P 00 51 40.6 -0.6**
comp=Z,891nm,0.9s
U42A Revenden 31.90 347 P **P 00 51 39.8 -1.5**
baz=164,SNR=144
T46A Princeton 31.96 352 P **P 00 51 40.5 -1.3**
baz=170,SNR=345
SLBS Sierra La Lagu 32.03 308 *eP* **P 00 51 41.2 -1.5**
comp=Z,169nm,1.4s
SLBS LR LR
comp=Z,21µm,20.0s
PB14 IPOC Station P 32.03 159 ‖ *eP* **P 00 51 47.5 +4.6**
PB14 IPOC Station P 32.03 159 ‖ *iP* **P 00 51 43.8 +0.8**
YJA Yavi 32.03 149 *eP* **P 00 51 44.2 +1.0**
V39A Pettigrew 32.04 343 P **P 00 51 41.3 -1.4**
baz=159,SNR=54
T45A Paducah 32.05 351 P **P 00 51 41.0 -1.6**
baz=169,SNR=30
U41A Viola 32.06 346 P **P 00 51 41.0 -1.7**
baz=162,SNR=12
PBMO Poplar Bluff 32.14 348 *eP* **P 00 51 41.8 -1.6**
comp=Z,214nm,1.0s
S51A Beattyville 32.21 359 P **P 00 51 43.1 -0.8**
baz=178,SNR=180
S52A Salyersville 32.24 359 P **P 00 51 43.4 -0.9**
baz=179
T44A Benton 32.28 350 P **P 00 51 43.0 -1.6**
baz=167,SNR=38
U40A Yellville 32.31 344 P **P 00 51 43.4 -1.5**
baz=161,SNR=100
S48A Wiedeman Farm, 32.36 355 P **P 00 51 43.8 -1.5**
baz=174,SNR=108
T43A Greenville 32.41 349 P **P 00 51 44.1 -1.6**
baz=166,SNR=295
URVA University of 32.46 8 *eP* **P 00 51 46.2 0.0**
U39A Green Forest 32.50 344 P **P 00 51 45.0 -1.7**
baz=160,SNR=60
T42A Van Buren 32.52 347 P **P 00 51 45.1 -1.6**
baz=164
LPIG La Paz 32.53 308 P **P 00 51 47.7 +0.7**
comp=Z,24nm,0.4s,baz=85,slow=5.9,SNR=4.5
JSRW J. Sargeant Re 32.54 7 *eP* **P 00 51 46.6 -0.2**
HHAR Hobbs 32.54 343 *eP* **P 00 51 45.5 -1.5**
comp=Z,74nm,0.9s
HHAR LR LR
comp=Z,9µm,20.0s
S46A Don Dixon Farm 32.57 352 P **P 00 51 45.5 -1.7**
baz=171,SNR=84

S45A Carrier Mills 32.69 351 P **P 00 51 46.5 -1.7**
baz=169,SNR=49
T41A Mountain View 32.69 346 P **P 00 51 46.7 -1.6**
baz=163,SNR=210
IP05 Hopewell Churc 32.69 7 *eP* **P 00 51 48.2 0.0**
comp=Z,114nm,1.0s
IP05 LR LR
comp=Z,21µm,19.0s
IP07 Quail 32.74 7 *eP* **P 00 51 48.8 +0.1**
comp=Z,95nm,0.8s
IP07 LR LR
comp=Z,18µm,22.0s
IP06 Yanceyville 32.76 7 *eP* **P 00 51 49.8 +0.9**
comp=Z,42nm,0.8s
IP06 LR LR
comp=Z,18µm,22.0s
TUL1 Leonard 32.79 340 P **P 00 51 47.4 -1.6**
baz=156,SNR=32
TUL1 Leonard 32.79 340 *eP* **P 00 51 47.5 -1.6**
comp=Z,96nm,1.1s
TUL1 LR LR
comp=Z,9µm,22.0s
IP01 Cuckoo 32.80 7 *eP* **P 00 51 48.9 -0.2**
comp=Z,197nm,1.2s
IP01 LR LR
comp=Z,20µm,22.0s
S44A Carbondale 32.81 350 P **P 00 51 47.8 -1.5**
baz=168,SNR=162
GO02 Mina Guanaco 32.82 158 *eP* **P 00 51 48.9 -1.0**
comp=Z,333nm,1.1s
GO02 Mina Guanaco 32.82 158 ‖ *iP* **P 00 51 46.9 -2.9**
S43A Fulton Ridge, 32.84 349 P **P 00 51 47.7 -1.8**
baz=166,SNR=160
USIN University of 32.84 353 *eP* **P 00 51 48.1 -1.5**
comp=Z,452nm,0.8s
IP03 Louisa 32.84 7 *eP* **P 00 51 49.7 +0.2**
comp=Z,128nm,0.8s
IP03 LR LR
comp=Z,17µm,19.0s
SPRD Spring Road, M 32.86 7 *eP* **P 00 51 49.6 -0.1**
comp=Z,240nm,1.1s
WMOK Wichita Mounta 32.89 335 P **P 00 51 48.7 -1.4**
baz=149,SNR=62
WMOK Wichita Mounta 32.89 335 *eP* **P 00 51 48.8 -1.2**
comp=Z,193nm,1.3s
WMOK LR LR
comp=Z,11µm,20.0s
WMOK Wichita Mounta 32.89 335 *eP* **P 00 51 48.8 -1.2**
WMOK pmax pmax
comp=Z,190nm,1.2s
IP04 Greensprings 32.91 7 *eP* **P 00 51 50.0 -0.1**
comp=Z,177nm,1.0s
IP04 LR LR
comp=Z,16µm,20.0s
CVRD Centerville Ro 32.92 7 *eP* **P 00 51 50.1 -0.1**
comp=Z,243nm,1.0s
HJA Humahuaca 32.95 150 *eP* **P 00 51 52.9 +1.8**
WCI Wyandotte Cave 32.95 355 P **P 00 51 49.1 -1.5**
baz=173
WCI Wyandotte Cave 32.95 355 *eP* **P 00 51 49.0 -1.5**
comp=Z,282nm,0.8s
WCI Wyandotte Cave 32.95 355 *eP* **P 00 51 49.0 -1.5**
WCI pmax pmax
comp=Z,280nm,0.8s
T40A Mansfield 32.97 345 P **P 00 51 49.4 -1.4**
baz=162
R47A Wooly Knot Far 33.04 354 P **P 00 51 49.7 -1.6**
baz=173,SNR=94
R46A Gibon Southern 33.07 353 P **P 00 51 50.0 -1.5**
baz=171,SNR=120
T39A Clever 33.08 344 P **P 00 51 50.0 -1.7**
baz=160,SNR=31
R48A Northridge Ran 33.09 355 P **P 00 51 50.2 -1.4**
baz=174,SNR=39
CBN Conin Frederi 33.11 8 P **P 00 51 51.0 -0.8**
baz=190
CBN Corbin Frederi 33.11 8 *eP* **P 00 51 52.6 +0.8**
comp=Z,235nm,1.2s
S42A Caledonia 33.17 348 P **P 00 51 50.2 -2.2**
baz=165,SNR=122
S41A Jillco Farms, 33.20 347 P **P 00 51 50.9 -1.8**
baz=163,SNR=67
R45A Skylar, Fairfi 33.25 352 P **P 00 51 51.7 -1.3**
baz=170,SNR=156
FVM French Village 33.30 349 *eP* **P 00 51 51.8 -1.8**
comp=Z,349nm,0.9s
FVM French Village 33.30 349 *eP* **P 00 51 51.8 -1.8**
FVM pmax pmax
comp=Z,350nm,1.0s
R44A Waltonville 33.32 351 P **P 00 51 52.5 -1.2**
baz=168,SNR=87
T38A Diamond 33.35 343 P **P 00 51 52.4 -1.6**
baz=159,SNR=44
CLNB Carlsbad 33.38 326 *eP* **P 00 51 53.6 -0.9**
S40A Lebanon 33.39 346 P **P 00 51 53.0 -1.4**
baz=162,SNR=137
R43A Red Bud 33.49 350 P **P 00 51 54.0 -1.3**
baz=167,SNR=288
CCM Cathedral Cave 33.54 348 P **P 00 51 53.9 -1.8**
baz=164
CCM Cathedral Cave 33.54 348 *eP* **P 00 51 53.8 -1.8**
comp=Z,618nm,0.9s
CCM Cathedral Cave 33.54 348 *eP* **P 00 51 53.8 -1.8**
CCM pmax pmax
comp=Z,620nm,1.0s
GDL2 Guadalupe Moun 33.61 325 *eP* **P 00 51 56.8 +0.3**
OLIL Olney 33.66 352 *eP* **P 00 51 55.3 -1.3**
comp=Z,698nm,0.8s
R42A Luebbering 33.66 348 P **P 00 51 55.1 -1.6**
baz=165,SNR=213
Q47A Bedord North L 33.66 355 P **P 00 51 55.2 -1.5**
baz=173,SNR=148
S39A Bolivar 33.69 345 P **P 00 51 55.3 -1.7**
baz=161,SNR=277
S38A Stockton 33.79 344 P **P 00 51 55.8 -2.0**
baz=160,SNR=9.1
R41A Rosebud 33.80 348 P **P 00 51 56.2 -1.7**
baz=164,SNR=282
Q45A Warren Harvey, 33.82 352 P **P 00 51 56.6 -1.4**
baz=170,SNR=280
MNTX Cornudas Mount 33.83 324 P **P 00 51 58.2 -0.1**
baz=136,SNR=143
MNTX Cornudas Mount 33.83 324 *eP* **P 00 51 58.1 -0.1**
comp=Z,152nm,1.1s
MNTX LR LR
comp=Z,17µm,20.0s
Q46A CEJHS Indians, 33.85 353 P **P 00 51 56.6 -1.7**
baz=172,SNR=11
SLM Saint Louis 33.90 349 *eP* **P 00 51 57.4 -1.4**
comp=Z,791nm,0.9s
SLM Saint Louis 33.90 349 *eP* **P 00 51 57.4 -1.4**
SLM pmax pmax
comp=Z,790nm,0.9s
BLO Bloomington 33.91 355 *eP* **P 00 51 57.3 -1.5**
comp=Z,366nm,0.8s
BLO LR LR
comp=Z,9µm,21.0s
BLO Bloomington 33.91 355 *eP* **P 00 51 57.3 -1.5**
BLO pmax pmax
comp=Z,370nm,0.8s
Q44A Meyer Farm, Va 33.95 351 P **P 00 51 57.5 -1.7**
baz=169,SNR=188
CPRX Cap Rock 33.96 327 *eP* **P 00 51 59.5 0.0**
R40A Maddies Statio 33.99 346 P **P 00 51 57.7 -1.9**
baz=163,SNR=138
Q43A New Douglas 34.10 350 P **P 00 51 58.9 -1.6**
baz=167,SNR=131
MSTX Muleshoe 34.11 329 P **P 00 51 59.9 -0.9**
baz=142,SNR=40
MSTX Muleshoe 34.11 329 *eP* **P 00 52 00.1 -0.8**
comp=Z,118nm,1.0s
MSTX LR LR
comp=Z,19µm,22.0s
SLA San Lorenzo 34.18 152 *eP* P 00 52 06.4 +4.8
P47A Martinsville 34.20 355 P **P 00 51 59.5 -1.8**
baz=174,SNR=92
R39A Chumby, Stover 34.20 345 P **P 00 51 59.5 -1.9**
baz=161,SNR=148
Q42A Golden Eagle 34.22 349 P **P 00 52 00.0 -1.5**
baz=166,SNR=128
MCWV Mont Chateau 34.30 4 P **P 00 52 01.6 -0.6**
baz=185,SNR=30
MCWV Mont Chateau 34.30 4 *eP* **P 00 52 02.2 0.0**
comp=Z,180nm,1.1s
MCWV LR LR
comp=Z,17µm,18.0s
AMTX Amarillo 34.31 332 P **P 00 52 01.6 -0.9**
baz=145

AMTX Amarillo 34.31 332 *eP* **P 00 52 01.8 -0.7**
comp=Z,146nm,0.9s
AMTX LR LR
comp=Z,22µm,22.0s
R38A Fenwick Farm, 34.31 344 P **P 00 52 00.4 -1.9**
baz=160,SNR=81
SDMD Soldier's Deli 34.36 8 *eP* **P 00 52 02.9 +0.2**
comp=Z,113nm,1.2s
SDMD LR LR
comp=Z,9µm,22.0s
P45A Graceland, Par 34.39 353 P **P 00 52 01.1 -1.9**
baz=171,SNR=127
Q41A Truxton 34.40 348 P **P 00 52 01.5 -1.6**
baz=165,SNR=290
P46A Rosedale 34.42 354 P **P 00 52 01.4 -1.9**
baz=172,SNR=73
P44A Sand Creek, Wi 34.45 352 P **P 00 52 01.8 -1.7**
baz=169,SNR=120
EPT El Paso 34.55 323 *eP* **P 00 52 04.5 -0.2**
comp=Z,46nm,0.9s
EPT LR LR
comp=Z,23µm,19.0s
Q40A Laux Farm, Aux 34.62 347 P **P 00 52 03.2 -1.8**
baz=163,SNR=278
P43A Skaggs, Pawnee 34.76 351 P **P 00 52 04.6 -1.5**
baz=168,SNR=279
ACSO Alum Creek Sta 34.78 360 P **P 00 52 05.1 -1.3**
baz=179,SNR=114
ACSO Alum Creek Sta 34.78 360 *eP* **P 00 52 05.2 -1.3**
comp=Z,348nm,1.0s
ACSO LR LR
comp=Z,11µm,18.0s
GO03 Copiap 34.82 161 *eP* **P 00 52 06.6 -0.4**
comp=Z,268nm,1.5s
GO03 LR LR
comp=Z,4µm,20.0s
P42A Winchester 34.84 350 P **P 00 52 05.1 -1.8**
baz=166,SNR=119
Q39A Willow Grove F 34.88 346 P **P 00 52 05.2 -2.1**
baz=162,SNR=83
O47A Sheridan 34.93 355 P **P 00 52 05.5 -2.2**
baz=174,SNR=80
Q38A Cooks Store, C 34.96 345 P **P 00 52 06.2 -1.7**
baz=161,SNR=93
O56A Blue Knob Stat 35.01 5 P **P 00 52 08.2 -0.3**
baz=187,SNR=77
O56A Blue Knob Stat 35.01 5 *eP* **P 00 52 08.4 0.0**
comp=Z,222nm,0.9s
O56A LR LR
comp=Z,11µm,18.0s
MVL Millersville 35.01 8 *eP* **P 00 52 08.9 +0.6**
comp=Z,314nm,1.2s
MVL LR LR
comp=Z,12µm,21.0s
P41A Barry, Barry 35.06 349 P **P 00 52 06.8 -2.1**
baz=165,SNR=109
PSUB Penn St. - Bra 35.08 10 *eP* **P 00 52 09.2 +0.2**
comp=Z,187nm,1.2s
O44A Mansfield 35.10 352 P **P 00 52 07.2 -2.0**
baz=170,SNR=68
O45A Potomac 35.10 353 P **P 00 52 06.8 -2.3**
baz=171,SNR=74
Q37A Longview Farm, 35.11 344 P **P 00 52 07.5 -1.8**
baz=159,SNR=35
P40A Paris 35.13 347 P **P 00 52 07.5 -1.9**
baz=164,SNR=142
FSA Cafayete 35.15 153 *eP* **P 00 52 09.9 -0.1**
SFIN Lafayette 35.16 354 P **P 00 52 07.3 -2.3**
baz=172,SNR=109
SFIN Lafayette 35.16 354 *eP* **P 00 52 07.3 -2.3**
comp=Z,354nm,1.1s
SFIN LR LR
comp=Z,11µm,18.0s
PAGS Pennsylvania G 35.18 8 *eP* **P 00 52 10.1 +0.3**
comp=Z,321nm,1.1s
PAGS LR LR
comp=Z,19µm,22.0s
P39B Salisbury 35.25 346 P **P 00 52 08.7 -1.7**
baz=162,SNR=171
O43A Sugar Creek Fa 35.35 351 P **P 00 52 09.4 -1.9**
baz=168,SNR=97
O42A Bath 35.39 350 P **P 00 52 09.7 -1.9**
baz=167,SNR=44
SSPA Standing Stone 35.44 6 P **P 00 52 11.6 -0.5**
baz=188
SSPA Standing Stone 35.44 6 *eP* **P 00 52 12.1 0.0**
comp=Z,240nm,1.0s
SSPA LR LR
comp=Z,8µm,19.0s
O41A Passleys Farm, 35.45 349 P **P 00 52 10.1 -2.1**
baz=166,SNR=400
P38A Dawn 35.57 345 P **P 00 52 11.3 -1.9**
baz=161,SNR=80
N54A Moraine State 35.59 3 P **P 00 52 12.1 -1.3**
baz=184,SNR=32
N54A Moraine State 35.59 3 *eP* **P 00 52 12.4 -1.0**
comp=Z,140nm,0.9s
N54A LR LR
comp=Z,14µm,22.0s
HDIL Hopedale 35.61 351 P **P 00 52 11.6 -2.0**
baz=169,SNR=216
HDIL Hopedale 35.61 351 *eP* **P 00 52 11.5 -2.0**
comp=Z,810nm,0.8s
N46A Monticello 35.64 355 P **P 00 52 11.3 -2.4**
baz=173,SNR=64
O40A La Belle 35.66 348 P **P 00 52 12.0 -2.0**
baz=164,SNR=98
N45A Kentland 35.67 354 P **P 00 52 11.6 -2.4**
baz=172,SNR=100
N44A Piper City 35.69 353 P **P 00 52 11.9 -2.3**
baz=171,SNR=220
SRIG Santa Rosalia 35.70 311 *eP* **P 00 52 14.1 -0.3**
comp=Z,176nm,1.1s
SRIG LR LR
comp=Z,15µm,22.0s
HSIG 35.71 315 PFAKE 00 52 30.0 +15
HSIG LR LR
comp=Z,40µm,20.0s
P37A Lathrop 35.74 344 P **P 00 52 12.8 -1.9**
baz=160,SNR=100
LUPA Lehigh Univers 35.75 9 *eP* **P 00 52 15.9 +1.2**
comp=Z,30nm,1.3s
LUPA LR LR
comp=Z,2µm,20.0s
121A Cookes Peak, D 35.86 322 P **P 00 52 17.7 +1.7**
baz=134,SNR=337
O39A Kirksville 35.93 347 P **P 00 52 14.7 -1.6**
baz=163,SNR=59
KSU1 Kansas State U 35.96 341 P **P 00 52 15.1 -1.4**
baz=156,SNR=25
KSU1 Kansas State U 35.96 341 *eP* **P 00 52 15.1 -1.4**
comp=Z,139nm,0.8s
KSU1 LR LR
comp=Z,10µm,22.0s
BRNJ Basking Ridge 35.97 10 *eP* **P 00 52 17.3 +0.7**
comp=Z,368nm,1.2s
BRNJ LR LR
comp=Z,16µm,20.0s
N43A Stutzman Famil 35.97 352 P **P 00 52 14.7 -1.9**
baz=169
LCO Las Campanas 35.99 162 *eP* **P 00 52 18.2 +1.0**
comp=Z,154nm,1.3s
LCO LR LR
comp=Z,5µm,20.0s
LCO Las Campanas 35.99 162 *eP* **P 00 52 21.6 +4.3**
LCO Las Campanas 35.99 162 *eP* **P 00 52 18.2 +1.0**
N42A Yates City 36.00 350 P **P 00 52 15.2 -1.6**
baz=167,SNR=9.1
N59A State Game Lan 36.00 9 P **P 00 52 16.9 +0.1**
baz=192,SNR=32
N59A State Game Lan 36.00 9 *eP* **P 00 52 17.0 +0.1**
comp=Z,146nm,1.0s
N59A LR LR
comp=Z,15µm,20.0s
AHML Horco Molle 36.02 153 *eP* **P 00 52 20.3 +3.1**
O38A Galt 36.02 346 P **P 00 52 15.2 -1.9**
baz=162,SNR=38
N41A Harden Midland 36.02 349 P **P 00 52 15.2 -1.9**
baz=166,SNR=277
319A Douglas 36.03 319 *eP* **P 00 52 18.7 +1.3**
comp=Z,154nm,1.0s
319A LR LR
comp=Z,52µm,18.0s
M46A Old House Fiel 36.11 355 P **P 00 52 15.1 -2.7**
baz=174
M54A Oil Creek Stat 36.16 4 P **P 00 52 16.9 -1.3**
baz=185,SNR=28
M54A Oil Creek Stat 36.16 4 *eP* **P 00 52 17.4 -0.8**

comp=Z,125nm,1.0s
M54A LR LR
comp=Z,14µm,19.0s
M45A Boilermakers S 36.17 354 P P 00 52 15.9 -2.4
baz=172,SNR=31
CPNY Central Park 36.19 11 eP P 00 52 20.8 +2.4
comp=Z,218nm,1.6s
CPNY LR LR
comp=Z,19µm,20.0s
O37A Wolven Farm, M 36.23 345 P P 00 52 17.0 -1.8
baz=160,SNR=35
M44A Midewin, Midew 36.26 353 P P 00 52 16.5 -2.6
baz=171,SNR=54
ALLY Alegheny Colle 36.27 3 eP P 00 52 18.2 -0.9
comp=Z,153nm,1.0s
ALLY LR LR
comp=Z,17µm,18.0s
BNM Barren Site 36.33 325 eP P 00 52 20.9 +0.9
N40A Mertquake, Sal 36.33 349 P P 00 52 17.4 -2.3
baz=165,SNR=56
ODNJ Ogdensburg 36.35 10 eP P 00 52 20.4 +0.5
comp=Z,166nm,1.2s
ODNJ LR LR
comp=Z,14µm,21.0s
PAL Palisades 36.41 11 P P 00 52 21.1 +0.8
baz=195,SNR=15
PAL Palisades 36.41 11 eP P 00 52 22.3 +2.0
comp=Z,41nm,1.5s
PAL LR LR
comp=Z,19µm,19.0s
PAL Palisades 36.41 11 eP P 00 52 22.3 +2.0
PAL pmax pmax
comp=Z,410nm,1.5s
M43A Waltham Townsh 36.43 352 P P 00 52 17.9 -2.6
baz=169,SNR=178
Y22D IRIS PASSCAL I 36.44 325 P P 00 52 21.5 +0.6
baz=136,SNR=14
Y22D IRIS PASSCAL I 36.44 325 eP P 00 52 23.6 +2.7
comp=Z,709nm,1.2s
Y22D LR LR
comp=Z,16µm,18.0s
Y22E IRIS PASSCAL I 36.44 325 P P 00 52 21.9 +1.0
baz=136
LPM Los Pinos Moun 36.45 325 eP P 00 52 21.8 +0.8
N39A Derby Farms, D 36.52 347 P P 00 52 19.5 -1.8
baz=163,SNR=210
M42A Sheffield 36.56 351 P P 00 52 19.4 -2.3
baz=168,SNR=36
VCA Vinchina 36.57 158 eP P 00 52 24.3 +2.2
N38A Joes South For 36.60 346 P P 00 52 20.5 -1.6
baz=162,SNR=205
M41A Milan 36.62 350 P P 00 52 19.8 -2.3
baz=167,SNR=154
KSPA Keystone Colle 36.62 9 eP P 00 52 22.6 +0.4
comp=Z,368nm,1.1s
KSPA LR LR
comp=Z,12µm,18.0s
CHI Chicago-Loyola 36.72 354 PFAKE 00 52 30.0 +7.0
CHI LR LR
comp=Z,5µm,22.0s
ERPA Erie 36.74 3 P P 00 52 22.6 -0.6
baz=184,SNR=8.8
ERPA Erie 36.74 3 eP P 00 52 22.6 -0.6
comp=Z,191nm,1.3s
ERPA LR LR
comp=Z,14µm,19.0s
CBKS Cedar Bluff 36.80 337 P P 00 52 23.3 -0.5
baz=151,SNR=25
CBKS Cedar Bluff 36.80 337 eP P 00 52 23.3 -0.5
comp=Z,231nm,0.9s
CBKS LR LR
comp=Z,9µm,20.0s
CBKS Cedar Bluff 36.80 337 eP P 00 52 23.3 -0.5
CBKS pmax pmax
comp=Z,230nm,1.0s
LAZ Ladron 36.80 325 eP P 00 52 25.1 +1.0
N37A Lee Faris, Mou 36.81 345 P P 00 52 22.1 -1.7
baz=161,SNR=53
ANMO Albuquerque 36.81 326 P P 00 52 25.1 +1.0
comp=Z,116nm,1.0s,baz=149,slow=9.3,SNR=161
ANMO Albuquerque 36.81 326 P P 00 52 24.8 +0.7
baz=138
ANMO Albuquerque 36.81 326 eP P 00 52 25.0 +0.9
comp=Z,257nm,1.2s
ANMO LR LR
comp=Z,19µm,20.0s
ANMO Albuquerque 36.81 326c iP P 00 52 24.9 +0.7
ANMO pmax pmax
comp=Z,217nm,1.7s
ANMO MLR MLR
comp=Z,17µm,18.0s
TASL Snake Pit, Alb 36.81 326 P P 00 52 24.8 +0.7
baz=138,SNR=266
TASM ASL Pad, Albuq 36.81 326 P P 00 52 24.9 +0.7
baz=138,SNR=239
M40A Post Highland 36.82 349 P P 00 52 21.7 -2.2
baz=165,SNR=62
AAM Ann Arbor 36.86 359 P P 00 52 22.5 -1.7
baz=178,SNR=7.7
AAM Ann Arbor 36.86 359 eP P 00 52 24.8 +0.6
comp=Z,207nm,1.3s
AAM LR LR
comp=Z,12µm,20.0s
AAM Ann Arbor 36.86 359 eP P 00 52 24.8 +0.6
AAM pmax pmax
comp=Z,210nm,1.3s
YLE Yale 36.90 12 eP P 00 52 26.3 +1.8
comp=Z,314nm,1.2s
YLE LR LR
comp=Z,21µm,20.0s
M39A Webster 37.02 348 P P 00 52 23.4 -2.3
baz=164,SNR=143
L44A Lake County Fo 37.03 353 P P 00 52 22.8 -2.8
baz=171,SNR=26
GO04 Tololo Observa 37.05 163 eP P 00 52 26.6 +0.4
comp=Z,318nm,1.1s
GO04 LR LR
comp=Z,3µm,21.0s
N36A Muff Farm, Cla 37.06 344 P P 00 52 24.0 -1.9
baz=159,SNR=15
L42A Oliver, Polo 37.09 351 P P 00 52 23.6 -2.5
baz=168,SNR=133
L43A Garden Prairie 37.13 352 P P 00 52 23.7 -2.8
baz=170,SNR=174
AGUA GUANDACOL 37.16 159 eP P 00 52 32.5 +5.5
M38A Pleasantville 37.19 347 P P 00 52 24.8 -2.2
baz=162,SNR=160
BINY Binghamton 37.22 8 P P 00 52 26.9 -0.4
baz=191,SNR=35
BINY Binghamton 37.22 8 eP P 00 52 27.4 +0.1
comp=Z,301nm,1.1s
BINY LR LR
comp=Z,12µm,19.0s
CYA Choya 37.26 155 eP P 00 52 28.6 +0.8
L41A Preston 37.29 350 P P 00 52 25.4 -2.4
baz=167,SNR=247
M37A Trindle Farm, 37.38 346 P P 00 52 26.9 -1.7
baz=161,SNR=79
L40A Anamosa 37.40 349 P P 00 52 26.6 -2.2
baz=166,SNR=303
T25A Trinidad 37.43 331 P P 00 52 30.4 +1.0
baz=143,SNR=103
T25A Trinidad 37.43 331 eP P 00 52 30.3 +0.8
comp=Z,230nm,1.1s
T25A LR LR
comp=Z,22µm,21.0s
MMNY Mt. Morris Dam 37.52 6 eP P 00 52 29.1 -0.6
comp=Z,290nm,1.0s
MMNY LR LR
comp=Z,17µm,22.0s
K43A Burlington 37.60 353 P P 00 52 27.5 -2.9
baz=171,SNR=53
TUC Tucson 37.61 319 P P 00 52 31.2 +0.4
baz=130
TUC Tucson 37.61 319 eP P 00 52 31.5 +0.7
comp=Z,97nm,1.1s
TUC LR LR
comp=Z,54µm,18.0s
TUC Tucson 37.61 319 eP P 00 52 31.5 +0.7
TUC pmax pmax
comp=Z,97nm,1.1s
L39A Vinton 37.61 349 P P 00 52 28.1 -2.4
baz=165,SNR=63
M36A Felix, Anita 37.61 345 P P 00 52 28.8 -1.8
baz=160,SNR=48
SCIA State Center 37.66 347 P P 00 52 29.2 -1.8
baz=163,SNR=53
SCIA State Center 37.66 347 eP P 00 52 29.3 -1.7
comp=Z,614nm,0.9s
M65A Busby, Falmout 37.67 15 P P 00 52 31.9 +0.9
baz=200
K41A Shullsburg 37.78 351 P P 00 52 29.4 -2.5
baz=168,SNR=82
BRYW Bryant College 37.79 14 eP P 00 52 32.3 +0.3
comp=Z,164nm,1.3s
K42A Prairie Point, 37.80 352 P P 00 52 29.6 -2.6
baz=169,SNR=135
L38A Oak Wood Farm, 37.83 347 P P 00 52 30.3 -2.1
baz=163,SNR=218
QUA2 Belchertown 37.95 12 eP P 00 52 32.8 -0.6
comp=Z,122nm,1.3s
L37A Phoenix Point, 37.99 347 P P 00 52 31.7 -2.1
baz=162,SNR=21
K40A Colesburg 38.01 350 P P 00 52 31.6 -2.3
baz=166,SNR=226
JFWS Jewell Farm 38.07 351 P P 00 52 32.2 -2.3
baz=168,SNR=117
JFWS Jewell Farm 38.07 351 eP P 00 52 32.0 -2.4
comp=Z,326nm,0.8s
JFWS Jewell Farm 38.07 351 eP P 00 52 32.0 -2.4
JFWS pmax pmax
comp=Z,330nm,0.9s
TRY Troy 38.12 11 eP P 00 52 35.5 +0.6
comp=Z,333nm,1.1s
KSCO Kaye Shedlock' 38.14 334 P P 00 52 35.6 +0.3
baz=147,SNR=28
KSCO Kaye Shedlock' 38.14 334 eP P 00 52 35.5 +0.3
comp=Z,194nm,0.8s
KSCO LR LR
comp=Z,12µm,18.0s
K39A Oelwein 38.15 349 P P 00 52 32.6 -2.5
baz=165,SNR=104
L36A Harm Buss Farm 38.19 345 P P 00 52 33.6 -1.8
baz=160,SNR=46
BCX Boston College 38.27 14 eP P 00 52 36.9 +0.8
comp=Z,620nm,1.5s
K38A Parkersburg 38.27 348 P P 00 52 33.9 -2.3
baz=164,SNR=59
J43A Natural Harves 38.27 353 P P 00 52 33.2 -3.0
baz=171,SNR=124
WES Weston 38.28 14 eP P 00 52 36.5 +0.3
comp=Z,199nm,1.3s
WES Weston 38.28 14 eP P 00 52 36.5 +0.3
WES pmax pmax
comp=Z,200nm,1.2s
J42A Columbus 38.30 352 P P 00 52 33.9 -2.5
baz=170,SNR=91
HRV Adam Dziewonsk 38.34 13 P P 00 52 38.3 +1.6
baz=198
HRV Adam Dziewonsk 38.34 13 eP P 00 52 38.7 +2.0
comp=Z,217nm,1.3s
HRV Adam Dziewonsk 38.34 13 eP P 00 52 38.7 +2.0
HRV pmax pmax
comp=Z,220nm,1.2s
SDCO Great Sand Dun 38.45 330 P P 00 52 39.0 +0.9
baz=142,SNR=423
SDCO Great Sand Dun 38.45 330 eP P 00 52 38.9 +0.9
comp=Z,274nm,1.0s
SDCO LR LR
comp=Z,13µm,22.0s
J41A Loganville 38.47 351 P P 00 52 35.5 -2.3
baz=168,SNR=183
AMOG MOGNA 38.48 160 eP P 00 52 38.2 +0.1
X18A Snowflake 38.54 323 eP P 00 52 40.0 +1.2
comp=Z,150nm,1.0s
X18A LR LR
comp=Z,51µm,18.0s
BGNE Belgrade 38.54 341 P P 00 52 37.2 -1.3
baz=155
BGNE Belgrade 38.54 341 eP P 00 52 37.8 -0.7
comp=Z,685nm,1.8s
BGNE LR LR
comp=Z,9µm,18.0s
K37A Belmond 38.57 347 P P 00 52 36.4 -2.3
baz=162,SNR=75
J40A Soldiers Grove 38.62 351 P P 00 52 36.4 -2.6
baz=167,SNR=150
K36A Gilmore City 38.64 346 P P 00 52 37.7 -1.6
baz=161,SNR=98
J39A Decorah 38.73 349 P P 00 52 37.2 -2.8
baz=166,SNR=107
214A Organ Pipe Nat 38.74 317 P P 00 52 41.1 +0.8
baz=127,SNR=55
I43A Langenfeld Bro 38.74 354 P P 00 52 37.5 -2.5
baz=171,SNR=240
ACCN Adirondack Com 38.75 10 eP P 00 52 40.0 -0.2
comp=Z,271nm,1.2s
ACCN LR LR
comp=Z,14µm,21.0s
W18A Petrified Fore 38.81 323 P P 00 52 42.4 +1.3
baz=134,SNR=54
W18A Petrified Fore 38.81 323 eP P 00 52 42.6 +1.5
comp=Z,555nm,1.1s
W18A LR LR
comp=Z,42µm,18.0s
I42A Draeger Farm, 38.84 353 P P 00 52 38.4 -2.5
baz=170
I42A Draeger Farm, 38.84 353 eP P 00 52 38.6 -2.3
comp=Z,541nm,0.9s
I42A LR LR
comp=Z,7µm,20.0s
J38A Wedel Dairy, R 38.86 349 P P 00 52 37.9 -3.2
baz=164,SNR=27
ZON Zonda 38.98 161 eP P 00 52 46.8 +4.5
J37A Redenius Farm, 39.07 347 P P 00 52 40.2 -2.6
baz=163,SNR=16
I40A Norwalk 39.08 351 P P 00 52 40.4 -2.5
baz=167,SNR=87
S22A 4UR Ranch, Cre 39.11 329 P P 00 52 44.4 +0.7
baz=140,SNR=173
S22A 4UR Ranch, Cre 39.11 329 eP P 00 52 44.4 +0.7
comp=Z,273nm,1.2s
S22A LR LR
comp=Z,14µm,20.0s
I41A Arkdale 39.13 352 P P 00 52 40.8 -2.5
baz=169,SNR=95
I39A Houston 39.19 350 P P 00 52 41.4 -2.4
baz=166,SNR=162
NCB Newcomb 39.23 10 eP P 00 52 45.3 +1.1
comp=Z,183nm,1.4s
NCB LR LR
comp=Z,14µm,22.0s
Q24A Divide 39.24 332 P P 00 52 45.2 +0.5
baz=143,SNR=29
Q24A Divide 39.24 332 eP P 00 52 45.5 +0.9
comp=Z,108nm,1.0s
Q24A LR LR
comp=Z,19µm,21.0s
J36A Seneca 1, Swea 39.27 346 P P 00 52 42.3 -2.2
baz=161,SNR=75
H43A Windswept, Lux 39.28 354 P P 00 52 42.0 -2.5
baz=172,SNR=116
H43A Windswept, Lux 39.28 354 eP P 00 52 42.5 -2.1
comp=Z,602nm,0.9s
H43A LR LR
comp=Z,9µm,20.0s
HNH Hanover 39.33 12 eP P 00 52 46.3 +1.4
comp=Z,213nm,1.1s
AUSP Uspallata 39.38 162 eP P 00 52 47.5 +1.6
X16A Lo Mia Camp, P 39.38 321 eP P 00 52 47.0 +1.1
comp=Z,71nm,0.9s
X16A LR LR
comp=Z,48µm,19.0s
H42A Shiocton 39.40 353 P P 00 52 41.4 -4.2
baz=171,SNR=6.3
H42A Shiocton 39.40 353 PFAKE 00 53 00.0 +14
H42A LR LR
comp=Z,11µm,19.0s
SADO Sadowa 39.44 4 eP P 00 52 44.0 -1.9
comp=Z,116nm,1.0s
SADO LR LR
comp=Z,11µm,19.0s
I38A Scanlan Farm, 39.52 349 P P 00 52 43.8 -2.8
baz=165,SNR=47
OGNE Ogallala 39.53 337 P P 00 52 47.0 +0.2
baz=149,SNR=76
OGNE Ogallala 39.53 337 eP P 00 52 47.2 +0.4
comp=Z,418nm,0.8s
OGNE LR LR
comp=Z,16µm,22.0s
MVCO Mesa Verde 39.60 327 P P 00 52 48.3 +0.6
baz=137,SNR=260
MVCO Mesa Verde 39.60 327 eP P 00 52 48.4 +0.8
comp=Z,493nm,1.0s
MVCO LR LR
comp=Z,17µm,18.0s
ROC1 El Roble 39.63 165 eP P 00 52 47.0 -0.9
comp=Z,308nm,1.1s
H41A Junction City 39.65 352 P P 00 52 45.3 -2.4
baz=169,SNR=25
H41A Junction City 39.65 352 eP P 00 52 45.3 -2.4
comp=Z,219nm,1.1s
I37A Lemond, Waseca 39.71 348 P P 00 52 45.6 -2.6
baz=163,SNR=31
H40A Chili 39.76 351 P P 00 52 46.0 -2.6
baz=168,SNR=136
LONY Lake Ozonia 39.80 9 P P 00 52 47.2 -1.7
baz=192,SNR=28
LONY Lake Ozonia 39.80 9 eP P 00 52 48.4 -0.6
comp=Z,247nm,1.3s
LONY LR LR
comp=Z,16µm,20.0s
VT1 Waterbury 39.84 11 eP P 00 52 49.4 +0.1
comp=Z,440nm,1.1s
I36A Fitzsimmons Fa 39.85 347 P P 00 52 46.9 -2.5
baz=162,SNR=29
113A Mohawk Valley, 39.87 317 eP P 00 52 50.4 +0.7
comp=Z,385nm,1.8s
113A LR LR
comp=Z,38µm,21.0s
CPUP Villa Florida 39.87 143 P P 00 52 48.6 -1.2
comp=Z,55nm,1.0s,baz=322,slow=9.7,SNR=25
CPUP LR LR 01 12 40.9
comp=Z,11µm,18.3s,baz=329,slow=41
CPUP Villa Florida 39.87 143 eP P 00 52 48.7 -1.0
comp=Z,85nm,1.2s
CPUP Villa Florida 39.87 143 eP P 00 52 48.7 -1.0
CPUP pmax pmax
comp=Z,85nm,1.2s
PLVO Plevna 39.88 6 eP P 00 52 48.7 -0.9
comp=Z,212nm,1.0s
PLVO LR LR
comp=Z,11µm,19.0s
ASAL Salagasta 39.90 162 eP P 00 52 51.8 +1.8
LBNH Lisbon 39.91 12 P P 00 52 48.9 -1.0
baz=197,SNR=13
LBNH Lisbon 39.91 12 eP P 00 52 50.4 +0.5
comp=Z,260nm,1.2s
LBNH LR LR
comp=Z,10µm,20.0s
LBNH Lisbon 39.91 12 eP P 00 52 50.4 +0.5
LBNH pmax pmax
comp=Z,260nm,1.2s
H39A Augusta 39.95 350 P P 00 52 47.7 -2.5
baz=167,SNR=82
G43A Wallace 40.05 354 P P 00 52 48.5 -2.4
baz=172,SNR=54
G43A Wallace 40.05 354 eP P 00 52 48.6 -2.4
comp=Z,351nm,1.0s
G43A LR LR
comp=Z,9µm,20.0s
WUAZ Wupatki 40.07 322 P P 00 52 52.5 +1.1
baz=132,SNR=117
WUAZ Wupatki 40.07 322 eP P 00 52 52.6 +1.1
comp=Z,248nm,1.0s
WUAZ LR LR
comp=Z,27µm,19.0s
Y14A Wickenburg 40.08 319 eP P 00 52 51.8 +0.3
Y14A epP P 00 52 52.3 +0.8
Y14A LR LR
comp=Z,39µm,18.0s
G42A Mountain 40.11 354 P P 00 52 49.0 -2.5
baz=171,SNR=112
G42A Mountain 40.11 354 eP P 00 52 49.0 -2.5
comp=Z,462nm,1.0s
G42A LR LR
comp=Z,8µm,20.0s
ISCO Idaho Springs 40.12 332 P P 00 52 52.4 +0.4
baz=143,SNR=93
ISCO Idaho Springs 40.12 332 eP P 00 52 52.5 +0.4
comp=Z,353nm,1.6s
ISCO LR LR
comp=Z,12µm,20.0s
ISCO Idaho Springs 40.12 332 eP P 00 52 52.5 +0.4
ISCO pmax pmax
comp=Z,350nm,1.6s
H38A Maiden Rock 40.13 349 P P 00 52 49.1 -2.5
baz=165,SNR=113
H37A Dierke Farm, C 40.16 349 P P 00 52 49.3 -2.6
baz=164,SNR=5.2
G41A Antigo 40.17 353 P P 00 52 49.5 -2.5
baz=170,SNR=30
FRNY Flat Rock 40.17 10 eP P 00 52 51.3 -0.6
comp=Z,561nm,1.8s
ECSD EROS Data Cent 40.22 344 P P 00 52 50.0 -2.4
baz=158,SNR=139
ECSD EROS Data Cent 40.22 344 eP P 00 52 50.3 -2.1
comp=Z,239nm,1.3s
SMCO Snowmass 40.28 330 eP P 00 52 54.4 +0.9
comp=Z,251nm,1.1s
SMCO LR LR
comp=Z,16µm,22.0s
TCA Tanti 40.29 156 eP P 00 52 53.1 -0.2
F45A CMU Biological 40.31 357 P P 00 52 50.9 -2.2
baz=176,SNR=7.8
PV01 Paradox Valley 40.31 328 eP P 00 52 54.5 +0.9
comp=Z,211nm,1.1s
AAGR Agrelo 40.35 162 eP P 00 52 54.9 +1.1
H36A Jessenland, He 40.36 348 P P 00 52 51.2 -2.4
baz=162,SNR=57
G40A Rib Lake 40.36 352 P P 00 52 51.1 -2.5
baz=168,SNR=160
F46A Macinaw City C 40.37 358 P P 00 52 50.8 -2.7
baz=177
PV15 Paradox Valley 40.42 328 eP P 00 52 55.5 +1.1
comp=Z,447nm,1.0s
PV02 Paradox Valley 40.46 328 eP P 00 52 55.6 +0.9
comp=Z,477nm,1.0s
G38A Ridgeland 40.53 350 P P 00 52 52.3 -2.6
baz=166,SNR=13
G39A Holcombe 40.53 351 P P 00 52 52.6 -2.4
baz=167,SNR=266
PV03 Paradox Valley 40.55 328 eP P 00 52 56.2 +0.7
comp=Z,440nm,1.0s
PV05 Paradox Valley 40.55 327 eP P 00 52 56.0 +0.4
comp=Z,454nm,1.0s
I33A Coleman 40.56 344 P P 00 52 53.2 -2.1
baz=158,SNR=10.0
F43A Flat Rock, Esc 40.57 355 P P 00 52 52.9 -2.4
baz=173,SNR=31
PV07 Paradox Valley 40.58 328 eP P 00 52 56.6 +0.9
comp=Z,400nm,1.0s
F42A Maple Grove Fa 40.59 354 P P 00 52 52.9 -2.5
baz=172,SNR=17
F44A Big Bay de Noc 40.66 356 P P 00 52 53.7 -2.2
baz=174,SNR=27
H35A Sunnyside Ranc 40.68 347 P P 00 52 53.8 -2.4
baz=161,SNR=138
F41A Three Lakes 40.68 353 P P 00 52 53.5 -2.7
baz=170,SNR=174
PV04 Paradox Valley 40.68 328 eP P 00 52 57.3 +0.7
comp=Z,285nm,1.1s
PV04 LR LR
comp=Z,24µm,22.0s
I32A Karley and Nic 40.73 344 P P 00 52 54.0 -2.6
baz=157
WVL Waterville 40.74 14 eP P 00 52 57.0 +0.3
comp=Z,228nm,1.3s
PV10 Paradox Valley 40.74 328 eP P 00 52 57.6 +0.4
comp=Z,375nm,1.0s
SPMN Marine on St. 40.75 349 P P 00 52 54.0 -2.8
baz=164,SNR=126
SPMN Marine on St. 40.75 349 eP P 00 52 54.2 -2.6
comp=Z,522nm,1.0s
GLA Glamis 40.76 317 P P 00 52 57.8 +0.7
baz=126,SNR=61
GLA Glamis 40.76 317 eP P 00 52 58.0 +0.9
comp=Z,201nm,1.3s
GLA LR LR
comp=Z,21µm,18.0s
GLA Glamis 40.76 317 eP P 00 52 58.0 +0.9
GLA pmax pmax
comp=Z,200nm,1.2s
H34A Spellman Lake, 40.87 346 P P 00 52 55.6 -2.2
baz=160,SNR=21
PV09 Paradox Valley 40.88 328 eP P 00 52 58.8 +0.4
G36A St. Michael 40.95 348 P P 00 52 55.9 -2.5
baz=163,SNR=22
E45A Wooded Hills, 40.96 357 P P 00 52 56.9 -1.6
baz=176
Y12C Blythe 40.96 318 P P 00 52 59.3 +0.6
baz=127,SNR=20
Y12C Blythe 40.96 318 eP P 00 52 59.6 +0.8
comp=Z,168nm,1.4s

Y12C LR LR
comp=Z,39µm,19.0s
F40A Park Falls 40.99 352 P P 00 52 56.3 -2.5
baz=169,SNR=225
I31A Royce, Wessing 41.04 342 P P 00 52 57.0 -2.2
baz=156
COWI Conover 41.04 353 *eP* **P 00 52 57.2 -2.0**
comp=Z,165nm,0.9s
COWI LR LR
comp=Z,14µm,19.0s
PDMCI Parker Dam,Lak 41.04 319 P P 00 53 00.1 +0.7
baz=128,SNR=28
G35A Watkins 41.09 347 P P 00 52 56.9 -2.7
baz=162,SNR=6.3
E43A Lone Tree Farm 41.10 355 P P 00 52 57.6 -2.1
baz=173,SNR=71
F39A Loretta 41.10 351 P P 00 52 57.0 -2.6
baz=167,SNR=73
H33A Prehn Over Nor 41.13 345 P P 00 52 58.0 -2.0
baz=158,SNR=107
N23A Red Feather La 41.15 333 P P 00 53 00.8 +0.4
baz=143,SNR=68
N23A Red Feather La 41.15 333 *eP* **P 00 53 01.0 +0.5**
comp=Z,171nm,1.2s
N23A LR LR
comp=Z,7µm,22.0s
H32A Carlson Farm, 41.16 344 P P 00 52 58.0 -2.2
baz=157,SNR=130
F37A Hinrichs Farm, 41.20 349 P P 00 52 58.1 -2.4
baz=165,SNR=14
U15A North Rim 41.23 323 *eP* **P 00 53 02.5 +1.2**
comp=Z,222nm,1.3s
U15A LR LR
comp=Z,36µm,18.0s
E42A Champion 41.23 354 P P 00 52 58.7 -2.1
baz=172,SNR=110
PHWY Pilot Hill 41.26 334 *eP* **P 00 53 01.8 +0.4**
comp=Z,294nm,2.0s
PHWY LR LR
comp=Z,11µm,20.0s
E44A Grand Marais A 41.27 357 P P 00 52 59.4 -1.6
baz=175,SNR=16
F38A Pierce - Schro 41.30 350 P P 00 52 58.9 -2.4
baz=166,SNR=163
RPN Rapa Nui 41.30 217 *eP* **P 00 53 01.8 +0.3**
comp=Z,886nm,1.4s
RPN Rapa Nui 41.30 217 *eP* **P 00 53 01.8 +0.3**
RPN pmax pmax
comp=Z,890nm,1.4s
GO05 HualaæØ 41.34 167 *eP* **P 00 53 01.9 +0.1**
comp=Z,275nm,1.3s
SWSC Sam W. Stewart 41.37 316 P P 00 53 02.8 +0.7
baz=125,SNR=23
W13A Hualapai Mount 41.37 320 *eP* **P 00 53 03.1 +0.8**
W13A *epP* **P 00 53 03.4 +1.1**
W13A LR LR
comp=Z,28µm,19.0s
TRQ Mont Tremblant 41.37 8 *eP* **P 00 53 01.1 -0.9**
E41A Kenton 41.38 353 P P 00 52 59.2 -2.7
baz=170,SNR=51
G34A Benson 41.38 346 P P 00 52 59.4 -2.6
baz=160
IKP In-Ko-Pah, Jac 41.42 315 P P 00 53 03.4 +0.8
baz=124,SNR=17
H31A Wolsey 41.43 343 P P 00 53 00.3 -2.1
baz=156,SNR=20
EMMW East Machias 41.45 16 *eP* **P 00 53 03.2 +0.7**
comp=Z,135nm,1.0s
E40A Wakefield 41.47 352 P P 00 53 00.5 -2.2
baz=169,SNR=175
PKME Peaks-Kenny Pk 41.48 14 P P 00 53 02.4 -0.4
baz=200
PKME Peaks-Kenny Pk 41.48 14 *eP* **P 00 53 04.5 +1.7**
comp=Z,320nm,1.2s
E39A Mellen 41.50 352 P P 00 53 00.7 -2.3
baz=168,SNR=289
F36A Milaca 41.51 349 P P 00 52 59.6 -3.4
baz=164
G33A Ortonville 41.53 345 P P 00 53 00.9 -2.3
baz=159,SNR=28
SUSD Miller 41.54 342 P P 00 53 00.0 -3.3
baz=155
IRM Iron Mountain 41.62 318 P P 00 53 04.8 +0.6
baz=126,SNR=56
NEE2 Needles Airpor 41.64 319 P P 00 53 04.7 +0.4
baz=128
O20A White River Ci 41.64 330 P P 00 53 05.0 +0.6
baz=140,SNR=107
O20A White River Ci 41.64 330 *eP* **P 00 53 05.2 +0.7**
comp=Z,242nm,1.0s
O20A LR LR
comp=Z,10µm,21.0s
F35A Swanville 41.72 347 P P 00 53 02.2 -2.6
baz=162,SNR=59
MONP2 Monument Peak 41.77 315 P P 00 53 06.3 +0.7
baz=124,SNR=24
F34A Alexandria 41.81 347 P P 00 53 03.1 -2.4
baz=161,SNR=33
BAR Barrett 41.83 315 *eP* **P 00 53 06.7 +0.8**
comp=Z,62nm,1.1s
BAR LR LR
comp=Z,20µm,18.0s
G32A Webster 41.87 344 P P 00 53 04.0 -2.0
baz=158,SNR=144
E38A The Farm, Brul 41.87 351 P P 00 53 03.5 -2.4
baz=167,SNR=58
PKCU Pink Cliffs 41.92 324 *eP* **P 00 53 08.4 +1.5**
comp=Z,168nm,1.0s
PKCU LR LR
comp=Z,23µm,18.0s
D41A Chassel 41.92 354 P P 00 53 04.5 -1.9
baz=171,SNR=123
KNB Kanab 41.94 323 *eP* **P 00 53 08.0 +1.1**
comp=Z,191nm,1.1s
KNB LR LR
comp=Z,36µm,18.0s
KNB Kanab 41.94 323 *eP* **P 00 53 08.0 +1.1**
KNB pmax pmax
comp=Z,190nm,1.1s
E37A Wrenshall 41.98 350 P P 00 53 03.8 -3.0
baz=165
G31A Conde 42.03 344 P P 00 53 05.0 -2.3
baz=156,SNR=16
SRU San Rafael Swe 42.07 327 *eP* **P 00 53 08.4 +0.4**
comp=Z,489nm,1.0s
SRU LR LR
comp=Z,20µm,19.0s
SRU San Rafael Swe 42.07 327 *eP* **P 00 53 08.4 +0.4**
SRU pmax pmax
comp=Z,490nm,1.0s
E36A McGregor 42.08 349 P P 00 53 05.3 -2.5
baz=164,SNR=100
F33A 5 Mile Ranch, 42.10 346 P P 00 53 05.4 -2.5
baz=160,SNR=132
BELC Belle Mtn. Jos 42.10 317 P P 00 53 09.0 +0.7
baz=125,SNR=89
LDFC Landfair 42.15 319 *eP* **P 00 53 10.5 +2.0**
comp=Z,201nm,1.3s
LDFC LR LR
comp=Z,38µm,18.0s
LCMT Little Creek M 42.19 323 *eP* **P 00 53 10.2 +1.3**
comp=Z,246nm,1.7s
LCMT LR LR
comp=Z,30µm,18.0s
PFO Pinyon Flats O 42.20 316 P P 00 53 09.7 +0.6
baz=124,SNR=43
PFO Pinyon Flats O 42.20 316 *eP* **P 00 53 09.6 +0.6**
comp=Z,89nm,1.0s
PFO LR LR
comp=Z,21µm,18.0s
PFO Pinyon Flats O 42.20 316 *eP* **P 00 53 09.6 +0.6**
PFO pmax pmax
comp=Z,89nm,1.0s
109C Camp Elliot, M 42.25 315 P P 00 53 09.9 +0.6
baz=123,SNR=18
CPE Camp Elliot 42.25 315 *eP* **P 00 53 09.9 +0.7**
comp=Z,148nm,1.1s
CPE LR LR
comp=Z,21µm,18.0s
MTPU Mount Pierson 42.25 325 *eP* **P 00 53 10.4 +0.8**
comp=Z,67nm,1.0s
MTPU LR LR
comp=Z,45µm,18.0s
GMRC Granite Mounta 42.33 318 P P 00 53 11.0 +0.9
baz=126,SNR=37
F32A Veblen 42.34 345 P P 00 53 07.3 -2.5
baz=158,SNR=20
E35A Pequot Lakes 42.35 348 P P 00 53 07.5 -2.4
baz=162,SNR=31
RWWY Rawlins 42.35 332 *eP* **P 00 53 09.8 -0.5**
comp=Z,298nm,1.1s
RWWY LR LR
comp=Z,10µm,19.0s
P17A Butcher Ranch, 42.45 327 *eP* **P 00 53 11.5 +0.5**
comp=Z,217nm,1.0s
P17A LR LR
comp=Z,22µm,20.0s
E34A Wadena 42.47 347 P P 00 53 08.8 -2.1
baz=161,SNR=32
SZCU Shurtz Canyon 42.48 323 *eP* **P 00 53 12.3 +0.9**
comp=Z,151nm,1.0s
SZCU LR LR
comp=Z,40µm,18.0s
D37A Cotton 42.55 350 P P 00 53 09.3 -2.2
baz=166,SNR=147
MSU Marysvale 42.57 325 *eP* **P 00 53 12.8 +0.7**
MSU Marysvale 42.57 325 *eP* **P 00 53 12.8 +0.7**
TMUT Trail Mountain 42.58 327 *eP* **P 00 53 12.6 +0.4**
comp=Z,150nm,1.2s
TMUT LR LR
comp=Z,22µm,19.0s
CCUT Cedar City 42.61 323 *eP* **P 00 53 13.7 +1.2**
comp=Z,98nm,1.1s
CCUT LR LR
comp=Z,33µm,19.0s
F31A Hecla 42.63 344 P P 00 53 09.6 -2.6
baz=157
E33A Westby DABS, E 42.65 346 P P 00 53 09.7 -2.7
baz=160,SNR=11
MURC Murrieta 42.70 316 P P 00 53 13.7 +0.7
baz=124,SNR=19
D36A Goodland 42.70 349 P P 00 53 10.1 -2.6
baz=164,SNR=62
D35A Remer 42.78 349 P P 00 53 10.5 -2.9
baz=163,SNR=49
TCRU Three Creeks R 42.79 325 *eP* **P 00 53 14.7 +0.7**
comp=Z,165nm,1.0s
TCRU LR LR
comp=Z,50µm,18.0s
HEC Hector,Ludlow 42.81 318 P P 00 53 14.8 +0.9
baz=126,SNR=50
K22A Casper 42.81 334 P P 00 53 14.2 +0.2
baz=144,SNR=120
K22A Casper 42.81 334 *eP* **P 00 53 14.3 +0.4**
comp=Z,293nm,1.3s
K22A LR LR
comp=Z,22µm,19.0s
C40A Isle Royale Na 42.83 354 P P 00 53 12.0 -1.7
baz=170,SNR=223
CCHI Chillan 42.83 167 *eP* **P 00 53 14.5 +0.6**
C39A Grand Marais 42.85 353 P P 00 53 11.2 -2.8
baz=169
BBRC Big Bear Solar 42.88 317 P P 00 53 15.4 +0.7
baz=125
TUQ Turquoise Moun 42.89 319 P P 00 53 15.2 +0.5
baz=127,SNR=18
C38A Sawbill Land. 42.91 351 P P 00 53 11.4 -3.1
baz=167,SNR=82
E32A Braaten, Kindr 43.00 345 P P 00 53 12.5 -2.7
baz=159,SNR=5.3
RSSD Black Hills 43.01 337 P P 00 53 16.1 +0.6
baz=148
RSSD Black Hills 43.01 337 *eP* **P 00 53 15.9 +0.4**
comp=Z,335nm,1.1s
RSSD LR LR
comp=Z,10µm,21.0s
RSSD Black Hills 43.01 337 *eP* **P 00 53 15.9 +0.4**
RSSD pmax pmax
comp=Z,330nm,1.1s
D34A Park Rapids 43.02 347 P P 00 53 12.7 -2.7
baz=162,SNR=96
SHPR Sheep Range 43.05 321 *eP* **P 00 53 16.8 +0.8**
comp=Z,103nm,1.1s
SHPR LR LR
comp=Z,20µm,19.0s
C37A Embarrass 43.07 351 P P 00 53 13.3 -2.4
baz=166,SNR=155
PQI Presque Isle 43.11 15 *eP* **P 00 53 17.1 +1.0**
comp=Z,332nm,1.3s
EYMN Ely 43.17 351 P P 00 53 13.9 -2.6
baz=167,SNR=128
EYMN Ely 43.17 351 *eP* **P 00 53 13.9 -2.6**
comp=Z,191nm,1.0s
E31A Nome 43.17 345 P P 00 53 14.3 -2.3
baz=158,SNR=34
C36A Pine Crest Far 43.20 350 P P 00 53 14.6 -2.2
baz=165,SNR=180
D33A AnnSam, Waubun 43.22 347 P P 00 53 14.7 -2.2
baz=161,SNR=48
RRX Edison Barstow 43.28 317 P P 00 53 18.4 +0.8
baz=125
MPU Maple Canyon 43.32 327 *eP* **P 00 53 18.8 +0.7**
comp=Z,129nm,0.9s
MPU LR LR
comp=Z,39µm,19.0s
SCI2 San Clemente I 43.32 314 P P 00 53 17.6 -0.4
baz=122,SNR=7.4
C35A Jirik Farms, M 43.36 349 P P 00 53 15.3 -2.7
baz=164,SNR=20
BFSC Mount Baldy Ra 43.37 316 P P 00 53 18.9 +0.3
baz=124,SNR=34
GSC Goldstone, Bar 43.40 318 P P 00 53 19.6 +0.9
baz=126,SNR=65
GSC Goldstone, Bar 43.40 318 *eP* **P 00 53 19.3 +0.6**
comp=Z,159nm,1.3s
GSC LR LR
comp=Z,23µm,18.0s
GSC Goldstone, Bar 43.40 318 *eP* **P 00 53 19.3 +0.6**
GSC pmax pmax
comp=Z,160nm,1.3s
SHOC Shoshone, Teco 43.40 319 P P 00 53 18.8 +0.2
baz=127,SNR=37
CIS Catalina Islan 43.45 315 P P 00 53 19.3 +0.3
baz=122,SNR=15
D32A Dogwood Acres, 43.49 346 P P 00 53 16.4 -2.7
baz=159,SNR=18
C34A RKJ Ranch, Bem 43.50 348 P P 00 53 16.2 -3.0
baz=162,SNR=17
NLU North Lily Min 43.51 327 *eP* **P 00 53 20.7 +0.9**
comp=Z,60nm,1.0s
NLU LR LR
comp=Z,40µm,18.0s
FMP Fort Macarthur 43.53 315 P P 00 53 20.0 +0.3
baz=123
PSUT Pine Spring 43.55 324 *eP* **P 00 53 20.9 +0.8**
comp=Z,143nm,1.0s
PSUT LR LR
comp=Z,34µm,18.0s
D31A Mcclaflin, Tow 43.59 345 P P 00 53 17.0 -2.9
baz=158,SNR=5.5
JLU Jordanelle 43.64 328 *eP* **P 00 53 21.2 +0.5**
comp=Z,181nm,1.4s
JLU LR LR
comp=Z,26µm,19.0s
MWC Mount Wilson 43.64 316 *eP* **P 00 53 21.4 +0.6**
comp=Z,390nm,1.9s
MWC LR LR
comp=Z,14µm,20.0s
MWC Mount Wilson 43.64 316 *eP* **P 00 53 21.4 +0.6**
MWC pmax pmax
comp=Z,390nm,1.9s
PASC Pasadena Art C 43.70 316 *eP* **P 00 53 22.1 +1.1**
comp=Z,134nm,1.2s
PASC LR LR
comp=Z,16µm,18.0s
C33A Trail 43.78 347 P P 00 53 18.7 -2.8
baz=161,SNR=14
DECC Green Verdugo 43.85 316 P P 00 53 23.0 +0.7
baz=123,SNR=8.3
CTU Camp Tracy 43.86 328 *eP* **P 00 53 23.1 +0.6**
comp=Z,213nm,1.1s
CTU LR LR
comp=Z,32µm,19.0s
B35A Bob, Littlefor 43.94 349 P P 00 53 20.1 -2.6
baz=164,SNR=60
EDW2 Edwards Air Fo 43.96 317 P P 00 53 23.4 +0.2
baz=124,SNR=36
TCUT Toone Canyon 43.99 328 *eP* **P 00 53 24.1 +0.5**
comp=Z,490nm,1.1s
TCUT LR LR
comp=Z,36µm,18.0s
TPNV Topopah Spring 44.01 320 P P 00 53 24.8 +1.0
baz=128,SNR=63
TPNV Topopah Spring 44.01 320 *eP* **P 00 53 24.6 +1.0**
comp=Z,234nm,1.5s
TPNV LR LR
comp=Z,26µm,21.0s
TPNV Topopah Spring 44.01 320 *eP* **P 00 53 24.7 +1.0**
TPNV pmax pmax
comp=Z,230nm,1.5s
C32A Crookston 44.02 347 P P 00 53 21.2 -2.1
baz=160
LRMC Laurel Mtn Rad 44.09 318 P P 00 53 24.9 +0.6
baz=125,SNR=52
DUG Dugway, Tooele 44.09 326 P P 00 53 24.8 +0.6
baz=134,SNR=71
DUG Dugway, Tooele 44.09 326 *eP* **P 00 53 24.6 +0.4**
comp=Z,83nm,1.1s
DUG LR LR
comp=Z,36µm,18.0s
DUG Dugway, Tooele 44.09 326 *eP* **P 00 53 24.6 +0.4**
DUG pmax pmax
comp=Z,83nm,1.1s
FURC Furnace Creek, 44.12 319 P P 00 53 25.2 +0.9
baz=126,SNR=37
SNCC San Nicolas Is 44.16 314 P P 00 53 25.7 +0.9
baz=121
SNCC San Nicolas Is 44.16 314 *eP* **P 00 53 26.1 +1.4**
comp=Z,217nm,1.4s
SNCC LR LR
comp=Z,22µm,22.0s
B33A Robert and Kas 44.23 348 P P 00 53 22.8 -2.2
baz=161,SNR=34
B34A Aery, Baudette 44.24 349 P P 00 53 22.8 -2.3
baz=163,SNR=239
C31A Landman Farms, 44.28 345 P P 00 53 23.5 -2.0
baz=158,SNR=131
BLG Laguna Peak, P 44.28 315 P P 00 53 26.7 +0.9
baz=122
MPMC Manual Prospec 44.29 318 P P 00 53 26.2 +0.2
baz=126,SNR=71
BW06 Boulder Array 44.29 331 P P 00 53 25.6 -0.4
baz=140,SNR=108
BW06 Boulder Array 44.29 331 *eP* **P 00 53 25.5 -0.4**
comp=Z,153nm,1.1s
BW06 LR LR
comp=Z,19µm,21.0s
PD31 Pinedale Array 44.29 331 *eP* **P 00 53 25.6 -0.3**
PDAR Pinedale Array 44.29 331 P P 00 53 25.5 -0.4
comp=Z,34nm,0.9s,baz=130,slow=8.5,SNR=126
PDAR PcP **PcP 00 55 10.9 +0.7**
comp=Z,11nm,1.1s,baz=128,slow=5.8,SNR=2.8
PDAR LR LR 01 14 16.7
comp=Z,15µm,18.2s,baz=150,slow=39
PDAR Pinedale Array 44.29 331 *eP* **P 00 53 24.8 -1.1**
PDAR PcP **PcP 00 55 10.8 +0.7**
AGMN Agassiz Nation 44.31 347 P P 00 53 23.5 -2.2
baz=161,SNR=106
AGMN Agassiz Nation 44.31 347 *eP* **P 00 53 22.8 -2.9**
comp=Z,239nm,0.9s
OSI Osito Audit: C 44.31 316 P P 00 53 26.1 0.0
baz=123
OSI Osito Audit: C 44.31 316 *eP* **P 00 53 26.9 +0.8**
comp=Z,58nm,0.8s
OSI LR LR
comp=Z,15µm,18.0s
HWUT Hardware Ranch 44.42 329 *eP* **P 00 53 27.0 +0.1**
comp=Z,384nm,1.0s
HWUT LR LR
comp=Z,28µm,18.0s
R11A Troy Canyon, C 44.47 322 P P 00 53 28.1 +0.7
baz=130,SNR=122
R11A Troy Canyon, C 44.47 322 *eP* **P 00 53 27.9 +0.6**
comp=Z,81nm,1.1s
R11A LR LR
comp=Z,33µm,19.0s
DAC Darwin (Calif) 44.48 319 *eP* **P 00 53 27.8 +0.2**
comp=Z,55nm,0.9s
DAC LR LR
comp=Z,24µm,18.0s
DAC Darwin (Calif) 44.48 319 *eP* **P 00 53 27.8 +0.2**
DAC pmax pmax
comp=Z,55nm,1.0s
B32A Ashes, Strandq 44.56 347 P P 00 53 25.8 -1.9
baz=160,SNR=300
SCZ2 Santa Cruz Isl 44.62 315 P P 00 53 28.0 -0.5
baz=122,SNR=6.0
ARVC Arvin 44.67 316 P P 00 53 29.1 +0.3
baz=123,SNR=32
SPUT South Promonto 44.67 328 *eP* **P 00 53 29.2 +0.3**
comp=Z,236nm,1.1s
SPUT LR LR
comp=Z,32µm,18.0s
BGU Big Grassy Mou 44.71 327 *eP* **P 00 53 29.4 +0.2**
comp=Z,182nm,1.1s
BGU LR LR
comp=Z,34µm,20.0s
ISA Isabella, Lake 44.72 317 P P 00 53 30.0 +0.7
baz=124,SNR=25
ISA Isabella, Lake 44.72 317 *eP* **P 00 53 30.0 +0.7**
comp=Z,77nm,1.0s
ISA LR LR
comp=Z,11µm,21.0s
ISA Isabella, Lake 44.72 317 *eP* **P 00 53 30.0 +0.7**
ISA pmax pmax
comp=Z,77nm,1.0s
SPB Sao Paulo 44.76 131 *eP* **P 00 53 28.7 -1.0**
comp=Z,41nm,1.0s
SPB LR LR
comp=Z,17µm,20.0s
A33A Warroad 44.82 348 P P 00 53 27.7 -2.0
baz=162,SNR=212
MDND Maddock 44.82 344 P P 00 53 28.4 -1.4
baz=156,SNR=41
MDND Maddock 44.82 344 *eP* **P 00 53 28.8 -1.0**
comp=Z,751nm,1.1s
B31A Greenbush Farm 44.84 346 P P 00 53 27.8 -2.1
baz=159,SNR=39
CWC Cottonwood Cre 44.90 319 P P 00 53 31.0 +0.2
baz=125
SBC Santa Barbara 44.91 315 P P 00 53 30.6 -0.1
baz=122
AHID Auburn Hatcher 45.04 330 *eP* **P 00 53 31.9 0.0**
comp=Z,261nm,1.4s
AHID LR LR
comp=Z,16µm,20.0s
A32A Rocking H Ranc 45.04 347 P P 00 53 29.3 -2.2
baz=160,SNR=40
HVU Hansel Valley 45.18 328 *eP* **P 00 53 33.1 +0.2**
comp=Z,105nm,1.1s
HVU LR LR
comp=Z,38µm,20.0s
HVU Hansel Valley 45.18 328 *eP* **P 00 53 33.2 +0.2**
HVU pmax pmax
comp=Z,100nm,1.0s
A31A Linda, St. Vin 45.21 346 P P 00 53 30.0 -2.8
baz=159,SNR=7.7
PKM Mcpherson Peak 45.22 316 P P 00 53 33.6 +0.2
baz=122,SNR=40
VES Vestal, Richgr 45.23 317 P P 00 53 33.5 +0.2
baz=124,SNR=82
TIN Tinemaha, Big 45.35 319 P P 00 53 35.1 +0.8
baz=126,SNR=9.2
REDW Red Top Meadow 45.36 331 *eP* **P 00 53 34.2 -0.3**
comp=Z,451nm,1.1s
REDW LR LR
comp=Z,24µm,19.0s
SNOW Snow King Moun 45.39 331 *eP* **P 00 53 34.7 0.0**
comp=Z,398nm,1.3s
SNOW LR LR
comp=Z,22µm,19.0s
LOHW Long Hollow 45.43 331 *eP* **P 00 53 34.7 -0.2**
comp=Z,116nm,1.0s
LOHW LR LR
comp=Z,24µm,20.0s
TPAW Teton Pass 45.50 331 *eP* **P 00 53 35.4 -0.2**
comp=Z,182nm,0.9s
TPAW LR LR
comp=Z,22µm,20.0s
SMMC Simmler 45.57 316 P P 00 53 36.8 +0.8
baz=122,SNR=30
MOOW Moose Ponds 45.60 331 *eP* **P 00 53 36.1 -0.2**
comp=Z,112nm,1.0s
MOOW LR LR
comp=Z,23µm,20.0s
FXWY Fox Creek 45.65 331 *eP* **P 00 53 36.4 -0.3**
comp=Z,105nm,1.0s
IMW Indian Meadow 45.80 331 *eP* **P 00 53 37.9 -0.1**
comp=Z,94nm,1.0s
IMW LR LR
comp=Z,23µm,19.0s
PAGB Antelope Grade 45.97 316 *eP* **P 00 53 40.0 +0.9**
comp=Z,144nm,1.1s
PAGB LR LR

comp=Z,23μm,22.0s
RLMT Red Lodge 45.98 334 P P 00 53 38.9 -0.4
baz=142,SNR=107
RLMT Red Lodge 45.98 334 *e*P **P 00 53 39.1 -0.2**
comp=Z,158nm,1.0s
RLMT LR LR
comp=Z,11μm,21.0s
LAO LASA Array 46.00 337 P **P 00 53 38.9 -0.4**
baz=146,SNR=164
LAO LASA Array 46.00 337 *e*P **P 00 53 38.8 -0.4**
comp=Z,502nm,1.2s
LAO LR LR
comp=Z,11μm,18.0s
H17A Grant Village 46.01 332 P **P 00 53 40.4 +0.8**
baz=140,SNR=14
H17A Grant Village 46.01 332 *e*P **P 00 53 40.7 +1.1**
comp=Z,78nm,1.0s
H17A LR LR
comp=Z,35μm,18.0s
YPP Pitchstone Pla 46.02 332 *e*P **P 00 53 40.5 +0.7**
comp=Z,131nm,1.1s
YPP LR LR
comp=Z,12μm,19.0s
LKWY Lake 46.06 332 PFAKE 00 53 50.0 +10
LKWY LR LR
comp=Z,16μm,20.0s
MLAC Mammoth, Mammo 46.08 319 P **P 00 53 39.2 -1.0**
baz=125
NV11 Mina Array Sit 46.11 321 *e*P **P 00 53 40.4 0.0**
comp=Z,10nm,1.0s
NV11 LR LR
comp=Z,2μm,18.0s
ULM Lac du Bonnet 46.17 348 P **P 00 53 37.9 -2.5**
comp=Z,175nm,0.8s,baz=158,slow=8.0,SNR=90
ULM Lac du Bonnet 46.17 348 *e*P **P 00 53 37.9 -2.5**
comp=Z,318nm,1.1s
ULM Lac du Bonnet 46.17 348 *e*P **P 00 53 37.9 -2.5**
ULM pmax pmax
comp=Z,320nm,1.1s
YFT Old Faithful 46.17 332 *e*P **P 00 53 42.5 +1.6**
comp=Z,237nm,1.0s
YFT LR LR
comp=Z,15μm,19.0s
OMMB Old Mammoth Mi 46.17 319 *e*P **P 00 53 41.6 +0.5**
comp=Z,134nm,1.1s
OMMB LR LR
comp=Z,25μm,19.0s
NV01 Mina Array Sit 46.20 321 *e*P **P 00 53 41.1 -0.1**
NVAR Mina Array Bea 46.20 321 P **P 00 53 41.8 +0.6**
comp=Z,62nm,0.7s,baz=138,slow=7.0,SNR=241
NVAR PcP **PcP 00 55 17.4 +0.5**
comp=Z,12nm,0.9s,baz=130,slow=3.9,SNR=2.0
NVAR LR LR 01 13 17.9
comp=Z,26μm,18.4s,baz=230,slow=37
MDPB Devils Postpil 46.24 319 *e*P **P 00 53 42.5 +1.0**
comp=Z,191nm,0.9s
MDPB LR LR
comp=Z,21μm,19.0s
YNR Norris Junctio 46.30 332 *e*P **P 00 53 43.2 +1.3**
comp=Z,130nm,1.2s
YNR LR LR
comp=Z,18μm,19.0s
YMR Madison River 46.40 332 *e*P **P 00 53 43.7 +1.1**
comp=Z,254nm,1.0s
YMR LR LR
comp=Z,17μm,18.0s
YHH Holmes Hill 46.44 332 *e*P **P 00 53 43.8 +0.8**
comp=Z,154nm,1.0s
YHH LR LR
comp=Z,20μm,20.0s
KVN Kaiserville 46.45 321 *e*P **P 00 53 43.2 +0.1**
comp=Z,84nm,1.1s
KVN LR LR
comp=Z,28μm,18.0s
KVN Kaiserville 46.45 321 *e*P **P 00 53 43.2 +0.1**
KVN pmax pmax
comp=Z,84nm,1.0s
RYN Ryan 46.46 321 *e*P **P 00 53 43.5 +0.4**
comp=Z,110nm,1.0s
RYN LR LR
comp=Z,22μm,19.0s
YHB Horse Butte 46.57 332 *e*P **P 00 53 45.8 +1.8**
comp=Z,150nm,1.0s
YHB LR LR
comp=Z,13μm,18.0s
PMPB Monarch Peak 46.60 317 *e*P **P 00 53 44.7 +0.5**
comp=Z,120nm,1.1s
PMPB LR LR
comp=Z,25μm,22.0s
GCMT Greycliff 46.68 334 *e*P **P 00 53 44.5 -0.2**
QLMT Earthquake Lak 46.74 332 *e*P **P 00 53 46.3 +1.0**
BMN Battle Mountai 46.77 324 *e*P **P 00 53 45.7 +0.2**
comp=Z,213nm,1.0s
BMN LR LR
comp=Z,33μm,18.0s
BMN Battle Mountai 46.77 324 *e*P **P 00 53 45.7 +0.2**
BMN pmax pmax
comp=Z,210nm,1.0s
DGMT Dagmar 46.78 340 P **P 00 53 45.2 -0.1**
baz=150,SNR=30
DGMT Dagmar 46.78 340 *e*P **P 00 53 45.3 -0.1**
comp=Z,287nm,0.9s
DGMT LR LR
comp=Z,9μm,18.0s
WAKR Walker 46.97 320 *e*P **P 00 53 47.9 +0.7**
comp=Z,98nm,1.0s
WAKR LR LR
comp=Z,30μm,20.0s
YERR Yerington 47.12 321 *e*P **P 00 53 49.6 +1.3**
comp=Z,116nm,0.9s
YERR LR LR
comp=Z,16μm,20.0s
PLCA Paso Flores 47.13 167 P **P 00 53 48.4 +0.2**
comp=Z,109nm,1.1s,baz=4.9,slow=10,SNR=20
PLCA Paso Flores 47.13 167 *e*P **P 00 53 48.1 0.0**
comp=Z,210nm,1.2s
PLCA Paso Flores 47.13 167 *e*P **P 00 53 48.1 0.0**
PLCA pmax pmax
comp=Z,210nm,1.2s
TRQA Tornquist 47.21 158 *e*P **P 00 53 48.5 -0.2**
comp=Z,197nm,1.3s
TRQA LR LR
comp=Z,6μm,21.0s
HLID Hailey 47.29 329 P **P 00 53 49.5 -0.1**
baz=135,SNR=133
HLID Hailey 47.29 329 *e*P **P 00 53 49.5 -0.1**
comp=Z,63nm,0.8s
HLID LR LR
comp=Z,34μm,20.0s
CMB Columbia Colle 47.32 319 *e*P **P 00 53 49.7 0.0**
comp=Z,31nm,0.9s
CMB LR LR
comp=Z,16μm,20.0s
CMB Columbia Colle 47.32 319 *e*P **P 00 53 49.7 0.0**
CMB pmax pmax
comp=Z,31nm,0.9s
SAO San Andreas Ge 47.34 317 *e*P **P 00 53 50.4 +0.6**
comp=Z,38nm,0.9s
SAO LR LR
comp=Z,23μm,22.0s
SAO San Andreas Ge 47.34 317 *e*P **P 00 53 50.4 +0.6**
SAO pmax pmax
comp=Z,38nm,1.0s
BOZ Bozeman (W) 47.41 332 P **P 00 53 50.6 +0.1**
baz=139,SNR=333
BOZ Bozeman (W) 47.41 332 *e*P **P 00 53 50.5 +0.1**
comp=Z,264nm,1.0s
BOZ LR LR
comp=Z,19μm,20.0s
BOZ Bozeman (W) 47.41 332 *e*P **P 00 53 50.5 +0.1**
BOZ pmax pmax
comp=Z,260nm,1.0s
PNTR Pine Nut 47.41 321 *e*P **P 00 53 51.6 +1.0**
comp=Z,114nm,1.0s
PNTR LR LR
comp=Z,15μm,21.0s
MCMT McKenzie Canyo 47.41 331 *e*P **P 00 53 51.1 +0.5**
VCNR Virginia City 47.56 321 PFAKE 00 54 00.0 +8.2
VCNR LR LR
comp=Z,12μm,20.0s
PAHR Pah Rah Range 47.64 321 *e*P **P 00 53 52.9 +0.6**
comp=Z,213nm,1.8s
PAHR LR LR
comp=Z,14μm,19.0s
DLMT Dillon 47.69 332 *e*P **P 00 53 53.0 +0.4**
comp=Z,94nm,1.0s
DLMT LR LR
comp=Z,16μm,19.0s

RUBR Rubicon Trail 47.74 320 PFAKE 00 54 10.0 +17
RUBR LR LR
comp=Z,29μm,18.0s
RDG13 Poverty Ridge 47.89 317 *e*P **P 00 53 55.0 +0.8**
comp=Z,67nm,1.0s
RDG13 LR LR
comp=Z,24μm,22.0s
MFID Camas Ranch 47.93 327 *e*P **P 00 53 54.4 -0.1**
comp=Z,145nm,1.3s
MFID LR LR
comp=Z,26μm,22.0s
RCBR Riachuelo 47.95 103 *e*P **P 00 53 53.9 -1.0**
comp=Z,51nm,1.0s
RCBR LR LR
comp=Z,10μm,20.0s
LRM Limekiln Ridge 47.96 332 *e*P **P 00 53 54.5 -0.3**
AFDM Forest Hills D 48.21 320 *e*P **P 00 53 56.5 -0.1**
comp=Z,38nm,1.1s
BEKR Beckworth 48.34 321 *e*P **P 00 53 58.0 +0.2**
comp=Z,65nm,1.0s
BEKR LR LR
comp=Z,19μm,21.0s
HRY Holter Researc 48.34 333 *e*P **P 00 53 57.4 -0.2**
EGMT Eagleton 48.48 336 P **P 00 53 58.4 -0.2**
baz=143,SNR=197
EGMT Eagleton 48.48 336 *e*P **P 00 53 58.4 -0.2**
comp=Z,378nm,1.0s
EGMT LR LR
comp=Z,11μm,21.0s
WVOR Wild Horse Val 48.85 325 *e*P **P 00 54 01.3 -0.3**
comp=Z,336nm,1.1s
WVOR LR LR
comp=Z,28μm,18.0s
WVOR Wild Horse Val 48.85 325 *e*P **P 00 54 01.3 -0.3**
WVOR pmax pmax
comp=Z,340nm,1.1s
ORV Oroville 48.89 320 *e*P **P 00 54 02.2 +0.4**
comp=Z,119nm,0.9s
ORV LR LR
comp=Z,14μm,20.0s
ORV Oroville 48.89 320 *e*P **P 00 54 02.2 +0.4**
ORV pmax pmax
comp=Z,120nm,1.0s
MCCM Marconi Confer 49.03 318 *e*P **P 00 54 03.6 +0.7**
comp=Z,158nm,1.0s
MCCM LR LR
comp=Z,19μm,22.0s
GDXM Geysers 49.32 318 *e*P **P 00 54 05.9 +0.6**
comp=Z,47nm,1.0s
GDXM LR LR
comp=Z,21μm,19.0s
J08A Circle Bar Ran 49.35 326 *e*P **P 00 54 04.7 -0.6**
comp=Z,81nm,0.9s
J08A LR LR
comp=Z,26μm,18.0s
MSO Missoula 49.40 332 P **P 00 54 05.2 -0.5**
baz=137,SNR=74
MSO Missoula 49.40 332 *e*P **P 00 54 05.0 -0.7**
comp=Z,152nm,1.1s
MSO LR LR
comp=Z,25μm,18.0s
O03D Paynes Creek 49.49 321 P **P 00 54 05.5 -0.9**
baz=124,SNR=25
MOD Modoc Plateau 49.50 323 *e*P **P 00 54 06.2 -0.5**
comp=Z,50nm,1.1s
MOD LR LR
comp=Z,24μm,18.0s
HOPS Hopland Field 49.61 318 *e*P **P 00 54 08.0 +0.7**
comp=Z,88nm,1.2s
HOPS LR LR
comp=Z,16μm,19.0s
BMO Blue Mountains 49.69 328 *e*P **P 00 54 06.6 -1.4**
comp=Z,47nm,1.0s
BMO LR LR
comp=Z,21μm,22.0s
BMO Blue Mountains 49.69 328 *e*P **P 00 54 06.6 -1.4**
BMO pmax pmax
comp=Z,47nm,1.0s
WDC Whiskeytown Da 50.12 320 *e*P **P 00 54 09.2 -1.9**
comp=Z,116nm,1.9s
WDC LR LR
comp=Z,12μm,22.0s
WDC Whiskeytown Da 50.12 320 *e*P **P 00 54 09.2 -1.9**
WDC pmax pmax
comp=Z,120nm,1.9s
JTMT Jette 50.23 333 *e*P **P 00 54 11.8 -0.2**
comp=Z,85nm,1.1s
JTMT LR LR
comp=Z,27μm,18.0s
KCPM Cahto Peak 50.31 319 *e*P **P 00 54 13.9 +1.1**
comp=Z,141nm,1.1s
KCPM LR LR
comp=Z,15μm,21.0s
K05A Summer Lake 50.35 324 *e*P **P 00 54 13.4 +0.3**
comp=Z,76nm,1.2s
K05A LR LR
comp=Z,25μm,18.0s
M04C Macdoel 50.36 322 P **P 00 54 12.5 -0.6**
baz=125,SNR=29
I07A Izee 50.38 326 *e*P **P 00 54 12.8 -0.4**
comp=Z,41nm,0.9s
I07A LR LR
comp=Z,23μm,18.0s
F10A Beach Ranch, E 50.41 329 *e*P **P 00 54 12.7 -0.7**
comp=Z,100nm,1.0s
F10A LR LR
comp=Z,24μm,18.0s
N02D Trinity Center 50.44 321 P **P 00 54 11.5 -2.2**
baz=124,SNR=8.0
KMRM Mail Ridge 50.67 319 *e*P **P 00 54 16.2 +0.8**
comp=Z,212nm,1.1s
KMRM LR LR
comp=Z,19μm,22.0s
M02C Callahan 50.77 321 P **P 00 54 14.5 -1.6**
baz=124,SNR=17
K04D Chiloquin, OR 50.80 323 P **P 00 54 16.0 -0.4**
baz=126
G08A Pilot Rock 50.86 327 *e*P **P 00 54 16.4 -0.4**
comp=Z,66nm,1.1s
G08A LR LR
comp=Z,12μm,21.0s
YBH Yreka Blue Hor 50.87 322 P **P 00 54 15.2 -1.8**
comp=Z,18nm,0.9s,baz=145,slow=4.9,SNR=32
YBH LR LR 01 16 14.9
comp=Z,17μm,19.6s,baz=142,slow=37
YBH Yreka Blue Hor 50.87 322 *e*P **P 00 54 14.5 -2.4**
comp=Z,37nm,0.9s
YBH Yreka Blue Hor 50.87 322 *e*P **P 00 54 14.5 -2.4**
YBH pmax pmax
comp=Z,37nm,1.0s
J05D Fort Rock, OR 50.88 324 P **P 00 54 16.5 -0.6**
baz=127,SNR=33
SCHQ Schefferville 51.01 12 P **P 00 54 15.8 -1.9**
comp=Z,137nm,1.2s,baz=193,slow=6.6,SNR=18
SCHQ LR LR 01 15 00.5
comp=Z,6μm,21.8s,baz=203,slow=35
SCHQ Schefferville 51.01 12 *e*P **P 00 54 16.2 -1.5**
SCHQ *es*P **P 00 54 17.1 -0.5**
PINE Pine Mountain 51.02 325 *e*P **P 00 54 18.3 +0.1**
comp=Z,73nm,0.9s
PINE LR LR
comp=Z,19μm,20.0s
WALA Waterton Lakes 51.03 334 *e*P **P 00 54 17.9 -0.2**
comp=Z,86nm,0.9s
WALA LR LR
comp=Z,20μm,18.0s
KHMM Horse Mountain 51.04 320 *e*P **P 00 54 18.8 +0.5**
comp=Z,145nm,0.9s
KHMM LR LR
comp=Z,14μm,19.0s
JCC Jacoby Creek, 51.20 320 *e*P **P 00 54 19.9 +0.7**
comp=Z,116nm,1.1s
JCC LR LR
comp=Z,10μm,20.0s
E09A Wood Farm, Sta 51.24 329 *e*P **P 00 54 18.9 -0.6**
comp=Z,220nm,1.0s
E09A LR LR
comp=Z,18μm,20.0s
J04D Umpqua Nationa 51.37 324 P **P 00 54 19.9 -0.9**
baz=126,SNR=15
HUMO Hull Mountain 51.52 322 *e*P **P 00 54 20.3 -1.4**
comp=Z,18nm,0.9s
HUMO LR LR
comp=Z,18μm,20.0s
I05D Terrebonne, OR 51.58 325 P **P 00 54 22.0 -0.2**
baz=128,SNR=25
L02D Cave Junction, 51.66 322 P **P 00 54 22.1 -0.7**
baz=124,SNR=7.2

E08A Dider Farm, El 51.70 328 *e*P **P 00 54 22.5 -0.4**
comp=Z,62nm,0.9s
FFC Flin Flon 51.71 346 *e*P **P 00 54 21.9 -0.9**
comp=Z,146nm,1.2s
FFC Flin Flon 51.71 346 *e*P **P 00 54 22.0 -0.9**
FFC pmax pmax
comp=Z,146nm,1.2s
G06A Carlson Farm, 51.74 326 *e*P **P 00 54 23.8 +0.4**
comp=Z,247nm,1.4s
G06A LR LR
comp=Z,26μm,18.0s
F07A Phinny Hill Vi 51.77 327 *e*P **P 00 54 23.9 +0.5**
comp=Z,121nm,1.1s
F07A LR LR
comp=Z,11μm,20.0s
I04A Tendick Farm, 51.87 324 P **P 00 54 23.3 -1.1**
baz=126,SNR=24
HAWA Hanford 51.88 328 *e*P **P 00 54 24.2 -0.1**
comp=Z,87nm,1.1s
HAWA LR LR
comp=Z,13μm,21.0s
NEW Newport 51.93 331 P **P 00 54 23.9 -0.9**
baz=134,SNR=54
NEW Newport 51.93 331 *e*P **P 00 54 23.8 -0.9**
comp=Z,71nm,1.0s
NEW LR LR
comp=Z,15μm,20.0s
NEW Newport 51.93 331 *e*P **P 00 54 23.8 -0.9**
NEW pmax pmax
comp=Z,71nm,1.0s
D08A Wollman Farm, 52.00 329 *e*P **P 00 54 24.9 -0.3**
comp=Z,76nm,0.9s
D08A LR LR
comp=Z,14μm,21.0s
KBO Bosley Butte 52.08 321 *e*P **P 00 54 26.5 +0.5**
comp=Z,421nm,1.1s
KBO LR LR
comp=Z,10μm,19.0s
G05D Wamic, OR 52.12 326 P **P 00 54 26.7 +0.6**
baz=128,SNR=27
E07A Sunnyside 52.16 328 *e*P **P 00 54 26.7 +0.3**
comp=Z,104nm,1.3s
E07A LR LR
comp=Z,14μm,19.0s
C09A Chrisman Ranch 52.17 330 *e*P **P 00 54 26.4 -0.1**
comp=Z,49nm,0.9s
C09A LR LR
comp=Z,20μm,22.0s
H04A Detroit Lake 52.27 325 *e*P **P 00 54 26.6 -0.7**
comp=Z,138nm,0.9s
H04A LR LR
comp=Z,20μm,20.0s
I03D Drain, OR 52.37 323 P **P 00 54 27.4 -0.6**
baz=125,SNR=40
KEBM Edson Butte 52.51 322 *e*P **P 00 54 29.9 +0.8**
comp=Z,191nm,1.0s
COR Corvallis 52.86 324 *e*P **P 00 54 31.8 +0.2**
comp=Z,175nm,1.0s
COR LR LR
comp=Z,12μm,19.0s
COR Corvallis 52.86 324 *e*P **P 00 54 31.8 +0.2**
COR pmax pmax
comp=Z,180nm,1.0s
LTY Liberty 53.03 328 *e*P **P 00 54 32.8 -0.1**
comp=Z,136nm,1.1s
CHRN Cochrane 53.06 171 *e*P **P 00 54 34.7 +1.7**
comp=Z,29nm,1.1s
B08A Colville Reser 53.07 330 *e*P **P 00 54 32.5 -0.6**
comp=Z,76nm,1.1s
B08A LR LR
comp=Z,17μm,21.0s
G03D McMinnville, O 53.20 325 P **P 00 54 33.8 -0.3**
baz=126,SNR=21
LON Longmire 53.32 327 *e*P **P 00 54 34.5 -0.5**
comp=Z,73nm,1.0s
LON LR LR
comp=Z,20μm,18.0s
LON Longmire 53.32 327 *e*P **P 00 54 34.5 -0.5**
LON pmax pmax
comp=Z,73nm,1.0s
F04D Rainier, OR 53.57 326 P **P 00 54 37.3 +0.5**
baz=127
C06D Leavenworth 53.58 329 P **P 00 54 36.7 -0.1**
baz=130
D05A Enumclaw 53.69 328 *e*P **P 00 54 37.5 -0.1**
comp=Z,267nm,0.9s
D05A LR LR
comp=Z,16μm,19.0s
F03A Seaside 53.79 325 *e*P **P 00 54 39.5 +1.1**
comp=Z,307nm,1.3s
F03A LR LR
comp=Z,23μm,19.0s
E03A Lebam 54.16 326 *e*P **P 00 54 41.2 +0.1**
comp=Z,238nm,1.0s
E03A LR LR
comp=Z,15μm,21.0s
B06A Marblemount 54.26 329 *e*P **P 00 54 41.6 -0.2**
comp=Z,160nm,1.0s
B06A LR LR
comp=Z,9μm,20.0s
B05A Bryant 54.42 329 P **P 00 54 42.0 -1.0**
baz=129
A04D Lummi Island 55.02 329 P **P 00 54 47.1 -0.2**
baz=129,SNR=40
PGC Sidney 55.36 328 *e*P **P 00 54 50.6 +0.9**
comp=Z,116nm,1.0s
PGC LR LR
comp=Z,11μm,20.0s
LLLB Lillooet 55.81 331 *e*P **P 00 54 53.2 +0.2**
comp=Z,206nm,1.1s
LLLB LR LR
comp=Z,15μm,22.0s
RKT Rikitea 58.38 239 *e*P **P 00 55 13.6 +2.0**
comp=Z,73nm,0.9s
RKT *e*S **S 01 03 12.4 -1.8**
comp=Z,14μm,31.0s
RKT *e*LQ LQ 01 09 53.8
comp=Z,5μm,31.2s
RKT *e*LR LR 01 12 23.7
comp=Z,26μm,28.8s,baz=64
SACV Santiago Islan 58.74 76 PFAKE 00 55 30.0 +16
SACV LR LR
comp=Z,2μm,19.0s
TAOE Nuku Hiva Isla 59.04 256 *e*S **S 01 03 20.3 -3.0**
comp=Z,9μm,26.9s
TAOE *e*SS **SS 01 07 13.0 -4.5**
comp=Z,2μm,27.5s
TAOE *e*LQ LQ 01 10 11.3
comp=Z,27μm,30.0s
TAOE *e*LR LR 01 12 41.5
comp=Z,16μm,26.6s,baz=80
TAOE Nuku Hiva Isla 59.04 256 PFAKE 00 55 30.0 +14
TAOE LR LR
comp=Z,6μm,18.0s
ROSA Rosais 59.29 48 *e*P **P 00 55 17.9 +0.1**
comp=Z,506nm,1.2s
ROSA LR LR
comp=Z,8μm,22.0s
BBB Bella Bella 59.86 329 *e*P **P 00 55 21.9 +0.5**
BBB *ep*P **P 00 55 22.3 +1.0**
BBB LR LR
comp=Z,8μm,20.0s
EFI East Falkland 60.52 163 PFAKE 00 55 40.0 +14
EFI LR LR
comp=Z,7μm,22.0s
EFI East Falkland 60.52 163‖ *e*P **P 00 55 25.2 -0.6**
EFI pmax pmax
comp=Z,10μm,21.5s
CMLA Cha da Macela 61.02 50 PFAKE 00 55 40.0 +10
CMLA LR LR
comp=Z,5μm,19.0s
IVI Ivigtut 61.46 18 *e*P **P 00 55 31.0 -1.1**
comp=Z,136nm,1.2s
YKA Yellowknife Ar 61.75 344 P **P 00 55 33.0 -1.0**
comp=Z,56nm,0.7s,baz=139,slow=6.7,SNR=146
YKA LR LR 01 24 07.6
comp=Z,472nm,18.4s,baz=140,slow=38
YKA PKP2bc 01 24 50.9
comp=Z,1.0nm,1.0s,baz=321,slow=2.9,SNR=4.7
YKA PKP2ab 01 25 02.2
comp=Z,2.4nm,1.1s,baz=317,slow=2.9,SNR=5.7
YKA Yellowknife Ar 61.75 344 P **P 00 55 33.0 -1.0**
NRS Narsarsuaq 62.31 19 *i* P **P 00 55 38.3 +0.5**
comp=Z,168nm,1.1s
comp=Z,6μm,16.0s
NRS Narsarsuaq 62.31 19 *e*P **P 00 55 39.1 +1.4**
comp=Z,171nm,1.1s
NRS LR LR

comp=Z,4μm,19.0s
NRS Narsarsuaq 62.31 19 eP P 00 55 39.2 +1.4
NRS pmax pmax
comp=Z,170nm,1.1s
DIB Dawson Inlet, 62.64 329 eP P 00 55 40.7 +0.5
DIB LR LR
comp=Z,11μm,18.0s
CRAG Craig 64.14 331 eP P 00 55 50.6 +0.6
comp=Z,138nm,1.0s
WRAK Wrangell Islan 64.28 332 eP P 00 55 51.0 0.0
WRAK LR LR
comp=Z,39nm,0.8s
DLBC Dease Lake 64.37 335 P **P 00 55 52.0 +0.3**
comp=Z,10μm,21.0s
DLBC Dease Lake 64.37 335 eP P 00 55 52.2 +0.5
comp=Z,98nm,1.0s,baz=133,slow=5.1,SNR=86
DLBC LR LR
comp=Z,249nm,1.0s
SFJD Kangerlussuaq 65.41 13 P **P 00 55 57.0 -1.1**
SFJD LR LR 01 22 52.1
comp=Z,20μm,19.0s
SFJD Kangerlussuaq 65.41 13 *i* P **P 00 55 56.7 -1.4**
comp=Z,117nm,1.2s,baz=202,slow=5.8,SNR=27
SFJD pmax pmax
comp=Z,174nm,1.4s
SFJD Kangerlussuaq 65.41 13 eP P 00 55 57.2 -0.9
comp=Z,7μm,22.0s,baz=218,slow=35
SFJD LR LR
comp=Z,8μm,16.0s
SFJD Kangerlussuaq 65.41 13 eP P 00 55 57.2 -0.9
comp=Z,151nm,1.3s
JIS Juneau Island 66.20 333 eP P 00 56 04.0 +0.6
JIS LR LR
comp=Z,150nm,1.2s
MACI Morro de la Ar 66.50 62 eP P 00 56 06.5 +0.3
MACI LR LR
comp=Z,123nm,1.1s
PMOZ Porto Moniz, M 66.55 57 eP P 00 56 09.8 +3.5
PMOZ LR LR
comp=Z,702nm,1.2s
PMOZ Porto Moniz, M 66.55 57 eP P 00 56 10.2 +2.6
PMOZ eS S 01 05 09.2 +12
comp=Z,307nm,1.4s
BESE Bessie Mountai 66.57 333 eP P 00 56 06.1 +0.2
BESE eLR LR 01 16 15.7
comp=Z,3μm,20.0s
PMAR Madeira 66.77 57 eP P 00 56 06.5 -1.3
PMAR LR LR
comp=Z,138nm,1.2s
FUL Funchal 66.77 57 eP P 00 56 10.2 +2.6
FUL LR LR
comp=Z,11μm,22.0s
ILULI Ilulissat 67.13 12 eP P 00 56 09.7 +0.6
ILULI LR LR
comp=Z,108nm,1.4s
ILULI Ilulissat 67.13 12 i P P 00 56 10.4 +1.3
ILULI LR LR
comp=Z,103nm,1.6s
ILULI Ilulissat 67.13 12 eP P 00 56 10.4 +1.3
ILULI pmax pmax
comp=Z,478nm,1.6s
SKAG Skagway 67.23 334 eP P 00 56 10.4 +0.5
SKAG LR LR
comp=Z,387nm,1.5s
PMPS Porto Santo 67.30 56 eP P 00 56 13.0 +2.1
PMPS LR LR
comp=Z,8μm,20.0s
VAH Vaihoa 67.52 251 eP P 00 56 13.3 +0.7
VAH LR LR
comp=Z,11μm,20.0s
WHY Whitehorse 67.67 335 eP P 00 56 12.7 -0.2
WHY LR LR
comp=Z,390nm,1.5s
PMOR Pomariorio Ree 67.72 252 eP P 00 56 14.7 +0.8
PMOR LR LR
comp=Z,49nm,1.0s
ANGG Ammassalik, Gr 67.93 18 eP P 00 56 11.6 -2.6
ANGG LR LR
comp=Z,7μm,19.0s
TVO Taravao 69.59 249 eP P 00 56 26.3 +0.7
TVO LR LR
comp=Z,192nm,1.2s
TIAR Tiarei 69.63 249 eP P 00 56 26.4 +0.6
TIAR LR LR
comp=Z,12nm,0.8s
RES Resolute Bay 69.70 357 P **P 00 56 23.3 -1.8**
RES LR LR
comp=Z,28nm,1.0s
RES Resolute Bay 69.70 357 eP P 00 56 23.2 -1.9
RES LR LR
comp=Z,36nm,1.0s,baz=184,slow=10,SNR=40
RES Resolute Bay 69.70 357 eP P 00 56 23.2 -1.9
RES pmax pmax
comp=Z,55nm,1.0s
PPT Papeete 69.85 249 LR LR 01 20 03.5
PPT2 LR LR
comp=Z,9μm,20.0s
PPT2 Papeete2 69.85 249 eP P 00 56 27.9 +0.7
PPT2 eS S 01 05 34.5 -2.4
comp=Z,55nm,1.0s
PPT2 Papeete2 69.85 249 eP P 00 56 27.9 +0.7
PPT2 eLQ LQ 01 14 45.0
comp=Z,66nm,1.1s
PAE Paea 69.87 249 eP P 00 56 27.7 +0.5
PAE LR LR
comp=Z,7μm,25.2s
HOPE Hope Point 70.71 153 eP P 00 56 33.5 +1.9
HOPE LR LR
comp=Z,14μm,25.0s,baz=66
KULLO Kullorsuaq 70.79 7 i P P 00 56 30.4 -1.4
KULLO LR LR
comp=Z,109nm,0.9s
BALM Baldy 71.06 334 PFAKE 00 56 50.0 +16
BALM LR LR
comp=Z,5μm,22.0s
DAWY Dawson 71.19 337 eP P 00 56 34.0 -0.6
DAWY LR LR
comp=Z,208nm,1.2s
CRQM Cirque 71.30 333 eP P 00 56 35.8 +0.4
CRQM LR LR
comp=Z,8μm,21.0s
INK Inuvik 71.42 342 P **P 00 56 35.6 -0.1**
INK LR LR
comp=Z,12μm,21.0s
INK Inuvik 71.42 342 eP P 00 56 35.5 -0.2
INK LR LR
comp=Z,114nm,1.1s
INK Inuvik 71.42 342 eP P 00 56 35.5 -0.2
INK pmax pmax
comp=Z,11μm,22.0s
TULEG Thule 71.60 3 eP P 00 56 35.2 -1.4
TULEG LR LR
comp=Z,41nm,1.0s,baz=124,slow=5.5,SNR=42
HULD Heiheiahulu Di 71.62 289 PFAKE 00 56 50.0 +12
HULD LR LR
comp=Z,251nm,1.2s
NPOC North of Pu'u 71.74 289 PFAKE 00 56 50.0 +11
NPOC LR LR
comp=Z,6μm,19.0s
STCH Steam Cracks 71.76 289 PFAKE 00 56 50.0 +11
STCH LR LR
comp=Z,15μm,22.0s
PUH Pauahi 71.84 289 PFAKE 00 56 50.0 +11
PUH LR LR
comp=Z,7μm,21.0s
RAGM Ragged Mountai 71.86 333 eP P 00 56 39.5 +0.9
RAGM LR LR
comp=Z,6μm,22.0s
BYL Byron's Ledge 71.89 289 PFAKE 00 56 50.0 +10
BYL LR LR
comp=Z,292nm,1.2s
HATHI Halema'uma'u T 71.89 289 PFAKE 00 56 50.0 +10
HATHI LR LR
comp=Z,21μm,21.0s
KKO Keanakako'i 71.89 289 PFAKE 00 56 50.0 +10
KKO LR LR
comp=Z,4μm,20.0s
SBLHI Steaming Bluff 71.89 289 PFAKE 00 56 50.0 +10
SBLHI LR LR
comp=Z,6μm,20.0s
RIM Rim 71.90 289 PFAKE 00 56 50.0 +10
RIM LR LR
comp=Z,9μm,22.0s
OBL Observatory Le 71.91 289 PFAKE 00 56 50.0 +10
OBL LR LR
comp=Z,5μm,20.0s
UWE Uwekahuna 71.92 289 PFAKE 00 56 50.0 +10
UWE LR LR
comp=Z,6μm,19.0s
HLP Hilina Pali 71.93 288 PFAKE 00 56 50.0 +10
HLP LR LR
comp=Z,6μm,22.0s
MLH Mauna Loa 72.01 289 PFAKE 00 56 50.0 +9.5
MLH LR LR
comp=Z,5μm,20.0s
BMRM Bremner River 72.05 333 eP P 00 56 40.0 +0.2
BMRM LR LR
comp=Z,6μm,18.0s
AIN Ainahou 72.07 289 PFAKE 00 56 50.0 +9.1
AIN LR LR
comp=Z,12μm,22.0s
HMH Humu'ula Sheep 72.10 289 PFAKE 00 56 50.0 +8.8
HMH LR LR
comp=Z,5μm,21.0s
POHA Pohakuloa 72.15 289 PFAKE 00 56 50.0 +8.6
POHA LR LR
comp=Z,7μm,19.0s
MLOA Mauna Loa Obse 72.19 289 PFAKE 00 56 50.0 +8.2
MLOA LR LR
comp=Z,6μm,20.0s
MWH Moku'aweowe 72.20 289 PFAKE 00 56 50.0 +7.9
MWH LR LR
comp=Z,6μm,18.0s
EGAK Eagle 72.21 337 eP P 00 56 40.2 -0.3
EGAK LR LR
comp=Z,10μm,22.0s
KHU Kahuku 72.22 288 PFAKE 00 56 50.0 +8.2
KHU LR LR
comp=Z,162nm,0.9s
MID Middleton Isla 72.29 331 eP P 00 56 41.6 +0.5
MID pmax pmax
comp=Z,11μm,21.0s
MID Middleton Isla 72.29 331 eP P 00 56 41.6 +0.5
MID pmax pmax
comp=Z,11μm,22.0s
HPAH Hawaii Prepara 72.31 289 PFAKE 00 56 50.0 +7.9
HPAH LR LR
comp=Z,230nm,1.1s
SUMG Summit 72.39 13 *i* P **P 00 56 41.0 -1.0**
SUMG LR LR
comp=Z,5μm,19.0s
SUMG Summit 72.39 13 eP P 00 56 39.8 -2.2
SUMG LR LR
comp=Z,473nm,1.2s
SUMG Summit 72.39 13 eP P 00 56 39.8 -2.2
SUMG pmax pmax
comp=Z,488nm,1.2s
EYAK Cordova Ski Ar 72.41 332 eP P 00 56 42.4 +0.6
EYAK LR LR
comp=Z,10μm,19.0s
HUH Hualalai 72.43 289 PFAKE 00 57 00.0 +17
HUH LR LR
comp=Z,490nm,1.2s
DIV Divide 72.63 333 eP P 00 56 44.0 +0.8
DIV LR LR
comp=Z,7μm,20.0s
HLK Haleakala 72.83 290 PFAKE 00 57 00.0 +15
HLK LR LR
comp=Z,152nm,1.2s
KLU Klutina 72.83 333 eP P 00 56 44.4 -0.1
KLU LR LR
comp=Z,13μm,22.0s
HARP HAARP 72.84 334 eP P 00 56 44.7 +0.3
HARP LR LR
comp=Z,5μm,18.0s
DOT Dot Lake 72.87 336 PFAKE 00 57 00.0 +15
DOT LR LR
comp=Z,196nm,1.1s
SCRK Sand Creek 72.97 336 eP P 00 56 45.2 -0.1
SCRK LR LR
comp=Z,10μm,21.0s
KHLH Kahului Airpor 73.00 290 PFAKE 00 57 00.0 +14
KHLH LR LR
comp=Z,87nm,0.9s
GLI Glacier Island 73.15 333 eP P 00 56 45.7 -0.5
GLI LR LR
comp=Z,10μm,20.0s
PAX Paxson 73.19 335 eP P 00 56 46.4 -0.1
PAX LR LR
comp=Z,12μm,21.0s
PAX Paxson 73.19 335 eP P 00 56 46.4 -0.1
PAX pmax pmax
comp=Z,9μm,18.0s
RIDG Independ'e Rid 73.22 336 eP P 00 56 46.7 0.0
RIDG LR LR
comp=Z,7μm,19.0s
BORG Borgarnes 73.27 23 eP P 00 56 47.9 +1.1
BORG LR LR
comp=Z,90nm,1.1s
BORG Borgarnes 73.27 23 eP P 00 56 47.9 +1.1
BORG pmax pmax
comp=Z,198nm,1.4s
SCM Sheep Creek Mo 73.58 333 eP P 00 56 48.6 -0.3
SCM pmax pmax
comp=Z,168nm,1.0s
SCM Sheep Creek Mo 73.58 333 eP P 00 56 48.6 -0.3
SCM LR LR
comp=Z,170nm,1.0s
PMAFR Mafra 73.75 51 eP P 00 56 51.3 +1.1
PMAFR LR LR
comp=Z,5μm,20.0s
PMST Lisbon--Monsan 73.80 51 eP P 00 56 51.1 +0.6
PMST LR LR
comp=Z,131nm,1.6s
LIS Lisbon 73.83 51 eP P 00 56 50.5 -0.1
LIS AMb AMB 00 56 57.1
comp=Z,396nm,1.4s
LIS Lisbon 73.83 51 eS **S 01 06 22.6 +0.7**
LIS eP **P 00 56 50.5 -0.1**
comp=Z,329nm,1.9s
PFVI Vila Bisbo 73.92 53 eS **S 01 06 22.5 +0.7**
PFVI LR LR
comp=Z,382nm,1.6s
PFVI Vila Bisbo 73.92 53 eP P 00 56 51.8 +0.6
PFVI LR LR
comp=Z,6μm,22.0s
PFVI Vila Bisbo 73.92 53 ePP PP 00 59 20.6 -16
PFVI LR LR
comp=Z,322nm,1.3s
SEW Seward 74.00 331 eP P 00 56 50.9 -0.3
SEW LR LR
comp=Z,11μm,21.0s
SEW Seward 74.00 331 eP P 00 56 52.4 +1.2
SEW LR LR
comp=Z,144nm,1.0s
SML Sawmill 74.02 333 eP P 00 56 51.0 -0.4
SML LR LR
comp=Z,10μm,22.0s
SML Sawmill 74.02 333 eP P 00 56 51.0 -0.4
SML pmax pmax
comp=Z,6μm,20.0s
DHY Denali Highway 74.03 335 eP P 00 56 51.0 -0.6
DHY LR LR
comp=Z,305nm,1.2s
PTEO Sao Teotonio 74.04 53 eP P 00 56 52.5 +0.6
PTEO LR LR
comp=Z,11μm,21.0s
PTEO Sao Teotonio 74.04 53 ePP PP 00 59 18.1 -19
PTEO LR LR
comp=Z,234nm,1.9s
MORF Marmelete 74.07 53 eS **S 01 06 25.3 +0.4**
MORF LR LR
comp=Z,10μm,22.0s
MORF Marmelete 74.07 53 eP P 00 56 52.1 -0.1
MORF AMb AMB 00 56 60.0
comp=Z,468nm,1.6s
MORF Marmelete 74.07 53 eS **S 01 06 25.3 +0.4**
MORF LR LR
comp=Z,469nm,1.6s
MORF Marmelete 74.07 53 eP P 00 56 53.2 +1.0
MORF LR LR
comp=Z,310nm,1.2s
PNCL Nicolau / Gran 74.25 52 eP P 00 56 53.7 +0.6
PNCL LR LR
comp=Z,255nm,1.5s
PNCL Nicolau / Gran 74.25 52 ePg PP 00 59 18.1 -21
PNCL LR LR
comp=Z,160nm,1.0s
PNCL Nicolau / Gran 74.25 52 ePP PP 00 59 18.1 -21
PNCL LR LR
comp=Z,7μm,19.0s
GHO Glory Hole Cre 74.28 333 eP P 00 56 52.5 -0.4
GHO LR LR
comp=Z,51nm,1.0s
PMR Palmer 74.31 333 eP P 00 56 52.2 -0.8
PMR LR LR
comp=Z,8μm,18.0s
PMR Palmer 74.31 333 eP P 00 56 52.2 -0.8
PMR pmax pmax
comp=Z,51nm,1.0s
ALMR Almeirim 74.32 51 eP P 00 56 53.3 -0.3
ALMR AMb AMB 00 57 01.4
comp=Z,527nm,1.6s
ALMR Almeirim 74.32 51 eS **S 01 06 28.2 +0.8**
ALMR eP **P 00 56 53.9 +0.4**
comp=Z,537nm,1.4s
ALMR Almeirim 74.32 51 ePP PP 00 59 17.1 -22
ALMR Almeirim 74.32 51 eP P 00 56 53.2 -0.3
ALMR eS **S 01 06 28.2 +0.8**
RC01 Rabbit Creek A 74.43 332 eP P 00 56 53.7 -0.1
comp=Z,186nm,1.2s
RC01 LR LR
comp=Z,10μm,21.0s
ILAR Eielson Array 74.44 336 P **P 00 56 53.6 -0.2**
comp=Z,24nm,0.8s,baz=118,slow=4.5,SNR=103
MESJ Messejana 74.46 52 eP P 00 56 54.2 -0.3
MESJ AMb AMB 00 57 01.1
comp=Z,147nm,1.7s
MESJ Messejana 74.46 52 eS **S 01 06 29.8 +0.7**
MESJ Messejana 74.46 52 eP P 00 56 55.1 +0.7
comp=Z,148nm,1.6s
MESJ Messejana 74.46 52 ePP PP 00 59 25.9 -15
MESJ Messejana 74.46 52 eP P 00 56 54.1 -0.3
MESJ eS **S 01 06 29.8 +0.7**
PCAS Casmilo, Conde 74.47 50 eP P 00 56 54.7 +0.3
comp=Z,492nm,1.6s
PCAS Casmilo, Conde 74.47 50 ePP PP 00 59 19.1 -22
HON Honolulu 74.47 291 PFAKE 00 57 10.0 +15
HON LR LR
comp=Z,7μm,19.0s
OPA Opana 74.49 291 PFAKE 00 57 10.0 +15
OPA LR LR
comp=Z,10μm,21.0s
KIP Kipapa 74.49 291 PFAKE 00 57 10.0 +15
KIP LR LR
comp=Z,8μm,19.0s
PTOM Tomar 74.49 50 eP P 00 56 54.5 -0.1
comp=Z,291nm,1.6s
PTOM Tomar 74.49 50 ePP PP 00 59 19.6 -21
FYU Fort Yukon 74.50 338 PFAKE 00 57 10.0 +16
FYU LR LR
comp=Z,14μm,21.0s
PTO Porto 74.51 49 eP P 00 56 55.0 +0.4
comp=Z,288nm,1.6s
BRLK Bradley Lake 74.59 331 eP P 00 56 54.5 -0.2
comp=Z,104nm,0.9s
BRLK LR LR
comp=Z,9μm,22.0s
PCVE Castro Verde 74.59 53 eP P 00 56 55.4 +0.2
comp=Z,182nm,1.6s
PCVE Castro Verde 74.59 53 ePP PP 00 59 26.7 -15
PBDV Barranco-do-Ve 74.64 53 eP P 00 56 56.5 +1.0
comp=Z,203nm,1.5s
PBDV Barranco-do-Ve 74.64 53 ePP PP 00 59 23.4 -19
EVO Evora 74.69 52 eP P 00 56 55.5 -0.2
comp=Z,171nm,1.7s
EVO Evora 74.69 52 ePP PP 00 59 25.0 -18
PBEJ Beja 74.76 52 eP P 00 56 56.7 +0.5
comp=Z,186nm,1.6s
PBEJ Beja 74.76 52 ePP PP 00 59 24.7 -19
CCB Clear Creek Bu 74.77 336 eP P 00 56 54.7 -0.9
comp=Z,32nm,1.1s
CCB LR LR
comp=Z,10μm,19.0s
RND Reindeer 74.78 335 eP P 00 56 55.7 -0.1
comp=Z,232nm,0.9s
RND LR LR
comp=Z,10μm,21.0s
RND Reindeer 74.78 335 eP P 00 56 55.7 -0.1
RND pmax pmax
comp=Z,230nm,0.9s
WRH Wood River Hil 74.82 336 eP P 00 56 55.1 -0.8
comp=Z,46nm,1.0s
WRH LR LR
comp=Z,10μm,19.0s
PVAQ Vaqueiros 74.82 53 eP P 00 56 56.7 +0.2
comp=Z,177nm,1.5s
PVAQ Vaqueiros 74.82 53 ePP PP 00 59 29.0 -15
PVAQ eS **S 01 06 39.6 +6.5**
PVAQ Vaqueiros 74.82 53 eLQ LQ 01 16 46.6
PVAQ eLR LR 01 20 06.2
comp=Z,7μm,22.0s
PGAV Gavieira, Arco 74.86 48 eP P 00 56 57.0 +0.2
comp=Z,149nm,1.6s
PGAV eS **S 01 06 36.5 +2.9**
PGAV Gavieira, Arco 74.86 48 eLQ LQ 01 16 37.8
PGAV eLR LR 01 20 39.1
comp=Z,5μm,20.0s
COLA College 74.86 336 eP P 00 56 55.8 -0.4
comp=Z,92nm,1.3s
COLA LR LR
comp=Z,11μm,19.0s
COLA College 74.86 336 eP P 00 56 55.8 -0.4
COLA pmax pmax
comp=Z,92nm,1.2s
KDAK Kodiak Island 74.91 329 P **P 00 56 56.1 -0.5**
comp=Z,30nm,1.0s,baz=92,slow=4.8,SNR=12
KDAK Kodiak Island 74.91 329 eP P 00 56 56.8 +0.3
comp=Z,115nm,1.4s
KDAK LR LR
comp=Z,6μm,22.0s
KDAK Kodiak Island 74.91 329 *i* P **P 00 56 57.8 +1.2**
MCK McKinley 74.92 335 eP P 00 56 56.5 -0.1
comp=Z,141nm,0.9s
MCK LR LR
comp=Z,8μm,20.0s
MCK McKinley 74.92 335 eP P 00 56 56.5 -0.1
MCK pmax pmax
comp=Z,140nm,0.9s
HOM Homer 74.93 331 PFAKE 00 57 10.0 +13
HOM LR LR
comp=Z,6μm,19.0s
PVIS Viseu 75.00 49 eP P 00 56 57.0 -0.6
comp=Z,180nm,1.7s
PVIS Viseu 75.00 49 ePP PP 00 59 25.7 -20
PCAB Cabril 75.01 48 eP P 00 56 58.5 +0.9
comp=Z,140nm,1.5s
SUA Susitna One 75.01 333 eP P 00 56 57.0 -0.3
comp=Z,103nm,0.8s
MDM Murphy Dome 75.05 336 eP P 00 56 56.8 -0.5
comp=Z,102nm,1.3s
MDM LR LR
comp=Z,10μm,19.0s
PESTR Estremoz 75.05 51 eP P 00 56 57.6 -0.3
comp=Z,429nm,1.3s
PESTR Estremoz 75.05 51 ePP PP 00 59 27.5 -18
PESTR Estremoz 75.05 51 eP P 00 56 56.8 -1.1
comp=Z,184nm,1.2s
PESTR LR LR
comp=Z,2μm,21.0s
POLO Lamas de Olo 75.14 49 eP P 00 56 59.0 +0.6
comp=Z,94nm,1.6s
OHAK Old Harbor 75.15 328 eP P 00 56 57.9 0.0
comp=Z,163nm,1.2s
OHAK LR LR
comp=Z,4μm,21.0s
PVRL Vila Real 75.19 49 eP P 00 56 58.8 +0.2
comp=Z,185nm,1.6s
PCBR Castelo Branco 75.23 50 eP P 00 56 58.5 -0.3
comp=Z,201nm,1.5s
PCBR Castelo Branco 75.23 50 ePP PP 00 59 29.0 -18
MTE Manteigas 75.23 50 eP P 00 56 59.1 +0.2
comp=Z,162nm,1.4s
MTE eS **S 01 06 38.9 +1.1**
MTE Manteigas 75.23 50 eLQ LQ 01 17 03.0
MTE eLR LR 01 20 11.0
comp=Z,9μm,24.0s
MTE Manteigas 75.23 50 eP P 00 56 58.2 -0.7
comp=Z,151nm,1.4s
MTE LR LR
comp=Z,8μm,22.0s
PMRV Marv??o 75.26 51 eP P 00 56 59.2 +0.2
comp=Z,172nm,1.4s
PMRV eS **S 01 06 40.4 +2.4**
PMRV Marv??o 75.26 51 eLQ LQ 01 16 58.3
PMRV eLR LR 01 19 57.2
comp=Z,4μm,22.0s
RTC Rabat Centre 75.27 56 PFAKE 00 57 10.0 +11
RTC LR LR
comp=Z,27μm,21.0s
BWN Browne 75.28 335 eP P 00 56 58.3 -0.4
comp=Z,188nm,1.0s
BWN LR LR
comp=Z,9μm,20.0s

TRF	**Thorofare Moun**	**75.40**	**335**	*e*P	**P**		**00 56 58.8**	**-0.7**
	comp=Z,230nm,1.4s							
TRF				LR	LR			
	comp=Z,10μm,22.0s							
PBAR	**Barrancos**	**75.42**	**52**	*e*P	**P**		**00 57 00.2**	**+0.2**
	comp=Z,508nm,1.6s							
PBAR	**Barrancos**	**75.42**	**52**	*e*PP	PP		00 59 31.8	-17
SII	**Sitkinak Islan**	**75.47**	**327**	*e*P	**P**		**00 57 01.4**	**+1.5**
	comp=Z,545nm,1.8s							
SII				LR	LR			
	comp=Z,4μm,19.0s							
SCO	**Scoresbysund**	**75.51**	**18**	*i* P	**P**		**00 56 59.2**	**-0.6**
	comp=Z,4μm,16.0s							
SCO	**Scoresbysund**	**75.51**	**18**	*e*P	**P**		**00 56 59.5**	**-0.3**
	comp=Z,82nm,1.4s							
SCO				LR	LR			
	comp=Z,4μm,20.0s							
SCO	**Scoresbysund**	**75.51**	**18**	*e*P	**P**		**00 56 59.5**	**-0.3**
SCO				pmax	pmax			
	comp=Z,82nm,1.4s							
SKT	**Skwentna**	**75.52**	**333**	*e*P	**P**		**00 56 59.4**	**-0.6**
	comp=Z,161nm,1.0s							
SKT				LR	LR			
	comp=Z,7μm,18.0s							
MVO	**Moncorvo**	**75.70**	**49**	*e*P	**P**		**00 57 01.2**	**-0.4**
	comp=Z,193nm,1.6s							
MVO				*e*S	**S**		**01 06 44.9**	**+2.0**
MVO	**Moncorvo**	**75.70**	**49**	*e*LQ	LQ		01 17 00.9	
MVO				*e*LR	LR		01 20 33.4	
	comp=Z,5μm,22.0s							
BPAW	**Bear Paw Mtn.**	**75.90**	**335**	*e*P	**P**		**00 57 01.4**	**-0.8**
	comp=Z,150nm,1.0s							
BPAW				LR	LR			
	comp=Z,10μm,22.0s							
PBRG	**Braganca**	**75.97**	**48**	*e*P	**P**		**00 57 03.4**	**+0.3**
	comp=Z,159nm,1.6s							
PPLA	**Purkeypile**	**76.07**	**334**	*e*P	**P**		**00 57 02.5**	**-0.8**
	comp=Z,182nm,1.0s							
PPLA				LR	LR			
	comp=Z,9μm,22.0s							
KEKH	**Kekaha**	**76.07**	**291**	PFAKE			00 57 20.0	+16
KEKH				LR	LR			
	comp=Z,9μm,19.0s							
MLY	**Manley**	**76.08**	**336**	*e*P	**P**		**00 57 02.5**	**-0.7**
	comp=Z,204nm,1.5s							
MLY				LR	LR			
	comp=Z,7μm,20.0s							
CAST	**Castle Rocks**	**76.17**	**334**	PFAKE			00 57 20.0	+16
CAST				LR	LR			
	comp=Z,11μm,21.0s							
COLD	**Coldfoot**	**76.56**	**338**	*e*P	**P**		**00 57 06.4**	**+0.5**
	comp=Z,99nm,1.1s							
COLD				LR	LR			
	comp=Z,14μm,22.0s							
TOLK	**Toolik Lake Re**	**76.81**	**340**	P	**P**		**00 57 06.9**	**-0.4**
	baz=110,SNR=49							
TOLK	**Toolik Lake Re**	**76.81**	**340**	*e*P	**P**		**00 57 07.2**	**-0.1**
	comp=Z,46nm,1.0s							
TOLK				LR	LR			
	comp=Z,7μm,18.0s							
MDT	**Midelt**	**77.08**	**58**	P	**P**		**00 57 10.5**	**+0.8**
	comp=Z,37nm,0.9s,baz=286,slow=7.1,SNR=18							
MDT				LR	LR		01 25 43.9	
	comp=Z,4μm,21.9s,baz=288,slow=32							
TIC	**Toumodi**	**77.13**	**84**	*e*PKP2	**P**		**00 57 08.6**	**-1.5**
LIC	**Lamto**	**77.15**	**85**	*e*PKP2	**P**		**00 57 09.5**	**-0.7**
	comp=Z,212nm,0.9s							
SVW2	**Sparrevohn**	**77.17**	**332**	*e*P	**P**		**00 57 09.6**	**+0.1**
	comp=Z,36nm,1.0s							
SVW2				LR	LR			
	comp=Z,5μm,20.0s							
DBIC	**Dimbokro**	**77.29**	**84**	P	**P**		**00 57 12.4**	**+1.4**
	comp=Z,35nm,0.9s,baz=248,slow=5.9,SNR=20							
DBIC				LR	LR		01 28 22.2	
	comp=Z,2μm,21.7s,baz=253,slow=34							
DBIC	**Dimbokro**	**77.29**	**84**	*e*P	**P**		**00 57 10.0**	**-1.0**
	comp=Z,67nm,1.0s							
DBIC	**Dimbokro**	**77.29**	**84**	*e*P	**P**		**00 57 10.0**	**-1.0**
DBIC				pmax	pmax			
	comp=Z,67nm,1.0s							
KIC	**Kosan Boka**	**77.43**	**85**	*e*PKP2	**P**		**00 57 10.2**	**-1.6**
	comp=Z,137nm,0.9s							
IM3	**Indian Mountai**	**77.55**	**337**	*e*P	**P**		**00 57 09.8**	**-1.6**
DSB	**Dublin**	**77.56**	**37**	PFAKE			00 57 20.0	+8.3
DSB				LR	LR			
	comp=Z,6μm,22.0s							
PAB	**San Pablo**	**77.61**	**51**	*e*P	**P**		**00 57 12.6**	**+0.1**
	comp=Z,176nm,1.4s							
PAB				LR	LR			
	comp=Z,4μm,22.0s							
PAB	**San Pablo**	**77.61**	**51**	*e*P	**P**		**00 57 12.6**	**+0.1**
PAB				pmax	pmax			
	comp=Z,180nm,1.4s							
KOWA	**Kowa**	**77.69**	**76**	P	**P**		**00 57 12.7**	**-0.5**
	comp=Z,37nm,0.9s,baz=261,slow=4.6,SNR=25							
KOWA				LR	LR		01 30 26.8	
	comp=Z,3μm,19.4s,baz=266,slow=35							
KOWA	**Kowa**	**77.69**	**76**	*e*P	**P**		**00 57 12.7**	**-0.5**
	comp=Z,295nm,1.8s							
CHGN	**Chignik**	**77.73**	**326**	*e*P	**P**		**00 57 12.2**	**-0.4**
	comp=Z,148nm,1.0s							
CCA1	**Carnmenellis**	**77.89**	**40**	*e*P	P		00 57 04.4	-9.3
CCA1				IAMs_20	IAMs_20		01 23 32.8	
	comp=Z,11μm,24.7s							
ESDC	**Sonseca Array**	**77.92**	**51**	P	**P**		**00 57 13.7**	**-0.4**
	comp=Z,52nm,1.1s,baz=272,slow=5.4,SNR=91							
ESDC				LR	LR		01 26 01.4	
	comp=Z,3μm,21.7s,baz=270,slow=31							
ESLA	**Sonseca Array**	**77.92**	**51**	*e*P	**P**		**00 57 14.3**	**+0.2**
	comp=Z,191nm,1.4s							
CLGH	**Cloghs, Cushen**	**77.97**	**35**	*e*P	P		00 57 05.5	-8.5
CLGH				IAMs_20	IAMs_20		01 23 54.1	
	comp=Z,6μm,23.6s							
ES19	**SONSECA Array**	**77.97**	**51**	*e*P	**P**		**00 57 13.8**	**-0.7**
HTL	**Hartland**	**78.45**	**39**	*e*P	P		00 57 07.3	-9.4
HTL				IAMs_20	IAMs_20		01 24 02.4	
	comp=Z,5μm,23.7s							
KPL	**Plockton**	**78.54**	**33**	*e*P	P		00 57 07.4	-10
KPL				IAmb	IAmb		00 57 21.0	
	comp=Z,204nm,1.4s							
KPL				IAMs_20	IAMs_20		01 23 08.4	
	comp=Z,9μm,24.5s							
WPS	**Cemaes, Angles**	**78.69**	**37**	*e*P	P		00 57 08.7	-9.3
WPS				IAMs_20	IAMs_20		01 23 23.1	
	comp=Z,8μm,27.4s							
GAL1	**Galloway**	**78.74**	**35**	*e*P	P		00 57 10.3	-7.9
GAL1				IAmb	IAmb		00 57 22.4	
	comp=Z,104nm,1.3s							
GAL1				IAMs_20	IAMs_20		01 25 46.9	
	comp=Z,3μm,21.5s							
DYA	**Yadsworthy**	**78.74**	**40**	*e*P	P		00 57 07.9	-10
DYA				IAMs_20	IAMs_20		01 23 56.5	
	comp=Z,10μm,24.4s							
WLF1	**Llynfaes**	**78.74**	**37**	*e*P	P		00 57 09.9	-8.4
WLF1				IAMs_20	IAMs_20		01 23 24.4	
	comp=Z,16μm,25.7s							
IOMK	**Kirk Michael**	**78.75**	**36**	*e*P	P		00 57 08.5	-10
IOMK				IAmb	IAmb		00 57 22.8	
	comp=Z,248nm,1.4s							
IOMK				IAMs_20	IAMs_20		01 23 11.9	
	comp=Z,6μm,26.6s							
PGBU	**Glenifferbraes**	**78.98**	**34**	*e*P	P		00 57 09.4	-10
PGBU				IAMs_20	IAMs_20		01 24 36.3	
	comp=Z,5μm,22.2s							
ROSF	**Rostrenen**	**78.99**	**42**	*e*P	**P**		**00 57 23.9**	**+4.1**
ROSF				pmax	pmax			
	comp=Z,269nm,1.4s							
QUIF	**Quistinic**	**79.03**	**42**	*e*P	**P**		**00 57 20.0**	**0.0**
DAG	**Danmarks Havn**	**79.06**	**12**	*i* P	**P**		**00 57 18.6**	**-1.0**
	comp=Z,164nm,1.6s							
	comp=Z,8μm,20.0s							
FOEL	**Foel Wylfa**	**79.42**	**37**	*e*P	P		00 57 10.6	-12
FOEL				IAmb	IAmb		00 57 25.1	
	comp=Z,124nm,1.3s							
FOEL				IAMs_20	IAMs_20		01 25 58.0	
	comp=Z,8μm,22.9s							
MCH1	**Michaelchurch**	**79.47**	**38**	*e*P	P		00 57 14.5	-7.8
MCH1				IAmb	IAmb		00 57 28.5	
	comp=Z,121nm,1.3s							
MCH1				IAMs_20	IAMs_20		01 26 24.9	
	comp=Z,8μm,20.9s							
MONM	**Monmouth**	**79.57**	**38**	*e*P	P		00 57 13.4	-9.5
MONM				IAMs_20	IAMs_20		01 26 28.9	
	comp=Z,8μm,19.8s							
HLM1	**Long Mynd**	**79.58**	**38**	*e*P	P		00 57 13.3	-10
HLM1				IAmb	IAmb		00 57 27.2	
	comp=Z,170nm,1.4s							
HLM1				IAMs_20	IAMs_20		01 26 58.7	
	comp=Z,6μm,20.8s							
BIGH	**Upper Bighouse**	**79.61**	**32**	*e*P	P		00 57 13.5	-9.5
BIGH				IAMs_20	IAMs_20		01 24 22.4	
	comp=Z,18μm,26.4s							
KESW	**Keswick, Cumbr**	**79.64**	**36**	*e*P	P		00 57 12.4	-11
KESW				IAmb	IAmb		00 57 27.4	
	comp=Z,223nm,1.2s							
KESW				IAMs_20	IAMs_20		01 23 34.5	
	comp=Z,7μm,30.0s							
ESK	**Eskdalemuir**	**79.65**	**35**	*e*P	**P**		**00 57 23.5**	**+0.3**
	comp=Z,219nm,1.4s							
ESK	**Eskdalemuir**	**79.65**	**35**	*e*P	P		00 57 12.0	-11
ESK				IAmb	IAmb		00 57 26.2	
	comp=Z,228nm,1.4s							
ESK				IAMs_20	IAMs_20		01 25 39.6	
	comp=Z,7μm,22.3s							
ESK	**Eskdalemuir**	**79.65**	**35**	*e*P	**P**		**00 57 23.5**	**+0.3**
ESK				pmax	pmax			
	comp=Z,220nm,1.3s							
EKA	**Eskdalemuir Ar**	**79.68**	**35**	P	**P**		**00 57 22.5**	**-0.9**
	comp=Z,86nm,1.1s,baz=261,slow=4.8,SNR=26							
EKA				LR	LR		01 27 06.2	
	comp=Z,3μm,21.9s,baz=270,slow=32							
EDI	**Edinburgh**	**79.72**	**34**	*e*P	P		00 57 13.7	-10
EDI				IAMs_20	IAMs_20		01 24 45.4	
	comp=Z,6μm,22.8s							
BATH	**Bath**	**79.84**	**39**	IAMs_20	IAMs_20		01 26 36.2	
	comp=Z,9μm,20.7s							
STRD	**Stroud**	**79.96**	**38**	*e*P	P		00 57 15.3	-10
STRD				IAmb	IAmb		00 57 29.3	
	comp=Z,196nm,1.2s							
STRD				IAMs_20	IAMs_20		01 26 40.3	
	comp=Z,9μm,19.7s							
RAR	**Rarotonga**	**79.99**	**247**	LR	LR		01 24 55.7	
	comp=Z,6μm,18.1s,baz=82,slow=30							
STNC	**Stoke**	**80.04**	**37**	*e*P	P		00 57 16.3	-9.1
STNC				IAmb	IAmb		00 57 30.1	
	comp=Z,264nm,1.4s							
STNC				IAMs_20	IAMs_20		01 26 16.6	
	comp=Z,7μm,24.1s							
SJPF	**Ste Jean**	**80.13**	**47**	*e*P	**P**		**00 57 26.8**	**+0.7**
SJPF				pmax	pmax			
	comp=Z,236nm,1.6s							
DRUM	**Mains of Drumt**	**80.20**	**33**	*e*P	P		00 57 17.0	-9.2
DRUM				IAmb	IAmb		00 57 30.2	
	comp=Z,214nm,1.3s							
DRUM				IAMs_20	IAMs_20		01 24 08.6	
	comp=Z,7μm,25.3s							
LBWR	**Ladybower, Pea**	**80.35**	**37**	*e*P	P		00 57 17.4	-10
LBWR				IAmb	IAmb		00 57 31.6	
	comp=Z,180nm,1.1s							
LBWR				IAMs_20	IAMs_20		01 24 24.8	
	comp=Z,7μm,24.8s							
HPK	**Haverah Park**	**80.45**	**36**	*e*P	P		00 57 19.0	-8.6
HPK				IAmb	IAmb		00 57 31.9	
	comp=Z,237nm,1.6s							
HPK				IAMs_20	IAMs_20		01 26 17.2	
	comp=Z,6μm,23.2s							
WOL	**Wolverton**	**80.52**	**39**	*e*P	P		00 57 18.7	-9.3
WOL				IAmb	IAmb		00 57 32.5	
	comp=Z,313nm,1.4s							
WOL				IAMs_20	IAMs_20		01 27 08.5	
	comp=Z,9μm,20.9s							
GRR	**Gorron**	**80.60**	**42**	*e*P	**P**		**00 57 28.5**	**0.0**
GRR				pmax	pmax			
	comp=Z,183nm,1.4s							
ETSF	**Etsaut**	**80.61**	**48**	*e*P	**P**		**00 57 29.4**	**+0.6**
ETSF				pmax	pmax			
	comp=Z,73nm,1.6s							
FLN	**La Foliniere**	**80.87**	**42**	*e*P	**P**		**00 57 30.1**	**+0.2**
FLN				pmax	pmax			
	comp=Z,206nm,1.3s							
LRW	**Lerwick**	**81.17**	**30**	*e*P	P		00 57 23.6	-7.7
LRW				IAMs_20	IAMs_20		01 23 33.4	
	comp=Z,12μm,50.1s							
LMK	**Market Rasen**	**81.19**	**37**	*e*P	P		00 57 21.7	-10
LMK				IAMs_20	IAMs_20		01 24 47.8	
	comp=Z,7μm,25.6s							
RDOG	**Red Dog Mine**	**81.48**	**338**	*e*P	**P**		**00 57 32.7**	**-0.1**
	comp=Z,63nm,1.1s							
HMNX	**Herstmonceux**	**81.48**	**39**	*e*P	P		00 57 22.3	-11
HMNX				IAMs_20	IAMs_20		01 25 56.2	
	comp=Z,13μm,24.5s							
WACR	**West Acre**	**81.73**	**38**	IAmb	IAmb		00 57 38.5	
	comp=Z,311nm,1.1s							
WACR				IAMs_20	IAMs_20		01 27 18.5	
	comp=Z,8μm,22.4s							
ELSH	**Elham, Standar**	**81.99**	**39**	*e*P	P		00 57 27.2	-8.6
ELSH				IAMs_20	IAMs_20		01 26 13.2	
	comp=Z,11μm,24.1s							
UNV	**Unalaska Valle**	**82.14**	**324**	*e*P	**P**		**00 57 38.2**	**+1.7**
	comp=Z,73nm,1.0s							
CAF	**Calviac**	**82.54**	**46**	*e*P	**P**		**00 57 38.8**	**-0.1**
CAF				pmax	pmax			
	comp=Z,99nm,1.5s							
TCF	**Toulx Ste Croi**	**82.64**	**44**	*e*P	**P**		**00 57 38.9**	**-0.5**
TCF				pmax	pmax			
	comp=Z,73nm,1.4s							
TOA0	**Torodi Ar. Sit**	**83.30**	**77**	*e*P	**P**		**00 57 42.1**	**-1.3**
TORD	**Torodi Ar. Bea**	**83.30**	**77**	*e*P	**P**		**00 57 41.8**	**-1.6**
	comp=Z,16nm,0.8s,baz=284,slow=5.0,SNR=50							
TORD				PKKPbc	**PKKPbc**		**01 16 04.9**	**+1.6**
	comp=Z,0.6nm,0.6s,baz=64,slow=1.7,SNR=8.0							
TORD				LR	LR		01 33 57.2	
	comp=Z,3μm,20.4s,baz=275,slow=35							
SNF	**Seneffe**	**83.99**	**40**	⇓P	**P**		**00 57 48.2**	**+2.1**
UCC	**Uccle**	**84.03**	**40**	⇑P	**P**		**00 57 46.1**	**-0.3**
UCC	**Uccle**	**84.03**	**40**	*e*P	**P**		**00 57 47.8**	**+1.4**
	comp=Z,70nm,1.3s							
UCC	**Uccle**	**84.03**	**40**	*e*P	**P**		**00 57 47.8**	**+1.4**
DOU	**Dourbes**	**84.19**	**40**	⇑P	**P**		**00 57 47.1**	**-0.2**
	comp=Z,34nm,1.5s							
SSB	**Saint Sauveur**	**84.28**	**45**	*e*P	**P**		**00 57 50.0**	**+2.1**
	comp=Z,94nm,1.5s							
SSB	**Saint Sauveur**	**84.28**	**45**	*e*P	**P**		**00 57 50.0**	**+2.1**
GIVF	**Givet**	**84.34**	**40**	*e*P	**P**		**00 57 47.8**	**-0.2**
GIVF				pmax	pmax			
	comp=Z,155nm,1.6s							
VIVF	**Saint-Julien-l**	**84.39**	**46**	*e*P	**P**		**00 57 49.1**	**+0.7**
VIVF				pmax	pmax			
	comp=Z,156nm,1.6s							
BCLA	**Clavier**	**84.64**	**40**	⇑P	**P**		**00 57 45.8**	**-3.7**
	comp=Z,65nm,2.1s							
BEBN	**Eben Emael**	**84.87**	**40**	⇑P	**P**		**00 57 51.6**	**+1.0**
BLS5	**Blasjo**	**85.02**	**31**	*e*P	**P**		**00 57 51.4**	**+0.2**
HGN	**Heimansgroeve**	**85.03**	**40**	*e*P	**P**		**00 57 52.5**	**+1.1**
	comp=Z,259nm,1.5s							
HGN	**Heimansgroeve**	**85.03**	**40**	*e*S	**S**		**01 08 22.2**	**+2.0**
HGN				*e*ScSp			01 09 22.0	
HGN				*e*SS	SS		01 13 27.4	-26
MEM	**Membach**	**85.08**	**40**	⇑P	**P**		**00 57 51.7**	**-0.1**
	comp=Z,59nm,1.5s							
MEM	**Membach**	**85.08**	**40**	P	**P**		**00 57 52.7**	**+1.0**
ODD1	**Odda**	**85.09**	**30**	*e*P	**P**		**00 57 55.5**	**+3.9**
WLF	**Walferdange**	**85.22**	**41**	⇑P	**P**		**00 57 52.5**	**+0.1**
	comp=Z,107nm,1.7s							
WLF	**Walferdange**	**85.22**	**41**	*e*P	**P**		**00 57 52.8**	**+0.4**
	comp=Z,173nm,1.3s							
WLF	**Walferdange**	**85.22**	**41**	*e*P	**P**		**00 57 52.8**	**+0.4**
ORIF	**Oris-en-Rattie**	**85.25**	**45**	*e*P	**P**		**00 57 53.7**	**+0.9**
ORIF				pmax	pmax			
	comp=Z,138nm,1.4s							
SET	**Setif**	**85.32**	**54**	P	**P**		**00 57 55.0**	**+1.6**
HAU	**Haudompre**	**85.42**	**42**	*e*P	**P**		**00 57 50.8**	**-2.7**
HAU				pmax	pmax			
	comp=Z,137nm,1.5s							
WTSB	**Winterswijk**	**85.52**	**38**	*e*P	**P**		**00 57 53.4**	**-0.5**
	comp=Z,455nm,1.2s							
DFRA	**Djebel Bou Aff**	**85.69**	**54**	P	**P**		**00 57 59.4**	**+4.2**
KBS	**Kingsbay**	**85.72**	**11**	*e*P	**P**		**00 57 54.6**	**+0.2**
	comp=Z,256nm,1.3s							
KBS	**Kingsbay**	**85.72**	**11**	*e*P	**P**		**00 57 54.6**	**+0.2**
KBS	**Kingsbay**	**85.72**	**11**	*e*P	**P**		**00 57 54.8**	**+0.4**
KBS				IAmb	IAmb		00 58 00.2	
	comp=Z,234nm,1.2s							
KBS				IVMs_BB	IVMs_BB		01 36 31.4	
	comp=Z,3μm,22.3s							
KBS				IAMs_20	IAMs_20		01 36 36.9	
	comp=Z,8μm,21.0s							
HINF	**Hinteralfeld**	**85.77**	**43**	*e*P	**P**		**00 57 54.7**	**-0.6**
HINF				pmax	pmax			
	comp=Z,112nm,1.5s							
LPL	**La Plagne**	**85.82**	**45**	*e*P	**P**		**00 57 57.3**	**+1.5**
LPL				pmax	pmax			
	comp=Z,78nm,1.4s							
LPG	**La Plagne**	**85.83**	**45**	*e*P	**P**		**00 57 56.6**	**+0.6**
LPG				pmax	pmax			
	comp=Z,105nm,1.5s							
FRF	**La Foret Royal**	**85.87**	**47**	*e*P	**P**		**00 57 56.2**	**+0.4**
FRF				pmax	pmax			
	comp=Z,97nm,1.3s							
ECH	**Echery**	**85.95**	**42**	*e*P	**P**		**00 57 55.6**	**-0.6**
	comp=Z,168nm,1.3s							
ECH	**Echery**	**85.95**	**42**	*e*P	**P**		**00 57 55.6**	**-0.6**
CDF	**Champ du Feu**	**86.02**	**42**	*e*P	**P**		**00 57 57.4**	**+0.8**
CDF				pmax	pmax			
	comp=Z,13nm,1.5s							
HOMB	**Homborsund**	**86.14**	**32**	*e*P	**P**		**00 57 58.3**	**+1.5**
CTEI	**Djebel Teioual**	**86.14**	**54**	P	**P**		**00 58 01.4**	**+3.9**
DOMB	**Dombas**	**86.16**	**28**	*e*P	**P**		**00 57 54.6**	**-2.3**
SENIN	**Lac Senin/Sane**	**86.16**	**44**	*e*P	**P**		**00 57 58.0**	**+0.6**
	comp=Z,106nm,1.5s							
CASM	**Ain Smara**	**86.20**	**54**	P	**P**		**00 58 01.6**	**+3.9**
TAM	**Tamanrasset**	**86.28**	**68**	*e*P	**P**		**00 57 59.7**	**+1.2**
	comp=Z,34nm,1.2s							
TAM	**Tamanrasset**	**86.28**	**68**	*e*P	**P**		**00 57 59.7**	**+1.2**
CKFL	**Kef-Lekhel**	**86.37**	**54**	P	**P**		**00 58 03.1**	**+4.5**
SBF	**Sospel**	**86.42**	**46**	*e*P	**P**		**00 57 59.6**	**+1.0**
CAEH	**'Ain El Ouahch**	**86.45**	**54**	P	**P**		**00 58 02.5**	**+3.6**
KIZ	**Kirchzarten**	**86.48**	**42**	P	**P**		**00 58 00.4**	**+1.6**
KONO	**Kongsberg**	**86.60**	**31**	*e*P	**P**		**00 58 01.2**	**+2.2**
	comp=Z,101nm,1.3s							
KONO	**Kongsberg**	**86.60**	**31**	*e*P	**P**		**00 58 01.2**	**+2.2**
KONO	**Kongsberg**	**86.60**	**31**	*e*P	**P**		**00 57 58.5**	**-0.6**
KONO				IVMs_BB	IVMs_BB		01 28 19.2	
	comp=Z,2μm,24.4s							
KONO				IAMs_20	IAMs_20		01 31 22.8	
	comp=Z,4μm,20.8s							
TBLU	**Trondheim**	**86.62**	**27**	*e*P	**P**		**00 57 56.6**	**-2.5**
MUD	**Monsted U'grnd**	**86.63**	**34**	*i* P	**P**		**00 58 00.9**	**+1.7**
	comp=Z,319nm,1.3s							
	comp=Z,5μm,23.0s							
SPA0	**Spitsbergen Ar**	**86.70**	**12**	*e*P	**P**		**00 58 00.1**	**+0.8**
SPA0	**Spitsbergen Ar**	**86.70**	**12**	*e*P	**P**		**00 57 59.1**	**-0.2**
SPITS	**Spitsbergen Ar**	**86.70**	**12**	P	**P**		**00 57 59.5**	**+0.3**
	comp=Z,371nm,1.4s,baz=306,slow=2.9,SNR=33							
SPITS				LR	LR		01 37 32.6	
	comp=Z,5μm,20.5s,baz=290,slow=36							
HSPB	**Hornsund (broa**	**86.72**	**13**	*e*P	**P**		**00 58 01.3**	**+2.0**
HSPB				*e*			01 01 23.3	
HSPB				*e*S	**S**		**01 08 33.5**	**-2.4**
HSPB	**Hornsund (broa**	**86.72**	**13**	*e*P	**P**		**00 58 00.5**	**+1.1**
SLE	**Schleitheim**	**86.88**	**42**	P	**P**		**00 58 02.0**	**+1.2**
CMAH	**Djebel Manchou**	**86.92**	**54**	P	**P**		**00 58 04.8**	**+3.5**
ABSA	**Djebel Ababsia**	**86.99**	**54**	P	P		00 58 07.6	+5.9
NC204	**NORSAR Array S**	**87.03**	**29**	*e*P	**P**		**00 58 01.7**	**+0.5**
NBO00	**NORSAR Array S**	**87.06**	**29**	*e*P	**P**		**00 58 02.5**	**+1.1**
NAO01	**NORSAR Array S**	**87.14**	**29**	*e*P	**P**		**00 58 03.7**	**+2.0**
OSL	**Oslo**	**87.14**	**30**	*e*P	**P**		**00 58 01.9**	**+0.2**
NSS	**Namsos**	**87.24**	**26**	*e*P	**P**		**00 58 02.5**	**+0.5**
STU	**Stuttgart**	**87.26**	**41**	*e*P	**P**		**00 58 02.7**	**+0.1**
	comp=Z,109nm,1.1s							
STU	**Stuttgart**	**87.26**	**41**	*e*P	**P**		**00 58 02.7**	**+0.1**
NB2	**NORSAR Subarra**	**87.27**	**29**	P	**P**		**00 58 02.7**	**+0.3**
	comp=Z,138nm,1.2s,baz=279,slow=4.8							
NB2	**NORSAR Subarra**	**87.27**	**29**	P	**P**		**00 58 02.7**	**+0.3**
	baz=279,slow=4.8							
NOA	**NORSAR Array B**	**87.27**	**29**	P	**P**		**00 58 01.2**	**-1.1**
	comp=Z,62nm,1.1s,baz=272,slow=5.0,SNR=18							
NOA				LR	LR		01 31 54.9	
	comp=Z,2μm,21.6s,baz=270,slow=32							
NB201	**NORSAR Array S**	**87.31**	**29**	*e*P	**P**		**00 58 02.2**	**-0.4**
NC303	**NORSAR Array S**	**87.33**	**29**	*e*P	**P**		**00 58 03.9**	**+1.3**
LOF	**Lofoten**	**87.43**	**22**	*e*P	**P**		**00 58 04.2**	**+1.3**
NC602	**NORSAR Array S**	**87.47**	**29**	*e*P	**P**		**00 58 04.7**	**+1.5**
NC602	**NORSAR Array S**	**87.47**	**29**	*e*P	**P**		**00 58 05.1**	**+1.9**
NC405	**NORSAR Array S**	**87.51**	**29**	*e*P	**P**		**00 58 03.4**	**-0.1**
DAVA	**Damuels**	**87.86**	**43**	*e*P	**P**		**00 58 05.7**	**0.0**
	comp=Z,102nm,1.3s,SNR=20							
MOR8	**Moi Rana**	**88.06**	**24**	*e*P	**P**		**00 58 06.0**	**0.0**
STEI	**Steigen**	**88.09**	**22**	*e*P	**P**		**00 58 02.5**	**-3.6**
FUORN	**Ofenpass-Fuorn**	**88.18**	**44**	*e*P	**P**		**00 58 08.0**	**+0.6**
	comp=Z,58nm,1.3s							
VSL	**Villasalto**	**88.22**	**51**	*e*P	**P**		**00 58 08.1**	**+0.7**
	comp=Z,103nm,1.2s							
RETA	**Reutte**	**88.43**	**43**	*e*pP	**P**		**00 58 09.9**	**+1.6**
	comp=Z,40nm,1.4s,SNR=6.5							
LLD	**Lille Linde**	**88.44**	**35**	*i* P	**P**		**00 58 09.6**	**+1.6**
FETA	**Feichten**	**88.46**	**43**	*e*PcP	**PcP**		**00 58 09.5**	**-0.7**

BRG	**Berggiesshubel**	**90.08**	**39**	*i* P	**P**	**00 58 16.2**	**+0.4**
BRG				pmax	pmax		
comp=Z,85nm,1.6s							
KHC	**Kasperske Hory**	**90.09**	**41**	*e*P	**P**	**00 58 16.8**	**+0.8**
KHC				*e*x	x	00 58 27.1	
KHC				*e*PP	**PP**	**01 01 46.5**	**-2.7**
KHC				*e*SKS	**SKSac**	**01 08 52.1**	**+5.4**
KHC				*e*x	x	01 10 09.9	
KHC				*e*SS	**SS**	**01 15 06.0**	**-1.4**
KHC				AMS	AMS	01 30 20.0	
comp=Z,10μm,25.0s							
KHC	**Kasperske Hory**	**90.09**	**41**	*e*P	**P**	**00 58 16.4**	**+0.4**
comp=Z,48nm,1.8s							
KHC	**Kasperske Hory**	**90.09**	**41**	*e*P	**P**	**00 58 16.8**	**+0.8**
KHC				*e*		01 01 46.5	
KHC				*e*		01 08 52.1	
KHC				*e*		01 10 09.9	
KHC				*e*SS	SS	01 15 06.0	-1.4
KHC				MLR	MLR		
comp=Z,10μm,25.0s							
GEC2	**GERESS Array S**	**90.22**	**41**	*e*P	**P**	**00 58 16.9**	**+0.3**
comp=Z,63nm,1.6s							
GEC2	**GERESS Array S**	**90.22**	**41**	*e*P	**P**	**00 58 16.9**	**+0.3**
GERES	**GERESS Array B**	**90.22**	**41**	P	**P**	**00 58 16.6**	**-0.1**
comp=Z,5.9nm,0.9s,baz=298,slow=2.9,SNR=25							
GERES				LR	LR	01 32 39.7	
comp=Z,3μm,21.7s,baz=276,slow=32							
GEA0	**GERESS Array S**	**90.22**	**41**	*e*P	**P**	**00 58 16.2**	**-0.5**
KBA	**Koelnbreinsper**	**90.23**	**43**	*e*pP	**P**	**00 58 18.7**	**+1.9**
comp=Z,54nm,1.5s,SNR=19							
AFI	**Afiamalu**	**90.43**	**256**	LR	LR	01 29 32.7	
comp=Z,4μm,21.0s,baz=80,slow=29							
MYKA	**Terra Mystica**	**90.49**	**43**	*e*PcP	**P**	**00 58 19.0**	**+1.0**
comp=Z,34nm,1.7s,SNR=6.7							
PRA	**Prague**	**90.51**	**40**	*e*x	x	01 01 13.1	
PRA				*e*SKS	**SKSac**	**01 08 54.5**	**+5.6**
PRA				*e*SP	**SP**	**01 10 16.7**	**-2.2**
PRA				AMS	AMS	01 31 20.0	
comp=Z,12μm,23.2s							
PVCC	**Panska Ves**	**90.52**	**39**	*e*x	x	01 01 12.8	
PVCC				*e*SKS	**SKSac**	**01 08 54.6**	**+5.6**
PVCC				*e*SP	**SP**	**01 10 16.8**	**-2.3**
PVCC				AMS	AMS	01 33 00.0	
comp=Z,9μm,22.4s							
PRU	**Pruhonice**	**90.59**	**40**	*e*P	**P**	**00 58 18.7**	**+0.5**
PRU				*e*x	x	00 58 29.1	
PRU				*e*x	x	01 01 12.9	
PRU				*e*SKS	**SKSac**	**01 08 54.3**	**+4.9**
PRU				*e*SP	**SP**	**01 10 17.2**	**-2.6**
PRU				*e*SS	**SS**	**01 15 10.1**	**-4.3**
PRU				AMS	AMS	01 31 20.0	
comp=Z,13μm,22.9s							
PRU	**Pruhonice**	**90.59**	**40**	*e*P	**P**	**00 58 18.7**	**+0.5**
PRU				*e*		01 08 54.3	
PRU				*e*		01 10 17.2	
PRU				*e*SS	SS	01 15 10.1	-4.3
PRU				MLR	MLR		
comp=Z,13μm,22.9s							
KTK1	**Kautokeino**	**90.72**	**20**	*e*P	**P**	**00 58 18.6**	**+0.2**
MOA	**Molln**	**90.73**	**42**	*e*PcP	**P**	**00 58 19.1**	**+0.1**
comp=Z,24nm,1.2s,SNR=8.3							
GOPC	**GO Pecny, Ondr**	**90.76**	**40**	*e*SKS	**SKSac**	**01 08 54.4**	**+4.0**
GOPC				*e*SP	**SP**	**01 10 19.8**	**-1.9**
GOPC				AMS	AMS	01 31 30.0	
comp=Z,13μm,23.0s							
OBKA	**Obir**	**91.13**	**43**	*e*P	**P**	**00 58 20.5**	**-0.4**
comp=Z,16nm,1.5s							
CEY	**Cerknica**	**91.16**	**44**	*e*P	**P**	**00 58 25.0**	**+4.0**
CEY				*e*SKSac	**SKSac**	**01 08 53.7**	**+0.7**
LJU	**Ljubljana**	**91.19**	**44**	*e*P	**P**	**00 58 25.1**	**+4.0**
LJU				*e*SKSac	**SKSac**	**01 08 52.3**	**-0.7**
LJU				*e*S	**S**	**01 09 20.4**	**+1.3**
LJU				*e*		01 15 26.2	
ARCES	**ARCESS Array B**	**91.33**	**20**	P	**P**	**00 58 19.8**	**-1.5**
comp=Z,14nm,1.0s,baz=289,slow=3.7,SNR=13							
ARCES				PP	**PP**	**01 01 59.9**	**+1.6**
comp=Z,18nm,1.1s,baz=309,slow=5.8,SNR=7.6							
ARCES				LR	LR	01 33 14.1	
comp=Z,2μm,21.8s,baz=290,slow=32							
ARCES	**ARCESS Array B**	**91.33**	**20**	*e*P	**P**	**00 58 20.1**	**-1.1**
ARCES				PP	**PP**	**01 01 59.9**	**+1.6**
ARCES	**ARCESS Array B**	**91.33**	**20**	*e*P	**P**	**00 58 20.2**	**-1.1**
ARE0	**ARCESS Array S**	**91.33**	**20**	*e*P	**P**	**00 58 21.8**	**+0.6**
comp=Z,68nm,1.4s							
CLTB	**Caltabellotta**	**91.43**	**52**	*e*P	**P**	**00 58 25.2**	**+2.7**
comp=Z,88nm,1.5s							
SOKA	**Soboth**	**91.43**	**43**	*e*PcP	**P**	**00 58 22.6**	**+0.3**
comp=Z,18nm,1.9s							
UPC	**Upice**	**91.43**	**39**	*e*P	**P**	**00 58 23.2**	**+1.1**
UPC				*e*x	x	00 58 36.2	
UPC				*e*x	x	01 01 24.0	
UPC				*e*PP	**PP**	**01 01 59.2**	**-0.5**
UPC				*e*SKS	**SKSac**	**01 08 59.7**	**+5.5**
UPC				*e*SP	**SP**	**01 10 25.3**	**-3.9**
UPC				*e*SS	**SS**	**01 15 26.1**	**-0.5**
UPC				AMS	AMS	01 33 40.0	
comp=Z,9μm,22.1s							
UPC	**Upice**	**91.43**	**39**	*e*P	**P**	**00 58 23.2**	**+1.1**
UPC				*e*		01 01 59.2	
UPC				*e*		01 08 59.7	
UPC				*e*		01 10 25.3	
UPC				*e*SS	SS	01 15 26.1	-0.5
UPC				MLR	MLR		
comp=Z,9μm,22.1s							
PERS	**Pernice**	**91.50**	**43**	*i* P	**P**	**00 58 25.5**	**+2.9**
PERS				*e*SKSac	**SKSac**	**01 08 54.2**	**-0.6**
KSP	**Ksiaz**	**91.55**	**39**	*e*P	**P**	**00 58 26.6**	**+3.9**
KSP				*e*PP	**PP**	**01 02 01.5**	**+1.0**
KSP				*e*S	**SKSac**	**01 08 58.2**	**+3.3**
KSP				*e*PS	**PS**	**01 10 32.3**	**-0.5**
KSP				*e*SS	SS	01 15 45.5	+17
KSP				LMZ	LR	01 30 55.0	
comp=Z,8μm,26.3s							
KSP	**Ksiaz**	**91.55**	**39**	*e*P	**P**	**00 58 26.6**	**+3.9**
KSP				*e*		01 02 01.5	
KSP				*e*S	**SKSac**	**01 08 58.2**	**+3.3**
KSP				*e*PS	**PS**	**01 10 32.3**	**-0.5**
DPC	**Dobruska-Polom**	**91.66**	**39**	*e*P	**P**	**00 58 23.5**	**+0.3**
DPC				*e*x	x	00 58 38.4	
DPC				*e*x	x	01 01 25.6	
DPC				*e*SKS	**SKSac**	**01 09 00.2**	**+4.6**
DPC				*e*x	x	01 10 24.5	
DPC				AMS	AMS	01 33 50.0	
comp=Z,10μm,22.2s							
DPC	**Dobruska-Polom**	**91.66**	**39**	*e*P	**P**	**00 58 23.5**	**+0.3**
DPC				*e*		01 09 00.2	
DPC				MLR	MLR		
comp=Z,10μm,22.2s							
ARSA	**Arzberg**	**91.67**	**42**	*e*pP	**P**	**00 58 24.7**	**+1.4**
comp=Z,7.3nm,1.1s							
GKP	**Gorka Klasztor**	**91.67**	**36**	*e*P	**P**	**00 58 26.1**	**+3.0**
GKP				*e*S	**SKSac**	**01 08 57.8**	**+2.4**
GKP				*e*PS	**PnS**	**01 10 35.1**	**+0.3**
GKP				LMZ	LR	01 33 20.7	
comp=Z,8μm,23.8s							
GKP	**Gorka Klasztor**	**91.67**	**36**	*e*P	**P**	**00 58 26.1**	**+3.0**
GKP				*e*S	**SKSac**	**01 08 57.8**	**+2.4**
GKP				*e*PS	**PnS**	**01 10 35.1**	**+0.3**
KEV	**Kevo**	**91.75**	**19**	*e*P	**P**	**00 58 23.6**	**+0.4**
comp=Z,86nm,1.4s							
KEV	**Kevo**	**91.75**	**19**	*e*P	**P**	**00 58 23.6**	**+0.4**
CONA	**Conrad Observa**	**91.78**	**42**	PcP	**PcP**	**00 58 24.9**	**+0.2**
comp=Z,21nm,1.2s,SNR=21							
SNAA	**Sanae**	**91.78**	**162**	P	**P**	**00 58 22.5**	**-0.8**
SNAA	**Sanae**	**91.78**	**162**	P	**P**	**00 58 22.3**	**-1.0**
comp=Z,9.7nm,0.9s,baz=264,slow=6.2,SNR=17							
SNAA				PP	**PP**	**01 02 02.8**	**+0.6**
comp=Z,13nm,1.1s,baz=326,slow=9.7,SNR=3.0							
SNAA				LR	LR	01 38 32.0	
comp=Z,952nm,21.9s,baz=291,slow=35							
SNAA	**Sanae**	**91.78**	**162**	*e*P	**P**	**00 58 23.1**	**-0.3**
comp=Z,10nm,0.9s							
SNAA				PP	**PP**	**01 02 02.8**	**+0.6**
SNAA	**Sanae**	**91.78**	**162**	‖*e*P	**P**	**00 58 22.7**	**-0.6**
KRUC	**Moravsky**	**91.93**	**41**	*e*P	**P**	**00 58 25.1**	**+0.6**
VRAC	**Vranov**	**92.02**	**40**	P	**P**	**00 58 25.5**	**+0.7**
comp=Z,26nm,1.2s,baz=284,slow=4.9,SNR=15							
VRAC	**Vranov**	**92.02**	**40**	⇑*i*P	**P**	**00 58 25.6**	**+0.7**
VRAC	**Vranov**	**92.02**	**40**	*e*P	**P**	**00 58 26.1**	**+1.2**
SOP	**Sopron**	**92.29**	**42**	‖*e*P	**P**	**00 58 27.3**	**+1.2**
SOP	**Sopron**	**92.29**	**42**	P	**P**	**00 58 28.1**	**+2.0**
VAE	**Valguarnera**	**92.39**	**52**	P	**P**	**00 58 28.1**	**+1.1**
comp=Z,8.6nm,0.9s,baz=245,slow=5.1,SNR=4.6							
VAE				LR	LR	01 36 19.4	
comp=Z,2μm,20.1s,baz=306,slow=33							
MORC	**Moravsky Berou**	**92.54**	**40**	*e*P	**P**	**00 58 28.0**	**+0.7**
comp=Z,232nm,1.4s							
MORC	**Moravsky Berou**	**92.54**	**40**	*e*P	**P**	**00 58 28.0**	**+0.7**
MORC	**Moravsky Berou**	**92.54**	**40**	*e*P	**P**	**00 58 29.0**	**+1.7**
ZST	**Bratislava**	**92.55**	**41**	*e*P	**P**	**00 58 28.3**	**+0.9**
ZST				pmax	pmax		
comp=Z,8.0nm,1.6s							
ZST	**Bratislava**	**92.55**	**41**	*e*P	**P**	**00 58 28.2**	**+0.9**
ZST				*e*PP	**PP**	**01 02 08.0**	**-0.5**
MODS	**Modra-Piesok**	**92.63**	**41**	*e*P	**P**	**00 58 28.3**	**+0.5**
MODS				pmax	pmax		
comp=Z,82nm,1.5s							
MODS	**Modra-Piesok**	**92.63**	**41**	*e*P	**P**	**00 58 28.3**	**+0.5**
MODS				*e*PP	**PP**	**01 02 06.5**	**-2.7**
JAVC	**Velka Javorina**	**92.80**	**41**	*e*P	**P**	**00 58 30.5**	**+1.9**
BILL	**Bilibino**	**92.86**	**339**	*e*P	**P**	**00 58 28.1**	**-0.3**
comp=Z,175nm,1.5s							
BILL	**Bilibino**	**92.86**	**339**	*c i*P	**P**	**00 58 29.0**	**+0.7**
BILL				*i*		00 58 33.5	
BILL				*i*		01 02 10.1	
BILL				*i* S	**SKSac**	**01 08 54.1**	**-7.4**
BILL				pmax	pmax		
comp=Z,35nm,1.1s							
BILL				MLR	MLR		
comp=Z,8μm,21.0s							
RAC	**Raciborz**	**92.89**	**39**	*e*P	**P**	**00 58 31.3**	**+2.5**
RAC				*e*		01 09 03.7	
OKC	**Ostrava-Krasne**	**92.91**	**40**	*e*SKS	**SKSac**	**01 09 01.2**	**-1.3**
OKC				AMS	AMS	01 34 30.0	
comp=Z,9μm,22.0s							
CUC	**Castrocucco**	**93.08**	**50**	*e*P	**P**	**00 58 30.0**	**-0.1**
comp=Z,15nm,1.1s							
KLNR	**Kaliningrad**	**93.11**	**35**	*de*P	**P**	**00 58 33.2**	**+3.5**
KLNR				pmax	pmax		
comp=Z,77nm,1.6s							
KLNR				MLR	MLR		
comp=Z,2μm,18.0s							
VYHS	**Vyhne**	**93.63**	**41**	*e*P	**P**	**00 58 31.2**	**-1.1**
VYHS				pmax	pmax		
comp=Z,27nm,1.7s							
VYHS	**Vyhne**	**93.63**	**41**	*e*P	**P**	**00 58 31.2**	**-1.1**
OJC	**Ojcow**	**93.87**	**39**	*e*P	**P**	**00 58 36.4**	**+3.0**
OJC				*e*PP	**PP**	**01 02 18.9**	**+0.1**
OJC				*e*S	**SKSac**	**01 09 09.4**	**+1.6**
OJC				*e*PS	**PS**	**01 10 58.9**	**+0.4**
OJC				*e*SS	SS	01 16 19.5	+18
OJC				LMZ	LR	01 32 14.8	
comp=Z,10μm,26.8s							
OJC	**Ojcow**	**93.87**	**39**	*e*P	**P**	**00 58 35.5**	**+2.1**
comp=Z,48nm,1.3s							
OJC	**Ojcow**	**93.87**	**39**	*e*P	**P**	**00 58 35.5**	**+2.1**
LANS	**Liptovska Anna**	**93.89**	**40**	*e*P	**P**	**00 58 36.8**	**+3.2**
LANS	**Liptovska Anna**	**93.89**	**40**	*e*P	**P**	**00 58 36.8**	**+3.2**
TIP	**Timpagrande**	**93.93**	**50**	‖*i*P	**P**	**00 58 32.7**	**-1.3**
TIP	**Timpagrande**	**93.93**	**50**	*e*P	**P**	**00 58 32.9**	**-1.2**
comp=Z,41nm,1.2s							
TIP	**Timpagrande**	**93.93**	**50**	P	**P**	**00 58 34.3**	**+0.3**
BUD	**Budapest**	**93.96**	**42**	P	**P**	**00 58 38.1**	**+4.2**
MORH	**M¨±r¨igy, Hung**	**93.97**	**43**	‖*e*P	**P**	**00 58 37.4**	**+3.5**
BEL	**Belsk**	**94.10**	**37**	*e*P	**P**	**00 58 35.9**	**+1.5**
BEL				*e*PP	PP	01 02 29.1	+8.6
BEL				*e*S	SKSac	01 08 41.8	-27
BEL				*e*PS	**PS**	**01 11 03.2**	**+2.2**
BEL				LMZ	LR	01 35 02.4	
comp=Z,6μm,22.4s							
BEL	**Belsk**	**94.10**	**37**	*e*P	**P**	**00 58 35.9**	**+1.5**
BEL				*e*		01 02 29.1	
BEL				*e*PS	**PS**	**01 11 03.2**	**+2.2**
FIA1	**FINESS Array S**	**94.19**	**27**	*e*P	**P**	**00 58 34.8**	**+0.2**
FINES	**FINESS Array B**	**94.19**	**27**	P	**P**	**00 58 34.6**	**0.0**
comp=Z,7.9nm,1.0s,baz=320,slow=6.1,SNR=9.6							
FINES				PP	**PP**	**01 02 21.0**	**0.0**
comp=Z,4.4nm,0.9s,baz=276,slow=6.7,SNR=4.2							
FINES				LR	LR	01 39 34.3	
comp=Z,2μm,19.7s,baz=284,slow=35							
NIE	**Niedzica**	**94.36**	**40**	*e*P	**P**	**00 58 39.6**	**+3.9**
NIE				*e*PP	**PP**	**01 02 23.9**	**+1.2**
NIE				*e*S	**SKSac**	**01 09 12.2**	**+1.6**
NIE				*e*PS	**PS**	**01 11 04.9**	**+0.8**
NIE				*e*SS	SS	01 16 24.7	+16
NIE				LMZ	LR	01 33 00.1	
comp=Z,6μm,25.6s							
NIE	**Niedzica**	**94.36**	**40**	*e*P	**P**	**00 58 39.6**	**+3.9**
NIE				*e*		01 02 23.9	
NIE				*e*S	**SKSac**	**01 09 12.2**	**+1.6**
NIE				*e*PS	**PS**	**01 11 04.9**	**+0.8**
PSZ	**Piszkesteto**	**94.44**	**41**	‖*i*P	**P**	**00 58 39.8**	**+3.6**
PSZ	**Piszkesteto**	**94.44**	**41**	‖*e*P	**P**	**00 58 39.8**	**+3.6**
PSZ	**Piszkesteto**	**94.44**	**41**	*e*P	**P**	**00 58 39.4**	**+3.2**
comp=Z,124nm,2.0s							
PSZ	**Piszkesteto**	**94.44**	**41**	*e*P	**P**	**00 58 39.4**	**+3.2**
APA	**Apatity**	**94.77**	**20**	*e*P	**P**	**00 58 35.5**	**-1.6**
APA				*i*		01 02 24.0	
APA				*i* PPP	PPP	01 04 38.0	
APA				*i*		01 09 13.0	
APA				*i* S	**S**	**01 09 44.0**	**-6.0**
APA				*i* PS	**PS**	**01 11 08.0**	**+0.3**
APA				*i* PPS	PPS	01 11 50.0	
APA				*i* SS	**SS**	**01 16 14.0**	**+0.8**
SUW	**Suwalki**	**94.94**	**35**	*e*P	**P**	**00 58 41.1**	**+2.8**
SUW				*e*PS	**PS**	**01 11 09.0**	**-1.1**
SUW				LMZ	LR	01 32 12.8	
comp=Z,5μm,28.9s							
SUW	**Suwalki**	**94.94**	**35**	*e*P	**P**	**00 58 41.0**	**+2.8**
comp=Z,49nm,1.2s							
SUW	**Suwalki**	**94.94**	**35**	*e*P	**P**	**00 58 41.0**	**+2.8**
LVZ	**Lovozero**	**95.04**	**20**	*e*P	**P**	**00 58 41.2**	**+2.8**
comp=Z,57nm,1.3s							
LVZ	**Lovozero**	**95.04**	**20**	*de*P	**P**	**00 58 40.5**	**+2.1**
LVZ				pmax	pmax		
comp=Z,59nm,1.4s							
CRVS	**Cervenica-Dubn**	**95.23**	**40**	*e*P	**P**	**00 58 40.9**	**+1.2**
CRVS				pmax	pmax		
comp=Z,21nm,1.4s							
CRVS	**Cervenica-Dubn**	**95.23**	**40**	*e*P	**P**	**00 58 40.9**	**+1.2**
QSPA	**South Pole Qui**	**95.31**	**180**	*e*P	**P**	**00 58 41.8**	**+2.1**
comp=Z,25nm,0.9s,baz=147,slow=3.3,SNR=42							
QSPA				PP	**PP**	**01 02 31.4**	**+1.6**
comp=Z,4.4nm,1.0s,baz=337,slow=1.8,SNR=6.4							
QSPA	**South Pole Qui**	**95.31**	**180**	*e*P	**P**	**00 58 41.7**	**+1.9**
comp=Z,248nm,1.1s							
QSPA				PP	**PP**	**01 02 31.4**	**+1.6**
DIVS	**Divibare**	**95.35**	**45**	*e*P	**P**	**00 58 41.6**	**+1.2**
comp=Z,30nm,1.3s							
VSU	**Vasula**	**95.48**	**30**	*ce*P	**P**	**00 58 40.1**	**-0.5**
VSU				pmax	pmax		
comp=Z,139nm,1.1s							
VSU				MLR	MLR		
comp=Z,6μm,19.0s							
UZH	**Uzhgorod**	**95.83**	**40**	*e*P	**P**	**00 58 44.2**	**+1.8**
UZH				*i*		00 58 47.0	
UZH				*e*		01 02 32.0	
UZH				*e*		01 09 24.2	
UZH				*e*S	**S**	**01 10 00.0**	**+0.1**
KWP	**Kalwaria Pacla**	**95.83**	**39**	*e*P	**P**	**00 58 46.4**	**+4.0**
KWP				LMZ	LR	01 33 29.1	
comp=Z,7μm,27.1s							
KWP	**Kalwaria Pacla**	**95.83**	**39**	*e*P	**P**	**00 58 46.4**	**+4.0**
ISAL	**Salakas**	**96.11**	**33**	*e*P	**P**	**00 58 43.5**	**0.0**
TRPA	**Tarpa**	**96.11**	**41**	‖*i*P	**P**	**00 58 46.3**	**+2.6**
IZAR	**Zarasai**	**96.12**	**33**	*e*P	**P**	**00 58 43.5**	**0.0**
IZAR				IAmb	IAmb	00 58 47.5	
comp=Z,9.4nm,0.9s							
BZS	**Buzias**	**96.13**	**43**	‖*i*P	**P**	**00 58 44.0**	**+0.2**
BZS	**Buzias**	**96.13**	**43**	‖P	**P**	**00 58 44.0**	**+0.2**
KEK	**Kerkira**	**96.14**	**49**	P	**P**	**00 58 45.2**	**+1.2**
KEK	**Kerkira**	**96.14**	**49**	P	**P**	**00 58 45.2**	**+1.2**
IIGN	**Ignalina**	**96.23**	**33**	*e*P	**P**	**00 58 44.0**	**-0.1**
IIGN				IAmb	IAmb	00 58 48.2	
comp=Z,14nm,1.2s							
MDVR	**Moldovita**	**96.39**	**44**	⇑*i*P	**P**	**00 58 45.1**	**0.0**
NVL	**N'lazarevskaya**	**96.44**	**161**	⇑*i*P	**P**	**00 58 47.8**	**+3.2**
NVL				*e**PP	**sP**	**00 58 53.1**	**+1.7**
NVL				*e*		01 02 43.1	
NVL				*i* S	**SKSac**	**01 09 24.1**	**+3.6**
NVL				pmax	pmax		
comp=Z,11nm,0.8s							
NVL				MLR	MLR		
comp=Z,4μm,21.0s							
SGD	**Sagiada**	**96.49**	**49**	P	**P**	**00 58 47.2**	**+1.6**
IDID	**Didziasalis**	**96.52**	**33**	*e*P	**P**	**00 58 45.3**	**0.0**
IDID				IAmb	IAmb	00 58 49.2	
comp=Z,7.6nm,1.1s							
DRGR		**96.57**	**42**	⇑*i*P	**P**	**00 58 47.9**	**+2.0**
DRGR		**96.57**	**42**	⇑P	**P**	**00 58 47.9**	**+2.0**
IGT	**Igoumenitsa**	**96.58**	**49**	P	**P**	**00 58 47.9**	**+1.9**
IGT	**Igoumenitsa**	**96.58**	**49**	P	**P**	**00 58 47.9**	**+1.9**
IGT	**Igoumenitsa**	**96.58**	**49**	P	**P**	**00 58 47.9**	**+1.9**
LVV	**L'vov**	**96.61**	**39**	*e*P	**P**	**00 58 50.4**	**+4.5**
KBN	**Korca**	**96.69**	**48**	P	**P**	**00 58 49.2**	**+2.6**
KBN	**Korca**	**96.69**	**48**	P	**P**	**00 58 49.2**	**+2.6**
KBN	**Korca**	**96.69**	**48**	P	**P**	**00 58 49.2**	**+2.6**
HERR	**Herculane**	**96.85**	**44**	‖*i*P	**P**	**00 58 47.8**	**+0.7**
NEST	**Nestorio**	**96.93**	**48**	P	P	00 58 52.5	+4.8
VLS	**Valsamata**	**97.07**	**51**	P	Pdif	00 58 50.3	+1.9
VLS	**Valsamata**	**97.07**	**51**	P	Pdif	00 58 50.3	+1.9
VLS	**Valsamata**	**97.07**	**51**	P	Pdif	00 58 50.3	+1.9
FNA	**Florina**	**97.09**	**48**	*e*P	Pdif	00 58 49.5	+1.0
comp=Z,26nm,1.3s							
FNA	**Florina**	**97.09**	**48**	P	Pdif	00 58 48.8	+0.3
FNA	**Florina**	**97.09**	**48**	*e*P	Pdif	00 58 49.5	+1.0
RAO	**Raoul Island**	**97.17**	**241**	LR	LR	01 32 20.1	
comp=Z,3μm,20.7s,baz=96,slow=29							
KFL	**Anninata**	**97.24**	**51**	P	Pdif	00 58 50.9	+1.8
DSL	**Palaion Diasel**	**97.25**	**50**	P	Pdif	00 58 51.4	+2.2
DSL	**Palaion Diasel**	**97.25**	**50**	P	Pdif	00 58 51.4	+2.2
MICGM	**Minsk**	**97.42**	**33**	*e*P	Pdif	00 58 53.0	+3.5
MICGM				*e*PP	**PP**	**01 02 52.0**	**+5.9**
MICGM				*e*PPP	PPP	01 05 10.0	
MICGM				*e*SKS	**SKSac**	**01 09 30.0**	**+3.7**
MICGM				*e*S	**ScS**	**01 10 16.0**	**+2.4**
MICGM				*e*SS	sS	01 10 56.0	+34
MICGM				*e*SSS	SSS	01 20 26.0	
MICGM				*e*LR	LR	01 31 06.0	
MICGM				LRM	MLR	01 36 00.0	
comp=Z,5.5nm,20.0s							
MNK	**Minsk**	**97.42**	**33**	*e*P	Pdif	00 58 53.0	+3.5
MNK				*e*		01 02 52.0	
MNK				*e*		01 09 30.0	
MNK				*e*S	**S**	**01 10 16.0**	**+2.6**
PDO	**Prodromos**	**97.43**	**50**	P	Pdif	00 58 51.6	+1.6
KZN	**Kozani**	**97.49**	**48**	P	Pdif	00 58 51.1	+0.8
KZN	**Kozani**	**97.49**	**48**	P	Pdif	00 58 51.1	+0.8
KZN	**Kozani**	**97.49**	**48**	P	Pdif	00 58 51.1	+0.8
LOT	**Lotru**	**97.63**	**43**	⇑*i*P	Pdif	00 59 07.4	+17
PVO	**Paravola**	**97.69**	**50**	P	Pdif	00 58 54.1	+3.0
RLS	**Riolos of Patr**	**97.77**	**51**	P	Pdif	00 58 54.9	+3.4
RLS	**Riolos of Patr**	**97.77**	**51**	P	Pdif	00 58 54.9	+3.4
GRG	**Griva**	**97.80**	**48**	P	Pdif	00 58 53.3	+1.7
GRG	**Griva**	**97.80**	**48**	P	Pdif	00 58 53.3	+1.7
GRG	**Griva**	**97.80**	**48**	P	Pdif	00 58 53.3	+1.7
EVR	**Evrytania**	**97.84**	**50**	P	Pdif	00 58 52.9	+1.0
EVR	**Evrytania**	**97.84**	**50**	P	Pdif	00 58 52.9	+1.0
VTS	**Vitosha**	**97.98**	**46**	⇑*i*P	Pdif	00 58 55.0	+2.5
VTS	**Vitosha**	**97.98**	**46**	*e*P	Pdif	00 58 53.9	+1.4
comp=Z,34nm,1.7s							
VTS	**Vitosha**	**97.98**	**46**	P	Pdif	00 58 53.4	+0.9
VTS	**Vitosha**	**97.98**	**46**	*e*P	Pdif	00 58 53.9	+1.4
BUR04	**Bucovina Ar. S**	**97.99**	**41**	*e*P	Pdif	00 58 54.5	+2.1
ANX	**Ano Chora**	**98.00**	**50**	P	Pdif	00 58 55.9	+3.3
EFP	**Efpalio**	**98.02**	**50**	P	Pdif	00 58 52.6	0.0
TMCR	**Tamitsa**	**98.06**	**22**	*e*P	**P**	**00 58 51.9**	**-0.2**
TMCR				pmax	pmax		
comp=Z,41nm,1.2s							
LIT	**Litokhoron**	**98.07**	**48**	*e*P	Pdif	00 58 54.5	+1.6
comp=Z,15nm,1.3s							
LIT	**Litokhoron**	**98.07**	**48**	P	Pdif	00 58 53.3	+0.5
LIT	**Litokhoron**	**98.07**	**48**	*e*P	Pdif	00 58 54.5	+1.7
KNT	**Kendrikon**	**98.12**	**47**	P	Pdif	00 58 56.0	+3.0
KNT	**Kendrikon**	**98.12**	**47**	P	Pdif	00 58 56.0	+3.0
KNT	**Kendrikon**	**98.12**	**47**	P	Pdif	00 58 56.0	+3.0
LAKA	**Lakka**	**98.12**	**50**	P	Pdif	00 58 56.1	+3.0
LAKA	**Lakka**	**98.12**	**50**	P	Pdif	00 58 56.1	+3.0
AGG	**Agios Georgios**	**98.21**	**49**	*e*P	Pdif	00 58 54.7	+1.2
comp=Z,108nm,1.3s							
AGG	**Agios Georgios**	**98.21**	**49**	P	**P**	**00 58 53.2**	**-0.2**
AGG	**Agios Georgios**	**98.21**	**49**	*e*P	Pdif	00 58 54.7	+1.2
ARR	**Arges**	**98.24**	**43**	‖*i*P	Pdif	00 58 54.0	+0.5
VOIR		**98.50**	**43**	⇑*i*P	**P**	**00 58 52.9**	**-1.8**
VOIR		**98.50**	**43**	⇑P	**P**	**00 58 52.9**	**-1.8**
DOPR

KIS *e*PS **PS** **01 12 08.0 -2.9**
VNDA Vanda 100.53 192 PP PP 01 03 10.3 +0.8
comp=Z,2.3nm,1.2s,baz=138,slow=7.7,SNR=2.2
CFR Carcaliu 100.66 42⇑*i*P **Pdif** **00 59 04.9 +0.8**
CFR Carcaliu 100.66 42⇑P **Pdif** **00 59 05.0 +0.8**
IDI Anoyia 101.10 53 P **Pdif** **00 59 06.7 +0.2**
comp=Z,7.5nm,1.1s,baz=304,slow=8.7,SNR=6.1
IDI PP **PP** **01 03 16.5 +1.5**
comp=Z,16nm,1.2s,baz=306,slow=8.7,SNR=5.1
IDI Anoyia 101.10 53⇓*i*P **Pdif** **00 59 08.8 +2.3**
OBN Obninsk 101.78 31⇑*e*P **Pdif** **00 59 10.8 +1.9**
OBN *i* 01 03 20.5
OBN *i* S **SKSac** **01 09 46.1 -1.8**
OBN pmax pmax
comp=Z,35nm,1.5s
OBN MLR MLR
comp=Z,2μm,19.0s
MOS Moscow 102.02 30 *e*P **Pdif** **00 59 11.7 +1.8**
MOS *i* 01 03 23.2
MOS *e*PPP PPP 01 05 39.0
MOS *e* 01 09 48.5
MOS *e*PS **PS** **01 12 25.7 -0.8**
MOS *e*SS SS 01 17 53.9 -1.5
MOS *e*SSS SSS 01 21 41.7
MOS pmax pmax
comp=Z,31nm,0.9s
PRGR Permogore 102.35 23⇓*i*P **Pdif** **00 59 14.0 +2.7**
PRGR *i* 01 03 25.5
PRGR pmax pmax
comp=Z,49nm,1.5s
MA2 Magadan 102.90 335 PKiKP **PKiKP** **01 03 29.4 -4.6**
comp=Z,2.9nm,0.3s,baz=82,slow=4.5,SNR=4.5
MA2 Magadan 102.90 335⇑*e*P **Pdif** **00 59 13.5 -0.3**
MA2 pmax pmax
comp=Z,7.0nm,1.0s
PETK Petropavlovsk- 102.95 327 PKiKP **PKiKP** **01 03 32.8 -1.5**
comp=Z,7.8nm,1.1s,baz=101,slow=4.6,SNR=3.2
SIM Simferopol' 104.70 41 P **Pdif** **00 59 29.5 +7.4**
SIM *e* 01 03 43.0
SIM *e*PPP PPP 01 06 05.0
SIM *e* 01 10 05.0
SIM *e*SS SS 01 18 39.0 +6.0
SIM pmax pmax
comp=Z,120nm,8.3s
NRIK Noril'sk 105.22 4 PP PP 01 03 44.1 -0.2
comp=Z,5.8nm,1.0s,baz=10,slow=7.2,SNR=2.9
SYO Syowa Base 106.07 162⇓*e*pPKiKP pPKiKP 01 03 44.8 +0.2
BRTR Keskin Array B 106.35 46 Pdiff **Pdif** **00 59 29.4 -0.5**
comp=Z,0.5nm,0.9s,baz=264,slow=2.9,SNR=3.2
BRTR PKiKP **PKiKP** **01 03 39.4 -1.7**
comp=Z,1.3nm,1.0s,baz=286,slow=5.8,SNR=3.8
BRTR PP **PP** **01 03 54.2 +0.2**
comp=Z,2.3nm,1.0s,baz=263,slow=2.3,SNR=3.9
BRTR PKKPbc **PKKPbc** **01 15 03.6 +0.9**
comp=Z,0.5nm,0.8s,baz=167,slow=2.3,SNR=3.0
BRTR PKKPab **PKKPab** **01 15 17.1 -1.5**
comp=Z,0.8nm,0.8s,baz=151,slow=4.0,SNR=4.2
YAK Yakutsk 108.42 345 *e*P **Pdif** **00 59 36.9 -1.4**
YAK *e* 01 04 06.1
YAK *e* 01 10 16.3
YAK *e*SS SS 01 19 14.0 -8.1
YAK pmax pmax
comp=Z,471nm,4.4s
YAK pmax pmax
comp=E,158nm,5.2s
YAK pmax pmax
comp=N,230nm,4.1s
MMAI Mount Meron Ar 110.09 52 PP PP 01 04 22.3 +0.8
comp=N,5.4nm,1.1s,baz=229,slow=15,SNR=3.9
KIV Kislovodsk 110.63 39 *i* PKIKP **PKiKP** **01 03 48.3 -0.7**
KIV *e* 01 04 26.5
KIV *e* 01 10 27.7
KIV *e*PS **PS** **01 13 56.3 +0.5**
KIV pmax pmax
comp=Z,6.0nm,1.1s
ARU Arti 110.79 22 *i* PKIKP **PKiKP** **01 03 49.6 +0.9**
ARU 01 04 27.9
ARU PPP PPP 01 06 43.4
ARU 01 11 01.8
ARU SP SP 01 13 57.5 +3.9
ARU SS **SS** **01 19 51.2 -3.1**
ARU SSS SSS 01 23 58.1
KBZ Khabaz 110.88 39 PKiKP **PKiKP** **01 03 50.3 +1.0**
comp=Z,1.1nm,0.7s,baz=310,slow=6.4,SNR=2.4
DZM Mont Dzumac 111.35 248 *e*PP PP 01 04 28.3 -2.9
comp=Z,262nm,29.6s
DZM Mont Dzumac 111.35 248 *e*PS PS 01 14 01.3 -2.2
comp=Z,1μm,35.4s
DZM *e*SS SS 01 20 08.7 +3.6
comp=Z,7μm,30.1s
DZM Mont Dzumac 111.35 248 *e*LR LR 01 37 25.3
comp=Z,4μm,26.9s
ASF Jabal al Asfar 111.57 53 PKiKP **PKiKP** **01 03 54.7 +3.6**
comp=Z,1.0nm,0.7s,baz=280,slow=7.7,SNR=2.5
GROC Groznyy 112.96 38 *i* PKIKP **PKiKP** **01 03 52.2 -1.1**
GROC *e* 01 04 42.6
GROC *e* 01 11 06.1
GROC pmax pmax
comp=Z,6.0nm,0.7s
GNI Garni 113.86 42 PKiKP **PKiKP** **01 03 59.1 +3.8**
comp=Z,1.3nm,0.6s,baz=304,slow=11,SNR=3.4
GNI PP **PP** **01 04 49.4 +1.3**
comp=Z,11nm,1.2s,baz=0.0,slow=10,SNR=4.4
GNI Garni 113.86 42⇑*i*PKIKP **PKiKP** **01 03 52.5 -2.8**
GNI MLR MLR
comp=Z,3μm,21.0s
MAK Makhachkala 114.14 38 *e*P **Pdif** **01 00 01.2 -2.9**
MAK *e* 01 04 51.4
MAK *e*PPP PPP 01 07 12.4
MAK *e* 01 10 37.5
MAK *e*PS **PS** **01 14 23.5 -4.3**
MAK *e*SS SS 01 20 40.5 +0.7
MAK *e*SSS SSS 01 24 53.6
YUK Yuzh-Kuril'sk 114.36 324 PKIKP PKPdf 01 03 53.1 -2.8
YUK *e* 01 11 09.1
YUK *e*SS SS 01 20 44.3 +1.8
AKTO Aktyubinsk 114.96 27 PKP PKPdf 01 03 56.9 -0.1
comp=Z,3.5nm,0.8s,baz=315,slow=7.8,SNR=3.2
AKTO PP **PP** **01 04 54.4 -0.8**
comp=Z,5.0nm,1.0s,baz=324,slow=10,SNR=6.4
AKTO PKKPbc **PKKPbc** **01 14 32.0 -2.9**
comp=Z,1.2nm,0.8s,baz=299,slow=1.8,SNR=2.8
ASAJ Asahikawa 116.20 325 PP PP 01 05 06.8 +2.7
comp=Z,2.4nm,0.4s,baz=342,slow=3.2,SNR=2.4
ABKAR Akbulak array 116.67 26 *e*PKPdf **PKPdf** **01 04 01.3 +1.1**
BRVK Borovoye 117.52 18 *e*PKPdf **PKPdf** **01 04 03.6 +1.8**
BRVK Borovoye 117.52 18⇓*i*PKIKP **PKPdf** **01 04 03.1 +1.4**
BRVK MLR MLR
comp=Z,2μm,21.0s
BVAR Borovoye Array 117.58 18 PKP **PKPdf** **01 04 02.3 +0.4**
comp=Z,2.6nm,1.0s,baz=285,slow=2.2,SNR=8.9
BVAR PP **PP** **01 05 14.8 +1.5**
comp=Z,7.0nm,1.0s,baz=328,slow=5.1,SNR=6.8
BVAR PKKPbc **PKKPbc** **01 14 24.1 -1.7**
comp=Z,1.4nm,0.9s,baz=151,slow=3.3,SNR=5.5
KLR Kul'dur 118.00 335⇑*i*PKIKP **PKPdf** **01 04 05.1 +2.3**
ZAA0 Zalesovo Array 120.04 9 *e*PKPdf **PKPdf** **01 04 07.2 +0.6**
ZALV Zalesovo Beam 120.04 9 PKP **PKPdf** **01 04 05.3 -1.2**
comp=Z,18nm,1.2s,baz=344,slow=2.1,SNR=19
ZALV PP **PP** **01 05 28.0 -2.1**
comp=Z,6.0nm,0.9s,baz=342,slow=5.0,SNR=2.6
ZALV PKKPbc **PKKPbc** **01 14 15.4 -1.6**
comp=Z,0.9nm,0.5s,baz=186,slow=5.7,SNR=3.3
ZALV Zalesovo Beam 120.04 9 *e*PKPdf **PKPdf** **01 04 05.7 -0.9**
ZALV PP **PP** **01 05 27.9 -2.1**
ZALV PKKPbc **PKKPbc** **01 14 15.4 -1.6**
ZALV Zalesovo Beam 120.04 9 *e*PKIKP **PKPdf** **01 04 05.7 -0.9**
ZALV 01 05 28.0
RAYN Ar Rayn 121.87 58 *e*PKPdf **PKPdf** **01 04 12.8 +1.7**
RAYN Ar Rayn 121.87 58 PKIKP **PKPdf** **01 04 12.7 +1.7**
KURK Kurchatov 121.92 14 *e*PKPdf **PKPdf** **01 04 10.4 +0.1**
KURK PP **PP** **01 05 43.3 +0.4**
KURK PKKPbc **PKKPab** **01 14 08.9 -0.8**
KURK Kurchatov 121.92 14⇓*i*PKIKP **PKPdf** **01 04 10.6 +0.3**
KURK MLR MLR
comp=Z,6μm,23.0s
KURBB Kurchatov Arra 121.98 14 PKP **PKPdf** **01 04 09.6 -0.8**
comp=Z,10nm,1.1s,baz=330,slow=2.2,SNR=21
KURBB PP **PP** **01 05 43.3 -0.1**
comp=Z,9.4nm,1.2s,baz=339,slow=5.9,SNR=5.3
KURBB PKKPbc **PKKPab** **01 14 08.9 -0.5**
comp=Z,2.2nm,1.0s,baz=153,slow=3.0,SNR=8.4
MDJ Mudanjiang 122.51 333 PKP **PKPdf** **01 04 11.4 -0.2**
MDJ LR LR
comp=Z,2μm,27.1s
MDJ LR LR
comp=Z,5μm,31.1s
MDJ LR LR
comp=Z,3μm,31.1s
TLY Talaya 122.99 355*c* *i*PKIKP **PKPdf** **01 04 11.3 -1.1**
TLY *e*PPS PPS 01 17 12.9
TLY *e*SS SS 01 22 28.7 -4.2
TLY pmax pmax
comp=Z,8.0nm,1.5s
MOY Mondy 123.18 357 *e*PKIKP **PKPdf** **01 04 14.5 +1.7**
MOY *e* 01 05 48.7
MOY pmax pmax
comp=Z,18nm,2.0s
MJAR Matsushiro Arr 123.53 321 PKP **PKPdf** **01 04 14.8 +1.0**
comp=Z,1.5nm,0.4s,baz=35,slow=1.1,SNR=6.7
MAJO Matsushiro 123.53 321⇓*i*PKIKP **PKPdf** **01 04 16.3 +2.5**
MAJO MLR MLR
comp=Z,2μm,19.0s
GEYT Alibeck 123.62 37 PKP **PKPdf** **01 04 14.5 +0.5**
comp=Z,9.3nm,0.8s,baz=320,slow=4.3,SNR=7.5
GYA0B ALIBECK ARRAY 123.62 37 *e*PKPdf **PKPdf** **01 04 14.7 +0.6**
HVS Khovu-Aksy 123.70 3*de*PKIKP **PKPdf** **01 04 13.4 -0.4**
ZAK Zakamensk 124.31 355 *e*PKIKP **PKPdf** **01 04 14.4 -0.6**
ZAK *e* 01 05 58.0
ZAK pmax pmax
comp=Z,7.0nm,1.3s
ZAK pmax pmax
comp=Z,15nm,1.2s
CN2 Changchun 124.95 335 *e*PKP **PKPdf** **01 04 12.0 -4.3**
CN2 AMB AMB
comp=Z,200nm,8.0s
CN2 LR LR
comp=Z,2μm,25.0s
CN2 LR LR
comp=Z,4μm,25.0s
CN2 LR LR
comp=Z,3μm,26.0s
ZSN Zaisan 126.33 11 *i* PKP **PKPdf** **01 04 20.2 +1.3**
ZSN *i* PP **PP** **01 06 16.3 +3.6**
MAKZ Makanchi 126.36 13 *e*PKPdf **PKPdf** **01 04 19.5 +0.5**
MAKZ Makanchi 126.36 13 *e*PKIKP **PKPdf** **01 04 19.5 +0.5**
ULN Ulaanbaatar 126.38 352 *e*PKPdf **PKPdf** **01 04 19.6 +0.4**
ULN Ulaanbaatar 126.38 352⇓*i*PKIKP **PKPdf** **01 04 20.3 +1.1**
ULN MLR MLR
comp=Z,3μm,22.0s
MK31 Makanchi Array 126.44 13 *e*PKPdf **PKPdf** **01 04 18.9 -0.2**
MK31 Makanchi Array 126.44 13 *e*PKIKP **PKPdf** **01 04 18.9 -0.2**
MKAR Makanchi Array 126.44 13 PKP **PKPdf** **01 04 18.3 -0.9**
comp=Z,7.2nm,1.0s,baz=280,slow=1.4,SNR=20
MKAR PP **PP** **01 06 10.3 -3.1**
comp=Z,6.9nm,1.1s,baz=349,slow=4.9,SNR=3.6
MKAR Makanchi Array 126.44 13 *e*PKPdf **PKPdf** **01 04 18.9 -0.2**
MKAR PP **PP** **01 06 10.3 -3.1**
MKAR Makanchi Array 126.44 13 *e*PKIKP **PKPdf** **01 04 18.9 -0.2**
MKAR 01 06 10.3
MK01 Makanchi Array 126.47 13 *e*PKPdf **PKPdf** **01 04 17.6 -1.6**
SONA1 Songino Array 126.49 352 *e*PKPdf **PKPdf** **01 04 19.4 0.0**
SONM Songino Array 126.50 352 PKP **PKPdf** **01 04 19.1 -0.3**
comp=Z,7.1nm,0.8s,baz=28,slow=0.4,SNR=20
SONM PP **PP** **01 06 11.8 -2.1**
comp=Z,4.1nm,0.9s,baz=25,slow=5.3,SNR=3.8
KUU Kurty 127.49 19⇓*e*PKP **PKPdf** **01 04 21.8 +0.6**
KUU *i* PP **PP** **01 06 23.4 +3.0**
KUU LR LR 02 03 57.1
comp=Z,2μm,18.9s
FRU Bishkek 127.84 21 *e*PKIKP **PKPdf** **01 04 21.0 -0.9**
FRU *e* 01 04 24.0
FRU *i* 01 06 28.0
FRU *e* 01 09 09.0
AAK Ala-Archa 127.96 21 PKP **PKPdf** **01 04 23.2 +0.9**
comp=Z,11nm,0.4s,baz=193,slow=8.4,SNR=17
AAK Ala-Archa 127.96 21 *e*PKPdf **PKPdf** **01 04 24.2 +1.9**
AAK Ala-Archa 127.96 21*d* *i*PKIKP **PKPdf** **01 04 24.3 +1.9**
BMNS Besmoynak 127.97 20 *e*PKP **PKPdf** **01 04 23.6 +1.2**
BMNS *i* PP **PP** **01 06 27.1 +3.4**
AAA Alma-Ata 128.29 19 *e*PKP **PKPdf** **01 04 24.6 +1.8**
AAA *i* PP **PP** **01 06 30.1 +4.4**
AAA LR LR 02 03 52.6
comp=Z,1μm,18.8s
AAA Alma-Ata 128.29 19 *e*PKIKP **PKPdf** **01 04 28.1 +5.3**
AAA pmax pmax
comp=Z,100nm,0.8s
MDOK Medeo 128.37 19 *e*PKP **PKPdf** **01 04 24.7 +1.6**
MDOK *i* PP **PP** **01 06 30.6 +4.2**
MDOK LR LR 02 03 38.3
comp=Z,1μm,19.2s
KPKS Kokpek 128.61 17 *e*PKP **PKPdf** **01 04 24.4 +0.9**
KPKS *i* PP **PP** **01 06 31.1 +3.2**
KS01 Wonju Array Si 128.82 329 *e*PKPdf **PKPdf** **01 04 22.3 -1.6**
KSRS Korea Array 128.82 329 PKP **PKPdf** **01 04 22.6 -1.2**
comp=Z,7.4nm,1.0s,baz=23,slow=1.2,SNR=25
KSAR Wonju Array Be 128.85 329 PKP **PKPdf** **01 04 22.6 -1.3**
KSAR Wonju Array Be 128.85 329 PKIKP **PKPdf** **01 04 22.7 -1.3**
SATY Saty 128.89 18 *e*PKP **PKPdf** **01 04 25.2 +1.2**
SATY *i* PP **PP** **01 06 33.2 +3.4**
UZB Uzynbulak 129.00 17 *e*PKP **PKPdf** **01 04 25.1 +0.8**
UZB *i* PP **PP** **01 06 33.6 +3.1**
SHLS Shalkode 129.12 17 *e*PKP **PKPdf** **01 04 26.9 +2.5**
SHLS LR LR 02 00 57.5
comp=Z,1μm,20.6s
KDJ Kajisay 129.34 19 *e*PKPdf **PKPdf** **01 04 25.3 +0.2**
KDJ Kajisay 129.34 19 PKIKP **PKPdf** **01 04 25.2 +0.2**
TJN Taejon 129.93 328⇓*i*PKIKP **PKPdf** **01 04 26.8 +0.8**
CTA Charters Tower 130.30 248 PKP **PKPdf** **01 04 27.4 +0.2**
comp=Z,5.7nm,0.8s,baz=62,slow=17,SNR=3.5
WMQ Urumqi 130.34 9 PKP **PKPdf** **01 04 27.0 +0.3**
WMQ PP **PP** **01 06 41.9 +3.0**
WMQ SKKS 01 13 35.1
WMQ SS **SS** **01 24 08.2 +3.5**
WMQ AMB AMB
comp=Z,1μm,8.1s
WMQ LR LR
comp=Z,6μm,24.1s
WMQ LR LR
comp=Z,6μm,20.9s
WMQ LR LR
comp=Z,7μm,21.3s
STKA Stephens Creek 130.94 232 PKP **PKPdf** **01 04 27.8 -0.2**
comp=Z,7.6nm,1.1s,baz=74,slow=3.2,SNR=3.3
STKA SP SP 01 17 01.9 +6.6
comp=Z,1.9nm,0.8s,baz=87,slow=7.4,SNR=3.2
KSH Kashi 131.23 22 PKP **PKPdf** **01 04 34.3 +5.7**
KSH PP **PP** **01 06 51.1 +6.0**
KSH PKS **PKSdf** **01 08 00.2 -5.0**
KSH SKS **SKSdf** **01 11 37.7 -2.3**
KSH SKKS **SKKSac** **01 13 41.4 -1.2**
KSH SS **SS** **01 24 19.4 +3.1**
KSH AMB AMB
comp=Z,700nm,4.9s
KSH LR LR
comp=Z,6μm,20.0s
KSH LR LR
comp=Z,5μm,18.4s
KSH LR LR
comp=Z,7μm,22.8s
BJI Beijing 131.68 341 PKP **PKPdf** **01 04 31.2 +2.0**
BJI AMB AMB
comp=Z,1μm,5.7s
BJI LR LR
comp=Z,5μm,20.4s
BJI LR LR
comp=Z,3μm,17.8s
BJI LR LR
comp=Z,4μm,25.6s
HHC Hu-ho-hao-te 132.27 345 *e*PKP **PKPdf** **01 04 31.0 +0.5**
HHC PP **PP** **01 06 57.0 +5.4**
HHC SS SS 01 24 33.2 +4.6
HHC AMB AMB
comp=Z,240nm,5.4s
HHC LR LR
comp=Z,2μm,19.0s
HHC LR LR
comp=Z,2μm,19.9s
HHC LR LR
comp=Z,2μm,19.0s
WSAR Wadi Sarin 132.73 52 PKP **PKPdf** **01 04 30.7 -1.0**
comp=Z,6.4nm,0.9s,baz=323,slow=5.1,SNR=2.0
GTA Gaotai 135.46 357⇓PKP **PKPdf** **01 04 37.0 +0.4**
GTA SS SS 01 25 07.6 +0.7
GTA AMB AMB
comp=Z,990nm,5.5s
GTA LR LR
comp=Z,2μm,21.6s
GTA LR LR
comp=Z,3μm,21.0s
GTA LR LR
comp=Z,4μm,23.4s
SSE Sheshan 137.25 329 PKP **PKPdf** **01 04 35.3 -4.6**
SSE PP **PP** **01 07 23.5 0.0**
SSE LR LR
comp=Z,630nm,22.8s
SSE LR LR
comp=Z,2μm,22.3s
NJ2 Nanjing 137.60 333 *e*PKP **PKPdf** **01 04 41.0 +0.5**
NJ2 PP **PP** **01 07 32.0 +6.5**
NJ2 SS SS 01 25 39.7 +6.7
NJ2 AMB AMB
comp=Z,400nm,5.9s
NJ2 LR LR
comp=Z,2μm,23.3s
NJ2 LR LR
comp=Z,2μm,19.0s
NJ2 LR LR
comp=Z,2μm,18.4s
DHRM DHARAMSHALA 137.62 27 *e*P **PKPdf** **01 04 40.5 -0.4**
DHRM IAMs_20 IAMs_20 01 12 11.8
comp=Z,447nm,5.0s
LZH Lanzhou 138.39 352 *e*PKP **PKPdf** **01 04 39.5 -2.6**
LZH PKS **PKSdf** **01 08 15.3 -3.2**
LZH SKS **SKSdf** **01 11 52.1 -0.6**
LZH SKKS **SKKSac** **01 14 19.6 -6.3**
LZH SS **SS** **01 25 42.9 +0.9**
LZH AMB AMB
comp=Z,2μm,6.5s
LZH LR LR
comp=Z,3μm,17.3s
LZH LR LR
comp=Z,2μm,16.8s
LZH LR LR
comp=Z,3μm,18.4s
SMLA Simla 138.96 27 *e*P **PKPdf** **01 04 42.5 -0.5**
XAN Xi'an 139.38 345 P **PKPdf** **01 04 38.2 -5.7**
XAN pmax pmax
comp=Z,7.0nm,1.1s
XAN Xi'an 139.38 345 PKP **PKPdf** **01 04 45.2 +1.3**
XAN AMB AMB
comp=Z,720nm,8.6s
XAN LR LR
comp=Z,4μm,21.1s
XAN LR LR
comp=Z,2μm,19.1s
XAN LR LR
comp=Z,4μm,21.1s
DDI Dehra Dun 140.04 26 *e*P **PKPdf** **01 04 44.7 -0.5**
ASAR Alice Springs 140.37 239 PKhKP PKPpre 01 04 38.0
comp=Z,4.4nm,0.8s,baz=119,slow=3.6,SNR=16
BHJ Bhuj 140.79 43 *e*P **PKPdf** **01 04 44.9 -1.6**
WHN Wuhan 140.83 336⇓PKP **PKPdf** **01 04 48.0 +1.5**
WHN PP **PP** **01 07 45.4 +0.1**
WHN LR LR
comp=Z,6μm,16.5s
WHN LR LR
comp=Z,2μm,13.1s
WHN LR LR
comp=Z,8μm,29.7s
WRAB Tennant Creek 141.21 245 *e*PKPdf **PKPdf** **01 04 45.9 -1.5**
WRAB Tennant Creek 141.21 245⇓*e*PKIKP **PKPdf** **01 04 45.7 -1.8**
WRAB MLR MLR
comp=Z,1μm,17.0s
WRA Warramunga Arr 141.22 245 PKhKP PKPpre 01 04 39.5
comp=Z,5.5nm,0.9s,baz=106,slow=2.4,SNR=20
CD2 Chengdu 143.49 351 PKP PKPbc 01 04 48.5 +0.1
CD2 sPKP 01 04 53.1
CD2 SKS **SKSdf** **01 11 58.2 -2.7**
CD2 SKKS **SKKSac** **01 14 52.0 -3.4**
CD2 SS **SS** **01 26 43.1 +1.9**
CD2 AMB AMB
comp=Z,750nm,7.1s
CD2 LR LR
comp=Z,5μm,21.4s
CD2 LR LR
comp=Z,6μm,21.4s
QZH Quanzhou 143.53 326⇓*i*PKP **PKPdf** **01 04 51.2 -0.2**
QZH SKKS 01 14 59.0
QZH AMB AMB
comp=Z,680nm,9.0s
QZH LR LR
comp=Z,760nm,19.0s
QZH LR LR
comp=Z,2μm,18.9s
QZH LR LR
comp=Z,2μm,18.0s
PYUN Piuthan 144.02 22 *e*P PKPbc 01 04 50.0 -0.3
comp=Z,243nm,1.4s
DANN Dangsing 144.07 21 *e*P PKPbc 01 04 51.3 +0.7
comp=Z,270nm,1.2s
KOLN Koldanda 144.54 21 *e*P **PKPab** **01 04 51.1 -0.7**
comp=Z,158nm,1.2s
GKN Gorkha 144.69 20 *e*P **PKPab** **01 04 51.0 -1.2**
comp=Z,560nm,1.3s
LSA Lhasa 144.70 9 PKP PKPbc 01 04 53.1 +0.4
LSA LR LR
comp=Z,1μm,32.0s
LSA LR LR
comp=Z,1μm,42.7s
LSA LR LR
comp=Z,4μm,32.0s
LSA Lhasa 144.70 9 *e*PKPdf **PKPdf** **01 04 53.4 -0.6**
LSA Lhasa 144.70 9 *e*PKIKP **PKPdf** **01 04 53.4 -0.6**
KKN Kakani 145.10 19 *e*P **PKPbc** **01 04 52.5 -1.3**
comp=Z,386nm,0.9s
GUN Gumba 145.18 18 *e*P **PKPbc** **01 04 53.2 -1.0**
comp=Z,2μm,1.4s
DMN Daman 145.21 19 *e*P **PKPbc** **01 04 53.0 -1.2**
comp=Z,1μm,1.3s
JIRN Jiri 145.50 18 *e*P **PKPbc** **01 04 54.1 -1.2**
comp=Z,2μm,1.4s
BHPL Bhopal 145.59 34 *e*P **PKPdf** **01 04 54.6 -0.5**
MTN Manton Dam 145.86 255 *e*PKPdf **PKPab** **01 04 57.2 +0.5**
GTK Tadong 146.49 14 *e*P **PKPdf** **01 04 56.0 -0.8**
H01W1 Cape Leeuwin H 146.71 206 T T 03 49 46.0
baz=151,slow=76,SNR=48
H01W2 Cape Leeuwin H 146.71 206 T T 03 49 45.4
baz=151,slow=76,SNR=42
H01W3 Cape Leeuwin H 146.72 206 T T 03 49 42.0
baz=151,slow=76,SNR=53
NWAO Narrogin (SRO) 146.85 212 PKPbc **PKPbc** **01 04 59.1 +0.3**
comp=Z,34nm,0.9s,baz=69,slow=2.5,SNR=3.8
POO Poona 146.86 44 *e*P **PKPdf** **01 04 57.6 +0.2**
GYA Guiyang 147.18 345⇑*i*PKPbc **PKPbc** **01 05 00.5 +0.5**
GYA PP **PP** **01 08 30.0 +6.7**
GYA SKKS 01 15 15.5
GYA SS **SS** **01 27 24.8 +1.1**
GYA AMB AMB
comp=Z,580nm,9.9s
GYA LR LR
comp=Z,290nm,22.0s
GYA LR LR
comp=Z,230nm,22.4s
ZIRO ZIRO 147.19 6 *e*P **PKPdf** **01 04 57.7 -0.2**
ZIRO IAmb IAmb 01 05 16.5
comp=Z,175nm,1.2s
ZIRO IAMs_20 IAMs_20 01 10 33.3
comp=Z,391nm,8.2s
GZH Guangzhou 147.76 332 PKPbc **PKPbc** **01 05 00.8 -0.7**
GZH PKS **PKSdf** **01 08 34.6 +0.5**
GZH SS SS 01 27 34.6 +3.8
GZH LR LR
comp=Z,2μm,19.8s
GZH LR LR
comp=Z,3μm,19.6s
TEZP TEZPUR 147.97 8 *e*P **PKPdf** **01 05 00.2 +1.2**
JORH JORHAT 148.01 5 *e*P **PKPdf** **01 04 59.2 +0.2**
JORH IAMs_20 IAMs_20 01 12 15.6
comp=Z,694nm,7.2s
NGP Nagpur 148.16 34 *e*P **PKPdf** **01 05 00.5 +1.0**
NGP IAMs_20 IAMs_20 01 59 53.6
comp=Z,5μm,39.2s
NGP Nagpur 148.16 34 *e*P **PKPbc** **01 05 02.9 +0.2**
NGP *e*S **PKiKP** **01 05 04.6 +0.1**
MCO Taipa Grande 148.48 330 P **PKPab** **01 05 12.0 +5.3**
TURI Tura 148.59 12 *e*P **PKPdf** **01 05 00.1 +0.1**
SHL Shillong 148.86 10 *e*P **PKPdf** **01 05 00.9 +0.2**
SHL IAmb IAmb 01 05 11.2
comp=Z,275nm,1.4s
SHL IAMs_20 IAMs_20 01 12 03.4
comp=Z,1μm,3.1s
SHL Shillong 148.86 10 *e*PKP **PKPbc** **01 05 05.0 +0.4**

SHL				*e*PP	PP	01 07 40.0	-53
BOK	**Bokaro**	**148.99**	**21**	*e*P	**PKPdf**	**01 05 01.2**	**+0.5**
BOK				IAMs_20	IAMs_20	01 12 33.9	
	comp=Z,691nm,11.9s						
KMI	**Kunming**	**149.32**	**350**	PKPbc	**PKPbc**	**01 05 03.7**	**-2.1**
KMI				pPKP	pPKPdf	01 05 06.3	-0.4
KMI				sPKP		01 05 08.7	
BUKP	**Musuan**	**149.43**	**295**	*e*P	**PKPab**	**01 05 09.9**	**-1.0**
FITZ	**Fitzroy Crossi**	**149.59**	**243**	PKPbc	**PKPbc**	**01 05 05.0**	**-1.4**
	comp=Z,13nm,0.8s,baz=42,slow=3.4,SNR=15						
FITZ	**Fitzroy Crossi**	**149.59**	**243**	*e*pPKPdf	**PKPbc**	**01 05 05.2**	**-1.2**
TGY	**Tagaytay City**	**149.70**	**310**	PKPab	**PKPab**	**01 05 10.7**	**-1.2**
	comp=Z,93nm,0.3s,baz=53,slow=20,SNR=3.6						
RCP	**Roxas**	**149.71**	**304⇑**	*e*P	**PKPbc**	**01 05 08.5**	**+1.7**
IMP	**Imphal**	**149.87**	**6**	*e*P	**PKPdf**	**01 05 02.5**	**+0.3**
AGT	**Agartala**	**150.39**	**11**	*e*P	**PKPdf**	**01 05 01.4**	**-1.5**
SJMP	**San Jose**	**150.53**	**307**	*e*P	**PKPbc**	**01 05 11.8**	**+3.1**
HYB	**Hyderabad**	**150.77**	**39**	*i* PKP	**PKPdf**	**01 05 05.0**	**+1.3**
HYB	**Hyderabad**	**150.77**	**39**	*e*P	**PKPdf**	**01 05 02.6**	**-1.1**
AZL	**Aizawl**	**150.78**	**9**	*e*P	**PKPdf**	**01 05 04.5**	**+0.8**
BELO	**BELONIA**	**151.05**	**11**	*e*P	**PKPdf**	**01 05 02.6**	**-1.4**
QIZ	**Qiongzhong**	**152.88**	**333**	PKPbc	**PKPdf**	**01 05 07.6**	**+0.8**
QIZ				PP	**PP**	**01 08 58.1**	**+1.6**
QIZ				AMB	AMB		
	comp=Z,850nm,8.8s						
QIZ				LR	LR		
	comp=Z,2μm,20.1s						
QIZ				LR	LR		
	comp=Z,2μm,22.6s						
QIZ				LR	LR		
	comp=Z,2μm,27.0s						
SOEI	**Soe**	**152.97**	**259**	*e*PKPab	**PKPab**	**01 05 27.4**	**+1.6**
CHTO	**Chiang Mai**	**155.99**	**356**	*e*PKPdf	**PKPdf**	**01 05 12.5**	**+1.3**
CHTO	**Chiang Mai**	**155.99**	**356**	*e*PKIKP	**PKPdf**	**01 05 12.5**	**+1.3**
CMAR	**Chiang Mai Arr**	**156.35**	**356**	PKP	**PKPdf**	**01 05 11.4**	**-0.2**
	comp=Z,3.5nm,0.4s,baz=305,slow=2.0,SNR=20						
CMAR				PKPab	**PKPab**	**01 05 38.6**	**-1.0**
	comp=Z,44nm,1.2s,baz=340,slow=4.1,SNR=14						
CMAR				PP	**PP**	**01 09 10.8**	**-4.6**
	comp=Z,0.9nm,0.3s,baz=339,slow=4.8,SNR=3.6						
CM01	**Chiang Mai Arr**	**156.38**	**356**	*e*PKPdf	**PKPdf**	**01 05 11.8**	**+0.1**
MYLDM	**Lahad Datu**	**156.47**	**296**	*e*PKPab	**PKPab**	**01 05 42.4**	**+1.9**
PBKT	**Sadao Pong**	**157.99**	**351**	*e*PKPdf	**PKPdf**	**01 05 15.5**	**+1.7**
PALK	**Pallekele**	**159.21**	**53**	PKPab	**PKPab**	**01 05 52.2**	**-0.1**
	comp=Z,38nm,1.1s,baz=296,slow=3.9,SNR=2.9						
DGPR	**DIGLIPUR**	**161.13**	**13**	*e*P	**PKPdf**	**01 05 15.7**	**-1.7**
KSM	**Kuching**	**165.43**	**297**	*e*PKPdf	**PKPdf**	**01 05 23.5**	**+1.9**
KULM	**Kulim**	**168.99**	**343**	*e*PKPab	**PKPab**	**01 06 35.5**	**+0.5**
IPM	**Ipoh**	**169.63**	**339**	*e*PKPab	**PKPab**	**01 06 38.2**	**+0.3**
PSI	**Prapat**	**171.81**	**349**	PKP	**PKPdf**	**01 05 25.9**	**0.0**
	comp=Z,16nm,0.9s,baz=0.0,slow=1.0,SNR=4.7						
PSI				PKPab	**PKPab**	**01 06 47.1**	**-0.5**
	comp=Z,22nm,1.1s,baz=0.0,slow=6.1,SNR=3.9						
PSI	**Prapat**	**171.81**	**349**	*e*PKPdf	**PKPdf**	**01 05 27.0**	**+1.1**
PSI				PKPab	**PKPab**	**01 06 47.1**	**-0.5**
PSI	**Prapat**	**171.81**	**349**	*e*PKIKP	**PKPdf**	**01 05 27.0**	**+1.1**
PSI						01 06 47.1	

IDC 04 00:51:24.5±2.2, 9°16S×124°85E, h0km, mb1 3.5/3, mb1mx3.3/58, mbtmp3.3/3, ML3.2/3, Error ellipse: s-maj=38.4km s-min=30.3km az=153.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**1.56**	**228**	Pn	Pn	00 51 53.5	-0.1
	80nm,0.3s,baz=60,slow=16,SNR=48						
BATI				Sn	Sb	00 52 14.8	0.0
	35nm,0.3s,baz=125,slow=21,SNR=15						
FITZ	**Fitzroy Crossi**	**8.92**	**175**	Pn	Pn	00 53 34.3	-0.4
	0.3nm,0.3s,baz=356,slow=11,SNR=22						
FITZ				Sn	Sn	00 55 10.6	-5.4
	1.0nm,0.3s,baz=311,slow=20,SNR=12						
WRA	**Warramunga Arr**	**14.11**	**140**	Pn	Pn	00 54 45.9	+0.1
	0.1nm,0.3s,baz=319,slow=13,SNR=4.4						
WRA				Sn	Sn	00 57 18.1	-5.2
	0.4nm,0.3s,baz=321,slow=22,SNR=10.0						
ASAR	**Alice Springs**	**16.83**	**150**	Pn	Pn	00 55 22.3	+0.6
	0.1nm,0.3s,baz=332,slow=13,SNR=4.6						
TORD	**Torodi Ar. Bea**	**124.18**	**280**	PKP	PKPdf	01 10 26.1	-0.1
	0.7nm,1.0s,baz=70,slow=1.7,SNR=2.4						

IDC 04 01:03:06.8±17.0, 16°24S×174°17W, h0km, mb4.2/5, mb1 4.3/5, mb1mx3.8/53, mbtmp4.2/5, Error ellipse: s-maj=334.3km s-min=160.7km az=76.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**37.74**	**258**	P	P	01 10 25.2	+0.5
	1.4nm,0.5s,baz=90,slow=9.1,SNR=2.9						
STKA	**Stephens Creek**	**42.98**	**241**	P	P	01 11 07.9	0.0
	1.4nm,0.4s,baz=68,slow=11,SNR=2.9						
WRA	**Warramunga Arr**	**48.94**	**258**	P	P	01 11 54.4	-0.8
	0.7nm,0.4s,baz=93,slow=7.2,SNR=15						
ASAR	**Alice Springs**	**49.15**	**253**	P	P	01 11 56.4	-0.4
	6.3nm,0.6s,baz=88,slow=8.4,SNR=56						
FITZ	**Fitzroy Crossi**	**57.32**	**259**	P	P	01 12 57.5	+0.5
	1.0nm,0.5s,baz=98,slow=3.9,SNR=3.1						

SOME ***04*** *01:03:46.9, 40°78N×73°30E, h5km*
KRNET ***04*** *01:03:46.1±0.1, 40°71N×73°32E, h13km, mb3.2*
NNC ***04*** *01:03:46.5±1.5, 40°69N×73°37E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=39.3km s-min=8.3km az=81.0*
KNET ***04*** *01:03:48.9±0.4, 40°81N×73°36E, h22km±2km, ml2.7, Error ellipse: s-maj=3.8km s-min=2.7km az=97.0*

ISC 04 01:03:46.6±1.3, 40°69N±0°02×73°12E±0°04, h10km±13km, n38, σ1°46/71, 31C-14D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**0.64**	**351**	⇑*i*P	**Pb**	**01 03 58.7**	**-1.3**
	baz=37						
ARSB				⇑*i*S	**Sb**	**01 04 07.8**	**-1.3**
	baz=37						
SFK	**Sufi-Kurgan**	**0.74**	**156**	⇑P	**Pb**	**01 03 59.5**	**-2.1**
	7.0nm,0.1s						
SFK				⇑S	**Sb**	**01 04 09.3**	**-2.5**
	117nm,0.4s						
SFK	**Sufi-Kurgan**	**0.74**	**156**	⇑*i*P	**Pb**	**01 03 59.5**	**-2.1**
	baz=69						
SFK				⇑*i*S	**Sb**	**01 04 09.5**	**-2.3**
	baz=69						
TOKL	**Toktogul**	**1.26**	**352**	⇓*i*P	**Pb**	**01 04 10.2**	**-0.3**
	baz=45						
TOKL				⇓*i*S	**Sn**	**01 04 27.8**	**+0.4**
	baz=45						
ARK	**Arkit**	**1.41**	**322**	⇑*i*P	**Pg**	**01 04 13.7**	**+0.1**
	baz=17						
ARK				⇑*i*S	**Sg**	**01 04 34.3**	**+2.4**
	baz=17						
AML	**Almayashu**	**1.50**	**17**	⇑P	**Pn**	**01 04 13.3**	**-0.7**
	17nm,0.1s,SNR=15						
AML				⇓S	**Sn**	**01 04 33.4**	**-0.5**
	122nm,0.3s						
AML	**Almayashu**	**1.50**	**17**	⇓*i*P	**Pn**	**01 04 13.2**	**-0.7**
	baz=11						
AML				⇓*i*S	**Sn**	**01 04 32.9**	**-0.9**
	baz=11						
DRK	**Karamyk**	**1.57**	**220**	⇑*e*P	**Pg**	**01 04 17.6**	**+0.8**
	baz=24						
DRK				⇑*i*S	**Sg**	**01 04 41.3**	**+4.0**
	baz=24						
MNAS	**Manas**	**1.85**	**346**	⇓Pn	**Pg**	**01 04 20.6**	**-1.5**
	21nm,0.7s						
MNAS				⇓Sn	**Sg**	**01 04 45.5**	**-0.8**
	42nm,0.5s						
UCH	**Uchtor**	**1.86**	**34**	⇑P	**Pb**	**01 04 19.6**	**-1.4**
	2.5nm,0.2s,SNR=13						
UCH				⇑S	**Sn**	**01 04 43.1**	**+0.4**
	59nm,0.3s						
UCH	**Uchtor**	**1.86**	**34**	⇑*i*P	**Pb**	**01 04 19.0**	**-1.9**
	baz=30						
UCH				⇑*i*S	**Sn**	**01 04 42.7**	**0.0**
	baz=30						
BTK	**Batken**	**1.87**	**251**	⇑*i*P	**Pg**	**01 04 22.5**	**+0.1**
	baz=52						
BTK				⇑*i*S	**Sg**	**01 04 50.0**	**+3.4**
	baz=52						
EKS2	**Erkin-Say**	**2.03**	**14**	⇓P	**Pb**	**01 04 22.9**	**-0.8**
	2.8nm,0.1s,SNR=11						
EKS2	**Erkin-Say**	**2.03**	**14**	⇑*i*P	**Pb**	**01 04 22.9**	**-0.8**
	baz=10.0						
EKS2				⇑*i*S	**Sb**	**01 04 49.1**	**+0.1**
	baz=10.0						
MRKS	**Merke**	**2.06**	**2**	*e*P	**Pb**	**01 04 23.4**	**-0.6**
	16nm,0.3s						
MRKS				*e*S	**Sb**	**01 04 50.2**	**+0.5**
	74nm,0.5s						
KZA	**Kyzart**	**2.12**	**48**	⇑P	**Pb**	**01 04 23.3**	**-2.0**
	2.6nm,0.2s,SNR=8.7						
KZA	**Kyzart**	**2.12**	**48**	⇓*i*P	**Pb**	**01 04 23.4**	**-2.0**
	baz=46						
KZA				⇓*i*S	**Sn**	**01 04 50.3**	**+1.3**
	baz=46						
AAK	**Ala-Archa**	**2.20**	**27**	⇓Pn	**Pb**	**01 04 25.7**	**-0.9**
	19nm,0.8s						
NRN	**Naryn**	**2.30**	**70**	⇑*i*P	**Pn**	**01 04 24.3**	**-0.6**
	baz=70						
NRN				⇑*i*S	**Sn**	**01 04 52.5**	**-0.9**
	baz=70						
KBK	**Karagaybulak**	**2.40**	**34**	⇑*i*P	**Pb**	**01 04 27.1**	**-2.8**
	baz=32						
KBK				⇑*i*S	**Sn**	**01 04 56.6**	**+1.1**
	baz=32						
IUG	**Iuzhnay**	**2.74**	**303**	*e*P	**Pg**	**01 04 38.0**	**-1.1**
	4.6nm,0.4s						
IUG				*e*S	**Sg**	**01 05 14.7**	**+0.1**
	48nm,0.4s						
USP	**Ospenovka**	**2.77**	**21**	⇑*e*P	**Pn**	**01 04 32.3**	**+1.2**
	baz=19						
USP				⇑*i*S	**Sn**	**01 05 06.3**	**+1.7**
	baz=19						
ULHL	**Ulahol**	**2.82**	**55**	⇑*i*P	**Pn**	**01 04 32.4**	**+0.6**
	baz=54						
ULHL				⇑*i*S	**Sn**	**01 05 06.4**	**+0.5**
	baz=54						
TKM2	**Tokmak 2**	**2.90**	**39**	⇓Pn	**Pn**	**01 04 33.7**	**+0.7**
	15nm,1.1s						
TKM2				⇓Lg	Lg	01 05 14.6	
	12nm,0.6s						
TKM2	**Tokmak 2**	**2.90**	**39**	⇑*i*P	**Pn**	**01 04 34.1**	**+1.1**
	baz=37						
TKM2				⇑*i*S	**Sn**	**01 05 08.7**	**+0.7**
	baz=37						
BMNS	**Besmoynak**	**3.08**	**37**	*e*P	**Pb**	**01 04 41.3**	**-0.2**
	5.9nm,0.2s						
BMNS				*e*S	**Sb**	**01 05 20.4**	**+1.3**
	51nm,0.4s						
KK31	**Karatay Array**	**3.10**	**322**	⇓Pg	**Pg**	**01 04 43.4**	**-2.5**
	1.2nm,0.3s,baz=134,slow=16,SNR=5.4						
KK31				⇑Lg	Lg	01 05 27.0	
	7.1nm,0.3s,baz=126,slow=29						
KST	**Kastek**	**3.17**	**41**	*e*P	**Pb**	**01 04 43.4**	**+0.3**
	4.8nm,0.6s						
KST				*e*S	**Sb**	**01 05 23.1**	**+1.3**
	15nm,0.7s						
DGS	**Degeres**	**3.23**	**37**	*e*P	**Pb**	**01 04 43.2**	**-0.8**
	7.3nm,0.5s						
DGS				*e*S	**Sb**	**01 05 23.5**	**0.0**
	16nm,0.5s						
BRLS	**Borolday**	**3.39**	**315**	*e*P	**Pg**	**01 04 49.0**	**-2.4**
	0.3nm,0.4s						
BRLS				*e*S	**Sg**	**01 05 33.5**	**-1.9**
	4.7nm,0.4s						
MTBS	**Maitube**	**3.47**	**44**	*e*P	**Pb**	**01 04 48.0**	**-0.1**
	2.7nm,0.2s						
MTBS				*e*S	**Sb**	**01 05 31.5**	**+1.1**
	12nm,0.4s						
IZV	**Izvestkoviy**	**3.51**	**47**	*e*P	**Pb**	**01 04 48.2**	**-0.6**
	11nm,1.1s						
IZV				*e*S	**Sb**	**01 05 32.8**	**+1.2**
	28nm,0.6s						
MDOK	**Medeo**	**3.84**	**49**	*e*P	**Pb**	**01 04 54.5**	**+0.1**
	9.8nm,0.5s						
MDOK				*e*S	**Sb**	**01 05 42.8**	**+1.9**
	9.0nm,0.5s						
KOTS	**Kotyrbulak**	**3.92**	**48**	*e*P	**Pb**	**01 04 56.0**	**+0.3**
	4.2nm,0.7s						
KOTS				*e*S	**Sb**	**01 05 45.7**	**+2.4**
	13nm,0.7s						
KUU	**Kurty**	**4.00**	**36**	*e*P	**Pb**	**01 04 56.7**	**-0.4**
	2.5nm,0.4s						
KUU				*e*S	**Sb**	**01 05 46.1**	**+0.7**
	9.1nm,0.4s						
KTBS	**Karatobe**	**4.02**	**40**	*e*P	**Pb**	**01 04 56.1**	**-1.3**
	2.8nm,0.8s						
KTBS				*e*S	**Sb**	**01 05 46.2**	**+0.2**
	14nm,0.7s						
CHKK	**Chushkaly**	**4.27**	**41**	*e*P	**Pb**	**01 05 01.2**	**-0.5**
	1.0nm,0.2s						
CHKK				*e*S	**Sb**	**01 05 54.9**	**+1.5**
	11nm,0.3s						
ARXS	**Arharly**	**4.95**	**43**	*e*P	**Pb**	**01 05 13.7**	**+0.3**
	3.4nm,1.0s						
ARXS				*e*S	**Sb**	**01 06 15.3**	**+2.3**
	7.2nm,0.6s						

ATH ***04*** *01:09:42.9, 37°75N×26°84E, h23km±1km, ML2.4/3, Error ellipse: s-maj=3.4km s-min=1.3km az=256.0*
ISK ***04*** *01:09:43.9, 37°77N×26°74E, h9km, ML2.5/11*
ISCJB ***04*** *01:09:44.3±0.4, 37°77N±0°02×26°73E±0°03, h5km±4km, Error ellipse: s-maj=4.7km s-min=3.1km az=148.5*
DDA ***04*** *01:09:44.3, 37°79N×26°73E, h7km, Ml2.6*
THE ***04*** *01:09:44.8, 37°75N×26°71E, h2km±3km, ML2.2/4, Error ellipse: s-maj=3.6km s-min=1.0km az=163.0*
CSEM ***04*** *01:09:44.3±0.2, 37°75N×26°72E, h5km, ML2.4, Error ellipse: s-maj=5.3km s-min=3.4km az=54.0*

ISC 04 01:09:44.4±0.8, 37°76N±0°02×26°73E±0°03, h12km±5km, n65, σ0°54/90, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.10**	**121**	P	**Pg**	**01 09 47.9**	**+0.6**
SMG				S	**Sg**	**01 09 48.8**	**-0.6**
SMG				AML	AML	01 09 49.6	
	comp=N,11652μm,0.3s						
SMG				AML	AML	01 09 49.9	
	comp=E,7102μm,0.2s						
SMG	**Samos**	**0.10**	**121**	P	**Pg**	**01 09 47.3**	**0.0**
SMG				S	**Sg**	**01 09 48.9**	**-0.4**
SMG	**Samos**	**0.10**	**121**	P	**Pg**	**01 09 47.3**	**0.0**
SMG				S	**Sg**	**01 09 49.3**	**0.0**
DGB	**˜zmir**	**0.32**	**23**	*i* P	**Pg**	**01 09 50.4**	**-0.4**
DGB				*i* S	**Sg**	**01 09 54.3**	**-0.8**
GMLD	**Gumuldur**	**0.35**	**26**	PG	**Pg**	**01 09 51.1**	**-0.3**
GMLD				SG	**Sg**	**01 09 56.1**	**0.0**
GMLD	**Gumuldur**	**0.35**	**26**	*e*Pg	**Pg**	**01 09 51.1**	**-0.3**
GMLD				*e*Sg	**Sg**	**01 09 56.1**	**0.0**
GCAM	**G?zelcaml?**	**0.41**	**99**	PG	**Pg**	**01 09 52.4**	**0.0**
GCAM				SG	**Sg**	**01 09 58.6**	**+0.6**
GCAM	**G?zelcaml?**	**0.41**	**99**	*i* P	**Pg**	**01 09 52.5**	**0.0**
GCAM				*i* S	**Sg**	**01 09 58.5**	**+0.6**
GCAM	**G?zelcaml?**	**0.41**	**99**	P	**Pg**	**01 09 52.5**	**0.0**
GCAM				S	**Sg**	**01 09 58.5**	**+0.6**
ZEY	**˜zmir**	**0.51**	**340**	*i* P	**Pg**	**01 09 54.2**	**-0.1**
URLA	**Izmir**	**0.61**	**350**	PG	**Pg**	**01 09 55.0**	**-1.2**
URLA	**Izmir**	**0.61**	**350**	*i* P	**Pg**	**01 09 55.0**	**-1.2**
URLA	**Izmir**	**0.61**	**350**	*e*Pg	**Pg**	**01 09 55.0**	**-1.2**
CESE	**˜e˜me**	**0.66**	**330**	PG	**Pg**	**01 09 57.7**	**+0.5**
CESE	**˜e˜me**	**0.66**	**330**	*e*Pg	**Pg**	**01 09 57.7**	**+0.5**
BLCB	**Balcova**	**0.67**	**22**	PG	**Pg**	**01 09 56.9**	**-0.6**
BLCB				SG	**Sg**	**01 10 06.1**	**-0.2**
BLCB	**Balcova**	**0.67**	**22**	*e*Pg	**Pg**	**01 09 56.9**	**-0.6**
BLCB				*e*Sg	**Sg**	**01 10 06.1**	**-0.2**
CHOS	**Chios island**	**0.82**	**320**	PG	**Pb**	**01 10 00.9**	**+0.2**
CHOS	**Chios island**	**0.82**	**320**	P	**Pg**	**01 10 00.1**	**-0.2**
CHOS				S	**Sb**	**01 10 12.8**	**+1.1**
CHOS				AML	AML	01 10 13.6	
	comp=E,338μm,0.2s						
CHOS				AML	AML	01 10 14.7	
	comp=N,229μm,0.2s						
CHOS	**Chios island**	**0.82**	**320**	P	**Pb**	**01 10 00.7**	**0.0**
CHOS				S	**Sb**	**01 10 12.0**	**+0.3**
CHOS	**Chios island**	**0.82**	**320**	P	**Pb**	**01 10 00.7**	**0.0**
CHOS				S	**Sb**	**01 10 12.0**	**+0.3**
BODT	**Bodrum**	**0.84**	**146**	PG	**Pg**	**01 10 00.6**	**0.0**
BODT				SG	**Sb**	**01 10 12.2**	**-0.1**
BODT	**Bodrum**	**0.84**	**146**	*e*Pg	**Pg**	**01 10 00.6**	**0.0**
BODT				*e*Sg	**Sb**	**01 10 12.2**	**-0.1**
KRBN	**Karaburun**	**0.84**	**351**	PG	**Pg**	**01 10 00.9**	**+0.2**
KRBN	**Karaburun**	**0.84**	**351**	*e*Pg	**Pg**	**01 10 00.9**	**+0.2**
BDRM	**Kayabasi**	**0.90**	**140**	*i* P	**Pb**	**01 10 02.2**	**+0.2**
BDRM				*i* S	**Sb**	**01 10 14.8**	**+0.8**
BDRM	**Kayabasi**	**0.90**	**140**	P	**Pb**	**01 10 02.2**	**+0.2**
BDRM				S	**Sb**	**01 10 14.8**	**+0.8**
AYDN	**Tasoluk**	**0.92**	**96**	*i* P	**Pg**	**01 10 01.4**	**-0.8**
AYDN				*i* S	**Sg**	**01 10 13.7**	**-0.5**
AYDN	**Tasoluk**	**0.92**	**96**	P	**Pg**	**01 10 01.4**	**-0.8**
AYDN				S	**Sg**	**01 10 13.7**	**-0.5**
AYDB	**Zeytinkoy-Aydi**	**0.94**	**78**	PG	**Pg**	**01 10 02.2**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**0.94**	**78**	*e*Pg	**Pg**	**01 10 02.2**	**-0.4**
FOCM	**Fo˜Şa**	**0.95**	**0**	PG	**Pg**	**01 10 02.4**	**-0.3**
FOCM	**Fo˜Şa**	**0.95**	**0**	*e*Pg	**Pg**	**01 10 02.4**	**-0.3**
MLSB	**Milas**	**0.96**	**119**	PG	**Pg**	**01 10 02.9**	**0.0**
MLSB	**Milas**	**0.96**	**119**	*e*Pg	**Pg**	**01 10 02.9**	**0.0**
APE	**Apeiranthos**	**1.18**	**234**	PN	**Pb**	**01 10 06.7**	**-0.1**
APE	**Apeiranthos**	**1.18**	**234**	P	**Pb**	**01 10 06.6**	**-0.1**
APE	**Apeiranthos**	**1.18**	**234**	P	**Pb**	**01 10 06.6**	**-0.1**
APE				S	**Sn**	**01 10 22.9**	**+0.1**
APE	**Apeiranthos**	**1.18**	**234**	P	**Pb**	**01 10 06.6**	**-0.1**
APE				S	**Sn**	**01 10 22.9**	**+0.1**
DKL	**Dikili**	**1.31**	**6**	PN	**Pb**	**01 10 09.1**	**0.0**
DKL	**Dikili**	**1.31**	**6**	*e*Pn	**Pb**	**01 10 09.1**	**0.0**
YER	**Yerkesik**	**1.39**	**116**	PN	**Pn**	**01 10 09.8**	**+0.1**
YER	**Yerkesik**	**1.39**	**116**	*e*Pn	**Pn**	**01 10 09.8**	**+0.1**
PRK	**Paraskevi**	**1.52**	**347**	P	**Pn**	**01 10 11.9**	**+0.4**
PRK				S	**Sb**	**01 10 32.1**	**+0.1**
PRK				AML	AML	01 10 35.7	
	comp=N,166μm,0.7s						
PRK				AML	AML	01 10 36.8	
	comp=E,117μm,0.6s						
PRK	**Paraskevi**	**1.52**	**347**	P	**Pn**	**01 10 12.2**	**+0.7**
PRK				S	**Sg**	**01 10 33.5**	**0.0**
PRK	**Paraskevi**	**1.52**	**347**	P	**Pn**	**01 10 11.6**	**+0.1**
PRK				S	**Sb**	**01 10 32.0**	**+0.1**
AYVA	**Ayvalik**	**1.54**	**359**	*i* P	**Pb**	**01 10 12.7**	**-0.3**
AYVA	**Ayvalik**	**1.54**	**359**	P	**Pb**	**01 10 12.7**	**-0.3**
SIGR	**SIGRI**	**1.60**	**335**	PN	**Pn**	**01 10 13.2**	**+0.6**
SIGR	**SIGRI**	**1.60**	**335**	P	**Pn**	**01 10 11.8**	**-0.8**
SIGR	**SIGRI**	**1.60**	**335**	P	**Pn**	**01 10 12.1**	**-0.5**
SIGR	**SIGRI**	**1.60**	**335**	P	**Pn**	**01 10 12.2**	**-0.4**
SIGR	**SIGRI**	**1.60**	**335**	*e*Pn	**Pn**	**01 10 13.2**	**+0.6**
MANT	**Manisa**	**1.62**	**63**	*i* P	**Pg**	**01 10 15.5**	**0.0**
MANT	**Manisa**	**1.62**	**63**	P	**Pg**	**01 10 15.5**	**0.0**
KULA	**Kula-Manisa**	**1.70**	**63**	PN	**Pn**	**01 10 14.3**	**+0.2**
KULA	**Kula-Manisa**	**1.70**	**63**	*e*Pn	**Pn**	**01 10 14.3**	**+0.2**
TURN	**Turunc**	**1.74**	**120**	PN	**Pn**	**01 10 12.6**	**-1.9**
TURN	**Turunc**	**1.74**	**120**	*e*Pn	**Pn**	**01 10 12.6**	**-1.9**
STEP	**BALIKESIR_Sava**	**1.79**	**25**	*i* P	**Pb**	**01 10 18.0**	**+0.8**
STEP	**BALIKESIR_Sava**	**1.79**	**25**	P	**Pb**	**01 10 18.0**	**+0.8**
DEMI	**Demirci**	**2.02**	**50**	*i* P	**Pg**	**01 10 23.7**	**+0.5**
DEMI	**Demirci**	**2.02**	**50**	P	**Pg**	**01 10 23.7**	**+0.5**
BALY	**Balya**	**2.10**	**19**	*i* P	**Pb**	**01 10 22.4**	**0.0**
BALY	**Balya**	**2.10**	**19**	P	**Pb**	**01 10 22.4**	**0.0**

ROM ***04*** *01:11:23.7±0.2, 44°892N±0°006×10°928E±0°009, h9km, ML2.7/20*
ISCJB ***04*** *01:11:25.9±0.3, 44°90N±0°02×10°93E±0°03, h14km±2km, Error ellipse: s-maj=4.0km s-min=3.7km az=14.3*
CSEM ***04*** *01:11:25.8±0.2, 44°93N×10°93E, h5km, ML2.7, Error ellipse: s-maj=6.2km s-min=4.3km az=106.0*
VIE ***04*** *01:11:26.8±1.4, 44°88N×11°23E, h8km, mb2.2/13, ml2.3/15, Error ellipse: s-maj=8.6km s-min=7.0km az=176.0 43 km NNW of Bologna*
PRU ***04*** *01:11:27.8, 45°05N×10°85E, h11km*

ISC 04 01:11:26.3±0.8, 44°91N±0°02×10°92E±0°02, h13km±4km, n100, σ0°97/117, 2C-3D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NDIM	**Novi di Modena**	**0.03**	**211**	AML	AML		
	comp=E,54050μm,0.3s						
NDIM				AML	AML		
	comp=E,54050μm,0.3s						
NDIM				AML	AML		
	comp=N,55150μm,0.3s						
NDIM				AML	AML		
	comp=E,52900μm,0.3s						
NDIM				AML	AML		
	comp=N,55600μm,0.3s						
NDIM				AML	AML		
	comp=N,55150μm,0.3s						
NDIM				AML	AML		
	comp=E,52950μm,0.3s						
NDIM				AML	AML		
	comp=N,55600μm,0.3s						
NDIM				AML	AML		
	comp=N,55600μm,0.3s						
NDIM				AML	AML		
	comp=N,55150μm,0.3s						
NDIM				AML	AML		
	comp=E,52950μm,0.3s						
NDIM				AML	AML		
	comp=E,54050μm,0.3s						
T0825	**Gonzaga (MN)**	**0.08**	**320**	⇑P	**Pg**	**01 11 28.8**	**-0.3**
T0825	**Gonzaga (MN)**	**0.08**	**320**	P	**Pg**	**01 11 28.8**	**-0.3**
T0825				S	**Sg**	**01 11 32.8**	**+1.8**
T0825				AML	AML		
	comp=E,36050μm,0.4s						
T0825				AML	AML		
	comp=N,19150μm,0.7s						
T0825				AML	AML		
	comp=E,36000μm,0.4s						
T0825				AML	AML		
	comp=N,19200μm,0.7s						

RAVA				AML	AML		
	comp=N,3585μm,0.3s						
RAVA				AML	AML		
	comp=E,5760μm,0.4s						
RAVA				AML	AML		
	comp=N,3585μm,0.3s						
GAZZ	**Gazzo Veronese**	**0.24**	**32**	*e*Pg	**Pg**	**01 11 31.5**	**+0.1**
GAZZ	**Gazzo Veronese**	**0.24**	**32**	*e*Pg	**Pg**	**01 11 31.5**	**+0.1**
T0800	**Massa Finalese**	**0.24**	**105**	P	**Pg**	**01 11 30.4**	**-1.0**
T0800				S	**Sg**	**01 11 35.6**	**+0.7**
T0800	**Massa Finalese**	**0.24**	**105**	P	**Pg**	**01 11 30.4**	**-1.0**
T0800				S	**Sg**	**01 11 35.6**	**+0.7**
T0800				AML	AML		
	comp=E,5630μm,0.2s						
T0800				AML	AML		
	comp=N,3900μm,0.2s						
T0800				AML	AML		
	comp=E,4235μm,0.3s						
T0800				AML	AML		
	comp=N,4800μm,0.2s						
T0800				AML	AML		
	comp=N,3900μm,0.2s						
T0800				AML	AML		
	comp=E,5630μm,0.2s						
T0800				AML	AML		
	comp=N,4800μm,0.2s						
T0800				AML	AML		
	comp=E,4235μm,0.3s						
MODE	**Modena**	**0.28**	**176**	P	**Pg**	**01 11 31.6**	**-0.6**
MODE	**Modena**	**0.28**	**176**	P	**Pg**	**01 11 31.6**	**-0.6**
SERM	**Sermide**	**0.28**	**70**	P	**Pg**	**01 11 31.8**	**-0.4**
SERM	**Sermide**	**0.28**	**70**	P	**Pg**	**01 11 31.8**	**-0.4**
SERM				AML	AML		
	comp=E,936μm,0.5s						
SERM				AML	AML		
	comp=N,551μm,0.3s						
SERM				AML	AML		
	comp=N,551μm,0.3s						
SERM				AML	AML		
	comp=E,936μm,0.5s						
PRMA	**PARMA**	**0.46**	**251**	P	**Pg**	**01 11 35.9**	**+0.6**
PRMA	**PARMA**	**0.46**	**251**	P	**Pg**	**01 11 35.9**	**+0.6**
PRMA				AML	AML		
	comp=E,323μm,1.4s						
PRMA				AML	AML		
	comp=N,245μm,1.4s						
PRMA				AML	AML		
	comp=E,323μm,1.4s						
PRMA				AML	AML		
	comp=N,245μm,1.4s						
PRMA				AML	AML		
	comp=E,323μm,1.4s						
PRMA				AML	AML		
	comp=N,245μm,1.4s						
TREG	**Tregnago**	**0.64**	**15**	P	**Pb**	**01 11 39.3**	**+0.1**
TREG	**Tregnago**	**0.64**	**15**	P	**Pb**	**01 11 39.3**	**+0.1**
ZOVE	**Zovencedo**	**0.68**	**36**	P	**Pg**	**01 11 39.1**	**-0.3**
ZOVE	**Zovencedo**	**0.68**	**36**	P	**Pg**	**01 11 39.1**	**-0.3**
TEOL	**Teolo**	**0.69**	**50**	*e*Pg	**Pg**	**01 11 40.2**	**+0.4**
TEOL				*e*Sg	**Sn**	**01 11 52.4**	**0.0**
TEOL	**Teolo**	**0.69**	**50**	P	**Pg**	**01 11 39.3**	**-0.5**
TEOL	**Teolo**	**0.69**	**50**	*e*Pg	**Pg**	**01 11 40.2**	**+0.4**
TEOL				*e*Sg	**Sn**	**01 11 52.4**	**0.0**
TEOL	**Teolo**	**0.69**	**50**	P	**Pg**	**01 11 39.3**	**-0.5**
TEOL				AML	AML		
	comp=E,1445μm,0.3s						
TEOL				AML	AML		
	comp=N,977μm,0.3s						
TEOL				AML	AML		
	comp=N,977μm,0.3s						
TEOL				AML	AML		
	comp=E,1445μm,0.3s						
ROVR	**Rover˜¤ Verone**	**0.74**	**8**	P	**Pg**	**01 11 40.1**	**-0.6**
ROVR	**Rover˜¤ Verone**	**0.74**	**8**	P	**Pg**	**01 11 40.1**	**-0.6**
ROVR				AML	AML		
	comp=E,748μm,0.2s						
ROVR				AML	AML		
	comp=N,1395μm,0.9s						
ROVR				AML	AML		
	comp=E,748μm,0.2s						
ROVR				AML	AML		
	comp=N,1395μm,0.9s						
MARN	**Marana (Italy)**	**0.76**	**16**	*e*Pg	**Pg**	**01 11 40.6**	**-0.3**
MARN				*e*Sg	**Sn**	**01 11 54.5**	**+0.6**
MARN	**Marana (Italy)**	**0.76**	**16**	*e*Pg	**Pg**	**01 11 40.6**	**-0.3**
MARN				*e*Sg	**Sn**	**01 11 54.5**	**+0.6**
SALO	**Salr**	**0.76**	**339**	P	**Pg**	**01 11 40.9**	**-0.1**
SALO	**Salr**	**0.76**	**339**	P	**Pg**	**01 11 40.9**	**-0.1**
SALO				AML	AML		
	comp=E,324μm,0.4s						
SALO				AML	AML		
	comp=N,471μm,1.1s						
SALO				AML	AML		
	comp=E,324μm,0.4s						
SALO				AML	AML		
	comp=N,471μm,1.1s						
BALD	**Monte Baldo**	**0.78**	**355**	*e*Pg	**Pg**	**01 11 41.2**	**-0.2**
BALD				*e*Sg	**Sb**	**01 11 53.4**	**+1.2**
BALD	**Monte Baldo**	**0.78**	**355**	*e*Pg	**Pg**	**01 11 41.2**	**-0.2**
BALD				*e*Sg	**Sb**	**01 11 53.4**	**+1.2**
ADRI	**Adria, Italy**	**0.79**	**80**	*e*Pg	**Pg**	**01 11 41.9**	**+0.3**
ADRI				*e*Sg	**Sn**	**01 11 54.9**	**+0.3**
ADRI	**Adria, Italy**	**0.79**	**80**	*e*Pg	**Pg**	**01 11 41.8**	**+0.3**
ADRI				*e*Sg	**Sn**	**01 11 54.9**	**+0.3**
POPM	**Popiglio**	**0.87**	**188**	P	**Pg**	**01 11 42.6**	**-0.6**
POPM	**Popiglio**	**0.87**	**188**	P	**Pg**	**01 11 42.6**	**-0.6**
POPM				AML	AML		
	comp=E,246μm,0.3s						
POPM				AML	AML		
	comp=N,261μm,0.5s						
POPM				AML	AML		
	comp=N,261μm,0.5s						
POPM				AML	AML		
	comp=E,246μm,0.3s						
BDI	**Bagni Di Lucca**	**0.88**	**195**	AML	AML		
	comp=N,876μm,1.0s						
BDI				AML	AML		
	comp=E,593μm,0.8s						
BDI				AML	AML		
	comp=E,699μm,0.4s						
BDI				AML	AML		
	comp=N,994μm,1.0s						
MAGA	**Magasa**	**0.89**	**347**	P	**Pg**	**01 11 42.5**	**-1.0**
MAGA	**Magasa**	**0.89**	**347**	P	**Pg**	**01 11 42.5**	**-1.0**
MAGA				AML	AML		
	comp=E,1905μm,0.4s						
MAGA				AML	AML		
	comp=N,1410μm,0.5s						
MAGA				AML	AML		
	comp=N,1410μm,0.5s						
MAGA				AML	AML		
	comp=E,1905μm,0.4s						
DOSS	**Dosso del Somm**	**0.99**	**11**	*e*Pg	**Pg**	**01 11 44.5**	**-0.9**
DOSS				*e*Sg	**Sb**	**01 11 59.6**	**+1.3**
DOSS	**Dosso del Somm**	**0.99**	**11**	*e*Pg	**Pg**	**01 11 44.5**	**-0.9**
DOSS				*e*Sg	**Sb**	**01 11 59.6**	**+1.3**
MAIM	**Mastiano**	**1.04**	**197**	AML	AML		
	comp=N,981μm,0.7s						
MAIM				AML	AML		
	comp=E,510μm,0.4s						
RNI	**Roncone**	**1.09**	**349**	*e*Pg	**Pg**	**01 11 45.2**	**-2.1**
RNI				*e*Sg	**Sn**	**01 12 03.0**	**+0.6**
RNI	**Roncone**	**1.09**	**349**	*e*Pg	**Pg**	**01 11 45.2**	**-2.1**
RNI				*e*Sg	**Sn**	**01 12 03.0**	**+0.6**
CRMI	**Carmignano**	**1.12**	**178**	AML	AML		
	comp=E,86μm,0.4s						
CRMI				AML	AML		
	comp=N,56μm,1.6s						
CRMI				AML	AML		
	comp=E,238μm,0.4s						
CRMI				AML	AML		
	comp=N,126μm,1.6s						
CGRP	**Cima Grappa**	**1.15**	**32**	*e*Pg	**Pg**	**01 11 47.3**	**-1.1**
CGRP	**Cima Grappa**	**1.15**	**32**	P	**Pg**	**01 11 45.8**	**-2.7**
CGRP	**Cima Grappa**	**1.15**	**32**	*e*Pg	**Pg**	**01 11 47.3**	**-1.1**
CGRP	**Cima Grappa**	**1.15**	**32**	P	**Pg**	**01 11 45.8**	**-2.7**
CGRP				AML	AML		
	comp=E,206μm,0.3s						
CGRP				AML	AML		
	comp=N,192μm,0.3s						
CGRP				AML	AML		
	comp=E,206μm,0.3s						
CGRP				AML	AML		
	comp=N,192μm,0.3s						
MSSA	**Maissana**	**1.17**	**240**	P	**Pb**	**01 11 48.5**	**+0.2**
MSSA	**Maissana**	**1.17**	**240**	P	**Pb**	**01 11 48.5**	**+0.2**
PANI	**Panarotta**	**1.18**	**14**	*e*Pg	**Pg**	**01 11 47.0**	**-2.0**
PANI	**Panarotta**	**1.18**	**14**	*e*Pg	**Pg**	**01 11 47.0**	**-2.0**
MABI	**Malga Bissina**	**1.18**	**346**	P	**Pg**	**01 11 47.4**	**-1.6**
MABI	**Malga Bissina**	**1.18**	**346**	P	**Pg**	**01 11 47.4**	**-1.6**
MABI				AML	AML		
	comp=E,72μm,0.1s						
MABI				AML	AML		
	comp=N,64μm,0.7s						
MABI				AML	AML		
	comp=E,72μm,0.1s						
MABI				AML	AML		
	comp=N,64μm,0.7s						
MTLO	**Montello**	**1.23**	**42⇑**	*e*Pg	**Pb**	**01 11 48.3**	**-1.0**
MTLO	**Montello**	**1.23**	**42**	*e*Pg	**Pb**	**01 11 48.3**	**-1.0**
ASQU	**Asqua**	**1.28**	**150**	AML	AML		
	comp=E,173μm,0.7s						
ASQU				AML	AML		
	comp=N,136μm,1.1s						
OZOL	**Ozolo**	**1.50**	**4**	*e*Pg	**Pn**	**01 11 51.7**	**-1.2**
OZOL	**Ozolo**	**1.50**	**4**	*e*Pg	**Pn**	**01 11 51.7**	**-1.2**
CARE	**Lago del Cares**	**1.52**	**354**	*e*Pg	**Pn**	**01 11 52.6**	**-0.8**
CARE	**Lago del Cares**	**1.52**	**354**	*e*Pg	**Pn**	**01 11 52.6**	**-0.8**
POLC	**Polcenigo**	**1.57**	**44**	AML	AML		
	comp=N,214μm,0.3s						
POLC				AML	AML		
	comp=E,133μm,0.3s						
POLC				AML	AML		
	comp=N,214μm,0.3s						
POLC				AML	AML		
	comp=E,133μm,0.3s						
APPI	**Appiano**	**1.58**	**8**	P	**Pn**	**01 11 53.0**	**-1.1**
APPI	**Appiano**	**1.58**	**8**	P	**Pn**	**01 11 54.0**	**-0.1**
APPI				AML	AML		
	comp=E,334μm,0.4s						
APPI				AML	AML		
	comp=N,236μm,0.4s						
APPI				AML	AML		
	comp=E,334μm,0.4s						
APPI				AML	AML		
	comp=N,236μm,0.4s						
AGOR	**Agordo**	**1.58**	**30**	*e*Pg	**Pn**	**01 11 54.1**	**+0.1**
AGOR	**Agordo**	**1.58**	**30**	AML	AML		
	comp=E,116μm,0.3s						
AGOR				AML	AML		
	comp=N,99μm,0.3s						
AGOR				AML	AML		
	comp=N,99μm,0.3s						
AGOR				AML	AML		
	comp=E,116μm,0.3s						
KOSI	**Kohlern**	**1.58**	**12**	AML	AML		
	comp=E,146μm,0.6s						
KOSI				AML	AML		
	comp=N,172μm,0.8s						
KOSI				AML	AML		
	comp=N,172μm,0.8s						
KOSI				AML	AML		
	comp=E,146μm,0.6s						
BRMO	**Bormio**	**1.61**	**346**	AML	AML		
	comp=E,56μm,0.5s						
BRMO				AML	AML		
	comp=E,56μm,0.5s						
BRMO				AML	AML		
	comp=N,48μm,1.1s						
BRMO				AML	AML		
	comp=N,48μm,1.1s						
ROSI	**Rosskopf**	**2.05**	**9**	⇓P	**Pn**	**01 12 01.4**	**+0.9**
ROSI	**Rosskopf**	**2.05**	**9**	P	**Pn**	**01 12 01.4**	**+0.9**
FETA	**Feichten**	**2.11**	**356**	Pn	**Pb**	**01 12 04.1**	**-0.4**
	comp=N,0.3nm,0.1s,SNR=5.7						
FETA	**Feichten**	**2.11**	**356**	Pn	**Pb**	**01 12 04.1**	**-0.4**
	comp=N,0.3nm,0.1s,SNR=5.7						
ABTA	**Abfaltersbach**	**2.15**	**31**	Pg	**Pb**	**01 12 05.2**	**+0.2**
	comp=N,0.1nm,0.1s,SNR=8.8						
ABTA	**Abfaltersbach**	**2.15**	**31**	Pg	**Pb**	**01 12 05.2**	**+0.2**
	comp=N,0.1nm,0.1s,SNR=8.8						
WTTA	**Wattenberg**	**2.41**	**12**	Pn	**Pb**	**01 12 08.4**	**-1.1**
	comp=N,2.6nm,0.2s						
WTTA				*e*Sn	**Sb**	**01 12 37.7**	**-1.4**
	comp=N,3.6nm,0.4s						
WTTA	**Wattenberg**	**2.41**	**12**	Pn	**Pb**	**01 12 08.4**	**-1.1**
	comp=N,2.6nm,0.2s						
WTTA				Sn	**Sb**	**01 12 37.7**	**-1.4**
	comp=N,3.6nm,0.4s						
WATA	**Walderalm**	**2.47**	**10**	Pn	**Pn**	**01 12 07.4**	**+1.1**
	comp=N,4.3nm,0.2s,SNR=11						
WATA	**Walderalm**	**2.47**	**10**	Pn	**Pn**	**01 12 07.4**	**+1.1**
	comp=N,4.3nm,0.2s,SNR=11						
MYKA	**Terra Mystica**	**2.56**	**47**	*e*Pg	**Pb**	**01 12 13.7**	**+1.6**
	comp=N,3.0nm,0.3s						
MYKA	**Terra Mystica**	**2.56**	**47**	Pg	**Pb**	**01 12 13.7**	**+1.6**
	comp=N,3.0nm,0.3s						
RETA	**Reutte**	**2.58**	**358**	*e*Pn	**Pn**	**01 12 08.8**	**+1.1**
	comp=N,1.1nm,0.2s						
RETA	**Reutte**	**2.58**	**358**	Pn	**Pn**	**01 12 08.8**	**+1.1**
	comp=N,1.1nm,0.2s						
KBA	**Koelnbreinsper**	**2.75**	**37**	Pg	**Pb**	**01 12 15.5**	**+0.2**
	comp=N,0.1nm,0.1s						
KBA	**Koelnbreinsper**	**2.75**	**37**	Pg	**Pb**	**01 12 15.5**	**+0.2**
	comp=N,0.1nm,0.1s						
OBKA	**Obir**	**3.00**	**57**	Pn	**Pn**	**01 12 13.9**	**+0.3**
	comp=N,0.1nm,0.1s						
OBKA	**Obir**	**3.00**	**57**	Pn	**Pn**	**01 12 13.9**	**+0.3**
	comp=N,0.1nm,0.1s						
SOKA	**Soboth**	**3.38**	**57**	*e*Pn	**Pn**	**01 12 17.7**	**-1.0**
	comp=N,0.3nm,0.3s						
SOKA	**Soboth**	**3.38**	**57**	Pn	**Pn**	**01 12 17.7**	**-1.0**
	comp=N,0.3nm,0.3s						
MOA	**Molln**	**3.74**	**37**	*i* Pn	**Pn**	**01 12 24.5**	**+0.8**
	comp=N,0.5nm,0.2s						
MOA	**Molln**	**3.74**	**37**	Pn	**Pn**	**01 12 24.5**	**+0.8**
	comp=N,0.5nm,0.2s						
ARSA	**Arzberg**	**3.97**	**52**	*e*Pn	**Pn**	**01 12 27.4**	**+0.6**
	comp=N,0.8nm,0.4s						
KHC	**Kasperske Hory**	**4.60**	**22**	*e*PN	**Pn**	**01 12 34.9**	**-0.5**
KHC				*ex*	x	01 12 52.7	
KHC				*e*SN	**Sn**	**01 13 26.6**	**-2.0**

*ROM **04** 01:12:21.3±0.2, 44°.883N±0°.007×10°.960E±0°.008, h8km, Md2.3/6*
*LDG **04** 01:12:22.5±0.2, 44°.93N×11°.25E, h2km, Ml3.2/17, Error ellipse: s-maj=4.5km s-min=2.4km az=83.0*
*ISCJB **04** 01:12:23.7±0.3, 44°.86N±0°.02×10°.93E±0°.03, h21km±2km, Error ellipse: s-maj=4.5km s-min=3.1km az=42.0*
*CSEM **04** 01:12:23.6±0.2, 44°.91N×10°.98E, h10km, ML3.1/15, Error ellipse: s-maj=4.4km s-min=3.3km az=132.0*
*PRU **04** 01:12:23.9, 45°.00N×10°.82E, h6km*
ISC 04 01:12:24.0±0.8, 44°.91N±0°.02×10°.95E±0°.02, h14km±5km, n73, σ1s06/128, 1C-1D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0825	**Gonzaga (MN)**	**0.10**	**309**	P	**Pg**	**01 12 26.8**	**-0.3**
T0825	**Gonzaga (MN)**	**0.10**	**309**	P	**Pg**	**01 12 26.9**	**-0.3**
T0825				S	**Sg**	**01 12 31.9**	**+2.7**
T0825				END			
T0825				END			
T0826	**Rio Saliceto (**	**0.12**	**235**	P	**Pg**	**01 12 25.0**	**-2.4**
T0826				S	**Sg**	**01 12 29.3**	**-0.4**
T0826	**Rio Saliceto (**	**0.12**	**235**	P	**Pg**	**01 12 25.9**	**-1.5**
T0826				S	**Sg**	**01 12 29.3**	**-0.4**
SBPO	**S.Benedetto Po**	**0.14**	**350**	P	**Pg**	**01 12 27.6**	**-0.1**
SBPO	**S.Benedetto Po**	**0.14**	**350**	P	**Pg**	**01 12 27.6**	**-0.1**
SBPO				END			
RAVA	**Ravarino**	**0.20**	**143**	P	**Pg**	**01 12 27.5**	**-1.0**
RAVA				S	**Sg**	**01 12 31.9**	**+0.5**
RAVA	**Ravarino**	**0.20**	**143**	P	**Pg**	**01 12 27.5**	**-1.0**
RAVA				S	**Sg**	**01 12 31.9**	**+0.5**
RAVA				END			
RAVA				END			
NOVE	**Novellara**	**0.20**	**236**	P	**Pg**	**01 12 27.4**	**-1.2**
NOVE				S	**Sg**	**01 12 32.9**	**+1.2**
NOVE	**Novellara**	**0.20**	**236**	P	**Pg**	**01 12 27.4**	**-1.2**
NOVE				S	**Sg**	**01 12 32.9**	**+1.2**
NOVE				END			
NOVE				END			
NOVE				END			
NOVE				END			
T0800	**Massa Finalese**	**0.22**	**106**	P	**Pg**	**01 12 28.0**	**-0.9**
T0800				S	**Sg**	**01 12 32.7**	**+0.6**
T0800	**Massa Finalese**	**0.22**	**106**	P	**Pg**	**01 12 28.0**	**-0.9**
T0800				S	**Sg**	**01 12 32.7**	**+0.6**
T0800				END			
T0800				END			
GAZZ	**Gazzo Veronese**	**0.23**	**26**	*e*Pg	**Pg**	**01 12 29.4**	**+0.4**
GAZZ	**Gazzo Veronese**	**0.23**	**26**	*e*Pg	**Pg**	**01 12 29.4**	**+0.4**
SERM	**Sermide**	**0.26**	**68**	P	**Pg**	**01 12 29.1**	**-0.5**
SERM				S	**Sb**	**01 12 35.2**	**+0.3**
SERM	**Sermide**	**0.26**	**68**	P	**Pg**	**01 12 29.1**	**-0.5**
SERM				S	**Sb**	**01 12 35.2**	**+0.3**
SERM				END			
SERM				END			
MODE	**Modena**	**0.28**	**181**	P	**Pg**	**01 12 29.2**	**-0.7**
MODE	**Modena**	**0.28**	**181**	P	**Pg**	**01 12 29.2**	**-0.7**
PRMA	**PARMA**	**0.48**	**252**	P	**Pb**	**01 12 33.8**	**-0.4**
PRMA	**PARMA**	**0.48**	**252**	P	**Pb**	**01 12 33.8**	**-0.4**
TEOL	**Teolo**	**0.68**	**48**	*e*Pg	**Pb**	**01 12 37.1**	**-0.5**
TEOL				*e*Sg	**Sn**	**01 12 49.1**	**-0.6**
ROVR	**Rover˜¤ Verone**	**0.74**	**6**	P	**Pb**	**01 12 38.3**	**-0.5**
ROVR	**Rover˜¤ Verone**	**0.74**	**6**	P	**Pb**	**01 12 38.3**	**-0.5**
MARN	**Marana (Italy)**	**0.75**	**14⇓**	*e*Pg	**Pb**	**01 12 38.6**	**-0.3**
MARN				*e*Sg	**Sn**	**01 12 51.7**	**+0.2**
MARN	**Marana (Italy)**	**0.75**	**14**	*e*Pg	**Pb**	**01 12 38.6**	**-0.3**
MARN				*e*Sg	**Sn**	**01 12 51.7**	**+0.2**
BALD	**Monte Baldo**	**0.78**	**353**	*e*Pg	**Pb**	**01 12 39.2**	**-0.3**
BALD				*e*Sg	**Sn**	**01 12 52.3**	**-0.1**
BALD	**Monte Baldo**	**0.78**	**353**	*e*Pg	**Pb**	**01 12 39.2**	**-0.3**
BALD				*e*Sg	**Sn**	**01 12 52.3**	**-0.1**
CTL8	**Castelleone**	**0.92**	**294**	P	**Pn**	**01 12 42.6**	**+0.1**
CTL8	**Castelleone**	**0.92**	**294**	P	**Pn**	**01 12 42.6**	**+0.1**
DOSS	**Dosso del Somm**	**0.98**	**10⇑**	*e*Pg	**Pb**	**01 12 42.8**	**-0.2**
DOSS				*e*Sg	**Sn**	**01 12 57.9**	**+0.4**
RNI	**Roncone**	**1.09**	**348**	*e*Pg	**Pg**	**01 12 44.4**	**-0.8**
RNI				*e*Sg	**Sn**	**01 13 00.4**	**+0.2**
RNI	**Roncone**	**1.09**	**348**	*e*Pg	**Pg**	**01 12 44.4**	**-0.8**
RNI				*e*Sg	**Sn**	**01 13 00.4**	**+0.2**
CGRP	**Cima Grappa**	**1.14**	**31**	*e*Pg	**Pg**	**01 12 45.2**	**-0.8**
CGRP				*e*Sg	**Sn**	**01 13 03.5**	**+2.2**
CGRP	**Cima Grappa**	**1.14**	**31**	*e*Pg	**Pg**	**01 12 45.2**	**-0.8**
CGRP				*e*Sg	**Sn**	**01 13 03.5**	**+2.2**
PANI	**Panarotta**	**1.17**	**13**	*e*Pg	**Pg**	**01 12 45.0**	**-1.6**
PANI				*e*Sg	**Sn**	**01 13 03.4**	**+1.3**
MTLO	**Montello**	**1.21**	**41**	*e*Pg	**Pb**	**01 12 45.9**	**-0.9**
MTLO	**Montello**	**1.21**	**41**	*e*Pg	**Pb**	**01 12 45.9**	**-0.9**
CARE	**Lago del Cares**	**1.52**	**353**	*e*Pg	**Pn**	**01 12 50.5**	**-0.7**
CARE				*e*Sg	**Sg**	**01 13 12.6**	**-0.6**
SBF	**Sospel**	**2.73**	**249**	*e*Pn	**Pn**	**01 13 09.3**	**+1.8**
SBF				*e*Sn	**Sn**	**01 13 42.9**	**+2.5**
	58nm,0.3s						
SBF	**Sospel**	**2.73**	**249**	*e*Pn	**Pn**	**01 13 09.3**	**+1.8**
SBF				*e*Sn	**Sn**	**01 13 42.9**	**+2.5**
	29nm,0.3s						
PGF	**Pioggiola**	**2.75**	**212**	*e*Pn	**Pn**	**01 13 08.1**	**+0.2**
PGF				*e*Sn	**Sn**	**01 13 40.4**	**-0.6**
	15nm,0.3s						
PGF	**Pioggiola**	**2.75**	**212**	*e*Pn	**Pn**	**01 13 08.1**	**+0.2**
PGF				*e*Sn	**Sn**	**01 13 40.4**	**-0.6**
	7.4nm,0.3s						
MBDF	**Montbardon**	**2.98**	**268**	*e*Pn	**Pn**	**01 13 10.9**	**-0.2**
MBDF				*e*Sn	**Sn**	**01 13 47.4**	**+0.7**
	18nm,0.6s						
LPG	**La Plagne**	**3.03**	**283**	*e*Pn	**Pn**	**01 13 14.2**	**+2.4**
LPG				*e*Sn	**Sn**	**01 13 49.9**	**+1.9**
	12nm,0.5s						
LPL	**La Plagne**	**3.04**	**283**	*e*Pn	**Pn**	**01 13 13.4**	**+1.4**
LPL				*e*Sn	**Sn**	**01 13 50.2**	**+1.9**
	14nm,0.4s						
FRF	**La Foret Royal**	**3.38**	**248**	*e*Pn	**Pn**	**01 13 16.6**	**+0.3**
FRF				*e*Sn	**Sn**	**01 13 57.7**	**+1.5**
	19nm,0.2s						
FRF	**La Foret Royal**	**3.38**	**248**	*e*Pn	**Pn**	**01 13 16.6**	**+0.3**
FRF				*e*Sn	**Sn**	**01 13 57.7**	**+1.5**
	9.5nm,0.2s						
LMR	**La Mourre**	**3.57**	**245**	*e*Pn	**Pn**	**01 13 19.7**	**+0.8**
LMR				*e*Sn	**Sn**	**01 14 00.7**	**-0.2**
	18nm,0.3s						
LMR	**La Mourre**	**3.57**	**245**	*e*Pn	**Pn**	**01 13 19.7**	**+0.8**
LMR				*e*Sn	**Sn**	**01 14 00.7**	**-0.2**
	9.0nm,0.3s						
ORIF	**Oris-en-Rattie**	**3.60**	**272**	*e*Pn	**Pn**	**01 13 20.3**	**+0.7**
ORIF				*e*Sn	**Sn**	**01 14 03.5**	**+1.5**
	26nm,0.9s						
CABF	**La Chapelle**	**3.81**	**298**	*e*Pn	**Pn**	**01 13 22.7**	**+0.4**
CABF				*e*Sn	**Sn**	**01 14 08.0**	**+1.1**
CABF	**La Chapelle**	**3.81**	**298**	*e*Pn	**Pn**	**01 13 22.7**	**+0.4**
CABF				*e*Sn	**Sn**	**01 14 08.0**	**+1.1**
SMRF	**Simiane la Rot**	**3.96**	**258**	*e*Pn	**Pn**	**01 13 27.1**	**+2.7**
SMRF	**Simiane la Rot**	**3.96**	**258**	*e*Pn	**Pn**	**01 13 27.1**	**+2.7**
HINF	**Hinteralfeld**	**4.06**	**317**	*e*Pn	**Pn**	**01 13 25.3**	**-0.5**
HINF				*e*Sn	**Sn**	**01 14 12.0**	**-1.2**
	8.8nm,0.4s						
HINF	**Hinteralfeld**	**4.06**	**317**	*e*Pn	**Pn**	**01 13 25.3**	**-0.5**
HINF				*e*Sn	**Sn**	**01 14 12.0**	**-1.2**
	4.4nm,0.4s						
CDF	**Champ du Feu**	**4.32**	**325**	*e*Pn	**Pn**	**01 13 29.2**	**-0.2**
CDF				*e*Sn	**Sn**	**01 14 17.5**	**-2.1**
	6.7nm,0.3s						
HAU	**Haudompre**	**4.44**	**316**	*e*Pn	**Pn**	**01 13 30.7**	**-0.3**
HAU				*e*Sn	**Sn**	**01 14 21.5**	**-0.9**
	16nm,0.4s						
VIVF	**Saint-Julien-l**	**4.46**	**272**	*e*Pn	**Pn**	**01 13 30.9**	**-0.4**
VIVF				*e*Sn	**Sn**	**01 14 22.9**	**-0.2**
	2.7nm,0.4s						
KHC	**Kasperske Hory**	**4.59**	**22**	*e*PG	**Pg**	**01 13 53.6**	**+1.7**
KHC				*e*SN	**Sn**	**01 14 24.6**	**-1.5**
KHC				*e*SG	**Sg**	**01 14 51.9**	**+0.7**
SMF	**Signal de Mont**	**5.27**	**292**	*e*Pn	**Pn**	**01 13 42.3**	**0.0**
SMF				*e*Sn	**Sn**	**01 14 41.7**	**-1.2**
	5.3nm,0.3s						
LOR	**Lormes**	**5.47**	**298**	*e*Pn	**Pn**	**01 13 44.7**	**-0.4**
LOR				*e*Sn	**Sn**	**01 14 45.4**	**-2.4**
	4.8nm,0.3s						
SSF	**Saint Saulge**	**5.62**	**295**	*e*Pn	**Pn**	**01 13 46.9**	**-0.2**
SSF				*e*Sn	**Sn**	**01 14 50.1**	**-1.3**
	4.8nm,0.5s						
SSF	**Saint Saulge**	**5.62**	**295**	*e*Pn	**Pn**	**01 13 46.9**	**-0.2**
SSF				*e*Sn	**Sn**	**01 14 50.1**	**-1.3**
	2.4nm,0.5s						
AVF	**Avril sur Loir**	**5.63**	**292**	*e*Pn	**Pn**	**01 13 47.3**	**0.0**
AVF				*e*Sn	**Sn**	**01 14 51.5**	**-0.3**
AVF	**Avril sur Loir**	**5.63**	**292**	*e*Pn	**Pn**	**01 13 47.3**	**0.0**
AVF				*e*Sn	**Sn**	**01 14 51.5**	**-0.3**
BGF	**Bois d'Agland**	**5.91**	**289**	*e*Pn	**Pn**	**01 13 51.3**	**+0.2**
BGF				*e*Sn	**Sn**	**01 14 58.2**	**-0.4**
	15nm,0.5s						
BGF	**Bois d'Agland**	**5.91**	**289**	*e*Pn	**

mb3.8/6, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**6.56**	**170**	T	T	01 47 05.0	
	baz=348,slow=74,SNR=43						
H10N3	**ASCENSION HYDR**	**6.57**	**170**	T	T	01 47 11.1	
	baz=348,slow=74,SNR=62						
H10N1	**ASCENSION HYDR**	**6.58**	**170**	T	T	01 47 08.8	
	baz=348,slow=74,SNR=69						
H10S1	**ASCENSION HYDR**	**7.63**	**173**	T	T	01 48 28.3	
	baz=351,slow=74,SNR=27						
H10S3	**ASCENSION HYDR**	**7.64**	**173**	T	T	01 48 28.6	
	baz=351,slow=74,SNR=37						
H10S2	**ASCENSION HYDR**	**7.65**	**173**	T	T	01 48 31.9	
	baz=351,slow=74,SNR=28						
DBIC	**Dimbokro**	**13.35**	**53**	Pn	**Pn**	**01 42 06.0**	**+0.7**
	0.2nm,0.3s,baz=239,slow=12,SNR=4.6						
DBIC				Sn	**Sn**	**01 44 31.4**	**-1.8**
	0.2nm,0.3s,baz=169,slow=19,SNR=3.0						
KOWA	**Kowa**	**19.46**	**36**	P	**P**	**01 43 22.8**	**+0.3**
	0.1nm,0.3s,baz=225,slow=12,SNR=3.8						
TORD	**Torodi Ar. Bea**	**22.39**	**50**	P	**P**	**01 43 54.4**	**+0.2**
	3.3nm,1.0s,baz=233,slow=11,SNR=11						
BOSA	**Boshof**	**47.50**	**129**	P	**P**	**01 47 32.0**	**+1.1**
	1.2nm,0.6s,baz=269,slow=10,SNR=4.0						
MLR	**Muntele Rosu**	**59.34**	**33**	P	**P**	**01 48 57.1**	**-0.6**
	0.3nm,0.9s,baz=211,slow=12,SNR=3.4						
BRTR	**Keskin Array B**	**60.74**	**42**	P	**P**	**01 49 08.4**	**+0.9**
	0.2nm,0.5s,baz=210,slow=8.3,SNR=2.9						
AKASG	**Malin Array Be**	**64.33**	**30**	P	**P**	**01 49 30.6**	**-0.4**
	0.3nm,0.5s,baz=236,slow=4.5,SNR=4.2						
SNAA	**Sanae**	**70.72**	**176**	P	**P**	**01 50 09.5**	**-1.6**
	1.7nm,0.9s,baz=358,slow=11,SNR=3.9						
ASAR	**Alice Springs**	**141.33**	**132**	PKhKP	PKPpre	01 58 18.1	
	0.6nm,0.8s,baz=205,slow=3.9,SNR=3.9						
WRA	**Warramunga Arr**	**143.74**	**127**	PKhKP	PKPpre	01 58 24.9	
	0.3nm,0.5s,baz=245,slow=2.7,SNR=3.7						

IASPEI ***04*** *01:56:22.7±0.8, 44˚.91N±0˚.02×10˚.91E±0˚.02, h13km±4km, Error ellipse: s-maj=2.9km s-min=2.5km az=122.4, GT5 selection from ISC bulletin GT5 identified by Bond˜jr and McLaughlin (2009) selection criteria Bond˜jr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*

ROM ***04*** *01:56:22.4±0.0, 44˚.886N±0˚.001×10˚.907E±0˚.001, h7km, ML2.7/31*

STR ***04*** *01:56:23.0±1.8, 45˚.N±5˚×1˚.1E±2˚.0, h5km, M3.6/7, MLv3.6/7*

ISCJB ***04*** *01:56:23.1±0.2, 44˚.93N±0˚.02×10˚.89E±0˚.03, h13km±2km, Error ellipse: s-maj=3.3km s-min=2.6km az=9.0*

CSEM ***04*** *01:56:23.0±0.1, 44˚.96N×10˚.92E, h5km, ML2.7, Error ellipse: s-maj=4.3km s-min=2.9km az=91.0*

ISC 04 01:56:22.6±0.7, 44˚.91N±0˚.02×10˚.93E±0˚.02, h16km±4km, n134, σ1§13/158, 3C-13D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0827	**Moglia (MN)**	**0.03**	**0⇑**	*i* P	**Pg**	**01 56 24.9**	**-0.6**
T0827				*i* S	**Sg**	**01 56 27.8**	**+0.3**
T0827	**Moglia (MN)**	**0.03**	**0**	*i* P	**Pg**	**01 56 24.9**	**-0.6**
T0827				*i* S	**Sg**	**01 56 27.8**	**+0.3**
NDIM	**Novi di Modena**	**0.03**	**228**	*i* P	**Pg**	**01 56 24.0**	**-1.5**
NDIM				*i* S	**Sg**	**01 56 25.7**	**-1.7**
T0818	**Loc. Fossa, Co**	**0.07**	**69⇑**	*i* P	**Pg**	**01 56 25.6**	**-0.2**
T0818				*i* S	**Sg**	**01 56 29.1**	**+1.2**
T0818	**Loc. Fossa, Co**	**0.07**	**69**	*i* P	**Pg**	**01 56 25.6**	**-0.2**
T0818				*i* S	**Sg**	**01 56 29.1**	**+1.2**
T0828	**Loc. Fossoli,**	**0.08**	**189⇓**	*i* P	**Pg**	**01 56 24.7**	**-1.1**
T0828				*i* S	**Sg**	**01 56 27.4**	**-0.5**
T0828	**Loc. Fossoli,**	**0.08**	**189**	*i* P	**Pg**	**01 56 24.7**	**-1.1**
T0828				*i* S	**Sg**	**01 56 27.4**	**-0.5**
T0825	**Gonzaga (MN)**	**0.09**	**317⇓**	*e* P	**Pg**	**01 56 26.4**	**+0.5**
T0825	**Gonzaga (MN)**	**0.09**	**317**	*e* P	**Pg**	**01 56 26.4**	**+0.5**
T0825				*e* S	**Sg**	**01 56 30.2**	**+2.1**
T0825				AML	AML		
	comp=E,48300μm,0.3s						
T0825				AML	AML		
	comp=N,48000μm,1.5s						
T0826	**Rio Saliceto (**	**0.11**	**231⇓**	*e* P	**Pb**	**01 56 25.9**	**-0.4**
T0826				*e* S	**Sb**	**01 56 28.2**	**-0.5**
T0826	**Rio Saliceto (**	**0.11**	**231**	*e* P	**Pb**	**01 56 25.9**	**-0.4**
T0826				*e* S	**Sb**	**01 56 28.2**	**-0.5**
T0826				AML	AML		
	comp=E,25050μm,0.6s						
T0826				AML	AML		
	comp=N,26200μm,0.3s						
T0826				AML	AML		
	comp=E,25050μm,0.6s						
T0826				AML	AML		
	comp=N,26200μm,0.3s						
T0826				AML	AML		
	comp=E,25050μm,0.6s						
T0826				AML	AML		
	comp=N,26250μm,0.3s						
T0826				AML	AML		
	comp=E,25050μm,0.6s						
T0826				AML	AML		
	comp=N,26250μm,0.3s						
T0814	**Loc. Cortile,**	**0.12**	**167⇓**	*i* P	**Pg**	**01 56 25.6**	**-0.6**
T0814				*i* S	**Sb**	**01 56 29.5**	**+0.5**
T0814	**Loc. Cortile,**	**0.12**	**167**	*i* P	**Pg**	**01 56 25.6**	**-0.6**
T0814				*i* S	**Sb**	**01 56 29.5**	**+0.5**
SBPO	**S.Benedetto Po**	**0.14**	**357⇓**	*e* P	**Pb**	**01 56 26.9**	**0.0**
SBPO	**S.Benedetto Po**	**0.14**	**357**	*e* P	**Pb**	**01 56 26.9**	**0.0**
SBPO				AML	AML		
	comp=E,2755μm,0.7s						
SBPO				AML	AML		
	comp=N,26050μm,0.4s						
SBPO				AML	AML		
	comp=E,2755μm,0.7s						
SBPO				AML	AML		
	comp=N,26050μm,0.4s						
SBPO				AML	AML		
	comp=E,2755μm,0.7s						
T0824	**Loc. Limidi di**	**0.15**	**181⇓**	*i* P	**Pg**	**01 56 26.1**	**-0.5**
T0824				*i* S	**Sb**	**01 56 30.7**	**+0.8**
T0824	**Loc. Limidi di**	**0.15**	**181**	*i* P	**Pg**	**01 56 26.1**	**-0.5**
T0824				*i* S	**Sb**	**01 56 30.7**	**+0.8**
T0802	**SanFelice sul**	**0.18**	**101**	*i* P	**Pb**	**01 56 27.2**	**-0.3**
T0802	**SanFelice sul**	**0.18**	**101**	*i* P	**Pb**	**01 56 27.2**	**-0.3**
T0812	**Loc. Stoppiaro**	**0.18**	**75⇓**	*e* P	**Pb**	**01 56 27.1**	**-0.4**
T0812	**Loc. Stoppiaro**	**0.18**	**75**	*e* P	**Pb**	**01 56 27.1**	**-0.4**
NOVE	**Novellara**	**0.19**	**234⇓**	*i* P	**Pg**	**01 56 26.6**	**-0.6**
NOVE				*i* S	**Sb**	**01 56 31.6**	**+0.6**
NOVE	**Novellara**	**0.19**	**234**	*i* P	**Pg**	**01 56 26.6**	**-0.6**
NOVE				*i* S	**Sb**	**01 56 31.6**	**+0.6**
NOVE				AML	AML		
	comp=E,13600μm,0.2s						
NOVE				AML	AML		
	comp=N,10005μm,0.2s						
NOVE				AML	AML		
	comp=E,13650μm,0.2s						
NOVE				AML	AML		
	comp=N,9980μm,0.2s						
NOVE				AML	AML		
	comp=E,13600μm,0.2s						
NOVE				AML	AML		
	comp=N,10010μm,0.2s						
NOVE				AML	AML		
	comp=N,10010μm,0.2s						
NOVE				AML	AML		
	comp=E,13600μm,0.2s						
T0813	**Massa Finalese**	**0.19**	**99⇓**	*e* P	**Pb**	**01 56 27.3**	**-0.4**
T0813				*e* S	**Sb**	**01 56 32.3**	**+1.2**
T0813	**Massa Finalese**	**0.19**	**99**	*e* P	**Pb**	**01 56 27.3**	**-0.4**
T0813				*e* S	**Sb**	**01 56 32.3**	**+1.2**
RAVA	**Ravarino**	**0.20**	**139**	*i* P	**Pb**	**01 56 27.4**	**-0.5**
RAVA				*i* S	**Sb**	**01 56 32.5**	**+1.1**
RAVA	**Ravarino**	**0.20**	**139**	*i* P	**Pb**	**01 56 27.4**	**-0.5**
RAVA				*i* S	**Sb**	**01 56 32.5**	**+1.1**
RAVA				AML	AML		
	comp=E,5180μm,0.4s						
RAVA				AML	AML		
	comp=N,5335μm,0.3s						
RAVA				AML	AML		
	comp=E,5180μm,0.4s						
RAVA				AML	AML		
	comp=N,5330μm,0.3s						
RAVA				AML	AML		
	comp=E,5180μm,0.4s						
RAVA				AML	AML		
	comp=N,5335μm,0.3s						
RAVA				AML	AML		
	comp=E,5180μm,0.4s						
RAVA				AML	AML		
	comp=N,5330μm,0.3s						
T0800	**Massa Finalese**	**0.23**	**105**	*i* P	**Pb**	**01 56 27.8**	**-0.6**
T0800				*i* S	**Sb**	**01 56 33.4**	**+1.1**
T0800	**Massa Finalese**	**0.23**	**105**	*i* P	**Pb**	**01 56 27.8**	**-0.6**
T0800				*i* S	**Sb**	**01 56 33.4**	**+1.1**
T0800				AML	AML		
	comp=E,6025μm,0.3s						
T0800				AML	AML		
	comp=N,4250μm,1.1s						
T0800				AML	AML		
	comp=E,5915μm,0.3s						
T0800				AML	AML		
	comp=N,4330μm,1.1s						
T0800				AML	AML		
	comp=E,6025μm,0.3s						
T0800				AML	AML		
	comp=N,4245μm,1.1s						
T0800				AML	AML		
	comp=E,5915μm,0.3s						
T0800				AML	AML		
	comp=N,4325μm,1.1s						
T0800				AML	AML		
	comp=E,6025μm,0.3s						
T0800				AML	AML		
	comp=N,4250μm,1.1s						
T0800				AML	AML		
	comp=E,5915μm,0.3s						
T0800				AML	AML		
	comp=N,4325μm,1.1s						
T0800				AML	AML		
	comp=E,5915μm,0.3s						
T0800				AML	AML		
	comp=E,6025μm,0.3s						
T0800				AML	AML		
	comp=N,4325μm,1.1s						
T0800				AML	AML		
	comp=N,4250μm,1.1s						
GAZZ	**Gazzo Veronese**	**0.23**	**29⇑**	*e* Pg	**Pb**	**01 56 28.9**	**+0.4**
GAZZ	**Gazzo Veronese**	**0.23**	**29**	*e* Pg	**Pb**	**01 56 28.9**	**+0.4**
T0811	**Palata Pepoli**	**0.24**	**121**	*i* P	**Pg**	**01 56 27.0**	**-1.0**
T0811				*i* S	**Sb**	**01 56 33.8**	**+1.2**
T0811	**Palata Pepoli**	**0.24**	**121**	*i* P	**Pb**	**01 56 28.0**	**-0.6**
T0811				*i* S	**Sb**	**01 56 33.8**	**+1.2**
SERM	**Sermide**	**0.28**	**68**	*e* P	**Pb**	**01 56 29.2**	**0.0**
SERM	**Sermide**	**0.28**	**68**	*e* P	**Pb**	**01 56 29.1**	**0.0**
SERM				AML	AML		
	comp=E,612μm,0.3s						
SERM				AML	AML		
SERM				AML	AML		
	comp=E,612μm,0.3s						
SERM				AML	AML		
SERM				AML	AML		
	comp=E,612μm,0.3s						
SERM				AML	AML		
T0805	**Bondeno (FE)**	**0.28**	**88**	*i* P	**Pb**	**01 56 28.7**	**-0.4**
T0805	**Bondeno (FE)**	**0.28**	**88**	*i* P	**Pb**	**01 56 28.7**	**-0.4**
MODE	**Modena**	**0.28**	**177**	AML	AML		
	comp=N,6655μm,0.5s						
MODE				AML	AML		
	comp=E,6535μm,0.6s						
MODE				AML	AML		
	comp=N,6660μm,0.5s						
MODE				AML	AML		
	comp=E,6540μm,0.6s						
MODE				AML	AML		
	comp=E,6535μm,0.6s						
MODE				AML	AML		
	comp=N,6660μm,0.5s						
MODE				AML	AML		
	comp=N,6660μm,0.5s						
MODE				AML	AML		
	comp=E,6535μm,0.6s						
T0803	**Dosso, Cento (**	**0.33**	**115**	*i* P	**Pb**	**01 56 29.8**	**-0.3**
T0803	**Dosso, Cento (**	**0.33**	**115**	*i* P	**Pb**	**01 56 29.8**	**-0.3**
T0803				*i* S	**Sn**	**01 56 37.5**	**-1.5**
T0823	**Castello D'Arg**	**0.33**	**132**	*i* P	**Pb**	**01 56 30.5**	**+0.4**
T0823	**Castello D'Arg**	**0.33**	**132**	*i* P	**Pb**	**01 56 30.5**	**+0.4**
T0817	**Loc. Veratica,**	**0.38**	**77**	*i* P	**Pb**	**01 56 31.3**	**+0.4**
T0817	**Loc. Veratica,**	**0.38**	**77**	*i* P	**Pb**	**01 56 31.4**	**+0.4**
PRMA	**PARMA**	**0.46**	**252**	*e* P	**Pb**	**01 56 32.7**	**+0.4**
PRMA	**PARMA**	**0.46**	**252**	*e* P	**Pb**	**01 56 32.7**	**+0.4**
PRMA				*e* S	**Sn**	**01 56 41.8**	**-0.6**
PRMA				AML	AML		
	comp=E,1018μm,1.2s						
PRMA				AML	AML		
	comp=N,1048μm,0.3s						
PRMA				AML	AML		
	comp=E,1018μm,1.2s						
PRMA				AML	AML		
	comp=N,1048μm,0.3s						
PRMA				AML	AML		
	comp=E,1018μm,1.2s						
PRMA				AML	AML		
	comp=N,1048μm,0.3s						
PRMA				AML	AML		
	comp=E,1018μm,1.2s						
PRMA				AML	AML		
	comp=N,1048μm,0.3s						
ZCCA	**Zocca**	**0.56**	**177**	*e* P	**Pn**	**01 56 35.4**	**-0.5**
ZCCA	**Zocca**	**0.56**	**177**	*e* P	**Pn**	**01 56 35.4**	**-0.5**
ZCCA				AML	AML		
	comp=E,554μm,1.6s						
ZCCA				AML	AML		
	comp=N,578μm,1.3s						
ZCCA				AML	AML		
	comp=E,554μm,1.6s						
ZCCA				AML	AML		
	comp=N,578μm,1.3s						
ZCCA				AML	AML		
	comp=E,554μm,1.6s						
ZCCA				AML	AML		
	comp=N,578μm,1.3s						
T0815	**Correggio (RE)**	**0.56**	**93**	*i* P	**Pn**	**01 56 34.8**	**-1.0**
T0815	**Correggio (RE)**	**0.56**	**93**	*i* P	**Pn**	**01 56 34.8**	**-1.0**
TEOL	**Teolo**	**0.69**	**49⇓**	*e* Pg	**Pn**	**01 56 36.4**	**-1.3**
TEOL				*e* Sg	**Sn**	**01 56 49.6**	**+1.6**
TEOL	**Teolo**	**0.69**	**49⇓**	*e* P	**Pn**	**01 56 36.4**	**-1.3**
TEOL	**Teolo**	**0.69**	**49**	*e* P	**Pn**	**01 56 36.4**	**-1.3**
TEOL				*e* S	**Sn**	**01 56 49.4**	**+1.3**
TEOL				AML	AML		
	comp=E,1170μm,0.4s						
TEOL				AML	AML		
	comp=N,1520μm,0.3s						
TEOL				AML	AML		
	comp=E,1170μm,0.4s						
TEOL				AML	AML		
	comp=N,1525μm,0.3s						
TEOL				AML	AML		
	comp=N,1525μm,0.3s						
TEOL				AML	AML		
	comp=E,1170μm,0.4s						
ROVR	**Rover˜¤ Verone**	**0.74**	**8**	*e* P	**Pn**	**01 56 37.2**	**-1.4**
ROVR	**Rover˜¤ Verone**	**0.74**	**8**	*e* P	**Pn**	**01 56 37.2**	**-1.4**
ROVR				*e* S	**Sn**	**01 56 50.8**	**+1.2**
ROVR				AML	AML		
	comp=E,548μm,0.2s						
ROVR				AML	AML		
	comp=N,1020μm,0.2s						
ROVR				AML	AML		
	comp=E,548μm,0.2s						
ROVR				AML	AML		
	comp=N,1020μm,0.2s						
ROVR				AML	AML		
	comp=N,1020μm,0.2s						
ROVR				AML	AML		
	comp=E,548μm,0.2s						
FNVD	**Fontana Vidola**	**0.75**	**169**	*e* P	**Pn**	**01 56 39.4**	**+0.8**
FNVD	**Fontana Vidola**	**0.75**	**169**	*e* P	**Pn**	**01 56 39.4**	**+0.8**
MARN	**Marana (Italy)**	**0.76**	**15⇓**	*e* Pg	**Pn**	**01 56 37.3**	**-1.3**
MARN				*e* Sg	**Sn**	**01 56 51.4**	**+1.7**
MARN	**Marana (Italy)**	**0.76**	**15**	*e* Pg	**Pn**	**01 56 37.3**	**-1.3**
SALO	**Salr**	**0.77**	**338**	*e* P	**Pn**	**01 56 37.9**	**-0.8**
SALO	**Salr**	**0.77**	**338**	*e* P	**Pn**	**01 56 37.9**	**-0.8**
SALO				AML	AML		
	comp=E,498μm,0.6s						
SALO				AML	AML		
	comp=N,500μm,0.8s						
SALO				AML	AML		
	comp=E,498μm,0.6s						
SALO				AML	AML		
	comp=N,500μm,0.8s						
SALO				AML	AML		
	comp=E,498μm,0.6s						
SALO				AML	AML		
	comp=N,500μm,0.8s						
BALD	**Monte Baldo**	**0.78**	**354**	*e* Pg	**Pn**	**01 56 38.1**	**-1.0**
BALD				*e* Sg	**Sn**	**01 56 50.4**	**-0.1**
BALD	**Monte Baldo**	**0.78**	**354**	*e* Pg	**Pn**	**01 56 38.1**	**-1.0**
BALD				*e* Sg	**Sn**	**01 56 50.4**	**-0.1**
VLC	**Villacollemand**	**0.84**	**208**	*e* P	**Pn**	**01 56 39.4**	**-0.4**
VLC	**Villacollemand**	**0.84**	**208**	*e* P	**Pn**	**01 56 39.4**	**-0.4**
POPM	**Popiglio**	**0.87**	**188**	*e* P	**Pn**	**01 56 40.5**	**+0.3**
POPM	**Popiglio**	**0.87**	**188**	*e* P	**Pn**	**01 56 40.5**	**+0.3**
POPM				AML	AML		
	comp=E,201μm,1.4s						
POPM				AML	AML		
	comp=N,272μm,0.3s						
POPM				AML	AML		
	comp=E,201μm,1.4s						
POPM				AML	AML		
	comp=N,272μm,0.3s						
POPM				AML	AML		
	comp=N,272μm,0.3s						
POPM				AML	AML		
	comp=E,201μm,1.4s						
BDI	**Bagni Di Lucca**	**0.88**	**196**	*e* P	**Pn**	**01 56 39.9**	**-0.4**
BDI	**Bagni Di Lucca**	**0.88**	**196**	*e* P	**Pn**	**01 56 39.9**	**-0.4**
BDI				AML	AML		
	comp=E,226μm,1.0s						
BDI				AML	AML		
	comp=N,278μm,0.5s						
BDI				AML	AML		
	comp=E,222μm,0.4s						
BDI				AML	AML		
	comp=N,273μm,0.6s						
BDI				AML	AML		
	comp=E,226μm,1.0s						
BDI				AML	AML		
	comp=N,278μm,0.5s						
BDI				AML	AML		
	comp=E,222μm,0.4s						
BDI				AML	AML		
	comp=N,273μm,0.6s						
BDI				AML	AML		
	comp=N,278μm,0.5s						
BDI				AML	AML		
	comp=N,273μm,0.6s						
BDI				AML	AML		
	comp=E,222μm,0.4s						
BDI				AML	AML		
	comp=E,226μm,1.0s						
MAGA	**Magasa**	**0.89**	**346⇓**	*e* P	**Pn**	**01 56 39.5**	**-1.1**
MAGA	**Magasa**	**0.89**	**346**	*e* P	**Pn**	**01 56 39.5**	**-1.1**
MAGA				*e* S	**Sn**	**01 56 54.4**	**+1.2**
MAGA				AML	AML		
	comp=E,1575μm,0.4s						
MAGA				AML	AML		
	comp=N,1240μm,0.3s						
MAGA				AML	AML		
	comp=E,1575μm,0.4s						
MAGA				AML	AML		
	comp=N,1240μm,0.3s						
MAGA				AML	AML		
	comp=N,1240μm,0.3s						
MAGA				AML	AML		
	comp=E,1575μm,0.4s						
SEI	**Scarperia**	**0.91**	**160**	*e* P	**Pn**	**01 56 41.7**	**+1.1**
SEI	**Scarperia**	**0.91**	**160**	*e* P	**Pn**	**01 56 41.7**	**+1.1**
DOSS	**Dosso del Somm**	**0.99**	**10**	*e* Pg	**Pn**	**01 56 41.3**	**-0.6**
DOSS				*e* Sg	**Sn**	**01 56 56.9**	**+1.2**
DOSS	**Dosso del Somm**	**0.99**	**10**	*e* Pg	**Pn**	**01 56 41.3**	**-0.6**
DOSS				*e* Sg	**Sn**	**01 56 56.9**	**+1.2**
MAIM	**Mastiano**	**1.04**	**198**	AML	AML		
	comp=E,162μm,0.6s						
MAIM				AML	AML		
	comp=N,174μm,1.0s						
MAIM				AML	AML		
	comp=E,162μm,0.6s						
MAIM				AML	AML		
	comp=N,174μm,1.0s						
MAIM				AML	AML		
	comp=N,174μm,1.0s						
MAIM				AML	AML		
	comp=E,162μm,0.6s						
RNI	**Roncone**	**1.09**	**349**	*e* Pg	**Pb**	**01 56 42.2**	**-1.0**
RNI	**Roncone**	**1.09**	**349**	*e* Pg	**Pb**	**01 56 42.2**	**-1.0**
CGRP	**Cima Grappa**	**1.15**	**32**	*e* Pg	**Pg**	**01 56 44.3**	**-0.5**
CGRP				*e* Sg	**Sn**	**01 57 03.0**	**+3.4**
CGRP	**Cima Grappa**	**1.15**	**32**	*e* Pg	**Pg**	**01 56 44.3**	**-0.5**
CGRP				*e* Sg	**Sn**	**01 57 03.0**	**+3.4**
CGRP	**Cima Grappa**	**1.15**	**32**	*e* P	**Pg**	**01 56 44.1**	**-0.7**
CGRP				AML	AML		
	comp=E,170μm,1.2s						
CGRP				AML	AML		
	comp=N,150μm,0.8s						
CGRP				AML	AML		
	comp=E,170μm,1.2s						
CGRP				AML	AML		
	comp=N,150μm,0.8s						
CGRP				AML	AML		
	comp=E,170μm,1.2s						
CGRP				AML	AML		
	comp=N,150μm,0.8s						
PLMA	**Palmaria, Port**	**1.16**	**222**	AML	AML		
	comp=E,268μm,0.7s						
PLMA				AML	AML		
	comp=E,268μm,0.7s						
PLMA				AML	AML		
	comp=N,369μm,0.6s						
PLMA				AML	AML		
	comp=N,369μm,0.6s						
PLMA				AML	AML		
	comp=E,268μm,0.7s						
PLMA				AML	AML		
	comp=N,369μm,0.6s						
MSSA	**Maissana**	**1.17**	**240**	AML	AML		
	comp=E,202μm,1.5s						
MSSA				AML	AML		
	comp=E,202μm,1.5s						
MSSA				AML	AML		
	comp=N,244μm,1.5s						
MSSA				AML	AML		
	comp=E,202μm,1.5s						
MSSA				AML	AML		
	comp=N,244μm,1.5s						
MSSA				AML	AML		
	comp=N,244μm,1.5s						
PANI	**Panarotta**	**1.18**	**14**	*e* Pg	**Pn**	**01 56 44.0**	**-0.6**
PANI	**Panarotta**	**1.18**	**14**	*e* Pg	**Pn**	**01 56 44.0**	**-0.6**
MABI	**Malga Bissina**	**1.18**	**346**	AML	AML		
	comp=N,81μm,1.4s						
MABI				AML	AML		
	comp=E,112μm,0.6s						
MABI				AML	AML		
	comp=E,112μm,0.6s						
MABI				AML	AML		
	comp=N,81μm,1.4s						
MABI				AML	AML		
	comp=E,112μm,0.6s						
MABI				AML	AML		
	comp=N,81μm,1.4s						
MTLO	**Montello**	**1.22**	**42**	*e* Pg	**Pg**	**01 56 45.5**	**-0.7**
MTLO	**Montello**	**1.22**	**42**	*e* Pg	**Pg**	**01 56 45.5**	**-0.7**
ASQU	**Asqua**	**1.27**	**151**	AML	AML		
	comp=N,112μm,0.4s						
ASQU				AML	AML		
	comp=E,129μm,0.4s						
ASQU				AML	AML		
	comp=N,112μm,0.4s						
ASQU				AML	AML		
	comp=E,129μm,0.4s						
ASQU				AML	AML		
	comp=N,112μm,0.4s						
ASQU				AML	AML		
	comp=E,129μm,0.4s						
OZOL	**Ozolo**	**1.50**	**3**	*e* Pg	**Pb**	**01 56 49.1**	**-1.0**
OZOL	**Ozolo**	**1.50**	**3**	*e* Pg	**Pb**	**01 56 49.1**	**-1.0**
CARE	**Lago del Cares**	**1.53**	**354**	*e* Pg	**Pb**	**01 56 49.6**	**-1.0**
CARE	**Lago del Cares**	**1.53**	**354**	*e* Pg	**Pb**	**01 56 49.6**	**-1.0**
POLC	**Polcenigo**	**1.57**	**44**	AML	AML		
	comp=N,185μm,1.2s						
POLC				AML	AML		
	comp=E,160μm,0.7s						
POLC				AML	AML		
	comp=E,160μm,0.7s						
POLC				AML	AML		
	comp=N,185μm,1.2s						

POLC				AML	AML		
	comp=N,185μm,1.2s						
POLC				AML	AML		
	comp=E,160μm,0.7s						
AGOR	**Agordo**	**1.58**	**29**	AML	AML		
	comp=E,76μm,0.4s						
AGOR				AML	AML		
	comp=N,126μm,0.4s						
AGOR				AML	AML		
	comp=E,76μm,0.4s						
AGOR				AML	AML		
	comp=N,126μm,0.4s						
APPI	**Appiano**	**1.58**	**7**	AML	AML		
	comp=N,190μm,0.4s						
APPI				AML	AML		
	comp=E,234μm,1.1s						
APPI				AML	AML		
	comp=N,190μm,0.4s						
APPI				AML	AML		
	comp=E,234μm,1.1s						
APPI				AML	AML		
	comp=E,234μm,1.1s						
APPI				AML	AML		
	comp=N,190μm,0.4s						
KOSI	**Kohlern**	**1.59**	**11**	AML	AML		
	comp=E,124μm,1.0s						
KOSI				AML	AML		
	comp=E,124μm,1.0s						
KOSI				AML	AML		
	comp=N,112μm,0.7s						
KOSI				AML	AML		
	comp=E,124μm,1.0s						
KOSI				AML	AML		
	comp=N,112μm,0.7s						
KOSI				AML	AML		
	comp=N,112μm,0.7s						
STAL	**STALIGIAL**	**1.84**	**42**	AML	AML		
	comp=N,96μm,0.3s						
STAL				AML	AML		
	comp=E,130μm,1.5s						
STAL				AML	AML		
	comp=N,96μm,0.3s						
STAL				AML	AML		
	comp=E,130μm,1.5s						
ABSI	**Aberstueckl**	**1.84**	**8**	AML	AML		
	comp=E,210μm,0.7s						
ABSI				AML	AML		
	comp=E,210μm,0.7s						
ABSI				AML	AML		
	comp=N,148μm,0.5s						
ABSI				AML	AML		
	comp=N,148μm,0.5s						
FINB	**Finale Ligure**	**2.00**	**250**	AML	AML		
	comp=N,410μm,0.3s						
FINB				AML	AML		
	comp=E,297μm,0.3s						
FINB				AML	AML		
	comp=E,297μm,0.3s						
FINB				AML	AML		
	comp=N,410μm,0.3s						
ROSI	**Rosskopf**	**2.05**	**9**	AML	AML		
	comp=N,132μm,0.9s						
ROSI				AML	AML		
	comp=E,120μm,0.7s						
ROSI				AML	AML		
	comp=N,132μm,0.9s						
ROSI				AML	AML		
	comp=E,120μm,0.7s						
FETA	**Feichten**	**2.12**	**356**	Pg	**Pg**	**01 57 02.1**	**-1.2**
	comp=E,2.5nm,0.2s						
FETA	**Feichten**	**2.12**	**356**	Pg	**Pg**	**01 57 02.1**	**-1.2**
	comp=E,2.5nm,0.2s						
ABTA	**Abfaltersbach**	**2.15**	**30**	Pg	**Pg**	**01 57 02.1**	**-1.7**
	comp=E,1.9nm,0.3s						
ABTA	**Abfaltersbach**	**2.15**	**30**	Pg	**Pg**	**01 57 02.1**	**-1.7**
	comp=E,1.9nm,0.3s						
RISI	**Rein**	**2.19**	**21**	AML	AML		
	comp=N,134μm,0.3s						
RISI				AML	AML		
	comp=E,122μm,0.5s						
RISI				AML	AML		
	comp=N,134μm,0.3s						
RISI				AML	AML		
	comp=E,122μm,0.5s						
RORO	**Rocca Rossa**	**2.20**	**250**	AML	AML		
	comp=N,41μm,1.0s						
RORO				AML	AML		
	comp=E,45μm,1.4s						
RORO				AML	AML		
	comp=N,41μm,1.0s						
RORO				AML	AML		
	comp=E,45μm,1.4s						
WTTA	**Wattenberg**	**2.41**	**12**	Pn	**Pb**	**01 57 05.0**	**-0.6**
	comp=E,1.0nm,0.2s						
WTTA	**Wattenberg**	**2.41**	**12**	Pn	**Pb**	**01 57 05.0**	**-0.6**
	comp=E,1.0nm,0.2s						
WATA	**Walderalm**	**2.47**	**10**	Pn	**Pb**	**01 57 05.3**	**-1.3**
	comp=E,3.4nm,0.2s,SNR=10						
WATA	**Walderalm**	**2.47**	**10**	Pn	**Pb**	**01 57 05.3**	**-1.3**
	comp=E,3.4nm,0.2s,SNR=10						
MYKA	**Terra Mystica**	**2.56**	**47**	Pg	**Pg**	**01 57 10.2**	**-1.5**
MYKA	**Terra Mystica**	**2.56**	**47**	Pg	**Pg**	**01 57 10.2**	**-1.5**
RETA	**Reutte**	**2.58**	**357**	Pn	**Pb**	**01 57 06.4**	**-2.1**
	comp=E,1.6nm,0.2s,SNR=6.4						
RETA	**Reutte**	**2.58**	**357**	Pn	**Pb**	**01 57 06.4**	**-2.1**
	comp=E,1.6nm,0.2s,SNR=6.4						
KBA	**Koelnbreinsper**	**2.75**	**37**	Pn	**Pb**	**01 57 10.7**	**-0.7**
	comp=E,0.9nm,0.2s						
KBA	**Koelnbreinsper**	**2.75**	**37**	Pn	**Pb**	**01 57 10.7**	**-0.7**
	comp=E,0.9nm,0.2s						
LUCF	**Luceram**	**2.76**	**250**	P	**Pb**	**01 57 09.1**	**-2.5**
LUCF	**Luceram**	**2.76**	**250**	P	**Pb**	**01 57 09.1**	**-2.5**
OBKA	**Obir**	**3.00**	**56**	Pn	**Pb**	**01 57 12.2**	**-3.4**
	comp=E,0.2nm,0.2s						
OBKA	**Obir**	**3.00**	**56**	Pn	**Pb**	**01 57 12.2**	**-3.4**
	comp=E,0.2nm,0.2s						
CALF	**Calern**	**3.10**	**250**	P	**Pn**	**01 57 13.1**	**+2.2**
CALF	**Calern**	**3.10**	**250**	P	**Pn**	**01 57 13.1**	**+2.2**
SOKA	**Soboth**	**3.37**	**57**	*e*Pn	**Pn**	**01 57 14.9**	**+0.3**
	comp=E,0.7nm,0.3s						
SOKA	**Soboth**	**3.37**	**57**	Pn	**Pn**	**01 57 14.9**	**+0.3**
	comp=E,0.7nm,0.3s						
KIZ	**Kirchzarten**	**3.69**	**327**	P	**Pn**	**01 57 20.1**	**+1.1**
KIZ	**Kirchzarten**	**3.69**	**327**	P	**Pn**	**01 57 20.1**	**+1.1**
CHMF	**Charmoille**	**3.79**	**310**	P	**Pn**	**01 57 21.5**	**+1.2**
CHMF	**Charmoille**	**3.79**	**310**	P	**Pn**	**01 57 21.5**	**+1.2**
OPP	**Oppenau**	**4.06**	**333**	P	**Pn**	**01 57 25.1**	**+1.2**
OPP	**Oppenau**	**4.06**	**333**	P	**Pn**	**01 57 25.1**	**+1.2**
ECH	**Echery**	**4.21**	**323**	P	**Pn**	**01 57 27.4**	**+1.3**
ECH	**Echery**	**4.21**	**323**	P	**Pn**	**01 57 27.4**	**+1.3**
KHC	**Kasperske Hory**	**4.59**	**22**	*e*PN	**Pn**	**01 57 32.3**	**+0.9**
KHC				*e*PG	**Pg**	**01 57 50.9**	**+0.3**
KHC				*e*SN	**Sn**	**01 58 24.1**	**-0.3**
KHC				*e*SG	**Sg**	**01 58 49.5**	**-0.5**

ISCJB ***04*** *02:07:26.2±0.3,23°.43N±0°.01×122°.11E±0°.02,h17km±3km,*
Error ellipse: s-maj=2.7km s-min=1.8km az=42.8
JMA ***04*** *02:07:26.9±0.1,23°.43N×122°.07E,h30km,M3.8*
TAP ***04*** *02:07:28.1,23°.43N×122°.05E,h37km,ML4.0,D*
ISC 04 02:07:26.3±1.2,23°.41N±0°.02×122°.08E±0°.02,h19km±3km,
n114,σ0°79/188,12C-16D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HGSD	**Ruisui**	**0.61**	**277**	⇓P	**Pb**	**02 07 39.0**	**+0.8**
	baz=276						
HGSD				S	**Sb**	**02 07 47.3**	**+0.8**
	baz=276						
EGFH	**Guangfu**	**0.65**	**293**	*e*P	**Pb**	**02 07 39.9**	**+0.9**
	baz=301						
EGFH				*e*S	**Sb**	**02 07 48.8**	**+1.1**
	baz=301						
ENLB	**Shoufeng**	**0.66**	**318**	P	**Pb**	**02 07 39.9**	**+0.8**
	baz=327						
ENLB				S	**Sb**	**02 07 48.7**	**+0.9**
	baz=327						
EHY	**Hungye**	**0.71**	**278**	⇓*i*P	**Pb**	**02 07 40.8**	**+0.8**
	baz=277						
EHY				*e*S	**Sb**	**02 07 50.4**	**+1.2**
	baz=277						
HWA	**Hwalien**	**0.71**	**322**	*e*P	**Pb**	**02 07 40.9**	**+0.9**
	baz=330						
HWA				*e*S	**Sb**	**02 07 50.1**	**+0.7**
	baz=330						
ESL	**Shilin**	**0.72**	**304**	*e*P	**Pg**	**02 07 40.3**	**-0.2**
	baz=298						
ESL				*e*S	**Sg**	**02 07 49.2**	**-0.9**
	baz=298						
YULB	**Yu-li**	**0.72**	**268**	⇓P	**Pb**	**02 07 40.8**	**+0.6**
	baz=263						
YULB				S	**Sb**	**02 07 51.2**	**+1.5**
	baz=263						
TWF1	**Yuli**	**0.73**	**265**	⇓*i*P	**Pb**	**02 07 41.0**	**+0.7**
	baz=260						
TWF1				S	**Sb**	**02 07 50.4**	**+0.6**
	baz=260						
CHKT	**Chengkung**	**0.73**	**245**	⇓P	**Pg**	**02 07 40.7**	**0.0**
	baz=236						
CHKT				S	**Sg**	**02 07 49.6**	**-0.8**
	baz=236						
FULB	**Fuli**	**0.76**	**254**	⇓*i*P	**Pg**	**02 07 41.1**	**-0.1**
	baz=243						
FULB				*e*S	**Sg**	**02 07 50.8**	**-0.5**
	baz=243						
TWD	**Chiawan**	**0.80**	**326**	⇑*i*P	**Pb**	**02 07 41.6**	**+0.1**
	baz=328						
TWD				*e*S	**Sb**	**02 07 51.3**	**-0.6**
	baz=328						
NACB	**Ninganchiao**	**0.88**	**329**	⇑P	**Pb**	**02 07 42.8**	**-0.1**
	baz=331						
NACB				*e*S	**Sb**	**02 07 53.5**	**-0.7**
	baz=331						
TWH	**Lutao**	**0.90**	**219**	⇓P	**Pb**	**02 07 43.5**	**+0.3**
	baz=215						
TWH				*e*S	**Sb**	**02 07 54.1**	**-0.6**
	baz=215						
VWDT	**VWDT**	**0.93**	**292**	⇑P	**Pg**	**02 07 44.4**	**0.0**
	baz=298						
VWDT				S	**Sb**	**02 07 55.6**	**-0.1**
	baz=298						
ELDTW	**Lidau**	**1.01**	**257**	*e*P	**Pb**	**02 07 44.8**	**-0.3**
	baz=247						
ELDTW				*e*S	**Sb**	**02 07 56.5**	**-1.5**
	baz=247						
CHGB	**Renai**	**1.05**	**308**	⇑P	**Pb**	**02 07 46.1**	**+0.1**
	baz=308						
CHGB				S	**Sb**	**02 07 58.7**	**-0.8**
	baz=308						
NANB	**Nanao**	**1.05**	**343**	⇑P	**Pb**	**02 07 45.8**	**-0.1**
	baz=344						
NANB				*e*S	**Sb**	**02 07 58.8**	**-0.5**
	baz=344						
ENA	**Nanau**	**1.06**	**343**	*e*P	**Pb**	**02 07 45.7**	**-0.3**
	baz=344						
ENA				*e*S	**Sb**	**02 07 58.8**	**-0.6**
	baz=344						
TTN	**Taitung**	**1.08**	**233**	*e*P	**Pb**	**02 07 46.6**	**+0.2**
	baz=231						
TWGBT	**Beinan**	**1.10**	**237**	⇓P	**Pb**	**02 07 46.4**	**-0.3**
	baz=231						
TWGBT				*e*S	**Sb**	**02 07 59.8**	**-0.8**
	baz=231						
SSLB	**Suanglung**	**1.10**	**290**	P	**Pb**	**02 07 46.6**	**-0.1**
	baz=290						
SSLB				*e*S	**Sb**	**02 07 59.3**	**-1.4**
	baz=290						
TWG	**Pinlang**	**1.10**	**238**	⇓P	**Pb**	**02 07 46.4**	**-0.4**
	baz=231						
TWG				*e*S	**Sb**	**02 07 59.9**	**-0.8**
	baz=231						
EOS1	**EOS1**	**1.13**	**2**	*e*P	**Pn**	**02 07 47.4**	**+0.3**
	baz=3.0						
EOS1				*e*S	**Sb**	**02 08 02.1**	**+0.6**
	baz=3.0						
ALS	**Alishan**	**1.18**	**275**	⇓*e*P	**Pb**	**02 07 48.7**	**+0.5**
	baz=275						
ALS				*e*S	**Sb**	**02 08 03.0**	**-0.2**
	baz=275						
TWT	**Tachien**	**1.18**	**315**	*e*P	**Pn**	**02 07 48.1**	**+0.2**
	baz=315						
TWT				*e*S	**Sb**	**02 08 02.1**	**-1.0**
	baz=315						
SMLT	**Sun Moon Lake**	**1.18**	**294**	⇓P	**Pn**	**02 07 48.2**	**+0.4**
	baz=299						
SMLT				*e*S	**Sb**	**02 08 02.2**	**-0.8**
	baz=299						
TDCB	**Techi**	**1.19**	**315**	P	**Pn**	**02 07 48.3**	**+0.3**
	baz=315						
TDCB				S	**Sb**	**02 08 02.2**	**-1.2**
	baz=315						
NNSH	**Datong**	**1.20**	**328**	*e*P	**Pn**	**02 07 48.0**	**-0.1**
	baz=319						
NNSH				*e*S	**Sb**	**02 08 02.5**	**-1.1**
	baz=319						
NNSB	**Datong**	**1.20**	**328**	⇑P	**Pn**	**02 07 48.1**	**0.0**
	baz=319						
NNSB				*e*S	**Sb**	**02 08 01.9**	**-1.6**
	baz=319						
TWC	**Suao**	**1.21**	**350**	⇑*e*P	**Pn**	**02 07 48.5**	**+0.4**
	baz=1.0						
TWC				*e*S	**Sb**	**02 08 02.9**	**-0.9**
	baz=1.0						
NNS	**Nan Shan**	**1.21**	**328**	P	**Pn**	**02 07 48.3**	**0.0**
	baz=319						
NNS				S	**Sb**	**02 08 03.0**	**-0.9**
	baz=319						
TYC	**Yuchr**	**1.23**	**294**	⇓P	**Pn**	**02 07 48.9**	**+0.5**
	baz=294						
TYC				*e*S	**Sb**	**02 08 03.7**	**-0.5**
	baz=294						
DPDB	**Guoxing**	**1.23**	**300**	⇑P	**Pn**	**02 07 49.0**	**+0.5**
	baz=308						
DPDB				*e*S	**Sb**	**02 08 03.9**	**-0.4**
	baz=308						
STYT	**Tauyuan**	**1.25**	**259**	⇓*e*P	**Pn**	**02 07 49.1**	**+0.5**
	baz=253						
STYT				*e*S	**Sb**	**02 08 03.6**	**-1.3**
	baz=253						
JYNG	**Yonagunijimaku**	**1.30**	**37**	P	**Pn**	**02 07 50.0**	**+0.6**
JYNG				S	**Sb**	**02 08 05.7**	**-0.6**
WJS	**Zhushan**	**1.31**	**288**	*e*P	**Pg**	**02 07 51.2**	**-0.4**
	baz=288						
ENTT	**Nioudou**	**1.31**	**339**	⇑P	**Pn**	**02 07 49.8**	**+0.3**
	baz=340						
ENTT				*e*S	**Sn**	**02 08 06.1**	**-0.4**
	baz=340						
ECL	**Taimali**	**1.32**	**232**	*e*P	**Pn**	**02 07 48.9**	**-0.8**
	baz=241						
ECL				*e*S	**Sn**	**02 08 04.5**	**-2.2**
	baz=241						
TPUB	**Ta-pu**	**1.34**	**265**	⇓*e*P	**Pb**	**02 07 51.2**	**+0.4**
	baz=270						
TPUB				*e*S	**Sb**	**02 08 08.2**	**+0.6**
	baz=270						
YOJ	**Yonaguni jima**	**1.34**	**39**	*e*P	**Pn**	**02 07 50.4**	**+0.4**
	baz=50						
YOJ				*e*S	**Sn**	**02 08 07.2**	**-0.1**
	baz=50						
YOJ	**Yonaguni jima**	**1.34**	**39**	P	**Pn**	**02 07 50.6**	**+0.6**
YOJ				S	**Sn**	**02 08 07.3**	**0.0**
TWE	**Neicheng**	**1.36**	**344**	*e*P	**Pn**	**02 07 50.8**	**+0.7**
	baz=345						
TWE				*e*S	**Sn**	**02 08 07.1**	**-0.5**
	baz=345						
WTP	**Ta-pu**	**1.36**	**263**	⇓P	**Pb**	**02 07 51.6**	**+0.4**
	baz=263						
WTP				*e*S	**Sb**	**02 08 08.7**	**+0.5**
	baz=263						
WNT	**Mingjian**	**1.36**	**290**	*e*P	**Pb**	**02 07 52.1**	**+0.9**
	baz=290						
SLGT	**Liugui**	**1.39**	**253**	*e*P	**Pn**	**02 07 51.0**	**+0.4**
	baz=246						
SLBB	**Yuanshan**	**1.40**	**343**	*e*P	**Pn**	**02 07 51.4**	**+0.6**
	baz=344						
SLBB				*e*S	**Sn**	**02 08 08.2**	**-0.5**
	baz=344						
YHNB	**Yeheng**	**1.41**	**333**	⇑P	**Pn**	**02 07 51.2**	**+0.3**
	baz=334						
YHNB				S	**Sn**	**02 08 07.8**	**-1.2**
	baz=334						
SGST	**Jiashian**	**1.42**	**257**	P	**Pb**	**02 07 52.7**	**+0.5**
	baz=250						
SGST				*e*S	**Sb**	**02 08 10.1**	**+0.3**
	baz=250						
NSK	**Sanguang**	**1.42**	**332**	P	**Pn**	**02 07 51.5**	**+0.4**
	baz=333						
NSK				*e*S	**Sn**	**02 08 07.8**	**-1.5**
	baz=333						
WGK	**Gukeng**	**1.42**	**281**	*e*P	**Pn**	**02 07 51.9**	**+0.8**
	baz=281						
EGS	**Yilan**	**1.43**	**354**	*e*P	**Pb**	**02 07 52.3**	**0.0**
	baz=356						
WDLH	**Douliu**	**1.45**	**281**	*e*P	**Pb**	**02 07 53.1**	**+0.6**
	baz=281						
CHN1	**Nanshi**	**1.45**	**261**	⇑P	**Pb**	**02 07 53.5**	**+0.8**
	baz=261						
CHN1				*e*S	**Sb**	**02 08 11.5**	**+0.8**
	baz=261						
NTC	**Toucheng**	**1.45**	**351**	*e*P	**Pn**	**02 07 52.4**	**+0.9**
	baz=2.0						
LAY	**Lan-yu**	**1.45**	**200**	*e*P	**Pn**	**02 07 51.4**	**-0.1**
	baz=198						
NWLT	**Wulai**	**1.46**	**339**	*e*P	**Pn**	**02 07 52.3**	**+0.7**
	baz=329						
NWLT				*e*S	**Sn**	**02 08 09.2**	**-0.9**
	baz=329						
CHN2	**Minshiung**	**1.48**	**275**	*e*P	**Pb**	**02 07 53.8**	**+0.6**
	baz=275						
TCU	**Taichung**	**1.48**	**300**	*e*P	**Pb**	**02 07 53.9**	**+0.7**
	baz=300						
SSD	**Sandimen**	**1.49**	**244**	*e*P	**Pn**	**02 07 52.3**	**+0.2**
	baz=238						
TAW	**Tawu**	**1.52**	**226**	*e*P	**Pn**	**02 07 52.8**	**+0.4**
	baz=233						
CHY	**Chiayi**	**1.53**	**273**	*e*P	**Pb**	**02 07 54.6**	**+0.7**
	baz=273						
EAST	**Anshuo**	**1.53**	**228**	P	**Pn**	**02 07 52.5**	**-0.1**
	baz=234						
WCHH	**Zhanghua**	**1.55**	**296**	*e*P	**Pb**	**02 07 55.2**	**+0.9**
	baz=296						
MASBT	**Mashibuluo**	**1.56**	**239**	⇓P	**Pn**	**02 07 53.4**	**+0.5**
	baz=235						
MASBT				*e*S	**Sn**	**02 08 11.2**	**-1.3**
	baz=235						
NSTT	**Nanjuang**	**1.56**	**321**	*e*P	**Pb**	**02 07 54.5**	**-0.1**
	baz=322						
NSTT				*e*S	**Sn**	**02 08 13.1**	**+0.4**
	baz=322						
LIOB	**Emei**	**1.57**	**322**	*e*P	**Pn**	**02 07 53.6**	**+0.5**
	baz=322						
LIOB				*e*S	**Sn**	**02 08 12.3**	**-0.6**
	baz=322						
NSY	**Sanyi**	**1.57**	**310**	*e*P	**Pb**	**02 07 55.2**	**+0.5**
	baz=310						
NSY				*e*S	**Sn**	**02 08 12.9**	**+0.1**
	baz=310						
TIPB	**Shuangxi**	**1.57**	**351**	P	**Pn**	**02 07 53.3**	**+0.2**
	baz=5.0						
TIPB				S	**Sn**	**02 08 12.4**	**-0.5**
	baz=5.0						
TWB1	**Santiao Chiao**	**1.59**	**357**	P	**Pn**	**02 07 54.2**	**+0.9**
	baz=358						
TWB1				*e*S	**Sn**	**02 08 12.9**	**-0.5**
	baz=358						
SGLT	**Jiouru**	**1.62**	**245**	*e*P	**Pg**	**02 07 57.3**	**-0.2**
	baz=242						
WLTB	**Daxi**	**1.62**	**332**	*e*P	**Pb**	**02 07 55.3**	**-0.3**
	baz=333						
WLTB				*e*S	**Sn**	**02 08 15.5**	**+1.3**
	baz=333						
NMLH	**Miaoli**	**1.63**	**314**	*e*P	**Pn**	**02 07 55.1**	**+1.2**
	baz=314						
TWM1	**Shoushan**	**1.64**	**249**	*e*P	**Pb**	**02 07 56.2**	**+0.3**
	baz=249						
TWM1				*e*S	**Sg**	**02 08 19.2**	**-0.1**
	baz=249						
WLGB	**Puzi**	**1.64**	**273**	*e*P	**Pn**	**02 07 53.9**	**-0.2**
	baz=272						
RLNB	**Erlin**	**1.65**	**287**	*e*P	**Pb**	**02 07 56.6**	**+0.6**
	baz=277						
RLNB				*e*S	**Sb**	**02 08 18.3**	**+1.8**
	baz=277						
NWF	**Wu-fen Shan**	**1.67**	**351**	*e*P	**Pn**	**02 07 55.9**	**+1.3**
	baz=352						
NWF				*e*S	**Sn**	**02 08 15.5**	**0.0**
	baz=352						
WFSB	**Wu-fen Shan**	**1.67**	**351**	*e*P	**Pn**	**02 07 55.9**	**+1.3**
	baz=3.0						
WFSB				*e*S	**Sn**	**02 08 15.9**	**+0.5**
	baz=3.0						
SSPT	**Xinbi**	**1.68**	**237**	*e*P	**Pb**	**02 07 57.6**	**+1.1**
	baz=232						
TAP1	**Taipei**	**1.70**	**343**	*e*P	**Pn**	**02 07 55.9**	**+1.1**
	baz=329						
HATJ	**Hateruma jima**	**1.70**	**68**	P	**Pn**	**02 07 55.5**	**+0.6**
HATJ				S	**Sn**	**02 08 15.6**	**-0.5**
SCZT	**Fangliau**	**1.70**	**233**	⇑*e*P	**Pn**	**02 07 55.7**	**+0.8**
	baz=226						
WTCT	**Ta-ch'eng**	**1.71**	**286**	*e*P	**Pb**	**02 07 57.7**	**+0.5**
	baz=286						
WTCT				*e*S	**Sb**	**02 08 19.2**	**+0.9**
	baz=286						
CHN8	**Yiju**	**1.72**	**268**	*e*P	**Pb**	**02 07 56.8**	**-0.5**
	baz=268						
CHN8				*e*S	**Sb**	**02 08 18.9**	**+0.4**
	baz=268						
WSF	**Szhu**	**1.72**	**278**	*e*P	**Pn**	**02 07 56.6**	**+1.4**
	baz=278						
WSF				*e*S	**Sn**	**02 08 17.8**	**+1.1**
	baz=278						
NCUH	**Zhongli**	**1.75**	**332**	*e*P	**Pn**	**02 07 56.8**	**+1.1**
	baz=333						
NCU	**National Centr**	**1.75**	**332**	*e*P	**Pn**	**02 07 57.0**	**+1.3**
	baz=334						
IRIF	**Iriomote-Funau**	**1.76**	**58**	P	**Pn**	**02 07 56.7**	**+0.9**
IRIF				S	**Sn**	**02 08 18.4**	**+0.7**
TWS1	**Kuangyinshan**	**1.79**	**340**	*e*P	**Pb**	**02 07 59.0**	**+0.6**
	baz=342						
YM10	**YM10**	**1.80**	**345**	*e*P	**Pn**	**02 07 57.3**	**+1.0**
	baz=332						
YM07	**YM07**	**1.80**	**347**	*e*P	**Pn**	**02 07 56.6**	**+0.2**
YM07				*e*S	**Sn**	**02 08 18.0**	**-0.7**
YM11	**YM11**	**1.81**	**345**	*e*P	**Pn**	**02 07 56.8**	**+0.4**
	baz=332						
YM08	**YM08**	**1.82**	**346**	*e*P	**Pn**	**02 07 57.3**	**+0.7**
	baz=332						
YM03	**YM03**	**1.83**	**344**	*e*P	**Pn**	**02 07 57.6**	**+0.9**
	baz=331						
TSEB	**Hengchuen, Pin**	**1.86**	**216**	*e*P	**Pn**	**02 07 58.5**	**+1.4**
	baz=216						
HEN	**Hengchun**	**1.87**	**222**	*e*P	**Pn**	**02 07 58.9**	**+1.6**
	baz=220						
TWKBT	**Hengchun**	**1.88**	**219**	*e*P	**Pn**	**02 07 58.0**	**+0.6**
	baz=218						
TWKBT				*e*S	**Sn**	**02 08 19.8**	**-0.7**
	baz=218						
TWK1	**Hengchun**	**1.88**	**219**	*e*P	**Pn**	**02 07 58.4**	**+1.0**
	baz=217						
WLCH	**Liuqiu**	**1.90**	**236**	*e*P	**Pg**	**02 08 02.6**	**-0.2**
	baz=233						
TWP	**Hsiaoliuchiu**	**1.91**	**237**	*e*P	**Pg**	**02 08 03.0**	**-0.1**
	baz=235						
JKRS	**Kuro-shima**	**1.94**	**65**	P	**Pn**	**02 07 59.3**	**+1.1**
JKRS				S	**Sn**	**02 08 22.3**	**+0.2**
JIJ	**Ishigaki jima**	**2.11**	**63**	P	**Pn**	**02 08 00.8**	**+0.3**
JIJ				S	**Sn**	**02 08 25.0**	**-1.2**
WDGT	**Dungji**	**2.23**	**267**	*e*P	**Pn**	**02 08 03.4**	**+1.2**
	baz=266						
WDGT				*e*S	**Sn**	**02 08 28.6**	**-0.6**
	baz=266						
PHUB	**P'eng-hu**	**2.31**	**273**	*e*P	**Pn**	**02 08 04.0**	**+0.8**
	baz=261						
PHUB				*e*S	**Sn**	**02 08 30.5**	**-0.6**
	baz=261						
PNG	**Penghu**	**2.33**	**274**	*e*P	**Pn**	**02 08 04.6**	**+1.1**
	baz=274						
JISG	**Ishigakijimahi**	**2.35**	**60**	P	**Pn**	**02 08 04.0**	**+0.2**
JISG				S	**Sn**	**02 08 31.2**	**-0.9**
VCHM	**Qimei**	**2.45**	**266**	*e*P	**Pn**	**02 08 06.3**	**+1.1**
	baz=266						
VCHM				*e*S	**Sn**	**02 08 33.0**	**-1.6**
	baz=266						
JTJ	**Tarama**	**2.69**	**62**	P	**Pn**	**02 08 09.2**	**+0.7**
JTJ				S	**Sn**	**02 08 40.8**	**+0.3**
VWUC	**VWUC**	**2.87**	**304**	*e*P	**Pn**	**02 08 11.2**	**+0.2**
	baz=315						
VWUC				*e*S	**Sn**	**02 08 43.0**	**-2.1**
	baz=315						
JIRB	**Irabujima**	**3.15**	**63**	P	**Pn**	**02 08 15.4**	**+0.5**
JMJ	**Miyako jima 2**	**3.25**	**64**	*e*S	**Sn**	**02 08 54.1**	**-0.2**
JIKM	**Ikemajima**	**3.26**	**62**	P	**Pn**	**02 08 16.8**	**+0.5**
JIKM				*e*S	**Sn**	**02 08 55.2**	**+0.7**
MATB	**Ma-tsu**	**3.35**	**325**	*e*P	**Pn**	**02 08 16.9**	**-0.7**
	baz=314						
KNM	**Kinmen**	**3.49**	**287**	*e*P	**Pn**	**02 08 21.4**	**+2.0**
	baz=287						
KNMB	**Chin-men Tao**	**3.54**	**288**	*e*P	**Pn**	**02 08 20.5**	**+0.3**
	baz=288						

IDC 04 02:27:24.9±3.5,5°.64S×151°.15E,h0km,mb3.6/3,

mb1 3.9/3, mb1mx3.5/43, mbtmp3.6/3, Error ellipse: s-maj=123.0km s-min=48.5km az=122.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.67**	**227**	P	P	02 32 16.5	-0.9
	0.5nm,0.5s,baz=53,slow=10,SNR=5.7						
ASAR	**Alice Springs**	**24.43**	**221**	P	P	02 32 45.4	-0.2
	0.4nm,0.4s,baz=55,slow=8.1,SNR=4.4						
FITZ	**Fitzroy Crossi**	**27.82**	**241**	P	P	02 33 16.8	+0.6
	4.4nm,1.1s,baz=50,slow=7.9,SNR=2.2						
TORD	**Torodi Ar. Bea**	**148.98**	**286**	PKPbc	PKPbc	02 47 15.5	-0.6
	0.3nm,0.6s,baz=90,slow=2.7,SNR=3.9						

*ISK **04** 02:36:50.9, 37°.04N×27°.54E, h19km±2km, ML1.8/5*
*CSEM **04** 02:36:51.3±0.6, 36°.98N×27°.64E, h2km, ML2.4, Error ellipse: s-maj=12.5km s-min=8.4km az=35.0, Suspected Mining explosion.*
*DDA **04** 02:36:51.6, 37°.00N×27°.62E, h7km, Ml2.4, Suspected Mining explosion.*

ISC 04 02:36:49.8±1.1, 36°.91N±0°.04×27°.64E±0°.03, h18km±2km, n26, σ1s72/40, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.22**	**314**	*i* P	**Pb**	**02 36 54.8**	**-0.1**
BDRM				*i* S	**Sb**	**02 36 57.5**	**-0.8**
BDRM	**Kayabasi**	**0.22**	**314**	P	**Pb**	**02 36 54.8**	**-0.1**
BDRM				S	**Sb**	**02 36 57.5**	**-0.8**
BODT	**Bodrum**	**0.30**	**299**	PG	**Pg**	**02 36 55.6**	**-0.9**
BODT				SG	**Sg**	**02 36 59.9**	**-1.2**
BODT	**Bodrum**	**0.30**	**299**	*e*Pg	**Pg**	**02 36 55.6**	**-0.9**
BODT				*e*Sg	**Sg**	**02 36 59.9**	**-1.2**
MLSB	**Milas**	**0.40**	**16**	PG	**Pg**	**02 36 58.5**	**+0.4**
MLSB				SG	**Sg**	**02 37 03.3**	**-0.4**
MLSB	**Milas**	**0.40**	**16**	*e*Pg	**Pg**	**02 36 58.5**	**+0.4**
MLSB				*e*Sg	**Sg**	**02 37 03.3**	**-0.4**
YER	**Yerkesik**	**0.56**	**66**	PG	**Pn**	**02 37 03.2**	**+0.3**
YER	**Yerkesik**	**0.56**	**66**	*e*Pg	**Pn**	**02 37 03.2**	**+0.3**
AYDN	**Tasoluk**	**0.77**	**14**	*i* P	**Pb**	**02 37 05.1**	**+0.4**
AYDN				*i* S	**Sb**	**02 37 14.9**	**0.0**
AYDN	**Tasoluk**	**0.77**	**14**	P	**Pb**	**02 37 05.1**	**+0.4**
AYDN				S	**Sb**	**02 37 14.9**	**0.0**
TURN	**Turunc**	**0.77**	**93**	PG	**Pb**	**02 37 03.5**	**-1.2**
TURN	**Turunc**	**0.77**	**93**	*i* P	**Pb**	**02 37 03.1**	**-1.6**
TURN				*i* S	**Sb**	**02 37 10.4**	**-4.4**
TURN	**Turunc**	**0.77**	**93**	P	**Pb**	**02 37 03.1**	**-1.6**
TURN	**Turunc**	**0.77**	**93**	*e*Pg	**Pb**	**02 37 03.5**	**-1.2**
TURN				S	**Sb**	**02 37 10.4**	**-4.4**
ARG	**Arkhangelos**	**0.80**	**151**	PG	**Pn**	**02 37 09.9**	**+3.8**
ARG	**Arkhangelos**	**0.80**	**151**	*e*Pg	**Pn**	**02 37 09.9**	**+3.8**
DALY	**Dalyan (Mu¨la**	**0.82**	**96**	PG	**Pn**	**02 37 09.5**	**+3.1**
DALY	**Dalyan (Mu¨la**	**0.82**	**96**	*e*Pg	**Pn**	**02 37 09.5**	**+3.1**
GCAM	**G?zelcaml?**	**0.85**	**338**	PG	**Pb**	**02 37 05.2**	**-0.8**
GCAM	**G?zelcaml?**	**0.85**	**338**	*i* P	**Pn**	**02 37 07.7**	**+0.8**
GCAM				*i* S	**Sg**	**02 37 17.9**	**+0.1**
GCAM	**G?zelcaml?**	**0.85**	**338**	*e*Pg	**Pb**	**02 37 05.2**	**-0.8**
GCAM	**G?zelcaml?**	**0.85**	**338**	P	**Pn**	**02 37 07.7**	**+0.8**
GCAM				S	**Sg**	**02 37 17.9**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**1.05**	**11**	PG	**Pb**	**02 37 09.9**	**+0.3**
AYDB	**Zeytinkoy-Aydi**	**1.05**	**11**	*e*Pg	**Pb**	**02 37 09.9**	**+0.3**
TAVA	**DENIZLI_Tavas**	**1.16**	**61**	*i* P	**Pg**	**02 37 13.0**	**+0.8**
TAVA				*i* S	**Sg**	**02 37 27.9**	**+0.5**
TAVA	**DENIZLI_Tavas**	**1.16**	**61**	P	**Pg**	**02 37 13.0**	**+0.8**
TAVA				S	**Sg**	**02 37 27.9**	**+0.5**

*ISCJB **04** 02:38:06.6±0.4, 40°.18N±0°.01×24°.04E±0°.02, h8km±3km, Error ellipse: s-maj=2.2km s-min=2.0km az=14.3*
*ISK **04** 02:38:06.6, 40°.18N×24°.05E, h11km, ML3.0/14*
*ATH **04** 02:38:06.7, 40°.18N×24°.02E, h26km±1km, ML2.9/18, Error ellipse: s-maj=1.0km s-min=0.7km az=310.0*
*CSEM **04** 02:38:07.0±0.1, 40°.16N×24°.02E, h8km, ML2.9, Error ellipse: s-maj=1.6km s-min=1.4km az=92.0*
*THE **04** 02:38:07.5, 40°.20N×24°.00E, h15km, ML2.9/18, Error ellipse: s-maj=0.8km s-min=0.5km az=320.0*
*BEO **04** 02:38:08.7±1.0, 40°.24N×24°.08E, h15km±5km*

ISC 04 02:38:07.0±0.8, 40°.17N±0°.01×24°.01E±0°.01, h13km±6km, n228, σ0s90/304, 10C-13D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OUR	**Ouranopolis**	**0.17**	**354**	PG	**Pg**	**02 38 11.3**	**+0.3**
OUR	**Ouranopolis**	**0.17**	**354**	P	**Pg**	**02 38 10.6**	**-0.4**
OUR	**Ouranopolis**	**0.17**	**354**	P	**Pg**	**02 38 11.2**	**+0.3**
OUR				S	**Sg**	**02 38 13.4**	**-0.3**
OUR	**Ouranopolis**	**0.17**	**354**	P	**Pg**	**02 38 11.3**	**+0.3**
OUR				S	**Sg**	**02 38 13.4**	**-0.3**
PAIG	**Paliouri**	**0.35**	**226**	P	**Pg**	**02 38 14.5**	**+0.5**
PAIG				S	**Sg**	**02 38 19.2**	**+0.4**
PAIG				AML	AML	02 38 20.2	
	comp=N,8089μm,0.3s						
PAIG				AML	AML	02 38 20.6	
	comp=E,6758μm,0.2s						
PAIG	**Paliouri**	**0.35**	**226**	P	**Pg**	**02 38 14.6**	**+0.5**
PAIG				S	**Sg**	**02 38 19.6**	**+0.9**
PAIG	**Paliouri**	**0.35**	**226**	P	**Pg**	**02 38 14.6**	**+0.5**
PAIG				S	**Sg**	**02 38 19.6**	**+0.9**
PLG	**Polygyros**	**0.48**	**296**	P	**Pg**	**02 38 16.8**	**+0.3**
PLG				S	**Sg**	**02 38 23.1**	**+0.3**
PLG				AML	AML	02 38 24.2	
	comp=N,3139μm,0.3s						
PLG				AML	AML	02 38 26.0	
	comp=E,2331μm,0.1s						
PLG	**Polygyros**	**0.48**	**296**	P	**Pg**	**02 38 16.7**	**+0.3**
PLG				S	**Sg**	**02 38 22.9**	**+0.1**
PLG	**Polygyros**	**0.48**	**296**	P	**Pg**	**02 38 16.7**	**+0.3**
PLG				S	**Sg**	**02 38 22.9**	**+0.1**
HORT	**Hortiatis**	**0.81**	**302**	PG	**Pg**	**02 38 22.8**	**-0.1**
HORT	**Hortiatis**	**0.81**	**302**	P	**Pg**	**02 38 23.0**	**+0.1**
HORT				S	**Sg**	**02 38 33.5**	**-0.1**
HORT				AML	AML	02 38 37.0	
	comp=N,3476μm,0.4s						
HORT				AML	AML	02 38 37.8	
	comp=E,2027μm,0.3s						
HORT	**Hortiatis**	**0.81**	**302**	P	**Pg**	**02 38 22.4**	**-0.5**
HORT				S	**Sg**	**02 38 33.6**	**0.0**
HORT	**Hortiatis**	**0.81**	**302**	P	**Pg**	**02 38 22.8**	**-0.1**
HORT				S	**Sg**	**02 38 33.6**	**0.0**
KVLA	**Kavala**	**0.82**	**20**	P	**Pb**	**02 38 23.2**	**0.0**
KVLA				S	**Sg**	**02 38 33.4**	**-0.3**
KVLA				AML	AML	02 38 36.0	
	comp=N,4253μm,0.2s						
KVLA				AML	AML	02 38 37.0	
	comp=E,3752μm,0.3s						
KVLA	**Kavala**	**0.82**	**20**	P	**Pg**	**02 38 22.8**	**-0.2**
KVLA				S	**Sb**	**02 38 33.7**	**-0.5**
SOH	**Sokhos**	**0.82**	**323**	P	**Pg**	**02 38 22.9**	**0.0**
SOH				S	**Sg**	**02 38 32.6**	**-1.1**
SOH				AML	AML	02 38 37.6	
	comp=E,4794μm,0.4s						
SOH				AML	AML	02 38 37.9	
	comp=N,3232μm,0.3s						
SOH	**Sokhos**	**0.82**	**323**	P	**Pg**	**02 38 22.7**	**-0.2**
SOH				S	**Sg**	**02 38 33.5**	**-0.2**
SOH	**Sokhos**	**0.82**	**323**	P	**Pg**	**02 38 22.8**	**-0.2**
SOH				S	**Sg**	**02 38 33.5**	**-0.2**
THE	**Thessaloniki**	**0.92**	**301**	P	**Pb**	**02 38 24.3**	**-0.5**
THE				S	**Sn**	**02 38 38.6**	**-0.2**
THE				AML	AML	02 38 42.8	
	comp=N,870μm,0.8s						
THE				AML	AML	02 38 43.4	
	comp=E,539μm,0.4s						
THE	**Thessaloniki**	**0.92**	**301**	P	**Pb**	**02 38 24.5**	**-0.4**
THE	**Thessaloniki**	**0.92**	**301**	P	**Pb**	**02 38 24.4**	**-0.5**
THE				S	**Sn**	**02 38 38.1**	**-0.7**
LIA	**Limnos Island**	**0.94**	**106**	P	**Pn**	**02 38 26.6**	**+0.6**
LIA				S	**Sn**	**02 38 39.1**	**-0.3**
LIA				AML	AML	02 38 40.5	
	comp=E,1294μm,0.4s						
LIA				AML	AML	02 38 41.3	
	comp=N,1242μm,0.4s						
LIA	**Limnos Island**	**0.94**	**106**	P	**Pn**	**02 38 25.6**	**-0.4**
LIA				S	**Sn**	**02 38 38.4**	**-0.9**
LIA	**Limnos Island**	**0.94**	**106**	P	**Pn**	**02 38 25.6**	**-0.4**
LIA				S	**Sn**	**02 38 38.5**	**-0.9**
EFSA	**Agios Efstrati**	**0.98**	**129**	P	**Pb**	**02 38 25.2**	**-0.7**
EFSA				S	**Sg**	**02 38 39.1**	**+0.3**
EFSA	**Agios Efstrati**	**0.98**	**129**	P	**Pb**	**02 38 25.4**	**-0.5**
EFSA				S	**Sg**	**02 38 39.3**	**+0.5**
SRS	**Serrai**	**1.00**	**342**	*e*Pg	**Pb**	**02 38 25.9**	**-0.4**
SRS				*e*Sg	**Sb**	**02 38 38.8**	**-0.6**
SRS	**Serrai**	**1.00**	**342**	P	**Pg**	**02 38 26.4**	**0.0**
SRS				S	**Sn**	**02 38 40.9**	**0.0**
SRS				AML	AML	02 38 41.8	
	comp=E,1236μm,0.4s						
SRS				AML	AML	02 38 46.8	
	comp=N,1329μm,0.2s						
SRS	**Serrai**	**1.00**	**342**	P	**Pb**	**02 38 25.9**	**-0.4**
SRS				S	**Sb**	**02 38 38.7**	**-0.6**
SRS	**Serrai**	**1.00**	**342**	*e*Pg	**Pb**	**02 38 25.9**	**-0.4**
SRS				*e*Sg	**Sb**	**02 38 38.8**	**-0.6**
SRS				S	**Sn**	**02 38 40.2**	**-0.7**
XOR	**Xorichti**	**1.02**	**218**	P	**Pn**	**02 38 27.3**	**+0.2**
XOR	**Xorichti**	**1.02**	**218**	P	**Pg**	**02 38 26.7**	**+0.1**
XOR				S	**Sn**	**02 38 41.6**	**+0.3**
XOR	**Xorichti**	**1.02**	**218**	P	**Pg**	**02 38 26.7**	**+0.1**
XOR				S	**Sn**	**02 38 41.6**	**+0.3**
ALNA	**Alonissos**	**1.02**	**186**	P	**Pn**	**02 38 27.2**	**+0.1**
ALNA	**Alonissos**	**1.02**	**186**	P	**Pg**	**02 38 26.9**	**+0.1**
NEO	**Neokhori**	**1.05**	**215**	P	**Pb**	**02 38 27.1**	**0.0**
NEO				S	**Sn**	**02 38 42.6**	**+0.5**
NEO				AML	AML	02 38 44.6	
	comp=E,1094μm,0.3s						
NEO				AML	AML	02 38 47.9	
	comp=N,1082μm,0.4s						
NEO	**Neokhori**	**1.05**	**215**	P	**Pb**	**02 38 26.7**	**-0.4**
NEO				S	**Sn**	**02 38 42.0**	**-0.1**
NEO	**Neokhori**	**1.05**	**215**	P	**Pb**	**02 38 27.1**	**0.0**
NEO				S	**Sn**	**02 38 42.3**	**+0.2**
SKIA	**Skiathos**	**1.08**	**203**	P	**Pg**	**02 38 28.1**	**+0.2**
SKIA				S	**Sg**	**02 38 42.2**	**+0.2**
SKIA				AML	AML	02 38 43.4	
	comp=N,1356μm,0.5s						
SKIA				AML	AML	02 38 48.2	
	comp=E,989μm,0.5s						
SKIA	**Skiathos**	**1.08**	**203**	P	**Pb**	**02 38 27.7**	**0.0**
SKIA				S	**Sn**	**02 38 42.5**	**-0.3**
SKIA	**Skiathos**	**1.08**	**203**	P	**Pn**	**02 38 27.9**	**-0.1**
SKIA				S	**Sn**	**02 38 42.6**	**-0.3**
FYTO	**Fytoko, Volos**	**1.12**	**228**	P	**Pg**	**02 38 28.6**	**+0.1**
FYTO	**Fytoko, Volos**	**1.12**	**228**	P	**Pb**	**02 38 28.3**	**+0.1**
FYTO				S	**Sg**	**02 38 43.2**	**+0.1**
FYTO	**Fytoko, Volos**	**1.12**	**228**	P	**Pn**	**02 38 28.5**	**+0.1**
FYTO				S	**Sg**	**02 38 43.2**	**+0.1**
LIT	**Litokhoron**	**1.16**	**267**	P	**Pb**	**02 38 29.1**	**0.0**
LIT				AML	AML	02 38 46.5	
	comp=E,764μm,0.2s						
LIT				S	**Sn**	**02 38 47.1**	**+2.2**
LIT				AML	AML	02 38 47.3	
	comp=N,738μm,0.3s						
LIT	**Litokhoron**	**1.16**	**267**	P	**Pn**	**02 38 28.9**	**-0.2**
LIT				S	**Sg**	**02 38 44.5**	**-0.1**
LIT	**Litokhoron**	**1.16**	**267**	P	**Pb**	**02 38 29.1**	**0.0**
LIT				S	**Sg**	**02 38 44.5**	**-0.1**
NVR	**Nevrokopi**	**1.19**	**355**	P	**Pn**	**02 38 29.2**	**-0.2**
NVR	**Nevrokopi**	**1.19**	**355**	P	**Pn**	**02 38 29.0**	**-0.4**
NVR				S	**Sb**	**02 38 43.7**	**-1.1**
NVR	**Nevrokopi**	**1.19**	**355**	P	**Pn**	**02 38 29.1**	**-0.4**
NVR				S	**Sb**	**02 38 43.7**	**-1.1**
SMTH	**Samothraki Isl**	**1.20**	**75**	P	**Pn**	**02 38 27.9**	**-1.7**
SMTH				S	**Sg**	**02 38 47.5**	**+1.6**
SMTH				AML	AML	02 38 48.0	
	comp=E,695μm,0.3s						
SMTH				AML	AML	02 38 49.3	
	comp=N,727μm,0.4s						
SMTH	**Samothraki Isl**	**1.20**	**75**	P	**Pn**	**02 38 28.6**	**-1.1**
SMTH				S	**Sb**	**02 38 44.9**	**-0.3**
SMTH	**Samothraki Isl**	**1.20**	**75**	P	**Pn**	**02 38 28.7**	**-0.9**
SMTH				S	**Sg**	**02 38 46.7**	**+0.8**
KNT	**Kendrikon**	**1.30**	**320**	PN	**Pb**	**02 38 31.1**	**-0.3**
KNT				SN	**Sg**	**02 38 49.7**	**+0.6**
KNT	**Kendrikon**	**1.30**	**320**	P	**Pg**	**02 38 32.7**	**+0.6**
KNT				S	**Sn**	**02 38 48.1**	**-0.2**
KNT				AML	AML	02 38 50.7	
	comp=E,953μm,0.4s						
KNT				AML	AML	02 38 52.5	
	comp=N,1252μm,0.3s						
KNT	**Kendrikon**	**1.30**	**320**	P	**Pb**	**02 38 31.1**	**-0.3**
KNT	**Kendrikon**	**1.30**	**320**	P	**Pb**	**02 38 31.1**	**-0.3**
KNT				S	**Sn**	**02 38 48.5**	**+0.2**
KNT				*e*Sn	**Sg**	**02 38 49.7**	**+0.6**
SKY	**Skiros Island**	**1.35**	**162**	P	**Pn**	**02 38 31.8**	**+0.2**
SKY	**Skiros Island**	**1.35**	**162**	P	**Pn**	**02 38 31.8**	**+0.2**
SKY	**Skiros Island**	**1.35**	**162**	P	**Pn**	**02 38 31.9**	**+0.2**
SMIA	**Simia**	**1.43**	**206**	P	**Pb**	**02 38 33.3**	**-0.2**
SMIA				S	**Sb**	**02 38 51.7**	**+0.1**
SMIA	**Simia**	**1.43**	**206**	P	**Pb**	**02 38 33.3**	**-0.2**
SMIA				S	**Sb**	**02 38 51.7**	**+0.1**
MMB	**Musomiste**	**1.44**	**352**	*i* P	**Pn**	**02 38 32.2**	**-0.7**
GADA	**Gvkgeada**	**1.45**	**88**	PN	**Pn**	**02 38 32.6**	**-0.4**
GADA				SN	**Sb**	**02 38 52.2**	**-0.1**
GADA	**Gvkgeada**	**1.45**	**88**	*e*Pn	**Pn**	**02 38 32.6**	**-0.4**
GRG	**Griva**	**1.46**	**303**	PN	**Pb**	**02 38 34.3**	**+0.3**
GRG	**Griva**	**1.46**	**303**	P	**Pg**	**02 38 34.7**	**-0.3**
GRG				S	**Sg**	**02 38 53.4**	**-0.5**
GRG				AML	AML	02 38 59.3	
	comp=N,634μm,0.7s						
GRG				AML	AML	02 39 01.8	
	comp=E,842μm,0.6s						
GRG	**Griva**	**1.46**	**303**	P	**Pb**	**02 38 34.0**	**0.0**
GRG				S	**Sb**	**02 38 53.1**	**+0.6**
RDO	**Rodhopi**	**1.52**	**49**	PN	**Pn**	**02 38 33.5**	**-0.4**
RDO	**Rodhopi**	**1.52**	**49**	P	**Pn**	**02 38 33.1**	**-0.9**
RDO				S	**Sn**	**02 38 53.4**	**-0.2**
RDO				AML	AML	02 38 58.9	
	comp=E,690μm,0.3s						
RDO				AML	AML	02 39 01.8	
	comp=N,873μm,0.2s						
RDO	**Rodhopi**	**1.52**	**49**	P	**Pn**	**02 38 33.5**	**-0.4**
RDO	**Rodhopi**	**1.52**	**49**	P	**Pn**	**02 38 33.6**	**-0.4**
RDO				S	**Sb**	**02 38 53.7**	**-0.6**
VAY	**Valandovo**	**1.59**	**317**	*e*Pg	**Pg**	**02 38 37.8**	**+0.3**
VAY				*e*Sg	**Sg**	**02 38 59.1**	**+0.9**
VAY	**Valandovo**	**1.59**	**317**	*i* Pn	**Pg**	**02 38 36.9**	**-0.6**
VAY				*i* Sn	**Sg**	**02 38 59.0**	**+0.9**
VAY	**Valandovo**	**1.59**	**317**	*e*Pg	**Pg**	**02 38 37.8**	**+0.3**
VAY				*e*Sg	**Sg**	**02 38 59.1**	**+0.9**
RZN	**Rozhen**	**1.61**	**19**	*i* P	**Pn**	**02 38 35.5**	**+0.1**
THL	**Klokotos Trika**	**1.65**	**249**	P	**Pn**	**02 38 35.9**	**+0.2**
THL				S	**Sn**	**02 38 56.2**	**-0.5**
THL				AML	AML	02 39 03.8	
	comp=E,208μm,0.8s						
THL				AML	AML	02 39 04.1	
	comp=N,276μm,0.7s						
THL	**Klokotos Trika**	**1.65**	**249**	P	**Pn**	**02 38 36.0**	**+0.3**
THL				S	**Sn**	**02 38 56.9**	**+0.2**
THL	**Klokotos Trika**	**1.65**	**249**	P	**Pn**	**02 38 36.0**	**+0.3**
THL				S	**Sn**	**02 38 57.0**	**+0.2**
LKR	**Lokris**	**1.70**	**208**	P	**Pn**	**02 38 36.6**	**+0.1**
LKR	**Lokris**	**1.70**	**208**	P	**Pn**	**02 38 36.6**	**+0.1**
ALN	**Alexandroupoli**	**1.72**	**64**	PN	**Pn**	**02 38 36.3**	**-0.4**
ALN	**Alexandroupoli**	**1.72**	**64**	P	**Pn**	**02 38 35.9**	**-0.8**
ALN				S	**Sn**	**02 38 58.0**	**-0.5**
ALN				AML	AML	02 39 04.2	
	comp=E,500μm,0.7s						
ALN				AML	AML	02 39 07.0	
	comp=N,386μm,0.5s						
ALN	**Alexandroupoli**	**1.72**	**64**	P	**Pn**	**02 38 36.0**	**-0.7**
ALN				S	**Sn**	**02 38 57.8**	**-0.7**
ALN	**Alexandroupoli**	**1.72**	**64**	P	**Pn**	**02 38 36.4**	**-0.3**
ALN				S	**Sn**	**02 38 58.4**	**-0.1**
KZN	**Kozani**	**1.72**	**275**	P	**Pn**	**02 38 37.6**	**+0.8**
KZN	**Kozani**	**1.72**	**275**	P	**Pn**	**02 38 37.3**	**+0.5**
SIGR	**SIGRI**	**1.72**	**123**	PN	**Pn**	**02 38 37.2**	**+0.5**
SIGR	**SIGRI**	**1.72**	**123**	*e*Pn	**Pn**	**02 38 37.2**	**+0.5**
AGG	**Agios Georgios**	**1.73**	**229**	PN	**Pn**	**02 38 37.4**	**+0.5**
AGG	**Agios Georgios**	**1.73**	**229**	P	**Pn**	**02 38 37.2**	**+0.4**
AGG	**Agios Georgios**	**1.73**	**229**	P	**Pn**	**02 38 37.2**	**+0.4**
AGG				S	**Sn**	**02 38 59.4**	**+0.6**
AGG	**Agios Georgios**	**1.73**	**229**	P	**Pn**	**02 38 37.3**	**+0.4**
AGG				S	**Sn**	**02 38 59.4**	**+0.6**
ENEZ	**Enez**	**1.73**	**70**	PN	**Pn**	**02 38 36.8**	**-0.1**
EREA	**Eretria**	**1.75**	**182**	P	**Pn**	**02 38 37.4**	**+0.4**
EREA	**Eretria**	**1.75**	**182**	P	**Pn**	**02 38 37.3**	**+0.2**
EREA	**Eretria**	**1.75**	**182**	P	**Pn**	**02 38 37.5**	**+0.4**
EZN	**Ezine**	**1.81**	**100**	PN	**Pb**	**02 38 38.9**	**-1.2**
EZN	**Ezine**	**1.81**	**100**	*e*Pn	**Pb**	**02 38 38.9**	**-1.2**
KDZ	**Kurdzhali**	**1.83**	**35**	PN	**Pn**	**02 38 37.2**	**-1.0**
KDZ	**Kurdzhali**	**1.83**	**35**	*i* P	**Pb**	**02 38 40.9**	**+0.5**
KDZ	**Kurdzhali**	**1.83**	**35**	*e*Pn	**Pn**	**02 38 37.2**	**-1.0**
KKB	**Krupnik**	**1.84**	**338**	*i* P	**Pn**	**02 38 38.5**	**+0.1**
GELI	**Tayfur-Gelibol**	**1.90**	**82**	PN	**Pn**	**02 38 39.1**	**-0.1**
ERIK	**Erikli-Kesan**	**1.98**	**74**	PN	**Pn**	**02 38 39.9**	**-0.4**
PLD	**Plovdiv**	**2.01**	**15**	PN	**Pn**	**02 38 41.6**	**+0.9**
PLD	**Plovdiv**	**2.01**	**15**	*i* P	**Pn**	**02 38 39.1**	**-1.6**
PLD	**Plovdiv**	**2.01**	**15**	*e*Pn	**Pb**	**02 38 41.6**	**+0.9**
VIL2	**Platees**	**2.04**	**197**	P	**Pn**	**02 38 41.4**	**+0.3**
VILL	**Villia**	**2.07**	**195**	P	**Pn**	**02 38 41.8**	**+0.2**
VILL	**Villia**	**2.07**	**195**	P	**Pn**	**02 38 41.8**	**+0.2**
DION	**Dionisos Attik**	**2.09**	**182**	P	**Pn**	**02 38 41.8**	**0.0**
DION				S	**Sn**	**02 39 06.4**	**-1.3**
DION				AML	AML	02 39 08.8	
	comp=E,221μm,0.4s						
DION				AML	AML	02 39 19.4	
	comp=N,198μm,0.7s						
DION	**Dionisos Attik**	**2.09**	**182**	P	**Pn**	**02 38 42.1**	**+0.3**
DION				S	**Sn**	**02 39 07.4**	**-0.3**
PROD	**Prodromos**	**2.09**	**205**	P	**Pn**	**02 38 41.6**	**-0.2**
PROD	**Prodromos**	**2.09**	**205**	P	**Pn**	**02 38 42.0**	**+0.2**
PROD	**Prodromos**	**2.09**	**205**	P	**Pn**	**02 38 42.0**	**+0.2**
DSF	**Desfina**	**2.10**	**214**	P	**Pn**	**02 38 42.0**	**+0.1**
DSF	**Desfina**	**2.10**	**214**	P	**Pn**	**02 38 42.0**	**+0.1**
FNA	**Florina**	**2.10**	**288**	PN	**Pn**	**02 38 43.1**	**+1.1**
FNA	**Florina**	**2.10**	**288**	*e*Pn	**Pn**	**02 38 43.1**	**+1.1**
FNA				*e*Sn	**Sn**	**02 39 09.1**	**+1.1**
FNA	**Florina**	**2.10**	**288**	P	**Pb**	**02 38 43.6**	**-1.4**
FNA	**Florina**	**2.10**	**288**	*e*Pn	**Pn**	**02 38 43.1**	**+1.1**
FNA				*e*Sn	**Sn**	**02 39 09.1**	**+1.1**
LPK	**Lapseki**	**2.12**	**84**	PN	**Pn**	**02 38 43.0**	**+0.8**
KESN	**Edirne-Kesan**	**2.14**	**71**	*i* P	**Pn**	**02 38 42.2**	**-0.7**
KESN	**Edirne-Kesan**	**2.14**	**71**	P	**Pn**	**02 38 42.2**	**-0.7**
KARY	**Karystos**	**2.16**	**171**	P	**Pn**	**02 38 42.8**	**+0.1**
KARY	**Karystos**	**2.16**	**171**	P	**Pn**	**02 38 43.1**	**+0.4**
DIM	**Dimitrovgrad**	**2.21**	**31**	*i* P	**Pn**	**02 38 43.3**	**-0.1**
BIA	**Bitola**	**2.21**	**293**	*i* Pn	**Pb**	**02 38 45.3**	**-1.6**
ANX	**Ano Chora**	**2.25**	**226**	P	**Pn**	**02 38 45.0**	**+0.8**
ANX	**Ano Chora**	**2.25**	**226**	P	**Pn**	**02 38 45.0**	**+0.8**
LTK	**Loutraki**	**2.29**	**201**	P	**Pn**	**02 38 44.7**	**+0.1**
LTK	**Loutraki**	**2.29**	**201**	P	**Pn**	**02 38 44.7**	**+0.1**
KALE	**Kalithea**	**2.29**	**220**	P	**Pn**	**02 38 45.5**	**+0.8**
KALE				S	**Sb**	**02 39 15.1**	**-1.4**
KALE	**Kalithea**	**2.29**	**220**	P	**Pn**	**02 38 45.3**	**+0.7**
KALE	**Kalithea**	**2.29**	**220**	P	**Pn**	**02 38 45.4**	**+0.8**
KALE				S	**Sn**	**02 39 14.3**	**+1.6**
SERG	**Sergoula**	**2.31**	**221**	P	**Pn**	**02 38 45.5**	**+0.6**
SERG	**Sergoula**	**2.31**	**221**	P	**Pn**	**02 38 45.5**	**+0.6**
VLY	**Voula,Athens**	**2.32**	**184**	P	**Pn**	**02 38 45.2**	**+0.3**
VLY	**Voula,Athens**	**2.32**	**184**	P	**Pn**	**02 38 45.2**	**+0.3**
THAL	**Thalero**	**2.37**	**207**	P	**Pn**	**02 38 46.4**	**+0.8**
THAL	**Thalero**	**2.37**	**207**	P	**Pn**	**02 38 46.4**	**+0.8**
PGB	**Panagyurishte**	**2.38**	**3**	*i* P	**Pb**	**02 38 51.1**	**+1.2**
CHOS	**Chios island**	**2.38**	**138**	PN	**Pn**	**02 38 46.8**	**+0.8**
CHOS	**Chios island**	**2.38**	**138**	P	**Pn**	**02 38 46.9**	**+1.0**
CHOS	**Chios island**	**2.38**	**138**	P	**Pn**	**02 38 46.8**	**+0.8**
CHOS	**Chios island**	**2.38**	**138**	P	**Pn**	**02 38 46.7**	**+0.8**
RKY	**Sarkoy-Tekirda**	**2.48**	**77**	PN	**Pn**	**02 38 47.1**	**-0.1**
DKL	**Dikili**	**2.49**	**115**	PN	**Pn**	**02 38 48.1**	**+0.8**
DKL	**Dikili**	**2.49**	**115**	*e*Pn	**Pn**	**02 38 48.1**	**+0.8**
VTS	**Vitosha**	**2.50**	**346**	*e*Pn	**Pn**	**02 38 48.7**	**+1.2**
VTS				*e*Sn	**Sn**	**02 39 18.8**	**+0.8**
VTS	**Vitosha**	**2.50**	**346**	⇑*i* P	**Pn**	**02 38 48.3**	**+0.8**
VTS	**Vitosha**	**2.50**	**346**	*i* P	**Pn**	**02 38 47.5**	**0.0**
VTS	**Vitosha**	**2.50**	**346**	⇑*i* P	**Pn**	**02 38 48.3**	**+0.8**
VTS	**Vitosha**	**2.50**	**346**	*e*Pn	**Pn**	**02 38 48.7**	**+1.2**
VTS				*e*Sn	**Sn**	**02 39 18.8**	**+0

GCMT ***04*** *03:15:24.8±0.1, 5.42N×82.60W, h18km, MW6.3/146, Moment Tensor Solution. s136,c320; s146,c575; Duration: 3s4 Moment tensor: Scale 1018Nm; Mrr-0.59±.02; Mθθ3.25±.02; Mφφ-2.66±.02; Mrθ0.61±.04; Mrφ1.46±.02; Mθφ0.41±.05; Best double couple: M03.36500×1018 NP1:φs32.00000°, δ88.00000°, λ169.00000°. NP2:φs122.00000°, δ79.00000°, λ2.00000°. Principal axes: T 3.7000, Plg9.0000°, Azm347.0000°; N -0.6730, Plg79.0000°, Azm202.0000°; P -3.0290, Plg6.0000°, Azm77.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

NEIC ***04*** *03:15:24.8±0.1, 5.51N×82.56W, h7km, mb5.8/298, ME6.8, MS5.8/299, MW6.1, MW6.3 Error ellipse: s-maj=4.1km s-min=2.7km az=215.0, Moment Tensor Solution. s65 Moment tensor: Scale 1018Nm; Mrr-0.44; Mθθ1.60; Mφφ-1.17; Mrθ0.30; Mrφ0.65; Mθφ0.20; Best double couple: M01.60000×1018 NP1:φs123.00000°, δ78.00000°, λ0.00000°. NP2:φs33.00000°, δ90.00000°, λ168.00000°. Principal axes: T 1.8000, Plg9.0000°, Azm347.0000°; N -0.4700, Plg78.0000°, Azm212.0000°; P -1.3300, Plg9.0000°, Azm78.0000°; Broadband fault plane solution: P waves. NP1:φs344.00000°, δ85.00000°, λ-10.00000°. NP2:φs75.00000°, δ80.00000°, λ-175.00000°. Principal axes: T Plg4.0000°, Azm30.0000°; N Plg0.0000°, Azm0.0000°; P Plg11.0000°, Azm299.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt at Golfito, Costa Rica.

NEIC ***04*** *03:15:25.0±0.0, 5.31N×82.47W, h11km, Moment Tensor Solution. s14 Moment tensor: Scale 1018Nm; Mrr-0.01; Mθθ2.77; Mφφ-2.76; Mrθ0.81; Mθφ1.49; Mφr-0.11; Best double couple: M03.20000×1018 NP1:φs121.00000°, δ85.00000°, λ13.00000°. NP2:φs30.00000°, δ77.00000°, λ175.00000°. Principal axes: T 3.3200, Plg12.0000°, Azm346.0000°; N -0.1500, Plg75.0000°, Azm141.0000°; P -3.1700, Plg5.0000°, Azm255.0000°;*

ISC 04 03:15:24.6±0.6, 5.45N±0.03×82.56W±0.03, h9km±3km, n2037, σ1993/1933, mb5.8/527, MS5.9/655, 75C-42D, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAPC	**Malpelo**	**1.73**	**146**	*eP*	Pn	03 15 48.0	-6.8
PTJ1	**Puerto Jim~ne**	**3.15**	**347**	⇑*iP*	**Pn**	**03 16 10.3**	**-4.1**
PTJ1				*eS*	**Sn**	**03 16 49.1**	**-3.0**
ACR	**Cerro Adams**	**3.24**	**349**	⇑*eP*	**Pn**	**03 16 10.9**	**-4.7**
BRU2	**Volcan**	**3.32**	**358**	*eP*	Pn	03 16 11.0	-5.9
BRU2				⇑*iP*	Pb	03 16 13.5	-10
EDPN	**Palmar Norte**	**3.60**	**346**	⇑*iP*	**Pn**	**03 16 17.1**	**-3.5**
EDBA	**Buenos Aires**	**3.76**	**349**	⇑*iP*	**Pn**	**03 16 19.7**	**-3.1**
EDDO	**Dominical**	**3.99**	**341**	⇑*iP*	**Pn**	**03 16 22.2**	**-3.7**
BUS	**Buena Vista**	**4.25**	**344**	⇑*iP*	**Pn**	**03 16 26.9**	**-3.0**
QCR1	**Quepos**	**4.26**	**338**	⇑*iP*	**Pn**	**03 16 25.8**	**-3.8**
QCR1				*eS*	**Sn**	**03 17 13.9**	**-5.5**
URSC	**Urasca**	**4.52**	**345**	⇑*iP*	**Pn**	**03 16 30.7**	**-2.7**
BCIP	**Isla Barro Col**	**4.58**	**36**	*ePn*	**Pn**	**03 16 33.7**	**-0.3**
BCIP				*eSn*	**Sn**	**03 17 29.6**	**+2.3**
BCIP	**Isla Barro Col**	**4.58**	**36**	*eP*	**Pn**	**03 16 32.7**	**-1.3**
BCIP				*eS*	**Sn**	**03 17 27.1**	**-0.2**
BCIP	**Isla Barro Col**	**4.58**	**36**	*eP*	**Pn**	**03 16 32.8**	**-1.2**
VTR0	**Volcan Turrial**	**4.69**	**345**	⇑*iP*	**Pn**	**03 16 33.6**	**-2.4**
CVTR	**Volcan Turrial**	**4.69**	**345**	⇑*iP*	**Pn**	**03 16 33.5**	**-2.5**
SJS	**Escuela Geolog**	**4.70**	**342**	⇑*iP*	**Pn**	**03 16 33.3**	**-2.5**
HDC	**Heredia**	**4.78**	**341**	*ePn*	**Pn**	**03 16 34.4**	**-2.5**
HDC				*eSn*	**Sn**	**03 17 30.1**	**-2.3**
HDC	**Heredia**	**4.78**	**341**	⇑*iP*	**Pn**	**03 16 34.4**	**-2.5**
CGA2	**Cerro Gallo 2**	**4.91**	**338**	⇑*iP*	**Pn**	**03 16 35.5**	**-3.3**
SRA1	**San Ram~‡n**	**4.98**	**338**	⇑*iP*	**Pn**	**03 16 36.3**	**-3.4**
GRGC	**Isla de Gorgon**	**5.01**	**119**	*eP*	**Pn**	**03 16 37.6**	**-2.4**
TUMC	**Tumaco**	**5.26**	**133**	*ePn*	**Pn**	**03 16 44.8**	**+1.5**
TUMC	**Tumaco**	**5.26**	**133**	*eP*	**Pn**	**03 16 41.3**	**-2.1**
JTS	**JuntasAbangare**	**5.36**	**334**	Pn	**Pn**	**03 16 41.5**	**-3.3**
	336nm,0.3s,baz=212,slow=8.6,SNR=416						
JTS				Sn	**Sn**	**03 17 42.5**	**-4.2**
	199nm,0.3s,baz=297,slow=22,SNR=6.4						
JTS	**JuntasAbangare**	**5.36**	**334**	⇑*iP*	**Pn**	**03 16 41.5**	**-3.3**
JTS				*eS*	**Sn**	**03 17 44.4**	**-2.3**
MALC	**Bahia Malaga**	**5.40**	**105**	*eP*	**Pn**	**03 16 45.4**	**+0.1**
VCR	**Vista de Mar**	**5.55**	**327**	⇑*iP*	**Pn**	**03 16 44.0**	**-3.6**
AMAS	**Alto Masis**	**5.66**	**335**	⇑*eP*	**Pn**	**03 16 46.3**	**-2.8**
ACAL	**Aguas Claras**	**5.70**	**335**	⇑*eP*	**Pn**	**03 16 47.2**	**-2.3**
PTEN	**Parque Tenorio**	**5.75**	**336**	⇑*eP*	**Pn**	**03 16 48.7**	**-1.6**
CUI	**Cuipilapa**	**5.78**	**334**	⇑*iP*	**Pn**	**03 16 47.8**	**-2.8**
LIM1	**Limonal**	**5.85**	**333**	⇑*eP*	**Pn**	**03 16 49.1**	**-2.5**
MESS	**Mesas**	**5.87**	**334**	⇑*iP*	**Pn**	**03 16 49.0**	**-2.8**
NY14	**Universidad de**	**5.94**	**331**	*eP*	**Pn**	**03 16 51.0**	**-1.7**
GPS2	**Hotel Rinc~‡n**	**5.95**	**333**	⇑*iP*	**Pn**	**03 16 50.1**	**-2.9**
GPS3	**Bodega del ICE**	**5.96**	**332**	*eP*	**Pn**	**03 16 50.2**	**-2.8**
GPS1	**Guardaparques**	**5.97**	**333**	*eP*	**Pn**	**03 16 50.6**	**-2.6**
BUEV	**Buena Vista**	**6.01**	**332**	⇑*eP*	**Pn**	**03 16 51.0**	**-2.8**
GBS3	**Finca Las Im~¡**	**6.02**	**332**	*eP*	**Pn**	**03 16 51.5**	**-2.4**
BUAI	**Buenos Aires**	**6.05**	**333**	*eP*	**Pn**	**03 16 51.7**	**-2.6**
CAPC	**Capurgana**	**6.06**	**58**	*eP*	**Pn**	**03 16 54.9**	**+0.4**
HORQ	**Saladito**	**6.24**	**108**	*eP*	**Pn**	**03 16 56.5**	**-0.5**
PLMC	**San Jos~' del**	**6.28**	**95**	*eP*	**Pn**	**03 16 56.7**	**-0.8**
CRZ1	**La Cruz**	**6.36**	**332**	*eP*	**Pn**	**03 16 56.1**	**-2.4**
YOTC	**Yotoco, Valle**	**6.37**	**103**	*eP*	**Pn**	**03 16 58.1**	**-0.6**
DBBC	**Dabeiba**	**6.50**	**76**	*eP*	**Pn**	**03 17 02.2**	**+1.6**
OTAV	**Otavalo**	**6.61**	**141**	*ePn*	**Pn**	**03 17 00.4**	**-2.0**
OTAV				*eSn*	Sn	03 18 09.2	-8.9
OTAV	**Otavalo**	**6.61**	**141**	*eP*	**Pn**	**03 17 00.5**	**-1.9**
CONN	**Concepcion**	**6.79**	**334**	*eP*	**Pn**	**03 17 04.0**	**-0.4**
CRUC	**La Cruz**	**6.80**	**124**	*eP*	**Pn**	**03 17 04.7**	**-0.2**
ESPN	**Las Esperanzas**	**6.92**	**346**	*eP*	**Pn**	**03 17 03.8**	**-2.4**
HELC	**Santa Helena**	**7.04**	**84**	*ePn*	**Pn**	**03 17 08.2**	**0.0**
HELC	**Santa Helena**	**7.04**	**84**	*eP*	**Pn**	**03 17 07.5**	**-0.7**
MGAN	**Managua**	**7.58**	**332**	*eP*	**Pn**	**03 17 14.7**	**-0.7**
MGAN				*eS*	**Sn**	**03 18 38.6**	**-2.9**
BOAB	**BOACO BROADBAN**	**7.60**	**336**	*eP*	**Pn**	**03 17 14.9**	**-0.6**
MOTC	**Monteria, Cord**	**7.60**	**64**	*eP*	**Pn**	**03 17 17.5**	**+1.9**
MOTC				*eP*	**Pn**	**03 17 18.2**	**+2.6**
BETC	**Betania**	**7.62**	**111**	*eP*	**Pn**	**03 17 18.2**	**+2.4**
XAVN	**Gruta Xavier**	**7.62**	**331**	*eP*	**Pn**	**03 17 15.8**	**-0.1**
NORC	**Norcasia**	**7.66**	**89**	*eP*	**Pn**	**03 17 18.5**	**+2.0**
COPN	**Copaltepe**	**7.78**	**330**	*eP*	**Pn**	**03 17 17.9**	**-0.2**
COPN				*eS*	**Sn**	**03 18 42.0**	**-4.3**
COPN				AML	AML	03 18 46.1	
	comp=Z,921nm,0.6s						
PRAC	**Prado**	**7.84**	**102**	*ePn*	**Pn**	**03 17 19.5**	**+0.6**
PRAC				*eSn*	**Sn**	**03 18 47.0**	**-1.0**
PRAC	**Prado**	**7.84**	**102**	*eP*	**Pn**	**03 17 20.1**	**+1.1**
FLOC	**Florencia**	**7.89**	**119**	*eP*	**Pn**	**03 17 21.7**	**+2.0**
FLOC				*eP*	**Pn**	**03 17 22.0**	**+2.3**
ZARC	**Zaragoza, Cauc**	**7.92**	**75**	*eP*	**Pn**	**03 17 21.2**	**+1.2**
MOMN	**Momotombo**	**7.95**	**331**	*eP*	**Pn**	**03 17 19.6**	**-0.9**
PRVC	**Isla de Provid**	**7.96**	**8**	*eP*	**Pn**	**03 17 17.1**	**-3.5**
CNGN	**Cerro Negro**	**8.11**	**330**	*eP*	**Pn**	**03 17 21.9**	**-0.7**
BRAN	**Las Pilas**	**8.13**	**333**	*eP*	Pn	03 17 16.0	-6.9
BRAN				*eS*	Sn	03 18 41.1	-14
BRAN				AML	AML	03 18 46.5	
	comp=N,4μm,0.6s						
MATN	**Matagalpa**	**8.14**	**336**	*eP*	**Pn**	**03 17 21.3**	**-1.8**
ROSC	**El Rosal**	**8.23**	**94**	Pn	**Pn**	**03 17 27.7**	**+3.1**
	comp=N,17nm,0.3s,baz=287,slow=7.7,SNR=112						
ROSC				LR	LR	03 20 35.5	
	comp=N,102μm,20.9s,baz=320,slow=38						
TELN	**Telica**	**8.26**	**330**	*eP*	**Pn**	**03 17 25.4**	**+0.6**
ESTN	**Estel**	**8.48**	**334**	*eP*	**Pn**	**03 17 27.4**	**-0.3**
SJCC	**San Jacinto, C**	**8.55**	**58**	*eP*	**Pn**	**03 17 30.1**	**+1.5**
CHIC	**Chingaza**	**8.84**	**95**	*eP*	**Pn**	**03 17 35.5**	**+2.6**
CNCH	**Conchagua**	**9.35**	**327**	*eP*	**Pn**	**03 17 37.9**	**-1.9**
BARC	**Barichara**	**9.40**	**83**	*eP*	**Pn**	**03 17 42.6**	**+2.1**
OCAC	**Ocana**	**9.59**	**73**	*eP*	**Pn**	**03 17 44.4**	**+1.4**
TGUH	**Tegucigalpa,Un**	**9.73**	**332**	*ePn*	**Pn**	**03 17 43.0**	**-1.8**
TGUH	**Tegucigalpa,Un**	**9.73**	**332**	*eP*	**Pn**	**03 17 45.0**	**+0.2**
PAMC	**Pamplona, Colo**	**9.98**	**79**	*eP*	**Pn**	**03 17 51.2**	**+2.5**
UESV	**Ojushtada**	**9.99**	**323**	IAML		03 17 56.5	
	comp=Z,545nm,0.3s						
CODC	**Agust~›n Codaz**	**10.07**	**63**	*eP*	**Pn**	**03 17 51.2**	**+1.7**
CODC				*eP*		03 17 51.3	
LFRS	**El Faro**	**10.34**	**322**	*eP*	**Pn**	**03 17 54.6**	**+1.3**
LFRS				*eS*	**Sn**	**03 19 44.9**	**-4.6**
UEES	**San Salvador**	**10.53**	**322**	IAML		03 18 07.8	
	comp=Z,611nm,0.5s						
APG	**El Apazote**	**12.27**	**321**	Pn	**Pn**	**03 18 19.4**	**-0.3**
	comp=Z,7.3nm,0.3s,baz=121,slow=12,SNR=47						
APG				Sn	**Sn**	**03 20 36.9**	**+0.1**
	comp=Z,1.8nm,0.3s,baz=323,slow=20,SNR=2.4						
SDV	**Santo Domingo**	**12.32**	**73**	Pn	**Pn**	**03 18 21.4**	**+1.0**
	comp=Z,12nm,0.3s,baz=240,slow=7.3,SNR=332						
SDV				Sn	**Sn**	**03 20 35.2**	**-2.9**
	comp=Z,7.4nm,0.3s,baz=5.0,slow=17,SNR=2.3						
SDV				LR	LR	03 23 09.1	
	comp=Z,233μm,19.2s,baz=268,slow=38						
SDV	**Santo Domingo**	**12.32**	**73**	*ePn*	**Pn**	**03 18 21.8**	**+1.4**
SDV				*eSn*	**Sn**	**03 20 35.2**	**-2.9**
SDV	**Santo Domingo**	**12.32**	**73**	*eP*	**Pn**	**03 18 21.9**	**+1.4**
ATAH	**Atahualpa**	**13.18**	**162**	Pn	**Pn**	**03 18 35.1**	**+2.8**
	comp=Z,3.2nm,0.3s,baz=345,slow=12,SNR=69						
ATAH				LR	LR	03 23 17.1	
	comp=Z,284μm,20.8s,baz=349,slow=36						
MTDJ	**Mount Denham**	**13.62**	**21**	*ePn*	**Pn**	**03 18 34.8**	**-3.3**
MTDJ	**Mount Denham**	**13.62**	**21**	*eP*	**Pn**	**03 18 39.8**	**+1.8**
FSCY	**Frank Sound, G**	**13.84**	**5**	*ePn*	**Pn**	**03 18 43.8**	**+2.7**
WBCY	**West Bay, Gran**	**13.89**	**5**	*ePn*	**Pn**	**03 18 44.5**	**+2.8**
CCIG	**Comitan**	**14.28**	**320**	*ePn*	**Pn**	**03 18 46.0**	**-1.3**
LCCY	**Blossom Villag**	**14.34**	**9**	*ePn*	**Pn**	**03 18 49.6**	**+1.8**
CBCY	**The Bluff, Cay**	**14.46**	**11**	*ePn*	**Pn**	**03 18 51.0**	**+1.5**
LGNH	**LØogne**	**16.22**	**36**	*ePn*	**P**	**03 19 14.7**	**-1.2**
	comp=Z,2μm,1.5s						
CMIG	**Matias Romero**	**16.71**	**315**	Pn	**Pn**	**03 19 18.8**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=123,slow=9.1,SNR=35						
CMIG				Sn	**Sn**	**03 22 26.4**	**+1.4**
	comp=Z,0.7nm,0.3s,baz=323,slow=20,SNR=3.6						
CMIG				LR	LR	03 24 37.6	
	comp=Z,26μm,21.5s,baz=136,slow=33						
MYIG	**MØrida**	**16.92**	**336**	*ePn*	**Pn**	**03 19 21.3**	**-0.3**
	comp=Z,3μm,1.9s						
SDDR	**Presa de Saban**	**17.37**	**38**	*ePn*	**P**	**03 19 28.8**	**+0.1**
	comp=Z,753nm,1.1s						
SDD	**Santo Domingo**	**17.88**	**43**	*ePn*	**Pn**	**03 19 31.0**	**-2.7**
	comp=Z,2μm,1.6s						
NNA	**Nana**	**18.23**	**162**	P	**Pn**	**03 19 38.2**	**+0.1**
	comp=Z,5.7nm,0.3s,baz=332,slow=9.5,SNR=72						
NNA				LR	LR	03 26 24.5	
	comp=Z,46μm,21.7s,baz=334,slow=36						
NNA	**Nana**	**18.23**	**162**	*ePn*	**Pn**	**03 19 36.3**	**-1.8**
	comp=Z,468nm,1.0s						
NNA	**Nana**	**18.23**	**162**	*i P*	**P**	**03 19 38.5**	**+0.2**
PCRV	**Puerto La Cruz**	**18.37**	**74**	P	**P**	**03 19 40.2**	**+0.4**
	comp=Z,4.0nm,0.3s,baz=247,slow=5.5,SNR=46						
PCRV				LR	LR	03 28 40.2	
	comp=Z,92μm,19.4s,baz=269,slow=43						
062Z	**Marathon**	**19.22**	**4**	P	**P**	**03 19 49.1**	**0.0**
	baz=185,SNR=8.5						
GRTK	**Grand Turk**	**19.43**	**34**	*eP*	**Pn**	**03 19 53.9**	**+1.4**
	comp=Z,2μm,1.7s						
LVIG	**Laguna Verde**	**19.57**	**318**	*eP*	**P**	**03 19 50.1**	**-2.8**
	comp=Z,217nm,1.1s						
CRPR	**Cabo Rojo, PR**	**19.59**	**49**	*eP*	**Pn**	**03 19 53.9**	**-0.6**
MPR	**Mayaguez**	**19.69**	**49**	*eP*	**P**	**03 19 54.9**	**+0.7**
	comp=Z,2μm,1.8s						
TLIG	**Tlapa**	**19.75**	**309**	*eP*	**Pn**	**03 19 57.2**	**+0.7**
	comp=Z,837nm,1.5s						
AGP	**Aguadilla**	**19.81**	**48**	*eP*	**Pn**	**03 19 57.7**	**+0.6**
	comp=Z,895nm,1.0s						
OBIP	**Obispado Ponce**	**19.99**	**50**	*eP*	**P**	**03 19 58.0**	**+0.4**
	comp=Z,935nm,1.2s						
AOPR	**Arecibo Observ**	**20.06**	**49**	*eP*	**P**	**03 19 58.6**	**+0.2**
	comp=Z,8μm,1.8s						
AOPR				*eS*	**S**	**03 23 40.9**	**-3.2**
061Z	**Ochoppi**	**20.36**	**4**	P	**P**	**03 20 01.7**	**+0.2**
	baz=185,SNR=12						
SJG	**San Juan**	**20.38**	**50**	P	**P**	**03 20 02.5**	**+0.7**
	comp=Z,464nm,0.9s,baz=230,slow=9.5,SNR=124						
SJG				LR	LR	03 28 31.1	
	comp=Z,47μm,20.2s,baz=226,slow=39						
SJG	**San Juan**	**20.38**	**50**	*eP*	**P**	**03 20 02.5**	**+0.7**
SJG				*eS*	**S**	**03 23 43.4**	**-6.9**
SJG	**San Juan**	**20.38**	**50**	*eP*	**P**	**03 20 02.5**	**+0.7**
SJG				*eS*	**S**	**03 23 43.4**	**-6.9**
SJG				pmax	pmax		
	comp=Z,8μm,1.8s						
HUMP	**Col San Antoni**	**20.63**	**51**	*eP*	**P**	**03 20 04.3**	**-0.2**
	comp=Z,7μm,1.9s						
HUMP				LR	LR		
	comp=Z,53μm,20.0s						
CBYP	**Canovanas**	**20.70**	**51**	*eP*	**P**	**03 20 05.2**	**-0.1**
	comp=Z,8μm,1.8s						
CBYP				LR	LR		
	comp=Z,60μm,20.0s						
059Z	**Ave Maria**	**20.80**	**3**	P	**P**	**03 20 06.6**	**+0.4**
	baz=183,SNR=46						
MTP	**Monte Pirata**	**20.84**	**51**	*eP*	**P**	**03 20 07.0**	**+0.3**
	comp=Z,8μm,2.0s						
MTP				LR	LR		
	comp=Z,49μm,18.0s						
060Z	**West Palm Beac**	**20.93**	**5**	P	**P**	**03 20 08.2**	**+0.6**
	baz=186,SNR=8.7						
CDVI	**St. Croix**	**21.26**	**53**	*eP*	**P**	**03 20 12.0**	**+0.7**
	comp=Z,2μm,1.1s						
UNM	**Universidad Na**	**21.27**	**312**	*eP*	**P**	**03 20 17.7**	**+6.0**
	comp=Z,312nm,1.4s						
UNM				LR	LR		
	comp=Z,13μm,21.0s						
UNM	**Universidad Na**	**21.27**	**312**	*eP*	**P**	**03 20 17.7**	**+6.0**
UNM				pmax	pmax		
	comp=Z,310nm,1.4s						
059A	**Moore Haven**	**21.44**	**3**	P	**P**	**03 20 13.1**	**0.0**
	baz=184,SNR=18						
STVI	**Saint Thomas**	**21.45**	**52**	*eP*	**P**	**03 20 12.5**	**-0.8**
	comp=Z,6μm,2.0s						
STVI				LR	LR		
	comp=Z,23μm,19.0s						
TPP	**Pointe-a-Pierr**	**21.46**	**76**	*eP*	**P**	**03 20 15.0**	**+1.5**
058A	**Arcadia**	**21.50**	**2**	P	**P**	**03 20 14.0**	**+0.2**
	baz=182,SNR=31						
060A	**Indiantown**	**21.57**	**5**	P	**P**	**03 20 14.9**	**+0.4**
	baz=186,SNR=7.8						
TRN	**Trinidad (W)**	**21.57**	**75**	*eP*	**P**	**03 20 18.6**	**+3.9**
GRGR	**Grenville**	**21.69**	**71**	*eP*	**P**	**03 20 14.7**	**-1.3**
	comp=Z,2μm,1.3s						
GRGR				LR	LR		
	comp=Z,88μm,22.0s						
GRGR	**Grenville**	**21.69**	**71**	*eP*	**P**	**03 20 15.6**	**-0.4**
TBH	**Brigand Hill**	**21.86**	**75**	*eP*	**P**	**03 20 17.2**	**-0.6**
959A	**Okeechobee**	**22.01**	**4**	P	**P**	**03 20 18.8**	**-0.4**
	baz=184,SNR=11						
958A	**Wauchula**	**22.03**	**2**	P	**P**	**03 20 19.2**	**-0.2**
	baz=182						
957A	**Wimauma**	**22.10**	**1**	P	**P**	**03 20 20.1**	**-0.1**
	baz=181,SNR=14						
ABVI	**Anegada Island**	**22.15**	**52**	*eP*	**P**	**03 20 20.6**	**-0.2**
	comp=Z,8μm,1.8s						
ABVI				LR	LR		
	comp=Z,38μm,21.0s						
FCV	**Fort Charlotte**	**22.37**	**68**	*eP*	**P**	**03 20 25.8**	**+2.5**
SVB	**Belmont**	**22.40**	**68**	*eP*	**P**	**03 20 22.6**	**-1.0**
SVB				LR	LR		
	comp=Z,38μm,19.0s						
SVB	**Belmont**	**22.40**	**68**	*eP*	**P**	**03 20 23.4**	**-0.2**
SABA	**Saba**	**22.43**	**56**	*eP*	**P**	**03 20 23.4**	**-0.5**
	comp=Z,3μm,1.7s						
SABA				LR	LR		
	comp=Z,55μm,21.0s						
SABA	**Saba**	**22.43**	**56**	*eP*	**P**	**03 20 23.1**	**-0.8**
SVV	**Soufriere Volc**	**22.45**	**68**	*eP*	**P**	**03 20 26.8**	**+2.6**
SVV	**Soufriere Volc**	**22.45**	**68**	*eP*	**P**	**03 20 27.1**	**+3.0**
SSV	**Crater Summit**	**22.47**	**68**	*eP*	**P**	**03 20 26.9**	**+2.4**
SVCV	**St. Vincent, C**	**22.50**	**68**	*eP*	**P**	**03 20 22.1**	**-2.6**
859A	**Kempfer Cattle**	**22.54**	**4**	P	**P**	**03 20 24.6**	**-0.3**
	baz=184,SNR=11						
TOSP	**Speyside**	**22.55**	**74**	*eP*	**P**	**03 20 23.4**	**-1.7**
DWPF	**Disney Wildern**	**22.56**	**3**	P	**P**	**03 20 24.7**	**-0.5**
	baz=183						
DWPF	**Disney Wildern**	**22.56**	**3**	*eP*	**P**	**03 20 25.1**	**0.0**
	baz=183,SNR=14						
DWPF				LR	LR		
	comp=Z,26μm,20.0s						
SEUS	**St. Eustatius**	**22.59**	**56**	*eP*	**P**	**03 20 26.4**	**+0.9**
	comp=Z,2μm,1.6s						
SEUS				LR	LR		
	comp=Z,51μm,22.0s						
SEUS	**St. Eustatius**	**22.59**	**56**	*eP*	**P**	**03 20 24.2**	**-1.3**
858A	**St. Cloud**	**22.67**	**3**	P	**P**	**03 20 25.8**	**-0.5**
	baz=183,SNR=16						
857A	**Zephyrhills**	**22.70**	**1**	P	**P**	**03 20 26.1**	**-0.5**
	baz=181,SNR=38						
857A				S	**S**	**03 24 37.4**	**+2.3**
	baz=181						
SLB	**Belfond**	**22.77**	**67**	*eP*	**P**	**03 20 30.1**	**+2.4**
SMRT	**St. Maarten**	**22.79**	**55**	*eP*	**P**	**03 20 26.9**	**-0.8**
	comp=Z,4μm,1.8s						
SMRT				LR	LR		
	comp=Z,36μm,22.0s						
SMRT	**St. Maarten**	**22.79**	**55**	*eP*	**P**	**03 20 26.3**	**-1.4**
MCLT	**Moule a Chique**	**22.83**	**67**	*eP*	**P**	**03 20 27.7**	**-0.4**
MLYT	**Lee's Yard**	**22.89**	**59**	*eP*	**P**	**03 20 28.5**	**-0.3**
PCM	**Pelee Case Pet**	**22.96**	**64**	*eP*	**P**	**03 20 29.6**	**0.0**
PCM	**Pelee Case Pet**	**22.96**	**64**	*eP*	**P**	**03 20 30.3**	**+0.7**
PML	**Morne Lenard**	**22.98**	**65**	*eP*	**P**	**03 20 29.4**	**-0.3**
BIM	**Bigot**	**22.98**	**65**	*eP*	**P**	**03 20 30.9**	**+1.1**
TBG	**Guadaloupe-3**	**22.98**	**62**	*eP*	**P**	**03 20 29.6**	**-0.1**
FDF	**Fort de France**	**22.99**	**65**	*eP*	**P**	**03 20 29.8**	**0.0**
	comp=Z,3μm,1.6s						
FDF				LR	LR		
	comp=Z,33μm,21.0s						
FDF	**Fort de France**	**22.99**	**65**	*eP*	**P**	**03 20 29.0**	**-0.9**
FDF	**Fort de France**	**22.99**	**65**	*eP*	**P**	**03 20 30.1**	**+0.2**
FDF	**Fort de France**	**22.99**	**65**	*eP*	**P**	**03 20 29.8**	**0.0**
FDF				pmax	pmax		
	comp=Z,3μm,1.6s						
FDF				MLR	MLR		
	comp=Z,33μm,21.0s						
MOIG	**Morelia**	**22.99**	**310**	*eP*	**P**	**03 20 31.4**	**+1.3**
	comp=Z,384nm,1.4s						
MOIG				LR	LR		
	comp=Z,28μm,19.0s						
CXM	**Morne La Croix**	**23.00**	**65**	*eP*	**P**	**03 20 30.6**	**+0.5**
BBL	**Barber's Block**	**23.01**	**63**	*eP*	**P**	**03 20 30.0**	**0.0**
TRMF	**Trois Ilets**	**23.01**	**65**	*eP*	**P**	**03 20 30.4**	**+0.4**
BAMF	**Morne Balai**	**23.02**	**65**	*eP*	**P**	**03 20 30.7**	**+0.5**
ZAM	**Aeronautique**	**23.04**	**65**	*eP*	**P**	**03 20 30.8**	**+0.5**
MDPO	**Dominica; Chan**	**23.04**	**62**	*eP*	**P**	**03 20 29.5**	**-0.8**
JRQG	**Juriquilla Cam**	**23.05**	**313**	*eP*	**P**	**03 20 33.2**	**+2.6**
	comp=Z,2μm,1.6s						
GDHS	**Morne Mazeau,**	**23.05**	**61**	*eP*	**P**	**03 20 31.1**	**+0.6**
	comp=Z,2μm,1.5s						
GDHS				LR	LR		
	comp=Z,60μm,20.0s						
LPMF	**Morne Lapointe**	**23.10**	**65**	*eP*	**P**	**03 20 31.4**	**+0.5**
MDVC	**Dominica, Viel**	**23.10**	**62**	*eP*	**P**	**03 20 32.1**	**+1.2**
DLPL	**La Plaine**	**23.13**	**63**	*eP*	**P**	**03 20 32.6**	**+1.4**
MVM	**Montagne Vaucl**	**23.16**	**65**	*eP*	**P**	**03 20 32.4**	**+0.9**
MGG	**Marie-Galante**	**23.30**	**62**	*eP*	**P**	**03 20 31.0**	**-1.9**
BPA	**Boggy Peak**	**23.32**	**59**	*eP*	**P**	**03 20 32.7**	**-0.5**
757A	**Oxford**	**23.37**	**1**	P	**P**	**03 20 33.1**	**-0.4**
	baz=181,SNR=22						
PTGA	**Pitinga**	**23.39**	**105**	P	**P**	**03 20 33.9**	**0.0**
	comp=Z,74nm,1.2s,baz=295,slow=11,SNR=31						
PTGA				LR	LR	03 29 44.4	
	comp=Z,64μm,18.0s,baz=285,slow=37						
PTGA	**Pitinga**	**23.39**	**105**	*eP*	**P**	**03 20 32.8**	**-1.1**
	comp=Z,407nm,1.4s						
758A	**Lake Helen**	**23.42**	**3**	P	**P**	**03 20 33.7**	**-0.3**
	baz=183,SNR=12						
ANWB	**Willy Bob**	**23.67**	**57**	*eP*	**P**	**03 20 35.0**	**-1.6**
	comp=Z,4μm,1.9s						
ANWB				*eS*	**S**	**03 24 47.8**	**-3.8**
ANWB				LR	LR		
	comp=Z,36μm,22.0s						
ANWB	**Willy Bob**	**23.67**	**57**	*eP*	**P**	**03 20 34.3**	**-2.3**
656A	**Willston**	**23.79**	**0**	P	**P**	**03 20 37

352A	Blakely	25.99	355	P	P	03 20 57.2	-0.5
	baz=175						
446A	Poplarville	26.01	347	P	P	03 20 57.9	-0.1
	baz=164						
543A	St. Martinvill	26.02	341	P	P	03 20 58.2	+0.1
	baz=159						
350A	Dozier	26.08	353	P	P	03 20 58.7	+0.2
	baz=172,SNR=23						
349A	Repton	26.13	351	P	P	03 20 59.3	+0.3
	baz=170,SNR=61						
445A	Amite	26.19	345	P	P	03 20 59.0	-0.5
	baz=162						
444A	Pine Grove	26.29	344	P	P	03 21 00.1	-0.3
	baz=161						
542A	Morse	26.29	340	P	P	03 21 00.2	-0.3
	baz=157						
348A	Jackson	26.31	350	P	P	03 21 00.8	+0.2
	baz=168,SNR=19						
255A	Hazlehurst	26.34	0	P	P	03 21 00.3	-0.6
	baz=180,SNR=20						
254A	Abbeville	26.37	359	P	P	03 21 00.6	-0.6
	baz=178,SNR=51						
KVTX	Kingsville	26.38	328	eP	P	03 21 05.7	+4.4
	comp=Z,2μm,1.8s						
KVTX				LR	LR		
	comp=Z,22μm,22.0s						
256A	Glennville	26.40	1	P	P	03 21 01.0	-0.4
	baz=182,SNR=21						
347A	Saraland	26.42	348	P	P	03 21 01.5	-0.1
	baz=167,SNR=21						
257A	Skidaway Islan	26.43	3	P	P	03 21 01.0	-0.6
	baz=183						
541A	Lake Charles	26.45	339	P	P	03 21 01.4	-0.5
	baz=156						
252A	Lumpkin	26.49	356	P	P	03 21 01.7	-0.6
	baz=175,SNR=59						
253A	Americus	26.52	357	P	P	03 21 01.7	-0.8
	baz=176,SNR=23						
346A	Big Creek Wild	26.60	347	P	P	03 21 03.2	-0.1
	baz=165,SNR=6.5						
250A	Grady	26.62	353	P	P	03 21 03.1	-0.3
	baz=172,SNR=76						
443A	Delano Plantat	26.63	342	P	P	03 21 03.4	-0.2
	baz=159						
251A	Midway	26.64	355	P	P	03 21 03.0	-0.6
	baz=174,SNR=78						
345A	Thompson Farm,	26.66	346	P	P	03 21 03.7	-0.2
	baz=163,SNR=8.8						
249A	Camden	26.73	351	P	P	03 21 04.5	+0.1
	baz=170,SNR=63						
PB12	IPOC Station P	26.78	154⇑	iP	P	03 21 04.8	-0.3
442A	Mamou	26.79	341	P	P	03 21 04.8	-0.2
	baz=158						
PB16	IPOC Station P	26.91	152⇑	iP	P	03 21 07.5	+0.6
248A	Dixon Mills	26.95	350	P	P	03 21 06.3	-0.1
	baz=169,SNR=46						
344A	Westbrook Farm	26.98	344	P	P	03 21 06.8	+0.1
	baz=162,SNR=56						
154A	Montrose	27.03	359	P	P	03 21 06.7	-0.5
	baz=179,SNR=47						
155A	Kite	27.03	0	P	P	03 21 06.8	-0.4
	baz=180,SNR=28						
151A	Opelika	27.06	355	P	P	03 21 06.8	-0.6
	baz=174,SNR=9.2						
247A	Quitman	27.07	349	P	P	03 21 07.5	0.0
	baz=167,SNR=36						
343A	Vidalia	27.07	343	P	P	03 21 06.9	-0.6
	baz=160						
441A	DeRidder	27.08	340	P	P	03 21 07.4	-0.2
	baz=156						
156A	Sylvania	27.08	2	P	P	03 21 07.5	-0.1
	baz=182,SNR=7.9						
153A	Fort Valley	27.09	358	P	P	03 21 07.0	-0.7
	baz=177						
246A	Jackson Lee, B	27.13	348	P	P	03 21 07.3	-0.7
	baz=166						
152A	Waverly Hall	27.16	356	P	P	03 21 07.6	-0.7
	baz=175,SNR=36						
150A	Eclectic	27.21	354	P	P	03 21 08.4	-0.4
	baz=172,SNR=46						
149A	Jones	27.30	352	P	P	03 21 09.0	-0.5
	baz=171,SNR=12						
245A	Little AP, Sta	27.32	346	P	P	03 21 09.4	-0.4
	baz=164,SNR=16						
342A	Flagon Creek P	27.37	342	P	P	03 21 09.7	-0.5
	baz=158,SNR=12						
HKT	Hockley	27.40	334	eP	P	03 21 10.5	+0.1
	comp=Z,920nm,2.0s						
HKT				LR	LR		
	comp=Z,4μm,19.0s						
HKT	Hockley	27.40	334	eP	P	03 21 10.5	+0.1
HKT				pmax	pmax		
	comp=Z,920nm,2.0s						
RGRS	Roger Stewart	27.41	4	eP	P	03 21 05.5	-5.0
	comp=Z,463nm,0.9s						
148A	Greensboro	27.46	351	P	P	03 21 10.5	-0.5
	baz=169,SNR=35						
CSU	Charleston Sou	27.50	5	eP	P	03 21 11.9	+0.6
244A	Avery, Jackson	27.53	345	P	P	03 21 11.0	-0.6
	baz=162,SNR=14						
MNMCX	Minye Minye	27.56	153⇑	iP	P	03 21 12.8	+0.4
MNMC	Minye Minye	27.57	153	eP	P	03 21 13.0	+0.6
	comp=Z,442nm,1.2s						
MNMC				LR	LR		
	comp=Z,41μm,18.0s						
243A	Waterproof	27.59	343	P	P	03 21 11.5	-0.7
	baz=161						
147A	Livingston	27.60	350	P	P	03 21 11.9	-0.4
	baz=168,SNR=24						
341A	Kurthwood	27.61	340	P	P	03 21 11.3	-1.0
	baz=157,SNR=20						
341A	Kurthwood	27.61	340	eP	P	03 21 11.3	-1.0
	comp=Z,456nm,1.5s						
341A				LR	LR		
	comp=Z,23μm,22.0s						
NHSC	New Hope	27.61	4	P	P	03 21 11.9	-0.4
	baz=185,SNR=11						
NHSC	New Hope	27.61	4	eP	P	03 21 12.8	+0.5
	comp=Z,366nm,1.3s						
NHSC				eS	S	03 25 49.5	-4.5
NHSC				LR	LR		
	comp=Z,25μm,19.0s						
Z55A	Blythe	27.63	1	P	P	03 21 12.2	-0.4
	baz=181,SNR=9.3						
Z54A	Sparta	27.65	359	P	P	03 21 11.9	-0.8
	baz=179,SNR=34						
VBMS	Vicksburg	27.65	345	P	P	03 21 12.0	-0.7
	baz=163						
VBMS	Vicksburg	27.65	345	eP	P	03 21 12.6	-0.1
	comp=Z,380nm,1.4s						
VBMS				eS	S	03 25 50.4	-4.3
VBMS				LR	LR		
	comp=Z,13μm,22.0s						
Z52A	Williamson	27.65	357	P	P	03 21 12.1	-0.6
	baz=176,SNR=46						
Z53A	Monticello	27.71	358	P	P	03 21 12.5	-0.7
	baz=178,SNR=33						
146A	Union	27.72	348	P	P	03 21 13.0	-0.4
	baz=166,SNR=38						
PSGCX	Pisagua	27.74	154⇑	iP	P	03 21 13.8	+0.1
LRAL	Lakeview Retre	27.75	352	P	P	03 21 13.1	-0.6
	baz=170,SNR=72						
LRAL	Lakeview Retre	27.75	352	eP	P	03 21 13.0	-0.6
	comp=Z,118nm,0.9s						
833A	Chaparral WMA,	27.80	327	P	P	03 21 13.7	-0.4
	baz=142,SNR=24						
833A	Chaparral WMA,	27.80	327	eP	P	03 21 13.7	-0.4
	comp=Z,920nm,1.4s						
833A				LR	LR		
	comp=Z,5μm,19.0s						
GOGA	Godfrey	27.83	358	P	P	03 21 13.7	-0.7
	baz=178,SNR=41						
GOGA	Godfrey	27.83	358	eP	P	03 21 13.6	-0.7
	comp=Z,320nm,1.5s						
GOGA				LR	LR		
	comp=Z,28μm,22.0s						
GOGA	Godfrey	27.83	358	eP	P	03 21 13.6	-0.7
GOGA				pmax	pmax		
	comp=Z,320nm,1.5s						
Z51A	Franklin	27.83	355	P	P	03 21 13.4	-0.9
	baz=174						
Z50A	Ashland	27.84	354	P	P	03 21 13.9	-0.6
	baz=173,SNR=70						
Z49A	Columbiana	27.85	353	P	P	03 21 13.9	-0.6
	baz=172,SNR=46						
145A	Houston Renfro	27.88	347	P	P	03 21 14.1	-0.6
	baz=164,SNR=12						
242A	Grayson	27.95	342	P	P	03 21 14.6	-0.8
	baz=159						
144A	Alexander Plac	28.02	346	P	P	03 21 15.1	-0.9
	baz=163						
Z47A	Carrollton	28.08	350	P	P	03 21 15.7	-0.8
	baz=168,SNR=61						
241A	Mo Tay, Goldon	28.16	341	P	P	03 21 16.3	-0.9
	baz=158						
Z48A	Northport	28.17	351	P	P	03 21 16.6	-0.8
	baz=170,SNR=80						
Z46A	Louisville	28.23	349	P	P	03 21 17.5	-0.4
	baz=166,SNR=20						
Y54A	Tignall	28.27	360	P	P	03 21 17.6	-0.6
	baz=180,SNR=43						
Y53A	Monroe	28.28	358	P	P	03 21 17.6	-0.7
	baz=178,SNR=34						
Y52A	Lilburn	28.31	357	P	P	03 21 17.9	-0.7
	baz=177,SNR=19						
143A	Socs Landing,	28.34	344	P	P	03 21 17.4	-1.5
	baz=161						
142A	Monroe	28.35	343	P	P	03 21 17.7	-1.2
	baz=160						
Y51A	Rockmart	28.40	356	P	P	03 21 18.7	-0.7
	baz=175,SNR=54						
Y50A	Piedmont	28.45	354	P	P	03 21 19.1	-0.8
	baz=173,SNR=46						
240A	Hunter Patters	28.45	340	P	P	03 21 19.0	-0.9
	baz=156						
240A	Hunter Patters	28.45	340	eP	P	03 21 19.1	-0.9
	comp=Z,240nm,1.3s						
240A				LR	LR		
	comp=Z,8μm,21.0s						
Y49A	Blount Mountai	28.49	353	P	P	03 21 19.3	-0.9
	baz=172,SNR=27						
NATX	Nacogdoches	28.52	338	P	P	03 21 19.7	-0.8
	baz=154,SNR=8.0						
NATX	Nacogdoches	28.52	338	eP	P	03 21 20.3	-0.2
	comp=Z,933nm,1.9s						
NATX				LR	LR		
	comp=Z,15μm,22.0s						
Z45A	Winona	28.56	347	P	P	03 21 20.0	-0.9
	baz=165						
HODGE	Hodges	28.64	1	eP	P	03 21 21.8	+0.3
	comp=Z,104nm,1.5s						
HODGE				LR	LR		
	comp=Z,28μm,20.0s						
Z44A	Pea Ridge, Bel	28.64	346	P	P	03 21 20.4	-1.1
	baz=164,SNR=10						
Y48A	Jasper	28.64	352	P	P	03 21 20.2	-1.3
	baz=170,SNR=47						
PB08	IPOC Station P	28.65	153⇑	iP	P	03 21 22.5	+0.4
141A	Papa Simpson,	28.69	342	P	P	03 21 21.1	-0.9
	baz=158,SNR=16						
JSC	Jenkinsville	28.71	2	eP	P	03 21 22.0	-0.2
	comp=Z,276nm,1.6s						
JSC				eS	S	03 26 12.4	+0.9
JSC				LR	LR		
	comp=Z,18μm,20.0s						
JSC	Jenkinsville	28.71	2	eP	P	03 21 22.0	-0.2
JSC				eS	S	03 26 12.4	+0.9
JSC				pmax	pmax		
	comp=Z,280nm,1.6s						
Y47A	UCPARC, Winfie	28.73	351	P	P	03 21 21.4	-0.9
	baz=169,SNR=38						
Z43A	Armstrong Fami	28.78	345	P	P	03 21 21.3	-1.5
	baz=162						
Y46A	Houston	28.89	349	P	P	03 21 22.8	-0.9
	baz=167,SNR=64						
435B	Jarrell	28.89	333	P	P	03 21 23.2	-0.6
	baz=148,SNR=22						
435B	Jarrell	28.89	333	eP	P	03 21 23.9	0.0
	comp=Z,466nm,1.6s						
435B				LR	LR		
	comp=Z,8μm,20.0s						
X53A	Estanollee	28.92	359	P	P	03 21 23.1	-0.9
	baz=178,SNR=17						
140A	Cam and Jess,	28.94	341	P	P	03 21 23.3	-0.9
	baz=157						
140A	Cam and Jess,	28.94	341	eP	P	03 21 24.0	-0.2
	comp=Z,572nm,1.9s						
140A				LR	LR		
	comp=Z,28μm,22.0s						
Y45A	Yeager Farm, C	29.01	348	P	P	03 21 24.3	-0.5
	baz=166,SNR=43						
X50B	Fort Payne	29.01	355	P	P	03 21 23.7	-1.2
	baz=174,SNR=31						
Z42A	Norrel Spur, H	29.03	344	P	P	03 21 23.3	-1.7
	baz=160						
X52A	Dahlonega	29.04	358	P	P	03 21 24.2	-0.8
	baz=177,SNR=28						
X51A	Calhoun	29.05	356	P	P	03 21 24.3	-0.9
	baz=175,SNR=22						
X49A	Woodville	29.13	354	P	P	03 21 24.9	-1.0
	baz=172,SNR=45						
X48A	Hartselle	29.16	352	P	P	03 21 24.7	-1.4
	baz=171						
PAULI	Pauline	29.23	1	eP	P	03 21 27.9	+1.1
	comp=Z,32nm,1.1s						
PAULI				LR	LR		
	comp=Z,23μm,20.0s						
Y44A	Strider, Charl	29.25	347	P	P	03 21 25.8	-1.1
	baz=164,SNR=12						
PB01	IPOC Station P	29.29	154	eP	P	03 21 23.2	-4.3
	comp=Z,142nm,1.3s						
PB01				LR	LR		
	comp=Z,42μm,20.0s						
PB01	IPOC Station P	29.29	154⇑	iP	P	03 21 27.1	-0.5
X47A	Russelville	29.34	351	P	P	03 21 26.3	-1.4
	baz=169,SNR=60						
PB02	IPOC Station P	29.36	155⇓	iP	P	03 21 22.1	-6.1
Y43A	Makayla and Ka	29.37	346	P	P	03 21 26.4	-1.6
	baz=163						
BG3	Lake Jocassee	29.40	359	eP	P	03 21 27.9	-0.4
	comp=Z,135nm,1.1s						
BG3				LR	LR		
	comp=Z,33μm,20.0s						
Z40A	Long Farm, Mag	29.45	341	P	P	03 21 27.6	-1.2
	baz=158						
X46A	Booneville	29.50	350	P	P	03 21 27.8	-1.3
	baz=168,SNR=32						
Y42A	Garnett, Star	29.52	344	P	P	03 21 28.1	-1.2
	baz=161,SNR=13						
X45A	UM Field Stati	29.52	348	P	P	03 21 27.8	-1.5
	baz=166,SNR=19						
W52A	Murphy	29.53	358	P	P	03 21 28.8	-0.6
	baz=177,SNR=36						
KMSC	Kings Mountain	29.57	2	P	P	03 21 29.1	-0.6
	baz=182,SNR=33						
KMSC	Kings Mountain	29.57	2	eP	P	03 21 29.0	-0.8
	comp=Z,125nm,1.2s						
KMSC				LR	LR		
	comp=Z,21μm,21.0s						
W53A	Cullowhee	29.58	359	P	P	03 21 29.6	-0.4
	baz=179,SNR=36						
CCAR	Cane Creek	29.59	344	eP	P	03 21 29.5	-0.4
	comp=Z,649nm,1.6s						
CCAR				LR	LR		
	comp=Z,8μm,20.0s						
OXF	Oxford	29.61	349	P	P	03 21 28.3	-1.8
	baz=166,SNR=20						
OXF	Oxford	29.61	349	eP	P	03 21 28.8	-1.3
	comp=Z,288nm,1.1s						
OXF				LR	LR		
	comp=Z,15μm,21.0s						
OXF	Oxford	29.61	349	eP	P	03 21 28.8	-1.3
OXF				pmax	pmax		
	comp=Z,290nm,1.1s						
W50A	Signal Mountai	29.71	355	P	P	03 21 30.2	-0.9
	baz=174,SNR=43						
JCT	Junction City	29.72	329	P	P	03 21 31.0	-0.2
	baz=144,SNR=21						
JCT	Junction City	29.72	329	eP	P	03 21 31.5	+0.2
	comp=Z,302nm,1.6s						
JCT				LR	LR		
	comp=Z,8μm,22.0s						
JCT	Junction City	29.72	329	eP	P	03 21 31.5	+0.2
JCT				pmax	pmax		
	comp=Z,300nm,1.6s						
W49A	Belvidere	29.72	354	P	P	03 21 29.8	-1.3
	baz=173,SNR=36						
PB07	IPOC Station P	29.73	156⇑	iP	P	03 21 31.9	+0.4
X44A	Crenshaw	29.75	347	P	P	03 21 29.2	-2.1
	baz=165						
SWET	Sewanee	29.78	354	eP	P	03 21 30.6	-1.1
	comp=Z,541nm,2.0s						
SWET				LR	LR		
	comp=Z,14μm,20.0s						
Y41A	Eaglette Beard	29.79	343	P	P	03 21 30.2	-1.5
	baz=160						
W48A	Pulaski	29.82	353	P	P	03 21 31.1	-0.9
	baz=171,SNR=51						
PLAL	Pickwick Lake	29.83	351	eP	P	03 21 30.4	-1.6
	comp=Z,303nm,1.9s						
WHTX	Lake Whitney,	29.86	334	P	P	03 21 31.5	-0.9
	baz=149,SNR=17						
WHTX	Lake Whitney,	29.86	334	eP	P	03 21 32.0	-0.3
	comp=Z,726nm,1.9s						
WHTX				LR	LR		
	comp=Z,9μm,22.0s						
CPCT	Cooper Cave	29.91	357	eP	P	03 21 32.2	-0.6
	comp=Z,213nm,1.5s						
CPCT				LR	LR		
	comp=Z,21μm,20.0s						
X43A	Marvell	29.93	346	P	P	03 21 31.8	-1.2
	baz=163						
X43A	Marvell	29.93	346	eP	P	03 21 32.4	-0.6
	comp=Z,563nm,1.8s						
X43A				LR	LR		
	comp=Z,14μm,20.0s						
CNNC	Cliffs of the	29.96	8	P	P	03 21 32.3	-0.8
	baz=189						
CNNC	Cliffs of the	29.96	8	PFAKE		03 21 50.0	+17
CNNC				LR	LR		
	comp=Z,34μm,19.0s						
W47A	Westpoint	30.02	352	P	P	03 21 32.6	-1.2
	baz=170,SNR=83						
W46A	Michie	30.02	350	P	P	03 21 32.2	-1.6
	baz=168,SNR=14						
PB09	IPOC Station P	30.06	155⇑	iP	P	03 21 28.4	-6.1
PB09			⇑	iP	P	03 21 28.6	-5.9
V53A	Saluda	30.07	360	P	P	03 21 33.8	-0.5
	baz=180,SNR=27						
X42A	Stuttgart	30.15	345	P	P	03 21 33.6	-1.3
	baz=162,SNR=18						
V50A	Pikevile	30.17	356	P	P	03 21 34.3	-0.8
	baz=175,SNR=47						
PB04	IPOC Station P	30.17	157	eP	P	03 21 32.1	-3.3
	comp=Z,199nm,1.3s						
PB04				LR	LR		
	comp=Z,23μm,18.0s						
W45A	Hickory Valley	30.19	349	P	P	03 21 33.6	-1.7
	baz=167,SNR=16						
V51A	Loudon	30.25	357	P	P	03 21 35.2	-0.6
	baz=176,SNR=47						
V52A	Sevierville	30.26	358	P	P	03 21 35.2	-0.7
	baz=178,SNR=36						
W44A	Shelby Farms P	30.30	348	P	P	03 21 34.5	-1.7
	baz=166						
MET	Memphis--Engin	30.30	348	eP	P	03 21 36.5	+0.3
	comp=Z,591nm,1.4s						
V49A	McMinnville	30.33	355	P	P	03 21 35.2	-1.3
	baz=173,SNR=52						
X41A	Kaden, Bauxite	30.34	344	P	P	03 21 35.0	-1.5
	baz=160,SNR=19						
V48A	Smith Brothers	30.40	353	P	P	03 21 36.0	-1.1
	baz=172,SNR=73						
X40A	Basin Creek Fa	30.42	343	P	P	03 21 35.7	-1.6
	baz=160,SNR=30						
X40A	Basin Creek Fa	30.42	343	eP	P	03 21 36.0	-1.3
	comp=Z,187nm,1.7s						
X40A				LR	LR		
	comp=Z,10μm,20.0s						
W43A	Forest City	30.44	347	P	P	03 21 36.0	-1.5
	baz=164						
V47A	Nunnelly	30.57	352	P	P	03 21 37.1	-1.5
	baz=170,SNR=65						
NCAT	North Carolina	30.59	4	eP	P	03 21 38.4	-0.4
	comp=Z,285nm,1.8s						
NCAT				LR	LR		
	comp=Z,24μm,20.0s						
V46A	Holladay	30.63	351	P	P	03 21 37.2	-2.0
	baz=169,SNR=53						
H06E1	SOCORRO T-PHAS	30.66	298	T	T	03 53 44.7	
	SNR=193						
H06S1	SOCORRO T	30.68	298	T	T	03 53 46.0	
	SNR=29						
HPIG		30.68	317	eP	P	03 21 40.9	+0.9
	comp=Z,44nm,1.2s						
HPIG				LR	LR		
	comp=Z,23μm,21.0s						
MIAR	Mount Ida	30.70	342	P	P	03 21 38.3	-1.5
	baz=158,SNR=43						
MIAR	Mount Ida	30.70	342	eP	P	03 21 38.2	-1.5
	comp=Z,209nm,1.5s						
MIAR				LR	LR		
	comp=Z,9μm,20.0s						
MIAR	Mount Ida	30.70	342	eP	P	03 21 38.3	-1.5
MIAR				pmax	pmax		
	comp=Z,210nm,1.5s						
V45A	Humboldt	30.71	350	P	P	03 21 38.2	-1.7
	baz=168,SNR=6.6						
PB06	IPOC Station P	30.73	156⇑	iP	P	03 21 40.5	+0.1
H06N1	SOCORRO T-PHAS	30.75	298	T	T	03 53 46.4	
	SNR=13						
W42A	Bald Knob	30.81	346	P	P	03 21 39.2	-1.5
	baz=162						
X39A	Fountain Ranch	30.83	341	P	P	03 21 39.8	-1.2
	baz=157,SNR=16						
HBAR	Harrisburg	30.87	347	eP	P	03 21 40.6	-0.7
	comp=Z,542nm,1.3s						
HBAR				LR	LR		
	comp=Z,14μm,20.0s						
W41B	Gary Mavity, V	30.90	344	P	P	03 21 40.2	-1.4
	baz=161,SNR=85						
W41B	Gary Mavity, V	30.90	344	eP	P	03 21 39.9	-1.6
	comp=Z,266nm,1.3s						
W41B				LR	LR		
	comp=Z,8μm,21.0s						
WVT	Waverly	30.91	352	P	P	03 21 39.7	-2.0
	baz=170						
WVT	Waverly	30.91	352	eP	P	03 21 39.7	-2.0
	comp=Z,405nm,1.7s						
WVT				LR	LR		
	comp=Z,11μm,19.0s						
WVT	Waverly	30.91	352	eP	P	03 21 39.7	-2.0
WVT				pmax	pmax		
	comp=Z,400nm,1.7s						
HALT	Halls	30.95	349	PFAKE		03 21 50.0	+8.0
HALT				LR	LR		
	comp=Z,13μm,19.0s						
TZTN	Tazewell	30.96	358	P	P	03 21 41.3	-0.8
	baz=178,SNR=26						
TZTN	Tazewell	30.96	358	eP	P	03 21 41.3	-0.8
	comp=Z,64nm,0.9s						
TZTN				LR	LR		
	comp=Z,28μm,20.0s						
V44A	Blytheville	30.98	348	P	P	03 21 40.8	-1.4
	baz=166,SNR=6.9						
TXAR	Lajitas Array	31.02	322	P	P	03 21 43.1	+0.2
	comp=Z,3.8nm,0.8s,baz=144,slow=9.2,SNR=24						
TXAR				PcP	PcP	03 24 38.8	0.0
	comp=Z,3.1nm,0.8s,baz=149,slow=4.2,SNR=3.2						
TXAR				LR	LR	03 34 17.0	
	comp=Z,7μm,20.1s,baz=0.0,slow=37						
WHAR	Wooly Hollow	31.02	344	eP	P	03 21 41.1	-1.5
	comp=Z,374nm,1.5s						
WHAR				LR	LR		
	comp=Z,9μm,20.0s						
TX31	Lajitas Ar. Si	31.02	322	eP	P	03 21 43.0	+0.2
U49A	Red Boiling Sp	31.06	355	P	P	03 21 41.8	-1.1
	baz=174,SNR=54						
V43A	Jonesboro	31.07	347	P	P	03 21 41.8	-1.2
	baz=164,SNR=11						
PB10	IPOC Station P	31.08	158	eP	P	03 21 44.7	+1.4
	comp=Z,117nm,1.0s						
PB10				LR	LR		
	comp=Z,28μm,18.0s						
U48A	Cassie Pea, Po	31.13	354	P	P	03 21 42.4	-1.1
	baz=172,SNR=44						
GNAR	Gosnell	31.13	348	eP	P	03 21 42.9	-0.7
	comp=Z,273nm,0.6s						
GNAR				LR	LR		
	comp=Z,13μm,20.0s						
W40A	Ferguson Farm,	31.15	343	P	P	03 21 42.5	-1.2
	baz=160,SNR=17						
W40A	Ferguson Farm,	31.15	343	eP	P	03 21 42.7	-1.0
	comp=Z,342nm,1.8s						
W40A				LR	LR		
	comp=Z,14μm,21.0s						
U47A	Clarksville	31.15	353	P	P	03 21 42.0	-1.7
	baz=171,SNR=31						
U46A	Springville	31.19	351	P	P	03 21 42.4	-1.7
	baz=169,SNR=38						
PB15	IPOC Station P	31.22	156⇓	iP	P	03 21 41.1	-3.7
U45A	Rockin P Farm,	31.27	350	P	P	03 21 43.2	-1.7
	baz=168,SNR=9.1						
V42A	Cord	31.28	346	P	P	03 21 43.1	-1.8

baz=163,SNR=39
UTMT University of 31.29 350 eP P 03 21 44.0 -0.9
comp=Z,394nm,1.0s
GLAT Glass 31.29 350 eP P 03 21 44.2 -0.8
comp=Z,614nm,1.4s
W39A Magazine 31.36 342 P P 03 21 44.6 -1.0
baz=158,SNR=34
W39A Magazine 31.36 342 eP P 03 21 44.7 -1.0
comp=Z,237nm,1.4s
W39A LR LR
comp=Z,12µm,19.0s
U44B Burton Farm, H 31.37 349 P P 03 21 44.3 -1.3
baz=167
ABTX Abilene, Hawle 31.39 332 P P 03 21 44.8 -1.1
baz=146,SNR=13
ABTX Abilene, Hawle 31.39 332 eP P 03 21 45.3 -0.7
comp=Z,139nm,1.3s
ABTX LR LR
comp=Z,12µm,22.0s
V41A Mountainview 31.45 345 P P 03 21 44.7 -1.8
baz=162,SNR=74
T50A Nancy 31.49 357 P P 03 21 45.5 -1.2
baz=176,SNR=31
T52A Hallie 31.51 359 P P 03 21 46.2 -0.8
baz=179,SNR=35
BBSR BB Station 31.56 30 PFAKE 03 22 00.0 +13
BBSR LR LR
comp=Z,15µm,19.0s
U44A Portageville 31.59 349 P P 03 21 46.2 -1.4
baz=166,SNR=13
U43A Rector 31.60 348 P P 03 21 46.2 -1.5
baz=165,SNR=13
T49A Edmonton 31.62 355 P P 03 21 46.7 -1.2
baz=174,SNR=58
V40A Witts Springs 31.65 344 P P 03 21 46.6 -1.6
baz=160,SNR=38
V40A Witts Springs 31.65 344 eP P 03 21 46.6 -1.6
comp=Z,348nm,1.8s
V40A LR LR
comp=Z,12µm,21.0s
T47A Sharon Grove 31.66 353 P P 03 21 46.7 -1.5
baz=171,SNR=48
BLA Blacksburg 31.67 3 P P 03 21 48.0 -0.4
baz=184,SNR=34
BLA Blacksburg 31.67 3 eP P 03 21 48.0 -0.4
comp=Z,122nm,0.8s
BLA LR LR
comp=Z,21µm,22.0s
BLA Blacksburg 31.67 3 eP P 03 21 48.0 -0.4
BLA pmax pmax
comp=Z,120nm,0.9s
T48A Bowling Green 31.70 354 P P 03 21 47.2 -1.4
baz=173,SNR=53
PARMO Parma 31.76 349 eP P 03 21 48.4 -0.7
comp=Z,292nm,1.0s
PARMO LR LR
comp=Z,12µm,19.0s
U42A Revenden 31.77 347 P P 03 21 47.6 -1.6
baz=164,SNR=77
T46A Princeton 31.82 352 P P 03 21 48.1 -1.5
baz=170,SNR=98
T45A Paducah 31.91 351 P P 03 21 48.8 -1.7
baz=168,SNR=11
V39A Pettigrew 31.92 343 P P 03 21 49.0 -1.6
baz=159,SNR=37
U41A Viola 31.93 346 P P 03 21 48.8 -1.8
baz=162,SNR=42
SLBS Sierra La Lagu 31.99 307 eP P 03 21 54.8 +3.4
comp=Z,103nm,1.3s
SLBS LR LR
comp=Z,9µm,20.0s
PBMO Poplar Bluff 32.00 348 eP P 03 21 49.7 -1.5
comp=Z,166nm,1.3s
PBMO LR LR
comp=Z,14µm,19.0s
S51A Beattyville 32.05 358 P P 03 21 50.7 -1.0
baz=178,SNR=83
S52A Salyersville 32.08 359 P P 03 21 50.9 -1.0
baz=179
T44A Benton 32.14 349 P P 03 21 50.8 -1.6
baz=167
U40A Yellville 32.18 344 P P 03 21 51.3 -1.5
baz=160,SNR=50
S48A Wiedeman Farm, 32.22 355 P P 03 21 51.4 -1.7
baz=174,SNR=14
T43A Greenville 32.27 348 P P 03 21 51.9 -1.7
baz=166,SNR=57
URVA University of 32.30 7 eP P 03 21 53.8 0.0
U39A Green Forest 32.38 343 P P 03 21 52.8 -1.8
baz=159,SNR=32
T42A Van Buren 32.39 347 P P 03 21 52.8 -1.8
baz=164
HHAR Hobbs 32.41 343 eP P 03 21 53.4 -1.5
comp=Z,119nm,1.5s
HHAR LR LR
comp=Z,13µm,20.0s
S46A Don Dixon Farm 32.43 352 P P 03 21 53.1 -1.9
baz=170,SNR=31
LPIG La Paz 32.49 308 LR LR 03 34 09.2
comp=Z,7µm,18.8s,baz=120,slow=35
IP05 Hopewell Churc 32.53 7 eP P 03 21 55.9 0.0
comp=Z,76nm,1.2s
IP05 LR LR
comp=Z,34µm,19.0s
S45A Carrier Mills 32.54 351 P P 03 21 54.1 -1.8
baz=169,SNR=11
T41A Mountain View 32.55 346 P P 03 21 54.4 -1.7
baz=163,SNR=64
IP07 Quail 32.58 7 eP P 03 21 56.4 +0.1
comp=Z,137nm,1.4s
IP07 LR LR
comp=Z,34µm,20.0s
IP06 Yanceyville 32.60 7 eP P 03 21 57.1 +0.7
comp=Z,86nm,1.4s
IP06 LR LR
comp=Z,28µm,19.0s
IP01 Cuckoo 32.63 7 eP P 03 21 56.8 +0.1
comp=Z,67nm,1.0s
IP01 LR LR
comp=Z,36µm,20.0s
TUL1 Leonard 32.67 340 P P 03 21 55.4 -1.7
baz=155,SNR=18
TUL1 Leonard 32.67 340 eP P 03 21 55.8 -1.3
comp=Z,235nm,1.6s
TUL1 LR LR
comp=Z,20µm,22.0s
S44A Carbondale 32.67 350 P P 03 21 55.5 -1.5
baz=168,SNR=26
IP03 Louisa 32.68 7 eP P 03 21 57.3 +0.1
comp=Z,71nm,0.9s
IP03 LR LR
comp=Z,34µm,19.0s
USIN University of 32.70 353 eP P 03 21 55.8 -1.5
comp=Z,806nm,1.6s
S43A Fulton Ridge, 32.70 349 P P 03 21 55.6 -1.8
baz=166,SNR=50
SPRD Spring Road, M 32.70 7 eP P 03 21 57.6 +0.2
comp=Z,83nm,1.0s
SPRD LR LR
comp=Z,33µm,19.0s
IP04 Greensprings 32.74 7 eP P 03 21 57.9 +0.1
comp=Z,114nm,1.1s
IP04 LR LR
comp=Z,31µm,20.0s
CVRD Centerville Ro 32.76 7 eP P 03 21 57.7 -0.1
comp=Z,243nm,1.5s
CVRD LR LR
comp=Z,33µm,19.0s
WMOK Wichita Mounta 32.78 335 P P 03 21 56.6 -1.5
baz=149,SNR=24
WMOK Wichita Mounta 32.78 335 eP P 03 21 56.0 -2.1
comp=Z,149nm,1.5s
WMOK LR LR
comp=Z,13µm,22.0s
WMOK Wichita Mounta 32.78 335 eP P 03 21 56.0 -2.1
WMOK pmax pmax
comp=Z,150nm,1.5s
WCI Wyandotte Cave 32.80 355 P P 03 21 56.7 -1.6
baz=173
WCI Wyandotte Cave 32.80 355 eP P 03 21 56.7 -1.6
comp=Z,574nm,1.5s
WCI LR LR
comp=Z,17µm,22.0s
WCI Wyandotte Cave 32.80 355 eP P 03 21 56.7 -1.6
WCI pmax pmax
comp=Z,570nm,1.5s
T40A Mansfield 32.84 345 P P 03 21 57.2 -1.4
baz=162

R47A Wooly Knot Far 32.89 354 P P 03 21 57.2 -1.9
baz=173,SNR=46
R46A Gibon Southern 32.92 353 P P 03 21 57.6 -1.6
baz=171,SNR=29
R48A Northridge Ran 32.94 355 P P 03 21 57.9 -1.5
baz=174,SNR=22
GO02 Mina Guanaco 32.94 158 PFAKE 03 22 10.0 +10
GO02 LR LR
comp=Z,20µm,21.0s
GO02 Mina Guanaco 32.94 158⇑ iP P 03 22 00.8 +0.8
CBN Corbin Frederi 32.94 8 P P 03 21 59.1 -0.4
baz=190
CBN Corbin Frederi 32.94 8 eP P 03 21 59.0 -0.4
comp=Z,144nm,1.3s
CBN LR LR
comp=Z,28µm,20.0s
T39A Clever 32.95 344 P P 03 21 57.8 -1.8
baz=160,SNR=33
S42A Caledonia 33.03 348 P P 03 21 58.2 -2.1
baz=165,SNR=45
S41A Jillco Farms, 33.07 347 P P 03 21 58.7 -1.9
baz=163,SNR=48
R45A Skylar, Fairfi 33.10 352 P P 03 21 59.5 -1.4
baz=170,SNR=78
FVM French Village 33.17 349 eP P 03 21 59.6 -1.9
comp=Z,335nm,1.4s
FVM LR LR
comp=Z,15µm,20.0s
FVM French Village 33.17 349 eP P 03 21 59.6 -1.9
FVM pmax pmax
comp=Z,330nm,1.4s
R44A Waltonville 33.18 351 P P 03 22 00.1 -1.4
baz=168,SNR=50
T38A Diamond 33.22 343 P P 03 22 00.3 -1.6
baz=158,SNR=25
S40A Lebanon 33.26 346 P P 03 22 00.7 -1.6
baz=162,SNR=86
R43A Red Bud 33.35 349 P P 03 22 01.7 -1.4
baz=167,SNR=82
CCM Cathedral Cave 33.40 348 P P 03 22 01.6 -2.0
baz=164
CCM Cathedral Cave 33.40 348 eP P 03 22 01.5 -2.0
comp=Z,261nm,1.2s
CCM LR LR
comp=Z,12µm,20.0s
CCM Cathedral Cave 33.40 348 eP P 03 22 01.5 -2.0
CCM pmax pmax
comp=Z,260nm,1.2s
OLIL Olney 33.51 352 eP P 03 22 02.9 -1.5
comp=Z,266nm,0.9s
OLIL LR LR
comp=Z,13µm,21.0s
Q47A Bedord North L 33.52 355 P P 03 22 02.9 -1.6
baz=173,SNR=47
GDL2 Guadalupe Moun 33.52 325 eP P 03 22 05.5 +0.7
R42A Luebbering 33.53 348 P P 03 22 02.8 -1.8
baz=165,SNR=72
S39A Bolivar 33.56 344 P P 03 22 03.2 -1.7
baz=160,SNR=65
S38A Stockton 33.66 344 P P 03 22 03.9 -1.9
baz=159,SNR=25
R41A Rosebud 33.66 347 P P 03 22 04.0 -1.8
baz=164,SNR=122
Q45A Warren Harvey, 33.68 352 P P 03 22 04.3 -1.5
baz=170,SNR=71
Q46A CEJHS Indians, 33.70 353 P P 03 22 04.1 -2.0
baz=171
MNTX Cornudas Mount 33.74 323 P P 03 22 06.8 +0.1
baz=136,SNR=125
MNTX Cornudas Mount 33.74 323 eP P 03 22 06.7 +0.1
comp=Z,254nm,1.6s
MNTX LR LR
comp=Z,5µm,21.0s
BLO Bloomington 33.76 354 eP P 03 22 05.0 -1.6
comp=Z,159nm,0.7s
BLO LR LR
comp=Z,15µm,18.0s
BLO Bloomington 33.76 354 eP P 03 22 05.0 -1.6
BLO pmax pmax
comp=Z,160nm,0.7s
SLM Saint Louis 33.76 349 eP P 03 22 05.2 -1.4
comp=Z,256nm,0.9s
SLM LR LR
comp=Z,13µm,19.0s
SLM Saint Louis 33.76 349 eP P 03 22 05.2 -1.4
SLM pmax pmax
comp=Z,260nm,0.9s
Q44A Meyer Farm, Va 33.81 351 P P 03 22 05.4 -1.7
baz=168,SNR=54
R40A Maddies Statio 33.86 346 P P 03 22 05.5 -2.0
baz=162,SNR=48
Q43A New Douglas 33.96 350 P P 03 22 06.7 -1.7
baz=167,SNR=43
MSTX Muleshoe 34.01 329 P P 03 22 08.2 -0.8
baz=142,SNR=24
MSTX Muleshoe 34.01 329 eP P 03 22 08.3 -0.8
comp=Z,102nm,1.1s
MSTX LR LR
comp=Z,9µm,20.0s
P47A Martinsville 34.05 355 P P 03 22 07.2 -1.9
baz=173,SNR=30
R39A Chumby, Stover 34.07 345 P P 03 22 07.4 -1.9
baz=161,SNR=44
Q42A Golden Eagle 34.09 349 P P 03 22 07.9 -1.5
baz=166,SNR=50
MCWV Mont Chateau 34.14 4 P P 03 22 09.2 -0.7
baz=185,SNR=14
MCWV Mont Chateau 34.14 4 eP P 03 22 09.9 -0.1
comp=Z,347nm,1.8s
MCWV LR LR
comp=Z,18µm,19.0s
R38A Fenwick Farm, 34.18 344 P P 03 22 08.3 -2.0
baz=160,SNR=45
SDMD Soldier's Deli 34.20 8 eP P 03 22 10.6 +0.2
comp=Z,63nm,1.2s
SDMD LR LR
comp=Z,13µm,20.0s
AMTX Amarillo 34.21 331 P P 03 22 09.8 -0.8
baz=145
AMTX Amarillo 34.21 331 eP P 03 22 10.0 -0.7
comp=Z,93nm,1.2s
AMTX LR LR
comp=Z,13µm,21.0s
P45A Graceland, Par 34.25 353 P P 03 22 08.9 -1.9
baz=171,SNR=46
Q41A Truxton 34.27 348 P P 03 22 09.4 -1.6
baz=165,SNR=70
P46A Rosedale 34.27 354 P P 03 22 09.0 -2.0
baz=172,SNR=25
P44A Sand Creek, Wi 34.30 352 P P 03 22 09.6 -1.8
baz=169,SNR=54
EPT El Paso 34.47 322 eP P 03 22 16.2 +3.2
comp=Z,150nm,2.0s
EPT LR LR
comp=Z,11µm,22.0s
Q40A Laux Farm, Aux 34.49 347 P P 03 22 10.9 -2.0
baz=163,SNR=95
P43A Skaggs, Pawnee 34.61 351 P P 03 22 12.4 -1.6
baz=168,SNR=80
ACSO Alum Creek Sta 34.63 359 P P 03 22 12.7 -1.4
baz=179,SNR=35
ACSO Alum Creek Sta 34.63 359 eP P 03 22 13.0 -1.1
comp=Z,160nm,0.8s
ACSO LR LR
comp=Z,29µm,19.0s
P42A Winchester 34.70 349 P P 03 22 12.9 -1.8
baz=166,SNR=61
Q39A Willow Grove F 34.75 346 P P 03 22 13.1 -2.0
baz=162,SNR=8.9
Q47A Sheridan 34.78 355 P P 03 22 13.2 -2.2
baz=174,SNR=28
Q38A Cooks Store, C 34.83 345 P P 03 22 14.1 -1.8
baz=160,SNR=52
MVL Millersville 34.85 8 eP P 03 22 11.4 -4.6
comp=Z,458nm,1.9s
MVL LR LR
comp=Z,36µm,21.0s
O56A Blue Knob Stat 34.85 5 P P 03 22 15.8 -0.3
baz=187,SNR=19
O56A Blue Knob Stat 34.85 5 eP P 03 22 16.4 +0.2
comp=Z,214nm,1.3s
O56A LR LR
comp=Z,24µm,21.0s
PSUB Penn St. - Bra 34.92 10 eP P 03 22 16.8 +0.1
comp=Z,267nm,2.0s
PSUB LR LR
comp=Z,22µm,18.0s
P41A Barry, Barry 34.92 349 P P 03 22 14.5 -2.2

baz=165,SNR=44
GO03 Copiap 34.94 161 PFAKE 03 22 30.0 +13
GO03 LR LR
comp=Z,10µm,22.0s
O45A Potomac 34.95 353 P P 03 22 14.7 -2.3
baz=171,SNR=22
O44A Mansfield 34.96 352 P P 03 22 14.9 -2.0
baz=170,SNR=26
Q37A Longview Farm, 34.98 344 P P 03 22 15.2 -1.9
baz=159,SNR=11
P40A Paris 34.99 347 P P 03 22 15.2 -2.0
baz=163,SNR=80
SFIN Lafayette 35.01 354 P P 03 22 15.0 -2.4
baz=172,SNR=38
SFIN Lafayette 35.01 354 eP P 03 22 15.0 -2.4
comp=Z,351nm,1.6s
SFIN LR LR
comp=Z,13µm,19.0s
PAGS Pennsylvania G 35.02 8 eP P 03 22 17.8 +0.3
comp=Z,191nm,1.2s
PAGS LR LR
comp=Z,28µm,20.0s
P39B Salisbury 35.11 346 P P 03 22 16.5 -1.8
baz=162,SNR=123
O43A Sugar Creek Fa 35.21 351 P P 03 22 17.1 -2.1
baz=168,SNR=27
O42A Bath 35.25 350 P P 03 22 17.5 -1.9
baz=167
FSA Cafayete 35.26 154⇓ eP P 03 22 19.8 -0.1
SSPA Standing Stone 35.28 6 P P 03 22 19.1 -0.6
baz=188
SSPA Standing Stone 35.28 6 eP P 03 22 19.7 0.0
comp=Z,511nm,1.9s
SSPA LR LR
comp=Z,30µm,21.0s
O41A Passleys Farm, 35.32 349 P P 03 22 17.9 -2.2
baz=166,SNR=116
N54A Moraine State 35.43 3 P P 03 22 20.1 -0.9
baz=184,SNR=15
N54A Moraine State 35.43 3 eP P 03 22 20.5 -0.6
comp=Z,68nm,0.9s
N54A LR LR
comp=Z,20µm,19.0s
P38A Dawn 35.44 345 P P 03 22 19.0 -2.0
baz=161,SNR=21
HDIL Hopedale 35.47 351 P P 03 22 19.3 -2.1
baz=168,SNR=115
HDIL Hopedale 35.47 351 eP P 03 22 19.3 -2.1
comp=Z,328nm,0.6s
HDIL LR LR
comp=Z,11µm,21.0s
N46A Monticello 35.49 355 P P 03 22 19.0 -2.6
baz=173,SNR=26
N45A Kentland 35.52 354 P P 03 22 19.3 -2.5
baz=172,SNR=40
O40A La Belle 35.52 348 P P 03 22 19.6 -2.2
baz=164,SNR=40
N44A Piper City 35.54 353 P P 03 22 19.7 -2.3
baz=170,SNR=69
LUPA Lehigh Univers 35.59 9 eP P 03 22 22.9 +0.6
comp=Z,45nm,1.9s
LUPA LR LR
comp=Z,2µm,18.0s
P37A Lathrop 35.61 344 P P 03 22 20.6 -2.0
baz=160,SNR=31
HSIG 35.65 314 eP P 03 22 23.8 +0.7
comp=Z,96nm,1.6s
HSIG LR LR
comp=Z,16µm,18.0s
SRIG Santa Rosalia 35.65 311 eP P 03 22 25.8 +2.7
comp=Z,118nm,1.1s
SRIG LR LR
comp=Z,7µm,21.0s
121A Cookes Peak, D 35.78 322 P P 03 22 26.1 +1.7
baz=134,SNR=117
O39A Kirksville 35.80 347 P P 03 22 22.5 -1.7
baz=163,SNR=14
BRNJ Basking Ridge 35.81 10 eP P 03 22 24.8 +0.6
comp=Z,243nm,1.4s
BRNJ LR LR
comp=Z,15µm,19.0s
N43A Stutzman Famil 35.83 351 P P 03 22 22.3 -2.2
baz=169
KSU1 Kansas State U 35.83 341 P P 03 22 23.1 -1.4
baz=156
KSU1 Kansas State U 35.83 341 eP P 03 22 23.4 -1.1
comp=Z,83nm,0.9s
KSU1 LR LR
comp=Z,12µm,22.0s
N59A State Game Lan 35.83 9 P P 03 22 24.0 -0.5
baz=192,SNR=11
N59A State Game Lan 35.83 9 eP P 03 22 25.1 +0.5
comp=Z,257nm,1.5s
N59A LR LR
comp=Z,28µm,20.0s
N42A Yates City 35.86 350 P P 03 22 22.8 -1.9
baz=167,SNR=126
N41A Harden Midland 35.88 349 P P 03 22 22.9 -2.0
baz=166,SNR=15
O38A Galt 35.89 346 P P 03 22 23.0 -2.0
baz=161,SNR=25
319A Douglas 35.95 319 eP P 03 22 27.4 +1.5
comp=Z,192nm,1.4s
319A LR LR
comp=Z,24µm,20.0s
M46A Old House Fiel 35.96 355 P P 03 22 22.9 -2.7
baz=174
M54A Oil Creek Stat 36.00 4 P P 03 22 24.8 -1.1
baz=185,SNR=10.0
M54A Oil Creek Stat 36.00 4 eP P 03 22 25.3 -0.6
comp=Z,141nm,1.4s
M54A LR LR
comp=Z,15µm,20.0s
CPNY Central Park 36.02 11 eP P 03 22 30.4 +4.4
comp=Z,188nm,1.6s
CPNY LR LR
comp=Z,15µm,18.0s
M45A Boilermakers S 36.03 354 P P 03 22 23.6 -2.6
baz=172,SNR=9.9
O37A Wolven Farm, M 36.10 345 P P 03 22 24.9 -1.9
baz=160,SNR=22
ALLY Alegheny Colle 36.11 3 eP P 03 22 26.6 -0.3
comp=Z,121nm,1.2s
ALLY LR LR
comp=Z,20µm,18.0s
LCO Las Campanas 36.11 162 eP P 03 22 27.8 +0.5
comp=Z,111nm,1.0s
LCO LR LR
comp=Z,10µm,20.0s
LCO Las Campanas 36.11 162 eP P 03 22 27.8 +0.5
M44A Midewin, Midew 36.12 353 P P 03 22 24.0 -2.9
baz=171,SNR=19
AHML Horco Molle 36.13 153⇓ eP P 03 22 27.4 +0.1
ODNJ Ogdensburg 36.19 10 eP P 03 22 27.6 +0.1
comp=Z,134nm,1.5s
ODNJ LR LR
comp=Z,11µm,19.0s
N40A Mertquake, Sal 36.20 348 P P 03 22 25.4 -2.2
baz=165,SNR=39
BNM Barren Site 36.24 325 eP P 03 22 29.5 +1.1
PAL Palisades 36.24 11 P P 03 22 27.6 -0.4
baz=195
PAL Palisades 36.24 11 eP P 03 22 29.5 +1.6
comp=Z,219nm,1.4s
PAL LR LR
comp=Z,14µm,19.0s
PAL Palisades 36.24 11 eP P 03 22 29.5 +1.6
PAL pmax pmax
comp=Z,220nm,1.4s
M43A Waltham Townsh 36.28 352 P P 03 22 25.8 -2.5
baz=169,SNR=51
Y22D IRIS PASSCAL I 36.35 325 P P 03 22 30.2 +1.0
baz=136
Y22D IRIS PASSCAL I 36.35 325 PFAKE 03 22 40.0 +11
Y22D LR LR
comp=Z,9µm,18.0s
Y22E IRIS PASSCAL I 36.35 325 P P 03 22 30.2 +1.0
baz=136
LPM Los Pinos Moun 36.36 325 eP P 03 22 30.3 +1.0
N39A Derby Farms, D 36.38 347 P P 03 22 27.3 -1.9
baz=163,SNR=72
M42A Sheffield 36.42 351 P P 03 22 27.1 -2.5
baz=168,SNR=10
KSPA Keystone Colle 36.46 9 eP P 03 22 30.2 +0.4
comp=Z,385nm,1.5s
KSPA LR LR
comp=Z,27µm,19.0s
N38A Joes South For 36.47 346 P P 03 22 28.3 -1.7

baz=162,SNR=71
M41A Milan 36.48 350 P P 03 22 27.7 -2.3
baz=167,SNR=59
CHI Chicago-Loyola 36.58 354 PFAKE 03 22 40.0 +9.2
CHI LR LR
comp=Z,5µm,19.0s
ERPA Erie 36.58 3 P P 03 22 29.1 -1.8
baz=184
ERPA Erie 36.58 3 eP P 03 22 30.6 -0.3
comp=Z,87nm,1.0s
ERPA LR LR
comp=Z,17µm,18.0s
N37A Lee Faris, Mou 36.67 345 P P 03 22 29.9 -1.8
baz=160,SNR=35
CBKS Cedar Bluff 36.68 337 P P 03 22 31.1 -0.7
baz=151,SNR=19
CBKS Cedar Bluff 36.68 337 eP P 03 22 31.3 -0.6
comp=Z,418nm,1.8s
CBKS LR LR
comp=Z,5µm,18.0s
CBKS Cedar Bluff 36.68 337 eP P 03 22 31.3 -0.6
CBKS pmax pmax
comp=Z,420nm,1.7s
M40A Post Highland 36.69 349 P P 03 22 29.5 -2.2
baz=165,SNR=43
VCA Vinchina 36.69 159⇓eP P 03 22 33.5 +1.3
AAM Ann Arbor 36.71 359 P P 03 22 30.2 -1.7
baz=178
AAM Ann Arbor 36.71 359 eP P 03 22 30.8 -1.2
comp=Z,155nm,1.4s
AAM LR LR
comp=Z,36µm,20.0s
AAM Ann Arbor 36.71 359 eP P 03 22 30.8 -1.2
AAM pmax pmax
comp=Z,160nm,1.4s
LAZ Ladron 36.71 325 eP P 03 22 33.6 +1.3
TASL Snake Pit, Alb 36.72 326 P P 03 22 33.4 +1.0
baz=138,SNR=98
ANMO Albuquerque 36.72 326 P P 03 22 33.0 +0.6
comp=Z,44nm,1.1s,baz=151,slow=11,SNR=53
ANMO LR LR 03 40 53.8
comp=Z,11µm,19.3s,baz=138,slow=42
ANMO Albuquerque 36.72 326 P P 03 22 33.6 +1.2
baz=138
ANMO Albuquerque 36.72 326 eP P 03 22 33.3 +0.8
comp=Z,226nm,1.5s
ANMO Albuquerque 36.72 326c iP P 03 22 33.5 +1.1
ANMO pmax pmax
comp=Z,75nm,1.3s
ANMO MLR MLR
comp=Z,11µm,19.0s
TASM ASL Pad, Albuq 36.72 326 P P 03 22 33.5 +1.1
baz=138,SNR=98
YLE Yale 36.73 12 PFAKE 03 22 40.0 +7.8
YLE LR LR
comp=Z,16µm,20.0s
L44A Lake County Fo 36.88 353 P P 03 22 30.4 -3.0
baz=171,SNR=11
M39A Webster 36.89 348 P P 03 22 31.4 -2.1
baz=164,SNR=43
N36A Muff Farm, Cla 36.93 344 P P 03 22 32.0 -1.8
baz=159
L42A Oliver, Polo 36.95 351 P P 03 22 31.5 -2.5
baz=168,SNR=35
L43A Garden Prairie 36.99 352 P P 03 22 31.8 -2.6
baz=170,SNR=36
M38A Pleasantville 37.05 347 P P 03 22 32.9 -2.1
baz=162,SNR=29
BINY Binghamton 37.06 8 P P 03 22 34.5 -0.5
baz=191,SNR=10
BINY Binghamton 37.06 8 eP P 03 22 34.1 -0.9
comp=Z,802nm,2.0s
BINY LR LR
comp=Z,30µm,20.0s
L41A Preston 37.15 350 P P 03 22 33.3 -2.4
baz=167,SNR=52
GO04 Tololo Observa 37.17 163 PFAKE 03 22 50.0 +14
GO04 LR LR
comp=Z,13µm,20.0s
GO04 Tololo Observa 37.17 163⇑iP P 03 22 36.4 +0.1
M37A Trindle Farm, 37.24 346 P P 03 22 34.8 -1.7
baz=161,SNR=23
L40A Anamosa 37.26 349 P P 03 22 34.5 -2.1
baz=166,SNR=74
AGUA GUANDACOL 37.27 160⇓eP P 03 22 38.1 +1.1
T25A Trinidad 37.33 331 P P 03 22 38.6 +1.0
baz=142,SNR=77
T25A Trinidad 37.33 331 eP P 03 22 38.5 +1.0
comp=Z,368nm,1.6s
T25A LR LR
comp=Z,12µm,20.0s
MMNY Mt. Morris Dam 37.35 6 eP P 03 22 36.9 -0.6
comp=Z,447nm,1.6s
MMNY LR LR
comp=Z,20µm,21.0s
CYA Choya 37.37 155⇓eP P 03 22 38.0 +0.2
K43A Burlington 37.45 353 P P 03 22 35.4 -2.9
baz=171,SNR=19
L39A Vinton 37.47 348 P P 03 22 36.1 -2.3
baz=164,SNR=37
M36A Felix, Anita 37.48 345 P P 03 22 36.7 -1.9
baz=160,SNR=14
SCIA State Center 37.52 347 P P 03 22 37.1 -1.8
baz=162,SNR=16
SCIA State Center 37.52 347 eP P 03 22 37.1 -1.8
comp=Z,166nm,0.9s
SCIA LR LR
comp=Z,14µm,19.0s
TUC Tucson 37.53 319 P P 03 22 40.0 +0.8
baz=130
TUC Tucson 37.53 319 eP P 03 22 40.0 +0.8
comp=Z,117nm,1.4s
TUC LR LR
comp=Z,26µm,18.0s
TUC Tucson 37.53 319 eP P 03 22 40.0 +0.8
TUC pmax pmax
comp=Z,120nm,1.4s
K41A Shullsburg 37.63 351 P P 03 22 37.4 -2.5
baz=167,SNR=31
K42A Prairie Point, 37.66 352 P P 03 22 37.4 -2.6
baz=169,SNR=32
L38A Oak Wood Farm, 37.69 347 P P 03 22 38.2 -2.1
baz=163,SNR=47
L37A Phoenix Point, 37.85 346 P P 03 22 39.6 -2.1
baz=162
K40A Colesburg 37.87 350 P P 03 22 39.5 -2.3
baz=166,SNR=86
JFWS Jewell Farm 37.92 351 P P 03 22 39.9 -2.3
baz=168,SNR=40
JFWS Jewell Farm 37.92 351 eP P 03 22 40.0 -2.3
comp=Z,383nm,1.6s
JFWS LR LR
comp=Z,14µm,19.0s
JFWS Jewell Farm 37.92 351 eP P 03 22 40.0 -2.3
JFWS pmax pmax
comp=Z,380nm,1.6s
TRY Troy 37.95 11 eP P 03 22 43.1 +0.6
comp=Z,566nm,1.8s
K39A Oelwein 38.01 349 P P 03 22 40.5 -2.5
baz=165,SNR=38
KSCO Kaye Shedlock' 38.03 334 P P 03 22 43.6 +0.2
baz=146,SNR=24
KSCO Kaye Shedlock' 38.03 334 eP P 03 22 43.7 +0.2
comp=Z,919nm,1.9s
KSCO LR LR
comp=Z,14µm,21.0s
L36A Harm Buss Farm 38.05 345 P P 03 22 41.5 -1.9
baz=160,SNR=11
BCX Boston College 38.10 14 eP P 03 22 45.0 +1.3
comp=Z,210nm,1.3s
J43A Natural Harves 38.13 353 P P 03 22 41.0 -3.0
baz=171,SNR=21
K38A Parkersburg 38.13 348 P P 03 22 41.7 -2.3
baz=163,SNR=18
J42A Columbus 38.16 352 P P 03 22 41.6 -2.6
baz=169,SNR=38
HRV Adam Dziewonsk 38.17 13 P P 03 22 45.6 +1.2
baz=198
HRV Adam Dziewonsk 38.17 13 PFAKE 03 23 00.0 +16
HRV LR LR
comp=Z,12µm,19.0s
J41A Loganville 38.33 351 P P 03 22 43.2 -2.5
baz=168,SNR=40
SDCO Great Sand Dun 38.34 330 P P 03 22 47.3 +1.0
baz=141,SNR=163
SDCO Great Sand Dun 38.34 330 eP P 03 22 47.3 +1.0
comp=Z,366nm,1.5s
SDCO LR LR
comp=Z,12µm,22.0s
BGNE Belgrade 38.42 341 P P 03 22 44.9 -1.6
baz=155
BGNE Belgrade 38.42 341 eP P 03 22 45.9 -0.7
comp=Z,632nm,1.8s
BGNE LR LR
comp=Z,15µm,22.0s
K37A Belmond 38.44 347 P P 03 22 44.1 -2.5
baz=162,SNR=24
X18A Snowflake 38.46 322 eP P 03 22 49.0 +1.8
comp=Z,119nm,1.3s
X18A LR LR
comp=Z,22µm,21.0s
J40A Soldiers Grove 38.48 350 P P 03 22 44.2 -2.7
baz=167,SNR=54
K36A Gilmore City 38.51 346 P P 03 22 45.4 -1.8
baz=161,SNR=20
J39A Decorah 38.59 349 P P 03 22 45.0 -2.8
baz=165,SNR=38
ACCN Adirondack Com 38.59 10 eP P 03 22 48.2 +0.3
comp=Z,96nm,1.0s
ACCN LR LR
comp=Z,16µm,18.0s
I43A Langenfeld Bro 38.59 354 P P 03 22 45.2 -2.7
baz=171,SNR=51
AMOG MOGNA 38.60 160⇓eP P 03 22 49.1 +0.8
214A Organ Pipe Nat 38.67 317 P P 03 22 49.8 +1.0
baz=127,SNR=36
I42A Draeger Farm, 38.69 353 P P 03 22 46.2 -2.6
baz=170,SNR=46
I42A Draeger Farm, 38.69 353 eP P 03 22 46.4 -2.3
comp=Z,658nm,1.7s
I42A LR LR
comp=Z,18µm,22.0s
J38A Wedel Dairy, R 38.72 348 P P 03 22 46.1 -2.9
baz=164,SNR=7.6
W18A Petrified Fore 38.73 323 P P 03 22 51.0 +1.6
baz=134,SNR=11
W18A Petrified Fore 38.73 323 eP P 03 22 51.4 +2.0
comp=Z,323nm,1.2s
W18A LR LR
comp=Z,18µm,20.0s
J37A Redenius Farm, 38.94 347 P P 03 22 48.5 -2.3
baz=162,SNR=10
I40A Norwalk 38.94 351 P P 03 22 48.3 -2.5
baz=167,SNR=25
RTLL Cerro Villicun 38.97 161⇓eP P 03 22 50.8 -0.5
I41A Arkdale 38.99 352 P P 03 22 48.7 -2.5
baz=168,SNR=32
S22A 4UR Ranch, Cre 39.02 329 P P 03 22 53.0 +1.1
baz=140,SNR=54
S22A 4UR Ranch, Cre 39.02 329 eP P 03 22 52.9 +1.0
comp=Z,186nm,1.5s
S22A LR LR
comp=Z,15µm,21.0s
I39A Houston 39.05 350 P P 03 22 49.3 -2.5
baz=166,SNR=14
NCB Newcomb 39.06 10 eP P 03 22 51.5 -0.4
comp=Z,103nm,1.4s
NCB LR LR
comp=Z,10µm,18.0s
ZON Zonda 39.10 161⇓eP P 03 22 52.5 +0.1
H43A Windswept, Lux 39.13 354 P P 03 22 50.0 -2.4
baz=172,SNR=32
H43A Windswept, Lux 39.13 354 eP P 03 22 50.4 -2.0
comp=Z,204nm,1.0s
H43A LR LR
comp=Z,12µm,22.0s
J36A Seneca 1, Swea 39.13 346 P P 03 22 50.3 -2.1
baz=161,SNR=42
Q24A Divide 39.13 332 P P 03 22 53.4 +0.5
baz=143,SNR=22
Q24A Divide 39.13 332 eP P 03 22 50.1 -2.8
comp=Z,332nm,1.6s
Q24A LR LR
comp=Z,9µm,21.0s
RTLS Leoncito 39.14 162⇓eP P 03 22 53.9 +0.9
HNH Hanover 39.16 12 eP P 03 22 53.2 +0.5
comp=Z,94nm,1.0s
H42A Shiocton 39.25 353 P P 03 22 50.8 -2.6
baz=171,SNR=17
H42A Shiocton 39.25 353 eP P 03 22 50.9 -2.6
comp=Z,225nm,1.5s
H42A LR LR
comp=Z,18µm,18.0s
SADO Sadowa 39.28 4 eP P 03 22 52.1 -1.5
comp=Z,177nm,1.5s
SADO LR LR
comp=Z,21µm,21.0s
X16A Lo Mia Camp, P 39.31 321 eP P 03 22 55.6 +1.3
comp=Z,70nm,1.2s
X16A LR LR
comp=Z,23µm,19.0s
I38A Scanlan Farm, 39.38 349 P P 03 22 51.8 -2.8
baz=165,SNR=8.4
OGNE Ogallala 39.41 337 P P 03 22 55.0 +0.1
baz=149,SNR=22
OGNE Ogallala 39.41 337 eP P 03 22 55.2 +0.3
comp=Z,793nm,1.5s
OGNE LR LR
comp=Z,7µm,18.0s
RTCV Cerro Valdivia 39.44 161⇓eP P 03 22 55.6 +0.4
H41A Junction City 39.50 352 P P 03 22 52.8 -2.7
baz=169,SNR=17
H41A Junction City 39.50 352 eP P 03 22 53.0 -2.5
comp=Z,409nm,2.0s
H41A LR LR
comp=Z,11µm,20.0s
MVCO Mesa Verde 39.50 327 P P 03 22 56.9 +1.0
baz=137,SNR=109
MVCO Mesa Verde 39.50 327 eP P 03 22 57.0 +1.0
comp=Z,649nm,1.8s
MVCO LR LR
comp=Z,11µm,19.0s
AUSP Uspallata 39.51 162⇓eP P 03 22 57.3 +1.3
I37A Lemond, Waseca 39.58 348 P P 03 22 53.6 -2.5
baz=163,SNR=12
H40A Chili 39.62 351 P P 03 22 53.9 -2.5
baz=168,SNR=36
LONY Lake Ozonia 39.64 9 P P 03 22 55.4 -1.3
baz=192,SNR=15
LONY Lake Ozonia 39.64 9 eP P 03 22 56.0 -0.6
comp=Z,210nm,1.5s
LONY LR LR
comp=Z,15µm,19.0s
VT1 Waterbury 39.67 11 eP P 03 22 57.1 +0.1
comp=Z,253nm,1.1s
I36A Fitzsimmons Fa 39.71 347 P P 03 22 54.6 -2.6
baz=162,SNR=7.7
PLVO Plevna 39.72 6 eP P 03 22 56.4 -0.9
comp=Z,175nm,1.2s
PLVO LR LR
comp=Z,27µm,21.0s
LBNH Lisbon 39.75 12 P P 03 22 56.3 -1.3
baz=197
LBNH Lisbon 39.75 12 eP P 03 22 58.5 +1.0
comp=Z,210nm,1.4s
LBNH LR LR
comp=Z,10µm,18.0s
LBNH Lisbon 39.75 12 eP P 03 22 58.6 +1.0
LBNH pmax pmax
comp=Z,210nm,1.3s
ROCH El Roble 39.75 165⇑iP P 03 22 57.8 -0.2
ROC1 El Roble 39.76 165 eP P 03 22 57.9 -0.2
comp=Z,248nm,0.8s
ROC1 El Roble 39.76 165⇓eP P 03 22 58.1 +0.1
113A Mohawk Valley, 39.80 317 eP P 03 22 59.1 +0.9
comp=Z,292nm,1.6s
113A LR LR
comp=Z,15µm,20.0s
H39A Augusta 39.81 350 P P 03 22 55.6 -2.5
baz=166,SNR=34
G43A Wallace 39.90 354 P P 03 22 56.2 -2.6
baz=172,SNR=30
G43A Wallace 39.90 354 eP P 03 22 56.3 -2.6
comp=Z,93nm,1.0s
G43A LR LR
comp=Z,11µm,20.0s
CPUP Villa Florida 39.95 143 P P 03 22 58.5 -0.9
comp=Z,40nm,0.9s,baz=331,slow=8.4,SNR=48
CPUP LR LR 03 42 33.1
comp=Z,30µm,19.7s,baz=326,slow=41
CPUP Villa Florida 39.95 143 eP P 03 22 58.2 -1.3
comp=Z,65nm,1.0s
CPUP Villa Florida 39.95 143⇑iP P 03 22 57.0 -2.5
G42A Mountain 39.97 354 P P 03 22 56.8 -2.6
baz=171,SNR=45
G42A Mountain 39.97 354 eP P 03 22 56.5 -2.8
comp=Z,283nm,1.4s
G42A LR LR
comp=Z,13µm,18.0s
H38A Maiden Rock 39.99 349 P P 03 22 57.2 -2.4
baz=165,SNR=33
WUAZ Wupatki 39.99 322 P P 03 23 01.2 +1.3
baz=132,SNR=32
WUAZ Wupatki 39.99 322 eP P 03 23 01.2 +1.3
comp=Z,71nm,1.0s
WUAZ LR LR
comp=Z,15µm,18.0s
Y14A Wickenburg 40.00 319 eP P 03 23 00.7 +0.8
comp=Z,257nm,1.8s
Y14A LR LR
comp=Z,13µm,18.0s
FRNY Flat Rock 40.01 10 eP P 03 22 59.2 -0.5
comp=Z,365nm,1.9s
FRNY LR LR
comp=Z,14µm,19.0s
ISCO Idaho Springs 40.02 332 P P 03 23 00.8 +0.6
baz=143,SNR=73
ISCO Idaho Springs 40.02 332 eP P 03 23 00.8 +0.6
comp=Z,279nm,1.6s
ISCO LR LR
comp=Z,5µm,20.0s
ISCO Idaho Springs 40.02 332 eP P 03 23 00.8 +0.6
ISCO pmax pmax
comp=Z,280nm,1.6s
H37A Dierke Farm, C 40.02 348 P P 03 22 57.1 -2.7
baz=164,SNR=10
G41A Antigo 40.02 353 P P 03 22 57.2 -2.7
baz=170,SNR=17
ECSD EROS Data Cent 40.09 344 P P 03 22 58.1 -2.3
baz=158,SNR=46
ECSD EROS Data Cent 40.09 344 eP P 03 22 58.2 -2.3
comp=Z,323nm,1.8s
ECSD LR LR
comp=Z,18µm,22.0s
F45A CMU Biological 40.16 357 P P 03 22 58.8 -2.1
baz=175
SMCO Snowmass 40.18 330 eP P 03 23 02.6 +0.8
comp=Z,184nm,1.4s
SMCO LR LR
comp=Z,7µm,21.0s
F46A Macinaw City C 40.21 358 P P 03 22 59.0 -2.3
baz=177
G40A Rib Lake 40.22 352 P P 03 22 59.1 -2.4
baz=168,SNR=54
PV01 Paradox Valley 40.22 328 eP P 03 23 02.8 +1.0
comp=Z,285nm,2.0s
H36A Jessenland, He 40.23 347 P P 03 22 59.2 -2.3
baz=162,SNR=31
CLCH Cerro Calan 40.28 164⇑iP P 03 23 00.9 -1.3
FCH Farellones 40.28 164⇑iP P 03 23 02.7 +0.2
PV15 Paradox Valley 40.33 328 eP P 03 23 04.0 +1.2
comp=Z,264nm,1.3s
PV02 Paradox Valley 40.36 328 eP P 03 23 04.1 +1.0
comp=Z,154nm,1.2s
G39A Holcombe 40.38 351 P P 03 23 00.6 -2.3
baz=167,SNR=87
G38A Ridgeland 40.39 350 P P 03 23 00.3 -2.5
baz=166,SNR=51
TCA Tanti 40.41 156 eP P 03 23 02.4 -0.9
F43A Flat Rock, Esc 40.42 355 P P 03 23 00.5 -2.6
baz=173,SNR=12
I33A Coleman 40.43 344 P P 03 23 00.8 -2.4
baz=158
F42A Maple Grove Fa 40.44 354 P P 03 23 00.9 -2.4
baz=171
PV03 Paradox Valley 40.45 327 eP P 03 23 04.6 +0.8
comp=Z,87nm,1.0s
PV05 Paradox Valley 40.46 327 eP P 03 23 04.5 +0.6
comp=Z,264nm,1.5s
AAGR Agrelo 40.48 162⇓eP P 03 23 04.7 +0.8
PV07 Paradox Valley 40.48 328 eP P 03 23 05.1 +1.1
comp=Z,240nm,1.4s
F44A Big Bay de Noc 40.51 356 P P 03 23 01.3 -2.5
baz=174,SNR=18
F41A Three Lakes 40.53 353 P P 03 23 01.5 -2.6
baz=170,SNR=39
H35A Sunnyside Ranc 40.54 347 P P 03 23 01.8 -2.4
baz=161,SNR=52
WVL Waterville 40.57 14 eP P 03 23 04.6 +0.2
comp=Z,114nm,1.1s
PV04 Paradox Valley 40.59 328 eP P 03 23 05.7 +0.9
comp=Z,161nm,1.2s
I32A Karley and Nic 40.60 343 P P 03 23 02.3 -2.3
baz=157,SNR=7.4
SPMN Marine on St. 40.62 349 P P 03 23 02.1 -2.6
baz=164,SNR=45
SPMN Marine on St. 40.62 349 eP P 03 23 02.0 -2.7
comp=Z,133nm,0.9s
SPMN LR LR
comp=Z,13µm,20.0s
PV10 Paradox Valley 40.65 327 eP P 03 23 06.0 +0.5
comp=Z,119nm,1.1s
GLA Glamis 40.69 317 P P 03 23 06.7 +1.1
baz=126,SNR=26
GLA Glamis 40.69 317 eP P 03 23 07.1 +1.5
comp=Z,314nm,1.6s
GLA LR LR
comp=Z,11µm,22.0s
GLA Glamis 40.69 317 eP P 03 23 07.1 +1.5
GLA pmax pmax
comp=Z,310nm,1.6s
H34A Spellman Lake, 40.74 346 P P 03 23 03.6 -2.1
baz=160,SNR=17
PV09 Paradox Valley 40.79 328 eP P 03 23 07.4 +0.8
E45A Wooded Hills, 40.81 357 P P 03 23 04.4 -1.9
baz=176
G36A St. Michael 40.81 348 P P 03 23 03.8 -2.6
baz=163,SNR=13
F40A Park Falls 40.84 352 P P 03 23 04.1 -2.5
baz=168,SNR=55
COWI Conover 40.89 353 eP P 03 23 05.1 -2.0
comp=Z,286nm,1.8s
COWI LR LR
comp=Z,15µm,19.0s
Y12C Blythe 40.90 318 P P 03 23 07.0 -0.3
baz=126,SNR=19
Y12C Blythe 40.90 318 eP P 03 23 08.6 +1.4
comp=Z,217nm,1.6s
Y12C LR LR
comp=Z,16µm,18.0s
I31A Royce, Wessing 40.91 342 P P 03 23 05.0 -2.2
baz=155
MRA San Martin 40.93 158⇓eP P 03 23 07.0 -0.6
AVIZ Vizcacheras 40.94 162⇓eP P 03 23 09.1 +1.5
E43A Lone Tree Farm 40.95 355 P P 03 23 05.3 -2.2
baz=173,SNR=24
F39A Loretta 40.96 351 P P 03 23 04.9 -2.7
baz=167,SNR=19
G35A Watkins 40.96 347 P P 03 23 04.9 -2.7
baz=162
PDMCI Parker Dam,Lak 40.97 319 P P 03 23 08.1 +0.2
baz=127,SNR=6.4
H33A Prehn Over Nor 41.00 345 P P 03 23 05.9 -2.1
baz=158,SNR=39
H32A Carlson Farm, 41.03 344 P P 03 23 06.0 -2.2
baz=157,SNR=48
N23A Red Feather La 41.04 333 P P 03 23 09.1 +0.5
baz=143,SNR=31
N23A Red Feather La 41.04 333 eP P 03 23 09.2 +0.5
comp=Z,246nm,1.6s
N23A LR LR
comp=Z,8µm,22.0s
F37A Hinrichs Farm, 41.06 349 P P 03 23 06.0 -2.4
baz=165,SNR=21
E42A Champion 41.09 354 P P 03 23 06.5 -2.2
baz=172,SNR=23
E44A Grand Marais A 41.12 356 P P 03 23 06.9 -1.9
baz=175,SNR=20
PHWY Pilot Hill 41.15 334 eP P 03 23 10.1 +0.5
comp=Z,314nm,1.8s
PHWY LR LR
comp=Z,8µm,20.0s
U15A North Rim 41.15 323 eP P 03 23 11.0 +1.4
comp=Z,189nm,1.4s
U15A LR LR
comp=Z,19µm,18.0s
F38A Pierce - Schro 41.16 350 P P 03 23 06.9 -2.2
baz=166,SNR=49
TRQ Mont Tremblant 41.21 8 eP P 03 23 08.9 -0.8
E41A Kenton 41.23 353 P P 03 23 07.2 -2.6
baz=170,SNR=26
G34A Benson 41.25 346 P P 03 23 07.4 -2.5
baz=160,SNR=11
W13A Hualapai Mount 41.29 320 eP P 03 23 12.2 +1.4

comp=Z,303nm,1.9s
W13A LR LR
comp=Z,12μm,18.0s
H31A Wolsey 41.30 343 P **P** 03 23 08.3 -2.2
baz=156,SNR=11
SWSC Sam W. Stewart 41.30 316 P **P** 03 23 11.6 +1.0
baz=124,SNR=20
PKME Peaks-Kenny Pk 41.31 14 P **P** 03 23 08.2 -2.2
baz=200
PKME Peaks-Kenny Pk 41.31 14 *eP* **P** 03 23 07.0 -3.5
comp=Z,106nm,1.0s
PKME LR LR
comp=Z,10μm,22.0s
E40A Wakefield 41.33 352 P **P** 03 23 08.4 -2.2
baz=169,SNR=59
E39A Mellen 41.35 352 P **P** 03 23 07.9 -2.9
baz=168,SNR=76
IKP In-Ko-Pah, Jac 41.35 315 P **P** 03 23 12.4 +1.2
baz=124,SNR=10
F36A Milaca 41.37 348 P **P** 03 23 07.9 -3.1
baz=163,SNR=46
G33A Ortonville 41.40 345 P **P** 03 23 08.6 -2.6
baz=159,SNR=19
SUSD Miller 41.41 342 P **P** 03 23 08.9 -2.5
baz=155,SNR=11
RPN Rapa Nui 41.46 217 P **P** 03 23 12.6 +0.6
comp=Z,71nm,0.9s,baz=75,slow=16,SNR=2.9
RPN LR LR 03 35 49.1
comp=Z,22μm,19.9s,baz=41,slow=30
RPN Rapa Nui 41.46 217 *eP* **P** 03 23 12.6 +0.6
comp=Z,600nm,1.4s
GO05 HualaæØ 41.47 167 *eP* **P** 03 23 11.5 -0.4
GO05 HualaæØ 41.47 167 *iP* **P** 03 23 11.2 -0.8
O20A White River Ci 41.55 330 P **P** 03 23 13.0 +0.2
baz=140,SNR=24
O20A White River Ci 41.55 330 *eP* **P** 03 23 13.7 +0.9
comp=Z,142nm,1.3s
O20A LR LR
comp=Z,8μm,20.0s
IRM Iron Mountain 41.55 318 P **P** 03 23 13.9 +1.2
baz=126,SNR=31
NEE2 Needles Airpor 41.57 319 P **P** 03 23 13.4 +0.6
baz=127
F35A Swanville 41.58 347 P **P** 03 23 10.1 -2.6
baz=162
F34A Alexandria 41.68 347 P **P** 03 23 11.2 -2.3
baz=161,SNR=12
MONP2 Monument Peak 41.71 315 P **P** 03 23 14.7 +0.5
baz=124,SNR=8.7
E38A The Farm, Brul 41.73 351 P **P** 03 23 11.0 -2.9
baz=166,SNR=21
G32A Webster 41.74 344 P **P** 03 23 11.5 -2.5
baz=157,SNR=69
BAR Barrett 41.77 315 *eP* **P** 03 23 17.0 +2.5
comp=Z,117nm,1.5s
BAR LR LR
comp=Z,8μm,22.0s
D41A Chassel 41.78 354 P **P** 03 23 12.1 -2.2
baz=171,SNR=33
E37A Wrenshall 41.84 350 P **P** 03 23 11.9 -2.8
baz=165
PKCU Pink Cliffs 41.84 324 *eP* **P** 03 23 17.1 +1.8
comp=Z,193nm,1.3s
PKCU LR LR
comp=Z,20μm,19.0s
KNB Kanab 41.86 323 *eP* **P** 03 23 16.7 +1.4
comp=Z,103nm,1.1s
KNB LR LR
comp=Z,18μm,18.0s
KNB Kanab 41.86 323 *eP* **P** 03 23 16.7 +1.4
KNB pmax pmax
comp=Z,100nm,1.0s
G31A Conde 41.91 343 P **P** 03 23 12.6 -2.8
baz=156,SNR=5.2
E36A McGregor 41.95 349 P **P** 03 23 13.2 -2.5
baz=164,SNR=48
F33A 5 Mile Ranch, 41.97 346 P **P** 03 23 12.9 -2.9
baz=159,SNR=50
SRU San Rafael Swe 41.98 327 *eP* **P** 03 23 17.0 +0.7
comp=Z,237nm,1.2s
SRU LR LR
comp=Z,16μm,21.0s
SRU San Rafael Swe 41.98 327 *eP* **P** 03 23 17.0 +0.7
SRU pmax pmax
comp=Z,240nm,1.2s
BELC Belle Mtn. Jos 42.04 317 P **P** 03 23 17.4 +0.6
baz=125,SNR=52
LDFC Landfair 42.08 319 *eP* **P** 03 23 18.8 +1.8
comp=Z,130nm,1.3s
LDFC LR LR
comp=Z,17μm,19.0s
LCMT Little Creek M 42.11 322 *eP* **P** 03 23 18.5 +1.1
comp=Z,126nm,1.5s
LCMT LR LR
comp=Z,14μm,18.0s
PFO Pinyon Flats O 42.13 316 P **P** 03 23 18.3 +0.8
baz=124,SNR=27
PFO Pinyon Flats O 42.13 316 *eP* **P** 03 23 18.4 +0.8
comp=Z,205nm,1.7s
PFO LR LR
comp=Z,9μm,18.0s
PFO Pinyon Flats O 42.13 316 *eP* **P** 03 23 18.4 +0.8
PFO pmax pmax
comp=Z,210nm,1.7s
RFA San Rafael 42.16 163 *eP* **P** 03 23 18.2 +0.6
MTPU Mount Pierson 42.16 324 *eP* **P** 03 23 18.9 +0.9
comp=Z,189nm,1.8s
MTPU LR LR
comp=Z,20μm,18.0s
109C Camp Elliot, M 42.19 315 P **P** 03 23 18.7 +0.9
baz=123,SNR=6.5
CPE Camp Elliot 42.19 315 *eP* **P** 03 23 19.2 +1.4
comp=Z,193nm,1.4s
CPE LR LR
comp=Z,8μm,19.0s
P18A Preston Nutter 42.20 328 *eP* **P** 03 23 17.2 -1.0
comp=Z,86nm,1.1s
P18A LR LR
comp=Z,17μm,19.0s
F32A Veblen 42.21 345 P **P** 03 23 15.3 -2.5
baz=158
E35A Pequot Lakes 42.21 348 P **P** 03 23 15.5 -2.3
baz=162,SNR=12
RWWY Rawlins 42.25 332 *eP* **P** 03 23 18.3 -0.2
comp=Z,264nm,1.4s
RWWY LR LR
comp=Z,11μm,21.0s
GMRC Granite Mounta 42.26 318 P **P** 03 23 19.7 +1.1
baz=126,SNR=27
E34A Wadena 42.34 347 P **P** 03 23 16.3 -2.6
baz=161,SNR=17
P17A Butcher Ranch, 42.35 327 *eP* **P** 03 23 20.0 +0.7
comp=Z,139nm,1.2s
P17A LR LR
comp=Z,16μm,22.0s
SZCU Shurtz Canyon 42.40 323 *eP* **P** 03 23 20.9 +1.1
comp=Z,132nm,1.4s
SZCU LR LR
comp=Z,15μm,18.0s
D37A Cotton 42.41 350 P **P** 03 23 17.2 -2.3
baz=165,SNR=62
MSU Marysvale 42.48 325 *eP* **P** 03 23 21.4 +0.9
MSU Marysvale 42.48 325 *eP* **P** 03 23 21.4 +0.9
TMUT Trail Mountain 42.48 327 *eP* **P** 03 23 21.1 +0.6
comp=Z,68nm,1.3s
TMUT LR LR
comp=Z,11μm,20.0s
F31A Hecla 42.50 344 P **P** 03 23 17.6 -2.6
baz=157
E33A Westby DABS, E 42.52 346 P **P** 03 23 17.6 -2.8
baz=160,SNR=10.0
CCUT Cedar City 42.53 323 *eP* **P** 03 23 22.3 +1.4
comp=Z,194nm,1.7s
CCUT LR LR
comp=Z,15μm,18.0s
D36A Goodland 42.56 349 P **P** 03 23 17.6 -3.1
baz=164,SNR=22
MURC Murrieta 42.64 316 P **P** 03 23 22.1 +0.5
baz=123,SNR=20
D35A Remer 42.64 348 P **P** 03 23 17.7 -3.7
baz=163,SNR=20
C40A Isle Royale Na 42.69 353 P **P** 03 23 19.6 -2.0
baz=170,SNR=60
TCRU Three Creeks R 42.70 325 PFAKE 03 23 30.0 +7.7
TCRU LR LR
comp=Z,21μm,20.0s
K22A Casper 42.70 334 P **P** 03 23 22.7 +0.6
baz=144,SNR=35
K22A Casper 42.70 334 *eP* **P** 03 23 22.4 +0.3
comp=Z,189nm,1.4s
K22A LR LR
comp=Z,13μm,20.0s
C39A Grand Marais 42.71 352 P **P** 03 23 19.3 -2.5
baz=169
HEC Hector,Ludlow 42.74 318 P **P** 03 23 23.4 +1.0
baz=125,SNR=12
C38A Sawbill Land. 42.77 351 P **P** 03 23 19.3 -3.1
baz=167,SNR=35
BBRC Big Bear Solar 42.81 317 P **P** 03 23 25.8 +2.6
baz=124
TUQ Turquoise Moun 42.82 319 P **P** 03 23 23.9 +0.8
baz=126
E32A Braaten, Kindr 42.86 345 P **P** 03 23 20.2 -2.9
baz=158,SNR=6.2
D34A Park Rapids 42.88 347 P **P** 03 23 20.7 -2.6
baz=161,SNR=34
RSSD Black Hills 42.89 337 P **P** 03 23 24.2 +0.5
baz=148
RSSD Black Hills 42.89 337 *eP* **P** 03 23 24.2 +0.5
comp=Z,375nm,1.6s
RSSD LR LR
comp=Z,8μm,21.0s
RSSD Black Hills 42.89 337 *eP* **P** 03 23 24.2 +0.5
RSSD pmax pmax
comp=Z,370nm,1.6s
C37A Embarrass 42.92 350 P **P** 03 23 21.3 -2.3
baz=166,SNR=51
PQI Presque Isle 42.95 15 *eP* **P** 03 23 24.2 +0.4
comp=Z,165nm,1.3s
SHPR Sheep Range 42.98 320 *eP* **P** 03 23 25.6 +1.1
comp=Z,275nm,1.7s
SHPR LR LR
comp=Z,10μm,18.0s
EYMN Ely 43.03 351 P **P** 03 23 21.4 -3.1
baz=167,SNR=33
EYMN Ely 43.03 351 *eP* **P** 03 23 21.8 -2.7
comp=Z,444nm,2.0s
EYMN LR LR
comp=Z,13μm,20.0s
E31A Nome 43.04 345 P **P** 03 23 21.8 -2.8
baz=157,SNR=13
C36A Pine Crest Far 43.06 350 P **P** 03 23 22.4 -2.3
baz=165,SNR=69
D33A AnnSam, Waubun 43.08 347 P **P** 03 23 22.6 -2.3
baz=160,SNR=41
RRX Edison Barstow 43.21 317 P **P** 03 23 26.7 +0.6
baz=125
C35A Jirik Farms, M 43.22 349 P **P** 03 23 23.4 -2.6
baz=163,SNR=44
MPU Maple Canyon 43.22 327 *eP* **P** 03 23 27.3 +0.9
comp=Z,132nm,1.5s
MPU LR LR
comp=Z,20μm,22.0s
SCI2 San Clemente I 43.26 314 P **P** 03 23 23.2 -3.3
baz=122
BFSC Mount Baldy Ra 43.31 316 P **P** 03 23 27.4 +0.3
baz=124,SNR=11
SHOC Shoshone, Teco 43.33 319 P **P** 03 23 28.2 +1.0
baz=126,SNR=13
GSC Goldstone, Bar 43.33 318 P **P** 03 23 27.7 +0.5
baz=125,SNR=39
GSC Goldstone, Bar 43.33 318 *eP* **P** 03 23 28.1 +0.9
comp=Z,219nm,1.7s
GSC LR LR
comp=Z,10μm,19.0s
GSC Goldstone, Bar 43.33 318 *eP* **P** 03 23 28.1 +0.9
GSC pmax pmax
comp=Z,220nm,1.7s
D32A Dogwood Acres, 43.36 346 P **P** 03 23 24.6 -2.5
baz=159
C34A RKJ Ranch, Bem 43.36 348 P **P** 03 23 24.4 -2.8
baz=162,SNR=11
CIS Catalina Islan 43.39 315 P **P** 03 23 28.8 +1.1
baz=122,SNR=8.5
NLU North Lily Min 43.42 327 *eP* **P** 03 23 28.6 +0.6
comp=Z,152nm,1.6s
NLU LR LR
comp=Z,20μm,18.0s
D31A Mcclaflin, Tow 43.45 345 P **P** 03 23 25.2 -2.7
baz=158
FMP Fort Macarthur 43.47 315 P **P** 03 23 28.4 +0.1
baz=122
PSUT Pine Spring 43.47 324 *eP* **P** 03 23 29.5 +1.1
comp=Z,104nm,1.3s
PSUT LR LR
comp=Z,13μm,21.0s
JLU Jordanelle 43.54 328 *eP* **P** 03 23 29.7 +0.6
comp=Z,160nm,1.5s
JLU LR LR
comp=Z,18μm,20.0s
MWC Mount Wilson 43.58 316 *eP* **P** 03 23 30.6 +1.2
comp=Z,266nm,1.6s
MWC LR LR
comp=Z,5μm,18.0s
MWC Mount Wilson 43.58 316 *eP* **P** 03 23 30.6 +1.2
MWC pmax pmax
comp=Z,270nm,1.6s
PASC Pasadena Art C 43.64 316 *eP* **P** 03 23 31.0 +1.3
comp=Z,236nm,1.5s
PASC LR LR
comp=Z,5μm,19.0s
C33A Trail 43.65 347 P **P** 03 23 26.9 -2.6
baz=161
CTU Camp Tracy 43.77 328 *eP* **P** 03 23 31.5 +0.7
comp=Z,137nm,1.2s
CTU LR LR
comp=Z,19μm,20.0s
DECC Green Verdugo 43.79 316 P **P** 03 23 31.8 +1.0
baz=123,SNR=6.9
B35A Bob, Littlefor 43.80 349 P **P** 03 23 28.3 -2.5
baz=164,SNR=11
C32A Crookston 43.88 346 P **P** 03 23 28.9 -2.5
baz=160
TCUT Toone Canyon 43.89 328 *eP* **P** 03 23 32.6 +0.8
comp=Z,469nm,1.5s
EDW2 Edwards Air Fo 43.90 317 P **P** 03 23 32.1 +0.3
baz=124,SNR=26
TPNV Topopah Spring 43.94 320 P **P** 03 23 32.9 +0.7
baz=127,SNR=37
TPNV Topopah Spring 43.94 320 *eP* **P** 03 23 33.4 +1.2
comp=Z,266nm,1.8s
TPNV LR LR
comp=Z,10μm,20.0s
TPNV Topopah Spring 43.94 320 *eP* **P** 03 23 33.4 +1.2
TPNV pmax pmax
comp=Z,270nm,1.8s
DUG Dugway, Tooele 44.00 326 P **P** 03 23 32.8 +0.2
baz=134,SNR=31
DUG Dugway, Tooele 44.00 326 *eP* **P** 03 23 33.2 +0.6
comp=Z,239nm,1.8s
DUG LR LR
comp=Z,22μm,18.0s
DUG Dugway, Tooele 44.00 326 *eP* **P** 03 23 33.2 +0.6
DUG pmax pmax
comp=Z,240nm,1.8s
LRMC Laurel Mtn Rad 44.02 317 P **P** 03 23 33.2 +0.4
baz=125,SNR=6.9
FURC Furnace Creek, 44.05 319 P **P** 03 23 33.8 +1.0
baz=126,SNR=38
B33A Robert and Kas 44.09 348 P **P** 03 23 31.0 -2.1
baz=161
B34A Aery, Baudette 44.10 348 P **P** 03 23 30.8 -2.3
baz=163,SNR=56
SNCC San Nicolas Is 44.10 314 P **P** 03 23 32.1 -1.3
baz=121
SNCC San Nicolas Is 44.10 314 PFAKE 03 23 50.0 +17
SNCC LR LR
comp=Z,7μm,20.0s
C31A Landman Farms, 44.15 345 P **P** 03 23 31.5 -2.0
baz=158,SNR=24
AGMN Agassiz Nation 44.18 347 P **P** 03 23 31.4 -2.3
baz=161,SNR=41
AGMN Agassiz Nation 44.18 347 *eP* **P** 03 23 31.4 -2.3
comp=Z,63nm,0.9s
AGMN LR LR
comp=Z,9μm,20.0s
BW06 Boulder Array 44.19 331 P **P** 03 23 33.8 -0.4
baz=140,SNR=19
BW06 Boulder Array 44.19 331 *eP* **P** 03 23 34.0 -0.2
comp=Z,195nm,1.7s
BW06 LR LR
comp=Z,13μm,19.0s
PD31 Pinedale Array 44.19 331 *eP* **P** 03 23 34.0 -0.2
PD31 *ePP* **PcP** 03 25 18.6 -0.3
PDAR Pinedale Array 44.19 331 P **P** 03 23 33.9 -0.3
comp=Z,15nm,1.0s,baz=128,slow=9.6,SNR=50
PDAR PcP **PcP** 03 25 18.6 -0.3
comp=Z,3.4nm,0.8s,baz=146,slow=0.3,SNR=2.1
PDAR LR LR 03 44 24.3
comp=Z,12μm,19.3s,baz=140,slow=39
MPMC Manual Prospec 44.22 318 P **P** 03 23 33.8 -0.6
baz=125,SNR=34
BLG Laguna Peak, P 44.22 315 P **P** 03 23 33.2 -1.1
baz=122
OSI Osito Audit: C 44.25 316 P **P** 03 23 32.5 -2.1
baz=123
OSI Osito Audit: C 44.25 316 PFAKE 03 23 50.0 +15
OSI LR LR
comp=Z,6μm,18.0s
HWUT Hardware Ranch 44.33 329 *eP* **P** 03 23 35.5 +0.2
comp=Z,151nm,1.1s
HWUT LR LR
comp=Z,15μm,22.0s
R11A Troy Canyon, C 44.39 322 P **P** 03 23 36.5 +0.7
baz=129,SNR=51
R11A Troy Canyon, C 44.39 322 *eP* **P** 03 23 36.7 +0.9
comp=Z,114nm,1.6s
R11A LR LR
comp=Z,15μm,19.0s
DAC Darwin (Calif) 44.41 318 *eP* **P** 03 23 36.5 +0.4
comp=Z,37nm,1.1s
DAC LR LR
comp=Z,10μm,18.0s
DAC Darwin (Calif) 44.41 318 *eP* **P** 03 23 36.5 +0.4
DAC pmax pmax
comp=Z,37nm,1.1s
B32A Ashes, Strandq 44.42 347 P **P** 03 23 33.7 -2.0
baz=160,SNR=66
SCZ2 Santa Cruz Isl 44.57 314 P **P** 03 23 36.7 -0.3
baz=121
SPUT South Promonto 44.58 328 *eP* **P** 03 23 37.6 +0.4
comp=Z,323nm,1.6s
SPUT LR LR
comp=Z,17μm,21.0s
ARVC Arvin 44.60 316 P **P** 03 23 37.8 +0.4
baz=123,SNR=16
BGU Big Grassy Mou 44.62 327 *eP* **P** 03 23 37.9 +0.3
comp=Z,298nm,1.7s
BGU LR LR
comp=Z,21μm,18.0s
ISA Isabella, Lake 44.66 317 P **P** 03 23 38.5 +0.6
baz=124,SNR=12
ISA Isabella, Lake 44.66 317 *eP* **P** 03 23 39.2 +1.4
comp=Z,148nm,1.6s
ISA LR LR
comp=Z,6μm,22.0s
ISA Isabella, Lake 44.66 317 *eP* **P** 03 23 39.2 +1.4
ISA pmax pmax
comp=Z,150nm,1.6s
A33A Warroad 44.68 348 P **P** 03 23 35.6 -2.1
baz=162,SNR=45
MDND Maddock 44.69 344 P **P** 03 23 36.5 -1.4
baz=156,SNR=39
MDND Maddock 44.69 344 *eP* **P** 03 23 36.7 -1.2
comp=Z,602nm,1.3s
MDND LR LR
comp=Z,11μm,20.0s
B31A Greenbush Farm 44.71 346 P **P** 03 23 35.7 -2.3
baz=158,SNR=14
SPB Sao Paulo 44.81 131 *eP* **P** 03 23 38.3 -0.8
comp=Z,211nm,1.8s
SPB LR LR
comp=Z,37μm,19.0s
CWC Cottonwood Cre 44.83 318 P **P** 03 23 39.9 +0.6
baz=125
SBC Santa Barbara 44.85 315 P **P** 03 23 39.5 +0.1
baz=122
A32A Rocking H Ranc 44.90 347 P **P** 03 23 37.2 -2.3
baz=160,SNR=17
AHID Auburn Hatcher 44.94 330 *eP* **P** 03 23 40.4 +0.2
comp=Z,139nm,1.4s
AHID LR LR
comp=Z,14μm,22.0s
A31A Linda, St. Vin 45.08 346 P **P** 03 23 38.6 -2.2
baz=159
HVU Hansel Valley 45.08 328 *eP* **P** 03 23 41.2 0.0
comp=Z,344nm,1.9s
HVU LR LR
comp=Z,20μm,21.0s
HVU Hansel Valley 45.08 328 *eP* **P** 03 23 41.3 0.0
HVU pmax pmax
comp=Z,340nm,1.9s
PKM Mcpherson Peak 45.16 315 P **P** 03 23 42.3 +0.3
baz=122,SNR=7.4
VES Vestal, Richgr 45.17 317 P **P** 03 23 42.5 +0.7
baz=123,SNR=30
REDW Red Top Meadow 45.26 331 *eP* **P** 03 23 42.5 -0.2
comp=Z,421nm,1.6s
REDW LR LR
comp=Z,20μm,20.0s
TIN Tinemaha, Big 45.28 319 P **P** 03 23 42.7 -0.2
baz=125
SNOW Snow King Moun 45.29 331 *eP* **P** 03 23 43.2 +0.2
comp=Z,215nm,1.3s
SNOW LR LR
comp=Z,17μm,22.0s
LOHW Long Hollow 45.33 331 *eP* **P** 03 23 43.4 +0.1
comp=Z,95nm,1.3s
LOHW LR LR
comp=Z,15μm,19.0s
TPAW Teton Pass 45.40 331 *eP* **P** 03 23 43.9 0.0
comp=Z,121nm,1.1s
TPAW LR LR
comp=Z,19μm,19.0s
MOOW Moose Ponds 45.50 331 *eP* **P** 03 23 44.5 -0.1
comp=Z,81nm,1.3s
MOOW LR LR
comp=Z,17μm,20.0s
SMMC Simmler 45.51 316 P **P** 03 23 44.5 -0.1
baz=122,SNR=6.2
FXWY Fox Creek 45.55 331 *eP* **P** 03 23 44.7 -0.3
comp=Z,87nm,1.5s
IMW Indian Meadow 45.70 331 *eP* **P** 03 23 46.3 0.0
comp=Z,88nm,1.3s
IMW LR LR
comp=Z,17μm,19.0s
RLMT Red Lodge 45.87 334 P **P** 03 23 47.3 -0.2
baz=142,SNR=26
RLMT Red Lodge 45.87 334 *eP* **P** 03 23 47.5 0.0
comp=Z,164nm,1.4s
RLMT LR LR
comp=Z,15μm,22.0s
LAO LASA Array 45.88 337 P **P** 03 23 46.9 -0.5
baz=146,SNR=44
LAO LASA Array 45.88 337 *eP* **P** 03 23 47.1 -0.3
comp=Z,552nm,1.6s
LAO LR LR
comp=Z,9μm,20.0s
H17A Grant Village 45.91 332 P **P** 03 23 48.6 +0.8
baz=139,SNR=16
H17A Grant Village 45.91 332 *eP* **P** 03 23 48.8 +0.9
comp=Z,188nm,1.6s
H17A LR LR
comp=Z,21μm,22.0s
PAGB Antelope Grade 45.91 316 *eP* **P** 03 23 48.8 +1.1
comp=Z,171nm,1.3s
PAGB LR LR
comp=Z,4μm,21.0s
YPP Pitchstone Pla 45.92 332 *eP* **P** 03 23 48.5 +0.5
comp=Z,70nm,1.1s
YPP LR LR
comp=Z,13μm,21.0s
LKWY Lake 45.95 332 PFAKE 03 24 00.0 +12
LKWY LR LR
comp=Z,8μm,20.0s
MLAC Mammoth, Mammo 46.01 319 P **P** 03 23 48.9 +0.2
baz=125
ULM Lac du Bonnet 46.03 348 P **P** 03 23 46.1 -2.2
comp=Z,42nm,0.9s,baz=160,slow=7.8,SNR=44
ULM PcP **PcP** 03 25 25.2 +0.4
comp=Z,11nm,0.6s,baz=191,slow=4.3,SNR=4.6
ULM LR LR 03 45 47.9
comp=Z,4μm,18.4s,baz=158,slow=40
ULM Lac du Bonnet 46.03 348 *eP* **P** 03 23 45.8 -2.6
comp=Z,93nm,1.0s
ULM LR LR
comp=Z,8μm,20.0s
ULM Lac du Bonnet 46.03 348 *eP* **P** 03 23 45.8 -2.6
ULM pmax pmax
comp=Z,93nm,1.0s
NV11 Mina Array Sit 46.04 321 *eP* **P** 03 23 49.9 +1.0
comp=Z,8.7nm,1.2s
NV11 LR LR
comp=Z,1μm,21.0s

YFT	**Old Faithful**	**46.07 332**	*e*P	**P**	**03 23 50.8 +1.7**	
	comp=Z,173nm,1.2s					
YFT			LR	LR		
	comp=Z,14μm,20.0s					
OMMB	**Old Mammoth Mi**	**46.10 319**	*e*P	**P**	**03 23 50.4 +0.8**	
	comp=Z,130nm,1.3s					
OMMB			LR	LR		
	comp=Z,12μm,19.0s					
NV01	**Mina Array Sit**	**46.13 320**	*e*P	**P**	**03 23 49.6 -0.1**	
NV01			*e*PcP	**PcP**	**03 25 26.5 +0.8**	
NVAR	**Mina Array Bea**	**46.13 320**	P	**P**	**03 23 50.1 +0.5**	
	comp=Z,32nm,0.9s,baz=132,slow=7.8,SNR=94					
NVAR			PcP	**PcP**	**03 25 26.5 +0.8**	
	comp=Z,6.8nm,0.8s,baz=138,slow=3.8,SNR=2.3					
NVAR			LR	LR	03 43 34.1	
	comp=Z,11μm,18.8s,baz=230,slow=37					
MDPB	**Devils Postpil**	**46.16 319**	*e*P	**P**	**03 23 50.9 +0.9**	
	comp=Z,79nm,0.9s					
MDPB			LR	LR		
	comp=Z,10μm,19.0s					
YNR	**Norris Junctio**	**46.20 332**	*e*P	**P**	**03 23 51.6 +1.5**	
	comp=Z,34nm,0.9s					
YNR			LR	LR		
	comp=Z,14μm,21.0s					
YMR	**Madison River**	**46.29 332**	*e*P	**P**	**03 23 51.9 +1.1**	
	comp=Z,256nm,1.4s					
YMR			LR	LR		
	comp=Z,11μm,20.0s					
YHH	**Holmes Hill**	**46.33 332**	*e*P	**P**	**03 23 52.2 +0.9**	
	comp=Z,75nm,1.1s					
YHH			LR	LR		
	comp=Z,11μm,19.0s					
KVN	**Kaiserville**	**46.37 321**	*e*P	**P**	**03 23 51.9 +0.4**	
	comp=Z,72nm,1.2s					
KVN			LR	LR		
	comp=Z,12μm,19.0s					
KVN	**Kaiserville**	**46.37 321**	*e*P	**P**	**03 23 51.9 +0.4**	
KVN			pmax	pmax		
	comp=Z,72nm,1.2s					
RYN	**Ryan**	**46.38 321**	*e*P	**P**	**03 23 52.6 +1.0**	
	comp=Z,68nm,1.2s					
RYN			LR	LR		
	comp=Z,13μm,18.0s					
YHB	**Horse Butte**	**46.46 332**	*e*P	**P**	**03 23 53.3 +1.1**	
	comp=Z,307nm,1.9s					
YHB			LR	LR		
	comp=Z,10μm,22.0s					
PMPB	**Monarch Peak**	**46.54 316**	*e*P	**P**	**03 23 54.1 +1.3**	
	comp=Z,364nm,2.0s					
PMPB			LR	LR		
	comp=Z,7μm,22.0s					
GCMT	**Greycliff**	**46.57 334**	*e*P	**P**	**03 23 52.9 -0.1**	
QLMT	**Earthquake Lak**	**46.63 332**	*e*P	**P**	**03 23 54.7 +1.1**	
DGMT	**Dagmar**	**46.66 340**	P	**P**	**03 23 53.4 -0.1**	
	baz=150,SNR=9.2					
DGMT	**Dagmar**	**46.66 340**	*e*P	**P**	**03 23 53.7 +0.3**	
	comp=Z,708nm,2.0s					
DGMT			LR	LR		
	comp=Z,11μm,21.0s					
BMN	**Battle Mountai**	**46.68 323**	*e*P	**P**	**03 23 54.4 +0.5**	
	comp=Z,217nm,1.4s					
BMN			LR	LR		
	comp=Z,12μm,19.0s					
BMN	**Battle Mountai**	**46.68 323**	*e*P	**P**	**03 23 54.4 +0.5**	
BMN			pmax	pmax		
	comp=Z,220nm,1.4s					
WAKR	**Walker**	**46.90 320**	*e*P	**P**	**03 23 56.6 +0.9**	
	comp=Z,76nm,1.1s					
WAKR			LR	LR		
	comp=Z,15μm,18.0s					
YERR	**Yerington**	**47.05 321**	PFAKE		03 24 10.0 +13	
YERR			LR	LR		
	comp=Z,8μm,18.0s					
HLID	**Hailey**	**47.20 328**	P	**P**	**03 23 57.9 +0.1**	
	baz=134,SNR=32					
HLID	**Hailey**	**47.20 328**	*e*P	**P**	**03 23 58.0 +0.1**	
	comp=Z,267nm,1.8s					
HLID			LR	LR		
	comp=Z,18μm,21.0s					
CMB	**Columbia Colle**	**47.25 319**	*e*P	**P**	**03 23 58.6 +0.4**	
	comp=Z,127nm,1.8s					
CMB			LR	LR		
	comp=Z,9μm,22.0s					
CMB	**Columbia Colle**	**47.25 319**	*e*P	**P**	**03 23 58.6 +0.4**	
CMB			pmax	pmax		
	comp=Z,130nm,1.8s					
PLCA	**Paso Flores**	**47.26 168**	P	**P**	**03 23 58.2 -0.1**	
	comp=Z,45nm,1.0s,baz=8.7,slow=9.3,SNR=32					
PLCA			PcP	**PcP**	**03 25 29.4 0.0**	
	comp=Z,7.9nm,0.9s,baz=13,slow=5.0,SNR=2.2					
PLCA			LR	LR	03 40 03.6	
	comp=Z,11μm,20.1s,baz=27,slow=31					
PLCA	**Paso Flores**	**47.26 168**	*e*P	**P**	**03 23 58.2 -0.1**	
	comp=Z,674nm,2.0s					
PLCA			*e*PcP	**PcP**	**03 25 29.4 0.0**	
PLCA	**Paso Flores**	**47.26 168**	*e*P	**P**	**03 23 58.3 0.0**	
PLCA			pmax	pmax		
	comp=Z,670nm,2.0s					
SAO	**San Andreas Ge**	**47.27 317**	*e*P	**P**	**03 24 02.0 +3.6**	
	comp=Z,59nm,1.4s					
SAO			LR	LR		
	comp=Z,9μm,22.0s					
SAO	**San Andreas Ge**	**47.27 317**	*e*P	**P**	**03 24 02.0 +3.6**	
SAO			pmax	pmax		
	comp=Z,59nm,1.4s					
BOZ	**Bozeman (W)**	**47.30 332**	P	**P**	**03 23 58.8 +0.1**	
	baz=139,SNR=96					
BOZ	**Bozeman (W)**	**47.30 332**	*e*P	**P**	**03 23 58.8 +0.1**	
	comp=Z,84nm,1.0s					
BOZ			LR	LR		
	comp=Z,10μm,20.0s					
BOZ	**Bozeman (W)**	**47.30 332**	*e*P	**P**	**03 23 58.8 +0.1**	
BOZ			pmax	pmax		
	comp=Z,84nm,1.0s					
MCMT	**McKenzie Canyo**	**47.31 331**	*e*P	**P**	**03 23 59.5 +0.6**	
TRQA	**Tornquist**	**47.33 158**	*e*P	**P**	**03 23 58.3 -0.5**	
	comp=Z,146nm,1.1s					
TRQA			LR	LR		
	comp=Z,14μm,20.0s					
TRQA	**Tornquist**	**47.33 158**	*e*P	**P**	**03 23 58.3 -0.5**	
PNTR	**Pine Nut**	**47.34 320**	*e*P	**P**	**03 23 59.9 +0.8**	
	comp=Z,63nm,1.2s					
PNTR			LR	LR		
	comp=Z,8μm,18.0s					
VCNR	**Virginia City**	**47.49 321**	*e*P	**P**	**03 24 04.6 +4.4**	
	comp=Z,44nm,1.1s					
VCNR			LR	LR		
	comp=Z,6μm,21.0s					
PAHR	**Pah Rah Range**	**47.56 321**	*e*P	**P**	**03 24 01.6 +0.8**	
	comp=Z,148nm,1.7s					
PAHR			LR	LR		
	comp=Z,10μm,19.0s					
DLMT	**Dillon**	**47.58 331**	*e*P	**P**	**03 24 01.5 +0.6**	
	comp=Z,95nm,1.3s					
DLMT			LR	LR		
	comp=Z,15μm,22.0s					
RUBR	**Rubicon Trail**	**47.67 320**	PFAKE		03 24 10.0 +8.3	
RUBR			LR	LR		
	comp=Z,12μm,19.0s					
RDG13	**Poverty Ridge**	**47.82 317**	*e*P	**P**	**03 24 04.4 +1.7**	
	comp=Z,206nm,1.7s					
RDG13			LR	LR		
	comp=Z,6μm,20.0s					
MFID	**Camas Ranch**	**47.84 327**	*e*P	**P**	**03 24 03.1 +0.2**	
	comp=Z,227nm,1.6s					
MFID			LR	LR		
	comp=Z,10μm,19.0s					
LRM	**Limekiln Ridge**	**47.85 332**	*e*P	**P**	**03 24 03.1 0.0**	
RCBR	**Riachuelo**	**47.91 103**	*e*P	**P**	**03 24 03.2 -0.5**	
	comp=Z,170nm,1.7s					
RCBR			LR	LR		
	comp=Z,22μm,20.0s					
AFDM	**Forest Hills D**	**48.13 319**	*e*P	**P**	**03 24 05.4 +0.3**	
	comp=Z,25nm,1.1s					
AFDM			LR	LR		
	comp=Z,5μm,19.0s					
HRY	**Holter Researc**	**48.24 333**	*e*P	**P**	**03 24 05.9 +0.1**	
BEKR	**Beckworth**	**48.26 321**	*e*P	**P**	**03 24 06.7 +0.4**	
	comp=Z,47nm,1.2s					
BEKR			LR	LR		
	comp=Z,7μm,21.0s					
EGMT	**Eagleton**	**48.37 336**	P	**P**	**03 24 06.7 0.0**	
	baz=143,SNR=48					
EGMT	**Eagleton**	**48.37 336**	*e*P	**P**	**03 24 06.8 0.0**	
	comp=Z,172nm,1.1s					
EGMT			LR	LR		
	comp=Z,8μm,20.0s					
WVOR	**Wild Horse Val**	**48.77 325**	*e*P	**P**	**03 24 10.3 +0.3**	
	comp=Z,205nm,1.1s					
WVOR			LR	LR		
	comp=Z,11μm,20.0s					
WVOR	**Wild Horse Val**	**48.77 325**	*e*P	**P**	**03 24 10.3 +0.3**	
WVOR			pmax	pmax		
	comp=Z,210nm,1.1s					
ORV	**Oroville**	**48.81 320**	*e*P	**P**	**03 24 10.9 +0.6**	
	comp=Z,198nm,1.5s					
ORV			LR	LR		
	comp=Z,8μm,21.0s					
ORV	**Oroville**	**48.81 320**	*e*P	**P**	**03 24 10.9 +0.6**	
ORV			pmax	pmax		
	comp=Z,200nm,1.5s					
MCCM	**Marconi Confer**	**48.96 317**	*e*P	**P**	**03 24 15.7 +4.3**	
	comp=Z,140nm,1.4s					
MCCM			LR	LR		
	comp=Z,6μm,22.0s					
GDXM	**Geysers**	**49.25 318**	PFAKE		03 24 30.0 +16	
GDXM			LR	LR		
	comp=Z,8μm,21.0s					
J08A	**Circle Bar Ran**	**49.26 326**	*e*P	**P**	**03 24 13.4 -0.4**	
	comp=Z,46nm,1.1s					
J08A			LR	LR		
	comp=Z,12μm,18.0s					
MSO	**Missoula**	**49.29 332**	P	**P**	**03 24 13.5 -0.4**	
	baz=137,SNR=56					
MSO	**Missoula**	**49.29 332**	*e*P	**P**	**03 24 13.7 -0.3**	
	comp=Z,112nm,1.4s					
MSO			LR	LR		
	comp=Z,13μm,19.0s					
O03D	**Paynes Creek**	**49.42 320**	P	**P**	**03 24 14.0 -1.0**	
	baz=124,SNR=17					
MOD	**Modoc Plateau**	**49.42 323**	*e*P	**P**	**03 24 14.4 -0.7**	
	comp=Z,71nm,1.5s					
MOD			LR	LR		
	comp=Z,11μm,19.0s					
HOPS	**Hopland Field**	**49.54 318**	*e*P	**P**	**03 24 17.3 +1.5**	
	comp=Z,87nm,1.3s					
HOPS			LR	LR		
	comp=Z,7μm,21.0s					
BMO	**Blue Mountains**	**49.59 328**	*e*P	**P**	**03 24 14.9 -1.4**	
	comp=Z,52nm,1.5s					
BMO			LR	LR		
	comp=Z,7μm,21.0s					
BMO	**Blue Mountains**	**49.59 328**	*e*P	**P**	**03 24 14.9 -1.4**	
BMO			pmax	pmax		
	comp=Z,52nm,1.5s					
WDC	**Whiskeytown Da**	**50.05 320**	*e*P	**P**	**03 24 17.8 -1.8**	
	comp=Z,83nm,1.9s					
WDC			LR	LR		
	comp=Z,5μm,21.0s					
WDC	**Whiskeytown Da**	**50.05 320**	*e*P	**P**	**03 24 17.8 -1.8**	
WDC			pmax	pmax		
	comp=Z,83nm,1.9s					
JTMT	**Jette**	**50.12 332**	*e*P	**P**	**03 24 20.3 0.0**	
	comp=Z,76nm,1.3s					
JTMT			LR	LR		
	comp=Z,15μm,19.0s					
KCPM	**Cahto Peak**	**50.24 319**	*e*P	**P**	**03 24 22.6 +1.3**	
	comp=Z,289nm,1.6s					
KCPM			LR	LR		
	comp=Z,6μm,21.0s					
K05A	**Summer Lake**	**50.26 324**	*e*P	**P**	**03 24 22.1 +0.6**	
	comp=Z,132nm,1.5s					
K05A			LR	LR		
	comp=Z,11μm,21.0s					
M04C	**Macdoel**	**50.28 322**	P	**P**	**03 24 20.6 -1.0**	
	baz=125					
I07A	**Izee**	**50.29 326**	*e*P	**P**	**03 24 21.4 -0.2**	
	comp=Z,27nm,1.1s					
I07A			LR	LR		
	comp=Z,11μm,20.0s					
F10A	**Beach Ranch, E**	**50.31 329**	*e*P	**P**	**03 24 21.1 -0.6**	
	comp=Z,208nm,1.9s					
F10A			LR	LR		
	comp=Z,15μm,20.0s					
N02D	**Trinity Center**	**50.37 321**	P	**P**	**03 24 20.7 -1.5**	
	baz=124					
KMRM	**Mail Ridge**	**50.60 319**	*e*P	**P**	**03 24 25.0 +1.0**	
	comp=Z,379nm,1.5s					
KMRM			LR	LR		
	comp=Z,10μm,22.0s					
M02C	**Callahan**	**50.69 321**	P	**P**	**03 24 22.9 -1.7**	
	baz=124					
K04D	**Chiloquin, OR**	**50.72 323**	P	**P**	**03 24 22.7 -2.2**	
	baz=126					
G08A	**Pilot Rock**	**50.77 327**	*e*P	**P**	**03 24 24.9 -0.2**	
	comp=Z,136nm,1.6s					
G08A			LR	LR		
	comp=Z,7μm,22.0s					
YBH	**Yreka Blue Hor**	**50.79 321**	P	**P**	**03 24 24.0 -1.4**	
	comp=Z,10nm,1.1s,baz=126,slow=8.0,SNR=13					
YBH			LR	LR	03 47 35.7	
	comp=Z,8μm,19.8s,baz=133,slow=38					
YBH	**Yreka Blue Hor**	**50.79 321**	*e*P	**P**	**03 24 24.1 -1.3**	
	comp=Z,16nm,1.0s					
YBH			LR	LR		
	comp=Z,10μm,20.0s					
YBH	**Yreka Blue Hor**	**50.79 321**	*e*P	**P**	**03 24 24.1 -1.3**	
YBH			pmax	pmax		
	comp=Z,17nm,1.0s					
J05D	**Fort Rock, OR**	**50.80 324**	P	**P**	**03 24 24.9 -0.6**	
	baz=127,SNR=20					
SCHQ	**Schefferville**	**50.85 12**	P	**P**	**03 24 24.1 -1.4**	
	comp=Z,72nm,0.9s,baz=196,slow=6.6,SNR=19					
SCHQ	**Schefferville**	**50.85 12**	*e*P	**P**	**03 24 24.1 -1.4**	
	comp=Z,108nm,1.0s					
SCHQ			LR	LR		
	comp=Z,13μm,22.0s					
WALA	**Waterton Lakes**	**50.93 334**	*e*P	**P**	**03 24 26.4 +0.1**	
	comp=Z,246nm,2.0s					
WALA			LR	LR		
	comp=Z,13μm,18.0s					
PINE	**Pine Mountain**	**50.93 325**	*e*P	**P**	**03 24 26.4 -0.1**	
	comp=Z,172nm,1.9s					
PINE			LR	LR		
	comp=Z,14μm,19.0s					
KHMM	**Horse Mountain**	**50.96 320**	*e*P	**P**	**03 24 27.5 +0.7**	
	comp=Z,463nm,1.5s					
KHMM			LR	LR		
	comp=Z,8μm,22.0s					
JCC	**Jacoby Creek,**	**51.12 320**	*e*P	**P**	**03 24 31.9 +4.2**	
	comp=Z,460nm,1.7s					
JCC			LR	LR		
	comp=Z,6μm,22.0s					
E09A	**Wood Farm, Sta**	**51.14 329**	*e*P	**P**	**03 24 27.9 +0.1**	
	comp=Z,99nm,1.1s					
E09A			LR	LR		
	comp=Z,15μm,21.0s					
J04D	**Umpqua Nationa**	**51.29 323**	P	**P**	**03 24 28.9 -0.4**	
	baz=126					
HUMO	**Hull Mountain**	**51.43 322**	*e*P	**P**	**03 24 30.2 0.0**	
	comp=Z,61nm,1.8s					
HUMO			LR	LR		
	comp=Z,9μm,18.0s					
I05D	**Terrebonne, OR**	**51.49 325**	P	**P**	**03 24 30.4 -0.2**	
	baz=127,SNR=19					
FFC	**Flin Flon**	**51.57 346**	*e*P	**P**	**03 24 30.0 -0.9**	
	comp=Z,210nm,1.9s					
FFC			LR	LR		
	comp=Z,10μm,19.0s					
FFC	**Flin Flon**	**51.57 346**	*e*P	**P**	**03 24 30.0 -0.9**	
FFC			pmax	pmax		
	comp=Z,210nm,1.9s					
L02D	**Cave Junction,**	**51.58 321**	P	**P**	**03 24 31.5 +0.3**	
	baz=124,SNR=7.0					
E08A	**Dider Farm, El**	**51.60 328**	*e*P	**P**	**03 24 31.1 -0.2**	
	comp=Z,94nm,1.4s					
E08A			LR	LR		
	comp=Z,12μm,18.0s					
G06A	**Carlson Farm,**	**51.65 326**	*e*P	**P**	**03 24 32.7 +1.0**	
	comp=Z,450nm,1.8s					
G06A			LR	LR		
	comp=Z,14μm,20.0s					
F07A	**Phinny Hill Vi**	**51.67 327**	*e*P	**P**	**03 24 32.3 +0.4**	
	comp=Z,138nm,1.4s					
F07A			LR	LR		
	comp=Z,8μm,18.0s					
HAWA	**Hanford**	**51.78 328**	*e*P	**P**	**03 24 32.6 -0.1**	
	comp=Z,89nm,1.5s					
HAWA			LR	LR		
	comp=Z,7μm,20.0s					
I04A	**Tendick Farm,**	**51.79 324**	P	**P**	**03 24 32.1 -0.7**	
	baz=126					
NEW	**Newport**	**51.83 331**	P	**P**	**03 24 32.3 -0.7**	
	baz=134,SNR=21					
NEW	**Newport**	**51.83 331**	*e*P	**P**	**03 24 31.6 -1.4**	
	comp=Z,34nm,1.1s					
NEW			LR	LR		
	comp=Z,9μm,20.0s					
NEW	**Newport**	**51.83 331**	*e*P	**P**	**03 24 31.6 -1.4**	
NEW			pmax	pmax		
	comp=Z,34nm,1.1s					
D08A	**Wollman Farm,**	**51.90 329**	*e*P	**P**	**03 24 32.1 -1.4**	
	comp=Z,29nm,1.1s					
D08A			LR	LR		
	comp=Z,12μm,21.0s					
KBO	**Bosley Butte**	**52.00 321**	*e*P	**P**	**03 24 35.5 +1.1**	
	comp=Z,823nm,1.8s					
KBO			LR	LR		
	comp=Z,6μm,21.0s					
G05D	**Wamic, OR**	**52.03 326**	P	**P**	**03 24 35.5 +0.9**	
	baz=128,SNR=31					
E07A	**Sunnyside**	**52.06 328**	PFAKE		03 24 50.0 +15	
E07A			LR	LR		
	comp=Z,10μm,18.0s					
C09A	**Chrisman Ranch**	**52.07 330**	*e*P	**P**	**03 24 35.0 +0.2**	
	comp=Z,29nm,1.1s					
C09A			LR	LR		
	comp=Z,10μm,22.0s					
H04A	**Detroit Lake**	**52.18 325**	*e*P	**P**	**03 24 35.7 -0.1**	
	comp=Z,73nm,1.1s					
H04A			LR	LR		
	comp=Z,10μm,21.0s					
I03D	**Drain, OR**	**52.29 323**	P	**P**	**03 24 36.1 -0.3**	
	baz=125					
KEBM	**Edson Butte**	**52.42 322**	*e*P	**P**	**03 24 39.2 +1.6**	
	comp=Z,305nm,1.5s					
KEBM			LR	LR		
	comp=Z,9μm,20.0s					
G04A	**Mulino**	**52.66 325**	*e*P	**P**	**03 24 39.1 -0.1**	
COR	**Corvallis**	**52.77 324**	*e*P	**P**	**03 24 41.4 +1.4**	
	comp=Z,206nm,1.5s					
COR			LR	LR		
	comp=Z,6μm,20.0s					
COR	**Corvallis**	**52.77 324**	*e*P	**P**	**03 24 41.4 +1.4**	
COR			pmax	pmax		
	comp=Z,210nm,1.5s					
LTY	**Liberty**	**52.94 328**	*e*P	**P**	**03 24 41.7 +0.4**	
	comp=Z,100nm,1.4s					
LTY			LR	LR		
	comp=Z,10μm,21.0s					
B08A	**Colville Reser**	**52.97 330**	*e*P	**P**	**03 24 41.0 -0.5**	
	comp=Z,36nm,1.1s					
B08A			LR	LR		
	comp=Z,9μm,21.0s					
G03D	**McMinnville, O**	**53.11 325**	P	**P**	**03 24 42.7 +0.2**	
	baz=126					
CHRN	**Cochrane**	**53.21 172**	*e*P	**P**	**03 24 43.8 +0.7**	
	comp=Z,26nm,1.0s					
LON	**Longmire**	**53.23 327**	*e*P	**P**	**03 24 43.3 -0.1**	
	comp=Z,131nm,1.8s					
LON	**Longmire**	**53.23 327**	*e*P	**P**	**03 24 43.3 -0.1**	
LON			pmax	pmax		
	comp=Z,130nm,1.7s					
C06D	**Leavenworth**	**53.48 329**	P	**P**	**03 24 44.8 -0.4**	
	baz=130					
F04D	**Rainier, OR**	**53.48 326**	P	**P**	**03 24 43.9 -1.4**	
	baz=127					
D05A	**Enumclaw**	**53.59 327**	*e*P	**P**	**03 24 46.2 +0.1**	
	comp=Z,220nm,1.3s					
D05A			LR	LR		
	comp=Z,15μm,22.0s					
F03A	**Seaside**	**53.70 325**	*e*P	**P**	**03 24 48.4 +1.5**	
	comp=Z,241nm,1.3s					
PNT	**Penticton**	**53.75 331**	*e*P	**P**	**03 24 47.8 +0.6**	
PNT	**Penticton**	**53.75 331**	*e*P	**P**	**03 24 47.8 +0.6**	
E03A	**Lebam**	**54.07 326**	*e*P	**P**	**03 24 49.6 +0.1**	
	comp=Z,251nm,1.5s					
E03A			LR	LR		
	comp=Z,10μm,19.0s					
B06A	**Marblemount**	**54.16 329**	*e*P	**P**	**03 24 50.2 0.0**	
	comp=Z,82nm,1.0s					
B06A			LR	LR		
	comp=Z,8μm,20.0s					
GNW	**Green Mountain**	**54.27 327**	*e*P	**P**	**03 24 49.5 -1.5**	
B05A	**Bryant**	**54.32 328**	P	**P**	**03 24 50.2 -1.1**	
	baz=129,SNR=9.2					
A04D	**Lummi Island**	**54.92 329**	P	**P**	**03 24 55.5 -0.1**	
	baz=128,SNR=33					
PGC	**Sidney**	**55.27 328**	*e*P	**P**	**03 24 58.8 +0.7**	
	comp=Z,100nm,1.3s					
PGC			LR	LR		
	comp=Z,7μm,22.0s					
LLLB	**Lillooet**	**55.71 331**	*e*P	**P**	**03 25 01.6 +0.2**	
	comp=Z,146nm,1.4s					
LLLB			LR	LR		
	comp=Z,8μm,21.0s					
RKT	**Rikitea**	**58.52 239**	*e*P	**P**	**03 25 22.9 +1.2**	
	comp=Z,131nm,1.0s					
RKT			*e*S	**S**	**03 33 24.3 -1.4**	
	comp=Z,12μm,30.5s					
RKT			*e*LQ	LQ	03 40 14.3	
	comp=Z,16μm,27.8s					
RKT			*e*LR	LR	03 42 43.0	
	comp=Z,22μm,28.0s,baz=68					
SACV	**Santiago Islan**	**58.64 76**	*e*P	**P**	**03 25 25.6 +2.9**	
	comp=Z,280nm,1.5s					
SACV			LR	LR		
	comp=Z,3μm,20.0s					
ROSA	**Rosais**	**59.14 48**	*e*P	**P**	**03 25 28.6 +2.8**	
	comp=Z,475nm,1.2s					
TAOE	**Nuku Hiva Isla**	**59.14 256**	*e*P	**P**	**03 25 27.4 +1.1**	
	comp=Z,472nm,1.2s					
TAOE			*e*S	**S**	**03 33 33.5 -0.8**	
	comp=Z,9μm,27.4s					
TAOE			*e*LQ	LQ	03 40 30.2	
	comp=Z,5μm,32.9s					
TAOE			*e*LR	LR	03 42 59.2	
	comp=Z,32μm,30.0s,baz=79					
TAOE	**Nuku Hiva Isla**	**59.14 256**	*e*P	**P**	**03 25 30.1 +3.8**	
	comp=Z,238nm,1.2s					
TAOE			LR	LR		
	comp=Z,10μm,20.0s					
BBB	**Bella Bella**	**59.76 329**	*e*P	**P**	**03 25 31.0 +1.2**	
	comp=Z,95nm,1.3s					
BBB			LR	LR		
	comp=Z,8μm,21.0s					
EFI	**East Falkland**	**60.64 163**	PFAKE		03 25 50.0 +14	
EFI			LR	LR		
	comp=Z,13μm,19.0s					
EFI	**East Falkland**	**60.64 163**	*e*P	**P**	**03 25 36.0 +0.2**	
EFI			pmax	pmax		
	comp=Z,79nm,1.1s					
EFI			MLR	MLR		
	comp=Z,10μm,18.0s					
IVI	**Ivigtut**	**61.30 18**	*e*P	**P**	**03 25 40.8 +0.7**	
	comp=Z,128nm,1.4s					
IVI			LR	LR		
	comp=Z,10μm,19.0s					
YKA	**Yellowknife Ar**	**61.62 344**	P	**P**	**03 25 41.5 -0.8**	
	comp=Z,38nm,0.8s,baz=138,slow=6.7,SNR=259					
YKA			LR	LR	03 54 25.8	
	comp=Z,672nm,19.7s,baz=132,slow=38					
YKA			PKPPKP	P'P'df	03 54 42.4 -13	
	comp=Z,1.1nm,1.1s,baz=339,slow=3.6,SNR=5.7					
YKB5	**Yellowknife Ar**	**61.62 344**	*e*P	**P**	**03 25 41.5 -0.8**	
YKB5			*e*		03 54 42.4	
YKW3	**Yellowknife Ar**	**61.67 344**	*e*P	**P**	**03 25 41.7 -0.9**	
	comp=Z,71nm,0.8s					
YKW3			LR	LR		
	comp=Z,7μm,20.0s					
NRS	**Narsarsuaq**	**62.14 19**	*i* P	**P**	**03 25 44.9 -0.9**	
	comp=Z,5μm,19.0s					
NRS	**Narsarsuaq**	**62.14 19**	PFAKE		03 26 00.0 +14	
NRS			LR	LR		
	comp=Z,5μm,19.0s					
DIB	**Dawson Inlet,**	**62.55 329**	*e*P	**P**	**03 25 49.9 +1.3**	
	comp=Z,90nm,1.4s					
DIB			LR	LR		
	comp=Z,6μm,21.0s					
CRAG	**Craig**	**64.04 331**	*e*P	**P**	**03 25 58.9 +0.4**	
	comp=Z,73nm,1.3s					
CRAG			LR	LR		
	comp=Z,7μm,20.0s					
WRAK	**Wrangell Islan**	**64.17 332**	PFAKE		03 26 10.0 +11	
WRAK			LR	LR		
	comp=Z,9μm,21.0s					
DLBC	**Dease Lake**	**64.26 335**	*e*P	**P**	**03 26 00.7 +0.6**	
	comp=Z,64nm,0.9s					
DLBC			LR	LR		
	comp=Z,14μm,19.0s					
SFJD	**Kangerlussuaq**	**65.24 13**	P	**P**	**03 26 04.5 -1.7**	
	comp=Z,44nm,1.1s,baz=216,slow=7.5,SNR=9.6					
SFJD			LR	LR	03 56 17.4	

comp=Z,5μm,19.3s,baz=218,slow=38
SFJD Kangerlussuaq 65.24 13 *i* P **P 03 26 04.2 -1.9**
comp=Z,7μm,18.0s
SFJD Kangerlussuaq 65.24 13 *e*P **P 03 26 04.2 -1.9**
comp=Z,82nm,1.2s
JIS Juneau Island 66.09 333 *e*P **P 03 26 12.7 +0.9**
comp=Z,55nm,1.0s
JIS LR LR
comp=Z,10μm,20.0s
MACI Morro de la Ar 66.37 62 *e*P **P 03 26 14.7 +0.2**
comp=Z,558nm,1.2s
PMOZ Porto Moniz, M 66.40 57 *e*P **P 03 26 15.3 +0.8**
comp=Z,336nm,1.6s
PMOZ *e*S S 03 35 17.6 +13
PMOZ *e*LQ LQ 03 42 46.3
PMOZ *e*LR LR 03 46 09.8
comp=Z,4μm,22.0s
BESE Bessie Mountai 66.46 333 *e*P **P 03 26 15.2 +0.9**
comp=Z,208nm,1.7s
BESE LR LR
comp=Z,10μm,20.0s
PMAR Madeira 66.62 57 *e*P **P 03 26 19.5 +3.5**
comp=Z,123nm,1.5s
ILULI Ilulissat 66.96 12 *i* P **P 03 26 14.6 -2.6**
comp=Z,10μm,23.0s
ILULI Ilulissat 66.96 12 *e*P **P 03 26 15.5 -1.7**
comp=Z,139nm,1.2s
ILULI LR LR
comp=Z,10μm,22.0s
ILULI Ilulissat 66.96 12 *e*P **P 03 26 15.5 -1.7**
ILULI pmax pmax
comp=Z,140nm,1.2s
SKAG Skagway 67.12 334 *e*P **P 03 26 18.2 -0.2**
comp=Z,99nm,1.4s
SKAG LR LR
comp=Z,7μm,21.0s
PMPS Porto Santo 67.16 57 *e*P **P 03 26 19.6 +0.5**
comp=Z,600nm,1.7s
WHY Whitehorse 67.55 335 *e*P **P 03 26 21.4 +0.1**
comp=Z,107nm,1.8s
WHY LR LR
comp=Z,6μm,20.0s
VAH Vaihoa 67.63 251 *e*P **P 03 26 23.2 +0.8**
comp=Z,151nm,1.1s
ANGG Ammassalik, Gr 67.76 18 *e*P **P 03 26 19.8 -2.5**
comp=Z,76nm,1.0s
ANGG LR LR
comp=Z,7μm,22.0s
PMOR Pomariorio Ree 67.84 251 *e*P **P 03 26 24.7 +1.0**
comp=Z,229nm,1.1s
YKU2 Yakutat 69.09 333 PFAKE 03 26 40.0 +9.3
YKU2 LR LR
comp=Z,8μm,19.0s
ASCN Ascension 69.31 101 PFAKE 03 26 50.0 +17
ASCN LR LR
comp=Z,8μm,22.0s
RES Resolute Bay 69.55 357 *e*P **P 03 26 31.5 -1.8**
comp=Z,88nm,1.4s
RES LR LR
comp=Z,17μm,22.0s
RES Resolute Bay 69.55 357 *e*P **P 03 26 31.5 -1.8**
TVO Taravao 69.71 249 *e*P **P 03 26 36.1 +0.7**
comp=Z,24nm,1.0s
TIAR Tiarei 69.75 249 *e*P **P 03 26 36.2 +0.6**
comp=Z,37nm,1.2s
PPTF Pamatai, Papee 69.96 249 PFAKE 03 26 50.0 +13
PPTF LR LR
comp=Z,17μm,19.0s
PPT Papeete 69.97 249 LR LR 03 49 47.3
comp=Z,15μm,20.8s,baz=82,slow=30
PPT2 Papeete2 69.97 249 *e*P **P 03 26 37.8 +0.7**
comp=Z,113nm,1.5s
PPT2 *e*S **S 03 35 46.3 -1.7**
comp=Z,16μm,29.5s
PPT2 *e*SS **SS 03 40 16.7 -0.8**
comp=Z,4μm,30.0s
PPT2 *e*LR LR 03 48 02.2
comp=Z,45μm,26.5s,baz=63
PAE Paea 69.99 249 *e*P **P 03 26 37.7 +0.6**
comp=Z,32nm,1.0s
KULLO Kullorsuaq 70.63 7 *i* P **P 03 26 38.1 -1.9**
comp=Z,276nm,1.6s
comp=Z,10μm,22.0s
HOPE Hope Point 70.82 153 *e*P **P 03 26 41.6 +0.2**
comp=Z,355nm,1.6s
HOPE LR LR
comp=Z,10μm,20.0s
BALM Baldy 70.95 334 PFAKE 03 26 50.0 +7.6
BALM LR LR
comp=Z,9μm,19.0s
DAWY Dawson 71.08 337 *e*P **P 03 26 42.7 -0.3**
comp=Z,46nm,1.0s
DAWY LR LR
comp=Z,12μm,22.0s
CRQM Cirque 71.19 333 *e*P **P 03 26 44.6 +0.7**
comp=Z,58nm,1.0s
CRQM LR LR
comp=Z,9μm,19.0s
INK Inuvik 71.29 342 *e*P **P 03 26 44.2 +0.1**
comp=Z,142nm,1.2s
INK LR LR
comp=Z,20μm,19.0s
INK Inuvik 71.29 342 *e*P **P 03 26 44.2 +0.1**
PMSA Palmer Station 71.38 172 LR LR 03 52 53.6
comp=Z,5μm,20.6s,baz=346,slow=32
TULEG Thule 71.44 3 *e*P **P 03 26 43.2 -1.6**
comp=Z,228nm,1.4s
TULEG LR LR
comp=Z,10μm,20.0s
HULD Heiheiahulu Di 71.63 289 PFAKE 03 27 00.0 +13
HULD LR LR
comp=Z,7μm,19.0s
RAGM Ragged Mountai 71.75 332 *e*P **P 03 26 48.9 +1.8**
comp=Z,234nm,1.5s
RAGM LR LR
comp=Z,11μm,22.0s
STCH Steam Cracks 71.77 289 PFAKE 03 27 00.0 +12
STCH LR LR
comp=Z,6μm,20.0s
PUH Pauahi 71.86 289 *e*P **P 03 26 52.0 +3.4**
comp=Z,157nm,0.9s
NPH North Pit 71.92 289 PFAKE 03 27 00.0 +11
NPH LR LR
comp=Z,5μm,21.0s
UWE Uwekahuna 71.93 289 PFAKE 03 27 00.0 +11
UWE LR LR
comp=Z,5μm,20.0s
SDHHI Sand Hill 71.93 289 PFAKE 03 27 00.0 +11
SDHHI LR LR
comp=Z,4μm,20.0s
BMRM Bremner River 71.94 333 *e*P **P 03 26 49.1 +0.9**
comp=Z,162nm,1.3s
BMRM LR LR
comp=Z,11μm,20.0s
HLP Hilina Pali 71.95 288 PFAKE 03 27 00.0 +11
HLP LR LR
comp=Z,6μm,19.0s
MLH Mauna Loa 72.02 289 PFAKE 03 27 00.0 +10
MLH LR LR
comp=Z,6μm,20.0s
AIN Ainahou 72.09 289 PFAKE 03 27 00.0 +10
AIN LR LR
comp=Z,7μm,20.0s
EGAK Eagle 72.09 337 *e*P **P 03 26 49.3 +0.3**
comp=Z,58nm,1.1s
EGAK LR LR
comp=Z,7μm,19.0s
HMH Humu'ula Sheep 72.11 289 PFAKE 03 27 00.0 +10
HMH LR LR
comp=Z,6μm,20.0s
POHA Pohakuloa 72.16 289 PFAKE 03 27 00.0 +9.4
POHA LR LR
comp=Z,5μm,18.0s
MID Middleton Isla 72.18 331 PFAKE 03 27 00.0 +10
MID LR LR
comp=Z,5μm,20.0s
MLOA Mauna Loa Obse 72.20 289 PFAKE 03 27 00.0 +9.0
MLOA LR LR
comp=Z,6μm,19.0s
MWH Moku'aweowe 72.22 289 PFAKE 03 27 00.0 +8.7
MWH LR LR
comp=Z,6μm,19.0s
SUMG Summit 72.22 13 *i* P **P 03 26 49.1 -1.0**
comp=Z,678nm,1.7s
comp=Z,8μm,22.0s
SUMG Summit 72.22 13 *e*P **P 03 26 47.9 -2.2**
comp=Z,687nm,1.7s
SUMG LR LR
comp=Z,7μm,19.0s
SUMG Summit 72.22 13 *e*P **P 03 26 47.9 -2.2**
EYAK Cordova Ski Ar 72.30 332 *e*P **P 03 26 51.3 +1.0**
comp=Z,247nm,1.7s
EYAK LR LR
comp=Z,11μm,20.0s
HPAH Hawaii Prepara 72.32 289 PFAKE 03 27 00.0 +8.7
HPAH LR LR
comp=Z,6μm,22.0s
HUH Hualalai 72.45 289 PFAKE 03 27 00.0 +7.7
HUH LR LR
comp=Z,7μm,18.0s
DIV Divide 72.53 333 *e*P **P 03 26 54.4 +2.6**
comp=Z,122nm,1.6s
DIV LR LR
comp=Z,10μm,19.0s
KLU Klutina 72.72 333 *e*P **P 03 26 53.1 +0.2**
comp=Z,50nm,1.0s
KLU LR LR
comp=Z,10μm,22.0s
HARP HAARP 72.73 334 *e*P **P 03 26 54.2 +1.3**
HARP LR LR
comp=Z,7μm,21.0s
DOT Dot Lake 72.76 336 *e*P **P 03 26 53.3 +0.3**
comp=Z,198nm,1.2s
DOT LR LR
comp=Z,19μm,18.0s
HLK Haleakala 72.84 290 PFAKE 03 27 10.0 +15
HLK LR LR
comp=Z,5μm,18.0s
SCRK Sand Creek 72.86 336 *e*P **P 03 26 54.3 +0.6**
comp=Z,102nm,1.5s
SCRK LR LR
comp=Z,8μm,20.0s
KHLH Kahului Airpor 73.01 290 PFAKE 03 27 10.0 +15
KHLH LR LR
comp=Z,7μm,20.0s
PAX Paxson 73.08 335 *e*P **P 03 26 55.0 0.0**
comp=Z,234nm,2.0s
PAX LR LR
comp=Z,6μm,22.0s
PAX Paxson 73.08 335 *e*P **P 03 26 55.0 0.0**
BORG Borgarnes 73.10 23 *e*P **P 03 26 55.1 +0.2**
comp=Z,324nm,1.8s
BORG LR LR
comp=Z,6μm,19.0s
BORG Borgarnes 73.10 23 *e*P **P 03 26 55.1 +0.2**
BORG pmax pmax
comp=Z,324nm,1.8s
BORG MLR MLR
comp=Z,6μm,19.0s
RIDG Independ'e Rid 73.11 336 *e*P **P 03 26 55.8 +0.6**
comp=Z,61nm,1.0s
RIDG LR LR
comp=Z,7μm,22.0s
SCM Sheep Creek Mo 73.47 333 *e*P **P 03 26 57.7 +0.3**
comp=Z,346nm,1.8s
SCM *e*S **SKiKP 03 36 29.3 +0.8**
SCM LR LR
comp=Z,7μm,20.0s
SCM Sheep Creek Mo 73.47 333 *e*P **P 03 26 57.7 +0.3**
PMAFR Mafra 73.60 51 *e*P **P 03 26 59.0 +0.5**
comp=Z,192nm,1.8s
PMST Lisbon--Monsan 73.65 51 *e*P **P 03 26 59.5 +0.7**
comp=Z,388nm,1.5s
LIS Lisbon 73.67 51 *e*P **P 03 26 58.9 0.0**
LIS AMb AMB 03 27 04.5
comp=Z,389nm,1.6s
LIS *e*S **S 03 36 30.1 +0.2**
LIS Lisbon 73.67 51 *e*P **P 03 27 00.1 +1.2**
comp=Z,380nm,1.5s
LIS Lisbon 73.67 51 *e*P **P 03 26 58.8 0.0**
LIS *e*S **S 03 36 30.0 +0.2**
PFVI Vila Bisbo 73.77 53 *e*P **P 03 27 00.2 +0.7**
comp=Z,504nm,1.7s
PFVI Vila Bisbo 73.77 53 *e*P **P 03 27 00.6 +1.1**
comp=Z,522nm,1.5s
PFVI LR LR
comp=Z,7μm,21.0s
PTEO Sao Teotonio 73.89 53 *e*P **P 03 27 01.0 +0.8**
comp=Z,316nm,1.7s
SEW Seward 73.89 331 *e*P **P 03 27 01.3 +1.6**
comp=Z,105nm,1.4s
SEW LR LR
comp=Z,5μm,22.0s
SML Sawmill 73.92 333 *e*P **P 03 26 59.8 -0.1**
comp=Z,197nm,1.4s
SML LR LR
comp=Z,6μm,20.0s
SML Sawmill 73.92 333 *e*P **P 03 26 59.8 -0.1**
MORF Marmelete 73.92 53 *e*P **P 03 27 00.3 -0.2**
MORF AMb AMB 03 27 07.2
comp=Z,516nm,1.6s
MORF *e*S **S 03 36 32.9 -0.1**
MORF Marmelete 73.92 53 *e*P **P 03 27 01.2 +0.7**
comp=Z,522nm,1.6s
MORF Marmelete 73.92 53 *e*P **P 03 27 00.3 -0.2**
MORF *e*S **S 03 36 32.8 -0.1**
DHY Denali Highway 73.92 335 *e*P **P 03 26 59.9 -0.2**
comp=Z,56nm,1.7s
DHY LR LR
comp=Z,7μm,21.0s
PNCL Nicolau / Gran 74.10 52 *e*P **P 03 27 02.1 +0.7**
comp=Z,302nm,1.5s
ALMR Almeirim 74.17 51 *e*P **P 03 27 01.8 0.0**
ALMR AMb AMB 03 27 07.2
comp=Z,518nm,1.3s
ALMR *e*S **S 03 36 35.7 +0.3**
ALMR Almeirim 74.17 51 *e*P **P 03 27 02.1 +0.3**
comp=Z,534nm,1.3s
ALMR Almeirim 74.17 51 *e*P **P 03 27 01.7 0.0**
ALMR *e*S **S 03 36 35.7 +0.3**
GHO Glory Hole Cre 74.17 333 *e*P **P 03 27 01.6 +0.2**
comp=Z,53nm,1.0s
GHO LR LR
comp=Z,7μm,20.0s
PMR Palmer 74.21 333 *e*P **P 03 27 01.5 0.0**
comp=Z,83nm,1.5s
PMR LR LR
comp=Z,11μm,20.0s
PMR Palmer 74.21 333 *e*P **P 03 27 01.5 0.0**
HDA Harding Lake 74.22 336 *e*P **P 03 27 01.7 +0.1**
comp=Z,78nm,1.0s
HDA LR LR
comp=Z,8μm,18.0s
MESJ Messejana 74.31 52 *e*P **P 03 27 02.6 0.0**
MESJ AMb AMB 03 27 08.3
comp=Z,203nm,2.0s
MESJ *e*S **S 03 36 37.4 +0.3**
MESJ Messejana 74.31 52 *e*P **P 03 27 03.2 +0.5**
comp=Z,203nm,1.8s
MESJ Messejana 74.31 52 *e*P **P 03 27 02.6 0.0**
MESJ *e*S **S 03 36 37.4 +0.3**
PCAS Casmilo, Conde 74.32 50 *e*P **P 03 27 02.9 +0.2**
comp=Z,584nm,1.6s
RC01 Rabbit Creek A 74.33 332 *e*P **P 03 27 02.5 +0.2**
comp=Z,133nm,1.4s
RC01 LR LR
comp=Z,9μm,20.0s
IL1 Eielson Array 74.33 336 *e*P **P 03 27 01.1 -1.1**
ILAR Eielson Array 74.33 336 P **P 03 27 02.0 -0.2**
comp=Z,10nm,0.8s,baz=111,slow=5.3,SNR=51
ILAR Eielson Array 74.33 336 P **P 03 27 02.0 -0.2**
ILAR pmax pmax
comp=Z,10.0nm,0.9s
ILB Eielson Array 74.33 336 *e*P **P 03 27 02.0 -0.2**
PTOM Tomar 74.34 51 *e*P **P 03 27 03.0 +0.2**
comp=Z,342nm,1.6s
FYU Fort Yukon 74.38 338 PFAKE 03 27 10.0 +7.6
FYU LR LR
comp=Z,10μm,22.0s
PMTG Montargil 74.43 51 *e*P **P 03 27 03.1 -0.2**
comp=Z,263nm,1.6s
PCVE Castro Verde 74.44 53 *e*P **P 03 27 04.1 +0.7**
comp=Z,283nm,1.8s
HON Honolulu 74.48 291 PFAKE 03 27 20.0 +16
HON LR LR
comp=Z,7μm,19.0s
BRLK Bradley Lake 74.49 331 *e*P **P 03 27 03.4 +0.1**
comp=Z,81nm,1.1s
BRLK LR LR
comp=Z,5μm,19.0s
PBDV Barranco-do-Ve 74.49 53 *e*P **P 03 27 04.5 +0.7**
comp=Z,298nm,1.7s
OPA Opana 74.50 291 PFAKE 03 27 20.0 +16
OPA LR LR
comp=Z,8μm,21.0s
KIP Kipapa 74.50 291 PFAKE 03 27 20.0 +16
KIP LR LR
comp=Z,7μm,18.0s
EVO Evora 74.54 52 *e*P **P 03 27 04.3 +0.3**
comp=Z,236nm,1.7s
PBEJ Beja 74.61 52 *e*P **P 03 27 04.8 +0.4**
comp=Z,235nm,1.8s
CCB Clear Creek Bu 74.65 336 *e*P **P 03 27 03.2 -0.9**
comp=Z,76nm,1.8s
CCB LR LR
comp=Z,8μm,19.0s
RND Reindeer 74.67 335 *e*P **P 03 27 04.3 0.0**
comp=Z,254nm,1.6s
RND LR LR
comp=Z,8μm,20.0s
RND Reindeer 74.67 335 *e*P **P 03 27 04.3 0.0**
PVAQ Vaqueiros 74.67 53 *e*P **P 03 27 05.5 +0.7**
comp=Z,253nm,1.8s
PVAQ *e*S **S 03 36 46.2 +5.0**
PVAQ Vaqueiros 74.67 53 *e*LQ LQ 03 46 47.5
PVAQ *e*LR LR 03 50 22.4
comp=Z,8μm,22.0s
PGAV Gavieira, Arco 74.70 48 *e*P **P 03 27 05.6 +0.6**
comp=Z,197nm,1.8s
PGAV *e*S **S 03 36 46.4 +4.9**
PGAV *e*LQ LQ 03 45 34.9
PGAV *e*LR LR 03 50 28.5
comp=Z,6μm,22.0s
WRH Wood River Hil 74.71 336 *e*P **P 03 27 03.9 -0.5**
comp=Z,23nm,1.0s
WRH LR LR
comp=Z,8μm,18.0s
COLA College 74.75 336 *e*P **P 03 27 07.8 +3.2**
comp=Z,40nm,0.9s
COLA LR LR
comp=Z,8μm,18.0s
COLA College 74.75 336 *e*P **P 03 27 07.8 +3.2**
XMAS Kiritimati 74.76 271 PFAKE 03 27 20.0 +14
XMAS LR LR
comp=Z,8μm,19.0s
MCK McKinley 74.81 335 *e*P **P 03 27 05.0 -0.1**
comp=Z,112nm,1.4s
MCK LR LR
comp=Z,5μm,21.0s
MCK McKinley 74.81 335 *e*P **P 03 27 05.0 -0.1**
KDAK Kodiak Island 74.82 329 *e*P **P 03 27 07.3 +2.2**
comp=Z,64nm,1.4s
KDAK LR LR
comp=Z,5μm,22.0s
KDAK Kodiak Island 74.82 329 *e*P **P 03 27 07.3 +2.2**
HOM Homer 74.83 331 PFAKE 03 27 20.0 +15
HOM LR LR
comp=Z,4μm,18.0s
PVIS Viseu 74.85 49 *e*P **P 03 27 05.8 0.0**
comp=Z,238nm,1.6s
PCAB Cabril 74.85 48 *e*P **P 03 27 06.5 +0.7**
comp=Z,162nm,1.8s
VAL Valentia 74.85 38 *e*P P 03 27 24.0 +19
VAL *e*S **S 03 36 43.1 +0.5**
PESTR Estremoz 74.90 51 *e*P **P 03 27 06.5 +0.4**
comp=Z,455nm,1.5s
PESTR Estremoz 74.90 51 *e*P **P 03 27 06.3 +0.2**
comp=Z,101nm,1.0s
PESTR LR LR
comp=Z,4μm,22.0s
SUA Susitna One 74.90 333 *e*P **P 03 27 05.7 0.0**
comp=Z,55nm,0.9s
MDM Murphy Dome 74.93 336 *e*P **P 03 27 05.6 -0.1**
comp=Z,74nm,1.2s
MDM LR LR
comp=Z,9μm,18.0s
POLO Lamas de Olo 74.99 49 *e*P **P 03 27 07.0 +0.3**
comp=Z,106nm,1.6s
PVRL Vila Real 75.04 49 *e*P **P 03 27 07.1 +0.2**
comp=Z,220nm,1.6s
OHAK Old Harbor 75.05 328 *e*P **P 03 27 06.4 -0.1**
comp=Z,118nm,1.4s
OHAK LR LR
comp=Z,6μm,19.0s
PCBR Castelo Branco 75.08 50 *e*P **P 03 27 07.3 +0.2**
comp=Z,256nm,1.6s
MTE Manteigas 75.08 50 *e*P **P 03 27 07.1 -0.1**
comp=Z,215nm,1.7s
MTE *e*S **S 03 36 50.5 +4.7**
MTE Manteigas 75.08 50 *e*LQ LQ 03 46 57.8
MTE *e*LR LR 03 50 27.8
comp=Z,9μm,24.0s
MTE Manteigas 75.08 50 *e*P **P 03 27 06.8 -0.4**
comp=Z,233nm,1.6s
MTE LR LR
comp=Z,6μm,21.0s
PMRV Marv??o 75.11 51 *e*P **P 03 27 07.1 -0.2**
comp=Z,217nm,1.6s
PMRV *e*S **S 03 36 47.6 +1.6**
PMRV Marv??o 75.11 51 *e*LQ LQ 03 47 00.3
PMRV *e*LR LR 03 50 20.2
comp=Z,7μm,24.0s
RTC Rabat Centre 75.12 56 PFAKE 03 27 20.0 +13
RTC LR LR
comp=Z,18μm,21.0s
BWN Browne 75.17 335 *e*P **P 03 27 07.1 0.0**
comp=Z,148nm,1.1s
BWN LR LR
comp=Z,8μm,22.0s
PBAR Barrancos 75.27 52 *e*P **P 03 27 08.7 +0.5**
comp=Z,577nm,1.6s
TRF Thorofare Moun 75.29 335 *e*P **P 03 27 08.0 0.0**
comp=Z,294nm,2.0s
TRF LR LR
comp=Z,9μm,21.0s
SCO Scoresbysund 75.34 18 *i* P **P 03 27 06.4 -1.5**
comp=Z,7μm,20.0s
SCO Scoresbysund 75.34 18 *e*P **P 03 27 05.9 -2.0**
comp=Z,55nm,1.3s
SCO LR LR
comp=Z,7μm,21.0s
SCO Scoresbysund 75.34 18 *e*P **P 03 27 05.9 -2.0**
SII Sitkinak Islan 75.38 327 *e*P **P 03 27 12.4 +3.9**
comp=Z,96nm,1.1s
SII LR LR
comp=Z,4μm,19.0s
SKT Skwentna 75.41 333 *e*P **P 03 27 08.7 +0.1**
comp=Z,95nm,1.2s
SKT LR LR
comp=Z,5μm,20.0s
MVO Moncorvo 75.54 49 *e*P **P 03 27 10.0 +0.2**
comp=Z,212nm,1.6s
MVO *e*S **S 03 36 54.2 +3.3**
MVO *e*LQ LQ 03 45 52.4
MVO *e*LR LR 03 50 54.0
comp=Z,6μm,22.0s
BPAW Bear Paw Mtn. 75.78 335 *e*P **P 03 27 10.1 -0.5**
comp=Z,42nm,0.9s
BPAW LR LR
comp=Z,7μm,18.0s
PBRG Braganca 75.82 48 *e*P **P 03 27 11.5 +0.1**
comp=Z,200nm,1.6s
PPLA Purkeypile 75.96 334 *e*P **P 03 27 11.7 -0.1**
comp=Z,157nm,1.3s
PPLA LR LR
comp=Z,6μm,20.0s
MLY Manley 75.96 336 *e*P **P 03 27 11.7 0.0**
comp=Z,56nm,1.0s
MLY LR LR
comp=Z,7μm,19.0s
CAST Castle Rocks 76.06 334 *e*P **P 03 27 11.8 -0.5**
comp=Z,109nm,1.4s
CAST LR LR
comp=Z,12μm,21.0s
KEKH Kekaha 76.08 291 PFAKE 03 27 30.0 +17
KEKH LR LR
comp=Z,7μm,19.0s
COLD Coldfoot 76.45 338 *e*P **P 03 27 15.1 +0.7**
comp=Z,83nm,1.3s
COLD LR LR
comp=Z,9μm,21.0s
TOLK Toolik Lake Re 76.69 340 P **P 03 27 15.0 -0.7**
baz=110,SNR=7.6
TOLK Toolik Lake Re 76.69 340 *e*P **P 03 27 16.0 +0.2**
comp=Z,131nm,1.8s
TOLK LR LR
comp=Z,7μm,21.0s
MDT Midelt 76.94 58 P **P 03 27 18.1 0.0**
comp=Z,27nm,1.1s,baz=274,slow=6.2,SNR=28
MDT LR LR 03 56 04.5

comp=Z,4µm,21.4s,baz=288,slow=32
TIC Toumodi 77.05 84 *e*PKP1 **P 03 27 16.9 -1.9**
LIC Lamto 77.07 85 *e*PKP1 **P 03 27 17.3 -1.6**
comp=Z,733nm,1.7s
DBIC Dimbokro 77.21 84 P **P 03 27 19.6 -0.1**
comp=Z,106nm,1.1s,baz=259,slow=7.6,SNR=24
DBIC LR LR 03 57 15.2
comp=Z,5µm,21.2s,baz=242,slow=32
DBIC Dimbokro 77.21 84 *e*P **P 03 27 19.4 -0.3**
comp=Z,210nm,1.3s
KIC Kosan Boka 77.34 85 *e*PKP1 **P 03 27 17.8 -2.6**
comp=Z,1µm,1.8s
IM3 Indian Mountai 77.44 337 *e*P **P 03 27 19.0 -0.9**
PAB San Pablo 77.46 51 *e*P **P 03 27 21.0 +0.3**
comp=Z,264nm,1.5s
PAB LR LR
comp=Z,4µm,21.0s
PAB San Pablo 77.46 51 *e*P **P 03 27 21.0 +0.3**
KOWA Kowa 77.59 76 P **P 03 27 21.9 +0.2**
comp=Z,64nm,1.0s,baz=278,slow=4.9,SNR=29
KOWA LR LR 03 59 44.6
comp=Z,12µm,21.6s,baz=262,slow=34
CHGN Chignik 77.64 326 *e*P **P 03 27 21.2 -0.1**
comp=Z,84nm,1.0s
CHGN LR LR
comp=Z,3µm,20.0s
ESDC Sonseca Array 77.77 51 P **P 03 27 22.7 +0.3**
comp=Z,29nm,0.9s,baz=273,slow=5.5,SNR=75
ESDC LR LR 03 56 30.5
comp=Z,2µm,21.1s,baz=265,slow=32
ESLA Sonseca Array 77.77 51 *e*P **P 03 27 22.8 +0.3**
comp=Z,284nm,1.5s
ESLA LR LR
comp=Z,7µm,22.0s
ES19 SONSECA Array 77.82 51 *e*P **P 03 27 22.7 0.0**
SDPT Sand Point 78.67 325 PFAKE 03 27 40.0 +13
SDPT LR LR
comp=Z,2µm,21.0s
DAG Danmarks Havn 78.89 12 *i* P **P 03 27 25.8 -2.0**
comp=Z,121nm,1.5s
comp=Z,9µm,18.0s
SHEL Horse Pasture 78.89 107 PFAKE 03 27 40.0 +11
SHEL LR LR
comp=Z,18µm,20.0s
ESK Eskdalemuir 79.48 35 *e*P **P 03 27 34.4 +2.9**
comp=Z,204nm,1.6s
ESK LR LR
comp=Z,6µm,18.0s
ESK Eskdalemuir 79.48 35 *e*P **P 03 27 34.4 +2.9**
EKA Eskdalemuir Ar 79.51 35 P **P 03 27 31.1 -0.5**
comp=Z,33nm,1.0s,baz=248,slow=3.9,SNR=16
EKA Eskdalemuir Ar 79.51 35 P **P 03 27 31.1 -0.5**
EKA pmax pmax
comp=Z,32nm,1.0s
CART Cartagena 80.02 53 PFAKE 03 27 50.0 +15
CART LR LR
comp=Z,2µm,20.0s
RAR Rarotonga 80.11 247 LR LR 03 54 29.9
comp=Z,12µm,21.2s,baz=101,slow=29
FALS False Pass 80.30 325 PFAKE 03 27 50.0 +14
FALS LR LR
comp=Z,3µm,18.0s
GRR Gorron 80.44 42 *e*P **P 03 27 39.9 +3.1**
GRR pmax pmax
comp=Z,258nm,1.6s
FLN La Foliniere 80.71 42 *e*P **P 03 27 41.4 +3.2**
FLN pmax pmax
comp=Z,309nm,1.6s
LDF La Druitiere 80.94 42 *e*P **P 03 27 42.5 +3.1**
LDF pmax pmax
comp=Z,188nm,1.5s
RDOG Red Dog Mine 81.36 338 *e*P **P 03 27 41.6 +0.2**
comp=Z,43nm,1.0s
RDOG LR LR
comp=Z,10µm,21.0s
AKUT Akutan 81.63 324 PFAKE 03 27 50.0 +7.0
AKUT LR LR
comp=Z,4µm,19.0s
EANR 'Ain N'Sour 81.70 55 P **P 03 27 44.0 +0.1**
ETRT Tiaret 81.87 55 P **P 03 27 45.0 +0.1**
ECHA Ech Chlef 81.92 54 P **P 03 27 46.0 +1.1**
RJF Les Rejaudoux 81.99 45 *e*P **P 03 27 48.1 +3.0**
RJF pmax pmax
comp=Z,176nm,1.6s
EBNR Beni Rached 82.05 54 P **P 03 27 47.0 +1.3**
UNV Unalaska Valle 82.05 323 PFAKE 03 28 00.0 +15
UNV LR LR
comp=Z,3µm,19.0s
CAF Calviac 82.38 46 *e*P **P 03 27 50.2 +3.0**
CAF pmax pmax
comp=Z,172nm,1.8s
TCF Toulx Ste Croi 82.48 44 *e*P **P 03 27 46.6 -1.1**
TCF pmax pmax
comp=Z,114nm,1.9s
TOC5 Torodi Ar. Sit 83.19 77 PFAKE 03 28 00.0 +8.1
TOC5 LR LR
comp=Z,8µm,20.0s
TOC7 Torodi Ar. Sit 83.19 77 PFAKE 03 28 00.0 +8.1
TOC7 LR LR
comp=Z,7µm,20.0s
TOB5 Torodi Ar. Sit 83.19 77 PFAKE 03 28 00.0 +8.1
TOB5 LR LR
comp=Z,8µm,20.0s
TOB4 Torodi Ar. Sit 83.19 77 PFAKE 03 28 00.0 +8.0
TOB4 LR LR
comp=Z,7µm,20.0s
EMHD Djebel Mahouad 83.20 54 P **P 03 27 49.0 -2.8**
TOA1 Torodi Ar. Sit 83.20 77 *e*P **P 03 27 51.6 -0.4**
TOA1 *e*PP **PP 03 30 58.1 -5.3**
TOA1 *e*PKKPbc **PKKPbc 03 46 13.1 +0.4**
TOA3 Torodi Ar. Sit 83.20 77 PFAKE 03 28 00.0 +8.0
TOA3 LR LR
comp=Z,7µm,20.0s
TOA0 Torodi Ar. Sit 83.20 77 *e*P **P 03 27 50.8 -1.2**
TORD Torodi Ar. Bea 83.20 77 P **P 03 27 51.6 -0.4**
comp=Z,107nm,1.3s,baz=269,slow=3.3,SNR=45
TORD PP **PP 03 30 58.1 -5.3**
comp=Z,3.9nm,1.0s,baz=280,slow=6.5,SNR=3.7
TORD PKKPbc **PKKPbc 03 46 13.1 +0.4**
comp=Z,1.8nm,1.1s,baz=88,slow=2.4,SNR=7.9
TORD LR LR 04 04 43.2
comp=Z,7µm,20.3s,baz=270,slow=36
TOA2 Torodi Ar. Sit 83.21 77 PFAKE 03 28 00.0 +8.0
TOA2 LR LR
comp=Z,7µm,20.0s
TOC1 Torodi Ar. Sit 83.21 77 PFAKE 03 28 00.0 +8.0
TOC1 LR LR
comp=Z,8µm,20.0s
TOC4 Torodi Ar. Sit 83.21 77 PFAKE 03 28 00.0 +8.0
TOC4 LR LR
comp=Z,7µm,20.0s
TOB3 Torodi Ar. Sit 83.21 77 PFAKE 03 28 00.0 +7.9
TOB3 LR LR
comp=Z,7µm,20.0s
TOB2 Torodi Ar. Sit 83.22 77 PFAKE 03 28 00.0 +7.9
TOB2 LR LR
comp=Z,7µm,20.0s
ABA Alger-Bouzarea 83.25 54 P **P 03 27 53.0 +1.2**
NIKH Nikolski High 83.45 323 PFAKE 03 28 00.0 +7.5
NIKH LR LR
comp=Z,3µm,19.0s
SNF Seneffe 83.82 40 ⇓P **P 03 27 56.1 +1.7**
comp=Z,86nm,2.4s
DOU Dourbes 84.03 40 ⇑P **P 03 27 55.2 -0.3**
comp=Z,32nm,2.0s
SSB Saint Sauveur 84.13 45 *e*P **P 03 27 57.8 +1.6**
comp=Z,188nm,1.8s
SSB LR LR
comp=Z,3µm,20.0s
SSB Saint Sauveur 84.13 45 *e*P **P 03 27 57.8 +1.6**
SSB pmax pmax
comp=Z,188nm,1.8s
SSB MLR MLR
comp=Z,3µm,20.0s
SPIA Saint Paul Isl 84.20 327 PFAKE 03 28 10.0 +14
SPIA LR LR
comp=Z,7µm,19.0s
VIVF Saint-Julien-l 84.23 46 *e*P **P 03 27 56.7 -0.1**
VIVF pmax pmax
comp=Z,279nm,1.8s
BCLA Clavier 84.48 40 ⇑P **P 03 27 59.0 +1.2**
comp=Z,65nm,2.1s
BEBN Eben Emael 84.70 40 ⇑P **P 03 28 00.3 +1.4**
HGN Heimansgroeve 84.87 40 *e*P **P 03 27 59.4 -0.3**
comp=Z,472nm,2.1s
HGN Heimansgroeve 84.87 40 *e*S **S 03 38 32.3 +3.9**
HGN *e*SS **SS 03 44 06.5 +6.1**
MEM Membach 84.92 40 ⇑P **P 03 28 01.4 +1.4**
comp=Z,54nm,2.0s
MEM Membach 84.92 40 P **P 03 28 02.3 +2.3**
WLF Walferdange 85.05 41 ⇑P **P 03 28 01.2 +0.5**
comp=Z,103nm,2.1s
WLF Walferdange 85.05 41 *e*P **P 03 28 01.4 +0.6**
comp=Z,302nm,1.7s
WLF LR LR
comp=Z,6µm,19.0s
WLF Walferdange 85.05 41 *e*P **P 03 28 01.4 +0.6**
ORIF Oris-en-Rattie 85.09 45 *e*P **P 03 28 01.8 +0.6**
ORIF pmax pmax
comp=Z,386nm,1.8s
CABF La Chapelle 85.15 44 *e*P **P 03 28 00.6 -0.8**
CABF pmax pmax
comp=Z,154nm,1.5s
SET Setif 85.18 54 P **P 03 28 04.0 +2.2**
HAU Haudompre 85.26 42 *e*P **P 03 28 04.6 +2.7**
HAU pmax pmax
comp=Z,197nm,1.8s
CKHR Kef el Ahmar 85.28 54 P **P 03 28 05.6 +3.3**
WTSB Winterswijk 85.36 38 *e*P **P 03 28 02.0 -0.1**
comp=Z,473nm,1.5s
DFRA Djebel Bou Aff 85.54 54 P **P 03 28 06.6 +3.0**
JOHN Johnston Islan 85.56 286 PFAKE 03 28 20.0 +16
JOHN LR LR
comp=Z,7µm,21.0s
KBS Kingsbay 85.56 11 *e*P **P 03 28 03.4 +0.7**
comp=Z,151nm,1.1s
KBS LR LR
comp=Z,8µm,22.0s
KBS Kingsbay 85.56 11 *e*P **P 03 28 03.4 +0.7**
HINF Hinteralfeld 85.61 43 *e*P **P 03 28 03.3 -0.3**
HINF pmax pmax
comp=Z,115nm,1.5s
LPL La Plagne 85.66 45 *e*P **P 03 28 04.3 +0.1**
LPL pmax pmax
comp=Z,46nm,1.2s
LPG La Plagne 85.67 45 *e*P **P 03 28 04.2 -0.1**
LPG pmax pmax
comp=Z,85nm,1.5s
FRF La Foret Royal 85.71 47 *e*P **P 03 28 07.1 +2.9**
FRF pmax pmax
comp=Z,135nm,1.5s
MBDF Montbardon 85.73 46 *e*P **P 03 28 05.4 +0.9**
MBDF pmax pmax
comp=Z,128nm,1.6s
ECH Echery 85.79 42 *e*P **P 03 28 04.5 0.0**
comp=Z,244nm,1.7s
ECH LR LR
comp=Z,4µm,20.0s
ECH Echery 85.79 42 *e*P **P 03 28 04.5 0.0**
ECH pmax pmax
comp=Z,244nm,1.7s
ECH MLR MLR
comp=Z,4µm,20.0s
MOF Molkenrain 85.80 42 *e*P **P 03 28 05.1 +0.5**
CDF Champ du Feu 85.86 42 *e*P **P 03 28 03.9 -1.0**
CDF pmax pmax
comp=Z,229nm,1.9s
CTEI Djebel Teioual 86.00 54 P **P 03 28 08.4 +2.5**
SENIN Lac Senin/Sane 86.00 44 *e*P **P 03 28 08.2 +2.3**
comp=Z,235nm,1.8s
SENIN LR LR
comp=Z,4µm,20.0s
CASM Ain Smara 86.05 54 P **P 03 28 08.6 +2.5**
TAM Tamanrasset 86.16 68 *e*P **P 03 28 07.1 +0.1**
comp=Z,138nm,1.6s
TAM LR LR
comp=Z,8µm,20.0s
TAM Tamanrasset 86.16 68 *e*P **P 03 28 07.1 +0.1**
TAM pmax pmax
comp=Z,139nm,1.6s
TAM MLR MLR
comp=Z,8µm,20.0s
CKFL Kef-Lekhel 86.23 54 P **P 03 28 09.3 +2.2**
SBF Sospel 86.26 46 *e*P **P 03 28 09.8 +2.8**
SBF pmax pmax
comp=Z,189nm,1.7s
CAEH 'Ain El Ouahch 86.31 54 P **P 03 28 09.7 +2.4**
KONO Kongsberg 86.43 31 PFAKE 03 28 20.0 +13
KONO LR LR
comp=Z,4µm,20.0s
KONO Kongsberg 86.43 31 ⇓*e*P **P 03 28 09.3 +1.9**
KONO pmax pmax
comp=Z,18nm,1.2s
KONO MLR MLR
comp=Z,4µm,20.0s
MUD Monsted U'grnd 86.46 34 *i* P **P 03 28 08.7 +1.2**
comp=Z,4µm,19.0s
SPA0 Spitsbergen Ar 86.53 12 *e*P **P 03 28 07.8 +0.2**
SPITS Spitsbergen Ar 86.53 12 P **P 03 28 07.1 -0.4**
comp=Z,64nm,1.2s,baz=240,slow=5.8,SNR=11
SPITS LR LR 04 07 31.8
comp=Z,7µm,21.1s,baz=290,slow=36
HSPB Hornsund (broa 86.55 13 *e*P **P 03 28 09.2 +1.6**
HSPB *e*S **S 03 38 45.8 +1.8**
SLE Schleitheim 86.72 43 P **P 03 28 11.0 +1.9**
ATKA Atka Island 86.74 322 PFAKE 03 28 20.0 +11
ATKA LR LR
comp=Z,2µm,20.0s
CMAH Djebel Manchou 86.77 54 P **P 03 28 11.1 +1.4**
ABSA Djebel Ababsia 86.85 54 P **P 03 28 12.6 +2.5**
NC204 NORSAR Array S 86.86 29 *e*P **P 03 28 11.1 +1.5**
NBO00 NORSAR Array S 86.89 29 *e*P **P 03 28 11.8 +2.1**
NAO01 NORSAR Array S 86.97 29 *e*P **P 03 28 12.7 +2.7**
STU Stuttgart 87.10 41 *e*P **P 03 28 11.2 +0.3**
comp=Z,276nm,1.8s
STU LR LR
comp=Z,4µm,20.0s
STU Stuttgart 87.10 41 *e*P **P 03 28 11.2 +0.3**
NB2 NORSAR Subarra 87.11 29 P **P 03 28 09.9 -0.8**
comp=Z,100nm,1.4s,baz=278,slow=5.1
NB2 NORSAR Subarra 87.11 29 P **P 03 28 09.9 -0.8**
baz=278,slow=5.1
NB200 NORSAR Array S 87.11 29 *e*P **P 03 28 10.5 -0.2**
NOA NORSAR Array B 87.11 29 P **P 03 28 10.5 -0.2**
comp=Z,29nm,1.1s,baz=276,slow=4.9,SNR=12
NOA LR LR 04 05 38.2
comp=Z,3µm,19.2s,baz=280,slow=35
NOA NORSAR Array B 87.11 29 P **P 03 28 10.5 -0.2**
NOA pmax pmax
comp=Z,28nm,1.1s
NOA MLR MLR
comp=Z,3µm,19.2s
NB201 NORSAR Array S 87.14 29 *e*P **P 03 28 13.5 +2.6**
NC303 NORSAR Array S 87.16 29 *e*P **P 03 28 11.4 +0.5**
NC602 NORSAR Array S 87.30 29 *e*P **P 03 28 15.1 +3.5**
NC405 NORSAR Array S 87.34 29 *e*P **P 03 28 13.3 +1.5**
DAVA Damuels 87.69 43 *e*PcP **P 03 28 14.6 +0.6**
comp=Z,84nm,1.5s,SNR=13
THTN Thala 87.89 55 PFAKE 03 28 30.0 +15
THTN LR LR
comp=Z,3µm,20.0s
FUORN Ofenpass-Fuorn 88.02 44 *e*P **P 03 28 18.1 +2.4**
comp=Z,130nm,1.6s
VSL Villasalto 88.07 51 PFAKE 03 28 30.0 +14
VSL LR LR
comp=Z,7µm,22.0s
TAMR Tamra 88.09 53 PFAKE 03 28 30.0 +14
TAMR LR LR
comp=Z,2µm,21.0s
RETA Reutte 88.27 43 *e*PcP **P 03 28 17.6 +0.9**
comp=Z,51nm,1.9s,SNR=12
LLD Lille Linde 88.28 35 *i* P **P 03 28 13.9 -2.4**
FETA Feichten 88.30 43 *e*P **P 03 28 17.0 +0.1**
comp=Z,44nm,2.1s,SNR=14
GRFO Grafenberg 88.33 40 *e*P **P 03 28 17.9 +1.1**
comp=Z,159nm,1.7s
GRFO LR LR
comp=Z,6µm,19.0s
GRFO Grafenberg 88.33 40 *e*P **P 03 28 17.9 +1.1**
GRFO pmax pmax
comp=Z,159nm,1.7s
GRFO MLR MLR
comp=Z,6µm,19.0s
GRF Grafenberg Arr 88.33 40 P **P 03 28 19.3 +2.5**
VLC Villacollemand 88.36 46 *e*P **P 03 28 18.6 +1.5**
comp=Z,94nm,1.5s
KEST Kesra 88.40 54 P **P 03 28 17.6 0.0**
comp=Z,12nm,0.9s,baz=258,slow=2.1,SNR=8.2
KEST Kesra 88.40 54 P **P 03 28 17.6 0.0**
KEST LR LR
comp=Z,4µm,20.0s
HFS Hagfors 88.43 30 P **P 03 28 17.3 +0.3**
comp=Z,10nm,1.0s,baz=305,slow=8.8,SNR=7.4
HFS LR LR 04 06 44.4
comp=Z,3µm,19.3s,baz=268,slow=35
WATA Walderalm 88.84 43 *e*PcP **P 03 28 20.6 +1.2**
comp=Z,28nm,1.4s
WTTA Wattenberg 88.89 43 *e*PcP **P 03 28 21.0 +1.3**
comp=Z,25nm,1.4s,SNR=7.2
RGN Rugen 89.01 35 PFAKE 03 28 30.0 +10
RGN LR LR
comp=Z,6µm,20.0s
NKC Novy Kostel 89.06 40 *e*P **P 03 28 23.5 +3.3**
NKC *e*x x 03 28 27.4
NKC *e*SKS **S 03 39 00.2 -8.8**
NKC AMS AMS 04 00 30.0
comp=Z,7µm,23.4s
NKC Novy Kostel 89.06 40 *e*P **P 03 28 23.5 +3.3**
NKC *e* 03 28 27.4
NKC *e* 03 39 00.2
NKC MLR MLR
comp=Z,7µm,23.4s
CLL Collm 89.26 39 *e*P **P 03 28 21.0 -0.1**
comp=Z,110nm,1.5s
CLL *i* Pmax 03 28 27.8
CLL *i* 03 28 31.9
CLL comp=Z,71nm,1.4s
CLL *e*PPIp 03 31 20.0
CLL *e*PP **PP 03 31 59.0 +7.5**
CLL *e*S **S 03 39 10.0 -0.8**
CLL *e*PS **PS 03 40 20.0 +3.6**
CLL *e* 03 41 54.0
CLL *e*SS **SS 03 45 13.0 +8.3**
CLL *e*(SSS) 03 48 24.0
CLL *e*(SSSS) 03 51 30.0
CLL Lm MLR 04 05 00.0
comp=N,2µm,20.2s
CLL Lm MLR 04 05 00.0
comp=E,4µm,21.0s
CLL Lm MLR 04 05 00.0
comp=Z,5µm,19.9s
CLL Collm 89.26 39 *e*P **P 03 28 21.6 +0.5**
comp=Z,101nm,1.5s
CLL LR LR
comp=Z,5µm,20.0s
CLL Collm 89.26 39 *e*P **P 03 28 21.6 +0.5**
CLL pmax pmax
comp=Z,101nm,1.5s
CLL MLR MLR
comp=Z,5µm,20.0s
WET Wettzell 89.47 41 P **P 03 28 22.8 +0.6**
ABTA Abfaltersbach 89.55 43 *e*P **P 03 28 22.4 -0.2**
comp=Z,35nm,2.1s,SNR=11
VNA3 Neumayer Olymp 89.69 162 P **P 03 28 22.3 -0.4**
BSD Bornholm Skovb 89.84 35 *i* P **P 03 28 25.3 +1.6**
comp=Z,59nm,1.3s
comp=Z,4µm,18.0s
BRG Berggiesshubel 89.91 39 *e*P **P 03 28 26.3 +2.1**
comp=Z,95nm,1.7s
BRG PP PP 03 31 38.6 -18
comp=Z,58nm,1.8s
BRG SKS **SKSac 03 38 56.0 +0.8**
BRG S **ScS 03 39 21.0 -0.1**
BRG SS **SS 03 45 20.0 +5.8**
comp=N,2µm,22.4s
comp=E,4µm,19.0s
comp=Z,6µm,19.5s
BRG Berggiesshubel 89.91 39 *e*P **P 03 28 26.3 +2.1**
BRG 03 38 56.0
BRG S **ScS 03 39 21.0 -0.1**
BRG SS **SS 03 45 20.0 +5.8**
BRG pmax pmax
comp=Z,95nm,1.7s
BRG MLR MLR
comp=N,2µm,22.4s
BRG MLR MLR
comp=E,4µm,19.0s
BRG MLR MLR
comp=Z,6µm,19.5s
KHC Kasperske Hory 89.93 41 *e*P **P 03 28 24.4 0.0**
KHC *e*x x 03 31 20.8
KHC *e*SKS **SKSac 03 39 04.4 +8.9**
KHC *e*SP **SPn 03 40 19.5 -2.5**
KHC *e*SS **SS 03 45 13.4 -1.3**
KHC AMS AMS 04 00 10.0
comp=Z,8µm,25.7s
KHC Kasperske Hory 89.93 41 *e*P **P 03 28 23.6 -0.8**
comp=Z,31nm,1.5s
KHC LR LR
comp=Z,2µm,19.0s
KHC Kasperske Hory 89.93 41 *e*P **P 03 28 24.4 0.0**
KHC *e* 03 40 19.5
KHC *e*SS SS 03 45 13.4 -1.3
KHC MLR MLR
comp=Z,8µm,25.7s
VNA1 Neumayer--Stat 89.95 161 P **P 03 28 23.9 +0.1**
GEC2 GERESS Array S 90.05 41 *e*P **P 03 28 25.7 +0.7**
comp=Z,59nm,1.4s
GEC2 GERESS Array S 90.05 41 *e*P **P 03 28 25.7 +0.7**
GEC2 pmax pmax
comp=Z,53nm,1.4s
GERES GERESS Array B 90.05 41 P **P 03 28 25.2 +0.2**
comp=Z,6.5nm,1.0s,baz=282,slow=2.6,SNR=17
GERES LR LR 04 04 20.9
comp=Z,3µm,20.6s,baz=274,slow=33
GEA0 GERESS Array S 90.06 41 *e*P **P 03 28 24.6 -0.4**
KBA Koelnbreinsper 90.07 43 *e*P **P 03 28 25.2 0.0**
comp=Z,39nm,1.4s,SNR=12
KBA Koelnbreinsper 90.07 43 P **P 03 28 27.2 +2.0**
MYKA Terra Mystica 90.33 43 *e*P **P 03 28 24.5 -1.9**
comp=Z,29nm,2.1s,SNR=7.0
PRA Prague 90.34 40 *e*SKS **SKSac 03 39 08.3 +11**
PRA *e*SS **SS 03 45 16.3 -4.1**
PRA AMS AMS 04 01 10.0
comp=Z,7µm,23.8s
PVCC Panska Ves 90.36 39 *e*P **P 03 28 29.4 +3.1**
PVCC *e*x x 03 31 22.9
PVCC *e*SKS **SKSac 03 39 07.3 +9.5**
PVCC *e*SP **SPn 03 40 24.2 -2.7**
PVCC AMS AMS 04 07 30.0
comp=Z,5µm,18.8s
PVCC Panska Ves 90.36 39 *e*P **P 03 28 29.4 +3.1**
PVCC *e* 03 40 24.2
PVCC MLR MLR
comp=Z,5µm,18.8s
PRU Pruhonice 90.42 40 *e*SKS **SKSac 03 39 08.0 +10**
PRU *e*x x 03 40 20.7
PRU *e*SS **SS 03 45 18.0 -3.6**
PRU AMS AMS 04 00 20.0
comp=Z,8µm,28.0s
CADS Cadrg 90.45 44 *e*P **P 03 28 29.4 +2.5**
CADS *e*SKSac **SKSac 03 39 03.0 +4.3**
CADS *e*S **ScS 03 39 24.4 -1.5**
AFI Afiamalu 90.53 256 LR LR 04 00 59.5
comp=Z,5µm,18.6s,baz=81,slow=30
MOA Molln 90.57 42 *e*PcP **P 03 28 28.4 +1.1**
comp=Z,18nm,1.4s,SNR=8.2
GOPC GO Pecny, Ondr 90.59 40 *e*P **P 03 28 28.1 +0.7**
GOPC *e*SKS **SKSac 03 39 09.9 +11**
GOPC *e*SP **SPn 03 40 30.4 +0.7**
GOPC *e*SS **SS 03 45 20.0 -4.1**
GOPC AMS AMS 04 01 20.0
comp=Z,8µm,23.5s
GOPC GO Pecny, Ondr 90.59 40 *e*P **P 03 28 28.1 +0.7**
GOPC *e* 03 40 30.4
GOPC *e*SS SS 03 45 20.0 -4.1
GOPC MLR MLR
comp=Z,8µm,23.5s
AQU L'Aquila 90.77 48 PFAKE 03 28 40.0 +12
AQU LR LR
comp=Z,4µm,22.0s
OBKA Obir 90.97 43 *e*P **P 03 28 31.8 +2.5**
comp=Z,25nm,1.9s
CEY Cerknica 91.00 44 *e*P **P 03 28 32.1 +2.7**
LJU Ljubljana 91.03 44 *i* P **P 03 28 32.1 +2.6**
LJU *i* SKSac **SKSac 03 39 06.4 +4.5**
LJU *e*S **S 03 39 28.9 +1.5**
ARA0 ARCESS Array S 91.16 20 *e*P **P 03 28 29.6 -0.1**
ARA0 *e*PP **PP 03 32 03.1 -2.9**
ARCES ARCESS Array B 91.16 20 P **P 03 28 29.6 -0.1**
comp=Z,8.3nm,0.9s,baz=318,slow=6.5,SNR=12
ARCES PP **PP 03 32 03.1 -2.9**
comp=Z,4.4nm,1.1s,baz=310,slow=7.0,SNR=3.5
ARCES ARCESS Array B 91.16 20 *e*P **P 03 28 30.9 +1.3**
ARCES ARCESS Array B 91.16 20 *e*P **P 03 28 30.9 +1.3**
ARE0 ARCESS Array S 91.16 20 *e*P **P 03 28 31.5 +1.9**

comp=Z,82nm,1.5s
ARE0 LR LR 03 28 31.5 +1.0
comp=Z,3μm,21.0s
UPC Upice 91.27 39 *e*P **P** 03 28 31.5 +1.0
UPC *ex* x 03 28 37.6
UPC *e*SKS **SKSac** 03 39 12.6 +9.5
UPC *e*SP **SP** 03 40 35.6 -1.5
UPC AMS AMS 04 07 40.0
comp=Z,6μm,19.4s
UPC Upice 91.27 39 *e*P **P** 03 28 31.5 +1.0
UPC *e* 03 28 37.6
UPC *e* 03 40 35.6
UPC MLR MLR
comp=Z,6μm,19.4s
SOKA Soboth 91.27 43 PcP **PcP** 03 28 31.2 -0.5
comp=Z,15nm,1.5s,SNR=8.5
CLTB Caltabellotta 91.28 52 PFAKE 03 28 40.0 +9.0
CLTB LR LR
comp=Z,4μm,19.0s
PERS Pernice 91.33 43 *e*P **P** 03 28 33.0 +2.0
KSP Ksiaz 91.39 39 *e*P **P** 03 28 33.1 +2.1
KSP LMZ LR 04 01 04.5
comp=Z,5μm,27.2s
KSP Ksiaz 91.39 39 *e*P **P** 03 28 33.1 +2.1
DPC Dobruska-Polom 91.49 39 *e*P **P** 03 28 32.6 +1.0
DPC *e*SKS **SKSac** 03 39 14.2 +10
DPC AMS AMS 04 08 10.0
comp=Z,5μm,19.0s
DPC Dobruska-Polom 91.49 39 *e*P **P** 03 28 32.6 +1.0
DPC MLR MLR
comp=Z,5μm,19.0s
ARSA Arzberg 91.51 42 *e*P **P** 03 28 31.6 -0.1
comp=Z,24nm,2.1s,SNR=9.4
GKP Gorka Klasztor 91.51 36 *e*P **P** 03 28 32.8 +1.3
GKP *e*S **S** 03 39 35.4 +4.0
GKP LMZ LR 04 07 24.5
comp=Z,8μm,20.3s
GKP Gorka Klasztor 91.51 36 *e*P **P** 03 28 32.8 +1.3
GKP *e*S **S** 03 39 35.4 +4.0
KEV Kevo 91.58 19 PFAKE 03 28 40.0 +8.5
KEV LR LR
comp=Z,4μm,22.0s
CONA Conrad Observa 91.62 42 *e*PcP **PcP** 03 28 33.0 -0.2
comp=Z,40nm,1.5s,SNR=18
MIDW Midway 91.68 298 PFAKE 03 28 40.0 +7.2
MIDW LR LR
comp=Z,3μm,20.0s
KRUC Moravsky 91.77 41 *e*P **P** 03 28 34.6 +1.7
KRUC Moravsky 91.77 41 *e*S **S** 03 39 29.2 -4.8
VRAC Vranov 91.85 40 P **P** 03 28 33.6 +0.3
comp=Z,7.0nm,0.9s,baz=281,slow=6.0,SNR=20
VRAC Vranov 91.85 40⇓ *i*P **P** 03 28 34.3 +1.0
VRAC Vranov 91.85 40⇓P **P** 03 28 34.3 +1.0
VRAC Vranov 91.85 40 *e*P **P** 03 28 35.2 +1.9
VRAC Vranov 91.85 40 *e*S **S** 03 39 36.2 +1.4
SNAA Sanae 91.91 162 P **P** 03 28 32.5 -0.5
SNAA Sanae 91.91 162 P **P** 03 28 32.2 -0.9
comp=Z,10.0nm,1.0s,baz=283,slow=5.8,SNR=21
SNAA PP **PP** 03 32 10.1 -2.1
comp=Z,6.9nm,1.2s,baz=280,slow=9.6,SNR=2.8
SNAA LR LR 04 10 14.9
comp=Z,2μm,18.7s,baz=296,slow=36
SNAA Sanae 91.91 162 *e*P **P** 03 28 31.8 -1.3
comp=Z,36nm,1.2s
SNAA *e*PP **PP** 03 32 10.1 -2.1
SOP Sopron 92.12 42⇓ *e*P **P** 03 28 36.5 +2.0
SOP Sopron 92.12 42 P **P** 03 28 38.4 +3.9
VAE Valguarnera 92.24 52 P **P** 03 28 39.1 +3.8
comp=Z,8.0nm,0.3s,baz=326,slow=3.6,SNR=7.7
VAE LR LR 04 06 33.6
comp=Z,3μm,20.6s,baz=314,slow=33
MORC Moravsky Berou 92.37 40⇓ *i*P **P** 03 28 38.6 +2.9
MORC Moravsky Berou 92.37 40 *e*P **P** 03 28 38.2 +2.5
comp=Z,277nm,1.6s
MORC LR LR
comp=Z,25μm,22.0s
MORC Moravsky Berou 92.37 40 *e*P **P** 03 28 38.2 +2.5
MORC pmax pmax
comp=Z,277nm,1.6s
MORC MLR MLR
comp=Z,25μm,22.0s
MORC Moravsky Berou 92.37 40 *e*S **S** 03 39 37.6 -1.9
MORC Moravsky Berou 92.37 40 *e*P **P** 03 28 36.1 +0.4
MORC Moravsky Berou 92.37 40 *e*S **S** 03 39 37.6 -1.9
ZST Bratislava 92.39 41 *e*P **P** 03 28 37.3 +1.6
ZST pmax pmax
comp=Z,8.0nm,1.6s
ZST Bratislava 92.39 41 *e*P **P** 03 28 37.3 +1.6
ZST Bratislava 92.39 41 *e*S **S** 03 39 43.6 +4.0
ZST *e*L L 04 08 47.2
MODS Modra-Piesok 92.47 41 *e*P **P** 03 28 37.2 +1.1
MODS pmax pmax
comp=Z,97nm,1.7s
MODS Modra-Piesok 92.47 41 *e*P **P** 03 28 37.2 +1.1
MODS Modra-Piesok 92.47 41 *e*S **S** 03 39 42.0 +1.6
MODS *e*SS SS 03 45 39.0 -12
MODS *e*L L 04 01 48.6
WDD Wied Dalam 92.57 54 PFAKE 03 28 50.0 +13
WDD LR LR
comp=Z,2μm,19.0s
JAVC Velka Javorina 92.63 41 *e*P **P** 03 28 39.9 +3.0
JAVC Velka Javorina 92.63 41 *e*S **S** 03 39 43.1 +1.2
BILL Bilibino 92.74 339 *e*P **P** 03 28 37.4 +0.5
comp=Z,68nm,1.2s
BILL LR LR
comp=Z,5μm,22.0s
BILL Bilibino 92.74 339*c i*P **P** 03 28 37.0 +0.1
BILL *i* 03 28 45.4
BILL *i* 03 32 19.3
BILL *i* S **SKSac** 03 39 10.2 -0.5
BILL *i* PS **PS** 03 40 54.0 -0.3
BILL pmax pmax
comp=Z,11nm,1.0s
BILL MLR MLR
comp=Z,6μm,22.0s
OKC Ostrava-Krasne 92.75 40 *e*P **P** 03 28 40.8 +3.5
OKC *ex* x 03 31 34.9
OKC *e*SKS **SKSac** 03 39 17.5 +6.1
OKC *ex* x 03 40 48.2
OKC AMS AMS 04 04 50.0
comp=Z,5μm,21.4s
OKC Ostrava-Krasne 92.75 40 *e*P **P** 03 28 40.8 +3.5
OKC *e* 03 39 17.5
OKC MLR MLR
comp=Z,5μm,21.4s
CUC Castrocucco 92.93 50 *e*P **P** 03 28 38.1 -0.3
comp=Z,29nm,1.4s
CUC LR LR
comp=Z,3μm,22.0s
KLNR Kaliningrad 92.94 35⇑ *e*P **P** 03 28 39.2 +1.1
KLNR pmax pmax
comp=Z,131nm,1.6s
KLNR MLR MLR
comp=Z,4μm,17.0s
BLY Banja Luka 93.09 45 PFAKE 03 28 50.0 +11
BLY LR LR
comp=Z,4μm,22.0s
VYHS Vyhne 93.47 41 *e*P **P** 03 28 42.3 +1.6
VYHS pmax pmax
comp=Z,46nm,1.9s
VYHS Vyhne 93.47 41 *e*P **P** 03 28 42.3 +1.6
VYHS Vyhne 93.47 41 *e*S **S** 03 39 51.1 +1.9
VYHS *e*SS **SS** 03 45 57.4 -8.1
VYHS *e*L L 04 02 45.7
OJC Ojcow 93.70 39 *e*P **P** 03 28 44.1 +2.4
OJC *e*S **S** 03 39 56.2 +5.1
OJC *e*SS **SS** 03 46 12.3 +3.5
OJC LMZ LR 04 02 26.0
comp=Z,7μm,26.1s
OJC Ojcow 93.70 39 *e*P **P** 03 28 44.1 +2.4
comp=Z,65nm,1.6s
OJC Ojcow 93.70 39 *e*P **P** 03 28 44.2 +2.4
OJC pmax pmax
comp=Z,65nm,1.6s
SMY Shemya 93.71 324 PFAKE 03 28 50.0 +8.3
SMY LR LR
comp=Z,3μm,20.0s
LANS Liptovska Anna 93.73 40 *e*P **P** 03 28 42.0 0.0
LANS Liptovska Anna 93.73 40 *e*P **P** 03 28 42.0 0.0
TIP Timpagrande 93.78 50⇑ *i*P **P** 03 28 43.2 +0.7
TIP Timpagrande 93.78 50 *e*P **P** 03 28 43.5 +1.0
comp=Z,42nm,1.5s
TIP LR LR
comp=Z,10μm,22.0s

MORH M¯‡r¯ıgy, Hung 93.81 43⇓ *e*P **P** 03 28 44.6 +2.3
BEL Belsk 93.94 37 *e*P **P** 03 28 45.0 +2.2
BEL *e*S **S** 03 39 58.4 +5.3
BEL LMZ LR 04 05 50.0
comp=Z,5μm,22.5s
BEL Belsk 93.94 37 *e*P **P** 03 28 44.9 +2.2
BEL *e*S **S** 03 39 58.4 +5.3
FIA0 FINESS Array S 94.02 27 *e*P **P** 03 28 43.5 +0.5
FIA0 *e*PP **PP** 03 32 23.9 -4.8
FIA0 FINESS Array S 94.02 27 *e*P **P** 03 28 43.5 +0.5
FIA1 FINESS Array S 94.02 27 *e*P **P** 03 28 45.0 +2.0
FINES FINESS Array B 94.02 27 P **P** 03 28 43.5 +0.5
comp=Z,5.1nm,1.1s,baz=219,slow=1.8,SNR=5.6
FINES PP **PP** 03 32 23.9 -4.8
comp=Z,3.1nm,1.0s,baz=226,slow=7.5,SNR=2.8
FINES LR LR 04 09 19.7
comp=Z,5μm,19.9s,baz=282,slow=34
NIE Niedzica 94.20 40 *e*P **P** 03 28 47.5 +3.4
NIE *e*S **S** 03 40 00.1 +4.5
NIE LMZ LR 04 02 55.2
comp=Z,4μm,26.6s
NIE Niedzica 94.20 40 *e*P **P** 03 28 47.5 +3.4
NIE *e*S **S** 03 40 00.1 +4.5
PSZ Piszkesteto 94.28 41⇓ *e*P **P** 03 28 47.5 +2.9
PSZ Piszkesteto 94.28 41 *e*P **P** 03 28 47.3 +2.7
comp=Z,136nm,1.9s
PSZ LR LR
comp=Z,3μm,20.0s
PSZ Piszkesteto 94.28 41 *e*P **P** 03 28 47.3 +2.7
PSZ pmax pmax
comp=Z,137nm,1.9s
PSZ MLR MLR
comp=Z,3μm,20.0s
APA Apatity 94.60 20⇑ *i*P **P** 03 28 43.5 -2.0
APA *i* PPP PPP 03 34 41.0
APA *i* S **S** 03 39 53.0 -5.2
APA *i* PS **PS** 03 41 14.0 -0.8
APA *i* PPS PPS 03 41 52.0
APA pmax pmax
comp=Z,8.0nm,1.0s
SUW Suwalki 94.78 35 *e*P **P** 03 28 48.0 +1.5
SUW *e*SKSac **SKSac** 03 39 23.9 +1.7
SUW LMZ LR 04 06 34.1
comp=Z,4μm,25.5s
SUW Suwalki 94.78 35 PFAKE 03 29 00.0 +13
SUW LR LR
comp=Z,4μm,22.0s
SUW Suwalki 94.78 35 *e*P **P** 03 28 48.0 +1.5
SUW *e* 03 39 23.9
LVZ Lovozero 94.87 20 PFAKE 03 29 00.0 +13
LVZ LR LR
comp=Z,3μm,20.0s
LVZ Lovozero 94.87 20⇓ *e*P **P** 03 28 47.6 +0.8
LVZ pmax pmax
comp=Z,33nm,2.0s
TTG Podgorica 95.02 47 PFAKE 03 29 00.0 +12
TTG LR LR
comp=Z,3μm,20.0s
CRVS Cervenica-Dubn 95.07 40 *e*P **P** 03 28 49.8 +1.7
CRVS pmax pmax
comp=Z,44nm,1.8s
CRVS Cervenica-Dubn 95.07 40 *e*P **P** 03 28 49.8 +1.7
CRVS Cervenica-Dubn 95.07 40 *e*S **S** 03 40 05.4 +2.3
CRVS *e*SS **SS** 03 46 26.3 -1.9
CRVS *e*L L 04 03 10.6
DIVS Divibare 95.19 45 *e*P **P** 03 28 52.0 +3.1
comp=Z,36nm,1.6s
DIVS LR LR
comp=Z,4μm,21.0s
VSU Vasula 95.32 30*de*P **P** 03 28 49.4 +0.5
VSU pmax pmax
comp=Z,95nm,1.1s
VSU MLR MLR
comp=Z,9μm,21.0s
QSPA South Pole Qui 95.46 180 P **P** 03 28 49.6 0.0
comp=Z,26nm,0.9s,baz=149,slow=2.9,SNR=63
QSPA LR LR 04 05 27.6
comp=Z,5μm,18.7s,baz=157,slow=32
QSPA South Pole Qui 95.46 180 *e*P **P** 03 28 47.5 -2.1
comp=Z,188nm,1.5s
QSPA LR LR
comp=Z,7μm,22.0s
KWP Kalwaria Pacla 95.67 39 *e*P **P** 03 28 53.9 +3.1
KWP LMZ LR 04 03 26.4
comp=Z,5μm,27.6s
KWP Kalwaria Pacla 95.67 39 PFAKE 03 29 00.0 +9.2
KWP LR LR
comp=Z,35μm,19.0s
KWP Kalwaria Pacla 95.67 39 *e*P **P** 03 28 53.9 +3.1
BZS Buzias 95.97 43⇑ *i*P **P** 03 28 52.8 +0.6
BZS Buzias 95.97 43⇑P **P** 03 28 52.8 +0.6
KEK Kerkira 95.99 49 P **P** 03 28 54.6 +2.1
KEK Kerkira 95.99 49 P **P** 03 28 54.6 +2.1
PHP Peshkopia 96.04 47 P **P** 03 28 54.3 +1.6
PHP Peshkopia 96.04 47 P **P** 03 28 54.3 +1.6
PHP Peshkopia 96.04 47 P **P** 03 28 54.3 +1.6
SRN Sarande 96.11 49 P **P** 03 28 55.1 +2.1
SRN Sarande 96.11 49 P **P** 03 28 55.1 +2.1
MDVR Moldovita 96.23 44⇑ *i*P **P** 03 28 57.5 +4.0
SGD Sagiada 96.34 49 P **P** 03 28 54.5 +0.5
DRGR 96.41 42⇑ *i*P **P** 03 28 58.2 +3.9
DRGR 96.41 42⇑P **P** 03 28 58.2 +3.9
IGT Igoumenitsa 96.43 49 P **P** 03 28 56.6 +2.1
IGT Igoumenitsa 96.43 49 P **P** 03 28 56.6 +2.1
IGT Igoumenitsa 96.43 49 P **P** 03 28 56.6 +2.1
LVV L`vov 96.45 39 *e*P **P** 03 28 56.0 +1.7
LVV *e* 03 32 54.5
LVV *e*S **S** 03 40 18.4 +3.4
LVV MLR MLR
comp=N,2μm,18.0s
LVV MLR MLR
comp=E,1μm,18.0s
LVV MLR MLR
comp=Z,3μm,19.0s
KBN Korca 96.53 48 P **P** 03 28 57.6 +2.6
KBN Korca 96.53 48 P **P** 03 28 57.6 +2.6
KBN Korca 96.53 48 P **P** 03 28 57.6 +2.6
NVL N'lazarevskaya 96.56 161⇑ *i*P **P** 03 28 53.1 -1.2
NVL *e*PP **sP** 03 28 58.8 +0.2
NVL pmax pmax
comp=Z,34nm,1.5s
SKO Skopje 96.70 47 P **P** 03 28 57.7 +2.0
SKO Skopje 96.70 47 P **P** 03 28 57.7 +2.0
SKO Skopje 96.70 47 P **P** 03 28 57.7 +2.0
NEST Nestorio 96.77 48 P **P** 03 29 00.7 +4.6
JAN Janina 96.80 49 P **P** 03 28 58.5 +2.3
JAN Janina 96.80 49 P **P** 03 28 58.5 +2.3
JAN Janina 96.80 49 P **P** 03 28 58.5 +2.3
FSK Fiskardo 96.84 50 P **P** 03 28 57.4 +1.1
LKD2 Lefkada island 96.84 50 P **P** 03 28 58.2 +1.8
LKD2 Lefkada island 96.84 50 P **P** 03 28 58.2 +1.8
VLS Valsamata 96.92 51 P **P** 03 28 58.6 +1.9
VLS Valsamata 96.92 51 P **P** 03 28 58.6 +1.9
VLS Valsamata 96.92 51 P **P** 03 28 58.6 +1.9
FNA Florina 96.93 48 *e*P **P** 03 28 58.0 +1.2
comp=Z,66nm,1.9s
FNA LR LR
comp=Z,3μm,22.0s
FNA Florina 96.93 48 P **P** 03 28 58.5 +1.7
FNA Florina 96.93 48 *e*P **P** 03 28 58.0 +1.2
FNA pmax pmax
comp=Z,67nm,1.9s
FNA MLR MLR
comp=Z,3μm,22.0s
KFL Anninata 97.09 51 P Pdif 03 29 00.7 +3.1
DSL Palaion Diasel 97.10 50 P Pdif 03 28 59.8 +2.2
DSL Palaion Diasel 97.10 50 P Pdif 03 28 59.8 +2.2
MICGM Minsk 97.25 33 *e*P Pdif 03 29 01.0 +3.1
MICGM *e*PP PP 03 33 02.0 +8.1
MICGM *e*SKS **SKSac** 03 39 34.0 -1.3
MICGM *e*SKKS **SKKSac** 03 40 00.0 -2.4
MICGM *e*S **ScS** 03 40 26.0 +4.0
MICGM *e*PS PS 03 42 00.0 +16
MICGM *e*SS SS 03 46 02.0 -57
MICGM *e*SSS SSS 03 50 12.0
MICGM *e*LQ LQ 03 57 36.0
MICGM *e*LR LR 04 11 36.0
MICGM LRM MLR 04 20 40.0
comp=E,1.7nm,18.0s
MICGM LRM MLR 04 20 52.0
comp=Z,2.7nm,18.0s
MNK Minsk 97.25 33 *e*P Pdif 03 29 01.0 +3.1
MNK *e* 03 33 02.0

MNK *e* 03 39 34.0
MNK *e*S **S** 03 40 26.0 +4.3
PDO Prodromos 97.28 50 P Pdif 03 28 58.5 +0.1
RAO Raoul Island 97.30 241 LR LR 04 02 43.1
comp=Z,5μm,21.8s,baz=76,slow=29
KZN Kozani 97.34 48 P Pdif 03 29 00.8 +2.1
KZN Kozani 97.34 48 P Pdif 03 29 00.8 +2.1
KZN Kozani 97.34 48 P Pdif 03 29 00.8 +2.1
PVO Paravola 97.54 50 P Pdif 03 29 01.8 +2.2
GRG Griva 97.65 48 P Pdif 03 29 02.1 +2.0
GRG Griva 97.65 48 P Pdif 03 29 02.1 +2.0
GRG Griva 97.65 48 P Pdif 03 29 02.1 +2.0
VAY Valandovo 97.68 47 P Pdif 03 29 01.2 +1.1
VAY Valandovo 97.68 47 P Pdif 03 29 01.2 +1.1
VAY Valandovo 97.68 47 P Pdif 03 29 01.2 +1.1
EVR Evrytania 97.69 50 P Pdif 03 29 02.7 +2.3
EVR Evrytania 97.69 50 P Pdif 03 29 02.7 +2.3
THL Klokotos Trika 97.69 49 P **P** 03 28 59.8 -0.3
BUR04 Bucovina Ar. S 97.82 41 *e*P Pdif 03 29 03.3 +2.5
VTS Vitosha 97.83 46⇑ *i*P Pdif 03 29 04.9 +3.9
VTS Vitosha 97.83 46 *e*P Pdif 03 29 03.2 +2.2
comp=Z,25nm,1.5s
VTS LR LR
comp=Z,3μm,22.0s
VTS Vitosha 97.83 46 P Pdif 03 29 02.6 +1.6
VTS Vitosha 97.83 46 *e*P Pdif 03 29 03.2 +2.2
VTS pmax pmax
comp=Z,25nm,1.5s
VTS MLR MLR
comp=Z,3μm,22.0s
ANX Ano Chora 97.85 50 P Pdif 03 29 03.8 +2.7
EFP Efpalio 97.87 50 P Pdif 03 29 02.2 +1.2
TMCR Tamitsa 97.89 22 *e*P Pdif 03 29 03.0 +2.5
TMCR pmax pmax
comp=Z,33nm,1.3s
LIT Litokhoron 97.92 48 *e*P Pdif 03 29 04.2 +2.9
comp=Z,44nm,1.8s
LIT LR LR
comp=Z,3μm,22.0s
LIT Litokhoron 97.92 48 P Pdif 03 29 02.6 +1.3
LIT Litokhoron 97.92 48 *e*P Pdif 03 29 04.2 +2.9
LIT pmax pmax
comp=Z,44nm,1.8s
LIT MLR MLR
comp=Z,3μm,22.0s
KNT Kendrikon 97.96 47 P Pdif 03 29 03.1 +1.7
KNT Kendrikon 97.96 47 P Pdif 03 29 03.1 +1.7
KNT Kendrikon 97.96 47 P Pdif 03 29 03.1 +1.7
LAKA Lakka 97.97 50 P Pdif 03 29 04.0 +2.4
LAKA Lakka 97.97 50 P Pdif 03 29 04.0 +2.4
SERG Sergoula 97.99 50 P Pdif 03 29 03.5 +1.9
AGG Agios Georgios 98.06 49 *e*P Pdif 03 29 04.4 +2.5
comp=Z,142nm,1.5s
AGG LR LR
comp=Z,4μm,20.0s
AGG Agios Georgios 98.06 49 P Pdif 03 29 03.8 +1.9
AGG Agios Georgios 98.06 49 *e*P Pdif 03 29 04.4 +2.5
AGG pmax pmax
comp=Z,142nm,1.5s
AGG MLR MLR
comp=Z,4μm,20.0s
ARR Arges 98.08 43⇑ *i*P Pdif 03 29 03.3 +1.4
THE Thessaloniki 98.14 48 P Pdif 03 29 03.5 +1.3
THE Thessaloniki 98.14 48 P Pdif 03 29 03.5 +1.3
THE Thessaloniki 98.14 48 P Pdif 03 29 03.5 +1.3
ITM Ithomi 98.17 51 *e*P Pdif 03 29 05.8 +3.3
comp=Z,75nm,1.9s
ITM Ithomi 98.17 51 P Pdif 03 29 04.0 +1.5
VOIR 98.34 43⇓ *i*P Pdif 03 29 05.3 +2.2
VOIR 98.34 43⇓P Pdif 03 29 05.3 +2.2
DSF Desfina 98.35 50 P Pdif 03 29 04.5 +1.2
DSF Desfina 98.35 50 P Pdif 03 29 04.5 +1.2
TRIP Tripoli 98.36 51 P Pdif 03 29 06.1 +2.7
SRS Serrai 98.48 47 P Pdif 03 29 05.5 +1.8
SRS Serrai 98.48 47 P Pdif 03 29 05.5 +1.8
SRS Serrai 98.48 47 P Pdif 03 29 05.5 +1.8
VLX Vlachokerasia 98.48 51 P Pdif 03 29 06.5 +2.6
VLX Vlachokerasia 98.48 51 P Pdif 03 29 06.5 +2.6
THAL Thalero 98.54 50 P Pdif 03 29 05.8 +1.8
NVR Nevrokopi 98.62 47 P Pdif 03 29 06.4 +2.0
NVR Nevrokopi 98.62 47 P Pdif 03 29 06.4 +2.0
LKR Lokris 98.65 50 P Pdif 03 29 05.8 +1.3
LKR Lokris 98.65 50 P Pdif 03 29 05.8 +1.3
LTK Loutraki 98.78 50 P Pdif 03 29 06.9 +1.8
LTK Loutraki 98.78 50 P Pdif 03 29 06.9 +1.8
PAIG Paliouri 98.85 48 P Pdif 03 29 06.9 +1.6
PAIG Paliouri 98.85 48 P Pdif 03 29 06.9 +1.6
PAIG Paliouri 98.85 48 P Pdif 03 29 06.9 +1.6
MLR Muntele Rosu 98.93 42 P **P** 03 29 05.7 -0.1
comp=Z,3.6nm,1.1s,baz=276,slow=4.7,SNR=15
MLR LR LR 04 10 47.8
comp=Z,577nm,20.0s,baz=272,slow=34
MLR Muntele Rosu 98.93 42⇑ *i*P Pdif 03 29 09.8 +4.0
MLR Muntele Rosu 98.93 42 *e*P Pdif 03 29 05.8 0.0
MLR Muntele Rosu 98.93 42⇑P Pdif 03 29 09.8 +4.0
OUR Ouranopolis 98.97 48 P Pdif 03 29 07.2 +1.3
OUR Ouranopolis 98.97 48 P Pdif 03 29 07.2 +1.3
OUR Ouranopolis 98.97 48 P Pdif 03 29 07.2 +1.3
VILL Villia 99.01 50 P **Pdif** 03 29 07.5 +1.3
VLI Veliai 99.07 52 P **Pdif** 03 29 08.1 +1.7
VLI Veliai 99.07 52 P **Pdif** 03 29 08.1 +1.7
KRND KRANIDI 99.08 51 P **Pdif** 03 29 07.6 +1.2
DID Didima 99.11 51 P **Pdif** 03 29 07.6 +1.0
DID Didima 99.11 51 P **Pdif** 03 29 07.6 +1.0
AKASG Malin Array Be 99.33 37 P **Pdif** 03 29 07.4 +0.2
comp=Z,0.2nm,0.2s,baz=285,slow=3.6,SNR=7.5
AKASG PP **PP** 03 33 08.5 -1.5
comp=Z,0.2nm,0.3s,baz=287,slow=7.2,SNR=3.3
AKASG LR LR 04 11 14.1
comp=Z,3μm,20.9s,baz=290,slow=34
AKASG Malin Array Be 99.33 37 *i* P **Pdif** 03 29 07.8 +0.6
AKBB Malin Array Si 99.33 37 *e*P **Pdif** 03 29 07.4 +0.2
comp=Z,20nm,1.8s
AKBB *e*PP **PP** 03 33 08.9 -1.0
AKBB Malin Array Si 99.33 37 *e*P **Pdif** 03 29 07.4 +0.2
AKBB *e* 03 33 08.9
AKBB pmax pmax
comp=Z,20nm,1.8s
SBA Scott Base 99.59 192 PFAKE 03 29 20.0 +12
SBA LR LR
comp=Z,8μm,22.0s
KLMR Klimovskoe 100.17 25 *e*P **Pdif** 03 29 11.9 +1.2
KLMR *e* 03 33 19.5
KLMR pmax pmax
comp=Z,28nm,1.7s
KLMR Klimovskoe 100.17 25 *e*P **Pdif** 03 29 12.0 +1.2
KLMR AMP 03 29 13.8
comp=Z,28nm,1.7s
KLMR *e*PP **PP** 03 33 19.5 +3.6
KLMR S SKSac 03 39 37.5 -12
KLMR S SKSac 03 39 37.5 -12
KLMR LQ LQ 03 55 19.8
KLMR LQ LQ 03 55 19.8
KLMR LR LR 04 02 08.3
KLMR AMP 04 07 23.2
comp=Z,4μm,25.0s
SEY Seymchan 100.23 338⇑ *e*P **Pdif** 03 29 10.6 -0.4
ALN Alexandroupoli 100.33 47 PFAKE 03 29 20.0 +8.1
ALN LR LR
comp=Z,1μm,21.0s
TIXI Tiksi 100.34 350 *e*Pdif **Pdif** 03 29 10.4 -0.9
TIXI LR LR
comp=Z,8μm,22.0s
TIXI Tiksi 100.34 350⇓ *e*P **Pdif** 03 29 10.4 -0.9
TIXI pmax pmax
comp=Z,4.0nm,1.0s
TIXI MLR MLR
comp=Z,8μm,21.0s
KIS Kishinev 100.35 40 *e*P **Pdif** 03 29 11.0 -0.9
KIS Kishinev 100.35 40 *e*PP PP 03 33 03.0 -15
KIS Kishinev 100.35 40 *e*PKP **PKiKP** 03 33 36.0 -2.9
KIS Kishinev 100.35 40 *e*P **Pdif** 03 29 11.0 -0.9
KIS *e* 03 39 54.0
KIS *i* S **Sdif** 03 40 50.0 +1.8
KIS *e*SS **SS** 03 47 40.0 -2.5
MXZ Matakaoa Point 100.53 233 PFAKE 03 29 20.0 +7.1
MXZ LR LR
comp=Z,4μm,18.0s
VNDA Vanda 100.70 192 P **Pdif** 03 29 13.3 +0.5
comp=Z,1.0nm,0.8s,baz=131,slow=3.5,SNR=5.0
VNDA PP **PP** 03 33 20.7 +0.9
comp=Z,0.6nm,0.8s,baz=97,slow=8.1,SNR=2.6
TIRR Tirgusor 100.92 43 PFAKE 03 29 30.0 +16

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TIRR                                    LR      LR
    comp=Z,2µm,21.0s
IDI  Anoyia      100.95  53  P       Pdif    03 29 15.6 +0.7
    comp=Z,8.7nm,1.1s,baz=292,slow=4.3,SNR=6.9
IDI                             PP      PP      03 33 22.0 -0.9
    comp=Z,8.5nm,1.1s,baz=283,slow=7.6,SNR=6.7
IDI  Anoyia      100.95  53⇑i P  Pdif    03 29 19.4 +4.5
IDI  Anoyia      100.95  53  P       Pdif    03 29 15.6 +0.7
IDI                             ePP     PP      03 33 24.7 +1.8
IDI                             LR      LR
    comp=Z,2µm,22.0s
SANT Santorini   101.12  51  PFAKE           03 29 30.0 +14
SANT                            LR      LR
    comp=Z,2µm,22.0s
TSUM Tsumeb      101.34 108  PP      PP      03 33 19.3 -7.3
    comp=Z,5.7nm,1.3s,baz=292,slow=7.5,SNR=4.5
TSUM Tsumeb      101.34 108  ePP     PP      03 33 19.3 -7.3
TSUM                            LR      LR
    comp=Z,14µm,21.0s
URZ  Urewera     101.46 232  PFAKE           03 29 30.0 +13
URZ                             LR      LR
    comp=Z,3µm,19.0s
OBN  Obninsk     101.61  31  P       Pdif    03 29 17.5 +0.2
    comp=Z,11nm,0.4s,baz=187,slow=5.6,SNR=5.2
OBN                             PP      PP      03 33 29.0 +2.0
    comp=Z,18nm,0.4s,baz=125,slow=3.3,SNR=5.7
OBN  Obninsk     101.61  31  ePdif   Pdif    03 29 17.5 +0.2
OBN                             ePP     PP      03 33 28.9 +2.0
OBN                             LR      LR
    comp=Z,3µm,22.0s
OBN  Obninsk     101.61  31⇓ eP  Pdif    03 29 16.9 -0.3
OBN                             i       03 33 27.3
OBN                             i S     SKSac   03 39 49.2 -7.6
OBN                             i PS    PS      03 42 32.1 +1.0
OBN                             pmax    pmax
    comp=Z,26nm,1.5s
OBN                             MLR     MLR
    comp=Z,2µm,20.0s
MOS  Moscow      101.85  30  eP      Pdif    03 29 19.4 +1.1
MOS                             e       03 33 29.8
MOS                             MLR     MLR
    comp=E,3µm,20.0s
MOS                             MLR     MLR
    comp=Z,4µm,20.0s
BKZ  Black Stump Fm 101.91 231  PFAKE           03 29 30.0 +11
BKZ                             LR      LR
    comp=Z,3µm,19.0s
BFZ  Birch Farm  102.02 230  PFAKE           03 29 30.0 +11
BFZ                             LR      LR
    comp=Z,3µm,18.0s
PRGR Permogore   102.18  23  eP      Pdif    03 29 21.9 +2.2
PRGR                            pmax    pmax
    comp=Z,10.0nm,0.6s
PET  Petropavlovsk 102.38 327  PFAKE           03 29 30.0 +9.3
PET                             LR      LR
    comp=Z,2µm,21.0s
MA2  Magadan     102.79 335  PFAKE           03 29 30.0 +7.6
MA2                             LR      LR
    comp=Z,5µm,20.0s
PEA0B Petropavlovsk- 102.85 328  PFAKE           03 29 30.0 +7.1
PEA0B                           LR      LR
    comp=Z,3µm,20.0s
SNZO South Karori 103.14 229  PFAKE           03 29 40.0 +16
SNZO                            LR      LR
    comp=Z,3µm,18.0s
SUR  Sutherland  104.19 122  PFAKE           03 29 40.0 +10
SUR                             LR      LR
    comp=Z,10µm,21.0s
TARA Tarawa      104.31 273  PFAKE           03 29 40.0 +10
TARA                            LR      LR
    comp=Z,4µm,19.0s
MQZ  McQueen's Vall 104.43 226  PFAKE           03 29 40.0 +10
MQZ                             LR      LR
    comp=Z,4µm,18.0s
THZ  Tophouse    104.45 228  PFAKE           03 29 40.0 +10
THZ                             LR      LR
    comp=Z,4µm,19.0s
CRLZ Canterbury Las 104.47 227  PFAKE           03 29 40.0 +10
CRLZ                            LR      LR
    comp=Z,5µm,20.0s
ISP  Isparta     104.57  49  PFAKE           03 29 40.0 +9.0
ISP                             LR      LR
    comp=Z,3µm,22.0s
ANTO Ankara      105.54  46  PFAKE           03 34 00.0
ANTO                            LR      LR
    comp=Z,2µm,21.0s
ODZ  Otahua Downs 105.69 225  PFAKE           03 34 00.0
ODZ                             LR      LR
    comp=Z,4µm,19.0s
ILGA Ilgaz       105.76  45  PFAKE           03 34 00.0
ILGA                            LR      LR
    comp=Z,2µm,21.0s
BR101 Keskin Array S 106.20  46  ePdif   Pdif    03 29 37.8 -0.5
BR101                           ePP     PKiKP   03 33 50.0  0.0
BR101                           ePKKPbc PKKPbc  03 45 10.7 -1.7
BRTR Keskin Array B 106.20  46  Pdiff   Pdif    03 29 37.8 -0.5
    comp=Z,0.5nm,0.7s,baz=273,slow=2.2,SNR=4.8
BRTR                            PP      PKiKP   03 33 50.0 -0.1
    comp=Z,1.6nm,1.0s,baz=204,slow=2.7,SNR=4.7
BRTR                            PKKPbc  PKKPbc  03 45 10.7 -1.7
    comp=Z,0.4nm,0.7s,baz=132,slow=6.4,SNR=3.2
WAKE Wake Island 107.62 292  PFAKE           03 34 10.0
WAKE                            LR      LR
    comp=Z,4µm,20.0s
CSS  Mathiatis   107.65  51  PFAKE           03 34 00.0
CSS                             LR      LR
    comp=Z,500nm,21.0s
BOSA Boshof      108.23 118  PKiKP   PKiKP   03 33 53.5 -0.5
    comp=Z,2.2nm,0.9s,baz=135,slow=4.3,SNR=2.6
YAK  Yakutsk     108.29 345  PFAKE           03 34 00.0
YAK                             LR      LR
    comp=Z,4µm,20.0s
YAK  Yakutsk     108.29 345  eP      Pdif    03 29 45.9 -0.9
YAK                             e       03 34 15.8
YAK                             ePS     PS      03 43 30.3 -10
YAK                             pmax    pmax
    comp=Z,363nm,4.2s
YAK                             pmax    pmax
    comp=N,113nm,3.9s
YAK                             pmax    pmax
    comp=E,161nm,4.7s
MMAI Mount Meron Ar 109.94  52  PP      PP      03 34 28.4 -1.1
    comp=E,0.5nm,0.3s,baz=269,slow=12,SNR=3.6
KIV  Kislovodsk  110.47  39  PFAKE           03 34 10.0
KIV                             LR      LR
    comp=Z,2µm,22.0s
KIV  Kislovodsk  110.47  39  i PKIKP  PKiKP   03 33 57.0 -0.8
KIV                             e       03 34 35.0
KIV                             e       03 40 36.3
KIV                             ePS     PS      03 44 06.0 +2.7
KIV                             eSS     SS      03 50 07.4 +6.5
KIV                             pmax    pmax
    comp=Z,6.0nm,1.1s
ARU  Arti        110.62  22  PFAKE           03 34 10.0
ARU                             LR      LR
    comp=Z,3µm,21.0s
ARU  Arti        110.62  22  i PKIKP  PKiKP   03 33 56.6 -1.0
ARU                             03 34 35.2
ARU                             PPP     PPP     03 36 53.8
ARU                             03 41 08.8
ARU                             SP      SP      03 44 05.9 +4.1
KBZ  Khabaz      110.71  39  PKiKP   PKiKP   03 33 59.4 +1.3
    comp=Z,2.7nm,0.9s,baz=262,slow=2.1,SNR=4.7
KBZ                             PP      PP      03 34 34.1 -0.3
    comp=Z,0.6nm,0.4s,baz=290,slow=9.5,SNR=4.8
KBZ                             PKKPbc  PKKPbc  03 44 57.1 -0.9
    comp=Z,1.3nm,0.6s,baz=121,slow=6.4,SNR=3.0
NEY  Neytrino    110.84  40⇓ iPKIKP  PKiKP   03 33 58.3 -0.4
NCK  Nalchik     111.27  39⇓ iPKIKP  PKiKP   03 33 58.9 -0.4
LSZ  Lusaka      111.42 104  PFAKE           03 34 10.0
LSZ                             LR      LR
    comp=Z,11µm,21.0s
ASF  Jabal al Asfar 111.42  52  PP      PP      03 34 39.3 -0.9
    comp=Z,1.0nm,0.5s,baz=246,slow=12,SNR=3.5
DZM  Mont Dzumac 111.47 249  ePS     PS      03 44 13.5 -0.2
    comp=Z,2µm,34.5s
DZM                             eSS     SS      03 50 15.2 -1.2
    comp=Z,8µm,30.2s
DZM  Mont Dzumac 111.47 249  eLR     LR      04 07 18.4
    comp=Z,10µm,30.1s
DZM  Mont Dzumac 111.47 249  PFAKE           03 34 10.0
DZM                             LR      LR
    comp=Z,3µm,18.0s
KUR  Kuril'sk    112.42 324  i PKIKP  PKiKP   03 34 01.7 +0.4
KUR                             i       03 34 49.7
KUR                             ePPP    PPP     03 37 08.0
KUR                             ePS     PS      03 44 18.7 -2.2
KUR                             eSS     SS      03 50 38.3 +12
MBAR Mbarara     113.25  88  PFAKE           03 34 20.0
MBAR                            LR      LR
    comp=Z,9µm,21.0s
MAW  Mawson      113.66 166  PFAKE           03 34 20.0
MAW                             LR      LR
    comp=Z,1µm,21.0s
GNI  Garni       113.69  42⇑i PKIKP  PKiKP   03 34 04.2  0.0
GNI                             MLR     MLR
    comp=Z,4µm,21.0s
MAK  Makhachkala 113.98  38  eP      Pdif    03 30 14.7 +2.2
MAK                             i       03 34 01.9
MAK                             e       03 35 03.3
MAK                             e       03 40 49.0
MAK                             eSS     SS      03 50 51.8 +4.6
MAK                             pmax    pmax
    comp=Z,88nm,1.1s
YSS  Yuzh-Sakhalins 114.26 328  PFAKE           03 34 20.0 +15
YSS                             LR      LR
    comp=Z,2µm,20.0s
YSS  Yuzh-Sakhalins 114.26 328  ePKIKP  PKPdf   03 34 02.8 -2.0
YUK  Yuzh-Kuril'sk  114.28 324⇑ ePKIKP  PKPdf   03 34 04.4 -0.5
AKTO Aktyubinsk  114.79  27  PKP     PKPdf   03 34 04.3 -1.5
    comp=Z,0.6nm,0.5s,baz=0.0,slow=2.0,SNR=2.6
AKTO                            PP      PP      03 35 01.9 -1.2
    comp=Z,5.4nm,1.2s,baz=323,slow=10,SNR=4.7
AKTO                            PKKPbc  PKKPbc  03 44 41.6 -3.1
    comp=Z,0.8nm,0.4s,baz=180,slow=4.0,SNR=3.6
ASAJ Asahikawa   116.11 325  PFAKE           03 34 20.0 +12
ASAJ                            LR      LR
    comp=Z,3µm,20.0s
AB31 Akbulak array 116.50  26  i PKIKP  PKPdf   03 34 08.0 -1.1
AB31                            pmax    pmax
    comp=Z,12nm,1.1s
ABKAR Akbulak array 116.50  26  ePKPdf  PKPdf   03 34 08.9 -0.1
ERM  Erimo       117.07 323  PFAKE           03 34 20.0 +10
ERM                             LR      LR
    comp=Z,2µm,20.0s
ERM  Erimo       117.07 323⇓ iPKIKP  PKPdf   03 34 07.4 -2.9
ERM                             MLR     MLR
    comp=Z,2µm,22.0s
BRVK Borovoye    117.35  18  PFAKE           03 34 20.0 +9.4
BRVK                            LR      LR
    comp=Z,4µm,20.0s
BRVK Borovoye    117.35  18⇑ iPKIKP  PKPdf   03 34 10.4 -0.2
BVAR Borovoye Array 117.41  18  PKP     PKPdf   03 34 10.5 -0.2
    comp=Z,2.1nm,0.7s,baz=1.9,slow=4.3,SNR=3.7
BVAR                            PP      PP      03 35 18.7 -2.5
    comp=Z,1.6nm,0.8s,baz=322,slow=4.4,SNR=2.8
BVAR                            PKKPbc  PKKPbc  03 44 32.7 -2.9
    comp=Z,1.7nm,0.8s,baz=134,slow=4.2,SNR=5.3
KLR  Kul'dur     117.89 335  PKP     PKPdf   03 34 10.8 -0.9
    comp=Z,0.2nm,0.7s,baz=329,slow=4.4,SNR=5.7
KLR                             PP      PP      03 35 23.1 -1.5
    comp=Z,0.3nm,1.0s,baz=40,slow=6.6,SNR=2.8
KLR  Kul'dur     117.89 335⇓ iPKIKP  PKPdf   03 34 11.0 -0.7
HNR  Honiara     117.95 262  PFAKE           03 34 20.0 +7.2
HNR                             LR      LR
    comp=Z,3µm,22.0s
PATS Pohnpei     118.03 281  PFAKE           03 34 30.0 +17
PATS                            LR      LR
    comp=Z,4µm,22.0s
CASY Casey       118.59 186  PFAKE           03 34 20.0 +7.5
CASY                            LR      LR
    comp=Z,13µm,18.0s
NVS  Novosibirsk 118.77  9  ePKIKP  PKPdf   03 34 12.6 -0.6
NVS                             e       03 35 28.9
NVS                             pmax    pmax
    comp=Z,16nm,1.7s
FURI Furi        119.72  77  PFAKE           03 34 30.0 +13
FURI                            LR      LR
    comp=Z,7µm,22.0s
KMBO Kilima Mbogo 119.78  88  PFAKE           03 34 30.0 +13
KMBO                            LR      LR
    comp=Z,7µm,21.0s
ZAA1 Zalesovo Array 119.87  9  ePKPdf  PKPdf   03 34 13.3 -2.1
ZAA1                            ePKPKPbc PKKPbc 03 44 19.7 -7.0
ZAA0 Zalesovo Array 119.88  9  ePKPdf  PKPdf   03 34 14.5 -0.9
ZAA0                            LR      LR
    comp=Z,3µm,20.0s
ZALV Zalesovo Beam 119.88  9  PKP     PKPdf   03 34 13.3 -2.1
    comp=Z,3.2nm,0.6s,baz=32,slow=5.9,SNR=12
ZALV                            PKKPbc  PKKPbc  03 44 19.7 -7.0
    comp=Z,1.1nm,0.3s,baz=197,slow=4.5,SNR=7.1
ZALV Zalesovo Beam 119.88  9  ePKPdf  PKPdf   03 34 14.0 -1.4
ZALV Zalesovo Beam 119.88  9  ePKIKP  PKPdf   03 34 14.0 -1.4
USRK Ussuriysk Ar. 121.61 331  PKP     PKPdf   03 34 17.7 -1.3
    comp=Z,3.7nm,0.8s,baz=150,slow=0.8,SNR=5.4
KURK Kurchatov   121.75  14  ePKPdf  PKPdf   03 34 18.7 -0.5
KURK                            ePKPKPbc PKKPbc 03 44 16.2 -3.4
KURK                            LR      LR
    comp=Z,6µm,20.0s
KURK Kurchatov   121.75  14⇑ iPKIKP  PKPdf   03 34 18.6 -0.5
KURK                            MLR     MLR
    comp=Z,9µm,24.0s
KURBB Kurchatov Arra 121.81  14  PKP     PKPdf   03 34 18.7 -0.6
    comp=Z,7.7nm,0.8s,baz=333,slow=2.3,SNR=25
KURBB                           PKKPbc  PKKPab  03 44 16.2 -3.1
    comp=Z,2.2nm,0.9s,baz=161,slow=3.1,SNR=15
HIA  Hailar      122.14 343  PFAKE           03 34 30.0 +10
HIA                             LR      LR
    comp=Z,6µm,20.0s
MDJ  Mudanjiang  122.40 333  PKP     PKPdf   03 34 24.3 +3.7
MDJ                             PP      PP      03 35 56.8 +1.1
MDJ                             LR      LR
    comp=Z,3µm,23.9s
MDJ                             LR      LR
    comp=Z,4µm,22.3s
MDJ                             LR      LR
    comp=Z,5µm,24.7s
MDJ  Mudanjiang  122.40 333  PFAKE           03 34 30.0 +9.4
MDJ                             LR      LR
    comp=Z,3µm,18.0s
TLY  Talaya      122.84 355  PFAKE           03 34 30.0 +8.8
TLY                             LR      LR
    comp=Z,3µm,20.0s
TLY  Talaya      122.84 355  i PKIKP  PKPdf   03 34 27.8 +6.6
TLY                             e       03 35 56.8
TLY                             eSS     SS      03 52 37.1 -3.5
TLY                             pmax    pmax
    comp=Z,3.0nm,0.6s
MOY  Mondy       123.03 357  ePKIKP  PKPdf   03 34 25.0 +3.3
ATD  Arta Tunnel 123.14  73  PKP     PKPdf   03 34 24.9 +2.0
    comp=Z,1.9nm,0.3s,baz=96,slow=2.4,SNR=2.8
ATD                             PP      PP      03 36 02.4 -0.1
    comp=Z,2.5nm,0.3s,baz=336,slow=6.4,SNR=3.7
ATD  Arta Tunnel 123.14  73  ePKPdf  PKPdf   03 34 24.9 +2.0
ATD                             ePP     PP      03 36 02.4 -0.1
ATD                             LR      LR
    comp=Z,4µm,22.0s
MSHR Mys Shultsa 123.23 331⇑ iPKIKP  PKPdf   03 34 23.2 +1.0
ARMA Armidale    123.41 237  PFAKE           03 34 40.0 +17
ARMA                            LR      LR
    comp=Z,3µm,20.0s
MAJO Matsushiro  123.45 321  ePKPdf  PKPdf   03 34 21.9 -0.9
MAJO Matsushiro  123.45 321⇓ iPKIKP  PKPdf   03 34 22.9 +0.1
MAJO                            MLR     MLR
    comp=Z,1µm,22.0s
MJAR Matsushiro Arr 123.45 321  PKP     PKPdf   03 34 21.9 -0.9
    comp=Z,1.5nm,0.8s,baz=118,slow=0.6,SNR=4.9
GEYT Alibeck     123.45  37  PKP     PKPdf   03 34 23.7 +0.8
    comp=Z,4.0nm,0.3s,baz=261,slow=5.4,SNR=7.8
GYA0B ALIBECK ARRAY 123.45  37  ePKPdf  PKPdf   03 34 24.9 +2.1
GYA0B                           LR      LR
    comp=Z,2µm,22.0s
HVS  Khovu-Aksy  123.55  3⇑ iPKIKP  PKPdf   03 34 22.8 +0.1
DAMY Dhamar      123.77  69  PFAKE           03 34 40.0 +16
DAMY                            LR      LR
    comp=Z,8µm,22.0s
ZAK  Zakamensk   124.16 355  ePKIKP  PKPdf   03 34 22.7 -1.2
ZAK                             pmax    pmax
    comp=Z,8.0nm,1.5s
CN2  Changchun   124.84 336  ePKP    PKPdf   03 34 23.4 -1.9
CN2                             ePP     PP      03 36 11.5 -0.6
CN2                             SKS     SKSdf   03 41 33.5 -4.0
CN2                             SS      SS      03 53 05.8 -0.7
CN2                             AMB     AMB
    comp=Z,400nm,8.0s
CN2                             LR      LR
    comp=Z,2µm,25.0s
CN2                             LR      LR
    comp=Z,3µm,25.0s
CN2                             LR      LR
    comp=Z,3µm,27.0s
INU  Inuyama     124.95 321  PFAKE           03 34 40.0 +14
INU                             LR      LR
    comp=Z,2µm,21.0s
EIDS Eidsvold    125.04 243  PFAKE           03 34 40.0 +14
EIDS                            LR      LR
    comp=Z,2µm,21.0s
RABL Rabaul      125.47 269  PFAKE           03 34 40.0 +13
RABL                            LR      LR
    comp=Z,4µm,21.0s
KK31 Karatay Array 125.86  24  i PKIKP  PKPdf   03 34 28.9 +1.6
KK31                            pmax    pmax
    comp=Z,11nm,1.4s
CBIJ Chichi jima 125.98 309  PFAKE           03 34 40.0 +12
CBIJ                            LR      LR
    comp=Z,3µm,21.0s
ZSN  Zaisan      126.17  11  ePKP    PKPdf   03 34 28.8 +1.1
ZSN                             LR      LR      04 30 34.1
    comp=Z,319nm,21.3s
MAKZ Makanchi    126.19  13  ePKPdf  PKPdf   03 34 26.8 -1.0
MAKZ                            LR      LR
    comp=Z,4µm,22.0s
MAKZ Makanchi    126.19  13  PKIKP   PKPdf   03 34 26.5 -1.3
MAKZ                            pmax    pmax
    comp=Z,33nm,1.5s
ULN  Ulaanbaatar 126.24 352  ePKPdf  PKPdf   03 34 27.4 -0.6
ULN                             LR      LR
    comp=Z,5µm,20.0s
ULN  Ulaanbaatar 126.24 352⇑ ePKIKP  PKPdf   03 34 27.0 -1.0
MK31 Makanchi Array 126.28  13  ePKPdf  PKPdf   03 34 26.9 -1.1
MK31 Makanchi Array 126.28  13  i PKIKP  PKPdf   03 34 26.6 -1.4
MK31                            pmax    pmax
    comp=Z,25nm,1.3s
MK32 Makanchi Array 126.28  13  ePKPdf  PKPdf   03 34 26.8 -1.2
MK32                            ePP     PP      03 36 17.4 -4.0
MKAR Makanchi Array 126.28  13  PKP     PKPdf   03 34 26.8 -1.1
    comp=Z,5.8nm,0.8s,baz=335,slow=1.9,SNR=16
MKAR                            PP      PP      03 36 17.4 -4.0
    comp=Z,2.4nm,1.0s,baz=357,slow=4.9,SNR=2.6
MKAR Makanchi Array 126.28  13  ePKPdf  PKPdf   03 34 26.9 -1.1
MKAR                            LR      LR
    comp=Z,900nm,20.0s
MK01 Makanchi Array 126.30  13  ePKPdf  PKPdf   03 34 26.6 -1.4
SONA1 Songino Array 126.35 353  ePKPdf  PKPdf   03 34 27.2 -1.0
SONA0 Songino Array 126.36 353  ePKPdf  PKPdf   03 34 27.6 -0.7
SONA0                           ePP     PP      03 36 18.2 -3.8
SONM Songino Array 126.36 353  PKP     PKPdf   03 34 27.6 -0.7
    comp=Z,5.4nm,0.8s,baz=1.5,slow=0.7,SNR=17
SONM                            PP      PP      03 36 18.2 -3.8
    comp=Z,2.2nm,1.0s,baz=348,slow=6.3,SNR=3.4
USP  Ospenovka   127.25  21  P       PKPdf   03 34 29.5 -0.5
    SNR=15
KUU  Kurty       127.32  19  ePKP    PKPdf   03 34 29.8 -0.3
KUU                             ePP     PP      03 36 31.2 +2.8
KUU                             LR      LR      04 33 39.2
    comp=Z,1µm,16.0s
EKS2 Erkin-Say   127.51  22  P       PKPdf   03 34 31.6 +1.0
    SNR=14
FRU  Bishkek     127.67  21  ePKIKP  PKPdf   03 34 32.0 +1.2
FRU                             e       03 36 28.0
FRU                             pmax    pmax
    comp=Z,100nm,1.6s
AAK  Ala-Archa   127.80  21  P       PKPdf   03 34 31.6 +0.4
    SNR=8.5
AAK  Ala-Archa   127.80  21  ePKPdf  PKPdf   03 34 31.5 +0.4
AAK                             LR      LR
    comp=Z,4µm,22.0s
AAK  Ala-Archa   127.80  21⇓ iPKIKP  PKPdf   03 34 31.4 +0.2
BMNS Besmoynak   127.80  20  ePKP    PKPdf   03 34 30.9 -0.2
BMNS                            ePP     PP      03 36 34.9 +3.2
BMNS                            LR      LR      04 36 51.9
    comp=Z,545nm,17.0s
TKM2 Tokmak 2    127.94  20  P       PKPdf   03 34 31.4 -0.1
    SNR=20
AML  Almayashu   127.94  22  P       PKPdf   03 34 36.5 +4.8
    SNR=7.4
KBK  Karagaybulak 127.94  21  P       PKPdf   03 34 34.3 +2.9
    SNR=9.3
AAA  Alma-Ata    128.12  19  ePKIKP  PKPdf   03 34 34.1 +2.4
AAA                             pmax    pmax
    comp=Z,100nm,2.1s
UCH  Uchtor      128.16  22  P       PKPdf   03 34 32.1 -0.2
    SNR=21
MDOK Medeo       128.21  19  ePKP    PKPdf   03 34 32.0  0.0
MDOK                            ePP     PP      03 36 37.4 +3.0
MDOK                            LR      LR      04 34 21.6
    comp=Z,2µm,20.9s
KPKS Kokpek      128.44  17  ePKP    PKPdf   03 34 32.5 +0.2
KPKS                            ePP     PP      03 36 39.1 +3.3
KPKS                            LR      LR      04 34 21.6
    comp=Z,2µm,19.3s
KZA  Kyzart      128.56  21  P       PKPdf   03 34 41.4 +8.4
    SNR=5.2
KSRS Korea Array 128.73 329  PKP     PKPdf   03 34 32.5 -0.4
    comp=Z,5.9nm,0.3s,baz=9.8,slow=1.1,SNR=24
KSRS Korea Array 128.73 329  PKIKP   PKPdf   03 34 32.5 -0.4
KSRS                            pmax    pmax
    comp=Z,13nm,0.9s
SATY Saty        128.73  18  ePKP    PKPdf   03 34 32.9  0.0
SATY                            ePP     PP      03 36 40.6 +2.8
SATY                            LR      LR      04 33 48.8
    comp=Z,1µm,20.2s
KS15 Wonju Array Si 128.75 329  ePKPdf  PKPdf   03 34 32.9  0.0
KSAR Wonju Array Be 128.75 329  PKP     PKPdf   03 34 32.5 -0.4
KSAR Wonju Array Be 128.75 329  PKIKP   PKPdf   03 34 32.5 -0.4
ULHL Ulahol      128.75  20  P       PKPdf   03 34 34.1 +1.0
    SNR=8.8
UZB  Uzynbulak   128.83  17  ePKP    PKPdf   03 34 33.5 +0.3
UZB                             LR      LR      04 34 39.4
    comp=Z,2µm,21.4s
SHLS Shalkode    128.95  17  ePKP    PKPdf   03 34 34.4 +1.1
SHLS                            LR      LR      04 35 12.2
    comp=Z,946nm,17.7s
KDJ  Kajisay     129.17  19  ePKPdf  PKPdf   03 34 34.3 +0.4
KDJ                             LR      LR
    comp=Z,5µm,22.0s
PRZ  Przheval'sk 129.25  18  ePKPdf  PKPdf   03 34 36.1 +2.2
PRZ                             LR      LR
    comp=Z,4µm,20.0s
PRZ  Przheval'sk 129.25  18  ePKIKP  PKPdf   03 34 36.2 +2.2
PRZ                             MLR     MLR
    comp=Z,4µm,20.0s
GUMO Guam        129.26 292  PFAKE           03 34 50.0 +16
GUMO                            LR      LR
    comp=Z,2µm,21.0s
ABPO Ambohimpanom 129.30 110  PFAKE           03 34 50.0 +15
ABPO                            LR      LR
    comp=Z,7µm,22.0s
INCN Inchon      129.36 330  PFAKE           03 34 50.0 +16
INCN                            LR      LR
    comp=Z,4µm,20.0s
NRN  Naryn       129.39  21  ePKPdf  PKPdf   03 34 34.7 +0.2
NRN                             LR      LR
    comp=Z,4µm,22.0s
NRN  Naryn       129.39  21  ePKIKP  PKPdf   03 34 34.7 +0.2
NRN                             MLR     MLR
    comp=Z,4µm,22.0s
TARG Taragay, Kyrgy 129.74  19  ePKPdf  PKPdf   03 34 36.4 +1.1
TARG                            LR      LR
    comp=Z,4µm,22.0s
UOSS Minazif     129.80  51  ePKPdf  PKPdf   03 34 37.7 +2.5
UOSS                            LR      LR
    comp=Z,4µm,21.0s
TJN  Taejon      129.84 328⇑ ePKIKP  PKPdf   03 34 34.0 -1.0
MANU Manus Island 130.08 272  PFAKE           03 34 50.0 +14
MANU                            LR      LR
    comp=Z,2µm,22.0s
WMQ  Urumqi      130.17  9  PKP     PKPdf   03 34 36.2 +0.7
WMQ                             PP      PP      03 36 52.8 +5.8
WMQ                             PKS     PKSdf   03 38 11.2 -0.9
WMQ                             SKKS    03 43 44.0
WMQ                             SS      SS      03 54 15.7 +3.3
WMQ                             AMB     AMB
    comp=Z,780nm,8.7s
WMQ                             LR      LR
    comp=Z,8µm,22.7s
WMQ                             LR      LR
    comp=Z,6µm,23.5s
WMQ                             LR      LR
    comp=Z,8µm,21.3s
JNU  Nakatsue    130.23 323  PKP     PKPdf   03 34 36.0 +0.1
    comp=Z,10nm,1.0s,baz=189,slow=4.7,SNR=3.5
JNU  Nakatsue    130.23 323  ePKPdf  PKPdf   03 34 36.0 +0.1
JNU                             LR      LR
    comp=Z,4µm,19.0s
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CTA	**Charters Tower**	**130.42**	**248**	PKP	**PKPdf**	**03 34 35.8**	**-0.7**
	comp=Z,1.3nm,0.3s,baz=69,slow=2.7,SNR=4.7						
CTAO	**Charters Tower**	**130.42**	**248**	PFAKE		03 34 50.0	+13
CTAO				LR	LR		
	comp=Z,2μm,19.0s						
DL2	**Dalian**	**130.51**	**335**	*e*PKP	**PKPdf**	**03 34 34.2**	**-2.0**
DL2				PP	**PP**	**03 36 55.3**	**+5.9**
DL2				AMB	AMB		
	comp=Z,300nm,5.9s						
DL2				LR	LR		
	comp=Z,1μm,21.2s						
DL2				LR	LR		
	comp=Z,4μm,22.4s						
DL2				LR	LR		
	comp=Z,3μm,22.4s						
PMG	**Port Moresby**	**130.57**	**262**	PFAKE		03 34 50.0	+13
PMG				LR	LR		
	comp=Z,2μm,18.0s						
KSH	**Kashi**	**131.06**	**22**	PKP	**PKPdf**	**03 34 39.4**	**+2.0**
KSH				PP	**PP**	**03 36 54.3**	**+1.2**
KSH				PKS	**PKSdf**	**03 38 10.2**	**-3.8**
KSH				SKKS		03 43 44.6	
KSH				AMB	AMB		
	comp=Z,740nm,6.7s						
KSH				LR	LR		
	comp=Z,3μm,14.0s						
KSH				LR	LR		
	comp=Z,3μm,17.2s						
KSH				LR	LR		
	comp=Z,4μm,19.7s						
STKA	**Stephens Creek**	**131.09**	**232**	PKP	**PKPdf**	**03 34 36.9**	**-0.7**
	comp=Z,4.8nm,0.9s,baz=318,slow=2.1,SNR=4.6						
STKA	**Stephens Creek**	**131.09**	**232**	*e*PKPdf	**PKPdf**	**03 34 37.5**	**0.0**
STKA				LR	LR		
	comp=Z,700nm,19.0s						
STKA	**Stephens Creek**	**131.09**	**232**	*e*PKIKP	**PKPdf**	**03 34 37.5**	**0.0**
STKA				MLR	MLR		
	comp=Z,700nm,19.0s						
BJT	**Baijiatuau**	**131.58**	**341**	PFAKE		03 34 50.0	+12
BJT				LR	LR		
	comp=Z,4μm,22.0s						
KBL	**Kabul**	**132.04**	**32**	PFAKE		03 34 50.0	+10
KBL				LR	LR		
	comp=Z,3μm,19.0s						
HHC	**Hu-ho-hao-te**	**132.14**	**346**	*e*PKP	**PKPdf**	**03 34 39.6**	**+0.2**
HHC				PP	**PP**	**03 37 04.0**	**+4.2**
HHC				SS	SS	03 54 37.6	+0.9
HHC				AMB	AMB		
	comp=Z,3μm,16.4s						
HHC				LR	LR		
	comp=Z,2μm,17.3s						
HHC				LR	LR		
	comp=Z,2μm,17.3s						
WSAR	**Wadi Sarin**	**132.58**	**52**	PKP	**PKPdf**	**03 34 40.0**	**-0.6**
	comp=Z,12nm,1.0s,baz=32,slow=5.2,SNR=5.4						
COEN	**Coen**	**134.20**	**256**	PFAKE		03 35 00.0	+16
COEN				LR	LR		
	comp=Z,2μm,19.0s						
NIL	**Nilore**	**134.87**	**29**	PFAKE		03 35 00.0	+15
NIL				LR	LR		
	comp=Z,4μm,22.0s						
BBOO	**Buckleboo**	**134.90**	**228**	PFAKE		03 35 00.0	+15
BBOO				LR	LR		
	comp=Z,3μm,21.0s						
GTA	**Gaotai**	**135.31**	**357**	⇓PKP	**PKPdf**	**03 34 45.0**	**-0.4**
GTA				PP	**PP**	**03 37 22.7**	**+2.8**
GTA				SKKS		03 44 15.1	
GTA				SS	**SS**	**03 55 15.2**	**+0.4**
GTA				AMB	AMB		
	comp=Z,520nm,7.6s						
GTA				LR	LR		
	comp=Z,4μm,23.7s						
GTA				LR	LR		
	comp=Z,2μm,23.7s						
GTA				LR	LR		
	comp=Z,7μm,24.4s						
SSE	**Sheshan**	**137.16**	**329**	PKP	**PKPdf**	**03 34 44.7**	**-4.2**
SSE				LR	LR		
	comp=Z,880nm,20.4s						
SSE				LR	LR		
	comp=Z,2μm,19.2s						
SSE				LR	LR		
	comp=Z,2μm,22.4s						
DHRM	**DHARAMSHALA**	**137.45**	**27**	*e*P	**PKPdf**	**03 34 49.5**	**-0.3**
DHRM				IAMs_20	IAMs_20	04 13 24.0	
	comp=Z,2μm,28.6s						
NJ2	**Nanjing**	**137.49**	**333**	*e*PKP	**PKPdf**	**03 34 49.8**	**+0.3**
NJ2				PP	**PP**	**03 37 37.1**	**+3.2**
NJ2				SS	SS	03 55 48.7	+7.2
NJ2				AMB	AMB		
	comp=Z,570nm,6.0s						
NJ2				LR	LR		
	comp=Z,3μm,20.6s						
NJ2				LR	LR		
	comp=Z,2μm,20.1s						
NJ2				LR	LR		
	comp=Z,3μm,21.7s						
LZH	**Lanzhou**	**138.25**	**352**	*e*PKP	**PKPdf**	**03 34 52.2**	**+1.2**
LZH				SS	SS	03 55 49.5	-0.5
LZH				AMB	AMB		
	comp=Z,2μm,6.5s						
LZH				LR	LR		
	comp=Z,2μm,17.9s						
LZH				LR	LR		
	comp=Z,4μm,18.4s						
LZH				LR	LR		
	comp=Z,4μm,19.2s						
SMLA	**Simla**	**138.79**	**27**	*e*P	**PKPdf**	**03 34 50.7**	**-1.2**
SMLA				IAMs_20	IAMs_20	04 07 55.3	
	comp=Z,295nm,8.8s						
XAN	**Xi'an**	**139.25**	**345**	PKP	**PKPdf**	**03 34 52.8**	**0.0**
XAN				PP	**PP**	**03 37 52.1**	**+7.5**
XAN				PKS	**PKSdf**	**03 38 29.8**	**+0.8**
XAN				SKKS		03 44 37.0	
XAN				SS	**SS**	**03 56 00.2**	**-1.6**
XAN				AMB	AMB		
	comp=Z,530nm,5.9s						
XAN				LR	LR		
	comp=Z,4μm,21.0s						
XAN				LR	LR		
	comp=Z,3μm,18.4s						
XAN				LR	LR		
	comp=Z,6μm,21.6s						
DDI	**Dehra Dun**	**139.87**	**26**	*e*P	**PKPdf**	**03 34 53.4**	**-0.6**
AS01	**Alice Springs**	**140.47**	**239**	*e*PKPpre	PKPpre	03 34 47.0	
AS31	**Alice Springs**	**140.51**	**239**	*e*PKPpre	PKPpre	03 34 49.0	
AS31				LR	LR		
	comp=Z,100nm,19.0s						
ASAR	**Alice Springs**	**140.51**	**239**	PKhKP	PKPpre	03 34 47.1	
	comp=Z,4.1nm,0.8s,baz=112,slow=3.3,SNR=24						
BHJ	**Bhuj**	**140.63**	**43**	IAMs_20	IAMs_20	04 03 39.9	
	comp=Z,593nm,8.5s						
WHN	**Wuhan**	**140.72**	**337**	PKP	**PKPdf**	**03 34 55.4**	**0.0**
WHN				LR	LR		
	comp=Z,4μm,19.4s						
WHN				LR	LR		
	comp=Z,12μm,23.5s						
WHN				LR	LR		
	comp=Z,9μm,28.0s						
NDI	**New Delhi**	**140.87**	**29**	*e*P	**PKPdf**	**03 34 56.0**	**+0.2**
WR0	**Warramunga Arr**	**141.16**	**245**	PFAKE		03 35 10.0	+13
WR0				LR	LR		
	comp=Z,4μm,18.0s						
WR9	**Warramunga Arr**	**141.18**	**245**	PFAKE		03 35 10.0	+13
WR9				LR	LR		
	comp=Z,4μm,18.0s						
WR8	**Warramunga Arr**	**141.20**	**245**	PFAKE		03 35 10.0	+13
WR8				LR	LR		
	comp=Z,4μm,18.0s						
WR7	**Warramunga Arr**	**141.22**	**245**	PFAKE		03 35 10.0	+13
WR7				LR	LR		
	comp=Z,4μm,18.0s						
WR6	**Warramunga Arr**	**141.24**	**245**	PFAKE		03 35 10.0	+13
WR6				LR	LR		
	comp=Z,4μm,18.0s						
WR5	**Warramunga Arr**	**141.26**	**245**	PFAKE		03 35 10.0	+13
WR5				LR	LR		
	comp=Z,4μm,18.0s						
WR4	**Warramunga Arr**	**141.28**	**245**	PFAKE		03 35 10.0	+13
WR4				LR	LR		
	comp=Z,4μm,18.0s						
WR3	**Warramunga Arr**	**141.30**	**245**	PFAKE		03 35 10.0	+13
WR3				LR	LR		
	comp=Z,4μm,18.0s						
WC3	**Warramunga Arr**	**141.31**	**245**	PFAKE		03 35 10.0	+13
WC3				LR	LR		
	comp=Z,4μm,18.0s						
WR2	**Warramunga Arr**	**141.32**	**245**	PFAKE		03 35 10.0	+13
WR2				LR	LR		
	comp=Z,3μm,18.0s						
WC2	**Warramunga Arr**	**141.33**	**245**	PFAKE		03 35 10.0	+13
WC2				LR	LR		
	comp=Z,5μm,18.0s						
WB2	**Warramunga Arr**	**141.34**	**245**	*e*PKPdf	**PKPdf**	**03 34 59.9**	**+3.0**
WB3	**Warramunga Arr**	**141.34**	**245**	PFAKE		03 35 10.0	+13
WB3				LR	LR		
	comp=Z,4μm,18.0s						
WB4	**Warramunga Arr**	**141.34**	**245**	PFAKE		03 35 10.0	+13
WB4				LR	LR		
	comp=Z,4μm,18.0s						
WRAB	**Tennant Creek**	**141.34**	**245**	PFAKE		03 35 10.0	+13
WRAB				LR	LR		
	comp=Z,4μm,18.0s						
WRAB	**Tennant Creek**	**141.34**	**245**	*de*PKIKP	**PKPdf**	**03 34 53.7**	**-3.1**
WRAB				MLR	MLR		
	comp=Z,2μm,16.0s						
WC4	**Warramunga Arr**	**141.34**	**245**	PFAKE		03 35 10.0	+13
WC4				LR	LR		
	comp=Z,4μm,18.0s						
WB8	**Warramunga Arr**	**141.34**	**245**	PFAKE		03 35 10.0	+13
WB8				LR	LR		
	comp=Z,4μm,18.0s						
WR1	**Warramunga Arr**	**141.34**	**245**	*e*PKPpre	PKPpre	03 34 50.2	
WR1				LR	LR		
	comp=Z,3μm,19.0s						
WB6	**Warramunga Arr**	**141.35**	**245**	PFAKE		03 35 10.0	+13
WB6				LR	LR		
	comp=Z,4μm,18.0s						
WRA	**Warramunga Arr**	**141.35**	**245**	PKhKP	PKPpre	03 34 50.2	
	comp=Z,8.0nm,0.8s,baz=98,slow=2.4,SNR=18						
WB0	**Warramunga Arr**	**141.35**	**245**	PFAKE		03 35 10.0	+13
WB0				LR	LR		
	comp=Z,4μm,19.0s						
WB9	**Warramunga Arr**	**141.35**	**245**	PFAKE		03 35 10.0	+13
WB9				LR	LR		
	comp=Z,9μm,19.0s						
WC1	**Warramunga Arr**	**141.35**	**245**	PFAKE		03 35 10.0	+13
WC1				LR	LR		
	comp=Z,3μm,18.0s						
FORT	**Forrest**	**141.75**	**225**	PFAKE		03 35 10.0	+13
FORT				LR	LR		
	comp=Z,4μm,18.0s						
TATO	**Taipei**	**141.76**	**323**	PFAKE		03 35 10.0	+13
TATO				LR	LR		
	comp=Z,3μm,21.0s						
YHNB	**Yeheng**	**142.06**	**323**	PFAKE		03 35 10.0	+12
YHNB				LR	LR		
	comp=Z,2μm,19.0s						
NACB	**Ninganchiao**	**142.30**	**322**	PFAKE		03 35 10.0	+12
NACB				LR	LR		
	comp=Z,3μm,22.0s						
ENH	**Enshi**	**142.65**	**343**	*e*PKPpre	PKPpre	03 34 53.2	
ENH				LR	LR		
	comp=Z,4μm,21.0s						
SSLB	**Suanglung**	**142.97**	**323**	PFAKE		03 35 10.0	+10
SSLB				LR	LR		
	comp=Z,2μm,20.0s						
YULB	**Yu-li**	**143.06**	**322**	PFAKE		03 35 10.0	+10
YULB				LR	LR		
	comp=Z,2μm,20.0s						
CD2	**Chengdu**	**143.34**	**351**	PKP	**PKPdf**	**03 34 58.9**	**-1.3**
CD2				sPKP		03 35 03.0	
CD2				PP	**PP**	**03 38 09.4**	**0.0**
CD2				SKS	**SKSdf**	**03 42 09.1**	**-1.4**
CD2				SKKS	**SKKSac**	**03 45 02.0**	**-2.4**
CD2				SS	**SS**	**03 56 50.9**	**+1.6**
CD2				AMB	AMB		
	comp=Z,1μm,10.7s						
CD2				LR	LR		
	comp=Z,4μm,21.6s						
CD2				LR	LR		
	comp=Z,4μm,20.6s						
QZH	**Quanzhou**	**143.44**	**327**	⇑*i*PKP	PKPdf	03 35 10.9	+10
QZH				PP	**PP**	**03 38 13.6**	**+2.9**
TPUB	**Ta-pu**	**143.53**	**322**	PFAKE		03 35 10.0	+9.3
TPUB				LR	LR		
	comp=Z,2μm,21.0s						
TWG	**Pinlang**	**143.62**	**321**	PFAKE		03 35 10.0	+9.2
TWG				LR	LR		
	comp=Z,11μm,20.0s						
LSA	**Lhasa**	**144.53**	**9**	*e*PKPdf	**PKPdf**	**03 35 03.2**	**+0.3**
LSA				LR	LR		
	comp=Z,3μm,21.0s						
LSA	**Lhasa**	**144.53**	**9**	*e*PKIKP	**PKPdf**	**03 35 03.2**	**+0.3**
LSA				MLR	MLR		
	comp=Z,3μm,21.0s						
FAKI	**Fak Fak**	**145.19**	**273**	PFAKE		03 35 20.0	+16
FAKI				LR	LR		
	comp=Z,5μm,20.0s						
BHPL	**Bhopal**	**145.43**	**34**	*e*P	**PKPbc**	**03 35 02.7**	**-1.2**
SIJI	**Sorong**	**145.93**	**276**	PKPbc	**PKPab**	**03 35 07.2**	**+1.0**
	comp=Z,26nm,0.7s,baz=45,slow=6.7,SNR=6.8						
MTN	**Manton Dam**	**145.96**	**255**	*e*PKPdf	**PKPdf**	**03 35 05.1**	**+0.1**
MTN				LR	LR		
	comp=Z,3μm,20.0s						
GTK	**Tadong**	**146.32**	**14**	*e*P	**PKPdf**	**03 35 05.1**	**-0.4**
GTK				IAmb	IAmb	03 35 15.7	
	comp=Z,7μm,3.0s						
POO	**Poona**	**146.70**	**44**	*e*P	**PKPdf**	**03 35 06.7**	**+0.4**
POO				IAmb	IAmb	03 35 11.0	
	comp=Z,276nm,1.6s						
POO				IAMs_20	IAMs_20	04 05 08.6	
	comp=Z,558nm,10.6s						
NWAO	**Narrogin (SRO)**	**147.02**	**212**	PKPbc	**PKPbc**	**03 35 07.7**	**-0.6**
	comp=Z,23nm,0.8s,baz=19,slow=3.5,SNR=8.0						
NWAO	**Narrogin (SRO)**	**147.02**	**212**	*e*PKPdf	**PKPbc**	**03 35 07.7**	**-0.6**
NWAO				LR	LR		
	comp=Z,3μm,20.0s						
GYA	**Guiyang**	**147.04**	**345**	⇑*i*PKPbc	**PKPdf**	**03 35 06.2**	**-0.6**
GYA				PP	**PP**	**03 38 35.4**	**+3.7**
GYA				PKS	**PKSdf**	**03 38 40.6**	**-1.7**
GYA				SKKS		03 45 24.2	
GYA				SS	**SS**	**03 57 33.0**	**+1.1**
GYA				AMB	AMB		
	comp=Z,640nm,9.9s						
GYA				LR	LR		
	comp=Z,340nm,22.0s						
GYA				LR	LR		
	comp=Z,280nm,22.4s						
LKP	**Lekhapani**	**147.37**	**3**	*e*P	**PKPbc**	**03 35 08.3**	**-1.1**
GZH	**Guangzhou**	**147.66**	**332**	PKPbc	**PKPdf**	**03 35 08.6**	**+0.9**
GZH				SS	SS	03 57 44.0	+4.7
GZH				LR	LR		
	comp=Z,2μm,18.1s						
GZH				LR	LR		
	comp=Z,2μm,18.7s						
TEZP	**TEZPUR**	**147.81**	**8**	*e*P	**PKPdf**	**03 35 07.5**	**-0.3**
JORH	**JORHAT**	**147.85**	**5**	*e*P	**PKPdf**	**03 35 07.4**	**-0.5**
JORH				IAmb	IAmb	03 35 18.7	
	comp=Z,226nm,0.5s						
DHUB	**DHUBRI**	**147.89**	**13**	*e*P	**PKPdf**	**03 35 04.6**	**-3.5**
DHUB				IAmb	IAmb	03 35 17.6	
	comp=Z,2μm,3.2s						
NGP	**Nagpur**	**148.00**	**34**	*e*P	**PKPdf**	**03 35 08.1**	**-0.2**
MCO	**Taipa Grande**	**148.38**	**331**	P	**PKPab**	**03 35 20.0**	**+4.6**
TURI	**Tura**	**148.42**	**12**	*e*P	**PKPdf**	**03 35 07.9**	**-1.0**
TURI				IAmb	IAmb	03 35 21.5	
	comp=Z,3μm,3.8s						
SHL	**Shillong**	**148.70**	**10**	*e*P	**PKPdf**	**03 35 08.0**	**-1.6**
SHL				*e*P	**pPKPdf**	**03 35 10.4**	**-2.5**
SHL				IAmb	IAmb	03 35 19.8	
	comp=Z,70nm,0.6s						
SHL	**Shillong**	**148.70**	**10**	*e*PKPdf	**PKPdf**	**03 35 11.4**	**+1.8**
SHL	**Shillong**	**148.70**	**10**	*e*PKIKP	**PKPdf**	**03 35 11.4**	**+1.8**
BOK	**Bokaro**	**148.82**	**21**	*e*P	**PKPdf**	**03 35 07.4**	**-2.3**
KMI	**Kunming**	**149.18**	**351**	PKPbc	**PKPdf**	**03 35 10.1**	**-0.4**
KMI				pPKP	PKPbc	03 35 14.6	0.0
DAV	**Davao City (W)**	**149.29**	**294**	PKPbc	**PKPbc**	**03 35 16.4**	**+1.5**
	comp=Z,94nm,0.3s,baz=14,slow=4.2,SNR=2.4						
TNTI	**Ternate**	**149.48**	**281**	PFAKE		03 35 20.0	-0.2
TNTI				LR	LR		
	comp=Z,1μm,21.0s						
TGY	**Tagaytay City**	**149.65**	**310**	PKPbc	**PKPbc**	**03 35 15.0**	**-0.8**
	comp=Z,123nm,0.3s,baz=166,slow=4.2,SNR=2.6						
TGY	**Tagaytay City**	**149.65**	**310**	PKP2	**PKPbc**	**03 35 15.0**	**-0.8**
TGY				pmax	pmax		
	comp=Z,123nm,0.3s						
RCP	**Roxas**	**149.68**	**304**	⇑*e*P	**PKPbc**	**03 35 15.1**	**-0.8**
IMP	**Imphal**	**149.71**	**6**	*e*P	**PKPdf**	**03 35 10.7**	**-0.5**
IMP				IAmb	IAmb	03 35 23.3	
	comp=Z,8μm,4.5s						
FITZ	**Fitzroy Crossi**	**149.72**	**243**	PKP	**PKPdf**	**03 35 10.7**	**-0.5**
	comp=Z,30nm,0.9s,baz=211,slow=5.9,SNR=4.7						
FITZ				PKPbc	**pPKPdf**	**03 35 14.9**	**+0.5**
	comp=Z,28nm,0.9s,baz=28,slow=2.1,SNR=12						
FITZ	**Fitzroy Crossi**	**149.72**	**243**	*e*PKPdf	**PKPdf**	**03 35 11.6**	**+0.5**
AGT	**Agartala**	**150.23**	**11**	*e*P	**PKPdf**	**03 35 09.6**	**-2.2**
HYB	**Hyderabad**	**150.60**	**39**	*i* PKP	**PKPdf**	**03 35 15.0**	**+2.4**
HYB	**Hyderabad**	**150.60**	**39**	*e*P	**PKPdf**	**03 35 10.7**	**-1.9**
AZL	**Aizawl**	**150.62**	**9**	IAmb	IAmb	03 35 27.2	
	comp=Z,3μm,3.0s						
BELO	**BELONIA**	**150.88**	**11**	*e*P	**PKPdf**	**03 35 09.9**	**-3.0**
BELO				IAmb	IAmb	03 35 27.6	
	comp=Z,12μm,3.9s						
BWNR	**Bhubaneshwar**	**151.98**	**24**	*e*P	**PKPdf**	**03 35 14.2**	**-0.3**
QIZ	**Qiongzhong**	**152.78**	**334**	PKPbc	**PKPdf**	**03 35 15.7**	**-0.1**
QIZ				PP	**PP**	**03 39 06.2**	**+1.2**
QIZ				AMB	AMB		
	comp=Z,520nm,7.6s						
QIZ				LR	LR		
	comp=Z,2μm,20.6s						
QIZ				LR	LR		
	comp=Z,3μm,22.1s						
QIZ				LR	LR		
	comp=Z,3μm,19.1s						
QIZ	**Qiongzhong**	**152.78**	**334**	PFAKE		03 35 30.0	-3.6
QIZ				LR	LR		
	comp=Z,4μm,20.0s						
SOEI	**Soe**	**153.07**	**259**	PFAKE		03 35 30.0	-5.3
SOEI				LR	LR		
	comp=Z,4μm,21.0s						
MBWA	**Marble Bar**	**153.33**	**232**	PFAKE		03 35 30.0	+5.9
MBWA				LR	LR		
	comp=Z,4μm,22.0s						
BATI	**Baumata**	**153.60**	**258**	PKPab	**PKPab**	**03 35 37.5**	**+0.1**
	comp=Z,44nm,0.7s,baz=112,slow=5.4,SNR=3.4						
MMRI	**Maumere**	**155.19**	**261**	PFAKE		03 35 30.0	+11
MMRI				LR	LR		
	comp=Z,2μm,22.0s						
CHTO	**Chiang Mai**	**155.84**	**357**	*e*PKPdf	**PKPdf**	**03 35 22.7**	**+2.5**
CHTO				LR	LR		
	comp=Z,2μm,20.0s						
CHTO	**Chiang Mai**	**155.84**	**357**	*e*PKIKP	**PKPdf**	**03 35 22.7**	**+2.5**
CHTO				MLR	MLR		
	comp=Z,2μm,20.0s						
CM31	**Chiang Mai Arr**	**156.20**	**356**	*e*PKPdf	**PKPdf**	**03 35 19.9**	**-0.7**
CM31				*e*PP	**PP**	**03 39 26.9**	**+3.2**
CMAR	**Chiang Mai Arr**	**156.20**	**356**	PKP	**PKPdf**	**03 35 19.9**	**-0.7**
	comp=Z,6.4nm,0.9s,baz=295,slow=2.0,SNR=16						
CMAR				PP	**PP**	**03 39 26.9**	**+3.2**
	comp=Z,1.2nm,0.4s,baz=354,slow=4.5,SNR=4.2						
CM01	**Chiang Mai Arr**	**156.23**	**356**	*e*PKPdf	**PKPdf**	**03 35 19.7**	**-0.9**
MYLDM	**Lahad Datu**	**156.47**	**296**	PFAKE		03 35 30.0	+8.9
MYLDM				LR	LR		
	comp=Z,4μm,22.0s						
KAPI	**Kappang**	**157.77**	**270**	PFAKE		03 35 30.0	+7.2
KAPI				LR	LR		
	comp=Z,2μm,21.0s						
PBKT	**Sadao Pong**	**157.84**	**351**	*e*PKPdf	**PKPdf**	**03 35 23.9**	**+1.2**
KKM	**Kota Kinabalu**	**158.05**	**301**	PFAKE		03 35 30.0	+6.8
KKM				LR	LR		
	comp=Z,2μm,20.0s						
PALK	**Pallekele**	**159.06**	**53**	PKPab	**PKPab**	**03 36 01.5**	**+0.8**
	comp=Z,30nm,1.1s,baz=296,slow=5.2,SNR=4.8						
PALK	**Pallekele**	**159.06**	**53**	*e*PKPab	**PKPab**	**03 36 04.8**	**+4.0**
PALK				LR	LR		
	comp=Z,6μm,20.0s						
DGPR	**DIGLIPUR**	**160.96**	**14**	IAMs_20	IAMs_20	04 07 05.4	
	comp=Z,2μm,2.6s						
SBUM	**Sibu**	**163.28**	**298**	*e*PKPdf	**PKPdf**	**03 35 30.0**	**+1.2**
KSM	**Kuching**	**165.42**	**298**	*e*PKPdf	**PKPdf**	**03 35 29.7**	**-1.0**
KULM	**Kulim**	**168.86**	**343**	*e*PKPdf	**PKPdf**	**03 35 35.8**	**+2.5**
PSI	**Prapat**	**171.67**	**350**	PKP	**PKPdf**	**03 35 33.8**	**-1.2**
	comp=Z,19nm,0.9s,baz=187,slow=0.4,SNR=4.3						

*CSEM **04** 03:28:02.6, 39.°15N×27.°38E, h7km, ML2.2*

DDA 04 03:28:02.6, 39.°15N×27.°38E, h7km, Ml2.2, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STEP	**BALIKESIR_Sava**	**0.34**	**49**	*i* P	Pb	03 28 10.4	-0.8
STEP				*i* S	Sb	03 28 16.1	-0.7
STEP	**BALIKESIR_Sava**	**0.34**	**49**	P	Pb	03 28 10.4	-0.7
STEP				S	Sb	03 28 16.1	-0.7
AKHS	**Akhisar**	**0.43**	**129**	*i* P	Pg	03 28 11.8	+0.7
AKHS	**Akhisar**	**0.43**	**129**	P	Pg	03 28 11.8	+0.8
BALY	**Balya**	**0.62**	**17**	*i* P	Pg	03 28 13.9	-0.7
BALY				*i* S	Sg	03 28 23.5	+0.9
BALY	**Balya**	**0.62**	**17**	P	Pg	03 28 13.9	-0.6
BALY				S	Sg	03 28 23.5	+0.9
BAYC	**CANAKKALE_Bayr**	**0.87**	**313**	*i* P	Pb	03 28 19.9	-0.2
BAYC				*i* S	Sb	03 28 31.7	-0.3
BAYC	**CANAKKALE_Bayr**	**0.87**	**313**	P	Pb	03 28 19.9	-0.2
BAYC				S	Sb	03 28 31.7	-0.3
DURS	**Dursunbey**	**0.96**	**62**	*i* P	Pb	03 28 21.4	-0.2
DURS				*i* S	Sb	03 28 34.2	-0.3
DURS	**Dursunbey**	**0.96**	**62**	P	Pb	03 28 21.4	-0.2
DURS				S	Sb	03 28 34.2	-0.4
MANT	**Manisa**	**1.13**	**125**	*i* P	Pn	03 28 25.1	0.0
MANT				*i* S	Sb	03 28 39.4	-0.3
MANT	**Manisa**	**1.13**	**125**	P	Pn	03 28 25.1	0.0
MANT				S	Sb	03 28 39.4	-0.3

*STR **04** 03:35:45.7±0.7, 44.°N±4.°×.°±.°, h0km, MLv0.9/3*
*CSEM **04** 03:35:46.0±0.4, 44.°84N×6.°70E, h2km, ML0.3, Error ellipse: s-maj=9.5km s-min=5.0km az=105.0*

GEN 04 03:35:46.4, 44.°85N×6.°75E, h5km, ML0.3, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RRL	**Rocca Remolon**	**0.08**	**20**	P	Pg	03 35 48.5	+0.1
RRL				S	Sg	03 35 50.0	+0.3
BHB	**Bricherasio**	**0.36**	**90**	P	Pg	03 35 53.6	+0.1
BHB				S	Sg	03 35 58.3	+0.1
SURF	**Saint Ours**	**0.37**	**173**	Pg	Pg	03 35 54.0	+0.4
SURF	**Saint Ours**	**0.37**	**173**	Pg	Pg	03 35 53.0	-0.5
SURF				Sg	Sg	03 35 59.1	+0.7
PZZ	**Stroppo**	**0.43**	**142**	P	Pg	03 35 54.7	0.0
RSP	**Reno Superiore**	**0.47**	**50**	P	Pg	03 35 55.6	0.0
ORIF	**Oris-en-Rattie**	**0.62**	**277**	Pg	Pg	03 35 58.3	-0.1
ORIF				Sg	Sg	03 36 06.3	-0.2
CALF	**Calern**	**1.10**	**174**	Pg	Pg	03 36 00.4	-7.1

*ISCJB **04** 03:38:46.1±0.3, 4.°77N±0.°03×127.°69E±0.°05, h108km, mb4.4/30, Error ellipse: s-maj=7.7km s-min=3.4km az=149.6*
*NEIC **04** 03:38:48.8±0.8, 4.°74N×127.°73E, h117km±8km, mb4.5/18, Error ellipse: s-maj=10.6km s-min=4.5km az=67.0*
*IDC **04** 03:38:48.7±1.9, 4.°69N×127.°75E, h114km±19km, mb4.0/18, mb1 4.1/20, mb1mx3.8/55, mbtmp4.4/20, Error ellipse: s-maj=21.4km s-min=9.0km az=72.0*

ISC 04 03:38:47.7±0.4, 4.°78N±0.°05×127.°72E±0.°07, h108km, n71, σ1°32/81, mb4.5/30, 2C, Talaud Islands

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

YULB	Yu-li	19.51	342	eP	P	03 43 04.9	-1.7
	12nm,1.1s						
FITZ	Fitzroy Crossi	22.83	185	P	P	03 43 41.8	0.0
	6.7nm,0.5s,baz=9.2,slow=7.6,SNR=26						
FITZ	Fitzroy Crossi	22.83	185	eP	P	03 43 42.3	+0.5
	15nm,1.1s						
WRAB	Tennant Creek	25.41	165	eP	P	03 44 05.0	-0.4
	7.4nm,0.4s						
WR1	Warramunga Arr	25.42	165	eP	P	03 44 05.2	-0.3
	10.0nm,0.6s						
WRA	Warramunga Arr	25.42	165	P	P	03 44 05.2	-0.3
	9.0nm,0.5s,baz=343,slow=10,SNR=50						
WB2	Warramunga Arr	25.42	165	eP	P	03 44 05.8	+0.4
	11nm,0.6s						
AS31	Alice Springs	28.91	168	eP	P	03 44 37.2	+0.5
	6.6nm,1.5s						
AS31				ePcP	PcP	03 47 43.0	-0.4
ASAR	Alice Springs	28.91	168	P	P	03 44 36.7	0.0
	2.9nm,0.5s,baz=357,slow=8.6,SNR=40						
ASAR				PcP	PcP	03 47 43.0	-0.4
	0.6nm,0.4s,baz=342,slow=2.7,SNR=3.4						
AS01	Alice Springs	28.92	168	eP	P	03 44 36.4	-0.3
CM31	Chiang Mai Arr	31.22	298	eP	P	03 44 57.4	+0.2
CMAR	Chiang Mai Arr	31.22	298	P	P	03 44 57.4	+0.2
	0.8nm,0.5s,baz=110,slow=6.7,SNR=4.5						
CHTO	Chiang Mai	31.36	299	eP	P	03 44 57.5	-0.8
	7.4nm,1.2s						
KS15	Wonju Array Si	32.51	0	eP	P	03 45 09.3	+1.1
KSAR	Wonju Array Be	32.51	0	P	P	03 45 09.3	+1.1
KSRS	Korea Array	32.52	0	P	P	03 45 09.3	+1.1
	5.5nm,0.3s,baz=177,slow=10.0,SNR=7.5						
FORT	Forrest	35.36	180	eP	P	03 45 32.7	-0.3
	26nm,0.6s						
EIDS	Eidsvold	37.59	144	eP	P	03 45 52.1	+0.2
	9.7nm,1.4s						
BBOO	Buckleboo	38.22	169	eP	P	03 45 54.6	-2.5
	25nm,1.3s						
STKA	Stephens Creek	38.78	161	P	P	03 46 01.8	0.0
	4.5nm,0.5s,baz=336,slow=9.0,SNR=22						
NWAO	Narrogin (SRO)	38.80	194	P	P	03 46 01.9	-0.1
	11nm,0.9s,baz=13,slow=14,SNR=4.1						
USRK	Ussuriysk Ar.	39.44	5	P	P	03 46 09.1	+1.9
	0.7nm,0.4s,baz=193,slow=5.9,SNR=3.0						
ASAJ	Asahikawa	41.31	16	P	P	03 46 24.6	+2.1
	2.0nm,0.4s,baz=232,slow=18,SNR=3.1						
ASAJ	Asahikawa	41.31	16	eP	P	03 46 24.6	+2.1
	21nm,1.4s						
ARMA	Armidale	41.82	148	eP	P	03 46 27.1	0.0
	16nm,1.2s						
JIRN	Jiri	45.58	305	eP	P	03 46 57.7	+0.1
	39nm,0.7s						
GUN	Gumba	45.93	305	eP	P	03 47 00.3	0.0
	24nm,0.5s						
DZM	Mont Dzumac	46.35	127	P	P	03 47 02.8	-0.6
	6.1nm,0.8s,baz=292,slow=19,SNR=3.9						
DZM	Mont Dzumac	46.35	127	eP	P	03 47 02.8	-0.6
	12nm,1.0s						
KKN	Kakani	46.37	304	eP	P	03 47 03.3	-0.4
	8.6nm,0.5s						
ULN	Ulaanbaatar	46.44	341	eP	P	03 47 03.7	-0.1
	3.7nm,0.7s						
DMN	Daman	46.45	304	eP	P	03 47 03.6	-0.8
SONA0	Songino Array	46.63	340	eP	P	03 47 05.9	+0.7
SONM	Songino Array	46.63	340	P	P	03 47 05.9	+0.7
	1.6nm,0.6s,baz=155,slow=9.0,SNR=7.8						
SONA1	Songino Array	46.64	340	eP	P	03 47 05.9	+0.5
GKN	Gorkha	46.98	304	eP	P	03 47 07.7	-0.7
	8.8nm,0.4s						
KOLN	Koldanda	47.76	304	eP	P	03 47 14.6	+0.2
	32nm,0.5s						
DANN	Dangsing	47.83	304	eP	P	03 47 15.0	-0.1
	38nm,0.6s						
PYUN	Piuthan	48.38	304	eP	P	03 47 19.5	+0.3
	30nm,0.9s						
TLY	Talaya	50.85	341	eP	P	03 47 38.9	+1.5
	12nm,0.6s						
PETK	Petropavlovsk-	54.09	22	P	P	03 48 00.6	-0.6
	2.9nm,0.5s,baz=176,slow=4.3,SNR=3.7						
PEA1	Petropavlovsk-	54.09	22	eP	P	03 48 00.6	-0.6
MK31	Makanchi Array	57.27	324	eP	P	03 48 25.3	+1.2
MK32	Makanchi Array	57.27	324	eP	P	03 48 25.0	+0.9
MKAR	Makanchi Array	57.27	324	P	P	03 48 25.0	+0.9
	3.5nm,0.4s,baz=114,slow=7.7,SNR=57						
MKAR	Makanchi Array	57.27	324	eP	P	03 48 25.3	+1.2
	27nm,0.4s						
ZALV	Zalesovo Beam	60.11	332	P	P	03 48 41.7	-1.9
	1.1nm,0.5s,baz=113,slow=6.8,SNR=3.9						
ZAA1	Zalesovo Array	60.12	332	eP	P	03 48 41.7	-1.9
KURK	Kurchatov	61.40	327	eP	P	03 48 53.3	+0.9
KURBB	Kurchatov Arra	61.40	327	P	P	03 48 53.1	+0.8
	2.5nm,0.4s,baz=127,slow=6.6,SNR=26						
KK31	Karatay Array	63.15	316	eP	P	03 49 05.1	+0.8
KKAR	Karatay Array	63.15	316	eP	P	03 49 05.1	+0.8
BVAR	Borovoye Array	66.99	326	P	P	03 49 29.7	+0.9
	1.1nm,0.4s,baz=132,slow=6.8,SNR=6.4						
AKTO	Aktyubinsk	73.46	321	P	P	03 50 08.9	+0.5
	1.1nm,0.6s,baz=90,slow=6.6,SNR=5.0						
ILAR	Eielson Array	83.73	25	P	P	03 51 04.9	+0.4
	0.2nm,0.5s,baz=246,slow=5.4,SNR=5.1						
ILB	Eielson Array	83.73	25	eP	P	03 51 04.9	+0.4
ARA0	ARCESS Array S	89.81	340	eP	P	03 51 34.9	+1.0
ARCES	ARCESS Array B	89.81	340	P	P	03 51 34.9	+1.0
	2.5nm,0.8s,baz=66,slow=6.8,SNR=4.5						
TORD	Torodi Ar. Bea	123.52	289	PKP	PKPdf	03 57 33.5	0.0
	0.6nm,1.0s,baz=40,slow=2.6,SNR=3.3						
TOA1	Torodi Ar. Sit	123.53	289	ePKPdf	PKPdf	03 57 33.5	0.0

*ISCJB **04** 03:52:12.5±2.0, 36°.75N±0°.04×141°.37E±0°.07, h12km±14km, mb3.4/4, Error ellipse: s-maj=9.8km s-min=6.8km az=21.0*
*IDC **04** 03:52:12.6±1.4, 36°.69N×141°.33E, h0km, mb3.3/4, mb1 3.6/5, mb1mx3.3/74, mbtmp3.3/5, ML3.2/1, MS3.3/1, Ms1 3.3/1, ms1mx2.8/39, Error ellipse: s-maj=30.8km s-min=25.8km az=162.0*
*JMA **04** 03:52:13.8±0.1, 36°.77N×141°.29E, h27km±1km, M3.4*
JMA Felt I J1.

ISC 04 03:52:12.8±2.2, 36°.77N±0°.05×141°.35E±0°.09, h5km±12km, n19, σ1§06/19, mb3.4/4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.55	307	P	Pb	03 52 24.1	-0.9
ONAJ				S	Sg	03 52 32.0	+1.4
JHO	Hitachi	0.65	256	P	Pg	03 52 25.4	+0.2
JHO				S	Sg	03 52 34.1	+0.6
JFK	Kawauchi	0.71	328	P	Pg	03 52 26.7	+0.4
JFK				S	Sg	03 52 36.4	+0.9
JYT	Yasato	1.07	240	P	Pb	03 52 32.8	-1.1
JYT				S	Sg	03 52 46.0	-1.3
JFT	Otama	1.10	313	P	Pb	03 52 33.5	-0.8
JMM	Marumori	1.18	338	P	Pn	03 52 34.5	-1.5
JMM				S	Sb	03 52 49.4	-1.9
MJAR	Matsushiro Arr	2.53	266	Pn	Pn	03 52 55.0	+0.4
	5.4nm,0.3s,baz=86,slow=16,SNR=20						
MJAR				Sn	Sn	03 53 25.3	-0.6
	4.0nm,0.3s,baz=94,slow=9.3,SNR=6.4						
MAT	Matsuhiro	2.54	266	P	Pn	03 52 55.0	+0.4
MAT				S	Sn	03 53 26.8	+0.9
JHJ	Hachijo jima 2	3.86	200	LR	LR	03 55 00.5	
	comp=Z,393nm,18.4s,baz=266,slow=44						
H11N2	WAKE ISLAND Hy	28.06	120	T	T	04 27 30.1	
	baz=313,slow=75,SNR=26						
H11N1	WAKE ISLAND Hy	28.07	120	T	T	04 27 31.0	
	baz=313,slow=75,SNR=31						
H11N3	WAKE ISLAND Hy	28.08	120	T	T	04 27 31.2	
	baz=313,slow=75,SNR=24						
H11S1	WAKE ISLAND Hy	28.76	122	T	T	04 28 27.1	
	baz=314						
H11S3	WAKE ISLAND Hy	28.76	122	T	T	04 28 23.2	
	baz=314						
H11S2	WAKE ISLAND Hy	28.78	122	T	T	04 28 26.7	
	baz=314						
MKAR	Makanchi Array	44.22	302	P	P	04 00 23.7	+0.9
	0.2nm,0.5s,baz=83,slow=12,SNR=2.7						
KURBB	Kurchatov Arra	46.12	308	P	P	04 00 38.3	+0.4
	0.4nm,0.6s,baz=84,slow=8.5,SNR=5.0						
ILAR	Eielson Array	49.75	32	P	P	04 01 06.8	+1.1
	0.3nm,0.7s,baz=256,slow=7.3,SNR=4.7						
WRA	Warramunga Arr	56.79	188	P	P	04 01 58.0	-0.1
	0.3nm,0.7s,baz=7.8,slow=7.5,SNR=4.6						

*DSN **04** 03:58:01.7±1.5, 28°.63N×57°.28E, h16km, mb5.3/1, ML4.7/8,*
Error ellipse: s-maj=20.9km s-min=10.7km az=86.0
*IDC **04** 03:58:04.8±0.8, 28°.03N×57°.41E, h0km, mb3.8/18, mb1 3.9/21, mb1mx3.8/65, mbtmp3.8/21, ML4.0/3, Error ellipse: s-maj=18.9km s-min=14.7km az=2.0*
*THR **04** 03:58:08.5±1.6, 28°.33N×57°.00E, h15km±19km, ML4.0*
*CSEM **04** 03:58:09.9±0.1, 28°.10N×57°.44E, h30km, mb4.7/5, Error ellipse: s-maj=6.3km s-min=3.5km az=101.0*
*NEIC **04** 03:58:09.0±0.0, 28°.24N×57°.03E, h29km, mb4.0/6, ML4.0(THR), MN3.9(TEH), After THR.*
*OMAN **04** 03:58:10.4±2.4, 28°.04N×57°.75E, h26km, Error ellipse: s-maj=32.9km s-min=23.0km az=122.0*
*TEH **04** 03:58:12.3, 28°.02N×57°.26E, h26km, ML3.9*

ISC 04 03:58:09.3±1.2, 28°.07N±0°.03×57°.40E±0°.04, h30km±9km, n138, σ1§68/151, mb3.9/22, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIAN	Nian	0.72	225	ePg	Pb	03 58 23.2	-0.2
NIAN				eSg	Sb	03 58 32.8	-0.1
NIAN				e		03 58 37.6	
	comp=Z,99nm,0.2s						
NIAN	Nian	0.72	225	ePg	Pb	03 58 22.9	-0.5
IBND	Bandar-abas	0.98	231	ePg	Pb	03 58 28.4	+0.6
IBND				e		03 58 50.2	
	comp=Z,88μm,0.3s						
IBND	Bandar-abas	0.98	231	ePg	Pb	03 58 28.5	+0.6
GENO	Geno	1.28	239	ePg	Pb	03 58 32.7	-0.2
GENO				e		03 59 00.1	
	comp=Z,99nm,0.2s						
GENO	Geno	1.28	239	ePg	Pb	03 58 32.6	-0.3
BNDS	Bandar-Abbas	1.28	239	ePg	Pn	03 58 30.6	-0.8
BNDS				eSg	Sn	03 58 46.4	-1.2
BNDS				AML	AML	03 58 50.4	
	comp=E,5μm,0.7s						
BNDS				AML	AML	03 58 50.6	
	comp=N,3μm,0.5s						
BNDS	Bandar-Abbas	1.28	239	ePg	Pn	03 58 30.6	-0.8
BNDS				eSg	Sn	03 58 46.4	-1.2
KHSK	Kohestak	1.35	193	ePn	Pb	03 58 34.3	+0.3
KHSK				e		03 58 35.6	
	comp=Z,99nm,0.2s						
KHSK	Kohestak	1.35	193	ePg	Pb	03 58 34.3	+0.3
CHMN	Cheshme madani	1.79	4	ePn	Pn	03 58 38.9	+0.4
KRBR	Kerman	1.98	344	ePg	Pn	03 58 38.5	-2.6
KRBR				AML	AML	03 59 11.7	
	comp=E,1μm,0.3s						
KRBR				AML	AML	03 59 22.0	
	comp=N,949nm,0.5s						
KRBR	Kerman	1.98	344	eSg	Sn	03 59 04.6	-0.6
TVBK	TV Kerman	1.99	344	ePn	Pn	03 58 42.4	+1.1
SHME	Shamm	2.31	209	eP	Pn	03 58 46.4	+1.0
	SNR=116						
SHME				S	Sb	03 59 20.7	+2.3
SHME	Shamm	2.31	209	P	Pb	03 58 49.8	-0.5
	SNR=27						
BANOM	Banah	2.36	205	P	Pb	03 58 49.1	-2.1
	SNR=13						
BANOM				S	Sb	03 59 19.4	-0.4
BANOM	Banah	2.36	205	P	Pb	03 58 49.1	-2.1
	SNR=13						
KHGB	Koh Gabri	2.43	341	ePn	Pn	03 58 49.4	+2.1
MSFE	Esma-Masafi	2.92	203	iP	Pn	03 58 55.0	+1.1
	SNR=9.5						
MSFE				S	Sb	03 59 34.3	-1.8
MSFE	Esma-Masafi	2.92	203	ePn	Pn	03 58 55.4	+1.6
MSFE	Esma-Masafi	2.92	203	P	Pb	03 58 57.5	-3.3
	SNR=5.9						
MDH	Madha	2.93	200	P	Pn	03 58 54.4	+0.4
UMQ	Umm Al-Quwin	2.98	212	P	Pn	03 58 55.1	+0.5
UOSS	Minazif	3.29	199	ePn	Pn	03 58 59.0	+0.1
UOSS				eSn	Sn	03 59 33.8	-3.3
UOSS	Minazif	3.29	199	P	Pn	03 59 03.0	+4.1
UOSS	Minazif	3.29	199	iP	Pn	03 58 58.7	-0.2
	SNR=7.7						
UOSS	Minazif	3.29	199	P	Pn	03 58 58.7	-0.2
	SNR=7.7						
UOSS	Minazif	3.29	199	ePn	Pn	03 58 59.0	+0.1
UOSS				eSn	Sn	03 59 33.8	-3.3
ZHSF	Zahedan	3.33	62	ePn	Pb	03 59 05.4	-2.5
ZHSF	Zahedan	3.33	62	ePn	Pb	03 59 05.4	-2.5
HATD	Hatta, Dubai	3.43	200	P	Pn	03 59 01.1	+0.3
HATD	Hatta, Dubai	3.43	200	P	Pn	03 59 01.1	+0.3
NAZ	Nazwa, Dubai	3.44	207	P	Pb	03 59 05.7	-3.9
	SNR=14						
NAZ	Nazwa, Dubai	3.44	207	iP	Pn	03 59 01.9	+0.9
	SNR=18						
NAZ	Nazwa, Dubai	3.44	207	P	Pn	03 59 01.9	+0.9
	SNR=18						
NAZ	Nazwa, Dubai	3.44	207	ePn	Pn	03 59 02.7	+1.7
ASUD	Al Ashush, Dub	3.90	209	P	Pn	03 59 10.1	+2.8
	SNR=6.4						
ASUD				S	Sn	03 59 56.3	+4.2
ASUD	Al Ashush, Dub	3.90	209	iP	Pn	03 59 07.0	-0.3
	SNR=16						
ASUD	Al Ashush, Dub	3.90	209	P	Pn	03 59 07.0	-0.3
	SNR=16						
ASUD	Al Ashush, Dub	3.90	209	ePn	Pn	03 59 10.0	+2.7
ASUD				S	Sn	03 59 56.3	+4.2
SOHO	SOHO	4.00	191	P	Pn	03 59 08.3	-0.3
IMEH	Mehriz	4.10	324	ePn	Pn	03 59 12.3	+2.0
IMEH				e		04 00 30.3	
	comp=Z,1μm,0.5s						
IMEH	Mehriz	4.10	324	ePn	Pn	03 59 12.2	+2.0
AJN	Ajban	4.11	212	iP	Pn	03 59 11.1	+0.9
	SNR=13						
ALNE	Al Ain	4.27	201	P	Pn	03 59 13.6	+1.2
HOQ	Hoqain	4.47	181	P	Pn	03 59 15.8	+0.7
	SNR=10						
HOQ	Hoqain	4.47	181	ePn	Pn	03 59 15.4	+0.3
HOQ	Hoqain	4.47	181	P	Pn	03 59 15.8	+0.7
	SNR=10						
IKOO	Kooshah	4.55	17	ePn	Pn	03 59 20.4	+4.0
IKOO				e		04 00 56.3	
	comp=Z,2μm,0.4s						
IKOO	Kooshah	4.55	17	ePn	Pn	03 59 20.4	+4.0
ARQ	Araqi	4.78	190	P	Pn	03 59 22.5	+3.1
ARQ				S	Sn	04 00 17.6	+3.7
ARQ	Araqi	4.78	190	P	Pn	03 59 22.5	+3.1
ARQ				S	Sn	04 00 17.6	+3.7
ICHK	Chekchek	4.90	329	ePn	Pn	03 59 24.7	+3.5
ICHK				e		04 00 58.9	
	comp=Z,1μm,0.3s						
WSAR	Wadi Sarin	4.94	167	Pn	Pn	03 59 21.9	+0.4
	comp=Z,7.3nm,0.3s,baz=344,slow=5.8,SNR=118						
WSAR				Sn	Sn	04 00 15.1	-2.7
	comp=Z,40nm,0.3s,baz=76,slow=18,SNR=25						
TPRV	Parvadeh(Tabas	4.98	353	ePn	Pn	03 59 25.4	+3.3
ISAD	Sadrabad	5.00	321	ePn	Pn	03 59 25.6	+2.9
SMDO	Samad	5.03	173	P	Pn	03 59 24.1	+1.2
	SNR=9.9						
SMDO	Samad	5.03	173	P	Pn	03 59 24.1	+1.2
	SNR=9.9						
IDAH	Dahanechah	5.12	24	ePn	Pn	03 59 28.5	+4.3
IKAZ	Kazeroun	5.16	291	ePn	Pn	03 59 27.2	+2.3
BSY	Bisya	5.31	182	P	Pn	03 59 29.7	+3.1
	SNR=8.3						
BSYO	Bisya	5.32	182	P	Pn	03 59 29.7	+2.9
	SNR=8.3						
TKDS	Koohdasht(Taba	5.53	358	ePn	Pn	03 59 30.8	+1.1
IRAM	Ramesheh	5.73	312	ePn	Pn	03 59 33.6	+1.0
IRAM				e		04 01 45.1	
	comp=Z,855nm,0.7s						
IRAM	Ramesheh	5.73	312	ePn	Pn	03 59 34.0	+1.4
NASN	Na'in	6.16	321	ePn	Pn	03 59 36.8	-1.7
MZR	Muzera	6.17	216	P	Pn	03 59 36.5	-2.0
IZEF	Zefreh	6.50	319	ePn	Pn	03 59 44.4	+1.2
SLWS		6.88	243	P	Pn	03 59 48.9	+0.7
SLWS				S	Sn	04 01 04.4	-1.1
MHTO	MHTO	7.07	176	P	Pn	03 59 52.7	+1.8
BTHS		7.13	237	P	Pn	03 59 51.8	+0.2
BTHS				S	Sn	04 01 09.6	-2.0
BOQSS		7.49	255	P	Pn	03 59 56.1	-0.5
BOQSS				S	Sn	04 01 17.0	-3.5
RAYN	Ar Rayn	11.64	250	ePn	Pn	04 00 50.0	-3.4
RAYN				eSn	Sn	04 02 53.2	-9.3
RAYN	Ar Rayn	11.64	250	P	Pn	04 00 48.5	-5.0
DAMY	Dhamar	18.07	225	eP	Pn	04 02 18.4	-0.2
	comp=Z,10nm,0.8s						
ASF	Jabal al Asfar	18.20	288	P	Pn	04 02 20.8	+0.9
	comp=Z,0.3nm,0.3s,baz=164,slow=2.8,SNR=3.5						
KK31	Karatay Array	18.36	32	eP	Pn	04 02 22.8	+1.1
KK31	Karatay Array	18.36	32	eP	Pn	04 02 22.8	+1.1
KVAR	Kislovodsk Arr	19.77	327	P	Pn	04 02 37.9	-0.8
	baz=150,slow=8.1,SNR=2.3						
KIV	Kislovodsk	19.77	327	eP	P	04 02 37.9	+0.8
	comp=Z,5.9nm,0.6s						
KIV	Kislovodsk	19.77	327	eP	P	04 02 37.9	+0.8
	comp=Z,5.9nm,0.6s						
AAK	Ala-Archa	20.08	39	P	P	04 02 40.4	-0.2
	comp=Z,1.1nm,0.4s,baz=207,slow=11,SNR=2.6						
NRN	Naryn	20.22	44	eP	Pn	04 02 43.5	-0.8
	comp=Z,3.9nm,0.8s						
NRN	Naryn	20.22	44	eP	Pn	04 02 43.5	-0.8
	comp=Z,3.9nm,0.8s						
ABKAR	Akbulak array	21.24	5	eP	P	04 02 53.9	+1.0
ABKAR	Akbulak array	21.24	5	eP	P	04 02 53.8	+1.0
TARG	Taragay, Kyrgy	21.51	45	eP	P	04 02 56.3	+0.1
	comp=Z,6.9nm,1.2s						
TARG	Taragay, Kyrgy	21.51	45	eP	P	04 02 56.3	+0.1
	comp=Z,6.9nm,1.2s						
AKTO	Aktyubinsk	22.34	1	P	P	04 03 05.0	+0.5
	comp=Z,1.4nm,0.3s,baz=184,slow=10,SNR=8.8						
BR101	Keskin Array S	22.82	307	eP	P	04 03 10.4	+0.4
BR101	Keskin Array S	22.82	307	eP	P	04 03 10.4	+0.4
BR131	Keskin Array S	22.82	307	eP	P	04 03 10.6	+0.6
BR131	Keskin Array S	22.82	307	eP	P	04 03 10.6	+0.6
BRTR	Keskin Array B	22.82	307	P	P	04 03 10.4	+0.4
	comp=Z,1.5nm,0.7s,baz=126,slow=9.8,SNR=11						
BVAR	Borovoye Array	26.72	18	P	P	04 03 46.7	+0.7
	comp=Z,0.9nm,0.6s,baz=204,slow=10,SNR=6.3						
MK01	Makanchi Array	27.01	40	eP	P	04 03 50.0	+1.4
MK01	Makanchi Array	27.01	40	eP	P	04 03 50.0	+1.4
MK31	Makanchi Array	27.02	40	eP	P	04 03 48.9	+0.2
MK31	Makanchi Array	27.02	40	eP	P	04 03 48.9	+0.2
MK32	Makanchi Array	27.02	40	eP	P	04 03 49.0	+0.3
MK32	Makanchi Array	27.02	40	eP	P	04 03 49.0	+0.3
MKAR	Makanchi Array	27.02	40	P	P	04 03 49.0	+0.3
	comp=Z,0.8nm,0.7s,baz=225,slow=8.4,SNR=7.1						
MKAR	Makanchi Array	27.02	40	P	P	04 03 49.0	+0.3
KURBB	Kurchatov Arra	27.64	30	P	P	04 03 54.0	-0.1
	comp=Z,1.1nm,0.9s,baz=229,slow=8.7,SNR=10.0						
KURK	Kurchatov	27.74	30	eP	P	04 03 54.0	-1.1
KURK	Kurchatov	27.74	30	eP	P	04 03 54.0	-1.1
IDI	Anoyia	28.50	293	P	P	04 04 02.2	+0.1
	comp=Z,1.6nm,0.5s,baz=120,slow=8.1,SNR=5.0						
IDI	Anoyia	28.50	293	eP	P	04 04 02.2	+0.1
	comp=Z,5.8nm,1.1s						
IDI	Anoyia	28.50	293	eP	P	04 04 02.2	+0.1
	comp=Z,5.8nm,1.1s						
AKASG	Malin Array Be	31.06	324	P	P	04 04 24.8	+0.3
	comp=Z,0.2nm,0.4s,baz=126,slow=8.3,SNR=3.7						
AKBB	Malin Array Si	31.06	324	eP	P	04 04 24.8	+0.3
ZAA0	Zalesovo Array	32.73	30	eP	P	04 04 38.9	-0.3
	comp=Z,3.0nm,0.9s						
ZALV	Zalesovo Beam	32.73	30	P	P	04 04 39.2	+0.1
	comp=Z,1.4nm,0.3s,baz=243,slow=9.0,SNR=6.0						
ZALV	Zalesovo Beam	32.73	30	eP	P	04 04 39.0	-0.2
ZAA1	Zalesovo Array	32.73	30	eP	P	04 04 39.2	+0.1
FIA0	FINESS Array S	39.35	337	eP	P	04 05 35.3	-0.4
FIA1	FINESS Array S	39.35	337	eP	P	04 05 35.6	-0.1
FINES	FINESS Array B	39.35	337	P	P	04 05 35.3	-0.4
	comp=Z,0.5nm,0.4s,baz=163,slow=7.0,SNR=3.8						
SONA0	Songino Array	42.56	49	eP	P	04 06 02.6	+0.1
SONM	Songino Array	42.56	49	P	P	04 06 02.6	+0.1
	comp=Z,1.2nm,0.8s,baz=250,slow=7.5,SNR=6.2						
HFS	Hagfors	43.53	330	P	P	04 06 10.0	0.0
	comp=Z,0.6nm,0.5s,baz=128,slow=11,SNR=4.1						
HFS	Hagfors	43.53	330	P	P	04 06 10.0	0.0
ARA0	ARCESS Array S	45.41	345	eP	P	04 06 24.8	0.0
ARCES	ARCESS Array B	45.41	345	P	P	04 06 24.8	0.0
	comp=Z,1.4nm,0.7s,baz=115,slow=8.1,SNR=4.4						
ESDC	Sonseca Array	51.35	300	P	P	04 07 11.1	-0.1
	comp=Z,0.2nm,0.4s,baz=76,slow=6.9,SNR=3.7						
TOA1	Torodi Ar. Sit	53.79	266	eP	P	04 07 28.3	-1.2
TORD	Torodi Ar. Bea	53.79	266	P	P	04 07 28.3	-1.2
	comp=Z,0.8nm,0.5s,baz=62,slow=7.2,SNR=15						
KS15	Wonju Array Si	58.78	61	eP	P	04 08 04.0	-0.7
KS15	Wonju Array Si	58.78	61	eP	P	04 08 04.1	-0.7
KSAR	Wonju Array Be	58.78	61	P	P	04 08 04.0	-0.7
KSAR	Wonju Array Be	58.78	61	P	P	04 08 04.1	-0.7
KSRS	Korea Array	58.80	61	P	P	04 08 04.0	-0.9
	comp=Z,1.4nm,0.6s,baz=280,slow=6.7,SNR=5.9						
ILULI	Ilulissat	70.30	339	eP	P	04 09 20.2	+0.7
	comp=Z,21nm,0.4s						
WR1	Warramunga Arr	88.33	114	eP	P	04 10 58.7	+0.1
	comp=Z,39nm,1.9s						
WRA	Warramunga Arr	88.33	114	P	P	04 10 58.7	+0.1
	comp=Z,1.2nm,0.9s,baz=303,slow=5.0,SNR=5.7						
YKA	Yellowknife Ar	89.52	356	P	P	04 11 03.5	0.0
	comp=Z,0.3nm,0.8s,baz=1,2,slow=5.7,SNR=3.4						
ASAR	Alice Springs	89.87	117	P	P	04 11 06.1	+0.3
	comp=Z,0.3nm,0.5s,baz=308,slow=4.6,SN

PTEN	Parque Tenorio	5.76	335	eP		Pn	04 13 38.2 -2.3
CUI	Cuipilapa	5.79	333	eP		Pn	04 13 38.5 -2.3
CUI				eS		Sn	04 14 43.0 -4.3
COLC	Colonia	5.81	333	eP		Pn	04 13 38.7 -2.4
GUAB	Guayabo de Bag	5.86	333	eP		Pn	04 13 41.0 -0.8
LIM1	Limonal	5.86	333	eP		Pn	04 13 40.7 -1.1
MESS	Mesas	5.87	334	eP		Pn	04 13 37.8 -4.2
MESS				eP		Pn	04 13 40.2 -1.8
MESS				eS		Sn	04 14 45.9 -3.6
NY14	Universidad de	5.95	330	eP		Pn	04 13 41.5 -1.5
GPS2	Hotel Rinc^‡n	5.96	332	eP		Pn	04 13 41.0 -2.1
GPS2				eS		Sn	04 14 50.4 -1.1
GPS3	Bodega del ICE	5.96	332	eP		Pn	04 13 42.8 -0.4
BUEV	Buena Vista	6.02	332	eP		Pn	04 13 42.0 -2.1
BUEV				eS		Sn	04 14 51.1 -2.1
GBS3	Finca Las lm^¡	6.03	332	eP		Pn	04 13 43.1 -1.0
CAPC	Capurgana	6.04	58	eP		Pn	04 13 44.5 +0.3
PLMC	San Jos^' del	6.25	95	eP		Pn	04 13 45.9 -1.4
YOTC	Yotoco, Valle	6.34	103	eP		Pn	04 13 47.0 -1.5
CRZ1	La Cruz	6.37	331	eP		Pn	04 13 46.8 -1.9
DBBC	Dabeiba	6.48	76	eP		Pn	04 13 50.6 +0.3
POPC	Popayan, Colom	6.52	116	eP		Pn	04 13 49.7 -1.4
OTAV	Otavalo	6.60	142	eP	n	Pn	04 13 49.1 -3.2
OTAV				eS	n	Sn	04 15 03.0 -4.9
OTAV	Otavalo	6.60	142	eP		Pn	04 13 50.1 -2.2
GCUF	Volcan Galeras	6.67	129	eP		Pn	04 13 52.1 -1.2
SOTA	Rioblanco	6.77	119	eP		Pn	04 13 55.0 +0.3
CRUC	La Cruz	6.78	125	eP		Pn	04 13 51.9 -2.8
PCON	Cinco Dias	6.87	117	eP		Pn	04 13 56.1 0.0
HELC	Santa Helena	7.01	84	eP	n	Pn	04 13 56.4 -1.5
HELC				eS	n	Sn	04 15 18.4 +0.5
HELC	Santa Helena	7.01	84	eP		Pn	04 14 02.6 +4.7
MARP	Paez Belalcaza	7.06	111	eP		Pn	04 13 57.9 -0.6
MOTC	Monteria, Cord	7.58	64	eP		Pn	04 14 08.5 +3.2
NORC	Norcasia	7.63	89	eP		Pn	04 14 08.5 +2.4
PRAC	Prado	7.82	102	eP	n	Pn	04 14 08.7 -0.1
PRAC				eS	n	Sn	04 15 36.0 -1.4
PRAC	Prado	7.82	102	eP		Pn	04 14 08.5 -0.3
FLOC	Florencia	7.87	119	eP		Pn	04 14 10.5 +1.1
ZARC	Zaragoza, Cauc	7.89	75	eP		Pn	04 14 10.7 +1.0
PTBC	PUERTO BERRIO,	8.11	82	eP		Pn	04 14 13.9 +1.2
ROSC	El Rosal	8.21	94	P	n	Pn	04 14 17.4 +3.0
	comp=Z,1.1nm,0.3s,baz=251,slow=19,SNR=8.4						
ROSC	El Rosal	8.21	94	eP	n	Pn	04 14 17.6 +3.2
ROSC	El Rosal	8.21	94	eP		Pn	04 14 14.5 +0.2
SJCC	San Jacinto, C	8.52	58	eP		Pn	04 14 18.8 +0.4
VILC	Villavicencio,	8.91	98	eP		Pn	04 14 26.5 +2.7
RUSC	La Rusia	9.42	87	eP	n	Pn	04 14 32.4 +1.3
RUSC	La Rusia	9.42	87	eP		Pn	04 14 31.1 +0.1
OCAC	Ocana	9.56	73	eP		Pn	04 14 29.1 -3.6
PAMC	Pamplona, Colo	9.95	79	eP		Pn	04 14 44.4 +6.0
CODC	Agust^›n Codaz	10.05	63	eP		Pn	04 14 41.8 +2.5
APG	El Apazote	12.28	321	P	n	Pn	04 15 13.8 +3.8
	comp=Z,0.5nm,0.3s,baz=33,slow=4.4,SNR=6.9						
SDV	Santo Domingo	12.29	73	P	n	Pn	04 15 10.4 +0.2
	comp=Z,0.9nm,0.3s,baz=252,slow=8.1,SNR=23						
SDV				S	n	Sn	04 17 22.3 -5.2
	comp=Z,0.8nm,0.3s,baz=14,slow=16,SNR=3.1						
SDV	Santo Domingo	12.29	73	eP	n	Pn	04 15 10.7 +0.5
SDV				eS	n	Sn	04 17 22.3 -5.2
ATAH	Atahualpa	13.17	162	P	n	Pn	04 15 25.1 +2.7
	comp=Z,0.9nm,0.3s,baz=324,slow=14,SNR=3.1						
CMIG	Matias Romero	16.73	315	P	n	P	04 16 13.1 +1.4
	comp=Z,0.1nm,0.3s,baz=122,slow=9.5,SNR=3.6						
NNA	Nana	18.23	162	P	n	Pn	04 16 28.0 -0.2
	comp=Z,0.4nm,0.3s,baz=335,slow=11,SNR=7.4						
NNA	Nana	18.23	162	eP	n	P	04 16 28.4 +0.1
	comp=Z,39nm,1.2s						
PCRV	Puerto La Cruz	18.34	74	P		Pn	04 16 28.4 -1.1
	comp=Z,0.5nm,0.3s,baz=241,slow=5.8,SNR=3.0						
CRPR	Cabo Rojo, PR	19.57	49	eP		Pn	04 16 43.5 -0.7
	comp=Z,37nm,1.1s						
AOPR	Arecibo Observ	20.04	49	eP		Pn	04 16 49.3 -0.6
	comp=Z,34nm,0.9s						
SJG	San Juan	20.36	50	P		Pn	04 16 52.6 -1.1
	comp=Z,14nm,0.8s,baz=225,slow=7.2,SNR=8.4						
SJG	San Juan	20.36	50	eP		Pn	04 16 54.2 +0.5
	comp=Z,29nm,1.0s						
SJG				eS		Sn	04 20 45.6 +2.4
HUMP	Col San Antoni	20.61	51	eP		P	04 16 54.4 +0.1
	comp=Z,44nm,1.3s						
HUMP				eS		Sn	04 20 47.5 -1.7
CBYP	Canovanas	20.68	51	eP		Pn	04 16 58.0 +0.5
	comp=Z,61nm,1.5s						
MTP	Monte Pirata	20.81	51	eP		P	04 16 55.7 -0.9
	comp=Z,79nm,1.7s						
CUPR	Culebra, Puert	21.14	51	eP		P	04 16 60.0 -0.1
	comp=Z,19nm,1.0s						
060A	Indiantown	21.56	5	eP		P	04 17 03.6 -0.9
	comp=Z,82nm,1.0s						
ABVI	Anegada Island	22.12	52	eP		P	04 17 15.6 +4.9
	comp=Z,26nm,0.8s						
PTGA	Pitinga	23.36	105	P		P	04 17 30.1 +6.4
	comp=Z,3.8nm,0.7s,baz=294,slow=13,SNR=8.2						
SAML	Samuel	24.02	126	eP		P	04 17 27.8 -2.3
	comp=Z,7.5nm,0.8s						
LPAZ	La Paz	25.88	147	P		P	04 17 47.1 -0.6
	comp=Z,2.2nm,0.6s,baz=318,slow=11,SNR=16						
LPAZ	La Paz	25.88	147	eP		P	04 17 47.6 -0.1
	comp=Z,4.3nm,0.9s						
GOGA	Godfrey	27.83	358	eP		P	04 18 04.1 -0.3
	comp=Z,14nm,1.5s						
H06E1	SOCORRO T-PHAS	30.69	298	T		T	04 50 32.6
	SNR=10						
HBAR	Harrisburg	30.88	347	eP		P	04 18 34.6 +3.2
	comp=Z,36nm,0.8s						
TXAR	Lajitas Array	31.03	322	P		P	04 18 33.5 +0.5
	comp=Z,0.3nm,0.8s,baz=149,slow=9.5,SNR=2.7						
TXAR				PcP		PcP	04 21 31.4 +2.4
	comp=Z,0.2nm,0.7s,baz=139,slow=4.8,SNR=3.1						
CCM	Cathedral Cave	33.41	347	eP		P	04 18 52.1 -1.5
	comp=Z,14nm,1.1s						
OLIL	Olney	33.51	352	eP		P	04 18 53.7 -0.7
	comp=Z,11nm,0.8s						
ANMO	Albuquerque	36.73	326	P		P	04 19 23.4 +0.8
	comp=Z,0.4nm,0.3s,baz=151,slow=17,SNR=3.5						
ANMO	Albuquerque	36.73	326	eP		P	04 19 23.4 +0.8
	comp=Z,9.1nm,1.8s						
SDCO	Great Sand Dun	38.35	330	eP		P	04 19 36.1 -0.3
	comp=Z,6.1nm,1.4s						
SPMN	Marine on St.	40.62	349	eP		P	04 19 55.2 +0.4
	comp=Z,8.7nm,1.1s						
WESC	Westside Schoo	41.17	316	eP		P	04 19 56.7 -2.8
YUH	Yuha Desert	41.24	315	eP		P	04 19 57.7 -2.4
HWB	Hans Werner Br	42.17	315	eP		P	04 20 06.3 -1.6
PD31	Pinedale Array	44.20	331	eP		P	04 20 26.1 +1.8
PDAR	Pinedale Array	44.20	331	P		P	04 20 26.1 +1.8
	comp=Z,0.2nm,0.3s,baz=147,slow=12,SNR=2.4						
ULM	Lac du Bonnet	46.03	348	P		P	04 20 40.2 +1.8
	comp=Z,2.6nm,0.8s,baz=150,slow=8.1,SNR=3.5						
NV01	Mina Array Sit	46.14	320	eP		P	04 20 41.1 +1.3
NVAR	Mina Array Bea	46.14	320	P		P	04 20 41.1 +1.3
	comp=Z,1.2nm,0.8s,baz=122,slow=6.7,SNR=3.9						
PLCA	Paso Flores	47.26	168	P		P	04 20 47.7 -0.6
	comp=Z,2.1nm,0.9s,baz=292,slow=11,SNR=2.2						
PLCA	Paso Flores	47.26	168	eP		P	04 20 47.7 -0.6
	comp=Z,64nm,1.9s						
YKA	Yellowknife Ar	61.62	344	P		P	04 22 31.8 -0.5
	comp=Z,1.4nm,0.7s,baz=140,slow=6.7,SNR=18						
YKW3	Yellowknife Ar	61.68	344	eP		P	04 22 35.1 +2.4
	comp=Z,5.6nm,0.9s						
ILAR	Eielson Array	74.33	336	P		P	04 23 52.7 +0.3
	comp=Z,0.4nm,0.7s,baz=109,slow=4.9,SNR=3.8						
ILB	Eielson Array	74.33	336	eP		P	04 23 52.7 +0.3
KOWA	Kowa	77.56	76	P		P	04 24 11.4 -0.3
	comp=Z,1.7nm,0.6s,baz=309,slow=4.0,SNR=3.7						
ESDC	Sonseca Array	77.75	51	P		P	04 24 12.0 -0.4
	comp=Z,1.0nm,0.8s,baz=271,slow=6.3,SNR=6.2						
ES19	SONSECA Array	77.80	51	eP		P	04 24 13.5 +0.9
TOA1	Torodi Ar. Sit	83.17	77	eP		P	04 24 41.3 -0.7
TORD	Torodi Ar. Bea	83.18	77	P		P	04 24 41.3 -0.7
	comp=Z,0.8nm,0.7s,baz=284,slow=5.7,SNR=6.2						

*ISCJB **04** 04:31:21.0±0.7, 78°.63N±0°.06×20°.4W±0°.3, h10km, Error ellipse: s-maj=9.4km s-min=7.2km az=28.6*
*OTT **04** 04:31:27.4±0.5, 78°.41N×20°.63W, h18km, ML4.0/3, Eastern Greenland. 870km east from Alert, Nu*

ISC 04 04:31:22.2±0.9, 78°.60N±0°.06×20°.49W±0°.06, h10km, n11, σ3°12/19, Eastern Kalaallit Nunaat

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAG	Danmarks Havn	1.88	167	i P	Pn	04 31 54.4	+0.1
DAG				i S	Sn	04 32 18.8	+0.8
KBS	Kingsbay	6.29	71	eP	Pn	04 32 54.6	-0.1
KBS				eS	Sn	04 34 03.0	-3.5
KBS				IAML		04 34 06.0	
	comp=Z,2.8nm,0.5s						
SPA0	Spitsbergen Ar	7.36	75	eP	Pn	04 33 10.8	+1.4
SUMG	Summit	7.48	226	i P	Pn	04 33 12.8	+1.3
SUMG				i S	Sn	04 34 34.3	-2.1
SCO	Scoresbysund	8.17	183	i P	Pn	04 33 22.7	+2.1
SCO				eS	Sn	04 34 48.5	-4.3
KULLO	Kullorsuaq	9.27	263	PN	Pn	04 33 38.3	+2.7
KULLO				SN	Sn	04 35 15.5	-4.3
KULLO	Kullorsuaq	9.27	263	i P	Pn	04 33 39.6	+4.0
KULLO				i S	Sn	04 35 17.0	-2.7
TULEG	Thule	10.35	283	PN	Pn	04 33 54.4	+3.9
TULEG				SN	Sn	04 35 42.2	-4.1
TULEG				Trac		04 35 57.7	
	comp=Z,1.9nm,0.2s						
EUNU	Eureka	11.71	309	PN	Pn	04 34 12.2	+3.2
EUNU				SN	Sn	04 36 15.6	-4.0
EUNU				Trac		04 36 24.6	
	comp=Z,2.9nm,0.3s						
MRYN	Mary River	16.07	275	PN	P	04 35 20.6	+9.4
MRYN				SN	Sn	04 38 04.4	-1.3
RES	Resolute Bay	16.47	295	PN	Pn	04 35 14.7	+1.9
RES				SN	Sn	04 38 07.4	-7.9
RES				Trac		04 38 12.0	
	comp=Z,20nm,1.4s						

NNC 04 04:46:12.3±3.0, 38°.49N×71°.29E, h0km, mb3.6, mpv3.2, 7C-6D, Error ellipse: s-maj=21.7km s-min=18.9km az=23.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	2.30	48	⇑Pn	Pn	04 46 52.3	+0.6
	8.0nm,0.3s						
SFK				⇓Lg	Lg	04 47 26.0	
	36nm,0.4s						
MNAS	Manas	4.10	13	⇓Pn	Pn	04 47 16.2	-0.2
	4.9nm,0.8s						
MNAS				⇑Sn	Sn	04 48 07.2	+2.0
	2.2nm,0.4s						
MNAS				⇑Lg	Lg	04 48 22.7	
	6.1nm,0.9s						
KK31	Karatay Array	4.65	353	⇑Pn	Pn	04 47 22.3	-1.5
	1.1nm,0.4s,baz=170,slow=12,SNR=15						
KK31				⇑Sn	Sn	04 48 20.4	+1.9
	3.4nm,0.8s,baz=172,slow=23						
KK31				⇑Lg	Lg	04 48 38.8	
	3.4nm,0.6s,baz=174,slow=27						
AAK	Ala-Archa	4.81	29	⇓Pn	Pn	04 47 22.7	-3.5
	3.3nm,0.8s						
AAK				⇓Sn	Sn	04 48 22.9	+0.2
	1.6nm,0.6s						
AAK				⇑Lg	Lg	04 48 42.2	
	2.1nm,0.5s						
TKM2	Tokmak 2	5.51	35	⇓Pn	Pn	04 47 39.4	+3.7
	1.6nm,0.8s						
TKM2				⇓Lg	Lg	04 49 05.3	
	1.8nm,0.7s						

IDC 04 04:54:10.2±5.1, 65°.15S×179°.61W, h0km, mb3.8/3, mb1 4.0/4, mb1mx3.8/32, mbtmp3.8/4, ML3.5/1, Error ellipse: s-maj=165.2km s-min=28.5km az=68.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	Vanda	13.65	197	Pn	Pn	04 57 23.9	-0.7
	0.2nm,0.3s,baz=49,slow=18,SNR=1.4						
QSPA	South Pole Qui	24.94	180	P	P	04 59 35.1	+0.2
	5.2nm,1.0s,baz=40,slow=4.8,SNR=7.6						
H01W1	Cape Leeuwin H	49.00	275	T	T	05 55 53.0	
	baz=149,slow=76,SNR=26						
H01W2	Cape Leeuwin H	49.00	274	T	T	05 55 53.3	
	baz=149,slow=76,SNR=23						
H01W3	Cape Leeuwin H	49.02	275	T	T	05 55 54.2	
	baz=149,slow=76,SNR=24						
ASAR	Alice Springs	51.06	301	P	P	05 03 14.1	+0.1
	0.8nm,0.6s,baz=155,slow=7.4,SNR=6.1						
WRA	Warramunga Arr	54.32	304	P	P	05 03 37.8	-0.4
	0.6nm,0.8s,baz=158,slow=6.3,SNR=2.8						
H06E1	SOCORRO T-PHAS	98.31	63	T	T	06 57 16.6	
H02S1	DAWSON INLET TI	23.44	32	T	T	07 28 48.0	
	SNR=18						

MAN 04 04:59:54.5, 12°.85N×123°.23E, h11km, mb4.0, ML2.7, MS2.3, 2C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUQP	San Andres	0.71	311	eP	Pg	05 00 08.2	-0.1
AUQP				eS	Sn	05 00 21.1	-0.4
GQP	Guinayangan	1.29	324	⇑eP	Pn	05 00 16.5	-2.0
GQP				i S	Sn	05 00 35.7	-0.1
RCP	Roxas	1.37	200	⇑eP	Pn	05 00 18.6	-1.0
RCP				eS	Sb	05 00 37.6	-0.1
CNP	Cataman	1.44	104	eP	Pn	05 00 19.9	-0.6
CNP				eS	Sb	05 00 39.8	+0.1
BOAC	Boac	1.48	294	eP	Pb	05 00 21.7	-0.3
BOAC				eS	Sb	05 00 41.4	+0.6

*ISCJB **04** 05:09:10.4±0.5, 32°.07N±0°.03×130°.95E±0°.05, h11km, mb3.4/5, Error ellipse: s-maj=6.7km s-min=4.0km az=151.3*
*JMA **04** 05:09:10.3, 32°.06N×130°.92E, h8km±1km, M3.8 Broadband fault plane solution: P waves. NP1: φs340.00000°, δ84.00000°, λ162.00000°. NP2: φs72.00000°, δ72.00000°, λ7.00000°. Principal axes: T Plg17.0000°, Azm295.0000°; N Plg71.0000°, Azm141.0000°; P Plg8.0000°, Azm27.0000°;*
JMA Felt III J1.
*IDC **04** 05:09:11.8±1.4, 32°.14N×131°.17E, h0km, mb3.5/5, mb1 3.5/8, mb1mx3.4/73, mbtmp3.4/8, ML3.2/3 Error ellipse: s-maj=36.2km s-min=12.3km az=82.0*

ISC 04 05:09:11.8±0.7, 32°.09N±0°.03×130°.93E±0°.04, h11km, n16, σ2°52/20, mb3.3/5, 3C-3D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTZ	Takazaki	0.23	144	⇑P	Pg	05 09 14.7	-1.9
JTZ				eS	Sg	05 09 18.0	-1.8
JZO	Okuchi	0.29	281	⇑P	Pg	05 09 16.0	-1.6
JZO				eS	Sg	05 09 20.1	-1.4
JIU2	Izumi 2	0.47	348	⇓P	Pg	05 09 20.2	-0.8
JIU2				eS	Sg	05 09 26.8	-0.4
JTSN	Tsuno	0.51	72	⇓P	Pg	05 09 20.5	-1.3
JNAR	Kushima--Naru	0.63	152	⇑P	Pg	05 09 22.5	-1.5
JNAR				S	Sg	05 09 30.6	-1.7
JSU	Suzuyama	0.71	215	⇓P	Pg	05 09 23.3	-2.2
JNU	Nakatsue	1.03	358	Pg	Pb	05 09 30.7	-1.0
	107nm,0.3s,baz=222,slow=7.6,SNR=247						
JNU				Lg	Lg	05 09 44.6	
	444nm,0.3s,baz=246,slow=20,SNR=19						
JOW	Kunigami	5.72	205	Pn	Pn	05 10 38.0	+1.2
	2.3nm,0.3s,baz=214,slow=7.3,SNR=1.6						
KSRS	Korea Array	5.90	336	Pg	Pg	05 11 03.1	-1.6
	0.5nm,0.3s,baz=143,slow=18,SNR=7.6						
KSRS				Sn	Sb	05 11 58.1	-7.1
	0.4nm,0.3s,baz=162,slow=32,SNR=4.2						
KSRS				Lg	Lg	05 12 16.7	
	0.8nm,0.3s,baz=154,slow=31,SNR=7.7						
MJAR	Matsushiro Arr	7.48	52	Pn	Pn	05 11 00.3	-0.6
	0.9nm,0.3s,baz=240,slow=14,SNR=6.4						
KLR	Kul'dur	17.14	2	P	P	05 13 12.0	-0.8
	0.0nm,0.3s,baz=162,slow=8.7,SNR=3.7						
SONM	Songino Array	24.37	317	P	P	05 14 32.9	+3.0
	0.5nm,0.5s,baz=125,slow=7.6,SNR=2.4						
MKAR	Makanchi Array	39.69	306	P	P	05 16 47.5	+3.5
	0.5nm,0.9s,baz=106,slow=9.1,SNR=2.7						
KURBB	Kurchatov Arra	42.49	312	P	P	05 17 09.4	+2.6
	0.3nm,0.5s,baz=99,slow=8.9,SNR=3.3						
WRA	Warramunga Arr	51.84	176	P	P	05 18 20.7	+0.7
	0.2nm,0.6s,baz=355,slow=7.9,SNR=1.1						
FINES	FINESS Array B	68.96	330	P	P	05 20 20.1	+3.5
	1.2nm,0.8s,baz=44,slow=4.8,SNR=2.9						

*UCR **04** 05:11:54.4±1.5, 13°.60N×91°.11W, h17km±19km, MD5.1, ML4.8, mb4.7(NEIC)*
*ISCJB **04** 05:11:58.5±0.3, 13°.74N±0°.02×90°.81W±0°.02, h87km±2km, mb4.7/305, Error ellipse: s-maj=3.8km s-min=2.3km az=143.6*
*MOS **04** 05:11:59.9±1.0, 13°.82N×90°.72W, h97km, mb4.8/49, Error ellipse: s-maj=11.3km s-min=4.5km az=111.9*
*NEIC **04** 05:12:00.3±0.5, 13°.73N×90°.80W, h83km±4km, mb4.7/300, MD5.2(SNET), Error ellipse: s-maj=4.4km s-min=2.6km az=220.0*
NEIC Felt at Antigua Guatemala and Jocotenango. Felt [II] at San Salvador, El Salvador. Also felt at Antiguo Cuscatlan and Izalco.
*IDC **04** 05:12:01.0±1.2, 13°.79N×90°.62W, h92km±8km, mb4.2/33, mb1 4.3/35, mb1mx4.3/51, mbtmp4.6/35, MS4.2/5, Ms1 4.3/5, ms1mx3.7/46, Error ellipse: s-maj=17.5km s-min=7.8km az=54.0*

ISC 04 05:11:58.5±1.0, 13°.71N±0°.05×90°.90W±0°.06, h70km±8km, n1086, σ1°20/1183, mb4.7/306, 7C-5D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	Ixpaco	0.63	43	⇑i P	Pn	05 12 11.1	-1.9
RTR	El Retiro	1.23	81	eP	Pn	05 12 19.9	-0.3
SBLS	San Blas	1.24	84	eP	Pn	05 12 19.7	-0.7
SNJE	San Jose	1.26	82	eP	Pn	05 12 20.0	-0.6
UNIC	Santa Ana	1.33	77	eP	Pn	05 12 21.6	+0.2
UNIC				eS	Sn	05 12 42.6	+4.1
UNIC				IAML		05 12 49.8	
	comp=Z,6μm,0.2s						
APG	El Apazote	1.36	18	P	Pn	05 12 22.3	+0.4
	comp=Z,1μm,0.3s,baz=163,slow=7.7,SNR=2332						
APG				S	Sn	05 12 41.3	+1.9
	comp=Z,282nm,0.3s,baz=199,slow=19,SNR=8.0						
APG				LR	LR	05 13 06.0	
	comp=Z,9μm,18.5s,baz=132,slow=54						
CEDA	San Andres	1.46	86	eP	Pn	05 12 22.6	-0.5
COLS	Colinas	1.55	91	eP	Pn	05 12 23.7	-0.7
BOQS	Boqueron	1.57	89	eP	Pn	05 12 24.5	-0.1
UEES	San Salvador	1.61	89	eP	Pn	05 12 24.7	-0.3
UEES				eS	Sn	05 12 50.0	+4.9
UEES				IAML		05 12 54.2	
	comp=Z,35μm,0.4s						
SNET	Serv Nac Est T	1.62	90	eP	Pn	05 12 24.3	-0.9
SNET				eS	Sn	05 12 48.0	+2.7
SNET				IAML		05 12 54.9	
	comp=Z,23μm,0.3s						
MTO3	Montecristo	1.64	65	eP	Pn	05 12 26.2	+0.5
UTEC	San Salvador	1.65	90	eP	Pn	05 12 24.7	-0.8
UTEC				IAML		05 12 58.1	
	comp=Z,20μm,0.3s						
OPAM	San Salvador	1.65	89	eP	Pn	05 12 24.9	-0.6
OPAM				IAML		05 12 55.0	
	comp=Z,32μm,0.3s						
UESS	San Salvador	1.65	90	eP	Pn	05 12 25.6	0.0
UESS				IAML		05 12 54.7	
	comp=Z,21μm,0.3s						
SANM	San Marcos	1.67	91	eP	Pn	05 12 24.7	-1.1
SANM				eS	Sn	05 12 50.0	+3.6
SANM				IAML		05 12 57.6	
	comp=Z,8μm,0.7s						
UDBS	Soyapango	1.69	89	eP	Pn	05 12 26.0	-0.1
UDBS				eS	Sn	05 12 51.3	+4.4
LFU	La Fuente	1.73	88	eP	Pn	05 12 26.9	+0.2
LFRS	El Faro	1.79	92	eP	Pn	05 12 27.1	-0.3
LBRS	Las Brisas	1.80	89	⇓i P	Pn	05 12 28.0	+0.4
LLGN	La Laguna	1.94	76	eP	Pn	05 12 30.1	+0.6
SNVI	San Vicente	2.00	92	eP	Pn	05 12 30.2	-0.2
UESV	Ojushtada	2.07	99	eP	Pn	05 12 31.0	-0.2
UESV				IAML		05 13 11.3	
	comp=Z,11μm,0.5s						
TECA	Tecapa	2.34	95	eP	Pn	05 12 34.4	-0.6
VSM	San Miguel	2.56	96	eP	Pn	05 12 38.9	+0.8
CCIG	Comitan	2.83	335	eP	n	Pn	05 12 40.2 -1.4
CCIG				S		Sn	05 13 13.2 -1.5
PCIG		3.00	312	P		Pn	05 12 37.5 -6.3
PCIG				S		Sn	05 13 09.7 -8.9
TGUH	Tegucigalpa,Un	3.54	84	eP	n	Pn	05 12 51.5 +0.4
TGIG		3.73	325	P		Pn	05 12 49.9 -4.0
TGIG				S		Sn	05 13 31.8 -4.9
TELN	Telica	4.11	105	eP		Pn	05 12 59.1 +0.1
CNGN	Cerro Negro	4.26	106	eP		Pn	05 12 60.0 -1.1
CNGN				eS		Sn	05 13 49.0 -0.6
MOMN	Momotombo	4.44	106	eP		Pn	05 13 03.4 -0.1
ESTN	Estel	4.45	97	eP		Pn	05 13 03.8 +0.2
ESTN				AML		AML	05 13 58.0
	comp=N,238nm,0.7s						
COPN	Copaltepe	4.46	109	eP		Pn	05 13 02.9 -0.8
COPN				AML		AML	05 14 00.8
	comp=Z,2μm,0.5s						
RCON	San Juan de Ri	4.61	92	eP		Pn	05 13 06.9 +0.9
XAVN	Gruta Xavier	4.72	109	eP		Pn	05 13 07.0 -0.2
XAVN				AML		AML	05 14 08.2
	comp=Z,2μm,0.6s						
MGAN	Managua	4.79	108	eP		Pn	05 13 07.2 -1.0
MATN	Matagalpa	4.90	98	eP		Pn	05 13 09.2 -0.7
CMIG	Matias Romero	5.11	312	P	n	Pn	05 13 08.1 -4.6
	comp=Z,7.8nm,0.3s,baz=154,slow=12,SNR=70						
CMIG				S		Sn	05 14 04.3 -6.1
	comp=Z,24nm,0.3s,baz=153,slow=20,SNR=8.0						
CMIG				LR		LR	05 15 38.8
	comp=Z,3μm,19.5s,baz=105,slow=41						
BOAB	BOACO BROADBAN	5.25	103	eP		Pn	05 13 13.5 -1.0
CONN	Concepcion	5.57	112	eP		Pn	05 13 18.0 -0.9
CRZ1	La Cruz	5.77	116	eP		Pn	05

MOTC Monteria, Cord 15.72 107 eP Pn 05 15 34.4 -1.5
058A Arcadia 15.77 31 P P 05 15 36.5 -2.5
baz=214,SNR=5.9
646A Port Sulphur 15.83 3 P Pn 05 15 37.4 +0.2
baz=184
SJCC San Jacinto, C 15.84 102 eP P 05 15 40.6 +0.6
060Z West Palm Beac 15.93 36 P Pn 05 15 37.4 -1.0
baz=219
059A Moore Haven 16.04 33 P P 05 15 40.1 -1.9
baz=216,SNR=13
059A Moore Haven 16.04 33 eP P 05 15 44.8 +2.8
comp=Z,156nm,0.8s
957A Wimauma 16.07 29 P Pn 05 15 39.4 -0.8
baz=212
957A Wimauma 16.07 29 ePn P 05 15 42.1 -0.3
comp=Z,70nm,0.8s
958A Wauchula 16.23 30 P Pn 05 15 41.5 -0.8
baz=213,SNR=12
543A St. Martinvill 16.33 357 P Pn 05 15 42.1 -1.3
baz=176
544A White Castle 16.33 359 P Pn 05 15 42.8 -0.6
baz=179
541A Lake Charles 16.41 353 P Pn 05 15 44.0 -0.5
baz=172
546A Slidell 16.48 4 P Pn 05 15 44.3 -1.1
baz=184
060A Indiantown 16.52 35 P P 05 15 45.1 -2.2
baz=218
060A Indiantown 16.52 35 ePn P 05 15 50.1 +2.8
comp=Z,127nm,0.8s
833A Chaparral WMA, 16.56 333 P Pn 05 15 45.9 -0.4
baz=150
833A Chaparral WMA, 16.56 333 ePn Pn 05 15 47.1 +0.8
comp=Z,25nm,1.0s
857A Zephyrhills 16.58 28 P P 05 15 46.2 -1.8
baz=210,SNR=9.9
959A Okeechobee 16.63 33 P Pn 05 15 45.1 -2.0
baz=216
HKT Hockley 16.80 345 ePn Pn 05 15 50.2 +1.0
comp=Z,63nm,1.4s
HKT Hockley 16.80 345 eP Pn 05 15 50.2 +1.0
HKT pmax pmax
comp=Z,63nm,1.4s
DWPF Disney Wildern 16.83 30 P P 05 15 49.4 -1.3
baz=213
DWPF Disney Wildern 16.83 30 ePn P 05 15 53.3 +2.6
comp=Z,82nm,0.9s
PLMC San Jos^ del 16.85 120 eP P 05 15 50.2 -1.0
HELC Santa Helena 16.87 115 ePn P 05 15 51.4 -0.2
comp=Z,28nm,0.9s
ZARC Zaragoza, Cauc 16.92 110 eP P 05 15 51.6 -0.3
444A Pine Grove 16.93 0 P Pn 05 15 51.2 +0.3
baz=180
858A St. Cloud 16.95 30 P P 05 15 51.0 -1.0
baz=213
445A Amite 16.95 2 P Pn 05 15 51.1 -0.1
baz=182
442A Mamou 16.99 355 P P 05 15 52.6 +0.1
baz=175
443A Delano Plantat 17.00 357 P Pn 05 15 51.3 -0.4
baz=177
859A Kempfer Cattle 17.05 32 P Pn 05 15 51.1 -1.3
baz=215
446A Poplarville 17.06 4 P P 05 15 53.8 +0.5
baz=185
441A DeRidder 17.10 353 P P 05 15 54.0 +0.3
baz=172
447A Lucedale 17.14 7 P P 05 15 55.5 +1.4
baz=187,SNR=10
447A Lucedale 17.14 7 ePn P 05 15 56.9 +2.8
comp=Z,237nm,0.8s
552A Lynn Haven 17.15 17 P P 05 15 54.8 +0.5
baz=198
757A Oxford 17.23 27 P P 05 15 55.4 +0.2
baz=210
655A Horseshoe Beac 17.25 23 P P 05 15 55.4 0.0
baz=206
YOTC Yotoco, Valle 17.31 123 eP P 05 15 56.5 +0.3
449A Pace 17.31 11 P P 05 15 56.8 +0.8
baz=192
448A Bay Minette 17.37 9 P P 05 15 57.0 +0.3
baz=190
HORQ Saladito 17.37 124 eP P 05 15 59.0 +1.8
656A Willston 17.41 25 P P 05 15 56.5 -0.6
baz=208
656A Willston 17.41 25 eP P 05 15 59.9 +2.7
comp=Z,89nm,0.8s
553A Crawfordville 17.46 19 P P 05 15 58.6 +0.9
baz=201,SNR=7.7
450A Crestview 17.48 12 P P 05 15 57.9 0.0
baz=194
345A Thompson Farm, 17.54 2 P Pn 05 16 00.3 +1.9
baz=182
554A Perry 17.61 21 P Pn 05 15 59.5 +0.3
baz=203
342A Flagon Creek P 17.64 356 P P 05 15 59.7 +0.1
baz=175
342A Flagon Creek P 17.64 356 eP Pn 05 16 00.5 +1.0
comp=Z,122nm,1.3s
346A Big Creek Wild 17.65 4 P Pn 05 16 00.5 +0.8
baz=184,SNR=15
346A Big Creek Wild 17.65 4 eP Pn 05 16 06.0 +6.2
comp=Z,124nm,0.8s
758A Lake Helen 17.65 29 P Pn 05 15 59.7 -0.1
baz=212
344A Westbrook Fam 17.67 0 P Pn 05 16 00.8 +0.8
baz=180,SNR=27
344A Westbrook Fam 17.67 0 eP Pn 05 16 02.4 +2.4
comp=Z,147nm,0.9s
341A Kurthwood 17.67 354 P Pn 05 16 00.9 +1.0
baz=172,SNR=7.0
341A Kurthwood 17.67 354 eP Pn 05 16 01.1 +1.1
comp=Z,39nm,0.9s
341A ePcP PcP 05 20 38.2 +3.0
PTBC PUERTO BERRIO, 17.67 112 eP Pn 05 16 00.8 +0.6
BRAL Brewton 17.74 11 P Pn 05 16 00.8 0.0
baz=192
BRAL Brewton 17.74 11 eP Pn 05 16 02.4 +1.5
comp=Z,94nm,0.9s
347A Saraland 17.75 7 P Pn 05 16 02.1 +1.2
baz=187,SNR=16
348A Jackson 17.84 8 P Pn 05 16 02.6 +0.5
baz=189
348A Jackson 17.84 8 eP Pn 05 16 04.6 +2.6
comp=Z,86nm,0.9s
452A Marianna 17.86 16 P Pn 05 16 02.6 +0.4
baz=198
657A Interlachen 17.88 26 P Pn 05 16 01.5 -1.0
baz=209
349A Repton 17.89 10 P Pn 05 16 04.7 +2.0
baz=191,SNR=14
555A McAlpin 17.91 23 P Pn 05 16 03.4 +0.6
baz=206,SNR=9.8
555A McAlpin 17.91 23 eP Pn 05 16 04.8 +2.0
comp=Z,112nm,0.8s
658A Bunnell 18.01 28 P Pn 05 16 04.1 0.0
baz=211
556A Lake Butler 18.02 24 P Pn 05 16 04.8 +0.6
baz=207
435B Jarrell 18.08 341 P P 05 16 04.4 -0.1
baz=158
435B Jarrell 18.08 341 eP P 05 16 04.5 -0.1
comp=Z,26nm,0.7s
OCAC Ocana 18.09 106 eP Pn 05 16 04.6 -0.8
243A Waterproof 18.10 358 P Pn 05 16 05.8 +0.6
baz=178
453A Whigham 18.11 18 P Pn 05 16 05.8 +0.4
baz=201
453A Whigham 18.11 18 eP Pn 05 16 06.4 +1.1
comp=Z,43nm,0.8s
350A Dozier 18.12 13 P Pn 05 16 06.2 +0.7
baz=194
351A Pinckard 18.15 15 P Pn 05 16 06.6 +0.7
baz=196
OTAV Otavalo 18.19 136 eP Pn 05 16 07.0 +0.1
comp=Z,8.1nm,1.0s
OTAV Otavalo 18.19 136 eP Pn 05 16 07.0 +0.1
OTAV pmax pmax
comp=Z,8.0nm,1.0s
454A Quitman 18.20 20 P Pn 05 16 06.5 0.0
baz=203
SOTA Rioblanco 18.21 128 eP Pn 05 16 10.7 +3.5
244A Avery, Jackson 18.25 1 P Pn 05 16 07.1 0.0
baz=180
PCON Cinco Dias 18.25 127 eP Pn 05 16 09.0 +1.2
245A Little AP, Sta 18.27 3 P Pn 05 16 07.6 +0.4
baz=183
NATX Nacogdoches 18.30 350 P P 05 16 07.1 +0.2
baz=168,SNR=7.5
NATX Nacogdoches 18.30 350 eP P 05 16 07.2 +0.2
comp=Z,37nm,0.8s
242A Grayson 18.31 357 P Pn 05 16 07.8 +0.1
baz=176
557A Orange Park 18.31 26 P Pn 05 16 07.8 +0.1
baz=209
241A Mo Tay, Goldon 18.33 355 P Pn 05 16 08.2 +0.3
baz=174,SNR=16
241A Mo Tay, Goldon 18.33 355 eP Pn 05 16 08.8 +0.9
comp=Z,77nm,0.9s
247A Quitman 18.38 6 P Pn 05 16 09.6 +1.0
baz=187,SNR=9.0
VBMS Vicksburg 18.43 1 eP Pn 05 16 11.4 +2.2
comp=Z,170nm,1.0s
240A Hunter Patters 18.44 352 P P 05 16 09.0 +0.5
baz=171
249A Camden 18.51 10 P Pn 05 16 10.7 +0.5
baz=191,SNR=10
352A Blakely 18.52 16 P Pn 05 16 11.8 +1.5
baz=198
352A Blakely 18.52 16 eP Pn 05 16 11.6 +1.3
comp=Z,62nm,0.8s
248A Dixon Mills 18.53 8 P Pn 05 16 10.8 +0.4
baz=189
ROSC El Rosal 18.57 117 P Pn 05 16 13.9 +2.5
comp=Z,0.7nm,0.3s,baz=74,slow=23,SNR=24
ROSC El Rosal 18.57 117 eP Pn 05 16 13.7 +2.4
comp=Z,16nm,0.8s
ROSC El Rosal 18.57 117 eP Pn 05 16 13.9 +2.5
353A Camilla 18.60 18 P Pn 05 16 11.6 +0.4
baz=200,SNR=15
JCT Junction City 18.61 335 P P 05 16 10.9 +0.5
baz=152,SNR=8.0
JCT Junction City 18.61 335 eP P 05 16 10.7 +0.3
comp=Z,19nm,0.6s
JCT ePcP PcP 05 20 38.5 +1.6
JCT Junction City 18.61 335 eP P 05 16 10.7 +0.3
JCT pmax pmax
comp=Z,19nm,0.6s
PRAC Prado 18.66 121 eP Pn 05 16 13.1 +0.9
comp=Z,36nm,1.1s
PRAC Prado 18.66 121 eP Pn 05 16 12.3 +0.1
250A Grady 18.68 12 P Pn 05 16 11.9 -0.3
baz=194
250A Grady 18.68 12 eP Pn 05 16 13.2 +1.0
comp=Z,67nm,1.5s
145A Houston Renfro 18.83 3 P P 05 16 13.0 +0.2
baz=183
144A Alexander Plac 18.84 1 P Pn 05 16 13.5 -0.6
baz=181
TIGA Tifton 18.88 20 P Pn 05 16 14.6 0.0
baz=202,SNR=6.7
TIGA Tifton 18.88 20 eP Pn 05 16 15.1 +0.5
comp=Z,86nm,0.8s
141A Papa Simpson, 18.90 355 P P 05 16 14.1 +0.6
baz=174
457A Yulee 18.91 26 P Pn 05 16 13.8 -1.1
baz=209
143A Socs Landing, 18.92 359 P P 05 16 13.0 -0.7
baz=178
143A Socs Landing, 18.92 359 eP P 05 16 14.2 +0.5
comp=Z,40nm,0.6s
146A Union 18.92 5 P P 05 16 14.1 +0.4
baz=185
146A Union 18.92 5 eP Pn 05 16 14.4 -0.6
comp=Z,60nm,0.6s
PAMC Pamplona, Colo 18.97 108 eP Pn 05 16 17.5 +1.3
251A Midway 18.98 14 P Pn 05 16 16.0 +0.2
baz=196,SNR=12
140A Cam and Jess, 19.01 353 P P 05 16 15.6 +1.0
baz=172
140A Cam and Jess, 19.01 353 eP Pn 05 16 15.8 -0.3
comp=Z,50nm,1.0s
147A Livingston 19.04 7 P Pn 05 16 15.7 -0.7
baz=188,SNR=11
147A Livingston 19.04 7 eP Pn 05 16 16.9 +0.5
comp=Z,78nm,0.7s
355A Pearson 19.05 22 P Pn 05 16 16.0 -0.6
baz=204
252A Lumpkin 19.06 16 P Pn 05 16 15.7 -1.1
baz=198,SNR=13
HPIG 19.08 316 eP P 05 16 15.4 -0.4
comp=Z,15nm,0.8s
148A Greensboro 19.10 9 P Pn 05 16 17.0 -0.1
baz=190,SNR=15
WHTX Lake Whitney, 19.17 343 P P 05 16 16.0 -0.5
baz=160
WHTX Lake Whitney, 19.17 343 eP P 05 16 15.7 -0.8
comp=Z,100nm,1.5s
149A Jones 19.18 11 P Pn 05 16 18.1 0.0
baz=192,SNR=25
CHIC Chingaza 19.18 116 eP Pn 05 16 19.8 +1.1
RUSC La Rusia 19.18 112 eP Pn 05 16 17.9 -0.9
comp=Z,9.1nm,0.6s
RUSC ePcP PcP 05 20 41.5 +2.8
RUSC La Rusia 19.18 112 eP Pn 05 16 18.4 -0.5
253A Americus 19.30 18 P Pn 05 16 18.1 -1.4
baz=200,SNR=5.8
FLOC Florencia 19.30 127 eP Pn 05 16 20.1 +0.4
356A Blackshear 19.30 23 P P 05 16 17.3 -0.5
baz=206
150A Eclectic 19.34 13 P Pn 05 16 19.6 -0.4
baz=194,SNR=37
151A Opelika 19.42 14 P Pn 05 16 20.8 -0.1
baz=196,SNR=74
Z43A Armstrong Fami 19.42 359 P P 05 16 19.3 +0.1
baz=179
254A Abbeville 19.45 20 P Pn 05 16 20.2 -1.1
baz=202
VILC Villavicencio, 19.47 118 eP Pn 05 16 23.0 +1.1
Z46A Louisville 19.48 5 P Pn 05 16 21.2 -0.5
baz=185
Z44A Pea Ridge, Bel 19.49 1 P Pn 05 16 20.9 -0.8
baz=181,SNR=6.5
Z42A Norrel Spur, H 19.50 357 P P 05 16 20.6 +0.5
baz=177
TX31 Lajitas Ar. Si 19.54 325 ePcP PcP 05 20 39.7 +1.1
TXAR Lajitas Array 19.54 325 P P 05 16 21.4 +0.7
comp=Z,1.1nm,0.3s,baz=153,slow=13,SNR=267
TXAR PcP PcP 05 20 40.1 +1.4
comp=Z,0.2nm,0.3s,baz=149,slow=3.5,SNR=8.1
LRAL Lakeview Retre 19.57 10 P Pn 05 16 22.5 -0.2
baz=191,SNR=21
LRAL Lakeview Retre 19.57 10 eP Pn 05 16 22.1 -0.6
comp=Z,22nm,0.7s
Z47A Carrollton 19.58 7 P Pn 05 16 22.0 -0.8
baz=188,SNR=18
Z40A Long Farm, Mag 19.60 354 P P 05 16 21.6 +0.4
baz=172,SNR=9.4
Z45A Winona 19.61 3 P P 05 16 20.9 -0.4
baz=183
357A Townsend 19.64 25 P Pn 05 16 21.6 -2.0
baz=208
SJAC San Juan de Ar 19.69 120 eP Pn 05 16 25.4 +1.0
152A Waverly Hall 19.70 16 P Pn 05 16 23.4 -0.9
baz=198,SNR=32
152A Waverly Hall 19.70 16 eP Pn 05 16 24.2 -0.1
152A ePcP PcP 05 20 40.9 +2.2
255A Hazlehurst 19.71 22 P Pn 05 16 23.1 -1.3
baz=205
Z49A Columbiana 19.80 11 P Pn 05 16 25.4 -0.1
baz=192,SNR=17
Z48A Northport 19.82 8 P Pn 05 16 24.4 -1.2
baz=189,SNR=20
H06E1 SOCORRO T-PHAS 19.88 287 T T 05 36 39.5
SNR=45
256A Glennville 19.98 23 P Pn 05 16 25.9 -1.6
baz=206
Z50A Ashland 19.98 12 P Pn 05 16 26.9 -0.7
baz=194,SNR=43
Z50A Ashland 19.98 12 eP Pn 05 16 27.3 -0.3
comp=Z,62nm,1.0s
Y42A Garnett, Star 20.06 358 P P 05 16 26.8 +0.7
baz=177
Y45A Yeager Farm, C 20.11 3 P P 05 16 27.6 +1.0
baz=184,SNR=8.4
154A Montrose 20.12 19 P P 05 16 26.9 +0.1
baz=202,SNR=7.3
154A Montrose 20.12 19 eP Pn 05 16 28.3 -1.0
comp=Z,140nm,0.9s
CCAR Cane Creek 20.14 358 eP P 05 16 27.7 +0.7
comp=Z,71nm,0.8s
Y41A Eaglette Beard 20.15 356 P P 05 16 27.0 0.0
baz=175
Y46A Houston 20.17 5 P P 05 16 28.0 +0.7
baz=186,SNR=5.8
Y44A Strider, Charl 20.18 2 P P 05 16 27.8 +0.5
baz=182
Z51A Franklin 20.21 14 P Pn 05 16 28.7 -1.5
baz=196
Z52A Williamson 20.28 16 P Pn 05 16 29.9 -1.1
baz=198,SNR=29
Y47A UCPARC, Winfie 20.30 7 P Pn 05 16 30.1 -1.1
baz=188,SNR=30
155A Kite 20.34 21 P Pn 05 16 29.5 -2.3
baz=204
Y48A Jasper 20.40 9 P Pn 05 16 31.1 -1.4
baz=190,SNR=16
SDV Santo Domingo 20.43 101 P P 05 16 29.4 -1.2
comp=Z,19nm,0.7s,baz=292,slow=7.2,SNR=18
SDV LR LR 05 25 38.7
comp=Z,518nm,18.4s,baz=237,slow=40
SDV Santo Domingo 20.43 101 eP P 05 16 30.0 -0.6
comp=Z,31nm,0.6s
SDV Santo Domingo 20.43 101 eP P 05 16 29.4 -1.2
ABTX Abilene, Hawle 20.46 338 P P 05 16 29.9 -0.6
baz=155,SNR=21
ABTX Abilene, Hawle 20.46 338 eP P 05 16 30.2 -0.3
comp=Z,61nm,0.8s
Y49A Blount Mountai 20.47 11 P Pn 05 16 31.9 -1.5
baz=192,SNR=19
Y49A Blount Mountai 20.47 11 eP Pn 05 16 32.1 -1.2
comp=Z,45nm,0.8s
Z53A Monticello 20.60 18 P Pn 05 16 32.8 -2.0
baz=200,SNR=14
Y50A Piedmont 20.64 12 P Pn 05 16 33.4 -1.9
baz=194,SNR=7.6
X45A UM Field Stati 20.67 4 P P 05 16 31.8 -0.9
baz=184
X43A Marvell 20.72 0 P P 05 16 33.9 +0.7
baz=180
X43A Marvell 20.72 0 eP Pn 05 16 34.7 -1.5
comp=Z,55nm,0.6s
GOGA Godfrey 20.75 18 P P 05 16 33.7 +0.1
baz=200,SNR=20
GOGA Godfrey 20.75 18 eP Pn 05 16 34.6 -2.0
comp=Z,44nm,0.9s
X41A Kaden, Bauxite 20.75 356 P P 05 16 33.4 -0.2
baz=175,SNR=36
OXF Oxford 20.76 3 P P 05 16 33.3 -0.4
baz=184
OXF Oxford 20.76 3 eP P 05 16 33.3 -0.4
comp=Z,89nm,1.0s
OXF Oxford 20.76 3 eP P 05 16 33.3 -0.4
OXF pmax pmax
comp=Z,89nm,1.0s
X40A Basin Creek Fa 20.77 355 P P 05 16 33.5 -0.2
baz=174
X40A Basin Creek Fa 20.77 355 eP P 05 16 33.5 -0.2
comp=Z,42nm,1.5s
X42A Stuttgart 20.77 358 P P 05 16 33.5 -0.3
baz=178
Z54A Sparta 20.78 19 P Pn 05 16 34.4 -2.6
baz=202
Y51A Rockmart 20.79 14 P Pn 05 16 35.4 -1.7
baz=196,SNR=40
X46A Booneville 20.87 5 P P 05 16 34.0 -0.8
baz=186
MIAR Mount Ida 20.89 354 P P 05 16 34.2 -0.9
baz=172,SNR=21
MIAR Mount Ida 20.89 354 eP P 05 16 34.8 -0.3
comp=Z,29nm,0.9s
MIAR Mount Ida 20.89 354 eP P 05 16 34.8 -0.3
MIAR pmax pmax
comp=Z,29nm,0.9s
X47A Russelville 20.90 7 P P 05 16 35.5 +0.3
baz=188,SNR=16
X39A Fountain Ranch 20.92 353 P P 05 16 35.2 -0.2
baz=171
X48A Hartselle 20.95 9 P P 05 16 35.6 -0.1
baz=190,SNR=15
X48A Hartselle 20.95 9 eP P 05 16 36.6 +0.9
comp=Z,48nm,0.9s
Z55A Blythe 21.00 21 P P 05 16 37.0 +0.7
baz=204
Y52A Lilburn 21.01 16 P P 05 16 37.8 +1.4
baz=198,SNR=24
Y52A Lilburn 21.01 16 eP P 05 16 37.8 +1.4
comp=Z,40nm,0.8s
X49A Woodville 21.13 11 P P 05 16 38.5 +0.9
baz=192,SNR=14
Y53A Monroe 21.13 17 P P 05 16 38.7 +1.0
baz=200,SNR=32
X50B Fort Payne 21.20 12 P P 05 16 39.5 +1.0
baz=194,SNR=13
PLAL Pickwick Lake 21.34 6 eP P 05 16 40.9 +1.1
comp=Z,31nm,1.0s
Y54A Tignall 21.41 19 P P 05 16 41.1 +0.5
baz=202,SNR=8.3
W41B Gary Mavity, V 21.41 357 P P 05 16 39.9 -0.7
baz=176,SNR=13
W41B Gary Mavity, V 21.41 357 eP P 05 16 40.0 -0.6
comp=Z,22nm,1.1s
X51A Calhoun 21.48 14 P P 05 16 42.7 +1.3
baz=196
W40A Ferguson Farm, 21.48 355 P P 05 16 41.3 -0.1
baz=174,SNR=13
W40A Ferguson Farm, 21.48 355 eP P 05 16 42.0 +0.5
comp=Z,24nm,0.8s
WHAR Wooly Hollow 21.53 357 eP P 05 16 41.6 -0.3
comp=Z,31nm,0.9s
W39A Magazine 21.56 354 P P 05 16 42.4 +0.2
baz=172,SNR=12
W39A Magazine 21.56 354 eP P 05 16 42.8 +0.6
comp=Z,32nm,1.1s
W48A Pulaski 21.64 9 P P 05 16 43.6 +0.5
baz=190,SNR=8.3
NHSC New Hope 21.64 25 P P 05 16 42.6 -0.6
baz=209
W47A Westpoint 21.66 7 P P 05 16 43.5 +0.2
baz=188
W49A Belvidere 21.73 10 P P 05 16 44.5 +0.5
baz=192
X52A Dahlonega 21.75 16 P P 05 16 45.0 +0.6
baz=198,SNR=36
X53A Estanollee 21.82 17 P P 05 16 45.4 +0.4
baz=200,SNR=25
SWET Sewanee 21.88 11 eP P 05 16 46.2 +0.5
comp=Z,38nm,1.1s
CLNB Carlsbad 21.96 329 eP P 05 16 46.2 -0.5
W50A Signal Mountai 21.99 12 P P 05 16 47.4 +0.5
baz=194,SNR=11
V45A Humboldt 22.01 4 P P 05 16 47.1 0.0
baz=185
V42A Cord 22.01 359 P P 05 16 46.4 -0.6
baz=178,SNR=9.0
V41A Mountainview 22.02 357 P P 05 16 46.0 -1.2
baz=176,SNR=32
V40A Witts Springs 22.07 356 P P 05 16 46.6 -1.2
baz=175,SNR=23
V40A Witts Springs 22.07 356 eP P 05 16 47.0 -0.8
comp=Z,33nm,0.9s
WMOK Wichita Mounta 22.12 343 P P 05 16 47.0 -1.4
baz=159
WMOK Wichita Mounta 22.12 343 eP P 05 16 48.7 +0.4
comp=Z,14nm,1.1s
WMOK Wichita Mounta 22.12 343 eP P 05 16 48.7 +0.4
WMOK pmax pmax
comp=Z,14nm,1.1s
V46A Holladay 22.14 6 P P 05 16 47.2 -1.3
baz=187,SNR=10.0
GDL2 Guadalupe Moun 22.16 328 eP P 05 16 49.4 +0.5
V39A Pettigrew 22.18 354 P P 05 16 47.7 -1.2
baz=173,SNR=19
W52A Murphy 22.21 15 P P 05 16 48.4 -0.9
baz=196,SNR=12
V47A Nunnelly 22.24 7 P P 05 16 48.8 -0.7
baz=188
V48A Smith Brothers 22.25 9 P P 05 16 48.6 -1.0
baz=190,SNR=12
V48A Smith Brothers 22.25 9 eP P 05 16 49.6 0.0
comp=Z,24nm,0.8s
JSC Jenkinsville 22.27 21 eP P 05 16 50.2 +0.3
comp=Z,25nm,1.1s
JSC Jenkinsville 22.27 21 eP P 05 16 50.2 +0.3
JSC pmax pmax
comp=Z,25nm,1.1s
MNTX Cornudas Mount 22.30 326 P P 05 16 49.0 -1.2
baz=140,SNR=156
MNTX Cornudas Mount 22.30 326 eP P 05 16 49.1 -1.2
comp=Z,77nm,0.8s
MNTX ePcP PcP 05 20 44.2 +0.4
BG3 Lake Jocassee 22.38 17 eP P 05 16 52.0 +0.9
comp=Z,26nm,0.9s
BG3 ePcP PcP 05 20 46.0 +2.2

CPCT	Cooper Cave	22.40	14	eP	P	05 16 51.8	+0.5
	comp=Z,18nm,0.8s						
CPCT				ePcP	PcP	05 20 45.6	+1.8
V49A	McMinnville	22.42	11	P	P	05 16 50.7	-0.9
	baz=192,SNR=19						
W53A	Cullowhee	22.48	17	P	P	05 16 52.2	-0.1
	baz=200,SNR=11						
V50A	Pikevile	22.49	12	P	P	05 16 51.9	-0.3
	baz=195,SNR=11						
WVT	Waverly	22.50	6	P	P	05 16 51.4	-0.9
	baz=188						
WVT	Waverly	22.50	6	eP	P	05 16 51.9	-0.4
	comp=Z,25nm,1.1s						
WVT	Waverly	22.50	6	eP	P	05 16 51.9	-0.4
WVT				pmax	pmax		
	comp=Z,25nm,1.1s						
TUL1	Leonard	22.55	350	P	P	05 16 51.2	-1.7
	baz=167						
TUL1	Leonard	22.55	350	eP	P	05 16 51.8	-1.1
	comp=Z,15nm,0.8s						
U42A	Revenden	22.55	359	P	P	05 16 51.5	-1.4
	baz=179,SNR=34						
U41A	Viola	22.56	358	P	P	05 16 51.4	-1.7
	baz=177,SNR=14						
PAULI	Pauline	22.57	20	eP	P	05 16 55.2	+2.0
	comp=Z,17nm,1.1s						
U43A	Rector	22.57	1	P	P	05 16 51.3	-1.8
	baz=181						
U40A	Yellville	22.62	356	P	P	05 16 52.2	-1.5
	baz=175,SNR=31						
U45A	Rockin P Farm,	22.63	4	P	P	05 16 52.0	-1.7
	baz=185						
HHAR	Hobbs	22.65	354	eP	P	05 16 53.9	0.0
	comp=Z,19nm,0.9s						
U46A	Springville	22.69	6	P	P	05 16 53.3	-1.1
	baz=187,SNR=10						
U39A	Green Forest	22.70	355	P	P	05 16 52.9	-1.6
	baz=173,SNR=26						
V51A	Loudon	22.78	14	P	P	05 16 55.0	-0.3
	baz=196,SNR=8.4						
U47A	Clarksville	22.87	8	P	P	05 16 54.3	-1.9
	baz=189,SNR=8.8						
MSTX	Muleshoe	22.88	334	P	P	05 16 54.5	-1.9
	baz=149,SNR=15						
MSTX	Muleshoe	22.88	334	eP	P	05 16 54.6	-1.8
	comp=Z,26nm,0.8s						
PBMO	Poplar Bluff	22.98	1	eP	P	05 16 56.1	-1.2
	comp=Z,28nm,0.9s						
PBMO				ePcP	PcP	05 20 45.8	+0.8
V52A	Sevierville	23.00	15	P	P	05 16 57.6	0.0
	baz=198,SNR=14						
KMSC	Kings Mountain	23.02	20	P	P	05 16 57.9	+0.2
	baz=204,SNR=12						
KMSC	Kings Mountain	23.02	20	eP	P	05 16 58.4	+0.6
	comp=Z,21nm,0.8s						
KMSC				ePcP	PcP	05 20 46.8	+1.7
U48A	Cassie Pea, Po	23.04	9	P	P	05 16 57.0	-0.9
	baz=191,SNR=10						
V53A	Saluda	23.05	17	P	P	05 16 57.9	-0.2
	baz=200,SNR=11						
U49A	Red Boiling Sp	23.17	11	P	P	05 16 58.9	-0.3
	baz=192,SNR=23						
T42A	Van Buren	23.23	360	P	P	05 16 58.5	-1.3
	baz=179						
AMTX	Amarillo	23.23	337	P	P	05 16 58.7	-1.2
	baz=152						
AMTX	Amarillo	23.23	337	eP	P	05 16 58.5	-1.4
	comp=Z,36nm,0.8s						
T41A	Mountain View	23.25	358	P	P	05 16 58.6	-1.4
	baz=178,SNR=20						
T43A	Greenville	23.29	1	P	P	05 16 58.5	-1.7
	baz=181,SNR=12						
T44A	Benton	23.31	3	P	P	05 16 60.0	-0.5
	baz=183						
T39A	Clever	23.33	355	P	P	05 16 59.1	-1.5
	baz=174,SNR=16						
T40A	Mansfield	23.39	357	P	P	05 17 00.4	-0.9
	baz=176						
T46A	Princeton	23.39	6	P	P	05 16 59.6	-1.7
	baz=187,SNR=6.2						
T38A	Diamond	23.43	353	P	P	05 16 59.9	-1.7
	baz=172,SNR=18						
T47A	Sharon Grove	23.43	8	P	P	05 17 00.2	-1.5
	baz=189,SNR=28						
T47A	Sharon Grove	23.43	8	eP	P	05 17 01.5	-0.1
	comp=Z,42nm,0.6s						
T48A	Bowling Green	23.65	9	P	P	05 17 02.8	-0.8
	baz=191,SNR=5.9						
TZTN	Tazewell	23.68	15	P	P	05 17 03.2	-0.7
	baz=198,SNR=16						
TZTN	Tazewell	23.68	15	eP	P	05 17 04.3	+0.4
	comp=Z,29nm,0.6s						
TZTN				ePcP	PcP	05 20 48.4	+1.9
S43A	Fulton Ridge,	23.78	2	P	P	05 17 03.4	-1.3
	baz=182,SNR=5.5						
T49A	Edmonton	23.79	11	P	P	05 17 03.8	-1.1
	baz=193,SNR=19						
S41A	Jillco Farms,	23.80	358	P	P	05 17 03.9	-1.0
	baz=178,SNR=29						
S40A	Lebanon	23.84	357	P	P	05 17 04.2	-1.0
	baz=176,SNR=34						
T50A	Nancy	23.84	12	P	P	05 17 04.6	-0.7
	baz=194,SNR=20						
S44A	Carbondale	23.94	3	P	P	05 17 05.5	-0.7
	baz=184						
S42A	Caledonia	23.97	0	P	P	05 17 05.3	-1.1
	baz=180,SNR=6.1						
S38A	Stockton	23.98	354	P	P	05 17 05.2	-1.3
	baz=173,SNR=36						
S39A	Bolivar	23.99	355	P	P	05 17 05.4	-1.2
	baz=174,SNR=74						
S39A	Bolivar	23.99	355	eP	P	05 17 05.8	-0.8
	comp=Z,73nm,0.8s						
S46A	Don Dixon Farm	24.05	6	P	P	05 17 07.2	0.0
	baz=187						
ATAH	Atahualpa	24.14	148	P	P	05 17 08.4	-0.3
	comp=Z,9.1nm,0.7s,baz=335,slow=7.0,SNR=6.4						
SJG	San Juan	24.19	76	P	P	05 17 06.9	-1.7
	comp=Z,7.7nm,0.6s,baz=233,slow=6.2,SNR=6.0						
S48A	Wiedeman Farm,	24.24	9	P	P	05 17 07.8	-1.1
	baz=191,SNR=6.2						
CCM	Cathedral Cave	24.25	359	P	P	05 17 08.4	-0.6
	baz=179						
CCM	Cathedral Cave	24.25	359	eP	P	05 17 08.0	-1.0
	comp=Z,28nm,0.8s						
CCM	Cathedral Cave	24.25	359	eP	P	05 17 08.0	-1.0
CCM				pmax	pmax		
	comp=Z,28nm,0.8s						
121A	Cookes Peak, D	24.28	323	P	P	05 17 10.5	+0.9
	baz=137,SNR=22						
T52A	Hallie	24.36	15	P	P	05 17 09.7	-0.2
	baz=199,SNR=8.6						
319A	Douglas	24.38	319	eP	P	05 17 12.8	+2.5
	comp=Z,46nm,1.0s						
NCAT	North Carolina	24.42	22	eP	P	05 17 10.7	+0.1
	comp=Z,14nm,0.9s						
NCAT				ePcP	PcP	05 20 49.1	+1.1
CNNC	Cliffs of the	24.44	26	P	P	05 17 09.3	-1.4
	baz=212						
CNNC	Cliffs of the	24.44	26	eP	P	05 17 11.3	+0.6
	comp=Z,25nm,0.9s						
HUMP	Col San Antoni	24.48	76	eP	P	05 17 10.6	-0.6
	comp=Z,6.8nm,0.8s						
HUMP				ePcP	PcP	05 20 50.1	+1.6
R42A	Luebbering	24.48	0	P	P	05 17 10.2	-0.8
	baz=180						
CBYP	Canovanas	24.48	76	eP	P	05 17 09.5	-1.9
	comp=Z,7.1nm,0.7s						
CBYP				ePcP	PcP	05 20 49.5	+0.9
R43A	Red Bud	24.49	2	P	P	05 17 10.8	-0.3
	baz=182,SNR=7.3						
R44A	Waltonville	24.50	3	P	P	05 17 09.6	-1.6
	baz=184						
R41A	Rosebud	24.50	359	P	P	05 17 10.3	-0.9
	baz=179,SNR=32						
R40A	Maddies Statio	24.52	357	P	P	05 17 10.2	-1.2
	baz=177,SNR=20						
R40A	Maddies Statio	24.52	357	eP	P	05 17 10.8	-0.6
	comp=Z,30nm,0.8s						
R38A	Fenwick Farm,	24.53	354	P	P	05 17 10.1	-1.4
	baz=173,SNR=50						
R39A	Chumby, Stover	24.58	356	P	P	05 17 10.4	-1.7
	baz=175,SNR=43						
R46A	Gibon Southern	24.59	6	P	P	05 17 11.4	-0.7
	baz=188						
R45A	Skylar, Fairfi	24.60	5	P	P	05 17 11.0	-1.1
	baz=186,SNR=5.2						
S51A	Beattyville	24.71	14	P	P	05 17 12.1	-1.0
	baz=197,SNR=14						
MTP	Monte Pirata	24.75	77	eP	P	05 17 11.8	-2.0
	comp=Z,13nm,0.7s						
WCI	Wyandotte Cave	24.77	9	P	P	05 17 13.5	-0.2
	baz=190						
WCI	Wyandotte Cave	24.77	9	eP	P	05 17 13.5	-0.2
	comp=Z,36nm,0.8s						
WCI				ePcP	PcP	05 20 50.1	+1.3
WCI	Wyandotte Cave	24.77	9	eP	P	05 17 13.5	-0.2
WCI				e		05 20 50.1	
WCI				pmax	pmax		
	comp=Z,36nm,0.8s						
R47A	Wooly Knot Far	24.80	8	P	P	05 17 13.3	-0.7
	baz=190,SNR=13						
BNM	Barren Site	24.86	328	eP	P	05 17 16.1	+1.3
S52A	Salyersville	24.87	15	P	P	05 17 14.8	+0.1
	baz=198						
Y22D	IRIS PASSCAL I	24.95	327	P	P	05 17 16.7	+1.1
	baz=140,SNR=9.1						
Y22D	IRIS PASSCAL I	24.95	327	eP	P	05 17 17.2	+1.6
	comp=Z,70nm,0.8s						
Y22E	IRIS PASSCAL I	24.95	327	P	P	05 17 16.6	+0.9
	baz=140						
LPM	Los Pinos Moun	24.98	328	eP	P	05 17 16.9	+0.9
R48A	Northridge Ran	25.00	9	P	P	05 17 15.6	-0.2
	baz=191,SNR=12						
CUPR	Culebra, Puert	25.03	76	eP	P	05 17 14.3	-1.9
	comp=Z,6.6nm,0.8s						
CUPR				ePcP	PcP	05 20 51.7	+2.0
OLIL	Olney	25.05	5	eP	P	05 17 15.9	-0.4
	comp=Z,14nm,0.8s						
Q42A	Golden Eagle	25.11	1	P	P	05 17 16.0	-0.8
	baz=181						
Q41A	Truxton	25.15	359	P	P	05 17 16.0	-1.2
	baz=179,SNR=14						
Q44A	Meyer Farm, Va	25.15	3	P	P	05 17 16.3	-0.8
	baz=184						
Q43A	New Douglas	25.16	2	P	P	05 17 17.0	-0.2
	baz=182						
Q45A	Warren Harvey,	25.21	5	P	P	05 17 16.8	-0.9
	baz=186						
BLA	Blacksburg	25.21	20	P	P	05 17 18.1	+0.3
	baz=204						
BLA	Blacksburg	25.21	20	eP	P	05 17 18.5	+0.7
	comp=Z,16nm,0.8s						
BLA				ePcP	PcP	05 20 51.5	+1.7
BLA	Blacksburg	25.21	20	eP	P	05 17 18.5	+0.7
BLA				e		05 20 51.5	
BLA				pmax	pmax		
	comp=Z,16nm,0.8s						
Q40A	Laux Farm, Aux	25.21	358	P	P	05 17 17.0	-0.8
	baz=177,SNR=6.2						
Q37A	Longview Farm,	25.27	353	P	P	05 17 17.7	-0.5
	baz=172						
Q38A	Cooks Store, C	25.27	355	P	P	05 17 16.9	-1.3
	baz=174,SNR=46						
Q39A	Willow Grove F	25.31	356	P	P	05 17 16.9	-1.7
	baz=175,SNR=17						
LAZ	Ladron	25.32	327	eP	P	05 17 20.1	+1.1
STVI	Saint Thomas	25.35	76	eP	P	05 17 17.2	-1.9
	comp=Z,11nm,0.8s						
TASL	Snake Pit, Alb	25.39	329	P	P	05 17 19.7	+0.1
	baz=142,SNR=24						
ANMO	Albuquerque	25.39	329	P	P	05 17 20.5	+0.9
	comp=Z,9.7nm,0.6s,baz=143,slow=12,SNR=57						
ANMO				PcP	PcP	05 20 51.3	+0.7
	comp=Z,2.8nm,0.7s,baz=175,slow=7.5,SNR=6.5						
ANMO	Albuquerque	25.39	329	P	P	05 17 20.6	+0.9
	baz=142						
TASM	ASL Pad, Albuq	25.39	329	P	P	05 17 19.8	+0.1
	baz=142,SNR=24						
Q47A	Bedord North L	25.44	8	P	P	05 17 19.0	-0.8
	baz=190,SNR=5.9						
BLO	Bloomington	25.66	8	eP	P	05 17 20.3	-1.5
	comp=Z,11nm,0.7s						
BLO	Bloomington	25.66	8	eP	P	05 17 20.3	-1.5
BLO				pmax	pmax		
	comp=Z,11nm,0.7s						
P39B	Salisbury	25.73	357	P	P	05 17 20.5	-1.9
	baz=176						
P44A	Sand Creek, Wi	25.74	4	P	P	05 17 21.1	-1.4
	baz=185						
P40A	Paris	25.75	358	P	P	05 17 21.2	-1.3
	baz=177,SNR=13						
P40A	Paris	25.75	358	eP	P	05 17 21.9	-0.6
	comp=Z,18nm,0.8s						
P42A	Winchester	25.79	1	P	P	05 17 22.9	0.0
	baz=181						
P42A	Winchester	25.79	1	eP	P	05 17 23.9	+1.0
	comp=Z,11nm,0.6s						
KSU1	Kansas State U	25.80	350	P	P	05 17 22.1	-0.9
	baz=167						
KSU1	Kansas State U	25.80	350	eP	P	05 17 23.8	+0.8
	comp=Z,15nm,0.8s						
P43A	Skaggs, Pawnee	25.86	2	P	P	05 17 22.5	-1.1
	baz=183						
P41A	Barry, Barry	25.87	360	P	P	05 17 22.9	-0.8
	baz=179						
P45A	Graceland, Par	25.87	6	P	P	05 17 23.0	-0.7
	baz=187						
P45A	Graceland, Par	25.87	6	eP	P	05 17 23.2	-0.4
	comp=Z,14nm,1.1s						
P45A				ePcP	PcP	05 20 52.3	+1.1
P38A	Dawn	25.92	355	P	P	05 17 23.4	-0.7
	baz=174,SNR=11						
P38A	Dawn	25.92	355	eP	P	05 17 24.3	+0.2
	comp=Z,22nm,0.8s						
TUC	Tucson	25.96	319	P	P	05 17 25.3	+0.6
	baz=131						
TUC	Tucson	25.96	319	eP	P	05 17 25.5	+0.8
	comp=Z,18nm,1.1s						
TUC				ePcP	PcP	05 20 55.2	+3.5
TUC	Tucson	25.96	319	eP	P	05 17 25.5	+0.8
TUC				e		05 20 55.2	
TUC				pmax	pmax		
	comp=Z,18nm,1.1s						
P37A	Lathrop	25.96	354	P	P	05 17 23.4	-1.1
	baz=172,SNR=7.4						
ABVI	Anegada Island	25.98	75	eP	P	05 17 25.1	+0.2
	comp=Z,24nm,0.8s						
P47A	Martinsville	26.00	8	P	P	05 17 24.4	-0.5
	baz=190						
CBKS	Cedar Bluff	26.21	344	P	P	05 17 26.3	-0.5
	baz=160						
CBKS	Cedar Bluff	26.21	344	ePcP	PcP	05 20 54.4	+2.3
T25A	Trinidad	26.27	335	P	P	05 17 26.8	-0.8
	baz=149,SNR=8.8						
T25A	Trinidad	26.27	335	eP	P	05 17 28.3	+0.7
	comp=Z,11nm,0.9s						
T25A				ePcP	PcP	05 20 54.4	+1.9
O41A	Passleys Farm,	26.31	0	P	P	05 17 27.0	-0.6
	baz=180						
O40A	La Belle	26.33	358	P	P	05 17 26.1	-1.7
	baz=178,SNR=6.6						
O38A	Galt	26.41	356	P	P	05 17 27.0	-1.6
	baz=174,SNR=6.0						
O37A	Wolven Farm, M	26.52	354	P	P	05 17 29.1	-0.4
	baz=173						
JSRW	J. Sargeant Re	26.56	24	eP	P	05 17 31.2	+1.3
O45A	Potomac	26.59	5	P	P	05 17 29.3	-0.9
	baz=187						
IP07	Quail	26.69	23	eP	P	05 17 31.9	+0.8
	comp=Z,12nm,0.9s						
IP05	Hopewell Churc	26.72	24	eP	P	05 17 31.9	+0.5
	comp=Z,9.4nm,1.0s						
IP06	Yanceyville	26.73	23	ePcP	PcP	05 20 54.8	+1.6
O47A	Sheridan	26.75	8	P	P	05 17 30.3	-1.4
	baz=190,SNR=7.7						
IP01	Cuckoo	26.77	23	eP	P	05 17 31.9	+0.1
	comp=Z,11nm,0.9s						
IP01				ePcP	PcP	05 20 54.3	+1.0
SFIN	Lafayette	26.78	6	P	P	05 17 31.0	-0.9
	baz=188						
SFIN	Lafayette	26.78	6	eP	P	05 17 31.7	-0.2
	comp=Z,8.9nm,0.8s						
HDIL	Hopedale	26.79	3	P	P	05 17 30.9	-1.0
	baz=183						
HDIL	Hopedale	26.79	3	ePcP	PcP	05 20 55.2	+1.8
IP04	Greensprings	26.82	23	eP	P	05 17 32.4	+0.2
	comp=Z,8.5nm,1.1s						
IP04				ePcP	PcP	05 20 54.5	+1.0
SPRD	Spring Road, M	26.84	23	eP	P	05 17 32.2	-0.3
	comp=Z,7.1nm,1.2s						
SPRD				ePcP	PcP	05 20 54.6	+1.1
N41A	Harden Midland	26.90	0	P	P	05 17 31.6	-1.4
	baz=180						
X18A	Snowflake	26.97	324	eP	P	05 17 35.3	+1.4
	comp=Z,23nm,0.8s						
X18A				ePcP	PcP	05 20 56.9	+2.7
N38A	Joes South For	27.06	356	P	P	05 17 34.3	-0.2
	baz=175						
214A	Organ Pipe Nat	27.07	316	P	P	05 17 34.9	+0.2
	baz=127,SNR=7.5						
N40A	Mertquake, Sal	27.08	359	P	P	05 17 33.4	-1.2
	baz=178						
SMRT	St. Maarten	27.09	77	ePcP	PcP	05 20 55.1	+0.6
N44A	Piper City	27.10	5	P	P	05 17 33.5	-1.2
	baz=186,SNR=6.2						
N37A	Lee Faris, Mou	27.11	354	P	P	05 17 34.5	-0.4
	baz=173						
N37A	Lee Faris, Mou	27.11	354	ePcP	PcP	05 20 56.1	+2.0
N39A	Derby Farms, D	27.11	357	P	P	05 17 33.5	-1.4
	baz=176						
N39A	Derby Farms, D	27.11	357	eP	P	05 17 34.0	-0.9
	comp=Z,11nm,0.8s						
CBN	Corbin Frederi	27.20	24	P	P	05 17 35.2	-0.4
	baz=210						
N45A	Kentland	27.20	6	P	P	05 17 35.0	-0.7
	baz=187						
SDCO	Great Sand Dun	27.25	334	P	P	05 17 36.2	-0.3
	baz=148,SNR=6.5						
SDCO	Great Sand Dun	27.25	334	eP	P	05 17 37.5	+1.1
	comp=Z,6.0nm,1.4s						
SDCO				ePcP	PcP	05 20 56.3	+1.4
W18A	Petrified Fore	27.27	325	P	P	05 17 37.4	+0.8
	baz=137,SNR=18						
W18A	Petrified Fore	27.27	325	eP	P	05 17 38.0	+1.4
	comp=Z,24nm,0.9s						
ACSO	Alum Creek Sta	27.32	13	P	P	05 17 36.3	-0.4
	baz=197						
N46A	Monticello	27.33	7	P	P	05 17 35.9	-0.9
	baz=189						
M41A	Milan	27.57	1	P	P	05 17 37.7	-1.2
	baz=180						
M40A	Post Highland	27.60	359	P	P	05 17 38.5	-0.8
	baz=178						
MCWV	Mont Chateau	27.62	19	P	P	05 17 38.3	-1.1
	baz=203						
MCWV	Mont Chateau	27.62	19	ePcP	PcP	05 20 56.5	+1.1
M43A	Waltham Townsh	27.68	3	P	P	05 17 39.7	-0.2
	baz=184						
M38A	Pleasantville	27.68	356	P	P	05 17 38.2	-1.7
	baz=175						
M44A	Midewin, Midew	27.69	5	P	P	05 17 38.4	-1.6
	baz=186						
M44A	Midewin, Midew	27.69	5	ePcP	PcP	05 20 57.2	+1.7
M39A	Webster	27.69	358	P	P	05 17 38.5	-1.6
	baz=177						
M37A	Trindle Farm,	27.73	355	P	P	05 17 39.7	-0.7
	baz=173						
X16A	Lo Mia Camp, P	27.77	321	eP	P	05 17 42.4	+1.4
	comp=Z,18nm,0.8s						
S22A	4UR Ranch, Cre	27.83	332	P	P	05 17 42.0	+0.3
	baz=145,SNR=11						
S22A	4UR Ranch, Cre	27.83	332	eP	P	05 17 42.8	+1.1
	comp=Z,5.2nm,0.8s						
S22A				ePcP	PcP	05 20 58.2	+1.9
M36A	Felix, Anita	27.86	354	P	P	05 17 41.4	-0.2
	baz=172						
SCIA	State Center	28.17	356	P	P	05 17 44.5	+0.2
	baz=175						
MVCO	Mesa Verde	28.19	329	P	P	05 17 45.3	+0.5
	baz=142,SNR=18						
MVCO	Mesa Verde	28.19	329	eP	P	05 17 45.8	+1.0
	comp=Z,14nm,0.8s						
MVCO				ePcP	PcP	05 20 58.4	+1.2
113A	Mohawk Valley,	28.20	316	eP	P	05 17 45.6	+0.9
	comp=Z,16nm,1.4s						
113A				ePcP	PcP	05 20 58.3	+1.4
L42A	Oliver, Polo	28.22	2	P	P	05 17 44.3	-0.4
	baz=182						
L42A	Oliver, Polo	28.22	2	eP	P	05 17 44.5	-0.2
	comp=Z,14nm,1.0s						
L40A	Anamosa	28.26	359	P	P	05 17 44.3	-0.8
	baz=179						
L40A	Anamosa	28.26	359	eP	P	05 17 46.0	+1.0
	comp=Z,18nm,1.0s						
L41A	Preston	28.27	1	P	P	05 17 44.7	-0.5
	baz=181,SNR=7.9						
L39A	Vinton	28.33	358	P	P	05 17 44.8	-1.0
	baz=178						
L38A	Oak Wood Farm,	28.39	357	P	P	05 17 44.7	-1.5
	baz=176						
L37A	Phoenix Point,	28.43	356	P	P	05 17 46.0	-0.6
	baz=174						
Y14A	Wickenburg	28.43	319	eP	P	05 17 48.1	+1.3
	comp=Z,6.3nm,0.9s						
Y14A				ePcP	PcP	05 20 59.0	+1.4
L43A	Garden Prairie	28.44	3	P	P	05 17 46.8	+0.1
	baz=184						
SDMD	Soldier's Deli	28.45	23	eP	P	05 17 47.2	+0.4
	comp=Z,7.1nm,0.7s						
L36A	Harm Buss Farm	28.48	354	P	P	05 17 46.3	-0.7
	baz=172						
L44A	Lake County Fo	28.49	5	P	P	05 17 45.7	-1.4
	baz=186						
WUAZ	Wupatki	28.49	323	P	P	05 17 48.0	+0.5
	baz=134,SNR=22						
WUAZ	Wupatki	28.49	323	eP	P	05 17 48.8	+1.4
	comp=Z,27nm,0.8s						
WUAZ				ePcP	PcP	05 20 59.4	+1.6
O56A	Blue Knob Stat	28.59	20	P	P	05 17 46.8	-1.4
	baz=205						
O56A	Blue Knob Stat	28.59	20	eP	P	05 17 48.6	+0.5
	comp=Z,10nm,0.8s						
O56A				ePcP	PcP	05 20 59.0	+1.2
N54A	Moraine State	28.78	17	P	P	05 17 48.4	-1.3
	baz=202						
N54A	Moraine State	28.78	17	eP	P	05 17 49.8	+0.1
	comp=Z,14nm,0.8s						
N54A				ePcP	PcP	05 20 59.2	+1.0
K41A	Shullsburg	28.80	1	P	P	05 17 48.9	-1.0
	baz=181,SNR=7.1						
K40A	Colesburg	28.89	360	P	P	05 17 49.9	-0.8
	baz=179						
K39A	Oelwein	28.91	358	P	P	05 17 50.0	-0.8
	baz=178,SNR=6.0						
PV01	Paradox Valley	28.95	330	eP	P	05 17 53.2	+1.5
K42A	Prairie Point,	29.00	2	P	P	05 17 50.9	-0.8
	baz=183						
ISCO	Idaho Springs	29.04	336	P	P	05 17 52.0	-0.4
	baz=149						
ISCO	Idaho Springs	29.04	336	ePcP	PcP	05 21 01.2	+1.9
K37A	Belmond	29.06	356	P	P	05 17 52.2	0.0
	baz=174						
SMCO	Snowmass	29.07	334	eP	P	05 17 53.8	+0.9
	comp=Z,4.7nm,0.9s						
SMCO				ePcP	PcP	05 21 01.3	+1.8
PV15	Paradox Valley	29.08	331	eP	P	05 17 54.5	+1.8
	comp=Z,8.6nm,1.1s						
GLA	Glamis	29.09	316	P	P	05 17 53.3	+0.6
	baz=126						
GLA	Glamis	29.09	316	eP	P	05 17 54.3	+1.7
	comp=Z,25nm,1.3s						
GLA	Glamis	29.09	316	eP	P	05 17 54.3	+1.7
GLA				pmax	pmax		
	comp=Z,25nm,1.3s						
PV02	Paradox Valley	29.09	330	eP	P	05 17 54.2	+1.4
	comp=Z,35nm,1.4s						
JFWS	Jewell Farm	29.11	1	P	P	05 17 52.0	-0.6
	baz=181						
JFWS	Jewell Farm	29.11	1	eP	P	05 17 52.4	-0.3
	comp=Z,6.6nm,0.6s						
JFWS	Jewell Farm	29.11	1	eP	P	05 17 52.4	-0.3
JFWS				pmax	pmax		
	comp=Z,7.0nm,0.6s						
SSPA	Standing Stone	29.15	21	P	P	05 17 53.0	0.0
	baz=206						
SSPA	Standing Stone	29.15	21	eP	P	05 17 52.9	-0.1
	comp=Z,10nm,1.0s						
PV03	Paradox Valley	29.18	330	eP	P	05 17 54.7

PDMCI	Parker Dam,Lak	29.39	318	P	P	05 17 56.1	+0.9
	baz=128						
PV09	Paradox Valley	29.51	330	eP	P	05 17 57.7	+1.0
J39A	Decorah	29.54	359	P	P	05 17 54.4	-2.0
	baz=178						
J38A	Wedel Dairy, R	29.54	358	P	P	05 17 54.9	-1.6
	baz=177						
J42A	Columbus	29.55	3	P	P	05 17 54.9	-1.6
	baz=183						
J41A	Loganville	29.57	1	P	P	05 17 55.9	-0.8
	baz=182,SNR=5.7						
J40A	Soldiers Grove	29.59	0	P	P	05 17 56.1	-0.8
	baz=180						
J43A	Natural Harves	29.65	4	P	P	05 17 55.4	-2.0
	baz=185						
U15A	North Rim	29.66	324	eP	P	05 17 59.2	+1.3
	comp=Z,18nm,0.8s						
SWSC	Sam W. Stewart	29.70	314	P	P	05 17 58.5	+0.5
	baz=124						
W13A	Hualapai Mount	29.73	320	eP	P	05 17 60.0	+1.5
	comp=Z,6.9nm,0.8s						
W13A				ePcP	PcP	05 21 02.7	+1.6
ERPA	Erie	29.85	16	P	P	05 17 58.3	-0.9
	baz=201						
ERPA	Erie	29.85	16	eP	P	05 17 59.1	-0.1
	comp=Z,21nm,0.7s						
IRM	Iron Mountain	29.96	317	P	P	05 17 59.6	-0.7
	baz=127						
LUPA	Lehigh Univers	30.04	24	eP	P	05 18 01.2	+0.3
	comp=Z,1.6nm,0.8s						
I39A	Houston	30.05	359	P	P	05 17 59.8	-1.2
	baz=179						
MONP2	Monument Peak	30.10	314	P	P	05 18 01.5	-0.4
	baz=123						
N23A	Red Feather La	30.11	337	P	P	05 18 00.9	-1.0
	baz=150						
I42A	Draeger Farm,	30.13	3	P	P	05 18 00.0	-1.6
	baz=184						
I42A	Draeger Farm,	30.13	3	eP	P	05 18 00.8	-0.9
	comp=Z,7.4nm,0.7s						
N59A	State Game Lan	30.16	23	P	P	05 18 00.9	-1.1
	baz=210						
I43A	Langenfeld Bro	30.17	4	P	P	05 18 01.5	-0.5
	baz=185						
I38A	Scanlan Farm,	30.26	358	P	P	05 18 01.5	-1.3
	baz=177,SNR=7.8						
I41A	Arkdale	30.26	1	P	P	05 18 01.8	-1.0
	baz=182						
I37A	Lemond, Waseca	30.28	356	P	P	05 18 02.1	-0.9
	baz=175						
ECSD	EROS Data Cent	30.32	352	P	P	05 18 02.8	-0.6
	baz=169,SNR=6.2						
ECSD	EROS Data Cent	30.32	352	eP	P	05 18 02.4	-1.0
	comp=Z,4.3nm,0.6s						
KNB	Kanab	30.37	324	eP	P	05 18 05.7	+1.6
	comp=Z,33nm,0.8s						
KNB	Kanab	30.37	324	eP	P	05 18 05.7	+1.6
KNB				pmax	pmax		
	comp=Z,33nm,0.8s						
PKCU	Pink Cliffs	30.38	325	eP	P	05 18 05.8	+1.4
	comp=Z,15nm,1.0s						
O20A	White River Ci	30.41	333	P	P	05 18 04.8	+0.3
	baz=145,SNR=5.0						
O20A	White River Ci	30.41	333	eP	P	05 18 04.7	+0.2
	comp=Z,6.8nm,0.8s						
O20A				ePcP	PcP	05 21 04.0	+1.3
BELC	Belle Mtn. Jos	30.44	316	P	P	05 18 04.7	+0.1
	baz=126						
BRNJ	Basking Ridge	30.44	25	eP	P	05 18 06.1	+1.7
	comp=Z,48nm,1.4s						
LDFC	Landfair	30.49	318	eP	P	05 18 07.7	+2.6
	comp=Z,26nm,0.8s						
LDFC				ePcP	PcP	05 21 04.7	+1.8
PFO	Pinyon Flats O	30.53	315	P	P	05 18 05.6	+0.1
	baz=124						
PFO	Pinyon Flats O	30.53	315	epP	pP	05 18 30.6	+8.4
LCMT	Little Creek M	30.61	323	eP	P	05 18 07.7	+1.5
	comp=Z,22nm,0.9s						
I33A	Coleman	30.66	352	P	P	05 18 06.0	-0.3
	baz=169						
SRU	San Rafael Swe	30.67	329	eP	P	05 18 07.6	+0.9
	comp=Z,10nm,1.2s						
SRU	San Rafael Swe	30.67	329	eP	P	05 18 07.6	+0.9
SRU				pmax	pmax		
	comp=Z,10.0nm,1.2s						
GMRC	Granite Mounta	30.67	317	P	P	05 18 06.7	-0.1
	baz=127,SNR=8.5						
KSPA	Keystone Colle	30.72	23	eP	P	05 18 06.9	+0.1
	comp=Z,5.5nm,0.7s						
MTPU	Mount Pierson	30.74	326	eP	P	05 18 09.1	+1.5
	comp=Z,35nm,0.8s						
ODNJ	Ogdensburg	30.76	24	eP	P	05 18 07.3	+0.1
	comp=Z,19nm,1.5s						
H43A	Windswept, Lux	30.78	4	P	P	05 18 05.5	-1.8
	baz=186						
H40A	Chili	30.82	1	P	P	05 18 06.5	-1.2
	baz=181						
H37A	Dierke Farm, C	30.82	357	P	P	05 18 06.7	-1.1
	baz=176,SNR=6.8						
H41A	Junction City	30.83	2	P	P	05 18 06.2	-1.6
	baz=182						
H39A	Augusta	30.87	359	P	P	05 18 07.0	-1.2
	baz=179						
H36A	Jessenland, He	30.88	356	P	P	05 18 08.1	-0.2
	baz=174						
H38A	Maiden Rock	30.89	358	P	P	05 18 07.1	-1.2
	baz=177,SNR=9.0						
SZCU	Shurtz Canyon	30.93	324	eP	P	05 18 10.5	+1.4
	comp=Z,24nm,0.8s						
SZCU				ePcP	PcP	05 21 06.1	+2.0
P18A	Preston Nutter	30.93	330	eP	P	05 18 10.7	+1.5
	comp=Z,11nm,1.2s						
CCUT	Cedar City	31.05	324	eP	P	05 18 12.2	+2.0
	comp=Z,27nm,0.9s						
CCUT				ePcP	PcP	05 21 06.6	+2.1
P17A	Butcher Ranch,	31.06	329	eP	P	05 18 10.5	+0.3
	comp=Z,13nm,0.8s						
H35A	Sunnyside Ranc	31.07	355	P	P	05 18 08.8	-1.1
	baz=172						
MSU	Marysvale	31.08	327	eP	P	05 18 11.9	+1.6
MSU				ePcP	PcP	05 21 06.2	+1.6
MSU	Marysvale	31.08	327	eP	P	05 18 12.0	+1.6
MSU				e		05 21 06.2	
HEC	Hector,Ludlow	31.15	317	P	P	05 18 10.6	-0.3
	baz=126,SNR=7.6						
TMUT	Trail Mountain	31.16	329	eP	P	05 18 12.2	+1.0
	comp=Z,8.1nm,0.8s						
TMUT				ePcP	PcP	05 21 06.5	+1.7
BINY	Binghamton	31.20	22	P	P	05 18 10.3	-0.8
	baz=209						
BINY	Binghamton	31.20	22	eP	P	05 18 11.2	+0.1
	comp=Z,8.1nm,0.8s						
H32A	Carlson Farm,	31.20	351	P	P	05 18 10.4	-0.8
	baz=168						
TUQ	Turquoise Moun	31.24	318	P	P	05 18 12.4	+0.7
	baz=128						
H33A	Prehn Over Nor	31.27	352	P	P	05 18 11.0	-0.8
	baz=169						
RWWY	Rawlins	31.28	336	eP	P	05 18 12.6	+0.4
	comp=Z,8.0nm,1.0s						
RWWY				ePcP	PcP	05 21 05.4	+0.4
TCRU	Three Creeks R	31.30	326	eP	P	05 18 14.0	+1.7
	comp=Z,31nm,0.8s						
H31A	Wolsey	31.35	350	P	P	05 18 11.1	-1.3
	baz=166						
G38A	Ridgeland	31.37	359	P	P	05 18 10.8	-1.8
	baz=178,SNR=10						
SUSD	Miller	31.40	349	P	P	05 18 12.3	-0.5
	baz=165						
SHPR	Sheep Range	31.42	321	eP	P	05 18 14.8	+1.5
	comp=Z,9.6nm,0.9s						
SHPR				ePcP	PcP	05 21 07.0	+1.6
G41A	Antigo	31.44	2	P	P	05 18 11.3	-1.8
	baz=183						
SPMN	Marine on St.	31.46	357	P	P	05 18 11.9	-1.4
	baz=176,SNR=9.4						
SPMN	Marine on St.	31.46	357	eP	P	05 18 13.7	+0.3
	comp=Z,15nm,0.9s						
G40A	Rib Lake	31.46	1	P	P	05 18 12.0	-1.4
	baz=181						
G40A	Rib Lake	31.46	1	eP	P	05 18 13.2	-0.2
	comp=Z,2.2nm,0.9s						
G39A	Holcombe	31.48	360	P	P	05 18 12.0	-1.5
	baz=179,SNR=10						
G42A	Mountain	31.50	3	P	P	05 18 12.5	-1.2
	baz=184						
G42A	Mountain	31.50	3	eP	P	05 18 12.8	-1.0
	comp=Z,5.2nm,0.8s						
G36A	St. Michael	31.52	356	P	P	05 18 11.9	-1.9
	baz=174						
G43A	Wallace	31.57	4	P	P	05 18 11.5	-2.8
	baz=186						
G43A	Wallace	31.57	4	eP	P	05 18 12.7	-1.6
	comp=Z,8.2nm,0.8s						
RRX	Edison Barstow	31.61	316	P	P	05 18 13.6	-1.3
	baz=125						
G34A	Benson	31.69	354	P	P	05 18 13.3	-2.1
	baz=171						
BFSC	Mount Baldy Ra	31.70	315	P	P	05 18 14.0	-1.9
	baz=124						
GSC	Goldstone, Bar	31.73	317	P	P	05 18 15.6	-0.5
	baz=126						
GSC	Goldstone, Bar	31.73	317	eP	P	05 18 17.5	+1.5
	comp=Z,9.7nm,1.4s						
GSC				ePcP	PcP	05 21 07.8	+1.6
GSC	Goldstone, Bar	31.73	317	eP	P	05 18 17.5	+1.5
GSC				e		05 21 07.8	
GSC				pmax	pmax		
	comp=Z,10.0nm,1.4s						
G33A	Ortonville	31.74	353	P	P	05 18 13.9	-1.9
	baz=170,SNR=5.2						
K22A	Casper	31.85	338	P	P	05 18 15.4	-1.7
	baz=150						
K22A	Casper	31.85	338	eP	P	05 18 17.9	+0.8
	comp=Z,7.4nm,0.8s						
MPU	Maple Canyon	31.92	329	eP	P	05 18 18.7	+1.0
	comp=Z,13nm,0.9s						
G32A	Webster	31.94	351	P	P	05 18 16.3	-1.3
	baz=168						
G32A	Webster	31.94	351	eP	P	05 18 17.6	0.0
	comp=Z,25nm,0.9s						
F37A	Hinrichs Farm,	31.95	358	P	P	05 18 15.9	-1.8
	baz=177						
RPV	Rancho Palos V	31.96	313	epP	pP	05 18 37.8	+3.1
F41A	Three Lakes	31.97	2	P	P	05 18 16.5	-1.3
	baz=183						
PSUT	Pine Spring	32.02	325	eP	P	05 18 20.3	+1.7
	comp=Z,20nm,0.9s						
PSUT				ePcP	PcP	05 21 09.2	+2.1
G31A	Conde	32.02	350	P	P	05 18 17.8	-0.5
	baz=166						
NLU	North Lily Min	32.09	328	eP	P	05 18 20.5	+1.2
	comp=Z,12nm,1.2s						
F39A	Loretta	32.11	360	P	P	05 18 17.4	-1.6
	baz=180						
F40A	Park Falls	32.12	1	P	P	05 18 17.4	-1.8
	baz=181,SNR=5.9						
F36A	Milaca	32.13	357	P	P	05 18 17.1	-2.1
	baz=175						
F36A	Milaca	32.13	357	eP	P	05 18 19.1	-0.2
	comp=Z,3.7nm,0.8s						
F38A	Pierce - Schro	32.16	359	P	P	05 18 18.1	-1.4
	baz=178,SNR=14						
F43A	Flat Rock, Esc	32.18	5	P	P	05 18 17.8	-1.8
	baz=187						
F34A	Alexandria	32.20	354	P	P	05 18 18.7	-1.2
	baz=172						
F45A	CMU Biological	32.20	7	P	P	05 18 18.5	-1.3
	baz=190						
F35A	Swanville	32.20	355	P	P	05 18 18.3	-1.6
	baz=173						
JLU	Jordanelle	32.27	330	eP	P	05 18 21.9	+1.1
	comp=Z,16nm,1.2s						
EDW2	Edwards Air Fo	32.29	315	P	P	05 18 21.2	+0.3
	baz=124						
COWI	Conover	32.33	2	eP	P	05 18 19.6	-1.3
	comp=Z,8.0nm,0.7s						
RSSD	Black Hills	32.33	342	P	P	05 18 21.1	-0.2
	baz=156						
RSSD	Black Hills	32.33	342	eP	P	05 18 21.7	+0.4
	comp=Z,3.2nm,0.7s						
RSSD				ePcP	PcP	05 21 08.2	+0.4
RSSD	Black Hills	32.33	342	eP	P	05 18 21.7	+0.4
RSSD				e		05 21 08.2	
RSSD				pmax	pmax		
	comp=Z,3.0nm,0.7s						
F33A	5 Mile Ranch,	32.35	353	P	P	05 18 19.5	-1.7
	baz=170						
TPNV	Topopah Spring	32.38	320	P	P	05 18 21.5	-0.3
	baz=129,SNR=7.3						
TPNV	Topopah Spring	32.38	320	eP	P	05 18 23.2	+1.4
	comp=Z,8.1nm,0.9s						
TPNV				ePcP	PcP	05 21 09.8	+1.8
TPNV	Topopah Spring	32.38	320	eP	P	05 18 23.2	+1.4
TPNV				e		05 21 09.8	
TPNV				pmax	pmax		
	comp=Z,8.0nm,0.9s						
F46A	Macinaw City C	32.38	8	P	P	05 18 19.4	-2.1
	baz=191						
F44A	Big Bay de Noc	32.39	6	P	P	05 18 20.2	-1.3
	baz=188						
LRMC	Laurel Mtn Rad	32.42	317	P	P	05 18 22.2	+0.1
	baz=125						
FURC	Furnace Creek,	32.47	319	P	P	05 18 22.4	+0.1
	baz=128						
CTU	Camp Tracy	32.49	330	eP	P	05 18 23.7	+1.0
	comp=Z,15nm,0.8s						
CTU				ePcP	PcP	05 21 10.5	+2.2
F32A	Veblen	32.49	352	P	P	05 18 22.6	+0.2
	baz=168						
TRY	Troy	32.53	24	eP	P	05 18 23.5	+0.8
	comp=Z,20nm,1.1s						
SADO	Sadowa	32.54	16	eP	P	05 18 22.4	-0.4
	comp=Z,40nm,1.4s						
E39A	Mellen	32.57	0	P	P	05 18 21.6	-1.5
	baz=180,SNR=5.1						
MPMC	Manual Prospec	32.63	318	P	P	05 18 24.5	+0.5
	baz=126,SNR=19						
E40A	Wakefield	32.65	1	P	P	05 18 22.4	-1.4
	baz=182,SNR=19						
DUG	Dugway, Tooele	32.65	328	P	P	05 18 24.2	+0.2
	baz=138,SNR=9.6						
DUG	Dugway, Tooele	32.65	328	eP	P	05 18 25.1	+1.1
	comp=Z,12nm,1.2s						
DUG				ePcP	PcP	05 21 09.9	+1.3
DUG	Dugway, Tooele	32.65	328	eP	P	05 18 25.1	+1.1
DUG				e		05 21 09.9	
DUG				pmax	pmax		
	comp=Z,12nm,1.2s						
TCUT	Toone Canyon	32.65	331	eP	P	05 18 25.5	+1.4
	comp=Z,46nm,1.2s						
QUA2	Belchertown	32.69	26	eP	P	05 18 24.0	-0.1
	comp=Z,25nm,1.0s						
E41A	Kenton	32.70	2	P	P	05 18 22.3	-1.8
	baz=183						
E42A	Champion	32.72	4	P	P	05 18 22.7	-1.7
	baz=185						
E43A	Lone Tree Farm	32.73	5	P	P	05 18 22.9	-1.6
	baz=187,SNR=8.8						
E43A	Lone Tree Farm	32.73	5	eP	P	05 18 23.8	-0.7
	comp=Z,14nm,0.8s						
E36A	McGregor	32.77	357	P	P	05 18 23.1	-1.7
	baz=176,SNR=6.4						
E38A	The Farm, Brul	32.80	359	P	P	05 18 23.5	-1.6
	baz=179,SNR=12						
E38A	The Farm, Brul	32.80	359	eP	P	05 18 24.1	-1.0
	comp=Z,17nm,0.7s						
DAC	Darwin (Calif)	32.83	318	eP	P	05 18 26.2	+0.5
	comp=Z,5.6nm,0.9s						
DAC	Darwin (Calif)	32.83	318	eP	P	05 18 26.2	+0.5
DAC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
E35A	Pequot Lakes	32.88	356	P	P	05 18 22.9	-2.9
	baz=174						
R11A	Troy Canyon, C	32.88	323	P	P	05 18 27.4	+1.2
	baz=132,SNR=25						
R11A	Troy Canyon, C	32.88	323	eP	P	05 18 27.9	+1.7
	comp=Z,14nm,1.0s						
R11A				ePcP	PcP	05 21 10.8	+1.4
E34A	Wadena	32.90	355	P	P	05 18 24.5	-1.5
	baz=172,SNR=11						
E45A	Wooded Hills,	32.90	7	P	P	05 18 24.9	-1.1
	baz=190						
E33A	Westby DABS, E	32.98	354	P	P	05 18 24.7	-2.0
	baz=171,SNR=5.3						
ARVC	Arvin	33.00	315	P	P	05 18 27.4	+0.4
	baz=123						
ISA	Isabella, Lake	33.05	316	P	P	05 18 26.7	-0.9
	baz=124						
ISA	Isabella, Lake	33.05	316	eP	P	05 18 29.1	+1.5
	comp=Z,9.0nm,1.1s						
ISA	Isabella, Lake	33.05	316	eP	P	05 18 29.1	+1.5
ISA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
E44A	Grand Marais A	33.08	6	P	P	05 18 27.0	-0.5
	baz=189						
ACCN	Adirondack Com	33.08	23	eP	P	05 18 27.9	+0.3
	comp=Z,19nm,1.2s						
BW06	Boulder Array	33.14	334	P	P	05 18 27.4	-1.0
	baz=145						
BW06	Boulder Array	33.14	334	eP	P	05 18 30.1	+1.6
	comp=Z,2.6nm,0.8s						
PD31	Pinedale Array	33.14	334	eP	P	05 18 30.0	+1.6
PDAR	Pinedale Array	33.14	334	P	P	05 18 27.8	-0.6
	comp=Z,1.7nm,0.7s,baz=129,slow=13,SNR=12						
PDAR				PcP	PcP	05 21 09.9	-0.1
	comp=Z,1.5nm,0.6s,baz=164,slow=2.6,SNR=8.2						
PDAR	Pinedale Array	33.14	334	eP	P	05 18 28.6	+0.2
PDAR				ePcP	PcP	05 21 10.1	0.0
CWC	Cottonwood Cre	33.24	318	P	P	05 18 28.9	-0.4
	baz=126						
E31A	Nome	33.27	351	P	P	05 18 27.3	-1.9
	baz=167						
SPUT	South Promonto	33.30	330	eP	P	05 18 30.6	+0.9
	comp=Z,22nm,1.3s						
SPUT				ePcP	PcP	05 21 12.1	+1.6
BGU	Big Grassy Mou	33.30	329	eP	P	05 18 30.8	+1.1
	comp=Z,13nm,0.8s						
BGU				ePcP	PcP	05 21 11.8	+1.3
D41A	Chassel	33.31	3	P	P	05 18 27.9	-1.7
	baz=184						
D41A	Chassel	33.31	3	eP	P	05 18 28.0	-1.5
	comp=Z,21nm,1.4s						
D41A				ePcP	PcP	05 21 11.3	+1.1
PLVO	Plevna	33.37	18	eP	P	05 18 29.6	-0.5
	comp=Z,12nm,0.8s						
NCB	Newcomb	33.37	22	eP	P	05 18 29.8	-0.3
	comp=Z,10nm,1.3s						
NCB				ePcP	PcP	05 21 11.3	+0.9
D37A	Cotton	33.37	358	P	P	05 18 28.3	-1.8
	baz=177,SNR=10						
D35A	Remer	33.38	356	P	P	05 18 28.1	-2.0
	baz=174,SNR=7.8						
D36A	Goodland	33.42	357	P	P	05 18 27.9	-2.6
	baz=176,SNR=6.0						
D36A	Goodland	33.42	357	eP	P	05 18 29.2	-1.3
	comp=Z,9.3nm,1.1s						
D36A				ePcP	PcP	05 21 11.6	+1.1
D34A	Park Rapids	33.47	355	P	P	05 18 29.0	-2.0
	baz=172						
VES	Vestal, Richgr	33.57	316	P	P	05 18 29.6	-2.3
	baz=124,SNR=9.3						
D33A	AnnSam, Waubun	33.59	354	P	P	05 18 29.7	-2.3
	baz=171,SNR=7.0						
LONY	Lake Ozonia	33.81	21	P	P	05 18 32.8	-1.1
	baz=209						
LONY	Lake Ozonia	33.81	21	eP	P	05 18 33.5	-0.4
	comp=Z,39nm,1.4s						
HVU	Hansel Valley	33.82	330	eP	P	05 18 34.6	+0.4
	comp=Z,20nm,1.2s						
HVU				ePcP	PcP	05 21 13.2	+1.3
HVU	Hansel Valley	33.82	330	eP	P	05 18 34.6	+0.4
HVU				e		05 21 13.2	
HVU				pmax	pmax		
	comp=Z,20nm,1.2s						
PTGA	Pitinga	33.84	113	eP	P	05 18 34.5	0.0
	comp=Z,18nm,0.7s						
GATR	Gnd/Air Tx Cnt	33.86	313	epP	pP	05 18 58.5	+7.0
SMMC	Simmler	33.90	315	P	P	05 18 33.7	-1.3
	baz=122						
C38A	Sawbill Land.	33.91	360	P	P	05 18 32.5	-2.3
	baz=179,SNR=11						
C37A	Embarrass	33.94	358	P	P	05 18 33.5	-1.4
	baz=178						
C36A	Pine Crest Far	33.99	358	P	P	05 18 33.9	-1.5
	baz=176,SNR=12						
C35A	Jirik Farms, M	33.99	356	P	P	05 18 33.6	-1.9
	baz=174,SNR=15						
C39A	Grand Marais	34.02	1	P	P	05 18 33.6	-2.0
	baz=181						
C40A	Isle Royale Na	34.14	2	P	P	05 18 34.8	-1.8
	baz=183						
C40A	Isle Royale Na	34.14	2	eP	P	05 18 35.1	-1.6
	comp=Z,7.2nm,0.9s						
EYMN	Ely	34.14	359	P	P	05 18 34.8	-1.9
	baz=179,SNR=8.1						
EYMN	Ely	34.14	359	eP	P	05 18 35.2	-1.5
	comp=Z,8.1nm,0.7s						
EYMN				ePcP	PcP	05 21 13.4	+0.9
REDW	Red Top Meadow	34.17	334	eP	P	05 18 37.4	0.0
	comp=Z,24nm,0.8s						
SNOW	Snow King Moun	34.21	334	eP	P	05 18 38.4	+0.6
	comp=Z,30nm,0.8s						
VT1	Waterbury	34.23	23	eP	P	05 18 38.1	+0.5
	comp=Z,18nm,1.3s						
LOHW	Long Hollow	34.27	334	eP	P	05 18 38.0	-0.2
	comp=Z,8.9nm,0.9s						
TPAW	Teton Pass	34.32	334	eP	P	05 18 38.7	0.0
	comp=Z,23nm,1.3s						
TPAW				ePcP	PcP	05 21 15.1	+1.6
FRNY	Flat Rock	34.35	22	eP	P	05 18 38.2	-0.3
	comp=Z,5.8nm,0.9s						
MLAC	Mammoth, Mammo	34.43	319	P	P	05 18 39.4	-0.3
	baz=126						
MOOW	Moose Ponds	34.44	334	eP	P	05 18 40.5	+0.8
	comp=Z,4.7nm,0.8s						
C31A	Landman Farms,	34.46	352	P	P	05 18 37.7	-1.8
	baz=168						
FXWY	Fox Creek	34.47	334	eP	P	05 18 40.5	+0.5
	comp=Z,6.1nm,1.0s						
FXWY				ePcP	PcP	05 21 15.3	+1.4
NV11	Mina Array Sit	34.49	321	eP	P	05 18 41.6	+1.6
	comp=Z,1.8nm,0.8s						
NV11				ePcP	PcP	05 21 15.5	+1.6
OMMB	Old Mammoth Mi	34.52	319	eP	P	05 18 42.1	+1.5
	comp=Z,12nm,1.1s						
NV01	Mina Array Sit	34.58	320	eP	P	05 18 42.6	+1.7
NV01				ePcP	PcP	05 21 15.6	+1.4
NVAR	Mina Array Bea	34.58	320	P	P	05 18 42.5	+1.5
	comp=Z,32nm,0.7s,baz=132,slow=8.0,SNR=137						
NVAR				PcP	PcP	05 21 15.6	+1.4
	comp=Z,5.9nm,0.6s,baz=126,slow=3.1,SNR=11						
NVAR				ScP	ScP	05 25 01.5	+8.0
	comp=Z,1.0nm,0.7s,baz=134,slow=5.2,SNR=5.6						
MDPB	Devils Postpil	34.59	319	eP	P	05 18 41.8	+0.7
	comp=Z,14nm,0.9s						
B35A	Bob, Littlefor	34.63	357	P	P	05 18 39.1	-1.9
	baz=175,SNR=8.4						
B35A	Bob, Littlefor	34.63	357	eP	P	05 18 39.4	-1.6
	comp=Z,17nm,1.2s						
IMW	Indian Meadow	34.64	334	eP	P	05 18 42.4	+0.9
	comp=Z,4.4nm,0.8s						
IMW				ePcP	PcP	05 21 15.9	+1.4
B33A	Robert and Kas	34.68	354	P	P	05 18 39.8	-1.6
	baz=172						
AGMN	Agassiz Nation	34.74	354	P	P	05 18 40.0	-1.9
	baz=171,SNR=6.0						
AGMN	Agassiz Nation	34.74	354	eP	P	05 18 41.5	-0.3
	comp=Z,6.1nm,0.8s						
AGMN				ePcP	PcP	05 21 14.7	+0.5
MDND	Maddock	34.80	350	P	P	05 18 40.7	-1.8
	baz=165,SNR=5.0						
MDND	Maddock	34.80	350	eP	P	05 18 41.8	-0.7
	comp=Z,23nm,0.6s						
B34A	Aery, Baudette	34.82	356	P	P	05 18 40.8	-1.7
	baz=174,SNR=7.0						
RYN	Ryan	34.83	321	eP	P	05 18 44.9	+1.8
	comp=Z,8.1nm,0.8s						
KVN	Kaiserville	34.84	321	eP	P	05 18 44.5	+1.4
	comp=Z,13nm,0.8s						
KVN				ePcP	PcP	05 21 16.1	+1.2
KVN	Kaiserville	34.84	321	eP	P	05 18 44.5	+1.4
KVN				e		05 21 16.1	
KVN				pmax	pmax		
	comp=Z,13nm,0.8s						
H17A	Grant Village	34.90	335	P	P	05 18 43.0	-0.7
	baz=145						
H17A	Grant Village	34.90	335	eP	P	05 18 44.7	+1.0
	comp=Z,5.0

BMN pmax pmax
comp=Z,21nm,0.8s
YMR Madison River 35.28 335 *eP* **P 05 18 48.3 +1.4**
comp=Z,11nm,0.9s
LAO LASA Array 35.31 342 P **P 05 18 45.7 -1.2**
baz=154
A33A Warroad 35.33 355 P **P 05 18 45.3 -1.7**
baz=172,SNR=16
YHH Holmes Hill 35.33 335 *eP* **P 05 18 49.1 +1.7**
comp=Z,3.4nm,0.9s
YHB Horse Butte 35.45 335 *eP* **P 05 18 50.1 +1.8**
comp=Z,8.2nm,1.3s
YERR Yerington 35.50 320 *eP* **P 05 18 50.4 +1.6**
comp=Z,17nm,0.7s
YERR *ePcP* **PcP 05 21 18.9 +2.0**
SAML Samuel 35.54 128 *eP* **P 05 18 48.2 -1.0**
comp=Z,11nm,0.7s
SAML Samuel 35.54 128 *eP* **P 05 18 48.2 -1.0**
SAML pmax pmax
comp=Z,11nm,0.7s
CMB Columbia Colle 35.66 318 *eP* **P 05 18 51.0 +0.9**
comp=Z,7.1nm,0.9s
CMB Columbia Colle 35.66 318 *eP* **P 05 18 51.0 +0.9**
CMB pmax pmax
comp=Z,7.0nm,0.9s
GCMT Greycliff 35.70 337 *eP* **P 05 18 50.9 +0.5**
PNTR Pine Nut 35.78 320 *eP* **P 05 18 53.1 +1.8**
comp=Z,29nm,0.7s
HLID Hailey 35.95 330 P **P 05 18 52.8 +0.2**
baz=139,SNR=17
HLID Hailey 35.95 330 *eP* **P 05 18 53.3 +0.6**
comp=Z,11nm,1.0s
HLID *ePcP* **PcP 05 21 20.1 +1.9**
PAHR Pah Rah Range 36.02 321 *eP* **P 05 18 54.7 +1.5**
comp=Z,11nm,0.8s
MCMT McKenzie Canyo 36.21 333 *eP* **P 05 18 56.4 +1.5**
MCMT *ePcP* **PcP 05 21 21.2 +2.2**
RDG13 Poverty Ridge 36.22 316 *eP* **P 05 18 56.1 +1.2**
comp=Z,19nm,1.3s
BOZ Bozeman (W) 36.31 335 P **P 05 18 56.0 +0.3**
baz=144,SNR=10
BOZ Bozeman (W) 36.31 335 *eP* **P 05 18 56.5 +0.9**
BOZ *ePcP* **PcP 05 21 20.4 +1.3**
DGMT Dagmar 36.37 345 *eP* **P 05 18 56.8 +0.9**
comp=Z,11nm,0.6s
PKME Peaks-Kenny Pk 36.41 26 *eP* **P 05 18 56.5 +0.3**
comp=Z,45nm,1.4s
JPC Peters Creek, 36.46 316 *eP* **P 05 18 54.5 -2.2**
DLMT Dillon 36.53 334 *eP* **P 05 18 59.1 +1.7**
comp=Z,8.1nm,0.8s
DLMT *ePcP* **PcP 05 21 21.9 +2.1**
MFID Camas Ranch 36.54 329 *eP* **P 05 18 58.7 +1.2**
comp=Z,14nm,1.0s
MFID *ePcP* **PcP 05 21 21.6 +1.8**
AFDM Forest Hills D 36.56 319 *eP* **P 05 18 59.1 +1.4**
comp=Z,3.6nm,1.0s
ULM Lac du Bonnet 36.67 355 P **P 05 18 56.3 -2.1**
comp=Z,5.0nm,0.6s,baz=172,slow=10,SNR=18
ULM PcP **PcP 05 21 19.6 -0.2**
comp=Z,4.5nm,0.9s,baz=210,slow=3.5,SNR=4.3
ULM LR LR 05 35 04.1
comp=Z,438nm,20.6s,baz=331,slow=38
ULM Lac du Bonnet 36.67 355 *eP* **P 05 18 56.4 -2.0**
comp=Z,15nm,1.1s
ULM *ePcP* **PcP 05 21 19.7 -0.2**
ULM Lac du Bonnet 36.67 355 *eP* **P 05 18 56.4 -2.0**
ULM *e* 05 21 19.7
ULM pmax pmax
comp=Z,15nm,1.1s
BEKR Beckworth 36.72 321 *eP* **P 05 19 00.2 +1.0**
comp=Z,14nm,0.9s
BEKR *ePcP* **PcP 05 21 21.8 +1.3**
LRM Limekiln Ridge 36.83 335 *eP* **P 05 19 00.7 +0.6**
LRM *ePcP* **PcP 05 21 22.4 +1.6**
ORV Oroville 37.25 319 *eP* **P 05 19 03.9 +0.4**
comp=Z,5.8nm,1.1s
ORV Oroville 37.25 319 *eP* **P 05 19 03.9 +0.4**
ORV pmax pmax
comp=Z,6.0nm,1.1s
HRY Holter Researc 37.30 336 *eP* **P 05 19 04.1 +0.1**
HRY *ePcP* **PcP 05 21 23.4 +1.4**
WVOR Wild Horse Val 37.34 325 *eP* **P 05 19 05.2 +0.8**
comp=Z,23nm,0.9s
WVOR *ePcP* **PcP 05 21 24.4 +2.2**
WVOR Wild Horse Val 37.34 325 *eP* **P 05 19 05.2 +0.8**
WVOR *e* 05 21 24.4
WVOR pmax pmax
comp=Z,23nm,0.9s
LPAZ La Paz 37.34 142 P **P 05 19 04.4 -0.7**
comp=Z,3.3nm,0.7s,baz=334,slow=6.1,SNR=22
LPAZ PcP **PcP 05 21 23.5 +0.2**
comp=Z,1.3nm,0.7s,baz=47,slow=1.3,SNR=3.2
LPAZ LR LR 05 34 21.0
comp=Z,417nm,19.8s,baz=330,slow=36
LPAZ La Paz 37.34 142 *eP* **P 05 19 05.2 0.0**
LPAZ *ePcP* **PcP 05 21 23.5 +0.2**
LPAZ La Paz 37.34 142 *eP* **P 05 19 05.2 0.0**
LPAZ *e* 05 21 23.5
EGMT Eagleton 37.64 339 P **P 05 19 06.0 -0.7**
baz=149,SNR=6.3
EGMT Eagleton 37.64 339 *eP* **P 05 19 06.4 -0.4**
comp=Z,7.1nm,0.8s
EGMT *ePcP* **PcP 05 21 24.7 +1.7**
GDXM Geysers 37.66 317 *eP* **P 05 19 09.1 +2.0**
comp=Z,8.0nm,0.8s
O03D Paynes Creek 37.86 320 P **P 05 19 08.6 -0.2**
baz=126,SNR=8.3
J08A Circle Bar Ran 37.87 327 *eP* **P 05 19 09.7 +0.9**
comp=Z,90nm,1.3s
J08A *ePcP* **PcP 05 21 26.1 +2.3**
MOD Modoc Plateau 37.94 323 *eP* **P 05 19 09.6 +0.1**
comp=Z,11nm,0.9s
MOD *ePcP* **PcP 05 21 25.6 +1.4**
PQI Presque Isle 38.06 26 *eP* **P 05 19 10.3 +0.1**
comp=Z,41nm,1.4s
PQI *ePcP* **PcP 05 21 24.6 +0.4**
MSO Missoula 38.26 334 P **P 05 19 12.0 -0.1**
baz=142,SNR=5.8
MSO Missoula 38.26 334 *eP* **P 05 19 12.2 +0.1**
comp=Z,12nm,1.1s
BMO Blue Mountains 38.31 329 *eP* **P 05 19 12.2 -0.2**
comp=Z,9.8nm,1.1s
BMO *ePcP* **PcP 05 21 27.3 +2.1**
BMO Blue Mountains 38.31 329 *eP* **P 05 19 12.3 -0.2**
BMO *e* 05 21 27.3
BMO pmax pmax
comp=Z,10.0nm,1.1s
KCPM Cahto Peak 38.65 318 *eP* **P 05 19 17.3 +1.8**
comp=Z,27nm,1.1s
M04C Macdoel 38.77 322 P **P 05 19 16.3 -0.1**
baz=127,SNR=11
MNMC Minye Minye 38.79 147 *eP* **P 05 19 18.3 +1.3**
comp=Z,15nm,1.0s
MNMC *ePcP* **PcP 05 21 29.1 +1.8**
K05A Summer Lake 38.80 324 *eP* **P 05 19 16.7 0.0**
comp=Z,16nm,1.3s
K05A *ePcP* **PcP 05 21 28.8 +1.9**
I07A Izee 38.91 327 *eP* **P 05 19 17.9 +0.4**
comp=Z,9.8nm,0.9s
KMRM Mail Ridge 39.03 319 *eP* **P 05 19 18.6 0.0**
comp=Z,32nm,0.9s
F10A Beach Ranch, E 39.09 331 *eP* **P 05 19 19.2 +0.2**
comp=Z,24nm,0.8s
JTMT Jette 39.13 335 *eP* **P 05 19 20.1 +0.8**
comp=Z,5.7nm,1.0s
M02C Callahan 39.15 321 P **P 05 19 18.8 -0.7**
baz=125,SNR=5.6
YBH Yreka Blue Hor 39.26 321 P **P 05 19 18.7 -1.8**
comp=Z,3.8nm,0.7s,baz=91,slow=4.6,SNR=21
YBH PcP **PcP 05 21 28.6 +0.4**
comp=Z,2.5nm,0.7s,baz=68,slow=2.4,SNR=6.9
YBH Yreka Blue Hor 39.26 321 *eP* **P 05 19 19.4 -1.1**
comp=Z,3.7nm,0.6s
YBH *ePcP* **PcP 05 21 29.9 +1.7**
YBH Yreka Blue Hor 39.26 321 *eP* **P 05 19 19.4 -1.1**
YBH *e* 05 21 29.9
YBH pmax pmax
comp=Z,4.0nm,0.6s
J05D Fort Rock, OR 39.34 324 P **P 05 19 20.9 -0.3**
baz=129,SNR=7.9
KHMM Horse Mountain 39.40 320 *eP* **P 05 19 22.6 +0.8**
comp=Z,34nm,0.9s
KHMM *ePcP* **PcP 05 21 31.0 +2.2**
G08A Pilot Rock 39.45 328 *eP* **P 05 19 21.9 -0.2**
comp=Z,12nm,1.4s
G08A *ePcP* **PcP 05 21 30.3 +1.5**

PINE Pine Mountain 39.50 325 *eP* **P 05 19 23.3 +0.7**
comp=Z,17nm,0.8s
PINE *ePcP* **PcP 05 21 31.2 +2.1**
JCC Jacoby Creek, 39.56 319 *eP* **P 05 19 23.5 +0.7**
comp=Z,39nm,1.0s
J04D Umpqua Nationa 39.81 324 P **P 05 19 24.8 -0.4**
baz=128,SNR=5.3
HUMO Hull Mountain 39.92 322 *eP* **P 05 19 25.4 -0.5**
comp=Z,7.7nm,1.3s
HUMO *ePcP* **PcP 05 21 32.3 +2.1**
L02D Cave Junction, 40.05 321 P **P 05 19 26.7 -0.2**
baz=125
I05D Terrebonne, OR 40.07 326 P **P 05 19 27.1 0.0**
baz=130
G06A Carlson Farm, 40.28 327 *eP* **P 05 19 30.9 +2.1**
comp=Z,14nm,1.1s
I04A Tendick Farm, 40.33 324 P **P 05 19 29.0 -0.2**
baz=128
KBO Bosley Butte 40.46 321 *eP* **P 05 19 31.1 +0.7**
comp=Z,43nm,0.8s
G05D Wamic, OR 40.65 327 P **P 05 19 32.2 +0.4**
baz=131,SNR=7.6
D08A Wollman Farm, 40.68 330 *eP* **P 05 19 32.2 +0.2**
comp=Z,19nm,1.2s
NEW Newport 40.74 333 P **P 05 19 32.5 -0.1**
comp=Z,2.8nm,0.7s,baz=143,slow=11,SNR=6.2
NEW PcP **PcP 05 21 31.6 -1.1**
comp=Z,4.2nm,0.7s,baz=131,slow=3.7,SNR=6.2
NEW Newport 40.74 333 P **P 05 19 32.5 -0.1**
baz=139
NEW Newport 40.74 333 *eP* **P 05 19 32.8 +0.2**
comp=Z,4.8nm,1.0s
NEW Newport 40.74 333 *eP* **P 05 19 32.8 +0.2**
NEW pmax pmax
comp=Z,5.0nm,1.0s
H04A Detroit Lake 40.76 325 *eP* **P 05 19 32.9 +0.1**
comp=Z,41nm,0.9s
I03D Drain, OR 40.81 323 P **P 05 19 33.4 +0.3**
baz=127,SNR=11
KEBM Edson Butte 40.90 322 *eP* **P 05 19 35.5 +1.4**
comp=Z,111nm,1.1s
C09A Chrisman Ranch 40.91 332 *eP* **P 05 19 34.4 +0.5**
comp=Z,14nm,0.9s
LTY Liberty 41.67 329 *eP* **P 05 19 39.6 -0.6**
comp=Z,20nm,1.5s
LTY *ePcP* **PcP 05 21 36.6 +0.8**
G03D McMinnville, O 41.69 325 P **P 05 19 40.8 +0.5**
baz=128
B08A Colville Reser 41.81 332 *eP* **P 05 19 41.2 -0.1**
comp=Z,4.2nm,0.8s
FFC Flin Flon 41.84 350 *eP* **P 05 19 41.6 +0.2**
comp=Z,7.4nm,0.8s
FFC Flin Flon 41.84 350 *eP* **P 05 19 41.6 +0.2**
FFC pmax pmax
comp=Z,7.0nm,0.8s
LON Longmire 41.90 328 *eP* **P 05 19 42.3 +0.2**
comp=Z,21nm,1.0s
LON *ePcP* **PcP 05 21 37.4 +0.7**
LON Longmire 41.90 328 *eP* **P 05 19 42.3 +0.2**
LON *e* 05 21 37.4
LON pmax pmax
comp=Z,21nm,1.0s
F04D Rainier, OR 42.10 326 P **P 05 19 44.1 +0.4**
baz=130
C06D Leavenworth 42.24 330 P **P 05 19 45.4 +0.6**
baz=134
D05A Enumclaw 42.28 328 *eP* **P 05 19 45.8 +0.6**
comp=Z,29nm,1.0s
F03A Seaside 42.30 326 *eP* **P 05 19 47.0 +1.7**
comp=Z,73nm,1.1s
E03A Lebam 42.69 327 *eP* **P 05 19 49.2 +0.8**
comp=Z,41nm,0.9s
E03A *ePcP* **PcP 05 21 41.4 +2.3**
B06A Marblemount 42.94 330 *eP* **P 05 19 50.5 +0.1**
comp=Z,22nm,0.8s
B05A Bryant 43.06 330 P **P 05 19 50.3 -1.2**
baz=132
A04D Lummi Island 43.67 330 P **P 05 19 56.2 0.0**
baz=132,SNR=7.2
GO02 Mina Guanaco 43.86 152 *eP* **P 05 19 59.1 +0.6**
comp=Z,12nm,1.0s
PGC Sidney 43.99 329 *eP* **P 05 19 59.4 +0.5**
comp=Z,36nm,1.1s
RPN Rapa Nui 44.36 204 LR LR 05 33 36.8
comp=Z,285nm,21.3s,baz=295,slow=29
LLLB Lillooet 44.58 332 *eP* **P 05 20 04.1 +0.5**
comp=Z,14nm,1.0s
SCHQ Schefferville 45.13 19 P **P 05 20 07.0 -0.9**
comp=Z,44nm,0.8s,baz=216,slow=6.2,SNR=15
SCHQ Schefferville 45.13 19 *eP* **P 05 20 07.1 -0.8**
comp=Z,47nm,0.8s
SCHQ *ePcP* **PcP 05 21 47.9 +0.6**
BBB Bella Bella 48.55 330 P **P 05 20 35.6 +1.1**
comp=Z,6.8nm,0.7s,baz=117,slow=7.3,SNR=5.1
DIB Dawson Inlet, 51.29 329 *eP* **P 05 20 56.6 +1.3**
comp=Z,31nm,1.1s
CPUP Villa Florida 51.47 141 P **P 05 20 55.5 -1.5**
comp=Z,2.5nm,0.8s,baz=333,slow=7.1,SNR=7.7
CPUP PcP **PcP 05 22 10.4 -0.2**
comp=Z,1.9nm,0.8s,baz=272,slow=6.8,SNR=3.9
CPUP Villa Florida 51.47 141 *eP* **P 05 20 55.5 -1.5**
comp=Z,21nm,1.5s
CPUP Villa Florida 51.47 141 *eP* **P 05 20 55.5 -1.5**
CPUP pmax pmax
comp=Z,21nm,1.5s
YKA Yellowknife Ar 51.56 346 P **P 05 20 56.1 -1.1**
comp=Z,5.1nm,0.7s,baz=148,slow=7.6,SNR=90
YKA PcP **PcP 05 22 10.0 -0.2**
comp=Z,1.3nm,0.6s,baz=151,slow=3.7,SNR=10
YKW3 Yellowknife Ar 51.62 346 *eP* **P 05 20 57.6 -0.1**
comp=Z,6.6nm,0.8s
GO05 HualaæØ 51.68 160 *eP* **P 05 20 58.1 -0.4**
comp=Z,38nm,1.5s
FRB Frobisher Bay 52.37 12 P **P 05 21 01.4 -1.8**
comp=Z,6.6nm,0.8s,baz=211,slow=8.2,SNR=11
CRAG Craig 52.89 331 *eP* **P 05 21 08.4 +1.2**
comp=Z,25nm,1.1s
DLBC Dease Lake 53.36 336 P **P 05 21 11.9 +1.1**
comp=Z,19nm,0.8s,baz=142,slow=5.6,SNR=50
DLBC Dease Lake 53.36 336 *eP* **P 05 21 11.8 +1.1**
comp=Z,21nm,0.8s
WHY Whitehorse 56.68 336 *eP* **P 05 21 34.8 +0.1**
comp=Z,4.6nm,1.0s
PLCA Paso Flores 57.35 162 P **P 05 21 38.2 -1.4**
comp=Z,1.7nm,0.9s,baz=26,slow=7.7,SNR=4.2
PLCA Paso Flores 57.35 162 *eP* **P 05 21 39.6 0.0**
comp=Z,11nm,1.4s
PLCA Paso Flores 57.35 162 *eP* **P 05 21 39.6 0.0**
PLCA pmax pmax
comp=Z,11nm,1.4s
RCBR Riachuelo 57.93 106 *eP* **P 05 21 45.4 +1.3**
comp=Z,31nm,0.8s
RCBR Riachuelo 57.93 106 *eP* **P 05 21 45.4 +1.3**
RCBR pmax pmax
comp=Z,31nm,0.8s
CRQM Cirque 60.18 333 *eP* **P 05 21 59.8 +0.7**
comp=Z,13nm,0.9s
DAWY Dawson 60.35 338 *eP* **P 05 21 59.6 -0.4**
comp=Z,1.6nm,0.8s
DAWY *ePcP* **PcP 05 22 45.1 +0.6**
RAGM Ragged Mountai 60.69 333 *eP* **P 05 22 03.9 +1.5**
comp=Z,17nm,0.9s
BMRM Bremner River 60.91 333 *eP* **P 05 22 04.2 +0.3**
comp=Z,14nm,0.8s
RES Resolute Bay 61.01 359 P **P 05 22 02.7 -1.5**
comp=Z,11nm,0.6s,baz=178,slow=10,SNR=75
RES Resolute Bay 61.01 359 *eP* **P 05 22 02.8 -1.5**
comp=Z,12nm,0.6s
RES Resolute Bay 61.01 359 *eP* **P 05 22 02.8 -1.5**
RES pmax pmax
comp=Z,12nm,0.6s
INK Inuvik 61.03 343 P **P 05 22 03.5 -0.9**
comp=Z,6.8nm,0.7s,baz=112,slow=8.8,SNR=19
INK Inuvik 61.03 343 *eP* **P 05 22 03.7 -0.8**
comp=Z,7.7nm,0.7s
INK Inuvik 61.03 343 *eP* **P 05 22 03.7 -0.8**
INK pmax pmax
comp=Z,8.0nm,0.7s
EYAK Cordova Ski Ar 61.24 333 *eP* **P 05 22 07.0 +0.9**
comp=Z,22nm,0.9s
EGAK Eagle 61.38 338 *eP* **P 05 22 06.8 -0.1**
comp=Z,10nm,1.4s
KLU Klutina 61.72 333 *eP* **P 05 22 09.7 +0.3**
comp=Z,18nm,0.8s
KLU *ePcP* **PcP 05 22 51.2 +1.1**
HARP HAARP 61.79 335 *eP* **P 05 22 11.7 +1.9**
comp=Z,17nm,0.8s

DOT Dot Lake 61.92 336 *eP* **P 05 22 10.6 -0.1**
comp=Z,17nm,0.9s
PAX Paxson 62.17 335 *eP* **P 05 22 11.9 -0.5**
comp=Z,6.2nm,1.0s
PAX Paxson 62.17 335 *eP* **P 05 22 11.9 -0.5**
PAX pmax pmax
comp=Z,6.0nm,1.0s
RIDG Independ'e Rid 62.27 336 *eP* **P 05 22 13.4 +0.4**
comp=Z,8.7nm,0.9s
SCM Sheep Creek Mo 62.47 334 *eP* **P 05 22 14.0 -0.4**
comp=Z,14nm,0.8s
SCM Sheep Creek Mo 62.47 334 *eP* **P 05 22 14.0 -0.4**
SCM pmax pmax
comp=Z,14nm,0.8s
SEW Seward 62.76 331 *eP* **P 05 22 16.4 +0.2**
comp=Z,13nm,0.8s
SML Sawmill 62.90 333 *eP* **P 05 22 17.5 +0.3**
comp=Z,24nm,1.2s
SML *esP* **PcP 05 22 55.7 +0.9**
SML Sawmill 62.90 333 *eP* **P 05 22 17.5 +0.3**
SML *e*SP **PcP 05 22 55.7 +0.9**
SML pmax pmax
comp=Z,24nm,1.2s
GHO Glory Hole Cre 63.14 333 *eP* **P 05 22 19.2 +0.4**
comp=Z,37nm,0.7s
PMR Palmer 63.16 333 *eP* **P 05 22 19.1 +0.2**
comp=Z,12nm,0.7s
PMR Palmer 63.16 333 *eP* **P 05 22 19.1 +0.2**
PMR pmax pmax
comp=Z,12nm,0.7s
RC01 Rabbit Creek A 63.25 332 *eP* **P 05 22 20.0 +0.5**
comp=Z,26nm,0.7s
RC01 *esP* **PcP 05 22 57.3 +1.1**
BRLK Bradley Lake 63.32 331 *eP* **P 05 22 20.5 +0.5**
comp=Z,45nm,0.8s
HDA Harding Lake 63.40 336 *eP* **P 05 22 20.1 -0.3**
comp=Z,7.7nm,1.0s
KDAK Kodiak Island 63.53 328 P **P 05 22 21.6 +0.1**
comp=Z,21nm,0.7s,baz=124,slow=2.6,SNR=31
KDAK Kodiak Island 63.53 328 *eP* **P 05 22 21.5 +0.1**
comp=Z,22nm,0.8s
KDAK Kodiak Island 63.53 328 *eP* **P 05 22 21.5 +0.1**
KDAK pmax pmax
comp=Z,23nm,0.8s
IL1 Eielson Array 63.53 337 *eP* **P 05 22 20.7 -0.6**
ILAR Eielson Array 63.53 337 P **P 05 22 20.6 -0.7**
comp=Z,7.2nm,1.0s,baz=116,slow=4.6,SNR=31
ILB Eielson Array 63.53 337 *eP* **P 05 22 20.6 -0.7**
KULLO Kullorsuaq 63.69 10 *i* P PcP 05 23 08.2 +10
comp=Z,14nm,1.1s
OHAK Old Harbor 63.73 327 *eP* **P 05 22 23.3 +0.6**
comp=Z,16nm,0.9s
RND Reindeer 63.75 335 *eP* **P 05 22 23.1 +0.3**
comp=Z,19nm,0.9s
RND Reindeer 63.75 335 *eP* **P 05 22 23.2 +0.3**
RND pmax pmax
comp=Z,19nm,0.9s
CCB Clear Creek Bu 63.84 336 *eP* **P 05 22 22.5 -0.8**
comp=Z,2.8nm,0.7s
CCB *ePcP* **PcP 05 22 58.7 +0.2**
SUA Susitna One 63.84 332 *eP* **P 05 22 24.1 +0.5**
comp=Z,17nm,0.7s
WRH Wood River Hil 63.87 336 *eP* **P 05 22 23.1 -0.4**
comp=Z,4.2nm,0.8s
WRH *ePcP* **PcP 05 22 59.0 +0.3**
MCK McKinley 63.91 335 *eP* **P 05 22 24.0 +0.2**
comp=Z,6.7nm,0.9s
COLA College 63.95 337 *eP* **P 05 22 23.7 -0.3**
comp=Z,7.1nm,0.7s
COLA *ePcP* **PcP 05 22 60.0 +1.0**
COLA College 63.95 337 *eP* **P 05 22 23.7 -0.3**
COLA *e* 05 23 00.0
COLA pmax pmax
comp=Z,7.0nm,0.7s
SII Sitkinak Islan 64.03 327 *eP* **P 05 22 25.9 +1.2**
comp=Z,51nm,0.8s
BWN Browne 64.30 335 *eP* **P 05 22 26.6 +0.2**
comp=Z,40nm,0.8s
TRF Thorofare Moun 64.36 335 *eP* **P 05 22 27.0 0.0**
comp=Z,17nm,0.9s
SKT Skwentna 64.37 333 *eP* **P 05 22 27.1 +0.2**
comp=Z,21nm,0.7s
BPAW Bear Paw Mtn. 64.89 335 *eP* **P 05 22 29.9 -0.4**
comp=Z,13nm,0.8s
PPLA Purkeypile 64.97 334 *eP* **P 05 22 30.7 -0.3**
comp=Z,12nm,0.9s
CAST Castle Rocks 65.10 334 *eP* **P 05 22 30.7 -0.9**
comp=Z,10.0nm,0.8s
CAST *ep*P **PcP 05 23 04.2 +0.4**
MLY Manley 65.14 336 *eP* **P 05 22 31.4 -0.4**
comp=Z,16nm,0.8s
COLD Coldfoot 65.80 338 *eP* **P 05 22 36.7 +0.7**
comp=Z,4.0nm,1.0s
TOLK Toolik Lake Re 66.16 340 P **P 05 22 38.1 -0.3**
baz=115,SNR=5.3
TOLK Toolik Lake Re 66.16 340 *eP* **P 05 22 38.2 -0.1**
comp=Z,7.4nm,1.3s
SUMG Summit 66.24 15 *i* P **P 05 22 38.3 -0.9**
comp=Z,8.8nm,0.8s
SUMG Summit 66.24 15 *eP* **P 05 22 38.3 -0.9**
comp=Z,8.8nm,0.8s
SUMG Summit 66.24 15 *eP* **P 05 22 38.3 -0.9**
SUMG pmax pmax
comp=Z,9.0nm,0.8s
CHGN Chignik 66.26 326 *eP* **P 05 22 39.4 +0.3**
comp=Z,29nm,0.8s
IM3 Indian Mountai 66.65 337 *eP* **P 05 22 40.6 -0.9**
IM3 *ep*P **PcP 05 23 10.1 -0.1**
SCO Scoresbysund 70.18 19 *eP* **P 05 23 02.2 -1.2**
comp=Z,4.9nm,1.2s
SCO Scoresbysund 70.18 19 *eP* **P 05 23 02.2 -1.2**
SCO pmax pmax
comp=Z,5.0nm,1.2s
DAG Danmarks Havn 72.70 13 *i* P **P 05 23 16.6 -1.9**
comp=Z,6.7nm,0.7s
DAG Danmarks Havn 72.70 13 P **P 05 23 16.6 -1.9**
DAG pmax pmax
comp=Z,13nm,0.8s
ATKA Atka Island 75.21 321 *eP* **P 05 23 33.9 +0.3**
comp=Z,53nm,1.0s
EKA Eskdalemuir Ar 77.58 36 P **P 05 23 44.9 -2.0**
comp=Z,3.5nm,0.7s,baz=265,slow=5.5,SNR=9.6
ESDC Sonseca Array 79.06 52 P **P 05 23 53.7 -1.8**
comp=Z,0.8nm,0.5s,baz=291,slow=5.2,SNR=10
ESLA Sonseca Array 79.06 52 *eP* **P 05 23 53.9 -1.6**
comp=Z,2.5nm,1.0s
ES19 SONSECA Array 79.10 52 *eP* **P 05 23 53.8 -2.0**
SPA0 Spitsbergen Ar 80.16 12 *eP* **P 05 24 00.5 -0.3**
SPITS Spitsbergen Ar 80.16 12 P **P 05 24 00.5 -0.3**
comp=Z,2.5nm,0.7s,baz=320,slow=6.4,SNR=3.9
BILL Bilibino 82.13 338 *eP* **P 05 24 11.6 +0.3**
comp=Z,8.6nm,0.6s
BILL Bilibino 82.13 338 *i* P **P 05 24 11.1 -0.2**
BILL *i* 05 24 39.2
BILL pmax pmax
comp=Z,4.0nm,0.7s
KOWA Kowa 83.70 77 P **P 05 24 19.1 -1.3**
comp=Z,5.8nm,0.6s,baz=282,slow=11,SNR=11
KOWA Kowa 83.70 77 *eP* **P 05 24 19.9 -0.6**
comp=Z,6.1nm,0.7s
NB200 NORSAR Array S 83.89 29 *eP* **P 05 24 20.5 -0.1**
NOA NORSAR Array B 83.89 29 P **P 05 24 20.5 -0.1**
comp=Z,1.0nm,0.7s,baz=287,slow=4.9,SNR=3.3
TIC Toumodi 84.46 85 *e*PKP1 **P 05 24 23.6 -0.8**
LIC Lamto 84.55 85 *e*PKP1 **P 05 24 24.2 -0.6**
comp=Z,36nm,0.8s
DBIC Dimbokro 84.62 84 P **P 05 24 23.8 -1.3**
comp=Z,8.4nm,0.7s,baz=252,slow=6.1,SNR=12
DBIC Dimbokro 84.62 84 *eP* **P 05 24 23.8 -1.3**
comp=Z,14nm,0.9s
DBIC Dimbokro 84.62 84 *eP* **P 05 24 23.8 -1.3**
DBIC pmax pmax
comp=Z,14nm,0.9s
KIC Kosan Boka 84.80 85 *e*PKP1 **P 05 24 24.7 -1.3**
comp=Z,29nm,0.8s
HFS Hagfors 85.34 29 P **P 05 24 26.9 -0.9**
comp=Z,3.4nm,0.9s,baz=234,slow=8.8,SNR=3.9
ARA0 ARCESS Array S 86.08 18 *eP* **P 05 24 30.6 -0.8**
ARCES ARCESS Array B 86.08 18 P **P 05 24 30.6 -0.8**
comp=Z,2.5nm,0.6s,baz=36,slow=10,SNR=7.6
ARCES ARCESS Array B 86.08 18 *eP* **P 05 24 30.2 -1.1**
ARCES ARCESS Array B 86.08 18 *eP* **P 05 24 30.2 -1.1**
ARE0 ARCESS Array S 86.08 18 *eP* **P 05 24 30.7 -0.6**
comp=Z,22nm,1.4s
CLL Collm 87.89 38 *eP* **P 05 24 39.0 -1.5**
CLL LmV 07 14 00.0
comp=Z,100nm,18.7s

GERES	GERESS Array B	89.14	40	P		P	05 24 45.9	-0.7
	comp=Z,0.4nm,0.5s,baz=318,slow=4.0,SNR=5.3							
TOA1	Torodi Ar. Sit	89.40	77	*e*P		P	05 24 46.2	-2.1
TOA0	Torodi Ar. Sit	89.40	77	*e*P		P	05 24 47.3	-1.0
TORD	Torodi Ar. Bea	89.40	77	*e*P		P	05 24 46.2	-2.1
	comp=Z,1.0nm,0.6s,baz=308,slow=3.6,SNR=12							
SEY	Seymchan	89.46	336	P		P	05 24 48.3	+0.7
	comp=Z,3.4nm,0.7s,baz=117,slow=6.4,SNR=7.3							
SEY	Seymchan	89.46	336	*i*P		P	05 24 47.7	+0.1
FIA0	FINESS Array S	90.31	25	*e*P		P	05 24 50.9	-0.7
FIA0	FINESS Array S	90.31	25	*e*P		P	05 24 50.9	-0.7
FINES	FINESS Array B	90.31	25	P		P	05 24 50.9	-0.7
	comp=Z,1.7nm,0.7s,baz=251,slow=13,SNR=4.0							
TIXI	Tiksi	90.76	348	⇓*i*P		P	05 24 51.2	-2.3
TIXI				pmax	pmax			
	comp=Z,3.0nm,0.5s							
PEA1	Petropavlovsk-	91.49	326	*e*P		P	05 24 58.0	+0.7
PETK	Petropavlovsk-	91.49	326	P		P	05 24 58.0	+0.7
	comp=Z,4.8nm,0.8s,baz=82,slow=11,SNR=4.2							
MA2	Magadan	91.84	333	P		P	05 24 59.1	+0.3
	comp=Z,5.6nm,0.6s,baz=111,slow=6.3,SNR=5.8							
MA2	Magadan	91.84	333	⇓*i*P		P	05 24 59.4	+0.6
MA2				pmax	pmax			
	comp=Z,44nm,2.1s							
OBN	Obninsk	98.45	27	*i*P		Pdif	05 25 31.6	+2.6
OBN				pmax	pmax			
	comp=Z,7.0nm,1.2s							
GNI	Garni	112.42	35	⇑*i*PKIKP		PKiKP	05 30 26.4	-0.8
ZAA1	Zalesovo Array	112.52	3	*e*PKiKP		PKiKP	05 30 27.1	+0.3
ZALV	Zalesovo Beam	112.52	3	PKiKP		PKiKP	05 30 27.1	+0.3
	comp=Z,0.9nm,0.5s,baz=300,slow=2.7,SNR=4.9							
KURK	Kurchatov	115.20	7	*e*PKiKP		PKPdf	05 30 32.7	+0.7
KURK	Kurchatov	115.20	7	⇑*i*PKIKP		PKPdf	05 30 31.2	-0.7
KURBB	Kurchatov Arra	115.28	7	PKP		PKPdf	05 30 32.7	+0.6
	comp=Z,2.2nm,0.6s,baz=348,slow=1.9,SNR=29							
HVS	Khovu-Aksy	115.31	357	⇓*i*PKIKP		PKPdf	05 30 32.6	+0.3
ULN	Ulaanbaatar	116.65	347	⇓*i*PKIKP		PKPdf	05 30 34.0	-1.1
SONA0	Songino Array	116.82	347	*e*PKPdf		PKPdf	05 30 35.9	+0.5
SONM	Songino Array	116.82	347	PKP		PKPdf	05 30 35.9	+0.5
	comp=Z,0.5nm,0.4s,baz=298,slow=3.2,SNR=4.6							
KS01	Wonju Array Si	117.39	326	*e*PKPdf		PKPdf	05 30 37.1	+0.5
KSRS	Korea Array	117.39	326	PKP		PKPdf	05 30 36.4	-0.1
	comp=Z,2.6nm,0.7s,baz=18,slow=1.9,SNR=11							
BOSA	Boshof	119.26	115	PKP		PKPdf	05 30 40.5	0.0
	comp=Z,7.2nm,0.8s,baz=286,slow=2.7,SNR=13							
BOSA	Boshof	119.26	115	*e*PKPdf		PKPdf	05 30 41.2	+0.7
MAKZ	Makanchi	119.43	6	*e*PKPdf		PKPdf	05 30 40.4	+0.1
MK31	Makanchi Array	119.47	5	*e*PKPdf		PKPdf	05 30 40.3	-0.1
MK31	Makanchi Array	119.47	5	*e*PKIKP		PKPdf	05 30 40.3	-0.1
MK32	Makanchi Array	119.47	5	*e*PKPdf		PKPdf	05 30 40.3	0.0
MKAR	Makanchi Array	119.47	5	PKP		PKPdf	05 30 40.3	0.0
	comp=Z,1.4nm,0.6s,baz=356,slow=1.9,SNR=16							
MKAR	Makanchi Array	119.47	5	*e*PKPdf		PKPdf	05 30 40.1	-0.2
MKAR	Makanchi Array	119.47	5	*e*PKIKP		PKPdf	05 30 40.1	-0.2
LBTB	Lobatse	119.50	111	*e*PKPdf		PKPdf	05 30 41.9	+0.9
MK01	Makanchi Array	119.50	5	*e*PKPdf		PKPdf	05 30 40.3	-0.1
GEYT	Alibeck	120.98	28	PKP		PKPdf	05 30 43.3	-0.3
	comp=Z,18nm,0.8s,baz=260,slow=8.5,SNR=5.6							
HHC	Hu-ho-hao-te	121.87	340	*e*PKP		PKPdf	05 30 44.3	-0.9
AAK	Ala-Archa	122.35	13	⇑*i*PKIKP		PKPdf	05 30 46.9	+0.7
WMQ	Urumqi	122.74	1	PKP		PKPdf	05 30 47.0	+0.2
KDJ	Kajisay	123.37	11	*e*PKPdf		PKPdf	05 30 49.8	+1.6
KDJ	Kajisay	123.37	11	*e*PKIKP		PKPdf	05 30 49.8	+1.6
KSH	Kashi	125.66	12	PKP		PKPdf	05 30 53.2	+0.6
KSH				PP		PP	05 32 50.1	+6.5
KSH				AMB		AMB		
	comp=Z,360nm,5.2s							
GTA	Gaotai	126.22	350	*e*PKP		PKPdf	05 30 54.2	+0.5
NJ2	Nanjing	126.31	328	*e*PKP		PKPdf	05 30 54.6	+0.8
XAN	Xi'an	128.91	339	PKP		PKPdf	05 31 00.7	+1.9
CD2	Chengdu	133.46	349	PKP		PKPdf	05 31 06.7	-0.8
WB2	Warramunga Arr	136.35	255	*e*PKPdf		PKPdf	05 31 15.0	+1.9
WR1	Warramunga Arr	136.36	255	*e*PKPpre		PKPpre	05 31 08.2	
WR1				*e*PKPdf		PKPdf	05 31 13.3	+0.2
WR1				*e*SKPab		SKPab	05 34 54.5	+9.3
WRA	Warramunga Arr	136.36	255	PKhKP		PKPpre	05 31 08.2	
	comp=Z,0.5nm,0.8s,baz=88,slow=3.0,SNR=3.8							
WRA				PKP		PKPdf	05 31 13.3	+0.2
	comp=Z,1.6nm,0.8s,baz=88,slow=2.7,SNR=13							
WRA				SKPab		SKPab	05 34 54.5	+9.3
	comp=Z,0.5nm,0.9s,baz=102,slow=3.3,SNR=2.8							
ASAR	Alice Springs	136.57	250	PKhKP		PKPpre	05 31 06.5	
	comp=Z,0.5nm,0.6s,baz=101,slow=2.9,SNR=3.4							
ASAR				PKP		PKPdf	05 31 13.1	-0.4
	comp=Z,1.0nm,0.8s,baz=64,slow=2.2,SNR=4.4							
FITZ	Fitzroy Crossi	144.63	258	PKP		PKPbc	05 31 26.5	-0.5
	comp=Z,5.0nm,0.8s,baz=77,slow=2.4,SNR=6.7							
CHTO	Chiang Mai	146.26	343	*e*PKPdf		PKPbc	05 31 31.7	-0.3
CHTO	Chiang Mai	146.26	343	*e*PKP2		PKPbc	05 31 31.7	-0.3
CM31	Chiang Mai Arr	146.60	343	*e*PKPbc		PKPab	05 31 33.8	-0.4
CMAR	Chiang Mai Arr	146.60	343	PKPbc		PKPbc	05 31 32.9	-0.2
	comp=Z,18nm,0.6s,baz=347,slow=3.3,SNR=64							
HYB	Hyderabad	147.37	19	*i*PKP		PKPbc	05 31 34.0	-1.3
PBKT	Sadao Pong	147.71	338	*e*PKPdf		PKPbc	05 31 34.9	-1.2
NWAO	Narrogin (SRO)	148.02	228	*e*PKPdf		PKPbc	05 31 35.8	-0.8
	comp=Z,7.0nm,0.8s,baz=42,slow=2.9,SNR=3.3							
NWAO	Narrogin (SRO)	148.02	228	*e*PKPbc		PKiKP	05 31 36.2	-2.1
MBWA	Marble Bar	149.89	251	*e*PKPbc		PKPbc	05 31 40.9	-0.8
MBWA				*e*PKPab		PKPab	05 31 47.0	-0.4

JMA 04 05:25:50.5, 36°.30N×140°.68E, h24km±1km, M3.0, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	Hitachi	0.32	344	P	Pb	05 25 57.6	-0.2
JHO				S	Sb	05 26 02.2	-0.6
JYT	Yasato	0.40	260	P	Pb	05 25 59.0	0.0
JYT				S	Sb	05 26 04.6	-0.2
ONAJ	Iwakimizuishiy	0.81	7	P	Pb	05 26 05.1	-0.8
JSB	Shiboa	0.91	318	P	Pb	05 26 07.5	-0.1
JSB				S	Sn	05 26 19.9	-0.2
MAT	Matsushiro	2.01	278	P	Pn	05 26 23.9	+1.0
MAT				S	Sb	05 26 49.4	-1.5

UCR ***04*** *05:31:38.3±1.2, 13°.49N×91°.06W, h11km±11km, ML3.7*
IDC ***04*** *05:31:39.6±2.3, 13°.51N×91°.31W, h49km±23km, mb3.2/4, mb1 3.4/7, mb1mx3.2/56, mbtmp3.4/7, ML3.5/3, Error ellipse: s-maj=20.0km s-min=14.3km az=22.0*

ISC 04 05:31:36.6±3.8, 13°.5N±0°.1×91°.25W±0°.07, h25km±27km, n28, σ1§11/37, mb3.3/4, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTR	El Retiro	1.62	74	*e*P	Pn	05 32 03.8	0.0
SBLS	San Blas	1.63	76	*e*P	Pn	05 32 03.5	-0.5
SBLS				*e*S	Sn	05 32 24.3	0.0
SNJE	San Jose	1.65	75	*e*P	Pn	05 32 04.3	0.0
APG	El Apazote	1.72	26	P	Pn	05 32 06.0	+0.8
	85nm,0.3s,baz=155,slow=10,SNR=488						
APG				S	Sb	05 32 28.1	-1.0
	41nm,0.3s,baz=90,slow=23,SNR=6.2						
APG				LR	LR	05 32 58.9	
	comp=Z,389nm,21.1s,baz=313,slow=47						
COLS	Colinas	1.91	83	*e*P	Pn	05 32 08.0	+0.3
BOQS	Boqueron	1.94	81	*e*P	Pn	05 32 08.4	+0.2
BOQS				*e*S	Sn	05 32 31.0	-0.8
BOQS				AML	AML	05 32 33.5	
	comp=Z,576nm,0.2s						
UEES	San Salvador	1.97	82	*e*P	Pn	05 32 08.9	+0.4
UEES				*e*S	Sn	05 32 34.0	+1.5
UEES				IAML		05 32 40.6	
	comp=Z,2μm,0.3s						
SNET	Serv Nac Est T	1.98	83	*e*P	Pn	05 32 08.8	+0.2
SNET				IAML		05 32 36.8	
	comp=Z,1μm,0.3s						
OPAM	San Salvador	2.01	82	*e*P	Pn	05 32 09.9	+0.8
OPAM				IAML		05 32 39.2	
	comp=Z,2μm,0.3s						
LFU	La Fuente	2.10	82	*e*P	Pn	05 32 10.4	+0.2
LFRS	El Faro	2.14	85	*e*P	Pn	05 32 11.3	+0.5
LFRS				*e*S	Sn	05 32 37.3	+0.7
LBRS	Las Brisas	2.17	82	*e*P	Pn	05 32 11.5	+0.4
TECA	Tecapa	2.67	89	*e*P	Pn	05 32 18.5	+0.2
CNGN	Cerro Negro	4.54	101	*e*P	Pn	05 32 44.1	+0.3
CNGN				*e*S	Sn	05 33 33.3	-2.5
MOMN	Momotombo	4.71	102	*e*P	Pn	05 32 47.4	+1.3
COPN	Copaltepe	4.72	105	*e*P	Pn	05 32 47.2	+1.0
COPN				AML	AML	05 33 38.1	
	comp=Z,67nm,0.6s						

ESTN	Estel	4.77	94	*e*P		Pn	05 32 48.0	+1.0
ESTN				*e*S		Sn	05 33 40.8	-0.7
RCON	San Juan de Ri	4.96	89	*e*P		Pn	05 32 51.2	+1.5
CMIG	Matias Romero	5.04	316	P		Pn	05 32 52.0	+1.4
	comp=Z,1.6nm,0.3s,baz=136,slow=8.7,SNR=14							
CMIG				S		Sn	05 33 47.9	-0.1
	comp=Z,1.8nm,0.3s,baz=38,slow=16,SNR=4.0							
MATN	Matagalpa	5.21	95	*e*P		Pn	05 32 53.9	+0.8
BOAB	BOACO BROADBAN	5.54	100	*e*P		Pn	05 32 57.3	-0.2
JTS	JuntasAbangare	6.92	116	P		Pn	05 33 19.5	+3.1
	comp=Z,0.4nm,0.3s,baz=316,slow=7.1,SNR=2.1							
JTS				S		Sn	05 34 33.9	-0.6
	comp=Z,0.6nm,0.3s,baz=322,slow=18,SNR=1.0							
TEIG	Tepich	7.32	23	*e*P		Pn	05 33 23.8	+1.9
TXAR	Lajitas Array	19.55	326	P		P	05 36 03.4	+0.7
	comp=Z,0.1nm,0.3s,baz=157,slow=13,SNR=9.0							
ANMO	Albuquerque	25.44	330	P		P	05 37 02.2	-0.5
	comp=Z,0.5nm,0.4s,baz=150,slow=16,SNR=4.1							
NVAR	Mina Array Bea	34.55	321	P		P	05 38 24.1	+0.7
	comp=Z,0.1nm,0.5s,baz=135,slow=13,SNR=2.5							
SIV	San Ignacio	41.79	133	P		P	05 39 25.2	+0.8
	comp=Z,1.1nm,0.6s,baz=299,slow=8.5,SNR=7.7							
YKA	Yellowknife Ar	51.73	346	P		P	05 40 39.9	-1.6
	comp=Z,0.1nm,0.4s,baz=150,slow=7.9,SNR=4.8							

IDC ***04*** *05:32:21.9±3.2, 65°.17S×179°.36E, h0km, mb3.8/4, mb1 4.0/5, mb1mx3.8/36, mbtmp3.9/5, ML4.1/1, MS4.3/18, Ms1 4.3/18, ms1mx4.1/34, Error ellipse: s-maj=100.0km s-min=25.2km az=73.0*
GCMT ***04*** *05:32:32.0±0.4, 65°.28S×179°.52E, h18km±2km, MW5.2/73, Moment Tensor Solution. s13,c15; s73,c91; Duration: 1§0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.09±.04; $M_{\theta\theta}$0.48±.03; $M_{\phi\phi}$-0.56±.04; $M_{r\theta}$-0.80±.16; $M_{\theta\phi}$-0.19±.03; $M_{\phi r}$0.19±.08; Best double couple: $M_0$0.88800×10^{17} NP1:ϕ_S319.00000°, δ82.00000°, λ47.00000°. NP2: ϕ_S220.00000°, δ44.00000°, λ168.00000°. Principal axes: T 1.1510, Plg38.0000°, Azm191.0000°; N -0.5270, Plg43.0000°, Azm327.0000°; P -0.6250, Plg24.0000°, Azm81.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 04 05:32:27.1±2.2, 65°.5S±0°.1×178°.3E±0°.4, h10km, n29, σ1§48/6, mb3.7/4, MS4.4/17, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	Vanda	13.09	196	Pn	Pn	05 35 34.4	+1.7
	0.8nm,0.3s,baz=49,slow=18,SNR=56						
VNDA				Sn	Sn	05 37 56.5	-1.5
	0.0nm,0.3s,baz=81,slow=13,SNR=1.5						
VNDA				LR	LR	05 39 40.4	
	comp=Z,2μm,22.0s,baz=332,slow=32						
RPZ	Rata Peaks	22.17	346	LR	LR	05 44 40.0	
	comp=Z,1μm,18.5s,baz=174,slow=34						
QSPA	South Pole Qui	24.62	180	P	P	05 37 46.2	-1.1
	7.4nm,1.1s,baz=36,slow=6.6,SNR=8.9						
URZ	Urewera	27.26	358	LR	LR	05 47 07.5	
	comp=Z,1μm,19.1s,baz=201,slow=33						
MAW	Mawson	39.58	213	P	P	05 39 58.1	+0.2
	1.4nm,0.7s,baz=170,slow=12,SNR=2.9						
MAW				LR	LR	05 56 38.6	
	comp=Z,1μm,18.2s,baz=127,slow=36						
STKA	Stephens Creek	40.32	308	LR	LR	05 52 12.0	
	comp=Z,124nm,22.0s,baz=276,slow=29						
SNAA	Sanae	43.12	179	LR	LR	05 57 55.8	
	comp=Z,837nm,19.6s,baz=170,slow=35						
DZM	Mont Dzumac	44.07	344	LR	LR	05 56 52.8	
	comp=Z,588nm,19.2s,baz=218,slow=34						
RAR	Rarotonga	46.52	29	LR	LR	05 55 09.5	
	comp=Z,514nm,19.1s,baz=224,slow=30						
H01W1	Cape Leeuwin H	48.14	277	T	T	06 34 00.9	
	baz=149,slow=76,SNR=28						
H01W2	Cape Leeuwin H	48.15	277	T	T	06 34 01.1	
	baz=149,slow=76,SNR=24						
H01W3	Cape Leeuwin H	48.16	277	T	T	06 34 02.1	
	baz=149,slow=76,SNR=24						
NWAO	Narrogin (SRO)	48.57	281	LR	LR	05 57 02.8	
	comp=Z,694nm,21.7s,baz=22,slow=30						
ASAR	Alice Springs	50.48	304	P	P	05 41 24.6	-0.3
	0.4nm,0.6s,baz=157,slow=7.5,SNR=4.2						
AFI	Afiamalu	51.95	12	LR	LR	06 00 59.1	
	comp=Z,149nm,18.8s,baz=232,slow=33						
PPT	Papeete	52.43	40	LR	LR	05 57 50.3	
	comp=Z,343nm,20.4s,baz=278,slow=30						
WRA	Warramunga Arr	53.77	306	P	P	05 41 45.7	-3.8
	0.7nm,1.0s,baz=161,slow=5.7,SNR=3.2						
WRA				LR	LR	06 01 34.9	
	comp=Z,332nm,21.6s,baz=190,slow=32						
HNR	Honiara	57.38	338	LR	LR	06 03 00.1	
	comp=Z,218nm,21.2s,baz=168,slow=32						
RPN	Rapa Nui	58.36	86	LR	LR	05 59 37.0	
	comp=Z,143nm,21.3s,baz=200,slow=28						
FITZ	Fitzroy Crossi	58.56	298	LR	LR	06 04 28.2	
	comp=Z,181nm,20.8s,baz=164,slow=33						
PMG	Port Moresby	59.98	324	LR	LR	06 03 23.4	
	comp=Z,176nm,21.2s,baz=175,slow=31						
LEM	Lembang	75.84	285	LR	LR	06 13 16.3	
	comp=Z,133nm,21.1s,baz=257,slow=32						
BOSA	Boshof	83.93	204	LR	LR	06 20 38.0	
	comp=Z,208nm,19.2s,baz=176,slow=34						
H08S2	Diego Garcia H	89.56	253	T	T	07 26 12.4	
	baz=155,slow=76,SNR=12						
H08S1	Diego Carcia H	89.57	253	T	T	07 26 13.4	
	baz=155,slow=76,SNR=13						
H08S3	Diego Garcia H	89.58	253	T	T	07 26 14.0	
	baz=155,slow=76,SNR=15						
H06E1	SOCORRO T-PHAS	99.25	65	T	T	07 35 32.2	
H02S1	DAWSON INLET T	124.19	33	T	T	08 07 04.7	
	SNR=23						
BRTR	Keskin Array B	147.24	236	PKPbc	PKPdf	05 52 07.5	-0.1
	0.3nm,0.7s,baz=157,slow=7.8,SNR=2.3						

IDC ***04*** *05:45:12.8±3.1, 31°.68S×68°.67W, h90km±30km, mb3.3/2, mb1 3.5/6, mb1mx3.3/36, mbtmp3.6/6, Error ellipse: s-maj=36.9km s-min=26.3km az=129.0*
ISCJB ***04*** *05:45:14.2±0.5, 31°.54S±0°.03×68°.77W±0°.05, h112km±4km, mb3.5/2, Error ellipse: s-maj=6.7km s-min=5.5km az=178.2*
SJA ***04*** *05:45:14.0±1.2, 31°.54S×68°.81W, h107km±3km, ML3.8, MW3.8*

ISC 04 05:45:14.3±0.8, 31°.55S±0°.04×68°.79W±0°.05, h108km±5km, n24, σ1§15/37, 9D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZON	Zonda	0.09	85	⇓*e*P	Pn	05 45 29.6	+0.4
ZON				IAML		05 45 29.8	
	comp=Z,2μm,0.2s						
ZON				*e*S	Sn	05 45 40.9	+0.4
SJA	San Juan	0.20	82	⇓*e*P	Pn	05 45 30.1	+0.6
SJA				IAML		05 45 30.2	
	comp=Z,3μm,0.2s						
SJA				*e*S	Sn	05 45 41.6	+0.8
RTLL	Cerro Villicun	0.35	50	⇓*e*P	Pn	05 45 30.3	+0.3
RTLL				*e*S	Sn	05 45 42.2	+0.3
RTLL				IAML		05 45 45.2	
	comp=Z,2μm,0.5s						
RTCV	Cerro Valdivia	0.37	146	*e*P	Pn	05 45 30.8	+0.6
RTCV				*e*S	Sn	05 45 42.6	+0.4
RTLS	Leoncito	0.50	241	⇓*e*P	Pn	05 45 31.8	+0.6
RTLS				*e*S	Sn	05 45 44.7	+0.7
RTLS				IAML		05 45 45.6	
	comp=Z,2μm,0.2s						
AMOG	MOGNA	0.66	22	⇓*e*P	Pn	05 45 33.0	+0.8
AMOG				*e*S	Sn	05 45 45.5	-0.1
AUSP	Uspallata	0.84	217	⇓*e*P	Pn	05 45 34.8	+0.8
ARCO	CERRO ARCO	1.29	185	⇓*e*P	Pn	05 45 39.9	+1.2
ARCO				IAML		05 46 00.5	
	comp=Z,1μm,0.6s						
AAGR	Agrelo	1.53	181	⇓*e*P	Pn	05 45 42.5	+1.1
AAGR				*e*S	Sn	05 46 03.8	+1.9
ACAN	Cantantal	1.54	118	*e*P	Pn	05 45 42.9	+1.5
ACAN				*e*S	Sn	05 46 02.7	+0.7
AVIZ	Vizcacheras	1.93	173	*e*P	Pn	05 45 47.5	+1.1
AVIZ				*e*S	Sn	05 46 10.6	-0.2
AGUA	GUANDACOL	2.08	7	*e*P	Pn	05 45 49.8	+1.5
ROC1	El Roble	2.36	233	*e*P	Pn	05 45 52.4	+0.3
ROC1				*e*S	Sn	05 46 20.8	-0.1
MRA	San Martin	2.75	109	*e*P	Pn	05 45 58.1	+1.2
MRA				*e*S	Sn	05 46 30.0	+0.2
MRA				IAML		05 46 30.5	
	comp=N,617nm,0.4s						

VCA	Vinchina	2.85	10	*e*P		Pn	05 45 59.9	+1.4
VCA				IAML			05 46 38.5	
	comp=Z,310nm,0.3s							
LCO	Las Campanas	3.03	326	⇓*e*P		Pn	05 46 01.4	+0.6
LCO				*e*S		Sn	05 46 36.6	-0.1
RFA	San Rafael	3.22	175	*e*P		Pn	05 46 03.2	+0.1
RFA				IAML			05 46 41.6	
	comp=Z,162nm,0.5s							
PLCA	Paso Flores	9.27	188	P		Pn	05 47 22.0	-3.0
	comp=Z,0.1nm,0.3s,baz=30,slow=13,SNR=1.6							
CPUP	Villa Florida	11.30	65	P		Pn	05 47 51.4	-1.1
	comp=Z,0.1nm,0.3s,baz=236,slow=11,SNR=1.7							
CPUP				S		Sn	05 49 53.8	-3.0
	comp=Z,0.3nm,0.3s,baz=333,slow=2.3,SNR=1.8							
LPAZ	La Paz	15.21	2	P		P	05 48 45.8	-0.7
	comp=Z,0.1nm,0.3s,baz=176,slow=6.3,SNR=4.7							
SIV	San Ignacio	17.02	26	P		Pn	05 49 05.1	-0.7
	comp=Z,0.1nm,0.3s,baz=223,slow=12,SNR=4.6							
TXAR	Lajitas Array	69.04	328	P		P	05 56 09.8	+1.4
	comp=Z,0.4nm,0.6s,baz=154,slow=7.5,SNR=5.5							
TORD	Torodi Ar. Bea	80.78	68	P		P	05 57 17.0	+0.8
	comp=Z,0.5nm,0.6s,baz=250,slow=3.6,SNR=3.7							
ZALV	Zalesovo Beam	150.70	32	PKPbc		PKPbc	06 04 53.4	+0.1
	comp=Z,1.4nm,0.5s,baz=280,slow=4.2,SNR=3.9							

ISK ***04*** *05:59:54.9, 38°.42N×39°.06E, h9km, ML2.2/4*
ISCJB ***04*** *05:59:55.7±0.5, 38°.42N±0°.03×39°.07E±0°.03, h6km±4km, Error ellipse: s-maj=4.6km s-min=3.9km az=25.8*
CSEM ***04*** *05:59:55.5±0.1, 38°.42N×39°.06E, h8km, ML2.7, Error ellipse: s-maj=2.6km s-min=2.3km az=36.0*
DDA ***04*** *05:59:55.7, 38°.41N×39°.08E, h7km, Ml2.7*

ISC 04 05:59:55.8±0.8, 38°.42N±0°.02×39°.07E±0°.02, h12km±5km, n26, σ0§43/46, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	Elazig	0.10	319	*i*P	Pg	05 59 58.8	+0.1
ELZG				*i*S	Sg	06 00 01.0	+0.1
ELZG	Elazig	0.10	319	P	Pg	05 59 58.8	+0.1
ELZG				S	Sg	06 00 01.0	+0.1
SVRC	Sivrice-ELAZID	0.19	103	PG	Pg	05 59 59.4	-0.7
SVRC				SG	Sg	06 00 02.9	-0.2
SVRC	Sivrice-ELAZID	0.19	103	*e*Pg	Pg	05 59 59.4	-0.7
SVRC				*e*Sg	Sg	06 00 02.9	-0.2
MALT	Malatya	0.52	258	PG	Pg	06 00 05.4	-0.4
MALT				SG	Sg	06 00 12.9	+0.2
MALT	Malatya	0.52	258	*e*Pg	Pg	06 00 05.4	-0.4
MALT				*e*Sg	Sg	06 00 12.9	+0.2
PTK	Pertek	0.53	28	PG	Pg	06 00 05.7	-0.5
PTK				SG	Sg	06 00 13.6	+0.2
PTK	Pertek	0.53	28	*e*Pg	Pg	06 00 05.7	-0.5
PTK				*e*Sg	Sg	06 00 13.6	+0.2
TNCL	Tunceli-Merkez	0.79	28	*i*P	Pb	06 00 11.4	0.0
TNCL				*i*S	Sb	06 00 22.0	-0.2
TNCL	Tunceli-Merkez	0.79	28	P	Pb	06 00 11.4	0.0
TNCL				S	Sb	06 00 22.0	-0.2
KEMA	Kemaliye	0.96	332	*i*P	Pg	06 00 13.6	-0.6
KEMA				*i*S	Sb	06 00 27.2	+0.1
KEMA	Kemaliye	0.96	332	P	Pg	06 00 13.6	-0.6
KEMA				S	Sb	06 00 27.2	+0.1
DIYA	Diyarbakir	0.97	121	*i*P	Pg	06 00 13.9	-0.5
DIYA				*i*S	Sb	06 00 28.1	+0.7
DIYA	Diyarbakir	0.97	121	P	Pg	06 00 13.9	-0.5
DIYA				S	Sb	06 00 28.1	+0.7
HEKM	Malatya_Hekimh	0.98	298	*i*P	Pb	06 00 14.7	-0.2
HEKM				*i*S	Sn	06 00 29.4	-0.1
HEKM	Malatya_Hekimh	0.98	298	P	Pb	06 00 14.7	-0.2
HEKM				S	Sn	06 00 29.4	-0.1
URFA	Urfa	1.00	191	PG	Pg	06 00 14.2	-0.8
URFA	Urfa	1.00	191	*e*Pg	Pg	06 00 14.2	-0.8
HANI	Diyarbakir_Han	1.05	90	*i*P	Pg	06 00 15.7	-0.2
HAN

comp=N,97nm,0.7s
BHGR Bahadurgarh 9.20 148 *ex* **Sn 06 03 56.7 -0.7**
KHET Khetri 9.32 155 *eS* **Sn 06 03 51.9 -8.5**
GEYT Alibeck 10.68 281 P **Pn 06 02 30.6 -2.7**
comp=N,2.6nm,0.3s,baz=125,slow=9.3,SNR=11
GEYT S **Sn 06 04 25.5 -6.9**
comp=N,1.5nm,0.3s,baz=131,slow=17,SNR=3.9
MKAR Makanchi Array 12.96 35 P **Pn 06 03 01.8 -0.4**
comp=N,0.1nm,0.3s,baz=225,slow=14,SNR=12
PYUN Piuthan 12.97 128 *eP* **Pn 06 03 02.5 -0.1**
comp=N,12nm,0.4s
DANN Dangsing 13.29 125 *eP* **Pn 06 03 07.3 +0.5**
comp=N,10nm,0.3s
KOLN Koldanda 13.58 127 *eP* **Pn 06 03 10.6 +0.3**
comp=N,4.8nm,0.3s
GKN Gorkha 14.11 124 *eP* **Pn 06 03 16.8 +0.1**
comp=N,9.5nm,0.3s
KKN Kakani 14.67 123 *eP* **Pn 06 03 23.3 -0.5**
comp=N,9.5nm,0.4s
DMN Daman 14.68 124 *eP* **Pn 06 03 22.5 -1.4**
comp=N,7.1nm,0.4s
KURBB Kurchatov Arra 14.87 18 P **P 06 03 26.7 +0.2**
comp=N,0.1nm,0.3s,baz=208,slow=12,SNR=4.6
KURBB S **Sn 06 06 16.2 +4.3**
baz=256,slow=24,SNR=3.0
GUN Gumba 15.01 121 *eP* **P 06 03 27.7 -1.0**
comp=N,9.5nm,0.3s
AB31 Akbulak array 15.12 330 ⇑P **Pn 06 03 28.4 -0.3**
comp=N,0.9nm,0.4s,baz=144,slow=12,SNR=21
AB31 ⇑S **S 06 06 06.8 -10**
comp=N,1.8nm,0.7s,baz=150,slow=23,SNR=6.3
JIRN Jiri 15.38 121 *eP* **P 06 03 32.1 -0.7**
comp=N,30nm,0.4s
BVAR Borovoye Array 16.38 358 P **Pn 06 03 45.8 +1.7**
comp=N,0.6nm,0.3s,baz=168,slow=7.6,SNR=4.7
AKTO Aktyubinsk 16.82 329 P **Pn 06 03 50.4 +1.2**
comp=N,1.0nm,0.3s,baz=138,slow=11,SNR=17
AKTO Aktyubinsk 16.82 329 ⇑P **Pn 06 03 50.0 +0.7**
comp=N,8.4nm,0.9s
AKTO ⇓S **S 06 06 50.1 -3.1**
comp=N,2.1nm,0.9s
ZALV Zalesovo Beam 19.63 24 P **Pn 06 04 20.5 -1.9**
comp=N,0.8nm,0.3s,baz=226,slow=12,SNR=8.7
HYB Hyderabad 20.18 160 *eP* Pn 06 04 39.3 +10
ZIRO ZIRO 21.03 109 *eP* P 06 04 49.5 +16
ARU Arti 21.60 340 P **P 06 04 41.4 +2.2**
comp=N,1.8nm,0.5s,baz=129,slow=8.7,SNR=3.6
BRTR Keskin Array B 29.71 288 P **P 06 05 56.7 +3.9**
comp=N,0.4nm,0.5s,baz=96,slow=12,SNR=3.4
AKASG Malin Array Be 33.11 309 P **P 06 06 24.6 +2.3**
comp=N,0.7nm,0.4s,baz=78,slow=7.2,SNR=5.1
MLR Muntele Rosu 35.00 299 P **P 06 06 41.7 +3.0**
comp=N,0.5nm,0.7s,baz=139,slow=9.3,SNR=7.1
FINES FINESS Array B 37.54 326 P **P 06 07 02.4 +2.6**
comp=N,1.3nm,0.4s,baz=121,slow=11,SNR=12
ARCES ARCESS Array B 41.13 337 P **P 06 07 32.2 +2.8**
comp=N,3.1nm,0.8s,baz=113,slow=8.2,SNR=12
HFS Hagfors 43.15 322 P **P 06 07 48.6 +2.7**
comp=N,5.0nm,0.5s,baz=96,slow=12,SNR=26
NB2 NORSAR Subarra 44.46 323 P **P 06 07 58.2 +1.9**
comp=Z,1.6nm,0.5s,baz=96,slow=7.9
NOA NORSAR Array B 44.46 323 P **P 06 07 58.5 +2.2**
comp=Z,2.5nm,0.5s,baz=97,slow=7.5,SNR=8.8
SPITS Spitsbergen Ar 47.42 347 P **P 06 08 22.2 +3.1**
comp=Z,7.5nm,1.1s,baz=99,slow=8.9,SNR=4.5
ESDC Sonseca Array 57.68 298 P **P 06 09 37.7 +2.8**
comp=Z,0.2nm,0.3s,baz=46,slow=7.6,SNR=3.8
TORD Torodi Ar. Bea 66.06 269 P **P 06 10 31.1 0.0**
comp=Z,1.0nm,0.8s,baz=43,slow=5.6,SNR=5.2
YKA Yellowknife Ar 81.07 3 P **P 06 12 00.3 +2.7**
comp=Z,0.6nm,0.6s,baz=351,slow=5.4,SNR=15
WRA Warramunga Arr 81.79 122 P **P 06 12 03.2 +1.2**
comp=Z,0.7nm,0.8s,baz=324,slow=4.9,SNR=7.8
ASAR Alice Springs 84.07 125 P **P 06 12 15.6 +1.9**
comp=Z,0.5nm,0.6s,baz=314,slow=5.0,SNR=5.5

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*ISCJB **04** 06:06:11.1±1.4, 39.°06N±0.°07×72.°28E±0.°06, h10km, Error ellipse: s-maj=10.7km s-min=6.2km az=169.2*
*KRNET **04** 06:06:12.9±0.1, 39.°24N×72.°32E, h13km, mb2.5*
*NNC **04** 06:06:12.1±1.7, 39.°22N×72.°42E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=17.3km s-min=6.6km az=159.0*
ISC 04 06:06:13.8±1.7, 39.°25N±0.°09×72.°32E±0.°05, h10km, n12, σ1§98/20, 17C-6D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**0.47**	**300**	⇑	*iP*	**Pg**	**06 06 21.9**	**-1.1**
DRK	baz=2.0			⇑	*iS*	**Sg**	**06 06 28.6**	**-0.6**
SFK	**Sufi-Kurgan**	**1.19**	**50**	⇑	P	**Pb**	**06 06 34.3**	**-2.3**
SFK	4.9nm,0.4s 25nm,0.4s			⇓	S	**Sb**	**06 06 50.5**	**-1.6**
SFK	**Sufi-Kurgan**	**1.19**	**50**	⇓	*iP*	**Pb**	**06 06 35.9**	**-0.7**
SFK	baz=49			⇓	*iS*	**Sb**	**06 06 51.8**	**-0.3**
BTK	**Batken**	**1.42**	**305**	⇑	*iP*	**Pn**	**06 06 38.9**	**-0.8**
BTK	baz=6.0			⇑	*iS*	**Sg**	**06 06 58.8**	**-0.6**
ARSB	**Arslanbob**	**2.13**	**13**	⇑	*iP*	**Pb**	**06 06 51.3**	**-1.3**
ARSB	baz=14			⇑	*iS*	**Sb**	**06 07 19.1**	**-0.1**
ARK	**Arkit**	**2.56**	**354**	⇑	*eP*	**Pn**	**06 06 56.7**	**+1.2**
ARK	baz=54			⇑	*eS*	**Sn**	**06 07 28.4**	**+1.6**
DZET	**Dzherino**	**2.76**	**262**	Pg		**Pb**	**06 07 03.2**	**-0.1**
DZET	6.0nm,0.7s 18nm,0.7s			Lg		Lg	06 07 41.5	
AML	**Almayashu**	**3.06**	**19**	⇑	*iP*	**Pb**	**06 07 06.0**	**-2.6**
AML	baz=19			⇑	*iS*	**Sn**	**06 07 42.7**	**+3.2**
MNAS	**Manas**	**3.24**	**2**	⇓	Pg	**Pb**	**06 07 08.2**	**-3.3**
MNAS	1.3nm,0.5s 15nm,0.7s			⇑	Lg	Lg	06 07 54.8	
AAK	**Ala-Archa**	**3.76**	**25**	⇑	Pg	**Pb**	**06 07 19.4**	**-1.0**
AAK	2.0nm,0.7s 3.1nm,0.5s			⇑	Lg	Lg	06 08 12.4	
KK31	**Karatay Array**	**4.09**	**341**	⇓	Pn	**Pn**	**06 07 19.0**	**+2.6**
KK31	0.3nm,0.3s,baz=154,slow=12,SNR=9.7 0.9nm,0.4s,baz=147,slow=24,SNR=3.9			⇑	Sn	**Sn**	**06 08 08.0**	**+3.7**
KK31	0.6nm,0.3s			⇑	Lg	Lg	06 08 21.4	
TKM2	**Tokmak 2**	**4.42**	**33**	⇓	Pg	**Pb**	**06 07 32.0**	**+0.3**
TKM2	1.9nm,0.9s 2.2nm,0.8s			⇑	Lg	Lg	06 08 30.6	

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*NNC **04** 06:41:25.9±2.2, 44.°27N×79.°94E, h26km±22km, mb3.4, mpv2.8, Error ellipse: s-maj=16.4km s-min=8.5km az=116.0*
*SOME **04** 06:41:26.4, 44.°23N×80.°00E, h5km*
ISC 04 06:41:25.2±1.4, 44.°21N±0.°04×80.°15E±0.°06, h16km±9km, n22, σ1§49/40, 6C-4D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**0.28**	**295**	*eP*		**Pg**	**06 41 31.2**	**-0.1**
DJR	58nm,0.1s 643nm,0.3s			*eS*		**Sg**	**06 41 34.5**	**-1.1**
PDGK	**Podgornoye**	**1.00**	**209**	⇑	P	**Pb**	**06 41 44.8**	**+0.5**
PDGK	9.1nm,0.4s 22nm,0.4s			⇓	S	**Sb**	**06 41 57.7**	**+0.3**
SHLS	**Shalkode**	**1.17**	**205**	*eP*		**Pn**	**06 41 46.7**	**-0.3**
SHLS	13nm,0.3s 52nm,0.3s			*eS*		**Sb**	**06 42 01.1**	**-0.9**
KAPS	**Kapalarasan**	**1.21**	**332**	*eP*		**Pn**	**06 41 47.8**	**+0.2**
KAPS	1.9nm,0.2s 5.9nm,0.3s			*eS*		**Sb**	**06 42 02.7**	**-0.5**
MNBS	**Baschi**	**1.27**	**264**	*eP*		**Pn**	**06 41 49.1**	**+0.7**
MNBS	32nm,0.1s 144nm,0.2s			*eS*		**Sn**	**06 42 05.7**	**+0.6**
KPKS	**Kokpek**	**1.30**	**235**	*eP*		**Pn**	**06 41 49.6**	**+0.9**
KPKS	91nm,0.1s 115nm,0.2s			*eS*		**Sb**	**06 42 06.4**	**+0.7**
UZB	**Uzynbulak**	**1.34**	**218**	*eP*		**Pb**	**06 41 50.8**	**+0.7**
UZB	5.2nm,0.2s 59nm,0.1s			*eS*		**Sb**	**06 42 08.2**	**+1.1**
KURS	**Kuram**	**1.60**	**244**	*eP*		**Pb**	**06 41 55.7**	**+1.2**
KURS	8.1nm,0.3s 22nm,0.3s			*eS*		**Sg**	**06 42 16.9**	**0.0**
ZHN	**Zhinishke**	**1.62**	**231**	*eP*		**Pb**	**06 41 55.2**	**+0.3**
ZHN	20nm,0.2s 75nm,0.2s			*eS*		**Sb**	**06 42 16.4**	**+1.2**
ARXS	**Arharly**	**1.67**	**271**	*eP*		**Pb**	**06 41 55.7**	**+0.1**
ARXS	18nm,0.2s 83nm,0.4s			*eS*		**Sb**	**06 42 17.3**	**+0.8**
SATY	**Saty**	**1.71**	**228**	*eP*		**Pb**	**06 41 57.5**	**+1.1**
SATY	49nm,0.2s 101nm,0.1s			*eS*		**Sb**	**06 42 19.8**	**+2.1**
CHKK	**Chushkaly**	**2.31**	**262**	*eP*		**Pb**	**06 42 07.1**	**+0.7**
CHKK	4.6nm,0.2s 54nm,0.2s			*eS*		**Sb**	**06 42 35.9**	**+1.2**
KOTS	**Kotyrbulak**	**2.41**	**247**	*eP*		**Pb**	**06 42 08.2**	**-0.1**
KOTS	9.0nm,0.3s 16nm,0.3s			*eS*		**Sb**	**06 42 38.6**	**+0.8**
MDOK	**Medeo**	**2.48**	**246**	Pn		**Pn**	**06 42 02.5**	**-2.6**
MDOK	6.9nm,0.4s 10.0nm,0.7s			Lg		Lg	06 42 39.7	
MDOK	**Medeo**	**2.48**	**246**	*eP*		**Pb**	**06 42 09.0**	**-0.5**
MDOK	5.7nm,0.4s 10.0nm,0.2s			*eS*		**Sb**	**06 42 39.5**	**-0.4**
KTBS	**Karatobe**	**2.55**	**260**	*eP*		**Pb**	**06 42 11.2**	**+0.5**
KTBS	3.1nm,0.2s 15nm,0.5s			*eS*		**Sb**	**06 42 43.2**	**+1.4**
IZV	**Izvestkoviy**	**2.83**	**247**	*eP*		**Pb**	**06 42 17.0**	**+1.7**
IZV	9.5nm,0.4s 15nm,0.4s			*eS*		**Sb**	**06 42 53.4**	**+3.7**
MAKZ	**Makanchi**	**2.90**	**26**	⇑	Pn	**Pn**	**06 42 09.8**	**-0.8**
MAKZ	0.9nm,0.6s 2.2nm,0.5s			⇑	Lg	Lg	06 42 55.6	
MK31	**Makanchi Array**	**2.99**	**30**	⇑	Pn	**Pn**	**06 42 13.3**	**+1.4**
MK31	0.4nm,0.3s,baz=208,slow=16,SNR=17 1.8nm,0.3s,baz=210,slow=25,SNR=12			⇓	Lg	Lg	06 42 58.5	
DGS	**Degeres**	**3.32**	**254**	*eP*		**Pb**	**06 42 24.2**	**+0.5**
DGS	2.6nm,0.2s 8.0nm,0.4s			*eS*		**Sb**	**06 43 06.0**	**+2.1**
TKM2	**Tokmak 2**	**3.55**	**250**	⇑	Pg	**Pb**	**06 42 29.9**	**+2.1**
TKM2	1.7nm,0.5s 3.8nm,0.5s			⇓	Lg	Lg	06 43 15.1	
AAK	**Ala-Archa**	**4.41**	**251**	⇓	Pn	**Pn**	**06 42 30.6**	**-1.0**
AAK	1.6nm,0.3s 1.2nm,0.4s			⇑	Sn	**Sn**	**06 43 17.8**	**-4.9**

IDC 04 06:42:10.1±41.0, 16.°04S×171.°16W, h0km, mb4.3/3, mb1 4.4/3, mb1mx3.6/55, mbtmp4.3/3, Error ellipse: s-maj=814.6km s-min=186.3km az=80.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**45.60**	**241**	P		P	06 50 33.9	+1.6
	2.0nm,0.6s,baz=61,slow=10,SNR=3.7							
WRA	**Warramunga Arr**	**51.80**	**257**	P		P	06 51 19.0	-1.2
	0.8nm,0.6s,baz=100,slow=7.4,SNR=21							
ASAR	**Alice Springs**	**51.97**	**252**	P		P	06 51 21.4	-0.1
	5.4nm,0.4s,baz=88,slow=8.1,SNR=82							

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*ISCJB **04** 06:50:36.7±0.9, 34.°21N±0.°05×36.°36E±0.°06, h4km±7km, Error ellipse: s-maj=10.8km s-min=6.2km az=135.0*
*CSEM **04** 06:50:37.0±0.4, 34.°21N×36.°35E, h2km, ML3.1, Error ellipse: s-maj=12.0km s-min=5.0km az=117.0*
*GRAL **04** 06:50:37.0±0.3, 34.°27N×36.°39E, h1km±3km, MD3.1*
*DDA **04** 06:50:53.3, 34.°43N×35.°97E, h36km, Ml3.3*
ISC 04 06:50:36.9±1.1, 34.°24N±0.°05×36.°36E±0.°04, h2km±11km, n19, σ0§88/32, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
FKH	**Fakeheh**	**0.04**	**81**	*eP*		**Pg**	**06 50 37.7**	**-0.1**
HWQ	**Hawqa**	**0.34**	**277**	*eP*		**Pg**	**06 50 43.6**	**+0.1**
HWQ				*eS*		**Sg**	**06 50 48.5**	**+0.5**
HWQ	**Hawqa**	**0.34**	**277**	*eP*		**Pg**	**06 50 43.6**	**+0.1**
HWQ				*eS*		**Sg**	**06 50 48.5**	**+0.5**
BHL	**Bhannes**	**0.67**	**241**	*eP*		**Pg**	**06 50 49.8**	**0.0**
BHL				*eS*		**Sg**	**06 50 59.2**	**+0.7**
BHL	**Bhannes**	**0.67**	**241**	*eP*		**Pg**	**06 50 49.8**	**0.0**
BHL				*eS*		**Sg**	**06 50 59.2**	**+0.7**
DQRL	**Deir Qamar**	**0.84**	**231**	*eP*		**Pg**	**06 50 53.0**	**-0.1**
DQRL				*eS*		**Sg**	**06 51 04.6**	**+0.6**
DQRL	**Deir Qamar**	**0.84**	**231**	*eP*		**Pg**	**06 50 53.0**	**-0.1**
DQRL				*eS*		**Sg**	**06 51 04.6**	**+0.6**
RCY	**Rachaya**	**0.86**	**211**	*eP*		**Pg**	**06 50 52.9**	**-0.5**
QRWL	**Qaraoun**	**0.89**	**219**	*eP*		**Pg**	**06 50 53.6**	**-0.3**
QRWL	**Qaraoun**	**0.89**	**219**	*eP*		**Pg**	**06 50 53.6**	**-0.3**
YAYL	**Yayladag**	**1.80**	**353**	*iP*		**Pn**	**06 51 09.1**	**0.0**
YAYL				*iS*		**Sn**	**06 51 32.9**	**+0.3**
YAYL	**Yayladag**	**1.80**	**353**	P		**Pn**	**06 51 09.1**	**0.0**
YAYL				S		**Sn**	**06 51 32.9**	**+0.3**
KUZU	**Kuzuini**	**2.60**	**13**	*iP*		**Pb**	**06 51 22.7**	**-1.4**
KUZU				*iS*		**Sn**	**06 51 53.7**	**+1.6**
KUZU	**Kuzuini**	**2.60**	**13**	P		**Pb**	**06 51 22.7**	**-1.4**
KUZU				S		**Sn**	**06 51 53.7**	**+1.6**
SURC	**SANLIURFA_SURC**	**3.21**	**34**	*iP*		**Pb**	**06 51 33.8**	**-0.9**
SURC				*iS*		**Sb**	**06 52 15.3**	**+1.0**
GULE	**Gulek**	**3.30**	**337**	*iP*		**Pn**	**06 51 30.3**	**+0.6**
GULE				*iS*		**Sn**	**06 52 07.8**	**-1.8**
GULE	**Gulek**	**3.30**	**337**	P		**Pn**	**06 51 30.3**	**+0.6**
GULE				S		**Sn**	**06 52 07.8**	**-1.8**
KERG	**Konya-Eregli**	**3.65**	**331**	*iP*		**Pn**	**06 51 34.9**	**+0.4**
KERG	**Konya-Eregli**	**3.65**	**331**	P		**Pn**	**06 51 34.9**	**+0.4**

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*ISCJB **04** 06:50:58.9±0.2, 32.°08N±0.°03×130.°94E±0.°03, h11km, mb4.3/52, MS3.7/24, Error ellipse: s-maj=3.9km s-min=3.3km az=35.8*
*IDC **04** 06:50:58.3±0.7, 32.°04N×131.°00E, h0km, mb4.1/20, mb1 4.2/24, mb1mx4.0/73, mbtmp4.0/24, ML3.3/4, MS3.6/23, Ms1 3.6/23, ms1mx3.4/72, Error ellipse: s-maj=19.7km s-min=10.5km az=85.0*
*NIED **04** 06:51:00, 32.°10N×130.°90E, h8km, Mw4.4 Best double couple: M0:4.12000×10^15 NP1:φs197.00000°, δ44.00000°, λ-142.00000°. NP2:φs77.00000°, δ65.00000°, λ-53.00000°.*
*JMA **04** 06:51:00.0, 32.°06N×130.°92E, h9km±1km, M4.4 Broadband fault plane solution: P waves. NP1: φs58.00000°, δ53.00000°, λ-50.00000°. NP2:φs184.00000°, δ53.00000°, λ-130.00000°. Principal axes: T Plg0.0000°, Azm121.0000°; N Plg31.0000°, Azm211.0000°; P Plg59.0000°, Azm31.0000°;*
JMA Felt IV J1.
*NEIC **04** 06:51:01.1±1.3, 32.°07N×130.°89E, h16km±7km, mb4.7/26 Error ellipse: s-maj=6.9km s-min=5.0km az=171.0*
NEIC Recorded [4 JMA] in Miyazaki.
*MOS **04** 06:51:01.3±1.0, 32.°00N×130.°94E, h33km, mb4.5/20, Error ellipse: s-maj=10.5km s-min=6.4km az=100.6*
*BJI **04** 06:51:04.7, 32.°05N×130.°81E, h40km, mb4.4/31, mB4.7/25, Ms4.2/21, Ms7 3.9/20*
ISC 04 06:51:00.5±0.4, 32.°05N±0.°03×130.°88E±0.°03, h11km, n159, σ1§76/158, mb4.5/52, MS3.7/25, 11C-3D, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JTZ	**Takazaki**	**0.23**	**130**	⇑	P	**Pg**	**06 51 04.3**	**-1.0**
JTZ				⇑	S	**Sg**	**06 51 07.6**	**-0.9**
JZO	**Okuchi**	**0.26**	**291**	⇑	P	**Pg**	**06 51 05.7**	**-0.1**
JZO				⇑	S	**Sg**	**06 51 09.8**	**+0.4**
JIU2	**Izumi 2**	**0.50**	**353**	⇑	P	**Pg**	**06 51 09.8**	**-0.5**
JIU2				⇑	S	**Sg**	**06 51 16.5**	**-0.4**
JTSN	**Tsuno**	**0.56**	**69**	P		**Pg**	**06 51 10.2**	**-1.3**
JNAR	**Kushima--Naru**	**0.62**	**147**	⇑	P	**Pg**	**06 51 12.1**	**-0.4**
JNU	**Nakatsue**	**1.07**	**360**	Pg		**Pb**	**06 51 20.3**	**-0.8**
JNU	257nm,0.3s,baz=204,slow=7.8,SNR=1014 703nm,0.3s,baz=59,slow=19,SNR=38			Lg		Lg	06 51 34.0	
JNU	**Nakatsue**	**1.07**	**360**	*e*Pg		**Pb**	**06 51 20.1**	**-0.9**
JNU				*e*Sn		**Sg**	**06 51 34.6**	**-0.5**
TJN	**Taejon**	**5.21**	**327**	⇓	*iP*	**Pn**	**06 52 19.8**	**+1.5**
TJN				*i*	S	**Sn**	**06 53 18.0**	**-0.4**
JOW	**Kunigami**	**5.67**	**204**	Pn		**Pn**	**06 52 26.3**	**+1.6**
	3.2nm,0.3s,baz=62,slow=13,SNR=5.7							
JOW	**Kunigami**	**5.67**	**204**	*e*Pn		**Pn**	**06 52 25.7**	**+1.0**
KSRS	**Korea Array**	**5.92**	**337**	Pn		**Pn**	**06 52 29.9**	**+1.8**
	0.5nm,0.3s,baz=158,slow=14,SNR=6.0							
KSRS				Pg		**Pg**	**06 52 52.1**	**-1.7**
	1.1nm,0.3s,baz=151,slow=18,SNR=19							
KSRS				Sn		**Sn**	**06 53 35.3**	**-0.5**
	0.6nm,0.3s,baz=153,slow=30,SNR=4.5							
KSRS				Lg		Lg	06 54 02.5	
	1.2nm,0.3s,baz=154,slow=32,SNR=7.8							
KSRS				LR		LR	06 54 47.0	
	comp=Z,614nm,18.9s,baz=180,slow=38							
KS15	**Wonju Array Si**	**5.92**	**336**	*e*Pn		**Pn**	**06 52 27.8**	**-0.3**
INU	**Inuyama**	**6.08**	**56**	*e*Pn		**Pn**	**06 52 30.5**	**+0.2**
MAJO	**Matsushiro**	**7.54**	**52**	*e*Pn		**Pn**	**06 52 51.3**	**+0.9**
MAJO	**Matsushiro**	**7.54**	**52**	⇑	*iP*	**Pn**	**06 52 51.7**	**+1.3**
MAT	**Matsushiro**	**7.54**	**52**	P		**Pn**	**06 52 51.5**	**+1.1**
MAT				S		**Sn**	**06 54 21.9**	**+6.1**
MJB9	**Matsu-Tunnel**	**7.54**	**51**	*e*Pn		**Pn**	**06 52 51.3**	**+0.9**
MJAR	**Matsushiro Arr**	**7.54**	**52**	Pn		**Pn**	**06 52 51.5**	**+1.1**
	2.8nm,0.3s,baz=241,slow=14,SNR=38							
MJAR				Lg		Lg	06 55 02.4	
	baz=232,slow=28,SNR=5.1							
MJAR				LR		LR	06 55 38.0	
	comp=Z,127nm,18.4s,baz=215,slow=37							
JHJ	**Hachijo jima 2**	**7.59**	**80**	LR		LR	06 55 31.8	
	comp=Z,271nm,20.8s,baz=256,slow=36							
NJ2	**Nanjing**	**10.21**	**273**	*e*P		**Pn**	**06 53 30.1**	**+3.1**
NJ2				S		**Sn**	**06 55 25.7**	**+4.3**
NJ2				pmax		pmax		
	comp=Z,14nm,0.6s							
NJ2				LR		LR		
	comp=N,1μm,13.0s							
NJ2				LR		LR		
	comp=E,250nm,7.0s							
NJ2				LR		LR		
	comp=Z,770nm,11.4s							
USRK	**Ussuriysk Ar.**	**12.16**	**4**	Pn		**Pn**	**06 53 55.9**	**+2.2**
	0.1nm,0.3s,baz=177,slow=14,SNR=6.5							
USRK				LR		LR	06 58 26.8	
	comp=Z,254nm,19.8s,baz=173,slow=37							
CN2	**Changchun**	**12.49**	**342**	*e*P		**Pn**	**06 53 58.0**	**-0.1**
CN2				*es*P		P	06 54 13.1	+3.2
CN2				*eS*		**Sn**	**06 56 14.6**	**-2.6**
CN2				pmax		pmax		
	comp=Z,10.0nm,0.9s							
CN2				LR		LR		
	comp=N,460nm,15.0s							
CN2				LR		LR		
	comp=E,1μm,15.0s							
CN2				LR		LR		
	comp=Z,810nm,17.0s							
MDJ	**Mudanjiang**	**12.59**	**356**	P		P	06 54 05.6	-5.5
MDJ				S		**Sn**	**06 56 27.3**	**+7.6**
MDJ				pmax		pmax		
	comp=Z,10.0nm,1.5s							
MDJ				pmax		pmax		
	comp=Z,130nm,4.0s							
MDJ				LR		LR		
	comp=Z,500nm,9.6s							
MDJ				LR		LR		
	comp=Z,660nm,11.2s							
MDJ				LR		LR		
	comp=Z,520nm,11.1s							
QZH	**Quanzhou**	**12.91**	**240**	*e*P		Pn	06 53 58.8	-5.2
QZH				*e*S		**Sn**	**06 56 23.1**	**-4.6**
ASAJ	**Asahikawa**	**15.15**	**34**	Pn		**Pn**	**06 54 34.6**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=251,slow=14,SNR=3.5							
ASAJ				LR		LR	07 00 04.7	
	comp=Z,115nm,21.9s,baz=248,slow=36							
ASAJ	**Asahikawa**	**15.15**	**34**	*e*Pn		**Pn**	**06 54 33.5**	**-0.9**
	comp=Z,32nm,1.4s							
KLR	**Kul'dur**	**17.18**	**2**	P		**P**	**06 55 01.5**	**-0.5**
	comp=Z,0.0nm,0.3s,baz=175,slow=7.6,SNR=24							
KLR				LR		LR	07 00 54.1	
	comp=Z,12nm,21.1s,baz=183,slow=35							
KLR	**Kul'dur**	**17.18**	**2**	*d*/*iP*		**P**	**06 55 01.3**	**-0.7**
HHC	**Hu-ho-hao-te**	**17.82**	**305**	*e*P		**Pn**	**06 55 08.5**	**-0.1**
HHC				PP		**PnPn**	**06 55 23.9**	**+4.6**
HHC				S		**Sn**	**06 58 20.8**	**-6.5**
HHC				pmax		pmax		
	comp=Z,15nm,0.5s							
HHC				pmax		pmax		
	comp=Z,61nm,5.3s							
HHC				LR		LR		
	comp=Z,150nm,6.9s							
HHC				LR		LR		
	comp=Z,240nm,9.5s							
HHC				LR		LR		
	comp=Z,250nm,9.5s							
KUR	**Kuril'sk**	**18.64**	**40**	⇑	*iP*	**Pn**	**06 55 18.7**	**+0.3**
HIA	**Hailar**	**19.13**	**337**	*e*P		**Pn**	**06 55 25.7**	**+1.4**
	comp=Z,26nm,0.9s							
HIA	**Hailar**	**19.13**	**337**	*e*P		**Pn**	**06 55 25.7**	**+1.4**
HIA				pmax		pmax		
	comp=Z,26nm,0.9s							
ZEA	**Zeya**	**21.84**	**354**	*e*P		**P**	**06 55 53.8**	**+1.0**
ZEA				pmax		pmax		
	comp=Z,43nm,1.2s							
ZEA				MLR		MLR		
	comp=Z,300nm,11.0s							
ZEA				MLR		MLR		
	comp=N,300nm,10.0s							
GUMO	**Guam**	**22.40**	**142**	LR		LR	07 03 35.3	
	comp=N,107nm,20.0s,baz=38,slow=34							
LZH	**Lanzhou**	**22.73**	**288**	*e*P		**P**	**06 56 06.6**	**+3.9**
LZH				pP		sP	06 56 16.1	+8.8
LZH				sP		pP	06 56 23.0	+17
LZH				pmax		pmax		
	comp=N,20nm,1.3s							
LZH				pmax		pmax		
	comp=N,100nm,4.3s							
CD2	**Chengdu**	**23.14**	**274**	P		**P**	**06 56 06.8**	**-0.1**
CD2				pmax		pmax		
	comp=N,20nm,0.9s							
CD2				LR		LR		
	comp=N,920nm,13.1s							
CD2				LR		LR		
	comp=N,620nm,13.1s							
ULN	**Ulaanbaatar**	**24.01**	**318**	*e*P		**P**	**06 56 15.8**	**+0.4**
	comp=N,20nm,1.2s							
ULN	**Ulaanbaatar**	**24.01**	**318**	⇑	*iP*	**P**	**06 56 15.3**	**-0.1**
ULN				*i*	*SP	sP	06 56 32.1	+12
ULN				pmax		pmax		
	comp=Z,28nm,1.7s							
SONA0	**Songino Array**	**24.37**	**317**	*e*P		**P**	**06 56 19.0**	**+0.3**
SONM	**Songino Array**	**24.37**	**317**	P		**P**	**06 56 19.0**	**+0.3**
	comp=Z,6.6nm,1.0s,baz=128,slow=9.8,SNR=24							
SONM				LR		LR	07 07 05.3	
	comp=Z,147nm,18.7s,baz=132,slow=40							
SONA1	**Songino Array**	**24.37**	**317**	*e*P		**P**	**06 56 18.8**	**+0.1**
DAV	**Davao City (W)**	**25.34**	**192**	LR		LR	07 07 51.7	
	comp=Z,74nm,18.2s,baz=348,slow=40							
KMI	**Kunming**	**25.61**	**262**	P		**P**	**06 56 31.9**	**+1.7**
KMI				pP		sP	06 56 43.3	+8.4
KMI				sP		pP	06 56 48.7	+15
KMI				pmax		pmax

GTA				pP	sP	06 56 46.6	+6.7
GTA				sP	pP	06 56 52.7	+14
GTA				S	**S**	**07 01 05.1**	**-2.0**
GTA				sS	sS	07 01 23.3	+11
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,40nm,10.7s						
GTA				LR	LR		
	comp=Z,290nm,15.5s						
GTA				LR	LR		
	comp=Z,170nm,14.8s						
GTA				LR	LR		
	comp=Z,220nm,11.7s						
ZAK	**Zakamensk**	**27.45**	**320**	*e*P	**P**	**06 56 45.5**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
TLY	**Talaya**	**27.95**	**323**	LR	LR	07 07 55.4	
	comp=Z,68nm,18.6s,baz=42,slow=36						
TLY	**Talaya**	**27.95**	**323**	*e*P	**P**	**06 56 53.5**	**+2.6**
TLY				pmax	pmax		
	comp=Z,7.0nm,1.6s						
TLY				MLR	MLR		
	comp=Z,77nm,10.0s						
PETK	**Petropavlovsk-**	**28.57**	**35**	LR	LR	07 07 41.0	
	comp=Z,75nm,21.9s,baz=156,slow=35						
CMAR	**Chiang Mai Arr**	**31.77**	**253**	LR	LR	07 11 36.7	
	comp=Z,68nm,18.0s,baz=54,slow=39						
H11N2	**WAKE ISLAND Hy**	**34.48**	**102**	T	T	07 33 48.8	
	baz=298,slow=74,SNR=29						
H11N1	**WAKE ISLAND Hy**	**34.49**	**102**	T	T	07 33 49.2	
	baz=298,slow=74,SNR=31						
H11N3	**WAKE ISLAND Hy**	**34.50**	**102**	T	T	07 33 51.4	
	baz=298,slow=74,SNR=37						
H11S3	**WAKE ISLAND Hy**	**34.91**	**104**	T	T	07 34 25.6	
	baz=304,slow=75,SNR=10						
H11S1	**WAKE ISLAND Hy**	**34.91**	**104**	T	T	07 34 23.4	
	baz=304,slow=75,SNR=14						
H11S2	**WAKE ISLAND Hy**	**34.92**	**104**	T	T	07 34 34.8	
	baz=304,slow=75,SNR=7.0						
WMQ	**Urumqi**	**35.66**	**302**	P	**P**	**06 58 00.3**	**+1.7**
WMQ				pP	sP	06 58 12.4	+9.0
WMQ				pmax	pmax		
	comp=Z,24nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,190nm,4.5s						
WMQ				LR	LR		
	comp=Z,370nm,17.5s						
WMQ				LR	LR		
	comp=Z,540nm,15.5s						
WMQ				LR	LR		
	comp=Z,220nm,17.5s						
JIRN	**Jiri**	**38.80**	**275**	*e*P	**P**	**06 58 27.2**	**+1.3**
GUN	**Gumba**	**38.99**	**276**	*e*P	**P**	**06 58 28.2**	**+0.8**
	comp=Z,41nm,0.9s						
ZAA0	**Zalesovo Array**	**39.26**	**318**	*e*P	**P**	**06 58 28.3**	**-0.7**
	comp=Z,12nm,1.5s						
ZALV	**Zalesovo Beam**	**39.26**	**318**	P	**P**	**06 58 28.4**	**-0.5**
	comp=Z,0.5nm,0.2s,baz=105,slow=5.1,SNR=5.3						
ZALV				LR	LR	07 16 07.4	
	comp=Z,68nm,18.2s,baz=66,slow=38						
ZALV	**Zalesovo Beam**	**39.26**	**318**	*e*P	**P**	**06 58 28.3**	**-0.6**
ZAA1	**Zalesovo Array**	**39.27**	**318**	*e*P	**P**	**06 58 28.4**	**-0.5**
KKN	**Kakani**	**39.53**	**276**	*e*P	**P**	**06 58 32.2**	**+0.4**
	comp=Z,19nm,0.9s						
MK01	**Makanchi Array**	**39.67**	**306**	*e*P	**P**	**06 58 31.7**	**-0.9**
TIXI	**Tiksi**	**39.67**	**359**⇑	*e*P	**P**	**06 58 31.3**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MK31	**Makanchi Array**	**39.68**	**306**	*e*P	**P**	**06 58 32.3**	**-0.3**
MK31	**Makanchi Array**	**39.68**	**306**	*e*P	**P**	**06 58 32.3**	**-0.3**
MK32	**Makanchi Array**	**39.68**	**306**	*e*P	**P**	**06 58 32.2**	**-0.4**
MKAR	**Makanchi Array**	**39.68**	**306**	P	**P**	**06 58 32.2**	**-0.3**
	comp=Z,1.7nm,0.9s,baz=94,slow=10,SNR=10						
MKAR				LR	LR	07 16 11.6	
	comp=Z,106nm,19.9s,baz=68,slow=38						
MKAR	**Makanchi Array**	**39.68**	**306**	*e*P	**P**	**06 58 32.3**	**-0.3**
	comp=Z,21nm,1.1s						
MKAR	**Makanchi Array**	**39.68**	**306**	*e*P	**P**	**06 58 32.3**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,21nm,1.1s						
DANN	**Dangsing**	**40.65**	**277**	*e*P	**P**	**06 58 41.9**	**+0.8**
	comp=Z,22nm,0.9s						
KOLN	**Koldanda**	**40.95**	**277**	*e*P	**P**	**06 58 44.2**	**+0.6**
	comp=Z,10nm,0.9s						
PYUN	**Piuthan**	**41.37**	**277**	*e*P	**P**	**06 58 47.6**	**+0.6**
	comp=Z,44nm,1.1s						
BILL	**Bilibino**	**41.44**	**19**	*i*P	**P**	**06 58 45.2**	**-1.6**
BILL				*i*		07 00 37.3	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.3s						
BILL				MLR	MLR		
	comp=Z,80nm,14.0s						
KURK	**Kurchatov**	**42.44**	**312**	*e*P	**P**	**06 58 54.6**	**-0.6**
	comp=Z,8.1nm,1.1s						
KURK	**Kurchatov**	**42.44**	**312**⇑	*i*P	**P**	**06 58 53.9**	**-1.2**
KURK				pmax	pmax		
	comp=Z,14nm,1.7s						
KURBB	**Kurchatov Arra**	**42.48**	**312**	P	**P**	**06 58 54.9**	**-0.6**
	comp=Z,10.0nm,1.4s,baz=98,slow=9.1,SNR=18						
PMG	**Port Moresby**	**44.06**	**157**	LR	LR	07 14 55.0	
	comp=Z,84nm,21.5s,baz=338,slow=33						
NRIK	**Noril'sk**	**44.53**	**340**	LR	LR	07 18 28.7	
	comp=Z,99nm,19.9s,baz=22,slow=37						
KSH	**Kashi**	**44.58**	**296**	P	**P**	**06 59 17.1**	**+4.3**
KSH				pP	sP	06 59 30.3	+13
KSH				PP	**PP**	**07 01 02.4**	**+5.7**
KSH				S	**S**	**07 05 51.1**	**+2.5**
KSH				sS	sS	07 06 10.9	+17
KSH				SS	**SS**	**07 09 03.2**	**-5.0**
KSH				pmax	pmax		
	comp=Z,170nm,4.5s						
KSH				LR	LR		
	comp=Z,270nm,6.2s						
KSH				LR	LR		
	comp=Z,210nm,5.9s						
KSH				LR	LR		
	comp=Z,430nm,6.7s						
AAK	**Ala-Archa**	**45.31**	**300**	LR	LR	07 17 42.7	
	comp=Z,116nm,21.1s,baz=92,slow=35						
BVAR	**Borovoye Array**	**47.66**	**315**	P	**P**	**06 59 36.4**	**-0.3**
	comp=Z,1.6nm,0.4s,baz=98,slow=8.9,SNR=21						
BRVK	**Borovoye**	**47.73**	**315**	*e*P	**P**	**06 59 36.9**	**-0.3**
	comp=Z,14nm,1.1s						
BRVK	**Borovoye**	**47.73**	**315**⇑	*i*P	**P**	**06 59 37.0**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,15nm,1.2s						
KK31	**Karatay Array**	**48.16**	**301**	*e*P	**P**	**06 59 40.4**	**-0.3**
KK31	**Karatay Array**	**48.16**	**301**	*e*P	**P**	**06 59 40.4**	**-0.3**
KKAR	**Karatay Array**	**48.16**	**301**	*e*P	**P**	**06 59 40.5**	**-0.3**
KKAR	**Karatay Array**	**48.16**	**301**	*e*P	**P**	**06 59 40.5**	**-0.3**
HNR	**Honiara**	**49.73**	**141**	LR	LR	07 20 12.2	
	comp=Z,66nm,18.2s,baz=24,slow=35						
WR1	**Warramunga Arr**	**51.80**	**176**	*e*P	**P**	**07 00 09.4**	**+0.9**
	comp=Z,17nm,1.5s						
WRA	**Warramunga Arr**	**51.80**	**176**	P	**P**	**07 00 09.4**	**+0.9**
	comp=Z,1.8nm,1.0s,baz=352,slow=8.3,SNR=5.1						
ARU	**Arti**	**54.38**	**319**	*e*P	**P**	**07 00 26.0**	**-1.1**
	comp=Z,5.4nm,0.6s						
ARU	**Arti**	**54.38**	**319***d*	*i*P	**P**	**07 00 26.1**	**-1.1**
ARU				S	**S**	**07 08 01.5**	**-3.6**
ARU				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ABKAR	**Akbulak array**	**54.50**	**310**	*e*P	**P**	**07 00 27.4**	**-0.8**
IM3	**Indian Mountai**	**55.28**	**29**	*e*P	**P**	**07 00 33.3**	**-0.3**
AS01	**Alice Springs**	**55.48**	**177**	*e*P	**P**	**07 00 34.7**	**-0.7**
ASAR	**Alice Springs**	**55.48**	**177**	P	**P**	**07 00 34.5**	**-0.9**
	comp=Z,1.6nm,0.9s,baz=359,slow=5.6,SNR=8.8						
AKTO	**Aktyubinsk**	**55.53**	**312**	P	**P**	**07 00 34.8**	**-0.8**
	comp=Z,2.6nm,0.9s,baz=95,slow=11,SNR=6.4						
PPLA	**Purkeypile**	**56.13**	**33**	*e*P	**P**	**07 00 39.8**	**0.0**
	comp=Z,19nm,1.4s						
CAST	**Castle Rocks**	**56.13**	**32**	*e*P	**P**	**07 00 39.4**	**-0.3**
	comp=Z,6.1nm,1.0s						
OHAK	**Old Harbor**	**56.21**	**39**	*e*P	**P**	**07 00 39.5**	**-0.7**
	comp=Z,26nm,1.6s						
KDAK	**Kodiak Island**	**56.51**	**39**	*e*P	**P**	**07 00 41.7**	**-0.7**
	comp=Z,15nm,1.1s						
KDAK	**Kodiak Island**	**56.51**	**39**	*e*P	**P**	**07 00 41.7**	**-0.7**
KDAK				pmax	pmax		
	comp=Z,15nm,1.1s						
MLY	**Manley**	**56.58**	**30**	*e*P	**P**	**07 00 43.1**	**+0.2**
	comp=Z,5.5nm,1.2s						
RND	**Reindeer**	**57.58**	**32**	*e*P	**P**	**07 00 49.3**	**-0.7**
	comp=Z,7.9nm,1.1s						
RND	**Reindeer**	**57.58**	**32**	*e*P	**P**	**07 00 49.3**	**-0.7**
RND				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MDM	**Murphy Dome**	**57.65**	**30**	*e*P	**P**	**07 00 50.1**	**-0.3**
	comp=Z,8.4nm,1.0s						
ILAR	**Eielson Array**	**58.24**	**30**	P	**P**	**07 00 53.6**	**-1.0**
	comp=Z,0.7nm,0.9s,baz=291,slow=8.6,SNR=5.6						
ILB	**Eielson Array**	**58.24**	**30**	*e*P	**P**	**07 00 53.6**	**-1.0**
DHY	**Denali Highway**	**58.29**	**32**	*e*P	**P**	**07 00 54.1**	**-1.0**
	comp=Z,5.2nm,1.3s						
SCM	**Sheep Creek Mo**	**58.51**	**33**	*e*P	**P**	**07 00 55.8**	**-0.8**
	comp=Z,16nm,1.3s						
SCM	**Sheep Creek Mo**	**58.51**	**33**	*e*P	**P**	**07 00 55.8**	**-0.8**
SCM				pmax	pmax		
	comp=Z,16nm,1.3s						
SCRK	**Sand Creek**	**59.62**	**31**	*e*P	**P**	**07 01 03.0**	**-1.4**
	comp=Z,4.3nm,1.2s						
BMRM	**Bremner River**	**59.96**	**34**	*e*P	**P**	**07 01 06.3**	**-0.4**
	comp=Z,7.8nm,1.2s						
INK	**Inuvik**	**62.65**	**25**	*e*P	**P**	**07 01 24.0**	**-0.6**
INK	**Inuvik**	**62.65**	**25**	*e*P	**P**	**07 01 24.0**	**-0.6**
STKA	**Stephens Creek**	**64.38**	**170**	LR	LR	07 28 59.3	
	comp=Z,52nm,20.6s,baz=26,slow=35						
KBZ	**Khabaz**	**67.33**	**308**	P	**P**	**07 01 56.0**	**+0.6**
	comp=Z,2.7nm,1.0s,baz=234,slow=8.7,SNR=3.6						
KBZ				LR	LR	07 34 40.7	
	comp=Z,55nm,18.7s,baz=28,slow=39						
KVAR	**Kislovodsk Arr**	**67.38**	**309**	P	**P**	**07 01 56.4**	**+0.5**
	comp=Z,3.5nm,0.4s,baz=249,slow=3.9,SNR=4.4						
KVAR				LR	LR	07 33 56.2	
	comp=Z,51nm,18.2s,baz=34,slow=38						
KIV	**Kislovodsk**	**67.38**	**309**	*e*P	**P**	**07 01 56.4**	**+0.5**
	comp=Z,8.7nm,0.4s						
KIV	**Kislovodsk**	**67.38**	**309**	*e*P	**P**	**07 01 55.6**	**-0.4**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
FIA0	**FINESS Array S**	**68.97**	**330**	*e*P	**P**	**07 02 06.8**	**+1.4**
FIA0	**FINESS Array S**	**68.97**	**330**	*e*P	**P**	**07 02 06.8**	**+1.4**
FINES	**FINESS Array B**	**68.97**	**330**	P	**P**	**07 02 06.8**	**+1.4**
	comp=Z,1.1nm,0.5s,baz=69,slow=7.6,SNR=5.3						
FINES				LR	LR	07 34 59.2	
	comp=Z,74nm,19.5s,baz=340,slow=38						
FINES	**FINESS Array B**	**68.97**	**330**	*i*P	**P**	**07 02 04.4**	**-1.0**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA	**Yellowknife Ar**	**72.30**	**26**	P	**P**	**07 02 23.8**	**-1.9**
	comp=Z,1.1nm,1.0s,baz=293,slow=5.0,SNR=8.7						
YKA	**Yellowknife Ar**	**72.30**	**26**	*i*P	**P**	**07 02 24.7**	**-1.0**
YKA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
AKASG	**Malin Array Be**	**72.64**	**319**	P	**P**	**07 02 26.4**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=54,slow=6.0,SNR=4.9						
AKASG	**Malin Array Be**	**72.64**	**319**	*i*P	**P**	**07 02 28.0**	**0.0**
HFS	**Hagfors**	**74.75**	**333**	P	**P**	**07 02 42.0**	**+1.8**
	comp=Z,1.2nm,0.8s,baz=69,slow=16,SNR=2.3						
NB200	**NORSAR Array S**	**75.12**	**334**	*e*P	**P**	**07 02 43.6**	**+1.2**
NOA	**NORSAR Array B**	**75.12**	**334**	P	**P**	**07 02 43.6**	**+1.2**
	comp=Z,1.3nm,0.8s,baz=51,slow=5.8,SNR=3.4						
NOA				LR	LR	07 38 34.1	
	comp=Z,35nm,18.5s,baz=40,slow=38						
BR101	**Keskin Array S**	**75.31**	**308**	*e*P	**P**	**07 02 43.0**	**-1.1**
BRTR	**Keskin Array B**	**75.31**	**308**	P	**P**	**07 02 43.0**	**-1.1**
	comp=Z,0.8nm,0.8s,baz=94,slow=5.3,SNR=4.5						
BRTR	**Keskin Array B**	**75.31**	**308**	*i*P	**P**	**07 02 45.0**	**+1.0**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KJJM	**Johnny Jack Ri**	**80.00**	**49**	*e*P	**P**	**07 03 10.1**	**+0.1**
CLL	**Collm**	**80.69**	**326**	*e*pP	**pP**	**07 03 17.0**	**-0.1**
CLL				*e*		07 03 25.0	
CLL				Lm	MLR	07 42 00.0	
	comp=Z,100nm,19.3s						
CLL	**Collm**	**80.69**	**326**	*e*P	**P**	**07 03 17.0**	**+3.5**
CLL				*e*		07 03 25.0	
FCC	**Fort Churchill**	**82.09**	**22**	*e*P	**P**	**07 03 19.8**	**-0.9**
	comp=Z,10nm,1.3s						
FCC	**Fort Churchill**	**82.09**	**22**	*e*P	**P**	**07 03 19.8**	**-0.9**
FCC				pmax	pmax		
	comp=Z,10.0nm,1.3s						
EKA	**Eskdalemuir Ar**	**84.49**	**336**	LR	LR	07 43 37.6	
	comp=Z,38nm,19.6s,baz=350,slow=37						
KVN	**Kaiserville**	**84.60**	**47**	*e*P	**P**	**07 03 34.3**	**0.0**
	comp=Z,4.6nm,1.2s						
KVN	**Kaiserville**	**84.60**	**47**	*e*P	**P**	**07 03 34.3**	**0.0**
KVN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
NV01	**Mina Array Sit**	**84.84**	**47**	*e*P	**P**	**07 03 35.0**	**-0.7**
NVAR	**Mina Array Bea**	**84.84**	**47**	P	**P**	**07 03 35.2**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=293,slow=5.6,SNR=6.0						
HWUT	**Hardware Ranch**	**86.86**	**42**	*e*P	**P**	**07 03 44.5**	**-1.1**
	comp=Z,8.1nm,1.3s						
PD31	**Pinedale Array**	**87.20**	**40**	*e*P	**P**	**07 03 46.1**	**-1.2**
PDAR	**Pinedale Array**	**87.20**	**40**	P	**P**	**07 03 46.1**	**-1.2**
	comp=Z,1.3nm,0.9s,baz=273,slow=2.5,SNR=7.1						
PDAR	**Pinedale Array**	**87.20**	**40**	*e*P	**P**	**07 03 46.0**	**-1.3**
ULM	**Lac du Bonnet**	**88.20**	**28**	P	**P**	**07 03 49.9**	**-1.7**
	comp=Z,4.0nm,1.0s,baz=308,slow=7.9,SNR=6.4						
ULM	**Lac du Bonnet**	**88.20**	**28**	*e*P	**P**	**07 03 50.2**	**-1.3**
	comp=Z,7.2nm,1.2s						
ULM	**Lac du Bonnet**	**88.20**	**28**	*e*P	**P**	**07 03 50.3**	**-1.3**
ULM				pmax	pmax		
	comp=Z,7.0nm,1.2s						
P18A	**Preston Nutter**	**88.92**	**43**	*e*P	**P**	**07 03 54.9**	**-0.7**
	comp=Z,6.9nm,1.2s						
PV10	**Paradox Valley**	**90.46**	**43**	*e*P	**P**	**07 04 03.5**	**+0.8**
PV05	**Paradox Valley**	**90.63**	**43**	*e*P	**P**	**07 04 03.1**	**-0.4**
PV01	**Paradox Valley**	**90.90**	**43**	*e*P	**P**	**07 04 04.3**	**-0.4**
ANMO	**Albuquerque**	**94.32**	**44**⇑	*e*P	**P**	**07 04 18.9**	**-1.7**
ANMO				pmax	pmax		
	comp=Z,1.0nm,1.9s						
NVL	**N'lazarevskaya**	**129.41**	**202**	*e*PKIKP	**PKPdf**	**07 10 04.2**	**-4.0**
NVL				pmax	pmax		
	comp=Z,2.0nm,0.4s						

IDC ***04*** *06:55:47.5±1.1, 44°.84N×10°.96E, h0km, mb3.6/5, mb1 3.8/8, mb1mx3.5/59, mbtmp3.6/8, ML3.7/3, MS2.9/2, Ms1 2.9/2, ms1mx2.4/68, Error ellipse: s-maj=33.1km s-min=13.4km az=117.0*

ISCJB ***04*** *06:55:49.3±0.2, 44°.86N±0°.02×10°.99E±0°.01, h23km±1km, mb3.7/6, MS2.8/1, Error ellipse: s-maj=2.6km s-min=1.8km az=173.5*

ROM ***04*** *06:55:49.5±0.0, 44°.881N±0°.001×10°.966E±0°.001, h9km, ML3.8/67*

NEIC ***04*** *06:55:49.0±0.0, 44°.93N×10°.98E, h5km, mb4.2/2, ML3.8(ROM), ML4.0(LDG), After ROM.*

IASPEI ***04*** *06:55:49.8±0.8, 44°.91N±0°.02×10°.95E±0°.02, h13km±4km, mb3.9/6, Error ellipse: s-maj=3.2km s-min=2.6km az=111.0, GT5 selection from ISC bulletin GT5 identified by Bond˙jr and McLaughlin (2009) selection criteria Bond˙jr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., <b>80<\/b>, 465-472, 2009*

CSEM ***04*** *06:55:49.8±0.1, 44°.92N×11°.00E, h10km, ML4.1/21, Error ellipse: s-maj=2.1km s-min=1.7km az=177.0*

LDG ***04*** *06:55:49.6±0.1, 44°.90N×11°.12E, h2km, Ml4.0/21, Error ellipse: s-maj=3.1km s-min=2.2km az=66.0*

PRU ***04*** *06:55:50.3, 44°.98N×10°.78E, h10km*

STR ***04*** *06:55:50.7±1.2, 45°.N±5°.×1°.1E±1°.1, h5km, M4.4/13, mB5.1/3, mb4.6/4, MLv4.2/13, Mw(mB)4.5/3*

BEO ***04*** *06:55:51.7±0.7, 44°.96N×11°.27E, h0km*

ISC 04 06:55:49.8±0.6, 44°.93N±0°.01×10°.97E±0°.02, h14km±3km, n445, σ1§33/545, mb3.9/6, 23C-48D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T0827	**Moglia (MN)**	**0.03**	**290**⇑	*i*P	**Pg**	**06 55 52.2**	**-0.1**
T0827				⇑*i*S	**Sg**	**06 55 55.2**	**+1.1**
T0827	**Moglia (MN)**	**0.03**	**290**	*i*P	**Pg**	**06 55 52.2**	**-0.1**
T0827				*i*S	**Sg**	**06 55 55.1**	**+1.1**
T0818	**Loc. Fossa, Co**	**0.04**	**80**⇓	*e*P	**Pg**	**06 55 52.2**	**-0.2**
T0818				⇓*e*S	**Sg**	**06 55 55.3**	**+1.1**
T0818	**Loc. Fossa, Co**	**0.04**	**80**	*e*P	**Pg**	**06 55 52.2**	**-0.2**
T0818				*e*S	**Sg**	**06 55 55.3**	**+1.1**
NDIM	**Novi di Modena**	**0.07**	**232**	*i*P	**Pg**	**06 55 51.5**	**-1.1**
NDIM				*i*S	**Sg**	**06 55 53.6**	**-0.8**
T0828	**Loc. Fossoli,**	**0.10**	**203**⇓	*i*P	**Pg**	**06 55 51.0**	**-2.0**
T0828				⇓*i*S	**Sg**	**06 55 54.8**	**-0.3**
T0828	**Loc. Fossoli,**	**0.10**	**203**	*i*P	**Pg**	**06 55 52.0**	**-1.0**
T0828				*i*S	**Sg**	**06 55 54.8**	**-0.3**
SBPO	**S.Benedetto Po**	**0.13**	**344**⇓	*e*P	**Pb**	**06 55 54.3**	**+0.3**
SBPO	**S.Benedetto Po**	**0.13**	**344**	*e*P	**Pb**	**06 55 54.3**	**+0.3**
T0814	**Loc. Cortile,**	**0.13**	**180**⇓	*i*P	**Pg**	**06 55 52.4**	**-1.0**
T0814				⇓*i*S	**Sg**	**06 55 55.6**	**-0.1**
T0814	**Loc. Cortile,**	**0.13**	**180**	*i*P	**Pg**	**06 55 52.4**	**-1.0**
T0814				*i*S	**Sg**	**06 55 55.6**	**-0.1**
T0812	**Loc. Stoppiaro**	**0.15**	**80**⇑	*e*P	**Pg**	**06 55 53.7**	**+0.1**
T0812	**Loc. Stoppiaro**	**0.15**	**80**	*e*P	**Pg**	**06 55 53.7**	**+0.1**
T0802	**SanFelice sul**	**0.16**	**109**⇓	*e*P	**Pg**	**06 55 53.3**	**-0.4**
T0802				⇓*e*S	**Sb**	**06 55 57.7**	**0.0**
T0802	**SanFelice sul**	**0.16**	**109**	*e*P	**Pg**	**06 55 53.3**	**-0.4**
T0802				*e*S	**Sb**	**06 55 57.7**	**0.0**
T0813	**Massa Finalese**	**0.17**	**107**⇑	*e*P	**Pg**	**06 55 53.8**	**-0.1**
T0813				⇑*e*S	**Sb**	**06 55 58.1**	**+0.1**
T0813	**Massa Finalese**	**0.17**	**107**	*e*P	**Pg**	**06 55 53.8**	**-0.1**
T0813				*e*S	**Sb**	**06 55 58.1**	**+0.1**
T0824	**Loc. Limidi di**	**0.17**	**190**⇓	*i*P	**Pg**	**06 55 53.2**	**-0.7**
T0824				⇓*i*S	**Sg**	**06 55 57.2**	**+0.5**
T0824	**Loc. Limidi di**	**0.17**	**190**	*i*P	**Pg**	**06 55 53.2**	**-0.7**
T0824				*i*S	**Sg**	**06 55 57.1**	**+0.5**
RAVA	**Ravarino**	**0.20**	**148**⇓	*i*P	**Pg**	**06 55 53.9**	**-0.5**
RAVA				⇓*i*S	**Sb**	**06 55 58.3**	**-0.6**
RAVA	**Ravarino**	**0.20**	**148**	*i*P	**Pg**	**06 55 53.9**	**-0.5**
RAVA				*i*S	**Sb**	**06 55 58.4**	**-0.6**
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
GAZZ	**Gazzo Veronese**	**0.21**	**25**⇓	*e*Pg	**Pb**	**06 55 55.4**	**0.0**
GAZZ	**Gazzo Veronese**	**0.21**	**25**	*e*Pg	**Pb**	**06 55 55.4**	**0.0**
T0800	**Massa Finalese**	**0.21**	**112**⇓	*e*P	**Pg**	**06 55 54.2**	**-0.4**
T0800				⇓*e*S	**Sb**	**06 55 59.2**	**0.0**
T0800	**Massa Finalese**	**0.21**	**112**	*e*P	**Pg**	**06 55 54.2**	**-0.4**
T0800				*e*S	**Sb**	**06 55 59.2**	**0.0**
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
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T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
NOVE	**Novellara**	**0.22**	**235**⇓	*e*P	**Pg**	**06 55 54.4**	**-0.3**
NOVE				⇓*e*S	**Sb**	**06 55 59.3**	**-0.2**
NOVE	**Novellara**	**0.22**	**235**	*e*P	**Pg**	**06 55 54.4**	**-0.3**
NOVE				*e*S	**Sb**	**06 55 59.3**	**-0.2**
NOVE				AML	AML		
NOVE				AML	AML		
	comp=N,97000μm,0.3s						
NOVE				AML	AML		
NOVE				AML	AML		
	comp=N,96950μm,0.3s						
NOVE				AML	AML		
NOVE				AML	AML		
	comp=N,97000μm,0.3s						
NOVE				AML	AML		
	comp=N,97000μm,0.3s						
NOVE				AML	AML		
T0811	**Palata Pepoli**	**0.23**	**128**⇓	*e*P	**Pg**	**06 55 54.3**	**-0.6**
T0811				⇓*e*S	**Sb**	**06 55 59.3**	**-0.4**
T0811	**Palata Pepoli**	**0.23**	**128**	*e*P	**Pg**	**06 55 54.3**	**-0.6**
T0811				*e*S	**Sb**	**06 55 59.4**	**-0.4**
T0805	**Bondeno (FE)**	**0.25**	**92**	AML	AML		
	comp=E,78300μm,0.2s						
T0805				AML	AML		
	comp=E,78300μm,0.2s						
T0805				AML	AML		
	comp=N,64350μm,1.1s						
T0805				AML	AML		
	comp=N,64350μm,1.1s						
T0805				AML	AML		
	comp=E,78300μm,0.2s						
T0805				AML	AML		
	comp=N,64350μm,1.1s						
T0805				AML	AML		
	comp=N,64350μm,1.1s						
T0805				AML	AML		
	comp=E,78300μm,0.2s						
MODE	**Modena**	**0.30**	**183**⇓	*e*P	**Pg**	**06 55 55.9**	**-0.1**
MODE	**Modena**	**0.30**	**183**	*e*P	**Pg**	**06 55 55.9**	**-0.1**
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
T0803	**Dosso, Cento (**	**0.32**	**121**⇓	*e*P	**Pg**	**06 55 55.8**	**-0.5**
T0803	**Dosso, Cento (**	**0.32**	**121**	*e*P	**Pg**	**06 55 55.8**	**-0.5**
T0803				AML	AML		
	comp=E,46750μm,0.3s						
T0803				AML	AML		
	comp=N,54850μm,0.3s						
T0803				AML	AML		
	comp=E,46750μm,0.3s						
T0803				AML	AML		
	comp=N,54850μm,0.4s						
T0803				AML	AML		
	comp=E,46750μm,0.3s						
T0803				AML	AML		
	comp=

ZCCA				AML	AML	
	comp=E,8410µm,0.8s					
ZCCA				AML	AML	
	comp=N,11370µm,1.1s					
ZCCA				AML	AML	
	comp=N,11370µm,1.1s					
ZCCA				AML	AML	
	comp=N,10635µm,1.1s					
ZCCA				AML	AML	
	comp=E,8410µm,0.8s					
ZCCA				AML	AML	
	comp=E,8790µm,0.9s					
MTRZ	**Monterenzio**	**0.66**	**147**⇓	*e*P	**Pn**	**06 56 04.4 -0.3**
MTRZ	**Monterenzio**	**0.66**	**147**	*e*P	**Pn**	**06 56 04.4 -0.3**
MTRZ				AML	AML	
	comp=E,14950µm,1.2s					
MTRZ				AML	AML	
	comp=N,14550µm,1.4s					
MTRZ				AML	AML	
	comp=E,15500µm,1.2s					
MTRZ				AML	AML	
	comp=N,15000µm,1.4s					
MTRZ				AML	AML	
	comp=E,14950µm,1.2s					
MTRZ				AML	AML	
	comp=N,14500µm,1.4s					
MTRZ				AML	AML	
	comp=E,15500µm,1.2s					
MTRZ				AML	AML	
	comp=N,15000µm,1.4s					
MTRZ				AML	AML	
	comp=N,15000µm,1.4s					
MTRZ				AML	AML	
	comp=N,14500µm,1.4s					
MTRZ				AML	AML	
	comp=E,15500µm,1.2s					
MTRZ				AML	AML	
	comp=E,14950µm,1.2s					
TEOL	**Teolo**	**0.66**	**49**⇓	*e*Pg	**Pb**	**06 56 03.2 +0.1**
TEOL				*e*Sg	**Sn**	**06 56 14.4 -0.5**
TEOL	**Teolo**	**0.66**	**49**⇓	*e*P	**Pb**	**06 56 03.2 +0.1**
TEOL				*e*Sg	**Sn**	**06 56 14.4 -0.5**
TEOL	**Teolo**	**0.66**	**49**	*e*P	**Pb**	**06 56 03.2 +0.1**
TEOL				AML	AML	
	comp=E,35100µm,1.3s					
TEOL				AML	AML	
	comp=N,50900µm,0.4s					
TEOL				AML	AML	
	comp=E,35100µm,1.3s					
TEOL				AML	AML	
	comp=N,50900µm,0.4s					
TEOL				AML	AML	
	comp=N,50900µm,0.4s					
TEOL				AML	AML	
	comp=E,35100µm,1.3s					
CMPO	**Campotto Po**	**0.69**	**120**	AML	AML	
	comp=N,10550µm,0.6s					
CMPO				AML	AML	
	comp=E,20900µm,1.3s					
CMPO				AML	AML	
	comp=N,10550µm,0.6s					
CMPO				AML	AML	
	comp=E,20900µm,1.3s					
CMPO				AML	AML	
	comp=E,20900µm,1.3s					
CMPO				AML	AML	
	comp=N,10550µm,0.6s					
ROVR	**Rover¯¤ Verone**	**0.72**	**6**⇓	*e*P	**Pg**	**06 56 04.4 +0.4**
ROVR	**Rover¯¤ Verone**	**0.72**	**6**	*e*P	**Pg**	**06 56 04.4 +0.4**
ROVR				AML	AML	
	comp=E,24300µm,0.3s					
ROVR				AML	AML	
	comp=N,34950µm,0.3s					
ROVR				AML	AML	
	comp=E,24300µm,0.3s					
ROVR				AML	AML	
	comp=N,34950µm,0.3s					
ROVR				AML	AML	
	comp=E,24300µm,0.3s					
ROVR				AML	AML	
	comp=N,34950µm,0.3s					
MARN	**Marana (Italy)**	**0.73**	**13**⇓	*e*Pg	**Pb**	**06 56 04.5 +0.2**
MARN				*e*Sg	**Sn**	**06 56 16.5 -0.2**
MARN	**Marana (Italy)**	**0.73**	**13**	*e*Pg	**Pb**	**06 56 04.5 +0.2**
MARN				*e*Sg	**Sn**	**06 56 16.5 -0.2**
ADRI	**Adria, Italy**	**0.75**	**81**	*e*Pg	**Pb**	**06 56 05.3 +0.7**
ADRI				*e*Sg	**Sn**	**06 56 17.1 0.0**
ADRI	**Adria, Italy**	**0.75**	**81**	*e*Pg	**Pb**	**06 56 05.3 +0.7**
ADRI				*e*Sg	**Sn**	**06 56 17.1 0.0**
SALO	**Salr**	**0.76**	**336**⇓	*e*P	**Pb**	**06 56 05.2 +0.3**
SALO	**Salr**	**0.76**	**336**	*e*P	**Pb**	**06 56 05.2 +0.3**
BALD	**Monte Baldo**	**0.76**	**352**⇓	*e*Pg	**Pg**	**06 56 05.0 +0.3**
BALD	**Monte Baldo**	**0.76**	**352**	*e*Pg	**Pg**	**06 56 05.0 +0.3**
FNVD	**Fontana Vidola**	**0.77**	**172**	AML	AML	
	comp=N,8840µm,1.0s					
FNVD				AML	AML	
	comp=E,8535µm,0.2s					
FNVD				AML	AML	
	comp=E,8535µm,0.2s					
FNVD				AML	AML	
	comp=N,8840µm,1.0s					
FNVD				AML	AML	
	comp=E,8535µm,0.2s					
FNVD				AML	AML	
	comp=N,8840µm,1.0s					
IMOL	**Imola, Italy**	**0.79**	**136**	AML	AML	
	comp=N,14650µm,1.2s					
IMOL				AML	AML	
	comp=E,8855µm,1.1s					
IMOL				AML	AML	
	comp=E,1615µm,0.6s					
IMOL				AML	AML	
	comp=N,1875µm,0.4s					
IMOL				AML	AML	
	comp=E,8855µm,1.1s					
IMOL				AML	AML	
	comp=N,14650µm,1.2s					
IMOL				AML	AML	
	comp=E,1615µm,0.6s					
IMOL				AML	AML	
	comp=N,1875µm,0.4s					
VLC	**Villacollemand**	**0.87**	**209**	*e*Pn	**Pb**	**06 56 06.8 +0.1**
VLC	**Villacollemand**	**0.87**	**209**	*e*P	**Pb**	**06 56 06.9 +0.1**
VLC	**Villacollemand**	**0.87**	**209**	*e*P	**Pb**	**06 56 06.9 +0.1**
VLC				AML	AML	
	comp=E,2985µm,1.1s					
VLC				AML	AML	
	comp=N,4250µm,0.8s					
VLC				AML	AML	
	comp=E,2985µm,1.1s					
VLC				AML	AML	
	comp=N,4250µm,0.8s					
VLC				AML	AML	
	comp=N,4250µm,0.8s					
VLC				AML	AML	
	comp=E,2985µm,1.1s					
MAGA	**Magasa**	**0.88**	**344**	AML	AML	
	comp=E,81850µm,0.5s					
MAGA				AML	AML	
	comp=E,81850µm,0.5s					
MAGA				AML	AML	
	comp=N,43200µm,0.5s					
MAGA				AML	AML	
	comp=E,81850µm,0.5s					
MAGA				AML	AML	
	comp=N,43200µm,0.5s					
MAGA				AML	AML	
	comp=N,43200µm,0.5s					
POPM	**Popiglio**	**0.90**	**190**	AML	AML	
	comp=N,12550µm,0.6s					
POPM				AML	AML	
	comp=E,8370µm,0.7s					
POPM				AML	AML	
	comp=N,12550µm,0.6s					
POPM				AML	AML	
	comp=E,8370µm,0.7s					
POPM				AML	AML	
	comp=N,12550µm,0.6s					
POPM				AML	AML	
	comp=E,8370µm,0.7s					
BDI	**Bagni Di Lucca**	**0.91**	**197**	AML	AML	
	comp=N,7675µm,0.4s					
BDI				AML	AML	
	comp=E,9840µm,0.4s					
BDI				AML	AML	
	comp=N,7335µm,0.4s					
BDI				AML	AML	
	comp=E,10700µm,0.4s					
BDI				AML	AML	
	comp=E,9835µm,0.4s					
BDI				AML	AML	
	comp=N,7340µm,0.4s					
BDI				AML	AML	
	comp=E,10700µm,0.4s					
BDI				AML	AML	
	comp=N,7675µm,0.4s					
BDI				AML	AML	
	comp=N,7675µm,0.4s					
BDI				AML	AML	
	comp=N,7340µm,0.4s					
BDI				AML	AML	
	comp=E,9835µm,0.4s					
BDI				AML	AML	
	comp=E,10700µm,0.4s					
CTL8	**Castelleone**	**0.92**	**293**	AML	AML	
	comp=N,2630µm,0.5s					
CTL8				AML	AML	
	comp=E,10125µm,0.4s					
CTL8				AML	AML	
	comp=N,11500µm,0.7s					
CTL8				AML	AML	
	comp=E,3825µm,0.7s					
CTL8				AML	AML	
	comp=N,11500µm,0.7s					
CTL8				AML	AML	
	comp=E,3825µm,0.7s					
CTL8				AML	AML	
	comp=E,10125µm,0.4s					
CTL8				AML	AML	
	comp=N,2630µm,0.5s					
DOSS	**Dosso del Somm**	**0.97**	**9**⇓	*e*Pg	**Pb**	**06 56 08.6 +0.2**
DOSS				*e*Sg	**Sn**	**06 56 23.5 +0.8**
DOSS	**Dosso del Somm**	**0.97**	**9**	*e*Pg	**Pb**	**06 56 08.6 +0.2**
DOSS				*e*Sg	**Sn**	**06 56 23.5 +0.8**
MAIM	**Mastiano**	**1.07**	**199**	AML	AML	
	comp=N,11450µm,0.7s					
MAIM				AML	AML	
	comp=E,5160µm,0.5s					
MAIM				AML	AML	
	comp=E,5160µm,0.5s					
MAIM				AML	AML	
	comp=N,11450µm,0.7s					
MAIM				AML	AML	
	comp=E,5160µm,0.5s					
MAIM				AML	AML	
	comp=N,11450µm,0.7s					
RNI	**Roncone**	**1.08**	**347**⇑	*e*Pg	**Pb**	**06 56 09.7 -0.8**
RNI	**Roncone**	**1.08**	**347**	*e*Pg	**Pb**	**06 56 09.7 -0.8**
CGRP	**Cima Grappa**	**1.12**	**31**⇑	*e*Pg	**Pb**	**06 56 11.1 0.0**
CGRP				*e*Sg	**Sn**	**06 56 28.2 +1.7**
CGRP	**Cima Grappa**	**1.12**	**31**⇓	*e*P	**Pb**	**06 56 11.2 +0.2**
CGRP				*e*Sg	**Sn**	**06 56 28.2 +1.7**
CGRP	**Cima Grappa**	**1.12**	**31**	*e*P	**Pb**	**06 56 11.2 +0.2**
CGRP				AML	AML	
	comp=E,8620µm,0.5s					
CGRP				AML	AML	
	comp=N,6060µm,0.4s					
CGRP				AML	AML	
	comp=E,8620µm,0.5s					
CGRP				AML	AML	
	comp=N,6060µm,0.4s					
CGRP				AML	AML	
	comp=E,8620µm,0.5s					
CGRP				AML	AML	
	comp=N,6060µm,0.4s					
CRMI	**Carmignano**	**1.14**	**180**	AML	AML	
	comp=E,3540µm,0.4s					
CRMI				AML	AML	
	comp=E,3540µm,0.4s					
CRMI				AML	AML	
	comp=N,1940µm,1.6s					
CRMI				AML	AML	
	comp=N,1940µm,1.6s					
CRMI				AML	AML	
	comp=N,1940µm,1.6s					
CRMI				AML	AML	
	comp=E,3540µm,0.4s					
PANI	**Panarotta**	**1.15**	**13**⇓	*e*Pg	**Pb**	**06 56 11.2 -0.4**
PANI	**Panarotta**	**1.15**	**13**	*e*Pg	**Pb**	**06 56 11.2 -0.4**
MABI	**Malga Bissina**	**1.17**	**344**	AML	AML	
	comp=E,1905µm,0.6s					
MABI				AML	AML	
	comp=E,1905µm,0.6s					
MABI				AML	AML	
	comp=N,2105µm,1.2s					
MABI				AML	AML	
	comp=E,1905µm,0.6s					
MABI				AML	AML	
	comp=N,2105µm,1.2s					
MABI				AML	AML	
	comp=N,2105µm,1.2s					
PLMA	**Palmaria, Port**	**1.19**	**223**	AML	AML	
	comp=E,5000µm,0.4s					
PLMA				AML	AML	
	comp=E,5000µm,0.4s					
PLMA				AML	AML	
	comp=N,6440µm,0.5s					
PLMA				AML	AML	
	comp=E,5000µm,0.4s					
PLMA				AML	AML	
	comp=N,6440µm,0.5s					
PLMA				AML	AML	
	comp=N,6440µm,0.5s					
MTLO	**Montello**	**1.19**	**41**⇓	*e*Pg	**Pb**	**06 56 12.5 +0.4**
MTLO				*e*Sg	**Sg**	**06 56 30.6 +2.3**
MTLO	**Montello**	**1.19**	**41**	*e*Pg	**Pb**	**06 56 12.5 +0.4**
MTLO				*e*Sg	**Sg**	**06 56 30.5 +2.3**
SFI	**Santa Sofia**	**1.20**	**148**	AML	AML	
	comp=E,2845µm,1.2s					
SFI				AML	AML	
	comp=E,2700µm,1.2s					
SFI				AML	AML	
	comp=N,3700µm,0.9s					
SFI				AML	AML	
	comp=N,3760µm,0.9s					
SFI				AML	AML	
	comp=E,2700µm,1.2s					
SFI				AML	AML	
	comp=N,3700µm,0.9s					
SFI				AML	AML	
	comp=E,2845µm,1.2s					
SFI				AML	AML	
	comp=N,3755µm,0.9s					
SFI				AML	AML	
	comp=N,3700µm,0.9s					
SFI				AML	AML	
	comp=N,3755µm,0.9s					
SFI				AML	AML	
	comp=E,2845µm,1.2s					
SFI				AML	AML	
	comp=E,2700µm,1.2s					
MSSA	**Maissana**	**1.20**	**240**	AML	AML	
	comp=N,3260µm,1.0s					
MSSA				AML	AML	
	comp=E,2900µm,0.3s					
MSSA				AML	AML	
	comp=N,3260µm,1.0s					
MSSA				AML	AML	
	comp=E,2900µm,0.3s					
MSSA				AML	AML	
	comp=E,2900µm,0.3s					
MSSA				AML	AML	
	comp=N,3260µm,1.0s					
CTI	**Castel Tesino**	**1.22**	**23**	AML	AML	
	comp=E,12950µm,0.3s					
CTI				AML	AML	
	comp=E,12950µm,0.3s					
CTI				AML	AML	
	comp=N,17000µm,0.3s					
CTI				AML	AML	
	comp=N,17000µm,0.3s					
CTI				AML	AML	
	comp=E,12950µm,0.3s					
CTI				AML	AML	
	comp=N,17000µm,0.3s					
ASQU	**Asqua**	**1.27**	**152**	AML	AML	
	comp=N,3035µm,0.5s					
ASQU				AML	AML	
	comp=E,2665µm,0.8s					
ASQU				AML	AML	
	comp=N,3035µm,0.5s					
ASQU				AML	AML	
	comp=E,2665µm,0.8s					
VARN	**Col Varnada, M**	**1.33**	**36**⇓	*e*Pg	**Pn**	**06 56 14.0 -0.1**
VARN	**Col Varnada, M**	**1.33**	**36**	*e*Pg	**Pn**	**06 56 14.0 -0.1**
OZOL	**Ozolo**	**1.48**	**2**⇑	*e*Pg	**Pn**	**06 56 16.3 +0.2**
OZOL	**Ozolo**	**1.48**	**2**	*e*Pg	**Pn**	**06 56 16.3 +0.2**
FAU	**Forcella Aurin**	**1.48**	**28**⇓	*e*Pg	**Pn**	**06 56 16.7 +0.5**
FAU	**Forcella Aurin**	**1.48**	**28**	*e*Pg	**Pn**	**06 56 16.7 +0.5**
CAE	**Caneva**	**1.49**	**43**⇓	*e*Pg	**Pn**	**06 56 16.5 +0.2**
CAE	**Caneva**	**1.49**	**43**	*e*Pg	**Pn**	**06 56 16.5 +0.2**
CARE	**Lago del Cares**	**1.51**	**353**⇓	*e*Pg	**Pn**	**06 56 17.0 +0.3**
CARE	**Lago del Cares**	**1.51**	**353**	*e*Pg	**Pn**	**06 56 17.0 +0.3**
POLC	**Polcenigo**	**1.54**	**44**	AML	AML	
	comp=N,8215µm,0.3s					
POLC				AML	AML	
	comp=E,5105µm,0.5s					
POLC				AML	AML	
	comp=N,8215µm,0.3s					
POLC				AML	AML	
	comp=E,5105µm,0.5s					
POLC				AML	AML	
	comp=E,5105µm,0.5s					
POLC				AML	AML	
	comp=N,8215µm,0.3s					
AGOR	**Agordo**	**1.55**	**29**⇑	*e*Pg	**Pn**	**06 56 17.7 +0.6**
AGOR	**Agordo**	**1.55**	**29**	AML	AML	
	comp=E,4305µm,0.5s					
AGOR				AML	AML	
	comp=N,4805µm,0.4s					
AGOR				AML	AML	
	comp=E,4305µm,0.5s					
AGOR				AML	AML	
	comp=N,4805µm,0.4s					
KOSI	**Kohlern**	**1.56**	**10**	AML	AML	
	comp=N,4985µm,0.3s					
KOSI				AML	AML	
	comp=E,6040µm,0.4s					
KOSI				AML	AML	
	comp=N,4985µm,0.3s					
KOSI				AML	AML	
	comp=E,6040µm,0.4s					
PARC	**Parchiule**	**1.57**	**144**	AML	AML	
	comp=E,1034µm,1.2s					
PARC				AML	AML	
	comp=E,1034µm,1.2s					
PARC				AML	AML	
	comp=N,1840µm,1.4s					
PARC				AML	AML	
	comp=N,1840µm,1.4s					
BOSI	**Bolzano**	**1.59**	**9**	AML	AML	
	comp=E,10850µm,1.2s					
BOSI				AML	AML	
	comp=N,12050µm,0.5s					
BOSI				AML	AML	
	comp=N,12050µm,0.5s					
BOSI				AML	AML	
	comp=E,10850µm,1.2s					
BRMO	**Bormio**	**1.60**	**345**	AML	AML	
	comp=E,1445µm,1.3s					
BRMO				AML	AML	
	comp=N,1990µm,0.8s					
BRMO				AML	AML	
	comp=N,1990µm,0.8s					
BRMO				AML	AML	
	comp=E,1445µm,1.3s					
CSO	**Casso**	**1.65**	**35**⇑	*e*Pg	**Pn**	**06 56 18.5 +0.1**
CSO	**Casso**	**1.65**	**35**	*e*Pg	**Pn**	**06 56 18.5 +0.1**
MLNI	**Malnisio**	**1.68**	**43**⇓	*e*Pg	**Pn**	**06 56 19.2 +0.4**
MLNI	**Malnisio**	**1.68**	**43**	*e*Pg	**Pn**	**06 56 19.2 +0.4**
BADI	**Badiali**	**1.69**	**147**	AML	AML	
	comp=N,1340µm,0.4s					
BADI				AML	AML	
	comp=E,1720µm,0.5s					
BADI				AML	AML	
	comp=N,1340µm,0.4s					
BADI				AML	AML	
	comp=E,1720µm,0.5s					
MOSI	**Grossmontoni**	**1.71**	**350**	AML	AML	
	comp=E,5345µm,1.0s					
MOSI				AML	AML	
	comp=N,6320µm,0.5s					
MOSI				AML	AML	
	comp=E,5345µm,1.0s					
MOSI				AML	AML	
	comp=N,6320µm,0.5s					
ATMC	**Monte Cedrone**	**1.72**	**149**	AML	AML	
	comp=N,2090µm,0.6s					
ATMC				AML	AML	
	comp=E,2715µm,0.4s					
ATMC				AML	AML	
	comp=E,2720µm,0.4s					
ATMC				AML	AML	
	comp=N,2090µm,0.6s					
ATMC				AML	AML	
	comp=E,2720µm,0.4s					
ATMC				AML	AML	
	comp=N,2090µm,0.6s					
FROS	**Frosini**	**1.72**	**175**	AML	AML	
	comp=E,1470µm,0.6s					
FROS				AML	AML	
	comp=E,1470µm,0.6s					
FROS				AML	AML	
	comp=N,1850µm,1.6s					
FROS				AML	AML	
	comp=N,1850µm,1.6s					
CIMO	**Cimolais**	**1.73**	**36**⇓	*e*Pn	**Pn**	**06 56 19.5 +0.1**
CIMO	**Cimolais**	**1.73**	**36**	*e*Pn	**Pn**	**06 56 19.5 +0.1**
CAFI	**Castiglion Fio**	**1.75**	**155**	AML	AML	
	comp=N,918µm,0.5s					
CAFI				AML	AML	
	comp=E,1105µm,1.2s					
CAFI				AML	AML	
	comp=E,1105µm,1.2s					
CAFI				AML	AML	
	comp=N,918µm,0.5s					
CAFI				AML	AML	
	comp=E,1105µm,1.2s					
CAFI				AML	AML	
	comp=N,918µm,0.5s					
FUORN	**Ofenpass-Fuorn**	**1.76**	**344**	*e*Pn	**Pb**	**06 56 21.9 -0.2**
FUORN	**Ofenpass-Fuorn**	**1.76**	**344**	*e*Pn	**Pb**	**06 56 21.9 -0.2**
PCP	**Piancastagn**	**1.77**	**258**	AML	AML	
	comp=N,1310µm,1.2s					
PCP				AML	AML	
	comp=E,1300µm,0.6s					
PCP				AML	AML	
	comp=N,1310µm,1.2s					
PCP				AML	AML	
	comp=E,1300µm,0.6s					
PIEI	**Piela**	**1.79**	**141**	AML	AML	
	comp=E,1890µm,0.9s					
PIEI				AML	AML	
	comp=N,1220µm,1.0s					
PIEI				AML	AML	
	comp=E,1890µm,0.9s					
PIEI				AML	AML	
	comp=N,1220µm,1.0s					
FSSB	**Fossombrone**	**1.79**	**133**	AML	AML	
	comp=N,4315µm,0.5s					
FSSB				AML	AML	
	comp=E,3060µm,0.3s					
FSSB				AML	AML	
	comp=N,4315µm,0.5s					
FSSB				AML	AML	
	comp=E,3060µm,0.3s					
ATPC	**Poggio Castell**	**1.80**	**143**	AML	AML	
	comp=E,1665µm,0.6s					
ATPC				AML	AML	
	comp=N,1525µm,1.1s					
ATPC				AML	AML	
	comp=E,1665µm,0.6s					
ATPC				AML	AML	
	comp=N,1525µm,1.1s					
ATPI	**Pietralunga -**	**1.80**	**145**	AML	AML	
	comp=N,1305µm,0.5s					
ATPI				AML	AML	
	comp=E,999µm,0.6s					
ATPI				AML	AML	
	comp=N,1305µm,0.5s					
ATPI				AML	AML	
	comp=E,999µm,0.6s					
TRIF	**Trifonti**	**1.81**	**182**	AML	AML	
	comp=N,725µm,1.0s					
TRIF				AML	AML	
	comp=E,780µm,0.6s					
TRIF				AML	AML	
	comp=N,725µm,1.0s					
TRIF				AML	AML	
	comp=E,780µm,0.6s					
VARE	**Varese**	**1.81**	**302**	AML	AML	

comp=E,1945µm,0.4s
VARE AML AML
comp=N,2005µm,1.1s
VARE AML AML
comp=E,1945µm,0.4s
VARE AML AML
comp=N,2005µm,1.1s
ABSI Aberstueckl 1.82 8 AML AML
comp=E,8435µm,0.5s
ABSI AML AML
comp=N,7750µm,0.4s
ABSI AML AML
comp=E,8435µm,0.5s
ABSI AML AML
comp=N,7750µm,0.4s
ATBU Serra di Buran 1.84 141 AML AML
comp=N,3375µm,1.5s
ATBU AML AML
comp=E,2670µm,0.4s
ATBU AML AML
comp=N,3375µm,1.5s
ATBU AML AML
comp=E,2670µm,0.4s
ATVO AVT- Monte Val 1.86 146 AML AML
comp=E,1670µm,1.2s
ATVO AML AML
comp=E,1670µm,1.2s
ATVO AML AML
comp=N,1230µm,0.5s
ATVO AML AML
comp=N,1230µm,0.5s
ATVA AVT- Monte Val 1.90 150 AML AML
comp=N,532µm,0.7s
ATVA AML AML
comp=E,634µm,1.1s
ATVA AML AML
comp=N,532µm,0.7s
ATVA AML AML
comp=E,634µm,1.1s
QLNO Quiliano 1.97 253 AML AML
comp=N,688µm,0.6s
QLNO AML AML
comp=E,667µm,0.4s
QLNO AML AML
comp=N,688µm,0.6s
QLNO AML AML
comp=E,667µm,0.4s
SSFR Montelago di S 1.98 138 AML AML
comp=N,2210µm,0.6s
SSFR AML AML
comp=E,2970µm,0.3s
SSFR AML AML
comp=E,2970µm,0.3s
SSFR AML AML
comp=N,2210µm,0.6s
ROSI Rosskopf 2.02 9 AML AML
comp=N,4415µm,1.4s
ROSI AML AML
comp=E,4590µm,0.3s
ROSI AML AML
comp=N,4415µm,1.4s
ROSI AML AML
comp=E,4590µm,0.3s
FVI Forni Avoltri 2.10 37 AML AML
comp=N,1360µm,0.5s
FVI AML AML
comp=E,1605µm,0.3s
FVI AML AML
comp=E,1605µm,0.3s
FVI AML AML
comp=N,1360µm,0.5s
VINO Villanova 2.10 50 AML AML
comp=N,1545µm,1.1s
VINO AML AML
comp=E,1355µm,0.4s
VINO AML AML
comp=N,1545µm,1.1s
VINO AML AML
comp=E,1355µm,0.4s
FETA Feichten 2.10 355 *e*Pn **Pb 06 56 27.2 -0.6**
comp=E,25nm,0.4s,SNR=159
FETA Sn **Sg 06 56 56.6 -0.8**
comp=E,84nm,0.4s
FETA Feichten 2.10 355 Pn **Pb 06 56 27.2 -0.6**
comp=E,25nm,0.4s,SNR=159
ARCI Arcidosso 2.11 170 AML AML
comp=E,266µm,0.5s
ARCI AML AML
comp=N,282µm,1.0s
ARCI AML AML
comp=E,266µm,0.5s
ARCI AML AML
comp=N,282µm,1.0s
ABTA Abfaltersbach 2.12 30 Pn **Pb 06 56 27.1 -0.9**
comp=N,13nm,0.2s,SNR=84
ABTA *i* Pg **Pg 06 56 30.3 -0.1**
comp=N,42nm,0.2s
ABTA Sg **Sg 06 57 01.9 +4.1**
comp=N,118nm,0.3s
ABTA Abfaltersbach 2.12 30 Pn **Pb 06 56 27.1 -0.9**
comp=N,13nm,0.2s,SNR=84
ATCC AVT- Casa Cast 2.12 145 AML AML
comp=E,1655µm,0.5s
ATCC AML AML
comp=N,1335µm,0.5s
ATCC AML AML
comp=N,1335µm,0.5s
ATCC AML AML
comp=E,1655µm,0.5s
CASP Castiglione de 2.14 182 AML AML
comp=N,874µm,0.6s
CASP AML AML
comp=E,682µm,0.4s
CASP AML AML
comp=N,874µm,0.6s
CASP AML AML
comp=E,682µm,0.4s
RISI Rein 2.16 21 AML AML
comp=N,6625µm,0.4s
RISI AML AML
comp=E,6205µm,0.6s
RISI AML AML
comp=E,6205µm,0.6s
RISI AML AML
comp=N,6625µm,0.4s
MGAB Montegabbione 2.18 157 AML AML
comp=E,873µm,0.4s
MGAB AML AML
comp=E,825µm,0.5s
MGAB AML AML
comp=N,713µm,1.6s
MGAB AML AML
comp=N,748µm,0.3s
MGAB AML AML
comp=E,873µm,0.4s
MGAB AML AML
comp=N,748µm,0.3s
MGAB AML AML
comp=N,713µm,1.6s
MGAB AML AML
comp=E,825µm,0.5s
SACS San Casciano d 2.19 162 AML AML
comp=E,404µm,1.2s
SACS AML AML
comp=N,419µm,1.1s
SACS AML AML
comp=E,404µm,0.9s
SACS AML AML
comp=N,442µm,1.1s
SACS AML AML
comp=E,404µm,0.9s
SACS AML AML
comp=N,442µm,1.1s
SACS AML AML
comp=N,419µm,1.1s
SACS AML AML
comp=E,404µm,1.2s
PTCC Patocco-Chiusa 2.23 48 AML AML
comp=N,946µm,0.9s
PTCC AML AML
comp=E,1570µm,0.4s
PTCC AML AML
comp=N,946µm,0.9s
PTCC AML AML
comp=E,1570µm,0.4s
SKDS Skadanscina 2.24 73 *i* Pn **Pn 06 56 25.9 -0.5**
SKDS *e*Sn **Sn 06 56 52.7 -1.2**
comp=Z,358nm,0.4s
SKDS Skadanscina 2.24 73 *i* Pn **Pn 06 56 25.9 -0.5**
SKDS *e*Sn **Sn 06 56 52.7 -1.2**
comp=Z,358nm,0.4s
VOJS Vojsko 2.33 61 *i* Pn **Pn 06 56 27.8 0.0**
VOJS *e*Sn **Sn 06 56 56.7 +0.5**
VOJS Vojsko 2.33 61 *i* Pn **Pn 06 56 27.8 0.0**
VOJS *e*Sn **Sn 06 56 56.7 +0.5**
AOI Ancona 2.34 125 AML AML
comp=N,686µm,0.5s
AOI AML AML
comp=E,533µm,0.5s
AOI AML AML
comp=N,686µm,0.5s
AOI AML AML
comp=E,533µm,0.5s
WTTA Wattenberg 2.38 11 *e*Pn **Pb 06 56 30.9 -1.7**
comp=E,12nm,0.2s,SNR=49
WTTA Sg **Sg 06 57 04.8 -1.6**
comp=E,209nm,0.5s
WTTA Wattenberg 2.38 11 Pn **Pb 06 56 30.9 -1.7**
comp=E,12nm,0.2s,SNR=49
WTTA Sg **Sg 06 57 04.8 -1.6**
comp=E,209nm,0.5s
WTTA Wattenberg 2.38 11 AML AML
comp=N,920µm,1.2s
WTTA AML AML
comp=E,1230µm,0.4s
WTTA AML AML
comp=N,920µm,1.2s
WTTA AML AML
comp=E,1230µm,0.4s
JAVS Javornik 2.38 65 *i* Pn **Pn 06 56 28.4 -0.2**
JAVS *e*Sn **Sn 06 56 57.8 +0.2**
comp=Z,376nm,0.4s
JAVS Javornik 2.38 65 *i* Pn **Pn 06 56 28.4 -0.2**
JAVS *e*Sn **Sn 06 56 57.8 +0.2**
comp=Z,376nm,0.4s
ACOM Acomizza, Ital 2.41 47 AML AML
comp=N,2550µm,1.2s
ACOM AML AML
comp=E,2895µm,0.4s
ACOM AML AML
comp=E,2895µm,0.4s
ACOM AML AML
comp=N,2550µm,1.2s
WATA Walderalm 2.44 10 *e*Pn **Pn 06 56 31.7 +2.3**
comp=N,6.4nm,0.2s,SNR=71
WATA Walderalm 2.44 10 Pn **Pn 06 56 31.7 +2.3**
comp=N,6.4nm,0.2s,SNR=71
DAVA Damuels 2.48 343 *e*Pn **Pb 06 56 32.8 -1.4**
comp=N,111nm,0.5s,SNR=57
DAVA Sn **Sb 06 57 05.9 +1.2**
comp=N,283nm,0.5s
DAVA Damuels 2.48 343 Pn **Pb 06 56 32.8 -1.4**
comp=N,111nm,0.5s,SNR=57
KNDS Knezji Dol 2.48 75 *e*Pn **Pn 06 56 29.4 -0.5**
KNDS *e*Sn **Sn 06 56 59.1 -1.0**
comp=Z,378nm,0.6s
KNDS Knezji Dol 2.48 75 *e*Pn **Pn 06 56 29.4 -0.5**
KNDS *e*Sn **Sn 06 56 59.1 -1.0**
comp=Z,378nm,0.6s
RIY Rijeka 2.52 80 *e*Pn **Pn 06 56 30.1 -0.2**
RIY *e*Sn **Sn 06 56 59.6 -1.1**
MYKA Terra Mystica 2.53 47 *e*Pn **Pn 06 56 32.1 +1.6**
comp=Z,3.2nm,0.2s
MYKA *e*Pg **Pg 06 56 37.8 -0.5**
comp=Z,36nm,0.3s
MYKA *e*Sn **Sb 06 57 04.7 -1.3**
comp=Z,45nm,0.2s
MYKA Sg **Sg 06 57 13.2 +2.2**
comp=Z,94nm,0.3s
MYKA Terra Mystica 2.53 47 Pn **Pn 06 56 32.1 +1.6**
comp=Z,3.2nm,0.2s
RETA Reutte 2.56 357 Pn **Pb 06 56 34.0 -1.6**
comp=Z,30nm,0.3s,SNR=24
RETA Sn **Sb 06 57 07.6 +0.6**
comp=Z,58nm,0.3s
RETA Reutte 2.56 357 Pn **Pb 06 56 34.0 -1.6**
comp=Z,30nm,0.3s,SNR=24
RETA Sn **Sb 06 57 07.6 +0.6**
comp=Z,58nm,0.3s
CEY Cerknica 2.57 70 *e*Pn **Pn 06 56 30.8 -0.2**
CEY *e*Sn **Sn 06 57 01.3 -0.8**
CEY Cerknica 2.57 70 *e*Pn **Pn 06 56 30.8 -0.2**
CEY *e*Sn **Sn 06 57 01.3 -0.8**
NEGI Seborga 2.58 246 AML AML
comp=N,986µm,0.5s
NEGI AML AML
comp=E,714µm,1.4s
NEGI AML AML
comp=N,986µm,0.5s
NEGI AML AML
comp=E,714µm,1.4s
SAOF Saorge 2.62 250 AML AML
comp=N,638µm,0.3s
SAOF AML AML
comp=E,701µm,0.5s
SAOF AML AML
comp=N,638µm,0.3s
SAOF AML AML
comp=E,701µm,0.5s
KBA Koelnbreinsper 2.71 37 Pn **Pn 06 56 35.0 +1.8**
comp=E,8.7nm,0.3s,SNR=32
KBA *e*Pg **Pg 06 56 42.5 +0.7**
comp=E,41nm,0.2s
KBA Sg **Sg 06 57 18.0 +1.0**
comp=E,190nm,0.5s
KBA Koelnbreinsper 2.71 37 Pn **Pn 06 56 35.0 +1.8**
comp=E,8.7nm,0.3s,SNR=32
KBA Koelnbreinsper 2.71 37 Pg **Pg 06 56 42.5 +0.7**
comp=E,41nm,0.2s
KBA Sg **Sg 06 57 18.0 +1.0**
comp=E,190nm,0.5s
LJU Ljubljana 2.74 65 *e*Pn **Pn 06 56 34.0 +0.7**
LJU *e*Sn **Sn 06 57 06.5 +0.3**
LJU Ljubljana 2.74 65 *e*Pn **Pn 06 56 34.0 +0.7**
LJU *e*Sn **Sn 06 57 06.5 +0.3**
SBF Sospel 2.75 248 *e*Pn **Pn 06 56 35.1 +1.6**
SNR=1.0
SBF *e*Sn **Sn 06 57 07.3 +0.8**
comp=E,370nm,0.3s,SNR=1.0
SBF Sospel 2.75 248 *e*Pn **Pn 06 56 35.1 +1.6**
SBF *e*Sn **Sn 06 57 07.3 +0.8**
SBF Sospel 2.75 248 *e*Pn **Pn 06 56 35.1 +1.6**
SNR=1.0
SBF *e*Sn **Sn 06 57 07.3 +0.8**
comp=E,185nm,0.3s,SNR=1.0
PGF Pioggiola 2.77 212 *e*Pn **Pn 06 56 34.4 +0.5**
SNR=1.0
PGF *e*Sn **Sn 06 57 06.0 -1.2**
comp=E,169nm,0.5s,SNR=1.0
PGF Pioggiola 2.77 212 *e*Pn **Pn 06 56 34.4 +0.5**
PGF *e*Sn **Sn 06 57 06.0 -1.2**
PGF Pioggiola 2.77 212 *e*Pn **Pn 06 56 34.4 +0.5**
SNR=1.0
PGF *e*Sn **Sn 06 57 06.0 -1.2**
comp=E,85nm,0.5s,SNR=1.0
LUCF Luceram 2.80 250 P **Pn 06 56 36.4 +2.2**
LUCF Luceram 2.80 250 P **Pn 06 56 36.4 +2.2**
NVLJ Novalja 2.80 96 *e*Pn **Pn 06 56 33.8 -0.4**
NVLJ Sn **Sn 06 57 06.4 -1.3**
VISS Visnje 2.86 71 *i* Pn **Pn 06 56 35.4 +0.3**
VISS Visnje 2.86 71 *i* Pn **Pn 06 56 35.4 +0.3**
SENIN Lac Senin/Sane 2.95 300 *e*Pn **Pn 06 56 37.5 +1.1**
SENIN Lac Senin/Sane 2.95 300 *e*Pn **Pn 06 56 37.5 +1.1**
OBKA Obir 2.96 56 Pn **Pn 06 56 37.5 +1.0**
comp=E,1.8nm,0.2s,SNR=7.3
OBKA Pg **Pg 06 56 46.3 -0.3**
comp=E,22nm,0.3s
OBKA Sn **Sn 06 57 13.5 +1.6**
comp=E,87nm,0.4s
OBKA Sg **Sg 06 57 27.0 +2.0**
comp=E,360nm,0.4s
OBKA Obir 2.96 56 Pn **Pn 06 56 37.5 +1.0**
comp=E,1.8nm,0.2s,SNR=7.3
MBDF Montbardon 3.00 268 *e*Pn **Pn 06 56 37.4 +0.4**
SNR=1.0
MBDF Montbardon 3.00 268 *e*Pn **Pn 06 56 37.4 +0.4**
MBDF Montbardon 3.00 268 *e*Pn **Pn 06 56 37.4 +0.4**
SNR=1.0
LPG La Plagne 3.04 282 *e*Pn **Pn 06 56 38.7 +1.0**
SNR=1.0
LPG *e*Sn **Sn 06 57 14.8 +0.8**
comp=E,166nm,0.6s
LPG La Plagne 3.04 282 *e*Pn **Pn 06 56 38.7 +1.0**
LPG *e*Sn **Sn 06 57 14.8 +0.8**
LPG La Plagne 3.04 282 *e*Pn **Pn 06 56 38.7 +1.0**
SNR=1.0
LPG *e*Sn **Sn 06 57 14.8 +0.8**
comp=E,83nm,0.6s
LPL La Plagne 3.05 283 *e*Pn **Pn 06 56 38.9 +1.1**
SNR=1.0
LPL *e*Sn **Sn 06 57 15.0 +0.7**
comp=E,101nm,0.4s,SNR=1.0
LPL La Plagne 3.05 283 *e*Pn **Pn 06 56 38.9 +1.1**
LPL *e*Sn **Sn 06 57 15.0 +0.7**
LPL La Plagne 3.05 283 *e*Pn **Pn 06 56 38.9 +1.1**
SNR=1.0
LPL *e*Sn **Sn 06 57 15.0 +0.7**
comp=E,51nm,0.4s,SNR=1.0
AQU L'Aquila 3.12 145 *e*Pn **Pn 06 56 40.3 +1.7**
AQU L'Aquila 3.12 145 *e*Pn **Pn 06 56 40.3 +1.7**
CALF Calern 3.13 249 P **Pn 06 56 40.7 +1.8**
CALF Calern 3.13 249 P **Pn 06 56 40.7 +1.8**
RSL Roselend 3.16 285 P **Pn 06 56 42.1 +2.8**
RSL Roselend 3.16 285 P **Pn 06 56 42.1 +2.8**
OZLJ Ozalj 3.25 76 *i* Pn **Pn 06 56 40.7 +0.4**
OZLJ Ozalj 3.25 76 *i* Pn **Pn 06 56 40.7 +0.4**
CRES Cresnjev 3.29 73 ⇑*i* Pn **Pn 06 56 41.0 +0.1**
SOKA Soboth 3.34 57 *e*Pn **Pn 06 56 42.4 +0.8**
comp=E,9.2nm,0.4s,SNR=9.0
SOKA *e*Sn **Sn 06 57 22.5 +1.4**
comp=E,27nm,0.4s
SOKA Sg **Sg 06 57 35.9 -1.1**
comp=E,63nm,0.4s
SOKA Soboth 3.34 57 Pn **Pn 06 56 42.4 +0.8**
comp=E,9.2nm,0.4s,SNR=9.0
SOKA Sn **Sn 06 57 22.5 +1.4**
comp=E,27nm,0.4s
SOKA Sg **Sg 06 57 35.9 -1.1**
comp=E,63nm,0.4s
FRF La Foret Royal 3.39 248 *e*Pn **Pn 06 56 43.0 +0.7**
SNR=1.0
FRF *e*Sn **Sn 06 57 21.1 -1.3**
comp=E,90nm,0.2s,SNR=1.0
FRF La Foret Royal 3.39 248 *e*Pn **Pn 06 56 43.0 +0.7**
FRF *e*Sn **Sn 06 57 21.1 -1.3**
FRF La Foret Royal 3.39 248 *e*Pn **Pn 06 56 43.0 +0.7**
SNR=1.0
FRF *e*Sn **Sn 06 57 21.1 -1.3**
comp=E,45nm,0.2s,SNR=1.0
UDBI Udbina 3.44 95 *e*Pn **Pn 06 56 43.4 +0.3**
UDBI Udbina 3.44 95 *e*Pn **Pn 06 56 43.3 +0.3**
LMR La Mourre 3.58 245 *e*Pn **Pn 06 56 45.6 +0.6**
SNR=1.0
LMR *e*Sn **Sn 06 57 27.1 0.0**
comp=E,206nm,0.3s,SNR=1.0
LMR La Mourre 3.58 245 *e*Pn **Pn 06 56 45.6 +0.6**
LMR *e*Sn **Sn 06 57 27.1 0.0**
LMR La Mourre 3.58 245 *e*Pn **Pn 06 56 45.6 +0.6**
SNR=1.0
LMR *e*Sn **Sn 06 57 27.1 0.0**
comp=E,103nm,0.3s,SNR=1.0
ORIF Oris-en-Rattie 3.62 272 *e*Pn **Pn 06 56 46.4 +0.9**
SNR=1.0
ORIF Oris-en-Rattie 3.62 272 *e*Pn **Pn 06 56 46.4 +0.9**
ORIF Oris-en-Rattie 3.62 272 P **Pn 06 56 47.4 +1.9**
ORIF Oris-en-Rattie 3.62 272 *e*Pn **Pn 06 56 46.4 +0.9**
SNR=1.0
KIZ Kirchzarten 3.69 326 P **Pn 06 56 48.1 +1.7**
KIZ Kirchzarten 3.69 326 P **Pn 06 56 48.1 +1.7**
MOA Molln 3.71 37 *e*Pn **Pn 06 56 48.4 +1.8**
comp=E,6.9nm,0.1s,SNR=14
MOA *e*Pg **Pg 06 57 00.4 -0.4**
comp=E,24nm,0.3s
MOA Molln 3.71 37 Pn **Pn 06 56 48.4 +1.8**
comp=E,6.9nm,0.1s,SNR=14
LOMF Lomont 3.76 312 P **Pn 06 56 48.4 +0.9**
LOMF Lomont 3.76 312 P **Pn 06 56 48.4 +0.9**
CHMF Charmoille 3.80 309 P **Pn 06 56 48.7 +0.8**
CHMF Charmoille 3.80 309 P **Pn 06 56 48.7 +0.8**
CABF La Chapelle 3.81 298 *e*Pn **Pn 06 56 49.2 +1.1**
SNR=1.0
CABF *e*Sn **Sn 06 57 31.6 -1.1**
comp=E,83nm,0.7s,SNR=1.0
CABF La Chapelle 3.81 298 *e*Pn **Pn 06 56 49.2 +1.1**
CABF *e*Sn **Sn 06 57 31.6 -1.1**
CABF La Chapelle 3.81 298 *e*Pn **Pn 06 56 49.2 +1.1**
SNR=1.0
CABF *e*Sn **Sn 06 57 31.6 -1.1**
comp=E,42nm,0.7s,SNR=1.0
ARSA Arzberg 3.93 52 *e*Pn **Pn 06 56 49.9 +0.2**
ARSA Arzberg 3.93 52 *e*Pn **Pn 06 56 50.0 +0.3**
comp=E,16nm,0.4s,SNR=9.5
ARSA Arzberg 3.93 52 *e*Pn **Pn 06 56 49.9 +0.2**
MOF Molkenrain 3.95 319 P **Pn 06 56 51.0 +0.9**
MOF Molkenrain 3.95 319 P **Pn 06 56 51.0 +0.9**
OG35 Corcelles 3.96 288 P **Pn 06 56 52.1 +1.9**
OG35 Corcelles 3.96 288 P **Pn 06 56 52.1 +1.9**
SMRF Simiane la Rot 3.98 258 *e*Pn **Pn 06 56 51.3 +0.9**
SNR=1.0
SMRF *e*Sn **Sn 06 57 36.5 -0.4**
comp=E,56nm,0.5s
SMRF Simiane la Rot 3.98 258 *e*Pn **Pn 06 56 51.3 +0.9**
SMRF *e*Sn **Sn 06 57 36.5 -0.4**
SMRF Simiane la Rot 3.98 258 *e*Pn **Pn 06 56 51.3 +0.9**
SNR=1.0
SMRF *e*Sn **Sn 06 57 36.5 -0.4**
comp=E,28nm,0.5s
STU Stuttgart 4.03 343 *e*Pn **Pn 06 56 51.6 +0.5**
STU Stuttgart 4.03 343 *e*Pn **Pn 06 56 51.7 +0.5**
OPP Oppenau 4.05 333 P **Pn 06 56 53.0 +1.6**
OPP Oppenau 4.05 333 P **Pn 06 56 52.0 +0.6**
HINF Hinteralfeld 4.06 317 *e*Pn **Pn 06 56 52.0 +0.5**
SNR=1.0
HINF *e*Sn **Sn 06 57 36.1 -2.7**
comp=E,75nm,0.4s,SNR=1.0
HINF Hinteralfeld 4.06 317 *e*Pn **Pn 06 56 52.0 +0.5**
HINF *e*Sn **Sn 06 57 36.1 -2.7**
HINF Hinteralfeld 4.06 317 *e*Pn **Pn 06 56 52.0 +0.5**
SNR=1.0
HINF *e*Sn **Sn 06 57 36.1 -2.7**
comp=E,38nm,0.4s,SNR=1.0
ECH Echery 4.21 323 *e*Pn **Pn 06 56 54.0 +0.4**
ECH Echery 4.21 323 P **Pn 06 56 54.8 +1.2**
ECH Echery 4.21 323 *e*Pn **Pn 06 56 54.0 +0.4**
ECH Echery 4.21 323 P **Pn 06 56 54.8 +1.2**
WLS Welschbruch 4.28 326 P **Pn 06 56 56.3 +1.7**
WLS Welschbruch 4.28 326 P **Pn 06 56 56.3 +1.7**
CDF Champ du Feu 4.32 325 *e*Pn **Pn 06 56 55.9 +0.8**
SNR=1.0
CDF *e*Sn **Sn 06 57 42.1 -3.1**
comp=E,49nm,0.4s,SNR=1.0
CDF Champ du Feu 4.32 325 *e*Pn **Pn 06 56 55.9 +0.8**
CDF *e*Sn **Sn 06 57 42.1 -3.1**
CDF Champ du Feu 4.32 325 *e*Pn **Pn 06 56 55.9 +0.8**
SNR=1.0
CDF *e*Sn **Sn 06 57 42.1 -3.1**
comp=E,24nm,0.4s,SNR=1.0
GEA0 GERESS Array S 4.34 25 *e*Pn **Pn 06 56 55.7 +0.3**
GEA0 GERESS Array S 4.34 25 *e*Pn **Pn 06 56 55.7 +0.3**
GEC2 GERESS Array S 4.34 25 *e*Pn **Pn 06 56 56.0 +0.5**
GEC2 GERESS Array S 4.34 25 *e*Pn **Pn 06 56 56.0 +0.5**
GERES GERESS Array B 4.34 25 Pn **Pn 06 56 56.0 +0.5**
comp=E,2.4nm,0.3s,baz=196,slow=13,SNR=25
GERES Pg **Pg 06 57 10.9 -2.0**
comp=E,7.1nm,0.3s,baz=202,slow=16,SNR=21
GERES Sn **Sn 06 57 46.6 +0.7**
comp=E,18nm,0.3s,baz=204,slow=26,SNR=8.9
GERES Lg Lg 06 58 08.9
comp=E,14nm,0.3s,baz=199,slow=24,SNR=5.3
BLY Banja Luka 4.42 90 *e*Pn **Pn 06 56 56.8 +0.3**
BLY *e*Sn **Sn 06 57 45.5 -2.2**
BLY Banja Luka 4.42 90 ⇑*i* P **Pn 06 56 56.9 +0.4**
BLY Banja Luka 4.42 90 S **Sn 06 57 41.8 -5.9**
BLY Banja Luka 4.42 90 *e*Pn **Pn 06 56 56.5 0.0**
BLY Banja Luka 4.42 90 *e*Pn **Pn 06 56 56.5 0.0**
BLY Banja Luka 4.42 90 ⇑*i* P **Pn 06 56 56.9 +0.4**
BLY *e*Sn **Sn 06 57 45.5 -2.2**
HAU Haudompre 4.44 316 *e*Pn **Pn 06 56 57.4 +0.7**
SNR=1.0
HAU *e*Sn **Sn 06 57 46.6 -1.5**
comp=E,106nm,0.4s,SNR=1.0
HAU Haudompre 4.44 316 *e*Pn **Pn 06 56 57.4 +0.7**
HAU *e*Sn **Sn 06 57 46.6 -1.5**
HAU Haudompre 4.44 316 *e*Pn **Pn 06 56 57.4 +0.7**
SNR=1.0
HAU *e*Sn **Sn 06 57 46.6 -1.5**
comp=E,53nm,0.4s,SNR=1.0
VIVF Saint-Julien-l 4.48 271 *e*Pn **Pn 06 56 57.1 -0.1**
SNR=1.0

VIVF				*e*Sn	**Sn**	**06 57 45.1**	**-4.0**
	comp=E,22nm,0.5s,SNR=1.0						
VIVF	**Saint-Julien-I**	**4.48**	**271**	*e*Pn	**Pn**	**06 56 57.1**	**-0.1**
VIVF				*e*Sn	**Sn**	**06 57 45.1**	**-4.0**
VIVF	**Saint-Julien-I**	**4.48**	**271**	*e*Pn	**Pn**	**06 56 57.1**	**-0.1**
	SNR=1.0						
CONA	**Conrad Observa**	**4.52**	**47**	*e*Pn	**Pn**	**06 56 58.9**	**+1.0**
	comp=E,3.0nm,0.4s,SNR=8.9						
CONA				Pg	**Pg**	**06 57 16.2**	**-0.2**
	comp=E,18nm,0.5s						
CONA	**Conrad Observa**	**4.52**	**47**	Pn	**Pn**	**06 56 58.9**	**+1.0**
	comp=E,3.0nm,0.4s,SNR=8.9						
SSB	**Saint Sauveur**	**4.56**	**277**	*e*Pn	**Pn**	**06 56 59.1**	**+0.6**
SSB	**Saint Sauveur**	**4.56**	**277**	*e*Pn	**Pn**	**06 56 59.1**	**+0.6**
KHC	**Kasperske Hory**	**4.57**	**22**	*e*PN	**Pn**	**06 56 59.2**	**+0.7**
KHC				*e*PG	**Pg**	**06 57 16.1**	**-1.2**
KHC				*e*SN	**Sn**	**06 57 50.9**	**-0.4**
KHC				*ex*	x	06 58 04.5	
KHC				*e*SG	**Sg**	**06 58 16.1**	**-0.3**
	comp=E,115nm,0.8s						
KHC				AMS	AMS	06 59 20.0	
	comp=E,400nm,6.4s						
KHC	**Kasperske Hory**	**4.57**	**22**	*e*Pn	**Pn**	**06 56 58.9**	**+0.4**
KHC	**Kasperske Hory**	**4.57**	**22**	*e*Pn	**Pn**	**06 56 58.9**	**+0.4**
GRFO	**Grafenberg**	**4.77**	**2**	*e*Pn	**Pn**	**06 57 01.5**	**+0.3**
GRFO	**Grafenberg**	**4.77**	**2**	*e*Pn	**Pn**	**06 57 01.5**	**+0.3**
LASF	**Ste Croix**	**5.16**	**263**	*e*Pn	**Pn**	**06 57 06.9**	**+0.3**
	SNR=1.0						
LASF	**Ste Croix**	**5.16**	**263**	*e*Pn	**Pn**	**06 57 06.9**	**+0.3**
LASF	**Ste Croix**	**5.16**	**263**	*e*Pn	**Pn**	**06 57 06.9**	**+0.3**
	SNR=1.0						
SFTF	**Sexfontaines**	**5.24**	**311**	*e*Pn	**Pn**	**06 57 08.5**	**+0.8**
	baz=130						
SFTF	**Sexfontaines**	**5.24**	**311**	*e*Pn	**Pn**	**06 57 08.5**	**+0.8**
SFTF	**Sexfontaines**	**5.24**	**311**	*e*Pn	**Pn**	**06 57 08.5**	**+0.8**
SMF	**Signal de Mont**	**5.27**	**292**	*e*Pn	**Pn**	**06 57 09.1**	**+0.9**
	SNR=1.0						
SMF				*e*Sn	**Sn**	**06 58 07.7**	**-1.0**
	comp=E,79nm,0.5s						
SMF	**Signal de Mont**	**5.27**	**292**	*e*Pn	**Pn**	**06 57 09.1**	**+0.9**
SMF				*e*Sn	**Sn**	**06 58 07.7**	**-1.0**
SMF	**Signal de Mont**	**5.27**	**292**	*e*Pn	**Pn**	**06 57 09.1**	**+0.9**
	SNR=1.0						
SMF				*e*Sn	**Sn**	**06 58 07.7**	**-1.0**
	comp=E,40nm,0.5s						
STON	**Ston**	**5.28**	**111**	*e*Pn	**Pn**	**06 57 07.7**	**-0.5**
STON	**Ston**	**5.28**	**111**	*e*Pn	**Pn**	**06 57 07.8**	**-0.3**
STON				Sn	**Sn**	**06 58 05.7**	**-3.1**
STON	**Ston**	**5.28**	**111**	*e*Pn	**Pn**	**06 57 07.7**	**-0.5**
STON				Sn	**Sn**	**06 58 05.7**	**-3.1**
ZST	**Bratislava**	**5.34**	**50**	*e*SN	**Sn**	**06 58 07.2**	**-3.2**
ZST	**Bratislava**	**5.34**	**50**	*e*Sn	**Sn**	**06 58 07.2**	**-3.2**
NKC	**Novy Kostel**	**5.40**	**10**	*e*PN	**Pn**	**06 57 10.4**	**+0.5**
NKC				*e*PG	**Pg**	**06 57 32.2**	**-1.0**
NKC				*e*SN	**Sn**	**06 58 10.7**	**-1.2**
NKC				*ex*	x	06 58 23.0	
NKC				*e*SG	**Sg**	**06 58 40.8**	**-2.3**
	comp=E,76nm,0.8s						
MEZF	**Maizieres J'vi**	**5.42**	**313**	*e*Pn	**Pn**	**06 57 11.8**	**+1.7**
	baz=133,SNR=1.0						
MEZF	**Maizieres J'vi**	**5.42**	**313**	*e*Pn	**Pn**	**06 57 11.8**	**+1.7**
MEZF	**Maizieres J'vi**	**5.42**	**313**	*e*Pn	**Pn**	**06 57 11.8**	**+1.7**
	SNR=1.0						
LOR	**Lormes**	**5.47**	**298**	*e*Pn	**Pn**	**06 57 11.7**	**+0.8**
	baz=118,SNR=1.0						
LOR				*e*Sn	**Sn**	**06 58 13.6**	**0.0**
	comp=E,31nm,0.3s						
LOR	**Lormes**	**5.47**	**298**	*e*Pn	**Pn**	**06 57 11.7**	**+0.8**
LOR				*e*Sn	**Sn**	**06 58 13.6**	**0.0**
LOR	**Lormes**	**5.47**	**298**	P	**Pn**	**06 57 11.9**	**+1.1**
LOR	**Lormes**	**5.47**	**298**	*e*Pn	**Pn**	**06 57 11.7**	**+0.8**
	SNR=1.0						
LOR				*e*Sn	**Sn**	**06 58 13.6**	**0.0**
	comp=E,16nm,0.3s						
ABH	**Alteburg**	**5.47**	**336**	P	**Pn**	**06 57 11.9**	**+1.0**
ABH	**Alteburg**	**5.47**	**336**	P	**Pn**	**06 57 11.9**	**+1.0**
LBL	**Lubilhac**	**5.48**	**276**	P	**Pn**	**06 57 12.1**	**+1.1**
LBL	**Lubilhac**	**5.48**	**276**	P	**Pn**	**06 57 12.1**	**+1.1**
MODS	**Modra-Piesok**	**5.54**	**49**	*e*PN	**Pn**	**06 57 11.3**	**-0.6**
MODS				*e*SN	**Sn**	**06 58 12.4**	**-3.0**
MODS	**Modra-Piesok**	**5.54**	**49**	*e*Pn	**Pn**	**06 57 11.3**	**-0.6**
VSL	**Villasalto**	**5.55**	**193**	*e*Pn	**Pn**	**06 57 14.7**	**+2.7**
VSL	**Villasalto**	**5.55**	**193**	*e*Pn	**Pn**	**06 57 14.7**	**+2.7**
KRUC	**Moravsky**	**5.56**	**40**	*e*PN	**Pn**	**06 57 12.2**	**+0.2**
KRUC				*e*PG	**Pg**	**06 57 35.0**	**-1.1**
PRU	**Pruhonice**	**5.61**	**24**	*e*PN	**Pn**	**06 57 14.1**	**+1.3**
PRU				*e*PG	**Pg**	**06 57 34.6**	**-2.6**
PRU				*e*SG	**Sg**	**06 58 50.4**	**+0.6**
	comp=E,82nm,1.0s						
PRU				AMS	AMS	06 59 40.0	
	comp=E,300nm,7.9s						
GOPC	**GO Pecny, Ondr**	**5.62**	**26**	*e*PN	**Pn**	**06 57 14.3**	**+1.4**
GOPC				*e*PG	**Pg**	**06 57 34.7**	**-2.7**
GOPC				*e*SN	**Sn**	**06 58 16.3**	**-1.0**
GOPC				*e*SG	**Sg**	**06 58 48.4**	**-1.7**
	comp=E,71nm,0.7s						
GOPC				AMS	AMS	06 59 50.0	
	comp=E,400nm,6.0s						
SSF	**Saint Saulge**	**5.62**	**295**	*e*Pn	**Pn**	**06 57 13.7**	**+0.8**
	SNR=1.0						
SSF				*e*Sn	**Sn**	**06 58 15.9**	**-1.4**
	comp=E,30nm,0.4s,SNR=1.0						
SSF	**Saint Saulge**	**5.62**	**295**	*e*Pn	**Pn**	**06 57 13.7**	**+0.8**
SSF				*e*Sn	**Sn**	**06 58 15.9**	**-1.4**
SSF	**Saint Saulge**	**5.62**	**295**	*e*Pn	**Pn**	**06 57 13.7**	**+0.8**
	SNR=1.0						
AGO	**Saint Agoulin**	**5.63**	**284**	P	**Pn**	**06 57 13.9**	**+0.9**
AGO	**Saint Agoulin**	**5.63**	**284**	P	**Pn**	**06 57 13.9**	**+0.9**
AVF	**Avril sur Loir**	**5.64**	**292**	*e*Pn	**Pn**	**06 57 13.9**	**+0.8**
	SNR=1.0						
AVF				*e*Sn	**Sn**	**06 58 16.2**	**-1.4**
	comp=E,17nm,0.6s,SNR=1.0						
AVF	**Avril sur Loir**	**5.64**	**292**	*e*Pn	**Pn**	**06 57 13.9**	**+0.8**
AVF				*e*Sn	**Sn**	**06 58 16.2**	**-1.4**
AVF	**Avril sur Loir**	**5.64**	**292**	*e*Pn	**Pn**	**06 57 13.9**	**+0.8**
	SNR=1.0						
PRA	**Prague**	**5.65**	**23**	*e*SN	**Sn**	**06 58 16.8**	**-1.2**
PRA				*e*SG	**Sg**	**06 58 48.6**	**-2.6**
	comp=E,78nm,0.9s						
HAPS	**Han Pijesak,BI**	**5.77**	**96**	*e*Pn	**Pn**	**06 57 14.8**	**-0.3**
VRAC	**Vranov**	**5.82**	**39**	Pg	**Pg**	**06 57 38.4**	**-2.8**
	comp=E,2.7nm,0.3s,baz=228,slow=14,SNR=6.9						
VRAC				Sn	**Sn**	**06 58 22.6**	**+0.3**
	comp=E,2.8nm,0.3s,baz=234,slow=19,SNR=4.6						
VRAC				Lg	Lg	06 58 56.4	
	comp=E,1.6nm,0.3s,baz=139,slow=20,SNR=3.3						
VRAC				LR	LR	07 00 02.3	
	comp=E,154nm,20.1s,baz=226,slow=43						
VRAC	**Vranov**	**5.82**	**39**	S	**Sb**	**06 58 35.0**	**-5.7**
BRY	**Bratogost**	**5.83**	**108**	*e*Pn	**Pn**	**06 57 16.7**	**+0.8**
BGF	**Bois d'Agland**	**5.92**	**289**	*e*Pn	**Pn**	**06 57 17.7**	**+0.7**
	SNR=1.0						
BGF				*e*Sn	**Sn**	**06 58 23.0**	**-1.5**
	comp=E,156nm,0.4s						
BGF	**Bois d'Agland**	**5.92**	**289**	*e*Pn	**Pn**	**06 57 17.7**	**+0.7**
BGF				*e*Sn	**Sn**	**06 58 23.0**	**-1.5**
BGF	**Bois d'Agland**	**5.92**	**289**	*e*Pn	**Pn**	**06 57 17.7**	**+0.7**
	SNR=1.0						
HCY	**Herceg Novi**	**5.99**	**112**	*e*Pn	**Pn**	**06 57 18.0**	**0.0**
MATE	**Matera**	**6.00**	**133**	⇑*iP*	**Pn**	**06 57 14.4**	**-3.8**
MATE	**Matera**	**6.00**	**133**	S	Sn	06 58 12.8	-14
JAVC	**Velka Javorina**	**6.04**	**47**	*e*PN	**Pn**	**06 57 20.5**	**+1.7**
PVCC	**Panska Ves**	**6.11**	**22**	*e*PN	**Pn**	**06 57 19.7**	**+0.1**
PVCC				*e*SN	**Sn**	**06 58 28.2**	**-1.0**
PVCC				*e*SG	**Sg**	**06 59 03.7**	**-2.0**
	comp=E,80nm,0.6s						
PVCC				AMS	AMS	07 00 00.0	
	comp=E,300nm,6.6s						
TEKS	**Tekeris**	**6.11**	**91**	*e*Pn	**Pn**	**06 57 19.9**	**+0.3**
TEKS				*e*Sn	**Sn**	**06 58 25.1**	**-4.2**
TEKS	**Tekeris**	**6.11**	**91**	*e*Pn	**Pn**	**06 57 19.9**	**+0.3**
BBLS	**Lazići**	**6.14**	**97**	*e*Pn	**Pn**	**06 57 20.2**	**+0.1**
BBLS				*e*Sn	**Sn**	**06 58 25.8**	**-4.2**
BBLS	**Lazići**	**6.14**	**97**	*e*Pn	**Pn**	**06 57 20.2**	**+0.1**
HYF	**Humbligny**	**6.25**	**295**	*e*Sn	**Sn**	**06 58 31.1**	**-1.6**
FGSL	**Fruska Gora**	**6.27**	**85**	*e*Pn	**Pn**	**06 57 21.6**	**-0.2**
FRGS	**Fruska Gora**	**6.27**	**85**	*e*Pn	**Pn**	**06 57 21.6**	**-0.2**
FRGS				*e*Sn	**Sn**	**06 58 29.6**	**-3.6**
FRGS	**Fruska Gora**	**6.27**	**85**	*e*Pn	**Pn**	**06 57 21.0**	**-0.8**
BRG	**Berggiesshubel**	**6.28**	**17**	PN	**Pn**	**06 57 23.7**	**+1.8**
BRG				PG	**Pg**	**06 57 48.4**	**-1.5**
BRG				*i*		06 58 31.9	
BRG	**Berggiesshubel**	**6.28**	**17**	SG	**Sg**	**06 59 06.9**	**-4.2**
	comp=E,104nm,1.3s						
	comp=N,172nm,10.2s						
	comp=E,296nm,8.7s						
	comp=Z,352nm,6.6s						
TCF	**Toulx Ste Croi**	**6.29**	**286**	*e*Pn	**Pn**	**06 57 22.7**	**+0.5**
	SNR=1.0						
TCF	**Toulx Ste Croi**	**6.29**	**286**	*e*Pn	**Pn**	**06 57 22.7**	**+0.5**
TCF	**Toulx Ste Croi**	**6.29**	**286**	*e*Pn	**Pn**	**06 57 22.7**	**+0.5**
	SNR=1.0						
CAF	**Calviac**	**6.32**	**273**	*e*Pn	**Pn**	**06 57 23.2**	**+0.6**
	SNR=1.0						
CAF	**Calviac**	**6.32**	**273**	*e*Pn	**Pn**	**06 57 23.2**	**+0.6**
CAF	**Calviac**	**6.32**	**273**	*e*Pn	**Pn**	**06 57 23.2**	**+0.6**
	SNR=1.0						
VYHS	**Vyhne**	**6.48**	**54**	*e*PN	**Pn**	**06 57 24.4**	**-0.3**
VYHS				*e*SN	**Sn**	**06 58 34.4**	**-4.0**
VYHS	**Vyhne**	**6.48**	**54**	*e*Pn	**Pn**	**06 57 24.4**	**-0.3**
KRLC	**Kraliky**	**6.48**	**35**	*e*PN	**Pn**	**06 57 25.4**	**+0.6**
KRLC				*ex*	x	06 57 35.7	
KRLC				*ex*	x	06 57 42.3	
KRLC				*e*SN	**Sn**	**06 58 36.8**	**-1.7**
MTLF	**Montolieu**	**6.50**	**259**	*e*Pn	**Pn**	**06 57 25.3**	**+0.4**
MTLF	**Montolieu**	**6.50**	**259**	*e*Pn	**Pn**	**06 57 25.3**	**+0.4**
MTLF	**Montolieu**	**6.50**	**259**	*e*Pn	**Pn**	**06 57 25.3**	**+0.4**
DIVS	**Divibare**	**6.50**	**94**	*e*Pn	**Pn**	**06 57 24.0**	**-1.1**
DIVS	**Divibare**	**6.50**	**94**	*e*Pn	**Pn**	**06 57 24.2**	**-0.9**
DIVS	**Divibare**	**6.50**	**94**	*e*Pn	**Pn**	**06 57 24.2**	**-0.9**
PDG	**Podgorica**	**6.50**	**110**	*e*Pn	**Pn**	**06 57 25.9**	**+0.9**
PDG	**Podgorica**	**6.50**	**110**	⇑*iP*	**Pn**	**06 57 22.0**	**-3.0**
PDG	**Podgorica**	**6.50**	**110**	S	Sn	06 58 27.8	-11
PDG	**Podgorica**	**6.50**	**110**	*e*Pn	**Pn**	**06 57 25.9**	**+0.9**
TTG	**Podgorica**	**6.50**	**110**	*e*Pn	**Pn**	**06 57 25.8**	**+0.8**
TTG				*e*Sn	**Sn**	**06 58 38.6**	**-0.4**
TTG	**Podgorica**	**6.50**	**110**	*e*Pn	**Pn**	**06 57 25.8**	**+0.8**
TTG				*e*Sn	**Sn**	**06 58 38.6**	**-0.4**
DPC	**Dobruska-Polom**	**6.52**	**32**	*e*PN	**Pn**	**06 57 26.3**	**+1.0**
DPC				*e*PG	**Pg**	**06 57 53.3**	**-1.2**
DPC				*e*SN	**Sn**	**06 58 36.0**	**-3.4**
DPC				*e*SG	**Sg**	**06 59 18.6**	**-0.3**
	comp=Z,47nm,0.9s						
DPC				AMS	AMS	07 00 10.0	
	comp=Z,300nm,7.8s						
CLL	**Collm**	**6.53**	**11**	*e*Pn	**Pn**	**06 57 26.0**	**+0.7**
CLL				*e*Pg	**Pg**	**06 57 55.0**	**+0.3**
CLL				*e*		06 58 02.0	
CLL				*e*		06 59 14.0	
CLL				*e*Sg	**Sg**	**06 59 21.0**	**+1.8**
	comp=Z,103nm,1.2s						
CLL	**Collm**	**6.53**	**11**	*e*Pn	**Pn**	**06 57 26.0**	**+0.7**
CLL	**Collm**	**6.53**	**11**	*e*Pn	**Pn**	**06 57 26.0**	**+0.7**
UPC	**Upice**	**6.54**	**30**	*e*PN	**Pn**	**06 57 26.0**	**+0.5**
UPC				*e*SN	**Sn**	**06 58 37.3**	**-2.5**
DRME	**Dracevica, Mon**	**6.57**	**112**	*e*Pn	**Pn**	**06 57 26.2**	**+0.3**
MORC	**Moravsky Berou**	**6.59**	**40**	⇓*iP*	Pb	06 57 36.8	-7.4
MORC	**Moravsky Berou**	**6.59**	**40**	*e*Pn	**Pn**	**06 57 26.6**	**+0.3**
MORC	**Moravsky Berou**	**6.59**	**40**	*e*Pn	**Pn**	**06 57 26.6**	**+0.3**
GIVF	**Givet**	**6.64**	**323**	*e*Pn	**Pn**	**06 57 27.4**	**+0.5**
	SNR=1.0						
GIVF	**Givet**	**6.64**	**323**	*e*Pn	**Pn**	**06 57 27.4**	**+0.5**
GIVF	**Givet**	**6.64**	**323**	*e*Pn	**Pn**	**06 57 27.4**	**+0.5**
	SNR=1.0						
SJES	**Sjenica**	**6.69**	**101**	*e*Pn	**Pn**	**06 57 27.9**	**+0.1**
SJES				*e*Sn	**Sn**	**06 58 39.8**	**-4.0**
IVAS	**Ivanjica**	**6.73**	**98**	*e*Pn	**Pn**	**06 57 28.0**	**-0.2**
IVAS				*e*Sn	**Sn**	**06 58 40.3**	**-4.4**
IVAS	**Ivanjica**	**6.73**	**98**	*e*Pn	**Pn**	**06 57 28.0**	**-0.2**
TRUS	**Trudelj**	**6.78**	**93**	*e*Pn	**Pn**	**06 57 28.9**	**+0.1**
TRUS	**Trudelj**	**6.78**	**93**	*e*Pn	**Pn**	**06 57 28.9**	**+0.1**
OKC	**Ostrava-Krasne**	**6.92**	**42**	*ex*	**Sn**	**06 58 56.8**	**+7.7**
GRUS	**Gruza**	**7.06**	**95**	*e*Pn	**Pn**	**06 57 32.7**	**+0.1**
GRUS	**Gruza**	**7.06**	**95**	*e*Pn	**Pn**	**06 57 32.7**	**+0.1**
KECS	**Kecovo**	**7.44**	**58**	*e*PN	**Pn**	**06 57 37.3**	**-0.6**
KECS	**Kecovo**	**7.44**	**58**	*e*Pn	**Pn**	**06 57 37.3**	**-0.6**
SELS	**Selova**	**7.51**	**100**	*e*Pn	**Pn**	**06 57 38.4**	**-0.4**
SELS	**Selova**	**7.51**	**100**	*e*Pn	**Pn**	**06 57 38.4**	**-0.4**
BZS	**Buzias**	**7.54**	**81**	⇓*iP*	**Pn**	**06 57 39.2**	**-0.1**
BZS	**Buzias**	**7.54**	**81**	⇓*iP*	**Pn**	**06 57 39.2**	**-0.1**
MDVR	**Moldovita**	**7.64**	**87**	⇓*iP*	**Pn**	**06 57 40.3**	**-0.3**
MDVR	**Moldovita**	**7.64**	**87**	S	**Sn**	**06 59 00.4**	**-6.5**
MDVR	**Moldovita**	**7.64**	**87**	⇓*iP*	**Pn**	**06 57 40.3**	**-0.3**
KUBS	**Kucevo**	**7.65**	**90**	*e*Pn	**Pn**	**06 57 39.6**	**-1.2**
KUBS	**Kucevo**	**7.65**	**90**	*e*Pn	**Pn**	**06 57 39.6**	**-1.2**
HERR	**Herculane**	**8.13**	**86**	⇓*iP*	**Pn**	**06 57 47.6**	**+0.3**
HERR	**Herculane**	**8.13**	**86**	⇓*iP*	**Pn**	**06 57 47.6**	**+0.3**
ZAGS	**Zajecar**	**8.15**	**94**	*e*Pn	**Pn**	**06 57 48.0**	**+0.4**
ZAGS	**Zajecar**	**8.15**	**94**	*e*Pn	**Pn**	**06 57 48.0**	**+0.4**
DRGR		**8.40**	**73**	⇑*iP*	**Pn**	**06 57 52.8**	**+1.6**
DRGR		**8.40**	**73**	⇑*iP*	**Pn**	**06 57 52.8**	**+1.6**
ZAPS	**Zavoj**	**8.56**	**97**	*e*Pn	**Pn**	**06 57 53.3**	**+0.1**
FLN	**La Foliniere**	**8.73**	**300**	*e*Pn	**Pn**	**06 57 56.1**	**+0.5**
FLN	**La Foliniere**	**8.73**	**300**	*e*Pn	**Pn**	**06 57 56.1**	**+0.5**
FLN	**La Foliniere**	**8.73**	**300**	*e*Pn	**Pn**	**06 57 56.1**	**+0.5**
GRR	**Gorron**	**8.84**	**297**	*e*Pn	**Pn**	**06 57 57.4**	**+0.3**
GRR	**Gorron**	**8.84**	**297**	*e*Pn	**Pn**	**06 57 57.4**	**+0.3**
GRR	**Gorron**	**8.84**	**297**	*e*Pn	**Pn**	**06 57 57.4**	**+0.3**
VTS	**Vitosha**	**9.16**	**100**	⇑*iP*	**Pn**	**06 57 59.7**	**-1.9**
VTS	**Vitosha**	**9.16**	**100**	*e*Pn	**Pn**	**06 58 02.3**	**+0.7**
VTS	**Vitosha**	**9.16**	**100**	⇑*iP*	**Pn**	**06 57 59.7**	**-1.9**
VTS	**Vitosha**	**9.16**	**100**	*e*Pn	**Pn**	**06 58 02.3**	**+0.7**
KEST	**Kesra**	**9.27**	**188**	Pn	Pn	06 58 08.6	+5.6
	comp=Z,1.5nm,0.3s,baz=320,slow=3.8,SNR=16						
LIT	**Litokhoron**	**9.78**	**116**	*e*Pn	**Pn**	**06 58 10.0**	**+0.1**
LIT	**Litokhoron**	**9.78**	**116**	*e*Pn	**Pn**	**06 58 10.0**	**+0.1**
BUR08	**Bucovina Ar. S**	**10.22**	**70**	*e*Pn	**Pn**	**06 58 16.4**	**+0.3**
BUR08	**Bucovina Ar. S**	**10.22**	**70**	*e*Pn	**Pn**	**06 58 16.4**	**+0.3**
BURAR	**Bucovina Array**	**10.22**	**70**	⇑*iP*	**Pn**	**06 58 18.3**	**+2.2**
BURAR	**Bucovina Array**	**10.22**	**70**	⇑*iP*	**Pn**	**06 58 18.3**	**+2.2**
MLR	**Muntele Rosu**	**10.59**	**82**	⇑*iP*	**Pn**	**06 58 21.4**	**+0.3**
MLR	**Muntele Rosu**	**10.59**	**82**	⇑*iP*	**Pn**	**06 58 21.4**	**+0.3**
ALN	**Alexandroupoli**	**11.76**	**105**	*e*Pn	**Pn**	**06 58 37.0**	**-0.1**
ALN	**Alexandroupoli**	**11.76**	**105**	*e*Pn	**Pn**	**06 58 37.0**	**-0.1**
ESDC	**Sonseca Array**	**12.23**	**250**	Pn	**Pn**	**06 58 45.4**	**+1.7**
	comp=Z,0.4nm,0.3s,baz=57,slow=14,SNR=4.0						
EKA	**Eskdalemuir Ar**	**13.78**	**324**	Pn	**Pn**	**06 59 05.8**	**+1.3**
	baz=138,slow=14,SNR=4.6						
DSB	**Dublin**	**14.06**	**312**	*e*Pn	**Pn**	**06 59 08.9**	**+0.5**
DSB	**Dublin**	**14.06**	**312**	*e*Pn	**Pn**	**06 59 08.9**	**+0.5**
KARP	**Karpathos**	**15.49**	**122**	*e*Pn	**P**	**06 59 31.4**	**-0.8**
	comp=Z,16nm,0.9s						
FINES	**FINESS Array B**	**18.77**	**23**	P	**Pn**	**07 00 10.3**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=212,slow=9.0,SNR=4.9						
TOA0	**Torodi Ar. Sit**	**32.65**	**197**	*e*P	**P**	**07 02 20.5**	**-0.9**
TORD	**Torodi Ar. Bea**	**32.65**	**197**	P	**P**	**07 02 19.8**	**-1.6**
	comp=Z,0.6nm,0.4s,baz=11,slow=9.0,SNR=10						
RAYN	**Ar Rayn**	**35.27**	**116**	*e*P	**P**	**07 02 46.0**	**+1.9**
	comp=Z,1.9nm,0.8s						
RAYN	**Ar Rayn**	**35.27**	**116**	*e*P	**P**	**07 02 46.0**	**+1.9**
	comp=Z,1.9nm,0.8s						
KURBB	**Kurchatov Arra**	**44.33**	**57**	P	**P**	**07 03 59.7**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=297,slow=9.1,SNR=4.6						
MKAR	**Makanchi Array**	**48.11**	**61**	P	**P**	**07 04 29.7**	**+0.7**
	comp=Z,0.9nm,0.7s,baz=299,slow=6.5,SNR=4.1						
YKA	**Yellowknife Ar**	**64.44**	**335**	P	**P**	**07 06 25.7**	**+0.6**
	comp=Z,0.1nm,0.5s,baz=37,slow=6.5,SNR=4.8						
YKA				LR	LR	07 35 03.5	
	comp=Z,5.4nm,18.1s,baz=50,slow=36						
TXAR	**Lajitas Array**	**85.16**	**307**	P	**P**	**07 08 25.9**	**+0.2**
	comp=Z,0.8nm,0.9s,baz=43,slow=4.1,SNR=5.6						

CSEM ***04*** *06:57:45.6, 40˚.49N×21˚.48E, h59km, ML0.9/1*

ATH 04 06:57:45.6, 40˚.49N×21˚.48E, h59km±7km, ML0.9/1, Error ellipse: s-maj=10.3km s-min=2.0km az=307.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FNA	**Florina**	**0.31**	**345**	P	Pn	06 57 55.7	0.0
FNA				S	Sn	06 58 03.6	+0.5
FNA				AML	AML	06 58 14.3	
	comp=N,31μm,0.3s						
FNA				AML	AML	06 58 16.0	
	comp=E,27μm,0.4s						
FNA	**Florina**	**0.31**	**345**	*e*Pn	Pn	06 57 55.3	-0.4
FNA	**Florina**	**0.31**	**345**	P	Pn	06 57 55.9	+0.2
FNA				S	Sn	06 58 03.6	+0.5
NEST	**Nestorio**	**0.34**	**258**	P	Pn	06 57 55.7	-0.3
NEST				S	Sn	06 58 04.4	+0.9
NEST	**Nestorio**	**0.34**	**258**	P	Pn	06 57 56.0	0.0
NEST				S	Sn	06 58 04.3	+0.7
PENT	**Pentalofos**	**0.39**	**222**	P	Pn	06 57 56.6	+0.1
PENT				S	Sn	06 58 05.5	+1.1
PENT	**Pentalofos**	**0.39**	**222**	P	Pn	06 57 56.7	+0.2
PENT				S	Sn	06 58 05.3	+0.9
GRG	**Griva**	**0.84**	**56**	P	Pn	06 58 03.0	+1.4
GRG				S	Sn	06 58 13.1	-0.2
GRG	**Griva**	**0.84**	**56**	P	Pn	06 58 02.6	+1.0
GRG				S	Sn	06 58 13.8	+0.5

PRU 04 07:02:22.6, 50˚.08N×18˚.47E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.32**	**221**	*e*PG	Pg	07 02 29.0	+0.3
OKC				*e*SG	Sg	07 02 33.0	+0.2
	comp=Z,7.7nm,0.2s						
MORC	**Moravsky Berou**	**0.67**	**243**	*e*PG	Pg	07 02 35.6	+0.1
MORC				*e*SG	Sg	07 02 44.5	+0.4
KRLC	**Kraliky**	**1.09**	**270**	*e*PG	Pg	07 02 43.0	-0.4
KRLC				*e*SG	Sg	07 02 56.2	-1.3
	comp=Z,0.9nm,0.3s						
DPC	**Dobruska-Polom**	**1.41**	**282**	*e*PG	Pn	07 02 48.7	-0.8
DPC				*e*SG	Sg	07 03 07.0	-0.7
	comp=Z,3.2nm,0.3s						
KHC	**Kasperske Hory**	**3.32**	**255**	*e*SG	Sg	07 04 07.5	-1.7

IDC ***04*** *07:04:45.2±1.5, 44˚.75N×11˚.01E, h0km, mb3.4/3, mb1 3.5/4, mb1mx3.2/64, mbtmp3.3/4, ML3.0/1, Error ellipse: s-maj=39.3km s-min=16.2km az=115.0*

ROM ***04*** *07:04:47.0±0.0, 44˚.882N±0˚.002×10˚.966E±0˚.001, h8km, ML3.4/48*

CSEM ***04*** *07:04:47.5±0.1, 44˚.93N×10˚.99E, h10km, ML3.4/14, Error ellipse: s-maj=3.0km s-min=2.4km az=165.0*

LDG ***04*** *07:04:47.5±0.1, 44˚.93N×11˚.09E, h2km, Ml3.5/19, Error ellipse: s-maj=3.1km s-min=2.2km az=58.0*

ISCJB ***04*** *07:04:47.2±0.2, 44˚.91N±0˚.02×10˚.97E±0˚.02, h19km±1km, mb3.5/3, Error ellipse: s-maj=2.9km s-min=2.0km az=166.5*

PRU ***04*** *07:04:47.3, 44˚.99N×10˚.82E, h8km*

IASPEI ***04*** *07:04:47.3±0.8, 44˚.91N±0˚.02×10˚.96E±0˚.02, h13km±4km, mb3.6/3, Error ellipse: s-maj=3.4km s-min=3.2km az=135.2, GT5 selection from ISC bulletin GT5 identified by Bond˚ir and McLaughlin (2009) selection criteria Bond˚ir and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472

MODE	**Modena**	**0.30**	**182**	*e*P	**Pg**	**07 04 53.4 -0.2**
MODE				AML	AML	
MODE				AML	AML	
	comp=N,46850µm,0.7s					
MODE				AML	AML	
MODE				AML	AML	
	comp=N,46850µm,0.7s					
MODE				AML	AML	
MODE				AML	AML	
	comp=N,46850µm,0.7s					
MODE				AML	AML	
MODE				AML	AML	
	comp=N,46850µm,0.7s					
T0803	**Dosso, Cento (**	**0.32**	**121**⇑	*e*P	**Pg**	**07 04 53.5 -0.4**
T0803			⇑	*e*S	**Sb**	**07 04 59.9 +0.2**
T0803	**Dosso, Cento (**	**0.32**	**121**	*e*P	**Pg**	**07 04 53.5 -0.4**
T0803				*e*S	**Sb**	**07 04 59.9 +0.2**
T0823	**Castello D'Arg**	**0.33**	**137**⇑	*e*P	**Pg**	**07 04 54.4 +0.3**
T0823			⇑	*e*S	**Sb**	**07 05 00.8 +0.8**
T0823	**Castello D'Arg**	**0.33**	**137**	*e*P	**Pg**	**07 04 54.4 +0.3**
T0823				*e*S	**Sb**	**07 05 00.8 +0.8**
T0817	**Loc. Veratica,**	**0.35**	**80**⇑	*e*P	**Pb**	**07 04 55.5 +0.2**
T0817	**Loc. Veratica,**	**0.35**	**80**	*e*P	**Pb**	**07 04 55.5 +0.2**
T0821	**Loc. Casaglia**	**0.41**	**94**	AML	AML	
	comp=E,8685µm,0.4s					
T0821				AML	AML	
	comp=N,8045µm,1.1s					
T0821				AML	AML	
	comp=E,8955µm,0.4s					
T0821				AML	AML	
	comp=N,8360µm,1.1s					
T0821				AML	AML	
	comp=E,8685µm,0.4s					
T0821				AML	AML	
	comp=N,8050µm,1.1s					
T0821				AML	AML	
	comp=E,8955µm,0.4s					
T0821				AML	AML	
	comp=N,8360µm,1.1s					
T0821				AML	AML	
	comp=N,8360µm,1.1s					
T0821				AML	AML	
	comp=N,8050µm,1.1s					
T0821				AML	AML	
	comp=E,8685µm,0.4s					
T0821				AML	AML	
	comp=E,8955µm,0.4s					
ZCCA	**Zocca**	**0.58**	**179**	AML	AML	
	comp=E,5655µm,1.6s					
ZCCA				AML	AML	
	comp=E,5650µm,1.6s					
ZCCA				AML	AML	
	comp=N,6465µm,1.0s					
ZCCA				AML	AML	
	comp=E,5085µm,1.6s					
ZCCA				AML	AML	
	comp=N,6840µm,1.0s					
ZCCA				AML	AML	
	comp=E,5655µm,1.6s					
ZCCA				AML	AML	
	comp=N,6465µm,1.0s					
ZCCA				AML	AML	
	comp=E,5085µm,1.6s					
ZCCA				AML	AML	
	comp=N,6840µm,1.0s					
ZCCA				AML	AML	
	comp=E,5655µm,1.6s					
ZCCA				AML	AML	
	comp=N,6465µm,1.0s					
ZCCA				AML	AML	
	comp=E,5085µm,1.6s					
ZCCA				AML	AML	
	comp=N,6840µm,1.0s					
ZCCA				AML	AML	
	comp=E,5085µm,1.6s					
ZCCA				AML	AML	
	comp=N,6840µm,1.0s					
ZCCA				AML	AML	
	comp=N,6465µm,1.0s					
ZOVE	**Zovencedo**	**0.64**	**35**	AML	AML	
	comp=E,2780µm,0.5s					
ZOVE				AML	AML	
	comp=E,2780µm,0.5s					
ZOVE				AML	AML	
	comp=N,3515µm,0.6s					
ZOVE				AML	AML	
	comp=E,2780µm,0.5s					
ZOVE				AML	AML	
	comp=N,3515µm,0.6s					
ZOVE				AML	AML	
	comp=N,3515µm,0.6s					
TEOL	**Teolo**	**0.66**	**49**⇑	*e*Pg	**Pb**	**07 05 00.7 +0.1**
TEOL	**Teolo**	**0.66**	**49**	*e*Pg	**Pb**	**07 05 00.7 +0.1**
TEOL	**Teolo**	**0.66**	**49**	AML	AML	
	comp=E,7925µm,0.8s					
TEOL				AML	AML	
	comp=E,7920µm,0.8s					
TEOL				AML	AML	
	comp=N,8415µm,0.3s					
TEOL				AML	AML	
	comp=N,8415µm,0.3s					
TEOL				AML	AML	
	comp=N,8415µm,0.3s					
TEOL				AML	AML	
	comp=E,7925µm,0.8s					
CMPO	**Campotto Po**	**0.69**	**120**	AML	AML	
	comp=N,7870µm,1.0s					
CMPO				AML	AML	
	comp=E,5320µm,0.9s					
CMPO				AML	AML	
	comp=E,5320µm,0.9s					
CMPO				AML	AML	
	comp=N,7870µm,1.0s					
CMPO				AML	AML	
	comp=N,7870µm,1.0s					
CMPO				AML	AML	
	comp=E,5320µm,0.9s					
MARN	**Marana (Italy)**	**0.73**	**14**⇑	*e*Pg	**Pb**	**07 05 02.5 +0.8**
MARN				*e*Sg	**Sn**	**07 05 15.2 +1.1**
MARN	**Marana (Italy)**	**0.73**	**14**	*e*Pg	**Pb**	**07 05 02.5 +0.8**
MARN				*e*Sg	**Sn**	**07 05 15.2 +1.1**
BALD	**Monte Baldo**	**0.76**	**352**⇑	*e*Pg	**Pb**	**07 05 03.2 +0.8**
BALD				*e*Sg	**Sn**	**07 05 16.8 +1.7**
BALD	**Monte Baldo**	**0.76**	**352**	*e*Pg	**Pb**	**07 05 03.2 +0.8**
BALD				*e*Sg	**Sn**	**07 05 16.8 +1.7**
VOBA	**Vobarno**	**0.78**	**336**	AML	AML	
	comp=E,3305µm,1.4s					
VOBA				AML	AML	
	comp=E,3305µm,1.4s					
VOBA				AML	AML	
	comp=N,4405µm,0.2s					
VOBA				AML	AML	
	comp=N,4405µm,0.2s					
VOBA				AML	AML	
	comp=N,4405µm,0.2s					
VOBA				AML	AML	
	comp=E,3305µm,1.4s					
IMOL	**Imola, Italy**	**0.80**	**135**	AML	AML	
	comp=N,4305µm,0.7s					
IMOL				AML	AML	
	comp=E,5230µm,0.6s					
IMOL				AML	AML	
	comp=N,4300µm,0.7s					
IMOL				AML	AML	
	comp=E,964µm,0.6s					
IMOL				AML	AML	
	comp=N,582µm,0.8s					
IMOL				AML	AML	
	comp=E,5230µm,0.6s					
IMOL				AML	AML	
	comp=N,4300µm,0.7s					
IMOL				AML	AML	
	comp=E,964µm,0.7s					
IMOL				AML	AML	
	comp=N,582µm,0.8s					
IMOL				AML	AML	
	comp=E,965µm,0.6s					
IMOL				AML	AML	
	comp=E,5225µm,0.6s					
IMOL				AML	AML	
	comp=N,581µm,0.8s					
VLC	**Villacollemand**	**0.88**	**208**	AML	AML	
	comp=E,992µm,1.0s					
VLC				AML	AML	
	comp=N,1120µm,1.5s					
VLC				AML	AML	
	comp=E,992µm,1.0s					
VLC				AML	AML	
	comp=N,1120µm,1.5s					
VLC				AML	AML	
	comp=N,1120µm,1.5s					
VLC				AML	AML	
	comp=E,992µm,1.0s					
MAGA	**Magasa**	**0.88**	**345**	AML	AML	
	comp=E,16300µm,0.6s					
MAGA				AML	AML	
	comp=E,16300µm,0.6s					
MAGA				AML	AML	
	comp=N,12650µm,0.5s					
MAGA				AML	AML	
	comp=E,16300µm,0.6s					
MAGA				AML	AML	
	comp=N,12650µm,0.5s					
MAGA				AML	AML	
	comp=N,12650µm,0.5s					
POPM	**Popiglio**	**0.90**	**190**	AML	AML	
	comp=E,2545µm,0.5s					
POPM				AML	AML	
	comp=E,2545µm,0.5s					
POPM				AML	AML	
	comp=N,4200µm,0.6s					
POPM				AML	AML	
	comp=E,2545µm,0.5s					
POPM				AML	AML	
	comp=N,4200µm,0.6s					
POPM				AML	AML	
	comp=N,4200µm,0.6s					
BDI	**Bagni Di Lucca**	**0.91**	**197**	AML	AML	
	comp=E,2485µm,0.9s					
BDI				AML	AML	
	comp=E,2560µm,1.0s					
BDI				AML	AML	
	comp=N,2305µm,0.7s					
BDI				AML	AML	
	comp=N,2675µm,0.8s					
BDI				AML	AML	
	comp=E,2565µm,1.0s					
BDI				AML	AML	
	comp=N,2310µm,0.7s					
BDI				AML	AML	
	comp=E,2485µm,0.9s					
BDI				AML	AML	
	comp=N,2675µm,0.8s					
BDI				AML	AML	
	comp=N,2310µm,0.7s					
BDI				AML	AML	
	comp=E,2485µm,0.9s					
BDI				AML	AML	
	comp=E,2565µm,1.0s					
BDI				AML	AML	
	comp=N,2675µm,0.8s					
CTL8	**Castelleone**	**0.92**	**293**	AML	AML	
	comp=E,856µm,0.5s					
CTL8				AML	AML	
	comp=E,2330µm,1.4s					
CTL8				AML	AML	
	comp=N,2920µm,0.7s					
CTL8				AML	AML	
	comp=E,856µm,0.5s					
CTL8				AML	AML	
	comp=N,743µm,0.4s					
CTL8				AML	AML	
	comp=N,2920µm,0.7s					
CTL8				AML	AML	
	comp=E,2330µm,1.4s					
CTL8				AML	AML	
	comp=N,743µm,0.4s					
DOSS	**Dosso del Somm**	**0.96**	**9**⇑	*e*Pg	**Pg**	**07 05 06.4 +0.5**
DOSS				Sg	**Sn**	**07 05 21.4 +1.3**
DOSS	**Dosso del Somm**	**0.96**	**9**	*e*Pg	**Pg**	**07 05 06.4 +0.5**
DOSS				Sg	**Sn**	**07 05 21.4 +1.3**
MAIM	**Mastiano**	**1.07**	**199**	AML	AML	
	comp=E,1575µm,1.0s					
MAIM				AML	AML	
	comp=E,1575µm,1.0s					
MAIM				AML	AML	
	comp=N,3190µm,0.8s					
MAIM				AML	AML	
	comp=N,3190µm,0.8s					
MAIM				AML	AML	
	comp=N,3190µm,0.8s					
MAIM				AML	AML	
	comp=E,1575µm,1.0s					
CGRP	**Cima Grappa**	**1.12**	**32**⇓	*e*Pg	**Pn**	**07 05 08.8 +0.2**
CGRP				*e*Sg	**Sn**	**07 05 25.6 +1.7**
CGRP	**Cima Grappa**	**1.12**	**32**	*e*Pg	**Pn**	**07 05 08.9 +0.2**
CGRP				*e*Sg	**Sn**	**07 05 25.6 +1.7**
CRMI	**Carmignano**	**1.14**	**180**	AML	AML	
	comp=N,687µm,1.3s					
CRMI				AML	AML	
	comp=E,948µm,0.5s					
CRMI				AML	AML	
	comp=N,687µm,1.3s					
CRMI				AML	AML	
	comp=E,948µm,0.5s					
CRMI				AML	AML	
	comp=N,687µm,1.3s					
CRMI				AML	AML	
	comp=E,948µm,0.5s					
PANI	**Panarotta**	**1.15**	**13**	*e*Pg	**Pb**	**07 05 09.1 +0.1**
PANI	**Panarotta**	**1.15**	**13**	*e*Pg	**Pb**	**07 05 09.1 +0.1**
MABI	**Malga Bissina**	**1.17**	**344**	AML	AML	
	comp=N,514µm,1.1s					
MABI				AML	AML	
	comp=E,556µm,0.2s					
MABI				AML	AML	
	comp=N,514µm,1.1s					
MABI				AML	AML	
	comp=E,556µm,0.2s					
MABI				AML	AML	
	comp=N,514µm,1.1s					
MABI				AML	AML	
	comp=E,556µm,0.2s					
PLMA	**Palmaria, Port**	**1.19**	**223**	AML	AML	
	comp=E,1132µm,0.8s					
PLMA				AML	AML	
	comp=E,1132µm,0.8s					
PLMA				AML	AML	
	comp=N,1515µm,1.6s					
PLMA				AML	AML	
	comp=E,1132µm,0.8s					
PLMA				AML	AML	
	comp=N,1515µm,1.6s					
PLMA				AML	AML	
	comp=N,1515µm,1.6s					
MTLO	**Montello**	**1.19**	**42**⇑	*e*Pg	**Pb**	**07 05 10.0 +0.4**
MTLO				*e*Sg	**Sg**	**07 05 27.6 +1.8**
MTLO	**Montello**	**1.19**	**42**	*e*Pg	**Pb**	**07 05 10.0 +0.4**
MTLO				*e*Sg	**Sg**	**07 05 27.6 +1.8**
MSSA	**Maissana**	**1.20**	**240**	AML	AML	
	comp=N,1470µm,0.7s					
MSSA				AML	AML	
	comp=E,1092µm,1.3s					
MSSA				AML	AML	
	comp=N,1470µm,0.7s					
MSSA				AML	AML	
	comp=E,1092µm,1.3s					
MSSA				AML	AML	
	comp=N,1470µm,0.7s					
MSSA				AML	AML	
	comp=E,1092µm,1.3s					
SFI	**Santa Sofia**	**1.21**	**148**	AML	AML	
	comp=E,1610µm,0.8s					
SFI				AML	AML	
	comp=N,2090µm,1.2s					
SFI				AML	AML	
	comp=E,1680µm,0.8s					
SFI				AML	AML	
	comp=N,2220µm,1.2s					
SFI				AML	AML	
	comp=E,1610µm,0.8s					
SFI				AML	AML	
	comp=N,2090µm,1.3s					
SFI				AML	AML	
	comp=E,1685µm,0.8s					
SFI				AML	AML	
	comp=N,2220µm,1.2s					
SFI				AML	AML	
	comp=N,2090µm,1.3s					
SFI				AML	AML	
	comp=N,2220µm,1.2s					
SFI				AML	AML	
	comp=E,1610µm,0.8s					
SFI				AML	AML	
	comp=E,1685µm,0.8s					
CTI	**Castel Tesino**	**1.22**	**23**	AML	AML	
	comp=E,2355µm,0.3s					
CTI				AML	AML	
	comp=E,2355µm,0.3s					
CTI				AML	AML	
	comp=N,3505µm,0.2s					
CTI				AML	AML	
	comp=E,2355µm,0.3s					
CTI				AML	AML	
	comp=N,3505µm,0.2s					
CTI				AML	AML	
	comp=N,3505µm,0.2s					
ASQU	**Asqua**	**1.28**	**152**	AML	AML	
	comp=E,1375µm,0.9s					
ASQU				AML	AML	
	comp=E,1375µm,0.9s					
ASQU				AML	AML	
	comp=N,1210µm,0.8s					
ASQU				AML	AML	
	comp=N,1210µm,0.8s					
ASQU				AML	AML	
	comp=E,1375µm,0.9s					
ASQU				AML	AML	
	comp=N,1210µm,0.8s					
OZOL	**Ozolo**	**1.48**	**2**	*e*Pg	**Pn**	**07 05 13.7 +0.2**
OZOL	**Ozolo**	**1.48**	**2**	*e*Pg	**Pn**	**07 05 13.7 +0.2**
FAU	**Forcella Aurin**	**1.48**	**28**⇑	*e*Pg	**Pn**	**07 05 14.1 +0.5**
FAU				*e*Sg	**Sg**	**07 05 36.2 +1.1**
FAU	**Forcella Aurin**	**1.48**	**28**	*e*Pg	**Pn**	**07 05 14.1 +0.5**
FAU				*e*Sg	**Sg**	**07 05 36.2 +1.1**
CARE	**Lago del Cares**	**1.51**	**353**	*e*Pg	**Pn**	**07 05 14.4 +0.3**
CARE				*e*Sg	**Sg**	**07 05 36.9 +1.0**
CARE	**Lago del Cares**	**1.51**	**353**	*e*Pg	**Pn**	**07 05 14.4 +0.3**
CARE				*e*Sg	**Sg**	**07 05 36.9 +1.0**
POLC	**Polcenigo**	**1.54**	**44**	AML	AML	
	comp=N,1975µm,0.8s					
POLC				AML	AML	
	comp=E,1765µm,0.6s					
POLC				AML	AML	
	comp=E,1765µm,0.6s					
POLC				AML	AML	
	comp=N,1975µm,0.8s					
AGOR	**Agordo**	**1.55**	**29**	*e*Pg	**Pn**	**07 05 15.0 +0.5**
AGOR				*e*Sg	**Sg**	**07 05 37.8 +0.5**
AGOR	**Agordo**	**1.55**	**29**	AML	AML	
	comp=E,906µm,0.5s					
AGOR				AML	AML	
	comp=N,1210µm,0.4s					
AGOR				AML	AML	
	comp=E,906µm,0.4s					
AGOR				AML	AML	
	comp=N,1210µm,0.4s					
AGOR				AML	AML	
	comp=E,906µm,0.4s					
AGOR				AML	AML	
	comp=N,1210µm,0.4s					
KOSI	**Kohlern**	**1.56**	**11**	AML	AML	
	comp=N,996µm,1.3s					
KOSI				AML	AML	
	comp=E,1231µm,0.7s					
KOSI				AML	AML	
	comp=N,996µm,1.3s					
KOSI				AML	AML	
	comp=E,1231µm,0.7s					
SSP9	**Sansepolcro**	**1.59**	**148**	AML	AML	
	comp=E,877µm,1.6s					
SSP9				AML	AML	
	comp=E,874µm,1.6s					
SSP9				AML	AML	
	comp=N,1121µm,0.7s					
SSP9				AML	AML	
	comp=N,1118µm,0.7s					
SSP9				AML	AML	
	comp=E,877µm,1.6s					
SSP9				AML	AML	
	comp=N,1118µm,0.7s					
BRMO	**Bormio**	**1.60**	**345**	AML	AML	
	comp=E,465µm,0.8s					
BRMO				AML	AML	
	comp=E,465µm,0.8s					
BRMO				AML	AML	
	comp=N,336µm,1.2s					
BRMO				AML	AML	
	comp=E,465µm,0.8s					
BRMO				AML	AML	
	comp=N,336µm,1.2s					
BRMO				AML	AML	
	comp=N,336µm,1.2s					
MOSI	**Grossmontoni**	**1.71**	**350**	AML	AML	
	comp=N,1465µm,0.9s					
MOSI				AML	AML	
	comp=E,1770µm,0.9s					
MOSI				AML	AML	
	comp=N,1465µm,0.9s					
MOSI				AML	AML	
	comp=E,1770µm,0.9s					
CIMO	**Cimolais**	**1.73**	**36**	*e*Pn	**Pn**	**07 05 17.4 +0.5**
CIMO	**Cimolais**	**1.73**	**36**	*e*Pn	**Pn**	**07 05 17.4 +0.5**
FROS	**Frosini**	**1.73**	**175**	AML	AML	
	comp=N,659µm,0.8s					
FROS				AML	AML	
	comp=E,469µm,1.1s					
FROS				AML	AML	
	comp=N,659µm,0.8s					
FROS				AML	AML	
	comp=E,469µm,1.1s					
CAFI	**Castiglion Fio**	**1.76**	**155**	AML	AML	
	comp=E,486µm,1.1s					
CAFI				AML	AML	
	comp=E,486µm,1.1s					
CAFI				AML	AML	
	comp=N,364µm,1.0s					
CAFI				AML	AML	
	comp=N,364µm,1.0s					
CAFI				AML	AML	
	comp=N,364µm,1.0s					
CAFI				AML	AML	
	comp=E,486µm,1.1s					
PCP	**Piancastagn**	**1.77**	**258**	AML	AML	
	comp=N,338µm,1.2s					
PCP				AML	AML	
	comp=E,460µm,1.5s					
PCP				AML	AML	
	comp=E,460µm,1.5s					
PCP				AML	AML	
	comp=N,338µm,1.2s					
PCP				AML	AML	
	comp=E,460µm,1.5s					
PCP				AML	AML	
	comp=N,338µm,1.2s					
PIEI	**Pieia**	**1.79**	**140**	AML	AML	
	comp=E,606µm,0.4s					
PIEI				AML	AML	
	comp=E,606µm,0.4s					
PIEI				AML	AML	
	comp=N,536µm,0.5s					
PIEI				AML	AML	
	comp=N,536µm,0.5s					
ATPC	**Poggio Castell**	**1.80**	**143**	AML	AML	
	comp=N,850µm,0.7s					
ATPC				AML	AML	
	comp=E,1260µm,1.6s					
ATPC				AML	AML	
	comp=N,850µm,0.7s					
ATPC				AML	AML	
	comp=E,1260µm,1.6s					
ABSI	**Aberstuecki**	**1.81**	**8**	AML	AML	
	comp=E,1855µm,0.5s					
ABSI				AML	AML	
	comp=E,1855µm,0.5s					
ABSI				AML	AML	
	comp=N,2140µm,0.5s					
ABSI				AML	AML	
	comp=N,2140µm,0.5s					
QLNO	**Quiliano**	**1.96**	**253**	AML	AML	
	comp=N,206µm,0.4s					
QLNO				AML	AML	
	comp=E,194µm,0.8s					
QLNO				AML	AML	
	comp=E,194µm,0.8s					
QLNO				AML	AML	
	comp=N,206µm,0.4s					
ROSI	**Rosskopf**	**2.02**	**9**	AML	AML	
	comp=E,1200µm,1.3s					
ROSI				AML	AML	
	comp=N,1295µm,0.8s					
ROSI				AML	AML	
	comp=E,1200µm,1.3s					

ROSI AML AML
comp=N,1295µm,0.8s
FINB Finale Ligure 2.03 249 AML AML
comp=E,1485µm,0.4s
FINB AML AML
comp=E,1485µm,0.4s
FINB AML AML
comp=N,810µm,1.2s
FINB AML AML
comp=N,810µm,1.2s
FVI Forni Avoltri 2.10 37 AML AML
comp=E,536µm,0.8s
FVI AML AML
comp=N,478µm,0.4s
FVI AML AML
comp=E,536µm,0.8s
FVI AML AML
comp=N,478µm,0.4s
FETA Feichten 2.10 356 Pn **Pb 07 05 24.5 -0.6**
comp=N,110nm,0.8s,SNR=40
FETA Feichten 2.10 356 Pn **Pb 07 05 24.5 -0.6**
comp=N,110nm,0.8s,SNR=40
ABTA Abfaltersbach 2.12 30 Pn **Pb 07 05 24.2 -1.2**
comp=N,1.8nm,0.2s,SNR=17
ABTA Abfaltersbach 2.12 30 Pn **Pb 07 05 24.2 -1.2**
comp=N,1.8nm,0.2s,SNR=17
CASP Castiglione de 2.14 182 AML AML
comp=N,264µm,0.4s
CASP AML AML
comp=E,186µm,0.5s
CASP AML AML
comp=E,186µm,0.5s
CASP AML AML
comp=N,264µm,0.4s
RISI Rein 2.16 21 AML AML
comp=N,1140µm,0.6s
RISI AML AML
comp=E,939µm,0.5s
RISI AML AML
comp=N,1140µm,0.6s
RISI AML AML
comp=E,939µm,0.5s
RORO Rocca Rossa 2.23 249 AML AML
comp=E,120µm,1.3s
RORO AML AML
comp=E,120µm,1.3s
RORO AML AML
comp=N,130µm,1.5s
RORO AML AML
comp=N,130µm,1.5s
WTTA Wattenberg 2.38 11 Pn **Pb 07 05 28.9 -1.1**
comp=N,0.5nm,0.1s,SNR=14
WTTA Wattenberg 2.38 11 Pn **Pb 07 05 28.9 -1.1**
comp=N,0.5nm,0.1s,SNR=14
WTTA Wattenberg 2.38 11 AML AML
comp=N,306µm,0.9s
WTTA AML AML
comp=E,418µm,0.8s
WTTA AML AML
comp=N,306µm,0.9s
WTTA AML AML
comp=E,418µm,0.8s
WATA Walderalm 2.44 10 Pn **Pb 07 05 29.9 -1.1**
comp=E,1.1nm,0.1s,SNR=21
WATA Walderalm 2.44 10 Pn **Pb 07 05 29.9 -1.1**
comp=E,1.1nm,0.1s,SNR=21
DAVA Damuels 2.47 343 Pn **Pb 07 05 30.3 -1.3**
SNR=15
DAVA Damuels 2.47 343 Pn **Pb 07 05 30.3 -1.3**
SNR=15
RIY Rijeka 2.52 80 *e*Pn **Pn 07 05 27.8 +0.1**
RIY *e*Sn **Sn 07 05 57.0 -1.2**
MYKA Terra Mystica 2.53 47 Pn **Pn 07 05 29.4 +1.5**
comp=E,0.7nm,0.1s,SNR=18
MYKA Terra Mystica 2.53 47 Pn **Pn 07 05 29.4 +1.5**
comp=E,0.7nm,0.1s,SNR=18
RETA Reutte 2.56 357 Pn **Pb 07 05 31.4 -1.6**
comp=E,6.2nm,0.3s,SNR=11
RETA Reutte 2.56 357 Pn **Pb 07 05 31.4 -1.6**
comp=E,6.2nm,0.3s,SNR=11
CEY Cerknica 2.57 70 *e*Pn **Pn 07 05 28.3 -0.2**
CEY *e*Sn **Sn 07 05 58.7 -0.8**
CEY Cerknica 2.57 70 *e*Pn **Pn 07 05 28.3 -0.2**
CEY *e*Sn **Sn 07 05 58.7 -0.8**
baz=1.0
NEGI Seborga 2.58 246 AML AML
comp=E,302µm,1.3s
NEGI AML AML
comp=E,302µm,1.3s
NEGI AML AML
comp=N,539µm,1.3s
NEGI AML AML
comp=N,539µm,1.3s
NRCA Norcia 2.61 143 AML AML
comp=N,172µm,0.6s
NRCA AML AML
comp=E,320µm,0.7s
NRCA AML AML
comp=N,172µm,0.6s
NRCA AML AML
comp=E,320µm,0.7s
SAOF Saorge 2.62 250 P **Pn 07 05 30.9 +1.8**
SAOF Saorge 2.62 250 P **Pn 07 05 30.9 +1.8**
SAOF S **Sn 07 06 02.8 +2.2**
KBA Koelnbreinsper 2.71 37 Pg **Pb 07 05 37.7 +2.0**
comp=E,7.3nm,0.3s
KBA Koelnbreinsper 2.71 37 Pg **Pb 07 05 37.7 +2.0**
comp=E,7.3nm,0.3s
LJU Ljubljana 2.74 65 *e*Pn **Pn 07 05 31.4 +0.6**
LJU *e*Sn **Sn 07 06 03.1 -0.6**
LJU Ljubljana 2.74 65 *e*Pn **Pn 07 05 31.4 +0.6**
baz=8.0
LJU *e*Sn **Sn 07 06 03.1 -0.6**
baz=8.0
SBF Sospel 2.75 248 *e*Pn **Pn 07 05 32.4 +1.5**
SNR=1.0
SBF *e*Sn **Sn 07 06 06.7 +2.9**
comp=E,119nm,0.5s
SBF Sospel 2.75 248 *e*Pn **Pn 07 05 32.4 +1.5**
SNR=1.0
SBF *e*Sn **Sn 07 06 06.7 +2.9**
comp=E,60nm,0.5s
PGF Pioggiola 2.77 212 *e*Pn **Pn 07 05 31.9 +0.6**
SNR=1.0
PGF *e*Sn **Sn 07 06 04.0 -0.6**
comp=E,39nm,0.3s,SNR=1.0
PGF Pioggiola 2.77 212 *e*Pn **Pn 07 05 31.9 +0.6**
SNR=1.0
PGF *e*Sn **Sn 07 06 04.0 -0.6**
comp=E,19nm,0.3s,SNR=1.0
LUCF Luceram 2.79 249 P **Pb 07 05 34.6 -2.3**
LUCF Luceram 2.79 249 P **Pb 07 05 34.6 -2.3**
LUCF S **Sn 07 06 07.4 +2.4**
ESCA l'Escarene 2.80 248 P **Pn 07 05 34.5 +2.9**
ESCA l'Escarene 2.80 248 P **Pn 07 05 34.5 +2.9**
NVLJ Novalja 2.81 96 *e*Pn **Pn 07 05 32.0 +0.4**
NVLJ Sn **Sn 07 06 04.1 -1.1**
NVLJ Novalja 2.81 96 *e*Pn **Pn 07 05 32.0 +0.4**
NVLJ Sn **Sn 07 06 04.1 -1.1**
REVF Revere 2.84 246 P **Pn 07 05 34.6 +2.4**
REVF Revere 2.84 246 P **Pn 07 05 34.6 +2.4**
REVF S **Sn 07 06 08.4 +2.2**
GUMA Gualdo di Mace 2.84 130 AML AML
comp=E,1865µm,0.7s
GUMA AML AML
comp=N,1560µm,1.6s
GUMA AML AML
comp=N,1560µm,1.6s
GUMA AML AML
comp=E,1865µm,0.7s
MVIF Mont Vial 2.92 251 P **Pn 07 05 35.7 +2.3**
MVIF Mont Vial 2.92 251 P **Pn 07 05 35.7 +2.3**
MVIF S **Sn 07 06 10.1 +1.8**
OBKA Obir 2.97 57 Pn **Pn 07 05 35.1 +1.2**
comp=E,0.8nm,0.2s
OBKA Obir 2.97 57 Pn **Pn 07 05 35.1 +1.2**
comp=E,0.8nm,0.2s
MBDF Montbardon 2.99 268 *e*Pn **Pn 07 05 35.9 +1.6**
SNR=1.0
MBDF *e*Sn **Sn 07 06 10.5 +0.5**
comp=E,35nm,0.5s,SNR=1.0
MBDF Montbardon 2.99 268 *e*Pn **Pn 07 05 35.9 +1.6**
SNR=1.0
MBDF *e*Sn **Sn 07 06 10.5 +0.5**
comp=E,18nm,0.5s,SNR=1.0
SURF Saint Ours 2.99 263 P **Pn 07 05 35.4 +1.0**
SURF Saint Ours 2.99 263 P **Pn 07 05 35.4 +1.0**

LPG La Plagne 3.03 282 *e*Pn **Pn 07 05 37.4 +2.4**
SNR=1.0
LPG La Plagne 3.03 282 *e*Pn **Pn 07 05 37.4 +2.4**
SNR=1.0
LPL La Plagne 3.05 283 *e*Sg **Sg 07 06 26.6 +1.4**
comp=E,22nm,0.5s,SNR=1.0
LPL La Plagne 3.05 283 *e*Sg **Sg 07 06 26.6 +1.4**
comp=E,11nm,0.5s,SNR=1.0
CALF Calern 3.13 249 P **Pn 07 05 38.3 +2.1**
CALF Calern 3.13 249 P **Pn 07 05 38.3 +2.1**
CALF S **Sn 07 06 15.9 +2.5**
RSL Roselend 3.15 285 P **Pn 07 05 37.4 +0.8**
RSL Roselend 3.15 285 P **Pn 07 05 37.4 +0.8**
OZLJ Ozalj 3.25 76 *i* Pn **Pn 07 05 38.6 +0.9**
OZLJ Sn **Sn 07 06 16.2 0.0**
OZLJ Ozalj 3.25 76 *i* Pn **Pn 07 05 38.6 +0.9**
OZLJ Sn **Sn 07 06 16.2 0.0**
SOKA Soboth 3.34 57 *e*Pn **Pn 07 05 40.2 +1.1**
comp=E,1.0nm,0.2s
SOKA Soboth 3.34 57 Pn **Pn 07 05 40.2 +1.1**
comp=E,1.0nm,0.2s
FRF La Foret Royal 3.39 248 *e*Pn **Pn 07 05 40.4 +0.7**
SNR=1.0
FRF *e*Sn **Sn 07 06 19.0 -0.7**
comp=E,47nm,0.3s,SNR=1.0
FRF La Foret Royal 3.39 248 *e*Pn **Pn 07 05 40.4 +0.7**
SNR=1.0
FRF *e*Sn **Sn 07 06 19.0 -0.7**
comp=E,24nm,0.3s,SNR=1.0
UDBI Udbina 3.44 95 *e*Pn **Pn 07 05 42.0 +1.5**
UDBI Sn **Sn 07 06 19.9 -1.3**
UDBI Udbina 3.44 95 *e*Pn **Pn 07 05 42.0 +1.5**
UDBI Sn **Sn 07 06 19.8 -1.3**
SPAK Spaichingen-Ko 3.51 335 P **Pn 07 05 44.1 +2.7**
SPAK Spaichingen-Ko 3.51 335 P **Pn 07 05 44.1 +2.7**
LMR La Mourre 3.58 245 *e*Pn **Pn 07 05 43.8 +1.5**
LMR *e*Sn **Sn 07 06 23.5 -0.9**
comp=E,58nm,0.3s,SNR=1.0
LMR La Mourre 3.58 245 *e*Pn **Pn 07 05 43.8 +1.5**
LMR *e*Sn **Sn 07 06 23.5 -0.9**
comp=E,29nm,0.3s,SNR=1.0
ORIF Oris-en-Rattie 3.61 272 *e*Pn **Pn 07 05 45.4 +2.6**
SNR=1.0
ORIF *e*Sn **Sn 07 06 27.1 +1.9**
comp=E,20nm,0.4s,SNR=1.0
ORIF Oris-en-Rattie 3.61 272 P **Pn 07 05 43.8 +1.0**
ORIF S **Sn 07 06 24.6 -0.6**
ORIF Oris-en-Rattie 3.61 272 *e*Pn **Pn 07 05 45.4 +2.6**
SNR=1.0
ORIF *e*Sn **Sn 07 06 27.1 +1.9**
comp=E,10nm,0.4s,SNR=1.0
KIZ Kirchzarten 3.69 326 P **Pn 07 05 45.0 +1.2**
KIZ Kirchzarten 3.69 326 P **Pn 07 05 44.0 +0.2**
KIZ S **Sn 07 06 27.0 0.0**
MOA Molln 3.71 37 *e*Pn **Pn 07 05 46.0 +2.0**
comp=E,3.6nm,0.3s
MOA Molln 3.71 37 Pn **Pn 07 05 46.0 +2.0**
comp=E,3.6nm,0.3s
LOMF Lomont 3.76 312 P **Pn 07 05 45.4 +0.6**
LOMF Lomont 3.76 312 P **Pn 07 05 45.4 +0.6**
LOMF S **Sn 07 06 28.5 -0.3**
CHMF Charmoille 3.79 309 P **Pn 07 05 46.3 +1.0**
CHMF Charmoille 3.79 309 P **Pn 07 05 46.3 +1.0**
CHMF S **Sn 07 06 29.4 -0.2**
CABF La Chapelle 3.80 298 *e*Pn **Pn 07 05 46.9 +1.5**
SNR=1.0
CABF *e*Sn **Sn 07 06 30.1 +0.1**
comp=E,21nm,0.6s,SNR=1.0
CABF La Chapelle 3.80 298 *e*Pn **Pn 07 05 46.9 +1.5**
SNR=1.0
CABF *e*Sn **Sn 07 06 30.1 +0.1**
comp=E,10nm,0.6s,SNR=1.0
ARSA Arzberg 3.93 52 *e*Pn **Pn 07 05 45.1 -2.0**
ARSA Arzberg 3.93 52 *i* Pn **Pn 07 05 49.6 +2.5**
comp=E,0.1nm,0.1s
ARSA Arzberg 3.93 52 Pn **Pn 07 05 49.6 +2.5**
comp=E,0.1nm,0.1s
MOF Molkenrain 3.94 319 P **Pn 07 05 48.0 +0.6**
MOF Molkenrain 3.94 319 P **Pn 07 05 48.0 +0.6**
MOF S **Sn 07 06 33.4 0.0**
OG35 Corcelles 3.95 288 P **Pn 07 05 47.8 +0.3**
OG35 Corcelles 3.95 288 P **Pn 07 05 47.8 +0.3**
OPP Oppenau 4.05 333 P **Pn 07 05 49.9 +1.2**
OPP Oppenau 4.05 333 P **Pn 07 05 49.9 +1.2**
HINF Hinteralfeld 4.05 317 *e*Pn **Pn 07 05 49.9 +1.1**
SNR=1.0
HINF *e*Sn **Sn 07 06 34.1 -1.9**
comp=E,20nm,0.3s,SNR=1.0
HINF Hinteralfeld 4.05 317 *e*Pn **Pn 07 05 49.9 +1.1**
SNR=1.0
HINF *e*Sn **Sn 07 06 34.1 -1.9**
comp=E,10.0nm,0.3s,SNR=1.0
WLS Welschbruch 4.28 326 P **Pn 07 05 52.9 +1.0**
WLS Welschbruch 4.28 326 P **Pn 07 05 52.9 +1.0**
CDF Champ du Feu 4.31 325 *e*Pn **Pn 07 05 52.7 +0.3**
comp=E,9.8nm,0.2s,SNR=1.0
CDF *e*Sn **Sn 07 06 42.0 -0.4**
comp=E,6.6nm,0.2s,SNR=1.0
CDF Champ du Feu 4.31 325 *e*Pn **Pn 07 05 52.7 +0.3**
comp=E,4.9nm,0.2s,SNR=1.0
CDF *e*Sn **Sn 07 06 42.0 -0.4**
comp=E,3.3nm,0.2s,SNR=1.0
GERES GERESS Array B 4.34 25 Pn **Pn 07 05 53.9 +1.0**
comp=E,0.6nm,0.3s,baz=201,slow=13,SNR=9.9
GERES Pg **Pg 07 06 07.9 -2.6**
comp=E,0.9nm,0.3s,baz=200,slow=16,SNR=11
GERES Sn **Sn 07 06 41.8 -1.5**
comp=E,1.6nm,0.3s,baz=205,slow=25,SNR=4.2
GERES Lg Lg 07 07 06.2
comp=E,2.4nm,0.3s,baz=207,slow=30,SNR=3.0
BLY Banja Luka 4.43 90 *e*Pn **Pn 07 05 54.6 +0.7**
BLY Banja Luka 4.43 90 *e*Pn **Pn 07 05 54.6 +0.7**
baz=6.0
HAU Haudompre 4.43 316 *e*Pn **Pn 07 05 54.4 +0.4**
SNR=1.0
HAU *e*Sn **Sn 07 06 43.5 -1.8**
comp=E,45nm,0.3s
HAU Haudompre 4.43 316 *e*Pn **Pn 07 05 54.4 +0.4**
SNR=1.0
HAU *e*Sn **Sn 07 06 43.5 -1.8**
comp=E,22nm,0.3s
VIVF Saint-Julien-I 4.47 271 *e*Pn **Pn 07 05 55.7 +1.1**
SNR=1.0
VIVF *e*Sn **Sn 07 06 46.1 -0.2**
comp=E,2.6nm,0.2s,SNR=1.0
VIVF Saint-Julien-I 4.47 271 *e*Pn **Pn 07 05 55.7 +1.1**
SNR=1.0
VIVF *e*Sn **Sn 07 06 46.1 -0.2**
comp=E,1.3nm,0.2s,SNR=1.0
CONA Conrad Observa 4.52 47 *e*Pn **Pn 07 05 56.0 +0.7**
comp=E,8.3nm,0.6s,SNR=10
CONA Conrad Observa 4.52 47 Pn **Pn 07 05 56.0 +0.7**
comp=E,8.3nm,0.6s,SNR=10
KHC Kasperske Hory 4.57 22 *e*PN **Pn 07 05 56.8 +0.9**
KHC *e*PG **Pg 07 06 13.1 -1.6**
KHC *e*SN **Sn 07 06 48.4 -0.3**
KHC *e*SG **Sg 07 07 12.8 -1.0**
comp=E,50nm,0.8s
KHC *ex* x 07 07 18.3
KHC AMS AMS 07 07 50.0
comp=E,300nm,8.9s
THEF They Montfort 4.76 316 P **Pn 07 05 59.5 +1.0**
THEF They Montfort 4.76 316 P **Pn 07 05 59.5 +1.0**
LASF Ste Croix 5.16 263 *e*Pn **Pn 07 06 04.0 0.0**
SNR=1.0
LASF Ste Croix 5.16 263 *e*Pn **Pn 07 06 04.0 0.0**
SNR=1.0
SMF Signal de Mont 5.27 292 *e*Pn **Pn 07 06 06.5 +1.0**
SNR=1.0
SMF *e*Sn **Sn 07 07 05.7 -0.2**
comp=E,18nm,0.4s,SNR=1.0
SMF Signal de Mont 5.27 292 *e*Pn **Pn 07 06 06.5 +1.0**
SNR=1.0
SMF *e*Sn **Sn 07 07 05.7 -0.2**
comp=E,9.1nm,0.4s,SNR=1.0
STON Ston 5.29 111 *e*Pn **Pn 07 06 06.5 +0.8**
STON Ston 5.29 111 *e*Pn **Pn 07 06 05.7 0.0**
STON Sn **Sn 07 07 02.7 -3.6**
STON Ston 5.29 111 *e*Pn **Pn 07 06 06.5 +0.8**
baz=1.0
STON Sn **Sn 07 07 02.7 -3.6**
NKC Novy Kostel 5.40 10 *e*PN **Pn 07 06 07.8 +0.5**
NKC *e*PG **Pg 07 06 29.4 -1.2**
NKC *e*SN **Sn 07 07 08.3 -0.9**
NKC *e*SG **Sg 07 07 38.7 -1.8**

comp=E,16nm,0.6s
NKC AMS AMS 07 08 30.0
comp=E,400nm,6.1s
LOR Lormes 5.47 298 *e*Pn **Pn 07 06 08.9 +0.7**
SNR=1.0
LOR *e*Sn **Sn 07 07 10.1 -0.7**
comp=E,11nm,0.4s,SNR=1.0
LOR Lormes 5.47 298 *e*Pn **Pn 07 06 08.9 +0.7**
SNR=1.0
LOR *e*Sn **Sn 07 07 10.1 -0.7**
comp=E,5.3nm,0.4s,SNR=1.0
MODS Modra-Piesok 5.54 49 *e*PN **Pn 07 06 08.4 -0.9**
MODS *e*SN **Sn 07 07 10.8 -2.0**
MODS Modra-Piesok 5.54 49 *e*Pn **Pn 07 06 08.4 -0.9**
PRU Pruhonice 5.61 24 *e*SN **Sn 07 07 11.3 -3.0**
PRU *e*SG **Sg 07 07 45.4 -1.9**
comp=E,17nm,0.8s
PRU AMS AMS 07 08 40.0
comp=E,300nm,10.1s
SSF Saint Saulge 5.62 295 *e*Pn **Pn 07 06 10.0 -0.3**
SNR=1.0
SSF Saint Saulge 5.62 295 *e*Pn **Pn 07 06 10.0 -0.3**
SNR=1.0
GOPC GO Pecny, Ondr 5.62 26 *e*SG **Sg 07 07 43.8 -3.8**
comp=E,23nm,0.9s
GOPC AMS AMS 07 08 30.0
comp=E,300nm,8.8s
AVF Avril sur Loir 5.63 292 *e*Pn **Pn 07 06 11.1 +0.6**
SNR=1.0
AVF Avril sur Loir 5.63 292 *e*Pn **Pn 07 06 11.1 +0.6**
SNR=1.0
VRAC Vranov 5.83 39 Pg **Pb 07 06 30.6 +2.1**
comp=E,0.7nm,0.3s,baz=229,slow=17,SNR=1.5
VRAC Lg Lg 07 07 50.4
comp=E,0.8nm,0.3s,baz=113,slow=13,SNR=1.9
BGF Bois d'Agland 5.91 289 *e*Pn **Pn 07 06 15.5 +1.2**
SNR=1.0
BGF *e*Sn **Sn 07 07 20.7 -1.0**
comp=E,34nm,0.4s,SNR=1.0
BGF Bois d'Agland 5.91 289 *e*Pn **Pn 07 06 15.5 +1.2**
SNR=1.0
BGF *e*Sn **Sn 07 07 20.7 -1.0**
comp=E,17nm,0.4s,SNR=1.0
PVCC Panska Ves 6.11 22 *e*SN **Sn 07 07 23.8 -2.7**
PVCC *e*SG **Sg 07 08 01.1 -2.0**
comp=E,25nm,0.6s
BBLS Lazići 6.14 97 *e*Pn **Pn 07 06 17.8 +0.3**
BBLS Lazići 6.14 97 *e*Pn **Pn 07 06 17.8 +0.3**
baz=4.0
BRG Berggiesshubel 6.27 18 PN **Pn 07 06 21.0 +1.7**
BRG PG **Pg 07 06 46.0 -1.3**
BRG SG **Sg 07 08 11.3 +2.8**
comp=E,57nm,1.6s
comp=N,171nm,10.1s
comp=E,199nm,10.2s
comp=Z,317nm,12.1s
TCF Toulx Ste Croi 6.29 286 *e*Pn **Pn 07 06 20.5 +1.0**
SNR=1.0
TCF *e*Sn **Sn 07 07 29.1 -2.0**
comp=Z,4.8nm,0.5s,SNR=1.0
TCF Toulx Ste Croi 6.29 286 *e*Pn **Pn 07 06 20.5 +1.0**
SNR=1.0
DPC Dobruska-Polom 6.52 32 *e*SG **Sg 07 08 14.0 -2.3**
comp=Z,21nm,0.9s
DPC AMS AMS 07 09 10.0
comp=Z,200nm,8.5s
CLL Collm 6.53 11 *e*Pn **Pn 07 06 24.0 +1.3**
CLL *e*Pg **Pg 07 06 51.0 -1.1**
CLL *e* 07 07 07.0
CLL *e* 07 07 53.0
CLL *e* 07 08 00.0
CLL *e*Sg **Sg 07 08 17.0 +0.4**
comp=Z,24nm,0.9s
UPC Upice 6.54 30 AMS AMS 07 09 10.0
comp=Z,400nm,7.7s
GIVF Givet 6.64 323 *e*Sg **Sg 07 08 18.9 -1.2**
comp=Z,6.0nm,0.5s,SNR=1.0
GIVF Givet 6.64 323 *e*Sg **Sg 07 08 18.9 -1.2**
comp=Z,3.0nm,0.5s,SNR=1.0
IVAS Ivanjica 6.74 98 *e*Pn **Pn 07 06 24.9 -0.8**
IVAS Ivanjica 6.74 98 *e*Pn **Pn 07 06 24.9 -0.8**
baz=6.0
KEST Kesra 9.27 188 Pn Pn 07 07 05.9 +5.4
comp=Z,0.3nm,0.3s,baz=230,slow=13,SNR=4.6
TORD Torodi Ar. Bea 32.65 197 P **P 07 11 17.5 -1.2**
comp=Z,0.3nm,0.4s,baz=13,slow=8.8,SNR=3.1
MKAR Makanchi Array 48.11 61 P **P 07 13 27.3 +0.9**
comp=Z,0.7nm,0.8s,baz=294,slow=6.5,SNR=5.3
YKA Yellowknife Ar 64.43 335 P **P 07 15 24.0 +1.5**
comp=Z,0.2nm,0.8s,baz=52,slow=8.2,SNR=3.0

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*ISCJB **04** 07:17:50.0±0.3,54.°53N±0.°03×160.°02E±0.°09,*
h161km±3km,mb3.5/13,Error ellipse: s-maj=9.0km
s-min=2.9km az=25.0
*KRSC **04** 07:17:49.3±0.8,54.°52N×160.°10E,h159km±8km,ML3.9*
*IDC **04** 07:17:52.3±1.0,54.°72N×159.°16E,h168km±13km,*
mb3.2/13,mb1 3.4/13,mb1mx3.1/80,mbtmp3.7/13,MS3.5/1,
Ms1 3.5/1,ms1mx2.5/29,Error ellipse: s-maj=19.4km
s-min=15.7km az=159.0
ISC 04 07:17:50.4±0.7,54.°56N±0.°04×159.°92E±0.°05,h159km±5km,
n56,σ1±14/82,mb3.5/13,Near east coast of Kamchatka
Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
KII	**Karymskiy**	**0.59**	**208**	*e*P	**Pn**		**07 18 13.5**	**+0.1**
KZV	**Kizimen**	**0.60**	**21**	*i* P	**Pn**		**07 18 13.5**	**0.0**
KZV				*e*S	**Sn**		**07 18 30.6**	**-0.6**
TUMD	**Tumrok D**	**0.71**	**23**	*e*P	**Pn**		**07 18 13.7**	**-0.2**
TUMD				*e*S	**Sn**		**07 18 31.1**	**-1.0**
TUMR	**Tumrok**	**0.74**	**10**	*e*P	**Pn**		**07 18 14.6**	**+0.3**
TUMR				*e*S	**Sn**		**07 18 32.7**	**0.0**
MKZ	**Mys Kozlova**	**1.05**	**89**	*i* P	**Pn**		**07 18 16.4**	**0.0**
MKZ				*e*S	**Sn**		**07 18 35.0**	**-1.4**
KMNR	**Kamenistaya**	**1.22**	**9**	*e*P	**Pn**		**07 18 18.2**	**+0.2**
KMNR				*e*S	**Sn**		**07 18 39.3**	**0.0**
KRX	**Arik**	**1.41**	**213**	*e*P	**Pn**		**07 18 20.7**	**+0.7**
KRX				*e*S	**Sn**		**07 18 43.2**	**+0.6**
SDLR	**Sedlovina**	**1.42**	**206**	*e*P	**Pn**		**07 18 20.5**	**+0.5**
SDLR				*e*S	**Sn**		**07 18 42.9**	**+0.2**
BZMR	**Bezymyannaya**	**1.42**	**13**	*e*P	**Pn**		**07 18 20.2**	**+0.2**
BZMR				*e*S	**Sn**		**07 18 43.5**	**+0.7**
KIRR	**Kirishev**	**1.42**	**10**	*e*P	**Pn**		**07 18 20.0**	**0.0**
KIRR				*e*S	**Sn**		**07 18 42.5**	**-0.4**
KPT	**Kopyto**	**1.43**	**7**	*e*P	**Pn**		**07 18 19.6**	**-0.4**
NLC	**Nalytchevo**	**1.43**	**194**	*e*P	**Pn**		**07 18 20.0**	**+0.1**
NLC				*e*S	**Sn**		**07 18 42.6**	**+0.1**
KRER	**Koryakskii**	**1.43**	**209**	*e*P	**Pn**		**07 18 20.9**	**+0.7**
KRER				*e*S	**Sn**		**07 18 43.9**	**+0.8**
GNL	**Ganaly**	**1.45**	**234**	*e*P	**Pn**		**07 18 20.3**	**0.0**
BZWR	**Bezymyannyi-We**	**1.45**	**13**	*e*P	**Pn**		**07 18 20.6**	**+0.3**
BZWR				*e*S	**Sn**		**07 18 44.0**	**+0.6**
SMAR	**Somma**	**1.45**	**208**	*e*P	**Pn**		**07 18 21.0**	**+0.5**
SMAR				*e*S	**Sn**		**07 18 43.7**	**+0.2**
BZGR	**Bezymyannyi-Gr**	**1.46**	**17**	*e*P	**Pn**		**07 18 20.4**	**+0.1**
SPN	**Mys Shipunski**	**1.46**	**178**	*e*P	**Pn**		**07 18 19.7**	**-0.6**
SPN				*e*S	**Sn**		**07 18 41.5**	**-1.7**
AVH	**Avacha**	**1.47**	**209**	*e*P	**Pn**		**07 18 21.4**	**+0.9**
KOK	**Koryaka**	**1.48**	**211**	*e*P	**Pn**		**07 18 21.7**	**+1.1**
UGLR	**Uglovaya**	**1.50**	**206**	*i* P	**Pn**		**07 18 21.5**	**+0.7**
UGLR				*e*S	**Sn**		**07 18 44.5**	**+0.5**
KOZ	**Kozyrevsk**	**1.51**	**359**	*e*P	**Pn**		**07 18 20.5**	**-0.2**
ESO	**Esso**	**1.54**	**334**	*e*P	**Pn**		**07 18 20.4**	**-0.7**
ZLN	**Zelenaya**	**1.55**	**19**	*e*P	**Pn**		**07 18 22.1**	**+0.8**
ZLN				*e*S	**Sn**		**07 18 45.7**	**+0.6**
LGNR	**Loginova**	**1.59**	**16**	*e*P	**Pn**		**07 18 22.5**	**+0.6**
CIRR	**Tsirk**	**1.63**	**17**	*e*P	**Pn**		**07 18 22.8**	**+0.6**
DALK	**Dalny**	**1.68**	**205**	*e*P	**Pn**		**07 18 22.8**	**+0.3**
DALK				*e*S	**Sn**		**07 18 47.4**	**+0.3**
KRSR	**Krestovskiy**	**1.71**	**12**	*e*P	**Pn**		**07 18 23.0**	**+0.1**
PET	**Petropavlovsk**	**1.71**	**207**	*i* P	**Pn**		**07 18 23.0**	**+0.2**
PET				*e*S	**Sn**		**07 18 48.2**	**+0.5**
KLY	**Klyuchi**	**1.81**	**13**	*e*P	**Pn**		**07 18 24.7**	**+0.8**
KLY				*e*S	**Sn**		**07 18 51.4**	**+1.6**
PETK	**Petropavlovsk-**	**1.96**	**223**	P	**Pn**		**07 18 25.9**	**+0.3**
	6.4nm,0.3s,baz=67,slow=17,SNR=52							
PETK				S	**Sn**		**07 18 53.6**	**+0.9**
	2.5nm,0.3s,baz=82,slow=16,SNR=4.3							
KRMR	**Karymshinskiy**	**2.03**	**212**	*e*P	**Pn**		**07 18 26.7**	**+0.3**
KRMR				*e*S	**Sn**		**07 18 54.5**	**+0.4**
BDR	**Baidarnaya**	**2.15**	**19**	*e*P	**Pn**		**07 18 28.8**	**+1.0**
SRKR	**Sorokina**	**2.22**	**18**	*e*P	**Pn**		**07 18 29.3**	**+0.7**

RUS	**Russkaya**	**2.29**	**202**	*e*P	**Pn**	**07 18 28.9**	**-0.5**
RUS				*e*S	**Sn**	**07 18 58.7**	**-0.8**
APC	**Apacha**	**2.31**	**226**	*e*P	**Pn**	**07 18 30.7**	**+1.0**
MTVR	**Mutnovka**	**2.32**	**207**	*e*P	**Pn**	**07 18 30.7**	**+0.7**
MTVR				*e*S	**Sn**	**07 19 01.6**	**+1.1**
KBTR	**Krutoberegovo**	**2.34**	**44**	*e*P	**Pn**	**07 18 30.1**	**+0.1**
KBTR				*e*S	**Sn**	**07 18 59.9**	**-0.8**
ASAK	**Asacha**	**2.49**	**210**	*e*P	**Pn**	**07 18 32.6**	**+0.7**
ASAK				*e*S	**Sn**	**07 19 04.4**	**+0.5**
KDTR	**Khodutka, Kamc**	**2.97**	**203**	*e*P	**Pn**	**07 18 36.9**	**-0.8**
KDTR				*e*S	**Sn**	**07 19 12.1**	**-2.2**
BKI	**Bering**	**3.56**	**77**	*e*P	**Pn**	**07 18 45.4**	**+0.3**
BKI				*e*S	**Sn**	**07 19 24.5**	**-3.1**
TIXI	**Tiksi**	**21.71**	**334**	P	**P**	**07 22 26.3**	**-2.2**
1.3nm,0.3s,baz=104,slow=4.2,SNR=4.2							
ILAR	**Eielson Array**	**27.88**	**47**	P	**P**	**07 23 27.9**	**+3.1**
0.2nm,0.9s,baz=264,slow=8.1,SNR=3.4							
SONM	**Songino Array**	**33.49**	**281**	PcP	**PcP**	**07 26 51.2**	**-0.2**
0.3nm,0.4s,baz=46,slow=4.2,SNR=2.6							
RES	**Resolute Bay**	**42.01**	**23**	P	**P**	**07 25 25.7**	**+0.5**
0.4nm,0.4s,baz=318,slow=14,SNR=4.3							
YKA	**Yellowknife Ar**	**42.16**	**44**	P	**P**	**07 25 29.9**	**+3.3**
0.2nm,0.6s,baz=304,slow=8.6,SNR=3.4							
SPITS	**Spitsbergen Ar**	**45.67**	**350**	P	**P**	**07 25 52.9**	**-1.6**
0.8nm,0.5s,baz=24,slow=11,SNR=5.4							
KURBB	**Kurchatov Arra**	**46.99**	**301**	P	**P**	**07 26 02.5**	**-2.5**
1.1nm,0.5s,baz=57,slow=7.6,SNR=7.5							
MKAR	**Makanchi Array**	**47.44**	**294**	P	**P**	**07 26 06.1**	**-2.6**
0.9nm,0.6s,baz=57,slow=7.1,SNR=5.8							
BVAR	**Borovoye Array**	**49.41**	**307**	P	**P**	**07 26 20.8**	**-2.7**
1.1nm,0.4s,baz=66,slow=7.9,SNR=8.5							
TGY	**Tagaytay City**	**50.50**	**232**	LR	LR	07 48 11.7	
comp=Z,52nm,20.1s,baz=190,slow=36							
FINES	**FINESS Array B**	**58.74**	**336**	P	**P**	**07 27 29.5**	**-1.4**
1.4nm,1.0s,baz=42,slow=6.4,SNR=3.0							
HFS	**Hagfors**	**62.52**	**342**	P	**P**	**07 27 55.1**	**-1.4**
1.8nm,0.8s,baz=347,slow=4.6,SNR=3.3							
TXAR	**Lajitas Array**	**70.16**	**67**	P	**P**	**07 28 48.3**	**+2.6**
0.4nm,0.6s,baz=289,slow=5.7,SNR=6.4							
WRA	**Warramunga Arr**	**77.37**	**205**	P	**P**	**07 29 28.0**	**+0.6**
0.2nm,0.5s,baz=18,slow=6.0,SNR=6.5							
ESDC	**Sonseca Array**	**85.13**	**348**	P	**P**	**07 30 08.9**	**+0.6**
0.3nm,0.4s,baz=18,slow=1.6,SNR=3.6							

ISCJB ***04*** *07:21:26.9±0.2,44°.97N±0°.02×10°.91E±0°.03,h12km±2km, Error ellipse: s-maj=3.3km s-min=2.6km az=19.0*
ROM ***04*** *07:21:27.1±0.0,44°.883N±0°.002×10°.972E±0°.001, h9km,ML3.2/36*
CSEM ***04*** *07:21:27.6±0.1,44°.92N×10°.93E,h5km,ML3.5/13,Error ellipse: s-maj=3.6km s-min=3.1km az=177.0*
PRU ***04*** *07:21:27.0,44°.89N×10°.82E,h0km*
LDG ***04*** *07:21:27.6±0.2,44°.91N×11°.14E,h2km,Ml3.5/16,Error ellipse: s-maj=4.3km s-min=3.1km az=66.0*
STR ***04*** *07:21:32.0±2.2,45°N±11°×1°1E±1°7,h25km,M3.3/7, MLv3.3/7*

ISC 04 07:21:27.3±0.7,44°.91N±0°.02×10°.93E±0°.02,h15km±4km, n178,σ1$33/216,15C-13D,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NDIM	**Novi di Modena**	**0.03**	**227**	*i* P	**Pg**	**07 21 29.6**	**-0.3**
NDIM				*i* S	**Sg**	**07 21 31.3**	**-0.3**
T0827	**Moglia (MN)**	**0.03**	**9**	⇑*i*P	**Pg**	**07 21 29.7**	**-0.2**
T0827	**Moglia (MN)**	**0.03**	**9**	*i* P	**Pg**	**07 21 29.7**	**-0.2**
T0827				*i* S	**Sg**	**07 21 32.5**	**+0.8**
T0828	**Loc. Fossoli,**	**0.07**	**186**	⇓*i*P	**Pg**	**07 21 29.5**	**-0.7**
T0828				⇓*i*S	**Sg**	**07 21 32.4**	**+0.3**
T0828	**Loc. Fossoli,**	**0.07**	**186**	*i* P	**Pg**	**07 21 29.5**	**-0.7**
T0828				*i* S	**Sg**	**07 21 32.4**	**+0.3**
T0818	**Loc. Fossa, Co**	**0.08**	**68**	⇑*i*P	**Pg**	**07 21 29.7**	**-0.6**
T0818				⇑*i*S	**Sg**	**07 21 32.7**	**+0.4**
T0818	**Loc. Fossa, Co**	**0.08**	**68**	*i* P	**Pg**	**07 21 29.7**	**-0.6**
T0818				*i* S	**Sg**	**07 21 32.7**	**+0.4**
T0825	**Gonzaga (MN)**	**0.09**	**321**	AML	AML		
T0825				AML	AML		
T0825				AML	AML		
T0825				AML	AML		
T0825				AML	AML		
T0825				AML	AML		
T0825				AML	AML		
T0825				AML	AML		
T0826	**Rio Saliceto (**	**0.10**	**231**	AML	AML		
comp=E,73300μm,0.4s							
T0826				AML	AML		
comp=E,73300μm,0.4s							
T0826				AML	AML		
comp=N,60900μm,0.3s							
T0826				AML	AML		
comp=N,60900μm,0.3s							
T0826				AML	AML		
comp=E,73250μm,0.4s							
T0826				AML	AML		
comp=N,60900μm,0.3s							
T0826				AML	AML		
comp=E,73250μm,0.4s							
T0826				AML	AML		
comp=N,60900μm,0.3s							
T0814	**Loc. Cortile,**	**0.12**	**164**	⇓*i*P	**Pg**	**07 21 29.9**	**-0.8**
T0814				⇓*i*S	**Sg**	**07 21 33.2**	**+0.3**
T0814	**Loc. Cortile,**	**0.12**	**164**	*i* P	**Pg**	**07 21 29.9**	**-0.8**
T0814				*i* S	**Sg**	**07 21 33.2**	**+0.3**
T0824	**Loc. Limidi di**	**0.14**	**179**	⇓*i*P	**Pg**	**07 21 30.8**	**-0.3**
T0824				⇓*i*S	**Sg**	**07 21 34.7**	**+1.1**
T0824	**Loc. Limidi di**	**0.14**	**179**	*i* P	**Pg**	**07 21 30.8**	**-0.3**
T0824				*i* S	**Sg**	**07 21 34.7**	**+1.1**
SBPO	**S.Benedetto Po**	**0.15**	**359**	⇓*e*P	**Pb**	**07 21 31.9**	**+0.1**
SBPO	**S.Benedetto Po**	**0.15**	**359**	*e*P	**Pb**	**07 21 31.9**	**+0.1**
SBPO				AML	AML		
comp=E,12750μm,0.8s							
SBPO				AML	AML		
SBPO				AML	AML		
comp=E,12750μm,0.8s							
SBPO				AML	AML		
SBPO				AML	AML		
comp=E,12750μm,0.8s							
SBPO				AML	AML		
SBPO				AML	AML		
comp=E,12750μm,0.8s							
SBPO				AML	AML		
NOVE	**Novellara**	**0.18**	**234**	⇑*e*P	**Pg**	**07 21 31.0**	**-0.6**
NOVE	**Novellara**	**0.18**	**234**	*e*P	**Pb**	**07 21 32.0**	**-0.4**
NOVE				*e*S	**Sg**	**07 21 37.6**	**+3.1**
NOVE				AML	AML		
comp=E,44450μm,0.2s							
NOVE				AML	AML		
comp=N,26450μm,0.2s							
NOVE				AML	AML		
comp=E,44500μm,0.2s							
NOVE				AML	AML		
comp=N,26450μm,0.2s							
NOVE				AML	AML		
comp=E,44450μm,0.2s							
NOVE				AML	AML		
comp=N,26450μm,0.2s							
NOVE				AML	AML		
comp=N,26450μm,0.2s							
NOVE				AML	AML		
comp=E,44450μm,0.2s							
T0802	**SanFelice sul**	**0.18**	**99**	⇑*e*P	**Pg**	**07 21 30.8**	**-0.9**
T0802				⇑*e*S	**Sg**	**07 21 35.1**	**+0.5**
T0802	**SanFelice sul**	**0.18**	**99**	*e*P	**Pg**	**07 21 30.8**	**-0.9**
T0802				*e*S	**Sg**	**07 21 35.1**	**+0.5**
T0812	**Loc. Stoppiaro**	**0.19**	**75**	*e*P	**Pg**	**07 21 31.2**	**-0.5**
T0812	**Loc. Stoppiaro**	**0.19**	**75**	*e*P	**Pg**	**07 21 31.2**	**-0.5**
T0813	**Massa Finalese**	**0.20**	**98**	⇑*e*P	**Pg**	**07 21 31.2**	**-0.6**
T0813				⇑*e*S	**Sg**	**07 21 35.4**	**+0.5**
T0813	**Massa Finalese**	**0.20**	**98**	*e*P	**Pg**	**07 21 31.2**	**-0.6**
T0813				*e*S	**Sg**	**07 21 35.4**	**+0.5**
RAVA	**Ravarino**	**0.20**	**137**	⇓*e*P	**Pg**	**07 21 31.3**	**-0.6**
RAVA				⇓*e*S	**Sg**	**07 21 35.0**	**0.0**
RAVA	**Ravarino**	**0.20**	**137**	*e*P	**Pg**	**07 21 31.3**	**-0.6**
RAVA				*e*S	**Sg**	**07 21 36.0**	**+1.0**
RAVA				AML	AML		
comp=E,37900μm,0.7s							
RAVA				AML	AML		
comp=N,36050μm,0.4s							
RAVA				AML	AML		
comp=E,37900μm,0.7s							
RAVA				AML	AML		
comp=N,36050μm,0.4s							
RAVA				AML	AML		
comp=E,37900μm,0.7s							
RAVA				AML	AML		
comp=N,36050μm,0.4s							
RAVA				AML	AML		
comp=E,37850μm,0.7s							
T0800	**Massa Finalese**	**0.24**	**104**	⇓*e*P	**Pg**	**07 21 31.7**	**-0.7**
T0800				⇓*e*S	**Sg**	**07 21 36.5**	**+0.5**
T0800	**Massa Finalese**	**0.24**	**104**	*e*P	**Pg**	**07 21 31.7**	**-0.7**
T0800				*e*S	**Sg**	**07 21 36.5**	**+0.5**
T0800				AML	AML		
comp=E,23150μm,1.1s							
T0800				AML	AML		
comp=N,18900μm,0.4s							
T0800				AML	AML		
comp=E,20200μm,1.2s							
T0800				AML	AML		
comp=N,20100μm,0.5s							
T0800				AML	AML		
comp=E,23150μm,1.1s							
T0800				AML	AML		
comp=N,18850μm,0.4s							
T0800				AML	AML		
comp=E,20200μm,1.2s							
T0800				AML	AML		
comp=N,20100μm,0.5s							
T0800				AML	AML		
comp=E,23100μm,1.1s							
T0800				AML	AML		
comp=N,18850μm,0.4s							
T0800				AML	AML		
comp=E,20200μm,1.2s							
T0800				AML	AML		
comp=N,20150μm,0.5s							
T0800				AML	AML		
comp=N,18850μm,0.4s							
T0800				AML	AML		
comp=E,23100μm,1.1s							
T0800				AML	AML		
comp=E,20200μm,1.2s							
T0800				AML	AML		
comp=N,20100μm,0.5s							
GAZZ	**Gazzo Veronese**	**0.24**	**30**	⇑*e*Pg	**Pb**	**07 21 33.0**	**-0.4**
GAZZ				*e*Sg	**Sg**	**07 21 39.2**	**+3.0**
GAZZ	**Gazzo Veronese**	**0.24**	**30**	*e*Pg	**Pb**	**07 21 33.0**	**-0.4**
GAZZ				*e*Sg	**Sg**	**07 21 39.2**	**+3.0**
T0811	**Palata Pepoli**	**0.25**	**119**	*e*P	**Pg**	**07 21 31.8**	**-0.8**
T0811				*e*S	**Sg**	**07 21 36.8**	**+0.5**
T0811	**Palata Pepoli**	**0.25**	**119**	*e*P	**Pg**	**07 21 31.8**	**-0.8**
T0811				*e*S	**Sg**	**07 21 36.8**	**+0.5**
T0805	**Bondeno (FE)**	**0.28**	**87**	*e*P	**Pg**	**07 21 32.6**	**-0.6**
T0805	**Bondeno (FE)**	**0.28**	**87**	*e*P	**Pg**	**07 21 32.6**	**-0.6**
T0822	**Casumaru (Bond**	**0.31**	**103**	⇑*e*P	**Pg**	**07 21 32.9**	**-0.8**
T0822				⇑*e*S	**Sb**	**07 21 38.8**	**-0.5**
T0822	**Casumaru (Bond**	**0.31**	**103**	*e*P	**Pg**	**07 21 32.9**	**-0.8**
T0822				*e*S	**Sb**	**07 21 38.8**	**-0.5**
T0822				AML	AML		
comp=E,8725μm,0.4s							
T0822				AML	AML		
comp=N,7125μm,1.2s							
T0822				AML	AML		
comp=E,8710μm,0.4s							
T0822				AML	AML		
comp=N,7125μm,1.2s							
T0822				AML	AML		
comp=E,8725μm,0.4s							
T0822				AML	AML		
comp=N,7140μm,1.2s							
T0822				AML	AML		
comp=N,7135μm,1.2s							
T0822				AML	AML		
comp=E,8735μm,0.4s							
T0803	**Dosso, Cento (**	**0.33**	**114**	*e*P	**Pg**	**07 21 33.2**	**-0.9**
T0803	**Dosso, Cento (**	**0.33**	**114**	*e*P	**Pg**	**07 21 33.2**	**-0.9**
T0823	**Castello D'Arg**	**0.33**	**131**	*e*P	**Pb**	**07 21 34.8**	**-0.1**
T0823				*e*S	**Sb**	**07 21 40.7**	**+0.6**
T0823	**Castello D'Arg**	**0.33**	**131**	*e*P	**Pb**	**07 21 34.8**	**-0.1**
T0823				*e*S	**Sb**	**07 21 40.6**	**+0.6**
T0817	**Loc. Veratica,**	**0.39**	**77**	*e*P	**Pb**	**07 21 35.7**	**-0.1**
T0817				*e*S	**Sb**	**07 21 42.4**	**+0.8**
T0817	**Loc. Veratica,**	**0.39**	**77**	*e*P	**Pb**	**07 21 35.7**	**-0.1**
T0817				*e*S	**Sb**	**07 21 42.4**	**+0.8**
TEOL	**Teolo**	**0.70**	**49**	*e*Pg	**Pb**	**07 21 41.0**	**-0.1**
TEOL				*e*Sg	**Sn**	**07 21 54.2**	**+1.0**
TEOL	**Teolo**	**0.70**	**49**	⇓*e*P	**Pg**	**07 21 40.6**	**-0.3**
TEOL	**Teolo**	**0.70**	**49**	*e*Pg	**Pb**	**07 21 41.0**	**-0.1**
TEOL				*e*Sg	**Sn**	**07 21 54.2**	**+1.0**
TEOL	**Teolo**	**0.70**	**49**	*e*P	**Pg**	**07 21 40.6**	**-0.3**
TEOL				AML	AML		
comp=E,3440μm,0.4s							
TEOL				AML	AML		
comp=N,5060μm,0.3s							
TEOL				AML	AML		
comp=E,3440μm,0.4s							
TEOL				AML	AML		
comp=N,5060μm,0.3s							
TEOL				AML	AML		
comp=E,3440μm,0.4s							
TEOL				AML	AML		
comp=N,5060μm,0.3s							
TEOL				AML	AML		
comp=N,5060μm,0.3s							
TEOL				AML	AML		
comp=E,3435μm,0.4s							
ROVR	**Rover˜α Verone**	**0.75**	**8**	AML	AML		
comp=N,3465μm,0.1s							
ROVR				AML	AML		
comp=E,2320μm,1.4s							
ROVR				AML	AML		
comp=N,3465μm,0.1s							
ROVR				AML	AML		
comp=E,2320μm,1.4s							
ROVR				AML	AML		
comp=N,3465μm,0.1s							
ROVR				AML	AML		
comp=E,2320μm,1.4s							
MARN	**Marana (Italy)**	**0.76**	**15**	⇑*e*Pg	**Pb**	**07 21 42.5**	**+0.2**
MARN				*e*Sg	**Sn**	**07 21 56.2**	**+1.4**
MARN	**Marana (Italy)**	**0.76**	**15**	*e*Pg	**Pb**	**07 21 42.5**	**+0.2**
SALO	**Salr**	**0.77**	**339**	AML	AML		
comp=E,2235μm,0.5s							
SALO				AML	AML		
comp=E,2235μm,0.5s							
SALO				AML	AML		
comp=N,2970μm,0.7s							
SALO				AML	AML		
comp=N,2970μm,0.7s							
SALO				AML	AML		
comp=E,2235μm,0.5s							
SALO				AML	AML		
comp=N,2970μm,0.7s							
BALD	**Monte Baldo**	**0.78**	**355**	⇑*e*Pg	**Pn**	**07 21 43.3**	**-0.7**
BALD				*e*Sg	**Sn**	**07 21 57.8**	**+2.2**
BALD	**Monte Baldo**	**0.78**	**355**	*e*Pg	**Pn**	**07 21 43.3**	**-0.7**
VLC	**Villacollemand**	**0.84**	**208**	AML	AML		
comp=E,614μm,0.8s							
VLC				AML	AML		
comp=N,764μm,1.0s							
VLC				AML	AML		
comp=E,614μm,0.8s							
VLC				AML	AML		
comp=N,764μm,1.0s							
VLC				AML	AML		
comp=N,764μm,1.0s							
VLC				AML	AML		
comp=E,614μm,0.8s							
POPM	**Popiglio**	**0.87**	**188**	AML	AML		
comp=N,1960μm,0.6s							
POPM				AML	AML		
comp=E,1125μm,0.8s							
POPM				AML	AML		
comp=E,1125μm,0.8s							
POPM				AML	AML		
comp=N,1960μm,0.6s							
POPM				AML	AML		
comp=N,1960μm,0.6s							
POPM				AML	AML		
comp=E,1125μm,0.8s							
BDI	**Bagni Di Lucca**	**0.87**	**196**	AML	AML		
comp=E,1490μm,0.4s							
BDI				AML	AML		
comp=E,1280μm,0.4s							
BDI				AML	AML		
comp=N,1780μm,0.5s							
BDI				AML	AML		
comp=E,1490μm,0.4s							
BDI				AML	AML		
comp=N,1445μm,0.5s							
BDI				AML	AML		
comp=E,1275μm,0.4s							
BDI				AML	AML		
comp=N,1780μm,0.5s							
BDI				AML	AML		
comp=E,1490μm,0.4s							
BDI				AML	AML		
comp=N,1445μm,0.5s							
BDI				AML	AML		
comp=E,1275μm,0.4s							
BDI				AML	AML		
comp=N,1445μm,0.5s							
BDI				AML	AML		
comp=N,1780μm,0.5s							
MAGA	**Magasa**	**0.90**	**347**	AML	AML		
comp=N,8870μm,0.3s							
MAGA				AML	AML		
comp=E,10070μm,0.4s							
MAGA				AML	AML		
comp=N,8870μm,0.3s							
MAGA				AML	AML		
comp=E,10070μm,0.4s							
MAGA				AML	AML		
comp=E,10070μm,0.4s							
MAGA				AML	AML		
comp=N,8870μm,0.3s							
CTL8	**Castelleone**	**0.90**	**295**	AML	AML		
comp=E,804μm,1.1s							
CTL8				AML	AML		
comp=E,2105μm,0.3s							
CTL8				AML	AML		
comp=N,3035μm,0.7s							
CTL8				AML	AML		
comp=N,720μm,0.3s							
CTL8				AML	AML		
comp=E,2105μm,0.3s							
CTL8				AML	AML		
comp=N,3035μm,0.7s							
CTL8				AML	AML		
comp=E,804μm,1.1s							
CTL8				AML	AML		
comp=N,720μm,0.3s							
DOSS	**Dosso del Somm**	**0.99**	**11**	*e*Pg	**Pn**	**07 21 47.1**	**+0.2**
DOSS	**Dosso del Somm**	**0.99**	**11**	*e*Pg	**Pn**	**07 21 47.1**	**+0.2**
MAIM	**Mastiano**	**1.04**	**198**	AML	AML		
comp=E,851μm,0.3s							
MAIM				AML	AML		
comp=E,851μm,0.3s							
MAIM				AML	AML		
comp=N,1495μm,0.4s							
MAIM				AML	AML		
comp=E,851μm,0.3s							
MAIM				AML	AML		
comp=N,1495μm,0.4s							
MAIM				AML	AML		
comp=N,1495μm,0.4s							
RNI	**Roncone**	**1.10**	**349**	*e*Pg	**Pg**	**07 21 47.9**	**-0.6**
RNI	**Roncone**	**1.10**	**349**	*e*Pg	**Pg**	**07 21 47.9**	**-0.6**
CRMI	**Carmignano**	**1.11**	**178**	AML	AML		
comp=N,322μm,1.6s							
CRMI				AML	AML		
comp=E,588μm,0.5s							
CRMI				AML	AML		
comp=N,322μm,1.6s							
CRMI				AML	AML		
comp=E,588μm,0.5s							
CRMI				AML	AML		
comp=N,322μm,1.6s							
CRMI				AML	AML		
comp=E,588μm,0.5s							
PLMA	**Palmaria, Port**	**1.15**	**222**	AML	AML		
comp=N,1210μm,0.4s							
PLMA				AML	AML		
comp=E,871μm,0.4s							
PLMA				AML	AML		
comp=N,1205μm,0.4s							
PLMA				AML	AML		
comp=E,871μm,0.4s							
PLMA				AML	AML		
comp=N,1210μm,0.4s							
PLMA				AML	AML		
comp=E,871μm,0.4s							
CGRP	**Cima Grappa**	**1.15**	**32**	⇓*e*Pg	**Pg**	**07 21 49.0**	**-0.6**
CGRP	**Cima Grappa**	**1.15**	**32**	*e*Pg	**Pg**	**07 21 49.0**	**-0.6**
CGRP	**Cima Grappa**	**1.15**	**32**	AML	AML		
comp=N,530μm,0.6s							
CGRP				AML	AML		
comp=E,641μm,1.6s							
CGRP				AML	AML		
comp=N,530μm,0.6s							
CGRP				AML	AML		
comp=E,640μm,1.6s							
CGRP				AML	AML		
comp=N,530μm,0.6s							
CGRP				AML	AML		
comp=E,640μm,1.6s							
MSSA	**Maissana**	**1.17**	**240**	AML	AML		
comp=E,681μm,0.2s							
MSSA				AML	AML		
comp=E,681μm,0.2s							
MSSA				AML	AML		
comp=N,704μm,0.5s							
MSSA				AML	AML		
comp=E,681μm,0.2s							
MSSA				AML	AML		
comp=N,704μm,0.5s							
MSSA				AML	AML		
comp=N,704μm,0.5s							
PANI	**Panarotta**	**1.18**	**14**	⇑*e*Pg	**Pb**	**07 21 48.9**	**-0.7**
PANI	**Panarotta**	**1.18**	**14**	*e*Pg	**Pb**	**07 21 48.9**	**-0.7**
MABI	**Malga Bissina**	**1.19**	**346**	AML	AML		
comp=E,313μm,0.3s							
MABI				AML	AML		
comp=E,314μm,0.3s							
MABI				AML	AML		
comp=N,254μm,0.7s							
MABI				AML	AML		
comp=N,254μm,0.7s							
MABI				AML	AML		
comp=N,254μm,0.7s							
MABI				AML	AML		
comp=E,313μm,0.3s							
MTLO	**Montello**	**1.23**	**42**	⇑*e*Pg	**Pb**	**07 21 50.2**	**0.0**
MTLO	**Montello**	**1.23**	**42**	*e*Pg	**Pb**	**07 21 50.2**	**0.0**
CTI	**Castel Tesino**	**1.25**	**24**	AML	AML		
comp=N,1475μm,0.2s							
CTI				AML	AML		
comp=E,1225μm,0.2s							
CTI				AML	AML		
comp=N,1475μm,0.2s							
CTI				AML	AML		
comp=E,1225μm,0.2s							
CTI				AML	AML		
comp=N,1475μm,0.2s							
CTI				AML	AML		
comp=E,1225μm,0.2s							
ASQU	**Asqua**	**1.27**	**150**	AML	AML		
comp=E,443μm,1.3s							
ASQU				AML	AML		
comp=N,356μm,0.5s							
ASQU				AML	AML		
comp=E,443μm,1.3s							
ASQU				AML	AML		
comp=N,356μm,0.5s							
VARN	**Col Varnada, M**	**1.37**	**37**	*e*Pg	**Pb**	**07 21 52.3**	**-0.4**
VARN	**Col Varnada, M**	**1.37**	**37**	*e*Pg	**Pb**	**07 21 52.3**	**-0.4**
OZOL	**Ozolo**	**1.50**	**3**	*e*Pg	**Pn**	**07 21 53.9**	**+0.1**
OZOL	**Ozolo**	**1.50**	**3**	*e*Pg	**Pn**	**07 21 53.9**	**+0.1**
CARE	**Lago del Cares**	**1.53**	**354**	*e*Pg	**Pn**	**07 21 54.5**	**+0.1**
CARE	**Lago del Cares**	**1.53**	**354**	*e*Pg	**Pn**	**07 21 54.5**	**+0.1**
AGOR	**Agordo**	**1.59**	**29**	AML	AML		
comp=N,322μm,0.3s							
AGOR				AML	AML		
comp=E,423μm,0.6s							
AGOR				AML	AML		
comp=E,423μm,0.6s							
AGOR				AML	AML		
comp=N,322μm,0.3s							
APPI	**Appiano**	**1.59**	**8**	AML	AML		
comp=N,532μm,0.8s							
APPI				AML	AML		
comp=E,567μm,0.3s							
APPI				AML	AML		
comp=E,564μm,0.3s							
APPI				AML	AML		
comp=N,534μm,0.8s							

APPI				AML	AML		
	comp=E,564μm,0.3s						
APPI				AML	AML		
	comp=N,534μm,0.8s						
KOSI	**Kohlern**	**1.59**	**11**	AML	AML		
	comp=E,740μm,0.5s						
KOSI				AML	AML		
	comp=E,740μm,0.5s						
KOSI				AML	AML		
	comp=N,608μm,0.6s						
KOSI				AML	AML		
	comp=E,740μm,0.5s						
KOSI				AML	AML		
	comp=N,608μm,0.6s						
KOSI				AML	AML		
	comp=N,608μm,0.6s						
BRMO	**Bormio**	**1.62**	**346**	AML	AML		
	comp=E,200μm,0.4s						
BRMO				AML	AML		
	comp=E,200μm,0.4s						
BRMO				AML	AML		
	comp=N,276μm,0.8s						
BRMO				AML	AML		
	comp=N,276μm,0.8s						
BRMO				AML	AML		
	comp=E,200μm,0.4s						
BRMO				AML	AML		
	comp=N,276μm,0.8s						
MOSI	**Grossmontoni**	**1.73**	**351**	AML	AML		
	comp=E,579μm,0.5s						
MOSI				AML	AML		
	comp=E,579μm,0.5s						
MOSI				AML	AML		
	comp=N,900μm,0.8s						
MOSI				AML	AML		
	comp=E,579μm,0.5s						
MOSI				AML	AML		
	comp=N,900μm,0.8s						
MOSI				AML	AML		
	comp=N,900μm,0.8s						
CAFI	**Castiglion Fio**	**1.75**	**154**	AML	AML		
	comp=N,116μm,0.7s						
CAFI				AML	AML		
	comp=E,124μm,1.2s						
CAFI				AML	AML		
	comp=N,116μm,0.7s						
CAFI				AML	AML		
	comp=E,124μm,1.2s						
CAFI				AML	AML		
	comp=E,124μm,1.2s						
CAFI				AML	AML		
	comp=N,116μm,0.7s						
PIEI	**Pieia**	**1.79**	**139**	AML	AML		
	comp=N,107μm,1.1s						
PIEI				AML	AML		
	comp=E,138μm,0.5s						
PIEI				AML	AML		
	comp=N,107μm,1.1s						
PIEI				AML	AML		
	comp=E,138μm,0.5s						
PIEI				AML	AML		
	comp=N,107μm,1.1s						
PIEI				AML	AML		
	comp=E,138μm,0.5s						
ABSI	**Aberstueckl**	**1.84**	**8**	AML	AML		
	comp=N,688μm,0.5s						
ABSI				AML	AML		
	comp=E,995μm,0.5s						
ABSI				AML	AML		
	comp=N,688μm,0.5s						
ABSI				AML	AML		
	comp=E,995μm,0.5s						
ROSI	**Rosskopf**	**2.05**	**9**	AML	AML		
	comp=N,504μm,1.3s						
ROSI				AML	AML		
	comp=E,376μm,0.8s						
ROSI				AML	AML		
	comp=N,504μm,1.3s						
ROSI				AML	AML		
	comp=E,376μm,0.8s						
CASP	**Castiglione de**	**2.11**	**181**	AML	AML		
	comp=N,144μm,0.3s						
CASP				AML	AML		
	comp=E,112μm,1.5s						
CASP				AML	AML		
	comp=N,144μm,0.3s						
CASP				AML	AML		
	comp=E,112μm,1.5s						
FETA	**Feichten**	**2.12**	**356**	Pn	**Pb**	**07 22 05.2**	**-0.3**
	comp=E,54nm,0.7s,SNR=22						
FETA	**Feichten**	**2.12**	**356**	Pn	**Pb**	**07 22 05.2**	**-0.3**
	comp=E,54nm,0.7s,SNR=22						
VINO	**Villanova**	**2.14**	**50**	AML	AML		
	comp=N,225μm,1.0s						
VINO				AML	AML		
	comp=E,140μm,0.6s						
VINO				AML	AML		
	comp=E,140μm,0.6s						
VINO				AML	AML		
	comp=N,225μm,1.0s						
ABTA	**Abfaltersbach**	**2.15**	**30**	Pn	**Pb**	**07 22 06.4**	**+0.4**
	comp=N,8.3nm,0.3s						
ABTA	**Abfaltersbach**	**2.15**	**30**	Pn	**Pb**	**07 22 06.4**	**+0.4**
	comp=N,8.3nm,0.3s						
SABO	**M.te Sabotino**	**2.17**	**59**	AML	AML		
	comp=N,433μm,0.7s						
SABO				AML	AML		
	comp=E,270μm,0.6s						
SABO				AML	AML		
	comp=N,433μm,0.7s						
SABO				AML	AML		
	comp=E,270μm,0.6s						
WTTA	**Wattenberg**	**2.41**	**12**	*e*Pn	**Pb**	**07 22 09.7**	**-0.8**
	comp=E,1.4nm,0.2s						
WTTA	**Wattenberg**	**2.41**	**12**	Pn	**Pb**	**07 22 09.7**	**-0.8**
	comp=E,1.4nm,0.2s						
WATA	**Walderalm**	**2.47**	**10**	Pn	**Pb**	**07 22 10.2**	**-1.3**
	comp=E,7.0nm,0.2s,SNR=16						
WATA	**Walderalm**	**2.47**	**10**	Pn	**Pb**	**07 22 10.2**	**-1.3**
	comp=E,7.0nm,0.2s,SNR=16						
DAVA	**Damuels**	**2.49**	**343**	Pn	**Pb**	**07 22 10.5**	**-1.3**
	comp=E,12nm,0.3s,SNR=9.0						
DAVA	**Damuels**	**2.49**	**343**	Pn	**Pb**	**07 22 10.5**	**-1.3**
	comp=E,12nm,0.3s,SNR=9.0						
MYKA	**Terra Mystica**	**2.57**	**47**	Pn	**Pg**	**07 22 15.4**	**-1.0**
	comp=E,3.6nm,0.2s						
RETA	**Reutte**	**2.58**	**358**	*e*Pn	**Pb**	**07 22 11.6**	**-1.8**
	comp=E,2.8nm,0.2s,SNR=7.6						
RETA	**Reutte**	**2.58**	**358**	Pn	**Pb**	**07 22 11.6**	**-1.8**
	comp=E,2.8nm,0.2s,SNR=7.6						
DOI	**San Damiano**	**2.65**	**263**	AML	AML		
	comp=E,140μm,0.4s						
DOI				AML	AML		
	comp=E,140μm,0.4s						
DOI				AML	AML		
	comp=N,154μm,0.3s						
DOI				AML	AML		
	comp=N,154μm,0.3s						
SBF	**Sospel**	**2.71**	**249**	*e*Pn	**Pb**	**07 22 13.9**	**-1.6**
	SNR=1.0						
SBF				*e*Sn	**Sb**	**07 22 46.5**	**-2.1**
	comp=N,154nm,0.6s,SNR=1.0						
SBF	**Sospel**	**2.71**	**249**	*e*Pn	**Pb**	**07 22 13.9**	**-1.6**
	SNR=1.0						
SBF				*e*Sn	**Sb**	**07 22 46.5**	**-2.1**
	comp=N,77nm,0.6s,SNR=1.0						
PGF	**Pioggiola**	**2.74**	**211**	*e*Pn	**Pn**	**07 22 12.4**	**+1.6**
	SNR=1.0						
PGF				*e*Sn	**Sn**	**07 22 43.5**	**-0.2**
	comp=N,45nm,0.4s,SNR=1.0						
PGF	**Pioggiola**	**2.74**	**211**	*e*Pn	**Pn**	**07 22 12.4**	**+1.6**
	SNR=1.0						
PGF				*e*Sn	**Sn**	**07 22 43.5**	**-0.2**
	comp=N,22nm,0.4s,SNR=1.0						
KBA	**Koelnbreinsper**	**2.75**	**37**	Pn	**Pb**	**07 22 16.5**	**+0.2**
	comp=N,1.1nm,0.2s						
KBA	**Koelnbreinsper**	**2.75**	**37**	Pn	**Pb**	**07 22 16.5**	**+0.2**
	comp=N,1.1nm,0.2s						
LUCF	**Luceram**	**2.76**	**250**	Pn	**Pn**	**07 22 13.4**	**+2.4**
LUCF	**Luceram**	**2.76**	**250**	Pn	**Pn**	**07 22 13.4**	**+2.4**
LUCF				Sn	**Sb**	**07 22 48.3**	**-1.7**
NVLJ	**Novalja**	**2.83**	**96**	*e*Pn	**Pn**	**07 22 12.0**	**+0.1**
NVLJ				Sn	**Sn**	**07 22 43.7**	**-2.1**
NVLJ	**Novalja**	**2.83**	**96**	*e*Pn	**Pn**	**07 22 12.0**	**+0.1**
MBDF	**Montbardon**	**2.96**	**268**	*e*Pn	**Pn**	**07 22 14.7**	**+0.8**
MBDF	**Montbardon**	**2.96**	**268**	*e*Pn	**Pn**	**07 22 14.7**	**+0.8**
SURF	**Saint Ours**	**2.96**	**263**	Pn	**Pn**	**07 22 15.5**	**+1.6**
SURF	**Saint Ours**	**2.96**	**263**	Pn	**Pn**	**07 22 15.5**	**+1.6**
OBKA	**Obir**	**3.00**	**56**	Pn	**Pb**	**07 22 18.9**	**-1.6**
	comp=N,0.6nm,0.1s						
OBKA	**Obir**	**3.00**	**56**	Pn	**Pb**	**07 22 18.9**	**-1.6**
	comp=N,0.6nm,0.1s						
LPG	**La Plagne**	**3.01**	**283**	*e*Pn	**Pb**	**07 22 19.4**	**-1.3**
	SNR=1.0						
LPG				*e*Sn	**Sn**	**07 22 51.8**	**+1.2**
	comp=N,27nm,0.5s,SNR=1.0						
LPG	**La Plagne**	**3.01**	**283**	*e*Pn	**Pb**	**07 22 19.4**	**-1.3**
	SNR=1.0						
LPG				*e*Sn	**Sn**	**07 22 51.8**	**+1.2**
	comp=N,14nm,0.5s,SNR=1.0						
LPL	**La Plagne**	**3.03**	**283**	*e*Pn	**Pb**	**07 22 19.4**	**-1.6**
	SNR=1.0						
LPL				*e*Sn	**Sn**	**07 22 49.0**	**-1.9**
	comp=N,25nm,0.5s,SNR=1.0						
LPL	**La Plagne**	**3.03**	**283**	*e*Pn	**Pb**	**07 22 19.4**	**-1.6**
	SNR=1.0						
LPL				*e*Sn	**Sn**	**07 22 49.0**	**-1.9**
	comp=N,12nm,0.5s,SNR=1.0						
RSL	**Roselend**	**3.13**	**286**	Pn	**Pn**	**07 22 17.3**	**+1.0**
RSL	**Roselend**	**3.13**	**286**	Pn	**Pn**	**07 22 17.3**	**+1.0**
FRF	**La Foret Royal**	**3.35**	**248**	*e*Pn	**Pn**	**07 22 21.9**	**+2.7**
	SNR=1.0						
FRF				*e*Sn	**Sn**	**07 23 00.0**	**+1.3**
	comp=N,35nm,0.2s,SNR=1.0						
FRF	**La Foret Royal**	**3.35**	**248**	*e*Pn	**Pn**	**07 22 21.9**	**+2.7**
	SNR=1.0						
FRF				*e*Sn	**Sn**	**07 23 00.0**	**+1.3**
	comp=N,18nm,0.2s,SNR=1.0						
LMR	**La Mourre**	**3.55**	**245**	*e*Pn	**Pn**	**07 22 23.4**	**+1.6**
	SNR=1.0						
LMR				*e*Sn	**Sn**	**07 23 05.3**	**+1.9**
	comp=N,60nm,0.3s,SNR=1.0						
LMR	**La Mourre**	**3.55**	**245**	*e*Pn	**Pn**	**07 22 23.4**	**+1.6**
	SNR=1.0						
LMR				*e*Sn	**Sn**	**07 23 05.3**	**+1.9**
	comp=N,30nm,0.3s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**3.58**	**272**	*e*Pn	**Pn**	**07 22 24.8**	**+2.4**
	SNR=1.0						
ORIF	**Oris-en-Rattie**	**3.58**	**272**	Pn	**Pn**	**07 22 23.6**	**+1.2**
ORIF	**Oris-en-Rattie**	**3.58**	**272**	*e*Pn	**Pn**	**07 22 24.8**	**+2.4**
	SNR=1.0						
KIZ	**Kirchzarten**	**3.69**	**327**	Pn	**Pn**	**07 22 24.7**	**+0.9**
KIZ	**Kirchzarten**	**3.69**	**327**	Pn	**Pn**	**07 22 24.7**	**+0.9**
MOA	**Molln**	**3.75**	**37**	*i* Pn	**Pn**	**07 22 26.4**	**+1.9**
	comp=N,0.2nm,0.1s						
MOA	**Molln**	**3.75**	**37**	Pn	**Pn**	**07 22 26.4**	**+1.9**
	comp=N,0.2nm,0.1s						
CHMF	**Charmoille**	**3.79**	**310**	Pn	**Pn**	**07 22 26.4**	**+1.2**
CHMF	**Charmoille**	**3.79**	**310**	Pn	**Pn**	**07 22 26.4**	**+1.2**
CABF	**La Chapelle**	**3.79**	**298**	*e*Pn	**Pn**	**07 22 27.9**	**+2.7**
	SNR=1.0						
CABF	**La Chapelle**	**3.79**	**298**	*e*Pn	**Pn**	**07 22 27.9**	**+2.7**
	SNR=1.0						
SMRF	**Simiane la Rot**	**3.94**	**258**	*e*Pn	**Pn**	**07 22 31.4**	**+4.1**
	SNR=1.0						
SMRF	**Simiane la Rot**	**3.94**	**258**	*e*Pn	**Pn**	**07 22 31.4**	**+4.1**
	SNR=1.0						
MOF	**Molkenrain**	**3.95**	**320**	Pn	**Pn**	**07 22 27.9**	**+0.5**
MOF	**Molkenrain**	**3.95**	**320**	Pn	**Pn**	**07 22 27.9**	**+0.5**
HINF	**Hinteralfeld**	**4.05**	**317**	*e*Pn	**Pn**	**07 22 29.1**	**+0.3**
HINF				*e*Sn	**Sn**	**07 23 16.6**	**+0.6**
	comp=N,18nm,0.3s,SNR=1.0						
HINF	**Hinteralfeld**	**4.05**	**317**	*e*Pn	**Pn**	**07 22 29.1**	**+0.3**
HINF				*e*Sn	**Sn**	**07 23 16.6**	**+0.6**
	comp=N,9.2nm,0.3s,SNR=1.0						
OPP	**Oppenau**	**4.06**	**333**	Pn	**Pn**	**07 22 30.1**	**+1.3**
OPP	**Oppenau**	**4.06**	**333**	Pn	**Pn**	**07 22 30.1**	**+1.3**
ECH	**Echery**	**4.21**	**323**	Pn	**Pn**	**07 22 31.9**	**+1.0**
ECH	**Echery**	**4.21**	**323**	Pn	**Pn**	**07 22 31.9**	**+1.0**
CDF	**Champ du Feu**	**4.32**	**326**	*e*Pn	**Pn**	**07 22 34.4**	**+2.0**
	SNR=1.0						
CDF				*e*Sn	**Sn**	**07 23 22.1**	**-0.4**
	comp=N,6.8nm,0.2s,SNR=1.0						
CDF	**Champ du Feu**	**4.32**	**326**	*e*Pn	**Pn**	**07 22 34.4**	**+2.0**
	SNR=1.0						
CDF				*e*Sn	**Sn**	**07 23 22.1**	**-0.4**
	comp=N,3.4nm,0.2s,SNR=1.0						
HAU	**Haudompre**	**4.43**	**316**	*e*Pn	**Pn**	**07 22 35.9**	**+2.0**
	SNR=1.0						
HAU				*e*Sn	**Sn**	**07 23 25.0**	**-0.3**
	comp=N,32nm,0.2s,SNR=1.0						
HAU	**Haudompre**	**4.43**	**316**	*e*Pn	**Pn**	**07 22 35.9**	**+2.0**
	SNR=1.0						
HAU				*e*Sn	**Sn**	**07 23 25.0**	**-0.3**
	comp=N,16nm,0.2s,SNR=1.0						
VIVF	**Saint-Julien-l**	**4.44**	**272**	*e*Pn	**Pn**	**07 22 35.4**	**+1.2**
	SNR=1.0						
VIVF				*e*Sn	**Sn**	**07 23 26.1**	**+0.5**
	comp=N,4.4nm,0.3s,SNR=1.0						
VIVF	**Saint-Julien-l**	**4.44**	**272**	*e*Pn	**Pn**	**07 22 35.4**	**+1.2**
	SNR=1.0						
VIVF				*e*Sn	**Sn**	**07 23 26.1**	**+0.5**
	comp=N,2.2nm,0.3s,SNR=1.0						
KHC	**Kasperske Hory**	**4.60**	**22**	*e*PN	**Pn**	**07 22 37.1**	**+0.8**
KHC				*e*PG	**Pg**	**07 22 53.9**	**-1.4**
KHC				*e*SN	**Sn**	**07 23 28.6**	**-0.9**
KHC				*e*SG	**Sg**	**07 23 57.6**	**+2.7**
	comp=N,9.4nm,0.6s						
SFTF	**Sexfontaines**	**5.23**	**311**	*e*Sn	**Sn**	**07 23 45.5**	**+0.5**
	comp=N,8.1nm,0.3s						
SFTF	**Sexfontaines**	**5.23**	**311**	*e*Sn	**Sn**	**07 23 45.5**	**+0.5**
	comp=N,4.1nm,0.3s						
SMF	**Signal de Mont**	**5.25**	**292**	*e*Pn	**Pn**	**07 22 46.6**	**+1.4**
	SNR=1.0						
SMF				*e*Sn	**Sn**	**07 23 45.2**	**-0.3**
	comp=N,16nm,0.4s,SNR=1.0						
SMF	**Signal de Mont**	**5.25**	**292**	*e*Pn	**Pn**	**07 22 46.6**	**+1.4**
	SNR=1.0						
SMF				*e*Sn	**Sn**	**07 23 45.2**	**-0.3**
	comp=N,8.1nm,0.4s,SNR=1.0						
STON	**Ston**	**5.30**	**110**	Sn	**Sn**	**07 23 43.6**	**-3.0**
NKC	**Novy Kostel**	**5.43**	**10**	*e*PG	**Pg**	**07 23 09.3**	**-1.9**
NKC				*e*SN	**Sn**	**07 23 47.7**	**-2.2**
NKC				*e*SG	**Sg**	**07 24 23.9**	**+2.4**
	comp=N,5.5nm,0.4s						
LOR	**Lormes**	**5.45**	**298**	*e*Pn	**Pn**	**07 22 49.0**	**+1.0**
	SNR=1.0						
LOR				*e*Sn	**Sn**	**07 23 50.2**	**-0.3**
	comp=N,10nm,0.3s,SNR=1.0						
LOR	**Lormes**	**5.45**	**298**	*e*Pn	**Pn**	**07 22 49.0**	**+1.0**
	SNR=1.0						
LOR				*e*Sn	**Sn**	**07 23 50.2**	**-0.3**
	comp=N,5.2nm,0.3s,SNR=1.0						
SSF	**Saint Saulge**	**5.60**	**295**	*e*Pn	**Pn**	**07 22 52.0**	**+2.0**
	SNR=1.0						
SSF	**Saint Saulge**	**5.60**	**295**	*e*Pn	**Pn**	**07 22 52.0**	**+2.0**
	SNR=1.0						
AVF	**Avril sur Loir**	**5.62**	**292**	*e*Pn	**Pn**	**07 22 51.3**	**+1.1**
	SNR=1.0						
AVF	**Avril sur Loir**	**5.62**	**292**	*e*Pn	**Pn**	**07 22 51.3**	**+1.1**
	SNR=1.0						
GOPC	**GO Pecny, Ondr**	**5.66**	**26**	*e*SG	**Sg**	**07 24 28.3**	**-0.4**
	comp=N,11nm,0.8s						
BGF	**Bois d'Agland**	**5.89**	**289**	*e*Pn	**Pn**	**07 22 55.5**	**+1.5**
	SNR=1.0						
BGF				*e*Sn	**Sn**	**07 24 01.2**	**-0.1**
	comp=N,31nm,0.4s,SNR=1.0						
BGF	**Bois d'Agland**	**5.89**	**289**	*e*Pn	**Pn**	**07 22 55.5**	**+1.5**
	SNR=1.0						
BGF				*e*Sn	**Sn**	**07 24 01.2**	**-0.1**
	comp=N,15nm,0.4s,SNR=1.0						
TCF	**Toulx Ste Croi**	**6.27**	**286**	*e*Sn	**Sn**	**07 24 09.3**	**-1.3**
	comp=N,3.6nm,0.3s,SNR=1.0						
BRG	**Berggiesshubel**	**6.31**	**18**	PG	**Pg**	**07 23 26.4**	**-1.5**
BRG				SG	**Sg**	**07 24 54.1**	**+4.6**
	comp=N,6.0nm,1.0s						
CLL	**Collm**	**6.56**	**11**	*e*Pg	**Pg**	**07 23 32.0**	**-0.7**
CLL				*e*Sg	**Sg**	**07 24 54.0**	**-3.5**
	comp=Z,13nm,1.1s						

IDC ***04*** *07:34:33.1±3.8, 2.95N×83.70W, h0km, mb3.6/7, mb1 4.0/8, mb1mx3.7/40, mbtmp3.7/8, ML4.8/2, MS3.3/13, Ms1 3.3/13, ms1mx3.1/33, Error ellipse: s-maj=89.0km s-min=69.9km az=68.0*
ISCJB ***04*** *07:34:40.6±0.9, 3.41N±0.09×84.17W±0.08, h33km, mb3.6/7, MS3.4/8, Error ellipse: s-maj=16.6km s-min=7.0km az=40.7*
ISC 04 07:34:42.7±1.1, 3.3N±0.1×84.2W±0.1, h35km, n24, σ1§58/17, mb3.7/7, MS3.3/8, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTAV	**Otavalo**	**6.50**	**118**	*e*P	**Pn**	**07 36 15.5**	**-0.8**
JTS	**JuntasAbangare**	**6.99**	**354**	Pn	**Pn**	**07 36 22.1**	**-0.6**
	73nm,0.3s,baz=244,slow=7.7,SNR=214						
JTS				Sn	**Sn**	**07 37 39.1**	**-1.9**
	2.5nm,0.3s,baz=21,slow=20,SNR=6.2						
JTS				LR	LR	07 38 15.9	
	comp=Z,102nm,19.9s,baz=226,slow=30						
GCUF	**Volcan Galeras**	**7.15**	**107**	*e*P	**Pn**	**07 36 26.3**	**+1.0**
HORQ	**Saladito**	**7.57**	**88**	*e*P	**Pn**	**07 36 30.3**	**-0.5**
SOTA	**Rioblanco**	**7.67**	**98**	*e*P	**Pn**	**07 36 32.7**	**+0.3**
YOTC	**Yotoco, Valle**	**7.87**	**85**	*e*P	**Pn**	**07 36 34.5**	**-0.4**
PLMC	**San Jos¨ del**	**8.06**	**78**	*e*P	**Pn**	**07 36 38.6**	**+1.2**
CAPC	**Capurgana**	**8.63**	**52**	*e*P	**Pn**	**07 36 48.1**	**+2.9**
APG	**El Apazote**	**13.17**	**332**	Pn	**Pn**	**07 37 51.2**	**+3.7**
	0.8nm,0.3s,baz=120,slow=9.1,SNR=9.2						
APG				LR	LR	07 42 05.8	
	comp=Z,161nm,19.0s,baz=175,slow=33						
SDV	**Santo Domingo**	**14.59**	**67**	LR	LR	07 43 38.9	
	comp=Z,66nm,19.1s,baz=56,slow=38						
NNA	**Nana**	**16.85**	**154**	LR	LR	07 44 21.5	
	comp=Z,49nm,21.1s,baz=314,slow=36						
CMIG	**Matias Romero**	**17.26**	**323**	LR	LR	07 43 23.3	
	comp=Z,97nm,21.7s,baz=160,slow=30						
PTGA	**Pitinga**	**24.55**	**99**	LR	LR	07 49 21.4	
	comp=Z,77nm,19.4s,baz=275,slow=37						
LPAZ	**La Paz**	**25.12**	**141**	LR	LR	07 50 12.7	
	comp=Z,74nm,19.4s,baz=14,slow=38						
TXAR	**Lajitas Array**	**31.81**	**326**	P	**P**	**07 41 04.4**	**+0.1**
	0.2nm,0.6s,baz=163,slow=10,SNR=3.1						
TXAR				LR	LR	07 53 49.6	
	comp=Z,55nm,18.1s,baz=0.0,slow=36						
ANMO	**Albuquerque**	**37.66**	**329**	P	**P**	**07 41 54.5**	**-0.4**
	0.9nm,0.8s,baz=169,slow=15,SNR=4.3						
ANMO				LR	LR	07 59 19.3	
	comp=Z,35nm,18.1s,baz=16,slow=39						
CPUP	**Villa Florida**	**39.28**	**140**	LR	LR	07 59 58.0	
	comp=Z,56nm,19.9s,baz=337,slow=39						
PDAR	**Pinedale Array**	**45.33**	**334**	P	**P**	**07 42 56.2**	**-1.5**
	0.5nm,0.8s,baz=134,slow=6.5,SNR=3.0						
PDAR				LR	LR	08 03 04.7	
	comp=Z,57nm,18.7s,baz=186,slow=37						
NVAR	**Mina Array Bea**	**46.79**	**323**	P	**P**	**07 43 10.0**	**+0.8**
	0.7nm,0.8s,baz=132,slow=8.2,SNR=6.4						
ULM	**Lac du Bonnet**	**47.82**	**350**	P	**P**	**07 43 16.1**	**-0.6**
	4.5nm,0.9s,baz=164,slow=9.0,SNR=10						
YBH	**Yreka Blue Hor**	**51.49**	**323**	LR	LR	08 05 36.9	
	comp=Z,59nm,18.2s,baz=158,slow=36						
YKA	**Yellowknife Ar**	**63.23**	**345**	P	**P**	**07 45 06.0**	**-1.3**
	0.6nm,0.8s,baz=136,slow=7.1,SNR=7.7						
ILAR	**Eielson Array**	**75.64**	**337**	P	**P**	**07 46 23.1**	**-0.8**
	0.5nm,0.9s,baz=123,slow=4.1,SNR=4.9						
TORD	**Torodi Ar. Bea**	**85.27**	**77**	LR	LR	08 25 16.9	
	comp=Z,17nm,18.6s,baz=145,slow=36						

SOME ***04*** *07:55:25.7, 44.43N×83.43E, h10km*
NNC ***04*** *07:55:31.1±2.0, 44.42N×82.97E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=25.3km s-min=8.9km az=113.0*
ISC 04 07:55:26.1±2.3, 44.38N±0.09×83.5E±0.1, h10km, n10, σ1§95/17, 4C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**2.55**	**342**	⇑Pn	**Pb**	**07 56 12.1**	**+0.2**
	5.4nm,0.4s,baz=159,slow=15,SNR=140						
MK31				⇑Lg	Lg	07 56 47.5	
	11nm,0.5s,baz=162,slow=32,SNR=10						
MAKZ	**Makanchi**	**2.64**	**337**	⇓Pn	**Pb**	**07 56 12.7**	**-0.8**
	4.5nm,0.4s						
MAKZ				⇓Lg	Lg	07 56 50.4	
	16nm,0.5s						
KAPS	**Kapalarasan**	**3.06**	**289**	*e*P	**Pb**	**07 56 22.4**	**+1.7**
	4.6nm,0.6s						
KAPS				*e*S	**Sg**	**07 57 02.6**	**-1.8**
	11nm,0.5s						
PDGK	**Podgornoye**	**3.06**	**251**	⇑Pn	**Pn**	**07 56 16.8**	**+2.1**
	3.6nm,0.5s						
PDGK				⇑Lg	Lg	07 56 57.4	
	20nm,0.5s						
SHLS	**Shalkode**	**3.15**	**249**	*e*P	**Pn**	**07 56 17.1**	**+1.3**
	25nm,0.3s						
SHLS				*e*S	**Sn**	**07 56 54.0**	**+0.5**
	59nm,0.3s						
UZB	**Uzynbulak**	**3.45**	**251**	*e*P	**Pb**	**07 56 25.7**	**-1.6**
	3.2nm,0.3s						
UZB				*e*S	**Sb**	**07 57 08.5**	**-0.8**
	8.7nm,0.6s						
KPKS	**Kokpek**	**3.57**	**257**	*e*P	**Pb**	**07 56 28.6**	**-0.9**
	24nm,0.3s						
KPKS				*e*S	**Sb**	**07 57 13.9**	**+1.0**
	48nm,0.5s						
MNBS	**Baschi**	**3.65**	**267**	*e*P	**Pb**	**07 56 31.5**	**+0.7**
	8.1nm,0.4s						
MNBS				*e*S	**Sb**	**07 57 18.5**	**+3.3**
	16nm,0.4s						
ARXS	**Arharly**	**4.05**	**270**	*e*P	**Pg**	**07 56 41.4**	**-2.3**
	13nm,0.3s						
ARXS				*e*S	**Sg**	**07 57 35.6**	**-0.5**
	21nm,0.5s						
CHKK	**Chushkaly**	**4.70**	**266**	*e*P	**Pb**	**07 56 51.3**	**+2.8**
	11nm,0.3s						
CHKK				*e*S	**Sg**	**07 57 53.6**	**-3.1**
	22nm,0.4s						

MEX 04 08:28:29.5±1.4, 14.35N×93.16W, h16km±259km, MD4.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.34**	**358**	*e*P	Pn	08 28 49.3	-4.3
PCIG				*e*S	Sn	08 29 05.8	-5.3
CCIG	**Comitan**	**2.16**	**27**	*e*P	Pn	08 29 03.8	-1.2
CCIG				*e*S	Sn	08 29 27.6	-3.9
TGIG		**2.41**	**1**	*e*P	Pn	08 29 06.3	-2.0
TGIG				*e*S	Sn	08 29 33.3	-4.3

ISCJB ***04*** *08:33:13.4±0.4, 5.52N±0.04×82.52W±0.04, h15km, mb4.3/20, MS3.4/12, Error ellipse: s-maj=7.1km s-min=2.5km az=44.7*
UCR ***04*** *08:33:14.4±2.6, 5.58N×82.47W, h14km±504km, MD4.0, mb4.5(NEIC)*
NEIC ***04*** *08:33:15.2±0.5, 5.46N×82.50W, h10km, mb4.5/19, Error ellipse: s-maj=10.1km s-min=6.9km az=213.0*
IDC ***04*** *08:33:17.5±5.2, 5.42N×82.51W, h33km±39km, mb3.6/6, mb1 4.0/11, mb1mx3.7/45, mbtmp4.0/11, ML3.2/5, MS3.5/19, Ms1 3.5/19, ms1mx3.3/35, Error ellipse: s-maj=35.7km s-min=16.7km az=41.0*
ISC 04 08:33:15.8±0.6, 5.47N±0.06×82.52W±0.07, h15km, n114, σ1§97/110, mb4.4/20, MS3.4/12, 1C-3D, South of Panama

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

comp=Z,597nm,21.1s,baz=204,slow=36
VCR Vista de Mar 5.56 327 eP Pn 08 34 34.9 -3.3
MESS Mesas 5.87 333 eP Pn 08 34 41.4 -1.0
MESS eS Sn 08 35 49.2 -0.4
GPS2 Hotel Rinc^‡n 5.96 332 eP Pn 08 34 43.3 -0.2
GPS2 eS Sn 08 35 50.8 -0.8
CAPC Capurgana 6.02 58 eP Pn 08 34 44.7 +0.3
BUEV Buena Vista 6.02 332 eP Pn 08 34 44.0 -0.5
BUEV eS Sn 08 35 48.9 -4.4
HORQ Saladito 6.20 108 eP Pn 08 34 45.1 -2.0
PLMC San Jos^´ del 6.24 95 eP Pn 08 34 45.2 -2.2
YOTC Yotoco, Valle 6.33 103 eP Pn 08 34 46.7 -2.0
CRZ1 La Cruz 6.37 331 eP Pn 08 34 49.1 0.0
DBBC Dabeiba 6.46 76 eP Pn 08 34 51.0 +0.5
POPC Popayan, Colom 6.51 116 eP Pn 08 34 48.7 -2.7
OTAV Otavalo 6.59 142 ePn Pn 08 34 50.1 -2.5
OTAV Otavalo 6.59 142 eP Pn 08 34 50.8 -1.8
GCUF Volcan Galeras 6.66 129 eP Pn 08 34 52.3 -1.4
SOTA Rioblanco 6.76 119 eP Pn 08 34 56.1 +1.1
CRUC La Cruz 6.77 125 eP Pn 08 34 54.7 -0.4
PCON Cinco Dias 6.86 117 eP Pn 08 34 57.0 +0.6
HELC Santa Helena 6.99 84 ePn Pn 08 34 57.8 -0.3
HELC Santa Helena 6.99 84 eP Pn 08 34 57.0 -1.0
MARP Paez Belalcaza 7.04 111 eP Pn 08 34 58.2 -0.5
GUYC Guyana, Colomb 7.10 92 eP Pn 08 35 01.1 +1.4
ANIL Santa Ana 7.16 97 eP Pn 08 34 57.6 -2.6
MOTC Monteria, Cord 7.55 64 eP Pn 08 35 07.1 +1.6
BETC Betania 7.58 111 eP Pn 08 35 06.7 +0.8
NORC Norcasia 7.62 89 eP Pn 08 35 07.6 +1.2
PRAC Prado 7.80 103 ePn Pn 08 35 08.4 -0.6
PRAC Prado 7.80 103 eP Pn 08 35 09.6 +0.6
FLOC Florencia 7.86 119 eP Pn 08 35 09.0 -0.8
ZARC Zaragoza, Cauc 7.87 75 eP Pn 08 35 10.4 +0.6
PTBC PUERTO BERRIO, 8.09 82 eP Pn 08 35 12.5 -0.4
ROSC El Rosal 8.19 94 Pn Pn 08 35 14.8 +0.3
1.8nm,0.3s,baz=232,slow=2.0,SNR=7.3
ROSC LR LR 08 38 19.9
comp=Z,199nm,19.9s,baz=254,slow=37
ROSC El Rosal 8.19 94 ePn Pn 08 35 16.1 +1.6
SJCC San Jacinto, C 8.50 58 eP Pn 08 35 18.2 -0.3
CHIC Chingaza 8.79 95 eP Pn 08 35 24.1 +1.2
VILC Villavicencio, 8.90 98 eP Pn 08 35 24.3 +0.2
BARC Barichara 9.35 83 eP Pn 08 35 32.5 +2.1
RUSC La Rusia 9.40 87 ePn Pn 08 35 31.6 +0.3
RUSC La Rusia 9.40 87 eP Pn 08 35 33.6 +2.4
OCAC Ocana 9.54 73 eP Pn 08 35 34.0 +1.2
TGUH Tegucigalpa,Un 9.74 332 ePn Pn 08 35 41.0 +5.5
CODC Agust^´n Codaz 10.03 63 eP Pn 08 35 42.6 +3.2
SDV Santo Domingo 12.27 73 Pn Pn 08 36 10.6 +0.3
1.1nm,0.3s,baz=255,slow=9.7,SNR=14
SDV Sn Sn 08 38 23.2 -3.9
0.3nm,0.3s,baz=247,slow=18,SNR=1.9
SDV LR LR 08 40 54.1
comp=Z,422nm,19.0s,baz=240,slow=37
APG El Apazote 12.28 321 Pn Pn 08 36 10.7 +0.1
0.1nm,0.3s,baz=131,slow=18,SNR=2.6
APG LR LR 08 40 10.6
comp=Z,167nm,21.7s,baz=160,slow=34
ATAH Atahualpa 13.18 162 LR LR 08 41 00.6
comp=Z,481nm,20.1s,baz=358,slow=35
CMIG Matias Romero 16.73 315 LR LR 08 41 50.0
comp=Z,72nm,18.4s,baz=132,slow=31
PCRV Puerto La Cruz 18.32 74 P P 08 37 29.9 +0.2
0.2nm,0.3s,baz=254,slow=13,SNR=2.3
PCRV LR LR 08 46 27.1
comp=Z,132nm,21.1s,baz=276,slow=43
AOPR Arecibo Observ 20.02 49 eP P 08 37 48.8 +0.5
37nm,0.9s
SJG San Juan 20.34 50 P P 08 37 52.7 +1.0
2.9nm,0.3s,baz=253,slow=6.3,SNR=8.7
SJG LR LR 08 46 25.8
comp=Z,88nm,19.1s,baz=228,slow=39
SJG San Juan 20.34 50 eP P 08 37 52.4 +0.7
16nm,0.9s
HUMP Col San Antoni 20.59 51 eP P 08 37 55.0 +0.6
26nm,1.0s
CBYP Canovanas 20.66 51 eP P 08 37 55.4 +0.2
34nm,1.2s
MTP Monte Pirata 20.79 51 eP P 08 37 56.7 0.0
24nm,1.0s
CUPR Culebra, Puert 21.12 51 eP P 08 37 59.9 -0.3
42nm,1.4s
STVI Saint Thomas 21.40 52 eP P 08 38 02.6 -0.6
38nm,1.5s
PTGA Pitinga 23.35 105 P P 08 38 26.7 +2.8
4.4nm,0.8s,baz=283,slow=10.0,SNR=5.7
PTGA LR LR 08 47 28.6
comp=Z,121nm,18.7s,baz=284,slow=36
SAML Samuel 24.01 126 eP P 08 38 27.9 -2.4
5.4nm,0.7s
LPAZ La Paz 25.88 147 P P 08 38 46.8 -1.1
1.3nm,0.7s,baz=348,slow=5.0,SNR=9.6
LPAZ LR LR 08 50 06.1
comp=Z,191nm,20.6s,baz=332,slow=39
LPAZ La Paz 25.88 147 eP P 08 38 48.6 +0.6
6.9nm,1.4s
344A Westbrook Farm 26.98 344 eP P 08 38 58.1 +1.1
17nm,1.3s
341A Kurthwood 27.61 340 eP P 08 39 03.2 +0.5
10nm,1.4s
SWET Sewanee 29.77 354 eP P 08 39 23.2 +1.2
4.2nm,1.1s
SIV San Ignacio 30.09 135 LR LR 08 51 22.5
comp=Z,91nm,18.2s,baz=172,slow=36
TXAR Lajitas Array 31.04 322 LR LR 08 51 16.4
comp=Z,34nm,18.4s,baz=0.0,slow=35
T42A Van Buren 32.38 347 eP P 08 39 44.3 -0.6
6.5nm,0.8s
FVM French Village 33.16 349 eP P 08 39 52.0 +0.3
6.5nm,1.0s
CCM Cathedral Cave 33.40 347 eP P 08 39 52.8 -1.0
8.4nm,0.9s
N41A Harden Midland 35.88 349 eP P 08 40 15.4 +0.2
20nm,1.1s
N37A Lee Faris, Mou 36.67 345 eP P 08 40 22.4 +0.4
16nm,1.0s
L40A Anamosa 37.26 349 eP P 08 40 26.7 -0.2
13nm,1.1s
CPUP Villa Florida 39.94 143 LR LR 09 00 07.0
comp=Z,54nm,18.3s,baz=293,slow=40
DREC Desert Rsrch C 41.00 316 eP P 08 41 04.3 +5.9
PDAR Pinedale Array 44.20 331 LR LR 09 01 51.3
comp=Z,35nm,18.8s,baz=137,slow=39
R11A Troy Canyon, C 44.40 322 eP P 08 41 27.2 +0.9
3.3nm,1.5s
NVAR Mina Array Bea 46.15 320 P P 08 41 40.8 +0.6
0.4nm,0.8s,baz=123,slow=6.6,SNR=3.2
NVAR LR LR 09 01 52.5
comp=Z,35nm,18.3s,baz=234,slow=37
YKA Yellowknife Ar 61.61 344 P P 08 43 31.8 -0.7
1.8nm,0.8s,baz=138,slow=6.6,SNR=21
PPTF Pamatai, Papee 70.01 249 eP P 08 44 28.9 +1.3
73nm,0.8s
PPT Papeete 70.01 249 eP P 08 44 28.9 +1.4
ILAR Eielson Array 74.33 336 P P 08 44 51.8 -0.8
0.4nm,0.9s,baz=114,slow=4.0,SNR=3.0
MDT Midelt 76.90 58 LR LR 09 12 16.7
comp=Z,15nm,21.6s,baz=221,slow=30
IM3 Indian Mountai 77.44 337 eP P 08 45 12.6 +2.4
KOWA Kowa 77.54 76 LR LR 09 20 36.4
comp=Z,13nm,18.7s,baz=215,slow=37
RAR Rarotonga 80.16 247 LR LR 09 11 18.6
comp=Z,84nm,19.4s,baz=100,slow=28
TORD Torodi Ar. Bea 83.16 77 P P 08 45 39.5 -2.6
0.4nm,0.5s,baz=276,slow=5.4,SNR=3.6
SPITS Spitsbergen Ar 86.51 12 LR LR 09 27 22.1
comp=Z,19nm,19.2s,baz=70,slow=38
WMQ Urumqi 130.15 9 PKP PKPdf 08 52 27.6 +1.9
KSH Kashi 131.03 22 PKP PKPdf 08 52 25.1 -2.5
HHC Hu-ho-hao-te 132.13 346 ePKP PKPdf 08 52 31.8 +2.2
HHC PP PP 08 54 57.0 +6.9
NJ2 Nanjing 137.50 333 ePKP PKPdf 08 52 41.3 +1.6
WRA Warramunga Arr 141.39 245 PKP PKPdf 08 52 45.3 -1.9
0.7nm,1.0s,baz=105,slow=2.2,SNR=3.5
CD2 Chengdu 143.34 351 PKP PKPdf 08 52 50.7 +0.3
H01W1 Cape Leeuwin H 146.91 206 T T 11 37 37.2
baz=149
H01W2 Cape Leeuwin H 146.91 206 T T 11 37 42.8
baz=149
H01W3 Cape Leeuwin H 146.93 206 T T 11 37 35.3
baz=149,SNR=4.0

*DSN **04** 08:34:33.4±0.8, 27°.49N×52°.26E, h15km, ML4.3/5, Error ellipse: s-maj=13.9km s-min=5.9km az=60.0*

*ISCJB **04** 08:34:50.9±0.5, 26°.96N±0°.05×53°.85E±0°.05, h19km, mb3.5/8, MS2.9/5, Error ellipse: s-maj=8.3km s-min=4.4km az=135.1*
*TEH **04** 08:34:50.2, 26°.83N×53°.79E, h10km, ML3.7*
*IDC **04** 08:34:54.6±4.0, 26°.96N×53°.85E, h40km±46km, mb3.4/8, mb1 3.6/11, mb1mx3.4/60, mbtmp3.7/11, ML3.6/3, MS2.9/7, Ms1 2.9/7, ms1mx2.6/45, Error ellipse: s-maj=27.7km s-min=24.9km az=25.0*
*CSEM **04** 08:34:54.1±0.4, 27°.18N×54°.02E, h20km, ML3.6, Error ellipse: s-maj=17.3km s-min=7.6km az=59.0*
ISC 04 08:34:52.2±0.6, 27°.05N±0°.04×53°.92E±0°.05, h19km, n53, σ1§61/52, mb3.5/8, MS2.9/5, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JHRM	Jahrom	1.48	348	eSg		Sg	08 35 42.4	+2.3
JHRM				e			08 35 50.8	
comp=Z,99nm,0.2s								
JHRM	Jahrom	1.48	348	ePg		Pb	08 35 19.5	+0.3
GHIR	Ghir-Karzin	1.48	326	ePg		Pb	08 35 18.8	-0.4
GHIR				eSg		Sg	08 35 39.5	-0.7
BNDS	Bandar-Abbas	2.04	80	ePn		Pn	08 35 22.3	-3.3
BNDS				eSg		Sn	08 35 51.9	+1.3
GENO	Geno	2.04	80	ePn		Pn	08 35 25.8	+0.1
SHME	Shamm	2.23	116	P		Pb	08 35 30.9	-1.0
IBND	Bandar-abas	2.37	80	ePn		Pn	08 35 30.0	0.0
IBND				e			08 36 33.8	
comp=Z,4μm,0.2s								
IBND	Bandar-abas	2.37	80	ePn		Pn	08 35 22.3	-7.7
ISRV	Sarvestan	2.43	343	ePn		Sn	08 35 55.2	-5.3
ISRV				e			08 36 58.9	
comp=Z,4μm,0.4s								
NAZ	Nazwa, Dubai	2.58	142	P		Pn	08 35 33.1	0.0
NAZ	Nazwa, Dubai	2.58	142	P		Pn	08 35 33.1	0.0
NAZ	Nazwa, Dubai	2.58	142	ePn		Pn	08 35 35.7	+2.6
MSFE	Esma-Masafi	2.62	129	P		Pn	08 35 35.3	+1.7
MSFE	Esma-Masafi	2.62	129	ePn		Pb	08 35 37.7	-1.0
NIAN	Nian	2.64	78	ePn		Pn	08 35 33.9	0.0
ASUD	Al Ashush, Dub	2.73	152	P		Pn	08 35 33.8	-1.2
ASUD				S		Sg	08 36 21.0	+1.0
ASUD	Al Ashush, Dub	2.73	152	ePn		Pb	08 35 39.6	-0.8
ASUD				S		Sg	08 36 21.0	+1.0
IPAR	Pars	2.88	345	ePn		Pn	08 35 39.0	+1.6
IPAR				e			08 36 34.2	
comp=Z,3μm,0.4s								
IPAR	Pars	2.88	345	ePn		Pn	08 35 38.5	+1.1
AHBU	AHRAM	2.94	308	eSg		Sb	08 36 21.7	+2.1
HATD	Hatta, Dubai	2.98	138	P		Pn	08 35 39.7	+1.2
HATD	Hatta, Dubai	2.98	138	P		Pn	08 35 39.7	+1.2
HATD	Hatta, Dubai	2.98	138	ePn		Pn	08 35 41.9	+3.4
IKAZ	Kazeroun	3.28	327	ePn		Pg	08 35 53.9	-1.2
IKAZ				e			08 36 57.5	
comp=Z,4μm,0.4s								
IKAZ	Kazeroun	3.28	327	ePn		Pn	08 35 43.7	+0.8
ALNE	Al Ain	3.41	151	P		Pn	08 35 43.2	-1.2
ALNE	Al Ain	3.41	151	ePn		Pn	08 35 46.0	+1.6
KRBR	Kerman	3.84	40	ePn		Pn	08 35 48.4	-2.2
KHGB	Koh Gabri	4.00	34	ePn		Pn	08 35 55.2	+2.4
KHGB				e			08 37 12.0	
comp=Z,99nm,1.0s								
KHGB	Koh Gabri	4.00	34	ePn		Pn	08 35 53.9	+1.1
CHMN	Cheshme madani	4.24	48	ePn		Pn	08 35 58.8	+2.6
CHMN				e			08 37 44.3	
comp=Z,99nm,0.6s								
IMEH	Mehriz	4.37	8	ePn		Pn	08 35 59.5	+1.7
IMEH				e			08 36 55.4	
comp=Z,617nm,0.3s								
IRAM	Ramesheh	4.93	345	ePn		Pn	08 36 06.7	+1.3
IRAM				e			08 37 11.6	
comp=Z,389nm,0.2s								
IRAM	Ramesheh	4.93	345	ePn		Pn	08 36 06.8	+1.3
WSAR	Wadi Sarin	5.71	131	Pn		Pn	08 36 16.9	+0.8
comp=Z,0.4nm,0.3s,baz=310,slow=10,SNR=5.1								
WSAR				Sn		Sn	08 37 20.9	-0.3
comp=Z,1.6nm,0.3s,baz=166,slow=18,SNR=6.1								
NASN	Na^´in	5.81	351	ePn		Pn	08 36 16.1	-1.6
IZEF	Zefreh	5.99	347	ePn		Pn	08 36 20.1	+0.1
IZEF				e			08 36 25.1	
comp=Z,115nm,0.1s								
IZEF	Zefreh	5.99	347	ePn		Pn	08 36 20.3	+0.3
GEYT	Alibeck	11.41	17	LR		LR	08 42 50.5	
comp=Z,86nm,18.1s,baz=210,slow=41								
GNI	Garni	15.12	332	LR		LR	08 46 01.1	
comp=Z,5.9nm,21.4s,baz=147,slow=44								
KBZ	Khabaz	18.88	335	P		Pn	08 39 12.2	+0.2
comp=Z,0.1nm,0.3s,baz=163,slow=11,SNR=2.6								
KVAR	Kislovodsk Arr	19.15	335	P		Pn	08 39 17.0	+1.6
baz=105,slow=22,SNR=3.9								
BRTR	Keskin Array B	21.07	312	P		P	08 39 36.0	+0.6
comp=Z,0.9nm,0.8s,baz=133,slow=11,SNR=4.3								
AAK	Ala-Archa	22.86	42	LR		LR	08 49 13.2	
comp=Z,42nm,20.0s,baz=167,slow=37								
AKTO	Aktyubinsk	23.56	7	P		P	08 40 01.2	-0.2
comp=Z,0.7nm,0.3s,baz=212,slow=11,SNR=4.7								
AKTO				LR		LR	08 51 03.7	
comp=Z,40nm,21.3s,baz=172,slow=41								
IDI	Anoyia	26.09	295	P		P	08 40 24.6	-0.3
comp=Z,2.4nm,0.6s,baz=119,slow=10,SNR=4.1								
BVAR	Borovoye Array	28.70	21	LR		LR	08 53 57.6	
comp=Z,69nm,19.3s,baz=182,slow=40								
MKAR	Makanchi Array	29.79	41	LR		LR	08 54 47.8	
comp=Z,21nm,21.6s,baz=249,slow=40								
AKASG	Malin Array Be	30.19	328	P		P	08 41 00.8	-0.4
comp=Z,0.2nm,0.2s,baz=133,slow=7.9,SNR=3.5								
ZALV	Zalesovo Beam	35.19	32	P		P	08 41 45.5	+0.6
comp=Z,0.7nm,0.5s,baz=218,slow=9.0,SNR=3.9								
ZALV				LR		LR	08 59 00.4	
comp=Z,15nm,19.7s,baz=75,slow=41								
FINES	FINESS Array B	39.14	339	P		P	08 42 17.7	-0.6
comp=Z,0.6nm,0.7s,baz=146,slow=7.9,SNR=3.8								
TORD	Torodi Ar. Bea	50.62	265	P		P	08 43 49.1	-1.3
comp=Z,0.4nm,0.6s,baz=76,slow=7.8,SNR=3.7								
YKA	Yellowknife Ar	90.29	355	P		P	08 47 52.5	+1.0
comp=Z,0.1nm,0.6s,baz=359,slow=5.6,SNR=4.1								

KRSC 04 09:06:29.9±1.1, 56°.08N×163°.63E, h6km±12km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.47	287	eP		Pg	09 06 39.5	+0.5
KBTR				eS		Sg	09 06 45.8	+0.6
SMKR	Semkarok	1.31	294	eP		Pn	09 06 53.6	-1.2
SMKR				eS		Sg	09 07 10.9	-1.0
BDR	Baidarnaya	1.44	291	eP		Pn	09 06 56.2	-0.4
BDR				eS		Sb	09 07 15.4	-0.4
BKI	Bering	1.59	122	eP		Pb	09 06 59.6	0.0
BKI				eS		Sg	09 07 20.8	-0.1
ZLN	Zelenaya	1.59	269	eP		Pb	09 06 59.6	-0.1
ZLN				eS		Sg	09 07 21.0	+0.1
LGNR	Loginova	1.65	271	eP		Pb	09 07 00.4	-0.5
BZGR	Bezymyannyi-Gr	1.66	267	eP		Pb	09 07 00.9	0.0
KRSR	Krestovskiy	1.72	276	eP		Pn	09 07 00.8	+0.3
KRSR				eS		Sn	09 07 22.9	0.0
BZWR	Bezymyannyi-We	1.77	268	eP		Pb	09 07 02.2	-0.6
BZMR	Bezymyannaya	1.77	267	eP		Pb	09 07 02.7	-0.2
MKZ	Mys Kozlova	1.87	216	eP		Pn	09 07 02.6	+0.2
KPT	Kopyto	1.92	268	eP		Pb	09 07 04.6	-0.7
KMNR	Kamenistaya	1.94	262	eP		Pb	09 07 05.1	-0.6
TUMD	Tumrok D	2.03	246	eP		Pn	09 07 05.7	+1.0
TUMD				eS		Sn	09 07 31.5	+1.1
KZV	Kizimen	2.13	244	eP		Pn	09 07 07.3	+1.2
TUMR	Tumrok	2.13	250	eP		Pb	09 07 08.0	-0.9
GNL	Ganaly	4.06	236	eP		Pn	09 07 35.0	+2.3

IDC 04 09:13:32.3±4.9, 9°.83N×57°.02E, h0km, mb3.6/5, mb1 3.6/5, mb1mx3.3/67, mbtmp3.6/5, Error ellipse: s-maj=121.0km s-min=35.5km az=154.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
H08N2	Diego Garcia H	21.25	138	T		T	09 39 52.2	
baz=318								
H08N3	Diego Garcia H	21.26	139	T		T	09 39 53.0	
baz=318,slow=74								
H08N1	Diego Carcia H	21.27	138	T		T	09 39 53.9	
baz=318,slow=74								
BRTR	Keskin Array B	36.33	329	P		P	09 20 38.1	-0.1
0.3nm,0.5s,baz=129,slow=11,SNR=1.6								
MKAR	Makanchi Array	42.65	26	P		P	09 21 30.7	+0.1
0.8nm,0.7s,baz=214,slow=7.7,SNR=7.5								
KURBB	Kurchatov Arra	44.38	20	P		P	09 21 44.2	-0.2
0.2nm,0.4s,baz=210,slow=8.6,SNR=1.8								
ZALV	Zalesovo Beam	49.30	21	P		P	09 22 22.7	-0.3
0.9nm,0.3s,baz=207,slow=9.2,SNR=1.8								
TORD	Torodi Ar. Bea	54.23	279	P		P	09 23 00.4	-0.1
0.4nm,0.9s,baz=86,slow=7.5,SNR=2.3								

IDC 04 09:19:01.8±3.0, 53°.48N×87°.62E, h0km, mb1 2.6/2, mb1mx2.5/69, mbtmp2.6/2, ML2.4/2, Error ellipse: s-maj=27.1km s-min=15.6km az=59.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.73	287	i			09 30 40.0	
baz=108,slow=336,SNR=1.5								
ZALV	Zalesovo Beam	1.73	287	Pg		Pn	09 19 32.2	-1.0
1.1nm,0.3s,baz=101,slow=12,SNR=7.9								
ZALV				Lg		Lg	09 19 57.1	
2.0nm,0.3s,baz=103,slow=24,SNR=10								
KURBB	Kurchatov Arra	6.30	247	Pn		Pn	09 20 36.3	+0.4
0.0nm,0.3s,baz=62,slow=14,SNR=3.2								
KURBB				Lg		Lg	09 22 23.4	
0.0nm,0.3s,baz=60,slow=28,SNR=2.6								
MKAR	Makanchi Array	7.52	209	Pn		Pn	09 20 54.2	+1.5
0.1nm,0.3s,baz=28,slow=14,SNR=6.2								
MKAR				Lg		Lg	09 22 59.2	
0.0nm,0.3s,baz=27,slow=26,SNR=2.2								

*ISCJB **04** 09:20:23.3±1.1, 0°.4S±0°.2×91°.7E±0°.2, h10km, mb3.8/6, Error ellipse: s-maj=30.6km s-min=15.5km az=42.2*
*IDC **04** 09:20:24.0±1.4, 0°.37S×91°.80E, h0km, mb3.8/6, mb1 4.0/8, mb1mx3.6/71, mbtmp3.8/8, ML3.9/1, Error ellipse: s-maj=49.3km s-min=22.1km az=52.0*
ISC 04 09:20:25.4±1.3, 0°.3S±0°.2×91°.8E±0°.2, h10km, n9, σ0§85/9, mb3.9/6, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PALK	Pallekele	13.39	305	Pn		Pn	09 23 34.8	-0.8
0.6nm,0.3s,baz=116,slow=14,SNR=1.7								
PALK				Sn		Sn	09 25 52.4	-12
0.5nm,0.3s,baz=116,slow=5.6,SNR=1.3								
CMAR	Chiang Mai Arr	19.94	20	P		Pn	09 24 58.6	-0.7
baz=210,slow=10,SNR=6.3								
WRA	Warramunga Arr	45.98	118	P		P	09 28 49.1	-0.1
0.8nm,0.7s,baz=296,slow=8.6,SNR=7.4								
ASAR	Alice Springs	46.97	123	P		P	09 28 56.4	-0.6
0.2nm,0.8s,baz=297,slow=8.1,SNR=1.6								
MKAR	Makanchi Array	47.65	351	P		P	09 29 02.1	+0.2
1.0nm,0.6s,baz=161,slow=9.0,SNR=10								
SONM	Songino Array	49.62	13	P		P	09 29 17.8	+0.6
1.8nm,0.6s,baz=191,slow=9.8,SNR=8.0								
KURBB	Kurchatov Arra	52.00	349	P		P	09 29 34.4	-0.4
1.0nm,0.8s,baz=167,slow=6.8,SNR=4.0								
GERES	GERESS Array B	82.40	319	P		P	09 32 49.4	+1.4
0.6nm,0.3s,baz=119,slow=3.5,SNR=6.0								
TXAR	Lajitas Array	147.59	26	PKPbc		PKPbc	09 40 10.7	-0.3
0.7nm,0.5s,baz=66,slow=0.5,SNR=17								

GUC 04 09:29:02.1±0.5, 24°.00S×67°.48W, h246km±12km, ML3.7, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PB15	IPOC Station P	1.99	293	eP		Pn	09 29 46.3	+1.9
PB15				eS		S	09 30 19.5	+1.9
PB06	IPOC Station P	2.31	303	eP		Pn	09 29 49.2	+1.7
PB06				eS		S	09 30 25.2	+2.1
PB06				IAML			09 30 27.6	
comp=E,124nm,0.4s								
PB09	IPOC Station P	2.73	323	eP		Pn	09 29 53.8	+2.0
PB09				eS		S	09 30 33.0	+2.2
PB09				IAML			09 30 34.9	
comp=E,45nm,0.3s								
PB14	IPOC Station P	2.74	256	eP		Pn	09 29 54.0	+2.2
PB14				eS		S	09 30 33.7	+2.6
PB14				IAML			09 30 40.4	
comp=E,92nm,0.2s								
PB10	IPOC Station P	2.86	279	eP		Pn	09 29 55.2	+2.4
PB10				eS		S	09 30 37.5	+4.6
PB10				IAML			09 30 41.2	
comp=E,76nm,0.3s								
PB04	IPOC Station P	2.96	304	eP		Pn	09 29 56.8	+2.6
PB04				eS		S	09 30 37.7	+2.5
PB04				IAML			09 30 40.1	
comp=N,94nm,0.4s								
PB07	IPOC Station P	3.17	315	eP		Pn	09 29 58.2	+1.7
PB07				eS		S	09 30 40.8	+1.4
PB02	IPOC Station P	3.48	320	eP		Pn	09 30 01.7	+1.8
PB02				eS		S	09 30 45.8	+0.3
PB02				IAML			09 30 51.7	
comp=E,96nm,0.3s								

*NIED **04** 09:34:00.35°.80N×140°.90E, h59km, Mw3.5 Best double couple: $M_0$1.71000×10^14 NP1:$\phi_0$131.00000°, δ68.00000°, λ179.00000°. NP2:$\phi_0$221.00000°, δ90.00000°, λ22.00000°.*
JMA 04 09:34:39.4±0.1, 35°.78N×140°.90E, h12km±1km, M3.7, 2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.08	204	‖P		Pg	09 34 42.0	0.0
CHOJ				S		Sg	09 34 43.8	-0.2
JCN	Nagara	0.67	238	P		Pb	09 34 53.4	+0.3
JYT	Yasato	0.73	308	P		Pg	09 34 53.2	-0.3
JYT				S		Sg	09 35 03.0	0.0
JHO	Hitachi	0.87	342	‖P		Pg	09 34 55.5	-0.7
JHO				S		Sg	09 35 07.2	-0.4
BSO3	Boso 3	1.03	198	P		Pb	09 34 58.8	-0.1
BSO1	Boso 1	1.13	177	P		Pb	09 34 59.1	-1.4
MAT	Matsushiro	2.31	290	P		Pn	09 35 17.3	0.0
MAT				S		Sn	09 35 46.6	+1.0

*KRSC **04** 10:08:56.7±1.5, 53°.92N×168°.55E, h16km±27km, ML4.3*
*IDC **04** 10:08:56.4±0.9, 54°.53N×168°.69E, h0km, mb3.8/14, mb1 4.0/15, mb1mx3.7/87, mbtmp3.8/15, ML3.6/1, MS2.9/3, Ms1 2.9/3, ms1mx2.4/71, Error ellipse: s-maj=26.6km s-min=13.9km az=174.0*
*ISCJB **04** 10:08:57.0±0.5, 54°.01N±0°.05×168°.87E±0°.05, h25km, mb3.8/15, MS3.1/2, Error ellipse: s-maj=7.7km s-min=4.4km az=11.1*
*MOS **04** 10:08:59.5±0.7, 54°.03N×168°.77E, h17km, mb4.1/8, Error ellipse: s-maj=12.1km s-min=6.5km az=26.3*
ISC 04 10:08:58.5±0.7, 54°.04N±0°.07×168°.88E±0°.06, h25km, n83, σ1§68/100, mb3.9/15, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BKI	Bering	2.06	306	eP		Pn	10 09 29.2	-2.2
BKI				eS		Sn	10 09 54.4	-1.8
BKI	Bering	2.06	306	PN		Pn	10 09 29.2	-2.2
BKI				S		Sn	10 09 54.4	-1.8
SMKR	Semkarok	4.94	304	eP		Pn	10 10 12.7	+1.5
SMKR				eS		Sn	10 11 09.5	+2.0
SMKR	Semkarok	4.94	304	PN		Pn	10 10 12.7	+1.5
SMKR				S		Sn	10 11 09.5	+2.0
ZLN	Zelenaya	5.05	296	eP		Pn	10 10 14.7	+2.0
ZLN				eS		Sn	10 11 11.7	+1.4
ZLN	Zelenaya	5.05	296	PN		Pn	10 10 14.7	+2.0
ZLN				S		Sn	10 11 11.7	+1.4
BDR	Baidarnaya	5.07

SRKR	Sorokina	5.12 304	eP	Pn	10 10 15.2	+1.6
SRKR	Sorokina	5.12 304	PN	Pn	10 10 15.2	+1.6
LGNR	Loginova	5.14 297	eP	Pn	10 10 16.0	+2.0
LGNR			eS	Sn	10 11 15.0	+2.4
LGNR	Loginova	5.14 297	PN	Pn	10 10 16.0	+2.0
LGNR			S	Sn	10 11 15.0	+2.4
BZWR	Bezymyannyi-We	5.20 295	eP	Pn	10 10 16.4	+1.6
BZWR	Bezymyannyi-We	5.20 295	PN	Pn	10 10 16.4	+1.6
TUMR	Tumrok	5.22 287	eP	Pn	10 10 16.6	+1.5
TUMR	Tumrok	5.22 287	PN	Pn	10 10 16.6	+1.5
KRSR	Krestovskiy	5.25 298	eP	Pn	10 10 18.1	+2.7
KRSR			eS	Sn	10 11 17.4	+2.3
KRSR	Krestovskiy	5.25 298	PN	Pn	10 10 18.1	+2.7
KRSR			S	Sn	10 11 17.4	+2.3
KMNR	Kamenistaya	5.28 293	eP	Pn	10 10 16.9	+1.1
KMNR	Kamenistaya	5.28 293	PN	Pn	10 10 16.9	+1.1
KPT	Kopyto	5.35 295	eP	Pn	10 10 18.9	+2.2
KPT			eS	Sn	10 11 19.7	+2.2
KPT	Kopyto	5.35 295	PN	Pn	10 10 18.9	+2.2
KPT			S	Sn	10 11 19.7	+2.2
SPN	Mys Shipunski	5.36 263	eP	Pn	10 10 17.0	+0.1
SPN			eS	Sn	10 11 16.9	-0.9
SPN	Mys Shipunski	5.36 263	PN	Pn	10 10 17.0	+0.1
SPN			S	Sn	10 11 16.9	-0.9
KII	Karymskiy	5.56 274	eP	Pn	10 10 20.0	+0.4
KII			eS	Sn	10 11 21.9	-0.8
KII	Karymskiy	5.56 274	PN	Pn	10 10 20.0	+0.4
KII			S	Sn	10 11 21.9	-0.8
NLC	Nalytchevo	5.75 265	eP	Pn	10 10 22.8	+0.7
NLC	Nalytchevo	5.75 265	PN	Pn	10 10 22.8	+0.7
SDLR	Sedlovina	6.00 267	eP	Pn	10 10 26.4	+0.8
SDLR	Sedlovina	6.00 267	PN	Pn	10 10 26.4	+0.8
UGLR	Uglovaya	6.04 266	eP	Pn	10 10 27.4	+1.1
UGLR	Uglovaya	6.04 266	PN	Pn	10 10 27.4	+1.1
KRER	Koryakskii	6.07 267	eP	Pn	10 10 28.1	+1.4
KRER	Koryakskii	6.07 267	PN	Pn	10 10 28.1	+1.4
AVH	Avacha	6.08 267	eP	Pn	10 10 28.2	+1.4
AVH	Avacha	6.08 267	PN	Pn	10 10 28.2	+1.4
KRX	Arik	6.12 268	eP	Pn	10 10 28.3	+0.9
KRX	Arik	6.12 268	PN	Pn	10 10 28.3	+0.9
ESO	Esso	6.16 292	eP	Pn	10 10 28.9	+1.1
ESO	Esso	6.16 292	PN	Pn	10 10 28.9	+1.1
PET	Petropavlovsk	6.18 265	eP	Pn	10 10 29.6	+1.5
PET	Petropavlovsk	6.18 265	PN	Pn	10 10 29.6	+1.5
RUS	Russkaya	6.43 260	eP	Pn	10 10 32.4	+0.9
RUS	Russkaya	6.43 260	PN	Pn	10 10 32.4	+0.9
GNL	Ganaly	6.48 271	eP	Pn	10 10 34.0	+1.7
GNL	Ganaly	6.48 271	PN	Pn	10 10 34.0	+1.7
KRMR	Karymshinskiy	6.54 264	eP	Pn	10 10 34.5	+1.5
KRMR	Karymshinskiy	6.54 264	PN	Pn	10 10 34.5	+1.5
PETK	Petropavlovsk-	6.73 267	Pn	Pn	10 10 37.1	+1.5
	6.3nm,0.3s,baz=90,slow=19,SNR=108					
PETK			Sn	Sn	10 11 51.9	+0.5
	0.9nm,0.3s,baz=82,slow=15,SNR=2.3					
PETK			LR	LR	10 13 28.6	
	comp=Z,37nm,18.8s,baz=94,slow=41					
ASAK	Asacha	6.80 260	eP	Pn	10 10 38.3	+1.6
ASAK	Asacha	6.80 260	PN	Pn	10 10 38.3	+1.6
KDTR	Khodutka, Kamc	6.91 256	eP	Pn	10 10 38.8	+0.8
KDTR			eS	Sn	10 11 52.6	-3.1
ILAR	Eielson Array	24.39 46	P	P	10 14 12.6	-1.9
	0.6nm,0.7s,baz=254,slow=7.2,SNR=8.9					
TIXI	Tiksi	24.63 331	P	P	10 14 13.9	-2.5
	0.9nm,0.5s,baz=112,slow=11,SNR=7.2					
H11N2	WAKE ISLAND Hy 34.28 183	T	T		10 52 15.8	
	baz=2.0,slow=76,SNR=236					
H11N3	WAKE ISLAND Hy 34.29 183	T	T		10 52 16.8	
	baz=2.0,slow=76,SNR=232					
H11N1	WAKE ISLAND Hy 34.30 183	T	T		10 52 17.2	
	baz=2.0,slow=76,SNR=282					
H11S1	WAKE ISLAND Hy 35.50 184	T	T		10 53 48.7	
	baz=2.1,slow=76,SNR=83					
H11S3	WAKE ISLAND Hy 35.52 184	T	T		10 53 51.7	
	baz=2.1,slow=76,SNR=37					
H11S2	WAKE ISLAND Hy 35.52 184	T	T		10 53 48.6	
	baz=2.1,slow=76,SNR=102					
BBB	Bella Bella	36.76 66	LR	LR	10 28 25.1	
	comp=Z,36nm,19.5s,baz=243,slow=32					
NRIK	Noril'sk	38.14 325	LR	LR	10 32 08.7	
	comp=Z,22nm,18.0s,baz=119,slow=37					
SONM	Songino Array	38.71 287	P	P	10 16 18.9	-1.4
	1.2nm,0.6s,baz=67,slow=7.1,SNR=6.1					
YKA	Yellowknife Ar	38.82 46	P	P	10 16 20.5	-0.3
	0.3nm,0.6s,baz=296,slow=8.5,SNR=3.2					
NVAR	Mina Array Bea	50.45 77	P	P	10 17 56.3	+2.2
	0.3nm,0.8s,baz=286,slow=7.4,SNR=3.2					
KURK	Kurchatov	51.57 306	P	P	10 18 02.0	0.0
KURBB	Kurchatov Arra	51.67 306	P	P	10 18 02.0	-0.8
	0.8nm,0.2s,baz=58,slow=7.7,SNR=3.8					
MKAR	Makanchi Array	52.35 300	P	P	10 18 07.4	-0.6
	0.6nm,0.6s,baz=44,slow=7.6,SNR=5.7					
PDAR	Pinedale Array	52.40 67	P	P	10 18 10.4	+1.7
	0.3nm,0.5s,baz=308,slow=4.4,SNR=3.6					
BVAR	Borovoye Array	53.78 312	P	P	10 18 18.2	-0.2
	0.7nm,0.4s,baz=40,slow=5.7,SNR=4.5					
ARCES	ARCESS Array B	53.88 345	P	P	10 18 17.8	-1.1
	2.1nm,0.8s,baz=23,slow=12,SNR=2.1					
CMAR	Chiang Mai Arr	63.50 265	P	P	10 19 28.6	+2.0
	0.8nm,0.4s,baz=25,slow=6.4,SNR=3.3					
NOA	NORSAR Array B	63.90 348	P	P	10 19 26.1	-2.6
	1.2nm,0.7s,baz=16,slow=6.8,SNR=2.4					
TXAR	Lajitas Array	65.39 74	P	P	10 19 40.4	+1.5
	0.3nm,0.5s,baz=304,slow=4.9,SNR=10					
GNI	Garni	74.64 319	P	P	10 20 33.1	-2.5
	8.7nm,0.4s,baz=6.7,slow=17,SNR=3.4					
WRA	Warramunga Arr	79.44 213	P	P	10 21 05.5	+3.1
	1.3nm,0.9s,baz=26,slow=6.3,SNR=4.8					

*CSEM **04** 10:16:43.9, 38.°20N×26.°58W, h0km, ML2.9*
PDA 04 10:16:43.9±1.1, 38.°20N×26.°58W, h0km±4km, MD3.6, ML2.9, Error ellipse: s-maj=8.0km s-min=1.6km az=36.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADH	Angra Heroismo	0.68	312	eP	Pg	10 16 55.5	-1.5
ADH				eS	Sg	10 17 04.6	-1.2
ADH				A	A	10 17 07.3	
	527nm,0.3s						
ADH	Angra Heroismo	0.68	312	eP	Pg	10 16 55.5	-1.5
ADH				eS	Sg	10 17 04.6	-1.2
PSET	Sete Cidades	0.78	119	eP	Pg	10 16 57.1	-1.7
PSET				eS	Sg	10 17 07.5	-1.4
PSET				A	A	10 17 09.1	
	411nm,0.3s						
PSET	Sete Cidades	0.78	119	eP	Pg	10 16 57.1	-1.7
PSET				eS	Sg	10 17 07.5	-1.4
PDA	Ponta Delgada	0.86	122	eP	Pg	10 16 58.0	-2.3
PDA				eS	Sg	10 17 09.3	-2.2
PDA				A	A	10 17 11.2	
	136nm,0.1s						
PDA	Ponta Delgada	0.86	122	eP	Pg	10 16 58.0	-2.3
PDA				eS	Sg	10 17 09.3	-2.2
GRON	Grota Negra	0.94	117	eP	Pg	10 17 01.0	-0.8
GRON				eS	Sg	10 17 07.0	-7.0
GRON				A	A	10 17 09.8	
	68nm,0.2s						
CMLA	Cha da Macela	0.94	117	eP	Pg	10 16 59.4	-2.6
CMLA				eS	Sg	10 17 11.4	-2.9
CMLA				A	A	10 17 15.8	
	436nm,0.3s						
CMLA	Cha da Macela	0.94	117	eP	Pg	10 16 59.4	-2.6
CMLA				eS	Sg	10 17 11.4	-2.9
BART	Pico Bartolome	1.20	110	eP	Pg	10 17 02.9	-3.9
BART				eS	Sg	10 17 17.2	-5.1
BART				A	A	10 17 22.9	
	65nm,0.3s						
BART	Pico Bartolome	1.20	110	eP	Pg	10 17 02.9	-3.9
BART				eS	Sg	10 17 17.2	-5.1
PMAN	Manadas	1.26	290	eP	Pg	10 17 03.8	-4.2
PMAN				eS	Sg	10 17 18.7	-5.6
PMAN				A	A	10 17 20.6	
	42nm,0.3s						
PMAN	Manadas	1.26	290	eP	Pg	10 17 03.8	-4.2
PMAN				eS	Sg	10 17 18.7	-5.6
PGRA	Graciosa	1.37	307	eS	Sg	10 17 21.6	-6.4
PGRA				A	A	10 17 23.7	
	48nm,0.3s						
PGRA	Graciosa	1.37	307	eS	Sg	10 17 21.6	-6.4
ROSA	Rosais	1.40	292	eP	Pn	10 17 05.9	-4.8
ROSA				eS	Sg	10 17 22.0	-6.9
ROSA				A	A	10 17 23.6	
	39nm,0.3s						
ROSA	Rosais	1.40	292	eP	Pn	10 17 05.9	-4.8
ROSA				eS	Sg	10 17 22.0	-6.9
PICO	Pico	1.48	282	eP	Pn	10 17 07.3	-4.5
PICO				eS	Sg	10 17 24.3	-7.1
PICO				A	A	10 17 25.4	
	26nm,0.2s						
PICO	Pico	1.48	282	eP	Pn	10 17 07.3	-4.5
PICO				eS	Sg	10 17 24.3	-7.1
PSMA	Santa Maria	1.67	136	eP	Pn	10 17 09.7	-4.7
PSMA				eS	Sn	10 17 28.8	-7.6
PSMA				A	A	10 17 29.5	
	64nm,0.2s						
PSMN	Pico do Norte,	1.70	134	eP	Pn	10 17 10.2	-4.6
PSMN				eS	Sn	10 17 28.8	-8.4
PSMN				A	A	10 17 30.2	
	30nm,0.4s						
PSMN	Pico do Norte,	1.70	134	eP	Pn	10 17 10.2	-4.6
PSMN				eS	Sn	10 17 28.8	-8.4

*CSEM **04** 10:19:56.4, 38.°20N×26.°59W, h1km, ML3.1*
PDA 04 10:19:56.4±1.1, 38.°20N×26.°59W, h1km±4km, MD3.7, ML3.1, Error ellipse: s-maj=7.7km s-min=1.7km az=33.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADH	Angra Heroismo	0.68	312	eP	Pg	10 20 07.9	-1.6
ADH				eS	Sg	10 20 17.2	-1.2
ADH				A	A	10 20 19.6	
	1μm,0.3s						
ADH	Angra Heroismo	0.68	312	eP	Pg	10 20 07.9	-1.6
ADH				eS	Sg	10 20 17.2	-1.2
PSET	Sete Cidades	0.78	118	eP	Pg	10 20 09.5	-1.8
PSET				eS	Sg	10 20 20.1	-1.3
PSET				A	A	10 20 21.6	
	1μm,0.6s						
PSET				eT	T	10 20 47.7	
PSET	Sete Cidades	0.78	118	eP	Pg	10 20 09.5	-1.8
PSET				eS	Sg	10 20 20.1	-1.3
PDA	Ponta Delgada	0.86	121	eP	Pg	10 20 10.7	-2.1
PDA				A	A	10 20 23.5	
	410nm,0.2s						
PDA				eT	T	10 20 50.0	
PDA	Ponta Delgada	0.86	121	eP	Pg	10 20 10.7	-2.1
GRON	Grota Negra	0.94	117	eP	Pg	10 20 13.1	-1.2
GRON				eS	Sg	10 20 26.1	-0.4
GRON				A	A	10 20 29.2	
	108nm,0.2s						
CMLA	Cha da Macela	0.94	117	eP	Pg	10 20 12.2	-2.3
CMLA				eS	Sg	10 20 24.2	-2.5
CMLA				A	A	10 20 28.0	
	890nm,0.3s						
CMLA	Cha da Macela	0.94	117	eP	Pg	10 20 12.2	-2.3
CMLA				eS	Sg	10 20 24.2	-2.5
BART	Pico Bartolome	1.20	110	eP	Pg	10 20 15.2	-4.1
BART				eS	Sg	10 20 29.5	-5.3
BART				A	A	10 20 35.2	
	145nm,0.3s						
BART	Pico Bartolome	1.20	110	eP	Pg	10 20 15.2	-4.1
BART				eS	Sg	10 20 29.5	-5.3
PMAN	Manadas	1.26	291	eP	Pg	10 20 16.7	-3.8
PMAN				eS	Sg	10 20 31.0	-5.8
PMAN				A	A	10 20 32.9	
	72nm,0.1s						
PMAN	Manadas	1.26	291	eP	Pg	10 20 16.7	-3.8
PMAN				eS	Sg	10 20 31.0	-5.8
PGRA	Graciosa	1.37	308	eS	Sg	10 20 33.7	-6.8
PGRA				A	A	10 20 36.0	
	64nm,0.3s						
PGRA	Graciosa	1.37	308	eS	Sg	10 20 33.7	-6.8
ROSA	Rosais	1.40	292	eP	Pn	10 20 18.3	-4.8
ROSA				eS	Sg	10 20 34.4	-7.0
ROSA				A	A	10 20 35.8	
	88nm,0.1s						
ROSA	Rosais	1.40	292	eP	Pn	10 20 18.3	-4.8
ROSA				eS	Sg	10 20 34.4	-7.0
PICO	Pico	1.48	282	eP	Pn	10 20 19.6	-4.6
PICO				eS	Sg	10 20 36.7	-7.2
PICO				A	A	10 20 39.1	
	80nm,0.1s						
PICO	Pico	1.48	282	eP	Pn	10 20 19.6	-4.6
PICO				eS	Sg	10 20 36.7	-7.2
PCAN	Candelaria	1.52	281	eP	Pn	10 20 19.9	-4.8
PCAN				eS	Sb	10 20 37.3	-7.8
PCAN				A	A	10 20 37.6	
	56nm,0.2s						
PCAN	Candelaria	1.52	281	eP	Pn	10 20 19.9	-4.8
PCAN				eS	Sb	10 20 37.3	-7.8
PSMA	Santa Maria	1.67	136	eP	Pn	10 20 22.0	-4.8
PSMA				eS	Sn	10 20 41.1	-7.7
PSMA				A	A	10 20 41.9	
	104nm,0.1s						
PSMN	Pico do Norte,	1.70	134	eP	Pn	10 20 22.1	-5.1
PSMN				eS	Sn	10 20 41.3	-8.2
PSMN				A	A	10 20 44.1	
	52nm,0.2s						
PSMN				eT	T	10 21 56.9	
PSMN	Pico do Norte,	1.70	134	eP	Pn	10 20 22.1	-5.1
PSMN				eS	Sn	10 20 41.3	-8.2
CALA	Caldeira	1.71	284	eS	Sn	10 20 42.2	-7.7
CALA	Caldeira	1.71	284	eS	Sn	10 20 42.2	-7.7
PCED	Cedros	1.72	285	eS	Sn	10 20 42.3	-7.7
PCED				A	A	10 20 43.5	
	41nm,0.2s						
PCED	Cedros	1.72	285	eS	Sn	10 20 42.3	-7.7

MEX 04 10:41:40.7±0.6, 15.°71N×93.°55W, h99km±8km, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		0.32	92	eP	Pn	10 41 53.8	-1.4
PCIG				eS	Sn	10 42 04.4	-1.7
TGIG		1.14	21	i P	Pn	10 42 02.0	-0.6
TGIG				eS	Sn	10 42 16.8	-2.4
CCIG	Comitan	1.48	67	eP	Pn	10 42 05.7	-1.1
CCIG				eS	Sn	10 42 24.9	-1.7

IDC 04 10:46:14.8±1.5, 0.°19N×121.°62E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.2/58, mbtmp3.4/3, Error ellipse: s-maj=206.4km s-min=24.4km az=60.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.57	149	P	P	10 51 27.6	+0.3
	1.0nm,0.6s,baz=324,slow=11,SNR=9.4						
ASAR	Alice Springs	26.55	154	P	P	10 51 54.4	-0.3
	0.6nm,0.8s,baz=343,slow=14,SNR=8.9						
MKAR	Makanchi Array	57.73	329	P	P	10 56 07.5	-0.1
	0.2nm,0.5s,baz=142,slow=7.2,SNR=3.4						

NEIC 04 10:55:41.6±0.0, 18.°97N×155.°50W, h37km, ML3.5(HVO), After HVO., Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HPO	Honuapo	0.13	336	ePn	Pn	10 55 47.3	-6.3
KHU	Kahuku	0.30	338	ePn	Pn	10 55 49.6	-0.5
KHU				eSn	Sn	10 55 54.5	-3.0
HLP	Hilina Pali	0.37	29	ePn	Pn	10 55 49.6	-0.7
HLP				eSn	Sn	10 55 55.0	-2.2
AIN	Ainahou	0.40	5	ePn	Pn	10 55 50.2	-0.6
SDHHI	Sand Hill	0.46	25	ePn	Pn	10 55 50.3	-1.3
SDHHI				eSn	Sn	10 55 55.6	-3.2
RIM	Rim	0.47	27	ePn	Pn	10 55 50.5	-1.4
WRMHI	West Rim	0.47	23	ePn	Pn	10 55 50.5	-1.4
WRMHI				eSn	Sn	10 55 57.1	-2.1
KKO	Keanakako'i	0.48	27	ePn	Pn	10 55 50.6	-1.4
PUH	Pauahi	0.48	34	ePn	Pn	10 55 50.5	-1.5
PUH				eSn	Sn	10 55 56.0	-3.4
NPH	North Pit	0.48	25	ePn	Pn	10 55 50.5	-1.6
NPH				eSn	Sn	10 55 56.5	-3.0
OBL	Observatory Le	0.49	24	ePn	Pn	10 55 50.7	-1.5
OBL				eSn	Sn	10 55 56.8	-2.8
UWE	Uwekahuna	0.49	23	ePn	Pn	10 55 50.6	-1.5
UWE				eSn	Sn	10 55 56.7	-2.9
BYL	Byron's Ledge	0.49	27	ePn	Pn	10 55 50.5	-1.8
UWB	Uwekahuna B	0.50	25	ePn	Pn	10 55 50.7	-1.6
HATHI	Halema'uma'u T	0.50	26	ePn	Pn	10 55 50.8	-1.6
SBLHI	Steaming Bluff	0.50	26	ePn	Pn	10 55 50.7	-1.7
SBLHI				eSn	Sn	10 55 57.1	-2.8
MWH	Moku'aweowe	0.52	350	ePn	Pn	10 55 51.4	-1.7
MLH	Mauna Loa	0.53	11	ePn	Pn	10 55 51.5	-1.5
STCH	Steam Cracks	0.54	40	ePn	Pn	10 55 51.2	-1.8
STCH				eSn	Sn	10 55 56.2	-4.7
NPOC	North of Pu'u	0.56	41	ePn	Pn	10 55 51.5	-1.8
NPOC				e		10 55 58.1	
NPOC				eSn	Sn	10 55 58.2	-3.0
MLOA	Mauna Loa Obse	0.57	353	ePn	Pn	10 55 51.8	-1.9
HMH	Humu'ula Sheep	0.63	1	ePn	Pn	10 55 53.0	-1.4
HMH				eSn	Sn	10 56 00.9	-2.4
HULD	Heiheiahulu Di	0.66	48	ePn	Pn	10 55 52.9	-1.8
HULD				eSn	Sn	10 55 57.5	-6.3
KHLU	Kahalu'u	0.72	329	ePn	Pn	10 55 53.6	-1.8
HUH	Hualalai	0.78	336	ePn	Pn	10 55 54.9	-1.4
POHA	Pohakuloa	0.78	358	ePn	Pn	10 55 54.5	-1.8
KKH	Kailua Kona	0.84	324	ePn	Pn	10 55 55.2	-1.7
MHA	Mahukona	1.27	343	ePn	Pn	10 56 00.9	-1.8
MHA				eSn	Sn	10 56 15.3	-3.3
HLK	Haleakala	1.91	338	ePn	Pn	10 56 09.3	-2.5
KHLH	Kahului Airpor	2.11	336	ePn	Pn	10 56 12.6	-1.7
KHLH				eSn	Sn	10 56 37.3	-2.0
HON	Honolulu	3.32	315	ePn	Pn	10 56 28.5	-2.5
HON				eSn	Sn	10 57 02.5	-6.7
KIP	Kipapa	3.40	316	ePn	Pn	10 56 29.3	-2.7
KIP				eSn	Sn	10 57 05.3	-5.8
OPA	Opana	3.59	319	ePn	Pn	10 56 31.7	-2.9
OPA				eSn	Sn	10 57 09.2	-6.6
KEKH	Kekaha	4.96	308	ePn	Pn	10 56 50.8	-2.8

*CNRM **04** 11:09:51.0, 36.°90N×12.°72W, h5km*
*SFS **04** 11:09:51.0, 37.°26N×12.°70W, h0km, ML4.4*
*MDD **04** 11:09:52.8±1.5, 37.°28N×12.°70W, h0km, mb4.4/16, Error ellipse: s-maj=13.8km s-min=10.8km az=49.0, PRXIMO*
*IGIL **04** 11:09:53.7, 37.°26N×12.°76W, h10km, ML2.6*
*INMG **04** 11:09:53.6±1.9, 37.°06N×13.°12W, h10km, ML2.8, Error ellipse: s-maj=6.4km s-min=4.4km az=128.0*
*LDG **04** 11:09:54.7±0.4, 37.°53N×12.°28W, h2km, Ml3.3/3, Error ellipse: s-maj=7.6km s-min=6.1km az=50.0*
*CSEM **04** 11:09:55.6±0.3, 37.°41N×12.°48W, h10km, ML3.6/13, Error ellipse: s-maj=5.9km s-min=4.5km az=50.0*
ISC 04 11:09:49.7±3.0, 37.°30N±0.°08×12.°8W±0.°1, h10km, n124, σ2s10/226, 2C-1D, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	3.21	92	ePn	Pn	11 10 40.9	+0.7
PFVI				eSn	Sn	11 11 17.1	-1.4
PFVI				A	A	11 11 21.5	
	12nm,0.3s						
PFVI	Vila Bisbo	3.21	92	⇑P	Pn	11 10 40.9	+0.7
	9.9nm,0.2s,SNR=18						
PFVI				S	Sn	11 11 16.6	-1.9
	13nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	3.21	92	P	Pn	11 10 40.9	+0.7
	9.9nm,0.2s,SNR=18						
PFVI				S	Sn	11 11 16.6	-1.9
	13nm,0.1s,SNR=7.9						
PFVI				eSn	Sn	11 11 17.1	-1.4
PMST	Lisbon--Monsan	3.23	63	ePn	Pn	11 10 42.3	+1.9
PMST				eSn	Sn	11 11 19.5	+0.6
PMST				A	A	11 11 22.1	
	34nm,0.2s						
PMST	Lisbon--Monsan	3.23	63	ePn	Pn	11 10 42.3	+1.9
PMST				eSn	Sn	11 11 19.5	+0.6
PMAFR	Mafra	3.26	58	ePn	Pn	11 10 42.9	+2.1
PMAFR				eSn	Sn	11 11 20.4	+0.7
PMAFR				A	A	11 11 25.8	
	38nm,0.6s						
PMAFR	Mafra	3.26	58	⇑P	Pn	11 10 42.9	+2.1
	21nm,0.2s,SNR=18						
PMAFR				S	Sn	11 11 20.3	+0.7
	29nm,0.2s,SNR=7.1						
PMAFR	Mafra	3.26	58	P	Pn	11 10 42.9	+2.1
	21nm,0.2s,SNR=18						
PMAFR				S	Sn	11 11 20.3	+0.7
	29nm,0.2s,SNR=7.1						
PTEO	Sao Teotonio	3.29	84	ePn	Pn	11 10 42.6	+1.4
PTEO				eSn	Sn	11 11 18.6	-1.8
PTEO				A	A	11 11 27.4	
	12nm,0.2s						
PTEO	Sao Teotonio	3.29	84	Pn	Pn	11 10 42.6	+1.4
PTEO				Sn	Sn	11 11 18.6	-1.8
	6.2nm,0.2s						
PTEO	Sao Teotonio	3.29	84	Pn	Pn	11 10 42.6	+1.4
PTEO				Sn	Sn	11 11 18.6	-1.8
	6.2nm,0.2s						
MORF	Marmelete	3.34	89	eP	Pn	11 10 43.2	+1.1
MORF				eS	Sn	11 11 19.6	-2.3
MORF				AML	AML	11 11 24.3	
	comp=E,16nm,0.4s						
MORF	Marmelete	3.34	89	ePn	Pn	11 10 43.2	+1.1
MORF				eSn	Sn	11 11 20.9	-0.9
MORF				A	A	11 11 28.5	
	comp=E,20nm,0.1s						
MORF	Marmelete	3.34	89	P	Pn	11 10 43.2	+1.1
MORF				Sn	Sn	11 11 20.9	-0.9
	comp=E,20nm,0.1s						
MORF	Marmelete	3.34	89	P	Pn	11 10 43.2	+1.1
MORF				Sn	Sn	11 11 20.9	-0.9
	comp=E,20nm,0.1s						
PNCL	Nicolau / Gran	3.52	75	ePn	Pn	11 10 45.6	+1.2
PNCL				eSn	Sn	11 11 25.1	-0.9
PNCL				A	A	11 11 32.1	
	comp=E,12nm,0.1s						
PNCL	Nicolau / Gran	3.52	75	ePn	Pn	11 10 45.6	+1.2
PNCL				eSn	Sn	11 11 25.1	-0.9
MESJ	Messejana	3.71	80	eP	Pn	11 10 48.6	+1.5
MESJ				eS	Sn	11 11 29.1	-1.8
MESJ				AML	AML	11 11 31.4	
	comp=N,9.1nm,0.2s						
MESJ	Messejana	3.71	80	ePn	Pn	11 10 48.8	+1.7
MESJ				eSn	Sn	11 11 29.3	-1.6
MESJ				A	A	11 11 39.3	
	comp=N,8.1nm,0.2s						
MESJ	Messejana	3.71	80	P	Pn	11 10 48.6	+1.5
MESJ				S	Sn	11 11 29.1	-1.8
	comp=N,9.1nm,0.2s						
MESJ	Messejana	3.71	80	P	Pn	11 10 48.6	+1.5
MESJ				eSn	Sn	11 11 29.3	-1.6
ALMR	Almeirim	3.84	60	eP	Pn	11 10 50.7	+1.9
ALMR				eS	Sn	11 11 32.3	-1.6
ALMR				AML	AML	11 11 37.1	
	comp=N,37nm,0.4s						
ALMR	Almeirim	3.84	60	ePn	Pn	11 10 51.5	+2

PBEJ	**Beja**	**4.01**	**78**	*e*Pn	**Pn**	**11 10 53.5**	**+2.3**
PBEJ				*e*Sn	**Sn**	**11 11 36.3**	**-2.0**
PBEJ				A	A	11 11 42.1	
	comp=N,27nm,0.3s						
PBEJ	**Beja**	**4.01**	**78**	Pn	**Pn**	**11 10 53.5**	**+2.3**
PBEJ				Sn	**Sn**	**11 11 36.3**	**-2.0**
	comp=N,13nm,0.3s						
PBEJ	**Beja**	**4.01**	**78**	Pn	**Pn**	**11 10 53.5**	**+2.3**
PBEJ				Sn	**Sn**	**11 11 36.3**	**-2.0**
	comp=N,13nm,0.3s						
PVAQ	**Vaqueiros**	**4.09**	**87**	*e*Pn	**Pn**	**11 10 53.9**	**+1.7**
PVAQ				*e*Sn	**Sn**	**11 11 38.7**	**-1.4**
PVAQ				A	A	11 11 44.1	
	comp=N,14nm,0.1s						
PVAQ	**Vaqueiros**	**4.09**	**87**	Pn	**Pn**	**11 10 53.9**	**+1.7**
PVAQ				Sn	**Sn**	**11 11 38.7**	**-1.4**
	comp=N,14nm,0.1s						
PVAQ	**Vaqueiros**	**4.09**	**87**	Pn	**Pn**	**11 10 53.9**	**+1.7**
PVAQ	**Vaqueiros**	**4.09**	**87**	P	**Pn**	**11 10 54.4**	**+2.2**
PVAQ				Sn	**Sn**	**11 11 38.7**	**-1.4**
	comp=N,14nm,0.1s						
PVAQ				S	**Sn**	**11 11 40.8**	**+0.7**
PTOM	**Tomar**	**4.18**	**55**	*e*Pn	**Pn**	**11 10 56.6**	**+3.1**
PTOM				*e*Sn	**Sn**	**11 11 42.7**	**+0.4**
PTOM				A	A	11 11 49.4	
	comp=N,23nm,0.4s						
PTOM	**Tomar**	**4.18**	**55**	Pn	**Pn**	**11 10 56.6**	**+3.1**
PTOM				Sn	**Sn**	**11 11 42.7**	**+0.4**
	comp=N,12nm,0.4s						
PTOM	**Tomar**	**4.18**	**55**	Pn	**Pn**	**11 10 56.6**	**+3.1**
PTOM				Sn	**Sn**	**11 11 42.7**	**+0.4**
	comp=N,12nm,0.4s						
EGRO	**El Granado**	**4.27**	**85**	P	**Pn**	**11 10 56.4**	**+1.6**
	comp=N,15nm,0.3s,SNR=31						
EGRO				S	**Sn**	**11 11 43.0**	**-1.7**
	comp=N,11nm,0.2s,SNR=61						
EGRO	**El Granado**	**4.27**	**85**	P	**Pn**	**11 10 56.4**	**+1.6**
	comp=N,15nm,0.3s,SNR=31						
EGRO				S	**Sn**	**11 11 43.0**	**-1.7**
	comp=N,11nm,0.2s,SNR=61						
PCAS	**Casmilo, Conde**	**4.37**	**50**	*e*Pn	**Pn**	**11 10 58.8**	**+2.7**
PCAS				*e*Sn	**Sn**	**11 11 46.8**	**-0.3**
PCAS				A	A	11 11 52.4	
	comp=N,8.2nm,0.7s						
PCAS	**Casmilo, Conde**	**4.37**	**50**	*e*Pn	**Pn**	**11 10 58.8**	**+2.7**
PCAS				*e*Sn	**Sn**	**11 11 46.8**	**-0.3**
PESTR	**Estremoz**	**4.43**	**68**	*e*Pn	**Pn**	**11 10 59.0**	**+2.0**
PESTR				*e*Sn	**Sn**	**11 11 47.4**	**-1.2**
PESTR				A	A	11 11 53.2	
	comp=N,8.6nm,0.6s						
PESTR	**Estremoz**	**4.43**	**68**	*e*Pn	**Pn**	**11 10 59.0**	**+2.0**
PESTR				*e*Sn	**Sn**	**11 11 47.4**	**-1.2**
PBAR	**Barrancos**	**4.68**	**77**	*e*Pn	**Pn**	**11 11 02.4**	**+2.0**
PBAR				*e*Sn	**Sn**	**11 11 53.6**	**-1.2**
PBAR				A	A	11 12 01.4	
	comp=N,12nm,0.2s						
PBAR	**Barrancos**	**4.68**	**77**	Pn	**Pn**	**11 11 02.4**	**+2.0**
PBAR				Sn	**Sn**	**11 11 53.6**	**-1.2**
	comp=N,12nm,0.2s						
PBAR	**Barrancos**	**4.68**	**77**	Pn	**Pn**	**11 11 02.4**	**+2.0**
PBAR				Sn	**Sn**	**11 11 53.6**	**-1.2**
	comp=N,12nm,0.2s						
PMRV	**Marv??o**	**4.78**	**62**	*e*Pn	**Pn**	**11 11 03.9**	**+2.1**
PMRV				*e*Sn	**Sn**	**11 11 56.1**	**-1.2**
PMRV				A	A	11 12 00.8	
	comp=N,11nm,0.2s						
PMRV	**Marv??o**	**4.78**	**62**	Pn	**Pn**	**11 11 03.9**	**+2.1**
PMRV				Sn	**Sn**	**11 11 56.1**	**-1.2**
	comp=N,11nm,0.2s						
PMRV	**Marv??o**	**4.78**	**62**	Pn	**Pn**	**11 11 03.9**	**+2.1**
PMRV				Sn	**Sn**	**11 11 56.1**	**-1.2**
	comp=N,11nm,0.2s						
EBAD	**Badajoz**	**4.83**	**71**	P	**Pn**	**11 11 03.8**	**+1.4**
	comp=N,6.2nm,0.1s,SNR=18						
EBAD				S	**Sn**	**11 11 56.2**	**-2.1**
	comp=N,18nm,0.2s						
EBAD	**Badajoz**	**4.83**	**71**	P	**Pn**	**11 11 03.8**	**+1.4**
	comp=N,6.2nm,0.1s,SNR=18						
EBAD				S	**Sn**	**11 11 56.2**	**-2.1**
	comp=N,18nm,0.2s						
PCBR	**Castelo Branco**	**4.91**	**57**	*e*Pn	**Pn**	**11 11 06.1**	**+2.6**
PCBR				*e*Sn	**Sn**	**11 12 00.0**	**-0.4**
PCBR				A	A	11 12 06.1	
	comp=N,3.7nm,0.1s						
PCBR	**Castelo Branco**	**4.91**	**57**	Pn	**Pn**	**11 11 06.1**	**+2.6**
PCBR				Sn	**Sn**	**11 12 00.0**	**-0.4**
	comp=N,1.9nm,0.1s						
PCBR	**Castelo Branco**	**4.91**	**57**	Pn	**Pn**	**11 11 06.1**	**+2.6**
PCBR				Sn	**Sn**	**11 12 00.0**	**-0.4**
	comp=N,1.9nm,0.1s						
EMIN	**Mina Concepcio**	**4.93**	**83**	||P	**Pn**	**11 11 05.3**	**+1.5**
	comp=N,5.1nm,0.2s,SNR=18						
EMIN				S	**Sn**	**11 11 57.0**	**-3.8**
	comp=N,5.1nm,0.2s,SNR=6.9						
EMIN	**Mina Concepcio**	**4.93**	**83**	P	**Pn**	**11 11 05.3**	**+1.5**
	comp=N,5.1nm,0.2s,SNR=18						
EMIN				S	**Sn**	**11 11 57.0**	**-3.8**
	comp=N,5.1nm,0.2s,SNR=6.9						
PMPS	**Porto Santo**	**5.11**	**215**	*e*Sn	Sn	11 11 48.4	-17
PMPS	**Porto Santo**	**5.11**	**215**	*e*Sn	Sn	11 11 48.4	-17
PVIS	**Viseu**	**5.15**	**47**	*e*Pn	**Pn**	**11 11 09.5**	**+2.7**
PVIS				*e*Sn	**Sn**	**11 12 05.2**	**-1.1**
PVIS				A	A	11 12 09.5	
	comp=N,8.8nm,0.1s						
PVIS	**Viseu**	**5.15**	**47**	Pn	**Pn**	**11 11 09.5**	**+2.7**
PVIS				Sn	**Sn**	**11 12 05.2**	**-1.1**
	comp=N,4.4nm,0.1s						
PVIS	**Viseu**	**5.15**	**47**	Pn	**Pn**	**11 11 09.5**	**+2.7**
PVIS				Sn	**Sn**	**11 12 05.2**	**-1.1**
	comp=N,4.4nm,0.1s						
MTE	**Manteigas**	**5.17**	**52**	*e*Pn	**Pn**	**11 11 09.6**	**+2.5**
MTE				*e*Sn	**Sn**	**11 12 06.8**	**0.0**
MTE				A	A	11 12 15.1	
	comp=N,12nm,0.4s						
MTE	**Manteigas**	**5.17**	**52**	Pn	**Pn**	**11 11 09.6**	**+2.5**
MTE				Sn	**Sn**	**11 12 06.8**	**0.0**
	comp=N,5.8nm,0.4s						
MTE	**Manteigas**	**5.17**	**52**	Pn	**Pn**	**11 11 09.6**	**+2.5**
MTE				Sn	**Sn**	**11 12 06.8**	**0.0**
	comp=N,5.8nm,0.4s						
POLO	**Lamas de Olo**	**5.64**	**42**	*e*Pn	**Pn**	**11 11 15.8**	**+2.1**
POLO				*e*Sn	**Sn**	**11 12 16.6**	**-2.0**
POLO				A	A	11 12 25.2	
	comp=N,1.2nm,0.2s						
POLO	**Lamas de Olo**	**5.64**	**42**	*e*Pn	**Pn**	**11 11 15.8**	**+2.1**
POLO				*e*Sn	**Sn**	**11 12 16.6**	**-2.0**
PCAB	**Cabril**	**5.77**	**39**	*e*Pn	**Pn**	**11 11 17.9**	**+2.6**
PCAB				*e*Sn	**Sn**	**11 12 20.9**	**-0.7**
PCAB				A	A	11 12 23.8	
	comp=N,3.7nm,0.2s						
PCAB	**Cabril**	**5.77**	**39**	Pn	**Pn**	**11 11 17.9**	**+2.6**
PCAB				Sn	**Sn**	**11 12 20.9**	**-0.7**
	comp=N,1.9nm,0.2s						
PCAB	**Cabril**	**5.77**	**39**	Pn	**Pn**	**11 11 17.9**	**+2.6**
PCAB				Sn	**Sn**	**11 12 20.9**	**-0.7**
	comp=N,1.9nm,0.2s						
PGAV	**Gavieira, Arco**	**5.84**	**36**	*e*Pn	**Pn**	**11 11 18.3**	**+1.8**
PGAV				*e*Sn	**Sn**	**11 12 21.2**	**-2.4**
PGAV				A	A	11 12 25.3	
	comp=N,4.2nm,0.2s						
PGAV	**Gavieira, Arco**	**5.84**	**36**	*e*Pn	**Pn**	**11 11 18.3**	**+1.8**
PGAV				*e*Sn	**Sn**	**11 12 21.2**	**-2.4**
ELOB	**Lobios**	**5.87**	**38**	P	**Pn**	**11 11 19.0**	**+2.2**
	comp=N,1.6nm,0.2s,SNR=6.2						
ELOB				S	**Sn**	**11 12 21.8**	**-2.4**
	comp=N,1.9nm,0.1s,SNR=5.1						
ELOB	**Lobios**	**5.87**	**38**	P	**Pn**	**11 11 19.0**	**+2.2**
	comp=N,1.6nm,0.2s,SNR=6.2						
ELOB				S	**Sn**	**11 12 21.8**	**-2.4**
	comp=N,1.9nm,0.1s,SNR=5.1						
MVO	**Moncorvo**	**5.94**	**48**	*e*Pn	**Pn**	**11 11 19.9**	**+2.2**
MVO				*e*Sn	**Sn**	**11 12 23.5**	**-2.3**
MVO				A	A	11 12 24.1	
	comp=N,6.1nm,0.5s						
MVO	**Moncorvo**	**5.94**	**48**	P	**Pn**	**11 11 19.9**	**+2.2**
	comp=N,5.2nm,0.2s,SNR=8.0						
MVO				S	**Sn**	**11 12 23.0**	**-2.8**
	comp=N,1.9nm,0.1s,SNR=5.7						
MVO	**Moncorvo**	**5.94**	**48**	P	**Pn**	**11 11 19.9**	**+2.2**
	comp=N,5.2nm,0.2s,SNR=8.0						
MVO				S	**Sn**	**11 12 23.0**	**-2.8**
	comp=N,1.9nm,0.1s,SNR=5.7						
MVO				*e*Sn	Sn	11 12 23.5	-2.3
ECAB	**El Cabril**	**5.94**	**80**	P	**Pn**	**11 11 19.0**	**+1.3**
	comp=N,6.3nm,0.3s,SNR=19						
ECAB				S	**Sn**	**11 12 23.1**	**-2.7**
	comp=N,6.2nm,0.3s						
ECAB	**El Cabril**	**5.94**	**80**	P	**Pn**	**11 11 19.0**	**+1.3**
	comp=N,6.3nm,0.3s,SNR=19						
ECAB				S	**Sn**	**11 12 23.1**	**-2.7**
	comp=N,6.2nm,0.3s						
EPLA	**Plasencia**	**5.97**	**60**	P	**Pn**	**11 11 19.6**	**+1.5**
	comp=N,5.0nm,0.2s,SNR=18						
EPLA				S	**Sn**	**11 12 25.4**	**-1.1**
	comp=N,2.4nm,0.1s						
EPLA	**Plasencia**	**5.97**	**60**	P	**Pn**	**11 11 19.6**	**+1.5**
	comp=N,5.0nm,0.2s,SNR=18						
EPLA				S	**Sn**	**11 12 25.4**	**-1.1**
	comp=N,2.4nm,0.1s						
HORN	**Hornachuelos**	**6.05**	**83**	P	**Pn**	**11 11 21.2**	**+2.0**
HORN				S	**Sn**	**11 12 28.9**	**+0.4**
EMAZ	**Mazaricos**	**6.37**	**26**	P	**Pn**	**11 11 25.2**	**+1.6**
	comp=N,1.2nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**11 12 30.8**	**-5.6**
	comp=N,5.5nm,0.3s,SNR=7.9						
EMAZ	**Mazaricos**	**6.37**	**26**	P	**Pn**	**11 11 25.2**	**+1.6**
	comp=N,1.2nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**11 12 30.8**	**-5.6**
	comp=N,5.5nm,0.3s,SNR=7.9						
PBRG	**Braganca**	**6.51**	**44**	*e*Pn	**Pn**	**11 11 27.9**	**+2.3**
PBRG	**Braganca**	**6.51**	**44**	Pn	**Pn**	**11 11 27.9**	**+2.3**
PBRG	**Braganca**	**6.51**	**44**	Pn	**Pn**	**11 11 27.9**	**+2.3**
EAGO	**Agolada(Pontev**	**6.59**	**32**	P	**Pn**	**11 11 28.0**	**+1.3**
	comp=N,1.2nm,0.1s,SNR=7.9						
EAGO				S	**Sn**	**11 12 37.0**	**-4.9**
	comp=N,4.0nm,0.1s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.59**	**32**	P	**Pn**	**11 11 28.0**	**+1.3**
	comp=N,1.2nm,0.1s,SNR=7.9						
EAGO				S	**Sn**	**11 12 37.0**	**-4.9**
	comp=N,4.0nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**6.61**	**80**	P	**Pn**	**11 11 28.9**	**+2.0**
	comp=N,3.4nm,0.1s,SNR=15						
EADA				S	**Sn**	**11 12 38.3**	**-4.0**
	comp=N,3.2nm,0.2s						
EADA	**Adamuz**	**6.61**	**80**	P	**Pn**	**11 11 28.9**	**+2.0**
	comp=N,3.4nm,0.1s,SNR=15						
EADA				S	**Sn**	**11 12 38.3**	**-4.0**
	comp=N,3.2nm,0.2s						
ECAL	**Calabor**	**6.61**	**44**	P	**Pn**	**11 11 29.5**	**+2.5**
	comp=N,2.9nm,0.2s,SNR=7.8						
ECAL				S	**Sn**	**11 12 40.4**	**-2.0**
	comp=N,0.4nm,0.0s,SNR=4.7						
ECAL	**Calabor**	**6.61**	**44**	P	**Pn**	**11 11 29.5**	**+2.5**
	comp=N,2.9nm,0.2s,SNR=7.8						
ECAL				S	**Sn**	**11 12 40.4**	**-2.0**
	comp=N,0.4nm,0.0s,SNR=4.7						
PAB	**San Pablo**	**7.04**	**69**	P	**Pn**	**11 11 34.1**	**+1.3**
	comp=N,3.6nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**11 12 50.7**	**-2.2**
	comp=N,1.4nm,0.3s,SNR=7.9						
PAB	**San Pablo**	**7.04**	**69**	P	**Pn**	**11 11 34.1**	**+1.3**
	comp=N,3.6nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**11 12 50.7**	**-2.2**
	comp=N,1.4nm,0.3s,SNR=7.9						
ESDC	**Sonseca Array**	**7.36**	**68**	P	**Pn**	**11 11 38.5**	**+1.3**
	comp=N,3.5nm,0.3s,baz=253,slow=13,SNR=20						
ESDC				S	**Sn**	**11 12 58.2**	**-2.6**
	comp=N,0.3nm,0.1s,baz=259,slow=23,SNR=3.8						
ESDC	**Sonseca Array**	**7.36**	**68**	P	**Pn**	**11 11 38.5**	**+1.3**
	comp=N,3.5nm,0.3s,baz=253,slow=13,SNR=20						
ESDC				S	**Sn**	**11 12 58.2**	**-2.6**
	comp=N,0.3nm,0.1s,slow=23,SNR=3.8						
EPON	**Pontenova**	**7.42**	**34**	P	**Pn**	**11 11 40.4**	**+2.3**
	comp=N,1.0nm,0.1s,SNR=7.9						
EPON				S	**Sn**	**11 12 59.2**	**-3.1**
	comp=N,1.1nm,0.3s,SNR=7.9						
EPON	**Pontenova**	**7.42**	**34**	P	**Pn**	**11 11 40.4**	**+2.3**
	comp=N,1.0nm,0.1s,SNR=7.9						
EPON				S	**Sn**	**11 12 59.2**	**-3.1**
	comp=N,1.1nm,0.3s,SNR=7.9						
GUD	**Guadarrama**	**7.55**	**61**	P	**Pn**	**11 11 41.6**	**+1.7**
	comp=N,1.5nm,0.2s,SNR=7.9						
GUD				S	**Sn**	**11 13 02.0**	**-3.5**
	comp=N,0.8nm,0.2s,SNR=7.9						
GUD	**Guadarrama**	**7.55**	**61**	P	**Pn**	**11 11 41.6**	**+1.7**
	comp=N,1.5nm,0.2s,SNR=7.9						
GUD				S	**Sn**	**11 13 02.0**	**-3.5**
	comp=N,0.8nm,0.2s,SNR=7.9						
EQES	**Quesada**	**7.78**	**83**	P	**Pn**	**11 11 43.8**	**+0.8**
	comp=N,0.9nm,0.2s,SNR=7.9						
EQES				S	**Sn**	**11 13 08.4**	**-2.9**
	comp=N,1.0nm,0.3s,SNR=7.9						
EQES	**Quesada**	**7.78**	**83**	P	**Pn**	**11 11 43.8**	**+0.8**
	comp=N,0.9nm,0.2s,SNR=7.9						
EQES				S	**Sn**	**11 13 08.4**	**-2.9**
	comp=N,1.0nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**9.02**	**78**	P	**Pn**	**11 12 01.2**	**+1.1**
	comp=N,1.0nm,0.1s,SNR=6.7						
ETOB	**Tobarra**	**9.02**	**78**	P	**Pn**	**11 12 01.2**	**+1.1**
	comp=N,1.0nm,0.1s,SNR=6.7						
SJPF	**Ste Jean**	**10.61**	**53**	*e*P	**Pn**	**11 12 24.5**	**+2.8**
SJPF				*e*Sn	Sn	11 14 05.7	-15
	comp=N,1.0nm,0.3s						
SJPF	**Ste Jean**	**10.61**	**53**	P	**Pn**	**11 12 24.5**	**+2.8**
SJPF	**Ste Jean**	**10.61**	**53**	P	**Pn**	**11 12 24.5**	**+2.8**
ATE	**Arette**	**10.93**	**54**	P	**Pn**	**11 12 27.9**	**+1.7**
	comp=N,1.4nm,0.2s,SNR=4.0						
ATE	**Arette**	**10.93**	**54**	P	**Pn**	**11 12 27.9**	**+1.7**
	comp=N,1.4nm,0.2s,SNR=4.0						
ETSF	**Etsaut**	**10.94**	**55**	*e*Pn	**Pn**	**11 12 22.6**	**-3.7**
ETSF	**Etsaut**	**10.94**	**55**	*e*P	**Pn**	**11 12 29.2**	**+2.9**
ETSF				*e*Sn	Sn	11 14 12.7	-16
	comp=N,1.0nm,0.3s						
ETSF	**Etsaut**	**10.94**	**55**	*e*P	**Pn**	**11 12 29.2**	**+2.9**
EPF	**Esparros**	**11.59**	**56**	*e*P	**Pn**	**11 12 37.6**	**+2.4**
EPF				*e*Sn	Sn	11 14 29.1	-16
	comp=N,1.2nm,0.3s						
EPF	**Esparros**	**11.59**	**56**	P	**Pn**	**11 12 37.6**	**+2.4**
EPF	**Esparros**	**11.59**	**56**	P	**Pn**	**11 12 37.6**	**+2.4**
QUIF	**Quistinic**	**12.77**	**31**	*e*Pn	**Pn**	**11 12 54.0**	**+2.8**
QUIF	**Quistinic**	**12.77**	**31**	Pn	**Pn**	**11 12 54.0**	**+2.8**
QUIF	**Quistinic**	**12.77**	**31**	Pn	**Pn**	**11 12 54.0**	**+2.8**

GCMT ***04*** *11:18:13.4±0.1, 8.°04S×106.°35E, h65km, MW5.8/129, Moment Tensor Solution. s129,c271; s126,c346; Duration: 1s9 Moment tensor: Scale 10^{17}Nm; M_{rr}4.43±.06; $M_{\theta\theta}$-4.12±.05; $M_{\phi\phi}$-0.30±.06; $M_{r\theta}$4.11±.05; $M_{r\phi}$0.50±.04; $M_{\theta r}$-2.14±.05; Best double couple: $M_0$6.31500×10^{17} NP1:ϕ_s111.00000°, δ69.00000°, λ100.00000°. NP2:ϕ_s267.00000°, δ23.00000°, λ67.00000°. Principal axes: T 6.5650, Plg65.0000°, Azm37.0000°; N -0.4980, Plg9.0000°, Azm288.0000°; P -6.0650, Plg23.0000°, Azm194.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

MOS ***04*** *11:18:13.2±1.0, 7.°59S×106.°54E, h62km, mb6.2/90, MS5.0/50 Error ellipse: s-maj=7.0km s-min=4.6km az=109.6*

BJI ***04*** *11:18:13.4, 7.°70S×106.°40E, h67km, mb5.9/85, mB5.8/65, Ms5.3/93, Ms7 5.3/83*

NEIC ***04*** *11:18:13.4±0.1, 7.°69S×106.°37E, h50km, mb5.9/120, ME5.7, MS5.2/119, MW5.7, MW5.9, Error ellipse: s-maj=3.6km s-min=2.6km az=36.0, Moment Tensor Solution. s38 Moment tensor: Scale 10^{17}Nm; M_{rr}3.22; $M_{\theta\theta}$-3.19; $M_{\phi\phi}$-0.04; $M_{r\theta}$2.96; $M_{r\phi}$0.85; $M_{\theta r}$-1.54; Best double couple: $M_0$4.70000×10^{17} NP1:ϕ_s114.00000°, δ68.00000°, λ98.00000°. NP2:ϕ_s274.00000°, δ23.00000°, λ72.00000°. Principal axes: T 4.6600, Plg66.0000°, Azm37.0000°; N 0.0800, Plg7.0000°, Azm291.0000°; P -4.7400, Plg22.0000°, Azm198.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s295.00000°, δ15.00000°, λ90.00000°. NP2:ϕ_s115.00000°, δ75.00000°, λ90.00000°. Principal axes: T Plg60.0000°, Azm25.0000°; N Plg0.0000°, Azm0.0000°; P Plg30.0000°, Azm205.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Two people injured and minor damage at Jakarta. Felt [IV] at Bandung and Pangandaran; [III] at Jakarta; [II] at Bogor and Cisarua. Felt widely in western Java. Also felt on Christmas Island, Australia.

NEIC ***04*** *11:18:13.0±0.0, 8.°19S×106.°37E, h50km, Moment Tensor Solution. s52 Moment tensor: Scale 10^{17}Nm; M_{rr}3.78; $M_{\theta\theta}$-3.64; $M_{\phi\phi}$-0.14; $M_{r\theta}$6.03; $M_{r\phi}$0.15; $M_{\theta r}$-3.88; Best double couple: $M_0$8.10000×10^{17} NP1:ϕ_s118.00000°, δ77.00000°, λ100.00000°. NP2:ϕ_s258.00000°, δ16.00000°, λ51.00000°. Principal axes: T 8.4600, Plg56.0000°, Azm41.0000°; N -0.8500, Plg10.0000°, Azm296.0000°; P -7.6200, Plg31.0000°, Azm199.0000°;*

DJA ***04*** *11:18:14.9±0.2, 8.°S±2.°×10.°6E±.°, h70km±2km, M5.8/66, mb5.8/66, mB6.1/54, MLv6.3/11, Mw(mB)5.7/54, Mwp5.8/10*

IDC ***04*** *11:18:14.7±1.3, 7.°67S×106.°47E, h60km±11km, mb5.5/56, mb1 5.5/57, mb1mx5.4/62, mbtmp5.7/57, MS4.8/55, Ms1 4.8/55, ms1mx4.8/59, Error ellipse: s-maj=9.2km s-min=7.3km az=55.0*

ISCJB ***04*** *11:18:15.7±0.3, 7.°65S±0.°02×106.°46E±0.°02, h83km±2km, mb5.8/269, Error ellipse: s-maj=3.7km s-min=2.5km az=27.3*

ISC 04 11:18:15.7±0.3, 7.°64S±0.°03×106.°41E±0.°03, h75km±1km, h75km:pP-P, n2027, σ1962/2175, mb5.9/270, 112C-39D, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.65**	**13**	P	**Pn**	**11 18 31.7**	**+1.2**
DBJI	**Dramaga**	**1.14**	**18**	P	**Pn**	**11 18 38.9**	**+2.7**
CGJI	**Cibinong**	**1.25**	**325**	P	**Pn**	**11 18 38.5**	**+0.9**
CGJI				S	**Sn**	**11 18 56.9**	**+3.0**
CISI	**Cisompet, Garu**	**1.40**	**86**	P	**Pn**	**11 18 39.3**	**-0.3**
CISI	**Cisompet, Garu**	**1.40**	**86**	*e*Pn	**Pn**	**11 18 39.8**	**+0.2**
CISI				*e*Sn	**Sn**	**11 18 58.2**	**+0.6**
LEM	**Lembang**	**1.45**	**56**	P	**Pn**	**11 18 44.1**	**+3.8**
	26μm,0.3s,baz=221,slow=11,SNR=1015						
LEM				S	**Sn**	**11 19 05.7**	**+6.8**
	12μm,0.3s,baz=306,slow=23,SNR=13						
LEM				LR	LR	11 19 35.1	
	comp=Z,110μm,19.9s,baz=210,slow=57						
TNG	**Tangerang**	**1.48**	**9**	P	**Pn**	**11 18 43.9**	**+3.3**
TNG				P	**Pn**	**11 18 43.9**	**+3.3**
TNG				S	**Sn**	**11 19 06.1**	**+6.7**
TNG				S		11 19 06.5	
SBJI	**Serang**	**1.54**	**350**	P	**Pn**	**11 18 43.8**	**+2.4**
SBJI				S	**Sn**	**11 19 06.0**	**+5.3**
CMJI	**Cimerak**	**2.03**	**94**	P	**Pn**	**11 18 47.6**	**-0.3**
CMJI				S	**Sn**	**11 19 11.8**	**-0.6**
JCJI	**Jatiwangi**	**2.18**	**58**	P	**Pn**	**11 18 51.2**	**+1.3**
JCJI				S	**Sn**	**11 19 18.9**	**+3.0**
KPJI	**Karang Pucung**	**2.52**	**83**	P	**Pn**	**11 18 56.3**	**+1.8**
BLSI	**Bandar Lampung**	**2.54**	**333**	P	**Pn**	**11 18 56.3**	**+1.5**
KASI	**Kota Agung**	**2.83**	**318**	P	**Pn**	**11 18 59.4**	**+0.6**
KLI	**Kotabumi**	**3.16**	**331**	P	**Pn**	**11 19 05.1**	**+1.9**
KLI	**Kotabumi**	**3.16**	**331**	P	**Pn**	**11 19 05.1**	**+1.9**
LWLI	**Liwa**	**3.50**	**318**	P	**Pn**	**11 19 09.2**	**+1.3**
MDSI	**Maura Dua**	**3.84**	**325**	P	**Pn**	**11 19 13.8**	**+1.3**
SMRI	**Semarang**	**4.04**	**82**	P	**Pn**	**11 19 18.1**	**+2.8**
SMRI	**Semarang**	**4.04**	**82**	*e*Pn	**Pn**	**11 19 18.3**	**+3.1**
UGM	**Wanagama**	**4.09**	**94**	P	**Pn**	**11 19 16.4**	**+0.6**
UGM	**Wanagama**	**4.09**	**94**	*e*Pn	**Pn**	**11 19 16.5**	**+0.6**
MNAI	**Manna**	**4.73**	**313**	P	**Pn**	**11 19 25.0**	**+0.3**
MNAI	**Manna**	**4.73**	**313**	*e*Pn	**Pn**	**11 19 24.6**	**-0.1**
PCJI	**Pacitan**	**4.76**	**97**	P	**Pn**	**11 19 25.8**	**+0.8**
PMBI	**Palembang**	**4.96**	**341**	P	**Pn**	**11 19 30.4**	**+2.6**
NGJI	**Ngawi**	**5.02**	**87**	P	**Pn**	**11 19 31.5**	**+3.0**
PWJI	**Pagerwojo**	**5.36**	**94**	P	**Pn**	**11 19 34.1**	**+0.9**
PPBI	**Pangkal Pinang**	**5.45**	**357**	P	**Pn**	**11 19 37.0**	**+2.5**
TBJI	**Tambak Boyo**	**5.46**	**82**	P	**Pn**	**11 19 34.4**	**-0.2**
GRJI	**Gresik**	**6.07**	**84**	P	**Pn**	**11 19 45.5**	**+2.6**
MASI	**Maura Aman, Be**	**6.10**	**317**	P	**Pn**	**11 19 43.8**	**+0.4**
BWJI	**Bawean**	**6.46**	**74**	P	**Pn**	**11 19 51.4**	**+3.2**
GMJI	**Gumukmas**	**7.00**	**96**	P	**Pn**	**11 19 56.5**	**+0.9**
BLJI	**Banyuglugur**	**7.13**	**91**	P	**Pn**	**11 19 58.8**	**+1.5**
PBKI	**Pangkalan Bun**	**7.18**	**47**	P	**Pn**	**11 20 01.8**	**+3.7**
DSRI	**Dabo**	**7.35**	**346**	P	**Pn**	**11 20 02.3**	**+1.9**
KRJI	**Kerinci**	**7.39**	**318**	P	**Pn**	**11 20 00.3**	**-0.8**
JAGI	**Jajag, Banyuwa**	**7.71**	**97**	P	**Pn**	**11 20 05.6**	**+0.2**
JAGI	**Jajag, Banyuwa**	**7.71**	**97**	*e*Pn	**Pn**	**11 20 06.3**	**+0.9**
PPSI	**Pulau Pagai**	**8.00**	**307**	P	**Pn**	**11 20 07.5**	**-1.9**
RGRI	**Rengat**	**8.31**	**331**	P	**Pn**	**11 20 15.6**	**+2.1**
	765nm,0.8s,43μm4.1nm						
TPRI	**Tanjung Pinang**	**8.71**	**347**	P	**Pn**	**11 20 20.3**	**+1.3**
	456nm,0.8s,27μm27μm		

comp=Z,39nm,0.3s,baz=22,slow=1.5,SNR=28
BATI S Sn 11 25 10.4 -13
comp=Z,35nm,0.3s,baz=210,slow=20,SNR=5.0
BATI Baumata 17.24 100 P Pn 11 22 11.5 -0.3
comp=Z,520nm,0.5s,comp=Z,6μm
KRAB Krabi 17.32 335 P Pn 11 22 10.0 -2.7
comp=Z,240nm,0.7s,comp=Z,2μm
MRSI Marisa 17.47 63 P Pn 11 22 13.6 -0.9
comp=Z,408nm,0.7s,comp=Z,5μm
MYLDM Lahad Datu 17.55 44 *e*Pn **Pn 11 22 15.0 -0.5**
comp=Z,726nm,1.1s
SOEI Soe 17.78 98 P P 11 22 15.5 -2.8
SOEI Soe 17.78 98 *e*P **P 11 22 15.9 -2.5**
comp=Z,989nm,0.9s
SURT Suratani 18.15 335 P Pn 11 22 22.8 0.0
comp=Z,59nm,1.1s
MBWA Marble Bar 18.61 138 *e*P **P 11 22 26.9 -0.3**
comp=Z,135nm,0.9s
MBWA Marble Bar 18.61 138 P P 11 22 27.4 +0.2
SNR=13
MBWA Marble Bar 18.61 138 P P 11 22 27.4 +0.2
SNR=13
SANI Sanana 20.28 75 P P 11 22 44.8 -0.7
CHBT CHBT 20.66 349 P Pn 11 22 51.2 -1.4
comp=Z,474nm,0.6s,comp=Z,93μm
PHET Kaeng Krachan 21.50 342 P P 11 22 59.3 +0.7
comp=Z,69nm,0.9s,comp=Z,498nm
SRAK Srakaew 21.95 349 P P 11 23 05.4 +2.1
comp=Z,275nm,1.1s,comp=Z,3μm
AAI Ambon 22.03 81 P P 11 23 01.6 -2.7
AAI pP P 11 23 12.1 +7.8
AAI Ambon 22.03 81 P P 11 23 01.0 -3.3
AAI pmax pmax
comp=Z,1μm,1.4s
LBMI Labuha 22.15 73 P P 11 23 05.0 -0.6
comp=Z,866nm,0.7s,comp=Z,12μm
TNTI Ternate 22.51 69 *e*P **P 11 23 09.6 +0.1**
comp=Z,3μm,1.4s
TNTI *e*S **S 11 27 12.4 +0.9**
ENPP El Nido 22.77 35 *e*P **P 11 23 12.4 +0.3**
MSAI Masohi 22.82 80 P P 11 23 10.2 -2.5
comp=Z,52nm,0.6s,comp=Z,713nm
PAGZ Pagadian 22.88 48 *e*P **P 11 23 15.7 +2.5**
SKMP Bagumbayan, Su 22.92 53 *e*P **P 11 23 13.6 -0.1**
SRDT SRDT 23.02 342 P P 11 23 14.7 +0.1
comp=Z,108nm,1.4s
PBA Port Blair 23.50 325 *e*P P 11 23 17.8 -1.4
comp=Z,215nm,1.0s
BNDI Bandanaira 23.57 84 P P 11 23 15.3 -4.5
CHAI Chaiyaphum 23.80 349 P P 11 23 21.9 +0.1
comp=Z,94nm,0.8s,comp=Z,664nm
BUSP Coron 23.86 35 *e*P **P 11 23 23.1 +0.8**
DAV Davao City (W) 24.07 53 LR LR 11 33 10.1
comp=Z,5μm,21.2s,baz=258,slow=37
DAV Davao City (W) 24.07 53⇑ *e*P **P 11 23 21.1 -3.2**
DAV Davao City (W) 24.07 53 *e*P **P 11 23 24.5 +0.2**
DAV *e* 11 33 10.1
DAV LR LR
comp=Z,3μm,20.0s
DAV Davao City (W) 24.07 53 P P 11 23 27.7 +3.4
SNR=16
BUKP Musuan 24.16 51 *e*P **P 11 23 25.8 +0.6**
CGP Cagayan de Oro 24.25 49⇓ *e*P **P 11 23 29.8 +3.9**
GUIM Jordan 24.27 42 *e*P **P 11 23 26.1 +0.1**
MATI Mati 24.54 54 *e*P **P 11 23 28.2 -0.3**
SKNT Sakolnakorn 24.58 354 P P 11 23 28.1 -0.8
comp=Z,41nm,1.1s
DGPR DIGLIPUR 24.64 327 *e*P **P 11 23 27.7 -1.7**
DGPR IAmb IAmb 11 23 30.9
comp=Z,170nm,0.4s
PBKT Sadao Pong 24.65 347 P P 11 23 28.4 -1.1
comp=Z,105nm,0.9s,comp=Z,2μm
PBKT Sadao Pong 24.65 347 *e*P **P 11 23 28.7 -0.8**
PBKT *e*PcP **PcP 11 27 06.8 +1.4**
SAUI Saumlaki 24.66 92 *e*P **P 11 23 28.6 -1.1**
comp=Z,748nm,1.2s
SJMP San Jose 24.76 36 *e*P **P 11 23 32.3 +1.8**
MTN Manton Dam 24.86 104 *e*P **P 11 23 31.4 -0.1**
LLP Lapu-Lapu 24.98 45 *e*P **P 11 23 32.7 +0.1**
RCP Roxas 25.06 41⇑ *e*P **P 11 23 34.8 +1.4**
OTRP Odiongan 25.22 38 *e*P **P 11 23 36.8 +2.1**
BUTP Butuan 25.28 50 *e*P **P 11 23 37.7 +2.4**
LUBP Lubang 25.30 33 *e*P **P 11 23 37.0 +1.6**
PHIT Phitsanulok 25.38 347 P P 11 23 36.3 +0.2
comp=Z,173nm,0.9s,comp=Z,1μm
MSLP Maasin 25.49 46 *e*P **P 11 23 34.4 -2.7**
SIJI Sorong 25.68 76 P P 11 23 39.2 +0.2
comp=Z,299nm,0.6s,baz=275,slow=6.2,SNR=75
SIJI S **S 11 28 01.8 -0.6**
comp=Z,4.9nm,0.4s,baz=103,slow=21,SNR=6.0
NONG Nongkai 25.75 353 P P 11 23 39.2 -0.3
comp=Z,129nm,0.6s,comp=Z,2μm
BOAC Boac 25.97 36 *e*P **P 11 23 43.5 +2.0**
TGY Tagaytay City 25.98 34 P P 11 23 43.4 +1.7
comp=Z,261nm,0.6s,baz=186,slow=7.0,SNR=4.8
TGY LR LR 11 36 28.1
comp=Z,2μm,19.9s,baz=180,slow=42
FAKI Fak Fak 26.15 81 P P 11 23 42.0 -1.3
FAKI pP **pP 11 24 00.9 +0.2**
FAKI Fak Fak 26.15 81 *e*P **P 11 23 42.4 -0.8**
comp=Z,358nm,1.0s
QIZ Qiongzhong 26.72 7 P P 11 23 49.6 +1.3
QIZ sP **sP 11 24 13.0 -1.6**
QIZ S **S 11 28 23.4 +4.8**
QIZ pmax pmax
comp=Z,880nm,7.4s
QIZ LR LR
comp=Z,4μm,21.6s
QIZ LR LR
comp=Z,3μm,16.7s
QIZ LR LR
comp=Z,5μm,22.1s
QIZ Qiongzhong 26.72 7 *e*P **P 11 23 49.5 +1.3**
comp=Z,160nm,1.1s
QIZ LR LR
comp=Z,6μm,21.0s
LAMP Lampang 26.85 346 P P 11 23 49.7 +0.3
comp=Z,48nm,0.9s,comp=Z,366nm
CM01 Chiang Mai Arr 26.92 344 *e*P **P 11 23 49.4 -0.7**
CM31 Chiang Mai Arr 26.96 344 *e*P **P 11 23 50.3 -0.2**
CM31 *e*PcP **PcP 11 27 13.1 +2.3**
CMAR Chiang Mai Arr 26.96 344 P P 11 23 50.4 -0.1
comp=Z,48nm,0.7s,baz=179,slow=8.8,SNR=146
CMAR PcP **PcP 11 27 13.1 +2.3**
comp=Z,36nm,0.9s,baz=203,slow=3.4,SNR=12
CMAR ScP **ScP 11 30 46.6 +2.1**
comp=Z,5.4nm,1.0s,baz=206,slow=3.4,SNR=5.5
CMAR PKiKP **PKiKP 11 34 48.2 -0.7**
comp=Z,0.9nm,0.5s,baz=302,slow=2.0,SNR=4.8
CMAR LR LR 11 35 45.5
comp=Z,2μm,20.2s,baz=180,slow=39
CNP Catarman 27.02 42 *e*P **P 11 23 54.3 +3.3**
NWAO Narrogin (SRO) 27.09 160 P P 11 23 49.9 -1.5
comp=Z,27nm,0.8s,baz=238,slow=18,SNR=13
NWAO LR LR 11 33 21.0
comp=Z,5μm,21.6s,baz=207,slow=34
NWAO Narrogin (SRO) 27.09 160 *e*P **P 11 23 50.0 -1.5**
NWAO LR LR
comp=Z,6μm,21.0s
NWAO Narrogin (SRO) 27.09 160 *e*P **P 11 23 50.0 -1.5**
NWAO MLR MLR
comp=Z,6μm,21.0s
CHTO Chiang Mai 27.30 344 P P 11 23 53.5 0.0
comp=Z,492nm,0.9s,comp=Z,5μm
CHTO Chiang Mai 27.30 344 *e*P **P 11 23 53.2 -0.3**
CHTO LR LR
comp=Z,2μm,21.0s
CHTO Chiang Mai 27.30 344 P P 11 23 54.0 +0.5
SNR=10
CHTO Chiang Mai 27.30 344 P P 11 23 54.0 +0.5
SNR=10
CHTO Chiang Mai 27.30 344 *e*P **P 11 23 53.2 -0.3**
CHTO MLR MLR
comp=Z,2μm,21.0s
PAYA Payao 27.60 347 P P 11 23 56.4 +0.3
comp=Z,37nm,0.7s,comp=Z,3μm
H01W3 Cape Leeuwin H 28.03 166 T T 11 53 43.5
baz=342,slow=77,SNR=242
H01W1 Cape Leeuwin H 28.04 166 T T 11 53 48.7
baz=342,slow=77,SNR=189
H01W2 Cape Leeuwin H 28.04 166 T T 11 53 51.0
baz=342,slow=77,SNR=292
RKPI Ransiki, Papua 28.33 79 P P 11 24 03.5 +0.7
comp=Z,379nm,0.8s,comp=Z,9μm
APYP Conner 29.27 30 *e*P **P 11 24 12.0 +1.0**
PALK Pallekele 29.61 299 P P 11 24 15.9 +1.8
comp=Z,50nm,1.1s,baz=116,slow=8.4,SNR=5.7
PALK LR LR 11 35 21.9
comp=Z,2μm,20.1s,baz=108,slow=35
PALK Pallekele 29.61 299 *e*P **P 11 24 15.2 +1.1**
comp=Z,153nm,1.4s
PALK *e* 11 35 21.9
PALK Pallekele 29.61 299 *i*P **P 11 24 16.6 +2.5**
SNR=7.5
PALK Pallekele 29.61 299 *i*P **P 11 24 18.1 +4.0**
WR1 Warramunga Arr 29.70 117 *e*P **P 11 24 14.9 +0.1**
comp=Z,296nm,1.6s
WR1 *e*PcP **PcP 11 27 18.2 +0.7**
WR1 *e* 11 56 15.8
WRA Warramunga Arr 29.70 117 P P 11 24 14.9 +0.1
comp=Z,22nm,0.6s,baz=286,slow=12,SNR=165
WRA PcP **PcP 11 27 18.2 +0.7**
comp=Z,13nm,0.4s,baz=313,slow=2.1,SNR=6.6
WRA P3KPbc 11 56 15.8
comp=Z,1.7nm,0.9s,baz=95,slow=4.4,SNR=7.6
WRAB Tennant Creek 29.70 117 *e*P **P 11 24 14.8 -0.1**
comp=Z,83nm,0.8s
WRAB LR LR
comp=Z,2μm,20.0s
WRAB Tennant Creek 29.70 117 *c i*P **P 11 24 15.4 +0.5**
WRAB *i* *PP **pP 11 24 33.2 +0.6**
WRAB *i* *SP **sP 11 24 39.8 -1.5**
WRAB pmax pmax
comp=Z,131nm,1.2s
WRAB MLR MLR
comp=Z,3μm,23.0s
WB2 Warramunga Arr 29.70 117 *e*P **P 11 24 14.6 -0.4**
SRPI Serui, Papua 30.27 81 P P 11 24 19.9 -0.1
comp=Z,249nm,0.6s,comp=Z,9μm
BAKI Biak 30.28 79 P P 11 24 27.3 +7.2
FORT Forrest 30.66 141 *e*P **P 11 24 22.9 -0.3**
comp=Z,113nm,0.8s
ASAR Alice Springs 30.80 124 P P 11 24 24.9 +0.3
comp=Z,32nm,0.7s,baz=304,slow=8.4,SNR=358
ASAR PcP **PcP 11 27 20.2 -0.2**
comp=Z,23nm,0.8s,baz=302,slow=2.4,SNR=8.4
ASAR S **S 11 29 19.2 -3.8**
comp=Z,11nm,1.0s,baz=297,slow=16,SNR=4.9
ASAR LR LR 11 38 54.2
comp=Z,2μm,19.7s,baz=302,slow=40
ASAR P3KPbc 11 56 09.2
comp=Z,1.7nm,1.0s,baz=115,slow=3.4,SNR=4.4
ASAR P3KP 11 57 24.5
comp=Z,2.1nm,1.0s,baz=48,slow=3.5,SNR=6.3
AS31 Alice Springs 30.81 124 *e*P **P 11 24 24.9 +0.2**
comp=Z,14nm,0.7s
AS31 *e*PcP **PcP 11 27 20.2 -0.2**
AS01 Alice Springs 30.84 124 *e*P **P 11 24 24.6 -0.4**
GZH Guangzhou 31.29 12 P P 11 24 34.6 +5.9
GZH S **S 11 29 36.8 +6.5**
GZH pmax pmax
comp=Z,820nm,8.0s
GZH LR LR
comp=Z,1μm,15.7s
GZH LR LR
comp=Z,2μm,15.7s
KMI Kunming 32.76 354 P P 11 24 43.9 +1.9
KMI pP pP 11 25 00.2 +0.5
KMI sP sP 11 25 08.5 0.0
KMI PcP **PcP 11 27 27.7 +1.8**
KMI S **S 11 29 56.4 +2.7**
KMI sS sS 11 30 20.2 -4.0
KMI SS **SnSn 11 31 58.4 +1.5**
KMI pmax pmax
comp=Z,75nm,1.2s
KMI pmax pmax
comp=Z,660nm,4.4s
KMI LR LR
comp=Z,6μm,13.6s
KMI LR LR
comp=Z,3μm,12.1s
KMI LR LR
comp=Z,8μm,14.3s
TWG Pinlang 33.51 25 *e*P **P 11 24 48.9 +0.7**
comp=Z,273nm,0.7s
H08S2 Diego Garcia H 33.61 268 T T 12 00 18.0
baz=92,slow=75,SNR=42
H08S3 Diego Garcia H 33.62 268 T T 12 00 18.7
baz=92,slow=75,SNR=43
H08S1 Diego Carcia H 33.62 268 T T 12 00 19.4
baz=92,slow=75,SNR=46
DGAR Diego Garcia 33.66 268 PFAKE 11 25 00.0 +10
DGAR LR LR
comp=Z,1μm,21.0s
TPUB Ta-pu 33.75 24 *e*P **P 11 24 51.6 +1.2**
comp=Z,94nm,0.7s
TPUB *e*PcP **PcP 11 27 30.5 +2.0**
GYA Guiyang 33.90 0⇓ *i*P **P 11 24 52.9 +1.2**
GYA pP pP 11 25 12.0 +2.5
GYA sP sP 11 25 20.0 +1.7
GYA PP **PP 11 26 12.8 +2.9**
GYA PcP **PcP 11 27 31.5 +2.6**
GYA S **S 11 30 15.0 +3.9**
GYA sS sS 11 30 44.4 +2.7
GYA ScP **ScP 11 31 09.3 +2.0**
GYA SS **SnSn 11 32 27.0 +2.8**
GYA ScS **ScS 11 35 10.5 +1.1**
GYA pmax pmax
comp=Z,140nm,0.7s
GYA pmax pmax
comp=Z,180nm,5.0s
GYA LR LR
comp=Z,5μm,17.0s
GYA LR LR
comp=Z,5μm,17.4s
GYA LR LR
comp=Z,5μm,17.8s
AZL Aizawl 33.95 337 *e*P **P 11 24 52.0 -0.1**
VIS Vishakhapatnam 33.98 318 *i*P **P 11 24 54.4 +2.0**
VIS ⇓ *i*S **S 11 30 16.7 +4.3**
GENI Genyem 33.99 83 P P 11 24 52.0 -0.6
comp=Z,217nm,1.4s,comp=Z,4μm
YULB Yu-li 34.11 25 *e*P **P 11 24 54.6 +1.2**
comp=Z,76nm,0.9s
SSLB Suanglung 34.32 24 *e*P **P 11 24 56.9 +1.6**
comp=Z,110nm,0.7s
SSLB *e*PcP **PcP 11 27 31.7 +1.6**
BWNR Bhubaneshwar 34.37 324 *e*P **P 11 24 56.1 +0.4**
IMP Imphal 34.49 340 *e*P **P 11 24 55.9 -0.8**
IMP IAmb IAmb 11 24 58.7
comp=Z,123nm,0.7s
QZH Quanzhou 34.50 20⇑ *i*P **P 11 24 55.9 -0.8**
QZH pP **pP 11 25 11.3 -3.3**
QZH PP **PP 11 26 16.8 +0.5**
QZH S **S 11 30 22.4 +2.3**
QZH pmax pmax
comp=Z,720nm,9.0s
QZH LR LR
comp=Z,2μm,14.1s
QZH LR LR
comp=Z,790nm,10.2s
QZH LR LR
comp=Z,2μm,16.3s
JAY Jayapura 34.53 83 P P 11 24 56.3 -1.0
comp=Z,1μm,0.8s,comp=Z,16μm
JAY Jayapura 34.53 83 P P 11 24 54.7 -2.6
JAY pmax pmax
comp=Z,1μm,0.8s
AGT Agartala 34.66 335 *e*P **P 11 24 59.8 +1.7**
NACB Ninganchiao 34.93 25 *e*P **P 11 25 01.1 +0.6**
comp=Z,122nm,1.1s
H08N1 Diego Carcia H 35.15 270 T T 12 02 41.7
baz=140,slow=74
H08N2 Diego Garcia H 35.16 270 T T 12 02 40.7
baz=140
H08N3 Diego Garcia H 35.17 270 T T 12 02 41.1
baz=140,slow=74
YHNB Yeheng 35.28 24 *e*P **P 11 25 04.5 +0.9**
comp=Z,67nm,0.7s
TATO Taipei 35.60 24 *e*P **P 11 25 06.9 +0.7**
comp=Z,340nm,1.5s
TATO LR LR
comp=Z,3μm,21.0s
YOJ Yonaguni jima 35.79 26 *e*P **P 11 25 09.2 +1.4**
comp=Z,383nm,0.6s
YOJ Yonaguni jima 35.79 26 *e*P **P 11 25 09.2 +1.4**
YOJ pmax pmax
comp=Z,383nm,0.6s
SHL Shillong 35.91 337 *e*P **P 11 25 08.6 -0.5**
SHL IAmb IAmb 11 25 11.1
comp=Z,257nm,0.8s
SHL *i* x x 11 30 36.0
SHL Shillong 35.91 337 *e*P **P 11 25 08.9 -0.2**
comp=Z,543nm,1.1s
SHL Shillong 35.91 337 *e*P **P 11 25 08.9 -0.2**
SHL pmax pmax
comp=Z,543nm,1.1s
JORH JORHAT 36.16 341 *e*P **P 11 25 09.6 -1.4**
LKP Lekhapani 36.24 344 *e*P **P 11 25 13.0 +1.3**
TURI Tura 36.51 335 *e*P **P 11 25 14.5 +0.5**
TEZP TEZPUR 36.53 339 *e*P **P 11 25 14.0 -0.1**
TEZP IAmb IAmb 11 25 15.4
GUWA GUWAHATI 36.55 337 *e*P **P 11 25 14.0 -0.3**
GUWA IAmb IAmb 11 25 16.1
comp=Z,206nm,0.8s
COEN Coen 36.62 103 *e*P **P 11 25 15.2 0.0**
comp=Z,100nm,0.7s
ZIRO ZIRO 37.02 341 *e*P **P 11 25 18.6 +0.1**
ZIRO IAmb IAmb 11 25 20.2
DHUB DHUBRI 37.07 335 *e*P **P 11 25 19.3 +0.5**
HYB Hyderabad 37.12 312⇑ *i*P **P 11 25 21.0 +1.6**
comp=Z,300nm,1.0s
HYB *e*S **S 11 31 00.0 -0.5**
HYB Hyderabad 37.12 312 *e*P **P 11 25 18.7 -0.6**
HYB IAmb IAmb 11 25 20.1
comp=Z,66nm,0.8s
BOK Bokaro 37.12 328 *e*P **P 11 25 20.8 +1.5**
BBOO Buckleboo 37.19 136 *e*P **P 11 25 18.9 -0.9**
comp=Z,116nm,1.4s
ENH Enshi 37.81 4 *e*P **P 11 25 25.2 +0.2**
comp=Z,156nm,1.0s
ENH *e*S **S 11 31 14.2 +3.4**
ENH LR LR
comp=Z,4μm,22.0s
CD2 Chengdu 38.42 356 P P 11 25 29.8 -0.3
CD2 pP pP 11 25 46.4 -1.8
CD2 sP sP 11 25 54.5 -2.4
CD2 PP **PP 11 27 00.0 +0.5**
CD2 S **S 11 31 17.4 -2.5**
CD2 sS sS 11 31 51.1 +0.3
CD2 pmax pmax
comp=Z,240nm,1.0s
CD2 pmax pmax
comp=Z,1μm,8.8s
CD2 LR LR
comp=Z,5μm,16.7s
CD2 LR LR
comp=Z,6μm,15.5s
WHN Wuhan 38.73 11⇑ *i*P **P 11 25 33.9 +1.3**
WHN sP **sP 11 25 58.4 -1.0**
WHN PcP **PcP 11 27 44.7 +1.6**
WHN S **S 11 31 24.5 +0.1**
WHN LR LR
comp=Z,5μm,15.1s
WHN LR LR
comp=Z,2μm,11.5s
WHN LR LR
comp=Z,6μm,17.0s
GTK Tadong 38.80 334 *e*P **P 11 25 34.3 +0.8**
GTK IAmb IAmb 11 25 36.4
comp=Z,335nm,1.0s
NGP Nagpur 39.25 317 *e*P **P 11 25 39.0 +1.8**
LSA Lhasa 39.92 339 P P 11 25 44.2 +0.9
LSA pmax pmax
comp=Z,500nm,0.8s
LSA Lhasa 39.92 339 *e*P **P 11 25 44.1 +0.9**
comp=Z,522nm,1.1s
LSA *e*S **S 11 31 42.4 -0.9**
LSA LR LR
comp=Z,2μm,22.0s
LSA Lhasa 39.92 339 P P 11 25 44.4 +1.2
LSA Lhasa 39.92 339 *e*P **P 11 25 44.1 +0.9**
LSA *e*S **S 11 31 42.4 -0.9**
LSA pmax pmax
comp=Z,522nm,1.1s
LSA MLR MLR
comp=Z,2μm,22.0s
JIRN Jiri 40.18 332 *e*P **P 11 25 45.8 +0.5**
comp=Z,944nm,0.6s
JOW Kunigami 40.30 31 P P 11 25 47.7 +1.9
comp=Z,225nm,0.9s,baz=272,slow=6.9,SNR=17
JOW LR LR 11 42 36.4
comp=Z,2μm,21.6s,baz=197,slow=36
JOW Kunigami 40.30 31 *e*P **P 11 25 47.3 +1.4**
comp=Z,568nm,1.3s
JOW *e* 11 42 36.4
PMG Port Moresby 40.33 96 P P 11 25 46.8 +0.5
comp=Z,83nm,0.7s,baz=299,slow=9.1,SNR=34
PMG LR LR 11 44 40.8
comp=Z,1μm,21.6s,baz=270,slow=39
PMG Port Moresby 40.33 96 *e*P **P 11 25 46.9 +0.6**
comp=Z,243nm,1.0s
PMG *e* 11 44 40.8
PMG LR LR
comp=Z,1μm,20.0s
PMG Port Moresby 40.33 96 *e*P **P 11 25 46.9 +0.6**
PMG pmax pmax
comp=Z,243nm,1.0s
PMG MLR MLR
comp=Z,1μm,20.0s
PKI Pulchoki 40.48 331 *e*P **P 11 25 48.7 +1.0**
comp=Z,0.5nm,0.2s
PKIN Phulchoki 40.49 331 *e*P **P 11 25 48.0 +0.3**
CTA Charters Tower 40.50 112 P P 11 25 48.9 +1.2
comp=Z,138nm,1.0s,baz=286,slow=12,SNR=104
CTA PcP **PcP 11 27 50.1 +1.0**
comp=Z,27nm,0.7s,baz=251,slow=7.0,SNR=5.6
CTA S **S 11 31 50.2 -1.3**
comp=Z,5.8nm,0.9s,baz=186,slow=18,SNR=2.8
CTA LR LR 11 43 31.2
comp=Z,918nm,21.4s,baz=284,slow=38
CTAO Charters Tower 40.50 112 *e*P **P 11 25 49.0 +1.3**
comp=Z,242nm,1.0s
CTAO LR LR
comp=Z,3μm,22.0s
CTAO Charters Tower 40.50 112 *e*P **P 11 25 49.0 +1.3**
CTAO pmax pmax
comp=Z,242nm,1.0s
CTAO MLR MLR
comp=Z,3μm,22.0s
GUN Gumba 40.54 331 *e*P **P 11 25 48.7 +0.5**
comp=Z,483nm,0.6s
STKA Stephens Creek 40.66 131 P P 11 25 49.4 +0.6
comp=Z,78nm,0.8s,baz=304,slow=8.5,SNR=72
STKA LR LR 11 44 27.1
comp=Z,1μm,20.5s,baz=298,slow=39
STKA Stephens Creek 40.66 131 *e*P **P 11 25 49.4 +0.6**
comp=Z,41nm,0.7s
STKA *e* 11 44 27.1
DMN Daman 40.66 330 *e*P **P 11 25 49.6 +0.5**
comp=Z,1μm,1.0s
KKN Kakani 40.72 331 *e*P **P 11 25 50.0 +0.4**
comp=Z,730nm,0.9s
SSE Sheshan 41.04 19 P P 11 25 54.2 +2.4
SSE S **S 11 32 01.8 +2.9**
SSE sS **sS 11 32 26.3 -3.8**
SSE pmax pmax
comp=Z,84nm,0.9s
SSE pmax pmax
comp=Z,640nm,4.0s
SSE LR LR
comp=Z,790nm,22.6s
MANU Manus Island 41.17 84 *e*P **P 11 25 53.8 +0.5**
comp=Z,223nm,0.8s
GKN Gorkha 41.22 330 *e*P **P 11 25 54.5 +1.0**
comp=Z,1μm,0.9s
NJ2 Nanjing 41.22 16 *e*P **P 11 25 54.4 +1.1**
NJ2 PcP **PcP 11 27 52.4 +1.3**
NJ2 S **S 11 32 04.0 +2.3**
NJ2 sS **sS 11 32 32.2 -0.6**
NJ2 pmax pmax
comp=Z,120nm,1.2s
NJ2 pmax pmax
comp=Z,2μm,4.1s
NJ2 LR LR
comp=Z,930nm,13.6s
NJ2 LR LR
comp=Z,2μm,11.9s
NJ2 LR LR
comp=Z,4μm,17.1s
POO Poona 41.33 309 *e*P **P 11 25 56.2 +1.7**
POO IAmb IAmb 11 25 56.5
comp=Z,118nm,0.8s
XAN Xi'an 41.52 3 P P 11 25 55.4 -0.4
XAN pP pP 11 26 13.7 -0.4
XAN PcP **PcP 11 27 52.8 +0.7**
XAN S **S 11 32 06.8 +0.6**
XAN ScS **ScS 11 35 49.0 -3.3**

XAN				pmax	pmax		
	comp=Z,280nm,1.0s						
XAN				pmax	pmax		
	comp=Z,1μm,3.4s						
XAN				LR	LR		
	comp=Z,3μm,19.4s						
XAN				LR	LR		
	comp=Z,3μm,16.1s						
XAN				LR	LR		
	comp=Z,5μm,20.6s						
KOLN	**Koldanda**	**41.55**	**329**	*e*P	**P**	**11 25 57.0**	**+0.7**
	comp=Z,962nm,0.7s						
BHPL	**Bhopal**	**41.78**	**318**	*e*P	**P**	**11 25 57.7**	**-0.4**
BHPL				IAmb	IAmb	11 25 58.4	
	comp=Z,68nm,0.8s						
DANN	**Dangsing**	**41.94**	**329**	*e*P	**P**	**11 26 00.0**	**+0.4**
	comp=Z,925nm,0.7s						
PYUN	**Piuthan**	**42.13**	**328**	*e*P	**P**	**11 26 01.8**	**+0.7**
	comp=Z,1μm,0.9s						
LZH	**Lanzhou**	**43.56**	**357**	⇓P	**P**	**11 26 13.7**	**+1.2**
LZH				pP	pP	11 26 32.8	+1.9
LZH				sP	sP	11 26 43.8	+4.3
LZH				PP	**PcP**	**11 27 58.9**	**-0.1**
LZH				S	**S**	**11 32 34.2**	**-2.2**
LZH				sS	sS	11 33 04.7	-3.0
LZH				ScS	**ScS**	**11 36 04.9**	**-0.2**
LZH				pmax	pmax		
	comp=Z,750nm,1.2s						
LZH				pmax	pmax		
	comp=Z,2μm,6.0s						
LZH				LR	LR		
	comp=Z,3μm,14.1s						
LZH				LR	LR		
	comp=Z,4μm,13.6s						
LZH				LR	LR		
	comp=Z,4μm,14.5s						
GUMO	**Guam**	**43.63**	**61**	P	**P**	**11 26 11.6**	**-1.5**
	comp=Z,85nm,0.6s,baz=173,slow=9.6,SNR=7.8						
GUMO				LR	LR	11 45 07.1	
	comp=Z,874nm,22.0s,baz=234,slow=37						
GUMO	**Guam**	**43.63**	**61**	*e*P	**P**	**11 26 11.7**	**-1.5**
GUMO				*e*		11 45 07.1	
GUMO				LR	LR		
	comp=Z,1μm,21.0s						
GUMO	**Guam**	**43.63**	**61**	*e*P	**P**	**11 26 11.7**	**-1.5**
GUMO				MLR	MLR		
	comp=Z,1μm,21.0s						
TIA	**Tai'an**	**44.77**	**12**	P	**P**	**11 26 22.6**	**+0.7**
TIA				S	**S**	**11 32 54.5**	**+0.9**
TIA				pmax	pmax		
	comp=Z,52nm,0.7s						
TIA				pmax	pmax		
	comp=Z,460nm,3.7s						
TIA				LR	LR		
	comp=Z,780nm,14.7s						
TIA				LR	LR		
	comp=Z,730nm,18.8s						
TIA				LR	LR		
	comp=Z,990nm,17.9s						
TIY	**Taiyuan**	**45.47**	**7**	P	**P**	**11 26 28.0**	**+0.5**
TIY				S	**S**	**11 33 04.6**	**+0.8**
TIY				pmax	pmax		
	comp=Z,290nm,0.6s						
TIY				pmax	pmax		
	comp=Z,1μm,3.7s						
TIY				LR	LR		
	comp=Z,2μm,18.2s						
TIY				LR	LR		
	comp=Z,1μm,12.6s						
TIY				LR	LR		
	comp=Z,3μm,22.6s						
RABL	**Rabaul**	**45.63**	**88**	*e*P	**P**	**11 26 29.3**	**+0.1**
	comp=Z,163nm,1.3s						
NDI	**New Delhi**	**45.79**	**323**	*e*P	**P**	**11 26 30.0**	**-0.2**
EIDS	**Eidsvold**	**46.05**	**118**	*e*P	**P**	**11 26 33.6**	**+1.3**
	comp=Z,152nm,1.5s						
JNU	**Nakatsue**	**46.75**	**29**	P	**P**	**11 26 37.4**	**-0.3**
	comp=Z,47nm,0.4s,baz=235,slow=2.8,SNR=73						
JNU				PcP	**PcP**	**11 28 11.3**	**+1.4**
	comp=Z,22nm,0.7s,baz=146,slow=3.6,SNR=2.7						
JNU				LR	LR	11 47 40.0	
	comp=Z,574nm,20.1s,baz=190,slow=38						
JNU	**Nakatsue**	**46.75**	**29**	*e*P	**P**	**11 26 37.1**	**-0.5**
	comp=Z,343nm,1.2s						
JNU				PcP	**PcP**	**11 28 11.3**	**+1.4**
JNU				*e*		11 47 40.0	
GTA	**Gaotai**	**47.21**	**353**	P	**P**	**11 26 42.6**	**+1.4**
GTA				pP	pP	11 26 58.2	-1.7
GTA				sP	sP	11 27 05.1	-3.3
GTA				PcP	**PcP**	**11 28 13.6**	**+2.0**
GTA				PP	**PP**	**11 28 32.6**	**-0.4**
GTA				S	**S**	**11 33 28.3**	**-0.5**
GTA				sS	sS	11 33 56.6	-3.9
GTA				ScS	**ScS**	**11 36 27.8**	**-0.6**
GTA				SS	**SS**	**11 36 51.0**	**-6.2**
GTA				pmax	pmax		
	comp=Z,450nm,1.2s						
GTA				pmax	pmax		
	comp=Z,2μm,10.0s						
GTA				LR	LR		
	comp=Z,2μm,21.0s						
GTA				LR	LR		
	comp=Z,3μm,20.3s						
GTA				LR	LR		
	comp=Z,4μm,22.7s						
BHJ	**Bhuj**	**47.27**	**311**	*e*P	**P**	**11 26 43.7**	**+1.9**
SMLA	**Simla**	**47.64**	**325**	*e*P	**P**	**11 26 45.1**	**+0.6**
ARMA	**Armidale**	**47.96**	**124**	*e*P	**P**	**11 26 47.4**	**+0.1**
	comp=Z,149nm,1.7s						
TJN	**Taejon**	**48.01**	**23***c*	*i*P	**P**	**11 26 47.5**	**+0.2**
BTO	**Baotou**	**48.12**	**4**	*e*P	**P**	**11 26 48.5**	**+0.2**
BTO				pmax	pmax		
	comp=Z,100nm,1.2s						
BJT	**Baijiatuau**	**48.27**	**10**	*e*P	**P**	**11 26 50.4**	**+1.1**
	comp=Z,177nm,1.2s						
BJT				*e*PcP	**PcP**	**11 28 16.6**	**+1.4**
BJT				LR	LR		
	comp=Z,3μm,22.0s						
BJT	**Baijiatuau**	**48.27**	**10**	*e*P	**P**	**11 26 50.4**	**+1.1**
BJT				*e*		11 28 16.6	
BJT				pmax	pmax		
	comp=Z,177nm,1.2s						
BJT				MLR	MLR		
	comp=Z,3μm,22.0s						
BJI	**Beijing**	**48.30**	**10**	P	**P**	**11 26 50.1**	**+0.7**
BJI				S	**S**	**11 33 44.4**	**+0.6**
BJI				pmax	pmax		
	comp=Z,210nm,1.0s						
BJI				LR	LR		
	comp=Z,2μm,33.6s						
BJI				LR	LR		
	comp=Z,2μm,16.7s						
BJI				LR	LR		
	comp=Z,9μm,39.8s						
DL2	**Dalian**	**48.42**	**16**	P	**P**	**11 26 50.0**	**-0.4**
DL2				S	**S**	**11 33 45.7**	**+0.1**
DL2				pmax	pmax		
	comp=Z,110nm,1.0s						
DL2				pmax	pmax		
	comp=Z,710nm,4.4s						
DL2				LR	LR		
	comp=Z,880nm,22.9s						
DL2				LR	LR		
	comp=Z,1μm,17.7s						
DL2				LR	LR		
	comp=Z,2μm,21.6s						
HHC	**Hu-ho-hao-te**	**48.49**	**5**	*e*P	**P**	**11 26 55.3**	**+4.3**
HHC				PP	**PP**	**11 28 49.2**	**+4.7**
HHC				S	**S**	**11 33 52.8**	**+6.1**
HHC				pmax	pmax		
	comp=Z,38nm,0.7s						
HHC				pmax	pmax		
	comp=Z,210nm,5.4s						
HHC				LR	LR		
	comp=Z,720nm,17.3s						
HHC				LR	LR		
	comp=Z,490nm,14.7s						
HHC				LR	LR		
	comp=Z,1μm,19.0s						
INCN	**Inchon**	**48.71**	**21**	*e*P	**P**	**11 26 53.0**	**+0.2**
	comp=Z,103nm,0.8s						
INCN				LR	LR		
	comp=Z,1μm,21.0s						
INCN	**Inchon**	**48.71**	**21**	P	**P**	**11 26 53.4**	**+0.6**
	SNR=8.8						
INCN	**Inchon**	**48.71**	**21**	P	**P**	**11 26 53.4**	**+0.6**
CBIJ	**Chichi jima**	**48.93**	**44**	*e*P	**P**	**11 26 52.1**	**-2.4**
	comp=Z,829nm,1.8s						
JCJ	**Chichijima**	**48.93**	**44**	P	**P**	**11 26 52.0**	**-2.5**
	comp=Z,72nm,0.3s,baz=274,slow=19,SNR=14						
DHRM	**DHARAMSHALA**	**48.97**	**326**	*e*P	**P**	**11 26 54.4**	**-0.7**
KS15	**Wonju Array Si**	**49.14**	**23**	*e*P	**P**	**11 26 57.2**	**+1.3**
KS15				*e*PcP	**PcP**	**11 28 19.9**	**+1.6**
KSAR	**Wonju Array Be**	**49.14**	**23**	P	**P**	**11 26 57.3**	**+1.3**
KSAR				PcP	**PcP**	**11 28 19.9**	**+1.6**
KSAR	**Wonju Array Be**	**49.14**	**23**	P	**P**	**11 26 57.3**	**+1.3**
KSAR						11 28 20.0	
KSRS	**Korea Array**	**49.17**	**23**	P	**P**	**11 26 57.3**	**+1.1**
	comp=Z,92nm,0.9s,baz=209,slow=9.3,SNR=249						
KSRS				PcP	**PcP**	**11 28 19.9**	**+1.5**
	comp=Z,25nm,0.9s,baz=207,slow=3.7,SNR=9.5						
KSRS				LR	LR	11 49 19.7	
	comp=Z,713nm,21.3s,baz=239,slow=38						
KS01	**Wonju Array Si**	**49.18**	**23**	*e*P	**P**	**11 26 56.8**	**+0.5**
TAU	**Tasmania Unive**	**50.21**	**141**	PFAKE		11 27 20.0	+16
TAU				LR	LR		
	comp=Z,3μm,19.0s						
RER	**Riviere de l'E**	**50.66**	**249**	*e*P	**P**	**11 27 08.1**	**+0.2**
	comp=Z,114nm,1.1s						
JHJ	**Hachijo jima 2**	**51.48**	**36**	LR	LR	11 48 37.6	
	comp=Z,975nm,20.9s,baz=250,slow=35						
INU	**Inuyama**	**51.59**	**32**	*e*P	**P**	**11 27 13.6**	**-0.9**
	comp=Z,72nm,0.8s						
SNY	**Shenyang**	**51.68**	**16**	⇑P	**P**	**11 27 14.5**	**-0.5**
SNY				pP	**pP**	**11 27 35.3**	**+1.4**
SNY				sP	**sP**	**11 27 41.7**	**-0.7**
SNY				S	**S**	**11 34 28.3**	**-2.6**
SNY				sS	**sS**	**11 35 00.8**	**-2.2**
SNY				ScS	**ScS**	**11 36 59.9**	**+1.7**
SNY				pmax	pmax		
	comp=Z,210nm,1.2s						
SNY				pmax	pmax		
	comp=Z,2μm,3.5s						
SNY				LR	LR		
	comp=Z,1μm,14.5s						
SNY				LR	LR		
	comp=Z,3μm,28.8s						
NIL	**Nilore**	**51.73**	**324**	*e*P	**P**	**11 27 15.7**	**0.0**
	comp=Z,393nm,1.1s						
NIL				*e*S	**S**	**11 34 31.1**	**-0.9**
NIL				LR	LR		
	comp=Z,519nm,22.0s						
NIL	**Nilore**	**51.73**	**324**	*e*P	**P**	**11 27 15.7**	**0.0**
NIL				*e*S	**S**	**11 34 31.1**	**-0.9**
NIL				pmax	pmax		
	comp=Z,393nm,1.1s						
NIL				MLR	MLR		
	comp=Z,519nm,22.0s						
HNR	**Honiara**	**52.94**	**96**	*e*P	**P**	**11 27 24.0**	**-0.9**
HNR	**Honiara**	**52.94**	**96**	P	**P**	**11 27 24.6**	**-0.3**
	comp=Z,88nm,0.6s,baz=212,slow=9.5,SNR=5.5						
HNR				LR	LR	11 52 49.4	
	comp=Z,438nm,20.1s,baz=267,slow=39						
HNR	**Honiara**	**52.94**	**96**	*e*P	**P**	**11 27 24.6**	**-0.3**
HNR				LR	LR		
	comp=Z,1μm,22.0s						
HNR	**Honiara**	**52.94**	**96**	*e*P	**P**	**11 27 24.6**	**-0.3**
HNR				MLR	MLR		
	comp=Z,1μm,22.0s						
MAJO	**Matsushiro**	**53.12**	**32**	*e*P	**P**	**11 27 24.1**	**-1.8**
	comp=Z,113nm,1.0s						
MAJO				*e*PcP	**PcP**	**11 28 34.5**	**+1.2**
MAJO				*e*		11 50 45.3	
MAJO				LR	LR		
	comp=Z,1μm,21.0s						
MAJO	**Matsushiro**	**53.12**	**32***c*	*i*P	**P**	**11 27 23.9**	**-2.0**
MAJO				pmax	pmax		
	comp=Z,77nm,0.9s						
MAJO				MLR	MLR		
	comp=Z,904nm,17.0s						
MAT	**Matsushiro**	**53.12**	**32**	P	**P**	**11 27 23.6**	**-2.3**
MAT				S	**S**	**11 34 45.4**	**-5.5**
MJAR	**Matsushiro Arr**	**53.12**	**32**	P	**P**	**11 27 24.6**	**-1.3**
	comp=Z,90nm,0.9s,baz=216,slow=8.0,SNR=245						
MJAR				PcP	**PcP**	**11 28 34.5**	**+1.2**
	comp=Z,28nm,0.9s,baz=212,slow=5.4,SNR=6.9						
MJAR				ScP	**ScP**	**11 32 26.2**	**+1.8**
	comp=Z,2.5nm,1.0s,baz=151,slow=2.8,SNR=5.0						
MJAR				LR	LR	11 50 45.3	
	comp=Z,1μm,21.2s,baz=195,slow=37						
MJB9	**Matsu-Tunnel**	**53.12**	**32**	*e*P	**P**	**11 27 24.2**	**-1.7**
	comp=Z,110nm,1.0s						
WMQ	**Urumqi**	**53.96**	**343**	P	**P**	**11 27 33.9**	**+2.0**
WMQ				sP	sP	11 27 57.9	-1.4
WMQ				PcP	**PcP**	**11 28 37.0**	**+0.7**
WMQ				PP	**PP**	**11 29 35.9**	**+1.8**
WMQ				S	**S**	**11 35 03.5**	**+1.5**
WMQ				ScS	**ScS**	**11 37 13.8**	**-0.5**
WMQ				SS	**SS**	**11 38 45.0**	**+0.5**
WMQ				pmax	pmax		
	comp=Z,920nm,1.1s						
WMQ				LR	LR		
	comp=Z,3μm,16.7s						
WMQ				LR	LR		
	comp=Z,2μm,19.7s						
WMQ				LR	LR		
	comp=Z,4μm,24.5s						
CN2	**Changchun**	**54.03**	**17**	*e*P	**P**	**11 27 31.9**	**-0.5**
CN2				PcP	**PcP**	**11 28 35.9**	**-0.6**
CN2				*e*S	**S**	**11 35 00.3**	**-2.6**
CN2				*e*SS	**SS**	**11 38 43.9**	**-1.7**
CN2				pmax	pmax		
	comp=Z,420nm,1.2s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,2μm,22.0s						
CN2				LR	LR		
	comp=Z,630nm,22.0s						
CN2				LR	LR		
	comp=Z,2μm,23.0s						
KSH	**Kashi**	**54.73**	**331**	⇑*i*P	**P**	**11 27 37.0**	**-0.7**
KSH				S	**S**	**11 35 08.0**	**-4.7**
KSH				sS	sS	11 35 43.7	-1.4
KSH				ScS	**ScS**	**11 37 21.5**	**+1.3**
KSH				pmax	pmax		
	comp=Z,920nm,1.4s						
KSH				pmax	pmax		
	comp=Z,3μm,4.1s						
KSH				LR	LR		
	comp=Z,2μm,15.3s						
KSH				LR	LR		
	comp=Z,1μm,14.6s						
KSH				LR	LR		
	comp=Z,2μm,12.5s						
KBL	**Kabul**	**54.85**	**322**	*e*P	**P**	**11 27 39.0**	**+0.3**
	comp=Z,236nm,1.2s						
KBL				*e*S	**S**	**11 35 16.5**	**+1.9**
KBL	**Kabul**	**54.85**	**322**	*e*P	**P**	**11 27 39.0**	**+0.3**
KBL				*e*S	**S**	**11 35 16.5**	**+1.9**
KBL				pmax	pmax		
	comp=Z,236nm,1.2s						
MSHR	**Mys Shultsa**	**54.85**	**22***c*	*i*P	**P**	**11 27 38.3**	**+0.1**
SONA0	**Songino Array**	**55.24**	**360**	*e*P	**P**	**11 27 43.1**	**+2.0**
SONA0				*e*PcP	**PcP**	**11 28 42.2**	**+1.0**
SONA0				*e*S	**S**	**11 35 21.7**	**+2.6**
SONA0				*e*		12 04 57.1	
SONM	**Songino Array**	**55.24**	**360**	P	**P**	**11 27 43.1**	**+2.0**
	comp=Z,270nm,0.5s,baz=177,slow=8.7,SNR=977						
SONM				PcP	**PcP**	**11 28 42.2**	**+1.0**
	comp=Z,65nm,0.8s,baz=178,slow=3.8,SNR=5.4						
SONM				ScP	**ScP**	**11 32 35.3**	**+1.8**
	comp=Z,5.0nm,1.0s,baz=196,slow=2.7,SNR=4.0						
SONM				S	**S**	**11 35 21.7**	**+2.6**
	comp=Z,1.1nm,0.9s,baz=201,slow=16,SNR=4.0						
SONM				LR	LR	11 53 02.3	
	comp=Z,3μm,21.7s,baz=176,slow=38						
SONM				P4KPbc		12 04 57.1	
	comp=Z,0.7nm,0.9s,baz=187,slow=3.7,SNR=3.7						
SONA1	**Songino Array**	**55.25**	**360**	*e*P	**P**	**11 27 42.4**	**+1.1**
SONA1				*e*S	**S**	**11 35 25.0**	**+5.6**
ULN	**Ulaanbaatar**	**55.27**	**1**	*e*P	**P**	**11 27 43.2**	**+1.8**
	comp=Z,656nm,1.1s						
ULN				LR	LR		
	comp=Z,3μm,22.0s						
ULN	**Ulaanbaatar**	**55.27**	**1**	P	**P**	**11 27 42.3**	**+0.8**
	SNR=187						
ULN	**Ulaanbaatar**	**55.27**	**1**	P	**P**	**11 27 42.3**	**+0.8**
	SNR=187						
ULN	**Ulaanbaatar**	**55.27**	**1***c*	*i*P	**P**	**11 27 42.9**	**+1.5**
ULN				pmax	pmax		
	comp=Z,406nm,0.8s						
ULN				MLR	MLR		
	comp=Z,3μm,23.0s						
WBK	**Wadi Bani Khal**	**55.32**	**304**	P	**P**	**11 27 45.1**	**+3.0**
	SNR=6.4						
WBK	**Wadi Bani Khal**	**55.32**	**304**	P	**P**	**11 27 45.1**	**+3.0**
	SNR=6.4						
TARG	**Taragay, Kyrgy**	**55.68**	**334**	*e*P	**P**	**11 27 45.5**	**+0.7**
	comp=Z,105nm,0.7s						
WSAR	**Wadi Sarin**	**55.88**	**305**	LR	LR	11 49 46.2	
	comp=Z,2μm,21.5s,baz=130,slow=34						
JMDO	**Jabal Madar**	**55.92**	**303**	P	P	11 27 55.0	+8.6
	SNR=5.7						
PRZ	**Przheval'sk**	**56.05**	**335**	*e*P	**P**	**11 27 48.6**	**+1.4**
	comp=Z,356nm,1.1s						
PRZ	**Przheval'sk**	**56.05**	**335**	*e*P	**P**	**11 27 48.6**	**+1.4**
PRZ				pmax	pmax		
	comp=Z,356nm,1.1s						
MDJ	**Mudanjiang**	**56.07**	**20**	P	**P**	**11 27 43.7**	**-3.3**
MDJ				S	**S**	**11 35 24.7**	**-5.3**
MDJ				ScS	**ScS**	**11 37 27.4**	**-1.8**
MDJ				pmax	pmax		
	comp=Z,150nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,1μm,4.0s						
MDJ				LR	LR		
	comp=N,1μm,20.7s						
MDJ				LR	LR		
	comp=E,630nm,20.7s						
MDJ				LR	LR		
	comp=Z,2μm,20.9s						
MDJ	**Mudanjiang**	**56.07**	**20**	*e*P	**P**	**11 27 46.4**	**-0.6**
	comp=Z,125nm,0.9s						
MDJ				LR	LR		
	comp=Z,1μm,20.0s						
SHLS	**Shalkode**	**56.18**	**336**⇑	*i*P	**P**	**11 27 47.9**	**-0.1**
	comp=Z,176nm,0.8s						
SHLS				*i*S	**S**	**11 35 31.0**	**-1.0**
NRN	**Naryn**	**56.24**	**333**	*e*P	**P**	**11 27 48.9**	**+0.2**
	comp=Z,388nm,1.3s						
NRN	**Naryn**	**56.24**	**333**	*e*P	**P**	**11 27 48.9**	**+0.2**
NRN				pmax	pmax		
	comp=Z,388nm,1.3s						
SMDO	**Samad**	**56.28**	**304**	P	**P**	**11 27 53.0**	**+3.9**
	SNR=8.8						
SMDO	**Samad**	**56.28**	**304**	P	**P**	**11 27 53.0**	**+3.9**
	SNR=8.8						
KDJ	**Kajisay**	**56.28**	**334**	*e*P	**P**	**11 27 49.7**	**+0.9**
	comp=Z,836nm,1.3s						
KDJ				*e*S	**S**	**11 35 35.0**	**+1.7**
KDJ	**Kajisay**	**56.28**	**334**	P	**P**	**11 27 49.7**	**+0.9**
KDJ				pmax	pmax		
	comp=Z,840nm,1.3s						
UZB	**Uzynbulak**	**56.35**	**336**⇑	*i*P	**P**	**11 27 50.1**	**+0.8**
	comp=Z,101nm,0.7s						
UZB				*i*S	**S**	**11 35 33.4**	**-0.8**
BIDO	**Bidbid**	**56.42**	**305**	P	**P**	**11 27 53.0**	**+3.0**
	SNR=18						
BIDO	**Bidbid**	**56.42**	**305**	P	**P**	**11 27 53.0**	**+3.0**
	SNR=18						
SATY	**Saty**	**56.52**	**336**	*e*P	**P**	**11 27 51.4**	**+0.9**
	comp=Z,239nm,1.2s						
USRK	**Ussuriysk Ar.**	**56.55**	**22**	P	**P**	**11 27 50.8**	**+0.4**
	comp=Z,48nm,0.5s,baz=211,slow=6.2,SNR=130						
ZHN	**Zhinishke**	**56.60**	**336**⇑	*i*P	**P**	**11 27 51.7**	**+0.6**
	comp=Z,93nm,1.3s						
ZHN				*e*S	**S**	**11 35 36.2**	**-1.3**
KPKS	**Kokpek**	**56.75**	**336**⇑	*i*P	**P**	**11 27 52.6**	**+0.6**
	comp=Z,248nm,1.4s						
KPKS				*i*S	**S**	**11 35 38.4**	**-1.0**
ULHL	**Ulahol**	**56.78**	**334**	P	**P**	**11 27 53.7**	**+1.3**
	SNR=5.7						
BSY	**Bisya**	**56.84**	**303**	P	P	11 27 59.0	+6.0
	SNR=11						
BSY	**Bisya**	**56.84**	**303**	P	P	11 27 59.0	+6.0
	SNR=11						
KZA	**Kyzart**	**57.09**	**333**	P	**P**	**11 27 55.9**	**+1.0**
	SNR=17						
HOQ	**Hoqain**	**57.12**	**304**	P	**P**	**11 27 59.0**	**+4.1**
	SNR=10						
HOQ	**Hoqain**	**57.12**	**304**	P	**P**	**11 27 59.0**	**+4.1**
	SNR=10						
MDOK	**Medeo**	**57.18**	**335**	*i*P	**P**	**11 27 55.8**	**+0.6**
	comp=Z,2μm,1.4s						
MDOK				*i*S	**S**	**11 35 44.2**	**-0.9**
AAA	**Alma-Ata**	**57.27**	**335**	*e*P	**P**	**11 27 56.4**	**+0.7**
AAA	**Alma-Ata**	**57.27**	**335**	*e*P	**P**	**11 27 56.2**	**+0.5**
AAA				*e*S	**S**	**11 35 45.5**	**-0.7**
AAA				pmax	pmax		
	comp=Z,1μm,4.4s						
AAA				smax	smax		
	comp=E,2μm,6.2s						
RBK	**Rabkut**	**57.30**	**296**	P	**P**	**11 27 60.0**	**+3.7**
	SNR=6.4						
RBK	**Rabkut**	**57.30**	**296**	P	**P**	**11 27 60.0**	**+3.7**
	SNR=6.4						
UCH	**Uchtor**	**57.55**	**332**	P	**P**	**11 27 58.6**	**+0.5**
	SNR=81						
TKM2	**Tokmak 2**	**57.61**	**334**	P	**P**	**11 27 58.5**	**+0.3**
	SNR=596						
KBK	**Karagaybulak**	**57.69**	**333**	P	**P**	**11 27 59.5**	**+0.8**
	SNR=157						
BMNS	**Besmoynak**	**57.73**	**334**	*e*P	**P**	**11 27 59.4**	**+0.5**
	comp=E,100nm,1.3s						
BMNS				*e*S	**S**	**11 35 51.1**	**-1.2**
ZAK	**Zakamensk**	**57.85**	**358**	*e*P	**P**	**11 28 00.9**	**+1.3**
ZAK				pmax	pmax		
	comp=Z,164nm,1.1s						
AML	**Almayashu**	**57.85**	**332**	P	**P**	**11 27 59.0**	**-1.2**
	SNR=108						
HIA	**Hailar**	**57.86**	**10**	*e*P	**P**	**11 27 59.1**	**-0.6**
	comp=Z,164nm,1.1s						
HIA				LR	LR		
	comp=Z,1μm,20.0s						
HIA	**Hailar**	**57.86**	**10***c*	*i*P	**P**	**11 27 59.2**	**-0.4**
HIA				pmax	pmax		
	comp=Z,124nm,1.0s						
HIA				MLR	MLR		
	comp=Z,907nm,18.0s						
AAK	**Ala-Archa**	**57.88**	**333**	P	**P**	**11 28 01.0**	**+1.0**
	comp=Z,45nm,0.6s,baz=136,slow=5.4,SNR=129						
AAK				PcP	**PcP**	**11 28 53.3**	**+1.6**
	comp=Z,57nm,0.9s,baz=196,slow=7.7,SNR=5.0						
AAK				S	**S**	**11 35 54.4**	**+0.1**
	comp=Z,1.5nm,0.5s,baz=260,slow=21,SNR=5.8						
AAK	**Ala-Archa**	**57.88**	**333**	P	**P**	**11 28 00.6**	**+0.5**
	SNR=87						
AAK	**Ala-Archa**	**57.88**	**333**	*e*P	**P**	**11 28 00.6**	**+0.5**
	comp=Z,108nm,1.1s						
AAK				*e*PcP	**PcP**	**11 28 53.3**	**+1.6**
AAK				*e*S	**S**	**11 35 54.4**	**+0.1**
AAK				LR	LR		
	comp=Z,1μm,22.0s						
AAK	**Ala-Archa**	**57.88**	**333**	P	**P**	**11 28 00.9**	**+0.8**
	SNR=78						
AAK	**Ala-Archa**	**57.88**	**333**	P	**P**	**11 28 00.9**	**+0.8**
	SNR=78						
AAK	**Ala-Archa**	**57.88**	**333**	*i*P	**P**	**11 28 00.6**	**+0.5**
	SNR=102						
AAK	**Ala-Archa**	**57.88**	**333***c*	*i*P	**P**	**11 28 00.5**	**+0.5**
AAK				pmax	pmax		
	comp=Z,92nm,1.0s						
AAK				MLR	MLR		
	comp=Z,2μm,27.0s						
FRU	**Bishkek**	**57.98**	**333**	*i*P	**P**	**11 28 00.0**	**-0.6**
FRU				*i*		11 28 28.0	
FRU				*e*S	**S**	**11 35 54.0**	**-1.4**
FRU				pmax	pmax		
	comp=Z,530nm,2.0s						
FRU				smax	smax		
	comp=E,2μm,4.0s						
CHMS	**Chumysh**	**58.05**	**333**	P	**P**	**11 28 01.2**	**+0.1**
	SNR=36						
ABTO	**Aybut**	**58.05**	**296**	P	**P**	**11 28 05.0**	**+3.3**
	SNR=5.8						
ABTO	**Aybut**	**58.05**	**296**	P	**P**	**11 28 05.0**	**+3.3**
	SNR=5.8						
KUU	**Kurty**	**58.07**	**335**⇑	*i*P	**P**	**11 28 01.2**	**0.0**
	comp=E,376nm,1.2s						
KUU				*e*S	**S**	**11 35 55.1**	**-1.4**
ZSN	**Zaisan**	**58.08**	**343**⇑	*i*P	**P**	**11 28 02.7**	**+1.5**
	comp=E,39nm,0.9s						
ZSN				*i*S	**S**	**11 35 57.2**	**+0.7**
EKS2	**Erkin-Say**	**58.23**	**332**	P	**P**	**11 28 03.1**	**+0.6**
	SNR=189						
MK01	**Makanchi Array**	**58.27**	**341**	*e*P	**P**	**11 28 03.4**	**+0.8**

MK31 Makanchi Array 58.29 341 *e*P **P** **11 28 03.6 +0.9**
MK31 Makanchi Array 58.29 341 *e*P **P** **11 28 03.6 +0.9**
MK32 Makanchi Array 58.29 341 *e*P **P** **11 28 04.0 +1.3**
MK32 *e*S **S** **11 36 01.7 +2.4**
MK32 *e* 11 57 07.6
MK32 *e* 12 05 11.8
MKAR Makanchi Array 58.29 341 P **P** **11 28 04.0 +1.3**
comp=E,289nm,0.6s,baz=145,slow=8.2,SNR=1257
MKAR S **S** **11 36 01.7 +2.4**
comp=E,8.7nm,1.0s,baz=149,slow=14,SNR=9.0
MKAR LR LR 11 57 07.6
comp=E,2μm,20.9s,baz=156,slow=40
MKAR PKPPKP **P'P'df** **11 57 41.8 +1.1**
comp=E,0.2nm,0.4s,baz=302,slow=6.9,SNR=3.7
MKAR P4KPbc 12 05 11.8
comp=E,1.1nm,0.9s,baz=132,slow=6.7,SNR=7.2
MKAR Makanchi Array 58.29 341 *e*P **P** **11 28 03.6 +0.9**
comp=E,2μm,0.6s
MKAR S **S** **11 36 01.7 +2.4**
MKAR *e* 12 05 11.8
MKAR Makanchi Array 58.29 341 *i*P **P** **11 28 03.0 +0.3**
MKAR pmax pmax
comp=Z,289nm,0.6s
USP Ospenovka 58.37 333 P **P** **11 28 03.4 +0.1**
SNR=97
MAKZ Makanchi 58.41 341 *e*P **P** **11 28 04.0 +0.5**
comp=Z,207nm,1.1s
MAKZ *e*S **S** **11 36 04.7 +3.9**
MAKZ Makanchi 58.41 341 *e*P **P** **11 28 04.0 +0.5**
MAKZ *e*S **S** **11 36 04.7 +3.9**
MAKZ pmax pmax
comp=Z,207nm,1.1s
ABPO Ambohimpanom 58.45 252 *e*P **P** **11 28 03.0 -1.5**
comp=Z,81nm,1.3s
ABPO LR LR
comp=Z,546nm,21.0s
ABPO Ambohimpanom 58.45 252 *e*P **P** **11 28 03.0 -1.5**
ABPO pmax pmax
comp=Z,81nm,1.3s
ABPO MLR MLR
comp=Z,546nm,21.0s
OPO Ambohidratompo 58.46 253 P **P** **11 28 05.9 +1.2**
comp=Z,14nm,1.0s,baz=91,slow=9.1,SNR=7.1
OPO LR LR 11 47 49.3
comp=Z,1μm,21.4s,baz=87,slow=30
ALNE Al Ain 58.61 304 *i*P **P** **11 28 06.6 +1.3**
SNR=11
CASY Casey 58.61 178 *e*P **P** **11 28 03.6 -1.0**
comp=Z,75nm,1.0s
CASY LR LR
comp=Z,491nm,22.0s
UOSS Minazif 58.63 305 *e*P **P** **11 28 06.0 +0.5**
comp=Z,258nm,1.5s
UOSS Minazif 58.63 305 *i*P **P** **11 28 05.9 +0.5**
SNR=6.9
HATD Hatta, Dubai 58.64 305 P **P** **11 28 08.0 +2.5**
SNR=12
HATD Hatta, Dubai 58.64 305 P **P** **11 28 08.0 +2.5**
SNR=12
HATD Hatta, Dubai 58.64 305 *i*P **P** **11 28 06.6 +1.1**
SNR=24
MSFE Esma-Masafi 58.85 306 *i*P **P** **11 28 07.4 +0.4**
SNR=8.6
TEY Ternei 59.05 25 *e*P **P** **11 28 08.0 +0.1**
TEY pmax pmax
comp=Z,1μm,4.0s
TEY pmax pmax
comp=N,47nm,1.0s
TEY pmax pmax
comp=E,22nm,1.0s
TEY pmax pmax
comp=Z,86nm,1.0s
NAZ Nazwa, Dubai 59.09 305 P **P** **11 28 10.1 +1.5**
SNR=16
NAZ Nazwa, Dubai 59.09 305 P **P** **11 28 10.1 +1.5**
SNR=16
NAZ Nazwa, Dubai 59.09 305 *i*P **P** **11 28 09.6 +0.9**
SNR=37
TLY Talaya 59.13 358 P **P** **11 28 10.3 +1.8**
baz=196,slow=9.8,SNR=8.8
TLY LR LR 11 55 25.4
comp=Z,2μm,21.6s,baz=162,slow=38
TLY Talaya 59.13 358 *e*P **P** **11 28 09.8 +1.4**
comp=Z,277nm,1.2s
TLY *e* 11 55 25.4
TLY LR LR
comp=Z,2μm,21.0s
TLY Talaya 59.13 358 P **P** **11 28 10.3 +1.8**
SNR=97
TLY Talaya 59.13 358 P **P** **11 28 10.3 +1.8**
SNR=97
TLY Talaya 59.13 358*c* *i*P **P** **11 28 08.5 +0.1**
TLY *e* 11 29 00.5
TLY *e* 11 30 16.9
TLY *e*S **S** **11 36 10.1 +0.1**
TLY *e* 11 37 49.6
TLY pmax pmax
comp=Z,245nm,1.2s
TLY MLR MLR
comp=Z,3μm,20.0s
SHME Shamm 59.18 306 *i*P **P** **11 28 10.5 +1.2**
SNR=20
ASUD Al Ashush, Dub 59.20 304 P **P** **11 28 12.0 +2.6**
SNR=8.9
ASUD Al Ashush, Dub 59.20 304 P **P** **11 28 12.0 +2.6**
SNR=8.9
ASUD Al Ashush, Dub 59.20 304 *i*P **P** **11 28 10.8 +1.4**
SNR=14
MOY Mondy 59.26 356 *e*P **P** **11 28 10.2 +0.8**
MOY pmax pmax
comp=Z,444nm,2.7s
DZM Mont Dzumac 59.43 111 P **P** **11 28 12.5 +1.3**
comp=Z,29nm,0.9s,baz=244,slow=9.5,SNR=12
DZM LR LR 11 53 20.1
comp=Z,1μm,21.9s,baz=273,slow=36
DZM Mont Dzumac 59.43 111 *e*P **P** **11 28 10.5 -0.7**
comp=Z,179nm,1.4s
DZM Mont Dzumac 59.43 111 *e*LR LR 11 45 49.7
comp=Z,5μm,33.4s
DZM Mont Dzumac 59.43 111 *e*P **P** **11 28 12.4 +1.2**
comp=Z,72nm,1.0s
AJN Ajban 59.45 304 *i*P **P** **11 28 12.0 +0.8**
SNR=7.5
MIR Mirnyy 59.54 186⇊ *i*P **P** **11 28 11.5 +0.5**
MIR pmax pmax
comp=Z,420nm,1.0s
HVS Khovu-Aksy 59.56 351*c* *i*P **P** **11 28 12.6 +1.1**
HVS *i* *PP **pP** **11 28 29.3 -1.5**
HVS *i* *SP **sP** **11 28 38.8 -0.3**
HVS pmax pmax
comp=Z,175nm,1.0s
DZA Taraz 59.56 331 *e*P **P** **11 28 11.7 +0.1**
comp=Z,21nm,0.6s
IUG Iuzhnay 59.66 329⇑ *i*P **P** **11 28 12.9 +0.5**
comp=Z,70nm,0.8s
IUG *e*S **S** **11 36 16.4 -0.9**
IRK Irkutsk 59.68 358 *e*P **P** **11 28 13.3 +1.1**
IRK *e*S **S** **11 36 21.2 +4.2**
IRK pmax pmax
comp=Z,436nm,1.4s
CIT Chita 59.74 5 *e*P **P** **11 28 14.0 +1.3**
CIT *e* 11 28 28.3
CIT *e* 11 28 41.1
CIT *e* 11 28 59.6
CIT pmax pmax
comp=Z,652nm,2.6s
ERM Erimo 59.75 31 *e*P **P** **11 28 13.0 +0.2**
comp=Z,116nm,0.9s
ERM LR LR
comp=Z,1μm,22.0s
ERM Erimo 59.75 31*d* *i*P **P** **11 28 12.7 -0.1**
ERM pmax pmax
comp=Z,151nm,1.0s
CHM Chimkent 60.00 329 *e*P **P** **11 28 15.3 +0.8**
comp=Z,62nm,1.1s
MZR Muzera 60.05 302 *i*P **P** **11 28 16.6 +1.3**
SNR=20
KK31 Karatay Array 60.12 330 *e*P **P** **11 28 15.3 -0.1**
KK31 Karatay Array 60.12 330 *e*P **P** **11 28 15.3 -0.1**
KKAR Karatay Array 60.12 330 *e*P **P** **11 28 15.3 -0.1**
KKAR Karatay Array 60.12 330 *e*P **P** **11 28 15.3 -0.1**
KLR Kul'dur 60.83 19 P **P** **11 28 19.9 -0.1**
comp=Z,12nm,0.8s,baz=215,slow=4.7,SNR=278
KLR Kul'dur 60.83 19*c* *i*P **P** **11 28 19.6 -0.4**
ASAJ Asahikawa 61.02 29 P **P** **11 28 21.5 +0.1**
comp=Z,114nm,0.7s,baz=232,slow=7.0,SNR=90
ASAJ LR LR 11 57 21.3
comp=Z,416nm,19.0s,baz=230,slow=38
ASAJ Asahikawa 61.02 29 *e*P **P** **11 28 21.5 +0.1**
comp=Z,139nm,0.9s
ASAJ *e* 11 57 21.3
SEM Semipalatinsk 62.11 341⇑ *i*P **P** **11 28 29.3 +0.4**
comp=Z,249nm,1.1s
SEM *i*S **S** **11 36 49.2 +0.7**
YUK Yuzh-Kuril'sk 62.58 31 *e*P **P** **11 28 30.1 -1.8**
YUK *e* 11 29 08.2
YUK *e* 11 30 48.0
YUK *e*S **S** **11 36 53.6 -0.5**
YUK pmax pmax
comp=Z,478nm,1.3s
YUK pmax pmax
comp=N,240nm,0.9s
YUK pmax pmax
comp=E,203nm,0.9s
KURBB Kurchatov Arra 62.85 340 P **P** **11 28 35.1 +1.5**
comp=E,376nm,1.0s,baz=157,slow=6.0,SNR=508
KURBB S **S** **11 36 53.0 -4.2**
comp=E,4.3nm,1.1s,baz=148,slow=14,SNR=6.8
KURK Kurchatov 62.90 341 *e*P **P** **11 28 34.6 +0.8**
comp=E,676nm,1.0s
KURK *e*S **S** **11 36 53.0 -4.8**
KURK *e*S S 11 37 00.6 +2.7
KURK LR LR
comp=Z,2μm,19.0s
KURK Kurchatov 62.90 341 P **P** **11 28 34.7 +0.8**
SNR=288
KURK Kurchatov 62.90 341 P **P** **11 28 34.7 +0.8**
SNR=288
KURK Kurchatov 62.90 341 P **P** **11 28 35.1 +1.2**
KURK S **S** **11 36 53.1 -4.8**
KURK pmax pmax
comp=Z,352nm,1.0s
KURK smax smax
comp=N,4.0nm,1.1s
YSS Yuzh-Sakhalins 63.22 27 *e*P **P** **11 28 36.2 +0.1**
comp=N,751nm,1.1s
YSS Yuzh-Sakhalins 63.22 27 *i*P **P** **11 28 36.1 +0.1**
YSS pmax pmax
comp=Z,480nm,0.9s
ZEA Zeya 63.64 14*ce*P **P** **11 28 39.0 +0.3**
ZEA *e* 11 29 10.0
ZEA *e*S **S** **11 37 04.0 -3.0**
ZEA *e* 11 38 25.0
ZEA *e*SS **SS** **11 41 16.0 -0.1**
ZEA pmax pmax
comp=N,180nm,1.0s
ZEA pmax pmax
comp=E,100nm,1.0s
ZEA pmax pmax
comp=Z,320nm,1.0s
ZEA pmax pmax
comp=Z,1μm,6.0s
ZEA pmax pmax
comp=N,900nm,5.0s
ZEA MLR MLR
comp=E,400nm,16.0s
GRNR Gornyy 63.71 21 *e*P **P** **11 28 40.0 +0.7**
GRNR pmax pmax
comp=N,160nm,1.0s
GRNR pmax pmax
comp=E,96nm,1.0s
GRNR pmax pmax
comp=Z,220nm,1.0s
GEYT Alibeck 63.85 319 P **P** **11 28 41.9 +1.3**
comp=Z,49nm,0.5s,baz=143,slow=5.2,SNR=143
GEYT PKP2bc 11 57 39.1
comp=Z,1.9nm,0.6s,baz=289,slow=9.1,SNR=6.5
GEYT LR LR 11 59 12.5
comp=Z,735nm,21.5s,baz=130,slow=38
GYA0B ALIBECK ARRAY 63.85 319 *e*P **P** **11 28 41.7 +1.1**
comp=Z,397nm,1.4s
ZAA0 Zalesovo Array 64.01 346 *e*P **P** **11 28 40.8 -0.4**
comp=Z,397nm,1.0s
ZALV Zalesovo Beam 64.01 346 P **P** **11 28 41.8 +0.6**
comp=Z,127nm,0.6s,baz=149,slow=3.4,SNR=350
ZALV S **S** **11 37 06.3 -5.2**
comp=Z,2.3nm,0.8s,baz=138,slow=11,SNR=4.1
ZALV PKP2bc 11 57 37.4
comp=Z,1.7nm,0.6s,baz=282,slow=2.9,SNR=4.0
ZALV LR LR 11 58 43.1
comp=Z,2μm,19.4s,baz=80,slow=38
ZALV Zalesovo Beam 64.01 346 *e*P **P** **11 28 41.0 -0.1**
ZALV S **S** **11 37 06.3 -5.2**
ZALV *e*S S 11 37 11.5 0.0
ZAA1 Zalesovo Array 64.01 346 *e*P **P** **11 28 41.8 +0.6**
ZAA1 *e*S **S** **11 37 06.3 -5.2**
ZAA1 *e* 11 58 43.1
KUR Kuril'sk 64.44 31*c* *i*P **P** **11 28 44.1 -0.1**
KUR *e*S **S** **11 37 14.3 -2.9**
KUR pmax pmax
comp=Z,988nm,1.0s
KUR pmax pmax
comp=E,137nm,1.1s
KUR pmax pmax
comp=N,238nm,1.3s
KUR pmax pmax
comp=Z,2μm,3.4s
KUR pmax pmax
comp=N,637nm,2.2s
KUR pmax pmax
comp=E,394nm,2.6s
KUR MLR MLR
comp=Z,339nm,15.0s
KUR MLR MLR
comp=N,137nm,14.0s
BRZS Berezniki 64.45 337 *i*P **P** **11 28 45.1 +0.9**
comp=N,12nm,1.4s
BRZS *e*S **S** **11 37 16.9 -0.4**
WAKE Wake Island 65.09 65 PFAKE 11 29 00.0 +11
WAKE LR LR
comp=Z,1μm,22.0s
NVS Novosibirsk 65.21 345⇑ *i*P **P** **11 28 49.8 +0.9**
NVS *e*S **S** **11 37 24.2 -2.0**
NVS pmax pmax
comp=Z,266nm,1.4s
NVS pmax pmax
comp=N,138nm,1.3s
NVS pmax pmax
comp=E,115nm,1.3s
NVS smax smax
comp=N,86nm,1.9s
NVS smax smax
comp=E,137nm,1.5s
DAMY Dhamar 65.33 290 *e*P **P** **11 28 52.3 +1.4**
comp=E,133nm,0.9s
BOD Bodaibo 65.53 4 *e*P **P** **11 28 51.7 +0.7**
BOD pmax pmax
comp=Z,351nm,1.5s
ATD Arta Tunnel 66.03 286 P **P** **11 28 57.1 +2.0**
comp=Z,18nm,0.8s,baz=112,slow=18,SNR=5.1
ATD LR LR 11 53 35.7
comp=Z,294nm,21.2s,baz=80,slow=32
CLNS Chul'man 66.03 11 *e*P **P** **11 28 55.2 +0.9**
CLNS *e* 11 29 22.9
CLNS *e* 11 31 23.1
CLNS *e*PPP PPP 11 33 00.0
CLNS *e*S **S** **11 37 35.4 -0.9**
CLNS *e**SS sS 11 38 18.0 +8.4
CLNS *e*SS **SS** **11 41 48.9 -4.4**
CLNS *e*SSS SSS 11 44 43.5
CLNS pmax pmax
comp=Z,113nm,1.0s
CLNS pmax pmax
comp=E,46nm,1.0s
CLNS pmax pmax
comp=N,73nm,1.0s
CLNS pmax pmax
comp=E,10.0nm,0.8s
CLNS pmax pmax
comp=Z,5.0nm,0.8s
CLNS pmax pmax
comp=N,8.0nm,0.9s
CLNS smax smax
comp=N,202nm,10.6s
CLNS smax smax
comp=E,353nm,12.0s
TYV Tymovskoe 66.15 24 *e*P **P** **11 28 55.5 +0.4**
TYV pmax pmax
comp=Z,83nm,1.6s
TYV pmax pmax
comp=Z,1μm,4.3s
RPZ Rata Peaks 66.50 134 LR LR 11 58 48.3
comp=Z,3μm,19.2s,baz=284,slow=37
RPZ Rata Peaks 66.50 134 *e*P **P** **11 28 57.6 0.0**
comp=Z,77nm,1.2s
RPZ *e* 11 58 48.3
MAW Mawson 66.58 197 P **P** **11 28 57.9 +0.2**
comp=Z,148nm,0.9s,baz=48,slow=7.1,SNR=231
MAW PKP2bc 11 57 25.9
comp=Z,23nm,1.1s,baz=230,slow=6.7,SNR=9.6
MAW Mawson 66.58 197 *e*P **P** **11 28 58.0 +0.4**
comp=Z,47nm,1.0s
MAW Mawson 66.58 197 *e*P **P** **11 28 58.0 +0.4**
MAW pmax pmax
comp=Z,47nm,1.0s
TARA Tarawa 66.94 85 PFAKE 11 29 10.0 +9.1
TARA LR LR
comp=Z,125nm,20.0s
RAYN Ar Rayn 67.05 299 *e*P **P** **11 29 01.6 +0.1**
comp=Z,113nm,1.1s
RAYN LR LR
comp=Z,1μm,22.0s
RAYN Ar Rayn 67.05 299 *i*P **P** **11 29 01.8 +0.3**
SNR=10.0
RAYN Ar Rayn 67.05 299 P **P** **11 29 01.5 +0.1**
RAYN pmax pmax
comp=Z,110nm,1.1s
NKL Nikolayevsk 67.18 22 *i*P **P** **11 29 02.0 +0.4**
NKL *e* 11 31 30.0
NKL *e*S **S** **11 37 50.0 -0.2**
NKL *e* 11 42 08.0
NKL pmax pmax
comp=N,600nm,4.0s
NKL pmax pmax
comp=E,500nm,4.0s
NKL pmax pmax
comp=Z,2μm,4.0s
NKL pmax pmax
comp=N,120nm,1.0s
NKL pmax pmax
comp=E,68nm,1.0s
NKL pmax pmax
comp=Z,390nm,1.0s
THZ Tophouse 67.46 132 *e*P **P** **11 29 04.2 +0.4**
comp=Z,58nm,0.7s
BVA0 Borovoye Array 67.73 337 *i*P **P** **11 29 04.8 -0.3**
BVA0 pmax pmax
comp=Z,255nm,1.3s
BVAR Borovoye Array 67.73 337 P **P** **11 29 06.2 +1.1**
comp=Z,97nm,0.6s,baz=142,slow=7.5,SNR=270
BVAR S **S** **11 37 55.5 -1.4**
comp=Z,4.3nm,0.9s,baz=195,slow=15,SNR=7.8
BVAR LR LR 12 02 21.8
comp=Z,627nm,19.8s,baz=138,slow=39
BRVK Borovoye 67.80 337 *e*P **P** **11 29 06.0 +0.5**
comp=Z,102nm,0.6s
BRVK LR LR
comp=Z,525nm,21.0s
BRVK Borovoye 67.80 337 P **P** **11 29 06.3 +0.8**
SNR=109
BRVK Borovoye 67.80 337 P **P** **11 29 06.3 +0.8**
SNR=109
BRVK Borovoye 67.80 337 *e*P **P** **11 29 06.0 +0.5**
BRVK pmax pmax
comp=Z,101nm,0.6s
BRVK MLR MLR
comp=Z,525nm,21.0s
KHZ Kahutara 68.03 133 *e*P **P** **11 29 07.8 +0.4**
comp=Z,204nm,1.8s
SNZO South Karori 68.72 131 PFAKE 11 29 20.0 +8.4
SNZO LR LR
comp=Z,2μm,22.0s
KMBO Kilima Mbogo 69.19 272 *e*P **P** **11 29 16.8 +1.4**
comp=Z,47nm,1.2s
KMBO LR LR
comp=Z,2μm,22.0s
KMBO Kilima Mbogo 69.19 272 *e*P **P** **11 29 16.8 +1.4**
KMBO pmax pmax
comp=Z,47nm,1.2s
KMBO MLR MLR
comp=Z,2μm,22.0s
AB31 Akbulak array 69.66 330 *i*P **P** **11 29 17.2 0.0**
AB31 pmax pmax
comp=Z,187nm,0.6s
ABKAR Akbulak array 69.66 330 *e*P **P** **11 29 17.7 +0.5**
ABKAR *e*S **S** **11 38 20.7 +0.7**
BFZ Birch Farm 69.78 130 *e*P **P** **11 29 18.7 +0.4**
comp=Z,101nm,1.1s
BKZ Black Stump Fm 69.78 129 *e*P **P** **11 29 18.8 +0.4**
comp=Z,93nm,1.0s
URZ Urewera 70.16 128 LR LR 12 00 45.1
comp=Z,751nm,20.9s,baz=284,slow=36
URZ Urewera 70.16 128 *e*P **P** **11 29 21.0 +0.4**
comp=Z,44nm,1.1s
MSVF Nonsavu 70.28 106⇑ *i*P **P** **11 29 21.1 -0.6**
AKTO Aktyubinsk 71.38 330 P **P** **11 29 28.5 +0.9**
comp=Z,31nm,0.3s,baz=129,slow=7.1,SNR=161
AKTO S **S** **11 38 37.5 -2.3**
comp=Z,6.5nm,0.9s,baz=26,slow=23,SNR=16
AKTO LR LR 12 04 11.5
comp=Z,365nm,21.7s,baz=121,slow=39
YAK Yakutsk 71.78 11 *e*P **P** **11 29 29.3 -0.5**
comp=Z,613nm,0.7s
YAK LR LR
comp=Z,807nm,20.0s
YAK Yakutsk 71.78 11*c* *i*P **P** **11 29 29.1 -0.6**
YAK *e**PP **PcP** **11 29 46.8 -1.5**
YAK *e* 11 29 49.5
YAK *e* 11 32 08.3
YAK *e*S **S** **11 38 39.0 -4.9**
YAK *e**SS **pS** **11 39 09.8 +1.9**
YAK *e* 11 39 21.8
YAK *e*SS **SS** **11 43 22.6 +1.1**
YAK pmax pmax
comp=Z,548nm,0.9s
YAK pmax pmax
comp=N,140nm,1.1s
YAK pmax pmax
comp=E,117nm,1.2s
YAK pmax pmax
comp=Z,136nm,3.5s
YAK pmax pmax
comp=N,98nm,4.1s
YAK smax smax
comp=E,197nm,3.5s
YAK smax smax
comp=N,256nm,2.7s
YAK MLR MLR
comp=Z,910nm,22.0s
YAK MLR MLR
comp=E,493nm,20.0s
FUNA Funafuti 71.97 96 PFAKE 11 29 40.0 +8.1
FUNA LR LR
comp=Z,5μm,19.0s
SKR Severo-Kuril's 72.19 31 *e*P **P** **11 29 32.3 -0.2**
SKR *e*S **S** **11 38 50.4 +1.3**
SKR *e*SS **SS** **11 43 21.0 -7.4**
SKR pmax pmax
comp=Z,600nm,4.9s
SKR pmax pmax
comp=Z,2μm,3.7s
SKR MLR MLR
comp=Z,400nm,19.0s
AKT Akhty 72.54 318⇑ *i*P **P** **11 29 36.2 +1.2**
AKT *e* 11 29 55.1
AKT *e* 11 32 18.6
AKT *e*S **S** **11 38 48.8 -5.0**
AKT pmax pmax
comp=Z,248nm,1.0s
MAK Makhachkala 73.37 319 *e*P **P** **11 29 35.2 -4.5**
MAK *e* 11 32 21.4
MAK *e*S **S** **11 39 01.9 -1.0**
MAK *e*SS **SS** **11 43 47.0 +0.3**
MAK pmax pmax
comp=Z,449nm,1.7s
RAO Raoul Island 73.83 118 LR LR 12 03 48.5
comp=Z,711nm,19.6s,baz=245,slow=37
RAO Raoul Island 73.83 118 PFAKE 11 30 00.0 +17
RAO LR LR
comp=Z,2μm,20.0s
GNI Garni 73.99 315 P **P** **11 29 44.8 +1.2**
comp=Z,114nm,1.0s,baz=151,slow=2.1,SNR=60
GNI LR LR 12 06 10.8
comp=Z,340nm,21.4s,baz=110,slow=39
GNI Garni 73.99 315 *e*P **P** **11 29 44.8 +1.2**
GNI *e* 12 06 10.8
GNI LR LR
comp=Z,472nm,22.0s

GNI	**Garni**	**73.99 315**	P	**P**	**11 29 45.0 +1.4**
	SNR=32				
GNI	**Garni**	**73.99 315**	P	**P**	**11 29 45.0 +1.4**
	SNR=32				
GNI	**Garni**	**73.99 315**	*i* P	**P**	**11 29 44.4 +0.8**
	SNR=26				
GNI	**Garni**	**73.99 315**	*c i*P	**P**	**11 29 44.7 +1.1**
GNI			pmax	pmax	
	comp=Z,397nm,1.0s				
SVE	**Sverdlovsk**	**74.35 336**	*d i*P	**P**	**11 29 46.4 +1.3**
SVE			*e*S	**S**	**11 39 14.1 +0.7**
SVE			pmax	pmax	
	comp=Z,461nm,1.0s				
PEA0B	**Petropavlovsk-**	**74.44 29**	*e*P	**P**	**11 29 46.2 +0.5**
	comp=Z,99nm,0.9s				
PETK	**Petropavlovsk-**	**74.44 29**	P	**P**	**11 29 45.8 +0.1**
	comp=Z,63nm,0.7s,baz=205,slow=3.3,SNR=62				
PETK			LR	LR	12 03 47.7
	comp=Z,252nm,20.6s,baz=234,slow=37				
PETK	**Petropavlovsk-**	**74.44 29**	*e*P	**P**	**11 29 45.5 -0.1**
PETK	**Petropavlovsk-**	**74.44 29**	P	**P**	**11 29 45.8 +0.1**
PETK			pmax	pmax	
	comp=Z,62nm,0.7s				
PETK			MLR	MLR	
	comp=Z,252nm,20.6s				
PEA1	**Petropavlovsk-**	**74.44 29**	*e*P	**P**	**11 29 45.8 0.0**
PEA1			*e*		12 03 47.7
GROC	**Groznyy**	**74.60 319**	*e*P	**P**	**11 29 47.4 +0.6**
GROC			*e*		11 30 00.6
GROC			*e*		11 32 36.5
GROC			*i* PPP	PPP	11 34 21.0
GROC			*e*S	**S**	**11 39 15.1 -1.6**
GROC			*e*		11 39 59.0
GROC			pmax	pmax	
	comp=Z,601nm,1.3s				
TBLG	**Delisi**	**74.66 317**	*e*P	**P**	**11 29 48.6 +1.3**
TBLG	**Delisi**	**74.66 317**	*e*P	**P**	**11 29 48.6 +1.3**
PET	**Petropavlovsk**	**74.85 30**	*e*P	**P**	**11 29 48.2 +0.1**
	comp=Z,202nm,1.0s				
PET			LR	LR	
	comp=Z,559nm,20.0s				
PET	**Petropavlovsk**	**74.85 30**	*c i*P	**P**	**11 29 48.0 0.0**
PET			*e**SP	**sP**	**11 30 13.2 -3.0**
PET			*e*S	**S**	**11 39 18.4 -0.7**
PET			*e*PS	**PnS**	**11 40 01.3 -2.4**
PET			pmax	pmax	
	comp=Z,1μm,3.9s				
PET			pmax	pmax	
	comp=Z,231nm,1.0s				
PET			pmax	pmax	
	comp=Z,400nm,12.1s				
ARU	**Arti**	**74.95 335**	P	**P**	**11 29 49.7 +1.1**
	comp=Z,132nm,0.6s,baz=119,slow=2.2,SNR=233				
ARU			S	**S**	**11 39 20.8 +0.7**
	comp=Z,1.5nm,0.3s,baz=267,slow=19,SNR=8.3				
ARU			LR	LR	12 07 17.1
	comp=Z,706nm,20.2s,baz=130,slow=39				
ARU	**Arti**	**74.95 335**	*e*P	**P**	**11 29 49.0 +0.5**
	comp=Z,503nm,1.2s				
ARU			*e*S	**S**	**11 39 21.6 +1.6**
ARU			LR	LR	
	comp=Z,700nm,19.0s				
ARU	**Arti**	**74.95 335**	*c i*P	**P**	**11 29 49.0 +0.5**
ARU			*PP	**pP**	**11 30 07.3 -1.2**
ARU					11 32 33.6
ARU			PPP	PPP	11 34 22.3
ARU			S	**S**	**11 39 23.8 +3.8**
ARU			*SS	**pS**	**11 39 46.9 +2.5**
ARU			SSS	SSS	11 47 29.6
ARU			pmax	pmax	
	comp=Z,384nm,1.0s				
ARU			MLR	MLR	
	comp=Z,2μm,31.0s				
AKH	**Akhalkalaki**	**75.38 316**	⇑*i*P	**P**	**11 29 52.9 +1.3**
AKH	**Akhalkalaki**	**75.38 316**	*e*P	**P**	**11 29 53.1 +1.6**
	comp=Z,201nm,1.4s				
AKH	**Akhalkalaki**	**75.38 316**	*e*P	**P**	**11 29 53.2 +1.6**
AKH			pmax	pmax	
	comp=Z,201nm,1.4s				
VNDA	**Vanda**	**75.45 169**	P	**P**	**11 29 51.2 +0.1**
	comp=Z,24nm,0.9s,baz=297,slow=6.4,SNR=63				
VNDA			S	**S**	**11 39 23.6 -1.4**
	comp=Z,0.8nm,0.8s,baz=123,slow=11,SNR=3.9				
VNDA			LR	LR	11 58 06.8
	comp=Z,528nm,21.1s,baz=322,slow=32				
VNDA	**Vanda**	**75.45 169**	*e*P	**P**	**11 29 51.0 -0.1**
VNDA			*e*PcP	**P**	**11 29 51.3 +0.1**
VNDA			*e*S	**S**	**11 39 23.6 -1.4**
VNDA			*e*		11 58 06.8
ZEI	**Tsey**	**75.67 318**	*e*P	**P**	**11 29 50.8 -2.5**
ZEI			*e*S	**S**	**11 39 28.1 -1.0**
ZEI			pmax	pmax	
	comp=Z,176nm,0.8s				
ZEI			pmax	pmax	
	comp=N,127nm,0.9s				
ZEI			pmax	pmax	
	comp=E,198nm,0.8s				
MA2	**Magadan**	**75.70 22**	P	**P**	**11 29 53.5 +0.6**
	comp=E,153nm,0.9s,baz=208,slow=5.6,SNR=103				
MA2	**Magadan**	**75.70 22**	*e*P	**P**	**11 29 53.5 +0.6**
	comp=E,199nm,0.9s				
MA2			LR	LR	
	comp=Z,645nm,22.0s				
MA2	**Magadan**	**75.70 22**	*i* P	**P**	**11 29 53.6 +0.8**
MA2			pmax	pmax	
	comp=Z,318nm,1.3s				
MBAR	**Mbarara**	**75.72 271**	*e*P	**P**	**11 29 55.0 +0.9**
	comp=Z,78nm,0.9s				
MBAR			LR	LR	
	comp=Z,586nm,20.0s				
MBAR	**Mbarara**	**75.72 271**	*e*P	**P**	**11 29 55.0 +0.9**
MBAR			pmax	pmax	
	comp=Z,79nm,0.9s				
MBAR			MLR	MLR	
	comp=Z,586nm,20.0s				
NCK	**Nalchik**	**76.17 318**	*c i*P	**P**	**11 29 57.2 +1.3**
NCK			pmax	pmax	
	comp=Z,208nm,0.9s				
SBA	**Scott Base**	**76.53 169**	*e*P	**P**	**11 29 58.3 +1.1**
	comp=Z,259nm,2.0s				
SBA			LR	LR	
	comp=Z,2μm,19.0s				
SBA	**Scott Base**	**76.53 169**	*e*P	**P**	**11 29 58.3 +1.1**
SBA			pmax	pmax	
	comp=Z,259nm,2.0s				
SBA			MLR	MLR	
	comp=Z,2μm,19.0s				
NEY	**Neytrino**	**76.65 318**	*d i*P	**P**	**11 30 00.8 +2.0**
NEY			pmax	pmax	
	comp=Z,39nm,0.9s				
LSZ	**Lusaka**	**76.71 256**	S	**S**	**11 39 41.0 -0.3**
	comp=Z,0.9nm,0.3s,baz=124,slow=18,SNR=4.6				
LSZ	**Lusaka**	**76.71 256**	*e*P	**P**	**11 30 00.7 +1.1**
	comp=Z,92nm,1.1s				
LSZ			*e*S	**S**	**11 39 41.0 -0.3**
LSZ			LR	LR	
	comp=Z,2μm,22.0s				
LSZ	**Lusaka**	**76.71 256**	PcP	**PcP**	**11 30 10.6 -0.1**
	SNR=12				
LSZ	**Lusaka**	**76.71 256**	*e*P	**P**	**11 30 00.7 +1.1**
LSZ			*e*S	**S**	**11 39 41.0 -0.3**
LSZ			pmax	pmax	
	comp=Z,92nm,1.1s				
LSZ			MLR	MLR	
	comp=Z,2μm,22.0s				
KBZ	**Khabaz**	**76.73 318**	P	**P**	**11 30 00.5 +1.5**
	comp=Z,212nm,0.9s,baz=112,slow=3.6,SNR=258				
KBZ			S	**S**	**11 39 38.1 -2.0**
	comp=Z,0.5nm,0.3s,baz=20,slow=22,SNR=5.6				
CHVG	**Ch'k'valeri**	**76.87 317**	⇑*i*P	**P**	**11 30 01.2 +1.4**
KVAR	**Kislovodsk Arr**	**76.96 318**	LR	LR	12 09 44.7
	comp=Z,154nm,19.6s,slow=40				
KIV	**Kislovodsk**	**76.96 318**	*e*P	**P**	**11 30 01.5 +1.1**
	comp=Z,141nm,0.8s				
KIV			*e*		12 09 44.7
KIV			LR	LR	
	comp=Z,347nm,19.0s				
KIV	**Kislovodsk**	**76.96 318**	P	**P**	**11 30 01.2 +0.7**
	SNR=48				
KIV	**Kislovodsk**	**76.96 318**	P	**P**	**11 30 01.2 +0.7**
	SNR=48				
KIV	**Kislovodsk**	**76.96 318**	*i* P	**P**	**11 30 01.1 +0.7**
	SNR=27				
KIV	**Kislovodsk**	**76.96 318**	*e*P	**P**	**11 30 01.4 +1.0**
KIV			*e*		11 32 54.9
KIV			*e*S	**S**	**11 39 46.3 +3.4**
KIV			pmax	pmax	
	comp=Z,184nm,1.0s				
KIV			pmax	pmax	
	comp=Z,211nm,3.3s				
ASF	**Jabal al Asfar**	**77.04 305**	P	**P**	**11 30 03.4 +2.3**
	comp=Z,68nm,0.8s,baz=83,slow=3.4,SNR=48				
ASF			LR	LR	12 03 45.3
	comp=Z,851nm,20.9s,baz=62,slow=35				
GOF	**Gofitskoye**	**77.19 319**	⇑*i*P	**P**	**11 30 02.5 +1.0**
GOF			*i* S	**S**	**11 39 45.4 +0.3**
GOF			pmax	pmax	
	comp=Z,340nm,1.4s				
GOF			smax	smax	
	comp=N,55nm,0.6s				
GOF			smax	smax	
	comp=E,14nm,0.5s				
SOKR	**Solikamsk**	**77.71 337**	*c i*P	**P**	**11 30 03.5 -0.5**
SOKR			S	**S**	**11 39 49.0 -1.0**
SOKR			pmax	pmax	
	comp=Z,300nm,0.9s				
SOKR			MLR	MLR	
	comp=Z,1μm,27.0s				
NRIK	**Noril'sk**	**77.91 353**	P	**P**	**11 30 05.5 +0.5**
	comp=Z,44nm,0.4s,baz=160,slow=5.5,SNR=81				
NRIK			S	**S**	**11 39 48.1 -3.9**
	comp=Z,4.4nm,0.5s,baz=203,slow=11,SNR=20				
NRIK			LR	LR	12 07 19.6
	comp=Z,1μm,21.1s,baz=154,slow=38				
EIL	**Elat**	**77.92 302**	LR	LR	12 02 34.8
	comp=Z,873nm,21.9s,baz=71,slow=34				
RCY	**Rachaya**	**78.29 306**	*e*P	**P**	**11 30 09.7 +1.6**
HWQ	**Hawqa**	**78.44 307**	*e*P	**P**	**11 30 10.3 +1.4**
MMAI	**Mount Meron Ar**	**78.50 306**	P	**P**	**11 30 11.4 +2.3**
	comp=Z,88nm,0.8s,baz=91,slow=7.5,SNR=49				
MMAI			S	**S**	**11 40 00.1 +0.2**
	comp=Z,1.5nm,0.3s,baz=31,slow=16,SNR=4.9				
MMAI			LR	LR	12 04 43.7
	comp=Z,870nm,20.8s,baz=125,slow=36				
LBTB	**Lobatse**	**78.51 246**	*e*P	**P**	**11 30 10.3 +0.8**
	comp=Z,47nm,1.1s				
LBTB	**Lobatse**	**78.51 246**	*e*P	**P**	**11 30 10.6 +1.1**
LBTB			pmax	pmax	
	comp=Z,47nm,1.1s				
BHL	**Bhannes**	**78.56 307**	*e*P	**P**	**11 30 11.2 +1.7**
DQRL	**Deir Qamar**	**78.56 307**	*e*P	**P**	**11 30 11.6 +2.1**
SEY	**Seymchan**	**78.60 20**	P	**P**	**11 30 09.7 +0.7**
	comp=Z,36nm,0.5s,baz=229,slow=7.2,SNR=136				
BOSA	**Boshof**	**78.64 242**	P	**P**	**11 30 10.8 +0.6**
	comp=Z,9.9nm,0.9s,baz=103,slow=7.9,SNR=14				
BOSA			PKKPbc	**PKKPbc**	**11 49 06.3 +0.8**
	comp=Z,2.3nm,0.9s,baz=211,slow=3.1,SNR=4.2				
BOSA			LR	LR	12 02 05.1
	comp=Z,368nm,18.0s,baz=82,slow=33				
BOSA	**Boshof**	**78.64 242**	*e*P	**P**	**11 30 11.0 +0.8**
BOSA			pmax	pmax	
	comp=Z,67nm,1.3s				
SOC	**Sochi**	**78.80 317**	*c i*P	**P**	**11 30 10.5 0.0**
SOC			*e**PP	**PcP**	**11 30 23.8 +4.8**
SOC			*e**SP	**pP**	**11 30 29.8 -0.8**
SOC			*e*		11 33 07.1
SOC			*e*PPP	PPP	11 34 55.0
SOC			*e*S	**S**	**11 40 04.3 +1.8**
SOC			*e*SSS	SSS	11 48 33.0
SOC			pmax	pmax	
	comp=Z,219nm,0.9s				
SOC			MLR	MLR	
	comp=Z,229nm,15.0s				
AFI	**Afiamalu**	**80.30 103**	P	**P**	**11 30 20.8 +1.5**
	comp=Z,165nm,1.2s,baz=262,slow=15,SNR=4.4				
AFI			LR	LR	12 06 20.7
	comp=Z,173nm,20.0s,baz=265,slow=36				
AFI	**Afiamalu**	**80.30 103**	*e*P	**P**	**11 30 19.7 +0.4**
	comp=Z,129nm,1.0s				
AFI			*e*		12 06 20.7
AFI			LR	LR	
	comp=Z,1μm,19.0s				
TIXI	**Tiksi**	**80.51 7**	P	**P**	**11 30 19.0 -0.2**
	comp=Z,158nm,0.8s,baz=177,slow=4.2,SNR=305				
TIXI			S	**S**	**11 40 14.7 -4.8**
	comp=Z,0.7nm,0.3s,baz=348,slow=20,SNR=13				
TIXI	**Tiksi**	**80.51 7**	*e*P	**P**	**11 30 19.0 -0.2**
TIXI			*e*S	**S**	**11 40 14.7 -4.8**
TIXI			LR	LR	
	comp=Z,796nm,21.0s				
TIXI	**Tiksi**	**80.51 7**	*d i*P	**P**	**11 30 19.1 -0.1**
TIXI			pmax	pmax	
	comp=Z,184nm,1.0s				
CSS	**Mathiatis**	**80.70 307**	*e*P	**P**	**11 30 21.9 +0.9**
	comp=Z,82nm,1.1s				
CSS	**Mathiatis**	**80.70 307**	P	**P**	**11 30 22.4 +1.4**
CSS	**Mathiatis**	**80.70 307**	P	**P**	**11 30 21.8 +0.8**
ANN	**Anapa**	**80.77 318**	*c i*P	**P**	**11 30 20.7 -0.4**
ANN			*e**PP	**PcP**	**11 30 33.0 +5.4**
ANN			*e*		11 33 22.9
ANN			*e*S	**S**	**11 40 21.3 -1.9**
ANN			pmax	pmax	
	comp=Z,108nm,1.3s				
MAMC	**Mammari**	**80.84 307**	P	**P**	**11 30 23.7 +1.9**
SZAC	**Souni**	**81.00 307**	P	**P**	**11 30 24.2 +1.6**
ALFC	**Alefka**	**81.33 307**	P	**P**	**11 30 25.0 +0.6**
PPCY	**Paphos**	**81.46 307**	P	**P**	**11 30 25.8 +0.8**
AKMC	**Akamas**	**81.51 307**	P	**P**	**11 30 26.3 +1.0**
BRTR	**Keskin Array B**	**81.81 312**	P	**P**	**11 30 27.6 +0.6**
	comp=Z,105nm,0.8s,baz=134,slow=6.8,SNR=489				
BRTR			PKKPbc	**PKKPbc**	**11 48 59.2 -0.1**
	comp=Z,1.9nm,0.9s,baz=186,slow=1.2,SNR=7.4				
BRTR			LR	LR	12 08 28.9
	comp=Z,661nm,21.7s,baz=96,slow=37				
BRTR	**Keskin Array B**	**81.81 312**	*i* P	**P**	**11 30 27.2 +0.2**
BRTR			pmax	pmax	
	comp=Z,105nm,0.8s				
BR101	**Keskin Array S**	**81.82 312**	*e*P	**P**	**11 30 27.6 +0.6**
BR101			*e*		12 08 28.9
BR131	**Keskin Array S**	**81.82 312**	*e*P	**P**	**11 30 27.2 +0.2**
VSR	**Storozhevoye**	**82.04 324**	*e*P	**P**	**11 30 28.0 +0.3**
VSR			*e*S	**S**	**11 40 37.8 +1.7**
VSR			pmax	pmax	
	comp=Z,340nm,0.6s				
VSR			pmax	pmax	
	comp=Z,790nm,1.2s				
VSR			smax	smax	
	comp=E,110nm,1.3s				
ILGA	**Ilgaz**	**82.15 313**	*e*P	**P**	**11 30 30.1 +1.3**
	comp=E,257nm,1.3s				
VORR	**Voronezh**	**82.19 325**	*e*P	**P**	**11 30 29.0 +0.5**
VORR			pmax	pmax	
	comp=Z,750nm,1.2s				
SUR	**Sutherland**	**82.25 238**	PFAKE		11 30 40.0 +10
SUR			LR	LR	
	comp=Z,4μm,22.0s				
QSPA	**South Pole Qui**	**82.35 180**	P	**P**	**11 30 29.1 -0.1**
	comp=Z,79nm,0.9s,baz=304,slow=2.4,SNR=126				
QSPA			LR	LR	12 04 06.2
	comp=Z,340nm,19.0s,baz=302,slow=33				
QSPA	**South Pole Qui**	**82.35 180**	*e*P	**P**	**11 30 28.9 -0.4**
	comp=Z,96nm,1.0s				
QSPA			*e*		12 04 06.2
QSPA			LR	LR	
	comp=Z,2μm,21.0s				
ANTO	**Ankara**	**82.48 312**	⇑*i*P	**P**	**11 30 31.2 +0.8**
ANTO	**Ankara**	**82.48 312**	*e*P	**P**	**11 30 31.1 +0.8**
	comp=Z,208nm,1.0s				
ANTO			LR	LR	
	comp=Z,826nm,22.0s				
ANTO	**Ankara**	**82.48 312**	P	**P**	**11 30 31.5 +1.1**
	SNR=52				
ANTO	**Ankara**	**82.48 312**	P	**P**	**11 30 31.5 +1.1**
	SNR=52				
ANTO	**Ankara**	**82.48 312**	*e*P	**P**	**11 30 31.1 +0.7**
ANTO			pmax	pmax	
	comp=Z,208nm,1.0s				
ANTO			MLR	MLR	
	comp=Z,826nm,22.0s				
BR231	**Keskin MP Arra**	**82.49 312**	*e*P	**P**	**11 30 31.9 +1.5**
SMY	**Shemya**	**82.88 35**	*e*P	**P**	**11 30 32.5 +0.5**
	comp=Z,301nm,1.1s				
SMY	**Shemya**	**82.88 35**	*e*P	**P**	**11 30 32.5 +0.5**
SMY			pmax	pmax	
	comp=Z,301nm,1.1s				
SIM	**Simferopol'**	**83.05 317**	*e*P	**P**	**11 30 34.5 +1.4**
SIM			*e*		11 33 47.0
SIM			*e*S	**S**	**11 40 45.0 -1.6**
SIM			*e*PS	**PnS**	**11 41 40.0 -6.8**
SIM			*e*SSS	SSS	11 49 40.0
SIM			pmax	pmax	
	comp=Z,284nm,0.9s				
SIM			pmax	pmax	
	comp=Z,80nm,9.3s				
PRGR	**Permogore**	**83.40 335**	⇓*i*P	**P**	**11 30 34.4 -0.1**
PRGR			*e**SP	**pP**	**11 30 55.9 +1.1**
PRGR			*e*S	**S**	**11 40 48.4 -1.0**
PRGR			pmax	pmax	
	comp=Z,140nm,0.6s				
ISP	**Isparta**	**83.64 309**	*e*P	**P**	**11 30 36.4 -0.1**
ISP	**Isparta**	**83.64 309**	P	**P**	**11 30 36.4 -0.1**
ISP	**Isparta**	**83.64 309**	*e*P	**P**	**11 30 36.4 -0.1**
NVL	**N'lazarevskaya**	**84.35 199**	⇑*i*P	**P**	**11 30 39.2 -0.1**
NVL			*i* S	**S**	**11 40 53.2 -5.6**
NVL			pmax	pmax	
	comp=Z,33nm,1.4s				
MOS	**Moscow**	**84.61 328**	α *i*P	**P**	**11 30 40.8 0.0**
MOS			*e*		11 31 09.1
MOS			*e*		11 33 58.5
MOS			*e*S	**S**	**11 41 00.5 -1.3**
MOS			pmax	pmax	
	comp=Z,900nm,2.0s				
MOS			pmax	pmax	
	comp=Z,362nm,1.4s				
ARG	**Arkhangelos**	**85.12 307**	*e*P	**P**	**11 30 44.7 +0.9**
ARG	**Arkhangelos**	**85.12 307**	P	**P**	**11 30 44.7 +0.9**
ARG	**Arkhangelos**	**85.12 307**	*e*P	**P**	**11 30 44.7 +0.9**
MANT	**Manisa**	**85.31 310**	*e*P	**P**	**11 30 46.4 +1.4**
	comp=Z,250nm,0.9s				
KLMR	**Klimovskoe**	**85.68 333**	*c i*P	**P**	**11 30 46.5 +0.5**
KLMR			*e*S	**S**	**11 41 09.7 -2.5**
KLMR			pmax	pmax	
	comp=Z,417nm,1.2s				
KLMR	**Klimovskoe**	**85.68 333**	⇑*i*P	**P**	**11 30 46.5 +0.5**
KLMR			⇑*i*P	**P**	**11 30 46.5 +0.5**
KLMR			⇓*i*P	**P**	**11 30 46.5 +0.5**
KLMR			AMP		11 30 48.1
	comp=Z,417nm,1.2s				
KLMR			*e*S	**S**	**11 41 09.8 -2.5**
KLMR			*e*S	**S**	**11 41 09.8 -2.5**
KARP	**Karpathos**	**85.73 307**	P	**P**	**11 30 48.4 +1.4**
KARP	**Karpathos**	**85.73 307**	P	**P**	**11 30 48.4 +1.4**
BILL	**Bilibino**	**86.29 19**	PFAKE		11 31 00.0 +11
BILL			LR	LR	
	comp=Z,742nm,20.0s				
BILL	**Bilibino**	**86.29 19**	*c i*P	**P**	**11 30 48.6 -0.3**
BILL			pmax	pmax	
	comp=Z,34nm,0.9s				
BILL			MLR	MLR	
	comp=Z,1μm,22.0s				
ZKR	**Zakros**	**86.40 306**	P	**P**	**11 30 51.2 +1.0**
TSUM	**Tsumeb**	**86.42 251**	*e*P	**P**	**11 30 52.2 +1.4**
	comp=Z,43nm,1.4s				
TSUM			LR	LR	
	comp=Z,2μm,22.0s				
SMG	**Samos**	**86.45 309**	*e*P	**P**	**11 30 51.4 +1.0**
SMG	**Samos**	**86.45 309**	P	**P**	**11 30 51.4 +1.0**
EFOR	**EFORIE**	**86.58 315**	⇑*i*P	**P**	**11 30 52.8 +2.0**
TLCR		**86.72 316**	⇓*i*P	**P**	**11 30 53.0 +1.5**
TLCR		**86.72 316**	P	**P**	**11 30 54.1 +2.6**
PSN	**Preselentsi**	**86.80 315**	*i* P	**P**	**11 30 53.0 +1.1**
TIRR	**Tirgusor**	**86.82 315**	⇓*i*P	**P**	**11 30 52.8 +0.8**
TIRR	**Tirgusor**	**86.82 315**	*e*P	**P**	**11 30 53.0 +1.0**
	comp=Z,196nm,1.0s				
TIRR	**Tirgusor**	**86.82 315**	*e*P	**P**	**11 30 53.0 +1.0**
TIRR			pmax	pmax	
	comp=Z,197nm,1.0s				
NPS	**Neapolis**	**86.91 306**	P	**P**	**11 30 54.0 +1.3**
LAST	**Lasithi**	**87.00 306**	P	**P**	**11 30 54.4 +1.2**
ANAF	**Anafi Island**	**87.01 307**	P	**P**	**11 30 53.8 +0.7**
CVDA	**Cernavoda**	**87.05 315**	⇑*i*P	**P**	**11 30 55.3 +2.2**
TLB	**Topalu**	**87.11 316**	⇑*i*P	**P**	**11 30 54.6 +1.2**
TLB	**Topalu**	**87.11 316**	⇑P	**P**	**11 30 54.6 +1.2**
MILM	**Milestii Mici**	**87.15 318**	⇓*i*P	**P**	**11 30 53.9 +0.4**
KIS	**Kishinev**	**87.16 318**	⇑*i*P	**P**	**11 30 53.0 -0.6**
	comp=Z,600nm,1.5s				
KIS			*e*pP	**pP**	**11 31 13.0 -1.0**
KIS	**Kishinev**	**87.16 318**	*e*PP	PP	11 34 18.0 -0.4
KIS			*i* S	**S**	**11 41 24.0 -3.2**
	comp=Z,2μm,10.0s				
KIS	**Kishinev**	**87.16 318**	*i* PS	PS	11 42 22.0 -16
KIS			LRM	MLR	12 05 24.0
	comp=Z,700nm,26.0s				
KIS	**Kishinev**	**87.16 318**	α *i*P	**P**	**11 30 53.0 -0.6**
KIS			*e**PP	**pP**	**11 31 13.0 -1.0**
KIS			*e*		11 34 18.0
KIS			*i* S	**S**	**11 41 24.0 -3.2**
KIS			*i* PS	**PnS**	**11 42 22.0 -14**
KIS			*e*		11 47 08.0
KIS			pmax	pmax	
	comp=Z,600nm,1.5s				
KIS			pmax	pmax	
	comp=E,300nm,1.2s				
KIS			pmax	pmax	
	comp=Z,1μm,4.0s				
KIS			pmax	pmax	
	comp=E,600nm,2.4s				
KIS			smax	smax	
	comp=N,2μm,10.0s				
ICOR	**Ion Corvin**	**87.17 315**	⇓*i*P	**P**	**11 30 55.1 +1.4**
CFR	**Carcaliu**	**87.19 316**	⇑*i*P	**P**	**11 30 54.8 +1.1**
CFR	**Carcaliu**	**87.19 316**	⇑P	**P**	**11 30 54.8 +1.1**
CHOS	**Chios island**	**87.20 309**	*e*P	**P**	**11 30 55.5 +1.4**
CHOS	**Chios island**	**87.20 309**	P	**P**	**11 30 55.5 +1.4**
HARR	**Harsova**	**87.21 316**	⇑*i*P	**P**	**11 30 55.3 +1.4**
HARR	**Harsova**	**87.21 316**	P	**P**	**11 30 56.9 +3.0**
PRK	**Paraskevi**	**87.21 310**	*e*P	**P**	**11 30 54.8 +0.8**
PRK	**Paraskevi**	**87.21 310**	P	**P**	**11 30 54.8 +0.8**
PRK	**Paraskevi**	**87.21 310**	*e*P	**P**	**11 30 54.8 +0.8**
PRD	**Provadia**	**87.24 314**	*i* P	**P**	**11 30 55.3 +1.2**
SANT	**Santorini**	**87.26 307**	⇑*i*P	**P**	**11 30 54.9 +0.5**
SANT	**Santorini**	**87.26 307**	*e*P	**P**	**11 30 54.9 +0.5**
	comp=N,379nm,1.3s				
APE	**Apeiranthos**	**87.34 308**	⇑*i*P	**P**	**11 30 55.0 +0.3**
APE	**Apeiranthos**	**87.34 308**	*e*P	**P**	**11 30 55.1 +0.3**
APE	**Apeiranthos**	**87.34 308**	P	**P**	**11 30 55.1 +0.3**
APE	**Apeiranthos**	**87.34 308**	*c i*P	**P**	**11 30 54.5 -0.3**
APE			pmax	pmax	
	comp=Z,66nm,1.0s				
LEOM	**Leova**	**87.42 317**	⇑*i*P	**P**	**11 30 56.3 +1.5**
LEOM	**Leova**	**87.42 317**	⇑P	**P**	**11 30 56.3 +1.5**
IOSP	**Ios island**	**87.46 307**	P	**P**	**11 30 55.6 +0.3**
IDI	**Anoyia**	**87.50 306**	P	**P**	**11 30 57.0 +1.4**
	comp=Z,52nm,1.0s,baz=89,slow=6.8,SNR=44				
IDI			S	**SKSac**	**11 41 16.8 -0.3**
	comp=Z,0.6nm,0.4s,baz=45,slow=20,SNR=4.5				
IDI			PKKPbc	**PKKPbc**	**11 48 46.0 +0.4**
	comp=Z,5.3nm,0.8s,baz=324,slow=3.8,SNR=6.9				
IDI			LR	LR	12 11 14.6
	comp=Z,406nm,21.9s,baz=82,slow=36				
IDI	**Anoyia**	**87.50 306**	⇑*i*P	**P**	**11 30 56.7 +1.1**
IDI	**Anoyia**	**87.50 306**	*e*P	**P**	**11 30 56.7 +1.1**
	comp=Z,182nm,1.3s				
IDI			S	**SKSac**	**11 41 16.8 -0.3**
SIVA	**Sivas**	**87.51 306**	P	**P**	**11 30 57.0 +1.4**
SIGR	**SIGRI**	**87.52 310**	*e*P	**P**	**11 30 56.3 +0.8**
SIGR	**SIGRI**	**87.52 310**	P	**P**	**11 30 56.3 +0.8**
AMRR	**Amara**	**87.61 315**	⇑*i*P	**P**	**11 30 57.6 +1.8**
AMRR	**Amara**	**87.61 315**	⇑P	**P**	**11 30 57.6 +1.8**
TMCR	**Tamitsa**	**87.63 336**	*e*P	**P**	**11 30 54.4 -1.0**
TMCR			pmax	pmax	
	comp=Z,177nm,0.6s				
JMB	**Yambol**	**87.67 313**	*i* P	**P**	**11 30 57.4 +1.2**
ALN	**Alexandroupoli**	**87.73 312**	*e*P	**P**	**11 30 57.1 +0.6**
ALN	**Alexandroupoli**	**87.73 312**	P	**P**	**11 30 57.1 +0.6**
ALN	**Alexandroupoli**	**87.73 312**	*e*P	**P**	**11 30 57.6 +1.1**
SORM	**Soroca**	**87.75 319**	⇓*i*P	**P**	**11 30 56.7 +0.3**
SORM	**Soroca**	**87.75 319**	⇓P	**P**	**11 30 56.7 +0.3**
AKASG	**Malin Array Be**	**87.83 322**	P	**P**	**11 30 57.0 +0.3**
	comp=Z,101nm,1.0s,baz=84,slow=4.7,SNR=15				
AKASG			PP	**PP**	**11 34 19.3 -4.3**
	comp=Z,17nm,1.0s,baz=92,slow=6.6,SNR=16				
AK

SMTH	Samothraki Isl	88.02 311	eP	P	11 30 58.3 +0.4
SMTH	Samothraki Isl	88.02 311	P	P	11 30 58.3 +0.4
GRER		88.03 316⇓	iP	P	11 31 01.2 +3.4
IAS	Iasi	88.04 318⇓	iP	P	11 30 59.1 +1.3
IAS	Iasi	88.04 318 ⇓	P	P	11 30 59.1 +1.3
GVD	Gavdhos	88.06 305	eP	P	11 30 59.0 +0.8
GVD	Gavdhos	88.06 305	P	P	11 30 59.0 +0.8
VAM	Vamos	88.08 306	P	P	11 30 59.9 +1.6
MHLO	Agia Marina, M	88.15 307	P	P	11 30 59.1 +0.5
RDO	Rodhopi	88.16 312	eP	P	11 30 59.0 +0.5
RDO	Rodhopi	88.16 312	P	P	11 30 59.0 +0.5
LIA	Limnos Island	88.17 310	eP	P	11 30 59.2 +0.6
LIA	Limnos Island	88.17 310	P	P	11 30 59.2 +0.6
SERI	Serifos	88.18 308	P	P	11 30 58.6 -0.1
IMMV	Iera Moni Meta	88.26 306	P	P	11 31 00.7 +1.6
ISR	Istrita	88.27 316⇑	iP	P	11 31 01.3 +2.3
ISR	Istrita	88.27 316 ⇑	P	P	11 31 01.3 +2.3
SZH	Strazhica	88.30 314	i P	P	11 31 00.2 +1.0
VRI	Vrincioaia	88.31 317⇓	iP	P	11 31 00.8 +1.7
VRI	Vrincioaia	88.31 317 ⇓	P	P	11 31 00.8 +1.7
DIM	Dimitrovgrad	88.34 313	i P	P	11 31 00.0 +0.6
PLOR	Plostina	88.36 317⇑	iP	P	11 31 00.7 +1.3
PLOR	Plostina	88.36 317 ⇑	P	P	11 31 00.7 +1.3
SULR		88.38 315⇓	iP	P	11 31 01.4 +2.0
KARY	Karystos	88.38 309	P	P	11 31 00.3 +0.7
SKY	Skiros Island	88.45 309	eP	P	11 31 00.5 +0.5
SKY	Skiros Island	88.45 309	P	P	11 31 00.5 +0.5
SGRR	Singureni	88.47 315⇑	iP	P	11 31 01.3 +1.4
TESR	Tescani	88.50 317⇑	iP	P	11 31 00.6 +0.6
SECR		88.58 316⇓	iP	P	11 31 02.9 +2.5
SNAA	Sanae	88.74 197	P	P	11 31 02.0 +1.2
SNAA	Sanae	88.74 197	P	P	11 31 01.9 +1.0
	comp=Z,16nm,0.6s,baz=115,slow=6.6,SNR=66				
SNAA		S		SKSac	11 41 19.2 -4.1
	comp=Z,1.1nm,0.9s,baz=234,slow=22,SNR=5.6				
SNAA		PKKPbc		PKKPdf	11 48 39.3 +1.8
	comp=Z,4.4nm,0.8s,baz=245,slow=4.2,SNR=12				
SNAA		LR	LR		12 05 08.9
	comp=Z,1μm,22.0s,baz=138,slow=32				
SNAA	Sanae	88.74 197	eP	P	11 31 01.8 +1.0
	comp=Z,92nm,1.3s				
SNAA		S		SKSac	11 41 19.2 -4.1
SNAA		e			12 05 08.9
SNAA	Sanae	88.74 197	c iP	P	11 31 02.2 +1.4
MLR	Muntele Rosu	88.76 316	P	P	11 31 03.3 +1.9
	comp=Z,54nm,1.0s,baz=71,slow=2.3,SNR=206				
MLR		S		SKSac	11 41 22.1 -2.3
	comp=Z,0.3nm,0.4s,baz=147,slow=18,SNR=3.8				
MLR	Muntele Rosu	88.76 316⇓	iP	P	11 31 02.7 +1.3
MLR	Muntele Rosu	88.76 316	eP	P	11 31 02.8 +1.3
	comp=Z,740nm,1.4s				
MLR	Muntele Rosu	88.76 316	eP	P	11 31 02.8 +1.3
MLR		pmax		pmax	
	comp=Z,740nm,1.4s				
ZIMR		88.79 314⇑	iP	P	11 31 03.3 +1.9
ZIMR		88.79 314	P	P	11 31 05.3 +3.9
PTL	Penteli	88.83 308	eP	P	11 31 02.1 +0.3
PTL	Penteli	88.83 308	P	P	11 31 02.1 +0.3
EREA	Eretria	88.84 309	P	P	11 31 02.0 +0.1
VLY	Voula,Athens	88.84 308	P	P	11 31 01.9 +0.1
RZN	Rozhen	88.87 312	i P	P	11 31 03.1 +1.0
ATHU	Athens Univers	88.87 308	eP	P	11 31 01.1 -0.9
ATHU	Athens Univers	88.87 308	P	P	11 31 01.1 -0.9
ANKY	Antikythira Is	88.88 306	P	P	11 31 03.4 +1.4
ATH	Athens Observa	88.93 308	P	P	11 31 02.5 +0.3
PLD	Plovdiv	88.96 313	P	P	11 31 03.2 +0.9
PRAR	RASCA	88.97 318⇑	iP	P	11 31 03.5 +1.3
KYTH	Kithira	89.15 307	P	P	11 31 04.4 +1.0
OUR	Ouranopolis	89.16 311	P	P	11 31 04.0 +0.8
DID	Didima	89.22 308	eP	P	11 31 03.1 -0.5
DID	Didima	89.22 308	P	P	11 31 03.1 -0.5
HUMR	Humele	89.23 315⇓	iP	P	11 31 04.5 +1.0
DOPR	Dopca	89.24 316⇓	iP	P	11 31 04.7 +1.2
KRND	KRANIDI	89.27 308	P	P	11 31 03.9 +0.1
VILL	Villia	89.28 309	P	P	11 31 03.5 -0.4
GOLR		89.31 315⇓	iP	P	11 31 05.4 +1.5
PAIG	Paliouri	89.31 310	P	P	11 31 04.4 +0.4
MTUR	Matau	89.32 316⇓	iP	P	11 31 05.0 +1.0
MTUR	Matau	89.32 316	P	P	11 31 06.3 +2.3
VLI	Veliai	89.32 307	P	P	11 31 03.9 -0.2
SKIA	Skiathos	89.34 310	P	P	11 31 04.0 -0.1
VOIR		89.37 316⇓	iP	P	11 31 04.8 +0.6
VOIR		89.37 316 ⇓	P	P	11 31 04.8 +0.6
NVR	Nevrokopi	89.43 312	P	P	11 31 05.0 +0.4
PGB	Panagyurishte	89.43 313	i P	P	11 31 05.2 +0.6
SMIA	Simia	89.48 309	P	P	11 31 04.9 +0.1
LTK	Loutraki	89.52 308	P	P	11 31 04.4 -0.6
NEO	Neokhori	89.55 310	P	P	11 31 04.5 -0.6
MICGM	Minsk	89.56 325⇑	eP	P	11 31 06.0 +1.2
MICGM		PM			11 31 07.0
	comp=Z,1.1nm,1.0s				
MICGM		epP		pP	11 31 16.0 -9.3
MICGM		esP		sP	11 31 32.0 -1.3
MICGM		eSKS		SKSac	11 41 24.0 -4.4
MICGM		eS		S	11 41 50.0 +0.5
MICGM		esS		sS	11 42 24.0 -0.5
MICGM		eLR	LR		12 11 04.0
MNK	Minsk	89.56 325	ceP	P	11 31 06.0 +1.2
MNK		e*SP		sP	11 31 32.0 -1.3
MNK		e			11 41 24.0
MNK		eS		S	11 41 50.0 +0.5
MNK		pmax		pmax	
	comp=Z,1μm,1.0s				
PLG	Polygyros	89.57 311	P	P	11 31 05.6 +0.4
MMB	Musomiste	89.58 312	i P	P	11 31 05.5 +0.3
XOR	Xorichti	89.58 310	eP	P	11 31 05.1 -0.2
XOR	Xorichti	89.58 310	P	P	11 31 05.1 -0.2
SRS	Serrai	89.59 311	P	P	11 31 05.4 +0.1
SRS	Serrai	89.59 311	P	P	11 31 05.9 +0.6
LKR	Lokris	89.60 309	P	P	11 31 05.2 -0.2
PUL	Pulkovo	89.62 331	c iP	P	11 31 06.8 +1.9
PUL		pmax		pmax	
	comp=Z,139nm,0.9s				
ARR	Arges	89.64 316⇓	iP	P	11 31 06.3 +0.8
BURAR	Bucovina Array	89.69 318⇑	iP	P	11 31 07.3 +1.6
BURAR	Bucovina Array	89.69 318	P	P	11 31 08.5 +2.8
BUR04	Bucovina Ar. S	89.69 318	eP	P	11 31 07.0 +1.2
BUR08	Bucovina Ar. S	89.71 318	eP	P	11 31 07.4 +1.6
SOH	Sokhos	89.72 311	eP	P	11 31 06.1 +0.2
SOH	Sokhos	89.72 311	P	P	11 31 06.1 +0.2
SOH	Sokhos	89.72 311	eP	P	11 31 06.1 +0.2
THAL	Thalero	89.76 308	P	P	11 31 05.6 -0.5
FYTO	Fytoko, Volos	89.78 310	eP	P	11 31 06.3 +0.1
FYTO	Fytoko, Volos	89.78 310	P	P	11 31 06.3 +0.1
DYR	Agios Nikonas	89.80 307	P	P	11 31 06.9 +0.5
HORT	Hortiatis	89.87 311	P	P	11 31 06.7 0.0
VLX	Vlachokerasia	89.87 308	P	P	11 31 07.4 +0.6
DSF	Desfina	89.93 309	P	P	11 31 06.4 -0.6
THE	Thessaloniki	89.97 311	P	P	11 31 06.9 -0.1
TRIP	Tripoli	89.98 308	P	P	11 31 08.3 +1.0
GUR	Goura	89.99 308	eP	P	11 31 07.6 +0.3
GUR	Goura	89.99 308	P	P	11 31 07.6 +0.3
KKB	Krupnik	90.10 312	i P	P	11 31 08.0 +0.3
KNT	Kendrikon	90.12 311	P	P	11 31 08.0 +0.3
VTS	Vitosha	90.14 313⇑	iP	P	11 31 08.5 +0.5
VTS	Vitosha	90.14 313	eP	P	11 31 08.2 +0.2
	comp=Z,117nm,1.2s				
VTS	Vitosha	90.14 313	i P	P	11 31 08.3 +0.3
VTS	Vitosha	90.14 313	P	P	11 31 08.5 +0.5
VTS	Vitosha	90.14 313	P	P	11 31 10.3 +2.3
ARCR	ARCALIA	90.16 317⇑	iP	P	11 31 09.5 +1.7
AGG	Agios Georgios	90.18 309	P	P	11 31 08.0 -0.1
AGG	Agios Georgios	90.18 309	P	P	11 31 08.0 -0.1
AGG	Agios Georgios	90.18 309	eP	P	11 31 08.3 +0.2
ITM	Ithomi	90.19 307	eP	P	11 31 08.6 +0.4
ITM	Ithomi	90.19 307	P	P	11 31 08.6 +0.4
KALE	Kalithea	90.22 309	P	P	11 31 08.7 +0.3
LIT	Litokhoron	90.24 310	P	P	11 31 08.5 +0.1
LIT	Litokhoron	90.24 310	P	P	11 31 08.5 +0.1
LIT	Litokhoron	90.24 310	eP	P	11 31 09.1 +0.7
LOT	Lotru	90.25 316⇑	iP	P	11 31 09.2 +0.8
TRIZ	Trizonia	90.27 309	P	P	11 31 08.7 +0.2
LVZ	Lovozero	90.28 339	eP	P	11 31 08.1 +0.2
	comp=Z,81nm,1.0s				
LVZ		LR		LR	
	comp=Z,745nm,21.0s				
LVZ	Lovozero	90.28 339	c iP	P	11 31 07.7 -0.2
LVZ		i *PP		pP	11 31 28.1 -0.3
LVZ		pmax		pmax	
	comp=Z,73nm,0.9s				
PYL	PYLOS	90.29 307	eP	P	11 31 08.7 +0.1
PYL	PYLOS	90.29 307	P	P	11 31 08.7 +0.1
SERG	Sergoula	90.29 309	P	P	11 31 09.0 +0.4
LAKA	Lakka	90.32 308	eP	P	11 31 09.6 +0.8
LAKA	Lakka	90.32 308	P	P	11 31 09.6 +0.8
VAY	Valandovo	90.39 312	P	P	11 31 09.2 +0.3
VAY	Valandovo	90.39 312	i P	P	11 31 09.2 +0.3
IDID	Didziasalis	90.39 326	eP	P	11 31 09.6 +1.0
IDID		IAmb		IAmb	11 31 11.2
	comp=Z,41nm,0.9s				
EFP	Efpalio	90.41 309	P	P	11 31 10.0 +0.9
AMT	Artemida-Makis	90.42 308	P	P	11 31 10.0 +0.7
ANX	Ano Chora	90.43 309	P	P	11 31 09.8 +0.5
GRG	Griva	90.45 311	P	P	11 31 09.5 +0.2
DRO	Drossia	90.49 308	P	P	11 31 11.0 +1.5
SRE	Strehaia	90.51 315⇑	iP	P	11 31 11.4 +2.0
SRE	Strehaia	90.51 315 ⇑	P	P	11 31 11.5 +2.0
THL	Klokotos Trika	90.51 310	P	P	11 31 09.1 -0.5
EVR	Evrytania	90.56 309	eP	P	11 31 10.6 +0.6
EVR	Evrytania	90.56 309	P	P	11 31 10.6 +0.6
KTI	Kastanea	90.57 311	P	P	11 31 10.5 +0.5
CJR	Cluj-Napoca	90.60 317⇓	iP	P	11 31 12.0 +2.1
CJR	Cluj-Napoca	90.60 317 ⇓	P	P	11 31 12.0 +2.1
APA	Apatity	90.62 338⇓	iP	P	11 31 07.9 -1.5
APA		i			11 34 47.0
APA		i			11 41 35.0
APA		i S		S	11 41 55.0 -3.8
APA		i PS		PS	11 43 06.0 -10
APA		pmax		pmax	
	comp=Z,27nm,0.9s				
IIGN	Ignalina	90.69 326	eP	P	11 31 11.0 +1.0
IIGN		IAmb		IAmb	11 31 12.5
	comp=Z,47nm,0.9s				
RLS	Riolos of Patr	90.69 308	P	P	11 31 12.0 +1.5
PVO	Paravola	90.74 309	P	P	11 31 12.2 +1.6
IZAR	Zarasai	90.76 326	eP	P	11 31 11.2 +0.9
IZAR		IAmb		IAmb	11 31 12.8
	comp=Z,15nm,0.9s				
VNA1	Neumayer--Stat	90.76 198	P	P	11 31 11.5 +1.4
ISAL	Salakas	90.79 326	eP	P	11 31 11.4 +1.0
ISAL		IAmb		IAmb	11 31 12.9
	comp=Z,27nm,1.1s				
RAR	Rarotonga	90.81 111	LR	LR	12 11 38.0
	comp=Z,435nm,21.3s,baz=254,slow=35				
KZN	Kozani	90.82 310	P	P	11 31 10.9 -0.2
BMR	Baia Mare	90.84 318⇑	iP	P	11 31 12.4 +1.5
BMR	Baia Mare	90.84 318 ⇑	P	P	11 31 12.4 +1.5
LVV	L'vov	90.89 320	eP	P	11 31 12.5 +1.4
LVV		e			11 34 48.1
LVV		eS		S	11 42 01.1 -0.9
LVV		pmax		pmax	
	comp=Z,160nm,1.3s				
VNA3	Neumayer Olymp	90.91 197	P	P	11 31 11.9 +1.1
DEV	Deva	90.93 316⇑	iP	P	11 31 13.6 +2.2
DEV	Deva	90.93 316 ⇑	P	P	11 31 13.6 +2.2
PDO	Prodromos	91.00 309	P	P	11 31 12.9 +1.0
VSU	Vasula	91.09 329	c iP	P	11 31 12.1 +0.3
VSU		i			11 34 50.4
VSU		pmax		pmax	
	comp=Z,278nm,1.0s				
HERR	Herculane	91.10 315⇓	iP	P	11 31 13.5 +1.3
DSL	Palaion Diasel	91.15 309	eP	P	11 31 13.7 +1.1
DSL	Palaion Diasel	91.15 309	P	P	11 31 13.7 +1.1
FNA	Florina	91.19 311	P	P	11 31 12.4 -0.4
FNA	Florina	91.19 311	P	P	11 31 12.4 -0.4
FNA	Florina	91.19 311	eP	P	11 31 13.1 +0.3
DRGR		91.22 317⇑	iP	P	11 31 13.8 +1.0
DRGR		91.22 317 ⇑	P	P	11 31 13.8 +1.0
KFL	Anninata	91.23 308	P	P	11 31 13.8 +0.8
SKO	Skopje	91.33 312	i P	P	11 31 13.3 0.0
VLS	Valsamata	91.39 308	eP	P	11 31 14.4 +0.6
VLS	Valsamata	91.39 308	P	P	11 31 14.4 +0.6
VLS	Valsamata	91.39 308	eP	P	11 31 14.4 +0.6
JAN	Janina	91.42 310	eP	P	11 31 15.1 +1.3
JAN	Janina	91.42 310	P	P	11 31 15.1 +1.3
JAN	Janina	91.42 310	eP	P	11 31 15.1 +1.3
LKD2	Lefkada island	91.43 309	eP	P	11 31 14.9 +1.0
LKD2	Lefkada island	91.43 309	P	P	11 31 14.9 +1.0
FSK	Fiskardo	91.46 308	P	P	11 31 14.5 +0.5
TRPA	Tarpa	91.56 318⇑	iP	P	11 31 15.4 +1.2
MDVR	Moldovita	91.58 315⇑	iP	P	11 31 15.4 +0.9
OHR	Ohrid	91.67 311	i P	P	11 31 14.9 -0.1
KWP	Kalwaria Pacla	91.70 320	eP	P	11 31 15.8 +0.9
KWP	Kalwaria Pacla	91.70 320	eP	P	11 31 15.9 +1.0
	comp=Z,378nm,0.6s				
KWP	Kalwaria Pacla	91.70 320	eP	P	11 31 16.1 +1.2
BZS	Buzias	91.77 316⇑	iP	P	11 31 16.0 +0.7
BZS	Buzias	91.77 316 ⇑	P	P	11 31 16.0 +0.7
IGT	Igoumenitsa	91.79 309	eP	P	11 31 16.2 +0.6
IGT	Igoumenitsa	91.79 309	P	P	11 31 16.2 +0.6
IGT	Igoumenitsa	91.79 309	eP	P	11 31 16.2 +0.6
UZH	Uzhgorod	91.80 319	eP	P	11 31 15.4 +0.1
UZH		e			11 31 40.8
SIRR	Siria	91.85 316⇑	iP	P	11 31 17.1 +1.4
SGD	Sagiada	91.88 310	P	P	11 31 16.8 +0.9
PHP	Peshkopia	92.02 312	eP	P	11 31 16.5 -0.1
PHP	Peshkopia	92.02 312	P	P	11 31 16.5 -0.1
PHP	Peshkopia	92.02 312	eP	P	11 31 16.5 -0.1
FIA1	FINESS Array S	92.06 332	eP	P	11 31 16.6 +0.4
	comp=Z,69nm,1.1s				
FIA0	FINESS Array S	92.06 332	eP	P	11 31 17.1 +0.9
FIA0		ePP		PP	11 34 55.0 -1.9
FIA0		ePKiKP		PKiKP	11 36 05.8 -0.1
FIA0		e			12 18 17.9
FIA0	FINESS Array S	92.06 332	eP	P	11 31 17.1 +0.9
FIA0		e			11 34 55.0
FINES	FINESS Array B	92.06 332	P	P	11 31 17.1 +0.9
	comp=Z,29nm,0.9s,baz=93,slow=6.7,SNR=50				
FINES		PP		PP	11 34 55.0 -1.9
	comp=Z,5.2nm,0.7s,baz=108,slow=10,SNR=4.4				
FINES		PKiKP		PKiKP	11 36 05.8 -0.1
	comp=Z,1.9nm,0.4s,baz=122,slow=0.9,SNR=6.7				
FINES		LR	LR		12 18 17.9
	comp=Z,390nm,20.6s,baz=96,slow=39				
FINES	FINESS Array B	92.06 332	i P	P	11 31 17.2 +1.0
FINES		pmax		pmax	
	comp=Z,29nm,0.9s				
SRN	Sarande	92.10 310	eP	P	11 31 17.5 +0.6
SRN	Sarande	92.10 310	P	P	11 31 17.5 +0.6
SUW	Suwalki	92.16 324	eP	P	11 31 17.1 +0.3
SUW	Suwalki	92.16 324	eP	P	11 31 17.3 +0.4
	comp=Z,263nm,1.0s				
SUW	Suwalki	92.16 324	eP	P	11 31 17.3 +0.4
SUW		pmax		pmax	
	comp=Z,263nm,1.0s				
KEK	Kerkira	92.23 310	eP	P	11 31 18.5 +1.0
KEK	Kerkira	92.23 310	P	P	11 31 18.5 +1.0
CRVS	Cervenica-Dubn	92.39 319	eP	P	11 31 19.1 +1.0
CRVS		pmax		pmax	
	comp=Z,15nm,1.0s				
CRVS	Cervenica-Dubn	92.39 319	eP	P	11 31 19.1 +1.0
CRVS		ePP		PP	11 34 56.0 -3.9
TIR	Tirane	92.40 311⇑	iP	P	11 31 19.4 +1.1
TIR	Tirane	92.40 311	eP	P	11 31 19.2 +0.9
	comp=Z,69nm,1.1s				
TIR	Tirane	92.40 311	eP	P	11 31 19.5 +1.1
DIVS	Divibare	92.69 314	eP	P	11 31 20.7 +1.0
	comp=Z,98nm,1.3s				
KECS	Kecovo	92.97 318	eP	P	11 31 21.1 +0.4
KECS		pmax		pmax	
	comp=Z,18nm,0.7s				
KECS	Kecovo	92.97 318	eP	P	11 31 21.1 +0.4
PDG	Podgorica	93.00 312⇑	iP	P	11 31 21.5 +0.5
PDG	Podgorica	93.00 312	P	P	11 31 21.3 +0.3
TTG	Podgorica	93.00 312	P	P	11 31 21.3 +0.3
TTG	Podgorica	93.00 312	eP	P	11 31 22.0 +1.0
NIE	Niedzica	93.22 319	eP	P	11 31 22.9 +1.0
NIE		ePP		PP	11 35 08.0 +1.6
NIE	Niedzica	93.22 319	eP	P	11 31 22.9 +1.0
NIE		e			11 35 08.0
BEL	Belsk	93.25 322	eP	P	11 31 23.5 +1.6
BEL	Belsk	93.25 322	eP	P	11 31 23.5 +1.6
PSZ	Piszkesteto	93.28 318⇑	iP	P	11 31 22.5 +0.2
PSZ	Piszkesteto	93.28 318⇑	eP	P	11 31 23.2 +0.9
PSZ	Piszkesteto	93.28 318	eP	P	11 31 22.5 +0.2
	comp=Z,42nm,1.2s				
PSZ	Piszkesteto	93.28 318	P	P	11 31 24.4 +2.1
KEV	Kevo	93.46 340	eP	P	11 31 21.8 -0.7
	comp=Z,74nm,1.2s				
KEV		LR		LR	
	comp=Z,616nm,20.0s				
KEV	Kevo	93.46 340	eP	P	11 31 21.8 -0.7
KEV		pmax		pmax	
	comp=Z,74nm,1.2s				
KEV		MLR		MLR	
	comp=Z,616nm,20.0s				
OJC	Ojcow	93.65 320	eP	P	11 31 24.4 +0.6
OJC		ePP		PP	11 35 09.8 +0.1
OJC	Ojcow	93.65 320	eP	P	11 31 24.2 +0.3
	comp=Z,47nm,1.5s				
OJC	Ojcow	93.65 320	eP	P	11 31 24.5 +0.6
LANS	Liptovska Anna	93.72 319	eP	P	11 31 25.2 +0.9
LANS	Liptovska Anna	93.72 319	eP	P	11 31 25.2 +0.9
MORH	M`tr`igy, Hung	93.91 316⇑	eP	P	11 31 25.7 +0.6
ARA0	ARCESS Array S	93.93 340	eP	P	11 31 25.0 +0.2
ARA0		ePP		PP	11 35 11.7 +0.3
ARA0		e			12 19 06.5
ARCES	ARCESS Array B	93.93 340	P	P	11 31 25.0 +0.2
	comp=Z,52nm,0.9s,baz=98,slow=3.7,SNR=58				
ARCES		PP		PP	11 35 11.7 +0.3
	comp=Z,12nm,0.9s,baz=94,slow=7.7,SNR=4.7				
ARCES		LR	LR		12 19 06.5
	comp=Z,631nm,18.7s,baz=102,slow=39				
ARE0	ARCESS Array S	93.93 340	eP	P	11 31 24.9 +0.2
	comp=Z,62nm,0.9s				
ARE0	ARCESS Array S	93.93 340	eP	P	11 31 25.5 +0.7
VYHS	Vyhne	94.06 318	eP	P	11 31 26.1 +0.3
VYHS		pmax		pmax	
	comp=Z,19nm,1.4s				
VYHS	Vyhne	94.06 318	eP	P	11 31 26.1 +0.3
VYHS		ePP		PP	11 35 11.7 -1.3
SRO	Srobarova	94.32 318	eP	P	11 31 28.4 +1.4
SRO	Srobarova	94.32 318	eP	P	11 31 28.4 +1.4
UNV	Unalaska Valle	94.40 36	eP	P	11 31 27.8 +0.6
	comp=Z,283nm,1.6s				
TIP	Timpagrande	94.50 309⇓	iP	P	11 31 27.6 -0.5
TIP	Timpagrande	94.50 309	P	P	11 31 28.4 +0.3
TIP	Timpagrande	94.50 309	P	P	11 31 28.4 +0.3
KTK1	Kautokeino	94.63 339	eP	P	11 31 28.2 +0.3
OKC	Ostrava-Krasne	94.66 320	eP	P	11 31 29.2 +0.7
OKC		esP		pP	11 31 51.4 +2.4
OKC		ePP		PP	11 35 12.7 -4.9
OKC		eS		S	11 42 34.3 -1.2
OKC		eSS		SS	11 48 51.1 -9.4
OKC		AMS		AMS	12 23 00.0
	comp=Z,500nm,23.1s				
OKC	Ostrava-Krasne	94.66 320	eP	P	11 31 29.2 +0.7
OKC		e			11 31 51.4
OKC		e			11 35 12.7
OKC		eS		S	11 42 34.3 -1.2
OKC		MLR		MLR	
	comp=Z,500nm,23.1s				
MATE	Matera	94.69 310⇓	iP	P	11 31 30.2 +1.4
BLY	Banja Luka	94.77 314⇑	iP	P	11 31 29.6 +0.5
BLY	Banja Luka	94.77 314	eP	P	11 31 30.2 +1.1
	comp=Z,86nm,1.3s				
JAVC	Velka Javorina	94.86 318	eP	P	11 31 30.8 +1.3
MORC	Moravsky Berou	95.04 319⇑	iP	P	11 31 30.2 -0.1
MORC	Moravsky Berou	95.04 319	eP	P	11 31 31.1 +0.7
	comp=Z,168nm,1.3s				
MORC	Moravsky Berou	95.04 319	P	P	11 31 32.7 +2.4
MORC	Moravsky Berou	95.04 319	eP	P	11 31 31.0 +0.7
MORC		ePP		PP	11 35 20.6 0.0
MODS	Modra-Piesok	95.07 318	eP	P	11 31 30.2 -0.3
MODS		pmax		pmax	
	comp=Z,36nm,1.4s				
MODS	Modra-Piesok	95.07 318	eP	P	11 31 30.2 -0.3
MODS		ePP		PP	11 35 20.6 -0.3
ZST	Bratislava	95.17 318	eP	P	11 31 30.6 -0.3
ZST		pmax		pmax	
	comp=Z,3.0nm,1.3s				
ZST	Bratislava	95.17 318	eP	P	11 31 30.6 -0.3
ZST		ePP		PP	11 35 21.8 +0.2
KIF	Kilpisjarvi	95.50 339	eP	P	11 31 32.1 +0.2
KOGS	Kog	95.58 316⇑	iP	P	11 31 33.6 +0.8
KOGS		ePP		PP	11 35 26.0 +1.1
VRAC	Vranov	95.61 319	eP	P	11 31 33.0 +0.1
VRAC		ePP		PP	11 35 25.5 +0.5
KRUC	Moravsky	95.72 319	eP	P	11 31 33.5 +0.1
KRUC		ePP		PP	11 35 27.3 +1.4
DPC	Dobruska-Polom	95.88 320	eP	P	11 31 35.1 +1.0
DPC		ex		x	11 31 59.0
DPC		ePP		PP	11 35 25.5 -1.6
DPC		eS		S	11 42 43.1 -3.0
DPC		AMS		AMS	12 19 00.0
	comp=Z,600nm,21.6s				
DPC	Dobruska-Polom	95.88 320	eP	P	11 31 35.1 +1.0
DPC		e			11 31 59.0
DPC		e			11 35 25.5
DPC		eS		S	11 42 43.1 -3.0
DPC		MLR		MLR	
	comp=Z,600nm,21.6s				
KSP	Ksiaz	95.94 320	eP	P	11 31 35.0 +0.7
KSP		ePP		PP	11 35 27.8 +0.3
KSP	Ksiaz	95.94 320	eP	P	11 31 35.0 +0.7
KSP		e			11 35 27.8
CONA	Conrad Observa	95.98 317	eP	P	11 31 34.6 -0.1
	comp=Z,9.3nm,1.2s				
UPC	Upice	96.09 320	eP	P	11 31 36.0 +1.0
UPC		ePP		PP	11 35 26.1 -2.6
UPC		eS		S	11 42 45.4 -2.5
UPC		eSS		SS	11 49 09.8 -11
UPC		AMS		AMS	12 20 10.0
	comp=Z,700nm,25.0s				
UPC	Upice	96.09 320	eP	P	11 31 36.0 +1.0
UPC		e			11 35 26.1
UPC		eS		S	11 42 45.4 -2.5
UPC		MLR		MLR	
	comp=Z,700nm,25.0s				
ARSA	Arzberg	96.15 317	i P	P	11 31 35.8 +0.4
	comp=Z,24nm,1.2s,SNR=8.3				
VAE	Valguarnera	96.17 307	LR	LR	12 22 46.7
	comp=Z,86nm,18.2s,baz=110,slow=40				
BOJS	Bojanci	96.20 315⇑	eP	P	11 31 36.1 +0.5
TRO	Tromso	96.23 339	eP	P	11 31 34.6 -0.6
PERS	Pernice	96.38 316⇑	eP	P	11 31 37.1 +0.6
SOKA	Soboth	96.44 316	ePcP	P	11 31 37.5 +0.7
	comp=Z,40nm,1.2s,SNR=9.9				
VISS	Visnje	96.51 315	i P	P	11 31 37.1 0.0
LJU	Ljubljana	96.75 315⇑	iP	P	11 31 39.1 +1.0
LJU		ePP		PP	11 35 35.5 +1.6
OBKA	Obir	96.76 316	ePcP	P	11 31 39.0 +0.7
	comp=Z,21nm,1.4s				
GOPC	GO Pecny, Ondr	96.83 319	eP	P	11 31 39.3 +0.9
GOPC		ePP		PP	11 35 32.7 -1.7
GOPC		eS		S	11 42 47.2 -7.1
GOPC		AMS		AMS	12 24 20.0
	comp=Z,700nm,22.6s				
GOPC	GO Pecny, Ondr	96.83 319	eP	P	11 31 39.3 +0.9
GOPC

BRG PP **PP** **11 35 33.0 -5.9**
BRG S S 11 42 50.0 -9.3
BRG SS **SS** **11 49 32.0 -7.6**
BRG Berggiesshubel 97.42 320 *i* P Pdif 11 31 41.5 +0.4
BRG *e**PP pP 11 32 02.2 +0.6
BRG S S 11 42 50.0 -9.3
BRG pmax pmax
comp=Z,25nm,1.4s
SPA0 Spitsbergen Ar 97.44 348 *e*P Pdif 11 31 40.8 +0.1
SPA0 *e* 12 21 10.9
SPA0 Spitsbergen Ar 97.44 348 *e*P Pdif 11 31 40.8 +0.1
SPITS Spitsbergen Ar 97.44 348 P **P** **11 31 40.5 -0.1**
comp=Z,53nm,0.8s,baz=72,slow=5.4,SNR=71
SPITS PKiKP **PKiKP** **11 36 16.7 +1.8**
comp=Z,33nm,1.3s,baz=98,slow=4.4,SNR=6.5
SPITS LR LR 12 21 10.9
comp=Z,1μm,21.1s,baz=70,slow=39
STEI Steigen 97.47 338 *e*P Pdif 11 31 41.4 +0.5
GEA0 GERESS Array S 97.47 318 *e*P **P** **11 31 41.2 -0.2**
GEC2 GERESS Array S 97.47 318 *e*P Pdif 11 31 42.0 +0.5
comp=Z,31nm,1.4s
GEC2 *e* 12 24 29.3
GEC2 GERESS Array S 97.47 318 *e*P Pdif 11 31 42.5 +1.0
GERES GERESS Array B 97.47 318 P Pdif 11 31 42.3 +0.8
comp=Z,7.4nm,1.0s,baz=90,slow=4.5,SNR=27
GERES PP **PP** **11 35 36.2 -3.3**
comp=Z,1.1nm,0.5s,baz=70,slow=6.5,SNR=2.5
GERES LR LR 12 24 29.3
comp=Z,153nm,18.4s,baz=82,slow=41
KHC Kasperske Hory 97.57 319 *e*P Pdif 11 31 42.1 +0.2
KHC *e*PP **PP** **11 35 37.3 -2.9**
KHC *e*S **S** **11 42 53.0 -7.7**
KHC *e*SS **SS** **11 49 32.6 -9.3**
KHC AMS AMS 12 25 20.0
comp=Z,600nm,20.7s
KHC Kasperske Hory 97.57 319 *e*P Pdif 11 31 42.1 +0.2
KHC *e* 11 35 37.3
KHC *e*S **S** **11 42 53.0 -7.7**
KHC MLR MLR
comp=Z,600nm,20.7s
HSPB Hornsund (broa 97.59 347 *e*P **P** **11 31 40.5 -0.7**
KBA Koelnbreinsper 97.62 316 *e*P **P** **11 31 41.8 -0.4**
comp=Z,8.5nm,1.1s
MOR8 Moi Rana 97.73 336 *e*P **P** **11 31 42.0 -0.1**
HFS Hagfors 97.92 330 P Pdif 11 31 43.6 +0.5
comp=Z,14nm,0.7s,baz=129,slow=2.0,SNR=20
HFS PP **PP** **11 35 38.5 -4.0**
comp=Z,8.0nm,0.7s,baz=74,slow=11,SNR=4.1
HFS LR LR 12 23 54.2
comp=Z,240nm,18.3s,baz=89,slow=40
SDPT Sand Point 98.00 35 *e*P Pdif 11 31 43.6 0.0
comp=Z,230nm,1.8s
CLL Collm 98.04 321 *e*Pdif Pdif 11 31 44.0 +0.2
comp=Z,24nm,1.6s
CLL *e* 11 31 48.0
CLL *e* 11 32 07.0
CLL *i* PP **PP** **11 35 42.2 -1.4**
CLL *e*SPP 11 36 08.0
CLL *e*(SKKSac) 11 42 53.0
CLL *e*sS sS 11 43 39.0 -0.8
CLL *e*SP **SP** **11 44 26.0 -2.1**
CLL *e*PPS PPS 11 45 36.0
CLL *e*SS **SS** **11 49 49.0 +0.9**
CLL *e*(SSS) 11 53 18.0
CLL *e*SSSS 11 56 54.0
CLL Collm 98.04 321 *e*P Pdif 11 31 44.0 +0.2
CLL *e**SP pP 11 32 07.0 +2.7
CLL *i* 11 35 42.2
CLL *e*S S 11 42 53.0 -11
CLL pmax pmax
comp=Z,24nm,1.6s
KBS Kingsbay 98.31 349 *e*P **P** **11 31 43.8 -0.7**
comp=Z,34nm,1.3s
KBS LR LR
comp=Z,1μm,20.0s
KBS Kingsbay 98.31 349 *e*P **P** **11 31 43.8 -0.7**
KBS pmax pmax
comp=Z,34nm,1.3s
KBS MLR MLR
comp=Z,1μm,20.0s
KBS Kingsbay 98.31 349 *e*P **P** **11 31 43.4 -1.1**
WTTA Wattenberg 98.80 317 *i* Pdiff **P** **11 31 47.5 0.0**
comp=Z,12nm,1.0s
WATA Walderalm 98.84 317 *i* Pdiff **P** **11 31 47.2 -0.4**
comp=Z,16nm,1.2s
NC405 NORSAR Array S 98.91 331 *e*P Pdif 11 31 48.8 +1.3
NC303 NORSAR Array S 99.08 331 *e*P **Pdif** **11 31 48.7 +0.4**
NB2 NORSAR Subarra 99.15 331 P **Pdif** **11 31 48.5 -0.1**
comp=Z,12nm,1.2s,baz=83,slow=4.6
NB2 NORSAR Subarra 99.15 331 P **Pdif** **11 31 48.5 -0.1**
baz=83,slow=4.6
NB200 NORSAR Array S 99.15 331 *e*P **Pdif** **11 31 48.8 +0.2**
NB200 *e*PP **PP** **11 35 53.9 +2.0**
NB200 *e* 12 20 44.0
NOA NORSAR Array B 99.15 331 P **Pdif** **11 31 48.8 +0.2**
comp=Z,9.0nm,1.0s,baz=91,slow=4.0,SNR=6.8
NOA PP **PP** **11 35 53.9 +2.0**
comp=Z,5.7nm,0.8s,baz=76,slow=8.1,SNR=4.4
NOA PKKPbc **PKKPbc** **11 48 13.9 -2.3**
comp=Z,0.9nm,0.7s,baz=251,slow=4.4,SNR=2.7
NOA LR LR 12 20 44.0
comp=Z,333nm,21.6s,baz=70,slow=38
MOTA Moosalm 99.16 317 *i* Pdiff **Pdif** **11 31 47.7 -1.4**
comp=Z,7.7nm,0.8s
NAO01 NORSAR Array S 99.32 330 *e*P **Pdif** **11 31 51.0 +1.7**
RETA Reutte 99.39 317 *i* Pdiff **Pdif** **11 31 50.2 +0.2**
comp=Z,11nm,1.0s
FETA Feichten 99.41 316 *e*Pdiff **Pdif** **11 31 50.6 +0.4**
comp=Z,11nm,1.0s
FUORN Ofenpass-Fuorn 99.72 316 *e*Pdif **Pdif** **11 31 52.9 +1.2**
comp=Z,18nm,1.0s
DAVA Damuels 99.99 317 *i* Pdiff **Pdif** **11 31 53.3 +0.5**
comp=Z,23nm,1.1s,SNR=5.5
KEST Kesra 100.13 305 PP PP 11 35 58.9 -1.3
comp=Z,5.5nm,0.9s,baz=127,slow=7.1,SNR=3.4
PPT2 Papeete2 100.91 110 *e*Sdif Sdif 11 43 29.5 -0.7
comp=Z,734nm,24.5s
PPT2 Papeete2 100.91 110 *e*LR LR 12 05 02.8
comp=Z,1μm,24.5s
IM3 Indian Mountai 100.95 24 *e*Pdif **Pdif** **11 31 56.8 +0.4**
CAST Castle Rocks 101.95 27 *e*Pdif **Pdif** **11 32 02.2 +1.3**
OHAK Old Harbor 101.97 33 *e*Pdif **Pdif** **11 32 02.0 +0.9**
TOLK Toolik Lake Re 102.18 21 P **Pdif** **11 32 02.9 +0.9**
baz=280
TOLK Toolik Lake Re 102.18 21 *e*Pdif **Pdif** **11 32 02.8 +0.9**
COLD Coldfoot 102.19 23 *e*Pdif **Pdif** **11 32 03.5 +1.6**
KDAK Kodiak Island 102.30 33 P **Pdif** **11 32 03.4 +0.8**
comp=Z,6.6nm,0.7s,baz=252,slow=5.2,SNR=10
KDAK Kodiak Island 102.30 33 *e*Pdif **Pdif** **11 31 59.8 -2.8**
KDAK LR LR
comp=Z,248nm,22.0s
MLY Manley 102.31 25 *e*Pdif **Pdif** **11 32 04.0 +1.4**
BPAW Bear Paw Mtn. 102.34 26 *e*Pdif **Pdif** **11 32 04.0 +1.2**
BRLK Bradley Lake 102.96 30 *e*Pdif **Pdif** **11 32 06.9 +1.4**
MCK McKinley 103.30 26 *e*Pdif **Pdif** **11 32 07.7 +0.7**
MCK McKinley 103.30 26 *e*P **Pdif** **11 32 07.7 +0.7**
RND Reindeer 103.39 27 *e*Pdif **Pdif** **11 32 07.9 +0.5**
RND Reindeer 103.39 27 *e*P **Pdif** **11 32 07.9 +0.5**
WRH Wood River Hil 103.53 25 *e*Pdif **Pdif** **11 32 08.6 +0.7**
COLA College 103.55 25 PFAKE 11 32 20.0 +12
COLA LR LR
comp=Z,335nm,19.0s
CCB Clear Creek Bu 103.61 25 *e*Pdif **Pdif** **11 32 09.2 +0.9**
SEW Seward 103.63 30 *e*Pdif **Pdif** **11 32 10.1 +1.7**
ILAR Eielson Array 103.98 25 Pdiff **Pdif** **11 32 09.6 -0.4**
comp=Z,0.6nm,0.8s,baz=293,slow=4.4,SNR=8.1
ILAR PKiKP **PP** **11 36 27.8 -0.2**
comp=Z,4.6nm,1.0s,baz=284,slow=3.8,SNR=6.2
ILAR PKKPbc **PKKPbc** **11 47 59.9 -2.2**
comp=Z,0.7nm,0.6s,baz=118,slow=1.6,SNR=10
ILB Eielson Array 103.98 25 *e*Pdif **Pdif** **11 32 09.6 -0.4**
ILB *e*PKiKP **PP** **11 36 27.8 -0.2**
SCRK Sand Creek 105.39 26 *e*Pdif **Pdif** **11 32 17.5 +1.1**
DOT Dot Lake 105.44 26 *e*Pdif **Pdif** **11 32 17.6 +1.1**
BMRM Bremner River 105.83 29 *e*Pdif **Pdif** **11 32 19.2 +0.9**
TOA0 Torodi Ar. Sit 105.97 281 *e*Pdif **Pdif** **11 32 20.9 +1.0**
TORD Torodi Ar. Bea 105.97 281 Pdiff **Pdif** **11 32 19.4 -0.4**
comp=Z,2.8nm,1.1s,baz=100,slow=1.6,SNR=7.9
TORD PKiKP **PKiKP** **11 36 32.0 -0.1**
comp=Z,3.0nm,0.7s,baz=65,slow=1.2,SNR=17
TORD PKKPbc **PKKPbc** **11 47 54.4 0.0**
comp=Z,0.7nm,0.4s,baz=308,slow=3.7,SNR=14
TOA1 Torodi Ar. Sit 105.97 281 *e*Pdif **Pdif** **11 32 19.4 -0.5**
TOA1 *e*PKiKP **PKiKP** **11 36 32.0 -0.1**

EGAK Eagle 106.35 24 PFAKE 11 36 40.0
EGAK LR LR
comp=Z,600nm,21.0s
EKA Eskdalemuir Ar 107.34 326 PKiKP **PKiKP** **11 36 34.4 +1.0**
comp=Z,3.2nm,0.7s,baz=82,slow=5.3,SNR=5.2
ESK Eskdalemuir 107.37 326 PFAKE 11 36 50.0
ESK LR LR
comp=Z,712nm,22.0s
PMSA Palmer Station 107.43 184 PFAKE 11 36 50.0
PMSA LR LR
comp=Z,2μm,19.0s
INK Inuvik 107.90 20 Pdiff **Pdif** **11 32 26.7 -0.6**
comp=Z,2.0nm,0.9s,baz=294,slow=5.3,SNR=4.5
INK PKiKP **PKiKP** **11 36 34.6 +0.5**
comp=Z,4.9nm,0.7s,baz=317,slow=4.2,SNR=10
INK PKKPbc **PKKPbc** **11 47 47.2 -2.8**
comp=Z,1.8nm,0.6s,baz=74,slow=1.7,SNR=10
SHEL Horse Pasture 108.87 250 PFAKE 11 36 50.0
SHEL LR LR
comp=Z,551nm,20.0s
ESDC Sonseca Array 110.51 309 PKiKP **PKiKP** **11 36 40.6 +0.7**
comp=Z,1.2nm,0.6s,baz=26,slow=1.9,SNR=10.0
ESDC PP **PP** **11 37 12.4 -4.2**
comp=Z,1.4nm,0.6s,baz=64,slow=7.5,SNR=6.0
ESDC PKKPbc **PKKPbc** **11 47 41.5 +0.5**
comp=Z,0.1nm,0.3s,baz=279,slow=3.7,SNR=7.0
PAB San Pablo 110.82 309 PFAKE 11 36 50.0
PAB LR LR
comp=Z,294nm,20.0s
HOPE Hope Point 110.89 202 PFAKE 11 36 50.0
HOPE LR LR
comp=Z,809nm,22.0s
KOWA Kowa 111.58 283 PKiKP **PKiKP** **11 36 42.6 0.0**
comp=Z,4.0nm,0.5s,baz=114,slow=2.9,SNR=8.8
KOWA PKKPbc **PKKPbc** **11 47 38.1 +1.5**
comp=Z,1.3nm,0.6s,baz=333,slow=9.0,SNR=3.9
TAOE Nuku Hiva Isla 111.69 103 *e*LR LR 12 10 08.0
comp=Z,982nm,24.3s
KIC Kosan Boka 111.71 274 *e*PKP1 **PKiKP** **11 36 42.8 -0.1**
comp=Z,108nm,1.9s
MDT Midelt 111.76 302 PKiKP **PKiKP** **11 36 43.8 +1.2**
comp=Z,1.7nm,0.6s,baz=51,slow=8.5,SNR=3.7
MDT PP **PP** **11 37 20.3 -5.7**
comp=Z,3.7nm,0.9s,baz=135,slow=2.9,SNR=3.1
DBIC Dimbokro 111.86 274 PKiKP **PKiKP** **11 36 43.3 +0.1**
comp=Z,5.2nm,0.9s,baz=127,slow=2.8,SNR=5.8
RES Resolute Bay 111.89 6 Pdiff **Pdif** **11 32 49.0 +4.0**
comp=Z,0.6nm,0.4s,baz=351,slow=2.7,SNR=5.0
RES PKiKP **PKiKP** **11 36 42.3 +0.8**
comp=Z,15nm,0.9s,baz=316,slow=2.2,SNR=31
LIC Lamto 111.98 274 *e*PKP1 **PKiKP** **11 36 42.1 -1.3**
comp=Z,33nm,1.2s
TIC Toumodi 112.02 274 *e*PKP1 **PKiKP** **11 36 43.0 -0.5**
BORG Borgarnes 112.31 338 PFAKE 11 36 50.0
BORG LR LR
comp=Z,183nm,21.0s
MVO Moncorvo 112.60 311 *e*PKP **PKiKP** **11 36 45.4 +1.5**
MVO Moncorvo 112.60 311 *i* P **SP** **11 46 59.6 +1.9**
MVO Moncorvo 112.60 311 *e*LR LR 12 14 22.4
comp=Z,218nm,20.0s
RKT Rikitea 112.68 119 *e*Sdif Sdif 11 44 58.5 -9.5
comp=Z,353nm,29.0s
RKT Rikitea 112.68 119 *e*PS PS 11 47 12.2 +4.0
comp=Z,643nm,32.8s
RKT *e*SS SS 11 53 13.4 +4.4
comp=Z,659nm,35.0s
RKT Rikitea 112.68 119 *e*LR LR 12 10 29.4
comp=Z,2μm,39.0s
PBAR Barrancos 113.09 308 *e*PKP **PKiKP** **11 36 46.1 +1.2**
PVRL Vila Real 113.09 312 *e*PKP **PKiKP** **11 36 46.2 +1.4**
MTE Manteigas 113.12 311 *e*PKP **PKiKP** **11 36 46.1 +1.2**
MTE Manteigas 113.12 311 *i* P **PKKPab** **11 47 38.0 -0.9**
MTE Manteigas 113.12 311 *e*LR LR 12 14 38.1
comp=Z,159nm,22.0s
POLO Lamas de Olo 113.13 312 *e*PKP **PKiKP** **11 36 46.1 +1.1**
PCBR Castelo Branco 113.16 310 *e*PKP **PKiKP** **11 36 46.2 +1.3**
PMRV Marv??o 113.16 310 *e*PKP **PKiKP** **11 36 45.8 +0.8**
WRAK Wrangell Islan 113.30 31 PFAKE 11 37 00.0
WRAK LR LR
comp=Z,304nm,20.0s
PVIS Viseu 113.32 311 *e*PKP **PKiKP** **11 36 46.5 +1.2**
PGAV Gavieira, Arco 113.37 312 *e*PKP **PKiKP** **11 36 46.4 +1.0**
PGAV Gavieira, Arco 113.37 312 *i* P **SP** **11 47 08.6 +3.9**
PGAV Gavieira, Arco 113.37 312 *e*LR LR 12 13 37.0
comp=Z,288nm,20.0s
PVAQ Vaqueiros 113.74 307 *e*PKP **PKiKP** **11 36 47.5 +1.4**
PVAQ Vaqueiros 113.74 307 *e*LR LR 12 13 49.9
comp=Z,269nm,20.0s
PBEJ Beja 113.76 308 *e*PKP **PKiKP** **11 36 47.4 +1.3**
PCAS Casmilo, Conde 113.90 310 *e*PKP **PKiKP** **11 36 47.7 +1.3**
PBDV Barranco-do-Ve 113.93 307 *e*PKP **PKiKP** **11 36 48.1 +1.6**
PCVE Castro Verde 113.95 308 *e*PKP 11 36 47.9
MESJ Messejana 114.06 308 *e*P PKPdf 11 36 47.0 +0.3
MESJ *e*PP **PP** **11 37 42.2 +0.2**
MESJ *e*SS SS 11 53 28.8 +1.8
MESJ Messejana 114.06 308 *e*PKP PKPdf 11 36 48.1 +1.4
PNCL Nicolau / Gran 114.26 308 *e*PKP PKPdf 11 36 48.7 +1.6
MORF Marmelete 114.49 307 *e*P PKPdf 11 36 47.6 0.0
MORF *e*PP **PP** **11 37 45.1 0.0**
MORF Marmelete 114.49 307 *e*PKP PKPdf 11 36 49.3 +1.7
LIS Lisbon 114.63 309 *e*PP **PP** **11 37 45.9 -0.1**
ANGG Ammassalik, Gr 116.96 344 *e*PKPdf **PKPdf** **11 36 51.3 -0.1**
YKW3 Yellowknife Ar 117.62 20 *e*PKPdf **PKPdf** **11 36 52.9 +0.1**
YKA Yellowknife Ar 117.67 20 PKP **PKPdf** **11 36 53.2 +0.3**
comp=Z,2.9nm,0.3s,baz=19,slow=0.2,SNR=120
YKA PKKPbc **PKKPbc** **11 47 15.7 -1.5**
comp=Z,0.8nm,0.6s,baz=118,slow=4.6,SNR=9.8
SFJD Kangerlussuaq 118.70 350 *e*PKPdf **PKPdf** **11 36 54.9 +0.2**
SFJD LR LR
comp=Z,534nm,22.0s
SFJD Kangerlussuaq 118.70 350 *e*PKIKP **PKPdf** **11 36 54.9 +0.2**
SFJD MLR MLR
comp=Z,534nm,22.0s
ASCN Ascension 118.96 257 PFAKE 11 37 10.0 +13
ASCN LR LR
comp=Z,1μm,21.0s
LLLB Lillooet 121.47 34 *e*PKPdf **PKPdf** **11 37 02.0 +1.4**
PGC Sidney 121.51 36 *e*PKPdf **PKPdf** **11 37 01.8 +1.1**
A04D Lummi Island 121.92 36 P **PKPdf** **11 37 02.9 +1.4**
baz=298
PMOZ Porto Moniz, M 122.22 304 *e*PKP **PP** **11 38 37.3 -1.5**
PMOZ Porto Moniz, M 122.22 304 *e*LR LR 12 17 35.1
comp=Z,252nm,20.0s
E03A Lebam 122.39 39 *e*PKPdf **PKPdf** **11 37 04.5 +2.1**
B05A Bryant 122.49 36 P **PKPdf** **11 37 03.9 +1.3**
baz=298,SNR=26
F03A Seaside 122.66 39 *e*PKPdf **PKPdf** **11 37 05.2 +2.2**
B06A Marblemount 122.73 36 *e*PKPdf **PKPdf** **11 37 04.4 +1.4**
F04D Rainier, OR 122.94 39 P **PKPdf** **11 37 05.2 +1.7**
baz=296
D05A Enumclaw 123.06 37 *e*PKPdf **PKPdf** **11 37 05.6 +1.8**
G03D McMinnville, O 123.16 40 P **PKPdf** **11 37 05.6 +1.6**
baz=296
IVI Ivigtut 123.30 346 *e*PKPdf **PKPdf** **11 37 03.9 +0.2**
LON Longmire 123.37 38 *e*PKPdf **PKPdf** **11 37 05.9 +1.4**
LON Longmire 123.37 38 *e*PKIKP **PKPdf** **11 37 05.9 +1.4**
COR Corvallis 123.40 41 *e*PKPdf **PKPdf** **11 37 05.8 +1.4**
COR Corvallis 123.40 41 *e*PKIKP **PKPdf** **11 37 05.8 +1.4**
I03D Drain, OR 123.74 42 P **PKPdf** **11 37 06.3 +1.1**
baz=295
LTY Liberty 123.82 37 *e*PKPdf **PKPdf** **11 37 06.2 +0.9**
B08A Colville Reser 124.05 35 *e*PKPdf **PKPdf** **11 37 06.7 +1.0**
H04A Detroit Lake 124.08 40 *e*PKPdf **PKPdf** **11 37 06.7 +0.9**
L02D Cave Junction, 124.20 44 P **PKPdf** **11 37 07.7 +1.6**
baz=293,SNR=8.5
I04A Tendick Farm, 124.32 41 P **PKPdf** **11 37 06.9 +0.5**
baz=296,SNR=17
G05D Wamic, OR 124.38 39 P **PKPdf** **11 37 07.7 +1.3**
baz=297
KHMM Horse Mountain 124.61 45 *e*PKPdf **PKPdf** **11 37 09.4 +2.3**
J04D Umpqua Nationa 124.75 42 P **PKPdf** **11 37 08.6 +1.2**
baz=295,SNR=12
I05D Terrebonne, OR 124.77 40 P **PKPdf** **11 37 08.6 +1.4**
baz=297
G06A Carlson Farm, 124.81 39 *e*PKPdf **PKPdf** **11 37 09.1 +1.8**
HAWA Hanford 124.92 37 PFAKE 11 37 20.0 +13
HAWA LR LR
comp=Z,425nm,21.0s
F07A Phinny Hill Vi 124.93 38 *e*PKPdf **PKPdf** **11 37 09.6 +2.2**
C09A Chrisman Ranch 124.94 35 *e*PKPdf **PKPdf** **11 37 08.9 +1.5**
D08A Wollman Farm, 124.95 36 *e*PKPdf **PKPdf** **11 37 09.3 +1.9**
YBH Yreka Blue Hor 124.98 44 PKP **PKPdf** **11 37 08.1 +0.3**
comp=Z,5.8nm,0.9s,baz=296,slow=3.5,SNR=15
YBH Yreka Blue Hor 124.98 44 *e*PKPdf **PKPdf** **11 37 09.1 +1.4**
YBH Yreka Blue Hor 124.98 44 *e*PKIKP **PKPdf** **11 37 09.1 +1.4**

M02C Callahan 125.01 44 P **PKPdf** **11 37 09.2 +1.4**
baz=294,SNR=24
E08A Dider Farm, El 125.16 37 *e*PKPdf **PKPdf** **11 37 09.9 +2.1**
K04D Chiloquin, OR 125.25 42 P **PKPdf** **11 37 09.6 +1.3**
baz=295,SNR=7.2
PINE Pine Mountain 125.28 41 *e*PKPdf **PKPdf** **11 37 10.5 +2.2**
N02D Trinity Center 125.28 45 P **PKPdf** **11 37 10.0 +1.6**
baz=293
J05D Fort Rock, OR 125.31 41 P **PKPdf** **11 37 10.1 +1.6**
baz=296,SNR=42
NEW Newport 125.35 34 P **PKPdf** **11 37 09.1 +0.9**
baz=303
NEW Newport 125.35 34 *e*PKPdf **PKPdf** **11 37 09.6 +1.4**
NEW LR LR
comp=Z,384nm,19.0s
NEW Newport 125.35 34 *e*PKIKP **PKPdf** **11 37 09.6 +1.4**
NEW MLR MLR
comp=Z,384nm,19.0s
M04C Macdoel 125.55 43 P **PKPdf** **11 37 09.9 +1.0**
baz=295,SNR=20
WDC Whiskeytown Da 125.55 45 *e*PKPdf **PKPdf** **11 37 10.2 +1.4**
WDC Whiskeytown Da 125.55 45 *e*PKIKP **PKPdf** **11 37 10.2 +1.4**
E09A Wood Farm, Sta 125.69 37 *e*PKPdf **PKPdf** **11 37 10.4 +1.6**
K05A Summer Lake 125.78 42 *e*PKPdf **PKPdf** **11 37 11.6 +2.2**
HOPS Hopland Field 125.78 47 *e*PKPdf **PKPdf** **11 37 11.2 +2.0**
G08A Pilot Rock 125.82 38 *e*PKPdf **PKPdf** **11 37 11.1 +1.8**
I07A Izee 126.06 40 *e*PKPdf **PKPdf** **11 37 11.6 +1.8**
O03D Paynes Creek 126.18 45 P **PKPdf** **11 37 10.9 +0.8**
baz=294
F10A Beach Ranch, E 126.52 37 *e*PKPdf **PKPdf** **11 37 11.6 +1.0**
MOD Modoc Plateau 126.54 43 *e*PKPdf **PKPdf** **11 37 12.3 +1.5**
WALA Waterton Lakes 126.63 32 *e*PKPdf **PKPdf** **11 37 11.9 +1.2**
ORV Oroville 126.69 46 *e*PKPdf **PKPdf** **11 37 12.1 +1.1**
ORV Oroville 126.69 46 *e*PKIKP **PKPdf** **11 37 12.1 +1.1**
BMO Blue Mountains 127.05 38 *e*PKPdf **PKPdf** **11 37 12.5 +0.9**
BMO LR LR
comp=Z,494nm,22.0s
BMO Blue Mountains 127.05 38 *e*PKIKP **PKPdf** **11 37 12.5 +0.9**
BMO MLR MLR
comp=Z,494nm,22.0s
J08A Circle Bar Ran 127.06 40 *e*PKPdf **PKPdf** **11 37 11.6 -0.1**
JTMT Jette 127.21 34 *e*PKPdf **PKPdf** **11 37 12.7 +0.8**
AFDM Forest Hills D 127.31 46 *e*PKPdf **PKPdf** **11 37 13.2 +1.0**
RDG13 Poverty Ridge 127.33 48 *e*PKPdf **PKPdf** **11 37 14.4 +2.1**
BEKR Beckworth 127.37 45 *e*PKPdf **PKPdf** **11 37 13.7 +1.2**
WVOR Wild Horse Val 127.40 41 *e*PKPdf **PKPdf** **11 37 14.5 +2.1**
WVOR LR LR
comp=Z,460nm,20.0s
WVOR Wild Horse Val 127.40 41 *e*PKIKP **PKPdf** **11 37 14.5 +2.1**
WVOR MLR MLR
comp=Z,460nm,20.0s
SAO San Andreas Ge 127.80 49 *e*PKPdf **PKPdf** **11 37 14.5 +1.3**
SAO San Andreas Ge 127.80 49 *e*PKIKP **PKPdf** **11 37 14.5 +1.3**
FFC Flin Flon 127.84 20 *e*PKPdf **PKPdf** **11 37 13.8 +1.1**
FFC LR LR
comp=Z,402nm,20.0s
FFC Flin Flon 127.84 20 *e*PKIKP **PKPdf** **11 37 13.8 +1.1**
FFC MLR MLR
comp=Z,402nm,20.0s
MSO Missoula 127.94 34 P **PKPdf** **11 37 14.1 +0.8**
baz=306
MSO Missoula 127.94 34 *e*PKPdf **PKPdf** **11 37 13.8 +0.6**
CMB Columbia Colle 128.09 47 *e*PKPdf **PKPdf** **11 37 15.2 +1.5**
CMB Columbia Colle 128.09 47 *e*PKIKP **PKPdf** **11 37 15.2 +1.5**
VCNR Virginia City 128.11 45 *e*PKPdf **PKPdf** **11 37 15.5 +1.5**
PAHR Pah Rah Range 128.12 45 *e*PKPdf **PKPdf** **11 37 15.7 +1.8**
PNTR Pine Nut 128.23 45 *e*PKPdf **PKPdf** **11 37 16.4 +2.2**
PMPB Monarch Peak 128.48 49 *e*PKPdf **PKPdf** **11 37 16.0 +1.4**
YERR Yerington 128.53 45 *e*PKPdf **PKPdf** **11 37 16.7 +1.9**
WAKR Walker 128.59 46 *e*PKPdf **PKPdf** **11 37 17.1 +2.2**
MFID Camas Ranch 128.70 39 *e*PKPdf **PKPdf** **11 37 14.2 -0.7**
PAGB Antelope Grade 129.08 50 *e*PKPdf **PKPdf** **11 37 17.6 +2.0**
HRY Holter Researc 129.17 33 *e*PKPdf **PKPdf** **11 37 17.0 +1.4**
RYN Ryan 129.19 46 *e*PKPdf **PKPdf** **11 37 18.2 +2.2**
MDPB Devils Postpil 129.20 47 *e*PKPdf **PKPdf** **11 37 17.9 +1.8**
OMMB Old Mammoth Mi 129.27 47 *e*PKPdf **PKPdf** **11 37 18.2 +1.8**
BMN Battle Mountai 129.28 43 *e*PKPdf **PKPdf** **11 37 18.0 +1.9**
BMN Battle Mountai 129.28 43 *e*PKIKP **PKPdf** **11 37 18.0 +1.9**
KVN Kaiserville 129.30 45 *e*PKPdf **PKPdf** **11 37 17.0 +0.8**
KVN Kaiserville 129.30 45 *e*PKIKP **PKPdf** **11 37 17.0 +0.8**
LRM Limekiln Ridge 129.36 35 *e*PKPdf **PKPdf** **11 37 17.1 +0.9**
MLAC Mammoth, Mammt 129.38 47 P **PKPdf** **11 37 18.1 +1.7**
baz=294
NV01 Mina Array Sit 129.43 46 *e*PKPdf **PKPdf** **11 37 17.9 +1.4**
NV01 *e*PP **PP** **11 39 21.9 -4.6**
NV01 *e* 11 40 34.1
NVAR Mina Array Bea 129.43 46 PKhKP PKPpre 11 37 06.3
comp=Z,1.3nm,0.8s,baz=246,slow=4.0,SNR=8.6
NVAR PKP **PKiKP** **11 37 18.2 +1.0**
comp=Z,11nm,0.9s,baz=267,slow=1.4,SNR=32
NVAR PP **PP** **11 39 21.8 -4.6**
comp=Z,2.0nm,0.9s,baz=280,slow=5.4,SNR=3.3
NVAR SKPbc SKPbc 11 40 34.1 +2.3
comp=Z,5.0nm,1.0s,baz=287,slow=4.1,SNR=4.7
SMMC Simmler 129.43 50 P **PKPdf** **11 37 18.1 +1.8**
baz=292
EGMT Eagleton 129.43 31 P **PKPdf** **11 37 17.0 +0.9**
baz=311
EGMT Eagleton 129.43 31 *e*PKPdf **PKPdf** **11 37 16.8 +0.7**
EGMT LR LR
comp=Z,440nm,20.0s
HLID Hailey 129.50 38 P **PKPdf** **11 37 18.3 +1.9**
baz=303
HLID Hailey 129.50 38 *e*PKPdf **PKPdf** **11 37 18.2 +1.9**
HLID LR LR
comp=Z,757nm,22.0s
NV11 Mina Array Sit 129.53 46 *e*PKPdf **PKPdf** **11 37 16.1 -0.5**
DLMT Dillon 129.55 35 *e*PKPdf **PKPdf** **11 37 18.5 +2.0**
MCMT McKenzie Canyo 129.72 36 *e*PKPdf **PKPdf** **11 37 18.3 +1.4**
PKM Mcpherson Peak 129.72 51 P **PKPdf** **11 37 18.9 +1.8**
baz=292
VES Vestal, Richgr 129.91 49 P **PKPdf** **11 37 17.7 +0.5**
baz=293
BOZ Bozeman (W) 129.96 34 P **PKPdf** **11 37 18.5 +1.3**
baz=307
BOZ Bozeman (W) 129.96 34 PFAKE 11 37 30.0 +13
BOZ LR LR
comp=Z,420nm,20.0s
SBC Santa Barbara 129.96 51 P **PKPdf** **11 37 19.2 +1.9**
baz=291
TIN Tinemaha, Big 130.06 47 P **PKPdf** **11 37 19.2 +1.6**
baz=295
SCZ2 Santa Cruz Isl 130.18 52 P **PKPdf** **11 37 18.8 +1.0**
baz=291
ARVC Arvin 130.38 50 P **PKPdf** **11 37 19.7 +1.6**
baz=293
CWC Cottonwood Cre 130.42 48 P **PKPdf** **11 37 19.8 +1.4**
baz=294
ISA Isabella, Lake 130.44 49 P **PKPdf** **11 37 19.7 +1.4**
baz=293
ISA Isabella, Lake 130.44 49 *e*PKPdf **PKPdf** **11 37 19.4 +1.1**
ISA Isabella, Lake 130.44 49 *e*PKIKP **PKPdf** **11 37 19.4 +1.1**
SNCC San Nicolas Is 130.53 52 P **PKPdf** **11 37 20.0 +1.5**
baz=290
QLMT Earthquake Lak 130.53 35 *e*PKPdf **PKPdf** **11 37 20.8 +2.4**
SACV Santiago Islan 130.53 283 PFAKE 11 37 30.0 +11
SACV LR LR
comp=Z,332nm,20.0s
BLG Laguna Peak, P 130.58 51 P **PKPdf** **11 37 20.0 +1.4**
baz=292
OSI Osito Audit: C 130.66 50 P **PKPdf** **11 37 20.5 +1.8**
baz=292
YHB Horse Butte 130.71 35 *e*PKPdf **PKPdf** **11 37 21.3 +2.5**
YHH Holmes Hill 130.89 35 *e*PKPdf **PKPdf** **11 37 20.9 +1.7**
YMR Madison River 130.90 35 *e*PKPdf **PKPdf** **11 37 21.4 +2.3**
GCMT Greycliff 130.92 33 *e*PKPdf **PKPdf** **11 37 20.8 +1.8**
MPMC Manual Prospec 131.01 48 P **PKPdf** **11 37 21.2 +1.7**
baz=294
DECC Green Verdugo 131.09 51 P **PKPdf** **11 37 21.2 +1.7**
baz=292
YFT Old Faithful 131.10 35 *e*PKPdf **PKPdf** **11 37 22.7 +3.1**
LRMC Laurel Mtn Rad 131.10 49 P **PKPdf** **11 37 21.6 +1.9**
baz=294
EDW2 Edwards Air Fo 131.11 50 P **PKPdf** **11 37 21.6 +2.0**
baz=293
YPP Pitchstone Pla 131.23 35 *e*PKPdf **PKPdf** **11 37 22.4 +2.6**
PASC Pasadena Art C 131.23 51 *e*PKPdf **PKPdf** **11 37 20.8 +1.0**
LKWY Lake 131.28 35 PFAKE 11 37 30.0 +10
LKWY LR LR
comp=Z,1μm,19.0s
H17A Grant Village 131.28 35 P **PKPdf** **11 37 22.3 +2.4**
baz=308
FURC Furnace Creek, 131.30 47 P **PKPdf** **11 37 21.7 +2.0**
baz=295

MWC	Mount Wilson	131.31	51	ePKPdf	PKPdf	11 37 21.9	+1.7
MWC	Mount Wilson	131.31	51	ePKIKP	PKPdf	11 37 21.9	+1.7
FMP	Fort Macarthur	131.32	51	P	PKPdf	11 37 21.5	+1.5
	baz=292						
CIS	Catalina Islan	131.34	52	P	PKPdf	11 37 21.5	+1.5
	baz=292						
R11A	Troy Canyon, C	131.37	45	P	PKPdf	11 37 22.0	+1.9
	baz=298						
R11A	Troy Canyon, C	131.37	45	ePKPdf	PKPdf	11 37 21.4	+1.3
IMW	Indian Meadow	131.37	36	ePKPdf	PKPdf	11 37 22.2	+2.1
SCI2	San Clemente I	131.39	52	P	PKPdf	11 37 21.6	+1.5
	baz=291						
FXWY	Fox Creek	131.48	36	ePKPdf	PKPdf	11 37 22.2	+2.0
TPNV	Topopah Spring	131.54	46	P	PKPdf	11 37 22.0	+1.5
	baz=296						
RLMT	Red Lodge	131.56	33	P	PKPdf	11 37 21.9	+1.6
	baz=310						
RLMT	Red Lodge	131.56	33	ePKPdf	PKPdf	11 37 22.4	+2.0
RLMT				LR	LR		
	comp=Z,609nm,21.0s						
MOOW	Moose Ponds	131.58	36	ePKPdf	PKPdf	11 37 22.3	+1.8
TPAW	Teton Pass	131.61	36	ePKPdf	PKPdf	11 37 19.7	-0.9
BFSC	Mount Baldy Ra	131.61	50	P	PKPdf	11 37 21.7	+1.0
	baz=293						
LOHW	Long Hollow	131.74	36	ePKPdf	PKPdf	11 37 22.6	+1.9
SNOW	Snow King Moun	131.74	36	ePKPdf	PKPdf	11 37 22.8	+2.0
REDW	Red Top Meadow	131.74	36	ePKPdf	PKPdf	11 37 22.2	+1.4
PLCA	Paso Flores	131.78	183	PKP	PKPdf	11 37 22.1	+1.3
	comp=Z,2.3nm,0.6s,baz=55,slow=1.1,SNR=6.3						
PLCA				PP	PP	11 39 37.7	-2.5
	comp=Z,5.6nm,1.0s,baz=197,slow=8.0,SNR=4.8						
PLCA				SKPbc	SKPab	11 40 41.2	+0.4
	comp=Z,31nm,1.1s,baz=203,slow=4.4,SNR=11						
DGMT	Dagmar	131.79	27	P	PKPdf	11 37 21.5	+1.1
	baz=318						
DGMT	Dagmar	131.79	27	ePKPdf	PKPdf	11 37 21.6	+1.2
DGMT				LR	LR		
	comp=Z,523nm,22.0s						
GSC	Goldstone, Bar	131.83	49	P	PKPdf	11 37 22.7	+1.8
	baz=294						
GSC	Goldstone, Bar	131.83	49	ePKPdf	PKPdf	11 37 22.2	+1.2
GSC	Goldstone, Bar	131.83	49	ePKIKP	PKPdf	11 37 22.2	+1.2
RRX	Edison Barstow	131.86	49	P	PKPdf	11 37 23.0	+2.0
	baz=294						
SPUT	South Promonto	131.94	39	ePKPdf	PKPdf	11 37 22.3	+1.2
AHID	Auburn Hatcher	131.95	37	ePKPdf	PKPdf	11 37 22.4	+1.2
AHID				LR	LR		
	comp=Z,751nm,22.0s						
SHOC	Shoshone, Teco	131.97	48	P	PKPdf	11 37 22.8	+1.7
	baz=295						
LAO	LASA Array	132.11	30	P	PKPdf	11 37 22.9	+1.8
	baz=314						
LAO	LASA Array	132.11	30	ePKPdf	PKPdf	11 37 22.9	+1.8
LAO				LR	LR		
	comp=Z,513nm,22.0s						
BBRC	Big Bear Solar	132.16	50	P	PKPdf	11 37 23.4	+1.5
	baz=294						
MURC	Murrieta	132.21	51	P	PKPdf	11 37 23.3	+1.6
	baz=293						
DUG	Dugway, Tooele	132.31	41	P	PKPdf	11 37 23.4	+1.6
	baz=302						
DUG	Dugway, Tooele	132.31	41	ePKPdf	PKPdf	11 37 23.1	+1.3
DUG				LR	LR		
	comp=Z,584nm,22.0s						
DUG	Dugway, Tooele	132.31	41	ePKIKP	PKPdf	11 37 23.2	+1.3
DUG				MLR	MLR		
	comp=Z,584nm,22.0s						
HWUT	Hardware Ranch	132.33	39	ePKPdf	PKPdf	11 37 21.5	-0.4
HWUT				LR	LR		
	comp=Z,379nm,21.0s						
HEC	Hector,Ludlow	132.38	49	P	PKPdf	11 37 23.9	+1.8
	baz=294						
TUQ	Turquoise Moun	132.43	48	P	PKPdf	11 37 23.9	+1.8
	baz=295						
PSUT	Pine Spring	132.47	43	ePKPpre	PKPpre	11 37 16.0	
SHPR	Sheep Range	132.52	46	ePKPdf	PKPdf	11 37 24.6	+2.3
109C	Camp Elliot, M	132.55	52	P	PKPdf	11 37 24.0	+1.7
	baz=292						
CPE	Camp Elliot	132.55	52	ePKPdf	PKPdf	11 37 24.1	+1.8
SCHQ	Schefferville	132.63	355	PKP	PKPdf	11 37 22.7	+0.9
	comp=Z,27nm,0.8s,baz=20,slow=2.7,SNR=9.7						
SCHQ				PP	PP	11 39 44.0	-1.7
	comp=Z,29nm,1.0s,baz=8.7,slow=6.8,SNR=7.2						
SCHQ	Schefferville	132.63	355	ePKPdf	PKPdf	11 37 22.7	+0.9
SCHQ				ePP	PP	11 39 44.8	-0.9
TCUT	Toone Canyon	132.70	39	ePKPdf	PKPdf	11 37 24.0	+1.4
CTU	Camp Tracy	132.73	40	ePKPdf	PKPdf	11 37 24.2	+1.5
PFO	Pinyon Flats O	132.77	51	P	PKPdf	11 37 24.7	+1.8
	baz=293						
PFO	Pinyon Flats O	132.77	51	ePKPdf	PKPdf	11 37 24.2	+1.3
PFO				LR	LR		
	comp=Z,497nm,19.0s						
PFO	Pinyon Flats O	132.77	51	ePKIKP	PKPdf	11 37 24.2	+1.3
PFO				MLR	MLR		
	comp=Z,497nm,19.0s						
BW06	Boulder Array	132.86	36	P	PKPdf	11 37 23.6	+0.7
	baz=308						
BW06	Boulder Array	132.86	36	PFAKE		11 37 40.0	+17
BW06				LR	LR		
	comp=Z,591nm,21.0s						
PD31	Pinedale Array	132.86	36	ePKPdf	PKPdf	11 37 22.4	-0.5
PDAR	Pinedale Array	132.86	36	PKP	PKPdf	11 37 22.3	-0.6
	comp=Z,6.7nm,0.7s,baz=104,slow=2.2,SNR=14						
PDAR				SKPbc	SKPab	11 40 45.7	+0.1
	comp=Z,1.6nm,0.9s,baz=325,slow=4.6,SNR=2.5						
PDAR	Pinedale Array	132.86	36	ePKPdf	PKPdf	11 37 21.3	-1.6
GMRC	Granite Mounta	132.90	49	P	PKPdf	11 37 25.1	+2.0
	baz=295						
NLU	North Lily Min	132.92	41	ePKPdf	PKPdf	11 37 23.6	+0.5
JLU	Jordanelle	132.97	40	ePKPdf	PKPdf	11 37 23.2	0.0
BAR	Barrett	132.97	52	ePKPdf	PKPdf	11 37 24.9	+1.8
BELC	Belle Mtn. Jos	132.97	50	P	PKPdf	11 37 25.0	+1.7
	baz=294						
MONP2	Monument Peak	133.08	52	P	PKPdf	11 37 25.3	+1.8
	baz=293						
MPU	Maple Canyon	133.17	40	ePKPdf	PKPdf	11 37 24.9	+1.4
TRQA	Tornquist	133.26	193	PFAKE		11 37 40.0	+16
TRQA				LR	LR		
	comp=Z,1μm,22.0s						
CCUT	Cedar City	133.29	44	ePKPdf	PKPdf	11 37 23.5	-0.4
IKP	In-Ko-Pah, Jac	133.42	52	P	PKPdf	11 37 26.0	+1.9
	baz=293						
SZCU	Shurtz Canyon	133.46	44	ePKPdf	PKPdf	11 37 23.9	-0.3
SWSC	Sam W. Stewart	133.54	51	P	PKPdf	11 37 25.8	+1.6
	baz=293						
IRM	Iron Mountain	133.55	49	P	PKPdf	11 37 26.4	+2.2
	baz=295						
MSU	Marysvale	133.62	43	ePKPdf	PKPdf	11 37 24.8	+0.4
MSU	Marysvale	133.62	43	ePKIKP	PKPdf	11 37 24.8	+0.4
LCMT	Little Creek M	133.64	45	ePKPdf	PKPdf	11 37 24.3	-0.1
ULM	Lac du Bonnet	133.64	20	PKP	PKPdf	11 37 24.2	+0.4
	comp=Z,30nm,0.8s,baz=329,slow=3.5,SNR=40						
ULM				PP	PP	11 39 51.6	-0.7
	comp=Z,6.9nm,0.9s,baz=307,slow=7.8,SNR=3.1						
ULM				SKPbc	SKPab	11 40 47.4	-1.0
	comp=Z,13nm,1.0s,baz=299,slow=3.3,SNR=4.9						
NEE2	Needles Airpor	133.68	48	P	PKPdf	11 37 26.3	+1.9
	baz=296						
TMUT	Trail Mountain	133.84	41	ePKPdf	PKPdf	11 37 26.8	+1.9
MTPU	Mount Pierson	133.85	43	ePKPpre	PKPpre	11 37 17.9	
KNB	Kanab	133.93	45	ePKPdf	PKPdf	11 37 24.3	-0.7
KNB	Kanab	133.93	45	ePKIKP	PKPdf	11 37 24.3	-0.7
PKCU	Pink Cliffs	134.07	44	ePKPdf	PKPdf	11 37 27.0	+1.5
W13A	Hualapai Mount	134.07	48	ePKPdf	PKPdf	11 37 26.9	+1.5
Y12C	Blythe	134.19	50	P	PKPdf	11 37 27.3	+2.0
	baz=295						
Y12C	Blythe	134.19	50	ePKPdf	PKPdf	11 37 25.9	+0.5
PDMCI	Parker Dam,Lak	134.24	49	P	PKPdf	11 37 26.7	+1.3
	baz=296						
MDND	Maddock	134.24	24	P	PKPdf	11 37 25.7	+0.7
	baz=323						
MDND	Maddock	134.24	24	ePKPdf	PKPdf	11 37 26.2	+1.2
GLA	Glamis	134.25	51	P	PKPdf	11 37 27.0	+1.5
	baz=294						
P18A	Preston Nutter	134.28	40	ePKPpre	PKPpre	11 37 18.1	
A31A	Linda, St. Vin	134.30	22	P	PKPdf	11 37 25.1	+0.1
	baz=326						
SRU	San Rafael Swe	134.38	41	ePKPdf	PKPdf	11 37 24.9	-0.9
SRU	San Rafael Swe	134.38	41	ePKIKP	PKPdf	11 37 24.9	-0.9
B31A	Greenbush Farm	134.55	22	P	PKPdf	11 37 25.4	-0.1
	baz=326						
A32A	Rocking H Ranc	134.56	21	P	PKPdf	11 37 25.4	-0.1
	baz=327						
U15A	North Rim	134.59	45	ePKPdf	PKPdf	11 37 28.3	+1.9
K22A	Casper	134.67	34	P	PKPdf	11 37 26.6	+0.4
	baz=311						
K22A	Casper	134.67	34	ePKPdf	PKPdf	11 37 26.6	+0.4
RWWY	Rawlins	134.90	36	ePKPdf	PKPdf	11 37 27.0	+0.2
A33A	Warroad	134.93	20	P	PKPdf	11 37 26.6	+0.4
	baz=329,SNR=11						
B32A	Ashes, Strandq	134.98	22	P	PKPdf	11 37 26.5	+0.1
	baz=327						
RSSD	Black Hills	135.00	31	P	PKPdf	11 37 27.6	+0.7
	baz=315						
RSSD	Black Hills	135.00	31	ePKPdf	PKPdf	11 37 27.1	+0.3
RSSD	Black Hills	135.00	31	ePKIKP	PKPdf	11 37 27.2	+0.3
C31A	Landman Farms,	135.03	23	P	PKPdf	11 37 27.2	+0.7
	baz=325						
113A	Mohawk Valley,	135.18	50	ePKPdf	PKPdf	11 37 28.0	+0.8
O20A	White River Ci	135.24	38	P	PKPdf	11 37 28.6	+1.3
	baz=307						
O20A	White River Ci	135.24	38	ePKPdf	PKPdf	11 37 28.7	+1.3
Y14A	Wickenburg	135.25	49	ePKPdf	PKPdf	11 37 26.9	-0.5
AGMN	Agassiz Nation	135.31	21	P	PKPdf	11 37 27.0	0.0
	baz=328						
AGMN	Agassiz Nation	135.31	21	ePKPdf	PKPdf	11 37 27.4	+0.4
AGMN				LR	LR		
	comp=Z,536nm,20.0s						
B33A	Robert and Kas	135.43	21	P	PKPdf	11 37 27.2	-0.1
	baz=328,SNR=9.2						
C32A	Crookston	135.46	22	P	PKPdf	11 37 27.1	-0.2
	baz=327						
B34A	Aery, Baudette	135.57	20	P	PKPdf	11 37 27.7	+0.2
	baz=330,SNR=10						
PV09	Paradox Valley	135.63	41	ePKPdf	PKPdf	11 37 28.6	+0.3
D31A	Mcclaflin, Tow	135.65	24	P	PKPdf	11 37 28.0	+0.4
	baz=325						
WUAZ	Wupatki	135.69	46	P	PKPdf	11 37 29.7	+1.4
	baz=300						
WUAZ	Wupatki	135.69	46	ePKPdf	PKPdf	11 37 27.4	-1.0
WUAZ				LR	LR		
	comp=Z,521nm,20.0s						
C33A	Trail	135.80	21	P	PKPdf	11 37 27.8	-0.1
	baz=328						
D32A	Dogwood Acres,	135.85	23	P	PKPdf	11 37 27.9	-0.1
	baz=326						
E31A	Nome	135.98	24	P	PKPdf	11 37 28.6	+0.3
	baz=324						
B35A	Bob, Littlefor	135.99	19	P	PKPdf	11 37 28.3	0.0
	baz=331,SNR=9.4						
PV02	Paradox Valley	136.05	41	ePKPdf	PKPdf	11 37 27.6	-1.4
N23A	Red Feather La	136.14	36	P	PKPdf	11 37 30.0	+0.9
	baz=310						
N23A	Red Feather La	136.14	36	ePKPdf	PKPdf	11 37 27.7	-1.5
PHWY	Pilot Hill	136.15	35	ePKPdf	PKPdf	11 37 29.2	0.0
X16A	Lo Mia Camp, P	136.17	47	ePKPdf	PKPdf	11 37 29.2	-0.1
C34A	RKJ Ranch, Bem	136.20	21	P	PKPdf	11 37 28.4	-0.3
	baz=329						
214A	Organ Pipe Nat	136.25	51	P	PKPdf	11 37 30.6	+1.3
	baz=295						
E32A	Braaten, Kindr	136.28	23	P	PKPdf	11 37 28.8	-0.1
	baz=325						
D33A	AnnSam, Waubun	136.29	22	P	PKPdf	11 37 28.9	0.0
	baz=327						
F31A	Hecla	136.39	25	P	PKPdf	11 37 28.7	-0.4
	baz=323						
C35A	Jirik Farms, M	136.47	20	P	PKPdf	11 37 28.8	-0.4
	baz=330,SNR=13						
D34A	Park Rapids	136.57	21	P	PKPdf	11 37 29.4	0.0
	baz=328						
SMCO	Snowmass	136.59	38	ePKPdf	PKPdf	11 37 29.9	-0.3
E33A	Westby DABS, E	136.76	23	P	PKPdf	11 37 30.0	+0.2
	baz=327						
MVCO	Mesa Verde	136.77	42	P	PKPdf	11 37 30.4	0.0
	baz=304						
MVCO	Mesa Verde	136.77	42	ePKPdf	PKPdf	11 37 29.9	-0.5
MVCO				LR	LR		
	comp=Z,547nm,21.0s						
C36A	Pine Crest Far	136.80	19	P	PKPdf	11 37 30.1	+0.3
	baz=332,SNR=12						
F32A	Veblen	136.84	24	P	PKPdf	11 37 29.8	-0.1
	baz=325						
G31A	Conde	136.91	26	P	PKPdf	11 37 30.0	-0.1
	baz=323						
D35A	Remer	136.98	20	P	PKPdf	11 37 29.9	-0.3
	baz=330						
ISCO	Idaho Springs	137.03	37	P	PKPdf	11 37 31.1	+0.3
	baz=310						
ISCO	Idaho Springs	137.03	37	ePKPdf	PKPdf	11 37 30.7	-0.2
ISCO				LR	LR		
	comp=Z,579nm,22.0s						
ISCO	Idaho Springs	137.03	37	ePKIKP	PKPdf	11 37 30.7	-0.2
ISCO				MLR	MLR		
	comp=Z,579nm,22.0s						
C37A	Embarrass	137.03	18	P	PKPdf	11 37 30.4	+0.2
	baz=332,SNR=12						
W18A	Petrified Fore	137.04	45	P	PKPdf	11 37 32.1	+1.2
	baz=301						
EYMN	Ely	137.05	18	P	PKPdf	11 37 30.1	-0.2
	baz=334						
EYMN	Ely	137.05	18	ePKPdf	PKPdf	11 37 30.3	0.0
EYMN				LR	LR		
	comp=Z,629nm,22.0s						
E34A	Wadena	137.07	22	P	PKPdf	11 37 30.6	+0.2
	baz=328						
G32A	Webster	137.19	25	P	PKPdf	11 37 30.9	+0.3
	baz=324						
D36A	Goodland	137.20	20	P	PKPdf	11 37 30.5	0.0
	baz=331,SNR=6.7						
F33A	5 Mile Ranch,	137.20	23	P	PKPdf	11 37 30.6	+0.1
	baz=326						
SUSD	Miller	137.21	27	P	PKPdf	11 37 30.5	-0.2
	baz=321						
E35A	Pequot Lakes	137.31	21	P	PKPdf	11 37 30.5	-0.3
	baz=329						
C38A	Sawbill Land.	137.32	18	P	PKPdf	11 37 30.7	-0.1
	baz=334						
H31A	Wolsey	137.39	26	P	PKPdf	11 37 31.0	0.0
	baz=322						
D37A	Cotton	137.46	19	P	PKPdf	11 37 31.2	+0.2
	baz=332,SNR=20						
S22A	4UR Ranch, Cre	137.54	40	P	PKPdf	11 37 33.1	+1.2
	baz=306						
C39A	Grand Marais	137.57	17	P	PKPdf	11 37 31.0	-0.2
	baz=335						
F34A	Alexandria	137.64	23	P	PKPdf	11 37 31.2	-0.2
	baz=327						
TUC	Tucson	137.64	49	P	PKPdf	11 37 32.1	+0.1
	baz=297						
TUC	Tucson	137.64	49	ePKPpre	PKPpre	11 37 23.9	
TUC				LR	LR		
	comp=Z,816nm,20.0s						
TUC	Tucson	137.64	49	ePKHKP	PKPpre	11 37 23.9	
TUC				MLR	MLR		
	comp=Z,816nm,20.0s						
G33A	Ortonville	137.68	24	P	PKPdf	11 37 31.6	+0.1
	baz=325						
I31A	Royce, Wessing	137.72	27	P	PKPdf	11 37 31.6	0.0
	baz=322						
C40A	Isle Royale Na	137.74	16	P	PKPdf	11 37 32.0	+0.4
	baz=337						
E36A	McGregor	137.75	20	P	PKPdf	11 37 31.8	+0.2
	baz=330,SNR=11						
H32A	Carlson Farm,	137.82	26	P	PKPdf	11 37 31.8	0.0
	baz=324						
Q24A	Divide	137.84	37	P	PKPdf	11 37 32.5	+0.1
	baz=310						
Q24A	Divide	137.84	37	ePKPdf	PKPdf	11 37 33.4	+1.0
F35A	Swanville	137.84	22	P	PKPdf	11 37 32.0	+0.2
	baz=328						
G34A	Benson	137.96	23	P	PKPdf	11 37 32.0	0.0
	baz=326						
H33A	Prehn Over Nor	137.97	25	P	PKPdf	11 37 31.6	-0.5
	baz=324						
E37A	Wrenshall	137.99	19	P	PKPdf	11 37 32.1	+0.1
	baz=332						
I32A	Karley and Nic	138.19	26	P	PKPdf	11 37 32.3	-0.2
	baz=323						
F36A	Milaca	138.22	21	P	PKPdf	11 37 32.8	+0.3
	baz=330,SNR=6.5						
E38A	The Farm, Brul	138.23	19	P	PKPdf	11 37 32.7	+0.2
	baz=333,SNR=9.1						
OGNE	Ogallala	138.29	33	P	PKPdf	11 37 33.6	+0.7
	baz=315						
OGNE	Ogallala	138.29	33	PFAKE		11 37 50.0	+17
OGNE				LR	LR		
	comp=Z,483nm,21.0s						
H34A	Spellman Lake,	138.38	24	P	PKPdf	11 37 33.2	+0.4
	baz=326						
SDCO	Great Sand Dun	138.38	39	P	PKPdf	11 37 32.9	-0.5
	baz=308						
SDCO	Great Sand Dun	138.38	39	ePKPpre	PKPpre	11 37 28.3	
SDCO				LR	LR		
	comp=Z,461nm,20.0s						
G35A	Watkins	138.42	22	P	PKPdf	11 37 33.4	+0.6
	baz=328						
I33A	Coleman	138.46	25	P	PKPdf	11 37 32.5	-0.5
	baz=324						
F37A	Hinrichs Farm,	138.65	20	P	PKPdf	11 37 33.4	+0.1
	baz=331						
G36A	St. Michael	138.68	22	P	PKPdf	11 37 33.5	+0.2
	baz=329						
D41A	Chassel	138.69	16	P	PKPdf	11 37 34.1	+0.8
	baz=337						
F38A	Pierce - Schro	138.70	19	P	PKPdf	11 37 34.0	+0.7
	baz=332						
H35A	Sunnyside Ranc	138.72	23	P	PKPdf	11 37 33.9	+0.5
	baz=327						
E39A	Mellen	138.74	18	P	PKPdf	11 37 33.9	+0.5
	baz=334						
ECSD	EROS Data Cent	138.79	25	P	PKPdf	11 37 34.0	+0.4
	baz=324						
ECSD	EROS Data Cent	138.79	25	ePKPpre	PKPpre	11 37 26.4	
ECSD				LR	LR		
	comp=Z,458nm,19.0s						
E40A	Wakefield	138.88	17	P	PKPdf	11 37 34.4	+0.8
	baz=335						
SPMN	Marine on St.	139.03	21	P	PKPdf	11 37 34.4	+0.4
	baz=330						
SPMN	Marine on St.	139.03	21	ePKPdf	PKPdf	11 37 35.0	+1.1
F39A	Loretta	139.04	18	P	PKPdf	11 37 34.6	+0.6
	baz=333						
E41A	Kenton	139.13	16	P	PKPdf	11 37 34.8	+0.7
	baz=336						
H36A	Jessenland, He	139.17	22	P	PKPdf	11 37 35.2	+0.9
	baz=328						
319A	Douglas	139.21	50	ePKPpre	PKPpre	11 37 28.4	
F40A	Park Falls	139.29	18	P	PKPdf	11 37 35.1	+0.6
	baz=334						
KSCO	Kaye Shedlock'	139.29	35	P	PKPdf	11 37 35.4	+0.6
	baz=313						
KSCO	Kaye Shedlock'	139.29	35	ePKPdf	PKPdf	11 37 36.5	+1.6
G38A	Ridgeland	139.40	20	P	PKPdf	11 37 34.6	0.0
	baz=332						
TASM	ASL Pad, Albuq	139.40	43	P	PKPdf	11 37 36.3	+1.1
	baz=304						
ANMO	Albuquerque	139.41	43	PKhKP	PKPpre	11 37 28.3	
	comp=Z,6.5nm,0.9s,baz=322,slow=3.6,SNR=15						
ANMO	Albuquerque	139.41	43	P	PKPdf	11 37 36.6	+1.3
	baz=304						
ANMO	Albuquerque	139.41	43	PFAKE		11 37 50.0	+15
ANMO				LR	LR		
	comp=Z,509nm,21.0s						
TASL	Snake Pit, Alb	139.41	43	P	PKPdf	11 37 36.4	+1.2
	baz=304						
COWI	Conover	139.41	17	ePKPpre	PKPpre	11 37 27.4	
COWI				LR	LR		
	comp=Z,611nm,21.0s						
T25A	Trinidad	139.44	39	P	PKPdf	11 37 36.4	+1.1
	baz=309						
T25A	Trinidad	139.44	39	ePKPpre	PKPpre	11 37 29.4	
E42A	Champion	139.44	15	P	PKPdf	11 37 35.4	+0.7
	baz=338						
G39A	Holcombe	139.52	19	P	PKPdf	11 37 35.0	+0.2
	baz=333,SNR=5.5						
ROC1	El Roble	139.53	183	ePKPdf	PKPdf	11 37 36.9	+1.3
H37A	Dierke Farm, C	139.54	21	P	PKPdf	11 37 35.3	+0.4
	baz=330						
Y22D	IRIS PASSCAL I	139.57	45	P	PKPdf	11 37 34.7	-0.8
	baz=303						
Y22D	IRIS PASSCAL I	139.57	45	ePKPdf	PKPdf	11 37 35.8	+0.3
Y22E	IRIS PASSCAL I	139.57	45	P	PKPdf	11 37 34.9	-0.6
	baz=303						
I36A	Fitzsimmons Fa	139.61	23	P	PKPdf	11 37 35.5	+0.5
	baz=328						
LPM	Los Pinos Moun	139.64	44	ePKPpre	PKPpre	11 37 29.7	
H38A	Maiden Rock	139.69	21	P	PKPdf	11 37 35.6	+0.4
	baz=331						
E43A	Lone Tree Farm	139.72	14	P	PKPdf	11 37 35.5	+0.3
	baz=339						
BNM	Barren Site	139.73	44	ePKPpre	PKPpre	11 37 31.1	
ASAL	Salagasta	139.73	186	eP	PKPpre	11 37 29.0	
E44A	Grand Marais A	139.75	13	P	PKPdf	11 37 34.8	-0.4
	baz=341						
F41A	Three Lakes	139.75	17	P	PKPdf	11 37 36.0	+0.7
	baz=336						
121A	Cookes Peak, D	139.76	47	P	PKPdf	11 37 37.4	+1.5
	baz=300						
G40A	Rib Lake	139.85	18	P	PKPdf	11 37 35.6	+0.1
	baz=334,SNR=16						
I37A	Lemond, Waseca	139.85	22	P	PKPdf	11 37 35.9	+0.4
	baz=329						
BGNE	Belgrade	139.93	29	P	PKPdf	11 37 35.6	-0.2
	baz=320						
BGNE	Belgrade	139.93	29	ePKPpre	PKPpre	11 37 30.3	
H39A	Augusta	140.02	20	P	PKPdf	11 37 35.6	-0.2
	baz=332,SNR=8.4						
J36A	Seneca 1, Swea	140.06	24	P	PKPdf	11 37 36.2	+0.3
	baz=327						
E45A	Wooded Hills,	140.16	13	P	PKPdf	11 37 36.9	+0.9
	baz=342						
F43A	Flat Rock, Esc	140.19	15	P	PKPdf	11 37 36.9	+0.9
	baz=339						
G41A	Antigo	140.21	17	P	PKPdf	11 37 36.3	+0.1
	baz=336						
I38A	Scanlan Farm,	140.22	21	P	PKPdf	11 37 36.0	-0.2
	baz=330						
F44A	Big Bay de Noc	140.24	14	P	PKPdf	11 37 36.2	0.0
	baz=340						
TCA	Tanti	140.29	192	eP	PKPpre	11 37 30.4	
H40A	Chili	140.37	19	P	PKPdf	11 37 36.5	+0.1
	baz=333,SNR=12						
J37A	Redenius Farm,	140.39	23	P	PKPdf	11 37 36.1	-0.4
	baz=328						
G42A	Mountain	140.40	16	P	PKPdf	11 37 37.1	+0.7
	baz=337						
G42A	Mountain	140.40	16	ePKPpre	PKPpre	11 37 29.2	
G43A	Wallace	140.59	16	P	PKPdf	11 37 37.5	+0.7
	baz=338						
G43A	Wallace	140.59	16	ePKPpre	PKPpre	11 37 29.9	
K36A

K39A	Oelwein	141.54	22	P	PKPdf	11 37 37.2	-1.4	
	baz=330							
TRQ	Mont Tremblant	141.56	1	ePKPpre	PKPpre	11 37 33.9		
J41A	Loganville	141.61	19	P	PKPdf	11 37 37.2	-1.5	
	baz=333,SNR=6.8							
L38A	Oak Wood Farm,	141.61	23	P	PKPdf	11 37 38.3	-0.4	
	baz=328							
SCIA	State Center	141.71	24	P	PKPdf	11 37 38.6	-0.3	
SCIA	State Center	141.71	24	ePKPpre	PKPpre	11 37 35.2		
SCIA				LR	LR			
	comp=Z,841nm,22.0s							
I43A	Langenfeld Bro	141.72	17	P	PKPdf	11 37 38.3	-0.6	
	baz=336							
M37A	Trindle Farm,	141.78	25	P	PKPdf	11 37 39.1	0.0	
	baz=326							
K40A	Colesburg	141.81	21	P	PKPdf	11 37 38.5	-0.6	
	baz=331							
N36A	Muff Farm, Cla	141.88	27	P	PKPdf	11 37 38.9	-0.3	
	baz=324							
MNTX	Cornudas Mount	141.93	47	P	PKPdf	11 37 40.0	+0.3	
	baz=302							
MNTX	Cornudas Mount	141.93	47	ePKPpre	PKPpre	11 37 35.7		
MNTX				LR	LR			
	comp=Z,423nm,19.0s							
JFWS	Jewell Farm	141.94	20	P	PKPdf	11 37 39.0	-0.3	
	baz=333							
JFWS	Jewell Farm	141.94	20	ePKPpre	PKPpre	11 37 34.1		
JFWS				LR	LR			
	comp=Z,510nm,21.0s							
JFWS	Jewell Farm	141.94	20	ePKHKP	PKPpre	11 37 34.1		
JFWS				MLR	MLR			
	comp=Z,510nm,21.0s							
J42A	Columbus	141.94	18	P	PKPdf	11 37 38.8	-0.5	
	baz=335							
L39A	Vinton	142.00	22	P	PKPdf	11 37 38.8	-0.6	
	baz=330							
J43A	Natural Harves	142.10	18	P	PKPdf	11 37 39.3	-0.3	
	baz=336							
M38A	Pleasantville	142.13	24	P	PKPdf	11 37 39.6	-0.1	
	baz=327							
K41A	Shullsburg	142.19	20	P	PKPdf	11 37 39.5	-0.3	
	baz=332,SNR=20							
N37A	Lee Faris, Mou	142.25	26	P	PKPdf	11 37 40.0	0.0	
	baz=325							
PKME	Peaks-Kenny Pk	142.34	355	P	PKPdf	11 37 39.4	-0.5	
	baz=7.0							
PKME	Peaks-Kenny Pk	142.34	355	PFAKE		11 37 50.0	+10	
PKME				LR	LR			
	comp=Z,643nm,20.0s							
L40A	Anamosa	142.34	22	P	PKPdf	11 37 39.3	-0.7	
	baz=331							
K42A	Prairie Point,	142.35	19	P	PKPdf	11 37 39.7	-0.4	
	baz=334							
MSTX	Muleshoe	142.44	42	P	PKPdf	11 37 40.7	0.0	
	baz=308							
KSU1	Kansas State U	142.46	30	P	PKPdf	11 37 40.2	-0.1	
	baz=321							
KSU1	Kansas State U	142.46	30	ePKPpre	PKPpre	11 37 36.8		
KSU1				LR	LR			
	comp=Z,595nm,19.0s							
M39A	Webster	142.49	23	P	PKPdf	11 37 40.2	-0.1	
	baz=329							
AMTX	Amarillo	142.58	40	P	PKPdf	11 37 40.5	-0.4	
	baz=310							
L41A	Preston	142.59	21	P	PKPdf	11 37 40.1	-0.4	
	baz=332							
PLVO	Plevna	142.62	4	ePKPpre	PKPpre	11 37 36.9		
N38A	Joes South For	142.64	25	P	PKPdf	11 37 40.7	+0.1	
	baz=327							
SADO	Sadowa	142.70	7	ePKPpre	PKPpre	11 37 37.0		
CPUP	Villa Florida	142.72	205	PKhKP	PKPpre	11 37 38.3		
	comp=Z,8.5nm,0.7s,baz=148,slow=1.7,SNR=15							
CPUP				SKPbc	SKPbc	11 41 12.9	+0.1	
	comp=Z,5.1nm,0.9s,baz=172,slow=7.3,SNR=3.9							
CPUP	Villa Florida	142.72	205	ePKPpre	PKPpre	11 37 38.0		
K43A	Burlington	142.74	18	P	PKPdf	11 37 40.2	-0.5	
	baz=336,SNR=7.5							
O37A	Wolven Farm, M	142.76	26	P	PKPdf	11 37 41.1	+0.2	
	baz=325							
M40A	Post Highland	142.80	23	P	PKPdf	11 37 40.6	-0.3	
	baz=330							
N39A	Derby Farms, D	142.87	24	P	PKPdf	11 37 40.6	-0.4	
	baz=328							
L42A	Oliver, Polo	142.94	20	P	PKPdf	11 37 40.8	-0.3	
	baz=333,SNR=13							
FRNY	Flat Rock	142.95	360	ePKPpre	PKPpre	11 37 37.7		
L43A	Garden Prairie	143.09	19	P	PKPdf	11 37 41.4	0.0	
	baz=335,SNR=12							
O38A	Galt	143.09	26	P	PKPdf	11 37 41.0	-0.4	
	baz=326							
P37A	Lathrop	143.14	27	P	PKPdf	11 37 41.2	-0.4	
	baz=324							
LONY	Lake Ozonia	143.16	1	P	PKPdf	11 37 41.6	+0.2	
	baz=358							
LONY	Lake Ozonia	143.16	1	ePKPpre	PKPpre	11 37 38.7		
LONY				LR	LR			
	comp=Z,1μm,22.0s							
M41A	Milan	143.19	21	P	PKPdf	11 37 41.3	-0.3	
	baz=331							
N40A	Mertquake, Sal	143.22	23	P	PKPdf	11 37 41.4	-0.2	
	baz=329							
L44A	Lake County Fo	143.35	18	P	PKPdf	11 37 41.9	0.0	
	baz=336							
O39A	Kirksville	143.37	25	P	PKPdf	11 37 41.7	-0.2	
	baz=328							
M42A	Sheffield	143.40	21	P	PKPbc	11 37 38.9	-0.3	
	baz=333,SNR=5.0							
LCO	Las Campanas	143.45	184	ePKPdf	PKPdf	11 37 42.6	-0.2	
LCO				LR	LR			
	comp=Z,2μm,22.0s							
VCA	Vinchina	143.46	188	eP	PKPdf	11 37 41.7	-1.0	
P38A	Dawn	143.48	26	P	PKPbc	11 37 39.6	+0.1	
	baz=326							
LBNH	Lisbon	143.52	358	P	PKPbc	11 37 39.7	+0.2	
	baz=2.8							
LBNH	Lisbon	143.52	358	ePKPpre	PKPbc	11 37 40.1	+0.6	
LBNH	Lisbon	143.52	358	ePKIKP	PKPbc	11 37 40.1	+0.6	
N41A	Harden Midland	143.65	22	P	PKPbc	11 37 39.7	-0.3	
	baz=330,SNR=9.4							
Q37A	Longview Farm,	143.67	28	P	PKPab	11 37 39.5	+0.2	
	baz=324							
M43A	Waltham Townsh	143.69	20	P	PKPbc	11 37 39.8	-0.3	
	baz=334,SNR=33							
O40A	La Belle	143.76	24	P	PKPbc	11 37 40.0	-0.3	
	baz=328							
N42A	Yates City	143.85	21	P	PKPbc	11 37 40.3	-0.2	
	baz=332,SNR=7.6							
P39B	Salisbury	143.93	26	P	PKPbc	11 37 40.8	0.0	
	baz=327							
Q38A	Cooks Store, C	143.98	27	P	PKPbc	11 37 40.9	-0.1	
	baz=325							
M44A	Midewin, Midew	144.03	19	P	PKPbc	11 37 41.0	-0.1	
	baz=335,SNR=24							
HPIG		144.04	54	ePKPdf	PKPdf	11 37 43.2	-0.6	
N43A	Stutzman Famil	144.06	20	P	PKPbc	11 37 41.1	-0.1	
	baz=333							
HNH	Hanover	144.06	358	ePKPdf	PKPdf	11 37 42.1	-0.9	
O41A	Passleys Farm,	144.16	23	P	PKPbc	11 37 41.3	-0.2	
	baz=330,SNR=23							
P40A	Paris	144.19	25	P	PKPbc	11 37 41.6	0.0	
	baz=328,SNR=15							
Q39A	Willow Grove F	144.20	26	P	PKPbc	11 37 41.8	+0.1	
	baz=326							
M45A	Boilermakers S	144.27	18	P	PKPbc	11 37 42.0	+0.2	
	baz=336,SNR=5.7							
AAM	Ann Arbor	144.36	13	P	PKPbc	11 37 42.0	0.0	
	baz=343							
AAM	Ann Arbor	144.36	13	ePKPdf	PKPbc	11 37 42.8	+0.8	
AAM				LR	LR			
	comp=Z,817nm,19.0s							
AAM	Ann Arbor	144.36	13	ePKIKP	PKPbc	11 37 42.8	+0.8	
AAM				MLR	MLR			
	comp=Z,817nm,19.0s							
HDIL	Hopedale	144.36	21	P	PKPab	11 37 42.0	+0.2	
	baz=333							
HDIL	Hopedale	144.36	21	ePKPdf	PKPbc	11 37 42.8	+0.7	
HDIL				LR	LR			
	comp=Z,901nm,20.0s							
O42A	Bath	144.39	22	P	PKPab	11 37 42.0	+0.1	
	baz=331							
ACCN	Adirondack Com	144.40	0	ePKPdf	PKPbc	11 37 42.7	+0.6	
TX31	Lajitas Ar. Si	144.43	49	ePKPdf	PKPdf	11 37 44.1	-0.2	
TX31				ePKPdf	PKPbc	11 37 44.5	+1.7	
TXAR	Lajitas Array	144.43	49	PKP	PKPdf	11 37 44.2	0.0	
	comp=Z,111nm,0.8s,baz=259,slow=1.7,SNR=676							
WMOK	Wichita Mounta	144.46	37	P	PKPbc	11 37 43.0	+0.3	
	baz=314							
WMOK	Wichita Mounta	144.46	37	ePKPdf	PKPbc	11 37 43.2	+0.5	
WMOK				LR	LR			
	comp=Z,512nm,22.0s							
WMOK	Wichita Mounta	144.46	37	ePKIKP	PKPbc	11 37 43.2	+0.5	
WMOK				MLR	MLR			
	comp=Z,512nm,22.0s							
P41A	Barry, Barry	144.47	23	P	PKPbc	11 37 42.6	+0.1	
	baz=329							
R38A	Fenwick Farm,	144.48	28	P	PKPab	11 37 42.2	-0.1	
	baz=324,SNR=28							
M46A	Old House Fiel	144.52	17	P	PKPbc	11 37 43.0	+0.4	
	baz=338,SNR=24							
N44A	Piper City	144.53	19	P	PKPbc	11 37 43.0	+0.3	
	baz=335,SNR=53							
O43A	Sugar Creek Fa	144.59	21	P	PKPbc	11 37 42.9	+0.1	
	baz=332							
Q40A	Laux Farm, Aux	144.63	25	P	PKPbc	11 37 43.2	+0.2	
	baz=327,SNR=9.1							
N45A	Kentland	144.69	18	P	PKPbc	11 37 43.5	+0.4	
	baz=336,SNR=71							
R39A	Chumby, Stover	144.77	27	P	PKPbc	11 37 43.7	+0.2	
	baz=325							
P42A	Winchester	144.82	23	P	PKPbc	11 37 43.7	+0.1	
	baz=330							
MMNY	Mt. Morris Dam	144.85	6	ePKPbc	PKPdf	11 37 44.0	-0.4	
AHML	Horco Molle	144.85	193	eP	PKPdf	11 37 44.9	-0.1	
N46A	Monticello	144.88	17	P	PKPdf	11 37 44.2	-0.3	
	baz=337,SNR=71							
S38A	Stockton	144.92	29	P	PKPab	11 37 43.8	-0.2	
	baz=323							
O44A	Mansfield	145.00	20	P	PKPbc	11 37 44.2	0.0	
	baz=334,SNR=9.3							
Q41A	Truxton	145.01	24	P	PKPab	11 37 44.6	+0.3	
	baz=328,SNR=31							
TRY	Troy	145.05	0	ePKPbc	PKPdf	11 37 45.0	+0.2	
P43A	Skaggs, Pawnee	145.08	22	P	PKPdf	11 37 44.9	0.0	
	baz=332							
R40A	Maddies Statio	145.13	26	P	PKPdf	11 37 45.0	-0.1	
	baz=326,SNR=50							
S39A	Bolivar	145.15	28	P	PKPbc	11 37 44.8	+0.1	
	baz=324							
O45A	Potomac	145.16	19	P	PKPdf	11 37 45.3	+0.3	
	baz=335,SNR=150							
ERPA	Erie	145.20	8	P	PKPdf	11 37 45.0	0.0	
	baz=349							
ERPA	Erie	145.20	8	ePKPbc	PKPdf	11 37 45.3	+0.2	
T38A	Diamond	145.21	30	P	PKPdf	11 37 45.2	0.0	
	baz=322,SNR=67							
HRV	Adam Dziewonsk	145.23	357	P	PKPdf	11 37 45.3	+0.3	
	baz=3.6							
HRV	Adam Dziewonsk	145.23	357	ePKPbc	PKPdf	11 37 45.6	+0.5	
HRV	Adam Dziewonsk	145.23	357	ePKIKP	PKPdf	11 37 45.6	+0.5	
SFIN	Lafayette	145.24	18	P	PKPdf	11 37 45.7	+0.5	
	baz=336,SNR=167							
SFIN	Lafayette	145.24	18	ePKPbc	PKPdf	11 37 45.4	+0.3	
TUL1	Leonard	145.31	33	P	PKPab	11 37 46.0	+0.5	
	baz=319							
TUL1	Leonard	145.31	33	ePKPbc	PKPab	11 37 46.0	+0.5	
ABTX	Abilene, Hawle	145.33	41	P	PKPab	11 37 46.8	+1.1	
	baz=310							
ABTX	Abilene, Hawle	145.33	41	ePKPbc	PKPab	11 37 46.7	+1.1	
Q42A	Golden Eagle	145.33	24	P	PKPab	11 37 45.7	+0.3	
	baz=330							
BCX	Boston College	145.38	357	ePKPdf	PKPab	11 37 45.8	+0.3	
QUA2	Belchertown	145.49	358	ePKPdf	PKPab	11 37 46.8	+0.9	
R41A	Rosebud	145.51	25	P	PKPab	11 37 46.3	+0.1	
	baz=328							
BINY	Binghamton	145.52	3	P	PKPab	11 37 46.3	+0.2	
	baz=356							
BINY	Binghamton	145.52	3	ePKPdf	PKPab	11 37 46.6	+0.5	
BINY				LR	LR			
	comp=Z,1μm,22.0s							
P44A	Sand Creek, Wi	145.56	21	P	PKPab	11 37 46.6	+0.4	
	baz=333							
S40A	Lebanon	145.60	27	P	PKPbc	11 37 46.2	0.0	
	baz=326,SNR=91							
Q43A	New Douglas	145.63	23	P	PKPab	11 37 46.8	+0.2	
	baz=331							
ALLY	Alegheny Colle	145.64	9	ePKPdf	PKPab	11 37 46.5	-0.1	
FSA	Cafayete	145.64	192	eP	PKPbc	11 37 46.9	+0.1	
O47A	Sheridan	145.65	17	P	PKPbc	11 37 46.4	+0.1	
	baz=338,SNR=108							
T39A	Clever	145.66	29	P	PKPab	11 37 46.9	+0.2	
	baz=324							
SLM	Saint Louis	145.69	23	ePKPdf	PKPbc	11 37 46.5	+0.1	
SLM	Saint Louis	145.69	23	ePKP2	PKPbc	11 37 46.5	+0.1	
R42A	Luebbering	145.76	24	P	PKPab	11 37 47.0	-0.1	
	baz=329							
CCM	Cathedral Cave	145.77	25	P	PKPbc	11 37 46.9	+0.2	
	baz=328							
CCM	Cathedral Cave	145.77	25	ePKPdf	PKPbc	11 37 46.7	+0.1	
CCM	Cathedral Cave	145.77	25	ePKP2	PKPbc	11 37 46.7	+0.1	
P45A	Graceland, Par	145.81	20	P	PKPab	11 37 47.0	-0.2	
	baz=335,SNR=119							
BRYW	Bryant College	145.82	357	ePKPdf	PKPab	11 37 47.3	+0.1	
M54A	Oil Creek Stat	145.85	8	P	PKPbc	11 37 47.0	+0.2	
	baz=349							
M54A	Oil Creek Stat	145.85	8	ePKPdf	PKPab	11 37 47.6	+0.3	
P46A	Rosedale	145.90	19	P	PKPab	11 37 47.4	-0.2	
	baz=336,SNR=50							
Q44A	Meyer Farm, Va	145.92	22	P	PKPbc	11 37 47.4	+0.3	
	baz=332							
S41A	Jillco Farms,	145.95	26	P	PKPab	11 37 47.8	0.0	
	baz=327,SNR=44							
T40A	Mansfield	145.96	28	P	PKPbc	11 37 47.3	0.0	
	baz=325							
HHAR	Hobbs	145.98	30	ePKPdf	PKPdf	11 37 47.0	+0.4	
R43A	Red Bud	146.12	23	P	PKPbc	11 37 48.0	+0.3	
	baz=330							
M65A	Busby, Falmout	146.12	356	P	PKPbc	11 37 47.2	-0.4	
	baz=5.3							
U39A	Green Forest	146.12	30	P	PKPbc	11 37 48.2	+0.3	
	baz=323,SNR=22							
FVM	French Village	146.17	24	ePKPdf	PKPbc	11 37 47.6	-0.3	
FVM	French Village	146.17	24	ePKP2	PKPbc	11 37 47.6	-0.3	
KSPA	Keystone Colle	146.17	3	ePKPdf	PKPab	11 37 48.4	-0.2	
S42A	Caledonia	146.20	25	P	PKPbc	11 37 48.4	+0.4	
	baz=328,SNR=44							
Q45A	Warren Harvey,	146.23	21	P	PKPab	11 37 48.8	-0.1	
	baz=334							
P47A	Martinsville	146.31	18	P	PKPab	11 37 48.8	-0.4	
	baz=337,SNR=71							
N54A	Moraine State	146.34	9	P	PKPbc	11 37 48.6	+0.3	
	baz=349							
N54A	Moraine State	146.34	9	ePKPdf	PKPbc	11 37 48.0	-0.3	
Q46A	CEJHS Indians,	146.39	20	P	PKPab	11 37 49.0	-0.4	
	baz=335,SNR=15							
T41A	Mountain View	146.39	27	P	PKPab	11 37 49.1	-0.4	
	baz=326,SNR=20							
OLIL	Olney	146.40	21	ePKPdf	PKPbc	11 37 48.6	+0.1	
U40A	Yellville	146.45	29	P	PKPbc	11 37 49.0	+0.2	
	baz=324,SNR=17							
YLE	Yale	146.46	359	ePKPdf	PKPbc	11 37 48.7	+0.1	
R44A	Waltonville	146.47	22	P	PKPbc	11 37 49.2	+0.4	
	baz=332							
V39A	Pettigrew	146.47	30	P	PKPbc	11 37 49.0	0.0	
	baz=322							
ACSO	Alum Creek Sta	146.48	13	P	PKPbc	11 37 49.3	+0.5	
	baz=343							
ACSO	Alum Creek Sta	146.48	13	ePKPdf	PKPdf	11 37 48.0	+0.7	
ACSO				LR	LR			
	comp=Z,521nm,21.0s							
BLO	Bloomington	146.52	18	ePKPdf	PKPbc	11 37 48.7	-0.2	
BLO	Bloomington	146.52	18	ePKP2	PKPbc	11 37 48.7	-0.2	
JCT	Junction City	146.56	44	P	PKPab	11 37 50.6	+0.1	
	baz=308							
JCT	Junction City	146.56	44	ePKPdf	PKPbc	11 37 49.1	-0.2	
JCT				LR	LR			
	comp=Z,501nm,22.0s							
JCT	Junction City	146.56	44	ePKP2	PKPbc	11 37 49.1	-0.2	
JCT				MLR	MLR			
	comp=Z,501nm,22.0s							
S43A	Fulton Ridge,	146.66	24	P	PKPbc	11 37 49.5	+0.1	
	baz=329							
ODNJ	Ogdensburg	146.69	1	ePKPdf	PKPbc	11 37 49.2	-0.1	
T42A	Van Buren	146.70	26	P	PKPbc	11 37 50.1	+0.6	
	baz=327							
R45A	Skylar, Fairfi	146.72	21	P	PKPab	11 37 50.2	-0.6	
	baz=333,SNR=9.7							
Q47A	Bedord North L	146.77	18	P	PKPab	11 37 50.4	-0.5	
	baz=336,SNR=50							
PAL	Palisades	146.78	0	P	PKPbc	11 37 50.1	+0.5	
	baz=360							
PAL	Palisades	146.78	0	ePKPdf	PKPbc	11 37 49.1	-0.4	
PAL	Palisades	146.78	0	ePKP2	PKPbc	11 37 49.1	-0.4	
N59A	State Game Lan	146.81	3	P	PKPab	11 37 50.5	-0.6	
	baz=356							
N59A	State Game Lan	146.81	3	ePKPdf	PKPbc	11 37 49.4	-0.3	
S44A	Carbondale	146.89	23	P	PKPab	11 37 50.7	-0.7	
	baz=331,SNR=11							
U41A	Viola	146.90	28	P	PKPbc	11 37 50.5	+0.5	
	baz=325							
V40A	Witts Springs	146.90	29	P	PKPbc	11 37 50.4	+0.3	
	baz=323							
V40A	Witts Springs	146.90	29	ePKPdf	PKPdf	11 37 48.5	+0.3	
W39A	Magazine	146.90	31	P	PKPbc	11 37 50.6	+0.5	
	baz=321							
W39A	Magazine	146.90	31	ePKPdf	PKPbc	11 37 49.2	-0.9	
SSPA	Standing Stone	146.93	6	P	PKPbc	11 37 50.5	+0.5	
	baz=352							
SSPA	Standing Stone	146.93	6	ePKPdf	PKPbc	11 37 49.3	-0.7	
CPNY	Central Park	146.99	1	ePKPdf	PKPbc	11 37 49.3	-0.8	
T43A	Greenville	147.00	25	P	PKPbc	11 37 50.7	+0.4	
	baz=329							
R46A	Gibon Southern	147.07	20	P	PKPbc	11 37 50.9	+0.4	
	baz=334							
BRNJ	Basking Ridge	147.09	1	ePKPdf	PKPbc	11 37 50.4	-0.1	
WHTX	Lake Whitney,	147.13	39	P	PKPab	11 37 52.4	-0.2	
	baz=312							
WHTX	Lake Whitney,	147.13	39	ePKPdf	PKPbc	11 37 50.3	-0.5	
LUPA	Lehigh Univers	147.15	2	ePKPdf	PKPbc	11 37 49.8	-0.8	
S45A	Carrier Mills	147.16	22	P	PKPbc	11 37 51.4	+0.7	
	baz=332							
PBMO	Poplar Bluff	147.19	25	ePKPdf	PKPdf	11 37 49.3	+0.7	
U42A	Revenden	147.20	27	P	PKPbc	11 37 51.4	+0.5	
	baz=326							
O56A	Blue Knob Stat	147.21	7	P	PKPbc	11 37 51.7	+0.8	
	baz=351							
O56A	Blue Knob Stat	147.21	7	ePKPdf	PKPbc	11 37 49.9	-1.0	
USIN	University of	147.24	21	ePKPdf	PKPbc	11 37 49.9	-1.1	
V41A	Mountainview	147.24	29	P	PKPbc	11 37 51.2	+0.1	
	baz=324							
X39A	Fountain Ranch	147.26	32	P	PKPab	11 37 52.4	-0.7	
	baz=320							
W40A	Ferguson Farm,	147.27	30	P	PKPbc	11 37 51.6	+0.5	
	baz=322							
W40A	Ferguson Farm,	147.27	30	ePKPdf	PKPdf	11 37 49.8	+1.0	
T44A	Benton	147.28	24	P	PKPbc	11 37 51.6	+0.5	
	baz=330							
R47A	Wooly Knot Far	147.32	19	P	PKPbc	11 37 51.5	+0.4	
	baz=336,SNR=8.5							
R48A	Northridge Ran	147.43	18	P	PKPbc	11 37 52.2	+0.7	
	baz=337,SNR=33							
PAGS	Pennsylvania G	147.44	4	ePKPdf	PKPdf	11 37 50.0	+1.1	
WCI	Wyandotte Cave	147.46	19	P	PKPbc	11 37 52.0	+0.4	
	baz=336							
WCI	Wyandotte Cave	147.46	19	ePKPdf	PKPdf	11 37 49.8	+0.8	
WCI	Wyandotte Cave	147.46	19	ePKIKP	PKPdf	11 37 49.8	+0.8	
S46A	Don Dixon Farm	147.47	21	P	PKPbc	11 37 51.9	+0.3	
	baz=333							
MIAR	Mount Ida	147.52	32	P	PKPbc	11 37 52.7	+0.8	
	baz=321							
MIAR	Mount Ida	147.52	32	ePKPdf	PKPdf	11 37 50.5	+1.3	
MIAR				LR	LR			
	comp=Z,607nm,22.0s							
MIAR	Mount Ida	147.52	32	ePKP2	PKPdf	11 37 50.5	+1.3	
MIAR				MLR	MLR			
	comp=Z,607nm,22.0s							
U43A	Rector	147.55	26	P	PKPbc	11 37 52.2	+0.3	
	baz=328							
PARMO	Parma	147.58	25	ePKPdf	PKPbc	11 37 51.2	-0.7	
WHAR	Wooly Hollow	147.58	29	ePKPdf	PKPdf	11 37 49.9	+0.7	
V42A	Cord	147.58	28	P	PKPbc	11 37 52.4	+0.5	
	baz=326							
MCWV	Mont Chateau	147.63	9	P	PKPbc	11 37 52.6	+0.6	
	baz=348							
MCWV	Mont Chateau	147.63	9	ePKPdf	PKPbc	11 37 50.7	-1.3	
MVL	Millersville	147.69	4	ePKPdf	PKPbc	11 37 50.9	-1.2	
W41B	Gary Mavity, V	147.69	29	P	PKPbc	11 37 52.6	+0.3	
	baz=324							
W41B	Gary Mavity, V	147.69	29	ePKPdf	PKPdf	11 37 50.2	+0.8	
T45A	Paducah	147.71	23	P	PKPbc	11 37 53.0	+0.7	
	baz=331							
U44A	Portageville	147.74	25	P	PKPbc	11 37 53.0	+0.6	
	baz=329							
PVMO	Portageville	147.81	25	ePKPbc	PKPab	11 37 54.0	-1.1	
PSUB	Penn St. - Bra	147.81	3	ePKPdf	PKPdf	11 37 50.6	+1.1	
435B	Jarrell	147.85	41	P	PKPbc	11 37 53.6	+0.7	
	baz=311							
435B	Jarrell	147.85	41	ePKPdf	PKPbc	11 37 51.6	-1.3	
X40A	Basin Creek Fa	147.94	31	P	PKPbc	11 37 53.6	+0.6	
	baz=322							
X40A	Basin Creek Fa	147.94	31	ePKPdf	PKPbc	11 37 51.9	-1.1	
W42A	Bald Knob	147.96	28	P	PKPbc	11 37 53.5	+0.5	
	baz=325							
T46A	Princeton	147.97	22	P	PKPbc	11 37 53.8	+0.8	
	baz=333							
V43A	Jonesboro	147.98	27	P	PKPbc	11 37 53.8	+0.8	
	baz=327							
U44B	Burton Farm, H	148.02	24	P	PKPbc	11 37 53.9	+0.8	
	baz=330							
S48A	Wiedeman Farm,	148.05	19	P	PKPbc	11 37 53.6	+0.4	
	baz=336,SNR=196							
GNAR	Gosnell	148.06	26	ePKPbc	PKPbc	11 37 54.2	+1.0	
X41A	Kaden, Bauxite	148.10	30	P	PKPbc	11 37 54.0	+0.7	
	baz=323							
GLAT	Glass	148.10	24	ePKPdf	PKPbc	11 37 52.2	-1.2	
833A	Chaparral WMA,	148.12	47	P	PKPab	11 37 55.3	-1.3	
	baz=305							
833A	Chaparral WMA,	148.12	47	ePKPdf	PKPbc	11 37 52.7	-0.9	
HBAR	Harrisburg	148.12	27	ePKPdf	PKPbc

EBZ	Ebenezer Churc	149.04	26	ePKPbc	PKPbc	11 37 57.1	+1.3
W45A	Hickory Valley	149.10	25	P	PKPbc	11 37 56.6	+0.7
	baz=329						
V47A	Nunnelly	149.19	22	P	PKPbc	11 37 56.6	+0.5
	baz=332						
U49A	Red Boiling Sp	149.19	19	P	PKPbc	11 37 56.8	+0.6
	baz=336						
X44A	Crenshaw	149.23	27	P	PKPbc	11 37 57.3	+1.0
	baz=327						
240A	Hunter Patters	149.31	35	P	PKPbc	11 37 58.2	+1.6
	baz=318						
YJA	Yavi	149.32	195	eP	PKPbc	11 37 55.5	-1.9
Y43A	Makayla and Ka	149.35	29	P	PKPbc	11 37 57.8	+1.2
	baz=325						
Z42A	Norrel Spur, H	149.35	31	P	PKPbc	11 37 57.9	+1.3
	baz=322						
141A	Papa Simpson,	149.37	33	P	PKPbc	11 37 57.9	+1.3
	baz=320						
CBN	Corbin Frederi	149.38	6	P	PKPbc	11 37 57.4	+0.8
	baz=353						
CBN	Corbin Frederi	149.38	6	PFAKE		11 38 00.0	-1.3
CBN				LR	LR		
	comp=Z,525nm,20.0s						
IP04	Greensprings	149.41	7	ePKPdf	PKPdf	11 37 53.8	+1.6
T52A	Hallie	149.45	15	P	PKPbc	11 37 57.2	+0.4
	baz=342						
W46A	Michie	149.46	24	P	PKPbc	11 37 56.9	0.0
	baz=330						
CVRD	Centerville Ro	149.47	7	ePKPdf	PKPdf	11 37 53.8	+1.6
IP03	Louisa	149.50	7	ePKPdf	PKPdf	11 37 53.7	+1.4
SPRD	Spring Road, M	149.51	7	ePKPdf	PKPdf	11 37 53.7	+1.4
V48A	Smith Brothers	149.52	22	P	PKPbc	11 37 57.3	+0.3
	baz=334						
HKT	Hockley	149.53	40	ePKPdf	PKPdf	11 37 54.7	+2.1
OXF	Oxford	149.55	26	P	PKPbc	11 37 57.7	+0.6
	baz=328						
OXF	Oxford	149.55	26	ePKPdf	PKPdf	11 37 54.1	+1.6
IP01	Cuckoo	149.57	7	ePKPdf	PKPdf	11 37 54.0	+1.5
IP06	Yanceyville	149.59	7	ePKPdf	PKPdf	11 37 53.9	+1.5
IP07	Quail	149.59	7	ePKPdf	PKPdf	11 37 53.9	+1.5
X45A	UM Field Stati	149.63	26	P	PKPbc	11 37 57.7	+0.4
	baz=328						
Y44A	Strider, Charl	149.65	28	P	PKPbc	11 37 58.5	+1.2
	baz=326						
KVTX	Kingsville	149.65	46	PFAKE		11 38 10.0	+7.2
KVTX				LR	LR		
	comp=Z,635nm,22.0s						
W47A	Westpoint	149.67	23	P	PKPbc	11 37 57.6	+0.3
	baz=332						
PLAL	Pickwick Lake	149.71	24	ePKPdf	PKPdf	11 37 52.7	0.0
IP05	Hopewell Churc	149.71	7	ePKPdf	PKPdf	11 37 54.2	+1.6
Z43A	Armstrong Fami	149.76	30	P	PKPbc	11 37 58.6	+0.9
	baz=324						
241A	Mo Tay, Goldon	149.80	34	P	PKPbc	11 37 59.2	+1.4
	baz=319						
V49A	McMinnville	149.82	20	P	PKPbc	11 37 58.1	+0.3
	baz=335,SNR=21						
JSRW	J. Sargeant Re	149.83	7	ePKPdf	PKPdf	11 37 54.0	+1.1
TZTN	Tazewell	149.83	16	P	PKPbc	11 37 58.3	+0.5
	baz=340,SNR=27						
X46A	Booneville	149.87	25	P	PKPbc	11 37 58.4	+0.5
	baz=329						
LNIG	Linares	149.91	52	ePKPdf	PKPdf	11 37 53.6	+0.3
BLA	Blacksburg	149.92	11	P	PKPbc	11 37 58.2	+0.2
	baz=346						
BLA	Blacksburg	149.92	11	ePKPdf	PKPdf	11 37 54.1	+1.1
BLA				LR	LR		
	comp=Z,515nm,21.0s						
142A	Monroe	149.92	32	P	PKPbc	11 37 59.1	+1.1
	baz=322						
URVA	University of	149.99	6	ePKPdf	PKPdf	11 37 54.7	+1.6
PB04	IPOC Station P	150.02	186	ePKPbc	PKPbc	11 38 00.5	+1.6
W48A	Pulaski	150.02	22	P	PKPbc	11 37 58.5	+0.3
	baz=333						
Y45A	Yeager Farm, C	150.03	27	P	PKPbc	11 37 59.4	+1.1
	baz=327						
143A	Socs Landing,	150.08	31	P	PKPbc	11 37 59.5	+1.1
	baz=323						
Z44A	Pea Ridge, Bel	150.10	29	P	PKPbc	11 37 59.4	+1.0
	baz=325						
341A	Kurthwood	150.18	35	P	PKPbc	11 38 00.3	+1.6
	baz=318						
341A	Kurthwood	150.18	35	ePKPdf	PKPdf	11 37 56.1	+2.6
V50A	Pikevile	150.18	19	P	PKPbc	11 37 59.0	+0.4
	baz=337,SNR=22						
242A	Grayson	150.19	33	P	PKPbc	11 37 59.9	+1.2
	baz=321						
X47A	Russelville	150.20	24	P	PKPbc	11 37 58.7	0.0
	baz=331						
W49A	Belvidere	150.28	21	P	PKPbc	11 37 59.3	+0.4
	baz=334,SNR=257						
V51A	Loudon	150.29	18	P	PKPbc	11 37 59.6	+0.7
	baz=338,SNR=21						
SWET	Sewanee	150.31	21	ePKPdf	PKPdf	11 37 54.4	+0.6
Y46A	Houston	150.32	26	P	PKPbc	11 37 59.5	+0.6
	baz=328						
Z45A	Winona	150.38	28	P	PKPbc	11 38 00.4	+1.3
	baz=326						
V52A	Sevierville	150.48	17	P	PKPbc	11 38 00.3	+1.0
	baz=340						
W50A	Signal Mountai	150.54	20	P	PKPbc	11 38 00.1	+0.5
	baz=336,SNR=100						
CPCT	Cooper Cave	150.57	18	ePKPdf	PKPdf	11 37 55.5	+1.4
X48A	Hartselle	150.58	23	P	PKPbc	11 37 59.6	0.0
	baz=332						
441A	DeRidder	150.59	36	P	PKPbc	11 38 01.3	+1.6
	baz=318						
342A	Flagon Creek P	150.62	34	P	PKPbc	11 38 01.7	+1.9
	baz=320						
144A	Alexander Plac	150.63	30	P	PKPbc	11 38 01.0	+1.3
	baz=324						
243A	Waterproof	150.69	32	P	PKPbc	11 38 00.8	+0.9
	baz=322						
MOIG	Morelia	150.69	63	ePKPdf	PKPdf	11 37 56.5	+1.5
MOIG				ePKPbc	PKiKP	11 38 01.8	+0.5
Y47A	UCPARC, Winfie	150.74	25	P	PKPbc	11 38 00.3	+0.3
	baz=330,SNR=6.6						
X49A	Woodville	150.80	22	P	PKPbc	11 38 00.7	+0.6
	baz=334						
V53A	Saluda	150.85	16	P	PKPbc	11 38 01.1	+0.8
	baz=341						
Z46A	Louisville	150.87	27	P	PKPbc	11 38 01.6	+1.3
	baz=328						
145A	Houston Renfro	150.90	29	P	PKPbc	11 38 01.4	+1.1
	baz=325						
VBMS	Vicksburg	150.92	31	P	PKPbc	11 38 01.5	+1.0
	baz=324						
VBMS	Vicksburg	150.92	31	ePKPdf	PKPdf	11 37 56.5	+1.8
JRQG	Juriquilla Cam	150.97	61	ePKPdf	PKPdf	11 37 56.1	+0.7
JRQG				ePKPbc	PKiKP	11 38 02.8	+1.0
244A	Avery, Jackson	150.97	31	P	PKPbc	11 38 01.5	+1.0
	baz=323						
Y48A	Jasper	151.01	24	P	PKPbc	11 38 00.6	0.0
	baz=331						
442A	Mamou	151.06	35	P	PKPbc	11 38 02.7	+1.9
	baz=319						
343A	Vidalia	151.08	33	P	PKPbc	11 38 02.1	+1.3
	baz=321						
W52A	Murphy	151.08	18	P	PKPbc	11 38 01.7	+0.9
	baz=339						
X50B	Fort Payne	151.09	21	P	PKPbc	11 38 01.0	+0.2
	baz=335						
NCAT	North Carolina	151.14	10	ePKPdf	PKPdf	11 37 56.1	+1.2
PB01	IPOC Station P	151.21	188	ePKPbc	PKPbc	11 38 01.6	0.0
W53A	Cullowhee	151.23	16	P	PKPbc	11 38 02.3	+1.1
	baz=340						
Z47A	Carrollton	151.25	26	P	PKPbc	11 38 01.8	+0.7
	baz=329						
X51A	Calhoun	151.27	20	P	PKPbc	11 38 01.9	+0.7
	baz=336,SNR=34						
146A	Union	151.28	28	P	PKPbc	11 38 02.6	+1.3
	baz=327						
Z48A	Northport	151.32	25	P	PKPbc	11 38 01.7	+0.4
	baz=330						
Y49A	Blount Mountai	151.35	23	P	PKPbc	11 38 01.9	+0.5
	baz=333,SNR=55						
245A	Little AP, Sta	151.38	30	P	PKPbc	11 38 02.6	+1.1
	baz=325						
344A	Westbrook Farm	151.42	32	P	PKPbc	11 38 03.3	+1.7
	baz=322						
542A	Morse	151.43	36	P	PKPbc	11 38 04.4	+2.8
	baz=318						
BG3	Lake Jocassee	151.46	16	ePKPdf	PKPdf	11 37 57.0	+1.5
BG3				ePKPbc	PKiKP	11 38 02.7	+0.6
X52A	Dahlonega	151.54	18	P	PKPbc	11 38 02.8	+1.0
	baz=338						
Y50A	Piedmont	151.57	22	P	PKPbc	11 38 02.3	+0.4
	baz=334						
147A	Livingston	151.61	27	P	PKPbc	11 38 02.8	+0.8
	baz=328						
KMSC	Kings Mountain	151.72	13	P	PKPbc	11 38 02.9	+0.6
	baz=344						
KMSC	Kings Mountain	151.72	13	ePKPdf	PKPdf	11 37 56.8	+0.9
KMSC				ePKPbc	PKPbc	11 38 02.8	+0.6
246A	Jackson Lee, B	151.76	29	P	PKPbc	11 38 03.7	+1.3
	baz=326						
Y51A	Rockmart	151.81	20	P	PKPbc	11 38 02.9	+0.4
	baz=336,SNR=25						
X53A	Estanollee	151.81	17	P	PKPbc	11 38 03.7	+1.2
	baz=339						
LRAL	Lakeview Retre	151.84	24	P	PKPbc	11 38 03.2	+0.7
	baz=331						
LRAL	Lakeview Retre	151.84	24	ePKPdf	PKPdf	11 37 57.1	+1.1
LRAL				ePKPbc	PKPbc	11 38 03.2	+0.7
543A	St. Martinvill	151.86	35	P	PKPbc	11 38 04.5	+1.9
	baz=319						
Z49A	Columbiana	151.89	23	P	PKPbc	11 38 03.1	+0.5
	baz=332,SNR=17						
345A	Thompson Farm,	151.89	31	P	PKPbc	11 38 04.0	+1.3
	baz=324						
PAULI	Pauline	151.91	14	ePKPdf	PKPdf	11 37 57.5	+1.3
PAULI				ePKPbc	PKiKP	11 38 03.4	+0.4
148A	Greensboro	151.94	26	P	PKPbc	11 38 03.5	+0.8
	baz=330						
247A	Quitman	151.98	28	P	PKPbc	11 38 04.1	+1.3
	baz=327						
444A	Pine Grove	151.99	33	P	PKPbc	11 38 04.5	+1.6
	baz=322						
Z50A	Ashland	152.07	22	P	PKPbc	11 38 03.6	+0.5
	baz=333,SNR=20						
346A	Big Creek Wild	152.12	30	P	PKPbc	11 38 04.3	+1.1
	baz=325						
Y52A	Lilburn	152.17	19	P	PKPbc	11 38 04.3	+1.0
	baz=337,SNR=8.8						
445A	Amite	152.19	32	P	PKPbc	11 38 04.9	+1.5
	baz=322						
544A	White Castle	152.23	34	P	PKPbc	11 38 05.7	+2.3
	baz=320						
CNNC	Cliffs of the	152.25	8	P	PKPbc	11 38 04.4	+1.0
	baz=351						
CNNC	Cliffs of the	152.25	8	ePKPdf	PKPdf	11 37 57.4	+0.8
CNNC				ePKPbc	PKiKP	11 38 05.0	+1.3
CNNC				LR	LR		
	comp=Z,536nm,20.0s						
Z51A	Franklin	152.29	21	P	PKPbc	11 38 04.4	+0.8
	baz=335						
149A	Jones	152.31	24	P	PKPbc	11 38 04.2	+0.6
	baz=331						
Y53A	Monroe	152.33	18	P	PKPbc	11 38 04.8	+1.1
	baz=338						
248A	Dixon Mills	152.34	27	P	PKPbc	11 38 05.0	+1.3
	baz=329						
HODGE	Hodges	152.36	16	ePKPdf	PKPdf	11 37 58.5	+1.7
HODGE				ePKPbc	PKiKP	11 38 04.8	+0.9
347A	Saraland	152.55	29	P	PKPbc	11 38 05.5	+1.4
	baz=326						
JSC	Jenkinsville	152.56	14	ePKPdf	PKPdf	11 37 58.7	+1.6
JSC				ePKPbc	PKiKP	11 38 05.2	+0.8
JSC	Jenkinsville	152.56	14	ePKIKP	PKPdf	11 37 58.7	+1.6
Y54A	Tignall	152.59	17	P	PKPbc	11 38 05.4	+1.2
	baz=340						
150A	Eclectic	152.61	23	P	PKPbc	11 38 04.7	+0.4
	baz=332,SNR=15						
446A	Poplarville	152.65	31	P	PKPbc	11 38 05.4	+1.0
	baz=324						
Z52A	Williamson	152.67	20	P	PKPbc	11 38 05.6	+1.2
	baz=336						
249A	Camden	152.71	26	P	PKPbc	11 38 05.8	+1.3
	baz=330						
GOGA	Godfrey	152.78	18	P	PKPbc	11 38 05.5	+0.9
	baz=338						
GOGA	Godfrey	152.78	18	ePKPdf	PKPdf	11 37 59.1	+1.6
GOGA				ePKPbc	PKiKP	11 38 05.8	+1.0
GOGA				LR	LR		
	comp=Z,678nm,22.0s						
GOGA	Godfrey	152.78	18	ePKIKP	PKPdf	11 37 59.1	+1.6
GOGA				MLR	MLR		
	comp=Z,678nm,22.0s						
348A	Jackson	152.84	28	P	PKPbc	11 38 06.3	+1.5
	baz=328						
Z53A	Monticello	152.87	19	P	PKPbc	11 38 05.7	+0.8
	baz=338						
151A	Opelika	152.95	22	P	PKPbc	11 38 05.8	+0.8
	baz=334						
447A	Lucedale	153.00	30	P	PKPbc	11 38 06.4	+1.3
	baz=326						
152A	Waverly Hall	153.04	21	P	PKPbc	11 38 06.0	+0.8
	baz=335,SNR=6.1						
645A	Chauvin	153.04	34	P	PKPbc	11 38 07.2	+1.9
	baz=320						
250A	Grady	153.06	24	P	PKPbc	11 38 06.3	+1.0
	baz=331,SNR=9.8						
Z54A	Sparta	153.13	17	P	PKPbc	11 38 06.6	+1.2
	baz=340						
349A	Repton	153.21	27	P	PKPbc	11 38 07.2	+1.5
	baz=329						
448A	Bay Minette	153.26	28	P	PKPbc	11 38 07.1	+1.4
	baz=327						
251A	Midway	153.30	23	P	PKPbc	11 38 07.0	+1.2
	baz=333,SNR=22						
Z55A	Blythe	153.35	16	P	PKPbc	11 38 07.0	+1.1
	baz=341						
153A	Fort Valley	153.36	20	P	PKPbc	11 38 06.8	+0.9
	baz=337						
BRAL	Brewton	153.43	26	P	PKPbc	11 38 07.7	+1.6
	baz=329						
BRAL	Brewton	153.43	26	PFAKE		11 38 10.0	+3.9
BRAL				LR	LR		
	comp=Z,718nm,22.0s						
SIV	San Ignacio	153.44	208	PKP	PKPdf	11 38 00.2	+1.3
	comp=Z,10nm,0.8s,baz=140,slow=2.5,SNR=43						
SIV				PKPbc	PKiKP	11 38 07.6	+0.9
	comp=Z,16nm,0.5s,baz=129,slow=2.1,SNR=37						
SIV				PKPab	pPKPdf	11 38 19.8	-0.5
	comp=Z,19nm,0.9s,baz=175,slow=7.4,SNR=9.3						
350A	Dozier	153.52	25	P	PKPbc	11 38 07.4	+1.1
	baz=331						
154A	Montrose	153.63	18	P	PKPbc	11 38 07.4	+0.9
	baz=338						
252A	Lumpkin	153.64	22	P	PKPbc	11 38 07.6	+1.0
	baz=335,SNR=12						
449A	Pace	153.71	27	P	PKPbc	11 38 08.1	+1.4
	baz=328						
TLIG	Tlapa	153.74	66	ePKPdf	PKPdf	11 38 01.9	+2.5
TLIG				ePKPbc	PKiKP	11 38 09.7	+2.3
253A	Americus	153.80	21	P	PKPbc	11 38 07.9	+1.0
	baz=336						
155A	Kite	153.81	17	P	PKPbc	11 38 07.8	+0.9
	baz=340						
NHSC	New Hope	153.94	13	P	PKPbc	11 38 07.9	+0.7
	baz=345						
NHSC	New Hope	153.94	13	ePKPbc	PKPbc	11 38 08.5	+1.4
NHSC				LR	LR		
	comp=Z,625nm,19.0s						
450A	Crestview	153.95	26	P	PKPbc	11 38 08.6	+1.3
	baz=330						
351A	Pinckard	153.95	24	P	PKPbc	11 38 08.3	+1.1
	baz=332						
352A	Blakely	154.03	23	P	PKPbc	11 38 08.6	+1.1
	baz=334						
BBSR	BB Station	154.04	343	PFAKE		11 38 10.0	+2.6
BBSR				LR	LR		
	comp=Z,620nm,20.0s						
156A	Sylvania	154.05	15	P	PKPbc	11 38 08.6	+1.2
	baz=342						
CSU	Charleston Sou	154.08	13	ePKPbc	PKPbc	11 38 08.6	+1.2
RGRS	Roger Stewart	154.13	13	ePKPdf	PKPdf	11 37 59.4	0.0
RGRS				ePKPbc	PKiKP	11 38 09.5	+1.9
254A	Abbeville	154.19	19	P	PKPbc	11 38 08.8	+1.0
	baz=338						
353A	Camilla	154.41	21	P	PKPbc	11 38 09.3	+1.1
	baz=335						
255A	Hazlehurst	154.46	18	P	PKPbc	11 38 09.4	+1.1
	baz=339						
451A	Vernon	154.47	25	P	PKPbc	11 38 09.6	+1.3
	baz=331						
452A	Marianna	154.49	24	P	PKPbc	11 38 09.9	+1.5
	baz=333						
TIGA	Tifton	154.55	20	P	PKPbc	11 38 09.9	+1.4
	baz=336						
TIGA	Tifton	154.55	20	ePKPdf	PKPdf	11 38 01.9	+1.9
TIGA				ePKPbc	PKiKP	11 38 10.2	+1.7
256A	Glennville	154.58	17	P	PKPbc	11 38 08.9	+0.3
	baz=341						
257A	Skidaway Islan	154.82	15	P	PKPbc	11 38 09.4	+0.4
	baz=343						
453A	Whigham	154.82	22	P	PKPbc	11 38 10.0	+0.9
	baz=334						
LVIG	Laguna Verde	154.82	59	ePKPdf	PKPdf	11 38 02.6	+1.9
355A	Pearson	154.88	19	P	PKPbc	11 38 09.7	+0.5
	baz=338						
552A	Lynn Haven	155.08	25	P	PKPbc	11 38 10.0	
	baz=332						
356A	Blackshear	155.13	18	P	PKPbc	11 38 10.3	
	baz=340						
454A	Quitman	155.20	21	P	PKPbc	11 38 10.5	
	baz=336						
357A	Townsend	155.22	16	P	PKPab	11 38 25.5	-0.4
	baz=341						
553A	Crawfordville	155.37	23	P	PKPab	11 38 27.1	+0.5
	baz=334						
455A	Stateville	155.38	20	P	PKPab	11 38 27.1	+0.5
	baz=337						
LPAZ	La Paz	155.62	193	PKP	PKPdf	11 38 03.8	+1.1
	comp=Z,6.3nm,0.9s,baz=66,slow=1.4,SNR=17						
LPAZ				PKPbc	PKPbc	11 38 14.6	
	comp=Z,5.7nm,0.9s,baz=104,slow=3.5,SNR=8.2						
554A	Perry	155.75	22	P	PKPab	11 38 28.2	-0.1
	baz=335						
457A	Yulee	155.96	17	P	PKPab	11 38 28.4	-0.7
	baz=340						
555A	McAlpin	155.97	20	P	PKPab	11 38 28.7	-0.5
	baz=337						
556A	Lake Butler	156.27	19	P	PKPab	11 38 30.3	-0.2
	baz=338						
655A	Horseshoe Beac	156.43	21	P	PKPab	11 38 31.3	+0.1
	baz=336						
557A	Orange Park	156.47	18	P	PKPab	11 38 31.5	+0.2
	baz=340						
656A	Willston	156.81	20	P	PKPab	11 38 32.7	-0.1
	baz=337						
657A	Interlachen	156.83	19	P	PKPab	11 38 33.1	+0.2
	baz=339						
658A	Bunnell	157.17	17	P	PKPab	11 38 34.6	+0.3
	baz=340						
CMIG	Matias Romero	157.21	64	PKP	PKPdf	11 38 04.9	+1.0
	comp=Z,11nm,0.9s,baz=52,slow=1.2,SNR=7.8						
CMIG				PKPab	PKPab	11 38 34.6	-0.4
	comp=Z,18nm,0.9s,baz=279,slow=3.1,SNR=9.3						
757A	Oxford	157.36	20	P	PKPab	11 38 35.2	0.0
	baz=338						
758A	Lake Helen	157.62	18	P	PKPab	11 38 37.0	+0.8
	baz=340						
857A	Zephyrhills	157.92	21	P	PKPab	11 38 37.7	0.0
	baz=337						
858A	St. Cloud	158.26	19	P	PKPab	11 38 39.2	+0.1
	baz=339						
DWPF	Disney Wildern	158.34	19	P	PKPab	11 38 39.5	+0.1
	baz=339						
DWPF	Disney Wildern	158.34	19	ePKPdf	PKPdf	11 38 06.4	+1.3
957A	Wimauma	158.47	21	P	PKPab	11 38 40.0	0.0
	baz=336						
859A	Kempfer Cattle	158.55	18	P	PKPab	11 38 40.4	0.0
	baz=340						
958A	Wauchula	158.71	20	P	PKPab	11 38 40.8	-0.3
	baz=337						
959A	Okeechobee	159.06	18	P	PKPab	11 38 42.4	-0.1
	baz=340						
058A	Arcadia	159.18	21	P	PKPab	11 38 43.3	+0.2
	baz=337						
059A	Moore Haven	159.49	20	P	PKPab	11 38 44.5	0.0
	baz=338						
060A	Indiantown	159.67	18	P	PKPab	11 38 44.7	-0.6
	baz=340						
CCIG	Comitan	159.95	63	ePKPdf	PKPdf	11 38 07.8	+0.3
059Z	Ave Maria	159.97	21	P	PKPab	11 38 46.2	-0.3
	baz=337						
060Z	West Palm Beac	160.20	19	P	PKPab	11 38 47.6	0.0
	baz=339						
NNA	Nana	160.23	171	PFAKE		11 38 20.0	+12
NNA				LR	LR		
	comp=Z,312nm,22.0s						
SAML	Samuel	160.52	212	ePKPdf	PKPdf	11 38 08.7	+0.8
SAML				LR	LR		
	comp=Z,656nm,22.0s						
061Z	Ochoppi	160.59	20	P	PKPab	11 38 48.6	-0.7
	baz=338						
062Z	Marathon	161.58	22	P	PKPab	11 38 52.9	-0.7
	baz=336						
APG	El Apazote	161.92	65	PKP	PKPdf	11 38 09.4	-0.3
	comp=Z,14nm,0.9s,baz=313,slow=4.7,SNR=12						
PTGA	Pitinga	164.06	239	PKP	PKPdf	11 38 12.1	+0.5
	comp=Z,6.2nm,0.7s,baz=83,slow=5.6,SNR=13						
PTGA				PKPab	PKPab	11 39 03.9	-1.1
	comp=Z,4.0nm,0.6s,baz=144,slow=4.0,SNR=6.9						
ATAH	Atahualpa	164.56	162	PKP	PKPdf	11 38 14.7	+2.2
	comp=Z,15nm,1.0s,baz=228,slow=1.7,SNR=11						
ANWB	Willy Bob	164.78	312	PFAKE		11 38 20.0	+8.0
ANWB				LR	LR		
	comp=Z,476nm,20.0s						
BBGH	Gun Hill	165.16	293	PFAKE		11 38 20.0	+7.6
BBGH				LR	LR		
	comp=Z,1μm,21.0s						
SMRT	St. Maarten	165.44	316	ePKPdf	PKPdf	11 38 13.1	+0.5
ABVI	Anegada Island	165.77	322	ePKPdf	PKPdf	11 38 13.3	+0.5
FDF	Fort de France	165.91	301	ePKPdf	PKPdf	11 38 13.6	+0.5
FDF	Fort de France	165.91	301	ePKIKP	PKPdf	11 38 13.6	+0.5
GRTK	Grand Turk	166.01	350	PFAKE		11 38 20.0	+7.1
GRTK				LR	LR		
	comp=Z,342nm,20.0s						
STVI	Saint Thomas	166.44	323	ePKPdf	PKPdf	11 38 13.4	+0.1
CDVI	St. Croix	166.77	320	ePKPdf	PKPdf	11 38 13.2	-0.4
MTP	Monte Pirata	166.99	324	ePKPdf	PKPdf	11 38 13.8	0.0
CBYP	Canovanas	167.03	325	ePKPdf	PKPdf	11 38 14.0	+0.1
HUMP	Col San Antoni	167.13	325	ePKPdf	PKPdf	11 38 14.2	+0.3
SJG	San Juan	167.32	326	PKP	PKPdf	11 38 14.3	+0.3
	comp=Z,5.1nm,0.3s,baz=5.9,slow=3.9,SNR=10						
SJG				PKPab	PKPab	11 39 19.0	0.0
	comp=Z,18nm,0.2s,baz=54,slow=10,SNR=4.0						
SJG				PP	PP	11 43 08.5	+2.1
	comp=Z,1.8nm,0.3s,baz=23,slow=13,SNR=3.4						
SJG	San Juan	167.32	326	ePKPdf	PKPdf	11 38 14.1	+0.1
SJG				ePKPab	PKPab	11 39 19.0	0.0
SJG				ePP	PP	11 43 08.5	+2.1
SJG				LR	LR		
	comp=Z,510nm,22.0s						
GRGR	Grenville	167.42	292	PFAKE		11 38 30.0	+16
GRGR				LR	LR		
	comp=Z,491nm,21.0s						
OBIP	Obispado Ponce	167.62	327	ePKPdf	PKPdf	11 38 13.6	-0.6
MPR	Mayaguez	167.76	330	ePKPdf	PKPdf	11 38 14.6	+0.3
JTS	JuntasAbangare	168.48	76	PKPab	PKPab	11 39 25.6	+0.9
	comp=Z,7.0nm,0.8s,baz=292,slow=6.9,SNR=5.0						
JTS	JuntasAbangare	168.48	76	PFAKE		11 38 30.0

HELC	Santa Helena	177.60	127	*e*P	PKPdf	11 38 17.1	-2.0
MOTC	Monteria, Cord	177.66	61	*e*P	PKPdf	11 38 18.4	-0.2
RUSC	La Rusia	178.19	196	*e*PKPdf	PKPdf	11 38 18.0	-1.3
RUSC	La Rusia	178.19	196	*e*P	PKPdf	11 38 17.8	-1.6

DDA ***04*** *11:22:12.8, 39°.08N×29°.15E, h7km, Ml2.5*
ISCJB ***04*** *11:22:13.8±0.5, 39°.03N±0°.03×29°.14E±0°.04, h9km±6km, Error ellipse: s-maj=5.8km s-min=4.9km az=137.7*
CSEM ***04*** *11:22:13.8±0.1, 39°.06N×29°.13E, h5km, ML2.1, Error ellipse: s-maj=2.4km s-min=2.2km az=134.0*
ISK ***04*** *11:22:13.5, 39°.07N×29°.13E, h6km, ML2.1/8*
ISC 04 11:22:13.8±0.9, 39°.07N±0°.03×29°.13E±0°.03, h10km±5km, n30, σ0s.38/42, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHAP	**Saphane-Kutahy**	**0.09**	**123**	PG	**Pg**	**11 22 16.1**	**-0.2**
SHAP	**Saphane-Kutahy**	**0.09**	**123**	*e*Pg	**Pg**	**11 22 16.1**	**-0.2**
SIMA	**Simav-Kutahya**	**0.12**	**277**	PG	**Pg**	**11 22 16.5**	**-0.2**
SIMA				SG	**Sg**	**11 22 18.7**	**0.0**
SIMA	**Simav-Kutahya**	**0.12**	**277**	*e*Pg	**Pg**	**11 22 16.5**	**-0.2**
SIMA				*e*Sg	**Sg**	**11 22 18.7**	**0.0**
SMAA	**Simav-Kutahya**	**0.12**	**285**	PG	**Pg**	**11 22 16.6**	**-0.1**
SMAA	**Simav-Kutahya**	**0.12**	**285**	*e*Pg	**Pg**	**11 22 16.6**	**-0.1**
GEDZ	**Gediz**	**0.22**	**96**	PG	**Pg**	**11 22 18.3**	**-0.1**
GEDZ	**Gediz**	**0.22**	**96**	*e*Pg	**Pg**	**11 22 18.3**	**-0.1**
DEMI	**Demirci**	**0.32**	**265**	*i* P	**Pg**	**11 22 20.1**	**-0.2**
DEMI				*i* S	**Sg**	**11 22 24.8**	**+0.2**
DEMI	**Demirci**	**0.32**	**265**	P	**Pg**	**11 22 20.1**	**-0.2**
DEMI				S	**Sg**	**11 22 24.8**	**+0.2**
KULA	**Kula-Manisa**	**0.66**	**214**	PG	**Pg**	**11 22 26.7**	**0.0**
KULA				SG	**Sb**	**11 22 36.3**	**-0.6**
KULA	**Kula-Manisa**	**0.66**	**214**	*e*Pg	**Pg**	**11 22 26.7**	**0.0**
KULA				*e*Sg	**Sb**	**11 22 36.3**	**-0.6**
MANT	**Manisa**	**0.73**	**218**	*i* P	**Pg**	**11 22 27.7**	**-0.2**
MANT				*i* S	**Sg**	**11 22 37.7**	**+0.2**
MANT	**Manisa**	**0.73**	**218**	P	**Pg**	**11 22 27.7**	**-0.2**
MANT				S	**Sg**	**11 22 37.7**	**+0.2**
DURS	**Dursunbey**	**0.73**	**316**	*i* P	**Pg**	**11 22 27.2**	**-0.8**
DURS				*i* S	**Sn**	**11 22 42.0**	**+0.4**
DURS	**Dursunbey**	**0.73**	**316**	P	**Pg**	**11 22 27.2**	**-0.8**
DURS				S	**Sn**	**11 22 42.0**	**+0.4**
KHAL	**Karahalli**	**0.75**	**158**	*i* P	**Pg**	**11 22 28.0**	**-0.3**
KHAL				*i* S	**Sg**	**11 22 37.5**	**-0.7**
KHAL	**Karahalli**	**0.75**	**158**	P	**Pg**	**11 22 28.0**	**-0.3**
KHAL				S	**Sg**	**11 22 37.5**	**-0.7**
CAVI	**Cavuskoy**	**1.26**	**26**	PN	**Pb**	**11 22 37.9**	**+0.2**
CAVI	**Cavuskoy**	**1.26**	**26**	*e*Pn	**Pb**	**11 22 37.9**	**+0.2**
BORA	**Eskisehir**	**1.31**	**51**	PN	**Pg**	**11 22 38.7**	**-0.2**
BORA	**Eskisehir**	**1.31**	**51**	*e*Pn	**Pg**	**11 22 38.7**	**-0.2**
YLV	**Yalova**	**1.51**	**7**	PN	**Pb**	**11 22 41.8**	**-0.1**
YLV	**Yalova**	**1.51**	**7**	*e*Pn	**Pb**	**11 22 41.8**	**-0.1**
ARMT	**Armutlu**	**1.51**	**352**	PN	**Pg**	**11 22 42.3**	**-0.4**
ARMT	**Armutlu**	**1.51**	**352**	*e*Pn	**Pg**	**11 22 42.3**	**-0.4**
SBT5	**Esenkoy-Cinarc**	**1.57**	**353**	PN	**Pb**	**11 22 42.7**	**-0.2**
SBT5	**Esenkoy-Cinarc**	**1.57**	**353**	*e*Pn	**Pb**	**11 22 42.7**	**-0.2**
GULT	**Gulveren**	**1.73**	**38**	PN	**Pn**	**11 22 44.7**	**+0.7**
GULT	**Gulveren**	**1.73**	**38**	*e*Pn	**Pn**	**11 22 44.7**	**+0.7**

DDA ***04*** *11:29:38.8, 39°.10N×29°.14E, h7km, Ml3.3*
CSEM ***04*** *11:29:39.5±0.1, 39°.08N×29°.13E, h2km, ML3.1, Error ellipse: s-maj=3.1km s-min=2.7km az=156.0*
ISK 04 11:29:39.2, 39°.09N×29°.12E, h3km, ML3.1/25, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHAP	**Saphane-Kutahy**	**0.10**	**129**	PG	Pg	11 29 41.8	+0.6
SHAP	**Saphane-Kutahy**	**0.10**	**129**	*i* Pg	Pg	11 29 41.8	+0.6
SIMA	**Simav-Kutahya**	**0.11**	**269**	PG	Pg	11 29 42.0	+0.6
SIMA				SG	Sg	11 29 43.6	+0.7
SIMA	**Simav-Kutahya**	**0.11**	**269**	*i* Pg	Pg	11 29 42.0	+0.6
SIMA				*e*Sg	Sg	11 29 43.6	+0.7
SMAA	**Simav-Kutahya**	**0.11**	**278**	PG	Pg	11 29 42.1	+0.7
SMAA				SG	Sg	11 29 44.8	+1.9
SMAA	**Simav-Kutahya**	**0.11**	**278**	*e*Pg	Pg	11 29 42.1	+0.7
SMAA				*e*Sg	Sg	11 29 44.8	+1.9
GEDZ	**Gediz**	**0.23**	**100**	PG	Pg	11 29 44.2	+0.6
GEDZ	**Gediz**	**0.23**	**100**	*e*Pg	Pg	11 29 44.2	+0.6
DEMI	**Demirci**	**0.32**	**262**	*i* P	Pg	11 29 46.1	+0.7
DEMI				*i* S	Sg	11 29 50.5	+1.0
DEMI	**Demirci**	**0.32**	**262**	P	Pg	11 29 46.1	+0.7
DEMI				S	Sg	11 29 50.5	+1.0
TVSB	**Tavsanli**	**0.45**	**36**	PG	Pg	11 29 46.6	-1.2
TVSB	**Tavsanli**	**0.45**	**36**	*e*Pg	Pg	11 29 46.6	-1.2
DST	**Dursunbey**	**0.65**	**323**	PG	Pg	11 29 51.8	+0.2
DST	**Dursunbey**	**0.65**	**323**	*e*Pg	Pg	11 29 51.8	+0.2
KULA	**Kula-Manisa**	**0.68**	**212**	PG	Pg	11 29 52.4	+0.3
KULA	**Kula-Manisa**	**0.68**	**212**	*e*Pg	Pg	11 29 52.4	+0.3
DURS	**Dursunbey**	**0.72**	**316**	*i* P	Pg	11 29 52.9	-0.1
DURS				*i* S	Sn	11 30 07.9	0.0
DURS	**Dursunbey**	**0.72**	**316**	P	Pg	11 29 52.9	-0.1
DURS				S	Sn	11 30 07.9	-0.1
MANT	**Manisa**	**0.74**	**217**	*i* P	Pg	11 29 53.6	+0.2
MANT				*i* S	Sg	11 30 03.3	+0.3
MANT	**Manisa**	**0.74**	**217**	P	Pg	11 29 53.6	+0.2
MANT				S	Sg	11 30 03.3	+0.3
KUTH	**Kutahya**	**0.76**	**66**	PG	Pb	11 29 55.3	+0.1
KUTH	**Kutahya**	**0.76**	**66**	*e*Pg	Pb	11 29 55.3	+0.1
KHAL	**Karahalli**	**0.77**	**158**	*i* P	Pg	11 29 53.4	-0.6
KHAL				*i* S	Sg	11 30 03.2	-0.7
KHAL	**Karahalli**	**0.77**	**158**	P	Pg	11 29 53.4	-0.6
KHAL				S	Sg	11 30 03.2	-0.8
KHL	**Karahalli**	**0.82**	**157**	PG	Pb	11 29 56.2	0.0
KHL	**Karahalli**	**0.82**	**157**	*e*Pg	Pb	11 29 56.2	0.0
ORLT	**Orhaneli**	**0.97**	**350**	PG	Pb	11 29 58.9	+0.1
ORLT	**Orhaneli**	**0.97**	**350**	*e*Pg	Pb	11 29 58.9	+0.1
AKS	**Akhisar**	**1.04**	**259**	PG	Pn	11 30 00.3	-0.4
AKS	**Akhisar**	**1.04**	**259**	*e*Pg	Pn	11 30 00.3	-0.4
AUBOZ	**BOZOYUK**	**1.08**	**40**	PN	Pb	11 30 00.6	0.0
AUBOZ	**BOZOYUK**	**1.08**	**40**	*i* P	Pg	11 29 60.0	0.0
AUBOZ				*i* S	Sn	11 30 16.9	-0.1
AUBOZ	**BOZOYUK**	**1.08**	**40**	P	Pg	11 30 00.0	0.0
AUBOZ	**BOZOYUK**	**1.08**	**40**	*e*Pn	Pb	11 30 00.6	0.0
AUBOZ				S	Sn	11 30 16.9	0.0
BALB	**Balikesir**	**1.11**	**300**	PN	Pn	11 30 01.6	0.0
BALB	**Balikesir**	**1.11**	**300**	*e*Pn	Pn	11 30 01.6	0.0
AUKUT	**KUTAHYA**	**1.11**	**38**	*i* P	Pg	11 29 53.0	-7.6
AUKUT				*i* S	Sg	11 30 04.0	-11
AUKUT	**KUTAHYA**	**1.11**	**38**	P	Pg	11 29 53.0	-7.5
AUKUT				S	Sg	11 30 04.0	-11
CAVI	**Cavuskoy**	**1.25**	**26**	PN	Pg	11 30 03.2	+0.1
CAVI	**Cavuskoy**	**1.25**	**26**	*e*Pn	Pg	11 30 03.2	+0.1
IZI	**Iznik**	**1.28**	**12**	PN	Pn	11 30 04.5	+0.4
IZI	**Iznik**	**1.28**	**12**	*e*Pn	Pn	11 30 04.5	+0.4
MDNY	**Mudanya-Bursa**	**1.29**	**352**	PN	Pb	11 30 04.8	+0.6
MDNY	**Mudanya-Bursa**	**1.29**	**352**	*e*Pn	Pb	11 30 04.8	+0.6
BORA	**Eskisehir**	**1.30**	**52**	PN	Pn	11 30 04.4	0.0
BORA	**Eskisehir**	**1.30**	**52**	*i* P	Pg	11 30 03.1	-1.0
BORA				*i* S	Sg	11 30 21.1	+0.1
BORA	**Eskisehir**	**1.30**	**52**	P	Pg	11 30 03.1	-1.0
BORA	**Eskisehir**	**1.30**	**52**	*e*Pn	Pn	11 30 04.4	0.0
BORA				S	Sg	11 30 21.1	+0.1
KCTX	**Karacabey (Bur**	**1.32**	**334**	PN	Pg	11 30 04.3	-0.2
KCTX	**Karacabey (Bur**	**1.32**	**334**	*e*Pn	Pg	11 30 04.3	-0.2
BALY	**Balya**	**1.33**	**300**	*i* P	Pg	11 30 03.6	-1.2
BALY				*i* S	Sg	11 30 21.5	-0.6
BALY	**Balya**	**1.33**	**300**	P	Pg	11 30 03.6	-1.2
BALY				S	Sg	11 30 21.5	-0.6
ADVT	**Abdulvahap**	**1.43**	**19**	PN	Pg	11 30 06.8	+0.2
ADVT	**Abdulvahap**	**1.43**	**19**	*e*Pn	Pg	11 30 06.8	+0.2
GONE	**Gonen-Balikesi**	**1.47**	**311**	PN	Pg	11 30 07.5	+0.2
GONE	**Gonen-Balikesi**	**1.47**	**311**	*e*Pn	Pg	11 30 07.5	+0.2
ARMT	**Armutlu**	**1.49**	**352**	PN	Pg	11 30 07.8	0.0
ARMT	**Armutlu**	**1.49**	**352**	*e*Pn	Pg	11 30 07.8	0.0
YLV	**Yalova**	**1.49**	**7**	PN	Pg	11 30 07.7	-0.1
YLV	**Yalova**	**1.49**	**7**	*e*Pn	Pg	11 30 07.7	-0.1
SBT5	**Esenkoy-Cinarc**	**1.55**	**353**	PN	Pb	11 30 08.9	-0.1
SBT5	**Esenkoy-Cinarc**	**1.55**	**353**	*e*Pn	Pg	11 30 08.9	-0.1
EDC	**Edincik**	**1.59**	**323**	PN	Pb	11 30 09.4	+0.2
EDC	**Edincik**	**1.59**	**323**	*e*Pn	Pb	11 30 09.4	+0.2
GULT	**Gulveren**	**1.72**	**38**	PN	Pb	11 30 11.3	-0.2
GULT	**Gulveren**	**1.72**	**38**	*e*Pn	Pb	11 30 11.3	-0.2
BUY	**Buyukada**	**1.76**	**360**	PN	Pb	11 30 11.6	-0.6
BUY	**Buyukada**	**1.76**	**360**	*e*Pn	Pb	11 30 11.6	-0.6
HRT	**Hereke**	**1.78**	**13**	PN	Pn	11 30 11.6	+0.6
HRT	**Hereke**	**1.78**	**13**	*e*Pn	Pn	11 30 11.6	+0.6
SAUV	**Serdivan-Sakar**	**1.89**	**29**	PN	Pb	11 30 13.8	-0.6
SAUV	**Serdivan-Sakar**	**1.89**	**29**	*e*Pn	Pb	11 30 13.8	-0.6
KAVV	**Kandilli-Istan**	**1.98**	**359**	PN	Pb	11 30 15.2	-0.6
KAVV	**Kandilli-Istan**	**1.98**	**359**	*e*Pn	Pb	11 30 15.2	-0.6
ISK	**Istanbul-Kandi**	**1.98**	**359**	PN	Pb	11 30 14.9	-0.9
ISK	**Istanbul-Kandi**	**1.98**	**359**	*e*Pn	Pb	11 30 14.9	-0.9
AUMIH	**MIHALICIK**	**1.99**	**66**	PN	Pb	11 30 15.2	-0.9
AUMIH	**MIHALICIK**	**1.99**	**66**	*e*Pn	Pb	11 30 15.2	-0.9
MDUB	**Mudurnu**	**2.12**	**48**	PN	Pb	11 30 17.2	-1.0
MDUB	**Mudurnu**	**2.12**	**48**	*e*Pn	Pb	11 30 17.2	-1.0

NNC 04 11:30:39.9±5.4, 37°.71N×71°.67E, h0km, mb3.8, mpv3.4, 3C-5D, Error ellipse: s-maj=49.1km s-min=15.9km az=162.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZET	**Dzherino**	**2.50**	**297**	⇑Pn	Pn	11 31 21.7	-0.2
DZET	6.8nm,0.4s						
				⇓Sn	Sb	11 31 55.1	-1.9
	26nm,0.7s						
SFK	**Sufi-Kurgan**	**2.71**	**31**	⇓Pn	Pn	11 31 24.1	-0.8
SFK	6.2nm,0.5s						
				⇓Sn	Sb	11 32 01.9	-1.4
	14nm,0.5s						
MNAS	**Manas**	**4.82**	**7**	⇑Pn	Pn	11 31 51.7	-2.1
MNAS	5.8nm,0.6s						
				⇓Sn	Sn	11 32 50.2	-0.2
	6.1nm,0.6s						
KK31	**Karatay Array**	**5.46**	**351**	⇑Pn	Pn	11 31 60.0	-2.6
KK31	4.9nm,0.8s,baz=167,slow=14,SNR=11						
				⇓Sn	Sn	11 33 04.0	-2.1
	2.0nm,0.3s,baz=168,slow=22,SNR=13						

NNC ***04*** *11:49:17.5±4.6, 37°.06N×70°.77E, h215km±42km, mb2.4, mpv3.6, Error ellipse: s-maj=45.6km s-min=22.5km az=156.0*
ISC 04 11:49:16.9±3.4, 36°.9N±0°.2×70°.91E±0°.09, h200km, n11, σ0s.79/17, 8C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZET	**Dzherino**	**2.49**	**319**	P	**Pn**	**11 50 00.8**	**0.0**
DZET	14nm,0.5s						
				⇑S	**Sn**	**11 50 34.9**	**-0.2**
	98nm,0.3s						
SFK	**Sufi-Kurgan**	**3.68**	**33**	⇑P	**Pn**	**11 50 15.1**	**+0.2**
SFK	4.7nm,0.4s						
				⇑S	**Sn**	**11 51 01.6**	**+1.1**
	11nm,0.4s						
AML	**Almayashu**	**5.61**	**22**	P	**Pn**	**11 50 39.8**	**+0.3**
	SNR=46						
MNAS	**Manas**	**5.67**	**12**	⇓P	**Pn**	**11 50 40.8**	**+0.8**
MNAS	2.8nm,0.4s						
				⇑S	**Sn**	**11 51 46.8**	**+1.0**
	5.3nm,0.5s						
UCH	**Uchtor**	**5.97**	**27**	P	**Pn**	**11 50 44.4**	**+0.3**
	SNR=13						
KZA	**Kyzart**	**6.13**	**32**	P	**Pn**	**11 50 45.7**	**-0.4**
	SNR=7.4						
KK31	**Karatay Array**	**6.16**	**357**	⇑P	**Pn**	**11 50 46.1**	**-0.1**
KK31	1.3nm,0.4s,baz=181,slow=14,SNR=11						
				⇑S	**Sn**	**11 51 56.5**	**-0.5**
	1.3nm,0.3s,baz=188,slow=26,SNR=7.2						
AAK	**Ala-Archa**	**6.32**	**25**	⇓P	**Pn**	**11 50 48.6**	**+0.2**
AAK	3.2nm,0.4s						
				⇑S	**Sn**	**11 52 00.7**	**-0.2**
	2.3nm,0.5s						
AAK	**Ala-Archa**	**6.32**	**25**	P	**Pn**	**11 50 49.1**	**+0.7**
	SNR=7.8						
TKM2	**Tokmak 2**	**6.97**	**30**	⇑P	**Pn**	**11 50 56.7**	**-0.2**
TKM2	6.8nm,0.8s						
				⇓S	**Sn**	**11 52 14.1**	**-2.2**
	0.3nm,0.3s						
TKM2	**Tokmak 2**	**6.97**	**30**	P	**Pn**	**11 50 57.0**	**+0.1**
	SNR=11						

MEX 04 12:06:39.7±0.3, 15°.88N×98°.59W, h10km, MD3.9, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.68**	**1**	*e*P	Pn	12 07 05.7	-3.5
TLIG				*e*S	Sn	12 07 26.3	-4.6
VHO	**Vista Hermosa**	**2.14**	**56**	*e*P	Pn	12 07 12.5	-3.1
VHO				*e*S	Sn	12 07 38.0	-4.4

ISK ***04*** *12:09:27.2, 39°.01N×37°.86E, h7km, ML1.9/4*
ISCJB ***04*** *12:09:29.9±0.6, 38°.94N±0°.04×37°.85E±0°.06, h23km±6km, Error ellipse: s-maj=7.9km s-min=6.0km az=147.1*
CSEM ***04*** *12:09:29.3±0.3, 38°.90N×37°.87E, h18km±3km, ML2.5, Error ellipse: s-maj=8.1km s-min=6.7km az=44.0*
DDA ***04*** *12:09:30.2, 38°.93N×37°.74E, h7km, Ml2.5*
ISC 04 12:09:29.7±1.0, 38°.91N±0°.03×37°.85E±0°.03, h22km±6km, n17, σ1s.06/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HEKM	**Malatya_Hekimh**	**0.09**	**106**	*i* P	**Pb**	**12 09 33.8**	**-0.5**
HEKM				*i* S	**Sb**	**12 09 38.2**	**+0.9**
HEKM	**Malatya_Hekimh**	**0.09**	**106**	P	**Pb**	**12 09 33.8**	**-0.5**
HEKM				S	**Sb**	**12 09 38.2**	**+0.9**
DARE	**Darende-Malaty**	**0.44**	**220**	PG	**Pb**	**12 09 37.8**	**-1.0**
DARE				SG	**Sb**	**12 09 45.8**	**+0.8**
DARE	**Darende-Malaty**	**0.44**	**220**	*e*Pg	**Pb**	**12 09 37.8**	**-1.0**
DARE				*e*Sg	**Sb**	**12 09 45.8**	**+0.8**
CUKAN	**kangal_SIVAS**	**0.51**	**325**	*i* P	**Pb**	**12 09 38.8**	**-1.3**
CUKAN				*i* S	**Sb**	**12 09 46.9**	**-0.2**
CUKAN	**kangal_SIVAS**	**0.51**	**325**	P	**Pb**	**12 09 38.8**	**-1.3**
CUKAN				S	**Sb**	**12 09 46.9**	**-0.2**
AKCD	**Akcadag**	**0.61**	**174**	*i* P	**Pb**	**12 09 41.6**	**-0.3**
AKCD				*i* S	**Sn**	**12 09 53.4**	**+1.0**
AKCD	**Akcadag**	**0.61**	**174**	P	**Pb**	**12 09 41.6**	**-0.3**
KEMA	**Kemaliye**	**0.62**	**54**	*i* P	**Pb**	**12 09 42.0**	**0.0**
KEMA				*i* S	**Sn**	**12 09 53.8**	**+1.2**
KEMA	**Kemaliye**	**0.62**	**54**	P	**Pb**	**12 09 42.0**	**0.0**
MALT	**Malatya**	**0.75**	**142**	PG	**Pb**	**12 09 43.6**	**-0.5**
MALT				SG	**Sn**	**12 09 55.4**	**-0.3**
MALT	**Malatya**	**0.75**	**142**	*e*Pg	**Pb**	**12 09 43.6**	**-0.5**
MALT				*e*Sg	**Sn**	**12 09 55.4**	**-0.3**
PTK	**Pertek**	**1.21**	**90**	PN	**Pn**	**12 09 50.6**	**-0.8**
PTK	**Pertek**	**1.21**	**90**	*e*Pn	**Pn**	**12 09 50.6**	**-0.8**
SARI	**SarD1z-Kayseri**	**1.22**	**246**	PN	**Pb**	**12 09 52.1**	**-0.2**
CUSAR	**Sarkisla-SIVAS**	**1.35**	**293**	*i* P	**Pb**	**12 09 54.1**	**-0.2**
CUSAR				*i* S	**Sb**	**12 10 13.9**	**+2.7**
CUSAR	**Sarkisla-SIVAS**	**1.35**	**293**	P	**Pb**	**12 09 54.1**	**-0.2**
CUSAR				S	**Sb**	**12 10 13.9**	**+2.7**

IDC 04 12:13:46.6±7.9, 17°.58S×177°.06W, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.4/48, mbtmp3.5/2, MS3.3/1, Ms1 3.3/1, ms1mx2.8/42, Error ellipse: s-maj=334.7km s-min=62.2km az=142.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**21.23**	**193**	LR	LR	12 25 42.3	
	comp=Z,95nm,21.4s,baz=300,slow=34						
WRA	**Warramunga Arr**	**45.96**	**259**	P	P	12 22 10.9	-0.9
	0.4nm,0.8s,baz=94,slow=8.4,SNR=4.9						
ASAR	**Alice Springs**	**46.12**	**254**	P	P	12 22 13.5	+0.4
	0.7nm,0.6s,baz=88,slow=8.1,SNR=13						
BRTR	**Keskin Array B**	**145.46**	**316**	PKPbc	PKPbc	12 33 26.3	-0.8
	0.4nm,0.6s,baz=45,slow=0.6,SNR=2.6						

SJA ***04*** *12:18:16.7±1.0, 27°.85S×66°.91W, h180km±6km, ML3.8, MW3.7*
IDC ***04*** *12:18:16.4±4.2, 27°.75S×66°.86W, h137km±32km, mb3.7/11, mb1 3.7/14, mb1mx3.5/39, mbtmp4.0/14, Error ellipse: s-maj=33.3km s-min=16.0km az=36.0*
ISCJB ***04*** *12:18:17.2±0.3, 27°.86S±0°.03×66°.97W±0°.04, h164km, mb3.7/11, Error ellipse: s-maj=4.6km s-min=3.6km az=11.9*
GUC ***04*** *12:18:18.3±0.6, 27°.88S×67°.11W, h179km±5km, ML4.6*
ISC 04 12:18:18.3±0.5, 27°.84S±0°.04×66°.96W±0°.05, h164km, n43, σ1s.35/55, mb3.9/11, 2C-9D, Catamarca Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CYA	**Choya**	**1.19**	**121**	IAML		12 18 47.3	
	comp=Z,734nm,0.5s						
CYA				⇓*e*S	**Sn**	**12 19 07.1**	**-0.2**
VCA	**Vinchina**	**1.41**	**231**	*e*P	**Pn**	**12 18 49.4**	**+1.2**
VCA				*e*S	**Sn**	**12 19 13.0**	**+1.7**
VCA				IAML		12 19 15.5	
	comp=Z,3μm,0.6s						
VCA	**Vinchina**	**1.41**	**231**	⇑*i* P	**Pn**	**12 18 49.2**	**+1.0**
VCA				*i* S	**Sn**	**12 19 12.0**	**+0.7**
VCA				IAML		12 19 14.2	
	comp=E,6μm,0.5s						
AHML	**Horco Molle**	**1.79**	**54**	*e*P	**Pn**	**12 18 52.4**	**+0.4**
AHML				IAML		12 18 53.1	
	comp=Z,548nm,0.3s						
FSA	**Cafayete**	**1.93**	**27**	IAML		12 18 54.5	
	comp=Z,145nm,0.6s						
FSA				*e*S	**Sn**	**12 19 21.1**	**0.0**
GO03	**Copiap**	**2.91**	**274**	*e*P	**Pn**	**12 19 04.5**	**-0.6**
GO03				*e*S	**Sn**	**12 19 39.6**	**-1.9**
GO03				IAML		12 19 40.5	
	comp=N,1000nm,0.4s						
AMOG	**MOGNA**	**3.36**	**203**	*e*P	**Pn**	**12 19 10.7**	**-0.1**
AMOG				⇓*e*S	**Sn**	**12 19 51.4**	**-0.3**
LCO	**Las Campanas**	**3.49**	**250**	*e*P	**Pn**	**12 19 12.3**	**-0.3**
LCO	**Las Campanas**	**3.49**	**250**	⇑*i* P	**Pn**	**12 19 12.2**	**-0.4**
LCO				*e*S	**Sn**	**12 19 53.3**	**-1.6**
LCO				IAML		12 19 55.2	
	comp=E,838nm,0.6s						
GO02	**Mina Guanaco**	**3.56**	**318**	*e*P	**Pn**	**12 19 14.4**	**+0.8**
GO02				*e*S	**Sn**	**12 19 56.9**	**+0.4**
RTLL	**Cerro Villicun**	**3.72**	**200**	*e*P	**Pn**	**12 19 15.0**	**-0.3**
RTLL				*e*S	**Sn**	**12 19 58.2**	**-1.6**
TCA	**Tanti**	**4.05**	**150**	⇓*e*P	**Pn**	**12 19 19.3**	**-0.2**
TCA				IAML		12 19 19.7	
	comp=Z,70nm,0.4s						
TCA				⇓*e*S	**Sn**	**12 20 05.0**	**-2.4**
GO04	**Tololo Observa**	**4.08**	**234**	*e*P	**Pn**	**12 19 19.2**	**-1.0**
GO04				*e*S	**Sn**	**12 20 06.4**	**-2.1**
TLL	**Tololo Astrono**	**4.09**	**235**	*e*P	**Pn**	**12 19 19.5**	**-0.7**
TLL				*e*S	**Sn**	**12 20 06.6**	**-1.9**
RTCV	**Cerro Valdivia**	**4.24**	**199**	⇓*e*P	**Pn**	**12 19 21.5**	**-0.4**
ACAN	**Cantantal**	**4.42**	**182**	*e*P	**Pn**	**12 19 24.4**	**0.0**
RTLS	**Leoncito**	**4.43**	**207**	*e*P	**Pn**	**12 19 24.5**	**-0.3**
RTLS				IAML		12 20 18.1	
	comp=Z,74nm,0.5s						
PB14	**IPOC Station P**	**4.45**	**315**	*e*P	**Pn**	**12 19 25.2**	**+0.1**
PB14				*e*S	**Sn**	**12 20 15.9**	**-1.3**
MRA	**San Martin**	**4.69**	**167**	⇓*e*P	**Pn**	**12 19 27.3**	**-0.5**
MRA				IAML		12 20 22.3	
	comp=Z,81nm,0.4s						
HJA	**Humahuaca**	**4.82**	**17**	*e*P	**Pn**	**12 19 31.9**	**+1.9**
HJA				IAML		12 19 45.5	
	comp=Z,16nm,0.6s						
AUSP	**Uspallata**	**4.85**	**205**	⇓*e*P	**Pn**	**12 19 29.9**	**-0.3**
ASAL	**Salagasta**	**5.00**	**198**	⇓*e*P	**Pn**	**12 19 32.0**	**0.0**
AAGR	**Agrelo**	**5.47**	**197**	⇓*e*P	**Pn**	**12 19 38.3**	**+0.2**
CPUP	**Villa Florida**	**8.72**	**82**	P	**Pn**	**12 20 19.1**	**-2.0**
	comp=Z,0.5nm,0.3s,baz=267,slow=11,SNR=7.5						
LPAZ	**La Paz**	**11.55**	**354**	P	**Pn**	**12 20 58.3**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=154,slow=7.5,SNR=8.6						
LPAZ				S	**Sn**	**12 23 02.0**	**-5.3**
	comp=Z,0.1nm,0.3s,baz=182,slow=8.3,SNR=2.6						
SIV	**San Ignacio**	**12.99**	**26**	P	**Pn**	**12 21 14.0**	**-3.0**
	baz=258,slow=14						
PTGA	**Pitinga**	**27.78**	**15**	P	**P**	**12 23 50.8**	**-1.2**
	comp=Z,1.2nm,0.3s,baz=275,slow=23,SNR=4.7						
SDV	**Santo Domingo**	**36.68**	**354**	P	**P**	**12 25 08.7**	**-1.0**
	comp=Z,4.3nm,0.3s,baz=195,slow=19,SNR=8.7						
APG	**El Apazote**	**48.30**	**329**	P	**P**	**12 26 44.4**	**+1

	baz=260							
EOS1	**EOS1**	**0.40**	**210**	*e*P	**Pb**	**12**	**28**	**39.1** **+0.5**
	baz=209							
EOS1				*e*S	**Sb**	**12**	**28**	**45.2** **+0.8**
	baz=209							
NTC	**Toucheng**	**0.47**	**265**	P	**Pb**	**12**	**28**	**40.5** **+0.6**
NTC				*e*S	**Sn**	**12**	**28**	**48.6** **-1.4**
	baz=263							
TIPB	**Shuangxi**	**0.48**	**279**	P	**Pg**	**12**	**28**	**39.3** **-0.3**
	baz=278							
TIPB				S	**Sg**	**12**	**28**	**46.3** **+0.1**
	baz=278							
TWC	**Suao**	**0.54**	**238**	*e*P	**Pg**	**12**	**28**	**40.6** **0.0**
	baz=236							
TWC				*e*S	**Sg**	**12**	**28**	**47.3** **-0.6**
	baz=236							
NWF	**Wu-fen Shan**	**0.54**	**288**	P	**Pb**	**12**	**28**	**41.7** **+0.6**
	baz=288							
NWF				S	**Sb**	**12**	**28**	**48.9** **+0.2**
	baz=288							
WFSB	**Wu-fen Shan**	**0.54**	**288**	P	**Pb**	**12**	**28**	**41.5** **+0.5**
	baz=288							
WFSB				S	**Sb**	**12**	**28**	**48.9** **+0.3**
	baz=288							
ILA	**Ilan**	**0.56**	**257**	*e*P	**Pb**	**12**	**28**	**42.4** **+1.0**
	baz=255							
ILA				S	**Sn**	**12**	**28**	**51.0** **-1.1**
	baz=255							
TWE	**Neicheng**	**0.65**	**254**	P	**Pb**	**12**	**28**	**43.0** **+0.2**
	baz=252							
TWE				S	**Sb**	**12**	**28**	**52.0** **+0.5**
	baz=252							
JYNG	**Yonaguni jima**	**0.70**	**129**	P	**Pb**	**12**	**28**	**43.9** **+0.2**
JYNG				S	**Sb**	**12**	**28**	**53.5** **+0.4**
YM07	**YM07**	**0.72**	**293**	*e*P	**Pg**	**12**	**28**	**43.7** **-0.3**
	baz=292							
YM07				S	**Sg**	**12**	**28**	**53.5** **-0.1**
	baz=292							
NANB	**Nanao**	**0.72**	**229**	*e*P	**Pg**	**12**	**28**	**43.9** **-0.1**
	baz=228							
NANB				*e*S	**Sg**	**12**	**28**	**53.0** **-0.6**
	baz=228							
ENA	**Nanau**	**0.73**	**230**	*e*P	**Pg**	**12**	**28**	**44.2** **+0.1**
	baz=228							
ENA				*e*S	**Sg**	**12**	**28**	**52.8** **-0.9**
	baz=228							
YOJ	**Yonaguni jima**	**0.74**	**126**	P	**Pg**	**12**	**28**	**44.3** **-0.1**
	baz=125							
YOJ				*e*S	**Sg**	**12**	**28**	**54.1** **-0.2**
	baz=125							
YOJ	**Yonaguni jima**	**0.74**	**126**	P	**Pg**	**12**	**28**	**44.4** **-0.1**
YOJ				S	**Sb**	**12**	**28**	**54.6** **+0.3**
YM08	**YM08**	**0.75**	**293**	P	**Pb**	**12**	**28**	**44.7** **+0.2**
	baz=292							
YM08				*e*S	**Sb**	**12**	**28**	**54.7** **+0.2**
	baz=292							
YM11	**YM11**	**0.75**	**291**	*e*P	**Pb**	**12**	**28**	**45.3** **+0.6**
	baz=290							
YM11				*e*S	**Sb**	**12**	**28**	**55.0** **+0.3**
	baz=290							
ENTT	**Nioudou**	**0.76**	**250**	P	**Pb**	**12**	**28**	**45.0** **+0.3**
	baz=249							
ENTT				S	**Sg**	**12**	**28**	**55.0** **+0.2**
	baz=249							
YM10	**YM10**	**0.76**	**290**	*e*P	**Pb**	**12**	**28**	**45.4** **+0.7**
	baz=289							
YM10				*e*S	**Sb**	**12**	**28**	**55.6** **+0.7**
	baz=289							
TWY	**Chenhua**	**0.78**	**299**	P	**Pg**	**12**	**28**	**45.5** **+0.4**
	baz=298							
TWY				*e*S	**Sb**	**12**	**28**	**56.0** **+0.7**
	baz=298							
NWLT	**Wulai**	**0.78**	**261**	*e*P	**Pb**	**12**	**28**	**45.9** **+0.8**
	baz=260							
NWLT				*e*S	**Sg**	**12**	**28**	**55.6** **+0.1**
	baz=260							
YM04	**YM04**	**0.78**	**289**	P	**Pb**	**12**	**28**	**45.4** **+0.3**
	baz=288							
YM04				S	**Sb**	**12**	**28**	**55.8** **+0.3**
	baz=288							
TATO	**Taipei**	**0.79**	**276**	P	**Pg**	**12**	**28**	**45.8** **+0.5**
	baz=275							
TATO				S	**Sg**	**12**	**28**	**55.8** **+0.1**
	baz=275							
YM03	**YM03**	**0.79**	**291**	P	**Pb**	**12**	**28**	**46.0** **+0.7**
	baz=290							
YM03				S	**Sb**	**12**	**28**	**56.0** **+0.3**
	baz=290							
NTST	**Danshui**	**0.86**	**288**	P	**Pn**	**12**	**28**	**47.3** **0.0**
	baz=287							
NTST				S	**Sn**	**12**	**28**	**59.0** **-0.5**
	baz=287							
TWS1	**Kuangyinshan**	**0.87**	**284**	P	**Pg**	**12**	**28**	**47.1** **+0.2**
	baz=283							
TWS1				S	**Sn**	**12**	**28**	**59.4** **-0.3**
	baz=283							
YHNB	**Yeheng**	**0.92**	**256**	P	**Pg**	**12**	**28**	**47.9** **+0.1**
	baz=255							
YHNB				S	**Sg**	**12**	**29**	**00.4** **+0.6**
	baz=255							
NSK	**Sanguang**	**0.93**	**256**	P	**Pg**	**12**	**28**	**48.3** **+0.3**
	baz=255							
NSK				S	**Sb**	**12**	**28**	**59.8** **+0.1**
	baz=255							
NACB	**Ninganchiao**	**1.00**	**224**	P	**Pb**	**12**	**28**	**49.1** **+0.3**
	baz=223							
NACB				*e*S	**Sb**	**12**	**29**	**00.5** **-1.1**
	baz=223							
NNSB	**Datong**	**1.00**	**242**	P	**Pg**	**12**	**28**	**49.4** **+0.1**
	baz=241							
NNSB				*e*S	**Sb**	**12**	**29**	**02.2** **+0.4**
	baz=241							
NNSH	**Datong**	**1.00**	**242**	P	**Pb**	**12**	**28**	**48.8** **0.0**
	baz=241							
NNSH				*e*S	**Sb**	**12**	**29**	**01.3** **-0.5**
	baz=241							
WLTB	**Daxi**	**1.00**	**268**	*e*P	**Pb**	**12**	**28**	**48.8** **+0.1**
	baz=267							
WLTB				*e*S	**Sg**	**12**	**29**	**02.7** **+0.3**
	baz=267							
NNS	**Nan Shan**	**1.00**	**243**	P	**Pb**	**12**	**28**	**49.3** **+0.4**
	baz=242							
NNS				S	**Sb**	**12**	**29**	**02.3** **+0.5**
	baz=242							
NCUH	**Zhongli**	**1.06**	**274**	P	**Pb**	**12**	**28**	**49.9** **0.0**
	baz=273							
NCUH				*e*S	**Sg**	**12**	**29**	**04.5** **+0.1**
	baz=273							
TWD	**Chiawan**	**1.07**	**220**	*e*P	**Pn**	**12**	**28**	**50.3** **+0.2**
	baz=219							
TWD				S	**Sb**	**12**	**29**	**03.4** **-0.2**
	baz=219							
ENLB	**Shoufeng**	**1.20**	**215**	*e*P	**Pg**	**12**	**28**	**54.5** **+1.3**
	baz=214							
ENLB				*e*S	**Sg**	**12**	**29**	**10.6** **+1.7**
	baz=214							
LIOB	**Emei**	**1.24**	**259**	P	**Pn**	**12**	**28**	**51.6** **-0.9**
	baz=258							
LIOB				*e*S	**Sb**	**12**	**29**	**09.1** **+0.4**
	baz=258							
SBCB	**Hsinchu**	**1.25**	**265**	P	**Pn**	**12**	**28**	**52.5** **0.0**
	baz=264							
SBCB				*e*S	**Sg**	**12**	**29**	**10.0** **-0.2**
	baz=264							
TWT	**Tachien**	**1.25**	**239**	P	**Pg**	**12**	**28**	**54.2** **+0.1**
	baz=238							
TWT				S	**Sn**	**12**	**29**	**10.1** **+0.8**
	baz=238							
NSTT	**Nanjuang**	**1.25**	**258**	P	**Pn**	**12**	**28**	**53.0** **+0.3**
	baz=257							
NSTT				*e*S	**Sg**	**12**	**29**	**10.5** **-0.1**
	baz=257							
TDCB	**Techi**	**1.26**	**240**	*e*P	**Pg**	**12**	**28**	**54.1** **-0.2**
	baz=239							
TDCB				*e*S	**Sn**	**12**	**29**	**09.8** **+0.2**
	baz=239							
CHGB	**Renai**	**1.36**	**232**	P	**Pg**	**12**	**28**	**56.1** **-0.1**
	baz=231							
CHGB				S	**Sb**	**12**	**29**	**12.8** **+0.5**
	baz=231							
ESL	**Shilin**	**1.37**	**218**	P	**Pn**	**12**	**28**	**54.7** **+0.5**
	baz=217							
ESL				S	**Sn**	**12**	**29**	**12.1** **+0.1**
	baz=217							
IRIF	**Iriomote-Funau**	**1.38**	**114**	P	**Pg**	**12**	**28**	**56.7** **+0.3**
IRIF				S	**Sg**	**12**	**29**	**14.5** **+0.1**
OWD	**Renai**	**1.43**	**229**	P	**Pb**	**12**	**28**	**56.5** **+0.4**
	baz=228							
OWD				S	**Sn**	**12**	**29**	**13.6** **0.0**
	baz=228							
NMLH	**Miaoli**	**1.46**	**256**	*e*P	**Pg**	**12**	**28**	**59.2** **+1.1**
	baz=255							
NMLH				*e*S	**Sg**	**12**	**29**	**17.2** **0.0**
	baz=255							
EGFH	**Guangfu**	**1.49**	**215**	*e*P	**Pb**	**12**	**28**	**57.2** **+0.1**
	baz=214							
EGFH				*e*S	**Sb**	**12**	**29**	**15.8** **+0.1**
	baz=214							
NSY	**Sanyi**	**1.52**	**252**	*e*P	**Pg**	**12**	**28**	**59.9** **+0.6**
	baz=251							
NSY				*e*S	**Sb**	**12**	**29**	**17.2** **+0.4**
	baz=251							
TWQ1	**Liyutan**	**1.54**	**249**	*e*P	**Pg**	**12**	**28**	**59.9** **+0.4**
	baz=248							
TWQ1				*e*S	**Sg**	**12**	**29**	**18.8** **-0.8**
	baz=248							
DPDB	**Guoxing**	**1.56**	**237**	*e*P	**Pg**	**12**	**28**	**59.4** **-0.5**
	baz=236							
DPDB				*e*S	**Sb**	**12**	**29**	**18.8** **+1.0**
	baz=236							
VWDT	**VWDT**	**1.59**	**224**	*e*P	**Pb**	**12**	**28**	**59.2** **+0.4**
	baz=223							
VWDT				*e*S	**Sb**	**12**	**29**	**18.8** **+0.2**
	baz=223							
HGSD	**Ruisui**	**1.64**	**211**	P	**Pb**	**12**	**28**	**59.4** **-0.3**
	baz=210							
HGSD				S	**Sn**	**12**	**29**	**19.3** **+0.6**
	baz=210							
SMLT	**Sun Moon Lake**	**1.67**	**233**	*e*P	**Pg**	**12**	**29**	**01.4** **-0.6**
	baz=232							
SMLT				*e*S	**Sg**	**12**	**29**	**22.9** **-0.8**
	baz=232							
EHY	**Hungye**	**1.68**	**214**	*e*P	**Pb**	**12**	**28**	**60.0** **-0.4**
	baz=213							
EHY				*e*S	**Sn**	**12**	**29**	**20.6** **+1.0**
	baz=213							
TYC	**Yuchr**	**1.68**	**234**	*e*P	**Pb**	**12**	**29**	**01.6** **+1.1**
	baz=233							
TYC				*e*S	**Sb**	**12**	**29**	**21.5** **+0.2**
	baz=233							
SSLB	**Suanglung**	**1.69**	**229**	*e*P	**Pb**	**12**	**29**	**00.8** **+0.2**
	baz=228							
SSLB				*e*S	**Sn**	**12**	**29**	**20.0** **0.0**
	baz=228							
TCU	**Taichung**	**1.70**	**244**	*e*P	**Pb**	**12**	**29**	**00.9** **+0.2**
	baz=243							
TCU				*e*S	**Sb**	**12**	**29**	**21.9** **+0.1**
	baz=243							
JIJ	**Ishigaki jima**	**1.72**	**108**	P	**Pb**	**12**	**29**	**00.5** **-0.5**
JIJ				S	**Sn**	**12**	**29**	**21.6** **+1.0**
YULB	**Yu-li**	**1.78**	**213**	*e*P	**Pn**	**12**	**28**	**59.1** **-0.9**
	baz=212							
YULB				*e*S	**Sn**	**12**	**29**	**22.0** **-0.3**
	baz=212							
TWF1	**Yuli**	**1.82**	**212**	*e*P	**Pn**	**12**	**29**	**01.1** **+0.6**
	baz=211							
TWF1				*e*S	**Sn**	**12**	**29**	**24.1** **+1.0**
	baz=211							
WJS	**Zhushan**	**1.83**	**234**	*e*P	**Pb**	**12**	**29**	**03.9** **+0.9**
	baz=233							
WJS				*e*S	**Sb**	**12**	**29**	**26.7** **+1.1**
	baz=233							
WNT	**Mingjian**	**1.83**	**237**	*e*P	**Pb**	**12**	**29**	**02.9** **0.0**
	baz=235							
WNT				*e*S	**Sb**	**12**	**29**	**26.4** **+0.8**
	baz=235							
FULB	**Fuli**	**1.95**	**210**	*e*P	**Pb**	**12**	**29**	**04.3** **-0.7**
	baz=209							
FULB				*e*S	**Sb**	**12**	**29**	**28.5** **-0.6**
	baz=209							
ALS	**Alishan**	**1.98**	**226**	*e*P	**Pn**	**12**	**29**	**04.4** **+1.5**
	baz=225							
ALS				*e*S	**Sn**	**12**	**29**	**27.8** **+0.3**
	baz=225							
WDLH	**Douliu**	**2.05**	**234**	*e*P	**Pb**	**12**	**29**	**06.0** **-0.7**
	baz=233							
WDLH				*e*S	**Sb**	**12**	**29**	**32.4** **+0.6**
	baz=233							
ELDTW	**Lidau**	**2.09**	**216**	*e*P	**Pn**	**12**	**29**	**06.0** **+1.6**
	baz=215							
ELDTW				*e*S	**Sn**	**12**	**29**	**31.4** **+1.3**
	baz=215							
TPUB	**Ta-pu**	**2.24**	**225**	*e*P	**Pb**	**12**	**29**	**09.3** **-0.7**
	baz=224							
TPUB				*e*S	**Sb**	**12**	**29**	**36.1** **-1.3**
	baz=224							
CHY	**Chiayi**	**2.25**	**232**	*e*P	**Pn**	**12**	**29**	**07.6** **+1.3**
	baz=231							
CHY				*e*S	**Sb**	**12**	**29**	**36.6** **-1.0**
	baz=231							
STYT	**Tauyuan**	**2.26**	**220**	*e*P	**Pb**	**12**	**29**	**09.1** **-1.3**
	baz=219							
STYT				*e*S	**Sb**	**12**	**29**	**37.3** **-0.7**
	baz=219							
WTP	**Ta-pu**	**2.29**	**224**	*e*P	**Pb**	**12**	**29**	**09.7** **-1.1**
	baz=223							
WTP				*e*S	**Sn**	**12**	**29**	**36.2** **+1.5**
	baz=223							
TWK	**Hsinying**	**2.35**	**227**	*e*P	**Pb**	**12**	**29**	**10.4** **-1.5**
	baz=225							
TWK				*e*S	**Sn**	**12**	**29**	**38.6** **+2.1**
	baz=225							
TWGBT	**Beinan**	**2.38**	**210**	*e*P	**Pn**	**12**	**29**	**09.0** **+0.8**
	baz=209							
TWGBT				*e*S	**Sn**	**12**	**29**	**38.5** **+1.6**
	baz=209							
TWG	**Pinlang**	**2.38**	**210**	*e*P	**Pn**	**12**	**29**	**09.3** **+1.1**
	baz=209							
TWG				*e*S	**Sn**	**12**	**29**	**37.9** **+0.9**
	baz=209							
CHN1	**Nanshi**	**2.38**	**225**	*e*P	**Pb**	**12**	**29**	**10.9** **-1.5**
	baz=224							
CHN1				*e*S	**Sn**	**12**	**29**	**39.1** **+1.9**
	baz=224							
SGST	**Jiashian**	**2.43**	**222**	*e*P	**Pb**	**12**	**29**	**11.7** **-1.5**
	baz=221							
SGST				*e*S	**Sb**	**12**	**29**	**41.7** **-1.1**
	baz=221							
SLGT	**Liugui**	**2.46**	**220**	*e*P	**Pn**	**12**	**29**	**11.7** **+2.4**
	baz=219							
SLGT				*e*S	**Sb**	**12**	**29**	**43.0** **-0.7**
	baz=219							
MATB	**Ma-tsu**	**2.50**	**300**	*e*P	**Pn**	**12**	**29**	**11.3** **+1.4**
	baz=299							
MATB				*e*S	**Sn**	**12**	**29**	**40.5** **+0.4**
	baz=299							
VWUC	**VWUC**	**2.63**	**273**	*e*P	**Pn**	**12**	**29**	**11.3** **-0.4**
	baz=271							
VWUC				*e*S	**Sn**	**12**	**29**	**41.0** **-2.3**
	baz=271							
SSD	**Sandimen**	**2.66**	**217**	*e*P	**Pb**	**12**	**29**	**15.3** **-1.8**
	baz=215							
SSD				*e*S	**Sn**	**12**	**29**	**44.9** **+1.0**
	baz=215							
MASBT	**Mashibuluo**	**2.77**	**215**	*e*P	**Pn**	**12**	**29**	**15.8** **+2.3**
	baz=214							
MASBT				*e*S	**Sn**	**12**	**29**	**47.6** **+1.0**
	baz=214							
EAST	**Anshuo**	**2.86**	**209**	*e*P	**Pb**	**12**	**29**	**19.0** **-1.6**
	baz=208							
EAST				*e*S	**Sn**	**12**	**29**	**49.8** **+0.9**
	baz=208							
WDGT	**Dungji**	**2.95**	**237**	*e*P	**Pn**	**12**	**29**	**17.1** **+1.0**
	baz=236							
WDGT				*e*S	**Sn**	**12**	**29**	**50.6** **-0.5**
	baz=236							
SCZT	**Fangliau**	**2.97**	**213**	*e*P	**Pn**	**12**	**29**	**18.1** **+1.7**
	baz=211							
SCZT				*e*S	**Sn**	**12**	**29**	**53.1** **+1.4**
	baz=211							
MKAR	**Makanchi Array**	**38.58**	**315**	P	**P**	**12**	**35**	**51.2** **-0.7**
	0.4nm,0.6s,baz=101,slow=7.8,SNR=4.6							
KURBB	**Kurchatov Arra**	**42.26**	**319**	P	**P**	**12**	**36**	**21.7** **-0.6**
	0.1nm,0.3s,baz=119,slow=9.6,SNR=1.8							
WRA	**Warramunga Arr**	**46.07**	**164**	P	**P**	**12**	**36**	**51.3** **-1.8**
	0.6nm,0.9s,baz=348,slow=8.6,SNR=2.6							
ASAR	**Alice Springs**	**49.56**	**166**	P	**P**	**12**	**37**	**20.5** **+0.3**
	0.2nm,0.8s,baz=358,slow=7.4,SNR=3.0							

MOS ***04*** *12:38:49.0±0.8, 57.°27N×155.°81W, h33km, mb4.8/19, Error ellipse: s-maj=13.5km s-min=6.6km az=88.5*
ISCJB ***04*** *12:38:51.3±0.3, 57.°03N±0.°03×155.°34W±0.°05, h70km±2km, mb4.3/47, Error ellipse: s-maj=5.9km s-min=3.5km*
az=139.0
IDC ***04*** *12:38:53.0±0.7, 57.°20N×155.°62W, h59km±7km, mb4.0/32, mb1 4.1/35, mb1mx3.9/81, mbtmp4.2/35, Error ellipse: s-maj=17.0km s-min=10.2km az=178.0*
NEIC ***04*** *12:38:53.3±0.0, 56.°99N×155.°32W, h57km, mb4.4/1, ML3.9(AEIC), After AEIC.*
ISC 04 12:38:52.1±0.5, 57.°05N±0.°04×155.°38W±0.°03, h61km±5km, h61km:pP-P, n138, σ1°24/161, mb4.5/47, 8C-6D, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SII	**Sitkinak Islan**	**0.82**	**126**	P	**Pn**	**12 39 08.0**	**+0.1**
SII				S	**Sn**	**12 39 19.8**	**+0.3**
PLK2	**Peulik 2**	**0.88**	**325**	P	**Pn**	**12 39 10.2**	**+1.6**
OHAK	**Old Harbor**	**1.16**	**80**	P	**Pn**	**12 39 12.3**	**+0.2**
OHAK				S	**Sn**	**12 39 26.7**	**-0.4**
KABU	**Katmai Buttres**	**1.23**	**2**	P	**Pn**	**12 39 14.9**	**+1.7**
CHIR	**Chirikof Islan**	**1.24**	**186**	P	**Pn**	**12 39 12.8**	**-0.4**
CHIR				S	**Sn**	**12 39 28.3**	**-0.7**
KAKN	**Katmai Knife C**	**1.26**	**8**	P	**Pn**	**12 39 14.9**	**+1.2**
KAKN				S	**Sn**	**12 39 32.3**	**+2.5**
KELA	**Mount Kelaz**	**1.41**	**352**	P	**Pn**	**12 39 16.4**	**+0.8**
ANNW	**Aniakchak Nort**	**1.55**	**268**	P	**Pn**	**12 39 19.0**	**+1.5**
AZAC	**Aniakchak**	**1.57**	**266**	P	**Pn**	**12 39 19.0**	**+1.2**
KDAK	**Kodiak Island**	**1.68**	**63**	P	**Pn**	**12 39 19.6**	**+0.4**
	76nm,0.3s,baz=181,slow=5.6,SNR=1302						
KDAK				S	**Sn**	**12 39 36.4**	**-3.3**
	123nm,0.3s,baz=224,slow=23,SNR=50						
KDAK	**Kodiak Island**	**1.68**	**63**	*i* P	**Pn**	**12 39 19.2**	**0.0**
CHGN	**Chignik**	**1.83**	**247**	P	**Pn**	**12 39 21.8**	**+0.6**
CHGN				S	**Sn**	**12 39 43.2**	**-0.1**
FONW	**Fourpeaked Sta**	**1.95**	**23**	P	**Pn**	**12 39 24.2**	**+1.3**
FOSS	**Fourpeaked Sta**	**1.97**	**26**	P	**Pn**	**12 39 24.0**	**+0.8**
CDD	**Cape Douglas**	**2.10**	**25**	P	**Pn**	**12 39 25.9**	**+1.0**
VNHG	**Veniaminof 1**	**2.25**	**250**	P	**Pn**	**12 39 28.2**	**+1.2**
AUI	**Augustine Isla**	**2.52**	**23**	P	**Pn**	**12 39 32.2**	**+1.7**
AUW	**Augustine West**	**2.54**	**23**	P	**Pn**	**12 39 32.3**	**+1.5**
AUNW	**Augustine NWes**	**2.54**	**23**	P	**Pn**	**12 39 32.5**	**+1.6**
ILW	**Iliamna West**	**3.24**	**20**	P	**Pn**	**12 39 42.3**	**+1.7**
SDPT	**Sand Point**	**3.32**	**241**	P	**Pn**	**12 39 41.9**	**+0.5**
SDPT				S	**Sn**	**12 40 17.8**	**-1.8**
BRLK	**Bradley Lake**	**3.61**	**39**	P	**Pn**	**12 39 45.7**	**+0.2**
RDWB	**Redoubt West**	**3.69**	**20**	P	**Pn**	**12 39 48.3**	**+1.5**
NCT	**North Crescent**	**3.75**	**19**	P	**Pn**	**12 39 49.1**	**+1.7**
RDJH	**Redoubt Jeurge**	**3.80**	**20**	P	**Pn**	**12 39 50.0**	**+1.8**
DFR	**Drift River**	**3.82**	**20**	P	**Pn**	**12 39 50.0**	**+1.6**
PS4A	**Pavlof South-4**	**4.00**	**247**	P	**Pn**	**12 39 51.8**	**+1.0**
DT1	**Dutton Round H**	**4.33**	**246**	P	**Pn**	**12 39 55.6**	**+0.4**
SEW	**Seward**	**4.36**	**43**	P	**Pn**	**12 39 55.2**	**-0.5**
DRIA	**Deer Island**	**4.39**	**244**	P	**Pn**	**12 39 56.4**	**+0.2**
SPCP	**Crater Peak Br**	**4.54**	**20**	P	**Pn**	**12 40 00.0**	**+1.7**
RC01	**Rabbit Creek A**	**4.99**	**33**	P	**Pn**	**12 40 04.8**	**+0.5**
SUA	**Susitna One**	**5.03**	**26**	P	**Pn**	**12 40 05.8**	**+0.9**
SKT	**Skwentna**	**5.32**	**20**	P	**Pn**	**12 40 10.3**	**+1.4**
PMR	**Palmer**	**5.57**	**32**	P	**Pn**	**12 40 11.8**	**-0.4**
PMR	**Palmer**	**5.57**	**32**	P	**Pn**	**12 40 11.8**	**-0.4**
KNK	**Knik Glacier**	**5.64**	**36**	P	**Pn**	**12 40 12.9**	**-0.3**
TT01	**Tatalina**	**5.89**	**357**	P	**Pn**	**12 40 17.8**	**+1.2**
SML	**Sawmill**	**5.97**	**34**	P	**Pn**	**12 40 17.9**	**+0.1**
SML	**Sawmill**	**5.97**	**34**	P	**Pn**	**12 40 17.9**	**+0.1**
JPK	**Jack Peak**	**6.05**	**45**	P	**Pn**	**12 40 18.5**	**-0.5**
PPLA	**Purkeypile**	**6.08**	**14**	P	**Pn**	**12 40 21.6**	**+2.2**
SCM	**Sheep Creek Mo**	**6.31**	**37**	P	**Pn**	**12 40 22.5**	**0.0**
SCM	**Sheep Creek Mo**	**6.31**	**37**	P	**Pn**	**12 40 22.5**	**0.0**
DIV	**Divide**	**6.42**	**46**	P	**Pn**	**12 40 23.9**	**0.0**
KLU	**Klutina**	**6.58**	**43**	P	**Pn**	**12 40 26.2**	**0.0**
CAST	**Castle Rocks**	**6.60**	**13**	P	**Pn**	**12 40 27.5**	**+1.2**
NICHA	**Nichawak Mount**	**6.76**	**57**	P	**Pn**	**12 40 28.5**	**0.0**
BMRM	**Bremner River**	**6.81**	**50**	P	**Pn**	**12 40 29.0**	**-0.3**
TRF	**Thorofare Moun**	**6.90**	**19**	P	**Pn**	**12 40 30.5**	**-0.1**
COLA	**College**	**8.66**	**22**	*e*Pn	**Pn**	**12 40 53.2**	**-1.2**
	9.7nm,0.8s						
COLA	**College**	**8.66**	**22**	*e*P	**Pn**	**12 40 53.2**	**-1.2**
COLA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ILAR	**Eielson Array**	**8.77**	**25**	P	**Pn**	**12 40 54.9**	**-1.2**
	comp=Z,2.2nm,0.3s,baz=216,slow=13,SNR=50						
ILAR				S	**Sn**	**12 42 28.5**	**-4.8**
	comp=Z,2.0nm,0.3s,baz=213,slow=22,SNR=8.2						
EGAK	**Eagle**	**10.37**	**36**	*e*Pn	**Pn**	**12 41 18.0**	**+0.2**
	comp=Z,4.9nm,0.5s						
DAWY	**Dawson**	**10.53**	**42**	*e*Pn	**Pn**	**12 41 20.2**	**+0.1**
	comp=Z,3.5nm,0.5s						
DLBC	**Dease Lake**	**13.59**	**73**	P	**Pn**	**12 42 02.8**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=207,slow=11,SNR=2.5						
DLBC				S	**Sn**	**12 44 26.2**	**-4.6**
	comp=Z,0.1nm,0.3s,baz=0.0,slow=20,SNR=3.7						
INK	**Inuvik**	**14.98**	**32**	P	**Pn**	**12 42 19.2**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=223,slow=15,SNR=12						
INK	**Inuvik**	**14.98**	**32**	P	**Pn**	**12 42 19.2**	**-0.7**
INK				*e*Pn	P	12 42 19.4	-4.7
BILL	**Bilibino**	**20.42**	**318**	*e*P	**P**	**12 43 23.6**	**-0.1**
	comp=Z,24nm,1.1s						
BILL	**Bilibino**	**20.42**	**318**	*i* P	**P**	**12 43 22.7**	**-1.1**
BILL				*i*		12 43 40.3	
BILL				pmax	pmax		
	comp=Z,15nm,0.8s						
YKA	**Yellowknife Ar**	**20.95**	**58**	P	**P**	**12 43 32.6**	**+3.0**
	comp=Z,1.3nm,0.7s,baz=271,slow=10,SNR=15						
SEY	**Seymchan**	**26.13**	**305**	P	**P**	**12 44 18.3**	**-1.6**
	comp=Z,2.6nm,0.9s,baz=30,slow=16,SNR=6.2						
PETK	**Petropavlovsk-**	**26.72**	**282**	P	**P**	**12 44 24.2**	**-1.2**
	comp=Z,1.6nm,0.3s,baz=69,slow=12,SNR=24						
MA2	**Magadan**	**27.75**	**298**	P	**P**	**12 44 33.9**	**-0.7**
	comp=Z,2.3nm,0.7s,baz=104,slow=18,SNR=3.6						
RES	**Resolute Bay**	**28.49**	**29**	P	**P**	**12 44 41.1**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=271,slow=8.4,SNR=5.3						
NVAR	**Mina Array Bea**	**30.59**	**111**	P	**P**	**12 45 02.2**	**+2.0**
	comp=Z,0.6nm,0.6s,baz=312,slow=8.8,SNR=6.2						
NVAR				pP	**pP**	**12 45 18.0**	**+2.9**
	comp=Z,1.5nm

MAJO	Matsushiro	47.73	274	⇓iP	P	12 47 22.4	-0.2
MAJO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MJAR	Matsushiro Arr	47.73	274	P	P	12 47 22.6	0.0
	comp=Z,1.0nm,0.6s,baz=40,slow=6.1,SNR=5.3						
KSRS	Korea Array	52.61	283	P	P	12 47 59.9	+0.4
	comp=Z,4.1nm,0.7s,baz=52,slow=7.7,SNR=22						
KSAR	Wonju Array Be	52.64	283	P	P	12 47 59.9	+0.2
KSAR	Wonju Array Be	52.64	283	P	P	12 47 59.9	+0.2
TJN	Taejon	53.71	282	⇑iP	P	12 48 08.4	+0.8
ARCES	ARCESS Array B	53.72	360	P	P	12 48 06.7	-0.5
	comp=Z,3.5nm,0.7s,baz=14,slow=7.8,SNR=19						
ARCES				PcP	PcP	12 49 13.1	+0.6
	comp=Z,3.2nm,0.8s,baz=349,slow=3.8,SNR=2.4						
TLY	Talaya	53.80	311	⇓iP	P	12 48 06.5	-1.6
TLY				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ULN	Ulaanbaatar	55.20	306	⇑iP	P	12 48 18.6	+0.2
ULN				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SONM	Songino Array	55.52	306	P	P	12 48 20.8	+0.2
	comp=Z,4.1nm,0.8s,baz=46,slow=7.1,SNR=16						
SONM				PcP	PcP	12 49 21.0	+1.0
	comp=Z,1.7nm,0.6s,baz=38,slow=1.2,SNR=6.1						
HVS	Khovu-Aksy	58.17	316	⇓iP	P	12 48 38.9	-0.4
HVS				pmax	pmax		
	comp=Z,11nm,0.9s						
ZALV	Zalesovo Beam	59.01	323	P	P	12 48 44.9	-0.1
	comp=Z,5.3nm,0.6s,baz=40,slow=6.8,SNR=23						
ZALV				PcP	PcP	12 49 34.1	+0.8
	comp=Z,1.2nm,0.6s,baz=11,slow=4.2,SNR=3.7						
NB2	NORSAR Subarra	61.78	7	P	P	12 49 04.0	+0.2
	comp=Z,1.1nm,0.7s,baz=353,slow=6.9						
NOA	NORSAR Array B	61.78	7	P	P	12 49 04.2	+0.4
	comp=Z,2.8nm,0.8s,baz=351,slow=6.7,SNR=6.1						
FINES	FINESS Array B	61.84	359	P	P	12 49 04.0	-0.2
	comp=Z,4.3nm,0.7s,baz=8.0,slow=8.2,SNR=27						
KLMR	Klimovskoe	61.85	352	eP	P	12 49 02.7	-1.6
KLMR				pmax	pmax		
	comp=Z,14nm,1.2s						
KLMR	Klimovskoe	61.85	352	eP	P	12 49 02.7	-1.6
KLMR				AMP		12 49 05.4	
	comp=Z,14nm,1.2s						
HFS	Hagfors	62.84	6	P	P	12 49 11.0	+0.1
	comp=Z,2.5nm,0.4s,baz=28,slow=3.4,SNR=24						
HFS	Hagfors	62.84	6	P	P	12 49 11.0	+0.1
ARU	Arti	63.61	340	c iP	P	12 49 15.2	-0.8
ARU				*PP	pP	12 49 29.6	-2.7
ARU						12 49 49.3	
ARU				S	S	12 57 44.2	-0.6
ARU						12 59 01.6	
ARU				SS	SS	13 01 51.1	-0.9
ARU				pmax	pmax		
	comp=Z,16nm,1.0s						
KURK	Kurchatov	63.75	325	P	P	12 49 17.7	+0.7
KURK				PcP	PcP	12 49 52.6	0.0
KURK	Kurchatov	63.75	325	c iP	P	12 49 17.0	0.0
KURK				pmax	pmax		
	comp=Z,14nm,2.5s						
KURBB	Kurchatov Arra	63.86	325	P	P	12 49 17.7	0.0
	comp=Z,2.9nm,0.6s,baz=28,slow=6.8,SNR=18						
KURBB				PcP	PcP	12 49 52.6	-0.4
	comp=Z,1.3nm,0.5s,baz=38,slow=3.6,SNR=6.7						
BRVK	Borovoye	64.08	331	c iP	P	12 49 19.0	-0.1
BRVK				pmax	pmax		
	comp=Z,11nm,0.8s						
BVAR	Borovoye Array	64.08	331	P	P	12 49 19.1	0.0
	comp=Z,13nm,0.6s,baz=26,slow=6.3,SNR=47						
EKA	Eskdalemuir Ar	65.73	17	P	P	12 49 30.7	+0.8
	comp=Z,0.6nm,0.3s,baz=343,slow=4.5,SNR=4.8						
MKAR	Makanchi Array	65.94	321	P	P	12 49 30.8	-0.6
	comp=Z,1.9nm,0.5s,baz=44,slow=7.1,SNR=30						
MKAR	Makanchi Array	65.94	321	eP	P	12 49 30.9	-0.5
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AKTO	Aktyubinsk	69.39	338	P	P	12 49 52.9	-0.1
	comp=Z,6.6nm,0.7s,baz=8.5,slow=6.0,SNR=24						
VSR	Storozhevoye	71.43	350	eP	P	12 50 04.8	-0.6
VSR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
TKM2	Tokmak 2	71.61	323	P	P	12 50 07.5	+0.6
SNR=10							
VORD	Divnogorie	71.67	350	eP	P	12 50 05.9	-0.9
VORD				pmax	pmax		
	comp=Z,6.0nm,0.5s						
CHMS	Chumysh	71.82	324	P	P	12 50 08.4	+0.5
SNR=5.4							
KBK	Karagaybulak	72.06	323	P	P	12 50 10.5	+0.9
SNR=8.3							
AAK	Ala-Archa	72.22	324	⇑iP	P	12 50 10.7	+0.2
AAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KZA	Kyzart	72.48	323	P	P	12 50 13.5	+1.1
SNR=5.2							
AKASG	Malin Array Be	72.55	357	P	P	12 50 11.7	-0.4
	comp=Z,3.4nm,0.5s,baz=8.1,slow=5.9,SNR=24						
AKASG	Malin Array Be	72.55	357	eP	P	12 50 11.6	-0.4
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.5s						
AML	Almayashu	72.94	324	P	P	12 50 16.3	+1.2
SNR=7.7							
GERES	GERESS Array B	74.08	7	P	P	12 50 21.1	-0.2
	comp=Z,0.8nm,0.5s,baz=352,slow=3.0,SNR=6.9						
GERES	GERESS Array B	74.08	7	eP	P	12 50 22.0	+0.7
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KIV	Kislovodsk	78.23	347	eP	P	12 50 45.7	+0.8
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,39nm,18.0s						
KBZ	Khabaz	78.42	347	P	P	12 50 46.2	+0.4
	comp=Z,4.4nm,0.8s,baz=306,slow=2.9,SNR=8.9						
ESDC	Sonseca Array	80.67	22	P	P	12 50 59.4	+1.2
	comp=Z,1.0nm,0.6s,baz=336,slow=6.2,SNR=6.4						
ESDC				pP	pP	12 51 15.2	+0.2
	comp=Z,0.6nm,0.5s,baz=338,slow=4.7,SNR=3.8						
GUN	Gumba	80.94	308	eP	P	12 51 00.5	+0.3
JIRN	Jiri	81.03	308	eP	P	12 51 00.3	-0.4
	comp=Z,47nm,0.7s						
GEYT	Alibeck	81.24	334	P	P	12 51 01.3	+0.1
	comp=Z,16nm,0.3s,baz=339,slow=7.9,SNR=4.5						
KKN	Kakani	81.31	309	eP	P	12 51 02.2	+0.2
GKN	Gorkha	81.39	309	eP	P	12 51 02.6	+0.3
PKI	Pulchoki	81.44	308	eP	P	12 51 03.0	+0.2
PKIN	Phulchoki	81.44	308	eP	P	12 51 03.3	+0.6
	comp=Z,9.6nm,0.5s						
DANN	Dangsing	81.46	310	eP	P	12 51 03.4	+0.5
	comp=Z,51nm,0.7s						
DMN	Daman	81.54	309	eP	P	12 51 03.7	+0.5
	comp=Z,8.4nm,0.5s						
PYUN	Piuthan	82.00	311	eP	P	12 51 05.8	+0.2
	comp=Z,24nm,0.7s						
KOLN	Koldanda	82.03	310	eP	P	12 51 05.9	+0.1
	comp=Z,12nm,0.7s						
CMAR	Chiang Mai Arr	82.91	293	P	P	12 51 10.2	0.0
	comp=Z,4.0nm,0.6s,baz=8.8,slow=5.3,SNR=26						
BRTR	Keskin Array B	83.29	353	P	P	12 51 12.7	+0.6
	comp=Z,1.3nm,0.7s,baz=31,slow=3.2,SNR=8.4						
APE	Apeiranthos	86.24	359	⇑eP	P	12 51 26.6	-0.2
APE				pmax	pmax		
	comp=Z,14nm,1.1s						
BOSA	Boshof	151.58	359	PKPbc	PKPbc	12 58 38.9	-0.1
	comp=Z,1.9nm,0.7s,baz=354,slow=2.3,SNR=5.8						

*IDC **04** 12:44:58.0±0.7, 25°.54S×70°.95W, h0km, mb4.0/6, mb1 4.0/8, mb1mx3.8/35, mbtmp3.9/8, ML3.6/2, MS3.6/1, Ms1 3.5/1, ms1mx2.9/42, Error ellipse: s-maj=33.0km s-min=22.5km az=89.0*
*ISCJB **04** 12:45:02.0±0.7, 25°.33S±0°.04×71°.01W±0°.08, h35km, mb3.9/6, Error ellipse: s-maj=10.1km s-min=6.2km az=13.0*
*GUC **04** 12:45:02.2±0.7, 25°.33S×70°.89W, h47km±4km, ML3.5*
ISC 04 12:45:03.6±0.7, 25°.35S±0°.06×70°.96W±0°.09, h35km, n22, σ1§05/22, mb4.0/6, 2C, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PB14	IPOC Station P	0.88	35	⇑iP		Pn	12 45 18.9	-0.9
PB14				eS		Sn	12 45 30.7	-0.8
PB14				IAML			12 45 31.8	
	comp=E,5μm,0.2s							
GO02	Mina Guanaco	1.25	82	eP		Pn	12 45 24.1	-0.8
GO02				eS		Sn	12 45 40.1	-0.6
PB10	IPOC Station P	1.87	12	⇑iP		Pn	12 45 32.1	-1.0
PB10				IAML			12 46 04.7	
	comp=E,444nm,0.2s							
GO03	Copiap	2.33	164	eP		Pn	12 45 39.5	+0.1
GO03				eS		Sn	12 46 07.1	+0.3
PB15	IPOC Station P	2.53	33	eP		Pn	12 45 42.5	+0.1
LPAZ	La Paz	9.40	17	Pn		Pn	12 47 16.9	-0.2
	comp=E,0.2nm,0.3s,baz=187,slow=5.3,SNR=4.1							
SIV	San Ignacio	13.12	47	Pn		Pn	12 48 09.7	+2.1
	comp=E,0.4nm,0.3s,baz=242,slow=8.7,SNR=10							
SIV				Sn		Sn	12 50 33.0	+0.7
	comp=E,0.1nm,0.3s,baz=236,slow=3.6,SNR=2.6							
PLCA	Paso Flores	15.34	179	LR		LR	12 53 40.6	
	comp=E,221nm,21.7s,baz=186,slow=34							
SNAA	Sanae	59.29	160	P		P	12 54 58.6	-2.8
	comp=E,0.4nm,0.3s,baz=323,slow=20,SNR=4.1							
TXAR	Lajitas Array	62.79	328	P		P	12 55 25.4	-0.4
	comp=E,0.2nm,0.6s,baz=162,slow=9.4,SNR=2.7							
KOWA	Kowa	76.27	67	P		P	12 56 48.7	-0.4
	comp=E,1.8nm,0.4s,baz=260,slow=5.4,SNR=5.2							
TORD	Torodi Ar. Bea	80.41	71	P		P	12 57 12.2	+0.2
	comp=E,2.3nm,0.6s,baz=258,slow=5.0,SNR=10							
MAW	Mawson	81.19	164	P		P	12 57 14.6	-0.7
	comp=E,1.2nm,0.7s,baz=210,slow=8.1,SNR=3.8							
YKA	Yellowknife Ar	94.20	341	P		P	12 58 19.2	+1.0
	comp=E,0.3nm,0.7s,baz=128,slow=5.0,SNR=4.5							
ASAR	Alice Springs	125.64	208	PKP		PKPdf	13 04 02.4	+0.3
	comp=E,0.4nm,0.5s,baz=125,slow=1.6,SNR=15							
H11S2	WAKE ISLAND Hyl	26.41	275	T		T	15 23 35.4	
	baz=106							
H11S1	WAKE ISLAND Hyl	26.42	275	T		T	15 23 33.9	
	baz=106							
H11S3	WAKE ISLAND Hyl	26.42	275	T		T	15 23 32.5	
	baz=106							
WRA	Warramunga Arr	128.70	211	PKP		PKPdf	13 04 08.6	+0.7
	comp=E,0.3nm,0.4s,baz=155,slow=1.9,SNR=10							
KURBB	Kurchatov Arra	145.57	35	PKPbc		PKPdf	13 04 38.6	+0.8
	comp=E,0.7nm,0.4s,baz=304,slow=3.5,SNR=10							
ZALV	Zalesovo Beam	146.22	26	PKPbc		PKPdf	13 04 39.8	+0.9
	comp=E,3.1nm,0.7s,baz=307,slow=4.4,SNR=12							
MKAR	Makanchi Array	149.83	38	PKPbc		PKPbc	13 04 50.7	+0.8
	comp=E,2.2nm,0.8s,baz=323,slow=2.8,SNR=16							

*ISCJB **04** 12:54:12.9±0.3, 32°.53N±0°.02×115°.61W±0°.02, h23km±2km, Error ellipse: s-maj=3.0km s-min=2.3km az=12.3*
*NEIC **04** 12:54:13.5±0.0, 32°.53N×115°.64W, h14km, ML2.8(ECX), ML2.9(PAS), After PAS.*
NEIC Felt at Mexicali.
*ECX **04** 12:54:14.2±0.7, 32°.51N×115°.65W, h5km, MD2.8, ML3.0*
*MEX **04** 12:54:14.8±1.0, 32°.61N×115°.60W, h17km±136km, MD3.9*
ISC 04 12:54:12.4±1.0, 32°.53N±0°.02×115°.63W±0°.02, h15km±8km, n90, σ0§90/132, 12C-1D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SGL	Mount Signal	0.14	325	⇑iP		Pb	12 54 16.7	-0.1
ERPC	Ernies Place	0.21	352	⇑iP		Pb	12 54 18.6	+0.6
ERPC	Ernies Place	0.21	352	ePg		Pb	12 54 18.6	+0.6
WESC	Westside Schoo	0.24	339	eP		Pb	12 54 18.9	+0.5
WESC	Westside Schoo	0.24	339	ePg		Pb	12 54 19.0	+0.5
YUH	Yuha Desert	0.28	295	⇑iP		Pb	12 54 18.9	-0.2
YUH	Yuha Desert	0.28	295	ePg		Pb	12 54 18.9	-0.2
CPBX	Cerro Prieto	0.30	112	⇑eP		Pb	12 54 19.8	+0.4
CPBX				eS		Sb	12 54 24.5	+0.4
CPBX				IAML			12 54 28.3	
	comp=E,7μm,0.3s							
CPBX				⇓e			12 54 28.3	
DREC	Desert Rsrch C	0.31	29	eP		Pb	12 54 20.4	+0.7
DREC	Desert Rsrch C	0.31	29	ePg		Pb	12 54 20.8	+1.1
COK	Cook Ranch	0.33	345	⇑iP		Pb	12 54 20.6	+0.6
MBIG	Mexicali	0.38	109	eP		Pb	12 54 21.5	+0.6
MBIG	Mexicali	0.38	109	eP		Pb	12 54 21.5	+0.6
MBIG				eS		Sb	12 54 26.4	-0.2
RMX	La Rumorosa	0.39	281	⇑iP		Pg	12 54 20.2	0.0
RMX				eS		Sg	12 54 24.9	-0.8
RMX				⇑e			12 54 25.9	
RMX				IAML			12 54 25.9	
	comp=N,3μm,0.1s							
IKP	In-Ko-Pah, Jac	0.42	286	P		Pb	12 54 21.6	0.0
	baz=106,SNR=156							
IKP				S		Sg	12 54 27.3	+0.6
	baz=106							
IKP	In-Ko-Pah, Jac	0.42	286	⇑eP		Pb	12 54 21.7	0.0
SWSC	Sam W. Stewart	0.44	341	P		Pb	12 54 22.0	+0.2
	baz=162,SNR=19							
SWSC				S		Sb	12 54 28.2	0.0
	baz=162							
SWSC	Sam W. Stewart	0.44	341	ePg		Pb	12 54 22.3	+0.4
SWSC				eSg		Sb	12 54 28.6	+0.4
CRR	Carrizo Plain	0.46	321	⇑iP		Pb	12 54 22.4	+0.3
CRR	Carrizo Plain	0.46	321	ePg		Pb	12 54 22.4	+0.3
COA	Coachella	0.54	52	ePg		Pb	12 54 24.3	+0.8
BTCC	Brunts Corner	0.59	36	ePg		Pn	12 54 25.3	-1.0
CLIC	Calipatria	0.61	8	ePg		Pb	12 54 25.0	+0.2
CLIC				ePn		Pn	12 54 27.1	+0.5
CBKC	Canebrake	0.64	305	ePg		Pn	12 54 26.1	-0.8
MONP2	Monument Peak	0.76	298	P		Pb	12 54 27.7	+0.3
	baz=118,SNR=131							
MONP2				S		Sb	12 54 37.6	-0.1
	baz=118							
GLA	Glamis	0.85	52	P		Pb	12 54 28.7	-0.2
	baz=233,SNR=55							
GLA				S		Sb	12 54 40.0	-0.2
	baz=233							
GLA	Glamis	0.85	52	ePg		Pb	12 54 28.8	-0.2
GLA				eSg		Sb	12 54 39.7	-0.5
GLA				eSn		Sg	12 54 40.3	+0.2
FRK	Frink	0.87	359	ePg		Pb	12 54 28.9	-0.3
TJIG	Tijuana	0.89	264	eP		Pb	12 54 29.6	+0.1
TJIG	Tijuana	0.89	264	eP		Pb	12 54 29.5	0.0
TJIG				eS		Sg	12 54 39.7	-1.6
BAR	Barrett	0.89	280	⇑eP		Pg	12 54 30.1	+0.3
BAR	Barrett	0.89	280	ePg		Pg	12 54 30.0	+0.3
BAR				eSg		Sg	12 54 41.1	-0.3
BAR				eSn		Sb	12 54 41.5	+0.1
CBX	Cerro Bola	0.90	256	⇑eP		Pg	12 54 30.2	+0.3
CBX				eS		Sg	12 54 41.7	-0.1
CBX				⇑e			12 54 44.7	
CBX				IAML			12 54 44.7	
	comp=E,604nm,0.2s							
CBX	Cerro Bola	0.90	256	ePg		Pb	12 54 30.1	+0.2
CBX				eSg		Sg	12 54 41.6	-0.1
CBX	Cerro Bola	0.90	256	i P		Pb	12 54 30.1	+0.2
CBX				eS		Sg	12 54 41.6	-0.1
BORC	Borrego Spring	0.99	318	ePn		Pn	12 54 31.9	+0.2
BORC				eSn		Sn	12 54 45.2	-0.4
EML	El Monte Cty P	1.09	290	ePn		Pg	12 54 33.5	+0.2
EML				eSn		Sb	12 54 47.1	+0.2
SDRC	San Diego Road	1.13	281	eP		Pn	12 54 33.8	+0.2
ZAX	El Zacaton	1.15	209	eP		Pn	12 54 33.9	-0.2
ZAX				eS		Sb	12 54 48.9	0.0
ECBX	El Chinero	1.16	155	eP		Pn	12 54 34.0	-0.1
ECBX				eS		Sb	12 54 49.2	+0.1
ECNX	Esteban Cantu	1.20	224	eP		Pb	12 54 34.8	-0.1
ECNX				eP		Pn	12 54 32.6	-2.1
DPP	Dos Picos Cty	1.20	293	ePn		Pg	12 54 35.5	0.0
DPP				eSn		Sn	12 54 50.7	-0.1
PBX	Punta Banda	1.22	230	eP		Pn	12 54 35.1	+0.2
HWB	Hans Werner Br	1.23	294	ePn		Pn	12 54 34.9	-0.1
HWB				eSn		Sn	12 54 51.4	0.0
FRD	Ford Ranch, An	1.26	320	ePn		Pn	12 54 35.5	-0.1
PFO	Pinyon Flats O	1.28	327	P		Pn	12 54 35.2	-0.7
	baz=147,SNR=5.3							
PFO				S		Sb	12 54 51.3	-1.4
	baz=147							
PFO	Pinyon Flats O	1.28	327	ePn		Pn	12 54 35.3	-0.7
PFO				eSn		Sb	12 54 51.1	-1.6
109C	Camp Elliot, M	1.29	286	P		Pn	12 54 36.1	+0.1
	baz=106,SNR=13							
109C				S		Sn	12 54 53.1	+0.1
	baz=106							
CPE	Camp Elliot	1.29	286	ePn		Pb	12 54 36.3	-0.1
CPE				eSn		Sb	12 54 52.7	-0.2
CPE				eSn		Sn	12 54 53.4	+0.3
SNDA	J Saunders Pla	1.31	321	ePn		Pn	12 54 36.1	-0.2
CRY	Cary Ranch	1.39	318	ePn		Pn	12 54 37.2	-0.2
SPIG	San Pedro Mart	1.49	175	eP		Pn	12 54 39.0	0.0
SPIG	San Pedro Mart	1.49	175	ePn		Pn	12 54 38.9	0.0
SPIG				eSn		Sn	12 54 58.3	0.0
SPIG	San Pedro Mart	1.49	175	eP		Pn	12 54 38.9	0.0
SPIG				eS		Sn	12 54 58.3	0.0
SPX	San Pedro Mart	1.49	175	eP		Pn	12 54 39.0	+0.1
SPX	San Pedro Mart	1.49	175	ePn		Pn	12 54 38.7	-0.2
SPX				eSn		Sn	12 54 57.9	-0.4
SPX	San Pedro Mart	1.49	175	eP		Pn	12 54 38.7	-0.2
SPX				eS		Sn	12 54 57.9	-0.4
BELC	Belle Mtn. Jos	1.50	348	P		Pn	12 54 38.5	-0.3
	baz=168,SNR=10							
BELC				S		Sn	12 54 56.8	-1.4
	baz=168							
Y12C	Blythe	1.53	37	P		Pn	12 54 38.9	-0.3
	baz=218,SNR=12							
Y12C				S		Sb	12 54 58.8	-0.8
	baz=218							
Y12C	Blythe	1.53	37	ePn		Pn	12 54 38.7	-0.4
113A	Mohawk Valley,	1.59	81	ePn		Pn	12 54 39.7	-0.2
113A				eSn		Sn	12 54 59.3	-1.0
BACC	Bachelor Mtn.	1.60	313	ePn		Pg	12 54 43.3	+0.1
BACC				eSn		Sg	12 55 03.1	-0.9
DGR	Domenigoni Val	1.61	314	ePn		Pn	12 54 40.2	-0.1
DGR				eSn		Sg	12 55 03.7	-0.5
HMTC	Hemet	1.65	316	ePn		Pn	12 54 40.9	+0.1
HMTC				eSn		Sg	12 55 04.9	-0.5
IRM	Iron Mountain	1.67	14	P		Pn	12 54 41.1	-0.1
	baz=194,SNR=25							
MURC	Murrieta	1.69	309	P		Pn	12 54 41.4	-0.1
	baz=129							
MURC				S		Sn	12 55 02.8	-0.1
	baz=129							
HEC	Hector,Ludlow	2.37	346	S		Sn	12 55 18.6	-1.0
	baz=166							
BFSC	Mount Baldy Ra	2.41	316	Sb		Sg	12 55 27.3	-2.4
	baz=135							
214A	Organ Pipe Nat	2.45	103	P		Pn	12 54 51.2	-0.8
	baz=284							
214A				S		Sn	12 55 20.2	-1.6
	baz=284							
CIS	Catalina Islan	2.50	291	S		Sn	12 55 22.9	+0.1
	baz=110							
SCI2	San Clemente I	2.50	281	S		Sn	12 55 24.1	+1.3
	baz=100							
LDFC	Landfair	2.58	9	ePn		Pn	12 54 55.0	+1.3
Y14A	Wickenburg	2.61	57	ePn		Pn	12 54 53.5	-0.6
TUQ	Turquoise Moun	2.91	355	S		Sn	12 55 32.4	-0.6
	baz=175							
W13A	Hualapai Mount	2.94	29	ePn		Pn	12 54 58.4	-0.5
SBI	Santa Barbara	3.01	289	eSn		Sn	12 55 36.6	+1.3
PT2	Point Dume	3.04	300	ePg		Pb	12 55 05.5	-0.6
EDW2	Edwards Air Fo	3.06	321	Sb		Sg	12 55 47.1	-3.7
	baz=140							
OAT	Oat Mountain	3.08	307	ePg		Pb	12 55 06.1	-0.9
CCCA	Chr Cany lake	3.32	335	ePg		Pb	12 55 10.4	-0.5
X16A	Lo Mia Camp, P	3.97	61	ePn		Pn	12 55 13.9	+0.9
TUC	Tucson	4.10	92	ePn		Pn	12 55 14.5	-0.2
CARC	Carrizo Plain	4.47	309	ePn		Pn	12 55 20.0	+0.3
CARC				ePg		Pb	12 55 31.1	+0.5
GATR	Gnd/Air Tx Cnt	4.54	298	eSg		Sb	12 56 31.0	+4.5
GATR				eLg		Lg	12 56 39.2	
U15A	North Rim	4.76	34	ePn		Pn	12 55 23.1	-0.9
LCMT	Little Creek M	4.88	23	ePn		Pn	12 55 26.9	+1.5
KNB	Kanab	5.04	27	ePn		Pn	12 55 29.4	+1.9
X18A	Snowflake	5.14	66	ePn		Pn	12 55 30.5	+1.5
CCUT	Cedar City	5.34	20	ePn		Pn	12 55 34.2	+2.4
MDPB	Devils Postpil	5.82	332	ePg		Pb	12 55 56.5	+2.7

MEX 04 13:10:55.9±1.2, 14°.88N×92°.82W, h17km±999km, MD4.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PCIG		0.90	335	eP		Pb	13 11 08.6	-4.6
CCIG	Comitan	1.54	25	eP		Pb	13 11 24.3	+0.2
TGIG		1.91	351	eP		Pn	13 11 25.6	-2.1

*ISCJB **04** 13:12:50.0±0.8, 83°.9N±0°.1×±°, h10km, mb3.5/7, MS3.5/2, Error ellipse: s-maj=22.1km s-min=11.6km az=40.0*
*IDC **04** 13:12:51.4±1.4, 84°.12N×2°.79W, h0km, mb3.6/7, mb1 3.6/9, mb1mx3.3/73, mbtmp3.5/9, ML3.1/2, MS3.5/2, Ms1 3.4/2, ms1mx2.6/65, Error ellipse: s-maj=39.2km s-min=21.6km az=41.0*
ISC 04 13:12:52.0±1.0, 83°.8N±0°.1×3°.2W±0°.2, h10km, n13, σ2§60/14, mb3.6/7, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KBS	Kingsbay	5.34	147	eP		Pn	13 14 13.5	+2.0
KBS				eS		Sn	13 15 09.7	-3.2
KBS				IAML			13 15 12.3	
	comp=Z,3.3nm,0.4s							
SPA0	Spitsbergen Ar	6.33	141	eP		Pn	13 14 27.5	+2.3
SPA0				eS		Sn	13 15 33.4	-4.1
SPITS	Spitsbergen Ar	6.33	141	Pn		Pn	13 14 26.1	+0.9
	baz=350,slow=16,SNR=17							
SPITS				Sn		Sn	13 15 33.7	-3.8
	baz=12,slow=15,SNR=1.9							
RES	Resolute Bay	16.78	293	Pn		Pn	13 16 45.7	-1.0
	comp=Z,0.0nm,0.3s,baz=102,slow=19,SNR=2.4							
ILAR	Eielson Array	30.65	330	P		P	13 19 04.0	-1.9
	comp=Z,0.2nm,0.7s,baz=10,slow=5.5,SNR=3.0							
ZALV

TXAR	Lajitas Array	70.92	333	P	P	13 50 22.8	-0.2
	comp=N,0.8nm,0.7s,baz=152,slow=8.3,SNR=9.4						
NVAR	Mina Array Bea	84.79	327	P	P	13 51 40.3	+0.3
	comp=N,0.4nm,0.7s,baz=154,slow=6.7,SNR=4.5						
WRA	Warramunga Arr	117.86	211	PKP	PKPdf	13 57 50.7	-1.8
	comp=N,0.4nm,0.8s,baz=152,slow=1.9,SNR=2.7						
BVAR	Borovoye Array	150.19	45	PKPbc	PKPbc	13 58 56.6	+0.8
	comp=N,0.6nm,0.5s,baz=289,slow=4.4,SNR=4.4						
MJAR	Matsushiro Arr	153.96	280	PKPbc	PKPbc	13 59 05.2	+0.3
	comp=N,0.3nm,0.3s,baz=148,slow=6.6,SNR=3.5						
ZALV	Zalesovo Beam	157.14	33	PKP	PKPdf	13 59 00.1	-0.4
	comp=N,0.6nm,0.6s,baz=325,slow=2.3,SNR=2.4						
ZALV				PKPab	PKPab	13 59 31.9	+0.5
	comp=N,0.4nm,0.4s,baz=264,slow=4.3,SNR=2.8						

DJA 04 13:39:26.9±1.4, 1°N±8°×11°7E±°, h10km, M3.8/3, mb4.0/1, MLv3.7/3, Borneo

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGKI	Sangatta, Kali	2.07	163	P	Pn	13 40 01.9	+0.1
SGKI				S	Sn	13 40 28.3	+0.6
MPSI	Mapaga	3.10	111	P	Pn	13 40 14.9	-1.0
MPSI				S	Sn	13 40 54.6	+1.6
MTKI	Muara Teweh, K	3.19	221	P	Pg	13 40 39.0	+11
PCI	Palu	3.68	130	P	Pg	13 40 39.2	+1.7
MRSI	Marisa	5.03	101	P	Pg	13 41 09.6	+6.3
MRSI				S	Sn	13 41 33.7	-7.0
APSI	Ampana	5.21	117	P	Pn	13 40 45.4	+0.5
APSI				S	Sn	13 41 47.7	+2.6
TTSI	Tana Toraja	5.29	148	S	Pg	13 41 11.6	+3.3

*IDC **04** 13:40:27.0±1.5, 29°.77N×50°.71E, h0km, mb3.7/8, mb1 3.8/10, mb1mx3.6/65, mbtmp3.8/10, ML3.4/2, Error ellipse: s-maj=29.7km s-min=22.6km az=166.0*
*ISCJB **04** 13:40:29.8±0.7, 29.80N±0.05×50.66E±0.06, h22km, mb3.6/8, Error ellipse: s-maj=8.4km s-min=5.9km az=138.9*
*CSEM **04** 13:40:31.7, 29°.81N×50°.81E, h40km, ML3.2*
*TEH **04** 13:40:33.9, 29°.92N×50°.97E, h5km, ML3.2*

ISC 04 13:40:30.8±0.8, 29°.80N±0.06×50°.83E±0.06, h22km, n25, σ2§13/30, mb3.8/8, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKAZ	Kazeroun	0.88	91	ePg	Pb	13 40 46.2	-1.3
IKAZ				eSg	Sb	13 40 58.5	-0.5
IKAZ				e		13 41 03.9	
	comp=Z,13μm,0.3s						
AHBU	AHRAM	1.02	156	ePg	Pn	13 40 51.0	+1.3
AHBU				eSg	Sn	13 41 05.7	+2.4
IPAR	Pars	1.93	88	eSg	Sb	13 41 30.0	+0.8
IPAR				ePn	Pb	13 41 05.5	+0.1
IRAM	Ramesheh	2.41	33	ePn	Pb	13 41 11.7	-1.8
IRAM				e		13 41 20.5	
	comp=Z,2μm,0.3s						
GHIR	Ghir-Karzin	2.42	128	ePn	Pn	13 41 10.8	+1.7
GHIR				eSg	Sb	13 41 46.5	+3.4
IGAR	Gharneh	2.79	22	ePn	Pn	13 41 17.3	+2.9
IGAR				e		13 41 19.7	
	comp=Z,1μm,0.0s						
ISAD	Sadrabad	3.23	49	ePn	Pn	13 41 22.0	+1.5
IZEF	Zefreh	3.34	22	ePn	Pn	13 41 24.4	+2.5
IZEF				e		13 41 35.8	
	comp=Z,603nm,0.2s						
NASN	Na'in	3.44	29	ePn	Pn	13 41 25.3	+2.0
IKLH	Kolahrood	3.56	10	ePn	Pn	13 41 27.3	+2.3
IKLH				e		13 41 29.4	
	comp=Z,563nm,0.1s						
IMEH	Mehriz	3.63	63	ePn	Pn	13 41 29.0	+3.2
IMEH				e		13 41 31.4	
	comp=Z,426nm,0.1s						
ICHK	Chekchek	3.92	51	ePn	Pn	13 41 30.1	+0.3
QAM	Ghamsar	3.98	7	ePn	Pn	13 41 33.6	+2.9
QAM				e		13 42 24.9	
	comp=Z,1μm,0.2s						
KHMZ	Khomeyn	4.00	350	ePn	Pn	13 41 32.0	+1.1
ANAR	Anarak	4.19	36	ePn	Pn	13 41 35.9	+2.4
ANAR				e		13 41 51.9	
	comp=Z,99nm,0.2s						
WSAR	Wadi Sarin	9.56	131	Pn	Pn	13 42 46.0	-1.2
	comp=Z,0.2nm,0.3s,baz=330,slow=8.7,SNR=5.6						
WSAR				Sn	Sn	13 44 28.4	-5.6
	comp=Z,0.2nm,0.3s,baz=258,slow=20,SNR=1.8						
GEYT	Alibeck	10.12	35	Pn	Pn	13 42 56.6	+1.9
	comp=Z,0.5nm,0.3s,baz=221,slow=16,SNR=5.2						
AKTO	Aktyubinsk	21.31	13	P	P	13 45 15.7	-0.2
	comp=Z,1.3nm,0.5s,baz=204,slow=12,SNR=4.6						
AKASG	Malin Array Be	26.43	328	P	P	13 46 06.0	+0.2
	comp=Z,0.7nm,0.3s,baz=135,slow=9.1,SNR=8.2						
KURBB	Kurchatov Arra	29.38	37	P	P	13 46 33.0	+0.8
	comp=Z,0.5nm,0.8s,baz=234,slow=9.5,SNR=4.1						
MKAR	Makanchi Array	29.69	46	P	P	13 46 35.2	+0.2
	comp=Z,0.2nm,0.5s,baz=243,slow=8.9,SNR=4.5						
ZALV	Zalesovo Beam	34.43	36	P	P	13 47 17.0	+0.6
	comp=Z,0.9nm,0.5s,baz=257,slow=9.7,SNR=4.6						
FINES	FINESS Array B	35.62	340	P	P	13 47 24.8	-1.7
	comp=Z,1.2nm,0.8s,baz=147,slow=6.4,SNR=2.5						
HFS	Hagfors	39.20	331	P	P	13 47 55.7	-1.2
	comp=Z,1.5nm,0.7s,baz=111,slow=7.9,SNR=3.4						
TORD	Torodi Ar. Bea	48.26	261	P	P	13 49 09.7	-0.7
	comp=Z,1.0nm,0.7s,baz=52,slow=8.1,SNR=7.9						

*IDC **04** 14:18:39.3±0.5, 15°.14S×177°.99W, h0km, mb4.2/25, mb1 4.4/27, mb1mx4.3/52, mbtmp4.3/27, ML3.5/2, MS5.3/42, Ms1 5.3/42, ms1mx5.3/46, Error ellipse: s-maj=17.6km s-min=13.5km az=130.0*
*NEIC **04** 14:18:41.0±0.2, 15°.13S×177°.99W, h10km, mb4.3/21, Error ellipse: s-maj=8.6km s-min=6.4km az=134.0*

ISC 04 14:18:40.3±0.4, 15°.20S±0.07×177°.74W±0.06, h10km, n101, σ1§94/76, mb4.4/51, MS5.3/39, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	5.92	78	Pn	Pn	14 20 07.0	-1.2
	11nm,0.3s,baz=123,slow=16,SNR=6.7						
AFI				Sn	Sb	14 21 32.2	-2.5
	baz=9.5,slow=21,SNR=3.6						
AFI	Afiamalu	5.92	78	Pn	Pn	14 20 06.3	-1.8
	124nm,1.0s						
AFI				Sn	Sb	14 21 32.2	-2.5
FUNA	Funafuti	7.28	335	ePn	Pn	14 20 25.2	-1.5
RAO	Raoul Island	13.99	181	Sn	S	14 24 50.3	-5.4
	8.2nm,0.3s,baz=73,slow=19,SNR=2.0						
RAO				LR	LR	14 26 55.2	
	comp=Z,7μm,19.8s,baz=308,slow=35						
DZM	Mont Dzumac	16.46	243	Pn	P	14 22 29.9	-4.5
	0.1nm,0.3s,baz=189,slow=10,SNR=3.0						
DZM				Sn	S	14 25 52.3	+5.6
	0.1nm,0.3s,baz=106,slow=14,SNR=2.6						
DZM				LR	LR	14 28 03.0	
	comp=Z,18μm,18.3s,baz=72,slow=35						
RAR	Rarotonga	18.08	112	P	P	14 22 55.1	+3.0
	3.0nm,0.3s,baz=17,slow=10,SNR=3.9						
RAR				S	S	14 26 38.9	+19
	0.3nm,0.3s,baz=120,slow=20,SNR=1.7						
RAR				LR	LR	14 28 29.1	
	comp=Z,12μm,20.0s,baz=272,slow=32						
OUZ	Omahuta	21.40	200	eP	P	14 23 33.1	+4.9
	285nm,1.4s						
HNR	Honiara	22.53	282	P	P	14 23 39.2	-1.3
	30nm,0.6s,baz=159,slow=8.6,SNR=2.1						
HNR				S	Sn	14 28 00.4	-0.5
	17nm,0.4s,baz=182,slow=18,SNR=3.6						
URZ	Urewera	23.41	190	P	P	14 23 50.7	+1.3
	12nm,0.9s,baz=341,slow=5.1,SNR=5.7						
URZ				S	Sn	14 28 20.3	-1.3
	7.4nm,1.1s,baz=177,slow=19,SNR=1.6						
URZ				LR	LR	14 31 35.8	
	comp=Z,14μm,19.1s,baz=47,slow=33						
BKZ	Black Stump Fm	24.41	191	eP	P	14 24 02.6	+3.6
	34nm,1.1s						
PPT	Papeete	27.12	99	LR	LR	14 32 36.2	
	comp=Z,5μm,21.1s,baz=266,slow=31						
RPZ	Rata Peaks	29.99	196	P	P	14 24 50.0	+1.0
	6.4nm,0.8s,baz=21,slow=7.5,SNR=2.3						
RPZ				LR	LR	14 34 53.1	
	comp=Z,7μm,21.5s,baz=23,slow=32						
CTA	Charters Tower	34.61	257	P	P	14 25 28.7	-1.1
	8.1nm,0.9s,baz=97,slow=11,SNR=7.8						
CTA				LR	LR	14 37 46.1	
	comp=Z,4μm,20.0s,baz=84,slow=33						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTAO	Charters Tower	34.61	257	eP	P	14 25 29.1	-0.7
	44nm,0.8s						
PMG	Port Moresby	34.74	275	S	S	14 31 09.2	+7.7
	9.5nm,0.9s,baz=182,slow=23,SNR=7.2						
PMG				LR	LR	14 38 31.6	
	comp=Z,5μm,18.1s,baz=95,slow=35						
H11S2	WAKE ISLAND Hy	36.82	335	T	T	15 04 56.6	
	baz=155,slow=76,SNR=6.1						
H11S3	WAKE ISLAND Hy	36.83	335	T	T	15 05 02.9	
	baz=155,slow=76,SNR=4.6						
H11S1	WAKE ISLAND Hy	36.84	335	T	T	15 04 59.3	
	baz=155,slow=76,SNR=5.0						
H11N3	WAKE ISLAND Hy	37.84	336	T	T	15 06 12.7	
	baz=155						
H11N1	WAKE ISLAND Hy	37.84	336	T	T	15 06 09.8	
	baz=155						
H11N2	WAKE ISLAND Hy	37.86	336	T	T	15 06 04.7	
	baz=155						
STKA	Stephens Creek	40.53	239	P	P	14 26 19.4	-0.4
	11nm,1.0s,baz=32,slow=7.1,SNR=6.8						
STKA				LR	LR	14 41 30.8	
	comp=Z,8μm,20.3s,baz=73,slow=34						
JAY	Jayapura	42.85	283	S	S	14 33 14.9	+11
	6.5nm,0.8s,baz=144,slow=19,SNR=2.2						
WRA	Warramunga Arr	45.81	257	P	P	14 27 01.3	-1.4
	2.0nm,1.0s,baz=90,slow=7.5,SNR=8.1						
ASAR	Alice Springs	46.19	252	P	P	14 27 04.3	-1.4
	3.0nm,0.6s,baz=83,slow=8.3,SNR=26						
ASAR				LR	LR	14 44 59.4	
	comp=Z,3μm,20.5s,baz=94,slow=34						
GUMO	Guam	46.76	306	LR	LR	14 44 09.8	
	comp=Z,2μm,20.8s,baz=126,slow=33						
JCJ	Chichijima	57.28	317	LR	LR	14 50 06.2	
	comp=Z,4μm,19.6s,baz=102,slow=33						
DAV	Davao City (W)	60.36	287	LR	LR	14 53 26.3	
	comp=Z,1μm,18.9s,baz=105,slow=35						
NWAO	Narogin (SRO)	61.06	241	LR	LR	14 54 56.0	
	comp=Z,5μm,18.6s,baz=58,slow=36						
JHJ	Hachijo jima 2	62.88	320	LR	LR	14 56 25.2	
	comp=Z,2μm,18.1s,baz=150,slow=36						
SBA	Scott Base	63.15	184	P	P	14 29 09.1	+1.2
	6.8nm,1.0s						
VNDA	Vanda	63.18	185	P	P	14 29 08.8	+0.7
	0.5nm,0.8s,baz=5.0,slow=2.9,SNR=3.0						
VNDA				LR	LR	14 54 17.8	
	comp=Z,1μm,18.1s,baz=28,slow=34						
RPN	Rapa Nui	64.23	113	LR	LR	14 50 01.7	
	comp=Z,3μm,21.6s,baz=268,slow=29						
MJAR	Matsushiro Arr	66.15	322	P	P	14 29 27.1	-1.0
	2.6nm,1.0s,baz=167,slow=5.9,SNR=4.7						
MJAR				LR	LR	14 52 44.1	
	comp=Z,1μm,21.8s,baz=135,slow=31						
JOW	Kunigami	67.03	308	LR	LR	14 53 28.5	
	comp=Z,1μm,20.8s,baz=143,slow=31						
TGY	Tagaytay City	67.27	293	LR	LR	14 55 29.5	
	comp=Z,5μm,20.4s,baz=114,slow=33						
JNU	Nakatsue	68.65	315	P	P	14 29 43.4	-0.7
	7.8nm,0.9s,baz=116,slow=3.8,SNR=4.0						
JNU				LR	LR	14 54 59.5	
	comp=Z,2μm,21.3s,baz=115,slow=32						
PETK	Petropavlovsk-	71.24	345	P	P	14 29 59.8	+0.3
	3.9nm,0.7s,baz=140,slow=6.8,SNR=2.4						
PETK				LR	LR	15 01 38.6	
	comp=Z,931nm,18.0s,baz=168,slow=36						
KSRS	Korea Array	73.13	317	P	P	14 30 09.1	-1.9
	1.4nm,0.9s,baz=129,slow=6.5,SNR=6.7						
KSRS				LR	LR	14 56 42.4	
	comp=Z,3μm,22.0s,baz=122,slow=31						
KSAR	Wonju Array Be	73.15	317	P	P	14 30 09.2	-2.1
LEM	Lembang	73.46	267	LR	LR	15 04 39.1	
	comp=Z,856nm,19.0s,baz=102,slow=38						
USRK	Ussuriysk Ar.	74.76	325	P	P	14 30 18.3	-2.2
	0.8nm,0.5s,baz=145,slow=5.3,SNR=2.1						
USRK				LR	LR	14 57 46.0	
	comp=Z,1μm,21.2s,baz=120,slow=32						
QSPA	South Pole Qui	74.84	180	P	P	14 30 20.3	-0.6
	2.3nm,0.9s,baz=333,slow=4.5,SNR=5.1						
QSPA				LR	LR	14 58 57.8	
	comp=Z,2μm,20.5s,baz=52,slow=32						
QSPA	South Pole Qui	74.84	180	eP	P	14 30 20.1	-0.8
	18nm,0.8s						
CMB	Columbia Colle	75.44	43	eP	P	14 30 26.4	+1.7
	13nm,0.7s						
KDAK	Kodiak Island	75.63	14	P	P	14 30 25.5	+0.3
	2.3nm,0.8s,baz=207,slow=2.3,SNR=2.3						
KDAK	Kodiak Island	75.63	14	eP	P	14 30 23.4	-1.8
	4.3nm,0.9s						
YBH	Yreka Blue Hor	76.03	39	P	P	14 30 29.9	+1.9
	4.2nm,0.9s,baz=211,slow=5.9,SNR=7.1						
YBH				LR	LR	14 56 28.1	
	comp=Z,4μm,21.4s,baz=238,slow=30						
HUMO	Hull Mountain	76.39	38	eP	P	14 30 33.1	+3.2
	15nm,1.0s						
DAC	Darwin (Calif)	76.42	46	eP	P	14 30 32.7	+2.2
	2.8nm,1.1s						
LPIG	La Paz	76.54	60	LR	LR	14 55 53.3	
	comp=Z,3μm,21.6s,baz=218,slow=29						
NKL	Nikolayevsk	76.88	336	eP	P	14 30 36.0	+3.6
NKL				e		14 40 37.0	
GRNR	Gornyy	76.95	332	eP	P	14 30 33.0	+0.1
NVAR	Mina Array Bea	77.04	44	P	P	14 30 35.5	+1.5
	3.8nm,0.9s,baz=221,slow=6.3,SNR=17						
NVAR				LR	LR	14 56 52.1	
	comp=Z,2μm,21.8s,baz=112,slow=30						
KLR	Kul'dur	78.13	329	P	P	14 30 40.6	+1.1
	0.0nm,0.3s,baz=101,slow=6.0,SNR=2.8						
TUC	Tucson	79.55	52	eP	P	14 30 50.0	+2.1
	1.6nm,0.6s						
PGC	Sidney	79.71	33	P	P	14 30 50.7	+2.5
	4.0nm,0.3s						
BMO	Blue Mountains	81.04	39	eP	P	14 30 57.1	+1.5
	1.3nm,0.7s						
MFID	Camas Ranch	81.21	41	eP	P	14 30 58.3	+1.7
	2.9nm,0.8s						
DUG	Dugway, Tooele	81.61	45	eP	P	14 30 57.7	-1.1
	3.3nm,1.0s						
HLID	Hailey	82.18	41	eP	P	14 31 03.5	+1.7
	2.3nm,0.8s						
NEW	Newport	82.96	36	P	P	14 31 08.6	+3.1
	1.9nm,0.8s						
COLA	College	83.01	12	eP	P	14 31 06.5	+1.1
	2.1nm,0.6s						
HWUT	Hardware Ranch	83.10	44	P	P	14 31 08.6	+1.9
	3.0nm,0.4s						
ILAR	Eielson Array	83.12	13	P	P	14 31 06.7	+0.8
	1.0nm,1.0s,baz=217,slow=5.3,SNR=5.8						
MNTX	Cornudas Mount	83.50	55	eP	P	14 31 09.8	+1.0
	1.3nm,0.8s						
ANMO	Albuquerque	83.92	51	LR	LR	15 02 00.4	
	comp=Z,3μm,19.9s,baz=246,slow=31						
ANMO	Albuquerque	83.92	51	eP	P	14 31 11.4	+0.4
	1.3nm,0.8s						
TXAR	Lajitas Array	84.01	58	P	P	14 31 13.5	+2.0
	1.3nm,0.9s,baz=230,slow=5.2,SNR=12						
TXAR				LR	LR	15 02 00.6	
	comp=Z,3μm,19.3s,baz=0.0,slow=31						
PSI	Prapat	84.30	274	LR	LR	15 10 11.7	
	comp=Z,753nm,20.7s,baz=91,slow=37						
DAWY	Dawson	84.32	16	eP	P	14 31 13.6	+1.4
	2.6nm,1.0s						
EGAK	Eagle	84.45	15	eP	P	14 31 15.1	+2.4
	3.2nm,1.0s						
BOZ	Bozeman (W)	84.90	40	P	P	14 31 15.3	-0.3
	1.5nm,1.0s						
BW06	Boulder Array	84.96	43	eP	P	14 31 17.6	+1.5
	0.9nm,0.4s						
PDAR	Pinedale Array	84.96	43	P	P	14 31 17.4	+1.3
	0.8nm,0.6s,baz=271,slow=7.1,SNR=4.7						
PDAR				LR	LR	15 02 13.8	
	comp=Z,2μm,21.1s,baz=258,slow=31						
WALA	Waterton Lakes	85.19	36	eP	P	14 31 18.7	+1.7
	1.4nm,0.7s						
SDCO	Great Sand Dun	85.72	49	P	P	14 31 21.0	+0.9
	1.4nm,1.2s						
PMSA	Palmer Station	86.03	157	LR	LR	15 05 18.5	
	comp=Z,863nm,18.2s,baz=238,slow=32						
RLMT	Red Lodge	86.17	41	P	P	14 31 22.4	+0.3
	1.4nm,0.5s						
MAW	Mawson	86.61	200	LR	LR	15 05 30.9	
	comp=Z,3μm,21.5s,baz=105,slow=32						
CMAR	Chiang Mai Arr	88.58	289	P	P	14 31 34.8	+0.8
	0.5nm,0.6s,baz=87,slow=4.6,SNR=2.9						
CMAR				LR	LR	15 07 49.6	
	comp=Z,1μm,20.4s,baz=98,slow=33						
INK	Inuvik	89.12	15	P	P	14 31 34.4	-1.1
	1.0nm,0.9s,baz=217,slow=5.1,SNR=2.3						
RSSD	Black Hills	89.18	44	P	P	14 31 37.7	+1.1
	2.9nm,0.8s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APG	El Apazote	91.30	75	LR	LR	15 06 30.3	
	comp=Z,693nm,18.0s,baz=240,slow=31						
YKA	Yellowknife Ar	91.62	24	P	P	14 31 49.4	+2.2
	0.1nm,0.4s,baz=244,slow=4.6,SNR=3.0						
SONM	Songino Array	91.93	319	P	P	14 31 48.9	-0.3
	0.2nm,0.3s,baz=116,slow=3.4,SNR=2.5						
SONM				LR	LR	15 08 49.7	
	comp=Z,984nm,21.9s,baz=115,slow=33						
PLCA	Paso Flores	92.72	133	LR	LR	15 05 01.4	
	comp=Z,1μm,21.8s,baz=250,slow=30						
SNAA	Sanae	93.27	178	P	P	14 31 55.6	+0.7
	1.9nm,0.9s,baz=186,slow=5.5,SNR=3.6						
SNAA				LR	LR	15 09 57.2	
	comp=Z,723nm,20.7s,baz=184,slow=33						
ZAK	Zakamensk	94.70	321	eP	P	14 32 01.6	-0.3
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.4s						
JTS	JuntasAbangare	95.31	81	LR	LR	15 04 47.0	
	comp=Z,870nm,21.1s,baz=318,slow=29						
ULM	Lac du Bonnet	96.44	40	LR	LR	15 08 55.2	
	comp=Z,3μm,21.9s,baz=252,slow=31						
MKAR	Makanchi Array	107.70	315	PKiKP	PKiKP	14 37 07.4	-0.5
	comp=Z,0.3nm,0.7s,baz=77,slow=1.9,SNR=2.4						
KURK	Kurchatov	110.23	319	PKiKP	PKiKP	14 37 12.5	+0.1
KURBB	Kurchatov Arra	110.29	319	PKiKP	PKiKP	14 37 12.5	0.0
	comp=Z,0.2nm,0.5s,baz=140,slow=2.7,SNR=3.0						
AKASG	Malin Array Be	138.44	334	PKP	PKPdf	14 38 05.9	-0.2
	comp=Z,0.1nm,0.3s,baz=44,slow=2.1,SNR=2.2						
BRTR	Keskin Array B	143.28	318	PKP	PKPdf	14 38 13.2	-2.2
	comp=Z,1.1nm,0.9s,baz=90,slow=2.5,SNR=5.0						
GRFO	Grafenberg	144.83	350	ePKPdf	PKPdf	14 38 17.0	-0.5
MMAI	Mount Meron Ar	145.13	307	PKP	PKPdf	14 38 19.1	+0.4
	comp=Z,2.6nm,0.6s,baz=66,slow=4.9,SNR=4.4						
GERES	GERESS Array B	145.16	347	PKPbc	PKPdf	14 38 18.2	-0.1
	comp=Z,0.5nm,0.5s,baz=33,slow=3.2,SNR=6.2						
BFO	Black Forest	146.59	353	ePKPdf	PKPab	14 38 21.4	-1.7
TORD	Torodi Ar. Bea	177.89	165	PKP	PKPdf	14 38 52.6	+0.5
	comp=Z,0.7nm,1.0s,baz=223,slow=0.7,SNR=3.5						

*NEIC **04** 14:18:51.0±0.0, 15°.22S×177°.80W, h11km, Moment Tensor Solution. s33 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.41; $M_{\theta\theta}$-1.24; $M_{\phi\phi}$1.65; $M_{r\theta}$-0.54; $M_{\theta\phi}$5.00; $M_{\phi r}$-0.68; Best double couple: $M_0$5.30000×10^{17} NP1:ϕ_s262.00000°, δ84.00000°, λ.6.00000°. NP2:ϕ_s172.00000°, δ84.00000°, λ174.00000°. Principal axes: T 5.5400, Plg8.0000°, Azm126.0000°; N -0.5400, Plg81.0000°, Azm304.0000°; P -5.0000, Plg0.0000°, Azm36.0000°;*
*GCMT **04** 14:18:52.3±0.1, 15°.17S×177°.87W, h15km, MW5.8/137, Moment Tensor Solution. s118,c244; s137,c394; Duration: 1§9 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.51±.04; $M_{\theta\theta}$-2.10±.05; $M_{\phi\phi}$2.62±.05; $M_{r\theta}$-0.62±.13; $M_{\theta\phi}$5.36±.04; $M_{\phi r}$-0.72±.14; Best double couple: $M_0$5.92400×10^{17} NP1:ϕ_s258.00000°, δ85.00000°, λ7.00000°. NP2:ϕ_s168.00000°, δ83.00000°, λ175.00000°. Principal axes: T 6.2480, Plg8.0000°, Azm123.0000°; N -0.6390, Plg82.0000°, Azm293.0000°; P -5.6000, Plg1.0000°, Azm33.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **04** 14:18:52.3±0.2, 15°.28S×177°.92W, h10km, mb5.3/107, MS5.5/111, MW5.7 Error ellipse: s-maj=12.0km s-min=6.2km az=128.0*
*MOS **04** 14:18:53.6±1.6, 15°.31S×177°.74W, h24km, mb5.3/32, MS5.5/11, Error ellipse: s-maj=11.4km s-min=9.1km az=142.4*
*ISCJB **04** 14:18:54.8±0.2, 15°.37S±0.05×177°.90W±0.04, h33km, mb5.1/135, MS5.5/142, Error ellipse: s-maj=7.2km s-min=4.9km az=158.3*

ISC 04 14:18:56.5±0.3, 15°.42S±0.06×177°.74W±0.05, h35km, h36km:pP-P, n507, σ2§06/367, mb5.2/135, MS5.5/143, 20C-11D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.65	240	ciP	Pn	14 20 03.1	-1.2
AFI	Afiamalu	5.96	76	eP	Pn	14 20 20.6	-1.8
AFI	Afiamalu	5.96	76	eP	Pn	14 20 20.6	-1.8
KNTN	Kanton	13.90	26	ePn	Pn	14 22 05.5	-5.6
DZM	Mont Dzumac	16.37	244	eP	P	14 22 45.4	-0.9
	225nm,1.5s						
DZM				eLR	LR	14 26 30.2	
	24μm,24.1s						
RAR	Rarotonga	18.00	111	P	Pn	14 23 03.3	-0.6
HNR	Honiara	22.58	283	P	P	14 23 46.0	-8.1
HNR	Honiara	22.58	283	PFAKE		14 24 00.0	+5.9
HNR				LR	LR		
	comp=Z,35μm,21.0s						
HNR	Honiara	22.58	283	P	P	14 23 54.4	+0.3
HNR				pmax	pmax		
	comp=Z,229nm,1.4s						
HIZ	Hauiti	23.91	194	eP	P	14 24 07.0	-0.1
	comp=Z,260nm,1.4s						
PPT2	Papeete2	27.08	99	eS	S	14 29 12.5	+0.4
	comp=Z,976nm,23.0s						
PPT2				eLQ	LQ	14 30 14.6	
	comp=Z,23μm,28.0s						
PPT2				eLR	LR	14 31 24.1	
	comp=Z,18μm,26.8s,baz=264						
THZ	Tophouse	27.46	195	eP	P	14 24 40.2	+0.9
	comp=Z,29nm,0.9s						
TBI	Tubuai	27.78	111	eS	S	14 29 23.8	+0.9
	comp=Z,2μm,25.5s						
TBI				eLQ	LQ	14

WB2	Warramunga Arr	45.75	257	eP		P	14 27 07.0 -7.8
	comp=Z,30nm,1.4s						
WRAB	Tennant Creek	45.75	257		PFAKE		14 27 20.0 +5.1
WRAB					LR	LR	
	comp=Z,3μm,19.0s						
GUMO	Guam	46.89	306		PFAKE		14 27 30.0 +6.2
GUMO					LR	LR	
	comp=Z,2μm,20.0s						
SOEI	Soe	56.75	268	eP		P	14 28 38.3 +0.7
	comp=Z,167nm,1.0s						
MBWA	Marble Bar	59.33	254		PFAKE		14 29 10.0 +15
MBWA					LR	LR	
	comp=Z,4μm,19.0s						
DAV	Davao City (W)	60.43	288		PFAKE		14 29 10.0 +6.9
DAV					LR	LR	
	comp=Z,1μm,19.0s						
NWAO	Narrogin (SRO)	60.96	241		PFAKE		14 29 20.0 +14
NWAO					LR	LR	
	comp=Z,5μm,19.0s						
KAPI	Kappang	62.20	272		PFAKE		14 29 30.0 +15
KAPI					LR	LR	
	comp=Z,847nm,21.0s						
SBA	Scott Base	62.93	184		PFAKE		14 29 30.0 +11
SBA					LR	LR	
	comp=Z,2μm,20.0s						
VNDA	Vanda	62.96	185	eP		P	14 29 20.4 +1.3
VNDA	Vanda	62.96	185	eP		P	14 29 20.4 +1.3
MAJO	Matsushiro	66.33	322		PFAKE		14 29 50.0 +8.4
MAJO					LR	LR	
	comp=Z,2μm,21.0s						
MAJO	Matsushiro	66.33	322	c iP		P	14 29 44.3 +2.7
MAJO				i *PP		pP	14 29 49.9 -2.5
MAJO				i *SP		sP	14 29 51.0 -5.5
MAJO					pmax	pmax	
	comp=Z,3.0nm,0.5s						
MAT	Matsushiro	66.33	322		P	P	14 29 39.4 -2.2
MAT					S	S	14 38 29.6 +0.6
ERM	Erimo	67.57	329		PFAKE		14 30 00.0 +11
ERM					LR	LR	
	comp=Z,5μm,20.0s						
YUK	Yuzh-Kuril'sk	67.86	332	eP		P	14 29 44.0 -7.2
YUK				eS		S	14 38 44.8 -2.3
KUR	Kuril'sk	67.95	334	eP		P	14 29 52.5 +0.8
KUR				e			14 30 24.6
KUR				i S		S	14 38 52.1 +3.9
KUR					MLR	MLR	
	comp=Z,2μm,18.0s						
KUR					MLR	MLR	
	comp=E,469nm,11.0s						
KUR					MLR	MLR	
	comp=N,2μm,16.0s						
CASY	Casey	68.65	204		P	P	14 29 56.2 +0.3
	comp=N,30nm,0.9s						
CASY					LR	LR	
	comp=Z,665nm,19.0s						
ASAJ	Asahikawa	69.43	331	eP		P	14 30 00.2 -0.7
	comp=Z,20nm,0.9s						
SKR	Severo-Kuril's	69.70	343	eP		P	14 30 01.2 -1.3
SKR				eS		S	14 39 09.5 +0.8
SKR					MLR	MLR	
	comp=Z,2μm,18.0s						
PET	Petropavlovsk	71.14	345	eP		P	14 30 16.0 +4.8
PET				eS		S	14 39 29.7 +4.3
PET				ePS		PnS	14 39 57.1 -0.2
PET				eSS		SS	14 44 04.2 +4.3
PEA0B	Petropavlovsk-	71.46	345	eP		P	14 30 12.4 -0.8
	comp=Z,32nm,0.9s						
YSS	Yuzh-Sakhalins	71.50	333	eP		P	14 30 13.1 -0.5
	comp=Z,38nm,1.0s						
YSS	Yuzh-Sakhalins	71.50	333⇑	i P		P	14 30 14.4 +0.8
YSS				i AP		pP	14 30 21.9 -2.5
YSS					pmax	pmax	
	comp=Z,42nm,1.0s						
KSM	Kuching	73.03	276	eP		P	14 30 21.8 -1.6
	comp=Z,21nm,1.2s						
QZH	Quanzhou	73.89	302	eP		P	14 30 30.0 +1.8
QZH				S		S	14 40 04.0 +6.1
QZH					LR	LR	
	comp=N,630nm,7.6s						
QZH					LR	LR	
	comp=E,830nm,16.9s						
QZH					LR	LR	
	comp=Z,910nm,17.5s						
INCN	Inchon	74.16	317		PFAKE		14 30 40.0 +10
INCN					LR	LR	
	comp=Z,3μm,21.0s						
SAO	San Andreas Ge	74.20	44		P	P	14 30 29.2 -0.6
PKM	Mcpherson Peak	74.30	46		P	P	14 30 32.5 +1.8
	baz=238						
PMPB	Monarch Peak	74.33	45	eP		P	14 30 29.4 -1.3
	comp=Z,64nm,1.1s						
RDG13	Poverty Ridge	74.37	43	eP		P	14 30 31.8 +0.9
	comp=Z,31nm,1.2s						
HOPS	Hopland Field	74.39	41	eP		P	14 30 32.0 +1.2
	comp=Z,59nm,1.1s						
SSE	Sheshan	74.67	309		P	P	14 30 33.2 +0.5
SSE					S	S	14 40 13.6 +7.1
SSE	Sheshan	74.67	309		SS	SS	14 45 09.0 +14
SSE					pmax	pmax	
	comp=Z,9.0nm,0.7s						
SSE					pmax	pmax	
	comp=Z,150nm,4.1s						
SSE					LR	LR	
	comp=N,350nm,16.9s						
KMRM	Mail Ridge	74.71	40	eP		P	14 30 34.1 +1.3
	comp=N,100nm,1.2s						
MWC	Mount Wilson	75.20	48	eP		P	14 30 35.7 -0.2
	comp=N,18nm,1.0s						
MWC	Mount Wilson	75.20	48	eP		P	14 30 35.7 -0.2
MWC					pmax	pmax	
	comp=Z,19nm,1.0s						
VES	Vestal, Richgr	75.31	46		P	P	14 30 37.4 +1.2
	baz=238						
BFSC	Mount Baldy Ra	75.49	48		P	P	14 30 36.1 -1.4
	baz=240						
EDW2	Edwards Air Fo	75.58	47		P	P	14 30 39.0 +1.1
	baz=239						
WDC	Whiskeytown Da	75.64	40	eP		P	14 30 38.9 +0.9
	comp=Z,33nm,1.3s						
WDC	Whiskeytown Da	75.64	40	eP		P	14 30 38.9 +0.9
WDC					pmax	pmax	
	comp=Z,33nm,1.3s						
ISA	Isabella, Lake	75.64	46		P	P	14 30 39.9 +1.6
	baz=239						
ISA	Isabella, Lake	75.64	46	eP		P	14 30 39.2 +0.9
	comp=Z,32nm,1.1s						
ISA	Isabella, Lake	75.64	46	eP		P	14 30 39.2 +0.9
ISA					pmax	pmax	
	comp=Z,32nm,1.1s						
MIR	Mirnyy	75.68	204	eP		P	14 30 55.0 +17
MIR					pmax	pmax	
	comp=Z,81nm,1.5s						
ORV	Oroville	75.71	42	eP		P	14 30 38.3 -0.2
	comp=Z,12nm,0.9s						
ORV	Oroville	75.71	42	eP		P	14 30 38.3 -0.2
ORV					pmax	pmax	
	comp=Z,13nm,0.9s						
MONP2	Monument Peak	75.72	50		P	P	14 30 39.9 +1.0
	baz=241						
N02D	Trinity Center	75.77	40		P	P	14 30 40.4 +1.6
	baz=235						
IKP	In-Ko-Pah, Jac	75.83	50		P	P	14 30 40.9 +1.5
	baz=241						
KDAK	Kodiak Island	75.85	14		PFAKE		14 30 50.0 +11
KDAK					LR	LR	
	comp=Z,877nm,22.0s						
L02D	Cave Junction,	75.91	38		P	P	14 30 42.4 +2.8
	baz=234						
M02C	Callahan	75.92	39		P	P	14 30 41.5 +1.7
	baz=235						
O03D	Paynes Creek	75.94	41		P	P	14 30 42.9 +3.0
	baz=236						
PFO	Pinyon Flats O	76.05	49		P	P	14 30 42.9 +2.2
	baz=241						
PFO	Pinyon Flats O	76.05	49	eP		P	14 30 40.4 -0.3
	comp=Z,19nm,1.4s						
PFO					LR	LR	
	comp=Z,4μm,20.0s						
PFO	Pinyon Flats O	76.05	49	eP		P	14 30 40.4 -0.3
PFO					pmax	pmax	
	comp=Z,19nm,1.4s						
PFO					MLR	MLR	
	comp=Z,4μm,20.0s						
OMMB	Old Mammoth Mi	76.30	44	eP		P	14 30 41.4 -0.9
	comp=Z,29nm,1.2s						
CWC	Cottonwood Cre	76.31	46		P	P	14 30 43.7 +1.4
	baz=239						
MLAC	Mammoth, Mammo	76.42	44		P	P	14 30 44.2 +1.4
	baz=238						
MPMC	Manual Prospec	76.53	46		P	P	14 30 44.8 +1.3
	baz=240						
MDJ	Mudanjiang	76.54	324		P	P	14 30 43.2 +0.1
MDJ					S	S	14 40 33.1 +6.4
MDJ	Mudanjiang	76.54	324		ScS	ScS	14 40 56.8 +0.4
MDJ	Mudanjiang	76.54	324		SS	SS	14 45 41.1 +18
MDJ					pmax	pmax	
	comp=Z,15nm,1.7s						
MDJ					pmax	pmax	
	comp=Z,220nm,4.1s						
MDJ					LR	LR	
	comp=N,1μm,19.1s						
MDJ					LR	LR	
	comp=E,2μm,15.9s						
MDJ					LR	LR	
	comp=Z,2μm,17.1s						
MDJ	Mudanjiang	76.54	324		PFAKE		14 30 50.0 +6.9
MDJ					LR	LR	
	comp=Z,2μm,19.0s						
DAC	Darwin (Calif)	76.57	46		P	P	14 30 43.1 -0.6
DAC					pmax	pmax	
	comp=Z,32nm,1.6s						
BELC	Belle Mtn. Jos	76.57	49		P	P	14 30 45.0 +1.3
	baz=241						
GSC	Goldstone, Bar	76.63	47		P	P	14 30 45.6 +1.7
	baz=240						
GSC	Goldstone, Bar	76.63	47	eP		P	14 30 44.1 +0.2
	comp=Z,12nm,0.8s						
GSC	Goldstone, Bar	76.63	47	eP		P	14 30 44.1 +0.2
GSC					pmax	pmax	
	comp=Z,12nm,0.8s						
PNTR	Pine Nut	76.69	43	eP		P	14 30 45.4 +1.0
	comp=Z,52nm,1.0s						
HEC	Hector,Ludlow	76.73	48		P	P	14 30 45.3 +0.8
	baz=241						
M04C	Macdoel	76.76	40		P	P	14 30 46.3 +1.8
	baz=235						
VCNR	Virginia City	76.77	43	eP		P	14 30 45.6 +0.9
	comp=Z,30nm,1.0s						
YERR	Yerington	76.87	43	eP		P	14 30 46.1 +0.8
	comp=Z,34nm,1.0s						
NJ2	Nanjing	76.88	309	eP		P	14 30 44.9 -0.3
NJ2					S	S	14 40 34.6 +3.8
NJ2	Nanjing	76.88	309		SS	SS	14 45 32.9 +4.8
NJ2					pmax	pmax	
	comp=Z,17nm,0.8s						
NJ2					LR	LR	
	comp=N,1μm,15.2s						
NJ2					LR	LR	
	comp=E,1μm,15.2s						
NJ2					LR	LR	
	comp=Z,1μm,16.3s						
I03D	Drain, OR	76.97	37		P	P	14 30 47.8 +2.2
	baz=234						
GMRC	Granite Mounta	77.19	48		P	P	14 30 48.7 +1.5
	baz=241						
IRM	Iron Mountain	77.27	49		P	P	14 30 48.8 +1.3
	baz=242						
TUQ	Turquoise Moun	77.32	48		P	P	14 30 49.2 +1.3
	baz=241						
Y12C	Blythe	77.53	50	eP		P	14 30 49.8 +1.0
	comp=Z,12nm,1.0s						
I04A	Tendick Farm,	77.58	38		P	P	14 30 51.6 +2.6
	baz=234						
113A	Mohawk Valley,	77.63	51	eP		P	14 30 50.4 +0.9
	comp=Z,23nm,1.3s						
TPNV	Topopah Spring	77.84	46		P	P	14 30 52.0 +1.2
	baz=240						
G03D	McMinnville, O	77.92	36		P	P	14 30 53.4 +2.6
	baz=234						
J05D	Fort Rock, OR	77.99	39		P	P	14 30 53.5 +2.1
	baz=235						
BRLK	Bradley Lake	78.02	14	eP		P	14 30 52.0 +0.9
	comp=Z,41nm,1.2s						
PDMCI	Parker Dam,Lak	78.07	49		P	P	14 30 53.5 +1.6
	baz=242						
H04A	Detroit Lake	78.23	37	eP		P	14 30 53.2 +0.6
	comp=Z,30nm,1.0s						
DL2	Dalian	78.25	316		P	P	14 30 45.8 -6.9
DL2					S	S	14 40 39.1 -6.2
DL2					pmax	pmax	
	comp=Z,17nm,1.3s						
DL2					pmax	pmax	
	comp=Z,130nm,8.3s						
DL2					LR	LR	
	comp=N,1μm,24.7s						
DL2					LR	LR	
	comp=E,1μm,23.3s						
DL2					LR	LR	
	comp=Z,2μm,22.9s						
KLR	Kul'dur	78.32	329⇓	i P		P	14 30 53.3 +0.4
SHPR	Sheep Range	78.39	47	eP		P	14 30 53.4 -0.4
	comp=Z,18nm,1.2s						
CN2	Changchun	78.47	322	eP		P	14 30 52.2 -1.6
CN2				esP		PcP	14 30 59.1 -3.8
CN2				eS		S	14 40 47.0 -0.5
CN2	Changchun	78.47	322	eSS		SS	14 45 51.6 -0.1
CN2					pmax	pmax	
	comp=Z,10.0nm,1.6s						
CN2					LR	LR	
	comp=N,1μm,16.0s						
CN2					LR	LR	
	comp=E,1μm,16.0s						
CN2					LR	LR	
	comp=Z,1μm,18.0s						
SNY	Shenyang	78.52	319⇓	P		P	14 30 54.7 +0.5
SNY				S		S	14 40 54.0 +5.9
SNY	Shenyang	78.52	319	SS		SS	14 46 02.4 +10
SNY					pmax	pmax	
	comp=Z,24nm,1.4s						
SNY					pmax	pmax	
	comp=Z,300nm,3.6s						
SNY					LR	LR	
	comp=N,1μm,16.9s						
SNY					LR	LR	
	comp=E,470nm,16.7s						
SNY					LR	LR	
	comp=Z,2μm,17.5s						
I05D	Terrebonne, OR	78.53	38		P	P	14 30 55.6 +1.4
	baz=235						
E03A	Lebam	78.56	35	eP		P	14 30 55.9 +1.6
	comp=Z,54nm,1.1s						
W13A	Hualapai Mount	78.62	49	eP		P	14 30 55.6 +0.4
	comp=Z,17nm,1.2s						
Y14A	Wickenburg	78.73	50	eP		P	14 30 56.0 +0.3
	comp=Z,18nm,1.1s						
MA2	Magadan	78.99	344	eP		P	14 30 54.3 -2.0
MA2					LR	LR	
	comp=Z,2μm,21.0s						
MA2	Magadan	78.99	344	i P		P	14 30 56.3 0.0
MA2				i AP		PcP	14 31 01.0 -3.8
MA2					pmax	pmax	
	comp=Z,28nm,1.7s						
R11A	Troy Canyon, C	78.99	45		P	P	14 30 59.0 +1.9
	baz=240						
QIZ	Qiongzhong	79.05	293		P	P	14 30 56.6 -1.0
QIZ	Qiongzhong	79.05	293		S	S	14 41 01.8 +7.1
QIZ	Qiongzhong	79.05	293		ScS	ScS	14 41 22.2 +4.4
QIZ	Qiongzhong	79.05	293		SS	SS	14 46 05.4 +4.1
QIZ					LR	LR	
	comp=N,870nm,21.6s						
QIZ					LR	LR	
	comp=E,2μm,20.6s						
QIZ					LR	LR	
	comp=Z,2μm,23.5s						
G05D	Wamic, OR	79.06	37		P	P	14 30 59.4 +2.2
	baz=235						
G06A	Carlson Farm,	79.45	37	eP		P	14 30 58.7 -0.6
	comp=Z,82nm,1.8s						
RC01	Rabbit Creek A	79.47	13	eP		P	14 30 58.1 -0.8
	comp=Z,52nm,1.4s						
I07A	Izee	79.47	39	eP		P	14 30 59.8 +0.3
	comp=Z,15nm,1.0s						
SUA	Susitna One	79.58	13	eP		P	14 30 59.4 -0.3
	comp=Z,21nm,1.0s						
LON	Longmire	79.65	35	eP		P	14 31 01.6 +1.2
	comp=Z,13nm,1.1s						
LON	Longmire	79.65	35	eP		P	14 31 01.6 +1.2
LON					pmax	pmax	
	comp=Z,13nm,1.1s						
TUC	Tucson	79.68	52		P	P	14 31 02.6 +1.7
	baz=245						
LCMT	Little Creek M	79.98	47	eP		P	14 31 03.0 +0.5
	comp=Z,43nm,2.0s						
PMR	Palmer	80.05	13	eP		P	14 31 00.3 -1.8
	comp=Z,24nm,1.3s						
PMR	Palmer	80.05	13	eP		P	14 31 00.3 -1.8
PMR					pmax	pmax	
	comp=Z,24nm,1.3s						
X16A	Lo Mia Camp, P	80.11	50	eP		P	14 31 00.7 -2.6
	comp=Z,17nm,1.1s						
CCUT	Cedar City	80.15	47	eP		P	14 31 05.7 +2.2
	comp=Z,9.0nm,0.9s						
GHO	Glory Hole Cre	80.25	13	eP		P	14 31 02.0 -1.3
	comp=Z,26nm,1.2s						
A04D	Lummi Island	80.33	33		P	P	14 31 05.9 +2.0
	baz=233						
SZCU	Shurtz Canyon	80.36	47	eP		P	14 31 07.5 +2.9
	comp=Z,28nm,1.5s						
B05A	Bryant	80.38	34		P	P	14 31 06.2 +2.0
	baz=234						
319A	Douglas	80.44	54	eP		P	14 31 07.5 +2.4
	comp=Z,19nm,1.0s						
LTY	Liberty	80.58	35	eP		P	14 31 06.3 +0.9
	comp=Z,25nm,1.3s						
BMRM	Bremner River	80.60	16	eP		P	14 31 02.5 -2.7
	comp=Z,58nm,1.3s						
SCM	Sheep Creek Mo	80.67	14	eP		P	14 31 02.6 -3.0
	comp=Z,19nm,1.0s						
SCM	Sheep Creek Mo	80.67	14	eP		P	14 31 02.6 -3.0
SCM					pmax	pmax	
	comp=Z,19nm,1.0s						
HAWA	Hanford	80.74	37	eP		P	14 31 03.5 -2.7
	comp=Z,48nm,1.4s						
HAWA					LR	LR	
	comp=Z,3μm,20.0s						
CRQM	Cirque	80.82	16	eP		P	14 31 04.8 -1.7
	comp=Z,30nm,1.1s						
E08A	Dider Farm, El	81.06	37	eP		P	14 31 09.1 +1.2
	comp=Z,42nm,1.3s						
MTPU	Mount Pierson	81.20	47	eP		P	14 31 08.2 -1.1
	comp=Z,23nm,1.3s						
BMO	Blue Mountains	81.21	39		PFAKE		14 31 20.0 +11
BMO					LR	LR	
	comp=Z,3μm,20.0s						
MSU	Marysvale	81.42	46	eP		P	14 31 10.5 +0.2
MSU	Marysvale	81.42	46	eP		P	14 31 10.5 +0.2
D08A	Wollman Farm,	81.46	36	eP		P	14 31 08.9 -1.1
	comp=Z,31nm,1.3s						
SEY	Seymchan	81.52	347	cP		P	14 31 10.0 +0.1
SEY				i *SP		PcP	14 31 16.1 +0.3
JIS	Juneau Island	81.59	22	eP		P	14 31 08.8 -1.6
	comp=Z,30nm,1.3s						
E09A	Wood Farm, Sta	81.61	37	eP		P	14 31 10.3 -0.5
	comp=Z,29nm,1.3s						
BESE	Bessie Mountai	81.66	21	eP		P	14 31 10.5 -0.4
	comp=Z,26nm,0.6s						
W18A	Petrified Fore	81.67	50	eP		P	14 31 12.3 +0.6
	comp=Z,17nm,1.3s						
DHY	Denali Highway	81.75	13	eP		P	14 31 11.9 +0.6
	comp=Z,19nm,1.3s						
DUG	Dugway, Tooele	81.77	45		P	P	14 31 13.8 +1.8
	baz=242						
DUG	Dugway, Tooele	81.77	45		PFAKE		14 31 20.0 +8.0
DUG					LR	LR	
	comp=Z,1μm,19.0s						
DUG	Dugway, Tooele	81.77	45		P	P	14 31 12.0 0.0
DUG					pmax	pmax	
	comp=Z,27nm,1.2s						
BPAW	Bear Paw Mtn.	81.91	12	eP		P	14 31 10.7 -1.2
	comp=Z,28nm,1.7s						
BGU	Big Grassy Mou	81.97	44	eP		P	14 31 13.8 +0.8
	comp=Z,31nm,1.5s						
MCK	McKinley	81.99	13	eP		P	14 31 10.5 -1.9
	comp=Z,26nm,1.1s						
MCK	McKinley	81.99	13	eP		P	14 31 10.5 -1.9
MCK					pmax	pmax	
	comp=Z,26nm,1.1s						
121A	Cookes Peak, D	82.08	53		P	P	14 31 15.4 +1.6
	baz=246						
NLU	North Lily Min	82.16	45	eP		P	14 31 13.4 -0.7
	comp=Z,18nm,1.4s						
SKAG	Skagway	82.16	20	eP		P	14 31 12.5 -0.8
C09A	Chrisman Ranch	82.23	36	eP		P	14 31 14.8 +0.8
	comp=Z,26nm,1.3s						
BWN	Browne	82.27	12	eP		P	14 31 12.7 -1.2
	comp=Z,49nm,1.1s						
HLID	Hailey	82.34	41		P	P	14 31 16.8 +1.8
	baz=241						
HLID	Hailey	82.34	41		PFAKE		14 31 30.0 +15
HLID					LR	LR	
	comp=Z,2μm,20.0s						
BJT	Baijiatuau	82.48	315		PFAKE		14 31 30.0 +15
BJT					LR	LR	
	comp=Z,2μm,19.0s						
MPU	Maple Canyon	82.48	45	eP		P	14 31 16.9 +1.0
	comp=Z,15nm,1.1s						
COCO	West Island	82.49	259		PFAKE		14 31 30.0 +14
COCO					LR	LR	
	comp=Z,2μm,19.0s						
CTU	Camp Tracy	82.72	44	eP		P	14 31 16.9 -0.1
	comp=Z,30nm,1.1s						
MLY	Manley	82.79	11	eP		P	14 31 15.5 -1.1
	comp=Z,18nm,1.2s						
JLU	Jordanelle	82.88	45	eP		P	14 31 17.2 -0.7
	comp=Z,21nm,1.1s						
HDA	Harding Lake	83.00	13	eP		P	14 31 16.6 -1.1
	comp=Z,38nm,1.4s						
NEW	Newport	83.13	36		P	P	14 31 20.5 +1.7
	baz=238						
NEW	Newport	83.13	36		PFAKE		14 31 30.0 +11
NEW					LR	LR	
	comp=Z,2μm,21.0s						
IM3	Indian Mountai	83.14	10	eP		P	14 31 18.1 -0.3
WHY	Whitehorse	83.21	20	eP		P	14 31 21.6 +2.6
	comp=Z,47nm,1.8s						
COLA	College	83.22	12		PFAKE		14 31 30.0 +11
COLA					LR	LR	
	comp=Z,2μm,21.0s						
COLA	College	83.22	12⇑	i P		P	14 31 20.7 +2.0
COLA				i AP		PcP	14 31 23.8 +0.6
COLA					pmax	pmax	
	comp=Z,6.0nm,0.8s						
HWUT	Hardware Ranch	83.26	44		PFAKE		14 31 30.0 +10
HWUT					LR	LR	
	comp=Z,2μm,20.0s						
P18A	Preston Nutter	83.27	46	eP		P	14 31 20.1 0.0
	comp=Z,19nm,1.1s						
SCRK	Sand Creek	83.31	14	eP		P	14 31 17.1 -2.3
	comp=Z,47nm,1.9s						
LAZ	Ladron	83.32	52	eP		P	14 31 21.0 +0.7
ZEA	Zeya	83.34	331	eP		P	14 31 16.9 -2.7
ZEA				eS		S	14 41 38.0 +0.1
ZEA				e			14 47 08.0
ZEA					pmax	pmax	
	comp=Z,18nm,1.2s						
ZEA					smax	smax	
	comp=N,700nm,12.0s						
ZEA					smax	smax	
	comp=E,300nm,12.0s						
PV05	Paradox Valley	83.40	48	eP		P	14 31 20.0 -0.6
	comp=E,36nm,1.1s						
ENH	Enshi	83.42	304		PFAKE		14 31 30.0 +9.3
ENH					LR	LR	
	comp=Z,1μm,19.0s						
MVCO	Mesa Verde	83.47	49		P	P	14 31 22.4 +1.4
	baz=245						
MVCO	Mesa Verde	83.47	49	eP		P	14 31 20.7 -0.3
	comp=Z,21nm,1.4s						
MVCO					LR	LR	
	comp=Z,3μm,22.0s						
PV10	Paradox Valley	83.57	47	eP		P	14 31 21.1 -0.5
	comp=Z,37nm,1.2s						
BNM	Barren Site	83.61	52	eP		P	14 31 22.5 +0.7
MNTX	Cornudas Mount	83.63	55		P	P	14 31 22.6 +0.9
	baz=248						
MNTX	Cornudas Mount	83.63	55		PFAKE		14 31 30.0 +8.3
MNTX					LR	LR	
	comp=Z,3μm,21.0s						
PV03	Paradox Valley	83.65	48	eP		P	14 31 20.4 -1.5
	comp=Z,22nm,1.2s						
LPM	Los Pinos Moun	83.67	52	eP		P	14 31 23.2 +1.1
PV02	Paradox Valley	83.71	48	eP		P	14 31 21.7 -0.6
	comp=Z,29nm,1.2s						
PV07	Paradox Valley	83.88	48	eP		P	14 31 22.8 -0.2
	comp=Z,40nm,1.5s						
PV15	Paradox Valley	83.95	48	eP		P	14 31 23.1 -0.4
	comp=Z,19nm,1.1s						
BILL	Bilibino	84.04	354		PFAKE		14 31 30.0 +7.1
BILL					LR	LR	
	comp=Z,984nm,20.0s						

TASM	**ASL Pad, Albuq**	84.05	51	P	P	14 31 25.1	+1.1
	baz=247						
ANMO	**Albuquerque**	84.06	51	P	P	14 31 24.9	+0.8
	baz=247						
ANMO	**Albuquerque**	84.06	51	PFAKE		14 31 40.0	+16
ANMO				LR	LR		
	comp=Z,3μm,20.0s						
ANMO	**Albuquerque**	84.06	51	*e*P	P	14 31 25.2	+1.2
ANMO				*i* *SP	pP	14 31 32.9	-2.2
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TASL	**Snake Pit, Alb**	84.06	51	P	P	14 31 24.9	+0.8
	baz=247						
AHID	**Auburn Hatcher**	84.10	43	PFAKE		14 31 40.0	+16
AHID				LR	LR		
	comp=Z,2μm,21.0s						
MSO	**Missoula**	84.25	38	P	P	14 31 26.3	+1.8
	baz=241						
GYA	**Guiyang**	84.38	299	P	P	14 31 25.2	-0.6
GYA				PP	PP	14 34 42.0	+0.8
GYA	**Guiyang**	84.38	299	SKS	S	14 41 45.5	-4.3
GYA	**Guiyang**	84.38	299	S	S	14 41 49.6	-0.2
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,5.8s						
JTMT	**Jette**	84.50	37	*e*P	P	14 31 24.3	-1.6
	comp=Z,24nm,1.7s						
REDW	**Red Top Meadow**	84.53	42	*e*P	P	14 31 21.9	-4.3
	comp=Z,79nm,1.4s						
SNOW	**Snow King Moun**	84.64	42	*e*P	P	14 31 24.9	-2.0
	comp=Z,40nm,1.0s						
EGAK	**Eagle**	84.66	15	PFAKE		14 31 40.0	+14
EGAK				LR	LR		
	comp=Z,2μm,22.0s						
LRM	**Limekiln Ridge**	84.66	40	*e*P	P	14 31 24.8	-2.1
IMW	**Indian Meadow**	84.72	42	*e*P	P	14 31 26.9	-0.4
	comp=Z,34nm,1.0s						
HIA	**Hailar**	84.73	324	PFAKE		14 31 40.0	+13
HIA				LR	LR		
	comp=Z,2μm,19.0s						
MOOW	**Moose Ponds**	84.77	42	*e*P	P	14 31 27.0	-0.5
	comp=Z,24nm,1.3s						
LOHW	**Long Hollow**	84.80	42	*e*P	P	14 31 27.1	-0.6
	comp=Z,23nm,1.2s						
QLMT	**Earthquake Lak**	84.83	41	*e*P	P	14 31 27.4	-0.4
O20A	**White River Ci**	84.88	46	*e*P	P	14 31 27.2	-0.8
	comp=Z,80nm,1.8s						
YPP	**Pitchstone Pla**	84.97	42	*e*P	P	14 31 28.5	-0.1
	comp=Z,29nm,1.5s						
YMR	**Madison River**	85.05	41	*e*P	P	14 31 27.7	-1.2
	comp=Z,34nm,1.0s						
BOZ	**Bozeman (W)**	85.06	40	P	P	14 31 30.0	+1.2
	baz=242						
BOZ	**Bozeman (W)**	85.06	40	PFAKE		14 31 40.0	+11
BOZ				LR	LR		
	comp=Z,4μm,20.0s						
BW06	**Boulder Array**	85.11	43	P	P	14 31 29.6	+0.4
	baz=244						
BW06	**Boulder Array**	85.11	43	PFAKE		14 31 40.0	+11
BW06				LR	LR		
	comp=Z,2μm,20.0s						
PD31	**Pinedale Array**	85.11	43	*e*P	P	14 31 28.6	-0.6
XAN	**Xi'an**	85.28	307	P	P	14 31 30.2	+0.2
XAN				pP	sP	14 32 06.6	+21
XAN				pmax	pmax		
	comp=Z,10.0nm,1.2s						
LKWY	**Lake**	85.36	41	PFAKE		14 31 40.0	+10
LKWY				LR	LR		
	comp=Z,2μm,22.0s						
SMCO	**Snowmass**	85.37	47	*e*P	P	14 31 29.6	-1.3
	comp=Z,28nm,1.4s						
HRY	**Holter Researc**	85.46	39	*e*P	P	14 31 30.3	-0.4
PMSA	**Palmer Station**	85.83	157	PFAKE		14 31 40.0	+7.9
PMSA				LR	LR		
	comp=Z,2μm,21.0s						
SDCO	**Great Sand Dun**	85.86	49	P	P	14 31 33.6	+0.5
	baz=247						
SDCO	**Great Sand Dun**	85.86	49	PFAKE		14 31 40.0	+6.8
SDCO				LR	LR		
	comp=Z,2μm,20.0s						
HHC	**Hu-ho-hao-te**	86.01	314	*e*P	P	14 31 33.1	-0.5
HHC				PP	PP	14 34 54.1	0.0
HHC	**Hu-ho-hao-te**	86.01	314	S	S	14 42 04.1	-1.2
HHC	**Hu-ho-hao-te**	86.01	314	SS	SS	14 47 44.4	+0.2
HHC				pmax	pmax		
	comp=Z,9.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,80nm,5.8s						
HHC				LR	LR		
	comp=N,480nm,16.4s						
HHC				LR	LR		
	comp=E,590nm,14.7s						
HHC				LR	LR		
	comp=Z,1μm,15.6s						
LNIG	**Linares**	86.14	63	*e*P	P	14 31 34.4	0.0
	comp=Z,26nm,1.2s						
RWWY	**Rawlins**	86.23	45	*e*P	P	14 31 34.7	-0.1
	comp=Z,36nm,1.4s						
TOLK	**Toolik Lake Re**	86.24	10	P	P	14 31 35.2	+1.2
	baz=207						
TOLK	**Toolik Lake Re**	86.24	10	*e*P	P	14 31 33.6	-0.4
	comp=Z,24nm,1.4s						
RLMT	**Red Lodge**	86.33	41	P	P	14 31 36.0	+0.8
	baz=244						
RLMT	**Red Lodge**	86.33	41	PFAKE		14 31 50.0	+15
RLMT				LR	LR		
	comp=Z,3μm,22.0s						
MAW	**Mawson**	86.40	200	*e*P	P	14 31 34.5	-0.4
	comp=Z,3.2nm,0.9s						
MAW	**Mawson**	86.40	200	*e*P	P	14 31 34.5	-0.4
MAW				pmax	pmax		
	comp=Z,3.0nm,0.9s						
T25A	**Trinidad**	86.43	50	*e*P	P	14 31 39.7	+3.8
	comp=Z,7.1nm,1.1s						
MSTX	**Muleshoe**	86.51	54	*e*P	P	14 31 36.5	+0.3
	comp=Z,63nm,1.8s						
ISCO	**Idaho Springs**	86.58	47	PFAKE		14 31 50.0	+13
ISCO				LR	LR		
	comp=Z,1μm,19.0s						
N23A	**Red Feather La**	86.78	46	*e*P	P	14 31 43.3	+5.7
	comp=Z,31nm,1.5s						
BTO	**Baotou**	86.98	313	*e*P	P	14 31 36.3	-2.0
KMI	**Kunming**	87.28	297	P	P	14 31 39.5	-0.8
KMI				pP	PcP	14 31 42.1	-0.3
KMI				sP	pP	14 31 43.4	-8.0
KMI				PP	PP	14 35 07.2	+2.3
KMI	**Kunming**	87.28	297	SKS	SKSac	14 42 05.9	+0.1
KMI	**Kunming**	87.28	297	S	S	14 42 19.6	+1.1
KMI	**Kunming**	87.28	297	sS	S	14 42 25.5	+7.0
KMI	**Kunming**	87.28	297	SS	SS	14 48 09.3	+5.6
KMI				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,120nm,4.0s						
KMI				LR	LR		
	comp=N,600nm,19.9s						
KMI				LR	LR		
	comp=E,2μm,24.7s						
KMI				LR	LR		
	comp=Z,3μm,22.0s						
EGMT	**Eagleton**	87.31	39	PFAKE		14 31 50.0	+10
EGMT				LR	LR		
	comp=Z,2μm,22.0s						
YAK	**Yakutsk**	87.52	338	*e*P	P	14 31 38.6	-1.7
YAK				*e*PP	pP	14 31 48.0	-3.4
YAK				*e*		14 35 10.4	
YAK				*e*S	SKSac	14 42 01.3	-3.8
YAK				pmax	pmax		
	comp=Z,14nm,1.0s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.3s						
YAK				pmax	pmax		
	comp=N,2.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,102nm,3.9s						
YAK				pmax	pmax		
	comp=N,59nm,3.7s						
YAK				pmax	pmax		
	comp=E,83nm,4.2s						
YAK				smax	smax		
	comp=E,123nm,12.4s						
YAK				smax	smax		
	comp=N,253nm,9.9s						
YAK				MLR	MLR		
	comp=Z,2μm,19.0s						
YAK				MLR	MLR		
	comp=E,734nm,18.0s						
YAK				MLR	MLR		
	comp=N,1μm,18.0s						
JCT	**Junction City**	87.67	58	PFAKE		14 31 50.0	+8.2
JCT				LR	LR		
	comp=Z,2μm,19.0s						
CD2	**Chengdu**	88.27	303	P	P	14 31 44.8	+0.1
CD2				PP	PP	14 35 11.5	-1.1
CD2	**Chengdu**	88.27	303	SKS	SKSac	14 42 15.1	+3.9
CD2	**Chengdu**	88.27	303	S	S	14 42 30.8	+3.4
CD2	**Chengdu**	88.27	303	sS	S	14 42 33.7	+6.3
CD2	**Chengdu**	88.27	303	SS	SS	14 48 20.5	+2.9
CD2				pmax	pmax		
	comp=Z,20nm,0.4s						
CD2				pmax	pmax		
	comp=Z,350nm,6.9s						
CD2				LR	LR		
	comp=N,820nm,16.7s						
CD2				LR	LR		
	comp=Z,590nm,16.7s						
KVTX	**Kingsville**	88.31	61	PFAKE		14 32 00.0	+15
KVTX				LR	LR		
	comp=Z,980nm,19.0s						
ABTX	**Abilene, Hawle**	88.50	56	*e*P	P	14 31 43.3	-2.4
	comp=Z,15nm,1.0s						
CM01	**Chiang Mai Arr**	88.64	289	*e*P	P	14 31 44.7	-1.9
CHTO	**Chiang Mai**	88.76	290	PFAKE		14 32 00.0	+13
CHTO				LR	LR		
	comp=Z,1μm,20.0s						
LAO	**LASA Array**	88.92	41	P	P	14 31 48.5	+1.1
	baz=246						
LAO	**LASA Array**	88.92	41	PFAKE		14 32 00.0	+13
LAO				LR	LR		
	comp=Z,3μm,22.0s						
OGNE	**Ogallala**	89.55	47	PFAKE		14 32 00.0	+9.5
OGNE				LR	LR		
	comp=Z,1μm,21.0s						
LZH	**Lanzhou**	89.89	307	*e*P	P	14 31 54.0	+1.7
LZH				pP	pP	14 32 00.6	-2.9
LZH				sP	sP	14 32 04.2	-3.3
LZH				PP	PP	14 35 36.3	+11
LZH	**Lanzhou**	89.89	307	SKS	SKSac	14 42 24.1	+3.3
LZH	**Lanzhou**	89.89	307	S	S	14 42 47.6	+5.0
LZH	**Lanzhou**	89.89	307	sS	sS	14 43 01.1	0.0
LZH	**Lanzhou**	89.89	307	SS	SS	14 48 34.0	-7.2
LZH				pmax	pmax		
	comp=Z,27nm,1.0s						
LZH				pmax	pmax		
	comp=Z,270nm,4.3s						
LZH				LR	LR		
	comp=N,640nm,13.0s						
LZH				LR	LR		
	comp=E,700nm,15.7s						
LZH				LR	LR		
	comp=Z,890nm,16.0s						
CBKS	**Cedar Bluff**	90.48	50	PFAKE		14 32 10.0	+15
CBKS				LR	LR		
	comp=Z,2μm,21.0s						
DGMT	**Dagmar**	90.88	40	PFAKE		14 32 10.0	+14
DGMT				LR	LR		
	comp=Z,3μm,21.0s						
ULN	**Ulaanbaatar**	91.70	319	⇓ *i*P	P	14 32 00.5	+0.1
ULN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
YKW3	**Yellowknife Ar**	91.85	24	*e*P	P	14 32 00.5	-0.1
	comp=Z,15nm,1.4s						
SONA1	**Songino Array**	92.10	319	*e*P	P	14 32 00.4	-1.8
NATX	**Nacogdoches**	92.26	58	PFAKE		14 32 10.0	+6.8
NATX				LR	LR		
	comp=Z,3μm,19.0s						
KSU1	**Kansas State U**	92.88	50	PFAKE		14 32 20.0	+14
KSU1				LR	LR		
	comp=Z,3μm,21.0s						
SNAA	**Sanae**	93.05	178	P	P	14 32 09.3	+3.0
SNAA	**Sanae**	93.05	178	*e*P	P	14 32 09.2	+2.9
	comp=Z,18nm,1.1s						
SNAA	**Sanae**	93.05	178	⇑ *i*P	P	14 32 09.9	+3.6
VNA3	**Neumayer Olymp**	93.16	176	P	P	14 32 11.1	+4.4
NVL	**N'lazarevskaya**	93.77	183	*e*P	P	14 32 11.3	+1.8
NVL				*e*S	SKSac	14 42 47.0	+5.8
NVL				pmax	pmax		
	comp=Z,2.0nm,0.2s						
NVL				MLR	MLR		
	comp=Z,2μm,16.0s						
VNA1	**Neumayer--Stat**	93.84	177	P	P	14 32 13.8	+4.0
MIAR	**Mount Ida**	93.91	55	PFAKE		14 32 20.0	+9.2
MIAR				LR	LR		
	comp=Z,3μm,21.0s						
TIXI	**Tiksi**	93.93	345	⇑ *i*P	P	14 32 09.5	-0.4
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GTA	**Gaotai**	93.95	310	⇑P	P	14 32 09.6	-1.4
GTA				pP	pP	14 32 16.9	-5.3
GTA				sP	sP	14 32 20.7	-5.5
GTA	**Gaotai**	93.95	310	SKS	SKSac	14 42 40.5	-3.0
GTA	**Gaotai**	93.95	310	S	S	14 43 19.7	+0.7
GTA	**Gaotai**	93.95	310	sS	sS	14 43 33.7	-3.8
GTA	**Gaotai**	93.95	310	SS	SS	14 49 51.2	+12
GTA				pmax	pmax		
	comp=Z,4.0nm,2.1s						
GTA				pmax	pmax		
	comp=Z,120nm,5.5s						
GTA				LR	LR		
	comp=N,590nm,19.9s						
GTA				LR	LR		
	comp=E,1μm,23.0s						
GTA				LR	LR		
	comp=Z,2μm,24.7s						
ECSD	**EROS Data Cent**	94.25	46	PFAKE		14 32 20.0	+7.8
ECSD				LR	LR		
	comp=Z,2μm,22.0s						
FFC	**Flin Flon**	94.45	34	PFAKE		14 32 20.0	+7.2
FFC				LR	LR		
	comp=Z,2μm,21.0s						
R38A	**Fenwick Farm,**	94.65	52	P	P	14 32 13.4	-0.6
	baz=254						
T39A	**Clever**	94.74	53	P	P	14 32 14.3	-0.2
	baz=254						
V40A	**Witts Springs**	94.84	54	*e*P	P	14 32 14.3	-0.8
	comp=Z,17nm,1.2s						
S39A	**Bolivar**	94.96	52	P	P	14 32 16.1	+0.6
	baz=255						
U40A	**Yellville**	94.97	54	P	P	14 32 15.8	+0.2
	baz=255						
TLY	**Talaya**	95.07	322	PFAKE		14 32 30.0	+14
TLY				LR	LR		
	comp=Z,1μm,19.0s						
TLY	**Talaya**	95.07	322	⇑ *e*P	P	14 32 13.3	-2.4
TLY				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WHAR	**Wooly Hollow**	95.13	55	*e*P	P	14 32 15.9	-0.4
	comp=Z,15nm,1.2s						
W41B	**Gary Mavity, V**	95.13	55	*e*P	P	14 32 16.5	+0.1
	comp=Z,13nm,1.3s						
EFI	**East Falkland**	95.19	147	PFAKE		14 32 30.0	+14
EFI				LR	LR		
	comp=Z,2μm,19.0s						
JTS	**JuntasAbangare**	95.34	81	PFAKE		14 32 30.0	+12
JTS				LR	LR		
	comp=Z,924nm,20.0s						
R39A	**Chumby, Stover**	95.34	52	P	P	14 32 17.4	+0.2
	baz=255						
T40A	**Mansfield**	95.43	53	P	P	14 32 17.8	+0.1
	baz=255						
S40A	**Lebanon**	95.56	53	P	P	14 32 17.9	-0.4
	baz=255						
U41A	**Viola**	95.69	54	P	P	14 32 19.2	+0.4
	baz=255						
P39B	**Salisbury**	95.86	51	P	P	14 32 20.2	+0.6
	baz=255						
R40A	**Maddies Statio**	95.92	52	P	P	14 32 20.4	+0.6
	baz=255						
T41A	**Mountain View**	95.99	53	P	P	14 32 20.7	+0.4
	baz=256						
M38A	**Pleasantville**	96.04	49	P	P	14 32 21.0	+0.7
	baz=255						
AGMN	**Agassiz Nation**	96.07	42	PFAKE		14 32 30.0	+10
AGMN				LR	LR		
	comp=Z,2μm,20.0s						
S41A	**Jillco Farms,**	96.14	53	P	P	14 32 20.9	0.0
	baz=256						
CCM	**Cathedral Cave**	96.64	52	*e*P	P	14 32 21.5	-1.6
	comp=Z,15nm,1.4s						
CCM	**Cathedral Cave**	96.64	52	*e*P	P	14 32 21.5	-1.6
CCM				pmax	pmax		
	comp=Z,15nm,1.4s						
LCO	**Las Campanas**	96.89	122	PFAKE		14 32 40.0	+15
LCO				LR	LR		
	comp=Z,2μm,21.0s						
NNA	**Nana**	97.11	104	PFAKE		14 32 40.0	+14
NNA				LR	LR		
	comp=Z,243nm,19.0s						
P42A	**Winchester**	97.69	51	P	Pdif	14 32 33.3	+5.4
	baz=257						
BRAL	**Brewton**	98.40	60	PFAKE		14 32 40.0	+8.8
BRAL				LR	LR		
	comp=Z,946nm,22.0s						
LSA	**Lhasa**	98.43	298	PFAKE		14 32 40.0	+8.0
LSA				LR	LR		
	comp=Z,2μm,22.0s						
JFWS	**Jewell Farm**	98.53	48	PFAKE		14 32 40.0	+8.4
JFWS				LR	LR		
	comp=Z,3μm,20.0s						
HDIL	**Hopedale**	98.70	50	PFAKE		14 32 40.0	+7.6
HDIL				LR	LR		
	comp=Z,2μm,20.0s						
EYMN	**Ely**	98.81	43	PFAKE		14 32 40.0	+7.3
EYMN				LR	LR		
	comp=Z,2μm,19.0s						
OTAV	**Otavalo**	99.02	92	PFAKE		14 32 50.0	+15
OTAV				LR	LR		
	comp=Z,398nm,19.0s						
BCIP	**Isla Barro Col**	99.95	83	PFAKE		14 32 50.0	+11
BCIP				LR	LR		
	comp=Z,611nm,20.0s						
COWI	**Conover**	99.99	45	PFAKE		14 32 50.0	+12
COWI				LR	LR		
	comp=Z,1μm,19.0s						
GOGA	**Godfrey**	101.83	58	PFAKE		14 33 00.0	+14
GOGA				LR	LR		
	comp=Z,3μm,22.0s						
HOPE	**Hope Point**	103.12	158	PFAKE		14 33 00.0	+8.2
HOPE				LR	LR		
	comp=Z,1μm,20.0s						
AAM	**Ann Arbor**	103.19	49	PFAKE		14 33 00.0	+7.7
AAM				LR	LR		
	comp=Z,1μm,20.0s						
ACSO	**Alum Creek Sta**	103.37	52	PFAKE		14 33 00.0	+6.8
ACSO				LR	LR		
	comp=Z,3μm,20.0s						
MTDJ	**Mount Denham**	104.15	75	PFAKE		14 33 10.0	+13
MTDJ				LR	LR		
	comp=Z,667nm,22.0s						
NHSC	**New Hope**	104.49	59	PFAKE		14 33 10.0	+12
NHSC				LR	LR		
	comp=Z,2μm,21.0s						
BLA	**Blacksburg**	104.90	55	PFAKE		14 33 10.0	+10
BLA				LR	LR		
	comp=Z,2μm,20.0s						
CNNC	**Cliffs of the**	106.67	57	PFAKE		14 37 30.0	
CNNC				LR	LR		
	comp=Z,3μm,21.0s						
CBN	**Corbin Frederi**	107.42	54	PFAKE		14 37 30.0	
CBN				LR	LR		
	comp=Z,3μm,21.0s						
BINY	**Binghamton**	108.83	50	PFAKE		14 37 30.0	
BINY				LR	LR		
	comp=Z,3μm,22.0s						
LONY	**Lake Ozonia**	109.98	48	PFAKE		14 37 40.0	
LONY				LR	LR		
	comp=Z,2μm,21.0s						
KURK	**Kurchatov**	110.40	319	PFAKE		14 37 40.0	
KURK				LR	LR		
	comp=Z,2μm,20.0s						
GRTK	**Grand Turk**	110.67	73	PFAKE		14 37 40.0	
GRTK				LR	LR		
	comp=Z,477nm,20.0s						
KSH	**Kashi**	112.13	307	PKP		14 37 29.8	
KSH				PP	PP	14 38 18.7	+5.2
KSH				PKS	PKSdf	14 41 02.7	-2.8
KSH	**Kashi**	112.13	307	SS	SS	14 53 59.3	+9.2
KSH				AMB	AMB		
	comp=Z,410nm,5.0s						
KSH				LR	LR		
	comp=N,320nm,5.9s						
KSH				LR	LR		
	comp=E,230nm,4.9s						
KSH				LR	LR		
	comp=Z,1μm,18.0s						
AAK	**Ala-Archa**	113.30	310	PFAKE		14 37 40.0	
AAK				LR	LR		
	comp=Z,814nm,21.0s						
NIL	**Nilore**	114.07	300	PFAKE		14 37 40.0	+7.5
NIL				LR	LR		
	comp=Z,390nm,20.0s						
BRVK	**Borovoye**	115.38	322	PFAKE		14 37 50.0	+16
BRVK				LR	LR		
	comp=Z,565nm,19.0s						
KBS	**Kingsbay**	116.30	358	PFAKE		14 37 50.0	+15
KBS				LR	LR		
	comp=Z,641nm,20.0s						
PTGA	**Pitinga**	116.49	99	PFAKE		14 37 50.0	+12
PTGA				LR	LR		
	comp=Z,12μm,20.0s						
BBSR	**BB Station**	117.40	61	PFAKE		14 37 50.0	+11
BBSR				LR	LR		
	comp=Z,722nm,19.0s						
GRGR	**Grenville**	118.03	84	PFAKE		14 37 50.0	+9.5
GRGR				LR	LR		
	comp=Z,396nm,20.0s						
ANWB	**Willy Bob**	118.82	78	PFAKE		14 37 50.0	+8.0
ANWB				LR	LR		
	comp=Z,428nm,19.0s						
BBGH	**Gun Hill**	120.22	84	PFAKE		14 38 00.0	+15
BBGH				LR	LR		
	comp=Z,2μm,20.0s						
ARU	**Arti**	121.13	327	PFAKE		14 38 00.0	+15
ARU				LR	LR		
	comp=Z,1μm,21.0s						
ARU	**Arti**	121.13	327	*i* PKIKP	PKPdf	14 37 48.1	+2.8
ARU						14 39 23.6	
ARU						14 44 59.8	
ARU				SP	SP	14 49 08.9	+6.1
ARU				MLR	MLR		
	comp=Z,2μm,23.0s						
KEV	**Kevo**	123.55	350	PFAKE		14 38 00.0	+10
KEV				LR	LR		
	comp=Z,1μm,19.0s						
LVZ	**Lovozero**	123.56	346	PFAKE		14 38 00.0	+10
LVZ				LR	LR		
	comp=Z,991nm,20.0s						
ABPO	**Ambohimpanom**	124.06	234	PFAKE		14 38 00.0	+7.7
ABPO				LR	LR		
	comp=Z,590nm,20.0s						
KLMR	**Klimovskoe**	127.32	338	*e*PKIKP	PKPdf	14 38 00.9	+3.9
KLMR				pmax	pmax		
	comp=Z,18nm,1.3s						
KLMR	**Klimovskoe**	127.32	338	*e*PKPdf	PKPdf	14 38 01.0	+3.9
KLMR				AMP		14 38 05.6	
	comp=Z,18nm,1.3s						
BORG	**Borgarnes**	128.16	13	PFAKE		14 38 10.0	+12
BORG				LR	LR		
	comp=Z,355nm,20.0s						
SUR	**Sutherland**	129.26	200	PFAKE		14 38 10.0	+8.0
SUR				LR	LR		
	comp=Z,2μm,19.0s						
OBN	**Obninsk**	132.38	334	PFAKE		14 38 20.0	+13
OBN				LR	LR		
	comp=Z,1.0nm,22.0s						
MAK	**Makhachkala**	132.68	315	*i* PKIKP	PKPdf	14 38 07.9	+0.2
MAK				*e*		14 40 29.9	
MAK				pmax	pmax		
	comp=Z,101nm,0.9s						
VSR	**Storozhevoye**	133.67	329	*e*PKIKP	PKPdf	14 38 11.0	+1.6
VSR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
VORD	**Divnogorie**	133.75	328	*e*PKIKP	PKPdf	14 38 11.3	+1.8
VORD				pmax	pmax		
	comp=Z,5.0nm,0.5s						
NB2	**NORSAR Subarra**	133.99	354	PKP	PKPdf	14 38 13.2	+3.5
	comp=Z,3.9nm,1.0s,baz=13,slow=4.0						
KIV	**Kislovodsk**	135.48	318	PFAKE		14 38 20.0	+6.9
KIV				LR	LR		
	comp=Z,2μm,20.0s						
KIV	**Kislovodsk**	135.48	318	*i* PKIKP	PKPdf	14 38 14.3	+1.2
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GNI	**Garni**	135.64	312	PFAKE		14 38 20.0	+6.4
GNI				LR	LR		
	comp=Z,739nm,20.0s						

RCBR	**Riachuelo**	**136.70**	**116**	PFAKE		14 38 30.0	+14
RCBR				LR	LR		
comp=Z,16μm,19.0s							
RAYN	**Ar Rayn**	**138.57**	**288**	PFAKE		14 38 30.0	+11
RAYN				LR	LR		
comp=Z,990nm,21.0s							
ESK	**Eskdalemuir**	**139.96**	**5**	PFAKE		14 38 30.0	+9.1
ESK				LR	LR		
comp=Z,1μm,19.0s							
LSZ	**Lusaka**	**140.17**	**221**	PFAKE		14 38 30.0	+7.4
LSZ				LR	LR		
comp=Z,1μm,22.0s							
KIS	**Kishinev**	**141.55**	**331**	*e*PKP	PKPdf	14 38 52.0	+28
KIS				*e*SKS	SKSdf	14 45 16.0	-15
KIS				LRM	MLR	15 38 00.0	
comp=Z,1μm,22.0s							
BUR04	**Bucovina Ar. S**	**142.70**	**334**	*e*PKPpre	PKPpre	14 38 21.5	
BUR04				*e*PKPdf	**PKiKP**	**14 38 28.9**	**-0.5**
UZH	**Uzhgorod**	**143.02**	**338**	*e*PKIKP	**PKPdf**	**14 38 28.6**	**+2.0**
UZH				*e*		14 38 34.8	
UZH				*e*		14 38 38.8	
CRVS	**Cervenica-Dubn**	**143.09**	**339**	*e*PKIKP	**PKPdf**	**14 38 23.4**	**-3.3**
CRVS				*e*SS	SS	15 00 46.5	+34
CRVS	**Cervenica-Dubn**	**143.09**	**339**	*e*PKP	**PKPdf**	**14 38 23.4**	**-3.3**
CRVS				*e*SS	SS	15 00 46.5	+34
CRVS				*e*L	L	15 37 18.3	
CLL	**Collm**	**143.18**	**349**	*e*PKPdf	**PKPdf**	**14 38 24.0**	**-2.8**
CLL				*e*PKiKP	**PKPdf**	**14 38 31.0**	**+4.2**
CLL				*ep*PKiKP	**pPKPdf**	**14 38 33.0**	**-5.2**
CLL				*e*		14 38 39.0	
CLL				*e*PP	**PP**	**14 41 36.0**	**-0.4**
CLL				*e*PPP	PPP	14 44 54.0	
CLL				*e*PPPP		14 46 48.0	
CLL				*e*SS	SS	15 00 15.0	+2.1
CLL				*e*SSS	SSS	15 05 28.0	
CLL				*e*		15 09 13.0	
CLL				*e*(SSSS)		15 09 54.0	
CLL				LmV		15 46 00.0	
comp=Z,800nm,20.7s							
CLL	**Collm**	**143.18**	**349**	*e*PKIKP	**PKPdf**	**14 38 31.0**	**+4.2**
CLL				*e*		14 38 33.0	
CLL				*e*		14 38 39.0	
CLL				MLR	MLR		
comp=Z,800nm,20.7s							
UPC	**Upice**	**143.28**	**345**	AMS	AMS	15 39 40.0	
comp=Z,1μm,18.4s							
OKC	**Ostrava-Krasne**	**143.32**	**343**	AMS	AMS	15 45 10.0	
comp=Z,1μm,20.4s							
DPC	**Dobruska-Polom**	**143.35**	**345**	AMS	AMS	15 44 50.0	
comp=Z,1μm,24.7s							
BRG	**Berggiesshubel**	**143.41**	**348**	*e*PKP	**PKPdf**	**14 38 32.3**	**+5.1**
comp=Z,13nm,1.5s							
BRG				SS	SS	15 00 16.0	+0.4
comp=N,838nm,21.4s							
comp=E,1μm,19.5s							
comp=Z,2μm,23.7s							
BRG	**Berggiesshubel**	**143.41**	**348**	*e*PKIKP	**PKPdf**	**14 38 32.3**	**+5.1**
BRG				SS	SS	15 00 16.0	+0.4
BRG				pmax	pmax		
comp=Z,13nm,1.5s							
BRG				MLR	MLR		
comp=N,838nm,21.4s							
BRG				MLR	MLR		
comp=E,1μm,19.5s							
BRG				MLR	MLR		
comp=Z,2μm,23.7s							
BR131	**Keskin Array S**	**143.44**	**318**	*e*PKPpre	PKPpre	14 38 24.4	
MORC	**Moravsky Berou**	**143.55**	**343**	*e*PKP	**PKPdf**	**14 38 25.2**	**-2.4**
TIRR	**Tirgusor**	**143.55**	**328** ⇑	*i*P	PKPab	14 38 14.8	-9.3
TIRR	**Tirgusor**	**143.55**	**328** ⇑	PKHKP	PKPpre	14 38 14.8	
PVCC	**Panska Ves**	**143.60**	**347**	AMS	AMS	15 46 10.0	
comp=Z,1μm,18.7s							
TLB	**Topalu**	**143.65**	**328** ⇑	*i*P	PKPab	14 38 14.5	-10
TLB	**Topalu**	**143.65**	**328** ⇑	PKHKP	PKPpre	14 38 14.5	
ANTO	**Ankara**	**143.91**	**318**	PFAKE		14 38 40.0	+11
ANTO				LR	LR		
comp=Z,545nm,20.0s							
MLR	**Muntele Rosu**	**144.01**	**331** ⇑	*i*P	PKPab	14 38 15.5	-10
MLR	**Muntele Rosu**	**144.01**	**331**	*e*PKPpre	PKPpre	14 38 25.8	
PRA	**Prague**	**144.06**	**347**	AMS	AMS	15 46 40.0	
comp=Z,2μm,19.3s							
PRU	**Pruhonice**	**144.11**	**346**	*e*SS	SS	15 00 26.7	+3.0
PRU				AMS	AMS	15 45 20.0	
comp=Z,2μm,20.1s							
GOPC	**GO Pecny, Ondr**	**144.12**	**346**	*e*SS	SS	15 00 29.3	+5.4
GOPC				AMS	AMS	15 45 20.0	
comp=Z,2μm,21.3s							
VRAC	**Vranov**	**144.23**	**344**	*e*PKP	PKPbc	14 38 26.2	-0.7
NKC	**Novy Kostel**	**144.31**	**349**	AMS	AMS	15 45 50.0	
comp=Z,1μm,20.1s							
VYHS	**Vyhne**	**144.31**	**341**	*e*PKHKP	**PKPab**	**14 38 23.7**	**-3.2**
VYHS	**Vyhne**	**144.31**	**341**	*e*PKP	**PKPab**	**14 38 23.7**	**-3.2**
JAVC	**Velka Javorina**	**144.34**	**342**	*e*PKP	**PKPdf**	**14 38 27.9**	**-1.1**
DRGR		**144.38**	**336** ⇓	*i*P	PKPab	14 38 16.0	-11
DRGR		**144.38**	**336** ⇓	PKHKP	PKPpre	14 38 16.0	
PSZ	**Piszkesteto**	**144.47**	**339** ⇓	*i*P	PKPab	14 38 16.5	-11
PSZ	**Piszkesteto**	**144.47**	**339**	*e*PKPdf	PKPbc	14 38 27.0	-0.8
PSZ	**Piszkesteto**	**144.47**	**339**	*e*PKIKP	PKPbc	14 38 27.0	-0.8
KRUC	**Moravsky**	**144.51**	**344**	*e*PKP	PKPbc	14 38 26.9	-0.9
ARR	**Arges**	**144.70**	**332** ⇓	*i*P	PKPab	14 38 17.7	-11
MEM	**Membach**	**144.77**	**356** ⇑	PKIKP	**PKPdf**	**14 38 32.7**	**+3.2**
MODS	**Modra-Piesok**	**144.89**	**343**	*e*PKHKP	**PKPab**	**14 38 25.5**	**-3.5**
MODS	**Modra-Piesok**	**144.89**	**343**	*e*PKP	**PKPab**	**14 38 25.5**	**-3.5**
MODS				*e*SS	SS	15 00 50.7	+18
PRD	**Provadia**	**144.96**	**327**	*e*P	**PKPdf**	**14 38 29.6**	**-0.5**
BCLA	**Clavier**	**145.01**	**357** ⇑	PKIKP	PKPbc	14 38 28.2	-1.2
KHC	**Kasperske Hory**	**145.13**	**347**	*e*PKP	**PKPbc**	**14 38 27.4**	**-2.4**
KHC				*ex*	x	14 38 33.9	
KHC				*e*SS	SS	15 00 34.1	-1.4
KHC				AMS	AMS	15 43 10.0	
comp=Z,1μm,20.6s							
KHC	**Kasperske Hory**	**145.13**	**347**	*e*PKP2	**PKPbc**	**14 38 27.4**	**-2.4**
KHC				*e*SS	SS	15 00 34.1	-1.4
KHC				MLR	MLR		
comp=Z,1μm,20.6s							
SIRR	**Siria**	**145.23**	**336** ⇓	*i*P	**PKPdf**	**14 38 31.3**	**+0.7**
DOU	**Dourbes**	**145.37**	**357** ⇑	PKIKP	**PKPbc**	**14 38 28.6**	**-1.8**
SZH	**Strazhica**	**145.66**	**329**	*e*P	**PKPab**	**14 38 31.0**	**-1.0**
CONA	**Conrad Observa**	**145.69**	**344**	*ep*PKPbc	**PKPbc**	**14 38 31.6**	**-0.1**
comp=Z,30nm,1.4s							
WLF	**Walferdange**	**145.70**	**356** ⇑	PKIKP	PKPpre	14 38 26.5	
BZS	**Buzias**	**145.78**	**336** ⇓	*i*P	PKPdf	14 38 19.0	-12
BZS	**Buzias**	**145.78**	**336** ⇓	PKHKP	PKPpre	14 38 19.0	
CSS	**Mathiatis**	**146.02**	**311**	*e*PKPdf	**PKPdf**	**14 38 30.9**	**-1.4**
CSS				*e*PKPdf	**PKiKP**	**14 38 34.0**	**-2.5**
HERR	**Herculane**	**146.05**	**334** ⇑	*i*P	PKPdf	14 38 19.7	-12
MOA	**Molln**	**146.17**	**345**	*e*PKPab	**PKPab**	**14 38 32.5**	**-1.4**
comp=Z,22nm,1.0s							
MDVR	**Moldovita**	**146.43**	**335** ⇓	*i*P	PKPdf	14 38 22.4	-10
DIM	**Dimitrovgrad**	**146.74**	**328**	*e*P	**PKPab**	**14 38 36.5**	**+0.4**
BFO	**Black Forest**	**146.81**	**353**	PFAKE		14 38 40.0	+3.8
BFO				LR	LR		
comp=Z,1μm,21.0s							
BFO	**Black Forest**	**146.81**	**353**	PKP2	**PKPbc**	**14 38 33.2**	**-1.8**
ECH	**Echery**	**147.05**	**354**	*e*PKPdf	**PKPdf**	**14 38 32.5**	**-1.1**
ECH	**Echery**	**147.05**	**354**	*e*PKIKP	**PKPdf**	**14 38 32.5**	**-1.1**
SOKA	**Soboth**	**147.06**	**344**	*e*PKPbc	**PKPbc**	**14 38 34.2**	**-1.7**
comp=Z,20nm,1.6s							
PERS	**Pernice**	**147.08**	**344**	*i*PKPdf	**PKPbc**	**14 38 35.1**	**-0.8**
PERS				*e*		14 38 38.4	
RETA	**Reutte**	**147.26**	**349**	*e*PKPdf	**PKPdf**	**14 38 33.1**	**-1.0**
comp=Z,40nm,1.1s							
WTTA	**Wattenberg**	**147.31**	**348**	*e*PKPbc	**PKPbc**	**14 38 34.7**	**-1.9**
comp=Z,43nm,1.5s							
MOTA	**Moosalm**	**147.33**	**349**	*e*PKPbc	**PKPbc**	**14 38 34.4**	**-2.2**
comp=Z,19nm,0.9s							
MYKA	**Terra Mystica**	**147.47**	**345**	*e*PKPbc	**PKPbc**	**14 38 35.3**	**-1.7**
comp=Z,41nm,1.7s							
VTS	**Vitosha**	**147.49**	**331**	*e*PKPbc	**PKPbc**	**14 38 35.4**	**-1.8**
VTS	**Vitosha**	**147.49**	**331**	*e*PKP2	**PKPbc**	**14 38 35.4**	**-1.8**
DAVA	**Damuels**	**147.60**	**350**	*ep*PKPdf	**PKPbc**	**14 38 36.7**	**-0.8**
comp=Z,46nm,1.7s							
MBAR	**Mbarara**	**147.67**	**243**	PFAKE		14 38 50.0	+9.1
MBAR				LR	LR		
comp=Z,603nm,19.0s							
DIVS	**Divibare**	**147.69**	**336**	*e*PKPdf	**PKPdf**	**14 38 34.4**	**-0.5**
FETA	**Feichten**	**147.71**	**349**	*e*PKPbc	**PKPbc**	**14 38 35.0**	**-2.7**
comp=Z,24nm,1.0s							
SHEL	**Horse Pasture**	**147.83**	**165**	PFAKE		14 38 50.0	+8.9
SHEL				LR	LR		
comp=Z,599nm,19.0s							
MMB	**Musomiste**	**148.00**	**329**	*e*P	**PKPbc**	**14 38 37.2**	**-1.3**
JAVS	**Javornik**	**148.05**	**344**	*e*PKPdf	**PKPab**	**14 38 42.1**	**+0.8**
BOJS	**Bojanci**	**148.08**	**343**	*e*PKPdf	**PKPab**	**14 38 42.2**	**+0.9**
VAY	**Valandovo**	**148.77**	**330**	*e*PKP	**PKPab**	**14 38 43.0**	**-1.2**
SKO	**Skopje**	**148.80**	**332**	*e*PKP	**PKPab**	**14 38 41.9**	**-2.4**
TTG	**Podgorica**	**149.37**	**335**	*e*PKPbc	**PKPab**	**14 38 43.2**	**-3.4**
TTG	**Podgorica**	**149.37**	**335**	*e*PKP2	**PKPab**	**14 38 43.2**	**-3.4**
LIT	**Litokhoron**	**149.74**	**328**	*e*PKPdf	**PKPdf**	**14 38 37.7**	**-0.5**
LIT				*e*PKPbc	**PKiKP**	**14 38 43.6**	**-0.4**
LIT	**Litokhoron**	**149.74**	**328**	*e*PKHKP	**PKPdf**	**14 38 37.7**	**-0.5**
LIT				*e*		14 38 43.6	
OHR	**Ohrid**	**149.77**	**331**	*e*PKP	**PKPbc**	**14 38 42.3**	**-0.7**
SSB	**Saint Sauveur**	**150.18**	**357**	*e*PKPbc	**PKPbc**	**14 38 44.0**	**+0.1**
SSB	**Saint Sauveur**	**150.18**	**357**	*e*PKIKP	**PKPbc**	**14 38 44.0**	**+0.1**
BNI	**Bardonecchia**	**150.23**	**354**	*e*PKPdf	**PKPdf**	**14 38 36.9**	**-2.1**
BNI				*e*PKPbc	**PKiKP**	**14 38 45.1**	**+0.1**
BNI	**Bardonecchia**	**150.23**	**354**	*e*PKIKP	**PKPdf**	**14 38 36.9**	**-2.1**
BNI				*e*		14 38 45.1	
AGG	**Agios Georgios**	**150.62**	**327**	*e*PKPbc	**PKPbc**	**14 38 47.1**	**+1.9**
ASCN	**Ascension**	**151.54**	**144**	PFAKE		14 38 50.0	+2.0
ASCN				LR	LR		
comp=Z,1μm,20.0s							
IDI	**Anoyia**	**151.67**	**318**	*e*PKPbc	**PKPbc**	**14 38 49.4**	**+1.6**
PGAV	**Gavieira, Arco**	**152.03**	**17**	*e*PKPdf	**PKPab**	**14 38 52.3**	**-5.4**
PGAV	**Gavieira, Arco**	**152.03**	**17**	*e*LR	LR	15 31 37.3	
comp=Z,2μm,20.0s							
POLO	**Lamas de Olo**	**152.71**	**17**	*e*PKPdf	**PKPbc**	**14 38 50.3**	**+0.4**
POLO	**Lamas de Olo**	**152.71**	**17**	*e*PKPab	PKPab	14 39 15.1	+14
PVRL	**Vila Real**	**152.82**	**17**	*e*PKPdf	**PKPab**	**14 38 54.4**	**-6.6**
MVO	**Moncorvo**	**153.11**	**16**	*e*PKPdf	**PKPbc**	**14 38 54.8**	**+4.0**
MVO	**Moncorvo**	**153.11**	**16**	*e*PKPab	**PKPab**	**14 39 02.5**	**+0.2**
MVO	**Moncorvo**	**153.11**	**16**	*e*LR	LR	15 32 04.0	
comp=Z,2μm,20.0s							
MTE	**Manteigas**	**153.69**	**17**	*e*PKPdf	**PKPab**	**14 38 59.1**	**-5.6**
MTE	**Manteigas**	**153.69**	**17**	*e*LR	LR	15 31 05.1	
comp=Z,2μm,20.0s							
PMRV	**Marv??o**	**154.63**	**18**	*e*PKPdf	**PKPbc**	**14 38 56.8**	**+2.8**
PMRV	**Marv??o**	**154.63**	**18**	*e*LR	LR	15 31 31.9	
comp=Z,1μm,18.0s							
SACV	**Santiago Islan**	**155.03**	**88**	PFAKE		14 39 00.0	-11
SACV				LR	LR		
comp=Z,450nm,20.0s							
PMOZ	**Porto Moniz, M**	**155.26**	**42**	*e*LR	LR	15 35 29.8	
comp=Z,592nm,22.0s							
PAB	**San Pablo**	**155.28**	**12**	PFAKE		14 39 00.0	-12
PAB				LR	LR		
comp=Z,2μm,21.0s							
PVAQ	**Vaqueiros**	**156.38**	**20**	*e*LR	LR	15 31 50.0	
comp=Z,3μm,20.0s							
TOA0	**Torodi Ar. Sit**	**177.67**	**166**	*e*PKPdf	**PKPdf**	**14 39 02.6**	**-1.6**

*IDC **04** 14:19:51.7±0.5, 36°.83N×28°.24E, h0km, mb4.3/28, mb1 4.4/38, mb1mx4.3/65, mbtmp4.3/38, ML3.8/9, MS3.4/13, Ms1 3.4/13, ms1mx3.2/58, Error ellipse: s-maj=11.1km s-min=9.3km az=144.0*

*BJI **04** 14:19:51.8, 36°.29N×28°.08E, h32km, mb4.7/20, mB4.9/10, Ms4.9/3, Ms7 4.7/1*

*ISCJB **04** 14:19:52.7±0.3, 36°.86N±0°.01×28°.25E±0°.01, h15km±2km, mb4.3/64, MS3.4/2, Error ellipse: s-maj=1.9km s-min=1.5km az=29.4*

*CSEM **04** 14:19:53.9±0.1, 36°.88N×28°.23E, h10km, mb4.5/22, Error ellipse: s-maj=1.9km s-min=1.5km az=30.0*

*THE **04** 14:19:53.9, 36°.93N×28°.18E, h2km±1km, ML4.2/11, Error ellipse: s-maj=1.7km s-min=0.8km az=51.0*

*MOS **04** 14:19:53.2±1.1, 36°.91N×28°.23E, h16km, mb4.6/32, Error ellipse: s-maj=5.1km s-min=3.1km az=105.9*

*NEIC **04** 14:19:53.8±0.5, 36°.90N×28°.25E, h11km±3km, mb4.4/22, ML4.2(THE), Error ellipse: s-maj=2.7km s-min=2.4km az=185.0*

NEIC Felt on Rhodes. Also felt at Koycegiz, Marmaris and Ortaca, Turkey.

*ATH **04** 14:19:53.8, 36°.94N×28°.14E, h24km±1km, ML4.2/5, Error ellipse: s-maj=1.8km s-min=0.8km az=225.0*

*DDA **04** 14:19:53.3, 36°.92N×28°.20E, h12km, Ml4.6*

*ISK **04** 14:19:53.2, 36°.92N×28°.19E, h7km, ML4.5/48*

*HLW **04** 14:19:54.2, 36°.88N×28°.31E, h21km±13km, Mb4.6, Ml4.2*

*NIC **04** 14:19:56.4±0.4, 36°.72N×28°.14E, h25km, mb4.4, ML4.0*

*GII **04** 14:19:58.6±0.0, 36°.64N×28°.35E, h30km, mb4.6/4, MD4.5/4*

ISC 04 14:19:53.9±0.5, 36°.92N±0°.01×28°.23E±0°.01, h12km±2km, h12km:pP-P, n766, σ1$29/889, mb4.4/63, 39C-36D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSB	**Marmaris-Mugla**	**0.20**	**188**	PG	**Pg**	**14 19 58.3**	**0.0**
MRSB				SG	**Sg**	**14 20 01.3**	**0.0**
MRSB	**Marmaris-Mugla**	**0.20**	**188**	*e*Pg	**Pg**	**14 19 58.3**	**0.0**
MRSB				*e*Sg	**Sg**	**14 20 01.3**	**0.0**
YER	**Yerkesik**	**0.22**	**11**	PG	**Pg**	**14 19 58.1**	**-0.6**
YER				SG	**Sg**	**14 20 01.7**	**-0.2**
YER	**Yerkesik**	**0.22**	**11**	P	**Pg**	**14 19 58.3**	**-0.4**
YER	**Yerkesik**	**0.22**	**11**	P	**Pg**	**14 19 58.4**	**-0.3**
YER				S	**Sg**	**14 20 02.1**	**+0.2**
YER	**Yerkesik**	**0.22**	**11**	P	**Pg**	**14 19 58.3**	**-0.4**
YER	**Yerkesik**	**0.22**	**11**	*e*Pg	**Pg**	**14 19 58.1**	**-0.6**
YER	**Yerkesik**	**0.22**	**11**	P	**Pg**	**14 19 58.4**	**-0.3**
YER				*e*Sg	**Sg**	**14 20 01.7**	**-0.2**
YER				S		14 20 02.1	
TURN	**Turunc**	**0.30**	**98**	PG	**Pg**	**14 19 56.9**	**-3.1**
TURN	**Turunc**	**0.30**	**98** ⇑	*i*P	**Pg**	**14 19 57.6**	**-2.4**
TURN				*i*S	**Sg**	**14 20 00.3**	**-3.8**
TURN	**Turunc**	**0.30**	**98**	P	**Pg**	**14 19 57.6**	**-2.4**
TURN				S	**Sg**	**14 20 00.3**	**-3.8**
DALY	**Dalyan (Mu¨la**	**0.35**	**106**	PG	**Pg**	**14 20 01.3**	**+0.3**
DALY	**Dalyan (Mu¨la**	**0.35**	**106** ⇑	*i*P	**Pg**	**14 20 01.2**	**+0.2**
DALY				*i*S	**Sb**	**14 20 07.3**	**-0.4**
DALY	**Dalyan (Mu¨la**	**0.35**	**106**	P	**Pg**	**14 20 01.2**	**+0.2**
DALY				S	**Sb**	**14 20 07.3**	**-0.4**
DATC	**Datca-Mugla**	**0.48**	**251**	PG	**Pg**	**14 20 02.3**	**-1.1**
DATC	**Datca-Mugla**	**0.48**	**251**	*e*Pg	**Pg**	**14 20 02.3**	**-1.1**
MLSB	**Milas**	**0.53**	**316**	PG	**Pg**	**14 20 03.8**	**-0.4**
MLSB	**Milas**	**0.53**	**316**	*e*Pg	**Pg**	**14 20 03.8**	**-0.4**
BDRM	**Kayabasi**	**0.65**	**283** ⇓	*i*P	**Pg**	**14 20 05.7**	**-0.8**
BDRM				*i*S	**Sb**	**14 20 15.6**	**-0.7**
BDRM	**Kayabasi**	**0.65**	**283**	P	**Pg**	**14 20 05.7**	**-0.8**
BDRM				S	**Sb**	**14 20 15.6**	**-0.7**
ARG	**Arkhangelos**	**0.70**	**187**	PG	**Pg**	**14 20 07.3**	**-0.3**
ARG	**Arkhangelos**	**0.70**	**187**	P	**Pg**	**14 20 07.2**	**-0.4**
ARG				S	**Sn**	**14 20 19.7**	**-0.8**
ARG				AML	AML	14 20 22.4	
comp=E,60099μm,0.5s							
ARG				AML	AML	14 20 24.3	
comp=N,36926μm,0.3s							
ARG	**Arkhangelos**	**0.70**	**187**	P	**Pg**	**14 20 07.5**	**0.0**
ARG				S	**Sn**	**14 20 19.2**	**-1.4**
ARG	**Arkhangelos**	**0.70**	**187**	P	**Pg**	**14 20 07.6**	**0.0**
baz=1.0							
ARG	**Arkhangelos**	**0.70**	**187**	P	**Pg**	**14 20 07.5**	**0.0**
ARG				S	**Sb**	**14 20 19.0**	**+1.2**
ARG	**Arkhangelos**	**0.70**	**187**	P	**Pg**	**14 20 07.5**	**0.0**
ARG				S	**Sn**	**14 20 19.2**	**-1.4**
ARG	**Arkhangelos**	**0.70**	**187**	*e*Pg	**Pg**	**14 20 07.3**	**-0.3**
ARG				S	**Sn**	**14 20 19.2**	**-1.4**
FETY	**Fethiye**	**0.74**	**112**	PG	**Pg**	**14 20 07.5**	**-0.7**
FETY	**Fethiye**	**0.74**	**112**	P	**Pg**	**14 20 07.2**	**-1.0**
FETY				S	**Sn**	**14 20 21.3**	**-0.2**
FETY	**Fethiye**	**0.74**	**112**	P	**Pg**	**14 20 07.2**	**-1.0**
FETY				S	**Sn**	**14 20 21.3**	**-0.2**
FETY	**Fethiye**	**0.74**	**112**	P	**Pg**	**14 20 07.2**	**-1.0**
FETY	**Fethiye**	**0.74**	**112**	*e*Pg	**Pg**	**14 20 07.5**	**-0.7**
FETY				S	**Sg**	**14 20 17.9**	**0.0**
BODT	**Bodrum**	**0.75**	**281**	PG	**Pg**	**14 20 07.1**	**-1.4**
BODT				SG	**Sg**	**14 20 18.2**	**-0.1**
BODT	**Bodrum**	**0.75**	**281**	P	**Pg**	**14 20 07.0**	**-1.4**
BODT				S	**Sg**	**14 20 18.2**	**-0.1**
BODT	**Bodrum**	**0.75**	**281**	P	**Pg**	**14 20 07.0**	**-1.4**
BODT				S	**Sg**	**14 20 18.1**	**-0.2**
BODT	**Bodrum**	**0.75**	**281**	*e*Pg	**Pg**	**14 20 07.1**	**-1.4**
BODT				S	**Sg**	**14 20 18.1**	**-0.2**
TAVA	**DENIZLI_Tavas**	**0.77**	**45** ⇑	*i*P	**Pg**	**14 20 08.1**	**-0.8**
TAVA				*i*S	**Sg**	**14 20 19.2**	**+0.2**
TAVA	**DENIZLI_Tavas**	**0.77**	**45**	P	**Pg**	**14 20 08.1**	**-0.8**
TAVA				S	**Sg**	**14 20 19.2**	**+0.2**
YKAV	**Yalikavak-Bodr**	**0.79**	**286**	PG	**Pg**	**14 20 08.4**	**-0.8**
YKAV				SG	**Sg**	**14 20 19.2**	**-0.3**
YKAV	**Yalikavak-Bodr**	**0.79**	**286**	*e*Pg	**Pg**	**14 20 08.4**	**-0.8**
YKAV				*e*Sg	**Sg**	**14 20 19.2**	**-0.3**
AYDN	**Tasoluk**	**0.79**	**339** ⇑	*i*P	**Pg**	**14 20 08.7**	**-0.6**
AYDN				*i*S	**Sg**	**14 20 19.6**	**-0.1**
AYDN	**Tasoluk**	**0.79**	**339**	P	**Pg**	**14 20 08.7**	**-0.6**
AYDN				S	**Sg**	**14 20 19.6**	**-0.1**
NISR	**Nisiros**	**0.94**	**251**	P	**Pg**	**14 20 10.7**	**-1.3**
NISR				S	**Sg**	**14 20 23.4**	**-0.8**
NISR				AML	AML	14 20 28.3	
comp=N,31759μm,0.3s							
NISR				AML	AML	14 20 29.4	
comp=E,46722μm,0.3s							
NISR	**Nisiros**	**0.94**	**251**	P	**Pg**	**14 20 11.5**	**-0.4**
NISR				S	**Sn**	**14 20 26.1**	**-0.2**
NISR	**Nisiros**	**0.94**	**251**	P	**Pg**	**14 20 11.6**	**-0.4**
NISR				S	**Sn**	**14 20 25.4**	**-0.9**
NISR	**Nisiros**	**0.94**	**251**	P	**Pg**	**14 20 10.7**	**-1.3**
NISR				S	**Sn**	**14 20 26.1**	**-0.2**
DNZL	**Cakiroluk**	**1.01**	**40** ⇑	*i*P	**Pg**	**14 20 12.2**	**-1.2**
DNZL				*i*S	**Sn**	**14 20 28.3**	**-0.1**
DNZL	**Cakiroluk**	**1.01**	**40**	P	**Pg**	**14 20 12.2**	**-1.2**
DNZL				S	**Sn**	**14 20 28.3**	**-0.1**
GLHS	**Glhisar (BURDU**	**1.04**	**76**	PG	**Pg**	**14 20 14.2**	**+0.2**
GLHS				SG	**Sn**	**14 20 29.6**	**+0.5**
GLHS	**Glhisar (BURDU**	**1.04**	**76**	*e*Pg	**Pg**	**14 20 14.2**	**+0.2**
GLHS				*e*Sg	**Sn**	**14 20 29.6**	**+0.5**
DENT	**Denizli**	**1.05**	**37**	PG	**Pb**	**14 20 13.7**	**-0.4**
DENT	**Denizli**	**1.05**	**37**	*e*Pg	**Pb**	**14 20 13.7**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**1.06**	**345**	PG	**Pb**	**14 20 13.8**	**-0.6**
AYDB				SG	**Sb**	**14 20 28.8**	**+0.5**
AYDB	**Zeytinkoy-Aydi**	**1.06**	**345**	*e*Pg	**Pb**	**14 20 13.8**	**-0.6**
AYDB				*e*Sg	**Sb**	**14 20 28.8**	**+0.5**
GOLH	**Golhisar**	**1.11**	**73** ⇑	*i*P	**Pb**	**14 20 13.1**	**-2.1**
GOLH				*i*S	**Sn**	**14 20 31.9**	**+1.1**
GOLH	**Golhisar**	**1.11**	**73**	P	**Pb**	**14 20 13.1**	**-2.1**
GOLH				S	**Sn**	**14 20 31.9**	**+1.1**
GCAM	**G?zelcaml?**	**1.12**	**315**	PN	**Pb**	**14 20 14.6**	**-0.6**
GCAM	**G?zelcaml?**	**1.12**	**315** ⇑	*i*P	**Pb**	**14 20 14.5**	**-0.7**
GCAM				*i*S	**Sn**	**14 20 30.4**	**-0.3**
GCAM	**G?zelcaml?**	**1.12**	**315**	P	**Pb**	**14 20 14.5**	**-0.7**
GCAM				S	**Sn**	**14 20 30.4**	**-0.3**
AKAS	**Kas**	**1.30**	**121**	PN	**Pb**	**14 20 18.5**	**+0.1**
AKAS	**Kas**	**1.30**	**121** ⇑	*i*P	**Pb**	**14 20 18.2**	**-0.2**
AKAS				*i*S	**Sg**	**14 20 38.5**	**+2.7**
AKAS	**Kas**	**1.30**	**121**	P	**Pb**	**14 20 18.2**	**-0.2**
AKAS	**Kas**	**1.30**	**121**	*e*Pn	**Pb**	**14 20 18.5**	**+0.1**
AKAS				S	**Sg**	**14 20 38.5**	**+2.7**
KSL	**Kastellorizon**	**1.33**	**125**	P	**Pb**	**14 20 19.0**	**+0.2**
KSL				S	**Sg**	**14 20 40.6**	**+3.9**
KSL				AML	AML	14 20 41.4	
comp=N,17462μm,1.3s							
KSL				AML	AML	14 20 41.5	
comp=E,17820μm,1.1s							
KSL	**Kastellorizon**	**1.33**	**125**	P	**Pg**	**14 20 19.6**	**+0.1**
KSL				S	**Sg**	**14 20 39.5**	**+2.7**
KSL	**Kastellorizon**	**1.33**	**125**	P	**Pg**	**14 20 20.2**	**+0.7**
KSL				S	**Sg**	**14 20 38.3**	**+1.5**
ELL	**Elmali**	**1.36**	**97**	PN	**Pb**	**14 20 19.6**	**+0.2**
ELL	**Elmali**	**1.36**	**97**	P	**Pg**	**14 20 20.0**	**0.0**
ELL	**Elmali**	**1.36**	**97**	*e*Pn	**Pb**	**14 20 19.6**	**+0.2**
ELL	**Elmali**	**1.36**	**97**	P	**Pg**	**14 20 20.0**	**0.0**
SMG	**Samos**	**1.36**	**306**	P

CHOS	Chios island	2.27 311	PN	Pn	14 20 31.0	-0.4
CHOS	Chios island	2.27 311	P	Pn	14 20 30.9	-0.4
CHOS			S	Sn	14 20 58.1	-1.2
CHOS	Chios island	2.27 311	P	Pn	14 20 30.9	-0.4
CHOS			S	Sn	14 20 58.1	-1.2
CHOS	Chios island	2.27 311	ePn	Pn	14 20 31.0	-0.4
CHOS			S	Sn	14 20 58.1	-1.2
SUTC	Sutluce-Ispart	2.28 75	PN	Pn	14 20 32.7	+1.1
SUTC	Sutluce-Ispart	2.28 75	ePn	Pn	14 20 32.7	+1.1
SANT	Santorini	2.29 257	PN	Pn	14 20 32.2	+0.5
SANT	Santorini	2.29 257 ⇑	iPn	Pn	14 20 31.3	-0.4
SANT	Santorini	2.29 257	P	Pn	14 20 31.7	0.0
SANT	Santorini	2.29 257	ePn	Pn	14 20 31.4	-0.3
SANT	Santorini	2.29 257	P	Pn	14 20 31.4	-0.3
SANT	Santorini	2.29 257	P	Pn	14 20 31.6	0.0
SANT	Santorini	2.29 257	ePn	Pn	14 20 32.2	+0.5
THR2	Thira island,	2.30 259	P	Pn	14 20 32.0	+0.4
THR2	Thira island,	2.30 259	P	Pn	14 20 32.0	+0.4
THR2	Thira island,	2.30 259	P	Pn	14 20 32.0	+0.4
BAGO	Egridir - ISPA	2.30 61 ⇓	iP	Pn	14 20 33.0	+1.2
BAGO			iS	Sg	14 21 06.5	-1.4
GEDZ	Gediz	2.32 23	PN	Pn	14 20 33.0	+0.9
GEDZ	Gediz	2.32 23	ePn	Pn	14 20 33.0	+0.9
CAND	Candarli	2.33 331	PN	Pn	14 20 32.4	+0.3
THR3	Thira Island,	2.33 258	P	Pn	14 20 32.4	+0.3
THR3	Thira Island,	2.33 258	P	Pn	14 20 32.4	+0.3
THR3	Thira Island,	2.33 258	P	Pn	14 20 32.4	+0.3
THR6	Thira Island,	2.35 257	P	Pn	14 20 31.3	-1.0
THR6	Thira Island,	2.35 257	P	Pn	14 20 31.3	-1.0
THR6	Thira Island,	2.35 257	P	Pn	14 20 31.3	-1.0
SAP1	Santorini-Akro	2.35 257	P	Pn	14 20 32.5	+0.1
SAP1	Santorini-Akro	2.35 257	P	Pn	14 20 32.5	+0.1
IOSP	Ios island	2.37 266	P	Pn	14 20 33.0	+0.4
IOSP	Ios island	2.37 266	P	Pn	14 20 32.7	0.0
THR5	Thira Island,	2.37 259	P	Pn	14 20 32.5	-0.2
THR5	Thira Island,	2.37 259	P	Pn	14 20 32.5	-0.2
DKL	Dikili	2.39 334	PN	Pn	14 20 33.5	+0.5
DKL	Dikili	2.39 334	ePn	Pn	14 20 33.5	+0.5
ZKR	Zakros	2.43 223	P	Pn	14 20 33.6	+0.1
ZKR	Zakros	2.43 223	P	Pn	14 20 33.7	+0.2
ZKR	Zakros	2.43 223	P	Pn	14 20 33.7	+0.2
ZKR			S	Sn	14 21 03.0	-0.2
ZKR	Zakros	2.43 223	P	Pn	14 20 33.7	+0.2
ZKR			S	Sn	14 21 03.0	-0.2
STEP	BALIKESIR_Sava	2.49 351 ⇓	iP	Pn	14 20 33.7	-0.6
STEP			iS	Sg	14 21 14.1	+0.2
STEP	BALIKESIR_Sava	2.49 351	P	Pn	14 20 33.7	-0.6
NPS	Neapolis	2.69 233	P	Pn	14 20 37.3	+0.2
NPS	Neapolis	2.69 233	P	Pn	14 20 37.0	0.0
NPS	Neapolis	2.69 233	P	Pn	14 20 37.1	0.0
NPS			S	Sn	14 21 08.9	-0.7
NPS	Neapolis	2.69 233	P	Pn	14 20 37.0	0.0
NPS	Neapolis	2.69 233	P	Pn	14 20 37.0	0.0
NPS			S	Sn	14 21 08.9	-0.7
KEPZ	Antalya-Kepez	2.70 89 ⇓	iP	Pb	14 20 40.3	-2.0
KEPZ			iS	Sb	14 21 15.9	+0.5
KEPZ	Antalya-Kepez	2.70 89	P	Pb	14 20 40.3	-2.0
KEPZ			S	Sb	14 21 15.9	+0.5
TVSB	Tavsanli	2.71 21	PN	Pn	14 20 38.4	+1.0
TVSB	Tavsanli	2.71 21	ePn	Pn	14 20 38.4	+1.0
BALB	Balikesir	2.73 354	PN	Pn	14 20 38.5	+0.8
BALB	Balikesir	2.73 354	ePn	Pn	14 20 38.5	+0.8
PRK	Paraskevi	2.79 327	P	Pn	14 20 38.0	-0.4
PRK	Paraskevi	2.79 327	P	Pn	14 20 38.1	-0.4
PRK			S	Sn	14 21 13.2	+1.1
PRK	Paraskevi	2.79 327	P	Pn	14 20 38.1	-0.4
PRK			S	Sn	14 21 13.2	+1.1
PRK	Paraskevi	2.79 327	P	Pn	14 20 38.1	-0.4
PRK			S	Sn	14 21 13.2	+1.1
PRK	Paraskevi	2.79 327	P	Pn	14 20 38.3	-0.2
LAST	Lasithi	2.84 233	P	Pn	14 20 40.1	+1.0
LAST	Lasithi	2.84 233	P	Pn	14 20 39.2	0.0
LAST	Lasithi	2.84 233	P	Pn	14 20 39.4	+0.2
LAST	Lasithi	2.84 233	P	Pn	14 20 39.2	0.0
KUTH	Kutahya	2.85 29	PN	Pn	14 20 40.5	+1.1
KUTH	Kutahya	2.85 29	ePn	Pn	14 20 40.5	+1.1
SIGR	SIGRI	2.96 321	PN	Pn	14 20 41.6	+0.8
SIGR	SIGRI	2.96 321	P	Pn	14 20 40.3	-0.5
SIGR	SIGRI	2.96 321	P	Pn	14 20 40.4	-0.4
SIGR	SIGRI	2.96 321	P	Pn	14 20 40.3	-0.5
SIGR	SIGRI	2.96 321	ePn	Pn	14 20 41.6	+0.8
MHLA	Plaka, Milos I	3.06 268	P	Pn	14 20 43.7	+1.6
MHLA	Plaka, Milos I	3.06 268	P	Pn	14 20 42.9	+0.7
MHLO	Agia Marina, M	3.08 267	P	Pn	14 20 43.1	+0.6
MHLO	Agia Marina, M	3.08 267	P	Pn	14 20 42.8	+0.3
GONE	Gonen-Balikesi	3.15 352	PN	Pn	14 20 43.9	+0.5
GONE	Gonen-Balikesi	3.15 352	ePn	Pn	14 20 43.9	+0.5
IDI	Anoyia	3.16 240	Pn	Pn	14 20 44.0	+0.4
	comp=E,21nm,0.3s,baz=5.6,slow=6.2,SNR=132					
IDI			Sn	Sn	14 21 22.1	+0.9
	comp=E,34nm,0.3s,baz=348,slow=2.3,SNR=13					
IDI			LR	LR	14 22 03.9	
	comp=E,348nm,19.6s,baz=93,slow=42					
IDI	Anoyia	3.16 240	PN	Pn	14 20 44.4	+0.9
IDI	Anoyia	3.16 240 ⇑	iP	Pn	14 20 43.7	+0.2
KARY	Karystos	3.22 291	P	Pn	14 20 44.6	+0.3
KARY	Karystos	3.22 291	P	Pn	14 20 44.6	+0.3
EZN	Ezine	3.27 333	PN	Pn	14 20 46.1	+1.1
EZN	Ezine	3.27 333	ePn	Pn	14 20 46.1	+1.1
AUBOZ	BOZOYUK	3.31 25	PN	Pn	14 20 47.4	+1.8
AUBOZ	BOZOYUK	3.31 25	ePn	Pn	14 20 47.4	+1.8
KCTX	Karacabey (Bur	3.34 2	PN	Pn	14 20 47.4	+1.3
KCTX	Karacabey (Bur	3.34 2	ePn	Pn	14 20 47.4	+1.3
SIVA	Sivas	3.36 237	P	Pn	14 20 45.6	-0.7
SIVA	Sivas	3.36 237	P	Pn	14 20 47.6	+1.3
SIVA	Sivas	3.36 237	P	Pn	14 20 47.6	+1.3
SIVA	Sivas	3.36 237	P	Pn	14 20 46.1	-0.2
BORA	Eskisehir	3.44 30	PN	Pn	14 20 48.4	+1.0
BORA	Eskisehir	3.44 30	ePn	Pn	14 20 48.4	+1.0
EDC	Edincik	3.44 355	PN	Pn	14 20 47.9	+0.6
EDC	Edincik	3.44 355	ePn	Pn	14 20 47.9	+0.6
KONT	Konya--Tatoy	3.44 71	PN	Pn	14 20 49.5	+2.0
KONT	Konya--Tatoy	3.44 71	ePn	Pn	14 20 49.5	+2.0
KIZT	Kizilcal	3.49 55	PN	Pn	14 20 49.5	+1.3
KIZT	Kizilcal	3.49 55	ePn	Pn	14 20 49.5	+1.3
SKY	Skiros Island	3.51 305	P	Pn	14 20 49.1	+0.8
SKY	Skiros Island	3.51 305	P	Pn	14 20 48.8	+0.5
CAVI	Cavuskoy	3.52 21	PN	Pn	14 20 50.2	+1.8
CAVI	Cavuskoy	3.52 21	ePn	Pn	14 20 50.2	+1.8
KRBG	Karabiga-Canak	3.55 348	PN	Pn	14 20 48.6	-0.2
KRBG	Karabiga-Canak	3.55 348	ePn	Pn	14 20 48.6	-0.2
GEMT	Gemlik	3.59 12	PN	Pn	14 20 51.1	+1.6
GEMT	Gemlik	3.59 12	ePn	Pn	14 20 51.1	+1.6
VAM	Vamos	3.59 246	P	Pn	14 20 50.2	+0.8
VAM	Vamos	3.59 246	P	Pn	14 20 49.9	+0.4
VAM	Vamos	3.59 246	P	Pn	14 20 49.9	+0.4
VAM	Vamos	3.59 246	P	Pn	14 20 49.9	+0.4
VAM	Vamos	3.59 246	P	Pn	14 20 49.9	+0.4
LPK	Lapseki	3.64 342	PN	Pn	14 20 49.5	-0.6
LPK	Lapseki	3.64 342	ePn	Pn	14 20 49.5	-0.6
PTL	Penteli	3.65 289	P	Pn	14 20 51.2	+0.9
PTL	Penteli	3.65 289	P	Pn	14 20 50.8	+0.5
VLY	Voula,Athens	3.66 286	P	Pn	14 20 51.4	+1.1
VLY	Voula,Athens	3.66 286	P	Pn	14 20 50.9	+0.6
ARMT	Armutlu	3.68 8	PN	Pn	14 20 52.4	+1.7
ARMT	Armutlu	3.68 8	ePn	Pn	14 20 52.4	+1.7
ADVT	Abdulvahap	3.70 18	PN	Pn	14 20 53.2	+2.2
ADVT	Abdulvahap	3.70 18	ePn	Pn	14 20 53.2	+2.2
EREA	Eretria	3.73 295	P	Pn	14 20 52.0	+0.6
EREA	Eretria	3.73 295	P	Pn	14 20 52.0	+0.6
IMMV	Iera Moni Meta	3.73 248	P	Pn	14 20 51.4	0.0
IMMV	Iera Moni Meta	3.73 248	P	Pn	14 20 53.0	+1.6
IMMV	Iera Moni Meta	3.73 248	P	Pn	14 20 51.6	+0.2
GELI	Tayfur-Gelibol	3.74 339	PN	Pn	14 20 54.1	+2.6
GELI	Tayfur-Gelibol	3.74 339	ePn	Pn	14 20 54.1	+2.6
ATH	Athens Observa	3.74 288	P	Pn	14 20 53.1	+1.5
ATH	Athens Observa	3.74 288	P	Pn	14 20 52.4	+0.9
GADA	Gvkgeada	3.75 331	PN	Pn	14 20 51.6	0.0
GADA	Gvkgeada	3.75 331	P	Pn	14 20 51.5	0.0
GADA	Gvkgeada	3.75 331	P	Pn	14 20 51.5	0.0
GADA	Gvkgeada	3.75 331	ePn	Pn	14 20 51.6	0.0
YLV	Yalova	3.75 13	PN	Pn	14 20 53.4	+1.7
YLV	Yalova	3.75 13	ePn	Pn	14 20 53.4	+1.7
LIA	Limnos Island	3.82 322	P	Pn	14 20 52.7	+0.2
LIA	Limnos Island	3.82 322	P	Pn	14 20 52.8	+0.2
LIA	Limnos Island	3.82 322	P	Pn	14 20 52.8	+0.2
LIA	Limnos Island	3.82 322	P	Pn	14 20 52.9	+0.3
AKMC	Akamas	3.82 118	P	Pn	14 20 53.7	+1.0
	baz=297					
AKMC	Akamas	3.82 118	P	Pn	14 20 53.7	+1.0

RKY	Sarkoy-Tekirda	3.85 348	PN	Pn	14 20 53.8	+0.7
RKY	Sarkoy-Tekirda	3.85 348	ePn	Pn	14 20 53.8	+0.7
PPCY	Paphos	3.91 120	P	Pn	14 20 54.6	+0.8
	baz=299					
PPCY	Paphos	3.91 120	P	Pn	14 20 54.6	+0.8
GULT	Gulveren	3.94 26	PN	Pn	14 20 56.6	+2.3
GULT	Gulveren	3.94 26	ePn	Pn	14 20 56.6	+2.3
ALFC	Alefka	3.95 115	P	Pn	14 20 54.9	+0.4
	baz=294					
ALFC			S	Sn	14 21 40.8	0.0
ALFC	Alefka	3.95 115	P	Pn	14 20 54.9	+0.4
ALFC			S	Sn	14 21 40.8	0.0
GVD	Gavdhos	3.95 240	P	Pn	14 20 55.0	+0.6
GVD	Gavdhos	3.95 240	P	Pn	14 20 55.0	+0.6
ERIK	Erikli-Kesan	3.98 341	PN	Pn	14 20 55.9	+1.1
ERIK	Erikli-Kesan	3.98 341	ePn	Pn	14 20 55.9	+1.1
CHBY	Cihanbeyli	4.05 64	PN	Pn	14 20 57.5	+1.6
CHBY	Cihanbeyli	4.05 64	ePn	Pn	14 20 57.5	+1.6
HRT	Hereke	4.06 16	PN	Pn	14 20 57.5	+1.6
HRT	Hereke	4.06 16	ePn	Pn	14 20 57.5	+1.6
ANKY	Antikythira Is	4.11 257	P	Pn	14 20 55.5	-1.1
ANKY	Antikythira Is	4.11 257	P	Pn	14 20 56.3	-0.3
SMTH	Samothraki Isl	4.13 330	P	Pn	14 20 55.7	-1.2
SMTH	Samothraki Isl	4.13 330	P	Pn	14 20 56.6	-0.3
SMTH	Samothraki Isl	4.13 330	P	Pn	14 20 56.7	-0.2
SMTH	Samothraki Isl	4.13 330	P	Pn	14 20 56.7	-0.2
KYTH	Kithira	4.22 263	P	Pn	14 20 58.4	+0.2
KYTH	Kithira	4.22 263	P	Pn	14 20 58.5	+0.3
VLI	Veliai	4.25 269	P	Pn	14 21 00.1	+1.5
VLI	Veliai	4.25 269	P	Pn	14 20 59.4	+0.8
VLI	Veliai	4.25 269	P	Pn	14 20 59.4	+0.8
VLI	Veliai	4.25 269	P	Pn	14 20 59.4	+0.8
ALN	Alexandroupoli	4.33 337	ePn	Pn	14 20 59.0	-0.5
ALN	Alexandroupoli	4.33 337	P	Pn	14 20 59.2	-0.3
ALN	Alexandroupoli	4.33 337	eP	Pn	14 20 59.0	-0.5
ALN	Alexandroupoli	4.33 337	P	Pn	14 20 59.2	-0.3
SZAC	Souni	4.35 118	P	Pn	14 21 00.8	+0.9
	baz=298					
SZAC			S	Sn	14 21 51.5	+0.9
SZAC	Souni	4.35 118	P	Pn	14 21 00.8	+0.9
SZAC			S	Sn	14 21 51.5	+0.9
SKIA	Skiathos	4.38 302	P	Pn	14 21 01.1	+0.8
SKIA	Skiathos	4.38 302	P	Pn	14 21 01.1	+0.8
MAMC	Mammari	4.40 112	P	Pn	14 21 01.9	+1.3
	baz=291					
MAMC	Mammari	4.40 112	P	Pn	14 21 01.9	+1.3
LKR	Lokris	4.49 294	P	Pn	14 21 04.2	+2.4
LKR	Lokris	4.49 294	P	Pn	14 21 03.3	+1.5
CSS	Mathiatis	4.57 114	ePn	Pn	14 21 03.0	0.0
CSS	Mathiatis	4.57 114	P	Pn	14 21 04.0	+1.0
	baz=294					
CSS			S	Sn	14 21 57.9	+1.8
CSS	Mathiatis	4.57 114	P	Pn	14 21 03.5	+0.5
CSS	Mathiatis	4.57 114	Pn	Pn	14 21 03.2	+0.2
CSS			Sn	Sn	14 21 54.1	-2.0
CSS	Mathiatis	4.57 114	ePn	Pn	14 21 03.0	0.0
CSS	Mathiatis	4.57 114	P	Pn	14 21 03.5	+0.5
CSS			Sn	Sn	14 21 54.1	-2.0
CSS			S	Sb	14 21 57.9	-1.1
ANTO	Ankara	4.64 49 ⇓	iP	Pn	14 21 06.0	+2.0
ANTO	Ankara	4.64 49	ePn	Pn	14 21 03.9	0.0
ANTO	Ankara	4.64 49	⇓P	Pn	14 21 06.0	+2.0
ANTO	Ankara	4.64 49	ePn	Pn	14 21 03.9	0.0
ANTO	Ankara	4.64 49	P	Pn	14 21 06.0	+2.0
XOR	Xorichti	4.67 303	P	Pn	14 21 04.8	+0.6
XOR	Xorichti	4.67 303	P	Pn	14 21 04.8	+0.6
XOR	Xorichti	4.67 303	P	Pn	14 21 04.8	+0.6
PAIG	Paliouri	4.67 311	P	Pn	14 21 04.6	+0.3
PAIG	Paliouri	4.67 311	P	Pn	14 21 04.6	+0.3
PAIG	Paliouri	4.67 311	P	Pn	14 21 04.6	+0.3
PAIG	Paliouri	4.67 311	P	Pn	14 21 04.6	+0.3
RDO	Rodhopi	4.71 334	P	Pn	14 21 03.9	-1.0
RDO	Rodhopi	4.71 334	P	Pn	14 21 05.2	+0.3
RDO	Rodhopi	4.71 334	P	Pn	14 21 05.0	+0.1
RDO	Rodhopi	4.71 334	P	Pn	14 21 05.2	+0.3
OUR	Ouranopolis	4.77 317	P	Pn	14 21 06.0	+0.4
OUR	Ouranopolis	4.77 317	P	Pn	14 21 06.1	+0.4
OUR	Ouranopolis	4.77 317	P	Pn	14 21 06.0	+0.4
OUR	Ouranopolis	4.77 317	P	Pn	14 21 06.0	+0.4
GUR	Goura	4.80 284	P	Pn	14 21 07.1	+1.0
GUR	Goura	4.80 284	P	Pn	14 21 07.1	+1.0
GUR	Goura	4.80 284	P	Pn	14 21 07.1	+1.0
ITM	Ithomi	5.05 275	ePn	Pn	14 21 10.7	+1.2
ITM	Ithomi	5.05 275	ePn	Pn	14 21 10.7	+1.2
BR131	Keskin Array S	5.09 55	ePn	Pn	14 21 11.7	+1.5
BR131	Keskin Array S	5.09 55	ePn	Pn	14 21 11.7	+1.5
BRTR	Keskin Array B	5.09 55	Pn	Pn	14 21 12.1	+1.8
	comp=E,6.1nm,0.3s,baz=233,slow=14,SNR=270					
BRTR			Sn	Sn	14 22 11.7	+2.6
	comp=E,0.9nm,0.3s,baz=229,slow=22,SNR=3.6					
BRTR			LR	LR	14 23 52.8	
	comp=E,575nm,19.4s,baz=232,slow=47					
PLG	Polygyros	5.09 314	P	Pn	14 21 11.3	+1.2
PLG	Polygyros	5.09 314	P	Pn	14 21 11.3	+1.2
AGG	Agios Georgios	5.11 296	ePn	Pn	14 21 11.8	+1.4
AGG	Agios Georgios	5.11 296	eP	Pn	14 21 11.8	+1.4
AGG	Agios Georgios	5.11 296	eP	Pn	14 21 11.8	+1.4
KDZ	Kurdzhali	5.21 336	iP	Pn	14 21 11.4	-0.3
SOH	Sokhos	5.45 317	P	Pn	14 21 17.1	+2.1
SOH	Sokhos	5.45 317	P	Pn	14 21 17.1	+2.1
RZN	Rozhen	5.49 331	iP	Pn	14 21 15.9	+0.2
LIT	Litokhoron	5.51 307	ePn	Pn	14 21 16.5	+0.6
LIT	Litokhoron	5.51 307	eP	Pn	14 21 16.5	+0.6
LIT	Litokhoron	5.51 307	eP	Pn	14 21 16.5	+0.6
DIM	Dimitrovgrad	5.54 339	iP	Pn	14 21 15.9	-0.2
SRS	Serrai	5.54 321	P	Pn	14 21 17.0	+0.8
SRS			pmax	pmax		
	comp=Z,36nm,0.8s					
SRS	Serrai	5.54 321	P	Pn	14 21 17.0	+0.8
	comp=Z,36nm,0.8s					
NVR	Nevrokopi	5.58 324	P	Pn	14 21 17.1	+0.3
NVR	Nevrokopi	5.58 324	P	Pn	14 21 17.2	+0.4
NVR	Nevrokopi	5.58 324	P	Pn	14 21 17.1	+0.3
MMB	Musomiste	5.83 325	iP	Pn	14 21 20.3	+0.1
PLD	Plovdiv	5.86 333	P	Pn	14 21 21.5	+1.0
PLD	Plovdiv	5.86 333	P	Pn	14 21 21.5	+1.0
KNT	Kendrikon	5.93 317	P	Pn	14 21 22.8	+1.2
KNT	Kendrikon	5.93 317	P	Pn	14 21 22.8	+1.2
KNT	Kendrikon	5.93 317	P	Pn	14 21 22.8	+1.2
KNT	Kendrikon	5.93 317	P	Pn	14 21 22.8	+1.2
ILGA	Ilgaz	5.94 44	ePn	Pn	14 21 22.1	+0.1
ILGA	Ilgaz	5.94 44	ePn	Pn	14 21 22.1	+0.1
SLUM	Salum	5.96 206	P	Pn	14 21 22.3	+0.3
	baz=207					
SLUM			S	Sn	14 22 26.1	-4.1
	baz=207					
SLUM	Salum	5.96 206	P	Pn	14 21 22.3	+0.3
VAY	Valandovo	6.22 317	ePn	Pn	14 21 27.2	+1.6
VAY			eSn	Sg	14 23 11.2	-2.3
PRD	Provadia	6.31 354	iP	Pn	14 21 27.0	+0.2
KKB	Krupnik	6.35 323	iP	Pn	14 21 28.6	+1.2
FNA	Florina	6.60 308	ePn	Pn	14 21 31.9	+1.1
FNA	Florina	6.60 308	eP	Pn	14 21 31.9	+1.1
FNA	Florina	6.60 308	eP	Pn	14 21 31.9	+1.1
IGT	Igoumenitsa	6.74 295	P	Pn	14 21 31.7	-1.1
IGT	Igoumenitsa	6.74 295	P	Pn	14 21 31.7	-1.1
HWQ	Hawqa	6.81 110	eP	Pn	14 21 34.0	+0.1
HNTI	Hanita	6.86 122	Pn	Pn	14 21 32.8	-1.6
HNTI			Sn	Sn	14 22 48.7	-3.8
HNTI	Hanita	6.86 122	Pn	Pn	14 21 32.8	-1.6
VTS	Vitosha	6.86 327 ⇑	iP	Pn	14 21 35.9	+1.4
VTS	Vitosha	6.86 327	ePn	Pn	14 21 35.3	+0.8
VTS	Vitosha	6.86 327	iP	Pn	14 21 35.8	+1.3
VTS	Vitosha	6.86 327 ⇑	P	Pn	14 21 35.9	+1.4
VTS	Vitosha	6.86 327	ePn	Pn	14 21 35.3	+0.8
VTS	Vitosha	6.86 327	P	Pn	14 21 35.9	+1.4
QRWL	Qaraoun	6.96 117	eP	Pn	14 21 35.5	-0.4
OFRI	'Ofer	7.02 126	Pn	Pn	14 21 36.3	-0.3
OFRI			Sn	Sn	14 22 52.4	-3.9
OFRI	'Ofer	7.02 126	Pn	Pn	14 21 36.3	-0.3
MMA0B	Mount Meron ar	7.06 121	Pn	Pn	14 21 36.4	-0.8
MMA0B			Sn	Sn	14 22 53.5	-3.9
MMA0B	Mount Meron ar	7.06 121	Pn	Pn	14 21 36.4	-0.8
MMAI	Mount Meron Ar	7.06 121	Pn	Pn	14 21 36.7	-0.5
	comp=Z,41nm,0.3s,baz=307,slow=12,SNR=137					
MMAI			Sn	Sn	14 22 53.5	-3.8
	comp=E,51nm,0.3s,baz=292,slow=15,SNR=17					
MMAI			LR	LR	14 25 27.1	
	comp=Z,192nm,21.2s,baz=230,slow=48					
BLGI	Bet Lehem HaGe	7.08 124	Pn	Pn	14 21 35.9	-1.5
BLGI			Sn	Sn	14 22 54.6	-3.3

BLGI	Bet Lehem HaGe	7.08 124	Pn	Pn	14 21 35.9	-1.5
RCY	Rachaya	7.10 116	eP	Pn	14 21 37.2	-0.6
KSDI	Kefar Szold	7.13 119	Pn	Pn	14 21 37.6	-0.5
KSDI			Sn	Sn	14 22 55.1	-4.1
KSDI	Kefar Szold	7.13 119	Pn	Pn	14 21 37.6	-0.5
ICOR	Ion Corvin	7.20 358 ⇓	iP	Pn	14 21 38.5	-0.5
SLTI	Sal'it	7.30 128	Pn	Pn	14 21 39.4	-1.0
SLTI			Sn	Sn	14 23 00.0	-3.2
SLTI	Sal'it	7.30 128	Pn	Pn	14 21 39.4	-1.0
KSHT	Keshet	7.36 120	Pn	Pn	14 21 41.8	+0.5
KSHT			Sn	Sn	14 23 02.1	-2.6
KSHT	Keshet	7.36 120	Pn	Pn	14 21 41.8	+0.5
MMLI	Mount Malkishu	7.42 125	Pn	Pn	14 21 40.6	-1.5
MMLI			Sn	Sn	14 23 02.4	-3.8
MMLI	Mount Malkishu	7.42 125	Pn	Pn	14 21 40.6	-1.5
HMYD	Mayadein	7.42 162	P	Pn	14 21 42.5	+0.4
	baz=162					
HMYD	Mayadein	7.42 162	P	Pn	14 21 42.5	+0.4
RSH		7.49 141	P	Pn	14 21 42.7	-0.3
	baz=141					
RSH		7.49 141	P	Pn	14 21 42.7	-0.3
TIRR	Tirgusor	7.54 1 ⇓	iP	Pn	14 21 44.4	+0.8
TIRR	Tirgusor	7.54 1	ePn	Pn	14 21 43.0	-0.6
TIRR	Tirgusor	7.54 1 ⇓	P	Pn	14 21 44.4	+0.8
TIRR	Tirgusor	7.54 1	ePn	Pn	14 21 43.0	-0.6
TIRR	Tirgusor	7.54 1	P	Pn	14 21 44.4	+0.8
KOT	Kottamia	7.59 156	P	Pn	14 21 44.1	-0.4
	baz=156					
KOT			AMP		14 23 00.0	
	baz=156					
KOT	Kottamia	7.59 156	P	Pn	14 21 44.1	-0.4
HMDT	Nahal Hemdat	7.60 126	Pn	Pn	14 21 43.9	-0.7
HMDT			Sn	Sn	14 23 07.7	-3.0
HMDT	Nahal Hemdat	7.60 126	Pn	Pn	14 21 43.9	-0.7
HHAG	Hagoal	7.66 154	P	Pn	14 21 44.9	-0.5
	baz=154					
HHAG	Hagoal	7.66 154	P	Pn	14 21 44.9	-0.5
TLB	Topalu	7.66 359 ⇑	iP	Pn	14 21 47.4	+2.1
TLB	Topalu	7.66 359 ⇑	P	Pn	14 21 47.4	+2.1
TLB	Topalu	7.66 359	P	Pn	14 21 47.4	+2.1
AMAZ	Amatzia	7.71 132	Pn	Pn	14 21 45.2	-0.9
AMAZ			Sn	Sn	14 23 08.7	-4.7
AMAZ	Amatzia	7.71 132	Pn	Pn	14 21 45.2	-0.9
HARR	Harsova	7.77 358 ⇑	iP	Pn	14 21 49.0	+2.2
HARR	Harsova	7.77 358 ⇑	P	Pn	14 21 49.0	+2.2
HARR	Harsova	7.77 358	P	Pn	14 21 49.0	+2.2
HSAF	As Saff	7.79 158	P	Pn	14 21 47.0	-0.2
	baz=158					
HSAF	As Saff	7.79 158	P	Pn	14 21 47.0	-0.2
GLL	Jalalah	7.88 157	P	Pn	14 21 47.8	-0.6
	baz=157					
GLL	Jalalah	7.88 157	P	Pn	14 21 47.8	-0.6
KZIT	Kziot	7.88 138	Pn	Pn	14 21 47.8	-0.7
KZIT			Sn	Sn	14 23 12.1	-5.6
KZIT	Kziot	7.88 138	Pn	Pn	14 21 47.8	-0.7
YTIR	Yattir	7.95 132	Pn	Pn	14 21 48.7	-0.8
YTIR	Yattir	7.95 132	Pn	Pn	14 21 48.7	-0.8
DSI	Dead Sea	7.96 130	Pn	Pn	14 21 48.5	-1.1
DSI	Dead Sea	7.96 130	Pn	Pn	14 21 48.5	-1.1
SWA2		8.00 198	P	Pn	14 21 49.7	-0.3
	baz=199					
SWA2			AMP		14 23 00.0	
	baz=199					
SWA2			S	Sn	14 23 14.8	-5.7
	baz=199					
SWA2		8.00 198	P	Pn	14 21 49.7	-0.3
MZDA	Masada	8.14 131	Pn

BURAR **Bucovina Array** 10.92 349 ⇓ *i* P Pn 14 22 31.8 +1.7
BURAR **Bucovina Array** 10.92 349 ⇓ P Pn 14 22 31.8 +1.7
BURAR **Bucovina Array** 10.92 349 ⇓ *i* P Pn 14 22 31.8 +1.7
BUR04 **Bucovina Ar. S** 10.92 349 *e*Pn Pn 14 22 29.5 -0.7
BUR04 **Bucovina Ar. S** 10.92 349 *e*Pn Pn 14 22 29.5 -0.7
BUR08 **Bucovina Ar. S** 10.95 349 *e*Pn Pn 14 22 29.9 -0.6
BUR08 **Bucovina Ar. S** 10.95 349 *e*Pn Pn 14 22 29.9 -0.6
HDK1 **Dakhla** 11.38 175 P Pn 14 22 36.4 -0.1
baz=175
HDK1 **Dakhla** 11.38 175 P Pn 14 22 36.4 -0.1
PSZ **Piszkesteto** 12.59 333 *e*Pn Pn 14 22 53.0 +0.1
PSZ **Piszkesteto** 12.59 333 *e*P Pn 14 22 53.0 +0.1
PSZ **Piszkesteto** 12.59 333 *e*P Pn 14 22 53.0 +0.1
KIV **Kislovodsk** 13.05 53 *e*P Pn 14 22 58.6 -0.7
KIV pmax pmax
comp=Z,8.0nm,1.0s
KIV MLR MLR
comp=Z,107nm,11.0s
KIV **Kislovodsk** 13.05 53 *e*P Pn 14 22 58.6 -0.7
comp=Z,107nm,11.0s
KVAR **Kislovodsk Arr** 13.06 53 Pn Pn 14 23 03.5 +4.1
baz=238,slow=15,SNR=2.8
KBZ **Khabaz** 13.09 54 Pn Pn 14 23 03.0 +3.4
comp=Z,0.1nm,0.3s,baz=243,slow=14,SNR=8.7
LVV **L'vov** 13.25 348 *e*P P 14 23 07.6 -4.1
LVV MLR MLR
comp=E,100nm,11.0s
LVV MLR MLR
comp=N,400nm,12.0s
LVV MLR MLR
comp=Z,400nm,12.0s
GNI **Garni** 13.32 71 LR LR 14 28 46.8
comp=Z,103nm,19.0s,baz=276,slow=40
ZEI **Tsey** 13.38 59 *e*P P 14 23 08.7 -4.8
ZEI pmax pmax
comp=Z,5.0nm,0.3s
NIE **Niedzica** 13.76 338 *e*Pn Pn 14 23 12.0 +3.2
NIE **Niedzica** 13.76 338 *e*P Pn 14 23 12.0 +3.2
HAGS **Hagol** 13.78 153 P Pn 14 23 10.4 +1.3
baz=153
HAGS **Hagol** 13.78 153 P Pn 14 23 10.4 +1.3
AKASG **Malin Array Be** 13.80 3 Pn Pn 14 23 09.1 -0.2
comp=Z,0.3nm,0.3s,baz=182,slow=12,SNR=7.8
AKASG Sn Sn 14 25 47.1 +4.6
comp=Z,1.1nm,0.3s,baz=186,slow=26,SNR=4.9
AKASG LR LR 14 29 14.2
comp=Z,232nm,19.6s,baz=185,slow=40
AKASG **Malin Array Be** 13.80 3 *e*P Pn 14 23 10.3 +1.0
AKASG **Malin Array Be** 13.80 3 *e*P Pn 14 23 10.3 +1.0
AKASG Sn Sn 14 25 47.0 +4.6
AKBB **Malin Array Si** 13.80 3 *e*Pn Pn 14 23 09.3 0.0
AKBB **Malin Array Si** 13.80 3 *e*P Pn 14 23 09.3 0.0
AKBB **Malin Array Si** 13.80 3 *e*P Pn 14 23 09.3 0.0
OJC **Ojcow** 14.62 338 *e*Pn P 14 23 27.6 +0.7
OJC **Ojcow** 14.62 338 *e*P P 14 23 27.6 +0.7
OJC **Ojcow** 14.62 338 *e*P P 14 23 27.6 +0.7
OKC **Ostrava-Krasne** 14.83 334 AMS AMS 14 30 00.0
comp=Z,400nm,13.7s
KBA **Koelnbreinsper** 14.99 317 *e*P P 14 23 33.0 +1.7
comp=Z,17nm,1.1s
KBA **Koelnbreinsper** 14.99 317 P P 14 23 34.6 +3.3
KBA **Koelnbreinsper** 14.99 317 P P 14 23 33.0 +1.7
comp=Z,17nm,1.1s
VRAC **Vranov** 15.00 329 LR LR 14 29 04.3
comp=Z,137nm,20.6s,baz=132,slow=37
MOA **Molln** 15.00 321 *e*pP P 14 23 31.8 +0.6
comp=Z,13nm,1.2s
MOA **Molln** 15.00 321 P P 14 23 31.8 +0.6
comp=Z,13nm,1.2s
KEST **Kesra** 15.27 271 Pn Pn 14 23 28.7 -0.7
comp=Z,0.1nm,0.3s,baz=310,slow=1.7,SNR=4.4
KEST **Kesra** 15.27 271 *e*Pn Pn 14 23 30.5 +1.0
comp=Z,17nm,0.8s
KEST **Kesra** 15.27 271 *e*Pn Pn 14 23 30.5 +1.0
comp=Z,17nm,0.8s
KRLC **Kraliky** 15.53 331 *e*P P 14 23 38.9 +1.8
KRLC *e*pP sP 14 23 43.2 +1.3
KRLC **Kraliky** 15.53 331 *e*P P 14 23 38.9 +1.8
DPC **Dobruska-Polom** 15.93 331 AMS AMS 14 30 50.0
comp=Z,600nm,9.8s
GEA0 **GERESS Array S** 15.95 323 *e*Pn Pn 14 23 39.1 +1.0
GEA0 **GERESS Array S** 15.95 323 *e*Pn Pn 14 23 39.1 +1.0
GEC2 **GERESS Array S** 15.95 323 *e*Pn Pn 14 23 38.8 +0.6
comp=Z,12nm,0.8s
GEC2 **GERESS Array S** 15.95 323 *e*P Pn 14 23 38.8 +0.6
GEC2 pmax pmax
comp=Z,12nm,0.8s
GEC2 **GERESS Array S** 15.95 323 *e*Pn Pn 14 23 38.8 +0.6
comp=Z,12nm,0.8s
GERES **GERESS Array B** 15.95 323 Pn Pn 14 23 39.2 +0.9
comp=Z,0.4nm,0.3s,baz=134,slow=11,SNR=44
GERES LR LR 14 30 06.9
comp=Z,153nm,18.6s,baz=130,slow=38
GERES **GERESS Array B** 15.95 323 *e*P P 14 23 42.4 +0.6
GERES **GERESS Array B** 15.95 323 *e*P P 14 23 42.4 +0.6
WTTA **Wattenberg** 16.05 315 *e*P P 14 23 47.3 +4.2
comp=Z,8.9nm,0.8s
VORD **Divnogorie** 16.12 26 *e*P P 14 23 42.9 -0.6
VORD pmax pmax
comp=Z,8.0nm,0.9s
VORD **Divnogorie** 16.12 26 *e*P P 14 23 42.9 -0.6
comp=Z,8.0nm,0.9s
UPC **Upice** 16.17 331 AMS AMS 14 31 00.0
comp=Z,400nm,11.3s
KHC **Kasperske Hory** 16.21 323 *e*P P 14 23 46.4 +1.8
KHC *ex* x 14 23 53.0
KHC AMS AMS 14 30 50.0
comp=Z,1μm,11.1s
KHC **Kasperske Hory** 16.21 323 *e*Pn Pn 14 23 41.6 +0.1
comp=Z,3.8nm,0.8s
KHC **Kasperske Hory** 16.21 323 *e*P P 14 23 46.4 +1.8
KHC MLR MLR
comp=Z,1μm,11.1s
KHC **Kasperske Hory** 16.21 323 *e*Pn Pn 14 23 41.6 +0.1
comp=Z,3.8nm,0.8s
KHC **Kasperske Hory** 16.21 323 *e*P P 14 23 46.4 +1.8
comp=Z,1μm,11.1s
GOPC **GO Pecny, Ondr** 16.22 327 AMS AMS 14 30 50.0
comp=Z,600nm,11.2s
VSR **Storozhevoye** 16.29 25 *e*P Pn 14 23 41.6 -0.8
VSR pmax pmax
comp=Z,3.0nm,0.5s
KSP **Ksiaz** 16.34 332 *e*Pn P 14 23 48.0 +2.0
KSP **Ksiaz** 16.34 332 *e*P P 14 23 48.0 +2.0
KSP **Ksiaz** 16.34 332 *e*P P 14 23 48.0 +2.0
PRU **Pruhonice** 16.38 327 AMS AMS 14 30 50.0
comp=Z,600nm,10.9s
MOTA **Moosalm** 16.40 315 *e*pP P 14 23 46.8 0.0
comp=Z,12nm,1.0s
MOTA **Moosalm** 16.40 315 P P 14 23 46.8 0.0
comp=Z,12nm,1.0s
FETA **Feichten** 16.44 313 *e*pP P 14 23 49.0 +1.7
comp=Z,32nm,1.0s
FETA **Feichten** 16.44 313 P P 14 23 49.0 +1.7
comp=Z,32nm,1.0s
WET **Wettzell** 16.55 322 P P 14 23 50.4 +2.0
WET pmax pmax
comp=Z,12nm,0.9s
PVCC **Panska Ves** 16.77 329 AMS AMS 14 31 20.0
comp=Z,600nm,10.1s
DAVA **Damuels** 17.07 313 *e*P P 14 23 53.5 -0.8
comp=Z,12nm,1.4s
DAVA **Damuels** 17.07 313 P P 14 23 53.5 -0.8
comp=Z,12nm,1.4s
BRG **Berggiesshubel** 17.30 328 *e*P P 14 23 57.9 +1.3
comp=Z,5.6nm,1.1s
BRG **Berggiesshubel** 17.30 328 *e*P P 14 23 57.9 +1.3
BRG pmax pmax
comp=Z,6.0nm,1.1s
BRG **Berggiesshubel** 17.30 328 *e*P P 14 23 57.9 +1.3
comp=Z,6.0nm,1.1s
SUW **Suwalki** 17.45 350 *e*P P 14 23 58.8 +0.5
SUW **Suwalki** 17.45 350 *e*P P 14 23 58.2 0.0
comp=Z,90nm,1.0s
SUW **Suwalki** 17.45 350 *e*P P 14 23 58.8 +0.5
SUW **Suwalki** 17.45 350 *e*P P 14 23 58.8 +0.5
NKC **Novy Kostel** 17.50 324 AMS AMS 14 31 30.0
comp=Z,700nm,11.6s
GRFO **Grafenberg** 17.73 321 *e*Pn P 14 24 01.2 -0.2
comp=Z,25nm,1.3s
GRFO **Grafenberg** 17.73 321 *e*P P 14 24 01.2 -0.2
GRFO pmax pmax
comp=Z,25nm,1.3s
GRFO **Grafenberg** 17.73 321 *e*P P 14 24 01.2 -0.2
comp=Z,25nm,1.3s
MBDF **Montbardon** 17.98 302 *e*P P 14 24 06.2 +1.8
MBDF pmax pmax
comp=Z,12nm,0.7s
MBDF **Montbardon** 17.98 302 *e*P P 14 24 06.2 +1.8
comp=Z,12nm,0.7s
CLL **Collm** 18.02 328 *e*P Pn 14 24 03.0 -1.1
CLL *i* pP P 14 24 05.0 +0.5
comp=Z,7.0nm,1.1s
CLL *i* 14 24 11.6
CLL *i* PPP PPP 14 24 23.6
CLL *e*S S 14 27 34.0 +3.1
CLL LmH 14 29 00.0
comp=N,200nm,20.3s
CLL LmH 14 29 00.0
comp=E,300nm,19.4s
CLL Lmax 14 31 00.0
CLL **Collm** 18.02 328 *e*Pn P 14 24 05.0 +0.5
comp=E,11nm,1.2s
CLL **Collm** 18.02 328 *e*P P 14 24 05.0 +0.5
CLL pmax pmax
comp=Z,11nm,1.2s
CLL **Collm** 18.02 328 *e*P P 14 24 05.0 +0.5
comp=Z,11nm,1.2s
MOX **Moxa** 18.17 324 P P 14 24 09.0 +2.8
MOX pmax pmax
comp=Z,21nm,0.9s
MOX **Moxa** 18.17 324 P P 14 24 09.0 +2.8
comp=Z,21nm,0.9s
SENIN **Lac Senin/Sane** 18.23 308 *e*Pn P 14 24 07.5 +0.4
comp=Z,22nm,0.8s
SENIN **Lac Senin/Sane** 18.23 308 *e*Pn P 14 24 07.5 +0.4
comp=Z,22nm,0.8s
LPG **La Plagne** 18.25 305 *e*P P 14 24 09.3 +1.8
LPG pmax pmax
comp=Z,15nm,0.8s
LPG **La Plagne** 18.25 305 *e*P P 14 24 09.3 +1.8
comp=Z,15nm,0.8s
LPL **La Plagne** 18.27 305 *e*P P 14 24 09.6 +1.9
LPL pmax pmax
comp=Z,13nm,0.7s
LPL **La Plagne** 18.27 305 *e*P P 14 24 09.6 +1.9
comp=Z,13nm,0.7s
BFO **Black Forest** 18.50 314 *c*eP Pn 14 24 14.7 +4.6
KLNR **Kaliningrad** 18.53 345 ⇑ *e*P Pn 14 24 10.8 +0.5
KLNR pmax pmax
comp=Z,42nm,0.9s
OBN **Obninsk** 19.07 15 LR LR 14 32 21.5
comp=Z,103nm,20.6s,baz=260,slow=39
CABF **La Chapelle** 19.09 307 *e*P P 14 24 16.6 +0.1
CABF pmax pmax
comp=Z,21nm,0.9s
CABF **La Chapelle** 19.09 307 *e*P P 14 24 16.6 +0.1
comp=Z,21nm,0.9s
HINF **Hinteralfeld** 19.12 311 *e*P Pn 14 24 18.5 +0.9
HINF pmax pmax
comp=Z,10.0nm,1.2s
HINF **Hinteralfeld** 19.12 311 *e*P Pn 14 24 18.5 +0.9
comp=Z,10.0nm,1.2s
CDF **Champ du Feu** 19.15 313 *e*P Pn 14 24 19.5 +1.5
CDF pmax pmax
comp=Z,18nm,1.4s
CDF **Champ du Feu** 19.15 313 *e*P Pn 14 24 19.5 +1.5
comp=Z,18nm,1.4s
VIVF **Saint-Julien-I** 19.45 301 *e*P P 14 24 20.2 -0.2
VIVF pmax pmax
comp=Z,25nm,1.0s
VIVF **Saint-Julien-I** 19.45 301 *e*P P 14 24 20.2 -0.2
comp=Z,25nm,1.0s
HAU **Haudompre** 19.51 311 *e*P P 14 24 21.3 +0.3
HAU pmax pmax
comp=Z,9.0nm,0.8s
HAU **Haudompre** 19.51 311 *e*P P 14 24 21.3 +0.3
comp=Z,9.0nm,0.8s
RAYN **Ar Rayn** 19.98 127 *e*P Pn 14 24 28.6 +0.5
comp=Z,11nm,0.9s
RAYN **Ar Rayn** 19.98 127 *i* P Pn 14 24 27.5 -0.5
SNR=11
RAYN **Ar Rayn** 19.98 127 P Pn 14 24 27.5 -0.5
SNR=11
SMF **Signal de Mont** 20.55 306 *e*P P 14 24 32.2 -0.1
SMF pmax pmax
comp=Z,85nm,0.8s
SSF **Saint Saulge** 20.91 307 *e*P P 14 24 36.9 +0.7
SSF pmax pmax
comp=Z,34nm,0.8s
SSF **Saint Saulge** 20.91 307 *e*P P 14 24 36.9 +0.7
comp=Z,34nm,0.8s
MEM **Membach** 20.99 318 ⇑ P P 14 24 38.0 +1.1
comp=Z,9.4nm,0.8s
MEM **Membach** 20.99 318 P Pn 14 24 40.7 +1.1
BGF **Bois d'Agland** 21.17 305 *e*P P 14 24 39.5 +0.5
BGF pmax pmax
comp=Z,29nm,1.0s
BCLA **Clavier** 21.27 317 ⇑ P P 14 24 41.2 +1.2
BCLA **Clavier** 21.27 317 P P 14 24 41.2 +1.2
GIVF **Givet** 21.38 315 *e*P P 14 24 42.6 +1.4
GIVF pmax pmax
comp=Z,13nm,0.8s
GIVF **Givet** 21.38 315 *e*P P 14 24 42.6 +1.4
comp=Z,13nm,0.8s
DOU **Dourbes** 21.51 315 ⇑ P P 14 24 44.2 +1.6
TCF **Toulx Ste Croi** 21.51 304 *e*P P 14 24 43.1 +0.4
TCF pmax pmax
comp=Z,18nm,1.2s
VSU **Vasula** 21.58 358 ⇑ *i* P P 14 24 44.1 +0.8
VSU *i* *SP sP 14 24 49.5 +1.5
VSU pmax pmax
comp=Z,98nm,1.2s
BAIF **Baives** 21.71 315 *e*P P 14 24 45.6 +0.9
BAIF pmax pmax
comp=Z,47nm,1.7s
RJF **Les Rejaudoux** 21.73 301 *e*P P 14 24 46.9 +1.9
RJF pmax pmax
comp=Z,9.0nm,0.8s
RJF **Les Rejaudoux** 21.73 301 *e*P P 14 24 46.9 +1.9
comp=Z,9.0nm,0.8s
UCC **Uccle** 21.98 317 ⇓ P P 14 24 47.5 -0.2
UCC **Uccle** 21.98 317 P P 14 24 47.4 -0.2
GEYT **Alibeck** 23.71 78 P P 14 25 05.4 -0.5
comp=Z,1.5nm,0.5s,baz=293,slow=9.4,SNR=5.7
LDF **La Druitiere** 23.72 308 *e*P P 14 25 04.4 -1.4
LDF pmax pmax
comp=Z,24nm,1.1s
GRR **Gorron** 24.12 308 *e*P P 14 25 08.2 -1.4
GRR pmax pmax
comp=Z,24nm,1.0s
FINES **FINESS Array B** 24.59 358 P P 14 25 12.9 -0.7
comp=Z,11nm,0.7s,baz=148,slow=11,SNR=31
FINES LR LR 14 35 34.1
comp=Z,128nm,18.4s,baz=169,slow=38
FINES **FINESS Array B** 24.59 358 *c*eP P 14 25 13.6 0.0
FINES pmax pmax
comp=Z,11nm,0.7s
FIA1 **FINESS Array S** 24.59 358 *e*P P 14 25 13.1 -0.5
comp=Z,13nm,0.8s
KLMR **Klimovskoe** 25.01 13 *e*P P 14 25 16.1 -1.3
KLMR pmax pmax
comp=Z,25nm,1.1s
KLMR **Klimovskoe** 25.01 13 *e*P P 14 25 16.2 -1.2
KLMR AMP 14 25 24.8
comp=Z,25nm,1.1s
HFS **Hagfors** 25.04 343 P P 14 25 17.0 -0.7
comp=Z,3.8nm,0.8s,baz=144,slow=13,SNR=5.0
HFS LR LR 14 36 25.6
comp=Z,143nm,19.7s,baz=162,slow=40
HFS **Hagfors** 25.04 343 P P 14 25 17.0 -0.7
AKTO **Aktyubinsk** 25.23 48 P P 14 25 19.1 -0.5
comp=Z,4.4nm,0.7s,baz=251,slow=12,SNR=10
AKTO LR LR 14 38 33.7
comp=Z,52nm,19.4s,baz=245,slow=44
ES19 **SONSECA Array** 25.30 286 *e*P P 14 25 20.1 -0.2
ES19 **SONSECA Array** 25.30 286 *e*P P 14 25 20.1 -0.2
ESDC **Sonseca Array** 25.35 286 P P 14 25 20.4 -0.4
comp=Z,8.5nm,0.8s,baz=80,slow=9.9,SNR=44
ESLA **Sonseca Array** 25.35 286 *e*P P 14 25 20.4 -0.4
comp=Z,10nm,0.8s
ESLA **Sonseca Array** 25.35 286 *e*P P 14 25 20.4 -0.4
comp=Z,10nm,0.8s
PAB **San Pablo** 25.65 286 *e*P P 14 25 22.6 -1.0
comp=Z,9.3nm,0.9s
PAB **San Pablo** 25.65 286 *e*P P 14 25 22.6 -1.0
PAB pmax pmax
comp=Z,9.0nm,0.9s
PAB **San Pablo** 25.65 286 *e*P P 14 25 22.6 -1.0
comp=Z,9.3nm,0.9s
KONO **Kongsberg** 25.73 338 *e*P P 14 25 25.4 +1.4
KONO pmax pmax
comp=Z,9.0nm,1.1s
ABKAR **Akbulak array** 26.04 52 *e*P P 14 25 25.8 -1.1
SHME **Shamm** 26.06 107 *i* P P 14 25 26.6 -0.8
SNR=7.9
ASUD **Al Ashush, Dub** 26.21 110 P P 14 25 27.8 -0.9
NAZ **Nazwa, Dubai** 26.26 109 *i* P P 14 25 30.2 +1.1
SNR=5.7
NB2 **NORSAR Subarra** 26.43 341 P P 14 25 30.7 +0.3
comp=Z,1.7nm,0.8s,baz=146,slow=10
NOA **NORSAR Array B** 26.43 341 P P 14 25 32.0 +1.6
comp=Z,1.4nm,0.7s,baz=146,slow=8.8,SNR=2.8
NOA LR LR 14 36 44.6
comp=Z,82nm,20.5s,baz=180,slow=38
NOA **NORSAR Array B** 26.43 341 P P 14 25 32.0 +1.6
MSFE **Esma-Masafi** 26.44 108 P P 14 25 29.5 -1.3
UOSS **Minazif** 26.70 109 *e*P P 14 25 32.7 -0.4
comp=Z,16nm,0.8s
UOSS **Minazif** 26.70 109 P P 14 25 33.0 -0.1
UOSS **Minazif** 26.70 109 *e*P P 14 25 32.7 -0.4
comp=Z,16nm,0.8s
HATD **Hatta, Dubai** 26.71 109 *i* P P 14 25 32.6 -0.6
SNR=6.1
ALNE **Al Ain** 26.85 111 P P 14 25 34.4 -0.1
MVO **Moncorvo** 27.59 290 *e*P P 14 25 44.0 +2.9
comp=Z,12nm,0.9s
MVO **Moncorvo** 27.59 290 *e*P P 14 25 44.0 +2.9
PBAR **Barrancos** 27.89 283 *e*P P 14 25 46.3 +2.6
comp=Z,10.0nm,1.2s
PBAR **Barrancos** 27.89 283 *e*P P 14 25 46.3 +2.6
PMRV **Marv??o** 28.01 286 *e*P P 14 25 46.8 +2.0
comp=Z,8.2nm,1.9s
PMRV **Marv??o** 28.01 286 *e*P P 14 25 46.8 +2.0
MTE **Manteigas** 28.03 288 *e*P P 14 25 47.1 +2.0
comp=Z,11nm,1.1s
MTE **Manteigas** 28.03 288 *e*P P 14 25 47.1 +2.0
EKA **Eskdalemuir Ar** 28.15 321 P P 14 25 47.3 +1.5
comp=Z,3.2nm,0.7s,baz=107,slow=11,SNR=6.0
POLO **Lamas de Olo** 28.16 290 *e*P P 14 25 46.4 +0.2
comp=Z,5.6nm,1.5s
POLO **Lamas de Olo** 28.16 290 *e*P P 14 25 46.4 +0.2
ARU **Arti** 28.17 36 P P 14 25 47.0 +1.0
comp=Z,4.4nm,0.2s,baz=249,slow=17,SNR=2.6
ARU LR LR 14 39 42.4
comp=Z,64nm,19.5s,baz=184,slow=42
ARU **Arti** 28.17 36 *c i* P P 14 25 50.5 +4.5
ARU 14 26 37.3
ARU SS SS 14 32 00.0 -30
ARU pmax pmax
comp=Z,12nm,2.5s
PVAQ **Vaqueiros** 28.55 282 *e*P P 14 25 49.1 -0.5
comp=Z,13nm,1.5s
PVAQ **Vaqueiros** 28.55 282 *e*P P 14 25 49.1 -0.5
WSAR **Wadi Sarin** 29.48 109 P P 14 25 57.5 -0.6
comp=Z,3.8nm,0.8s,baz=273,slow=8.0,SNR=5.5
ARCES **ARCESS Array B** 32.71 358 P P 14 26 26.5 +0.5
comp=Z,2.8nm,0.8s,baz=171,slow=6.4,SNR=4.3
BRVK **Borovoye** 33.28 47 ⇓ *i* P P 14 26 32.4 +1.3
BRVK pmax pmax
comp=Z,2.0nm,1.5s
BVAR **Borovoye Array** 33.33 48 P P 14 26 31.3 -0.3
comp=Z,0.7nm,0.8s,baz=261,slow=8.3,SNR=5.6
TOA0 **Torodi Ar. Sit** 33.53 232 *e*P P 14 26 32.4 -1.2
TORD **Torodi Ar. Bea** 33.53 232 P P 14 26 32.8 -0.8
comp=Z,2.8nm,0.5s,baz=33,slow=9.0,SNR=34
AAK **Ala-Archa** 35.66 66 P P 14 26 51.5 -0.6
comp=Z,1.1nm,0.4s,baz=239,slow=5.7,SNR=4.7
AAK **Ala-Archa** 35.66 66 ⇑ *i* P P 14 26 52.1 0.0
AAK *i* *PP pP 14 26 54.6 -1.0
AAK *i* 14 29 21.7
AAK pmax pmax
comp=Z,3.0nm,1.1s
KOWA **Kowa** 36.36 241 P P 14 26 57.3 -0.8
comp=Z,1.2nm,0.4s,baz=63,slow=6.5,SNR=3.9
NIL **Nilore** 36.64 81 *e*P P 14 26 59.9 -0.5
comp=Z,8.2nm,0.8s
NIL **Nilore** 36.64 81 *e*P P 14 26 59.9 -0.5
NIL pmax pmax
comp=Z,8.0nm,0.8s
NIL **Nilore** 36.64 81 *e*P P 14 26 59.9 -0.5
comp=Z,8.2nm,0.8s
NRN **Naryn** 36.94 68 *e*P P 14 27 02.2 -1.0
comp=Z,3.5nm,0.9s
NRN **Naryn** 36.94 68 *e*P P 14 27 02.2 -1.0
NRN pmax pmax
comp=Z,4.0nm,0.9s
NRN **Naryn** 36.94 68 *e*P P 14 27 02.2 -1.0
comp=Z,3.5nm,0.9s
KDJ **Kajisay** 37.70 67 *e*P P 14 27 09.0 -0.5
comp=Z,3.8nm,0.9s
KURBB **Kurchatov Arra** 38.08 53 P P 14 27 12.2 -0.1
comp=Z,6.9nm,0.9s,baz=276,slow=8.7,SNR=40
KURK **Kurchatov** 38.14 52 *e*P P 14 27 12.1 -0.7
comp=Z,6.2nm,1.0s
KURK **Kurchatov** 38.14 52 ⇑ *i* P P 14 27 13.1 +0.3
KURK pmax pmax
comp=Z,8.0nm,1.2s
MK31 **Makanchi Array** 40.73 58 *e*P P 14 27 33.4 -1.2
MK31 **Makanchi Array** 40.73 58 *e*P P 14 27 33.4 -1.2
MKAR **Makanchi Array** 40.73 58 P P 14 27 34.7 +0.1
comp=Z,6.3nm,0.9s,baz=282,slow=6.4,SNR=32
MKAR **Makanchi Array** 40.73 58 *e*P P 14 27 33.6 -1.0
comp=Z,32nm,0.9s
MK01 **Makanchi Array** 40.74 59 *e*P P 14 27 33.8 -0.9
NVS **Novosibirsk** 41.08 46 *e*P P 14 27 37.5 +0.2
SPITS **Spitsbergen Ar** 41.67 356 P P 14 27 43.7 +1.8
comp=Z,2.3nm,0.9s,baz=167,slow=8.4,SNR=3.7
ZAA0 **Zalesovo Array** 41.99 48 *e*P P 14 27 44.1 -0.6
comp=Z,3.4nm,0.8s
ZALV **Zalesovo Beam** 41.99 48 P P 14 27 44.5 -0.2
comp=Z,3.6nm,0.7s,baz=266,slow=8.7,SNR=18
ZALV **Zalesovo Beam** 41.99 48 *e*P P 14 27 43.6 -1.2
DBIC **Dimbokro** 42.61 233 P P 14 27 49.3 -0.9
comp=Z,1.2nm,0.3s,baz=22,slow=6.7,SNR=4.1
WMQ **Urumqi** 44.98 62 P P 14 28 11.0 +1.9
NRIK **Noril'sk** 45.23 25 P P 14 28 11.8 +1.2
comp=Z,2.4nm,0.5s,baz=245,slow=5.9,SNR=3.8
PYUN **Piuthan** 46.47 84 *e*P P 14 28 21.4 +0.2
comp=Z,31nm,0.8s
DANN **Dangsing** 46.97 84 *e*P P 14 28 25.7 +0.4
comp=Z,66nm,0.8s
KOLN **Koldanda** 47.10 84 *e*P P 14 28 26.2 0.0
comp=Z,22nm,0.8s
GKN **Gorkha** 47.82 84 *e*P P 14 28 31.4 -0.3
comp=Z,40nm,1.0s
DMN **Daman** 48.37 84 *e*P P 14 28 36.1 0.0
comp=Z,41nm,0.9s
KKN **Kakani** 48.43 84 *e*P P 14 28 36.1 -0.4
comp=Z,11nm,0.7s
PKIN **Phulchoki** 48.61 84 *e*P P 14 28 38.0 0.0
comp=Z,14nm,0.8s
GUN **Gumba** 48.85 83 *e*P P 14 28 39.4 -0.5
comp=Z,20nm,0.8s
JIRN **Jiri** 49.21 83 *e*P P 14 28 42.2 -0.5
comp=Z,17nm,0.7s
TLY **Talaya** 53.58 48 P P 14 29 15.1 +0.3
comp=Z,2.4nm,0.3s,baz=306,slow=11,SNR=2.4
TLY **Talaya** 53.58 48 ⇑ *i* P P 14 29 15.6 +0.9
TLY *i* AP pP 14 29 17.2 -1.2
TLY pmax pmax
comp=Z,4.0nm,0.8s
ZAK **Zakamensk** 53.71 50 *e*P P 14 29 16.1 +0.3
ZAK pmax pmax
comp=Z,5.0nm,1.1s
SONM **Songino Array** 56.45 52 P P 14 29 36.0 +0.3
comp=Z,1.8nm,0.5s,baz=286,slow=8.4,SNR=13
SONM **Songino Array** 56.45 52 *e*P P 14 29 36.3 +0.7
SONM pmax pmax
comp=Z,2.0nm,0.5s
SONA1 **Songino Array** 56.45 52 *e*P P 14 29 35.1 -0.5
ULN **Ulaanbaatar** 56.85 52 *e*P P 14 29 38.3 -0.3
comp=Z,6.2nm,1.1s
ULN **Ulaanbaatar** 56.85 52 ⇑ *i* P P 14 29 39.3 +0.8
ULN *i* *PP pP 14 29 40.9 -1.3
ULN pmax pmax
comp=Z,4.0nm,0.7s
OPO **Ambohidratompo** 58.02 159 P P 14 29 44.7 -2.2
comp=Z,3.4nm,0.9s,baz=31,slow=5.9,SNR=1.9
TIXI **Tiksi** 58.64 21 ⇓ *i* P P 14 29 51.6 +1.1
TIXI *i* *PP pP 14 29 54.4 +0.2
TIXI *i* 14 30 43.1
TIXI pmax pmax
comp=Z,1.0nm,0.6s
LBTB **Lobatse** 61.65 183 *e*P P 14 30 13.1 +1.4
comp=Z,21nm,0.8s
LBTB **Lobatse** 61.65 183 *e*P P 14 30 13.1 +1.4
LBTB pmax pmax

comp=Z,21nm,0.8s
HHC Hu-ho-hao-te 62.60 58 eP P 14 30 17.9 -0.2
HHC PP **PP** 14 32 37.2 +1.7
HHC S **S** 14 38 40.7 -5.3
HHC pmax pmax
comp=Z,13nm,0.5s
HHC pmax pmax
comp=Z,37nm,5.4s
YAK Yakutsk 63.10 31⇑iP P 14 30 21.6 +0.6
YAK pmax pmax
comp=Z,7.0nm,0.8s
CMAR Chiang Mai Arr 63.93 86 P P 14 30 26.3 -0.9
comp=Z,3.0nm,0.8s,baz=299,slow=8.0,SNR=18
CMAR Chiang Mai Arr 63.93 86 eP P 14 30 26.7 -0.4
CMAR pmax pmax
comp=Z,3.0nm,0.8s
BOSA Boshof 65.24 183 P P 14 30 35.0 -0.5
comp=Z,8.8nm,0.8s,baz=352,slow=6.9,SNR=17
BOSA Boshof 65.24 183 eP P 14 30 35.4 -0.1
comp=Z,11nm,0.9s
BOSA Boshof 65.24 183 eP P 14 30 35.4 -0.1
BOSA pmax pmax
comp=Z,11nm,0.9s
SNY Shenyang 70.03 52 ⇓P P 14 31 05.0 -0.6
SNY pmax pmax
comp=Z,23nm,1.0s
BILL Bilibino 70.73 15 eP P 14 31 09.1 -0.4
comp=Z,11nm,1.4s
USRK Ussuriysk Ar. 73.83 47 P P 14 31 28.2 -0.2
comp=Z,3.5nm,0.7s,baz=298,slow=2.0,SNR=5.2
KS01 Wonju Array Si 75.21 54 eP P 14 31 35.9 -0.6
KSAR Wonju Array Be 75.22 54 P P 14 31 37.0 +0.5
KSAR Wonju Array Be 75.22 54 P P 14 31 37.1 +0.5
KSRS Korea Array 75.24 54 P P 14 31 37.0 +0.4
comp=Z,5.1nm,0.8s,baz=300,slow=5.1,SNR=17
YKA Yellowknife Ar 76.52 343 P P 14 31 42.0 -1.5
comp=Z,0.2nm,0.4s,baz=41,slow=5.7,SNR=3.9
YKA Yellowknife Ar 76.52 343 eP P 14 31 42.6 -0.9
YKA pmax pmax
comp=Z,1.0nm,0.8s
MJAR Matsushiro Arr 82.30 50 P P 14 32 15.5 0.0
comp=Z,3.0nm,0.8s,baz=294,slow=6.2,SNR=6.0
MJA0 Matsu Arr-Jizo 82.32 50 eP P 14 32 15.6 -0.1
MJA0 pmax pmax
comp=Z,3.0nm,0.9s
ANMO Albuquerque 97.01 324⇑iP Pdif 14 33 27.9 +1.8
ANMO *PP sP 14 33 31.6 +0.3
ANMO pmax pmax
comp=Z,1.0nm,1.4s
ASAR Alice Springs 115.93 101 PKP PKPdf 14 38 35.1 -1.9
comp=Z,0.4nm,0.9s,baz=316,slow=1.8,SNR=5.6
ASAR Alice Springs 115.93 101 ePKIKP PKPdf 14 38 37.0 0.0

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*ISK **04** 14:56:30.9, 39°.88N×39°.69E, h8km, ML2.9/5*
*ISCJB **04** 14:56:31.7±0.4, 39°.88N±0°.02×39°.70E±0°.04, h7km±5km, Error ellipse: s-maj=5.3km s-min=3.9km az=24.1*
*CSEM **04** 14:56:31.5±0.1, 39°.86N×39°.68E, h8km, ML2.9, Error ellipse: s-maj=2.5km s-min=2.2km az=120.0*
*DDA **04** 14:56:31.9, 39°.86N×39°.68E, h7km, Ml2.9*
ISC 04 14:56:31.6±0.9, 39°.87N±0°.02×39°.67E±0°.02, h11km±7km, n28, σ0$44/45, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EUZM	**Uzumlu**	**0.17**	**172**	*i* P	**Pg**	**14 56 35.5**	**+0.1**
EUZM				*i* S	**Sg**	**14 56 38.1**	**+0.1**
EUZM	**Uzumlu**	**0.17**	**172**	P	**Pg**	**14 56 35.5**	**+0.1**
EUZM				S	**Sg**	**14 56 38.1**	**+0.1**
EZC	**Erzincan**	**0.27**	**244**	*e*Pg	**Pg**	**14 56 36.9**	**-0.3**
ERZN	**Erzincan**	**0.29**	**172**	PG	**Pg**	**14 56 36.9**	**-0.6**
KELT	**Kelkit**	**0.42**	**311**	*i* P	**Pb**	**14 56 40.8**	**-0.4**
KELT				*i* S	**Sb**	**14 56 47.1**	**-0.6**
KELT	**Kelkit**	**0.42**	**311**	P	**Pb**	**14 56 40.8**	**-0.4**
KELT				S	**Sb**	**14 56 47.1**	**-0.6**
GUMT	**Gumushane**	**0.60**	**346**	PG	**Pg**	**14 56 43.4**	**0.0**
GUMT	**Gumushane**	**0.60**	**346**	*e*Pg	**Pg**	**14 56 43.4**	**0.0**
BAYT	**Ayd¨–ntepe-Bay**	**0.64**	**35**	PG	**Pg**	**14 56 43.7**	**-0.3**
BAYT				SG	**Sg**	**14 56 51.9**	**-0.5**
BAYT	**Ayd¨–ntepe-Bay**	**0.64**	**35**	*e*Pg	**Pg**	**14 56 43.7**	**-0.3**
BAYT				*e*Sg	**Sg**	**14 56 51.9**	**-0.5**
KOPT	**Kop Dagi**	**0.65**	**77**	*i* P	**Pg**	**14 56 44.6**	**+0.3**
KOPT				*i* S	**Sb**	**14 56 54.4**	**-0.1**
KOPT	**Kop Dagi**	**0.65**	**77**	P	**Pg**	**14 56 44.6**	**+0.3**
KOPT				S	**Sb**	**14 56 54.3**	**-0.1**
TNCL	**Tunceli-Merkez**	**0.76**	**187**	*i* P	**Pg**	**14 56 46.4**	**+0.1**
TNCL				*i* S	**Sn**	**14 56 59.0**	**-1.0**
TNCL	**Tunceli-Merkez**	**0.76**	**187**	P	**Pg**	**14 56 46.4**	**+0.1**
YEDI	**Yedisu-Bingol**	**0.80**	**122**	PG	**Pg**	**14 56 46.7**	**-0.4**
YEDI	**Yedisu-Bingol**	**0.80**	**122**	*e*Pg	**Pg**	**14 56 46.7**	**-0.4**
PTK	**Pertek**	**1.00**	**192**	PG	**Pb**	**14 56 50.9**	**-0.2**
PTK	**Pertek**	**1.00**	**192**	*e*Pg	**Pb**	**14 56 50.9**	**-0.2**
MACK	**Trabzon**	**1.07**	**4**	*i* P	**Pg**	**14 56 52.2**	**0.0**
MACK				*i* S	**Sb**	**14 57 06.8**	**+0.5**
MACK	**Trabzon**	**1.07**	**4**	P	**Pg**	**14 56 52.2**	**0.0**
MACK				S	**Sb**	**14 57 06.8**	**+0.5**
KEMA	**Kemaliye**	**1.09**	**237**	*i* P	**Pb**	**14 56 52.8**	**+0.3**
KEMA				*i* S	**Sb**	**14 57 07.5**	**+0.7**
KEMA	**Kemaliye**	**1.09**	**237**	P	**Pb**	**14 56 52.8**	**+0.3**
KEMA				S	**Sb**	**14 57 07.5**	**+0.7**
SUSE	**Susehri**	**1.17**	**287**	*i* P	**Pg**	**14 56 53.5**	**-0.7**
SUSE				*i* S	**Sn**	**14 57 11.0**	**+0.7**
SUSE	**Susehri**	**1.17**	**287**	P	**Pg**	**14 56 53.5**	**-0.7**
SUSE				S	**Sn**	**14 57 11.0**	**+0.7**
ESPY	**Espiye-Giresun**	**1.27**	**326**	PN	**Pb**	**14 56 55.8**	**+0.3**
ESPY				SN	**Sn**	**14 57 12.9**	**+0.5**
ESPY	**Espiye-Giresun**	**1.27**	**326**	*e*Pn	**Pb**	**14 56 55.8**	**+0.3**
ESPY				*e*Sn	**Sn**	**14 57 12.9**	**+0.5**
CHOM	**Cayeli-Rize**	**1.48**	**34**	PN	**Pb**	**14 56 59.2**	**0.0**
CHOM	**Cayeli-Rize**	**1.48**	**34**	*e*Pn	**Pb**	**14 56 59.2**	**0.0**

KRSC 04 15:03:52.8±1.3, 50°.42N×158°.21E, h40km±21km, ML3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAK	**Asacha**	**1.98**	**354**	*e*P	Pn	15 04 26.0	+2.2
RUS	**Russkaya**	**2.03**	**5**	*e*P	Pn	15 04 25.9	+1.5
RUS				*e*S	Sn	15 04 50.4	+1.9
MTVR	**Mutnovka**	**2.07**	**360**	*e*P	Pn	15 04 27.1	+2.0
MTVR				*e*S	Sn	15 04 52.8	+3.1
PET	**Petropavlovsk**	**2.63**	**6**	*e*P	Pn	15 04 34.7	+2.1
PET				*e*S	Sn	15 05 06.3	+3.1
DALK	**Dalny**	**2.64**	**7**	*e*P	Pn	15 04 35.0	+2.2
DALK				*e*S	Sn	15 05 06.6	+3.1
UGLR	**Uglovaya**	**2.82**	**8**	*e*P	Pn	15 04 38.7	+3.3
AVH	**Avacha**	**2.87**	**6**	*e*P	Pn	15 04 40.3	+4.2
KOK	**Koryaka**	**2.89**	**5**	*e*P	Pn	15 04 40.2	+3.8
SDLR	**Sedlovina**	**2.90**	**8**	*e*P	Pn	15 04 39.4	+3.0
SDLR				*e*S	Sn	15 05 14.2	+4.1
KRER	**Koryakskii**	**2.91**	**6**	*e*P	Pn	15 04 40.2	+3.5
KRX	**Arik**	**2.96**	**5**	*e*P	Pn	15 04 41.2	+3.9
KRX				*e*S	Sn	15 05 17.2	+5.5
GNL	**Ganaly**	**3.29**	**357**	*e*P	Pn	15 04 45.1	+3.3

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*ISCJB **04** 15:14:34.3±0.7, 8°.78S±0°.07×124°.38E±0°.07, h100km, mb3.4/3, Error ellipse: s-maj=11.1km s-min=8.4km az=140.1*
*IDC **04** 15:14:35.7±3.7, 8°.75S×124°.43E, h92km±47km, mb3.3/3, mb1 3.8/6, mb1mx3.3/47, mbtmp3.9/6, MS3.6/1, Ms1 3.6/1, ms1mx3.0/29, Error ellipse: s-maj=46.7km s-min=28.2km az=31.0*
*DJA **04** 15:14:39.6±0.7, 9°S±3°×12°4E±°, h27km±15km, M4.1/9, mB5.0/1, mb4.4/3, MLv4.0/9, Mw(mB)4.4/1*
ISC 04 15:14:35.1±0.9, 8°.88S±0°.07×124°.34E±0°.08, h100km, n16, σ3$60/22, mb3.4/3, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**0.87**	**184**	P	**Pn**	**15 14 58.5**	**+4.2**
SOEI				S	**Sn**	**15 15 13.3**	**+4.5**
BATI	**Baumata**	**1.48**	**207**	P	**Pn**	**15 15 03.9**	**+2.7**
	89nm,0.3s,baz=294,slow=3.9,SNR=147						
BATI				S	**Sn**	**15 15 24.3**	**+3.5**
	285nm,0.3s,baz=77,slow=6.3,SNR=43						
BATI	**Baumata**	**1.48**	**207**	P	**Pn**	**15 15 04.0**	**+2.9**
BATI				S	**Sn**	**15 15 24.4**	**+3.6**
MMRI	**Maumere**	**2.09**	**276**	P	**Pn**	**15 15 09.7**	**+0.9**
EDFI	**Ende, Flores**	**2.62**	**273**	P	**Pn**	**15 15 16.8**	**+0.9**
BASI	**Baing, Sumba**	**3.94**	**250**	P	**Pn**	**15 15 33.9**	**+0.4**
WSI	**Waingapu**	**4.06**	**259**	P	**Pn**	**15 15 35.3**	**+0.2**
BKSI	**Bulukumba**	**5.47**	**310**	P	**Pn**	**15 15 54.8**	**+0.5**
PLAI	**Plampang**	**6.48**	**270**	P	**Pn**	**15 16 08.3**	**+0.3**
PLAI				S	**Sn**	**15 17 15.9**	**-4.7**
FITZ	**Fitzroy Crossi**	**9.25**	**172**	P	**Pn**	**15 16 46.2**	**+0.6**
	1.0nm,0.3s,baz=1.5,slow=12,SNR=56						
FITZ				S	**Sn**	**15 18 23.1**	**-4.9**
	2.3nm,0.3s,baz=245,slow=21,SNR=19						
WRA	**Warramunga Arr**	**14.65**	**140**	P	**Pn**	**15 17 57.4**	**0.0**
	2.5nm,0.3s,baz=322,slow=14,SNR=87						
WRA				S	**Sn**	**15 20 32.6**	**-6.5**
	1.4nm,0.3s,baz=314,slow=23,SNR=8.3						
ASAR	**Alice Springs**	**17.32**	**149**	P	**Pn**	**15 18 33.2**	**+2.5**
	1.1nm,0.3s,baz=318,slow=11,SNR=67						
ASAR				S	**Sn**	**15 21 35.2**	**-8.3**
	0.3nm,0.3s,baz=308,slow=20,SNR=5.0						
KSRS	**Korea Array**	**46.21**	**4**	LR	LR	15 45 06.9	
	comp=Z,71nm,19.2s,baz=42,slow=40						
MJAR	**Matsushiro Arr**	**47.02**	**15**	P	**P**	**15 22 57.7**	**+1.2**
	0.9nm,0.5s,baz=200,slow=9.7,SNR=4.6						
MKAR	**Makanchi Array**	**66.87**	**330**	P	**P**	**15 25 17.6**	**+1.1**
	0.2nm,0.5s,baz=143,slow=5.6,SNR=4.6						
KURBB	**Kurchatov Arra**	**71.30**	**331**	P	**P**	**15 25 44.1**	**+0.4**
	0.3nm,0.7s,baz=123,slow=6.8,SNR=2.8						

MAN 04 15:26:32.9, 17°.67N×119°.05E, h35km, mb4.9, ML3.8, MS3.8, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABRA	**Dolores**	**1.58**	**90**	*e*P	Pn	15 26 58.7	+0.3
ABRA				*e*S	Sn	15 27 18.4	+0.8
SCZP	**Santa Cruz**	**2.05**	**156**	*e*P	Pn	15 27 05.7	+0.8
APYP	**Conner**	**2.10**	**84**	*e*P	Pn	15 27 06.2	+0.7
APYP				*e*S	Sn	15 27 31.6	+1.2

IDC 04 15:26:41.2±2.1, 65°.22S×179°.85E, h0km, mb3.5/2, mb1 4.0/3, mb1mx3.7/32, mbtmp3.8/3, ML3.7/1, MS4.0/8, Ms1 4.0/8, ms1mx3.7/30, Error ellipse: s-maj=73.9km s-min=40.5km az=69.0, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**13.52**	**197**	Pn	Pn	15 29 54.6	+0.8
	0.4nm,0.3s,baz=35,slow=16,SNR=45						
VNDA				LR	LR	15 33 37.7	
	comp=Z,436nm,20.6s,baz=352,slow=31						
RPZ	**Rata Peaks**	**22.10**	**343**	LR	LR	15 38 36.3	
	comp=Z,225nm,18.1s,baz=167,slow=32						
URZ	**Urewera**	**27.05**	**355**	LR	LR	15 41 12.1	
	comp=Z,279nm,19.3s,baz=134,slow=32						
MAW	**Mawson**	**40.16**	**212**	LR	LR	15 50 27.7	
	comp=Z,347nm,18.9s,baz=204,slow=36						
SNAA	**Sanae**	**43.36**	**179**	LR	LR	15 51 23.6	
	comp=Z,312nm,18.9s,baz=180,slow=34						
DZM	**Mont Dzumac**	**44.02**	**342**	LR	LR	15 50 37.6	
	comp=Z,132nm,19.4s,baz=160,slow=33						
RAR	**Rarotonga**	**45.98**	**27**	LR	LR	15 51 50.2	
	comp=Z,153nm,18.6s,baz=196,slow=33						
H01W1	**Cape Leeuwin H**	**48.78**	**275**	T	T	16 28 16.7	
	baz=148,slow=76,SNR=80						
H01W2	**Cape Leeuwin H**	**48.78**	**275**	T	T	16 28 16.9	
	baz=148,slow=76,SNR=69						
H01W3	**Cape Leeuwin H**	**48.79**	**275**	T	T	16 28 17.9	
	baz=148,slow=76,SNR=71						
ASAR	**Alice Springs**	**50.90**	**302**	P	P	15 35 44.2	+0.3
	0.2nm,0.6s,baz=153,slow=7.1,SNR=5.8						
WRA	**Warramunga Arr**	**54.17**	**304**	P	P	15 36 07.8	-0.3
	2.1nm,1.3s,baz=159,slow=6.6,SNR=3.8						
HNR	**Honiara**	**57.41**	**336**	LR	LR	15 56 54.8	
	comp=Z,94nm,21.6s,baz=135,slow=32						
H08S2	**Diego Garcia H**	**90.28**	**251**	T	T	17 20 29.5	
	baz=155,slow=76,SNR=31						
H08S1	**Diego Garcia H**	**90.28**	**251**	T	T	17 20 30.5	
	baz=155,slow=76,SNR=22						
H08S3	**Diego Garcia H**	**90.30**	**251**	T	T	17 20 31.0	
	baz=155,slow=76,SNR=45						
H06E1	**SOCORRO T-PHAS**	**98.54**	**64**	T	T	17 29 55.2	
	SNR=5.8						
H02S1	**DAWSON INLET T**	**123.62**	**32**	T	T	18 01 13.4	
	SNR=121						
ILAR	**Eielson Array**	**131.93**	**18**	PKP	PKPdf	15 45 55.0	+0.3
	0.1nm,0.3s,baz=212,slow=3.2,SNR=3.0						
BRTR	**Keskin Array B**	**147.93**	**234**	PKPbc	PKPbc	15 46 26.1	-1.5
	0.2nm,0.4s,baz=165,slow=3.5,SNR=2.5						

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*ISCJB **04** 15:30:49.7±1.3, 36°.23N±0°.04×70°.1E±0°.1, h100km, Error ellipse: s-maj=15.7km s-min=4.6km az=172.1*
*NNC **04** 15:31:01.6±4.2, 37°.04N×70°.37E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=34.0km s-min=29.4km az=138.0*
ISC 04 15:30:52.4±1.5, 36°.24N±0°.06×70°.3E±0°.1, h100km, n21, σ2$24/26, 7C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**4.55**	**33**	⇑Pn	**Pn**	**15 32 03.1**	**+3.9**
	3.3nm,0.3s						
SFK				⇑Sn	**Sn**	**15 32 50.7**	**-0.4**
	48nm,0.8s						
THN	**Thein Dam**	**5.91**	**128**	⇓iP	Pn	15 32 25.6	+8.3
THN				*i* S	Sn	15 33 33.0	+9.4
DHRM	**DHARAMSHALA**	**6.40**	**127**	*e*P	**Pn**	**15 32 26.8**	**+2.5**
DHRM				*e*S	**Sn**	**15 33 37.8**	**+1.8**
DHRM				IAML		15 33 40.9	
	comp=N,97nm,0.3s						
DHRM				IAML		15 33 41.2	
	comp=E,167nm,0.3s						
MNAS	**Manas**	**6.47**	**15**	⇑Pn	**Pn**	**15 32 28.0**	**+2.8**
	comp=E,1.2nm,0.3s						
MNAS				⇓Sn	**Sn**	**15 33 34.3**	**-3.3**
	comp=E,10nm,0.7s						
KK31	**Karatay Array**	**6.85**	**2**	⇓Pn	**Pn**	**15 32 34.1**	**+3.8**
	comp=E,1.1nm,0.3s,baz=184,slow=13,SNR=18						
KK31				⇑Sn	**Sn**	**15 33 44.0**	**-2.7**
	comp=E,1.2nm,0.3s,baz=184,slow=20,SNR=6.0						
AAK	**Ala-Archa**	**7.18**	**26**	⇑Pn	**Pn**	**15 32 36.2**	**+1.5**
	comp=E,5.0nm,0.8s						
AAK				⇓Sn	**Sn**	**15 33 50.0**	**-4.8**
	comp=E,9.1nm,0.8s						
SMLA	**Simla**	**7.70**	**130**	*e*P	Pn	15 32 46.7	+5.0
SMLA				*e*S	**Sn**	**15 34 08.8**	**+1.6**
SMLA				IAML		15 34 10.9	
	comp=N,32nm,0.5s						
SMLA				IAML		15 34 11.3	
	comp=E,34nm,0.3s						
TKM2	**Tokmak 2**	**7.84**	**30**	⇑Pn	**Pn**	**15 32 43.6**	**-0.2**
	comp=E,1.7nm,0.6s						
TKM2				⇑Sn	**Sn**	**15 34 10.2**	**-0.8**
	comp=E,2.3nm,0.7s						
KKR	**Kurukshetra**	**8.34**	**137**	*e*S	**Sn**	**15 34 22.4**	**-0.6**
JASL	**Jaisalmer**	**9.31**	**176**	*e*S	**Sn**	**15 34 44.5**	**-2.1**
KHET	**Khetri**	**9.41**	**148**	*e*S	**Sn**	**15 34 46.7**	**-2.2**
KHET				IAML		15 34 53.5	
	comp=E,6.3nm,0.5s						
KHET				IAML		15 34 56.6	
SONA	**Sohna**	**9.84**	**142**	*e*S	**Sn**	**15 34 59.3**	**-0.3**
PYUN	**Piuthan**	**13.49**	**123**	*e*P	**Pn**	**15 34 00.1**	**+0.2**
	comp=E,5.3nm,0.3s						
DANN	**Dangsing**	**13.86**	**121**	*e*P	**Pn**	**15 34 04.4**	**-0.4**
	comp=E,7.5nm,0.6s						
KOLN	**Koldanda**	**14.12**	**123**	*e*P	**Pn**	**15 34 08.7**	**+0.7**
	comp=E,4.1nm,0.4s						
GKN	**Gorkha**	**14.69**	**120**	*e*P	**Pn**	**15 34 15.1**	**-0.2**
	comp=E,8.6nm,0.4s						
DMN	**Daman**	**15.26**	**120**	*e*P	**Pn**	**15 34 21.1**	**-1.5**
	comp=E,5.3nm,0.4s						
KKN	**Kakani**	**15.27**	**119**	*e*P	**Pn**	**15 34 21.2**	**-1.5**
	comp=E,12nm,0.5s						
PKIN	**Phulchoki**	**15.48**	**120**	*e*P	**Pn**	**15 34 24.4**	**-1.0**
	comp=E,7.6nm,0.4s						
GUN	**Gumba**	**15.62**	**118**	*e*P	**Pn**	**15 34 25.9**	**-1.4**
	comp=E,13nm,0.8s						
JIRN	**Jiri**	**15.99**	**118**	*e*P	**Pn**	**15 34 30.2**	**-1.7**
	comp=E,12nm,0.5s						

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*IDC **04** 15:40:46.9±1.7, 24°.51S×177°.79W, h0km, mb4.5/6, mb1 4.6/6, mb1mx4.0/43, mbtmp4.5/6, Error ellipse: s-maj=71.3km s-min=32.2km az=162.0*
*ISCJB **04** 15:40:49.4±1.6, 24°.6S±0°.2×177°.7W±0°.3, h33km, mb4.4/7, Error ellipse: s-maj=37.4km s-min=27.2km az=153.2*
*NEIC **04** 15:40:52.1±0.8, 24°.60S×177°.78W, h35km, mb4.2/1, Error ellipse: s-maj=26.6km s-min=20.1km az=177.0*
ISC 04 15:40:52.1±1.1, 24°.6S±0°.2×177°.8W±0°.2, h35km, n17, σ1$36/20, mb4.3/7, 1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**33.50**	**270**	P	**P**	**15 47 29.8**	**+1.4**
	13nm,0.4s,baz=100,slow=12,SNR=41						
CTAO	**Charters Tower**	**33.50**	**270**	*e*P	**P**	**15 47 30.0**	**+1.6**
PMG	**Port Moresby**	**36.63**	**288**	P	**P**	**15 47 54.7**	**-0.7**
	19nm,0.7s,baz=139,slow=9.3,SNR=7.9						
ASAR	**Alice Springs**	**43.92**	**261**	P	**P**	**15 48 56.6**	**+0.8**
	2.5nm,0.8s,baz=100,slow=6.6,SNR=34						
ASAR				PcP	**PcP**	**15 50 41.5**	**0.0**
	0.7nm,0.8s,baz=105,slow=4.3,SNR=4.8						
WRAB	**Tennant Creek**	**44.37**	**266**	*e*P	**P**	**15 48 58.5**	**-0.8**
	2.2nm,0.5s						
WRA	**Warramunga Arr**	**44.38**	**266**	P	**P**	**15 48 58.9**	**-0.5**
	3.0nm,0.5s,baz=103,slow=8.7,SNR=30						
WRA				PcP	**PcP**	**15 50 42.0**	**-1.1**
	0.8nm,0.8s,baz=99,slow=3.3,SNR=3.9						
FITZ	**Fitzroy Crossi**	**52.79**	**265**	P	**P**	**15 50 02.4**	**-1.8**
	3.4nm,1.0s,baz=90,slow=8.1,SNR=4.5						
SBA	**Scott Base**	**53.82**	**184**	*e*P	**P**	**15 50 10.7**	**-0.2**
KSRS	**Korea Array**	**80.08**	**319**	P	**P**	**15 52 58.1**	**-0.1**
	1.0nm,0.8s,baz=122,slow=4.7,SNR=4.1						
KSAR	**Wonju Array Be**	**80.09**	**319**	P	**P**	**15 52 58.1**	**-0.2**
KURK	**Kurchatov**	**117.09**	**316**	PKP	**PKPdf**	**15 59 34.1**	**+1.1**
KURBB	**Kurchatov Arra**	**117.14**	**316**	PKP	**PKPdf**	**15 59 34.1**	**+1.0**
	0.4nm,0.8s,baz=116,slow=2.2,SNR=2.5						
BVAR	**Borovoye Array**	**122.29**	**318**	PKP	**PKPdf**	**15 59 42.9**	**-0.2**
	0.4nm,0.4s,baz=143,slow=2.7,SNR=3.3						
HFS	**Hagfors**	**143.59**	**350**	PKP	**PKPdf**	**16 00 22.3**	**-0.4**
	2.1nm,0.4s,baz=47,slow=2.8,SNR=21						
AKASG	**Malin Array Be**	**146.63**	**328**	PKPbc	**PKPab**	**16 00 30.3**	**-0.6**
	0.5nm,0.3s,baz=44,slow=4.3,SNR=7.8						
BRTR	**Keskin Array B**	**149.60**	**307**	PKPbc	**PKPbc**	**16 00 38.3**	**+0.1**
	1.3nm,0.6s,baz=80,slow=4.1,SNR=3.9						
CLL	**Collm**	**152.06**	**345**	⇓*i*PKPbc	**PKPbc**	**16 00 46.6**	**+3.2**
	comp=Z,4.0nm,0.7s						
CLL				*e*PKPab	**sPKPbc**	**16 00 56.0**	**-2.8**

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*ISCJB **04** 15:52:07.7±1.5, 55°.3S±0°.2×28°.7W±0°.3, h10km, mb4.0/2, Error ellipse: s-maj=36.4km s-min=14.8km az=42.5*
*IDC **04** 15:52:08.3±1.4, 55°.16S×28°.43W, h0km, mb4.0/1, mb1 4.1/2, mb1mx3.7/27, mbtmp3.9/2, ML4.1/1, Error ellipse: s-maj=109.8km s-min=32.9km az=50.0*
*NEIC **04** 15:52:09.7±0.7, 55°.28S×28°.74W, h10km, mb4.0/1, Error ellipse: s-maj=21.8km s-min=11.1km az=218.0*
ISC 04 15:52:09.7±1.3, 55°.3S±0°.2×28°.7W±0°.2, h10km, n8, σ0$60/8, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**4.59**	**279**	*e*Pn	**Pn**	**15 53 18.9**	**-0.2**
EFI	**East Falkland**	**17.75**	**270**	Pn	**Pn**	**15 56 16.8**	**+0.1**
SNAA	**Sanae**	**19.81**	**156**	P	**P**	**15 56 40.3**	**+0.4**
	0.5nm,0.3s,baz=321,slow=11,SNR=6.8						
QSPA	**South Pole Qui**	**34.97**	**180**	P	**P**	**15 59 01.5**	**-0.2**
LPAZ	**La Paz**	**49.21**	**306**	P	**P**	**16 00 58.8**	**+0.1**
	0.9nm,0.4s,baz=170,slow=6.9,SNR=6.1						
SAML	**Samuel**	**53.63**	**316**	*e*P	**P**	**16 01 31.1**	**0.0**
	1.3nm,0.8s						
ILAR	**Eielson Array**	**148.94**	**313**	PKPbc	**PKPbc**	**16 11 57.1**	**+0.9**
	1.3nm,0.8s,baz=125,slow=1.9,SNR=13						
SONM	**Songino Array**	**151.56**	**86**	PKPbc	**PKPbc**	**16 12 02.3**	**-0.9**
	0.4nm,0.4s,baz=219,slow=5.0,SNR=3.2						

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*IDC **04** 16:11:17.4±0.7, 9°.14S×118°.44E, h0km, mb4.2/14, mb1 4.2/16, mb1mx4.0/59, mbtmp4.2/16, ML4.0/2, MS3.1/1, Ms1 3.1/1, ms1mx2.6/56, Error ellipse: s-maj=31.4km s-min=15.1km az=60.0*
*ISCJB **04** 16:11:27.0±0.3, 9°.32S±0°.04×118°.42E±0°.02, h100km, mb4.2/19, Error ellipse: s-maj=6.1km s-min=2.9km az=8.5*
*NEIC **04** 16:11:27.6±0.8, 9°.18S×118°.44E, h85km±8km, mb4.3/8, Error ellipse: s-maj=13.9km s-min=6.4km az=205.0*
*DJA **04** 16:11:29.1±0.5, 9°S±3°×11°8E±°, h40km±5km, M4.7/24, mb4.8/13, mB5.1/7, MLv4.9/24, Mw(mB)4.5/7*
ISC 04 16:11:28.6±0.5, 9°.30S±0°.06×118°.46E±0°.04, h100km, n81, σ1$68/88, mb4.3/19, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**0.82**	**305**	P	**Pn**	**16 11 44.3**	**-3.0**
PLAI				S	**Sn**	**16 11 55.1**	**-6.1**
WSI	**Waingapu**	**1.85**	**102**	P	**Pn**	**16 11 57.8**	**-1.5**
WSI				S	**Sn**	**16 12 21.7**	**-0.9**
BASI	**Baing, Sumba**	**2.28**	**114**	P	**Pn**	**16 12 05.5**	**+0.7**
BASI				S	**Sn**	**16 12 35.0**	**+2.5**
EDFI	**Ende, Flores**	**3.23**	**81**	P	**Pn**	**16 12 17.4**	**-0.2**
EDFI				S	**Sn**	**16 12 57.9**	**+2.4**
DNP	**Denpasar**	**3.27**	**281**	P	**Pn**	**16 12 18.6**	**+0.6**
DNP				S	**Sn**	**16 12 58.2**	**+2.0**
IGBI	**Denpasar**	**3.31**	**278**	P	**Pn**	**16 12 17.4**	**-1.2**
IGBI				S	**Sn**	**16 12 55.6**	**-1.6**
SRBI	**Singaraja**	**3.43**	**290**	P	**Pn**	**16 12 19.7**	**-0.5**
SRBI				S	**Sn**	**16 13 02.2**	**+2.1**
MMRI

CMAR Chiang Mai Arr 33.64 325 P P 16 18 00.6 +0.6
0.9nm,0.5s,baz=158,slow=7.1,SNR=9.4
H08S2 Diego Garcia H 45.48 268 T T 17 09 09.5
baz=96,slow=75,SNR=5.5
H08S3 Diego Garcia H 45.49 268 T T 17 09 10.1
baz=96,slow=75,SNR=8.8
H08S1 Diego Garcia H 45.49 268 T T 17 09 10.8
baz=96,slow=75,SNR=4.9
KSAR Wonju Array Be 47.33 10 P **P 16 19 49.9 -2.4**
KSRS Korea Array 47.34 10 P **P 16 19 49.9 -2.5**
1.0nm,0.8s,baz=201,slow=7.9,SNR=3.5
JIRN Jiri 48.23 321 *eP* **P 16 19 59.8 -0.2**
17nm,0.4s
GUN Gumba 48.60 321 *eP* **P 16 20 02.6 -0.2**
12nm,0.5s
PKI Pulchoki 48.66 320 *eP* **P 16 20 02.4 -0.9**
PKIN Phulchoki 48.68 320 *eP* **P 16 20 02.3 -1.0**
DMN Daman 48.88 320 *eP* **P 16 20 04.2 -0.7**
8.5nm,0.6s
KKN Kakani 48.90 320 *eP* **P 16 20 04.8 -0.1**
4.2nm,0.5s
GKN Gorkha 49.45 320 *eP* **P 16 20 08.4 -0.7**
7.9nm,0.3s
KOLN Koldanda 49.97 319 *eP* **P 16 20 12.1 -0.9**
8.6nm,0.6s
DANN Dangsing 50.26 319 *eP* **P 16 20 14.5 -0.8**
17nm,0.6s
HHC Hu-ho-hao-te 50.30 353 *eP* P 16 20 18.7 +3.5
HHC pmax pmax
comp=Z,11nm,0.6s
HHC pmax pmax
comp=Z,68nm,6.1s
PYUN Piuthan 50.59 318 *eP* **P 16 20 16.9 -0.8**
comp=Z,8.7nm,0.6s
GTA Gaotai 51.46 342 *eP* **P 16 20 25.5 +1.5**
GTA pP pP 16 20 30.1 -18
GTA sP sP 16 20 33.3 -26
GTA pmax pmax
comp=Z,5.0nm,0.7s
USRK Ussuriysk Ar. 54.64 12 P **P 16 20 47.7 +0.7**
comp=Z,2.4nm,0.4s,baz=191,slow=5.9,SNR=8.9
SONM Songino Array 57.88 350 P **P 16 21 11.2 +1.0**
comp=Z,1.9nm,0.5s,baz=167,slow=8.7,SNR=11
WMQ Urumqi 59.79 335 P **P 16 21 25.1 +1.7**
WMQ LR LR
comp=N,170nm,18.7s
WMQ LR LR
comp=E,260nm,18.7s
WMQ LR LR
comp=Z,220nm,19.3s
MK01 Makanchi Array 64.46 333 *eP* **P 16 21 54.6 +0.1**
MK31 Makanchi Array 64.48 333 *eP* **P 16 21 55.0 +0.3**
MKAR Makanchi Array 64.48 333 P **P 16 21 55.0 +0.3**
comp=Z,3.4nm,0.6s,baz=141,slow=6.3,SNR=30
MKAR Makanchi Array 64.48 333 *eP* **P 16 21 55.0 +0.3**
comp=Z,22nm,0.8s
AAK Ala-Archa 65.43 326 P **P 16 22 01.5 +0.5**
comp=Z,0.8nm,0.3s,baz=149,slow=2.0,SNR=3.6
KURBB Kurchatov Arra 69.00 334 P **P 16 22 23.5 +0.3**
comp=Z,2.5nm,0.5s,baz=139,slow=5.1,SNR=26
KURK Kurchatov 69.03 334 *eP* **P 16 22 23.5 +0.1**
comp=Z,4.0nm,1.0s
ZAA0 Zalesovo Array 69.13 339 *eP* **P 16 22 23.4 -0.6**
comp=Z,3.3nm,0.8s
ZALV Zalesovo Beam 69.13 339 P **P 16 22 23.7 -0.2**
comp=Z,3.2nm,0.4s,baz=142,slow=5.1,SNR=17
ZALV Zalesovo Beam 69.13 339 *eP* **P 16 22 23.1 -0.9**
VNDA Vanda 71.78 171 P **P 16 22 42.2 +2.4**
comp=Z,0.3nm,0.5s,baz=317,slow=4.8,SNR=4.8
BVAR Borovoye Array 74.31 332 P **P 16 22 55.4 +0.3**
comp=Z,3.0nm,0.8s,baz=137,slow=7.1,SNR=18
ABKAR Akbulak array 77.50 325 *eP* **P 16 23 12.5 -0.7**
AKTO Aktyubinsk 79.17 326 P **P 16 23 22.9 +0.4**
comp=Z,1.2nm,0.6s,baz=92,slow=6.3,SNR=5.0
TIXI Tiksi 81.07 3 *eP* **P 16 23 31.9 -0.3**
comp=Z,1.2nm,0.8s
LSZ Lusaka 87.85 255 P **P 16 24 10.0 +2.2**
comp=Z,3.9nm,0.8s,baz=95,slow=5.6,SNR=4.7
TORD Torodi Ar. Bea 117.39 280 PKP **PKPdf 16 30 06.1 +1.3**
comp=Z,0.6nm,0.6s,baz=54,slow=1.7,SNR=3.2

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*ISCJB **04** 16:14:47.9±0.5, 2.°00N±0.°07×68.°74E±0.°07, h10km, mb4.1/16, MS4.0/7, Error ellipse: s-maj=11.6km s-min=8.3km az=43.4*
*IDC **04** 16:14:47.9±0.7, 2.°10N×68.°82E, h0km, mb4.1/13, mb1 4.1/13, mb1mx3.8/66, mbtmp4.1/13, ML5.2/1, MS4.0/7, Ms1 4.0/7, ms1mx3.4/64, Error ellipse: s-maj=22.8km s-min=17.5km az=15.0*
*NEIC **04** 16:14:49.9±0.5, 2.°14N×68.°82E, h10km, mb4.6/1, Error ellipse: s-maj=13.5km s-min=11.6km az=47.0*
ISC 04 16:14:49.9±0.6, 2.°13N±0.°09×68.°82E±0.°09, h10km, n44, σ1º63/32, mb4.3/16, MS3.8/7, North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08N2	**Diego Garcia H**	**8.68**	**165**	T	T	16 25 55.0	
	baz=346,slow=74,SNR=161						
H08N3	**Diego Garcia H**	**8.69**	**166**	T	T	16 25 55.3	
	baz=346,slow=74,SNR=193						
H08N1	**Diego Garcia H**	**8.70**	**165**	T	T	16 25 56.2	
	baz=346,slow=74,SNR=144						
DGAR	**Diego Garcia**	**10.15**	**159**	*e*Pn	**Pn**	**16 17 18.1**	**+2.3**
PALK	**Pallekele**	**12.90**	**66**	Pn	**Pn**	**16 17 52.1**	**-1.4**
	13nm,0.3s,baz=296,slow=10,SNR=87						
PALK				Sn	Sn	16 20 02.2	-15
	0.8nm,0.3s,baz=115,slow=7.1,SNR=1.6						
PALK	**Pallekele**	**12.90**	**66**	*e*P	**Pn**	**16 17 52.8**	**-0.7**
PALK				Sn	Sn	16 20 02.2	-15
URV	**Uravakonda**	**15.22**	**33**	*e*P	**Pn**	**16 18 26.9**	**+1.8**
SKHT	**Srikalahasti**	**15.78**	**42**	*e*P	**Pn**	**16 18 34.4**	**+1.9**
POO	**Poona**	**17.03**	**17**	*e*P	**Pn**	**16 18 45.0**	**-3.4**
SRLM	**Srisailam**	**17.07**	**35**	*e*P	**P**	**16 18 51.1**	**+0.5**
ADKI	**Addanki**	**17.51**	**38**	*e*P	**P**	**16 18 57.2**	**+1.8**
KLRI	**Killari**	**17.59**	**25**	*e*P	**P**	**16 18 59.1**	**+2.7**
NJS	**Nagarjunasagar**	**17.66**	**35**	*e*P	**P**	**16 18 59.5**	**+2.2**
HYB	**Hyderabad**	**17.95**	**32**	*i* P	**P**	**16 19 03.0**	**+2.5**
HYBB	**Hyderabad (bro**	**17.95**	**32**	*e*P	**P**	**16 19 03.3**	**+2.8**
RPR	**Rampur**	**19.54**	**31**	*e*P	**P**	**16 19 17.1**	**-0.8**
PVM	**Polavaram**	**19.60**	**39**	*e*P	**Pn**	**16 19 19.9**	**0.0**
WSAR	**Wadi Sarin**	**23.19**	**336**	LR	LR	16 27 47.3	
	comp=Z,288nm,19.3s,baz=276,slow=34						
ATD	**Arta Tunnel**	**27.40**	**291**	LR	LR	16 29 30.5	
	comp=Z,170nm,19.4s,baz=118,slow=32						
PSI	**Prapat**	**30.09**	**88**	LR	LR	16 31 56.9	
	comp=Z,172nm,20.7s,baz=269,slow=34						
LSZ	**Lusaka**	**43.75**	**245**	P	**P**	**16 22 56.6**	**+0.4**
	5.8nm,0.9s,baz=62,slow=6.8,SNR=13						
MMAI	**Mount Meron Ar**	**43.88**	**318**	LR	LR	16 39 57.0	
	comp=Z,106nm,18.2s,baz=170,slow=34						
KBZ	**Khabaz**	**47.39**	**334**	P	**P**	**16 23 26.8**	**+2.4**
	3.4nm,1.1s,baz=158,slow=8.1,SNR=3.2						
AKTO	**Aktyubinsk**	**49.00**	**351**	P	**P**	**16 23 39.2**	**+2.5**
	2.9nm,0.6s,baz=158,slow=11,SNR=7.7						
KURK	**Kurchatov**	**49.12**	**8**	*e*P	**P**	**16 23 36.7**	**-0.9**
BRTR	**Keskin Array B**	**49.20**	**324**	P	**P**	**16 23 38.1**	**-0.5**
	1.6nm,0.8s,baz=142,slow=10,SNR=9.9						
BOSA	**Boshof**	**51.75**	**230**	P	**P**	**16 23 57.1**	**-1.0**
	1.3nm,0.7s,baz=44,slow=9.7,SNR=3.2						
IDI	**Anoyia**	**52.41**	**314**	P	**P**	**16 24 02.5**	**-0.3**
	5.9nm,0.7s,baz=85,slow=12,SNR=5.3						
ZALV	**Zalesovo Beam**	**53.30**	**12**	P	**P**	**16 24 09.6**	**+0.6**
	0.5nm,0.2s,baz=212,slow=5.3,SNR=3.6						
SONM	**Songino Array**	**55.88**	**30**	P	**P**	**16 24 28.4**	**+0.3**
	0.4nm,0.5s,baz=228,slow=5.6,SNR=2.3						
H01W3	**Cape Leeuwin H**	**56.17**	**135**	T	T	17 24 49.6	
	baz=302,slow=75,SNR=12						
H01W2	**Cape Leeuwin H**	**56.18**	**135**	T	T	17 24 50.1	
	baz=302,slow=75,SNR=7.9						
H01W1	**Cape Leeuwin H**	**56.19**	**135**	T	T	17 24 50.8	
	baz=302,slow=75,SNR=9.5						
AKASG	**Malin Array Be**	**58.79**	**332**	P	**P**	**16 24 48.8**	**+0.5**
	0.5nm,0.3s,baz=131,slow=5.9,SNR=4.1						
TORD	**Torodi Ar. Bea**	**67.25**	**283**	P	**P**	**16 25 44.3**	**-0.9**
	2.1nm,0.9s,baz=97,slow=6.6,SNR=7.3						
WRA	**Warramunga Arr**	**67.85**	**112**	P	**P**	**16 25 48.6**	**-0.4**
	2.5nm,0.7s,baz=292,slow=6.1,SNR=11						
WRAB	**Tennant Creek**	**67.86**	**112**	*e*P	**P**	**16 25 48.2**	**-0.8**
	3.3nm,0.7s						
ASAR	**Alice Springs**	**68.21**	**116**	P	**P**	**16 25 50.5**	**-0.7**
	1.6nm,0.8s,baz=289,slow=6.0,SNR=12						
HFS	**Hagfors**	**71.46**	**334**	P	**P**	**16 26 09.2**	**-1.2**
	1.4nm,0.7s,baz=118,slow=7.3,SNR=4.4						
KOWA	**Kowa**	**72.85**	**284**	P	**P**	**16 26 19.6**	**-0.1**
	1.9nm,0.5s,baz=63,slow=2.3,SNR=5.4						
KOWA				LR	LR	16 57 28.1	
	comp=Z,111nm,19.7s,baz=197,slow=35						
MDT	**Midelt**	**74.94**	**303**	LR	LR	16 58 16.8	
	comp=Z,124nm,18.3s,baz=174,slow=35						
ESDC	**Sonseca Array**	**75.42**	**310**	P	**P**	**16 26 33.1**	**-1.2**
	0.7nm,0.7s,baz=89,slow=5.9,SNR=6.3						
DZM	**Mont Dzumac**	**97.86**	**112**	LR	LR	17 07 47.5	
	comp=Z,149nm,19.9s,baz=300,slow=32						
TXAR	**Lajitas Array**	**147.90**	**348**	PKPbc	**PKPbc**	**16 34 35.6**	**-0.6**
	0.7nm,0.7s,baz=37,slow=3.1,SNR=10						

MEX 04 16:22:48.5±0.4, 13.°75N×92.°09W, h16km±999km, MD3.7, Off coast of Chiapas

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*ISCJB **04** 16:31:19.4±0.7, 16.°2S±0.°2×175.°6W±0.°1, h300km, mb3.8/9, Error ellipse: s-maj=25.9km s-min=10.2km az=148.1*
*IDC **04** 16:31:21.0±1.3, 16.°27S×175.°38W, h306km±13km, mb3.6/9, mb1 3.7/10, mb1mx3.4/49, mbtmp4.2/10, Error ellipse: s-maj=26.5km s-min=12.4km az=139.0*
ISC 04 16:31:20.5±0.8, 16.°2S±0.°2×175.°5W±0.°1, h300km, n16, σ0º97/18, mb4.1/9, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.27**	**58**	P	**Pn**	**16 32 31.3**	**+1.4**
	2.6nm,0.3s,baz=232,slow=12,SNR=1.8						
AFI				S	**S**	**16 33 25.0**	**-0.4**
	17nm,0.3s,baz=216,slow=20,SNR=10						
URZ	**Urewera**	**22.89**	**195**	P	**P**	**16 35 57.4**	**-1.0**
	5.5nm,0.5s,baz=261,slow=2.5,SNR=7.1						
WRA	**Warramunga Arr**	**47.69**	**258**	P	**P**	**16 39 29.0**	**+1.1**
	0.8nm,0.8s,baz=93,slow=6.6,SNR=12						
WRA				PcP	**PcP**	**16 40 52.6**	**+0.5**
	0.5nm,0.6s,baz=97,slow=3.9,SNR=4.6						
ASAR	**Alice Springs**	**47.94**	**253**	P	**P**	**16 39 30.8**	**+1.0**
	2.9nm,0.7s,baz=86,slow=8.0,SNR=54						
JNU	**Nakatsue**	**70.92**	**314**	P	**P**	**16 42 06.3**	**+0.6**
	5.3nm,0.8s,baz=169,slow=4.5,SNR=3.9						
PETK	**Petropavlovsk-**	**72.83**	**343**	P	**P**	**16 42 15.4**	**-1.1**
	3.5nm,0.9s,baz=105,slow=8.1,SNR=6.8						
YBH	**Yreka Blue Hor**	**75.49**	**38**	P	**P**	**16 42 32.5**	**+0.4**
	2.9nm,0.8s,baz=233,slow=1.5,SNR=5.3						
NVAR	**Mina Array Bea**	**76.30**	**43**	P	**P**	**16 42 37.1**	**+0.1**
	1.4nm,0.6s,baz=225,slow=9.7,SNR=11						
TXAR	**Lajitas Array**	**82.75**	**57**	P	**P**	**16 43 11.8**	**+0.1**
	0.3nm,0.6s,baz=224,slow=5.2,SNR=4.3						
ILAR	**Eielson Array**	**83.66**	**12**	P	**P**	**16 43 14.4**	**-0.8**
	2.0nm,0.6s,baz=223,slow=5.6,SNR=34						
BVAR	**Borovoye Array**	**117.29**	**322**	PKP	**PKPdf**	**16 49 29.1**	**-1.0**
	0.5nm,0.6s,baz=103,slow=3.1,SNR=4.1						
ARCES	**ARCESS Array B**	**125.14**	**351**	PKP	**PKPdf**	**16 49 42.6**	**-2.1**
	1.2nm,0.7s,baz=339,slow=1.5,SNR=3.9						
FINES	**FINESS Array B**	**132.29**	**346**	PKP	**PKPdf**	**16 49 58.8**	**+0.3**
	0.7nm,0.8s,baz=6.3,slow=19,SNR=3.3						
BRTR	**Keskin Array B**	**145.49**	**318**	PKPbc	**PKPdf**	**16 50 24.0**	**+0.6**
	1.8nm,0.8s,baz=101,slow=2.9,SNR=7.4						
GERES	**GERESS Array B**	**146.62**	**349**	PKPbc	**PKPbc**	**16 50 26.7**	**-0.3**
	0.6nm,0.6s,baz=36,slow=5.0,SNR=5.4						
ESDC	**Sonseca Array**	**155.50**	**16**	PKPab	**PKPab**	**16 51 05.8**	**-0.1**
	0.1nm,0.3s,baz=333,slow=4.0,SNR=4.0						

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*IDC **04** 16:39:58.5±0.4, 0.°67S×127.°63E, h0km, mb4.7/27, mb1 4.7/30, mb1mx4.5/52, mbtmp4.7/30, ML4.3/3, MS4.0/29, Ms1 4.0/29, ms1mx3.9/50, Error ellipse: s-maj=16.6km s-min=10.0km az=66.0*
*ISCJB **04** 16:40:00.4±0.8, 0.°63S±0.°03×127.°76E±0.°02, h23km±5km, mb4.9/128, MS4.1/39, Error ellipse: s-maj=4.7km s-min=3.6km az=17.1*
*MOS **04** 16:40:01.9±1.0, 0.°58S×127.°68E, h33km, mb5.2/39, Error ellipse: s-maj=9.4km s-min=5.6km az=114.4*
*DJA **04** 16:40:01.9±0.2, 1.°S±2.°×12.°8E±.°, h10km, M4.8/47, mb5.0/47, mB5.3/18, MLv5.0/17, Mw(mB)4.8/18*
*BJI **04** 16:40:01.9, 0.°70S×127.°70E, h33km, mb4.9/63, mB5.1/37, Ms4.5/28, Ms7 4.2/29*
*NEIC **04** 16:40:03.2±0.1, 0.°68S×127.°70E, h35km, mb5.0/82, Error ellipse: s-maj=4.8km s-min=3.5km az=56.0*
*GCMT **04** 16:40:03.2±0.2, 0.°61S×127.°76E, h16km, MW5.0/99, Moment Tensor Solution. s38,c57; s99,c149; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.97±.18; $M_{\theta\theta}$2.50±.11; $M_{\phi\phi}$1.47±.12; $M_{r\theta}$-0.45±.33; $M_{\phi\theta}$1.65±.07; $M_{\phi r}$-0.22±.37; Best double couple: $M_0$3.87400×10^{16} NP1:ϕ_s55.00000°, δ49.00000°, λ-89.00000°. NP2: ϕ_s233.00000°, δ41.00000°, λ-92.00000°. Principal axes: T 3.7450, Plg4.0000°, Azm144.0000°; N 0.2580, Plg1.0000°, Azm234.0000°; P -4.0030, Plg86.0000°, Azm341.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 04 16:40:02.4±0.5, 0.°68S±0.°04×127.°78E±0.°04, h24km±3km, h25km:pP-P, n299, σ1º70/313, mb5.0/128, MS4.1/39, 11C-9D, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**0.28**	**279**	P	**Pb**	**16 40 06.0**	**-3.0**
TNTI	**Ternate**	**1.50**	**344**	*e*Pn	**Pn**	**16 40 27.2**	**-0.6**
SANI	**Sanana**	**2.24**	**233**	P	**Pn**	**16 40 37.3**	**-0.7**
MSAI	**Masohi**	**2.89**	**156**	P	**Pn**	**16 40 48.6**	**+1.7**
AAI	**Ambon**	**3.02**	**172**	P	**Pn**	**16 40 50.4**	**+1.8**
AAI	**Ambon**	**3.02**	**172**	P	**Pn**	**16 40 50.9**	**+2.3**
SIJI	**Sorong**	**3.50**	**93**	Pn	**Pn**	**16 40 56.3**	**+1.0**
	52nm,0.3s,baz=265,slow=12,SNR=74						
SIJI				Sn	**Sn**	**16 41 37.6**	**+1.7**
	24nm,0.3s,baz=70,slow=23,SNR=6.8						
KMSI	**Cibinong**	**3.99**	**288**	P	**Pn**	**16 41 01.8**	**-0.3**
BNDI	**Bandanaira**	**4.37**	**151**	P	**Pn**	**16 41 08.1**	**+0.9**
SGSI	**Sangihe**	**4.88**	**333**	P	**Pn**	**16 41 14.3**	**0.0**
FAKI	**Fak Fak**	**4.99**	**116**	P	**Pn**	**16 41 15.7**	**-0.1**
FAKI	**Fak Fak**	**4.99**	**116**	*e*Pn	**Pn**	**16 41 16.1**	**+0.2**
MRSI	**Marisa**	**5.95**	**281**	P	**Pn**	**16 41 28.7**	**-0.2**
KDI	**Kendari**	**6.09**	**238**	P	**Pn**	**16 41 30.9**	**0.0**
APSI	**Ampana**	**6.13**	**268**	P	**Pn**	**16 41 30.7**	**-0.8**
RKPI	**Ransiki, Papua**	**6.45**	**97**	P	**Pn**	**16 41 37.0**	**+1.1**
KMPI	**Kaimana, Papua**	**6.62**	**117**	P	**Pn**	**16 41 39.3**	**+1.1**
PCI	**Palu**	**7.94**	**268**	P	**Pn**	**16 41 56.1**	**-0.3**
PCI	**Palu**	**7.94**	**268**	P	**Pn**	**16 41 58.8**	**+2.4**
PCI				pmax	pmax		
	comp=Z,128nm,0.7s						
MPSI	**Mapaga**	**7.94**	**277**	P	**Pn**	**16 41 56.1**	**-0.2**
TTSI	**Tana Toraja**	**8.29**	**253**	P	**Pn**	**16 42 01.0**	**-0.1**
BAKI	**Biak**	**8.35**	**94**	P	**Pn**	**16 42 03.0**	**+1.1**
SPSI	**Sidrap Palu**	**8.64**	**248**	P	**Pn**	**16 42 08.2**	**+2.3**
BKSI	**Bulukumba**	**8.92**	**239**	P	**Pn**	**16 42 12.2**	**+2.4**
EDFI	**Ende, Flores**	**10.05**	**217**	P	**Pn**	**16 42 25.4**	**0.0**
BATI	**Baumata**	**10.31**	**203**	LR	LR	16 46 35.6	
	comp=Z,2μm,20.1s,baz=19,slow=39						
KBKI	**Kotabaru**	**11.89**	**257**	P	Pn	16 43 01.3	+11
GENI	**Genyem**	**12.53**	**99**	P	**Pn**	**16 43 02.2**	**+2.9**
MTN	**Manton Dam**	**12.53**	**165**	*e*Pn	**Pn**	**16 42 58.2**	**-1.1**
PLAI	**Plampang**	**12.83**	**231**	P	**Pn**	**16 43 03.4**	**0.0**
JAY	**Jayapura**	**13.05**	**98**	Pn	**Pn**	**16 43 08.1**	**+1.7**
	comp=Z,0.7nm,0.3s,baz=270,slow=13,SNR=2.7						
JAY				LR	LR	16 49 15.8	
	comp=Z,1μm,21.2s,baz=276,slow=42						
JAY	**Jayapura**	**13.05**	**98**	P	**Pn**	**16 43 07.6**	**+1.2**
SRBI	**Singaraja**	**14.52**	**239**	P	P	16 43 41.6	+8.8
JAGI	**Jajag, Banyuwa**	**15.62**	**240**	P	**Pn**	**16 43 43.0**	**+1.9**
JAGI	**Jajag, Banyuwa**	**15.62**	**240**	*e*Pn	**Pn**	**16 43 40.0**	**-1.1**
	comp=Z,91nm,1.1s						
BLJI	**Banyuglugur**	**15.78**	**243**	P	P	16 43 54.4	+7.6
SBUM	**Sibu**	**15.86**	**281**	*e*Pn	**Pn**	**16 43 42.8**	**-1.4**
	comp=Z,58nm,1.8s						
GMJI	**Gumukmas**	**16.15**	**242**	P	**Pn**	**16 43 48.1**	**+0.2**
STKI	**Sintang**	**16.31**	**273**	P	**P**	**16 43 58.3**	**+5.5**
FITZ	**Fitzroy Crossi**	**17.43**	**187**	Pn	**Pn**	**16 44 04.4**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=17,slow=7.3,SNR=25						
FITZ				LR	LR	16 51 47.7	
	comp=Z,488nm,18.9s,baz=10,slow=41						
FITZ	**Fitzroy Crossi**	**17.43**	**187**	*e*Pn	**Pn**	**16 44 04.6**	**+0.5**
	comp=Z,13nm,0.8s						
PWJI	**Pagerwojo**	**17.50**	**245**	P	**P**	**16 44 07.2**	**+1.2**
NGJI	**Ngawi**	**17.57**	**247**	P	P	16 44 16.9	+10
KSM	**Kuching**	**17.59**	**277**	*e*Pn	**Pn**	**16 44 04.8**	**-1.3**
	comp=Z,46nm,1.2s						
PCJI	**Pacitan**	**18.14**	**245**	P	**P**	**16 44 14.5**	**+1.5**
MANU	**Manus Island**	**19.63**	**94**	*e*P	**P**	**16 44 28.9**	**-0.5**
	comp=Z,36nm,1.1s						
KPJI	**Karang Pucung**	**19.91**	**250**	P	**P**	**16 44 33.6**	**+1.1**
COEN	**Coen**	**20.16**	**132**	*e*P	**P**	**16 44 35.9**	**+0.8**
	comp=Z,70nm,1.2s						
WRAB	**Tennant Creek**	**20.19**	**162**	*e*P	**P**	**16 44 34.0**	**-1.5**
	comp=Z,90nm,1.5s						
WRAB	**Tennant Creek**	**20.19**	**162**	*d i*P	**P**	**16 44 35.0**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,33nm,1.0s						
WRA	**Warramunga Arr**	**20.19**	**162**	P	**P**	**16 44 34.0**	**-1.5**
	comp=Z,17nm,0.8s,baz=342,slow=11,SNR=49						
WRA				S	**S**	**16 48 13.3**	**-7.9**
	comp=Z,1.8nm,0.9s,baz=343,slow=23,SNR=3.6						
WRA				LR	LR	16 52 49.3	
	comp=Z,1μm,20.9s,baz=330,slow=38						
WRA	**Warramunga Arr**	**20.19**	**162⇑**	*e*P	**P**	**16 44 34.0**	**-1.5**
WRA				pmax	pmax		
	comp=Z,17nm,0.8s						
WB2	**Warramunga Arr**	**20.20**	**162**	*e*P	**P**	**16 44 34.2**	**-1.3**
	comp=Z,103nm,1.5s						
JCJI	**Jatiwangi**	**20.30**	**253**	P	Pn	16 44 51.4	+13
CMJI	**Cimerak**	**20.51**	**249**	P	Pn	16 44 51.5	+10
LEM	**Lembang**	**21.01**	**253**	P	**P**	**16 44 48.6**	**+4.0**
	comp=Z,121nm,1.1s,baz=59,slow=12,SNR=9.9						
CISI	**Cisompet, Garu**	**21.04**	**251**	P	**P**	**16 44 45.7**	**+1.0**
CISI	**Cisompet, Garu**	**21.04**	**251**	*e*P	**P**	**16 44 44.2**	**-0.5**
	comp=Z,84nm,0.8s						
PMG	**Port Moresby**	**21.15**	**115**	P	**P**	**16 44 46.4**	**+0.6**
	comp=Z,19nm,0.9s,baz=315,slow=14,SNR=3.8						
PMG				LR	LR	16 54 06.6	
	comp=Z,1μm,21.7s,baz=268,slow=40						
PMG	**Port Moresby**	**21.15**	**115**	*e*P	**P**	**16 44 46.3**	**+0.4**
	comp=Z,67nm,1.4s						
PMG	**Port Moresby**	**21.15**	**115**	*e*P	**P**	**16 44 46.3**	**+0.4**
PMG				pmax	pmax		
	comp=Z,67nm,1.4s						
DBJI	**Dramaga**	**21.77**	**254**	P	**P**	**16 44 57.3**	**+4.7**
KLI	**Kotabumi**	**23.26**	**259**	P	**P**	**16 45 10.9**	**+2.6**
TPRI	**Tanjung Pinang**	**23.30**	**274**	P	**P**	**16 45 10.6**	**+1.9**
AS31	**Alice Springs**	**23.61**	**166**	*e*P	**P**	**16 45 10.9**	**-0.8**
	comp=Z,8.3nm,0.6s						
ASAR	**Alice Springs**	**23.61**	**166**	P	**P**	**16 45 10.8**	**-0.9**
	comp=Z,7.7nm,0.3s,baz=345,slow=11,SNR=209						
ASAR				S	**S**	**16 49 23.9**	**-1.0**
	comp=Z,2.3nm,0.9s,baz=352,slow=19,SNR=4.9						
ASAR				LR	LR	16 55 11.6	
	comp=Z,742nm,20.8s,baz=339,slow=39						
AS01	**Alice Springs**	**23.62**	**166**	*e*P	**P**	**16 45 10.7**	**-1.1**
KASI	**Kota Agung**	**23.73**	**258**	P	**P**	**16 45 13.7**	**+0.8**
MDSI	**Maura Dua**	**23.87**	**260**	P	**P**	**16 45 14.8**	**+0.6**
MYKOM	**Kota Tinggi**	**24.05**	**276**	*e*P	**P**	**16 45 15.9**	**0.0**
	comp=Z,22nm,0.7s						
LWLI	**Liwa**	**24.07**	**259**	P	**P**	**16 45 17.8**	**+1.6**
TWG	**Pinlang**	**24.25**	**345**	*e*P	**P**	**16 45 15.3**	**-2.3**
	comp=Z,270nm,0.6s						
RABL	**Rabaul**	**24.61**	**99**	*e*P	**P**	**16 45 22.0**	**+0.9**
	comp=Z,317nm,1.9s						
YULB	**Yu-li**	**24.75**	**346**	*e*P	**P**	**16 45 20.9**	**-1.3**
	comp=Z,78nm,1.7s						
TPUB	**Ta-pu**	**24.83**	**344**	*e*P	**P**	**16 45 22.4**	**-0.6**
	comp=Z,46nm,0.8s						
SSLB	**Suanglung**	**25.21**	**345**	*e*P	**P**	**16 45 25.0**	**-1.4**
	comp=Z,32nm,0.8s						
MASI	**Maura Aman, Be**	**25.64**	**264**	P	**P**	**16 45 30.1**	**-0.3**
YHNB	**Yeheng**	**25.95**	**347**	*e*P	**P**	**16 45 32.4**	**-0.7**
	comp=Z,66nm,0.8s						
TATO	**Taipei**	**26.22**	**347**	*e*P	**P**	**16 45 35.5**	**0.0**
	comp=Z,74nm,0.8s						
QIZ	**Qiongzhong**	**26.34**	**319**	P	**P**	**16 45 36.3**	**-0.4**
QIZ				S	**S**	**16 50 08.4**	**-0.1**
QIZ				sS	**sS**	**16 50 23.4**	**+2.9**
QIZ				pmax	pmax		
	comp=Z,220nm,6.7s						
QIZ				LR	LR		
	comp=Z,320nm,11.3s						
QIZ				LR	LR		
	comp=Z,490nm,14.7s						
QIZ				LR	LR		
	comp=Z,270nm,27.5s						
QIZ	**Qiongzhong**	**26.34**	**319**	*e*P	**P**	**16 45 37.1**	**+0.5**
	comp=Z,23nm,1.0s						
KRJI	**Kerinci**	**26.34**	**267**	P	**P**	**16 45 40.2**	**+3.3**
CTA	**Charters Tower**	**26.44**	**138**	P	**P**	**16 45 40.3**	**+2.7**
	comp=Z,10nm,1.0s,baz=325,slow=12,SNR=6.2						
CTA				LR	LR	16 58 45.6	
	comp=Z,560nm,18.0s,baz=314,slow=42						
CTAO	**Charters Tower**	**26.44**	**138**	*e*P	**P**	**16 45 39.6**	**+2.1**
	comp=Z,54nm,1.4s						
CTAO	**Charters Tower**	**26.44**	**138**	*e*P	**P**	**16 45 39.7**	**+2.1**
CTAO				pmax	pmax		
	comp=Z,54nm,1.4s						
QZH	**Quanzhou**	**26.98**	**341**	*e*P	**P**	**16 45 45.6**	**+3.3**
QZH				LR	LR		
	comp=Z,380nm,18.4s						
IPM	**Ipoh**	**27.21**	**281**	*e*P	**P**	**

comp=Z,7.0nm,0.8s
CHTO Chiang Mai 34.31 306 *e*P P 16 46 47.1 -0.1
CHTO pmax pmax
comp=Z,7.0nm,0.8s
CMAI Chiengmai2 34.82 308 P P 16 46 55.7 +3.9
comp=Z,206nm,0.8s,comp=Z,14µm
KMI Kunming 35.29 318 P P 16 46 56.6 +0.8
KMI pP sP 16 47 06.5 +0.3
KMI sP pP 16 47 10.7 +7.5
KMI PP **PP 16 48 19.7 +3.5**
KMI S **S 16 52 31.4 +2.7**
KMI sS sS 16 52 46.5 +5.7
KMI pmax pmax
comp=Z,7.0nm,0.7s
KMI LR LR
comp=Z,160nm,16.6s
KMI LR LR
comp=Z,280nm,14.5s
KMI LR LR
comp=Z,280nm,16.6s
ENH Enshi 35.37 332 *e*P P 16 46 56.2 0.0
comp=Z,31nm,0.8s
INU Inuyama 36.87 13 *e*P P 16 47 08.8 -0.1
comp=Z,17nm,0.8s
TJN Taejon 36.87 359⇓*i*P P 16 47 09.7 +0.8
TJN *i* *SP **pP 16 47 14.7 -1.6**
KS15 Wonju Array Si 37.93 0 *e*P P 16 47 16.3 -1.6
KSAR Wonju Array Be 37.93 0 P P 16 47 18.3 +0.4
KSAR Wonju Array Be 37.93 0 P P 16 47 18.3 +0.4
KSRS Korea Array 37.95 0 P P 16 47 18.3 +0.3
comp=Z,6.4nm,0.8s,baz=177,slow=10.0,SNR=24
MAJO Matsushiro 38.28 14 *e*P P 16 47 19.2 -1.7
comp=Z,13nm,0.8s
MAJO Matsushiro 38.28 14*c* *i*P P 16 47 20.2 -0.7
MAJO pmax pmax
comp=Z,15nm,1.0s
MAT Matsushiro 38.28 14 P P 16 47 19.6 -1.3
MAT S S 16 53 23.0 +9.2
MJAR Matsushiro Arr 38.28 14 P P 16 47 19.8 -1.2
comp=Z,9.2nm,0.8s,baz=191,slow=9.8,SNR=26
MJAR LR LR 17 01 50.1
comp=Z,348nm,20.9s,baz=225,slow=34
MJB9 Matsu-Tunnel 38.29 14 *e*P P 16 47 19.4 -1.6
comp=Z,14nm,0.8s
XAN Xi'an 38.81 335 P P 16 47 25.0 -0.5
XAN pP pP 16 47 33.9 +1.1
XAN S **S 16 53 26.5 +4.6**
XAN pmax pmax
comp=Z,33nm,1.1s
XAN pmax pmax
comp=Z,170nm,3.1s
XAN LR LR
comp=Z,340nm,34.2s
XAN LR LR
comp=Z,290nm,34.2s
XAN LR LR
comp=Z,270nm,32.7s
CD2 Chengdu 38.83 326 P P 16 47 25.1 -0.6
CD2 pmax pmax
comp=Z,30nm,0.6s
BJI Beijing 41.89 347 P P 16 47 49.9 -0.9
BJI pmax pmax
comp=Z,21nm,0.9s
SNY Shenyang 42.48 355 ⇑P P 16 47 55.3 -0.3
SNY pmax pmax
comp=Z,19nm,0.6s
LZH Lanzhou 42.83 331 *e*P P 16 47 59.9 +1.2
LZH pP sP 16 48 10.0 +0.9
LZH sP pP 16 48 13.9 +7.7
LZH PP **PP 16 49 42.8 +4.4**
LZH S **S 16 54 23.7 +1.8**
LZH sS sS 16 54 41.8 +7.7
LZH SS **SS 16 57 30.8 -2.8**
LZH pmax pmax
comp=Z,89nm,1.1s
LZH pmax pmax
comp=Z,390nm,4.7s
LZH LR LR
comp=Z,850nm,12.7s
LZH LR LR
comp=Z,710nm,13.0s
LZH LR LR
comp=Z,860nm,13.6s
MSHR Mys Shultsa 43.17 4⇑*i*P P 16 48 01.5 +0.3
SHL Shillong 43.40 310 *e*P P 16 48 02.7 -0.8
comp=Z,17nm,0.6s
SHL Shillong 43.40 310 *e*P P 16 48 02.7 -0.8
SHL pmax pmax
comp=Z,17nm,0.6s
HHC Hu-ho-hao-te 43.89 342 *e*P P 16 48 08.0 +0.9
HHC pmax pmax
comp=Z,14nm,0.7s
HHC pmax pmax
comp=Z,71nm,5.1s
CN2 Changchun 44.34 358 *e*P P 16 48 11.6 +1.1
CN2 *e*PP **PcP 16 49 56.7 +2.3**
CN2 *e*S **S 16 54 44.6 +1.3**
CN2 *e*SS **SS 16 57 56.4 -6.2**
CN2 LR LR
comp=Z,240nm,18.0s
CN2 LR LR
comp=Z,320nm,18.0s
CN2 LR LR
comp=Z,270nm,18.0s
USRK Ussuriysk Ar. 44.84 4 P P 16 48 14.7 +0.1
comp=Z,9.3nm,0.9s,baz=187,slow=7.3,SNR=11
USRK LR LR 17 05 02.1
comp=Z,156nm,20.9s,baz=198,slow=34
MDJ Mudanjiang 45.13 2 P P 16 48 13.9 -2.9
MDJ pmax pmax
comp=Z,20nm,1.2s
MDJ pmax pmax
comp=Z,180nm,3.1s
MDJ LR LR
comp=Z,220nm,5.6s
MDJ LR LR
comp=Z,150nm,6.4s
MDJ LR LR
comp=Z,250nm,18.5s
MDJ Mudanjiang 45.13 2 *e*P P 16 48 16.6 -0.3
comp=Z,21nm,1.1s
LSA Lhasa 46.18 314 P P 16 48 27.3 +1.3
LSA pmax pmax
comp=Z,33nm,1.2s
LSA Lhasa 46.18 314 *e*P P 16 48 26.4 +0.4
comp=Z,24nm,0.8s
LSA Lhasa 46.18 314 *e*P P 16 48 26.4 +0.4
LSA pmax pmax
comp=Z,24nm,0.8s
ASAJ Asahikawa 46.52 15 P P 16 48 29.0 +1.1
comp=Z,16nm,0.8s,baz=243,slow=6.2,SNR=6.2
ASAJ LR LR 17 06 53.6
comp=Z,191nm,20.8s,baz=220,slow=35
YUK Yuzh-Kuril'sk 47.36 18 *i*P P 16 48 35.6 +1.2
GTA Gaotai 47.41 330 ⇓P P 16 48 34.6 -0.4
GTA pP pP 16 48 43.8 +1.2
GTA sP sP 16 48 47.9 +2.4
GTA S **S 16 55 25.0 -3.0**
GTA sS sS 16 55 42.2 +1.8
GTA SS **SS 16 58 50.4 -5.7**
GTA pmax pmax
comp=Z,19nm,1.1s
GTA pmax pmax
comp=Z,120nm,8.9s
GTA LR LR
comp=Z,270nm,22.3s
GTA LR LR
comp=Z,320nm,17.9s
GTA LR LR
comp=Z,220nm,20.6s
JIRN Jiri 48.86 309 *e*P P 16 48 47.0 +0.3
comp=Z,72nm,0.6s
MDRS Chennai 49.06 288 *e*x P 16 48 42.8 -5.2
MDRS *e*x x 16 53 20.8
MDRS *e*x x 16 57 04.8
MDRS *e*x x 17 03 00.8
GUN Gumba 49.22 309 *e*P P 16 48 49.7 +0.2
comp=Z,84nm,0.6s
YSS Yuzh-Sakhalins 49.23 14 *e*P P 16 48 48.7 0.0
comp=Z,21nm,0.8s
YSS Yuzh-Sakhalins 49.23 14⇓*i*P P 16 48 49.4 +0.7
YSS pmax pmax
comp=Z,20nm,0.9s
PKIN Phulchoki 49.44 308 *e*P P 16 48 51.6 +0.5
comp=Z,19nm,0.6s
KKN Kakani 49.63 308 *e*P P 16 48 52.6 +0.1
comp=Z,70nm,1.0s
DMN Daman 49.68 308 *e*P P 16 48 53.0 +0.1
comp=Z,100nm,1.1s
KLR Kul'dur 49.84 3⇑*i*P P 16 48 53.5 +0.1
GKN Gorkha 50.23 308 *e*P P 16 48 57.0 0.0
comp=Z,74nm,1.0s
KOLN Koldanda 50.95 307 *e*P P 16 49 02.9 +0.5
comp=Z,80nm,0.7s
DANN Dangsing 51.08 308 *e*P P 16 49 03.8 +0.3
comp=Z,86nm,0.7s
PYUN Piuthan 51.58 307 *e*P P 16 49 07.6 +0.4
comp=Z,97nm,0.8s
ULN Ulaanbaatar 51.61 342 *e*P P 16 49 06.1 -0.9
comp=Z,18nm,1.1s
ULN Ulaanbaatar 51.61 342*d* *i*P P 16 49 06.9 -0.1
ULN pmax pmax
comp=Z,14nm,1.0s
HYB Hyderabad 51.68 293 *i*P P 16 49 09.0 +1.1
SONM Songino Array 51.78 342 P P 16 49 08.1 -0.2
comp=Z,6.3nm,1.0s,baz=160,slow=8.4,SNR=20
SONM LR LR 17 11 56.6
comp=Z,86nm,18.9s,baz=146,slow=37
GRNR Gornyy 51.79 7 *e*P P 16 49 08.8 +0.8
GRNR pmax pmax
comp=Z,42nm,1.0s
SONA1 Songino Array 51.79 342 *e*P P 16 49 07.4 -1.0
ZEA Zeya 54.23 360 *e*P P 16 49 25.0 -1.0
ZEA pmax pmax
comp=Z,30nm,1.6s
NKL Nikolayevsk 54.72 9 *e*P P 16 49 29.8 +0.3
NKL pmax pmax
comp=N,30nm,0.9s
NKL pmax pmax
comp=Z,40nm,0.9s
ZAK Zakamensk 55.01 341 *e*P P 16 49 29.3 -2.6
ZAK pmax pmax
comp=Z,3.0nm,1.2s
TLY Talaya 56.02 342 *e*P P 16 49 39.1 +0.1
TLY pmax pmax
comp=Z,5.0nm,1.0s
MOY Mondy 56.86 340 *e*P P 16 49 44.6 -0.5
MOY pmax pmax
comp=Z,23nm,2.1s
WMQ Urumqi 56.93 326 P P 16 49 46.4 +0.7
WMQ pP pP 16 49 55.6 +2.2
WMQ sP sP 16 50 02.5 +6.2
WMQ pmax pmax
comp=Z,45nm,1.1s
WMQ pmax pmax
comp=Z,280nm,5.7s
WMQ LR LR
comp=Z,530nm,23.7s
WMQ LR LR
comp=Z,410nm,21.9s
WMQ LR LR
comp=Z,330nm,24.7s
PETK Petropavlovsk- 59.13 21 P P 16 50 02.1 +1.2
comp=Z,26nm,0.8s,baz=185,slow=4.5,SNR=24
PETK Petropavlovsk- 59.13 21 *e*P P 16 50 01.1 +0.2
PETK Petropavlovsk- 59.13 21 *e*P P 16 50 01.1 +0.2
HVS Khovu-Aksy 59.16 336⇑*i*P P 16 50 01.4 +0.2
HVS *i* *SP **pP 16 50 06.6 -2.3**
HVS *i* 16 50 48.9
HVS pmax pmax
comp=Z,21nm,1.1s
AFI Afiamalu 61.20 105 LR LR 17 16 25.8
comp=Z,143nm,19.5s,baz=58,slow=36
NIL Nilore 61.47 309 *e*P P 16 50 15.7 -1.6
comp=Z,12nm,0.9s
NIL Nilore 61.47 309 *e*P P 16 50 15.7 -1.6
NIL pmax pmax
comp=Z,12nm,0.9s
MK01 Makanchi Array 61.75 326 *e*P P 16 50 17.7 -1.2
MK31 Makanchi Array 61.77 326 *e*P P 16 50 17.9 -1.2
MK31 Makanchi Array 61.77 326 *i*P P 16 50 17.8 -1.2
MK31 pmax pmax
comp=Z,18nm,1.0s
MKAR Makanchi Array 61.77 326 P P 16 50 18.3 -0.8
comp=Z,6.5nm,0.9s,baz=123,slow=8.8,SNR=34
MKAR LR LR 17 19 26.0
comp=Z,63nm,18.2s,baz=80,slow=38
MKAR Makanchi Array 61.77 326 *e*P P 16 50 17.8 -1.3
comp=Z,66nm,0.8s
MKAR Makanchi Array 61.77 326*c*e*P P 16 50 18.5 -0.5
MKAR pmax pmax
comp=Z,7.0nm,0.9s
KSH Kashi 61.91 316 *e*P P 16 50 21.3 +1.0
KSH *e*PP **PP 16 52 41.8 +5.0**
KSH *e*S **S 16 58 42.3 -0.8**
KSH *e*sS sS 16 58 58.8 +3.0
KSH *e*SS **SS 17 02 50.6 +4.9**
KSH pmax pmax
comp=Z,21nm,0.5s
KSH pmax pmax
comp=Z,320nm,6.1s
KSH LR LR
comp=Z,400nm,6.4s
KSH LR LR
comp=Z,230nm,5.0s
KSH LR LR
comp=Z,300nm,6.9s
MAKZ Makanchi 61.95 326 *e*P P 16 50 19.0 -1.2
comp=Z,15nm,0.9s
MAKZ Makanchi 61.95 326 *e*P P 16 50 19.0 -1.2
MAKZ pmax pmax
comp=Z,15nm,0.9s
KDJ Kajisay 62.34 320 *e*P P 16 50 22.7 -0.5
comp=Z,10nm,0.9s
KDJ Kajisay 62.34 320 P P 16 50 22.6 -0.5
KDJ pmax pmax
comp=Z,11nm,0.9s
YAK Yakutsk 62.56 1 *e*P P 16 50 23.2 -0.8
comp=Z,58nm,0.8s
YAK Yakutsk 62.56 1 *e*P P 16 50 23.6 -0.4
YAK *e**PP **sP 16 50 34.5 -0.1**
YAK *e* 16 51 03.8
YAK *e*S **S 16 58 48.4 -1.8**
YAK *e**SS **sS 16 59 04.0 +1.1**
YAK *e* 17 00 11.5
YAK *e*SS **SS 17 02 53.8 -0.9**
YAK pmax pmax
comp=Z,48nm,0.9s
YAK pmax pmax
comp=N,14nm,1.4s
YAK pmax pmax
comp=E,8.0nm,1.5s
YAK smax smax
comp=N,54nm,3.0s
YAK smax smax
comp=E,42nm,2.6s
YAK MLR MLR
comp=Z,120nm,19.0s
YAK MLR MLR
comp=N,174nm,20.0s
MA2 Magadan 62.72 13 *e*P P 16 50 25.6 +0.5
comp=N,30nm,0.8s
MA2 Magadan 62.72 13⇑*i*P P 16 50 26.7 +1.6
MA2 pmax pmax
comp=Z,41nm,1.0s
NRN Naryn 62.78 318 *e*P P 16 50 25.4 -0.8
comp=Z,9.8nm,0.9s
NRN Naryn 62.78 318 *e*P P 16 50 25.5 -0.8
NRN pmax pmax
comp=Z,10.0nm,0.9s
KZA Kyzart 63.58 319 P P 16 50 32.1 +0.4
SNR=12
TKM2 Tokmak 2 63.74 320 P P 16 50 32.4 -0.2
SNR=12
UCH Uchtor 64.13 319 P P 16 50 36.1 +0.7
SNR=12
AAK Ala-Archa 64.33 319 *e*P P 16 50 34.4 -1.9
comp=Z,11nm,1.3s
AAK Ala-Archa 64.33 319⇓*i*P P 16 50 36.1 -0.2
AAK pmax pmax
comp=Z,7.0nm,1.3s
USP Ospenovka 64.61 320 P P 16 50 37.7 -0.4
SNR=13
AML Almayashu 64.63 318 P P 16 50 38.8 +0.2
SNR=13
EKS2 Erkin-Say 64.81 319 P P 16 50 38.7 -0.8
SNR=6.6
ZAA0 Zalesovo Array 64.97 334 *e*P P 16 50 37.8 -2.2
comp=Z,14nm,1.3s
ZALV Zalesovo Beam 64.97 334 P P 16 50 38.2 -1.9
comp=Z,7.1nm,1.1s,baz=119,slow=5.6,SNR=19
ZALV LR LR 17 20 36.3
comp=Z,78nm,20.1s,baz=70,slow=38
ZALV Zalesovo Beam 64.97 334 *e*P P 16 50 37.8 -2.2
ZALV Zalesovo Beam 64.97 334 *e*P P 16 50 37.8 -2.2
KBL Kabul 65.05 309 *e*P P 16 50 40.1 -1.2
comp=Z,9.6nm,0.8s
KBL Kabul 65.05 309 *e*P P 16 50 40.1 -1.2
KBL pmax pmax
comp=Z,10.0nm,0.8s
KURBB Kurchatov Arra 66.00 328 P P 16 50 45.6 -1.2
comp=Z,11nm,1.0s,baz=128,slow=5.6,SNR=55
KURK Kurchatov 66.01 328 *e*P P 16 50 45.6 -1.2
comp=Z,22nm,0.8s
KURK Kurchatov 66.01 328⇑*i*P P 16 50 46.1 -0.7
KURK pmax pmax
comp=Z,32nm,1.2s
SEY Seymchan 66.08 12*c* *i*P P 16 50 48.8 +1.7
NVS Novosibirsk 66.26 334 *e*P P 16 50 46.3 -2.0
KK31 Karatay Array 67.17 318 *e*P P 16 50 53.2 -1.3
KK31 Karatay Array 67.17 318 *i*P P 16 50 53.3 -1.2
KK31 pmax pmax
comp=Z,10.0nm,1.0s
KKAR Karatay Array 67.17 318 *e*P P 16 50 53.2 -1.3
KKAR Karatay Array 67.17 318 *e*P P 16 50 53.2 -1.3
BVA0 Borovoye Array 71.57 328 P P 16 51 19.2 -2.3
BVA0 pmax pmax
comp=Z,18nm,1.4s
BVAR Borovoye Array 71.57 328 P P 16 51 20.2 -1.2
comp=Z,10nm,1.1s,baz=116,slow=6.6,SNR=26
BVAR LR LR 17 24 48.0
comp=Z,59nm,21.9s,baz=121,slow=38
BRVK Borovoye 71.64 328 *e*P P 16 51 20.4 -1.5
comp=Z,28nm,1.5s
BRVK Borovoye 71.64 328 *e*P P 16 51 20.4 -1.5
BRVK pmax pmax
comp=Z,28nm,1.5s
TIXI Tiksi 72.21 0 *e*P P 16 51 23.5 -1.4
comp=Z,13nm,1.0s
TIXI Tiksi 72.21 0*d* *i*P P 16 51 24.7 -0.2
TIXI pmax pmax
comp=Z,18nm,1.2s
BILL Bilibino 73.54 14 *i*P P 16 51 31.6 -1.3
BILL *i* 16 51 48.4
BILL pmax pmax
comp=Z,4.0nm,1.2s
BILL MLR MLR
comp=Z,118nm,18.0s
GEYT Alibeck 74.48 310 P P 16 51 38.8 -0.3
comp=Z,3.0nm,0.6s,baz=180,slow=4.0,SNR=7.3
GYA0B ALIBECK ARRAY 74.48 310 *e*P P 16 51 38.1 -1.0
comp=Z,31nm,1.8s
NRIK Noril'sk 74.93 346 P P 16 51 40.5 -0.5
comp=Z,9.5nm,0.5s,baz=154,slow=5.8,SNR=9.2
NRIK LR LR 17 29 13.8
comp=Z,102nm,18.3s,baz=148,slow=40
ABKAR Akbulak array 76.22 321 *e*P P 16 51 46.9 -1.8
AKTO Aktyubinsk 77.75 322 P P 16 51 56.2 -1.1
comp=Z,5.8nm,0.8s,baz=108,slow=6.4,SNR=16
AKTO LR LR 17 29 56.7
comp=Z,71nm,20.2s,baz=103,slow=39
SVE Sverdlovsk 78.25 329 *e*P P 16 51 58.9 -1.1
SVE pmax pmax
comp=Z,20nm,1.2s
VNDA Vanda 78.95 173 P P 16 52 04.2 +0.7
comp=Z,1.1nm,0.8s,baz=308,slow=6.9,SNR=6.9
VNDA LR LR 17 27 23.4
comp=Z,140nm,18.5s,baz=316,slow=36
VNDA Vanda 78.95 173 *e*P P 16 52 03.9 +0.4
comp=Z,24nm,2.0s
VNDA Vanda 78.95 173 *e*P P 16 52 03.9 +0.4
VNDA pmax pmax
comp=Z,24nm,2.0s
ARU Arti 79.20 328 *e*P P 16 52 02.8 -2.4
comp=Z,17nm,1.5s
ARU Arti 79.20 328*d* *i*P P 16 52 03.4 -1.8
ARU 16 55 00.6
ARU S **S 17 02 05.9 +2.3**
ARU SS **SS 17 07 08.8 -1.5**
ARU pmax pmax
comp=Z,8.0nm,1.0s
MAW Mawson 80.01 201 P P 16 52 09.8 +0.4
comp=Z,2.6nm,0.9s,baz=34,slow=4.4,SNR=3.3
RAYN Ar Rayn 83.18 294 *e*P P 16 52 25.6 -1.6
comp=Z,11nm,1.3s
RAYN Ar Rayn 83.18 294 P P 16 52 25.6 -1.6
RAYN pmax pmax
comp=Z,11nm,1.3s
OHAK Old Harbor 84.58 32 *e*P P 16 52 33.4 0.0
comp=Z,62nm,1.5s
KDAK Kodiak Island 85.05 32 *e*P P 16 52 36.4 +0.6
comp=Z,30nm,1.1s
KDAK Kodiak Island 85.05 32 *e*P P 16 52 36.4 +0.6
KDAK pmax pmax
comp=Z,30nm,1.1s
IM3 Indian Mountai 85.93 24 *e*P P 16 52 39.9 -0.2
ZEI Tsey 85.95 313 *e*P P 16 52 39.1 -1.9
ZEI pmax pmax
comp=Z,9.0nm,0.6s
AKH Akhalkalaki 86.15 311 *e*P P 16 52 41.5 -0.5
comp=Z,16nm,1.2s
AKH Akhalkalaki 86.15 311 *e*P P 16 52 41.5 -0.5
AKH pmax pmax
comp=Z,16nm,1.2s
CAST Castle Rocks 86.19 26 *e*P P 16 52 41.8 +0.3
comp=Z,3.3nm,0.7s
BRLK Bradley Lake 86.22 30 *e*P P 16 52 41.4 -0.3
comp=Z,46nm,1.2s
SKT Skwentna 86.22 28 *e*P P 16 52 41.1 -0.5
comp=Z,9.4nm,1.0s
SUA Susitna One 86.52 28 *e*P P 16 52 43.2 0.0
comp=Z,14nm,0.9s
KBZ Khabaz 86.76 314 P P 16 52 43.7 -0.9
comp=Z,0.5nm,0.3s,baz=133,slow=4.2,SNR=4.0
BPAW Bear Paw Mtn. 86.78 26 *e*P P 16 52 44.4 +0.1
comp=Z,4.1nm,1.1s
NEY Neytrino 86.85 313⇓*e*P P 16 52 44.3 -1.1
NEY pmax pmax
comp=Z,2.0nm,1.6s
RC01 Rabbit Creek A 86.95 29 *e*P P 16 52 44.7 -0.5
comp=Z,9.9nm,0.8s
SEW Seward 86.98 30 *e*P P 16 52 45.2 -0.1
comp=Z,17nm,1.2s
PMR Palmer 87.30 28 *e*P P 16 52 45.7 -1.2
comp=Z,9.1nm,1.0s
PMR Palmer 87.30 28 *e*P P 16 52 45.7 -1.2
PMR pmax pmax
comp=Z,9.0nm,1.0s
GHO Glory Hole Cre 87.42 28 *e*P P 16 52 46.8 -0.8
comp=Z,7.3nm,1.0s
COLD Coldfoot 87.53 23 *e*P P 16 52 47.3 -0.6
comp=Z,6.6nm,1.1s
RND Reindeer 87.63 27 *e*P P 16 52 47.4 -1.2
comp=Z,10nm,1.0s
RND Reindeer 87.63 27 *e*P P 16 52 47.4 -1.2
RND pmax pmax
comp=Z,11nm,1.0s
SML Sawmill 87.70 28 *e*P P 16 52 48.9 0.0
comp=Z,11nm,0.8s
SML Sawmill 87.70 28 *e*P P 16 52 48.9 0.0
SML pmax pmax
comp=Z,11nm,0.8s
MDM Murphy Dome 88.06 25 *e*P P 16 52 50.2 -0.3
comp=Z,3.5nm,0.9s
WRH Wood River Hil 88.07 26 *e*P P 16 52 49.7 -0.8
comp=Z,10nm,1.2s
SCM Sheep Creek Mo 88.18 28 *e*P P 16 52 50.8 -0.4
comp=Z,16nm,1.0s
SCM Sheep Creek Mo 88.18 28 *e*P P 16 52 50.8 -0.4
SCM pmax pmax
comp=Z,16nm,1.0s
CCB Clear Creek Bu 88.21 25 *e*P P 16 52 50.0 -1.2
comp=Z,12nm,1.2s
DHY Denali Highway 88.26 27 *e*P P 16 52 50.8 -0.9
comp=Z,8.7nm,1.4s
IL1 Eielson Array 88.62 25 *e*P P 16 52 51.6 -1.5
ILAR Eielson Array 88.62 25 P P 16 52 52.0 -1.1
comp=Z,3.5nm,1.1s,baz=261,slow=4.4,SNR=16
ILAR PP **PP 16 56 19.6 -2.1**
comp=Z,0.5nm,0.8s,baz=249,slow=6.7,SNR=4.5
KLU Klutina 88.82 29 *e*P P 16 52 52.9 -1.4
comp=Z,8.2nm,1.3s
PAX Paxson 89.12 27 *e*P P 16 52 55.4 -0.3
comp=Z,8.6nm,0.5s
PAX Paxson 89.12 27 *e*P P 16 52 55.4 -0.3
PAX pmax pmax
comp=Z,9.0nm,0.5s
QSPA South Pole Qui 89.25 180 P P 16 52 56.4 +0.2
comp=Z,3.6nm,0.8s,baz=319,slow=2.2,SNR=6.5

QSPA South Pole Qui 89.25 180 *eP* **P 16 52 55.4 -0.9**
comp=Z,13nm,1.2s
BMRM Bremner River 89.43 29 *eP* **P 16 52 56.9 -0.2**
comp=Z,12nm,1.0s
DOT Dot Lake 89.79 26 *eP* **P 16 52 58.4 -0.3**
comp=Z,11nm,0.8s
CRQM Cirque 90.14 29 *eP* **P 16 52 59.2 -1.4**
comp=Z,13nm,1.2s
EGAK Eagle 91.07 25 *eP* **P 16 53 02.7 -1.9**
comp=Z,5.3nm,0.9s
DAWY Dawson 91.85 26 *eP* **P 16 53 07.4 -0.9**
comp=Z,10nm,1.0s
MMAI Mount Meron Ar 92.36 303 LR LR 17 41 26.5
comp=Z,40nm,19.6s,baz=25,slow=40
BRTR Keskin Array B 93.62 310 LR LR 17 43 31.3
comp=Z,24nm,18.3s,baz=76,slow=41
INK Inuvik 93.86 22 *eP* **P 16 53 16.4 -0.9**
comp=Z,7.6nm,1.3s
INK Inuvik 93.86 22 *eP* **P 16 53 16.4 -0.9**
INK pmax pmax
comp=Z,8.0nm,1.3s
WHY Whitehorse 94.20 29 *eP* **P 16 53 18.6 -0.7**
comp=Z,11nm,0.9s
ARCES ARCESS Array B 94.92 340 LR LR 17 40 21.6
comp=Z,64nm,19.0s,baz=59,slow=38
SPITS Spitsbergen Ar 94.98 349 LR LR 17 41 12.3
comp=Z,61nm,19.1s,baz=5.0,slow=39
FINES FINESS Array B 96.19 332 LR LR 17 40 39.1
comp=Z,58nm,18.1s,baz=90,slow=38
BUR04 Bucovina Ar. S 98.97 318 *eP* **P 16 53 37.4 -3.8**
TXAR Lajitas Array 123.37 55 PKP **PKPdf 16 58 58.7 +0.4**
comp=Z,0.6nm,1.0s,baz=348,slow=1.3,SNR=4.2
TOA0 Torodi Ar. Sit 125.19 286 *e*PKPdf **PKPdf 16 59 00.5 -1.5**
TORD Torodi Ar. Bea 125.19 286 PKP **PKPdf 16 59 01.1 -0.9**
comp=Z,1.1nm,0.7s,baz=76,slow=1.8,SNR=7.3
JTS JuntasAbangare 146.09 73 PKPbc **PKPab 16 59 42.7 +0.6**
comp=Z,8.8nm,0.8s,baz=314,slow=5.1,SNR=7.7
CPUP Villa Florida 152.70 170 PKPbc **PKPbc 16 59 55.6 -2.2**
comp=Z,1.8nm,0.9s,baz=230,slow=4.4,SNR=3.4
LPAZ La Paz 156.96 138 PKPab **PKPab 17 00 26.2 -1.4**
comp=Z,1.5nm,0.9s,baz=225,slow=8.6,SNR=3.6

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*ISCJB **04** 17:33:03.2±0.8, 17°.7S±0°.2×178°.5W±0°.1, h547km, mb3.9/9, Error ellipse: s-maj=23.0km s-min=14.3km az=146.7*
*IDC **04** 17:33:03.5±2.0, 17°.71S×178°.72W, h518km±24km, mb3.4/10, mb1 3.5/11, mb1mx3.2/54, mbtmp4.3/11, Error ellipse: s-maj=22.8km s-min=15.4km az=147.0*
ISC 04 17:33:05.0±0.8, 17°.7S±0°.2×178°.6W±0°.1, h547km, n15, σ1§17/17, mb4.0/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.61**	**61**	P	**P**	**17 34 57.1**	**-1.9**
	4.0nm,0.3s,baz=189,slow=15,SNR=2.6						
DZM	**Mont Dzumac**	**14.69**	**250**	P	**P**	**17 36 12.0**	**+0.5**
	0.2nm,0.3s,baz=96,slow=18,SNR=3.4						
URZ	**Urewera**	**20.79**	**189**	P	**P**	**17 37 07.2**	**-1.1**
	5.7nm,0.8s,baz=346,slow=8.3,SNR=3.5						
CTA	**Charters Tower**	**33.27**	**260**	P	**P**	**17 38 57.3**	**-0.4**
	3.7nm,0.8s,baz=90,slow=8.0,SNR=5.9						
STKA	**Stephens Creek**	**38.53**	**241**	P	**P**	**17 39 41.9**	**+0.8**
	3.5nm,0.5s,baz=92,slow=9.6,SNR=14						
JAY	**Jayapura**	**42.66**	**286**	P	**P**	**17 40 13.9**	**-0.3**
	4.5nm,0.7s,baz=157,slow=8.4,SNR=6.7						
WRA	**Warramunga Arr**	**44.46**	**259**	P	**P**	**17 40 26.8**	**-1.3**
	1.8nm,0.7s,baz=94,slow=7.9,SNR=38						
WRA				PcP	**PcP**	**17 42 00.5**	**+0.7**
	0.5nm,0.7s,baz=91,slow=3.7,SNR=4.1						
ASAR	**Alice Springs**	**44.64**	**254**	P	**P**	**17 40 29.2**	**-0.3**
	17nm,0.6s,baz=89,slow=7.9,SNR=491						
ASAR				PcP	**PcP**	**17 42 00.6**	**+0.2**
	0.9nm,0.5s,baz=105,slow=4.0,SNR=7.1						
FITZ	**Fitzroy Crossi**	**52.85**	**260**	P	**P**	**17 41 30.7**	**+0.4**
	1.1nm,0.3s,baz=78,slow=7.6,SNR=14						
MJAR	**Matsushiro Arr**	**67.64**	**323**	P	**P**	**17 43 07.3**	**-0.4**
	0.9nm,0.5s,baz=158,slow=5.6,SNR=4.9						
SEY	**Seymchan**	**83.56**	**347**	P	**P**	**17 44 35.6**	**+0.3**
	1.8nm,0.4s,baz=154,slow=9.1,SNR=18						
TXAR	**Lajitas Array**	**86.08**	**58**	P	**P**	**17 44 51.7**	**+3.2**
	0.3nm,0.6s,baz=214,slow=6.2,SNR=3.3						
BVAR	**Borovoye Array**	**116.58**	**321**	PKP	**PKPdf**	**17 50 46.9**	**0.0**
	0.4nm,0.4s,baz=122,slow=2.7,SNR=4.4						
BRTR	**Keskin Array B**	**144.51**	**315**	PKP	**PKPdf**	**17 51 39.6**	**-0.2**
	1.2nm,0.8s,baz=125,slow=3.6,SNR=7.9						
MMAI	**Mount Meron Ar**	**145.87**	**303**	PKPbc	**PKPab**	**17 51 45.0**	**-0.8**
	1.9nm,0.6s,baz=69,slow=4.6,SNR=4.0						

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*NNC **04** 17:36:29.8±1.8, 37°.66N×71°.76E, h191km±19km, mb2.6, mpv3.5, Error ellipse: s-maj=19.6km s-min=14.4km az=65.0*
ISC 04 17:36:21.7±1.0, 37°.15N±0°.06×71°.7E±0°.1, h200km, n20, σ3§04/29, 3C-11D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.18**	**25**	⇓P	**Pn**	**17 37 15.7**	**+2.1**
	5.6nm,0.3s						
SFK				⇑S	**Sn**	**17 37 52.2**	**-2.2**
	140nm,0.4s						
MNAS	**Manas**	**5.37**	**6**	⇑P	**Pn**	**17 37 42.9**	**+2.1**
	16nm,0.3s						
MNAS				⇓S	**Sn**	**17 38 39.9**	**-3.5**
	44nm,0.6s						
THN	**Thein Dam**	**5.73**	**144**	*e*P	**Pn**	**17 37 48.0**	**+2.6**
THN				*e*S	**Sn**	**17 38 50.0**	**-1.6**
AAK	**Ala-Archa**	**5.88**	**20**	⇓P	**Pn**	**17 37 49.3**	**+1.9**
	1.3nm,0.3s						
AAK				⇓S	**Sn**	**17 38 53.8**	**-1.5**
	19nm,0.7s						
KK31	**Karatay Array**	**6.03**	**351**	⇓P	**Pn**	**17 37 51.3**	**+2.1**
	2.6nm,0.3s,baz=156,slow=10,SNR=117						
KK31				⇓S	**Sn**	**17 38 54.7**	**-3.8**
	5.3nm,0.3s,baz=165,slow=16,SNR=15						
DHRM	**DHARAMSHALA**	**6.16**	**141**	*e*P	**Pn**	**17 37 53.8**	**+2.6**
DHRM				*e*S	**Sn**	**17 39 00.8**	**-1.3**
DHRM				IAML		17 39 03.9	
	comp=E,214nm,0.4s						
DHRM				IAML		17 39 04.4	
	comp=N,188nm,0.3s						
TKM2	**Tokmak 2**	**6.48**	**26**	⇓P	**Pn**	**17 37 56.3**	**+1.0**
	comp=N,1.0nm,0.5s						
TKM2				⇓S	**Sn**	**17 39 06.0**	**-3.5**
	comp=N,3.7nm,0.6s						
SMLA	**Simla**	**7.50**	**142**	*e*P	**Pn**	**17 38 12.1**	**+3.7**
SMLA				*e*S	**Sn**	**17 39 31.6**	**-1.6**
SMLA				IAML		17 39 33.0	
	comp=N,56nm,0.9s						
SMLA				IAML		17 39 33.7	
	comp=E,78nm,0.8s						
KHET	**Khetri**	**9.67**	**158**	*e*S	**Sn**	**17 40 18.4**	**-6.6**
SONA	**Sohna**	**9.94**	**152**	*e*S	**Sn**	**17 40 26.7**	**-4.7**
PYUN	**Piuthan**	**13.08**	**130**	*e*P	**P**	**17 39 22.7**	**-0.8**
	comp=E,14nm,0.5s						
DANN	**Dangsing**	**13.38**	**128**	*e*P	**P**	**17 39 27.2**	**+0.3**
	comp=E,6.7nm,0.3s						
KOLN	**Koldanda**	**13.69**	**130**	*e*P	**P**	**17 39 32.2**	**+1.9**
	comp=E,6.0nm,0.3s						
GKN	**Gorkha**	**14.18**	**126**	*e*P	**P**	**17 39 37.1**	**+1.5**
	comp=E,38nm,0.5s						
KKN	**Kakani**	**14.74**	**125**	*e*P	**P**	**17 39 43.3**	**+1.4**
	comp=E,8.5nm,0.6s						
AB31	**Akbulak array**	**14.83**	**328**	⇓P	P	17 39 46.3	+3.9
	comp=E,0.6nm,0.5s,baz=147,slow=13,SNR=17						
AB31				⇓S	**S**	**17 42 23.9**	**-2.2**
	comp=E,0.8nm,0.5s,baz=151,slow=23,SNR=5.0						
GUN	**Gumba**	**15.05**	**124**	*e*P	**P**	**17 39 46.8**	**+1.3**
	comp=E,15nm,0.6s						
JIRN	**Jiri**	**15.42**	**124**	*e*P	**P**	**17 39 51.3**	**+1.6**
	comp=E,16nm,0.4s						
AKTO	**Aktyubinsk**	**16.53**	**328**	⇓P	**Pn**	**17 40 05.6**	**+3.4**
	comp=E,2.8nm,0.5s						
AKTO				⇑S	**S**	**17 43 01.7**	**-2.2**
	comp=E,1.2nm,0.6s						
BOK	**Bokaro**	**18.02**	**134**	*ex*	**P**	**17 40 11.1**	**-6.6**

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*ISCJB **04** 17:48:53.3±0.2, 44°.99N±0°.01×10°.90E±0°.02, h13km±2km, Error ellipse: s-maj=2.7km s-min=2.1km az=33.3*
*PRU **04** 17:48:53.0, 44°.92N×10°.71E, h5km*
*ROM **04** 17:48:53.3±0.0, 44°.892N±0°.003×10°.905E±0°.001, h8km, ML3.1/48*
*CSEM **04** 17:48:54.0±0.1, 44°.94N×10°.96E, h10km, ML3.3/16, Error ellipse: s-maj=3.2km s-min=2.6km az=159.0*
*LDG **04** 17:48:54.3±0.2, 44°.94N×11°.08E, h2km, Ml3.3/15, Error ellipse: s-maj=6.5km s-min=3.5km az=146.0*
*STR **04** 17:48:54.1±3.7, 45°.N±13°×1°.1E±3°.4, h5km, M3.9/7, MLv3.9/7*
ISC 04 17:48:53.6±0.7, 44°.92N±0°.02×10°.92E±0°.02, h13km±3km, n207, σ1§24/265, 15C-19D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0827	**Moglia (MN)**	**0.03**	**29**	⇑*i*P	**Pg**	**17 48 55.8**	**-0.2**
T0827				⇑*i*S	**Sg**	**17 48 58.5**	**+0.9**
T0827	**Moglia (MN)**	**0.03**	**29**	*i* P	**Pg**	**17 48 55.8**	**-0.2**
T0827				*i* S	**Sg**	**17 48 58.5**	**+0.9**
NDIM	**Novi di Modena**	**0.03**	**202**	*i* P	**Pg**	**17 48 54.9**	**-1.1**
NDIM				*i* S	**Sg**	**17 48 56.6**	**-1.0**
T0825	**Gonzaga (MN)**	**0.07**	**320**	AML	AML		
T0825				AML	AML		
T0818	**Loc. Fossa, Co**	**0.08**	**77**	⇑*i*P	**Pg**	**17 48 56.5**	**+0.1**
T0818				⇑*i*S	**Sg**	**17 49 00.0**	**+1.6**
T0818	**Loc. Fossa, Co**	**0.08**	**77**	*i* P	**Pg**	**17 48 56.5**	**+0.1**
T0818				*i* S	**Sg**	**17 49 00.0**	**+1.6**
T0828	**Loc. Fossoli,**	**0.09**	**180**	⇓*i*P	**Pg**	**17 48 55.7**	**-0.7**
T0828				⇓*i*S	**Sg**	**17 48 58.1**	**-0.3**
T0828	**Loc. Fossoli,**	**0.09**	**180**	*i* P	**Pg**	**17 48 55.7**	**-0.7**
T0828				*i* S	**Sg**	**17 48 58.1**	**-0.3**
T0826	**Rio Saliceto (**	**0.11**	**224**	AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0814	**Loc. Cortile,**	**0.13**	**163**	⇓*i*P	**Pg**	**17 48 56.6**	**-0.4**
T0814				⇓*i*S	**Sb**	**17 49 00.2**	**-0.5**
T0814	**Loc. Cortile,**	**0.13**	**163**	*i* P	**Pg**	**17 48 56.6**	**-0.4**
T0814				*i* S	**Sb**	**17 49 00.2**	**-0.5**
SBPO	**S.Benedetto Po**	**0.14**	**1**	⇓*e*P	**Pb**	**17 48 57.9**	**-0.1**
SBPO	**S.Benedetto Po**	**0.14**	**1**	*e*P	**Pb**	**17 48 57.9**	**-0.1**
SBPO				AML	AML		
	comp=E,14100μm,0.5s						
SBPO				AML	AML		
	comp=N,79250μm,0.4s						
SBPO				AML	AML		
	comp=E,14100μm,0.5s						
SBPO				AML	AML		
	comp=N,79250μm,0.4s						
SBPO				AML	AML		
	comp=E,14100μm,0.5s						
SBPO				AML	AML		
	comp=N,79250μm,0.4s						
T0824	**Loc. Limidi di**	**0.16**	**177**	⇓*i*P	**Pg**	**17 48 57.2**	**-0.2**
T0824				⇓*i*S	**Sb**	**17 49 01.2**	**-0.3**
T0824	**Loc. Limidi di**	**0.16**	**177**	*i* P	**Pg**	**17 48 57.2**	**-0.2**
T0824				*i* S	**Sb**	**17 49 01.2**	**-0.3**
NOVE	**Novellara**	**0.18**	**230**	⇓*e*P	**Pg**	**17 48 57.6**	**-0.2**
NOVE				⇓*e*S	**Sb**	**17 49 02.2**	**-0.1**
NOVE	**Novellara**	**0.18**	**230**	*e*P	**Pg**	**17 48 57.6**	**-0.2**
NOVE				*e*S	**Sb**	**17 49 02.2**	**-0.1**
NOVE				AML	AML		
	comp=E,51000μm,0.3s						
NOVE				AML	AML		
	comp=N,41100μm,0.2s						
NOVE				AML	AML		
	comp=E,51000μm,0.3s						
NOVE				AML	AML		
	comp=N,41100μm,0.2s						
NOVE				AML	AML		
	comp=E,51000μm,0.3s						
NOVE				AML	AML		
	comp=N,41100μm,0.2s						
NOVE				AML	AML		
	comp=E,51000μm,0.3s						
NOVE				AML	AML		
	comp=N,41100μm,0.2s						
T0812	**Loc. Stoppiaro**	**0.19**	**78**	*e*P	**Pb**	**17 48 58.2**	**-0.7**
T0812	**Loc. Stoppiaro**	**0.19**	**78**	*e*P	**Pb**	**17 48 58.2**	**-0.7**
T0802	**SanFelice sul**	**0.19**	**102**	⇑*e*P	**Pb**	**17 48 58.2**	**-0.8**
T0802				⇑*e*S	**Sb**	**17 49 02.9**	**+0.3**
T0802	**SanFelice sul**	**0.19**	**102**	*e*P	**Pb**	**17 48 58.2**	**-0.8**
T0802				*e*S	**Sb**	**17 49 02.9**	**+0.3**
T0813	**Massa Finalese**	**0.20**	**101**	⇑*e*P	**Pb**	**17 48 58.3**	**-0.9**
T0813				⇑*e*S	**Sb**	**17 49 03.3**	**+0.4**
T0813	**Massa Finalese**	**0.20**	**101**	*e*P	**Pb**	**17 48 58.3**	**-0.9**
T0813				*e*S	**Sb**	**17 49 03.3**	**+0.4**
RAVA	**Ravarino**	**0.22**	**138**	⇓*e*P	**Pg**	**17 48 58.3**	**0.0**
RAVA				⇓*e*S	**Sb**	**17 49 03.4**	**+0.2**
RAVA	**Ravarino**	**0.22**	**138**	*e*P	**Pg**	**17 48 58.3**	**0.0**
RAVA				*e*S	**Sb**	**17 49 03.4**	**+0.2**
RAVA				AML	AML		
	comp=E,23050μm,0.6s						
RAVA				AML	AML		
	comp=N,21400μm,0.7s						
RAVA				AML	AML		
	comp=E,23100μm,0.6s						
RAVA				AML	AML		
	comp=N,21400μm,0.7s						
RAVA				AML	AML		
	comp=E,23050μm,0.6s						
RAVA				AML	AML		
	comp=N,21400μm,0.7s						
RAVA				AML	AML		
	comp=N,21400μm,0.7s						
RAVA				AML	AML		
	comp=E,23050μm,0.6s						
GAZZ	**Gazzo Veronese**	**0.23**	**33**	⇑*e*Pg	**Pb**	**17 48 59.4**	**-0.3**
GAZZ	**Gazzo Veronese**	**0.23**	**33**	*e*Pg	**Pb**	**17 48 59.4**	**-0.3**
T0800	**Massa Finalese**	**0.25**	**106**	⇓*e*P	**Pb**	**17 48 58.9**	**-1.0**
T0800				⇓*e*S	**Sb**	**17 49 04.3**	**+0.2**
T0800	**Massa Finalese**	**0.25**	**106**	*e*P	**Pb**	**17 48 58.9**	**-1.0**
T0800				*e*S	**Sb**	**17 49 04.3**	**+0.2**
T0800				AML	AML		
	comp=E,20100μm,0.5s						
T0800				AML	AML		
	comp=N,16700μm,0.6s						
T0800				AML	AML		
	comp=E,16150μm,0.5s						
T0800				AML	AML		
	comp=N,14800μm,0.5s						
T0800				AML	AML		
	comp=E,20150μm,0.5s						
T0800				AML	AML		
	comp=N,16700μm,0.6s						
T0800				AML	AML		
	comp=E,16150μm,0.5s						
T0800				AML	AML		
	comp=N,14800μm,0.5s						
T0800				AML	AML		
	comp=E,20150μm,0.5s						
T0800				AML	AML		
	comp=N,16650μm,0.6s						
T0800				AML	AML		
	comp=E,16150μm,0.5s						
T0800				AML	AML		
	comp=N,14850μm,0.5s						
T0800				AML	AML		
	comp=N,16650μm,0.6s						
T0800				AML	AML		
	comp=N,14850μm,0.5s						
T0800				AML	AML		
	comp=E,20150μm,0.5s						
T0800				AML	AML		
	comp=E,16150μm,0.5s						
T0811	**Palata Pepoli**	**0.26**	**121**	*e*P	**Pg**	**17 48 58.9**	**-0.1**
T0811				*e*S	**Sb**	**17 49 04.5**	**+0.1**
T0811	**Palata Pepoli**	**0.26**	**121**	*e*P	**Pg**	**17 48 58.9**	**-0.1**
T0811				*e*S	**Sb**	**17 49 04.5**	**+0.1**
SERM	**Sermide**	**0.29**	**71**	*e*P	**Pb**	**17 49 00.9**	**+0.3**
SERM	**Sermide**	**0.29**	**71**	*e*P	**Pb**	**17 49 00.9**	**+0.3**
SERM				AML	AML		
	comp=E,2705μm,0.5s						
SERM				AML	AML		
	comp=N,1815μm,0.4s						
SERM				AML	AML		
	comp=E,5255μm,0.7s						
SERM				AML	AML		
	comp=N,3155μm,0.8s						
SERM				AML	AML		
	comp=E,2710μm,0.5s						
SERM				AML	AML		
	comp=N,1815μm,0.4s						
SERM				AML	AML		
	comp=E,5250μm,0.7s						
SERM				AML	AML		
	comp=N,3155μm,0.8s						
SERM				AML	AML		
	comp=E,5250μm,0.7s						
SERM				AML	AML		
	comp=E,2710μm,0.5s						
SERM				AML	AML		
	comp=N,1815μm,0.4s						
MODE	**Modena**	**0.29**	**175**	AML	AML		
	comp=E,23100μm,0.5s						
MODE				AML	AML		
	comp=E,23100μm,0.5s						
MODE				AML	AML		
	comp=N,11850μm,0.4s						
MODE				AML	AML		
	comp=E,23150μm,0.5s						
MODE				AML	AML		
	comp=N,15850μm,0.7s						
MODE				AML	AML		
	comp=N,15850μm,0.7s						
MODE				AML	AML		
	comp=E,23100μm,0.5s						
MODE				AML	AML		
	comp=N,15850μm,0.7s						
T0805	**Bondeno (FE)**	**0.29**	**89**	*e*P	**Pb**	**17 48 59.8**	**-0.8**
T0805	**Bondeno (FE)**	**0.29**	**89**	*e*P	**Pb**	**17 48 59.8**	**-0.8**
T0805				AML	AML		
	comp=E,11150μm,0.4s						
T0805				AML	AML		
	comp=N,9985μm,0.3s						
T0805				AML	AML		
	comp=E,11150μm,0.4s						
T0805				AML	AML		
	comp=N,9960μm,0.3s						
T0805				AML	AML		
	comp=N,9960μm,0.3s						
T0805				AML	AML		
	comp=E,11150μm,0.4s						
T0822	**Casumaru (Bond**	**0.32**	**105**	*e*P	**Pb**	**17 49 00.1**	**-1.0**
T0822				*e*S	**Sb**	**17 49 06.3**	**+0.2**
T0822	**Casumaru (Bond**	**0.32**	**105**	*e*P	**Pb**	**17 49 00.1**	**-1.0**
T0822				*e*S	**Sb**	**17 49 06.3**	**+0.2**
T0822				AML	AML		
	comp=E,4225μm,0.7s						
T0822				AML	AML		
	comp=N,6595μm,0.4s						
T0822				AML	AML		
	comp=E,4225μm,0.7s						
T0822				AML	AML		
	comp=N,6600μm,0.4s						
T0822				AML	AML		
	comp=E,4225μm,0.7s						
T0822				AML	AML		
	comp=N,6595μm,0.4s						
T0822				AML	AML		
	comp=N,6595μm,0.4s						
T0822				AML	AML		
	comp=E,4225μm,0.7s						
T0823	**Castello D'Arg**	**0.34**	**132**	*e*P	**Pb**	**17 49 01.3**	**-0.3**
T0823	**Castello D'Arg**	**0.34**	**132**	*e*P	**Pb**	**17 49 01.3**	**-0.3**
T0817	**Loc. Veratica,**	**0.39**	**79**	*e*P	**Pb**	**17 49 02.6**	**+0.2**
T0817	**Loc. Veratica,**	**0.39**	**79**	*e*P	**Pb**	**17 49 02.6**	**+0.2**
T0821	**Loc. Casaglia**	**0.44**	**91**	AML	AML		
	comp=N,1850μm,0.5s						
T0821				AML	AML		
	comp=E,1865μm,0.7s						
T0821				AML	AML		
	comp=E,1940μm,0.7s						
T0821				AML	AML		
	comp=N,1885μm,0.5s						
T0821				AML	AML		
	comp=E,1940μm,0.7s						
T0821				AML	AML		
	comp=N,1885μm,0.5s						
T0821				AML	AML		
	comp=N,1885μm,0.5s						
T0821				AML	AML		
	comp=E,1940μm,0.7s						
ZCCA	**Zocca**	**0.57**	**176**	⇑*e*P	**Pn**	**17 49 06.6**	**-0.8**
ZCCA	**Zocca**	**0.57**	**176**	*e*P	**Pn**	**17 49 06.6**	**-0.8**
ZCCA				AML	AML		
	comp=E,1875μm,1.6s						
ZCCA				AML	AML		
	comp=N,1855μm,0.8s						
ZCCA				AML	AML		
	comp=E,1840μm,1.6s						
ZCCA				AML	AML		
	comp=N,1905μm,0.8s						
ZCCA				AML	AML		
	comp=E,1880μm,1.6s						
ZCCA				AML	AML		
	comp=N,1855μm,0.8s						
ZCCA				AML	AML		
	comp=E,1840μm,1.6s						
ZCCA				AML	AML		
	comp=N,1905μm,0.8s						
ZCCA				AML	AML		
	comp=E,1880μm,1.6s						
ZCCA				AML	AML		
	comp=E,1840μm,1.6s						
ZCCA				AML	AML		
	comp=N,1855μm,0.8s						
ZCCA				AML	AML		
	comp=N,1905μm,0.8s						
TEOL	**Teolo**	**0.69**	**50**	⇓*e*Pg	**Pb**	**17 49 07.4**	**-0.1**
TEOL				*e*Sg	**Sn**	**17 49 20.7**	**+0.9**
TEOL	**Teolo**	**0.69**	**50**	⇓*e*P	**Pb**	**17 49 07.4**	**-0.1**
TEOL				*e*Sg	**Sn**	**17 49 20.7**	**+0.9**
TEOL	**Teolo**	**0.69**	**50**	*e*P	**Pb**	**17 49 07.4**	**-0.1**
TEOL				AML	AML		
	comp=E,4600μm,0.4s						
TEOL				AML	AML		
	comp=N,4515μm,0.5s						
TEOL				AML	AML		
	comp=E,4600μm,0.4s						
TEOL				AML	AML		
	comp=N,4515μm,0.5s						
TEOL				AML	AML		
	comp=N,4515μm,0.5s						
TEOL				AML	AML		
	comp=E,4600μm,0.4s						
CMPO	**Campotto Po**	**0.72**	**118**	AML	AML		
	comp=E,1930μm,0.6s						
CMPO				AML	AML		
	comp=E,1930μm,0.6s						
CMPO				AML	AML		
	comp=N,3275μm,0.6s						
CMPO				AML	AML		
	comp=N,3275μm,0.6s						
CMPO				AML	AML		
	comp=N,3275μm,0.6s						
CMPO				AML	AML		
	comp=E,1930μm,0.6s						
ROVR	**Rover¨¤ Verone**	**0.74**	**9**	AML	AML		
	comp=E,1470μm,0.3s						
ROVR				AML	AML		
	comp=N,3880μm,0.2s						
ROVR				AML	AML		
	comp=E,1470μm,0.3s						
ROVR				AML	AML		
	comp=N,3880μm,0.2s						
ROVR				AML	AML		
	comp=N,3880μm,0.2s						
ROVR				AML	AML		
	comp=E,1470μm,0.3s						
MARN	**Marana (Italy)**	**0.75**	**16**	⇓*e*Pg	**Pg**	**17 49 08.2**	**0.0**
MARN				*e*Sg	**Sn**	**17 49 21.6**	**+0.4**
MARN	**Marana (Italy)**	**0.75**	**16**	*e*Pg	**Pg**	**17 49 08.2**	**0.0**
MARN				*e*Sg	**Sn**	**17 49 21.5**	**+0.4**
SALO	**Salr**	**0.76**	**339**	AML	AML		
	comp=N,1750μm,0.6s						
SALO				AML	AML		
	comp=E,1595μm,0.4s						
SALO				AML	AML		
	comp=N,1750μm,0.6s						
SALO				AML	AML		
	comp=E,1595μm,0.4s						
SALO				AML	AML		
	comp=N,1750μm,0.6s						
SALO				AML	AML		
	comp=E,1595μm,0.4s						
FNVD	**Fontana Vidola**	**0.76**	**169**	AML	AML		
	comp=E,1370μm,0.8s						
FNVD				AML	AML		
	comp=E,1370μm,0.8s						
FNVD				AML	AML		
	comp=N,1210μm,0.3s						

FNVD AML AML
comp=N,1210µm,0.3s
ADRI Adria, Italy 0.79 81⇑ ePg Pn 17 49 10.6 +0.2
ADRI eSg Sn 17 49 24.6 +2.6
ADRI Adria, Italy 0.79 81 ePg Pn 17 49 10.6 +0.2
ADRI eSg Sn 17 49 24.6 +2.6
IMOL Imola, Italy 0.81 133 AML AML
comp=N,185µm,0.7s
IMOL AML AML
comp=E,339µm,0.8s
IMOL AML AML
comp=N,184µm,0.7s
IMOL AML AML
comp=E,339µm,0.8s
IMOL AML AML
comp=E,339µm,0.8s
IMOL AML AML
comp=N,185µm,0.7s
VLC Villacollemand 0.85 207 AML AML
comp=E,454µm,0.9s
VLC AML AML
comp=N,662µm,0.7s
VLC AML AML
comp=E,454µm,0.9s
VLC AML AML
comp=N,662µm,0.7s
VLC AML AML
comp=E,454µm,0.9s
VLC AML AML
comp=N,662µm,0.7s
POPM Popiglio 0.88 187 AML AML
comp=E,766µm,0.3s
POPM AML AML
comp=N,836µm,1.0s
POPM AML AML
comp=E,766µm,0.3s
POPM AML AML
comp=N,836µm,1.0s
POPM AML AML
comp=N,836µm,1.0s
POPM AML AML
comp=E,766µm,0.3s
MAGA Magasa 0.88 347 AML AML
comp=N,6495µm,0.5s
MAGA AML AML
comp=E,9120µm,0.4s
MAGA AML AML
comp=E,9120µm,0.4s
MAGA AML AML
comp=N,6495µm,0.5s
MAGA AML AML
comp=N,6495µm,0.5s
MAGA AML AML
comp=E,9120µm,0.4s
CTL8 Castelleone 0.89 294 AML AML
comp=E,758µm,0.4s
CTL8 AML AML
comp=E,2150µm,0.4s
CTL8 AML AML
comp=N,2255µm,0.5s
CTL8 AML AML
comp=N,626µm,0.4s
CTL8 AML AML
comp=E,2155µm,0.4s
CTL8 AML AML
comp=N,2255µm,0.5s
CTL8 AML AML
comp=E,758µm,0.4s
CTL8 AML AML
comp=N,626µm,0.4s
CTL8 AML AML
comp=N,2255µm,0.5s
CTL8 AML AML
comp=N,626µm,0.4s
CTL8 AML AML
comp=E,2155µm,0.4s
CTL8 AML AML
comp=E,758µm,0.4s
DOSS Dosso del Somm 0.98 11⇓ ePg Pb 17 49 12.4 -0.2
DOSS eSg Sn 17 49 28.2 +1.1
DOSS Dosso del Somm 0.98 11 ePg Pb 17 49 12.4 -0.2
DOSS eSg Sn 17 49 28.2 +1.1
MAIM Mastiano 1.05 197 AML AML
comp=N,699µm,0.4s
MAIM AML AML
comp=E,558µm,0.5s
MAIM AML AML
comp=N,699µm,0.4s
MAIM AML AML
comp=E,558µm,0.5s
MAIM AML AML
comp=N,699µm,0.4s
MAIM AML AML
comp=E,558µm,0.5s
BOB Bobbio (Coli) 1.05 262 AML AML
comp=E,998µm,0.5s
BOB AML AML
comp=E,998µm,0.5s
BOB AML AML
comp=N,1785µm,1.4s
BOB AML AML
comp=E,998µm,0.5s
BOB AML AML
comp=N,1785µm,1.4s
BOB AML AML
comp=N,1785µm,1.4s
RNI Roncone 1.08 349⇑ ePg Pb 17 49 13.2 -1.1
RNI eSg Sn 17 49 30.3 +0.7
RNI Roncone 1.08 349 ePg Pb 17 49 13.2 -1.1
RNI eSg Sn 17 49 30.3 +0.7
CRMI Carmignano 1.13 178 AML AML
comp=E,321µm,0.5s
CRMI AML AML
comp=E,321µm,0.5s
CRMI AML AML
comp=N,272µm,0.5s
CRMI AML AML
comp=E,321µm,0.5s
CRMI AML AML
comp=N,273µm,0.5s
CRMI AML AML
comp=N,273µm,0.5s
CGRP Cima Grappa 1.15 33⇓ ePg Pg 17 49 15.5 -0.3
CGRP eSg Sn 17 49 34.0 +2.9
CGRP Cima Grappa 1.15 33 ePg Pg 17 49 15.5 -0.3
CGRP eSg Sn 17 49 34.0 +2.9
CGRP Cima Grappa 1.15 33 AML AML
comp=N,765µm,0.7s
CGRP AML AML
comp=E,645µm,0.7s
CGRP AML AML
comp=N,765µm,0.7s
CGRP AML AML
comp=E,644µm,0.7s
CGRP AML AML
comp=N,765µm,0.7s
CGRP AML AML
comp=E,644µm,0.7s
PLMA Palmaria, Port 1.15 222 AML AML
comp=N,1120µm,0.6s
PLMA AML AML
comp=E,790µm,0.3s
PLMA AML AML
comp=E,790µm,0.3s
PLMA AML AML
comp=N,1120µm,0.6s
MSSA Maissana 1.17 239 AML AML
comp=N,812µm,0.5s
MSSA AML AML
comp=E,749µm,0.4s
MSSA AML AML
comp=N,812µm,0.5s
MSSA AML AML
comp=E,749µm,0.4s
MSSA AML AML
comp=N,812µm,0.5s
MSSA AML AML
comp=E,749µm,0.4s
PANI Panarotta 1.17 14⇑ ePg Pn 17 49 15.1 -0.8
PANI eSg Sg 17 49 33.5 +2.0
PANI Panarotta 1.17 14 ePg Pn 17 49 15.1 -0.8
PANI eSg Sg 17 49 33.5 +2.0
MABI Malga Bissina 1.17 346 AML AML
comp=N,286µm,0.8s
MABI AML AML
comp=E,319µm,0.6s
MABI AML AML
comp=E,319µm,0.6s
MABI AML AML
comp=N,286µm,0.8s
MABI AML AML
comp=E,319µm,0.6s
MABI AML AML
comp=N,286µm,0.8s
SFI Santa Sofia 1.21 146 AML AML
comp=N,734µm,0.9s
SFI AML AML
comp=E,447µm,0.7s
SFI AML AML
comp=N,734µm,0.9s
SFI AML AML
comp=E,530µm,0.5s
SFI AML AML
comp=N,763µm,0.9s
SFI AML AML
comp=E,530µm,0.5s
SFI AML AML
comp=N,763µm,0.9s
SFI AML AML
comp=E,447µm,0.7s
MTLO Montello 1.22 42⇓ ePg Pb 17 49 16.5 -0.1
MTLO eSg Sg 17 49 35.6 +2.5
MTLO Montello 1.22 42 ePg Pb 17 49 16.5 -0.1
MTLO eSg Sg 17 49 35.6 +2.5
CTI Castel Tesino 1.25 24 AML AML
comp=E,1120µm,0.2s
CTI AML AML
comp=E,1120µm,0.2s
CTI AML AML
comp=N,1865µm,1.6s
CTI AML AML
comp=E,1120µm,0.2s
CTI AML AML
comp=N,1865µm,1.6s
CTI AML AML
comp=N,1865µm,1.6s
ASQU Asqua 1.28 150 AML AML
comp=N,404µm,0.5s
ASQU AML AML
comp=E,323µm,1.3s
ASQU AML AML
comp=N,404µm,0.5s
ASQU AML AML
comp=E,323µm,1.3s
OZOL Ozolo 1.49 4⇑ ePg Pn 17 49 20.1 -0.1
OZOL Ozolo 1.49 4 ePg Pn 17 49 20.1 -0.1
CRE Caprese Michel 1.49 150 AML AML
comp=N,304µm,0.7s
CRE AML AML
comp=E,244µm,0.8s
CRE AML AML
comp=N,304µm,0.7s
CRE AML AML
comp=E,244µm,0.8s
CRE AML AML
comp=E,244µm,0.8s
CRE AML AML
comp=N,304µm,0.7s
FAU Forcella Aurin 1.51 29⇑ ePg Pb 17 49 20.8 -0.8
FAU eSg Sg 17 49 43.1 +0.8
FAU Forcella Aurin 1.51 29 ePg Pb 17 49 20.8 -0.8
FAU eSg Sg 17 49 43.1 +0.8
CARE Lago del Cares 1.52 354 ePg Pn 17 49 20.1 -0.6
CARE Lago del Cares 1.52 354 ePg Pn 17 49 20.1 -0.6
CAE Caneva 1.53 44 ePg Pb 17 49 21.6 -0.2
CAE Caneva 1.53 44 ePg Pb 17 49 21.6 -0.2
APPI Appiano 1.58 8 AML AML
comp=N,838µm,0.4s
APPI AML AML
comp=E,940µm,1.1s
APPI AML AML
comp=E,940µm,1.1s
APPI AML AML
comp=N,838µm,0.4s
AGOR Agordo 1.58 30 AML AML
comp=E,308µm,0.3s
AGOR AML AML
comp=N,361µm,0.4s
AGOR AML AML
comp=N,361µm,0.4s
AGOR AML AML
comp=E,308µm,0.3s
KOSI Kohlern 1.58 12 AML AML
comp=N,484µm,0.7s
KOSI AML AML
comp=E,526µm,0.7s
KOSI AML AML
comp=N,484µm,0.7s
KOSI AML AML
comp=E,526µm,0.7s
BRMO Bormio 1.61 347 AML AML
comp=N,250µm,0.6s
BRMO AML AML
comp=E,211µm,0.4s
BRMO AML AML
comp=N,250µm,0.6s
BRMO AML AML
comp=E,211µm,0.4s
MOSI Grossmontoni 1.72 352 AML AML
comp=N,937µm,0.7s
MOSI AML AML
comp=E,822µm,1.1s
MOSI AML AML
comp=E,822µm,1.1s
MOSI AML AML
comp=N,937µm,0.7s
CAFI Castiglion Fio 1.76 154 AML AML
comp=E,142µm,0.6s
CAFI AML AML
comp=N,108µm,1.5s
CAFI AML AML
comp=N,108µm,1.5s
CAFI AML AML
comp=E,142µm,0.6s
ABSI Aberstueckl 1.83 9 AML AML
comp=N,746µm,0.5s
ABSI AML AML
comp=E,1195µm,0.6s
ABSI AML AML
comp=N,746µm,0.5s
ABSI AML AML
comp=E,1195µm,0.6s
STAL STALIGIAL 1.84 43 AML AML
comp=N,470µm,0.8s
STAL AML AML
comp=E,424µm,0.3s
STAL AML AML
comp=N,470µm,0.8s
STAL AML AML
comp=E,494µm,0.3s
STAL AML AML
comp=N,427µm,0.3s
STAL AML AML
comp=E,494µm,0.3s
STAL AML AML
comp=E,424µm,0.3s
STAL AML AML
comp=N,427µm,0.3s
QLNO Quiliano 1.93 253 AML AML
comp=E,152µm,0.5s
QLNO AML AML
comp=E,152µm,0.5s
QLNO AML AML
comp=N,212µm,1.1s
QLNO AML AML
comp=N,212µm,1.1s
FINB Finale Ligure 1.99 249 AML AML
comp=N,1285µm,0.3s
FINB AML AML
comp=E,1190µm,0.4s
FINB AML AML
comp=N,1285µm,0.3s
FINB AML AML
comp=E,1190µm,0.4s
ROSI Rosskopf 2.04 10 AML AML
comp=E,508µm,0.7s
ROSI AML AML
comp=N,495µm,0.9s
ROSI AML AML
comp=E,508µm,0.7s
ROSI AML AML
comp=N,495µm,0.9s
FETA Feichten 2.11 357 ePn **Pb 17 49 31.5 -0.3**
comp=N,1.3nm,0.2s
FETA ePg **Pg 17 49 33.3 -0.8**
comp=N,19nm,0.5s,SNR=18
FETA Sn **Sb 17 49 59.0 +1.1**
comp=N,28nm,0.5s
FETA Feichten 2.11 357 Pn **Pb 17 49 31.5 -0.3**
comp=N,1.3nm,0.2s
FETA Feichten 2.11 357 Pg **Pg 17 49 33.3 -0.8**
comp=N,19nm,0.5s,SNR=18
FETA Sn **Sb 17 49 59.0 +1.1**
comp=N,28nm,0.5s
ABTA Abfaltersbach 2.15 31 ePn **Pb 17 49 30.5 -1.8**
comp=N,1.0nm,0.2s
ABTA ePg **Pg 17 49 33.6 -1.2**
comp=N,10nm,0.3s,SNR=12
ABTA Sg **Sg 17 50 04.1 +1.5**
comp=N,39nm,0.5s
ABTA Abfaltersbach 2.15 31 Pn **Pb 17 49 30.5 -1.8**
comp=N,1.0nm,0.2s
RISI Rein 2.19 21 AML AML
comp=N,554µm,0.4s
RISI AML AML
comp=E,591µm,0.4s
RISI AML AML
comp=N,554µm,0.4s
RISI AML AML
comp=E,591µm,0.4s
SKDS Skadanscina 2.28 73 *i* Pn **Pn 17 49 30.4 -0.5**
comp=Z,21nm,0.2s
SKDS Skadanscina 2.28 73 *i* Pn **Pn 17 49 30.4 -0.5**
comp=Z,21nm,0.2s
VOJS Vojsko 2.37 61 *i* Pn **Pn 17 49 32.2 0.0**
VOJS Vojsko 2.37 61 *i* Pn **Pn 17 49 32.2 0.0**
WTTA Wattenberg 2.40 12 ePn **Pb 17 49 35.6 -1.2**
comp=Z,4.9nm,0.2s,SNR=6.7
WTTA eSn **Sb 17 50 06.6 +0.3**
comp=Z,44nm,0.4s
WTTA Wattenberg 2.40 12 Pn **Pb 17 49 35.6 -1.2**
comp=Z,4.9nm,0.2s,SNR=6.7
WTTA Sn **Sb 17 50 06.6 +0.3**
comp=Z,44nm,0.4s
JAVS Javornik 2.42 65 ePn **Pn 17 49 32.9 -0.1**
JAVS Javornik 2.42 65 ePn **Pn 17 49 32.9 -0.1**
MOMA Monte Martano 2.43 150 AML AML
comp=N,87µm,0.6s
MOMA AML AML
comp=E,87µm,0.4s
MOMA AML AML
comp=N,87µm,0.6s
MOMA AML AML
comp=E,87µm,0.4s
MOTA Moosalm 2.43 3 ePn **Pn 17 49 34.6 +1.5**
comp=E,16nm,0.5s,SNR=17
MOTA Moosalm 2.43 3 Pn **Pn 17 49 34.6 +1.5**
comp=E,16nm,0.5s,SNR=17
FDMO Fiordimonte 2.45 139 AML AML
comp=N,64µm,1.4s
FDMO AML AML
comp=E,57µm,0.7s
FDMO AML AML
comp=E,57µm,0.7s
FDMO AML AML
comp=N,64µm,1.4s
WATA Walderalm 2.46 11 ePn **Pb 17 49 35.7 -2.1**
comp=N,28nm,0.3s,SNR=19
WATA Walderalm 2.46 11 Pn **Pb 17 49 35.7 -2.1**
comp=N,28nm,0.3s,SNR=19
DAVA Damuels 2.48 343 ePn **Pb 17 49 36.5 -1.6**
comp=N,6.6nm,0.2s
DAVA Damuels 2.48 343 Pn **Pb 17 49 36.5 -1.6**
comp=N,6.6nm,0.2s
NEGI Seborga 2.54 246 AML AML
comp=E,242µm,0.5s
NEGI AML AML
comp=N,292µm,1.4s
NEGI AML AML
comp=N,292µm,1.4s
NEGI AML AML
comp=E,242µm,0.5s
MYKA Terra Mystica 2.56 47 ePg **Pg 17 49 41.5 -1.3**
comp=E,11nm,0.3s,SNR=9.1
MYKA Terra Mystica 2.56 47 Pg **Pg 17 49 41.5 -1.3**
comp=E,11nm,0.3s,SNR=9.1
RETA Reutte 2.57 358 ePn **Pb 17 49 37.6 -2.1**
comp=E,7.7nm,0.3s,SNR=5.8
RETA Reutte 2.57 358 Pn **Pb 17 49 37.6 -2.1**
comp=E,7.7nm,0.3s,SNR=5.8
SAOF Saorge 2.58 250 AML AML
comp=E,156µm,0.8s
SAOF AML AML
comp=E,156µm,0.8s
SAOF AML AML
comp=N,147µm,1.6s
SAOF AML AML
comp=N,147µm,1.6s
CRNS Crni Vrh 2.62 62 ePn **Pn 17 49 35.7 0.0**
CRNS eSn **Sn 17 50 07.0 -0.4**
comp=Z,18nm,0.2s
CRNS Crni Vrh 2.62 62 ePn **Pn 17 49 35.7 0.0**
CRNS eSn **Sn 17 50 07.0 -0.4**
comp=Z,18nm,0.2s
SBF Sospel 2.71 248 ePn **Pn 17 49 38.3 +1.5**
SNR=1.0
SBF eSn **Sb 17 50 13.3 -1.7**
SNR=1.0
SBF Sospel 2.71 248 ePn **Pn 17 49 38.3 +1.5**
SNR=1.0
SBF eSn **Sb 17 50 13.3 -1.7**
SNR=1.0
PGF Pioggiola 2.74 211 ePn **Pn 17 49 38.8 +1.4**
SNR=1.0
PGF eSn **Sn 17 50 11.3 +0.9**
comp=Z,27nm,0.3s,SNR=1.0
PGF Pioggiola 2.74 211 ePn **Pn 17 49 38.8 +1.4**
SNR=1.0
PGF eSn **Sn 17 50 11.3 +0.9**
comp=Z,14nm,0.3s,SNR=1.0
KBA Koelnbreinsper 2.75 37 ePg **Pg 17 49 44.8 -1.4**
comp=Z,14nm,0.3s,SNR=12
KBA eSg **Sg 17 50 22.8 +1.0**
comp=Z,13nm,0.4s
KBA Koelnbreinsper 2.75 37 Pg **Pg 17 49 44.8 -1.4**
comp=Z,14nm,0.3s,SNR=12
KBA Sg **Sg 17 50 22.8 +1.0**
comp=Z,13nm,0.4s
NVLJ Novalja 2.84 96 ePn **Pn 17 49 39.0 +0.4**
NVLJ Sn **Sn 17 50 11.1 -1.6**
NVLJ Novalja 2.84 96 ePn **Pn 17 49 39.0 +0.4**
NVLJ Sn **Sn 17 50 11.0 -1.6**
MVIF Mont Vial 2.88 251 P **Pn 17 49 42.0 +2.7**
MVIF Mont Vial 2.88 251 P **Pn 17 49 42.0 +2.7**
MBDF Montbardon 2.96 268 ePn **Pn 17 49 40.3 0.0**
MBDF eSn **Sn 17 50 17.6 +1.9**
comp=Z,31nm,0.6s
MBDF Montbardon 2.96 268 ePn **Pn 17 49 40.3 0.0**
MBDF eSn **Sn 17 50 17.6 +1.9**
comp=Z,15nm,0.6s
LPG La Plagne 3.00 283 ePn **Pn 17 49 43.3 +2.2**
SNR=1.0
LPG eSn **Sn 17 50 18.7 +1.7**
comp=Z,34nm,0.5s,SNR=1.0
LPG La Plagne 3.00 283 ePn **Pn 17 49 43.3 +2.2**
SNR=1.0
LPG eSn **Sn 17 50 18.7 +1.7**
comp=Z,17nm,0.5s,SNR=1.0
OBKA Obir 3.00 57 ePn **Pn 17 49 41.7 +0.8**
comp=Z,1.0nm,0.2s
OBKA ePg **Pg 17 49 49.0 -2.1**
comp=Z,5.4nm,0.3s
OBKA Obir 3.00 57 Pn **Pn 17 49 41.7 +0.8**
comp=Z,1.0nm,0.2s
LPL La Plagne 3.02 283 ePn **Pn 17 49 42.9 +1.7**
SNR=1.0
LPL eSn **Sn 17 50 18.1 +0.8**
comp=Z,33nm,0.5s
LPL La Plagne 3.02 283 ePn **Pn 17 49 42.9 +1.7**
SNR=1.0
LPL eSn **Sn 17 50 18.1 +0.8**
comp=Z,17nm,0.5s
CALF Calern 3.09 249 P **Pn 17 49 44.2 +2.0**
CALF Calern 3.09 249 P **Pn 17 49 44.2 +2.0**
RSL Roselend 3.12 286 P **Pn 17 49 45.7 +3.1**
RSL Roselend 3.12 286 P **Pn 17 49 45.7 +3.1**
OZLJ Ozalj 3.29 76 *i* Pn **Pn 17 49 44.7 -0.1**
OZLJ Sn **Sn 17 50 22.4 -1.3**
OZLJ Ozalj 3.29 76 *i* Pn **Pn 17 49 44.6 -0.1**
OZLJ Sn **Sn 17 50 22.3 -1.3**
FRF La Foret Royal 3.35 248 ePn **Pn 17 49 47.6 +2.0**
SNR=1.0

FRF				*e*Sn		**Sn**	**17 50 27.2 +1.9**
	comp=Z,27nm,0.2s						
FRF	**La Foret Royal**	**3.35**	**248**	*e*Pn		**Pn**	**17 49 47.6 +2.0**
	SNR=1.0						
FRF				*e*Sn		**Sn**	**17 50 27.2 +1.9**
	comp=Z,14nm,0.2s						
LMR	**La Mourre**	**3.54**	**245**	*e*Pn		**Pn**	**17 49 49.8 +1.5**
	SNR=1.0						
LMR				*e*Sn		**Sn**	**17 50 31.1 +1.1**
	comp=Z,41nm,0.3s,SNR=1.0						
LMR	**La Mourre**	**3.54**	**245**	*e*Pn		**Pn**	**17 49 49.8 +1.5**
	SNR=1.0						
LMR				*e*Sn		**Sn**	**17 50 31.1 +1.1**
	comp=Z,21nm,0.3s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**3.58**	**272**	*e*Pn		**Pn**	**17 49 50.4 +1.6**
	SNR=1.0						
ORIF				*e*Sn		**Sn**	**17 50 32.0 +1.1**
	comp=Z,15nm,0.4s						
ORIF	**Oris-en-Rattie**	**3.58**	**272**	*e*Pn		**Pn**	**17 49 50.4 +1.6**
	SNR=1.0						
ORIF				*e*Sn		**Sn**	**17 50 32.0 +1.1**
	comp=Z,7.7nm,0.4s						
KIZ	**Kirchzarten**	**3.68**	**327**	P		**Pn**	**17 49 50.8 +0.7**
KIZ	**Kirchzarten**	**3.68**	**327**	P		**Pn**	**17 49 50.8 +0.7**
MOA	**Molln**	**3.74**	**37**	*i* Pn		**Pn**	**17 49 52.6 +1.6**
	comp=Z,1.8nm,0.2s						
MOA	**Molln**	**3.74**	**37**	Pn		**Pn**	**17 49 52.6 +1.6**
	comp=Z,1.8nm,0.2s						
CHMF	**Charmoille**	**3.77**	**310**	P		**Pn**	**17 49 52.2 +0.7**
CHMF	**Charmoille**	**3.77**	**310**	P		**Pn**	**17 49 52.2 +0.7**
CABF	**La Chapelle**	**3.78**	**298**	*e*Pn		**Pn**	**17 49 52.9 +1.3**
	SNR=1.0						
CABF				*e*Sn		**Sn**	**17 50 36.0 +0.1**
	comp=Z,21nm,0.6s,SNR=1.0						
CABF	**La Chapelle**	**3.78**	**298**	*e*Pn		**Pn**	**17 49 52.9 +1.3**
	SNR=1.0						
CABF				*e*Sn		**Sn**	**17 50 36.0 +0.1**
	comp=Z,10nm,0.6s,SNR=1.0						
SMRF	**Simiane la Rot**	**3.94**	**258**	*e*Pn		**Pn**	**17 49 56.2 +2.5**
SMRF	**Simiane la Rot**	**3.94**	**258**	*e*Pn		**Pn**	**17 49 56.2 +2.5**
HINF	**Hinteralfeld**	**4.04**	**317**	*e*Pn		**Pn**	**17 49 55.4 +0.3**
	SNR=1.0						
HINF				*e*Sn		**Sn**	**17 50 41.4 -0.9**
	comp=Z,9.0nm,0.3s,SNR=1.0						
HINF	**Hinteralfeld**	**4.04**	**317**	*e*Pn		**Pn**	**17 49 55.4 +0.3**
	SNR=1.0						
HINF				*e*Sn		**Sn**	**17 50 41.4 -0.9**
	comp=Z,4.5nm,0.3s,SNR=1.0						
OPP	**Oppenau**	**4.04**	**333**	P		**Pn**	**17 49 56.3 +1.2**
OPP	**Oppenau**	**4.04**	**333**	P		**Pn**	**17 49 56.3 +1.2**
ECH	**Echery**	**4.20**	**323**	P		**Pn**	**17 49 57.6 +0.4**
ECH	**Echery**	**4.20**	**323**	P		**Pn**	**17 49 57.6 +0.4**
CDF	**Champ du Feu**	**4.30**	**326**	*e*Pn		**Pn**	**17 49 59.4 +0.6**
	SNR=1.0						
CDF				*e*Sn		**Sn**	**17 50 47.6 -1.2**
	comp=Z,8.8nm,0.4s,SNR=1.0						
CDF	**Champ du Feu**	**4.30**	**326**	*e*Pn		**Pn**	**17 49 59.4 +0.6**
	SNR=1.0						
CDF				*e*Sn		**Sn**	**17 50 47.6 -1.2**
	comp=Z,4.4nm,0.4s,SNR=1.0						
HAU	**Haudompre**	**4.42**	**316**	*e*Pn		**Pn**	**17 50 01.4 +1.1**
	SNR=1.0						
HAU				*e*Sn		**Sn**	**17 50 50.5 -1.0**
	comp=Z,19nm,0.3s,SNR=1.0						
HAU	**Haudompre**	**4.42**	**316**	*e*Pn		**Pn**	**17 50 01.4 +1.1**
	SNR=1.0						
HAU				*e*Sn		**Sn**	**17 50 50.5 -1.0**
	comp=Z,9.3nm,0.3s,SNR=1.0						
VIVF	**Saint-Julien-l**	**4.44**	**271**	*e*Pn		**Pn**	**17 50 00.8 +0.2**
	SNR=1.0						
VIVF				*e*Sn		**Sn**	**17 50 52.2 +0.1**
	comp=Z,5.2nm,0.4s,SNR=1.0						
VIVF	**Saint-Julien-l**	**4.44**	**271**	*e*Pn		**Pn**	**17 50 00.8 +0.2**
	SNR=1.0						
VIVF				*e*Sn		**Sn**	**17 50 52.2 +0.1**
	comp=Z,2.6nm,0.4s,SNR=1.0						
CONA	**Conrad Observa**	**4.56**	**47**	*i* Pn		**Pn**	**17 50 04.3 +2.0**
	comp=Z,0.6nm,0.2s						
CONA	**Conrad Observa**	**4.56**	**47**	Pn		**Pn**	**17 50 04.3 +2.0**
	comp=Z,0.6nm,0.2s						
KHC	**Kasperske Hory**	**4.59**	**22**	*e*PN		**Pn**	**17 50 03.1 +0.4**
KHC				*e*PG		**Pg**	**17 50 22.3 +0.8**
KHC				*e*SN		**Sn**	**17 50 55.3 -0.6**
KHC				*e*SG		**Sg**	**17 51 21.9 +0.9**
	comp=Z,8.0nm,0.7s						
SMF	**Signal de Mont**	**5.24**	**292**	*e*Pn		**Pn**	**17 50 12.0 +0.4**
	SNR=1.0						
SMF				*e*Sn		**Sn**	**17 51 09.2 -2.7**
	comp=Z,12nm,0.5s,SNR=1.0						
SMF	**Signal de Mont**	**5.24**	**292**	*e*Pn		**Pn**	**17 50 12.0 +0.4**
	SNR=1.0						
SMF				*e*Sn		**Sn**	**17 51 09.2 -2.7**
	comp=Z,6.1nm,0.5s,SNR=1.0						
STON	**Ston**	**5.31**	**110**	*e*Pn		**Pn**	**17 50 12.3 -0.2**
STON	**Ston**	**5.31**	**110**	*e*Pn		**Pn**	**17 50 12.3 -0.2**
NKC	**Novy Kostel**	**5.42**	**10**	*e*PG		**Pg**	**17 50 39.1 +1.8**
NKC				*e*SG		**Sg**	**17 51 45.4 -2.1**
	comp=Z,6.8nm,0.5s						
LOR	**Lormes**	**5.44**	**298**	*e*Pn		**Pn**	**17 50 15.2 +0.8**
	SNR=1.0						
LOR				*e*Sn		**Sn**	**17 51 15.7 -1.1**
	comp=Z,8.8nm,0.4s,SNR=1.0						
LOR	**Lormes**	**5.44**	**298**	*e*Pn		**Pn**	**17 50 15.2 +0.8**
	SNR=1.0						
LOR				*e*Sn		**Sn**	**17 51 15.7 -1.1**
	comp=Z,4.4nm,0.4s,SNR=1.0						
SSF	**Saint Saulge**	**5.59**	**295**	*e*Pn		**Pn**	**17 50 17.5 +1.1**
	SNR=1.0						
SSF				*e*Sn		**Sn**	**17 51 18.2 -2.2**
	comp=Z,5.5nm,0.4s,SNR=1.0						
SSF	**Saint Saulge**	**5.59**	**295**	*e*Pn		**Pn**	**17 50 17.5 +1.1**
	SNR=1.0						
AVF	**Avril sur Loir**	**5.61**	**292**	*e*Pn		**Pn**	**17 50 17.5 +0.9**
	SNR=1.0						
AVF	**Avril sur Loir**	**5.61**	**292**	*e*Pn		**Pn**	**17 50 17.5 +0.9**
	SNR=1.0						
PRU	**Pruhonice**	**5.64**	**25**	*e*SN		**Sn**	**17 51 21.2 -0.4**
PRU				*e*SG		**Sg**	**17 51 54.4 -0.1**
	comp=Z,7.7nm,0.7s						
GOPC	**GO Pecny, Ondr**	**5.65**	**26**	*e*PG		**Pg**	**17 50 38.4 -3.3**
BRG	**Berggiesshubel**	**6.30**	**18**	PG		**Pg**	**17 50 51.2 -2.9**
BRG				SG		**Sg**	**17 52 12.9 -2.7**
	comp=Z,5.0nm,0.9s						
MTLF	**Montolieu**	**6.46**	**259**	*e*Pn		**Pn**	**17 50 30.5 +2.2**
	SNR=1.0						
MTLF	**Montolieu**	**6.46**	**259**	*e*Pn		**Pn**	**17 50 30.5 +2.2**
	SNR=1.0						
CLL	**Collm**	**6.55**	**12**	*e*Pn		**Pn**	**17 50 29.0 -0.5**
CLL				*e*Pg		**Pg**	**17 51 01.0 +2.1**
CLL				*e*			17 51 23.0
CLL				*e*			17 51 41.0
CLL				*e*Sg		**Sg**	**17 52 23.0 -0.6**
	comp=Z,11nm,1.3s						
DPC	**Dobruska-Polom**	**6.55**	**32**	*e*SG		**Sg**	**17 52 23.0 -0.6**
UPC	**Upice**	**6.56**	**30**	*e*SG		**Sg**	**17 52 24.9 +0.7**
	comp=Z,6.6nm,0.6s						
FLN	**La Foliniere**	**8.71**	**300**	*e*Pn		**Pn**	**17 51 00.6 +1.5**
	SNR=1.0						
FLN	**La Foliniere**	**8.71**	**300**	*e*Pn		**Pn**	**17 51 00.6 +1.5**
	SNR=1.0						

ISCJB ***04*** *17:49:29.1±0.5,22.°08N±0.°02×121.°38E±0.°02,h15km±4km, Error ellipse: s-maj=3.9km s-min=3.4km az=168.9*
JMA ***04*** *17:49:29.6±0.1,22.°18N×121.°10E,h60km±2km,M3.4*
TAP ***04*** *17:49:30.9,22.°11N×121.°25E,h21km,ML3.3,C*
ISC 04 17:49:29.7±1.1,22.°16N±0.°03×121.°26E±0.°02,h14km±8km, n87,σ1§11/144,3D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.29**	**113**	*e*P	**Pg**	**17 49 37.6**	**+1.7**
	baz=96						
TAW	**Tawu**	**0.39**	**301**	⇓*i*P	**Pb**	**17 49 39.1**	**+0.6**
	baz=307						
TAW				*i* S	**Sb**	**17 49 45.2**	**+0.8**
	baz=307						
TSEB	**Hengchuen, Pin**	**0.42**	**233**	*e*P	**Pb**	**17 49 39.2**	**+0.3**
	baz=240						
TSEB				*e*S	**Sb**	**17 49 45.9**	**+0.8**
	baz=240						
EAST	**Anshuo**	**0.44**	**301**	⇓*i*P	**Pb**	**17 49 39.9**	**+0.5**
	baz=306						
EAST				*i* S	**Sb**	**17 49 46.3**	**+0.4**
	baz=306						
TWKBT	**Hengchun**	**0.47**	**243**	*e*P	**Pb**	**17 49 39.4**	**-0.3**
	baz=247						
TWKBT				*e*S	**Sb**	**17 49 45.6**	**-0.9**
	baz=247						
TWK1	**Hengchun**	**0.47**	**244**	*e*P	**Pb**	**17 49 39.5**	**-0.3**
	baz=247						
TWK1				*e*S	**Sb**	**17 49 45.6**	**-1.1**
	baz=247						
HEN	**Hengchun**	**0.51**	**253**	*e*P	**Pb**	**17 49 40.5**	**+0.1**
	baz=248						
HEN				*e*S	**Sb**	**17 49 47.9**	**+0.3**
	baz=248						
ECL	**Taimali**	**0.52**	**327**	*e*P	**Pb**	**17 49 41.2**	**+0.4**
	baz=331						
ECL				*e*S	**Sb**	**17 49 48.8**	**+0.6**
	baz=331						
TWH	**Lutao**	**0.59**	**20**	*e*P	**Pb**	**17 49 42.2**	**+0.4**
	baz=21						
TTN	**Taitung**	**0.60**	**350**	*e*S	**Sn**	**17 49 55.0**	**+1.5**
	baz=352						
SCZT	**Fangliau**	**0.63**	**290**	⇓*i*P	**Pn**	**17 49 42.9**	**-1.4**
	baz=294						
SCZT				*e*S	**Sb**	**17 49 51.3**	**+0.1**
	baz=294						
TWGBT	**Beinan**	**0.68**	**346**	*e*P	**Pb**	**17 49 43.6**	**+0.1**
	baz=335						
TWGBT				*e*S	**Sb**	**17 49 53.4**	**+0.6**
	baz=335						
TWG	**Pinlang**	**0.69**	**345**	*e*P	**Pb**	**17 49 43.9**	**+0.3**
	baz=335						
TWG				*e*S	**Sb**	**17 49 53.5**	**+0.6**
	baz=335						
SSPT	**Xinbi**	**0.72**	**297**	*e*P	**Pn**	**17 49 44.7**	**-0.8**
	baz=306						
MASBT	**Mashibuluo**	**0.74**	**308**	*e*P	**Pn**	**17 49 44.7**	**-1.1**
	baz=311						
MASBT				*e*S	**Sn**	**17 49 55.9**	**-0.9**
	baz=311						
SSD	**Sandimen**	**0.83**	**315**	*e*P	**Pn**	**17 49 46.5**	**-0.5**
	baz=327						
WLCH	**Liuqiu**	**0.84**	**284**	*e*P	**Pn**	**17 49 48.3**	**+1.2**
	baz=275						
WLCH				*e*S	**Sn**	**17 50 01.5**	**+2.2**
	baz=275						
TWP	**Hsiaoliuchiu**	**0.85**	**283**	*e*P	**Pn**	**17 49 48.0**	**+0.6**
	baz=285						
TWP				*e*S	**Sn**	**17 50 01.3**	**+1.7**
	baz=285						
SGLT	**Jiouru**	**0.91**	**309**	*e*P	**Pn**	**17 49 48.9**	**+0.8**
	baz=323						
SGLT				*e*S	**Sn**	**17 50 02.2**	**+1.1**
	baz=323						
CHKT	**Chengkung**	**0.94**	**6**	*e*P	**Pg**	**17 49 47.6**	**-0.5**
	baz=15						
CHKT				*e*S	**Sb**	**17 50 01.0**	**+0.7**
	baz=15						
SLGT	**Liugui**	**1.01**	**326**	*e*P	**Pn**	**17 49 50.2**	**+0.7**
	baz=331						
SLGT				*e*S	**Sn**	**17 50 03.7**	**+0.2**
	baz=331						
TWM1	**Shoushan**	**1.02**	**311**	*e*P	**Pn**	**17 49 51.3**	**+1.6**
	baz=324						
TWM1				*e*S	**Sn**	**17 50 06.0**	**+2.1**
	baz=324						
FULB	**Fuli**	**1.04**	**2**	*e*P	**Pg**	**17 49 49.8**	**-0.1**
	baz=1.0						
FULB				*e*S	**Sn**	**17 50 05.7**	**+1.4**
	baz=1.0						
ELDTW	**Lidau**	**1.05**	**348**	*e*P	**Pg**	**17 49 49.0**	**-1.1**
	baz=348						
ELDTW				*e*S	**Sg**	**17 50 03.0**	**-0.9**
	baz=348						
STYT	**Tauyuan**	**1.11**	**335**	*e*P	**Pn**	**17 49 51.2**	**+0.3**
	baz=343						
TWF1	**Yuli**	**1.19**	**2**	*e*P	**Pb**	**17 49 51.3**	**-0.9**
	baz=2.0						
CHN1	**Nanshi**	**1.23**	**327**	*e*P	**Pn**	**17 49 54.1**	**+1.6**
	baz=328						
CHN1				*e*S	**Sn**	**17 50 11.3**	**+2.3**
	baz=328						
YULB	**Yu-li**	**1.23**	**2**	*e*P	**Pb**	**17 49 51.2**	**-1.7**
	baz=2.0						
WTP	**Ta-pu**	**1.24**	**331**	*e*P	**Pn**	**17 49 54.4**	**+1.7**
	baz=332						
WTP				*e*S	**Sn**	**17 50 11.6**	**+2.3**
	baz=332						
TPUB	**Ta-pu**	**1.28**	**333**	*e*P	**Pg**	**17 49 54.4**	**-0.1**
	baz=334						
TPUB				*e*S	**Sn**	**17 50 12.0**	**+1.7**
	baz=334						
TWK	**Hsinying**	**1.32**	**327**	*e*P	**Pg**	**17 49 55.5**	**+0.4**
	baz=328						
TWK				*e*S	**Sn**	**17 50 13.2**	**+2.0**
	baz=328						
HGSD	**Ruisui**	**1.34**	**6**	*e*P	**Pn**	**17 49 53.6**	**-0.5**
	baz=17						
EHY	**Hungye**	**1.35**	**2**	*e*P	**Pn**	**17 49 53.1**	**-1.1**
	baz=3.0						
ALS	**Alishan**	**1.41**	**343**	*e*P	**Pb**	**17 49 56.1**	**0.0**
	baz=343						
ALS				*e*S	**Sg**	**17 50 16.3**	**+0.9**
	baz=343						
EGFH	**Guangfu**	**1.52**	**6**	*e*P	**Pn**	**17 49 57.2**	**+0.7**
	baz=6.0						
CHY	**Chiayi**	**1.54**	**330**	*e*P	**Pb**	**17 49 58.0**	**-0.1**
	baz=331						
CHY				*e*S	**Sg**	**17 50 18.4**	**-1.1**
	baz=331						
CHN2	**Minshiung**	**1.55**	**332**	*e*P	**Pg**	**17 49 58.6**	**-0.9**
	baz=333						
CHN2				*e*S	**Sg**	**17 50 19.3**	**-0.4**
	baz=333						
VWDT	**VWDT**	**1.59**	**356**	*e*P	**Pn**	**17 49 58.1**	**+0.6**
	baz=8.0						
SSLB	**Suanglung**	**1.65**	**350**	*e*P	**Pb**	**17 49 59.5**	**-0.5**
	baz=350						
SSLB				*e*S	**Sb**	**17 50 21.2**	**+0.6**
	baz=350						
WGK	**Gukeng**	**1.65**	**337**	*e*P	**Pg**	**17 50 00.4**	**-1.2**
	baz=337						
WGK				*e*S	**Sg**	**17 50 22.9**	**-0.2**
	baz=337						
ESL	**Shilin**	**1.66**	**5**	*e*P	**Pn**	**17 49 58.9**	**+0.4**
	baz=5.0						
WDLH	**Douliu**	**1.67**	**337**	*e*P	**Pb**	**17 50 00.5**	**+0.3**
	baz=337						
WDLH				*e*S	**Sg**	**17 50 22.8**	**-0.7**
	baz=337						
WJS	**Zhushan**	**1.73**	**344**	*e*P	**Pg**	**17 50 02.3**	**-0.7**
	baz=344						
WJS				*e*S	**Sg**	**17 50 24.3**	**-1.2**
	baz=344						
SMLT	**Sun Moon Lake**	**1.75**	**349**	*e*P	**Pb**	**17 50 01.9**	**+0.1**
	baz=349						
SMLT				*e*S	**Sg**	**17 50 24.6**	**-1.6**
	baz=349						
WSF	**Szhu**	**1.76**	**327**	*e*P	**Pb**	**17 50 01.1**	**-0.7**
	baz=327						
WSF				*e*S	**Sb**	**17 50 23.7**	**0.0**
	baz=327						
ENLB	**Shoufeng**	**1.77**	**10**	*e*P	**Pn**	**17 50 00.8**	**+0.8**
	baz=19						
TYC	**Yuchr**	**1.78**	**348**	*e*P	**Pb**	**17 50 02.6**	**+0.4**
	baz=348						
TYC				*e*S	**Sb**	**17 50 24.5**	**+0.2**
	baz=348						
OWD	**Renai**	**1.79**	**358**	*e*P	**Pn**	**17 50 01.8**	**+1.4**
	baz=9.0						
OWD				*e*S	**Sb**	**17 50 24.9**	**0.0**
	baz=9.0						
WNT	**Mingjian**	**1.79**	**343**	*e*P	**Pg**	**17 50 03.0**	**-1.2**
	baz=343						
WNT				*e*S	**Sb**	**17 50 25.4**	**+0.5**
	baz=343						
WDGT	**Dungji**	**1.84**	**307**	*e*P	**Pn**	**17 50 00.6**	**-0.3**
	baz=307						
WDGT				*e*S	**Sn**	**17 50 22.8**	**-1.3**
	baz=307						
DPDB	**Guoxing**	**1.90**	**351**	*e*P	**Pb**	**17 50 03.9**	**-0.3**
	baz=351						
DPDB				*e*S	**Sb**	**17 50 28.1**	**+0.4**
	baz=351						
CHGB	**Renai**	**1.90**	**358**	*e*P	**Pb**	**17 50 03.7**	**-0.6**
	baz=10.0						
TWD	**Chiawan**	**1.94**	**9**	*e*P	**Pn**	**17 50 02.9**	**+0.5**
	baz=9.0						
VCHM	**Qimei**	**1.99**	**302**	*e*S	**Sn**	**17 50 26.5**	**-1.2**
	baz=302						
NACB	**Ninganchiao**	**2.03**	**9**	*e*P	**Pn**	**17 50 02.8**	**-0.8**
	baz=8.0						
NACB				*e*S	**Sn**	**17 50 28.9**	**+0.1**
	baz=8.0						
TCU	**Taichung**	**2.06**	**345**	*e*P	**Pb**	**17 50 06.2**	**-0.6**
	baz=345						
TCU				*e*S	**Sb**	**17 50 31.4**	**-0.9**
	baz=345						
PHUB	**P'eng-hu**	**2.06**	**311**	*e*P	**Pn**	**17 50 03.5**	**-0.5**
	baz=311						
PHUB				*e*S	**Sn**	**17 50 28.2**	**-1.3**
	baz=311						
TDCB	**Techi**	**2.09**	**357**	*e*P	**Pn**	**17 50 05.7**	**+1.2**
	baz=9.0						
PNG	**Penghu**	**2.11**	**312**	*e*P	**Pn**	**17 50 04.7**	**0.0**
	baz=312						
PNG				*e*S	**Sn**	**17 50 29.6**	**-1.1**
	baz=312						
TWQ1	**Liyutan**	**2.23**	**348**	*e*P	**Pb**	**17 50 08.9**	**-1.0**
	baz=348						
TWQ1				*e*S	**Sb**	**17 50 36.8**	**-0.6**
	baz=348						
NNSB	**Datong**	**2.27**	**3**	*e*P	**Pn**	**17 50 08.1**	**+1.2**
	baz=14						
NNSB				*e*S	**Sn**	**17 50 35.8**	**+1.0**
	baz=14						
NNSH	**Datong**	**2.27**	**3**	*e*P	**Pn**	**17 50 08.2**	**+1.3**
	baz=13						
NNS	**Nan Shan**	**2.28**	**3**	*e*P	**Pn**	**17 50 08.8**	**+1.7**
	baz=14						
NNS				*e*S	**Sn**	**17 50 36.2**	**+1.2**
	baz=14						
ENA	**Nanau**	**2.31**	**11**	*e*P	**Pn**	**17 50 08.2**	**+0.9**
NANB	**Nanao**	**2.31**	**11**	*e*P	**Pn**	**17 50 08.6**	**+1.2**
NSTT	**Nanjuang**	**2.48**	**355**	*e*P	**Pn**	**17 50 12.0**	**+2.3**
	baz=355						
NSTT				*e*S	**Sn**	**17 50 41.8**	**+2.0**
	baz=355						
LIOB	**Emei**	**2.49**	**355**	*e*P	**Pn**	**17 50 12.0**	**+2.1**
	baz=355						
LIOB				*e*S	**Sn**	**17 50 42.4**	**+2.3**
	baz=355						
ENTT	**Nioudou**	**2.49**	**6**	*e*P	**Pn**	**17 50 10.7**	**+0.8**
	baz=6.0						
TWC	**Suao**	**2.50**	**12**	*e*P	**Pn**	**17 50 11.5**	**+1.5**
	baz=1.0						
TWC				*e*S	**Sn**	**17 50 42.3**	**+1.9**
	baz=1.0						
YHNB	**Yeheng**	**2.50**	**2**	*e*P	**Pn**	**17 50 11.3**	**+1.2**
	baz=13						
YHNB				*e*S	**Sn**	**17 50 40.7**	**+0.1**
	baz=13						
NSK	**Sanguang**	**2.51**	**2**	*e*P	**Pn**	**17 50 11.7**	**+1.5**
	baz=13						
EOS1	**EOS1**	**2.51**	**18**	*e*P	**Pn**	**17 50 11.4**	**+1.2**
	baz=18						
NWLT	**Wulai**	**2.62**	**5**	*e*P	**Pn**	**17 50 12.5**	**+0.8**
	baz=17						
YOJ	**Yonaguni jima**	**2.80**	**35**	P	**Pn**	**17 50 15.8**	**+1.6**
TIPB	**Shuangxi**	**2.85**	**10**	*e*P	**Pn**	**17 50 16.5**	**+1.6**
	baz=10.0						
TIPB				*e*S	**Sn**	**17 50 50.0**	**+0.9**
	baz=10.0						
WFSB	**Wu-fen Shan**	**2.94**	**9**	*e*P	**Pn**	**17 50 18.0**	**+1.9**
	baz=9.0						
YM11	**YM11**	**3.01**	**5**	*e*P	**Pn**	**17 50 19.2**	**+2.1**
	baz=16						
HATJ	**Hateruma jima**	**3.01**	**51**	P	**Pn**	**17 50 17.6**	**+0.5**
HATJ				*e*S	**Sn**	**17 50 51.3**	**-1.7**
IRIF	**Iriomote-Funau**	**3.14**	**46**	P	**Pn**	**17 50 19.8**	**+1.0**
IRIF				*e*S	**Sn**	**17 50 55.7**	**-0.4**
JKRS	**Kuro-shima**	**3.27**	**50**	P	**Pn**	**17 50 21.4**	**+0.8**
JKRS				*e*S	**Sn**	**17 50 58.3**	**-1.0**
VWUC	**VWUC**	**3.28**	**330**	*e*P	**Pn**	**17 50 21.3**	**+0.7**
	baz=329						
JIJ	**Ishigaki jima**	**3.44**	**50**	P	**Pn**	**17 50 23.3**	**+0.3**
JIJ				S	**Sn**	**17 51 01.1**	**-2.5**
KNMB	**Chin-men Tao**	**3.50**	**312**	*e*P	**Pn**	**17 50 24.2**	**+0.4**
	baz=310						
KNMB				*e*S	**Sn**	**17 51 03.7**	**-1.3**
	baz=310						
JISG	**Ishigakijimahi**	**3.70**	**49**	P	**Pn**	**17 50 26.5**	**-0.1**
JISG				*e*S	**Sn**	**17 51 09.5**	**-0.5**
JTJ	**Tarama**	**4.01**	**51**	P	**Pn**	**17 50 29.3**	**-1.5**
JTJ				*e*S	**Sn**	**17 51 16.3**	**-1.4**
MATB	**Ma-tsu**	**4.16**	**343**	*e*P	**Pn**	**17 50 34.1**	**+1.3**
	baz=343						
JIRB	**Irabujima**	**4.47**	**53**	P	**Pn**	**17 50 37.8**	**+0.7**
JIRB				*e*S	**Sn**	**17 51 28.5**	**-0.4**

ROM ***04*** *18:04:25.7±0.0,44.°891N±0.°001×10.°905E±0.°001, h8km,ML3.2/45*
ISCJB ***04*** *18:04:25.4±0.2,44.°96N±0.°01×10.°85E±0.°02,h15km±2km, Error ellipse: s-maj=2.2km s-min=2.2km az=150.5*
CSEM ***04*** *18:04:26.0±0.1,44.°93N×10.°90E,h10km,ML3.3/13,Error ellipse: s-maj=3.2km s-min=2.7km az=163.0*
PRU ***04*** *18:04:26.6,44.°99N×10.°66E,h7km*
LDG ***04*** *18:04:26.2±0.1,44.°97N×10.°99E,h2km,Ml3.3/14,Error ellipse: s-maj=2.4km s-min=2.2km az=73.0*
STR ***04*** *18:04:28.0±1.5,45.°N±8.°×1.°1E±1.°1,h5km,M3.7/6,mb3.5/1, MLv3.8/6*
ISC 04 18:04:26.0±0.7,44.°94N±0.°02×10.°88E±0.°02,h16km±4km, n192,σ1§21/256,18C-19D,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0825	**Gonzaga (MN)**	**0.04**	**328**	AML	AML		
T0825				AML	AML		
T0827	**Moglia (MN)**	**0.04**	**94**	⇑*i*P	**Pg**	**18 04 28.2**	**-0.7**
T0827				⇑*i*S	**Sg**	**18 04 30.9**	**+0.2**
T0827	**Moglia (MN)**	**0.04**	**94**	*i* P	**Pg**	**18 04 28.2**	**-0.7**
T0827				*i* S	**Sg**	**18 04 30.9**	**+0.2**
NDIM	**Novi di Modena**	**0.06**	**163**	*i* P	**Pg**	**18 04 27.2**	**-1.7**
NDIM				*i* S	**Sg**	**18 04 29.0**	**-1.9**
NDIM				AML	AML		
NDIM				AML	AML		
NDIM				AML	AML		
NDIM				AML	AML		
T0818	**Loc. Fossa, Co**	**0.11**	**93**	⇑*i*P	**Pg**	**18 04 28.9**	**-0.6**
T0818				⇑*i*S	**Sg**	**18 04 32.3**	**+0.6**
T0818	**Loc. Fossa, Co**	**0.11**	**93**	*i* P	**Pg**	**18 04 28.9**	**-0.6**
T0818				*i* S	**Sg**	**18 04 32.4**	**+0.6**
T0826	**Rio Saliceto (**	**0.11**	**204**	AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0828	**Loc. Fossoli,**	**0.11**	**166**	⇓*i*

comp=N,51300µm,0.8s
NOVE AML AML
comp=E,47550µm,0.3s
NOVE AML AML
comp=N,51300µm,0.8s
T0824 Loc. Limidi di 0.18 168⇓ *iP* **Pg 18 04 29.6 -0.9**
T0824 ⇓ *iS* **Sg 18 04 33.6 +0.2**
T0824 Loc. Limidi di 0.18 168 *i P* **Pg 18 04 29.6 -0.9**
T0824 *i S* **Sg 18 04 33.6 +0.2**
T0812 Loc. Stoppiaro 0.22 86 *eP* **Pg 18 04 30.8 -0.2**
T0812 Loc. Stoppiaro 0.22 86 *eP* **Pg 18 04 30.8 -0.2**
T0812 *eS* **Sg 18 04 38.1 +3.8**
T0802 SanFelice sul 0.23 107⇑ *eP* **Pg 18 04 30.5 -0.6**
T0802 ⇑ *eS* **Sg 18 04 35.3 +0.7**
T0802 SanFelice sul 0.23 107 *eP* **Pg 18 04 30.5 -0.6**
T0802 *eS* **Sg 18 04 35.3 +0.7**
T0802 AML AML
comp=E,23050µm,0.4s
T0802 AML AML
comp=N,28950µm,0.3s
T0802 AML AML
comp=N,28950µm,0.3s
T0802 AML AML
comp=E,23050µm,0.4s
T0813 Massa Finalese 0.24 105⇑ *eP* **Pg 18 04 30.7 -0.6**
T0813 ⇑ *eS* **Sg 18 04 35.7 +0.8**
T0813 Massa Finalese 0.24 105 *eP* **Pg 18 04 30.7 -0.6**
T0813 *eS* **Sg 18 04 35.7 +0.8**
RAVA Ravarino 0.25 137⇓ *eP* **Pg 18 04 30.7 -0.8**
RAVA ⇓ *eS* **Sg 18 04 35.7 +0.4**
RAVA Ravarino 0.25 137 *eP* **Pg 18 04 30.7 -0.8**
RAVA *eS* **Sg 18 04 35.7 +0.4**
RAVA AML AML
comp=E,21800µm,0.4s
RAVA AML AML
comp=N,17700µm,0.7s
RAVA AML AML
comp=E,21750µm,0.4s
RAVA AML AML
comp=N,17700µm,0.7s
RAVA AML AML
comp=E,21750µm,0.4s
RAVA AML AML
comp=N,17650µm,0.7s
RAVA AML AML
comp=N,17650µm,0.7s
RAVA AML AML
comp=E,21750µm,0.4s
T0800 Massa Finalese 0.28 109⇑ *eP* **Pg 18 04 31.2 -0.8**
T0800 ⇑ *eS* **Sb 18 04 36.5 -0.6**
T0800 Massa Finalese 0.28 109 *eP* **Pg 18 04 31.2 -0.8**
T0800 *eS* **Sb 18 04 36.5 -0.6**
T0800 AML AML
comp=E,14200µm,0.4s
T0800 AML AML
comp=N,13130µm,0.4s
T0800 AML AML
comp=E,13600µm,0.4s
T0800 AML AML
comp=N,13550µm,0.4s
T0800 AML AML
comp=E,14200µm,0.4s
T0800 AML AML
comp=N,13150µm,0.4s
T0800 AML AML
comp=E,13600µm,0.4s
T0800 AML AML
comp=N,13500µm,0.4s
T0800 AML AML
comp=E,14200µm,0.4s
T0800 AML AML
comp=N,13100µm,0.4s
T0800 AML AML
comp=E,13600µm,0.4s
T0800 AML AML
comp=N,13550µm,0.4s
T0800 AML AML
comp=N,13100µm,0.4s
T0800 AML AML
comp=N,13550µm,0.4s
T0800 AML AML
comp=E,14200µm,0.4s
T0800 AML AML
comp=E,13600µm,0.4s
T0811 Palata Pepoli 0.29 122⇑ *eP* **Pg 18 04 31.4 -0.9**
T0811 ⇑ *eS* **Sg 18 04 36.9 +0.4**
T0811 Palata Pepoli 0.29 122 *eP* **Pg 18 04 31.4 -0.9**
T0811 *eS* **Sg 18 04 36.9 +0.4**
SERM Sermide 0.31 77 AML AML
comp=E,6150µm,0.7s
SERM AML AML
comp=E,2960µm,0.5s
SERM AML AML
comp=N,1945µm,0.5s
SERM AML AML
comp=E,6140µm,0.7s
SERM AML AML
comp=N,3215µm,0.9s
SERM AML AML
comp=E,2955µm,0.5s
SERM AML AML
comp=N,1945µm,0.5s
SERM AML AML
comp=E,6150µm,0.7s
SERM AML AML
comp=N,3214µm,0.9s
SERM AML AML
comp=N,3214µm,0.9s
SERM AML AML
comp=E,2955µm,0.5s
SERM AML AML
comp=N,1945µm,0.5s
MODE Modena 0.32 170⇓ *eP* **Pg 18 04 32.3 -0.3**
MODE Modena 0.32 170 *eP* **Pg 18 04 32.3 -0.3**
MODE AML AML
comp=E,30300µm,0.6s
MODE AML AML
comp=N,23550µm,0.7s
MODE AML AML
comp=E,30250µm,0.6s
MODE AML AML
comp=N,23550µm,0.7s
MODE AML AML
comp=E,30250µm,0.6s
MODE AML AML
comp=N,23550µm,0.7s
T0805 Bondeno (FE) 0.32 94 *eP* **Pg 18 04 32.3 -0.4**
T0805 Bondeno (FE) 0.32 94 *eP* **Pg 18 04 32.3 -0.4**
T0822 Casumaru (Bond 0.35 108⇑ *eP* **Pg 18 04 32.5 -0.8**
T0822 ⇑ *eS* **Sb 18 04 38.8 -0.4**
T0822 Casumaru (Bond 0.35 108 *eP* **Pg 18 04 32.5 -0.8**
T0822 *eS* **Sb 18 04 38.8 -0.4**
T0822 AML AML
comp=E,3965µm,0.5s
T0822 AML AML
comp=N,5610µm,0.4s
T0822 AML AML
comp=E,3965µm,0.5s
T0822 AML AML
comp=N,5610µm,0.4s
T0822 AML AML
comp=E,3965µm,0.5s
T0822 AML AML
comp=N,5610µm,0.4s
T0822 AML AML
comp=N,5610µm,0.4s
T0822 AML AML
comp=E,3965µm,0.5s
T0823 Castello D'Arg 0.38 132 *eP* **Pg 18 04 33.4 -0.4**
T0823 Castello D'Arg 0.38 132 *eP* **Pg 18 04 33.4 -0.4**
T0817 Loc. Veratica, 0.41 83 *eP* **Pb 18 04 34.9 -0.1**
T0817 Loc. Veratica, 0.41 83 *eP* **Pb 18 04 34.9 -0.1**
T0817 *eS* **Sb 18 04 42.5 +1.5**
PRMA PARMA 0.44 246 AML AML
comp=N,3480µm,0.5s
PRMA AML AML
comp=E,3900µm,1.0s
PRMA AML AML
comp=N,3480µm,0.5s
PRMA AML AML
comp=E,3900µm,1.0s
PRMA AML AML
comp=E,3900µm,1.0s
PRMA AML AML
comp=N,3480µm,0.5s
T0821 Loc. Casaglia 0.47 94 AML AML
comp=E,2080µm,0.7s
T0821 AML AML
comp=N,1870µm,0.5s
T0821 AML AML
comp=E,2080µm,0.7s
T0821 AML AML
comp=N,1875µm,0.5s
T0821 AML AML
comp=N,1875µm,0.5s
T0821 AML AML
comp=E,2080µm,0.7s
FIU Minerbio Fiu 0.53 124 AML AML
comp=E,1645µm,0.7s
FIU AML AML
comp=N,1880µm,1.5s
FIU AML AML
comp=E,1645µm,0.7s
FIU AML AML
comp=N,1875µm,1.5s
FIU AML AML
comp=N,1875µm,1.5s
FIU AML AML
comp=E,1645µm,0.7s
ZCCA Zocca 0.59 173 AML AML
comp=E,2005µm,1.6s
ZCCA AML AML
comp=E,2005µm,1.6s
ZCCA AML AML
comp=N,2225µm,0.8s
ZCCA AML AML
comp=E,2040µm,1.6s
ZCCA AML AML
comp=N,2415µm,0.8s
ZCCA AML AML
comp=N,2230µm,0.8s
ZCCA AML AML
comp=E,2040µm,1.6s
ZCCA AML AML
comp=N,2415µm,0.8s
ZCCA AML AML
comp=E,2040µm,1.6s
ZCCA AML AML
comp=E,2005µm,1.6s
ZCCA AML AML
comp=N,2415µm,0.8s
ZCCA AML AML
comp=N,2230µm,0.8s
TEOL Teolo 0.70 53⇓ *ePg* **Pb 18 04 39.8 -0.1**
TEOL *eSg* **Sn 18 04 51.6 -0.3**
TEOL Teolo 0.70 53⇓ *eP* **Pb 18 04 39.8 -0.1**
TEOL *eSg* **Sn 18 04 51.6 -0.3**
TEOL Teolo 0.70 53 *eP* **Pb 18 04 39.8 -0.1**
TEOL AML AML
comp=E,4595µm,1.1s
TEOL AML AML
comp=N,3665µm,0.5s
TEOL AML AML
comp=E,4595µm,1.1s
TEOL AML AML
comp=N,3665µm,0.5s
TEOL AML AML
comp=N,3665µm,0.5s
TEOL AML AML
comp=E,4595µm,1.1s
ROVR Rover¨¤ Verone 0.72 11 AML AML
comp=E,1535µm,0.3s
ROVR AML AML
comp=N,3820µm,0.4s
ROVR AML AML
comp=E,1535µm,0.3s
ROVR AML AML
comp=N,3820µm,0.4s
ROVR AML AML
comp=N,3820µm,0.4s
ROVR AML AML
comp=E,1535µm,0.3s
SALO Salr 0.72 340 AML AML
comp=E,1335µm,0.6s
SALO AML AML
comp=N,1910µm,0.3s
SALO AML AML
comp=E,1335µm,0.6s
SALO AML AML
comp=N,1910µm,0.3s
SALO AML AML
comp=E,1335µm,0.6s
SALO AML AML
comp=N,1910µm,0.3s
MARN Marana (Italy) 0.74 19⇓ *ePg* **Pb 18 04 40.9 +0.4**
MARN *eSg* **Sn 18 04 53.3 +0.5**
MARN Marana (Italy) 0.74 19 *ePg* **Pb 18 04 40.9 +0.4**
MARN *eSg* **Sn 18 04 53.3 +0.5**
VOBA Vobarno 0.75 340 AML AML
comp=N,1745µm,0.8s
VOBA AML AML
comp=E,1890µm,0.4s
VOBA AML AML
comp=N,1745µm,0.8s
VOBA AML AML
comp=E,1885µm,0.4s
VOBA AML AML
comp=N,1745µm,0.8s
VOBA AML AML
comp=E,1885µm,0.4s
CMPO Campotto Po 0.75 118 AML AML
comp=N,2685µm,0.9s
CMPO AML AML
comp=E,2150µm,0.8s
CMPO AML AML
comp=N,2685µm,0.9s
CMPO AML AML
comp=E,2150µm,0.8s
CMPO AML AML
comp=N,2685µm,0.9s
CMPO AML AML
comp=E,2150µm,0.8s
ADRI Adria, Italy 0.82 83⇑ *ePg* **Pb 18 04 42.4 +0.6**
ADRI *eSg* **Sn 18 04 55.6 +1.0**
ADRI Adria, Italy 0.82 83 *ePg* **Pb 18 04 42.4 +0.6**
ADRI *eSg* **Sn 18 04 55.6 +1.0**
IMOL Imola, Italy 0.85 133 AML AML
comp=N,1080µm,1.6s
IMOL AML AML
comp=E,1810µm,0.9s
IMOL AML AML
comp=N,1081µm,1.6s
IMOL AML AML
comp=E,1810µm,0.9s
IMOL AML AML
comp=N,1080µm,1.6s
IMOL AML AML
comp=E,1810µm,0.9s
MAGA Magasa 0.85 348 AML AML
comp=E,7715µm,0.6s
MAGA AML AML
comp=E,7715µm,0.6s
MAGA AML AML
comp=N,5470µm,0.3s
MAGA AML AML
comp=E,7715µm,0.6s
MAGA AML AML
comp=N,5470µm,0.3s
MAGA AML AML
comp=N,5470µm,0.3s
VLC Villacollemand 0.86 204 AML AML
comp=E,635µm,0.8s
VLC AML AML
comp=N,916µm,0.6s
VLC AML AML
comp=E,635µm,0.8s
VLC AML AML
comp=N,916µm,0.6s
VLC AML AML
comp=E,635µm,0.8s
VLC AML AML
comp=N,916µm,0.6s
BDI Bagni Di Lucca 0.90 193 AML AML
comp=N,1385µm,0.8s
BDI AML AML
comp=E,1380µm,0.5s
BDI AML AML
comp=N,1295µm,0.8s
BDI AML AML
comp=E,1410µm,0.5s
BDI AML AML
comp=N,1385µm,0.8s
BDI AML AML
comp=E,1410µm,0.5s
BDI AML AML
comp=E,1380µm,0.5s
BDI AML AML
comp=N,1295µm,0.8s
POPM Popiglio 0.90 185 AML AML
comp=N,928µm,0.7s
POPM AML AML
comp=E,754µm,0.3s
POPM AML AML
comp=N,928µm,0.7s
POPM AML AML
comp=E,754µm,0.3s
POPM AML AML
comp=N,928µm,0.7s
POPM AML AML
comp=E,754µm,0.3s
DOSS Dosso del Somm 0.97 13⇓ *ePg* **Pb 18 04 44.7 +0.2**
DOSS *eSg* **Sn 18 05 00.2 +1.6**
DOSS Dosso del Somm 0.97 13 *ePg* **Pb 18 04 44.7 +0.2**
DOSS *eSg* **Sn 18 05 00.2 +1.6**
BOB Bobbio (Coli) 1.03 261 AML AML
comp=N,1600µm,1.4s
BOB AML AML
comp=E,948µm,0.6s
BOB AML AML
comp=N,1600µm,1.4s
BOB AML AML
comp=E,948µm,0.6s
BOB AML AML
comp=N,1600µm,1.4s
BOB AML AML
comp=E,948µm,0.6s
RNI Roncone 1.05 350⇑ *ePg* **Pg 18 04 45.6 -0.9**
RNI *eSg* **Sn 18 05 02.5 +1.6**
RNI Roncone 1.05 350 *ePg* **Pg 18 04 45.6 -0.9**
RNI *eSg* **Sn 18 05 02.5 +1.6**
MAIM Mastiano 1.06 195 AML AML
comp=N,810µm,0.4s
MAIM AML AML
comp=E,644µm,0.6s
MAIM AML AML
comp=N,810µm,0.4s
MAIM AML AML
comp=E,644µm,0.6s
MAIM AML AML
comp=N,810µm,0.4s
MAIM AML AML
comp=E,644µm,0.6s
CGRP Cima Grappa 1.14 34⇓ *ePg* **Pb 18 04 47.8 +0.3**
CGRP *eSg* **Sn 18 05 05.7 +2.7**
CGRP Cima Grappa 1.14 34 *ePg* **Pb 18 04 47.8 +0.3**
CGRP *eSg* **Sn 18 05 05.7 +2.7**
CGRP Cima Grappa 1.14 34 AML AML
comp=E,782µm,0.9s
CGRP AML AML
comp=N,784µm,0.6s
CGRP AML AML
comp=E,782µm,0.9s
CGRP AML AML
comp=N,784µm,0.6s
CGRP AML AML
comp=N,784µm,0.6s
CGRP AML AML
comp=E,782µm,0.9s
MABI Malga Bissina 1.14 347 AML AML
comp=N,392µm,0.8s
MABI AML AML
comp=E,424µm,1.4s
MABI AML AML
comp=N,392µm,0.8s
MABI AML AML
comp=E,424µm,1.4s
MABI AML AML
comp=E,424µm,1.4s
MABI AML AML
comp=N,392µm,0.8s
CRMI Carmignano 1.15 177 AML AML
comp=N,222µm,0.8s
CRMI AML AML
comp=E,279µm,1.5s
CRMI AML AML
comp=E,279µm,1.5s
CRMI AML AML
comp=N,222µm,0.8s
MSSA Maissana 1.15 238 AML AML
comp=E,910µm,0.4s
MSSA AML AML
comp=E,910µm,0.4s
MSSA AML AML
comp=N,1006µm,0.5s
MSSA AML AML
comp=N,1006µm,0.5s
MSSA AML AML
comp=N,1006µm,0.5s
MSSA AML AML
comp=E,910µm,0.4s
PLMA Palmaria, Port 1.15 220 AML AML
comp=N,1580µm,0.5s
PLMA AML AML
comp=E,984µm,0.4s
PLMA AML AML
comp=E,984µm,0.4s
PLMA AML AML
comp=N,1580µm,0.5s
PLMA AML AML
comp=E,984µm,0.4s
PLMA AML AML
comp=N,1580µm,0.5s
PANI Panarotta 1.16 16⇓ *ePg* **Pg 18 04 47.3 -1.0**
PANI *eSg* **Sn 18 05 05.0 +1.6**
PANI Panarotta 1.16 16 *ePg* **Pg 18 04 47.3 -1.0**
PANI *eSg* **Sn 18 05 04.9 +1.6**
MTLO Montello 1.23 44⇓ *ePg* **Pg 18 04 48.9 -0.7**
MTLO *eSg* **Sn 18 05 06.7 +1.9**
MTLO Montello 1.23 44 *ePg* **Pg 18 04 48.9 -0.7**
MTLO *eSg* **Sn 18 05 06.7 +1.9**
CTI Castel Tesino 1.23 26 AML AML
comp=N,2115µm,1.5s
CTI AML AML
comp=E,1325µm,0.7s
CTI AML AML
comp=N,2115µm,1.5s
CTI AML AML
comp=E,1325µm,0.7s
CTI AML AML
comp=E,1325µm,0.7s
CTI AML AML
comp=N,2115µm,1.5s
SFI Santa Sofia 1.25 146 AML AML
comp=N,1044µm,1.0s
SFI AML AML
comp=E,402µm,0.6s
SFI AML AML
comp=N,1044µm,1.0s
SFI AML AML
comp=E,402µm,0.6s
ASQU Asqua 1.32 150 AML AML
comp=N,470µm,1.1s
ASQU AML AML
comp=E,364µm,0.9s
ASQU AML AML
comp=N,470µm,1.1s
ASQU AML AML
comp=E,364µm,0.9s
VARN Col Varnada, M 1.36 39 *ePg* **Pn 18 04 50.6 +0.1**
VARN *eSg* **Sn 18 05 10.0 +1.8**
VARN Col Varnada, M 1.36 39 *ePg* **Pn 18 04 50.6 +0.1**
VARN *eSg* **Sn 18 05 10.0 +1.8**
OZOL Ozolo 1.47 5⇑ *ePg* **Pn 18 04 52.4 +0.4**
OZOL Ozolo 1.47 5 *ePg* **Pn 18 04 52.4 +0.4**
CARE Lago del Cares 1.49 355 *ePg* **Pn 18 04 52.9 +0.5**
CARE *eSg* **Sg 18 05 13.0 -1.1**
CARE Lago del Cares 1.49 355 *ePg* **Pn 18 04 52.9 +0.5**
CARE *eSg* **Sg 18 05 13.0 -1.1**
CRE Caprese Michel 1.53 149 AML AML
comp=E,237µm,0.8s
CRE AML AML
comp=E,237µm,0.8s
CRE AML AML
comp=N,248µm,0.8s
CRE AML AML
comp=N,248µm,0.8s
CAE Caneva 1.53 45⇑ *ePg* **Pn 18 04 52.7 -0.1**
CAE Caneva 1.53 45 *ePg* **Pn 18 04 52.7 -0.1**
APPI Appiano 1.56 9 AML AML
comp=N,740µm,0.9s
APPI AML AML

comp=E,896μm,1.1s
APPI AML AML
comp=N,740μm,0.9s
APPI AML AML
comp=E,896μm,1.1s
KOSI Kohlern 1.56 13 AML AML
comp=N,478μm,0.9s
KOSI AML AML
comp=E,618μm,0.8s
KOSI AML AML
comp=N,478μm,0.9s
KOSI AML AML
comp=E,618μm,0.8s
AGOR Agordo 1.57 31 AML AML
comp=N,320μm,0.4s
AGOR AML AML
comp=E,362μm,0.7s
AGOR AML AML
comp=N,320μm,0.4s
AGOR AML AML
comp=E,362μm,0.7s
BRMO Bormio 1.57 347 AML AML
comp=E,261μm,0.6s
BRMO AML AML
comp=N,269μm,0.6s
BRMO AML AML
comp=N,269μm,0.6s
BRMO AML AML
comp=E,261μm,0.6s
MOSI Grossmontoni 1.69 352 AML AML
comp=E,742μm,1.2s
MOSI AML AML
comp=E,742μm,1.2s
MOSI AML AML
comp=N,1170μm,0.8s
MOSI AML AML
comp=N,1170μm,0.8s
VARE Varese 1.75 303 AML AML
comp=E,680μm,0.6s
VARE AML AML
comp=E,680μm,0.6s
VARE AML AML
comp=N,720μm,1.3s
VARE AML AML
comp=N,720μm,1.3s
CAFI Castiglion Fio 1.79 154 AML AML
comp=N,102μm,1.0s
CAFI AML AML
comp=E,148μm,0.7s
CAFI AML AML
comp=N,102μm,1.0s
CAFI AML AML
comp=E,148μm,0.7s
ABSI Aberstueckl 1.81 10 AML AML
comp=E,1480μm,0.6s
ABSI AML AML
comp=N,796μm,0.5s
ABSI AML AML
comp=N,796μm,0.5s
ABSI AML AML
comp=E,1480μm,0.6s
ROSI Rosskopf 2.02 10 AML AML
comp=N,625μm,0.8s
ROSI AML AML
comp=E,620μm,0.7s
ROSI AML AML
comp=E,620μm,0.7s
ROSI AML AML
comp=N,625μm,0.8s
ATTE AVT- Monte Tez 2.04 148 AML AML
comp=E,129μm,1.5s
ATTE AML AML
comp=N,95μm,0.8s
ATTE AML AML
comp=E,129μm,1.5s
ATTE AML AML
comp=N,95μm,0.8s
MURB Monte Urbino 2.06 144 AML AML
comp=N,284μm,1.5s
MURB AML AML
comp=E,310μm,0.9s
MURB AML AML
comp=N,284μm,1.5s
MURB AML AML
comp=E,310μm,0.9s
FETA Feichten 2.08 357 *e*Pg **Pg 18 05 05.6 -0.4**
comp=E,24nm,0.5s,SNR=21
FETA *e*Sn **Sg 18 05 31.4 -1.7**
comp=E,49nm,0.8s
FETA Feichten 2.08 357 Pg **Pg 18 05 05.6 -0.4**
comp=E,24nm,0.5s,SNR=21
FETA Sn **Sg 18 05 31.4 -1.7**
comp=E,49nm,0.8s
ABTA Abfaltersbach 2.14 32 *e*Pn **Pb 18 05 03.8 -0.6**
comp=E,0.8nm,0.1s,SNR=9.2
ABTA *e*Pg **Pg 18 05 06.2 -0.8**
comp=E,11nm,0.3s,SNR=16
ABTA Abfaltersbach 2.14 32 Pn **Pb 18 05 03.8 -0.6**
comp=E,0.8nm,0.1s,SNR=9.2
SKDS Skadanscina 2.30 74 *i* Pn **Pn 18 05 02.7 -0.6**
SKDS Skadanscina 2.30 74 Pn **Pn 18 05 02.7 -0.6**
WTTA Wattenberg 2.38 13 *e*Pn **Pb 18 05 07.6 -1.0**
comp=E,2.9nm,0.1s
WTTA *e*Sn **Sb 18 05 37.7 -0.2**
comp=E,35nm,0.6s
WTTA Wattenberg 2.38 13 Pn **Pb 18 05 07.6 -1.0**
comp=E,2.9nm,0.1s
WTTA Sn **Sb 18 05 37.7 -0.2**
comp=E,35nm,0.6s
MOTA Moosalm 2.41 4 *e*Pn **Pn 18 05 06.9 +2.0**
comp=E,4.0nm,0.2s,SNR=19
MOTA Moosalm 2.41 4 Pn **Pn 18 05 06.9 +2.0**
comp=E,4.0nm,0.2s,SNR=19
JAVS Javornik 2.44 66 *i* Pn **Pn 18 05 05.2 -0.1**
JAVS Javornik 2.44 66 *i* Pn **Pn 18 05 05.2 -0.1**
WATA Walderalm 2.44 11 *e*Pn **Pb 18 05 08.4 -1.3**
comp=E,7.9nm,0.2s,SNR=10
WATA Walderalm 2.44 11 Pn **Pb 18 05 08.4 -1.3**
comp=E,7.9nm,0.2s,SNR=10
DAVA Damuels 2.45 344 *e*Pn **Pb 18 05 08.8 -0.9**
comp=E,6.2nm,0.3s
DAVA *e*Sn **Sn 18 05 35.9 +0.8**
comp=E,32nm,0.6s
DAVA Damuels 2.45 344 Pn **Pb 18 05 08.8 -0.9**
comp=E,6.2nm,0.3s
DAVA Sn **Sn 18 05 35.9 +0.8**
comp=E,32nm,0.6s
RETA Reutte 2.55 358 *e*Pn **Pb 18 05 09.8 -1.6**
comp=E,4.2nm,0.2s,SNR=11
RETA Reutte 2.55 358 Pn **Pb 18 05 09.8 -1.6**
comp=E,4.2nm,0.2s,SNR=11
MYKA Terra Mystica 2.57 48 Pg **Pg 18 05 13.9 -1.3**
comp=E,12nm,0.4s
MYKA Sg **Sg 18 05 50.0 +1.4**
comp=E,42nm,0.7s
MYKA Terra Mystica 2.57 48 Pg **Pg 18 05 13.9 -1.3**
comp=E,12nm,0.4s
MYKA Sg **Sg 18 05 50.0 +1.4**
comp=E,42nm,0.7s
SBF Sospel 2.69 248 *e*Pn **Pn 18 05 10.1 +1.4**
SNR=1.0
SBF *e*Sn **Sn 18 05 42.0 +1.0**
comp=E,159nm,0.5s,SNR=1.0
SBF Sospel 2.69 248 *e*Pn **Pn 18 05 10.1 +1.4**
SNR=1.0
SBF *e*Sn **Sn 18 05 42.0 +1.0**
comp=E,80nm,0.5s,SNR=1.0
LUCF Luceram 2.74 249 P **Pn 18 05 12.0 +2.6**
LUCF S **Sb 18 05 48.5 +0.6**
LUCF Luceram 2.74 249 P **Pn 18 05 11.0 +1.6**
KBA Koelnbreinsper 2.74 38 *e*Pn **Pg 18 05 17.0 -1.6**
comp=E,11nm,0.3s
PGF Pioggiola 2.75 210 *e*Pn **Pn 18 05 10.8 +1.2**
SNR=1.0
PGF *e*Sn **Sn 18 05 43.0 +0.5**
comp=E,31nm,0.4s,SNR=1.0
PGF Pioggiola 2.75 210 *e*Pn **Pn 18 05 10.8 +1.2**
SNR=1.0
PGF *e*Sn **Sn 18 05 43.0 +0.5**
comp=E,16nm,0.4s,SNR=1.0
MVIF Mont Vial 2.86 250 P **Pn 18 05 14.2 +3.0**
MVIF S **Sb 18 05 51.7 0.0**
MVIF Mont Vial 2.86 250 P **Pn 18 05 14.2 +3.0**
NVLJ Novalja 2.87 96 *e*Pn **Pn 18 05 11.3 +0.2**
NVLJ Sn **Sn 18 05 43.5 -1.9**
NVLJ Novalja 2.87 96 *e*Pn **Pn 18 05 11.3 +0.2**
NVLJ Sn **Sn 18 05 43.4 -1.9**
VISS Visnje 2.92 71 *i* Pn **Pn 18 05 12.1 +0.3**
VISS *i* Sn **Sn 18 05 47.3 +0.6**
comp=Z,8.0nm,0.3s
VISS Visnje 2.92 71 *i* Pn **Pn 18 05 12.1 +0.3**
VISS *i* Sn **Sn 18 05 47.3 +0.6**
comp=Z,8.0nm,0.3s
MBDF Montbardon 2.93 267 *e*Pn **Pn 18 05 12.4 +0.4**
SNR=1.0
MBDF *e*Sn **Sn 18 05 47.7 +0.7**
comp=Z,65nm,0.6s
MBDF Montbardon 2.93 267 *e*Pn **Pn 18 05 12.4 +0.4**
SNR=1.0
MBDF *e*Sn **Sn 18 05 47.7 +0.7**
comp=Z,32nm,0.6s
LPG La Plagne 2.97 282 *e*Pn **Pn 18 05 13.4 +0.7**
SNR=1.0
LPG *e*Sn **Sn 18 05 48.3 +0.2**
comp=Z,31nm,0.6s,SNR=1.0
LPG La Plagne 2.97 282 *e*Pn **Pn 18 05 13.4 +0.7**
SNR=1.0
LPG *e*Sn **Sn 18 05 48.3 +0.2**
comp=Z,16nm,0.6s,SNR=1.0
LPL La Plagne 2.98 283 *e*Pn **Pn 18 05 13.9 +1.0**
SNR=1.0
LPL *e*Sn **Sn 18 05 49.0 +0.6**
comp=Z,25nm,0.5s
LPL La Plagne 2.98 283 *e*Pn **Pn 18 05 13.9 +1.0**
SNR=1.0
LPL *e*Sn **Sn 18 05 49.0 +0.6**
comp=Z,12nm,0.5s
CALF Calern 3.08 249 P **Pn 18 05 16.4 +2.4**
CALF Calern 3.08 249 P **Pn 18 05 16.4 +2.4**
OZLJ Ozalj 3.31 77 *e*Pn **Pn 18 05 18.0 +0.9**
OZLJ Sn **Sn 18 05 56.5 +0.4**
OZLJ Ozalj 3.31 77 *e*Pn **Pn 18 05 18.0 +0.9**
OZLJ Sn **Sn 18 05 56.5 +0.4**
FRF La Foret Royal 3.34 247 *e*Pn **Pn 18 05 18.9 +1.4**
SNR=1.0
FRF *e*Sn **Sn 18 05 57.6 +0.8**
FRF La Foret Royal 3.34 247 *e*Pn **Pn 18 05 18.9 +1.4**
SNR=1.0
FRF *e*Sn **Sn 18 05 57.6 +0.8**
LMR La Mourre 3.53 244 *e*Pn **Pn 18 05 21.4 +1.2**
SNR=1.0
LMR *e*Sn **Sn 18 06 02.9 +1.3**
comp=Z,47nm,0.4s,SNR=1.0
LMR La Mourre 3.53 244 *e*Pn **Pn 18 05 21.4 +1.2**
SNR=1.0
LMR *e*Sn **Sn 18 06 02.9 +1.3**
comp=Z,24nm,0.4s,SNR=1.0
ORIF Oris-en-Rattie 3.55 271 *e*Pn **Pn 18 05 22.4 +1.9**
SNR=1.0
ORIF *e*Sn **Sn 18 06 02.6 +0.4**
comp=Z,37nm,0.6s
ORIF Oris-en-Rattie 3.55 271 P **Pn 18 05 23.1 +2.6**
ORIF Oris-en-Rattie 3.55 271 *e*Pn **Pn 18 05 22.4 +1.9**
SNR=1.0
ORIF *e*Sn **Sn 18 06 02.6 +0.4**
comp=Z,19nm,0.6s
KIZ Kirchzarten 3.64 327 P **Pn 18 05 23.6 +1.8**
KIZ Kirchzarten 3.64 327 P **Pn 18 05 23.6 +1.8**
CHMF Charmoille 3.74 310 P **Pn 18 05 24.9 +1.8**
CHMF Charmoille 3.74 310 P **Pn 18 05 24.9 +1.8**
MOA Molln 3.74 38 *i* Pn **Pn 18 05 24.8 +1.7**
comp=Z,1.8nm,0.3s
MOA Molln 3.74 38 Pn **Pn 18 05 24.8 +1.7**
comp=Z,1.8nm,0.3s
CABF La Chapelle 3.74 298 *e*Pn **Pn 18 05 23.7 +0.5**
SNR=1.0
CABF *e*Sn **Sn 18 06 05.8 -1.2**
SNR=1.0
CABF La Chapelle 3.74 298 *e*Pn **Pn 18 05 23.7 +0.5**
SNR=1.0
CABF *e*Sn **Sn 18 06 05.8 -1.2**
SNR=1.0
HINF Hinteralfeld 4.00 317 *e*Pn **Pn 18 05 26.9 +0.2**
SNR=1.0
HINF *e*Sn **Sn 18 06 11.6 -1.7**
comp=Z,10nm,0.3s,SNR=1.0
HINF Hinteralfeld 4.00 317 *e*Pn **Pn 18 05 26.9 +0.2**
SNR=1.0
HINF *e*Sn **Sn 18 06 11.6 -1.7**
comp=Z,5.2nm,0.3s,SNR=1.0
OPP Oppenau 4.01 334 P **Pn 18 05 28.2 +1.4**
OPP Oppenau 4.01 334 P **Pn 18 05 28.2 +1.4**
ECH Echery 4.16 323 P **Pn 18 05 30.7 +1.9**
ECH Echery 4.16 323 P **Pn 18 05 30.7 +1.9**
WLS Welschbruch 4.24 326 P **Pn 18 05 31.7 +1.8**
WLS Welschbruch 4.24 326 P **Pn 18 05 31.7 +1.8**
CDF Champ du Feu 4.26 326 *e*Pn **Pn 18 05 31.4 +1.0**
SNR=1.0
CDF *e*Sn **Sn 18 06 18.1 -1.7**
comp=Z,4.2nm,0.2s
CDF Champ du Feu 4.26 326 *e*Pn **Pn 18 05 31.4 +1.0**
SNR=1.0
CDF *e*Sn **Sn 18 06 18.1 -1.7**
comp=Z,2.1nm,0.2s
HAU Haudompre 4.38 316 *e*Pn **Pn 18 05 33.1 +1.2**
SNR=1.0
HAU *e*Sn **Sn 18 06 21.3 -1.3**
comp=Z,18nm,0.2s,SNR=1.0
HAU Haudompre 4.38 316 *e*Pn **Pn 18 05 33.1 +1.2**
SNR=1.0
HAU *e*Sn **Sn 18 06 21.3 -1.3**
comp=Z,9.1nm,0.2s,SNR=1.0
VIVF Saint-Julien-l 4.41 271 *e*Pn **Pn 18 05 32.8 +0.5**
SNR=1.0
VIVF *e*Sn **Sn 18 06 23.0 -0.3**
comp=Z,3.9nm,0.4s
VIVF Saint-Julien-l 4.41 271 *e*Pn **Pn 18 05 32.8 +0.5**
SNR=1.0
VIVF *e*Sn **Sn 18 06 23.0 -0.3**
comp=Z,2.0nm,0.4s
KHC Kasperske Hory 4.58 23 *e*PN **Pn 18 05 35.5 +0.8**
KHC *ex* x 18 05 54.6
KHC *e*SN **Sn 18 06 27.9 +0.3**
KHC *e*SG **Sg 18 06 53.9 +0.9**
comp=Z,16nm,0.8s
LASF Ste Croix 5.09 263 *e*Sn **Sn 18 06 39.2 -1.0**
SNR=1.0
LASF Ste Croix 5.09 263 *e*Sn **Sn 18 06 39.2 -1.0**
SNR=1.0
SMF Signal de Mont 5.21 292 *e*Pn **Pn 18 05 43.0 -0.2**
SNR=1.0
SMF *e*Sn **Sn 18 06 41.6 -1.3**
SMF Signal de Mont 5.21 292 *e*Pn **Pn 18 05 43.0 -0.2**
SNR=1.0
SMF *e*Sn **Sn 18 06 41.6 -1.3**
STON Ston 5.35 110 *e*Pn **Pn 18 05 44.7 -0.4**
STON Sn **Sn 18 06 43.2 -3.2**
STON Ston 5.35 110 *e*Pn **Pn 18 05 44.7 -0.4**
STON Sn **Sn 18 06 43.1 -3.2**
NKC Novy Kostel 5.40 11 *e*SG **Sg 18 07 17.8 -1.5**
LOR Lormes 5.41 298 *e*Pn **Pn 18 05 47.0 +1.0**
SNR=1.0
LOR *e*Sn **Sn 18 06 46.4 -1.4**
comp=Z,2.9nm,0.2s
LOR Lormes 5.41 298 P **Pn 18 05 47.6 +1.7**
LOR Lormes 5.41 298 *e*Pn **Pn 18 05 47.0 +1.0**
SNR=1.0
SSF Saint Saulge 5.55 295 *e*Pn **Pn 18 05 48.5 +0.5**
SNR=1.0
SSF *e*Sn **Sn 18 06 48.7 -2.8**
comp=Z,6.5nm,0.5s,SNR=1.0
SSF Saint Saulge 5.55 295 *e*Pn **Pn 18 05 48.5 +0.5**
SNR=1.0
AVF Avril sur Loir 5.57 292 *e*Pn **Pn 18 05 49.2 +1.0**
SNR=1.0
AVF *e*Sn **Sn 18 06 49.2 -2.6**
comp=Z,5.1nm,0.6s,SNR=1.0
AVF Avril sur Loir 5.57 292 *e*Pn **Pn 18 05 49.2 +1.0**
SNR=1.0
PRU Pruhonice 5.63 25 *e*SG **Sg 18 07 27.1 +0.6**
comp=Z,9.1nm,0.8s
GOPC GO Pecny, Ondr 5.64 27 *e*SG **Sg 18 07 28.5 +1.6**
comp=Z,18nm,1.1s
BRG Berggiesshubel 6.28 18 PG **Pn 18 06 00.5 +2.5**
BRG SG **Sg 18 07 45.2 -2.3**
comp=Z,16nm,1.5s
CLL Collm 6.53 12 *e*Pn **Pn 18 06 02.0 +0.7**
CLL *e*Pg **Pg 18 06 30.0 -0.9**
CLL *e* 18 06 35.0
CLL *e*Sg **Sg 18 07 56.0 +0.7**
comp=Z,9.0nm,0.9s
DPC Dobruska-Polom 6.54 32 *e*SG **Sg 18 07 55.5 -0.3**
comp=Z,5.5nm,0.8s

MAN ***04*** *18:14:50.7, 18°.50N×122°.35E, h3km, mb5.4, ML4.4, MS4.7*
IDC ***04*** *18:14:50.6±0.7, 18°.20N×122°.32E, h0km, mb4.2/26, mb1 4.4/27, mb1mx4.2/68, mbtmp4.2/27, ML3.7/1, MS3.8/26, Ms1 3.8/26, ms1mx3.6/55, Error ellipse: s-maj=21.1km s-min=16.1km az=66.0*
ISCJB ***04*** *18:14:53.8±0.3, 18°.42N±0°.03×122°.37E±0°.05, h25km, mb4.3/38, MS3.8/24, Error ellipse: s-maj=6.9km s-min=4.3km az=17.9*
BJI ***04*** *18:14:53.4, 18°.46N×122°.36E, h10km, mb4.5/32, mB4.8/23, Ms4.3/25, Ms7 4.1/22*
NEIC ***04*** *18:14:57.7±1.2, 18°.34N×122°.36E, h49km±12km, mb4.5/10, Error ellipse: s-maj=10.3km s-min=9.0km az=85.0*
NEIC Felt [III PIVS] at Santa Ana.
ISC 04 18:14:54.6±0.5, 18°.25N±0°.05×122°.34E±0°.06, h25km, n86, σ1§44/67, mb4.4/38, MS3.8/24, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGCP	**Mt. Cagua**	**0.28**	**268**	*e*P	**Pb**	**18 14 58.5**	**-2.8**
APYP	**Conner**	**1.11**	**250**	*e*P	**Pb**	**18 15 13.5**	**-1.7**
CAUP	**Cauayan**	**1.39**	**201**	*e*P	**Pb**	**18 15 19.2**	**-0.7**
ABRA	**Dolores**	**1.66**	**249**	*e*P	**Pb**	**18 15 22.4**	**-2.1**
ABRA				*e*S	**Sb**	**18 15 45.2**	**+0.2**
BALP	**Baler**	**2.60**	**196**	*e*P	**Pn**	**18 15 35.3**	**+0.2**
BALP				*e*S	**Sb**	**18 16 13.3**	**+1.2**
PCPH	**Palayan**	**2.93**	**204⇑**	*e*P	**Pb**	**18 15 42.3**	**-3.8**
PCPH				*e*S	**Sb**	**18 16 23.1**	**+1.5**
BOLP	**Bolinao**	**2.97**	**232**	*e*P	**Pb**	**18 15 42.7**	**-4.2**
SCZP	**Santa Cruz**	**3.38**	**224**	*e*P	**Pb**	**18 15 50.8**	**-3.2**
SCZP				*e*S	**Sb**	**18 16 36.5**	**+1.8**
GQP	**Guinayangan**	**4.33**	**179‖**	*e*P	Pn	18 16 01.9	+3.1
TGY	**Tagaytay City**	**4.34**	**198**	Pn	Pb	18 16 04.0	-6.3
	51nm,0.3s,baz=28,slow=1.5,SNR=14						
BUSP	**Coron**	**6.55**	**199**	*e*P	Pn	18 16 33.7	+4.3
GZH	**Guangzhou**	**9.70**	**301**	P	**Pn**	**18 17 12.1**	**-0.5**
GZH				S	**Sn**	**18 19 02.7**	**+2.0**
GZH				LR	LR		
	comp=N,610nm,10.4s						
GZH				LR	LR		
	comp=E,730nm,11.0s						
DAV	**Davao City (W)**	**11.55**	**164**	LR	LR	18 22 35.6	
	comp=Z,216nm,18.7s,baz=70,slow=40						
QIZ	**Qiongzhong**	**11.87**	**276**	*e*P	**Pn**	**18 17 43.3**	**+0.9**
	23nm,1.0s						
JNU	**Nakatsue**	**16.68**	**26**	LR	LR	18 24 54.1	
	comp=Z,151nm,20.8s,baz=160,slow=36						
ENH	**Enshi**	**16.73**	**318**	*e*P	**P**	**18 18 47.8**	**-1.7**
	22nm,1.0s						
SKNT	**Sakolnakorn**	**17.55**	**269**	P	P	18 19 06.0	+7.4
	12nm,0.9s						
TIA	**Tai'an**	**18.47**	**347**	P	**Pn**	**18 19 08.6**	**-0.3**
TIA				S	Sn	18 22 19.8	-15
TIA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TIA				LR	LR		
	comp=N,120nm,14.0s						
TIA				LR	LR		
	comp=E,240nm,14.1s						
TIA				LR	LR		
	comp=Z,240nm,14.5s						
KSAR	**Wonju Array Be**	**19.73**	**13**	P	**P**	**18 19 21.8**	**-0.6**
KSRS	**Korea Array**	**19.75**	**13**	P	**P**	**18 19 21.8**	**-0.8**
	0.2nm,0.3s,baz=194,slow=11,SNR=20						
KSRS				LR	LR	18 27 07.6	
	comp=Z,251nm,19.4s,baz=203,slow=37						
XAN	**Xi'an**	**19.77**	**325**	P	**Pn**	**18 19 24.6**	**0.0**
XAN				S	**Sn**	**18 23 05.3**	**-0.8**
XAN				sS	sS	18 23 10.3	-5.3
XAN				pmax	pmax		
	comp=Z,29nm,1.3s						
XAN				LR	LR		
	comp=N,460nm,17.3s						
XAN				LR	LR		
	comp=E,330nm,15.5s						
XAN				LR	LR		
	comp=Z,500nm,16.7s						
PBKT	**Sadao Pong**	**20.46**	**269**	P	Pn	18 19 36.9	+4.2
	25nm,1.3s,2μm						
PHIT	**Phitsanulok**	**20.91**	**270**	P	Pn	18 19 44.8	+6.8
	11nm,1.1s						
PAYA	**Payao**	**21.30**	**277**	P	P	18 19 50.7	+11
	5.2nm,1.0s						
JHJ	**Hachijo jima 2**	**21.55**	**43**	LR	LR	18 25 44.9	
	comp=Z,105nm,21.0s,baz=268,slow=30						
GUMO	**Guam**	**22.15**	**99**	LR	LR	18 27 08.7	
	comp=Z,196nm,19.7s,baz=262,slow=33						
CHTO	**Chiang Mai**	**22.19**	**275**	P	P	18 19 58.4	+9.2
	64nm,1.4s						
CHTO	**Chiang Mai**	**22.19**	**275**	*e*P	**P**	**18 19 48.5**	**-0.7**
	30nm,1.4s						
CMAR	**Chiang Mai Arr**	**22.20**	**274**	P	**P**	**18 19 52.2**	**+2.9**
	6.8nm,1.0s,baz=79,slow=9.1,SNR=10.0						
CMAR				PcP	**PcP**	**18 23 47.6**	**+2.0**
	1.0nm,0.8s,baz=136,slow=0.8,SNR=6.1						
CMAR				LR	LR	18 28 53.9	
	comp=Z,119nm,18.5s,baz=84,slow=38						
MJAR	**Matsushiro Arr**	**22.97**	**34**	P	**P**	**18 19 57.9**	**+0.5**
	2.5nm,0.8s,baz=221,slow=9.0,SNR=9.6						
LZH	**Lanzhou**	**24.14**	**321**	*e*P	**P**	**18 20 10.8**	**+1.9**
LZH				pmax	pmax		
	comp=Z,35nm,1.2s						
LZH				pmax	pmax		
	comp=Z,290nm,4.8s						
LZH				LR	LR		
	comp=N,630nm,13.6s						
LZH				LR	LR		
	comp=E,660nm,10.3s						
LZH				LR	LR		
	comp=Z,680nm,11.9s						
MDJ	**Mudanjiang**	**26.98**	**11**	*e*P	**P**	**18 20 34.7**	**+0.4**
USRK	**Ussuriysk Ar.**	**27.11**	**15**	P	**P**	**18 20 36.9**	**+1.4**
	2.3nm,0.8s,baz=190,slow=8.2,SNR=4.3						
USRK				LR	LR	18 30 57.9	
	comp=Z,140nm,19.7s,baz=179,slow=36						
GTA	**Gaotai**	**28.73**	**322**	*e*P	**P**	**18 20 53.1**	**+2.9**
GTA				pP	pP	18 20 57.1	-0.5
GTA				sP	sP	18 21 00.3	-0.4
GTA				pmax	pmax		
	comp=Z,2.0nm,1.7s						
LEM	**Lembang**	**28.85**	**212**	LR	LR	18 35 00.9	
	comp=Z,78nm,18.2s,baz=10,slow=42						
LSA	**Lhasa**	**30.59**	**298**	*e*P	P	18 21 10.6	+3.4
	6.0nm,0.8s						
ASAJ	**Asahikawa**	**30.90**	**29**	LR	LR	18 33 49.9	
	comp=Z,99nm,19.6s,baz=187,slow=37						
HIA	**Hailar**	**31.01**	**357**	*e*P	**P**	**18 21 09.5**	**-0.7**
ULN	**Ulaanbaatar**	**32.07**	**340**	*e*P	**P**	**18 21 18.8**	**-0.8**
	4.1nm,0.8s						
SONM	**Songino Array**	**32.25**	**340**	P	**P**	**18 21 21.1**	**-0.1**
	3.4nm,0.9s,baz=126,slow=9.1,SNR=9.8						
SONM				LR	LR	18 35 46.7	
	comp=Z,523nm,18.2s,baz=136,slow=39						
FITZ	**Fitzroy Crossi**	**36.27**	**175**	LR	LR	18 41 14.8	
	comp=Z,52nm,18.3s,baz=158,slow=44						
WRA	**Warramunga Arr**	**39.74**	**162**	P	**P**	**18 22 24.9**	**-0.5**
	1.0nm,0.7s,baz=342,slow=9.2,SNR=6.6						
PALK	**Pallekele**	**41.95**	**260**	LR	LR	18 41 03.2	
	comp=Z,126nm,18.1s,baz=105,slow=38						
H11S3	**WAKE ISLAND Hy**	**42.01**	**82**	T	T	19 07 27.9	
	baz=277,slow=75,SNR=3031						
H11S1	**WAKE ISLAND Hy**	**42.02**	**82**	T	T	19 07 28.9	
	baz=277,slow=75,SNR=1410						
H11S2	**WAKE ISLAND Hy**	**42.02**	**82**	T	T	19 07 29.2	
	baz=277,slow=75,SNR=1630						
H11N1	**WAKE ISLAND Hy**	**42.07**	**81**	T	T	19 07 31.1	
	baz=275,slow=75,SNR=1381						
H11N2	**WAKE ISLAND Hy**	**42.07**	**81**	T	T	19 07 32.8	
	baz=275,slow=75,SNR=1378						
H11N3	**WAKE ISLAND Hy**	**42.08**	**81**	T	T	19 07 33.6	
	baz=275,slow=75,SNR=1385						
ASAR	**Alice Springs**	**43.17**	**164**	P	**P**	**18 22 53.0**	**-0.5**
	0.8nm,1.0s,baz=345,slow=6.9,SNR=9.1						
MKAR	**Makanchi Array**	**43.45**	**320**	P	**P**	**18 22 56.0**	**+0.5**
	5.5nm,0.7s,baz=111,slow=9.2,SNR=32						
MKAR				LR	LR	18 43 24.5	
	comp=Z,114nm,19.1s,baz=110,slow=39						
PETK	**Petropavlovsk-**	**44.31**	**30**	P	**P**	**18 23 03.2**	**+0.8**
	3.2nm,0.8s,baz=228,slow=1.7,SNR=4.0						
PETK				LR	LR	18 42 33.2	
	comp=Z,85nm,19.1s,baz=196,slow=38						
ZALV	**Zalesovo Beam**	**45.84**	**330**	P	**P**	**18 23 14.8**	**+0.3**
	2.9nm,0.7s,baz=116,slow=6.8,SNR=12						
ZALV				PcP	**PcP**	**18 24 53.2**	**+1.7**
	0.9nm,0.6s,baz=48,slow=2.1,SNR=2.8						

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ZALV                                   LR    LR    18 44 35.4
      comp=Z,68nm,18.6s,baz=68,slow=39
NIL   Nilore          46.30 299 eP          P     18 23 19.0 +0.4
      25nm,0.7s
KURK  Kurchatov       47.39 323 eP          P     18 23 26.1 -0.6
      50nm,0.8s
KURBB Kurchatov Arra  47.40 323  P          P     18 23 27.0 +0.2
      8.8nm,0.7s,baz=120,slow=7.7,SNR=46
BVAR  Borovoye Array  52.99 323  P          P     18 24 09.4 +0.2
      1.6nm,0.6s,baz=107,slow=9.8,SNR=11
BVAR                                   PcP   PcP   18 25 17.3 -0.4
      1.8nm,0.7s,baz=72,slow=4.8,SNR=5.2
BVAR                                   LR    LR    18 46 50.2
      comp=Z,67nm,18.7s,baz=106,slow=36
TIXI  Tiksi           53.53  3 eP          P     18 24 10.0 -2.8
      4.0nm,0.8s
NRIK  Noril'sk        55.38 346  P          P     18 24 26.8 +0.5
      5.0nm,0.5s,baz=129,slow=6.8,SNR=4.3
NRIK                                   LR    LR    18 50 42.8
      comp=Z,141nm,18.0s,baz=150,slow=39
GEYT  Alibeck         58.84 304 LR          LR    18 53 35.8
      comp=Z,46nm,18.8s,baz=45,slow=40
AKTO  Aktyubinsk      59.82 318  P          P     18 24 57.9  0.0
      0.6nm,0.3s,baz=71,slow=5.8,SNR=4.1
AKTO                                   LR    LR    18 53 03.0
      comp=Z,68nm,19.1s,baz=111,slow=38
ARU   Arti            60.52 325  P          P     18 25 01.6 -1.0
      3.8nm,0.6s,baz=84,slow=1.3,SNR=7.6
ARU   Arti            60.52 325 eP          P     18 25 01.0 -1.6
      4.3nm,0.7s
GNI   Garni           69.12 307 LR          LR    19 00 01.4
      comp=Z,31nm,19.2s,baz=138,slow=39
KBZ   Khabaz          70.08 311  P          P     18 26 05.3 +0.6
      3.8nm,1.1s,baz=90,slow=4.0,SNR=4.7
KVAR  Kislovodsk Arr  70.20 311  P          P     18 26 06.3 +0.7
      5.6nm,0.8s,baz=72,slow=3.8,SNR=3.9
RAYN  Ar Rayn         71.20 289 eP          P     18 26 12.5 +0.5
      7.3nm,0.9s
ILAR  Eielson Array   73.99  26  P          P     18 26 28.8 +1.0
      0.6nm,0.6s,baz=280,slow=5.2,SNR=5.8
SPITS Spitsbergen Ar  75.48 348 LR          LR    19 04 19.0
      comp=Z,134nm,18.0s,baz=30,slow=39
EGAK  Eagle           76.40  26 eP          P     18 26 41.9 +0.2
      3.8nm,0.6s
FINES FINESS Array B  77.10 331  P          P     18 26 45.1 -0.5
      4.6nm,0.8s,baz=77,slow=8.2,SNR=11
FINES                                  LR    LR    19 05 16.8
      comp=Z,107nm,18.2s,baz=68,slow=39
BRTR  Keskin Array B  77.59 308  P          P     18 26 49.9 +0.8
      1.3nm,1.0s,baz=49,slow=4.4,SNR=5.5
AKASG Malin Array Be  78.03 320  P          P     18 26 49.9 -1.1
      0.4nm,0.4s,baz=64,slow=5.5,SNR=5.3
INK   Inuvik          78.31  22  P          P     18 26 51.4 -0.9
      1.4nm,0.8s,baz=299,slow=12,SNR=4.3
MLR   Muntele Rosu    81.56 315  P          P     18 27 10.3 -0.1
      0.6nm,0.7s,baz=135,slow=4.3,SNR=3.6
HFS   Hagfors         83.25 331  P          P     18 27 18.7 -0.1
      3.6nm,0.7s,baz=66,slow=7.3,SNR=6.5
HFS                                    LR    LR    19 07 44.6
      comp=Z,144nm,19.7s,baz=70,slow=38
NB2   NORSAR Subarra  83.96 333  P          P     18 27 21.1 -1.4
      comp=Z,3.1nm,0.9s,baz=63,slow=5.6
NOA   NORSAR Array B  83.96 333  P          P     18 27 21.6 -0.9
      comp=Z,5.4nm,0.9s,baz=63,slow=5.1,SNR=6.5
NOA                                    LR    LR    19 08 40.4
      comp=Z,233nm,18.0s,baz=55,slow=38
VYHS  Vyhne           85.13 320 eP          P     18 27 29.2 +0.5
VRAC  Vranov          86.18 321  P          P     18 27 35.0 +1.2
      comp=Z,1.4nm,0.4s,baz=50,slow=4.7,SNR=3.3
YKA   Yellowknife Ar  87.99  23  P          P     18 27 41.7 -0.6
      comp=Z,1.6nm,0.7s,baz=308,slow=4.9,SNR=15
GERES GERESS Array B  88.10 321  P          P     18 27 43.2 -0.1
      comp=Z,0.8nm,0.7s,baz=60,slow=3.9,SNR=6.1
GERES                                  LR    LR    19 11 47.2
      comp=Z,59nm,19.3s,baz=116,slow=39
EKA   Eskdalemuir Ar  93.43 332 LR          LR    19 14 54.0
      comp=Z,170nm,18.4s,baz=45,slow=39
TORD  Torodi Ar. Bea  113.67 294 PP          PP    18 34 18.1  -5.9
      comp=Z,0.6nm,0.9s,baz=70,slow=1.7,SNR=2.9
TXAR  Lajitas Array   115.13  44 PKP         PKPdf 18 33 34.9 +0.5
      comp=Z,0.7nm,0.9s,baz=298,slow=2.7,SNR=3.7
SDV   Santo Domingo   150.15  26 PKPbc       PKPbc 18 34 43.1  -1.5
      comp=Z,6.1nm,1.0s,baz=292,slow=4.6,SNR=4.1
```

IDC ***04*** *18:16:45.2±1.0, 55°.69S×28°.30W, h0km, mb4.0/3, mb1 4.2/4, mb1mx3.8/29, mbtmp4.2/4, ML4.8/1, Error ellipse: s-maj=66.1km s-min=23.6km az=94.0*
ISCJB ***04*** *18:16:50.7±1.7, 55°.8S±0°.2×28°.3W±0°.8, h45km, mb4.1/3, Error ellipse: s-maj=63.0km s-min=22.0km az=179.5*
ISC 04 18:16:51.7±1.2, 55°.7S±0°.2×28°.3W±0°.4, h45km, n9, σ1s 06/9, mb4.2/3, South Sandwich Islands region

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Code  Station Name    Δ°   AZ°   Phase ID                Time      Res
                                Op    ISC               h m s     ISC
VNA3  Neumayer Olymp  17.51 160  P     P                 18 20 53.3 +0.5
SNAA  Sanae           19.29 156  P     P                 18 21 12.2 -0.2
SNAA  Sanae           19.29 156  P     P                 18 21 12.0 -0.4
      2.8nm,0.3s,baz=314,slow=13,SNR=75
QSPA  South Pole Qui  34.53 180  P     P                 18 23 35.5 +0.1
      2.0nm,0.6s,baz=153,slow=1.0,SNR=8.5
VNDA  Vanda           46.87 183  P     P                 18 25 17.0 +0.4
      0.6nm,0.6s,baz=186,slow=7.1,SNR=5.1
TORD  Torodi Ar. Bea  73.08  31  P     P                 18 28 18.2 +1.2
      1.5nm,0.5s,baz=200,slow=6.4,SNR=12
FINES FINESS Array B  124.39  28 PKP   PKPdf             18 35 42.5 -1.6
      0.8nm,0.7s,baz=207,slow=1.6,SNR=6.0
ILAR  Eielson Array   149.44 312 PKPbc PKPbc             18 36 34.3 +0.2
      1.4nm,0.7s,baz=122,slow=2.7,SNR=15
SONM  Songino Array   151.33  87 PKPbc PKPbc             18 36 38.0 -1.4
      2.2nm,0.5s,baz=220,slow=4.3,SNR=6.9
```

CSEM ***04*** *18:44:39.2±0.7, 54°.89N×18°.69E, h2km, ML2.5, Error ellipse: s-maj=15.9km s-min=5.0km az=143.0, Mining explosion.*
UPP ***04*** *18:44:40.2±1.8, 54°.92N×18°.47E, h0km, ML2.5*
IDC ***04*** *18:44:41.7±2.7, 55°.01N×18°.65E, h0km, mb1 3.5/4, mb1mx3.1/58, mbtmp3.4/4, ML3.0/4, Error ellipse: s-maj=24.6km s-min=15.3km az=5.0*
ISC 04 18:44:41.3±2.1, 55°.01N±0°.10×18°.58E±0°.08, h10km, n50, σ0s 86/56, Baltic Sea

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Code  Station Name    Δ°   AZ°   Phase ID                Time      Res
                                Op    ISC               h m s     ISC
BSD   Bornholm Skovb  2.11 274  i P   Pn                18 45 17.4 +0.8
BSD                              i S   Sb                18 45 45.3 -0.5
BSD   Bornholm Skovb  2.11 274  i P   Pn                18 45 17.4 +0.8
BSD                              i S   Sb                18 45 45.3 -0.5
BYXU  Byxelkrok       2.45 340  P     Pn                18 45 21.9 +0.6
BYXU                              S     Sb                18 45 54.8 -0.8
BYXU  Byxelkrok       2.45 340  P     Pn                18 45 21.9 +0.6
BYXU                              S     Sb                18 45 54.8 -0.8
OSKU  Oskarshamn      2.60 329  P     Pn                18 45 24.1 +0.8
OSKU  Oskarshamn      2.60 329  P     Pn                18 45 24.1 +0.8
ASPU  Aespoe          2.66 336  P     Pn                18 45 25.2 +1.1
ASPU  Aespoe          2.66 336  P     Pn                18 45 25.2 +1.1
GOTU  Gotland         2.69 360  P     Pn                18 45 25.3 +0.8
GOTU  Gotland         2.69 360  P     Pn                18 45 25.3 +0.8
VXJU  Vaexsjoe        2.80 315  P     Pn                18 45 26.1 -0.1
VXJU  Vaexsjoe        2.80 315  P     Pn                18 45 26.1 -0.1
VSTU  Vaestervik      2.89 338  P     Pn                18 45 28.4 +1.1
VSTU  Vaestervik      2.89 338  P     Pn                18 45 28.4 +1.1
LUNU  Lund            3.00 284  P     Pn                18 45 28.6 -0.2
LUNU  Lund            3.00 284  P     Pn                18 45 28.6 -0.2
DEL   Delary          3.04 301  P     Pn                18 45 29.3  0.0
DEL   Delary          3.04 301  P     Pn                18 45 29.3  0.0
LNKU  Linkoeping      3.64 334  P     Pn                18 45 38.0 +0.4
LNKU  Linkoeping      3.64 334  P     Pn                18 45 38.0 +0.4
VIKU  Vikbolandet     3.65 344  P     Pn                18 45 39.2 +1.4
VIKU  Vikbolandet     3.65 344  P     Pn                18 45 39.2 +1.4
NYNU  Nynaeshamn      4.02 356  P     Pn                18 45 43.6 +0.8
NYNU  Nynaeshamn      4.02 356  P     Pn                18 45 43.6 +0.8
FKPU  Falk            4.14 322  P     Pn                18 45 45.0 +0.4
FKPU  Falk            4.14 322  P     Pn                18 45 45.0 +0.4
ESKU  Eskilstuna      4.40 345  P     Pn                18 45 49.1 +1.1
ESKU  Eskilstuna      4.40 345  P     Pn                18 45 49.1 +1.1
ASKU  Askersund       4.41 334  P     Pn                18 45 49.2 +1.1
ASKU  Askersund       4.41 334  P     Pn                18 45 49.2 +1.1
NRTU  Norrtaelje      4.68  0   P     Pn                18 45 52.9 +0.9
NRTU  Norrtaelje      4.68  0   P     Pn                18 45 52.8 +0.9
NASU  Vaermlandsnaes  4.91 325  P     Pn                18 45 55.8 +0.7
BACU  Backbrunna      4.93 351  P     Pn                18 45 55.8 +0.5
BACU  Backbrunna      4.93 351  P     Pn                18 45 55.8 +0.5
FIBU  Brunna          4.95 353  P     Pn                18 45 56.3 +0.7
NRAU  Nora            4.96 339  P     Pn                18 45 56.7 +0.9
NRAU  Nora            4.96 339  P     Pn                18 45 56.7 +0.9
FLYU  Flymyra         5.15 356  P     Pn                18 45 59.2 +0.9
FLYU  Flymyra         5.15 356  P     Pn                18 45 59.2 +0.9
OSTU  Oestervaala     5.29 352  P     Pn                18 46 00.4 +0.1
OSTU  Oestervaala     5.29 352  P     Pn                18 46 00.4 +0.1
GRAU  Graesoe         5.34 360  P     Pn                18 46 01.5 +0.5
GRAU  Graesoe         5.34 360  P     Pn                18 46 01.5 +0.5
FALU  Falun           5.70 346  P     Pn                18 46 05.9 +0.1
FALU  Falun           5.70 346  P     Pn                18 46 05.9 +0.1
HFS   Hagfors         5.77 335  Pn    Pn                18 46 07.0 +0.1
      0.5nm,0.3s,baz=149,slow=15,SNR=38
HFS                                Pg    Pb                18 46 23.4 +1.4
      0.3nm,0.3s,baz=151,slow=18,SNR=4.6
HFS                                Sn    Sn                18 47 12.7 -0.4
      0.5nm,0.3s,baz=144,slow=22,SNR=5.6
HFS                                Lg    Lg                18 47 41.2
      0.6nm,0.3s,baz=158,slow=26,SNR=3.8
NOA   NORSAR Array B  7.20 330  Pn    Pn                18 46 25.0 -1.5
      0.3nm,0.3s,baz=150,slow=12,SNR=7.8
NOA                                Lg    Lg                18 48 28.7
      0.4nm,0.3s,baz=141,slow=22,SNR=2.2
FINES FINESS Array B  7.57  28 Pn    Pn                18 46 31.5  0.0
      0.4nm,0.3s,baz=221,slow=11,SNR=18
FINES                              Sn    Sn                18 47 54.5 -2.7
      0.2nm,0.3s,baz=227,slow=22,SNR=4.0
FINES                              Lg    Lg                18 48 40.0
      0.3nm,0.3s,baz=220,slow=24,SNR=3.4
ARCES ARCESS Array B  14.92  9 Pn    Pn                18 48 06.7  -5.2
      0.2nm,0.3s,baz=191,slow=13,SNR=5.1
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KRSC ***04*** *19:00:45.9±1.8, 48°.75N×156°.38E, h7km±32km, ML4.3*
MOS ***04*** *19:00:47.9±1.0, 48°.82N×155°.09E, h38km, mb4.0/6, Error ellipse: s-maj=16.1km s-min=4.8km az=71.7*
SKHL ***04*** *19:00:47.3±0.6, 48°.56N×155°.62E, h72km±5km, mb4.5/6*
ISCJB ***04*** *19:00:48.1±0.7, 48°.81N±0°.07×155°.2E±0°.1, h72km±6km, mb3.5/14, Error ellipse: s-maj=15.7km s-min=4.3km az=42.5*
IDC ***04*** *19:00:52.1±2.4, 48°.96N×154°.89E, h86km±21km, mb3.3/14, mb1 3.6/20, mb1mx3.4/73, mbtmp3.7/20, MS3.0/7, Ms1 3.0/7, ms1mx2.7/42, Error ellipse: s-maj=22.6km s-min=13.3km az=129.0*
ISC 04 19:00:48.9±1.2, 48°.74N±0°.09×155°.3E±0°.1, h69km±11km, n76, σ1s 16/81, mb3.6/14, Kuril Islands

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Code  Station Name    Δ°   AZ°   Phase ID                Time      Res
                                Op    ISC               h m s     ISC
SKR   Severo-Kuril's  2.01  14  eP    Pn                19 01 20.6 -0.1
SKR                              AMB   AMB               19 01 22.0
      148nm,0.6s
SKR                              eS    Sn                19 01 45.3 +0.5
SKR                              A     A                 19 01 53.1
      762nm,0.7s
SKR                              A     A                 19 01 53.1
      649nm,0.7s
SKR   Severo-Kuril's  2.01  14  eP    Pn                19 01 19.3 -1.4
SKR                              eS    Sn                19 01 43.3 -1.5
SKR   Severo-Kuril's  2.01  14  ePN   Pn                19 01 20.6 -0.1
SKR                              eS    Sn                19 01 45.6 +0.8
SKR                              pmax  pmax
      comp=Z,148nm,0.6s
SKR                              smax  smax
      comp=N,762nm,0.7s
SKR                              smax  smax
      comp=E,649nm,0.7s
PAU   Pauzhetka       2.89  19  eP    Pn                19 01 33.4 +0.8
PAU                              eS    Sn                19 02 07.5 +1.3
PAU                              A     A                 19 02 09.3
      comp=E,230nm,0.5s
PAU                              A     A                 19 02 09.3
      comp=E,350nm,0.5s
PAU   Pauzhetka       2.89  19  eP    Pn                19 01 32.6  0.0
PAU                              eS    Sn                19 02 06.7 +0.5
PAU   Pauzhetka       2.89  19  PN    Pn                19 01 32.6  0.0
PAU                              S     Sn                19 02 06.7 +0.5
KDTR  Khodutka, Kamc  3.54  29  eP    Pn                19 01 40.5 -0.9
KDTR                             eS    Sn                19 02 20.3 -1.8
ASAK  Asacha          4.00  23  eP    Pn                19 01 48.5 +0.7
ASAK  Asacha          4.00  23  PN    Pn                19 01 48.5 +0.7
MTVR  Mutnovka        4.17  25  eP    Pn                19 01 51.0 +0.9
MTVR                             eS    Sn                19 02 38.1 +0.6
MTVR  Mutnovka        4.17  25  PN    Pn                19 01 51.0 +0.9
MTVR                             S     Sn                19 02 38.1 +0.6
RUS   Russkaya        4.22  28  eP    Pn                19 01 49.8 -0.8
RUS   Russkaya        4.22  28  eP    Pn                19 01 49.8 -0.8
RUS                              eS    Sn                19 02 37.2 -1.4
RUS   Russkaya        4.22  28  PN    Pn                19 01 49.8 -0.8
RUS                              S     Sn                19 02 37.2 -1.4
APC   Apacha          4.35  15  eP    Pn                19 01 54.6 +2.2
APC   Apacha          4.35  15  PN    Pn                19 01 54.6 +2.2
PETK  Petropavlovsk-  4.62  18  P     Pn                19 01 57.3 +1.1
      comp=E,2.2nm,0.3s,baz=178,slow=12,SNR=40
PETK                             LR    LR                19 03 59.3
      comp=E,113nm,20.9s,baz=183,slow=42
PET   Petropavlovsk   4.78  25  eP    Pn                19 01 58.9 +0.6
PET                              AMB   AMB               19 02 01.9
      comp=E,11nm,0.5s
PET                              eS    Sn                19 02 52.7 +0.4
PET                              A     A                 19 03 13.5
      comp=E,80nm,0.6s
PET                              A     A                 19 03 13.5
      comp=E,79nm,0.6s
PET   Petropavlovsk   4.78  25  ePN   Pn                19 01 58.2 -0.1
PET                              eS    Sn                19 02 53.5 +1.2
PET                              smax  smax
      comp=E,79nm,0.6s
PET                              smax  smax
      comp=N,82nm,0.7s
UGLR  Uglovaya        4.99  25  eP    Pn                19 02 02.3 +1.0
UGLR  Uglovaya        4.99  25  PN    Pn                19 02 02.3 +1.0
KOK   Koryaka         5.01  23  eP    Pn                19 02 01.5 -0.1
KOK   Koryaka         5.01  23  PN    Pn                19 02 01.5 -0.1
AVH   Avacha          5.02  24  eP    Pn                19 02 03.2 +1.6
AVH   Avacha          5.02  24  PN    Pn                19 02 03.2 +1.6
KRER  Koryakskii      5.05  24  eP    Pn                19 02 03.3 +1.0
KRER  Koryakskii      5.05  24  PN    Pn                19 02 03.3 +1.0
SDLR  Sedlovina       5.07  25  eP    Pn                19 02 02.8 +0.4
SDLR  Sedlovina       5.07  25  PN    Pn                19 02 02.8 +0.4
KRX   Arik            5.08  23  eP    Pn                19 02 02.8 +0.3
KRX   Arik            5.08  23  PN    Pn                19 02 02.8 +0.3
GNL   Ganaly          5.23  17  eP    Pn                19 02 06.2 +1.7
GNL   Ganaly          5.23  17  PN    Pn                19 02 06.2 +1.7
SPN   Mys Shipunski   5.28  32  eP    Pn                19 02 04.8 -0.3
SPN   Mys Shipunski   5.28  32  eP    Pn                19 02 04.8 -0.3
SPN   Mys Shipunski   5.28  32  PN    Pn                19 02 04.8 -0.3
KUR   Kuril'sk        6.19 238  eP    Pn                19 02 18.0 +0.4
KUR                              AMB   AMB               19 02 21.5
      comp=N,30nm,0.5s
KUR                              eS    Sn                19 03 26.0 -1.0
KUR                              A     A                 19 03 33.9
      comp=N,80nm,0.8s
KUR                              A     A                 19 03 33.9
      comp=N,100nm,0.8s
KUR   Kuril'sk        6.19 238  ePN   Pn                19 02 18.4 +0.8
KUR                              eS    Sn                19 03 28.1 +1.1
KUR                              pmax  pmax
      comp=Z,30nm,0.5s
KUR                              smax  smax
      comp=N,19nm,0.6s
KUR                              smax  smax
      comp=E,45nm,0.6s
MKZ   Mys Kozlova     7.05  32  eP    Pn                19 02 28.8 -0.6
MKZ   Mys Kozlova     7.05  32  PN    Pn                19 02 28.8 -0.6
SHO   Shikotan        7.64 234  eP    Pn                19 02 35.8 -1.6
SHO                              AMB   AMB               19 02 39.8
      comp=E,60nm,0.7s
SHO   Shikotan        7.64 234  ePN   Pn                19 02 34.3 -3.1
SHO                              pmax  pmax
      comp=Z,8.0nm,0.4s
YUK   Yuzh-Kuril'sk   8.06 238  eP    Pn                19 02 43.6 +0.5
YUK                              AMB   AMB               19 02 44.9
      comp=Z,36nm,0.5s
YUK                              AMB   AMB               19 02 44.9
      comp=Z,13nm,0.5s
YUK                              AMB   AMB               19 02 44.9
      comp=Z,26nm,0.5s
YUK                              eS    Sn                19 04 11.5 -1.2
YUK   Yuzh-Kuril'sk   8.06 238  ePN   Pn                19 02 43.4 +0.3
YUK                              pmax  pmax
      comp=N,36nm,0.5s
YUK                              pmax  pmax
      comp=Z,52nm,0.5s
YUK                              pmax  pmax
      comp=E,13nm,0.2s
JKA   Kamikawa-asahi  9.93 247  eP    Pn                19 03 10.2 +1.5
ASAJ  Asahikawa       9.93 247  P     Pn                19 03 10.2 +1.5
      comp=E,3.5nm,0.3s,baz=74,slow=14,SNR=45
ASAJ                              LR    LR                19 06 30.5
      comp=E,66nm,20.8s,baz=135,slow=35
MA2   Magadan        11.18 348  P     Pn                19 03 25.7 +0.1
      comp=E,0.5nm,0.3s,baz=167,slow=18,SNR=3.5
MA2                               LR    LR                19 07 50.3
      comp=E,43nm,18.0s,baz=209,slow=38
SEY   Seymchan       14.32 355  P     Pn                19 04 08.4 +0.6
      comp=E,0.0nm,0.3s,baz=169,slow=16,SNR=2.7
EKMR  Ekimchan       14.75 296  eP    Pn                19 04 14.0 +0.4
EKMR                              AMB   AMB               19 04 22.0
      comp=E,5.0nm,0.6s
USRK  Ussuriysk Ar.  16.68 263  P     Pn                19 04 38.7 +0.6
      comp=E,0.1nm,0.3s,baz=67,slow=13,SNR=3.0
MJAR  Matsushiro Arr 17.48 232  P     P                 19 04 47.7 -0.5
      comp=E,0.1nm,0.3s,baz=28,slow=13,SNR=3.2
KSRS  Korea Array    22.84 251  P     P                 19 05 45.8 -0.4
      comp=E,2.3nm,0.6s,baz=47,slow=10,SNR=8.2
KSRS                              LR    LR                19 13 52.0
      comp=E,39nm,18.3s,baz=223,slow=34
TIXI  Tiksi          26.02 341  P     P                 19 06 11.8 -3.2
      comp=E,1.4nm,0.7s,baz=133,slow=8.1,SNR=7.3
H11N2 WAKE ISLAND Hy 30.41 158  T     T                 19 38 59.6
      baz=344,slow=76,SNR=16
H11N1 WAKE ISLAND Hy 30.42 158  T     T                 19 38 57.3
      baz=344,slow=76,SNR=27
H11N3 WAKE ISLAND Hy 30.42 158  T     T                 19 38 48.4
      baz=344,slow=76,SNR=20
H11S1 WAKE ISLAND Hy 31.53 159  T     T                 19 40 11.7
      baz=345,slow=76,SNR=143
H11S3 WAKE ISLAND Hy 31.54 159  T     T                 19 40 19.0
      baz=345,slow=76,SNR=165
H11S2 WAKE ISLAND Hy 31.55 159  T     T                 19 40 13.9
      baz=345,slow=76,SNR=90
SONM  Songino Array  32.13 287  LR    LR                19 21 17.9
      comp=E,53nm,19.3s,baz=45,slow=39
ILAR  Eielson Array  34.06  40  P     P                 19 07 27.1 +1.0
      comp=E,0.3nm,0.6s,baz=269,slow=12,SNR=4.2
NRIK  Noril'sk       37.85 328  LR    LR                19 23 54.1
      comp=E,37nm,18.6s,baz=31,slow=37
MKAR  Makanchi Array 47.37 297  P     P                 19 09 14.7 -1.1
      comp=E,0.3nm,0.7s,baz=49,slow=6.5,SNR=3.1
KURK  Kurchatov      47.52 303  eP    P                 19 09 14.9 -2.0
KURK  Kurchatov      47.52 303  P     P                 19 09 14.9 -2.0
KURBB Kurchatov Arra 47.62 303  P     P                 19 09 14.9 -2.7
      comp=E,0.2nm,0.5s,baz=66,slow=8.5,SNR=3.4
YKA   Yellowknife Ar 48.44  38  P     P                 19 09 26.1 +2.3
      comp=E,0.7nm,0.8s,baz=298,slow=7.5,SNR=5.7
BVAR  Borovoye Array 50.76 309  P     P                 19 09 40.2 -1.4
      comp=E,0.2nm,0.5s,baz=66,slow=4.9,SNR=2.8
CMAR  Chiang Mai Arr 54.29 257  P     P                 19 10 09.2 +1.1
      comp=E,1.5nm,0.8s,baz=31,slow=7.0,SNR=7.1
FINES FINESS Array B 62.87 335  P     P                 19 11 06.4 -0.7
      comp=E,0.4nm,0.4s,baz=32,slow=7.5,SNR=4.3
NOA   NORSAR Array B 66.81 342  LR    LR                19 45 43.9
      comp=E,11nm,18.1s,baz=195,slow=40
AKASG Malin Array Be 70.71 327  P     P                 19 11 56.5 -0.6
      comp=E,0.3nm,0.4s,baz=34,slow=7.2,SNR=2.3
WRA   Warramunga Arr 70.89 201  P     P                 19 11 59.5 +1.1
      comp=E,0.7nm,1.0s,baz=17,slow=6.3,SNR=3.6
ASAR  Alice Springs  74.58 200  P     P                 19 12 21.8 +1.5
      comp=E,0.3nm,0.6s,baz=11,slow=5.0,SNR=7.7
EKA   Eskdalemuir Ar 74.74 347  P     P                 19 12 21.1 +0.3
      comp=E,0.5nm,0.5s,baz=26,slow=5.0,SNR=4.5
TXAR  Lajitas Array  75.23  62  P     P                 19 12 27.2 +2.9
      comp=E,0.4nm,0.7s,baz=309,slow=4.5,SNR=3.5
```

CSEM ***04*** *19:20:20.0±0.2, 73°.05N×5°.69E, h10km, ML3.1, Error ellipse: s-maj=7.2km s-min=2.7km az=85.0*
IDC ***04*** *19:20:20.6±2.2, 72°.91N×5°.85E, h0km, mb3.3/2, mb1 3.4/6, mb1mx3.2/71, mbtmp3.4/6, ML3.5/4, MS3.5/1, Ms1 3.5/1, ms1mx2.4/35, Error ellipse: s-maj=30.9km s-min=20.6km az=86.0*
NAO ***04*** *19:20:20.4±2.4, 73°.02N×6°.14E, ML3.1*
ISCJB ***04*** *19:20:21.3±0.8, 72°.98N±0°.05×6°.9E±0°.2, h11km, mb3.1/2, MS3.5/1, Error ellipse: s-maj=8.9km s-min=6.4km az=169.4*
BER ***04*** *19:20:23.2±3.4, 73°.04N×5°.98E, h10km, ML2.4, ML3.1(NAO)*
HEL ***04*** *19:20:27.2±0.5, 72°.85N×7°.03E, h10km, ML2.4*
ISC 04 19:20:22.2±1.4, 72°.93N±0°.07×6°.4E±0°.1, h11km, n37, σ2s 09/46, Norwegian Sea

```
Code  Station Name    Δ°   AZ°   Phase ID                Time      Res
                                Op    ISC               h m s     ISC
BJO1  Bjornoya        3.87  60  Pn    Pn                19 21 21.5 -0.1
BJO   Bjornoya        3.92  60  Pn    Pn                19 21 21.5 -0.7
BJO   Bjornoya        3.92  60  eP    Pn                19 21 21.4 -0.7
HSPB  Hornsund (broa  4.72  26  eP    Pn                19 21 30.9 -2.3
HSP   Hornsund        4.73  26  Pn    Pn                19 21 31.1 -2.2
TRO   Tromso          5.20 123  eP    Pn                19 21 41.9 +2.1
TRO                              eS    Sn                19 22 37.0 -2.6
TRO                              IAML                    19 22 40.8
      comp=Z,13nm,0.2s
LOF   Lofoten         5.37 150  eP    Pn                19 21 44.6 +2.5
LOF                              eS    Sn                19 22 40.0 -3.7
LOF                              IAML                    19 22 47.0
      comp=Z,7.1nm,0.4s
STEI  Steigen         5.82 145  eP    Pn                19 21 50.9 +2.7
STEI                             eS    Sn                19 22 52.2 -2.6
STEI                             IAML                    19 22 55.5
      comp=Z,4.3nm,0.4s
SPA0  Spitsbergen Ar  5.82  21  Pn    Pn                19 21 46.5 -1.8
      baz=220,slow=14
SPA0  Spitsbergen Ar  5.82  21  Pn    Pn                19 21 46.5 -1.8
      baz=220,slow=13,SNR=174
SPA0  Spitsbergen Ar  5.82  21  Pn    Pn                19 21 46.5 -1.8
      baz=220,slow=14
SPITS Spitsbergen Ar  5.82  21  Pn    Pn                19 21 46.1 -2.2
      baz=215,slow=16,SNR=75
HAMF  Hammerfest      5.86 105  eP    Pn                19 21 50.3 +1.5
KIF   Kilpisjarvi     6.12 123  eP    Pn                19 21 54.2 +2.0
KIF                              eS    Sn                19 22 59.4 -2.7
KIF   Kilpisjarvi     6.12 123  eP    Pn                19 21 54.3 +2.0
KIF                              eS    Sn                19 22 59.9 -2.2
KTK1  Kautokeino      6.73 117  eP    Pn                19 22 03.6 +2.8
KTK1                             e                       19 23 19.7
KONS  Konsvik         6.86 157  eP    Pn                19 22 03.3 +0.8
KONS                             eS    Sn                19 23 14.4  -6.0
KONS                             IAML                    19 23 22.1
      comp=Z,7.3nm,0.7s
ARA0  ARCESS Array S  7.01 110  Pn    Pn                19 22 06.5 +1.9
      baz=302,slow=11
ARA0                             Sn    Sn                19 23 24.0  -0.1
      baz=313,slow=22
ARA0  ARCESS Array S  7.01 110  Pn    Pn                19 22 06.5 +1.9
      baz=302,slow=11
ARA0                             Sn    Sn                19 23 24.0  -0.1
      baz=313,slow=22
ARCES ARCESS Array B  7.01 110  Pn    Pn                19 22 06.5 +2.0
      comp=Z,0.8nm,0.3s,baz=318,slow=11,SNR=34
ARCES                            Sn    Sn                19 23 24.3 +0.2
      comp=Z,0.9nm,0.3s,baz=307,slow=24,SNR=6.5
ARE0  ARCESS Array S  7.01 110  eP    Pn                19 22 06.2 +1.6
ARE0                             eS    Sn                19 23 21.8  -2.3
ARE0  ARCESS Array S  7.01 110  eP    Pn                19 22 06.4 +1.8
LANU  Lannavaara      7.12 126  eP    Pn                19 22 08.2 +2.0
LANU                             eS    Sn                19 23 23.8  -3.3
LANU  Lannavaara      7.12 126  eP    Pn                19 22 08.2 +2.0
MOR8  Moi Rana        7.33 154  eP    Pn                19 22 11.8 +2.8
MOR8                             eS    Sn                19 23 26.6  -5.6
MOR8                             IAML                    19 23 32.7
      comp=Z,7.2nm,0.2s
DAG   Danmarks Havn   7.56 312  i P   Pn                19 22 03.7  -8.4
DAG                              i S   Sn                19 23 18.8  -19
TOF   Tornio          9.26 129  eP    Pn                19 22 36.6 +1.2
TOF                              eS    Sn                19 24 14.8  -4.5
TOF                              MSN                     19 24 22.4
      comp=Z,0.4nm,0.1s
KU6   Riekki         10.67 119  eP    Pn                19 22 54.8 +0.1
KU6                              eS    Sn                19 24 48.0  -6.0
KU6                              MSN                     19 24 54.5
      comp=Z,0.3nm,0.1s
NOA   NORSAR Array B 12.08 169  Pn    Pn                19 23 15.2 +1.1
      comp=Z,0.3nm,0.3s,baz=341,slow=12,SNR=3.9
NRA0  NORESS Array S 12.40 168  Pn    Pn                19 23 18.6 +0.2
      baz=3.0,slow=18
NRA0  NORESS Array S 12.40 168  Pn    Pn                19 23 18.6 +0.2
```

baz=3.0,slow=18
HFS Hagfors 13.15 164 Pn **Pn 19 23 29.6 +1.0**
baz=342,slow=12
HFS Hagfors 13.15 164 Pn **Pn 19 23 28.7 +0.1**
comp=Z,0.2nm,0.3s,baz=2.5,slow=13,SNR=6.1
HFS Hagfors 13.15 164 Pn **Pn 19 23 29.6 +1.0**
baz=342,slow=12
AKASG Malin Array Be 24.42 143 P **P 19 25 41.4 +1.0**
comp=Z,0.4nm,0.4s,baz=344,slow=9.6,SNR=3.5
KURBB Kurchatov Arra 37.41 86 P **P 19 27 37.7 +3.0**
comp=Z,0.2nm,0.7s,baz=333,slow=6.3,SNR=2.5
MDT Midelt 40.59 194 LR LR 19 43 52.4
comp=Z,59nm,18.4s,baz=212,slow=35

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*CSEM **04** 19:22:26.1±0.1, 46°.02N×15°.29E, h5km, ML0.4, Error ellipse: s-maj=2.1km s-min=1.3km az=174.0*

LJU 04 19:22:25.8, 46°.03N×15°.29E, h8km, ML0.4, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEGS	**Legarje**	**0.09**	**166**	*i* Pg	Pg	19 22 27.9	0.0
LEGS				*i* Sg	Sg	19 22 29.5	+0.1
LEGS	**Legarje**	**0.09**	**166**	*i* Pg	Pg	19 22 27.9	0.0
LEGS				*i* Sg	Sg	19 22 29.5	+0.1
DOBS	**Dobrina**	**0.17**	**47**	*i* Pg	Pg	19 22 30.1	+0.7
DOBS				*i* Sg	Sg	19 22 32.0	+0.2
	comp=Z,3.0nm,0.1s						
DOBS	**Dobrina**	**0.17**	**47**	*i* Pg	Pg	19 22 30.0	+0.6
DOBS				*i* Sg	Sg	19 22 32.0	+0.2
	comp=Z,3.0nm,0.1s						
PDKS	**Podkum**	**0.20**	**279**	*i* Pg	Pg	19 22 30.2	+0.2
PDKS				*i* Sg	Sg	19 22 33.1	+0.3
PDKS	**Podkum**	**0.20**	**279**	*i* Pg	Pg	19 22 30.2	+0.3
PDKS				*i* Sg	Sg	19 22 33.1	+0.3
GOLS	**Golise**	**0.23**	**95**	*i* Pg	Pg	19 22 30.7	+0.2
GOLS	**Golise**	**0.23**	**95**	*i* Pg	Pg	19 22 30.7	+0.2

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*IDC **04** 19:22:48.7±1.9, 37°.51S×74°.07W, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.7/34, mbtmp3.8/5, ML3.8/1, MS3.3/1, Ms1 3.3/1, ms1mx2.9/31, Error ellipse: s-maj=58.4km s-min=18.4km az=62.0*
*ISCJB **04** 19:22:49.4±1.6, 37°.18S±0°.05×73°.73W±0°.08, h7km±9km, mb3.6/4, MS3.2/1, Error ellipse: s-maj=10.6km s-min=7.7km az=1.9*
*SJA **04** 19:22:50.9±0.5, 37°.03S×73°.45W, h10km, ML3.7, MW3.3*
*GUC **04** 19:22:51.5±0.6, 37°.22S×73°.66W, h5km±3km, ML4.1*

ISC 04 19:22:52.2±2.0, 37°.19S±0°.04×73°.58W±0°.09, h11km±11km, n19, σ1°50/25, mb3.7/4, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCSP	**San Pedro de C**	**0.52**	**48**	*e*P	**Pg**	**19 23 02.2**	**-0.1**
CCSP				*i* S	**Sg**	**19 23 09.5**	**+0.4**
CCSP				IAML		19 23 12.3	
	comp=N,15μm,0.2s						
COCH	**Cobquecura**	**1.24**	**31**	*e*P	**Pn**	**19 23 13.7**	**-1.7**
COCH				*i* S	**Sb**	**19 23 30.9**	**-0.6**
CCHI	**Chillan**	**1.34**	**64**	*e*P	**Pn**	**19 23 16.2**	**-0.6**
CCHI				*i* S	**Sn**	**19 23 34.2**	**-0.5**
CCHI				IAML		19 23 41.5	
	comp=E,5μm,0.3s						
TMU	**Temuco**	**1.72**	**154**	*e*P	**Pn**	**19 23 21.1**	**-1.0**
TMU				*i* S	**Sb**	**19 23 43.4**	**-2.1**
TMU				IAML		19 23 49.2	
	comp=E,4μm,0.5s						
CANA	**Caviahue**	**2.12**	**110**	*e*P	**Pn**	**19 23 28.0**	**+0.3**
CANA				*e*S	**Sb**	**19 23 56.1**	**-1.0**
GO05	**HualaæØ**	**2.56**	**32**	*e*P	**Pb**	**19 23 37.0**	**-1.1**
GO05				*i* S	**Sb**	**19 24 10.0**	**+0.4**
GO05				IAML		19 24 21.7	
	comp=E,991nm,1.0s						
PLCA	**Paso Flores**	**4.25**	**147**	Pn	**Pn**	**19 23 55.5**	**-1.4**
	comp=E,1.2nm,0.3s,baz=343,slow=12,SNR=19						
PLCA				Pg	**Pb**	**19 24 07.5**	**+0.4**
	comp=E,7.2nm,0.3s,baz=351,slow=14,SNR=34						
PLCA				Lg	Lg	19 25 01.4	
	comp=E,3.4nm,0.3s,baz=59,slow=22,SNR=7.5						
PLCA	**Paso Flores**	**4.25**	**147**	*e*P	**Pn**	**19 24 00.5**	**+3.6**
ASAL	**Salagasta**	**6.03**	**42**	*e*P	**Pn**	**19 24 21.4**	**0.0**
AUSP	**Uspallata**	**6.04**	**36**	*e*P	**Pn**	**19 24 21.5**	**-0.2**
RTLS	**Leoncito**	**6.44**	**35**	*e*P	**Pn**	**19 24 27.4**	**+0.2**
RTLS				IAML		19 24 44.4	
	comp=Z,22nm,0.5s						
RTLL	**Cerro Villicun**	**7.22**	**37**	*e*P	**Pn**	**19 24 37.2**	**-0.5**
AMOG	**MOGNA**	**7.53**	**36**	*e*P	**Pn**	**19 24 41.5**	**-0.5**
LPAZ	**La Paz**	**21.38**	**14**	P	**P**	**19 27 42.4**	**+2.1**
	comp=Z,0.9nm,0.4s,baz=188,slow=16,SNR=4.3						
SIV	**San Ignacio**	**23.85**	**31**	P	**P**	**19 28 09.2**	**+3.6**
	comp=Z,3.2nm,0.9s,baz=222,slow=14,SNR=3.8						
NNA	**Nana**	**25.27**	**353**	LR	LR	19 35 30.6	
	comp=Z,65nm,18.5s,baz=190,slow=30						
TXAR	**Lajitas Array**	**71.94**	**333**	P	**P**	**19 34 15.2**	**-0.4**
	comp=Z,0.2nm,0.6s,baz=147,slow=8.4,SNR=2.3						
TORD	**Torodi Ar. Bea**	**86.47**	**71**	P	**P**	**19 35 35.5**	**+0.3**
	comp=Z,0.6nm,0.9s,baz=237,slow=6.6,SNR=2.6						
BVAR	**Borovoye Array**	**150.44**	**46**	PKPbc	**PKPbc**	**19 42 41.5**	**-1.6**
	comp=Z,0.4nm,0.7s,baz=298,slow=3.1,SNR=2.7						

TAP 04 19:31:07.7, 24°.38N×121°.92E, h21km, ML1.5, 1C-2D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NANB	**Nanao**	**0.17**	**287**	P	Pb	19 31 12.9	-0.7
	baz=287						
NANB				S	Sb	19 31 16.9	-0.9
	baz=287						
ENA	**Nanau**	**0.17**	**287**	P	Pb	19 31 12.9	-0.7
	baz=286						
ENA				*e*S	Sb	19 31 16.8	-0.9
	baz=286						
TWC	**Suao**	**0.24**	**343**	P	Pb	19 31 13.8	0.0
	baz=345						
TWC				*i* S	Sb	19 31 18.2	+0.3
	baz=345						
EOS1	**EOS1**	**0.25**	**47**	*e*P	Pb	19 31 14.2	+0.4
	baz=47						
EOS1				*e*S	Sb	19 31 19.7	+1.7
	baz=47						
NACB	**Ninganchiao**	**0.36**	**236**	⇓*e*P	Pb	19 31 15.7	+0.4
	baz=235						
NACB				*e*S	Sb	19 31 22.1	+1.6
	baz=235						
TWE	**Neicheng**	**0.41**	**326**	*e*P	Pb	19 31 16.7	+0.5
	baz=327						
TWE				*e*S	Sb	19 31 23.2	+1.1
	baz=327						
ENTT	**Nioudou**	**0.42**	**309**	⇑P	Pb	19 31 16.9	+0.6
	baz=309						
ENTT				S	Sb	19 31 23.6	+1.5
	baz=309						
SLBB	**Yuanshan**	**0.46**	**325**	⇓*e*P	Pb	19 31 17.9	+0.9
	baz=324						
SLBB				*e*S	Sn	19 31 25.2	-1.5
	baz=324						
NNSB	**Datong**	**0.50**	**276**	*e*P	Pb	19 31 16.6	-1.2
	baz=275						
NNSB				*e*S	Sb	19 31 26.1	+1.4
	baz=275						
NNSH	**Datong**	**0.50**	**276**	*e*P	Pb	19 31 17.9	+0.1
	baz=275						
NNSH				*e*S	Sb	19 31 25.5	+0.8
	baz=275						
NNS	**Nan Shan**	**0.51**	**277**	*e*P	Pb	19 31 18.3	+0.3
	baz=276						
NNS				*e*S	Sb	19 31 26.4	+1.4
	baz=276						
ENLB	**Shoufeng**	**0.56**	**212**	*e*P	Pn	19 31 20.5	+0.1
	baz=211						
ENLB				*e*S	Sn	19 31 28.0	-1.0
	baz=211						
YHNB	**Yeheng**	**0.58**	**300**	*e*P	Pb	19 31 19.7	+0.5
	baz=300						
YHNB				*e*S	Sn	19 31 28.8	-0.9
	baz=300						
NSK	**Sanguang**	**0.59**	**300**	*e*P	Pb	19 31 19.8	+0.2
	baz=300						
NSK				*e*S	Sb	19 31 28.8	+1.2
	baz=300						
TIPB	**Shuangxi**	**0.60**	**351**	*e*P	Pb	19 31 19.9	+0.3
	baz=351						
TIPB				*e*S	Sb	19 31 28.7	+1.0
	baz=351						
TDCB	**Techi**	**0.71**	**260**	*e*P	Pb	19 31 22.0	+0.5
	baz=259						
TDCB				*e*S	Sn	19 31 32.0	-1.1
	baz=259						
CHGB	**Renai**	**0.75**	**245**	*e*P	Pn	19 31 22.8	-0.5
	baz=245						
CHGB				*e*S	Sn	19 31 34.6	+0.4
	baz=245						

JMA 04 19:31:16.3±0.2, 25°.16N×123°.40E, h183km±3km, M2.8, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.82**	**210**	S	Sn	19 32 04.4	+0.7
IRIF	**Iriomote-Funau**	**0.88**	**160**	P	Pn	19 31 43.5	0.0
IRIF				S	Sn	19 32 04.2	-0.2
JISG	**Ishigakijimahi**	**1.00**	**124**	P	Pn	19 31 44.3	0.0
JISG				*e*S	Sn	19 32 06.0	+0.1
JIJ	**Ishigaki jima**	**1.04**	**139**	P	Pn	19 31 44.8	+0.2
JIJ				S	Sn	19 32 05.9	-0.6
JKRS	**Kuro-shima**	**1.07**	**149**	P	Pn	19 31 45.5	+0.6
JKRS				S	Sn	19 32 07.3	+0.4
JTJ	**Tarama**	**1.29**	**113**	P	Pn	19 31 47.0	+0.4
JTJ				S	Sn	19 32 10.1	+0.1
JIRB	**Irabujima**	**1.64**	**101**	P	Pn	19 31 49.8	-0.1
JIRB				*e*S	Sn	19 32 14.4	-1.4
JIKM	**Ikemajima**	**1.69**	**98**	P	Pn	19 31 50.6	+0.2
JIKM				*e*S	Sn	19 32 16.9	+0.2
JMJ	**Miyako jima 2**	**1.75**	**101**	P	Pn	19 31 51.4	+0.4

JMA 04 19:38:56.6±0.1, 36°.71N×141°.07E, h28km±1km, M3.6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.41**	**256**	P	Pb	19 39 05.3	-0.3
JHO				S	Sb	19 39 11.4	-0.3
ONAJ	**Iwakimizuishiy**	**0.45**	**331**	P	Pb	19 39 05.8	-0.4
ONAJ				S	Sb	19 39 12.5	-0.1
JFK	**Kawauchi**	**0.67**	**347**	P	Pb	19 39 09.1	-0.8
JFK				S	Sb	19 39 18.6	-0.3
JYT	**Yasato**	**0.85**	**236**	P	Pn	19 39 12.1	-0.6
JYT				S	Sb	19 39 23.4	-0.5
JSB	**Shiboa**	**0.96**	**286**	P	Pb	19 39 15.2	+0.6
JSB				S	Sn	19 39 28.5	+1.5
JFT	**Otama**	**1.00**	**324**	P	Pb	19 39 15.1	-0.2
JFT				S	Sb	19 39 28.3	+0.3
JMM	**Marumori**	**1.18**	**349**	P	Pn	19 39 17.0	-0.2
JMM				S	Sn	19 39 31.9	-0.4
MAT	**Matsushiro**	**2.31**	**267**	P	Pn	19 39 34.8	+2.0

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*NIED **04** 19:38:00, 32°.90N×138°.20E, h320km, Mw4.1 Best double couple: M0=1.63000×10^15 NP1:φs=77.00000°, δ31.00000°, λ149.00000°. NP2:φs=194.00000°, δ75.00000°, λ63.00000°.*
*IDC **04** 19:38:58.6±0.5, 32°.80N×138°.09E, h314km±5km, mb3.3/16, mb1 3.5/23, mb1mx3.3/70, mbtmp4.0/23, Error ellipse: s-maj=12.9km s-min=9.3km az=64.0*
*ISCJB **04** 19:38:59.2±0.5, 33°.04N±0°.05×138°.09E±0°.06, h341km, mb3.4/16, Error ellipse: s-maj=7.8km s-min=6.1km az=44.9*
*JMA **04** 19:38:59.0±0.3, 32°.90N×138°.15E, h325km±3km, M3.7*

ISC 04 19:39:01.1±0.7, 33°.02N±0°.08×138°.14E±0°.06, h341km, n49, σ2°70/60, mb3.5/16, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TK02	**Tokai 2**	**0.98**	**341**	P	**Pn**	**19 39 42.8**	**-2.6**
TTO3	**TONANKAI O.B.S**	**1.04**	**324**	P	**Pn**	**19 39 43.3**	**-2.5**
TTO4	**TONANKAI O.B.S**	**1.10**	**333**	P	**Pn**	**19 39 43.3**	**-2.6**
TTO2	**TONANKAI O.B.S**	**1.17**	**308**	P	**Pn**	**19 39 43.8**	**-2.3**
TTO5	**TONANKAI O.B.S**	**1.28**	**344**	P	**Pn**	**19 39 44.4**	**-2.4**
TTO1	**TONANKAI O.B.S**	**1.28**	**298**	P	**Pn**	**19 39 44.1**	**-2.6**
JHJ	**Hachijo jima 2**	**1.39**	**85**	P	**Pn**	**19 39 43.1**	**-4.6**
	15nm,0.3s,baz=334,slow=20,SNR=8.1						
JHJ				S	**S**	**19 40 18.8**	**-6.2**
	116nm,0.3s,baz=56,slow=22,SNR=11						
JIE	**Ise**	**1.81**	**319**	P	**Pn**	**19 39 47.5**	**-2.7**
JIE				*e*S	**S**	**19 40 24.6**	**-5.0**
JWZ	**Kozaga**	**2.09**	**285**	P	**Pn**	**19 39 48.6**	**-3.6**
JWZ				*e*S	**S**	**19 40 27.7**	**-5.4**
JWY	**Kouya**	**2.44**	**300**	P	**Pn**	**19 39 52.5**	**-2.4**
JWY				*e*S	**S**	**19 40 33.6**	**-4.5**
JAI	**Aioi**	**3.18**	**285**	P	**Pn**	**19 39 58.6**	**-2.7**
JAI				*e*S	**S**	**19 40 45.3**	**-4.5**
JWT	**Wachi**	**3.20**	**316**	P	**Pn**	**19 39 59.6**	**-1.9**
JWT				*e*S	**S**	**19 40 46.1**	**-4.0**
MJAR	**Matsushiro Arr**	**3.52**	**1**	P	**Pn**	**19 40 02.7**	**-1.8**
	11nm,0.3s,baz=182,slow=12,SNR=26						
MJAR				S	**S**	**19 40 53.0**	**-2.7**
	baz=181,slow=20,SNR=5.3						
MAT	**Matsushiro**	**3.52**	**1**	P	**Pn**	**19 40 02.8**	**-1.8**
MAT				*e*S	**S**	**19 40 52.8**	**-2.9**
MAT	**Matsushiro**	**3.52**	**1**	S	**Pn**	**19 40 03.0**	**-1.6**
JMN	**Monobe**	**3.63**	**282**	P	**Pn**	**19 40 03.3**	**-2.5**
JMN				S	**S**	**19 40 53.7**	**-4.2**
JSZ	**Suzu**	**4.46**	**352**	P	**Pn**	**19 40 12.6**	**-1.7**
JSZ				S	**S**	**19 41 10.4**	**-3.0**
JHS	**Saijyo**	**4.61**	**297**	P	**Pn**	**19 40 14.4**	**-1.6**
JHS				*e*S	**S**	**19 41 14.1**	**-2.4**
JNU	**Nakatsue**	**6.09**	**273**	P	**Pn**	**19 40 30.3**	**-2.4**
	0.3nm,0.3s,baz=117,slow=9.0,SNR=3.1						
JCJ	**Chichijima**	**6.87**	**148**	P	Pn	19 40 35.2	-6.6
	60nm,0.3s,baz=286,slow=15,SNR=13						
JCJ				S	S	19 41 47.8	-16
	34nm,0.3s,baz=282,slow=20,SNR=6.0						
KSRS	**Korea Array**	**9.45**	**301**	P	**Pn**	**19 41 12.1**	**-0.2**
	1.6nm,0.3s,baz=113,slow=13,SNR=82						
ASAJ	**Asahikawa**	**11.62**	**16**	P	**Pn**	**19 41 37.3**	**-0.8**
	1.2nm,0.3s,baz=222,slow=11,SNR=6.3						
ASAJ				S	**S**	**19 43 40.1**	**-7.7**
	0.4nm,0.3s,baz=178,slow=11,SNR=4.0						
USRK	**Ussuriysk Ar.**	**12.15**	**339**	P	**Pn**	**19 41 44.1**	**-0.4**
	1.5nm,0.3s,baz=152,slow=11,SNR=46						
KLR	**Kul'dur**	**16.88**	**345**	P	**P**	**19 42 36.5**	**+0.2**
	0.1nm,0.3s,baz=164,slow=8.1,SNR=20						
SONM	**Songino Array**	**28.09**	**311**	P	**P**	**19 44 24.0**	**+1.6**
	5.3nm,0.7s,baz=118,slow=10,SNR=14						
ZALV	**Zalesovo Beam**	**42.77**	**316**	P	**P**	**19 46 26.1**	**+0.3**
	1.1nm,0.6s,baz=111,slow=8.4,SNR=5.6						
MKAR	**Makanchi Array**	**44.10**	**305**	P	**P**	**19 46 37.2**	**+0.7**
	0.9nm,0.5s,baz=86,slow=9.8,SNR=26						
JIRN	**Jiri**	**44.78**	**277**	*e*P	**P**	**19 46 43.0**	**+0.4**
	31nm,0.6s						
GUN	**Gumba**	**44.95**	**278**	*e*P	**P**	**19 46 44.1**	**+0.2**
	21nm,0.8s						
PKIN	**Phulchoki**	**45.47**	**278**	*e*P	**P**	**19 46 47.7**	**-0.1**
	7.1nm,0.6s						
KKN	**Kakani**	**45.49**	**278**	*e*P	**P**	**19 46 47.4**	**-0.5**
	10nm,0.9s						
DMN	**Daman**	**45.70**	**278**	*e*P	**P**	**19 46 49.1**	**-0.5**
	2.8nm,0.5s						
GKN	**Gorkha**	**45.96**	**279**	*e*P	**P**	**19 46 51.1**	**-0.3**
	7.6nm,0.7s						
KURBB	**Kurchatov Arra**	**46.46**	**311**	P	**P**	**19 46 55.2**	**+0.4**
	3.5nm,0.6s,baz=89,slow=6.7,SNR=37						
DANN	**Dangsing**	**46.57**	**279**	*e*P	**P**	**19 46 56.6**	**+0.3**
	13nm,0.7s						
KOLN	**Koldanda**	**46.90**	**279**	*e*P	**P**	**19 46 58.7**	**0.0**
	5.7nm,0.7s						
PYUN	**Piuthan**	**47.29**	**279**	*e*P	**P**	**19 47 01.9**	**+0.2**
	8.6nm,0.6s						
BVAR	**Borovoye Array**	**51.36**	**314**	P	**P**	**19 47 32.3**	**+0.7**
	1.0nm,0.5s,baz=96,slow=7.6,SNR=10						
WRA	**Warramunga Arr**	**52.79**	**184**	P	**P**	**19 47 40.8**	**-1.6**
	0.5nm,0.5s,baz=0.7,slow=7.6,SNR=11						
ILAR	**Eielson Array**	**54.31**	**31**	P	**P**	**19 47 54.2**	**+1.4**
	0.9nm,0.7s,baz=278,slow=5.5,SNR=11						
ASAR	**Alice Springs**	**56.51**	**185**	P	**P**	**19 48 06.6**	**-2.2**
	0.4nm,0.5s,baz=16,slow=9.8,SNR=10						
INK	**Inuvik**	**59.17**	**26**	P	**P**	**19 48 28.2**	**+1.7**
	0.8nm,0.4s,baz=308,slow=2.8,SNR=3.0						
YKA	**Yellowknife Ar**	**68.62**	**28**	P	**P**	**19 49 29.0**	**+1.4**
	0.5nm,0.4s,baz=295,slow=5.4,SNR=6.1						
AKASG	**Malin Array Be**	**75.79**	**322**	P	**P**	**19 50 10.5**	**+0.6**
	0.5nm,0.5s,baz=58,slow=8.9,SNR=2.3						
NOA	**NORSAR Array B**	**76.81**	**336**	P	**P**	**19 50 17.5**	**+1.9**
	0.5nm,0.6s,baz=44,slow=4.8,SNR=2.7						
BRTR	**Keskin Array B**	**79.45**	**311**	P	**P**	**19 50 32.0**	**+1.5**
	0.4nm,0.6s,baz=96,slow=1.4,SNR=3.3						
NVAR	**Mina Array Bea**	**79.57**	**51**	P	**P**	**19 50 33.5**	**+2.2**
	0.5nm,0.4s,baz=307,slow=7.5,SNR=3.1						
PDAR	**Pinedale Array**	**82.41**	**43**	P	**P**	**19 50 47.8**	**+1.8**
	0.7nm,0.7s,baz=280,slow=2.7,SNR=3.4						
TXAR	**Lajitas Array**	**94.72**	**51**	P	**P**	**19 51 46.8**	**+2.2**
	0.7nm,0.7s,baz=298,slow=4.5,SNR=4.1						

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*LDG **04** 19:45:35.7±0.1, 44°.88N×11°.12E, h2km, Ml3.2/19, Error ellipse: s-maj=2.8km s-min=1.8km az=170.0*
*PRU **04** 19:45:35.6, 44°.92N×10°.75E, h7km*
*ROM **04** 19:45:36.2±0.0, 44°.882N±0°.001×10°.938E±0°.001, h7km, ML3.6/2*
*IASPEI **04** 19:45:36.8±0.7, 44°.91N±0°.02×10°.93E±0°.02, h13km±3km, Error ellipse: s-maj=2.6km s-min=2.4km az=112.2, GT5 selection from ISC bulletin GT5 identified by Bond˜jr and McLaughlin (2009) selection criteria Bond˜jr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
*CSEM **04** 19:45:36.5±0.1, 44°.92N×10°.93E, h10km, ML3.1/22, Error ellipse: s-maj=2.7km s-min=2.4km az=162.0*
*ISCJB **04** 19:45:36.0±0.2, 44°.94N±0°.01×10°.87E±0°.02, h14km±1km, Error ellipse: s-maj=2.1km s-min=2.0km az=43.7*
*STR **04** 19:45:39.4±1.1, 45°.N±5°.×1°.1E±°, h5km, M3.5/7, mb3.4/1, MLv3.6/7*

ISC 04 19:45:36.8±0.7, 44°.92N±0°.01×10°.93E±0°.01, h14km±3km, n211, σ1°21/312, 11C-19D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0827	**Moglia (MN)**	**0.02**	**6**	⇑*e*P	**Pg**	**19 45 38.6**	**-0.7**
T0827				*e*S	**Sg**	**19 45 41.4**	**+0.5**
T0827	**Moglia (MN)**	**0.02**	**6**	*e*P	**Pg**	**19 45 38.6**	**-0.7**
T0827				*e*S	**Sg**	**19 45 41.4**	**+0.5**
NDIM	**Novi di Modena**	**0.03**	**218**	*e*P	**Pg**	**19 45 37.8**	**-1.5**
NDIM				*e*S	**Sg**	**19 45 39.6**	**-1.3**
T0818	**Loc. Fossa, Co**	**0.07**	**74**	⇓*e*P	**Pg**	**19 45 38.9**	**-0.7**
T0818				*e*S	**Sg**	**19 45 42.1**	**+0.6**
T0818	**Loc. Fossa, Co**	**0.07**	**74**	*e*P	**Pg**	**19 45 38.9**	**-0.7**
T0818				*e*S	**Sg**	**19 45 42.1**	**+0.6**
T0825	**Gonzaga (MN)**	**0.08**	**315**	⇑*e*P	**Pg**	**19 45 40.6**	**+0.9**
T0825	**Gonzaga (MN)**	**0.08**	**315**	*e*P	**Pg**	**19 45 40.6**	**+0.9**
T0825				*e*S	**Sg**	**19 45 44.4**	**+2.7**
T0825				AML	AML		
T0825				AML	AML		
T0828	**Loc. Fossoli,**	**0.08**	**187**	⇓*i*P	**Pg**	**19 45 38.3**	**-1.4**
T0828				*i* S	**Sg**	**19 45 41.2**	**-0.5**
T0828	**Loc. Fossoli,**	**0.08**	**187**	*i* P	**Pg**	**19 45 38.3**	**-1.4**
T0828				*i* S	**Sg**	**19 45 41.2**	**-0.5**
T0826	**Rio Saliceto (**	**0.11**	**228**	⇓*e*P	**Pg**	**19 45 39.2**	**-0.8**
T0826				*e*S	**Sg**	**19 45 42.5**	**+0.3**
T0826	**Rio Saliceto (**	**0.11**	**228**	*e*P	**Pg**	**19 45 39.1**	**-0.8**
T0826				*e*S	**Sg**	**19 45 42.5**	**+0.3**
T0826				AML	AML		
	comp=E,75200μm,0.3s						
T0826				AML	AML		
	comp=N,74000μm,0.1s						
T0826				AML	AML		
	comp=E,75200μm,0.3s						
T0826				AML	AML		
	comp=N,74000μm,0.1s						
T0826				AML	AML		
	comp=E,75200μm,0.3s						
T0826				AML	AML		
	comp=N,74000μm,0.1s						
T0826				AML	AML		
	comp=N,74000μm,0.1s						
T0826				AML	AML		
	comp=E,75200μm,0.3s						
T0814	**Loc. Cortile,**	**0.12**	**166**	⇓*i*P	**Pg**	**19 45 39.2**	**-1.0**
T0814				*i* S	**Sg**	**19 45 42.3**	**-0.1**
T0814	**Loc. Cortile,**	**0.12**	**166**	*i* P	**Pg**	**19 45 39.2**	**-1.0**
T0814				*i* S	**Sg**	**19 45 42.3**	**-0.1**
SBPO	**S.Benedetto Po**	**0.14**	**358**	⇓*e*P	**Pg**	**19 45 40.8**	**+0.4**
SBPO	**S.Benedetto Po**	**0.14**	**358**	*e*P	**Pg**	**19 45 40.8**	**+0.4**
T0824	**Loc. Limidi di**	**0.15**	**180**	⇓*i*P	**Pg**	**19 45 39.8**	**-0.8**
T0824				*i* S	**Sg**	**19 45 43.6**	**+0.4**
T0824	**Loc. Limidi di**	**0.15**	**180**	*i* P	**Pg**	**19 45 39.8**	**-0.8**
T0824				*i* S	**Sg**	**19 45 43.6**	**+0.4**
T0802	**SanFelice sul**	**0.18**	**102**	*e*P	**Pg**	**19 45 40.5**	**-0.5**
T0802				*e*S	**Sg**	**19 45 45.2**	**+1.3**
T0802	**SanFelice sul**	**0.18**	**102**	*e*P	**Pg**	**19 45 40.5**	**-0.5**
T0802				*e*S	**Sg**	**19 45 45.2**	**+1.3**
T0812	**Loc. Stoppiaro**	**0.18**	**77**	⇓*e*P	**Pg**	**19 45 40.4**	**-0.6**
T0812	**Loc. Stoppiaro**	**0.18**	**77**	*e*P	**Pg**	**19 45 40.4**	**-0.6**
T0812				*e*S	**Sg**	**19 45 47.8**	**+3.9**
NOVE	**Novellara**	**0.19**	**232**	⇓*e*P	**Pg**	**19 45 40.6**	**-0.5**
NOVE				*e*S	**Sg**	**19 45 45.4**	**+1.3**
NOVE	**Novellara**	**0.19**	**232**	*e*P	**Pg**	**19 45 40.6**	**-0.5**
NOVE				*e*S	**Sg**	**19 45 45.4**	**+1.3**
NOVE				AML	AML		
	comp=E,23000μm,0.2s						
NOVE				AML	AML		
	comp=N,16550μm,0.2s						
NOVE				AML	AML		
	comp=E,23000μm,0.2s						
NOVE				AML	AML		
	comp=N,16550μm,0.2s						
NOVE				AML	AML		
	comp=E,23000μm,0.2s						
NOVE				AML	AML		
	comp=N,16550μm,0.2s						
NOVE				AML	AML		
	comp=E,23000μm,0.2s						
T0813	**Massa Finalese**	**0.20**	**101**	⇓*e*P	**Pg**	**19 45 40.5**	**-0.7**
T0813				*e*S	**Sg**	**19 45 45.8**	**+1.6**
T0813	**Massa Finalese**	**0.20**	**101**	*e*P	**Pg**	**19 45 40.5**	**-0.7**
T0813				*e*S	**Sg**	**19 45 45.8**	**+1.6**
RAVA	**Ravarino**	**0.21**	**139**	⇓*e*P	**Pg**	**19 45 40.7**	**-0.7**
RAVA				*e*S	**Sg**	**19 45 45.3**	**+0.7**
RAVA	**Ravarino**	**0.21**	**139**	*e*P	**Pg**

	comp=N,1405µm,1.6s						
SERM					AML	AML	
	comp=E,2450µm,0.6s						
SERM					AML	AML	
	comp=N,1405µm,1.6s						
SERM					AML	AML	
	comp=E,4380µm,0.9s						
SERM					AML	AML	
	comp=N,2550µm,0.9s						
SERM					AML	AML	
	comp=E,2450µm,0.6s						
SERM					AML	AML	
	comp=N,1405µm,1.6s						
SERM					AML	AML	
	comp=E,4400µm,0.9s						
SERM					AML	AML	
	comp=N,2550µm,0.9s						
SERM					AML	AML	
	comp=E,2450µm,0.6s						
SERM					AML	AML	
	comp=E,4405µm,0.9s						
SERM					AML	AML	
	comp=N,2555µm,0.9s						
T0805	**Bondeno (FE)**	**0.28**	**89**	*e*P	**Pg**	**19 45 42.2**	**-0.4**
T0805				*e*S	**Sb**	**19 45 48.8**	**+0.7**
T0805	**Bondeno (FE)**	**0.28**	**89**	*e*P	**Pg**	**19 45 42.2**	**-0.4**
T0805				*e*S	**Sb**	**19 45 48.8**	**+0.7**
MODE	**Modena**	**0.28**	**177**	*e*P	**Pg**	**19 45 42.5**	**-0.2**
MODE	**Modena**	**0.28**	**177**	*e*P	**Pg**	**19 45 42.5**	**-0.2**
MODE					AML	AML	
	comp=E,41100µm,0.5s						
MODE					AML	AML	
	comp=N,21500µm,0.5s						
MODE					AML	AML	
	comp=E,41100µm,0.5s						
MODE					AML	AML	
	comp=N,21500µm,0.5s						
MODE					AML	AML	
	comp=E,41100µm,0.5s						
MODE					AML	AML	
	comp=N,21500µm,0.5s						
T0822	**Casumaru (Bond**	**0.31**	**105**	*e*P	**Pg**	**19 45 42.2**	**-0.9**
T0822				*e*S	**Sb**	**19 45 48.7**	**-0.2**
T0822	**Casumaru (Bond**	**0.31**	**105**	*e*P	**Pg**	**19 45 42.2**	**-0.9**
T0822				*e*S	**Sb**	**19 45 48.7**	**-0.2**
T0803	**Dosso, Cento (**	**0.34**	**116**	*e*P	**Pg**	**19 45 42.8**	**-0.8**
T0803	**Dosso, Cento (**	**0.34**	**116**	*e*P	**Pg**	**19 45 42.8**	**-0.8**
T0823	**Castello D'Arg**	**0.34**	**132**	*e*P	**Pg**	**19 45 43.3**	**-0.4**
T0823	**Castello D'Arg**	**0.34**	**132**	*e*P	**Pg**	**19 45 43.3**	**-0.4**
T0823				*e*S	**Sb**	**19 45 50.5**	**+0.7**
T0817	**Loc. Veratica,**	**0.38**	**78⇓**	*e*P	**Pb**	**19 45 44.6**	**-0.7**
T0817	**Loc. Veratica,**	**0.38**	**78**	*e*P	**Pb**	**19 45 44.6**	**-0.7**
T0817				*e*S	**Sb**	**19 45 51.8**	**+0.7**
OPPE	**Oppeano**	**0.43**	**24**	AML	AML		
	comp=E,2390µm,1.0s						
OPPE					AML	AML	
	comp=N,4070µm,1.0s						
OPPE					AML	AML	
	comp=E,2390µm,1.0s						
OPPE					AML	AML	
	comp=N,4070µm,1.0s						
PRMA	**PARMA**	**0.46**	**251**	*e*P	**Pb**	**19 45 47.1**	**+0.5**
PRMA	**PARMA**	**0.46**	**251**	*e*P	**Pb**	**19 45 47.1**	**+0.5**
PRMA				*e*S	**Sb**	**19 45 55.7**	**+2.3**
FIU	**Minerbio Fiu**	**0.49**	**124**	*e*P	**Pb**	**19 45 48.2**	**+1.1**
FIU	**Minerbio Fiu**	**0.49**	**124**	*e*P	**Pb**	**19 45 48.2**	**+1.1**
FIU					AML	AML	
	comp=E,1250µm,0.8s						
FIU					AML	AML	
	comp=N,1020µm,0.7s						
FIU					AML	AML	
	comp=E,1245µm,0.8s						
FIU					AML	AML	
	comp=N,1022µm,0.7s						
T0816	**San Bartolomeo**	**0.51**	**112**	*e*P	**Pb**	**19 45 47.3**	**-0.3**
T0816	**San Bartolomeo**	**0.51**	**112**	*e*P	**Pb**	**19 45 47.3**	**-0.3**
T0815	**Correggio (RE)**	**0.56**	**94⇑**	*e*P	**Pb**	**19 45 48.3**	**-0.1**
T0815				*e*S	**Sb**	**19 45 57.2**	**+0.9**
T0815	**Correggio (RE)**	**0.56**	**94**	*e*P	**Pb**	**19 45 48.3**	**-0.1**
T0815				*e*S	**Sb**	**19 45 57.2**	**+0.9**
ZCCA	**Zocca**	**0.56**	**176⇓**	*e*P	**Pb**	**19 45 48.9**	**+0.4**
ZCCA	**Zocca**	**0.56**	**176**	*e*P	**Pb**	**19 45 48.9**	**+0.4**
ZCCA					AML	AML	
	comp=E,1300µm,0.5s						
ZCCA					AML	AML	
	comp=N,1455µm,1.6s						
ZCCA					AML	AML	
	comp=E,1290µm,0.5s						
ZCCA					AML	AML	
	comp=N,1610µm,0.5s						
ZCCA					AML	AML	
	comp=E,1300µm,0.5s						
ZCCA					AML	AML	
	comp=N,1455µm,1.6s						
ZCCA					AML	AML	
	comp=E,1290µm,0.5s						
ZCCA					AML	AML	
	comp=N,1610µm,0.5s						
MTRZ	**Monterenzio**	**0.66**	**144**	*e*P	**Pn**	**19 45 52.3**	**+0.6**
MTRZ					AML	AML	
	comp=E,1395µm,0.9s						
MTRZ					AML	AML	
	comp=N,1285µm,0.7s						
TEOL	**Teolo**	**0.69**	**49**	*e*Pg	**Pg**	**19 45 49.9**	**-0.3**
TEOL				*e*Sg	**Sn**	**19 46 02.0**	**-0.6**
TEOL	**Teolo**	**0.69**	**49⇓**	*e*P	**Pg**	**19 45 49.9**	**-0.3**
TEOL				*e*Sg	**Sn**	**19 46 02.0**	**-0.6**
TEOL	**Teolo**	**0.69**	**49**	*e*P	**Pg**	**19 45 49.9**	**-0.3**
TEOL				*e*S	**Sn**	**19 46 03.5**	**+0.9**
TEOL					AML	AML	
	comp=E,6580µm,0.3s						
TEOL					AML	AML	
	comp=N,5190µm,0.3s						
TEOL					AML	AML	
	comp=E,6580µm,0.3s						
TEOL					AML	AML	
	comp=N,5190µm,0.3s						
CMPO	**Campotto Po**	**0.71**	**118**	AML	AML		
	comp=N,914µm,1.6s						
CMPO					AML	AML	
	comp=E,1195µm,0.8s						
CMPO					AML	AML	
	comp=E,1195µm,0.8s						
CMPO					AML	AML	
	comp=N,1134µm,1.1s						
ROVR	**Rover¤ Verone**	**0.74**	**8⇓**	*e*P	**Pg**	**19 45 50.9**	**-0.3**
ROVR	**Rover¤ Verone**	**0.74**	**8**	*e*P	**Pg**	**19 45 50.9**	**-0.3**
ROVR				*e*S	**Sn**	**19 46 04.8**	**+0.8**
ROVR					AML	AML	
	comp=E,1970µm,0.3s						
ROVR					AML	AML	
	comp=N,4375µm,0.2s						
ROVR					AML	AML	
	comp=E,1970µm,0.3s						
ROVR					AML	AML	
	comp=N,4375µm,0.2s						
SALO	**Salr**	**0.76**	**338**	*e*P	**Pb**	**19 45 51.7**	**-0.1**
SALO	**Salr**	**0.76**	**338**	*e*P	**Pb**	**19 45 51.7**	**-0.1**
SALO				*e*S	**Sn**	**19 46 04.8**	**+0.5**
SALO					AML	AML	
	comp=E,1815µm,1.3s						
SALO					AML	AML	
	comp=N,1825µm,1.0s						
SALO					AML	AML	
	comp=E,1815µm,1.3s						
SALO					AML	AML	
	comp=N,1825µm,1.0s						
BALD	**Monte Baldo**	**0.77**	**354⇓**	*e*Pg	**Pb**	**19 45 51.8**	**-0.3**
BALD	**Monte Baldo**	**0.77**	**354**	*e*Pg	**Pb**	**19 45 51.8**	**-0.3**
ADRI	**Adria, Italy**	**0.78**	**81⇑**	*e*Pg	**Pb**	**19 45 52.4**	**+0.3**
ADRI	**Adria, Italy**	**0.78**	**81**	*e*Pg	**Pb**	**19 45 52.4**	**+0.3**
VLC	**Villacollemand**	**0.85**	**207⇑**	*e*P	**Pb**	**19 45 53.3**	**0.0**
VLC	**Villacollemand**	**0.85**	**207**	*e*P	**Pb**	**19 45 53.3**	**0.0**
VLC					AML	AML	
	comp=E,397µm,0.9s						
VLC					AML	AML	
	comp=N,496µm,1.0s						
VLC					AML	AML	
	comp=E,397µm,0.9s						
VLC					AML	AML	
	comp=N,496µm,1.0s						
POPM	**Popiglio**	**0.88**	**188**	*e*P	**Pb**	**19 45 54.1**	**+0.4**
POPM	**Popiglio**	**0.88**	**188**	*e*P	**Pb**	**19 45 54.1**	**+0.4**
POPM				*e*S	**Sn**	**19 46 11.2**	**+3.9**
POPM					AML	AML	
	comp=E,880µm,0.3s						
POPM					AML	AML	
	comp=N,1395µm,0.3s						
POPM					AML	AML	
	comp=E,880µm,0.3s						
POPM					AML	AML	
	comp=N,1400µm,0.3s						
BDI	**Bagni Di Lucca**	**0.88**	**196**	*e*P	**Pg**	**19 45 53.6**	**-0.3**
BDI	**Bagni Di Lucca**	**0.88**	**196**	*e*P	**Pg**	**19 45 53.6**	**-0.3**
BDI				*e*S	**Sn**	**19 46 10.8**	**+3.3**
BDI					AML	AML	
	comp=E,926µm,0.7s						
BDI					AML	AML	
	comp=N,1310µm,1.1s						
BDI					AML	AML	
	comp=E,1080µm,0.4s						
BDI					AML	AML	
	comp=N,1480µm,1.0s						
BDI					AML	AML	
	comp=E,926µm,0.7s						
BDI					AML	AML	
	comp=N,1305µm,1.1s						
BDI					AML	AML	
	comp=E,1080µm,0.4s						
BDI					AML	AML	
	comp=N,1480µm,1.0s						
MAGA	**Magasa**	**0.89**	**346⇓**	*e*P	**Pg**	**19 45 53.4**	**-0.6**
MAGA				*e*S	**Sn**	**19 46 08.0**	**+0.4**
MAGA	**Magasa**	**0.89**	**346**	*e*P	**Pg**	**19 45 53.4**	**-0.6**
MAGA				*e*S	**Sn**	**19 46 09.0**	**+1.3**
MAGA					AML	AML	
	comp=E,8525µm,0.3s						
MAGA					AML	AML	
	comp=N,6460µm,0.3s						
MAGA					AML	AML	
	comp=E,8525µm,0.3s						
MAGA					AML	AML	
	comp=N,6460µm,0.3s						
CTL8	**Castelleone**	**0.90**	**294**	AML	AML		
	comp=N,406µm,0.3s						
CTL8					AML	AML	
	comp=E,984µm,0.3s						
CTL8					AML	AML	
	comp=N,1150µm,1.3s						
CTL8					AML	AML	
	comp=E,398µm,0.8s						
CTL8					AML	AML	
	comp=N,406µm,0.3s						
CTL8					AML	AML	
	comp=E,988µm,0.3s						
CTL8					AML	AML	
	comp=N,1150µm,1.3s						
CTL8					AML	AML	
	comp=E,398µm,0.8s						
DOSS	**Dosso del Somm**	**0.98**	**11⇓**	*e*Pg	**Pg**	**19 45 55.2**	**-0.6**
DOSS				*e*Sg	**Sn**	**19 46 10.9**	**+0.8**
DOSS	**Dosso del Somm**	**0.98**	**11**	*e*Pg	**Pg**	**19 45 55.2**	**-0.6**
DOSS				*e*Sg	**Sn**	**19 46 10.9**	**+0.8**
MAIM	**Mastiano**	**1.05**	**198**	AML	AML		
	comp=E,858µm,0.4s						
MAIM					AML	AML	
	comp=N,1470µm,0.6s						
MAIM					AML	AML	
	comp=E,858µm,0.4s						
MAIM					AML	AML	
	comp=N,1470µm,0.6s						
BOB	**Bobbio (Coli)**	**1.06**	**263**	AML	AML		
	comp=N,452µm,0.4s						
BOB					AML	AML	
	comp=E,447µm,0.8s						
BOB					AML	AML	
	comp=N,452µm,0.4s						
BOB					AML	AML	
	comp=E,447µm,0.8s						
RNI	**Roncone**	**1.09**	**349⇑**	*e*Pg	**Pg**	**19 45 56.1**	**-1.6**
RNI				*e*Sg	**Sn**	**19 46 12.7**	**0.0**
RNI	**Roncone**	**1.09**	**349**	*e*Pg	**Pg**	**19 45 56.1**	**-1.6**
RNI				*e*Sg	**Sn**	**19 46 12.7**	**0.0**
CRMI	**Carmignano**	**1.12**	**178**	AML	AML		
	comp=N,187µm,0.4s						
CRMI					AML	AML	
	comp=E,360µm,0.4s						
CRMI					AML	AML	
	comp=E,360µm,0.4s						
CRMI					AML	AML	
	comp=N,187µm,0.4s						
CGRP	**Cima Grappa**	**1.14**	**32⇓**	*e*Pg	**Pg**	**19 45 57.9**	**-1.0**
CGRP				*e*Sg	**Sn**	**19 46 15.9**	**+1.8**
CGRP	**Cima Grappa**	**1.14**	**32⇓**	*e*P	**Pg**	**19 45 57.8**	**-1.0**
CGRP				*e*Sg	**Sn**	**19 46 15.9**	**+1.8**
CGRP	**Cima Grappa**	**1.14**	**32**	*e*P	**Pg**	**19 45 57.8**	**-1.0**
CGRP				*e*S	**Sn**	**19 46 15.7**	**+1.6**
CGRP					AML	AML	
	comp=E,632µm,0.6s						
CGRP					AML	AML	
	comp=N,724µm,0.9s						
CGRP					AML	AML	
	comp=E,632µm,0.6s						
CGRP					AML	AML	
	comp=N,724µm,0.9s						
PANI	**Panarotta**	**1.17**	**14⇑**	*e*Pg	**Pg**	**19 45 57.8**	**-1.5**
PANI				*e*Sg	**Sn**	**19 46 16.2**	**+1.4**
PANI	**Panarotta**	**1.17**	**14**	*e*Pg	**Pg**	**19 45 57.8**	**-1.5**
PANI				*e*Sg	**Sn**	**19 46 16.2**	**+1.4**
MSSA	**Maissana**	**1.17**	**240**	AML	AML		
	comp=E,364µm,0.4s						
MSSA					AML	AML	
	comp=N,408µm,1.2s						
MSSA					AML	AML	
	comp=E,364µm,0.4s						
MSSA					AML	AML	
	comp=N,408µm,1.2s						
MABI	**Malga Bissina**	**1.18**	**346**	AML	AML		
	comp=N,256µm,0.7s						
MABI					AML	AML	
	comp=E,260µm,1.4s						
MABI					AML	AML	
	comp=E,260µm,1.4s						
MABI					AML	AML	
	comp=N,256µm,0.7s						
MTLO	**Montello**	**1.22**	**42⇑**	*e*Pg	**Pg**	**19 45 59.3**	**-0.9**
MTLO				*e*Sg	**Sn**	**19 46 18.5**	**+2.8**
MTLO	**Montello**	**1.22**	**42**	*e*Pg	**Pg**	**19 45 59.3**	**-0.9**
MTLO				*e*Sg	**Sn**	**19 46 18.5**	**+2.8**
CTI	**Castel Tesino**	**1.24**	**24**	AML	AML		
	comp=E,1180µm,0.2s						
CTI					AML	AML	
	comp=N,2165µm,0.3s						
CTI					AML	AML	
	comp=E,1180µm,0.2s						
CTI					AML	AML	
	comp=N,2165µm,0.3s						
ASQU	**Asqua**	**1.28**	**151**	AML	AML		
	comp=N,264µm,0.5s						
ASQU					AML	AML	
	comp=E,254µm,0.7s						
ASQU					AML	AML	
	comp=N,264µm,0.5s						
ASQU					AML	AML	
	comp=E,255µm,0.7s						
VARN	**Col Varnada, M**	**1.36**	**37**	*e*Pg	**Pn**	**19 46 01.5**	**+0.1**
VARN	**Col Varnada, M**	**1.36**	**37**	*e*Pg	**Pn**	**19 46 01.5**	**+0.1**
CRE	**Caprese Michel**	**1.49**	**150**	AML	AML		
	comp=N,171µm,1.6s						
CRE					AML	AML	
	comp=E,190µm,0.5s						
OZOL	**Ozolo**	**1.49**	**3**	*e*Pg	**Pn**	**19 46 03.0**	**-0.3**
OZOL	**Ozolo**	**1.49**	**3**	*e*Pg	**Pn**	**19 46 03.0**	**-0.3**
CARE	**Lago del Cares**	**1.52**	**354**	*e*Pg	**Pn**	**19 46 03.5**	**-0.3**
CARE	**Lago del Cares**	**1.52**	**354**	*e*Pg	**Pn**	**19 46 03.5**	**-0.3**
CAE	**Caneva**	**1.52**	**44**	*e*Pg	**Pn**	**19 46 03.9**	**+0.3**
CAE	**Caneva**	**1.52**	**44**	*e*Pg	**Pn**	**19 46 03.9**	**+0.3**
PARC	**Parchiule**	**1.58**	**143**	AML	AML		
	comp=N,126µm,0.6s						
PARC					AML	AML	
	comp=E,94µm,0.6s						
AGOR	**Agordo**	**1.58**	**29**	AML	AML		
	comp=N,375µm,1.1s						
AGOR					AML	AML	
	comp=E,296µm,1.4s						
APPI	**Appiano**	**1.58**	**8**	AML	AML		
	comp=E,1046µm,0.5s						
APPI					AML	AML	
	comp=N,712µm,0.3s						
KOSI	**Kohlern**	**1.58**	**11**	AML	AML		
	comp=E,566µm,0.9s						
KOSI					AML	AML	
	comp=N,582µm,0.5s						
BRMO	**Bormio**	**1.61**	**346**	AML	AML		
	comp=E,206µm,1.0s						
BRMO					AML	AML	
	comp=N,172µm,0.7s						
FROS	**Frosini**	**1.71**	**174**	AML	AML		
	comp=N,168µm,0.6s						
FROS					AML	AML	
	comp=E,170µm,1.6s						
MOSI	**Grossmontoni**	**1.72**	**351**	AML	AML		
	comp=N,667µm,0.5s						
MOSI					AML	AML	
	comp=E,460µm,0.9s						
ABSI	**Aberstueckl**	**1.83**	**8**	AML	AML		
	comp=N,456µm,0.7s						
ABSI					AML	AML	
	comp=E,614µm,0.5s						
STAL	**STALIGIAL**	**1.84**	**42**	AML	AML		
	comp=E,366µm,0.8s						
STAL					AML	AML	
	comp=N,423µm,0.2s						
ROSI	**Rosskopf**	**2.04**	**9**	AML	AML		
	comp=E,380µm,0.3s						
ROSI					AML	AML	
	comp=N,360µm,0.3s						
FETA	**Feichten**	**2.11**	**356**	*e*Pn	**Pb**	**19 46 15.1**	**+0.2**
	comp=N,2.0nm,0.2s						
FETA				*e*Pg	**Pg**	**19 46 19.6**	**+2.3**
	comp=N,13nm,0.4s,SNR=23						
FETA				Sn	**Sg**	**19 46 43.1**	**-1.6**
	comp=N,6.9nm,0.3s						
FETA	**Feichten**	**2.11**	**356**	Pn	**Pb**	**19 46 15.1**	**+0.2**
	comp=N,2.0nm,0.2s						
ABTA	**Abfaltersbach**	**2.14**	**31**	*e*Pn	**Pn**	**19 46 13.1**	**+1.0**
	comp=N,1.1nm,0.2s,SNR=21						
ABTA				*e*Pg	**Pg**	**19 46 16.6**	**-1.2**
	comp=N,6.4nm,0.2s						
ABTA				*e*Sg	**Sg**	**19 46 47.2**	**+1.6**
	comp=N,32nm,0.7s						
ABTA	**Abfaltersbach**	**2.14**	**31**	Pn	**Pn**	**19 46 13.1**	**+1.0**
	comp=N,1.1nm,0.2s,SNR=21						
RISI	**Rein**	**2.19**	**21**	AML	AML		
	comp=N,538µm,0.4s						
RISI					AML	AML	
	comp=E,494µm,0.7s						
WTTA	**Wattenberg**	**2.40**	**12**	*e*Pn	**Pn**	**19 46 17.8**	**+2.0**
	comp=E,5.8nm,0.2s						
WTTA				*e*Sn	**Sb**	**19 46 50.8**	**+1.5**
	comp=E,54nm,0.6s						
WTTA	**Wattenberg**	**2.40**	**12**	Pn	**Pn**	**19 46 17.8**	**+2.0**
	comp=E,5.8nm,0.2s						
MOTA	**Moosalm**	**2.43**	**3**	*e*Pn	**Pn**	**19 46 17.7**	**+1.5**
	comp=E,7.0nm,0.4s,SNR=10						
MOTA	**Moosalm**	**2.43**	**3**	Pn	**Pn**	**19 46 17.7**	**+1.5**
	comp=E,7.0nm,0.4s,SNR=10						
FDMO	**Fiordimonte**	**2.44**	**140**	AML	AML		
	comp=E,41µm,0.6s						
FDMO					AML	AML	
	comp=N,43µm,1.1s						
WATA	**Walderalm**	**2.46**	**10**	*e*Pn	**Pb**	**19 46 19.7**	**-1.2**
	comp=N,15nm,0.3s,SNR=12						
WATA				*e*Sn	**Sb**	**19 46 52.5**	**+1.4**
	comp=N,22nm,0.4s						
WATA	**Walderalm**	**2.46**	**10**	Pn	**Pb**	**19 46 19.7**	**-1.2**
	comp=N,15nm,0.3s,SNR=12						
DAVA	**Damuels**	**2.48**	**343**	*e*Pn	**Pb**	**19 46 20.0**	**-1.2**
	comp=N,3.6nm,0.3s						
DAVA				Sn	**Sb**	**19 46 52.0**	**+0.3**
	comp=N,23nm,0.4s						
DAVA	**Damuels**	**2.48**	**343**	Pn	**Pb**	**19 46 20.0**	**-1.2**
	comp=N,3.6nm,0.3s						
DAVA				Sn	**Sb**	**19 46 52.0**	**+0.3**
	comp=N,23nm,0.4s						
MYKA	**Terra Mystica**	**2.56**	**47**	*e*Pg	**Pg**	**19 46 24.6**	**-1.2**
	comp=N,16nm,0.5s,SNR=9.5						
MYKA	**Terra Mystica**	**2.56**	**47**	Pg	**Pg**	**19 46 24.6**	**-1.2**
	comp=N,16nm,0.5s,SNR=9.5						
RETA	**Reutte**	**2.58**	**357**	*e*Pn	**Pn**	**19 46 20.5**	**+2.4**
	comp=N,3.7nm,0.2s						
RETA				Sn	**Sb**	**19 46 52.9**	**-1.4**
	comp=N,20nm,0.5s						
RETA	**Reutte**	**2.58**	**357**	Pn	**Pn**	**19 46 20.5**	**+2.4**
	comp=N,3.7nm,0.2s						
RETA				Sn	**Sb**	**19 46 52.9**	**-1.4**
	comp=N,20nm,0.5s						
SBF	**Sospel**	**2.72**	**248**	*e*Pn	**Pn**	**19 46 21.3**	**+1.3**
	SNR=1.0						
SBF				*e*Sn	**Sn**	**19 46 52.9**	**+0.2**
	comp=N,67nm,0.4s,SNR=1.0						
SBF	**Sospel**	**2.72**	**248**	*e*Pn	**Pn**	**19 46 21.3**	**+1.3**
	SNR=1.0						
SBF				*e*Sn	**Sn**	**19 46 52.9**	**+0.2**
	comp=N,34nm,0.4s,SNR=1.0						
KBA	**Koelnbreinsper**	**2.74**	**37**	*e*Pg	**Pg**	**19 46 27.7**	**-1.6**
	comp=N,15nm,0.3s,SNR=12						
KBA				*e*Sg	**Sg**	**19 47 06.6**	**+1.7**
	comp=N,14nm,0.3s						
KBA	**Koelnbreinsper**	**2.74**	**37**	Pg	**Pg**	**19 46 27.7**	**-1.6**
	comp=N,15nm,0.3s,SNR=12						
KBA				Sg	**Sg**	**19 47 06.6**	**+1.7**
	comp=N,14nm,0.3s						
PGF	**Pioggiola**	**2.75**	**211**	*e*Pn	**Pn**	**19 46 19.3**	**-1.2**
	SNR=1.0						
PGF				*e*Sn	**Sn**	**19 46 51.6**	**-1.9**
	comp=N,14nm,0.3s						
PGF	**Pioggiola**	**2.75**	**211**	*e*Pn	**Pn**	**19 46 19.3**	**-1.2**
	SNR=1.0						
PGF				*e*Sn	**Sn**	**19 46 51.6**	**-1.9**
	comp=N,6.8nm,0.3s						
LUCF	**Luceram**	**2.76**	**250**	P	**Pb**	**19 46 23.6**	**-2.4**
LUCF				S	**Sb**	**19 46 59.3**	**-0.4**
LUCF	**Luceram**	**2.76**	**250**	P	**Pb**	**19 46 23.6**	**-2.4**
NVLJ	**Novalja**	**2.83**	**96**	*i* Pn	**Pn**	**19 46 21.4**	**-0.1**
NVLJ				Sn	**Sn**	**19 46 53.5**	**-1.9**
NVLJ	**Novalja**	**2.83**	**96**	*i* Pn	**Pn**	**19 46 21.4**	**-0.1**
NVLJ				Sn	**Sn**	**19 46 53.5**	**-1.9**
MBDF	**Montbardon**	**2.96**	**268**	*e*Pn	**Pn**	**19 46 24.0**	**+0.5**
MBDF				*e*Sn	**Sn**	**19 46 59.5**	**+0.6**
	comp=N,20nm,0.5s						
MBDF	**Montbardon**	**2.96**	**268**	*e*Pn	**Pn**	**19 46 24.0**	**+0.5**
MBDF				*e*Sn	**Sn**	**19 46 59.5**	**+0.6**
	comp=N,9.9nm,0.5s						
OBKA	**Obir**	**3.00**	**57**	*e*Pn	**Pn**	**19 46 24.9**	**+1.0**
	comp=N,1.0nm,0.2s						
OBKA				*e*Pg	**Pg**	**19 46 34.2**	**+0.1**
	comp=N,8.8nm,0.3s						
OBKA				Sg	**Sg**	**19 47 11.9**	**-1.1**
	comp=N,23nm,0.4s						
OBKA	**Obir**	**3.00**	**57**	Pn	**Pn**	**19 46 24.9**	**+1.0**
	comp=N,1.0nm,0.2s						
LPG	**La Plagne**	**3.01**	**283**	*e*Pn	**Pn**	**19 46 25.3**	**+1.1**
	SNR=1.0						
LPG				*e*Sn	**Sn**	**19 47 01.0**	**+0.8**
	comp=N,12nm,0.5s,SNR=1.0						
LPG	**La Plagne**	**3.01**	**283**	*e*Pn	**Pn**	**19 46 25.3**	**+1.1**
	SNR=1.0						
LPG				*e*Sn	**Sn**	**19 47 01.0**	**+0.8**
	comp=N,6.2nm,0.5s,SNR=1.0						
LPL	**La Plagne**	**3.03**	**283**	*e*Pn	**Pn**	**19 46 25.3**	**+0.9**
	SNR=1.0						
LPL				*e*Sn	**Sn**	**19 47 00.4**	**-0.1**
	SNR=1.0						
LPL				*e*Sg	**Sg**	**19 47 15.0**	**+1.1**
	comp=N,10nm,0.4s,SNR=1.0						
LPL	**La Plagne**	**3.03**	**283**	*e*Pn	**Pn**	**19 46 25.3**	**+0.9**
	SNR=1.0						
LPL				*e*Sn	**Sn**	**19 47 00.4**	**-0.1**
	SNR=1.0						
LPL				*e*Sg	**Sg**	**19 47 15.0**	**+1.1**
	comp=N,5.2nm,0.4s,SNR=1.0						
CALF	**Calern**	**3.10**	**249**	P	**Pn**	**19 46 26.9**	**+1.6**
CALF	**Calern**	**3.10**	**249**	P	**Pn**	**19 46 26.9**	**+1.6**
OZLJ	**Ozalj**	**3.28**	**76**	*e*Pn	**Pn**	**19 46 27.9**	**+0.2**
OZLJ				Sn	**Sn**	**19 47 05.8**	**-0.7**
OZLJ	**Ozalj**	**3.28**	**76**	*e*Pn	**Pn**	**19 46 27.9**	**+0.2**
OZLJ				Sn	**Sn**	**19 47 05.7**	**-0.7**
FRF	**La Foret Royal**	**3.36**	**248**	*e*Pn	**Pn**	**19 46 28.4**	**-0.4**
	SNR=1.0						
FRF				*e*Sn	**Sn**	**19 47 08.2**	**-0.3**
	comp=N,31nm,0.4s,SNR=1.0						
FRF	**La Foret Royal**	**3.36**	**248**	*e*Pn	**Pn**	**19 46 28.4**	**-0.4**
	SNR=1.0						
FRF				*e*Sn	**Sn**	**19 47 08.2**	**-0.3**
	comp=N,15nm,0.4s,SNR=1.0						
SOKA	**Soboth**	**3.37**	**57**	*i* Pn	**Pn**	**19 46 29.2**	**+0.2**
	comp=N,1.2nm,0.2s						
SOKA				*e*Pg	**Pg**	**19 46 39.5**	**-1.8**

	comp=N,3.6nm,0.3s							
SOKA	**Soboth**	**3.37**	**57**	Pn		**Pn**	**19 46 29.2**	**+0.2**
	comp=N,1.2nm,0.2s							
UDBI	**Udbina**	**3.47**	**95**	*e*Pn		**Pn**	**19 46 31.7**	**+1.4**
UDBI				Sn		**Sn**	**19 47 08.1**	**-3.2**
UDBI	**Udbina**	**3.47**	**95**	*e*Pn		**Pn**	**19 46 31.7**	**+1.4**
UDBI				Sn		**Sn**	**19 47 08.0**	**-3.2**
LMR	**La Mourre**	**3.55**	**245**	*e*Pn		**Pn**	**19 46 31.6**	**+0.2**
	SNR=1.0							
LMR				*e*Sn		**Sn**	**19 47 12.2**	**-1.0**
	comp=N,29nm,0.4s,SNR=1.0							
LMR	**La Mourre**	**3.55**	**245**	*e*Pn		**Pn**	**19 46 31.6**	**+0.2**
	SNR=1.0							
LMR				*e*Sn		**Sn**	**19 47 12.2**	**-1.0**
	comp=N,15nm,0.4s,SNR=1.0							
ORIF	**Oris-en-Rattie**	**3.59**	**272**	*e*Pn		**Pn**	**19 46 32.7**	**+0.7**
	SNR=1.0							
ORIF				*e*Sn		**Sn**	**19 47 13.5**	**-0.7**
	comp=N,11nm,0.5s,SNR=1.0							
ORIF	**Oris-en-Rattie**	**3.59**	**272**	P		**Pn**	**19 46 33.4**	**+1.4**
ORIF	**Oris-en-Rattie**	**3.59**	**272**	*e*Pn		**Pn**	**19 46 32.7**	**+0.7**
	SNR=1.0							
ORIF				*e*Sn		**Sn**	**19 47 13.5**	**-0.7**
	comp=N,5.5nm,0.5s,SNR=1.0							
KIZ	**Kirchzarten**	**3.69**	**327**	P		**Pn**	**19 46 34.3**	**+1.0**
KIZ	**Kirchzarten**	**3.69**	**327**	P		**Pn**	**19 46 34.3**	**+1.0**
MOA	**Molln**	**3.73**	**37**	*i* Pn		**Pn**	**19 46 35.5**	**+1.5**
	comp=N,4.1nm,0.3s							
MOA	**Molln**	**3.73**	**37**	Pn		**Pn**	**19 46 35.5**	**+1.5**
	comp=N,4.1nm,0.3s							
CHMF	**Charmoille**	**3.78**	**310**	P		**Pn**	**19 46 35.0**	**+0.4**
CHMF	**Charmoille**	**3.78**	**310**	P		**Pn**	**19 46 35.0**	**+0.4**
CHMF				S		**Sn**	**19 47 21.7**	**+2.7**
CABF	**La Chapelle**	**3.79**	**298**	*e*Pn		**Pn**	**19 46 35.4**	**+0.6**
	SNR=1.0							
CABF				*e*Sn		**Sn**	**19 47 19.1**	**-0.1**
	comp=N,8.2nm,0.5s,SNR=1.0							
CABF	**La Chapelle**	**3.79**	**298**	*e*Pn		**Pn**	**19 46 35.4**	**+0.6**
	SNR=1.0							
CABF				*e*Sn		**Sn**	**19 47 19.1**	**-0.1**
	comp=N,4.1nm,0.5s,SNR=1.0							
SMRF	**Simiane la Rot**	**3.95**	**258**	*e*Pn		**Pn**	**19 46 37.9**	**+1.0**
	SNR=1.0							
SMRF	**Simiane la Rot**	**3.95**	**258**	*e*Pn		**Pn**	**19 46 37.9**	**+1.0**
	SNR=1.0							
HINF	**Hinteralfeld**	**4.05**	**317**	*e*Pn		**Pn**	**19 46 38.4**	**+0.1**
	SNR=1.0							
HINF				*e*Sn		**Sn**	**19 47 24.6**	**-0.9**
	comp=N,5.9nm,0.2s							
HINF	**Hinteralfeld**	**4.05**	**317**	*e*Pn		**Pn**	**19 46 38.4**	**+0.1**
	SNR=1.0							
HINF				*e*Sn		**Sn**	**19 47 24.6**	**-0.9**
	comp=N,3.0nm,0.2s							
ECH	**Echery**	**4.20**	**323**	P		**Pn**	**19 46 40.6**	**+0.2**
ECH	**Echery**	**4.20**	**323**	P		**Pn**	**19 46 40.6**	**+0.2**
CDF	**Champ du Feu**	**4.31**	**326**	*e*Pn		**Pn**	**19 46 41.4**	**-0.5**
	SNR=1.0							
CDF				*e*Sn		**Sn**	**19 47 30.1**	**-1.9**
	comp=N,8.9nm,0.3s							
CDF	**Champ du Feu**	**4.31**	**326**	*e*Pn		**Pn**	**19 46 41.4**	**-0.5**
	SNR=1.0							
CDF				*e*Sn		**Sn**	**19 47 30.1**	**-1.9**
	comp=N,4.4nm,0.3s							
HAU	**Haudompre**	**4.42**	**316**	*e*Pn		**Pn**	**19 46 43.7**	**+0.3**
	SNR=1.0							
HAU				*e*Sn		**Sn**	**19 47 33.6**	**-1.1**
	comp=N,17nm,0.3s,SNR=1.0							
HAU	**Haudompre**	**4.42**	**316**	*e*Pn		**Pn**	**19 46 43.7**	**+0.3**
	SNR=1.0							
HAU				*e*Sn		**Sn**	**19 47 33.6**	**-1.1**
	comp=N,8.4nm,0.3s,SNR=1.0							
VIVF	**Saint-Julien-l**	**4.45**	**271**	*e*Pn		**Pn**	**19 46 44.0**	**+0.2**
	SNR=1.0							
VIVF				*e*Sn		**Sn**	**19 47 34.6**	**-0.7**
	comp=N,3.0nm,0.3s,SNR=1.0							
VIVF	**Saint-Julien-l**	**4.45**	**271**	*e*Pn		**Pn**	**19 46 44.0**	**+0.2**
	SNR=1.0							
VIVF				*e*Sn		**Sn**	**19 47 34.6**	**-0.7**
	comp=N,1.5nm,0.3s,SNR=1.0							
KHC	**Kasperske Hory**	**4.59**	**22**	*e*PN		**Pn**	**19 46 46.2**	**+0.5**
KHC				*e*PG		**Pg**	**19 47 03.0**	**-1.6**
KHC				*e*SN		**Sn**	**19 47 37.8**	**-1.1**
KHC				*ex*		x	19 48 07.7	
LASF	**Ste Croix**	**5.13**	**263**	*e*Sn		**Sn**	**19 47 51.6**	**-0.5**
	comp=N,4.7nm,0.8s,SNR=1.0							
LASF	**Ste Croix**	**5.13**	**263**	*e*Sn		**Sn**	**19 47 51.6**	**-0.5**
	comp=N,2.3nm,0.8s,SNR=1.0							
SMF	**Signal de Mont**	**5.25**	**292**	*e*Pn		**Pn**	**19 46 55.1**	**+0.3**
	SNR=1.0							
SMF				*e*Sn		**Sn**	**19 47 53.8**	**-1.3**
	comp=N,6.7nm,0.3s,SNR=1.0							
SMF	**Signal de Mont**	**5.25**	**292**	*e*Pn		**Pn**	**19 46 55.1**	**+0.3**
	SNR=1.0							
SMF				*e*Sn		**Sn**	**19 47 53.8**	**-1.3**
	comp=N,3.3nm,0.3s,SNR=1.0							
NKC	**Novy Kostel**	**5.42**	**10**	*e*PG		**Pg**	**19 47 22.5**	**+2.0**
NKC				*e*SN		**Sn**	**19 47 57.3**	**-2.0**
LOR	**Lormes**	**5.45**	**298**	*e*Pn		**Pn**	**19 46 57.8**	**+0.3**
	SNR=1.0							
LOR				*e*Sn		**Sn**	**19 47 58.9**	**-1.1**
	comp=N,5.2nm,0.3s,SNR=1.0							
LOR	**Lormes**	**5.45**	**298**	P		**Pn**	**19 46 58.5**	**+1.0**
LOR	**Lormes**	**5.45**	**298**	*e*Pn		**Pn**	**19 46 57.8**	**+0.3**
	SNR=1.0							
LOR				*e*Sn		**Sn**	**19 47 58.9**	**-1.1**
	comp=N,2.6nm,0.3s,SNR=1.0							
SSF	**Saint Saulge**	**5.60**	**295**	*e*Pn		**Pn**	**19 46 59.5**	**-0.1**
	SNR=1.0							
SSF				*e*Sn		**Sn**	**19 48 02.0**	**-1.7**
	comp=N,3.5nm,0.4s							
SSF	**Saint Saulge**	**5.60**	**295**	*e*Pn		**Pn**	**19 46 59.5**	**-0.1**
	SNR=1.0							
SSF				*e*Sn		**Sn**	**19 48 02.0**	**-1.7**
	comp=N,1.8nm,0.4s							
AVF	**Avril sur Loir**	**5.62**	**292**	*e*Pn		**Pn**	**19 47 00.5**	**+0.7**
	SNR=1.0							
AVF				*e*Sn		**Sn**	**19 48 03.0**	**-1.0**
	comp=N,2.0nm,0.3s							
AVF	**Avril sur Loir**	**5.62**	**292**	*e*Pn		**Pn**	**19 47 00.5**	**+0.7**
	SNR=1.0							
AVF				*e*Sn		**Sn**	**19 48 03.0**	**-1.0**
	comp=N,1.0nm,0.3s							
PRU	**Pruhonice**	**5.64**	**24**	*e*SG		**Sg**	**19 48 38.4**	**+0.9**
	comp=N,5.3nm,0.7s							
GOPC	**GO Pecny, Ondr**	**5.64**	**26**	*e*SG		**Sg**	**19 48 37.4**	**-0.4**
	comp=N,18nm,1.2s							
BGF	**Bois d'Agland**	**5.89**	**289**	*e*Pn		**Pn**	**19 47 03.8**	**+0.2**
	SNR=1.0							
BGF				*e*Sn		**Sn**	**19 48 09.4**	**-1.4**
	comp=N,16nm,0.4s							
BGF	**Bois d'Agland**	**5.89**	**289**	*e*Pn		**Pn**	**19 47 03.8**	**+0.2**
	SNR=1.0							
BGF				*e*Sn		**Sn**	**19 48 09.4**	**-1.4**
	comp=N,8.1nm,0.4s							
TCF	**Toulx Ste Croi**	**6.27**	**286**	*e*Pn		**Pn**	**19 47 09.4**	**+0.6**
TCF				*e*Sn		**Sn**	**19 48 18.7**	**-1.5**
	SNR=1.0							
TCF	**Toulx Ste Croi**	**6.27**	**286**	*e*Pn		**Pn**	**19 47 09.4**	**+0.6**
TCF				*e*Sn		**Sn**	**19 48 18.7**	**-1.5**
	SNR=1.0							
BRG	**Berggiesshubel**	**6.30**	**18**	SG		**Sg**	**19 48 57.0**	**-1.7**
	comp=N,4.4nm,0.7s							
VYHS	**Vyhne**	**6.51**	**54**	*e*PN		**Pn**	**19 47 11.8**	**-0.3**
VYHS				*e*SN		**Sn**	**19 48 19.1**	**-7.0**
VYHS	**Vyhne**	**6.51**	**54**	*e*Pn		**Pn**	**19 47 11.8**	**-0.3**
CLL	**Collm**	**6.55**	**11**	*e*Pn		**Pn**	**19 47 13.0**	**+0.5**
CLL				*e*Pg		**Pg**	**19 47 46.0**	**+4.0**
CLL				*e*			19 48 47.0	
CLL				*e*Sg		**Sg**	**19 49 05.0**	**-1.7**
	comp=Z,8.0nm,1.2s							
UPC	**Upice**	**6.56**	**30**	*e*SG		**Sg**	**19 49 07.3**	**+0.1**

IDC 04 20:10:41.7±1.3, 23°.71N×141°.98E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.3/63, mbtmp3.6/5, Error ellipse: s-maj=48.1km s-min=27.1km az=84.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.02**	**190**	P		20 18 51.0	-0.2
	0.2nm,0.3s,baz=7.4,slow=8.1,SNR=21						
ZALV	**Zalesovo Beam**	**51.96**	**321**	P		20 19 52.6	+0.3
	0.3nm,0.3s,baz=110,slow=8.3,SNR=2.7						
MKAR	**Makanchi Array**	**52.53**	**312**	P		20 19 56.8	0.0
	0.1nm,0.4s,baz=96,slow=6.7,SNR=4.2						
BVAR	**Borovoye Array**	**60.43**	**319**	P		20 20 52.5	-0.5
	0.1nm,0.3s,baz=97,slow=6.4,SNR=3.2						
YKA	**Yellowknife Ar**	**75.21**	**28**	P		20 22 26.0	+0.1
	0.6nm,0.4s,baz=292,slow=5.9,SNR=7.2						

*JMA **04** 20:14:37.7±0.1, 22°.09N×121°.34E, h52km±4km, M3.5*
*ISCJB **04** 20:14:39.7±0.4, 22°.24N±0°.02×121°.49E±0°.02, h16km±3km, Error ellipse: s-maj=3.4km s-min=3.1km az=39.0*
*TAP **04** 20:14:40.5, 22°.27N×121°.41E, h22km, ML3.4, B*
ISC 04 20:14:39.8±1.1, 22°.29N±0°.02×121°.47E±0°.02, h19km±2km, n84, σ1§15/156, 3D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.26**	**162**	P	**Pb**	**20 14 46.5**	**+0.6**
	baz=149						
LAY				S	**Sg**	**20 14 51.0**	**+1.1**
	baz=149						
TWH	**Lutao**	**0.42**	**1**	P	**Pb**	**20 14 49.0**	**+0.3**
	baz=20						
TWH				S	**Sb**	**20 14 55.6**	**+0.8**
	baz=20						
TAW	**Tawu**	**0.53**	**277**	*e*P	**Pb**	**20 14 49.8**	**-0.8**
	baz=280						
TAW				S	**Sg**	**20 14 57.3**	**-0.5**
	baz=280						
TTN	**Taitung**	**0.55**	**327**	*e*P	**Pn**	**20 14 52.7**	**0.0**
	baz=342						
TTN				*e*S	**Sn**	**20 15 00.2**	**-1.1**
	baz=342						
ECL	**Taimali**	**0.56**	**303**	P	**Pb**	**20 14 50.9**	**-0.2**
	baz=294						
ECL				S	**Sb**	**20 14 58.4**	**-0.3**
	baz=294						
EAST	**Anshuo**	**0.58**	**279**	⇓P	**Pb**	**20 14 50.9**	**-0.4**
	baz=282						
EAST				S	**Sb**	**20 14 58.2**	**-1.0**
	baz=282						
TWGBT	**Beinan**	**0.64**	**326**	P	**Pb**	**20 14 52.4**	**+0.1**
	baz=317						
TWGBT				*e*S	**Sg**	**20 15 02.0**	**+1.1**
	baz=317						
TWG	**Pinlang**	**0.64**	**325**	P	**Pb**	**20 14 52.4**	**0.0**
	baz=317						
TWG				S	**Sb**	**20 15 01.2**	**+0.2**
	baz=317						
TSEB	**Hengchuen, Pin**	**0.65**	**234**	S	**Sb**	**20 15 01.5**	**+0.2**
	baz=245						
TWKBT	**Hengchun**	**0.70**	**240**	⇓*e*P	**Pb**	**20 14 52.5**	**-0.9**
	baz=248						
TWKBT				*e*S	**Sb**	**20 15 01.3**	**-1.3**
	baz=248						
TWK1	**Hengchun**	**0.70**	**241**	P	**Pb**	**20 14 52.7**	**-0.8**
	baz=248						
TWK1				S	**Sb**	**20 15 01.4**	**-1.4**
	baz=248						
SCZT	**Fangliau**	**0.79**	**276**	⇓P	**Pb**	**20 14 54.2**	**-0.7**
	baz=286						
SCZT				S	**Sb**	**20 15 03.8**	**-1.5**
	baz=286						
CHKT	**Chengkung**	**0.81**	**353**	P	**Pg**	**20 14 55.6**	**-0.1**
	baz=5.0						
CHKT				S	**Sn**	**20 15 07.2**	**-0.7**
	baz=5.0						
MASBT	**Mashibuluo**	**0.83**	**293**	*e*P	**Pb**	**20 14 55.2**	**-0.5**
	baz=295						
MASBT				*e*S	**Sb**	**20 15 05.3**	**-1.3**
	baz=295						
SSPT	**Xinbi**	**0.85**	**283**	*e*P	**Pb**	**20 14 56.1**	**0.0**
	baz=293						
SSPT				*e*S	**Sb**	**20 15 08.2**	**+1.0**
	baz=293						
SSD	**Sandimen**	**0.90**	**301**	*e*P	**Pb**	**20 14 56.3**	**-0.5**
	baz=298						
SSD				*e*S	**Sb**	**20 15 07.3**	**-1.1**
	baz=298						
FULB	**Fuli**	**0.92**	**350**	*e*P	**Pg**	**20 14 57.6**	**-0.2**
	baz=338						
FULB				*e*S	**Sn**	**20 15 10.8**	**+0.3**
	baz=338						
ELDTW	**Lidau**	**0.99**	**335**	*e*P	**Pb**	**20 14 58.0**	**-0.4**
	baz=339						
SGLT	**Jiouru**	**1.00**	**296**	*e*P	**Pg**	**20 14 59.7**	**+0.4**
	baz=293						
SGLT				*e*S	**Sg**	**20 15 13.3**	**+0.8**
	baz=293						
WLCH	**Liuqiu**	**1.01**	**274**	*e*P	**Pg**	**20 15 00.8**	**+1.3**
	baz=274						
SLGT	**Liugui**	**1.03**	**313**	*e*P	**Pb**	**20 14 58.9**	**-0.2**
	baz=320						
SLGT				*e*S	**Sn**	**20 15 13.6**	**+0.2**
	baz=320						
TWF1	**Yuli**	**1.07**	**352**	*e*P	**Pn**	**20 14 59.9**	**0.0**
	baz=342						
TWF1				*e*S	**Sb**	**20 15 13.1**	**-0.3**
	baz=342						
STYT	**Tauyuan**	**1.09**	**323**	*e*P	**Pb**	**20 14 60.0**	**-0.1**
	baz=335						
STYT				*e*S	**Sn**	**20 15 14.9**	**+0.1**
	baz=335						
TWM1	**Shoushan**	**1.10**	**299**	*e*P	**Pg**	**20 15 02.5**	**+1.3**
	baz=301						
TWM1				*e*S	**Sg**	**20 15 17.8**	**+2.1**
	baz=301						
YULB	**Yu-li**	**1.11**	**352**	*e*P	**Pn**	**20 15 00.0**	**-0.4**
	baz=342						
YULB				*e*S	**Sn**	**20 15 15.1**	**-0.1**
	baz=342						
HGSD	**Ruisui**	**1.20**	**358**	*e*P	**Pn**	**20 15 01.6**	**-0.1**
	baz=13						
EHY	**Hungye**	**1.22**	**354**	*e*P	**Pn**	**20 15 01.7**	**-0.2**
	baz=344						
EHY				*e*S	**Sn**	**20 15 18.1**	**+0.2**
	baz=344						
WTP	**Ta-pu**	**1.23**	**321**	*e*P	**Pb**	**20 15 03.1**	**+0.5**
	baz=323						
WTP				*e*S	**Sg**	**20 15 19.8**	**-0.1**
	baz=323						
CHN1	**Nanshi**	**1.24**	**316**	P	**Pg**	**20 15 03.6**	**-0.3**
	baz=331						
CHN1				S	**Sg**	**20 15 20.8**	**+0.6**
	baz=331						
TPUB	**Ta-pu**	**1.27**	**323**	P	**Pb**	**20 15 03.3**	**+0.1**
	baz=325						
TPUB				S	**Sg**	**20 15 20.4**	**-0.6**
	baz=325						
CHN3	**Shinhua**	**1.28**	**308**	*e*S	**Sg**	**20 15 24.3**	**+2.8**
	baz=309						
TWK	**Hsinying**	**1.33**	**317**	P	**Pb**	**20 15 04.8**	**+0.5**
	baz=320						
TWK				S	**Sg**	**20 15 23.0**	**+0.2**
	baz=320						
EGFH	**Guangfu**	**1.37**	**359**	*e*P	**Pn**	**20 15 04.4**	**+0.3**
	baz=347						
EGFH				*e*S	**Sg**	**20 15 23.4**	**-0.9**
	baz=347						
VWDT	**VWDT**	**1.49**	**348**	*e*P	**Pb**	**20 15 06.8**	**-0.1**
	baz=4.0						
VWDT				*e*S	**Sb**	**20 15 25.1**	**-0.4**
	baz=4.0						
ESL	**Shilin**	**1.52**	**359**	*e*P	**Pb**	**20 15 07.1**	**-0.3**
	baz=10.0						
ESL				*e*S	**Sb**	**20 15 27.3**	**+1.0**
	baz=10.0						
CHN2	**Minshiung**	**1.54**	**324**	*e*S	**Sg**	**20 15 30.1**	**+0.6**
	baz=326						
CHY	**Chiayi**	**1.54**	**322**	*e*P	**Pb**	**20 15 08.7**	**+0.9**
	baz=324						
CHY				*e*S	**Sg**	**20 15 28.9**	**-0.7**
	baz=324						
SSLB	**Suanglung**	**1.56**	**343**	*e*P	**Pb**	**20 15 08.9**	**+0.7**
	baz=355						
SSLB				*e*S	**Sb**	**20 15 28.4**	**+0.7**
	baz=355						
WLGB	**Puzi**	**1.60**	**318**	*e*P	**Pb**	**20 15 09.7**	**+0.9**
	baz=319						
WLGB				*e*S	**Sb**	**20 15 30.1**	**+1.5**
	baz=319						
WGK	**Gukeng**	**1.62**	**329**	*e*S	**Sg**	**20 15 31.1**	**-1.1**
	baz=331						
WDLH	**Douliu**	**1.63**	**329**	*e*S	**Sg**	**20 15 31.4**	**-1.3**
	baz=312						
SMLT	**Sun Moon Lake**	**1.67**	**342**	*e*P	**Pb**	**20 15 10.9**	**+0.8**
	baz=354						
SMLT				*e*S	**Sg**	**20 15 32.6**	**-1.2**
	baz=354						
WJS	**Zhushan**	**1.67**	**336**	*e*P	**Pb**	**20 15 10.8**	**+0.7**
	baz=338						
WJS				*e*S	**Sg**	**20 15 32.8**	**-1.0**
	baz=338						
OWD	**Renai**	**1.68**	**351**	*e*P	**Pb**	**20 15 09.5**	**-0.8**
	baz=5.0						
OWD				*e*S	**Sn**	**20 15 29.2**	**-0.3**
	baz=5.0						
TYC	**Yuchr**	**1.70**	**341**	*e*P	**Pb**	**20 15 10.9**	**+0.4**
	baz=343						
TYC				*e*S	**Sg**	**20 15 33.9**	**-0.9**
	baz=343						
WNT	**Mingjian**	**1.74**	**336**	*e*P	**Pb**	**20 15 11.8**	**+0.6**
	baz=338						
WNT				*e*S	**Sb**	**20 15 34.2**	**+1.6**
	baz=338						
CHGB	**Renai**	**1.78**	**351**	*e*P	**Pb**	**20 15 11.0**	**-1.1**
	baz=6.0						
CHGB				*e*S	**Sb**	**20 15 33.3**	**-0.9**
	baz=6.0						
DPDB	**Guoxing**	**1.81**	**344**	*e*P	**Pb**	**20 15 12.6**	**+0.2**
	baz=359						
DPDB				*e*S	**Sb**	**20 15 35.4**	**+0.7**
	baz=359						
NACB	**Ninganchiao**	**1.88**	**4**	*e*P	**Pn**	**20 15 11.7**	**+0.7**
	baz=355						
NACB				*e*S	**Sb**	**20 15 35.7**	**-1.0**
	baz=355						
WDGT	**Dungji**	**1.93**	**300**	*e*P	**Pn**	**20 15 11.2**	**-0.4**
	baz=301						
WDGT				*e*S	**Sn**	**20 15 34.7**	**-0.7**
	baz=301						
WCHH	**Zhanghua**	**1.97**	**335**	*e*S	**Sb**	**20 15 40.4**	**+1.1**
	baz=320						
TWT	**Tachien**	**1.97**	**352**	*e*P	**Pb**	**20 15 15.4**	**+0.1**
	baz=5.0						
TWT				*e*S	**Sn**	**20 15 37.9**	**+1.1**
	baz=5.0						
TDCB	**Techi**	**1.97**	**352**	*e*P	**Pb**	**20 15 14.5**	**-0.8**
	baz=5.0						
TDCB				*e*S	**Sn**	**20 15 38.0**	**+1.2**
	baz=5.0						
VCHM	**Qimei**	**2.09**	**296**	*e*P	**Pn**	**20 15 13.5**	**-0.4**
	baz=296						
VCHM				*e*S	**Sn**	**20 15 37.4**	**-2.0**
	baz=296						
PHUB	**P'eng-hu**	**2.13**	**305**	*e*P	**Pn**	**20 15 13.5**	**-0.9**
	baz=305						
PHUB				*e*S	**Sn**	**20 15 39.3**	**-1.1**
	baz=305						
NNSB	**Datong**	**2.13**	**358**	*e*P	**Pn**	**20 15 15.0**	**+0.4**
NNSB				*e*S	**Sn**	**20 15 41.6**	**+1.0**
NNSH	**Datong**	**2.13**	**358**	*e*P	**Pb**	**20 15 17.4**	**-0.6**
NNSH				*e*S	**Sb**	**20 15 44.1**	**0.0**
NNS	**Nan Shan**	**2.14**	**358**	*e*P	**Pb**	**20 15 16.9**	**-1.2**
NNS				*e*S	**Sb**	**20 15 44.5**	**+0.1**
ENA	**Nanau**	**2.14**	**7**	*e*P	**Pn**	**20 15 15.8**	**+1.1**
	baz=356						
ENA				*e*S	**Sb**	**20 15 42.4**	**-1.9**
	baz=356						
NANB	**Nanao**	**2.14**	**7**	*e*P	**Pn**	**20 15 15.1**	**+0.4**
	baz=357						
NANB				*e*S	**Sn**	**20 15 41.4**	**+0.6**
	baz=357						
EOS1	**EOS1**	**2.33**	**15**	*e*P	**Pb**	**20 15 19.5**	**-1.7**
	baz=28						
EOS1				*e*S	**Sb**	**20 15 47.8**	**-1.9**
	baz=28						
TWC	**Suao**	**2.33**	**9**	*e*P	**Pn**	**20 15 18.7**	**+1.4**
	baz=358						
TWC				*e*S	**Sn**	**20 15 46.4**	**+0.9**
	baz=358						
ENTT	**Nioudou**	**2.34**	**2**	*e*P	**Pb**	**20 15 20.1**	**-1.4**
	baz=5.0						
ENTT				*e*S	**Sn**	**20 15 47.1**	**+1.4**
	baz=5.0						
NSTT	**Nanjuang**	**2.37**	**350**	*e*P	**Pb**	**20 15 21.9**	**0.0**
	baz=336						
NSTT				*e*S	**Sb**	**20 15 49.5**	**-1.4**
	baz=336						
YHNB	**Yeheng**	**2.37**	**358**	*e*P	**Pb**	**20 15 20.2**	**-1.8**
YHNB				*e*S	**Sn**	**20 15 48.0**	**+1.5**
NSK	**Sanguang**	**2.38**	**358**	*e*P	**Pb**	**20 15 20.4**	**-1.7**
NSK				*e*S	**Sn**	**20 15 47.2**	**+0.6**
LIOB	**Emei**	**2.38**	**350**	*e*P	**Pn**	**20 15 19.9**	**+1.9**
	baz=336						
LIOB				*e*S	**Sn**	**20 15 47.9**	**+1.3**
	baz=336						
TWE	**Neicheng**	**2.43**	**4**	*e*P	**Pb**	**20 15 21.9**	**-1.0**
	baz=357						
TWE				*e*S	**Sb**	**20 15 50.7**	**-1.8**
	baz=357						
NWLT	**Wulai**	**2.48**	**1**	*e*P	**Pb**	**20 15 21.6**	**-2.2**
	baz=3.0						
NWLT				*e*S	**Sn**	**20 15 51.2**	**+2.2**
	baz=3.0						
JYNG	**Yonagunijimaku**	**2.54**	**32**	P	**Pn**	**20 15 20.9**	**+0.7**
JYNG				*e*S	**Sn**	**20 15 52.6**	**+2.0**
TIPB	**Shuangxi**	**2.69**	**7**	*e*P	**Pn**	**20 15 24.0**	**+1.8**
	baz=358						
TIPB				*e*S	**Sn**	**20 15 56.4**	**+2.1**
	baz=358						
WFSB	**Wu-fen Shan**	**2.78**	**6**	*e*P	**Pn**	**20 15 25.9**	**+2.5**
	baz=359						
WFSB				*e*S	**Sn**	**20 15 58.9**	**+2.4**
	baz=359						
YM10	**YM10**	**2.85**	**2**	*e*P	**Pn**	**20 15 26.4**	**+1.9**
	baz=4.0						
YM10				*e*S	**Sn**	**20 16 00.7**	**+2.3**
	baz=4.0						
YM11	**YM11**	**2.86**	**2**	*e*P	**Pb**	**20 15 27.8**	**-2.6**
	baz=4.0						
YM11				*e*S	**Sn**	**20 16 00.5**	**+1.8**
	baz=4.0						
YM07	**YM07**	**2.88**	**3**	*e*P	**Pb**	**20 15 27.8**	**-2.8**
	baz=5.0						
YM07				*e*S	**Sn**	**20 15 60.0**	**+1.1**
	baz=5.0						
IRIF	**Iriomote-Funau**	**2.91**	**45**	P	**Pn**	**20 15 26.3**	**+1.1**
IRIF				*e*S	**Sn**	**20 16 01.9**	**+2.2**
JKRS	**Kuro-shima**	**3.04**	**50**	S	**Sn**	**20 16 01.7**	**-1.1**
JIJ	**Ishigaki jima**	**3.21**	**49**	P	**Pn**	**20 15 29.8**	**+0.5**
JIJ				*e*S	**Sn**	**20 16 05.3**	**-1.8**
VWUC	**VWUC**	**3.26**	**326**	*e*P	**Pn**	**20 15 30.4**	**+0.3**
	baz=326						
VWUC				*e*S	**Sn**	**20 16 06.7**	**-1.7**
	baz=326						
JISG	**Ishigakijimahi**	**3.47**	**48**	P	**Pn**	**20 15 33.4**	**+0.5**
JISG				*e*S	**Sn**	**20 16 11.9**	**-1.6**
JTJ	**Tarama**	**3.78**	**51**	P	**Pn**	**20 15 38.4**	**+1.2

*IDC **04** 20:37:04.4±0.6, 73.°09N×5.°70E, h0km, mb3.8/17, mb1 3.9/23, mb1mx3.7/70, mbtmp3.8/23, ML3.3/6, MS3.1/15, Ms1 3.1/15, ms1mx3.0/74, Error ellipse: s-maj=14.8km s-min=11.6km az=51.0*
*NEIC **04** 20:37:05.7±0.4, 73.°10N×5.°77E, h10km, mb4.3/5, Error ellipse: s-maj=8.8km s-min=7.3km az=67.0*
*BER **04** 20:37:06.6±3.9, 73.°12N×5.°90E, h10km, ML2.2, ML3.3(NAO)*
ISC 04 20:37:05.8±0.5, 73.°05N±0.°06×5.°91E±0.°08, h11km, n71, σ2.°93/70, mb4.0/26, MS3.1/10, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJO	**Bjornoya**	**4.00**	**62**	*e*P	**Pn**	**20 38 05.2**	**-1.7**
HSPB	**Hornsund (broa**	**4.69**	**28**	*e*P	**Pn**	**20 38 14.1**	**-2.2**
JMIC	**Jan Mayen**	**4.92**	**252**	Pn	**Pn**	**20 38 18.0**	**-1.5**
	baz=130,slow=7.9,SNR=2.3						
JMIC	**Jan Mayen**	**4.92**	**252**	Pn	**Pn**	**20 38 18.0**	**-1.5**
TRO	**Tromso**	**5.40**	**123**	*e*P	**Pn**	**20 38 26.0**	**0.0**
TRO				*e*T	T	20 43 21.1	
LOF	**Lofoten**	**5.55**	**149**	*e*P	**Pn**	**20 38 29.3**	**+1.1**
LOF				*e*S	**Sn**	**20 39 24.4**	**-7.5**
LOF				IAML		20 39 33.5	
	comp=Z,6.2nm,0.5s						
LOF				*e*T	T	20 43 34.2	
SPA0	**Spitsbergen Ar**	**5.77**	**22**	Pn	**Pn**	**20 38 28.8**	**-2.3**
	baz=230,slow=16						
SPITS	**Spitsbergen Ar**	**5.77**	**22**	Pn	**Pn**	**20 38 29.2**	**-2.0**
	baz=215,slow=14,SNR=73						
SPITS				LR	LR	20 40 25.5	
	comp=Z,161nm,19.5s,baz=215,slow=35						
STEI	**Steigen**	**6.01**	**144**	*e*P	**Pn**	**20 38 35.0**	**+0.5**
STEI				*e*S	Sn	20 39 33.9	-9.1
STEI				*e*T	T	20 43 40.0	
HAMF	**Hammerfest**	**6.04**	**105**	*e*P	**Pn**	**20 38 35.6**	**+0.7**
KBS	**Kingsbay**	**6.09**	**11**	*e*P	**Pn**	**20 38 33.6**	**-1.9**
KIF	**Kilpisjarvi**	**6.31**	**123**	*e*P	**Pn**	**20 38 38.9**	**+0.3**
KIF				*e*T	T	20 43 38.7	
KTK1	**Kautokeino**	**6.93**	**117**	*e*P	**Pn**	**20 38 46.4**	**-0.7**
KONS	**Konsvik**	**7.03**	**156**	*e*P	**Pn**	**20 38 49.4**	**+1.0**
KONS				*e*S	**Sn**	**20 40 00.8**	**-7.4**
KONS				IAML		20 40 09.6	
	comp=Z,3.6nm,0.5s						
ARA0	**ARCESS Array S**	**7.19**	**110**	Pn	**Pn**	**20 38 50.8**	**+0.1**
	baz=320,slow=14						
ARCES	**ARCESS Array B**	**7.19**	**110**	Pn	**Pn**	**20 38 50.5**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=327,slow=8.7,SNR=6.4						
ARCES				Sn	Sn	20 40 02.4	-10
	comp=Z,0.1nm,0.3s,baz=313,slow=26,SNR=3.0						
DAG	**Danmarks Havn**	**7.37**	**312**	*i* P	Pn	20 38 47.6	-5.4
DAG				*e*S	Sn	20 40 02.6	-14
MOR8	**Moi Rana**	**7.51**	**153**	*e*P	**Pn**	**20 38 55.4**	**+0.3**
NB2	**NORSAR Subarra**	**12.23**	**168**	Pn	**Pn**	**20 39 59.6**	**0.0**
	baz=346,slow=16						
NOA	**NORSAR Array B**	**12.23**	**168**	Pn	**Pn**	**20 39 59.5**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=358,slow=13,SNR=5.2						
NOA				LR	LR	20 43 44.1	
	comp=Z,19nm,19.9s,baz=345,slow=32						
NRA0	**NORESS Array A**	**12.55**	**167**	Pn	**Pn**	**20 40 02.6**	**-1.4**
	baz=355,slow=11						
HFS	**Hagfors**	**13.31**	**163**	Pn	**Pn**	**20 40 14.2**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=348,slow=13,SNR=9.6						
HFS				LR	LR	20 45 01.8	
	comp=Z,49nm,19.6s,baz=324,slow=36						
HFS	**Hagfors**	**13.31**	**163**	Pn	**Pn**	**20 40 13.9**	**-0.5**
	baz=341,slow=14						
FIA0	**FINESS Array S**	**13.90**	**136**	Pn	**Pn**	**20 40 21.8**	**-0.5**
	baz=348,slow=18						
FINES	**FINESS Array B**	**13.90**	**136**	Pn	**Pn**	**20 40 21.7**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=354,slow=15,SNR=5.0						
FINES				LR	LR	20 45 12.8	
	comp=Z,108nm,21.5s,baz=350,slow=35						
EKA	**Eskdalemuir Ar**	**18.18**	**197**	P	**Pn**	**20 41 17.8**	**0.0**
	baz=6.0,slow=10,SNR=6.3						
SFJD	**Kangerlussuaq**	**19.50**	**281**	LR	LR	20 48 13.6	
	comp=Z,119nm,18.2s,baz=16,slow=34						
OBN	**Obninsk**	**21.96**	**128**	P	**P**	**20 41 59.9**	**+0.9**
	comp=Z,6.6nm,0.7s,baz=345,slow=10.0,SNR=5.8						
OBN				LR	LR	20 50 16.8	
	comp=Z,77nm,20.9s,baz=271,slow=36						
CLL	**Collm**	**22.04**	**168**	*e*P	**P**	**20 42 01.0**	**+1.1**
BRG	**Berggiesshubel**	**22.53**	**167**	*e*P	**P**	**20 42 05.9**	**+0.7**
	comp=Z,7.4nm,1.2s						
KSP	**Ksiaz**	**22.74**	**163**	*e*P	**P**	**20 42 08.8**	**+1.4**
NKC	**Novy Kostel**	**23.07**	**169**	*e*P	**P**	**20 42 13.8**	**+2.8**
DPC	**Dobruska-Polom**	**23.23**	**163**	*e*P	**P**	**20 42 15.2**	**+2.6**
DPC				*e*pP	**sP**	**20 42 19.4**	**+2.2**
PRU	**Pruhonice**	**23.45**	**166**	*e*P	**P**	**20 42 16.8**	**+2.1**
OKC	**Ostrava-Krasne**	**23.91**	**160**	*e*P	**P**	**20 42 21.4**	**+2.2**
MORC	**Moravsky Berou**	**23.91**	**161**	*e*P	**P**	**20 42 20.2**	**+0.9**
VRAC	**Vranov**	**24.29**	**163**	P	**P**	**20 42 24.4**	**+1.6**
	comp=Z,4.9nm,0.8s,baz=5.6,slow=11,SNR=7.9						
VRAC				LR	LR	20 53 18.2	
	comp=Z,34nm,19.2s,baz=338,slow=40						
VRAC	**Vranov**	**24.29**	**163**	*e*P	**P**	**20 42 24.1**	**+1.3**
KRUC	**Moravsky**	**24.52**	**163**	*e*P	**P**	**20 42 27.2**	**+2.4**
GERES	**GERESS Array B**	**24.53**	**168**	P	**P**	**20 42 27.2**	**+2.1**
	comp=Z,3.3nm,0.9s,baz=358,slow=8.5,SNR=21						
AKASG	**Malin Array Be**	**24.61**	**143**	P	**P**	**20 42 25.8**	**+0.2**
	comp=Z,1.9nm,0.6s,baz=346,slow=9.7,SNR=12						
AKASG				LR	LR	20 51 48.2	
	comp=Z,118nm,18.6s,baz=30,slow=36						
KWP	**Kalwaria Pacla**	**24.64**	**153**	*e*P	**P**	**20 42 29.4**	**+3.4**
NRIK	**Noril'sk**	**24.65**	**57**	P	**P**	**20 42 25.6**	**-0.2**
	comp=Z,3.9nm,0.4s,baz=324,slow=8.7,SNR=3.4						
NRIK				LR	LR	20 53 34.2	
	comp=Z,47nm,18.2s,baz=214,slow=40						
LANS	**Liptovska Anna**	**24.72**	**158**	*e*P	**P**	**20 42 30.4**	**+3.7**
BFO	**Black Forest**	**24.82**	**176**	*e*P	**P**	**20 42 29.2**	**+1.6**
	comp=Z,5.1nm,1.1s						
JAVC	**Velka Javorina**	**24.83**	**161**	*e*P	**P**	**20 42 29.4**	**+1.7**
RES	**Resolute Bay**	**24.91**	**322**	LR	LR	20 50 54.7	
	comp=Z,49nm,18.1s,baz=64,slow=33						
CRVS	**Cervenica-Dubn**	**25.20**	**155**	*e*P	**P**	**20 42 34.1**	**+3.1**
MODS	**Modra-Piesok**	**25.28**	**162**	*e*P	**P**	**20 42 33.1**	**+1.4**
VYHS	**Vyhne**	**25.31**	**160**	*e*P	**P**	**20 42 34.6**	**+2.6**
MOA	**Molln**	**25.56**	**167**	*i* pP	**P**	**20 42 36.2**	**+1.9**
	comp=Z,7.6nm,1.5s						
CONA	**Conrad Observa**	**25.60**	**164**	*i* pP	**P**	**20 42 36.8**	**+2.1**
	comp=Z,5.1nm,0.8s						
MOTA	**Moosalm**	**25.89**	**172**	*e*pP	**P**	**20 42 39.2**	**+1.7**
	comp=Z,12nm,1.5s						
DAVA	**Damuels**	**25.91**	**174**	*e*pP	**P**	**20 42 39.6**	**+2.0**
	comp=Z,12nm,1.0s						
ARU	**Arti**	**26.65**	**100**	P	**P**	**20 42 45.3**	**+1.3**
	comp=Z,0.5nm,0.3s,baz=309,slow=9.4,SNR=2.5						
ARU	**Arti**	**26.65**	**100**	*e*P	**P**	**20 42 42.6**	**-1.4**
	comp=Z,5.6nm,1.0s						
TIXI	**Tiksi**	**31.11**	**31**	*e*P	**P**	**20 43 24.1**	**+0.6**
	comp=Z,4.0nm,1.1s						
AKTO	**Aktyubinsk**	**31.77**	**107**	P	**P**	**20 43 32.4**	**+2.9**
	comp=Z,1.1nm,0.6s,baz=304,slow=11,SNR=2.6						
AKTO				LR	LR	20 56 59.5	
	comp=Z,56nm,18.2s,baz=342,slow=38						
ESDC	**Sonseca Array**	**33.80**	**194**	P	**P**	**20 43 48.1**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=6.0,slow=10,SNR=5.5						
BRTR	**Keskin Array B**	**36.02**	**142**	P	**P**	**20 44 08.3**	**+1.6**
	comp=Z,0.8nm,0.7s,baz=330,slow=5.0,SNR=5.8						
BRTR				LR	LR	21 00 00.0	
	comp=Z,19nm,21.7s,baz=264,slow=38						
ZALV	**Zalesovo Beam**	**36.44**	**78**	P	**P**	**20 44 09.5**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=338,slow=9.5,SNR=2.1						
KURK	**Kurchatov**	**37.50**	**86**	*e*P	**P**	**20 44 20.6**	**+1.7**
	comp=Z,14nm,0.9s						
KURBB	**Kurchatov Arra**	**37.55**	**86**	P	**P**	**20 44 20.7**	**+1.3**
	comp=Z,1.6nm,0.9s,baz=336,slow=6.5,SNR=4.0						
YKA	**Yellowknife Ar**	**38.97**	**321**	P	**P**	**20 44 30.6**	**-0.6**
	comp=Z,0.1nm,0.4s,baz=17,slow=9.8,SNR=4.8						
YKA				LR	LR	20 59 38.1	
	comp=Z,6.2nm,18.1s,baz=58,slow=35						
ILAR	**Eielson Array**	**41.24**	**343**	P	**P**	**20 44 50.2**	**+0.1**
	comp=Z,0.6nm,0.8s,baz=4.9,slow=7.0,SNR=7.3						
MKAR	**Makanchi Array**	**42.09**	**85**	P	**P**	**20 44 58.0**	**+0.7**
	comp=Z,0.3nm,0.9s,baz=313,slow=7.3,SNR=2.6						
PDAR	**Pinedale Array**	**56.37**	**307**	P	**P**	**20 46 46.0**	**-0.7**
	comp=Z,2.2nm,1.0s,baz=25,slow=4.9,SNR=11						
PDAR				LR	LR	21 10 17.5	
	comp=Z,52nm,18.5s,baz=184,slow=35						
AHID	**Auburn Hatcher**	**56.73**	**308**	*e*P	**P**	**20 46 48.5**	**-0.7**
	comp=Z,3.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**59.93**	**185**	P	**P**	**20 47 12.0**	**+0.4**
	comp=Z,0.7nm,0.8s,baz=355,slow=7.4,SNR=5.0						
YBH	**Yreka Blue Hor**	**60.20**	**318**	LR	LR	21 12 41.6	
	comp=Z,48nm,19.5s,baz=86,slow=36						
TXAR	**Lajitas Array**	**67.66**	**297**	P	**P**	**20 48 02.4**	**-0.2**

comp=Z,0.3nm,0.6s,baz=66,slow=3.1,SNR=5.3

*NIED **04** 20:38:00, 24.°10N×122.°20E, h47km, Mw4.5 Best double couple: M0:5.95000×10^15 NP1:φ=43.00000°, δ=59.00000°, λ=153.00000° NP2:φ=147.00000°, δ=67.00000°, λ=34.00000°.*
*MOS **04** 20:38:26.0±1.0, 24.°32N×122.°30E, h39km, mb5.0/38, Error ellipse: s-maj=8.5km s-min=4.9km az=110.6*
*ISCJB **04** 20:38:28.5±0.1, 24.°23N±0.°01×122.°23E±0.°01, h60km±1km, mb4.8/126, MS3.6/21, Error ellipse: s-maj=2.1km s-min=1.6km az=141.9*
*BJI **04** 20:38:28.5, 24.°27N×122.°06E, h39km, mb4.4/43, mB4.5/33, ML4.1/7, Ms4.0/31, Ms7 3.9/20*
*JMA **04** 20:38:28.6±0.1, 24.°13N×122.°19E, h47km±3km, M4.5*
*IDC **04** 20:38:29.5±1.9, 24.°33N×122.°29E, h54km±16km, mb4.4/41, mb1 4.5/45, mb1mx4.3/71, mbtmp4.7/45, ML4.3/4, MS3.5/23, Ms1 3.5/23, ms1mx3.4/71, Error ellipse: s-maj=11.7km s-min=10.1km az=55.0*
*NEIC **04** 20:38:29.1±0.4, 24.°23N×122.°24E, h52km±3km, mb4.9/67, Error ellipse: s-maj=4.8km s-min=3.8km az=158.0*
*TAP **04** 20:38:29.4, 24.°22N×122.°19E, h50km, ML5.1, B*
ISC 04 20:38:27.6±0.5, 24.°21N±0.°02×122.°23E±0.°02, h41km±4km, n416, σ1.°81/551, mb4.8/126, MS3.6/21, 43C-83D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.35**	**345**	⇑P	**Pn**	**20 38 38.9**	**+2.4**
	baz=343						
EOS1				*e*S	**Sn**	**20 38 46.0**	**+3.3**
	baz=343						
NANB	**Nanao**	**0.49**	**297**	⇓P	**Pn**	**20 38 40.4**	**+2.2**
	baz=303						
NANB				S	**Sn**	**20 38 48.0**	**+2.2**
	baz=303						
ENA	**Nanau**	**0.50**	**296**	⇓*i*P	**Pn**	**20 38 40.4**	**+2.1**
	baz=303						
ENA				S	**Sn**	**20 38 48.2**	**+2.3**
	baz=303						
TWC	**Suao**	**0.53**	**319**	⇓*i*P	**Pn**	**20 38 40.5**	**+1.8**
	baz=325						
TWC				S	**Sn**	**20 38 48.0**	**+1.3**
	baz=325						
NACB	**Ninganchiao**	**0.58**	**267**	⇓P	**Pn**	**20 38 41.0**	**+1.5**
	baz=265						
NACB				S	**Sn**	**20 38 49.4**	**+1.5**
	baz=265						
NACB	**Ninganchiao**	**0.58**	**267**	*e*Pn	**Pn**	**20 38 40.9**	**+1.5**
TWD	**Chiawan**	**0.59**	**258**	⇑*i*P	**Pn**	**20 38 41.0**	**+1.4**
	baz=246						
TWD				S	**Sn**	**20 38 49.5**	**+1.4**
	baz=246						
HWA	**Hwalien**	**0.61**	**248**	⇑P	**Pn**	**20 38 41.7**	**+1.8**
	baz=245						
HWA				S	**Sn**	**20 38 51.0**	**+2.3**
	baz=245						
ENLB	**Shoufeng**	**0.65**	**242**	⇑P	**Pn**	**20 38 42.1**	**+1.7**
	baz=233						
ENLB				S	**Sn**	**20 38 51.7**	**+2.2**
	baz=233						
EGS		**0.69**	**337**	⇓P	**Pn**	**20 38 43.1**	**+2.1**
	baz=340						
EGS				*e*S	**Sn**	**20 38 52.4**	**+1.9**
	baz=340						
JYNG	**Yonagunijimaku**	**0.70**	**69**	P	**Pn**	**20 38 43.2**	**+2.2**
JYNG				S	**Sn**	**20 38 53.8**	**+3.2**
ILA	**Ilan**	**0.71**	**322**	⇓*i*P	**Pn**	**20 38 43.6**	**+2.5**
	baz=317						
ILA				S	**Sn**	**20 38 53.5**	**+2.6**
	baz=317						
TWE	**Neicheng**	**0.72**	**315**	⇓*i*P	**Pn**	**20 38 43.7**	**+2.3**
	baz=317						
TWE				S	**Sn**	**20 38 53.7**	**+2.4**
	baz=317						
NTC	**Toucheng**	**0.74**	**331**	*e*P	**Pn**	**20 38 43.7**	**+2.1**
	baz=341						
NTC				S	**Sn**	**20 38 54.0**	**+2.3**
	baz=341						
ENTT	**Nioudou**	**0.74**	**306**	⇓*i*P	**Pn**	**20 38 43.8**	**+2.1**
	baz=306						
ENTT				S	**Sn**	**20 38 54.2**	**+2.4**
	baz=306						
YOJ	**Yonaguni jima**	**0.76**	**70**	⇓P	**Pn**	**20 38 44.0**	**+2.2**
	baz=72						
YOJ				*e*S	**Sn**	**20 38 54.7**	**+2.6**
	baz=72						
YOJ	**Yonaguni jima**	**0.76**	**70**	*e*Pn	**Pn**	**20 38 44.0**	**+2.2**
YOJ	**Yonaguni jima**	**0.76**	**70**	P	**Pn**	**20 38 43.9**	**+2.2**
YOJ				S	**Sn**	**20 38 54.7**	**+2.6**
YOJ	**Yonaguni jima**	**0.76**	**70**	*e*P	**Pn**	**20 38 44.0**	**+2.2**
NNSB	**Datong**	**0.80**	**286**	⇓P	**Pn**	**20 38 44.3**	**+1.7**
	baz=286						
NNSB				S	**Sn**	**20 38 54.6**	**+1.2**
	baz=286						
NNS	**Nan Shan**	**0.81**	**287**	⇓P	**Pn**	**20 38 44.4**	**+1.7**
	baz=286						
NNS				*e*S	**Sn**	**20 38 55.3**	**+1.6**
	baz=286						
ESL	**Shilin**	**0.83**	**242**	⇑P	**Pn**	**20 38 43.9**	**+1.1**
	baz=239						
ESL				*e*S	**Sn**	**20 38 54.1**	**+0.2**
	baz=239						
TWB1	**Santiao Chiao**	**0.83**	**345**	P	**Pn**	**20 38 44.6**	**+1.8**
	baz=347						
TWB1				S	**Sn**	**20 38 55.0**	**+1.1**
	baz=347						
TIPB	**Shuangxi**	**0.84**	**334**	⇓P	**Pn**	**20 38 44.1**	**+1.0**
	baz=345						
TIPB				S	**Sn**	**20 38 55.1**	**+0.8**
	baz=345						
NWLT	**Wulai**	**0.87**	**311**	⇓P	**Pn**	**20 38 45.7**	**+2.3**
	baz=302						
NWLT				*e*S	**Sn**	**20 38 57.1**	**+2.1**
	baz=302						
YHNB	**Yeheng**	**0.90**	**301**	⇓P	**Pn**	**20 38 46.0**	**+2.1**
	baz=301						
YHNB				S	**Sn**	**20 38 57.3**	**+1.5**
	baz=301						
YHNB	**Yeheng**	**0.90**	**301**	*e*Pn	**Pn**	**20 38 45.8**	**+1.9**
EGFH	**Guangfu**	**0.91**	**234**	*e*P	**Pn**	**20 38 45.1**	**+1.2**
	baz=226						
EGFH				*e*S	**Sn**	**20 38 56.8**	**+1.0**
	baz=226						
NSK	**Sanguang**	**0.92**	**301**	⇓*i*P	**Pn**	**20 38 46.2**	**+2.0**
	baz=301						
NSK				*e*S	**Sn**	**20 38 57.6**	**+1.4**
	baz=301						
NWF	**Wu-fen Shan**	**0.95**	**335**	⇑*i*P	**Pn**	**20 38 46.6**	**+2.0**
	baz=347						
NWF				S	**Sn**	**20 38 58.4**	**+1.4**
	baz=347						
WFSB	**Wu-fen Shan**	**0.95**	**335**	⇑P	**Pn**	**20 38 46.5**	**+2.0**
	baz=347						
WFSB				S	**Sn**	**20 38 58.4**	**+1.5**
	baz=347						
TWT	**Tachien**	**0.96**	**273**	⇓P	**Pn**	**20 38 47.1**	**+2.3**
	baz=272						
TWT				S	**Sn**	**20 38 59.5**	**+2.1**
	baz=272						
CHGB	**Renai**	**0.97**	**262**	⇓P	**Pn**	**20 38 46.7**	**+1.7**
	baz=252						
CHGB				S	**Sn**	**20 38 58.9**	**+1.2**
	baz=252						
TDCB	**Techi**	**0.98**	**273**	⇓P	**Pn**	**20 38 47.1**	**+2.1**
	baz=272						
TDCB				*e*S	**Sn**	**20 38 58.2**	**+0.4**
	baz=272						
TATO	**Taipei**	**1.02**	**319**	⇓P	**Pn**	**20 38 47.9**	**+2.5**
	baz=319						
TATO				S	**Sn**	**20 39 01.5**	**+2.9**
	baz=319						
TATO	**Taipei**	**1.02**	**319**	*e*Pn	**Pn**	**20 38 48.0**	**+2.5**
HGSD	**Ruisui**	**1.02**	**226**	⇑P	**Pn**	**20 38 46.7**	**+1.2**
	baz=220						
HGSD				*e*S	**Sn**	**20 38 58.7**	**0.0**
	baz=220						
EHY	**Hungye**	**1.08**	**230**	*e*P	**Pn**	**20 38 47.4**	**+1.1**
	baz=236						
VWDT	**VWDT**	**1.09**	**246**	⇓P	**Pn**	**20 38 48.4**	**+2.0**
	baz=236						
VWDT				*e*S	**Sn**	**20 39 01.0**	**+0.6**
	baz=236						
WLTB	**Daxi**	**1.10**	**306**	⇓P	**Pn**	**20 38 49.3**	**+2.9**
	baz=298						
WLTB				*e*S	**Sn**	**20 39 02.8**	**+2.4**
	baz=298						
YM07	**YM07**	**1.11**	**330**	⇓*e*P	**Pn**	**20 38 47.5**	**+0.7**
	baz=342						
YM07				*e*S	**Sn**	**20 39 00.8**	**-0.1**
	baz=342						
YM11	**YM11**	**1.12**	**328**	⇓P	**Pn**	**20 38 48.8**	**+1.8**
	baz=339						
YM11				S	**Sn**	**20 39 02.7**	**+1.4**
	baz=339						
YM04	**YM04**	**1.13**	**326**	⇓P	**Pn**	**20 38 48.9**	**+1.9**
	baz=339						
YM04				S	**Sn**	**20 39 02.7**	**+1.3**
	baz=339						
YM08	**YM08**	**1.14**	**329**	⇓P	**Pn**	**20 38 48.6**	**+1.5**
	baz=340						
YM08				*e*S	**Sn**	**20 39 01.8**	**+0.3**
	baz=340						
TWS1	**Kuangyinshan**	**1.16**	**320**	⇓P	**Pn**	**20 38 49.8**	**+2.5**
	baz=331						
TWS1				*e*S	**Sn**	**20 39 04.2**	**+2.3**
	baz=331						
YULB	**Yu-li**	**1.18**	**227**	⇑P	**Pn**	**20 38 48.6**	**+1.0**
	baz=237						
YULB				*e*S	**Sn**	**20 39 01.8**	**-0.7**
	baz=237						
YULB	**Yu-li**	**1.18**	**227**	*e*Pn	**Pn**	**20 38 48.9**	**+1.3**
NTST	**Danshui**	**1.19**	**323**	*e*P	**Pn**	**20 38 50.1**	**+2.4**
	baz=335						
NTST				*e*S	**Sn**	**20 39 04.4**	**+1.7**
	baz=335						
LIOB	**Emei**	**1.19**	**292**	⇓*e*P	**Pn**	**20 38 49.1**	**+1.4**
	baz=291						
LIOB				*e*S	**Sn**	**20 39 04.7**	**+1.9**
	baz=291						
NSTT	**Nanjuang**	**1.20**	**291**	⇓P	**Pn**	**20 38 50.6**	**+2.8**
	baz=290						
NSTT				*e*S	**Sn**	**20 39 05.1**	**+2.2**
	baz=290						
DPDB	**Guoxing**	**1.20**	**262**	⇓*i*P	**Pn**	**20 38 50.3**	**+2.3**
	baz=256						
DPDB				*e*S	**Sn**	**20 39 04.7**	**+1.5**
	baz=256						
TWF1	**Yuli**	**1.21**	**225**	⇑P	**Pn**	**20 38 49.1**	**+1.1**
	baz=235						
TWY	**Chenhua**	**1.21**	**332**	*e*P	**Pn**	**20 38 50.2**	**+2.2**
	baz=343						
TWY				*e*S	**Sn**	**20 39 04.2**	**+1.0**
	baz=343						
NCU	**National Centr**	**1.22**	**309**	P	**Pn**	**20 38 50.4**	**+2.3**
	baz=309						
NCU				*e*S	**Sn**	**20 39 05.0**	**+1.6**
	baz=309						
NCUH	**Zhongli**	**1.22**	**309**	⇓*e*P	**Pn**	**20 38 50.4**	**+2.3**
	baz=308						
NCUH				*e*S	**Sn**	**20 39 05.4**	**+2.0**
	baz=308						
SSLB	**Suanglung**	**1.24**	**251**	⇓P	**Pn**	**20 38 50.3**	**+1.9**
	baz=250						
SSLB				*e*S	**Sn**	**20 39 04.4**	**+0.4**
	baz=250						
SSLB	**Suanglung**	**1.24**	**251**	*e*Pn	**Pn**	**20 38 49.7**	**+1.2**
SMLT	**Sun Moon Lake**	**1.26**	**255**	⇓*i*P	**Pn**	**20 38 50.9**	**+2.1**
	baz=247						
SMLT				*e*S	**Sn**	**20 39 05.9**	**+1.3**
	baz=247						
SBCB	**Hsinchu**	**1.27**	**297**	⇓P	**Pn**	**20 38 51.5**	**+2.6**
	baz=310						
SBCB				*e*S	**Sn**	**20 39 07.2**	**+2.4**
	baz=310						
TYC	**Yuchr**	**1.29**	**257**	⇓*i*P	**Pn**	**20 38 51.3**	**+2.2**
	baz=249						
TYC				S	**Sn**	**20 39 07.0**	**+1.8**
	baz=249						
FULB	**Fuli**	**1.32**	**221**	⇑*e*P	**Pn**	**20 38 50.6**	**+1.0**
	baz=211						
NMLH	**Miaoli**	**1.35**	**284**	⇓P	**Pn**	**20 38 52.9**	**+2.9**
	baz=283						
NMLH				*e*S	**Sn**	**20 39 08.8**	**+2.0**
	baz=283						
NSY	**Sanyi**	**1.36**	**279**	⇓P	**Pn**	**20 38 53.0**	**+3.0**
	baz=278						
NSY				*e*S	**Sn**	**20 39 10.6**	**+3.7**
	baz=278						
CHKT	**Chengkung**	**1.36**	**216**	⇑*i*P	**Pn**	**20 38 50.7**	**+0.7**
	baz=206						
CHKT				S	**Sn**	**20 39 06.0**	**-0.9**
	baz=206						
IRIF	**Iriomote-Funau**	**1.38**	**84**	P	**Pn**	**20 38 52.3**	**+2.0**
IRIF				S	**Sn**	**20 39 09.4**	**+2.1**
TCU	**Taichung**	**1.42**	**268**	*e*P	**Pn**	**20 38 53.9**	**+3.0**
	baz=267						
TCU				*e*S	**Sn**	**20 39 11.5**	**+3.1**
	baz=267						
WJS	**Zhushan**	**1.43**	**255**	*e*P	**Pn**	**20 38 54.0**	**+3.0**
	baz=250						
WJS				*e*S	**Sn**	**20 39 11.1**	**+2.5**
	baz=250						
HATJ	**Hateruma jima**	**1.45**	**96**	P	**Pn**	**20 38 53.8**	**+2.5**
WNT	**Mingjian**	**1.45**	**257**	⇓P	**Pn**	**20 38 54.7**	**+3.3**
	baz=257						
WNT				*e*S	**Sn**	**20 39 12.5**	**+3.3**
	baz=257						
ELDTW	**Lidau**	**1.50**	**228**	*e*P	**Pn**	**20 38 53.3**	**+1.1**
	baz=227						
ELDTW				*e*S	**Sn**	**20 39 10.5**	**-0.2**
	baz=227						
WCHH	**Zhanghua**	**1.53**	**266**	⇓*e*P	**Pn**	**20 38 55.2**	**+2.8**
	baz=265						
WCHH				*e*S	**Sn**	**20 39 13.4**	**+2.2**
	baz=265						
WGK	**Gukeng**	**1.61**	**252**	⇓P	**Pn**	**20 38 56.6**	**+3.1**
	baz=240						
WGK				*e*S	**Sn**	**20 39 17.6**	**+4.5**
	baz=240						
JKRS	**Kuro-shima**	**1.62**	**89**	P	**Pn**	**20 38 56.4**	**+2.7**
JKRS				S	**Sn**	**20 39 16.5**	**+3.1**
WDLH	**Douliu**	**1.63**

CHN1				*e*S		**Sn**	**20 39 22.3 +2.9**
	baz=237						
SLGT	**Liugui**	**1.89**	**231**	*e*P		**Pn**	**20 39 00.7 +3.3**
	baz=225						
SLGT				*e*S		**Sn**	**20 39 23.1 +3.1**
	baz=225						
WLGB	**Puzi**	**1.91**	**248**	P		**Pn**	**20 39 00.7 +3.1**
	baz=236						
WLGB				*e*S		**Sn**	**20 39 24.0 +3.6**
	baz=236						
WSF	**Szhu**	**1.92**	**253**	⇓*e*P		**Pn**	**20 39 00.5 +2.7**
	baz=265						
WSF				*e*S		**Sn**	**20 39 24.6 +3.9**
	baz=265						
JISG	**Ishigakijimahi**	**1.94**	**78**	P		**Pn**	**20 38 59.6 +1.6**
JISG				S		**Sn**	**20 39 22.8 +1.7**
ECL	**Taimali**	**1.98**	**216**	*e*P		**Pn**	**20 38 59.0 +0.3**
	baz=215						
CHN8	**Yiju**	**2.04**	**246**	⇓*i*P		**Pn**	**20 39 02.2 +2.8**
	baz=235						
CHN8				*e*S		**Sn**	**20 39 26.6 +2.9**
	baz=235						
CHN3	**Shinhua**	**2.05**	**237**	*e*P		**Pn**	**20 39 03.3 +3.8**
	baz=237						
CHN3				*e*S		**Sn**	**20 39 28.5 +4.7**
	baz=237						
SSD	**Sandimen**	**2.07**	**226**	*e*P		**Pn**	**20 39 02.0 +2.2**
	baz=225						
SSD				*e*S		**Sn**	**20 39 26.9 +2.6**
	baz=225						
SCLT	**Jiali**	**2.13**	**242**	*e*P		**Pn**	**20 39 03.6 +2.9**
	baz=241						
SCLT				S		**Sn**	**20 39 29.6 +3.7**
	baz=241						
TWM1	**Shoushan**	**2.16**	**231**	*e*P		**Pn**	**20 39 05.4 +4.3**
	baz=240						
TWM1				*e*S		**Sn**	**20 39 30.8 +4.2**
	baz=240						
MASBT	**Mashibuluo**	**2.16**	**223**	⇑*e*P		**Pn**	**20 39 03.1 +2.0**
	baz=223						
MASBT				*e*S		**Sn**	**20 39 29.2 +2.5**
	baz=223						
TAI1	**Yung-k'ang**	**2.17**	**238**	*e*P		**Pn**	**20 39 03.9 +2.7**
	baz=248						
TAI1				*e*S		**Sn**	**20 39 29.6 +2.7**
	baz=248						
SGLT	**Jiouru**	**2.17**	**228**	*e*P		**Pn**	**20 39 06.0 +4.7**
	baz=218						
SGLT				*e*S		**Sn**	**20 39 32.3 +5.4**
	baz=218						
EAST	**Anshuo**	**2.22**	**215**	⇑*e*P		**Pn**	**20 39 04.5 +2.6**
	baz=214						
LAY	**Lan-yu**	**2.25**	**196**	*e*P		**Pn**	**20 39 02.5 +0.1**
	baz=189						
JTJ	**Tarama**	**2.29**	**79**	P		**Pn**	**20 39 05.4 +2.5**
JTJ				*e*S		**Sn**	**20 39 32.0 +2.0**
SSPT	**Xinbi**	**2.30**	**222**	*e*P		**Pn**	**20 39 05.6 +2.6**
	baz=222						
SSPT				*e*S		**Sn**	**20 39 33.2 +3.2**
	baz=222						
SCZT	**Fangliau**	**2.35**	**219**	*e*P		**Pn**	**20 39 06.2 +2.5**
	baz=215						
SCZT				*e*S		**Sn**	**20 39 34.5 +3.1**
	baz=215						
WLCH	**Liuqiu**	**2.51**	**223**	*e*P		**Pn**	**20 39 10.1 +4.2**
	baz=223						
TWP	**Hsiaoliuchiu**	**2.53**	**223**	*e*P		**Pn**	**20 39 09.1 +3.0**
	baz=223						
PHUB	**P'eng-hu**	**2.53**	**255**	⇓P		**Pn**	**20 39 07.6 +1.5**
	baz=255						
PHUB				*e*S		**Sn**	**20 39 36.2 +0.4**
	baz=255						
PNG	**Penghu**	**2.53**	**256**	⇓P		**Pn**	**20 39 07.6 +1.4**
	baz=256						
PNG				*e*S		**Sn**	**20 39 36.8 +1.0**
	baz=256						
WDGT	**Dungji**	**2.54**	**249**	⇓P		**Pn**	**20 39 08.3 +2.0**
	baz=249						
WDGT				*e*S		**Sn**	**20 39 37.3 +1.4**
	baz=249						
HEN	**Hengchun**	**2.59**	**212**	*e*P		**Pn**	**20 39 10.1 +3.1**
	baz=212						
HEN				*e*S		**Sn**	**20 39 38.2 +1.0**
	baz=212						
TSEB	**Hengchuen, Pin**	**2.60**	**208**	*e*P		**Pn**	**20 39 09.1 +1.9**
	baz=209						
TSEB				*e*S		**Sn**	**20 39 38.3 +0.7**
	baz=209						
TWKBT	**Hengchun**	**2.61**	**210**	⇑P		**Pn**	**20 39 08.6 +1.4**
	baz=210						
TWKBT				*e*S		**Sn**	**20 39 37.4 -0.3**
	baz=210						
TWK1	**Hengchun**	**2.61**	**210**	⇑*e*P		**Pn**	**20 39 08.8 +1.5**
	baz=210						
TWK1				*e*S		**Sn**	**20 39 38.0 +0.3**
	baz=210						
VWUC	**VWUC**	**2.65**	**288**	⇓*e*P		**Pn**	**20 39 08.8 +1.1**
	baz=287						
JIRB	**Irabujima**	**2.75**	**76**	P		**Pn**	**20 39 11.6 +2.4**
JIRB				S		**Sn**	**20 39 43.9 +2.7**
VCHM	**Qimei**	**2.75**	**249**	⇓P		**Pn**	**20 39 11.1 +1.8**
	baz=250						
VCHM				*e*S		**Sn**	**20 39 41.2 -0.1**
	baz=250						
MATB	**Ma-tsu**	**2.83**	**314**	⇓*e*P		**Pn**	**20 39 11.3 +0.9**
	baz=312						
JIKM	**Ikemajima**	**2.84**	**75**	P		**Pn**	**20 39 13.0 +2.6**
JIKM				S		**Sn**	**20 39 46.8 +3.4**
JMJ	**Miyako jima 2**	**2.86**	**77**	*e*P		**Pn**	**20 39 13.4 +2.7**
	baz=77						
JMJ	**Miyako jima 2**	**2.86**	**77**	P		**Pn**	**20 39 13.3 +2.7**
JMJ				S		**Sn**	**20 39 46.6 +2.8**
JOGS	**Gusukube**	**2.95**	**79**	P		**Pn**	**20 39 14.9 +3.0**
JOGS				S		**Sn**	**20 39 48.7 +2.7**
QZH	**Quanzhou**	**3.39**	**283**	⇓*i*Pn		**Pn**	**20 39 18.9 +0.9**
QZH				Sn		**Sn**	**20 39 55.1 -1.9**
QZH				smax		smax	
	comp=N,340nm,0.4s						
QZH				smax		smax	
	comp=E,300nm,0.4s						
KNM	**Kinmen**	**3.47**	**274**	*e*P		**Pn**	**20 39 21.5 +2.4**
	baz=264						
KNMB	**Chin-men Tao**	**3.51**	**275**	⇓*e*P		**Pn**	**20 39 20.4 +0.7**
	baz=265						
JOW	**Kunigami**	**6.05**	**63**	P		**Pn**	**20 39 55.5 +0.9**
	49nm,0.3s,baz=5.8,slow=7.6,SNR=31						
JOW	**Kunigami**	**6.05**	**63**	*e*P		**Pn**	**20 39 55.7 +1.1**
	baz=63						
JOW	**Kunigami**	**6.05**	**63**	*e*Pn		**Pn**	**20 39 55.4 +0.8**
VDOS	**Pratas Island**	**6.17**	**237**	*e*P		**Pn**	**20 39 58.2 +2.0**
	baz=236						
GZH	**Guangzhou**	**8.22**	**264**	P		**Pn**	**20 40 21.1 -3.3**
GZH				S		Sn	20 41 43.6 -12
GZH				smax		smax	
	comp=N,220nm,0.9s						
GZH				smax		smax	
	comp=E,130nm,0.7s						
NJ2	**Nanjing**	**8.36**	**340**	*e*P		**Pn**	**20 40 27.4 +1.1**
NJ2				S		**Sn**	**20 42 02.5 +3.1**
NJ2				pmax		pmax	
	comp=E,14nm,0.5s						
NJ2				LR		LR	
	comp=E,870nm,7.6s						
NJ2				LR		LR	
	comp=E,810nm,10.3s						
NJ2				LR		LR	
	comp=E,810nm,9.8s						
WHN	**Wuhan**	**9.43**	**314**	⇑P		**Pn**	**20 40 40.8 0.0**
WHN				S		**Sn**	**20 42 21.5 -4.0**
WHN				LR		LR	
	comp=E,1μm,20.0s						
TGY	**Tagaytay City**	**10.13**	**187**	LR		LR	20 45 19.6
	comp=E,48nm,18.6s,baz=154,slow=40						
JNU	**Nakatsue**	**11.68**	**39**	P		**Pn**	**20 41 13.6 +1.8**
	comp=E,0.5nm,0.3s,baz=221,slow=2.9,SNR=4.5						
JNU				LR		LR	20 45 57.2
	comp=E,171nm,18.3s,baz=238,slow=39						
TJN	**Taejon**	**12.91**	**19**	⇑*i*P		**Pn**	**20 41 26.6 -1.9**
KS15	**Wonju Array Si**	**14.05**	**19**	*e*Pn		**P**	**20 41 48.9 -2.1**
KSAR	**Wonju Array Be**	**14.05**	**19**	P		**Pn**	**20 41 47.0 +3.0**
KSAR	**Wonju Array Be**	**14.05**	**19**	P		**Pn**	**20 41 47.0 +3.0**
KSRS	**Korea Array**	**14.08**	**19**	P		**Pn**	**20 41 47.0 +2.7**
	comp=E,5.0nm,0.3s,baz=198,slow=12,SNR=29						
KSRS				LR		LR	20 47 52.9
	comp=E,94nm,18.1s,baz=208,slow=40						
GYA	**Guiyang**	**14.25**	**282**	⇑*i*P		**Pn**	**20 41 49.0 +2.0**
GYA				pP		P	20 41 58.2 +4.7
GYA				S		**Sn**	**20 44 27.5 +3.6**
GYA				pmax		pmax	
	comp=E,20nm,0.7s						
GYA				pmax		pmax	
	comp=E,120nm,4.6s						
GYA				LR		LR	
	comp=E,1μm,12.6s						
GYA				LR		LR	
	comp=E,980nm,13.4s						
GYA				LR		LR	
	comp=E,1μm,12.8s						
XAN	**Xi'an**	**15.19**	**313**	P		**P**	**20 42 06.3 +2.5**
XAN				pP		pP	20 42 15.2 +1.4
XAN				pmax		pmax	
	comp=Z,10.0nm,0.8s						
XAN				LR		LR	
	comp=N,550nm,6.4s						
XAN				LR		LR	
	comp=Z,280nm,21.1s						
DAV	**Davao City (W)**	**17.34**	**169**	LR		LR	20 48 36.2
	comp=Z,64nm,19.2s,baz=350,slow=35						
CD2	**Chengdu**	**17.68**	**296**	P		**Pn**	**20 42 30.6 -0.2**
CD2				pmax		pmax	
	comp=Z,40nm,0.7s						
KMI	**Kunming**	**17.74**	**277**	P		**P**	**20 42 34.5 +2.2**
KMI				pP		pP	20 42 45.5 +3.2
KMI				LR		LR	
	comp=Z,190nm,6.3s						
KMI				LR		LR	
	comp=Z,190nm,11.0s						
KMI				LR		LR	
	comp=Z,290nm,12.4s						
JHJ	**Hachijo jima 2**	**17.76**	**56**	P		**P**	**20 42 33.6 +1.4**
	comp=Z,14nm,0.3s,baz=242,slow=15,SNR=3.4						
JHJ				LR		LR	20 48 59.5
	comp=Z,65nm,22.0s,baz=254,slow=36						
MAJO	**Matsushiro**	**18.44**	**44**	⇑*e*P		**Pn**	**20 42 40.9 +0.8**
MJAR	**Matsushiro Arr**	**18.44**	**44**	P		**P**	**20 42 38.8 -0.9**
	comp=Z,0.4nm,0.3s,baz=235,slow=9.3,SNR=7.2						
MJAR				LR		LR	20 50 14.7
	comp=Z,107nm,19.9s,baz=200,slow=38						
HHC	**Hu-ho-hao-te**	**18.85**	**334**	*e*P		**Pn**	**20 42 47.4 +2.3**
HHC				pmax		pmax	
	comp=Z,16nm,0.6s						
HHC				pmax		pmax	
	comp=Z,100nm,5.2s						
CN2	**Changchun**	**19.72**	**7**	*e*P		**P**	**20 42 53.5 -0.1**
CN2				*e*pP		pP	20 43 03.9 +0.2
CN2				*e*PP		**PnPn**	**20 43 13.2 +3.3**
CN2				*e*S		**S**	**20 46 27.4 -6.4**
CN2				pmax		pmax	
	comp=Z,20nm,0.9s						
CN2				pmax		pmax	
	comp=Z,200nm,4.0s						
CN2				LR		LR	
	comp=Z,230nm,17.0s						
CN2				LR		LR	
	comp=Z,80nm,17.0s						
MSHR	**Mys Shultsa**	**19.76**	**20**	*d i*P		**P**	**20 42 54.9 +0.9**
LZH	**Lanzhou**	**19.79**	**311**	*e*P		**Pn**	**20 42 57.6 +1.3**
LZH				pP		pP	20 43 06.0 +1.3
LZH				sP		sP	20 43 13.2 +3.3
LZH				S		**S**	**20 46 33.6 -1.8**
LZH				pmax		pmax	
	comp=Z,25nm,0.9s						
LZH				pmax		pmax	
	comp=Z,110nm,4.3s						
LZH				LR		LR	
	comp=Z,730nm,10.2s						
LZH				LR		LR	
	comp=Z,720nm,10.4s						
LZH				LR		LR	
	comp=Z,920nm,11.7s						
MDJ	**Mudanjiang**	**21.23**	**15**	P		**P**	**20 43 08.3 -1.6**
MDJ				S		**S**	**20 47 06.0 +2.4**
MDJ				SS		**SnSn**	**20 47 33.0 +5.4**
MDJ				pmax		pmax	
	comp=Z,8.0nm,0.8s						
MDJ				pmax		pmax	
	comp=Z,130nm,3.6s						
MDJ				LR		LR	
	comp=N,180nm,4.7s						
MDJ				LR		LR	
	comp=E,94nm,5.5s						
MDJ				LR		LR	
	comp=Z,150nm,5.0s						
USRK	**Ussuriysk Ar.**	**21.48**	**19**	P		**P**	**20 43 12.8 +0.1**
	comp=Z,15nm,0.7s,baz=203,slow=10,SNR=31						
USRK				LR		LR	20 51 17.6
	comp=Z,122nm,21.2s,baz=209,slow=36						
CMAR	**Chiang Mai Arr**	**22.42**	**260**	P		**P**	**20 43 25.5 +2.5**
	comp=Z,0.6nm,0.3s,baz=67,slow=8.7,SNR=5.2						
CMAR				PcP		**PcP**	**20 47 17.7 +1.0**
	comp=Z,0.8nm,0.7s,baz=56,slow=1.2,SNR=5.2						
CMAR				LR		LR	20 51 58.4
	comp=Z,109nm,18.7s,baz=68,slow=36						
GUMO	**Guam**	**23.84**	**112**	LR		LR	20 51 03.1
	comp=Z,62nm,22.0s,baz=155,slow=32						
GTA	**Gaotai**	**24.25**	**314**	*e*P		**P**	**20 43 42.7 +1.8**
GTA				pP		pP	20 43 54.1 +2.1
GTA				sP		sP	20 43 59.9 +2.9
GTA				S		**S**	**20 47 54.2 -2.8**
GTA				sS		sS	20 48 10.9 -4.5
GTA				pmax		pmax	
	comp=Z,83nm,6.2s						
GTA				LR		LR	
	comp=Z,380nm,21.3s						
GTA				LR		LR	
	comp=Z,480nm,21.0s						
ERM	**Erimo**	**24.84**	**39**	⇑*e*P		**P**	**20 43 43.2 -2.9**
ERM				pmax		pmax	
	comp=Z,9.0nm,0.4s						
ASAJ	**Asahikawa**	**25.92**	**35**	P		**P**	**20 43 54.3 -1.6**
	comp=Z,7.0nm,0.3s,baz=236,slow=11,SNR=35						
ASAJ				LR		LR	20 53 39.4
	comp=Z,99nm,20.7s,baz=179,slow=35						
KLR	**Kul'dur**	**26.07**	**14**	P		**P**	**20 43 56.8 -0.4**
	comp=Z,0.3nm,0.4s,baz=209,slow=8.1,SNR=17						
KLR				PcP		**PcP**	**20 47 24.3 +0.2**
	comp=Z,0.2nm,0.6s,baz=176,slow=3.6,SNR=8.3						
KLR	**Kul'dur**	**26.07**	**14**	*d i*P		**P**	**20 43 56.9 -0.3**
KLR				*i* *PP		**pP**	**20 44 03.1 -5.2**
KLR				*i*			20 47 24.3
ULN	**Ulaanbaatar**	**26.51**	**337**	*e*P		**P**	**20 44 01.8 +0.4**
	comp=Z,33nm,0.6s						
ULN				*e*PcP		**PcP**	**20 47 26.1 +0.7**
ULN	**Ulaanbaatar**	**26.51**	**337**	*c e*P		**P**	**20 44 01.5 +0.1**
ULN				*i*			20 44 41.3
ULN				*i*			20 47 25.9
ULN				pmax		pmax	
	comp=Z,36nm,0.8s						
SONM	**Songino Array**	**26.73**	**336**	P		**P**	**20 44 03.6 +0.3**
	comp=Z,37nm,0.7s,baz=150,slow=9.9,SNR=139						
SONM				PcP		**PcP**	**20 47 26.2 +0.4**
	comp=Z,1.2nm,0.5s,baz=146,slow=2.7,SNR=4.9						
SONM				ScP		**ScP**	**20 51 01.3 -1.5**
	comp=Z,0.4nm,0.5s,baz=131,slow=4.0,SNR=3.1						
SONM				LR		LR	20 56 01.0
	comp=Z,182nm,18.3s,baz=124,slow=40						
SONA1	**Songino Array**	**26.73**	**336**	*e*P		**P**	**20 44 03.5 +0.2**
SONA1				*e*PcP		**PcP**	**20 47 25.9 +0.1**
YSS	**Yuzh-Sakhalins**	**28.01**	**31**	⇓*i*P		**P**	**20 44 14.9 +0.3**
YSS				pmax		pmax	
	comp=Z,14nm,1.0s						
ZEA	**Zeya**	**29.73**	**6**	*e*P		**P**	**20 44 29.7 -0.1**
ZEA				pmax		pmax	
	comp=Z,18nm,1.4s						
ZAK	**Zakamensk**	**29.99**	**335**	*e*P		**P**	**20 44 31.6 -0.7**
ZAK				*e*			20 45 36.2
ZAK				pmax		pmax	
	comp=Z,6.0nm,1.0s						
ZAK				pmax		pmax	
	comp=Z,3.0nm,0.8s						
TLY	**Talaya**	**30.91**	**337**	*e*P		**P**	**20 44 40.6 +0.3**
	comp=Z,24nm,0.7s						
TLY	**Talaya**	**30.91**	**337**	*e*P		**P**	**20 44 40.5 +0.2**
TLY				pmax		pmax	
	comp=Z,23nm,0.7s						
TLY				MLR		MLR	
	comp=Z,114nm,20.0s						
PSI	**Prapat**	**30.98**	**230**	LR		LR	20 56 33.8
	comp=Z,85nm,18.2s,baz=90,slow=35						
IRK	**Irkutsk**	**31.17**	**339**	*e*P		**P**	**20 44 42.2 -0.3**
IRK				pmax		pmax	
	comp=Z,25nm,1.4s						
MOY	**Mondy**	**31.89**	**335**	*e*P		**P**	**20 44 49.1 +0.1**
MOY				pmax		pmax	
	comp=Z,10.0nm,1.4s						
WMQ	**Urumqi**	**34.33**	**313**	P		**P**	**20 45 13.3 +2.9**
WMQ				pP		sP	20 45 27.1 +0.6
WMQ				pmax		pmax	
	comp=Z,37nm,1.1s						
WMQ				pmax		pmax	
	comp=Z,320nm,4.1s						
WMQ				LR		LR	
	comp=Z,91nm,18.1s						
WMQ				LR		LR	
	comp=Z,110nm,18.1s						
YAK	**Yakutsk**	**38.15**	**6**	*e*P		**P**	**20 45 40.0 -2.6**
YAK				*e**PP		**pP**	**20 45 47.2 -6.7**
YAK				*e*			20 47 07.9
YAK				*e*			20 47 55.0
YAK				*e*S		**S**	**20 51 33.4 +0.7**
YAK				*e**SS		**sS**	**20 51 47.5 -4.1**
YAK				*e*SS		**SnSn**	**20 54 17.5 -1.1**
YAK				pmax		pmax	
	comp=Z,13nm,1.0s						
YAK				pmax		pmax	
	comp=N,5.0nm,1.0s						
YAK				pmax		pmax	
	comp=E,2.0nm,1.3s						
YAK				pmax		pmax	
	comp=Z,53nm,3.5s						
YAK				pmax		pmax	
	comp=N,46nm,3.5s						
YAK				pmax		pmax	
	comp=E,34nm,3.5s						
YAK				smax		smax	
	comp=E,43nm,3.0s						
YAK				smax		smax	
	comp=N,31nm,2.7s						
YAK				MLR		MLR	
	comp=Z,91nm,18.0s						
MK01	**Makanchi Array**	**38.97**	**315**	*e*P		**P**	**20 45 50.1 +0.3**
MK01				*e*PcP		**PcP**	**20 47 59.1 -0.5**
MK31	**Makanchi Array**	**38.99**	**315**	*e*P		**P**	**20 45 50.5 +0.6**
MK31				*e*PcP		**PcP**	**20 47 59.5 -0.2**
MK31	**Makanchi Array**	**38.99**	**315**	*e*P		**P**	**20 45 50.5 +0.6**
MK31				*e*			20 47 59.5
MKAR	**Makanchi Array**	**38.99**	**315**	P		**P**	**20 45 50.4 +0.5**
	comp=Z,6.0nm,0.5s,baz=100,slow=10,SNR=116						
MKAR				PcP		**PcP**	**20 47 59.3 -0.4**
	comp=Z,2.6nm,0.7s,baz=90,slow=4.8,SNR=9.8						
MKAR	**Makanchi Array**	**38.99**	**315**	*e*P		**P**	**20 45 50.5 +0.5**
	comp=Z,56nm,0.6s						
MKAR				*e*PcP		**PcP**	**20 47 59.5 -0.2**
MAKZ	**Makanchi**	**39.19**	**315**	*e*P		**P**	**20 45 52.3 +0.6**
	comp=Z,10nm,0.6s						
MAKZ				*e*PcP		**PcP**	**20 48 00.1 -0.3**
MAKZ	**Makanchi**	**39.19**	**315**	*e*P		**P**	**20 45 52.3 +0.6**
MAKZ				*e*			20 48 00.1
MAKZ				pmax		pmax	
	comp=Z,10.0nm,0.6s						
PETK	**Petropavlovsk-**	**39.32**	**34**	LR		LR	21 01 41.0
	comp=Z,73nm,21.8s,baz=194,slow=36						
PDGK	**Podgornoye**	**39.81**	**309**	P		**P**	**20 45 57.8 +0.8**
PDGK				pmax		pmax	
	comp=Z,17nm,0.7s						
ZAA0	**Zalesovo Array**	**40.75**	**327**	*e*P		**P**	**20 46 03.8 -0.6**
	comp=Z,25nm,1.0s						
ZALV	**Zalesovo Beam**	**40.75**	**327**	P		**P**	**20 46 03.8 -0.6**
	comp=Z,20nm,0.6s,baz=112,slow=7.8,SNR=80						
ZALV				PcP		**PcP**	**20 48 03.9 -1.3**
	comp=Z,1.6nm,0.5s,baz=97,slow=3.7,SNR=4.2						
ZALV				ScP		**ScP**	**20 51 51.2 -0.3**
	comp=Z,0.3nm,0.3s,baz=98,slow=5.1,SNR=2.1						
ZALV				LR		LR	21 04 19.7
	comp=Z,77nm,20.7s,baz=70,slow=38						
KSH	**Kashi**	**41.69**	**303**	*e*P		**P**	**20 46 15.4 +2.9**
KSH				*e*pP		sP	20 46 31.7 +2.9
KSH				*e*PP		**PnPn**	**20 48 00.7 +6.3**
KSH				*e*S		**S**	**20 52 28.3 +1.6**
KSH				*e*sS		sS	20 52 53.3 +7.6
KSH				*e*SS		**SS**	**20 55 33.6 +0.6**
KSH				pmax		pmax	
	comp=Z,170nm,5.4s						
KSH				LR		LR	
	comp=Z,290nm,4.4s						
KSH				LR		LR	
	comp=Z,250nm,6.9s						
KSH				LR		LR	
	comp=Z,220nm,6.2s						
ULHL	**Ulahol**	**41.91**	**307**	P		**P**	**20 46 16.3 +1.9**
	SNR=8.7						
NRN	**Naryn**	**41.95**	**306**	*e*P		**P**	**20 46 16.9 +2.0**
	comp=Z,9.2nm,0.9s						
NRN	**Naryn**	**41.95**	**306**	*e*P		**P**	**20 46 16.9 +2.0**
NRN				pmax		pmax	
	comp=Z,9.0nm,0.9s						
NVS	**Novosibirsk**	**42.00**	**327**	*e*P		**P**	**20 46 14.2 -0.5**
NVS				pmax		pmax	
	comp=N,3.0nm,0.8s						
NVS				pmax		pmax	
	comp=E,5.0nm,0.8s						
NVS				pmax		pmax	
	comp=Z,9.0nm,0.8s						
TKM2	**Tokmak 2**	**42.50**	**308**	P		**P**	**20 46 20.9 +1.7**
	SNR=14						
KURK	**Kurchatov**	**42.69**	**320**	*e*P		**P**	**20 46 20.3 0.0**
	comp=Z,11nm,1.0s						
KURK				PcP		**PcP**	**20 48 11.0 -0.6**
KURK	**Kurchatov**	**42.69**	**320**	*d i*P		**P**	**20 46 20.2 -0.1**
KURK				*i* *SP		**pP**	**20 46 29.8 -2.0**
KURK				*i*			20 48 10.8
KURK				pmax		pmax	
	comp=Z,18nm,1.7s						
KURBB	**Kurchatov Arra**	**42.71**	**320**	P		**P**	**20 46 20.4 -0.1**
	comp=Z,3.0nm,0.6s,baz=113,slow=9.3,SNR=31						
KURBB				PcP		**PcP**	**20 48 11.0 -0.6**
	comp=Z,1.4nm,0.7s,baz=117,slow=3.6,SNR=7.0						
KBK	**Karagaybulak**	**42.92**	**307**	P		**P**	**20 46 24.7 +2.1**
	SNR=5.3						
UCH	**Uchtor**	**43.17**	**307**	P		**P**	**20 46 26.8 +1.9**
	SNR=7.6						
AAK	**Ala-Archa**	**43.25**	**307**	⇓*i*P		**P**	**20 46 27.2 +2.0**
AAK				pmax		pmax	
	comp=Z,2.0nm,0.8s						
SEY	**Seymchan**	**43.63**	**19**	PcP		**PcP**	**20 48 14.3 -0.2**
	comp=Z,1.8nm,0.5s,baz=237,slow=5.6,SNR=7.2						
SEY	**Seymchan**	**43.63**	**19**	*i* P		**P**	**20 46 27.8 0.0**
SFK	**Sufi-Kurgan**	**43.64**	**303**	P		**P**	**20 46 30.3 +1.8**
SFK				pmax		pmax	
	comp=Z,7.0nm,0.8s						
AML	**Almayashu**	**43.76**	**306**	P		**P**	**20 46 31.4 +1.8**
	SNR=7.6						
EKS2	**Erkin-Say**	**43.78**	**307**	P		**P**	**20 46 31.0 +1.5**
	SNR=5.2						
MNAS	**Manas**	**44.68**	**307**	P		**P**	**20 46 38.6 +1.9**
MNAS				pmax		pmax	
	comp=Z,7.0nm,1.0s						
WRAB	**Tennant Creek**	**45.44**	**164**	⇑*i*P		**P**	**20 46 43.4 +0.8**
WRAB				pmax		pmax	
	comp=Z,7.0nm,1.1s						
WRA	**Warramunga Arr**	**45.44**	**164**	P		**P**	**20 46 43.4 +0.7**
	comp=Z,5.5nm,0.6s,baz=346,slow=8.7,SNR=63						
WRA				PcP		**PcP**	**20 48 21.5 +0.1**
	comp=Z,1.5nm,0.7s,baz=348,slow=3.7,SNR=4.4						
WB2	**Warramunga Arr**	**45.44**	**164**	*e*P		**P**	**20 46 43.8 +1.1**
OTUK	**Ortayu**	**45.85**	**315**	P		**P**	**20 46 46.5 +0.7**
KK31	**Karatay Array**	**46.22**	**307**	*e*P		**P**	**20 46 49.9 +1.2**
KK31	**Karatay Array**	**46.22**	**307**	*e*P		**P**	**20 46 49.9 +1.2**
KKAR	**Karatay Array**	**46.22**	**307**	*e*P		**P**	**20 46 49.9 +1.2**
KKAR	**Karatay Array**	**46.22**	**307**	*e*P		**P**	**20 46 49.9 +1.2**
TIXI	**Tiksi**	**47.62**	**3**	PcP		**PcP**	**20 48 27.9 -0.3**
	comp=Z,3.2nm,0.7s,baz=173,slow=3.0,SNR=4.3						
TIXI	**Tiksi**	**47.62**	**3**	*e*P		**P**	**20 46 57.5 -1.7**
	comp=Z,17nm,1.2s						
TIXI				PcP		**PcP**	**20 48 27.9 -0.3**

ASAR Alice Springs 48.92 166 P **P 20 47 10.8 +1.0**
comp=Z,1.7nm,0.7s,baz=346,slow=6.0,SNR=20
ASAR PcP **PcP 20 48 33.5 -0.2**
comp=Z,0.8nm,0.6s,baz=345,slow=3.7,SNR=4.3
AS01 Alice Springs 48.93 166 *eP* **P 20 47 09.4 -0.4**
NRIK Noril'sk 49.63 345 P **P 20 47 13.6 -1.1**
comp=Z,5.2nm,0.8s,baz=129,slow=8.9,SNR=4.7
NRIK LR LR 21 09 42.1
comp=Z,83nm,20.9s,baz=158,slow=38
CTA Charters Tower 49.86 150 P **P 20 47 18.1 +1.1**
comp=Z,2.0nm,0.7s,baz=310,slow=7.9,SNR=2.1
CTA PcP **PcP 20 48 38.4 +1.2**
comp=Z,4.9nm,0.8s,baz=307,slow=5.1,SNR=4.2
BILL Bilibino 51.34 20⇑*iP* **P 20 47 26.4 -1.2**
BILL *i* 20 47 32.9
BILL *i* 20 48 41.9
BILL pmax pmax
comp=Z,2.0nm,0.8s
ABKAR Akbulak array 54.11 314 *eP* **P 20 47 48.8 +0.5**
SVE Sverdlovsk 54.59 324 *eP* **P 20 47 51.7 0.0**
SVE pmax pmax
comp=Z,14nm,0.8s
AKTO Aktyubinsk 55.42 316 P **P 20 47 58.6 +0.8**
comp=Z,2.8nm,0.5s,baz=92,slow=11,SNR=6.3
AKTO LR LR 21 11 57.5
comp=Z,54nm,19.0s,baz=112,slow=36
GEYT Alibeck 55.61 300 P **P 20 48 00.3 +0.9**
comp=Z,11nm,0.8s,baz=64,slow=3.4,SNR=20
GYA0B ALIBECK ARRAY 55.61 300 *eP* **P 20 48 01.1 +1.7**
comp=Z,8.6nm,0.8s
ARU Arti 55.66 323 P **P 20 47 58.9 -0.6**
comp=Z,6.1nm,0.4s,baz=95,slow=4.9,SNR=17
ARU Arti 55.66 323 *eP* **P 20 47 58.8 -0.6**
comp=Z,12nm,1.0s
ARU Arti 55.66 323 *eP* **P 20 47 58.8 -0.6**
ARU pmax pmax
comp=Z,12nm,1.0s
STKA Stephens Creek 58.76 161 P **P 20 48 22.3 +0.8**
comp=Z,5.4nm,0.7s,baz=349,slow=6.6,SNR=11
LKRN Lenkeran, Azer 62.78 303 P **P 20 48 47.4 -1.5**
SEKA Sheki 63.54 305 P **P 20 48 52.0 -2.1**
MNGR Mingechevir, A 63.70 305 P **P 20 48 53.5 -1.5**
ZKTA Zakatala 63.90 306 P **P 20 48 54.8 -1.5**
GANJ Ganja 64.30 305 P **P 20 48 57.4 -1.6**
NAX Nakhchivan 65.20 304 P **P 20 49 03.4 -1.6**
GNI Garni 65.58 305 LR LR 21 22 09.2
comp=Z,38nm,18.0s,baz=126,slow=40
ZEI Tsey 65.67 308 *eP* **P 20 49 07.6 -0.5**
ZEI pmax pmax
comp=Z,4.0nm,0.4s
IM3 Indian Mountai 65.73 27 *eP* **P 20 49 07.7 -0.1**
IM3 *ePcP* **PcP 20 49 39.7 +0.8**
KBZ Khabaz 66.21 309 P **P 20 49 11.8 +0.5**
comp=Z,5.6nm,1.0s,baz=93,slow=3.0,SNR=7.0
AKH Akhalkalaki 66.25 306⇑*iP* **P 20 49 13.7 +1.9**
KIV Kislovodsk 66.31 309 *eP* **P 20 49 13.3 +1.2**
comp=Z,24nm,1.3s
KIV Kislovodsk 66.31 309 *eP* **P 20 49 13.1 +1.0**
KIV pmax pmax
comp=Z,15nm,1.0s
CAST Castle Rocks 66.73 29 *eP* **P 20 49 14.6 +0.3**
comp=Z,13nm,0.9s
PPLA Purkeypile 66.75 30 *eP* **P 20 49 14.8 +0.1**
comp=Z,9.5nm,0.6s
COLD Coldfoot 67.00 25 *eP* **P 20 49 16.6 +0.6**
comp=Z,3.7nm,0.8s
TOLK Toolik Lake Re 67.05 23 *eP* **P 20 49 16.5 +0.2**
comp=Z,13nm,0.8s
OHAK Old Harbor 67.05 36 *eP* **P 20 49 16.1 -0.3**
comp=Z,7.1nm,0.4s
MLY Manley 67.09 27 *eP* **P 20 49 17.3 +0.7**
comp=Z,12nm,0.9s
BPAW Bear Paw Mtn. 67.12 28 *eP* **P 20 49 16.9 +0.1**
comp=Z,10.0nm,0.9s
SKT Skwentna 67.19 31 *eP* **P 20 49 16.8 -0.4**
comp=Z,7.4nm,0.8s
VSR Storozhevoye 67.27 317 *eP* **P 20 49 17.7 -0.2**
VSR pmax pmax
comp=Z,8.0nm,0.8s
KDAK Kodiak Island 67.33 35 P **P 20 49 17.8 -0.4**
comp=Z,7.1nm,0.4s,baz=268,slow=3.4,SNR=21
KDAK Kodiak Island 67.33 35 *eP* **P 20 49 17.9 -0.2**
comp=Z,36nm,1.5s
KDAK Kodiak Island 67.33 35 *eP* **P 20 49 17.9 -0.2**
KDAK pmax pmax
comp=Z,36nm,1.5s
TRF Thorofare Moun 67.53 29 *eP* **P 20 49 20.1 +0.6**
comp=Z,7.7nm,0.6s
SUA Susitna One 67.64 31 *eP* **P 20 49 20.3 +0.1**
comp=Z,25nm,0.8s
MCK McKinley 68.07 29 *eP* **P 20 49 22.9 +0.1**
comp=Z,9.3nm,0.7s
MDM Murphy Dome 68.16 27 *eP* **P 20 49 23.5 +0.2**
comp=Z,20nm,0.9s
RND Reindeer 68.17 29 *eP* **P 20 49 22.8 -0.7**
comp=Z,35nm,0.8s
RND Reindeer 68.17 29 *eP* **P 20 49 22.8 -0.7**
RND pmax pmax
comp=Z,35nm,0.8s
RC01 Rabbit Creek A 68.19 32 *eP* **P 20 49 23.5 0.0**
comp=Z,5.5nm,0.5s
WRH Wood River Hil 68.30 28 *eP* **P 20 49 24.9 +0.7**
comp=Z,7.9nm,0.8s
COLA College 68.33 27⇓*iP* **P 20 49 25.1 +0.8**
COLA pmax pmax
comp=Z,8.0nm,0.9s
CCB Clear Creek Bu 68.39 28 *eP* **P 20 49 24.4 -0.3**
comp=Z,2.3nm,0.8s
SML Sawmill 68.71 31 *eP* **P 20 49 26.7 -0.2**
comp=Z,11nm,0.8s
IL1 Eielson Array 68.75 27 *eP* **P 20 49 24.8 -2.2**
ILAR Eielson Array 68.75 27 P **P 20 49 26.1 -0.9**
comp=Z,1.9nm,0.6s,baz=293,slow=9.4,SNR=24
ILAR LR LR 21 24 17.6
comp=Z,34nm,18.8s,baz=324,slow=40
DHY Denali Highway 68.89 29 *eP* **P 20 49 27.2 -0.8**
comp=Z,5.5nm,0.6s
SCM Sheep Creek Mo 69.17 31 *eP* **P 20 49 29.5 -0.2**
comp=Z,24nm,0.7s
SCM Sheep Creek Mo 69.17 31 *eP* **P 20 49 29.5 -0.2**
SCM pmax pmax
comp=Z,25nm,0.7s
SPA0 Spitsbergen Ar 69.66 348 *eP* **P 20 49 32.1 -0.3**
SPITS Spitsbergen Ar 69.66 348 P **P 20 49 32.0 -0.4**
comp=Z,10nm,0.6s,baz=54,slow=7.4,SNR=50
SPITS LR LR 21 23 48.8
comp=Z,57nm,18.9s,baz=125,slow=39
PAX Paxson 69.76 29 *eP* **P 20 49 33.4 +0.1**
comp=Z,6.9nm,0.6s
ARCES ARCESS Array B 69.87 338 P **P 20 49 33.4 -0.5**
comp=Z,2.2nm,0.7s,baz=62,slow=8.1,SNR=10
KLU Klutina 69.90 31 *eP* **P 20 49 34.1 -0.2**
comp=Z,9.5nm,0.5s
SCRK Sand Creek 70.16 28 *eP* **P 20 49 35.6 -0.3**
comp=Z,6.6nm,0.9s
KBS Kingsbay 70.19 349⇑*iP* **P 20 49 35.4 -0.3**
DOT Dot Lake 70.21 28 *eP* **P 20 49 35.7 -0.4**
comp=Z,20nm,0.8s
BMRM Bremner River 70.65 31 *eP* **P 20 49 39.0 +0.1**
comp=Z,13nm,1.1s
EGAK Eagle 71.13 27 *eP* **P 20 49 41.2 -0.4**
comp=Z,11nm,0.6s
CRQM Cirque 71.40 31 *eP* **P 20 49 43.7 +0.2**
comp=Z,15nm,1.1s
FIA1 FINESS Array S 71.91 330 *eP* **P 20 49 46.6 +0.3**
FINES FINESS Array B 71.91 330 P **P 20 49 46.1 -0.2**
comp=Z,3.4nm,0.5s,baz=54,slow=5.2,SNR=30
FINES LR LR 21 23 57.6
comp=Z,98nm,20.1s,baz=50,slow=38
FINES FINESS Array B 71.91 330*ceP* **P 20 49 46.5 +0.2**
FINES pmax pmax
comp=Z,3.0nm,0.5s
DAWY Dawson 72.08 27 *eP* **P 20 49 47.1 -0.3**
comp=Z,13nm,0.6s
INK Inuvik 72.84 22 P **P 20 49 51.2 -0.5**
comp=Z,12nm,0.6s,baz=307,slow=7.1,SNR=40
INK Inuvik 72.84 22 *eP* **P 20 49 51.3 -0.5**
comp=Z,14nm,0.8s
INK Inuvik 72.84 22 *eP* **P 20 49 51.3 -0.5**
INK pmax pmax
comp=Z,14nm,0.8s
AKASG Malin Array Be 73.49 319 P **P 20 49 55.2 -0.6**
comp=Z,3.4nm,0.6s,baz=59,slow=6.4,SNR=11
AKASG Malin Array Be 73.49 319*ceP* **P 20 49 55.5 -0.4**
AKASG pmax pmax
comp=Z,3.0nm,0.6s
ASF Jabal al Asfar 73.80 298 P **P 20 49 59.2 +1.1**
comp=Z,4.6nm,0.9s,baz=79,slow=5.2,SNR=8.8
BR131 Keskin Array S 73.93 307 *eP* **P 20 49 59.3 +0.4**
BRTR Keskin Array B 73.93 307 P **P 20 49 59.3 +0.4**
comp=Z,9.5nm,0.8s,baz=104,slow=5.5,SNR=54
BRTR Keskin Array B 73.93 307*ceP* **P 20 49 59.5 +0.6**
BRTR pmax pmax
comp=Z,10.0nm,0.8s
ANTO Ankara 74.50 307⇓*iP* **P 20 50 02.0 -0.1**
ANTO Ankara 74.50 307⇓P **P 20 50 02.0 -0.1**
MMAI Mount Meron Ar 74.72 300 P **P 20 50 04.6 +1.1**
comp=Z,1.8nm,0.5s,baz=64,slow=9.9,SNR=5.9
WHY Whitehorse 75.25 30 *eP* **P 20 50 06.8 +0.7**
comp=Z,6.8nm,0.7s
CSS Mathiatis 75.70 302 *eP* **P 20 50 09.6 +0.5**
comp=Z,6.9nm,0.7s
SUW Suwalki 75.85 323 *eP* **P 20 50 09.5 0.0**
SUW Suwalki 75.85 323 *eP* **P 20 50 09.5 0.0**
CFR Carcaliu 75.99 313⇓*iP* **P 20 50 10.3 -0.1**
CFR Carcaliu 75.99 313⇓P **P 20 50 10.3 -0.1**
TIRR Tirgusor 76.05 313⇑*iP* **P 20 50 10.9 +0.1**
TIRR Tirgusor 76.05 313⇑P **P 20 50 10.9 +0.1**
BESE Bessie Mountai 76.09 32 *eP* **P 20 50 12.5 +1.6**
comp=Z,11nm,1.0s
TLB Topalu 76.25 313⇑*iP* **P 20 50 11.7 -0.3**
TLB Topalu 76.25 313⇑P **P 20 50 11.7 -0.3**
PRAR RASCA 76.46 316⇓*iP* **P 20 50 12.7 -0.5**
VRI Vrincioaia 76.67 314⇑*iP* **P 20 50 14.9 +0.5**
VRI Vrincioaia 76.67 314⇑P **P 20 50 14.9 +0.5**
PLOR Plostina 76.73 314⇓*iP* **P 20 50 14.7 0.0**
PLOR Plostina 76.73 314⇓P **P 20 50 14.7 0.0**
BUR08 Bucovina Ar. S 77.01 316 *eP* **P 20 50 16.6 +0.2**
BURAR Bucovina Array 77.01 316⇓*iP* **P 20 50 16.5 +0.2**
BURAR Bucovina Array 77.01 316⇓P **P 20 50 16.5 +0.2**
BUR04 Bucovina Ar. S 77.01 316 *eP* **P 20 50 16.0 -0.3**
MLR Muntele Rosu 77.32 314 P **P 20 50 18.6 +0.5**
comp=Z,1.2nm,0.8s,baz=90,slow=8.1,SNR=17
MLR Muntele Rosu 77.32 314⇓*iP* **P 20 50 18.8 +0.6**
MLR Muntele Rosu 77.32 314 *eP* **P 20 50 18.7 +0.5**
comp=Z,4.6nm,0.8s
MLR Muntele Rosu 77.32 314⇓P **P 20 50 18.8 +0.6**
DOPR Dopca 77.51 315⇓*iP* **P 20 50 19.4 +0.3**
KWP Kalwaria Pacla 77.79 319 *eP* **P 20 50 21.1 +0.5**
KWP Kalwaria Pacla 77.79 319 *eP* **P 20 50 21.0 +0.5**
comp=Z,101nm,0.9s
KWP Kalwaria Pacla 77.79 319 *eP* **P 20 50 21.1 +0.5**
VOIR 77.92 314⇓*iP* **P 20 50 21.2 -0.3**
VOIR 77.92 314⇓P **P 20 50 21.2 -0.3**
HFS Hagfors 78.01 331 P **P 20 50 21.1 -0.5**
comp=Z,2.4nm,0.5s,baz=89,slow=6.4,SNR=13
HFS LR LR 21 28 12.0
comp=Z,111nm,19.3s,baz=68,slow=38
ARR Arges 78.22 314⇑*iP* **P 20 50 23.5 +0.4**
HUMR Humele 78.31 314⇓*iP* **P 20 50 23.4 -0.2**
NC405 NORSAR Array S 78.40 332 *eP* **P 20 50 22.1 -1.6**
DLBC Dease Lake 78.44 31 P **P 20 50 25.1 +1.0**
comp=Z,5.6nm,0.8s,baz=286,slow=7.1,SNR=12
DLBC Dease Lake 78.44 31 *eP* **P 20 50 24.2 +0.2**
comp=Z,12nm,1.1s
RES Resolute Bay 78.48 9 P **P 20 50 23.2 -0.7**
comp=Z,3.7nm,0.4s,baz=289,slow=7.4,SNR=14
NB2 NORSAR Subarra 78.65 332 P **P 20 50 23.8 -1.3**
comp=Z,1.8nm,0.7s,baz=56,slow=5.6
NOA NORSAR Array B 78.65 332 P **P 20 50 24.2 -0.9**
comp=Z,4.7nm,0.7s,baz=55,slow=5.6,SNR=21
NOA LR LR 21 28 55.7
comp=Z,49nm,20.0s,baz=65,slow=38
NC204 NORSAR Array S 78.72 333 *eP* **P 20 50 24.9 -0.6**
LOT Lotru 78.75 315⇓*iP* **P 20 50 26.1 0.0**
DRGR 78.90 316⇓*iP* **P 20 50 26.9 +0.1**
DRGR 78.90 316 ⇓P **P 20 50 26.9 +0.1**
OJC Ojcow 79.27 320 *eP* **P 20 50 28.6 -0.1**
OJC Ojcow 79.27 320 *eP* **P 20 50 28.6 -0.1**
HERR Herculane 79.86 315⇑*iP* **P 20 50 32.0 0.0**
KONO Kongsberg 80.05 332*c iP* **P 20 50 34.1 +1.4**
KONO *i* *SP **pP 20 50 45.8 +0.8**
PSZ Piszkesteto 80.18 318⇓*iP* P 20 50 27.1 -6.7
VTS Vitosha 80.26 312⇑*iP* **P 20 50 34.6 +0.2**
VTS Vitosha 80.26 312 *eP* **P 20 50 34.7 +0.2**
comp=Z,7.6nm,0.8s
VTS Vitosha 80.26 312 *eP* **P 20 50 34.7 +0.3**
VTS pmax pmax
comp=Z,8.0nm,0.8s
MDVR Moldovita 80.35 315⇓*iP* **P 20 50 34.7 0.0**
VYHS Vyhne 80.58 319 *eP* **P 20 50 36.4 +0.6**
VYHS pmax pmax
comp=Z,5.0nm,1.1s
VYHS Vyhne 80.58 319 *eP* **P 20 50 36.4 +0.6**
MORC Moravsky Berou 80.77 321 *eP* **P 20 50 37.6 +0.7**
JAVC Velka Javorina 81.11 320 *eP* **P 20 50 39.7 +1.0**
VRAC Vranov 81.53 320 P **P 20 50 40.8 -0.1**
comp=Z,3.3nm,0.5s,baz=172,slow=24,SNR=3.6
IDI Anoyia 82.01 305 P **P 20 50 43.1 -0.6**
comp=Z,5.1nm,0.6s,baz=30,slow=13,SNR=5.8
AGG Agios Georgios 82.33 309 *eP* **P 20 50 43.8 -1.5**
comp=Z,22nm,0.9s
AGG Agios Georgios 82.33 309 *eP* **P 20 50 43.8 -1.5**
AGG pmax pmax
comp=Z,22nm,0.9s
YKW3 Yellowknife Ar 82.53 23 *eP* **P 20 50 45.1 -0.7**
comp=Z,16nm,0.8s
SUMG Summit 82.58 354 *eP* **P 20 50 46.2 -0.2**
comp=Z,7.4nm,0.6s
SUMG Summit 82.58 354 *eP* **P 20 50 46.2 -0.2**
SUMG pmax pmax
comp=Z,7.0nm,0.6s
YKA Yellowknife Ar 82.58 23 P **P 20 50 45.8 -0.2**
comp=Z,8.9nm,0.7s,baz=313,slow=4.7,SNR=100
YKA Yellowknife Ar 82.58 23*ceP* **P 20 50 45.7 -0.4**
YKA pmax pmax
comp=Z,9.0nm,0.7s
CLL Collm 82.61 323 *eP* **P 20 50 45.0 -1.4**
CLL Collm 82.61 323 *eP* **P 20 50 45.0 -1.4**
ITM Ithomi 83.40 308 *eP* **P 20 50 49.9 -1.0**
comp=Z,19nm,0.6s
GEC2 GERESS Array S 83.43 321 *eP* **P 20 50 51.8 +0.9**
comp=Z,3.5nm,0.9s
GEC2 GERESS Array S 83.43 321 *eP* **P 20 50 51.8 +0.9**
GEC2 pmax pmax
comp=Z,4.0nm,0.9s
GERES GERESS Array B 83.43 321 P **P 20 50 51.4 +0.5**
comp=Z,2.6nm,0.9s,baz=66,slow=4.5,SNR=18
GEA0 GERESS Array S 83.43 321 *eP* **P 20 50 51.0 +0.1**
OPO Ambohidratompo 84.58 247 P **P 20 50 58.0 +0.7**
comp=Z,4.1nm,0.7s,baz=94,slow=13,SNR=3.9
LLLB Lillooet 86.55 35 *eP* **P 20 51 07.4 +0.9**
comp=Z,13nm,1.1s
WLF Walferdange 87.18 324⇑P **P 20 51 09.6 +0.1**
EKA Eskdalemuir Ar 88.14 332 P **P 20 51 13.6 -0.3**
comp=Z,1.3nm,0.7s,baz=1.8,slow=5.3,SNR=4.5
D05A Enumclaw 88.43 38 *eP* **P 20 51 17.2 +1.7**
comp=Z,24nm,0.6s
LON Longmire 88.78 38 *eP* **P 20 51 18.1 +0.8**
comp=Z,7.4nm,1.0s
LON Longmire 88.78 38 *eP* **P 20 51 18.1 +0.8**
LON pmax pmax
comp=Z,7.0nm,1.0s
LTY Liberty 89.13 37 *eP* **P 20 51 18.9 0.0**
comp=Z,8.6nm,0.6s
B08A Colville Reser 89.21 36 *eP* **P 20 51 20.0 +0.8**
comp=Z,16nm,0.8s
D08A Wollman Farm, 90.21 37 *eP* **P 20 51 25.1 +1.2**
comp=Z,13nm,0.7s
NEW Newport 90.44 35 P **P 20 51 25.3 +0.3**
comp=Z,9.3nm,0.9s,baz=303,slow=3.7,SNR=8.8
NEW Newport 90.44 35 *eP* **P 20 51 25.7 +0.7**
comp=Z,16nm,1.1s
NEW Newport 90.44 35 *eP* **P 20 51 25.7 +0.7**
NEW pmax pmax
comp=Z,16nm,1.1s
PINE Pine Mountain 90.99 40 *eP* **P 20 51 29.5 +1.7**
comp=Z,40nm,1.6s
WALA Waterton Lakes 91.58 33 *eP* **P 20 51 31.6 +1.2**
comp=Z,21nm,1.4s
FRB Frobisher Bay 91.93 5 P **P 20 51 30.4 -1.0**
comp=Z,11nm,0.8s,baz=350,slow=5.2,SNR=17
FCC Fort Churchill 92.03 18 *eP* **P 20 51 31.2 -0.8**
comp=Z,12nm,0.7s
FCC Fort Churchill 92.03 18 *eP* **P 20 51 31.2 -0.8**
FCC pmax pmax
comp=Z,12nm,0.7s
JTMT Jette 92.24 34 *eP* **P 20 51 33.4 0.0**
comp=Z,4.9nm,0.7s
BMO Blue Mountains 92.45 38 *eP* **P 20 51 35.3 +0.9**
comp=Z,3.3nm,0.6s
FFC Flin Flon 92.72 24 *eP* **P 20 51 35.2 -0.1**
comp=Z,16nm,0.9s
FFC Flin Flon 92.72 24 *eP* **P 20 51 35.2 -0.1**
FFC pmax pmax
comp=Z,16nm,0.9s
KEST Kesra 92.97 311 P **P 20 51 37.1 +0.1**
comp=Z,3.3nm,0.8s,baz=205,slow=3.5,SNR=4.0
ORV Oroville 93.08 44 *eP* **P 20 51 37.3 0.0**
comp=Z,24nm,1.8s
ORV Oroville 93.08 44 *eP* **P 20 51 37.3 0.0**
ORV pmax pmax
comp=Z,24nm,1.8s
BEKR Beckworth 93.62 43 *eP* **P 20 51 40.7 +0.7**
comp=Z,6.6nm,0.8s
DLMT Dillon 94.68 35 *eP* **P 20 51 45.7 +0.9**
comp=Z,3.0nm,0.6s
NV01 Mina Array Sit 95.76 43 *eP* **P 20 51 50.1 +0.2**
NVAR Mina Array Bea 95.76 43 P **P 20 51 50.5 +0.6**
comp=Z,3.8nm,0.7s,baz=286,slow=5.2,SNR=11
DAC Darwin (Calif) 97.51 45 *eP* Pdif 20 51 58.1 +0.2
comp=Z,3.4nm,0.8s
DAC Darwin (Calif) 97.51 45 *eP* Pdif 20 51 58.1 +0.2
DAC pmax pmax
comp=Z,3.0nm,0.8s
TXAR Lajitas Array 110.86 42 PKiKP **PKiKP 20 56 56.4 -0.5**
comp=Z,0.2nm,0.3s,baz=219,slow=1.6,SNR=4.7
TORD Torodi Ar. Bea 111.08 296 PKiKP **PKiKP 20 56 56.7 -0.9**
comp=Z,0.8nm,0.8s,baz=24,slow=2.8,SNR=3.4
KOWA Kowa 114.93 301 PKP PKPdf 20 57 04.6 -0.2
comp=Z,0.9nm,0.5s,baz=169,slow=0.9,SNR=4.1
SDV Santo Domingo 144.79 22 PKP **PKPab 20 57 59.8 -0.2**
comp=Z,11nm,0.5s,baz=272,slow=1.2,SNR=17
PCRV Puerto La Cruz 145.18 12 PKPbc **PKPbc 20 57 59.9 -1.3**
comp=Z,5.4nm,0.4s,baz=14,slow=6.6,SNR=4.9
RUSC La Rusia 146.56 28 *e*PKPdf **PKPbc 20 58 05.6 -0.5**
OTAV Otavalo 148.49 43 *e*PKPbc **PKPbc 20 58 11.0 -0.4**
OTAV Otavalo 148.49 43 *e*PKP2 **PKPbc 20 58 11.0 -0.4**
SAML Samuel 163.97 20 *e*PKPab **PKPab 20 59 18.2 -1.8**
LPAZ La Paz 167.49 53 PKP **PKPdf 20 58 31.8 +1.0**
comp=Z,1.1nm,0.5s,baz=332,slow=5.7,SNR=4.4
LPAZ PKPab **PKPab 20 59 35.5 -0.9**
comp=Z,2.3nm,0.7s,baz=310,slow=4.1,SNR=4.8
LPAZ La Paz 167.49 53 *e*PKPdf **PKPdf 20 58 32.7 +1.9**
LPAZ PKPab **PKPab 20 59 35.5 -0.9**
LPAZ La Paz 167.49 53 *e*PKIKP **PKPdf 20 58 32.7 +1.9**
LPAZ 20 59 35.5

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*CSEM **04** 20:47:43.3, 44.°89N×10.°97E, h7km, ML2.1/13*
ROM 04 20:47:43.3±0.0, 44.°885N±0.°001×10.°973E±0.°001,
h7km, ML2.1/7, 4C-7D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NDIM	**Novi di Modena**	**0.05**	**273**	*i* P	Pg	20 47 45.7	+0.9
NDIM				*i* S	Sg	20 47 47.1	+1.2
T0827	**Moglia (MN)**	**0.06**	**331**	⇓*i*P	Pg	20 47 45.7	+0.8
T0827				*i* S	Sg	20 47 48.5	+2.4
T0827	**Moglia (MN)**	**0.06**	**331**	*i* P	Pg	20 47 45.7	+0.8
T0827				*i* S	Sg	20 47 48.5	+2.4
T0818	**Loc. Fossa, Co**	**0.06**	**39**⇑	*e*P	Pg	20 47 45.7	+0.7
T0818				*i* S	Sg	20 47 48.6	+2.4
T0818	**Loc. Fossa, Co**	**0.06**	**39**	*e*P	Pg	20 47 45.7	+0.8
T0818				*i* S	Sg	20 47 48.6	+2.4
T0828	**Loc. Fossoli,**	**0.07**	**218**	⇓*i*P	Pg	20 47 45.6	+0.6
T0828				*i* S	Sg	20 47 48.5	+2.3
T0828	**Loc. Fossoli,**	**0.07**	**218**	*i* P	Pg	20 47 45.6	+0.6
T0828				*i* S	Sg	20 47 48.5	+2.2
T0814	**Loc. Cortile,**	**0.09**	**182**	⇓*i*P	Pg	20 47 46.2	+0.9
T0814				*i* S	Sg	20 47 49.5	+2.7
T0814	**Loc. Cortile,**	**0.09**	**182**	*i* P	Pg	20 47 46.2	+0.8
T0814				*i* S	Sg	20 47 49.5	+2.7
T0826	**Rio Saliceto (**	**0.12**	**248**	⇑*i*P	Pg	20 47 46.6	+0.7
T0826				*i* S	Sg	20 47 50.2	+2.5
T0826	**Rio Saliceto (**	**0.12**	**248**	*i* P	Pg	20 47 46.6	+0.8
T0826				*i* S	Sg	20 47 50.2	+2.6
T0826				AML	AML		
	comp=E,4220μm,0.1s						
T0826				AML	AML		
	comp=N,4365μm,0.2s						
T0826				AML	AML		
	comp=E,4215μm,0.1s						
T0826				AML	AML		
	comp=N,4360μm,0.2s						
T0825	**Gonzaga (MN)**	**0.13**	**314**	*e*P	Pg	20 47 47.4	+1.5
T0825				*i* S	Sg	20 47 51.8	+4.0
T0825	**Gonzaga (MN)**	**0.13**	**314**	*e*P	Pg	20 47 47.4	+1.4
T0825				*i* S	Sg	20 47 51.8	+4.1
T0824	**Loc. Limidi di**	**0.13**	**195**	⇓*i*P	Pg	20 47 47.4	+1.4
T0824				*i* S	Sg	20 47 51.8	+4.0
T0824	**Loc. Limidi di**	**0.13**	**195**	*i* P	Pg	20 47 47.4	+1.4
T0824				*i* S	Sg	20 47 51.8	+4.0
T0802	**SanFelice sul**	**0.15**	**94**	*e*P	Pg	20 47 47.3	+1.0
T0802				*i* S	Sg	20 47 51.4	+3.0
T0802	**SanFelice sul**	**0.15**	**94**	*e*P	Pg	20 47 47.3	+1.0
T0802				*i* S	Sg	20 47 51.4	+3.0
T0813	**Massa Finalese**	**0.16**	**92**⇑	*e*P	Pg	20 47 47.4	+0.9
T0813				*i* S	Sg	20 47 51.5	+2.8
T0813	**Massa Finalese**	**0.16**	**92**	*e*P	Pg	20 47 47.4	+0.9
T0813				*i* S	Sg	20 47 51.5	+2.8
T0812	**Loc. Stoppiaro**	**0.16**	**65**	*e*P	Pg	20 47 47.3	+0.7
T0812	**Loc. Stoppiaro**	**0.16**	**65**	*e*P	Pg	20 47 47.3	+0.8
RAVA	**Ravarino**	**0.17**	**141**	⇓*i*P	Pg	20 47 47.6	+1.0
RAVA				*i* S	Sg	20 47 52.1	+3.2
RAVA	**Ravarino**	**0.17**	**141**	*i* P	Pg	20 47 47.6	+1.0
RAVA				*i* S	Sg	20 47 52.1	+3.2
RAVA				AML	AML		
	comp=E,2695μm,0.3s						
RAVA				AML	AML		
	comp=N,4225μm,0.3s						
RAVA				AML	AML		
	comp=E,2695μm,0.3s						
RAVA				AML	AML		
	comp=N,4220μm,0.3s						
SBPO	**S.Benedetto Po**	**0.17**	**347**	*e*P	Pg	20 47 48.8	+2.1
SBPO	**S.Benedetto Po**	**0.17**	**347**	*e*P	Pg	20 47 48.8	+2.1
T0800	**Massa Finalese**	**0.20**	**100**⇑	*e*P	Pg	20 47 47.9	+0.7
T0800				*i* S	Sg	20 47 52.8	+2.9
T0800	**Massa Finalese**	**0.20**	**100**	*e*P	Pg	20 47 47.9	+0.7
T0800				*i* S	Sg	20 47 52.8	+2.9
T0800				AML	AML		
	comp=E,4915μm,0.2s						
T0800				AML	AML		
	comp=N,5175μm,0.2s						
T0800				AML	AML		
	comp=E,5430μm,0.2s						
T0800				AML	AML		
	comp=N,4300μm,0.2s						
T0800				AML	AML		
	comp=E,4915μm,0.2s						
T0800				AML	AML		
	comp=N,5170μm,0.2s						
T0800				AML	AML		
	comp=E,5430μm,0.2s						
T0800				AML	AML		
	comp=N,4300μm,0.2s						
NOVE	**Novellara**	**0.20**	**245**	*e*P	Pg	20 47 48.1	+0.8
NOVE				*i* S	Sg	20 47 53.2	+3.2
NOVE	**Novellara**	**0.20**	**245**	*e*P	Pg	20 47 48.1	+0.8
NOVE				*i* S	Sg	20 47 53.2	+3.2
NOVE				AML	AML		
	comp=E,1165μm,0.3s						
NOVE				AML	AML		
	comp=N,1725μm,0.2s						
NOVE				AML	AML		
	comp=E,1165μm,0.3s						
NOVE				AML	AML		
	comp=N,1725μm,0.2s						
NOVE				AML	AML		
	comp=N,1725μm,0.2s						
NOVE				AML	AML		
	comp=E,1165μm,0.3s						
T0811	**Palata Pepoli**	**0.21**	**119**⇓	*e*P	Pg	20 47 48.6	+1.2
T0811				*i* S	Sg	20 47 52.9	+2.8
T0811	**Palata Pepoli**	**0.21**	**119**	*e*P	Pg	20 47 48.6	+1.2
T0811				*i* S	Sg	20 47 52.9	+2.8
T0805	**Bondeno (FE)**	**0.25**	**82**	*e*P	Pg	20 47 48.8	+0.6
T0805	**Bondeno (FE)**	**0.25**	**82**	*e*P	Pg	20 47 48.8	+0.6
MODE	**Modena**	**0.26**	**184**	*e*P	Pb	20 47 49.8	-0.4
MODE	**Modena**	**0.26**	**184**	*e*P	Pb	20 47 49.8	-0.4
SERM	**Sermide**	**0.26**	**61**	*e*P	Pg	20 47 49.3	+0.9
SERM	**Sermide**	**0.26**	**61**	*e*P	Pg	20 47 49.3	+0.9
T0822	**Casumaru (Bond**	**0.27**	**101**	*e*P	Pg	20 47 49.2	+0.6
T0822	**Casumaru (Bond**	**0.27**	**101**	*e*P	Pg	20 47 49.2	+0.6
T0803	**Dosso, Cento (**	**0.29**	**114**	*e*P	Pg	20 47 49.7	+0.7

T0803	**Dosso, Cento (**	**0.29**	**114**	*e*P	Pg	20 47 49.7	+0.7
T0823	**Castello D'Arg**	**0.29**	**132**⇓	*e*P	Pb	20 47 50.1	-0.8
T0823				*i* S	Sb	20 47 55.5	-0.4
T0823	**Castello D'Arg**	**0.29**	**132**	*e*P	Pb	20 47 50.1	-0.7
T0823				*i* S	Sb	20 47 55.5	-0.4
T0817	**Loc. Veratica,**	**0.36**	**73**	*e*P	Pb	20 47 51.5	-0.5
T0817				*i* S	Sb	20 47 58.7	+0.9
T0817	**Loc. Veratica,**	**0.36**	**73**	*e*P	Pb	20 47 51.5	-0.5
T0817				*i* S	Sb	20 47 58.7	+0.9
ZCCA	**Zocca**	**0.53**	**180**	*e*P	Pn	20 47 56.9	-0.5
ZCCA	**Zocca**	**0.53**	**180**	*e*P	Pn	20 47 56.9	-0.4
TEOL	**Teolo**	**0.69**	**46**	*e*P	Pg	20 47 56.0	-0.4
TEOL	**Teolo**	**0.69**	**46**	*e*P	Pg	20 47 57.0	+0.5
ROVR	**Rover¯¤ Verone**	**0.77**	**5**	*e*P	Pb	20 47 58.5	-0.5
ROVR	**Rover¯¤ Verone**	**0.77**	**5**	*e*P	Pg	20 47 58.5	+0.5
ROVR				AML	AML		
	comp=E,184μm,0.8s						
ROVR				AML	AML		
	comp=N,258μm,1.4s						
ROVR				AML	AML		
	comp=E,184μm,0.8s						
ROVR				AML	AML		
	comp=N,258μm,1.4s						
ROVR				AML	AML		
	comp=N,258μm,1.4s						
ROVR				AML	AML		
	comp=E,184μm,0.8s						
SALO	**Salr**	**0.80**	**337**	AML	AML		
	comp=E,136μm,0.2s						
SALO				AML	AML		
	comp=N,150μm,0.9s						
SALO				AML	AML		
	comp=N,150μm,0.9s						
SALO				AML	AML		
	comp=E,136μm,0.2s						
VLC	**Villacollemand**	**0.84**	**210**	*e*P	Pn	20 48 01.5	0.0
VLC	**Villacollemand**	**0.84**	**210**	*e*P	Pn	20 48 01.5	0.0
POPM	**Popiglio**	**0.85**	**191**	*e*P	Pn	20 48 01.4	-0.3
POPM	**Popiglio**	**0.85**	**191**	*e*P	Pn	20 48 01.4	-0.3
POPM				AML	AML		
	comp=E,89μm,1.3s						
POPM				AML	AML		
	comp=N,110μm,1.3s						
POPM				AML	AML		
	comp=N,110μm,1.3s						
POPM				AML	AML		
	comp=E,89μm,1.3s						
BDI	**Bagni Di Lucca**	**0.86**	**198**	AML	AML		
	comp=N,95μm,0.4s						
BDI				AML	AML		
	comp=E,88μm,1.3s						
BDI				AML	AML		
	comp=N,95μm,0.4s						
BDI				AML	AML		
	comp=E,88μm,1.3s						
MAGA	**Magasa**	**0.92**	**345**	*e*P	Pg	20 48 01.2	+0.2
MAGA	**Magasa**	**0.92**	**345**	*e*P	Pg	20 48 01.2	+0.2
CGRP	**Cima Grappa**	**1.15**	**30**	*e*P	Pg	20 48 05.2	-0.2
CGRP	**Cima Grappa**	**1.15**	**30**	*e*P	Pg	20 48 05.2	-0.2
MABI	**Malga Bissina**	**1.21**	**345**	AML	AML		
	comp=N,19μm,0.8s						
MABI				AML	AML		
	comp=E,29μm,0.7s						
MABI				AML	AML		
	comp=N,19μm,0.8s						
MABI				AML	AML		
	comp=E,29μm,0.7s						
CTI	**Castel Tesino**	**1.26**	**22**	AML	AML		
	comp=E,130μm,0.1s						
CTI				AML	AML		
	comp=E,130μm,0.1s						
CTI				AML	AML		
	comp=N,129μm,0.4s						
CTI				AML	AML		
	comp=N,129μm,0.4s						

*IDC **04** 21:03:45.2±2.0, 0.″00S×93.″04E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.3/69, mbtmp3.5/5, ML3.6/1, MS3.4/1, Ms1 3.4/1, ms1mx2.7/51, Error ellipse: s-maj=61.2km s-min=26.0km az=58.0*

*ISCJB **04** 21:03:48.0±1.6, 0.″1N±0.″2×93.″1E±0.″2, h33km, mb3.6/4, MS3.5/1, Error ellipse: s-maj=31.5km s-min=21.6km az=144.9*

ISC 04 21:03:50.3±1.8, 0.″1N±0.″2×93.″1E±0.″2, h35km, n10, σ1$14/6, mb3.6/4, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**6.40**	**65**	Pn	**Pn**	**21 05 22.0**	**-0.3**
	1.3nm,0.3s,baz=180,slow=9.0,SNR=3.8						
H08S2	**Diego Garcia H**	**21.95**	**249**	T	T	21 30 23.2	
	baz=68,slow=75,SNR=3.5						
H08S3	**Diego Garcia H**	**21.95**	**249**	T	T	21 30 24.9	
	baz=68,slow=75,SNR=4.0						
H08S1	**Diego Carcia H**	**21.97**	**249**	T	T	21 30 25.2	
	baz=68,slow=75,SNR=3.2						
WRA	**Warramunga Arr**	**44.98**	**119**	P	**P**	**21 12 02.7**	**+0.1**
	0.6nm,0.7s,baz=294,slow=8.6,SNR=3.4						
ASAR	**Alice Springs**	**46.06**	**124**	P	**P**	**21 12 10.8**	**-0.4**
	0.3nm,0.7s,baz=289,slow=8.7,SNR=3.2						
MKAR	**Makanchi Array**	**47.50**	**350**	P	**P**	**21 12 20.7**	**-1.2**
	0.4nm,0.6s,baz=176,slow=8.2,SNR=4.4						
SONM	**Songino Array**	**48.96**	**12**	P	**P**	**21 12 34.3**	**+0.9**
	0.6nm,0.5s,baz=200,slow=8.1,SNR=4.0						
USRK	**Ussuriysk Ar.**	**55.89**	**33**	LR	LR	21 39 07.6	
	comp=Z,34nm,19.0s,baz=247,slow=38						
TXAR	**Lajitas Array**	**146.66**	**27**	PKPbc	**PKPab**	**21 23 31.5**	**+1.2**
	0.3nm,0.7s,baz=0.0,slow=0.9,SNR=3.3						

*IDC **04** 21:09:12.5±1.5, 4.″63S×153.″07E, h0km, mb3.9/7, mb1 4.1/7, mb1mx3.6/55, mbtmp3.9/7, Error ellipse: s-maj=62.5km s-min=21.6km az=117.0*

*ISCJB **04** 21:09:15.8±0.9, 4.″8S±0.″1×153.″2E±0.″2, h35km, mb3.8/9, Error ellipse: s-maj=28.9km s-min=11.5km az=41.2*

*NEIC **04** 21:09:17.5±0.8, 4.″77S×153.″15E, h35km, mb4.3/2, Error ellipse: s-maj=27.3km s-min=12.5km az=117.0*

ISC 04 21:09:17.1±1.0, 4.″8S±0.″2×153.″2E±0.″2, h35km, n12, σ0$92/13, mb4.0/9, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.58**	**232**	Sn	**Sn**	**21 12 31.0**	**+1.1**
	2.4nm,0.3s,baz=210,slow=20,SNR=4.7						
PMG	**Port Moresby**	**7.58**	**232**	*e*Pn	**Pn**	**21 11 03.8**	**-1.4**
PMG				Sn	**Sn**	**21 12 31.0**	**+1.1**
WRAB	**Tennant Creek**	**23.77**	**229**	*e*P	**P**	**21 14 27.3**	**+0.7**
	2.3nm,0.5s						
WRA	**Warramunga Arr**	**23.78**	**229**	P	**P**	**21 14 27.4**	**+0.6**
	3.0nm,0.5s,baz=53,slow=9.8,SNR=34						
ASAR	**Alice Springs**	**26.46**	**223**	P	**P**	**21 14 51.9**	**+0.7**
	0.5nm,0.5s,baz=55,slow=9.2,SNR=13						
STKA	**Stephens Creek**	**29.09**	**201**	P	**P**	**21 15 15.2**	**+0.7**
	2.7nm,0.8s,baz=7.8,slow=12,SNR=2.9						
FITZ	**Fitzroy Crossi**	**30.05**	**242**	P	**P**	**21 15 22.4**	**-0.7**
	1.5nm,0.6s,baz=46,slow=6.5,SNR=9.5						
TAU	**Tasmania Unive**	**38.34**	**187**	P	**P**	**21 16 33.8**	**-0.8**
	7.7nm,0.6s						
MKAR	**Makanchi Array**	**80.59**	**319**	P	**P**	**21 21 26.5**	**+0.3**
	0.1nm,0.4s,baz=99,slow=7.4,SNR=3.1						
ILAR	**Eielson Array**	**81.97**	**22**	P	**P**	**21 21 34.0**	**+0.9**
	0.4nm,0.6s,baz=248,slow=4.9,SNR=3.6						
BVAR	**Borovoye Array**	**89.48**	**323**	P	**P**	**21 22 10.0**	**-0.6**
	0.8nm,0.6s,baz=104,slow=6.1,SNR=8.2						
TORD	**Torodi Ar. Bea**	**150.71**	**288**	PKPbc	**PKPbc**	**21 29 06.7**	**0.0**
	0.5nm,0.4s,baz=90,slow=1.6,SNR=7.5						

*MAN **04** 21:15:21.9, 7.″33N×121.″73E, h148km, mb4.5, ML3.3, MS3.2*

ISC 04 21:15:17.7±3.9, 7.″0N±0.″1×121.″3E±0.″2, h35km, n7, σ2$37/10, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZCP	**Zamboanga City**	**0.77**	**92**⇑	*i*P	**Pn**	**21 15 31.0**	**-1.1**
ZCP				*i* S	**Sn**	**21 15 39.1**	**-3.4**
PAGZ	**Pagadian**	**2.24**	**67**	*e*P	**Pn**	**21 15 54.3**	**+1.9**
PAGZ				*e*S	**Sn**	**21 16 20.1**	**+1.2**
CTBH	**Cotabato--PC H**	**2.93**	**85**⇑	*i*P	**Pn**	**21 16 02.7**	**+0.8**
CTBH				*i* S	**Sn**	**21 16 35.1**	**-0.8**
SKMP	**Bagumbayan, Su**	**3.25**	**98**	*e*P	**Pn**	**21 16 07.9**	**+1.7**
GSPH	**General Santos**	**3.73**	**103**⇓	*i*P	Pn	21 16 19.1	+6.1
GSPH				*i* S	Sn	21 17 03.0	+7.4
BUKP	**Musuan**	**3.84**	**76**	*e*P	**Pn**	**21 16 17.0**	**+2.6**
GUIM	**Jordan**	**3.86**	**19**	*e*P	**Pn**	**21 16 15.6**	**+0.9**
GUIM				*e*S	**Sn**	**21 16 55.6**	**-3.1**

*CSEM **04** 21:23:47.3±0.2, 37.″99N×26.″77W, h10km, ML4.0, Error ellipse: s-maj=11.2km s-min=3.0km az=23.0*

*PDA **04** 21:23:50.4±1.8, 38.″17N×26.″61W, h0km±6km, MD3.8, ML4.0, Error ellipse: s-maj=10.3km s-min=2.1km az=32.0*

*IDC **04** 21:23:51.9±3.5, 38.″34N×26.″05W, h0km, mb3.9/8, mb1 3.8/9, mb1mx3.5/66, mbtmp3.8/9, ML4.2/1, MS3.5/15, Ms1 3.5/15, ms1mx3.2/56, Error ellipse: s-maj=79.6km s-min=23.0km az=81.0*

*NEIC **04** 21:23:53.1±2.5, 38.″32N×25.″92W, h7km±13km, mb4.4/3, Error ellipse: s-maj=22.7km s-min=10.2km az=104.0*

ISC 04 21:23:47.4±1.3, 38.″10N±0.″07×26.″68W±0.″05, h2km±8km, n67, σ2$37/79, mb4.1/11, MS3.6/14, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADH	**Angra Heroismo**	**0.70**	**322**	*e*P	**Pg**	**21 24 02.0**	**+1.1**
ADH				*e*S	**Sg**	**21 24 11.1**	**+1.0**
ADH				A	A	21 24 15.4	
	5μm,0.6s						
ADH	**Angra Heroismo**	**0.70**	**322**	*e*P	**Pg**	**21 24 02.0**	**+1.1**
ADH				*e*S	**Sg**	**21 24 11.1**	**+1.0**
PSET	**Sete Cidades**	**0.81**	**110**	*e*P	**Pg**	**21 24 03.7**	**+0.8**
PSET				*e*S	**Sg**	**21 24 14.1**	**+0.8**
PSET				A	A	21 24 16.1	
	7μm,0.2s						
PSET	**Sete Cidades**	**0.81**	**110**	*e*P	**Pg**	**21 24 03.7**	**+0.8**
PSET				*e*S	**Sg**	**21 24 14.1**	**+0.8**
PDA	**Ponta Delgada**	**0.88**	**113**	*e*P	**Pg**	**21 24 04.9**	**+0.7**
PDA				*e*S	**Sg**	**21 24 16.1**	**+0.5**
PDA				A	A	21 24 17.6	
	3μm,0.7s						
PDA	**Ponta Delgada**	**0.88**	**113**	*e*P	**Pg**	**21 24 04.9**	**+0.7**
PDA				*e*S	**Sg**	**21 24 16.1**	**+0.5**
GRON	**Grota Negra**	**0.96**	**110**	*e*P	**Pg**	**21 24 07.4**	**+1.5**
GRON				*e*S	**Sg**	**21 24 19.7**	**+1.3**
GRON				A	A	21 24 24.4	
	550nm,0.2s						
CMLA	**Cha da Macela**	**0.97**	**110**	*e*P	**Pg**	**21 24 06.2**	**+0.1**
CMLA				*e*S	**Sg**	**21 24 18.4**	**-0.3**
CMLA				A	A	21 24 20.2	
	9μm,0.3s						
CMLA	**Cha da Macela**	**0.97**	**110**	*e*Pg	**Pg**	**21 24 05.4**	**-0.7**
CMLA	**Cha da Macela**	**0.97**	**110**	*e*Pg	**Pg**	**21 24 05.4**	**-0.7**
CMLA	**Cha da Macela**	**0.97**	**110**	*e*P	**Pg**	**21 24 06.2**	**+0.1**
CMLA				*e*S	**Sg**	**21 24 18.4**	**-0.3**
PMAN	**Manadas**	**1.23**	**296**	*e*P	**Pn**	**21 24 10.0**	**-1.7**
PMAN				*e*S	**Sb**	**21 24 24.9**	**-2.8**
PMAN				A	A	21 24 28.3	
	700nm,0.5s						
PMAN	**Manadas**	**1.23**	**296**	*e*P	**Pn**	**21 24 10.0**	**-1.7**
PMAN				*e*S	**Sb**	**21 24 24.9**	**-2.8**
BART	**Pico Bartolome**	**1.24**	**105**	*e*P	**Pb**	**21 24 09.5**	**-2.1**
BART				*e*S	**Sb**	**21 24 23.9**	**-4.1**
BART				A	A	21 24 30.7	
	2μm,0.5s						
BART	**Pico Bartolome**	**1.24**	**105**	*e*P	**Pb**	**21 24 09.5**	**-2.1**
BART				*e*S	**Sb**	**21 24 23.9**	**-4.1**
ROSA	**Rosais**	**1.37**	**297**	*e*P	**Pn**	**21 24 12.0**	**-1.7**
ROSA				*e*S	**Sb**	**21 24 28.7**	**-3.2**
ROSA				A	A	21 24 32.0	
	410nm,0.6s						
ROSA	**Rosais**	**1.37**	**297**	*e*P	**Pn**	**21 24 12.0**	**-1.7**
ROSA				*e*S	**Sb**	**21 24 28.7**	**-3.2**
PGRA	**Graciosa**	**1.38**	**313**	*e*P	**Pn**	**21 24 11.8**	**-1.9**
PGRA				*e*S	**Sb**	**21 24 28.8**	**-3.2**
PGRA				A	A	21 24 42.7	
	607nm,0.5s						
PGRA	**Graciosa**	**1.38**	**313**	*e*P	**Pn**	**21 24 11.8**	**-1.9**
PGRA				*e*S	**Sb**	**21 24 28.8**	**-3.2**
PICO	**Pico**	**1.43**	**287**	*e*P	**Pn**	**21 24 13.3**	**-1.2**
PICO				*e*S	**Sn**	**21 24 30.2**	**-3.7**
PICO				A	A	21 24 36.7	
	496nm,0.4s						
PICO	**Pico**	**1.43**	**287**	*e*P	**Pn**	**21 24 13.3**	**-1.2**
PICO				*e*S	**Sn**	**21 24 30.2**	**-3.7**
PCAN	**Candelaria**	**1.47**	**285**	*e*P	**Pn**	**21 24 13.7**	**-1.2**
PCAN				*e*S	**Sn**	**21 24 30.9**	**-3.9**
PCAN				A	A	21 24 44.3	
	362nm,0.4s						
PCAN	**Candelaria**	**1.47**	**285**	*e*P	**Pn**	**21 24 13.7**	**-1.2**
PCAN				*e*S	**Sn**	**21 24 30.9**	**-3.9**
HOR	**Horta**	**1.59**	**286**	*e*P	**Pn**	**21 24 15.5**	**-1.1**
HOR				*e*S	**Sn**	**21 24 34.2**	**-3.6**
HOR				A	A	21 24 35.9	
	231nm,0.1s						
HOR	**Horta**	**1.59**	**286**	*e*P	**Pn**	**21 24 15.5**	**-1.1**
HOR				*e*S	**Sn**	**21 24 34.2**	**-3.6**
PSMA	**Santa Maria**	**1.65**	**131**	*e*P	**Pn**	**21 24 16.2**	**-1.3**
PSMA				*e*S	**Sn**	**21 24 35.0**	**-4.3**
PSMA				A	A	21 24 37.3	
	604nm,0.2s						
CALA	**Caldeira**	**1.66**	**287**	*e*P	**Pn**	**21 24 16.9**	**-0.8**
CALA				*e*S	**Sn**	**21 24 36.0**	**-3.7**
CALA	**Caldeira**	**1.66**	**287**	*e*P	**Pn**	**21 24 16.9**	**-0.8**
CALA				*e*S	**Sn**	**21 24 36.0**	**-3.7**
PCED	**Cedros**	**1.68**	**289**	*e*P	**Pn**	**21 24 16.3**	**-1.5**
PCED				*e*S	**Sn**	**21 24 36.3**	**-3.6**
PCED				A	A	21 24 37.6	
	165nm,0.3s						
PCED	**Cedros**	**1.68**	**289**	*e*P	**Pn**	**21 24 16.3**	**-1.5**
PCED				*e*S	**Sn**	**21 24 36.3**	**-3.6**
PSMN	**Pico do Norte,**	**1.69**	**130**	*e*P	**Pn**	**21 24 16.5**	**-1.5**
PSMN				*e*S	**Sn**	**21 24 35.6**	**-4.6**
PSMN				A	A	21 24 38.4	
	271nm,0.2s						
PSMN	**Pico do Norte,**	**1.69**	**130**	*e*P	**Pn**	**21 24 16.5**	**-1.5**
PSMN				*e*S	**Sn**	**21 24 35.6**	**-4.6**
PMOZ	**Porto Moniz, M**	**9.35**	**121**	*e*P	**Pn**	**21 26 05.1**	**+1.7**
	102nm,1.4s						
PMOZ	**Porto Moniz, M**	**9.35**	**121**	*e*P	**Pn**	**21 26 05.1**	**+1.7**
PMAR	**Madeira**	**9.61**	**121**	*e*P	**Pn**	**21 26 07.9**	**+1.0**
	75nm,1.6s						
PMAR	**Madeira**	**9.61**	**121**	*e*P	**Pn**	**21 26 07.9**	**+1.0**
ESDC	**Sonseca Array**	**17.75**	**78**	P	**Pn**	**21 27 51.9**	**-3.9**
	0.2nm,0.3s,baz=260,slow=13,SNR=4.6						
ESDC				LR	LR	21 34 06.0	
	comp=Z,89nm,18.1s,baz=250,slow=36						
EKA	**Eskdalemuir Ar**	**23.42**	**35**	P	**P**	**21 28 58.3**	**+0.6**
	1.7nm,0.7s,baz=231,slow=7.6,SNR=11						
CLL	**Collm**	**30.75**	**52**	*e*(P)	**P**	**21 30 06.0**	**+2.1**
CLL				LV		21 40 00.0	
	comp=Z,100nm,18.1s						
KOWA	**Kowa**	**30.91**	**133**	P	**P**	**21 30 09.0**	**+3.4**
	comp=Z,1.8nm,0.7s,baz=313,slow=6.2,SNR=5.0						
VAE	**Valguarnera**	**32.29**	**78**	LR	LR	21 41 08.3	
	comp=Z,150nm,21.3s,baz=307,slow=33						
NOA	**NORSAR Array B**	**32.88**	**33**	LR	LR	21 42 24.6	
	comp=Z,61nm,18.1s,baz=230,slow=34						
HFS	**Hagfors**	**33.61**	**36**	P	**P**	**21 30 29.3**	**+0.4**
	comp=Z,2.0nm,0.7s,baz=205,slow=6.4,SNR=7.0						
HFS				LR	LR	21 42 10.0	
	comp=Z,26nm,19.9s,baz=217,slow=33						
TORD	**Torodi Ar. Bea**	**35.41**	**127**	P	**P**	**21 30 47.1**	**+2.2**
	comp=Z,3.7nm,1.1s,baz=310,slow=8.0,SNR=8.3						
FINES	**FINESS Array B**	**39.80**	**37**	P	**P**	**21 31 22.3**	**+0.7**
	comp=Z,1.3nm,0.6s,baz=226,slow=5.0,SNR=6.2						
FINES				LR	LR	21 45 21.6	
	comp=Z,48nm,21.5s,baz=240,slow=33						
ARCES	**ARCESS Array B**	**41.81**	**25**	P	**P**	**21 31 38.7**	**+0.5**
	comp=Z,2.5nm,0.7s,baz=260,slow=7.3,SNR=5.8						
SPITS	**Spitsbergen Ar**	**43.93**	**12**	LR	LR	21 44 47.7	
	comp=Z,50nm,21.1s,baz=270,slow=29						
RCBR	**Riachuelo**	**44.54**	**193**	P	P	21 32 08.5	+7.8
	comp=Z,0.8nm,0.4s						
BRTR	**Keskin Array B**	**46.18**	**68**	P	**P**	**21 32 14.6**	**+0.8**
	comp=Z,0.3nm,0.8s,baz=238,slow=7.2,SNR=2.8						
BRTR				LR	LR	21 51 37.4	
	comp=Z,22nm,18.5s,baz=257,slow=36						
H10N2	**ASCENSION HYDR**	**47.09**	**163**	T	T	22 22 33.2	
	baz=347,slow=75,SNR=122						
H10N3	**ASCENSION HYDR**	**47.09**	**163**	T	T	22 22 33.4	
	baz=347,slow=75,SNR=95						
H10N1	**ASCENSION HYDR**	**47.10**	**163**	T	T	22 22 34.6	
	baz=347,slow=75,SNR=155						
H10S1	**ASCENSION HYDR**	**48.13**	**164**	T	T	22 23 51.6	
	baz=347,slow=75,SNR=200						
H10S3	**ASCENSION HYDR**	**48.13**	**164**	T	T	22 23 50.5	
	baz=347,slow=75,SNR=177						
H10S2	**ASCENSION HYDR**	**48.15**	**164**	T	T	22 23 51.3	
	baz=347,slow=75,SNR=202						
SDV	**Santo Domingo**	**49.04**	**245**	LR	LR	21 49 16.8	
	comp=Z,56nm,20.9s,baz=110,slow=31						
PTGA	**Pitinga**	**49.33**	**226**	LR	LR	21 51 37.5	
	comp=Z,93nm,18.0s,baz=154,slow=33						
GNI	**Garni**	**54.03**	**64**	P	**P**	**21 33 13.2**	**-0.2**
	comp=Z,2.2nm,0.5s						
ROSC	**El Rosal**	**54.47**	**245**	LR	LR	21 54 16.1	
	comp=Z,66nm,18.9s,baz=162,slow=33						
SHEL	**Horse Pasture**	**57.25**	**156**	P	**P**	**21 33 40.4**	**+3.9**
	comp=Z,4.1nm,0.6s						
AKTO	**Aktyubinsk**	**58.73**	**48**	LR	LR	21 58 58.4	
	comp=Z,79nm,19.6s,baz=305,slow=36						
JTS	**JuntasAbangare**	**58.84**	**258**	LR	LR	21 58 13.3	
	comp=Z,29nm,19.0s,baz=246,slow=35						
NRIK	**Noril'sk**	**62.64**	**21**	LR	LR	22 01 23.7	
	comp=Z,41nm,19.6s,baz=143,slow=36						
BVAR	**Borovoye Array**	**64.47**	**42**	LR	LR	22 01 22.4	
	comp=Z,64nm,20.4s,baz=274,slow=35						
ZALV	**Zalesovo Beam**	**71.05**	**36**	LR	LR	22 06 59.8	
	comp=Z,48nm,18.1s,baz=250,slow=37						
MKAR	**Makanchi Array**	**74.32**	**42**	P	**P**	**21 35 27.7**	**+1.3**
	comp=Z,0.4nm,0.8s,baz=331,slow=4.7,SNR=4.2						
COCO	**West Island**	**123.70**	**78**	*e*PKPdf	**PKPdf**	**21 42 50.3**	**+3.0**

IDC 04 21:28:00.4±1.6, 8.″63S×157.″39E, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.6/48, mbtmp3.8/5, ML4.1/1, Error ellipse: s-maj=40.1km s-min=24.2km az=1.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.65**	**108**	*e*P	Pn	21 28 45.0	+0.5
HNR				*e*S	Sb	21 29 20.0	-2.0
HNR	**Honiara**	**2.65**	**108**	Pn	Pn	21 28 44.5	+0.1
	31nm,0.3s,baz=169,slow=5.6,SNR=4.9						
HNR				Sn	Sn	21 29 18.5	+1.1
	52nm,0.3s,baz=252,slow=22,SNR=10						
WRA	**Warramunga Arr**	**24.97**	**241**	P	P	21 33 24.8	-1.1
	1.1nm,0.6s,baz=68,slow=9.6,SNR=8.9						
ASAR	**Alice Springs**	**27.00**	**234**	P	P	21 33 45.0	+0.7
	0.3nm,0.8s,baz=64,slow=10,SNR=2.7						
STKA	**Stephens Creek**	**27.40**	**210**	P	P	21 33 48.0	+0.2
	4.7nm,1.1s,baz=11,slow=6.2,SNR=2.7						
MKAR	**Makanchi Array**	**86.19**	**318**	P	P	21 40 43.9	+0.1
	0.3nm,0.6s,baz=91,slow=6.9,SNR=4.4						

*ISCJB **04** 21:32:09.1±1.7, 10.″2S±0.″2×161.″2E±0.″2, h100km, mb3.7/4, Error ellipse: s-maj=35.7km s-min=8.9km az=143.7*

*IDC **04** 21:32:12.4±2.5, 10.″05S×161.″01E, h104km±14km, mb3.6/4, mb1 3.8/5, mb1mx3.4/51, mbtmp4.0/5, Error ellipse: s-maj=34.6km s-min=25.2km az=73.0*

ISC 04 21:32:10.9±1.5, 10.″1S±0.″2×161.″1E±0.″2, h100km, n7, σ2$01/11, mb3.8/4, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.33**	**300**	*e*P	**Pn**	**21 32 34.0**	**-1.1**
HNR				*e*S	**Sn**	**21 32 54.0**	**+0.6**
HNR	**Honiara**	**1.33**	**300**	P	**Pn**	**21 32 35.0**	**-0.1**
	154nm,0.3s,baz=158,slow=6.4,SNR=15						
HNR				LR	LR	21 32 45.5	
	comp=Z,66nm,21.2s,baz=148,slow=27						
HNR				S	**Sn**	**21 32 53.1**	**-0.2**
	373nm,0.3s,baz=156,slow=20,SNR=22						
DZM	**Mont Dzumac**	**12.96**	**157**	P	**Pn**	**21 35 14.5**	**+3.1**
	0.4nm,0.3s,baz=0.0,slow=20,SNR=4.9						
DZM				S	**Sn**	**21 37 30.2**	**-3.8**
	0.3nm,0.3s,baz=126,slow=19,SNR=3.2						
WRA	**Warramunga Arr**	**27.61**	**246**	P	**P**	**21 37 49.6**	**+0.4**
	1.3nm,0.6s,baz=76,slow=8.8,SNR=14						
ASAR	**Alice Springs**	**29.25**	**239**	P	**P**	**21 38 03.5**	**-0.3**
	0.3nm,0.4s,baz=61,slow=10,SNR=6.7						
FITZ	**Fitzroy Crossi**	**35.26**	**253**	P	**P**	**21 38 57.0**	**+0.8**
	1.6nm,0.5s,baz=61,slow=9.6,SNR=9.3						
SONM	**Songino Array**	**75.26**	**325**	P	**P**	**21 43 43.5**	**+0.5**
	1.2nm,0.6s,baz=142,slow=5.6,SNR=9.6						
SONM				pP	**pP**	**21 44 06.4**	**-2.3**
	0.8nm,0.7s,baz=138,slow=6.7,SNR=3.5						

JMA 04 21:32:27.6±0.2, 38.″51N×144.″59E, h36km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.35**	**285**	P	Pn	21 33 05.3	+1.6
OFUJ				*e*S	Sn	21 33 33.2	+1.9
MIYJ	**Miyakonagasawa**	**2.41**	**297**	P	Pn	21 33 05.6	+1.2
JMK	**Ichinoseki**	**2.67**	**281**	P	Pn	21 33 10.2	+2.2
JMK				*e*S	Sn	21 33 41.1	+1.9
JOM	**Ohasama**	**2.74**	**292**	P	Pn	21 33 11.0	+2.0
JOM				*e*S	Sn	21 33 43.0	+2.1
JANG	**Nango**	**3.02**	**309**	P	Pn	21 33 14.0	+1.1
JOU	**Okura**	**3.09**	**269**	P	Pn	21 33 16.0	+2.2
JOU				S	Sn	21 33 51.7	+2.3
JRG	**Rokugo**	**3.21**	**287**	P	Pn	21 33 17.9	+2.5
JRG				*e*S	Sn	21 33 55.8	+3.4
JYK	**Kaneyama**	**3.33**	**278**	P	Pn	21 33 19.9	+2.7
JYK				*e*S	Sn	21 33 58.6	+3.1
JFT	**Otama**	**3.50**	**255**	P	Pn	21 33 22.2	+2.7
JFT				S	Sn	21 34 02.3	+2.6
JTM	**Tenmabayashi**	**3.54**	**311**	P	Pn	21 33 21.6	+1.6
JTM				*e*S	Sn	21 34 01.7	+1.0
JOT

0.5nm,0.8s,baz=350,slow=1.2,SNR=3.6

NIED ***04*** *21:51:00,38.°50N×144.°60E,h5km,Mw3.9 Best double couple: M07.40000×10^14 NP1:φ15.00000°,δ23.00000°, λ-63.00000°. NP2:φ167.00000°,δ69.00000°, λ-101.00000°.*
IDC ***04*** *21:51:27.0±1.1,38.°40N×145.°00E,h0km,mb3.7/8, mb1 3.9/12,mb1mx3.7/69,mbtmp3.9/12,ML4.0/3,MS2.7/4, Ms1 2.7/4,ms1mx2.5/69,Error ellipse: s-maj=26.9km s-min=19.7km az=120.0*
ISCJB ***04*** *21:51:31.1±0.6,38.°61N±0.°04×144.°66E±0.°05,h35km, mb3.8/9,MS4.3/1,Error ellipse: s-maj=6.4km s-min=4.7km az=135.4*
JMA ***04*** *21:51:31.9±0.2,38.°52N×144.°59E,h43km,M4.4*
NEIC ***04*** *21:51:32.7±0.8,38.°52N×144.°81E,h35km,mb4.3/1,Error ellipse: s-maj=17.7km s-min=10.7km az=125.0*

ISC 04 21:51:32.7±0.9,38.°58N±0.°05×144.°71E±0.°08,h35km,n42, σ2.09/47,mb3.9/9,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.43**	**283**	P	**Pn**	**21 52 09.3**	**-0.5**
OFUJ				*e*S	**Sn**	**21 52 37.1**	**-1.2**
MIYJ	**Miyakonagasawa**	**2.46**	**295**	P	**Pn**	**21 52 09.7**	**-0.6**
MIYJ				*e*S	**Sn**	**21 52 37.5**	**-1.7**
JMK	**Ichinoseki**	**2.75**	**279**	P	**Pn**	**21 52 14.1**	**-0.2**
JMK				*e*S	**Sn**	**21 52 45.2**	**-1.1**
JOM	**Ohasama**	**2.81**	**290**	P	**Pn**	**21 52 15.0**	**-0.1**
JOM				S	**Sn**	**21 52 47.0**	**-0.7**
JANG	**Nango**	**3.06**	**307**	P	**Pn**	**21 52 17.7**	**-0.8**
JYK	**Kaneyama**	**3.42**	**277**	P	**Pn**	**21 52 23.5**	**0.0**
JYK				*e*S	**Sn**	**21 53 02.3**	**-0.5**
JFT	**Otama**	**3.61**	**254**	P	**Pn**	**21 52 25.9**	**-0.2**
JFT				S	**Sn**	**21 53 06.3**	**-1.2**
ERM	**Erimo**	**3.64**	**341**	*e*Pn	**Pn**	**21 52 27.1**	**+0.7**
JOT	**Ohata**	**3.97**	**316**	*e*S	**Sn**	**21 53 14.6**	**-1.8**
JCH	**Churui**	**4.16**	**346**	*e*S	**Sn**	**21 53 19.1**	**-2.0**
JKB	**Kayabe**	**4.34**	**321**	P	**Pn**	**21 52 37.0**	**+0.9**
JKB				S	**Sn**	**21 53 23.0**	**-2.5**
NEM2	**Nemuro 2**	**4.85**	**9**	P	**Pn**	**21 52 40.1**	**-3.0**
NEM2				*e*S	**Sn**	**21 53 31.6**	**-6.3**
BSO1	**Boso 1**	**4.93**	**219**	P	**Pn**	**21 52 41.3**	**-2.5**
BSO1				*e*S	**Sn**	**21 53 36.1**	**-3.2**
JRY	**Ryogami san**	**5.29**	**243**	P	**Pn**	**21 52 47.8**	**-1.4**
JRY				S	**Sn**	**21 53 45.3**	**-3.6**
JOSM	**Okushiri--Mats**	**5.32**	**313**	P	**Pn**	**21 52 51.0**	**+1.5**
JTKR	**Abashiri--Toko**	**5.42**	**354**	P	**Pn**	**21 52 49.7**	**-1.3**
JTKR				S	**Sn**	**21 53 48.3**	**-3.8**
MJAR	**Matsushiro Arr**	**5.55**	**251**	Pn	**Pn**	**21 52 52.9**	**+0.1**
	3.9nm,0.3s,baz=62,slow=8.2,SNR=36						
MJAR				Sn	**Sn**	**21 53 55.8**	**+0.5**
	1.0nm,0.3s,baz=229,slow=39,SNR=3.1						
MJAR				LR	LR	21 55 51.6	
	comp=Z,47nm,18.5s,baz=95,slow=46						
MAJO	**Matsushiro**	**5.55**	**251**	*e*Pn	**Pn**	**21 52 53.3**	**+0.5**
MAT	**Matsushiro**	**5.55**	**251**	P	**Pn**	**21 52 53.3**	**+0.5**
MAT				S	**Sn**	**21 53 55.4**	**0.0**
JOD2	**Odawara 2**	**5.59**	**235**	*e*S	**Sn**	**21 53 51.2**	**-5.0**
ASAJ	**Asahikawa**	**5.76**	**345**	Pn	**Pn**	**21 52 54.9**	**-0.7**
	2.6nm,0.3s,baz=218,slow=12,SNR=10						
ASAJ				Sn	**Sn**	**21 53 59.0**	**-1.4**
	1.7nm,0.3s,baz=0.0,slow=18,SNR=3.4						
ASAJ				LR	LR	21 55 37.7	
	comp=Z,29nm,19.2s,baz=234,slow=42						
JHJ	**Hachijo jima 2**	**6.75**	**218**	Pn	**Pn**	**21 53 05.7**	**-3.6**
	14nm,0.3s,baz=241,slow=19,SNR=4.5						
JHJ				Sn	Sn	21 54 14.8	-10
	5.6nm,0.3s,baz=333,slow=2.3,SNR=2.3						
USRK	**Ussuriysk Ar.**	**11.08**	**305**	Pn	**Pn**	**21 54 11.6**	**+3.0**
	0.4nm,0.3s,baz=110,slow=13,SNR=9.1						
JNU	**Nakatsue**	**12.47**	**248**	LR	LR	21 59 36.8	
	comp=Z,69nm,20.7s,baz=119,slow=39						
KSRS	**Korea Array**	**13.29**	**270**	LR	LR	21 59 03.1	
	comp=Z,58nm,18.4s,baz=75,slow=34						
SEY	**Seymchan**	**24.83**	**8**	P	**P**	**21 56 52.9**	**+1.6**
	3.0nm,0.8s,baz=187,slow=7.0,SNR=7.8						
H11N2	**WAKE ISLAND Hy 26.86**	**128**		T	T	22 23 43.8	
	baz=315,slow=75,SNR=7.5						
H11N1	**WAKE ISLAND Hy 26.87**	**128**		T	T	22 23 44.6	
	baz=315,slow=75,SNR=9.0						
H11N3	**WAKE ISLAND Hy 26.88**	**128**		T	T	22 23 43.0	
	baz=315,slow=75,SNR=3.5						
H11S1	**WAKE ISLAND Hy 27.67**	**130**		T	T	22 24 33.5	
	baz=316,slow=76,SNR=7.1						
H11S3	**WAKE ISLAND Hy 27.68**	**130**		T	T	22 24 34.1	
	baz=316,slow=76,SNR=8.8						
H11S2	**WAKE ISLAND Hy 27.69**	**130**		T	T	22 24 39.1	
	baz=316,slow=76,SNR=5.8						
ZALV	**Zalesovo Beam**	**42.84**	**311**	PcP	**PcP**	**22 01 18.8**	**+1.2**
	0.8nm,0.4s,baz=98,slow=3.6,SNR=4.3						
MKAR	**Makanchi Array**	**45.53**	**301**	P	**P**	**21 59 50.4**	**+1.6**
	0.6nm,0.7s,baz=80,slow=9.6,SNR=7.2						
ILAR	**Eielson Array**	**46.79**	**33**	P	**P**	**21 59 58.0**	**-0.3**
	0.5nm,0.8s,baz=263,slow=6.5,SNR=5.1						
KURK	**Kurchatov**	**47.05**	**307**	*e*P	**P**	**22 00 01.8**	**+1.2**
	2.0nm,0.6s						
KURBB	**Kurchatov Arra**	**47.13**	**307**	P	**P**	**22 00 02.8**	**+1.6**
	1.1nm,0.5s,baz=82,slow=8.3,SNR=14						
BVAR	**Borovoye Array**	**51.48**	**312**	P	**P**	**22 00 36.1**	**+1.7**
	0.4nm,0.4s,baz=60,slow=10,SNR=2.9						
WRA	**Warramunga Arr**	**59.02**	**191**	P	**P**	**22 01 28.1**	**-0.9**
	1.1nm,1.0s,baz=8.8,slow=6.8,SNR=6.1						
YKA	**Yellowknife Ar**	**61.15**	**31**	P	**P**	**22 01 42.0**	**-1.1**
	0.3nm,0.6s,baz=307,slow=7.2,SNR=4.4						
FINES	**FINESS Array B**	**68.65**	**333**	P	**P**	**22 02 33.6**	**+1.7**
	1.3nm,0.7s,baz=49,slow=6.3,SNR=4.3						
RPZ	**Rata Peaks**	**85.31**	**161**	LR	LR	22 40 53.6	
	comp=Z,124nm,19.3s,baz=134,slow=35						

ISCJB ***04*** *22:10:24.6±0.4,43.°01N±0.°02×78.°24E±0.°02,h2km±3km, Error ellipse: s-maj=3.6km s-min=2.5km az=157.5*
SOME ***04*** *22:10:24.7,43.°03N×78.°25E,h10km*
KRNET ***04*** *22:10:24.7±0.1,43.°02N×78.°27E,h22km,mb4.0*
NNC ***04*** *22:10:24.4±0.5,43.°18N×78.°25E,h0km,mb3.9,mpv3.6, Error ellipse: s-maj=13.6km s-min=2.1km az=174.0*
KNET ***04*** *22:10:29.3±0.9,42.°87N×77.°92E,h0km,ml3.3,Error ellipse: s-maj=13.5km s-min=7.5km az=177.0*

ISC 04 22:10:24.8±0.9,43.°03N±0.°02×78.°23E±0.°01,h6km±8km, n74,σ1.15/131,41C-31D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SATY	**Saty**	**0.13**	**75**	⇑*i*P	**Pg**	**22 10 27.5**	**-0.1**
	2μm,0.1s						
SATY				⇑*i*S	**Sg**	**22 10 29.6**	**0.0**
	11μm,0.1s						
ZHN	**Zhinishke**	**0.21**	**46**	*e*P	**Pg**	**22 10 29.0**	**+0.1**
	baz=39						
ZHN				*e*S	**Sg**	**22 10 32.2**	**+0.4**
	baz=39						
ZHN	**Zhinishke**	**0.21**	**46**	*e*P	**Pg**	**22 10 29.0**	**+0.1**
	148nm,0.1s						
ZHN				*e*S	**Sg**	**22 10 32.1**	**+0.4**
	2μm,0.2s						
KURS	**Kuram**	**0.47**	**354**	*e*P	**Pg**	**22 10 34.3**	**+0.5**
	baz=51						
KURS				*e*S	**Sb**	**22 10 41.2**	**-1.4**
	baz=51						
KURS	**Kuram**	**0.47**	**354**	*e*P	**Pg**	**22 10 34.3**	**+0.5**
	199nm,0.4s						
KURS				*e*S	**Sb**	**22 10 41.2**	**-1.4**
	270nm,0.6s						
KPKS	**Kokpek**	**0.55**	**37**	*e*P	**Pg**	**22 10 35.4**	**0.0**
	baz=35						
KPKS				*e*S	**Sg**	**22 10 43.2**	**+0.6**
	baz=35						
KPKS	**Kokpek**	**0.55**	**37**	*e*P	**Pg**	**22 10 35.4**	**0.0**
	166nm,0.3s						
KPKS				*e*S	**Sg**	**22 10 43.1**	**+0.6**
	1μm,0.4s						
PRZ	**Przheval'sk**	**0.56**	**167**	⇓*i*P	**Pg**	**22 10 35.9**	**+0.4**
	baz=68						
PRZ				⇓*i*S	**Sb**	**22 10 44.0**	**-1.2**
	baz=68						
UZB	**Uzynbulak**	**0.59**	**78**	*e*P	**Pg**	**22 10 35.6**	**-0.6**
	baz=77						
UZB				*e*S	**Sg**	**22 10 43.2**	**-0.7**
	baz=77						
UZB	**Uzynbulak**	**0.59**	**78**	*e*P	**Pg**	**22 10 35.6**	**-0.6**
	432nm,0.2s						
UZB				*e*S	**Sg**	**22 10 43.1**	**-0.7**
	912nm,0.1s						
KOTS	**Kotyrbulak**	**0.85**	**285**	*e*P	**Pg**	**22 10 41.3**	**+0.3**
	39nm,0.2s						
KOTS				*e*S	**Sb**	**22 10 53.1**	**-0.5**
	254nm,0.3s						
MDOK	**Medeo**	**0.88**	**279**	⇓P	**Pg**	**22 10 41.4**	**-0.2**
	50nm,0.5s						
MDOK				⇓S	**Sg**	**22 10 53.2**	**+0.1**
	933nm,0.5s						
MDOK	**Medeo**	**0.88**	**279**	*e*P	**Pg**	**22 10 41.6**	**-0.1**
	baz=80						
MDOK				*e*S	**Sg**	**22 10 53.7**	**+0.6**
	baz=80						
MDOK	**Medeo**	**0.88**	**279**	*e*P	**Pg**	**22 10 41.6**	**-0.1**
	45nm,0.1s						
MDOK				*e*S	**Sg**	**22 10 53.7**	**+0.6**
	1μm,0.5s						
SHLS	**Shalkode**	**0.91**	**81**	*e*P	**Pn**	**22 10 47.0**	**+2.8**
	baz=83						
SHLS				*e*S	**Sn**	**22 11 02.8**	**+5.2**
	baz=83						
SHLS	**Shalkode**	**0.91**	**81**	*e*P	**Pn**	**22 10 47.0**	**+2.8**
	182nm,0.3s						
SHLS				*e*S	**Sn**	**22 11 02.8**	**+5.2**
	610nm,0.4s						
KNDC	**Almaty**	**0.95**	**282**	⇑P	**Pb**	**22 10 43.7**	**0.0**
	39nm,0.4s						
KNDC				⇑S	**Sg**	**22 10 55.3**	**0.0**
	459nm,0.5s						
PDGK	**Podgornoye**	**0.97**	**71**	⇑P	**Pg**	**22 10 42.1**	**-1.2**
	182nm,0.6s						
PDGK				⇑S	**Sg**	**22 10 54.3**	**-1.6**
	227nm,0.5s						
PDGK	**Podgornoye**	**0.97**	**71**	⇑*i*P	**Pg**	**22 10 42.2**	**-1.2**
	baz=70						
PDGK				⇑*i*S	**Sg**	**22 10 54.8**	**-1.1**
	baz=70						
MNBS	**Baschi**	**1.06**	**7**	*e*P	**Pb**	**22 10 45.1**	**-0.4**
	85nm,0.2s						
MNBS				*e*S	**Sb**	**22 10 59.7**	**-0.1**
	254nm,0.3s						
KDJ	**Kajisay**	**1.19**	**221**	⇑*i*P	**Pb**	**22 10 46.4**	**-1.3**
	baz=22						
KDJ				⇑*i*S	**Sb**	**22 11 02.4**	**-1.0**
	baz=22						
IZV	**Izvestkoviy**	**1.19**	**271**	*e*P	**Pb**	**22 10 47.2**	**-0.6**
	baz=71						
IZV				*e*S	**Sg**	**22 11 03.4**	**+0.4**
	baz=71						
IZV	**Izvestkoviy**	**1.19**	**271**	*e*P	**Pb**	**22 10 47.2**	**-0.6**
	74nm,0.5s						
IZV				*e*S	**Sg**	**22 11 03.4**	**+0.4**
	461nm,0.2s						
ARXS	**Arharly**	**1.22**	**346**	*e*P	**Pg**	**22 10 48.1**	**-0.1**
	216nm,0.3s						
ARXS				*e*S	**Sn**	**22 11 04.8**	**-0.6**
	693nm,0.4s						
CHKK	**Chushkaly**	**1.23**	**313**	*e*P	**Pb**	**22 10 48.2**	**-0.2**
	baz=13						
CHKK				*e*S	**Sn**	**22 11 04.8**	**-0.6**
	baz=13						
CHKK	**Chushkaly**	**1.23**	**313**	*e*P	**Pb**	**22 10 48.2**	**-0.2**
	61nm,0.2s						
CHKK				*e*S	**Sn**	**22 11 04.8**	**-0.6**
	314nm,0.3s						
KTBS	**Karatobe**	**1.32**	**302**	*e*P	**Pb**	**22 10 49.9**	**-0.1**
	118nm,0.3s						
KTBS				*e*S	**Sg**	**22 11 07.9**	**+0.6**
	689nm,0.4s						
MTBS	**Maitube**	**1.33**	**275**	*e*P	**Pb**	**22 10 49.9**	**-0.2**
	baz=75						
MTBS				*e*S	**Sn**	**22 11 07.4**	**-0.5**
	baz=75						
MTBS	**Maitube**	**1.33**	**275**	*e*P	**Pb**	**22 10 49.9**	**-0.2**
	20nm,0.2s						
MTBS				*e*S	**Sn**	**22 11 07.4**	**-0.5**
	168nm,0.3s						
KTMS	**Ketmen**	**1.60**	**74**	*e*P	**Pn**	**22 10 53.3**	**-0.5**
	baz=73						
KTMS				*e*S	**Sb**	**22 11 14.4**	**-1.0**
	baz=73						
KTMS	**Ketmen**	**1.60**	**74**	*e*P	**Pn**	**22 10 53.3**	**-0.5**
	94nm,0.2s						
KTMS				*e*S	**Sb**	**22 11 14.4**	**-1.0**
	318nm,0.3s						
KUU	**Kurty**	**1.63**	**303**	*e*P	**Pb**	**22 10 55.3**	**+0.1**
	baz=3.0						
KUU				*e*S	**Sg**	**22 11 16.8**	**-0.3**
	baz=3.0						
KUU	**Kurty**	**1.63**	**303**	*e*P	**Pb**	**22 10 55.3**	**+0.1**
	113nm,0.1s						
KUU				*e*S	**Sg**	**22 11 16.8**	**-0.3**
	497nm,0.3s						
ULHL	**Ulahol**	**1.66**	**243**	⇑P	**Pb**	**22 10 55.3**	**-0.6**
	34nm,0.1s,SNR=49						
ULHL				⇓S	**Sb**	**22 11 17.3**	**+0.1**
	138nm,0.2s						
ULHL	**Ulahol**	**1.66**	**243**	⇓*i*P	**Pb**	**22 10 55.1**	**-0.8**
	baz=43						
ULHL				⇓*i*S	**Sb**	**22 11 17.0**	**-0.2**
	baz=43						
KST	**Kastek**	**1.67**	**271**	*e*P	**Pb**	**22 10 55.8**	**-0.1**
	baz=72						
KST				*e*S	**Sb**	**22 11 17.3**	**+0.2**
	baz=72						
KST	**Kastek**	**1.67**	**271**	*e*P	**Pb**	**22 10 55.8**	**-0.1**
	51nm,0.4s						
KST				*e*S	**Sb**	**22 11 17.3**	**+0.2**
	119nm,0.3s						
DJR	**Jarkent**	**1.73**	**40**	*e*P	**Pb**	**22 10 56.5**	**-0.5**
	46nm,0.5s						
DJR				*e*S	**Sg**	**22 11 19.5**	**-0.8**
	625nm,0.5s						
BOOM	**Boomskoye usch**	**1.77**	**253**	⇑*i*P	**Pb**	**22 10 56.8**	**-0.9**
	baz=54						
BOOM				⇑*i*S	**Sb**	**22 11 20.2**	**-0.1**
	baz=54						
DGS	**Degeres**	**1.81**	**278**	*e*P	**Pb**	**22 10 58.5**	**+0.1**
	baz=78						
DGS				*e*S	**Sb**	**22 11 22.3**	**+0.8**
	baz=78						
DGS	**Degeres**	**1.81**	**278**	*e*P	**Pb**	**22 10 58.5**	**+0.1**
	16nm,0.2s						
DGS				*e*S	**Sb**	**22 11 22.3**	**+0.8**
	166nm,0.4s						
BMNS	**Besmoynak**	**1.88**	**273**	*e*P	**Pb**	**22 10 59.8**	**+0.2**
	68nm,0.2s						
BMNS				*e*S	**Sb**	**22 11 24.2**	**+0.8**
	337nm,0.2s						
TKM2	**Tokmak 2**	**1.94**	**268**	⇑Pn	**Pb**	**22 11 00.2**	**-0.4**
	25nm,0.4s						
TKM2				⇓Sn	**Sg**	**22 11 26.4**	**-0.6**
	109nm,0.3s						
TKM2	**Tokmak 2**	**1.94**	**268**	⇑P	**Pb**	**22 11 00.6**	**0.0**
	36nm,0.2s,SNR=108						
TKM2				⇑S	**Sg**	**22 11 27.1**	**+0.1**
	31nm,0.1s						
TKM2	**Tokmak 2**	**1.94**	**268**	⇑*i*P	**Pn**	**22 10 59.0**	**+0.6**
	baz=68						
TKM2				⇑*i*S	**Sb**	**22 11 24.4**	**-0.7**
	baz=68						
NRN	**Naryn**	**2.30**	**227**	⇓*i*P	**Pn**	**22 11 04.4**	**+1.0**
	baz=28						
NRN				⇓*i*S	**Sn**	**22 11 33.6**	**+1.4**
	baz=28						
KZA	**Kyzart**	**2.40**	**248**	⇓P	**Pb**	**22 11 08.5**	**-0.1**
	15nm,0.4s,SNR=34						
KZA	**Kyzart**	**2.40**	**248**	⇑*i*P	**Pn**	**22 11 05.7**	**+0.8**
	baz=48						
KZA				⇑*i*S	**Sn**	**22 11 35.9**	**+1.1**
	baz=48						
KAPS	**Kapalarasan**	**2.40**	**19**	*e*P	**Pb**	**22 11 08.4**	**+0.1**
	56nm,0.2s						
KAPS				*e*S	**Sg**	**22 11 40.1**	**-1.7**
	60nm,0.3s						
KBK	**Karagaybulak**	**2.44**	**262**	⇑P	**Pb**	**22 11 09.9**	**+0.7**
	31nm,0.5s,SNR=125						
KBK	**Karagaybulak**	**2.44**	**262**	⇑*i*P	**Pn**	**22 11 06.0**	**+0.7**
	baz=63						
KBK				⇑*i*S	**Sn**	**22 11 36.2**	**+0.6**
	baz=63						
CHMS	**Chumysh**	**2.55**	**271**	⇑P	**Pb**	**22 11 10.8**	**-0.2**
	6.4nm,0.2s,SNR=25						
CHMS	**Chumysh**	**2.55**	**271**	⇑*i*P	**Pb**	**22 11 07.3**	**+0.6**
	baz=71						
CHMS				⇑*i*S	**Sn**	**22 11 38.4**	**+0.3**
	baz=71						
FRU1	**Bishkek**	**2.66**	**267**	⇑*i*P	**Pn**	**22 11 08.6**	**+0.5**
	baz=67						
FRU1				⇑*i*S	**Sn**	**22 11 41.8**	**+1.1**
	baz=67						
USP	**Ospenovka**	**2.74**	**276**	⇓P	**Pb**	**22 11 14.5**	**+0.3**
	1.9nm,0.3s,SNR=73						
USP	**Ospenovka**	**2.74**	**276**	⇓*i*P	**Pn**	**22 11 10.0**	**+0.7**
	baz=76						
USP				⇓*i*S	**Sn**	**22 11 43.2**	**+0.4**
	baz=76						
AAK	**Ala-Archa**	**2.78**	**263**	⇓Pn	**Pb**	**22 11 14.5**	**-0.3**
	47nm,0.8s						
AAK				⇓Lg	Lg	22 11 52.1	
	91nm,0.5s						
AAK	**Ala-Archa**	**2.78**	**263**	⇑P	**Pb**	**22 11 14.5**	**-0.3**
	3.7nm,0.3s,SNR=13						
AAK	**Ala-Archa**	**2.78**	**263**	⇑*i*P	**Pn**	**22 11 10.7**	**+0.8**
	baz=63						
AAK				⇑*i*S	**Sn**	**22 11 44.1**	**+0.3**
	baz=63						
UCH	**Uchtor**	**2.86**	**255**	⇓P	**Pb**	**22 11 15.8**	**-0.6**
	2.1nm,0.3s,SNR=73						
UCH	**Uchtor**	**2.86**	**255**	⇓*i*P	**Pn**	**22 11 12.0**	**+0.7**
	baz=55						
UCH				⇓*i*S	**Sn**	**22 11 46.9**	**+0.7**
	baz=55						
EKS2	**Erkin-Say**	**3.30**	**265**	⇑P	**Pb**	**22 11 22.7**	**-1.0**
	3.7nm,0.4s,SNR=7.6						
AML	**Almayashu**	**3.47**	**257**	⇑P	**Pb**	**22 11 25.2**	**-1.6**
	0.5nm,0.2s,SNR=15						
MRKS	**Merke**	**3.69**	**267**	*e*P	**Pb**	**22 11 31.3**	**+0.9**
	13nm,0.4s						
MRKS				*e*S	**Sb**	**22 12 18.7**	**+3.3**
	33nm,0.4s						
MNAS	**Manas**	**4.25**	**265**	⇓Pg	**Pb**	**22 11 41.9**	**+1.9**
	4.2nm,0.5s						
MNAS				⇓Lg	Lg	22 12 37.2	
	17nm,0.6s						
MAKZ	**Makanchi**	**4.62**	**34**	⇓Pn	**Pn**	**22 11 37.6**	**+2.5**
	3.7nm,0.7s						
MAKZ				⇑Lg	Lg	22 12 46.1	
	67nm,1.1s						
SFK	**Sufi-Kurgan**	**4.65**	**231**	⇓Pg	**Pg**	**22 11 52.1**	**-1.8**
	9.5nm,1.1s						
SFK				⇓Lg	Lg	22 12 51.9	
	32nm,0.9s						
MK31	**Makanchi Array**	**4.74**	**36**	⇑Pn	**Pn**	**22 11 39.0**	**+2.2**
	2.2nm,0.3s,baz=213,slow=12,SNR=99						
MK31				⇓Lg	Lg	22 12 50.6	
	29nm,0.7s,baz=211,slow=28,SNR=8.7						
KK31	**Karatay Array**	**5.66**	**273**	⇑Pg	**Pb**	**22 12 06.4**	**+2.5**
	2.3nm,0.5s,baz=81,slow=15,SNR=19						
KK31				⇑Lg	Lg	22 13 21.2	
	14nm,0.6s,baz=83,slow=28,SNR=11						
OTUK	**Ortayu**	**6.66**	**324**	⇑Pn	**Pn**	**22 12 03.7**	**+0.7**
	3.0nm,0.4s						
OTUK				⇑Sn	**Sn**	**22 13 18.1**	**-1.1**
	4.8nm,0.8s						
OTUK				⇑Lg	Lg	22 13 48.8	
	19nm,0.5s						
KURBB	**Kurchatov Arra**	**7.60**	**1**	⇓Pn	**Pn**	**22 12 15.3**	**-0.6**
	1.1nm,0.5s						
KURBB				⇑Sn	**Sn**	**22 13 40.7**	**-1.7**
	5.1nm,0.5s						
KURBB				⇓Lg	Lg	22 14 20.9	
	59nm,0.9s						
KURK	**Kurchatov**	**7.70**	**2**	⇓Pn	**Pn**	**22 12 17.0**	**-0.3**
	1.1nm,0.7s						
KURK				⇑Lg	Lg	22 14 22.5	
	26nm,0.8s						
BVA0	**Borovoye Array**	**11.29**	**335**	⇓P	**Pn**	**22 13 04.9**	**-1.6**
	0.8nm,0.3s,baz=228,slow=45,SNR=19						
BRVK	**Borovoye**	**11.35**	**335**	⇓P	**Pn**	**22 13 04.7**	**-2.6**
	3.2nm,1.0s						

IDC 04 22:24:21.8±3.8,15.°94S×173.°47W,h0km,mb4.0/3, mb1 4.2/4,mb1mx3.7/48,mbtmp4.0/4,ML3.4/1,MS3.3/1, Ms1 3.3/1,ms1mx2.7/47,Error ellipse: s-maj=180.6km s-min=21.9km az=138.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.60**	**39**	Pn	Pn	22 25 03.9	-1.3
	7.0nm,0.3s,baz=86,slow=19,SNR=2.8						
AFI				Sn	Sn	22 25 37.1	-0.3
	16nm,0.3s,baz=30,slow=18,SNR=4.3						
PPT	**Papeete**	**22.93**	**97**	LR	LR	22 36 51.1	
	comp=Z,75nm,18.5s,baz=161,slow=33						
STKA	**Stephens Creek**	**43.71**	**240**	P	P	22 32 29.4	+0.5
	4.0nm,1.1s,baz=63,slow=4.5,SNR=2.4						
WRA	**Warramunga Arr**	**49.66**	**257**	P	P	22 33 14.9	-0.8
	0.7nm,0.7s,baz=96,slow=7.1,SNR=20						
ASAR	**Alice Springs**	**49.88**	**252**	P	P	22 33 16.4	-1.1
	2.2nm,0.6s,baz=88,slow=8.5,SNR=31						
BRTR	**Keskin Array B**	**146.53**	**320**	PKPbc	PKPab	22 44 06.8	+0.2
	0.5nm,0.8s,baz=76,slow=6.1,SNR=3.2						

IDC 04 22:47:05.4±2.1,56.°72S×26.°80W,h0km,mb3.8/2, mb1 4.0/2,mb1mx3.6/30,mbtmp3.8/2,Error ellipse: s-maj=84.1km s-min=44.1km az=6.0,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10S2	**ASCENSION HYDR**	**48.58**	**16**	T	T	23 47 11.4	
	baz=190,slow=75,SNR=27						
H10S3	**ASCENSION HYDR**	**48.59**	**16**	T	T	23 47 12.7	
	baz=190,slow=75,SNR=19						
H10S1	**ASCENSION HYDR**	**48.60**	**16**	T	T	23 47 15.3	
	baz=190,slow=75,SNR=24						
H10N1	**ASCENSION HYDR**	**49.70**	**16**	T	T	23 48 37.0	
	baz=182,slow=71,SNR=14						
H10N3	**ASCENSION HYDR**	**49.70**	**16**	T	T	23 48 33.1	
	baz=182,slow=71,SNR=16						
H10N2	**ASCENSION HYDR**	**49.72**	**16**	T	T	23 48 38.7	
	baz=182,slow=71,SNR=18						
LPAZ	**La Paz**	**50.94**	**305**	P	P	22 56 09.8	+0.6
	1.5nm,0.5s,baz=155,slow=3.2,SNR=9.0						
TORD	**Torodi Ar. Bea**	**73.53**	**29**	P	P	22 58 39.7	-0.1
	0.2nm,0.3s,baz=196,slow=6.1,SNR=7.0						
SONM	**Songino Array**	**150.55**	**87**	PKPbc	PKPbc	23 06 59.0	+0.8
	0.5nm,0.5s,baz=250,

baz=51,slow=15
FITZ Sn Sn 23 12 22.0 -7.9
0.2nm,0.3s,baz=292,slow=19,SNR=3.2
WRA Warramunga Arr 13.70 160 Pn Pn 23 10 50.0 +1.1
0.3nm,0.3s,baz=346,slow=13,SNR=14
WRA Sn Sn 23 13 21.9 -0.1
0.2nm,0.3s,baz=338,slow=23,SNR=4.0
ASAR Alice Springs 17.09 166 P P 23 11 35.0 -0.7
0.1nm,0.3s,baz=334,slow=9.5,SNR=5.3
PMG Port Moresby 17.76 99 LR LR 23 18 36.9
comp=Z,82nm,18.1s,baz=212,slow=37
MKAR Makanchi Array 67.92 327 P P 23 18 34.3 +0.3
1.1nm,0.7s,baz=130,slow=7.4,SNR=11
ZALV Zalesovo Beam 71.35 334 P P 23 18 54.7 -0.2
0.7nm,0.4s,baz=121,slow=5.6,SNR=3.3
KURBB Kurchatov Arra 72.22 329 P P 23 19 00.1 -0.1
1.0nm,0.7s,baz=131,slow=5.3,SNR=9.8

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*IGIL **04** 23:17:50.2, 37.°20N×12.°85W, h0km, ML2.0*
*MDD **04** 23:17:53.1±1.9, 37.°28N×12.°70W, h0km, mb3.6/10, Error ellipse: s-maj=17.8km s-min=16.8km az=152.0, PRXIMO*
*INMG **04** 23:17:54.8±1.3, 37.°14N×13.°08W, h10km, ML2.2, Error ellipse: s-maj=9.7km s-min=6.6km az=101.0*
*CSEM **04** 23:17:56.3±0.6, 37.°35N×12.°42W, h10km, mb3.6, Error ellipse: s-maj=10.4km s-min=9.6km az=115.0*
ISC 04 23:17:55.6±3.8, 37.°37N±0.°09×12.°5W±0.°2, h10km, n80, σ1§17/123, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMAFR	**Mafra**	**2.98**	**57**	*e*Sn	**Sn**	**23 19 20.1**	**+1.4**
PMAFR				A	A	23 19 40.0	
9.2nm,0.5s							
PMAFR	**Mafra**	**2.98**	**57**	P	**Pn**	**23 18 43.8**	**+0.9**
7.7nm,0.3s,SNR=7.9							
PMAFR				S	**Sn**	**23 19 20.1**	**+1.4**
5.6nm,0.2s,SNR=7.9							
PMAFR	**Mafra**	**2.98**	**57**	P	**Pn**	**23 18 43.8**	**+0.9**
7.7nm,0.3s,SNR=7.9							
PMAFR				S	**Sn**	**23 19 20.1**	**+1.4**
5.6nm,0.2s,SNR=7.9							
PTEO	**Sao Teotonio**	**3.00**	**85**	*e*Pn	**Pn**	**23 18 43.5**	**+0.4**
PTEO				*e*Sn	**Sn**	**23 19 20.0**	**+0.9**
PTEO				A	A	23 19 23.7	
7.1nm,0.6s							
PTEO	**Sao Teotonio**	**3.00**	**85**	P	**Pn**	**23 18 43.5**	**+0.4**
PTEO				S	**Sn**	**23 19 20.0**	**+0.9**
3.6nm,0.6s							
PTEO	**Sao Teotonio**	**3.00**	**85**	P	**Pn**	**23 18 43.5**	**+0.4**
PTEO				S	**Sn**	**23 19 20.0**	**+0.9**
3.6nm,0.6s							
PNCL	**Nicolau / Gran**	**3.22**	**75**	*e*Pn	**Pn**	**23 18 45.6**	**-0.6**
PNCL				*e*Sn	**Sn**	**23 19 25.2**	**+0.6**
PNCL				A	A	23 19 28.5	
2.2nm,0.7s							
PNCL	**Nicolau / Gran**	**3.22**	**75**	*e*Pn	**Pn**	**23 18 45.6**	**-0.6**
PNCL				*e*Sn	**Sn**	**23 19 25.2**	**+0.6**
MESJ	**Messejana**	**3.42**	**81**	*e*P	Pn	23 18 47.1	-1.8
MESJ				*e*S	**Sn**	**23 19 29.3**	**-0.2**
MESJ				AML	AML	23 19 32.4	
comp=E,2.0nm,0.4s							
MESJ	**Messejana**	**3.42**	**81**	*e*Pn	**Pn**	**23 18 49.8**	**+0.9**
MESJ				*e*Sn	**Sn**	**23 19 29.6**	**+0.1**
MESJ				A	A	23 19 34.3	
comp=E,2.3nm,0.7s							
MESJ	**Messejana**	**3.42**	**81**	P	**Pn**	**23 18 49.8**	**+0.9**
MESJ				S	**Sn**	**23 19 29.6**	**+0.1**
comp=E,2.3nm,0.7s							
MESJ	**Messejana**	**3.42**	**81**	P	**Pn**	**23 18 49.8**	**+0.9**
MESJ				S	**Sn**	**23 19 29.6**	**+0.1**
comp=E,2.3nm,0.7s							
PCVE	**Castro Verde**	**3.54**	**84**	*e*Pn	**Pn**	**23 18 50.0**	**-0.7**
PCVE				*e*Sn	**Sn**	**23 19 33.9**	**+1.3**
PCVE	**Castro Verde**	**3.54**	**84**	P	**Pn**	**23 18 50.0**	**-0.7**
PCVE				S	**Sn**	**23 19 33.9**	**+1.3**
PCVE	**Castro Verde**	**3.54**	**84**	P	**Pn**	**23 18 50.0**	**-0.7**
PCVE				S	**Sn**	**23 19 33.9**	**+1.3**
ALMR	**Almeirim**	**3.56**	**59**	*e*P	Pn	23 18 48.9	-1.9
ALMR				*e*S	**Sn**	**23 19 32.9**	**0.0**
ALMR				AML	AML	23 19 35.9	
comp=E,5.9nm,0.6s							
ALMR	**Almeirim**	**3.56**	**59**	P	Pn	23 18 48.9	-1.9
ALMR				S	**Sn**	**23 19 32.9**	**0.0**
comp=E,3.0nm,0.6s							
ALMR	**Almeirim**	**3.56**	**59**	S	**Sn**	**23 19 32.9**	**0.0**
comp=E,3.0nm,0.6s							
PBDV	**Barranco-do-Ve**	**3.63**	**91**	*e*Pn	**Pn**	**23 18 51.9**	**0.0**
PBDV				*e*Sn	**Sn**	**23 19 37.2**	**+2.4**
PBDV	**Barranco-do-Ve**	**3.63**	**91**	P	**Pn**	**23 18 51.9**	**0.0**
PBDV				S	**Sn**	**23 19 37.2**	**+2.4**
PBDV	**Barranco-do-Ve**	**3.63**	**91**	P	**Pn**	**23 18 51.9**	**0.0**
PBDV				*e*Sn	**Sn**	**23 19 37.2**	**+2.4**
EVO	**Evora**	**3.72**	**70**	*e*Pn	**Pn**	**23 18 53.9**	**+0.8**
EVO				*e*Sn	**Sn**	**23 19 37.3**	**+0.4**
EVO	**Evora**	**3.72**	**70**	P	**Pn**	**23 18 53.9**	**+0.8**
EVO				S	**Sn**	**23 19 37.3**	**+0.4**
EVO	**Evora**	**3.72**	**70**	P	**Pn**	**23 18 53.9**	**+0.8**
EVO				S	**Sn**	**23 19 37.3**	**+0.4**
PBEJ	**Beja**	**3.72**	**78**	*e*Pn	**Pn**	**23 18 53.5**	**+0.4**
PBEJ	**Beja**	**3.72**	**78**	P	**Pn**	**23 18 53.5**	**+0.4**
PBEJ	**Beja**	**3.72**	**78**	P	**Pn**	**23 18 53.5**	**+0.4**
PMTG	**Montargil**	**3.76**	**62**	*e*Pn	**Pn**	**23 18 54.1**	**+0.5**
PMTG				*e*Sn	**Sn**	**23 19 38.0**	**+0.1**
PMTG				A	A	23 19 46.1	
comp=E,2.0nm,0.7s							
PMTG	**Montargil**	**3.76**	**62**	*e*Pn	**Pn**	**23 18 54.1**	**+0.5**
PMTG				*e*Sn	**Sn**	**23 19 38.0**	**+0.1**
PVAQ	**Vaqueiros**	**3.79**	**88**	*e*Pn	Pn	23 18 51.8	-2.3
PVAQ				*e*Sn	**Sn**	**23 19 38.4**	**-0.4**
PVAQ				A	A	23 19 44.2	
comp=E,1.6nm,0.4s							
PVAQ	**Vaqueiros**	**3.79**	**88**	P	Pn	23 18 51.8	-2.3
PVAQ				S	**Sn**	**23 19 38.4**	**-0.4**
comp=E,1.6nm,0.4s							
PVAQ	**Vaqueiros**	**3.79**	**88**	*e*Pn	Pn	23 18 51.8	-2.3
PVAQ				S	**Sn**	**23 19 38.4**	**-0.4**
comp=E,1.6nm,0.4s							
PTOM	**Tomar**	**3.91**	**54**	*e*Pn	**Pn**	**23 18 57.5**	**+1.9**
PTOM				*e*Sn	**Sn**	**23 19 43.8**	**+2.3**
PTOM				A	A	23 19 53.6	
comp=E,4.0nm,0.4s							
PTOM	**Tomar**	**3.91**	**54**	P	**Pn**	**23 18 57.5**	**+1.9**
PTOM				S	**Sn**	**23 19 43.8**	**+2.3**
comp=E,2.0nm,0.4s							
PTOM	**Tomar**	**3.91**	**54**	P	**Pn**	**23 18 57.5**	**+1.9**
PTOM				S	**Sn**	**23 19 43.8**	**+2.3**
comp=E,2.0nm,0.4s							
EGRO	**El Granado**	**3.98**	**86**	P	**Pn**	**23 18 57.1**	**+0.4**
comp=E,0.7nm,0.2s,SNR=4.0							
EGRO				S	**Sn**	**23 19 44.0**	**+0.6**
comp=E,2.6nm,0.3s,SNR=4.0							
EGRO	**El Granado**	**3.98**	**86**	P	**Pn**	**23 18 57.1**	**+0.4**
comp=E,0.7nm,0.2s,SNR=4.0							
EGRO				S	**Sn**	**23 19 44.0**	**+0.6**
comp=E,2.6nm,0.3s,SNR=4.0							
PCAS	**Casmilo, Conde**	**4.11**	**48**	*e*Pn	**Pn**	**23 19 00.9**	**+2.4**
PCAS	**Casmilo, Conde**	**4.11**	**48**	*e*Pn	**Pn**	**23 19 00.9**	**+2.4**
PESTR	**Estremoz**	**4.14**	**67**	*e*Pn	**Pn**	**23 19 00.0**	**+1.1**
PESTR				*e*Sn	**Sn**	**23 19 47.5**	**+0.2**
PESTR				A	A	23 20 01.2	
comp=E,1.9nm,0.5s							
PESTR	**Estremoz**	**4.14**	**67**	*e*Pn	**Pn**	**23 19 00.0**	**+1.1**
PESTR				*e*Sn	**Sn**	**23 19 47.5**	**+0.2**
PBAR	**Barrancos**	**4.39**	**78**	*e*Pn	**Pn**	**23 19 02.8**	**+0.5**
PBAR				*e*Sn	**Sn**	**23 19 53.7**	**+0.3**
PBAR				A	A	23 19 58.3	
comp=E,3.0nm,0.7s							
PBAR	**Barrancos**	**4.39**	**78**	P	**Pn**	**23 19 02.8**	**+0.5**
PBAR				S	**Sn**	**23 19 53.7**	**+0.3**
comp=E,3.0nm,0.7s							
PBAR	**Barrancos**	**4.39**	**78**	P	**Pn**	**23 19 02.8**	**+0.5**
PBAR				S	**Sn**	**23 19 53.7**	**+0.3**
comp=E,3.0nm,0.7s							
PMRV	**Marv??o**	**4.50**	**61**	*e*Pn	**Pn**	**23 19 04.5**	**+0.7**
PMRV				*e*Sn	**Sn**	**23 19 56.5**	**+0.3**
PMRV				A	A	23 20 06.3	
comp=E,1.6nm,0.3s							
PMRV	**Marv??o**	**4.50**	**61**	P	**Pn**	**23 19 04.5**	**+0.7**
PMRV				S	**Sn**	**23 19 56.5**	**+0.3**
comp=E,1.6nm,0.3s							
PMRV	**Marv??o**	**4.50**	**61**	P	**Pn**	**23 19 04.5**	**+0.7**
PMRV				S	**Sn**	**23 19 56.5**	**+0.3**
comp=E,1.6nm,0.3s							
EBAD	**Badajoz**	**4.53**	**71**	P	**Pn**	**23 19 03.8**	**-0.5**
comp=E,0.5nm,0.2s,SNR=7.9							
EBAD				S	**Sn**	**23 19 55.7**	**-1.3**
comp=E,1.5nm,0.2s,SNR=7.9							
EBAD	**Badajoz**	**4.53**	**71**	P	**Pn**	**23 19 03.8**	**-0.5**
comp=E,0.5nm,0.2s,SNR=7.9							
EBAD				S	**Sn**	**23 19 55.7**	**-1.3**
comp=E,1.5nm,0.2s,SNR=7.9							
EMIN	**Mina Concepcio**	**4.63**	**83**	P	**Pn**	**23 19 05.4**	**-0.2**
comp=E,0.4nm,0.2s,SNR=7.9							
EMIN				S	**Sn**	**23 19 57.0**	**-2.5**
comp=E,0.5nm,0.2s,SNR=7.9							
EMIN	**Mina Concepcio**	**4.63**	**83**	P	**Pn**	**23 19 05.4**	**-0.2**
comp=E,0.4nm,0.2s,SNR=7.9							
EMIN				S	**Sn**	**23 19 57.0**	**-2.5**
comp=E,0.5nm,0.2s,SNR=7.9							
PCBR	**Castelo Branco**	**4.63**	**56**	*e*Pn	**Pn**	**23 19 06.5**	**+0.9**
PCBR	**Castelo Branco**	**4.63**	**56**	P	**Pn**	**23 19 06.5**	**+0.9**
PCBR	**Castelo Branco**	**4.63**	**56**	P	**Pn**	**23 19 06.5**	**+0.9**
PVIS	**Viseu**	**4.89**	**45**	*e*Sn	**Sn**	**23 20 05.4**	**-0.6**
PVIS	**Viseu**	**4.89**	**45**	S	**Sn**	**23 20 05.4**	**-0.6**
PVIS	**Viseu**	**4.89**	**45**	S	**Sn**	**23 20 05.4**	**-0.6**
MTE	**Manteigas**	**4.90**	**50**	*e*Sn	**Sn**	**23 20 06.5**	**+0.3**
MTE	**Manteigas**	**4.90**	**50**	Sn	**Sn**	**23 20 06.5**	**+0.3**
MTE	**Manteigas**	**4.90**	**50**	Sn	**Sn**	**23 20 06.5**	**+0.3**
POLO	**Lamas de Olo**	**5.40**	**41**	*e*Sn	**Sn**	**23 20 16.8**	**-1.8**
POLO	**Lamas de Olo**	**5.40**	**41**	*e*Sn	**Sn**	**23 20 16.8**	**-1.8**
PGAV	**Gavieira, Arco**	**5.63**	**34**	*e*Sn	**Sn**	**23 20 22.2**	**-1.9**
PGAV	**Gavieira, Arco**	**5.63**	**34**	*e*Sn	**Sn**	**23 20 22.2**	**-1.9**
ELOB	**Lobios**	**5.64**	**36**	S	**Sn**	**23 20 21.4**	**-3.1**
comp=E,0.7nm,0.3s,SNR=7.9							
ECAB	**El Cabril**	**5.64**	**81**	P	**Pn**	**23 19 19.6**	**+0.1**
comp=E,0.1nm,0.1s,SNR=7.2							
ECAB				S	**Sn**	**23 20 22.5**	**-2.0**
comp=E,0.5nm,0.3s,SNR=7.9							
ECAB	**El Cabril**	**5.64**	**81**	P	**Pn**	**23 19 19.6**	**+0.1**
comp=E,0.1nm,0.1s,SNR=7.2							
ECAB				S	**Sn**	**23 20 22.5**	**-2.0**
comp=E,0.5nm,0.3s,SNR=7.9							
MVO	**Moncorvo**	**5.68**	**46**	P	Pn	23 19 19.5	-0.6
comp=E,0.3nm,0.1s,SNR=7.9							
MVO				S	**Sn**	**23 20 22.1**	**-3.3**
comp=E,0.2nm,0.1s,SNR=7.9							
MVO	**Moncorvo**	**5.68**	**46**	P	Pn	23 19 19.5	-0.6
comp=E,0.3nm,0.1s,SNR=7.9							
MVO				*e*Sn	**Sn**	**23 20 23.6**	**-1.8**
EPLA	**Plasencia**	**5.69**	**60**	P	**Pn**	**23 19 20.2**	**+0.1**
comp=E,0.8nm,0.1s,SNR=7.9							
EPLA	**Plasencia**	**5.69**	**60**	P	**Pn**	**23 19 20.2**	**+0.1**
comp=E,0.8nm,0.1s,SNR=7.9							
EADA	**Adamuz**	**6.31**	**80**	P	**Pn**	**23 19 28.4**	**-0.3**
comp=E,0.5nm,0.1s,SNR=7.9							
EADA				S	**Sn**	**23 20 39.9**	**-1.1**
comp=E,1.0nm,0.1s,SNR=4.0							
EADA	**Adamuz**	**6.31**	**80**	P	**Pn**	**23 19 28.4**	**-0.3**
comp=E,0.5nm,0.1s,SNR=7.9							
EADA				S	**Sn**	**23 20 39.9**	**-1.1**
comp=E,1.0nm,0.1s,SNR=4.0							
ECAL	**Calabor**	**6.37**	**42**	S	**Sn**	**23 20 41.9**	**-0.4**
comp=E,0.4nm,0.2s,SNR=4.0							
ECAL	**Calabor**	**6.37**	**42**	S	**Sn**	**23 20 41.9**	**-0.4**
comp=E,0.4nm,0.2s,SNR=4.0							
EAGO	**Agolada(Pontev**	**6.39**	**30**	S	Sn	23 20 36.4	-6.4
comp=E,0.4nm,0.1s,SNR=4.0							
PAB	**San Pablo**	**6.74**	**69**	P	**Pn**	**23 19 34.6**	**-0.1**
comp=E,0.1nm,0.1s,SNR=4.0							
PAB				S	**Sn**	**23 20 49.4**	**-2.2**
comp=E,0.1nm,0.2s,SNR=4.0							
PAB	**San Pablo**	**6.74**	**69**	P	**Pn**	**23 19 34.6**	**-0.1**
comp=E,0.1nm,0.1s,SNR=4.0							
PAB				S	**Sn**	**23 20 49.4**	**-2.2**
comp=E,0.1nm,0.2s,SNR=4.0							
ESDC	**Sonseca Array**	**7.07**	**68**	P	**Pn**	**23 19 38.4**	**-0.7**
comp=E,1.4nm,0.2s,baz=253,slow=13,SNR=4.0							
ESDC	**Sonseca Array**	**7.07**	**68**	P	**Pn**	**23 19 38.4**	**-0.7**
comp=E,1.4nm,0.2s,SNR=4.0							

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*IDC **04** 23:30:55.8±1.9, 29.°74S×71.°00W, h0km, mb4.2/3, mb1 3.9/6, mb1mx3.7/37, mbtmp3.8/6, ML3.5/3, Error ellipse: s-maj=55.3km s-min=44.9km az=94.0*
*SJA **04** 23:31:01.7±0.6, 29.°44S×71.°27W, h5km±17km, ML3.8, MW4.2*
*GUC **04** 23:31:03.1±0.6, 29.°35S×70.°95W, h64km±4km, ML3.9*
*NEIC **04** 23:31:03.0±0.0, 29.°33S×71.°21W, h47km, mb4.2/5, ML3.9(GUC), After GUC.*
ISC 04 23:31:05.2±1.1, 29.°31S±0.°04×71.°0W±0.°1, h63km±7km, n31, σ1§68/35, mb4.1/8, 2C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**0.40**	**43**	*e*Pn	**Pn**	**23 31 15.4**	**-1.2**
LCO				*e*Sn	**Sn**	**23 31 25.7**	**+0.7**
LCO	**Las Campanas**	**0.40**	**43**	*i* P	**Pn**	**23 31 15.7**	**-0.9**
LCO				*i* S	**Sn**	**23 31 25.5**	**+0.5**
LCO	**Las Campanas**	**0.40**	**43**	↑*i*P	**Pn**	**23 31 16.1**	**-0.6**
LCO				*i* S	**Sn**	**23 31 25.4**	**+0.5**
VACH	**Vallenar**	**0.76**	**17**	↑*i*P	Pn	23 31 48.6	+28
VACH				*i* S	Sn	23 32 00.6	+29
VACH				IAML		23 32 01.9	
comp=N,9μm,0.1s							
TLL	**Tololo Astrono**	**0.88**	**168**	*e*P	**Pn**	**23 31 20.8**	**-1.2**
TLL				*i* S	**Sn**	**23 31 34.1**	**-0.4**
TLL				IAML		23 31 35.3	
comp=E,4μm,0.5s							
GO04	**Tololo Observa**	**0.88**	**168**	*e*P	**Pn**	**23 31 20.7**	**-1.4**
GO04				*i* S	**Sn**	**23 31 34.2**	**-0.3**
GO04				IAML		23 31 36.8	
comp=N,12μm,0.5s							
GO03	**Copiap**	**1.84**	**22**	*e*P	**Pn**	**23 31 34.2**	**-0.3**
GO03				*i* S	**Sn**	**23 31 58.1**	**+1.4**
GO03				IAML		23 32 04.3	
comp=E,993nm,0.2s							
CPCH	**Copiapo**	**2.02**	**17**	*e*P	**Pn**	**23 31 35.9**	**-1.1**
CPCH				*i* S	**Sn**	**23 32 01.9**	**+0.6**
CPCH				IAML		23 32 07.5	
comp=N,2μm,0.1s							
AGUA	**GUANDACOL**	**2.21**	**95**	*i* P	Pn	23 31 44.8	+5.2
AGUA				*i* S	Sn	23 32 16.6	+11
VCA	**Vinchina**	**2.52**	**78**	*i* P	Pn	23 31 49.7	+5.8
VCA				IAML		23 32 30.4	
comp=Z,560nm,0.3s							
RTLS	**Leoncito**	**2.89**	**150**	*i* P	**Pn**	**23 31 52.2**	**+3.1**
RTLS				IAML		23 32 45.3	
comp=Z,203nm,0.6s							
RTLL	**Cerro Villicun**	**2.98**	**133**	*i* P	**Pn**	**23 31 53.2**	**+3.2**
AUSP	**Uspallata**	**3.23**	**155**	*i* P	**Pn**	**23 31 56.6**	**+3.0**
RTCV	**Cerro Valdivia**	**3.32**	**141**	*i* P	**Pn**	**23 31 58.1**	**+3.3**
ASAL	**Salagasta**	**3.77**	**151**	*i* P	**Pn**	**23 32 03.8**	**+2.9**
ARCO	**CERRO ARCO**	**3.95**	**154**	*i* P	**Pn**	**23 32 06.3**	**+2.9**
ARCO				IAML		23 33 05.2	
comp=Z,167nm,0.5s							
TRQA	**Tornquist**	**11.52**	**142**	*e*Pn	**Pn**	**23 33 46.6**	**-0.1**
CPUP	**Villa Florida**	**12.46**	**80**	Pn	**Pn**	**23 33 56.4**	**-3.4**
comp=Z,0.1nm,0.3s,baz=214,slow=7.3,SNR=2.1							
LPAZ	**La Paz**	**13.22**	**12**	Pn	**Pn**	**23 34 12.2**	**+1.6**
comp=Z,0.1nm,0.3s,baz=162,slow=3.2,SNR=2.9							
SIV	**San Ignacio**	**16.10**	**37**	Pn	**Pn**	**23 34 47.8**	**+0.1**
comp=Z,0.1nm,0.3s,baz=228,slow=13,SNR=7.1							
RCBR	**Riachuelo**	**40.54**	**62**	P	**P**	**23 38 39.4**	**+0.9**
comp=Z,2.7nm,0.4s							
OXF	**Oxford**	**65.81**	**343**	P	**P**	**23 41 45.1**	**+1.4**
comp=Z,2.4nm,0.4s							
MIAR	**Mount Ida**	**66.99**	**340**	P	**P**	**23 41 50.2**	**-1.0**
comp=Z,1.9nm,0.9s							
ACSO	**Alum Creek Sta**	**70.07**	**350**	P	**P**	**23 42 09.7**	**-0.7**
comp=Z,1.0nm,0.4s							
KOWA	**Kowa**	**77.91**	**66**	P	**P**	**23 42 56.5**	**-0.2**
comp=Z,1.6nm,0.7s,baz=234,slow=6.4,SNR=5.0							
BOSA	**Boshof**	**81.48**	**118**	P	**P**	**23 43 14.7**	**-1.5**
comp=Z,2.3nm,1.0s,baz=223,slow=7.1,SNR=4.4							
TORD	**Torodi Ar. Bea**	**81.78**	**70**	P	**P**	**23 43 17.9**	**+0.2**
comp=Z,0.9nm,0.6s,baz=256,slow=4.7,SNR=12							
NEW	**Newport**	**87.58**	**331**	P	**P**	**23 43 45.2**	**-0.9**
comp=Z,0.4nm,0.4s							
KURBB	**Kurchatov Arra**	**148.75**	**38**	PKPbc	**PKPbc**	**23 50 45.3**	**+0.2**
comp=Z,0.4nm,0.4s,baz=307,slow=2.9,SNR=5.6							
KURK	**Kurchatov**	**148.75**	**38**	PKPbc	**PKPbc**	**23 50 45.3**	**+0.2**
ZALV	**Zalesovo Beam**	**149.75**	**29**	PKPbc	**PKPbc**	**23 50 47.8**	**+0.3**
comp=Z,1.5nm,0.6s,baz=299,slow=4.3,SNR=6.6							

JMA 05 00:00:33.6, 35.°22N×138.°32E, h23km±1km, M3.0, 3C-3D
Broadband fault plane solution: P waves. NP1:
ϕ_s217.00000°, δ83.00000°, λ-22.00000°. **NP2:** ϕ_s310.00000°, δ68.00000°, λ-172.00000°. **Principal axes:** T Plg10.0000°, Azm265.0000°; N Plg67.0000°, Azm19.0000°; P Plg21.0000°, Azm171.0000°; **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHZ3	**Shizuoka 3**	**0.18**	**210**	⇑P	Pb	00 00 38.5	-0.4
SHZ3				*e*S	Sb	00 00 42.4	0.0
JYN	**Shimob**	**0.33**	**33**	⇓P	Pb	00 00 40.7	-0.3
JYN				S	Sb	00 00 46.3	+0.2
JNY	**Yasuok**	**0.40**	**290**	⇑P	Pb	00 00 41.9	-0.2
JNY				S	Sb	00 00 48.0	+0.1
JOD2	**Odawara 2**	**0.63**	**86**	⇑P	Pb	00 00 45.4	-0.6
JOD2				S	Sb	00 00 54.0	-0.4
JIZS	**Izushimoda**	**0.68**	**137**	P	Pb	00 00 45.9	-0.9
JIZS				S	Sb	00 00 55.1	-0.7
TK04	**Tokai 4**	**0.91**	**204**	⇓P	Pb	00 00 50.7	+0.1
JRY	**Ryogami san**	**0.93**	**31**	⇓P	Pb	00 00 50.4	-0.6
JRY				S	Sb	00 01 02.6	-0.3
MAT	**Matsushiro**	**1.32**	**356**	P	Pn	00 00 56.5	-0.2
MAT				S	Sb	00 01 15.6	+1.3

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*NNC **05** 00:01:16.2±4.2, 37.°62N×71.°15E, h0km, mb3.8, mpv3.5 Error ellipse: s-maj=33.2km s-min=25.3km az=172.0*
ISC 05 00:01:17.3±3.4, 37.°4N±0.°2×71.°2E±0.°1, h35km, n13, σ1§46/18, 3C-8D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.20**	**33**	⇓P	**Pn**	**00 02 05.7**	**+0.4**
4.7nm,0.3s							
SFK				⇓S	**Sn**	**00 02 45.0**	**+2.7**
7.6nm,0.3s							
AML	**Almayashu**	**5.13**	**21**	P	**Pn**	**00 02 30.9**	**-1.2**
SNR=22							
MNAS	**Manas**	**5.22**	**11**	⇓P	**Pn**	**00 02 31.9**	**-1.0**
2.7nm,0.5s							
MNAS				⇓S	**Sn**	**00 03 31.8**	**-0.1**
1.8nm,0.5s							
KZA	**Kyzart**	**5.65**	**32**	P	**Pn**	**00 02 37.5**	**-1.7**
SNR=6.3							
EKS2	**Erkin-Say**	**5.65**	**20**	P	**Pn**	**00 02 39.0**	**+0.2**
SNR=7.8							
KK31	**Karatay Array**	**5.76**	**355**	⇓P	**Pn**	**00 02 38.8**	**-1.5**
1.4nm,0.2s,baz=177,slow=13,SNR=67							
KK31				⇑S	**Sn**	**00 03 43.7**	**-1.5**
2.6nm,0.6s,baz=168,slow=25,SNR=4.4							
AAK	**Ala-Archa**	**5.84**	**25**	⇑P	**Pn**	**00 02 40.7**	**-0.8**
2.1nm,0.4s							
AAK				⇓S	**Sn**	**00 03 46.1**	**-1.2**
2.7nm,0.5s							
AAK	**Ala-Archa**	**5.84**	**25**	P	**Pn**	**00 02 40.9**	**-0.7**
SNR=6.6							
CHMS	**Chumysh**	**6.25**	**25**	P	**Pn**	**00 02 45.9**	**-1.1**
SNR=14							
USP	**Ospenovka**	**6.41**	**22**	P	**Pn**	**00 02 47.6**	**-1.6**
SNR=7.5							
TKM2	**Tokmak 2**	**6.49**	**30**	⇓P	**Pn**	**00 02 48.9**	**-1.6**
5.4nm,0.6s							
TKM2	**Tokmak 2**	**6.49**	**30**	P	**Pn**	**00 02 49.1**	**-1.5**
SNR=9.7							
AB31	**Akbulak array**	**14.42**	**329**	⇑P	**Pn**	**00 04 39.6**	**+0.8**
0.3nm,0.3s,baz=134,slow=14,SNR=15							
AB31				⇓S	**Sn**	**00 07 19.2**	**+1.9**
1.6nm,0.8s,baz=152,slow=22,SNR=4.5							

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*NIED **05** 00:02:00, 36.°70N×141.°10E, h11km, Mw3.4 Best double couple: $M_0$1.57000×10^14 NP1:ϕ_s196.00000°, δ44.00000°, λ-85.00000°. NP2:ϕ_s9.00000°, δ46.00000°, λ-95.00000°.*
*IDC **05** 00:02:52.7±1.1, 36.°71N×141.°09E, h0km, mb3.5/6, mb1 3.7/8, mb1mx3.4/78, mbtmp3.5/8, ML3.0/2, MS3.4/1, Ms1 3.4/1, ms1mx2.4/60, Error ellipse: s-maj=24.9km s-min=18.6km az=82.0*
*ISCJB **05** 00:02:54.0±1.0, 36.°73N±0.°03×141.°19E±0.°07, h22km±6km, mb3.6/6, MS3.3/1, Error ellipse: s-maj=8.9km s-min=5.3km az=13.5*
*JMA **05** 00:02:55.7±0.1, 36.°75N×141.°06E, h29km±1km, M3.6*
JMA Felt II J1.
ISC 05 00:02:53.5±1.7, 36.°76N±0.°04×141.°13E±0.°07, h5km±11km, n23, σ0§68/26, mb3.6/6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.43**	**323**	P	**Pb**	**00 03 04.4**	**+0.7**
ONAJ				S	**Sb**	**00 03 10.4**	**-0.2**
JHO	**Hitachi**	**0.47**	**252**	P	**Pb**	**00 03 04.6**	**+0.3**
JHO				S	**Sb**

PUZ	Puketiti	17.55	189	P		P	00 21 49.1 -2.5
OPRZ	Ohinepanea	17.64	194	P		P	00 21 54.5 +2.0
OPRZ	Ohinepanea	17.64	194	P		P	00 21 54.5 +2.0
TWGZ	Tauwhareparae	17.69	190	P		P	00 21 48.4 -4.6
TWGZ	Tauwhareparae	17.69	190	P		P	00 21 48.4 -4.6
MARZ	Manawahe	17.75	193	P		P	00 21 55.8 +2.3
MARZ	Manawahe	17.75	193	P		P	00 21 55.8 +2.3
KMRZ	Kaimai	17.78	195	P		P	00 21 58.9 +5.1
KMRZ	Kaimai	17.78	195	P		P	00 21 58.9 +5.1
KARZ	Kaharoa	17.88	194	P		P	00 21 58.7 +4.0
KARZ	Kaharoa	17.88	194	P		P	00 21 58.7 +4.0
MWZ	Matawai	17.92	191	P		P	00 21 51.5 -3.6
MWZ	Matawai	17.92	191	P		P	00 21 51.5 -3.6
URZ	Urewera	17.92	192	P		P	00 21 48.0 -7.1
URZ	Urewera	17.92	192	P		P	00 21 55.8 +0.7
CNGZ	Carnagh Statio	17.96	189	P		P	00 21 52.1 -3.3
CNGZ	Carnagh Statio	17.96	189	P		P	00 21 52.1 -3.3
TKGZ	Te Karaka	17.97	190	P		P	00 21 51.6 -3.8
TKGZ	Te Karaka	17.97	190	P		P	00 21 51.6 -3.8
MUGZ	Murupara	18.20	193	P		P	00 21 58.9 +1.2
MUGZ	Murupara	18.20	193	P		P	00 21 58.9 +1.2
HRRZ	Handcock Road	18.22	194	P		P	00 22 01.5 +3.6
HRRZ	Handcock Road	18.22	194	P		P	00 22 01.5 +3.6
GRRZ	Galatos Road	18.22	194	P		P	00 22 02.3 +4.4
GRRZ	Galatos Road	18.22	194	P		P	00 22 02.3 +4.4
RIGZ	Rimuhau	18.24	190	P		P	00 21 56.2 -1.9
RIGZ	Rimuhau	18.24	190	P		P	00 21 56.2 -1.9
PRRZ	Plateau Road	18.30	193	P		P	00 22 01.3 +2.8
PRRZ	Plateau Road	18.30	193	P		P	00 22 01.3 +2.8
WPRZ	Whakapapatarin	18.37	194	P		P	00 22 03.3 +4.1
WPRZ	Whakapapatarin	18.37	194	P		P	00 22 03.3 +4.1
SNGZ	Shannon Statio	18.39	191	P		P	00 21 56.6 -2.7
SNGZ	Shannon Statio	18.39	191	P		P	00 21 56.6 -2.7
KUTZ	Kaahu Road	18.42	195	P		P	00 22 05.0 +5.3
KUTZ	Kaahu Road	18.42	195	P		P	00 22 05.0 +5.3
PRGZ	Paritu Road	18.44	190	P		P	00 21 57.0 -2.8
PRGZ	Paritu Road	18.44	190	P		P	00 21 57.0 -2.8
MTHZ	Maungataniwha	18.55	192	P		P	00 22 00.9 0.0
MTHZ	Maungataniwha	18.55	192	P		P	00 22 00.9 0.0
RAHZ	Arahi	18.57	191	P		P	00 22 00.6 -0.4
RAHZ	Arahi	18.57	191	P		P	00 22 00.6 -0.4
KNZ	Kokohu	18.57	190	P		P	00 21 58.0 -3.0
KNZ	Kokohu	18.57	190	P		P	00 21 58.0 -3.0
MRHZ	Matea Rd	18.62	193	P		P	00 22 03.4 +1.9
MRHZ	Matea Rd	18.62	193	P		P	00 22 03.4 +1.9
WATZ	Wairara	18.65	195	P		P	00 22 06.9 +5.1
WATZ	Wairara	18.65	195	P		P	00 22 06.9 +5.1
MHGZ	Mahia Peninsul	18.66	189	P		P	00 22 03.7 +1.9
WHHZ	Waihua	18.69	191	P		P	00 22 01.8 -0.4
WHHZ	Waihua	18.69	191	P		P	00 22 01.8 -0.4
NMHZ	Naumai	18.79	192	P		P	00 22 05.4 +2.3
NMHZ	Naumai	18.79	192	P		P	00 22 05.4 +2.3
RATZ	Rangitukua	18.79	195	P		P	00 22 07.9 +4.8
RATZ	Rangitukua	18.79	195	P		P	00 22 07.9 +4.8
RITZ	Rihia Road	18.88	194	P		P	00 22 08.2 +4.4
RITZ	Rihia Road	18.88	194	P		P	00 22 08.2 +4.4
ARHZ	Aropaoanui	18.92	191	P		P	00 22 06.1 +1.9
ARHZ	Aropaoanui	18.92	191	P		P	00 22 06.1 +1.9
BKZ	Black Stump Fm	18.92	193	P		P	00 22 06.7 +2.4
BKZ	Black Stump Fm	18.92	193	P		P	00 22 06.7 +2.4
KRVZ	Karewarewa	19.04	195	P		P	00 22 10.2 +4.7
KRVZ	Karewarewa	19.04	195	P		P	00 22 10.2 +4.7
WTVZ	West Tongariro	19.07	195	P		P	00 22 10.4 +4.7
WTVZ	West Tongariro	19.07	195	P		P	00 22 10.4 +4.7
MCHZ	McNeill Hill	19.15	192	P		P	00 22 09.1 +2.8
MCHZ	McNeill Hill	19.15	192	P		P	00 22 09.1 +2.8
COVZ	Chateau Observ	19.17	195	P		P	00 22 11.4 +4.8
COVZ	Chateau Observ	19.17	195	P		P	00 22 11.4 +4.8
KWHZ	Kaweka Forest	19.18	193	P		P	00 22 09.6 +2.9
KWHZ	Kaweka Forest	19.18	193	P		P	00 22 09.6 +2.9
FWVZ	Far West T-bar	19.21	195	P		P	00 22 11.6 +4.5
FWVZ	Far West T-bar	19.21	195	P		P	00 22 11.6 +4.5
WHVZ	Whangaehu Hut	19.23	195	P		P	00 22 11.9 +4.5
WHVZ	Whangaehu Hut	19.23	195	P		P	00 22 11.9 +4.5
CKHZ	Cape Kidnapper	19.29	191	P		P	00 22 09.7 +2.2
CKHZ	Cape Kidnapper	19.29	191	P		P	00 22 09.7 +2.2
MOVZ	Moawhango	19.31	194	P		P	00 22 11.6 +3.7
MOVZ	Moawhango	19.31	194	P		P	00 22 11.6 +3.7
BHHZ	Black Hill Sta	19.32	193	P		P	00 22 11.0 +3.1
BHHZ	Black Hill Sta	19.32	193	P		P	00 22 11.0 +3.1
KRHZ	Kereru	19.41	193	P		P	00 22 10.3 +1.6
KRHZ	Kereru	19.41	193	P		P	00 22 10.3 +1.6
KAHZ	Kahuranaki	19.45	191	P		P	00 22 11.2 +2.0
KAHZ	Kahuranaki	19.45	191	P		P	00 22 11.2 +2.0
PXZ	Pawanui	19.69	191	P		P	00 22 13.1 +1.9
PXZ	Pawanui	19.69	191	P		P	00 22 13.1 +1.9
PNHZ	Pukenui	19.70	193	P		P	00 22 14.8 +3.4
PNHZ	Pukenui	19.70	193	P		P	00 22 14.8 +3.4
WPHZ	Waipukurau	19.80	192	P		P	00 22 16.2 +4.0
PRHZ	Porangahau	19.96	191	P		P	00 22 16.2 +2.5
CTA	Charters Tower	33.21	265	P		P	00 24 11.6 +1.0
	7.9nm,0.5s,baz=93,slow=12,SNR=20						
STKA	Stephens Creek	37.46	244	P		P	00 24 46.1 +0.2
	1.3nm,0.4s,baz=65,slow=12,SNR=3.6						
ASAR	Alice Springs	44.22	257	P		P	00 25 40.6 +0.6
	11nm,0.7s,baz=96,slow=8.2,SNR=97						
WRA	Warramunga Arr	44.32	262	P		P	00 25 41.1 +0.3
	4.4nm,0.6s,baz=97,slow=8.1,SNR=57						
BATI	Baumata	56.68	271	P		P	00 27 14.4 +3.0
	31nm,0.6s,baz=131,slow=5.8,SNR=3.6						
VNDA	Vanda	57.66	185	P		P	00 27 17.4 +0.3
	0.4nm,0.5s,baz=21,slow=6.8,SNR=4.2						
QSPA	South Pole Qui	69.34	180	P		P	00 28 33.2 +0.9
	3.4nm,0.8s,baz=133,slow=1.6,SNR=9.8						
TXAR	Lajitas Array	87.39	57	P		P	00 30 11.2 +1.6
	0.3nm,0.7s,baz=212,slow=6.8,SNR=4.7						
MKAR	Makanchi Array	111.17	313	PKiKP		PKiKP	00 35 52.5 +0.5
	0.1nm,0.5s,baz=221,slow=1.4,SNR=4.1						
ARCES	ARCESS Array B	129.09	349	PKP		PKPdf	00 36 27.5 +1.8
	2.7nm,0.9s,baz=15,slow=4.7,SNR=2.9						
FINES	FINESS Array B	135.92	343	PKP		PKPdf	00 36 41.2 +2.6
	1.5nm,1.0s,baz=83,slow=4.3,SNR=3.6						
HFS	Hagfors	139.72	351	PKhKP		PKPpre	00 36 40.1
	2.2nm,0.9s,baz=64,slow=3.4,SNR=6.2						
AKASG	Malin Array Be	143.09	331	PKP		PKPdf	00 36 51.1 -0.8
	0.8nm,0.4s,baz=40,slow=4.4,SNR=5.2						
EKA	Eskdalemuir Ar	145.25	5	PKPbc		PKPab	00 36 57.3 -0.2
	0.1nm,0.3s,baz=18,slow=2.5,SNR=4.0						
BRTR	Keskin Array B	146.80	312	PKPbc		PKPab	00 37 03.6 -0.8
	0.5nm,0.4s,baz=130,slow=4.1,SNR=6.0						
MMAI	Mount Meron Ar	147.70	299	PKPbc		PKPab	00 37 06.1 -2.0
	1.3nm,0.5s,baz=79,slow=7.5,SNR=4.5						
CLL	Collm	148.22	347	||i PKPbc		PKPab	00 37 07.0 -2.5
	comp=Z,6.0nm,0.8s						
CLL				*i* PKPab		PKiKP	00 37 10.6 +4.6
	comp=Z,4.0nm,1.0s						
DPC	Dobruska-Polom	148.26	342	*e*P		PKPab	00 37 07.8 -2.0
MLR	Muntele Rosu	148.27	327	PKPbc		PKPab	00 37 07.4 -2.8
	baz=277,slow=8.1						
BRG	Berggiesshubel	148.41	345	*i* PKP		PKPab	00 37 07.4 -2.9
	comp=Z,4.3nm,0.9s						
PRU	Pruhonice	149.08	344	*e*P		PKPab	00 37 09.1 -4.0
NKC	Novy Kostel	149.35	346	*e*P		PKPab	00 37 10.1 -4.2
KHC	Kasperske Hory	150.12	344	*e*P		PKPab	00 37 11.7 -5.8
GERES	GERESS Array B	150.35	344	PKPbc		PKPab	00 37 12.2 -6.4
	comp=Z,1.0nm,0.6s,baz=8.5,slow=2.7,SNR=9.0						

IDC ***05*** *00:35:24.0±0.4, 13°.55N×44°.92W, h0km, mb4.5/45, mb1 4.5/45, mb1mx4.5/66, mbtmp4.5/45, MS4.6/49, Ms1 4.5/49, ms1mx4.5/51, Error ellipse: s-maj=12.2km s-min=9.3km az=157.0*

MOS ***05*** *00:35:24.4±1.0, 13°.58N×44°.89W, h10km, mb5.2/86, MS4.6/11, Error ellipse: s-maj=6.6km s-min=4.6km az=54.0*

BJI ***05*** *00:35:25.8, 13°.50N×44°.90W, h10km, mB5.4/5, Ms5.3/8, Ms7 5.0/8*

ISCJB ***05*** *00:35:25.1±0.2, 13°.53N±0°.04×44°.88W±0°.02, h15km, mb5.0/250, MS4.6/66, Error ellipse: s-maj=5.8km s-min=2.3km az=178.4*

GCMT ***05*** *00:35:26.0±0.1, 13°.57N×44°.86W, h12km, MW5.2/109, Moment Tensor Solution. s60,c85; s109,c204; Duration: 1s0 Moment tensor: Scale 10^17^Nm; Mrr=0.91±.01; Mθθ0.03±.01; Mφφ0.87±.01; Mrθ0.07±.04; Mθφ=0.26±.01; Mφr=0.11±.04; Best double couple: M0=0.93600×10^17^ NP1:φs342.00000°, δ49.00000°, λ=93.00000°. NP2:φs167.00000°, δ41.00000°, λ=86.00000°. Principal axes: T 0.9560, Plg4.0000°, Azm74.0000°; N -0.0390, Plg2.0000°, Azm344.0000°; P -0.9160, Plg86.0000°, Azm221.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***05*** *00:35:26.0±0.2, 13°.50N×44°.85W, h10km, mb5.1/176 Error ellipse: s-maj=5.9km s-min=3.2km az=176.0*

ISC 05 00:35:26.6±0.3, 13°.53N±0.06×44.91W±0.05, h15km, n796, σ1§48/778, mb5.1/256, MS4.7/68, 30C-14D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H05S1	Guadeloupe/Mar	15.49	275	T	T	00 54 48.7	
	SNR=175						
ZAM	Aeronautique	15.68	276	*e*P	Pn	00 39 04.9	-2.2
TRMF	Trois Ilets	15.70	276	*e*P	Pn	00 39 06.3	-1.0
FDF	Fort de France	15.80	276	*e*Pn	Pn	00 39 08.9	+0.2
	113nm,1.2s						
FDF	Fort de France	15.80	276	*e*P	Pn	00 39 06.6	-2.2
FDF	Fort de France	15.80	276	*e*P	Pn	00 39 08.9	+0.2
FDF				pmax	pmax		
	comp=Z,113nm,1.2s						
BAMF	Morne Balai	15.80	277	*e*P	Pn	00 39 09.6	+0.8
SVCV	St. Vincent, C	15.80	271	*e*P	Pn	00 39 05.7	-3.0
H05N1	Guadeloupe/Mar	15.85	282	T	T	00 55 13.9	
	SNR=14						
DEG	La Desirade	15.85	282	*e*P	Pn	00 39 06.6	-2.9
PCM	Pelee Case Pet	15.86	277	*e*P	Pn	00 39 08.3	-1.2
SVB	Belmont	15.91	271	*e*Pn	Pn	00 39 10.2	+0.1
	comp=Z,86nm,0.9s						
SVB	Belmont	15.91	271	*e*P	Pn	00 39 00.5	-10
BBL	Barber's Block	16.16	279	*e*P	Pn	00 38 59.3	-14
TBG	Guadaloupe-3	16.36	280	*e*P	Pn	00 39 05.7	-10
GRGR	Grenville	16.39	267	*e*P	Pn	00 39 08.4	-7.9
ANWB	Willy Bob	16.77	286	*e*P	Pn	00 39 17.1	-4.0
MLYT	Lee's Yard	16.99	283	*e*P	Pn	00 39 21.5	-2.3
SEUS	St. Eustatius	17.86	285	*e*P	Pn	00 39 31.8	-2.9
SMRT	St. Maarten	18.05	287	*e*P	Pn	00 39 34.1	-2.9
SABA	Saba	18.12	285	*e*P	Pn	00 39 32.2	-5.8
STVI	Saint Thomas	19.86	287	*e*P	P	00 39 57.7	+0.5
	comp=Z,141nm,1.7s						
MTP	Monte Pirata	20.37	286	*e*P	Pn	00 40 04.2	-0.8
	comp=Z,66nm,1.0s						
PTGA	Pitinga	20.59	228	P	P	00 40 05.0	-0.2
	comp=Z,59nm,0.9s,baz=48,slow=14,SNR=41						
PTGA				LR	LR	00 47 09.6	
	comp=Z,2μm,20.7s,baz=46,slow=34						
PTGA	Pitinga	20.59	228	*e*P	P	00 40 04.6	-0.6
	comp=Z,384nm,1.6s						
HUMP	Cerro San Antoni	20.66	286	*e*P	Pn	00 40 07.6	-0.7
	comp=Z,83nm,1.6s						
CBYP	Canovanas	20.69	286	*e*P	Pn	00 40 07.8	-0.9
	comp=Z,44nm,1.4s						
SJG	San Juan	20.93	285	P	P	00 40 09.5	+0.5
	comp=Z,27nm,0.9s,baz=88,slow=9.5,SNR=14						
SJG				LR	LR	00 46 56.3	
	comp=Z,2μm,21.1s,baz=102,slow=33						
SJG	San Juan	20.93	285	*e*P	P	00 40 09.8	+0.8
	comp=Z,302nm,1.9s						
SJG	San Juan	20.93	285	*e*P	P	00 40 09.8	+0.8
SJG				pmax	pmax		
	comp=Z,302nm,1.9s						
OBIP	Obispado Ponce	21.35	285	*e*P	P	00 40 15.7	+2.2
	comp=Z,147nm,1.6s						
AOPR	Arecibo Observ	21.54	286	*e*P	P	00 40 17.6	+2.0
	comp=Z,115nm,1.2s						
CRPR	Cabo Rojo, PR	21.82	285	*e*P	P	00 40 18.6	+0.1
	comp=Z,64nm,0.9s						
MPR	Mayaguez	21.88	285	*e*P	P	00 40 20.4	+1.3
	comp=Z,138nm,1.9s						
SDV	Santo Domingo	25.65	262	P	P	00 40 55.7	-0.5
	comp=Z,19nm,1.0s,baz=102,slow=6.5,SNR=12						
SDV				LR	LR	00 51 54.1	
	comp=Z,229nm,21.6s,baz=70,slow=39						
SDV	Santo Domingo	25.65	262	*e*P	P	00 40 57.4	+1.2
	comp=Z,34nm,1.1s						
RUSC	La Rusia	28.77	257	*e*P	P	00 41 26.6	+2.0
	comp=Z,57nm,2.0s						
SAML	Samuel	28.78	220	*e*P	P	00 41 23.8	-0.3
	comp=Z,54nm,1.6s						
ROSC	El Rosal	30.26	256	P	P	00 41 37.8	0.0
	comp=Z,3.9nm,0.3s,baz=45,slow=19,SNR=2.4						
ROSC				LR	LR	00 55 07.9	
	comp=Z,976nm,18.5s,baz=90,slow=39						
PRAC	Prado	31.17	254	*e*P	P	00 41 46.3	+0.9
	comp=Z,123nm,1.8s						
PMOZ	Porto Moniz, M	31.74	48	*e*LQ	LQ	00 48 42.8	
PMOZ				*e*LR	LR	00 49 37.9	
	comp=Z,907nm,22.0s						
PMOZ	Porto Moniz, M	31.74	48	*e*T	T	01 14 25.3	
FUL	Funchal	31.87	49	*e*T	T	01 14 10.9	
PMAR	Madeira	31.89	48	*e*T	T	01 14 24.4	
SIV	San Ignacio	33.41	209	P	P	00 42 04.7	-0.2
	comp=Z,4.5nm,0.9s,baz=46,slow=6.9,SNR=15						
OTAV	Otavalo	35.75	251	*e*P	P	00 42 27.7	+2.0
	comp=Z,23nm,1.3s						
059A	Moore Haven	36.39	297	P	P	00 42 32.0	+1.4
	baz=104						
H10N3	ASCENSION HYDR	36.91	123	T	T	01 21 36.0	
	baz=304,slow=76,SNR=53						
H10N2	ASCENSION HYDR	36.91	123	T	T	01 21 36.4	
	baz=304,slow=76,SNR=56						
H10N1	ASCENSION HYDR	36.93	123	T	T	01 21 37.5	
	baz=304,slow=76,SNR=52						
058A	Arcadia	36.98	297	P	P	00 42 36.9	+1.3
	baz=104						
H10S3	ASCENSION HYDR	37.42	125	T	T	01 22 15.7	
	baz=306,slow=75,SNR=47						
H10S1	ASCENSION HYDR	37.43	125	T	T	01 22 15.2	
	baz=306,slow=75,SNR=88						
H10S2	ASCENSION HYDR	37.44	125	T	T	01 22 18.8	
	baz=306,slow=75,SNR=81						
LPAZ	La Paz	37.48	218	P	P	00 42 39.9	-0.8
	comp=Z,23nm,1.3s,baz=24,slow=10,SNR=20						
LPAZ				LR	LR	00 57 56.6	
	comp=Z,3μm,19.9s,baz=38,slow=36						
LPAZ	La Paz	37.48	218	*e*P	P	00 42 40.3	-0.3
	comp=Z,20nm,1.3s						
LPAZ	La Paz	37.48	218	*e*P	P	00 42 42.0	+1.4
LPAZ				pmax	pmax		
	comp=Z,23nm,1.3s						
NHSC	New Hope	37.55	307	P	P	00 42 41.5	+1.2
	baz=113						
857A	Zephyrhills	37.65	299	P	P	00 42 42.4	+1.2
	baz=105						
757A	Oxford	37.69	300	P	P	00 42 42.4	+0.8
	baz=106						
357A	Townsend	37.97	304	P	P	00 42 44.8	+0.9
	baz=110						
356A	Blackshear	38.46	304	P	P	00 42 48.7	+0.7
	baz=109						
555A	McAlpin	38.78	301	P	P	00 42 52.0	+1.3
	baz=107						
655A	Horseshoe Beac	38.85	300	P	P	00 42 52.5	+1.2
	baz=106						
455A	Stateville	39.01	302	P	P	00 42 54.6	+1.9
	baz=108						
155A	Kite	39.16	305	P	P	00 42 55.1	+1.1
	baz=110						
BLA	Blacksburg	39.46	313	P	P	00 42 57.9	+1.4
	baz=117						
KOWA	Kowa	39.65	84	P	P	00 42 58.0	-0.2
	comp=Z,3.1nm,0.7s,baz=273,slow=7.6,SNR=9.5						
KOWA				LR	LR	00 58 12.4	
	comp=Z,2μm,18.6s,baz=275,slow=34						
KOWA	Kowa	39.65	84	*e*P	P	00 42 59.5	+1.2
	comp=Z,86nm,2.0s						
Z54A	Sparta	39.67	306	P	P	00 42 60.0	+1.8
	baz=111						
TIC	Toumodi	39.82	96	*e*P	P	00 43 00.1	+0.4
LIC	Lamto	39.91	97	*e*P	P	00 43 01.1	+0.7
	comp=Z,74nm,1.4s						
DBIC	Dimbokro	39.97	96	P	P	00 43 02.3	+1.4
	comp=Z,12nm,1.0s,baz=267,slow=11,SNR=6.4						
DBIC				LR	LR	00 55 55.7	
	comp=Z,1μm,21.1s,baz=252,slow=31						
DBIC	Dimbokro	39.97	96	*e*P	P	00 43 01.9	+0.9
	comp=Z,47nm,1.4s						
LONY	Lake Ozonia	39.98	327	P	P	00 43 00.8	+0.2
	baz=132						
MORF	Marmelete	40.03	47	*e*P	P	00 43 01.4	+0.2
KIC	Kosan Boka	40.15	96	*e*P	P	00 43 03.3	+0.8
	comp=Z,83nm,1.5s						
353A	Camilla	40.16	303	P	P	00 43 04.5	+2.2
	baz=107						
GOGA	Godfrey	40.22	306	P	P	00 43 04.6	+1.8
	baz=110						
PMAFR	Mafra	40.36	45	*e*T	T	01 25 04.7	
Y53A	Monroe	40.47	307	P	P	00 43 06.2	+1.4
	baz=111						
X53A	Estanollee	40.48	308	P	P	00 43 05.9	+1.0
	baz=112						
PNCL	Nicolau / Gran	40.48	46	*e*T	T	01 24 49.7	
V53A	Saluda	40.55	310	P	P	00 43 06.7	+1.1
	baz=113						
PCVE	Castro Verde	40.61	47	*e*P	P	00 43 03.6	-2.3
552A	Lynn Haven	40.72	301	P	P	00 43 07.0	+0.1
	baz=105						
PVAQ	Vaqueiros	40.74	48	*e*P	P	00 43 07.8	+0.8
PVAQ				*e*LQ	LQ	00 52 21.0	
PVAQ				*e*LR	LR	00 53 48.9	
	comp=Z,1μm,22.0s						
252A	Lumpkin	40.78	304	P	P	00 43 09.9	+2.5
	baz=108						
452A	Marianna	40.82	302	P	P	00 43 09.0	+1.3
	baz=106						
Z52A	Williamson	40.90	305	P	P	00 43 09.7	+1.3
	baz=109						
152A	Waverly Hall	40.97	305	P	P	00 43 10.8	+1.8
	baz=108						
X52A	Dahlonega	40.97	308	P	P	00 43 10.7	+1.7
	baz=111						
351A	Pinckard	41.28	302	P	P	00 43 13.3	+1.7
	baz=106						
251A	Midway	41.35	303	P	P	00 43 13.9	+1.7
	baz=107						
MDT	Midelt	41.40	55	P	P	00 43 11.4	-1.3
	comp=Z,2.4nm,0.8s,baz=225,slow=2.9,SNR=1.6						
MDT				LR	LR	00 56 54.1	
	comp=Z,2μm,21.4s,baz=274,slow=31						
CPUP	Villa Florida	41.43	197	P	P	00 43 11.2	-1.5
	comp=Z,1.1nm,0.6s,baz=27,slow=8.8,SNR=4.6						
CPUP				LR	LR	01 00 22.9	
	comp=Z,577nm,20.9s,baz=21,slow=36						
PESTR	Estremoz	41.48	46	*e*P	P	00 43 14.0	+0.9
PBAR	Barrancos	41.56	47	*e*P	P	00 43 14.0	+0.3
PBAR	Barrancos	41.56	47	*e*T	T	01 25 49.7	
Y51A	Rockmart	41.64	306	P	P	00 43 16.5	+2.0
	baz=109						
V51A	Loudon	41.76	309	P	P	00 43 16.8	+1.4
	baz=112						
PMRV	Marv??o	41.88	45	*e*P	P	00 43 23.2	+6.9
PMRV				*e*LQ	LQ	00 52 50.8	
PMRV				*e*LR	LR	00 54 21.8	
	comp=Z,1μm,22.0s						
PMRV	Marv??o	41.88	45	*e*T	T	01 25 39.1	
S51A	Beattyville	41.92	312	P	P	00 43 17.6	+0.9
	baz=115						
150A	Eclectic	42.00	304	P	P	00 43 19.0	+1.6
	baz=107,SNR=6.1						
Z50A	Ashland	42.11	305	P	P	00 43 19.5	+1.1
	baz=108						
Y50A	Piedmont	42.16	306	P	P	00 43 20.4	+1.7
	baz=109						
MTE	Manteigas	42.23	44	*e*P	P	00 43 19.1	-0.2
MTE				*e*LQ	LQ	00 53 04.5	
MTE				*e*LR	LR	00 54 42.1	
	comp=Z,2μm,20.0s						
MTE	Manteigas	42.23	44	*e*P	P	00 43 20.5	+1.2
	comp=Z,47nm,1.7s						
W50A	Signal Mountai	42.27	308	P	P	00 43 20.7	+1.1
	baz=110						
X50B	Fort Payne	42.28	307	P	P	00 43 18.6	-1.2
	baz=109						
449A	Pace	42.48	301	P	P	00 43 20.7	-0.7
	baz=104						
PGAV	Gavieira, Arco	42.53	41	*e*LQ	LQ	00 53 09.4	
PGAV				*e*LR	LR	00 54 43.0	
	comp=Z,2μm,20.0s						
PGAV	Gavieira, Arco	42.53	41	*e*T	T	01 26 55.2	
POLO	Lamas de Olo	42.54	42	*e*P	P	00 43 21.3	-0.5
Z49A	Columbiana	42.58	305	P	P	00 43 23.4	+1.3
	baz=107,SNR=5.4						
T50A	Nancy	42.58	311	P	P	00 43 23.3	+1.2
	baz=113						
149A	Jones	42.62	304	P	P	00 43 23.6	+1.1
	baz=106						
ACSO	Alum Creek Sta	42.63	316	P	P	00 43 24.1	+1.6
	baz=118						
Y49A	Blount Mountai	42.69	306	P	P	00 43 24.9	+1.8
	baz=108						
249A	Camden	42.72	303	P	P	00 43 25.0	+1.7
	baz=106						
X49A	Woodville	42.83	307	P	P	00 43 23.8	-0.3
	baz=109						
LRAL	Lakeview Retre	42.91	304	P	P	00 43 26.2	+1.3
	baz=107						
LRAL	Lakeview Retre	42.91	304	*e*P	P	00 43 25.3	+0.4
	comp=Z,18nm,1.3s						
V49A	McMinnville	42.92	308	P	P	00 43 24.9	-0.1
	baz=110						
MVO	Moncorvo	42.94	43	*e*LQ	LQ	00 53 18.4	
MVO				*e*LR	LR	00 54 54.5	
	comp=Z,2μm,20.0s						
MVO	Moncorvo	42.94	43	*e*T	T	01 27 02.5	
U49A	Red Boiling Sp	43.09	309	P	P	00 43 27.4	+1.1
	baz=111						
T49A	Edmonton	43.13	310	P	P	00 43 27.6	+1.0
	baz=112						
Y48A	Jasper	43.31	305	P	P	00 43 28.8	+0.7
	baz=108						
X48A	Hartselle	43.37	306	P	P	00

comp=Z,489nm,20.0s,baz=144,slow=33
V46A Holladay 44.63 308 P P 00 43 39.7 +1.1
baz=109
Y46A Houston 44.64 305 P P 00 43 39.8 +1.0
baz=106
O47A Sheridan 44.83 314 P P 00 43 41.1 +0.9
baz=115
T46A Princeton 44.87 309 P P 00 43 42.0 +1.5
baz=110
245A Little AP, Sta 45.01 302 P P 00 43 43.5 +1.7
baz=104
OXF Oxford 45.26 305 P P 00 43 45.0 +1.3
baz=106
OXF Oxford 45.26 305 eP P 00 43 44.8 +1.2
comp=Z,15nm,0.9s
OXF Oxford 45.26 305 eP P 00 43 44.8 +1.2
OXF pmax pmax
comp=Z,15nm,0.9s
V45A Humboldt 45.26 307 P P 00 43 45.1 +1.5
baz=108
W45A Hickory Valley 45.26 306 P P 00 43 45.5 +1.8
baz=107
TOA0 Torodi Ar. Sit 45.29 85 eP P 00 43 43.1 -1.1
TORD Torodi Ar. Bea 45.29 85 P P 00 43 43.6 -0.6
comp=Z,4.8nm,0.9s,baz=288,slow=7.7,SNR=21
TORD LR LR 01 01 59.6
comp=Z,2µm,18.0s,baz=270,slow=35
P46A Rosedale 45.31 313 P P 00 43 45.2 +1.2
baz=113
N46A Monticello 45.49 315 P P 00 43 45.8 +0.4
baz=115
SFIN Lafayette 45.53 314 P P 00 43 46.1 +0.4
baz=114
344A Westbrook Farm 45.58 301 P P 00 43 48.0 +1.7
baz=102
R45A Skylar, Fairfi 45.59 311 P P 00 43 47.3 +1.0
baz=111
244A Avery, Jackson 45.67 302 P P 00 43 48.2 +1.2
baz=103
S44A Carbondale 46.11 310 P P 00 43 51.9 +1.6
baz=109
R44A Waltonville 46.16 310 P P 00 43 51.5 +0.7
baz=110
P44A Sand Creek, Wi 46.26 312 P P 00 43 52.5 +1.0
baz=112
Q44A Meyer Farm, Va 46.35 311 P P 00 43 53.3 +1.1
baz=111
O44A Mansfield 46.41 313 P P 00 43 53.6 +1.0
baz=112
N44A Piper City 46.42 314 P P 00 43 53.5 +0.8
baz=113
X43A Marvell 46.43 305 P P 00 43 53.7 +0.8
baz=105
S43A Fulton Ridge, 46.69 309 P P 00 43 55.6 +0.8
baz=109
R43A Red Bud 46.80 310 P P 00 43 56.9 +1.1
baz=109
Q43A New Douglas 46.86 311 P P 00 43 57.4 +1.2
baz=110
242A Grayson 46.89 301 P P 00 43 57.8 +1.3
baz=102
F45A CMU Biological 46.89 321 P P 00 43 56.6 +0.3
baz=120
E45A Wooded Hills, 47.02 322 P P 00 43 58.2 +0.8
baz=121
FVM French Village 47.08 310 eP P 00 43 58.1 +0.1
comp=Z,10nm,0.9s
FVM French Village 47.08 310 eP P 00 43 58.1 +0.1
FVM pmax pmax
comp=Z,10.0nm,0.9s
V42A Cord 47.17 307 P P 00 43 58.8 +0.1
baz=106
N43A Stutzman Famil 47.20 314 P P 00 43 59.1 +0.3
baz=112
U42A Revenden 47.21 307 P P 00 43 59.1 +0.1
baz=107
M43A Waltham Townsh 47.24 315 P P 00 43 59.4 +0.2
baz=113
S42A Caledonia 47.29 309 P P 00 43 59.5 -0.1
baz=108
T42A Van Buren 47.29 308 P P 00 43 60.0 +0.3
baz=107
VAL Valentia 47.32 29 eS S 00 50 52.7 +0.1
K43A Burlington 47.33 316 P P 00 44 00.6 +0.7
baz=115
L43A Garden Prairie 47.39 316 P P 00 44 00.9 +0.6
baz=114
R42A Luebbering 47.45 310 P P 00 44 01.8 +1.0
baz=109
Q42A Golden Eagle 47.46 311 P P 00 44 01.7 +0.8
baz=109
241A Mo Tay, Goldon 47.52 301 P P 00 44 01.9 +0.5
baz=102
P42A Winchester 47.55 312 P P 00 44 02.3 +0.7
baz=110
F44A Big Bay de Noc 47.58 321 P P 00 44 02.4 +0.7
baz=119
341A Kurthwood 47.59 300 P P 00 44 02.4 +0.4
baz=101
341A Kurthwood 47.59 300 eP P 00 44 03.3 +1.2
comp=Z,33nm,1.1s
E44A Grand Marais A 47.60 322 P P 00 44 03.0 +1.1
baz=120
141A Papa Simpson, 47.62 302 P P 00 44 02.9 +0.6
baz=102
Y41A Eaglette Beard 47.66 304 P P 00 44 02.3 -0.3
baz=103,SNR=5.7
J43A Natural Harves 47.67 317 P P 00 44 03.3 +0.8
baz=115
W41B Gary Mavity, V 47.68 305 P P 00 44 02.1 -0.5
baz=105,SNR=6.7
W41B Gary Mavity, V 47.68 305 eP P 00 44 03.7 +1.0
comp=Z,22nm,1.0s
I43A Langenfeld Bro 47.71 318 P P 00 44 03.6 +0.9
baz=116
CCM Cathedral Cave 47.72 309 P P 00 44 03.6 +0.7
baz=108
CCM Cathedral Cave 47.72 309 eP P 00 44 04.6 +1.7
comp=Z,24nm,1.6s
CCM Cathedral Cave 47.72 309 eP P 00 44 04.6 +1.7
CCM pmax pmax
comp=Z,25nm,1.6s
H43A Windswept, Lux 47.72 319 P P 00 44 03.8 +1.0
baz=117
X41A Kaden, Bauxite 47.73 304 P P 00 44 03.6 +0.6
baz=104
U41A Viola 47.73 307 P P 00 44 03.9 +0.8
baz=106
WHAR Wooly Hollow 47.74 306 eP P 00 44 04.0 +0.8
comp=Z,87nm,1.9s
V41A Mountainview 47.77 306 P P 00 44 02.5 -0.9
baz=105,SNR=5.4
T41A Mountain View 47.81 308 P P 00 44 02.6 -1.0
baz=107,SNR=6.0
R41A Rosebud 47.89 310 P P 00 44 04.3 0.0
baz=108
S41A Jillco Farms, 47.95 309 P P 00 44 04.0 -0.8
baz=107,SNR=6.2
F43A Flat Rock, Esc 47.97 321 P P 00 44 05.1 +0.3
baz=118
X40A Basin Creek Fa 47.98 304 P P 00 44 05.8 +0.7
baz=104
X40A Basin Creek Fa 47.98 304 eP P 00 44 06.2 +1.1
comp=Z,19nm,1.3s
Q41A Truxton 47.99 311 P P 00 44 05.1 +0.1
baz=109
G43A Wallace 48.02 320 P P 00 44 05.6 +0.4
baz=117
K42A Prairie Point, 48.04 316 P P 00 44 05.8 +0.4
baz=114
P41A Barry, Barry 48.10 312 P P 00 44 06.2 +0.3
baz=110
J42A Columbus 48.11 317 P P 00 44 06.4 +0.5
baz=114
O41A Passleys Farm, 48.12 312 P P 00 44 06.5 +0.5
baz=110
E43A Lone Tree Farm 48.13 321 P P 00 44 06.8 +0.8
baz=119
I42A Draeger Farm, 48.21 318 P P 00 44 07.4 +0.7
baz=115
V40A Witts Springs 48.30 306 P P 00 44 07.8 +0.4
baz=105
V40A Witts Springs 48.30 306 eP P 00 44 07.9 +0.4
comp=Z,16nm,1.1s
N41A Harden Midland 48.31 313 P P 00 44 07.8 +0.3
baz=111
W40A Ferguson Farm, 48.34 305 P P 00 44 08.0 +0.3
baz=104,SNR=10
W40A Ferguson Farm, 48.34 305 eP P 00 44 09.4 +1.6
comp=Z,144nm,1.6s
T40A Mansfield 48.42 308 P P 00 44 09.0 +0.6
baz=106
U40A Yellville 48.46 307 P P 00 44 07.7 -1.1
baz=105,SNR=6.2
G42A Mountain 48.48 319 P P 00 44 09.2 +0.5
baz=117
G42A Mountain 48.48 319 eP P 00 44 08.3 -0.4
comp=Z,11nm,1.0s
S40A Lebanon 48.53 308 P P 00 44 09.6 +0.4
baz=107
L41A Preston 48.55 315 P P 00 44 09.5 +0.2
baz=112
R40A Maddies Statio 48.56 309 P P 00 44 09.8 +0.3
baz=107
MIAR Mount Ida 48.59 304 P P 00 44 10.5 +0.7
baz=103,SNR=5.5
MIAR Mount Ida 48.59 304 eP P 00 44 12.4 +2.7
comp=Z,25nm,1.3s
MIAR Mount Ida 48.59 304 eP P 00 44 12.4 +2.7
MIAR pmax pmax
comp=Z,25nm,1.3s
TAM Tamanrasset 48.60 72 eP P 00 44 11.6 +1.4
comp=Z,17nm,1.7s
TAM Tamanrasset 48.60 72 eP P 00 44 11.6 +1.4
TAM pmax pmax
comp=Z,17nm,1.7s
K41A Shullsburg 48.62 316 P P 00 44 10.2 +0.4
baz=113
Q40A Laux Farm, Aux 48.63 310 P P 00 44 10.0 +0.1
baz=108
QUIF Quistinic 48.68 37 eP P 00 44 08.7 -1.5
QUIF pmax pmax
comp=Z,31nm,1.5s
EPF Esparros 48.68 44 eP P 00 44 12.2 +1.8
EPF pmax pmax
comp=Z,67nm,1.9s
JFWS Jewell Farm 48.70 316 P P 00 44 11.1 +0.6
baz=113
JFWS Jewell Farm 48.70 316 eP P 00 44 12.5 +2.0
comp=Z,17nm,1.2s
JFWS Jewell Farm 48.70 316 eP P 00 44 12.5 +2.0
JFWS pmax pmax
comp=Z,17nm,1.2s
E42A Champion 48.71 321 P P 00 44 11.2 +0.7
baz=118
J41A Loganville 48.72 317 P P 00 44 11.3 +0.7
baz=114
P40A Paris 48.77 311 P P 00 44 11.4 +0.4
baz=109
ROSF Rostrenen 48.83 36 eP P 00 44 12.3 +0.9
ROSF pmax pmax
comp=Z,32nm,1.3s
O40A La Belle 48.84 312 P P 00 44 11.5 0.0
baz=109,SNR=8.2
W39A Magazine 48.91 305 P P 00 44 12.3 +0.1
baz=104,SNR=11
W39A Magazine 48.91 305 eP P 00 44 13.7 +1.6
comp=Z,104nm,1.6s
NATX Nacogdoches 48.92 300 eP P 00 44 14.0 +1.6
comp=Z,31nm,0.8s
V39A Pettigrew 48.95 306 P P 00 44 12.7 +0.2
baz=104
U39A Green Forest 48.96 307 P P 00 44 12.0 -0.6
baz=105,SNR=6.6
X39A Fountain Ranch 49.02 304 P P 00 44 12.8 -0.2
baz=103,SNR=5.3
T39A Clever 49.04 308 P P 00 44 13.6 +0.4
baz=106
L40A Anamosa 49.05 315 P P 00 44 12.8 -0.3
baz=111,SNR=5.6
F41A Three Lakes 49.13 320 P P 00 44 13.4 -0.4
baz=116,SNR=5.5
R39A Chumby, Stover 49.14 309 P P 00 44 14.2 +0.3
baz=107
S39A Bolivar 49.18 308 P P 00 44 14.5 +0.3
baz=106
SGMF Saint Gilles 49.20 36 eP P 00 44 17.3 +3.1
SGMF pmax pmax
comp=Z,29nm,1.4s
K40A Colesburg 49.23 315 P P 00 44 14.8 +0.3
baz=112
P39B Salisbury 49.28 311 P P 00 44 14.6 -0.3
baz=108
Q39A Willow Grove F 49.31 310 P P 00 44 15.1 -0.1
baz=108
I40A Norwalk 49.34 317 P P 00 44 15.6 +0.3
baz=113
E41A Kenton 49.37 321 P P 00 44 15.8 +0.3
baz=117
D41A Chassel 49.40 322 P P 00 44 16.1 +0.3
baz=118
H40A Chili 49.48 318 P P 00 44 16.0 -0.4
baz=114,SNR=7.7
M39A Webster 49.51 313 P P 00 44 17.1 +0.4
baz=110
N39A Derby Farms, D 49.54 313 P P 00 44 17.3 +0.4
baz=109
L39A Vinton 49.61 314 P P 00 44 18.0 +0.5
baz=111
S38A Stockton 49.61 308 P P 00 44 17.9 +0.4
baz=106
G40A Rib Lake 49.62 319 P P 00 44 18.3 +0.8
baz=115
HKT Hockley 49.64 298 eP P 00 44 18.8 +1.0
comp=Z,10nm,1.3s
HKT Hockley 49.64 298 eP P 00 44 18.8 +1.0
HKT pmax pmax
comp=Z,10.0nm,1.3s
LFF La Frestale 49.71 42 eP P 00 44 20.8 +2.6
LFF pmax pmax
comp=Z,70nm,1.8s
K39A Oelwein 49.74 315 P P 00 44 17.6 -0.8
baz=111
T38A Diamond 49.76 307 P P 00 44 19.2 +0.6
baz=105
R38A Fenwick Farm, 49.76 309 P P 00 44 18.2 -0.4
baz=106
Q38A Cooks Store, C 49.76 310 P P 00 44 18.9 +0.2
baz=107
J39A Decorah 49.85 316 P P 00 44 19.7 +0.5
baz=112
F40A Park Falls 49.85 320 P P 00 44 18.6 -0.7
baz=116,SNR=8.0
P38A Dawn 49.89 311 P P 00 44 19.9 +0.3
baz=108
I39A Houston 49.92 317 P P 00 44 20.5 +0.7
baz=113
E40A Wakefield 49.94 320 P P 00 44 20.0 +0.1
baz=116
H39A Augusta 50.09 318 P P 00 44 21.3 +0.3
baz=113
C40A Isle Royale Na 50.15 322 P P 00 44 22.0 +0.5
baz=118
M38A Pleasantville 50.21 313 P P 00 44 22.5 +0.5
baz=109
G39A Holcombe 50.26 318 P P 00 44 22.9 +0.6
baz=114
L38A Oak Wood Farm, 50.29 314 P P 00 44 22.8 +0.2
baz=110
E39A Mellen 50.32 320 P P 00 44 22.3 -0.5
baz=115,SNR=8.4
F39A Loretta 50.35 319 P P 00 44 22.6 -0.5
baz=115,SNR=8.5
RJF Les Rejaudoux 50.36 42 eP P 00 44 25.3 +2.2
RJF pmax pmax
comp=Z,16nm,1.4s
J38A Wedel Dairy, R 50.37 316 P P 00 44 23.3 +0.1
baz=111
P37A Lathrop 50.49 310 P P 00 44 24.8 +0.6
baz=107
I38A Scanlan Farm, 50.53 317 P P 00 44 25.0 +0.6
baz=112
CAF Calviac 50.57 42 eP P 00 44 28.0 +3.3
CAF pmax pmax
comp=Z,69nm,1.9s
G38A Ridgeland 50.65 318 P P 00 44 26.1 +0.8
baz=113
FLN La Foliniere 50.66 37 eP P 00 44 27.7 +2.5
FLN pmax pmax
comp=Z,36nm,1.6s
TUL1 Leonard 50.66 305 P P 00 44 26.0 +0.5
baz=103
TUL1 Leonard 50.66 305 eP P 00 44 27.3 +1.8
comp=Z,47nm,1.5s
C39A Grand Marais 50.69 322 P P 00 44 26.5 +0.9
baz=117
LDF La Druitiere 50.79 37 eP P 00 44 27.9 +1.7
LDF pmax pmax
comp=Z,95nm,2.3s
F38A Pierce - Schro 50.98 319 P P 00 44 28.2 +0.4
baz=114
J37A Redenius Farm, 51.10 315 P P 00 44 29.1 +0.4
baz=110
TCF Toulx Ste Croi 51.21 41 eP P 00 44 30.3 +0.8
TCF pmax pmax
comp=Z,23nm,1.3s
I37A Lemond, Waseca 51.24 316 P P 00 44 30.0 +0.2
baz=111
435B Jarrell 51.25 299 P P 00 44 30.0 0.0
baz=97
435B Jarrell 51.25 299 eP P 00 44 29.6 -0.4
comp=Z,31nm,0.8s
SPMN Marine on St. 51.29 318 P P 00 44 30.6 +0.5
baz=112
WHTX Lake Whitney, 51.31 300 P P 00 44 30.6 +0.2
baz=98
WHTX Lake Whitney, 51.31 300 eP P 00 44 31.1 +0.7
comp=Z,29nm,0.9s
C38A Sawbill Land. 51.34 321 P P 00 44 30.8 +0.4
baz=116
BGF Bois d'Agland 51.72 41 eP P 00 44 33.9 +0.6
BGF pmax pmax
comp=Z,46nm,1.8s
C37A Embarrass 51.90 321 P P 00 44 34.7 0.0
baz=115
G36A St. Michael 51.92 317 P P 00 44 34.8 0.0
baz=112
F36A Milaca 52.00 318 P P 00 44 35.4 0.0
baz=112
E36A McGregor 52.08 319 P P 00 44 36.6 +0.6
baz=113
AVF Avril sur Loir 52.13 41 eP P 00 44 36.8 +0.5
AVF pmax pmax
comp=Z,89nm,2.3s
D36A Goodland 52.28 320 P P 00 44 38.0 +0.5
baz=114
C36A Pine Crest Far 52.32 321 P P 00 44 38.0 +0.3
baz=114
SSB Saint Sauveur 52.33 43 eP P 00 44 38.6 +0.7
comp=Z,38nm,2.0s
SSB Saint Sauveur 52.33 43 eP P 00 44 38.6 +0.7
SSB pmax pmax
comp=Z,38nm,2.0s
H35A Sunnyside Ranc 52.44 316 P P 00 44 38.6 -0.1
baz=110
LNIG Linares 52.45 291 eP P 00 44 39.0 -0.1
comp=Z,4.3nm,0.7s
833A Chaparral WMA, 52.57 295 P P 00 44 39.4 -0.5
baz=94
EKA Eskdalemuir Ar 52.74 29 P P 00 44 40.0 -0.7
comp=Z,2.8nm,0.9s,baz=213,slow=5.1,SNR=5.3
EKA LR LR 01 01 59.0
comp=Z,350nm,21.2s,baz=235,slow=30
EKA Eskdalemuir Ar 52.74 29 P P 00 44 40.0 -0.7
FRB Frobisher Bay 52.81 347 P P 00 44 40.3 -0.7
comp=Z,5.0nm,0.7s,baz=145,slow=9.3,SNR=9.6
FRB Frobisher Bay 52.81 347 eP P 00 44 42.9 +1.9
FRB pmax pmax
comp=Z,22nm,2.5s
WMOK Wichita Mounta 52.84 303 P P 00 44 40.7 -1.1
baz=100,SNR=12
WMOK Wichita Mounta 52.84 303 eP P 00 44 40.8 -1.1
comp=Z,21nm,1.1s
WMOK Wichita Mounta 52.84 303 eP P 00 44 40.8 -1.1
WMOK pmax pmax
comp=Z,21nm,1.1s
C35A Jirik Farms, M 53.00 320 P P 00 44 42.7 -0.1
baz=113
B35A Bob, Littlefor 53.10 321 P P 00 44 43.7 +0.1
baz=114
JCT Junction City 53.12 298 P P 00 44 42.5 -1.4
baz=96,SNR=6.0
JCT Junction City 53.12 298 eP P 00 44 43.6 -0.4
comp=Z,17nm,0.8s
JCT Junction City 53.12 298 eP P 00 44 43.6 -0.4
JCT pmax pmax
comp=Z,17nm,0.8s
ABTX Abilene, Hawle 53.23 301 P P 00 44 44.7 0.0
baz=98
ABTX Abilene, Hawle 53.23 301 eP P 00 44 44.8 0.0
comp=Z,24nm,1.1s
KEST Kesra 53.31 55 P P 00 44 46.5 +1.1
comp=Z,5.5nm,0.9s,baz=221,slow=4.9,SNR=6.1
KEST LR LR 01 05 34.9
comp=Z,884nm,21.1s,baz=206,slow=34
KEST Kesra 53.31 55 eP P 00 44 46.0 +0.6
comp=Z,76nm,2.0s
SFJD Kangerlussuaq 53.55 357 LR LR 01 03 09.5
comp=Z,668nm,19.6s,baz=164,slow=31
SFJD Kangerlussuaq 53.55 357 eP P 00 44 47.5 +1.1
comp=Z,15nm,1.2s
SFJD Kangerlussuaq 53.55 357 eP P 00 44 47.5 +1.1
SFJD pmax pmax
comp=Z,15nm,1.2s
I33A Coleman 53.56 315 P P 00 44 47.7 +0.7
baz=108
B34A Aery, Baudette 53.72 321 P P 00 44 48.8 +0.7
baz=113
H33A Prehn Over Nor 53.73 316 P P 00 44 48.9 +0.7
baz=108
F33A 5 Mile Ranch, 53.80 317 P P 00 44 49.7 +1.0
baz=110
D33A AnnSam, Waubun 53.96 319 P P 00 44 50.3 +0.5
baz=111
BAIF Baives 53.98 37 eP P 00 44 50.1 +0.2
BAIF pmax pmax
comp=Z,15nm,1.1s
DOU Dourbes 54.22 37 ⇓P P 00 44 52.7 +1.0
AGMN Agassiz Nation 54.40 320 eP P 00 44 52.3 -0.7
comp=Z,37nm,1.9s
G32A Webster 54.41 316 P P 00 44 51.8 -1.4
baz=108,SNR=5.3
HAU Haudompre 54.47 40 eP P 00 44 53.5 -0.1
HAU pmax pmax
comp=Z,137nm,2.6s
SENIN Lac Senin/Sane 54.51 42 eP P 00 44 55.2 +1.1
comp=Z,76nm,2.0s
BCLA Clavier 54.77 37 ⇑P P 00 44 56.2 +0.6
comp=Z,18nm,2.3s
WLF Walferdange 54.97 38 ⇑P P 00 44 57.6 +0.4
A32A Rocking H Ranc 55.01 321 P P 00 44 57.9 +0.4
baz=112
BEBN Eben Emael 55.14 37 ⇑P P 00 44 59.1 +0.8
D31A Mcclaflin, Tow 55.14 318 P P 00 44 58.5 +0.1
baz=109
ULM Lac du Bonnet 55.15 323 P P 00 44 56.5 -1.8
comp=Z,4.9nm,0.7s,baz=109,slow=8.4,SNR=8.8
ULM LR LR 01 04 45.5
comp=Z,463nm,21.4s,baz=109,slow=32
ULM Lac du Bonnet 55.15 323 eP P 00 44 56.4 -2.0
comp=Z,38nm,2.0s
ULM Lac du Bonnet 55.15 323 eP P 00 44 57.4 -1.0
ULM pmax pmax
comp=Z,5.0nm,0.7s
CDF Champ du Feu 55.20 40 eP P 00 45 00.8 +1.9
AMTX Amarillo 55.22 303 P P 00 44 59.1 -0.2
baz=98
AMTX Amarillo 55.22 303 eP P 00 44 59.0 -0.2
comp=Z,26nm,1.0s
MEM Membach 55.25 37 ⇑P P 00 44 59.5 +0.4
BFO Black Forest 55.83 40 eP P 00 45 04.4 +1.0
comp=Z,38nm,1.7s
BFO Black Forest 55.83 40 eP P 00 45 04.4 +1.0
BFO pmax pmax
comp=Z,38nm,1.7s
MSTX Muleshoe 56.00 302 P P 00 45 03.5 -1.5
baz=97,SNR=13
MSTX Muleshoe 56.00 302 eP P 00 45 04.0 -1.0
comp=Z,42nm,1.0s
TXAR Lajitas Array 56.38 296 P P 00 45 07.1 -0.6
comp=Z,5.7nm,0.8s,baz=113,slow=7.3,SNR=38
TXAR PcP PcP 00 46 05.3 +0.4
comp=Z,2.1nm,0.9s,baz=102,slow=3.8,SNR=5.6
TXAR LR LR 01 07 49.0
comp=Z,370nm,21.9s,baz=0.0,slow=34
TX31 Lajitas Ar. Si 56.38 296 eP P 00 45 07.2 -0.5
DAVA Damuels 56.49 42 epP P 00 45 10.8 +2.5
comp=Z,20nm,1.7s
FUORN Ofenpass-Fuorn 56.54 43 eP P 00 45 10.2 +1.4
comp=Z,68nm,1.9s
FETA Feichten 56.96 42 i P P 00 45 11.6 0.0
comp=Z,22nm,1.9s
RETA Reutte 57.12 42 i P P 00 45 14.0 +1.4

comp=Z,20nm,1.4s,SNR=6.9
MOTA Moosalm 57.30 42 *i* P **P 00 45 13.3 -0.7**
comp=Z,20nm,1.4s
WATA Walderalm 57.60 42 *e*pP **P 00 45 18.1 +2.0**
comp=Z,3.1nm,0.5s
VAE Valguarnera 57.61 54 LR LR 01 10 00.9
comp=Z,701nm,18.2s,baz=302,slow=36
WTTA Wattenberg 57.62 42 *i* pP **P 00 45 18.2 +1.8**
comp=Z,11nm,1.1s
T25A Trinidad 57.71 305 P **P 00 45 17.3 +0.1**
baz=98
T25A Trinidad 57.71 305 *e*P **P 00 45 17.9 +0.7**
comp=Z,55nm,1.9s
MNTX Cornudas Mount 57.99 299 P **P 00 45 17.6 -1.3**
baz=94,SNR=16
MNTX Cornudas Mount 57.99 299 *e*P **P 00 45 18.2 -0.8**
comp=Z,50nm,1.7s
FCC Fort Churchill 58.01 332 *e*P **P 00 45 17.5 -1.0**
comp=Z,9.5nm,1.1s
FCC Fort Churchill 58.01 332 *e*P **P 00 45 17.5 -1.0**
FCC pmax pmax
comp=Z,10.0nm,1.1s
ABTA Abfaltersbach 58.06 43 *i* P **P 00 45 20.0 +0.7**
comp=Z,36nm,1.8s,SNR=8.0
MOX Moxa 58.61 38 P **P 00 45 26.4 +3.4**
MOX pmax pmax
comp=Z,11nm,2.1s
RSSD Black Hills 58.62 314 P **P 00 45 23.6 +0.2**
baz=102
SDCO Great Sand Dun 58.65 306 P **P 00 45 23.6 -0.2**
baz=97,SNR=16
SDCO Great Sand Dun 58.65 306 *e*P **P 00 45 24.3 +0.4**
comp=Z,11nm,1.1s
SCO Scoresbysund 58.67 9 *i* P **P 00 45 23.1 +0.1**
comp=Z,15nm,1.2s
SCO Scoresbysund 58.67 9 *e*P **P 00 45 23.1 +0.1**
comp=Z,18nm,1.3s
SCO Scoresbysund 58.67 9 *i* P **P 00 45 23.1 +0.1**
SCO pmax pmax
comp=Z,15nm,1.2s
KBA Koelnbreinsper 58.70 43 *i* P **P 00 45 23.3 -0.5**
comp=Z,13nm,1.0s
CADS Cadrg 58.75 44 *i* P **P 00 45 24.6 +0.5**
MYKA Terra Mystica 58.78 43 *i* P **P 00 45 25.5 +1.2**
comp=Z,24nm,1.2s,SNR=7.3
WET Wettzell 58.94 40 P **P 00 45 28.0 +2.6**
WET pmax pmax
comp=Z,10.0nm,2.2s
NKC Novy Kostel 58.99 39 *e*P **P 00 45 26.1 +0.5**
NKC AMS AMS 01 05 30.0
comp=Z,600nm,16.2s
NKC Novy Kostel 58.99 39 *e*P **P 00 45 26.1 +0.5**
NKC MLR MLR
comp=Z,600nm,16.2s
PLCA Paso Flores 58.99 203 P **P 00 45 25.5 -0.2**
comp=Z,3.5nm,0.9s,baz=46,slow=11,SNR=3.8
PLCA LR LR 01 12 36.4
comp=Z,688nm,19.5s,baz=32,slow=38
PLCA Paso Flores 58.99 203 *e*P **P 00 45 26.2 +0.4**
PLCA pmax pmax
comp=Z,4.0nm,0.9s
ISCO Idaho Springs 59.01 308 P **P 00 45 26.3 0.0**
baz=98,SNR=21
ISCO Idaho Springs 59.01 308 *e*P **P 00 45 27.3 +0.9**
comp=Z,74nm,1.7s
ISCO Idaho Springs 59.01 308 *e*P **P 00 45 27.3 +0.9**
ISCO pmax pmax
comp=Z,74nm,1.7s
CRNS Crni Vrh 59.07 44 *i* P **P 00 45 26.8 +0.4**
TASL Snake Pit, Alb 59.12 303 P **P 00 45 26.5 -0.6**
baz=95,SNR=8.0
ANMO Albuquerque 59.12 303 P **P 00 45 27.4 +0.3**
comp=Z,2.8nm,0.8s,baz=97,slow=7.5,SNR=9.4
ANMO LR LR 01 08 14.2
comp=Z,1μm,21.4s,baz=94,slow=33
ANMO Albuquerque 59.12 303 P **P 00 45 27.0 -0.1**
baz=95
ANMO Albuquerque 59.12 303 *e*P **P 00 45 27.9 +0.9**
comp=Z,19nm,1.8s
ANMO Albuquerque 59.12 303⇑*i*P **P 00 45 28.0 +0.9**
ANMO *i* *PP **pP 00 45 31.2 -0.7**
ANMO *i* *SP **sP 00 45 32.4 -1.3**
ANMO *i* 00 46 16.6
ANMO pmax pmax
comp=Z,4.0nm,1.0s
TASM ASL Pad, Albuq 59.12 303 P **P 00 45 27.0 -0.1**
baz=95,SNR=5.2
SUMG Summit 59.14 2 *i* P **P 00 45 26.4 -0.4**
comp=Z,16nm,1.0s
SUMG Summit 59.14 2 *e*P **P 00 45 26.8 0.0**
comp=Z,24nm,1.5s
SUMG Summit 59.14 2 *e*P **P 00 45 26.8 0.0**
SUMG pmax pmax
comp=Z,24nm,1.5s
LPM Los Pinos Moun 59.22 302 *e*P **P 00 45 29.4 +1.7**
LJU Ljubljana 59.24 44 *i* P **P 00 45 28.5 +1.0**
OBKA Obir 59.37 44 *i* P **P 00 45 29.6 +1.2**
comp=Z,45nm,1.8s,SNR=6.4
GEA0 GERESS Array S 59.38 41 *e*P **P 00 45 27.7 -0.8**
KHC Kasperske Hory 59.38 41 *e*P **P 00 45 28.2 -0.2**
KHC *e*S **S 00 53 39.0 +2.2**
KHC AMS AMS 01 06 10.0
comp=Z,500nm,18.2s
KHC Kasperske Hory 59.38 41 *e*P **P 00 45 29.4 +1.0**
comp=Z,3.8nm,1.0s
KHC Kasperske Hory 59.38 41 *e*P **P 00 45 29.4 +1.0**
KHC pmax pmax
comp=Z,4.0nm,1.0s
GEC2 GERESS Array S 59.38 41 *e*P **P 00 45 29.2 +0.7**
comp=Z,34nm,1.8s
GEC2 GERESS Array S 59.38 41 *e*P **P 00 45 29.2 +0.7**
GEC2 pmax pmax
comp=Z,34nm,1.8s
GERES GERESS Array B 59.38 41 P **P 00 45 28.2 -0.3**
comp=Z,1.2nm,0.7s,baz=242,slow=7.1,SNR=9.6
GERES LR LR 01 07 09.2
comp=Z,528nm,21.9s,baz=257,slow=32
N23A Red Feather La 59.42 310 P **P 00 45 29.5 +0.4**
baz=99
N23A Red Feather La 59.42 310 *e*P **P 00 45 30.7 +1.5**
comp=Z,51nm,1.6s
MOA Molln 59.50 42 *i* P **P 00 45 30.0 +0.8**
comp=Z,19nm,1.6s,SNR=8.1
LAZ Ladron 59.64 302 *e*P **P 00 45 31.3 +0.7**
CLL Collm 59.64 38⇓*i*P **P 00 45 29.9 -0.2**
comp=Z,28nm,1.5s
CLL *e* 00 45 39.0
CLL *e* 00 45 53.0
CLL *e*SS **S 00 53 44.0 +4.0**
CLL *e*SSS SSS 01 00 16.0
CLL LmH 01 06 00.0
comp=N,300nm,20.8s
CLL LmH 01 06 00.0
comp=E,600nm,21.6s
CLL Collm 59.64 38 *e*P **P 00 45 31.4 +1.3**
comp=E,12nm,1.1s
CLL Collm 59.64 38 *e*P **P 00 45 31.4 +1.3**
CLL pmax pmax
comp=Z,12nm,1.1s
S22A 4UR Ranch, Cre 59.69 306 P **P 00 45 31.4 +0.3**
baz=96,SNR=18
S22A 4UR Ranch, Cre 59.69 306 *e*P **P 00 45 31.9 +0.9**
comp=Z,22nm,1.1s
SOKA Soboth 59.73 44 *i* P **P 00 45 31.7 +0.8**
comp=Z,13nm,1.9s
SMCO Snowmass 59.97 308 *e*P **P 00 45 34.6 +1.5**
comp=Z,50nm,1.8s
121A Cookes Peak, D 60.07 300 P **P 00 45 33.9 +0.3**
baz=93,SNR=9.4
BRG Berggiesshubel 60.09 39 *e*P **P 00 45 34.1 +0.9**
BRG S **S 00 53 54.0 +8.3**
BRG pmax pmax
comp=Z,65nm,2.1s
BRG MLR MLR
comp=N,301nm,13.1s
BRG MLR MLR
comp=E,774nm,17.9s
BRG MLR MLR
comp=Z,996nm,17.3s
BRG Berggiesshubel 60.09 39 *e*P **P 00 45 34.1 +0.9**
BRG S **S 00 53 54.0 +8.3**
BRG pmax pmax
comp=Z,65nm,2.1s
BRG MLR MLR
comp=N,301nm,13.1s
BRG MLR MLR
comp=E,774nm,17.9s
BRG MLR MLR
comp=Z,996nm,17.3s
K22A Casper 60.13 312 P **P 00 45 33.7 -0.1**
baz=99
K22A Casper 60.13 312 *e*P **P 00 45 35.5 +1.7**
comp=Z,40nm,1.9s
ARSA Arzberg 60.18 43 *i* P **P 00 45 34.7 +0.8**
comp=Z,37nm,2.0s,SNR=10
PRU Pruhonice 60.22 40 *e*P **P 00 45 34.3 +0.2**
PRU *ex* x 00 45 43.3
PRU *e*S **S 00 53 50.0 +2.6**
PRU AMS AMS 01 06 30.0
comp=Z,600nm,21.4s
PRU Pruhonice 60.22 40 *e*P **P 00 45 34.3 +0.2**
PRU *e* 00 45 43.3
PRU *e*S **S 00 53 50.0 +2.6**
PRU MLR MLR
comp=Z,600nm,21.4s
GOPC GO Pecny, Ondr 60.35 40 *e*S **S 00 53 52.3 +3.1**
GOPC AMS AMS 01 06 30.0
comp=Z,600nm,22.3s
PVCC Panska Ves 60.38 39 AMS AMS 01 06 50.0
comp=Z,500nm,22.8s
CONA Conrad Observa 60.56 42 *i* P **P 00 45 36.3 -0.3**
comp=Z,54nm,1.9s,SNR=17
KONO Kongsberg 60.85 28⇓*i*P **P 00 45 38.5 +0.3**
KONO pmax pmax
comp=Z,7.0nm,1.1s
BEHE Becsehely 60.86 44⇑*e*P **P 00 45 39.6 +1.1**
SOP Sopron 60.96 43⇓*e*P **P 00 45 38.7 -0.5**
SOP Sopron 60.96 43 P **P 00 45 40.3 +1.1**
SOP pmax pmax
comp=Z,27nm,1.9s
MVCO Mesa Verde 60.96 305 P **P 00 45 39.4 -0.3**
baz=95
MVCO Mesa Verde 60.96 305 *e*P **P 00 45 41.4 +1.6**
comp=Z,58nm,1.8s
PV15 Paradox Valley 61.05 306 *e*P **P 00 45 42.2 +1.9**
comp=Z,23nm,1.0s
O20A White River Ci 61.06 308 P **P 00 45 40.2 -0.1**
baz=97
O20A White River Ci 61.06 308 *e*P **P 00 45 40.6 +0.3**
comp=Z,21nm,1.4s
PV01 Paradox Valley 61.10 306 *e*P **P 00 45 41.7 +1.0**
comp=Z,22nm,1.1s
KRUC Moravsky 61.16 41 *e*P **P 00 45 40.4 -0.1**
PV07 Paradox Valley 61.19 307 *e*P **P 00 45 41.5 +0.3**
comp=Z,14nm,1.5s
PV02 Paradox Valley 61.24 306 *e*P **P 00 45 42.5 +0.9**
comp=Z,26nm,1.2s
UPC Upice 61.26 40 *e*P **P 00 45 41.5 +0.3**
UPC AMS AMS 01 07 00.0
comp=Z,500nm,22.1s
UPC Upice 61.26 40 *e*P **P 00 45 41.5 +0.3**
UPC MLR MLR
comp=Z,500nm,22.1s
319A Douglas 61.30 298 *e*P **P 00 45 43.8 +1.9**
comp=Z,12nm,0.8s
PV03 Paradox Valley 61.33 306 *e*P **P 00 45 43.4 +1.2**
comp=Z,22nm,1.2s
VRAC Vranov 61.34 41 *e*P **P 00 45 41.8 0.0**
DPC Dobruska-Polom 61.41 40 *e*P **P 00 45 42.7 +0.4**
DPC *ex* x 00 45 51.6
DPC *e*S **S 00 54 10.9 +8.1**
DPC AMS AMS 01 07 10.0
comp=Z,500nm,18.9s
DPC Dobruska-Polom 61.41 40 *e*P **P 00 45 42.7 +0.4**
DPC *e* 00 45 51.6
DPC *e*S **S 00 54 10.9 +8.1**
DPC MLR MLR
comp=Z,500nm,18.9s
ZST Bratislava 61.43 42 *e*P **P 00 45 41.5 -0.9**
ZST pmax pmax
comp=Z,16nm,2.2s
ZST Bratislava 61.43 42 *e*P **P 00 45 41.5 -0.9**
PV10 Paradox Valley 61.49 306 *e*P **P 00 45 44.4 +1.1**
comp=Z,28nm,1.2s
PV05 Paradox Valley 61.51 306 *e*P **P 00 45 44.6 +1.1**
comp=Z,27nm,1.2s
KSP Ksiaz 61.52 39 *e*P **P 00 45 43.5 +0.6**
KSP Ksiaz 61.52 39 *e*P **P 00 45 43.5 +0.6**
PV09 Paradox Valley 61.58 307 *e*P **P 00 45 45.8 +1.8**
MODS Modra-Piesok 61.58 42 *e*P **P 00 45 41.8 -1.6**
MODS pmax pmax
comp=Z,111nm,1.9s
MODS Modra-Piesok 61.58 42 *e*P **P 00 45 41.8 -1.6**
KRLC Kraliky 61.64 40 *e*P **P 00 45 43.1 -0.7**
KRLC Kraliky 61.64 40 *e*P **P 00 45 43.1 -0.7**
W18A Petrified Fore 61.82 303 P **P 00 45 45.2 -0.3**
baz=93
W18A Petrified Fore 61.82 303 *e*P **P 00 45 47.5 +2.0**
comp=Z,20nm,1.3s
X18A Snowflake 61.97 302 *e*P **P 00 45 48.1 +1.6**
comp=Z,22nm,1.3s
MORC Moravsky Berou 62.05 41⇑*i*P **P 00 45 48.2 +1.6**
MORC Moravsky Berou 62.05 41 *e*P **P 00 45 48.1 +1.5**
comp=Z,169nm,1.7s
MORC Moravsky Berou 62.05 41⇑P **P 00 45 48.2 +1.6**
MORC Moravsky Berou 62.05 41 *e*P **P 00 45 46.9 +0.3**
MORH M^ŧr^igy, Hung 62.09 45⇓*e*P **P 00 45 46.7 -0.1**
NB2 NORSAR Subarra 62.16 27 P **P 00 45 46.8 -0.3**
comp=Z,57nm,2.0s,baz=247,slow=6.9
NB2 NORSAR Subarra 62.16 27 P **P 00 45 46.8 -0.3**
baz=247,slow=6.9
NOA NORSAR Array B 62.16 27 P **P 00 45 45.9 -1.2**
comp=Z,3.8nm,1.0s,baz=246,slow=6.7,SNR=5.4
NOA LR LR 01 07 14.3
comp=Z,434nm,21.7s,baz=240,slow=31
NOA NORSAR Array B 62.16 27 *e*P **P 00 45 46.8 -0.3**
NOA pmax pmax
comp=Z,4.0nm,1.0s
LPIG La Paz 62.33 290 LR LR 01 12 12.2
comp=Z,160nm,21.6s,baz=42,slow=35
BW06 Boulder Array 62.36 311 P **P 00 45 48.3 -0.8**
baz=97
BW06 Boulder Array 62.36 311 *e*P **P 00 45 48.2 -0.8**
comp=Z,28nm,1.9s
PD31 Pinedale Array 62.36 311 *e*P **P 00 45 49.7 +0.7**
PDAR Pinedale Array 62.36 311 P **P 00 45 48.2 -0.8**
comp=Z,2.1nm,0.9s,baz=144,slow=5.3,SNR=12
PDAR LR LR 01 10 21.8
comp=Z,385nm,21.0s,baz=116,slow=34
PDAR Pinedale Array 62.36 311 *e*P **P 00 45 47.3 -1.7**
OKC Ostrava-Krasne 62.45 41 *e*P **P 00 45 49.9 +0.7**
OKC *ex* x 00 45 56.7
OKC *e*S **S 00 54 20.4 +4.7**
OKC Ostrava-Krasne 62.45 41 *e*P **P 00 45 49.9 +0.7**
OKC *e* 00 45 56.7
OKC *e*S **S 00 54 20.4 +4.7**
RLMT Red Lodge 62.47 314 P **P 00 45 49.5 -0.2**
baz=99
RLMT Red Lodge 62.47 314 *e*P **P 00 45 50.7 +1.0**
comp=Z,61nm,2.0s
RAC Raciborz 62.53 40 *e*P **P 00 45 49.9 +0.2**
P18A Preston Nutter 62.54 308 *e*P **P 00 45 51.7 +1.3**
comp=Z,50nm,1.7s
BUD Budapest 62.56 43⇑*e*P **P 00 45 50.8 +0.8**
BUD Budapest 62.56 43 P **P 00 45 52.2 +2.2**
TUC Tucson 62.60 299 P **P 00 45 50.7 +0.1**
baz=91
TUC Tucson 62.60 299 *e*P **P 00 45 50.9 +0.3**
comp=Z,9.8nm,0.9s
TUC Tucson 62.60 299 *e*P **P 00 45 50.9 +0.3**
TUC pmax pmax
comp=Z,10.0nm,0.9s
VYHS Vyhne 62.62 42 *e*P **P 00 45 50.4 0.0**
VYHS pmax pmax
comp=Z,42nm,2.0s
VYHS Vyhne 62.62 42 *e*P **P 00 45 50.4 0.0**
SRU San Rafael Swe 62.71 307 *e*P **P 00 45 52.9 +1.5**
comp=Z,17nm,1.3s
SRU San Rafael Swe 62.71 307 *e*P **P 00 45 52.9 +1.5**
SRU pmax pmax
comp=Z,17nm,1.3s
HFS Hagfors 62.94 29 P **P 00 45 52.1 -0.1**
comp=Z,10nm,0.8s,baz=212,slow=5.1,SNR=16
HFS LR LR 01 08 59.6
comp=Z,438nm,19.2s,baz=248,slow=32
WUAZ Wupatki 63.17 303 P **P 00 45 54.1 -0.4**
baz=92
WUAZ Wupatki 63.17 303 *e*P **P 00 45 56.5 +2.0**
comp=Z,23nm,1.2s
X16A Lo Mia Camp, P 63.19 302 *e*P **P 00 45 56.6 +1.9**
comp=Z,16nm,1.4s
PSZ Piszkesteto 63.22 43⇑*i*P **P 00 45 56.3 +1.9**
PSZ Piszkesteto 63.22 43⇓*e*P **P 00 45 54.3 -0.1**
PSZ Piszkesteto 63.22 43 *e*P **P 00 45 55.9 +1.5**
comp=Z,46nm,1.8s
PSZ Piszkesteto 63.22 43 P **P 00 45 56.4 +2.0**
LOHW Long Hollow 63.22 312 *e*P **P 00 45 55.2 +0.5**
comp=Z,25nm,1.8s
EGMT Eagleton 63.27 317 P **P 00 45 54.8 0.0**
baz=100
SNOW Snow King Moun 63.31 312 *e*P **P 00 45 55.7 +0.3**
comp=Z,6.8nm,0.6s
MOOW Moose Ponds 63.34 312 *e*P **P 00 45 55.8 +0.3**
comp=Z,11nm,1.4s
REDW Red Top Meadow 63.37 312 *e*P **P 00 45 56.2 +0.4**
comp=Z,33nm,1.7s
YPP Pitchstone Pla 63.44 313 *e*P **P 00 45 54.9 -1.4**
comp=Z,14nm,1.4s
TPAW Teton Pass 63.46 312 *e*P **P 00 45 56.1 -0.3**
comp=Z,35nm,1.6s
AHID Auburn Hatcher 63.49 311 *e*P **P 00 45 56.9 +0.4**
comp=Z,13nm,1.1s
IMW Indian Meadow 63.50 312 *e*P **P 00 45 57.5 +0.8**
comp=Z,34nm,1.7s
FXWY Fox Creek 63.53 312 *e*P **P 00 45 56.2 -0.6**
comp=Z,13nm,1.5s
ITM Ithomi 63.54 55 *e*P **P 00 45 57.1 +0.4**
comp=Z,84nm,1.8s
YHH Holmes Hill 63.54 313 *e*P **P 00 45 59.3 +2.4**
comp=Z,34nm,1.8s
JLU Jordanelle 63.54 309 *e*P **P 00 45 58.2 +1.2**
comp=Z,40nm,1.7s
OJC Ojcow 63.56 40 *e*P **P 00 45 57.0 +0.4**
OJC Ojcow 63.56 40 *e*P **P 00 45 58.5 +1.9**
comp=Z,69nm,1.6s
OJC Ojcow 63.56 40 *e*P **P 00 45 58.5 +1.9**
OJC pmax pmax
comp=Z,69nm,1.6s
MPU Maple Canyon 63.64 308 *e*P **P 00 45 58.0 +0.5**
comp=Z,9.0nm,1.1s
KECS Kecovo 63.70 42 *e*P P 00 45 46.3 -11
KECS Kecovo 63.70 42 *e* P 00 45 46.3 -11
HWUT Hardware Ranch 63.72 310 *e*P **P 00 45 58.9 +0.9**
comp=Z,28nm,1.4s
NIE Niedzica 63.74 41 *e*P **P 00 45 59.0 +1.2**
NIE Niedzica 63.74 41 *e*P **P 00 45 59.0 +1.2**
MTPU Mount Pierson 63.94 306 *e*P **P 00 46 00.6 +0.8**
comp=Z,28nm,1.4s
U15A North Rim 63.95 304 *e*P **P 00 46 00.5 +0.7**
comp=Z,24nm,1.2s
MSU Marysvale 63.96 306 *e*P **P 00 46 03.4 +3.7**
MSU Marysvale 63.96 306 *e*P **P 00 46 03.4 +3.7**
MDVR Moldovita 64.02 47⇑*i*P **P 00 45 58.1 -1.6**
BZS Buzias 64.05 46⇑*i*P **P 00 46 00.9 +1.0**
BZS Buzias 64.05 46 P **P 00 46 00.9 +1.0**
BOZ Bozeman (W) 64.19 314 P **P 00 46 01.0 0.0**
baz=97
BOZ Bozeman (W) 64.19 314 *e*P **P 00 46 01.6 +0.6**
comp=Z,8.8nm,1.4s
BOZ Bozeman (W) 64.19 314 *e*P **P 00 46 01.6 +0.6**
BOZ pmax pmax
comp=Z,9.0nm,1.4s
214A Organ Pipe Nat 64.31 299 P **P 00 46 01.6 -0.3**
baz=90
KNB Kanab 64.40 305 *e*P **P 00 46 04.2 +1.6**
comp=Z,10nm,1.0s
KNB Kanab 64.40 305 *e*P **P 00 46 04.2 +1.6**
KNB pmax pmax
comp=Z,11nm,1.0s
CRVS Cervenica-Dubn 64.41 42 *e*P **P 00 46 02.9 +0.7**
CRVS pmax pmax
comp=Z,87nm,2.0s
CRVS Cervenica-Dubn 64.41 42 *e*P **P 00 46 02.9 +0.7**
LTVH L~`tav~`rtes, 64.47 44⇓*e*P **P 00 46 02.8 +0.2**
Y14A Wickenburg 64.48 301 *e*P **P 00 46 04.4 +1.4**
comp=Z,21nm,1.6s
HERR Herculane 64.52 47⇑*i*P **P 00 46 02.9 -0.1**
DUG Dugway, Tooele 64.55 308 P **P 00 46 03.5 0.0**
baz=94
DUG Dugway, Tooele 64.55 308 *e*P **P 00 46 04.8 +1.3**
comp=Z,34nm,1.7s
DUG Dugway, Tooele 64.55 308 *e*P **P 00 46 04.8 +1.3**
DUG pmax pmax
comp=Z,34nm,1.7s
KLNR Kaliningrad 64.71 36*c i*P **P 00 46 04.0 0.0**
KLNR pmax pmax
comp=Z,17nm,0.9s
DAG Danmarks Havn 64.71 6 *i* P **P 00 46 03.4 -0.3**
comp=Z,16nm,1.4s
DAG Danmarks Havn 64.71 6 *i* P **P 00 46 03.4 -0.3**
DAG pmax pmax
comp=Z,16nm,1.4s
BGU Big Grassy Mou 64.77 309 *e*P **P 00 46 05.0 +0.1**
comp=Z,41nm,1.3s
CCUT Cedar City 64.85 305 *e*P **P 00 46 06.4 +0.8**
comp=Z,27nm,1.3s
UZH Uzhgorod 64.91 42 *e*P **P 00 46 04.5 -0.9**
UZH *e* 00 46 10.7
UZH *e* 00 46 38.1
DRGR 64.95 45⇑*i*P **P 00 46 06.7 +0.9**
DRGR 64.95 45 P **P 00 46 06.7 +0.9**
W13A Hualapai Mount 65.22 303 *e*P **P 00 46 08.7 +0.7**
comp=Z,17nm,1.4s
PSUT Pine Spring 65.28 306 *e*P **P 00 46 10.4 +2.1**
comp=Z,16nm,0.9s
KWP Kalwaria Pacla 65.32 41 *e*P **P 00 46 09.1 +0.9**
KWP Kalwaria Pacla 65.32 41 *e*P **P 00 46 09.4 +1.3**
comp=Z,2μm,2.0s
KWP Kalwaria Pacla 65.32 41 *e*P **P 00 46 09.4 +1.3**
PDMCI Parker Dam,Lak 65.42 302 P **P 00 46 09.3 +0.2**
baz=90
LOT Lotru 65.53 46⇓*i*P **P 00 46 07.6 -2.1**
CJR Cluj-Napoca 65.55 45⇑*i*P **P 00 46 10.9 +1.2**
CJR Cluj-Napoca 65.55 45 P **P 00 46 10.9 +1.2**
IDI Anoyia 65.89 57 P **P 00 46 13.4 +1.3**
comp=Z,6.3nm,0.8s,baz=258,slow=11,SNR=4.9
IDI LR LR 01 13 09.8
comp=Z,557nm,21.7s,baz=286,slow=34
IDI Anoyia 65.89 57⇑*i*P **P 00 46 15.2 +3.1**
HLID Hailey 65.97 312 P **P 00 46 12.4 -0.3**
baz=94
HLID Hailey 65.97 312 *e*P **P 00 46 13.5 +0.8**
comp=Z,11nm,1.4s
JTMT Jette 66.25 316 *e*P **P 00 46 14.9 +0.6**
comp=Z,9.4nm,0.9s
IRM Iron Mountain 66.26 302 P **P 00 46 14.8 +0.3**
baz=89
SUW Suwalki 66.30 37 *e*P **P 00 46 13.8 -0.5**
SUW Suwalki 66.30 37 *e*P **P 00 46 14.4 +0.1**
comp=Z,38nm,1.1s
SUW Suwalki 66.30 37 *e*P **P 00 46 14.4 +0.1**
SUW pmax pmax
comp=Z,38nm,1.1s
ELK Elko 66.43 309 P **P 00 46 17.0 +1.3**
comp=Z,7.2nm,0.9s,baz=131,slow=6.0,SNR=11
ELK Elko 66.43 309 P **P 00 46 17.0 +1.3**
VOIR 66.43 46⇑*i*P P 00 46 10.1 -5.4
VOIR 66.43 46⇑P P 00 46 10.1 -5.4
R11A Troy Canyon, C 66.63 306 P **P 00 46 17.0 0.0**
baz=91
R11A Troy Canyon, C 66.63 306 *e*P **P 00 46 19.8 +2.8**
comp=Z,8.2nm,0.6s
GMRC Granite Mounta 66.68 302 P **P 00 46 16.7 -0.6**
baz=89,SNR=9.5
BUR08 Bucovina Ar. S 66.73 44 *e*P **P 00 46 18.8 +1.5**
BUR04 Bucovina Ar. S 66.73 44 *e*P **P 00 46 17.8 +0.4**
BURAR Bucovina Array 66.73 44⇑*i*P **P 00 46 18.7 +1.3**
BURAR Bucovina Array 66.73 44⇑P **P 00 46 18.7 +1.3**
ALN Alexandroupoli 66.90 51 *e*P **P 00 46 20.1 +1.7**
comp=Z,27nm,1.7s
ALN Alexandroupoli 66.90 51 *e*P **P 00 46 20.1 +1.7**
ALN pmax pmax
comp=Z,27nm,1.7s
MFID Camas Ranch 66.99 312 *e*P **P 00 46 20.2 +1.1**
comp=Z,4.5nm,0.7s
RES Resolute Bay 67.02 347 P **P 00 46 18.5 -0.1**
comp=Z,1.4nm,0.8s,baz=93,slow=4.3,SNR=5.7
RES Resolute Bay 67.02 347 *e*P **P 00 46 19.4 +0.8**
comp=Z,28nm,2.0s
RES Resolute Bay 67.02 347 *e*P **P 00 46 19.4 +0.8**
RES pmax pmax
comp=Z,28nm,2.0s
MLR Muntele Rosu 67.06 46 P **P 00 46 19.6 +0.1**
comp=Z,2.0nm,0.8s,baz=278,slow=6.5
MLR LR LR 01 14 58.0
comp=Z,136nm,19.0s,baz=269,slow=35
MLR Muntele Rosu 67.06 46⇓*i*P **P 00 46 20.1 +0.5**
MLR Muntele Rosu 67.06 46 *e*P **P 00 46 19.6 +0.1**
comp=Z,190nm,1.9s
MLR Muntele Rosu 67.06 46⇓P **P 00 46 20.1 +0.5**
MONP2 Monument Peak 67.35 300 P **P 00 46 22.1 +0.4**

baz=88
GSC Goldstone, Bar 67.61 303 P P 00 46 23.3 +0.2
baz=89
GSC Goldstone, Bar 67.61 303 eP P 00 46 24.0 +0.8
comp=Z,15nm,1.1s
GSC Goldstone, Bar 67.61 303 eP P 00 46 24.0 +0.8
GSC pmax pmax
comp=Z,15nm,1.1s
TESR Tescani 67.62 45⇑ iP P 00 46 20.2 -2.7
BMN Battle Mountai 67.93 308 eP P 00 46 26.2 +1.0
comp=Z,14nm,1.4s
BMN Battle Mountai 67.93 308 eP P 00 46 26.2 +1.0
BMN pmax pmax
comp=Z,14nm,1.4s
MURC Murrieta 67.97 301 P P 00 46 25.2 -0.2
baz=88
NEW Newport 68.19 317 P P 00 46 25.8 -0.7
comp=Z,6.9nm,0.9s,baz=105,slow=7.8,SNR=12
NEW Newport 68.19 317 P P 00 46 25.2 -1.4
baz=94,SNR=7.2
NEW Newport 68.19 317 eP P 00 46 26.7 +0.2
comp=Z,14nm,1.1s
NEW Newport 68.19 317 eP P 00 46 26.7 +0.2
NEW pmax pmax
comp=Z,14nm,1.1s
ISAL Salakas 68.22 35 eP P 00 46 26.9 +0.4
ISAL IAmb IAmb 00 46 28.1
comp=Z,6.4nm,1.0s
DAC Darwin (Calif) 68.23 304 eP P 00 46 29.0 +1.8
comp=Z,7.7nm,1.1s
DAC Darwin (Calif) 68.23 304 eP P 00 46 29.0 +1.8
DAC pmax pmax
comp=Z,8.0nm,1.1s
IIGN Ignalina 68.25 36 eP P 00 46 27.0 +0.4
IIGN IAmb IAmb 00 46 28.3
comp=Z,9.0nm,1.1s
IZAR Zarasai 68.32 35 eP P 00 46 27.5 +0.4
IZAR IAmb IAmb 00 46 28.6
comp=Z,7.4nm,1.1s
BFSC Mount Baldy Ra 68.34 302 P P 00 46 28.2 +0.4
baz=88
IDID Didziasalis 68.54 36 eP P 00 46 28.8 +0.3
IDID IAmb IAmb 00 46 30.1
comp=Z,6.7nm,0.9s
EDW2 Edwards Air Fo 68.59 302 P P 00 46 29.8 +0.5
baz=88
YKA Yellowknife Ar 68.74 332 P P 00 46 27.9 -1.7
comp=Z,1.7nm,0.8s,baz=101,slow=6.7,SNR=16
YKA LR LR 01 14 13.4
comp=Z,35nm,19.7s,baz=96,slow=34
YKW3 Yellowknife Ar 68.76 332 eP P 00 46 29.2 -0.4
comp=Z,9.0nm,1.2s
NVAR Mina Array Bea 68.77 306 LR LR 01 17 54.6
comp=Z,75nm,18.1s,baz=267,slow=37
ISA Isabella, Lake 68.96 303 P P 00 46 32.2 +0.6
baz=88
ISA Isabella, Lake 68.96 303 eP P 00 46 33.8 +2.2
comp=Z,22nm,1.3s
ISA Isabella, Lake 68.96 303 eP P 00 46 33.8 +2.2
ISA pmax pmax
comp=Z,22nm,1.3s
VSU Vasula 68.97 32c iP P 00 46 30.7 -0.4
VSU pmax pmax
comp=Z,40nm,1.0s
WVOR Wild Horse Val 69.02 310 eP P 00 46 35.7 +3.8
comp=Z,67nm,1.8s
WVOR Wild Horse Val 69.02 310 eP P 00 46 35.7 +3.8
WVOR pmax pmax
comp=Z,67nm,1.8s
FINES FINESS Array B 69.13 29 P P 00 46 31.9 -0.2
comp=Z,4.4nm,0.7s,baz=288,slow=1.8,SNR=15
FINES LR LR 01 11 44.0
comp=Z,492nm,21.7s,baz=259,slow=32
FIA1 FINESS Array S 69.13 29 eP P 00 46 32.7 +0.7
KIS Kishinev 69.14 45⇑ iP P 00 46 31.0 -1.4
comp=Z,500nm,2.0s
KIS eS S 00 55 40.0 +2.5
KIS LRM MLR 01 15 30.0
comp=Z,600nm,20.0s
KIS Kishinev 69.14 45c iP P 00 46 31.0 -1.4
KIS e 00 50 50.0
KIS eS S 00 55 40.0 +2.5
KIS pmax pmax
comp=Z,500nm,2.0s
D08A Wollman Farm, 69.34 315 eP P 00 46 34.2 +0.5
comp=Z,32nm,1.7s
AK11 Malin Array Si 69.56 41 eP P 00 46 34.3 -0.6
AKASG Malin Array Be 69.60 41 P P 00 46 34.3 -0.8
comp=Z,3.1nm,0.6s,baz=272,slow=5.1,SNR=24
AKASG LR LR 01 15 29.8
comp=Z,267nm,19.2s,baz=270,slow=35
AKBB Malin Array Si 69.60 41 eP P 00 46 34.3 -0.8
comp=Z,8.3nm,0.7s
AKBB Malin Array Si 69.60 41 eP P 00 46 34.3 -0.8
AKBB pmax pmax
comp=Z,8.0nm,0.7s
TSUM Tsumeb 69.60 117 eP P 00 46 36.3 +0.4
comp=Z,42nm,1.6s
HAWA Hanford 69.74 315 P P 00 46 35.7 -0.4
comp=Z,1.7nm,0.4s
MOD Modoc Plateau 70.26 310 eP P 00 46 41.1 +1.5
comp=Z,34nm,1.6s
ISP Isparta 70.38 54⇑ eP P 00 46 40.6 +0.2
ISP pmax pmax
comp=Z,6.0nm,0.7s
G06A Carlson Farm, 70.49 313 eP P 00 46 42.3 +1.5
comp=Z,114nm,1.8s
ARCES ARCESS Array B 70.59 21 P P 00 46 40.3 -0.6
comp=Z,4.7nm,0.7s,baz=262,slow=6.0,SNR=13
ARCES LR LR 01 10 53.4
comp=Z,411nm,21.9s,baz=242,slow=30
K05A Summer Lake 70.69 311 eP P 00 46 44.3 +2.0
comp=Z,60nm,1.3s
AFDM Forest Hills D 70.84 307 eP P 00 46 44.3 +1.3
comp=Z,7.1nm,1.1s
G05D Wamic, OR 70.97 313 P P 00 46 44.2 +0.5
baz=90
I05D Terrebonne, OR 70.99 312 P P 00 46 44.4 +0.4
baz=90
SPITS Spitsbergen Ar 71.10 11 LR LR 01 10 28.3
comp=Z,557nm,19.3s,baz=260,slow=30
M04C Macdoel 71.41 310 P P 00 46 46.2 -0.4
baz=88,SNR=7.0
I04A Tendick Farm, 71.78 312 P P 00 46 48.8 +0.1
baz=89
YBH Yreka Blue Hor 72.06 310 LR LR 01 15 37.1
comp=Z,289nm,21.8s,baz=100,slow=34
G03D McMinnville, O 72.35 313 P P 00 46 52.0 0.0
baz=88
BR131 Keskin Array S 72.72 52 eP P 00 46 55.4 +0.8
BRTR Keskin Array B 72.72 52 P P 00 46 54.4 -0.1
comp=Z,1.3nm,0.6s,baz=263,slow=5.8,SNR=12
BRTR LR LR 01 18 31.6
comp=Z,153nm,19.4s,baz=234,slow=36
BRTR Keskin Array B 72.72 52 eP P 00 46 55.3 +0.8
BRTR pmax pmax
comp=Z,1.0nm,0.6s
SIM Simferopol' 72.83 47 P P 00 46 51.9 -2.9
SIM eS S 00 56 14.0 -6.5
SIM MLR MLR
comp=Z,370nm,16.7s
APA Apatity 73.12 23⇓ iP P 00 46 54.3 -1.8
APA i S S 00 56 13.0 -10
APA pmax pmax
comp=Z,9.0nm,0.9s
LVZ Lovozero 73.62 23 eP P 00 46 59.3 +0.2
LVZ pmax pmax
comp=Z,25nm,1.4s
MMAI Mount Meron Ar 74.71 59 P P 00 47 06.7 +0.5
comp=Z,0.5nm,0.5s,baz=243,slow=44,SNR=3.8
MMAI LR LR 01 20 47.0
comp=Z,213nm,21.3s,baz=280,slow=36
MOS Moscow 74.73 36 eP P 00 47 05.0 -0.8
MOS pmax pmax
comp=Z,66nm,1.4s
MOS MLR MLR
comp=E,500nm,18.0s
ANN Anapa 75.19 47 eP P 00 47 08.3 -0.3
ANN e*PP pP 00 47 12.0 -1.6
ANN eS S 00 56 49.0 +2.0
ANN pmax pmax
comp=Z,50nm,1.8s
ANN MLR MLR
comp=Z,319nm,19.0s
ANN MLR MLR
comp=N,362nm,19.0s
ANN MLR MLR
comp=E,62nm,19.0s
KLMR Klimovskoe 75.58 30 eP P 00 47 08.9 -1.6
KLMR pmax pmax
comp=Z,96nm,2.0s
KLMR Klimovskoe 75.58 30 eP P 00 47 08.9 -1.6
KLMR AMP 00 47 12.6
comp=Z,96nm,2.0s
VSR Storozhevoye 75.88 40 eP P 00 47 12.0 -0.5
VSR pmax pmax
comp=Z,30nm,1.1s
DLBC Dease Lake 76.04 327 P P 00 47 13.3 -0.1
comp=Z,5.5nm,0.8s,baz=72,slow=6.3,SNR=12
DLBC Dease Lake 76.04 327 eP P 00 47 13.9 +0.6
comp=Z,25nm,1.3s
ASF Jabal al Asfar 76.06 60 LR LR 01 23 58.2
comp=Z,177nm,18.9s,baz=214,slow=38
INK Inuvik 77.02 338 eP P 00 47 17.8 -0.8
comp=Z,12nm,1.0s
INK Inuvik 77.02 338 eP P 00 47 17.8 -0.8
INK pmax pmax
comp=Z,12nm,1.0s
LSZ Lusaka 77.75 109 eP P 00 47 25.2 +1.4
comp=Z,24nm,1.4s
LSZ Lusaka 77.75 109 eP P 00 47 25.2 +1.4
LSZ pmax pmax
comp=Z,24nm,1.4s
WHY Whitehorse 78.31 330 eP P 00 47 25.8 -0.3
comp=Z,7.1nm,1.2s
PRGR Permogore 78.46 29⇓ iP P 00 47 26.8 +0.1
PRGR pmax pmax
comp=Z,66nm,1.0s
LBTB Lobatse 78.65 119 eP P 00 47 28.8 +0.2
comp=Z,56nm,2.0s
LBTB Lobatse 78.65 119 eP P 00 47 28.8 +0.2
LBTB pmax pmax
comp=Z,56nm,2.0s
SKAG Skagway 78.68 329 eP P 00 47 27.6 -0.4
comp=Z,12nm,0.9s
KIV Kislovodsk 79.03 47 eP P 00 47 28.2 -2.2
KIV pmax pmax
comp=Z,8.0nm,1.1s
KIV MLR MLR
comp=Z,262nm,18.0s
GOF Gofitskoye 79.12 46⇑ eP P 00 47 31.5 +0.8
KBZ Khabaz 79.21 48 LR LR 01 23 01.4
comp=Z,241nm,19.6s,baz=294,slow=36
BOSA Boshof 79.66 123 P P 00 47 33.3 -0.8
comp=Z,5.7nm,1.0s,baz=309,slow=5.0,SNR=8.0
BOSA LR LR 01 15 09.4
comp=Z,428nm,21.6s,baz=270,slow=30
BOSA Boshof 79.66 123 eP P 00 47 34.0 -0.1
comp=Z,44nm,1.5s
BOSA Boshof 79.66 123 eP P 00 47 34.0 -0.1
BOSA pmax pmax
comp=Z,44nm,1.5s
DAWY Dawson 79.90 334 eP P 00 47 34.2 -0.5
comp=Z,15nm,1.3s
GNI Garni 81.14 51 P P 00 47 43.3 +1.3
comp=Z,1.2nm,0.3s,baz=202,slow=3.7,SNR=8.1
GNI LR LR 01 22 32.4
comp=Z,194nm,21.8s,baz=266,slow=35
GNI Garni 81.14 51 eP P 00 47 42.5 +0.5
comp=Z,48nm,1.6s
NAX Nakhchivan 81.89 52 P P 00 47 45.1 -0.8
SCRK Sand Creek 81.89 334 eP P 00 47 45.9 +0.5
comp=Z,20nm,1.6s
GANJ Ganja 82.24 50 P P 00 47 47.0 -0.6
CRQM Cirque 82.29 331 eP P 00 47 48.6 +0.9
comp=Z,12nm,0.8s
MAK Makhachkala 82.65 48 eP P 00 47 44.3 -5.3
MAK eS S 00 57 59.7 -7.1
MAK pmax pmax
comp=Z,117nm,1.0s
TOLK Toolik Lake Re 82.75 339 P P 00 47 50.1 +0.4
baz=72
TOLK Toolik Lake Re 82.75 339 eP P 00 47 51.3 +1.5
comp=Z,24nm,1.5s
SEKA Sheki 82.78 49 P P 00 47 50.1 -0.3
MNGR Mingechevir, A 82.78 50 P P 00 47 49.8 -0.6
HARP HAARP 82.81 332 eP P 00 47 51.2 +1.1
comp=Z,33nm,1.2s
IL1 Eielson Array 82.90 335 eP P 00 47 49.2 -1.3
ILAR Eielson Array 82.90 335 P P 00 47 49.9 -0.6
comp=Z,10nm,0.8s,baz=70,slow=4.2,SNR=66
ILAR LR LR 01 21 19.5
comp=Z,66nm,21.8s,baz=94,slow=33
ILB Eielson Array 82.90 335 eP P 00 47 50.3 -0.2
BMRM Bremner River 82.93 331 eP P 00 47 51.3 +0.5
comp=Z,20nm,1.3s
COLA College 83.27 335 eP P 00 47 51.4 -0.9
comp=Z,26nm,0.9s
COLA College 83.27 335 eP P 00 47 51.4 -0.9
COLA pmax pmax
comp=Z,26nm,0.9s
CCB Clear Creek Bu 83.32 335 eP P 00 47 52.4 -0.2
comp=Z,21nm,1.0s
MDM Murphy Dome 83.39 335 eP P 00 47 52.9 -0.1
comp=Z,9.4nm,0.9s
KLU Klutina 83.40 332 eP P 00 47 54.1 +0.9
comp=Z,26nm,1.4s
DHY Denali Highway 83.60 333 eP P 00 47 54.5 +0.2
comp=Z,6.9nm,1.0s
SCM Sheep Creek Mo 83.95 332 eP P 00 47 57.5 +1.4
comp=Z,12nm,0.7s
SCM Sheep Creek Mo 83.95 332 eP P 00 47 57.5 +1.4
SCM pmax pmax
comp=Z,12nm,0.7s
RND Reindeer 84.14 334 eP P 00 47 57.2 +0.2
comp=Z,70nm,2.0s
RND Reindeer 84.14 334 eP P 00 47 57.2 +0.2
RND pmax pmax
comp=Z,70nm,2.0s
BWN Browne 84.15 335 eP P 00 47 57.8 +0.9
comp=Z,84nm,1.7s
MLY Manley 84.38 336 eP P 00 47 58.1 -0.1
comp=Z,12nm,1.0s
LKRN Lenkeran, Azer 84.49 52 P P 00 47 58.5 -0.7
TRF Thorofare Moun 84.73 334 eP P 00 48 00.2 +0.1
comp=Z,33nm,1.1s
BPAW Bear Paw Mtn. 84.80 335 eP P 00 47 59.8 -0.4
comp=Z,20nm,1.0s
RAYN Ar Rayn 85.07 67 eP P 00 48 02.3 -0.2
comp=Z,34nm,1.9s
RAYN Ar Rayn 85.07 67 P P 00 48 02.2 -0.2
RAYN pmax pmax
comp=Z,34nm,1.9s
IM3 Indian Mountai 85.20 337 eP P 00 48 01.3 -0.9
ATD Arta Tunnel 85.21 79 LR LR 01 24 30.2
comp=Z,974nm,21.1s,baz=284,slow=35
SUA Susitna One 85.61 332 eP P 00 48 04.8 +0.3
comp=Z,18nm,1.0s
PPLA Purkeypile 85.73 334 eP P 00 48 04.6 -0.5
comp=Z,175nm,2.0s
SKT Skwentna 85.78 333 eP P 00 48 05.0 -0.2
comp=Z,28nm,1.2s
ARU Arti 86.13 33 P P 00 48 06.8 -0.1
comp=Z,1.9nm,0.5s,baz=274,slow=2.9,SNR=10
ARU Arti 86.13 33 eP P 00 48 07.1 +0.1
comp=Z,22nm,1.3s
ARU Arti 86.13 33d iP P 00 48 07.3 +0.3
ARU 00 51 22.1
ARU S S 00 58 32.9 -8.1
ARU SS SS 01 04 15.0 -3.9
ARU pmax pmax
comp=Z,30nm,1.7s
BRLK Bradley Lake 86.27 331 eP P 00 48 09.0 +1.3
comp=Z,18nm,1.1s
VNA1 Neumayer--Stat 87.66 169 P P 00 48 14.2 +0.3
AKTO Aktyubinsk 87.72 39 P P 00 48 14.6 -0.3
comp=Z,3.5nm,0.9s,baz=289,slow=3.2,SNR=15
AKTO LR LR 01 26 15.7
comp=Z,305nm,18.0s,baz=290,slow=35
VNA3 Neumayer Olymp 87.88 169 P P 00 48 14.9 -0.2
OHAK Old Harbor 88.38 329 eP P 00 48 18.1 +0.3
comp=Z,18nm,1.0s
ABKAR Akbulak array 89.29 39 eP P 00 48 22.2 -0.1
SNAA Sanae 89.55 168 P P 00 48 22.5 -0.5
SNAA Sanae 89.55 168 P P 00 48 22.2 -0.7
comp=Z,4.6nm,0.8s,baz=306,slow=7.7,SNR=19
SNAA LR LR 01 21 07.5
comp=Z,384nm,20.4s,baz=354,slow=31
SNAA Sanae 89.55 168 eP P 00 48 22.3 -0.7
comp=Z,18nm,1.2s
SNAA Sanae 89.55 168⇑ iP P 00 48 23.2 +0.2
NRIK Noril'sk 90.89 15 P P 00 48 29.4 0.0
comp=Z,4.1nm,0.9s,baz=291,slow=3.5,SNR=8.1
NRIK LR LR 01 26 02.5
comp=Z,238nm,19.0s,baz=320,slow=33
GEYT Alibeck 91.77 50 LR LR 01 32 04.7
comp=Z,81nm,19.7s,baz=320,slow=37
BRVK Borovoye 93.69 33⇑ iP P 00 48 43.6 +0.9
BRVK pmax pmax
comp=Z,1.0nm,0.9s
BVAR Borovoye Array 93.77 33 LR LR 01 28 20.1
comp=Z,561nm,20.4s,baz=298,slow=34
TIXI Tiksi 94.92 2 eP P 00 48 47.8 -0.1
comp=Z,4.2nm,1.0s
TIXI Tiksi 94.92 2⇑ iP P 00 48 48.1 +0.2
TIXI pmax pmax
comp=Z,4.0nm,0.9s
RKT Rikitea 95.27 248 eLR LR 01 19 32.8
comp=Z,372nm,36.0s
BILL Bilibino 95.60 349 i P P 00 48 50.3 -0.8
BILL pmax pmax
comp=Z,2.0nm,0.9s
BILL MLR MLR
comp=Z,167nm,18.0s
OPO Ambohidratompo 96.16 108 LR LR 01 27 29.3
comp=Z,298nm,20.9s,baz=308,slow=32
WSAR Wadi Sarin 96.78 64 LR LR 01 34 41.0
comp=Z,589nm,19.8s,baz=318,slow=37
TAOE Nuku Hiva Isla 97.09 263 eLR LR 01 20 21.2
comp=Z,396nm,30.3s
KURK Kurchatov 99.32 32 P Pdif 00 49 08.0 -0.2
KURK Kurchatov 99.32 32⇓ iP Pdif 00 49 09.1 +0.9
KURK pmax pmax
comp=Z,2.0nm,1.4s
KURBB Kurchatov Arra 99.33 33 P Pdif 00 49 08.0 -0.2
comp=Z,0.3nm,0.3s,baz=310,slow=4.7,SNR=3.9
PPT2 Papeete2 107.75 256 eSS SS 01 09 24.4 -2.5
comp=Z,184nm,25.2s
PPT2 Papeete2 107.75 256 eLR LR 01 25 26.9
comp=Z,331nm,24.5s
TBI Tubuai 108.44 250 eLR LR 01 25 38.4
comp=Z,323nm,39.2s
GTA Gaotai 117.91 30 ePKP PKPdf 00 54 15.1 +1.9
GTA SKKS 01 02 24.4
GTA SS **SS 01 11 41.5 +2.6**
GTA AMB AMB
comp=Z,66nm,10.3s
GTA LR LR
comp=Z,230nm,21.0s
GTA LR LR
comp=Z,310nm,21.6s
GTA LR LR
comp=Z,410nm,20.3s
HHC Hu-ho-hao-te 121.66 21 ePKP PKPdf 00 54 21.5 +1.1
HHC PP **PP 00 55 56.8 +5.1**
HHC SKS **SKSdf 01 01 32.3 +0.1**
HHC SKKS **SKKSac 01 02 48.8 -3.3**
HHC SS **SS 01 12 29.2 +2.5**
HHC AMB AMB
comp=Z,30nm,5.6s
HHC LR LR
comp=Z,81nm,19.6s
HHC LR LR
comp=Z,160nm,18.2s
HHC LR LR
comp=Z,93nm,19.0s
LZH Lanzhou 122.49 30 ePKP PKPdf 00 54 18.4 -3.8
LZH sPKP 00 54 26.0
LZH SKS **SKSdf 01 01 28.6 -5.5**
LZH SKKS **SKKSac 01 02 49.6 -8.2**
LZH SS **SS 01 12 41.4 +3.6**
LZH LR LR
comp=Z,400nm,13.3s
LZH LR LR
comp=Z,580nm,13.0s
LZH LR LR
comp=Z,740nm,15.2s
CD2 Chengdu 126.52 34 PKP PKPdf 00 54 28.6 -1.3
XAN Xi'an 126.53 27 PKP PKPdf 00 54 30.1 +0.3
MJA0 Matsu Arr-Jizo 130.10 357 ePKIKP PKPdf 00 54 38.5 +1.9
MJA0 pmax pmax
comp=Z,1.0nm,0.3s
MJAR Matsushiro Arr 130.11 357 PKP PKPdf 00 54 36.2 -0.4
comp=Z,0.8nm,0.3s,baz=297,slow=2.4,SNR=5.5
KMI Kunming 130.28 39 PKP PKPdf 00 54 35.8 -1.6
KMI sPKP 00 54 42.8
KMI PP **PP 00 56 50.4 +0.6**
KMI AMB AMB
comp=Z,200nm,4.4s
KMI LR LR
comp=Z,310nm,20.5s
KMI LR LR
comp=Z,170nm,19.5s
KMI LR LR
comp=Z,330nm,25.4s
GYA Guiyang 131.58 35 ePdif Pdif 00 51 30.8 -1.6
GYA PKP **PKPdf 00 54 38.9 -0.8**
GYA PP **PP 00 57 01.0 +3.1**
GYA AMB AMB
comp=Z,120nm,7.8s
NJ2 Nanjing 132.08 19 ePKP PKPdf 00 54 39.8 -0.5
CMAR Chiang Mai Arr 132.24 49 PKP PKPdf 00 54 40.2 -0.8
comp=Z,3.1nm,0.9s,baz=295,slow=3.6,SNR=11
CM01 Chiang Mai Arr 132.28 49 ePKPdf PKPdf 00 54 40.5 -0.5
QIZ Qiongzhong 139.18 38 PKP PKPdf 00 54 52.5 -1.4
QIZ PP **PP 00 57 45.7 -0.2**
QIZ SS SS 01 16 03.6 +0.9
QIZ LR LR
comp=Z,180nm,11.3s
QIZ LR LR
comp=Z,230nm,19.6s
DZM Mont Dzumac 149.02 250 eLR LR 01 44 37.5
comp=Z,348nm,23.8s
ASAR Alice Springs 169.86 174 PKP PKPdf 00 55 33.2 -1.3
comp=Z,0.9nm,0.8s,baz=197,slow=1.0,SNR=6.2
ASAR PKPab **PKPab 00 56 48.8 +0.1**
comp=Z,0.8nm,0.9s,baz=160,slow=3.0,SNR=3.3
WRA Warramunga Arr 173.59 174 ePKIKP PKPdf 00 55 35.2 -1.2
WRA pmax pmax
comp=Z,1.0nm,1.0s

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*TIR **05** 00:36:12.2, 41°.51N×20°.53E, h22km, Md2.3/4*
*ATH **05** 00:36:13.2, 41°.60N×20°.46E, h12km±7km, ML1.8/3, Error ellipse: s-maj=8.1km s-min=1.2km az=203.0*
*SKO **05** 00:36:13.1, 41°.57N×20°.44E, h15km, M1.0, ML1.8*
*ISCJB **05** 00:36:14.3±0.5, 41°.54N±0°.03×20°.48E±0°.04, h2km±8km, Error ellipse: s-maj=5.5km s-min=4.1km az=142.9*
*CSEM **05** 00:36:14.4±0.5, 41°.55N×20°.40E, h15km, ML2.3, Error ellipse: s-maj=13.1km s-min=8.8km az=51.0*

ISC 05 00:36:14.4±0.9, 41°.54N±0°.02×20°.42E±0°.03, h9km±8km, n21, σ1.913/36, 3C-1D, Albania

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
PHP	**Peshkopia**	**0.15**	**7**	*i* PG		**Pg**	**00 36 17.3**	**-0.5**
PHP				*i* SG		**Sg**	**00 36 20.5**	**+0.5**
PHP	**Peshkopia**	**0.15**	**7**	*i* Pg		**Pg**	**00 36 17.3**	**-0.5**
	baz=237							
PHP				*i* Sg		**Sg**	**00 36 20.5**	**+0.5**
	baz=237							
TIR	**Tirane**	**0.46**	**246**	P		**Pg**	**00 36 23.4**	**+0.2**
TIR				S		**Sg**	**00 36 30.4**	**+1.1**
TIR				AML		AML	00 36 32.9	
	comp=N,299μm,0.4s							
TIR				AML		AML	00 36 35.0	
	comp=E,358μm,0.4s							
TIR	**Tirane**	**0.46**	**246**	*i* PG		**Pg**	**00 36 23.2**	**0.0**
TIR				*i* SG		**Sb**	**00 36 31.6**	**0.0**
TIR	**Tirane**	**0.46**	**246**	P		**Pg**	**00 36 23.3**	**0.0**
TIR				*i* Sg		**Sb**	**00 36 31.5**	**0.0**
	baz=252							
OHR	**Ohrid**	**0.51**	**146**	⇑*i* Pg		**Pg**	**00 36 24.3**	**-0.1**
OHR				*i* Sg		**Sg**	**00 36 31.8**	**+0.6**
OHR				*e*Lg		Lg	00 36 32.0	
	comp=N,44nm,0.6s							
OHR				*e*Lg		Lg	00 36 32.0	
	comp=E,30nm,0.6s							
PUK	**Puka**	**0.64**	**322**	*i* PG		**Pg**	**00 36 26.1**	**-0.7**
PUK				*i* SG		**Sb**	**00 36 37.2**	**+0.3**
PUK	**Puka**	**0.64**	**322**	*i* Pg		**Pg**	**00 36 26.1**	**-0.7**
	baz=318							
PUK				*i* Sg		**Sb**	**00 36 37.2**	**+0.3**
	baz=318							
BIA	**Bitola**	**0.86**	**127**	⇑*i* Pg		**Pg**	**00 36 30.0**	**-0.9**
BIA				*i* Sg		**Sg**	**00 36 42.0**	**-0.1**
BIA				*e*Lg		Lg	00 36 43.2	
	comp=N,14nm,0.4s							
BIA				*e*Lg		Lg	00 36 43.4	

comp=E,15nm,0.5s
BCI Bajram Curri 0.87 343 *i* PG **Pg 00 36 30.9 -0.3**
BCI *i* SG **Sn 00 36 45.1 -0.6**
BCI Bajram Curri 0.87 343 *i* Pg **Pg 00 36 30.9 -0.3**
baz=338
SKO Skopje 0.88 60⇑ *i*Pg **Pg 00 36 29.8 -1.7**
SKO *i* Sg **Sg 00 36 41.7 -1.2**
SKO *e*Lg Lg 00 36 43.3
comp=N,6.7nm,0.3s
SKO *e*Lg Lg 00 36 43.7
comp=E,2.8nm,0.3s
FNA Florina 1.04 136 P **Pg 00 36 33.2 -1.3**
FNA S **Sb 00 36 48.8 +0.3**
FNA AML AML 00 36 52.8
comp=E,181μm,0.5s
FNA AML AML 00 36 52.9
comp=N,122μm,0.3s
FNA Florina 1.04 136 P **Pg 00 36 33.3 -1.3**
NEST Nestorio 1.22 157 P **Pb 00 36 37.2 -0.5**
NEST S **Sg 00 36 53.8 +0.1**
NEST AML AML 00 37 00.7
comp=E,35μm,0.6s
NEST AML AML 00 37 05.0
comp=N,31μm,0.7s
NEST Nestorio 1.22 157 P **Pb 00 36 37.1 -0.6**
NEST S **Sg 00 36 54.1 +0.4**
STIP Stip 1.34 83⇓ *i*Pg **Pg 00 36 41.5 +1.4**
STIP *i* Sg **Sg 00 37 02.5 +5.0**
STIP *e*Lg Lg 00 37 03.4
comp=E,3.4nm,0.3s
STIP *e*Lg Lg 00 37 03.6
comp=N,3.1nm,0.3s
GRG Griva 1.61 110 P **Pn 00 36 43.2 +0.2**
GRG Griva 1.61 110 P **Pn 00 36 43.2 +0.2**
KNT Kendrikon 1.91 100 P **Pn 00 36 47.5 +0.3**
KNT Kendrikon 1.91 100 P **Pn 00 36 47.4 +0.3**

CSEM ***05*** *00:36:23.8, 45.′85N×15.′63E, h0km, ML0.1*
LJU 05 00:36:23.8, 45.′86N×15.′63E, h5km, ML0.1, 2C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCIS	**Gornji Cirnik**	**0.01**	**344⇑**	*i*Pg	Pg	00 36 24.8	+0.1
GCIS				*i* Sg	Sg	00 36 25.4	0.0
comp=Z,11nm,0.1s							
GCIS	**Gornji Cirnik**	**0.01**	**344⇑**	*i*Pg	Pg	00 36 24.8	+0.1
GCIS				*i* Sg	Sg	00 36 25.4	+0.1
comp=Z,11nm,0.1s							
CRES	**Cresnjev**	**0.13**	**256**	*i* Pg	Pg	00 36 26.4	0.0
CRES				*i* Sg	Sg	00 36 28.3	+0.2
comp=Z,2.0nm,0.1s							
CRES	**Cresnjev**	**0.13**	**256**	*i* Pg	Pg	00 36 26.4	0.0
CRES				*i* Sg	Sg	00 36 28.3	+0.2
comp=Z,2.0nm,0.1s							
GOLS	**Golise**	**0.15**	**358**	*i* Pg	Pg	00 36 26.9	0.0
GOLS	**Golise**	**0.15**	**358**	*i* Pg	Pg	00 36 26.9	0.0
LEGS	**Legarje**	**0.24**	**293**	*e*Pg	Pg	00 36 28.8	+0.3
LEGS	**Legarje**	**0.24**	**293**	*e*Pg	Pg	00 36 28.8	+0.4

WEL ***05*** *01:02:19.1, 37.′S±7.′×18.′0W±.′, h97km±19km*
IDC ***05*** *01:02:24.8±2.9, 36.′47S×178.′72E, h0km, mb4.1/2, mb1 4.3/3, mb1mx3.8/42, mbtmp4.1/3, ML3.3/1, Error ellipse: s-maj=63.7km s-min=30.8km az=111.0*
ISC 05 01:02:16.3±3.6, 37.′13S±0.′08×179.′7W±0.′1, h15km±23km, n42, σ1§22/54, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.63**	**254**	P	**Pn**	**01 02 44.8**	**+0.4**
MXZ				S	**Sn**	**01 03 03.5**	**-1.6**
WMGZ	**Waiomatatini S**	**1.63**	**245**	P	**Pb**	**01 02 46.0**	**-0.1**
WMGZ				S	**Sn**	**01 03 05.9**	**+0.6**
PUZ	**Puketiti**	**1.86**	**239**	P	**Pb**	**01 02 49.3**	**-0.6**
PUZ				S	**Sn**	**01 03 10.5**	**-0.3**
PKGZ	**Pakihiroa**	**1.90**	**246**	P	**Pn**	**01 02 49.2**	**+0.9**
PKGZ				S	**Sn**	**01 03 11.3**	**-0.7**
HAZ	**Te Kaha**	**2.08**	**252**	P	**Pn**	**01 02 51.9**	**+1.2**
HAZ				S	**Sn**	**01 03 16.4**	**+0.1**
TWGZ	**Tauwhareparae**	**2.10**	**240**	P	**Pn**	**01 02 52.8**	**+1.9**
TWGZ				S	**Sn**	**01 03 17.5**	**+0.7**
CNGZ	**Carnagh Statio**	**2.12**	**230**	P	**Pn**	**01 02 53.2**	**+2.0**
TKGZ	**Te Karaka**	**2.32**	**235**	P	**Pn**	**01 02 55.6**	**+1.6**
TKGZ				S	**Sn**	**01 03 22.6**	**+0.3**
MWZ	**Matawai**	**2.49**	**240**	P	**Pn**	**01 02 57.8**	**+1.5**
MWZ				S	**Sn**	**01 03 24.8**	**-1.6**
RIGZ	**Rimuhau**	**2.53**	**231**	P	**Pn**	**01 02 58.8**	**+1.8**
RIGZ				S	**Sn**	**01 03 27.8**	**+0.3**
PRGZ	**Paritu Road**	**2.60**	**226**	P	**Pn**	**01 02 59.5**	**+1.6**
MHGZ	**Mahia Peninsul**	**2.75**	**222**	P	**Pn**	**01 03 01.3**	**+1.4**
URZ	**Urewera**	**2.75**	**245**	Pn	**Pn**	**01 03 01.6**	**+1.7**
8.5nm,0.3s,baz=87,slow=3.7,SNR=31							
URZ				Sn	**Sn**	**01 03 31.9**	**-1.0**
36nm,0.3s,baz=150,slow=23,SNR=19							
URZ	**Urewera**	**2.75**	**245**	P	**Pn**	**01 03 01.3**	**+1.5**
URZ				S	**Sn**	**01 03 31.5**	**-1.4**
KNZ	**Kokohu**	**2.79**	**227**	P	**Pn**	**01 03 01.4**	**+1.1**
KNZ				S	**Sn**	**01 03 33.5**	**-0.2**
NMHZ	**Naumai**	**3.37**	**233**	P	**Pn**	**01 03 11.0**	**+2.6**
CKHZ	**Cape Kidnapper**	**3.56**	**224**	P	**Pn**	**01 03 12.0**	**+1.0**
BKZ	**Black Stump Fm**	**3.61**	**235**	P	**Pn**	**01 03 12.7**	**+1.0**
KUZ	**Kuaotunu**	**3.67**	**275**	P	**Pn**	**01 03 12.1**	**-0.4**
KAHZ	**Kahuranaki**	**3.77**	**224**	P	**Pn**	**01 03 14.9**	**+1.0**
KWHZ	**Kaweka Forest**	**3.80**	**232**	P	**Pn**	**01 03 15.7**	**+1.3**
TOZ	**Tahuroa Road**	**3.85**	**260**	P	**Pn**	**01 03 15.1**	**+0.2**
PXZ	**Pawanui**	**3.94**	**222**	P	**Pn**	**01 03 16.5**	**+0.2**
KRHZ	**Kereru**	**3.96**	**230**	P	**Pn**	**01 03 17.9**	**+1.3**
BHHZ	**Black Hill Sta**	**4.06**	**233**	P	**Pn**	**01 03 19.1**	**+1.1**
MKAZ	**Moumakai**	**4.09**	**269**	P	**Pn**	**01 03 18.4**	**+0.1**
MOVZ	**Moawhango**	**4.22**	**236**	P	**Pn**	**01 03 22.4**	**+2.2**
PRHZ	**Porangahau**	**4.23**	**221**	P	**Pn**	**01 03 21.0**	**+0.8**
DVHZ	**Dannevirke**	**4.51**	**224**	P	**Pn**	**01 03 23.9**	**-0.1**
HIZ	**Hauiti**	**4.51**	**251**	P	**Pn**	**01 03 25.6**	**+1.6**
BFZ	**Birch Farm**	**4.74**	**220**	P	**Pn**	**01 03 26.0**	**-1.2**
PRWZ	**Pori Road**	**4.79**	**223**	P	**Pn**	**01 03 28.1**	**+0.1**
POWZ	**Post Office Ro**	**4.79**	**226**	P	**Pn**	**01 03 29.0**	**+1.0**
WCZ	**Waipu Caves**	**4.92**	**282**	P	**Pn**	**01 03 30.4**	**+0.7**
MRZ	**Mangatainoka R**	**5.08**	**225**	P	**Pn**	**01 03 31.4**	**-0.6**
TMWZ	**Te Maipa**	**5.23**	**219**	P	**Pn**	**01 03 32.9**	**-1.2**
MTW	**Mount Morrison**	**5.47**	**221**	P	**Pn**	**01 03 35.6**	**-1.7**
MSWZ	**Moikau Station**	**5.79**	**221**	P	**Pn**	**01 03 39.8**	**-1.8**
QRZ	**Quartz Range**	**7.07**	**236**	P	**Pn**	**01 03 58.3**	**-1.0**
ASAR	**Alice Springs**	**41.80**	**275**	P	**P**	**01 10 05.5**	**0.0**
1.8nm,0.6s,baz=121,slow=7.9,SNR=20							
WRA	**Warramunga Arr**	**43.39**	**280**	P	**P**	**01 10 18.2**	**-0.2**
1.9nm,0.6s,baz=120,slow=7.8,SNR=21							
FINES	**FINESS Array B**	**150.80**	**335**	PKPbc	**PKPab**	**01 22 15.2**	**+0.8**
1.9nm,0.9s,baz=101,slow=3.9,SNR=5.3							

CSEM ***05*** *01:10:06.8±0.2, 37.′00N×27.′59E, h1km, ML2.7, Error ellipse: s-maj=4.1km s-min=2.8km az=42.0, Suspected Mining explosion.*
ISK ***05*** *01:10:06.3, 36.′98N×27.′55E, h6km, ML2.5/7*
DDA ***05*** *01:10:06.8, 37.′01N×27.′61E, h8km, Ml2.7*
ISC 05 01:10:06.2±0.9, 37.′05N±0.′03×27.′72E±0.′03, h3km±9km, n33, σ1§31/56, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.22**	**273**	*i* P	**Pg**	**01 10 10.0**	**-0.4**
BDRM				*i* S	**Sg**	**01 10 12.7**	**-0.5**
BDRM	**Kayabasi**	**0.22**	**273**	P	**Pg**	**01 10 10.0**	**-0.4**
BDRM				S	**Sg**	**01 10 12.7**	**-0.5**
MLSB	**Milas**	**0.24**	**11**	PG	**Pb**	**01 10 14.1**	**+3.2**
MLSB	**Milas**	**0.24**	**11**	*e*Pg	**Pb**	**01 10 14.1**	**+3.2**
DATC	**Datca-Mugla**	**0.30**	**189**	PG	**Pg**	**01 10 11.3**	**-0.6**
DATC	**Datca-Mugla**	**0.30**	**189**	*i* Pg	**Pg**	**01 10 11.3**	**-0.6**
BODT	**Bodrum**	**0.33**	**272**	PG	**Pg**	**01 10 10.8**	**-1.6**
BODT	**Bodrum**	**0.33**	**272**	*i* Pg	**Pg**	**01 10 10.8**	**-1.6**
YKAV	**Yalikavak-Bodr**	**0.36**	**282**	PG	**Pg**	**01 10 11.8**	**-1.2**
YKAV				SG	**Sg**	**01 10 16.4**	**-1.3**
YKAV	**Yalikavak-Bodr**	**0.36**	**282**	*e*Pg	**Pg**	**01 10 11.8**	**-1.2**
YKAV				*e*Sg	**Sg**	**01 10 16.4**	**-1.3**
AYDN	**Tasoluk**	**0.62**	**12**	*i* P	**Pb**	**01 10 20.2**	**+0.5**
AYDN				*i* S	**Sb**	**01 10 29.8**	**+1.0**
AYDN	**Tasoluk**	**0.62**	**12**	P	**Pb**	**01 10 20.2**	**+0.5**
AYDN				S	**Sb**	**01 10 29.8**	**+1.0**
TURN	**Turunc**	**0.73**	**104**	*i* P	**Pg**	**01 10 16.9**	**-3.3**
TURN				*i* S	**Sg**	**01 10 26.2**	**-3.5**
GCAM	**G?zelcaml?**	**0.75**	**329**	PG	**Pb**	**01 10 21.4**	**-0.4**
GCAM				SG	**Sb**	**01 10 33.2**	**+0.7**
GCAM	**G?zelcaml?**	**0.75**	**329**	*i* P	**Pb**	**01 10 21.5**	**-0.4**
GCAM				*i* S	**Sb**	**01 10 33.2**	**+0.7**
GCAM	**G?zelcaml?**	**0.75**	**329**	P	**Pb**	**01 10 21.5**	**-0.4**
GCAM				S	**Sb**	**01 10 33.2**	**+0.7**
DALY	**Dalyan (Mu¨la**	**0.79**	**107**	*i* P	**Pb**	**01 10 23.4**	**+0.9**
DALY				*i* S	**Sn**	**01 10 37.0**	**+0.6**
DALY	**Dalyan (Mu¨la**	**0.79**	**107**	P	**Pb**	**01 10 23.4**	**+0.9**
DALY				S	**Sn**	**01 10 37.0**	**+0.6**
ARG	**Arkhangelos**	**0.90**	**158**	PG	**Pb**	**01 10 24.4**	**0.0**
ARG				SG	**Sb**	**01 10 36.9**	**+0.2**
ARG	**Arkhangelos**	**0.90**	**158**	*e*Pg	**Pb**	**01 10 24.4**	**0.0**
ARG				*e*Sg	**Sb**	**01 10 36.9**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**0.90**	**9**	PG	**Pn**	**01 10 25.4**	**-0.5**
AYDB				SG	**Sn**	**01 10 39.8**	**+0.3**
AYDB	**Zeytinkoy-Aydi**	**0.90**	**9**	*e*Pg	**Pn**	**01 10 25.4**	**-0.5**
AYDB				*e*Sg	**Sn**	**01 10 39.8**	**+0.3**
TAVA	**DENIZLI_Tavas**	**1.04**	**66**	*i* P	**Pn**	**01 10 28.3**	**+0.6**
TAVA				*i* S	**Sn**	**01 10 43.3**	**+0.5**
TAVA	**DENIZLI_Tavas**	**1.04**	**66**	P	**Pn**	**01 10 28.3**	**+0.6**
TAVA				S	**Sn**	**01 10 43.3**	**+0.5**
FETY	**Fethiye**	**1.17**	**110**	PN	**Pn**	**01 10 31.9**	**+2.4**
FETY	**Fethiye**	**1.17**	**110**	P	**Pn**	**01 10 30.1**	**+0.6**
FETY	**Fethiye**	**1.17**	**110**	*e*Pn	**Pn**	**01 10 31.9**	**+2.4**
FETY				S	**Sn**	**01 10 48.1**	**+2.1**
DGB	**¨zmir**	**1.20**	**327**	*i* P	**Pg**	**01 10 28.7**	**-0.4**
DGB				*i* S	**Sg**	**01 10 43.5**	**-1.1**
BLCB	**Balcova**	**1.43**	**338**	PN	**Pn**	**01 10 33.0**	**0.0**
BLCB				SN	**Sn**	**01 10 53.8**	**+1.4**
BLCB	**Balcova**	**1.43**	**338**	*e*Pn	**Pn**	**01 10 33.0**	**0.0**
BLCB				*e*Sn	**Sn**	**01 10 53.8**	**+1.4**
ZEY	**¨zmir**	**1.52**	**321**	*i* P	**Pn**	**01 10 32.8**	**-1.5**
ZEY				*i* S	**Sg**	**01 10 54.4**	**-0.8**
URLA	**Izmir**	**1.58**	**326**	PN	**Pb**	**01 10 36.0**	**0.0**
URLA	**Izmir**	**1.58**	**326**	*e*Pn	**Pb**	**01 10 36.0**	**0.0**

ISCJB ***05*** *01:10:31.3±1.1, 22.′5S±0.′1×177.′8W±0.′2, h280km, mb3.5/6, Error ellipse: s-maj=24.4km s-min=13.8km az=12.8*
IDC ***05*** *01:10:35.4±10.0, 22.′56S×177.′73W, h310km±101km, mb3.3/6, mb1 3.6/7, mb1mx3.3/44, mbtmp4.1/7, Error ellipse: s-maj=43.8km s-min=29.5km az=1.0*
ISC 05 01:10:32.3±1.1, 22.′5S±0.′1×177.′7W±0.′2, h280km, n8, σ1§00/9, mb3.3/6, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**16.30**	**195**	P	**P**	**01 14 04.7**	**+0.2**
2.7nm,0.3s,baz=271,slow=5.6,SNR=10.0							
URZ				S	**S**	**01 17 00.1**	**-0.7**
1.1nm,0.3s,baz=106,slow=18,SNR=4.8							
CTA	**Charters Tower**	**33.65**	**267**	P	**P**	**01 16 47.9**	**+0.6**
5.1nm,0.6s,baz=101,slow=9.6,SNR=5.2							
STKA	**Stephens Creek**	**37.22**	**247**	P	**P**	**01 17 17.9**	**+0.5**
5.1nm,0.9s,baz=84,slow=9.2,SNR=4.4							
ASAR	**Alice Springs**	**44.38**	**259**	P	**P**	**01 18 16.1**	**+0.2**
1.1nm,0.8s,baz=94,slow=7.9,SNR=8.5							
WRA	**Warramunga Arr**	**44.66**	**264**	P	**P**	**01 18 17.3**	**-0.7**
0.4nm,0.3s,baz=99,slow=8.6,SNR=19							
TXAR	**Lajitas Array**	**87.90**	**57**	P	**P**	**01 22 52.1**	**+1.3**
0.4nm,0.8s,baz=209,slow=7.2,SNR=5.2							
ILAR	**Eielson Array**	**90.23**	**13**	P	**P**	**01 22 59.7**	**-1.0**
0.2nm,0.5s,baz=215,slow=4.7,SNR=2.5							
AKASG	**Malin Array Be**	**144.93**	**330**	PKP	**PKPdf**	**01 29 34.5**	**-1.3**
0.5nm,0.3s,baz=45,slow=4.4,SNR=2.0							

NEIC 05 01:23:10.1±0.0, 19.′34N×155.′28W, h1km, ML3.5(HVO), After HVO., Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HLP	**Hilina Pali**	**0.05**	**208**	*e*Pg	Pg	01 23 12.1	+1.1
SDHHI	**Sand Hill**	**0.05**	**348**	*e*Pg	Pg	01 23 12.3	+1.2
SDHHI				*e*Sg	Sg	01 23 13.0	+1.2
RIM	**Rim**	**0.06**	**9**	*e*Pg	Pg	01 23 12.4	+1.2
RIM				*e*Sg	Sg	01 23 13.8	+1.8
KKO	**Keanakako'i**	**0.06**	**16**	*e*Pg	Pg	01 23 12.6	+1.2
KKO				*e*Sg	Sg	01 23 13.3	+1.1
WRMHI	**West Rim**	**0.07**	**346**	*e*Pg	Pg	01 23 12.7	+1.2
WRMHI				*e*Sg	Sg	01 23 13.5	+1.1
NPH	**North Pit**	**0.07**	**2**	*e*Pg	Pg	01 23 12.9	+1.4
NPH				*e*Sg	Sg	01 23 14.0	+1.5
PUH	**Pauahi**	**0.07**	**62**	*e*Pg	Pg	01 23 12.6	+1.1
BYL	**Byron's Ledge**	**0.07**	**17**	*e*Pg	Pg	01 23 12.9	+1.3
BYL				*e*Sg	Sg	01 23 13.7	+1.0
OBL	**Observatory Le**	**0.08**	**359**	*e*Pg	Pg	01 23 13.1	+1.4
OBL				*e*Sg	Sg	01 23 13.8	+1.0
UWE	**Uwekahuna**	**0.08**	**353**	*e*Pg	Pg	01 23 13.1	+1.4
UWB	**Uwekahuna B**	**0.08**	**3**	*e*Pg	Pg	01 23 13.4	+1.6
HATHI	**Halema'uma'u T**	**0.09**	**14**	*e*Pg	Pg	01 23 13.4	+1.6
SBLHI	**Steaming Bluff**	**0.09**	**9**	*e*Pg	Pg	01 23 13.5	+1.6
STCH	**Steam Cracks**	**0.16**	**73**	*e*Pg	Pg	01 23 14.5	+1.4
AIN	**Ainahou**	**0.17**	**281**	*e*Pg	Pg	01 23 15.0	+1.6
NPOC	**North of Pu'u**	**0.17**	**72**	*e*Pg	Pg	01 23 15.0	+1.6
JCUZ	**Jacuzzi**	**0.18**	**76**	*e*Pg	Pg	01 23 15.1	+1.6
MLH	**Mauna Loa**	**0.18**	**328**	*e*Pg	Pg	01 23 15.3	+1.7
HULD	**Heiheiahulu Di**	**0.30**	**75**	*e*Pg	Pb	01 23 18.1	-0.3
HMH	**Humu'ula Sheep**	**0.32**	**324**	*e*Pg	Pb	01 23 17.9	-1.0
KHU	**Kahuku**	**0.33**	**253**	*e*Pg	Pb	01 23 18.7	-0.2
MWH	**Moku'aweowe**	**0.33**	**296**	*e*Pg	Pg	01 23 16.7	+0.2
HPO	**Honuapo**	**0.36**	**226**	*e*Pg	Pb	01 23 19.1	-0.1
POHA	**Pohakuloa**	**0.48**	**331**	*e*Pg	Pb	01 23 20.9	-0.5
HUH	**Hualalai**	**0.62**	**303**	*e*Pg	Pb	01 23 23.8	-0.2
KHLU	**Kahalu'u**	**0.63**	**294**	*e*Pg	Pb	01 23 23.1	-0.8
LPH	**Laupahoehoe**	**0.66**	**350**	*e*Pg	Pg	01 23 23.6	+0.7
KKH	**Kailua Kona**	**0.76**	**295**	*e*Pn	Pn	01 23 28.1	+0.1
HPAH	**Hawaii Prepara**	**0.79**	**330**	*e*Pg	Pg	01 23 25.9	+0.7
MHA	**Mahukona**	**1.03**	**325**	*e*Pn	Pn	01 23 34.9	+3.3

IDC 05 01:26:36.7±1.4, 3.′21N×128.′25E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.6/57, mbtmp3.9/6, Error ellipse: s-maj=93.8km s-min=17.7km az=70.0, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.33**	**187**	P	P	01 31 25.0	-0.5
5.0nm,1.0s,baz=270,slow=11							
WRA	**Warramunga Arr**	**23.77**	**166**	P	P	01 31 50.6	-0.6
3.0nm,0.8s,baz=346,slow=11,SNR=14							
ASAR	**Alice Springs**	**27.28**	**169**	P	P	01 32 23.8	+0.8
0.4nm,0.5s,baz=354,slow=7.1,SNR=3.9							
STKA	**Stephens Creek**	**37.13**	**161**	P	P	01 33 49.4	+0.1
3.1nm,0.9s,baz=333,slow=11,SNR=2.9							
MKAR	**Makanchi Array**	**58.85**	**325**	P	P	01 36 37.6	+0.3
1.2nm,0.7s,baz=120,slow=8.2,SNR=13							
KURBB	**Kurchatov Arra**	**63.00**	**327**	P	P	01 37 05.2	-0.1
1.3nm,0.7s,baz=124,slow=6.2,SNR=16							
TORD	**Torodi Ar. Bea**	**124.53**	**288**	PKP	PKPdf	01 45 38.3	-0.8
0.3nm,0.7s,baz=84,slow=1.6,SNR=3.0							

BJI ***05*** *01:49:56.9, 14.′16N×145.′74E, h118km, mb4.9/41, mB5.0/21*
ISCJB ***05*** *01:49:59.1±0.6, 14.′29N±0.′04×145.′36E±0.′04, h118km±6km, mb4.8/175, Error ellipse: s-maj=6.8km s-min=5.7km az=144.2*
MOS ***05*** *01:49:59.4±1.1, 14.′26N×145.′33E, h128km, mb4.9/38, Error ellipse: s-maj=12.2km s-min=5.5km az=94.5*
IDC ***05*** *01:49:59.7±0.5, 14.′20N×145.′46E, h118km±4km, mb4.3/36, mb1 4.4/36, mb1mx4.3/67, mbtmp4.7/36, MS3.7/4, Ms1 3.7/4, ms1mx3.0/59, Error ellipse: s-maj=13.6km s-min=7.9km az=82.0*
NEIC ***05*** *01:50:00.6±1.8, 14.′24N×145.′34E, h120km±4km, mb4.9/144, Error ellipse: s-maj=16.2km s-min=5.2km az=68.0*
NEIC Felt on Tinian.
ISC 05 01:49:59.8±0.5, 14.′24N±0.′05×145.′49E±0.′07, h116km±4km, h117km: pP-P, n292, σ1§23/321, mb4.8/175, 9C-6D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.88**	**223**	P	**Pn**	**01 50 21.1**	**+0.7**
2μm,0.3s,baz=342,slow=20,SNR=733							
GUMO				S	**Sn**	**01 50 35.6**	**-0.2**
baz=225,slow=8.6							
GUMO	**Guam**	**0.88**	**223**	*e*Pn	**Pn**	**01 50 21.1**	**+0.7**
GUMO				*e*Pn	Pn	01 50 21.1	+0.8
GUMO				*e*Sn	**Sn**	**01 50 35.7**	**-0.2**
PATS	**Pohnpei**	**14.59**	**119**	*e*Pn	**Pn**	**01 53 22.0**	**+1.3**
PATS				*e*Sn	Sn	01 55 52.4	-9.5
JAY	**Jayapura**	**17.31**	**196**	P	**Pn**	**01 53 55.0**	**+0.6**
0.8nm,0.3s,baz=35,slow=4.6,SNR=8.1							
JAY	**Jayapura**	**17.31**	**196**	*e*P	**Pn**	**01 53 55.0**	**+0.6**
JOW	**Kunigami**	**20.39**	**311**	P	Pn	01 54 29.2	-1.4
46nm,0.5s,baz=151,slow=6.8,SNR=4.5							
JOW	**Kunigami**	**20.39**	**311**	*e*P	Pn	01 54 29.2	-1.4
171nm,1.3s							
H11S3	**WAKE ISLAND Hy**	**20.77**	**75**	T	T	02 16 10.9	
baz=262,slow=75,SNR=13							
H11S1	**WAKE ISLAND Hy**	**20.78**	**75**	T	T	02 16 13.0	
baz=262,slow=75,SNR=28							
H11S2	**WAKE ISLAND Hy**	**20.79**	**75**	T	T	02 16 41.5	
baz=262,slow=75,SNR=6.1							
FAKI	**Fak Fak**	**21.51**	**219**	*e*P	**P**	**01 54 41.5**	**+1.8**
39nm,1.1s							
INU	**Inuyama**	**22.36**	**342**	*e*P	**P**	**01 54 49.7**	**+1.3**
22nm,0.6s							
JNU	**Nakatsue**	**23.03**	**327**	P	**P**	**01 54 55.6**	**+0.7**
30nm,0.7s,baz=137,slow=1.6,SNR=24							
JNU	**Nakatsue**	**23.03**	**327**	*e*P	**P**	**01 54 54.9**	**0.0**
42nm,0.9s							
MJA0	**Matsu Arr-Jizo**	**23.14**	**345**	*e*P	**P**	**01 54 55.0**	**-1.0**
MJA0				pmax	pmax		
comp=Z,11nm,0.8s							
MJAR	**Matsushiro Arr**	**23.15**	**345**	P	**P**	**01 54 55.0**	**-1.0**
comp=Z,9.7nm,0.8s,baz=177,slow=10,SNR=21							
MJAR				LR	LR	02 02 10.4	
comp=Z,75nm,20.6s,baz=325,slow=32							
MAJO	**Matsushiro**	**23.15**	**345**	*e*P	**P**	**01 54 55.0**	**-1.0**
comp=Z,30nm,1.3s							
MAJO	**Matsushiro**	**23.15**	**345**	*d i*P	**P**	**01 54 55.3**	**-0.7**
MAJO				pmax	pmax		
comp=Z,34nm,1.7s							
MAT	**Matsushiro**	**23.15**	**345**	P	**P**	**01 54 55.1**	**-0.9**
MJB9	**Matsu-Tunnel**	**23.15**	**345**	*e*P	**P**	**01 54 55.4**	**-0.7**
comp=Z,30nm,1.3s							
PMG	**Port Moresby**	**23.55**	**176**	P	**P**	**01 54 59.1**	**-0.7**
comp=Z,20nm,0.8s,baz=15,slow=8.7,SNR=6.2							
PMG	**Port Moresby**	**23.55**	**176**	*e*P	**P**	**01 54 59.9**	**+0.1**
comp=Z,25nm,0.9s							
PMG	**Port Moresby**	**23.55**	**176**	*e*P	**P**	**01 54 59.9**	**+0.1**
PMG				pmax	pmax		
comp=Z,25nm,0.9s							
YULB	**Yu-li**	**24.61**	**295**	*e*P	**P**	**01 55 10.4**	**+1.0**
comp=Z,9.1nm,0.6s							
SSLB	**Suanglung**	**25.03**	**296**	*e*P	**P**	**01 55 13.2**	**-0.1**
comp=Z,37nm,1.1s							
TJN	**Taejon**	**27.37**	**327⇑**	*i*P	**P**	**01 55 34.2**	**0.0**
ERM	**Erimo**	**27.75**	**356**	*e*P	**P**	**01 55 37.3**	**-0.2**
ERM				pmax	pmax		
comp=Z,13nm,1.2s							
KSRS	**Korea Array**	**27.91**	**329**	P	**P**	**01 55 39.0**	**0.0**
comp=Z,7.3nm,0.7s,baz=142,slow=11,SNR=35							
KS15	**Wonju Array Si**	**27.92**	**329**	*e*P	**P**	**01 55 39.6**	**+0.6**
KS01	**Wonju Array Si**	**27.94**	**329**	*e*P	**P**	**01 55 38.1**	**-1.1**
YUK	**Yuzh-Kuril'sk**	**29.70**	**1⇓**	*i*P	**P**	**01 55 53.7**	**-1.0**
NJ2	**Nanjing**	**30.11**	**311**	*e*P	**P**	**01 55 59.8**	**+1.3**
NJ2				pmax	pmax		
comp=Z,18nm,0.5s							
MSHR	**Mys Shultsa**	**30.84**	**339⇑**	*i*P	**P**	**01 56 05.4**	**+0.7**
KUR	**Kuril'sk**	**30.96**	**3⇑**	*i*P	**P**	**01 56 05.7**	**-0.1**
USRK	**Ussuriysk Ar.**	**32.01**	**342**	P	**P**	**01 56 15.5**	**+0.4**
comp=Z,8.6nm,0.7s,baz=163,slow=9.0,SNR=27							
MDJ	**Mudanjiang**	**33.17**	**339**	P	**P**	**01 56 23.0**	**-2.1**
MDJ				pmax	pmax		
comp=Z,16nm,0.6s							
MDJ				pmax	pmax		
comp=Z,130nm,5.6s							
CTA	**Charters Tower**	**34.12**	**179**	P	**P**	**01 56 33.1**	**-0.6**
comp=Z,5.8nm,1.0s,baz=8.7,slow=9.4,SNR=4.7							
WRAB	**Tennant Creek**	**35.68**	**198**	*e*P	**P**	**01 56 46.6**	**-0.5**
comp=Z,11nm,0.8s							
WRAB				*e*pP	**pP**	**01 57 12.6**	**-0.4**
WRAB	**Tennant Creek**	**35.68**	**198⇑**	*i*P	**P**	**01 56 46.5**	**-0.6**
WRAB				*i* *PP	**pP**	**01 57 12.5**	**-0.4**
WRAB				*i*		01 58 11

SMY Shemya 44.63 24 *eP* **P 01 58 01.9 +1.4**
SMY pmax pmax
comp=Z,87nm,0.7s
CM31 Chiang Mai Arr 44.77 282 *eP* **P 01 58 03.2 +1.0**
CMAR Chiang Mai Arr 44.77 282 P **P 01 58 03.2 +1.0**
comp=Z,3.0nm,0.6s,baz=82,slow=6.0,SNR=11
CMAR Chiang Mai Arr 44.77 282 *eP* **P 01 58 04.3 +2.1**
CMAR pmax pmax
comp=Z,3.0nm,0.6s
MA2 Magadan 45.43 4 *eP* **P 01 58 06.5 -0.3**
comp=Z,37nm,0.9s
MA2 Magadan 45.43 4 *i P* **P 01 58 06.5 -0.3**
STKA Stephens Creek 46.00 185 P **P 01 58 10.7 -0.9**
comp=Z,3.4nm,0.7s,baz=4.2,slow=10,SNR=5.0
STKA LR LR 02 19 21.5
comp=Z,198nm,20.0s,baz=248,slow=38
STKA Stephens Creek 46.00 185 *eP* **P 01 58 10.7 -0.9**
comp=Z,1.0nm,0.8s
ULN Ulaanbaatar 46.20 325 *eP* **P 01 58 14.3 +1.1**
comp=Z,9.3nm,0.9s
ULN Ulaanbaatar 46.20 325 *d iP* **P 01 58 14.4 +1.1**
ULN pmax pmax
comp=Z,8.0nm,0.7s
SONA0 Songino Array 46.56 324 *eP* **P 01 58 17.1 +1.2**
SONM Songino Array 46.56 324 P **P 01 58 17.1 +1.2**
comp=Z,5.1nm,0.7s,baz=141,slow=8.8,SNR=22
SONA1 Songino Array 46.56 324 *eP* **P 01 58 16.5 +0.5**
GTA Gaotai 47.20 311 *eP* **P 01 58 22.4 +1.3**
GTA pP pP 01 58 47.9 -0.2
GTA sP sP 01 59 00.4 -0.8
GTA S **S 02 05 08.4 +3.0**
GTA sS sS 02 05 50.6 -1.4
GTA SS **SS 02 08 30.2 -3.9**
GTA pmax pmax
comp=Z,7.0nm,0.8s
GTA LR LR
comp=Z,230nm,17.9s
GTA LR LR
comp=Z,250nm,20.3s
GTA LR LR
comp=Z,110nm,16.8s
SEY Seymchan 48.88 4 *c iP* **P 01 58 33.3 -0.1**
YAK Yakutsk 49.05 350 *eP* **P 01 58 33.2 -1.6**
YAK *e* 02 00 32.7
YAK *e*S **S 02 05 28.7 -1.7**
YAK pmax pmax
comp=Z,30nm,0.8s
YAK pmax pmax
comp=N,9.0nm,1.0s
YAK pmax pmax
comp=Z,66nm,3.2s
YAK pmax pmax
comp=E,33nm,3.2s
YAK smax smax
comp=N,33nm,2.4s
YAK smax smax
comp=E,32nm,2.3s
ZAK Zakamensk 49.64 326 *eP* **P 01 58 39.4 -0.2**
ZAK pmax pmax
comp=Z,9.0nm,1.2s
TLY Talaya 50.14 327 LR LR 02 19 22.8
comp=Z,55nm,18.2s,baz=75,slow=35
TLY Talaya 50.14 327 *eP* **P 01 58 43.6 +0.4**
comp=Z,9.7nm,0.7s
TLY Talaya 50.14 327 *eP* **P 01 58 44.0 +0.8**
TLY pmax pmax
comp=Z,18nm,1.4s
BILL Bilibino 55.43 9 *eP* **P 01 59 20.4 -1.5**
comp=Z,30nm,1.2s
BILL Bilibino 55.43 9 *d iP* **P 01 59 21.0 -0.8**
BILL *i* 02 01 33.4
BILL pmax pmax
comp=Z,23nm,1.0s
WMQ Urumqi 57.13 313 P **P 01 59 37.2 +2.7**
WMQ pP pP 02 00 05.7 +3.3
WMQ pmax pmax
comp=Z,41nm,1.1s
WMQ pmax pmax
comp=Z,360nm,4.9s
WMQ LR LR
comp=Z,200nm,26.7s
WMQ LR LR
comp=Z,190nm,24.5s
WMQ LR LR
comp=Z,160nm,23.5s
TIXI Tiksi 58.26 354 P **P 01 59 40.4 -1.3**
comp=Z,3.8nm,0.6s,baz=179,slow=2.6,SNR=9.1
TIXI Tiksi 58.26 354 ⇑ *iP* **P 01 59 40.7 -1.0**
TIXI pmax pmax
comp=Z,4.0nm,0.9s
SDPT Sand Point 58.27 33 *eP* **P 01 59 42.4 +0.4**
comp=Z,240nm,1.3s
CHGN Chignik 59.71 32 *eP* **P 01 59 52.5 +0.5**
comp=Z,32nm,1.0s
MK01 Makanchi Array 61.44 316 *eP* **P 02 00 04.0 0.0**
MK01 *ep*P **pP 02 00 31.7 -0.6**
MK31 Makanchi Array 61.45 316 *eP* **P 02 00 04.2 +0.2**
MK31 *ep*P **pP 02 00 31.6 -0.8**
MK32 Makanchi Array 61.45 316 *eP* **P 02 00 04.1 0.0**
MKAR Makanchi Array 61.45 316 P **P 02 00 04.1 0.0**
comp=Z,2.5nm,0.6s,baz=91,slow=9.0,SNR=25
MKAR Makanchi Array 61.45 316 *eP* **P 02 00 04.2 +0.2**
comp=Z,35nm,1.2s
MKAR *ep*P **pP 02 00 31.6 -0.8**
ZAA0 Zalesovo Array 61.45 324 *eP* **P 02 00 03.6 -0.3**
comp=Z,4.4nm,0.8s
ZALV Zalesovo Beam 61.45 324 P **P 02 00 04.0 +0.1**
comp=Z,4.3nm,0.6s,baz=105,slow=6.9,SNR=14
ZALV Zalesovo Beam 61.45 324 *eP* **P 02 00 03.1 -0.8**
ZALV Zalesovo Beam 61.45 324 *eP* **P 02 00 03.1 -0.8**
ZAA1 Zalesovo Array 61.45 324 *eP* **P 02 00 04.0 +0.1**
MAKZ Makanchi 61.66 316 *eP* **P 02 00 05.7 +0.2**
comp=Z,4.5nm,0.6s
MAKZ *ep*P **pP 02 00 34.6 +0.8**
MAKZ Makanchi 61.66 316 *eP* **P 02 00 05.7 +0.2**
MAKZ *e**PP **pP 02 00 34.6 +0.8**
MAKZ pmax pmax
comp=Z,5.0nm,0.6s
SII Sitkinak Islan 62.01 33 *eP* **P 02 00 09.0 +1.4**
comp=Z,91nm,0.8s
NVS Novosibirsk 62.58 325 *eP* **P 02 00 11.3 -0.1**
OHAK Old Harbor 62.68 32 *eP* **P 02 00 12.6 +0.6**
comp=Z,40nm,0.9s
RDOG Red Dog Mine 63.08 19 *eP* **P 02 00 15.0 +0.5**
comp=Z,14nm,0.7s
KDAK Kodiak Island 63.20 32 *eP* **P 02 00 16.4 +0.9**
comp=Z,58nm,1.3s
KDAK Kodiak Island 63.20 32 *eP* **P 02 00 16.4 +0.9**
KDAK pmax pmax
comp=Z,58nm,1.3s
KURK Kurchatov 64.48 320 *eP* **P 02 00 23.3 -0.7**
comp=Z,13nm,0.9s
KURK *eP* **P 02 00 24.1 +0.1**
KURK *ep*P **pP 02 00 51.7 -0.8**
KURK Kurchatov 64.48 320 ⇑ *iP* **P 02 00 24.4 +0.4**
KURK *i* *PP **pP 02 00 53.6 +1.1**
KURK pmax pmax
comp=Z,146nm,1.2s
KURBB Kurchatov Arra 64.53 320 P **P 02 00 24.1 -0.1**
comp=Z,12nm,0.8s,baz=100,slow=7.0,SNR=51
KURBB pP **pP 02 00 54.2 +1.4**
comp=Z,5.4nm,0.6s,baz=99,slow=7.0,SNR=4.0
BRLK Bradley Lake 64.61 30 *eP* **P 02 00 24.3 -0.4**
comp=Z,48nm,0.6s
PPLA Purkeypile 64.94 27 *eP* **P 02 00 27.3 +0.4**
comp=Z,28nm,0.7s
SKT Skwentna 64.95 28 *eP* **P 02 00 26.4 -0.4**
comp=Z,37nm,1.2s
SUA Susitna One 65.15 28 *eP* **P 02 00 28.2 -0.1**
comp=Z,18nm,0.9s
CAST Castle Rocks 65.16 26 *eP* **P 02 00 28.6 +0.4**
comp=Z,42nm,0.7s
KSH Kashi 65.33 307 P **P 02 00 33.3 +3.4**
KSH pP PcP 02 01 03.1 +1.9
KSH S **S 02 09 05.8 +0.9**
KSH pmax pmax
comp=Z,220nm,4.7s
KSH LR LR
comp=Z,240nm,3.9s
KSH LR LR
comp=Z,190nm,4.0s
IM3 Indian Mountai 65.37 23 *eP* **P 02 00 29.2 -0.3**
SEW Seward 65.40 30 *eP* **P 02 00 30.0 +0.3**
comp=Z,46nm,0.6s
RC01 Rabbit Creek A 65.52 29 *eP* **P 02 00 30.7 +0.2**
comp=Z,55nm,0.6s

NRIK Noril'sk 65.72 341 P **P 02 00 31.3 -0.4**
comp=Z,2.7nm,0.4s,baz=117,slow=6.0,SNR=8.5
BPAW Bear Paw Mtn. 65.83 26 *eP* **P 02 00 32.8 +0.2**
comp=Z,29nm,0.9s
PMR Palmer 65.93 28 *eP* **P 02 00 32.8 -0.3**
comp=Z,31nm,0.7s
PMR Palmer 65.93 28 *eP* **P 02 00 32.8 -0.3**
PMR pmax pmax
comp=Z,31nm,0.7s
TRF Thorofare Moun 65.93 26 *eP* **P 02 00 32.9 -0.5**
comp=Z,22nm,0.8s
GHO Glory Hole Cre 66.08 28 *eP* **P 02 00 34.1 -0.1**
comp=Z,38nm,0.8s
MLY Manley 66.22 25 *eP* **P 02 00 35.4 +0.3**
comp=Z,20nm,0.8s
SML Sawmill 66.36 28 *eP* **P 02 00 36.2 +0.2**
comp=Z,78nm,0.9s
SML Sawmill 66.36 28 *eP* **P 02 00 36.2 +0.2**
SML pmax pmax
comp=Z,78nm,0.9s
BWN Browne 66.49 26 *eP* **P 02 00 37.2 +0.5**
comp=Z,69nm,0.9s
RND Reindeer 66.54 27 *eP* **P 02 00 36.6 -0.5**
comp=Z,19nm,0.8s
RND Reindeer 66.54 27 *eP* **P 02 00 36.6 -0.5**
RND pmax pmax
comp=Z,19nm,0.8s
GLI Glacier Island 66.72 29 *eP* **P 02 00 38.4 +0.2**
comp=Z,32nm,0.6s
SCM Sheep Creek Mo 66.83 28 *eP* **P 02 00 39.4 +0.4**
comp=Z,91nm,1.0s
SCM Sheep Creek Mo 66.83 28 *eP* **P 02 00 39.4 +0.4**
SCM pmax pmax
comp=Z,91nm,1.0s
DHY Denali Highway 67.10 27 *eP* **P 02 00 40.8 0.0**
comp=Z,15nm,0.7s
WRH Wood River Hil 67.15 26 *eP* **P 02 00 40.5 -0.4**
comp=Z,27nm,0.8s
MDM Muhy Dome 67.22 25 *eP* **P 02 00 41.0 -0.3**
comp=Z,20nm,0.9s
CCB Clear Creek Bu 67.31 25 *eP* **P 02 00 41.3 -0.6**
comp=Z,9.1nm,0.6s
COLA College 67.36 25 *i P* **P 02 00 41.7 -0.4**
COLA pmax pmax
comp=Z,11nm,1.0s
DIV Divide 67.40 29 *eP* **P 02 00 43.5 +0.9**
comp=Z,26nm,0.7s
KLU Klutina 67.40 29 *eP* **P 02 00 43.2 +0.6**
comp=Z,27nm,0.7s
IL1 Eielson Array 67.73 25 *eP* **P 02 00 42.8 -1.7**
ILAR Eielson Array 67.73 25 P **P 02 00 43.2 -1.3**
comp=Z,14nm,0.7s,baz=255,slow=4.9,SNR=86
ILB Eielson Array 67.73 25 *eP* **P 02 00 43.2 -1.3**
RAGM Ragged Mountai 67.78 30 *eP* **P 02 00 44.9 0.0**
comp=Z,44nm,1.4s
TOLK Toolik Lake Re 67.80 21 *eP* **P 02 00 45.6 +0.6**
comp=Z,28nm,1.3s
PAX Paxson 67.92 27 *eP* **P 02 00 46.1 +0.2**
comp=Z,27nm,0.6s
PAX Paxson 67.92 27 *eP* **P 02 00 46.1 +0.2**
PAX pmax pmax
comp=Z,27nm,0.6s
BMRM Bremner River 67.92 30 *eP* **P 02 00 46.5 +0.6**
comp=Z,34nm,0.8s
HARP HAARP 67.95 28 *eP* **P 02 00 46.9 +0.9**
comp=Z,66nm,0.7s
OTUK Ortayu 68.31 316 P **P 02 00 49.7 +1.2**
OTUK pmax pmax
comp=Z,4.0nm,1.3s
RIDG Independ'e Rid 68.36 27 *eP* **P 02 00 48.5 -0.1**
comp=Z,28nm,1.0s
CRQM Cirque 68.59 30 *eP* **P 02 00 51.0 +0.7**
comp=Z,37nm,0.6s
DOT Dot Lake 68.68 27 *eP* **P 02 00 50.5 -0.1**
comp=Z,31nm,0.7s
SCRK Sand Creek 68.78 26 *eP* **P 02 00 51.1 -0.1**
comp=Z,16nm,0.8s
BVAR Borovoye Array 69.80 322 P **P 02 00 57.0 -0.6**
comp=Z,4.3nm,0.7s,baz=109,slow=6.9,SNR=11
BVAR pP **pP 02 01 27.7 +1.3**
comp=Z,2.3nm,0.7s,baz=110,slow=7.1,SNR=2.6
BRVK Borovoye 69.86 322 *c iP* **P 02 00 58.5 +0.6**
BRVK pmax pmax
comp=Z,11nm,0.8s
EGAK Eagle 70.13 26 *eP* **P 02 00 59.5 +0.1**
comp=Z,12nm,0.8s
DAWY Dawson 70.79 27 *eP* **P 02 01 04.1 +0.6**
comp=Z,16nm,0.8s
SKAG Skagway 72.36 32 *eP* **P 02 01 14.1 +1.3**
comp=Z,22nm,1.0s
BESE Bessie Mountai 72.58 33 *eP* **P 02 01 15.4 +1.1**
comp=Z,30nm,1.3s
WHY Whitehorse 72.62 31 *eP* **P 02 01 15.7 +1.1**
comp=Z,18nm,0.8s
JIS Juneau Island 72.82 33 *eP* **P 02 01 16.9 +1.3**
comp=Z,53nm,1.4s
INK Inuvik 73.54 23 P **P 02 01 19.3 -0.4**
comp=Z,8.9nm,0.8s,baz=281,slow=6.8,SNR=21
INK Inuvik 73.54 23 *eP* **P 02 01 19.1 -0.6**
comp=Z,11nm,0.8s
INK Inuvik 73.54 23 *eP* **P 02 01 19.1 -0.6**
INK pmax pmax
comp=Z,11nm,0.8s
DIB Dawson Inlet, 73.97 38 *eP* **P 02 01 24.2 +1.7**
comp=Z,20nm,0.8s
DLBC Dease Lake 75.11 33 *eP* **P 02 01 30.4 +1.3**
comp=Z,58nm,1.3s
ABKAR Akbulak array 76.47 318 *eP* **P 02 01 36.0 -0.9**
ARU Arti 76.58 325 P **P 02 01 37.6 +0.3**
comp=Z,2.7nm,0.5s,baz=106,slow=20,SNR=3.3
ARU Arti 76.58 325 *c iP* **P 02 01 37.3 -0.1**
ARU S **S 02 04 26.7**
ARU S **S 02 11 17.6 +3.6**
ARU SS **SS 02 16 12.1 +0.9**
ARU pmax pmax
comp=Z,7.0nm,1.7s
AKTO Aktyubinsk 77.57 319 P **P 02 01 41.3 -1.8**
comp=Z,0.7nm,0.4s,baz=92,slow=11,SNR=4.0
LLLB Lillooet 80.79 40 *eP* **P 02 02 02.1 +1.5**
comp=Z,9.9nm,0.9s
H04A Detroit Lake 81.77 46 *eP* **P 02 02 07.0 +1.1**
comp=Z,17nm,1.0s
YKW3 Yellowknife Ar 81.99 27 *eP* **P 02 02 06.4 -0.2**
comp=Z,12nm,0.8s
YBH Yreka Blue Hor 82.00 49 P **P 02 02 09.0 +1.8**
comp=Z,8.2nm,0.6s,baz=11,slow=2.7,SNR=9.5
YKA Yellowknife Ar 82.01 28 P **P 02 02 06.4 -0.3**
comp=Z,9.5nm,0.7s,baz=287,slow=5.3,SNR=107
PRGR Permogore 82.22 332 *eP* **P 02 02 05.5 -2.3**
PRGR pmax pmax
comp=Z,10.0nm,0.7s
LTY Liberty 82.26 43 *eP* **P 02 02 09.3 +0.9**
comp=Z,5.2nm,0.9s
PINE Pine Mountain 82.83 47 *eP* **P 02 02 13.0 +1.4**
comp=Z,25nm,0.8s
B08A Colville Reser 82.89 42 *eP* **P 02 02 12.3 +0.7**
comp=Z,22nm,1.3s
K05A Summer Lake 83.10 48 *eP* **P 02 02 14.4 +1.3**
comp=Z,18nm,1.0s
SPA0 Spitsbergen Ar 83.51 351 *eP* **P 02 02 14.6 +0.3**
SPITS Spitsbergen Ar 83.51 351 P **P 02 02 14.6 +0.3**
comp=Z,1.4nm,0.6s,baz=41,slow=5.7,SNR=7.3
MOD Modoc Plateau 83.71 49 *eP* **P 02 02 17.2 +1.0**
comp=Z,14nm,1.2s
RES Resolute Bay 83.78 13 P **P 02 02 15.4 -0.2**
comp=Z,3.6nm,0.6s,baz=340,slow=6.4,SNR=21
RES Resolute Bay 83.78 13 *eP* **P 02 02 14.9 -0.8**
comp=Z,3.9nm,0.8s
RES Resolute Bay 83.78 13 *eP* **P 02 02 14.9 -0.8**
RES pmax pmax
comp=Z,4.0nm,0.8s
AFDM Forest Hills D 83.90 52 *eP* **P 02 02 18.4 +1.4**
comp=Z,3.2nm,0.8s
E09A Wood Farm, Sta 84.12 44 *eP* **P 02 02 19.2 +1.3**
comp=Z,7.8nm,0.8s
BEKR Beckworth 84.14 51 *eP* **P 02 02 19.6 +1.2**
comp=Z,8.7nm,0.6s
NEW Newport 84.35 42 P **P 02 02 19.9 +0.7**
comp=Z,11nm,0.9s,baz=289,slow=4.5,SNR=12
NEW Newport 84.35 42 *eP* **P 02 02 20.1 +1.0**
comp=Z,14nm,1.1s
NEW Newport 84.35 42 *eP* **P 02 02 20.1 +1.0**
NEW pmax pmax
comp=Z,14nm,1.1s
CMB Columbia Colle 84.56 52 *eP* **P 02 02 21.8 +1.4**
comp=Z,5.1nm,0.8s
CMB Columbia Colle 84.56 52 *eP* **P 02 02 21.8 +1.4**

CMB pmax pmax
comp=Z,5.0nm,0.8s
TMCR Tamitsa 84.71 335 *eP* **P 02 02 19.1 -1.4**
TMCR pmax pmax
comp=Z,16nm,0.9s
WVOR Wild Horse Val 84.79 48 *eP* **P 02 02 22.8 +1.2**
comp=Z,5.9nm,0.8s
WVOR Wild Horse Val 84.79 48 *eP* **P 02 02 22.8 +1.2**
WVOR pmax pmax
comp=Z,6.0nm,0.8s
MDPB Devils Postpil 85.66 52 *eP* **P 02 02 29.0 +2.8**
comp=Z,22nm,0.8s
RCCR Rock Creek Can 85.97 53 *eP* **P 02 02 30.6 +2.8**
NVAR Mina Array Bea 86.05 52 P **P 02 02 29.5 +1.4**
comp=Z,4.0nm,0.5s,baz=272,slow=5.6,SNR=13
NV01 Mina Array Sit 86.05 52 *eP* **P 02 02 29.0 +1.0**
BCW Bitter Crk WRg 86.07 55 *eP* **P 02 02 31.9 +3.8**
WALA Waterton Lakes 86.17 40 *eP* **P 02 02 29.9 +1.6**
comp=Z,19nm,0.9s
JTMT Jette 86.32 42 *eP* **P 02 02 30.4 +1.3**
comp=Z,13nm,1.0s
BMN Battle Mountai 86.33 49 *eP* **P 02 02 29.4 +0.1**
comp=Z,9.9nm,1.4s
BMN Battle Mountai 86.33 49 *eP* **P 02 02 29.4 +0.1**
BMN pmax pmax
comp=Z,10.0nm,1.4s
ARA0 ARCESS Array S 86.66 342 *eP* **P 02 02 28.6 -1.4**
ARCES ARCESS Array B 86.66 342 P **P 02 02 28.6 -1.4**
comp=Z,5.3nm,0.7s,baz=66,slow=6.1,SNR=13
ARCES ARCESS Array B 86.66 342 *eP* **P 02 02 28.9 -1.2**
ARCES pmax pmax
comp=Z,5.0nm,0.7s
MSO Missoula 86.82 43 *eP* **P 02 02 31.6 +0.1**
comp=Z,10nm,1.5s
HLID Hailey 87.46 46 *eP* **P 02 02 35.8 +1.0**
comp=Z,9.5nm,0.8s
GSC Goldstone, Bar 88.04 54 *eP* **P 02 02 39.1 +1.6**
comp=Z,4.8nm,0.8s
GSC Goldstone, Bar 88.04 54 *eP* **P 02 02 39.1 +1.6**
GSC pmax pmax
comp=Z,5.0nm,0.8s
R11A Troy Canyon, C 88.12 51 *eP* **P 02 02 39.5 +1.5**
comp=Z,3.7nm,0.8s
MCMT McKenzie Canyo 88.15 44 *eP* **P 02 02 39.2 +1.1**
HRY Holter Researc 88.23 42 *eP* **P 02 02 40.1 +1.8**
DAG Danmarks Havn 88.68 356 P **P 02 02 38.6 -1.0**
DAG pmax pmax
comp=Z,5.0nm,0.8s
BOZ Bozeman (W) 88.72 43 *eP* **P 02 02 41.7 +1.0**
comp=Z,3.4nm,0.8s
BOZ Bozeman (W) 88.72 43 *eP* **P 02 02 41.7 +1.0**
BOZ pmax pmax
comp=Z,3.0nm,0.8s
BORC Borrego Spring 88.91 56 *eP* **P 02 02 46.0 +4.4**
VSR Storozhevoye 88.94 323 *eP* **P 02 02 38.4 -2.9**
VSR pmax pmax
comp=Z,9.0nm,0.6s
SHPR Sheep Range 88.98 53 *eP* **P 02 02 43.9 +1.9**
comp=Z,3.5nm,0.7s
PSUT Pine Spring 89.37 50 *eP* **P 02 02 45.3 +1.4**
comp=Z,8.6nm,0.9s
YMR Madison River 89.47 44 *eP* **P 02 02 46.5 +2.2**
comp=Z,19nm,1.2s
YHH Holmes Hill 89.51 44 *eP* **P 02 02 46.5 +2.0**
comp=Z,8.6nm,1.1s
DUG Dugway, Tooele 89.63 49 *eP* **P 02 02 46.3 +1.3**
comp=Z,9.3nm,0.8s
DUG Dugway, Tooele 89.63 49 *eP* **P 02 02 46.3 +1.3**
DUG pmax pmax
comp=Z,9.0nm,0.8s
YFT Old Faithful 89.64 44 *eP* **P 02 02 48.3 +3.2**
comp=Z,10nm,1.0s
IMW Indian Meadow 89.75 45 *eP* **P 02 02 47.4 +1.7**
comp=Z,6.5nm,0.8s
FXWY Fox Creek 89.78 45 *eP* **P 02 02 47.2 +1.5**
comp=Z,8.4nm,1.4s
H17A Grant Village 89.83 44 *eP* **P 02 02 47.9 +1.9**
comp=Z,9.7nm,1.0s
TPAW Teton Pass 89.88 45 *eP* **P 02 02 47.8 +1.5**
comp=Z,3.3nm,0.6s
MOOW Moose Ponds 89.93 45 *eP* **P 02 02 48.0 +1.5**
comp=Z,6.3nm,1.2s
REDW Red Top Meadow 89.99 45 *eP* **P 02 02 48.2 +1.5**
comp=Z,6.9nm,1.3s
CCUT Cedar City 90.04 51 *eP* **P 02 02 48.9 +1.8**
comp=Z,8.2nm,1.4s
HWUT Hardware Ranch 90.07 47 *eP* **P 02 02 48.2 +1.1**
comp=Z,6.8nm,0.6s
Y12C Blythe 90.28 55 *eP* **P 02 02 49.6 +1.6**
comp=Z,6.8nm,0.8s
TCUT Toone Canyon 90.34 47 *eP* **P 02 02 49.6 +1.2**
comp=Z,10nm,0.7s
W13A Hualapai Mount 90.39 54 *eP* **P 02 02 50.1 +1.4**
comp=Z,3.6nm,0.8s
RLMT Red Lodge 90.45 43 *eP* **P 02 02 50.6 +1.8**
comp=Z,6.9nm,1.0s
JLU Jordanelle 90.48 48 *eP* **P 02 02 50.3 +1.2**
comp=Z,6.1nm,0.9s
KNB Kanab 90.61 52 *eP* **P 02 02 51.7 +2.0**
comp=Z,6.3nm,0.8s
FIA1 FINESS Array S 90.83 335 *eP* **P 02 02 47.5 -2.4**
FIA1 *eP* **P 02 02 47.9 -1.9**
FIA0 FINESS Array S 90.83 335 *eP* **P 02 02 47.8 -2.1**
FIA0 FINESS Array S 90.83 335 *eP* **P 02 02 47.8 -2.1**
FINES FINESS Array B 90.83 335 P **P 02 02 47.8 -2.1**
comp=Z,7.0nm,0.5s,baz=69,slow=4.7,SNR=115
FINES LR LR 02 45 05.9
comp=Z,51nm,20.0s,baz=313,slow=36
FFC Flin Flon 90.94 32 *eP* **P 02 02 50.7 +0.1**
comp=Z,9.9nm,1.1s
FFC Flin Flon 90.94 32 *eP* **P 02 02 50.7 +0.1**
FFC pmax pmax
comp=Z,10.0nm,1.1s
PD31 Pinedale Array 91.08 45 *eP* **P 02 02 52.4 +0.5**
PDAR Pinedale Array 91.08 45 P **P 02 02 52.0 +0.2**
comp=Z,1.7nm,0.6s,baz=237,slow=3.3,SNR=14
PDAR Pinedale Array 91.08 45 *eP* **P 02 02 51.8 0.0**
TMUT Trail Mountain 91.09 49 *eP* **P 02 02 53.9 +1.9**
comp=Z,5.4nm,0.8s
Y14A Wickenburg 91.43 55 *eP* **P 02 02 54.8 +1.4**
comp=Z,5.2nm,0.8s
SRU San Rafael Swe 91.65 49 *eP* **P 02 02 55.4 +0.9**
comp=Z,5.2nm,0.7s
SRU San Rafael Swe 91.65 49 *eP* **P 02 02 55.4 +0.9**
SRU pmax pmax
comp=Z,5.0nm,0.7s
P18A Preston Nutter 91.68 48 *eP* **P 02 02 56.2 +1.5**
comp=Z,3.3nm,0.8s
LAO LASA Array 91.84 41 *eP* **P 02 02 55.7 +0.6**
comp=Z,32nm,1.0s
WUAZ Wupatki 92.20 53 *eP* **P 02 02 59.0 +1.9**
comp=Z,5.7nm,0.8s
K22A Casper 93.21 45 *eP* **P 02 03 02.4 +0.8**
comp=Z,12nm,1.2s
PV02 Paradox Valley 93.28 49 *eP* **P 02 03 02.8 +0.8**
comp=Z,5.4nm,0.9s
SMCO Snowmass 94.21 48 *eP* **P 02 03 07.5 +1.0**
comp=Z,5.3nm,1.2s
RSSD Black Hills 94.29 43 *eP* **P 02 03 06.9 +0.4**
comp=Z,5.6nm,0.6s
RSSD Black Hills 94.29 43 *eP* **P 02 03 06.9 +0.4**
RSSD pmax pmax
comp=Z,6.0nm,0.6s
ULM Lac du Bonnet 96.37 35 P **P 02 03 14.7 -0.9**
comp=Z,1.6nm,0.6s,baz=307,slow=6.9,SNR=5.1
ULM Lac du Bonnet 96.37 35 *eP* **P 02 03 15.3 -0.3**
ULM pmax pmax
comp=Z,2.0nm,0.6s
HFS Hagfors 96.42 338 P **P 02 03 13.4 -2.2**
comp=Z,2.2nm,0.6s,baz=116,slow=3.4,SNR=17
NB2 NORSAR Subarra 96.66 339 P **P 02 03 14.5 -2.2**
comp=Z,1.0nm,0.7s,baz=52,slow=5.1
NB200 NORSAR Array S 96.66 339 *eP* **P 02 03 14.7 -2.0**
NOA NORSAR Array B 96.66 339 P **P 02 03 14.7 -2.0**
comp=Z,1.1nm,0.7s,baz=46,slow=4.5,SNR=6.8
TXAR Lajitas Array 100.50 56 P **Pdif 02 03 34.4 -0.3**
comp=Z,0.2nm,0.6s,baz=270,slow=5.4,SNR=4.9
ESDC Sonseca Array 119.28 333 PKP **PKPdf 02 08 35.3 -0.5**
comp=Z,0.2nm,0.4s,baz=47,slow=1.8,SNR=3.3
SNAA Sanae 119.53 191 PKP **PKPdf 02 08 34.6 -0.7**
comp=Z,0.7nm,0.5s,baz=225,slow=17,SNR=5.8
LSZ Lusaka 119.55 260 *e*PKPdf **PKPdf 02 08 37.7 +0.8**
TOA1 Torodi Ar. Sit 134.99 306 *e*PKPdf **PKPdf 02 09 06.6 +0.3**
TORD Torodi Ar. Bea 134.99 306 PKP **PKPdf 02 09 06.6 +0.3**
comp=Z,0.6nm,0.6s,baz=55,slow=1.5,SNR=13
SDV Santo Domingo 137.43 59 PKP **PKPdf 02 09 10.8 -0.3**
comp=Z,11nm,1.0s,baz=224,slow=4.2,SNR=7.4

SDV	Santo Domingo	137.43	59	*e*PKPdf	PKPdf	02 09 11.8	+0.7
DBIC	Dimbokro	143.99	303	PKP	PKPbc	02 09 20.4	-0.3
	comp=Z,4.6nm,0.6s,baz=38,slow=3.3,SNR=13						
KIC	Kosan Boka	144.07	303	*e*PKP1	PKPbc	02 09 20.9	-0.2
	comp=Z,12nm,0.7s						
TIC	Toumodi	144.13	303	*e*PKP1	PKPab	02 09 20.1	-0.7
LIC	Lamto	144.38	303	*e*PKP1	PKPab	02 09 21.0	-0.7
	comp=Z,45nm,0.9s						
MNMC	Minye Minye	146.08	103	*e*PKPdf	PKPbc	02 09 27.2	-0.3
LPAZ	La Paz	147.52	98	PKPbc	PKPbc	02 09 30.8	-1.3
	comp=Z,3.7nm,0.6s,baz=324,slow=1.4,SNR=15						
LPAZ	La Paz	147.52	98	*e*PKP2	PKPbc	02 09 30.9	-1.2
LPAZ				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SAML	Samuel	151.44	83	*e*PKPdf	PKPdf	02 09 35.6	+0.7
SAML	Samuel	151.44	83	*e*PKIKP	PKPdf	02 09 35.6	+0.7
PTGA	Pitinga	151.47	64	*e*PKPdf	PKPdf	02 09 36.1	+1.1
PTGA				*e*PKPbc	PKiKP	02 09 41.7	+0.1

ISCJB ***05*** *01:58:55.6±0.5, 37°.23N±0°.02×20°.10E±0°.02, h9km±4km, mb3.8/14, MS3.3/3, Error ellipse: s-maj=3.9km s-min=2.0km az=32.5*
IDC ***05*** *01:58:57.5±0.8, 37°.41N×20°.62E, h0km, mb3.9/15, mb1 3.9/24, mb1mx3.8/70, mbtmp3.8/24, ML3.4/8, MS3.2/8, Ms1 3.2/8, ms1mx2.9/68, Error ellipse: s-maj=16.5km s-min=13.4km az=174.0*
CSEM ***05*** *01:58:58.4±0.2, 37°.16N×20°.21E, h20km, ML3.9, Error ellipse: s-maj=5.1km s-min=2.7km az=33.0*
THE ***05*** *01:58:58.1, 37°.24N×20°.30E, h0km, ML3.7/59, Error ellipse: s-maj=1.4km s-min=0.5km az=236.0*
PDG ***05*** *01:58:59.9±0.5, 37°.38N×20°.43E, h16km±1km, ML4.0/9, Error ellipse: s-maj=1.0km s-min=1.2km az=0.0*
ATH ***05*** *01:58:59.3, 37°.34N×20°.45E, h22km±1km, ML3.9/6, Error ellipse: s-maj=2.4km s-min=0.7km az=58.0*
BEO ***05*** *01:59:01.7±0.7, 37°.49N×20°.47E, h10km*
TIR ***05*** *01:59:01.9, 37°.76N×19°.51E, h20km, Md3.7/6*
ISC 05 01:58:58.9±1.5, 37°.31N±0°.03×20°.28E±0°.03, h13km±10km, n361, σ1§66/526, mb4.0/14, MS3.3/3, 25C-28D, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KFL	Anninata	0.89	27	P	Pb	01 59 14.8	-1.5
KFL				S	Sb	01 59 26.3	-1.7
KFL				AML	AML	01 59 31.6	
	comp=N,61060μm,0.4s						
KFL				AML	AML	01 59 34.8	
	comp=E,74147μm,0.4s						
KFL	Anninata	0.89	27	P	Pb	01 59 15.5	-0.7
KFL				S	Sn	01 59 29.5	-0.4
KFL	Anninata	0.89	27	P	Pb	01 59 15.5	-0.7
KFL				S	Sn	01 59 29.5	-0.4
VLS	Valsamata	0.90	16	P	Pb	01 59 15.9	-0.5
VLS				S	Sb	01 59 26.7	-1.5
VLS				AML	AML	01 59 30.9	
	comp=E,16416μm,0.6s						
VLS				AML	AML	01 59 37.8	
	comp=N,16634μm,0.5s						
VLS	Valsamata	0.90	16	P	Pb	01 59 15.8	-0.5
VLS				S	Sn	01 59 29.7	-0.4
VLS	Valsamata	0.90	16	P	Pb	01 59 15.8	-0.5
VLS				S	Sn	01 59 29.7	-0.4
VTN	Vitineika	0.94	50	P	Pb	01 59 15.9	-1.1
VTN				S	Sn	01 59 30.6	-0.4
VTN	Vitineika	0.94	50	P	Pb	01 59 15.9	-1.1
VTN				S	Sn	01 59 30.6	-0.4
MES3	Kyparissia	1.11	93	P	Pb	01 59 19.0	-0.9
MES3				S	Sb	01 59 31.1	-3.3
MES3	Kyparissia	1.11	93	P	Pb	01 59 18.6	-1.4
AMT	Artemida-Makis	1.16	79	P	Pn	01 59 19.4	-1.4
AMT				S	Sb	01 59 32.0	-3.7
AMT	Artemida-Makis	1.16	79	P	Pn	01 59 19.9	-0.9
AMT				S	Sg	01 59 37.6	+1.3
AMT	Artemida-Makis	1.16	79	P	Pn	01 59 19.9	-0.9
AMT				S	Sg	01 59 37.6	+1.3
FSK	Fiskardo	1.17	11	P	Pn	01 59 20.8	-0.1
FSK				S	Sg	01 59 39.6	+3.0
MES2	Methoni	1.24	113	P	Pn	01 59 20.9	-1.0
MES2				S	Sb	01 59 35.8	-2.3
MES2				AML	AML	01 59 45.6	
	comp=N,14677μm,1.2s						
MES2				AML	AML	01 59 50.2	
	comp=E,10776μm,1.0s						
MES2	Methoni	1.24	113	P	Pn	01 59 20.9	-1.0
MES2				S	Sb	01 59 36.2	-1.8
PYL	PYLOS	1.24	109	P	Pn	01 59 20.3	-1.6
PYL				S	Sb	01 59 37.4	-0.7
PYL				AML	AML	01 59 41.5	
	comp=E,5294μm,0.5s						
PYL				AML	AML	01 59 45.3	
	comp=N,5471μm,0.8s						
PYL	PYLOS	1.24	109	P	Pn	01 59 20.7	-1.2
PYL				S	Sb	01 59 37.5	-0.6
PYL	PYLOS	1.24	109	P	Pn	01 59 20.5	-1.4
PYL				S	Sb	01 59 36.9	-1.2
DRO	Drossia	1.30	60	P	Pn	01 59 22.0	-0.8
DRO				S	Sg	01 59 41.9	+1.0
DRO	Drossia	1.30	60	P	Pn	01 59 22.0	-0.8
DRO				S	Sg	01 59 41.9	+1.0
ITM	Ithomi	1.32	95	P	Pn	01 59 22.5	-0.6
ITM				S	Sn	01 59 38.8	-1.7
ITM				AML	AML	01 59 54.9	
	comp=E,4498μm,0.6s						
ITM				AML	AML	01 59 57.9	
	comp=N,7454μm,1.4s						
ITM	Ithomi	1.32	95	P	Pn	01 59 22.2	-0.8
ITM				S	Sg	01 59 41.4	-0.1
ITM	Ithomi	1.32	95	P	Pn	01 59 22.0	-1.0
ITM				S	Sg	01 59 41.4	-0.1
MGNA	Meganis‚„	1.40	17	P	Pb	01 59 25.5	+0.6
MGNA				S	Sn	01 59 42.2	-0.3
MGNA				AML	AML	01 59 53.5	
	comp=N,5264μm,0.5s						
MGNA				AML	AML	01 59 53.9	
	comp=E,5774μm,0.6s						
MGNA	Meganis‚„	1.40	17	P	Pb	01 59 25.1	+0.2
PDO	Prodromos	1.47	29	P	Pb	01 59 25.8	-0.3
PDO				S	Sg	01 59 47.0	+0.8
PDO	Prodromos	1.47	29	P	Pb	01 59 25.8	-0.3
PDO				S	Sg	01 59 47.0	+0.8
LKD2	Lefkada island	1.50	11	P	Pb	01 59 26.9	+0.3
LKD2				S	Sb	01 59 46.7	+1.0
LKD2	Lefkada island	1.50	11	P	Pb	01 59 27.0	+0.3
LKD2				S	Sg	01 59 48.3	+1.0
LKD2	Lefkada island	1.50	11	P	Pb	01 59 26.6	-0.1
LKD2				S	Sg	01 59 48.3	+1.0
UPR	University Cam	1.54	50	P	Pn	01 59 25.0	-0.9
UPR	University Cam	1.54	50	P	Pb	01 59 27.9	+0.7
UPR				S	Sg	01 59 49.0	+0.6
UPR	University Cam	1.54	50	P	Pn	01 59 25.4	-0.6
UPR				S	Sg	01 59 49.0	+0.6
TRIP	Tripoli	1.60	82	P	Pn	01 59 25.9	-1.0
TRIP	Tripoli	1.60	82	P	Pn	01 59 26.5	-0.4
TRIP				S	Sb	01 59 49.5	+1.0
TRIP	Tripoli	1.60	82	P	Pn	01 59 26.5	-0.4
TRIP				S	Sb	01 59 49.5	+1.0
PVO	Paravola	1.63	37	P	Pb	01 59 28.6	-0.2
PVO				S	Sg	01 59 51.4	-0.1
PVO	Paravola	1.63	37	P	Pb	01 59 28.6	-0.2
PVO				S	Sg	01 59 51.4	-0.1
LAKA	Lakka	1.64	55	P	Pb	01 59 28.4	-0.5
LAKA	Lakka	1.64	55	P	Pn	01 59 28.0	+0.7
LAKA				S	Sb	01 59 50.1	+0.7
LAKA	Lakka	1.64	55	P	Pn	01 59 27.8	+0.5
LAKA				S	Sb	01 59 50.1	+0.7
VLX	Vlachokerasia	1.68	87	P	Pn	01 59 27.1	-0.9
VLX	Vlachokerasia	1.68	87	P	Pn	01 59 27.4	-0.6
VLX				S	Sb	01 59 51.7	+1.1
VLX	Vlachokerasia	1.68	87	P	Pn	01 59 27.4	-0.6
VLX				S	Sb	01 59 51.7	+1.1
EFP	Efpalio	1.70	49	P	Pn	01 59 29.3	+1.0
EFP	Efpalio	1.70	49	P	Pn	01 59 29.2	+1.0
EFP				S	Sg	01 59 53.7	0.0
EFP	Efpalio	1.70	49	P	Pn	01 59 28.7	+0.5
EFP				S	Sg	01 59 53.7	0.0
DYR	Agios Nikonas	1.73	108	P	Pn	01 59 28.1	-0.6
DYR				S	Sn	01 59 50.8	+0.1
DYR	Agios Nikonas	1.73	108	P	Pn	01 59 28.1	-0.6
DYR				S	Sn	01 59 50.8	+0.1
GUR	Goura	1.75	69	P	Pn	01 59 29.4	+0.4
GUR	Goura	1.75	69	P	Pn	01 59 28.9	-0.1
GUR				S	Sb	01 59 53.2	+0.3
GUR	Goura	1.75	69	P	Pn	01 59 29.0	-0.1
GUR				S	Sb	01 59 53.2	+0.3
TRIZ	Trizonia	1.77	53	P	Pb	01 59 30.5	-0.6
TRIZ	Trizonia	1.77	53	P	Pn	01 59 29.9	+0.8
TRIZ				S	Sb	01 59 53.8	+0.6
TRIZ	Trizonia	1.77	53	P	Pn	01 59 29.7	+0.6
TRIZ				S	Sb	01 59 53.8	+0.6
SERG	Sergoula	1.79	51	P	Pn	01 59 30.1	+0.7
SERG				S	Sb	01 59 54.2	+0.4
SERG	Sergoula	1.79	51	P	Pn	01 59 30.1	+0.7
SERG				S	Sb	01 59 54.2	+0.4
ANX	Ano Chora	1.82	45	P	Pn	01 59 31.2	+1.2
ANX				S	Sb	01 59 55.5	+0.6
ANX	Ano Chora	1.82	45	P	Pn	01 59 31.2	+1.2
ANX				S	Sb	01 59 55.5	+0.6
KALE	Kalithea	1.82	53	P	Pn	01 59 31.0	+1.0
KALE	Kalithea	1.82	53	P	Pn	01 59 30.9	+0.9
KALE				S	Sb	01 59 56.4	+1.5
KALE	Kalithea	1.82	53	P	Pn	01 59 30.4	+0.4
KALE				S	Sb	01 59 56.4	+1.5
DSL	Palaion Diasel	1.93	19	P	Pb	01 59 33.0	-0.9
DSL				S	Sb	01 59 58.3	+0.4
DSL	Palaion Diasel	1.93	19	P	Pb	01 59 33.0	-0.9
DSL				S	Sb	01 59 58.3	+0.4
EVR	Evrytania	2.01	37	P	Pb	01 59 34.5	-0.7
EVR				S	Sb	02 00 00.7	+0.5
EVR	Evrytania	2.01	37	P	Pb	01 59 34.5	-0.7
EVR				S	Sb	02 00 00.7	+0.5
THAL	Thalero	2.03	68	P	Pn	01 59 32.3	-0.4
THAL	Thalero	2.03	68	P	Pn	01 59 33.0	+0.3
THAL				S	Sb	01 59 59.8	-0.8
THAL	Thalero	2.03	68	P	Pn	01 59 33.0	+0.3
THAL				S	Sb	01 59 59.8	-0.8
DSF	Desfina	2.09	58	P	Pn	01 59 33.8	+0.2
DSF	Desfina	2.09	58	P	Pn	01 59 34.2	+0.6
DSF				S	Sb	02 00 03.0	+0.4
DSF	Desfina	2.09	58	P	Pn	01 59 34.2	+0.6
DSF				S	Sb	02 00 03.0	+0.4
DLFA	Delphi	2.10	56	P	Pn	01 59 33.9	+0.1
DLFA	Delphi	2.10	56	P	Pn	01 59 33.8	0.0
VLI	Veliai	2.21	105	P	Pn	01 59 35.7	+0.5
VLI	Veliai	2.21	105	P	Pn	01 59 36.1	+0.9
VLI				S	Sb	02 00 04.5	-1.4
VLI	Veliai	2.21	105	P	Pn	01 59 35.5	+0.3
VLI				S	Sb	02 00 04.5	-1.4
IGT	Igoumenitsa	2.22	1	*e*Pn	Pn	01 59 37.2	+1.9
IGT				*e*Sg	Sb	02 00 07.1	+0.9
IGT	Igoumenitsa	2.22	1	P	Pn	01 59 35.0	-0.4
IGT	Igoumenitsa	2.22	1	P	Pn	01 59 36.1	+1.2
IGT				S	Sb	02 00 06.5	+0.3
IGT	Igoumenitsa	2.22	1	P	Pn	01 59 35.8	+0.5
IGT	Igoumenitsa	2.22	1	*e*Pn	Pn	01 59 37.2	+1.9
IGT				S	Sb	02 00 06.5	+0.3
LTK	Loutraki	2.25	71	P	Pn	01 59 34.6	-1.2
LTK	Loutraki	2.25	71	P	Pn	01 59 35.2	-0.6
LTK				S	Sb	02 00 06.1	-1.0
LTK	Loutraki	2.25	71	P	Pn	01 59 35.2	-0.6
LTK				S	Sb	02 00 06.1	-1.0
PROD	Prodromos	2.28	65	P	Pn	01 59 35.7	-0.5
PROD	Prodromos	2.28	65	P	Pn	01 59 35.9	-0.3
KRND	KRANIDI	2.29	87	P	Pn	01 59 34.4	-1.9
KRND	KRANIDI	2.29	87	P	Pn	01 59 35.4	-0.9
KRND				S	Sb	02 00 06.8	-1.4
KRND	KRANIDI	2.29	87	P	Pn	01 59 35.4	-0.9
KRND				S	Sb	02 00 06.8	-1.4
MNVA	Monemvasia	2.29	105	P	Pn	01 59 37.8	+1.4
MNVA	Monemvasia	2.29	105	P	Pn	01 59 37.2	+0.8
AGG	Agios Georgios	2.35	43	P	Pn	01 59 39.0	+1.8
AGG	Agios Georgios	2.35	43	P	Pn	01 59 38.2	+1.0
AGG				S	Sb	02 00 08.9	-1.1
AGG	Agios Georgios	2.35	43	P	Pn	01 59 38.2	+1.0
AGG				S	Sb	02 00 08.9	-1.1
JAN	Janina	2.38	11	P	Pb	01 59 40.0	-1.6
JAN	Janina	2.38	11	P	Pn	01 59 39.6	+2.0
JAN				S	Sb	02 00 10.9	-0.1
JAN	Janina	2.38	11	P	Pn	01 59 39.4	+1.8
JAN				S	Sb	02 00 10.9	-0.1
KEK	Kerkira	2.43	351	P	Pn	01 59 38.0	-0.2
KEK	Kerkira	2.43	351	P	Pb	01 59 40.5	-1.9
KEK				S	Sb	02 00 12.3	+0.1
KEK	Kerkira	2.43	351	P	Pn	01 59 39.0	+0.8
KEK				S	Sb	02 00 12.3	+0.1
KASA	Kassiopi	2.44	354	P	Pn	01 59 39.6	+1.2
KASA	Kassiopi	2.44	354	P	Pn	01 59 39.4	+1.5
KYTH	Kithira	2.46	114	P	Pn	01 59 40.9	+2.2
KYTH	Kithira	2.46	114	P	Pn	01 59 39.9	+1.3
KYTH				S	Sn	02 00 09.9	+1.4
LKR	Lokris	2.53	57	P	Pn	01 59 38.6	-1.0
LKR	Lokris	2.53	57	P	Pn	01 59 39.2	-0.4
LKR				S	Sb	02 00 13.1	-2.1
LKR	Lokris	2.53	57	P	Pn	01 59 39.2	-0.4
LKR				S	Sb	02 00 13.1	-2.1
VIL2	Platees	2.53	68	P	Pn	01 59 37.7	-2.0
VILL	Villia	2.55	70	P	Pn	01 59 38.9	-1.1
VILL				S	Sb	02 00 13.7	-2.1
VILL	Villia	2.55	70	P	Pn	01 59 38.9	-1.1
VILL				S	Sb	02 00 13.7	-2.1
SRN	Sarande	2.57	355	P	Pn	01 59 41.1	+0.9
SRN				S	Sb	02 00 14.8	-1.6
SRN	Sarande	2.57	355	*i* PN	Pn	01 59 41.8	+1.6
SRN				*i* SN	Sn	02 00 10.9	-0.4
SRN	Sarande	2.57	355	P	Pn	01 59 41.1	+0.9
SRN	Sarande	2.57	355	*i* Pn	Pn	01 59 41.8	+1.6
SRN				*i* Sn	Sn	02 00 10.9	-0.4
SRN				S	Sb	02 00 14.8	-1.6
THL	Klokotos Trika	2.63	31	P	Pn	01 59 42.5	+1.6
THL	Klokotos Trika	2.63	31	P	Pn	01 59 42.1	+1.1
THL				S	Sb	02 00 17.3	-0.7
THL	Klokotos Trika	2.63	31	P	Pn	01 59 42.1	+1.1
THL				S	Sb	02 00 17.3	-0.7
SMIA	Simia	2.79	55	P	Pn	01 59 43.2	0.0
SMIA				S	Sb	02 00 20.8	-1.9
SMIA	Simia	2.79	55	P	Pn	01 59 43.2	0.0
SMIA				S	Sb	02 00 20.8	-1.9
ANKY	Antikythira Is	2.83	120	P	Pn	01 59 42.5	-1.2
ANKY	Antikythira Is	2.83	120	P	Pn	01 59 44.2	+0.5
ANKY				S	Sn	02 00 18.7	+1.1
ANKY	Antikythira Is	2.83	120	P	Pn	01 59 43.4	-0.3
VLY	Voula,Athens	2.84	78	P	Pn	01 59 42.7	-1.2
VLY				S	Sn	02 00 20.4	+2.3
VLY	Voula,Athens	2.84	78	P	Pn	01 59 42.7	-1.2
VLY				S	Sn	02 00 20.4	+2.3
LRSO	Larissa Observ	2.88	35	P	Pn	01 59 45.3	+0.9
LRSO				S	Sb	02 00 23.0	-2.2
LRSO	Larissa Observ	2.88	35	P	Pn	01 59 45.3	+0.9
LRSO				S	Sb	02 00 23.0	-2.2
PTL	Penteli	2.94	74	P	Pn	01 59 42.8	-2.4
PTL	Penteli	2.94	74	P	Pn	01 59 44.6	-0.7
PTL				S	Sn	02 00 22.3	+1.9
PTL	Penteli	2.94	74	P	Pn	01 59 44.6	-0.7
PTL				S	Sn	02 00 22.3	+1.9
PENT	Pentalofos	2.96	13	P	Pn	01 59 48.2	+2.6
PENT				S	Sb	02 00 26.0	-1.5
PENT	Pentalofos	2.96	13	P	Pn	01 59 48.2	+2.6
PENT				S	Sb	02 00 26.0	-1.5
FYTO	Fytoko, Volos	2.96	44	P	Pn	01 59 44.6	-0.9
FYTO	Fytoko, Volos	2.96	44	P	Pn	01 59 45.5	0.0
FYTO				S	Sb	02 00 24.4	-3.1
FYTO	Fytoko, Volos	2.96	44	P	Pn	01 59 45.5	0.0
FYTO				S	Sb	02 00 24.4	-3.1
DION	Dionisos Attik	3.00	74	P	Pn	01 59 44.0	-2.1
DION	Dionisos Attik	3.00	74	P	Pn	01 59 45.1	-1.0
NEO	Neokhori	3.06	48	P	Pn	01 59 44.7	-2.2
NEO	Neokhori	3.06	48	P	Pn	01 59 46.1	-0.8
NEO				S	Sn	02 00 26.5	+3.2
NEO	Neokhori	3.06	48	P	Pn	01 59 46.1	-0.8
NEO				S	Sn	02 00 26.5	+3.2
EREA	Eretria	3.10	68	P	Pn	01 59 48.4	+1.0
EREA				S	Sn	02 00 27.8	+3.5
EREA	Eretria	3.10	68	P	Pn	01 59 48.4	+1.0
EREA				S	Sn	02 00 27.8	+3.5
SKIA	Skiathos	3.12	53	P	Pn	01 59 47.1	-0.6
SKIA	Skiathos	3.12	53	P	Pn	01 59 47.6	-0.1
NEST	Nestorio	3.16	11	P	Pn	01 59 51.8	+3.5
NEST	Nestorio	3.16	11	P	Pn	01 59 50.9	+2.6
NEST				S	Sb	02 00 29.9	-3.4
NEST	Nestorio	3.16	11	P	Pn	01 59 50.7	+2.4
NEST				S	Sb	02 00 29.9	-3.4
KZN	Kozani	3.21	21	P	Pn	01 59 51.1	+2.0
KZN	Kozani	3.21	21	P	Pn	01 59 50.5	+1.5
KZN				S	Sn	02 00 30.9	+3.7
KZN	Kozani	3.21	21	P	Pn	01 59 50.5	+1.5
KZN				S	Sn	02 00 30.9	+3.7
LIT	Litokhoron	3.28	31	P	Pn	01 59 50.0	0.0
LIT	Litokhoron	3.28	31	P	Pn	01 59 50.4	+0.5
LIT				S	Sb	02 00 32.8	-3.9
LIT	Litokhoron	3.28	31	P	Pn	01 59 50.4	+0.5
LIT				S	Sb	02 00 32.8	-3.9
KBN	Korca	3.33	7	P	Pn	01 59 53.2	+2.5
KBN				S	Sn	02 00 33.8	+3.7
KBN	Korca	3.33	7	*i* PN	Pn	01 59 53.4	+2.7
KBN				*i* SN	Sn	02 00 31.2	+1.1
KBN	Korca	3.33	7	P	Pn	01 59 53.2	+2.5
KBN				*i* Sn	Sn	02 00 31.2	+1.1
KBN				S	Sn	02 00 33.8	+3.7
MHLA	Plaka, Milos I	3.36	98	P	Pn	01 59 48.8	-2.3
MHLA	Plaka, Milos I	3.36	98	P	Pn	01 59 50.1	-1.0
KARY	Karystos	3.38	76	P	Pn	01 59 50.0	-1.3
KARY				S	Sn	02 00 34.3	+3.1
KARY	Karystos	3.38	76	P	Pn	01 59 50.0	-1.3
KARY				S	Sn	02 00 34.3	+3.1
FNA	Florina	3.57	14	*e*Pn	Pn	01 59 55.2	+1.2
FNA				*e*Sn	Sn	02 00 34.1	-1.9
FNA	Florina	3.57	14	P	Pn	01 59 55.2	+1.2
FNA	Florina	3.57	14	P	Pn	01 59 55.2	+1.2
FNA				S	Sb	02 00 40.9	-4.2
FNA	Florina	3.57	14	P	Pn	01 59 55.2	+1.2
FNA				S	Sb	02 00 40.9	-4.2
VAM	Vamos	3.69	120	P	Pn	01 59 54.4	-1.2
VAM	Vamos	3.69	120	P	Pn	01 59 55.5	-0.1
PAIG	Paliouri	3.73	45	P	Pn	01 59 55.6	-0.5
PAIG				S	Sn	02 00 43.5	+3.6
PAIG	Paliouri	3.73	45	P	Pn	01 59 55.6	-0.5
PAIG				S	Sn	02 00 43.5	+3.6
BIA	Bitola	3.79	12	*i* Pn	Pn	01 59 59.0	+2.0
BIA				*i* Sn	Sn	02 00 40.8	-0.6
OHR	Ohrid	3.81	6	*i* Pn	Pn	01 59 58.9	+1.5
OHR				*i* Sn	Sn	02 00 41.3	-0.8
THE	Thessaloniki	3.92	31	P	Pn	01 59 58.7	0.0
THE				S	Sn	02 00 49.4	+4.8
THE	Thessaloniki	3.92	31	P	Pn	01 59 58.7	0.0
THE				S	Sn	02 00 49.4	+4.8
PLG	Polygyros	3.93	38	P	Pn	01 59 58.6	-0.3
PLG				S	Sn	02 00 49.4	+4.5
PLG	Polygyros	3.93	38	P	Pn	01 59 58.6	-0.3
PLG				S	Sn	02 00 49.4	+4.5
HORT	Hortiatis	3.95	33	P	Pn	01 59 57.8	-1.4
HORT	Hortiatis	3.95	33	P	Pn	01 59 59.1	-0.1
HORT				S	Sn	02 00 49.3	+3.9
HORT	Hortiatis	3.95	33	P	Pn	01 59 59.1	-0.1
HORT				S	Sn	02 00 49.3	+3.9
TAR1	Taranto	3.97	325	*e*Pn	Pn	02 00 00.7	+1.3
TAR1				Sn	Sn	02 00 44.2	-1.5
CGL1	Ceglie Messapi	3.99	328	*e*Pn	Pn	02 00 02.6	+2.9
CGL1				Sn	Sn	02 00 46.1	-0.2
GRG	Griva	4.00	24	P	Pn	02 00 00.2	+0.4
GRG				S	Sn	02 00 50.8	+4.3
GRG	Griva	4.00	24	P	Pn	02 00 00.2	+0.4
GRG				S	Sn	02 00 50.8	+4.3
TIR	Tirane	4.04	356	*e*Pn	Pn	02 00 02.3	+1.9
TIR	Tirane	4.04	356	⇓*i* P	Pn	02 00 03.0	+2.6
TIR	Tirane	4.04	356	*i* PN	Pn	02 00 02.3	+1.9
TIR				*i* SN	Sn	02 00 45.5	-2.1
TIR	Tirane	4.04	356	*i* Pn	Pn	02 00 02.3	+1.9
TIR	Tirane	4.04	356	⇓*i* P	Pn	02 00 03.0	+2.6
TIR				*i* Sn	Sn	02 00 45.5	-2.1
MASS	Massafra	4.12	325	*e*Pn	Pn	02 00 03.8	+2.4
MASS				Sn	Sn	02 00 48.9	-0.6
FASA	Fasano	4.17	328	*e*Pn	Pn	02 00 04.1	+1.9
FASA				Sn	Sn	02 00 50.2	-0.6
OUR	Ouranopolis	4.18	43	P	Pn	02 00 00.7	-1.6
OUR	Ouranopolis	4.18	43	P	Pn	02 00 01.8	-0.5
OUR				S	Sn	02 00 55.1	+4.2
OUR	Ouranopolis	4.18	43	P	Pn	02 00 01.9	-0.4
OUR				S	Sn	02 00 55.1	+4.2
APE	Apeiranthos	4.20	92	⇑*i* P	Pn	02 00 00.9	-1.7
APE	Apeiranthos	4.20	92	⇑*i* P	Pn	02 00 00.9	-1.7
IDI	Anoyia	4.24	117	Pn	Pn	02 00 02.8	-0.4
	comp=E,1.8nm,0.3s,baz=260,slow=9.1,SNR=16						
IDI				Sn	Sn	02 00 50.1	-2.4
	comp=E,8.1nm,0.3s,baz=316,slow=19,SNR=9.5						
IDI				LR	LR	02 01 44.4	
	comp=E,131nm,20.5s,baz=282,slow=41						
KNT	Kendrikon	4.35	27	P	Pn	02 00 04.9	+0.3
KNT				S	Sn	02 00 59.8	+4.6
KNT	Kendrikon	4.35	27	P	Pn	02 00 04.9	+0.3
KNT				S	Sn	02 00 59.8	+4.6
PHP	Peshkopia	4.37	2	*i* PN	Pn	02 00 06.5	+1.5
PHP				*i* SN	Sn	02 00 55.5	-0.2
PHP	Peshkopia	4.37	2	*i* Pn	Pn	02 00 06.5	+1.5
PHP				*i* Sn	Sn	02 00 55.5	-0.2
VAY	Valandovo	4.38	23	*e*Pn	Pn	02

NKME *e*Sn **Sn** **02 01 24.8 +0.2**
NKME Niksic 5.54 350 ⇓*i*Pn **Pn** **02 00 22.4 +1.3**
NKME *e*Sn **Sn** **02 01 24.8 +0.2**
RZN Rozhen 5.56 37 P **Pn** **02 00 21.8 +0.4**
BEY Berane 5.56 357 *e*Pn **Pn** **02 00 22.8 +1.4**
IVA Berane 5.56 357 *e*Pn **Pn** **02 00 22.8 +1.4**
IVA *e*Sn **Sn** **02 01 24.8 -0.3**
BARS Barje 5.62 12 *e*Pn **Pn** **02 00 22.5 +0.4**
BARS *e*Sn **Sn** **02 01 20.8 -5.8**
BARS Barje 5.62 12 *e*Pn **Pn** **02 00 22.5 +0.4**
VTS Vitosha 5.73 22 P **Pn** **02 00 23.0 -0.8**
BRY Bratogost 5.74 347 ⇓*i*Pn **Pn** **02 00 24.4 +0.5**
BRY *e*Sn **Sn** **02 01 29.9 +0.3**
BRY Bratogost 5.74 347 ⇓*i*Pn **Pn** **02 00 24.4 +0.5**
BRY *e*Sn **Sn** **02 01 29.9 +0.3**
STON Ston 5.89 341 *e*Pn **Pn** **02 00 25.8 0.0**
STON Ston 5.89 341 *e*Pn **Pn** **02 00 25.2 -0.6**
STON Sn **Sn** **02 01 29.6 -3.5**
STON Ston 5.89 341 *e*Pn **Pn** **02 00 25.8 0.0**
SELS Selova 5.94 6 *e*Pn **Pn** **02 00 26.1 -0.3**
UPM Unac-Piva 5.98 350 ⇑*i*Pn **Pn** **02 00 27.9 +0.7**
UPM *e*Sn **Sn** **02 01 35.4 -0.1**
UPM Unac-Piva 5.98 350 ⇑*i*Pn **Pn** **02 00 27.9 +0.7**
PLE Pljevlja 6.05 354 ⇑*i*Pn **Pn** **02 00 29.6 +1.5**
PLE *e*Sn **Sn** **02 01 36.6 -0.6**
PLE Pljevlja 6.05 354 ⇑*i*Pn **Pn** **02 00 29.6 +1.5**
ZAPS Zavoj 6.22 16 *i*Pn **Pn** **02 00 30.9 +0.5**
DIM Dimitrovgrad 6.23 39 P **Pn** **02 00 30.5 +0.1**
IVAS Ivanjica 6.26 359 *e*Pn **Pn** **02 00 31.2 +0.3**
IVAS Ivanjica 6.26 359 *e*Pn **Pn** **02 00 31.2 +0.3**
GRUS Gruza 6.58 3 *e*Pn **Pn** **02 00 35.2 0.0**
GRUS Gruza 6.58 3 *e*Pn **Pn** **02 00 35.2 0.0**
BBLS Lazići 6.58 354 *e*Pn **Pn** **02 00 35.5 +0.2**
BBLS Lazići 6.58 354 *e*Pn **Pn** **02 00 35.5 +0.2**
MPEP Malo Peshtene 6.59 23 P **Pn** **02 00 35.9 +0.5**
ZAGS Zajecar 6.66 12 *i*Pn **Pn** **02 00 36.1 -0.3**
ZAGS Zajecar 6.66 12 *i*Pn **Pn** **02 00 36.1 -0.3**
DIVS Divibare 6.78 358 *e*Pn **Pn** **02 00 37.9 -0.2**
DIVS Divibare 6.78 358 *e*Pn **Pn** **02 00 37.9 -0.2**
HAPS Han Pijesak,Bl 6.84 352 *e*Pn **Pn** **02 00 38.6 -0.4**
HAPS Han Pijesak,Bl 6.84 352 *e*Pn **Pn** **02 00 38.6 -0.4**
TRUS Trudelj 6.91 1 *e*Pn **Pn** **02 00 39.7 0.0**
TRUS Trudelj 6.91 1 *e*Pn **Pn** **02 00 39.7 0.0**
KUBS Kucevo 7.17 8 *e*Pn **Pn** **02 00 41.5 -1.9**
KUBS Kucevo 7.17 8 *e*Pn **Pn** **02 00 41.5 -1.9**
TEKS Tekeris 7.25 356 *i*Pn **Pn** **02 00 44.1 -0.4**
TEKS Tekeris 7.25 356 *i*Pn **Pn** **02 00 44.1 -0.4**
SZH Strazhica 7.35 34 P **Pn** **02 00 47.0 +1.2**
MDVR Moldovita 7.54 8 ⇓*i*P **Pn** **02 00 47.8 -0.7**
MDVR Moldovita 7.54 8 ⇓*i*P **Pn** **02 00 47.8 -0.7**
HERR Herculane 7.73 11 ⇓*i*P **Pn** **02 00 50.5 -0.6**
HERR Herculane 7.73 11 ⇓*i*P **Pn** **02 00 50.5 -0.6**
BLY Banja Luka 7.79 344 *e*Pn **Pn** **02 00 51.9 +0.1**
FGSL Fruska Gora 7.85 358 *e*Pn **Pn** **02 00 51.9 -0.7**
FRGS Fruska Gora 7.85 358 *e*Pn **Pn** **02 00 51.9 -0.8**
UDBI Udbina 7.98 336 *e*Pn **Pn** **02 00 57.1 +2.6**
UDBI Sn **Sn** **02 02 19.3 -5.2**
NVLJ Novalja 8.32 332 *e*Pn **Pn** **02 01 00.0 +0.9**
NVLJ Sn **Sn** **02 02 28.2 -4.6**
NVLJ Novalja 8.32 332 *e*Pn **Pn** **02 01 00.0 +0.9**
BZS Buzias 8.36 6 *e*Pn **Pn** **02 00 58.3 -1.3**
BZS Buzias 8.36 6 ⇓*i*P **Pn** **02 01 00.6 +1.0**
BZS Buzias 8.36 6 *e*Pn **Pn** **02 00 58.3 -1.3**
BZS Buzias 8.36 6 ⇓*i*P **Pn** **02 01 00.6 +1.0**
LOT Lotru 8.54 17 ⇑*i*P **Pn** **02 01 02.3 0.0**
LOT Lotru 8.54 17 ⇑*i*P **Pn** **02 01 02.3 0.0**
VOIR 8.87 22 ⇓*i*P **Pn** **02 01 07.3 +0.5**
VOIR 8.87 22 ⇓*i*P **Pn** **02 01 07.3 +0.5**
KEST Kesra 8.94 263 Pn **Pn** **02 01 10.8 +3.0**
comp=E,0.1nm,0.3s,baz=0.9,slow=22,SNR=4.5
KEST Sn **Sn** **02 02 50.4 +2.0**
comp=E,0.0nm,0.3s,baz=211,slow=19,SNR=3.0
KEST LR LR 02 05 21.0
comp=E,174nm,19.1s,baz=191,slow=42
OZLJ Ozalj 9.04 338 *e*Pn **Pn** **02 01 10.5 +1.4**
OZLJ Sn **Sn** **02 02 44.4 -6.3**
OZLJ Ozalj 9.04 338 *e*Pn **Pn** **02 01 10.4 +1.4**
ISR Istrita 9.11 29 ⇑*i*P **Pn** **02 01 10.6 +0.5**
ISR Istrita 9.11 29 ⇑*i*P **Pn** **02 01 10.6 +0.5**
MLR Muntele Rosu 9.21 26 Pn **Pn** **02 01 10.4 -1.0**
comp=E,0.1nm,0.3s,baz=252,slow=3.2,SNR=7.6
MLR LR LR 02 05 36.9
comp=E,98nm,20.6s,baz=206,slow=44
MLR Muntele Rosu 9.21 26 ⇓*i*P **Pn** **02 01 12.4 +0.9**
MLR Muntele Rosu 9.21 26 ⇓*i*P **Pn** **02 01 12.4 +0.9**
CRES Cresnjev 9.24 339 *e*Pn **Pn** **02 01 11.0 -0.7**
TLB Topalu 9.34 37 ⇑*i*P **Pn** **02 01 13.1 0.0**
TLB Topalu 9.34 37 ⇑*i*P **Pn** **02 01 13.1 0.0**
DOPR Dopca 9.45 22 ⇑*i*P **Pn** **02 01 15.5 +0.8**
DOPR Dopca 9.45 22 ⇑*i*P **Pn** **02 01 15.5 +0.8**
CEY Cerknica 9.49 334 *e*Pn **Pn** **02 01 15.7 +0.5**
DRGR 9.64 10 ⇓*i*P **Pn** **02 01 17.4 +0.1**
DRGR 9.64 10 ⇓*i*P **Pn** **02 01 17.4 +0.1**
PLOR Plostina 9.77 27 ⇑*i*P **Pn** **02 01 20.0 +0.9**
PLOR Plostina 9.77 27 ⇑*i*P **Pn** **02 01 20.0 +0.9**
VRI Vrincioaia 9.81 27 ⇓*i*P **Pn** **02 01 20.5 +0.9**
VRI Vrincioaia 9.81 27 ⇓*i*P **Pn** **02 01 20.5 +0.9**
OBKA Obir 10.13 337 *e*Pn **Pn** **02 01 25.7 +1.7**
comp=E,0.5nm,0.1s
OBKA Obir 10.13 337 Pn **Pn** **02 01 25.7 +1.7**
comp=E,0.5nm,0.1s
SOKA Soboth 10.14 339 *e*Pn **Pn** **02 01 24.4 +0.3**
comp=E,4.9nm,0.6s
SOKA Soboth 10.14 339 Pn **Pn** **02 01 24.4 +0.3**
comp=E,4.9nm,0.6s
ARSA Arzberg 10.54 342 *e*Pn Pn 02 01 36.2 +6.7
comp=E,0.9nm,0.3s
BURAR Bucovina Array 10.92 18 ⇑*i*P **Pn** **02 01 36.3 +1.5**
BURAR Bucovina Array 10.92 18 ⇑*i*P **Pn** **02 01 36.3 +1.5**
ABTA Abfaltersbach 11.05 331 *e*Pn Pn 02 01 44.4 +7.8
comp=E,0.7nm,0.4s
CONA Conrad Observa 11.09 344 *e*Pn **Pn** **02 01 35.8 -1.4**
comp=E,0.4nm,0.2s
CONA Conrad Observa 11.09 344 Pn **Pn** **02 01 35.8 -1.4**
comp=E,0.4nm,0.2s
MOA Molln 11.42 339 *e*Pn **Pn** **02 01 43.7 +2.1**
comp=E,0.6nm,0.2s
MOA Molln 11.42 339 Pn **Pn** **02 01 43.7 +2.1**
comp=E,0.6nm,0.2s
VRAC Vranov 12.29 349 LR LR 02 07 48.3
comp=E,57nm,18.3s,baz=174,slow=43
GERES GERESS Array B 12.48 340 Pn **Pn** **02 01 57.1 +0.9**
comp=E,0.1nm,0.3s,baz=154,slow=12,SNR=3.8
OKC Ostrava-Krasne 12.62 354 AMS AMS 02 08 00.0
comp=E,200nm,14.4s
MORC Moravsky Berou 12.62 352 *e*PG P 02 03 03.9 +54
MORC *e*SG 02 03 15.4
MMAI Mount Meron Ar 13.10 105 Pn Pn 02 01 59.8 -4.8
comp=E,0.6nm,0.3s,baz=323,slow=13,SNR=3.2
GOPC GO Pecny, Ondr 13.20 344 AMS AMS 02 08 30.0
comp=E,100nm,12.3s
DPC Dobruska-Polom 13.34 349 AMS AMS 02 08 40.0
comp=E,200nm,14.0s
UPC Upice 13.54 348 AMS AMS 02 08 40.0
comp=E,200nm,13.1s
PVCC Panska Ves 13.83 345 AMS AMS 02 08 30.0
comp=E,100nm,10.2s
NKC Novy Kostel 14.09 339 AMS AMS 02 09 10.0
comp=E,200nm,10.7s
EIL Elat 14.41 118 Pn **Pn** **02 02 18.9 -3.6**
comp=E,0.3nm,0.3s,baz=321,slow=4.6,SNR=8.0
EIL Sn Sn 02 04 45.3 -17
comp=E,0.3nm,0.3s,baz=288,slow=3.2,SNR=4.6
AKASG Malin Array Be 14.84 23 Pn **Pn** **02 02 24.8 -3.4**
comp=E,0.2nm,0.3s,baz=206,slow=12,SNR=3.2
ESDC Sonseca Array 19.11 285 P **Pn** **02 03 25.0 +2.8**
comp=E,0.1nm,0.3s,baz=81,slow=12,SNR=9.6
GNI Garni 19.28 74 LR LR 02 10 37.6
comp=E,57nm,19.8s,baz=301,slow=37
MDT Midelt 20.84 265 P Pn 02 03 43.8 +0.9
comp=E,2.5nm,0.8s,baz=79,slow=9.6,SNR=5.3
OBN Obninsk 20.98 27 LR LR 02 12 04.1
comp=E,67nm,19.1s,baz=267,slow=38
HFS Hagfors 23.23 352 P **P** **02 04 05.3 -0.1**
comp=E,4.4nm,0.8s,baz=165,slow=11,SNR=13
EKA Eskdalemuir Ar 24.03 326 P **P** **02 04 14.2 +0.9**
comp=E,5.1nm,0.9s,baz=123,slow=9.2,SNR=9.6
FINES FINESS Array B 24.43 7 P **P** **02 04 16.3 -0.6**
comp=E,2.7nm,0.7s,baz=156,slow=10.0,SNR=5.4
NB2 NORSAR Subarra 24.43 349 P **P** **02 04 16.5 -0.5**
comp=Z,3.5nm,1.1s,baz=162,slow=9.3
NOA NORSAR Array B 24.43 349 P **P** **02 04 16.7 -0.2**
comp=Z,1.1nm,0.7s,baz=149,slow=10,SNR=5.0

TORD Torodi Ar. Bea 29.24 219 P **P** **02 05 02.8 +2.3**
comp=Z,1.1nm,0.8s,baz=35,slow=8.6,SNR=8.7
KOWA Kowa 31.35 230 LR LR 02 19 26.2
comp=Z,142nm,18.9s,baz=218,slow=39
ARU Arti 31.84 41 LR LR 02 19 23.0
comp=Z,65nm,20.1s,baz=321,slow=39
ARCES ARCESS Array B 32.41 3 P **P** **02 05 26.6 -1.4**
comp=Z,1.9nm,0.9s,baz=189,slow=10.0,SNR=4.2
BVAR Borovoye Array 37.83 49 P **P** **02 06 12.3 -2.5**
comp=Z,0.8nm,0.5s,baz=270,slow=6.0,SNR=6.4
KURBB Kurchatov Arra 42.90 53 P **P** **02 06 54.8 -2.1**
comp=Z,1.0nm,0.4s,baz=280,slow=8.7,SNR=12
MKAR Makanchi Array 45.92 58 P **P** **02 07 19.4 -1.8**
comp=Z,1.4nm,0.6s,baz=284,slow=6.6,SNR=20
ZALV Zalesovo Beam 46.41 47 P **P** **02 07 23.3 -1.5**
comp=Z,2.8nm,0.6s,baz=275,slow=8.9,SNR=9.1
SONM Songino Array 61.16 50 P **P** **02 09 11.8 -1.2**
comp=Z,0.3nm,0.4s,baz=300,slow=6.4,SNR=3.9
YKA Yellowknife Ar 74.14 340 P **P** **02 10 36.3 +1.8**
comp=Z,0.3nm,0.7s,baz=37,slow=5.4,SNR=3.3
ILAR Eielson Array 77.75 354 P **P** **02 10 57.5 +2.3**
comp=Z,0.5nm,0.9s,baz=335,slow=4.0,SNR=3.7
KSRS Korea Array 80.03 50 P **P** **02 11 07.7 -0.4**
comp=Z,1.0nm,0.6s,baz=314,slow=5.2,SNR=4.9

ISCJB ***05*** *02:07:02.9±0.5, 48°.39N±0°.03×154°.58E±0°.04, h53km±3km, mb4.4/93, MS3.7/13, Error ellipse: s-maj=6.5km s-min=2.8km az=142.2*
SKHL ***05*** *02:07:03.3±0.2, 48°.18N×154°.90E, h59km±1km, mb5.4/3, msh4.8/5*
MOS ***05*** *02:07:03.1±1.1, 48°.39N×154°.64E, h55km, mb4.8/27, Error ellipse: s-maj=8.1km s-min=4.1km az=74.7*
BJI ***05*** *02:07:03.9, 48°.47N×154°.43E, h63km, mb4.5/24, mB4.7/15, Ms4.1/5, Ms7 3.9/5*
KRSC ***05*** *02:07:04.1±2.0, 48°.28N×156°.26E, h30km±27km, ML4.8*
NEIC ***05*** *02:07:05.0±0.4, 48°.42N×154°.46E, h56km±3km, mb4.5/49, Error ellipse: s-maj=6.0km s-min=3.1km az=148.0*
IDC ***05*** *02:07:06.7±2.0, 48°.49N×154°.50E, h71km±17km, mb3.9/30, mb1 4.1/35, mb1mx4.0/77, mbtmp4.3/35, MS3.6/13, Ms1 3.6/13, ms1mx3.3/67, Error ellipse: s-maj=14.1km s-min=9.4km az=145.0*
ISC 05 02:07:04.0±0.6, 48°.35N±0°.05×154°.65E±0°.04, h50km±4km, n295, σ1§54/320, mb4.5/93, MS3.8/13, 11C-6D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.52**	**22**	*e*P		**Pn**	**02 07 42.4**	**0.0**
SKR					AMB	AMB	02 07 44.3	
SKR	230nm,0.5s				AMB	AMB	02 07 46.1	
SKR	620nm,2.0s				*e*S	**Sn**	**02 08 11.8**	**-0.1**
SKR					A	A	02 08 12.6	
SKR	1μm,2.0s				A	A	02 08 12.6	
SKR	2μm,2.0s				A	A	02 08 28.8	
SKR	2μm,0.8s				A	A	02 08 28.8	
SKR	2μm,0.8s							
SKR	**Severo-Kuril's**	**2.52**	**22**	*e*P		**Pn**	**02 07 42.1**	**-0.3**
SKR				*e*S		**Sn**	**02 08 11.7**	**-0.1**
SKR	**Severo-Kuril's**	**2.52**	**22**	*e*PN		**Pn**	**02 07 42.4**	**0.0**
SKR				*e*S		**Sn**	**02 08 11.8**	**-0.1**
SKR	comp=Z,228nm,0.5s				pmax	pmax		
SKR	comp=E,2μm,0.7s				smax	smax		
SKR	comp=N,2μm,0.9s				smax	smax		
PAU	**Pauzhetka**	**3.42**	**23**	*e*P		**Pn**	**02 07 55.9**	**+1.2**
PAU					AMB	AMB	02 07 58.7	
PAU	comp=N,120nm,0.5s				*e*S	**Sn**	**02 08 34.6**	**+0.7**
PAU					A	A	02 08 40.8	
PAU	comp=N,860nm,0.5s							
KDTR	**Khodutka, Kamc**	**4.10**	**31**	*e*P		**Pn**	**02 08 03.3**	**-0.8**
KDTR				*e*S		**Sn**	**02 08 48.3**	**-2.5**
ASAK	**Asacha**	**4.54**	**26**	*e*P		**Pn**	**02 08 11.3**	**+1.1**
ASAK	**Asacha**	**4.54**	**26**	PN		**Pn**	**02 08 11.3**	**+1.1**
MTVR	**Mutnovka**	**4.71**	**27**	*e*P		**Pn**	**02 08 13.0**	**+0.4**
MTVR				*e*S		**Sn**	**02 09 05.4**	**-0.5**
MTVR	**Mutnovka**	**4.71**	**27**	PN		**Pn**	**02 08 13.0**	**+0.4**
MTVR				S		**Sn**	**02 09 05.4**	**-0.5**
RUS	**Russkaya**	**4.77**	**30**	*e*P		**Pn**	**02 08 12.3**	**-1.0**
RUS	**Russkaya**	**4.77**	**30**	PN		**Pn**	**02 08 12.3**	**-1.0**
KRMR	**Karymshinskiy**	**5.00**	**25**	*e*P		**Pn**	**02 08 18.3**	**+1.9**
KRMR	**Karymshinskiy**	**5.00**	**25**	PN		**Pn**	**02 08 18.3**	**+1.9**
PEA0B	**Petropavlovsk-**	**5.14**	**21**	*e*Pn		**Pn**	**02 08 20.3**	**+2.0**
PEA0B				*e*Sn		**Sn**	**02 09 13.8**	**-2.5**
PETK	**Petropavlovsk-**	**5.14**	**21**	P		**Pn**	**02 08 20.0**	**+1.7**
PETK	comp=N,3.2nm,0.3s,baz=180,slow=11,SNR=39				S	**Sn**	**02 09 16.1**	**-0.1**
PETK	comp=N,2.0nm,0.3s,baz=172,slow=15,SNR=3.6							
PETK	**Petropavlovsk-**	**5.14**	**21**	*e*Pn		**Pn**	**02 08 20.2**	**+1.9**
PETK				*e*Sn		**Sn**	**02 09 14.9**	**-1.4**
PETK	**Petropavlovsk-**	**5.14**	**21**	*e*PN		**Pn**	**02 08 20.2**	**+1.9**
PETK				*e*			02 09 14.9	
PEA1	**Petropavlovsk-**	**5.14**	**21**	*e*Pn		**Pn**	**02 08 20.0**	**+1.6**
PEA1				*e*Sn		**Sn**	**02 09 16.1**	**-0.3**
PET	**Petropavlovsk**	**5.32**	**27**	*e*P		**Pn**	**02 08 22.8**	**+2.0**
PET					AMB	AMB	02 08 26.4	
PET	comp=N,177nm,3.0s				AMB	AMB	02 08 29.4	
PET	comp=N,42nm,0.5s				*e*S	**Sn**	**02 09 22.2**	**+1.5**
PET					A	A	02 09 24.0	
PET	comp=N,315nm,3.0s				A	A	02 09 24.0	
PET	comp=N,349nm,3.0s				A	A	02 09 29.8	
PET	comp=N,210nm,0.6s				A	A	02 09 29.8	
PET	comp=N,270nm,0.6s							
PET	**Petropavlovsk**	**5.32**	**27**	*e*PN		Pn	02 08 26.8	+6.0
PET				*e*S		**Sn**	**02 09 19.8**	**-0.9**
PET	comp=Z,82nm,0.6s				pmax	pmax		
PET	comp=N,208nm,0.6s				smax	smax		
PET	comp=E,269nm,0.7s				smax	smax		
UGLR	**Uglovaya**	**5.54**	**27**	*e*P		**Pn**	**02 08 24.9**	**+1.1**
UGLR	**Uglovaya**	**5.54**	**27**	PN		**Pn**	**02 08 24.9**	**+1.1**
KOK	**Koryaka**	**5.55**	**26**	*e*P		**Pn**	**02 08 26.7**	**+2.6**
KOK	**Koryaka**	**5.55**	**26**	PN		**Pn**	**02 08 26.7**	**+2.6**
AVH	**Avacha**	**5.56**	**26**	*e*P		**Pn**	**02 08 25.6**	**+1.5**
AVH	**Avacha**	**5.56**	**26**	*e*P		**Pn**	**02 08 25.6**	**+1.5**
AVH	**Avacha**	**5.56**	**26**	PN		**Pn**	**02 08 25.6**	**+1.5**
KRER	**Koryakskii**	**5.60**	**26**	*e*P		**Pn**	**02 08 26.0**	**+1.3**
KRER	**Koryakskii**	**5.60**	**26**	PN		**Pn**	**02 08 26.0**	**+1.3**
KUR	**Kuril'sk**	**5.60**	**239**	*i*P		**Pn**	**02 08 26.1**	**+1.4**
KUR					AMB	AMB	02 08 30.0	
KUR	comp=E,29nm,0.5s				AMB	AMB	02 08 30.0	
KUR	comp=E,69nm,0.5s				AMB	AMB	02 08 30.0	
KUR	comp=E,256nm,0.5s				AMB	AMB	02 08 30.7	
KUR	comp=E,560nm,2.0s				*e*S	**Sn**	**02 09 28.3**	**+0.6**
KUR					A	A	02 09 37.0	
KUR	comp=E,229nm,0.4s				A	A	02 09 37.0	
KUR	comp=E,49nm,0.4s				A	A	02 09 38.0	
KUR	comp=E,655nm,2.0s				A	A	02 09 38.0	
KUR	comp=E,921nm,2.0s				AMS	AMS	02 11 02.3	
KUR	comp=E,461nm,5.0s							
KUR	**Kuril'sk**	**5.60**	**239**	*d*iPN		**Pn**	**02 08 28.6**	**+3.9**
KUR				*i*S		**Sn**	**02 09 33.4**	**+5.7**
KUR	comp=Z,256nm,0.5s				pmax	pmax		
KUR	comp=N,29nm,0.2s				pmax	pmax		
KUR	comp=E,69nm,0.8s				pmax	pmax		
KUR	comp=Z,560nm,2.5s				pmax	pmax		
KUR	comp=N,230nm,0.4s				smax	smax		
KUR	comp=E,49nm,0.5s				smax	smax		
KUR	comp=E,921nm,1.7s				smax	smax		
KUR	comp=N,655nm,2.1s				smax	smax		
KUR	comp=Z,461nm,5.0s				MLR	MLR		
SDLR	**Sedlovina 5.61 27**			*e*P		**Pn**	**02 08 25.1**	**+0.2**
SDLR	**Sedlovina 5.61 27**			PN		**Pn**	**02 08 25.1**	**+0.2**
KRX	**Arik 5.62 25**			*e*P		**Pn**	**02 08 27.3**	**+2.3**
KRX	**Arik 5.62 25**			PN		**Pn**	**02 08 27.3**	**+2.3**
NLC	**Nalytchevo 5.67 30**			*e*S		**Sn**	**02 09 24.8**	**-4.4**
GNL	**Ganaly 5.74 20**			*e*P		**Pn**	**02 08 28.2**	**+1.6**
GNL	**Ganaly 5.74 20**			PN		**Pn**	**02 08 28.2**	**+1.6**
SPN	**Mys Shipunski 5.85 34**			*e*P		**Pn**	**02 08 27.2**	**-0.8**
SPN	**Mys Shipunski 5.85 34**			PN		**Pn**	**02 08 27.2**	**-0.8**
SHO	**Shikotan 7.04 233**			*e*P		**Pn**	**02 08 43.0**	**-1.4**
SHO					AMB	AMB	02 08 46.0	
SHO	comp=Z,56nm,0.4s				*e*S	**Sn**	**02 10 00.9**	**-2.1**
SHO					A	A	02 10 05.0	
SHO	comp=Z,142nm,3.0s							
SHO	**Shikotan 7.04 233**			*e*PN		**Pn**	**02 08 43.3**	**-1.1**
SHO					pmax	pmax		
SHO	comp=Z,56nm,0.4s				pmax	pmax		
SHO	comp=E,38nm,0.3s				pmax	pmax		
SHO	comp=N,22nm,0.2s							
YUK	**Yuzh-Kuril'sk 7.47 238**			*i*P		**Pn**	**02 08 52.0**	**+1.8**
YUK					AMB	AMB	02 08 52.0	
YUK	comp=N,50nm,0.4s				AMB	AMB	02 08 52.0	
YUK	comp=N,33nm,0.4s				AMB	AMB	02 08 52.0	
YUK	comp=N,200nm,0.4s				*e*S	**Sn**	**02 10 13.3**	**-0.2**
YUK					A	A	02 10 16.6	
YUK	comp=N,170nm,3.0s				A	A	02 10 16.6	
YUK	comp=N,280nm,3.0s							
YUK	**Yuzh-Kuril'sk 7.47 238**			*d*iPN		**Pn**	**02 08 52.3**	**+2.1**
YUK					pmax	pmax		
YUK	comp=N,50nm,0.4s				pmax	pmax		
YUK	comp=E,33nm,0.4s				pmax	pmax		
YUK	comp=Z,412nm,0.4s				MLR	MLR		
YUK	comp=Z,421nm,19.0s				MLR	MLR		
YUK	comp=E,277nm,16.0s				MLR	MLR		
YUK	comp=N,359nm,19.0s							
GRPR	**Tuman 7.54 238**			*e*P		**Pn**	**02 08 52.0**	**+0.7**
GRPR					AMB	AMB	02 08 54.0	
GRPR	comp=N,162nm,0.4s							
GRPR	**Tuman 7.54 238**			*e*PN		**Pn**	**02 08 52.9**	**+1.6**
GRPR					pmax	pmax		
GRPR	comp=Z,162nm,0.4s				pmax	pmax		
GRPR	comp=N,61nm,0.1s				pmax	pmax		
GRPR	comp=E,74nm,0.1s							
TUMD	**Tumrok D 7.73 25**			*e*P		**Pn**	**02 08 53.9**	**+0.1**
TUMR	**Tumrok 7.73 24**			*e*P		**Pn**	**02 08 55.9**	**+2.0**
TUMR	**Tumrok 7.73 24**			PN		**Pn**	**02 08 53.9**	**0.0**
GLVR	**Golovnino 7.85 237**			*e*P		**Pn**	**02 08 56.0**	**+0.6**
GLVR					AMB	AMB	02 09 00.0	
GLVR	comp=E,83nm,0.5s							
GLVR	**Golovnino 7.85 237**			*e*PN		**Pn**	**02 08 56.9**	**+1.5**
GLVR					pmax	pmax		
GLVR	comp=Z,83nm,0.5s				pmax	pmax		
GLVR	comp=N,89nm,0.4s				pmax	pmax		
GLVR	comp=E,40nm,0.2s							
YSS	**Yuzh-Sakhalins 8.15 265**			*e*P		**Pn**	**02 09 03.1**	**+3.5**
YSS					AMB	AMB	02 09 05.2	
YSS	comp=E,70nm,1.0s				AMB	AMB	02 09 05.2	
YSS	comp=E,50nm,1.0s				AMS	AMS	02 12 58.0	
YSS	comp=E,300nm,15.0s							
YSS	**Yuzh-Sakhalins 8.15 265**			*e*Pn		**Pn**	**02 09 01.2**	**+1.6**
YSS	**Yuzh-Sakhalins 8.15 265**			⇓*e*PN		**P**	**02 09 03.1**	**+3.5**
YSS	comp=Z,50nm,1.0s				pmax	pmax		
YSS	comp=E,70nm,0.9s				pmax	pmax		
YSS	comp=Z,300nm,15.0s				MLR	MLR		
TYV	**Tymovskoe 8.18 292**			*e*P		**Pn**	**02 09 03.8**	**+3.8**
TYV					AMB	AMB	02 09 04.4	
TYV	comp=Z,20nm,0.7s				*e*S	**Sn**	**02 10 33.1**	**+2.1**
TYV					A	A	02 10 33.4	
TYV	comp=Z,13nm,0.9s				A	A	02 10 33.4	
TYV	comp=Z,15nm,0.9s							
TYV	**Tymovskoe 8.18 292**			*e*PN		**Pn**	**02 09 03.4**	**+3.4**
TYV					pmax	pmax		
TYV	comp=Z,20nm,0.7s							
UGL	**Uglegorsk 8.35 280**			*e*P		**Pn**	**02 09 06.9**	**+4.6**
UGL					AMB	AMB	02 09 10.0	
UGL	comp=Z,100nm,0.8s							
KBTR	**Krutoberegovo 9.32 29**			*e*P		**Pn**	**02 09 15.3**	**-0.2**
KBTR	**Krutoberegovo 9.32 29**			PN		**Pn**	**02 09 15.3**	**-0.2**
JKA	**Kamikawa-asahi 9.36 248**			*e*P		**Pn**	**02 09 20.0**	**+3.9**
ASAJ	**Asahikawa 9.36 248**			P		**Pn**	**02 09 20.0**	**+3.8**
ASAJ	comp=Z,4.6nm,0.3s,baz=77,slow=14,SNR=34				LR	LR	02 12 33.4	
ASAJ	comp=Z,310nm,21.6s,baz=354,slow=35							
ASAJ	**Asahikawa 9.36 248**			*e*Pn		**Pn**	**02 09 17.3**	**+1.1**
NKL	**Nikolayevsk 10.06 304**			*e*P		**Pn**	**02 09 28.0**	**+2.3**
ERM	**Erimo 10.29 236**			*e*P		**Pn**	**02 09 29.9**	**+1.2**
ERM	**Erimo 10.29 236**			*e*Pn		**Pn**	**02 09 28.5**	**-0.3**
ERM	**Erimo 10.29 236**			*c*iPN		**Pn**	**02 09 30.0**	**+1.2**
MA2	**Magadan 11.47 350**			P		**Pn**	**02 09 45.3**	**+0.4**
MA2	comp=Z,1.4nm,0.3s,baz=160,slow=15,SNR=3.9				LR	LR	02 14 39.5	
MA2	comp=Z,177nm,18.4s,baz=188,slow=40							
MA2	**Magadan 11.47 350**			*e*P		**Pn**	**02 09 45.0**	**+0.2**
MA2	**Magadan 11.47 350**			*e*Pn		**Pn**	**02 09 43.4**	**-1.5**
MA2	**Magadan 11.47 350**			⇓*e*PN		**Pn**	**02 09 45.1**	**+0.2**
MA2	comp=Z,11nm,1.0s				pmax	pmax		
SMY	**Shemya 13.11 63**			*e*Pn		**Pn**	**02 10 05.4**	**-1.9**
EKMR	**Ekimchan 14.51 297**			*e*P		**Pn**	**02 10 26.6**	**+0.4**
EKMR					AMB	AMB	02 10 51.4	
EKMR	comp=Z,12nm,0.6s							
SEY	**Seymchan 14.67 356**			P		**Pn**	**02 10 28.2**	**+0.1**
SEY	**Seymchan 14.67 356**			⇑*i*P		**Pn**	**02 10 26.2**	**-2.0**
KLR	**Kul'dur 15.11 282**			P		**Pn**	**02 10 35.1**	**+1.2**
KLR	comp=Z,0.0nm,0.3s,baz=76,slow=8.3,SNR=5.3				LR	LR	02 16 23.5	
KLR	comp=Z,14nm,21.2s,baz=96,slow=37							
KLR	**Kul'dur 15.11 282**			*e*P		**Pn**	**02 10 35.5**	**+1.5**
KLR	**Kul'dur 15.11 282**			*c*iP		**Pn**	**02 10 35.5**	**+1.5**
USRK	**Ussuriysk Ar. 16.19 264**			P		**P**	**02 10 49.3**	**-1.0**
USRK	comp=Z,0.7nm,0.3s,baz=65,slow=13,SNR=8.3				LR	LR

ZEA **Zeya** 17.98 298 *e*P Pn 02 11 18.8 +8.7
INU **Inuyama** 18.42 232 *e*P **Pn** **02 11 15.7 +0.3**
comp=Z,37nm,1.3s
YAK **Yakutsk** 19.59 324 *e*P **Pn** **02 11 29.4 +0.2**
YAK **Yakutsk** 19.59 324 *e*P **Pn** **02 11 29.4 +0.2**
YAK *e*S **Sn** **02 15 08.3 +0.3**
YAK pmax pmax
comp=Z,7.0nm,0.8s
YAK pmax pmax
comp=N,3.0nm,1.0s
YAK pmax pmax
comp=E,5.0nm,1.0s
YAK smax smax
comp=N,39nm,3.3s
YAK smax smax
comp=E,47nm,3.0s
CLNS **Chul'man** 19.83 306 *e*P **Pn** **02 11 32.4 +0.2**
CLNS **Chul'man** 19.83 306 *e*P **Pn** **02 11 32.4 +0.2**
CLNS pmax pmax
comp=Z,20nm,0.9s
CLNS pmax pmax
comp=E,10.0nm,0.9s
CLNS pmax pmax
comp=N,9.0nm,0.8s
BILL **Bilibino** 20.60 12 *e*P **P** **02 11 38.5 0.0**
comp=N,11nm,1.2s
BILL **Bilibino** 20.60 12 *i*P **P** **02 11 36.2 -2.2**
BILL *i* 02 11 56.7
BILL pmax pmax
comp=Z,5.0nm,1.0s
BILL MLR MLR
comp=Z,125nm,20.0s
CN2 **Changchun** 20.69 268 *e*P **P** **02 11 37.9 -1.8**
KSRS **Korea Array** 22.29 251 P **P** **02 11 57.4 +0.6**
comp=Z,10nm,0.9s,baz=46,slow=9.9,SNR=29
KSRS LR LR 02 19 18.3
comp=Z,107nm,19.8s,baz=22,slow=33
KSRS **Korea Array** 22.29 251 P **P** **02 11 57.4 +0.6**
KSRS pmax pmax
comp=Z,9.0nm,0.9s
KSRS MLR MLR
comp=Z,107nm,19.8s
KS01 **Wonju Array Si** 22.29 251 *e*P **P** **02 11 56.7 -0.2**
KSAR **Wonju Array Be** 22.32 251 *e*P **P** **02 11 57.4 +0.2**
KSAR **Wonju Array Be** 22.32 251 P **P** **02 11 57.4 +0.2**
KSAR **Wonju Array Be** 22.32 251 P **P** **02 11 57.4 +0.2**
TJN **Taejon** 23.31 249 *ce*P **P** **02 12 08.9 +1.6**
JNU **Nakatsue** 23.44 238 LR LR 02 20 41.8
comp=Z,143nm,18.2s,baz=120,slow=35
TIK **Tiksi** 26.23 342 *e*P **P** **02 12 34.8 +1.1**
TIXI **Tiksi** 26.24 342⇑ *i*P **P** **02 12 34.8 +1.0**
TIXI pmax pmax
comp=Z,2.0nm,0.9s
H11N2 **WAKE ISLAND Hy** 30.22 157 T T 02 44 53.3
baz=344,slow=76,SNR=197
H11N1 **WAKE ISLAND Hy** 30.24 157 T T 02 44 57.7
baz=344,slow=76,SNR=810
H11N3 **WAKE ISLAND Hy** 30.24 157 T T 02 44 55.5
baz=344,slow=76,SNR=204
HHC **Hu-ho-hao-te** 31.24 272 *e*P **P** **02 13 20.0 +1.3**
HHC PP **PnPn** **02 14 23.8 +1.7**
HHC S **S** **02 18 19.2 -2.4**
HHC SS **SnSn** **02 20 06.7 -0.9**
HHC ScS **ScS** **02 23 46.7 -1.4**
HHC pmax pmax
comp=Z,10.0nm,1.1s
HHC pmax pmax
comp=Z,68nm,5.3s
HHC LR LR
comp=Z,74nm,13.9s
HHC LR LR
comp=Z,51nm,13.7s
HHC LR LR
comp=Z,100nm,13.9s
H11S1 **WAKE ISLAND Hy** 31.34 158 T T 02 46 21.4
baz=344,slow=76,SNR=4142
H11S3 **WAKE ISLAND Hy** 31.35 158 T T 02 46 18.1
baz=344,slow=76,SNR=4109
H11S2 **WAKE ISLAND Hy** 31.36 158 T T 02 46 24.8
baz=344,slow=76,SNR=2563
ULN **Ulaanbaatar** 31.38 287 *e*P **P** **02 13 20.6 +0.7**
ULN **Ulaanbaatar** 31.38 287⇑ *i*P **P** **02 13 20.6 +0.7**
ULN pmax pmax
comp=Z,2.0nm,1.0s
NJ2 **Nanjing** 31.47 252 *e*P **P** **02 13 21.2 +0.6**
NJ2 pmax pmax
comp=Z,21nm,0.5s
SONA1 **Songino Array** 31.80 288 *e*P **P** **02 13 22.8 -0.8**
SONA0 **Songino Array** 31.81 288 *e*P **P** **02 13 22.9 -0.8**
SONA0 *e*PcP **PcP** **02 16 13.4 -0.2**
SONM **Songino Array** 31.81 288 P **P** **02 13 22.9 -0.8**
comp=Z,1.5nm,0.9s,baz=73,slow=9.2,SNR=6.9
SONM PcP **PcP** **02 16 13.4 -0.2**
comp=Z,1.6nm,0.8s,baz=86,slow=1.7,SNR=8.3
SONM LR LR 02 27 15.8
comp=Z,147nm,18.9s,baz=82,slow=38
IM3 **Indian Mountai** 31.86 37 *e*P **P** **02 13 23.9 +0.1**
TLY **Talaya** 32.40 295 *e*P **P** **02 13 29.7 +1.1**
TLY **Talaya** 32.40 295⇓ *i*P **P** **02 13 29.8 +1.1**
TLY pmax pmax
comp=Z,5.0nm,0.9s
BPAW **Bear Paw Mtn.** 32.86 41 *e*P **P** **02 13 33.8 +1.2**
comp=Z,3.9nm,0.9s
TRF **Thorofare Moun** 33.15 42 *e*P **P** **02 13 36.1 +0.8**
comp=Z,8.3nm,1.2s
MDM **Murphy Dome** 34.08 40 *e*P **P** **02 13 44.3 +1.2**
comp=Z,4.7nm,0.9s
SML **Sawmill** 34.10 45 *e*P **P** **02 13 44.1 +0.8**
SML **Sawmill** 34.10 45 *e*P **P** **02 13 44.1 +0.8**
comp=Z,17nm,0.8s
WRH **Wood River Hil** 34.13 41 *e*P **P** **02 13 43.6 0.0**
comp=Z,5.1nm,1.1s
WRH *e*PcP **PcP** **02 16 19.9 +0.3**
COLA **College** 34.24 40 *e*P **P** **02 13 43.4 -1.0**
COLA **College** 34.24 40⇓ *e*P **P** **02 13 43.4 -1.0**
COLA pmax pmax
comp=Z,8.0nm,0.8s
CCB **Clear Creek Bu** 34.26 40 *e*P **P** **02 13 45.4 +0.8**
comp=Z,2.6nm,0.7s
SCM **Sheep Creek Mo** 34.57 45 *e*P **P** **02 13 48.7 +1.2**
comp=Z,6.4nm,0.8s
IL1 **Eielson Array** 34.65 40 *e*P **P** **02 13 48.0 0.0**
ILAR **Eielson Array** 34.65 40 P **P** **02 13 48.2 +0.1**
comp=Z,2.2nm,1.0s,baz=250,slow=7.7,SNR=10
ILB **Eielson Array** 34.65 40 *e*P **P** **02 13 48.1 +0.1**
KLU **Klutina** 35.27 46 *e*P **P** **02 13 55.5 +2.0**
comp=Z,5.2nm,1.0s
FYU **Fort Yukon** 35.34 37 *e*P **P** **02 13 54.9 +1.0**
comp=Z,7.7nm,0.7s
BMRM **Bremner River** 35.97 46 *e*P **P** **02 14 00.8 +1.3**
comp=Z,6.9nm,1.0s
CRQM **Cirque** 36.71 47 *e*P **P** **02 14 07.6 +1.7**
comp=Z,10nm,0.9s
BALM **Baldy** 37.04 46 *e*P **P** **02 14 09.6 +0.9**
comp=Z,5.3nm,1.1s
EGAK **Eagle** 37.10 40 *e*P **P** **02 14 09.4 +0.4**
comp=Z,5.3nm,0.8s
INK **Inuvik** 39.74 34 P **P** **02 14 31.9 +0.8**
comp=Z,1.4nm,0.5s,baz=311,slow=8.4,SNR=6.3
INK **Inuvik** 39.74 34 *e*P **P** **02 14 32.2 +1.1**
INK **Inuvik** 39.74 34 *e*P **P** **02 14 32.2 +1.1**
comp=Z,6.9nm,1.1s
INK **Inuvik** 39.74 34 *e*P **P** **02 14 32.2 +1.1**
GTA **Gaotai** 39.76 278 *e*P **P** **02 14 31.4 -0.4**
GTA pP pP 02 14 46.5 +1.4
GTA sP sP 02 14 53.7 +2.7
GTA S **S** **02 20 29.6 -2.6**
GTA sS sS 02 20 55.1 +0.6
GTA SS **SS** **02 23 18.8 -10**
GTA pmax pmax
comp=Z,5.0nm,0.6s
GTA pmax pmax
comp=Z,79nm,10.6s
GTA LR LR
comp=Z,93nm,16.8s
GTA LR LR
comp=Z,160nm,16.2s
GTA LR LR
comp=Z,150nm,13.1s
WHY **Whitehorse** 40.69 45 *e*P **P** **02 14 40.6 +1.4**
comp=Z,4.5nm,0.9s
CD2 **Chengdu** 42.06 265 P **P** **02 14 48.5 -2.2**
CD2 pmax pmax
comp=Z,5.0nm,0.6s
ZAA1 **Zalesovo Array** 42.53 305 *e*P **P** **02 14 52.9 -1.3**
ZAA1 *e*PcP **PcP** **02 16 46.2 +0.4**

ZALV **Zalesovo Beam** 42.53 305 P **P** **02 14 52.8 -1.3**
comp=Z,0.9nm,0.3s,baz=77,slow=6.4,SNR=2.0
ZALV PcP **PcP** **02 16 46.2 +0.4**
comp=Z,3.7nm,0.8s,baz=69,slow=3.0,SNR=10
ZALV LR LR 02 33 06.9
comp=Z,124nm,19.9s,baz=70,slow=37
DLBC **Dease Lake** 43.74 47 *e*P **P** **02 15 05.3 +1.3**
comp=Z,3.9nm,0.9s
WMQ **Urumqi** 45.32 291 P **P** **02 15 17.7 +0.9**
WMQ LR LR
comp=Z,180nm,20.3s
WMQ LR LR
comp=Z,160nm,25.3s
WMQ LR LR
comp=Z,140nm,20.7s
MK31 **Makanchi Array** 47.14 297 *e*P **P** **02 15 29.4 -1.5**
MK31 **Makanchi Array** 47.14 297 *e*P **P** **02 15 29.4 -1.5**
MK32 **Makanchi Array** 47.14 297 *e*P **P** **02 15 29.6 -1.3**
MK32 *e*PcP **PcP** **02 17 02.1 +0.2**
MKAR **Makanchi Array** 47.14 297 P **P** **02 15 29.6 -1.3**
comp=Z,4.9nm,0.8s,baz=67,slow=7.9,SNR=38
MKAR PcP **PcP** **02 17 02.1 +0.2**
comp=Z,1.5nm,0.8s,baz=52,slow=4.2,SNR=4.0
MKAR LR LR 02 36 25.0
comp=Z,76nm,20.7s,baz=63,slow=37
MKAR **Makanchi Array** 47.14 297 *e*P **P** **02 15 29.4 -1.5**
comp=Z,33nm,0.8s
MK01 **Makanchi Array** 47.14 297 *e*P **P** **02 15 29.7 -1.3**
MAKZ **Makanchi** 47.32 297 *e*P **P** **02 15 31.6 -0.7**
comp=Z,8.3nm,1.4s
MAKZ **Makanchi** 47.32 297 *e*P **P** **02 15 31.6 -0.7**
MAKZ pmax pmax
comp=Z,8.0nm,1.4s
KURK **Kurchatov** 47.35 303 *e*P **P** **02 15 31.8 -0.7**
KURK **Kurchatov** 47.35 303 *e*P **P** **02 15 31.7 -0.7**
comp=Z,5.3nm,0.6s
KURK *e*PcP **PcP** **02 17 02.2 -0.3**
KURK **Kurchatov** 47.35 303 *d i*P **P** **02 15 31.8 -0.7**
KURK pmax pmax
comp=Z,3.0nm,0.7s
KURBB **Kurchatov Arra** 47.45 303 P **P** **02 15 32.2 -1.0**
comp=Z,4.5nm,0.6s,baz=71,slow=8.1,SNR=30
KURBB PcP **PcP** **02 17 02.2 -0.7**
comp=Z,1.5nm,0.8s,baz=57,slow=4.2,SNR=4.8
RES **Resolute Bay** 48.98 19 *e*P **P** **02 15 45.2 +0.4**
RES **Resolute Bay** 48.98 19 *e*P **P** **02 15 45.2 +0.4**
comp=Z,3.5nm,0.8s
RES **Resolute Bay** 48.98 19 P **P** **02 15 45.1 +0.4**
RES pmax pmax
comp=Z,4.0nm,0.9s
YKW3 **Yellowknife Ar** 48.98 38 *e*P **P** **02 15 45.6 +0.7**
comp=Z,4.4nm,1.0s
YKA **Yellowknife Ar** 49.02 38 P **P** **02 15 46.0 +0.9**
comp=Z,2.5nm,0.7s,baz=297,slow=7.5,SNR=24
BVAR **Borovoye Array** 50.65 309 P **P** **02 15 56.4 -1.4**
comp=Z,1.6nm,0.5s,baz=61,slow=8.2,SNR=15
BVAR PcP **PcP** **02 17 14.4 -0.1**
comp=Z,3.3nm,0.6s,baz=75,slow=2.6,SNR=10
BVAR LR LR 02 37 31.7
comp=Z,106nm,19.5s,baz=60,slow=36
BRVK **Borovoye** 50.69 309 *e*P **P** **02 15 56.1 -1.9**
comp=Z,4.3nm,0.6s
BRVK **Borovoye** 50.69 309⇑ *i*P **P** **02 15 57.0 -1.0**
BRVK pmax pmax
comp=Z,2.0nm,0.8s
CHTO **Chiang Mai** 53.50 257 *e*P **P** **02 16 19.4 +0.1**
comp=Z,12nm,0.7s
CHTO **Chiang Mai** 53.50 257 *e*P **P** **02 16 19.4 +0.1**
CHTO pmax pmax
comp=Z,12nm,0.7s
CM31 **Chiang Mai Arr** 53.76 256 *e*P **P** **02 16 22.3 +1.1**
CMAR **Chiang Mai Arr** 53.76 256 P **P** **02 16 22.3 +1.1**
comp=Z,8.5nm,0.7s,baz=32,slow=7.3,SNR=23
CMAR **Chiang Mai Arr** 53.76 256 *e*P **P** **02 16 22.6 +1.4**
CMAR **Chiang Mai Arr** 53.76 256 *i*P **P** **02 16 22.7 +1.5**
CMAR pmax pmax
comp=Z,8.0nm,0.6s
CM01 **Chiang Mai Arr** 53.77 256 *e*P **P** **02 16 22.0 +0.7**
AAK **Ala-Archa** 54.05 296 *e*P **P** **02 16 23.4 +0.1**
AAK **Ala-Archa** 54.05 296 *e*P **P** **02 16 23.0 -0.3**
comp=Z,3.0nm,0.9s
AAK **Ala-Archa** 54.05 296⇑ *i*P **P** **02 16 23.4 +0.1**
AAK pmax pmax
comp=Z,3.0nm,0.9s
B08A **Colville Reser** 54.13 55 *e*P **P** **02 16 24.1 +0.5**
comp=Z,2.6nm,0.8s
ARU **Arti** 54.53 317 *e*P **P** **02 16 27.5 +1.1**
ARU **Arti** 54.53 317 *d i*P **P** **02 16 27.4 +1.1**
ARU *PP **sP** **02 16 43.2 -2.8**
ARU 02 17 25.5
ARU S **S** **02 24 04.2 +2.7**
ARU SS **SS** **02 27 43.9 0.0**
ARU pmax pmax
comp=Z,4.0nm,1.0s
KSH **Kashi** 55.00 292 P P 02 16 39.7 +10
KSH pP sP 02 16 50.7 +0.9
KSH PP **PP** **02 18 39.5 +6.1**
JIRN **Jiri** 55.85 275 *e*P **P** **02 16 36.9 +0.2**
comp=Z,16nm,0.4s
GUN **Gumba** 55.90 275 *e*P **P** **02 16 36.4 -0.6**
comp=Z,9.2nm,0.6s
DMN **Daman** 56.61 275 *e*P **P** **02 16 42.9 +0.9**
comp=Z,21nm,0.7s
GKN **Gorkha** 56.66 276 *e*P **P** **02 16 42.5 +0.3**
comp=Z,16nm,0.7s
DANN **Dangsing** 57.01 277 *e*P **P** **02 16 45.4 +0.5**
KOLN **Koldanda** 57.50 276 *e*P **P** **02 16 48.3 +0.1**
comp=Z,11nm,0.6s
PYUN **Piuthan** 57.69 277 *e*P **P** **02 16 50.5 +1.0**
comp=Z,32nm,0.9s
HNR **Honiara** 57.72 174 LR LR 02 38 41.1
comp=Z,75nm,20.4s,baz=135,slow=33
MSO **Missoula** 57.97 54 *e*P **P** **02 16 53.1 +1.9**
comp=Z,3.8nm,1.0s
ABKAR **Akbulak array** 58.20 310 *e*P **P** **02 16 51.3 -1.3**
FFC **Flin Flon** 58.84 41 *e*P **P** **02 16 58.5 +1.5**
FFC **Flin Flon** 58.84 41 *e*P **P** **02 16 58.5 +1.5**
comp=Z,7.2nm,1.0s
FFC **Flin Flon** 58.84 41 *e*P **P** **02 16 58.5 +1.5**
MFID **Camas Ranch** 59.05 58 *e*P **P** **02 17 01.0 +2.3**
comp=Z,75nm,1.0s
FCC **Fort Churchill** 59.35 34 *e*P **P** **02 17 01.0 +0.6**
FCC **Fort Churchill** 59.35 34 *e*P **P** **02 17 00.9 +0.6**
comp=Z,4.7nm,0.6s
FCC **Fort Churchill** 59.35 34 *e*P **P** **02 17 01.0 +0.6**
FCC pmax pmax
comp=Z,5.0nm,0.6s
LRM **Limekiln Ridge** 59.41 54 *e*P **P** **02 17 01.4 +0.1**
BOZ **Bozeman (W)** 59.99 54 *e*P **P** **02 17 06.7 +1.5**
comp=Z,3.8nm,0.8s
BOZ *e*pP **pP** **02 17 19.4 +0.2**
YHH **Holmes Hill** 60.94 54 *e*P **P** **02 17 13.8 +1.9**
comp=Z,2.9nm,0.8s
TPAW **Teton Pass** 61.73 55 *e*P **P** **02 17 19.8 +2.6**
comp=Z,12nm,1.4s
GATR **Gnd/Air Tx Cnt** 61.96 69 *e*P **P** **02 17 18.3 -0.4**
R11A **Troy Canyon, C** 62.45 62 *e*P **P** **02 17 22.9 +0.9**
comp=Z,5.1nm,0.8s
PD31 **Pinedale Array** 62.97 55 *e*P **P** **02 17 26.9 +1.4**
PDAR **Pinedale Array** 62.97 55 P **P** **02 17 26.9 +1.4**
comp=Z,2.6nm,0.9s,baz=318,slow=2.0,SNR=11
PDAR **Pinedale Array** 62.97 55 *e*P **P** **02 17 26.5 +1.1**
TPNV **Topopah Spring** 62.98 64 *e*P **P** **02 17 25.8 +0.3**
comp=Z,9.9nm,0.7s
FIA0 **FINESS Array S** 63.03 335 *e*P **P** **02 17 23.5 -1.7**
FIA0 **FINESS Array S** 63.03 335 *e*P **P** **02 17 23.5 -1.7**
FINES **FINESS Array B** 63.03 335 P **P** **02 17 23.5 -1.7**
comp=Z,1.5nm,0.7s,baz=359,slow=9.0,SNR=4.8
DJJ **Dona J Jenkin** 63.53 68 *e*P **P** **02 17 25.6 -3.4**
MWC **Mount Wilson** 63.69 67 *e*P **P** **02 17 29.1 -1.2**
ULM **Lac du Bonnet** 64.63 42 P **P** **02 17 36.2 +0.3**
comp=Z,3.3nm,0.7s,baz=319,slow=7.5,SNR=8.3
SRU **San Rafael Swe** 64.89 59 *e*P **P** **02 17 39.4 +1.3**
SRU *e*pP **pP** **02 17 52.5 +0.4**
SRU **San Rafael Swe** 64.89 59 *e*P **P** **02 17 39.4 +1.3**
SRU *e*AP **pP** **02 17 52.6 +0.4**
RSSD **Black Hills** 65.00 51 *e*P **P** **02 17 40.1 +1.4**
RSSD *e*pP **pP** **02 17 53.1 +0.3**
PHWY **Pilot Hill** 66.20 54 *e*pP pP 02 18 03.8 +3.0
SMCO **Snowmass** 66.85 57 *e*pP pP 02 18 04.8 -0.3
NB2 **NORSAR Subarra** 67.04 342 P **P** **02 17 50.8 -0.5**
comp=Z,0.5nm,0.7s,baz=25,slow=6.5
NB200 **NORSAR Array S** 67.04 342 *e*P **P** **02 17 50.8 -0.5**
NOA **NORSAR Array B** 67.04 342 P **P** **02 17 50.8 -0.5**
comp=Z,2.5nm,0.9s,baz=25,slow=6.3,SNR=4.0

ISCO **Idaho Springs** 67.17 55 *e*pP pP 02 18 07.7 +0.7
HFS **Hagfors** 67.31 340 P **P** **02 17 52.3 -0.7**
comp=Z,1.3nm,0.5s,baz=75,slow=6.3,SNR=11
EYMN **Ely** 68.28 41 *e*P **P** **02 17 59.8 +0.5**
comp=Z,6.6nm,1.0s
CTA **Charters Tower** 68.54 188 P **P** **02 18 01.6 +0.5**
comp=Z,5.1nm,0.7s,baz=356,slow=8.8,SNR=3.9
ECSD **EROS Data Cent** 69.03 47 *e*P **P** **02 18 04.5 +0.4**
comp=Z,7.2nm,1.1s
ANMO **Albuquerque** 70.12 60 P **P** **02 18 12.3 +1.2**
comp=Z,0.8nm,0.6s,baz=339,slow=8.6,SNR=4.1
WB2 **Warramunga Arr** 70.37 200 *e*P **P** **02 18 13.2 +0.8**
WR1 **Warramunga Arr** 70.37 200 *e*P **P** **02 18 12.8 +0.4**
comp=Z,9.9nm,0.8s
WRA **Warramunga Arr** 70.37 200 P **P** **02 18 12.8 +0.4**
comp=Z,7.6nm,0.8s,baz=16,slow=6.3,SNR=30
AKASG **Malin Array Be** 70.78 327 P **P** **02 18 13.2 -1.5**
comp=Z,0.8nm,0.5s,baz=33,slow=6.4,SNR=3.6
AKBB **Malin Array Si** 70.78 327 *e*P **P** **02 18 13.2 -1.5**
comp=Z,3.0nm,1.0s
AKBB **Malin Array Si** 70.78 327 *e*P **P** **02 18 13.2 -1.5**
AKBB pmax pmax
comp=Z,3.0nm,1.0s
G43A **Wallace** 72.02 41 *e*P **P** **02 18 22.9 +0.7**
comp=Z,11nm,0.8s
GNI **Garni** 72.28 311 LR LR 02 56 15.6
comp=Z,48nm,18.5s,baz=76,slow=41
AS01 **Alice Springs** 74.05 200 *e*P **P** **02 18 35.2 +0.8**
AS31 **Alice Springs** 74.06 200 *e*P **P** **02 18 35.7 +1.3**
comp=Z,0.8nm,0.7s
ASAR **Alice Springs** 74.06 200 P **P** **02 18 35.7 +1.3**
comp=Z,2.5nm,0.7s,baz=13,slow=5.7,SNR=22
BUR04 **Bucovina Ar. S** 74.81 327 *e*P **P** **02 18 39.1 +0.4**
EKA **Eskdalemuir Ar** 75.02 347 P **P** **02 18 39.5 -0.1**
comp=Z,1.0nm,0.7s,baz=25,slow=5.5,SNR=4.4
DPC **Dobruska-Polom** 75.35 334 *e*P **P** **02 18 42.6 +0.9**
DPC **Dobruska-Polom** 75.35 334 *e*P **P** **02 18 42.6 +0.9**
CLL **Collm** 75.42 336 *e*P **P** **02 18 42.0 0.0**
LANS **Liptovska Anna** 75.44 331 *e*P **P** **02 18 43.6 +1.3**
LANS **Liptovska Anna** 75.44 331 *e*P **P** **02 18 43.6 +1.3**
TX31 **Lajitas Ar. Si** 75.81 62 *e*P **P** **02 18 45.5 +0.8**
TXAR **Lajitas Array** 75.81 62 P **P** **02 18 45.6 +0.8**
comp=Z,1.3nm,0.8s,baz=300,slow=4.2,SNR=15
SADO **Sadowa** 75.98 36 P **P** **02 18 44.5 -0.9**
comp=Z,4.4nm,0.8s,baz=342,slow=6.4,SNR=3.0
SADO **Sadowa** 75.98 36 *e*P **P** **02 18 44.5 -0.9**
comp=Z,15nm,1.5s
VYHS **Vyhne** 76.22 331 *e*P **P** **02 18 47.3 +0.6**
VYHS **Vyhne** 76.22 331 *e*P **P** **02 18 47.3 +0.6**
MLR **Muntele Rosu** 76.34 326 P **P** **02 18 48.2 +0.7**
comp=Z,0.4nm,0.8s,baz=231,slow=14,SNR=5.2
WSAR **Wadi Sarque** 76.82 290 P **P** **02 18 51.0 +0.6**
comp=Z,5.5nm,0.8s,baz=63,slow=4.5,SNR=3.6
KHC **Kasperske Hory** 77.23 335 *e*P **P** **02 18 52.1 -0.3**
KHC **Kasperske Hory** 77.23 335 *e*P **P** **02 18 52.1 -0.3**
KHC **Kasperske Hory** 77.23 335 *e*P **P** **02 18 52.1 -0.3**
GERES **GERESS Array B** 77.46 335 LR LR 02 56 04.1
comp=Z,62nm,18.5s,baz=318,slow=38
BR101 **Keskin Array S** 77.92 317 *e*P **P** **02 18 56.9 +0.4**
BRTR **Keskin Array B** 77.92 317 P **P** **02 18 56.9 +0.3**
comp=Z,0.8nm,0.8s,baz=64,slow=3.4,SNR=5.4
BRTR **Keskin Array B** 77.92 317 *i*P **P** **02 18 56.5 0.0**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
BAIF **Baives** 78.71 341 *e*P **P** **02 19 00.4 -0.1**
BAIF pmax pmax
comp=Z,53nm,2.0s
VTS **Vitosha** 79.84 326 *e*P **P** **02 19 06.8 -0.2**
comp=Z,4.7nm,1.0s
VTS **Vitosha** 79.84 326 *e*P **P** **02 19 06.8 -0.2**
VTS pmax pmax
comp=Z,5.0nm,1.0s
HAU **Haudompre** 80.16 339 *e*P **P** **02 19 07.7 -0.8**
HAU pmax pmax
comp=Z,9.0nm,1.2s
GRR **Gorron** 81.33 344 *e*P **P** **02 19 10.4 -4.3**
GRR pmax pmax
comp=Z,26nm,1.3s
SSF **Saint Saulge** 81.70 341 *e*P **P** **02 19 16.9 +0.2**
SSF pmax pmax
comp=Z,6.0nm,0.9s
AVF **Avril sur Loir** 81.99 341 *e*P **P** **02 19 17.7 -0.5**
AVF pmax pmax
comp=Z,4.0nm,0.8s
LPL **La Plagne** 82.39 338 *e*P **P** **02 19 20.8 +0.2**
LPL pmax pmax
comp=Z,12nm,1.3s
LPG **La Plagne** 82.40 338 *e*P **P** **02 19 21.0 +0.2**
LPG pmax pmax
comp=Z,7.0nm,1.0s
ASF **Jabal al Asfar** 82.45 311 P **P** **02 19 22.0 +1.1**
comp=Z,2.5nm,0.8s,baz=324,slow=5.1,SNR=3.7
MMAI **Mount Meron Ar** 82.52 312 P **P** **02 19 21.6 +0.3**
comp=Z,4.6nm,0.7s,baz=31,slow=9.1,SNR=10
TCF **Toulx Ste Croi** 82.72 341 *e*P **P** **02 19 21.8 -0.3**
TCF pmax pmax
comp=Z,7.0nm,1.0s
MFF **Saint Martin d** 82.90 343 *e*P **P** **02 19 22.7 -0.3**
MFF pmax pmax
comp=Z,49nm,2.0s
SSB **Saint Sauveur** 83.14 339 *e*P **P** **02 19 24.4 +0.1**
comp=Z,7.8nm,1.0s
SSB **Saint Sauveur** 83.14 339 *e*P **P** **02 19 24.4 +0.1**
SSB pmax pmax
comp=Z,8.0nm,1.0s
VIVF **Saint-Julien-l** 83.51 339 *e*P **P** **02 19 26.2 0.0**
VIVF pmax pmax
comp=Z,3.0nm,0.8s
RJF **Les Rejaudoux** 83.80 341 *e*P **P** **02 19 27.3 -0.3**
RJF pmax pmax
comp=Z,8.0nm,1.2s
CAF **Calviac** 84.05 341 *e*P **P** **02 19 29.0 +0.1**
CAF pmax pmax
comp=Z,6.0nm,1.0s
RAYN **Ar Rayn** 84.55 299 *e*P **P** **02 19 31.8 -0.1**
comp=Z,5.8nm,0.8s
RAYN **Ar Rayn** 84.55 299 P **P** **02 19 31.8 -0.1**
RAYN pmax pmax
comp=Z,6.0nm,0.8s
ETSF **Etsaut** 86.54 342 *e*P **P** **02 19 44.8 +3.3**
ETSF pmax pmax
comp=Z,10.0nm,1.4s
ES19 **SONSECA Array** 90.28 344 *e*P **P** **02 19 58.5 -0.8**
ESDC **Sonseca Array** 90.32 344 P **P** **02 19 58.4 -1.1**
comp=Z,0.2nm,0.6s,baz=12,slow=2.4,SNR=5.5
KEST **Kesra** 90.75 332 P **P** **02 20 00.0 -1.5**
comp=Z,2.2nm,0.7s,baz=302,slow=2.4,SNR=5.1
KEST **Kesra** 90.75 332 *e*P **P** **02 20 00.0 -1.5**
comp=Z,10nm,1.3s
TOA1 **Torodi Ar. Sit** 114.22 331 *e*PKiKP **PKiKP** **02 25 37.1 -0.9**
TORD **Torodi Ar. Bea** 114.22 331 PKP PKPdf 02 25 37.1 -0.9
comp=Z,0.2nm,0.6s,baz=13,slow=2.5,SNR=3.2
CPUP **Villa Florida** 146.77 60 PKPbc **PKPdf** **02 26 37.2 -1.2**
comp=Z,3.0nm,1.1s,baz=35,slow=3.3,SNR=3.6
PLCA **Paso Flores** 147.30 94 PKPbc **PKPbc** **02 26 42.0 +0.7**
comp=Z,3.5nm,0.7s,baz=313,slow=5.0,SNR=6.3
SNAA **Sanae** 154.38 196 PKPbc **PKPbc** **02 26 55.9 -1.3**
comp=Z,1.0nm,0.7s,baz=58,slow=6.3,SNR=5.0

IDC 05 02:07:42.4±1.9,3°48N×128°46E,h0km,mb3.7/5, mb1 3.8/5,mb1mx3.5/55,mbtmp3.7/5,Error ellipse: s-maj=153.2km s-min=19.9km az=69.0,North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.98**	**166**	P	P	02 12 58.0	-0.9
1.6nm,0.7s,baz=346,slow=10,SNR=10							
ASAR	**Alice Springs**	**27.50**	**169**	P	P	02 13 31.3	+0.6
0.3nm,0.6s,baz=352,slow=11,SNR=2.6							
MKAR	**Makanchi Array**	**58.75**	**325**	P	P	02 17 42.5	+0.3
0.9nm,0.6s,baz=105,slow=7.6,SNR=4.5							
KURBB	**Kurchatov Arra**	**62.89**	**327**	P	P	02 18 09.3	-1.0
0.8nm,0.6s,baz=128,slow=5.8,SNR=6.1							
BVAR	**Borovoye Array**	**68.48**	**327**	P	P	02 18 47.2	+0.8
0.7nm,0.6s,baz=117,slow=8.3,SNR=3.0							

LJU 05 02:17:07.2,46°17N×13°71E,h12km,ML0.4,1C,Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CADS	**Cadrg**	**0.06**	**15⇑**	*i*Pg	Pg	02 17 09.7	0.0
CADS				*i* Sg	Sg	02 17 11.7	+0.2
comp=Z,6.0nm,0.1s							

ROBS	**Robic**	**0.16**	**298**	*i* Pg	Pg	02 17 11.1	+0.2
ROBS				*i* Sg	Sg	02 17 13.7	+0.2
	comp=Z,3.0nm,0.1s						
GORS	**Gorjuse**	**0.25**	**53**	*i* Pg	Pg	02 17 12.4	0.0

DDA ***05*** *02:23:06.0, 36°.93N×28°.25E, h7km, Ml2.6*
ISK ***05*** *02:23:05.9, 36°.93N×28°.23E, h11km±2km, ML2.0/6*
CSEM ***05*** *02:23:06.1±0.2, 36°.94N×28°.25E, h1km, ML2.0, Error ellipse: s-maj=5.2km s-min=4.5km az=26.0, Suspected Mining explosion.*
ISC 05 02:23:05.8±0.9,**36°.94N**±0°.03×**28°.31E**±0°.02,**h10**km±9km,
n25,σ0§**92**/38,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.20**	**355**	PG	**Pg**	**02 23 10.8**	**+0.8**
YER	**Yerkesik**	**0.20**	**355**	*e*Pg	**Pg**	**02 23 10.8**	**+0.8**
MRSB	**Marmaris-Mugla**	**0.23**	**202**	PG	**Pg**	**02 23 10.6**	**0.0**
MRSB				SG	**Sg**	**02 23 14.7**	**+0.8**
MRSB	**Marmaris-Mugla**	**0.23**	**202**	*e*Pg	**Pg**	**02 23 10.6**	**0.0**
MRSB				*e*Sg	**Sg**	**02 23 14.7**	**+0.8**
TURN	**Turunc**	**0.25**	**104**	PG	**Pg**	**02 23 10.0**	**-0.8**
TURN				SG	**Sg**	**02 23 12.9**	**-1.3**
TURN	**Turunc**	**0.25**	**104**	*i* P	**Pg**	**02 23 09.9**	**-0.8**
TURN				*i* S	**Sg**	**02 23 12.5**	**-1.6**
TURN	**Turunc**	**0.25**	**104**	*i* Pg	**Pg**	**02 23 10.0**	**-0.8**
DALY	**Dalyan (Mu¨la**	**0.30**	**113**	PG	**Pb**	**02 23 13.5**	**+0.2**
DALY				SG	**Sb**	**02 23 19.3**	**+1.0**
DALY	**Dalyan (Mu¨la**	**0.30**	**113**	*i* P	**Pb**	**02 23 13.4**	**+0.1**
DALY				*i* S	**Sb**	**02 23 19.3**	**+1.0**
DALY	**Dalyan (Mu¨la**	**0.30**	**113**	P	**Pb**	**02 23 13.4**	**+0.1**
DALY				*e*Sg	**Sb**	**02 23 19.3**	**+1.0**
DATC	**Datca-Mugla**	**0.55**	**251**	PG	**Pg**	**02 23 16.4**	**0.0**
DATC	**Datca-Mugla**	**0.55**	**251**	*e*Pg	**Pg**	**02 23 16.4**	**0.0**
MLSB	**Milas**	**0.56**	**311**	PG	**Pg**	**02 23 16.2**	**-0.4**
MLSB	**Milas**	**0.56**	**311**	*e*Pg	**Pg**	**02 23 16.2**	**-0.4**
FETY	**Fethiye**	**0.69**	**115**	P	**Pb**	**02 23 19.9**	**0.0**
BDRM	**Kayabasi**	**0.70**	**281**	*i* P	**Pg**	**02 23 17.4**	**-2.0**
BDRM				*i* S	**Sg**	**02 23 28.4**	**-0.1**
BDRM	**Kayabasi**	**0.70**	**281**	P	**Pg**	**02 23 17.4**	**-2.0**
BDRM				S	**Sg**	**02 23 28.5**	**-0.1**
TAVA	**DENIZLI_Tavas**	**0.72**	**42**	*i* P	**Pb**	**02 23 20.1**	**-0.4**
TAVA				*i* S	**Sb**	**02 23 32.1**	**+1.8**
TAVA	**DENIZLI_Tavas**	**0.72**	**42**	P	**Pb**	**02 23 20.1**	**-0.4**
TAVA				S	**Sb**	**02 23 32.2**	**+1.8**
ARG	**Arkhangelos**	**0.73**	**191**	PG	**Pb**	**02 23 20.4**	**-0.2**
ARG	**Arkhangelos**	**0.73**	**191**	*e*Pg	**Pb**	**02 23 20.4**	**-0.2**
AYDN	**Tasoluk**	**0.80**	**335**	*i* P	**Pg**	**02 23 20.7**	**-0.5**
AYDN				*i* S	**Sb**	**02 23 32.9**	**+0.2**
AYDN	**Tasoluk**	**0.80**	**335**	P	**Pg**	**02 23 20.7**	**-0.5**
AYDN				S	**Sb**	**02 23 32.9**	**+0.2**
BODT	**Bodrum**	**0.81**	**279**	PG	**Pg**	**02 23 20.5**	**-0.8**
BODT	**Bodrum**	**0.81**	**279**	*e*Pg	**Pg**	**02 23 20.5**	**-0.8**

IDC ***05*** *02:23:59.1±1.6, 0°.28S×122°.52E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/55, mbtmp3.5/3, Error ellipse: s-maj=161.7km s-min=28.3km az=63.0*
ISCJB ***05*** *02:24:14.8±1.2, 0°.1S±0°.1×122°.9E±0°.1, h162km, mb3.3/3, Error ellipse: s-maj=18.2km s-min=15.3km az=159.9*
DJA ***05*** *02:24:14.8±2.0, 0°.5±.5°×12°.3E±°, h22km±20km, M3.8/4, MLv3.8/4*
ISC 05 02:24:16.5±1.4,**0°.1S**±0°.1×**122°.8E**±0°.2,**h162**km,**n6**,
σ2§**27**/7,**mb3.4**/3,**Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**1.04**	**303**	P	**Pn**	**02 24 40.9**	**-1.8**
MRSI				S	**Sn**	**02 25 00.6**	**-2.3**
APSI	**Ampana**	**1.42**	**235**	P	**Pn**	**02 24 46.0**	**-0.1**
APSI				S	**Sn**	**02 25 09.5**	**+0.6**
SANI	**Sanana**	**3.72**	**121**	P	Pn	02 25 03.8	-10
WRA	**Warramunga Arr**	**22.73**	**151**	P	**P**	**02 29 02.7**	**-2.1**
	0.8nm,0.7s,baz=330,slow=11,SNR=4.8						
SONM	**Songino Array**	**49.83**	**346**	P	**P**	**02 32 55.7**	**+2.6**
	0.4nm,0.5s,baz=161,slow=9.2,SNR=3.8						
MKAR	**Makanchi Array**	**58.60**	**328**	P	**P**	**02 33 57.3**	**+0.9**
	0.4nm,0.7s,baz=130,slow=8.1,SNR=2.7						

KRNET ***05*** *02:27:43.8±0.1, 41°.37N×74°.68E, h22km, mb3.6*
KNET ***05*** *02:27:43.8±0.5, 41°.43N×74°.62E, h7km±3km, ml2.9, Error ellipse: s-maj=2.9km s-min=1.7km az=4.0*
NNC ***05*** *02:27:44.6±0.9, 41°.40N×74°.58E, h0km, mb3.9, mpv3.7, Error ellipse: s-maj=9.8km s-min=5.7km az=105.0*
SOME ***05*** *02:27:45.0, 41°.43N×74°.58E, h10km*
ISC 05 02:27:42.7±1.3,**41°.36N**±0°.03×**74°.73E**±0°.02,**h3**km±11km,
n56,σ1§**27**/94,**41C-29D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZA	**Kyzart**	**0.81**	**28**	P	**Pb**	**02 27 59.3**	**-0.4**
	22nm,0.1s,SNR=115						
KZA				⇑S	**Sb**	**02 28 11.3**	**+0.1**
	211nm,0.2s						
KZA	**Kyzart**	**0.81**	**28**	⇓*i*P	**Pb**	**02 27 59.4**	**-0.3**
	baz=31						
KZA				⇓*i*S	**Sb**	**02 28 11.1**	**-0.1**
	baz=31						
UCH	**Uchtor**	**0.88**	**349**	P	**Pg**	**02 28 00.1**	**+0.5**
	101nm,0.2s,SNR=228						
UCH				⇓S	**Sb**	**02 28 12.8**	**-0.4**
	145nm,0.3s						
UCH	**Uchtor**	**0.88**	**349**	⇓*i*P	**Pg**	**02 28 00.1**	**+0.5**
	baz=52						
UCH				⇓*i*S	**Sb**	**02 28 12.0**	**-1.2**
	baz=52						
NRN	**Naryn**	**0.96**	**85**	⇓*i*P	**Pg**	**02 28 01.9**	**+0.9**
	baz=86						
NRN				⇓*i*S	**Sb**	**02 28 14.8**	**-0.5**
	baz=86						
AML	**Almayashu**	**1.09**	**315**	⇓P	**Pg**	**02 28 03.3**	**-0.3**
	84nm,0.1s,SNR=148						
AML				⇑S	**Sg**	**02 28 17.9**	**+0.1**
	240nm,0.3s						
AML	**Almayashu**	**1.09**	**315**	⇓*i*P	**Pg**	**02 28 03.4**	**-0.2**
	baz=16						
AML				⇓*i*S	**Sg**	**02 28 17.9**	**+0.1**
	baz=16						
AAK	**Ala-Archa**	**1.28**	**352**	⇑P	**Pb**	**02 28 07.5**	**-0.1**
	13nm,0.5s						
AAK				⇑S	**Sn**	**02 28 24.9**	**-0.6**
	72nm,0.7s						
AAK	**Ala-Archa**	**1.28**	**352**	P	**Pb**	**02 28 07.5**	**-0.1**
	36nm,0.2s,SNR=58						
AAK				⇑S	**Sn**	**02 28 25.1**	**-0.4**
	70nm,0.4s						
AAK	**Ala-Archa**	**1.28**	**352**	⇑*i*P	**Pn**	**02 28 07.3**	**-0.4**
	baz=54						
AAK				⇑*i*S	**Sg**	**02 28 24.0**	**0.0**
	baz=54						
KBK	**Karagaybulak**	**1.30**	**7**	P	**Pg**	**02 28 08.2**	**+0.6**
	114nm,0.1s,SNR=179						
KBK				⇓S	**Sn**	**02 28 26.5**	**+0.5**
	294nm,0.2s						
KBK	**Karagaybulak**	**1.30**	**7**	⇑*i*P	**Pg**	**02 28 08.2**	**+0.6**
	baz=9.0						
KBK				⇑*i*S	**Sn**	**02 28 25.2**	**-0.8**
	baz=9.0						
ARSB	**Arslanbob**	**1.32**	**269**	⇑*i*P	**Pn**	**02 28 07.3**	**-0.8**
	baz=68						
ARSB				⇑*i*S	**Sb**	**02 28 24.7**	**-0.8**
	baz=68						
ULHL	**Ulahol**	**1.43**	**52**	⇓*i*P	**Pg**	**02 28 10.5**	**+0.3**
	baz=53						
ULHL				⇓*i*S	**Sg**	**02 28 29.9**	**+1.2**
	baz=53						
BOOM	**Boomskoye usch**	**1.44**	**38**	⇑*i*P	**Pg**	**02 28 10.6**	**+0.3**
	baz=40						
BOOM				⇑*i*S	**Sg**	**02 28 30.0**	**+1.0**
	baz=40						
EKS2	**Erkin-Say**	**1.48**	**332**	⇓P	**Pb**	**02 28 10.7**	**-0.2**
	10.0nm,0.2s,SNR=17						
EKS2	**Erkin-Say**	**1.48**	**332**	⇓*i*P	**Pb**	**02 28 10.7**	**-0.2**
	baz=33						
EKS2				⇓*i*S	**Sn**	**02 28 29.1**	**-1.2**
	baz=33						
CHMS	**Chumysh**	**1.63**	**1**	⇓P	**Pg**	**02 28 14.0**	**0.0**
	28nm,0.2s,SNR=44						
CHMS				⇑S	**Sg**	**02 28 36.2**	**+1.0**
	75nm,0.4s						
CHMS	**Chumysh**	**1.63**	**1**	⇑*i*P	**Pb**	**02 28 13.6**	**+0.1**
	baz=2.0						
CHMS				⇑*i*S	**Sg**	**02 28 35.3**	**+0.1**
	baz=2.0						
SFK	**Sufi-Kurgan**	**1.64**	**215**	⇓Pn	**Pn**	**02 28 12.7**	**+0.1**
	113nm,0.5s						
SFK				⇑Lg	Lg	02 28 37.2	
	325nm,0.4s						
SFK	**Sufi-Kurgan**	**1.64**	**215**	⇑*i*P	**Pn**	**02 28 13.4**	**+0.8**
	baz=14						
SFK				⇑*i*S	**Sn**	**02 28 35.0**	**+0.6**
	baz=14						
TKM2	**Tokmak 2**	**1.68**	**22**	⇓Pn	**Pg**	**02 28 14.9**	**-0.1**
	30nm,0.4s						
TKM2				⇓Lg	Lg	02 28 41.3	
	97nm,0.4s						
TKM2	**Tokmak 2**	**1.68**	**22**	⇓P	**Pg**	**02 28 14.9**	**-0.1**
	15nm,0.2s,SNR=93						
TKM2	**Tokmak 2**	**1.68**	**22**	⇑*i*P	**Pg**	**02 28 14.8**	**-0.1**
	baz=23						
TKM2				⇑*i*S	**Sg**	**02 28 37.1**	**+0.3**
	baz=23						
MRKS	**Merke**	**1.78**	**321**	*e*P	**Pb**	**02 28 15.5**	**-0.5**
	52nm,0.1s						
MRKS				*e*S	**Sb**	**02 28 38.9**	**+0.1**
	180nm,0.3s						
USP	**Ospenovka**	**1.91**	**355**	P	**Pg**	**02 28 18.8**	**-0.5**
	16nm,0.1s,SNR=75						
USP	**Ospenovka**	**1.91**	**355**	⇓*i*P	**Pb**	**02 28 17.9**	**-0.3**
	baz=56						
USP				⇓*i*S	**Sg**	**02 28 42.8**	**-1.3**
	baz=56						
KST	**Kastek**	**1.91**	**28**	*e*P	**Pg**	**02 28 20.5**	**+1.2**
	47nm,0.3s						
KST				*e*S	**Sg**	**02 28 45.4**	**+1.3**
	556nm,0.4s						
KDJ	**Kajisay**	**1.99**	**67**	⇑*i*P	**Pb**	**02 28 19.7**	**+0.1**
	baz=67						
KDJ				⇑*i*S	**Sb**	**02 28 45.5**	**+0.7**
	baz=67						
MNAS	**Manas**	**2.01**	**305**	⇑Pn	**Pb**	**02 28 19.4**	**-0.5**
	22nm,0.4s						
MNAS				⇓Lg	Lg	02 28 45.1	
	47nm,0.4s						
MNAS	**Manas**	**2.01**	**305**	⇑*i*P	**Pb**	**02 28 18.9**	**-1.0**
	baz=5.0						
MNAS				⇑*i*S	**Sb**	**02 28 44.3**	**-1.0**
	baz=5.0						
DGS	**Degeres**	**2.03**	**22**	*e*P	**Pg**	**02 28 22.4**	**+0.8**
	103nm,0.2s						
DGS				*e*S	**Sg**	**02 28 49.5**	**+1.6**
	275nm,0.5s						
ARK	**Arkit**	**2.12**	**283**	⇑*i*P	**Pn**	**02 28 20.6**	**+1.4**
	baz=82						
ARK				⇑*i*S	**Sn**	**02 28 47.2**	**+1.1**
	baz=82						
MTBS	**Maitube**	**2.17**	**35**	*e*P	**Pg**	**02 28 25.5**	**+1.2**
	45nm,0.2s						
MTBS				*e*S	**Sg**	**02 28 53.9**	**+1.6**
	253nm,0.2s						
IZV	**Izvestkoviy**	**2.18**	**39**	*e*P	**Pg**	**02 28 25.5**	**+1.0**
	99nm,0.4s						
IZV				*e*S	**Sg**	**02 28 54.4**	**+1.7**
	255nm,0.3s						
TARG	**Taragay, Kyrgy**	**2.33**	**80**	⇑*i*P	**Pb**	**02 28 24.9**	**-0.8**
	baz=80						
TARG				⇑*i*S	**Sb**	**02 28 54.1**	**-1.0**
	baz=80						
AAA	**Alma-Ata**	**2.46**	**41**	*e*P	**Pg**	**02 28 31.3**	**+1.6**
	79nm,0.1s						
AAA				*e*S	**Sg**	**02 29 03.8**	**+2.3**
	224nm,0.3s						
KNDC	**Almaty**	**2.49**	**41**	⇓Pg	**Pg**	**02 28 30.5**	**+0.2**
	59nm,0.6s						
KNDC				⇑Lg	Lg	02 29 04.4	
	97nm,0.5s						
MDOK	**Medeo**	**2.49**	**43**	⇑Pn	**Pg**	**02 28 29.9**	**-0.4**
	26nm,0.4s						
MDOK				⇑Lg	Lg	02 29 03.3	
	175nm,0.7s						
MDOK	**Medeo**	**2.49**	**43**	*e*P	**Pg**	**02 28 29.8**	**-0.6**
	37nm,0.6s						
MDOK				*e*S	**Sg**	**02 29 01.2**	**-1.4**
	126nm,0.4s						
KOTS	**Kotyrbulak**	**2.57**	**43**	*e*P	**Pg**	**02 28 32.5**	**+0.5**
	36nm,0.4s						
KOTS				*e*S	**Sg**	**02 29 05.8**	**+0.5**
	73nm,0.3s						
KTBS	**Karatobe**	**2.75**	**31**	*e*P	**Pg**	**02 28 35.6**	**+0.2**
	27nm,0.6s						
KTBS				*e*S	**Sg**	**02 29 11.2**	**+0.1**
	240nm,0.6s						
KUU	**Kurty**	**2.79**	**25**	*e*P	**Pg**	**02 28 35.2**	**-1.0**
	38nm,0.4s						
KUU				*e*S	**Sg**	**02 29 11.9**	**-0.4**
	135nm,0.4s						
CHKK	**Chushkaly**	**3.00**	**33**	*e*P	**Pg**	**02 28 40.2**	**+0.1**
	38nm,0.5s						
CHKK				*e*S	**Sg**	**02 29 19.2**	**+0.3**
	162nm,0.3s						
BTK	**Batken**	**3.25**	**248**	⇓*i*P	**Pn**	**02 28 35.7**	**+1.1**
	baz=47						
BTK				⇓*i*S	**Sn**	**02 29 13.9**	**+0.1**
	baz=47						
KURS	**Kuram**	**3.31**	**49**	*e*P	**Pg**	**02 28 44.8**	**-1.4**
	15nm,0.6s						
KURS				*e*S	**Sg**	**02 29 27.0**	**-2.1**
	29nm,0.7s						
KK31	**Karatay Array**	**3.58**	**300**	⇑Pn	**Pn**	**02 28 42.6**	**+3.5**
	3.8nm,0.3s,baz=122,slow=17,SNR=33						
KK31				⇑Lg	Lg	02 29 34.9	
	21nm,0.3s,baz=118,slow=27,SNR=9.6						
ARXS	**Arharly**	**3.65**	**38**	*e*P	**Pg**	**02 28 51.0**	**-1.5**
	18nm,0.7s						
ARXS				*e*S	**Sg**	**02 29 37.6**	**-2.2**
	103nm,0.5s						
MNBS	**Baschi**	**3.83**	**44**	*e*P	**Pg**	**02 28 55.1**	**-1.0**
	23nm,0.4s						
MNBS				*e*S	**Sg**	**02 29 44.7**	**-1.0**
	57nm,0.5s						
PDGK	**Podgornoye**	**4.04**	**59**	⇑Pg	**Pg**	**02 28 59.7**	**-0.3**
	19nm,1.0s						
PDGK				⇑Lg	Lg	02 29 56.5	
	49nm,0.9s						
DJR	**Jarkent**	**4.76**	**50**	*e*P	**Pg**	**02 29 10.8**	**-3.0**
	7.2nm,0.3s						
DJR				*e*S	**Sg**	**02 30 12.0**	**-3.5**
	29nm,0.5s						
KAPS	**Kapalarasan**	**5.17**	**39**	*e*P	**Pb**	**02 29 17.4**	**+3.7**
	4.8nm,0.6s						
KAPS				*e*S	**Sg**	**02 30 23.0**	**-5.7**
	14nm,0.5s						
MAKZ	**Makanchi**	**7.54**	**41**	⇑Pn	Pn	02 29 38.7	+5.3
	1.8nm,0.8s						
MAKZ				⇑Lg	Lg	02 31 43.4	
	7.0nm,0.9s						
MK31	**Makanchi Array**	**7.68**	**43**	⇑Pn	Pn	02 29 42.3	+6.8
	2.1nm,0.6s,baz=224,slow=14,SNR=4.8						
MK31				⇓Lg	Lg	02 31 49.1	
	3.2nm,0.6s,baz=229,slow=31,SNR=4.8						
KURBB	**Kurchatov Arra**	**9.63**	**15**	⇓Lg	Lg	02 32 50.4	
	23nm,0.8s						
KURK	**Kurchatov**	**9.73**	**15**	⇑Lg	Lg	02 32 52.3	
	37nm,1.2s						

IDC ***05*** *02:32:20.4±2.0, 37°.05N×141°.40E, h0km, mb3.5/3, mb1 3.7/5, mb1mx3.3/65, mbtmp3.6/5, ML3.2/2, Error ellipse: s-maj=40.8km s-min=26.4km az=63.0*
ISCJB ***05*** *02:32:24.4±1.8, 36°.70N±0°.03×141°.24E±0°.07, h15km±13km, mb3.5/3, Error ellipse: s-maj=9.5km s-min=5.7km az=176.6*
JMA ***05*** *02:32:26.0, 36°.71N×141°.10E, h24km±1km, M3.4*
JMA Felt I J1.
ISC 05 02:32:26.5±1.4,**36°.75N**±0°.04×**141°.07E**±0°.07,**h22**km±10km,
n20,σ0§**92**/22,**mb3.5**/3,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.42**	**328**	P	**Pb**	**02 32 35.4**	**+0.1**
ONAJ				S	**Sb**	**02 32 42.1**	**+0.8**
JHO	**Hitachi**	**0.43**	**252**	P	**Pb**	**02 32 34.9**	**-0.5**
JHO				S	**Sb**	**02 32 41.1**	**-0.4**
JFK	**Kawauchi**	**0.64**	**346**	P	**Pb**	**02 32 38.9**	**-0.2**
JYT	**Yasato**	**0.88**	**234**	P	**Pb**	**02 32 41.7**	**-1.4**
JYT				S	**Sb**	**02 32 53.1**	**-1.3**
JSB	**Shiboa**	**0.95**	**284**	P	**Pn**	**02 32 44.9**	**+0.3**
JSB				S	**Sn**	**02 32 58.2**	**+0.7**
JFT	**Otama**	**0.97**	**323**	P	**Pb**	**02 32 44.8**	**+0.1**
JFT				S	**Sn**	**02 32 57.9**	**0.0**
JMM	**Marumori**	**1.14**	**349**	P	**Pn**	**02 32 46.5**	**-0.6**
JMM				S	**Sb**	**02 33 01.5**	**-0.4**
JFY	**Yanaizu**	**1.28**	**301**	S	**Sb**	**02 33 06.7**	**+0.8**
MJAR	**Matsushiro Arr**	**2.31**	**266**	Pn	**Pn**	**02 33 04.0**	**+0.7**
	2.8nm,0.3s,baz=102,slow=12,SNR=13						
MJAR				Sn	**Sb**	**02 33 35.3**	**-0.4**
	6.8nm,0.3s,baz=173,slow=13,SNR=7.8						
MAT	**Matsushiro**	**2.31**	**266**	P	**Pn**	**02 33 04.4**	**+1.1**
MAT				*e*S	**Sb**	**02 33 36.6**	**+0.8**
JHJ	**Hachijo jima 2**	**3.77**	**197**	Pn	**Pn**	**02 33 25.2**	**+1.9**
	5.3nm,0.3s,baz=66,slow=20,SNR=2.8						
JHJ				Sn	**Sn**	**02 34 08.3**	**+1.3**
	11nm,0.3s,baz=73,slow=19,SNR=4.9						
H11N2	**WAKE ISLAND Hy**	**28.24**	**120**	T	T	03 07 46.5	
	baz=313,slow=75,SNR=97						
H11N1	**WAKE ISLAND Hy**	**28.25**	**120**	T	T	03 07 48.9	
	baz=313,slow=75,SNR=89						
H11N3	**WAKE ISLAND Hy**	**28.26**	**120**	T	T	03 07 50.1	
	baz=313,slow=75,SNR=96						
H11S1	**WAKE ISLAND Hy**	**28.94**	**122**	T	T	03 08 39.5	
	baz=314,slow=76,SNR=68						
H11S3	**WAKE ISLAND Hy**	**28.94**	**122**	T	T	03 08 39.5	
	baz=314,slow=76,SNR=74						
H11S2	**WAKE ISLAND Hy**	**28.95**	**122**	T	T	03 08 42.1	
	baz=314,slow=76,SNR=39						
MKAR	**Makanchi Array**	**44.04**	**302**	P	**P**	**02 40 31.7**	**-0.8**
	0.2nm,0.5s,baz=81,slow=8.9,SNR=3.2						
KURBB	**Kurchatov Arra**	**45.96**	**308**	P	P	02 40 43.1	-4.6
	0.3nm,0.5s,baz=82,slow=8.8,SNR=4.0						
WRA	**Warramunga Arr**	**56.74**	**188**	P	**P**	**02 42 08.2**	**-0.5**
	0.7nm,0.5s,baz=5.1,slow=7.5,SNR=12						

NEIC ***05*** *02:33:55.4±0.0, 15°.90N×98°.42W, h5km, MD4.1(MEX), After MEX.*
MEX 05 02:33:55.4±0.4,**15°.90N×98°.42W,h5**km,**MD4.1,Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.66**	**355**	*e*Pn	Pn	02 34 20.9	-4.4
TLIG				*e*S	Sn	02 34 42.6	-4.6
TLIG	**Tlapa**	**1.66**	**355**	*e*P	Pn	02 34 21.5	-3.9
TLIG				*e*S	Sn	02 34 42.6	-4.6
ACX	**Acapulco**	**1.69**	**305**	*e*Pn	Pn	02 34 25.1	-0.5
ACX				*e*Sn	Sn	02 34 45.7	-1.9
ACX	**Acapulco**	**1.69**	**305**	*e*P	Pn	02 34 25.1	-0.5
ACX				*e*S	Sn	02 34 45.7	-1.9
VHO	**Vista Hermosa**	**2.00**	**54**	*e*Pn	Pn	02 34 26.6	-3.4
VHO				*e*Sn	Sn	02 34 51.3	-4.2
VHO	**Vista Hermosa**	**2.00**	**54**	*e*P	Pn	02 34 26.6	-3.4
VHO				*e*S	Sn	02 34 51.3	-4.2
CAIG	**El Cayaco**	**2.11**	**303**	*e*Pn	Pn	02 34 28.2	-3.2
CAIG				*e*Sn	Sn	02 34 54.0	-4.1
CAIG	**El Cayaco**	**2.11**	**303**	*e*P	Pn	02 34 28.2	-3.2
CAIG				*e*S	Sn	02 34 54.0	-4.1
HUIG	**Huatulco**	**2.23**	**93**	*e*Pn	Pn	02 34 30.0	-3.0
HUIG	**Huatulco**	**2.23**	**93**	*e*P	Pn	02 34 30.0	-3.0
PLIG	**Platanillo**	**2.69**	**337**	*e*Pn	Pn	02 34 37.1	-2.4
PLIG				*e*Sn	Sn	02 35 08.8	-3.7
PLIG	**Platanillo**	**2.69**	**337**	*e*P	Pn	02 34 37.1	-2.4
PLIG				*e*S	Sn	02 35 08.8	-3.7
UNM	**Universidad Na**	**3.49**	**348**	*e*Lg	Lg	02 35 45.3	
LVIG	**Laguna Verde**	**4.26**	**26**	*e*Pn	Pn	02 34 58.3	-2.7
LVIG				*e*Sn	Sn	02 35 51.0	-0.1

DDA ***05*** *02:47:00.8, 41°.29N×43°.89E, h7km, Ml2.5*
CSEM ***05*** *02:47:01.0±0.1, 41°.27N×43°.90E, h12km, ML1.3, Error ellipse: s-maj=4.8km s-min=2.8km az=146.0*
TIF ***05*** *02:47:01.5, 41°.39N×43°.90E, h7km±2km*
ISC 05 02:47:01.3±1.0,**41°.28N**±0°.04×**43°.93E**±0°.04,**h12**km±11km,
n11,σ0§**46**/22,**Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BGD	**Bogdanovka**	**0.25**	**267**	P	**Pg**	**02 47 06.8**	**+0.2**
BGD				S	**Sg**	**02 47 10.5**	**+0.3**
BGD	**Bogdanovka**	**0.25**	**267**	P	**Pg**	**02 47 06.8**	**+0.2**
BGD				S	**Sg**	**02 47 10.5**	**+0.3**
AKH	**Akhalkalaki**	**0.35**	**292**	P	**Pg**	**02 47 08.0**	**-0.4**
AKH				S	**Sg**	**02 47 12.5**	**-0.7**
AKH	**Akhalkalaki**	**0.35**	**292**	P	**Pg**	**02 47 08.0**	**-0.4**
AKH				S	**Sg**	**02 47 12.5**	**-0.7**
EAK	**Akyaka**	**0.64**	**202**	*i* P	**Pg**	**02 47 13.4**	**-0.4**
EAK				*i* S	**Sg**	**02 47 22.4**	**+0.2**
EAK	**Akyaka**	**0.64**	**202**	P	**Pg**	**02 47 13.4**	**-0.4**
EAK				S	**Sg**	**02 47 22.4**	**+0.2**
TBLG	**Delisi**	**0.76**	**53**	P	**Pg**	**02 47 16.3**	**+0.3**
TBLG				S	**Sb**	**02 47 26.7**	**0.0**
TBLG	**Delisi**	**0.76**	**53**	P	**Pg**	**02 47 16.3**	**+0.3**
TBLG				S	**Sb**	**02 47 26.7**	**0.0**
DUS	**Dusheti**	**1.00**	**35**	P	**Pb**	**02 47 20.9**	**+0.4**
DUS				S	**Sn**	**02 47 35.2**	**+0.1**
DUS	**Dusheti**	**1.00**	**35**	P	**Pb**	**02 47 20.9**	**+0.4**
DUS				S	**Sn**	**02 47 35.2**	**+0.1**
DGRG	**David-gareji**	**1.10**	**81**	P	**Pg**	**02 47 22.0**	**-0.5**
DGRG				S	**Sg**	**02 47 35.8**	**-1.0**

DJA 05 03:13:33.8±0.3,**3°S**±3°×**12°2E**±°,**h10**km,**M4.0**/10,**mb4.3**/2,
MLv3.8/10,**Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDI	**Kendari**	**1.46**	**154**	P	Pn	03 13 59.1	-1.1
APSI	**Ampana**	**1.75**	**349**	P	Pn	03 14 04.2	0.0
TTSI	**Tana Toraja**	**2.20**	**259**	P	Pn	03 14 09.9	-0

SNR=8.6
TXAR Lajitas Array 18.19 328 P **Pn 03 28 55.5 +1.4**
0.1nm,0.3s,baz=153,slow=14,SNR=7.5
TX31 Lajitas Ar. Si 18.20 328 *eP* **Pn 03 28 55.5 +1.3**
ABTX Abilene, Hawle 19.44 342 *eP* **P 03 29 07.9 +0.2**
5.3nm,0.6s
MIAR Mount Ida 20.32 358 *eP* **P 03 29 17.1 -0.1**
5.7nm,0.8s
ROSC El Rosal 20.35 115 P Pn 03 29 23.9 +3.6
2.1nm,0.4s,baz=309,slow=18,SNR=3.2
ROSC El Rosal 20.35 115 *eP* **P 03 29 14.3 -3.8**
18nm,1.4s
MNTX Cornudas Mount 20.97 329 *eP* **P 03 29 24.9 +0.5**
5.2nm,1.0s
RUSC La Rusia 20.98 111 *eP* **P 03 29 24.1 -1.1**
15nm,1.5s
PBMO Poplar Bluff 22.62 5 *eP* **P 03 29 40.4 -1.6**
8.3nm,1.3s
ANMO Albuquerque 24.13 331 P **P 03 29 57.6 +0.5**
0.3nm,0.3s,baz=138,slow=14,SNR=3.0
ANMO Albuquerque 24.13 331 *eP* **P 03 29 57.6 +0.5**
2.1nm,1.1s
WCI Wyandotte Cave 24.65 12 *eP* **P 03 29 59.5 -2.0**
9.7nm,0.8s
KSU1 Kansas State U 25.09 353 *eP* **P 03 30 05.4 -0.1**
9.0nm,0.8s
T25A Trinidad 25.16 338 *eP* **P 03 30 08.1 +1.7**
6.8nm,0.9s
CBKS Cedar Bluff 25.34 347 *eP* **P 03 30 08.9 +1.1**
12nm,0.8s
SDCO Great Sand Dun 26.10 336 *eP* **P 03 30 13.0 -2.1**
10nm,1.4s
DGR Domenigoni Val 29.37 316 *eP* **P 03 30 44.0 0.0**
OAT Oat Mountain 30.86 315 *eP* **P 03 30 58.6 +1.4**
WASM Alta Sierra Ca 31.62 317 *eP* **P 03 31 00.8 -3.3**
PD31 Pinedale Array 32.00 336 *eP* **P 03 31 07.4 0.0**
PDAR Pinedale Array 32.00 336 P **P 03 31 07.4 0.0**
0.5nm,0.7s,baz=188,slow=9.0,SNR=3.7
REDW Red Top Meadow 33.01 335 *eP* **P 03 31 17.5 +1.3**
16nm,1.5s
SNOW Snow King Moun 33.06 336 *eP* **P 03 31 17.7 +1.1**
8.0nm,0.8s
NV01 Mina Array Sit 33.12 322 *eP* **P 03 31 18.6 +1.4**
NVAR Mina Array Bea 33.12 322 P **P 03 31 18.6 +1.4**
1.0nm,0.7s,baz=133,slow=7.6,SNR=4.1
TPAW Teton Pass 33.16 335 *eP* **P 03 31 20.2 +2.7**
7.7nm,1.1s
MDND Maddock 34.08 352 *eP* **P 03 31 24.6 -0.6**
11nm,0.8s
MCMT McKenzie Canyo 35.04 335 *eP* **P 03 31 36.0 +2.2**
F10A Beach Ranch, E 37.85 332 *eP* **P 03 31 57.9 +0.3**
5.2nm,1.0s
YKA Yellowknife Ar 50.72 347 P **P 03 33 39.3 -0.8**
4.2nm,0.9s,baz=150,slow=7.6,SNR=41
YKW3 Yellowknife Ar 50.78 347 *eP* **P 03 33 39.7 -0.9**
8.3nm,1.2s
INK Inuvik 60.10 344 *eP* **P 03 34 47.1 -0.4**
3.4nm,0.9s
GHO Glory Hole Cre 61.95 333 *eP* **P 03 35 03.1 +2.7**
3.8nm,0.8s
BRLK Bradley Lake 62.07 331 *eP* **P 03 35 04.2 +3.1**
7.4nm,0.9s
IL1 Eielson Array 62.43 337 *eP* **P 03 35 04.7 +1.3**
ILAR Eielson Array 62.43 337 P **P 03 35 04.7 +1.3**
1.3nm,0.9s,baz=116,slow=6.2,SNR=12
ILB Eielson Array 62.43 337 *eP* **P 03 35 04.7 +1.3**
CD2 Chengdu 132.48 341 PKP **PKPdf 03 43 57.1 +1.5**
CM31 Chiang Mai Arr 145.62 340 *e*PKPdf **PKPdf 03 44 18.1 -1.6**
CMAR Chiang Mai Arr 145.62 340 PKPbc **PKPdf 03 44 18.1 -1.6**
1.1nm,0.4s,baz=336,slow=1.1,SNR=4.0

DJA 05 03:47:14.1±0.3, 2°S±3°×12°1E±°, h10km, M3.6/7, MLv3.6/7, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APSI	**Ampana**	**1.45**	**17**	P	Pn	03 47 39.3	-1.0
APSI				S	Sb	03 47 59.6	0.0
TTSI	**Tana Toraja**	**1.58**	**242**	P	Pn	03 47 41.4	-0.8
TTSI				S	Sn	03 48 02.8	0.0
PCI	**Palu**	**1.96**	**315**	P	Pn	03 47 48.3	+0.9
KDI	**Kendari**	**2.16**	**140**	P	Pn	03 47 50.0	-0.2
SPSI	**Sidrap Palu**	**2.20**	**221**	P	Pn	03 47 50.2	-0.5
SPSI				S	Sn	03 48 19.1	+1.1
BNSI	**Bone**	**2.36**	**208**	P	Pn	03 47 53.6	+0.6
MRSI	**Marisa**	**2.85**	**15**	P	Pn	03 47 58.6	-1.1
MPSI	**Mapaga**	**2.93**	**333**	P	Pb	03 48 04.3	-2.2
BKSI	**Bulukumba**	**3.19**	**200**	P	Pn	03 48 04.9	+0.5

*IDC **05** 03:49:03.3±7.5, 22°.95S×179°.66W, h478km±84km, mb3.1/5, mb1 3.4/6, mb1mx3.0/49, mbtmp4.0/6, Error ellipse: s-maj=78.2km s-min=27.4km az=7.0*
*ISCJB **05** 03:49:04.9±1.3, 23°.2S±0°.1×179°.8W±0°.2, h500km, mb3.5/5, Error ellipse: s-maj=24.1km s-min=14.8km az=171.3*
ISC 05 03:49:06.0±1.1, 23°.4S±0°.1×179°.8W±0°.2, h500km, n11, σ1§66/11, mb3.5/5, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**15.10**	**189**	P	**P**	**03 52 17.9**	**+0.9**
1.3nm,0.3s,baz=293,slow=4.9,SNR=4.9
URZ S **S 03 54 53.5 -1.1**
0.3nm,0.3s,baz=346,slow=19,SNR=2.7
CTA Charters Tower 31.69 269 P **P 03 54 47.2 -0.8**
1.7nm,0.3s,baz=90,slow=6.1,SNR=4.0
ASAR Alice Springs 42.33 260 P **P 03 56 16.0 +0.3**
0.7nm,0.4s,baz=102,slow=7.0,SNR=8.3
WRA Warramunga Arr 42.65 265 P **P 03 56 18.2 0.0**
0.5nm,0.3s,baz=92,slow=8.5,SNR=34
FITZ Fitzroy Crossi 51.08 265 P **P 03 57 22.4 +0.5**
2.7nm,0.7s,baz=73,slow=10,SNR=6.7
TXAR Lajitas Array 89.97 58 P **P 04 01 11.3 -0.7**
0.3nm,0.7s,baz=224,slow=6.2,SNR=3.8
HFS Hagfors 142.05 349 PKhKP PKPpre 04 07 34.6
1.5nm,0.3s,baz=51,slow=3.5,SNR=25
AKASG Malin Array Be 144.62 328 PKP **PKPdf 04 07 41.8 -3.2**
1.0nm,0.4s,baz=43,slow=4.2,SNR=5.8
BRTR Keskin Array B 147.41 308 PKPbc **PKPdf 04 07 51.8 +1.5**
0.4nm,0.5s,baz=134,slow=4.2,SNR=3.0
MMAI Mount Meron Ar 147.66 295 PKPbc **PKPdf 04 07 52.7 +1.9**
2.4nm,0.5s,baz=112,slow=6.4,SNR=4.4
EKA Eskdalemuir Ar 147.96 4 PKPbc **PKPdf 04 07 52.1 +1.6**
0.4nm,0.4s,baz=346,slow=2.5,SNR=4.2

*ISCJB **05** 03:52:31.8±1.0, 5°.21N±0°.10×82°.7W±0°.1, h15km, mb3.5/3, MS3.1/1, Error ellipse: s-maj=18.9km s-min=6.8km az=137.2*
*IDC **05** 03:52:33.2±3.0, 5°.37N×82°.73W, h0km, mb3.6/4, mb1 4.0/6, mb1mx3.6/42, mbtmp3.8/6, ML2.4/1, MS3.1/2, Ms1 3.1/2, ms1mx2.6/35, Error ellipse: s-maj=66.2km s-min=28.3km az=20.0*
ISC 05 03:52:34.1±1.4, 5°.2N±0°.1×82°.7W±0°.1, h15km, n16, σ1§34/15, mb3.5/3, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCIP	**Isla Barro Col**	**4.87**	**36**	*eP*	**Pn**	**03 53 46.5**	**-0.4**
JTS	**JuntasAbangare**	**5.51**	**337**	Pn	**Pn**	**03 53 54.7**	**-1.0**
baz=158,slow=16
JTS Sn **Sn 03 54 57.9 -1.1**
5.3nm,0.3s,baz=24,slow=10.0,SNR=14
PLMC San Jos¨ del 6.43 92 *eP* **Pn 03 54 09.5 +1.0**
YOTC Yotoco, Valle 6.48 101 *eP* **Pn 03 54 07.2 -2.0**
OTAV Otavalo 6.53 139 *eP* **Pn 03 54 08.5 -1.6**
SOTA Rioblanco 6.83 116 *eP* **Pn 03 54 13.2 -1.1**
PCON Cinco Dias 6.94 114 *eP* **Pn 03 54 16.5 +0.7**
MARP Paez Belalcaza 7.16 109 *eP* **Pn 03 54 18.5 -0.1**
ANIL Santa Ana 7.34 95 *eP* **Pn 03 54 18.5 -2.6**
SDV Santo Domingo 12.55 72 Pn **Pn 03 55 33.9 +1.5**
0.2nm,0.3s,baz=270,slow=16,SNR=4.2
CMIG Matias Romero 16.77 316 LR LR 04 00 47.2
comp=Z,31nm,18.6s,baz=166,slow=30
SJG San Juan 20.67 50 P **P 03 57 13.5 -0.1**
3.1nm,0.4s,baz=210,slow=8.1,SNR=2.8
SJG LR LR 04 04 08.3
comp=Z,82nm,19.8s,baz=216,slow=34
H06E1 SOCORRO T-PHAS 30.63 299 T T 04 30 59.8
SNR=12
NVAR Mina Array Bea 46.21 321 P **P 04 00 59.5 +0.5**
1.0nm,0.8s,baz=156,slow=7.6,SNR=4.7
YKA Yellowknife Ar 61.80 344 P **P 04 02 52.6 +0.4**
0.3nm,0.7s,baz=139,slow=6.9,SNR=7.1

ESDC Sonseca Array 78.05 51 P **P 04 04 33.4 +0.8**
0.1nm,0.3s,baz=261,slow=6.4,SNR=4.4

*ISCJB **05** 03:57:35.6±0.8, 17°.7S±0°.3×178°.7W±0°.2, h550km, mb4.1/13, Error ellipse: s-maj=42.9km s-min=10.5km az=154.4*
*IDC **05** 03:57:36.2±1.9, 17°.74S×178°.66W, h546km±23km, mb3.7/13, mb1 3.9/15, mb1mx3.6/49, mbtmp4.6/15, Error ellipse: s-maj=39.8km s-min=11.2km az=154.0*
ISC 05 03:57:36.2±1.0, 17°.8S±0°.3×178°.6W±0°.2, h550km, n17, σ0§81/16, mb4.0/13, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.63**	**61**	P	**P**	**03 59 29.9**	**-0.5**
12nm,0.3s,baz=58,slow=7.1,SNR=10
DZM Mont Dzumac 14.67 251 P **P 04 00 41.9 -0.6**
1.7nm,0.3s,baz=96,slow=18,SNR=12
CTA Charters Tower 33.27 260 P **P 04 03 28.6 0.0**
4.0nm,0.3s,baz=85,slow=10,SNR=5.6
PMG Port Moresby 34.23 280 P **P 04 03 38.1 +1.3**
17nm,0.7s,baz=22,slow=5.4,SNR=4.9
STKA Stephens Creek 38.51 241 P **P 04 04 12.3 +0.4**
10nm,0.4s,baz=92,slow=10,SNR=27
WRA Warramunga Arr 44.45 259 P **P 04 04 57.8 -1.2**
5.5nm,0.6s,baz=92,slow=6.9,SNR=145
ASAR Alice Springs 44.63 254 P **P 04 05 00.1 -0.2**
58nm,0.5s,baz=89,slow=8.2,SNR=669
PETK Petropavlovsk- 73.50 345 P **P 04 08 13.2 +0.4**
3.9nm,0.7s,baz=110,slow=8.1,SNR=4.8
YBH Yreka Blue Hor 78.55 39 P **P 04 08 41.6 +0.5**
2.6nm,0.7s,baz=117,slow=4.5,SNR=3.5
NVAR Mina Array Bea 79.47 44 P **P 04 08 46.9 +0.6**
2.3nm,0.7s,baz=222,slow=8.1,SNR=7.2
ILAR Eielson Array 85.81 13 P **P 04 09 16.1 -1.1**
1.1nm,0.4s,baz=222,slow=5.3,SNR=27
TXAR Lajitas Array 86.10 58 P **P 04 09 21.0 +1.5**
3.0nm,0.8s,baz=218,slow=6.1,SNR=34
ANMO Albuquerque 86.18 52 P **P 04 09 20.1 +0.2**
1.3nm,1.0s,baz=236,slow=7.7,SNR=3.0
PDAR Pinedale Array 87.40 44 P **P 04 09 25.7 +0.2**
1.6nm,0.5s,baz=215,slow=3.2,SNR=15
YKA Yellowknife Ar 94.30 25 P **P 04 09 55.9 -0.6**
0.3nm,0.5s,baz=234,slow=4.6,SNR=7.6
EKA Eskdalemuir Ar 142.35 4 PKhKP PKPpre 04 15 60.0
2.5nm,1.0s,baz=352,slow=2.1,SNR=3.4
GERES GERESS Array B 147.43 345 PKPbc **PKPbc 04 16 18.4 -0.2**
1.5nm,0.5s,baz=20,slow=2.6,SNR=9.2

*ISCJB **05** 04:18:26.2±1.3, 6°.11S±0°.07×147°.3E±0°.1, h77km, mb3.8/4, Error ellipse: s-maj=16.9km s-min=8.2km az=156.1*
*IDC **05** 04:18:27.1±2.9, 6°.07S×147°.44E, h84km±23km, mb3.8/4, mb1 4.0/7, mb1mx3.5/49, mbtmp4.1/7, Error ellipse: s-maj=31.7km s-min=14.7km az=66.0*
ISC 05 04:18:27.6±1.3, 6°.16S±0°.08×147°.3E±0°.1, h77km, n8, σ3§40/12, mb3.7/4, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.22**	**182**	P	**Pn**	**04 19 18.5**	**+2.6**
28nm,0.3s,baz=2.5,slow=8.8,SNR=27
PMG S **Sn 04 19 55.9 +2.7**
32nm,0.3s,baz=41,slow=20,SNR=8.1
JAY Jayapura 7.47 299 P **Pn 04 20 15.5 +1.6**
3.2nm,0.3s,baz=114,slow=7.5,SNR=10
JAY S **Sn 04 21 38.9 +1.6**
baz=357,slow=19,SNR=1.7
WRA Warramunga Arr 18.58 221 P **P 04 22 39.0 +0.4**
0.6nm,0.3s,baz=41,slow=12,SNR=25
WRA S **S 04 25 59.8 -6.3**
0.1nm,0.3s,baz=41,slow=23,SNR=3.1
ASAR Alice Springs 21.63 215 P **P 04 23 13.0 +1.4**
1.5nm,0.5s,baz=55,slow=8.3,SNR=21
ASAR S **S 04 27 01.4 -5.7**
0.4nm,0.9s,baz=23,slow=24,SNR=3.0
FITZ Fitzroy Crossi 24.20 239 P **P 04 23 38.2 +1.1**
23nm,0.6s,baz=49,slow=7.9,SNR=82
STKA Stephens Creek 26.12 191 P **P 04 23 53.4 -1.0**
2.3nm,0.8s,baz=4.8,slow=12,SNR=2.5
ILAR Eielson Array 85.53 23 P **P 04 30 54.1 -2.8**
0.4nm,0.7s,baz=257,slow=4.9,SNR=4.8
TORD Torodi Ar. Bea 145.38 284 PKPbc **PKPab 04 37 57.2 -0.7**
0.4nm,0.5s,baz=104,slow=2.7,SNR=12

*KRNET **05** 04:42:03.3±0.1, 41°.50N×75°.02E, h20km, mb2.5*
*NNC **05** 04:42:03.6±0.5, 41°.54N×74°.96E, h0km, mb2.7, mpv2.6, Error ellipse: s-maj=4.0km s-min=2.5km az=112.0*
*KNET **05** 04:42:05.0±0.7, 41°.60N×75°.02E, h18km±4km, ml1.9, Error ellipse: s-maj=5.0km s-min=3.5km az=171.0*
*SOME **05** 04:42:06.9, 41°.50N×74°.75E, h20km*
ISC 05 04:42:02.7±1.3, 41°.45N±0°.04×74°.97E±0°.02, h5km±10km, n35, σ1§47/65, 35C-14D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZA	**Kyzart**	**0.66**	**18**	⇑P	**Pg**	**04 42 15.1**	**-0.4**
6.3nm,0.1s,SNR=60
KZA ⇑S **Sg 04 42 24.0 -0.2**
17nm,0.1s
KZA Kyzart 0.66 18 ⇑*iP* **Pg 04 42 15.1 -0.4**
baz=16
KZA ⇑*iS* **Sg 04 42 23.5 -0.7**
baz=16
NRN Naryn 0.78 91 ⇑*iP* **Pg 04 42 16.8 -0.9**
baz=96
NRN ⇑*iS* **Sg 04 42 26.4 -1.4**
baz=96
UCH Uchtor 0.85 337 ⇓P **Pg 04 42 18.8 -0.2**
11nm,0.1s,SNR=12
UCH ⇓S **Sg 04 42 30.2 0.0**
36nm,0.1s
UCH Uchtor 0.85 337 ⇑*iP* **Pg 04 42 18.7 -0.4**
baz=33
UCH ⇑*iS* **Sg 04 42 29.6 -0.5**
baz=33
KBK Karagaybulak 1.21 359 ⇑*iP* **Pn 04 42 24.7 -1.8**
baz=57
KBK ⇑*iS* **Sb 04 42 40.1 -2.1**
baz=57
AAK Ala-Archa 1.24 344 ⇓P **Pn 04 42 25.7 -1.2**
1.9nm,0.4s
AAK ⇓S **Sb 04 42 41.5 -1.6**
14nm,0.5s
AAK Ala-Archa 1.24 344 ⇓P **Pn 04 42 25.8 -1.2**
2.2nm,0.2s,SNR=6.0
AAK ⇑S **Sb 04 42 41.8 -1.3**
31nm,0.4s
AAK Ala-Archa 1.24 344 ⇑*iP* **Pn 04 42 25.4 -1.5**
baz=41
AAK ⇑*iS* **Sb 04 42 41.3 -1.8**
baz=41
ULHL Ulahol 1.24 50 ⇓P **Pn 04 42 25.3 -1.7**
0.8nm,0.1s,SNR=21
ULHL ⇓S **Sb 04 42 41.0 -2.3**
20nm,0.2s
ULHL Ulahol 1.24 50 ⇑*iP* **Pn 04 42 25.0 -2.0**
baz=50
ULHL ⇑*iS* **Sb 04 42 40.5 -2.7**
baz=50
BOOM Boomskoye usch 1.27 35 ⇑*iP* **Pn 04 42 25.8 -1.5**
baz=34
BOOM ⇑*iS* **Sb 04 42 41.8 -2.2**
baz=34
EKS2 Erkin-Say 1.50 324 ⇓P **Pn 04 42 30.9 +0.4**
1.9nm,0.2s,SNR=8.4
EKS2 Erkin-Say 1.50 324 ⇑*iP* **Pn 04 42 30.3 -0.2**
baz=22
EKS2 ⇑*iS* **Sn 04 42 49.8 -0.7**
baz=22
TKM2 Tokmak 2 1.54 17 ⇓P **Pn 04 42 31.0 -0.1**
0.8nm,0.2s
TKM2 ⇓S **Sn 04 42 50.7 -1.0**
4.1nm,0.3s
TKM2 Tokmak 2 1.54 17 ⇑P **Pn 04 42 31.2 0.0**
1.0nm,0.1s,SNR=9.7
TKM2 ⇑S **Sn 04 42 51.4 -0.3**
14nm,0.1s
TKM2 Tokmak 2 1.54 17 ⇑*iP* **Pn 04 42 30.6 -0.6**
baz=17
TKM2 ⇑*iS* **Sn 04 42 50.0 -1.7**
baz=17
CHMS Chumysh 1.56 354 ⇑*iP* **Pn 04 42 30.7 -0.5**
baz=52
CHMS ⇑*iS* **Sn 04 42 50.6 -1.2**
baz=52
KST Kastek 1.76 25 *eP* **Pb 04 42 37.3 +1.8**
2.5nm,0.2s
KST *eS* **Sb 04 42 57.7 -0.3**
10.0nm,0.2s
KDJ Kajisay 1.79 67 ⇑*iP* **Pn 04 42 34.2 -0.3**
baz=68
KDJ ⇑*iS* **Sn 04 42 57.7 0.0**
baz=68
SFK Sufi-Kurgan 1.81 218 ⇑Pg **Pb 04 42 37.4 +0.8**
5.6nm,0.6s
SFK ⇓Lg Lg 04 43 03.9
8.3nm,0.4s
MRKS Merke 1.83 316 *eP* **Pn 04 42 36.7 +1.7**
13nm,0.3s
MRKS *eS* **Sn 04 42 57.0 -1.7**
5.6nm,0.3s
USP Ospenovka 1.85 349 P **Pn 04 42 36.8 +1.6**
1.9nm,0.2s,SNR=15
USP Ospenovka 1.85 349 ⇑*iP* **Pn 04 42 35.9 +0.7**
baz=48
USP ⇑*iS* **Sn 04 42 59.4 +0.4**
baz=48
DGS Degeres 1.89 18 *eP* **Pn 04 42 37.4 +1.6**
8.1nm,0.3s
DGS *eS* **Sn 04 42 58.4 -1.7**
11nm,0.5s
IZV Izvestkoviy 2.00 37 *eP* **Pb 04 42 41.1 +1.4**
2.5nm,0.2s
IZV *eS* **Sb 04 43 05.3 +0.2**
10nm,0.4s
MNAS Manas 2.11 300 ⇓Pg **Pb 04 42 41.4 -0.2**
3.4nm,0.5s
MNAS ⇓Lg Lg 04 43 09.2
4.6nm,0.5s
MNAS Manas 2.11 300 ⇑*iP* **Pn 04 42 40.6 +1.7**
baz=99
MNAS ⇑*iS* **Sb 04 43 08.0 -0.1**
baz=99
TARG Taragay, Kyrgy 2.15 82 ⇑*iP* **Pn 04 42 39.8 +0.2**
baz=83
TARG ⇑*iS* **Sn 04 43 07.0 +0.2**
baz=83
KOTS Kotyrbulak 2.39 41 *eP* **Pb 04 42 48.4 +2.0**
5.0nm,0.3s
KOTS *eS* **Sb 04 43 17.4 +1.2**
11nm,0.4s
KTBS Karatobe 2.59 29 *eP* **Pb 04 42 51.5 +1.8**
2.5nm,0.2s
KTBS *eS* **Sb 04 43 23.5 +1.6**
10nm,0.4s
KUU Kurty 2.65 22 *eP* **Pb 04 42 52.0 +1.4**
3.9nm,0.3s
KUU *eS* **Sb 04 43 24.5 +1.1**
13nm,0.5s
ARXS Arharly 3.47 36 *eP* **Pb 04 43 07.5 +2.8**
0.8nm,0.1s
ARXS *eS* **Sb 04 43 50.0 +2.7**
10nm,0.3s
MNBS Baschi 3.65 43 *eP* **Pb 04 43 10.4 +2.7**
1.9nm,0.1s
MNBS *eS* **Sb 04 43 55.3 +3.0**
6.8nm,0.2s
KK31 Karatay Array 3.70 298 ⇑Pg **Pb 04 43 10.7 +2.2**
0.5nm,0.4s,baz=120,slow=17,SNR=7.0
KK31 ⇓Lg Lg 04 44 00.1
0.4nm,0.3s,baz=122,slow=28,SNR=4.2

*ISCJB **05** 04:57:48.4±0.5, 29°.00S±0°.08×13°.06W±0°.10, h11km, mb4.3/20, MS3.6/7, Error ellipse: s-maj=13.5km s-min=10.1km az=40.5*
*IDC **05** 04:57:48.3±0.6, 28°.99S×13°.13W, h0km, mb4.1/14, mb1 4.2/14, mb1mx4.0/51, mbtmp4.1/14, MS3.7/7, Ms1 3.7/7, ms1mx3.3/42, Error ellipse: s-maj=19.1km s-min=17.2km az=146.0*
*NEIC **05** 04:57:49.9±0.3, 29°.00S×13°.12W, h10km, mb4.5/10, Error ellipse: s-maj=10.3km s-min=8.1km az=133.0*
ISC 05 04:57:50.0±0.5, 29°.0S±0°.1×13°.1W±0°.1, h11km, n47, σ0§75/39, mb4.3/20, MS3.9/7, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H09N1	**TRISTAN DA CUN**	**8.07**	**176**	T	T	05 08 13.8	
SNR=6.8
H10S2 ASCENSION HYDR 19.99 356 T T 05 22 46.5
baz=176,slow=75,SNR=260
H10S3 ASCENSION HYDR 20.00 355 T T 05 22 47.1
baz=176,slow=75,SNR=173
H10S1 ASCENSION HYDR 20.01 356 T T 05 22 47.9
baz=176,slow=75,SNR=255
SUR Sutherland 29.28 105 LR LR 05 12 29.2
comp=Z,18nm,20.5s,baz=235,slow=30
TSUM Tsumeb 29.58 78 P **P 05 03 54.7 -0.6**
1.2nm,0.4s,baz=239,slow=6.0,SNR=4.0
TSUM LR LR 05 14 49.3
comp=Z,96nm,18.2s,baz=164,slow=34
TSUM Tsumeb 29.58 78 *eP* **P 05 03 54.7 -0.6**
9.9nm,1.4s
BOSA Boshof 33.51 99 LR LR 05 15 14.5
comp=Z,126nm,21.2s,baz=229,slow=31
LBTB Lobatse 34.60 93 P **P 05 04 39.4 +0.2**
1.3nm,0.6s,baz=253,slow=9.7,SNR=4.1
LBTB Lobatse 34.60 93 *eP* **P 05 04 39.4 +0.2**
5.4nm,1.0s
LIC Lamto 35.88 14 *eP* **P 05 04 50.3 +0.2**
95nm,1.8s
KIC Kosan Boka 36.07 14 *eP* **P 05 04 51.7 -0.1**
13nm,0.8s
TIC Toumodi 36.29 14 *eP* **P 05 04 53.5 -0.1**
DBIC Dimbokro 36.34 14 P **P 05 04 54.2 +0.1**
5.6nm,0.9s,baz=178,slow=11,SNR=5.3
DBIC Dimbokro 36.34 14 *eP* **P 05 04 54.2 +0.1**
12nm,1.1s
CPUP Villa Florida 39.10 263 P **P 05 05 16.6 -0.8**
2.9nm,1.0s,baz=100,slow=6.1,SNR=4.3
CPUP Villa Florida 39.10 263 *eP* **P 05 05 16.6 -0.8**
8.3nm,1.3s
TRQA Tornquist 41.34 244 *eP* **P 05 05 36.2 +0.3**
15nm,1.4s
SNAA Sanae 43.09 175 P **P 05 05 50.1 +0.3**
1.0nm,0.9s,baz=55,slow=18,SNR=2.9
SNAA Sanae 43.09 175 *eP* **P 05 05 50.1 +0.3**
5.9nm,1.3s
KOWA Kowa 44.13 13 P **P 05 05 58.8 +0.2**
6.8nm,0.7s,baz=198,slow=7.8,SNR=22
TOA0 Torodi Ar. Sit 44.27 21 *eP* **P 05 05 60.0 +0.1**
TORD Torodi Ar. Bea 44.27 21 P **P 05 05 59.6 -0.2**
2.6nm,0.8s,baz=198,slow=6.9,SNR=9.9
TOA1 Torodi Ar. Sit 44.28 21 *eP* **P 05 05 59.6 -0.2**
SIV San Ignacio 45.89 276 P **P 05 06 14.2 +1.4**
2.1nm,0.9s,baz=114,slow=7.2,SNR=7.8
SAML Samuel 50.96 283 *eP* **P 05 06 54.4 +2.5**
9.6nm,1.5s
LPAZ La Paz 51.94 272 P **P 05 06 59.0 -0.9**
1.1nm,0.8s,baz=160,slow=7.1,SNR=4.5
LPAZ LR LR 05 26 12.9
comp=Z,115nm,21.6s,baz=165,slow=33
MAW Mawson 58.20 154 P **P 05 07 44.1 +0.4**
2.7nm,0.8s,baz=293,slow=7.6,SNR=4.1
MAW Mawson 58.20 154 *eP* **P 05 07 44.1 +0.4**
0.9nm,0.9s
QSPA South Pole Qui 61.23 180 *eP* **P 05 08 04.8 0.0**
4.7nm,1.0s
SDV Santo Domingo 67.01 295 P **P 05 08 42.6 -1.0**
3.9nm,0.7s,baz=149,slow=12,SNR=5.4
SDV LR LR 05 34 50.1
comp=Z,95nm,21.6s,baz=226,slow=33
ROSC El Rosal 67.68 289 LR LR 05 37 37.1
comp=Z,88nm,18.9s,baz=180,slow=35
JTS JuntasAbangare 79.47 288 LR LR 05 44 18.2
comp=Z,58nm,19.1s,baz=188,slow=35
BR101 Keskin Array S 81.03 35 *eP* **P 05 10 06.2 +1.2**
BRTR Keskin Array B 81.03 35 P **P 05 10 06.2 +1.2**
0.2nm,0.4s,baz=190,slow=7.3,SNR=3.5
EKA Eskdalemuir Ar 84.43 6 P **P 05 10 22.4 +0.3**
2.0nm,0.8s,baz=161,slow=5.1,SNR=5.0
AKASG Malin Array Be 87.73 25 P **P 05 10 37.7 -0.8**
0.2nm,0.3s,baz=207,slow=0.2,SNR=2.4
AKBB Malin Array Si 87.73 25 *eP* **P 05 10 37.7 -0.8**
4.7nm,1.4s
ASAR Alice Springs 118.75 145 PKP **PKPdf 05 16 38.4 -0.6**
0.4nm,0.6s,baz=172,slow=1.9,SNR=4.0
AS31 Alice Springs 118.75 145 *e*PKPdf **PKPdf 05 16 38.4 -0.6**
YKA Yellowknife Ar 120.56 328 PKP **PKPdf 05 16 40.0 -1.0**

0.3nm,0.7s,baz=100,slow=2.1,SNR=5.4
YKA Yellowknife Ar 120.56 328 PKP **PKPdf 05 16 40.0 -1.0**
ILAR Eielson Array 134.08 334 PKP **PKPdf 05 17 07.0 +0.2**
0.4nm,0.8s,baz=359,slow=1.2,SNR=5.1
ILB Eielson Array 134.08 334 *e*PKPdf **PKPdf 05 17 07.0 +0.2**
KS15 Wonju Array Si 146.48 65 *e*PKPdf **PKPbc 05 17 31.5 +0.1**
KSAR Wonju Array Be 146.48 65 PKPbc **PKPbc 05 17 31.5 +0.1**
KSRS Korea Array 146.51 65 PKPbc **PKPbc 05 17 31.5 +0.1**
1.2nm,0.5s,baz=271,slow=2.8,SNR=6.4

NEIC ***05*** *05:02:27.0±0.0, 15°.01N×95°.15W, h20km, MD4.2(MEX), After MEX.*
MEX ***05*** *05:02:27.0±0.4, 15°.01N×95°.15W, h20km±13km, MD4.2*
IDC ***05*** *05:02:27.4±2.3, 15°.46N×95°.04W, h0km, mb3.5/3, mb1 3.8/5, mb1mx3.5/47, mbtmp3.5/5, ML3.1/2, MS3.3/1, Ms1 3.3/1, ms1mx2.5/32, Error ellipse: s-maj=39.6km s-min=26.5km az=29.0*
ISCJB ***05*** *05:02:28.0±0.9, 15°.22N±0°.09×95°.11W±0°.04, h35km, mb3.6/3, Error ellipse: s-maj=12.2km s-min=5.5km az=4.3*
ISC 05 05:02:29.6±1.1, 15°.24N±0°.09×95°.16W±0°.04, h35km, n21, σ2°.55/31, mb3.6/3, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.05**	**300**	*e*Pn	**Pn**	**05 02 45.6**	**-2.4**
HUIG				*e*Sn	**Sn**	**05 02 59.2**	**-2.2**
HUIG	**Huatulco**	**1.05**	**300**	*e*P	**Pn**	**05 02 45.6**	**-2.4**
HUIG				*e*S	**Sn**	**05 02 59.2**	**-2.2**
CMIG	**Matias Romero**	**1.86**	**8**	Pn	**Pn**	**05 02 57.6**	**-1.4**
7.3nm,0.3s,baz=179,slow=13,SNR=96							
CMIG				Sn	**Sn**	**05 03 20.8**	**-0.5**
17nm,0.3s,baz=176,slow=19,SNR=14							
CMIG				LR	LR	05 03 24.4	
comp=Z,89nm,21.4s,baz=198,slow=35							
PCIG		**1.93**	**76**	*e*Pn	**Pn**	**05 02 56.5**	**-3.4**
PCIG				*e*Sn	**Sn**	**05 03 19.9**	**-3.0**
PCIG		**1.93**	**76**	*e*P	**Pn**	**05 02 56.5**	**-3.4**
PCIG				*e*S	**Sn**	**05 03 19.9**	**-3.0**
TGIG		**2.48**	**52**	*e*Pn	**Pn**	**05 03 06.2**	**-1.5**
TGIG				*e*Sn	**Sn**	**05 03 36.8**	**-0.1**
TGIG		**2.48**	**52**	*e*P	**Pn**	**05 03 06.2**	**-1.5**
TGIG				*e*S	**Sn**	**05 03 36.8**	**-0.1**
CCIG	**Comitan**	**3.09**	**70**	*e*Pn	**Pn**	**05 03 14.2**	**-1.9**
CCIG				*e*Pn	Pn	05 03 14.9	-1.1
CCIG	**Comitan**	**3.09**	**70**	*e*P	**Pn**	**05 03 14.2**	**-1.9**
TLIG	**Tlapa**	**4.00**	**306**	*e*Pn	**Pn**	**05 03 30.0**	**+1.4**
APG	**El Apazote**	**4.54**	**92**	Pn	**Pn**	**05 03 36.2**	**+0.2**
0.4nm,0.3s,baz=308,slow=14,SNR=6.7							
APG				Sn	**Sn**	**05 04 31.5**	**+3.7**
1.6nm,0.3s,baz=316,slow=14,SNR=3.9							
TXAR	**Lajitas Array**	**16.07**	**332**	Pn	**Pn**	**05 06 14.1**	**+0.9**
0.0nm,0.3s,baz=149,slow=14,SNR=8.8							
TXAR				LR	LR	05 13 00.9	
comp=Z,97nm,19.3s,baz=0.0,slow=40							
GDL2	**Guadalupe Moun**	**18.85**	**335**	*e*P	**P**	**05 06 42.5**	**-4.4**
GDL2				*e*Pn	**Pn**	**05 06 48.9**	**+1.3**
GDL2				*e*sP	**pP**	**05 06 53.5**	**-2.5**
GDL2				*e*Sn	S	05 10 32.4	+13
TIGA	**Tifton**	**19.28**	**31**	*e*Sn	**Sn**	**05 10 31.2**	**+3.4**
T25A	**Trinidad**	**23.31**	**341**	*e*P	**P**	**05 07 34.8**	**0.0**
BBRC	**Big Bear Solar**	**27.27**	**318**	*e*P	**P**	**05 08 11.5**	**+0.5**
BFSC	**Mount Baldy Ra**	**27.73**	**317**	*e*P	**P**	**05 08 10.4**	**-4.7**
TJR	**Tejon Ranch**	**28.92**	**317**	*e*P	**P**	**05 08 29.5**	**+4.0**
NVAR	**Mina Array Bea**	**30.82**	**323**	P	**P**	**05 08 45.6**	**+3.1**
0.4nm,0.6s,baz=131,slow=9.7,SNR=3.5							
YKA	**Yellowknife Ar**	**49.16**	**348**	P	**P**	**05 11 14.5**	**+0.8**
0.5nm,0.7s,baz=152,slow=7.4,SNR=7.7							
ILAR	**Eielson Array**	**60.51**	**337**	P	**P**	**05 12 37.5**	**+1.6**
0.5nm,0.9s,baz=130,slow=4.8,SNR=4.5							

NEIC ***05*** *05:09:42.8±0.6, 36°.88N×10°.81W, h10km, mb4.5/3, Error ellipse: s-maj=10.6km s-min=7.5km az=111.0*
IDC ***05*** *05:09:43.3±2.3, 36°.73N×10°.67W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.3/60, mbtmp3.7/3, ML5.5/2, MS3.2/2, Ms1 3.2/2, ms1mx2.6/65, Error ellipse: s-maj=56.4km s-min=25.8km az=100.0*
SFS ***05*** *05:09:46.0, 36°.90N×10°.40W, h0km, ML4.3*
LDG ***05*** *05:09:46.0±0.2, 36°.77N×10°.50W, h30km, Ml4.3/17, Error ellipse: s-maj=7.0km s-min=4.4km az=124.0*
MDD ***05*** *05:09:48.9±0.5, 36°.85N×10°.58W, h53km±29km, mb5.2/62, Error ellipse: s-maj=6.2km s-min=4.6km az=127.0, PRXIMO*
CSEM ***05*** *05:09:49.1±0.2, 36°.90N×10°.47W, h50km, ML4.7, Error ellipse: s-maj=4.2km s-min=3.2km az=81.0*
INMG ***05*** *05:09:50.3±2.2, 36°.86N×10°.51W, h31km±7km, MD3.8, ML4.1, Error ellipse: s-maj=3.3km s-min=2.1km az=105.0*
IGIL ***05*** *05:09:50.4, 36°.91N×10°.46W, h21km, ML4.2*
CNRM ***05*** *05:09:52.6, 36°.54N×10°.16W, h50km, ML4.7*
ISC 05 05:09:45.6±0.5, 36°.83N±0°.02×10°.59W±0°.02, h40km±7km, n343, σ2°.41/513, mb4.2/6, 45C-2D, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**1.44**	**77**	⇑*i*P	**Pn**	**05 10 12.2**	**+3.0**
PFVI				*e*S	**Sn**	**05 10 27.4**	**+0.5**
PFVI				A	A	05 10 28.5	
2μm,0.4s							
PFVI	**Vila Bisbo**	**1.44**	**77**	⇑P	**Pn**	**05 10 12.1**	**+3.0**
2μm,0.1s,SNR=18							
PFVI				S	**Sn**	**05 10 27.3**	**+0.5**
5μm,0.2s,SNR=30							
PFVI	**Vila Bisbo**	**1.44**	**77**	*e*Pn	**Pn**	**05 10 11.8**	**+2.6**
PFVI				*e*Sn	**Sn**	**05 10 27.0**	**+0.1**
PFVI	**Vila Bisbo**	**1.44**	**77**	*e*Pn	**Pn**	**05 10 11.8**	**+2.6**
PFVI	**Vila Bisbo**	**1.44**	**77**	P	**Pn**	**05 10 12.2**	**+3.0**
PFVI				*e*Sn	**Sn**	**05 10 27.0**	**+0.1**
MORF	**Marmelete**	**1.62**	**72**	*e*P	**Pn**	**05 10 14.6**	**+2.9**
MORF				*e*S	**Sn**	**05 10 31.9**	**+0.5**
MORF				AML	AML	05 10 33.1	
comp=N,3μm,0.2s							
MORF	**Marmelete**	**1.62**	**72**	⇑*i*P	**Pn**	**05 10 14.7**	**+3.0**
MORF				*e*S	**Sn**	**05 10 31.9**	**+0.5**
MORF				A	A	05 10 33.6	
comp=N,1μm,0.2s							
MORF	**Marmelete**	**1.62**	**72**	P	**Pn**	**05 10 14.7**	**+3.0**
MORF				S	**Sn**	**05 10 31.9**	**+0.5**
comp=N,3μm,0.2s							
MORF	**Marmelete**	**1.62**	**72**	⇑*i*P	**Pn**	**05 10 14.7**	**+3.0**
MORF				S	**Sn**	**05 10 31.9**	**+0.5**
comp=N,3μm,0.2s							
PTEO	**Sao Teotonio**	**1.65**	**64**	⇑*i*P	**Pn**	**05 10 15.1**	**+3.1**
PTEO				*e*S	**Sn**	**05 10 33.1**	**+1.1**
PTEO				A	A	05 10 33.7	
comp=N,981nm,0.7s							
PTEO	**Sao Teotonio**	**1.65**	**64**	P	**Pn**	**05 10 15.1**	**+3.1**
PTEO				S	**Sn**	**05 10 33.1**	**+1.1**
comp=N,491nm,0.7s							
PTEO	**Sao Teotonio**	**1.65**	**64**	⇑*i*P	**Pn**	**05 10 15.1**	**+3.1**
PTEO				S	**Sn**	**05 10 33.1**	**+1.1**
comp=N,491nm,0.7s							
PNCL	**Nicolau / Gran**	**2.08**	**51**	⇑*i*P	**Pn**	**05 10 21.0**	**+3.1**
PNCL				*e*S	**Sn**	**05 10 43.0**	**+0.5**
PNCL				A	A	05 10 45.7	
comp=N,699nm,0.5s							
PNCL	**Nicolau / Gran**	**2.08**	**51**	⇑*i*P	**Pn**	**05 10 21.0**	**+3.1**
PNCL				*e*S	**Sn**	**05 10 43.0**	**+0.5**
MESJ	**Messejana**	**2.14**	**61**	*e*P	**Pn**	**05 10 21.7**	**+3.0**
MESJ				*e*S	**Sn**	**05 10 44.4**	**+0.4**
MESJ				AML	AML	05 10 47.9	
comp=N,545nm,0.2s							
MESJ	**Messejana**	**2.14**	**61**	⇑*i*P	**Pn**	**05 10 21.7**	**+3.0**
MESJ				*e*S	**Sn**	**05 10 44.6**	**+0.6**
MESJ				A	A	05 10 47.9	
comp=N,428nm,0.5s							
MESJ	**Messejana**	**2.14**	**61**	P	**Pn**	**05 10 21.7**	**+3.0**
MESJ				S	**Sn**	**05 10 44.4**	**+0.4**
comp=N,545nm,0.2s							
MESJ	**Messejana**	**2.14**	**61**	⇑*i*P	**Pn**	**05 10 21.7**	**+3.0**
MESJ				S	**Sn**	**05 10 44.4**	**+0.4**
comp=N,545nm,0.2s							
PBDV	**Barranco-do-Ve**	**2.16**	**78**	⇑*i*P	**Pn**	**05 10 22.4**	**+3.3**
PBDV				*e*S	**Sn**	**05 10 45.1**	**+0.4**
PBDV				A	A	05 10 53.0	
comp=N,642nm,0.6s							
PBDV	**Barranco-do-Ve**	**2.16**	**78**	P	**Pn**	**05 10 22.4**	**+3.3**
PBDV				S	**Sn**	**05 10 45.1**	**+0.4**
comp=N,642nm,0.6s							
PBDV	**Barranco-do-Ve**	**2.16**	**78**	⇑*i*P	**Pn**	**05 10 22.4**	**+3.3**
PBDV				S	**Sn**	**05 10 45.1**	**+0.4**
comp=N,642nm,0.6s							
PCVE	**Castro Verde**	**2.19**	**68**	⇑*i*P	**Pn**	**05 10 22.5**	**+3.1**
PCVE				*e*S	**Sn**	**05 10 45.9**	**+0.7**
PCVE				A	A	05 10 46.2	
comp=N,373nm,1.0s							
PCVE	**Castro Verde**	**2.19**	**68**	P	**Pn**	**05 10 22.5**	**+3.1**
PCVE				S	**Sn**	**05 10 45.9**	**+0.7**
comp=N,373nm,1.0s							
PCVE	**Castro Verde**	**2.19**	**68**	⇑*i*P	**Pn**	**05 10 22.5**	**+3.1**
PCVE				S	**Sn**	**05 10 45.9**	**+0.7**
comp=N,373nm,1.0s							
LIS	**Lisbon**	**2.20**	**31**	*e*P	**Pn**	**05 10 22.6**	**+3.0**
LIS				*e*S	**Sn**	**05 10 46.4**	**+0.9**
LIS				AML	AML	05 10 48.7	
comp=E,3μm,0.3s							
LIS	**Lisbon**	**2.20**	**31**	*e*P	**Pn**	**05 10 22.7**	**+3.1**
LIS				*e*S	**Sn**	**05 10 47.3**	**+1.8**
LIS				A	A	05 10 48.6	
comp=E,1μm,0.5s							
LIS	**Lisbon**	**2.20**	**31**	P	**Pn**	**05 10 22.6**	**+3.0**
LIS				P		05 10 22.7	
LIS	**Lisbon**	**2.20**	**31**	*e*P	**Pn**	**05 10 22.7**	**+3.1**
LIS				*e*S	**Sn**	**05 10 47.3**	**+1.8**
PMST	**Lisbon--Monsan**	**2.20**	**30**	⇑*i*P	**Pn**	**05 10 22.8**	**+3.2**
PMST				*e*S	**Sn**	**05 10 47.2**	**+1.6**
PMST				A	A	05 10 50.1	
comp=E,1μm,0.6s							
PMST	**Lisbon--Monsan**	**2.20**	**30**	⇑*i*P	**Pn**	**05 10 22.8**	**+3.2**
PMST				*e*S	**Sn**	**05 10 47.2**	**+1.6**
PMAFR	**Mafra**	**2.36**	**26**	⇑*i*P	**Pn**	**05 10 24.9**	**+3.1**
PMAFR				*e*S	**Sn**	**05 10 50.5**	**+1.0**
PMAFR				A	A	05 10 53.3	
comp=E,2μm,0.2s							
PMAFR	**Mafra**	**2.36**	**26**	⇑P	**Pn**	**05 10 24.9**	**+3.1**
comp=E,328nm,0.1s,SNR=18							
PMAFR				S	**Sn**	**05 10 50.3**	**+0.8**
comp=E,3μm,0.4s,SNR=8.1							
PMAFR	**Mafra**	**2.36**	**26**	P	**Pn**	**05 10 24.9**	**+3.1**
comp=E,328nm,0.1s,SNR=18							
PMAFR				*e*S	**Sn**	**05 10 50.5**	**+1.0**
PVAQ	**Vaqueiros**	**2.36**	**75**	⇑*i*P	**Pn**	**05 10 25.1**	**+3.3**
PVAQ				*e*S	**Sn**	**05 10 50.0**	**+0.4**
PVAQ				A	A	05 10 51.7	
comp=E,648nm,0.1s							
PVAQ	**Vaqueiros**	**2.36**	**75**	P	**Pn**	**05 10 25.1**	**+3.3**
PVAQ				S	**Sn**	**05 10 50.0**	**+0.4**
comp=E,648nm,0.1s							
PVAQ	**Vaqueiros**	**2.36**	**75**	⇑*i*P	**Pn**	**05 10 25.1**	**+3.3**
PVAQ				S	**Sn**	**05 10 50.0**	**+0.4**
comp=E,648nm,0.1s							
PBEJ	**Beja**	**2.47**	**60**	⇑*e*P	**Pn**	**05 10 26.0**	**+2.7**
PBEJ				*e*S	**Sn**	**05 10 52.0**	**-0.3**
PBEJ				A	A	05 10 55.3	
comp=E,316nm,0.5s							
PBEJ	**Beja**	**2.47**	**60**	P	**Pn**	**05 10 26.0**	**+2.7**
PBEJ				S	**Sn**	**05 10 52.0**	**-0.3**
comp=E,158nm,0.5s							
PBEJ	**Beja**	**2.47**	**60**	⇑*e*P	**Pn**	**05 10 26.0**	**+2.7**
PBEJ				S	**Sn**	**05 10 52.0**	**-0.3**
comp=E,158nm,0.5s							
EGRO	**El Granado**	**2.58**	**73**	⇑P	**Pn**	**05 10 27.7**	**+3.0**
comp=E,100nm,0.1s,SNR=18							
EGRO				S	**Sn**	**05 10 54.7**	**-0.1**
comp=E,806nm,0.2s							
EGRO	**El Granado**	**2.58**	**73**	P	**Pn**	**05 10 27.7**	**+3.0**
comp=E,100nm,0.1s,SNR=18							
EGRO				S	**Sn**	**05 10 54.7**	**-0.1**
comp=E,806nm,0.2s							
EVO	**Evora**	**2.66**	**50**	*e*P	**Pn**	**05 10 28.6**	**+2.8**
EVO				*e*S	**Sn**	**05 10 57.1**	**+0.3**
EVO				A	A	05 10 58.7	
comp=E,359nm,0.1s							
EVO	**Evora**	**2.66**	**50**	P	**Pn**	**05 10 28.6**	**+2.8**
EVO				S	**Sn**	**05 10 57.1**	**+0.3**
comp=E,359nm,0.1s							
EVO	**Evora**	**2.66**	**50**	*i*P	**Pn**	**05 10 28.4**	**+2.6**
EVO				S	**Sn**	**05 10 57.1**	**+0.3**
comp=E,359nm,0.1s							
ALMR	**Almeirim**	**2.81**	**34**	*e*P	**Pn**	**05 10 30.9**	**+2.9**
ALMR				*e*S	**Sn**	**05 11 00.8**	**+0.2**
ALMR				AML	AML	05 11 02.5	
comp=N,1μm,0.4s							
ALMR	**Almeirim**	**2.81**	**34**	⇑*i*P	**Pn**	**05 10 30.9**	**+2.9**
ALMR				*e*S	**Sn**	**05 11 01.3**	**+0.7**
ALMR				A	A	05 11 07.6	
comp=N,954nm,0.4s							
ALMR	**Almeirim**	**2.81**	**34**	P	**Pn**	**05 10 30.9**	**+2.9**
ALMR				S	**Sn**	**05 11 01.3**	**+0.7**
comp=N,477nm,0.4s							
ALMR	**Almeirim**	**2.81**	**34**	⇑*i*P	**Pn**	**05 10 30.9**	**+2.9**
ALMR				S	**Sn**	**05 11 01.3**	**+0.7**
comp=N,477nm,0.4s							
PMTG	**Montargil**	**2.91**	**39**	⇑*i*P	**Pn**	**05 10 32.0**	**+2.7**
PMTG				*e*S	**Sn**	**05 11 02.5**	**-0.6**
PMTG				A	A	05 11 04.1	
comp=N,325nm,0.3s							
PMTG	**Montargil**	**2.91**	**39**	⇑*i*P	**Pn**	**05 10 32.0**	**+2.7**
PMTG				*e*S	**Sn**	**05 11 02.5**	**-0.6**
PBAR	**Barrancos**	**3.12**	**64**	*e*P	**Pn**	**05 10 35.2**	**+2.9**
PBAR				*e*S	**Sn**	**05 11 08.0**	**-0.3**
PBAR				A	A	05 11 10.2	
comp=N,672nm,0.5s							
PBAR	**Barrancos**	**3.12**	**64**	P	**Pn**	**05 10 35.2**	**+2.9**
PBAR				S	**Sn**	**05 11 08.0**	**-0.3**
comp=N,672nm,0.5s							
PBAR	**Barrancos**	**3.12**	**64**	*e*P	**Pn**	**05 10 35.2**	**+2.9**
PBAR				S	**Sn**	**05 11 08.0**	**-0.3**
comp=N,672nm,0.5s							
PESTR	**Estremoz**	**3.12**	**49**	*e*P	**Pn**	**05 10 34.9**	**+2.6**
PESTR				*e*S	**Sn**	**05 11 08.1**	**-0.3**
PESTR				A	A	05 11 10.1	
comp=N,216nm,0.3s							
PESTR	**Estremoz**	**3.12**	**49**	*e*Pn	**Pn**	**05 10 34.9**	**+2.6**
PESTR				*e*Sn	**Sn**	**05 11 07.5**	**-0.9**
PESTR	**Estremoz**	**3.12**	**49**	*e*P	**Pn**	**05 10 34.9**	**+2.6**
PESTR				*e*Sn	**Sn**	**05 11 07.4**	**-0.9**
PESTR				*e*S		05 11 08.1	
EMIN	**Mina Concepcio**	**3.26**	**72**	⇑P	**Pn**	**05 10 36.8**	**+2.7**
comp=N,104nm,0.1s,SNR=18							
EMIN				S	**Sn**	**05 11 11.1**	**-0.5**
comp=N,396nm,0.3s							
EMIN	**Mina Concepcio**	**3.26**	**72**	P	**Pn**	**05 10 36.8**	**+2.7**
comp=N,104nm,0.1s,SNR=18							
EMIN				S	**Sn**	**05 11 11.1**	**-0.5**
comp=N,396nm,0.3s							
PTOM	**Tomar**	**3.27**	**31**	*e*P	**Pn**	**05 10 37.2**	**+3.0**
PTOM				*e*S	**Sn**	**05 11 12.0**	**+0.1**
PTOM				A	A	05 11 18.2	
comp=N,431nm,0.8s							
PTOM	**Tomar**	**3.27**	**31**	*e*P	**Pn**	**05 10 37.2**	**+3.0**
PTOM				*e*S	**Sn**	**05 11 12.0**	**+0.1**
EBAD	**Badajoz**	**3.42**	**55**	⇑P	**Pn**	**05 10 38.7**	**+2.3**
comp=N,216nm,0.1s,SNR=18							
EBAD				S	**Sn**	**05 11 15.0**	**-0.6**
comp=N,464nm,0.2s,SNR=12							
EBAD	**Badajoz**	**3.42**	**55**	P	**Pn**	**05 10 38.7**	**+2.3**
comp=N,216nm,0.1s,SNR=18							
EBAD				S	**Sn**	**05 11 15.0**	**-0.6**
comp=N,464nm,0.2s,SNR=12							
SFS	**San Fernando**	**3.54**	**95**	*i*P	Pn	05 10 46.3	+8.3
SFS				*e*S	**Sn**	**05 11 21.1**	**+2.5**
PCAS	**Casmilo, Conde**	**3.61**	**26**	⇑*i*P	**Pn**	**05 10 42.0**	**+3.0**
PCAS				*e*S	**Sn**	**05 11 20.7**	**+0.4**
PCAS				A	A	05 11 22.7	
comp=N,308nm,0.4s							
PCAS	**Casmilo, Conde**	**3.61**	**26**	⇑*i*P	**Pn**	**05 10 42.0**	**+3.0**
PCAS				*e*S	**Sn**	**05 11 20.7**	**+0.4**
PMRV	**Marv??o**	**3.61**	**43**	⇑*i*P	**Pn**	**05 10 41.7**	**+2.7**
PMRV				*e*S	**Sn**	**05 11 19.7**	**-0.8**
PMRV				A	A	05 11 21.3	
comp=N,318nm,0.5s							
PMRV	**Marv??o**	**3.61**	**43**	P	**Pn**	**05 10 41.7**	**+2.7**
PMRV				S	**Sn**	**05 11 19.7**	**-0.8**
comp=N,318nm,0.5s							
PMRV	**Marv??o**	**3.61**	**43**	⇑*i*P	**Pn**	**05 10 41.7**	**+2.7**
PMRV				S	**Sn**	**05 11 19.7**	**-0.8**
comp=N,318nm,0.5s							
CNIL	**Conil**	**3.68**	**96**	*i*P	**Pn**	**05 10 43.9**	**+4.0**
CNIL				*e*S	**Sn**	**05 11 26.0**	**+4.1**
GIBL	**Gibalbin**	**3.71**	**89**	*e*P	**Pn**	**05 10 43.7**	**+3.4**
GIBL				*e*S	**Sn**	**05 11 23.5**	**+0.8**
COI	**Coimbra**	**3.78**	**26**	P	**Pn**	**05 10 44.4**	**+3.2**
COI				S	**Sn**	**05 11 24.2**	**-0.2**
comp=N,375nm,0.6s							
COI	**Coimbra**	**3.78**	**26**	*e*P	**Pn**	**05 10 44.4**	**+3.2**
COI				S	**Sn**	**05 11 24.2**	**-0.2**
comp=N,375nm,0.6s							
PCBR	**Castelo Branco**	**3.87**	**38**	*e*P	**Pn**	**05 10 45.3**	**+2.7**
PCBR				*e*S	**Sn**	**05 11 26.1**	**-0.7**
PCBR				A	A	05 11 29.3	
comp=N,139nm,0.5s							
PCBR	**Castelo Branco**	**3.87**	**38**	P	**Pn**	**05 10 45.3**	**+2.7**
PCBR				S	**Sn**	**05 11 26.1**	**-0.7**
comp=N,70nm,0.5s							
PCBR	**Castelo Branco**	**3.87**	**38**	*e*P	**Pn**	**05 10 45.3**	**+2.7**
PCBR				S	**Sn**	**05 11 26.1**	**-0.7**
comp=N,70nm,0.5s							
ALJ	**Aljibe**	**3.98**	**93**	*e*P	**Pn**	**05 10 48.0**	**+3.9**
ALJ				*e*S	**Sn**	**05 11 30.0**	**+0.5**
EJIF	**Jimena Fronter**	**4.13**	**94**	P	**Pn**	**05 10 49.6**	**+3.4**
comp=N,30nm,0.2s,SNR=7.9							
EJIF				S	**Sn**	**05 11 32.0**	**-1.2**
comp=N,113nm,0.4s,SNR=7.9							
EJIF	**Jimena Fronter**	**4.13**	**94**	P	**Pn**	**05 10 49.6**	**+3.4**
comp=N,30nm,0.2s,SNR=7.9							
EJIF				S	**Sn**	**05 11 32.0**	**-1.2**
comp=N,113nm,0.4s,SNR=7.9							
RTC	**Rabat Centre**	**4.16**	**132**	*e*Pn	**Pn**	**05 10 48.0**	**+1.5**
RTC	**Rabat Centre**	**4.16**	**132**	*e*Pn	**Pn**	**05 10 48.0**	**+1.5**
RTC	**Rabat Centre**	**4.16**	**132**	P	**Pn**	**05 10 49.2**	**+2.6**
MTE	**Manteigas**	**4.29**	**33**	⇑*i*P	**Pn**	**05 10 51.0**	**+2.7**
MTE				*e*S	**Sn**	**05 11 36.2**	**-0.9**
MTE				A	A	05 11 40.6	
comp=N,244nm,0.8s							
MTE	**Manteigas**	**4.29**	**33**	P	**Pn**	**05 10 51.0**	**+2.7**
MTE				S	**Sn**	**05 11 36.2**	**-0.9**
comp=N,122nm,0.8s							
MTE	**Manteigas**	**4.29**	**33**	*e*Pn	**Pn**	**05 10 50.1**	**+1.8**
MTE	**Manteigas**	**4.29**	**33**	*e*Pn	**Pn**	**05 10 50.1**	**+1.8**
MTE	**Manteigas**	**4.29**	**33**	⇑*i*P	**Pn**	**05 10 51.0**	**+2.7**
MTE				S	**Sn**	**05 11 36.2**	**-0.9**
comp=N,122nm,0.8s							
ECAB	**El Cabril**	**4.29**	**72**	⇑P	**Pn**	**05 10 50.8**	**+2.4**
comp=N,158nm,0.2s,SNR=18							
ECAB				S	**Sn**	**05 11 35.1**	**-2.2**
comp=N,510nm,0.3s							
ECAB	**El Cabril**	**4.29**	**72**	P	**Pn**	**05 10 50.8**	**+2.4**
comp=N,158nm,0.2s,SNR=18							
ECAB				S	**Sn**	**05 11 35.1**	**-2.2**
comp=N,510nm,0.3s							
ECEU	**Ceuta**	**4.31**	**101**	P	**Pn**	**05 10 52.3**	**+3.7**
comp=N,39nm,0.2s,SNR=53							
ECEU				S	**Sn**	**05 11 38.4**	**+0.8**
comp=N,319nm,0.5s,SNR=4.0							
ECEU	**Ceuta**	**4.31**	**101**	P	**Pn**	**05 10 52.3**	**+3.7**
comp=N,39nm,0.2s,SNR=53							
ECEU				S	**Sn**	**05 11 38.4**	**+0.8**
comp=N,319nm,0.5s,SNR=4.0							
CEU	**Ceuta**	**4.31**	**101**	*i*P	**Pn**	**05 10 52.9**	**+4.3**
CEU				*e*S	**Sn**	**05 11 40.1**	**+2.6**
RSA	**Sarsar**	**4.33**	**115**	P	**Pn**	**05 10 52.0**	**+3.1**
RSA				S	**Sn**	**05 11 38.0**	**-0.2**
CEUT	**Ceuta**	**4.35**	**101**	P	**Pn**	**05 10 52.5**	**+3.4**
CEUT				S	**Sn**	**05 11 34.7**	**-3.9**
HORN	**Hornachuelos**	**4.37**	**75**	P	**Pn**	**05 10 51.8**	**+2.5**
AVE	**Averroes**	**4.38**	**143**	*i*P	**Pn**	**05 10 52.5**	**+2.9**
PVIS	**Viseu**	**4.41**	**28**	*e*P	**Pn**	**05 10 52.7**	**+2.7**
PVIS				*e*S	**Sn**	**05 11 39.4**	**-0.8**
PVIS				A	A	05 11 42.1	
comp=N,376nm,0.3s							
PVIS	**Viseu**	**4.41**	**28**	*e*P	**Pn**	**05 10 52.7**	**+2.7**
PVIS				*e*S	**Sn**	**05 11 39.4**	**-0.8**
PTO	**Porto**	**4.57**	**19**	*e*P	**Pn**	**05 10 55.0**	**+2.9**
PTO				*e*S	**Sn**	**05 11 42.0**	**-1.9**
PTO				A	A	05 11 44.8	
comp=N,365nm,0.4s							
PTO	**Porto**	**4.57**	**19**	P	**Pn**	**05 10 55.0**	**+2.9**
PTO				S	**Sn**	**05 11 42.0**	**-1.9**
comp=N,182nm,0.4s							
PTO	**Porto**	**4.57**	**19**	*e*P	**Pn**	**05 10 55.0**	**+2.9**
PTO				S	**Sn**	**05 11 42.0**	**-1.9**
comp=N,182nm,0.4s							
EMIJ	**Mijas**	**4.68**	**92**	P	**Pn**	**05 10 56.5**	**+2.8**
comp=N,21nm,0.3s,SNR=7.9							
EMIJ				S	**Sn**	**05 11 46.1**	**-0.7**
comp=N,213nm,0.4s,SNR=10							
EMIJ	**Mijas**	**4.68**	**92**	P	**Pn**	**05 10 56.5**	**+2.8**
comp=N,21nm,0.3s,SNR=7.9							
EMIJ				S	**Sn**	**05 11 46.1**	**-0.7**
comp=N,213nm,0.4s,SNR=10							
EPLA	**Plasencia**	**4.79**	**46**	⇑P	**Pn**	**05 10 57.9**	**+2.7**
comp=N,75nm,0.2s,SNR=18							
EPLA				S	**S

PGAV **Gavieira, Arco 5.43 19** *e*P **Pn 05 11 07.0 +2.9**
PGAV *e*S **Sn 05 12 03.6 -1.7**
ELGU Los Guajares, 5.58 88 P **Pn 05 11 09.6 +3.5**
comp=N,20nm,0.4s,SNR=7.9
ELGU S **Sn 05 12 08.7 -0.4**
comp=N,256nm,0.3s,SNR=7.9
ELGU Los Guajares, 5.58 88 P **Pn 05 11 09.6 +3.5**
comp=N,20nm,0.4s,SNR=7.9
ELGU S **Sn 05 12 08.7 -0.4**
comp=N,256nm,0.3s,SNR=7.9
PAB San Pablo 5.61 59 P **Pn 05 11 08.5 +2.0**
comp=N,86nm,0.3s,SNR=7.9
PAB S **Sn 05 12 07.3 -2.5**
comp=N,95nm,0.5s,SNR=7.9
PAB San Pablo 5.61 59 *e*Pn **Pn 05 11 08.4 +2.0**
PAB San Pablo 5.61 59 P **Pn 05 11 08.5 +2.0**
comp=N,86nm,0.3s,SNR=7.9
PAB S **Sn 05 12 07.3 -2.5**
comp=N,95nm,0.5s,SNR=7.9
MPAL Palemas 5.62 105 P **Pn 05 11 10.0 +3.4**
MPAL S **Sn 05 12 05.2 -4.7**
EQUE Quentar 5.73 84 P **Pn 05 11 10.9 +2.7**
comp=N,34nm,0.3s,SNR=56
EQUE S **Sn 05 12 11.9 -0.9**
comp=N,197nm,0.5s,SNR=7.1
EQUE Quentar 5.73 84 P **Pn 05 11 10.9 +2.7**
comp=N,34nm,0.3s,SNR=56
EQUE S **Sn 05 12 11.9 -0.9**
comp=N,197nm,0.5s,SNR=7.1
PBRG Braganca 5.79 30 *e*P **Pn 05 11 11.3 +2.3**
PBRG *e*S **Sn 05 12 11.6 -2.5**
PBRG A A 05 12 14.7
comp=N,149nm,0.3s
PBRG Braganca 5.79 30 P **Pn 05 11 11.3 +2.3**
PBRG S **Sn 05 12 11.6 -2.5**
comp=N,74nm,0.3s
PBRG Braganca 5.79 30 *e*P **Pn 05 11 11.3 +2.3**
PBRG S **Sn 05 12 11.6 -2.5**
comp=N,74nm,0.3s
ECAL Calabor 5.91 29 P **Pn 05 11 12.9 +2.3**
comp=N,68nm,0.3s,SNR=120
ECAL S **Sn 05 12 14.4 -2.7**
comp=N,448nm,0.4s,SNR=10
ECAL Calabor 5.91 29 P **Pn 05 11 12.9 +2.3**
comp=N,68nm,0.3s,SNR=120
ECAL S **Sn 05 12 14.4 -2.7**
comp=N,448nm,0.4s,SNR=10
CZD Col de Zad 5.92 128 P **Pn 05 11 13.5 +2.5**
CZD S Sn 05 12 11.8 -6.0
ESDC Sonseca Array 5.94 59 Pn **Pn 05 11 13.2 +2.3**
comp=N,84nm,0.3s,baz=247,slow=13,SNR=534
ESDC Sn **Sn 05 12 14.4 -3.3**
comp=N,50nm,0.3s,baz=245,slow=24,SNR=17
ESDC LR LR 05 13 35.1
comp=N,62nm,19.4s,baz=175,slow=38
ESDC Sonseca Array 5.94 59 P **Pn 05 11 12.7 +1.8**
comp=N,67nm,0.2s,baz=245,slow=13,SNR=470
ESDC S **Sn 05 12 15.5 -2.1**
comp=N,191nm,0.5s,baz=245,slow=23,SNR=20
ESDC Sonseca Array 5.94 59 P **Pn 05 11 12.7 +1.8**
comp=N,67nm,0.2s,SNR=470
ESDC Sonseca Array 5.94 59 *e*Pn **Pn 05 11 13.2 +2.3**
ESDC *e*Sn **Sn 05 12 14.4 -3.3**
ESDC S 05 12 15.5
comp=N,191nm,0.5s,SNR=20
ESLA Sonseca Array 5.94 59 *e*Pn **Pn 05 11 12.9 +2.0**
ESLA Sonseca Array 5.94 59 *e*Pn **Pn 05 11 12.9 +2.0**
ES19 SONSECA Array 5.99 59 *e*Pn **Pn 05 11 12.4 +0.7**
ES19 SONSECA Array 5.99 59 *e*Pn **Pn 05 11 12.4 +0.7**
PMPS Porto Santo 6.04 233 *e*P Pn 05 11 15.8 +3.5
PMPS *e*S **Sn 05 12 16.1 -4.0**
PMPS A A 05 12 26.1
comp=N,116nm,0.2s
PMPS Porto Santo 6.04 233 P Pn 05 11 15.8 +3.5
PMPS S **Sn 05 12 16.1 -4.0**
comp=N,58nm,0.2s
OUK Oukaimeden 6.05 157 P **Pn 05 11 15.2 +2.4**
OUK S **Sn 05 12 17.7 -3.2**
GORA Gorafe 6.06 82 P **Pn 05 11 15.4 +2.7**
comp=N,41nm,0.2s,SNR=7.9
GORA S **Sn 05 12 20.0 -0.8**
comp=N,229nm,0.3s,SNR=7.9
GORA Gorafe 6.06 82 P **Pn 05 11 15.4 +2.7**
comp=N,41nm,0.2s,SNR=7.9
GORA S **Sn 05 12 20.0 -0.8**
comp=N,229nm,0.3s,SNR=7.9
EQES Quesada 6.07 79 ⇑P **Pn 05 11 14.8 +2.0**
comp=N,17nm,0.2s,SNR=18
EQES S **Sn 05 12 19.3 -1.8**
comp=N,197nm,0.4s,SNR=11
EQES Quesada 6.07 79 P **Pn 05 11 14.8 +2.0**
comp=N,17nm,0.2s,SNR=18
EQES S **Sn 05 12 19.3 -1.8**
comp=N,197nm,0.4s,SNR=11
EALB Alboran 6.16 96 P **Pn 05 11 15.3 +1.4**
comp=N,6.0nm,0.2s,SNR=7.6
EALB S **Sn 05 12 19.7 -3.4**
comp=N,134nm,0.7s,SNR=8.2
EALB Alboran 6.16 96 P **Pn 05 11 15.3 +1.4**
comp=N,6.0nm,0.2s,SNR=7.6
CGR Cap Guir 6.21 174 P **Pn 05 11 18.0 +3.3**
EMAZ Mazaricos 6.23 11 P **Pn 05 11 17.3 +2.3**
comp=N,43nm,0.3s,SNR=7.9
EMAZ S **Sn 05 12 20.5 -4.4**
comp=N,319nm,0.2s,SNR=7.9
EMAZ Mazaricos 6.23 11 P **Pn 05 11 17.3 +2.3**
comp=N,43nm,0.3s,SNR=7.9
EAGO Agolada(Pontev 6.26 17 ⇓P **Pn 05 11 18.0 +2.5**
comp=N,16nm,0.1s,SNR=18
EAGO S **Sn 05 12 22.6 -3.2**
comp=N,96nm,0.2s,SNR=7.9
EAGO Agolada(Pontev 6.26 17 P **Pn 05 11 18.0 +2.5**
comp=N,16nm,0.1s,SNR=18
GUD Guadarrama 6.30 51 ⇑P **Pn 05 11 18.0 +1.9**
comp=N,50nm,0.2s,SNR=18
GUD S **Sn 05 12 23.5 -3.4**
comp=N,96nm,0.3s
GUD Guadarrama 6.30 51 P **Pn 05 11 18.0 +1.9**
comp=N,50nm,0.2s,SNR=18
GUD S **Sn 05 12 23.5 -3.4**
comp=N,96nm,0.3s
MDT Midelt 6.34 127 Pn **Pn 05 11 18.8 +2.3**
comp=N,34nm,0.3s,baz=314,slow=10,SNR=465
MDT Sn **Sn 05 12 24.0 -3.8**
comp=N,58nm,0.3s,baz=222,slow=22,SNR=45
EMEL Melilla 6.37 102 P **Pn 05 11 19.9 +3.0**
comp=N,33nm,0.1s,SNR=7.9
EMEL S **Sn 05 12 25.8 -2.5**
comp=N,145nm,0.2s,SNR=7.9
EMLI Melilla 6.37 102 P **Pn 05 11 19.9 +3.0**
comp=N,33nm,0.1s,SNR=7.9
MELI Melilla 6.38 102 S **Sn 05 12 25.6 -3.1**
comp=N,112nm,0.3s,SNR=7.9
SESP Santiago Espad 6.52 76 P **Pn 05 11 21.1 +2.0**
comp=N,26nm,0.4s,SNR=7.9
SESP S **Sn 05 12 29.0 -3.3**
comp=N,155nm,0.3s,SNR=7.9
SESP Santiago Espad 6.52 76 P **Pn 05 11 21.2 +2.1**
SESP S **Sn 05 12 29.0 -3.3**
comp=N,155nm,0.3s,SNR=7.9
FUL Funchal 6.66 233 *e*P Pn 05 11 24.2 +3.4
FUL *e*S **Sn 05 12 31.0 -4.5**
FUL A A 05 12 37.1
comp=N,210nm,0.2s
FUL Funchal 6.66 233 P Pn 05 11 24.2 +3.4
FUL S **Sn 05 12 31.0 -4.5**
comp=N,105nm,0.2s
ENIJ Nijar 6.72 86 P **Pn 05 11 24.1 +2.4**
comp=N,23nm,0.3s,SNR=7.9
ENIJ S **Sn 05 12 33.9 -3.0**
comp=N,84nm,0.3s,SNR=7.9
ENIJ Nijar 6.72 86 P **Pn 05 11 24.1 +2.4**
comp=N,23nm,0.3s,SNR=7.9
ENIJ S **Sn 05 12 33.9 -3.0**
comp=N,84nm,0.3s,SNR=7.9
UCM Universidad Co 6.72 57 *i*P **Pn 05 11 24.8 +3.1**
UCM *e*S **Sn 05 12 34.3 -2.6**
PMOZ Porto Moniz, M 6.75 236 *e*P Pn 05 11 25.8 +3.6
PMOZ *e*S **Sn 05 12 37.5 -0.3**
PMOZ A A 05 12 51.4
comp=N,159nm,0.3s
PMOZ Porto Moniz, M 6.75 236 P **Pn 05 11 25.1 +2.9**
comp=N,127nm,0.6s,SNR=7.9
PMOZ S **Sn 05 12 35.1 -2.7**
comp=N,256nm,0.4s,SNR=7.9
PMOZ Porto Moniz, M 6.75 236 P Pn 05 11 25.8 +3.6
EPON Pontenova 7.00 21 P **Pn 05 11 27.3 +1.8**
comp=N,8.6nm,0.3s,SNR=29
EPON S **Sn 05 12 40.1 -3.7**
comp=N,45nm,0.3s,SNR=7.9
EPON Pontenova 7.00 21 P **Pn 05 11 27.3 +1.8**
comp=N,8.6nm,0.3s,SNR=29
ETOB Tobarra 7.39 73 P **Pn 05 11 32.3 +1.4**
comp=N,28nm,0.2s,SNR=218
ETOB S **Sn 05 12 50.7 -2.8**
comp=N,22nm,0.2s,SNR=7.9
ETOB Tobarra 7.39 73 P **Pn 05 11 32.3 +1.4**
comp=N,28nm,0.2s,SNR=218
ETOB S **Sn 05 12 50.7 -2.8**
comp=N,22nm,0.2s,SNR=7.9
EMUR La Murta 7.51 79 P **Pn 05 11 34.1 +1.5**
comp=N,12nm,0.5s,SNR=8.0
EMUR S **Sn 05 12 52.4 -4.1**
comp=N,95nm,0.7s,SNR=7.9
EMUR La Murta 7.51 79 P **Pn 05 11 34.1 +1.5**
comp=N,12nm,0.5s,SNR=8.0
EMUR S **Sn 05 12 52.4 -4.1**
comp=N,95nm,0.7s,SNR=7.9
EARI Arriondas 7.66 31 P **Pn 05 11 37.5 +2.9**
comp=N,5.8nm,0.2s,SNR=67
EARI S **Sn 05 12 57.1 -3.0**
comp=N,94nm,0.8s,SNR=7.9
EARI Arriondas 7.66 31 P **Pn 05 11 37.5 +2.9**
comp=N,5.8nm,0.2s,SNR=67
EARI S **Sn 05 12 57.1 -3.0**
comp=N,94nm,0.8s,SNR=7.9
CART Cartagena 7.69 82 *e*Pn **Pn 05 11 36.1 +1.2**
CART *e*Sn **Sn 05 12 56.9 -3.7**
CART Cartagena 7.69 82 *e*Pn **Pn 05 11 36.1 +1.2**
CART Cartagena 7.69 82 *e*P **Pn 05 11 36.5 +1.6**
CART *e*S **Sn 05 12 57.0 -3.7**
ETOR Torete 7.76 57 P **Pn 05 11 38.1 +2.1**
comp=N,204nm,0.4s,SNR=7.9
ETOR S Sn 05 12 57.9 -4.6
comp=N,85nm,0.4s,SNR=7.9
ETOR Torete 7.76 57 P **Pn 05 11 38.1 +2.1**
comp=N,204nm,0.4s,SNR=7.9
ETOR S Sn 05 12 57.9 -4.6
comp=N,85nm,0.4s,SNR=7.9
EFAM Famara 8.07 199 P **Pn 05 11 42.1 +1.9**
comp=N,3.8nm,0.2s,SNR=7.9
EFAM S **Sn 05 13 05.8 -4.4**
comp=N,33nm,0.2s,SNR=7.9
AFON Font Roja 8.17 74 P **Pn 05 11 44.0 +2.4**
comp=N,19nm,0.3s,SNR=14
AFON S **Sn 05 13 10.8 -1.9**
comp=N,42nm,0.4s,SNR=6.0
AFON Font Roja 8.17 74 P **Pn 05 11 44.0 +2.4**
comp=N,19nm,0.3s,SNR=14
AFON S **Sn 05 13 10.8 -1.9**
comp=N,42nm,0.4s,SNR=6.0
ELAN Lanestosa 8.42 38 P **Pn 05 11 47.2 +2.2**
comp=N,9.6nm,0.3s,SNR=20
ELAN S **Sn 05 13 16.4 -2.3**
comp=N,21nm,0.3s,SNR=4.6
ELAN Lanestosa 8.42 38 P **Pn 05 11 47.2 +2.2**
comp=N,9.6nm,0.3s,SNR=20
ELAN S **Sn 05 13 16.4 -2.3**
comp=N,21nm,0.3s,SNR=4.6
EBEN2 Beniarda presa 8.44 74 P **Pn 05 11 47.4 +2.1**
comp=N,16nm,0.2s,SNR=7.9
EBEN2 S **Sn 05 13 16.0 -3.2**
comp=N,45nm,0.3s,SNR=7.9
CFUE Fuerteventura 8.63 200 P Pn 05 11 51.7 +3.7
comp=N,6.1nm,0.3s,SNR=7.9
CFUE S **Sn 05 13 20.9 -3.2**
comp=N,50nm,0.3s,SNR=7.9
EMOS Mosqueruela 8.67 63 P **Pn 05 11 50.7 +2.2**
comp=N,40nm,0.4s,SNR=65
EMOS S **Sn 05 13 20.9 -4.2**
comp=N,74nm,0.7s,SNR=7.3
EMOS Mosqueruela 8.67 63 P **Pn 05 11 50.7 +2.2**
comp=N,40nm,0.4s,SNR=65
EMOS S **Sn 05 13 20.9 -4.2**
comp=N,74nm,0.7s,SNR=7.3
CFTV Fuerteventura 8.90 200 P **Pn 05 11 53.8 +2.3**
comp=N,2.1nm,0.2s,SNR=7.9
CFTV S **Sn 05 13 26.8 -3.8**
comp=N,12nm,0.3s,SNR=7.9
EARA Aranguren 9.12 47 P **Pn 05 11 58.0 +3.4**
comp=N,29nm,0.3s,SNR=8.2
EARA S **Sn 05 13 33.4 -2.5**
comp=N,28nm,0.5s,SNR=7.9
EARA Aranguren 9.12 47 P **Pn 05 11 58.0 +3.4**
comp=N,29nm,0.3s,SNR=8.2
EARA S **Sn 05 13 33.4 -2.5**
comp=N,28nm,0.5s,SNR=7.9
ESAC San Caprasio 9.24 55 P **Pn 05 11 58.5 +2.2**
comp=N,40nm,0.3s,SNR=12
ESAC S **Sn 05 13 35.2 -3.7**
comp=N,75nm,0.4s,SNR=7.9
ESAC San Caprasio 9.24 55 P **Pn 05 11 58.5 +2.2**
comp=N,40nm,0.3s,SNR=12
ESAC S **Sn 05 13 35.2 -3.7**
comp=N,75nm,0.4s,SNR=7.9
EORO Oroz-Betelu 9.35 47 P **Pn 05 11 59.8 +2.0**
comp=N,10nm,0.3s,SNR=75
EORO S **Sn 05 13 37.1 -4.5**
comp=N,39nm,0.7s,SNR=7.9
EORO Oroz-Betelu 9.35 47 P **Pn 05 11 59.8 +2.0**
comp=N,10nm,0.3s,SNR=75
EORO S **Sn 05 13 37.1 -4.5**
comp=N,39nm,0.7s,SNR=7.9
IELO Elcoad 9.36 47 ⇓P **Pn 05 12 00.1 +2.1**
comp=N,48nm,0.3s,SNR=18
IELO S **Sn 05 13 38.4 -3.6**
comp=N,11nm,0.3s,SNR=7.9
IELO Elcoad 9.36 47 P **Pn 05 12 00.1 +2.1**
comp=N,48nm,0.3s,SNR=18
IELO S **Sn 05 13 38.4 -3.6**
comp=N,11nm,0.3s,SNR=7.9
EALK Alkurruntz 9.44 45 P **Pn 05 12 01.3 +2.3**
comp=N,15nm,0.3s,SNR=21
EALK S **Sn 05 13 39.6 -4.2**
comp=N,61nm,0.6s,SNR=7.9
EALK Alkurruntz 9.44 45 P **Pn 05 12 01.3 +2.3**
comp=N,15nm,0.3s,SNR=21
EALK S **Sn 05 13 39.6 -4.2**
comp=N,61nm,0.6s,SNR=7.9
ERTA Horta de San J 9.46 61 P **Pn 05 12 01.7 +2.5**
comp=N,5.0nm,0.1s,SNR=15
ERTA S **Sn 05 13 40.7 -3.5**
comp=N,18nm,0.6s,SNR=7.9
ERTA Horta de San J 9.46 61 P **Pn 05 12 01.7 +2.5**
comp=N,5.0nm,0.1s,SNR=15
ERTA S **Sn 05 13 40.7 -3.5**
comp=N,18nm,0.6s,SNR=7.9
SJPF Ste Jean 9.53 46 *e*P **Pn 05 12 03.3 +3.1**
SJPF *e*Sn Sn 05 13 40.4 -5.7
comp=N,18nm,0.4s
SJPF Ste Jean 9.53 46 *e*Pn **Pn 05 12 03.3 +3.1**
SJPF *e*Sn Sn 05 13 40.4 -5.7
SJPF Ste Jean 9.53 46 *e*P **Pn 05 12 03.3 +3.1**
EBAJ Bajamar 9.58 212 P **Pn 05 12 00.8 -0.2**
comp=N,5.5nm,0.2s,SNR=13
EBAJ S **Sn 05 13 41.0 -6.4**
comp=N,12nm,0.2s,SNR=7.9
EIBI Ibiza 9.68 73 P **Pn 05 12 03.8 +1.6**
comp=N,2.1nm,0.1s,SNR=8.4
EIBI S Sn 05 13 44.1 -5.5
comp=N,17nm,0.5s,SNR=7.9
EIBI Ibiza 9.68 73 P **Pn 05 12 03.8 +1.6**
comp=N,2.1nm,0.1s,SNR=8.4
EOSO Osorio 9.69 207 P **Pn 05 12 02.2 -0.2**
comp=N,3.3nm,0.2s,SNR=7.9
EOSO S **Sn 05 13 44.4 -5.7**
comp=N,19nm,0.3s,SNR=7.9
ETSF Etsaut 9.80 49 *e*P **Pn 05 12 06.3 +2.4**
ETSF *e*Sn Sn 05 13 46.3 -6.4
comp=N,23nm,0.5s
ETSF Etsaut 9.80 49 *e*Pn **Pn 05 12 06.3 +2.4**
ETSF *e*Sn Sn 05 13 46.3 -6.4
ETSF Etsaut 9.80 49 *e*P **Pn 05 12 06.3 +2.4**
ATE Arette 9.82 47 P **Pn 05 12 07.4 +3.2**
comp=N,13nm,0.2s,SNR=7.9
ATE S Sn 05 13 48.4 -4.8
comp=N,11nm,0.3s,SNR=7.9
ATE Arette 9.82 47 P **Pn 05 12 07.4 +3.2**
comp=N,13nm,0.2s,SNR=7.9
ATE S Sn 05 13 48.4 -4.8
comp=N,11nm,0.3s,SNR=7.9
CCAN Las Canadas 9.97 212 P **Pn 05 12 06.8 +0.3**
comp=N,2.3nm,0.2s,SNR=7.9
CCAN S Sn 05 13 48.0 -9.3
SNR=7.9
EPOB Poblet 10.13 60 P **Pn 05 12 09.9 +1.5**
comp=N,10.0nm,0.2s,SNR=30
EPOB S Sn 05 13 55.5 -5.2
comp=N,5.9nm,0.4s,SNR=7.9
EPOB Poblet 10.13 60 P **Pn 05 12 09.9 +1.5**
comp=N,10.0nm,0.2s,SNR=30
EPOB S Sn 05 13 55.5 -5.2
comp=N,5.9nm,0.4s,SNR=7.9
ECHI Chisagues Biel 10.14 52 P **Pn 05 12 10.9 +2.3**
comp=N,19nm,0.3s,SNR=7.9
ECHI S Sn 05 13 55.8 -5.2
comp=N,19nm,0.3s,SNR=7.9
ECHI Chisagues Biel 10.14 52 P **Pn 05 12 10.9 +2.3**
comp=N,19nm,0.3s,SNR=7.9
ECHI S Sn 05 13 55.8 -5.2
comp=N,19nm,0.3s,SNR=7.9
TBT Taburiente 10.20 219 P **Pn 05 12 09.6 +0.1**
comp=N,23nm,0.2s,SNR=7.9
TBT S Sn 05 13 51.6 -11
comp=N,105nm,0.2s,SNR=7.9
PYLO Lourdes 10.22 49 P **Pn 05 12 12.7 +3.0**
EGOM La Gomera 10.29 215 P **Pn 05 12 10.1 -0.6**
comp=N,3.7nm,0.2s,SNR=6.4
EGOM S Sn 05 13 56.4 -8.4
comp=N,20nm,0.1s,SNR=7.9
EPF Esparros 10.42 50 *e*P **Pn 05 12 15.2 +2.8**
EPF *e*Sn Sn 05 14 01.6 -6.3
comp=N,19nm,0.4s
EPF Esparros 10.42 50 *e*Pn **Pn 05 12 15.2 +2.8**
EPF *e*Sn Sn 05 14 01.6 -6.3
EPF Esparros 10.42 50 *e*P **Pn 05 12 15.2 +2.8**
CSOR Sort 10.60 55 P **Pn 05 12 16.3 +1.4**
comp=N,12nm,0.3s,SNR=7.9
CSOR S **Sn 05 14 07.8 -4.5**
comp=N,14nm,0.4s,SNR=7.9
CSOR Sort 10.60 55 P **Pn 05 12 16.3 +1.4**
comp=N,12nm,0.3s,SNR=7.9
CSOR S **Sn 05 14 07.8 -4.5**
comp=N,14nm,0.4s,SNR=7.9
EMIR Miracle 10.66 58 ⇑P **Pn 05 12 17.2 +1.5**
comp=N,21nm,0.3s,SNR=18
EMIR S **Sn 05 14 09.3 -4.4**
comp=N,19nm,0.4s,SNR=7.9
EMIR Miracle 10.66 58 P **Pn 05 12 17.2 +1.5**
comp=N,21nm,0.3s,SNR=18
EMIR S **Sn 05 14 09.3 -4.4**
comp=N,19nm,0.4s,SNR=7.9
MLS Moulis 10.86 52 P **Pn 05 12 21.6 +3.3**
ETOS Mallorca 10.93 70 P **Pn 05 12 21.3 +1.9**
comp=N,2.4nm,0.3s,SNR=6.3
ETOS S **Sn 05 14 15.9 -4.4**
comp=N,22nm,1.2s,SNR=7.9
ETOS Mallorca 10.93 70 P **Pn 05 12 21.3 +1.9**
comp=N,2.4nm,0.3s,SNR=6.3
ETOS S **Sn 05 14 15.9 -4.4**
comp=N,22nm,1.2s,SNR=7.9
CTIG El Hierro 10.94 217 S Sn 05 14 12.4 -8.3
comp=N,50nm,0.3s,SNR=7.9
CHIE El Hierro 11.01 217 S Sn 05 14 13.8 -8.5
comp=N,6.8nm,0.5s,SNR=7.9
CLLI Llivia 11.20 56 P **Pn 05 12 25.2 +2.0**
comp=N,13nm,0.4s,SNR=7.9
CLLI S Sn 05 14 21.0 -6.1
comp=N,18nm,0.6s,SNR=7.9
CLLI Llivia 11.20 56 P **Pn 05 12 25.2 +2.0**
comp=N,13nm,0.4s,SNR=7.9
CFON Fontmartina 11.22 60 P **Pn 05 12 25.7 +2.3**
comp=N,19nm,0.3s,SNR=5.5
CFON Fontmartina 11.22 60 P **Pn 05 12 25.7 +2.3**
comp=N,19nm,0.3s,SNR=5.5
FNEB N^bias 11.48 54 P **Pn 05 12 30.8 +3.9**
MONQ Montcuq 11.69 46 P **Pn 05 12 32.0 +2.3**
MTLF Montolieu 11.76 53 *e*P **Pn 05 12 33.2 +2.5**
MTLF *e*Sn Sn 05 14 31.9 -8.6
comp=N,2.6nm,0.3s
MTLF Montolieu 11.76 53 *e*Pn **Pn 05 12 33.2 +2.5**
MTLF *e*Sn Sn 05 14 31.9 -8.6
MTLF Montolieu 11.76 53 *e*P **Pn 05 12 33.2 +2.5**
LFF La Frestale 11.78 43 *e*Pn **Pn 05 12 32.0 +1.0**
LFF *e*Sn Sn 05 14 33.8 -7.3
comp=N,9.4nm,0.4s
LFF La Frestale 11.78 43 *e*Pn **Pn 05 12 32.0 +1.0**
LFF *e*Sn Sn 05 14 33.8 -7.3
LFF La Frestale 11.78 43 *e*Pn **Pn 05 12 32.0 +1.0**
EJON La Jonquera 11.80 57 P **Pn 05 12 33.0 +1.7**
comp=N,10nm,0.4s,SNR=8.2
EJON La Jonquera 11.80 57 P **Pn 05 12 33.0 +1.7**
comp=N,10nm,0.4s,SNR=8.2
CHIF Chize 12.02 36 P **Pn 05 12 36.3 +2.2**
QUIF Quistinic 12.35 24 *e*Pn **Pn 05 12 40.8 +2.1**
QUIF *e*Sn Sn 05 14 46.8 -8.1
comp=N,14nm,0.4s
QUIF Quistinic 12.35 24 *e*Pn **Pn 05 12 40.8 +2.1**
QUIF *e*Sn Sn 05 14 46.8 -8.1
QUIF Quistinic 12.35 24 *e*Pn **Pn 05 12 40.8 +2.1**
RJF Les Rejaudoux 12.44 43 *e*Pn **Pn 05 12 40.3 +0.3**
RJF *e*Sn Sn 05 14 48.4 -8.8
comp=N,14nm,0.6s
RJF Les Rejaudoux 12.44 43 *e*Pn **Pn 05 12 40.3 +0.3**
RJF *e*Sn Sn 05 14 48.4 -8.8
RJF Les Rejaudoux 12.44 43 *e*Pn **Pn 05 12 40.3 +0.3**
MFF Saint Martin d 12.48 35 *e*Pn **Pn 05 12 41.7 +1.2**
MFF *e*Sn Sn 05 14 50.1 -8.1
comp=N,5.2nm,0.3s
MFF Saint Martin d 12.48 35 *e*Pn **Pn 05 12 41.7 +1.2**
MFF *e*Sn Sn 05 14 50.1 -8.1
MFF Saint Martin d 12.48 35 *e*Pn **Pn 05 12 41.7 +1.2**
CAF Calviac 12.52 46 *e*Pn **Pn 05 12 41.5 +0.4**
CAF *e*Sn Sn 05 14 51.4 -7.8
comp=N,15nm,0.7s
CAF Calviac 12.52 46 *e*Pn **Pn 05 12 41.5 +0.4**
CAF *e*Sn Sn 05 14 51.4 -7.8
CAF Calviac 12.52 46 *e*Pn **Pn 05 12 41.5 +0.4**
ROSF Rostrenen 12.69 23 *e*Pn **Pn 05 12 46.2 +2.9**
ROSF *e*Sn Sn 05 14 55.0 -8.2
comp=N,16nm,0.6s
ROSF Rostrenen 12.69 23 *e*Pn **Pn 05 12 46.2 +2.9**
ROSF *e*Sn Sn 05 14 55.0 -8.2
ROSF Rostrenen 12.69 23 *e*Pn **Pn 05 12 46.2 +2.9**
SGMF Saint Gilles 12.85 25 *e*Pn **Pn 05 12 45.2 -0.3**
SGMF *e*Sn Sn 05 14 59.9 -7.2
comp=N,13nm,0.7s
SGMF Saint Gilles 12.85 25 *e*Pn **Pn 05 12 45.2 -0.3**
SGMF *e*Sn Sn 05 14 59.9 -7.2
SGMF Saint Gilles 12.85 25 *e*Pn **Pn 05 12 45.2 -0.3**
LASF Ste Croix 13.15 52 *e*Pn Pn 05 12 48.7 -1.0
LASF Ste Croix 13.15 52 *e*Pn Pn 05 12 48.7 -1.0
LASF Ste Croix 13.15 52 *e*Pn Pn 05 12 48.7 -1.0
TRBF Trabuc cave 13.23 52 P **Pn 05 12 52.6 +1.8**
LBL Lubilhac 13.38 47 P **Pn 05 12 54.0 +1.1**
TCF Toulx Ste Croi 13.44 41 *e*Pn **Pn 05 12 54.9 +1.3**
TCF *e*Sn Sn 05 15 12.5 -9.1
comp=N,14nm,0.7s
TCF Toulx Ste Croi 13.44 41 *e*Pn **Pn 05 12 54.9 +1.3**
TCF *e*Sn Sn 05 15 12.5 -9.1
TCF Toulx Ste Croi 13.44 41 *e*Pn **Pn 05 12 54.9 +1.3**
GRR Gorron 13.57 29 *e*Pn Pn 05 12 54.0 -1.4
GRR *e*Sn Sn 05 15 17.2 -7.6
comp=N,7.5nm,0.5s
GRR Gorron 13.57 29 *e*Pn Pn 05 12 54.0 -1.4
GRR *e*Sn Sn 05 15 17.2 -7.6
BGF Bois d'Agland 13.95 42 *e*Pn **Pn 05 13 00.3 -0.3**
BGF *e*Sn Sn 05 15 25.4 -8.6
comp=N,28nm,0.4s
BGF Bois d'Agland 13.95 42 *e*Pn **Pn 05 13 00.3 -0.3**
BGF *e*Sn Sn 05 15 25.4 -8.6
BGF Bois d'Agland 13.95 42 *e*Pn **Pn 05 13 00.3 -0.3**
FLN La Foliniere 14.03 29 *e*Pn Pn 05 12 59.7 -1.8
FLN La Foliniere 14.03 29 *e*Pn Pn 05 12 59.7 -1.8
LDF La Druitiere 14.03 30 *e*Pn **Pn 05 13 01.6 0.0**
LDF La Druitiere 14.03 30 *e*Pn **Pn 05 13 01.6 0.0**
LDF La Druitiere 14.03 30 *e*Pn **Pn 05 13 01.6 0.0**
VIVF Saint-Julien-l 14.04 50 *e*Pn **Pn 05 13 01.4 -0.5**
VIVF Saint-Julien-l 14.04 50 *e*Pn **Pn 05 13 01.4 -0.5**
VIVF Saint-Julien-l 14.04 50 *e*Pn **Pn 05 13 01.4 -0.5**
SMRF Simiane la Rot 14.22 55 *e*P **Pn 05 13 06.6 +2.3**
SMRF Simiane la Rot 14.22 55 P **Pn 05 13 06.6 +2.3**
SMRF Simiane la Rot 14.22 55 *e*Pn **Pn 05 13 06.6 +2.3**
SMRF Simiane la Rot 14.22 55 *e*Pn **Pn 05 13 06.6 +2.3**
HYF Humbligny 14.31 39 *e*Pn Pn 05 13 03.2 -2.2
HYF Humbligny 14.31 39 *e*Pn Pn 05 13 03.2 -2.2
AVF Avril sur Loir 14.37 42 *e*Pn **Pn 05 13 06.3 +0.1**
AVF *e*Sn Sn 05 15 35.6 -8.5
comp=N,4.2nm,0.5s

AVF	**Avril sur Loir**	**14.37**	**42**	Pn	**Pn**	**05 13 06.3 +0.1**
AVF				Sn	Sn	05 15 35.6 -8.5
	comp=N,2.1nm,0.5s					
AVF	**Avril sur Loir**	**14.37**	**42**	*e*Pn	**Pn**	**05 13 06.3 +0.1**
AVF				*e*Sn	Sn	05 15 35.6 -8.5
AVF	**Avril sur Loir**	**14.37**	**42**	*e*Pn	**Pn**	**05 13 06.3 +0.1**
AVF				*e*Sn	Sn	05 15 35.6 -8.5
SMF	**Signal de Mont**	**14.54**	**43**	*e*Pn	Pn	05 13 06.8 -1.8
SMF	**Signal de Mont**	**14.54**	**43**	*e*Pn	Pn	05 13 06.8 -1.8
SMF	**Signal de Mont**	**14.54**	**43**	*e*Pn	Pn	05 13 06.8 -1.8
SSF	**Saint Saulge**	**14.62**	**41**	*e*Pn	**Pn**	**05 13 10.0 +0.4**
SSF				*e*Sn	Sn	05 15 41.6 -8.7
	comp=N,6.7nm,0.6s					
SSF	**Saint Saulge**	**14.62**	**41**	Pn	**Pn**	**05 13 10.0 +0.4**
SSF				Sn	Sn	05 15 41.6 -8.7
	comp=N,3.3nm,0.6s					
SSF	**Saint Saulge**	**14.62**	**41**	*e*Pn	**Pn**	**05 13 10.0 +0.4**
SSF				*e*Sn	Sn	05 15 41.6 -8.7
SSF	**Saint Saulge**	**14.62**	**41**	*e*Pn	**Pn**	**05 13 10.0 +0.4**
SSF				*e*Sn	Sn	05 15 41.6 -8.7
LOR	**Lormes**	**14.94**	**41**	*e*Pn	**Pn**	**05 13 14.0 +0.2**
LOR				*e*Sn	Sn	05 15 48.8 -9.2
	comp=N,4.3nm,0.6s					
LOR	**Lormes**	**14.94**	**41**	Pn	**Pn**	**05 13 14.0 +0.2**
LOR				Sn	Sn	05 15 48.8 -9.2
	comp=N,2.2nm,0.6s					
LOR	**Lormes**	**14.94**	**41**	*e*Pn	**Pn**	**05 13 14.0 +0.2**
LOR				*e*Sn	Sn	05 15 48.8 -9.2
LOR	**Lormes**	**14.94**	**41**	*e*Pn	**Pn**	**05 13 14.0 +0.2**
LOR				*e*Sn	Sn	05 15 48.8 -9.2
LPL	**La Plagne**	**15.64**	**51**	*e*P	**Pn**	**05 13 25.5 +2.3**
LPL	**La Plagne**	**15.64**	**51**	P	**Pn**	**05 13 25.5 +2.3**
LPL	**La Plagne**	**15.64**	**51**	*e*Pn	**Pn**	**05 13 25.5 +2.3**
LPL	**La Plagne**	**15.64**	**51**	P	**Pn**	**05 13 25.5 +2.3**
LPG	**La Plagne**	**15.64**	**51**	*e*P	**Pn**	**05 13 26.3 +3.0**
LPG	**La Plagne**	**15.64**	**51**	*e*Pn	**Pn**	**05 13 26.3 +3.0**
LPG	**La Plagne**	**15.64**	**51**	*e*P	**Pn**	**05 13 26.3 +3.0**
TAM	**Tamanrasset**	**19.74**	**131**	*e*P	**P**	**05 14 13.2 +1.1**
	comp=N,4.1nm,1.0s					
TAM	**Tamanrasset**	**19.74**	**131**	*e*P	**P**	**05 14 13.2 +1.1**
	comp=N,4.1nm,1.0s					
GERES	**GERESS Array B**	**21.38**	**48**	P	**P**	**05 14 33.8 +4.2**
	comp=N,0.9nm,0.6s,baz=239,slow=11,SNR=3.6					
KOWA	**Kowa**	**23.00**	**164**	P	**P**	**05 14 48.8 +1.8**
	comp=N,3.6nm,0.7s,baz=354,slow=12,SNR=5.7					
TOA1	**Torodi Ar. Sit**	**26.02**	**152**	*e*P	**P**	**05 15 17.4 +2.4**
TORD	**Torodi Ar. Bea**	**26.03**	**152**	P	**P**	**05 15 17.4 +2.4**
	comp=N,2.6nm,0.8s,baz=336,slow=9.1,SNR=14					
ARU	**Arti**	**49.08**	**43**	LR	LR	05 40 52.5
	comp=N,78nm,18.3s,baz=280,slow=38					
BMRM	**Bremner River**	**75.57**	**339**	*e*P	**P**	**05 21 27.3 +1.5**
	comp=N,5.1nm,0.8s					
DIV	**Divide**	**75.78**	**339**	*e*P	**P**	**05 21 24.6 -2.4**
	comp=N,35nm,0.7s					
GHO	**Glory Hole Cre**	**76.11**	**341**	*e*P	**P**	**05 21 26.9 -1.9**
	comp=N,12nm,0.8s					
PFO	**Pinyon Flats O**	**81.62**	**306**	*e*P	**P**	**05 21 57.6 -2.1**
CHNC	**Chino**	**82.17**	**307**	*e*P	**P**	**05 22 04.6 +2.2**
PASC	**Pasadena Art C**	**82.38**	**307**	*e*P	**P**	**05 22 05.4 +1.9**
GATR	**Gnd/Air Tx Cnt**	**83.60**	**309**	*e*P	**P**	**05 22 11.1 +1.2**
WRA	**Warramunga Arr**	**145.10**	**71**	PKPbc	**PKPdf**	**05 29 22.0 +2.9**
	comp=N,1.0nm,1.0s,baz=326,slow=2.8,SNR=3.1					
WR1	**Warramunga Arr**	**145.10**	**71**	*e*PKPbc	**PKPdf**	**05 29 21.9 +2.9**
ASAR	**Alice Springs**	**146.83**	**77**	PKPbc	**PKPab**	**05 29 27.7 +2.5**
	comp=N,0.3nm,0.6s,baz=311,slow=2.9,SNR=3.3					

*UCR **05** 05:13:15.6±2.3, 13°.67N×91°.02W, h14km±12km, MD5.0, ML4.6, mb4.5(NEIC)*
*ISCJB **05** 05:13:15.8±0.4, 13°.90N±0°.03×91°.01W±0°.03, h89km±3km, mb4.3/72, Error ellipse: s-maj=6.0km s-min=3.0km az=138.9*
*NEIC **05** 05:13:16.5±0.4, 13°.92N×91°.03W, h73km±3km, mb4.3/82, MD4.8(SNET), Error ellipse: s-maj=7.3km s-min=3.0km az=220.0*
NEIC Felt [II] at San Salvador, El Salvador.
*IDC **05** 05:13:18.3±2.0, 14°.04N×90°.76W, h99km±14km, mb3.8/9, mb1 4.1/11, mb1mx3.7/46, mbtmp4.2/11, MS3.5/3, Ms1 3.5/3, ms1mx3.0/39, Error ellipse: s-maj=41.0km s-min=13.5km az=44.0*

ISC 05 05:13:15.5±0.8, 13°.86N±0°.06×91°.12W±0°.06, h70km±7km, n386, σ1§24/411, mb4.4/72, 13C-3D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.72**	**64**	⇓*i*P	**Pn**	**05 13 29.3**	**-1.6**
IXG	**Ixpaco**	**0.72**	**64**	⇓*i*P	**Pn**	**05 13 29.3**	**-1.6**
APG	**El Apazote**	**1.30**	**29**	P	**Pn**	**05 13 39.0**	**+0.9**
	135nm,0.3s,baz=192,slow=12,SNR=1058						
APG				S	**Sn**	**05 14 00.2**	**+5.2**
	598nm,0.3s,baz=75,slow=19,SNR=20						
APG				LR	LR	05 14 04.3	
	comp=Z,99nm,19.2s,baz=70,slow=46						
RTR	**El Retiro**	**1.44**	**88**	*e*P	**Pn**	**05 13 39.5**	**-0.3**
RTR	**El Retiro**	**1.44**	**88**	*e*P	**Pn**	**05 13 39.5**	**-0.3**
SBLS	**San Blas**	**1.46**	**91**	⇑*i*P	**Pn**	**05 13 39.5**	**-0.7**
SBLS	**San Blas**	**1.46**	**91**	⇑*i*P	**Pn**	**05 13 39.5**	**-0.7**
SNJE	**San Jose**	**1.48**	**90**	⇑*i*P	**Pn**	**05 13 39.9**	**-0.5**
SNJE	**San Jose**	**1.48**	**90**	⇑*i*P	**Pn**	**05 13 39.9**	**-0.5**
UNIC	**Santa Ana**	**1.52**	**85**	*e*P	**Pn**	**05 13 40.7**	**-0.2**
UNIC				IAML		05 13 41.7	
	comp=Z,4μm,0.2s						
UNIC				*e*S	**Sn**	**05 14 02.2**	**+2.1**
COLS	**Colinas**	**1.78**	**96**	*e*P	**Pn**	**05 13 43.7**	**-0.7**
COLS	**Colinas**	**1.78**	**96**	*e*P	**Pn**	**05 13 43.7**	**-0.7**
BOQS	**Boqueron**	**1.80**	**94**	*e*P	**Pn**	**05 13 44.3**	**-0.4**
BOQS	**Boqueron**	**1.80**	**94**	*e*P	**Pn**	**05 13 44.3**	**-0.4**
BOQS				*e*S	**Sn**	**05 14 08.9**	**+2.2**
UEES	**San Salvador**	**1.83**	**94**	*e*P	**Pn**	**05 13 44.5**	**-0.5**
UEES				IAML		05 14 11.6	
	comp=Z,10μm,0.2s						
SNET	**Serv Nac Est T**	**1.85**	**95**	*e*P	**Pn**	**05 13 44.7**	**-0.5**
SNET				*e*S	**Sn**	**05 14 08.8**	**+1.0**
SNET	**Serv Nac Est T**	**1.85**	**95**	*e*P	**Pn**	**05 13 44.7**	**-0.5**
SNET				*e*S	**Sn**	**05 14 08.8**	**+1.0**
SNET				IAML		05 14 14.2	
	comp=Z,13μm,0.3s						
OPAM	**San Salvador**	**1.87**	**94**	*e*P	**Pn**	**05 13 45.3**	**-0.2**
OPAM				IAML		05 14 17.5	
	comp=Z,10μm,0.3s						
UESS	**San Salvador**	**1.88**	**95**	*e*P	**Pn**	**05 13 45.4**	**-0.2**
UESS				IAML		05 14 16.3	
	comp=Z,7μm,0.4s						
SANM	**San Marcos**	**1.90**	**96**	*e*P	**Pn**	**05 13 45.3**	**-0.6**
SANM				IAML		05 14 14.3	
	comp=Z,4μm,0.6s						
UDBS	**Soyapango**	**1.92**	**94**	*e*P	**Pn**	**05 13 46.1**	**0.0**
UDBS				IAML		05 14 17.0	
	comp=Z,11μm,0.3s						
LFU	**La Fuente**	**1.96**	**93**	⇑*e*P	**Pn**	**05 13 46.8**	**+0.1**
LFU	**La Fuente**	**1.96**	**93**	⇑*e*P	**Pn**	**05 13 46.8**	**+0.1**
LFRS	**El Faro**	**2.02**	**97**	⇑*i*P	**Pn**	**05 13 47.2**	**-0.3**
LFRS	**El Faro**	**2.02**	**97**	⇑*i*P	**Pn**	**05 13 47.2**	**-0.3**
LBRS	**Las Brisas**	**2.02**	**93**	⇑*i*P	**Pn**	**05 13 47.7**	**+0.1**
LBRS	**Las Brisas**	**2.02**	**93**	⇑*i*P	**Pn**	**05 13 47.7**	**+0.1**
LLGN	**La Laguna**	**2.13**	**81**	*e*P	**Pn**	**05 13 49.1**	**0.0**
LLGN				IAML		05 14 26.3	
	comp=Z,2μm,0.5s						
SNVI	**San Vicente**	**2.23**	**96**	*e*P	**Pn**	**05 13 50.7**	**+0.2**
UESV	**Ojushtada**	**2.32**	**102**	*e*P	**Pn**	**05 13 51.1**	**-0.4**
UESV				IAML		05 14 27.4	
	comp=Z,4μm,0.6s						
TECA	**Tecapa**	**2.57**	**98**	*e*P	**Pn**	**05 13 54.9**	**-0.2**
TECA	**Tecapa**	**2.57**	**98**	*e*P	**Pn**	**05 13 54.9**	**-0.2**
CCIG	**Comitan**	**2.60**	**338**	*e*Pn	**Pn**	**05 13 55.6**	**+0.1**
PACA	**Pacayal**	**2.75**	**98**	*e*P	**Pn**	**05 13 57.6**	**+0.1**
PACA				*e*S	**Sn**	**05 14 32.5**	**+2.8**
PACA	**Pacayal**	**2.75**	**98**	*e*P	**Pn**	**05 13 57.6**	**+0.1**
PACA				*e*S	**Sn**	**05 14 32.5**	**+2.8**
LCY	**Lacayo**	**2.79**	**99**	*e*P	**Pn**	**05 13 58.0**	**+0.1**
LCY	**Lacayo**	**2.79**	**99**	*e*P	**Pn**	**05 13 58.0**	**+0.1**
VSM	**San Miguel**	**2.80**	**99**	*e*P	**Pn**	**05 13 58.6**	**+0.2**
LCND	**La Ca¯–ada**	**3.19**	**100**	IAML		05 14 45.1	
	comp=Z,3μm,0.5s						
CNCH	**Conchagua**	**3.25**	**100**	*e*P	**Pn**	**05 14 03.8**	**-0.5**
CNCH	**Conchagua**	**3.25**	**100**	*e*P	**Pn**	**05 14 03.8**	**-0.5**
CNCH				IAML		05 14 54.0	
	comp=Z,29μm,0.4s						
TGUH	**Tegucigalpa,Un**	**3.74**	**87**	*e*Pn	**Pn**	**05 14 11.2**	**+0.3**
CNGN	**Cerro Negro**	**4.52**	**107**	*e*P	**Pn**	**05 14 20.6**	**-0.9**
ESTN	**Estel**	**4.69**	**99**	*e*Pn	**Pn**	**05 14 23.7**	**-0.2**
ESTN	**Estel**	**4.69**	**99**	*e*P	**Pn**	**05 14 24.0**	**+0.1**
ESTN				*e*S	**Sn**	**05 15 18.3**	**+1.3**
MOMN	**Momotombo**	**4.69**	**107**	*e*P	**Pn**	**05 14 22.2**	**-1.7**
COPN	**Copaltepe**	**4.72**	**110**	*e*P	**Pn**	**05 14 23.5**	**-0.8**
CMIG	**Matias Romero**	**4.84**	**312**	P	**Pn**	**05 14 23.4**	**-2.5**
	comp=Z,23nm,0.3s,baz=151,slow=10,SNR=93						
CMIG				S	**Sn**	**05 15 18.0**	**-2.7**
	comp=Z,35nm,0.3s,baz=58,slow=20,SNR=6.5						
RCON	**San Juan de Ri**	**4.84**	**94**	*e*P	**Pn**	**05 14 26.3**	**+0.2**
APYN	**Apoyeque**	**4.93**	**109**	*e*P	**Pn**	**05 14 25.7**	**-1.4**
MATN	**Matagalpa**	**5.14**	**100**	*e*P	**Pn**	**05 14 29.6**	**-0.5**
CRZ1	**La Cruz**	**6.04**	**117**	*e*P	**Pn**	**05 14 41.5**	**-0.7**
GBS3	**Finca Las lm¯¡**	**6.33**	**118**	*e*P	**Pn**	**05 14 48.1**	**+1.8**
NY14	**Universidad de**	**6.33**	**120**	⇓*i*P	**Pn**	**05 14 48.1**	**+1.9**
BUEV	**Buena Vista**	**6.36**	**118**	*e*P	**Pn**	**05 14 47.7**	**+0.9**
BUEV				*e*S	**Sn**	**05 15 58.8**	**+0.6**
GPS3	**Bodega del ICE**	**6.42**	**118**	*e*P	**Pn**	**05 14 48.9**	**+1.3**
GPS2	**Hotel Rinc˜‡n**	**6.43**	**118**	*e*P	**Pn**	**05 14 48.8**	**+1.0**
VCR	**Vista de Mar**	**6.53**	**124**	*e*P	**Pn**	**05 14 48.5**	**-0.7**
LIM1	**Limonal**	**6.54**	**118**	*e*P	**Pn**	**05 14 49.9**	**+0.6**
GUAB	**Guayabo de Bag**	**6.56**	**118**	*e*P	**Pn**	**05 14 50.9**	**+1.4**
MESS	**Mesas**	**6.57**	**118**	⇑*e*P	**Pn**	**05 14 50.0**	**+0.3**
MESS				⇑*e*P		05 14 50.1	
HORNC	**Hornillas**	**6.60**	**118**	*e*P	**Pn**	**05 14 50.3**	**+0.2**
COLC	**Colonia**	**6.60**	**118**	*e*P	**Pn**	**05 14 51.4**	**+1.3**
CUI	**Cuipilapa**	**6.64**	**118**	*e*P	**Pn**	**05 14 51.0**	**+0.4**
ACAL	**Aguas Claras**	**6.76**	**118**	*e*P	**Pn**	**05 14 52.2**	**0.0**
PTEN	**Parque Tenorio**	**6.76**	**117**	*e*P	**Pn**	**05 14 52.5**	**+0.2**
AMAS	**Alto Masis**	**6.81**	**118**	*e*P	**Pn**	**05 14 54.0**	**+1.1**
ESPN	**Las Esperanzas**	**6.85**	**103**	*e*Pn	**Pn**	**05 14 54.2**	**+0.8**
ESPN	**Las Esperanzas**	**6.85**	**103**	*e*P	**Pn**	**05 14 53.0**	**-0.5**
JTS	**JuntasAbangare**	**7.00**	**120**	P	**Pn**	**05 14 56.0**	**+0.5**
	comp=Z,10nm,0.3s,baz=46,slow=20,SNR=47						
JTS				S	**Sn**	**05 16 10.5**	**-3.2**
	baz=24,slow=20,SNR=1.0						
JTS	**JuntasAbangare**	**7.00**	**120**	*e*P	**Pn**	**05 14 55.7**	**+0.2**
CEDE	**Laguna Cede¯–o**	**7.12**	**117**	*e*P	**Pn**	**05 14 57.9**	**+0.7**
MYIG	**MÖrida**	**7.18**	**10**	*e*Pn	**Pn**	**05 14 58.4**	**+0.5**
SRA1	**San Ram˜‡n**	**7.51**	**119**	*e*P	**Pn**	**05 15 04.7**	**+2.2**
SRA1				*e*S	**Sn**	**05 16 23.0**	**-3.2**
CGA2	**Cerro Gallo 2**	**7.55**	**120**	*e*P	**Pn**	**05 15 04.1**	**+1.0**
CGA2				*e*S	**Sn**	**05 16 25.5**	**-1.9**
HDC	**Heredia**	**7.86**	**118**	*e*Pn	**Pn**	**05 15 08.6**	**+1.2**
HDC	**Heredia**	**7.86**	**118**	*e*P	**Pn**	**05 15 08.0**	**+0.7**
HDC				*e*S	**Sn**	**05 16 35.6**	**+0.7**
TLIG	**Tlapa**	**8.05**	**298**	*e*Pn	**Pn**	**05 15 09.8**	**-0.1**
QCR1	**Quepos**	**8.12**	**122**	*e*P	**Pn**	**05 15 11.9**	**+1.2**
QCR1				*e*S	**Sn**	**05 16 38.4**	**-2.6**
CVTR	**Volcan Turrial**	**8.16**	**117**	*e*P	**Pn**	**05 15 12.5**	**+0.8**
VTR0	**Volcan Turrial**	**8.16**	**117**	*e*P	**Pn**	**05 15 13.0**	**+1.4**
URSC	**Urasca**	**8.23**	**118**	⇑*e*P	**Pn**	**05 15 14.2**	**+1.8**
URSC				*e*S	**Sn**	**05 16 42.8**	**-1.2**
BUS	**Buena Vista**	**8.39**	**120**	*e*P	**Pn**	**05 15 16.0**	**+1.2**
EDPN	**Palmar Norte**	**8.96**	**122**	*e*P	**Pn**	**05 15 24.2**	**+2.0**
EDBA	**Buenos Aires**	**9.00**	**120**	*e*P	**Pn**	**05 15 22.0**	**-0.8**
ACR	**Cerro Adams**	**9.36**	**123**	*e*P	**Pn**	**05 15 29.8**	**+2.0**
ACR				*e*S	**Sn**	**05 17 12.7**	**+1.1**
EDSV	**San Vito**	**9.43**	**121**	*e*P	**Pn**	**05 15 32.3**	**+3.4**
EDSV				*e*S	**Sn**	**05 17 15.7**	**+2.3**
BRU2	**Volcan**	**9.68**	**120**	*e*P	**Pn**	**05 15 33.4**	**+1.1**
BRU2				*e*S	**Sn**	**05 17 19.6**	**+0.1**
JRQG	**Juriquilla Cam**	**11.20**	**309**	*e*Pn	**Pn**	**05 15 55.9**	**+2.9**
MOIG	**Morelia**	**11.24**	**302**	*e*Pn	**Pn**	**05 15 55.4**	**+1.8**
LNIG	**Linares**	**13.50**	**326**	*e*Pn	**Pn**	**05 16 26.3**	**+2.3**
ZAIG	**Zacatecas**	**14.01**	**311**	*e*Pn	**Pn**	**05 16 32.6**	**+1.6**
833A	**Chaparral WMA,**	**16.32**	**333**	*e*Pn	**Pn**	**05 17 00.9**	**+0.6**
	comp=Z,8.4nm,0.6s						
HKT	**Hockley**	**16.59**	**346**	*e*Pn	**Pn**	**05 17 04.7**	**+1.1**
	comp=Z,2.0nm,0.8s						
441A	**DeRidder**	**16.91**	**354**	P	**P**	**05 17 08.7**	**+0.1**
	baz=173						
446A	**Poplarville**	**16.93**	**5**	P	**Pn**	**05 17 07.4**	**-0.4**
	baz=186						
447A	**Lucedale**	**17.00**	**7**	P	**P**	**05 17 10.6**	**+1.0**
	baz=188						
HELC	**Santa Helena**	**17.14**	**115**	*e*Pn	**P**	**05 17 11.4**	**-0.2**
	comp=Z,7.1nm,0.8s						
342A	**Flagon Creek P**	**17.46**	**357**	P	**P**	**05 17 14.9**	**+0.2**
	baz=176						
341A	**Kurthwood**	**17.49**	**354**	P	**P**	**05 17 15.8**	**+0.8**
	baz=173						
341A	**Kurthwood**	**17.49**	**354**	*e*Pn	**P**	**05 17 16.1**	**+1.1**
	comp=Z,21nm,1.0s						
346A	**Big Creek Wild**	**17.51**	**5**	P	**P**	**05 17 17.4**	**+2.2**
	baz=185						
344A	**Westbrook Farm**	**17.51**	**1**	P	**P**	**05 17 17.2**	**+2.0**
	baz=181,SNR=5.8						
347A	**Saraland**	**17.62**	**7**	P	**P**	**05 17 18.2**	**+1.9**
	baz=188						
349A	**Repton**	**17.78**	**11**	P	**Pn**	**05 17 20.2**	**+2.0**
	baz=192						
555A	**McAlpin**	**17.85**	**24**	P	**Pn**	**05 17 21.6**	**+2.5**
	baz=206						
435B	**Jarrell**	**17.86**	**342**	P	**Pn**	**05 17 20.2**	**+1.0**
	baz=159						
435B	**Jarrell**	**17.86**	**342**	*e*P	**P**	**05 17 19.4**	**+0.4**
	comp=Z,8.5nm,0.6s						
244A	**Avery, Jackson**	**18.10**	**1**	P	**Pn**	**05 17 24.3**	**+2.2**
	baz=181						
NATX	**Nacogdoches**	**18.11**	**350**	*e*P	**Pn**	**05 17 22.6**	**+0.3**
	comp=Z,12nm,0.8s						
242A	**Grayson**	**18.14**	**357**	P	**Pn**	**05 17 22.9**	**+0.2**
	baz=176,SNR=5.2						
241A	**Mo Tay, Goldon**	**18.15**	**355**	P	**Pn**	**05 17 23.0**	**+0.3**
	baz=174						
247A	**Quitman**	**18.25**	**7**	P	**Pn**	**05 17 24.6**	**+0.6**
	baz=188						
VBMS	**Vicksburg**	**18.28**	**2**	*e*P	**Pn**	**05 17 25.3**	**+1.0**
	comp=Z,17nm,0.8s						
JCT	**Junction City**	**18.37**	**336**	P	**P**	**05 17 25.5**	**+0.8**
	baz=152						
JCT	**Junction City**	**18.37**	**336**	*e*P	**P**	**05 17 25.3**	**+0.5**
	comp=Z,5.9nm,0.8s						
352A	**Blakely**	**18.43**	**17**	P	**Pn**	**05 17 25.8**	**-0.4**
	baz=199						
353A	**Camilla**	**18.52**	**19**	P	**Pn**	**05 17 27.4**	**+0.1**
	baz=201						
250A	**Grady**	**18.57**	**13**	P	**Pn**	**05 17 28.5**	**+0.7**
	baz=195						
143A	**Socs Landing,**	**18.76**	**359**	P	**Pn**	**05 17 30.4**	**+0.4**
	baz=179						
TIGA	**Tifton**	**18.81**	**20**	P	**Pn**	**05 17 30.8**	**+0.1**
	baz=203						
HPIG		**18.81**	**316**	*e*P	**P**	**05 17 30.1**	**+0.3**
	comp=Z,19nm,1.0s						
HPIG				*e*PcP	**PcP**	**05 21 51.6**	**-2.9**
ROSC	**El Rosal**	**18.84**	**117**	*e*P	**Pn**	**05 17 31.9**	**+0.3**
	comp=Z,8.7nm,1.0s						
251A	**Midway**	**18.89**	**15**	P	**Pn**	**05 17 32.3**	**+0.7**
	baz=197						
147A	**Livingston**	**18.91**	**7**	P	**Pn**	**05 17 32.9**	**+1.1**
	baz=188						
PRAC	**Prado**	**18.93**	**121**	*e*P	**Pn**	**05 17 32.6**	**+0.2**
	comp=Z,26nm,1.1s						
WHTX	**Lake Whitney,**	**18.95**	**343**	*e*P	**P**	**05 17 31.8**	**+0.7**
	comp=Z,16nm,1.0s						
252A	**Lumpkin**	**18.97**	**17**	P	**Pn**	**05 17 33.0**	**+0.4**
	baz=199						
148A	**Greensboro**	**18.98**	**9**	P	**Pn**	**05 17 33.1**	**+0.4**
	baz=190						
149A	**Jones**	**19.07**	**11**	P	**Pn**	**05 17 33.8**	**+0.1**
	baz=193						
150A	**Eclectic**	**19.23**	**13**	P	**Pn**	**05 17 35.4**	**-0.3**
	baz=195						
TXAR	**Lajitas Array**	**19.29**	**325**	P	**P**	**05 17 36.5**	**+1.6**
	comp=Z,0.7nm,0.3s,baz=150,slow=12,SNR=80						
TX31	**Lajitas Ar. Si**	**19.29**	**325**	*e*P	**P**	**05 17 36.0**	**+1.2**
151A	**Opelika**	**19.32**	**15**	P	**Pn**	**05 17 36.5**	**-0.3**
	baz=197						
Z42A	**Norrel Spur, H**	**19.34**	**358**	P	**Pn**	**05 17 39.1**	**+2.2**
	baz=177						
Z46A	**Louisville**	**19.34**	**6**	P	**Pn**	**05 17 38.5**	**+1.4**
	baz=186						
254A	**Abbeville**	**19.38**	**20**	P	**Pn**	**05 17 38.1**	**+0.7**
	baz=203						
Z40A	**Long Farm, Mag**	**19.42**	**354**	P	**P**	**05 17 36.9**	**+0.8**
	baz=173						
RUSC	**La Rusia**	**19.45**	**112**	*e*P	**Pn**	**05 17 38.7**	**-0.2**
	comp=Z,4.6nm,0.9s						
Z47A	**Carrollton**	**19.45**	**8**	P	**P**	**05 17 36.3**	**-0.1**
	baz=189						
LRAL	**Lakeview Retre**	**19.45**	**10**	P	**P**	**05 17 35.4**	**-1.1**
	baz=192,SNR=6.3						
LRAL	**Lakeview Retre**	**19.45**	**10**	*e*P	**Pn**	**05 17 38.0**	**-0.3**
	comp=Z,6.2nm,0.7s						
152A	**Waverly Hall**	**19.61**	**16**	P	**P**	**05 17 38.1**	**-0.1**
	baz=198,SNR=5.5						
Z49A	**Columbiana**	**19.69**	**11**	P	**P**	**05 17 38.8**	**-0.3**
	baz=193,SNR=5.7						
Z48A	**Northport**	**19.70**	**9**	P	**P**	**05 17 39.0**	**-0.1**
	baz=190						
Z50A	**Ashland**	**19.88**	**13**	P	**P**	**05 17 42.0**	**+0.9**
	baz=195						
Y42A	**Garnett, Star**	**19.89**	**358**	P	**P**	**05 17 40.5**	**-0.8**
	baz=178						
CCAR	**Cane Creek**	**19.97**	**358**	*e*P	**P**	**05 17 42.5**	**+0.4**
	comp=Z,16nm,0.7s						
Y41A	**Eaglette Beard**	**19.97**	**356**	P	**P**	**05 17 41.7**	**-0.5**
	baz=176						
Y46A	**Houston**	**20.04**	**6**	P	**P**	**05 17 42.5**	**-0.3**
	baz=186						
Z51A	**Franklin**	**20.11**	**15**	P	**P**	**05 17 43.4**	**-0.3**
	baz=197,SNR=5.2						
Y47A	**UCPARC, Winfie**	**20.17**	**8**	P	**P**	**05 17 44.5**	**+0.2**
	baz=189						
Z52A	**Williamson**	**20.19**	**16**	P	**P**	**05 17 44.7**	**+0.3**
	baz=199						
ABTX	**Abilene, Hawle**	**20.23**	**339**	P	**P**	**05 17 44.9**	**-0.1**
	baz=155,SNR=8.4						
ABTX	**Abilene, Hawle**	**20.23**	**339**	*e*P	**P**	**05 17 45.5**	**+0.5**
	comp=Z,16nm,0.8s						
Y48A	**Jasper**	**20.28**	**10**	P	**P**	**05 17 46.2**	**+0.7**
	baz=191						
Y49A	**Blount Mountai**	**20.36**	**11**	P	**P**	**05 17 46.3**	**-0.1**
	baz=193						
Z53A	**Monticello**	**20.52**	**18**	P	**P**	**05 17 47.6**	**-0.4**
	baz=201						
X45A	**UM Field Stati**	**20.53**	**4**	P	**P**	**05 17 48.8**	**+0.7**
	baz=184						
Y50A	**Piedmont**	**20.53**	**13**	P	**P**	**05 17 48.5**	**+0.3**
	baz=195						
X43A	**Marvell**	**20.57**	**1**	*e*P	**P**	**05 17 49.9**	**+1.4**
	comp=Z,23nm,0.9s						
X40A	**Basin Creek Fa**	**20.59**	**356**	P	**P**	**05 17 48.7**	**-0.1**
	baz=175						
OXF	**Oxford**	**20.62**	**4**	P	**P**	**05 17 47.0**	**-2.1**
	baz=184						
GOGA	**Godfrey**	**20.67**	**18**	P	Pn	05 17 51.1 -1.5
	baz=201						
SDV	**Santo Domingo**	**20.68**	**102**	P	**P**	**05 17 48.0**	**-2.2**
	comp=Z,1.9nm,0.4s,baz=306,slow=12,SNR=3.5						
Y51A	**Rockmart**	**20.69**	**14**	P	**P**	**05 17 50.5**	**+0.6**
	baz=197						
MIAR	**Mount Ida**	**20.71**	**354**	P	**P**	**05 17 50.3**	**+0.1**
	baz=173						
MIAR	**Mount Ida**	**20.71**	**354**	*e*P	**P**	**05 17 50.2**	**+0.1**
	comp=Z,13nm,1.0s						
X39A	**Fountain Ranch**	**20.73**	**353**	P	**P**	**05 17 50.5**	**+0.1**
	baz=172						
X47A	**Russelville**	**20.78**	**8**	P	**P**	**05 17 50.7**	**-0.1**
	baz=189						
X48A	**Hartselle**	**20.83**	**10**	P	**P**	**05 17 51.8**	**+0.4**
	baz=191						
Y52A	**Lilburn**	**20.92**	**17**	P	**P**	**05 17 52.6**	**+0.2**
	baz=199						
X49A	**Woodville**	**21.01**	**11**	P	**P**	**05 17 54.4**	**+1.0**
	baz=193						
Y53A	**Monroe**	**21.05**	**18**	P	**P**	**05 17 53.5**	**-0.3**
	baz=200,SNR=5.2						
X50B	**Fort Payne**	**21.10**	**13**

T47A	Sharon Grove	23.31	8	P		P	05 18 16.1	-1.3
	baz=190							
TZTN	Tazewell	23.58	15	P		P	05 18 19.2	-0.8
	baz=198							
S43A	Fulton Ridge,	23.63	2	P		P	05 18 20.3	0.0
	baz=182							
S41A	Jillco Farms,	23.63	359	P		P	05 18 19.2	-1.3
	baz=178,SNR=8.6							
T49A	Edmonton	23.68	11	P		P	05 18 19.4	-1.4
	baz=193							
S44A	Carbondale	23.79	4	P		P	05 18 21.8	0.0
	baz=184							
S38A	Stockton	23.80	355	P		P	05 18 21.1	-0.8
	baz=173							
S39A	Bolivar	23.81	356	P		P	05 18 20.7	-1.3
	baz=174,SNR=9.3							
S42A	Caledonia	23.81	1	P		P	05 18 19.8	-2.2
	baz=181							
121A	Cookes Peak, D	24.02	323	P		P	05 18 25.6	+1.5
	baz=137,SNR=8.3							
CCM	Cathedral Cave	24.09	360	P		P	05 18 23.7	-0.8
	baz=180							
CCM	Cathedral Cave	24.09	360	eP		P	05 18 23.0	-1.5
	comp=Z,14nm,0.8s							
319A	Douglas	24.12	319	eP		P	05 18 26.1	+1.2
	comp=Z,6.6nm,0.8s							
T52A	Hallie	24.26	16	P		P	05 18 25.2	-0.8
	baz=199							
R42A	Luebbering	24.32	1	P		P	05 18 25.7	-0.9
	baz=181							
R41A	Rosebud	24.34	360	P		P	05 18 25.2	-1.5
	baz=179,SNR=11							
R43A	Red Bud	24.34	2	P		P	05 18 25.9	-0.8
	baz=183							
R38A	Fenwick Farm,	24.35	355	P		P	05 18 25.3	-1.6
	baz=173,SNR=5.6							
R40A	Maddies Statio	24.35	358	P		P	05 18 25.5	-1.3
	baz=177,SNR=8.3							
R39A	Chumby, Stover	24.41	356	P		P	05 18 26.3	-1.1
	baz=175,SNR=10							
BNM	Barren Site	24.61	328	eP		P	05 18 31.1	+1.6
S51A	Beattyville	24.61	14	P		P	05 18 28.4	-0.8
	baz=198							
WCI	Wyandotte Cave	24.64	9	eP		P	05 18 29.3	-0.2
	comp=Z,9.7nm,0.9s							
WCI				epP		pP	05 18 43.8	-2.3
LPM	Los Pinos Moun	24.73	328	eP		P	05 18 31.6	+1.0
S52A	Salyersville	24.78	15	P		P	05 18 28.5	-2.3
	baz=199							
Q42A	Golden Eagle	24.95	1	P		P	05 18 32.2	-0.1
	baz=181							
Q41A	Truxton	24.99	360	P		P	05 18 31.2	-1.5
	baz=180,SNR=8.1							
Q40A	Laux Farm, Aux	25.05	358	P		P	05 18 31.5	-1.6
	baz=178							
LAZ	Ladron	25.07	327	eP		P	05 18 34.9	+1.2
Q38A	Cooks Store, C	25.10	355	P		P	05 18 32.7	-0.9
	baz=174,SNR=6.1							
Q39A	Willow Grove F	25.14	357	P		P	05 18 33.6	-0.4
	baz=176							
TASL	Snake Pit, Alb	25.14	329	P		P	05 18 34.2	-0.1
	baz=143,SNR=6.1							
ANMO	Albuquerque	25.14	329	P		P	05 18 35.3	+0.9
	comp=Z,3.2nm,0.6s,baz=144,slow=12,SNR=18							
ANMO	Albuquerque	25.14	329	P		P	05 18 34.8	+0.4
	baz=143							
TASM	ASL Pad, Albuq	25.15	329	P		P	05 18 34.8	+0.4
	baz=143							
P39B	Salisbury	25.57	357	P		P	05 18 36.9	-1.0
	baz=176							
P40A	Paris	25.58	358	P		P	05 18 36.7	-1.3
	baz=178							
P42A	Winchester	25.63	1	P		P	05 18 37.1	-1.4
	baz=182							
TUC	Tucson	25.69	319	P		P	05 18 40.1	+0.8
	baz=131							
TUC	Tucson	25.69	319	eP		P	05 18 40.7	+1.4
	comp=Z,6.4nm,0.8s							
P41A	Barry, Barry	25.71	0	P		P	05 18 37.3	-1.9
	baz=180							
P38A	Dawn	25.75	356	P		P	05 18 39.7	+0.2
	baz=174							
O40A	La Belle	26.17	359	P		P	05 18 42.0	-1.3
	baz=178							
X18A	Snowflake	26.71	324	eP		P	05 18 50.2	+1.7
	comp=Z,3.1nm,0.7s							
214A	Organ Pipe Nat	26.80	316	P		P	05 18 48.9	-0.3
	baz=127							
N37A	Lee Faris, Mou	26.93	355	P		P	05 18 50.5	+0.3
	baz=173							
N39A	Derby Farms, D	26.94	358	P		P	05 18 50.6	+0.3
	baz=177							
SDCO	Great Sand Dun	27.01	334	P		P	05 18 51.4	+0.1
	baz=148							
W18A	Petrified Fore	27.01	325	eP		P	05 18 52.2	+1.0
	comp=Z,11nm,1.1s							
ACSO	Alum Creek Sta	27.22	14	eP		P	05 18 52.5	-0.3
X16A	Lo Mia Camp, P	27.51	322	eP		P	05 18 56.7	+1.0
	comp=Z,3.7nm,0.7s							
M38A	Pleasantville	27.51	357	P		P	05 18 55.3	-0.1
	baz=175							
M39A	Webster	27.53	358	P		P	05 18 55.6	+0.1
	baz=176							
S22A	4UR Ranch, Cre	27.59	332	P		P	05 18 55.9	-0.6
	baz=145							
MVCO	Mesa Verde	27.94	329	P		P	05 18 60.0	+0.4
	baz=142							
MVCO	Mesa Verde	27.94	329	eP		P	05 19 00.5	+0.9
	comp=Z,6.1nm,0.8s							
L38A	Oak Wood Farm,	28.22	357	P		P	05 19 00.1	-1.6
	baz=176							
WUAZ	Wupatki	28.23	323	P		P	05 19 01.3	-0.8
	baz=135							
WUAZ	Wupatki	28.23	323	eP		P	05 19 02.8	+0.7
	comp=Z,7.1nm,0.8s							
PV01	Paradox Valley	28.71	331	eP		P	05 19 07.3	+0.9
K39A	Oelwein	28.75	359	P		P	05 19 04.5	-1.9
	baz=178							
GLA	Glamis	28.82	316	P		P	05 19 08.2	+0.9
	baz=126							
PV02	Paradox Valley	28.85	330	eP		P	05 19 08.7	+1.1
	comp=Z,4.3nm,0.8s							
PV03	Paradox Valley	28.94	330	eP		P	05 19 09.4	+1.0
PV10	Paradox Valley	29.12	330	eP		P	05 19 10.1	0.0
U15A	North Rim	29.40	324	eP		P	05 19 14.0	+1.4
	comp=Z,2.6nm,0.6s							
IKP	In-Ko-Pah, Jac	29.48	314	P		P	05 19 14.5	+1.4
	baz=124							
ERRC	Elmore Ranch	29.54	315	ePcP		PcP	05 22 18.3	+1.0
ERRC				eS		S	05 24 06.5	+3.1
IRM	Iron Mountain	29.69	317	P		P	05 19 16.4	+1.4
	baz=127							
ERPA	Erie	29.76	17	P		P	05 19 16.9	+1.6
	baz=202							
KNB	Kanab	30.11	324	eP		P	05 19 20.2	+1.4
	comp=Z,7.2nm,0.7s							
ECSD	EROS Data Cent	30.14	352	P		P	05 19 17.6	-1.1
	baz=169							
O20A	White River Ci	30.18	333	P		P	05 19 19.4	+0.1
	baz=145							
PFO	Pinyon Flats O	30.26	315	eP		P	05 19 24.9	+4.9
PFO				eS		S	05 24 10.6	-4.4
LCMT	Little Creek M	30.35	323	eP		P	05 19 21.6	+0.7
	comp=Z,3.8nm,0.9s							
MTPU	Mount Pierson	30.49	326	eP		P	05 19 23.9	+1.6
	comp=Z,11nm,0.7s							
SZCU	Shurtz Canyon	30.67	324	eP		P	05 19 24.9	+1.1
	comp=Z,6.2nm,0.8s							
CCUT	Cedar City	30.80	324	eP		P	05 19 26.3	+1.4
	comp=Z,5.6nm,0.9s							
P17A	Butcher Ranch,	30.81	330	eP		P	05 19 25.8	+0.9
	comp=Z,5.5nm,0.8s							
MSU	Marysvale	30.83	327	eP		P	05 19 26.9	+1.8
TMUT	Trail Mountain	30.91	329	eP		P	05 19 27.3	+1.3
	comp=Z,3.0nm,0.8s							
BBRC	Big Bear Solar	30.94	315	epP		pP	05 19 41.2	-1.8
BBRC				eS		S	05 24 23.8	-2.1
TUQ	Turquoise Moun	30.97	318	ePcP		PcP	05 22 22.1	+0.9
HLNC	Highland	31.07	315	ePcP		PcP	05 22 25.5	+4.2
SPMN	Marine on St.	31.29	358	P		P	05 19 27.2	-1.6
	baz=177							
G39A	Holcombe	31.32	360	P		P	05 19 27.8	-1.3
	baz=180							
PSUT	Pine Spring	31.76	325	eP		P	05 19 34.9	+1.6
	comp=Z,5.4nm,0.9s							
CTU	Camp Tracy	32.24	330	eP		P	05 19 38.7	+1.2
	comp=Z,6.4nm,0.9s							
F46A	Macinaw City C	32.26	8	P		P	05 19 35.8	-1.5
	baz=191							
MPMC	Manual Prospec	32.36	318	P		P	05 19 39.2	+0.6
	baz=126							
DUG	Dugway, Tooele	32.40	328	P		P	05 19 39.4	+0.6
	baz=138							
TCUT	Toone Canyon	32.41	331	eP		P	05 19 40.1	+1.1
	comp=Z,12nm,1.0s							
SADO	Sadowa	32.45	16	P		P	05 19 37.2	-1.8
	comp=Z,2.4nm,0.4s,baz=228,slow=9.4,SNR=6.6							
E40A	Wakefield	32.49	2	P		P	05 19 38.0	-1.4
	baz=182							
E41A	Kenton	32.55	3	P		P	05 19 39.1	-0.8
	baz=184							
E36A	McGregor	32.60	357	P		P	05 19 39.0	-1.3
	baz=176							
HWUT	Hardware Ranch	32.86	331	eP		P	05 19 44.6	+1.7
	comp=Z,7.7nm,0.9s							
PDAR	Pinedale Array	32.90	335	P		P	05 19 43.2	-0.1
	comp=Z,0.5nm,0.5s,baz=129,slow=12,SNR=5.4							
PDAR				PcP		PcP	05 22 24.8	-1.6
	comp=Z,0.3nm,0.5s,baz=90,slow=1.0,SNR=4.1							
BAKC	Calstate	33.04	315	eP		P	05 19 45.9	+1.6
D37A	Cotton	33.21	358	P		P	05 19 44.6	-1.0
	baz=178							
VES	Vestal, Richgr	33.30	316	P		P	05 19 46.8	+0.2
	baz=124							
C35A	Jirik Farms, M	33.82	357	P		P	05 19 48.7	-2.2
	baz=175							
C36A	Pine Crest Far	33.82	358	P		P	05 19 49.8	-1.2
	baz=177							
REDW	Red Top Meadow	33.94	334	eP		P	05 19 53.3	+1.0
	comp=Z,8.4nm,0.9s							
SNOW	Snow King Moun	33.98	334	eP		P	05 19 53.5	+0.9
	comp=Z,8.8nm,0.8s							
ELK	Elko	34.07	326	P		P	05 19 56.9	+3.4
	comp=Z,4.4nm,0.9s,baz=191,slow=6.2,SNR=17							
TPAW	Teton Pass	34.08	334	eP		P	05 19 54.3	+0.7
	comp=Z,3.8nm,0.9s							
NV11	Mina Array Sit	34.22	321	eP		P	05 19 56.4	+1.6
	comp=Z,0.4nm,0.8s							
MLIM	Lincoln Peak	34.28	319	epP		pP	05 20 19.5	+7.0
NV01	Mina Array Sit	34.31	320	eP		P	05 19 57.4	+1.7
NV01				ePcP		PcP	05 22 28.1	-2.3
NVAR	Mina Array Bea	34.31	320	P		P	05 19 57.4	+1.7
	comp=Z,7.0nm,0.7s,baz=131,slow=8.4,SNR=29							
NVAR				PcP		PcP	05 22 28.1	-2.3
	comp=Z,1.2nm,0.8s,baz=125,slow=5.6,SNR=2.6							
NVAR				LR		LR	05 37 16.3	
	comp=Z,62nm,18.1s,baz=264,slow=42							
B35A	Bob, Littlefor	34.46	357	P		P	05 19 54.3	-2.2
	baz=175							
AGMN	Agassiz Nation	34.56	354	P		P	05 19 55.7	-1.6
	baz=172							
KVN	Kaiserville	34.58	322	eP		P	05 19 59.3	+1.4
	comp=Z,3.7nm,0.7s							
MDND	Maddock	34.61	350	P		P	05 19 56.5	-1.3
	baz=165							
MDND	Maddock	34.61	350	eP		P	05 19 57.4	-0.4
	comp=Z,8.8nm,0.8s							
BMN	Battle Mountai	34.95	324	eP		P	05 20 02.9	+1.9
	comp=Z,5.5nm,0.9s							
BBGB	Big Mountain B	35.02	316	eP		P	05 20 00.6	-1.0
A33A	Warroad	35.15	355	P		P	05 20 01.1	-1.3
	baz=173							
HLID	Hailey	35.71	330	P		P	05 20 07.4	-0.1
	baz=139,SNR=5.8							
HLID	Hailey	35.71	330	eP		P	05 20 08.5	+1.0
	comp=Z,4.5nm,1.0s							
MCMT	McKenzie Canyo	35.97	333	eP		P	05 20 10.9	+1.1
BOZ	Bozeman (W)	36.08	335	P		P	05 20 11.0	+0.4
	baz=145							
DLMT	Dillon	36.29	334	eP		P	05 20 14.0	+1.6
	comp=Z,3.0nm,0.9s							
MFID	Camas Ranch	36.29	329	eP		P	05 20 13.8	+1.4
	comp=Z,5.4nm,1.1s							
ULM	Lac du Bonnet	36.49	355	P		P	05 20 11.2	-2.6
	comp=Z,1.3nm,0.4s,baz=177,slow=11,SNR=5.5							
ULM				LR		LR	05 35 59.3	
	comp=Z,84nm,18.8s,baz=338,slow=37							
WVOR	Wild Horse Val	37.08	325	eP		P	05 20 19.8	+0.6
	comp=Z,5.8nm,0.8s							
WVOR				eS		S	05 25 57.8	-2.5
MSO	Missoula	38.02	334	P		P	05 20 27.4	+0.4
	baz=142							
BMO	Blue Mountains	38.06	329	eP		P	05 20 27.3	-0.1
	comp=Z,2.4nm,1.0s							
F10A	Beach Ranch, E	38.84	331	eP		P	05 20 34.0	+0.2
	comp=Z,15nm,0.8s							
YBH	Yreka Blue Hor	39.00	321	P		P	05 20 34.4	-0.9
	comp=Z,1.2nm,0.7s,baz=110,slow=7.2,SNR=3.7							
YBH				LR		LR	05 37 10.0	
	comp=Z,57nm,18.1s,baz=154,slow=37							
MNMC	Minye Minye	39.05	147	eP		P	05 20 37.5	+1.4
	comp=Z,10.0nm,0.3s							
PINE	Pine Mountain	39.25	325	eP		P	05 20 37.9	+0.5
	comp=Z,8.1nm,0.9s							
I04A	Tendick Farm,	40.07	324	P		P	05 20 44.4	+0.4
	baz=128							
G05D	Wamic, OR	40.40	327	P		P	05 20 48.2	+1.5
	baz=131							
NEW	Newport	40.50	333	P		P	05 20 47.6	+0.1
	baz=139							
H04A	Detroit Lake	40.51	325	eP		P	05 20 48.1	+0.5
	comp=Z,14nm,0.9s							
I03D	Drain, OR	40.55	323	P		P	05 20 49.0	+1.0
	baz=127							
C09A	Chrisman Ranch	40.67	332	eP		P	05 20 49.8	+0.9
	comp=Z,7.3nm,0.6s							
LON	Longmire	41.65	328	eP		P	05 20 57.7	+0.6
	comp=Z,7.5nm,0.9s							
F04D	Rainier, OR	41.84	327	P		P	05 20 59.3	+0.7
	baz=130							
YKA	Yellowknife Ar	51.36	346	P		P	05 22 11.4	-1.2
	comp=Z,1.2nm,0.6s,baz=152,slow=7.7,SNR=30							
YKA				PcP		PcP	05 23 25.8	-0.6
	comp=Z,0.5nm,0.6s,baz=150,slow=3.7,SNR=7.1							
DLBC	Dease Lake	53.13	336	eP		P	05 22 27.0	+1.1
	comp=Z,5.3nm,0.8s							
KLU	Klutina	61.48	334	eP		P	05 23 25.4	+0.7
	comp=Z,7.3nm,1.0s							
GHO	Glory Hole Cre	62.90	333	eP		P	05 23 34.4	+0.1
	comp=Z,12nm,0.8s							
RC01	Rabbit Creek A	63.01	332	eP		P	05 23 35.1	+0.3
	comp=Z,7.7nm,0.8s							
BRLK	Bradley Lake	63.07	331	eP		P	05 23 35.7	+0.4
	comp=Z,14nm,0.8s							
IL1	Eielson Array	63.30	337	eP		P	05 23 35.9	-0.8
ILAR	Eielson Array	63.30	337	P		P	05 23 36.1	-0.6
	comp=Z,2.6nm,1.0s,baz=132,slow=4.4,SNR=16							
ILB	Eielson Array	63.30	337	eP		P	05 23 36.1	-0.6
RND	Reindeer	63.51	335	eP		P	05 23 38.8	+0.5
	comp=Z,8.1nm,1.0s							
SUA	Susitna One	63.59	332	eP		P	05 23 39.2	+0.3
	comp=Z,6.2nm,0.8s							
TRF	Thorofare Moun	64.12	335	eP		P	05 23 42.2	-0.2
	comp=Z,4.9nm,0.8s							
SKT	Skwentna	64.13	333	eP		P	05 23 42.3	0.0
	comp=Z,6.8nm,0.7s							
BPAW	Bear Paw Mtn.	64.66	335	eP		P	05 23 45.7	0.0
	comp=Z,4.1nm,0.8s							
CAST	Castle Rocks	64.86	334	eP		P	05 23 46.7	-0.4
	comp=Z,3.7nm,0.8s							
CD2	Chengdu	133.24	342	PKP		PKPdf	05 32 23.3	-0.8
WR1	Warramunga Arr	136.18	256	ePKPdf		PKPdf	05 32 29.6	-0.1
WRA	Warramunga Arr	136.19	256	PKP		PKPdf	05 32 29.6	-0.2
	comp=Z,0.4nm,0.8s,baz=1.1,slow=0.9,SNR=3.4							
CMAR	Chiang Mai Arr	146.38	343	PKPbc		PKPdf	05 32 49.2	+1.1
	comp=Z,3.6nm,0.5s,baz=345,slow=3.3,SNR=17							

MDD ***05*** *05:23:20.1±1.1, 37.°23N×12.°72W, h0km, mb4.2/12, Error ellipse: s-maj=12.1km s-min=10.1km az=142.0, PRXIMO*
SFS ***05*** *05:23:20.0, 37.°26N×11.°60W, h0km, ML4.2*
IGIL ***05*** *05:23:21.5, 37.°26N×12.°70W, h0km, ML2.4*
CNRM ***05*** *05:23:22.2, 36.°74N×12.°55W, h15km*
INMG ***05*** *05:23:22.4±1.1, 37.°11N×13.°07W, h10km, ML2.6, Error ellipse: s-maj=5.5km s-min=4.3km az=76.0*
LDG ***05*** *05:23:22.2±0.5, 37.°58N×12.°42W, h2km, Ml3.2/3, Error ellipse: s-maj=9.4km s-min=8.1km az=57.0*
CSEM ***05*** *05:23:23.6±0.3, 37.°39N×12.°45W, h10km, mb4.2, Error ellipse: s-maj=5.5km s-min=4.7km az=58.0*
ISC 05 05:23:19.2±2.7, 37.°39W±0.°07×12.°6W±0.°1, h10km, n119, σ2.°62/217, **Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMST	Lisbon--Monsan	3.02	62	eSn	Sb	05 24 46.9	-3.1
PMST				A	A	05 24 49.7	
	34nm,0.6s						
PMST	Lisbon--Monsan	3.02	62	eSn	Sb	05 24 46.9	-3.1
PFVI	Vila Bisbo	3.03	94	ePn	Pn	05 24 08.8	+1.6
PFVI				eSn	Sn	05 24 44.6	+1.1
PFVI				A	A	05 24 51.7	
	9.5nm,0.6s						
PFVI	Vila Bisbo	3.03	94	P	Pn	05 24 08.7	+1.6
	3.7nm,0.1s,SNR=7.9						
PFVI				S	Sn	05 24 44.3	+0.8
	3.5nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	3.03	94	P	Pn	05 24 08.7	+1.6
	3.7nm,0.1s,SNR=7.9						
PFVI				S	Sn	05 24 44.3	+0.8
	3.5nm,0.1s,SNR=7.9						
PFVI				eSn	Sn	05 24 44.6	+1.1
PMAFR	Mafra	3.05	58	ePn	Pn	05 24 10.8	+3.2
PMAFR				eSn	Sb	05 24 47.6	-3.4
PMAFR				A	A	05 24 49.2	
	27nm,0.2s						
PMAFR	Mafra	3.05	58	P	Pn	05 24 10.8	+3.2
	7.6nm,0.2s,SNR=11						
PMAFR				S	Sb	05 24 48.3	-2.7
	21nm,0.2s,SNR=14						
PMAFR	Mafra	3.05	58	P	Pn	05 24 10.8	+3.2
	7.6nm,0.2s,SNR=11						
PMAFR				eSn	Sb	05 24 47.6	-3.4
PMAFR				S	Sb	05 24 48.3	-2.7
	21nm,0.2s,SNR=14						
PTEO	Sao Teotonio	3.09	86	ePn	Pn	05 24 10.5	+2.4
PTEO				eSn	Sn	05 24 46.6	+1.5
PTEO				A	A	05 24 54.6	
	12nm,0.8s						
PTEO	Sao Teotonio	3.09	86	P	Pn	05 24 10.5	+2.4
PTEO				S	Sn	05 24 46.6	+1.5
	5.9nm,0.8s						
PTEO	Sao Teotonio	3.09	86	P	Pn	05 24 10.5	+2.4
PTEO				S	Sn	05 24 46.6	+1.5
	5.9nm,0.8s						
MORF	Marmelete	3.15	90	ePn	Pn	05 24 10.9	+1.9
MORF	Marmelete	3.15	90	P	Pn	05 24 10.9	+1.9
MORF	Marmelete	3.15	90	P	Pn	05 24 10.9	+1.9
PNCL	Nicolau / Gran	3.31	76	ePn	Pn	05 24 13.6	+2.5
PNCL				eSn	Sn	05 24 52.5	+2.0
PNCL				A	A	05 25 01.3	
	7.9nm,0.2s						
PNCL	Nicolau / Gran	3.31	76	ePn	Pn	05 24 13.6	+2.5
PNCL				eSn	Sn	05 24 52.5	+2.0
MESJ	Messejana	3.51	81	eP	Pn	05 24 16.8	+2.9
MESJ				eS	Sn	05 24 57.0	+1.5
MESJ				AML	AML	05 24 60.0	
	comp=N,6.2nm,0.2s						
MESJ	Messejana	3.51	81	ePn	Pn	05 24 16.8	+2.9
MESJ				eSn	Sn	05 24 57.1	+1.5
MESJ				A	A	05 25 04.4	
	comp=N,5.8nm,0.3s						
MESJ	Messejana	3.51	81	P	Pn	05 24 16.8	+2.9
MESJ				S	Sn	05 24 57.0	+1.5
	comp=N,6.2nm,0.2s						
MESJ	Messejana	3.51	81	P	Pn	05 24 16.8	+2.9
MESJ				S	Sn	05 24 57.0	+1.5
	comp=N,6.2nm,0.2s						
ALMR	Almeirim	3.63	60	eP	Pn	05 24 18.7	+3.2
ALMR				eS	Sn	05 25 00.8	+2.4
ALMR				AML	AML	05 25 04.9	
	comp=N,18nm,0.5s						
ALMR	Almeirim	3.63	60	ePn	Pn	05 24 19.1	+3.6
ALMR				eSn	Sn	05 25 01.7	+3.3
ALMR				A	A	05 25 08.0	
	comp=N,20nm,0.6s						
ALMR	Almeirim	3.63	60	P	Pn	05 24 18.7	+3.2
ALMR				S	Sn	05 25 00.8	+2.4
	comp=N,9.1nm,0.5s						
ALMR	Almeirim	3.63	60	P	Pn	05 24 18.7	+3.2
ALMR	Almeirim	3.63	60	ePn	Pn	05 24 19.1	+3.6
ALMR				S	Sn	05 25 00.8	+2.4
	comp=N,9.1nm,0.5s						
ALMR				eSn	Sn	05 25 01.7	+3.3
PCVE	Castro Verde	3.64	85	ePn	Pn	05 24 18.8	+3.2
PCVE				eSn	Sn	05 25 00.1	+1.4
PCVE				A	A	05 25 09.7	
	comp=N,4.3nm,0.4s						
PCVE	Castro Verde	3.64	85	P	Pn	05 24 18.8	+3.2
PCVE				S	Sn	05 25 00.1	+1.4
	comp=N,4.3nm,0.4s						
PCVE	Castro Verde	3.64	85	P	Pn	05 24 18.8	+3.2
PCVE				S	Sn	05 25 00.1	+1.4
	comp=N,4.3nm,0.4s						
PBDV	Barranco-do-Ve	3.73	91	ePn	Pn	05 24 19.2	+2.3
PBDV				eSn	Sn	05 25 02.6	+1.7
PBDV				A	A	05 25 11.3	
	comp=N,5.8nm,0.6s						
PBDV	Barranco-do-Ve	3.73	91	P	Pn	05 24 19.2	+2.3
PBDV				S	Sn	05 25 02.6	+1.7
	comp=N,5.8nm,0.6s						
PBDV	Barranco-do-Ve	3.73	91	P	Pn	05 24 19.2	+2.3
PBDV				S	Sn	05 25 02.6	+1.7
	comp=N,5.8nm,0.6s						
EVO	Evora	3.81	71	ePn	Pn	05 24 21.1	+3.2
EVO				eSn	Sn	05 25 04.6	+1.9
EVO				A	A	05 25 10.7	
	comp=N,11nm,0.1s						
EVO	Evora	3.81	71	P	Pn	05 24 21.1	+3.2
EVO				S	Sn	05 25 04.6	+1.9
EVO	Evora	3.81	71	P	Pn	05 24 21.1	+3.2
EVO				S	Sn	05 25 04.6	+1.9
PBEJ	Beja	3.81	79	ePn	Pn	05 24 21.3	+3.3
PBEJ				eSn	Sn	05 25 03.8	+0.9
PBEJ				A	A	05 25 10.0	
	comp=N,7.3nm,0.2s						
PBEJ	Beja	3.81	79	P	Pn	05 24 21.3	+3.3
PBEJ				S	Sn	05 25 03.8	+0.9
	comp=N,3.7nm,0.2s						
PBEJ	Beja	3.81	79	P	Pn	05 24 21.3	+3.3
PBEJ				S	Sn	05 25 03.8	+0.9
	comp=N,3.7nm,0.2s						
PMTG	Montargil	3.84	63	ePn	Pn	05 24 21.0	+2.7
PMTG				eSn	Sn	05 25 05.8	+2.3
PMTG				A	A	05 25 11.8	
	comp=N,4.1nm,0.1s						
PMTG	Montargil	3.84	63	ePn	Pn	05 24 21.0	+2.7
PMTG				eSn	Sn	05 25 05.8	+2.3
PVAQ	V

PESTR	**Estremoz**	**4.22**	**68**	P	**Pb**	**05 24 30.0 -3.6**
PESTR				*e*Sn	**Sn**	**05 25 15.2 +2.2**
PBAR	**Barrancos**	**4.48**	**78**	*e*Pn	**Pn**	**05 24 30.4 +3.2**
PBAR				*e*Sn	**Sn**	**05 25 21.9 +2.5**
PBAR				A	A	05 25 29.2
	comp=N,7.3nm,0.4s					
PBAR	**Barrancos**	**4.48**	**78**	P	**Pn**	**05 24 30.4 +3.2**
PBAR				S	**Sn**	**05 25 21.9 +2.5**
	comp=N,7.3nm,0.4s					
PBAR	**Barrancos**	**4.48**	**78**	P	**Pn**	**05 24 30.4 +3.2**
PBAR				S	**Sn**	**05 25 21.9 +2.5**
	comp=N,7.3nm,0.4s					
PMRV	**Marv??o**	**4.58**	**62**	*e*Pn	**Pn**	**05 24 31.7 +3.2**
PMRV				*e*Sn	**Sn**	**05 25 23.9 +2.2**
PMRV				A	A	05 25 30.7
	comp=N,7.1nm,0.5s					
PMRV	**Marv??o**	**4.58**	**62**	P	**Pn**	**05 24 31.7 +3.2**
PMRV				S	**Sn**	**05 25 23.9 +2.2**
	comp=N,7.1nm,0.5s					
PMRV	**Marv??o**	**4.58**	**62**	P	**Pn**	**05 24 31.7 +3.2**
PMRV				S	**Sn**	**05 25 23.9 +2.2**
	comp=N,7.1nm,0.5s					
EBAD	**Badajoz**	**4.62**	**71**	P	**Pn**	**05 24 32.3 +3.2**
	comp=N,1.5nm,0.1s,SNR=15					
EBAD				S	**Sn**	**05 25 23.2 +0.4**
	comp=N,5.2nm,0.2s,SNR=6.0					
EBAD	**Badajoz**	**4.62**	**71**	P	**Pn**	**05 24 32.3 +3.2**
	comp=N,1.5nm,0.1s,SNR=15					
EBAD				S	**Sn**	**05 25 23.2 +0.4**
	comp=N,5.2nm,0.2s,SNR=6.0					
PCBR	**Castelo Branco**	**4.71**	**57**	*e*Pn	**Pn**	**05 24 34.3 +4.0**
PCBR				*e*Sn	**Sn**	**05 25 26.8 +1.9**
PCBR	**Castelo Branco**	**4.71**	**57**	P	**Pn**	**05 24 34.3 +4.0**
PCBR				S	**Sn**	**05 25 26.8 +1.9**
PCBR	**Castelo Branco**	**4.71**	**57**	P	**Pn**	**05 24 34.3 +4.0**
PCBR				S	**Sn**	**05 25 26.8 +1.9**
EMIN	**Mina Concepcio**	**4.73**	**84**	P	**Pn**	**05 24 33.0 +2.4**
	comp=N,1.2nm,0.1s,SNR=19					
EMIN				S	**Sn**	**05 25 26.1 +0.6**
	comp=N,2.3nm,0.2s,SNR=7.4					
EMIN	**Mina Concepcio**	**4.73**	**84**	P	**Pn**	**05 24 33.0 +2.4**
	comp=N,1.2nm,0.1s,SNR=19					
EMIN				S	**Sn**	**05 25 26.1 +0.6**
	comp=N,2.3nm,0.2s,SNR=7.4					
PVIS	**Viseu**	**4.95**	**46**	*e*Pn	**Pn**	**05 24 37.0 +3.3**
PVIS				*e*Sn	**Sn**	**05 25 31.8 +0.8**
PVIS				A	A	05 25 37.7
	comp=N,4.4nm,0.1s					
PVIS	**Viseu**	**4.95**	**46**	P	**Pn**	**05 24 37.0 +3.3**
PVIS				S	**Sn**	**05 25 31.8 +0.8**
	comp=N,2.2nm,0.1s					
PVIS	**Viseu**	**4.95**	**46**	P	**Pn**	**05 24 37.0 +3.3**
PVIS				S	**Sn**	**05 25 31.8 +0.8**
	comp=N,2.2nm,0.1s					
MTE	**Manteigas**	**4.96**	**51**	*e*Pn	**Pn**	**05 24 36.4 +2.5**
MTE				*e*Sn	**Sn**	**05 25 33.8 +2.4**
MTE	**Manteigas**	**4.96**	**51**	P	**Pn**	**05 24 36.4 +2.5**
MTE				S	**Sn**	**05 25 33.8 +2.4**
MTE	**Manteigas**	**4.96**	**51**	P	**Pn**	**05 24 36.4 +2.5**
MTE				S	**Sn**	**05 25 33.8 +2.4**
PMPS	**Porto Santo**	**5.29**	**216**	*e*Pn	Pn	05 24 35.0 -3.2
PMPS				*e*Sn	Sn	05 25 17.5 -22
PMPS	**Porto Santo**	**5.29**	**216**	P	Pn	05 24 35.0 -3.2
PMPS	**Porto Santo**	**5.29**	**216**	P	Pn	05 24 35.0 -3.2
PVRL	**Vila Real**	**5.43**	**43**	*e*Pn	**Pn**	**05 24 44.0 +3.8**
PVRL				*e*Sn	**Sn**	**05 25 45.0 +2.2**
PVRL				A	A	05 25 48.2
	comp=N,2.7nm,0.3s					
PVRL	**Vila Real**	**5.43**	**43**	P	**Pn**	**05 24 44.0 +3.8**
PVRL				S	**Sn**	**05 25 45.0 +2.2**
	comp=N,1.4nm,0.3s					
PVRL	**Vila Real**	**5.43**	**43**	P	**Pn**	**05 24 44.0 +3.8**
PVRL				S	**Sn**	**05 25 45.0 +2.2**
	comp=N,1.4nm,0.3s					
POLO	**Lamas de Olo**	**5.46**	**42**	*e*Pn	**Pn**	**05 24 44.0 +3.3**
POLO				*e*Sn	**Sn**	**05 25 45.9 +2.4**
POLO	**Lamas de Olo**	**5.46**	**42**	*e*Pn	**Pn**	**05 24 44.0 +3.3**
POLO				*e*Sn	**Sn**	**05 25 45.9 +2.4**
PCAB	**Cabril**	**5.58**	**38**	*e*Pn	**Pn**	**05 24 46.0 +3.6**
PCAB				*e*Sn	**Sn**	**05 25 48.1 +1.5**
PCAB				A	A	05 25 55.4
	comp=N,3.3nm,0.7s					
PCAB	**Cabril**	**5.58**	**38**	P	**Pn**	**05 24 46.0 +3.6**
PCAB				S	**Sn**	**05 25 48.1 +1.5**
	comp=N,1.7nm,0.7s					
PCAB	**Cabril**	**5.58**	**38**	P	**Pn**	**05 24 46.0 +3.6**
PCAB				S	**Sn**	**05 25 48.1 +1.5**
	comp=N,1.7nm,0.7s					
PGAV	**Gavieira, Arco**	**5.67**	**35**	*e*Pn	**Pn**	**05 24 46.7 +3.1**
PGAV				*e*Sn	**Sn**	**05 25 49.2 +0.5**
PGAV				A	A	05 25 53.0
	comp=N,2.8nm,0.4s					
PGAV	**Gavieira, Arco**	**5.67**	**35**	*e*Pn	**Pn**	**05 24 46.7 +3.1**
PGAV				*e*Sn	**Sn**	**05 25 49.2 +0.5**
ELOB	**Lobios**	**5.69**	**37**	P	**Pn**	**05 24 46.4 +2.6**
	comp=N,0.6nm,0.1s,SNR=7.9					
ELOB				S	**Sn**	**05 25 49.1 -0.1**
	comp=N,0.8nm,0.2s,SNR=7.9					
ELOB	**Lobios**	**5.69**	**37**	P	**Pn**	**05 24 46.4 +2.6**
	comp=N,0.6nm,0.1s,SNR=7.9					
ELOB				S	**Sn**	**05 25 49.1 -0.1**
	comp=N,0.8nm,0.2s,SNR=7.9					
ECAB	**El Cabril**	**5.74**	**81**	P	**Pn**	**05 24 46.8 +2.3**
	comp=N,1.2nm,0.2s,SNR=22					
ECAB				S	**Sn**	**05 25 49.5 -0.9**
	comp=N,0.6nm,0.2s					
ECAB	**El Cabril**	**5.74**	**81**	P	**Pn**	**05 24 46.8 +2.3**
	comp=N,1.2nm,0.2s,SNR=22					
ECAB				S	**Sn**	**05 25 49.5 -0.9**
	comp=N,0.6nm,0.2s					
MVO	**Moncorvo**	**5.74**	**47**	*e*Pn	**Pn**	**05 24 47.5 +3.0**
MVO				*e*Sn	**Sn**	**05 25 51.1 +0.6**
MVO				A	A	05 25 52.8
	comp=N,3.8nm,0.4s					
MVO	**Moncorvo**	**5.74**	**47**	P	**Pn**	**05 24 47.6 +3.0**
	comp=N,1.0nm,0.1s,SNR=6.8					
MVO				S	**Sn**	**05 25 51.3 +0.8**
	comp=N,0.2nm,0.2s,SNR=7.9					
MVO	**Moncorvo**	**5.74**	**47**	P	**Pn**	**05 24 47.6 +3.0**
	comp=N,1.0nm,0.1s,SNR=6.8					
MVO				S	**Sn**	**05 25 51.3 +0.8**
	comp=N,0.2nm,0.2s,SNR=7.9					
EPLA	**Plasencia**	**5.76**	**60**	P	**Pn**	**05 24 48.2 +3.4**
	comp=N,1.7nm,0.1s,SNR=9.3					
EPLA				S	**Sn**	**05 25 52.3 +1.3**
	comp=N,3.2nm,0.1s					
EPLA	**Plasencia**	**5.76**	**60**	P	**Pn**	**05 24 48.2 +3.4**
	comp=N,1.7nm,0.1s,SNR=9.3					
EPLA				S	**Sn**	**05 25 52.3 +1.3**
	comp=N,3.2nm,0.1s					
EMAZ	**Mazaricos**	**6.21**	**25**	S	**Sn**	**05 25 58.5 -3.6**
	comp=N,1.5nm,0.1s,SNR=7.9					
EMAZ	**Mazaricos**	**6.21**	**25**	S	**Sn**	**05 25 58.5 -3.6**
	comp=N,1.5nm,0.1s,SNR=7.9					
PBRG	**Braganca**	**6.32**	**44**	*e*Pn	**Pn**	**05 24 55.7 +3.2**
PBRG				*e*Sn	**Sn**	**05 26 06.5 +1.7**
PBRG				A	A	05 26 09.8
	comp=N,2.0nm,0.3s					
PBRG	**Braganca**	**6.32**	**44**	P	**Pn**	**05 24 55.7 +3.2**
PBRG				Sn	**Sn**	**05 26 06.5 +1.7**
	comp=N,1.0nm,0.3s					
PBRG	**Braganca**	**6.32**	**44**	P	**Pn**	**05 24 55.7 +3.2**
PBRG				Sn	**Sn**	**05 26 06.5 +1.7**
	comp=N,1.0nm,0.3s					
EADA	**Adamuz**	**6.41**	**81**	P	**Pn**	**05 24 56.1 +2.4**
	comp=N,1.6nm,0.1s,SNR=7.9					
EADA				S	**Sn**	**05 26 07.9 +1.0**
	comp=N,2.8nm,0.0s,SNR=21					
EADA	**Adamuz**	**6.41**	**81**	P	**Pn**	**05 24 56.1 +2.4**
	comp=N,1.6nm,0.1s,SNR=7.9					
EADA				S	**Sn**	**05 26 07.9 +1.0**
	comp=N,2.8nm,0.0s,SNR=21					
ECAL	**Calabor**	**6.42**	**43**	P	**Pn**	**05 24 57.2 +3.4**
	comp=N,1.6nm,0.3s,SNR=5.6					
ECAL				S	**Sn**	**05 26 08.3 +1.1**
	comp=N,0.5nm,0.0s,SNR=4.5					
ECAL	**Calabor**	**6.42**	**43**	P	**Pn**	**05 24 57.2 +3.4**
	comp=N,1.6nm,0.3s,SNR=5.6					
ECAL				S	**Sn**	**05 26 08.3 +1.1**
	comp=N,0.5nm,0.0s,SNR=4.5					
EAGO	**Agolada(Pontev**	**6.42**	**31**	P	**Pn**	**05 24 55.8 +1.9**
	comp=N,0.9nm,0.1s,SNR=7.9					
EAGO				S	**Sn**	**05 26 04.4 -2.8**
	comp=N,1.3nm,0.1s,SNR=7.9					
EAGO	**Agolada(Pontev**	**6.42**	**31**	P	**Pn**	**05 24 55.8 +1.9**
	comp=N,0.9nm,0.1s,SNR=7.9					
EAGO				S	**Sn**	**05 26 04.4 -2.8**
	comp=N,1.3nm,0.1s,SNR=7.9					
PAB	**San Pablo**	**6.83**	**69**	P	**Pn**	**05 25 01.9 +2.4**
	comp=N,1.6nm,0.3s,SNR=7.9					
PAB				S	**Sn**	**05 26 16.8 -0.6**
	comp=N,0.2nm,0.2s,SNR=7.9					
PAB	**San Pablo**	**6.83**	**69**	P	**Pn**	**05 25 01.9 +2.4**
	comp=N,1.6nm,0.3s,SNR=7.9					
PAB				S	**Sn**	**05 26 16.8 -0.6**
	comp=N,0.2nm,0.2s,SNR=7.9					
ESDC	**Sonseca Array**	**7.15**	**69**	P	**Pn**	**05 25 06.4 +2.5**
	comp=N,6.1nm,0.2s,baz=252,slow=13,SNR=11					
ESDC				S	**Sn**	**05 26 23.6 -1.7**
	comp=N,0.2nm,0.1s,baz=328,slow=16,SNR=3.5					
ESDC	**Sonseca Array**	**7.15**	**69**	P	**Pn**	**05 25 06.4 +2.5**
	comp=N,6.1nm,0.2s,baz=252,slow=13,SNR=11					
ESDC				S	**Sn**	**05 26 23.6 -1.7**
	comp=N,0.2nm,0.1s,SNR=3.5					
GUD	**Guadarrama**	**7.34**	**61**	P	**Pn**	**05 25 09.8 +3.2**
	comp=N,2.4nm,0.4s,SNR=5.8					
GUD				S	**Sn**	**05 26 30.6 +0.6**
	comp=N,0.8nm,0.2s,SNR=7.9					
GUD	**Guadarrama**	**7.34**	**61**	P	**Pn**	**05 25 09.8 +3.2**
	comp=N,2.4nm,0.4s,SNR=5.8					
GUD				S	**Sn**	**05 26 30.6 +0.6**
	comp=N,0.8nm,0.2s,SNR=7.9					
SJPF	**Ste Jean**	**10.41**	**53**	*e*P	**Pn**	**05 25 51.7 +3.2**
SJPF				*e*Sn	Sn	05 27 35.1 -10
	comp=N,0.6nm,0.2s					
SJPF	**Ste Jean**	**10.41**	**53**	P	**Pn**	**05 25 51.7 +3.2**
SJPF	**Ste Jean**	**10.41**	**53**	P	**Pn**	**05 25 51.7 +3.2**
ETSF	**Etsaut**	**10.74**	**55**	*e*P	**Pn**	**05 25 56.8 +3.7**
ETSF				*e*Sn	Sn	05 27 42.7 -11
	comp=N,0.5nm,0.2s					
ETSF	**Etsaut**	**10.74**	**55**	P	**Pn**	**05 25 56.8 +3.7**
ETSF	**Etsaut**	**10.74**	**55**	P	**Pn**	**05 25 56.8 +3.7**
EPF	**Esparros**	**11.39**	**56**	*e*P	**Pn**	**05 26 05.7 +3.7**
EPF				*e*Sn	Sn	05 27 58.2 -11
	comp=N,0.7nm,0.3s					
EPF	**Esparros**	**11.39**	**56**	P	**Pn**	**05 26 05.7 +3.7**
EPF	**Esparros**	**11.39**	**56**	P	**Pn**	**05 26 05.7 +3.7**

*CSEM **05** 05:27:33.0±0.2,44°.86N×11°.38E,h5km,ML2.5,Error ellipse: s-maj=4.8km s-min=3.8km az=91.0*
ROM 05 05:27:32.4±0.0,44°.836N±0°.001×11°.335E±0°.001, h9km,ML2.5/27,9C-10D,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0822	**Casumaru (Bond**	**0.01**	**111**	*i*P	Pg	05 27 34.3	+0.4
T0822				*i* S	Sg	05 27 36.5	+1.6
T0822	**Casumaru (Bond**	**0.01**	**111**	*i* P	Pg	05 27 34.3	+0.4
T0822				*i* S	Sg	05 27 36.5	+1.5
T0800	**Massa Finalese**	**0.06**	**282**	*i*P	Pg	05 27 34.8	+0.5
T0800				*i* S	Sg	05 27 37.4	+1.7
T0800	**Massa Finalese**	**0.06**	**282**	*i* P	Pg	05 27 34.8	+0.5
T0800				*i* S	Sg	05 27 37.4	+1.7
T0800				AML	AML		
	comp=E,47000μm,0.3s						
T0800				AML	AML		
	comp=N,37600μm,0.3s						
T0800				AML	AML		
	comp=E,56350μm,0.3s						
T0800				AML	AML		
	comp=N,25750μm,0.2s						
T0803	**Dosso, Cento (**	**0.07**	**170**	*i*P	Pg	05 27 34.8	+0.4
T0803				*e*S	Sg	05 27 37.4	+1.6
T0803	**Dosso, Cento (**	**0.07**	**170**	*i* P	Pg	05 27 34.8	+0.4
T0803				*e*S	Sg	05 27 37.4	+1.6
T0805	**Bondeno (FE)**	**0.08**	**354**	*i*P	Pg	05 27 35.9	+1.3
T0805	**Bondeno (FE)**	**0.08**	**354**	*i* P	Pg	05 27 35.9	+1.3
T0811	**Palata Pepoli**	**0.09**	**236**	*i*P	Pg	05 27 35.2	+0.5
T0811				*i* S	Sg	05 27 38.3	+2.0
T0811	**Palata Pepoli**	**0.09**	**236**	*i* P	Pg	05 27 35.2	+0.5
T0811				*i* S	Sg	05 27 38.3	+2.0
T0813	**Massa Finalese**	**0.10**	**294**	*e*P	Pg	05 27 35.3	+0.4
T0813				*e*S	Sg	05 27 38.3	+1.7
T0813	**Massa Finalese**	**0.10**	**294**	*e*P	Pg	05 27 35.3	+0.4
T0813				*e*S	Sg	05 27 38.4	+1.7
T0802	**SanFelice sul**	**0.12**	**290**	*e*P	Pg	05 27 35.5	+0.5
T0802	**SanFelice sul**	**0.12**	**290**	*e*P	Pg	05 27 35.5	+0.5
T0802				AML	AML		
	comp=E,9530μm,0.3s						
T0802				AML	AML		
	comp=N,6565μm,1.1s						
T0802				AML	AML		
	comp=E,9540μm,0.3s						
T0802				AML	AML		
	comp=N,6560μm,1.1s						
T0802				AML	AML		
	comp=E,9555μm,0.3s						
T0802				AML	AML		
	comp=N,6565μm,1.1s						
T0802				AML	AML		
	comp=E,9555μm,0.3s						
T0802				AML	AML		
	comp=N,6565μm,1.1s						
T0823	**Castello D'Arg**	**0.15**	**195**	*i*P	Pg	05 27 36.5	+0.8
T0823				*i* S	Sg	05 27 40.8	+2.9
T0823	**Castello D'Arg**	**0.15**	**195**	*i* P	Pg	05 27 36.5	+0.8
T0823				*i* S	Sg	05 27 40.8	+2.8
T0812	**Loc. Stoppiaro**	**0.16**	**318**	*e*P	Pg	05 27 36.5	+0.7
T0812	**Loc. Stoppiaro**	**0.16**	**318**	*e*P	Pg	05 27 36.5	+0.7
T0821	**Loc. Casaglia**	**0.16**	**65**	*e*P	Pg	05 27 36.2	+0.4
T0821				*e*S	Sg	05 27 39.4	+1.3
T0821	**Loc. Casaglia**	**0.16**	**65**	*e*P	Pg	05 27 36.2	+0.4
T0821				*e*S	Sg	05 27 39.4	+1.3
T0821				AML	AML		
	comp=E,2485μm,0.5s						
T0821				AML	AML		
	comp=N,2280μm,1.5s						
T0821				AML	AML		
	comp=E,2630μm,0.5s						
T0821				AML	AML		
	comp=N,2260μm,1.5s						
T0821				AML	AML		
	comp=E,2485μm,0.5s						
T0821				AML	AML		
	comp=N,2280μm,1.5s						
T0821				AML	AML		
	comp=E,2625μm,0.5s						
T0821				AML	AML		
	comp=N,2260μm,1.5s						
T0821				AML	AML		
	comp=E,2485μm,0.5s						
T0821				AML	AML		
	comp=N,2280μm,1.5s						
T0821				AML	AML		
	comp=E,2625μm,0.5s						
T0821				AML	AML		
	comp=N,2265μm,1.5s						
T0821				AML	AML		
	comp=N,2280μm,1.5s						
T0821				AML	AML		
	comp=N,2265μm,1.5s						
T0821				AML	AML		
	comp=E,2485μm,0.5s						
T0821				AML	AML		
	comp=E,2625μm,0.5s						
RAVA	**Ravarino**	**0.17**	**243**	*e*P	Pg	05 27 37.1	+1.1
RAVA				*e*S	Sg	05 27 41.5	+3.0
RAVA	**Ravarino**	**0.17**	**243**	*e*P	Pg	05 27 37.1	+1.1
RAVA				*e*S	Sg	05 27 41.5	+3.1
RAVA				AML	AML		
	comp=E,6925μm,0.6s						
RAVA				AML	AML		
	comp=N,10085μm,0.3s						
RAVA				AML	AML		
	comp=E,6925μm,0.6s						
RAVA				AML	AML		
	comp=N,10075μm,0.3s						
RAVA				AML	AML		
	comp=E,6925μm,0.6s						
RAVA				AML	AML		
	comp=N,10070μm,0.3s						
RAVA				AML	AML		
	comp=E,6925μm,0.6s						
RAVA				AML	AML		
	comp=N,10070μm,0.3s						
SERM	**Sermide**	**0.18**	**351**	*e*P	Pg	05 27 36.9	+0.8
SERM	**Sermide**	**0.18**	**351**	*e*P	Pg	05 27 36.9	+0.8
SERM				AML	AML		
	comp=E,1560μm,1.0s						
SERM				AML	AML		
	comp=N,2130μm,0.5s						
SERM				AML	AML		
	comp=E,2020μm,0.3s						
SERM				AML	AML		
	comp=N,3885μm,0.9s						
SERM				AML	AML		
	comp=E,1560μm,1.0s						
SERM				AML	AML		
	comp=N,2130μm,0.5s						
SERM				AML	AML		
	comp=E,2020μm,0.3s						
SERM				AML	AML		
	comp=N,3890μm,0.9s						
SERM				AML	AML		
	comp=E,1560μm,1.0s						
SERM				AML	AML		
	comp=N,2125μm,0.5s						
SERM				AML	AML		
	comp=E,2020μm,0.3s						
SERM				AML	AML		
	comp=N,3890μm,0.9s						
SERM				AML	AML		
	comp=E,2020μm,0.3s						
SERM				AML	AML		
	comp=N,2125μm,0.5s						
SERM				AML	AML		
	comp=E,1560μm,1.0s						
SERM				AML	AML		
	comp=N,3890μm,0.9s						
T0817	**Loc. Veratica,**	**0.18**	**29**	*e*P	Pg	05 27 36.8	+0.7
T0817	**Loc. Veratica,**	**0.18**	**29**	*e*P	Pg	05 27 36.8	+0.7
T0816	**San Bartolomeo**	**0.22**	**121**	*e*P	Pg	05 27 37.2	+0.4
T0816	**San Bartolomeo**	**0.22**	**121**	*e*P	Pg	05 27 37.2	+0.3
FIU	**Minerbio Fiu**	**0.23**	**150**	*e*P	Pg	05 27 37.6	+0.7
FIU				*e*S	Sg	05 27 42.6	+2.6
FIU	**Minerbio Fiu**	**0.23**	**150**	*e*P	Pg	05 27 37.6	+0.7
FIU				*e*S	Sg	05 27 42.6	+2.6
FIU				AML	AML		
	comp=E,2880μm,0.2s						
FIU				AML	AML		
	comp=N,3530μm,0.8s						
FIU				AML	AML		
	comp=E,2875μm,0.2s						
FIU				AML	AML		
	comp=N,3530μm,0.8s						
FIU				AML	AML		
	comp=E,2880μm,0.2s						
FIU				AML	AML		
	comp=N,3530μm,0.8s						
FIU				AML	AML		
	comp=E,2880μm,0.2s						
FIU				AML	AML		
	comp=N,3530μm,0.8s						
T0818	**Loc. Fossa, Co**	**0.24**	**295**	*e*P	Pg	05 27 37.0	-0.2
T0818				*e*S	Sg	05 27 43.3	+2.9
T0818	**Loc. Fossa, Co**	**0.24**	**295**	*e*P	Pg	05 27 38.0	+0.8
T0818				*e*S	Sg	05 27 43.4	+2.9
T0815	**Correggio (RE)**	**0.28**	**82**	*e*P	Pb	05 27 39.5	0.0
T0815	**Correggio (RE)**	**0.28**	**82**	*e*P	Pb	05 27 39.5	0.0
T0815				*e*S	Sb	05 27 45.1	+0.8
T0828	**Loc. Fossoli,**	**0.30**	**269**	*e*P	Pg	05 27 38.0	-0.3
T0828	**Loc. Fossoli,**	**0.30**	**269**	*e*P	Pg	05 27 39.0	+0.7
T0827	**Moglia (MN)**	**0.30**	**290**	*e*P	Pb	05 27 39.4	-0.6
T0827				*e*S	Sb	05 27 46.4	+1.3
T0827	**Moglia (MN)**	**0.30**	**290**	*e*P	Pb	05 27 39.4	-0.6
T0827				*e*S	Sb	05 27 46.4	+1.3
GAZZ	**Gazzo Veronese**	**0.33**	**329**	*e*Pg	Pg	05 27 39.6	+0.8
GAZZ	**Gazzo Veronese**	**0.33**	**329**	*e*Pg	Pg	05 27 39.6	+0.8
NOVE	**Novellara**	**0.44**	**265**	*e*P	Pb	05 27 42.9	+0.6
NOVE	**Novellara**	**0.44**	**265**	*e*P	Pb	05 27 42.9	+0.5
NOVE				AML	AML		
	comp=E,441μm,1.2s						
NOVE				AML	AML		
	comp=N,467μm,0.9s						
NOVE				AML	AML		
	comp=E,440μm,1.2s						
NOVE				AML	AML		
	comp=N,467μm,0.9s						
NOVE				AML	AML		
	comp=E,438μm,1.2s						
NOVE				AML	AML		
	comp=N,467μm,0.9s						
NOVE				AML	AML		
	comp=N,467μm,0.9s						
NOVE				AML	AML		
	comp=E,438μm,1.2s						
MTRZ	**Monterenzio**	**0.47**	**168**	*e*P	Pn	05 27 45.3	-0.1
ZCCA	**Zocca**	**0.55**	**208**	*e*P	Pn	05 27 45.6	-0.9
ZCCA	**Zocca**	**0.55**	**208**	*e*P	Pn	05 27 45.6	-0.9
ZCCA				AML	AML		
	comp=E,246μm,1.6s						
ZCCA				AML	AML		
	comp=N,446μm,0.4s						
ZCCA				AML	AML		
	comp=E,246μm,1.6s						
ZCCA				AML	AML		
	comp=N,446μm,0.4s						
ZCCA				AML	AML		
	comp=E,246μm,1.6s						
TEOL	**Teolo**	**0.58**	**24**	*e*Pg	Pg	05 27 44.0	+0.5
TEOL	**Teolo**	**0.58**	**24**	*e*P	Pg	05 27 44.0	+0.5
TEOL	**Teolo**	**0.58**	**24**	*e*P	Pg	05 27 44.0	+0.5
TEOL				AML	AML		
	comp=E,953μm,0.7s						
TEOL				AML	AML		
	comp=N,1041μm,1.3s						
TEOL				AML	AML		
	comp=E,954μm,0.7s						
TEOL				AML	AML		
	comp=N,1040μm,1.3s						
TEOL				AML	AML		
	comp=E,954μm,0.7s						
TEOL				AML	AML		
	comp=N,1040μm,1.3s						
FNVD	**Fontana Vidola**	**0.69**	**193**	*e*P	Pn	05 27 49.4	+1.1
FNVD				AML	AML		
	comp=E,260μm,0.2s						
FNVD				AML	AML		
	comp=N,231μm,0.9s						
FNVD				AML	AML		
	comp=E,260μm,0.2s						
FNVD				AML	AML		
	comp=N,231μm,0.9s						
FNVD				AML	AML		
	comp=E,260μm,0.2s						
FNVD				AML	AML		
	comp=N,231μm,0.9s						
MARN	**Marana (Italy)**	**0.81**	**354**	*e*Pg	Pg	05 27 48.2	+0.3
MARN				*e*Sg	Sn	05 28 01.4	-0.8
ROVR	**Rover¯¤ Verone**	**0.83**	**347**	*e*P	Pg	05 27 48.7	+0.3
ROVR	**Rover¯¤ Verone**	**0.83**	**347**	*e*P	Pg	05 27 48.7	+0.3
ROVR				AML	AML		
	comp=E,910μm,0.4s						
ROVR				AML	AML		
	comp=N,1182μm,0.2s						
ROVR				AML	AML		
	comp=E,910μm,0.4s						
ROVR				AML	AML		
	comp=N,1182μm,0.2s						
ROVR				AML	AML		
	comp=E,910μm,0.4s						
ROVR				AML	AML		
	comp=N,1182μm,0.2s						
POPM	**Popiglio**	**0.89**	**208**	AML	AML		
	comp=E,226μm,0.5s						
POPM				AML	AML		
	comp=N,210μm,0.3s						
POPM				AML	AML		
	comp=N,210μm,0.3s						
POPM				AML	AML		
	comp=E,226μm,0.5s						
BALD	**Monte Baldo**	**0.92**	**337**	*e*Pg	Pb	05 27 50.8	+0.1
BALD				*e*Sg	Sn	05 28 04.8	-0.5
BALD	**Monte Baldo**	**0.92**	**337**	*e*Pg	Pb	05 27 50.8	+0.1
BALD				*e*Sg	Sn	05 28 04.8	-0.5
SALO	**Salr**	**0.97**	**324**	*e*P	Pb	05 27 51.8	+0.4
SALO	**Salr**	**0.97**	**324**	*e*P	Pb	05 27 51

comp=E,808μm,0.2s
SALO AML AML
comp=N,798μm,0.3s
SALO AML AML
comp=E,808μm,0.2s
SALO AML AML
comp=N,798μm,0.3s
SFI Santa Sofia 1.00 158 AML AML
comp=N,254μm,0.6s
SFI AML AML
comp=E,168μm,0.3s
SFI AML AML
comp=N,254μm,0.6s
SFI AML AML
comp=E,167μm,0.3s
SFI AML AML
comp=E,167μm,0.3s
SFI AML AML
comp=N,254μm,0.6s
DOSS Dosso del Somm 1.05 354 ↑ *e*Pg Pg 05 27 52.4 -0.1
DOSS *e*Sg Sn 05 28 08.0 -0.4
DOSS Dosso del Somm 1.05 354 *e*Pg Pg 05 27 52.4 -0.2
DOSS *e*Sg Sn 05 28 08.0 -0.4
MAGA Magasa 1.06 332 *e*P Pg 05 27 52.9 +0.1
MAGA *e*S Sn 05 28 08.9 +0.3
MAGA Magasa 1.06 332 *e*P Pb 05 27 52.9 -0.1
MAGA *e*S Sn 05 28 08.9 +0.3
MAGA AML AML
comp=E,1545μm,0.4s
MAGA AML AML
comp=N,1405μm,0.5s
MAGA AML AML
comp=E,1545μm,0.4s
MAGA AML AML
comp=N,1405μm,0.5s
MAGA AML AML
comp=E,1545μm,0.4s
MAGA AML AML
comp=N,1405μm,0.5s
CRMI Carmignano 1.08 194 AML AML
comp=N,179μm,1.0s
CRMI AML AML
comp=E,225μm,0.4s
CRMI AML AML
comp=E,225μm,0.4s
CRMI AML AML
comp=N,179μm,1.0s
CRMI AML AML
comp=E,225μm,0.4s
CRMI AML AML
comp=N,179μm,1.0s
ASQU Asqua 1.09 162 AML AML
comp=E,162μm,0.4s
ASQU AML AML
comp=E,162μm,0.4s
ASQU AML AML
comp=N,240μm,1.4s
ASQU AML AML
comp=E,162μm,0.4s
ASQU AML AML
comp=N,240μm,1.4s
ASQU AML AML
comp=N,240μm,1.4s
CGRP Cima Grappa 1.09 17 ↓ *e*Pg Pg 05 27 53.5 +0.1
CGRP *e*Sg Sn 05 28 09.3 -0.2
CGRP Cima Grappa 1.09 17 *e*P Pg 05 27 53.5 +0.1
CGRP *e*Sg Sn 05 28 09.3 -0.2
CGRP Cima Grappa 1.09 17 *e*P Pg 05 27 53.5 +0.1
CGRP AML AML
comp=E,192μm,0.4s
CGRP AML AML
comp=N,194μm,0.6s
CGRP AML AML
comp=E,192μm,0.4s
CGRP AML AML
comp=N,194μm,0.6s
CGRP AML AML
comp=E,192μm,0.4s
CGRP AML AML
comp=N,194μm,0.6s
MAIM Mastiano 1.10 214 AML AML
comp=E,100μm,0.7s
MAIM AML AML
comp=N,158μm,0.6s
MAIM AML AML
comp=E,100μm,0.7s
MAIM AML AML
comp=N,158μm,0.6s
MAIM AML AML
comp=E,100μm,0.7s
MAIM AML AML
comp=N,158μm,0.6s
MTLO Montello 1.12 29 ↑ *e*Pg Pn 05 27 54.2 0.0
PANI Panarotta 1.21 360 *e*Pg Pb 05 27 54.5 -1.2
PANI *e*Sg Sn 05 28 12.6 +0.1
PANI Panarotta 1.21 360 *e*Pg Pb 05 27 54.5 -1.2
PANI *e*Sg Sn 05 28 12.6 +0.1
RNI Roncone 1.25 337 *e*Pg Pn 05 27 55.5 -0.7
RNI *e*Sg Sn 05 28 13.9 +0.5
RNI Roncone 1.25 337 *e*Pg Pn 05 27 55.5 -0.8
RNI *e*Sg Sn 05 28 13.9 +0.6
CRE Caprese Michel 1.29 160 AML AML
comp=N,150μm,0.4s
CRE AML AML
comp=E,118μm,0.6s
CRE AML AML
comp=N,150μm,0.4s
CRE AML AML
comp=E,118μm,0.6s
CRE AML AML
comp=N,150μm,0.4s
CRE AML AML
comp=E,118μm,0.6s
BOB Bobbio (Coli) 1.34 268 AML AML
comp=E,118μm,1.4s
BOB AML AML
comp=E,118μm,1.4s
BOB AML AML
comp=N,114μm,1.1s
BOB AML AML
comp=N,114μm,1.1s
MABI Malga Bissina 1.35 335 AML AML
comp=N,90μm,1.0s
MABI AML AML
comp=E,93μm,0.8s
MABI AML AML
comp=E,94μm,0.8s
MABI AML AML
comp=N,90μm,1.0s
MABI AML AML
comp=N,90μm,1.0s
MABI AML AML
comp=E,94μm,0.8s
MSSA Maissana 1.40 249 AML AML
comp=E,88μm,1.6s
MSSA AML AML
comp=E,78μm,1.2s
MSSA AML AML
comp=N,102μm,1.4s
MSSA AML AML
comp=E,88μm,1.6s
MSSA AML AML
comp=N,102μm,1.4s
MSSA AML AML
comp=N,102μm,1.4s
CAE Caneva 1.41 33 *e*Pg Pn 05 27 57.9 -0.4
AGOR Agordo 1.53 19 AML AML
comp=E,89μm,0.4s
AGOR AML AML
comp=N,90μm,0.4s
AGOR AML AML
comp=N,90μm,0.4s
AGOR AML AML
comp=E,89μm,0.4s
OZOL Ozolo 1.58 353 *e*Pg Pn 05 28 00.7 -0.1
OZOL Ozolo 1.58 353 *e*Pg Pn 05 28 00.7 0.0
KOSI Kohlern 1.63 1 AML AML
comp=N,133μm,0.9s
KOSI AML AML
comp=E,194μm,0.6s
KOSI AML AML
comp=E,194μm,0.6s
KOSI AML AML
comp=N,133μm,0.9s
KOSI AML AML
comp=N,133μm,0.9s
KOSI AML AML
comp=E,194μm,0.6s
CARE Lago del Cares 1.65 344 *e*Pg Pn 05 28 01.4 -0.4
CARE Lago del Cares 1.65 344 *e*Pg Pn 05 28 01.5 -0.4
STAL STALIGIAL 1.72 34 AML AML
comp=N,222μm,1.0s
STAL AML AML
comp=E,226μm,0.3s
STAL AML AML
comp=N,222μm,1.0s
STAL AML AML
comp=E,226μm,0.3s
STAL AML AML
comp=N,222μm,1.0s
STAL AML AML
comp=E,226μm,0.3s
BRMO Bormio 1.77 338 AML AML
comp=N,72μm,0.4s
BRMO AML AML
comp=E,74μm,0.5s
BRMO AML AML
comp=N,72μm,0.4s
BRMO AML AML
comp=E,74μm,0.5s
BRMO AML AML
comp=E,74μm,0.5s
BRMO AML AML
comp=N,72μm,0.4s
ABSI Aberstueckl 1.89 360 AML AML
comp=N,151μm,0.6s
ABSI AML AML
comp=E,230μm,0.7s
ABSI AML AML
comp=E,230μm,0.7s
ABSI AML AML
comp=N,151μm,0.6s
ABTA Abfaltersbach 2.08 23 *e*Pn Pg 05 28 14.6 +2.3
comp=N,5.0nm,0.3s
FETA Feichten 2.23 349 *e*Pg Pb 05 28 13.9 +1.0
comp=N,6.7nm,0.4s,SNR=4.5
FETA Feichten 2.23 349 Pg Pb 05 28 13.9 +1.0
comp=N,6.7nm,0.4s,SNR=4.5
MYKA Terra Mystica 2.42 41 *e*Pn Pg 05 28 19.1 +0.4
comp=N,3.9nm,0.2s
WTTA Wattenberg 2.44 5 *e*Pn Pb 05 28 14.9 -1.6
comp=N,1.8nm,0.2s
WTTA Wattenberg 2.44 5 Pn Pb 05 28 14.9 -1.6
comp=N,1.8nm,0.2s
WATA Walderalm 2.51 4 *e*Pn Pb 05 28 16.1 -1.5
comp=N,4.9nm,0.2s
WATA Walderalm 2.51 4 Pn Pb 05 28 16.1 -1.6
comp=N,4.9nm,0.2s
MOTA Moosalm 2.52 356 *e*Pn Pn 05 28 15.6 +2.0
comp=N,1.8nm,0.2s
MOTA Moosalm 2.52 356 Pn Pn 05 28 15.6 +2.0
comp=N,1.8nm,0.2s
NVLJ Novalja 2.54 95 *e*Pn Pn 05 28 13.4 -0.3
NVLJ Sn Sn 05 28 43.1 -1.6
NVLJ Novalja 2.54 95 *e*Pn Pn 05 28 13.4 -0.3
NVLJ Sn Sn 05 28 43.1 -1.6
KBA Koelnbreinsper 2.65 31 Pg Pg 05 28 22.4 -0.7
comp=N,3.8nm,0.2s,SNR=6.6
KBA Koelnbreinsper 2.65 31 Pg Pg 05 28 22.4 -0.7
comp=N,3.8nm,0.2s,SNR=6.6
DAVA Damuels 2.65 338 *e*Pn Pb 05 28 18.3 -1.9
comp=N,2.3nm,0.2s
DAVA Damuels 2.65 338 Pn Pb 05 28 18.3 -1.9
comp=N,2.3nm,0.2s
RETA Reutte 2.68 352 *e*Pn Pn 05 28 16.0 +0.1
comp=N,4.5nm,0.2s
RETA Reutte 2.68 352 Pn Pn 05 28 16.0 +0.2
comp=N,4.5nm,0.2s
OBKA Obir 2.81 52 Pn Pn 05 28 19.0 +1.4
comp=N,3.5nm,0.3s
OBKA Obir 2.81 52 Pn Pn 05 28 19.0 +1.4
comp=N,3.5nm,0.3s
MOA Molln 3.63 33 *i* Pn Pn 05 28 30.8 +2.0
comp=N,1.2nm,0.1s
MOA Molln 3.63 33 Pn Pn 05 28 30.8 +1.9
comp=N,1.2nm,0.1s
ARSA Arzberg 3.79 49 *i* Pn Pn 05 28 30.7 -0.3
comp=N,2.1nm,0.4s
ARSA Arzberg 3.79 49 Pn Pn 05 28 30.7 -0.3
comp=N,2.1nm,0.4s
KHC Kasperske Hory 4.56 19 *e*PG Pb 05 28 55.8 +3.2
KHC *e*SN Sn 05 29 33.3 -1.5
KHC *e*SG Sg 05 29 58.4 -0.4

MEX 05 05:31:46.4±0.7, 15°.83N×93°.34W, h18km, MD3.9, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.17**	**136**	*i* P	Pb	05 31 49.5	-0.9
PCIG				*e*S	Sb	05 31 52.5	-0.5
TGIG		**0.97**	**12**	*e*P	Pb	05 32 01.6	-3.2
TGIG				*e*S	Sb	05 32 13.8	-3.5
CCIG	**Comitan**	**1.24**	**68**	*e*P	Pn	05 32 05.2	-3.8
CCIG				*e*S	Sb	05 32 20.5	-4.6

*IGIL **05** 05:40:41.5, 36°.84N×12°.50W, h6km, ML2.2*
*MDD **05** 05:40:41.0±1.8, 36°.87N×12°.42W, h0km, mb3.8/7, Error ellipse: s-maj=15.8km s-min=15.1km az=62.0, PRXIMO*
*INMG **05** 05:40:42.1±1.2, 36°.71N×12°.83W, h10km, ML2.3, Error ellipse: s-maj=7.4km s-min=5.5km az=78.0*
*CSEM **05** 05:40:43.4±0.4, 37°.03N×12°.27W, h10km, mb3.8, Error ellipse: s-maj=7.6km s-min=6.4km az=54.0*

ISC 05 05:40:40.6±3.5, 36°.9N±0°.1×12°.4W±0°.2, h10km, n84, σ1°37/142, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**2.87**	**85**	*e*Pn	**Pn**	**05 41 26.7**	**+0.3**
PFVI				*e*Sn	**Sn**	**05 42 00.0**	**-0.9**
PFVI	**Vila Bisbo**	**2.87**	**85**	P	**Pn**	**05 41 26.4**	**0.0**
	3.2nm,0.1s,SNR=7.9						
PFVI				S	**Sn**	**05 41 59.5**	**-1.4**
	6.0nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**2.87**	**85**	P	**Pn**	**05 41 26.4**	**0.0**
	3.2nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**2.87**	**85**	*e*Pn	**Pn**	**05 41 26.7**	**+0.3**
PFVI				S	**Sn**	**05 41 59.5**	**-1.4**
	6.0nm,0.1s,SNR=7.9						
PFVI				*e*Sn	Sb	05 42 00.0	-7.0
PTEO	**Sao Teotonio**	**3.00**	**77**	*e*Pn	**Pn**	**05 41 28.7**	**+0.6**
PTEO				*e*Sn	**Sn**	**05 42 03.0**	**-1.1**
PTEO	**Sao Teotonio**	**3.00**	**77**	P	**Pn**	**05 41 28.7**	**+0.6**
PTEO				S	**Sn**	**05 42 03.0**	**-1.1**
PTEO	**Sao Teotonio**	**3.00**	**77**	P	**Pn**	**05 41 28.7**	**+0.6**
PTEO				S	**Sn**	**05 42 03.0**	**-1.1**
MORF	**Marmelete**	**3.02**	**82**	*e*P	**Pn**	**05 41 29.2**	**+0.7**
MORF	**Marmelete**	**3.02**	**82**	P	**Pn**	**05 41 29.2**	**+0.7**
MORF	**Marmelete**	**3.02**	**82**	P	**Pn**	**05 41 29.2**	**+0.7**
PMAFR	**Mafra**	**3.18**	**50**	*e*Pn	**Pn**	**05 41 32.4**	**+1.7**
PMAFR				*e*Sn	**Sn**	**05 42 10.7**	**+1.9**
PMAFR				A	A	05 42 16.8	
	10nm,0.7s						
PMAFR	**Mafra**	**3.18**	**50**	P	**Pn**	**05 41 31.9**	**+1.2**
	2.0nm,0.1s,SNR=5.8						
PMAFR				S	**Sn**	**05 42 10.7**	**+1.9**
	6.2nm,0.1s,SNR=7.9						
PMAFR	**Mafra**	**3.18**	**50**	P	**Pn**	**05 41 31.9**	**+1.2**
	2.0nm,0.1s,SNR=5.8						
PMAFR	**Mafra**	**3.18**	**50**	*e*Pn	**Pn**	**05 41 32.4**	**+1.7**
PMAFR				S	**Sn**	**05 42 10.7**	**+1.9**
	6.2nm,0.1s,SNR=7.9						
PNCL	**Nicolau / Gran**	**3.29**	**68**	*e*Pn	**Pn**	**05 41 33.4**	**+1.2**
PNCL				*e*Sn	**Sn**	**05 42 11.9**	**+0.5**
PNCL				A	A	05 42 12.6	
	3.3nm,0.2s						
PNCL	**Nicolau / Gran**	**3.29**	**68**	*e*Pn	**Pn**	**05 41 33.4**	**+1.2**
PNCL				*e*Sn	**Sn**	**05 42 11.9**	**+0.5**
MESJ	**Messejana**	**3.45**	**74**	*e*P	**Pn**	**05 41 35.4**	**+1.0**
MESJ				*e*S	**Sn**	**05 42 14.9**	**-0.4**
MESJ				AML	AML	05 42 17.9	
	comp=N,3.4nm,0.5s						
MESJ	**Messejana**	**3.45**	**74**	*e*Pn	**Pn**	**05 41 35.5**	**+1.1**
MESJ				*e*Sn	**Sn**	**05 42 15.5**	**+0.2**
MESJ				A	A	05 42 21.3	
	comp=N,2.3nm,0.4s						
MESJ	**Messejana**	**3.45**	**74**	P	**Pn**	**05 41 35.4**	**+1.0**
MESJ				S	**Sn**	**05 42 14.9**	**-0.4**
	comp=N,3.4nm,0.5s						
MESJ	**Messejana**	**3.45**	**74**	*e*Pn	**Pn**	**05 41 35.5**	**+1.1**
MESJ				S	**Sn**	**05 42 14.9**	**-0.4**
	comp=N,3.4nm,0.5s						
MESJ				*e*Sn	Sb	05 42 15.5	-8.2
PCVE	**Castro Verde**	**3.55**	**77**	*e*Pn	**Pn**	**05 41 37.1**	**+1.4**
PCVE				*e*Sn	**Sn**	**05 42 17.3**	**-0.4**
PCVE				A	A	05 42 22.5	
	comp=N,3.0nm,0.4s						
PCVE	**Castro Verde**	**3.55**	**77**	P	**Pn**	**05 41 37.1**	**+1.4**
PCVE				S	**Sn**	**05 42 17.3**	**-0.4**
	comp=N,3.0nm,0.4s						
PCVE	**Castro Verde**	**3.55**	**77**	P	**Pn**	**05 41 37.1**	**+1.4**
PCVE				S	**Sn**	**05 42 17.3**	**-0.4**
	comp=N,3.0nm,0.4s						
PBDV	**Barranco-do-Ve**	**3.59**	**84**	*e*Pn	**Pn**	**05 41 38.3**	**+2.0**
PBDV				*e*Sn	**Sn**	**05 42 20.6**	**+1.9**
PBDV				A	A	05 42 23.8	
	comp=N,2.5nm,0.2s						
PBDV	**Barranco-do-Ve**	**3.59**	**84**	P	**Pn**	**05 41 38.3**	**+2.0**
PBDV	**Barranco-do-Ve**	**3.59**	**84**	P	**Pn**	**05 41 38.3**	**+2.0**
PBDV				*e*Sn	**Sn**	**05 42 20.6**	**+1.9**
ALMR	**Almeirim**	**3.74**	**53**	*e*S	**Sn**	**05 42 22.2**	**-0.3**
ALMR				AML	AML	05 42 25.0	
	comp=E,12nm,0.4s						
ALMR	**Almeirim**	**3.74**	**53**	*e*Pn	**Pn**	**05 41 41.3**	**+2.9**
ALMR				*e*Sn	**Sn**	**05 42 23.0**	**+0.5**
ALMR	**Almeirim**	**3.74**	**53**	P	**Pn**	**05 41 41.3**	**+2.9**
ALMR				S	**Sn**	**05 42 23.0**	**+0.5**
ALMR	**Almeirim**	**3.74**	**53**	P	**Pn**	**05 41 41.3**	**+2.9**
ALMR				S	**Sn**	**05 42 23.0**	**+0.5**
PBEJ	**Beja**	**3.77**	**72**	*e*Sn	**Sn**	**05 42 23.4**	**+0.3**
PBEJ	**Beja**	**3.77**	**72**	S	**Sn**	**05 42 23.4**	**+0.3**
PBEJ	**Beja**	**3.77**	**72**	S	**Sn**	**05 42 23.4**	**+0.3**
PVAQ	**Vaqueiros**	**3.77**	**82**	*e*Pn	**Pn**	**05 41 39.7**	**+0.9**
PVAQ				*e*Sn	**Sn**	**05 42 23.1**	**-0.1**
PVAQ				A	A	05 42 31.5	
	comp=E,2.4nm,0.2s						
PVAQ	**Vaqueiros**	**3.77**	**82**	P	**Pn**	**05 41 39.7**	**+0.9**
PVAQ				S	**Sn**	**05 42 23.1**	**-0.1**
	comp=E,2.4nm,0.2s						
PVAQ	**Vaqueiros**	**3.77**	**82**	P	**Pn**	**05 41 39.7**	**+0.9**
PVAQ				S	**Sn**	**05 42 23.1**	**-0.1**
	comp=E,2.4nm,0.2s						
EVO	**Evora**	**3.83**	**64**	*e*Sn	**Sn**	**05 42 24.3**	**-0.3**
EVO				A	A	05 42 25.3	
	comp=E,5.3nm,0.1s						
EVO	**Evora**	**3.83**	**64**	S	**Sn**	**05 42 24.3**	**-0.3**
	comp=E,5.3nm,0.1s						
EVO	**Evora**	**3.83**	**64**	S	**Sn**	**05 42 24.3**	**-0.3**
	comp=E,5.3nm,0.1s						
PMTG	**Montargil**	**3.92**	**56**	*e*Pn	**Pn**	**05 41 42.4**	**+1.5**
PMTG				*e*Sn	**Sn**	**05 42 27.5**	**+0.5**
PMTG				A	A	05 42 31.3	
	comp=E,1.4nm,0.2s						
PMTG	**Montargil**	**3.92**	**56**	*e*Pn	**Pn**	**05 41 42.4**	**+1.5**
PMTG				*e*Sn	**Sn**	**05 42 27.5**	**+0.5**
EGRO	**El Granado**	**3.97**	**80**	P	**Pn**	**05 41 42.9**	**+1.4**
	comp=E,0.8nm,0.2s,SNR=5.0						
EGRO				S	**Sn**	**05 42 26.8**	**-1.3**
	comp=E,1.7nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**3.97**	**80**	P	**Pn**	**05 41 42.9**	**+1.4**
	comp=E,0.8nm,0.2s,SNR=5.0						
EGRO				S	**Sn**	**05 42 26.8**	**-1.3**
	comp=E,1.7nm,0.1s,SNR=7.9						
PTOM	**Tomar**	**4.12**	**48**	*e*Sn	**Sn**	**05 42 33.7**	**+1.7**
PTOM	**Tomar**	**4.12**	**48**	S	**Sn**	**05 42 33.7**	**+1.7**
PTOM	**Tomar**	**4.12**	**48**	S	**Sn**	**05 42 33.7**	**+1.7**
PESTR	**Estremoz**	**4.26**	**62**	*e*Pn	**Pn**	**05 41 47.3**	**+1.7**
PESTR				*e*Sn	**Sn**	**05 42 34.8**	**-0.6**
PESTR				A	A	05 42 36.6	
	comp=E,2.8nm,0.6s						
PESTR	**Estremoz**	**4.26**	**62**	*e*Pn	**Pn**	**05 41 47.3**	**+1.7**
PESTR				*e*Sn	**Sn**	**05 42 34.8**	**-0.6**
PBAR	**Barrancos**	**4.44**	**72**	*e*Pn	**Pn**	**05 41 49.9**	**+2.0**
PBAR				*e*Sn	**Sn**	**05 42 39.8**	**+0.2**
PBAR				A	A	05 42 43.9	
	comp=E,3.7nm,0.6s						
PBAR	**Barrancos**	**4.44**	**72**	P	**Pn**	**05 41 49.9**	**+2.0**
PBAR				S	**Sn**	**05 42 39.8**	**+0.2**
	comp=E,3.7nm,0.6s						
PBAR	**Barrancos**	**4.44**	**72**	P	**Pn**	**05 41 49.9**	**+2.0**
PBAR				S	**Sn**	**05 42 39.8**	**+0.2**
	comp=E,3.7nm,0.6s						
EBAD	**Badajoz**	**4.63**	**65**	P	**Pn**	**05 41 51.0**	**+0.4**
	comp=E,1.3nm,0.2s,SNR=7.9						
EBAD				S	**Sn**	**05 42 43.5**	**-1.0**
	comp=E,1.4nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**4.63**	**65**	P	**Pn**	**05 41 51.0**	**+0.4**
	comp=E,1.3nm,0.2s,SNR=7.9						
EBAD				S	**Sn**	**05 42 43.5**	**-1.0**
	comp=E,1.4nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.64**	**78**	P	**Pn**	**05 41 51.2**	**+0.5**
	comp=E,1.0nm,0.2s,SNR=7.9						
EMIN				S	**Sn**	**05 42 43.1**	**-1.5**
	comp=E,0.4nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.64**	**78**	P	**Pn**	**05 41 51.2**	**+0.5**
	comp=E,1.0nm,0.2s,SNR=7.9						
EMIN				S	**Sn**	**05 42 43.1**	**-1.5**
	comp=E,0.4nm,0.1s,SNR=7.9						
PMRV	**Marv??o**	**4.67**	**56**	*e*Pn	**Pn**	**05 41 51.9**	**+0.8**
PMRV				*e*Sn	**Sn**	**05 42 44.0**	**-1.3**
PMRV				A	A	05 42 46.1	
	comp=E,2.6nm,0.2s						
PMRV	**Marv??o**	**4.67**	**56**	P	**Pn**	**05 41 51.9**	**+0.8**
PMRV				S	**Sn**	**05 42 44.0**	**-1.3**
	comp=E,2.6nm,0.2s						
PMRV	**Marv??o**	**4.67**	**56**	P	**Pn**	**05 41 51.9**	**+0.8**
PMRV				S	**Sn**	**05 42 44.0**	**-1.3**
	comp=E,2.6nm,0.2s						
PVIS	**Viseu**	**5.16**	**42**	*e*Sn	**Sn**	**05 42 57.1**	**-0.4**
PVIS	**Viseu**	**5.16**	**42**	S	**Sn**	**05 42 57.1**	**-0.4**
PVIS	**Viseu**	**5.16**	**42**	S	**Sn**	**05 42 57.1**	**-0.4**
ECAB	**El Cabril**	**5.67**	**76**	P	**Pn**	**05 42 05.8**	**+0.9**
	comp=E,1.3nm,0.3s,SNR=6.4						
ECAB				S	**Sn**	**05 43 07.3**	**-2.7**
	comp=E,0.6nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**5.67**	**76**	P	**Pn**	**05 42 05.8**	**+0.9**
	comp=E,1.3nm,0.3s,SNR=6.4						
ECAB				S	**Sn**	**05 43 07.3**	**-2.7**
	comp=E,0.6nm,0.2s,SNR=7.9						
POLO	**Lamas de Olo**	**5.70**	**38**	*e*Pn	**Pn**	**05 42 05.5**	**+0.2**
POLO				*e*Sn	**Sn**	**05 43 09.3**	**-1.5**
POLO	**Lamas de Olo**	**5.70**	**38**	*e*Pn	**Pn**	**05 42 05.5**	**+0.2**
POLO				*e*Sn	**Sn**	**05 43 09.3**	**-1.5**
PCAB	**Cabril**	**5.85**	**34**	*e*Sn	**Sn**	**05 43 12.0**	**-2.5**
PCAB	**Cabril**	**5.85**	**34**	Sn	**Sn**	**05 43 12.0**	**-2.5**
PCAB	**Cabril**	**5.85**	**34**	Sn	**Sn**	**05 43 12.0**	**-2.5**
EPLA	**Plasencia**	**5.86**	**56**	P	**Pn**	**05 42 08.1**	**+0.6**
	comp=E,1.4nm,0.4s,SNR=7.9						
EPLA				S	**Sn**	**05 43 13.7**	**-1.0**
	comp=E,0.6nm,0.1s,SNR=7.9						
EPLA	**Plasencia**	**5.86**	**56**	P	**Pn**	**05 42 08.1**	**+0.6**
	comp=E,1.4nm,0.4s,SNR=7.9						
EPLA				S	**Sn**	**05 43 13.7**	**-1.0**
	comp=E,0.6nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**5.94**	**43**	*e*Pn	**Pn**	**05 42 10.0**	**+1.3**
MVO				*e*Sn	**Sn**	**05 43 15.1**	**-1.7**
MVO				A	A	05 43 17.5	
	comp=E,1.7nm,0.8s						
MVO	**Moncorvo**	**5.94**	**43**	P	**Pn**	**05 42 09.3**	**+0.6**
	comp=E,0.6nm,0.2s,SNR=7.9						
MVO				S	**Sn**	**05 43 15.5**	**-1.3**
	comp=E,0.5nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**5.94**	**43**	P	**Pn**	**05 42 09.3**	**+0.6**
	comp=E,0.6nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**5.94**	**43**	*e*Pn	**Pn**	**05 42 10.0**	**+1.3**
MVO				*e*Sn	**Sn**	**05 43 15.1**	**-1.7**
MVO				S	**Sn**	**05 43 15.5**	**-1.3**
	comp=E,0.5nm,0.1s,SNR=7.9						
PGAV	**Gavieira, Arco**	**5.95**	**31**	*e*Pn	**Pn**	**05 42 10.6**	**+1.8**
PGAV				*e*Sn	**Sn**	**05 43 14.7**	**-2.4**
PGAV	**Gavieira, Arco**	**5.95**	**31**	*e*Pn	**Pn**	**05 42 10.6**	**+1.8**
PGAV				*e*Sn	**Sn**	**05 43 14.7**	**-2.4**
ELOB	**Lobios**	**5.96**	**33**	P	**Pn**	**05 42 08.6**	**-0.3**
	comp=E,0.4nm,0.2s,SNR=7.9						
ELOB				S	**Sn**	**05 43 15.4**	**-1.9**
	comp=E,0.4nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.96**	**33**	P	**Pn**	**05 42 08.6**	**-0.3**
	comp=E,0.4nm,0.2s,SNR=7.9						
ELOB				S	**Sn**	**05 43 15.4**	**-1.9**
	comp=E,0.4nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**6.65**	**40**	P	**Pn**	**05 42 18.7**	**+0.4**
	comp=E,0.7nm,0.3s,SNR=7.9						
ECAL				S	**Sn**	**05 43 32.5**	**-1.7**
	comp=E,2.1nm,0.5s,SNR=7.9						
ECAL	**Calabor**	**6.65**	**40**	P	**Pn**	**05 42 18.7**	**+0.4**

comp=E,0.7nm,0.3s,SNR=7.9
ECAL S Sn 05 43 32.5 -1.7
comp=E,2.1nm,0.5s,SNR=7.9
EAGO Agolada(Pontev 6.73 28 P Pn 05 42 20.1 +0.6
comp=E,0.3nm,0.1s,SNR=7.9
EAGO Agolada(Pontev 6.73 28 P Pn 05 42 20.1 +0.6
comp=E,0.3nm,0.1s,SNR=7.9
PAB San Pablo 6.85 65 S Sn 05 43 35.6 -3.7
comp=E,0.5nm,0.2s,SNR=7.9
PAB San Pablo 6.85 65 S Sn 05 43 35.6 -3.7
comp=E,0.5nm,0.2s,SNR=7.9

*ISCJB **05** 05:49:06.2±0.4, 32.°09N±0.°02×115.°74W±0.°02, h6km±3km, Error ellipse: s-maj=3.7km s-min=2.7km az=153.0*
*NEIC **05** 05:49:08.1±0.0, 32.°09N×115.°73W, h6km, ML2.8(ECX), ML3.0(PAS), After ECX.*
*ECX **05** 05:49:08.1±0.5, 32.°09N×115.°73W, h6km, MD2.8, ML3.0*
*MEX **05** 05:49:09.5±0.5, 32.°17N×115.°69W, h16km±5km, MD3.9*
ISC 05 05:49:05.6±1.1, 32.°09N±0.°02×115.°73W±0.°02, h13km±9km, n57, σ1§38/87, 7C-2D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPBX	Cerro Prieto	0.49	48	eP	Pb	05 49 16.6	+0.5
CPBX				eS	Sb	05 49 23.8	+0.7
MBIG	Mexicali	0.55	55	eP	Pn	05 49 18.0	-1.2
MBIG	Mexicali	0.55	55	i P	Pn	05 49 18.0	-1.2
MBIG				eS	Sb	05 49 23.6	-1.3
SGL	Mount Signal	0.56	0⇑	iP	Pb	05 49 17.5	+0.2
YUH	Yuha Desert	0.58	344	eP	Pb	05 49 17.7	+0.1
YUH	Yuha Desert	0.58	344	ePg	Pb	05 49 17.8	+0.1
RMX	La Rumorosa	0.59	330	eP	Pb	05 49 17.8	-0.1
RMX				eS	Sg	05 49 25.4	+0.4
IKP	In-Ko-Pah, Jac	0.64	330	eP	Pb	05 49 19.1	+0.3
ERPC	Ernies Place	0.65	5	ePg	Pn	05 49 19.8	-0.8
WESC	Westside Schoo	0.67	360⇑	eP	Pn	05 49 19.8	-1.0
WESC	Westside Schoo	0.67	360	ePg	Pn	05 49 20.4	-0.3
WESC				eSg	Sb	05 49 29.5	+1.2
ZAX	El Zacaton	0.74	219⇑	eP	Pb	05 49 21.0	+0.6
ZAX				eS	Sb	05 49 31.4	+0.9
ZAX				IAML		05 49 35.1	
	comp=N,643nm,0.7s						
ZAX				⇑e		05 49 35.1	
CRR	Carrizo Plain	0.82	346	ePg	Pn	05 49 22.5	-0.4
CBX	Cerro Bola	0.82	286⇑	iP	Pn	05 49 22.8	-0.3
CBX				eS	Sb	05 49 34.0	+1.1
CBX				IAML		05 49 35.0	
	comp=N,535nm,0.3s						
CBX				⇓e		05 49 35.0	
CBX	Cerro Bola	0.82	286	ePg	Pn	05 49 22.6	-0.4
CBX				eSg	Sg	05 49 32.9	+0.6
CBX	Cerro Bola	0.82	286	eP	Pn	05 49 22.6	-0.4
CBX				eS	Sg	05 49 32.9	+0.6
ECBX	El Chinero	0.84	137⇓	eP	Pb	05 49 22.0	-0.1
ECBX				eS	Sb	05 49 33.2	-0.2
ECBX				IAML		05 49 38.3	
	comp=N,455nm,0.5s						
ECBX				e		05 49 38.3	
SWSC	Sam W. Stewart	0.85	356	eSg	Sb	05 49 34.1	+0.4
ECNX	Esteban Cantu	0.86	240	eP	Pn	05 49 23.2	-0.3
ECNX				⇑eP	Pb	05 49 22.2	-0.2
TJIG	Tijuana	0.87	293	eP	Pb	05 49 23.1	+0.5
TJIG				eS	Sg	05 49 33.9	+0.1
PBX	Punta Banda	0.92	248	eP	Pn	05 49 24.1	-0.1
CBKC	Canebrake	0.92	331	ePg	Pn	05 49 24.6	+0.3
COA	Coachella	0.93	33	ePg	Pn	05 49 24.3	0.0
BAR	Barrett	0.99	307⇑	eP	Pn	05 49 25.2	-0.1
BAR	Barrett	0.99	307	ePg	Pn	05 49 25.3	0.0
BAR				eSg	Sg	05 49 37.9	+0.2
BAR				eSn	Sb	05 49 38.2	+0.5
SPIG	San Pedro Mart	1.07	168	eP	Pn	05 49 26.7	+0.2
SPIG				eS	Sn	05 49 41.5	+0.1
SPIG	San Pedro Mart	1.07	168	ePg	Pn	05 49 27.2	+0.7
SPIG				eSg	Sn	05 49 40.6	-0.9
SPIG	San Pedro Mart	1.07	168	eP	Pn	05 49 27.2	+0.7
SPIG				eS	Sn	05 49 40.6	-0.9
SPX	San Pedro Mart	1.07	168	eP	Pn	05 49 27.3	+0.7
SPX				eS	Sn	05 49 41.8	+0.3
SPX				IAML		05 49 44.1	
	comp=E,165nm,0.7s						
SPX				e		05 49 44.1	
SPX	San Pedro Mart	1.07	168	ePg	Pn	05 49 27.1	+0.5
SPX				eSg	Sn	05 49 40.5	-0.9
SPX	San Pedro Mart	1.07	168	eP	Pn	05 49 27.1	+0.5
SPX				eS	Sn	05 49 40.5	-0.9
SDRC	San Diego Road	1.21	302	eP	Pg	05 49 29.1	+0.2
GLA	Glamis	1.22	38	ePg	Pn	05 49 28.1	-0.4
GLA				eSn	Sb	05 49 43.0	-1.4
EML	El Monte Cty P	1.23	310	ePg	Pg	05 49 29.6	+0.2
EML				eSn	Sn	05 49 45.3	+0.1
BORC	Borrego Spring	1.31	334	eSg	Sg	05 49 49.1	+1.3
DPP	Dos Picos Cty	1.37	312	ePn	Pg	05 49 31.8	-0.1
DPP				eSn	Sb	05 49 49.1	+0.7
HWB	Hans Werner Br	1.40	312	ePn	Pg	05 49 32.4	0.0
HWB				eSn	Sg	05 49 50.5	0.0
CPE	Camp Elliot	1.41	305	ePn	Pg	05 49 32.4	-0.3
CPE				eSn	Sb	05 49 50.0	+0.3
PLM	Palomar	1.58	323	ePn	Pg	05 49 36.0	+0.1
PLM				eSn	Sg	05 49 56.3	-0.2
PFO	Pinyon Flats O	1.64	338	ePn	Pn	05 49 34.6	+0.3
PFO				eSn	Sn	05 49 54.9	-0.4
SNDA	J Saunders Pla	1.64	333	eSn	Sg	05 49 58.8	+0.5
CRY	Cary Ranch	1.70	330	ePn	Pg	05 49 39.4	+1.2
CRY				eSn	Sg	05 50 00.8	+0.5
113A	Mohawk Valley,	1.79	67	ePn	Pn	05 49 36.6	+0.4
113A				eSn	Sn	05 49 57.0	-1.9
BACC	Bachelor Mtn.	1.88	324	eSn	Sg	05 50 05.0	-1.0
DGR	Domenigoni Val	1.89	326	ePn	Pg	05 49 41.4	-0.5
DGR				eSn	Sg	05 50 05.9	-0.6
HMTC	Hemet	1.94	327	ePn	Pg	05 49 42.7	-0.1
Y12C	Blythe	1.94	31	ePn	Pg	05 49 42.9	+0.1
GMRC	Granite Mounta	2.69	1	ePn	Pn	05 49 46.9	-1.9
PASC	Pasadena Art C	2.92	316	eSn	Sb	05 50 30.6	-2.7
Y14A	Wickenburg	2.94	50	ePn	Pb	05 49 57.6	-0.3
TJR	Tejon Ranch	3.86	320	ePn	Pn	05 50 00.8	-3.9
ARVC	Arvin	3.98	320	eSn	Sn	05 50 52.9	-0.1
X16A	Lo Mia Camp, P	4.28	56	ePn	Pn	05 50 12.8	+2.2
CARC	Carrizo Plain	4.70	314	ePg	Pg	05 50 32.9	-2.7
TPNV	Topopah Spring	4.87	355	ePn	Pn	05 50 16.9	-1.8
TIN	Tinemaha, Big	5.36	338	eSn	Sn	05 51 35.5	+8.3
TIN				eSg	Sb	05 51 40.9	-2.7
KNB	Kanab	5.47	25	ePn	Pn	05 50 30.3	+3.3

*IDC **05** 05:52:13.2±4.2, 23.°39N×126.°15E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.5/62, mbtmp3.7/5, Error ellipse: s-maj=284.4km s-min=20.1km az=65.0*
*JMA **05** 05:52:18.9±0.3, 23.°48N×125.°62E, h87km, M3.1*
ISC 05 05:52:14.2±2.2, 23.°38N±0.°08×125.°87E±0.°06, h11km±13km, n20, σ1§80/29, mb3.7/5, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOGS	Gusukube	1.44	343	P	Pg	05 52 42.2	+0.3
JOGS				S	Sn	05 52 59.8	+0.7
JMJ	Miyako jima 2	1.52	340	P	Pb	05 52 42.7	+0.2
JMJ				S	Sn	05 53 01.2	0.0
JIRB	Irabujima	1.58	336	P	Pn	05 52 43.3	+1.2
JIRB				eS	Sn	05 53 02.0	-0.5
JIKM	Ikemajima	1.64	340	P	Pb	05 52 44.5	0.0
JIKM				eS	Sn	05 53 03.8	-0.3
JTJ	Tarama	1.65	320	P	Pn	05 52 43.9	+0.8
JTJ				eS	Sn	05 53 01.9	-2.4
JIJ	Ishigaki jima	1.86	302	P	Pn	05 52 46.2	+0.2
JIJ				eS	Sn	05 53 06.3	-3.2
JISG	Ishigakijimahi	1.86	311	P	Pn	05 52 46.9	+0.8
JISG				S	Sn	05 53 07.5	-2.1
JKRS	Kuro-shima	1.90	297	P	Pn	05 52 47.1	+0.5
JKRS				S	Sn	05 53 07.6	-3.0
HATJ	Hateruma jima	2.01	290	P	Pn	05 52 47.5	-0.5
HATJ				eS	Sn	05 53 09.3	-3.8
IRIF	Iriomote-Funau	2.17	296	P	Pn	05 52 50.7	+0.4
IRIF				S	Sn	05 53 14.0	-3.3
YOJ	Yonaguni jima	2.83	293	P	Pn	05 52 59.8	+0.5
YOJ				eS	Sn	05 53 28.1	-5.3
JYNG	Yonagunijimaku	2.88	292	eS	Sn	05 53 30.1	-4.6
JKE	Kume jima 2	3.05	16	P	Pb	05 53 04.5	-4.1
JKE				eS	Sn	05 53 37.1	-1.9
JNTH	Nagotoyohara	3.69	32	eS	Sn	05 53 53.3	-1.4
JOW	Kunigami	4.07	32	S	Sn	05 54 02.5	-1.7
MKAR	Makanchi Array	41.92	315	P	P	06 00 07.0	+2.1
	0.5nm,0.5s,baz=108,slow=9.7,SNR=7.2						
ZALV	Zalesovo Beam	43.29	326	P	P	06 00 17.5	+1.7
	0.4nm,0.2s,baz=116,slow=8.2,SNR=4.2						
WRA	Warramunga Arr	43.84	168	P	P	06 00 20.4	-0.2
	1.1nm,0.9s,baz=350,slow=8.8,SNR=5.3						
KURBB	Kurchatov Arra	45.51	319	P	P	06 00 35.5	+1.9
	0.8nm,0.6s,baz=109,slow=8.5,SNR=5.4						
ASAR	Alice Springs	47.41	170	P	P	06 00 49.7	+0.9
	0.5nm,0.8s,baz=353,slow=12,SNR=3.8						

*IDC **05** 06:51:46.4±2.0, 56.°07N×162.°00E, h0km, mb3.3/4, mb1 3.7/5, mb1mx3.3/73, mbtmp3.3/5, ML2.1/1, Error ellipse: s-maj=134.7km s-min=24.7km az=135.0*
*KRSC **05** 06:51:48.0±0.7, 56.°25N×161.°48E, h33km±12km, ML3.7*
ISC 05 06:51:47.2±1.4, 56.°29N±0.°03×161.°49E±0.°04, h10km±10km, n29, σ1§06/48, mb3.4/4, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMKR	Semkarok	0.29	358	eP	Pn	06 51 56.6	-1.0
SMKR				eS	Sb	06 52 02.9	+3.4
BDR	Baidarnaya	0.32	331	eP	Pn	06 51 56.6	-1.4
BDR				eS	Sb	06 52 02.5	+2.2
SRKR	Sorokina	0.40	334	eP	Pb	06 51 57.6	+1.1
SRKR				eS	Sb	06 52 04.7	+2.0
KLY	Klyuchi	0.47	273	eP	Pg	06 51 56.2	-0.1
KLY				eS	Sg	06 52 02.4	0.0
ZLN	Zelenaya	0.47	234	eP	Pb	06 51 58.5	+0.8
ZLN				eS	Sb	06 52 05.7	+1.0
LGNR	Loginova	0.49	245	i P	Pb	06 51 58.7	+0.6
LGNR				eS	Sb	06 52 06.5	+1.0
KRSR	Krestovskiy	0.52	262	eP	Pb	06 51 58.2	-0.3
KRSR				eS	Sb	06 52 05.9	-0.2
BZGR	Bezymyannyi-Gr	0.57	232	eP	Pb	06 51 59.7	+0.4
BZGR				eS	Sb	06 52 08.6	+1.1
BZWR	Bezymyannyi-We	0.65	240	eP	Pb	06 52 00.8	+0.1
BZWR				eS	Sb	06 52 10.4	+0.6
BZMR	Bezymyannaya	0.66	238	eP	Pb	06 52 01.2	+0.2
BZMR				eS	Sb	06 52 10.7	+0.4
KIRR	Kirishev	0.73	242	eP	Pb	06 52 01.9	-0.1
KIRR				eS	Sb	06 52 11.8	-0.3
KBTR	Krutoberegovo	0.75	96	i P	Pb	06 52 03.2	+0.9
KBTR				eS	Sn	06 52 14.7	-0.5
KPT	Kopyto	0.78	246	eP	Pb	06 52 02.6	-0.3
KPT				eS	Sb	06 52 13.5	-0.1
KMNR	Kamenistaya	0.89	233	i P	Pb	06 52 04.6	-0.1
KOZ	Kozyrevsk	0.93	256	eP	Pb	06 52 05.3	-0.2
KOZ				eS	Sb	06 52 18.9	+1.0
TUMD	Tumrok D	1.25	210	eP	Pn	06 52 10.7	-0.1
TUMD				eS	Sb	06 52 27.0	-0.1
TUMR	Tumrok	1.27	217	i P	Pg	06 52 11.4	-0.1
TUMR				eS	Sn	06 52 28.3	+0.2
KZV	Kizimen	1.36	210	i P	Pn	06 52 12.5	+0.1
MKZ	Mys Kozlova	1.75	175	i P	Pn	06 52 17.3	-0.2
MKZ				eS	Sn	06 52 39.0	-0.8
BKI	Bering	2.76	111	eS	Sn	06 53 05.3	+0.5
OSSR	Ossora	3.08	15	eP	Pb	06 52 39.5	-2.6
GNL	Ganaly	3.31	220	i P	Pn	06 52 40.1	+1.0
SPN	Mys Shipunski	3.31	195	eP	Pn	06 52 38.3	-0.8
SPN				eS	Sn	06 53 16.2	-2.2
PETK	Petropavlovsk-	3.88	216	Pn	Pn	06 52 47.5	+0.7
	0.6nm,0.3s,baz=51,slow=14,SNR=4.1						
PETK				Sn	Sn	06 53 33.2	+0.9
	baz=54,slow=15,SNR=1.8						
RUS	Russkaya	4.24	205	eP	Pn	06 52 52.8	+1.0
ILAR	Eielson Array	26.05	50	P	P	06 57 19.5	-0.8
	0.3nm,0.6s,baz=273,slow=6.2,SNR=5.1						
YKA	Yellowknife Ar	40.29	46	P	P	06 59 23.6	-0.4
	0.5nm,0.6s,baz=300,slow=7.7,SNR=6.6						
PDAR	Pinedale Array	55.31	64	P	P	07 01 21.4	+0.4
	0.4nm,0.7s,baz=321,slow=5.1,SNR=2.7						
TXAR	Lajitas Array	68.69	69	P	P	07 02 50.8	0.0
	0.2nm,0.7s,baz=319,slow=3.6,SNR=3.1						

IDC 05 06:59:14.6±5.9, 39.°38N×110.°81E, h0km, mb3.6/3, mb1 3.9/4, mb1mx3.5/65, mbtmp3.7/4, ML3.4/1, Error ellipse: s-maj=124.6km s-min=28.5km az=85.0, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	Songino Array	9.04	341	Pn	Pn	07 01 25.9	-0.5
	0.4nm,0.3s,baz=158,slow=13,SNR=14						
SONM				Lg	Lg	07 03 55.1	
	baz=159,slow=29,SNR=2.0						
MKAR	Makanchi Array	22.02	299	P	P	07 04 10.4	-0.1
	2.1nm,0.9s,baz=96,slow=12,SNR=16						
ZALV	Zalesovo Beam	22.85	318	P	P	07 04 19.6	+0.4
	0.4nm,0.4s,baz=118,slow=9.0,SNR=2.1						
CMAR	Chiang Mai Arr	23.25	210	P	P	07 04 23.5	0.0
	1.2nm,0.3s,baz=12,slow=10,SNR=6.6						

*ISCJB **05** 07:06:59.1±0.6, 1.°82N±0.°05×98.°12E±0.°06, h46km, mb3.8/5, Error ellipse: s-maj=8.7km s-min=6.4km az=23.8*
*DJA **05** 07:06:59.4±0.9, 2.°N±4.°×9.°8E±.°, h25km±13km, M4.1/11, mb4.6/1, MLv3.8/11*
*IDC **05** 07:07:02.3±4.1, 1.°89N×98.°48E, h88km±25km, mb3.5/5, mb1 3.5/5, mb1mx3.2/69, mbtmp3.8/5, Error ellipse: s-maj=74.8km s-min=20.6km az=61.0*
ISC 05 07:06:58.2±0.9, 1.°81N±0.°05×98.°10E±0.°06, h46km, n15, σ2§18/16, mb3.9/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	Gunungsitoli	0.72	227	P	Pn	07 07 13.1	+1.0
GSI				S	Sn	07 07 24.0	+1.8
PSI	Prapat	1.28	40	P	Pn	07 07 21.6	+1.7
	13nm,0.3s,baz=180,slow=6.4,SNR=14						
PSI				S	Sn	07 07 35.6	-0.4
	28nm,0.3s,baz=180,slow=8.9,SNR=13						
TPTI		1.71	327	P	Pn	07 07 27.3	+1.7
KCSI	Kotacane, Aceh	1.74	349	P	Pn	07 07 28.5	+2.5
TSI	Tuntungan	1.75	15	P	Pn	07 07 29.0	+2.9
MNSI	Mandailing Nat	1.78	124	P	Pn	07 07 27.9	+1.3
MLSI	Meulaboh, Aceh	2.98	325	P	Pn	07 07 44.5	+1.5
PDSI	Padang	3.58	139	P	Pn	07 07 54.4	+3.1
MASI	Maura Aman, Be	6.42	140	P	Pn	07 08 33.5	+3.2
WSI	Waingapu	24.87	118	P	P	07 12 29.7	+13
WRA	Warramunga Arr	41.60	123	P	P	07 14 39.9	-2.2
	0.8nm,0.5s,baz=302,slow=9.0,SNR=5.5						
ASAR	Alice Springs	43.05	128	P	P	07 14 51.2	-2.6
	0.1nm,0.3s,baz=306,slow=8.0,SNR=3.7						
SONM	Songino Array	46.41	8	P	P	07 15 19.9	-0.4
	0.6nm,0.4s,baz=200,slow=7.3,SNR=4.5						
MKAR	Makanchi Array	46.88	345	P	P	07 15 23.1	-0.9
	1.0nm,0.5s,baz=152,slow=9.0,SNR=6.0						
ZALV	Zalesovo Beam	53.11	350	P	P	07 16 10.6	-0.4
	1.5nm,0.4s,baz=173,slow=5.8,SNR=4.0						

NNC 05 07:10:55.8±3.8, 53.°37N×90.°17E, h0km, mb3.8, mpv3.5, 3C-6D, Error ellipse: s-maj=31.5km s-min=23.0km az=83.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	3.24	282	⇓Pn	Pn	07 11 48.7	+0.9
	13nm,0.8s						
ZAA0				⇑Lg	Lg	07 12 38.4	
	24nm,0.8s						
KURBB	Kurchatov Arra	7.69	254	⇓Pn	Pn	07 12 46.5	-2.5
	2.6nm,0.7s						
KURBB				⇑Sn	Sn	07 14 16.8	0.0
	23nm,0.8s						
KURBB				⇓Lg	Lg	07 15 01.1	
	47nm,0.9s						
MK31	Makanchi Array	8.30	221	⇓Pn	Pn	07 12 56.4	-1.0
	0.7nm,0.6s,baz=42,slow=14,SNR=12						
MK31				⇓Sn	Sn	07 14 35.5	+3.6
	2.3nm,0.8s,baz=41,slow=28,SNR=4.5						
MK31				⇑Lg	Lg	07 15 19.4	
	10nm,0.9s,baz=46,slow=34,SNR=5.1						
MAKZ	Makanchi	8.41	222	⇓Lg	Lg	07 15 24.0	
	7.4nm,1.1s						

*MOS **05** 07:20:45.3±1.1, 18.°02S×168.°39E, h33km, mb5.2/20, Error ellipse: s-maj=11.2km s-min=10.6km az=56.0*
*IDC **05** 07:20:48.7±2.7, 18.°08S×168.°43E, h50km±23km, mb4.4/24, mb1 4.5/25, mb1mx4.4/43, mbtmp4.7/25, ML5.0/1, MS4.0/19, Ms1 4.0/19, ms1mx3.7/49, Error ellipse: s-maj=16.6km s-min=12.5km az=80.0*
*ISCJB **05** 07:20:49.9±0.2, 18.°13S±0.°03×168.°27E±0.°04, h69km, mb4.9/83, Error ellipse: s-maj=6.0km s-min=4.8km az=164.5*
*BJI **05** 07:20:52.9, 17.°96S×168.°07E, h80km, mb4.8/39, mB5.1/25, Ms5.0/10, Ms7 4.7/6*
*NEIC **05** 07:20:52.6±0.7, 18.°11S×168.°32E, h81km±6km, mb5.2/50, Error ellipse: s-maj=5.3km s-min=5.1km az=222.0*
NEIC Felt [III] at Port-Vila.
*GCMT **05** 07:20:52.6±0.4, 18.°20S×168.°19E, h68km±4km, MW4.9/60, Moment Tensor Solution. s18,c24; s60,c83; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.34±.18; $M_{\theta\theta}$1.08±.17; $M_{\phi\phi}$-1.42±.17; $M_{r\theta}$-0.16±.10; $M_{\theta\phi}$2.06±.10; $M_{\phi r}$-1.57±.09; Best double couple: $M_0$2.87000×10^{16} NP1:ϕ_s194.00000°, δ88.00000°, λ147.00000°. NP2: ϕ_s285.00000°, δ57.00000°, λ2.00000°. Principal axes: T 2.6520, Plg24.0000°, Azm144.0000°; N 0.4410, Plg57.0000°, Azm11.0000°; P -3.0880, Plg21.0000°, Azm244.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 05 07:20:51.3±0.3, 18.°16S±0.°05×168.°31E±0.°06, h69km, n195, σ1§48/191, mb5.0/83, 11C-4D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.27	204	P	Pn	07 21 52.0	-1.9
	86nm,0.3s,baz=54,slow=8.1,SNR=980						
DZM				S	Sn	07 22 38.8	-3.7
	95nm,0.3s,baz=136,slow=22,SNR=10						
DZM				LR	LR	07 23 25.5	
	comp=Z,1μm,22.0s,baz=44,slow=36						
DZM	Mont Dzumac	4.27	204	ePn	Pn	07 21 51.7	-2.2
	398nm,0.3s						
DZM				eSn	Sn	07 22 39.1	-3.4
	269nm,0.2s						
DZM	Mont Dzumac	4.27	204	ePn	Pn	07 21 51.6	-2.2
DZM				eSn	Sn	07 22 41.6	-0.8
MSVF	Nonsavu	9.28	89	ePn	Pn	07 23 05.6	+3.2
MSVF	Nonsavu	9.28	89⇑	eP	Pn	07 23 03.7	+1.3
HNR	Honiara	11.88	316	P	Pn	07 23 39.1	+1.3
	55nm,0.3s,baz=104,slow=8.3,SNR=3.8						
HNR				S	Sn	07 25 42.7	-6.0
	10nm,0.3s,baz=162,slow=20,SNR=1.9						
HNR				LR	LR	07 27 50.9	
	comp=Z,529nm,19.9s,baz=146,slow=36						
RAO	Raoul Island	16.74	134	LR	LR	07 30 14.5	
	comp=Z,169nm,18.2s,baz=300,slow=34						
EIDS	Eidsvold	17.53	243	ePn	P	07 24 53.8	+2.5
	205nm,1.4s						
OUZ	Omahuta	17.63	166	eP	P	07 24 53.2	+0.9
	183nm,1.7s						
ARMA	Armidale	19.47	228	eP	Pn	07 25 15.7	+1.3
	179nm,1.5s						
AFI	Afiamalu	19.60	80	ePP	pP	07 25 28.2	-0.2
AFI	Afiamalu	19.60	80	eP	pP	07 25 28.2	-0.2
CTA	Charters Tower	20.93	261	P	P	07 25 29.6	+1.2
	41nm,1.1s,baz=86,slow=13,SNR=21						
CTA				LR	LR	07 32 48.5	
	comp=Z,622nm,18.0s,baz=96,slow=34						
CTAO	Charters Tower	20.93	261	eP	P	07 25 29.9	+1.4
	48nm,0.9s						
CTAO	Charters Tower	20.93	261	eP	P	07 25 29.9	+1.4
CTAO				pmax	pmax		
	comp=Z,48nm,0.9s						
HIZ	Hauiti	21.07	166	eP	P	07 25 34.8	+5.1
	comp=Z,113nm,0.9s						
URZ	Urewera	21.45	161	P	P	07 25 34.6	+0.8
	comp=Z,51nm,0.8s,baz=105,slow=1.7,SNR=7.9						
BKZ	Black Stump Fm	22.11	163	eP	P	07 25 41.7	+0.8
	comp=Z,47nm,0.7s						
PMG	Port Moresby	22.29	290	P	P	07 25 45.4	+2.4
	comp=Z,30nm,0.9s,baz=93,slow=1.3,SNR=5.7						
PMG				LR	LR	07 33 05.6	
	comp=Z,449nm,19.4s,baz=166,slow=33						
PMG	Port Moresby	22.29	290	eP	P	07 25 45.5	+2.4
	comp=Z,33nm,0.9s						
PMG	Port Moresby	22.29	290	eP	P	07 25 45.5	+2.4
PMG				pmax	pmax		
	comp=Z,33nm,0.9s						
BFZ	Birch Farm	23.46	165	eP	P	07 25 54.1	-0.5
	comp=Z,102nm,1.4s						
SNZO	South Karori	23.72	168	eP	P	07 25 57.3	+0.4
	comp=Z,107nm,1.0s						
THZ	Tophouse	23.85	171	eP	P	07 25 59.4	+1.2
	comp=Z,207nm,1.5s						
CAN	Canberra	24.21	221	eP	P	07 26 02.8	+1.3
	comp=Z,118nm,1.4s						
CAN	Canberra	24.21	221	eP	P	07 26 02.8	+1.3
CAN				pmax	pmax		
	comp=Z,118nm,1.4s						
COEN	Coen	24.50	276	eP	P	07 26 04.7	+0.4
	comp=Z,29nm,0.9s						
KHZ	Kahutara	24.59	171	eP	P	07 26 04.5	-0.3
	comp=Z,156nm,1.5s						
LTZ	Lake Taylor	24.77	173	eP	P	07 26 07.2	+0.7
	comp=Z,79nm,0.9s						
OXZ	Oxford	25.29	174	eP	P	07 26 11.4	+0.2
	comp=Z,204nm,1.8s						
FOZ	Fox Glacier	25.33	177	eP	P	07 26 12.8	+1.3
	comp=Z,340nm,1.8s						
RPZ	Rata Peaks	25.58	175	P	P	07 26 14.4	+0.6
	comp=Z,8.8nm,0.3s,baz=32,slow=3.2,SNR=6.8						
RPZ				LR	LR	07 35 44.6	
	comp=Z,346nm,19.9s,baz=313,slow=35						
RPZ	Rata Peaks	25.58	175	eP	P	07 26 14.7	+0.8
	comp=Z,186nm,1.7s						
MQZ	McQueen's Vall	25.73	173	eP	P	07 26 15.5	+0.4
	comp=Z,135nm,1.5s						
LBZ	Lake Benmore	26.20	177	eP	P	07 26 20.1	+0.7
	comp=Z,126nm,1.6s						
STKA	Stephens Creek	27.70	235	P	P	07 26 34.0	+0.9
	comp=

comp=Z,533nm,20.7s,baz=85,slow=35
FITZ Fitzroy Crossi 40.48 263 *e*P **P 07 28 24.0 +0.4**
comp=Z,124nm,0.8s
SOEI Soe 43.46 275 P P 07 28 54.7 +6.6
BATI Baumata 43.91 274 P **P 07 28 52.8 +1.2**
comp=Z,68nm,0.7s,baz=101,slow=5.2,SNR=5.9
BATI LR LR 07 46 18.4
comp=Z,274nm,20.1s,baz=126,slow=35
MBWA Marble Bar 45.71 258 *e*P **P 07 29 06.1 +0.4**
comp=Z,88nm,0.9s
NWAO Narrogin (SRO) 47.93 242 P **P 07 29 22.8 -0.2**
comp=Z,70nm,0.7s,baz=320,slow=7.0,SNR=31
NWAO LR LR 07 50 22.8
comp=Z,161nm,18.5s,baz=338,slow=37
NWAO Narrogin (SRO) 47.93 242 *e*P **P 07 29 22.8 -0.2**
comp=Z,86nm,0.8s
BKSI Bulukumba 48.72 279 P **P 07 29 29.6 +0.3**
comp=Z,15nm,1.1s
APSI Ampana 48.90 285 P **P 07 29 31.5 +0.8**
comp=Z,45nm,1.3s,comp=Z,584nm
SPSI Sidrap Palu 49.51 281 P **P 07 29 36.0 +0.7**
TTSI Tana Toraja 49.79 282 P **P 07 29 40.1 +2.7**
PLAI Plampang 49.87 274 P **P 07 29 38.2 +0.1**
PCI Palu 50.57 284 P **P 07 29 45.2 +1.8**
TAOE Nuku Hiva Isla 50.82 87 *e*LR LR 07 44 24.4
comp=Z,552nm,28.2s
IGBI Denpasar 52.37 273 P **P 07 29 57.3 +0.5**
RKT Rikitea 53.04 106 *e*LR LR 07 45 16.6
comp=Z,298nm,26.5s
JAGI Jajag, Banyuwa 53.41 273 *e*P **P 07 30 03.5 -1.0**
comp=Z,31nm,0.9s
UGM Wanagama 57.01 272 *e*P **P 07 30 30.9 +0.4**
comp=Z,179nm,1.4s
JOW Kunigami 59.24 318 *e*P **P 07 30 43.4 -2.3**
comp=Z,231nm,1.6s
VNDA Vanda 59.48 182 P **P 07 30 46.6 0.0**
comp=Z,2.1nm,0.6s,baz=1.7,slow=6.5,SNR=9.0
VNDA Vanda 59.48 182 *e*P **P 07 30 46.9 +0.3**
comp=Z,7.7nm,1.4s
VNDA Vanda 59.48 182 *e*P **P 07 30 46.9 +0.3**
VNDA pmax pmax
comp=Z,8.0nm,1.4s
CISI Cisompet, Garu 59.69 272 *e*P **P 07 30 49.1 -0.1**
comp=Z,61nm,0.8s
SBA Scott Base 59.73 180 P **P 07 30 49.6 +1.3**
comp=Z,12nm,0.8s
SBA Scott Base 59.73 180 *e*P **P 07 30 49.6 +1.3**
SBA pmax pmax
comp=Z,12nm,0.8s
LEM Lembang 60.08 273 P **P 07 30 52.7 +0.7**
comp=Z,82nm,0.7s,baz=60,slow=8.1,SNR=13
LEM LR LR 07 57 34.9
comp=Z,119nm,19.8s,baz=106,slow=37
KSM Kuching 60.28 283 *e*P **P 07 30 52.7 -0.4**
comp=Z,55nm,0.8s
CASY Casey 60.76 203 *e*P **P 07 30 55.7 +0.1**
comp=Z,7.6nm,0.6s
MJAR Matsushiro Arr 61.39 333 P **P 07 30 59.0 -1.2**
comp=Z,0.8nm,0.4s,baz=178,slow=8.2,SNR=5.1
MAJO Matsushiro 61.39 333⇑*e*P **P 07 31 01.8 +1.6**
MAJO pmax pmax
comp=Z,5.0nm,1.1s
JNU Nakatsue 62.28 325 P **P 07 31 05.2 -1.1**
comp=Z,12nm,1.0s,baz=68,slow=8.5,SNR=3.7
JNU LR LR 07 55 22.8
comp=Z,56nm,21.4s,baz=117,slow=33
JNU Nakatsue 62.28 325 *e*P **P 07 31 06.1 -0.1**
comp=Z,33nm,1.3s
ASAJ Asahikawa 66.29 340 P **P 07 31 32.8 +0.6**
comp=Z,9.4nm,0.9s,baz=151,slow=13,SNR=3.9
ASAJ Asahikawa 66.29 340 *e*P **P 07 31 33.5 +1.4**
comp=Z,49nm,1.5s
TJN Taejon 66.63 325⇑*e*P **P 07 31 34.0 -0.5**
KSRS Korea Array 67.12 326 P **P 07 31 37.5 -0.1**
comp=Z,2.4nm,0.7s,baz=149,slow=6.2,SNR=10
KSAR Wonju Array Be 67.14 326 P **P 07 31 37.5 -0.1**
KSAR Wonju Array Be 67.14 326 P **P 07 31 37.6 -0.1**
KS01 Wonju Array Si 67.16 326 *e*P **P 07 31 37.3 -0.6**
NJ2 Nanjing 68.82 316 *e*P **P 07 31 49.6 +1.2**
NJ2 pmax pmax
comp=Z,23nm,0.5s
USRK Ussuriysk Ar. 70.38 333 P **P 07 31 57.8 +0.1**
comp=Z,2.3nm,0.6s,baz=129,slow=8.0,SNR=4.2
PSI Prapat 71.38 279 LR LR 08 06 05.6
comp=Z,172nm,18.4s,baz=266,slow=38
PEA0B Petropavlovsk- 71.56 353 *e*P **P 07 32 04.5 -0.3**
comp=Z,40nm,1.3s
PETK Petropavlovsk- 71.56 353 P **P 07 32 04.2 -0.5**
comp=Z,4.1nm,0.8s,baz=162,slow=6.2,SNR=4.0
PETK LR LR 07 57 41.2
comp=Z,98nm,20.7s,baz=167,slow=31
PETK Petropavlovsk- 71.56 353 *e*P **P 07 32 04.9 +0.2**
MDJ Mudanjiang 71.76 332 P **P 07 32 08.3 +2.2**
MDJ pmax pmax
comp=Z,11nm,0.6s
QSPA South Pole Qui 71.89 180 P **P 07 32 06.7 -0.2**
comp=Z,11nm,0.9s,baz=12,slow=3.5,SNR=28
CHBT CHBT 71.96 290 P **P 07 32 04.8 -3.1**
comp=Z,316nm,0.8s
GSI Gunungsitoli 72.14 277 *e*P **P 07 32 09.7 +0.5**
comp=Z,45nm,0.9s
GYA Guiyang 74.48 305 *e*P **P 07 32 25.2 +2.4**
GYA pP sP 07 32 46.4 -2.5
GYA sP pP 07 32 55.6 +14
GYA PP **PP 07 35 14.0 +3.8**
GYA S **S 07 41 51.8 -1.0**
GYA SKS **SKSac 07 42 20.2 -5.1**
GYA pmax pmax
comp=Z,30nm,1.0s
GYA pmax pmax
comp=Z,140nm,5.4s
KLR Kul'dur 74.53 336⇓*e*P **P 07 32 22.2 -0.2**
RPN Rapa Nui 75.33 114 LR LR 07 59 34.5
comp=Z,80nm,20.1s,baz=176,slow=31
BJI Beijing 75.55 321 P **P 07 32 28.4 0.0**
BJI pmax pmax
comp=Z,21nm,0.8s
XAN Xi'an 76.74 313 P **P 07 32 35.6 +0.2**
XAN pP pP 07 32 54.9 +0.8
XAN pmax pmax
comp=Z,5.0nm,1.0s
KMI Kunming 76.96 302 P **P 07 32 38.4 +1.4**
KMI sP sP 07 33 09.2 +5.9
KMI pmax pmax
comp=Z,13nm,0.9s
CM01 Chiang Mai Arr 77.23 294 *e*P **P 07 32 39.5 +1.1**
CMAR Chiang Mai Arr 77.26 294 P **P 07 32 39.7 +1.1**
comp=Z,2.5nm,0.4s,baz=127,slow=4.6,SNR=12
CMAR Chiang Mai Arr 77.26 294 *i* P **P 07 32 40.0 +1.4**
CMAR pmax pmax
comp=Z,3.0nm,0.4s
HHC Hu-ho-hao-te 78.83 320 *e*P **P 07 32 50.3 +3.3**
HHC PP **PP 07 35 52.0 +5.4**
HHC S **S 07 42 41.6 +1.9**
HHC sS sS 07 43 16.5 +5.0
HHC pmax pmax
comp=Z,13nm,1.1s
HHC pmax pmax
comp=Z,86nm,5.7s
HHC LR LR
comp=Z,68nm,15.7s
HHC LR LR
comp=Z,52nm,14.7s
CD2 Chengdu 78.88 308 P **P 07 32 47.4 0.0**
CD2 pmax pmax
comp=Z,20nm,0.9s
MAW Mawson 79.10 202 P **P 07 32 48.7 +0.9**
comp=Z,5.8nm,0.8s,baz=109,slow=4.5,SNR=13
MAW Mawson 79.10 202 *e*P **P 07 32 49.1 +1.2**
comp=Z,1.5nm,0.8s
MAW Mawson 79.10 202 *e*P **P 07 32 49.1 +1.2**
MAW pmax pmax
comp=Z,2.0nm,0.8s
LZH Lanzhou 81.36 312 *e*P **P 07 33 02.0 +1.3**
LZH pP pP 07 33 23.2 +3.6
LZH sP sP 07 33 31.4 +4.3
LZH pmax pmax
comp=Z,22nm,1.0s
SEY Seymchan 81.79 353⇓*e*P **P 07 33 00.8 -1.4**
ULN Ulaanbaatar 85.48 324 *e*P **P 07 33 20.9 -0.7**
comp=Z,6.1nm,0.8s
ULN Ulaanbaatar 85.48 324 *d i*P **P 07 33 21.1 -0.5**
ULN pmax pmax
comp=Z,5.0nm,0.9s
YAK Yakutsk 85.58 343 *e*P **P 07 33 20.5 -1.1**
YAK pmax pmax
comp=Z,20nm,1.1s
YAK pmax pmax
comp=N,3.0nm,1.0s
SYO Syowa Base 85.72 196⇑*e*P **P 07 33 20.4 -1.9**
GTA Gaotai 85.75 314 *e*P **P 07 33 23.4 +0.3**
GTA pP pP 07 33 43.9 +1.8
GTA sP sP 07 33 51.1 +1.5
GTA pmax pmax
comp=N,10.0nm,1.0s
GTA pmax pmax
comp=N,130nm,7.9s
GTA LR LR
comp=N,190nm,18.5s
GTA LR LR
comp=N,240nm,17.5s
SONM Songino Array 85.83 323 P **P 07 33 22.8 -0.6**
comp=N,3.1nm,0.9s,baz=142,slow=5.9,SNR=11
SONA1 Songino Array 85.83 323 *e*P **P 07 33 22.8 -0.5**
RDG13 Poverty Ridge 85.87 49 *e*P **P 07 33 24.7 +0.9**
comp=N,50nm,1.6s
BILL Bilibino 85.96 359⇑*i*P **P 07 33 22.7 -0.7**
BILL *i* 07 36 39.5
BILL pmax pmax
comp=Z,4.0nm,0.9s
KHMM Horse Mountain 86.06 45 *e*P **P 07 33 25.8 +1.1**
comp=Z,119nm,1.9s
AFDM Forest Hills D 87.08 47 *e*P **P 07 33 29.3 -0.2**
comp=Z,12nm,1.5s
CMB Columbia Colle 87.10 48 *e*P **P 07 33 29.1 -0.6**
comp=Z,4.9nm,0.8s
CMB Columbia Colle 87.10 48 *e*P **P 07 33 29.1 -0.6**
CMB pmax pmax
comp=Z,5.0nm,0.8s
BEKR Beckworth 87.91 47 *e*P **P 07 33 33.6 -0.1**
comp=Z,4.1nm,0.9s
WAKR Walker 87.97 48 *e*P **P 07 33 34.8 +0.7**
comp=Z,19nm,1.8s
NVAR Mina Array Bea 88.75 49 P **P 07 33 37.9 +0.1**
comp=Z,0.9nm,0.3s,baz=230,slow=8.9,SNR=3.8
NV11 Mina Array Sit 88.86 49 *e*P **P 07 33 38.8 +0.6**
comp=Z,1.0nm,1.6s
ZAK Zakamensk 88.91 325 *e*P **P 07 33 36.8 -1.3**
ZAK pmax pmax
comp=Z,20nm,1.4s
KVN Kaiserville 89.15 48 *e*P **P 07 33 39.7 +0.1**
comp=Z,8.4nm,1.5s
KVN Kaiserville 89.15 48 *e*P **P 07 33 39.7 +0.1**
KVN pmax pmax
comp=Z,8.0nm,1.5s
TLY Talaya 89.38 326 *e*P **P 07 33 38.4 -1.7**
TLY pmax pmax
comp=Z,3.0nm,0.8s
ILAR Eielson Array 89.47 18 P **P 07 33 38.0 -2.2**
comp=Z,0.4nm,0.6s,baz=233,slow=4.9,SNR=6.6
NVL N'lazarevskaya 89.81 188 *e*P **P 07 33 42.9 +1.0**
NVL pmax pmax
comp=Z,10.0nm,0.8s
SNAA Sanae 90.19 183 P **P 07 33 42.8 -1.1**
SNAA Sanae 90.19 183 P **P 07 33 42.9 -0.9**
comp=Z,3.2nm,0.6s,baz=187,slow=7.1,SNR=24
SNAA Sanae 90.19 183 *e*P **P 07 33 43.1 -0.6**
comp=Z,9.5nm,1.3s
SNAA Sanae 90.19 183⇑*e*P **P 07 33 43.2 -0.6**
VNA3 Neumayer Olymp 90.82 181 P **P 07 33 45.4 -1.2**
VNA2 Neumayer--Watz 91.10 181 P **P 07 33 47.6 -0.3**
baz=169,slow=4.0
VNA1 Neumayer--Stat 91.39 181 P **P 07 33 50.3 +1.0**
U15A North Rim 92.41 53 *e*P **P 07 33 55.9 +0.9**
comp=Z,19nm,1.9s
WMQ Urumqi 95.83 314 P **P 07 34 11.3 +1.1**
WMQ sP sP 07 34 42.3 +5.5
WMQ pmax pmax
comp=Z,41nm,1.3s
WMQ pmax pmax
comp=Z,280nm,6.7s
WMQ LR LR
comp=Z,360nm,20.3s
WMQ LR LR
comp=Z,310nm,27.5s
WMQ LR LR
comp=Z,260nm,26.7s
ANMO Albuquerque 96.42 55⇑*e*P **P 07 34 10.9 -2.3**
ANMO pmax pmax
comp=Z,1.0nm,1.2s
TXAR Lajitas Array 97.03 62 P **P 07 34 14.0 -2.0**
comp=Z,0.2nm,0.7s,baz=260,slow=5.4,SNR=2.5
YKA Yellowknife Ar 100.12 27 P **Pdif 07 34 27.1 -1.8**
comp=Z,0.2nm,0.7s,baz=255,slow=4.8,SNR=5.6
MK01 Makanchi Array 100.34 316 *e*Pdif **Pdif 07 34 29.9 -0.4**
MKAR Makanchi Array 100.35 316 P **Pdif 07 34 29.9 -0.5**
comp=Z,0.7nm,0.5s,baz=91,slow=6.6,SNR=9.1
ZALV Zalesovo Beam 100.73 323 P **Pdif 07 34 30.4 -1.4**
comp=Z,0.4nm,0.2s,baz=150,slow=6.0,SNR=3.2
ARCES ARCESS Array B 123.81 345 PKP **PKPdf 07 39 39.3 -1.4**
comp=Z,1.0nm,0.3s,baz=80,slow=2.2,SNR=13
FINES FINESS Array B 129.26 338 PKP **PKPdf 07 39 52.2 +1.0**
comp=Z,1.2nm,0.7s,baz=65,slow=6.6,SNR=3.3
BRTR Keskin Array B 135.46 309 PKP **PKPdf 07 40 02.8 -1.0**
comp=Z,0.6nm,0.8s,baz=29,slow=4.1,SNR=4.0
CONA Conrad Observa 142.77 329 *e*PKPdf **PKPdf 07 40 15.4 -1.4**
comp=Z,8.7nm,0.9s
GERES GERESS Array B 143.13 332 PKhKP PKPpre 07 40 13.3
comp=Z,1.2nm,0.6s,baz=34,slow=3.7,SNR=2.5
ARSA Arzberg 143.40 328 *e*PKPdf PKPbc 07 40 15.7 +0.5
comp=Z,0.2nm,0.3s
MOA Molln 143.59 330 *e*PKPdf PKPbc 07 40 16.0 +0.3
comp=Z,4.0nm,0.8s
SOKA Soboth 144.04 328 *e*PKPdf **PKPab 07 40 16.5 -0.1**
comp=Z,7.8nm,0.7s
KBA Koelnbreinsper 144.58 330 *e*PKPab **PKPab 07 40 17.5 -1.3**
comp=Z,7.3nm,0.6s
MEM Membach 144.68 340⇑PKP **PKPab 07 40 17.5 -1.2**
MEM Membach 144.68 340⇑PKiKP **PKiKP 07 40 23.1 -0.6**
LJU Ljubljana 144.73 328 *i* PKPbc **PKPab 07 40 18.8 -0.4**
MYKA Terra Mystica 144.76 329 *e*PKPab **PKPab 07 40 18.5 -0.8**
comp=Z,5.9nm,0.5s
CRNS Crni Vrh 144.84 328 *i* PKPbc **PKPab 07 40 18.8 -0.8**
GBAS Gorenja Brezov 144.84 328 *i* PKPbc **PKPab 07 40 18.9 -0.7**
ITM Ithomi 144.97 310 *e*PKPbc PKPbc 07 40 19.4 -0.9
BCLA Clavier 145.06 341⇑PKP **PKPbc 07 40 19.3 -0.8**
WATA Walderalm 145.21 332 *e*PKPdf **PKPbc 07 40 20.2 -0.7**
comp=Z,6.1nm,0.5s
ABTA Abfaltersbach 145.21 330 *e*PKPab **PKPbc 07 40 19.7 -1.2**
comp=Z,16nm,0.6s
WTTA Wattenberg 145.23 332 *e*PKPbc **PKPbc 07 40 18.2 -2.8**
comp=Z,7.1nm,0.8s
MOTA Moosalm 145.41 332 *e*PKPbc **PKPdf 07 40 19.8 -1.8**
comp=Z,20nm,0.8s
WLF Walferdange 145.44 339⇑PKP **PKPbc 07 40 21.4 0.0**
WLF Walferdange 145.44 339 *e*PKPdf **PKPab 07 40 21.6 -0.1**
WLF Walferdange 145.44 339 *e*PKiKP **PKPab 07 40 21.6 -0.1**
RETA Reutte 145.45 333 *e*PKPbc **PKPdf 07 40 18.8 -2.7**
comp=Z,14nm,1.1s
DOU Dourbes 145.56 341⇓PKP **PKPdf 07 40 20.8 -0.7**
BFO Black Forest 145.78 336 *e*PKPdf **PKPdf 07 40 22.0 0.0**
BFO Black Forest 145.78 336 *e*PKP2 **PKPdf 07 40 22.0 0.0**
FETA Feichten 145.82 332 *e*PKPab **PKPdf 07 40 22.3 +0.1**
comp=Z,20nm,1.1s
DAVA Damuels 145.98 333 *e*PKPab **PKPdf 07 40 22.3 -0.2**
comp=Z,5.6nm,0.7s
RCBR Riachuelo 146.25 133 *e*PKPdf **PKPbc 07 40 25.0 0.0**
FUORN Ofenpass-Fuorn 146.33 332 *e*PKPdf **PKPbc 07 40 24.5 -0.1**
TUE Stuetta 146.85 333 *e*PKPbc **PKPbc 07 40 26.4 +0.4**
TIP Timpagrande 147.64 316 *e*PKPbc **PKPbc 07 40 28.3 0.0**
SENIN Lac Senin/Sane 147.79 335 *e*PKPbc **PKPbc 07 40 27.9 -0.7**
VLC Villacolleman d 148.13 329 *e*PKPbc **PKPbc 07 40 28.8 -0.5**
BNI Bardonecchia 149.11 334 *e*PKPbc **PKPbc 07 40 32.6 +0.7**
BNI Bardonecchia 149.11 334 *e*PKP2 **PKPbc 07 40 32.7 +0.7**
VSL Villasalto 151.98 324 *e*PKPbc **PKPbc 07 40 37.9 -0.9**
ESDC Sonseca Array 157.54 344 PKPab **PKPab 07 41 10.4 -1.5**
comp=Z,0.2nm,0.3s,baz=354,slow=5.2,SNR=2.8
TORD Torodi Ar. Bea 166.18 251 PKP **PKPdf 07 40 48.1 -1.3**
comp=Z,1.3nm,0.8s,baz=130,slow=0.7,SNR=6.1
TORD PKPab **PKPab 07 41 49.9 -0.6**
comp=Z,1.9nm,0.8s,baz=108,slow=4.1,SNR=6.4

*NEIC **05** 07:32:31.6±0.8, 12°.81N×89°.40W, h35km, mb4.2/9, MD4.4(SNET), Error ellipse: s-maj=12.7km s-min=6.6km az=202.0*
NEIC Felt [II] at San Salvador.
*ISCJB **05** 07:32:32.5±0.8, 12°.90N±0°.07×89°.27W±0°.06, h59km±6km, mb4.1/9, Error ellipse: s-maj=14.1km s-min=4.4km az=37.7*

*UCR **05** 07:32:33.5±1.4, 12°.94N×89°.25W, h40km±5km, MD4.0, ML4.3, mb4.2(NEIC)*
ISC 05 07:32:32.9±1.6,**12°.91N**±0°.09×**89°.31W**±0°.08,**h51**km±13km, **n65**,σ0§**92**/71,**mb4.2**/9,**2C-17D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIES	**Las Flores**	**0.60**	**25**	⇓*i*P	**Pn**	**07 32 45.2**	**-0.3**
AIES				AML	AML	07 32 45.4	
	comp=Z,13μm,0.2s						
UESV	**Ojushtada**	**0.69**	**47**	*e*P	**Pn**	**07 32 48.7**	**+2.0**
UESV				IAML		07 33 01.6	
	comp=Z,4μm,0.3s						
LFRS	**El Faro**	**0.75**	**19**	⇓*i*P	**Pn**	**07 32 47.0**	**-0.5**
LFRS	**El Faro**	**0.75**	**19**	⇓*i*P	**Pn**	**07 32 47.0**	**-0.5**
COLS	**Colinas**	**0.75**	**1**	⇓*i*P	**Pn**	**07 32 47.4**	**-0.2**
COLS	**Colinas**	**0.75**	**1**	⇓*i*P	**Pn**	**07 32 47.4**	**-0.2**
SANM	**San Marcos**	**0.76**	**9**	⇓*e*P	**Pn**	**07 32 47.1**	**-0.5**
SANM				IAML		07 32 47.4	
	comp=Z,6μm,0.2s						
SNET	**Serv Nac Est T**	**0.78**	**5**	⇓*i*P	**Pn**	**07 32 47.6**	**-0.3**
SNET	**Serv Nac Est T**	**0.78**	**5**	⇓*i*P	**Pn**	**07 32 47.6**	**-0.3**
SNET				IAML		07 32 59.4	
	comp=Z,8μm,0.3s						
UTEC	**San Salvador**	**0.79**	**7**	*e*P	**Pn**	**07 32 47.8**	**-0.3**
UESS	**San Salvador**	**0.80**	**7**	*e*P	**Pn**	**07 32 48.1**	**0.0**
UESS				IAML		07 33 01.1	
	comp=Z,10μm,0.1s						
OPAM	**San Salvador**	**0.81**	**7**	⇓*e*P	**Pn**	**07 32 48.0**	**-0.2**
OPAM				*e*S	**Sn**	**07 32 58.4**	**-1.0**
OPAM				IAML		07 33 01.8	
	comp=Z,10μm,0.2s						
UEES	**San Salvador**	**0.81**	**4**	⇓*i*P	**Pn**	**07 32 48.1**	**-0.3**
UEES				IAML		07 33 00.7	
	comp=Z,12μm,0.3s						
BOQS	**Boqueron**	**0.82**	**2**	⇑*i*P	**Pn**	**07 32 48.5**	**-0.1**
BOQS	**Boqueron**	**0.82**	**2**	⇑*i*P	**Pn**	**07 32 48.5**	**-0.1**
BOQS				*e*S	**Sn**	**07 32 59.7**	**-0.2**
UDBS	**Soyapango**	**0.82**	**10**	⇓*i*P	**Pn**	**07 32 48.2**	**-0.3**
UDBS				IAML		07 33 01.6	
	comp=Z,12μm,0.3s						
SNVI	**San Vicente**	**0.83**	**33**	*e*P	**Pn**	**07 32 48.1**	**-0.5**
LFU	**La Fuente**	**0.85**	**13**	⇓*i*P	**Pn**	**07 32 48.9**	**0.0**
LFU	**La Fuente**	**0.85**	**13**	⇓*i*P	**Pn**	**07 32 48.9**	**0.0**
LBRS	**Las Brisas**	**0.86**	**17**	⇓*i*P	**Pn**	**07 32 48.9**	**-0.1**
LBRS	**Las Brisas**	**0.86**	**17**	⇓*i*P	**Pn**	**07 32 48.9**	**-0.1**
SBLS	**San Blas**	**0.97**	**342**	*e*P	**Pn**	**07 32 50.6**	**+0.1**
SBLS	**San Blas**	**0.97**	**342**	*e*P	**Pn**	**07 32 50.6**	**+0.1**
TECA	**Tecapa**	**0.97**	**53**	⇓*i*P	**Pn**	**07 32 50.3**	**-0.3**
TECA	**Tecapa**	**0.97**	**53**	⇓*i*P	**Pn**	**07 32 50.3**	**-0.3**
RTR	**El Retiro**	**1.03**	**341**	*e*P	**Pn**	**07 32 51.7**	**+0.4**
RTR	**El Retiro**	**1.03**	**341**	*e*P	**Pn**	**07 32 51.7**	**+0.4**
UNIC	**Santa Ana**	**1.10**	**347**	*e*P	**Pn**	**07 32 52.3**	**+0.1**
PACA	**Pacayal**	**1.11**	**60**	*e*P	**Pn**	**07 32 52.7**	**+0.4**
PACA				*e*S	**Sn**	**07 33 06.6**	**+0.1**
PACA	**Pacayal**	**1.11**	**60**	*e*P	**Pn**	**07 32 52.7**	**+0.4**
PACA				*e*S	**Sn**	**07 33 06.6**	**+0.1**
PACA				IAML		07 33 10.3	
	comp=Z,235μm,0.4s						
LCY	**Lacayo**	**1.11**	**63**	*e*P	**Pn**	**07 32 52.5**	**+0.3**
LCY	**Lacayo**	**1.11**	**63**	*e*P	**Pn**	**07 32 52.5**	**+0.3**
VSM	**San Miguel**	**1.13**	**63**	*e*P	**Pn**	**07 32 53.0**	**+0.3**
VSM	**San Miguel**	**1.13**	**63**	*e*P	**Pn**	**07 32 53.0**	**+0.3**
LLGN	**La Laguna**	**1.30**	**15**	*e*P	**Pn**	**07 32 54.5**	**-0.4**
LLGN				IAML		07 33 12.5	
	comp=Z,1μm,0.5s						
LCND	**La Ca¯–ada**	**1.44**	**74**	IAML		07 33 14.2	
	comp=Z,17μm,0.3s						
CNCH	**Conchagua**	**1.48**	**76**	*e*P	**Pn**	**07 32 58.0**	**+0.7**
CNCH	**Conchagua**	**1.48**	**76**	*e*P	**Pn**	**07 32 58.0**	**+0.7**
CNCH				IAML		07 33 26.2	
	comp=Z,39μm,0.3s						
TGUH	**Tegucigalpa,Un**	**2.28**	**60**	*e*Pn	**Pn**	**07 33 08.3**	**+0.2**
CNGN	**Cerro Negro**	**2.58**	**99**	*e*P	**Pn**	**07 33 12.0**	**-0.3**
MOMN	**Momotombo**	**2.75**	**100**	*e*P	**Pn**	**07 33 14.7**	**+0.1**
COPN	**Copaltepe**	**2.75**	**105**	*e*P	**Pn**	**07 33 15.6**	**+1.1**
COPN				*e*S	**Sn**	**07 33 46.6**	**0.0**
ESTN	**Estel**	**2.87**	**86**	*e*Pn	**Pn**	**07 33 17.1**	**+0.8**
ESTN				*e*Sn	**Sn**	**07 33 49.4**	**-0.3**
ESTN	**Estel**	**2.87**	**86**	*e*P	**Pn**	**07 33 16.8**	**+0.4**
ESTN				*e*S	**Sn**	**07 33 49.9**	**+0.2**
APYN	**Apoyeque**	**2.96**	**103**	*e*P	**Pn**	**07 33 18.0**	**+0.4**
XAVN	**Gruta Xavier**	**3.01**	**104**	*e*P	**Pn**	**07 33 18.8**	**+0.7**
MGAN	**Managua**	**3.08**	**104**	*e*P	**Pn**	**07 33 18.6**	**-0.5**
MGAN				*e*S	**Sn**	**07 33 52.8**	**-2.0**
MGAN				AML	AML	07 33 56.2	
	comp=E,67nm,0.3s						
RCON	**San Juan de Ri**	**3.12**	**79**	*e*P	**Pn**	**07 33 20.4**	**+0.6**
MATN	**Matagalpa**	**3.30**	**89**	*e*P	**Pn**	**07 33 22.6**	**+0.5**
CCIG	**Comitan**	**4.33**	**321**	*e*Pn	**Pn**	**07 33 40.3**	**+3.9**
ESPN	**Las Esperanzas**	**4.94**	**98**	*e*Pn	Pn	07 33 36.7	-8.0
JTS	**JuntasAbangare**	**5.00**	**121**	*e*P	**Pn**	**07 33 45.7**	**+0.2**
HDC	**Heredia**	**5.85**	**119**	*e*Pn	**Pn**	**07 33 56.7**	**-0.6**
TX31	**Lajitas Ar. Si**	**21.09**	**323**	*e*P	**P**	**07 37 15.2**	**+1.8**
MIAR	**Mount Ida**	**21.89**	**351**	*e*P	**P**	**07 37 23.8**	**+2.2**
	comp=E,9.2nm,1.4s						
WMOK	**Wichita Mounta**	**23.37**	**340**	*e*P	**P**	**07 37 37.8**	**+0.7**
	comp=E,3.7nm,1.4s						
AMTX	**Amarillo**	**24.58**	**335**	*e*P	**P**	**07 37 50.2**	**+1.9**
	comp=E,2.3nm,0.5s						
S22A	**4UR Ranch, Cre**	**29.26**	**331**	*e*P	**P**	**07 38 31.8**	**+1.2**
	comp=E,1.3nm,0.8s						
PV10	**Paradox Valley**	**30.84**	**329**	*e*P	**P**	**07 38 42.9**	**-1.6**
SNOW	**Snow King Moun**	**35.61**	**333**	*e*P	**P**	**07 39 26.4**	**+0.3**
	comp=E,2.1nm,0.7s						
TPAW	**Teton Pass**	**35.72**	**333**	*e*P	**P**	**07 39 28.5**	**+1.5**
	comp=E,6.0nm,1.5s						
MDND	**Maddock**	**35.88**	**348**	*e*P	**P**	**07 39 28.8**	**+0.8**
	comp=E,5.5nm,0.7s						
FCC	**Fort Churchill**	**45.91**	**357**	*e*P	**P**	**07 40 49.6**	**-0.6**
YKW3	**Yellowknife Ar**	**52.77**	**346**	*e*P	**P**	**07 41 41.1**	**-1.4**
	comp=E,7.4nm,1.5s						
WHY	**Whitehorse**	**58.04**	**336**	*e*P	**P**	**07 42 18.6**	**-2.0**
	comp=E,2.8nm,0.8s						

*IDC **05** 07:32:42.4±0.6, 0°.78S×133°.39E, h0km, mb4.3/13, mb1 4.4/16, mb1mx4.1/60, mbtmp4.3/16, ML4.5/4, MS3.7/9, Ms1 3.7/9, ms1mx3.3/52, Error ellipse: s-maj=21.0km s-min=13.0km az=77.0*
*BJI **05** 07:32:44.4, 0°.95S×133°.56E, h28km, mb4.8/20, mB5.0/10, Ms4.3/5, Ms7 4.1/4*
*ISCJB **05** 07:32:45.8±0.2, 0°.80S±0°.03×133°.29E±0°.04, h29km, mb4.6/40, MS3.9/9, Error ellipse: s-maj=5.4km s-min=4.5km az=157.5*
*NEIC **05** 07:32:47.7±3.2, 0°.80S×133°.34E, h33km±23km, mb4.7/24, Error ellipse: s-maj=10.2km s-min=6.0km az=51.0*
NEIC Felt [III] at Manokwari.
*DJA **05** 07:32:47.0±0.7, 1°S±5°×13°3E±°, h13km±7km, M4.9/12, mb5.0/9, mB5.3/6, MLv4.9/12, Mw(mB)4.7/6*
ISC 05 07:32:47.5±0.4,**0°.81S**±0°.05×**133°.35E**±0°.05,**h29**km,**n89**, σ1§**49**/93,**mb4.7**/40,**MS4.0**/9,**2D, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**1.09**	**130**	P	**Pb**	**07 33 07.7**	**0.0**
RKPI				S	**Sb**	**07 33 22.4**	**+0.9**
SIJI	**Sorong**	**2.08**	**268**	Pn	**Pn**	**07 33 20.5**	**0.0**
	171nm,0.3s,baz=103,slow=23,SNR=426						
SIJI				Sn	**Sn**	**07 33 47.0**	**+1.5**
	105nm,0.3s,baz=270,slow=20,SNR=4.1						
SIJI				LR	LR	07 33 52.7	
	comp=Z,283nm,21.6s,baz=86,slow=33						
FAKI	**Fak Fak**	**2.37**	**208**	P	**Pn**	**07 33 24.7**	**+0.3**
FAKI	**Fak Fak**	**2.37**	**208**	*e*Pn	**Pn**	**07 33 24.7**	**+0.3**
BAKI	**Biak**	**2.79**	**98**	P	**Pn**	**07 33 31.5**	**+1.3**
KMPI	**Kaimana, Papua**	**2.86**	**173**	P	**Pn**	**07 33 31.6**	**+0.4**
SRPI	**Serui, Papua**	**3.08**	**110**	P	**Pn**	**07 33 36.5**	**+2.3**
BNDI	**Bandanaira**	**5.04**	**223**	P	**Pn**	**07 34 01.8**	**+0.5**
MSAI	**Masohi**	**5.08**	**240**	P	**Pn**	**07 34 02.6**	**+0.8**
LBMI	**Labuha**	**5.85**	**272**	P	**Pn**	**07 34 12.4**	**+0.1**
AAI	**Ambon**	**5.89**	**241**	P	**Pn**	**07 34 13.3**	**+0.4**
NLAI	**Namlea**	**6.69**	**249**	P	**Pn**	**07 34 24.1**	**+0.2**
DAV	**Davao City (W)**	**11.01**	**315**	LR	LR	07 39 30.9	
	comp=Z,117nm,20.3s,baz=165,slow=37						
APSI	**Ampana**	**11.70**	**269**	P	**Pn**	**07 35 33.3**	**+0.7**
MTN	**Manton Dam**	**12.16**	**190**	*e*Pn	**Pn**	**07 35 36.9**	**-2.0**
SOEI	**Soe**	**12.67**	**225**	P	**

COEN	Coen	16.29	144	*e*Pn	Pn	07 36 34.7	+0.3
	9.5nm,1.0s						
FITZ	Fitzroy Crossi	18.78	203	P	P	07 37 03.6	-0.9
	1.3nm,0.3s,baz=37,slow=10.0,SNR=12						
FITZ				S	Sn	07 40 17.3	-17
	0.5nm,0.3s,baz=89,slow=24,SNR=11						
FITZ	Fitzroy Crossi	18.78	203	*e*P	P	07 37 03.9	-0.7
	26nm,1.2s						
FITZ				S	Sn	07 40 17.3	-17
WRAB	Tennant Creek	19.03	177	*e*P	Pn	07 37 07.8	-0.5
	15nm,0.6s						
WRA	Warramunga Arr	19.04	177	P	P	07 37 05.5	-2.0
	0.8nm,0.3s,baz=359,slow=12,SNR=38						
WRA				S	Sn	07 40 26.9	-14
	0.7nm,0.3s,baz=8.4,slow=23,SNR=6.2						
WB2	Warramunga Arr	19.04	177	*e*P	P	07 37 06.7	-0.8
	14nm,0.7s						
AS31	Alice Springs	22.73	179	*e*P	P	07 37 46.7	-0.7
	4.3nm,0.7s						
AS01	Alice Springs	22.73	179	*e*P	P	07 37 46.4	-1.0
ASAR	Alice Springs	22.73	179	P	P	07 37 46.2	-1.1
	17nm,0.8s,baz=4.2,slow=12,SNR=64						
ASAR				S	S	07 41 54.1	-0.2
	6.3nm,1.1s,baz=0.0,slow=21,SNR=5.6						
CTA	Charters Tower	22.95	147	P	P	07 37 50.5	+0.8
	3.0nm,0.6s,baz=339,slow=14,SNR=4.7						
CTAO	Charters Tower	22.95	147	*e*P	P	07 37 51.1	+1.4
	32nm,1.4s						
MBWA	Marble Bar	24.20	212	*e*P	P	07 38 02.1	+0.3
	23nm,0.9s						
JOW	Kunigami	27.91	350	LR	LR	07 47 31.2	
	comp=Z,241nm,21.2s,baz=142,slow=32						
STKA	Stephens Creek	31.87	167	P	P	07 39 07.8	-2.4
	3.2nm,0.8s,baz=336,slow=9.1,SNR=5.7						
STKA				LR	LR	07 53 21.3	
	comp=Z,400nm,21.9s,baz=347,slow=39						
STKA	Stephens Creek	31.87	167	*e*P	P	07 39 10.5	+0.2
	1.0nm,1.2s						
BBOO	Buckleboo	31.93	176	*e*P	P	07 39 11.0	+0.2
	28nm,1.3s						
NJ2	Nanjing	35.45	339	*e*P	P	07 39 41.7	+0.4
NJ2				pmax	pmax		
	comp=Z,22nm,0.5s						
WHN	Wuhan	36.04	331	⇓P	P	07 39 51.2	+4.7
MJAR	Matsushiro Arr	37.43	6	LR	LR	07 52 16.6	
	comp=Z,166nm,21.9s,baz=130,slow=31						
KSRS	Korea Array	38.40	353	LR	LR	07 55 30.9	
	comp=Z,87nm,20.0s,baz=160,slow=36						
KMI	Kunming	39.27	313	P	P	07 40 15.7	+1.5
KMI				pP	sP	07 40 26.0	-0.3
KMI				sP	pP	07 40 30.1	+7.3
KMI				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,190nm,5.1s						
XAN	Xi'an	41.56	329	P	P	07 40 33.5	+0.7
CD2	Chengdu	42.25	321	P	P	07 40 37.9	-0.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BJI	Beijing	43.58	341	⇓*i*P	P	07 40 48.4	-0.6
BJI				pmax	pmax		
	comp=Z,21nm,1.4s						
USRK	Ussuriysk Ar.	44.83	359	LR	LR	07 56 39.9	
	comp=Z,50nm,20.6s,baz=109,slow=32						
LZH	Lanzhou	45.84	326	*e*P	P	07 41 09.5	+2.2
LZH				pP	sP	07 41 18.0	-1.6
LZH				sP	pP	07 41 22.7	+6.6
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC	Hu-ho-hao-te	45.95	337	*e*P	P	07 41 10.8	+2.7
HHC				PP	PP	07 42 59.0	+2.8
HHC				S	S	07 47 53.5	+2.3
HHC				SS	SS	07 51 10.7	-5.7
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,68nm,5.1s						
HHC				LR	LR		
	comp=N,68nm,15.9s						
HHC				LR	LR		
	comp=E,120nm,15.1s						
GTA	Gaotai	50.44	326	*e*P	P	07 41 42.6	-0.2
GTA				pP	pP	07 41 51.8	+0.1
GTA				sP	sP	07 41 56.3	+1.2
GTA				S	S	07 48 53.1	-1.7
GTA				sS	sS	07 49 07.6	-1.8
GTA				SS	SS	07 52 24.0	-5.1
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,120nm,7.2s						
GTA				LR	LR		
	comp=N,190nm,17.5s						
GTA				LR	LR		
	comp=E,180nm,14.1s						
GTA				LR	LR		
	comp=Z,110nm,13.7s						
SONM	Songino Array	53.83	338	P	P	07 42 08.1	+0.2
	0.6nm,0.5s,baz=123,slow=5.5,SNR=5.0						
URZ	Urewera	54.75	138	LR	LR	08 05 32.1	
	comp=Z,184nm,19.9s,baz=306,slow=36						
WMQ	Urumqi	60.25	323	P	P	07 42 54.9	+1.6
WMQ				pP	sP	07 43 05.3	-0.5
WMQ				sP	pP	07 43 09.4	+7.1
WMQ				pmax	pmax		
	comp=Z,42nm,1.5s						
MK01	Makanchi Array	65.04	324	*e*P	P	07 43 24.8	-0.5
MK31	Makanchi Array	65.06	324	*e*P	P	07 43 25.2	-0.2
MKAR	Makanchi Array	65.06	324	P	P	07 43 25.1	-0.3
	5.8nm,0.5s,baz=111,slow=8.7,SNR=86						
MKAR	Makanchi Array	65.06	324	*e*P	P	07 43 25.2	-0.2
	39nm,0.6s						
SEY	Seymchan	65.17	9	P	P	07 43 25.2	-0.4
	3.6nm,0.9s,baz=202,slow=4.1,SNR=7.9						
MAKZ	Makanchi	65.25	324	*e*P	P	07 43 26.6	0.0
	9.3nm,0.6s						
KSH	Kashi	65.91	314	P	P	07 43 32.6	+1.5
KSH				pP	sP	07 43 42.4	-1.2
KSH				PP	PP	07 46 01.6	+5.1
KSH				S	S	07 52 16.2	-0.6
KSH				sS	sS	07 52 35.9	+4.1
KSH				SS	SS	07 56 37.1	+4.8
KSH				pmax	pmax		
	comp=Z,340nm,5.5s						
KSH				LR	LR		
	comp=N,180nm,5.8s						
KSH				LR	LR		
	comp=E,160nm,4.3s						
KSH				LR	LR		
	comp=Z,250nm,6.5s						
KDJ	Kajisay	66.12	317	*e*P	P	07 43 33.3	+0.7
	4.1nm,0.7s						
NRN	Naryn	66.64	316	*e*P	P	07 43 35.6	-0.4
	8.5nm,0.4s						
ZALV	Zalesovo Beam	67.66	331	P	P	07 43 40.2	-1.6
	0.9nm,0.5s,baz=104,slow=6.3,SNR=4.1						
KURK	Kurchatov	69.13	326	*e*P	P	07 43 51.0	0.0
	5.8nm,0.8s						
KURBB	Kurchatov Arra	69.13	326	P	P	07 43 50.7	-0.4
	4.9nm,0.8s,baz=120,slow=5.9,SNR=47						
KK31	Karatay Array	71.05	316	*e*P	P	07 44 02.5	-0.5
KKAR	Karatay Array	71.05	316	*e*P	P	07 44 02.6	-0.4
BVAR	Borovoye Array	74.72	326	P	P	07 44 23.4	-1.2
	2.2nm,0.8s,baz=114,slow=6.6,SNR=12						
BRVK	Borovoye	74.80	326	*e*P	P	07 44 24.4	-0.6
	3.2nm,0.8s						
NRIK	Noril'sk	76.45	345	P	P	07 44 33.4	-0.7
	1.4nm,0.4s,baz=144,slow=5.3,SNR=3.8						
VNDA	Vanda	78.18	174	P	P	07 44 43.2	-0.6
	0.9nm,0.8s,baz=334,slow=7.6,SNR=3.7						
VNDA				LR	LR	08 19 30.9	
	comp=Z,116nm,18.2s,baz=102,slow=36						
ABKAR	Akbulak array	79.83	320	*e*P	P	07 44 52.6	-0.7
KDAK	Kodiak Island	82.23	31	P	P	07 45 05.7	-0.2
	4.7nm,0.8s,baz=197,slow=18,SNR=4.2						
KDAK	Kodiak Island	82.23	31	*e*P	P	07 45 06.4	+0.5
	6.1nm,0.8s						
RND	Reindeer	85.26	26	*e*P	P	07 45 20.2	-1.2
	8.2nm,0.9s						
SCM	Sheep Creek Mo	85.67	28	*e*P	P	07 45 23.2	-0.2
	14nm,1.1s						
WRH	Wood River Hil	85.80	25	*e*P	P	07 45 23.2	-0.7
	6.4nm,1.0s						
MDM	Murphy Dome	85.83	25	*e*P	P	07 45 23.8	-0.3
	1.6nm,0.8s						
DHY	Denali Highway	85.86	27	*e*P	P	07 45 24.2	-0.3
	6.5nm,1.0s						
CCB	Clear Creek Bu	85.95	25	*e*P	P	07 45 23.6	-1.0
	5.7nm,0.9s						
TOLK	Toolik Lake Re	86.05	21	*e*P	P	07 45 25.0	-0.2
	1.2nm,1.0s						
HDA	Harding Lake	86.27	25	*e*P	P	07 45 25.5	-0.8
	5.5nm,0.9s						
ILAR	Eielson Array	86.36	25	P	P	07 45 24.8	-1.9
	2.5nm,0.9s,baz=258,slow=4.9,SNR=19						
ILB	Eielson Array	86.36	25	*e*P	P	07 45 25.6	-1.1
IL1	Eielson Array	86.36	25	*e*P	P	07 45 25.4	-1.3
TAOE	Nuku Hiva Isla	86.42	99	*e*P	P	07 45 28.1	-0.1
	136nm,1.3s						
RIDG	Independ'e Rid	87.09	26	*e*P	P	07 45 30.2	-0.2
	4.1nm,0.8s						
DOT	Dot Lake	87.42	26	*e*P	P	07 45 32.0	0.0
	9.8nm,0.9s						
YKA	Yellowknife Ar	100.76	26	P	Pdif	07 46 31.9	-1.2
	0.3nm,0.7s,baz=293,slow=4.9,SNR=3.7						
CPUP	Villa Florida	151.12	160	PKPbc	PKPbc	07 52 38.5	-0.3
	0.6nm,0.5s,baz=214,slow=3.6,SNR=2.8						
PRAC	Prado	151.65	84	*e*PKPbc	PKPbc	07 52 40.0	-0.4
LPAZ	La Paz	152.84	130	PKPab	PKPab	07 52 55.5	+1.0
	1.8nm,0.8s,baz=225,slow=2.9,SNR=6.3						
AGP	Aguadilla	153.34	48	*e*PKPbc	PKPbc	07 52 43.1	-0.8

BJI ***05*** *07:47:05.0,38°.20N×30°.60W,h5km,mb5.0/20,mB5.4/10, Ms5.3/7,Ms7 5.0/6*
ISCJB ***05*** *07:47:06.9±0.2,38°.32N±0°.04×30°.70W±0°.02,h10km, mb4.8/203,MS4.5/60,Error ellipse: s-maj=5.5km s-min=1.9km az=178.7*
IDC ***05*** *07:47:06.8±0.5,38°.36N×30°.73W,h0km,mb4.4/35, mb1 4.6/35,mb1mx4.3/73,mbtmp4.5/35,MS4.4/49, Ms1 4.4/49,ms1mx4.3/59,Error ellipse: s-maj=13.4km s-min=10.7km az=171.0*
PDA ***05*** *07:47:07.8±1.4,38°.33N×30°.62W,h11km±16km,MD4.4, ML4.3,Error ellipse: s-maj=9.5km s-min=5.3km az=47.0*
IGIL ***05*** *07:47:08.1,38°.26N×30°.56W,h10km,mb4.9*
CSEM ***05*** *07:47:08.5±0.1,38°.31N×30°.64W,h10km,mb4.9/99,Error ellipse: s-maj=7.1km s-min=2.9km az=1.0*
NEIC ***05*** *07:47:08.6±0.2,38°.28N×30°.63W,h10km,mb4.9/161, Error ellipse: s-maj=6.3km s-min=2.9km az=178.0*
GCMT ***05*** *07:47:08.6±0.2,38°.40N×30°.57W,h12km,MW5.1/103, Moment Tensor Solution. s26,c31; s103,c175; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}~1.97±.13; $M_{\theta\theta}$~0.60±.14; $M_{\phi\phi}$2.57±.12; $M_{r\theta}$0.24±.34; $M_{\theta\phi}$4.41±.09; $M_{\phi r}$~1.09±.35; Best double couple: $M_0$4.89200×10^{16} NP1:ϕ_s353.00000°,δ79.00000°,λ-160.00000°. NP2: ϕ_s259.00000°,δ70.00000°,λ-12.00000°. Principal axes: T 5.7450, Plg6.0000°, Azm125.0000°; N -1.7070, Plg67.0000°, Azm21.0000°; P -4.0400, Plg22.0000°, Azm217.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 05 07:47:08.2±0.9,38°.45N±0°.04×30°.53W±0°.02,h11km±5km, n705,σ2§12/668,mb4.9/210,MS4.5/60,15C-9D,Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H07S1	**FLORES T-PHASE**	**1.07**	**331**	Pn	**Pg**	**07 47 25.8**	**-2.9**
H07S1				Sn	**Sg**	**07 47 39.3**	**-3.4**
H07S1	**FLORES T-PHASE**	**1.07**	**331**	⇑*i*P	**Pg**	**07 47 25.2**	**-3.6**
H07S1				*e*S	**Sg**	**07 47 38.3**	**-4.4**
H07S1	**FLORES T-PHASE**	**1.07**	**331**	⇑*i*P	**Pg**	**07 47 25.2**	**-3.6**
H07S1				*e*S	**Sg**	**07 47 38.3**	**-4.4**
H07N1	**FLORES T-PHASE**	**1.32**	**340**	Pn	**Pn**	**07 47 29.9**	**-2.8**
H07N1				Sn	**Sb**	**07 47 43.8**	**-6.3**
H07N1				T	T	07 48 56.5	
	SNR=7.3						
H07N1	**FLORES T-PHASE**	**1.32**	**340**	⇑*i*P	**Pn**	**07 47 29.3**	**-3.4**
H07N1				*e*S	**Sb**	**07 47 44.4**	**-5.7**
H07N1	**FLORES T-PHASE**	**1.32**	**340**	⇑*i*P	**Pn**	**07 47 29.3**	**-3.4**
H07N1				*e*S	**Sb**	**07 47 44.4**	**-5.7**
CALA	**Caldeira**	**1.44**	**84**	*e*P	**Pn**	**07 47 30.4**	**-3.9**
CALA				*e*S	**Sn**	**07 47 47.7**	**-5.6**
CALA	**Caldeira**	**1.44**	**84**	*e*P	**Pn**	**07 47 30.4**	**-3.9**
CALA				*e*S	**Sn**	**07 47 47.7**	**-5.6**
PCED	**Cedros**	**1.45**	**82**	⇓*i*P	**Pn**	**07 47 30.7**	**-3.6**
PCED				*e*S	**Sn**	**07 47 47.2**	**-6.1**
PCED				A	A	07 47 50.8	
	2μm,0.6s						
PCED	**Cedros**	**1.45**	**82**	⇓*i*P	**Pn**	**07 47 30.7**	**-3.6**
PCED				*e*S	**Sn**	**07 47 47.2**	**-6.1**
HOR	**Horta**	**1.49**	**86**	*e*P	**Pn**	**07 47 31.0**	**-4.0**
HOR				*e*S	**Sn**	**07 47 48.2**	**-6.2**
HOR				A	A	07 47 50.8	
	2μm,0.4s						
HOR	**Horta**	**1.49**	**86**	*e*P	**Pn**	**07 47 31.0**	**-4.0**
HOR				*e*S	**Sn**	**07 47 48.2**	**-6.2**
PCAN	**Candelaria**	**1.60**	**89**	*e*P	**Pn**	**07 47 32.6**	**-3.9**
PCAN				*e*S	**Sn**	**07 47 51.2**	**-6.1**
PCAN				A	A	07 47 52.4	
	921nm,0.4s						
PCAN	**Candelaria**	**1.60**	**89**	*e*P	**Pn**	**07 47 32.6**	**-3.9**
PCAN				*e*S	**Sn**	**07 47 51.2**	**-6.1**
PICO	**Pico**	**1.65**	**88**	*e*P	**Pn**	**07 47 33.6**	**-3.6**
PICO				*e*S	**Sn**	**07 47 52.9**	**-5.6**
PICO				A	A	07 47 55.9	
	859nm,0.3s						
PICO	**Pico**	**1.65**	**88**	*e*P	**Pn**	**07 47 33.6**	**-3.6**
PICO				*e*S	**Sn**	**07 47 52.9**	**-5.6**
ROSA	**Rosais**	**1.81**	**81**	*e*P	**Pn**	**07 47 36.2**	**-3.2**
ROSA				*e*S	**Sn**	**07 47 56.3**	**-6.1**
ROSA				A	A	07 48 00.0	
	767nm,0.3s						
ROSA	**Rosais**	**1.81**	**81**	*e*Pn	**Pn**	**07 47 36.1**	**-3.2**
ROSA	**Rosais**	**1.81**	**81**	*e*P	**Pn**	**07 47 36.2**	**-3.2**
ROSA				*e*S	**Sn**	**07 47 56.3**	**-6.1**
PMAN	**Manadas**	**1.92**	**84**	*e*P	**Pn**	**07 47 37.1**	**-3.8**
PMAN				*e*S	**Sn**	**07 47 58.9**	**-6.2**
PMAN				A	A	07 48 06.3	
	463nm,0.4s						
PMAN	**Manadas**	**1.92**	**84**	*e*P	**Pn**	**07 47 37.1**	**-3.8**
PMAN				*e*S	**Sn**	**07 47 58.9**	**-6.2**
PGRA	**Graciosa**	**2.08**	**73**	*e*P	**Pn**	**07 47 39.7**	**-3.3**
PGRA				*e*S	**Sn**	**07 48 03.2**	**-5.6**
PGRA				A	A	07 48 07.4	
	154nm,0.3s						
PGRA	**Graciosa**	**2.08**	**73**	*e*P	**Pn**	**07 47 39.7**	**-3.3**
PGRA				*e*S	**Sn**	**07 48 03.2**	**-5.6**
ADH	**Angra Heroismo**	**2.59**	**84**	*e*P	**Pn**	**07 47 46.4**	**-3.7**
ADH				*e*S	**Sn**	**07 48 15.5**	**-6.0**
ADH				A	A	07 48 18.3	
	349nm,0.3s						
ADH	**Angra Heroismo**	**2.59**	**84**	*e*P	**Pn**	**07 47 46.4**	**-3.7**
ADH				*e*S	**Sn**	**07 48 15.5**	**-6.0**
PSET	**Sete Cidades**	**3.84**	**98**	*e*P	Pn	07 48 02.9	-4.4
PSET				*e*S	**Sn**	**07 48 45.8**	**-6.7**
PSET				A	A	07 48 51.5	
	195nm,0.4s						
PSET	**Sete Cidades**	**3.84**	**98**	*e*P	Pn	07 48 02.9	-4.4
PSET				*e*S	**Sn**	**07 48 45.8**	**-6.7**
PDA	**Ponta Delgada**	**3.90**	**99**	*e*P	**Pn**	**07 48 04.4**	**-3.7**
PDA				*e*S	**Sn**	**07 48 47.0**	**-6.9**
PDA				A	A	07 48 50.4	
	59nm,0.2s						
PDA	**Ponta Delgada**	**3.90**	**99**	*e*P	**Pn**	**07 48 04.4**	**-3.7**
PDA				*e*S	**Sn**	**07 48 47.0**	**-6.9**
CMLA	**Cha da Macela**	**4.01**	**98**	⇑*i*P	**Pn**	**07 48 05.7**	**-3.9**
CMLA				*e*S	**Sn**	**07 48 49.7**	**-6.8**
CMLA				A	A	07 48 53.0	
	120nm,0.5s						
CMLA	**Cha da Macela**	**4.01**	**98**	⇑*i*P	**Pn**	**07 48 05.7**	**-3.9**
CMLA				*e*S	**Sn**	**07 48 49.7**	**-6.8**
BART	**Pico Bartolome**	**4.28**	**97**	*e*P	**Pn**	**07 48 09.8**	**-3.6**
BART				*e*S	**Sn**	**07 48 55.9**	**-7.5**
BART				A	A	07 49 04.8	
	97nm,0.4s						
BART	**Pico Bartolome**	**4.28**	**97**	*e*P	**Pn**	**07 48 09.8**	**-3.6**
BART				*e*S	**Sn**	**07 48 55.9**	**-7.5**
PSMA	**Santa Maria**	**4.52**	**107**	*e*P	Pn	07 48 11.8	-4.8
PSMA				*e*S	**Sn**	**07 49 00.9**	**-8.3**
PSMA				A	A	07 49 02.3	
	25nm,0.2s						
PSMN	**Pico do Norte,**	**4.57**	**107**	*e*P	Pn	07 48 12.7	-4.5
PSMN				*e*S	Sn	07 49 01.8	-8.5
PSMN				A	A	07 49 04.5	
	15nm,0.2s						
PSMN	**Pico do Norte,**	**4.57**	**107**	*e*P	Pn	07 48 12.7	-4.5
PSMN				*e*S	Sn	07 49 01.8	-8.5
PMOZ	**Porto Moniz, M**	**12.21**	**113**	*e*P	**Pn**	**07 49 58.8**	**-3.3**
	97nm,2.3s						
PMOZ				*e*LR	LR	07 52 32.9	
	2μm,18.0s						
PMOZ	**Porto Moniz, M**	**12.21**	**113**	*e*P	**Pn**	**07 49 58.8**	**-3.3**
PMAFR	**Mafra**	**16.59**	**82**	*e*P	**Pn**	**07 51 02.4**	**+1.6**
	125nm,1.6s						
PMAFR	**Mafra**	**16.59**	**82**	*e*P	**Pn**	**07 51 02.4**	**+1.6**
LIS	**Lisbon**	**16.72**	**82**	*e*S	**Sn**	**07 54 10.4**	**+2.4**
ALMR	**Almeirim**	**17.13**	**81**	*e*P	**Pn**	**07 51 08.3**	**+0.8**
ALMR				AMb	AMB	07 51 16.3	
	comp=Z,82nm,1.4s						
ALMR				*e*S	**Sn**	**07 54 20.4**	**+2.5**
PFVI	**Vila Bisbo**	**17.20**	**88**	*e*P	**P**	**07 51 11.3**	**+1.3**
	comp=Z,108nm,1.4s						
PFVI	**Vila Bisbo**	**17.20**	**88**	*e*P	**P**	**07 51 11.3**	**+1.3**
PNCL	**Nicolau / Gran**	**17.28**	**84**	*e*P	**Pn**	**07 51 10.5**	**+1.1**
	comp=Z,46nm,1.7s						
PNCL	**Nicolau / Gran**	**17.28**	**84**	*e*P	**Pn**	**07 51 10.5**	**+1.1**
MORF	**Marmelete**	**17.31**	**87**	*e*S	**Sn**	**07 54 24.4**	**+2.0**
PGAV	**Gavieira, Arco**	**17.35**	**71**	*e*P	**P**	**07 51 16.1**	**+4.3**
	comp=Z,41nm,1.6s						
PGAV				*e*LR	LR	07 54 50.6	
	comp=Z,814nm,18.0s						
PGAV	**Gavieira, Arco**	**17.35**	**71**	*e*P	**P**	**07 51 16.1**	**+4.3**
PMTG	**Montargil**	**17.41**	**81**	*e*P	**Pn**	**07 51 12.0**	**+1.0**
	comp=Z,53nm,1.8s						
PMTG	**Montargil**	**17.41**	**81**	*e*P	**Pn**	**07 51 12.0**	**+1.0**
PCAB	**Cabril**	**17.52**	**72**	*e*P	**P**	**07 51 19.6**	**+6.1**
	comp=Z,33nm,1.8s						
PCAB	**Cabril**	**17.52**	**72**	*e*P	**P**	**07 51 19.6**	**+6.1**
MESJ	**Messejana**	**17.56**	**85**	*e*P	**Pn**	**07 51 13.4**	**+0.6**
MESJ				AMb	AMB	07 51 19.6	
	comp=Z,59nm,1.8s						
MESJ				*e*S	**Sn**	**07 54 30.5**	**+2.2**
MESJ	**Messejana**	**17.56**	**85**	*e*P	**Pn**	**07 51 13.5**	**+0.6**
	comp=Z,61nm,1.5s						
MESJ	**Messejana**	**17.56**	**85**	*e*P	**Pn**	**07 51 13.5**	**+0.6**
POLO	**Lamas de Olo**	**17.68**	**73**	*e*P	**P**	**07 51 20.0**	**+4.6**
	comp=Z,21nm,1.5s						
POLO	**Lamas de Olo**	**17.68**	**73**	*e*P	**P**	**07 51 20.0**	**+4.6**
PCVE	**Castro Verde**	**17.73**	**86**	*e*P	**P**	**07 51 18.5**	**+2.6**
	comp=Z,65nm,1.5s						
PCVE	**Castro Verde**	**17.73**	**86**	*e*P	**P**	**07 51 18.5**	**+2.6**
PBEJ	**Beja**	**17.81**	**84**	*e*P	**P**	**07 51 19.4**	**+2.7**
	comp=Z,51nm,1.7s						
PBEJ	**Beja**	**17.81**	**84**	*e*P	**P**	**07 51 19.4**	**+2.7**
PBDV	**Barranco-do-Ve**	**17.89**	**87**	*e*P	**P**	**07 51 20.5**	**+2.9**
	comp=Z,50nm,1.7s						
PBDV	**Barranco-do-Ve**	**17.89**	**87**	*e*P	**P**	**07 51 20.5**	**+2.9**
PESTR	**Estremoz**	**17.92**	**81**	*e*P	**P**	**07 51 20.3**	**+2.4**
	comp=Z,26nm,1.5s						
PESTR	**Estremoz**	**17.92**	**81**	*e*P	**P**	**07 51 20.3**	**+2.4**
PCBR	**Castelo Branco**	**17.93**	**78**	*e*P	**P**	**07 51 21.8**	**+3.8**
	comp=Z,26nm,1.7s						
PCBR	**Castelo Branco**	**17.93**	**78**	*e*P	**P**	**07 51 21.8**	**+3.8**
PMRV	**Marv??o**	**18.02**	**80**	*e*P	**P**	**07 51 21.3**	**+2.2**
	comp=Z,31nm,1.4s						
PMRV				*e*LR	LR	07 54 56.0	
	comp=Z,1μm,18.0s						
PMRV	**Marv??o**	**18.02**	**80**	*e*P	**P**	**07 51 21.3**	**+2.2**
PVAQ	**Vaqueiros**	**18.02**	**86**	*e*P	**P**	**07 51 22.1**	**+3.0**
	comp=Z,50nm,1.7s						
PVAQ				*e*LR	LR	07 55 03.9	
	comp=Z,1μm,18.0s						
PVAQ	**Vaqueiros**	**18.02**	**86**	*e*P	**P**	**07 51 22.1**	**+3.0**
MVO	**Moncorvo**	**18.25**	**74**	*e*P	P	07 51 28.3	+6.7
	comp=Z,41nm,1.5s						
MVO				*e*LR	LR	07 55 01.4	
	comp=Z,647nm,18.0s						
MVO	**Moncorvo**	**18.25**	**74**	*e*P	P	07 51 28.3	+6.7
PBAR	**Barrancos**	**18.43**	**84**	*e*P	**Pn**	**07 51 24.8**	**+1.2**
	comp=Z,58nm,1.6s						
PBAR	**Barrancos**	**18.43**	**84**	*e*P	**Pn**	**07 51 24.8**	**+1.2**
VAL	**Valentia**	**19.57**	**40**	*e*P	Pn	07 51 46.0	+8.8
VAL				*e*S	**S**	**07 55 10.4**	**-6.1**
PAB	**San Pablo**	**20.36**	**79**	*e*P	Pn	07 51 46.9	+0.1
	comp=Z,32nm,1.3s						
PAB	**San Pablo**	**20.36**	**79**	*e*P	Pn	07 51 46.9	+0.1
	comp=Z,32nm,1.3s						
ESDC	**Sonseca Array**	**20.64**	**78**	P	Pn	07 51 50.8	+0.7
	comp=Z,7.1nm,1.0s,baz=278,slow=9.8,SNR=26						
ESDC				LR	LR	07 58 33.0	
	comp=Z,680nm,18.9s,baz=270,slow=33						
ESLA	**Sonseca Array**	**20.64**	**78**	*e*P	Pn	07 51 49.9	-0.2
	comp=Z,32nm,1.4s						
ESLA	**Sonseca Array**	**20.64**	**78**	*e*P	Pn	07 51 49.9	-0.2
	comp=Z,32nm,1.4s						
ES19	**SONSECA Array**	**20.69**	**78**	*e*P	Pn	07 51 50.4	-0.3
ES19	**SONSECA Array**	**20.69**	**78**	*e*P	Pn	07 51 50.4	-0.3
MDT	**Midelt**	**21.77**	**97**	P	**P**	**07 52 01.2**	**+1.2**
	comp=Z,2.9nm,0.9s,baz=280,slow=7.5,SNR=10.0						
MDT				LR	LR	07 58 51.4	
	comp=Z,2μm,19.7s,baz=304,slow=32						
CART	**Cartagena**	**23.24**	**83**	*e*P	**P**	**07 52 16.9**	**+1.5**
	comp=Z,38nm,1.5s						
CART	**Cartagena**	**23.24**	**83**	*e*P	**P**	**07 52 16.9**	**+1.5**
	comp=Z,38nm,1.5s						
SACV	**Santiago Islan**	**24.17**	**163**	*e*P	**P**	**07 52 23.3**	**-1.3**
	comp=Z,112nm,1.4s						
SACV	**Santiago Islan**	**24.17**	**163**	*e*P	**P**	**07 52 23.3**	**-1.3**
	comp=Z,112nm,1.4s						
EKA	**Eskdalemuir Ar**	**24.96**	**39**	P	**P**	**07 52 31.

KONO **Kongsberg** 33.03 37 *e*P P 07 53 45.9 +2.6
comp=Z,21nm,1.1s
KHC **Kasperske Hory** 33.15 57 *e*P P 07 53 48.4 +3.9
KHC AMS AMS 08 09 20.0
comp=Z,400nm,12.1s
KHC **Kasperske Hory** 33.15 57 *e*P P 07 53 46.1 +1.6
comp=Z,10nm,1.4s
MYKA **Terra Mystica** 33.19 61 *i* P P 07 53 45.5 +0.6
comp=Z,21nm,1.4s
GEA0 **GERESS Array S** 33.22 57 *e*P P 07 53 47.4 +2.3
GEC2 **GERESS Array S** 33.22 57 *e*P P 07 53 46.4 +1.2
comp=Z,9.3nm,1.0s
GERES **GERESS Array B** 33.22 57 P P 07 53 45.8 +0.6
comp=Z,0.4nm,0.3s,baz=266,slow=8.8,SNR=2.3
GERES LR LR 08 05 40.2
comp=Z,223nm,20.0s,baz=278,slow=33
KOWA **Kowa** 33.43 128 LR LR 08 06 49.2
comp=Z,3μm,18.4s,baz=352,slow=35
KOWA **Kowa** 33.43 128 *e*P P 07 53 46.7 -0.4
comp=Z,14nm,1.4s
BRG **Berggiesshubel** 33.48 54 *e*P P 07 53 49.7 +2.5
comp=Z,3.0nm,0.8s
BRG *i* 07 53 52.6
comp=Z,32nm,1.5s
MOA **Molln** 33.59 59 *i* P P 07 53 50.4 +2.1
comp=Z,33nm,1.2s
PRU **Pruhonice** 33.81 55 *e*P P 07 53 53.1 +3.0
PRU *e*S S 07 59 18.9 +5.1
PRU AMS AMS 08 06 30.0
comp=Z,600nm,14.6s
OBKA **Obir** 33.82 61 *i* P P 07 53 52.7 +2.2
comp=Z,16nm,0.8s
PVCC **Panska Ves** 33.85 54 AMS AMS 08 06 10.0
comp=Z,900nm,17.0s
FRB **Frobisher Bay** 33.93 331 P P 07 53 50.5 -0.5
comp=Z,10nm,1.0s,baz=122,slow=8.2,SNR=12
GOPC **GO Pecny, Ondr** 33.96 55 *e*P P 07 53 54.7 +3.2
GOPC *e*S S 07 59 23.2 +7.0
GOPC AMS AMS 08 06 30.0
comp=Z,500nm,15.5s
SOKA **Soboth** 34.15 61 *i* pP P 07 53 57.3 +4.1
comp=Z,8.8nm,1.1s
NC204 **NORSAR Array S** 34.19 35 *e*P P 07 53 57.1 +3.8
NOA **NORSAR Array B** 34.30 35 P P 07 53 55.4 +1.0
comp=Z,9.2nm,0.9s,baz=249,slow=8.9,SNR=9.8
NOA LR LR 08 06 25.5
comp=Z,589nm,18.4s,baz=250,slow=34
NC602 **NORSAR Array S** 34.34 36 *e*P P 07 53 58.7 +4.1
NB201 **NORSAR Array S** 34.34 35 *e*P P 07 53 60.0 +5.3
SUMG **Summit** 34.43 356 *i* P P 07 53 57.1 +1.3
comp=Z,36nm,1.2s
SUMG **Summit** 34.43 356 *e*P P 07 53 57.0 +1.3
comp=Z,38nm,1.2s
NC303 **NORSAR Array S** 34.44 35 *e*P P 07 53 59.9 +4.4
ARSA **Arzberg** 34.46 60 *i* pP P 07 54 00.5 +4.7
comp=Z,13nm,1.2s
TAM **Tamanrasset** 34.48 106 *e*P P 07 53 57.9 +1.5
comp=Z,6.2nm,1.0s
NC405 **NORSAR Array S** 34.55 35 *e*P P 07 53 57.7 +1.2
N59A **State Game Lan** 34.61 289 P P 07 53 57.5 +0.3
baz=79
CONA **Conrad Observa** 34.66 59 *i* P P 07 53 58.1 +0.4
comp=Z,7.7nm,1.1s
UPC **Upice** 34.77 54 AMS AMS 08 07 00.0
comp=Z,900nm,16.7s
KSP **Ksiaz** 34.96 54 *e*P P 07 54 01.9 +1.8
DPC **Dobruska-Polom** 34.97 55 *e*P P 07 54 02.8 +2.6
DPC *e*S S 07 59 36.1 +4.4
DPC AMS AMS 08 07 00.0
comp=Z,700nm,18.6s
KRUC **Moravsky** 35.00 57 *e*P P 07 54 05.4 +4.9
VRAC **Vranov** 35.13 56 *e*P P 07 54 06.5 +4.9
HFS **Hagfors** 35.14 37 P P 07 54 03.2 +1.6
comp=Z,4.2nm,0.9s,baz=228,slow=7.6,SNR=4.4
HFS LR LR 08 07 03.3
comp=Z,766nm,19.4s,baz=249,slow=34
VAE **Valguarnera** 35.18 77 LR LR 08 07 18.4
comp=Z,1μm,18.6s,baz=348,slow=34
CUC **Castrocucco** 35.63 73 *e*P P 07 54 07.8 +1.7
comp=Z,29nm,1.2s
CUC **Castrocucco** 35.63 73 *e*P P 07 54 07.8 +1.7
comp=Z,29nm,1.2s
GKP **Gorka Klasztor** 35.70 50 *e*P P 07 54 13.1 +6.7
MORC **Moravsky Berou** 35.74 56 ‖ *i*P P 07 54 12.5 +5.6
MORC **Moravsky Berou** 35.74 56 *e*P P 07 54 09.5 +2.5
comp=Z,68nm,1.4s
MORC **Moravsky Berou** 35.74 56 *e*P P 07 54 11.4 +4.5
MMNY **Mt. Morris Dam** 35.86 292 *e*P P 07 54 08.5 +0.6
comp=Z,17nm,1.0s
OKC **Ostrava-Krasne** 36.14 56 *e*S S 07 59 52.5 +2.9
OKC AMS AMS 08 10 40.0
comp=Z,400nm,15.5s
SADO **Sadowa** 36.45 296 *e*P P 07 54 13.1 +0.2
comp=Z,17nm,1.2s
VYHS **Vyhne** 36.63 58 *e*P P 07 54 18.0 +3.5
MORH **M‡r^gy, Hung** 36.67 62 ‖ *e*P P 07 54 20.0 +5.2
O56A **Blue Knob Stat** 36.83 288 P P 07 54 17.7 +1.3
baz=77
OJC **Ojcow** 37.20 55 *e*P P 07 54 21.0 +1.7
OJC **Ojcow** 37.20 55 *e*P P 07 54 20.6 +1.3
comp=Z,31nm,1.1s
PSZ **Piszkesteto** 37.37 59 ⇑ *i*P P 07 54 25.8 +4.9
PSZ **Piszkesteto** 37.37 59 ‖ *e*P P 07 54 26.4 +5.5
PSZ **Piszkesteto** 37.37 59 *e*P P 07 54 21.5 +0.6
comp=Z,34nm,1.4s
NIE **Niedzica** 37.55 56 *e*P P 07 54 29.0 +6.7
ALLY **Alegheny Colle** 37.70 291 *e*P P 07 54 23.9 +0.3
comp=Z,23nm,1.0s
ALLY **Alegheny Colle** 37.70 291 *e*P P 07 54 23.9 +0.3
comp=Z,23nm,1.0s
N54A **Moraine State** 37.73 290 *e*P P 07 54 23.6 -0.3
comp=Z,36nm,1.4s
N54A **Moraine State** 37.73 290 *e*P P 07 54 23.6 -0.3
comp=Z,36nm,1.4s
DIVS **Divibare** 37.90 65 *e*P P 07 54 27.5 +2.1
comp=Z,19nm,1.4s
MCWV **Mont Chateau** 37.93 288 P P 07 54 26.1 +0.5
baz=76
TOA0 **Torodi Ar. Sit** 38.09 123 *e*P P 07 54 26.4 -0.7
TORD **Torodi Ar. Bea** 38.09 123 P P 07 54 26.5 -0.7
comp=Z,3.4nm,0.7s,baz=310,slow=7.2,SNR=14
TORD LR LR 08 09 08.6
comp=Z,887nm,18.3s,baz=300,slow=35
CRVS **Cervenica-Dubn** 38.34 57 *e*P P 07 54 34.9 +5.9
SIRR **Siria** 38.74 61 ⇑ *i*P P 07 54 37.4 +5.0
BZS **Buzias** 38.81 62 ⇑ *i*P P 07 54 38.4 +5.5
TIC **Toumodi** 39.18 137 *e*P P 07 54 36.4 +0.1
DBIC **Dimbokro** 39.25 137 P P 07 54 36.8 0.0
comp=Z,4.4nm,0.7s,baz=316,slow=9.0,SNR=5.3
DBIC LR LR 08 09 04.5
comp=Z,1μm,20.8s,baz=300,slow=34
DBIC **Dimbokro** 39.25 137 *e*P P 07 54 36.3 -0.6
comp=Z,9.4nm,1.0s
SUW **Suwalki** 39.27 49 *e*P P 07 54 41.8 +5.1
LIC **Lamto** 39.53 138 *e*P P 07 54 38.4 -0.8
comp=Z,66nm,1.6s
KIC **Kosan Boka** 39.57 137 *e*P P 07 54 39.7 +0.1
comp=Z,76nm,1.7s
ACSO **Alum Creek Sta** 40.12 290 P P 07 54 44.1 +0.2
baz=75
ACSO **Alum Creek Sta** 40.12 290 *e*P P 07 54 44.1 +0.2
comp=Z,23nm,0.9s
F46A **Macinaw City C** 40.22 298 P P 07 54 45.2 +0.5
baz=81
E45A **Wooded Hills,** 40.42 299 P P 07 54 46.5 +0.2
baz=81
F45A **CMU Biological** 40.76 298 P P 07 54 49.6 +0.5
baz=80
E44A **Grand Marais A** 40.88 300 P P 07 54 50.7 +0.5
baz=81
S52A **Salyersville** 40.91 286 P P 07 54 50.8 +0.3
baz=72
BUR08 **Bucovina Ar. S** 40.96 58 *e*P P 07 54 52.8 +1.9
BUR04 **Bucovina Ar. S** 40.97 59 *e*P P 07 54 53.4 +2.4
BURAR **Bucovina Array** 40.97 59 ⇑ *i*P P 07 54 56.2 +5.2
T52A **Hallie** 41.02 285 P P 07 54 51.1 -0.3
baz=72
VOIR 41.22 62 ‖ *i*P P 07 54 57.9 +4.9
S51A **Beattyville** 41.31 286 P P 07 54 53.8 +0.1
baz=72
F44A **Big Bay de Noc** 41.33 299 P P 07 54 54.1 +0.2
baz=80
FINES **FINESS Array B** 41.35 37 P P 07 54 55.1 +1.3
comp=Z,7.8nm,0.8s,baz=270,slow=3.8,SNR=16
FINES LR LR 08 10 45.5
comp=Z,810nm,19.1s,baz=267,slow=34

FIA1 **FINESS Array S** 41.35 37 *e*P P 07 54 55.8 +2.0
comp=Z,21nm,1.0s
DOPR **Dopca** 41.35 61 ⇑ *i*P P 07 54 58.5 +4.4
V53A **Saluda** 41.36 283 P P 07 54 54.2 -0.1
baz=70
TZTN **Tazewell** 41.63 284 *e*P P 07 54 57.1 +0.7
comp=Z,11nm,1.1s
E43A **Lone Tree Farm** 41.66 300 P P 07 54 56.5 0.0
baz=80,SNR=9.3
W53A **Cullowhee** 41.80 282 P P 07 54 58.3 +0.4
baz=70
MLR **Muntele Rosu** 41.82 62 LR LR 08 11 12.7
comp=Z,65nm,19.6s,baz=280,slow=34
MLR **Muntele Rosu** 41.82 62 ‖ *i*P P 07 55 03.1 +5.0
MLR **Muntele Rosu** 41.82 62 *e*P P 07 55 01.0 +2.9
comp=Z,33nm,1.3s
F43A **Flat Rock, Esc** 41.87 299 P P 07 54 58.5 +0.2
baz=80
V52A **Sevierville** 41.90 283 P P 07 54 58.3 -0.3
baz=70
Y54A **Tignall** 41.90 280 P P 07 54 58.3 -0.4
baz=68
PLOR **Plostina** 42.24 61 ⇑ *i*P P 07 55 06.3 +5.0
E42A **Champion** 42.27 300 P P 07 55 01.4 -0.1
baz=80
VRI **Vrincioaia** 42.29 61 ‖ *i*P P 07 55 06.8 +5.1
G43A **Wallace** 42.34 298 P P 07 55 02.8 +0.7
baz=79
G43A **Wallace** 42.34 298 *e*P P 07 55 02.0 -0.1
comp=Z,13nm,1.0s
W52A **Murphy** 42.41 283 P P 07 55 03.4 +0.5
baz=69
T50A **Nancy** 42.45 286 P P 07 55 03.4 +0.3
baz=71
O47A **Sheridan** 42.47 291 P P 07 55 03.4 +0.2
baz=74
255A **Hazlehurst** 42.49 278 P P 07 55 03.0 -0.4
baz=66
V51A **Loudon** 42.49 284 P P 07 55 03.1 -0.3
baz=70
F42A **Maple Grove Fa** 42.55 299 P P 07 55 03.7 -0.1
baz=79
H43A **Windswept, Lux** 42.56 297 P P 07 55 03.7 -0.2
baz=78
658A **Bunnell** 42.59 274 P P 07 55 04.1 -0.2
baz=64
Y53A **Monroe** 42.60 281 P P 07 55 04.5 +0.2
baz=68
D41A **Chassel** 42.60 301 P P 07 55 04.7 +0.5
baz=80
GOGA **Godfrey** 42.67 280 P P 07 55 03.7 -1.3
baz=68
GOGA **Godfrey** 42.67 280 *e*P P 07 55 05.4 +0.5
comp=Z,7.7nm,1.0s
GOGA **Godfrey** 42.67 280 *e*P P 07 55 05.4 +0.5
comp=Z,7.7nm,1.0s
N46A **Monticello** 42.70 292 P P 07 55 05.3 +0.2
baz=74
CPCT **Cooper Cave** 42.74 283 *e*P P 07 55 05.7 +0.2
comp=Z,12nm,1.1s
ARCES **ARCESS Array B** 42.78 25 P P 07 55 07.0 +1.6
comp=Z,10nm,1.0s,baz=264,slow=8.3,SNR=8.4
ARCES LR LR 08 09 38.1
comp=Z,519nm,20.9s,baz=256,slow=32
ARCES **ARCESS Array B** 42.78 25 *e*P P 07 55 07.3 +1.9
ARE0 **ARCESS Array S** 42.78 25 *e*P P 07 55 06.7 +1.3
comp=Z,34nm,1.4s
Z53A **Monticello** 42.80 280 P P 07 55 06.8 +0.8
baz=68
C40A **Isle Royale Na** 42.84 302 P P 07 55 06.4 +0.3
baz=81
G42A **Mountain** 42.86 298 P P 07 55 07.0 +0.7
baz=78
G42A **Mountain** 42.86 298 *e*P P 07 55 06.7 +0.4
comp=Z,16nm,1.2s
T49A **Edmonton** 42.95 286 P P 07 55 07.2 0.0
baz=71
I43A **Langenfeld Bro** 42.96 296 P P 07 55 05.7 -1.4
baz=77
Y52A **Lilburn** 42.96 281 P P 07 55 07.8 +0.5
baz=68
E41A **Kenton** 42.98 300 P P 07 55 06.6 -0.7
baz=79
BLO **Bloomington** 43.03 289 *e*P P 07 55 08.5 +0.7
comp=Z,24nm,1.3s
H42A **Shiocton** 43.09 297 P P 07 55 07.7 -0.5
baz=77
H42A **Shiocton** 43.09 297 *e*P P 07 55 08.7 +0.5
comp=Z,11nm,1.0s
V50A **Pikevile** 43.10 284 P P 07 55 07.8 -0.6
baz=70
SFIN **Lafayette** 43.11 291 P P 07 55 08.3 -0.1
baz=74
254A **Abbeville** 43.11 278 P P 07 55 07.5 -1.0
baz=66
AK11 **Malin Array Si** 43.13 53 *e*P P 07 55 10.8 +2.3
WCI **Wyandotte Cave** 43.15 288 P P 07 55 08.3 -0.5
baz=72
S48A **Wiedeman Farm,** 43.16 287 P P 07 55 08.3 -0.5
baz=71
AKASG **Malin Array Be** 43.16 53 P P 07 55 11.0 +2.3
comp=Z,15nm,0.9s,baz=277,slow=7.7,SNR=26
AKASG LR LR 08 12 42.4
comp=Z,447nm,18.2s,baz=275,slow=35
AKBB **Malin Array Si** 43.16 53 *e*P P 07 55 09.4 +0.8
comp=Z,27nm,1.0s
F41A **Three Lakes** 43.22 299 P P 07 55 09.1 -0.2
baz=78
J43A **Natural Harves** 43.27 296 P P 07 55 09.4 -0.3
baz=76
N45A **Kentland** 43.28 292 P P 07 55 09.4 -0.4
baz=74
R47A **Wooly Knot Far** 43.31 288 P P 07 55 10.4 +0.4
baz=72
X51A **Calhoun** 43.31 282 P P 07 55 09.8 -0.4
baz=69
U49A **Red Boiling Sp** 43.33 285 P P 07 55 09.4 -0.9
baz=70
G41A **Antigo** 43.38 298 P P 07 55 11.3 +0.7
baz=78
P46A **Rosedale** 43.41 290 P P 07 55 10.7 -0.1
baz=73
W50A **Signal Mountai** 43.43 283 P P 07 55 11.6 +0.5
baz=69
TLB **Topalu** 43.47 62 ‖ *i*P P 07 55 15.1 +3.9
KIS **Kishinev** 43.49 59 *e*P P 07 55 15.0 +3.6
comp=Z,100nm,1.5s
KIS *e*S S 08 01 32.0 -7.8
KIS *e*L L 08 11 15.0
KIS LRM MLR 08 18 41.0
comp=Z,500nm,14.0s
Z52A **Williamson** 43.49 280 P P 07 55 12.1 +0.5
baz=67
I42A **Draeger Farm,** 43.50 297 P P 07 55 12.1 +0.6
baz=76
I42A **Draeger Farm,** 43.50 297 *e*P P 07 55 11.2 -0.3
comp=Z,9.8nm,1.0s
C39A **Grand Marais** 43.51 302 P P 07 55 11.2 -0.3
baz=80
O45A **Potomac** 43.60 291 P P 07 55 12.9 +0.5
baz=73
E40A **Wakefield** 43.62 300 P P 07 55 12.4 -0.1
baz=79,SNR=7.9
V49A **McMinnville** 43.68 284 P P 07 55 12.8 -0.3
baz=70
Y51A **Rockmart** 43.72 281 P P 07 55 13.9 +0.5
baz=68
TIRR **Tirgusor** 43.76 63 ⇑ *i*P P 07 55 17.2 +3.7
TIRR **Tirgusor** 43.76 63 *e*P P 07 55 14.0 +0.4
comp=Z,17nm,0.9s
J42A **Columbus** 43.78 296 P P 07 55 13.8 0.0
baz=76
L43A **Garden Prairie** 43.80 294 P P 07 55 14.0 0.0
baz=75
F40A **Park Falls** 43.88 300 P P 07 55 14.4 -0.2
baz=78,SNR=9.8
SWET **Sewanee** 43.90 284 *e*P P 07 55 14.8 -0.2
comp=Z,10nm,1.0s
U48A **Cassie Pea, Po** 43.91 286 P P 07 55 13.7 -1.2
baz=70
152A **Waverly Hall** 43.93 280 P P 07 55 14.4 -0.7
baz=67
X50B **Fort Payne** 43.96 282 P P 07 55 15.0 -0.4
baz=68
G40A **Rib Lake** 44.07 299 P P 07 55 16.0 -0.1
baz=77,SNR=7.2
E39A **Mellen** 44.08 300 P P 07 55 16.3 +0.2
baz=78,SNR=6.9

K42A **Prairie Point,** 44.08 295 P P 07 55 16.8 +0.6
baz=75
655A **Horseshoe Beac** 44.11 275 P P 07 55 17.0 +0.4
baz=64
I41A **Arkdale** 44.13 297 P P 07 55 16.6 +0.1
baz=76
M43A **Waltham Townsh** 44.16 293 P P 07 55 16.2 -0.6
baz=74
T47A **Sharon Grove** 44.17 286 P P 07 55 17.0 0.0
baz=70
W49A **Belvidere** 44.19 284 P P 07 55 17.1 0.0
baz=69
252A **Lumpkin** 44.21 279 P P 07 55 17.6 +0.2
baz=66
SPITS **Spitsbergen Ar** 44.23 12 LR LR 08 10 06.0
comp=Z,290nm,18.2s,baz=235,slow=31
Y50A **Piedmont** 44.24 282 P P 07 55 16.9 -0.7
baz=68
C38A **Sawbill Land.** 44.28 302 P P 07 55 17.7 -0.1
baz=79
Q45A **Warren Harvey,** 44.33 289 P P 07 55 18.1 -0.2
baz=72
H40A **Chili** 44.35 298 P P 07 55 18.6 +0.2
baz=76,SNR=7.7
EYMN **Ely** 44.39 303 P P 07 55 18.1 -0.5
baz=79,SNR=9.2
EYMN **Ely** 44.39 303 *e*P P 07 55 18.2 -0.4
comp=Z,12nm,1.0s
V48A **Smith Brothers** 44.39 285 P P 07 55 18.2 -0.6
baz=69
S46A **Don Dixon Farm** 44.39 288 P P 07 55 18.6 -0.2
baz=71
J41A **Loganville** 44.40 296 P P 07 55 18.8 0.0
baz=75
F39A **Loretta** 44.42 300 P P 07 55 18.8 -0.1
baz=78,SNR=7.4
151A **Opelika** 44.46 280 P P 07 55 19.2 -0.1
baz=66
N43A **Stutzman Famil** 44.46 293 P P 07 55 19.8 +0.5
baz=73
X49A **Woodville** 44.46 283 P P 07 55 19.6 +0.2
baz=68
U47A **Clarksville** 44.50 286 P P 07 55 19.9 +0.3
baz=70
R45A **Skylar, Fairfi** 44.62 289 P P 07 55 20.6 +0.1
baz=71
Z50A **Ashland** 44.63 281 P P 07 55 20.6 -0.1
baz=67
HDIL **Hopedale** 44.66 292 *e*P P 07 55 20.3 -0.6
comp=Z,25nm,1.4s
I40A **Norwalk** 44.69 297 P P 07 55 22.0 +0.9
baz=76
251A **Midway** 44.70 279 P P 07 55 22.3 +1.0
baz=66
E38A **The Farm, Brul** 44.70 301 P P 07 55 20.5 -0.6
baz=78,SNR=5.3
FCC **Fort Churchill** 44.71 318 *e*P P 07 55 21.9 +1.0
comp=Z,23nm,1.1s
G39A **Holcombe** 44.73 299 P P 07 55 21.3 -0.1
baz=77,SNR=6.4
T46A **Princeton** 44.74 287 P P 07 55 21.6 0.0
baz=70
Y49A **Blount Mountai** 44.77 282 P P 07 55 22.1 +0.2
baz=68
K41A **Shullsburg** 44.81 295 P P 07 55 22.6 +0.6
baz=74
C37A **Embarrass** 44.89 303 P P 07 55 22.8 +0.2
baz=78
V47A **Nunnelly** 44.89 285 P P 07 55 22.2 -0.6
baz=69
J40A **Soldiers Grove** 44.90 296 P P 07 55 22.8 0.0
baz=75
H39A **Augusta** 44.96 298 P P 07 55 23.6 +0.4
baz=76
150A **Eclectic** 44.96 280 P P 07 55 23.6 +0.2
baz=66
WVT **Waverly** 45.01 286 P P 07 55 24.1 +0.3
baz=69
WVT **Waverly** 45.01 286 *e*P P 07 55 23.9 +0.2
comp=Z,15nm,1.4s
X48A **Hartselle** 45.03 283 P P 07 55 23.6 -0.3
baz=68
P43A **Skaggs, Pawnee** 45.10 291 P P 07 55 24.9 +0.4
baz=72
Z49A **Columbiana** 45.12 281 P P 07 55 24.0 -0.7
baz=67
D37A **Cotton** 45.17 302 P P 07 55 24.6 -0.2
baz=78,SNR=9.2
R44A **Waltonville** 45.23 289 P P 07 55 24.9 -0.5
baz=71
G38A **Ridgeland** 45.23 299 P P 07 55 25.5 +0.1
baz=76
C36A **Pine Crest Far** 45.31 303 P P 07 55 25.8 -0.1
baz=78,SNR=8.6
M41A **Milan** 45.32 294 P P 07 55 26.4 +0.2
baz=73
I39A **Houston** 45.33 297 P P 07 55 25.8 -0.4
baz=75,SNR=5.1
V46A **Holladay** 45.35 285 P P 07 55 26.4 0.0
baz=69
K40A **Colesburg** 45.37 296 P P 07 55 26.2 -0.3
baz=74
Q43A **New Douglas** 45.46 290 P P 07 55 27.3 +0.1
baz=71
KARP **Karpathos** 45.52 75 *e*P P 07 55 29.0 +1.2
comp=Z,16nm,0.9s
KARP **Karpathos** 45.52 75 *e*P P 07 55 29.0 +1.2
comp=Z,16nm,0.9s
S44A **Carbondale** 45.54 288 P P 07 55 28.0 +0.1
baz=70
MANT **Manisa** 45.54 71 *e*P P 07 55 29.0 +0.8
comp=Z,67nm,1.2s
MANT **Manisa** 45.54 71 *e*P P 07 55 29.0 +0.8
comp=Z,67nm,1.2s
LRAL **Lakeview Retre** 45.55 281 P P 07 55 27.9 -0.1
baz=67
149A **Jones** 45.56 281 P P 07 55 28.0 -0.1
baz=66
J39A **Decorah** 45.60 297 P P 07 55 28.0 -0.3
baz=74,SNR=5.6
L40A **Anamosa** 45.61 295 P P 07 55 28.7 +0.3
baz=74
PLAL **Pickwick Lake** 45.62 284 *e*P P 07 55 28.8 +0.2
comp=Z,22nm,1.4s
PLAL **Pickwick Lake** 45.62 284 *e*P P 07 55 28.8 +0.2
comp=Z,22nm,1.4s
F37A **Hinrichs Farm,** 45.63 300 P P 07 55 29.2 +0.7
baz=76
X47A **Russelville** 45.63 284 P P 07 55 28.3 -0.3
baz=68
U45A **Rockin P Farm,** 45.64 286 P P 07 55 29.0 +0.3
baz=69
H38A **Maiden Rock** 45.65 298 P P 07 55 29.3 +0.7
baz=76
D36A **Goodland** 45.65 302 P P 07 55 28.9 +0.2
baz=77
P42A **Winchester** 45.72 291 P P 07 55 29.2 -0.1
baz=72
N41A **Harden Midland** 45.75 293 P P 07 55 29.7 +0.2
baz=72
B35A **Bob, Littlefor** 45.77 304 P P 07 55 29.0 -0.6
baz=78,SNR=7.9
Z48A **Northport** 45.84 282 P P 07 55 29.7 -0.7
baz=67
R43A **Red Bud** 45.85 289 P P 07 55 30.4 +0.1
baz=71
I38A **Scanlan Farm,** 45.85 298 P P 07 55 30.3 0.0
baz=75
Y47A **UCPARC, Winfie** 45.86 283 P P 07 55 30.4 -0.1
baz=67
E36A **McGregor** 45.86 301 P P 07 55 30.5 +0.1
baz=77,SNR=11
SPMN **Marine on St.** 45.87 299 P P 07 55 29.9 -0.5
baz=76,SNR=7.2
SPMN **Marine on St.** 45.87 299 *e*P P 07 55 30.4 0.0
comp=Z,14nm,0.9s
K39A **Oelwein** 45.90 296 P P 07 55 30.7 0.0
baz=74
O41A **Passleys Farm,** 45.95 292 P P 07 55 31.0 -0.1
baz=72
T44A **Benton** 46.00 288 P P 07 55 31.9 +0.3
baz=70
V45A **Humboldt** 46.01 286 P P 07 55 31.9 +0.3
baz=69
M40A **Post Highland** 46.01 294 P P 07 55 31.5 -0.1
baz=73
C35A **Jirik Farms, M** 46.07 303 P P 07 55 31.7 -0.3
baz=77,SNR=8.5

Q42A	Golden Eagle	46.08 290	P	P	07 55 32.9	+0.7
	baz=71					
H37A	Dierke Farm, C	46.11 299	P	P	07 55 32.7	+0.4
	baz=75					
J38A	Wedel Dairy, R	46.14 297	P	P	07 55 32.3	-0.3
	baz=74					
L39A	Vinton	46.15 295	P	P	07 55 32.3	-0.3
	baz=73					
S43A	Fulton Ridge,	46.19 288	P	P	07 55 32.3	-0.8
	baz=70					
F36A	Milaca	46.20 300	P	P	07 55 32.9	-0.2
	baz=76					
N40A	Mertquake, Sal	46.22 293	P	P	07 55 32.8	-0.4
	baz=72					
P41A	Barry, Barry	46.22 291	P	P	07 55 32.8	-0.4
	baz=71					
D35A	Remer	46.27 302	P	P	07 55 33.7	+0.2
	baz=77					
Z47A	Carrollton	46.30 282	P	P	07 55 33.9	-0.1
	baz=66					
B34A	Aery, Baudette	46.34 304	P	P	07 55 34.4	+0.2
	baz=78					
349A	Repton	46.39 279	P	P	07 55 34.5	-0.1
	baz=65					
W45A	Hickory Valley	46.40 285	P	P	07 55 34.4	-0.3
	baz=68					
M39A	Webster	46.46 294	P	P	07 55 35.4	+0.2
	baz=73					
R42A	Luebbering	46.48 290	P	P	07 55 35.1	-0.2
	baz=70					
SDV	Santo Domingo	46.49 241	LR	LR	08 11 28.6	
	comp=Z,215nm,19.2s,baz=48,slow=32					
T43A	Greenville	46.52 288	P	P	07 55 35.1	-0.5
	baz=69					
K38A	Parkersburg	46.54 296	P	P	07 55 35.1	-0.6
	baz=73					
Q41A	Truxton	46.58 291	P	P	07 55 35.9	-0.2
	baz=71					
RES	Resolute Bay	46.59 341	P	P	07 55 35.9	+0.3
	comp=Z,8.7nm,1.1s,baz=105,slow=9.0,SNR=8.0					
RES	Resolute Bay	46.59 341	eP	P	07 55 36.0	+0.3
	comp=Z,41nm,1.6s					
I37A	Lemond, Waseca	46.60 298	P	P	07 55 36.5	+0.3
	baz=74					
E35A	Pequot Lakes	46.62 302	P	P	07 55 36.5	+0.1
	baz=76					
Y46A	Houston	46.64 283	P	P	07 55 35.7	-0.9
	baz=67					
S42A	Caledonia	46.66 289	P	P	07 55 35.9	-0.8
	baz=70					
O40A	La Belle	46.67 292	P	P	07 55 36.6	-0.1
	baz=72					
147A	Livingston	46.67 281	P	P	07 55 36.5	-0.4
	baz=66					
C34A	RKJ Ranch, Bem	46.70 303	P	P	07 55 36.8	-0.1
	baz=77					
A33A	Warroad	46.73 305	P	P	07 55 36.8	-0.3
	baz=78					
PBMO	Poplar Bluff	46.74 287	eP	P	07 55 37.1	-0.3
	comp=Z,25nm,1.2s					
ULM	Lac du Bonnet	46.76 307	P	P	07 55 35.6	-1.7
	comp=Z,0.9nm,0.5s,baz=45,slow=3.6,SNR=3.8					
ULM			LR	LR	08 14 07.2	
	comp=Z,885nm,19.3s,baz=120,slow=35					
OXF	Oxford	46.81 284	P	P	07 55 37.6	-0.3
	baz=67					
OXF	Oxford	46.81 284	eP	P	07 55 37.5	-0.5
	comp=Z,74nm,1.3s					
OXF	Oxford	46.81 284	eP	P	07 55 37.5	-0.5
	comp=Z,74nm,1.3s					
L38A	Oak Wood Farm,	46.82 295	P	P	07 55 37.6	-0.3
	baz=73					
X45A	UM Field Stati	46.84 284	P	P	07 55 37.8	-0.3
	baz=67					
N39A	Derby Farms, D	46.88 294	P	P	07 55 38.1	-0.4
	baz=72					
CCM	Cathedral Cave	46.90 289	P	P	07 55 38.4	-0.2
	baz=70					
CCM	Cathedral Cave	46.90 289	eP	P	07 55 38.8	+0.2
	comp=Z,19nm,1.4s					
J37A	Redenius Farm,	46.90 297	P	P	07 55 38.8	+0.3
	baz=74					
R41A	Rosebud	46.91 290	P	P	07 55 38.5	-0.2
	baz=70					
F35A	Swanville	46.91 301	P	P	07 55 38.7	+0.1
	baz=75					
OBN	Obninsk	46.97 46	P	P	07 55 40.3	+1.5
	comp=Z,22nm,0.4s,baz=255,slow=10,SNR=10					
Z46A	Louisville	46.98 282	P	P	07 55 39.2	-0.1
	baz=66					
P40A	Paris	46.99 292	P	P	07 55 38.8	-0.4
	baz=71					
B33A	Robert and Kas	47.00 304	P	P	07 55 39.5	+0.2
	baz=77					
G35A	Watkins	47.02 300	P	P	07 55 39.5	+0.1
	baz=75					
I36A	Fitzsimmons Fa	47.02 298	P	P	07 55 39.5	0.0
	baz=74					
D34A	Park Rapids	47.02 302	P	P	07 55 39.3	-0.1
	baz=76					
SCIA	State Center	47.08 295	eP	P	07 55 41.2	+1.3
	comp=Z,7.1nm,0.6s					
O39A	Kirksville	47.11 293	P	P	07 55 40.1	-0.1
	baz=71					
T42A	Van Buren	47.14 288	P	P	07 55 40.3	-0.2
	baz=69					
Y45A	Yeager Farm, C	47.17 283	P	P	07 55 41.0	+0.2
	baz=67					
AGMN	Agassiz Nation	47.17 304	P	P	07 55 41.1	+0.5
	baz=77					
AGMN	Agassiz Nation	47.17 304	eP	P	07 55 40.8	+0.2
	comp=Z,6.9nm,0.8s					
Q40A	Laux Farm, Aux	47.19 291	P	P	07 55 40.7	-0.2
	baz=70					
M38A	Pleasantville	47.21 294	P	P	07 55 40.9	-0.1
	baz=72					
C33A	Trail	47.24 303	P	P	07 55 40.8	-0.4
	baz=76					
F34A	Alexandria	47.39 301	P	P	07 55 41.9	-0.5
	baz=75					
L37A	Phoenix Point,	47.39 296	P	P	07 55 42.1	-0.3
	baz=72					
H35A	Sunnyside Ranc	47.40 299	P	P	07 55 42.3	-0.1
	baz=74,SNR=16					
347A	Saraland	47.41 280	P	P	07 55 42.8	+0.2
	baz=65					
A32A	Rocking H Ranc	47.44 305	P	P	07 55 43.2	+0.6
	baz=77					
N38A	Joes South For	47.44 294	P	P	07 55 42.4	-0.4
	baz=72					
D33A	AnnSam, Waubun	47.44 303	P	P	07 55 43.5	+0.7
	baz=76					
J36A	Seneca 1, Swea	47.45 297	P	P	07 55 43.1	+0.3
	baz=73					
PTGA	Pitinga	47.47 222	eP	P	07 55 43.7	+0.4
	comp=Z,19nm,1.0s					
U42A	Revenden	47.50 287	P	P	07 55 43.0	-0.3
	baz=68					
P39B	Salisbury	47.52 292	P	P	07 55 42.8	-0.6
	baz=71,SNR=7.4					
R40A	Maddies Statio	47.57 290	P	P	07 55 43.3	-0.5
	baz=70,SNR=11					
T41A	Mountain View	47.64 288	P	P	07 55 44.4	0.0
	baz=69					
E33A	Westby DABS, E	47.71 302	P	P	07 55 45.5	+0.7
	baz=75					
K36A	Gilmore City	47.73 296	P	P	07 55 44.7	-0.3
	baz=73,SNR=7.5					
G34A	Benson	47.80 300	P	P	07 55 45.9	+0.4
	baz=74					
V42A	Cord	47.82 287	P	P	07 55 45.8	0.0
	baz=68					
O38A	Galt	47.83 293	P	P	07 55 45.7	-0.1
	baz=71					
Q39A	Willow Grove F	47.83 291	P	P	07 55 45.3	-0.5
	baz=70,SNR=12					
M37A	Trindle Farm,	47.83 295	P	P	07 55 45.8	-0.1
	baz=72					
KLMR	Klimovskoe	47.84 38	eP	P	07 55 40.5	-5.1
KLMR			AMP		07 55 53.1	
	comp=Z,22nm,1.4s					
X43A	Marvell	47.93 285	eP	P	07 55 46.4	-0.3
	comp=Z,55nm,1.3s					
X43A	Marvell	47.93 285	eP	P	07 55 46.4	-0.3
	comp=Z,55nm,1.3s					
S40A	Lebanon	47.99 289	P	P	07 55 47.1	+0.1
	baz=69					
U41A	Viola	48.01 288	P	P	07 55 47.3	0.0
	baz=68					
P38A	Dawn	48.04 292	P	P	07 55 47.9	+0.4
	baz=70					
H34A	Spellman Lake,	48.05 299	P	P	07 55 47.6	+0.1
	baz=74					
F33A	5 Mile Ranch,	48.08 301	P	P	07 55 48.1	+0.4
	baz=74					
Z44A	Pea Ridge, Bel	48.08 283	P	P	07 55 47.8	0.0
	baz=66					
R39A	Chumby, Stover	48.13 290	P	P	07 55 47.6	-0.6
	baz=70,SNR=11					
N37A	Lee Faris, Mou	48.15 294	P	P	07 55 48.2	-0.1
	baz=71					
T40A	Mansfield	48.16 289	P	P	07 55 48.2	-0.3
	baz=69					
B31A	Greenbush Farm	48.30 305	P	P	07 55 49.9	+0.5
	baz=76					
Q38A	Cooks Store, C	48.33 291	P	P	07 55 49.8	+0.1
	baz=70					
M36A	Felix, Anita	48.35 295	P	P	07 55 49.7	-0.1
	baz=71					
G33A	Ortonville	48.35 300	P	P	07 55 49.9	+0.1
	baz=74					
V41A	Mountainview	48.40 287	P	P	07 55 49.4	-0.9
	baz=68					
H10N2	ASCENSION HYDR	48.40 159	T	T	08 47 14.2	
	baz=343,slow=75,SNR=16					
H10N3	ASCENSION HYDR	48.41 159	T	T	08 47 02.6	
	baz=343,slow=75,SNR=21					
H10N1	ASCENSION HYDR	48.42 159	T	T	08 47 15.0	
	baz=343,slow=75,SNR=19					
C31A	Landman Farms,	48.51 304	P	P	07 55 51.5	+0.5
	baz=75					
S39A	Bolivar	48.56 290	P	P	07 55 50.8	-0.7
	baz=69,SNR=9.6					
P37A	Lathrop	48.64 293	P	P	07 55 51.7	-0.5
	baz=70					
WHAR	Wooly Hollow	48.69 286	eP	P	07 55 52.7	+0.2
	comp=Z,8.6nm,1.0s					
D31A	Mcclaflin, Tow	48.70 303	P	P	07 55 52.6	+0.2
	baz=75					
W41B	Gary Mavity, V	48.71 286	P	P	07 55 51.5	-1.2
	baz=67					
W41B	Gary Mavity, V	48.71 286	eP	P	07 55 51.8	-0.9
	comp=Z,12nm,1.1s					
W41B	Gary Mavity, V	48.71 286	eP	P	07 55 51.8	-0.9
	comp=Z,12nm,1.1s					
U40A	Yellville	48.71 288	P	P	07 55 51.9	-0.8
	baz=68,SNR=14					
H33A	Prehn Over Nor	48.71 300	P	P	07 55 52.4	-0.2
	baz=73,SNR=11					
R38A	Fenwick Farm,	48.81 291	P	P	07 55 52.7	-0.8
	baz=69,SNR=14					
CCAR	Cane Creek	48.85 284	eP	P	07 55 53.4	-0.3
	comp=Z,75nm,1.3s					
T39A	Clever	48.85 289	P	P	07 55 52.9	-0.8
	baz=68					
BR131	Keskin Array S	48.85 67	eP	P	07 55 56.4	+2.5
BRTR	Keskin Array B	48.85 67	P	P	07 55 56.2	+2.3
	comp=Z,2.2nm,0.8s,baz=286,slow=6.3,SNR=11					
BRTR			LR	LR	08 15 43.4	
	comp=Z,83nm,20.3s,baz=276,slow=35					
Y42A	Garnett, Star	48.89 284	P	P	07 55 53.7	-0.3
	baz=68					
V40A	Witts Springs	48.90 287	P	P	07 55 53.8	-0.3
	baz=68					
V40A	Witts Springs	48.90 287	eP	P	07 55 53.2	-1.0
	comp=Z,28nm,1.3s					
V40A	Witts Springs	48.90 287	eP	P	07 55 53.2	-1.0
	comp=Z,28nm,1.3s					
ECSD	EROS Data Cent	48.90 298	P	P	07 55 53.5	-0.6
	baz=72,SNR=12					
ECSD	EROS Data Cent	48.90 298	eP	P	07 55 53.8	-0.2
	comp=Z,16nm,1.1s					
E31A	Nome	48.95 302	P	P	07 55 54.1	-0.2
	baz=74,SNR=9.9					
S38A	Stockton	49.02 290	P	P	07 55 54.8	-0.2
	baz=69					
G32A	Webster	49.05 301	P	P	07 55 55.0	-0.3
	baz=73					
U39A	Green Forest	49.17 288	P	P	07 55 55.6	-0.6
	baz=68					
H32A	Carlson Farm,	49.23 300	P	P	07 55 56.5	-0.1
	baz=73,SNR=17					
W40A	Ferguson Farm,	49.32 287	P	P	07 55 56.8	-0.6
	baz=67					
W40A	Ferguson Farm,	49.32 287	eP	P	07 55 56.7	-0.6
	comp=Z,16nm,1.4s					
W40A	Ferguson Farm,	49.32 287	eP	P	07 55 56.7	-0.6
	comp=Z,16nm,1.4s					
H10S1	ASCENSION HYDR	49.42 159	T	T	08 48 21.1	
	baz=344,slow=75,SNR=8.0					
X40A	Basin Creek Fa	49.42 286	P	P	07 55 57.2	-0.9
	baz=66					
X40A	Basin Creek Fa	49.42 286	eP	P	07 55 57.0	-1.2
	comp=Z,9.8nm,0.8s					
X40A	Basin Creek Fa	49.42 286	eP	P	07 55 57.0	-1.2
	comp=Z,9.8nm,0.8s					
H10S3	ASCENSION HYDR	49.42 159	T	T	08 48 21.3	
	baz=344,slow=75,SNR=7.9					
H10S2	ASCENSION HYDR	49.44 159	T	T	08 48 23.9	
	baz=344,slow=75,SNR=7.0					
V39A	Pettigrew	49.50 288	P	P	07 55 58.4	-0.4
	baz=67					
Y41A	Eaglette Beard	49.50 285	P	P	07 55 58.4	-0.3
	baz=66					
FFC	Flin Flon	49.51 314	eP	P	07 55 59.5	+1.0
	comp=Z,8.7nm,1.1s					
T38A	Diamond	49.52 289	P	P	07 55 58.6	-0.3
	baz=68					
HHAR	Hobbs	49.55 288	eP	P	07 56 00.6	+1.5
	comp=Z,11nm,1.4s					
MDND	Maddock	49.71 304	P	P	07 56 01.0	+0.8
	baz=74					
MDND	Maddock	49.71 304	eP	P	07 56 00.8	+0.6
	comp=Z,33nm,1.2s					
W39A	Magazine	49.85 287	P	P	07 56 01.7	+0.3
	baz=67					
W39A	Magazine	49.85 287	eP	P	07 56 01.1	-0.3
	comp=Z,19nm,1.1s					
W39A	Magazine	49.85 287	eP	P	07 56 01.1	-0.3
	comp=Z,19nm,1.1s					
MIAR	Mount Ida	49.96 286	P	P	07 56 01.9	-0.3
	baz=66					
MIAR	Mount Ida	49.96 286	eP	P	07 56 01.9	-0.3
	comp=Z,14nm,1.0s					
MIAR	Mount Ida	49.96 286	eP	P	07 56 01.9	-0.3
	comp=Z,14nm,1.0s					
X39A	Fountain Ranch	50.38 286	P	P	07 56 04.5	-0.9
	baz=66					
KSU1	Kansas State U	50.45 293	P	P	07 56 04.9	-1.1
	baz=69					
KSU1	Kansas State U	50.45 293	eP	P	07 56 05.1	-0.8
	comp=Z,9.3nm,0.8s					
BGNE	Belgrade	50.73 296	P	P	07 56 07.4	-0.7
	baz=70					
TUL1	Leonard	51.07 289	P	P	07 56 09.8	-0.9
	baz=67					
TUL1	Leonard	51.07 289	eP	P	07 56 11.0	+0.4
	comp=Z,7.2nm,0.8s					
TUL1	Leonard	51.07 289	eP	P	07 56 11.0	+0.4
	comp=Z,7.2nm,0.8s					
ROSC	El Rosal	51.92 241	LR	LR	08 15 49.2	
	comp=Z,254nm,22.0s,baz=66,slow=33					
HKT	Hockley	53.68 282	eP	P	07 56 33.3	+3.4
	comp=Z,8.9nm,1.3s					
WMOK	Wichita Mounta	53.78 289	P	P	07 56 30.2	-0.6
	baz=65					
WMOK	Wichita Mounta	53.78 289	eP	P	07 56 30.0	-0.8
	comp=Z,4.7nm,1.1s					
KBZ	Khabaz	53.92 59	P	P	07 56 35.2	+3.6
	comp=Z,6.6nm,0.9s,baz=303,slow=7.6,SNR=9.3					
KBZ			LR	LR	08 18 56.8	
	comp=Z,69nm,20.3s,baz=294,slow=35					
WHTX	Lake Whitney,	53.99 285	P	P	07 56 32.0	-0.3
	baz=63,SNR=8.9					
WHTX	Lake Whitney,	53.99 285	eP	P	07 56 32.5	+0.2
	comp=Z,37nm,1.4s					
YKW3	Yellowknife Ar	54.11 325	eP	P	07 56 35.2	+2.5
	comp=Z,11nm,1.5s					
YKA	Yellowknife Ar	54.12 325	P	P	07 56 33.1	+0.3
	comp=Z,1.4nm,0.7s,baz=70,slow=7.3,SNR=17					
YKA			PcP	PcP	07 57 36.5	-0.9
	comp=Z,0.9nm,0.8s,baz=72,slow=4.5,SNR=6.6					
YKA			LR	LR	08 17 09.6	
	comp=Z,55nm,18.0s,baz=77,slow=33					
LAO	LASA Array	54.36 305	P	P	07 56 35.2	+0.3
	baz=70					
LAO	LASA Array	54.36 305	eP	P	07 56 35.6	+0.7
	comp=Z,22nm,1.0s					
ABTX	Abilene, Hawle	55.35 287	P	P	07 56 41.6	-0.6
	baz=63					
AMTX	Amarillo	55.87 290	P	P	07 56 45.6	-0.4
	baz=64					
AMTX	Amarillo	55.87 290	eP	P	07 56 46.1	+0.1
	comp=Z,30nm,1.5s					
JTS	JuntasAbangare	55.98 255	LR	LR	08 16 27.0	
	comp=Z,201nm,21.8s,baz=95,slow=32					
K22A	Casper	56.07 300	P	P	07 56 47.5	+0.1
	baz=67					
K22A	Casper	56.07 300	eP	P	07 56 49.6	+2.2
	comp=Z,15nm,1.1s					
SAML	Samuel	56.12 220	eP	P	07 56 49.9	+2.2
	comp=Z,12nm,0.9s					
N23A	Red Feather La	56.38 298	P	P	07 56 49.3	-0.4
	baz=66					
N23A	Red Feather La	56.38 298	eP	P	07 56 50.3	+0.5
	comp=Z,20nm,1.2s					
JCT	Junction City	56.47 284	P	P	07 56 49.9	-0.4
	baz=62					
JCT	Junction City	56.47 284	eP	P	07 56 52.5	+2.2
	comp=Z,18nm,1.4s					
JCT	Junction City	56.47 284	eP	P	07 56 52.5	+2.2
	comp=Z,18nm,1.4s					
GNI	Garni	56.58 63	LR	LR	08 22 07.2	
	comp=Z,67nm,20.9s,baz=307,slow=37					
ISCO	Idaho Springs	56.60 297	P	P	07 56 50.3	-1.1
	baz=66					
Q24A	Divide	56.62 296	P	P	07 56 51.7	+0.1
	baz=65					
T25A	Trinidad	56.87 294	P	P	07 56 53.4	+0.1
	baz=64					
T25A	Trinidad	56.87 294	eP	P	07 56 57.4	+4.0
	comp=Z,4.8nm,1.0s					
GCMT	Greycliff	56.91 305	eP	P	07 56 56.5	+3.2
RLMT	Red Lodge	56.91 304	P	P	07 56 53.8	+0.4
	baz=67					
RLMT	Red Lodge	56.91 304	eP	P	07 56 56.8	+3.3
	comp=Z,14nm,1.3s					
RWWY	Rawlins	56.92 300	eP	P	07 56 56.7	+3.1
	comp=Z,13nm,1.0s					
MSTX	Muleshoe	57.08 289	P	P	07 56 55.2	+0.5
	baz=63					
MSTX	Muleshoe	57.08 289	eP	P	07 56 58.2	+3.5
	comp=Z,19nm,1.4s					
APG	El Apazote	57.35 263	LR	LR	08 18 58.6	
	comp=Z,104nm,19.8s,baz=85,slow=33					
SDCO	Great Sand Dun	57.39 295	P	P	07 56 57.1	+0.1
	baz=64					
SDCO	Great Sand Dun	57.39 295	eP	P	07 56 57.3	+0.3
	comp=Z,2.5nm,0.9s					
H17A	Grant Village	58.06 304	P	P	07 57 01.6	0.0
	baz=66					
BW06	Boulder Array	58.06 302	P	P	07 57 01.6	0.0
	baz=65					
BW06	Boulder Array	58.06 302	eP	P	07 57 03.5	+1.9
	comp=Z,10nm,1.1s					
PD31	Pinedale Array	58.06 302	eP	P	07 57 00.9	-0.7
PDAR	Pinedale Array	58.06 302	P	P	07 57 00.8	-0.8
	comp=Z,5.8nm,0.9s,baz=69,slow=8.1,SNR=21					
PDAR			LR	LR	08 20 45.8	
	comp=Z,1µm,21.3s,baz=80,slow=35					
PDAR	Pinedale Array	58.06 302	eP	P	07 57 00.2	-1.4
BOZ	Bozeman (W)	58.25 305	P	P	07 57 01.6	-1.1
	baz=66					
BOZ	Bozeman (W)	58.25 305	eP	P	07 57 05.4	+2.6
	comp=Z,6.9nm,1.2s					
WALA	Waterton Lakes	58.27 310	eP	P	07 57 02.8	0.0
	comp=Z,11nm,1.1s					
O20A	White River Ci	58.28 298	P	P	07 57 02.2	-0.9
	baz=64					
O20A	White River Ci	58.28 298	eP	P	07 57 06.7	+3.5
	comp=Z,22nm,1.4s					
YHB	Horse Butte	58.32 304	eP	P	07 57 05.8	+2.4
	comp=Z,5.0nm,0.9s					
S22A	4UR Ranch, Cre	58.34 295	P	P	07 57 02.9	-0.8
	baz=64					
S22A	4UR Ranch, Cre	58.34 295	eP	P	07 57 08.3	+4.6
	comp=Z,3.9nm,1.1s					
MOOW	Moose Ponds	58.44 303	eP	P	07 57 07.2	+2.9
	comp=Z,8.2nm,1.3s					
ARU	Arti	58.55 41	P	P	07 57 06.2	+1.7
	comp=Z,6.5nm,0.7s,baz=244,slow=2.3,SNR=16					
ARU	Arti	58.55 41	eP	P	07 57 05.7	+1.2
	comp=Z,20nm,1.0s					
SNOW	Snow King Moun	58.56 303	eP	P	07 57 07.9	+2.8
	comp=Z,9.9nm,1.1s					
FXWY	Fox Creek	58.67 303	eP	P	07 57 08.3	+2.4
	comp=Z,9.9nm,1.3s					
REDW	Red Top Meadow	58.67 303	eP	P	07 57 07.2	+1.3
	comp=Z,22nm,1.3s					
TPAW	Teton Pass	58.68 303	eP	P	07 57 07.8	+1.9
	comp=Z,5.2nm,0.9s					
DLMT	Dillon	58.96 305	eP	P	07 57 08.5	+0.8
	comp=Z,6.9nm,1.3s					
AHID	Auburn Hatcher	59.09 302	eP	P	07 57 09.5	+0.7
	comp=Z,18nm,1.1s					
MSO	Missoula	59.20 307	P	P	07 57 09.3	0.0
	baz=65					
ANMO	Albuquerque	59.34 292	P	P	07 57 10.5	-0.1
	comp=Z,1.1nm,0.6s,baz=118,slow=12,SNR=3.7					
ANMO			LR	LR	08 22 27.5	
	comp=Z,772nm,19.0s,baz=60,slow=36					
ANMO	Albuquerque	59.34 292	eP	P	07 57 10.7	+0.1
	comp=Z,2.9nm,1.0s					
TASL	Snake Pit, Alb	59.34 292	P	P	07 57 09.5	-1.0
	baz=62					
TASM	ASL Pad, Albuq	59.34 292	P	P	07 57 10.1	-0.5
	baz=62					
INK	Inuvik	59.39 335	P	P	07 57 10.7	+0.6
	comp=Z,8.3nm,0.9s,baz=55,slow=8.8,SNR=14					
INK	Inuvik	59.39 335	eP	P	07 57 11.7	+1.6
	comp=Z,24nm,1.1s					
CMIG	Matias Romero	59.61 268	LR	LR	08 19 13.8	
	comp=Z,223nm,21.6s,baz=36,slow=32					
PV09	Paradox Valley	59.63 297	eP	P	07 57 13.4	+0.7
MVCO	Mesa Verde	59.76 295	P	P	07 57 13.1	-0.5
	baz=63					
MVCO	Mesa Verde	59.76 295	eP	P	07 57 14.3	+0.8
	comp=Z,15nm,1.4s					
HWUT	Hardware Ranch	59.91 301	eP	P	07 57 14.3	0.0
TXAR	Lajitas Array	59.95 285	P	P	07 57 14.5	-0.3
	comp=Z,1.7nm,0.7s,baz=73,slow=7.2,SNR=23					
TXAR			LR	LR	08 23 53.2	
	comp=Z,465nm,19.1s,baz=0.0,slow=37					
TX31	Lajitas Ar. Si	59.95 285	eP	P	07 57 14.2	-0.6
TX31	Lajitas Ar. Si	59.95 285	eP	P	07 57 14.2	-0.6
MNTX	Cornudas Mount	60.09 288	P	P	07 57 14.7	-0.9
	baz=61					
LAZ	Ladron	60.09 292	eP	P	07 57 16.2	+0.4
P17A	Butcher Ranch,	60.30 299	eP	P	07 57 17.9	+0.8
	comp=Z,4.7nm,1.0s					
SRU	San Rafael Swe	60.32 298	eP	P	07 57 18.6	+1.3
	comp=Z,8.9nm,1.3s					
NEW	Newport	60.53 310	LR	LR	08 22 30.2	
	comp=Z,1µm,19.8s,baz=55,slow=35					
NEW	Newport	60.53 310	P	P	07 57 18.5	+0.1
	baz=64					
NEW	Newport	60.53 310	eP	P	07 57 18.0	-0.4
	comp=Z,12nm,1.2s					
MPU	Maple Canyon	60.67 300	eP	P	07 57 18.9	-0.7
	comp=Z,9.5nm,1.3s					
TMUT	Trail Mountain	60.70 299	eP	P	07 57 20.1	+0.1
	comp=Z,15nm,1.2s					
AKTO	Aktyubinsk	60.74 47	P	P	07 57 21.0	+1.3
	comp=Z,6.9nm,0.9s,baz=295,slow=6.5,SNR=16					
HLID	Hailey	60.92 304	P	P	07 57 21.4	+0.1
	baz=63					
HLID	Hailey	60.92 304	eP	P	07 57 21.5	+0.3
	comp=Z,5.2nm,1.1s					
DUG	Dugway, Tooele	61.39 300	P	P	07 57 24.8	+0.3
	baz=62					
DUG	Dugway, Tooele	61.39 300	eP	P	07 57 26.5	+2.0
	comp=Z,13nm,1.3s					
MSU	Marysvale	61.74 298	eP	P	07 57 28.1	+1.2
E09A	Wood Farm, Sta	61.94 309	eP	P	07 57 28.8	+0.9
	comp=Z,11nm,1.3s					
X18A	Snowflake	62.07 293	eP	P	07 57 29.5	+0.3
	comp=Z,5.2nm,1.1s					
LLLB	Lillooet	62.26 314	eP	P	07 57 31.2	+1.2
	comp=Z,7.7nm,0.9s					
ABKAR	Akbulak array	62.38 48	eP	P	07 57 32.5	+1.8
E08A	Dider Farm, El	62.51 309	eP	P	07 57 34.5	+2.8
	comp=Z,6.6nm,0.8s					
WUAZ	Wupatki	62.61 295	P	P	07 57 33.6	+0.8
	baz=61					

WUAZ Wupatki 62.61 295 *eP* **P 07 57 33.8 +1.1**
comp=Z,14nm,1.4s
DLBC Dease Lake 62.71 324 P **P 07 57 34.0 +1.1**
comp=Z,4.0nm,1.1s,baz=92,slow=9.5,SNR=3.6
PSUT Pine Spring 62.88 299 *eP* **P 07 57 34.9 +0.3**
comp=Z,9.4nm,1.1s
CCUT Cedar City 63.02 298 *eP* **P 07 57 36.0 +0.4**
comp=Z,7.0nm,1.1s
X16A Lo Mia Camp, P 63.20 294 *eP* **P 07 57 37.4 +0.7**
comp=Z,5.9nm,1.2s
DAWY Dawson 63.60 332 *eP* **P 07 57 41.3 +2.6**
comp=Z,14nm,1.2s
WHY Whitehorse 63.70 328 *eP* **P 07 57 41.4 +1.9**
comp=Z,18nm,1.4s
EGAK Eagle 63.83 333 *eP* **P 07 57 42.8 +2.7**
comp=Z,4.8nm,1.0s
TOLK Toolik Lake Re 64.11 339 P **P 07 57 42.8 +0.8**
baz=50
TOLK Toolik Lake Re 64.11 339 *eP* **P 07 57 42.7 +0.7**
comp=Z,21nm,1.2s
FYU Fort Yukon 64.13 336 *eP* **P 07 57 45.7 +3.6**
comp=Z,31nm,1.2s
R11A Troy Canyon, C 64.16 300 *eP* **P 07 57 43.5 +0.5**
comp=Z,2.9nm,1.0s
WVOR Wild Horse Val 64.18 305 *eP* **P 07 57 44.3 +1.3**
comp=Z,4.8nm,1.0s
SKAG Skagway 64.53 327 *eP* **P 07 57 47.5 +2.7**
comp=Z,8.5nm,1.1s
Y14A Wickenburg 64.56 294 *eP* **P 07 57 46.8 +1.3**
comp=Z,8.8nm,1.4s
SHPR Sheep Range 64.79 298 *eP* **P 07 57 47.4 +0.3**
comp=Z,5.0nm,1.3s
LPAZ La Paz 64.86 220 P **P 07 57 47.9 -0.3**
comp=Z,14nm,0.9s,baz=22,slow=5.1,SNR=32
LPAZ LR LR 08 22 33.6
comp=Z,523nm,21.7s,baz=28,slow=33
LPAZ La Paz 64.86 220 *eP* **P 07 57 47.6 -0.6**
comp=Z,24nm,1.1s
BBB Bella Bella 64.90 318 LR LR 08 25 54.4
comp=Z,968nm,18.1s,baz=80,slow=36
COLD Coldfoot 65.22 338 *eP* **P 07 57 51.0 +1.7**
comp=Z,13nm,1.1s
J05D Fort Rock, OR 65.42 307 P **P 07 57 51.8 +0.8**
baz=60
214A Organ Pipe Nat 65.43 292 P **P 07 57 51.9 +0.7**
baz=59
KVN Kaiserville 65.51 301 *eP* **P 07 57 51.7 -0.1**
comp=Z,13nm,1.2s
DOT Dot Lake 65.53 333 *eP* **P 07 57 52.9 +1.6**
comp=Z,22nm,1.0s
RIDG Independ'e Rid 65.74 334 *eP* **P 07 57 53.6 +0.9**
comp=Z,14nm,1.1s
IL1 Eielson Array 65.79 335 *eP* **P 07 57 53.4 +0.5**
ILAR Eielson Array 65.79 335 P **P 07 57 54.1 +1.2**
comp=Z,2.2nm,0.9s,baz=49,slow=5.7,SNR=17
ILAR PP **PP 08 00 20.8 +3.7**
comp=Z,0.6nm,1.0s,baz=51,slow=8.2,SNR=4.2
ILAR LR LR 08 23 58.7
comp=Z,443nm,18.4s,baz=71,slow=34
ILB Eielson Array 65.79 335 *eP* **P 07 57 55.5 +2.6**
NV11 Mina Array Sit 65.86 301 *eP* **P 07 57 54.7 +0.7**
comp=Z,0.8nm,1.5s
NV01 Mina Array Sit 65.97 301 *eP* **P 07 57 55.8 +1.0**
NVAR Mina Array Bea 65.97 301 LR LR 08 26 38.7
comp=Z,1μm,18.9s,baz=301,slow=36
COLA College 66.04 335 *eP* **P 07 57 57.2 +2.8**
comp=Z,10nm,1.4s
HDA Harding Lake 66.04 335 *eP* **P 07 57 55.6 +1.1**
comp=Z,15nm,1.1s
MDM Murphy Dome 66.11 336 *eP* **P 07 57 56.0 +1.0**
comp=Z,14nm,1.2s
BRVK Borovoye 66.12 40 *eP* **P 07 57 56.8 +1.6**
comp=Z,23nm,1.4s
CCB Clear Creek Bu 66.17 335 *eP* **P 07 57 55.0 -0.3**
comp=Z,15nm,1.2s
BVAR Borovoye Array 66.19 40 P **P 07 57 56.8 +1.1**
comp=Z,4.3nm,0.6s,baz=308,slow=5.5,SNR=21
BVAR LR LR 08 27 13.0
comp=Z,348nm,18.3s,baz=307,slow=36
WRH Wood River Hil 66.38 335 *eP* **P 07 57 57.8 +1.1**
comp=Z,19nm,1.1s
PAX Paxson 66.45 333 *eP* **P 07 57 58.0 +0.7**
comp=Z,10nm,1.0s
M04C Macdoel 66.57 305 P **P 07 57 58.9 +0.5**
baz=59
DAC Darwin (Calif) 66.59 298 *eP* **P 07 57 58.8 0.0**
comp=Z,11nm,1.3s
MPMC Manual Prospec 66.63 298 P **P 07 57 59.9 +0.8**
baz=59
GEYT Alibeck 66.81 59 LR LR 08 27 47.1
comp=Z,73nm,21.7s,baz=355,slow=36
CRQM Cirque 66.97 330 *eP* **P 07 58 01.6 +0.8**
comp=Z,23nm,1.2s
MCK McKinley 67.15 335 *eP* **P 07 58 02.8 +1.1**
comp=Z,11nm,1.1s
YBH Yreka Blue Hor 67.15 306 LR LR 08 28 03.4
comp=Z,512nm,18.1s,baz=52,slow=37
BMRM Bremner River 67.40 331 *eP* **P 07 58 05.7 +2.4**
comp=Z,22nm,1.0s
KLU Klutina 67.55 332 *eP* **P 07 58 07.3 +2.9**
comp=Z,8.8nm,1.1s
BPAW Bear Paw Mtn. 67.57 336 *eP* **P 07 58 05.0 +0.7**
comp=Z,14nm,1.1s
LPIG La Paz 67.74 284 LR LR 08 29 09.8
comp=Z,163nm,18.2s,baz=23,slow=37
TRF Thorofare Moun 67.78 335 *eP* **P 07 58 06.7 +0.8**
comp=Z,12nm,1.1s
PMR Palmer 68.65 333 *eP* **P 07 58 12.0 +1.0**
comp=Z,11nm,1.0s
CPUP Villa Florida 69.16 206 P **P 07 58 14.1 -0.5**
comp=Z,4.9nm,0.8s,baz=31,slow=6.3,SNR=8.9
CPUP LR LR 08 25 25.8
comp=Z,284nm,20.4s,baz=251,slow=33
SKT Skwentna 69.21 334 *eP* **P 07 58 15.7 +1.1**
comp=Z,11nm,0.9s
ATD Arta Tunnel 69.93 91 LR LR 08 29 01.3
comp=Z,128nm,18.4s,baz=326,slow=36
KURK Kurchatov 71.68 39 *eP* **P 07 58 30.9 +1.0**
comp=Z,23nm,1.1s
KURBB Kurchatov Arra 71.70 39 P **P 07 58 31.8 +1.9**
comp=Z,10nm,1.0s,baz=311,slow=6.4,SNR=26
KK31 Karatay Array 71.85 49 *eP* **P 07 58 32.6 +1.5**
KKAR Karatay Array 71.85 49 *eP* **P 07 58 33.6 +2.5**
ZAA0 Zalesovo Array 72.50 34 *eP* **P 07 58 35.4 +0.7**
comp=Z,15nm,1.4s
ZALV Zalesovo Beam 72.50 34 P **P 07 58 37.2 +2.5**
comp=Z,1.2nm,0.3s,baz=309,slow=7.1,SNR=8.4
ZALV LR LR 08 29 50.7
comp=Z,145nm,21.7s,baz=252,slow=35
ZALV Zalesovo Beam 72.50 34 *eP* **P 07 58 36.7 +2.1**
AAK Ala-Archa 74.47 48 *eP* **P 07 58 46.7 0.0**
comp=Z,8.0nm,1.3s
MAKZ Makanchi 75.90 41 *eP* **P 07 58 55.8 +1.0**
comp=Z,19nm,1.4s
MK31 Makanchi Array 76.07 41 *eP* **P 07 58 56.8 +1.1**
MKAR Makanchi Array 76.07 41 P **P 07 58 57.7 +2.0**
comp=Z,5.5nm,1.0s,baz=310,slow=4.3,SNR=20
MKAR LR LR 08 32 41.0
comp=Z,560nm,18.9s,baz=268,slow=36
MKAR Makanchi Array 76.07 41 *eP* **P 07 58 56.9 +1.2**
comp=Z,56nm,1.3s
MK01 Makanchi Array 76.09 41 *eP* **P 07 58 56.8 +0.9**
KSH Kashi 77.30 49 P P 07 59 08.5 +5.6
KSH sP PcP 07 59 11.6 -1.9
KSH PP **PP 08 01 58.4 +1.9**
KSH S **S 08 08 55.9 +3.0**
KSH ScS **SKKSac 08 09 18.3 +1.7**
KSH SS **SS 08 13 51.9 +1.8**
KSH pmax pmax
comp=Z,31nm,0.7s
KSH pmax pmax
comp=Z,240nm,5.4s
KSH LR LR
comp=Z,230nm,5.2s
KSH LR LR
comp=Z,230nm,4.9s
KSH LR LR
comp=Z,880nm,17.9s
WMQ Urumqi 80.88 40 P **P 07 59 24.4 +2.0**
WMQ pP PcP 07 59 29.1 +0.1
WMQ sP sP 07 59 31.4 +4.1
WMQ pmax pmax
comp=Z,44nm,1.1s
WMQ pmax pmax
comp=Z,310nm,5.7s
WMQ LR LR
comp=Z,700nm,15.3s
WMQ LR LR
comp=Z,780nm,14.1s
WMQ LR LR
comp=Z,510nm,17.9s
BOSA Boshof 84.66 133 LR LR 08 36 00.1
comp=Z,319nm,19.4s,baz=337,slow=35
SONA1 Songino Array 85.91 27 *eP* **P 07 59 49.2 +0.9**
SONM Songino Array 85.92 27 P **P 07 59 49.6 +1.3**
comp=Z,5.9nm,1.0s,baz=324,slow=4.9,SNR=26
SONM LR LR 08 40 19.3
comp=Z,156nm,18.0s,baz=326,slow=37
ULN Ulaanbaatar 86.13 27 *eP* **P 07 59 50.9 +1.5**
comp=Z,24nm,1.3s
PLCA Paso Flores 86.88 209 P **P 07 59 52.8 0.0**
comp=Z,9.4nm,1.2s,baz=113,slow=7.7,SNR=2.4
PETK Petropavlovsk- 88.54 355 LR LR 08 40 06.6
comp=Z,176nm,18.4s,baz=31,slow=36
GTA Gaotai 90.13 36 *eP* **P 08 00 12.4 +3.8**
GTA pP sP 08 00 16.6 +3.0
GTA sP pP 08 00 19.6 +7.3
GTA pmax pmax
comp=Z,4.0nm,1.0s
OPO Ambohidratompo 92.15 112 LR LR 08 40 12.9
comp=Z,346nm,21.9s,baz=344,slow=34
LZH Lanzhou 94.68 36 *eP* **P 08 00 26.7 -3.1**
LZH pmax pmax
comp=Z,18nm,1.0s
LZH pmax pmax
comp=Z,65nm,5.2s
LZH LR LR
comp=Z,420nm,12.7s
LZH LR LR
comp=Z,760nm,16.3s
USRK Ussuriysk Ar. 96.23 13 LR LR 08 44 38.0
comp=Z,70nm,18.8s,baz=334,slow=36
ASAJ Asahikawa 97.58 5 LR LR 08 41 25.5
comp=Z,62nm,21.9s,baz=96,slow=33
CD2 Chengdu 98.90 39 P **P 08 00 47.6 -1.2**
CD2 pmax pmax
comp=Z,1.0nm,0.6s
WRA Warramunga Arr 157.37 40 PKPab **PKPab 08 07 35.9 0.0**
comp=Z,3.5nm,0.9s,baz=341,slow=4.1,SNR=12
ASAR Alice Springs 160.17 46 PKP **PKPdf 08 07 08.5 +0.5**
comp=Z,0.9nm,1.0s,baz=301,slow=0.7,SNR=4.2
ASAR PKPab **PKPab 08 07 50.0 +1.9**
comp=Z,3.2nm,0.9s,baz=328,slow=4.7,SNR=15

ATH ***05*** *07:57:15.6, 35°.40N×27°.89E, h21km±5km, ML2.1/3, Error ellipse: s-maj=7.6km s-min=1.2km az=321.0*
CSEM ***05*** *07:57:16.0±0.5, 35°.43N×27°.90E, h8km, ML2.1, Error ellipse: s-maj=14.7km s-min=6.4km az=150.0*
DDA ***05*** *07:57:50.8, 34°.71N×27°.66E, h50km, Ml3.3*
ISC 05 07:57:16.3±1.5, 35°.40N±0°.06×27°.88E±0°.05, h13km±10km, n16, σ1§24/29, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time (h m s)	Res
KARP	**Karpathos**	**0.61**	**285**	P		**Pg**	**Pg**	**07 57 27.3**	**-0.8**
KARP				S		**Sg**	**Sg**	**07 57 36.5**	**+0.3**
KARP				AML		AML	AML	07 57 40.4	
	comp=N,645μm,0.5s								
KARP				AML		AML	AML	07 57 46.3	
	comp=E,539μm,0.5s								
KARP	**Karpathos**	**0.61**	**285**	P		**Pg**	**Pg**	**07 57 27.5**	**-0.7**
KARP				S		**Sg**	**Sg**	**07 57 36.5**	**+0.3**
ARG	**Arkhangelos**	**0.84**	**14**	P		**Pg**	**Pg**	**07 57 32.2**	**-0.4**
ARG				S		**Sg**	**Sg**	**07 57 43.3**	**-0.3**
ARG				AML		AML	AML	07 57 49.1	
	comp=N,188μm,0.5s								
ARG				AML		AML	AML	07 57 50.6	
	comp=E,275μm,0.3s								
ARG	**Arkhangelos**	**0.84**	**14**	P		**Pg**	**Pg**	**07 57 31.9**	**-0.7**
ARG				S		**Sg**	**Sg**	**07 57 43.3**	**-0.3**
ZKR	**Zakros**	**1.39**	**259**	P		**Pb**	**Pb**	**07 57 42.5**	**+0.5**
ZKR				S		**Sg**	**Sg**	**07 58 01.5**	**+0.3**
ZKR				AML		AML	AML	07 58 12.0	
	comp=E,224μm,0.7s								
ZKR				AML		AML	AML	07 58 13.3	
	comp=N,74μm,0.6s								
ZKR	**Zakros**	**1.39**	**259**	P		**Pb**	**Pb**	**07 57 42.3**	**+0.2**
ZKR				S		**Sg**	**Sg**	**07 58 01.4**	**+0.3**
DALY	**Dalyan (Mu¨la**	**1.55**	**24**	*i* P		**Pn**	**Pn**	**07 57 44.2**	**+0.7**
DALY				*i* S		**Sg**	**Sg**	**07 58 10.2**	**+4.1**
KSL	**Kastellorizon**	**1.57**	**61**	P		**Pn**	**Pn**	**07 57 44.0**	**+0.2**
TURN	**Turunc**	**1.58**	**21**	*i* P		**Pn**	**Pn**	**07 57 41.7**	**-2.3**
TURN				*i* S		**Sn**	**Sn**	**07 58 04.3**	**0.0**
TURN	**Turunc**	**1.58**	**21**	P		**Pn**	**Pn**	**07 57 41.7**	**-2.3**
TURN				S		**Sn**	**Sn**	**07 58 04.3**	**0.0**
AKAS	**Kas**	**1.63**	**59**	*i* P		**Pn**	**Pn**	**07 57 43.1**	**-1.7**
AKAS				*i* S		**Sb**	**Sb**	**07 58 06.9**	**+0.2**
BDRM	**Kayabasi**	**1.70**	**348**	*i* P		**Pn**	**Pn**	**07 57 45.4**	**-0.3**
BDRM				*i* S		**Sb**	**Sb**	**07 58 08.1**	**-0.6**
NPS	**Neapolis**	**1.86**	**267**	P		**Pn**	**Pn**	**07 57 48.5**	**+0.7**
NPS	**Neapolis**	**1.86**	**267**	P		**Pn**	**Pn**	**07 57 48.6**	**+0.8**
TAVA	**DENIZLI_Tavas**	**2.23**	**22**	*i* P		**Pn**	**Pn**	**07 57 52.8**	**-0.2**
TAVA				*i* S		**Sg**	**Sg**	**07 58 29.7**	**+1.8**
AYDN	**Tasoluk**	**2.26**	**360**	*i* P		**Pn**	**Pn**	**07 57 53.9**	**+0.6**
AYDN				*i* S		**Sb**	**Sb**	**07 58 24.3**	**-0.5**

ISC 05 08:00:55.9±1.0, 49°.49N±0°.06×17°.54E±0°.06, h7km, n6, σ0§63/9, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time (h m s)	Res
MORC	**Moravsky Berou**	**0.29**	**360**	*e*P	G	**Pg**	**Pg**	**08 01 01.4**	**-0.3**
MORC				*e*S	G	**Sg**	**Sg**	**08 01 05.4**	**-0.2**
VRAC	**Vranov**	**0.65**	**254**	*e*P	G	**Pb**	**Pb**	**08 01 09.3**	**-0.2**
KRUC	**Moravsky**	**0.86**	**241**	*e*P	G	**Pb**	**Pb**	**08 01 13.4**	**+0.2**
LANS	**Liptovska Anna**	**1.30**	**104**	*e*P	G	**Pg**	**Pg**	**08 01 21.1**	**+0.2**
LANS				*e*S	G	**Sn**	**Sn**	**08 01 39.3**	**+1.0**
VYHS	**Vyhne**	**1.31**	**139**	*e*P	G	**Pn**	**Pn**	**08 01 20.1**	**-0.5**
VYHS				*e*S	N	**Sb**	**Sb**	**08 01 37.5**	**-0.3**
VYHS				*e*L	G	Lg	Lg	08 01 37.6	
BRG	**Berggiesshubel**	**2.70**	**302**	SG		**Sb**	**Sb**	**08 02 18.7**	**+0.8**
	2.8nm,0.8s								

IDC 05 08:04:57.7±3.1, 53°.60N×88°.06E, h0km, mb1 2.8/2, mb1mx2.7/71, mbtmp2.8/2, ML2.6/2, 3C-2D, Error ellipse: s-maj=26.0km s-min=18.1km az=53.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time (h m s)	Res
I46RU	**ZALESOVO INFRA**	**1.96**	**282**	*i*				08 17 22.8	
	baz=104,slow=339,SNR=4.9								
ZAA0	**Zalesovo Array**	**1.96**	**282**	⇑P	g		Pn	08 05 31.4	-0.7
	2.1nm,0.5s								
ZAA0				⇓L	g		Lg	08 06 00.2	
	4.3nm,0.5s								
ZALV	**Zalesovo Beam**	**1.96**	**282**	P	g		Pn	08 05 31.5	-0.6
	1.3nm,0.3s,baz=96,slow=16,SNR=9.6								
ZALV				L	g		Lg	08 06 00.8	
	2.6nm,0.3s,baz=101,slow=23,SNR=9.2								
KURBB	**Kurchatov Arra**	**6.58**	**247**	Pn			Pn	08 06 35.8	+0.2
	0.1nm,0.3s,baz=62,slow=14,SNR=9.8								
KURBB				Sn			Sn	08 07 52.2	+0.8
	0.0nm,0.3s,baz=350,slow=4.8,SNR=3.0								
KURBB				Lg			Lg	08 08 23.8	
	0.0nm,0.3s,baz=66,slow=31,SNR=4.3								
KURBB	**Kurchatov Arra**	**6.58**	**247**	⇓P	n		Pn	08 06 36.2	+0.6
	0.1nm,0.2s,baz=62,slow=14								
KURBB				⇑S	n		Sn	08 07 53.7	+2.4
	1.8nm,0.6s								
KURBB				⇑L	g		Lg	08 08 29.5	
	3.9nm,0.9s,baz=59,slow=32								
MKAR	**Makanchi Array**	**7.75**	**211**	Pn			Pn	08 06 53.3	+1.5
	0.1nm,0.3s,baz=21,slow=11,SNR=3.6								
MKAR				Lg			Lg	08 09 06.3	
	baz=21,slow=34,SNR=2.3								

ISCJB ***05*** *08:15:28.7±0.4, 44°.76N±0°.02×18°.39E±0°.02, h1km±3km, Error ellipse: s-maj=3.0km s-min=2.0km az=136.9*
CSEM ***05*** *08:15:29.7±0.1, 44°.74N×18°.39E, h2km, ML3.0, Error ellipse: s-maj=2.6km s-min=1.7km az=42.0*
PRU ***05*** *08:15:29.8, 44°.68N×18°.32E, h0km*
PDG ***05*** *08:15:29.6±0.4, 44°.75N×18°.35E, h13km, ML2.9/10, Error ellipse: s-maj=0.7km s-min=0.9km az=0.0*
BEO ***05*** *08:15:30.8±0.3, 44°.65N×18°.35E, h13km±2km*
ISC 05 08:15:29.4±1.1, 44°.74N±0°.02×18°.40E±0°.02, h4km±9km, n138, σ1§13/209, 23C-26D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time (h m s)	Res
DOB	**Doboj**	**0.21**	**270**	⇓*i*P	g		**Pg**	**08 15 32.9**	**-0.6**
DOB				*e*S	g		**Sg**	**08 15 36.1**	**-0.2**
BLJ	**Bijeljina**	**0.62**	**85**	*e*P	g		**Pg**	**08 15 41.2**	**-0.1**
HAPS	**Han Pijesak,Bl**	**0.76**	**148**	*e*P	g		**Pg**	**08 15 41.9**	**-2.0**
HAPS				*e*S	g		**Sg**	**08 15 54.3**	**+0.5**
HAPS	**Han Pijesak,Bl**	**0.76**	**148**	*e*P	g		**Pg**	**08 15 42.6**	**-1.3**
HAPS				*e*S	g		**Sg**	**08 15 54.4**	**+0.6**
TEKS	**Tekeris**	**0.83**	**103**	*e*P	g		**Pb**	**08 15 46.1**	**-0.3**
TEKS				*e*S	g		**Sb**	**08 15 57.8**	**-0.1**
TEKS	**Tekeris**	**0.83**	**103**	*e*P	g		**Pg**	**08 15 45.6**	**+0.3**
TEKS				*e*S	g		**Sb**	**08 15 57.2**	**-0.7**
BLY	**Banja Luka**	**0.87**	**271**	*e*P	g		**Pb**	**08 15 46.6**	**-0.4**
BLY				*e*S	g		**Sb**	**08 15 58.1**	**-0.8**
BLY	**Banja Luka**	**0.87**	**271**	⇓*i*P			**Pg**	**08 15 45.9**	**-0.1**
BLY				S			**Sg**	**08 15 56.7**	**-0.5**
BLY	**Banja Luka**	**0.87**	**271**	⇓*i*P			**Pg**	**08 15 45.9**	**-0.1**
BLY	**Banja Luka**	**0.87**	**271**	*e*P	g		**Pb**	**08 15 46.6**	**-0.4**
BLY				S			**Sg**	**08 15 56.7**	**-0.5**
BLY				*e*S	g		**Sb**	**08 15 58.1**	**-0.8**
FGSL	**Fruska Gora**	**1.09**	**67**	*e*P	g		**Pn**	**08 15 51.4**	**-0.1**
FGSL				*e*S	g		**Sn**	**08 16 08.2**	**+1.2**
FRGS	**Fruska Gora**	**1.09**	**67**	*e*P	g		**Pn**	**08 15 51.4**	**-0.1**
FRGS				*e*S	g		**Sn**	**08 16 08.2**	**+1.2**
BBLS	**Lazići**	**1.13**	**140**	*e*P	g		**Pg**	**08 15 50.7**	**-0.3**
BBLS				*e*S	g		**Sb**	**08 16 06.3**	**-0.3**
BBLS	**Lazići**	**1.13**	**140**	*e*P	g		**Pg**	**08 15 50.7**	**-0.3**
BBLS				*e*S	g		**Sb**	**08 16 06.3**	**-0.3**
DIVS	**Divibare**	**1.31**	**119**	*e*P	g		**Pg**	**08 15 54.0**	**-0.4**
DIVS				*e*S	g		**Sn**	**08 16 12.7**	**+0.2**
DIVS	**Divibare**	**1.31**	**119**	*e*P	g		**Pg**	**08 15 54.0**	**-0.4**
DIVS				*e*S	g		**Sn**	**08 16 12.7**	**+0.2**
MORH	**M¨‡r^igy, Hung**	**1.49**	**7**	⇑*e*P	n		**Pn**	**08 15 56.5**	**-0.5**
MORH				*e*S	n		**Sg**	**08 16 19.2**	**+1.9**
MORH	**M¨‡r^igy, Hung**	**1.49**	**7**	⇑*e*P	n		**Pn**	**08 15 56.5**	**-0.5**
MORH				*e*S	n		**Sg**	**08 16 19.2**	**+1.9**
TRUS	**Trudelj**	**1.52**	**109**	*e*P	n		**Pb**	**08 15 58.1**	**-0.1**
TRUS	**Trudelj**	**1.52**	**109**	*e*P	n		**Pb**	**08 15 58.1**	**-0.1**
UPM	**Unac-Piva**	**1.57**	**166**	⇓*i*P	n		**Pn**	**08 15 58.8**	**+0.5**
UPM				*e*S	n		**Sg**	**08 16 21.6**	**+1.7**
UPM	**Unac-Piva**	**1.57**	**166**	⇓*i*P	n		**Pn**	**08 15 58.8**	**+0.5**
UPM				*e*S	n		**Sg**	**08 16 21.6**	**+1.7**
PLE	**Pljevlja**	**1.57**	**153**	⇓*i*P	n		**Pg**	**08 15 59.4**	**-0.2**
PLE				*e*S	n		**Sg**	**08 16 22.0**	**+2.0**
PLE	**Pljevlja**	**1.57**	**153**	⇓*i*P	n		**Pg**	**08 15 59.4**	**-0.2**
PLE				*e*S	n		**Sg**	**08 16 22.0**	**+2.0**
IVAS	**Ivanjica**	**1.71**	**132**	*e*P	n		**Pn**	**08 16 00.3**	**+0.2**
IVAS				*e*S	n		**Sn**	**08 16 21.6**	**-0.9**
IVAS	**Ivanjica**	**1.71**	**132**	*e*P	n		**Pn**	**08 16 00.3**	**+0.2**
IVAS				*e*S	n		**Sn**	**08 16 21.6**	**-0.9**
BRY	**Bratogost**	**1.83**	**177**	⇑*i*P	n		**Pn**	**08 16 02.1**	**+0.3**
BRY				*e*S	n		**Sb**	**08 16 27.4**	**+0.4**
BRY	**Bratogost**	**1.83**	**177**	⇑*i*P	n		**Pn**	**08 16 02.1**	**+0.3**
BRY				*e*S	n		**Sb**	**08 16 27.4**	**+0.4**
SJES	**Sjenica**	**1.86**	**142**	*e*P	n		**Pn**	**08 16 02.5**	**+0.3**
SJES				*e*S	n		**Sn**	**08 16 24.7**	**-1.5**
GRUS	**Gruza**	**1.87**	**116**	*e*P	n		**Pn**	**08 16 02.8**	**+0.7**
GRUS				*e*S	n		**Sn**	**08 16 26.3**	**+0.2**
GRUS	**Gruza**	**1.87**	**116**	*e*P	n		**Pn**	**08 16 02.8**	**+0.7**
GRUS				*e*S	n		**Sn**	**08 16 26.3**	**+0.2**
UDBI	**Udbina**	**1.89**	**265**	*i* P	n		**Pn**	**08 16 02.5**	**0.0**
UDBI				S	n		**Sb**	**08 16 29.2**	**+0.6**
UDBI	**Udbina**	**1.89**	**265**	*i* P	n		**Pn**	**08 16 02.5**	**0.0**
UDBI				S	n		**Sb**	**08 16 29.1**	**+0.6**
STON	**Ston**	**1.93**	**195**	*e*P	n		**Pn**	**08 16 01.7**	**-1.3**
STON				*e*S	n		**Sn**	**08 16 25.4**	**-2.3**
STON	**Ston**	**1.93**	**195**	*i* P	n		**Pn**	**08 16 01.9**	**-1.1**
STON				S	n		**Sn**	**08 16 27.6**	**-0.1**
STON	**Ston**	**1.93**	**195**	*e*P	n		**Pn**	**08 16 02.0**	**-1.0**
STON				*e*S	n		**Sn**	**08 16 27.1**	**-0.6**
NKY	**Niksic**	**1.97**	**167**	⇓*i*P	n		**Pb**	**08 16 05.0**	**-0.9**
NKY				*e*S	n		**Sb**	**08 16 30.8**	**0.0**
NKY	**Niksic**	**1.97**	**167**	⇓*i*P	n		**Pb**	**08 16 05.0**	**-0.9**
NKY				*e*S	n		**Sb**	**08 16 30.8**	**0.0**
NKME	**Niksic**	**2.01**	**168**	⇓*i*P	n		**Pn**	**08 16 05.1**	**+1.0**
NKME				*e*S	n		**Sb**	**08 16 31.2**	**-0.6**
NKME	**Niksic**	**2.01**	**168**	⇓*i*P	n		**Pn**	**08 16 05.1**	**+1.0**
NKME				*e*S	n		**Sb**	**08 16 31.2**	**-0.6**
TREB	**Trebinje**	**2.02**	**181**	*e*P	n		**Pn**	**08 16 05.2**	**+1.0**
TREB				*e*S	n		**Sn**	**08 16 30.4**	**+0.5**
BEHE	**Becsehely**	**2.08**	**327**	⇑*e*P	n		**Pn**	**08 16 05.5**	**+0.4**
BEHE				*e*S	n		**Sg**	**08 16 40.6**	**+4.5**
BEHE	**Becsehely**	**2.08**	**327**	⇑*i*P	n		**Pn**	**08 16 05.4**	**+0.4**
BEHE				*e*S	n		**Sb**	**08 16 32.6**	**-1.2**
BEY	**Berane**	**2.15**	**149**	⇓*i*P	n		**Pn**	**08 16 06.0**	**-0.2**
BEY				*e*S	n		**Sb**	**08 16 35.6**	**-0.5**
IVA	**Berane**	**2.15**	**149**	⇓*i*P	n		**Pn**	**08 16 06.0**	**-0.2**
IVA				*e*S	n		**Sb**	**08 16 35.6**	**-0.5**
CEME	**Cevo**	**2.22**	**170**	⇑*i*P	n		**Pn**	**08 16 07.9**	**+0.9**
CEME				*e*S	n		**Sb**	**08 16 36.9**	**-1.1**
CEME	**Cevo**	**2.22**	**170**	⇑*i*P	n		**Pn**	**08 16 07.9**	**+0.9**
CEME				*e*S	n		**Sb**	**08 16 36.9**	**-1.1**
OZLJ	**Ozalj**	**2.25**	**294**	*e*P	n		**Pn**	**08 16 07.2**	**-0.2**
OZLJ	**Ozalj**	**2.25**	**294**	*e*P	n		**Pn**	**08 16 07.2**	**-0.2**
HCY	**Herceg Novi**	**2.29**	**178**	⇓*i*P	n		**Pn**	**08 16 08.9**	**+1.0**
HCY				*e*S	n		**Sb**	**08 16 38.6**	**-1.3**
HCY	**Herceg Novi**	**2.29**	**178**	⇓*i*P	n		**Pn**	**08 16 08.9**	**+1.0**
HCY				*e*S	n		**Sb**	**08 16 38.6**	**-1.3**
CRES	**Cresnjev**	**2.35**	**299**	*e*P	n		**Pn**	**08 16 08.5**	**-0.2**
CRES				*e*S	n		**Sn**	**08 16 38.3**	**+0.3**
MDVR	**Moldovita**	**2.36**	**88**	⇑*i*P			**Pg**	**08 16 14.9**	**+0.3**
KUBS	**Kucevo**	**2.36**	**97**	*e*P	n		**Pn**	**08 16 09.9**	**+0.9**
KUBS				*e*S	n		**Sn**	**08 16 39.3**	**+0.9**
KUBS	**Kucevo**	**2.36**	**97**	*e*P	n		**Pn**	**08 16 09.9**	**+0.9**
KUBS				*e*S	n		**Sn**	**08 16 39.3**	**+0.9**
PDG	**Podgorica**	**2.39**	**165**	*e*P	n		**Pn**	**08 16 09.7**	**+0.4**
PDG	**Podgorica**	**2.39**	**165**	⇑*i*P			**Pb**	**08 16 12.1**	**-0.8**
PDG	**Podgorica**	**2.39**	**165**	*e*P	n		**Pn**	**08 16 10.5**	**+1.2**
PDG	**Podgorica**	**2.39**	**165**	⇑*i*P			**Pb**	**08 16 12.1**	**-0.8**
PDG				*e*S	n		**Sb**	**08 16 41.1**	**-1.6**
TTG	**Podgorica**	**2.39**	**165**	⇓*i*P	n		**Pn**	**08 16 10.5**	**+1.2**
TTG				*e*S	n		**Sb**	**08 16 41.1**	**-1.6**
PVY	**Plav**	**2.42**	**152**	⇑*i*P	n		**Pn**	**08 16 09.6**	**-0.3**
PVY				*e*S	n		**Sn**	**08 16 42.1**	**+2.1**
PVY	**Plav**	**2.42**	**152**	⇑*i*P	n		**Pn**	**08 16 09.6**	**-0.3**
PVY				*e*S	n		**Sn**	**08 16 42.1**	**+2.

SOP	Sopron	3.21	337	‖ *e*Pn	Pn	08 16 21.1	+0.4
ARSA	Arzberg	3.22	322	*e*Pn	Pn	08 16 20.8	+0.1
ARSA	Arzberg	3.22	322	*i* P	Pn	08 16 21.1	+0.4
	40nm,0.4s,SNR=49						
ARSA	Arzberg	3.22	322	*e*Pn	Pn	08 16 20.8	+0.1
ARSA	Arzberg	3.22	322	P	Pn	08 16 21.1	+0.4
	40nm,0.4s,SNR=49						
OBKA	Obir	3.23	305	*i* P	Pn	08 16 21.2	+0.2
	9.5nm,0.5s						
OBKA	Obir	3.23	305	P	Pn	08 16 21.2	+0.2
	9.5nm,0.5s						
PSZ	Piszkesteto	3.35	17	⇑ *i* P	Pn	08 16 22.4	-0.2
PSZ	Piszkesteto	3.35	17	‖ *e*x	Pn	08 16 22.2	-0.4
ZAPS	Zavoj	3.39	114	*e*Pn	Pn	08 16 23.6	+0.5
SRE	Strehaia	3.43	90	⇑ *i* P	Pb	08 16 30.5	-0.2
ZST	Bratislava	3.58	346	*e*PN	Pn	08 16 25.0	-0.6
ZST				*e*LG	Lg	08 17 08.5	
CONA	Conrad Observa	3.65	332	*i* P	Pn	08 16 26.8	+0.1
	4.6nm,0.3s,SNR=10.0						
CONA	Conrad Observa	3.65	332	P	Pn	08 16 26.8	+0.1
	4.6nm,0.3s,SNR=10.0						
DRGR		3.65	54	⇑ *i* P	Pb	08 16 33.8	-0.7
MODS	Modra-Piesok	3.72	348	*e*PN	Pn	08 16 26.7	-1.0
MODS				*e*SN	Sn	08 17 08.4	-3.5
MODS				*e*LG	Lg	08 17 18.5	
MODS	Modra-Piesok	3.72	348	*e*Pn	Pn	08 16 26.7	-1.0
MODS				*e*Sn	Sn	08 17 08.4	-3.5
VYHS	Vyhne	3.77	4	*e*PN	Pn	08 16 28.5	+0.1
VYHS				*e*SN	Sn	08 17 14.7	+1.5
VYHS				*e*LG	Lg	08 17 38.8	
VYHS	Vyhne	3.77	4	*e*Pn	Pn	08 16 28.5	+0.1
VYHS				*e*Sn	Sn	08 17 14.7	+1.5
MYKA	Terra Mystica	3.83	301	*i* P	Pn	08 16 30.0	+0.8
	5.2nm,0.4s						
MYKA	Terra Mystica	3.83	301	P	Pn	08 16 30.0	+0.8
	5.2nm,0.4s						
SMOL	Smolenice	3.84	350	*e*PN	Pn	08 16 29.1	-0.2
SMOL	Smolenice	3.84	350	*e*Pn	Pn	08 16 29.2	-0.1
LOT	Lotru	3.87	77	⇑ *i* P	Pg	08 16 41.0	-2.5
JAVC	Velka Javorina	4.16	353	*e*PN	Pn	08 16 35.0	+1.3
MOA	Molln	4.23	319	*i* P	Pn	08 16 35.9	+1.2
	5.9nm,0.4s,SNR=11						
MOA	Molln	4.23	319	P	Pn	08 16 35.9	+1.2
	5.9nm,0.4s,SNR=11						
KBA	Koelnbreinsper	4.24	305	*i* P	Pn	08 16 35.3	+0.5
	2.5nm,0.3s,SNR=4.7						
KBA	Koelnbreinsper	4.24	305	P	Pn	08 16 35.3	+0.5
	2.5nm,0.3s,SNR=4.7						
LANS	Liptovska Anna	4.48	9	*e*PN	Pn	08 16 39.2	+1.1
LANS	Liptovska Anna	4.48	9	*e*Pn	Pn	08 16 39.2	+1.1
KRUC	Moravsky	4.54	343	*e*PN	Pn	08 16 38.6	-0.3
ABTA	Abfaltersbach	4.59	298	*i* P	Pn	08 16 40.7	+1.1
	3.2nm,0.6s						
ABTA	Abfaltersbach	4.59	298	P	Pn	08 16 40.7	+1.1
	3.2nm,0.6s						
VRAC	Vranov	4.74	346	*e*Pn	Pn	08 16 41.7	+0.1
VRAC	Vranov	4.74	346	*e*PN	Pn	08 16 41.7	+0.1
VOIR		4.76	79	⇑ *i* P	Pb	08 16 48.2	-5.3
MORC	Moravsky Berou	5.08	354	‖ *i* P	Pn	08 16 47.3	+1.0
MORC	Moravsky Berou	5.08	354	*e*Pn	Pn	08 16 46.9	+0.6
MORC	Moravsky Berou	5.08	354	‖ *e*Pn	Pn	08 16 47.3	+1.0
MORC	Moravsky Berou	5.08	354	*e*PN	Pn	08 16 46.9	+0.6
WTTA	Wattenberg	5.35	301	*i* P	Pn	08 16 51.4	+1.3
	2.9nm,0.4s						
WTTA	Wattenberg	5.35	301	P	Pn	08 16 51.4	+1.3
	2.9nm,0.4s						
MLR	Muntele Rosu	5.39	79	⇑ *i* P	Pb	08 17 00.1	-4.2
WATA	Walderalm	5.42	301	*e*P	Pn	08 16 52.6	+1.5
	2.9nm,0.4s						
WATA	Walderalm	5.42	301	P	Pn	08 16 52.6	+1.5
	2.9nm,0.4s						
KHC	Kasperske Hory	5.50	325	*e*PN	Pn	08 16 53.4	+1.3
KHC				*e*x	x	08 17 00.4	
KHC				*e*x	x	08 18 08.2	
MOTA	Moosalm	5.71	300	*e*P	Pn	08 16 55.9	+0.8
	3.6nm,0.5s						
MOTA	Moosalm	5.71	300	P	Pn	08 16 55.9	+0.8
	3.6nm,0.5s						
FETA	Feichten	5.82	296	*i* P	Pn	08 16 58.1	+1.4
	2.5nm,0.4s,SNR=4.4						
FETA	Feichten	5.82	296	P	Pn	08 16 58.1	+1.4
	2.5nm,0.4s,SNR=4.4						
DAVA	Damuels	6.46	296	*e*P	Pn	08 17 06.3	+1.0
	2.2nm,0.4s						
DAVA	Damuels	6.46	296	P	Pn	08 17 06.3	+1.0
	2.2nm,0.4s						

*ISCJB **05** 08:22:54.4±0.5, 31°.21S±0°.05×68°.04W±0°.06, h100km, mb3.6/5, Error ellipse: s-maj=8.0km s-min=7.1km az=139.8*
*SJA **05** 08:22:54.5±0.7, 31°.33S×68°.14W, h103km±5km, ML4.1, MW4.4*
*IDC **05** 08:22:55.5±0.8, 31°.43S×68°.14W, h107km±5km, mb3.5/5, mb1 3.8/7, mb1mx3.4/37, mbtmp3.8/7, Error ellipse: s-maj=32.3km s-min=25.4km az=44.0*
ISC 05 08:22:55.1±0.6, **31°.23S**±0°.07×**68°.01W**±0°.05, **h100**km, **n25**, σ1§**65**/35, **mb3.7**/5, **San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLL	Cerro Villicun	0.41	255	*i* P	Pn	08 23 10.2	-0.2
AMOG	MOGNA	0.50	305	*i* P	Pn	08 23 11.8	+0.8
ZON	Zonda	0.65	241	*i* P	Pn	08 23 11.6	-0.6
ZON				*i* S	Sn	08 23 24.3	-0.7
RTCV	Cerro Valdivia	0.78	215	*i* P	Pn	08 23 12.4	-0.9
RTLS	Leoncito	1.24	242	*i* P	Pn	08 23 18.0	-0.5
RTLS				IAML		08 23 36.9	
	comp=Z,3μm,0.5s						
ACAN	Cantantal	1.26	146	*i* P	Pn	08 23 19.0	+0.4
ACAN				*i* S	Sn	08 23 36.0	-0.2
ASAL	Salagasta	1.53	207	*i* P	Pn	08 23 20.9	-1.0
ASAL				*i* S	Sn	08 23 41.0	-1.1
AUSP	Uspallata	1.54	229	*i* P	Pn	08 23 21.4	-0.7
AUSP				*i* S	Sn	08 23 41.4	-1.2
ARCO	CERRO ARCO	1.79	206	*i* P	Pn	08 23 24.2	-1.0
ARCO				IAML		08 23 48.8	
	comp=Z,1μm,0.4s						
AAGR	Agrelo	1.98	200	*i* P	Pn	08 23 26.6	-0.9
MRA	San Martin	2.29	122	*i* P	Pn	08 23 32.1	+0.6
MRA				IAML		08 24 00.8	
	comp=Z,944nm,0.7s						
PLCA	Paso Flores	9.71	192	P	Pn	08 25 09.2	-2.6
	comp=Z,0.1nm,0.3s,baz=36,slow=12,SNR=4.5						
CPUP	Villa Florida	10.56	65	P	Pn	08 25 22.2	-1.3
	comp=Z,0.4nm,0.3s,baz=232,slow=8.3,SNR=11						
CPUP				S	Sn	08 27 14.2	-5.7
	comp=Z,0.3nm,0.3s,baz=215,slow=17,SNR=1.9						
LPAZ	La Paz	14.87	360	P	P	08 26 24.4	+0.2
	comp=Z,0.3nm,0.3s,baz=146,slow=2.1,SNR=10						
VNA3	Neumayer Olymp	50.69	159	P	P	08 31 47.6	+3.6
VNA2	Neumayer--Watz	51.29	158	P	P	08 31 50.9	+2.4
	baz=286,slow=9.5						
SNAA	Sanae	52.90	159	P	P	08 32 03.5	+3.0
TXAR	Lajitas Array	69.12	327	P	P	08 33 51.1	+0.4
	comp=Z,0.6nm,0.5s,baz=153,slow=8.2,SNR=17						
ANMO	Albuquerque	75.11	328	P	P	08 34 26.1	-0.3
	comp=Z,0.6nm,0.6s,baz=172,slow=7.1,SNR=3.8						
TORD	Torodi Ar. Bea	80.05	68	P	P	08 34 54.6	+0.5
	comp=Z,0.8nm,0.9s,baz=244,slow=6.3,SNR=2.9						
TORD				pP	pP	08 35 21.8	+1.9
	comp=Z,2.1nm,0.6s,baz=286,slow=7.2,SNR=11						
PDAR	Pinedale Array	82.93	331	P	P	08 35 08.5	-0.4
	comp=Z,0.6nm,0.7s,baz=104,slow=6.3,SNR=4.4						
NVAR	Mina Array Bea	83.65	323	P	P	08 35 13.2	+0.5
	comp=Z,1.3nm,0.8s,baz=168,slow=5.5,SNR=3.5						
KURBB	Kurchatov Arra	148.53	42	PKPbc	PKPbc	08 42 29.8	0.0
	comp=Z,1.5nm,0.7s,baz=292,slow=3.1,SNR=14						
KURBB				pPKPbc	pPKPab	08 42 59.1	-1.2
	comp=Z,1.1nm,0.7s,baz=296,slow=3.2,SNR=5.0						
ZALV	Zalesovo Beam	150.07	33	PKPbc	PKPbc	08 42 33.6	0.0
	comp=Z,3.1nm,0.5s,baz=303,slow=3.1,SNR=9.8						
ZALV				pPKPbc	pPKPbc	08 43 02.0	+1.1
	comp=Z,1.7nm,0.5s,baz=290,slow=3.0,SNR=3.3						
MKAR	Makanchi Array	152.39	47	PKPbc	PKPbc	08 42 38.8	-0.4
	comp=Z,1.3nm,0.8s,baz=286,slow=2.3,SNR=12						
MKAR				PKPab	PKPab	08 42 49.0	-0.7
	comp=Z,0.7nm,0.7s,baz=280,slow=5.0,SNR=5.5						
MKAR				pPKPbc	pPKPbc	08 43 07.9	+1.3
	comp=Z,0.7nm,0.6s,baz=279,slow=2.4,SNR=4.6						

*SOME **05** 08:25:08.9, 44°.65N×82°.30E, h20km*

*NNC **05** 08:25:12.2±1.1, 44°.79N×81°.86E, h0km, mb3.2, mpv2.7, Error ellipse: s-maj=16.2km s-min=6.6km az=118.0*
ISC 05 08:25:08.5±2.0, **44°.55N**±0°.08×**82°.4E**±0°.1, **h10**km, **n11**, σ1§**20**/19, **4C-1D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	Jarkent	1.89	264	*e*P	Pb	08 25 41.8	-1.3
	9.6nm,0.3s						
DJR				*e*S	Sb	08 26 05.5	-1.4
	14nm,0.3s						
MK31	Makanchi Array	2.25	358	⇑ Pn	Pb	08 25 47.7	-1.5
	3.0nm,0.2s,baz=197,slow=16,SNR=170						
MK31				Lg	Lg	08 26 15.8	
	3.8nm,0.3s,baz=188,slow=27,SNR=30						
MAKZ	Makanchi	2.28	352	‖ Pn	Pn	08 25 47.8	+1.6
	1.4nm,0.2s						
MAKZ				⇑ Lg	Lg	08 26 16.5	
	15nm,0.5s						
KAPS	Kapalarasan	2.29	290	*e*P	Pn	08 25 47.2	+0.8
	1.5nm,0.2s						
KAPS				*e*S	Sn	08 26 14.7	-0.1
	12nm,0.2s						
PDGK	Podgornoye	2.44	241	⇑ Pn	Pb	08 25 50.9	-1.6
	1.2nm,0.4s						
PDGK				⇑ Lg	Lg	08 26 23.1	
	11nm,0.4s						
SHLS	Shalkode	2.55	238	*e*P	Pn	08 25 50.3	+0.3
	11nm,0.2s						
SHLS				*e*S	Sn	08 26 20.8	-0.3
	31nm,0.3s						
UZB	Uzynbulak	2.83	241	*e*P	Pb	08 25 58.4	-0.7
	1.4nm,0.2s						
UZB				*e*S	Sb	08 26 34.2	+0.4
	5.5nm,0.2s						
KPKS	Kokpek	2.90	249	*e*P	Pb	08 26 00.0	-0.3
	4.9nm,0.1s						
KPKS				*e*S	Sb	08 26 36.3	+0.4
	34nm,0.3s						
MNBS	Baschi	2.92	262	*e*P	Pb	08 25 59.0	-1.7
	3.7nm,0.3s						
MNBS				*e*S	Sb	08 26 35.6	-0.9
	18nm,0.3s						
SATY	Saty	3.26	244	*e*P	Pb	08 26 06.0	-0.5
	5.3nm,0.3s						
SATY				*e*S	Sb	08 26 47.1	+0.8
	24nm,0.3s						
KTBS	Karatobe	4.21	261	*e*P	Pb	08 26 23.2	+0.5
	1.0nm,0.3s						
KTBS				*e*S	Sb	08 27 15.9	+2.4
	5.2nm,0.3s						

*IDC **05** 08:35:14.6±0.8, 1°.01S×126°.71E, h0km, mb3.9/11, mb1 4.0/12, mb1mx3.8/61, mbtmp4.0/12, ML3.6/1, MS3.5/1, Ms1 3.5/1, ms1mx2.8/45, Error ellipse: s-maj=31.2km s-min=15.4km az=74.0*
*ISCJB **05** 08:35:18.6±0.4, 0°.89S±0°.05×126°.88E±0°.04, h34km, mb4.0/10, MS3.3/1, Error ellipse: s-maj=6.8km s-min=5.5km az=170.8*
*DJA **05** 08:35:18.3±0.3, 1°.5±3°×12°.7E±°, h70km±6km, M4.7/12, mb5.0/10, mB5.2/8, MLv4.7/12, Mw(mB)4.6/8*
ISC 05 08:35:20.0±0.7, **0°.89S**±0°.07×**126°.91E**±0°.06, **h34**km, **n30**, σ1§**31**/29, **mb4.1**/10, **Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	Labuha	0.64	67	P	Pn	08 35 32.4	-0.2
LBMI				S	Sn	08 35 42.0	+0.4
SANI	Sanana	1.48	219	P	Pn	08 35 44.0	-0.2
NLAI	Namlea	2.34	175	P	Pn	08 35 55.7	-0.4
AAI	Ambon	3.06	155	P	Pn	08 36 07.1	+1.1
MSAI	Masohi	3.16	140	P	Pn	08 36 06.8	-0.6
KMSI	Cibinong	3.27	296	P	Pn	08 36 07.9	-1.0
SIJI	Sorong	4.35	90	Pn	Pn	08 36 26.9	+3.2
	2.6nm,0.3s,baz=316,slow=23,SNR=4.8						
BNDI	Bandanaira	4.68	140	P	Pn	08 36 27.5	-0.8
MRSI	Marisa	5.16	285	P	Pn	08 36 33.9	-0.9
KDI	Kendari	5.26	235	P	Pn	08 36 38.8	+2.5
APSI	Ampana	5.26	270	P	Pn	08 36 36.4	+0.1
FAKI	Fak Fak	5.70	111	P	Pn	08 36 36.4	-5.9
PCI	Palu	7.08	270	P	Pn	08 37 03.7	+2.5
MPSI	Mapaga	7.12	280	P	Pn	08 37 03.2	+1.4
SPSI	Sidrap Palu	7.76	247	P	Pn	08 37 11.1	+0.5
BKSI	Bulukumba	8.08	237	P	Pn	08 37 16.1	+1.1
EDFI	Ende, Flores	9.38	214	P	Pn	08 37 34.6	+1.6
WRA	Warramunga Arr	20.28	159	P	P	08 39 51.4	-1.5
	1.4nm,0.7s,baz=340,slow=11,SNR=15						
GUMO	Guam	22.89	50	LR	LR	08 49 04.3	
	comp=Z,108nm,19.6s,baz=244,slow=36						
ASAR	Alice Springs	23.63	164	P	P	08 40 27.2	-1.1
	2.0nm,0.9s,baz=346,slow=12,SNR=10						
STKA	Stephens Creek	33.80	157	P	P	08 41 57.7	-1.2
	2.6nm,0.9s,baz=312,slow=14,SNR=3.2						
KSRS	Korea Array	38.17	1	P	P	08 42 37.4	+1.2
	1.7nm,0.5s,baz=178,slow=9.8,SNR=5.0						
MJAR	Matsushiro Arr	38.70	15	P	P	08 42 39.9	-0.9
	1.1nm,0.5s,baz=191,slow=10,SNR=4.1						
USRK	Ussuriysk Ar.	45.12	5	P	P	08 43 32.1	-1.0
	2.0nm,0.6s,baz=204,slow=7.9,SNR=5.1						
PETK	Petropavlovsk-	59.63	21	P	P	08 45 21.9	+1.2
	2.2nm,0.5s,baz=184,slow=4.5,SNR=7.7						
MKAR	Makanchi Array	61.46	327	P	P	08 45 33.6	+0.3
	0.9nm,0.6s,baz=117,slow=7.8,SNR=12						
KURBB	Kurchatov Arra	65.73	329	P	P	08 46 01.4	+0.1
	0.6nm,0.4s,baz=133,slow=6.1,SNR=8.1						
SEY	Seymchan	66.47	12	P	P	08 46 07.2	+1.3
	0.4nm,0.3s,baz=48,slow=22,SNR=3.8						
AKTO	Aktyubinsk	77.39	322	P	P	08 47 11.2	-0.4
	0.7nm,0.4s,baz=90,slow=9.1,SNR=2.5						
TORD	Torodi Ar. Bea	124.42	285	PKP	PKPdf	08 54 16.3	-0.3
	0.5nm,0.8s,baz=72,slow=2.8,SNR=2.7						

*IDC **05** 08:35:32.5±0.6, 0°.95S×126°.77E, h0km, mb4.4/21, mb1 4.5/23, mb1mx4.3/62, mbtmp4.4/23, ML4.0/2, MS3.5/1, Ms1 3.5/1, ms1mx2.9/45, Error ellipse: s-maj=25.5km s-min=12.1km az=75.0*
*ISCJB **05** 08:35:35.8±0.3, 0°.95S±0°.04×126°.82E±0°.07, h34km, mb4.6/44, Error ellipse: s-maj=10.9km s-min=4.7km az=165.3*
*NEIC **05** 08:35:40.7±0.7, 0°.97S×126°.92E, h63km±7km, mb4.7/31, Error ellipse: s-maj=8.6km s-min=4.1km az=77.0*
ISC 05 08:35:37.9±0.5, **0°.93S**±0°.05×**126°.78E**±0°.09, **h34**km, **n80**, σ0§**99**/79, **mb4.6**/44, **Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.79	19	*e*Pn	Pb	08 36 09.1	-1.0
TNTI				*e*Sn	Sb	08 36 35.1	+2.8
SIJI	Sorong	4.49	89	Pn	Pn	08 36 42.8	-0.8
	5.7nm,0.3s,baz=259,slow=16,SNR=5.8						
FAKI	Fak Fak	5.81	110	*e*Pn	Pn	08 37 04.3	+2.5
DAV	Davao City (W)	8.04	351	LR	LR	08 40 57.1	
	comp=Z,306nm,20.3s,baz=356,slow=40						
MYLDM	Lahad Datu	10.26	306	*e*Pn	Pn	08 38 08.4	+5.6
MTN	Manton Dam	12.60	160	*e*Pn	Pn	08 38 34.4	-0.3
FITZ	Fitzroy Crossi	17.09	184	P	Pn	08 39 33.6	-0.7
	0.4nm,0.3s,baz=22,slow=8.1,SNR=7.3						
FITZ	Fitzroy Crossi	17.09	184	*e*Pn	P	08 39 35.5	-0.3
	27nm,1.4s						
WRAB	Tennant Creek	20.29	159	*e*P	P	08 40 09.5	-1.4
	16nm,1.0s						
WR1	Warramunga Arr	20.29	159	*e*P	P	08 40 09.3	-1.6
	25nm,0.9s						
WRA	Warramunga Arr	20.29	159	P	P	08 40 09.3	-1.6
	7.7nm,0.8s,baz=339,slow=11,SNR=23						
WB2	Warramunga Arr	20.30	159	*e*P	P	08 40 09.4	-1.5
	22nm,1.0s						
COEN	Coen	20.75	129	*e*P	P	08 40 16.1	+0.1
	39nm,1.1s						
MBWA	Marble Bar	21.25	198	*e*P	P	08 40 22.0	+0.8
	56nm,1.2s						
AS31	Alice Springs	23.63	164	*e*P	P	08 40 44.8	-1.4
	4.0nm,0.6s						
ASAR	Alice Springs	23.63	164	P	P	08 40 45.2	-0.9
	9.0nm,0.8s,baz=343,slow=9.8,SNR=22						
AS01	Alice Springs	23.64	163	*e*P	P	08 40 45.4	-0.9
MNAI	Manna	24.04	261	*e*P	P	08 40 52.9	+2.8
	275nm,1.1s						
YULB	Yu-li	24.76	348	*e*P	P	08 40 55.6	-0.9
	13nm,1.1s						
TPUB	Ta-pu	24.82	346	*e*P	P	08 40 57.1	0.0
	20nm,0.7s						

SSLB	Suanglung	25.22	347	*e*P	P	08 41 00.5	-0.2
	12nm,0.8s						
YHNB	Yeheng	25.98	349	*e*P	P	08 41 08.1	+0.4
	48nm,1.4s						
CTA	Charters Tower	26.93	136	P	P	08 41 16.1	-0.1
	1.3nm,0.3s,baz=287,slow=11,SNR=3.5						
FORT	Forrest	29.71	178	*e*P	P	08 41 40.7	-0.2
	17nm,0.8s						
BBOO	Buckleboo	32.89	166	*e*P	P	08 42 09.6	+0.6
STKA	Stephens Creek	33.81	157	P	P	08 42 16.9	-0.1
	14nm,0.9s,baz=340,slow=11,SNR=12						
STKA	Stephens Creek	33.81	157	*e*P	P	08 42 17.0	+0.1
	4.6nm,1.0s						
JNU	Nakatsue	34.09	6	P	P	08 42 19.0	-0.4
	2.4nm,0.5s,baz=148,slow=14,SNR=4.4						
JNU	Nakatsue	34.09	6	*e*P	P	08 42 19.0	-0.4
	13nm,1.1s						
INU	Inuyama	37.34	14	*e*P	P	08 42 46.8	-0.4
	57nm,1.5s						
KS15	Wonju Array Si	38.20	1	*e*P	P	08 42 55.0	+0.7
KSAR	Wonju Array Be	38.20	1	P	P	08 42 54.9	+0.5
KSRS	Korea Array	38.21	1	P	P	08 42 54.9	+0.4
	5.9nm,0.7s,baz=177,slow=9.7,SNR=14						
KS01	Wonju Array Si	38.23	1	*e*P	P	08 42 55.8	+1.2
MJAR	Matsushiro Arr	38.77	15	P	P	08 42 57.4	-1.8
	3.8nm,0.5s,baz=192,slow=9.9,SNR=11						
MAJO	Matsushiro	38.77	15	*e*P	P	08 42 57.7	-1.6
	13nm,1.3s						
MJB9	Matsu-Tunnel	38.77	15	*e*P	P	08 42 57.8	-1.5
	14nm,1.3s						
LHI	Lord Howe Isla	43.09	138	*e*P	P	08 43 36.1	+1.2
	289nm,1.4s						
USRK	Ussuriysk Ar.	45.17	5	P	P	08 43 51.5	+0.1
	6.3nm,0.7s,baz=194,slow=7.2,SNR=12						
ERM	Erimo	45.24	17	*e*P	P	08 43 53.4	+1.4
	11nm,0.9s						
ASAJ	Asahikawa	47.03	16	*e*P	P	08 44 06.0	0.0
	23nm,1.2s						
KLR	Kul'dur	50.15	4	P	P	08 44 29.8	-0.1
	0.3nm,0.5s,baz=276,slow=4.3,SNR=7.2						
ULN	Ulaanbaatar	51.55	343	*e*P	P	08 44 41.8	+1.1
	4.9nm,0.8s						
SONA0	Songino Array	51.72	343	*e*P	P	08 44 41.9	-0.1
SONM	Songino Array	51.72	343	P	P	08 44 41.9	-0.1
	3.1nm,0.7s,baz=167,slow=8.9,SNR=2.7						
PEA0B	Petropavlovsk-	59.72	21	*e*P	P	08 45 39.5	+0.4
	24nm,1.2s						
PETK	Petropavlovsk-	59.72	21	P	P	08 45 39.4	+0.3
	3.8nm,0.7s,baz=176,slow=3.9,SNR=9.0						
PETK	Petropavlovsk-	59.72	21	*e*P	P	08 45 39.6	+0.5
PEA1	Petropavlovsk-	59.72	21	*e*P	P	08 45 39.4	+0.3
MK01	Makanchi Array	61.40	327	*e*P	P	08 45 51.5	+0.7
MK31	Makanchi Array	61.42	327	*e*P	P	08 45 51.6	+0.7
MK32	Makanchi Array	61.42	327	*e*P	P	08 45 51.3	+0.4
MKAR	Makanchi Array	61.42	327	P	P	08 45 51.3	+0.4
	1.8nm,0.4s,baz=114,slow=7.9,SNR=7.5						
MKAR	Makanchi Array	61.42	327	*e*P	P	08 45 51.5	+0.6
	37nm,0.6s						
MAKZ	Makanchi	61.60	327	*e*P	P	08 45 52.4	+0.3
	5.0nm,0.8s						
MA2	Magadan	63.19	13	P	P	08 46 02.6	+0.1
	6.5nm,0.6s,baz=166,slow=8.3,SNR=4.4						
AAK	Ala-Archa	63.87	319	P	P	08 46 08.2	+0.7
	0.9nm,0.4s,baz=6.3,slow=18,SNR=3.6						
ZALV	Zalesovo Beam	64.76	334	P	P	08 46 13.0	+0.2
	0.7nm,0.3s,baz=150,slow=6.3,SNR=3.2						
ZAA1	Zalesovo Array	64.76	334	*e*P	P	08 46 13.0	+0.2
KURBB	Kurchatov Arra	65.69	329	P	P	08 46 18.9	-0.1
	1.3nm,0.4s,baz=130,slow=6.4,SNR=11						
KURK	Kurchatov	65.70	329	*e*P	P	08 46 19.2	+0.2
	9.4nm,0.9s						
SEY	Seymchan	66.54	12	P	P	08 46 24.6	+0.4
	3.2nm,0.8s,baz=200,slow=8.1,SNR=7.5						
BVAR	Borovoye Array	71.25	328	P	P	08 46 51.8	-1.8
	0.4nm,0.3s,baz=108,slow=8.0,SNR=2.9						
NRIK	Noril'sk	74.94	347	P	P	08 47 15.0	-0.2
	2.5nm,0.4s,baz=155,slow=5.7,SNR=3.8						
ABKAR	Akbulak array	75.79	322	*e*P	P	08 47 20.1	-0.3
OHAK	Old Harbor	85.33	33	*e*P	P	08 48 11.3	0.0
	12nm,1.1s						
KDAK	Kodiak Island	85.79	32	P	P	08 48 13.3	-0.3
	2.2nm,0.6s,baz=244,slow=6.1,SNR=4.5						
KDAK	Kodiak Island	85.79	32	*e*P	P	08 48 13.3	-0.3
	12nm,1.4s						
BRLK	Bradley Lake	86.93	30	*e*P	P	08 48 18.3	-1.0
	5.2nm,1.1s						
QSPA	South Pole Qui	89.00	180	P	P	08 48 29.1	-0.1
	1.4nm,0.7s,baz=319,slow=5.2,SNR=5.4						
QSPA	South Pole Qui	89.00	180	*e*P	P	08 48 29.4	+0.2
	7.4nm,1.4s						
ILAR	Eielson Array	89.27	25	P	P	08 48 27.8	-2.4
	0.3nm,

H11S2	WAKE ISLAND Hy	29.11	126	T	T	09 28 19.0	
	baz=318,slow=76,SNR=18						
ZALV	Zalesovo Beam	41.49	311	P	P	08 58 49.3	-0.2
	0.8nm,0.5s,baz=90,slow=9.2,SNR=4.0						
MKAR	Makanchi Array	43.95	301	P	P	08 59 10.4	+0.7
	0.4nm,0.6s,baz=87,slow=7.8,SNR=2.4						
KURBB	Kurchatov Arra	45.68	307	P	P	08 59 23.1	-0.2
	1.9nm,0.4s,baz=81,slow=8.1,SNR=15						
BVAR	Borovoye Array	50.14	312	LR	LR	09 21 55.7	
	comp=Z,47nm,18.1s,baz=80,slow=37						
WRA	Warramunga Arr	58.50	189	P	P	09 00 57.8	-1.1
	0.7nm,0.5s,baz=6.7,slow=6.9,SNR=15						
ASAR	Alice Springs	62.23	189	P	P	09 01 23.6	-0.7
	0.4nm,0.6s,baz=359,slow=5.2,SNR=7.5						
TXAR	Lajitas Array	88.78	53	P	P	09 03 56.5	-0.3
	0.2nm,0.9s,baz=292,slow=2.6,SNR=3.0						
TXAR				LR	LR	09 41 52.5	
	comp=Z,49nm,19.7s,baz=0.0,slow=34						

*ISK **05** 08:55:51.2,38°.63N×38°.89E,h5km,ML2.3/6*
*CSEM **05** 08:55:52.3±0.2,38°.63N×38°.90E,h8km,ML2.7,Error ellipse: s-maj=6.1km s-min=5.1km az=148.0*
*DDA **05** 08:55:52.4,38°.62N×38°.93E,h7km,Ml2.7*

ISC 05 08:55:51.7±1.0,38°.63N±0°.03×38°.95E±0°.03,h18km±7km, n29,σ0°47/35,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	Elazig	0.14	169	*i* P	Pg	08 55 55.7	-0.2
ELZG	Elazig	0.14	169	P	Pg	08 55 55.7	-0.2
SVRC	Sivrice-ELAZID	0.38	132	PG	Pb	08 56 00.3	+0.3
SVRC	Sivrice-ELAZID	0.38	132	*i* Pg	Pb	08 56 00.3	+0.3
PTK	Pertek	0.43	53	PG	Pb	08 56 01.6	+0.6
PTK				SG	Sn	08 56 09.7	-1.1
PTK	Pertek	0.43	53	*e*Pg	Pb	08 56 01.6	+0.6
PTK				*e*Sg	Sn	08 56 09.7	-1.1
MALT	Malatya	0.52	232	PG	Pg	08 56 02.1	-0.1
MALT				SG	Sg	08 56 09.4	+0.2
MALT	Malatya	0.52	232	*e*Pg	Pg	08 56 02.1	-0.1
MALT				*e*Sg	Sg	08 56 09.4	+0.2
TNCL	Tunceli-Merkez	0.67	44	*i* P	Pg	08 56 04.8	-0.1
TNCL				*i* S	Sn	08 56 15.9	-0.6
TNCL	Tunceli-Merkez	0.67	44	P	Pg	08 56 04.8	-0.1
TNCL				S	Sn	08 56 15.9	-0.6
KEMA	Kemaliye	0.73	331	*i* P	Pg	08 56 06.3	+0.3
KEMA	Kemaliye	0.73	331	P	Pg	08 56 06.3	+0.3
HEKM	Malatya_Hekimh	0.81	288	*i* P	Pb	08 56 08.1	+0.6
HEKM	Malatya_Hekimh	0.81	288	P	Pb	08 56 08.1	+0.6
ILIC	Ilic-Erzincan	0.87	340	PG	Pb	08 56 08.1	-0.3
ILIC	Ilic-Erzincan	0.87	340	*e*Pg	Pb	08 56 08.1	-0.3
AKCD	Akcadag	0.88	248	*i* P	Pb	08 56 08.6	+0.1
AKCD	Akcadag	0.88	248	P	Pb	08 56 08.6	+0.1
DARE	Darende-Malaty	1.15	267	PN	Pn	08 56 13.0	-0.1
DARE	Darende-Malaty	1.15	267	*e*Pn	Pn	08 56 13.0	-0.1
URFA	Urfa	1.19	185	PN	Pn	08 56 14.3	+0.7
URFA	Urfa	1.19	185	*e*Pn	Pn	08 56 14.3	+0.7
CUKAN	kangal_SIVAS	1.34	301	*i* P	Pg	08 56 17.9	+0.3
CUKAN	kangal_SIVAS	1.34	301	P	Pg	08 56 17.9	+0.3
KELT	Kelkit	1.53	9	*i* P	Pg	08 56 21.5	+0.3
KELT	Kelkit	1.53	9	P	Pg	08 56 21.5	+0.3
MAZI	Mazidag	1.66	134	PN	Pg	08 56 23.7	0.0
MAZI	Mazidag	1.66	134	*e*Pn	Pg	08 56 23.7	0.0
SARI	SarD1z-Kayseri	2.00	264	PN	Pb	08 56 27.3	-0.4

*ISCJB **05** 09:06:52.9±0.4,37°.85N×0°.02×30°.45E±0°.02,h5km±3km, Error ellipse: s-maj=3.0km s-min=2.6km az=4.2*
*DDA **05** 09:06:52.6,37°.84N×30°.48E,h23km,Ml3.5*
*ISK **05** 09:06:52.4,37°.84N×30°.43E,h5km,ML3.4/46*
*IASPEI **05** 09:06:53.3±0.9,37°.84N±0°.02×30°.45E±0°.02,h7km±5km, Error ellipse: s-maj=3.1km s-min=2.9km az=140.3,GT5 selection from ISC bulletin GT5 identified by Bond˙¡r and McLaughlin (2009) selection criteria Bond˙¡r and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
*CSEM **05** 09:06:53.7±0.1,37°.84N×30°.44E,h10km,ML3.4,Error ellipse: s-maj=2.7km s-min=2.5km az=22.0*

ISC 05 09:06:53.4±0.8,37°.84N±0°.02×30°.45E±0°.02,h6km±5km, n191,σ0°86/217,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISP	Isparta	0.06	110	PG	Pg	09 06 55.1	0.0
ISP				SG	Sg	09 06 56.4	+0.1
ISP	Isparta	0.06	110	*i* Pg	Pg	09 06 55.1	0.0
ISP				*i* Sg	Sg	09 06 56.4	+0.1
BAGO	Egridir - ISPA	0.30	61	*i* P	Pg	09 06 58.8	-0.7
BAGO				*i* S	Sg	09 07 03.8	+0.2
BRDR	BURDUR-Merkez	0.34	245	*i* P	Pg	09 07 00.1	0.0
BRDR				*i* S	Sb	09 07 06.2	-1.5
BRDR	BURDUR-Merkez	0.34	245	P	Pg	09 07 00.1	0.0
BRDR				S	Sb	09 07 06.2	-1.5
BCK	Bucak	0.40	164	PG	Pg	09 07 00.1	-1.1
BCK				SG	Sg	09 07 06.2	-0.2
BCK	Bucak	0.40	164	*i* Pg	Pg	09 07 00.1	-1.1
BCK				*e*Sg	Sg	09 07 06.2	-0.2
KZIL	AFYON_Kizioren	0.48	330	*i* P	Pg	09 07 02.7	-0.1
KZIL				*i* S	Sb	09 07 11.6	-0.2
KZIL	AFYON_Kizioren	0.48	330	P	Pg	09 07 02.7	-0.1
KZIL				S	Sb	09 07 11.6	-0.2
SUTC	Sutluce-Ispart	0.57	130	PG	Pg	09 07 03.6	-0.8
SUTC				SG	Sb	09 07 13.0	-1.3
SUTC	Sutluce-Ispart	0.57	130	*i* Pg	Pg	09 07 03.6	-0.8
SUTC				*e*Sg	Sb	09 07 13.0	-1.3
KORT	Korkueli	0.84	185	PG	Pg	09 07 08.6	-1.1
KORT	Korkueli	0.84	185	*i* P	Pg	09 07 08.5	-1.1
KORT				*i* S	Sn	09 07 24.1	-0.6
KORT	Korkueli	0.84	185	*i* Pg	Pg	09 07 08.6	-1.1
KORT				S	Sn	09 07 24.1	-0.6
KHL	Karahalli	0.88	303	PG	Pg	09 07 09.5	-0.8
KHL	Karahalli	0.88	303	*e*Pg	Pg	09 07 09.5	-0.8
KHAL	Karahalli	0.92	305	*i* P	Pg	09 07 09.6	-1.6
KHAL				*i* S	Sb	09 07 25.1	+0.6
KHAL	Karahalli	0.92	305	P	Pg	09 07 09.6	-1.6
KHAL				S	Sb	09 07 25.1	+0.6
GOLH	Golhisar	0.93	230	*i* P	Pg	09 07 09.4	-1.9
GOLH				*i* S	Sb	09 07 25.3	+0.6
GOLH	Golhisar	0.93	230	P	Pg	09 07 09.4	-1.9
GOLH				S	Sb	09 07 25.3	+0.6
ANTB	Antalya	0.96	170	PG	Pg	09 07 10.9	-0.9
ANTB	Antalya	0.96	170	*e*Pg	Pg	09 07 10.9	-0.9
BOLV	Bolvadin	0.96	24	*i* P	Pg	09 07 10.6	-1.3
BOLV				*i* S	Sn	09 07 27.6	0.0
BOLV	Bolvadin	0.96	24	P	Pg	09 07 10.6	-1.3
BOLV				S	Sn	09 07 27.6	0.0
DOGA	KONYA_Doganhis	1.00	74	*i* P	Pg	09 07 11.2	-1.4
DOGA				*i* S	Sb	09 07 26.7	0.0
DOGA	KONYA_Doganhis	1.00	74	P	Pg	09 07 11.2	-1.4
DOGA				S	Sb	09 07 26.7	0.0
GLHS	Glhisar (BURDU	1.02	228	PG	Pg	09 07 12.2	-0.9
GLHS	Glhisar (BURDU	1.02	228	*e*Pg	Pg	09 07 12.2	-0.9
DENT	Denizli	1.13	266	PN	Pg	09 07 14.3	-0.8
DENT	Denizli	1.13	266	*e*Pn	Pg	09 07 14.3	-0.8
ELL	Elmali	1.18	202	PN	Pg	09 07 15.5	-0.5
ELL	Elmali	1.18	202	*e*Pn	Pg	09 07 15.5	-0.5
TAVA	DENIZLI_Tavas	1.28	253	*i* P	Pn	09 07 16.9	-1.0
TAVA				*i* S	Sn	09 07 36.4	+1.0
TAVA	DENIZLI_Tavas	1.28	253	P	Pn	09 07 16.9	-1.0
TAVA				S	Sn	09 07 36.4	+1.0
KEPZ	Antalya-Kepez	1.31	135	*i* P	Pn	09 07 17.7	-0.7
KEPZ				*i* S	Sn	09 07 38.5	+2.3
KEPZ	Antalya-Kepez	1.31	135	P	Pn	09 07 17.7	-0.7
KEPZ				S	Sn	09 07 38.5	+2.3
GEDZ	Gediz	1.45	326	PN	Pn	09 07 20.2	-0.1
GEDZ	Gediz	1.45	326	*e*Pn	Pn	09 07 20.2	-0.1
KDHN	Kadinhani	1.48	62	*i* P	Pn	09 07 19.3	-1.4
KDHN				*i* S	Sg	09 07 43.8	+2.9
KDHN	Kadinhani	1.48	62	P	Pn	09 07 19.3	-1.4
KDHN				S	Sg	09 07 43.8	+2.9
KONT	Konya--Tatoy	1.51	86	PN	Pn	09 07 20.9	-0.2
KONT	Konya--Tatoy	1.51	86	*i* P	Pn	09 07 21.3	+0.2
KONT	Konya--Tatoy	1.51	86	*e*Pn	Pn	09 07 20.9	-0.2
KMER	Konya-Meram	1.52	92	*i* P	Pn	09 07 20.6	-0.7
KMER	Konya-Meram	1.52	92	P	Pn	09 07 20.6	-0.7
SHAP	Saphane-Kutahy	1.52	321	PN	Pn	09 07 21.3	0.0
SHAP	Saphane-Kutahy	1.52	321	*e*Pn	Pn	09 07 21.3	0.0
KIZT	Kizilcal	1.53	47	PN	Pn	09 07 20.9	-0.5
KIZT	Kizilcal	1.53	47	*e*Pn	Pn	09 07 20.9	-0.5
LADK	Ladik-KONYA	1.55	76	PN	Pn	09 07 20.5	-1.2
LADK	Ladik-KONYA	1.55	76	*e*Pn	Pn	09 07 20.5	-1.2
KULA	Kula-Manisa	1.56	296	PN	Pn	09 07 21.3	-0.5
KULA	Kula-Manisa	1.56	296	*e*Pn	Pn	09 07 21.3	-0.5
KUTH	Kutahya	1.59	348	PN	Pn	09 07 21.5	-0.7
KUTH	Kutahya	1.59	348	*e*Pn	Pn	09 07 21.5	-0.7
FETY	Fethiye	1.63	223	PN	Pn	09 07 22.7	+0.1
FETY	Fethiye	1.63	223	*e*Pn	Pn	09 07 22.7	+0.1
MANT	Manisa	1.63	294	*i* P	Pn	09 07 21.9	-0.9
MANT	Manisa	1.63	294	P	Pn	09 07 21.9	-0.9
SIMA	Simav-Kutahya	1.69	317	PN	Pn	09 07 22.9	-0.7
SIMA	Simav-Kutahya	1.69	317	*e*Pn	Pn	09 07 22.9	-0.7
ESKT	Eskisehir	1.70	10	PN	Pn	09 07 23.8	0.0
ESKT	Eskisehir	1.70	10	*i* P	Pn	09 07 22.6	-1.3
ESKT	Eskisehir	1.70	10	*e*Pn	Pn	09 07 23.8	0.0
SEYT	Eskypehyr	1.70	10	P	Pn	09 07 22.5	-1.3
SMAA	Simav-Kutahya	1.71	318	PN	Pn	09 07 23.9	+0.1
SMAA	Simav-Kutahya	1.71	318	*e*Pn	Pn	09 07 23.9	+0.1
AKAS	Kas	1.74	203	PN	Pn	09 07 24.1	-0.3
AKAS	Kas	1.74	203	*i* P	Pb	09 07 25.3	-0.6
AKAS	Kas	1.74	203	*e*Pn	Pn	09 07 24.1	-0.3
AKAS	Kas	1.74	203	P	Pb	09 07 25.3	-0.6
DALY	Dalyan (Mu˙la	1.76	235	PN	Pn	09 07 24.5	+0.1
DALY	Dalyan (Mu˙la	1.76	235	*i* P	Pb	09 07 25.3	-0.8
DALY	Dalyan (Mu˙la	1.76	235	*e*Pn	Pn	09 07 24.5	+0.1
DALY	Dalyan (Mu˙la	1.76	235	P	Pb	09 07 25.3	-0.8
TURN	Turunc	1.76	237	PN	Pg	09 07 28.7	+1.5
TURN	Turunc	1.76	237	*i* P	Pg	09 07 29.4	+2.1
TVSB	Tavsanli	1.78	335	PN	Pn	09 07 23.9	-1.0
TVSB	Tavsanli	1.78	335	*e*Pn	Pn	09 07 23.9	-1.0
AUSIV	SIVRIHISAR	1.81	28	PN	Pn	09 07 24.0	-1.2
AUSIV	SIVRIHISAR	1.81	28	*i* P	Pn	09 07 23.8	-1.5
AUSIV	SIVRIHISAR	1.81	28	*e*Pn	Pn	09 07 24.0	-1.2
DEMI	Demirci	1.81	312	*i* P	Pn	09 07 24.9	-0.4
DEMI	Demirci	1.81	312	P	Pn	09 07 24.9	-0.4
YER	Yerkesik	1.86	248	PN	Pn	09 07 25.8	-0.1
YER	Yerkesik	1.86	248	*e*Pn	Pn	09 07 25.8	-0.1
AYDB	Zeytinkoy-Aydi	2.03	274	PN	Pn	09 07 27.7	-0.6
AYDB	Zeytinkoy-Aydi	2.03	274	*e*Pn	Pn	09 07 27.7	-0.6
BORA	Eskisehir	2.03	0	PN	Pn	09 07 28.4	+0.1
BORA	Eskisehir	2.03	0	*i* P	Pn	09 07 28.2	-0.1
BORA	Eskisehir	2.03	0	*e*Pn	Pn	09 07 28.4	+0.1
AYDN	Tasoluk	2.05	266	*i* P	Pn	09 07 28.3	-0.1
AYDN	Tasoluk	2.05	266	P	Pn	09 07 28.3	-0.1
CHBY	Cihanbeyli	2.06	68	PN	Pn	09 07 28.6	-0.1
CHBY	Cihanbeyli	2.06	68	*e*Pn	Pn	09 07 28.6	-0.1
AUKUT	KUTAHYA	2.13	351	*i* P	Pn	09 07 21.6	-8.2
AUMIH	MIHALICIK	2.18	21	PN	Pn	09 07 30.5	+0.2
AUMIH	MIHALICIK	2.18	21	*i* P	Pb	09 07 32.5	-0.8
AUMIH	MIHALICIK	2.18	21	*e*Pn	Pb	09 07 30.5	+0.2
AUMIH	MIHALICIK	2.18	21	P	Pb	09 07 32.5	-0.8
GAZI	Gazipasa	2.19	137	*i* P	Pn	09 07 29.7	-0.7
GAZI	Gazipasa	2.19	137	P	Pn	09 07 29.7	-0.7
MLSB	Milas	2.19	256	PN	Pn	09 07 30.5	0.0
MLSB	Milas	2.19	256	*e*Pn	Pn	09 07 30.5	0.0
AKS	Akhisar	2.32	297	PN	Pn	09 07 32.4	+0.3
AKS	Akhisar	2.32	297	*e*Pn	Pn	09 07 32.4	+0.3
KULU	Kulu	2.33	58	PN	Pn	09 07 32.9	+0.4
KULU	Kulu	2.33	58	*e*Pn	Pn	09 07 32.9	+0.4
DURS	Dursunbey	2.34	319	*i* P	Pn	09 07 32.5	0.0
DURS	Dursunbey	2.34	319	P	Pn	09 07 32.5	0.0
KKUL	Konya-Kulu	2.35	55	*i* P	Pn	09 07 31.4	-1.2
KKUL	Konya-Kulu	2.35	55	P	Pn	09 07 31.4	-1.2
CAVI	Cavuskoy	2.40	349	PN	Pn	09 07 33.5	+0.2
CAVI	Cavuskoy	2.40	349	*e*Pn	Pn	09 07 33.5	+0.2
GPA	Golpazari	2.44	357	PN	Pn	09 07 34.4	+0.5
GPA	Golpazari	2.44	357	*e*Pn	Pn	09 07 34.4	+0.5
ARG	Arkhangelos	2.47	230	PN	Pn	09 07 34.5	+0.3
ARG	Arkhangelos	2.47	230	*e*Pn	Pn	09 07 34.5	+0.3
DATC	Datca-Mugla	2.47	245	PN	Pn	09 07 35.0	+0.7
DATC	Datca-Mugla	2.47	245	*e*Pn	Pn	09 07 35.0	+0.7
ORLT	Orhaneli	2.51	332	PN	Pn	09 07 35.2	+0.4
ORLT	Orhaneli	2.51	332	*e*Pn	Pn	09 07 35.2	+0.4
GCAM	G?zelcaml?	2.55	268	PN	Pn	09 07 36.1	+0.8
GCAM	G?zelcaml?	2.55	268	*e*Pn	Pn	09 07 36.1	+0.8
GULT	Gulveren	2.59	1	PN	Pn	09 07 36.3	+0.4
GULT	Gulveren	2.59	1	*e*Pn	Pn	09 07 36.3	+0.4
AFSR	Af˙ar-Bala (A	2.60	51	PN	Pn	09 07 35.6	-0.5
AFSR	Af˙ar-Bala (A	2.60	51	*e*Pn	Pn	09 07 35.6	-0.5
IZI	Iznik	2.60	343	PN	Pn	09 07 36.7	+0.6
IZI	Iznik	2.60	343	*e*Pn	Pn	09 07 36.7	+0.6
YESY	Yesilyurt	2.61	90	PN	Pn	09 07 37.1	+0.9
YESY	Yesilyurt	2.61	90	*e*Pn	Pn	09 07 37.1	+0.9
GEYV	SAKARYA_Geyve	2.64	357	*i* P	Pn	09 07 37.0	+0.4
GEYV	SAKARYA_Geyve	2.64	357	P	Pn	09 07 37.0	+0.4
ADVT	Abdulvahap	2.65	348	PN	Pn	09 07 37.1	+0.5
ADVT	Abdulvahap	2.65	348	*e*Pn	Pn	09 07 37.1	+0.5
SERE	Sereflikochisa	2.68	65	PN	Pn	09 07 37.7	+0.4
SERE	Sereflikochisa	2.68	65	*e*Pn	Pn	09 07 37.7	+0.4
MDUB	Mudurnu	2.69	12	PN	Pn	09 07 37.7	+0.4
MDUB	Mudurnu	2.69	12	*e*Pn	Pn	09 07 37.7	+0.4
BALB	Balikesir	2.69	313	PN	Pn	09 07 37.8	+0.5
BALB	Balikesir	2.69	313	*e*Pn	Pn	09 07 37.8	+0.5
LOD	Lodumlu	2.73	41	PN	Pn	09 07 37.1	-0.7
LOD	Lodumlu	2.73	41	*e*Pn	Pn	09 07 37.1	-0.7
ANTO	Ankara	2.73	41	PN	Pn	09 07 38.4	+0.6
ANTO	Ankara	2.73	41	*e*Pn	Pn	09 07 38.4	+0.6
BLCB	Balcova	2.74	282	PN	Pn	09 07 38.1	+0.1
BLCB	Balcova	2.74	282	*e*Pn	Pn	09 07 38.1	+0.1
TEVE	Tevekalti-Mers	2.77	120	PN	Pn	09 07 39.1	+0.6
TEVE	Tevekalti-Mers	2.77	120	*e*Pn	Pn	09 07 39.1	+0.6
MDNY	Mudanya-Bursa	2.80	335	PN	Pn	09 07 39.1	+0.3
MDNY	Mudanya-Bursa	2.80	335	*e*Pn	Pn	09 07 39.1	+0.3
YLV	Yalova	2.84	343	PN	Pn	09 07 39.4	-0.1
YLV	Yalova	2.84	343	*e*Pn	Pn	09 07 39.4	-0.1
YAYX	Yaylak	2.86	66	PN	Pn	09 07 40.7	+1.0
YAYX	Yaylak	2.86	66	*e*Pn	Pn	09 07 40.7	+1.0
KCTX	Karacabey (Bur	2.92	327	PN	Pn	09 07 40.8	+0.4
KCTX	Karacabey (Bur	2.92	327	*e*Pn	Pn	09 07 40.8	+0.4
TEPE	Tepekoy-Mersin	2.97	122	PN	Pn	09 07 41.8	+0.7
TEPE	Tepekoy-Mersin	2.97	122	*e*Pn	Pn	09 07 41.8	+0.7
KAMT	Kaman	2.98	58	PN	Pn	09 07 41.7	+0.4
KAMT	Kaman	2.98	58	*e*Pn	Pn	09 07 41.7	+0.4
ARMT	Armutlu	2.99	336	PN	Pn	09 07 40.9	-0.4
ARMT	Armutlu	2.99	336	*e*Pn	Pn	09 07 40.9	-0.4
AKKU	Akkuyu-Mersin	3.00	123	PN	Pn	09 07 42.9	+1.4
AKKU	Akkuyu-Mersin	3.00	123	*e*Pn	Pn	09 07 42.9	+1.4
GULA	Gulagac	3.03	79	PN	Pn	09 07 42.2	+0.2
GULA	Gulagac	3.03	79	*e*Pn	Pn	09 07 42.2	+0.2
HRT	Hereke	3.04	349	PN	Pn	09 07 41.6	-0.4
HRT	Hereke	3.04	349	*e*Pn	Pn	09 07 41.6	-0.4
YESI	Yesilovacik-Me	3.04	122	PN	Pn	09 07 42.5	+0.5
YESI	Yesilovacik-Me	3.04	122	*e*Pn	Pn	09 07 42.5	+0.5
SBT5	Esenkoy-Cinarc	3.04	337	PN	Pn	09 07 42.6	+0.6
SBT5	Esenkoy-Cinarc	3.04	337	*e*Pn	Pn	09 07 42.6	+0.6
DKL	Dikili	3.04	295	PN	Pn	09 07 41.9	-0.1
DKL	Dikili	3.04	295	*e*Pn	Pn	09 07 41.9	-0.1
IKL	Isikli	3.04	121	PN	Pn	09 07 43.3	+1.2
IKL	Isikli	3.04	121	*e*Pn	Pn	09 07 43.3	+1.2
URLA	Izmir	3.08	281	PN	Pn	09 07 41.9	-0.8
URLA	Izmir	3.08	281	*e*Pn	Pn	09 07 41.9	-0.8
AKDN	Akdeniz- K˙–br	3.25	141	PN	Pn	09 07 45.7	+0.8
AKDN	Akdeniz- K˙–br	3.25	141	*e*Pn	Pn	09 07 45.7	+0.8
KIZK	Mersin	3.25	114	PN	Pn	09 07 46.3	+1.4
MERS	Mersin	3.39	105	PN	Pn	09 07 47.8	+0.9
MERS	Mersin	3.39	105	*e*Pn	Pn	09 07 47.8	+0.9
CSS	Mathiatis	3.70	140	PN	Pn	09 07 52.1	+1.0
CSS	Mathiatis	3.70	140	*e*Pn	Pn	09 07 52.1	+1.0
KARA	Karaisali	3.71	98	PN	Pn	09 07 52.7	+1.5
KARA	Karaisali	3.71	98	*e*Pn	Pn	09 07 52.7	+1.5
EREN	Erenkoy	3.78	127	PN	Pn	09 07 53.9	+1.7
EREN	Erenkoy	3.78	127	*e*Pn	Pn	09 07 53.9	+1.7

*ISCJB **05** 09:23:49.0±0.8,3°.1N±0°.2×127°.9E±0°.3,h100km,mb3.6/6, Error ellipse: s-maj=54.1km s-min=9.5km az=144.4*
*IDC **05** 09:23:51.4±5.9,3°.02N×127°.87E,h106km±66km,mb3.4/6, mb1 3.5/7,mb1mx3.3/56,mbtmp3.8/7,ML4.2/1,Error ellipse: s-maj=107.4km s-min=20.6km az=71.0*

ISC 05 09:23:51.1±1.2,3°.0N±0°.3×127°.7E±0°.4,h100km,n7, σ1°20/8,mb3.8/6,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	5.20	137	P	Pn	09 25 07.8	+1.3
	8.0nm,0.3s,baz=226,slow=23,SNR=30						
SIJI				S	Sn	09 26 03.6	-1.7
	6.4nm,0.3s,baz=175,slow=22,SNR=10						
WRA	Warramunga Arr	23.67	164	P	P	09 28 54.3	+0.5
	0.6nm,0.7s,baz=344,slow=10,SNR=13						
ASAR	Alice Springs	27.15	168	P	P	09 29 24.9	-0.2
	0.2nm,0.7s,baz=348,slow=7.5,SNR=4.2						
MKAR	Makanchi Array	58.75	325	P	P	09 33 38.9	+0.3
	0.8nm,0.5s,baz=119,slow=8.5,SNR=6.9						
ZALV	Zalesovo Beam	61.72	333	P	P	09 33 59.1	+0.5
	0.3nm,0.3s,baz=120,slow=5.2,SNR=2.3						
KURBB	Kurchatov Arra	62.92	327	P	P	09 34 05.3	-1.4
	1.2nm,0.6s,baz=125,slow=6.0,SNR=7.8						
BVAR	Borovoye Array	68.50	327	P	P	09 34 42.3	-0.3
	0.7nm,0.4s,baz=111,slow=7.9,SNR=4.1						

*IDC **05** 09:31:22.4±0.8,1°.07S×126°.64E,h0km,mb4.0/9, mb1 4.1/10,mb1mx3.9/53,mbtmp4.1/10,ML3.9/1,MS3.1/2, Ms1 3.1/2,ms1mx2.6/67,Error ellipse: s-maj=30.1km s-min=15.8km az=69.0*
*ISCJB **05** 09:31:26.2±0.4,0°.91S±0°.04×126°.85E±0°.04,h34km, mb4.1/8,MS3.2/1,Error ellipse: s-maj=6.4km s-min=5.1km az=145.1*
*DJA **05** 09:31:26.4±0.2,1°.S±2°.×12°.7E±°.,h10km,M4.6/13,mb5.0/7, mB5.3/7,MLv4.3/13,Mw(mB)4.7/7*

ISC 05 09:31:27.8±0.7,0°.96S±0°.06×126°.81E±0°.06,h34km,n28, σ1°69/29,mb4.1/8,Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	Labuha	0.76	65	P	Pn	09 31 40.3	-1.8
LBMI				S	Sn	09 31 49.9	-2.5
SANI	Sanana	1.36	217	P	Pn	09 31 49.4	-1.0
SANI				S	Sb	09 32 09.3	-0.6
NLAI	Namlea	2.28	173	P	Pn	09 32 03.2	+0.1
NLAI				S	Sn	09 32 30.0	-0.1
AAI	Ambon	3.04	153	P	Pn	09 32 14.7	+1.2
MSAI	Masohi	3.18	138	P	Pn	09 32 14.1	-1.3
SIJI	Sorong	4.45	89	Pn	Pn	09 32 35.6	+2.6
	5.0nm,0.3s,baz=252,slow=13,SNR=14						
SIJI				Sn	Sn	09 33 28.0	+4.3
	baz=252,slow=20,SNR=3.0						
MRSI	Marisa	5.08	286	P	Pb	09 33 01.6	+5.6
KDI	Kendari	5.14	235	P	Pn	09 32 43.4	+1.0
APSI	Ampana	5.17	270	P	Pn	09 32 44.0	+1.2
FAKI	Fak Fak	5.77	110	P	Pn	09 32 50.9	-0.2
MPSI	Mapaga	7.04	281	P	Pn	09 33 09.1	+0.6
TTSI	Tana Toraja	7.29	253	P	Pn	09 33 13.6	+1.6
	66nm,0.6s,1μm0.2nm						
BNSI	Bone	7.52	243	P	Pn	09 33 17.4	+2.2
SPSI	Sidrap Palu	7.64	247	P	Pn	09 33 19.1	+2.2
	209nm,0.6s,4μm0.9nm						
BKSI	Bulukumba	7.96	237	P	Pn	09 33 24.3	+3.1
	38nm,0.5s,738nm0.2nm						
DAV	Davao City (W)	8.07

DENT	**Denizli**	**0.42 331**	*e*Pg	**Pg**	**09 35 40.4**	**-0.2**
BRDR	**BURDUR-Merkez**	**0.69 63**	*i* P	**Pb**	**09 35 45.7**	**0.0**
BRDR	**BURDUR-Merkez**	**0.69 63**	P	**Pb**	**09 35 45.7**	**0.0**
DALY	**Dalyan (Mu¨la**	**0.76 222**	PG	**Pb**	**09 35 47.1**	**+0.2**
DALY			SG	**Sg**	**09 35 56.9**	**0.0**
DALY	**Dalyan (Mu¨la**	**0.76 222**	*i* P	**Pn**	**09 35 48.2**	**+0.1**
DALY			*i* S	**Sn**	**09 35 59.0**	**-0.3**
DALY	**Dalyan (Mu¨la**	**0.76 222**	*e*Pg	**Pb**	**09 35 47.1**	**+0.2**
DALY			*e*Sg	**Sg**	**09 35 56.9**	**0.0**
DALY			S	**Sn**	**09 35 59.0**	**-0.3**
DALY	**Dalyan (Mu¨la**	**0.76 222**	P	**Pn**	**09 35 48.2**	**+0.1**
FETY	**Fethiye**	**0.77 192**	PG	**Pg**	**09 35 46.5**	**-0.5**
FETY			SG	**Sg**	**09 35 57.2**	**+0.1**
FETY	**Fethiye**	**0.77 192**	*e*Pg	**Pg**	**09 35 46.5**	**-0.5**
FETY			*e*Sg	**Sg**	**09 35 57.2**	**+0.1**
ELL	**Elmali**	**0.81 142**	PG	**Pb**	**09 35 47.9**	**+0.1**
ELL	**Elmali**	**0.81 142**	*e*Pg	**Pb**	**09 35 47.9**	**+0.1**
YER	**Yerkesik**	**0.84 253**	PG	**Pg**	**09 35 48.4**	**0.0**
YER			SG	**Sb**	**09 36 00.3**	**+0.9**
YER	**Yerkesik**	**0.84 253**	*e*Pg	**Pg**	**09 35 48.4**	**0.0**
YER			*e*Sg	**Sb**	**09 36 00.3**	**+0.9**
KORT	**Korkueli**	**0.93 114**	PG	**Pg**	**09 35 50.3**	**+0.2**
KORT	**Korkueli**	**0.93 114**	*e*Pg	**Pg**	**09 35 50.3**	**+0.2**
KULA	**Kula-Manisa**	**1.23 336**	PN	**Pg**	**09 35 55.4**	**-0.4**
KULA	**Kula-Manisa**	**1.23 336**	*e*Pn	**Pg**	**09 35 55.4**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**1.24 297**	PN	**Pn**	**09 35 55.1**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**1.24 297**	*e*Pn	**Pn**	**09 35 55.1**	**+0.2**

ISCJB ***05*** *09:43:01.9±0.6, 38.°46N±0.°04×28.°49E±0.°05, h10km±4km, Error ellipse: s-maj=8.3km s-min=5.5km az=140.0*
CSEM ***05*** *09:43:01.9±0.1, 38.°46N×28.°50E, h8km, ML2.6, Error ellipse: s-maj=3.6km s-min=2.5km az=149.0*
ISK ***05*** *09:43:01.5, 38.°45N×28.°50E, h12km, ML2.1/6*
DDA ***05*** *09:43:02.2, 38.°49N×28.°52E, h10km, Ml2.6*
ISC 05 09:43:01.7±1.0, 38.°45N±0.°04×28.°50E±0.°03, h10km±6km, n20, σ0°28/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANT	**Manisa**	**0.06**	**48**	*i* P	**Pg**	**09 43 04.2**	**+0.1**
MANT				*i* S	**Sg**	**09 43 05.6**	**-0.2**
MANT	**Manisa**	**0.06**	**48**	P	**Pg**	**09 43 04.2**	**+0.1**
MANT				S	**Sg**	**09 43 05.6**	**-0.2**
KULA	**Kula-Manisa**	**0.14**	**63**	PG	**Pg**	**09 43 05.5**	**+0.5**
KULA	**Kula-Manisa**	**0.14**	**63**	*e*Pg	**Pg**	**09 43 05.5**	**+0.5**
DEMI	**Demirci**	**0.61**	**16**	*i* P	**Pg**	**09 43 14.0**	**+0.3**
DEMI				*i* S	**Sg**	**09 43 21.9**	**+0.1**
DEMI	**Demirci**	**0.61**	**16**	P	**Pg**	**09 43 14.0**	**+0.3**
DEMI				S	**Sg**	**09 43 21.9**	**+0.1**
AKHS	**Akhisar**	**0.69**	**309**	*i* P	**Pg**	**09 43 15.0**	**0.0**
AKHS	**Akhisar**	**0.69**	**309**	P	**Pg**	**09 43 15.0**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**0.70**	**224**	PG	**Pg**	**09 43 15.4**	**+0.2**
AYDB				SG	**Sb**	**09 43 25.4**	**-0.3**
AYDB	**Zeytinkoy-Aydi**	**0.70**	**224**	*e*Pg	**Pg**	**09 43 15.4**	**+0.2**
AYDB				*e*Sg	**Sb**	**09 43 25.4**	**-0.3**
SIMA	**Simav-Kutahya**	**0.73**	**31**	PG	**Pg**	**09 43 15.9**	**0.0**
SIMA	**Simav-Kutahya**	**0.73**	**31**	*e*Pg	**Pg**	**09 43 15.9**	**0.0**
KHAL	**Karahalli**	**0.78**	**96**	*i* P	**Pg**	**09 43 17.1**	**+0.3**
KHAL				*i* S	**Sb**	**09 43 27.9**	**-0.3**
KHAL	**Karahalli**	**0.78**	**96**	P	**Pg**	**09 43 17.1**	**+0.3**
KHAL				S	**Sb**	**09 43 27.9**	**-0.3**
BLCB	**Balcova**	**1.15**	**267**	PN	**Pn**	**09 43 24.1**	**+0.3**
BLCB	**Balcova**	**1.15**	**267**	*e*Pn	**Pn**	**09 43 24.1**	**+0.3**
TVSB	**Tavsanli**	**1.25**	**37**	PN	**Pn**	**09 43 25.1**	**-0.2**
TVSB	**Tavsanli**	**1.25**	**37**	*e*Pn	**Pn**	**09 43 25.1**	**-0.2**
BALB	**Balikesir**	**1.28**	**338**	PN	**Pg**	**09 43 26.7**	**+0.3**
BALB	**Balikesir**	**1.28**	**338**	*e*Pn	**Pg**	**09 43 26.7**	**+0.3**

ISCJB ***05*** *09:45:42.3±0.8, 6.°96S±0.°06×127.°49E±0.°09, h315km, mb3.6/2, Error ellipse: s-maj=12.8km s-min=7.7km az=23.6*
IDC ***05*** *09:45:42.7±1.2, 6.°99S×127.°57E, h279km±15km, mb3.5/2, mb1 3.5/7, mb1mx3.1/52, mbtmp4.1/7, Error ellipse: s-maj=19.0km s-min=12.0km az=101.0*
ISC 05 09:45:43.0±0.9, 6.°99S±0.°08×127.°5E±0.°1, h315km, n7, σ3°03/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**4.98**	**230**	P	**Pn**	**09 47 00.9**	**0.0**
	56nm,0.3s,baz=81,slow=3.3,SNR=26						
BATI				S	**S**	**09 48 00.5**	**-3.2**
	13nm,0.3s,baz=288,slow=21,SNR=8.7						
SIJI	**Sorong**	**7.14**	**32**	P	**Pn**	**09 47 26.8**	**+0.4**
	9.8nm,0.3s,baz=69,slow=2.3,SNR=50						
SIJI				S	**S**	**09 48 46.0**	**-4.1**
	2.8nm,0.3s,baz=69,slow=22,SNR=4.6						
FITZ	**Fitzroy Crossi**	**11.19**	**189**	P	**P**	**09 48 16.2**	**-1.1**
	0.1nm,0.3s,baz=34,slow=16,SNR=3.4						
WRA	**Warramunga Arr**	**14.47**	**153**	P	**Pn**	**09 48 54.3**	**-0.6**
	0.6nm,0.3s,baz=331,slow=12,SNR=44						
WRA				S	**S**	**09 51 30.1**	**-1.8**
	0.1nm,0.3s,baz=332,slow=21,SNR=4.6						
ASAR	**Alice Springs**	**17.67**	**160**	P	**Pn**	**09 49 30.3**	**-1.9**
	0.1nm,0.3s,baz=344,slow=12,SNR=13						
ASAR				S	**S**	**09 52 39.8**	**+4.2**
	0.1nm,0.3s,baz=347,slow=25,SNR=4.3						
STKA	**Stephens Creek**	**28.02**	**154**	P	**P**	**09 51 09.0**	**+3.1**
	3.1nm,0.9s,baz=342,slow=9.6,SNR=3.1						
KURBB	**Kurchatov Arra**	**71.24**	**329**	P	**P**	**09 56 31.6**	**+3.2**
	0.6nm,0.5s,baz=136,slow=5.9,SNR=4.8						

SOME ***05*** *09:51:57.1, 40.°05N×76.°83E, h5km*
KRNET ***05*** *09:52:02.1±0.1, 40.°25N×76.°73E, h12km, mb3.2*
NNC ***05*** *09:52:05.0±2.5, 40.°27N×76.°70E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=27.0km s-min=13.9km az=136.0*
ISC 05 09:52:02.8±1.9, 40.°30N±0.°06×76.°59E±0.°04, h1km±12km, n35, σ1°30/56, 24C-12D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	**Naryn**	**1.22**	**339**	⇑*i*P	**Pn**	**09 52 26.2**	**-1.1**
	baz=34						
NRN				⇑*i*S	**Sn**	**09 52 44.8**	**+0.2**
	baz=34						
TARG	**Taragay, Kyrgy**	**1.70**	**32**	⇑*i*P	**Pb**	**09 52 33.7**	**-1.4**
	baz=28						
TARG				⇑*i*S	**Sg**	**09 52 56.9**	**-0.5**
	baz=28						
KDJ	**Kajisay**	**1.88**	**13**	⇓*i*P	**Pb**	**09 52 37.3**	**-0.8**
	baz=10.0						
KDJ				⇓*i*S	**Sg**	**09 53 03.6**	**+0.3**
	baz=10.0						
ULHL	**Ulahol**	**1.96**	**352**	P	**Pg**	**09 52 41.2**	**+0.8**
	SNR=12						
ULHL	**Ulahol**	**1.96**	**352**	⇓*i*P	**Pb**	**09 52 39.7**	**+0.2**
	baz=50						
ULHL				⇓*i*S	**Sg**	**09 53 07.1**	**+1.3**
	baz=50						
KZA	**Kyzart**	**2.04**	**331**	P	**Pb**	**09 52 41.8**	**+0.8**
	SNR=40						
KZA	**Kyzart**	**2.04**	**331**	⇑*i*P	**Pb**	**09 52 41.4**	**+0.4**
	baz=29						
KZA				⇑*i*S	**Sg**	**09 53 10.0**	**+1.5**
	baz=29						
BOOM	**Boomskoye usch**	**2.24**	**348**	⇑*i*P	**Pb**	**09 52 43.6**	**-0.6**
	baz=45						
BOOM				⇑*i*S	**Sb**	**09 53 13.5**	**+0.9**
	baz=45						
SFK	**Sufi-Kurgan**	**2.38**	**264**	⇓Pn	**Pb**	**09 52 46.3**	**-0.4**
	6.6nm,0.7s						
SFK				⇑Lg	Lg	09 53 20.9	
	9.0nm,0.3s						
SFK	**Sufi-Kurgan**	**2.38**	**264**	⇑*i*P	**Pb**	**09 52 45.8**	**-0.9**
	baz=66						
SFK				⇑*i*S	**Sb**	**09 53 17.7**	**+1.0**
	baz=66						
UCH	**Uchtor**	**2.48**	**322**	P	**Pb**	**09 52 48.1**	**-0.4**
	SNR=12						
UCH	**Uchtor**	**2.48**	**322**	⇑*i*P	**Pb**	**09 52 47.4**	**-1.1**
	baz=20						
UCH				⇑*i*S	**Sb**	**09 53 20.6**	**+0.9**
	baz=20						
KBK	**Karagaybulak**	**2.66**	**333**	P	**Pb**	**09 52 51.0**	**-0.3**
	SNR=7.6						
KBK	**Karagaybulak**	**2.66**	**333**	⇓*i*P	**Pb**	**09 52 49.6**	**-1.7**
	baz=31						
KBK				⇓*i*S	**Sb**	**09 53 24.0**	**-0.5**
	baz=31						
TKM2	**Tokmak 2**	**2.72**	**344**	⇑Pn	**Pb**	**09 52 51.4**	**-1.0**
	4.8nm,0.5s						
TKM2				⇑Lg	Lg	09 53 32.9	
	6.3nm,0.7s						
TKM2	**Tokmak 2**	**2.72**	**344**	P	**Pb**	**09 52 51.6**	**-0.8**
	SNR=12						
TKM2	**Tokmak 2**	**2.72**	**344**	⇑*i*P	**Pb**	**09 52 50.4**	**-2.0**
	baz=43						
TKM2				⇑*i*S	**Sb**	**09 53 25.3**	**-1.1**
	baz=43						
IZV	**Izvestkoviy**	**2.73**	**0**	*e*P	**Pb**	**09 52 50.9**	**-1.8**
	13nm,0.5s						
IZV				*e*S	**Sg**	**09 53 29.8**	**-0.9**
	11nm,0.3s						
KST	**Kastek**	**2.78**	**350**	*e*P	**Pb**	**09 52 54.3**	**+0.9**
	11nm,0.3s						
KST				*e*S	**Sg**	**09 53 35.1**	**+3.0**
	7.1nm,0.6s						
AAK	**Ala-Archa**	**2.82**	**327**	⇑Pn	**Pb**	**09 52 54.2**	**+0.1**
	8.3nm,0.5s						
AAK				⇓Lg	Lg	09 53 36.0	
	18nm,0.9s						
AAK	**Ala-Archa**	**2.82**	**327**	P	**Pg**	**09 52 56.4**	**-0.4**
	SNR=14						
AAK	**Ala-Archa**	**2.82**	**327**	⇑*i*P	**Pb**	**09 52 51.8**	**-2.2**
	baz=26						
AAK				⇑*i*S	**Sb**	**09 53 28.3**	**-0.8**
	baz=26						
AML	**Almayashu**	**2.85**	**311**	P	**Pb**	**09 52 53.2**	**-1.5**
	SNR=24						
AML	**Almayashu**	**2.85**	**311**	⇑*i*P	**Pb**	**09 52 52.6**	**-2.1**
	baz=10.0						
AML				⇑*i*S	**Sb**	**09 53 29.5**	**-0.7**
	baz=10.0						
MDOK	**Medeo**	**2.88**	**7**	⇓Pn	**Pb**	**09 52 53.3**	**-1.8**
	7.8nm,0.5s						
MDOK				⇑Lg	Lg	09 53 36.5	
	12nm,0.5s						
MDOK	**Medeo**	**2.88**	**7**	*e*P	**Pb**	**09 52 54.6**	**-0.5**
	12nm,0.4s						
MDOK				*e*S	**Sg**	**09 53 35.7**	**+0.3**
	12nm,0.5s						
DGS	**Degeres**	**3.00**	**348**	*e*P	**Pg**	**09 52 59.1**	**-1.3**
	5.5nm,0.2s						
DGS				*e*S	**Sg**	**09 53 43.2**	**+3.9**
	11nm,0.4s						
CHMS	**Chumysh**	**3.03**	**334**	P	**Pb**	**09 52 56.0**	**-1.5**
	SNR=5.2						
EKS2	**Erkin-Say**	**3.17**	**319**	P	**Pb**	**09 52 58.4**	**-1.6**
	SNR=6.9						
KURS	**Kuram**	**3.40**	**20**	*e*P	**Pb**	**09 53 04.2**	**+0.4**
	3.4nm,0.5s						
KURS				*e*S	**Sg**	**09 53 52.1**	**+0.2**
	9.2nm,0.9s						
MRKS	**Merke**	**3.51**	**315**	*e*P	**Pb**	**09 53 06.2**	**+0.3**
	5.1nm,0.4s						
MRKS				*e*S	**Sg**	**09 53 56.4**	**+0.7**
	8.8nm,0.5s						
PDGK	**Podgornoye**	**3.72**	**35**	⇓Pg	**Pb**	**09 53 10.1**	**+0.7**
	4.5nm,0.6s						
PDGK				⇑Lg	Lg	09 54 00.2	
	12nm,0.7s						
PDGK	**Podgornoye**	**3.72**	**35**	⇓*i*P	**Pn**	**09 53 03.3**	**+1.8**
	baz=33						
PDGK				⇓*i*S	**Sn**	**09 53 46.4**	**+0.3**
	baz=33						
MNBS	**Baschi**	**4.01**	**19**	*e*P	**Pb**	**09 53 14.3**	**0.0**
	4.4nm,0.5s						
MNBS				*e*S	**Sg**	**09 54 09.7**	**-1.9**
	5.1nm,0.5s						
ARXS	**Arharly**	**4.02**	**13**	*e*P	**Pb**	**09 53 14.8**	**+0.4**
	3.8nm,0.4s						
ARXS				*e*S	**Sg**	**09 54 10.1**	**-1.7**
	7.1nm,0.5s						

NIED ***05*** *09:56:00, 24.°10N×122.°30E, h29km, Mw4.7 Best double couple: M0 1.09000×10^16 NP1:φ=296.00000°, δ=38.00000°, λ=141.00000°. NP2:φ=59.00000°, δ=67.00000°, λ=59.00000°.*
BJI ***05*** *09:56:28.1, 24.°12N×122.°21E, h28km, mb4.6/46, mB4.8/30, ML4.5/11, Ms4.5/51, Ms7 4.4/46*
MOS ***05*** *09:56:29.9±0.8, 24.°26N×122.°32E, h48km, mb4.9/34, MS4.2/4, Error ellipse: s-maj=10.9km s-min=6.5km az=121.1*
IDC ***05*** *09:56:30.6±0.5, 24.°29N×122.°26E, h39km±4km, mb4.2/33, mb1 4.2/36, mb1mx4.1/69, mbtmp4.3/36, ML3.7/3, MS4.0/47, Ms1 4.0/47, ms1mx3.9/72, Error ellipse: s-maj=15.3km s-min=8.8km az=66.0*
ISCJB ***05*** *09:56:30.0±0.2, 24.°19N±0.°01×122.°27E±0.°01, h48km±1km, mb4.4/86, MS4.0/45, Error ellipse: s-maj=2.2km s-min=1.7km az=43.1*
JMA ***05*** *09:56:30.1, 24.°13N×122.°26E, h31km±3km, M4.9*
NEIC ***05*** *09:56:30.7±0.4, 24.°21N×122.°25E, h40km±4km, mb4.6/30, ML5.1(TAP), Error ellipse: s-maj=4.7km s-min=4.1km az=123.0*
NEIC Felt at Tanshui. Recorded [2 TAP] in Yilan and [1 TAP] in Chiayi, Hualien, Nantou, Taitung and Yunlin.
TAP ***05*** *09:56:30.1, 24.°22N×122.°24E, h29km, ML5.1, B*
ISC 05 09:56:29.7±0.4, 24.°16N±0.°02×122.°26E±0.°02, h32km±2km, h33km; pP-P, n330, σ1°43/425, mb4.5/86, MS4.0/45, 47C-28D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.40**	**343**	⇓P	**Pb**	**09 56 38.1**	**-0.7**
	baz=339						
EOS1				S	**Sb**	**09 56 44.3**	**-0.7**
	baz=339						
NANB	**Nanao**	**0.54**	**300**	⇓P	**Pb**	**09 56 40.3**	**-0.6**
	baz=300						
NANB				S	**Sb**	**09 56 47.1**	**-1.4**
	baz=300						
ENA	**Nanau**	**0.54**	**299**	*e*P	**Pb**	**09 56 40.1**	**-0.8**
	baz=301						
TWC	**Suao**	**0.58**	**320**	⇓*i*P	**Pb**	**09 56 40.5**	**-1.1**
	baz=318						
TWC				*e*S	**Sb**	**09 56 47.5**	**-2.2**
	baz=318						
NACB	**Ninganchiao**	**0.61**	**271**	⇑P	**Pn**	**09 56 42.0**	**0.0**
	baz=251						
NACB				S	**Sn**	**09 56 50.9**	**+0.1**
	baz=251						
NACB	**Ninganchiao**	**0.61**	**271**	*e*Pn	**Pn**	**09 56 42.1**	**0.0**
NACB				*e*Sn	**Sn**	**09 56 52.5**	**+1.7**
TWD	**Chiawan**	**0.61**	**262**	P	**Pn**	**09 56 42.0**	**-0.1**
	baz=242						
TWD				*e*S	**Sb**	**09 56 50.8**	**+0.2**
	baz=242						
HWA	**Hwalien**	**0.63**	**253**	*e*P	**Pb**	**09 56 42.6**	**+0.3**
	baz=246						
ENLB	**Shoufeng**	**0.66**	**247**	*e*P	**Pn**	**09 56 42.9**	**+0.2**
	baz=229						
ENLB				*e*S	**Sn**	**09 56 52.3**	**+0.4**
	baz=229						
JYNG	**Yonagunijimaku**	**0.69**	**65**	P	**Pn**	**09 56 43.3**	**+0.1**
JYNG				S	**Sn**	**09 56 52.7**	**0.0**
EGS		**0.74**	**336**	⇓P	**Pn**	**09 56 43.6**	**-0.3**
	baz=336						
EGS				*e*S	**Sn**	**09 56 53.7**	**-0.4**
	baz=336						
YOJ	**Yonaguni jima**	**0.75**	**66**	⇑P	**Pb**	**09 56 44.4**	**+0.1**
	baz=71						
YOJ				*e*S	**Sn**	**09 56 54.1**	**-0.1**
	baz=71						
YOJ	**Yonaguni jima**	**0.75**	**66**	*e*Pn	**Pb**	**09 56 44.3**	**0.0**
YOJ				*e*Sn	**Sb**	**09 56 55.4**	**+1.2**
YOJ	**Yonaguni jima**	**0.75**	**66**	P	**Pb**	**09 56 44.3**	**0.0**
YOJ				S	**Sb**	**09 56 54.3**	**+0.1**
YOJ	**Yonaguni jima**	**0.75**	**66**	*e*P	**Pb**	**09 56 44.3**	**0.0**
YOJ				*e*		09 56 55.4	
ILA	**Ilan**	**0.76**	**322**	⇓P	**Pn**	**09 56 44.1**	**-0.1**
	baz=320						
ILA				*e*S	**Sn**	**09 56 54.2**	**-0.3**
	baz=320						
TWE	**Neicheng**	**0.78**	**316**	⇓P	**Pn**	**09 56 44.1**	**-0.2**
	baz=318						
TWE				*e*S	**Sn**	**09 56 53.9**	**-1.0**
	baz=318						
ENTT	**Nioudou**	**0.79**	**307**	⇓P	**Pn**	**09 56 44.6**	**0.0**
	baz=304						
ENTT				*e*S	**Sb**	**09 56 55.6**	**0.0**
	baz=304						
NTC	**Toucheng**	**0.79**	**330**	⇓*e*P	**Pn**	**09 56 44.4**	**-0.2**
	baz=340						
NTC				*e*S	**Sn**	**09 56 55.1**	**-0.2**
	baz=340						
ESL	**Shilin**	**0.83**	**246**	⇑*e*P	**Pn**	**09 56 45.0**	**-0.2**
	baz=240						
ESL				*e*S	**Sn**	**09 56 56.2**	**-0.1**
	baz=240						
NNSB	**Datong**	**0.84**	**288**	⇑P	**Pn**	**09 56 45.8**	**+0.4**
	baz=284						
NNSB				*e*S	**Sb**	**09 56 57.5**	**+0.4**
	baz=284						
NNSH	**Datong**	**0.84**	**288**	⇑*e*P	**Pn**	**09 56 45.7**	**+0.3**
	baz=284						
NNSH				*e*S	**Sn**	**09 56 56.4**	**-0.3**
	baz=284						
NNS	**Nan Shan**	**0.85**	**289**	⇑*e*P	**Pn**	**09 56 45.9**	**+0.2**
	baz=285						
NNS				*e*S	**Sb**	**09 56 58.1**	**+0.7**
	baz=285						
TIPB	**Shuangxi**	**0.90**	**334**	⇓P	**Pn**	**09 56 45.4**	**-0.7**
	baz=333						
TIPB				*e*S	**Sn**	**09 56 56.1**	**-1.9**
	baz=333						
EGFH	**Guangfu**	**0.91**	**237**	*e*P	**Pn**	**09 56 46.2**	**0.0**
	baz=221						
EGFH				*e*S	**Sn**	**09 56 58.4**	**+0.3**
	baz=221						
NWLT	**Wulai**	**0.92**	**312**	⇓*e*P	**Pb**	**09 56 47.1**	**-0.2**
	baz=309						
NWLT				*e*S	**Sn**	**09 56 58.6**	**-0.1**
	baz=309						
YHNB	**Yeheng**	**0.95**	**302**	⇑P	**Pb**	**09 56 47.6**	**-0.1**
	baz=287						
YHNB				*e*S	**Sn**	**09 56 59.7**	**+0.3**
	baz=287						
YHNB	**Yeheng**	**0.95**	**302**	*e*Pn	**Pb**	**09 56 47.6**	**-0.1**
YHNB				*e*Sn	**Sn**	**09 56 59.3**	**-0.1**
NSK	**Sanguang**	**0.97**	**302**	⇑P	**Pb**	**09 56 47.8**	**-0.3**
	baz=284						
NSK				*e*S	**Sn**	**09 57 00.1**	**+0.4**
	baz=284						
TWT	**Tachien**	**0.99**	**275**	*e*P	**Pb**	**09 56 48.6**	**0.0**
	baz=261						
CHGB	**Renai**	**1.00**	**264**	⇑P	**Pn**	**09 56 48.1**	**+0.5**
	baz=248						
CHGB				*e*S	**Sn**	**09 57 01.2**	**+0.4**
	baz=248						
NWF	**Wu-fen Shan**	**1.00**	**334**	⇑*i*P	**Pb**	**09 56 48.2**	**-0.5**
	baz=347						
NWF				*e*S	**Sn**	**09 57 00.7**	**0.0**
	baz=347						
WFSB	**Wu-fen Shan**	**1.00**	**334**	⇓*e*P	**Pb**	**09 56 48.1**	**-0.5**
	baz=347						
WFSB				S	**Sb**	**09 57 01.3**	**-0.3**
	baz=347						
TDCB	**Techi**	**1.01**	**275**	⇑P	**Pn**	**09 56 48.3**	**+0.5**
	baz=261						
HGSD	**Ruisui**	**1.02**	**229**	⇓P	**Pn**	**09 56 47.5**	**-0.1**
	baz=216						
HGSD				*e*S	**Sb**	**09 57 02.8**	**+1.0**
	baz=216						
TWA	**Mucha**	**1.02**	**323**	⇓*e*P	**Pb**	**09 56 48.9**	**-0.1**
	baz=321						
TWA				*e*S	**Sn**	**09 57 01.1**	**+0.1**
	baz=321						
TATO	**Taipei**	**1.07**	**319**	⇑P	**Pb**	**09 56 49.7**	**-0.1**
	baz=329						
TATO				*e*S	**Sb**	**09 57 03.5**	**+0.1**
	baz=329						
TATO	**Taipei**	**1.07**	**319**	*e*Pn	**Pb**	**09 56 49.8**	**0.0**
TATO				*e*Sn	**Sn**	**09 56 59.4**	**-2.8**
EHY	**Hungye**	**1.08**	**233**	*e*P	**Pn**	**09 56 48.7**	**+0.1**
	baz=241						
TAP1	**Taipei**	**1.10**	**323**	⇑P	**Pb**	**09 56 49.9**	**-0.4**
	baz=320						
TAP1				S	**Sb**	**09 57 04.7**	**+0.4**
	baz=320						
VWDT	**VWDT**	**1.10**	**249**	⇑P	**Pn**	**09 56 49.6**	**+0.8**
	baz=234						
YM07	**YM07**	**1.17**	**330**	⇑*e*P	**Pn**	**09 56 49.1**	**-0.7**
	baz=328						
YM07				*e*S	**Sn**	**09 57 03.3**	**-1.3**
	baz=328						
YULB	**Yu-li**	**1.17**	**229**	⇓*e*P	**Pn**	**09 56 49.8**	**0.0**
	baz=239						
YULB	**Yu-li**	**1.17**	**229**	*e*Pn	**Pn**	**09 56 49.8**	**0.0**
YULB				*e*Sn	**Sn**	**09 57 04.6**	**0.0**
YM10	**YM10**	**1.18**	**327**	⇑P	**Pn**	**09 56 50.4**	**+0.5**
	baz=340						
YM10				*e*S	**Sn**	**09 57 05.4**	**+0.5**
	baz=340						
YM11	**YM11**	**1.18**	**328**	*e*P	**Pb**	**09 56 51.0**	**-0.6**
	baz=342						
YM04	**YM04**	**1.19**	**326**	⇑*i*P	**Pn**	**09 56 50.5**	**+0.5**
	baz=340						
YM04				*e*S	**Sb**	**09 57 06.2**	**-0.6**
	baz=340						
YM08	**YM08**	**1.19**	**329**	⇑P	**Pn**	**09 56 49.9**	**-0.2**
	baz=327						
YM08				*e*S	**Sn**	**09 57 05.1**	**0.0**
	baz=327						
YM12	**YM12**	**1.19**	**328**	⇑*e*P	**Pn**	**09 56 50.2**	**+0.1**
	baz=342						
TWF1	**Yuli**	**1.20**	**228**	⇓*e*P	**Pn**	**09 56 50.4**	**+0.2**
	baz=239						
TWF1				*e*S	**Sn**	**09 57 05.1**	**-0.2**
	baz=239						
TWS1	**Kuangyinshan**	**1.21**	**321**	*e*P	**Pb**	**09 56 51.6**	**-0.5**
	baz=329						
TWS1				*e*S	**Sb**	**09 57 08.1**	**+0.8**
	baz=329						
NSTT	**Nanjuang**	**1.24**	**292**	⇑P	**Pb**	**09 56 52.5**	**-0.1**
	baz=289						
NTST	**Danshui**	**1.24**	**324**	*e*P	**Pb**	**09 56 51.7**	**-0.8**
	baz=339						
SSLB	**Suanglung**	**1.25**	**253**	⇑P	**Pn**	**09 56 51.7**	**+0.7**
	baz=249						
SSLB				*e*S	**Sn**	**09 57 05.8**	**-0.9**
	baz=249						
SSLB	**Suanglung**	**1.25**	**253**	*e*Pn	**Pn**	**09 56 51.7**	**+0.7**
SSLB				*e*Sn	**Sn**	**09 57 07.8**	**+1.1**
TWY	**Chenhua**	**1.26**	**332**	⇓P	**Pn**	**09 56 51.8**	**+0.8**
	baz=346						
NCU	**National Centr**	**1.27**	**310**	*e*P	**Pb**	**09 56 52.2**	**-0.8**
	baz=307						
NCUH	**Zhongli**	**1.27**	**310**	*e*P	**Pb**	**09 56 52.5**	**-0.6**
	baz=307						
SMLT	**Sun Moon Lake**	**1.27**	**258**	⇑P	**Pn**	**09 56 52.3**	**+0.9**
	baz=254						
SMLT				*e*S	**Sn**	**09 57 07.6**	**+0.2**
	baz=254

ELDTW eS Sn 09 57 11.5 -1.4
baz=227
WCHH Zhanghua 1.56 267 eP **Pb 09 56 56.9 -1.1**
WCHH eS Sb 09 57 17.3 0.0
baz=264
JKRS Kuro-shima 1.60 87 P **Pb 09 56 57.8 -0.8**
TWH Lutao 1.61 207 ⇓P **Pn 09 56 55.9 0.0**
baz=204
TWH eS Sn 09 57 14.7 -0.9
baz=204
WGK Gukeng 1.62 253 eP **Pn 09 56 57.7 +1.6**
baz=250
WGK eS Sb 09 57 18.9 -0.3
baz=250
WDLH Douliu 1.65 254 eP **Pb 09 56 58.5 -0.9**
baz=236
STYT Tauyuan 1.70 234 ⇓P **Pn 09 56 58.6 +1.4**
baz=222
STYT eS Sn 09 57 19.9 +2.0
baz=222
TWGBT Beinan 1.72 219⇓eP **Pn 09 56 57.0 -0.4**
baz=217
TWGBT eS Sn 09 57 16.4 -1.9
baz=217
TPUB Ta-pu 1.72 240⇑eP **Pb 09 56 59.5 -1.3**
baz=238
TPUB eS Sn 09 57 20.6 +2.2
baz=238
TPUB Ta-pu 1.72 240 ePn **Pb 09 56 59.4 -1.3**
TPUB eSn **Sb 09 57 21.7 -0.4**
TWG Pinlang 1.72 219 eP **Pn 09 56 57.1 -0.3**
baz=217
TWG eS Sn 09 57 17.4 -0.9
baz=217
TWG Pinlang 1.72 219 ePn **Pn 09 56 57.1 -0.3**
TWG eSn **Sn 09 57 17.8 -0.5**
JIJ Ishigaki jima 1.73 83 P **Pn 09 56 58.7 +1.2**
JIJ S **Sn 09 57 19.6 +1.1**
TTN Taitung 1.73 216 eP **Pn 09 56 58.3 +0.7**
baz=204
TTN eS Sn 09 57 19.3 +0.7
baz=204
RLNB Erlin 1.76 262 eP **Pn 09 56 59.6 +1.8**
baz=258
RLNB eS Sb 09 57 22.4 -0.6
baz=258
WTP Ta-pu 1.76 239⇓eP **Pb 09 57 00.4 -1.1**
baz=236
CHY Chiayi 1.81 249 eP **Pn 09 56 59.8 +1.2**
baz=245
WTCT Ta-ch'eng 1.83 261 eP **Pn 09 57 00.1 +1.2**
baz=258
WTCT eS Sb 09 57 24.5 -0.7
baz=258
TWK Hsinying 1.85 242 eP **Pb 09 57 01.5 -1.5**
baz=239
TWK eS Sb 09 57 24.1 -1.7
baz=239
CHN1 Nanshi 1.86 239⇑eP **Pb 09 57 01.6 -1.6**
baz=236
CHN1 eS Sb 09 57 25.1 -1.0
baz=236
SGST Jiashian 1.88 235 eP **Pb 09 57 02.1 -1.3**
baz=224
SGST eS Sn 09 57 24.5 +2.4
baz=224
SLGT Liugui 1.88 232 eP **Pn 09 57 00.9 +1.2**
baz=230
SLGT eS Sn 09 57 24.4 +2.1
baz=230
JISG Ishigakijimahi 1.92 77 P **Pn 09 57 01.2 +1.1**
JISG eS **Sn 09 57 23.6 +0.5**
WLGB Puzi 1.92 250 eP **Pn 09 57 01.4 +1.3**
baz=246
WSF Szhu 1.94 255 eP **Pn 09 57 02.1 +1.8**
baz=266
WSF eS Sb 09 57 27.6 -0.5
baz=266
ECL Taimali 1.97 218 eP **Pn 09 57 00.1 -0.7**
baz=215
CHN8 Yiju 2.05 247 eP **Pn 09 57 03.5 +1.7**
baz=244
CHN8 eS Sb 09 57 29.4 -1.8
baz=244
SSD Sandimen 2.06 227 eP **Pn 09 57 03.9 +1.9**
baz=225
SSD eS Sn 09 57 29.0 +2.5
baz=225
SCLT Jiali 2.13 243 eP **Pn 09 57 04.5 +1.4**
baz=240
SCLT eS Sn 09 57 31.3 +2.9
baz=240
MASBT Mashibuluo 2.15 224 eP **Pn 09 57 04.3 +1.0**
baz=214
MASBT eS Sn 09 57 31.9 +3.1
baz=214
TWM1 Shoushan 2.15 232 eP **Pb 09 57 07.4 -0.6**
baz=230
SGLT Jiouru 2.17 229 eP **Pb 09 57 06.6 -1.6**
baz=214
TAI1 Yung-k'ang 2.17 239 eP **Pn 09 57 05.5 +1.9**
baz=236
EAST Anshuo 2.20 217 eP **Pn 09 57 03.9 0.0**
baz=214
LAY Lan-yu 2.21 197⇓eP **Pn 09 57 03.3 -0.8**
baz=196
JTJ Tarama 2.28 77 P **Pn 09 57 06.8 +1.8**
JTJ eS **Sb 09 57 35.3 -2.6**
SSPT Xinbi 2.28 223 eP **Pn 09 57 07.2 +2.1**
baz=213
SCZT Fangliau 2.33 221 eP **Pn 09 57 06.9 +1.1**
baz=213
SCZT eS Sn 09 57 35.5 +2.1
baz=213
WLCH Liuqiu 2.50 224 eP **Pb 09 57 12.9 -1.1**
baz=221
TWP Hsiaoliuchiu 2.51 224 eP **Pb 09 57 11.7 -2.5**
baz=221
PHUB P'eng-hu 2.54 256 ⇑P **Pn 09 57 09.7 +0.9**
baz=253
PHUB eS Sn 09 57 39.8 +1.2
baz=253
PNG Penghu 2.55 257⇑eP **Pn 09 57 09.6 +0.9**
baz=254
WDGT Dungji 2.55 250⇑eP **Pn 09 57 10.2 +1.4**
baz=236
WDGT eS Sn 09 57 39.5 +0.9
baz=236
HEN Hengchun 2.56 213 eP **Pn 09 57 10.2 +1.2**
baz=203
TSEB Hengchuen, Pin 2.58 209 eP **Pn 09 57 10.6 +1.4**
baz=209
TSEB eS Sn 09 57 40.3 +1.0
baz=209
TWKBT Hengchun 2.58 211 ⇓P **Pn 09 57 09.8 +0.6**
baz=210
TWKBT eS Sn 09 57 38.9 -0.6
baz=210
TWK1 Hengchun 2.58 212 eP **Pn 09 57 10.2 +0.9**
baz=210
TWK1 eS Sn 09 57 39.1 -0.4
baz=210
VWUC VWUC 2.69 288⇑eP **Pn 09 57 10.9 +0.3**
baz=285
JIRB Irabujima 2.73 75 P **Pn 09 57 13.0 +1.7**
JIRB eS **Sn 09 57 45.2 +1.9**
VCHM Qimei 2.76 250 ⇑P **Pn 09 57 13.0 +1.3**
baz=236
VCHM eS Sn 09 57 44.2 +0.2
baz=236
JIKM Ikemajima 2.82 74 P **Pn 09 57 14.6 +2.0**
JIKM eS **Sn 09 57 47.3 +1.8**
JMJ Miyako jima 2 2.84 76 eP **Pn 09 57 13.9 +1.1**
baz=78
JMJ Miyako jima 2 2.84 76 P **Pn 09 57 15.7 +2.9**
JMJ eS **Sn 09 57 48.2 +2.3**
MATB Ma-tsu 2.88 314⇑eP **Pn 09 57 13.4 0.0**
baz=298
JOGS Gusukube 2.93 78 P **Pn 09 57 16.7 +2.7**
JOGS eS **Sn 09 57 51.8 +3.7**
QZH Quanzhou 3.43 284⇑iPn **Pn 09 57 21.1 +0.2**
QZH Sn **Sn 09 57 59.1 -1.3**
QZH smax smax
comp=N,590nm,0.7s
QZH smax smax
comp=E,390nm,0.7s

KNM Kinmen 3.50 275⇑eP **Pn 09 57 23.8 +1.9**
baz=270
KNMB Chin-men Tao 3.54 276⇑eP **Pn 09 57 22.7 +0.3**
baz=271
JOW Kunigami 6.05 63 Pn **Pn 09 57 56.1 -0.8**
7.7nm,0.3s,baz=16,slow=7.4,SNR=4.6
JOW Kunigami 6.05 63 eP **Pn 09 57 57.7 +0.8**
baz=62
JOW Kunigami 6.05 63 ePn **Pn 09 57 57.5 +0.6**
VDOS Pratas Island 6.17 237 eP **Pn 09 58 01.2 +2.6**
baz=235
GZH Guangzhou 8.25 264 P **Pn 09 58 23.3 -3.8**
GZH smax smax
comp=N,230nm,0.8s
GZH smax smax
comp=E,250nm,1.0s
NJ2 Nanjing 8.41 340 eP **Pn 09 58 30.9 +1.5**
NJ2 S **Sn 10 00 08.9 +5.7**
NJ2 pmax pmax
comp=Z,20nm,0.5s
NJ2 smax smax
comp=N,190nm,0.9s
NJ2 smax smax
comp=E,150nm,1.0s
NJ2 LR LR
comp=N,3μm,10.3s
NJ2 LR LR
comp=E,1μm,11.4s
NJ2 LR LR
comp=Z,3μm,11.9s
WHN Wuhan 9.48 314 P Pn 09 58 49.9 +6.0
WHN S **Sn 10 00 34.9 +5.6**
WHN LR LR
comp=N,5μm,7.1s
WHN LR LR
comp=E,3μm,7.7s
WHN LR LR
comp=Z,5μm,11.6s
TGY Tagaytay City 10.09 187 LR LR 10 03 07.5
comp=Z,643nm,21.0s,baz=94,slow=39
JNU Nakatsue 11.70 38 LR LR 10 04 04.3
comp=Z,536nm,18.5s,baz=260,slow=39
QIZ Qiongzhong 12.63 249 P **Pn 09 59 27.6 +0.5**
QIZ S **Sn 10 01 50.8 +4.1**
QIZ LR LR
comp=N,620nm,16.7s
QIZ LR LR
comp=E,490nm,21.6s
QIZ LR LR
comp=Z,610nm,14.7s
TJN Taejon 12.95 19⇑eP **Pn 09 59 33.4 +2.0**
KS15 Wonju Array Si 14.09 19 ePn **Pn 09 59 48.1 +1.2**
KSRS Korea Array 14.11 19 Pn **Pn 09 59 47.5 +0.3**
0.2nm,0.3s,baz=204,slow=14,SNR=4.7
KSRS LR LR 10 05 35.8
comp=Z,298nm,19.6s,baz=193,slow=39
KS01 Wonju Array Si 14.12 19 ePn **Pn 09 59 47.1 -0.3**
GYA Guiyang 14.29 282 eP **Pn 09 59 50.4 +0.5**
GYA pP P 09 59 59.8 +3.1
GYA S **Sn 10 02 30.0 +2.6**
GYA pmax pmax
comp=Z,10.0nm,0.7s
XAN Xi'an 15.24 313 P **P 10 00 07.4 +0.2**
XAN pmax pmax
comp=Z,31nm,1.4s
XAN LR LR
comp=N,540nm,10.8s
XAN LR LR
comp=E,840nm,13.7s
XAN LR LR
comp=Z,1μm,12.2s
BJI Beijing 16.64 343 eP **P 10 00 22.5 -0.1**
BJI S **Sn 10 03 26.5 +2.3**
BJI LR LR
comp=N,2μm,14.3s
BJI LR LR
comp=E,550nm,10.7s
BJI LR LR
comp=Z,890nm,27.0s
DAV Davao City (W) 17.29 169 LR LR 10 07 00.6
comp=Z,412nm,20.5s,baz=5.0,slow=36
CD2 Chengdu 17.72 296 P **Pn 10 00 34.0 -0.1**
CD2 pmax pmax
comp=Z,70nm,1.0s
CD2 LR LR
comp=E,2μm,8.9s
CD2 LR LR
comp=Z,2μm,11.9s
KMI Kunming 17.77 277 P **P 10 00 35.4 -0.1**
KMI pP pP 10 00 44.8 +0.7
KMI sP sP 10 00 48.3 +0.1
KMI S **Sn 10 03 47.7 -4.5**
KMI pmax pmax
comp=Z,14nm,0.5s
KMI pmax pmax
comp=Z,220nm,6.8s
KMI LR LR
comp=N,390nm,18.4s
KMI LR LR
comp=E,1μm,17.0s
KMI LR LR
comp=Z,1μm,14.3s
JCJ Chichijima 18.20 77 LR LR 10 07 04.2
comp=Z,456nm,19.1s,baz=130,slow=35
MAJO Matsushiro 18.45 44 eP **P 10 00 41.7 -0.9**
MAJO Matsushiro 18.45 44 eP **P 10 00 41.7 -0.9**
MJAR Matsushiro Arr 18.45 44 P **P 10 00 41.7 -0.9**
0.1nm,0.3s,baz=202,slow=5.0,SNR=3.0
MJAR LR LR 10 08 34.6
comp=Z,318nm,20.4s,baz=230,slow=39
NONG Nongkai 18.83 255 P Pn 10 00 56.3 +8.7
HHC Hu-ho-hao-te 18.90 334 eP **Pn 10 00 50.3 +1.9**
HHC sP sP 10 01 02.8 +2.4
HHC PP **PnPn 10 01 06.8 +5.7**
HHC S **Sn 10 04 16.3 -2.8**
HHC sS sS 10 04 28.9 -5.6
HHC SS **SnSn 10 04 41.7 +8.3**
HHC pmax pmax
comp=Z,11nm,1.1s
HHC pmax pmax
comp=Z,65nm,5.2s
HHC LR LR
comp=N,640nm,14.1s
HHC LR LR
comp=E,340nm,15.5s
HHC LR LR
comp=Z,670nm,16.1s
CN2 Changchun 19.76 7 eP **P 10 00 57.2 +0.3**
CN2 pmax pmax
comp=Z,10.0nm,1.3s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,830nm,16.0s
CN2 LR LR
comp=E,350nm,16.0s
CN2 LR LR
comp=Z,1μm,18.0s
LZH Lanzhou 19.84 311 eP **Pn 10 01 00.4 +0.7**
LZH pP pP 10 01 06.4 -0.2
LZH sP sP 10 01 09.6 -1.1
LZH PP **PnPn 10 01 15.3 +1.3**
LZH eS **Sn 10 04 43.1 +1.3**
LZH SS **SnSn 10 04 58.1 +1.8**
LZH pmax pmax
comp=Z,42nm,0.9s
LZH pmax pmax
comp=Z,270nm,4.3s
LZH LR LR
comp=N,1μm,13.5s
LZH LR LR
comp=E,2μm,13.6s
LZH LR LR
comp=Z,2μm,15.2s
SGSI Sangihe 20.60 171 P Pn 10 01 09.0 +0.4
CHAI Chaiyaphum 20.73 250 P Pn 10 01 11.7 +1.6
5.9nm,1.0s
PAYA Payao 21.33 261 P **P 10 01 18.5 +4.4**
5.5nm,1.0s
USRK Ussuriysk Ar. 21.52 19 P **P 10 01 14.7 -1.2**
2.6nm,0.6s,baz=215,slow=9.7,SNR=6.7
USRK LR LR 10 10 08.0
comp=Z,380nm,18.9s,baz=186,slow=38
PHIT Phitsanulok 21.57 255 P **P 10 01 19.6 +3.0**
29nm,0.9s,318nm
SRAK Srakaew 21.58 246 P **P 10 01 15.6 -1.2**
51nm,1.1s
LAMP Lampang 21.80 259 P **P 10 01 22.3 +3.2**
7.4nm,0.9s,81nm
CHTO Chiang Mai 22.33 261 eP **P 10 01 25.5 +0.7**
9.3nm,0.8s
CHTO Chiang Mai 22.33 261 eP **P 10 01 25.5 +0.7**
CHTO pmax pmax
comp=Z,9.0nm,0.8s
CMAR Chiang Mai Arr 22.44 260 P **P 10 01 26.1 0.0**
comp=Z,3.9nm,0.8s,baz=64,slow=8.6,SNR=15
CMAR LR LR 10 10 54.5
comp=Z,207nm,18.3s,baz=68,slow=38
SBUM Sibu 23.67 206 eP **P 10 01 38.8 +0.4**
comp=Z,17nm,1.1s
GUMO Guam 23.80 112 LR LR 10 10 39.4
comp=Z,338nm,19.3s,baz=286,slow=36
GTA Gaotai 24.30 314 eP **P 10 01 44.8 +0.4**
GTA pP pP 10 01 52.0 -1.8
GTA sP sP 10 01 55.4 -2.3
GTA pmax pmax
comp=Z,11nm,1.6s
HIA Hailar 25.14 356*d* iP **P 10 01 52.2 +0.5**
HIA pmax pmax
comp=Z,11nm,0.3s
LBMI Labuha 25.17 168 P **P 10 01 53.9 +1.6**
KSM Kuching 25.35 209 eP **P 10 01 53.6 -0.3**
comp=Z,8.9nm,0.9s
ASAJ Asahikawa 25.94 35 LR LR 10 13 06.1
comp=Z,272nm,18.4s,baz=237,slow=38
ASAJ Asahikawa 25.94 35 eP **P 10 02 01.2 +2.1**
KLR Kul'dur 26.11 14 P **P 10 02 01.1 +0.6**
comp=Z,0.1nm,0.6s,baz=210,slow=8.3,SNR=6.1
KLR LR LR 10 13 21.3
comp=Z,44nm,19.1s,baz=197,slow=39
KLR Kul'dur 26.11 14⇑eP **P 10 02 00.8 +0.3**
SIJI Sorong 26.37 159 LR LR 10 11 27.7
comp=Z,128nm,20.8s,baz=17,slow=34
ULN Ulaanbaatar 26.56 337 eP **P 10 02 04.5 -0.4**
comp=Z,15nm,0.6s
ULN Ulaanbaatar 26.56 337*c* iP **P 10 02 04.3 -0.5**
ULN pmax pmax
comp=Z,43nm,1.7s
SONA0 Songino Array 26.78 336 eP **P 10 02 06.4 -0.4**
SONA0 ePP **pP 10 02 15.9 -0.2**
SONA0 ePcP **PcP 10 05 26.9 -2.3**
SONM Songino Array 26.78 336 P **P 10 02 06.4 -0.4**
comp=Z,29nm,0.9s,baz=151,slow=9.1,SNR=78
SONM pP **pP 10 02 15.9 -0.2**
comp=Z,16nm,0.7s,baz=151,slow=9.3,SNR=14
SONM PcP **PcP 10 05 26.9 -2.3**
comp=Z,0.9nm,0.6s,baz=145,slow=5.3,SNR=4.9
SONM LR LR 10 13 53.1
comp=Z,994nm,18.8s,baz=140,slow=39
SONA1 Songino Array 26.79 336 eP **P 10 02 06.3 -0.5**
SHL Shillong 27.57 279 ex **P 10 02 13.0 -1.1**
YSS Yuzh-Sakhalins 28.04 31⇑eP **P 10 02 18.5 +0.7**
YSS pmax pmax
comp=Z,43nm,1.8s
TPRI Tanjung Pinang 28.79 219 P **P 10 02 23.1 -1.7**
BKSI Bulukumba 29.38 184 P P 10 02 43.3 +13
ZAK Zakamensk 30.04 335 eP **P 10 02 33.2 -2.5**
ZAK pmax pmax
comp=Z,4.0nm,1.0s
PSI Prapat 30.97 230 LR LR 10 14 38.7
comp=Z,183nm,19.6s,baz=84,slow=35
TLY Talaya 30.97 337 P **P 10 02 43.3 -0.5**
comp=Z,9.0nm,0.6s,baz=169,slow=6.1,SNR=22
TLY LR LR 10 16 07.6
comp=Z,283nm,21.5s,baz=136,slow=38
TLY Talaya 30.97 337 eP **P 10 02 43.2 -0.6**
comp=Z,13nm,0.8s
TLY Talaya 30.97 337*c* iP **P 10 02 43.1 -0.7**
TLY pmax pmax
comp=Z,25nm,1.5s
TLY MLR MLR
comp=Z,694nm,17.0s
PWJI Pagerwojo 33.58 199 P P 10 03 18.8 +12
BATI Baumata 34.19 178 LR LR 10 17 10.1
comp=Z,176nm,19.3s,baz=138,slow=36
WMQ Urumqi 34.38 313 P **P 10 03 15.7 +1.9**
WMQ pP sP 10 03 26.2 -1.1
WMQ sP pP 10 03 30.6 +7.3
WMQ pmax pmax
comp=Z,58nm,1.3s
WMQ pmax pmax
comp=Z,370nm,5.9s
WMQ LR LR
comp=Z,610nm,22.1s
WMQ LR LR
comp=Z,470nm,16.5s
WMQ LR LR
comp=Z,210nm,17.7s
CGJI Cibinong 34.60 210 P P 10 03 21.2 +5.4
HVS Khovu-Aksy 34.76 328⇓eP **P 10 03 14.1 -2.9**
HVS pmax pmax
comp=Z,13nm,0.6s
MTN Manton Dam 37.79 166 eP **P 10 03 43.2 +0.2**
comp=Z,18nm,0.9s
MK01 Makanchi Array 39.02 315 eP **P 10 03 53.2 -0.1**
MK31 Makanchi Array 39.04 316 eP **P 10 03 53.1 -0.3**
MK31 Makanchi Array 39.04 316 eP **P 10 03 53.1 -0.3**
MK32 Makanchi Array 39.04 316 eP **P 10 03 53.4 -0.1**
MK32 ePP **pP 10 04 04.2 +1.2**
MK32 ePcP **PcP 10 06 02.2 -0.9**
MKAR Makanchi Array 39.04 316 P **P 10 03 53.4 -0.1**
comp=Z,2.3nm,0.5s,baz=107,slow=8.6,SNR=19
MKAR pP **pP 10 04 04.2 +1.2**
comp=Z,2.7nm,0.5s,baz=116,slow=7.5,SNR=7.1
MKAR PcP **PcP 10 06 02.2 -0.9**
comp=Z,1.9nm,0.8s,baz=115,slow=2.0,SNR=3.8
MKAR LR LR 10 21 31.7
comp=Z,374nm,19.1s,baz=72,slow=38
MKAR Makanchi Array 39.04 316 eP **P 10 03 53.1 -0.3**
comp=Z,24nm,0.8s
MAKZ Makanchi 39.24 315 eP **P 10 03 55.2 +0.1**
comp=Z,9.0nm,1.1s
MAKZ Makanchi 39.24 315 eP **P 10 03 55.2 +0.1**
MAKZ pmax pmax
comp=Z,9.0nm,1.1s
PETK Petropavlovsk- 39.34 33 LR LR 10 20 41.4
comp=Z,166nm,19.4s,baz=226,slow=37
PDGK Podgornoye 39.86 309 P **P 10 04 00.7 +0.3**
PDGK pmax pmax
comp=Z,25nm,0.8s
TARG Taragay, Kyrgy 40.72 307 eP **P 10 04 09.1 +1.2**
comp=Z,3.7nm,0.9s
ZAA0 Zalesovo Array 40.80 327 eP **P 10 04 06.6 -1.3**
comp=Z,17nm,0.9s
ZALV Zalesovo Beam 40.80 327 P **P 10 04 06.5 -1.3**
comp=Z,9.1nm,0.6s,baz=117,slow=7.4,SNR=34
ZALV pP **pP 10 04 17.9 +0.5**
comp=Z,7.3nm,0.5s,baz=109,slow=7.6,SNR=8.3
ZALV PcP **PcP 10 06 06.1 -2.3**
comp=Z,1.6nm,0.5s,baz=133,slow=4.3,SNR=2.9
ZALV LR LR 10 22 20.4
comp=Z,554nm,18.2s,baz=72,slow=38
ZALV Zalesovo Beam 40.80 327 eP **P 10 04 06.4 -1.5**
ZAA1 Zalesovo Array 40.80 327 eP **P 10 04 06.5 -1.4**
ZAA1 ePP **pP 10 04 17.9 +0.5**
ZAA1 ePcP **PcP 10 06 06.1 -2.3**
KDJ Kajisay 41.25 307 eP **P 10 04 13.2 +1.2**
comp=Z,6.5nm,1.0s
KDJ Kajisay 41.25 307 eP **P 10 04 13.2 +1.2**
KDJ pmax pmax
comp=Z,7.0nm,1.0s
PMG Port Moresby 41.29 141 LR LR 10 18 39.1
comp=Z,97nm,20.1s,baz=348,slow=32
KSH Kashi 41.74 303 P **P 10 04 20.2 +4.2**
KSH sP sP 10 04 32.2 +2.7
KSH PP **PnPn 10 06 01.2 +3.5**
KSH S **S 10 10 36.9 +5.8**
KSH sS sS 10 10 53.7 +6.8
KSH SS **SS 10 13 36.9 -0.5**
KSH pmax pmax
comp=Z,260nm,4.4s
KSH LR LR
comp=Z,270nm,5.0s
KSH LR LR
comp=Z,220nm,5.2s
KSH LR LR
comp=Z,750nm,8.7s
NRN Naryn 42.00 306 eP **P 10 04 19.9 +1.6**
comp=Z,10nm,1.0s
NRN Naryn 42.00 306 eP **P 10 04 19.9 +1.6**
NRN pmax pmax
comp=Z,10.0nm,1.0s

NVS	Novosibirsk	42.06	327	*i* P	P	10 04 17.5	-0.6
KURK	Kurchatov	42.74	320	*e*P	P	10 04 23.4	-0.4
KURK	Kurchatov	42.74	320*c*	*i* P	P	10 04 23.1	-0.7
KURK				pmax	pmax		
	comp=Z,27nm,1.7s						
KURBB	Kurchatov Arra	42.76	320	P	P	10 04 23.4	-0.5
	comp=Z,5.9nm,1.0s,baz=115,slow=7.5,SNR=26						
PALK	Pallekele	43.18	254	LR	LR	10 23 43.8	
	comp=Z,118nm,18.1s,baz=116,slow=38						
AAK	Ala-Archa	43.30	307	P	P	10 04 28.7	0.0
	comp=Z,1.1nm,0.3s,baz=113,slow=7.7,SNR=3.5						
NIL	Nilore	43.59	294	*e*P	P	10 04 31.5	+0.5
	comp=Z,8.4nm,0.9s						
NIL	Nilore	43.59	294	*e*P	P	10 04 31.5	+0.5
NIL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SFK	Sufi-Kurgan	43.68	303	P	P	10 04 33.1	+1.2
SFK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MNAS	Manas	44.73	307	P	P	10 04 41.0	+0.9
MNAS				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WRAB	Tennant Creek	45.38	164	*e*P	P	10 04 46.2	+0.9
	comp=Z,14nm,1.0s						
WRAB	Tennant Creek	45.38	164	*e*P	P	10 04 46.2	+0.9
WRAB				pmax	pmax		
	comp=Z,14nm,1.0s						
WRA	Warramunga Arr	45.39	164	P	P	10 04 46.5	+1.2
	comp=Z,5.7nm,0.7s,baz=346,slow=8.9,SNR=8.3						
WRA				pP	pP	10 04 57.0	+1.9
	comp=Z,10nm,0.7s,baz=345,slow=8.5,SNR=12						
WR1	Warramunga Arr	45.39	164	*e*P	P	10 04 46.5	+1.2
	comp=Z,9.3nm,0.8s						
WR1				*e*pP	pP	10 04 57.0	+1.9
WB2	Warramunga Arr	45.39	164	*e*P	P	10 04 46.4	+1.1
	comp=Z,11nm,0.6s						
OTUK	Ortayu	45.91	315	P	P	10 04 48.9	-0.3
OTUK				pmax	pmax		
	comp=Z,15nm,1.2s						
KK31	Karatay Array	46.27	307	*e*P	P	10 04 53.0	+0.9
KK31	Karatay Array	46.27	307	*e*P	P	10 04 53.0	+0.9
KKAR	Karatay Array	46.27	307	*e*P	P	10 04 52.9	+0.8
KKAR	Karatay Array	46.27	307	*e*P	P	10 04 52.9	+0.8
BVAR	Borovoye Array	48.31	320	P	P	10 05 07.4	-0.5
	comp=Z,3.7nm,0.6s,baz=111,slow=9.8,SNR=15						
BVAR				PcP	PcP	10 06 32.3	-2.0
	comp=Z,1.2nm,0.5s,baz=101,slow=3.7,SNR=2.5						
BVAR				LR	LR	10 28 00.2	
	comp=Z,151nm,19.1s,baz=90,slow=39						
BRVK	Borovoye	48.38	321	*e*P	P	10 05 08.0	-0.4
	comp=Z,9.4nm,0.8s						
BRVK	Borovoye	48.38	321*c*	*i* P	P	10 05 07.8	-0.6
BRVK				pmax	pmax		
	comp=Z,13nm,1.0s						
ASAR	Alice Springs	48.87	166	P	P	10 05 13.6	+1.2
	comp=Z,2.5nm,0.5s,baz=352,slow=13,SNR=19						
ASAR				pP	sP	10 05 25.0	-1.1
	comp=Z,8.0nm,0.7s,baz=343,slow=6.1,SNR=12						
AS01	Alice Springs	48.88	166	*e*P	P	10 05 13.8	+1.3
NRIK	Noril'sk	49.68	345	P	P	10 05 17.7	-0.4
	comp=Z,2.0nm,0.4s,baz=130,slow=8.1,SNR=4.3						
NRIK				LR	LR	10 28 17.7	
	comp=Z,376nm,18.2s,baz=152,slow=38						
HNR	Honiara	49.69	128	LR	LR	10 25 33.4	
	comp=Z,63nm,19.6s,baz=228,slow=35						
CTA	Charters Tower	49.81	150	P	P	10 05 21.1	+1.4
	comp=Z,3.2nm,0.8s,baz=328,slow=13,SNR=3.4						
BILL	Bilibino	51.37	20	*i* P	P	10 05 29.6	-1.3
BILL				*i*		10 06 41.8	
BILL				*i*		10 07 26.7	
BILL				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,283nm,17.0s						
ABKAR	Akbulak array	54.16	314	*e*P	P	10 05 51.8	0.0
AKTO	Aktyubinsk	55.48	316	P	P	10 06 00.8	-0.5
	comp=Z,1.2nm,0.4s,baz=100,slow=14,SNR=7.2						
AKTO				LR	LR	10 31 23.5	
	comp=Z,155nm,19.9s,baz=97,slow=38						
GEYT	Alibeck	55.66	300	P	P	10 06 03.4	+0.5
	comp=Z,15nm,0.8s,baz=23,slow=8.0,SNR=3.9						
GEYT				LR	LR	10 34 05.4	
	comp=Z,242nm,19.6s,baz=40,slow=41						
GYA0B	ALIBECK ARRAY	55.66	300	*e*P	P	10 06 04.1	+1.2
	comp=Z,20nm,1.1s						
ARU	Arti	55.72	323	LR	LR	10 31 24.1	
	comp=Z,173nm,20.5s,baz=117,slow=38						
ARU	Arti	55.72	323*d*	*i* P	P	10 06 01.7	-1.2
ARU						10 08 03.5	
ARU				S	S	10 13 46.5	-0.6
ARU				SS	SS	10 17 26.4	-6.0
ARU				pmax	pmax		
	comp=Z,21nm,1.7s						
ARU				MLR	MLR		
	comp=Z,154nm,16.0s						
NWAO	Narrogin (SRO)	56.97	185	P	P	10 06 13.2	+1.2
	comp=Z,5.0nm,0.8s,baz=270,slow=7.1,SNR=2.5						
WSAR	Wadi Sarin	57.80	283	LR	LR	10 34 59.5	
	comp=Z,62nm,18.3s,baz=107,slow=40						
STKA	Stephens Creek	58.71	161	P	P	10 06 25.2	+1.0
	comp=Z,4.9nm,0.7s,baz=353,slow=5.7,SNR=12						
STKA				pP	sP	10 06 37.2	-0.8
	comp=Z,8.9nm,0.6s,baz=333,slow=6.3,SNR=7.5						
STKA				LR	LR	10 37 26.1	
	comp=Z,84nm,18.0s,baz=206,slow=42						
DZM	Mont Dzumac	62.90	133	LR	LR	10 32 36.2	
	comp=Z,64nm,19.0s,baz=248,slow=34						
GNI	Garni	65.62	305	LR	LR	10 38 42.3	
	comp=Z,78nm,21.6s,baz=87,slow=39						
GNI	Garni	65.62	305⇑	*e*P	P	10 07 11.7	+0.8
GNI				pmax	pmax		
	comp=Z,49nm,1.6s						
ZEI	Tsey	65.72	308	*e*P	P	10 07 07.5	-4.1
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.4s						
KBZ	Khabaz	66.26	309	P	P	10 07 14.6	-0.1
	comp=Z,4.8nm,0.9s,baz=28,slow=3.0,SNR=6.4						
KBZ				LR	LR	10 39 49.0	
	comp=Z,142nm,18.7s,baz=39,slow=39						
KVAR	Kislovodsk Arr	66.36	309	LR	LR	10 40 14.8	
	comp=Z,93nm,19.1s,baz=84,slow=40						
KIV	Kislovodsk	66.36	309	*e*P	P	10 07 15.8	+0.3
KIV				pmax	pmax		
	comp=Z,18nm,1.1s						
KIV				MLR	MLR		
	comp=Z,81nm,17.0s						
NEY	Neytrino	66.48	308⇑	*e*P	P	10 07 16.9	+0.5
NEY				pmax	pmax		
	comp=Z,1.0nm,0.8s						
VORD	Divnogorie	67.29	317	*e*P	P	10 07 20.4	-0.7
VORD				pmax	pmax		
	comp=Z,4.0nm,0.8s						
VSR	Storozhevoye	67.32	317	*e*P	P	10 07 20.9	-0.4
VSR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
OBN	Obninsk	68.12	322	LR	LR	10 40 54.6	
	comp=Z,185nm,18.8s,baz=88,slow=39						
MDM	Murphy Dome	68.18	27	*e*P	P	10 07 25.8	-0.8
	comp=Z,1.4nm,0.7s						
ILAR	Eielson Array	68.78	27	P	P	10 07 30.8	+0.5
	comp=Z,0.3nm,0.5s,baz=298,slow=5.9,SNR=4.3						
RAYN	Ar Rayn	69.29	287	*e*P	P	10 07 34.2	-0.1
	comp=Z,7.6nm,1.1s						
RAYN	Ar Rayn	69.29	287	*e*P	P	10 07 34.2	-0.1
RAYN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
SPA0	Spitsbergen Ar	69.71	348	*e*P	P	10 07 34.9	-0.9
SPITS	Spitsbergen Ar	69.71	348	P	P	10 07 35.0	-0.9
	comp=Z,4.2nm,0.6s,baz=54,slow=7.3,SNR=13						
SPITS				LR	LR	10 42 28.0	
	comp=Z,302nm,18.4s,baz=25,slow=40						
ARA0	ARCESS Array S	69.92	338	*e*P	P	10 07 36.3	-1.0
ARCES	ARCESS Array B	69.92	338	P	P	10 07 36.3	-1.0
	comp=Z,3.1nm,0.9s,baz=72,slow=7.8,SNR=3.9						
ARCES				LR	LR	10 43 19.6	
	comp=Z,104nm,18.4s,baz=84,slow=40						
DOT	Dot Lake	70.24	28	*e*P	P	10 07 39.0	-0.4
	comp=Z,3.2nm,1.2s						
FIA0	FINESS Array S	71.96	330	*e*P	P	10 07 49.0	-0.7
FIA0	FINESS Array S	71.96	330	*e*P	P	10 07 49.0	-0.7
FINES	FINESS Array B	71.96	330	P	P	10 07 49.0	-0.7
	comp=Z,1.8nm,0.7s,baz=41,slow=6.1,SNR=7.4						
FINES				LR	LR	10 42 44.0	
	comp=Z,440nm,19.3s,baz=38,slow=39						
FINES	FINESS Array B	71.96	330	*i* P	P	10 07 49.0	-0.7
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
DAWY	Dawson	72.11	27	*e*P	P	10 07 50.6	0.0
	comp=Z,1.8nm,0.8s						
INK	Inuvik	72.88	22	*e*P	P	10 07 54.6	-0.4
	comp=Z,3.3nm,0.9s						
INK	Inuvik	72.88	22	*e*P	P	10 07 54.6	-0.4
INK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AKASG	Malin Array Be	73.54	319	P	P	10 07 58.3	-1.0
	comp=Z,1.4nm,0.4s,baz=69,slow=5.4,SNR=2.8						
AKASG				LR	LR	10 43 27.3	
	comp=Z,82nm,20.1s,baz=45,slow=38						
ASF	Jabal al Asfar	73.84	298	P	P	10 08 01.8	+0.2
	comp=Z,2.4nm,0.4s,baz=34,slow=2.0,SNR=6.2						
BR101	Keskin Array S	73.97	307	*e*P	P	10 08 02.1	-0.2
BR131	Keskin Array S	73.97	307	*e*P	P	10 08 02.0	-0.3
BRTR	Keskin Array B	73.97	307	P	P	10 08 02.1	-0.2
	comp=Z,6.8nm,0.9s,baz=103,slow=5.5,SNR=38						
BRTR				LR	LR	10 46 42.3	
	comp=Z,42nm,19.4s,baz=74,slow=41						
MMAI	Mount Meron Ar	74.76	300	P	P	10 08 06.9	0.0
	comp=Z,2.4nm,0.7s,baz=94,slow=4.8,SNR=3.4						
MMAI				LR	LR	10 47 08.2	
	comp=Z,105nm,19.9s,baz=145,slow=41						
DAG	Danmarks Havn	76.54	351	*i* P	P	10 08 14.1	-2.1
	comp=Z,5.4nm,1.0s						
DAG	Danmarks Havn	76.54	351	*i* P	P	10 08 14.1	-2.1
DAG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
VRI	Vrincioaia	76.72	314	P	P	10 08 18.2	+0.4
VRI				pmax	pmax		
	comp=Z,70nm,1.7s						
BUR04	Bucovina Ar. S	77.06	316	*e*P	P	10 08 18.1	-1.6
MLR	Muntele Rosu	77.37	314	P	P	10 08 21.5	-0.1
	comp=Z,0.5nm,0.7s,baz=92,slow=7.2,SNR=3.9						
MLR				LR	LR	10 46 35.0	
	comp=Z,30nm,18.0s,baz=60,slow=39						
HFS	Hagfors	78.06	331	P	P	10 08 23.7	-1.3
	comp=Z,0.7nm,0.4s,baz=153,slow=9.7,SNR=5.6						
HFS				LR	LR	10 46 14.1	
	comp=Z,483nm,19.2s,baz=62,slow=38						
NB2	NORSAR Subarra	78.70	332	P	P	10 08 27.1	-1.5
	comp=Z,0.5nm,0.6s,baz=55,slow=5.6						
NB200	NORSAR Array S	78.70	332	*e*P	P	10 08 26.8	-1.8
NOA	NORSAR Array B	78.70	332	P	P	10 08 26.8	-1.8
	comp=Z,1.1nm,0.5s,baz=56,slow=5.7,SNR=6.0						
NOA				LR	LR	10 47 05.6	
	comp=Z,266nm,18.1s,baz=60,slow=39						
VTS	Vitosha	80.31	312	*e*P	P	10 08 38.1	+0.3
	comp=Z,7.3nm,1.0s						
VTS	Vitosha	80.31	312	*e*P	P	10 08 38.1	+0.3
VTS				pmax	pmax		
	comp=Z,7.0nm,1.0s						
VYHS	Vyhne	80.63	319	*e*P	P	10 08 39.5	+0.3
VYHS				*e*		10 08 52.6	
VYHS				pmax	pmax		
	comp=Z,5.0nm,1.2s						
VYHS	Vyhne	80.63	319	*e*P	P	10 08 39.5	+0.3
VYHS				*e*pP	sP	10 08 52.6	-0.7
IDI	Anoyia	82.05	305	P	P	10 08 46.5	-0.6
	comp=Z,6.0nm,0.7s,baz=23,slow=17,SNR=3.2						
IDI				LR	LR	10 51 52.5	
	comp=Z,46nm,19.6s,baz=80,slow=40						
IDI	Anoyia	82.05	305	*e*P	P	10 08 46.4	-0.8
	comp=Z,7.4nm,0.8s						
SCO	Scoresbysund	82.28	349	*i* P	P	10 08 47.4	-0.1
	comp=Z,2.8nm,0.9s						
SCO	Scoresbysund	82.28	349	*e*P	P	10 08 47.4	-0.1
SCO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
YKW3	Yellowknife Ar	82.56	23	*e*P	P	10 08 48.4	-0.7
	comp=Z,4.1nm,1.1s						
YKA	Yellowknife Ar	82.61	23	P	P	10 08 48.7	-0.7
	comp=Z,2.6nm,0.9s,baz=312,slow=4.8,SNR=30						
YKA				LR	LR	10 48 30.1	
	comp=Z,5.2nm,18.8s,baz=260,slow=38						
SUMG	Summit	82.62	354	*i* P	P	10 08 48.4	-1.4
	comp=Z,5.6nm,0.9s						
SUMG	Summit	82.62	354	*e*P	P	10 08 49.1	-0.7
	comp=Z,5.4nm,0.9s						
SUMG	Summit	82.62	354	*e*P	P	10 08 49.1	-0.7
SUMG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CLL	Collm	82.66	323	*i* P	P	10 08 51.6	+1.7
CLL				LmV		10 50 00.0	
	comp=Z,200nm,19.0s						
GERES	GERESS Array B	83.48	321	P	P	10 08 53.8	-0.5
	comp=Z,1.8nm,0.9s,baz=57,slow=4.9,SNR=10						
GERES				pP	pP	10 09 06.3	+1.6
	comp=Z,1.4nm,0.6s,baz=56,slow=5.3,SNR=4.4						
GERES				LR	LR	10 49 41.6	
	comp=Z,140nm,19.7s,baz=86,slow=38						
GEA0	GERESS Array S	83.48	321	*e*P	P	10 08 54.6	+0.3
EKA	Eskdalemuir Ar	88.19	332	LR	LR	10 53 44.2	
	comp=Z,136nm,18.1s,baz=65,slow=39						
D05A	Enumclaw	88.45	38	*e*P	P	10 09 19.5	+0.7
	comp=Z,12nm,0.8s						
SEPW	September Lobe	88.90	39	*e*P	P	10 09 21.2	0.0
B08A	Colville Reser	89.23	36	*e*P	P	10 09 22.8	+0.3
	comp=Z,4.7nm,0.8s						
NEW	Newport	90.46	35	P	P	10 09 28.5	+0.3
NEW				pmax	pmax		
	comp=Z,9.0nm,0.9s						
FRB	Frobisher Bay	91.97	5	P	P	10 09 33.2	-1.6
FRB				pmax	pmax		
	comp=Z,11nm,2.5s						
DLMT	Dillon	94.70	35	*e*P	P	10 09 47.2	-0.8
	comp=Z,2.1nm,1.0s						
NVAR	Mina Array Bea	95.78	43	P	P	10 09 51.8	-1.4
	comp=Z,0.6nm,0.8s,baz=305,slow=3.2,SNR=3.3						
ULM	Lac du Bonnet	98.58	24	LR	LR	11 01 16.1	
	comp=Z,62nm,18.0s,baz=8.0,slow=40						
NVL	N'lazarevskaya	119.32	201	*e*PKIKP	PKPdf	10 15 16.4	+1.6
NVL				pmax	pmax		
	comp=Z,11nm,0.9s						
VNA2	Neumayer--Watz	125.17	198	PKP	PKPdf	10 15 26.4	+0.3
VNA3	Neumayer Olymp	125.63	197	PKP	PKPdf	10 15 26.9	-0.1
SDV	Santo Domingo	144.82	23	PKP	PKPab	10 16 03.0	-0.4
	comp=Z,12nm,0.9s,baz=37,slow=1.6,SNR=12						
LPAZ	La Paz	167.50	53	PKP	PKPdf	10 16 35.2	+1.2
	comp=Z,3.0nm,1.1s,baz=313,slow=4.2,SNR=5.8						

SOME ***05*** *09:57:17.6,40°.20N×76°.68E,h5km*
KRNET ***05*** *09:57:17.4±0.1,40°.25N×76°.72E,h16km,mb3.5*
ISCJB ***05*** *09:57:19.8±1.1,40°.19N±0°.06×76°.78E±0°.06,h10km, Error ellipse: s-maj=8.6km s-min=6.0km az=147.8*
NNC ***05*** *09:57:19.0±8.9,39°.98N×76°.57E,h0km,mb3.7,mpv3.4, Error ellipse: s-maj=79.1km s-min=49.9km az=148.0*

ISC 05 09:57:17.0±1.5,40°.21N±0°.06×76°.64E±0°.04,h10km,n36,
σ1§44/58,21C-17D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
NRN	Naryn	1.32	339	⇑*i*P	Pg		09 57 42.0	-0.4
	baz=34							
NRN				⇑*i*S	Sn		09 58 00.8	+1.2
	baz=34							
TARG	Taragay, Kyrgy	1.76	30	⇓*e*P	Pb		09 57 49.0	-0.7
	baz=29							
TARG				⇓*i*S	Sg		09 58 12.8	-0.9
	baz=29							
KDJ	Kajisay	1.96	12	⇑*e*P	Pb		09 57 52.7	-0.3
	baz=11							
KDJ				⇑*i*S	Sg		09 58 19.7	-0.5
	baz=11							
ULHL	Ulahol	2.06	352	P	Pg		09 57 57.0	+0.5
	SNR=24							
ULHL	Ulahol	2.06	352	⇑*i*P	Pb		09 57 54.9	+0.3
	baz=50							
ULHL				⇑*i*S	Sg		09 58 22.4	-0.8
	baz=50							
KZA	Kyzart	2.14	331	P	Pg		09 57 57.7	-0.5
	SNR=54							
KZA	Kyzart	2.14	331	⇑*i*P	Pg		09 57 56.7	-1.4
	baz=29							
KZA				⇑*i*S	Sg		09 58 25.6	-0.3
	baz=29							
BOOM	Boomskoye usch	2.34	347	⇑*i*P	Pb		09 57 58.9	-0.5
	baz=46							
BOOM				⇑*i*S	Sb		09 58 29.6	+1.2
	baz=46							
SFK	Sufi-Kurgan	2.41	266	⇓Pn	Pg		09 58 02.2	-1.1
	3.4nm,0.3s							
SFK				⇓Lg	Lg		09 58 36.0	
	35nm,0.4s							
SFK	Sufi-Kurgan	2.41	266	⇓*i*P	Pg		09 58 02.0	-1.2
	baz=66							
SFK				⇓*i*S	Sg		09 58 34.0	-0.5
	baz=66							
UCH	Uchtor	2.58	322	P	Pb		09 58 03.6	0.0
	SNR=21							
UCH	Uchtor	2.58	322	⇑*e*P	Pb		09 58 02.3	-1.3
	baz=21							
UCH				⇑*i*S	Sb		09 58 36.5	+1.0
	baz=21							
KBK	Karagaybulak	2.76	333	P	Pb		09 58 07.2	+0.7
	SNR=15							
KBK	Karagaybulak	2.76	333	⇓*i*P	Pb		09 58 05.1	-1.4
	baz=32							
KBK				⇓*i*S	Sb		09 58 40.2	-0.2
	baz=32							
TKM2	Tokmak 2	2.82	344	⇑Pn	Pb		09 58 07.2	-0.4
	7.6nm,0.5s							
TKM2				⇑Lg	Lg		09 58 53.1	
	16nm,0.7s							
TKM2	Tokmak 2	2.82	344	P	Pb		09 58 07.3	-0.3
	SNR=18							
IZV	Izvestkoviy	2.83	360	*e*P	Pg		09 58 10.3	-0.9
	24nm,0.4s							
IZV				*e*S	Sg		09 58 47.9	+0.1
	36nm,0.7s							
KST	Kastek	2.88	350	*e*P	Pg		09 58 12.3	+0.1
	19nm,0.4s							
KST				*e*S	Sg		09 58 50.4	+1.0
	26nm,0.6s							
AAK	Ala-Archa	2.91	327	⇑Pn	Pg		09 58 11.8	-1.0
	26nm,0.8s							
AAK				⇑Lg	Lg		09 58 53.4	
	33nm,0.8s							
AAK	Ala-Archa	2.91	327	P	Pg		09 58 12.2	-0.6
	SNR=24							
AAK	Ala-Archa	2.91	327	⇑*i*P	Pb		09 58 06.8	-2.4
	baz=26							
AAK				⇑*i*S	Sb		09 58 43.7	-1.2
	baz=26							
AML	Almayashu	2.94	312	P	Pb		09 58 09.1	-0.6
	SNR=14							
AML	Almayashu	2.94	312	⇓*i*P	Pb		09 58 07.4	-2.3
	baz=10.0							
AML				⇓*i*S	Sb		09 58 45.1	-0.7
	baz=10.0							
MDOK	Medeo	2.97	6	⇓Pn	Pb		09 58 09.0	-1.1
	14nm,0.5s							
MDOK				⇑Lg	Lg		09 58 57.6	
	29nm,0.6s							
MDOK	Medeo	2.97	6	*e*P	Pg		09 58 13.6	-0.3
	18nm,0.4s							
MDOK				*e*S	Sg		09 58 52.7	+0.3
	17nm,0.6s							
KOTS	Kotyrbulak	3.04	7	*e*P	Pg		09 58 14.4	-1.0
	12nm,0.4s							
KOTS				*e*S	Sg		09 58 54.4	-0.4
	16nm,0.8s							
DGS	Degeres	3.10	348	*e*P	Pg		09 58 16.4	-0.1
	8.8nm,0.3s							
DGS				*e*S	Sg		09 58 57.8	+1.2
	14nm,0.5s							
CHMS	Chumysh	3.13	334	P	Pb		09 58 11.8	-1.0
	SNR=8.7							
EKS2	Erkin-Say	3.26	320	P	Pb		09 58 14.2	-0.9
	SNR=11							
KTBS	Karatobe	3.50	1	*e*P	Pg		09 58 22.0	-2.1
	5.6nm,0.5s							
KTBS				*e*S	Sg		09 59 07.2	-2.3
	19nm,0.8s							
MRKS	Merke	3.60	316	*e*P	Pg		09 58 24.3	-1.7
	14nm,0.6s							
MRKS				*e*S	Sg		09 59 11.1	-1.7
	17nm,0.5s							
PDGK	Podgornoye	3.78	33	⇑Pg	Pg		09 58 29.8	+0.4
	5.9nm,0.5s							
PDGK				⇓Lg	Lg		09 59 24.1	
	51nm,0.8s							
MNAS	Manas	3.85	308	⇓Pn	Pn		09 58 20.1	+3.6
	2.6nm,0.5s							
MNAS				⇑Pg	Pg		09 58 30.0	-0.9
	7.7nm,1.0s							
MNAS				⇓Sn	Sb		09 59 09.6	-2.4
	5.3nm,0.7s							
MNAS				⇓Lg	Lg		09 59 23.1	
	16nm,1.2s							
MNBS	Baschi	4.08	18	*e*P	Pg		09 58 32.3	-3.0
	8.7nm,0.5s							
MNBS				*e*S	Sg		09 59 25.3	-2.9
	13nm,0.5s							
ARXS	Arharly	4.10	12	*e*P	Pg		09 58 33.0	-2.5
	4.5nm,0.6s							
ARXS				*e*S	Sg		09 59 26.2	-2.4
	9.8nm,0.5s							
KK31	Karatay Array	5.42	304	⇓Pn	Pn		09 58 41.1	+3.2
	0.6nm,0.3s,baz=159,slow=16,SNR=7.4							
KK31				⇓Lg	Lg		10 00 14.1	
	2.6nm,0.6s,baz=148,slow=28,SNR=3.8							

ISCJB ***05*** *09:57:35.0±0.4,7°.15S±0°.04×128°.86E±0°.05,h10km, mb4.2/9, Error ellipse: s-maj=7.0km s-min=5.3km az=2.0*
IDC ***05*** *09:57:35.6±0.8,7°.17S×128°.85E,h0km,mb4.2/8, mb1 4.3/13,mb1mx4.0/58,mbtmp4.2/13,ML4.1/5,MS3.0/1, Ms1 3.0/1,ms1mx2.7/50, Error ellipse: s-maj=28.8km s-min=14.4km az=82.0*
NEIC ***05*** *09:57:40.7±0.5,7°.25S×128°.86E,h35km,mb4.0/1, Error ellipse: s-maj=12.7km s-min=7.6km az=71.0*
DJA ***05*** *09:57:40.4±0.3,7°.5S±3°×12°9E±°,h130km±9km,M4.3/10, mB4.8/2,mb4.3/10,MLv4.3/10,Mw(mB)4.0/2*

ISC 05 09:57:36.6±0.6,7°.22S±0°.05×128°.92E±0°.07,h10km,n28,
σ1§73/33,mb4.4/9,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.48	108	P	Pb		09 58 22.0	+0.8
BNDI	Bandanaira	2.85	20	P	Pn		09 58 21.6	-0.6
AAI	Ambon	3.58	348	P	Pn		09 58 29.6	-2.6
SOEI	Soe	5.25	241	P	Pn		09 58 57.6	+2.3
	88nm,1.2s,0.3nm							
FAKI	Fak Fak	5.40	38	P	Pn		09 58 58.0	+0.7
BATI	Baumata	5.99	240	Pn	Pn		09 59 06.5	+1.2
	20nm,0.3s,baz=180,slow=1.2,SNR=12							
BATI				Sn	Sn		10 00 15.6	+1.5
	5.1nm,0.3s,baz=90,slow=20,SNR=2.6							

2.2nm,0.6s,baz=124,slow=6.2,SNR=5.3
KURBB Kurchatov Arra 72.14 329 P **P 10 09 00.8 -0.6**
2.7nm,0.6s,baz=131,slow=5.0,SNR=13
KURK Kurchatov 72.15 329 *e*P **P 10 09 02.2 +0.8**
34nm,1.0s
SEY Seymchan 72.22 11 P **P 10 09 02.0 +0.4**
1.7nm,0.7s,baz=224,slow=4.5,SNR=5.5
BVAR Borovoye Array 77.68 328 P **P 10 09 34.8 +1.4**
1.0nm,0.7s,baz=123,slow=5.3,SNR=4.1

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*NNC **05** 10:09:04.1±6.9, 53.64N×88.12E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=52.1km s-min=42.5km az=51.0*
IDC 05 10:09:05.5±2.9, 53.76N×88.08E, h0km, mb1 3.1/2, mb1mx2.9/72, mbtmp3.1/2, ML2.7/2, 4C-2D, Error ellipse: s-maj=25.6km s-min=16.5km az=62.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.94**	**277**	*i*		10 21 29.4	
	baz=92,slow=324,SNR=2.9						
ZAA0	**Zalesovo Array**	**1.94**	**277**	⇑Pg	Pn	10 09 39.6	0.0
	13nm,0.6s						
ZAA0				⇓Lg	Lg	10 10 07.0	
	46nm,0.8s						
ZALV	**Zalesovo Beam**	**1.94**	**277**	Pn	Pn	10 09 39.8	+0.1
	2.9nm,0.3s,baz=99,slow=14,SNR=40						
ZALV				Lg	Lg	10 10 06.6	
	7.2nm,0.3s,baz=94,slow=25,SNR=24						
KURK	**Kurchatov**	**6.56**	**246**	⇑Lg	Lg	10 12 32.7	
	6.1nm,0.9s						
KURBB	**Kurchatov Arra**	**6.66**	**246**	Pn	Pn	10 10 45.0	+0.5
	0.2nm,0.3s,baz=62,slow=14,SNR=5.5						
KURBB				Lg	Lg	10 12 38.1	
	0.1nm,0.3s,baz=65,slow=34,SNR=8.2						
KURBB	**Kurchatov Arra**	**6.66**	**246**	⇑Pn	Pn	10 10 45.2	+0.8
	2.1nm,0.5s,baz=63,slow=14						
KURBB				⇓Sn	Sn	10 12 00.2	-0.7
	5.7nm,0.6s						
KURBB				⇑Lg	Lg	10 12 35.7	
	11nm,0.7s,baz=64,slow=32						
MKAR	**Makanchi Array**	**7.89**	**210**	Pn	Pn	10 11 02.5	+1.0
	0.1nm,0.3s,baz=27,slow=14,SNR=3.7						
MKAR				Sn	Sn	10 12 31.5	0.0
	0.2nm,0.3s,baz=35,slow=28,SNR=4.7						
MKAR				Lg	Lg	10 13 13.8	
	0.1nm,0.3s,baz=22,slow=27,SNR=2.7						

JMA 05 10:09:14.1±0.2, 35.71N×140.94E, h9km±1km, M3.6, 4C-1D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.07**	**264**	⇑P	Pg	10 09 16.2	+0.1
CHOJ				S	Sg	10 09 17.8	+0.2
JCN	**Nagara**	**0.67**	**244**	⇑P	Pb	10 09 28.0	+0.1
JCN				*e*S	Sb	10 09 38.6	+1.3
KTR	**Katsuura**	**0.76**	**222**	P	Pg	10 09 28.7	0.0
KTR				*e*S	Sg	10 09 38.9	+0.3
JYT	**Yasato**	**0.80**	**311**	⇑P	Pg	10 09 29.1	-0.3
JYT				S	Sg	10 09 39.8	0.0
BSO4	**Boso 4**	**0.87**	**215**	P	Pb	10 09 31.3	0.0
JHO	**Hitachi**	**0.95**	**342**	⇓P	Pg	10 09 31.5	-0.8
JHO				S	Sg	10 09 44.4	-0.3
BSO3	**Boso 3**	**0.97**	**201**	⇑P	Pg	10 09 32.6	-0.1
MAT	**Matsushiro**	**2.36**	**291**	P	Pn	10 09 52.8	-0.3
MAT				*e*S	Sn	10 10 21.1	-1.1

IDC 05 10:28:19.8±46.0, 16.21S×174.13W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.5/57, mbtmp3.9/3, Error ellipse: s-maj=887.1km s-min=186.1km az=79.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**43.02**	**241**	P	P	10 36 21.7	+0.3
	3.6nm,1.1s,baz=72,slow=6.4,SNR=2.9						
WRA	**Warramunga Arr**	**48.98**	**257**	P		10 37 07.9	-0.6
	0.5nm,0.8s,baz=95,slow=7.5,SNR=7.3						
ASAR	**Alice Springs**	**49.19**	**253**	P	P	10 37 10.2	+0.1
	1.2nm,0.5s,baz=89,slow=8.0,SNR=22						

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*NIED **05** 10:32:00, 35.70N×141.00E, h5km, Mw4.0 Best double couple: M0:1.22000×10^15 NP1:φs17.00000°, δ37.00000°, λ-68.00000°. NP2:φs171.00000°, δ56.00000°, λ-105.00000°.*
*ISCJB **05** 10:32:14.5±1.0, 35.71N±0.04×141.06E±0.06, h11km±5km, mb3.8/8, MS2.9/2, Error ellipse: s-maj=8.1km s-min=5.8km az=163.5*
*IDC **05** 10:32:14.7±0.8, 35.58N×141.00E, h0km, mb3.8/7, mb1 3.8/11, mb1mx3.6/77, mbtmp3.7/11, ML2.9/4, MS3.1/4, Ms1 3.1/4, ms1mx2.6/70, Error ellipse: s-maj=19.7km s-min=14.8km az=43.0*
*NEIC **05** 10:32:15.9±0.6, 35.64N×140.99E, h10km, mb4.3/1, Error ellipse: s-maj=11.7km s-min=11.0km az=214.0*
NEIC Recorded [2 JMA] in Chiba and Ibaraki.
*JMA **05** 10:32:16.3±0.1, 35.71N×140.93E, h11km±1km, M4.2 Broadband fault plane solution: P waves. NP1: φs216.00000°, δ62.00000°, λ-34.00000°. NP2: φs323.00000°, δ60.00000°, λ-147.00000°. Principal axes: T Plg1.0000°, Azm270.0000°; N Plg47.0000°, Azm1.0000°; P Plg43.0000°, Azm179.0000°;*
JMA Felt II J1.
ISC 05 10:32:15.1±1.5, 35.70N±0.04×141.03E±0.06, h3km±10km, n33, σ1§15/31, mb3.9/8, 3C-3D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.14**	**269**	⇑P	**Pg**	**10 32 18.4**	**+0.5**
CHOJ				S	**Sg**	**10 32 20.0**	**+0.3**
JCN	**Nagara**	**0.73**	**247**	⇑P	**Pb**	**10 32 29.7**	**-0.8**
JYT	**Yasato**	**0.86**	**308**	⇑P	**Pg**	**10 32 31.3**	**-0.3**
JYT				S	**Sg**	**10 32 41.7**	**-1.0**
BSO4	**Boso 4**	**0.91**	**219**	⇓P	**Pb**	**10 32 33.1**	**-0.4**
JHO	**Hitachi**	**0.98**	**338**	⇓P	**Pg**	**10 32 33.6**	**-0.3**
JHO				S	**Sg**	**10 32 46.4**	**-0.2**
BSO3	**Boso 3**	**1.00**	**205**	⇓P	**Pn**	**10 32 34.9**	**-0.9**
BSO1	**Boso 1**	**1.05**	**182**	P	**Pg**	**10 32 35.0**	**-0.2**
MJAR	**Matsushiro Arr**	**2.43**	**291**	Pn	**Pn**	**10 32 53.9**	**-1.9**
	6.4nm,0.3s,baz=177,slow=18,SNR=57						
MJAR				Lg	Lg	10 33 31.7	
	12nm,0.3s,baz=100,slow=21,SNR=7.9						
MAJO	**Matsushiro**	**2.44**	**291**	*e*Pn	**Pn**	**10 32 55.0**	**-0.8**
MAJO				*e*Sn	**Sn**	**10 33 27.0**	**+0.8**
MAT	**Matsushiro**	**2.44**	**291**	P	**Pn**	**10 32 54.9**	**-0.9**
MAT				*e*S	**Sn**	**10 33 23.7**	**-2.5**
JHJ	**Hachijo jima 2**	**2.78**	**202**	Pn	**Pn**	**10 32 59.2**	**-1.3**
	7.6nm,0.3s,baz=66,slow=19,SNR=2.9						
ERM	**Erimo**	**6.52**	**14**	*e*Pn	**Pn**	**10 33 51.5**	**-0.4**
ERM				*e*Sn	**Sn**	**10 35 06.0**	**-0.7**
JNU	**Nakatsue**	**8.78**	**256**	LR	LR	10 38 20.5	
	comp=Z,211nm,19.9s,baz=117,slow=42						
KSRS	**Korea Array**	**10.69**	**283**	Pn	**Pn**	**10 34 50.9**	**+1.8**
	0.2nm,0.3s,baz=103,slow=16,SNR=3.5						
KSRS				LR	LR	10 39 02.1	
	comp=Z,58nm,18.1s,baz=74,slow=38						
KSAR	**Wonju Array Be**	**10.71**	**283**	Pn	**Pn**	**10 34 50.9**	**+1.4**
USRK	**Ussuriysk Ar.**	**10.95**	**323**	Pn	**Pn**	**10 34 55.3**	**+2.5**
	0.1nm,0.3s,baz=108,slow=14,SNR=3.0						
PETK	**Petropavlovsk-**	**20.99**	**29**	LR	LR	10 44 23.0	
	comp=Z,68nm,21.0s,baz=251,slow=34						
MA2	**Magadan**	**24.72**	**12**	P	**P**	**10 37 38.2**	**+0.9**
	4.3nm,0.7s,baz=215,slow=9.2,SNR=4.0						
MA2				LR	LR	10 48 00.8	
	comp=Z,29nm,21.5s,baz=113,slow=38						
H11N2	**WAKE ISLAND Hy**	**27.76**	**118**	T	T	11 07 12.4	
	baz=311,slow=75,SNR=79						
H11N1	**WAKE ISLAND Hy**	**27.77**	**118**	T	T	11 07 13.4	
	baz=311,slow=75,SNR=98						
H11N3	**WAKE ISLAND Hy**	**27.78**	**118**	T	T	11 07 13.9	
	baz=311,slow=75,SNR=136						
SONM	**Songino Array**	**28.29**	**306**	P	**P**	**10 38 10.3**	**+0.4**
	0.5nm,0.7s,baz=116,slow=9.8,SNR=2.6						
H11S1	**WAKE ISLAND Hy**	**28.43**	**120**	T	T	11 07 53.4	
	baz=312,slow=75,SNR=107						
H11S3	**WAKE ISLAND Hy**	**28.43**	**120**	T	T	11 07 56.7	
	baz=312,slow=75,SNR=152						
H11S2	**WAKE ISLAND Hy**	**28.44**	**120**	T	T	11 07 55.4	
	baz=312,slow=75,SNR=136						

ZALV	**Zalesovo Beam**	**42.59**	**313**	P	**P**	**10 40 12.5**	**+0.3**
	0.9nm,0.4s,baz=97,slow=6.3,SNR=4.7						
MKAR	**Makanchi Array**	**44.58**	**303**	P	**P**	**10 40 28.9**	**+0.5**
	1.3nm,0.6s,baz=92,slow=9.4,SNR=8.4						
ILAR	**Eielson Array**	**50.78**	**32**	P	**P**	**10 41 17.3**	**+1.0**
	0.7nm,0.7s,baz=263,slow=5.7,SNR=8.5						
WRAB	**Tennant Creek**	**55.69**	**188**	*e*P	**P**	**10 41 51.7**	**-1.1**
	4.1nm,1.2s						
WRA	**Warramunga Arr**	**55.70**	**188**	P	**P**	**10 41 51.5**	**-1.5**
	1.1nm,0.8s,baz=6.8,slow=7.6,SNR=7.3						
ASAR	**Alice Springs**	**59.43**	**188**	P	**P**	**10 42 18.4**	**-0.8**
	0.2nm,0.6s,baz=15,slow=11,SNR=4.5						
LPAZ	**La Paz**	**147.62**	**61**	PKPbc	**PKPbc**	**10 52 02.1**	**-0.1**
	1.7nm,0.8s,baz=256,slow=4.0,SNR=6.8						
SIV	**San Ignacio**	**152.17**	**51**	PKPbc	**PKPbc**	**10 52 12.3**	**-0.4**
	0.4nm,0.4s,baz=52,slow=5.8,SNR=3.8						

MEX 05 10:37:31.0±0.4, 16.96N×100.21W, h11km±3km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.10**	**327**	*e*P	Pg	10 37 33.2	-0.6
CAIG				*i* S	Sg	10 37 35.1	-0.6
MEIG	**Mezcala**	**1.11**	**30**	*e*P	Pb	10 37 48.6	-3.7
MEIG				*e*S	Sb	10 38 02.7	-4.2
ARIG	**Puente Sto Nin**	**1.32**	**354**	*e*P	Pn	10 37 52.0	-3.5
ARIG				*e*S	Sb	10 38 07.8	-5.0
PLIG	**Platanillo**	**1.58**	**25**	*e*P	Pn	10 37 55.3	-3.8
PLIG				*e*S	Sn	10 38 14.7	-4.8
TLIG	**Tlapa**	**1.68**	**69**	*e*S	Sn	10 38 17.6	-4.5

IDC 05 10:39:13.8±8.1, 16.13S×70.75W, h120km±38km, mb3.0/2, mb1 3.0/4, mb1mx2.9/45, mbtmp3.3/4, Error ellipse: s-maj=221.6km s-min=55.1km az=23.0, Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**2.52**	**94**	P	Pn	10 39 54.1	-0.4
	0.7nm,0.3s,baz=276,slow=7.1,SNR=20						
SIV	**San Ignacio**	**9.30**	**90**	P	Pn	10 41 26.1	+1.1
	0.4nm,0.3s,baz=270,slow=13,SNR=4.3						
TORD	**Torodi Ar. Bea**	**77.29**	**72**	P	P	10 50 55.5	-0.2
	0.2nm,0.4s,baz=260,slow=5.5,SNR=5.4						
YKA	**Yellowknife Ar**	**85.57**	**341**	P	P	10 51 38.4	+0.2
	0.1nm,0.5s,baz=133,slow=5.4,SNR=4.3						

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*NIED **05** 10:41:00, 35.70N×141.00E, h5km, Mw3.8 Best double couple: M0:5.55000×10^14 NP1:φs14.00000°, δ38.00000°, λ-64.00000°. NP2:φs163.00000°, δ56.00000°, λ-109.00000°.*
*IDC **05** 10:41:36.2±1.4, 35.50N×140.92E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.4/67, mbtmp3.6/5, ML3.2/1, MS2.9/3, Ms1 2.9/3, ms1mx2.6/69, Error ellipse: s-maj=33.9km s-min=26.2km az=34.0*
*ISCJB **05** 10:41:37.2±1.1, 35.69N±0.05×140.96E±0.09, h13km±4km, mb3.7/4, MS2.6/1, Error ellipse: s-maj=13.2km s-min=7.3km az=159.2*
*JMA **05** 10:41:37.8±0.2, 35.70N×140.95E, h10km±1km, M3.8*
JMA Felt II J1.
ISC 05 10:41:37.7±1.1, 35.67N±0.06×140.91E±0.08, h11km±5km, n15, σ0§86/17, mb3.7/4, 2C-2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.05**	**311**	⇑P	**Pg**	**10 41 40.0**	**+0.1**
CHOJ				S	**Sg**	**10 41 41.6**	**0.0**
JCN	**Nagara**	**0.63**	**247**	⇑P	**Pn**	**10 41 51.7**	**-0.7**
JYT	**Yasato**	**0.81**	**314**	P	**Pg**	**10 41 53.1**	**-0.1**
JYT				S	**Sg**	**10 42 03.9**	**+0.1**
BSO3	**Boso 3**	**0.92**	**201**	⇓P	**Pn**	**10 41 56.2**	**-0.1**
JHO	**Hitachi**	**0.98**	**344**	⇓P	**Pg**	**10 41 55.4**	**-1.2**
JHO				S	**Sg**	**10 42 08.4**	**-1.0**
BSO1	**Boso 1**	**1.01**	**177**	P	**Pn**	**10 41 56.5**	**-0.8**
MJAR	**Matsushiro Arr**	**2.35**	**293**	Pn	**Pn**	**10 42 16.2**	**0.0**
	5.4nm,0.3s,baz=108,slow=7.2,SNR=34						
MJAR				Sn	**Sb**	**10 42 49.6**	**+0.4**
	8.6nm,0.3s,baz=125,slow=24,SNR=7.2						
MAT	**Matsushiro**	**2.36**	**293**	P	**Pn**	**10 42 16.6**	**+0.3**
MAT				*e*S	**Sn**	**10 42 43.9**	**-1.3**
JNU	**Nakatsue**	**8.67**	**256**	LR	LR	10 46 40.5	
	comp=Z,91nm,18.3s,baz=116,slow=35						
KSRS	**Korea Array**	**10.60**	**284**	LR	LR	10 48 11.3	
	comp=Z,56nm,18.3s,baz=127,slow=37						
GUMO	**Guam**	**22.27**	**170**	LR	LR	10 56 18.4	
	comp=Z,22nm,18.1s,baz=58,slow=40						
MKAR	**Makanchi Array**	**44.51**	**303**	P	**P**	**10 49 49.7**	**+0.6**
	0.7nm,0.7s,baz=99,slow=7.9,SNR=4.5						
KURBB	**Kurchatov Arra**	**46.53**	**309**	P	**P**	**10 50 06.1**	**+1.2**
	0.6nm,0.2s,baz=86,slow=7.9,SNR=4.4						
ILAR	**Eielson Array**	**50.87**	**32**	P	**P**	**10 50 39.5**	**+1.4**
	0.2nm,0.7s,baz=279,slow=6.2,SNR=2.7						
WRA	**Warramunga Arr**	**55.66**	**187**	P	**P**	**10 51 12.9**	**-0.8**
	0.9nm,0.9s,baz=6.6,slow=8.1,SNR=4.5						

KRSC 05 10:45:59.5±1.1, 54.06N×168.04E, h7km±19km, ML3.8, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**1.66**	**315**	*e*P	Pn	10 46 28.7	-0.3
BKI				*e*S	Sb	10 46 51.1	-0.4
KBTR	**Krutoberegovo**	**3.69**	**308**	*e*S	Sn	10 47 45.1	+4.5
MKZ	**Mys Kozlova**	**3.73**	**280**	*e*P	Pn	10 47 00.7	+3.3
MKZ				*e*S	Sn	10 47 45.6	+4.1
KZV	**Kizimen**	**4.63**	**286**	*e*P	Pn	10 47 14.2	+4.3
TUMR	**Tumrok**	**4.74**	**288**	*e*P	Pn	10 47 16.6	+5.1
KMNR	**Kamenistaya**	**4.81**	**294**	*e*P	Pn	10 47 16.8	+4.4
SPN	**Mys Shipunski**	**4.87**	**262**	*e*S	Sn	10 48 16.0	+6.3
NLC	**Nalytchevo**	**5.25**	**264**	*e*S	Sn	10 48 24.5	+5.5
SDLR	**Sedlovina**	**5.50**	**266**	*e*P	Pn	10 47 25.8	+3.9
UGLR	**Uglovaya**	**5.55**	**265**	*e*P	Pn	10 47 27.0	+4.5
RUS	**Russkaya**	**5.95**	**258**	*e*P	Pn	10 47 32.9	+5.0
GNL	**Ganaly**	**5.99**	**271**	*e*P	Pn	10 47 33.4	+4.9
ASAK	**Asacha**	**6.32**	**259**	*e*P	Pn	10 47 37.9	+4.9
KDTR	**Khodutka, Kamc**	**6.43**	**254**	*e*S	Sn	10 48 51.8	+3.7

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*BJI **05** 11:01:14.9, 5.32N×94.57E, h36km, mb5.6/64, mB5.4/50, Ms4.8/65, MS7 4.6/71*
*MOS **05** 11:01:17.2±0.9, 5.59N×94.71E, h43km, mb5.8/130, MS4.5/12, Error ellipse: s-maj=5.9km s-min=3.2km az=119.4*
*ISCJB **05** 11:01:18.7±0.3, 5.42N±0.02×94.67E±0.02, h59km±3km, mb5.5/287, MS4.5/70, Error ellipse: s-maj=3.6km s-min=2.4km az=39.9*
*DJA **05** 11:01:19.5±0.2, 5°N±2°×9°5E±°, h54km±2km, M5.3/65, mb5.6/65, mB5.7/41, MLv5.8/12, Mw(mB)5.2/41, Mwp6.5/2*
*NEIC **05** 11:01:20.0±0.1, 5.48N×94.67E, mb5.6/116, Error ellipse: s-maj=4.3km s-min=2.6km az=215.0*
NEIC Felt [III] at Banda Aceh.
*IDC **05** 11:01:20.5±0.4, 5.55N×94.75E, h57km±3km, mb5.1/58, mb1 5.1/62, mb1mx5.0/72, mbtmp5.3/62, MS4.3/46, Ms1 4.3/46, ms1mx4.1/67, Error ellipse: s-maj=9.2km s-min=6.9km az=41.0*
*GCMT **05** 11:01:20.0±0.2, 5.40N×94.58E, h48km, MW5.3/95, Moment Tensor Solution. s74,c116; s95,c160; Duration: 1§0 Moment tensor: Scale 10^17Nm; Mrr0.74±.02; Mθθ-0.38±.02; Mφφ-0.36±.02; Mrθ0.51±.01; Mθφ0.43±.01; Mφr-0.28±.01; Best double couple: M0:0.96800×10^17 NP1:φs125.00000°, δ64.00000°, λ81.00000°. NP2:φs325.00000°, δ28.00000°, λ108.00000°. Principal axes: T 0.9500, Plg70.0000°, Azm15.0000°; N 0.0360, Plg8.0000°, Azm129.0000°; P -0.9850, Plg18.0000°, Azm222.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
ISC 05 11:01:20.3±0.3, 5.44N±0.03×94.64E±0.03, h59km±2km, h59km:pP-P, n1387, σ1§36/1521, mb5.6/295, MS4.5/71, 121C-24D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**0.66**	**85**	P	**Pn**	**11 01 33.4**	**-0.6**
BSI				S	**Sn**	**11 01 43.0**	**-0.9**
MLSI	**Meulaboh, Aceh**	**2.11**	**124**	P	**Pn**	**11 01 52.5**	**-0.8**
LHMI	**Lhok Sumawe**	**2.31**	**95**	P	**Pn**	**11 01 56.7**	**+0.8**
LHMI	**Lhok Sumawe**	**2.31**	**95**	*e*Pn	**Pn**	**11 01 56.8**	**+0.8**
TPTI		**3.33**	**130**	P	**Pn**	**11 02 09.3**	**-0.7**
KCSI	**Kotacane, Aceh**	**3.66**	**121**	P	**Pn**	**11 02 14.9**	**+0.4**
TSI	**Tuntungan**	**4.36**	**116**	P	**Pn**	**11 02 23.9**	**-0.2**
PSI	**Prapat**	**5.01**	**121**	P	**Pn**	**11 02 34.1**	**+0.9**
	40nm,0.3s,baz=360,slow=12,SNR=92						
PSI				S	**Sn**	**11 03 30.7**	**+0.8**
	26nm,0.3s,baz=180,slow=16,SNR=7.9						
PSI				LR	LR	11 04 47.6	
	comp=Z,5μm,20.6s,baz=271,slow=41						
PSI	**Prapat**	**5.01**	**121**	*e*Pn	**Pn**	**11 02 34.6**	**+1.5**
PSI				S	**Sn**	**11 03 30.7**	**+0.8**
PSI	**Prapat**	**5.01**	**121**	*e*P	**Pn**	**11 02 34.6**	**+1.5**
GSI	**Gunungsitoli**	**5.05**	**144**	P	**Pn**	**11 02 32.0**	**-1.5**
GSI	**Gunungsitoli**	**5.05**	**144**	*e*Pn	**Pn**	**11 02 32.4**	**-1.1**
SURT	**Suratani**	**5.40**	**50**	P	**Pn**	**11 02 38.4**	**0.0**
	1μm,0.9s,11μm4.5nm						
TRTT	**Trang**	**5.55**	**64**	P	**Pn**	**11 02 39.6**	**-0.8**
	710nm,0.8s,13μm3.7nm						
KULM	**Kulim**	**5.99**	**91**	*e*Pn	**Pn**	**11 02 46.6**	**+0.3**
SKLT	**Songkhla**	**6.19**	**74**	P	**Pn**	**11 02 48.3**	**-0.8**
	2μm,0.7s,19μm6.0nm						
IPM	**Ipoh**	**6.43**	**98**	*e*Pn	**Pn**	**11 02 52.2**	**-0.4**
IPM				*e*Sn	**Sn**	**11 04 02.5**	**-2.2**
PBA	**Port Blair**	**6.45**	**343**	*e*Pn	Pn	11 02 52.3	-0.4
PBSI	**Pulau Batu**	**6.56**	**146**	P	**Pn**	**11 02 52.0**	**-2.2**
	653nm,1.0s,4.5nm						
MNSI	**Mandailing Nat**	**6.76**	**133**	P	**Pn**	**11 02 56.6**	**-0.3**
	383nm,0.4s,8μm2.4nm						
SISI	**Saibi**	**8.06**	**146**	P	**Pn**	**11 03 13.0**	**-1.8**
	247nm,0.8s						
BKNI	**Bangkinang**	**8.16**	**128**	P	**Pn**	**11 03 16.3**	**+0.1**
	486nm,1.2s,6μm						
BKNI	**Bangkinang**	**8.16**	**128**	*e*Pn	**Pn**	**11 03 15.8**	**-0.5**
PPI	**Padang Panjang**	**8.21**	**135**	P	**Pn**	**11 03 16.3**	**-0.6**
	223nm,0.9s,4μm						
PDSI	**Padang**	**8.58**	**137**	P	**Pn**	**11 03 21.0**	**-1.0**
	146nm,0.9s,3μm						
PHET	**Kaeng Krachan**	**8.90**	**33**	P	**Pn**	**11 03 28.0**	**+1.7**
	161nm,0.8s,2μm						
PPSI	**Pulau Pagai**	**9.76**	**147**	P	**Pn**	**11 03 39.3**	**+1.3**
MYKOM	**Kota Tinggi**	**9.88**	**111**	*e*Pn	**Pn**	**11 03 39.4**	**-0.3**
SRDT	**SRDT**	**9.89**	**26**	P	**Pn**	**11 03 41.8**	**+2.0**
	215nm,1.1s,3μm						
KRJI	**Kerinci**	**10.12**	**138**	P	**Pn**	**11 03 42.3**	**-0.8**
	400nm,0.8s,7μm						
CHBT	**CHBT**	**10.50**	**46**	P	**Pn**	**11 03 50.3**	**+2.1**
	2μm,0.6s,83μm						
TPRI	**Tanjung Pinang**	**10.85**	**114**	P	**Pn**	**11 03 56.3**	**+3.4**
SRAK	**Srakaew**	**11.21**	**40**	P	Pn	11 04 05.9	+8.0
MASI	**Maura Aman, Be**	**11.42**	**138**	P	**Pn**	**11 03 59.6**	**-1.2**
	378nm,1.0s						
DSRI	**Dabo**	**11.54**	**120**	P	**Pn**	**11 04 02.5**	**+0.1**
	129nm,0.7s						
CHAI	**Chaiyaphum**	**12.65**	**34**	P	**Pn**	**11 04 20.8**	**+3.3**
	67nm,0.9s,558nm						
PBKT	**Sadao Pong**	**12.68**	**29**	P	**Pn**	**11 04 19.5**	**+1.6**
	237nm,1.0s,3μm						
PBKT	**Sadao Pong**	**12.68**	**29**	*e*Pn	**Pn**	**11 04 19.6**	**+1.7**
MNAI	**Manna**	**12.80**	**139**	P	**Pn**	**11 04 18.4**	**-1.2**
	450nm,1.5s						
MNAI	**Manna**	**12.80**	**139**	*e*Pn	**Pn**	**11 04 19.1**	**-0.5**
PHIT	**Phitsanulok**	**12.97**	**25**	P	**Pn**	**11 04 24.5**	**+2.6**
	190nm,0.9s,2μm						
CM01	**Chiang Mai Arr**	**13.57**	**18**	*e*Pn	**Pn**	**11 04 33.3**	**+3.2**
CM31	**Chiang Mai Arr**	**13.60**	**18**	*e*Pn	**P**	**11 04 34.2**	**-3.4**
CMAR	**Chiang Mai Arr**	**13.60**	**18**	P	**Pn**	**11 04 30.4**	**0.0**
	11nm,0.3s,baz=210,slow=15,SNR=103						
CMAR				LR	LR	11 09 35.2	
	comp=Z,1μm,20.6s,baz=212,slow=37						
CMAR				ScP	**ScP**	**11 13 21.6**	**+0.2**
	baz=224,slow=3.4,SNR=8.7						
MDSI	**Maura Dua**	**13.71**	**136**	P	**Pn**	**11 04 29.9**	**-2.1**
	163nm,0.8s,1μm						
LAMP	**Lampang**	**13.88**	**20**	P	**P**	**11 04 38.3**	**-2.4**
	246nm,0.7s,2μm						
CHTO	**Chiang Mai**	**13.94**	**17**	P	**Pn**	**11 04 37.0**	**+2.0**
	2μm,0.8s						
CHTO	**Chiang Mai**	**13.94**	**17**	*e*Pn	**Pn**	**11 04 37.9**	**+2.9**
	265nm,0.7s						
CHTO				*e*Sn	**Sn**	**11 07 10.4**	**+2.2**
CHTO	**Chiang Mai**	**13.94**	**17**	*e*P	**Pn**	**11 04 37.9**	**+2.9**
CHTO				*e*		11 07 10.4	
CHTO				pmax	pmax		
	comp=Z,265nm,0.7s						
PALK	**Pallekele**	**13.97**	**278**	P	**Pn**	**11 04 36.0**	**+0.4**
	comp=Z,20nm,0.3s,baz=116,slow=16,SNR=54						
PALK				S	Sn	11 06 56.8	-12
	comp=Z,46nm,0.3s,baz=116,slow=8.3,SNR=17						
PALK				LR	LR	11 09 36.0	
	comp=Z,3μm,20.7s,baz=115,slow=35						
PALK	**Pallekele**	**13.97**	**278**	*i* P	**Pn**	**11 04 36.1**	**+0.6**
	SNR=11						
PALK	**Pallekele**	**13.97**	**278**	P	**Pn**	**11 04 36.0**	**+0.4**
PALK				pmax	pmax		
	comp=Z,20nm,0.3s						
PALK				MLR	MLR		
	comp=Z,3μm,20.7s						
LWLI	**Liwa**	**14.02**	**138**	P	**Pn**	**11 04 35.2**	**-1.0**
	comp=Z,163nm,0.6s,comp=Z,9μm						
UBPT	**Khong Chiam**	**14.45**	**47**	P	**Pn**	**11 04 43.5**	**+1.7**
	comp=Z,300nm,1.6s						
SKNT	**Sakolnakorn**	**14.66**	**38**	P	**Pn**	**11 04 45.4**	**+0.8**
	comp=Z,116nm,0.7s,comp=Z,1μm						
KASI	**Kota Agung**	**14.68**	**138**

HYBB	**Hyderabad (bro**	**19.73 308**	*e*P	**Pn**	**11 05 46.5**	**-0.9**
HYBB			IAmb	IAmb	11 05 50.0	
	comp=Z,60nm,0.8s					
HYBB			*e*S	S	11 09 13.4	-12
RPR	**Rampur**	**20.04 313**	*e*P	Pn	11 05 50.2	-0.7
RPR			IAmb	IAmb	11 05 55.6	
	comp=Z,96nm,0.6s					
QIZ	**Qiongzhong**	**20.05 46**	*e*P	Pn	11 05 50.3	-0.8
	comp=Z,87nm,0.8s					
SMRI	**Semarang**	**20.07 128**	*e*P	**P**	**11 05 49.6**	**+0.6**
	comp=Z,410nm,1.2s					
BOK	**Bokaro**	**20.10 336**	*e*P	**P**	**11 05 48.0**	**-1.3**
BOK			IAmb	IAmb	11 05 52.7	
	comp=Z,575nm,0.4s					
SHL	**Shillong**	**20.18 353**	*e*P	**P**	**11 05 51.0**	**+0.6**
SHL			IAmb	IAmb	11 05 52.5	
	comp=Z,83nm,0.6s					
SHL			*e*x	x	11 09 26.0	
SHL	**Shillong**	**20.18 353**	*e*P	**P**	**11 05 47.2**	**-3.2**
	comp=Z,113nm,0.6s					
SHL	**Shillong**	**20.18 353**	*e*P	**P**	**11 05 47.2**	**-3.2**
SHL			pmax	pmax		
	comp=Z,110nm,0.6s					
TURI	**Tura**	**20.41 349**	*e*P	**P**	**11 05 50.1**	**-2.6**
TURI			IAmb	IAmb	11 05 52.8	
	comp=Z,109nm,0.2s					
UGM	**Wanagama**	**20.67 130**	P	**P**	**11 05 56.3**	**+0.7**
UGM	**Wanagama**	**20.67 130**	*e*P	**P**	**11 05 52.7**	**-2.8**
	comp=Z,176nm,0.7s					
SRSP	**Sriramsagar**	**20.79 312**	*e*P	**P**	**11 05 57.5**	**+0.7**
SRSP			IAmb	IAmb	11 06 02.7	
	comp=Z,166nm,0.7s					
GUWA	**GUWAHATI**	**20.82 353**	*e*P	**P**	**11 05 56.9**	**-0.3**
DHUB	**DHUBRI**	**20.94 348**	*e*P	**P**	**11 05 55.2**	**-3.1**
DHUB			IAmb	IAmb	11 05 59.1	
	comp=Z,523nm,0.1s					
KMI	**Kunming**	**21.05 21**	P	**P**	**11 06 01.8**	**+1.9**
KMI			pP	pP	11 06 11.1	-1.7
KMI			sP	sP	11 06 15.7	-4.4
KMI			PP	**PnPn**	**11 06 28.0**	**+6.8**
KMI			S	**S**	**11 09 50.2**	**-1.1**
KMI			sS	Sn	11 10 04.8	+4.3
KMI			SS	**SnSn**	**11 10 21.8**	**+5.2**
KMI			pmax	pmax		
	comp=Z,250nm,1.0s					
KMI			pmax	pmax		
	comp=Z,470nm,3.1s					
KMI			LR	LR		
	comp=Z,1μm,22.6s					
KMI			LR	LR		
	comp=Z,1μm,13.6s					
KMI			LR	LR		
	comp=Z,2μm,22.9s					
TBJI	**Tambak Boyo**	**21.05 125**	P	**P**	**11 06 01.7**	**+2.0**
NGJI	**Ngawi**	**21.06 127**	P	**P**	**11 06 03.5**	**+3.7**
TEZP	**TEZPUR**	**21.13 355**	*e*P	**P**	**11 05 58.3**	**-2.1**
TEZP			IAmb	IAmb	11 06 03.7	
	comp=Z,93nm,0.7s					
MTKI	**Muara Teweh, K**	**21.20 107**	P	**P**	**11 06 01.9**	**+0.6**
PCJI	**Pacitan**	**21.34 129**	P	**P**	**11 06 01.7**	**-1.1**
KKM	**Kota Kinabalu**	**21.48 87**	*e*P	**P**	**11 06 05.4**	**+1.1**
	comp=Z,123nm,0.9s					
GRJI	**Gresik**	**21.63 124**	P	**P**	**11 06 07.9**	**+2.1**
KLRI	**Killari**	**21.64 307**	*e*P	**P**	**11 06 06.5**	**+0.5**
KLRI			IAmb	IAmb	11 06 11.9	
	comp=Z,121nm,0.7s					
KLRI			*e*S	**S**	**11 09 54.9**	**-7.7**
NGP	**Nagpur**	**21.73 317⇑**	*e*P	**P**	**11 06 07.0**	**+0.1**
NGP			*e*x	x	11 06 14.9	
	comp=Z,305nm,2.0s					
NGP			⇑*e*x	x	11 10 08.5	
LKP	**Lekhapani**	**21.80 3**	*e*P	**P**	**11 06 05.8**	**-1.8**
ZIRO	**ZIRO**	**21.98 358**	*e*P	**P**	**11 06 06.7**	**-2.9**
ZIRO			IAmb	IAmb	11 06 07.5	
	comp=Z,465nm,0.7s					
ODAN	**Odare**	**22.39 343**	*e*P	**P**	**11 06 10.9**	**-3.3**
GTK	**Tadong**	**22.50 346**	*e*P	**P**	**11 06 14.8**	**-0.5**
RAMN	**Ramite**	**22.72 341**	*e*P	**P**	**11 06 15.8**	**-1.9**
BKB	**Balikpapan**	**23.20 106**	P	**P**	**11 06 24.5**	**+2.0**
JIRN	**Jiri**	**23.51 341**	*e*P	**P**	**11 06 23.4**	**-2.2**
	comp=Z,531nm,0.6s					
PKIN	**Phulchoki**	**23.70 339**	*e*P	**P**	**11 06 25.6**	**-1.7**
	comp=Z,216nm,0.6s					
MYLDM	**Lahad Datu**	**23.76 90**	*e*P	**P**	**11 06 28.5**	**+0.9**
	comp=Z,165nm,1.0s					
DMN	**Daman**	**23.84 339**	*e*P	**P**	**11 06 26.8**	**-1.7**
	comp=Z,195nm,0.6s					
GUN	**Gumba**	**23.85 341**	*e*P	**P**	**11 06 26.8**	**-1.9**
	comp=Z,431nm,0.6s					
GYA	**Guiyang**	**23.85 28⇑**	*i*P	**P**	**11 06 28.1**	**-0.3**
GYA			pP	pP	11 06 39.4	-3.2
GYA			PP	**PnPn**	**11 07 02.8**	**+3.6**
GYA			PcP	**PcP**	**11 10 13.0**	**+2.6**
GYA			S	**S**	**11 10 40.4**	**-0.1**
GYA			sS	sS	11 10 55.6	-9.2
GYA			SS	**SnSn**	**11 11 32.3**	**+7.6**
GYA			ScP	**ScP**	**11 13 47.0**	**+3.0**
GYA			pmax	pmax		
	comp=Z,450nm,0.8s					
GYA			pmax	pmax		
	comp=Z,610nm,5.2s					
GYA			LR	LR		
	comp=Z,9μm,17.6s					
GYA			LR	LR		
	comp=Z,9μm,17.4s					
GYA			LR	LR		
	comp=Z,10μm,17.8s					
JAGI	**Jajag, Banyuwa**	**23.87 125**	*e*P	**P**	**11 06 24.7**	**-3.9**
	comp=Z,264nm,0.4s					
KKN	**Kakani**	**23.94 339**	*e*P	**P**	**11 06 27.6**	**-1.8**
	comp=Z,165nm,0.6s					
POO	**Poona**	**24.10 304**	*e*P	**P**	**11 06 30.8**	**+0.1**
BHPL	**Bhopal**	**24.26 319**	*e*P	**P**	**11 06 31.8**	**-0.4**
BHPL			IAmb	IAmb	11 06 35.5	
	comp=Z,88nm,0.6s					
LSA	**Lhasa**	**24.35 353**	P	**P**	**11 06 32.4**	**-1.0**
LSA	**Lhasa**	**24.35 353**	*e*P	**P**	**11 06 32.6**	**-0.8**
	comp=Z,212nm,0.6s					
LSA	**Lhasa**	**24.35 353**	P	**P**	**11 06 33.8**	**+0.4**
LSA	**Lhasa**	**24.35 353**	*e*P	**P**	**11 06 32.6**	**-0.8**
LSA			pmax	pmax		
	comp=Z,212nm,0.6s					
GKN	**Gorkha**	**24.37 338**	*e*P	**P**	**11 06 32.4**	**-0.8**
	comp=Z,291nm,0.6s					
SRBI	**Singaraja**	**24.53 123**	P	**P**	**11 06 35.7**	**+1.1**
KOLN	**Koldanda**	**24.56 336**	*e*P	**P**	**11 06 35.2**	**+0.2**
	comp=Z,419nm,0.7s					
MCO	**Taipa Grande**	**24.69 46**	P	**P**	**11 06 38.0**	**+1.9**
DANN	**Dangsing**	**25.01 337**	*e*P	**P**	**11 06 39.2**	**0.0**
	comp=Z,593nm,0.6s					
PYUN	**Piuthan**	**25.10 335**	*e*P	**P**	**11 06 40.3**	**+0.3**
	comp=Z,661nm,0.5s					
GZH	**Guangzhou**	**25.17 44**	P	**P**	**11 06 46.3**	**+6.0**
GZH			sP	**sP**	**11 07 04.3**	**+2.7**
GZH			S	S	11 11 15.6	+14
GZH			LR	LR		
	comp=N,790nm,14.7s					
GZH			LR	LR		
	comp=E,2μm,14.8s					
H08S2	**Diego Garcia H**	**25.64 240**	T	T	11 32 56.2	
	baz=61,slow=74,SNR=362					
H08S3	**Diego Garcia H**	**25.64 240**	T	T	11 32 51.4	
	SNR=349					
H08S1	**Diego Garcia H**	**25.65 240**	T	T	11 32 48.9	
	baz=119,slow=74,SNR=318					
MPSI	**Mapaga**	**25.72 101**	P	**P**	**11 06 45.8**	**+0.3**
PCI	**Palu**	**25.94 103**	P	**P**	**11 06 47.5**	**0.0**
PCI	**Palu**	**25.94 103**	P	**P**	**11 06 49.4**	**+1.9**
PCI			pmax	pmax		
	comp=Z,144nm,1.2s					
H08N1	**Diego Garcia H**	**26.33 244**	T	T	11 34 09.8	
	baz=53,slow=75,SNR=16					
H08N2	**Diego Garcia H**	**26.34 244**	T	T	11 34 15.0	
	baz=53,slow=75,SNR=18					
H08N3	**Diego Garcia H**	**26.35 244**	T	T	11 34 02.3	
	baz=53,slow=75,SNR=35					
TTSI	**Tana Toraja**	**26.53 108**	P	**P**	**11 06 53.3**	**+0.5**
CD2	**Chengdu**	**26.75 18**	P	**P**	**11 06 53.9**	**-0.7**
CD2			pP	pP	11 07 04.3	-4.7
CD2			S	**S**	**11 11 29.1**	**+2.7**
CD2			sS	sS	11 11 46.6	-4.4
CD2			SS	**SnSn**	**11 12 42.5**	**+7.2**
CD2			pmax	pmax		
	comp=Z,230nm,0.5s					
CD2			pmax	pmax		
	comp=Z,350nm,7.8s					
CD2			LR	LR		
	comp=Z,2μm,19.0s					
CD2			LR	LR		
	comp=Z,1μm,19.0s					
SPSI	**Sidrap Palu**	**26.78 110**	P	**P**	**11 06 54.0**	**-1.1**
PLAI	**Plampang**	**27.08 121**	P	**P**	**11 06 54.9**	**-2.8**
KAPI	**Kappang**	**27.14 112**	*e*P	**P**	**11 06 58.5**	**+0.1**
	comp=Z,92nm,0.8s					
TGY	**Tagaytay City**	**27.28 70**	LR	LR	11 16 52.7	
	comp=Z,706nm,21.6s,baz=296,slow=34					
BKSI	**Bulukumba**	**27.60 112**	P	**P**	**11 07 02.6**	**+0.2**
MRSI	**Marisa**	**27.70 99**	P	**P**	**11 07 02.8**	**-0.5**
APSI	**Ampana**	**27.70 102**	P	**P**	**11 07 03.4**	**+0.1**
ENH	**Enshi**	**28.39 28**	*e*P	**P**	**11 07 08.4**	**-0.9**
	comp=Z,92nm,0.6s					
ENH			*e*PcP	**PcP**	**11 10 20.7**	**0.0**
NDI	**New Delhi**	**28.41 326**	*e*P	**P**	**11 07 08.0**	**-1.4**
RCP	**Roxas**	**28.44 76⇓**	*e*P	**P**	**11 07 10.9**	**+1.0**
APYP	**Conner**	**28.78 62**	*e*P	**P**	**11 07 13.7**	**+0.8**
DDI	**Dehra Dun**	**29.27 330**	*e*P	**P**	**11 07 16.9**	**-0.2**
KDI	**Kendari**	**29.46 108**	P	**P**	**11 07 18.8**	**-0.2**
QZH	**Quanzhou**	**30.07 47**	*e*P	**P**	**11 07 26.3**	**+2.1**
QZH			S	**S**	**11 12 26.3**	**+7.7**
QZH			LR	LR		
	comp=Z,2μm,18.5s					
QZH			LR	LR		
	comp=Z,840nm,16.7s					
QZH			LR	LR		
	comp=Z,2μm,19.4s					
BUKP	**Musuan**	**30.31 84**	*e*P	**P**	**11 07 27.4**	**+0.8**
SMLA	**Simla**	**30.37 329**	*e*P	**P**	**11 07 26.4**	**-0.3**
SMLA			IAmb	IAmb	11 07 26.9	
	comp=Z,58nm,0.8s					
DAV	**Davao City (W)**	**30.79 85**	LR	LR	11 22 09.3	
	comp=Z,392nm,20.8s,baz=260,slow=41					
WHN	**Wuhan**	**31.11 34**	P	**P**	**11 07 33.9**	**+0.6**
WHN			pmax	pmax		
	comp=Z,130nm,1.0s					
WHN			LR	LR		
	comp=Z,7μm,19.4s					
WHN			LR	LR		
	comp=Z,3μm,14.3s					
WHN			LR	LR		
	comp=Z,5μm,15.4s					
SSLB	**Suanglung**	**31.21 52**	*e*P	**P**	**11 07 35.6**	**+1.2**
	comp=Z,35nm,1.3s					
YULB	**Yu-li**	**31.28 53**	*e*P	**P**	**11 07 37.2**	**+2.2**
	comp=Z,74nm,1.6s					
XAN	**Xi'an**	**31.39 23**	P	**P**	**11 07 35.0**	**-0.8**
XAN			pP	pP	11 07 44.3	-6.1
XAN			LR	LR		
	comp=Z,940nm,20.1s					
XAN			LR	LR		
	comp=Z,880nm,16.7s					
XAN			LR	LR		
	comp=Z,2μm,19.6s					
LZH	**Lanzhou**	**31.65 14**	*e*P	**P**	**11 07 37.4**	**-0.8**
LZH			pP	pP	11 07 45.1	-7.7
LZH			sP	sP	11 07 48.3	-11
LZH			PP	**PnPn**	**11 08 42.6**	**-1.3**
LZH			PcP	**PcP**	**11 10 30.4**	**+1.2**
LZH			*e*S	**S**	**11 12 44.3**	**+0.8**
LZH			ScP	**ScP**	**11 14 07.1**	**-0.6**
LZH			SS	**SnSn**	**11 14 35.8**	**+1.1**
LZH			pmax	pmax		
	comp=Z,150nm,1.3s					
LZH			pmax	pmax		
	comp=Z,380nm,4.7s					
LZH			LR	LR		
	comp=Z,4μm,14.0s					
LZH			LR	LR		
	comp=Z,3μm,14.7s					
LZH			LR	LR		
	comp=Z,4μm,16.5s					
DHRM	**DHARAMSHALA**	**31.70 330**	*e*P	**P**	**11 07 37.2**	**-1.7**
DHRM			IAmb	IAmb	11 07 47.4	
	comp=Z,3μm,3.2s					
NACB	**Ninganchiao**	**31.91 52**	*e*P	**P**	**11 07 43.1**	**+2.6**
	comp=Z,30nm,0.8s					
YHNB	**Yeheng**	**32.00 51**	*e*P	**P**	**11 07 42.6**	**+1.2**
	comp=Z,123nm,1.5s					
SANI	**Sanana**	**32.19 103**	P	**P**	**11 07 42.1**	**-0.9**
BATI	**Baumata**	**32.82 118**	P	**P**	**11 07 46.5**	**-2.1**
	comp=Z,37nm,0.7s,baz=232,slow=2.9,SNR=6.4					
BATI			S	**S**	**11 12 57.0**	**-5.1**
	comp=Z,18nm,0.4s,baz=52,slow=19,SNR=3.9					
BATI	**Baumata**	**32.82 118**	P	**P**	**11 07 45.9**	**-2.7**
SOEI	**Soe**	**33.16 117**	P	**P**	**11 07 54.4**	**+2.8**
SOEI	**Soe**	**33.16 117**	*e*P	**P**	**11 07 50.8**	**-0.8**
	comp=Z,75nm,0.8s					
LBMI	**Labuha**	**33.37 99**	P	**P**	**11 07 53.6**	**+0.2**
NLAI	**Namlea**	**33.55 104**	P	**P**	**11 07 57.8**	**+2.9**
GTA	**Gaotai**	**34.14 7**	⇑P	**P**	**11 07 59.2**	**-0.7**
GTA			pP	pP	11 08 08.6	-5.9
GTA			sP	sP	11 08 12.3	-9.1
GTA			S	**S**	**11 13 19.7**	**-2.3**
GTA			pmax	pmax		
	comp=Z,170nm,0.9s					
GTA			pmax	pmax		
	comp=Z,350nm,8.6s					
GTA			LR	LR		
	comp=Z,910nm,24.0s					
NIL	**Nilore**	**34.39 327**	*e*P	**P**	**11 08 01.2**	**-0.8**
	comp=Z,279nm,0.6s					
NIL	**Nilore**	**34.39 327**	*e*P	**P**	**11 08 01.2**	**-0.8**
NIL			pmax	pmax		
	comp=Z,279nm,0.6s					
AAI	**Ambon**	**34.72 104**	P	**P**	**11 08 04.5**	**-0.6**
AAI	**Ambon**	**34.72 104**	P	**P**	**11 08 02.6**	**-2.5**
AAI			pmax	pmax		
	comp=Z,162nm,0.9s					
NJ2	**Nanjing**	**34.84 38**	*e*P	**P**	**11 08 06.5**	**+0.7**
NJ2			pP	**pP**	**11 08 15.2**	**-5.4**
NJ2			sP	**sP**	**11 08 20.6**	**-6.8**
NJ2			S	**S**	**11 13 33.6**	**+0.9**
NJ2			pmax	pmax		
	comp=Z,150nm,0.9s					
NJ2			pmax	pmax		
	comp=Z,620nm,4.6s					
NJ2			LR	LR		
	comp=Z,2μm,16.3s					
NJ2			LR	LR		
	comp=Z,920nm,14.6s					
NJ2			LR	LR		
	comp=Z,2μm,14.1s					
SSE	**Sheshan**	**35.67 41**	P	**P**	**11 08 13.7**	**+0.7**
SSE			S	**S**	**11 13 49.0**	**+3.5**
SSE			pmax	pmax		
	comp=Z,26nm,0.9s					
SSE			pmax	pmax		
	comp=Z,330nm,4.8s					
SSE			LR	LR		
	comp=Z,500nm,17.4s					
SSE			LR	LR		
	comp=Z,540nm,17.4s					
TIY	**Taiyuan**	**35.98 24**	*e*P	**P**	**11 08 15.2**	**-0.5**
MBWA	**Marble Bar**	**36.12 138**	*e*P	**P**	**11 08 16.6**	**-0.4**
	comp=Z,58nm,1.1s					
BNDI	**Bandanaira**	**36.58 105**	P	**P**	**11 08 18.4**	**-2.7**
TIA	**Tai'an**	**36.93 31**	P	**P**	**11 08 23.9**	**+0.2**
TIA			pmax	pmax		
	comp=Z,60nm,0.7s					
TIA			LR	LR		
	comp=Z,440nm,18.4s					
TIA			LR	LR		
	comp=Z,370nm,18.0s					
TIA			LR	LR		
	comp=Z,810nm,20.6s					
SIJI	**Sorong**	**37.11 99**	P	**P**	**11 08 24.8**	**-0.8**
	comp=Z,146nm,0.9s,baz=318,slow=5.7,SNR=36					
KBL	**Kabul**	**37.41 324**	*e*P	**P**	**11 08 27.7**	**-0.4**
	comp=Z,19nm,0.6s					
KBL	**Kabul**	**37.41 324**	*e*P	**P**	**11 08 27.7**	**-0.4**
KBL			pmax	pmax		
	comp=Z,19nm,0.6s					
BTO	**Baotou**	**37.63 19**	*e*P	**P**	**11 08 28.1**	**-1.7**
KSH	**Kashi**	**37.88 336⇑**	*i*P	**P**	**11 08 30.4**	**-1.5**
KSH			pP	pP	11 08 42.8	-3.9
KSH			PcP	**PcP**	**11 10 48.1**	**+0.9**
KSH			S	**S**	**11 14 17.0**	**-2.3**
KSH			sS	ScP	11 14 36.1	+6.2
KSH			SS	**SnSn**	**11 16 57.5**	**-7.8**
KSH			LR	LR		
	comp=Z,290nm,4.9s					
KSH			LR	LR		
	comp=Z,340nm,6.0s					
KSH			LR	LR		
	comp=Z,380nm,7.5s					
HHC	**Hu-ho-hao-te**	**38.38 21**	*e*P	**P**	**11 08 36.4**	**+0.4**
HHC			pP	pP	11 08 46.2	-4.7
HHC			sP	sP	11 08 50.1	-7.6
HHC			PP	**PnPn**	**11 10 08.6**	**+1.5**
HHC			S	**S**	**11 14 29.5**	**+2.7**
HHC			sS	sS	11 14 45.6	-6.3
HHC			SS	**SnSn**	**11 17 10.7**	**-6.6**
HHC			pmax	pmax		
	comp=Z,62nm,1.0s					
HHC			LR	LR		
	comp=Z,610nm,17.3s					
HHC			LR	LR		
	comp=Z,240nm,17.8s					
HHC			LR	LR		
	comp=Z,620nm,19.4s					
JOW	**Kunigami**	**38.47 53**	P	**P**	**11 08 36.2**	**-0.7**
	comp=Z,54nm,0.7s,baz=244,slow=3.9,SNR=4.8					
JOW			LR	LR	11 24 10.1	
	comp=Z,1μm,21.6s,baz=294,slow=36					
FAKI	**Fak Fak**	**38.47 102**	P	**P**	**11 08 36.4**	**-0.7**
FAKI	**Fak Fak**	**38.47 102**	*e*P	**P**	**11 08 36.3**	**-0.7**
	comp=Z,104nm,0.7s					
WMQ	**Urumqi**	**38.71 352**	P	**P**	**11 08 39.6**	**+0.9**
WMQ			pP	pP	11 08 50.5	-3.1
WMQ			sP	sP	11 08 57.1	-3.3
WMQ			PcP	**PcP**	**11 10 51.6**	**+2.0**
WMQ			S	**S**	**11 14 34.1**	**+2.5**
WMQ			SS	**SS**	**11 17 17.0**	**-7.1**
WMQ			pmax	pmax		
	comp=Z,920nm,4.0s					
WMQ			LR	LR		
	comp=Z,690nm,24.9s					
WMQ			LR	LR		
	comp=Z,1μm,27.5s					
WMQ			LR	LR		
	comp=Z,1μm,29.5s					
WSAR	**Wadi Sarin**	**38.95 301**	P	**P**	**11 08 42.2**	**+1.3**
	comp=Z,31nm,0.6s,baz=134,slow=7.3,SNR=61					
TARG	**Taragay, Kyrgy**	**39.13 340**	*e*P	**P**	**11 08 43.7**	**+1.0**
	comp=Z,521nm,1.3s					
SFK	**Sufi-Kurgan**	**39.33 334**	P	**P**	**11 08 44.6**	**+0.4**
SFK			pmax	pmax		
	comp=Z,246nm,0.7s					
BIDO	**Bidbid**	**39.48 301**	P	**P**	**11 08 49.0**	**+3.6**
	SNR=5.8					
BIDO	**Bidbid**	**39.48 301**	P	**P**	**11 08 49.0**	**+3.6**
	SNR=5.8					
BJT	**Baijiatuau**	**39.51 26**	*e*P	**P**	**11 08 46.5**	**+1.2**
	comp=Z,192nm,0.8s					
BJT	**Baijiatuau**	**39.51 26**	*e*P	**P**	**11 08 46.5**	**+1.2**
BJT			pmax	pmax		
	comp=Z,192nm,0.8s					
NRN	**Naryn**	**39.52 338**	*e*P	**P**	**11 08 46.4**	**+0.6**
	comp=Z,158nm,0.6s					
NRN	**Naryn**	**39.52 338**	*e*P	**P**	**11 08 46.4**	**+0.6**
NRN			pmax	pmax		
	comp=Z,160nm,0.6s					
BJI	**Beijing**	**39.53 26⇑**	*i*P	**P**	**11 08 46.7**	**+1.2**
BJI			LR	LR		
	comp=Z,1μm,20.4s					
BJI			LR	LR		
	comp=Z,750nm,19.6s					
BJI			LR	LR		
	comp=Z,2μm,28.9s					
PRZ	**Przheval'sk**	**39.60 341**	*e*P	**P**	**11 08 48.3**	**+1.9**
	comp=Z,433nm,0.7s					
PRZ	**Przheval'sk**	**39.60 341**	*e*P	**P**	**11 08 48.3**	**+1.9**
PRZ			pmax	pmax		
	comp=Z,430nm,0.7s					
KDJ	**Kajisay**	**39.70 340**	*e*P	**P**	**11 08 48.3**	**+1.1**
	comp=Z,317nm,0.6s					
KDJ	**Kajisay**	**39.70 340**	P	**P**	**11 08 48.2**	**+1.1**
KDJ			pmax	pmax		
	comp=Z,320nm,0.7s					
SHLS	**Shalkode**	**39.88 343⇑**	*i*P	**P**	**11 08 48.9**	**+0.3**
	comp=Z,176nm,0.8s					
SHLS			*e*S	**S**	**11 14 49.3**	**-0.1**
UZB	**Uzynbulak**	**40.01 342⇑**	*i*P	**P**	**11 08 50.8**	**+1.1**
	comp=Z,128nm,0.7s					
UZB			*e*S	**S**	**11 14 53.8**	**+2.5**
PDGK	**Podgornoye**	**40.03 343**	P	**P**	**11 08 50.4**	**+0.6**
PDGK			pmax	pmax		
	comp=Z,212nm,0.7s					
RKPI	**Ransiki, Papua**	**40.09 99**	P	**P**	**11 08 50.0**	**-0.6**
SATY	**Saty**	**40.12 341⇑**	*i*P	**P**	**11 08 51.9**	**+1.3**
	comp=Z,329nm,0.7s					
ULHL	**Ulahol**	**40.13 339**	P	**P**	**11 08 51.4**	**+0.7**
	SNR=142					
ZHN	**Zhinishke**	**40.21 342⇑**	*i*P	**P**	**11 08 52.4**	**+1.1**
	comp=Z,95nm,0.7s					
KZA	**Kyzart**	**40.36 338**	P	**P**	**11 08 53.7**	**+0.9**
	SNR=13					
KPKS	**Kokpek**	**40.40 342⇑**	*i*P	**P**	**11 08 53.8**	**+0.9**
	comp=Z,203nm,0.7s					
KPKS			*e*S	**S**	**11 14 58.9**	**+1.9**
MTN	**Manton Dam**	**40.56 117**	*e*P	**P**	**11 08 52.9**	**-1.5**
	comp=Z,64nm,0.4s					
MDOK	**Medeo**	**40.66 340⇑**	*i*P	**P**	**11 08 56.3**	**+1.3**
	comp=Z,6μm,1.0s					
MDOK			*i* S	**S**	**11 15 02.6**	**+1.6**
AAA	**Alma-Ata**	**40.74 340**	*e*P	**P**	**11 08 57.2**	**+1.6**
	comp=Z,246nm,1.0s					
AAA			*e*S	**S**	**11 15 04.0**	**+1.9**
AAA	**Alma-Ata**	**40.74 340**	*i* P	**P**	**11 08 57.2**	**+1.6**
AAA			*i* S	**S**	**11 15 03.7**	**+1.6**
AAA			pmax	pmax		
	comp=Z,800nm,1.5s					
AAA			smax	smax		
	comp=N,500nm,4.7s					
UCH	**Uchtor**	**40.77 337**	P	**P**	**11 08 57.1**	**+0.8**
	SNR=313					
TKM2	**Tokmak 2**	**40.95 339**	P	**P**	**11 08 58.1**	**+0.6**
	SNR=237					
TKM2	**Tokmak 2**	**40.95 339**	P	**P**	**11 08 58.0**	**+0.5**
TKM2			pmax	pmax		
	comp=Z,134nm,0.7s					
KBK	**Karagaybulak**	**40.97 338**	P	**P**	**11 08 58.9**	**+1.3**
	SNR=416					
AML	**Almayashu**	**41.01 336**	P	**P**	**11 08 59.2**	**+1.0**
	SNR=325					
BMNS	**Besmoynak**	**41.09 339⇑**	*i*P	**P**	**11 08 59.5**	**+0.9**
	comp=Z,144nm,0.6s					
BMNS			*e*S	**S**	**11 15 09.5**	**+2.1**
AAK	**Ala-Archa**	**41.12 337**	P	**P**	**11 09 00.0**	**+1.2**
	SNR=152					
AAK	**Ala-Archa**	**41.12 337**	*e*P	**P**	**11 09 00.1**	**+1.2**
	comp=Z,166nm,0.8s					
AAK	**Ala-Archa**	**41.12 337**	P	**P**	**11 08 59.7**	**+0.8**
	SNR=69					
AAK	**Ala-Archa**	**41.12 337**	P	**P**	**11 08 59.7**	**+0.8**
	SNR=69					
AAK	**Ala-Archa**	**41.12 337**	*i* P	**P**	**11 08 59.8**	**+1.0**
	SNR=169					
AAK	**Ala-Archa**	**41.12 337***c*	*i*P	**P**	**11 08 59.7**	**+0.8**
AAK			pmax	pmax		
	comp=Z,180nm,0.8s					
FRU	**Bishkek**	**41.24 338**	*i* P	**P**	**11 09 00.0**	**+0.3**
FRU			*i*		11 09 12.0	
FRU			*i*		11 09 18.0	
FRU			pmax	pmax		
	comp=Z,440nm,2.0s					
DL2	**Dalian**	**41.31 32**	P	**P**	**11 09 01.0**	**+0.7**
DL2			*e*S	**S**	**11 15 14.5**	**+4.0**
DL2			LR	LR		
	comp=Z,710nm,16.4s					
DL2			LR	LR		
	comp=Z,620nm,15.9s					
DL2			LR	LR		
	comp=Z,1μm,21.3s					
CHMS	**Chumysh**	**41.34 338**	P	**P**	**11 09 01.0**	**+0.5**
	SNR=51					
EKS2	**Erkin-Say**	**41.42 337**	P	**P**	**11 09 02.5**	**+1.2**
	SNR=167					
KUU	**Kurty**	**41.54 340⇑**	*i*P	**P**	**11 09 02.4**	**+0.3**
	comp=Z,190nm,1.1s					
KUU			*e*S	**S**	**11 15 13.9**	**0.0**
UOSS	**Minazif**	**41.63 302**	*e*P	**P**	**11 09 04.5**	**+1.4**
	comp=Z,21nm,0.8s					
UOSS	**Minazif**	**41.63 302**	*i* P	**P**	**11 09 04.2**	**+1.1**
	SNR=10					
HATD	**Hatta, Dubai**	**41.65 302**	P

HATD	**Hatta, Dubai**	41.65	302	P	P	11 09 07.0	+3.7
	SNR=8.2						
HATD	**Hatta, Dubai**	41.65	302	*i* P	P	11 09 04.9	+1.6
	SNR=13						
USP	**Ospenovka**	41.66	338	P	P	11 09 04.0	+0.8
	SNR=92						
ALNE	**Al Ain**	41.70	300	*i* P	P	11 09 06.2	+2.4
	SNR=8.8						
MNAS	**Manas**	41.80	335	P	P	11 09 04.9	+0.5
MNAS				pmax	pmax		
	comp=Z,145nm,1.2s						
BAKI	**Biak**	41.94	98	P	P	11 09 05.0	-0.8
SHME	**Shamm**	42.09	303	*i* P	P	11 09 08.9	+2.0
	SNR=5.8						
NAZ	**Nazwa, Dubai**	42.10	302	P	P	11 09 15.1	+8.1
	SNR=5.7						
NAZ	**Nazwa, Dubai**	42.10	302	*i* P	P	11 09 08.9	+1.9
	SNR=7.1						
SRPI	**Serui, Papua**	42.18	99	P	P	11 09 06.0	-1.8
ASUD	**Al Ashush, Dub**	42.26	301	P	P	11 09 12.0	+3.7
	SNR=10						
ASUD	**Al Ashush, Dub**	42.26	301	P	P	11 09 12.0	+3.7
	SNR=10						
ASUD	**Al Ashush, Dub**	42.26	301	*i* P	P	11 09 11.0	+2.7
	SNR=13						
MK01	**Makanchi Array**	42.53	347	*e*P	P	11 09 10.2	+0.1
AJN	**Ajban**	42.53	301	*i* P	P	11 09 12.6	+2.2
	SNR=6.0						
MK31	**Makanchi Array**	42.55	347	*e*P	P	11 09 10.4	+0.1
MK31	**Makanchi Array**	42.55	347	*e*P	P	11 09 10.4	+0.1
MKAR	**Makanchi Array**	42.55	347	P	P	11 09 10.3	0.0
	comp=Z,112nm,0.7s,baz=166,slow=8.1,SNR=615						
MKAR				PcP	PcP	11 11 02.2	+0.3
	comp=Z,11nm,0.5s,baz=193,slow=3.1,SNR=4.5						
MKAR				LR	LR	11 29 54.4	
	comp=Z,294nm,21.5s,baz=168,slow=40						
MKAR	**Makanchi Array**	42.55	347	*e*P	P	11 09 10.4	0.0
	comp=Z,612nm,0.8s						
MKAR				PcP	PcP	11 11 02.2	+0.3
MKAR	**Makanchi Array**	42.55	347	*e*P	P	11 09 10.4	+0.1
MKAR				pmax	pmax		
	comp=Z,610nm,0.8s						
IUG	**Iuzhnay**	42.60	333⇑	*i*P	P	11 09 11.5	+0.6
	comp=Z,66nm,0.6s						
IUG				*e*S	S	11 15 29.0	-0.6
MAKZ	**Makanchi**	42.63	347	*e*P	P	11 09 10.8	-0.2
	comp=Z,132nm,0.6s						
MAKZ	**Makanchi**	42.63	347	*e*P	P	11 09 10.8	-0.2
MAKZ				pmax	pmax		
	comp=Z,130nm,0.6s						
CHM	**Chimkent**	42.93	333⇑	*e*P	P	11 09 14.3	+0.9
	comp=Z,21nm,0.5s						
TJN	**Taejon**	42.98	40*c*	*i*P	P	11 09 13.6	-0.3
KK31	**Karatay Array**	43.15	334	*i* P	P	11 09 15.1	-0.1
KK31				pmax	pmax		
	comp=Z,43nm,0.6s						
KKAR	**Karatay Array**	43.15	334	*e*P	P	11 09 15.1	-0.1
KKAR	**Karatay Array**	43.15	334	*e*P	P	11 09 15.1	-0.1
INCN	**Inchon**	43.22	38	*e*P	P	11 09 15.4	-0.4
	comp=Z,106nm,0.9s						
INCN	**Inchon**	43.22	38	P	P	11 09 16.0	+0.2
	SNR=7.9						
INCN	**Inchon**	43.22	38	P	P	11 09 16.0	+0.2
	SNR=7.9						
MZR	**Muzera**	43.34	298	*i* P	P	11 09 19.3	+2.2
	SNR=34						
SONM	**Songino Array**	43.42	12	P	P	11 09 16.9	-0.6
	comp=Z,86nm,0.7s,baz=191,slow=8.5,SNR=358						
SONM				PcP	PcP	11 11 05.6	+0.6
	comp=Z,12nm,0.5s,baz=200,slow=3.7,SNR=12						
SONM				ScP	ScP	11 14 50.6	-0.9
	comp=Z,4.5nm,0.9s,baz=197,slow=4.2,SNR=5.3						
SONM				LR	LR	11 29 30.8	
	comp=Z,576nm,19.7s,baz=198,slow=39						
SONA1	**Songino Array**	43.44	12	*e*P	P	11 09 17.1	-0.5
JNU	**Nakatsue**	43.52	46	P	P	11 09 18.6	+0.1
	comp=Z,68nm,0.8s,baz=242,slow=2.8,SNR=46						
JNU				LR	LR	11 27 31.5	
	comp=Z,951nm,21.8s,baz=262,slow=36						
JNU	**Nakatsue**	43.52	46	*e*P	P	11 09 18.7	+0.3
	comp=Z,91nm,0.9s						
ULN	**Ulaanbaatar**	43.59	12	*e*P	P	11 09 18.1	-0.7
	comp=Z,67nm,0.7s						
ULN	**Ulaanbaatar**	43.59	12	P	P	11 09 18.3	-0.5
	SNR=19						
ULN	**Ulaanbaatar**	43.59	12	P	P	11 09 18.3	-0.5
	SNR=19						
ULN	**Ulaanbaatar**	43.59	12*c*	*i*P	P	11 09 17.9	-0.9
ULN				pmax	pmax		
	comp=Z,57nm,0.6s						
NWAO	**Narrogin (SRO)**	43.78	152	P	P	11 09 21.1	+0.8
	comp=Z,9.4nm,0.9s,baz=294,slow=18,SNR=3.6						
NWAO				LR	LR	11 27 28.5	
	comp=Z,248nm,18.8s,baz=205,slow=36						
KS15	**Wonju Array Si**	43.97	39	*e*P	P	11 09 21.7	-0.1
KSAR	**Wonju Array Be**	43.97	39	P	P	11 09 21.6	-0.2
KSAR				ScP	ScP	11 14 52.6	-1.2
KSAR	**Wonju Array Be**	43.97	39	P	P	11 09 21.6	-0.2
KS01	**Wonju Array Si**	43.99	39	*e*P	P	11 09 22.1	0.0
KSRS	**Korea Array**	44.00	39	P	P	11 09 21.6	-0.5
	comp=Z,41nm,0.8s,baz=216,slow=9.1,SNR=164						
KSRS				ScP	ScP	11 14 52.6	-1.3
	comp=Z,4.6nm,1.0s,baz=221,slow=4.9,SNR=10						
KSRS				LR	LR	11 30 01.0	
	comp=Z,710nm,18.2s,baz=224,slow=39						
KSRS	**Korea Array**	44.00	39	P	P	11 09 21.6	-0.5
KSRS				pmax	pmax		
	comp=Z,46nm,0.8s						
KSRS				pmax	pmax		
	comp=N,5.0nm,1.0s						
KSRS				MLR	MLR		
	comp=Z,710nm,18.2s						
H01W3	**Cape Leeuwin H**	44.12	157	T	T	11 57 24.4	
	baz=331,slow=76,SNR=11						
H01W2	**Cape Leeuwin H**	44.13	157	T	T	11 57 31.8	
	baz=331,slow=76,SNR=13						
H01W1	**Cape Leeuwin H**	44.14	157	T	T	11 57 32.1	
	baz=331,slow=76,SNR=10.0						
SNY	**Shenyang**	44.46	31	⇑P	P	11 09 25.2	-0.5
SNY				S	S	11 15 59.6	+3.1
SNY				pmax	pmax		
	comp=Z,130nm,0.6s						
SNY				LR	LR		
	comp=Z,980nm,19.4s						
SNY				LR	LR		
	comp=Z,560nm,21.4s						
SNY				LR	LR		
	comp=Z,2μm,19.4s						
ZAK	**Zakamensk**	45.37	8	*e*P	P	11 09 31.7	-1.2
ZAK				*e*		11 11 06.7	
ZAK				pmax	pmax		
	comp=Z,32nm,1.2s						
HVS	**Khovu-Aksy**	45.55	359*d*	*i*P	P	11 09 33.8	-0.5
HVS				pmax	pmax		
	comp=Z,77nm,0.9s						
GENI	**Genyem**	46.17	99	P	P	11 09 38.9	-0.8
GEYT	**Alibeck**	46.34	319	P	P	11 09 41.6	+0.9
	comp=Z,73nm,0.5s,baz=153,slow=8.4,SNR=38						
GEYT				LR	LR	11 33 11.1	
	comp=Z,164nm,18.4s,baz=60,slow=41						
GYA0B	**ALIBECK ARRAY**	46.34	319	*e*P	P	11 09 41.6	+0.9
	comp=Z,79nm,0.6s						
MOY	**Mondy**	46.37	5	*e*P	P	11 09 40.2	-0.6
MOY				pmax	pmax		
	comp=Z,47nm,2.2s						
SEM	**Semipalatinsk**	46.41	347⇑	*i*P	P	11 09 41.2	-0.1
	comp=Z,48nm,0.8s						
SEM				*e*S	S	11 16 23.1	-1.9
WRA	**Warramunga Arr**	46.48	124	P	P	11 09 41.7	-0.3
	comp=Z,71nm,0.6s,baz=302,slow=9.8,SNR=845						
WRA				pP	pP	11 09 56.7	-0.5
	comp=Z,72nm,0.7s,baz=304,slow=9.1,SNR=9.9						
WRA				ScP	ScP	11 15 03.5	-1.1
	comp=Z,5.9nm,0.7s,baz=316,slow=3.7,SNR=8.8						
WRA				S	S	11 16 22.6	-3.6
	comp=Z,5.8nm,0.9s,baz=294,slow=16,SNR=5.8						
WRA				PKiKP	PKiKP	11 18 09.4	-1.7
	comp=Z,0.5nm,0.5s,baz=293,slow=1.9,SNR=4.6						
WRAB	**Tennant Creek**	46.48	124	*e*P	P	11 09 42.2	+0.1
	comp=Z,114nm,0.7s						
WRAB	**Tennant Creek**	46.48	124*c*	*i*P	P	11 09 41.8	-0.2
WRAB				pmax	pmax		
	comp=Z,118nm,1.2s						
WB2	**Warramunga Arr**	46.49	124	*e*P	P	11 09 41.8	-0.3
WB2				*e*P	P	11 09 42.0	-0.1
JAY	**Jayapura**	46.69	99	P	P	11 09 42.5	-1.3
	comp=Z,18nm,0.8s,baz=96,slow=12,SNR=7.0						
JAY	**Jayapura**	46.69	99	P	P	11 09 43.3	-0.5
TLY	**Talaya**	46.69	8	P	P	11 09 43.5	+0.3
	comp=Z,28nm,0.7s,baz=208,slow=7.2,SNR=46						
TLY	**Talaya**	46.69	8	*e*P	P	11 09 43.5	+0.3
	comp=Z,39nm,0.8s						
TLY	**Talaya**	46.69	8*c*	*i*P	P	11 09 43.3	+0.1
TLY				pmax	pmax		
	comp=Z,44nm,0.9s						
TLY				MLR	MLR		
	comp=Z,631nm,19.0s						
OTUK	**Ortayu**	46.70	340	P	P	11 09 43.9	+0.5
OTUK				pmax	pmax		
	comp=Z,358nm,0.6s						
CN2	**Changchun**	46.83	31	⇑P	P	11 09 44.0	-0.4
CN2				pmax	pmax		
	comp=Z,100nm,0.6s						
CN2				LR	LR		
	comp=Z,650nm,20.0s						
CN2				LR	LR		
	comp=Z,620nm,20.0s						
CN2				LR	LR		
	comp=Z,690nm,20.0s						
KURBB	**Kurchatov Arra**	47.01	346	P	P	11 09 45.8	+0.2
	comp=Z,263nm,0.6s,baz=171,slow=6.9,SNR=1908						
KURBB				ScP	ScP	11 15 06.0	-0.1
	comp=Z,8.8nm,1.1s,baz=173,slow=3.6,SNR=11						
KURBB				S	S	11 16 33.9	+0.9
	comp=Z,2.5nm,0.9s,baz=154,slow=13,SNR=4.1						
KURK	**Kurchatov**	47.07	346	P	P	11 09 45.8	-0.3
KURK				ScP	ScP	11 15 06.0	-0.3
KURK				S	S	11 16 33.9	0.0
KURK	**Kurchatov**	47.07	346*c*	*i*P	P	11 09 46.5	+0.4
KURK				pmax	pmax		
	comp=Z,253nm,0.7s						
IRK	**Irkutsk**	47.33	8	*e*P	P	11 09 46.9	-1.2
IRK				pmax	pmax		
	comp=Z,117nm,2.0s						
AS31	**Alice Springs**	48.00	129	*e*P	P	11 09 53.9	+0.1
	comp=Z,20nm,0.6s						
ASAR	**Alice Springs**	48.00	129	P	P	11 09 53.9	0.0
	comp=Z,61nm,0.7s,baz=300,slow=7.4,SNR=942						
ASAR				ScP	ScP	11 15 08.6	-2.3
	comp=Z,1.8nm,0.7s,baz=310,slow=4.6,SNR=4.1						
ASAR				S	S	11 16 45.6	-2.3
	comp=Z,7.5nm,1.0s,baz=297,slow=14,SNR=15						
ASAR				PKiKP	PKiKP	11 18 11.1	-1.5
	comp=Z,0.5nm,0.6s,baz=318,slow=1.2,SNR=4.5						
ASAR				LR	LR	11 32 35.0	
	comp=Z,213nm,21.1s,baz=306,slow=39						
AS01	**Alice Springs**	48.04	129	*e*P	P	11 09 53.9	-0.2
BRZS	**Berezniki**	48.09	341	*e*P	P	11 09 54.9	+0.8
	comp=Z,6.6nm,1.1s						
BRZS				*e*S	S	11 16 49.3	+0.9
HIA	**Hailar**	48.57	22	*e*P	P	11 09 57.6	-0.2
	comp=Z,38nm,0.5s						
HIA	**Hailar**	48.57	22	*e*P	P	11 09 57.6	-0.2
HIA				pmax	pmax		
	comp=Z,38nm,0.5s						
ZAA0	**Zalesovo Array**	49.02	352	*e*P	P	11 10 01.2	+0.2
	comp=Z,199nm,0.9s						
ZALV	**Zalesovo Beam**	49.02	352	P	P	11 10 01.1	+0.1
	comp=Z,202nm,0.7s,baz=186,slow=7.6,SNR=539						
ZALV				ScP	ScP	11 15 13.4	-1.1
	comp=Z,3.5nm,0.6s,baz=192,slow=2.7,SNR=4.1						
ZALV				S	S	11 17 01.4	+0.1
	comp=Z,3.3nm,0.8s,baz=185,slow=10.0,SNR=4.3						
ZALV				LR	LR	11 34 40.6	
	comp=Z,134nm,18.9s,baz=253,slow=41						
ZALV	**Zalesovo Beam**	49.02	352	*e*P	P	11 09 60.0	-1.1
ZALV				ScP	ScP	11 15 13.4	-1.1
ZALV				S	S	11 17 01.4	+0.1
ZALV	**Zalesovo Beam**	49.02	352	*e*P	P	11 10 00.0	-1.1
INU	**Inuyama**	49.04	47	*e*P	P	11 10 01.5	-0.2
	comp=Z,82nm,0.7s						
MSHR	**Mys Shultsa**	49.12	36⇑	*e*P	P	11 10 02.0	-0.1
MDJ	**Mudanjiang**	49.55	33	P	P	11 10 03.2	-2.2
MDJ				pP	pP	11 10 13.8	-6.9
MDJ				sP	sP	11 10 18.4	-9.1
MDJ				PcP	PcP	11 11 23.1	-3.3
MDJ				PP	PP	11 11 58.8	-1.4
MDJ				ScP	ScP	11 15 14.7	-2.4
MDJ				S	S	11 17 14.0	+4.9
MDJ				ScS	ScS	11 19 50.7	-1.2
MDJ				pmax	pmax		
	comp=Z,100nm,0.8s						
MDJ				LR	LR		
	comp=Z,790nm,19.6s						
MDJ				LR	LR		
	comp=Z,520nm,15.7s						
MDJ				LR	LR		
	comp=Z,1μm,20.6s						
MDJ	**Mudanjiang**	49.55	33	*e*P	P	11 10 05.9	+0.5
	comp=Z,91nm,0.9s						
CBIJ	**Chichi jima**	50.08	59	*e*P	P	11 10 08.9	-0.7
	comp=Z,269nm,1.2s						
NVS	**Novosibirsk**	50.11	351⇑	*i*P	P	11 10 09.1	-0.3
NVS				*e*		11 10 22.6	
NVS				*e*		11 11 26.6	
NVS				*e*S	S	11 17 10.9	-5.5
NVS				pmax	pmax		
	comp=Z,145nm,1.0s						
NVS				pmax	pmax		
	comp=N,52nm,0.5s						
NVS				pmax	pmax		
	comp=E,38nm,0.5s						
NVS				smax	smax		
	comp=N,22nm,1.4s						
NVS				smax	smax		
	comp=E,37nm,1.4s						
GUMO	**Guam**	50.11	77	LR	LR	11 33 15.6	
	comp=E,86nm,18.8s,baz=256,slow=38						
JHJ	**Hachijo jima 2**	50.17	51	LR	LR	11 30 25.6	
	comp=E,399nm,21.7s,baz=276,slow=35						
MJB9	**Matsu-Tunnel**	50.45	46	*e*P	P	11 10 12.4	+0.1
	comp=E,29nm,0.8s						
MAJO	**Matsushiro**	50.45	46	*e*P	P	11 10 12.3	0.0
	comp=E,28nm,0.8s						
MAJO	**Matsushiro**	50.45	46*c*	*e*P	P	11 10 11.6	-0.7
MAJO				pmax	pmax		
	comp=Z,18nm,0.6s						
MAT	**Matsushiro**	50.45	46	P	P	11 10 11.3	-1.0
MAT				S	S	11 17 22.0	+0.1
MJAR	**Matsushiro Arr**	50.45	46	P	P	11 10 11.9	-0.4
	comp=Z,16nm,0.8s,baz=248,slow=9.6,SNR=44						
MJAR				PcP	PcP	11 11 29.9	0.0
	comp=Z,16nm,0.8s,baz=248,slow=4.5,SNR=8.7						
MJAR				ScP	ScP	11 15 19.6	-1.5
	comp=Z,2.5nm,1.0s,baz=244,slow=6.0,SNR=4.0						
MJAR				LR	LR	11 32 12.9	
	comp=Z,600nm,21.8s,baz=250,slow=37						
RAYN	**Ar Rayn**	50.56	296	*e*P	P	11 10 15.1	+1.6
	comp=Z,37nm,0.6s						
RAYN	**Ar Rayn**	50.56	296	*i* P	P	11 10 15.1	+1.6
	SNR=38						
RAYN	**Ar Rayn**	50.56	296	P	P	11 10 15.1	+1.6
RAYN				pmax	pmax		
	comp=Z,37nm,0.7s						
USRK	**Ussuriysk Ar.**	50.60	34	P	P	11 10 13.2	-0.1
	comp=Z,30nm,0.7s,baz=241,slow=7.9,SNR=36						
USRK				LR	LR	11 34 14.3	
	comp=Z,897nm,18.1s,baz=213,slow=39						
BVAR	**Borovoye Array**	51.44	342	P	P	11 10 19.0	-0.4
	comp=Z,104nm,0.7s,baz=143,slow=9.5,SNR=486						
BVAR				S	S	11 17 34.8	-0.2
	comp=Z,6.3nm,1.0s,baz=149,slow=21,SNR=8.9						
BVAR				LR	LR	11 34 37.0	
	comp=Z,119nm,21.4s,baz=146,slow=39						
BRVK	**Borovoye**	51.50	341	*e*P	P	11 10 20.2	+0.3
	comp=Z,127nm,0.6s						
BRVK	**Borovoye**	51.50	341*c*	*i*P	P	11 10 19.7	-0.2
BRVK				pmax	pmax		
	comp=Z,98nm,0.6s						
COEN	**Coen**	51.87	112	*e*P	P	11 10 22.4	-0.9
	comp=Z,20nm,0.7s						
OPO	**Ambohidratompo**	52.50	242	P	P	11 10 30.3	+2.1
	comp=Z,11nm,0.6s,baz=68,slow=8.8,SNR=13						
OPO				LR	LR	11 28 33.0	
	comp=Z,406nm,21.8s,baz=54,slow=31						
AB31	**Akbulak array**	52.59	332	*i* P	P	11 10 28.3	+0.2
AB31				pmax	pmax		
	comp=Z,40nm,0.5s						
ABKAR	**Akbulak array**	52.59	332	*e*P	P	11 10 28.6	+0.5
MANU	**Manus Island**	53.19	97	*e*P	P	11 10 33.4	+0.3
	comp=Z,105nm,1.3s						
KLR	**Kul'dur**	53.73	29	P	P	11 10 36.7	+0.2
	comp=Z,4.5nm,0.8s,baz=266,slow=6.5,SNR=94						
KLR	**Kul'dur**	53.73	29*c*	*i*P	P	11 10 36.4	-0.1
TEY	**Ternei**	53.75	36	*e*P	P	11 10 36.8	+0.2
TEY				*e*		11 11 42.0	
TEY				pmax	pmax		
	comp=Z,43nm,1.0s						
AKTO	**Aktyubinsk**	54.31	332	P	P	11 10 40.4	-0.3
	comp=Z,48nm,0.6s,baz=114,slow=9.4						
PMG	**Port Moresby**	54.38	106	P	P	11 10 41.4	-0.4
	comp=Z,68nm,0.7s,baz=319,slow=6.4,SNR=27						
PMG				LR	LR	11 39 34.0	
	comp=Z,96nm,18.0s,baz=270,slow=42						
PMG	**Port Moresby**	54.38	106	*e*P	P	11 10 41.5	-0.2
PMG				pmax	pmax		
	comp=Z,68nm,0.8s						
BOD	**Bodaibo**	54.39	13	*e*P	P	11 10 40.2	-0.9
BOD				pmax	pmax		
	comp=Z,109nm,1.1s						
ZEA	**Zeya**	54.97	23	*e*P	P	11 10 44.8	-0.6
ZEA				pmax	pmax		
	comp=Z,51nm,0.8s						
ZEA				MLR	MLR		
	comp=E,300nm,15.0s						
ZEA				MLR	MLR		
	comp=N,500nm,16.0s						
ERM	**Erimo**	56.34	42	*e*P	P	11 10 56.1	+0.7
	comp=N,24nm,0.9s						
ERM	**Erimo**	56.34	42⇑	*e*P	P	11 10 56.3	+0.9
ERM				pmax	pmax		
	comp=Z,24nm,1.0s						
GNI	**Garni**	56.49	315	P	P	11 10 56.6	-0.2
	comp=Z,28nm,0.7s,baz=162,slow=4.9,SNR=23						
GNI				LR	LR	11 38 14.9	
	comp=Z,80nm,20.8s,baz=102,slow=39						
GNI	**Garni**	56.49	315	*e*P	P	11 10 57.3	+0.6
	comp=Z,51nm,0.9s						
GNI	**Garni**	56.49	315	P	P	11 10 57.2	+0.5
	SNR=13						
GNI	**Garni**	56.49	315	P	P	11 10 57.2	+0.5
	SNR=13						
GNI	**Garni**	56.49	315	*i* P	P	11 10 56.9	+0.1
	SNR=6.6						
GNI	**Garni**	56.49	315*c*	*i*P	P	11 10 56.7	-0.1
GNI				pmax	pmax		
	comp=Z,187nm,1.0s						
CLNS	**Chul'man**	56.54	19	*e*P	P	11 10 54.2	-2.4
CLNS				pmax	pmax		
	comp=Z,20nm,0.8s						
CLNS				pmax	pmax		
	comp=N,13nm,0.8s						
CLNS				pmax	pmax		
	comp=E,12nm,0.9s						
CTA	**Charters Tower**	56.71	118	P	P	11 10 58.0	-0.4
	comp=E,19nm,0.9s,baz=292,slow=11,SNR=19						
CTAO	**Charters Tower**	56.71	118	*e*P	P	11 10 58.2	-0.2
	comp=E,31nm,0.9s						
CTAO	**Charters Tower**	56.71	118	*e*P	P	11 10 58.2	-0.2
CTAO				pmax	pmax		
	comp=Z,31nm,1.0s						
ASAJ	**Asahikawa**	56.94	40	P	P	11 10 59.2	-0.4
	comp=Z,19nm,0.6s,baz=278,slow=8.5,SNR=15						
ASAJ				LR	LR	11 36 42.3	
	comp=Z,487nm,19.5s,baz=256,slow=37						
ASAJ	**Asahikawa**	56.94	40	*e*P	P	11 10 59.8	+0.2
	comp=Z,235nm,1.8s						
GRNR	**Gornyy**	57.03	30	*e*P	P	11 11 00.2	0.0
GRNR				pmax	pmax		
	comp=Z,24nm,0.5s						
TBLG	**Delisi**	57.15	317	*e*P	P	11 11 01.3	+0.1
	comp=Z,77nm,0.8s						
TBLG	**Delisi**	57.15	317	*e*P	P	11 11 01.3	+0.1
TBLG				pmax	pmax		
	comp=Z,77nm,0.8s						
SVE	**Sverdlovsk**	57.83	339*d*	*i*P	P	11 11 06.0	+0.3
SVE				pmax	pmax		
	comp=Z,186nm,0.8s						
AKH	**Akhalkalaki**	57.87	316⇓	*i*P	P	11 11 07.2	+0.7
AKH	**Akhalkalaki**	57.87	316	*e*P	P	11 11 07.2	+0.7
	comp=Z,63nm,1.4s						
AKH	**Akhalkalaki**	57.87	316	*e*P	P	11 11 07.2	+0.7
AKH				pmax	pmax		
	comp=Z,63nm,1.3s						
STKA	**Stephens Creek**	58.09	133	P	P	11 11 08.0	0.0
	comp=Z,15nm,0.5s,baz=306,slow=6.8,SNR=42						
STKA				LR	LR	11 38 33.6	
	comp=Z,196nm,20.5s,baz=312,slow=38						
STKA	**Stephens Creek**	58.09	133	*e*P	P	11 11 08.0	0.0
	comp=Z,25nm,1.5s						
STKA	**Stephens Creek**	58.09	133	*e*P	P	11 11 08.0	0.0
STKA				pmax	pmax		
	comp=Z,25nm,1.5s						
ARU	**Arti**	58.31	337	LR	LR	11 38 43.2	
	comp=Z,195nm,20.9s,baz=152,slow=38						
ARU	**Arti**	58.31	337	*e*P	P	11 11 08.7	-0.3
	comp=Z,86nm,0.9s						
ARU	**Arti**	58.31	337*c*	*i*P	P	11 11 08.6	-0.4
ARU						11 11 59.2	
ARU						11 13 13.4	
ARU				S	S	11 19 07.8	+0.9
ARU						11 20 50.6	
ARU				SS	SS	11 23 05.9	+6.2
ARU				pmax	pmax		
	comp=Z,163nm,1.7s						
ARU				MLR	MLR		
	comp=Z,217nm,22.0s						
YSS	**Yuzh-Sakhalins**	58.40	37	*e*P	P	11 11 10.1	+0.2
	comp=Z,130nm,1.0s						
YSS	**Yuzh-Sakhalins**	58.40	37⇑	*e*P	P	11 11 10.0	+0.2
YSS				*e*S	S	11 19 05.7	-2.8
YSS				*e*PS	PnS	11 19 23.0	-4.7
YSS				*e*SS	SS	11 23 04.0	+2.5
YSS				pmax	pmax		
	comp=N,30nm,0.9s						
YSS				pmax	pmax		
	comp=Z,90nm,0.9s						
YSS				pmax	pmax		
	comp=E,30nm,0.6s						
YSS				MLR	MLR		
	comp=E,400nm,14.0s						
NCK	**Nalchik**	58.66	319⇑	*e*P	P	11 11 11.6	-0.2
NCK				pmax	pmax		
	comp=Z,67nm,0.6s						
YUK	**Yuzh-Kuril'sk**	59.00	41	*e*P	P	11 11 14.1	0.0
YUK				*e*		11 13 28.3	
YUK				S	S	11 19 15.4	-1.0
YUK				*e*SS	SS	11 23 13.7	+2.6
YUK				MLR	MLR		
	comp=Z,441nm,19.0s						
YUK				MLR	MLR		
	comp=E,496nm,18.0s						
NEY	**Neytrino**	59.13	318⇑	*e*P	P	11 11 15.8	+0.5
NEY				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KBZ	**Khabaz**	59.22	319	P	P	11 11 15.2	-0.4
	comp=Z,34nm,0.8s,baz=110,slow=6.4,SNR=50						
CHVG	**Ch'k'valeri**	59.35	317⇑	*i*P	P	11 11 16.6	0.0
KIV	**Kislovodsk**	59.45	319	*e*P	P	11 11 17.0	-0.3
	comp=Z,74nm,0.8s

TYV pmax pmax
comp=Z,300nm,7.0s
TYV MLR MLR
comp=Z,2μm,15.0s
NKL Nikolayevsk 60.56 30 *e*P **P 11 11 24.5 -0.1**
NKL *e* 11 11 33.2
NKL pmax pmax
comp=N,40nm,1.0s
NKL pmax pmax
comp=E,43nm,1.0s
NKL pmax pmax
comp=Z,120nm,1.0s
KUR Kuril'sk 60.80 40⇓*e*P **P 11 11 26.9 +0.5**
RCY Rachaya 61.14 305 *e*P **P 11 11 30.7 +1.6**
HWQ Hawqa 61.24 306 *e*P **P 11 11 31.0 +1.2**
SOKR Solikamsk 61.25 339*c i*P **P 11 11 27.1 -2.0**
SOKR pmax pmax
comp=Z,81nm,0.8s
SOC Sochi 61.28 317*c i*P **P 11 11 28.5 -1.2**
SOC *e* 11 13 42.1
SOC *e*PPP PPP 11 15 08.6
SOC pmax pmax
comp=Z,70nm,0.9s
SOC MLR MLR
comp=Z,101nm,17.0s
BHL Bhannes 61.38 306 *e*P **P 11 11 32.0 +1.3**
MMAI Mount Meron Ar 61.38 305 P **P 11 11 32.2 +1.5**
comp=Z,36nm,0.7s,baz=91,slow=9.2,SNR=39
MMAI LR LR 11 39 29.2
comp=Z,267nm,21.3s,baz=155,slow=37
DQRL Deir Qamar 61.41 305 *e*P **P 11 11 32.6 +1.7**
YAK Yakutsk 62.13 18 *e*P **P 11 11 33.9 -1.2**
comp=Z,148nm,0.7s
YAK Yakutsk 62.13 18*c i*P **P 11 11 33.7 -1.4**
YAK *e**PP pP 11 11 41.2 -10
YAK *e* 11 12 10.5
YAK *e*S **S 11 19 57.9 +2.1**
YAK *e**SS pS 11 20 03.9 -10
YAK *e* 11 21 25.5
YAK *e*SS **SS 11 24 00.0 +0.5**
YAK pmax pmax
comp=Z,88nm,0.9s
YAK pmax pmax
comp=N,19nm,1.0s
YAK pmax pmax
comp=E,16nm,0.9s
YAK smax smax
comp=N,40nm,1.5s
YAK smax smax
comp=E,30nm,1.5s
YAK MLR MLR
comp=Z,622nm,21.0s
YAK MLR MLR
comp=N,2μm,22.0s
YAK MLR MLR
comp=E,199nm,18.0s
ANN Anapa 63.25 318 *e*P **P 11 11 41.1 -1.7**
ANN *e*S **S 11 20 14.0 +3.6**
ANN pmax pmax
comp=Z,43nm,1.1s
CSS Mathiatis 63.49 306 *e*P **P 11 11 45.3 +0.7**
comp=Z,79nm,1.6s
CSS Mathiatis 63.49 306 P **P 11 11 45.2 +0.5**
MAMC Mammari 63.63 307 P **P 11 11 46.9 +1.3**
SZAC Souni 63.81 306 P **P 11 11 47.7 +0.9**
NRIK Noril'sk 63.98 357 P **P 11 11 46.6 -0.5**
comp=Z,94nm,0.6s,baz=164,slow=5.9,SNR=63
NRIK LR LR 11 43 52.3
comp=Z,118nm,19.6s,baz=179,slow=40
ALFC Alefka 64.12 306 P **P 11 11 49.2 +0.4**
PPCY Paphos 64.27 306 P **P 11 11 50.0 +0.3**
AKMC Akamas 64.31 306 P **P 11 11 50.2 +0.1**
BR131 Keskin Array S 64.39 312 *e*P **P 11 11 50.0 -0.7**
BRTR Keskin Array B 64.39 312 P **P 11 11 50.0 -0.7**
comp=Z,30nm,0.7s,baz=128,slow=7.4,SNR=189
BRTR Keskin Array B 64.39 312 P **P 11 11 50.0 -0.7**
VORD Divnogorie 64.47 325 *e*P **P 11 11 49.2 -1.5**
VORD pmax pmax
comp=Z,140nm,0.8s
VSR Storozhevoye 64.65 325 *e*P **P 11 11 50.1 -1.8**
VSR *e*S **S 11 20 23.1 -4.4**
VSR pmax pmax
comp=Z,160nm,0.8s
VSR smax smax
comp=N,40nm,1.4s
ILGA Ilgaz 64.69 313 *e*P **P 11 11 52.5 -0.1**
comp=N,207nm,1.6s
ANTO Ankara 65.06 312⇑*i*P **P 11 11 54.7 -0.2**
ANTO Ankara 65.06 312 *e*P **P 11 11 54.6 -0.3**
comp=N,152nm,1.5s
ANTO Ankara 65.06 312 P **P 11 11 54.9 0.0**
SNR=12
ANTO Ankara 65.06 312 *e*P **P 11 11 54.6 -0.3**
ANTO pmax pmax
comp=Z,150nm,1.5s
BR231 Keskin MP Arra 65.06 312 *e*P **P 11 11 55.2 +0.2**
ARMA Armidale 65.10 127 *e*P **P 11 11 54.9 -0.5**
comp=Z,61nm,1.4s
SIM Simferopol' 65.53 317*c i*P **P 11 11 57.5 -0.3**
SIM pmax pmax
comp=Z,69nm,0.8s
ISP Isparta 66.32 309⇑*i*P **P 11 12 03.6 +0.5**
ISP Isparta 66.32 309 *e*P **P 11 12 03.5 +0.4**
comp=Z,286nm,1.6s
ISP Isparta 66.32 309 *e*P **P 11 12 03.5 +0.4**
ISP pmax pmax
comp=Z,290nm,1.6s
HNR Honiara 66.73 103 *e*P **P 11 12 05.0 -1.0**
HNR Honiara 66.73 103 P **P 11 12 05.2 -0.8**
comp=Z,57nm,0.5s,baz=187,slow=3.4,SNR=7.1
HNR LR LR 11 45 31.5
comp=Z,64nm,18.6s,baz=233,slow=40
HNR Honiara 66.73 103 *e*P **P 11 12 05.9 -0.1**
comp=Z,222nm,1.1s
HNR Honiara 66.73 103 *e*P **P 11 12 05.9 -0.1**
HNR pmax pmax
comp=Z,220nm,1.1s
PRGR Permogore 66.76 337⇑*i*P **P 11 12 04.6 -0.7**
PRGR *e*S **S 11 20 50.7 -2.1**
PRGR pmax pmax
comp=Z,167nm,0.6s
MOS Moscow 67.40 329α*i*P **P 11 12 08.3 -1.2**
MOS *e**PP **pP 11 12 26.3 +0.8**
MOS *e* 11 12 35.0
MOS *e* 11 14 33.6
MOS *e*S **S 11 20 55.7 -5.1**
MOS pmax pmax
comp=Z,300nm,0.7s
MOS pmax pmax
comp=Z,192nm,0.6s
MANT Manisa 67.97 309 *e*P **P 11 12 13.9 +0.2**
comp=Z,172nm,0.7s
SKR Severo-Kuril's 67.97 37 *e*P P 11 12 26.3 +13
SKR *e*S **S 11 21 09.3 +1.6**
SKR *e* 11 22 06.8
SKR MLR MLR
comp=Z,400nm,18.0s
KARP Karpathos 68.56 306 *e*P **P 11 12 17.9 +0.7**
comp=Z,96nm,0.9s
MA2 Magadan 68.68 27 *e*P **P 11 12 16.9 -0.6**
comp=Z,64nm,0.7s
MA2 Magadan 68.68 27 *i*P **P 11 12 16.9 -0.6**
MA2 pmax pmax
comp=Z,62nm,0.7s
KLMR Klimovskoe 68.85 334 *e*P **P 11 12 15.4 -3.0**
KLMR pmax pmax
comp=Z,101nm,1.4s
KLMR Klimovskoe 68.85 334 *e*P **P 11 12 15.5 -3.0**
KLMR AMP 11 12 18.9
comp=Z,101nm,1.4s
LSZ Lusaka 68.95 251 *e*P **P 11 12 20.5 +0.4**
comp=Z,34nm,1.1s
LSZ Lusaka 68.95 251 *e*P **P 11 12 20.5 +0.4**
LSZ pmax pmax
comp=Z,34nm,1.1s
TLCR 69.21 316⇓*i*P **P 11 12 21.1 +0.1**
TIRR Tirgusor 69.32 316⇓*i*P **P 11 12 21.6 -0.1**
TIRR Tirgusor 69.32 316 *e*P **P 11 12 21.2 -0.5**
comp=Z,41nm,0.8s
TIRR Tirgusor 69.32 316 *e*P **P 11 12 21.2 -0.5**
TIRR pmax pmax
comp=Z,41nm,0.8s
TIXI Tiksi 69.51 11 *e*P **P 11 12 20.7 -1.6**
comp=Z,97nm,0.6s
TIXI Tiksi 69.51 11 *e*P **P 11 12 20.7 -1.6**
TIXI pmax pmax
comp=Z,97nm,0.6s
TLB Topalu 69.61 316⇓*i*P **P 11 12 23.4 0.0**
KIS Kishinev 69.65 318 *e*P **P 11 12 22.0 -1.7**
comp=Z,200nm,0.8s
KIS Kishinev 69.65 318 *e*PcP PcP 11 12 38.0 -8.3
KIS *e*S **S 11 21 24.0 -3.8**
KIS Kishinev 69.65 318 *e*P **P 11 12 22.0 -1.7**
KIS *e* 11 12 38.0
KIS *e*S **S 11 21 24.0 -3.8**
KIS *e*PS **PnS 11 21 48.0 -13**
KIS pmax pmax
comp=Z,200nm,0.8s
CFR Carcaliu 69.67 316⇑*i*P **P 11 12 23.7 -0.2**
CFR Carcaliu 69.67 316 P **P 11 12 23.4 -0.5**
CFR pmax pmax
comp=Z,51nm,1.4s
PETK Petropavlovsk- 69.69 35 P **P 11 12 22.9 -1.0**
comp=Z,3.4nm,0.5s,baz=219,slow=2.5,SNR=9.9
PETK LR LR 11 43 08.9
comp=Z,418nm,21.8s,baz=233,slow=36
HARR Harsova 69.71 316⇓*i*P **P 11 12 24.1 0.0**
LEOM Leova 69.90 318⇑*i*P **P 11 12 25.0 -0.2**
LEOM Leova 69.90 318 P **P 11 12 25.0 -0.2**
SANT Santorini 70.05 307⇑*i*P **P 11 12 26.1 -0.3**
SANT Santorini 70.05 307 *e*P **P 11 12 26.1 -0.3**
comp=Z,121nm,0.6s
APE Apeiranthos 70.09 307⇑*i*P **P 11 12 26.4 -0.3**
APE Apeiranthos 70.09 307 P **P 11 12 26.3 -0.4**
APE Apeiranthos 70.09 307⇑*i*P **P 11 12 26.4 -0.3**
PET Petropavlovsk 70.21 35 *e*P **P 11 12 25.5 -1.4**
comp=Z,35nm,0.7s
PET Petropavlovsk 70.21 35 *e*P **P 11 12 25.6 -1.4**
PET *e*S **S 11 21 33.0 -1.1**
PET *e*SS **SS 11 26 11.3 +6.2**
PET pmax pmax
comp=Z,54nm,0.8s
PET pmax pmax
comp=Z,100nm,9.4s
ALN Alexandroupoli 70.31 311 *e*P **P 11 12 27.9 0.0**
comp=Z,93nm,1.6s
ALN Alexandroupoli 70.31 311 *e*P **P 11 12 27.9 0.0**
ALN pmax pmax
comp=Z,93nm,1.6s
AKASG Malin Array Be 70.36 322 P **P 11 12 26.8 -1.2**
comp=Z,42nm,0.6s,baz=94,slow=5.4,SNR=54
AKBB Malin Array Si 70.36 322 *e*P **P 11 12 26.8 -1.2**
comp=Z,41nm,0.6s
AKBB Malin Array Si 70.36 322 *e*P **P 11 12 26.8 -1.2**
AKBB pmax pmax
comp=Z,41nm,0.6s
IDI Anoyia 70.36 305 P **P 11 12 28.1 -0.3**
comp=Z,98nm,0.6s,baz=84,slow=8.7,SNR=87
IDI pP **pP 11 12 44.4 -0.1**
comp=Z,65nm,0.6s,baz=96,slow=7.8,SNR=9.0
IDI LR LR 11 49 35.8
comp=Z,60nm,18.4s,baz=88,slow=41
IDI Anoyia 70.36 305⇑*i*P **P 11 12 29.1 +0.7**
IDI Anoyia 70.36 305 *e*P **P 11 12 28.8 +0.4**
comp=Z,120nm,0.6s
IDI pP **pP 11 12 44.4 -0.1**
AK11 Malin Array Si 70.39 322 *e*P **P 11 12 26.8 -1.3**
ISR Istrita 70.76 316⇓*i*P **P 11 12 31.8 +1.2**
ISR Istrita 70.76 316 P **P 11 12 31.6 +1.0**
ISR pmax pmax
comp=Z,117nm,0.8s
VRI Vrincioaia 70.79 317⇑*i*P **P 11 12 31.6 +0.9**
VRI Vrincioaia 70.79 317 P **P 11 12 30.9 +0.2**
PLOR Plostina 70.84 317⇑*i*P **P 11 12 31.9 +0.8**
PLOR Plostina 70.84 317 P **P 11 12 31.8 +0.7**
SEY Seymchan 70.92 24*ce*P **P 11 12 30.1 -1.0**
SGRR Singureni 70.98 315⇑*i*P **P 11 12 32.7 +0.8**
TESR Tescani 70.98 317⇓*i*P **P 11 12 31.4 -0.5**
TMCR Tamitsa 71.05 337 *e*P **P 11 12 30.1 -1.7**
TMCR pmax pmax
comp=Z,84nm,0.8s
SECR 71.08 316⇓*i*P **P 11 12 33.6 +1.1**
PLAR PLOIESTI 71.08 316⇓*i*P **P 11 12 33.4 +1.0**
MLR Muntele Rosu 71.25 316⇑*i*P **P 11 12 34.2 +0.5**
MLR Muntele Rosu 71.25 316 *e*P **P 11 12 34.3 +0.6**
comp=Z,77nm,0.7s
MLR Muntele Rosu 71.25 316 *e*P **P 11 12 34.3 +0.6**
MLR pmax pmax
comp=Z,77nm,0.7s
ZIMR 71.31 314⇑*i*P **P 11 12 34.4 +0.6**
PRAR RASCA 71.45 318⇓*i*P **P 11 12 34.6 -0.1**
PLD Plovdiv 71.51 313 P **P 11 12 34.9 -0.2**
DOPR Dopca 71.73 317⇓*i*P **P 11 12 37.2 +0.8**
HUMR Humele 71.74 315⇑*i*P **P 11 12 36.4 0.0**
GOLR 71.81 315⇓*i*P **P 11 12 37.6 +0.7**
MTUR Matau 71.81 316⇑*i*P **P 11 12 37.4 +0.4**
VOIR 71.86 316⇓*i*P **P 11 12 36.9 -0.4**
VOIR 71.86 316 P **P 11 12 36.6 -0.7**
VOIR pmax pmax
comp=Z,59nm,0.5s
PAIG Paliouri 71.94 310 P **P 11 12 37.5 -0.3**
PAIG pmax pmax
comp=Z,120nm,1.4s
BURAR Bucovina Array 72.17 318⇓*i*P **P 11 12 39.9 +0.8**
BURAR Bucovina Array 72.17 318 P **P 11 12 39.8 +0.7**
BUR04 Bucovina Ar. S 72.18 318 *e*P **P 11 12 39.5 +0.4**
SRS Serrai 72.18 311 P **P 11 12 38.3 -0.9**
SRS pmax pmax
comp=Z,49nm,1.1s
BUR08 Bucovina Ar. S 72.19 318 *e*P **P 11 12 39.6 +0.3**
MICGM Minsk 72.20 326⇑*e*P **P 11 12 37.0 -2.0**
MICGM PM 11 12 38.0
comp=Z,0.3nm,1.0s
MNK Minsk 72.20 326⇑*e*P **P 11 12 37.0 -2.0**
MNK pmax pmax
comp=Z,260nm,1.0s
SOH Sokhos 72.31 311 P **P 11 12 39.2 -0.9**
SOH pmax pmax
comp=Z,22nm,1.2s
MDB Medias 72.45 317⇓*i*P **P 11 12 41.6 +0.9**
CASY Casey 72.47 173 *e*P **P 11 12 42.1 +1.8**
comp=Z,50nm,1.4s
PUL Pulkovo 72.57 331⇑*e*P **P 11 12 40.9 -0.2**
PUL pmax pmax
comp=Z,139nm,0.5s
THE Thessaloniki 72.58 311 P **P 11 12 40.3 -1.2**
THE pmax pmax
comp=Z,42nm,1.4s
ARCR ARCALIA 72.64 318⇑*i*P **P 11 12 42.5 +0.7**
KNT Kendrikon 72.70 311 P **P 11 12 41.5 -0.8**
LOT Lotru 72.75 316⇓*i*P **P 11 12 42.2 -0.4**
AGG Agios Georgios 72.86 309 *e*P **P 11 12 41.7 -1.6**
comp=Z,51nm,0.7s
AGG Agios Georgios 72.86 309 *e*P **P 11 12 41.7 -1.6**
AGG pmax pmax
comp=Z,51nm,0.7s
LIT Litokhoron 72.87 310 *e*P **P 11 12 42.6 -0.7**
comp=Z,66nm,0.6s
LIT Litokhoron 72.87 310 *e*P **P 11 12 42.6 -0.7**
LIT pmax pmax
comp=Z,66nm,0.6s
NACGM Naroch 72.92 326 *e* **P 11 12 41.0 -2.3**
ITM Ithomi 72.96 307 *e*P **P 11 12 43.7 -0.2**
comp=Z,86nm,0.8s
VAY Valandovo 72.97 311 *i*P **P 11 12 43.0 -0.8**
IDID Didziasalis 73.06 326 *e*P **P 11 12 44.2 +0.1**
IDID IAmb IAmb 11 12 45.3
comp=Z,29nm,0.8s
CJR Cluj-Napoca 73.09 317⇑*i*P **P 11 12 45.4 +0.9**
CJR Cluj-Napoca 73.09 317 P **P 11 12 45.3 +0.8**
JOF Joensuu 73.24 335 P **P 11 12 45.1 +0.1**
JOF pmax pmax
comp=Z,77nm,1.1s
STIP Stip 73.31 312 *i*P **P 11 12 43.4 -2.5**
IIGN Ignalina 73.35 326 *e*P **P 11 12 45.9 +0.1**
IIGN IAmb IAmb 11 12 46.3
comp=Z,28nm,0.7s
LVV L'vov 73.39 320 *e*P **P 11 12 46.5 +0.3**
DEV Deva 73.42 316 P **P 11 12 47.8 +1.4**
DEV pmax pmax
comp=Z,94nm,1.1s
IZAR Zarasai 73.44 327 *e*P **P 11 12 46.4 0.0**
IZAR IAmb IAmb 11 12 46.8
comp=Z,22nm,0.7s
ISAL Salakas 73.46 327 *e*P **P 11 12 46.5 0.0**
ISAL IAmb IAmb 11 12 46.9
comp=Z,17nm,0.7s
LBTB Lobatse 73.53 242 *e*P **P 11 12 50.1 +2.5**
comp=Z,37nm,0.8s
LBTB Lobatse 73.53 242 *e*P **P 11 12 50.1 +2.5**
LBTB pmax pmax
comp=Z,37nm,0.8s
HERR Herculane 73.60 315⇑*i*P **P 11 12 47.7 +0.2**
DRGR 73.70 317⇑*i*P **P 11 12 48.8 +0.6**
DRGR 73.70 317 P **P 11 12 48.3 +0.1**
DRGR pmax pmax
comp=Z,218nm,0.9s
BARS Barje 73.73 313 *e*P **P 11 12 46.9 -1.4**
FNA Florina 73.80 311 *e*P **P 11 12 47.6 -1.2**
comp=Z,81nm,1.7s
FNA Florina 73.80 311 *e*P **P 11 12 47.6 -1.2**
FNA pmax pmax
comp=Z,81nm,1.7s
SKO Skopje 73.90 312 *i*P **P 11 12 48.0 -1.3**
VSU Vasula 73.92 330*c i*P **P 11 12 48.4 -0.6**
VSU pmax pmax
comp=Z,415nm,2.5s
LVZ Lovozero 74.00 340 *e*P **P 11 12 48.8 -0.7**
comp=Z,80nm,0.7s
LVZ Lovozero 74.00 340*c i*P **P 11 12 48.7 -0.7**
LVZ pmax pmax
comp=Z,56nm,0.6s
MDVR Moldovita 74.08 315⇓*i*P **P 11 12 50.4 0.0**
KWP Kalwaria Pacla 74.19 320 *e*P **P 11 12 51.2 +0.3**
KWP Kalwaria Pacla 74.19 320 *e*P **P 11 12 51.3 +0.3**
comp=Z,2μm,1.4s
KWP Kalwaria Pacla 74.19 320 *e*P **P 11 12 51.3 +0.4**
BZS Buzias 74.27 316⇑*i*P **P 11 12 51.3 -0.1**
OHR Ohrid 74.27 311 *i*P **P 11 12 50.1 -1.5**
OHR Ohrid 74.27 311 P **P 11 12 51.3 -0.3**
OHR pmax pmax
comp=Z,86nm,1.1s
APA Apatity 74.28 340⇑*i*P **P 11 12 49.7 -1.3**
APA *i* 11 13 05.5
APA *i*S **S 11 22 19.0 -1.2**
APA pmax pmax
comp=Z,62nm,0.8s
UZH Uzhgorod 74.29 319⇑*i*P **P 11 12 51.7 +0.3**
UZH *e* 11 13 04.5
SIRR Siria 74.33 316⇓*i*P **P 11 12 52.4 +0.6**
LTVH L¨tav¨rtes, 74.34 318⇑*e*P **P 11 12 52.6 +0.8**
IGT Igoumenitsa 74.45 309 P **P 11 12 51.6 -1.0**
BOSA Boshof 74.73 239 P **P 11 12 56.3 +1.7**
comp=Z,15nm,1.0s,baz=76,slow=5.3,SNR=14
BOSA pP **pP 11 13 11.2 +0.4**
comp=Z,33nm,0.7s,baz=87,slow=6.0,SNR=14
BOSA LR LR 11 42 01.8
comp=Z,236nm,19.9s,baz=40,slow=33
BOSA Boshof 74.73 239 *e*P **P 11 12 56.5 +1.9**
comp=Z,38nm,0.8s
BOSA pP **pP 11 13 11.2 +0.4**
BOSA Boshof 74.73 239 *e*P **P 11 12 56.5 +1.9**
BOSA pmax pmax
comp=Z,38nm,0.8s
SUW Suwalki 74.76 325 *e*P **P 11 12 53.3 -0.7**
SUW Suwalki 74.76 325 *e*P **P 11 12 53.1 -0.9**
comp=Z,119nm,0.8s
SUW Suwalki 74.76 325⇑*e*P **P 11 12 53.3 -0.7**
CRVS Cervenica-Dubn 74.88 319 *e*P **P 11 12 55.3 +0.4**
CRVS pmax pmax
comp=Z,88nm,1.4s
CRVS Cervenica-Dubn 74.88 319 *e*P **P 11 12 55.3 +0.4**
FIA1 FINESS Array S 75.08 332 *e*P **P 11 12 54.4 -1.3**
FIA1 *e*P **P 11 12 55.2 -0.5**
FINES FINESS Array B 75.08 332 P **P 11 12 55.2 -0.6**
comp=Z,25nm,0.5s,baz=98,slow=5.4,SNR=122
FINES pP **pP 11 13 11.0 -1.0**
comp=Z,16nm,0.5s,baz=96,slow=5.4,SNR=8.0
FINES LR LR 11 51 03.5
comp=Z,88nm,20.1s,baz=152,slow=40
DIVS Divibare 75.21 314 *e*P **P 11 12 56.6 -0.4**
comp=Z,17nm,0.8s
MSF Maaselka 75.24 337 *e*P **P 11 12 56.1 -0.5**
MSF pmax pmax
comp=Z,152nm,0.8s
DZM Mont Dzumac 75.34 114 P **P 11 12 59.0 +0.9**
comp=Z,27nm,1.0s,baz=335,slow=0.6,SNR=6.5
DZM LR LR 11 47 55.3
comp=Z,172nm,20.9s,baz=270,slow=37
DZM Mont Dzumac 75.34 114 *e*P **P 11 12 58.9 +0.8**
comp=Z,157nm,1.4s
DZM Mont Dzumac 75.34 114 *e*LR LR 11 36 17.1
comp=Z,318nm,22.9s
DZM Mont Dzumac 75.34 114 *e*P **P 11 12 59.7 +1.6**
DZM *e*pP **PcP 11 13 10.1 -1.1**
KECS Kecovo 75.45 319 *e*P **P 11 12 58.6 +0.4**
KECS pmax pmax
comp=Z,28nm,0.7s
KECS Kecovo 75.45 319 *e*P **P 11 12 58.6 +0.4**
PDG Podgorica 75.56 312⇑*i*P **P 11 12 58.5 -0.4**
PDG Podgorica 75.56 312⇑*i*P **P 11 12 58.1 -0.8**
TTG Podgorica 75.56 312 *e*P **P 11 12 58.2 -0.7**
comp=Z,41nm,0.7s
TTG Podgorica 75.56 312 *e*P **P 11 12 58.2 -0.7**
TTG pmax pmax
comp=Z,41nm,0.7s
DRME Dracevica, Mon 75.59 312⇑*i*P **P 11 12 58.2 -0.9**
NIE Niedzica 75.71 320 *e*P **P 11 13 00.4 +0.7**
NIE Niedzica 75.71 320⇑*e*P **P 11 13 00.4 +0.7**
PSZ Piszkesteto 75.76 318⇑*i*P **P 11 13 00.4 +0.3**
PSZ Piszkesteto 75.76 318⇑*e*P **P 11 13 00.3 +0.2**
PSZ Piszkesteto 75.76 318 *e*P **P 11 13 00.1 +0.1**
comp=Z,49nm,0.7s
PSZ Piszkesteto 75.76 318 *e*P **P 11 13 00.1 +0.1**
PSZ pmax pmax
comp=Z,49nm,0.7s
BEL Belsk 75.78 322 *e*P **P 11 13 00.2 +0.3**
BEL Belsk 75.78 322 *e*P **P 11 13 00.2 +0.3**
OJC Ojcow 76.15 320 *e*P **P 11 13 02.4 +0.2**
OJC Ojcow 76.15 320 *e*P **P 11 13 02.3 +0.2**
comp=Z,115nm,0.6s
OJC Ojcow 76.15 320⇑*e*P **P 11 13 02.3 +0.2**
LANS Liptovska Anna 76.21 319 *e*P **P 11 13 03.1 +0.6**
LANS Liptovska Anna 76.21 319 *e*P **P 11 13 03.1 +0.6**
OUL Oulu 76.22 336 P **P 11 13 01.8 -0.3**
OUL pmax pmax
comp=Z,73nm,1.0s
MAW Mawson 76.27 192 P **P 11 13 04.0 +1.7**
comp=Z,3.0nm,0.6s,baz=48,slow=3.7,SNR=7.9
MAW pP **pP 11 13 18.6 0.0**
comp=Z,10nm,0.7s,baz=31,slow=8.0,SNR=9.7
MAW Mawson 76.27 192 *e*P **P 11 13 05.3 +2.9**
comp=Z,3.0nm,0.8s
MAW pP **pP 11 13 18.6 0.0**
MORH M¨‡r¨¡gy, Hung 76.40 316⇑*e*P **P 11 13 03.3 -0.3**
VYHS Vyhne 76.54 318 *e*P **P 11 13 04.5 +0.1**
VYHS pmax pmax
comp=Z,21nm,0.7s
VYHS Vyhne 76.54 318 *e*P **P 11 13 04.5 +0.1**
KLNR Kaliningrad 76.58 325*c i*P **P 11 13 04.1 -0.3**
KLNR pmax pmax
comp=Z,96nm,0.8s
SGF Sodankyl 76.70 338 *e*P **P 11 13 04.7 -0.1**
SGF pmax pmax
comp=Z,125nm,0.9s
SRO Srobarova 76.81 318 *e*P **P 11 13 06.9 +1.0**
SRO Srobarova 76.81 318 *e*P **P 11 13 06.9 +1.0**
VAF Ylistaro 77.04 334 *e*P **P 11 13 06.6 -0.2**
VAF pmax pmax
comp=Z,81nm,1.3s
OKC Ostrava-Krasne 77.15 320⇑*e*P **P 11 13 08.4 +0.6**
OKC *e*PCP **PcP 11 13 19.4 +1.0**
OKC *e*pP **pP 11 13 25.6 +1.5**
OKC *e*S **S 11 22 50.7 -1.8**
OKC Ostrava-Krasne 77.15 320 *e*P **P 11 13 08.4 +0.6**
OKC *e* 11 13 19.4
OKC *e* 11 13 25.6
OKC *e*S **S 11 22 50.7 -1.8**
TIP Timpagrande 77.19 309⇑*i*P **P 11 13 09.1 +0.8**
TIP Timpagrande 77.19 309 *e*P **P 11 13 08.8 +0.5**
comp=Z,84nm,1.5s
TIP Timpagrande 77.19 309⇑*i*P **P 11 13 09.1 +0.8**
KEV Kevo 77.28 341 *e*P **P 11 13 08.1 0.0**
comp=Z,77nm,0.7s
KEV Kevo 77.28 341 *e*P **P 11 13 08.1 0.0**
KEV pmax pmax
comp=Z,77nm,0.7s
BLY Banja Luka 77.28 315⇑*i*P **P 11 13 08.9 +0.3**
BLY Banja Luka 77.28 315 *e*P **P 11 13 08.6 0.0**
comp=Z,44nm,0.7s
MATE Matera 77.32 310⇑*i*P **P 11 13 08.9 0.0**
MATE Matera 77.32 310⇑*i*P **P 11 13 08.9 0.0**
JAVC Velka Javorina 77.35 319 *e*P **P 11 13 10.1 +1.1**

MORC Moravsky Berou 77.53 320⇑ *i*P P 11 13 10.7 +0.7
MORC Moravsky Berou 77.53 320 *e*P P 11 13 10.4 +0.4
comp=Z,662nm,1.5s
MORC Moravsky Berou 77.53 320 *e*P P 11 13 10.4 +0.4
MORC pmax pmax
comp=Z,660nm,1.5s
MORC Moravsky Berou 77.53 320 *e*P P 11 13 10.4 +0.4
MODS Modra-Piesok 77.56 318 *e*P P 11 13 09.5 -0.6
MODS pmax pmax
comp=Z,96nm,1.4s
MODS Modra-Piesok 77.56 318 *e*P P 11 13 09.5 -0.6
ZST Bratislava 77.66 318 *e*P P 11 13 09.7 -0.9
ZST pmax pmax
comp=Z,21nm,1.5s
ZST Bratislava 77.66 318 *e*P P 11 13 09.6 -1.0
ARCES ARCESS Array B 77.71 340 P P 11 13 10.5 0.0
comp=Z,49nm,0.6s,baz=89,slow=5.8,SNR=270
ARCES pP **pP 11 13 26.3 -0.5**
comp=Z,23nm,0.6s,baz=93,slow=5.3,SNR=6.6
ARCES PP **PP 11 16 08.0 +1.7**
comp=Z,7.0nm,0.7s,baz=106,slow=8.9,SNR=4.5
ARCES LR LR 11 50 49.5
comp=Z,208nm,21.5s,baz=108,slow=38
ARE0 ARCESS Array S 77.71 340 *e*P P 11 13 10.6 +0.1
comp=Z,54nm,0.7s
ARE0 ARCESS Array S 77.71 340 *e*P P 11 13 10.6 +0.1
BEHE Becsehely 77.72 316⇑ *e*P P 11 13 11.8 +0.8
CEL Celeste 77.81 308 *e*P P 11 13 13.5 +1.7
comp=Z,61nm,0.8s
SOP Sopron 77.97 317⇑ *e*P P 11 13 12.7 +0.3
SOP Sopron 77.97 317 P P 11 13 12.7 +0.3
SOP pmax pmax
comp=Z,56nm,1.2s
KRLC Kraliky 78.05 320⇑ *e*P P 11 13 13.6 +0.7
KRLC Kraliky 78.05 320 *e*P P 11 13 13.6 +0.7
KOGS Kog 78.08 316⇑ *i*P P 11 13 13.3 +0.3
VRAC Vranov 78.10 319 *e*P P 11 13 13.2 +0.1
GKP Gorka Klasztor 78.13 323 *e*P P 11 13 12.7 -0.4
GKP Gorka Klasztor 78.13 323 *e*P P 11 13 12.7 -0.4
BILL Bilibino 78.15 21 *e*P P 11 13 12.0 -1.0
comp=Z,26nm,0.8s
BILL Bilibino 78.15 21*c* *i*P P 11 13 11.7 -1.3
BILL pmax pmax
comp=Z,24nm,0.7s
BILL MLR MLR
comp=Z,1μm,19.0s
KRUC Moravsky 78.21 319 *e*P P 11 13 13.7 0.0
KTK1 Kautokeino 78.33 340 *e*P P 11 13 13.8 -0.2
DPC Dobruska-Polom 78.38 320⇑ *i*P P 11 13 15.6 +1.0
DPC *e*pP **pP 11 13 32.3 +1.3**
DPC *e*S **S 11 23 04.4 -1.5**
DPC Dobruska-Polom 78.38 320⇑ *i*P P 11 13 15.6 +1.0
DPC *e* 11 13 32.3
DPC *e*S **S 11 23 04.4 -1.5**
KSP Ksiaz 78.44 321 *e*P P 11 13 15.5 +0.6
KSP Ksiaz 78.44 321⇑ *e*P P 11 13 15.5 +0.6
CONA Conrad Observa 78.46 318 *i*P P 11 13 15.2 0.0
comp=Z,14nm,0.7s
CONA *i*P **P 11 13 15.4 +0.1**
SNR=15
UPC Upice 78.59 320⇑ *e*P P 11 13 16.4 +0.6
UPC *e*pP **pP 11 13 33.6 +1.5**
UPC Upice 78.59 320 *e*P P 11 13 16.4 +0.6
UPC *e* 11 13 33.6
HAMF Hammerfest 78.63 341 *e*P P 11 13 15.5 -0.1
ARSA Arzberg 78.64 317 *i*P P 11 13 16.5 +0.3
comp=Z,83nm,1.4s
ARSA *i*P **P 11 13 16.8 +0.6**
SNR=19
BOJS Bojanci 78.70 315⇑ *i*P P 11 13 16.7 +0.2
PERS Pernice 78.87 316⇑ *i*P P 11 13 18.0 +0.5
SOKA Soboth 78.93 316 *i*P P 11 13 18.1 +0.3
SNR=38
SOKA *i*P **P 11 13 18.5 +0.6**
comp=Z,68nm,0.8s
VAE Valguarnera 78.96 307 P P 11 13 19.6 +1.5
comp=Z,34nm,0.8s,baz=34,slow=7.3,SNR=6.8
LJU Ljubljana 79.24 316⇑ *e*P P 11 13 19.9 +0.5
OBKA Obir 79.25 316 *i*P P 11 13 20.3 +0.7
comp=Z,31nm,0.7s
OBKA *i*P **P 11 13 20.3 +0.7**
SNR=12
SMY Shemya 79.31 37 *e*P P 11 13 18.9 -0.7
comp=Z,113nm,0.7s
SMY Shemya 79.31 37 *e*P P 11 13 18.9 -0.7
SMY pmax pmax
comp=Z,110nm,0.7s
GOPC GO Pecny, Ondr 79.32 320⇑ *e*P P 11 13 20.5 +0.7
GOPC *e*pP **pP 11 13 36.6 +0.4**
GOPC GO Pecny, Ondr 79.32 320 *e*P P 11 13 20.5 +0.7
GOPC *e* 11 13 36.6
SUR Sutherland 79.37 236 P P 11 13 23.0 +2.3
comp=Z,0.9nm,0.8s,baz=85,slow=11,SNR=5.4
SUR pP **pP 11 13 39.3 +2.3**
comp=Z,2.5nm,0.7s,baz=88,slow=6.2,SNR=9.8
SUR Sutherland 79.37 236 *e*P P 11 13 23.8 +3.2
comp=Z,45nm,0.8s
SUR pP **pP 11 13 39.3 +2.3**
PRU Pruhonice 79.49 320⇑ *e*P P 11 13 21.1 +0.4
PRU Pruhonice 79.49 320 *e*P P 11 13 21.1 +0.4
PVCC Panska Ves 79.51 320⇑ *e*P P 11 13 21.4 +0.6
PVCC Panska Ves 79.51 320 *e*P P 11 13 21.4 +0.6
MOA Molln 79.53 318 *i*P P 11 13 21.1 +0.1
comp=Z,22nm,0.8s
MOA *i*P **P 11 13 21.1 +0.1**
SNR=10
TSUM Tsumeb 79.63 249 *e*P P 11 13 24.9 +2.6
comp=Z,10nm,0.9s
BSD Bornholm Skovb 79.68 325 *i*P P 11 13 21.1 -0.5
BSD Bornholm Skovb 79.68 325 *i*P P 11 13 21.1 -0.5
CADS Cadrg 79.80 316⇑ *i*P P 11 13 22.4 -0.1
AQU L'Aquila 79.88 312 *e*P P 11 13 22.9 -0.1
comp=Z,52nm,0.8s
AQU L'Aquila 79.88 312 *e*P P 11 13 23.0 -0.1
AQU pmax pmax
comp=Z,52nm,0.8s
MYKA Terra Mystica 79.88 316 *i*P P 11 13 23.0 +0.1
SNR=12
MYKA *i*P **P 11 13 23.1 +0.1**
comp=Z,18nm,0.6s
CLTB Caltabellotta 79.91 307 *e*P P 11 13 23.3 -0.1
comp=Z,29nm,0.7s
BRG Berggiesshubel 79.93 321⇑ *i*P P 11 13 23.3 +0.2
comp=Z,33nm,0.9s
BRG *e* 11 47 35.3
comp=Z,3.3nm,0.8s
BRG Berggiesshubel 79.93 321⇑ *i*P P 11 13 23.3 +0.2
BRG pmax pmax
comp=Z,33nm,0.9s
GEA0 GERESS Array S 79.96 319 *e*P P 11 13 24.1 +0.8
GEC2 GERESS Array S 79.96 319 *e*P P 11 13 24.2 +0.8
comp=Z,67nm,0.8s
GEC2 GERESS Array S 79.96 319 *e*P P 11 13 24.2 +0.8
GEC2 pmax pmax
comp=Z,67nm,0.8s
GERES GERESS Array B 79.96 319 P P 11 13 23.6 +0.2
comp=Z,47nm,0.7s,baz=95,slow=6.0,SNR=234
TRO Tromso 79.96 340 *e*P P 11 13 22.4 -0.4
KHC Kasperske Hory 80.06 319⇑ *e*P P 11 13 24.1 +0.2
KHC *e*pP **pP 11 13 40.2 0.0**
KHC *e*x x 11 13 50.2
KHC *e*S **S 11 23 20.2 -3.6**
KHC Kasperske Hory 80.06 319 *e*P P 11 13 24.1 +0.2
comp=Z,8.9nm,0.7s
KHC Kasperske Hory 80.06 319 *e*P P 11 13 24.1 +0.2
KHC *e* 11 13 40.2
KHC *e*S **S 11 23 20.2 -3.6**
KBA Koelnbreinsper 80.11 317 *i*P P 11 13 24.0 -0.3
comp=Z,23nm,0.6s
KBA *i*P **P 11 13 24.1 -0.3**
SNR=14
KBA Koelnbreinsper 80.11 317 P P 11 13 23.8 -0.5
KBA pmax pmax
comp=Z,38nm,1.0s
WET Wettzell 80.52 319 P P 11 13 26.5 +0.2
WET pmax pmax
comp=Z,49nm,1.5s
CLL Collm 80.55 321⇑ *i*P P 11 13 26.2 -0.1
comp=Z,29nm,1.2s
CLL *e*(pP) **pP 11 13 45.0 +2.2**
CLL LmV 11 56 00.0
comp=Z,100nm,19.9s
CLL Collm 80.55 321 *e*P P 11 13 26.0 -0.3
comp=Z,19nm,1.0s
CLL Collm 80.55 321 *e*P P 11 13 26.0 -0.3
CLL pmax pmax
comp=Z,19nm,1.0s
ABTA Abfaltersbach 80.67 316 *i*P P 11 13 26.6 -0.7
SNR=12
ABTA *i*P **PcP 11 13 27.0 -6.9**
comp=Z,19nm,0.6s
HFS Hagfors 80.79 330 P P 11 13 26.8 -0.7
comp=Z,8.1nm,0.4s,baz=123,slow=5.3,SNR=49
HFS LR LR 11 52 46.3
comp=Z,88nm,21.2s,baz=98,slow=38
NKC Novy Kostel 80.85 320⇑ *e*P P 11 13 28.5 +0.5
NKC Novy Kostel 80.85 320 *e*P P 11 13 28.5 +0.5
STEI Steigen 81.00 338 *e*P P 11 13 27.7 -0.7
MOR8 Moi Rana 81.08 336 *e*P P 11 13 28.2 -0.8
WTTA Wattenberg 81.28 317 *i*P P 11 13 30.3 -0.3
comp=Z,37nm,0.6s
WTTA *i*P **P 11 13 30.3 -0.3**
SNR=14
WATA Walderalm 81.32 317 *i*P P 11 13 30.3 -0.5
comp=Z,24nm,0.5s
WATA *i*P **P 11 13 30.5 -0.2**
SNR=8.1
GRB1 Grafenberg Arr 81.33 319 P P 11 13 31.5 +0.9
GRB1 pmax pmax
comp=Z,97nm,1.1s
GRF Grafenberg Arr 81.62 319 P P 11 13 33.1 +1.0
GRF pmax pmax
comp=Z,63nm,1.3s
MOTA Moosalm 81.64 317 *i*P P 11 13 31.0 -1.5
comp=Z,33nm,0.6s
MOTA *i*P **P 11 13 31.0 -1.5**
SNR=21
KONS Konsvik 81.65 336 *e*P P 11 13 31.6 -0.2
LOF Lofoten 81.66 338 *e*P P 11 13 31.1 -0.8
RETA Reutte 81.88 317 *i*P P 11 13 33.6 -0.1
SNR=25
RETA *i*P **P 11 13 33.6 -0.1**
comp=Z,55nm,0.6s
FETA Feichten 81.89 317 *i*P P 11 13 33.8 -0.1
comp=Z,30nm,0.7s
FETA *i*P **P 11 13 33.9 +0.1**
SNR=14
NSS Namsos 81.96 334 *e*P P 11 13 33.1 -0.4
NB2 NORSAR Subarra 82.08 331 P P 11 13 33.3 -1.0
comp=Z,13nm,0.9s,baz=95,slow=5.6
NB2 NORSAR Subarra 82.08 331 P P 11 13 33.3 -1.0
baz=95,slow=5.6
NOA NORSAR Array B 82.08 331 P P 11 13 33.2 -1.2
comp=Z,10.0nm,0.8s,baz=92,slow=5.7,SNR=21
NOA PP **PP 11 16 42.6 -0.2**
comp=Z,3.7nm,0.7s,baz=112,slow=6.1,SNR=4.7
NOA LR LR 11 54 19.5
comp=Z,89nm,19.3s,baz=105,slow=39
VLC Villacollemand 82.12 314 *e*P P 11 13 34.4 -0.5
comp=Z,31nm,1.1s
FUORN Ofenpass-Fuorn 82.21 316 *e*P P 11 13 36.1 +0.5
OSL Oslo 82.27 330 *e*P P 11 13 35.9 +0.6
HSPB Hornsund (broa 82.28 347 *e*P P 11 13 34.7 -0.3
SPA0 Spitsbergen Ar 82.30 348 *e*P P 11 13 34.8 -0.3
SPA0 Spitsbergen Ar 82.30 348 *e*P P 11 13 34.6 -0.5
SPITS Spitsbergen Ar 82.30 348 P P 11 13 34.1 -1.1
comp=Z,58nm,0.6s,baz=94,slow=6.1,SNR=112
SPITS LR LR 11 56 08.4
comp=Z,205nm,21.8s,baz=55,slow=40
DAVA Damuels 82.48 317 *i*P P 11 13 37.0 +0.2
comp=Z,30nm,0.7s
DAVA *i*P **P 11 13 37.1 +0.2**
SNR=15
KONO Kongsberg 82.83 329 *e*P P 11 13 38.2 0.0
comp=Z,57nm,1.4s
KONO Kongsberg 82.83 329*c* *i*P P 11 13 37.6 -0.6
KONO pmax pmax
comp=Z,36nm,1.2s
KONO Kongsberg 82.83 329 *e*P P 11 13 38.0 -0.2
TUE Stuetta 82.84 316 *e*P P 11 13 38.8 0.0
comp=Z,28nm,0.7s
VSL Villasalto 82.92 309 *e*P P 11 13 38.7 -0.4
comp=Z,68nm,1.1s
KEST Kesra 83.04 305 P P 11 13 40.6 +0.7
comp=Z,49nm,0.9s,baz=30,slow=1.9,SNR=39
KEST Kesra 83.04 305 *e*P P 11 13 41.1 +1.2
comp=Z,81nm,1.1s
PGF Pioggiola 83.14 312 P P 11 13 39.8 -0.6
PGF pmax pmax
comp=Z,38nm,0.9s
DOMB Dombas 83.15 332 *e*P P 11 13 39.7 -0.2
TOD Tromm 83.19 319 P P 11 13 40.5 +0.2
KBS Kingsbay 83.29 349 *e*P P 11 13 39.4 -0.8
comp=Z,45nm,1.0s
KBS Kingsbay 83.29 349 *e*P P 11 13 39.4 -0.8
KBS pmax pmax
comp=Z,45nm,1.0s
KBS Kingsbay 83.29 349 *e*P P 11 13 39.6 -0.6
SLE Schleitheim 83.41 317 P P 11 13 42.6 +1.0
BFO Black Forest 83.52 318 *e*P P 11 13 41.8 -0.2
BFO Black Forest 83.52 318 *e*P P 11 13 41.8 -0.2
LANF Langenberg 83.85 319 P P 11 13 44.1 +0.4
MOL Molde 83.86 332 *e*P P 11 13 43.0 -0.4
AKN Aaknes 84.12 332 *e*P P 11 13 45.5 +0.7
SAOF Saorge 84.16 314 P P 11 13 46.7 +1.3
SAOF pmax pmax
comp=Z,52nm,1.2s
CDF Champ du Feu 84.22 318 *e*P P 11 13 44.5 -1.2
CDF pmax pmax
comp=Z,13nm,0.8s
SBF Sospel 84.25 313 *e*P P 11 13 45.3 -0.6
SBF pmax pmax
comp=Z,69nm,0.7s
SENIN Lac Senin/Sane 84.26 316 *e*P P 11 13 46.4 +0.3
ECH Echery 84.30 318 *e*P P 11 13 45.8 -0.2
ECH Echery 84.30 318 *e*P P 11 13 45.8 -0.2
BLS5 Blasjo 84.43 329 *e*P P 11 13 47.1 +0.7
HINF Hinteralfeld 84.52 317 P P 11 13 46.5 -0.7
HINF pmax pmax
comp=Z,8.0nm,0.7s
HYA Hoyanger 84.52 331 *e*P P 11 13 46.4 -0.4
ABSA Djebel Ababsia 84.53 306 P P 11 13 48.9 +1.3
LOMF Lomont 84.55 317 P P 11 13 47.6 +0.2
CMAH Djebel Manchou 84.56 306 P P 11 13 48.7 +1.0
LPG La Plagne 84.68 315 *e*P P 11 13 47.7 -0.6
LPG pmax pmax
comp=Z,37nm,0.7s
BNI Bardonecchia 84.75 315 *e*P P 11 13 47.8 -0.7
comp=Z,33nm,0.9s
BNI Bardonecchia 84.75 315 *e*P P 11 13 47.8 -0.7
BNI pmax pmax
comp=Z,33nm,0.9s
FRF La Foret Royal 84.83 313 *e*P P 11 13 48.3 -0.5
FRF pmax pmax
comp=Z,50nm,0.5s
HAU Haudompre 84.85 318 *e*P P 11 13 47.7 -1.1
HAU pmax pmax
comp=Z,50nm,0.7s
WLF Walferdange 84.91 319 ⇓P P 11 13 49.4 +0.3
comp=Z,29nm,1.8s
MEM Membach 84.97 320 ⇑P P 11 13 49.3 0.0
comp=Z,18nm,1.1s
MEM Membach 84.97 320 *e*P P 11 13 49.8 +0.5
MEM pmax pmax
comp=Z,35nm,1.2s
CAEH 'Ain El Ouahch 85.01 306 P P 11 13 50.4 +0.5
CKFL Kef-Lekhel 85.13 306 P P 11 13 51.7 +1.1
ORIF Oris-en-Rattie 85.32 315 *e*P P 11 13 49.1 -2.2
ORIF pmax pmax
comp=Z,16nm,0.6s
CASM Ain Smara 85.33 306 P P 11 13 52.7 +1.2
MSVF Nonsavu 85.39 108 *e*P P 11 13 53.8 +1.7
MSVF Nonsavu 85.39 108⇑ *e*P P 11 13 53.5 +1.3
MSVF pmax pmax
comp=Z,36nm,1.0s
BCLA Clavier 85.42 320 ⇓P P 11 13 51.8 +0.3
DFRA Djebel Bou Aff 85.80 306 P P 11 13 55.7 +1.7
DOU Dourbes 85.89 320 ⇑P P 11 13 54.2 +0.2
BAIF Baives 86.15 320 *e*P P 11 13 54.7 -0.5
BAIF pmax pmax
comp=Z,23nm,0.9s
VIVF Saint-Julien-l 86.18 315 *e*P P 11 13 54.9 -0.6
VIVF pmax pmax
comp=Z,22nm,0.9s
SSB Saint Sauveur 86.24 315 *e*P P 11 13 55.9 +0.1
SSB Saint Sauveur 86.24 315 *e*P P 11 13 55.9 +0.1
SMF Signal de Mont 86.63 316 P P 11 13 56.7 -1.0
SMF pmax pmax
comp=Z,32nm,0.8s
AVF Avril sur Loir 86.96 317 *e*P P 11 13 58.3 -0.9
AVF pmax pmax
comp=Z,19nm,1.0s
TAM Tamanrasset 87.11 292 *e*P P 11 14 02.9 +2.2
TAM Tamanrasset 87.11 292 *e*P P 11 14 02.9 +2.2
BKZ Black Stump Fm 87.11 130 *e*P P 11 13 59.7 -0.4
TCF Toulx Ste Croi 87.79 316 *e*P P 11 14 02.7 -0.6
TCF pmax pmax
comp=Z,9.0nm,0.8s
EMHD Djebel Mahouad 88.18 306 P P 11 14 07.2 +1.7
RJF Les Rejaudoux 88.37 315 P P 11 14 05.9 -0.1
RJF pmax pmax
comp=Z,18nm,0.8s
EBNR Beni Rached 89.32 306 P P 11 14 12.6 +1.8
FLN La Foliniere 89.32 319 *e*P P 11 14 09.8 -0.6
FLN pmax pmax
comp=Z,29nm,0.8s
MFF Saint Martin d 89.37 317 *e*P P 11 14 10.2 -0.5
MFF pmax pmax
comp=Z,63nm,1.5s
NIKH Nikolski High 89.61 37 *e*P P 11 14 10.7 -0.9
GRR Gorron 89.62 318 *e*P P 11 14 11.5 -0.3
GRR pmax pmax
comp=Z,82nm,1.6s
RDOG Red Dog Mine 89.62 22 *e*P P 11 14 11.8 +0.3
EANR 'Ain N'Sour 89.70 306 P P 11 14 14.2 +1.6
DAG Danmarks Havn 89.94 348⇑ *i*P P 11 14 11.8 -0.9
comp=Z,25nm,0.7s
DAG Danmarks Havn 89.94 348⇑ *i*P P 11 14 11.8 -0.9
DAG pmax pmax
comp=Z,25nm,0.7s
EKA Eskdalemuir Ar 89.99 326 P P 11 14 13.6 +0.2
comp=Z,5.1nm,0.6s,baz=98,slow=5.6,SNR=16
EKA PP **PP 11 17 49.7 +2.9**
comp=Z,2.0nm,0.7s,baz=83,slow=7.8,SNR=3.5
EKA LR LR 12 01 15.8
comp=Z,101nm,18.1s,baz=80,slow=40
ETSF Etsaut 90.14 313 *e*P P 11 14 14.6 +0.1
ETSF pmax pmax
comp=Z,12nm,0.6s
RAO Raoul Island 90.40 119 LR LR 11 57 56.2
comp=Z,78nm,18.5s,baz=348,slow=38
VNDA Vanda 90.46 168 P P 11 14 16.4 +1.3
comp=Z,1.7nm,0.6s,baz=300,slow=7.9,SNR=5.3
VNDA Vanda 90.46 168 *e*P P 11 14 16.1 +1.0
VNDA Vanda 90.46 168 *e*P P 11 14 16.1 +1.0
SJPF Ste Jean 90.59 313 *e*P P 11 14 16.8 +0.3
SJPF pmax pmax
comp=Z,19nm,0.9s
SGMF Saint Gilles 90.76 318 *e*P P 11 14 16.6 -0.5
QUIF Quistinic 91.22 318 *e*P P 11 14 18.5 -0.7
QUIF pmax pmax
comp=Z,26nm,0.9s
SBA Scott Base 91.57 168 *e*P P 11 14 21.3 +1.1
SBA Scott Base 91.57 168 *e*P P 11 14 21.3 +1.1
TORD Torodi Ar. Bea 91.64 283 P P 11 14 22.9 +1.0
comp=Z,7.8nm,0.7s,baz=80,slow=4.0,SNR=40
TORD pP **pP 11 14 39.1 +0.5**
comp=Z,12nm,0.9s,baz=79,slow=5.1,SNR=6.8
TORD PP **PP 11 18 07.0 +6.0**
comp=Z,1.6nm,0.8s,baz=76,slow=5.3,SNR=4.5
TORD PKKPbc **PKKPbc 11 31 41.7 +0.6**
comp=Z,1.0nm,0.5s,baz=304,slow=2.9,SNR=19
TORD LR LR 11 54 25.0
comp=Z,335nm,19.6s,baz=80,slow=35
ES19 SONSECA Array 93.10 310 *e*P P 11 14 29.0 +0.7
ESDC Sonseca Array 93.15 310 P P 11 14 29.1 +0.6
comp=Z,7.4nm,0.6s,baz=60,slow=4.1,SNR=34
ESDC PP **PP 11 18 18.4 +6.1**
comp=Z,0.3nm,0.3s,baz=70,slow=7.4,SNR=4.2
ESDC PKiKP **PKiKP 11 19 15.1 -0.2**
comp=Z,0.5nm,0.3s,baz=38,slow=2.6,SNR=6.1
ESDC LR LR 12 01 08.9
comp=Z,64nm,19.5s,baz=195,slow=38
ESLA Sonseca Array 93.15 310 *e*P P 11 14 29.3 +0.8
PAB San Pablo 93.47 310 *e*P P 11 14 30.8 +0.8
PAB San Pablo 93.47 310 *e*P P 11 14 30.8 +0.8
SCO Scoresbysund 93.50 342 *i*P P 11 14 29.8 +0.5
comp=Z,12nm,0.8s
SCO Scoresbysund 93.50 342 *e*P P 11 14 29.2 -0.1
SCO Scoresbysund 93.50 342 *i*P P 11 14 29.8 +0.5
SCO pmax pmax
comp=Z,12nm,0.8s
TOLK Toolik Lake Re 94.07 19 P P 11 14 32.3 +0.2
baz=296
TOLK Toolik Lake Re 94.07 19 *e*P P 11 14 32.2 +0.2
MLY Manley 95.20 23 *e*P P 11 14 37.7 +0.3
CAST Castle Rocks 95.33 25 *e*P P 11 14 37.2 -0.7
QSPA South Pole Qui 95.36 180 P P 11 14 39.3 +1.3
comp=Z,1.0nm,0.7s,baz=312,slow=4.1,SNR=5.0
QSPA LR LR 11 51 05.2
comp=Z,576nm,21.9s,baz=252,slow=31
PPLA Purkeypile 95.49 25 *e*P P 11 14 38.6 -0.2
BPAW Bear Paw Mtn. 95.50 24 *e*P P 11 14 38.6 -0.1
TRF Thorofare Moun 96.05 24 *e*P P 11 14 41.1 -0.3
SKT Skwentna 96.14 26 *e*P P 11 14 40.0 -1.6
MDM Murphy Dome 96.20 22 *e*P P 11 14 41.5 -0.3
COLA College 96.38 22⇑ *e*P P 11 14 41.9 -0.7
COLA pmax pmax
comp=Z,4.0nm,0.7s
WRH Wood River Hil 96.47 23 *e*P P 11 14 42.3 -0.7
MCK McKinley 96.47 24 *e*P P 11 14 42.7 -0.4
MCK McKinley 96.47 24 *e*P P 11 14 42.7 -0.4
CCB Clear Creek Bu 96.50 23 *e*P P 11 14 41.9 -1.2
SUMG Summit 96.61 347 *i*P P 11 14 43.8 -0.2
comp=Z,7.2nm,0.6s
SUMG Summit 96.61 347 *e*P P 11 14 43.5 -0.5
SUMG Summit 96.61 347 *i*P P 11 14 43.8 -0.2
SUMG pmax pmax
comp=Z,7.0nm,0.6s
RND Reindeer 96.65 24 *e*P P 11 14 43.1 -0.9
RND Reindeer 96.65 24 *e*P P 11 14 43.1 -0.9
SUA Susitna One 96.69 26 *e*P P 11 14 43.7 -0.5
IL1 Eielson Array 96.79 22 *e*P P 11 14 41.6 -2.9
ILAR Eielson Array 96.79 22 P P 11 14 42.5 -2.1
comp=Z,3.1nm,0.5s,baz=292,slow=3.2,SNR=52
ILAR PP PP 11 18 26.7 -13
comp=Z,0.9nm,0.8s,baz=291,slow=5.8,SNR=4.4
ILAR LR LR 12 01 06.3
comp=Z,129nm,21.0s,baz=303,slow=37
ILB Eielson Array 96.79 22 *e*P P 11 14 42.9 -1.7
KOWA Kowa 96.99 285 P P 11 14 47.3 +0.8
comp=Z,3.7nm,0.5s,baz=240,slow=1.6,SNR=10
KOWA LR LR 11 57 26.0
comp=Z,278nm,20.2s,baz=37,slow=35
OHAK Old Harbor 97.15 31 *e*P P 11 14 45.6 -0.6
RC01 Rabbit Creek A 97.29 26 *e*P P 11 14 46.2 -0.6
KDAK Kodiak Island 97.29 30 P P 11 14 46.2 -0.6
comp=Z,14nm,0.9s,baz=284,slow=1.5,SNR=13
BRLK Bradley Lake 97.32 28 *e*P P 11 14 45.9 -1.2
PMR Palmer 97.33 26 *e*P P 11 14 46.2 -0.8
PMR Palmer 97.33 26 *e*P P 11 14 46.2 -0.8
GHO Glory Hole Cre 97.34 25 *e*P P 11 14 46.9 -0.2
DHY Denali Highway 97.40 24 *e*P P 11 14 46.9 -0.6
SNAA Sanae 97.49 198 *i*P P 11 14 47.3 -0.2
SML Sawmill 97.58 25 *e*P P 11 14 47.8 -0.4
SML Sawmill 97.58 25 *e*P P 11 14 47.8 -0.4
SEW Seward 97.84 27 *e*P P 11 14 48.4 -0.9
SCM Sheep Creek Mo 97.99 25 *e*P P 11 14 50.1 0.0
SCM Sheep Creek Mo 97.99 25 *e*P Pdif 11 14 50.1 0.0
RIDG Independ'e Rid 98.08 23 *e*P P 11 14 49.7 -0.7
PAX Paxson 98.21 24 *e*P P 11 14 51.0 -0.1
PAX Paxson 98.21 24 *e*P P 11 14 51.0 -0.1
SCRK Sand Creek 98.28 22 *e*P P 11 14 51.1 -0.3
KULLO Kullorsuaq 98.28 353⇑ *i*P P 11 14 50.8 -0.2
comp=Z,21nm,0.8s
KULLO Kullorsuaq 98.28 353⇑ *i*P P 11 14 50.8 -0.2
KULLO pmax pmax
comp=Z,21nm,0.8s
DOT Dot Lake 98.42 23 *e*P P 11 14 51.4 -0.5
HARP HAARP 98.62 24 *e*P P 11 14 52.4 -0.4
KLU Klutina 98.75 25 *e*P Pdif 11 14 53.7 +0.3
DBIC Dimbokro 98.76 278 P Pdif 11 14 55.7 +1.3
comp=Z,2.1nm,0.7s,baz=91,slow=4.5,SNR=3.5
DBIC LR LR 11 56 40.1
comp=Z,185nm,21.9s,baz=74,slow=34
EGAK Eagle 98.90 21 *e*P P 11 14 53.5 -0.5
INK Inuvik 99.17 16 P Pdif 11 14 54.3 -0.7
comp=Z,13nm,1.0s,baz=342,slow=5.9,SNR=16
INK PKiKP **PKiKP 11 19 26.5 +1.6**
comp=Z,1.3nm,0.6s,baz=337,slow=3.0,SNR=4.2
INK Inuvik 99.17 16 *e*P Pdif 11 14 54.5 -0.6
BMRM Bremner River 99.56 25 *e*P Pdif 11 14 57.0 -0.1
RES Resolute Bay 99.79 3 P Pdif 11 14 58.3 +0.6
comp=Z,23nm,0.7s,baz=310,slow=2.9,SNR=82

DAWY	Dawson	99.93	21	ePdif	Pdif	11 14 58.1	-0.5		comp=Z,5.8nm,0.9s
SFJD	Kangerlussuaq	103.58	347	PP	PP	11 19 31.6	+0.8		comp=Z,11nm,0.7s,baz=40,slow=7.4,SNR=7.2
DLBC	Dease Lake	106.99	23	PKiKP	PKiKP	11 19 39.4	-0.2		comp=Z,1.5nm,0.5s,baz=297,slow=4.5,SNR=3.2
YKA	Yellowknife Ar	108.65	14	Pdiff	Pdif	11 15 37.9	+0.5		comp=Z,0.7nm,0.7s,baz=326,slow=4.6,SNR=15
YKA				PKiKP	PKiKP	11 19 41.6	-0.8		comp=Z,1.0nm,0.6s,baz=337,slow=2.1,SNR=21
YKA				PP	PP	11 20 02.3	-5.8		comp=Z,3.2nm,0.8s,baz=332,slow=7.6,SNR=6.7
YKA				PKKPbc	PKKPbc	11 30 51.2	-2.9		comp=Z,0.4nm,0.6s,baz=148,slow=3.5,SNR=11
YKA				PKKP	PKKPdf	11 31 08.7	+0.7		comp=Z,0.5nm,0.6s,baz=148,slow=3.2,SNR=7.6
TBI	Tubuai	115.90	113	eLR	LR	11 55 01.7			comp=Z,188nm,24.5s
PPT2	Papeete2	116.19	107	eLR	LR	11 55 03.8			comp=Z,138nm,23.0s
A04D	Lummi Island	116.97	27	P	PKPdf	11 19 58.6	0.0		baz=317
B05A	Bryant	117.58	27	P	PKPdf	11 19 59.9	+0.1		baz=318
SCHQ	Schefferville	117.99	348	PKP	PKPdf	11 20 00.5	0.0		comp=Z,8.3nm,0.5s,baz=274,slow=1.9,SNR=8.6
G03D	McMinnville, O	119.25	30	P	PKPdf	11 20 03.0	-0.2		baz=316
NEW	Newport	119.70	24	PKP	PKPdf	11 20 03.8	-0.2		comp=Z,4.8nm,0.5s,baz=258,slow=1.7,SNR=16
NEW	Newport	119.70	24	P	PKPdf	11 20 03.6	-0.4		baz=323
G05D	Wamic, OR	120.17	29	P	PKPdf	11 20 03.9	-1.1		baz=318
I03D	Drain, OR	120.28	31	P	PKPdf	11 20 05.7	+0.5		baz=315
I04A	Tendick Farm,	120.69	30	P	PKPdf	11 20 05.7	-0.4		baz=316
I05D	Terrebonne, OR	120.83	29	P	PKPdf	11 20 06.6	+0.2		baz=317
L02D	Cave Junction,	121.22	33	P	PKPdf	11 20 07.6	+0.5		baz=314
J04D	Umpqua Nationa	121.24	31	P	PKPdf	11 20 07.3	0.0		baz=316
J05D	Fort Rock, OR	121.65	30	P	PKPdf	11 20 08.0	0.0		baz=317
K04D	Chiloquin, OR	121.86	31	P	PKPdf	11 20 07.6	-0.8		baz=316
YBH	Yreka Blue Hor	122.00	32	PKP	PKPdf	11 20 08.6	-0.1		comp=Z,2.2nm,0.7s,baz=55,slow=4.4,SNR=9.1
MSO	Missoula	122.12	23	P	PKPdf	11 20 08.0	-0.8		baz=326
M02C	Callahan	122.16	33	P	PKPdf	11 20 08.8	-0.2		baz=314
M04C	Macdoel	122.42	32	P	PKPdf	11 20 09.3	-0.3		baz=316
N02D	Trinity Center	122.53	33	P	PKPdf	11 20 09.6	-0.1		baz=314
EGMT	Eagleton	122.60	19	P	PKPdf	11 20 09.5	-0.1		baz=331
O03D	Paynes Creek	123.50	33	P	PKPdf	11 20 11.2	-0.5		baz=315
ULM	Lac du Bonnet	123.79	8	PKP	PKPdf	11 20 11.1	-0.6		comp=Z,33nm,0.6s,baz=353,slow=2.0,SNR=112
DGMT	Dagmar	123.83	15	P	PKPdf	11 20 11.7	-0.2		baz=337
BOZ	Bozeman (W)	124.03	22	P	PKPdf	11 20 12.4	-0.2		baz=328
HLID	Hailey	124.61	25	P	PKPdf	11 20 14.0	+0.2		baz=324
LAO	LASA Array	124.89	17	P	PKPdf	11 20 14.6	+0.6		baz=334
A32A	Rocking H Ranc	125.00	9	P	PKPdf	11 20 13.6	-0.5		baz=346
A33A	Warroad	125.14	8	P	PKPdf	11 20 14.1	-0.3		baz=348
B31A	Greenbush Farm	125.29	10	P	PKPdf	11 20 14.2	-0.5		baz=345
RLMT	Red Lodge	125.30	21	P	PKPdf	11 20 15.2	+0.1		baz=330
H17A	Grant Village	125.45	22	P	PKPdf	11 20 16.7	+1.2		baz=329
MDND	Maddock	125.47	12	P	PKPdf	11 20 14.6	-0.5		baz=342
B32A	Ashes, Strandq	125.50	9	P	PKPdf	11 20 14.6	-0.5		baz=346
TAOE	Nuku Hiva Isla	125.57	97	eLR	LR	11 59 30.7			comp=Z,153nm,24.5s
B34A	Aery, Baudette	125.68	8	P	PKPdf	11 20 15.0	-0.5		baz=349
AGMN	Agassiz Nation	125.70	9	P	PKPdf	11 20 14.7	-0.8		baz=347
B33A	Robert and Kas	125.76	8	P	PKPdf	11 20 15.0	-0.6		baz=347
C31A	Landman Farms,	125.88	10	P	PKPdf	11 20 15.2	-0.6		baz=345
B35A	Bob, Littlefor	125.92	7	P	PKPdf	11 20 15.2	-0.7		baz=350
C32A	Crookston	126.05	9	P	PKPdf	11 20 15.2	-1.0		baz=346
C33A	Trail	126.24	9	P	PKPdf	11 20 15.6	-0.9		baz=347
C34A	RKJ Ranch, Bem	126.47	8	P	PKPdf	11 20 16.0	-1.0		baz=348
ELK	Elko	126.48	28	PKP	PKPdf	11 20 19.5	+1.9		comp=Z,7.5nm,0.6s,baz=334,slow=3.1,SNR=24
C35A	Jirik Farms, M	126.54	7	P	PKPdf	11 20 16.1	-1.1		baz=349
EYMN	Ely	126.56	5	P	PKPdf	11 20 16.5	-0.6		baz=352
D31A	Mcclaflin, Tow	126.60	11	P	PKPdf	11 20 16.5	-0.8		baz=345
D32A	Dogwood Acres,	126.64	10	P	PKPdf	11 20 16.3	-1.0		baz=346
C37A	Embarrass	126.72	6	P	PKPdf	11 20 16.9	-0.5		baz=352
NVAR	Mina Array Bea	126.72	32	PKP	PKPdf	11 20 18.7	+0.6		comp=Z,11nm,0.7s,baz=289,slow=2.6,SNR=32
C40A	Isle Royale Na	126.76	3	P	PKPdf	11 20 17.2	-0.3		baz=355
C39A	Grand Marais	126.80	4	P	PKPdf	11 20 16.7	-0.9		baz=354
C38A	Sawbill Land.	126.81	5	P	PKPdf	11 20 17.3	-0.4		baz=353
D33A	AnnSam, Waubun	126.83	9	P	PKPdf	11 20 16.9	-0.8		baz=347
D34A	Park Rapids	126.98	8	P	PKPdf	11 20 17.2	-0.8		baz=348
E31A	Nome	127.04	11	P	PKPdf	11 20 17.3	-0.8		baz=344
D35A	Remer	127.14	7	P	PKPdf	11 20 17.6	-0.7		baz=349
D36A	Goodland	127.15	7	P	PKPdf	11 20 17.5	-0.8		baz=350
BW06	Boulder Array	127.22	22	P	PKPdf	11 20 18.2	-0.7		baz=329
PDAR	Pinedale Array	127.22	22	PKP	PKPdf	11 20 18.4	-0.5		comp=Z,8.1nm,0.6s,baz=157,slow=1.0,SNR=55
D37A	Cotton	127.25	6	P	PKPdf	11 20 18.0	-0.5		baz=351
E33A	Westby DABS, E	127.42	9	P	PKPdf	11 20 18.4	-0.5		baz=347
PKME	Peaks-Kenny Pk	127.51	346	P	PKPdf	11 20 18.8	-0.2		baz=20
E34A	Wadena	127.54	9	P	PKPdf	11 20 18.5	-0.6		baz=348
E35A	Pequot Lakes	127.61	8	P	PKPdf	11 20 18.6	-0.6		baz=349
F31A	Hecla	127.64	11	P	PKPdf	11 20 18.5	-0.7		baz=344
D41A	Chassel	127.65	3	P	PKPdf	11 20 19.0	-0.2		baz=356
E36A	McGregor	127.79	7	P	PKPdf	11 20 19.4	-0.2		baz=350
F32A	Veblen	127.85	10	P	PKPdf	11 20 19.0	-0.7		baz=345
RSSD	Black Hills	127.87	17	P	PKPdf	11 20 19.4	-0.7		baz=336
E38A	The Farm, Brul	127.89	5	P	PKPdf	11 20 19.5	-0.2		baz=352
F33A	5 Mile Ranch,	128.02	10	P	PKPdf	11 20 19.5	-0.5		baz=346
DUG	Dugway, Tooele	128.03	27	P	PKPdf	11 20 20.7	+0.3		baz=324
VES	Vestal, Richgr	128.16	35	P	PKPdf	11 20 19.9	-0.7		baz=316
E44A	Grand Marais A	128.16	0	P	PKPdf	11 20 20.3	+0.1		baz=359
R11A	Troy Canyon, C	128.18	30	P	PKPdf	11 20 20.8	0.0		baz=320
E40A	Wakefield	128.18	4	P	PKPdf	11 20 20.3	0.0		baz=354
E39A	Mellen	128.20	5	P	PKPdf	11 20 20.0	-0.3		baz=353
E41A	Kenton	128.22	3	P	PKPdf	11 20 19.7	-0.7		baz=355
F34A	Alexandria	128.23	9	P	PKPdf	11 20 20.0	-0.4		baz=347
G31A	Conde	128.26	12	P	PKPdf	11 20 20.0	-0.5		baz=344
F35A	Swanville	128.27	8	P	PKPdf	11 20 19.9	-0.6		baz=348
CWC	Cottonwood Cre	128.29	34	P	PKPdf	11 20 20.5	-0.5		baz=317
E42A	Champion	128.31	2	P	PKPdf	11 20 20.0	-0.5		baz=357
G32A	Webster	128.37	11	P	PKPdf	11 20 20.2	-0.5		baz=344
E43A	Lone Tree Farm	128.39	1	P	PKPdf	11 20 20.3	-0.3		baz=358
PKM	Mcpherson Peak	128.40	36	P	PKPdf	11 20 20.5	-0.8		baz=314
F36A	Milaca	128.41	7	P	PKPdf	11 20 20.1	-0.6		baz=350
K22A	Casper	128.41	20	P	PKPdf	11 20 20.4	-0.6		baz=333
E45A	Wooded Hills,	128.43	360	P	PKPdf	11 20 20.6	-0.2		baz=0.2
F38A	Pierce - Schro	128.50	6	P	PKPdf	11 20 21.0	+0.1		baz=352
G33A	Ortonville	128.62	10	P	PKPdf	11 20 20.7	-0.4		baz=346
F39A	Loretta	128.63	5	P	PKPdf	11 20 21.2	0.0		baz=353
ISA	Isabella, Lake	128.63	35	P	PKPdf	11 20 21.1	-0.5		baz=316
F37A	Hinrichs Farm,	128.65	7	P	PKPdf	11 20 21.1	-0.1		baz=351
F40A	Park Falls	128.69	4	P	PKPdf	11 20 21.0	-0.3		baz=354
G34A	Benson	128.71	9	P	PKPdf	11 20 21.0	-0.4		baz=347
SBC	Santa Barbara	128.77	37	P	PKPdf	11 20 20.6	-1.1		baz=314
F44A	Big Bay de Noc	128.80	1	P	PKPdf	11 20 21.4	0.0		baz=359
SUSD	Miller	128.86	12	P	PKPdf	11 20 21.2	-0.5		baz=342
MPMC	Manual Prospec	128.90	34	P	PKPdf	11 20 22.3	+0.1		baz=317
TPNV	Topopah Spring	128.90	32	P	PKPdf	11 20 21.7	-0.4		baz=319
G35A	Watkins	128.91	8	P	PKPdf	11 20 21.4	-0.3		baz=348
F43A	Flat Rock, Esc	128.93	2	P	PKPdf	11 20 21.7	0.0		baz=358
F41A	Three Lakes	128.94	3	P	PKPdf	11 20 21.6	-0.2		baz=355
FURC	Furnace Creek,	128.94	33	P	PKPdf	11 20 21.6	-0.3		baz=318
F42A	Maple Grove Fa	128.97	2	P	PKPdf	11 20 21.8	0.0		baz=356
G36A	St. Michael	128.99	8	P	PKPdf	11 20 21.3	-0.5		baz=349
F46A	Macinaw City C	129.01	359	P	PKPdf	11 20 21.6	-0.3		baz=0.7
H33A	Prehn Over Nor	129.06	10	P	PKPdf	11 20 21.7	-0.4		baz=345
LBNH	Lisbon	129.08	348	P	PKPdf	11 20 21.9	-0.2		baz=17
RKT	Rikitea	129.10	115	eLR	LR	12 01 07.6			comp=Z,245nm,28.2s
F45A	CMU Biological	129.10	0	P	PKPdf	11 20 21.8	-0.3		baz=360
H32A	Carlson Farm,	129.11	11	P	PKPdf	11 20 21.7	-0.4		baz=344
SPMN	Marine on St.	129.12	7	P	PKPdf	11 20 21.7	-0.4		baz=350
LRMC	Laurel Mtn Rad	129.21	34	P	PKPdf	11 20 22.0	-0.7		baz=317
G39A	Holcombe	129.23	5	P	PKPdf	11 20 21.9	-0.4		baz=352
LONY	Lake Ozonia	129.23	350	P	PKPdf	11 20 22.0	-0.3		baz=14
H34A	Spellman Lake,	129.25	10	P	PKPdf	11 20 22.4	0.0		baz=347
G38A	Ridgeland	129.28	6	P	PKPdf	11 20 22.0	-0.5		baz=352
G40A	Rib Lake	129.33	4	P	PKPdf	11 20 22.0	-0.5		baz=354
I31A	Royce, Wessing	129.34	12	P	PKPdf	11 20 22.3	-0.3		baz=343
H35A	Sunnyside Ranc	129.37	9	P	PKPdf	11 20 22.3	-0.3		baz=348
G41A	Antigo	129.46	3	P	PKPdf	11 20 22.2	-0.6		baz=355
EDW2	Edwards Air Fo	129.47	35	P	PKPdf	11 20 23.2	+0.1		baz=316
G42A	Mountain	129.47	3	P	PKPdf	11 20 22.5	-0.2		baz=356
G43A	Wallace	129.49	2	P	PKPdf	11 20 22.7	-0.1		baz=357
I32A	Karley and Nic	129.56	11	P	PKPdf	11 20 22.7	-0.3		baz=344
H36A	Jessenland, He	129.61	8	P	PKPdf	11 20 23.2	+0.2		baz=349
I33A	Coleman	129.67	11	P	PKPdf	11 20 23.0	-0.2		baz=355
SHOC	Shoshone, Teco	129.68	33	P	PKPdf	11 20 23.6	+0.1		baz=318
SADO	Sadowa	129.70	354	PKP	PKPdf	11 20 22.8	-0.4		comp=Z,14nm,0.5s,baz=359,slow=3.0,SNR=20
H38A	Maiden Rock	129.72	6	P	PKPdf	11 20 22.7	-0.6		baz=351
H37A	Dierke Farm, C	129.74	7	P	PKPdf	11 20 23.4	+0.1		baz=350
H39A	Augusta	129.82	6	P	PKPdf	11 20 23.7	+0.2		baz=352
GSC	Goldstone, Bar	129.83	34	P	PKPdf	11 20 24.2	+0.3		baz=318
H40A	Chili	129.96	5	P	PKPdf	11 20 23.4	-0.3		baz=353
O20A	White River Ci	129.99	23	P	PKPdf	11 20 23.8	-0.4		baz=330
ECSD	EROS Data Cent	130.00	11	P	PKPdf	11 20 23.6	-0.2		baz=345
H41A	Junction City	130.02	4	P	PKPdf	11 20 23.3	-0.6		baz=354
BFSC	Mount Baldy Ra	130.12	35	P	PKPdf	11 20 24.3	-0.2		baz=316
FMP	Fort Macarthur	130.12	36	P	PKPdf	11 20 23.7	-0.6		baz=315
I36A	Fitzsimmons Fa	130.15	8	P	PKPdf	11 20 23.6	-0.5		baz=349
N23A	Red Feather La	130.17	20	P	PKPdf	11 20 24.4	-0.2		baz=333
H42A	Shiocton	130.19	3	P	PKPdf	11 20 23.9	-0.3		baz=356
I37A	Lemond, Waseca	130.24	8	P	PKPdf	11 20 23.9	-0.4		baz=350
H43A	Windswept, Lux	130.27	2	P	PKPdf	11 20 23.7	-0.6		baz=357
I38A	Scanlan Farm,	130.34	7	P	PKPdf	11 20 23.9	-0.6		baz=351
I41A	Arkdale	130.56	4	P	PKPdf	11 20 24.4	-0.4		baz=354
I39A	Houston	130.62	6	P	PKPdf	11 20 24.2	-0.8		baz=352
HRV	Adam Dziewonsk	130.65	347	P	PKPdf	11 20 24.9	-0.2		baz=18
I40A	Norwalk	130.66	5	P	PKPdf	11 20 24.3	-0.8		baz=353
J36A	Seneca 1, Swea	130.78	9	P	PKPdf	11 20 24.8	-0.5		baz=348
I42A	Draeger Farm,	130.79	3	P	PKPdf	11 20 24.6	-0.7		baz=355
I43A	Langenfeld Bro	130.84	3	P	PKPdf	11 20 24.8	-0.6		baz=356
GMRC	Granite Mounta	130.84	33	P	PKPdf	11 20 25.9	0.0		baz=318
MURC	Murrieta	130.84	36	P	PKPdf	11 20 25.5	-0.3		baz=316
J37A	Redenius Farm,	130.91	8	P	PKPdf	11 20 25.2	-0.4		baz=349
J38A	Wedel Dairy, R	131.04	7	P	PKPdf	11 20 24.9	-0.9		baz=351
J39A	Decorah	131.11	6	P	PKPdf	11 20 25.2	-0.8		baz=352
J40A	Soldiers Grove	131.15	5	P	PKPdf	11 20 25.3	-0.7		baz=353
BELC	Belle Mtn. Jos	131.24	34	P	PKPdf	11 20 26.5	-0.1		baz=318
J41A	Loganville	131.24	5	P	PKPdf	11 20 25.5	-0.7		baz=354
ISCO	Idaho Springs	131.26	21	P	PKPdf	11 20 26.0	-0.7		baz=333
J43A	Natural Harves	131.32	3	P	PKPdf	11 20 25.5	-0.8		baz=356
J42A	Columbus	131.35	4	P	PKPdf	11 20 25.9	-0.5		baz=355
OGNE	Ogallala	131.37	17	P	PKPdf	11 20 26.1	-0.6		baz=338
K37A	Belmond	131.43	8	P	PKPdf	11 20 25.7	-0.9		baz=349
K36A	Gilmore City	131.44	9	P	PKPdf	11 20 26.0	-0.6		baz=348
K38A	Parkersburg	131.66	7	P	PKPdf	11 20 26.1	-0.9		baz=350
JFWS	Jewell Farm	131.67	5	P	PKPdf	11 20 26.2	-0.8		baz=354
K39A	Oelwein	131.71	6	P	PKPdf	11 20 26.2	-0.9		baz=351
K40A	Colesburg	131.80	6	P	PKPdf	11 20 26.6	-0.6		baz=352
MONP2	Monument Peak	131.80	36	P	PKPdf	11 20 27.0	-0.9		baz=317
BINY	Binghamton	131.82	351	P	PKPdf	11 20 27.1	-0.3		baz=12
K42A	Prairie Point,	131.87	4	P	PKPdf	11 20 26.7	-0.7		baz=355
L36A	Harm Buss Farm	131.93	9	P	PKPdf	11 20 26.8	-0.8		baz=348
BGNE	Belgrade	131.93	13	P	PKPdf	11 20 26.9	-0.6		baz=343
K41A	Shullsburg	131.97	5	P	PKPdf	11 20 27.0	-0.6		baz=353
K43A	Burlington	132.00	3	P	PKPdf	11 20 27.2	-0.5		baz=356
PDMCI	Parker Dam,Lak	132.03	32	P	PKPdf	11 20 27.5	-0.4		baz=320
L37A	Phoenix Point,	132.04	8	P	PKPdf	11 20 27.2	-0.6		baz=349
L38A	Oak Wood Farm,	132.14	8	P	PKPdf	11 20 27.3	-0.7		baz=350
IKP	In-Ko-Pah, Jac	132.16	36	P	PKPdf	11 20 27.8	-0.5		baz=317
Q24A	Divide	132.17	21	P	PKPdf	11 20 27.7	-0.8		baz=333
Y12C	Blythe	132.24	33	P	PKPdf	11 20 27.7	-0.6		baz=319
L39A	Vinton	132.28	7	P	PKPdf	11 20 27.5	-0.6		baz=351
SCIA	State Center	132.33	8	P	PKPdf	11 20 27.9	-0.4		baz=349
MVCO	Mesa Verde	132.39	25	P	PKPdf	11 20 28.4	-0.5		baz=328
ERPA	Erie	132.41	355	P	PKPdf	11 20 27.8	-0.7		baz=7.2
L40A	Anamosa	132.42	6	P	PKPdf	11 20 27.5	-1.0		baz=352
L41A	Preston	132.48	5	P	PKPdf	11 20 28.2	-0.4		baz=353
WUAZ	Wupatki	132.48	29	P	PKPdf	11 20 28.9	-0.1		baz=324
L43A	Garden Prairie	132.50	3	P	PKPdf	11 20 27.6	-1.0		baz=355
M36A	Felix, Anita	132.54	10	P	PKPdf	11 20 28.2	-0.6		baz=347
GLA	Glamis	132.59	34	P	PKPdf	11 20 29.1	0.0		baz=318
PAL	Palisades	132.60	348	P	PKPdf	11 20 29.0	+0.2		baz=16
S22A	4UR Ranch, Cre	132.61	23	P	PKPdf	11 20 29.0	-0.4		baz=330
L42A	Oliver, Polo	132.62	4	P	PKPdf	11 20 28.2	-0.6		baz=354
M37A	Trindle Farm,	132.71	9	P	PKPdf	11 20 28.5	-0.5		baz=348
M38A	Pleasantville	132.82	8	P	PKPdf	11 20 28.9	-0.4		baz=349
M39A	Webster	132.89	7	P	PKPdf	11 20 28.8	-0.5		baz=351
KSCO	Kaye Shedlock'	132.97	18	P	PKPdf	11 20 28.9	-0.9		baz=336
M54A	Oil Creek Stat	132.99	354	P	PKPdf	11 20 29.0	-0.6		baz=7.7
N59A	State Game Lan	133.03	350	P	PKPdf	11 20 29.4	-0.3		baz=13
M40A	Post Highland	133.04	6	P	PKPdf	11 20 29.1	-0.5		baz=352
SDCO	Great Sand Dun	133.12	22	P	PKPdf	11 20 29.6	-0.7		baz=332
N36A	Muff Farm, Cla	133.13	10	P	PKPdf	11 20 29.4	-0.5		baz=347
M42A	Sheffield	133.16	5	P	PKPdf	11 20 29.5	-0.4		baz=354
M41A	Milan	133.17	5	P	PKPdf	11 20 29.8	0.0		baz=353
M43A	Waltham Townsh	133.23	4	P	PKPdf	11 20 29.3	-0.7		baz=355
N37A	Lee Faris, Mou	133.31	9	P	PKPdf	11 20 29.3	-0.9		baz=348
M44A	Midewin, Midew	133.33	3	P	PKPdf	11 20 29.9	-0.3		baz=356
M45A	Boilermakers S	133.36	2	P	PKPdf	11 20 30.0	-0.2		baz=357
N38A	Joes South For	133.43	8	P	PKPdf	11 20 29.7	-0.7		baz=349
N39A	Derby Farms, D	133.44	7	P	PKPdf	11 20 29.8	-0.6		baz=350
N40A	Mertquake, Sal	133.55	7	P	PKPdf	11 20 30.3	-0.3		baz=351
N54A	Moraine State	133.56	354	P	PKPdf	11 20 31.0	+0.4		baz=7.3
W18A	Petrified Fore	133.58	28	P	PKPdf	11 20 31.5	+0.3		baz=326
SSPA	Standing Stone	133.63	352	P	PKPdf	11 20 30.5	-0.3		baz=10
N43A	Stutzman Famil	133.71	4	P	PKPdf	11 20 30.6	-0.3		baz=355
N42A	Yates City	133.75	5	P	PKPdf	11 20 30.3	-0.6		baz=354
N41A	Harden Midland	133.80	6	P	PKPdf	11 20 30.6	-0.5		baz=352
N46A	Monticello	133.87	1	P	PKPdf	11 20 31.0	-0.2		baz=358
N45A	Kentland	133.89	2	P	PKPdf	11 20 30.9	-0.3		baz=357
O37A	Wolven Farm, M	133.90	9	P	PKPdf	11 20 31.0	-0.3		baz=348
N44A	Piper City	133.92	3	P	PKPdf	11 20 31.4	+0.1		baz=356
CBKS	Cedar Bluff	133.99	16	P	PKPdf	11 20 31.1	-0.5		baz=340
O38A	Galt	134.05	9	P	PKPdf	11 20 31.6	0.0		baz=349
O39A	Kirksville	134.05	8	P	PKPdf	11 20 31.5	0.0		baz=350
T25A	Trinidad	134.05	21	P	PKPdf	11 20 31.8	-0.2		baz=333
HDIL	Hopedale	134.08	4	P	PKPdf	11 20 31.0	-0.6		baz=354
O56A	Blue Knob Stat	134.09	353	P	PKPdf	11 20 31.3	-0.4		baz=9.3
O40A	La Belle	134.26	7	P	PKPdf	11 20 31.2	-0.8		baz=351
O43A	Sugar Creek Fa	134.35	4	P	PKPdf	11 20 31.7	-0.4		baz=354
SFIN	Lafayette	134.38	2	P	PKPdf	11 20 31.7	-0.5		baz=358
O42A	Bath	134.38	5	P	PKPdf	11 20 31.6	-0.6		baz=353
O41A	Passleys Farm,	134.38	6	P	PKPdf	11 20 31.3	-0.9		baz=352
P37A	Lathrop	134.43	10	P	PKPdf	11 20 31.8	-0.5		baz=347
KSU1	Kansas State U	134.47	12	P	PKPdf	11 20 31.9	-0.6		baz=344
O45A	Potomac	134.48	3	P	PKPdf	11 20 32.1	-0.3		baz=357
ACSO	Alum Creek Sta	134.50	357	P	PKPdf	11 20 32.1	-0.4		baz=3.3
P38A	Dawn	134.53	9	P	PKPdf	11 20 32.0	-0.5		baz=349

O44A Mansfield 134.54 3 P PKPdf 11 20 32.1 -0.4
baz=356
O47A Sheridan 134.54 1 P PKPdf 11 20 32.0 -0.5
baz=359
P39B Salisbury 134.77 8 P PKPdf 11 20 32.4 -0.5
baz=350
P41A Barry, Barry 134.80 6 P PKPdf 11 20 32.4 -0.6
baz=352
P40A Paris 134.83 7 P PKPdf 11 20 32.7 -0.4
baz=351
MCWV Mont Chateau 134.84 354 P PKPdf 11 20 33.0 -0.1
baz=7.7
P42A Winchester 134.96 5 P PKPdf 11 20 32.7 -0.6
baz=353
P43A Skaggs, Pawnee 134.98 5 P PKPdf 11 20 33.0 -0.3
baz=354
Q37A Longview Farm, 135.11 10 P PKPdf 11 20 33.1 -0.5
baz=347
P46A Rosedale 135.13 2 P PKPdf 11 20 33.2 -0.4
baz=357
Q38A Cooks Store, C 135.16 9 P PKPdf 11 20 33.2 -0.5
baz=348
TASM ASL Pad, Albuq 135.18 25 P PKPdf 11 20 33.6 -0.5
baz=330
ANMO Albuquerque 135.18 25 PKP PKPdf 11 20 34.8 +0.7
comp=Z,9.0nm,0.7s,baz=271,slow=1.2,SNR=36
ANMO SKPbc SKPbc 11 23 59.1 -1.0
comp=Z,4.9nm,0.8s,baz=347,slow=4.7,SNR=11
ANMO Albuquerque 135.18 25 P PKPdf 11 20 33.5 -0.6
baz=330
Q39A Willow Grove F 135.18 8 P PKPdf 11 20 33.3 -0.4
baz=349
TASL Snake Pit, Alb 135.18 25 P PKPdf 11 20 34.0 -0.1
baz=330
P45A Graceland, Par 135.20 3 P PKPdf 11 20 33.4 -0.3
baz=357
P44A Sand Creek, Wi 135.21 4 P PKPdf 11 20 33.5 -0.2
baz=355
P47A Martinsville 135.29 1 P PKPdf 11 20 33.5 -0.4
baz=359
TUC Tucson 135.34 31 P PKPdf 11 20 33.9 -0.5
baz=323
Q40A Laux Farm, Aux 135.35 7 P PKPdf 11 20 33.6 -0.5
baz=350
Q41A Truxton 135.49 7 P PKPdf 11 20 33.9 -0.4
baz=352
Q42A Golden Eagle 135.61 6 P PKPdf 11 20 34.2 -0.3
baz=353
Q43A New Douglas 135.66 5 P PKPdf 11 20 34.4 -0.2
baz=354
Y22D IRIS PASSCAL I 135.72 26 P PKPdf 11 20 34.5 -0.6
baz=328
Y22E IRIS PASSCAL I 135.72 26 P PKPdf 11 20 34.5 -0.5
baz=328
Q44A Meyer Farm, Va 135.75 4 P PKPdf 11 20 34.5 -0.2
baz=355
Q45A Warren Harvey, 135.81 3 P PKPdf 11 20 34.5 -0.4
baz=356
Q47A Bedord North L 135.83 1 P PKPdf 11 20 34.8 -0.1
baz=358
R38A Fenwick Farm, 135.87 10 P PKPdf 11 20 34.6 -0.4
baz=348
R39A Chumby, Stover 135.88 9 P PKPdf 11 20 34.8 -0.3
baz=349
R40A Maddies Statio 136.02 8 P PKPdf 11 20 34.8 -0.5
baz=350
R41A Rosebud 136.12 7 P PKPdf 11 20 34.9 -0.6
baz=351
R42A Luebbering 136.21 6 P PKPdf 11 20 35.0 -0.7
baz=352
R43A Red Bud 136.30 5 P PKPdf 11 20 35.1 -0.7
baz=353
R48A Northridge Ran 136.38 1 P PKPdf 11 20 35.5 -0.4
baz=359
CCM Cathedral Cave 136.38 7 P PKPdf 11 20 35.3 -0.7
baz=352
R44A Waltonville 136.40 4 P PKPdf 11 20 35.6 -0.4
baz=355
R45A Skylar, Fairfi 136.40 3 P PKPdf 11 20 35.6 -0.4
baz=356
S38A Stockton 136.41 10 P PKPdf 11 20 35.4 -0.7
baz=348
S39A Bolivar 136.45 9 P PKPdf 11 20 35.7 -0.5
baz=348
R47A Wooly Knot Far 136.47 1 P PKPdf 11 20 35.8 -0.4
baz=358
R46A Gibon Southern 136.52 2 P PKPdf 11 20 35.8 -0.4
baz=357
WCI Wyandotte Cave 136.54 1 P PKPdf 11 20 35.8 -0.5
baz=359
121A Cookes Peak, D 136.63 28 P PKPdf 11 20 36.1 -0.8
baz=326
S40A Lebanon 136.66 8 P PKPdf 11 20 36.2 -0.3
baz=350
S42A Caledonia 136.71 6 P PKPdf 11 20 36.1 -0.6
baz=352
S41A Jillco Farms, 136.78 7 P PKPdf 11 20 36.2 -0.6
baz=351
T38A Diamond 136.93 10 P PKPdf 11 20 36.7 -0.3
baz=347
S44A Carbondale 136.93 5 P PKPdf 11 20 37.0 0.0
baz=354
S43A Fulton Ridge, 136.98 5 P PKPdf 11 20 37.0 -0.2
baz=353
S45A Carrier Mills 137.00 4 P PKPdf 11 20 36.8 -0.3
baz=355
S46A Don Dixon Farm 137.04 3 P PKPdf 11 20 36.7 -0.5
baz=356
AMTX Amarillo 137.04 20 ePKPdf PKPdf 11 20 39.3 +1.9
T39A Clever 137.09 9 P PKPdf 11 20 36.9 -0.4
baz=348
T40A Mansfield 137.10 8 P PKPdf 11 20 37.0 -0.4
baz=350
S51A Beattyville 137.11 358 P PKPdf 11 20 37.1 -0.2
baz=2.5
S48A Wiedeman Farm, 137.12 1 P PKPdf 11 20 37.0 -0.4
baz=359
T41A Mountain View 137.31 8 P PKPdf 11 20 37.4 -0.4
baz=351
BLA Blacksburg 137.32 354 P PKPdf 11 20 37.4 -0.4
baz=7.2
T42A Van Buren 137.41 7 P PKPdf 11 20 37.4 -0.5
baz=352
T43A Greenville 137.44 6 P PKPdf 11 20 37.4 -0.6
baz=353
MSTX Muleshoe 137.48 22 P PKPdf 11 20 37.8 -0.6
baz=334
T44A Benton 137.51 5 P PKPdf 11 20 37.8 -0.2
baz=354
T52A Hallie 137.61 357 P PKPdf 11 20 38.0 -0.4
baz=3.4
T48A Bowling Green 137.66 1 P PKPdf 11 20 38.1 -0.3
baz=358
T46A Princeton 137.67 3 P PKPdf 11 20 38.2 -0.2
baz=356
T49A Edmonton 137.67 0 P PKPdf 11 20 37.8 -0.6
baz=360
U39A Green Forest 137.70 10 P PKPdf 11 20 37.8 -0.7
baz=348
TUL1 Leonard 137.72 13 P PKPdf 11 20 38.3 -0.2
baz=344
T50A Nancy 137.75 359 P PKPdf 11 20 37.9 -0.7
baz=0.7
T47A Sharon Grove 137.76 2 P PKPdf 11 20 38.1 -0.4
baz=357
U40A Yellville 137.83 9 P PKPdf 11 20 38.4 -0.3
baz=349
U41A Viola 137.98 8 P PKPdf 11 20 38.6 -0.4
baz=350
U42A Revenden 138.06 7 P PKPdf 11 20 38.8 -0.3
baz=351
WMOK Wichita Mounta 138.08 17 P PKPdf 11 20 39.0 -0.3
baz=340
U43A Rector 138.14 6 P PKPdf 11 20 38.9 -0.3
baz=352
TZTN Tazewell 138.20 358 P PKPdf 11 20 38.9 -0.6
baz=2.6
V39A Pettigrew 138.21 10 P PKPdf 11 20 39.0 -0.5
baz=348
U48A Cassie Pea, Po 138.25 1 P PKPdf 11 20 39.1 -0.4
baz=358
U49A Red Boiling Sp 138.26 1 P PKPdf 11 20 39.1 -0.4
baz=359
U44B Burton Farm, H 138.27 5 P PKPdf 11 20 39.4 -0.1
baz=354
U47A Clarksville 138.30 2 P PKPdf 11 20 39.1 -0.4
baz=357
U45A Rockin P Farm, 138.31 4 P PKPdf 11 20 39.3 -0.3
baz=355
U46A Springville 138.33 3 P PKPdf 11 20 39.4 -0.2
baz=356
V40A Witts Springs 138.38 9 P PKPdf 11 20 39.3 -0.5
baz=349
MNTX Cornudas Mount 138.42 26 P PKPdf 11 20 39.8 -0.2
baz=329
V41A Mountainview 138.50 8 P PKPdf 11 20 39.3 -0.7
baz=350
V42A Cord 138.58 7 P PKPdf 11 20 39.6 -0.5
baz=351
WVT Waverly 138.58 3 P PKPdf 11 20 39.7 -0.4
baz=356
W39A Magazine 138.81 10 P PKPdf 11 20 40.1 -0.5
baz=347
V46A Holladay 138.89 3 P PKPdf 11 20 40.1 -0.5
baz=356
V45A Humboldt 138.90 4 P PKPdf 11 20 40.1 -0.6
baz=354
V47A Nunnelly 138.90 3 P PKPdf 11 20 40.6 -0.1
baz=357
V52A Sevierville 138.90 358 P PKPdf 11 20 40.6 -0.1
baz=2.6
W40A Ferguson Farm, 138.93 10 P PKPdf 11 20 40.4 -0.4
baz=348
V51A Loudon 138.96 359 P PKPdf 11 20 40.3 -0.5
baz=1.5
V49A McMinnville 139.00 1 P PKPdf 11 20 40.3 -0.6
baz=359
V48A Smith Brothers 139.01 2 P PKPdf 11 20 40.7 -0.2
baz=358
V53A Saluda 139.03 357 P PKPdf 11 20 40.8 -0.2
baz=3.8
W41B Gary Mavity, V 139.08 9 P PKPdf 11 20 40.6 -0.5
baz=350
V50A Pikeville 139.10 360 P PKPdf 11 20 40.6 -0.5
baz=0.3
X39A Fountain Ranch 139.41 11 P PKPdf 11 20 41.3 -0.4
baz=347
KMSC Kings Mountain 139.45 355 P PKPdf 11 20 41.3 -0.4
baz=6.1
W45A Hickory Valley 139.46 5 P PKPdf 11 20 41.2 -0.5
baz=354
W47A Westpoint 139.47 3 P PKPdf 11 20 41.2 -0.6
baz=357
MIAR Mount Ida 139.48 10 P PKPdf 11 20 41.4 -0.4
baz=347
W46A Michie 139.54 4 P PKPdf 11 20 41.5 -0.4
baz=355
W53A Cullowhee 139.55 357 P PKPdf 11 20 41.7 -0.4
baz=3.3
W50A Signal Mountai 139.57 360 P PKPdf 11 20 41.6 -0.4
W48A Pulaski 139.61 2 P PKPdf 11 20 41.7 -0.4
baz=358
W49A Belvidere 139.65 1 P PKPdf 11 20 41.4 -0.7
baz=359
W52A Murphy 139.66 358 P PKPdf 11 20 41.9 -0.2
baz=2.1
X40A Basin Creek Fa 139.66 10 P PKPdf 11 20 41.9 -0.2
baz=348
X41A Kaden, Bauxite 139.71 9 P PKPdf 11 20 42.1 -0.1
baz=349
ABTX Abilene, Hawle 139.78 19 P PKPdf 11 20 41.9 -0.6
baz=338
X42A Stuttgart 139.78 8 P PKPdf 11 20 41.9 -0.4
baz=350
X43A Marvell 139.91 7 P PKPdf 11 20 42.2 -0.3
baz=351
X44A Crenshaw 140.02 6 P PKPdf 11 20 42.5 -0.3
baz=353
Y40A Okolona 140.05 10 P PKPdf 11 20 42.8 0.0
baz=348
OXF Oxford 140.08 5 P PKPdf 11 20 43.3 +0.5
baz=354
X46A Booneville 140.10 4 P PKPdf 11 20 43.0 0.0
baz=355
X52A Dahlonega 140.15 358 P PKPdf 11 20 42.9 -0.2
baz=2.2
X45A UM Field Stati 140.16 5 P PKPdf 11 20 42.6 -0.4
baz=354
X47A Russelville 140.18 3 P PKPdf 11 20 42.9 -0.2
baz=356
X51A Calhoun 140.20 359 P PKPdf 11 20 42.7 -0.4
baz=0.7
X53A Estanollee 140.22 357 P PKPdf 11 20 43.3 +0.1
baz=3.1
X49A Woodville 140.25 1 P PKPdf 11 20 42.9 -0.3
baz=358
X48A Hartselle 140.29 2 P PKPdf 11 20 42.7 -0.5
baz=357
Y41A Eaglette Beard 140.29 9 P PKPdf 11 20 43.2 0.0
baz=349
X50B Fort Payne 140.31 0 P PKPdf 11 20 43.0 -0.3
baz=360
Y43A Makayla and Ka 140.50 7 P PKPdf 11 20 43.2 -0.4
baz=351
Y44A Strider, Charl 140.54 6 P PKPdf 11 20 43.5 -0.2
baz=352
Y45A Yeager Farm, C 140.71 5 P PKPdf 11 20 43.8 -0.2
baz=353
Y46A Houston 140.75 5 P PKPdf 11 20 43.8 -0.3
baz=354
Z40A Long Farm, Mag 140.76 11 P PKPdf 11 20 43.7 -0.5
baz=347
Y47A UCPARC, Winfie 140.80 3 P PKPdf 11 20 44.0 -0.2
baz=356
Y48A Jasper 140.82 2 P PKPdf 11 20 43.8 -0.4
baz=357
Y54A Tignall 140.83 356 P PKPdf 11 20 44.3 0.0
baz=4.1
Y51A Rockmart 140.87 360 P PKPdf 11 20 44.3 -0.1
baz=0.4
Y50A Piedmont 140.88 0 P PKPdf 11 20 44.6 +0.2
baz=359
Y53A Monroe 140.88 358 P PKPdf 11 20 44.6 +0.2
baz=2.7
Y52A Lilburn 140.89 358 P PKPdf 11 20 44.4 0.0
baz=2.0
Y49A Blount Mountai 140.90 1 P PKPdf 11 20 44.3 -0.1
baz=358
Z42A Norrel Spur, H 140.99 9 P PKPdf 11 20 44.5 -0.1
baz=350
WHTX Lake Whitney, 141.03 16 P PKPdf 11 20 44.4 -0.3
baz=341
Z43A Armstrong Fami 141.16 8 P PKPdf 11 20 44.8 -0.1
baz=351
Z45A Winona 141.18 6 P PKPdf 11 20 45.1 +0.2
baz=353
Z44A Pea Ridge, Bel 141.19 7 P PKPdf 11 20 45.2 +0.3
baz=352
TXAR Lajitas Array 141.20 26 PKhKP PKPpre 11 20 37.6
comp=Z,1.7nm,0.6s,baz=290,slow=1.2,SNR=30
TXAR PKP PKPdf 11 20 45.1 -0.1
comp=Z,6.5nm,0.6s,baz=180,slow=0.5,SNR=40
TXAR PP PP 11 23 46.6 +0.5
comp=Z,1.4nm,0.9s,baz=1.1,slow=4.5,SNR=4.0
TXAR SKPbc SKPbc 11 24 15.9 -1.4
comp=Z,3.3nm,0.8s,baz=243,slow=1.7,SNR=5.2
TXAR SKKPbc SKKPbc 11 32 39.5 -2.2
comp=Z,0.4nm,0.9s,baz=64,slow=2.9,SNR=3.4
GOGA Godfrey 141.32 357 P PKPdf 11 20 44.6 -0.6
baz=3.0
Z48A Northport 141.34 3 P PKPdf 11 20 44.9 -0.3
baz=356
Z46A Louisville 141.43 5 P PKPdf 11 20 45.5 +0.1
baz=354
Z53A Monticello 141.45 358 P PKPdf 11 20 45.5 +0.1
baz=2.8
Z51A Franklin 141.45 360 P PKPdf 11 20 45.4 0.0
baz=0.2
Z54A Sparta 141.46 357 P PKPdf 11 20 45.5 +0.1
baz=4.0
Z47A Carrollton 141.48 4 P PKPdf 11 20 45.4 -0.1
baz=356
141A Papa Simpson, 141.49 10 P PKPdf 11 20 45.8 +0.3
baz=348
Z50A Ashland 141.51 1 P PKPdf 11 20 45.9 +0.3
baz=359
Z49A Columbiana 141.56 2 P PKPdf 11 20 45.5 -0.1
baz=358
Z52A Williamson 141.57 359 P PKPdf 11 20 46.0 +0.4
baz=1.4
143A Socs Landing, 141.63 8 P PKPdf 11 20 45.8 +0.1
baz=350
JCT Junction City 141.70 20 P PKPdf 11 20 46.1 +0.1
baz=336
LRAL Lakeview Retre 141.70 2 P PKPdf 11 20 46.0 +0.1
baz=357
156A Sylvania 141.94 355 P PKPdf 11 20 46.6 +0.4
baz=6.2
147A Livingston 141.99 4 P PKPdf 11 20 46.5 +0.1
baz=355
155A Kite 142.04 356 P PKPdf 11 20 46.7 +0.2
baz=4.6
241A Mo Tay, Goldon 142.05 10 P PKPdf 11 20 46.5 0.0
baz=348
148A Greensboro 142.06 3 P PKPdf 11 20 46.6 +0.1
baz=356
152A Waverly Hall 142.09 359 P PKPdf 11 20 46.8 +0.2
baz=1.0
435B Jarrell 142.13 17 P PKPdf 11 20 46.9 +0.2
baz=340
149A Jones 142.14 2 P PKPdf 11 20 46.6 0.0
baz=358
150A Eclectic 142.16 1 P PKPdf 11 20 46.9 +0.3
baz=359
VBMS Vicksburg 142.23 7 P PKPdf 11 20 46.9 +0.1
baz=352
151A Opelika 142.24 360 P PKPdf 11 20 47.6 +0.8
244A Avery, Jackson 142.38 7 P PKPdf 11 20 47.9 +0.8
baz=351
243A Waterproof 142.43 9 P PKPdf 11 20 47.8 +0.6
baz=350
PLCA Paso Flores 142.44 199 PKhKP PKPpre 11 20 42.0
comp=Z,2.1nm,0.5s,baz=220,slow=4.2,SNR=6.8
245A Little AP, Sta 142.48 6 P PKPdf 11 20 47.8 +0.6
baz=353
247A Quitman 142.58 5 P PKPdf 11 20 48.0 +0.6
baz=355
248A Dixon Mills 142.60 3 P PKPdf 11 20 48.1 +0.7
baz=356
251A Midway 142.67 0 P PKPdf 11 20 47.7 +0.1
baz=360
253A Americus 142.69 358 P PKPdf 11 20 48.0 +0.4
baz=2.0
255A Hazlehurst 142.74 356 P PKPdf 11 20 48.4 +0.7
baz=4.7
249A Camden 142.75 2 P PKPdf 11 20 48.2 +0.4
baz=357
252A Lumpkin 142.76 359 P PKPdf 11 20 48.2 +0.4
baz=1.0
250A Grady 142.78 1 P PKPdf 11 20 49.2 +1.4
baz=358
342A Flagon Creek P 142.79 10 P PKPdf 11 20 48.9 +1.1
baz=348
344A Westbrook Farm 142.95 8 P PKPdf 11 20 49.2 +1.0
baz=351
357A Townsend 143.15 354 P PKPdf 11 20 49.0 +0.5
baz=6.3
346A Big Creek Wild 143.17 6 P PKPdf 11 20 49.2 +0.7
baz=353
345A Thompson Farm, 143.18 7 P PKPdf 11 20 49.2 +0.7
baz=352
347A Saraland 143.24 5 P PKPdf 11 20 49.6 +1.0
baz=355
441A DeRidder 143.24 11 P PKPdf 11 20 49.6 +1.0
baz=347
348A Jackson 143.27 4 P PKPdf 11 20 50.0 +1.3
baz=356
352A Blakely 143.28 359 P PKPdf 11 20 50.3 +1.6
baz=0.7
TIGA Tifton 143.29 357 P PKPdf 11 20 49.8 +1.1
baz=2.9
356A Blackshear 143.31 355 P PKPdf 11 20 49.5 +0.8
baz=5.3
349A Repton 143.37 3 P PKPdf 11 20 49.8 +0.9
baz=357
442A Mamou 143.42 10 P PKPdf 11 20 50.2 +1.3
baz=348
657A Interlachen 145.01 355 P PKPab 11 20 51.0 -0.1
baz=6.0
658A Bunnell 145.11 354 P PKPbc 11 20 51.3 -0.1
baz=7.0
655A Horseshoe Beac 145.19 357 P PKPdf 11 20 52.1 0.0
baz=3.6
656A Willston 145.28 356 P PKPdf 11 20 52.3 +0.1
baz=4.9
758A Lake Helen 145.56 354 P PKPbc 11 20 52.9 +0.1
baz=7.2
757A Oxford 145.67 355 P PKPab 11 20 53.6 +0.1
baz=5.7
CPUP Villa Florida 146.12 229 PKPbc PKPab 11 20 55.1 -0.3
comp=Z,9.7nm,0.6s,baz=85,slow=2.4,SNR=19
858A St. Cloud 146.32 354 P PKPbc 11 20 55.6 +0.4
baz=7.1
857A Zephyrhills 146.35 355 P PKPbc 11 20 55.7 +0.4
baz=5.5
859A Kempfer Cattle 146.42 353 P PKPab 11 20 56.0 -0.3
baz=7.9
DWPF Disney Wildern 146.43 354 P PKPbc 11 20 55.9 +0.4
baz=7.0
959A Okeechobee 146.94 353 P PKPbc 11 20 57.6 +0.5
baz=8.1
957A Wimauma 146.94 355 P PKPbc 11 20 57.4 +0.4
baz=5.6
958A Wauchula 146.98 354 P PKPbc 11 20 57.6 +0.5
baz=6.5
ANWB Willy Bob 147.30 315 eP PKPbc 11 20 58.2 0.0
060A Indiantown 147.35 352 P PKPbc 11 20 58.6 +0.4
baz=9.1
MRA San Martin 147.49 212 eP PKPbc 11 20 59.3 +0.7
MRA eP PKPab 11 20 59.5 -1.1
058A Arcadia 147.51 354 P PKPbc 11 20 59.0 +0.4
baz=6.5
059A Moore Haven 147.52 353 P PKPbc 11 20 59.1 +0.4
baz=7.7
DEG La Desirade 147.67 312 eP PKPbc 11 20 59.2 -0.2
BPA Boggy Peak 147.77 314 eP PKPbc 11 21 00.8 +1.1
SMRT St. Maarten 147.93 317 eP PKPbc 11 21 00.2 +0.1
060Z West Palm Beac 148.00 352 P PKPbc 11 21 00.6 +0.7
baz=8.9
MGG Marie-Galante 148.11 312 eP PKPdf 11 20 58.0 +0.7
059Z Ave Maria 148.18 353 P PKPbc 11 21 00.9 +0.4
baz=7.3
NVRH Round Hill, Ne 148.20 315 eP PKPbc 11 21 02.0 +1.3
NEV Hard Times 148.21 315 eP PKPbc 11 20 59.6 -1.1
MLYT Lee's Yard 148.22 314 eP PKPbc 11 21 01.0 +0.2
SABA Saba 148.34 317 eP PKPdf 11 20 58.5 +0.8
MDVC Dominica, Viel 148.37 312 eP PKPbc 11 20 59.9 -1.3
TBG Guadaloupe-3 148.39 312 eP PKPbc 11 21 01.5 +0.2
MDPO Dominica; Chan 148.43 312 eP PKPbc 11 21 01.9 +0.6
BBL Barber's Block 148.47 312 eP PKPbc 11 21 02.0 +0.5
DBCT Belle View Cho 148.54 311 eP PKPbc 11 21 01.4 -0.3
MDN Morne-Daniel 148.54 311 eP PKPbc 11 20 59.9 -1.8
061Z Ochoppi 148.58 352 P PKPbc 11 21 02.0 +0.5
baz=8.4
DSHT Scott's Head 148.60 311 eP PKPbc 11 21 02.5 +0.7
MVM Montagne Vaucl 148.64 310 eP PKPbc 11 21 02.3 +0.4
BAMF Morne Balai 148.67 310 eP PKPbc 11 21 02.2 +0.1
LPMF Morne Lapointe 148.68 310 eP PKPbc 11 21 02.3 +0.3
CXM Morne La Croix 148.69 310 eP PKPbc 11 21 02.8 +0.6
PCM Pelee Case Pet 148.72 310 eP PKPbc 11 21 02.0 -0.2
PCM Pelee Case Pet 148.72 310 eP PKPbc 11 21 02.9 +0.7
FDF Fort de France 148.73 310 eP PKPbc 11 21 02.4 +0.2
ZAM Aeronautique 148.73 310 eP PKPbc 11 21 02.8 +0.7
TRMF Trois Ilets 148.77 310 eP PKPbc 11 21 03.1 +0.9
ASAL Salagasta 148.90 208 eP PKPbc 11 21 01.4 -0.9
SLB Belfond 149.19 309 eP PKPbc 11 21 05.3 +1.9
RTCV Cerro Valdivia 149.36 209 eP PKPbc 11 21 02.1 -1.3
SVCV St. Vincent, C 149.60 308 eP PKPbc 11 21 04.0 -0.4
SSV Crater Summit 149.60 308 eP PKPbc 11 21 06.9 +2.4
SVV Soufriere Volc 149.63 308 eP PKPbc 11 21 06.5 +2.1
SVB Belmont 149.68 308 eP PKPbc 11 21 05.2 +0.6
062Z Marathon 149.72 352 P PKPbc 11 21 04.7 +0.3
baz=8.4
FCV Fort Charlotte 149.75 308 eP PKPbc 11 21 07.0 +2.2
RTLL Cerro Villicun 149.76 210 eP PKPbc 11 21 02.8 -1.6
RTLS Leoncito 149.77 208 eP PKPbc 11 21 03.3 -1.5
SJG San Juan 149.88 321 PKPbc PKPbc 11 21 04.9 -0.1
comp=Z,32nm,0.5s,baz=80,slow=3.9,SNR=16
AMOG MOGNA 150.09 210 eP PKPbc 11 21 03.1 -2.1
GRSS Sisters 150.54 307 eP PKPbc 11 21 07.8 +1.2
CYA Choya 150.55 217 eP PKPbc 11 21 03.7 -2.7
GRHS Sauteurs 150.60 307 eP PKPbc 11 21 07.9 +1.1
GRGR Grenville 150.66 307 eP PKPbc 11 21 06.0 -1.0
AGUA GUANDACOL 151.26 212 eP PKPdf 11 21 05.1 +3.0
VCA Vinchina 151.70 213 eP PKPdf 11 21 05.7 +2.8
PCRV Puerto La Cruz 154.18 307 PKPbc PKPbc 11 21 13.4 -1.5
comp=Z,30nm,0.5s,baz=229,slow=1.3,SNR=22
YJA Yavi 154.60 227 eP PKPdf 11 21 10.9 +3.3
APG El Apazote 159.06 14 PKPab PKPab 11 21 48.0 -1.6
comp=Z,32nm,0.9s,baz=334,slow=12,SNR=15
SDV Santo Domingo 159.55 314 PKP PKPdf 11 21 13.6 -0.2
comp=Z,5.7nm,0.7s,baz=17,slow=1.2,SNR=8.2

SDV PKPab **PKPab** **11 21 51.1 -0.9**
comp=Z,14nm,1.0s,baz=295,slow=4.2,SNR=6.4
LPAZ La Paz **159.96 236** **PKPdf** **11 21 15.0 +0.3**
comp=Z,4.7nm,0.6s,baz=100,slow=2.4,SNR=22
ROSC El Rosal **164.97 313** PKP **PKPdf** **11 21 19.6 +0.1**
comp=Z,9.5nm,0.6s,baz=139,slow=6.7,SNR=9.7

*ISK **05** 11:10:16.2, 39°.15N×30°.01E, h5km, ML2.4/7*
*CSEM **05** 11:10:17.3±0.3, 39°.17N×30°.11E, h2km, ML2.4, Error ellipse: s-maj=6.9km s-min=5.0km az=137.0*
*DDA **05** 11:10:17.6, 39°.20N×30°.13E, h12km, Ml2.6*
ISC 05 11:10:17.2±1.2, 39°.13N±0°.03×30°.08E±0°.03, h0km±11km, n29, σ0°.74/42, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUTH	**Kutahya**	**0.27**	**351**	PG	**Pg**	**11 10 22.2**	**-0.1**
KUTH				SG	**Sg**	**11 10 26.5**	**+0.8**
KUTH	**Kutahya**	**0.27**	**351**	*e*Pg	**Pg**	**11 10 22.2**	**-0.1**
KUTH				*e*Sg	**Sg**	**11 10 26.5**	**+0.8**
GEDZ	**Gediz**	**0.53**	**260**	PG	**Pg**	**11 10 26.6**	**-0.7**
GEDZ				SG	**Sg**	**11 10 34.3**	**+0.2**
GEDZ	**Gediz**	**0.53**	**260**	*e*Pg	**Pg**	**11 10 26.6**	**-0.7**
GEDZ				*e*Sg	**Sg**	**11 10 34.3**	**+0.2**
TVSB	**Tavsanli**	**0.57**	**304**	PG	**Pg**	**11 10 27.4**	**-0.8**
TVSB	**Tavsanli**	**0.57**	**304**	*e*Pg	**Pg**	**11 10 27.4**	**-0.8**
ESKT	**Eskisehir**	**0.71**	**57**	*i* P	**Pg**	**11 10 29.5**	**-1.3**
ESKT				*i* S	**Sg**	**11 10 40.9**	**+0.8**
SEYT	**Eskypehyr**	**0.71**	**57**	P	**Pg**	**11 10 29.5**	**-1.3**
BOLV	**Bolvadin**	**0.80**	**121**	*i* P	**Pg**	**11 10 32.7**	**+0.2**
BOLV				*i* S	**Sb**	**11 10 45.3**	**0.0**
BOLV	**Bolvadin**	**0.80**	**121**	P	**Pg**	**11 10 32.7**	**+0.2**
BORA	**Eskisehir**	**0.80**	**21**	PG	**Pg**	**11 10 32.3**	**-0.2**
BORA	**Eskisehir**	**0.80**	**21**	*i* P	**Pg**	**11 10 31.9**	**-0.6**
BORA				*i* S	**Sg**	**11 10 42.6**	**-0.3**
BORA	**Eskisehir**	**0.80**	**21**	P	**Pg**	**11 10 32.0**	**-0.6**
BORA	**Eskisehir**	**0.80**	**21**	*e*Pg	**Pg**	**11 10 32.3**	**-0.2**
BORA				S	**Sg**	**11 10 42.6**	**-0.3**
SIMA	**Simav-Kutahya**	**0.85**	**267**	PG	**Pg**	**11 10 32.7**	**-0.8**
SIMA	**Simav-Kutahya**	**0.85**	**267**	*e*Pg	**Pg**	**11 10 32.7**	**-0.8**
KHAL	**Karahalli**	**0.89**	**211**	*i* P	**Pb**	**11 10 36.1**	**+0.6**
KHAL				*i* S	**Sn**	**11 10 49.8**	**-0.9**
KHAL	**Karahalli**	**0.89**	**211**	P	**Pb**	**11 10 36.1**	**+0.6**
KHAL				S	**Sn**	**11 10 49.8**	**-0.9**
DEMI	**Demirci**	**1.06**	**266**	*i* P	**Pn**	**11 10 39.6**	**+0.2**
DEMI				*i* S	**Sn**	**11 10 54.0**	**-0.9**
DEMI	**Demirci**	**1.06**	**266**	P	**Pn**	**11 10 39.6**	**+0.2**
DEMI				S	**Sn**	**11 10 54.0**	**-0.9**
CAVI	**Cavuskoy**	**1.08**	**350**	PG	**Pg**	**11 10 38.0**	**+0.1**
CAVI	**Cavuskoy**	**1.08**	**350**	*e*Pg	**Pg**	**11 10 38.0**	**+0.1**
DURS	**Dursunbey**	**1.33**	**291**	*i* P	**Pb**	**11 10 44.0**	**+1.0**
DURS				*i* S	**Sn**	**11 11 03.3**	**+1.9**
DURS	**Dursunbey**	**1.33**	**291**	P	**Pb**	**11 10 44.0**	**+1.0**
GULT	**Gulveren**	**1.34**	**14**	PN	**Pb**	**11 10 43.5**	**+0.3**
YLV	**Yalova**	**1.53**	**339**	PN	**Pb**	**11 10 45.8**	**-0.7**
YLV	**Yalova**	**1.53**	**339**	*e*Pn	**Pb**	**11 10 45.8**	**-0.7**
ARMT	**Armutlu**	**1.71**	**327**	PN	**Pn**	**11 10 48.4**	**+0.2**
ARMT	**Armutlu**	**1.71**	**327**	*e*Pn	**Pn**	**11 10 48.4**	**+0.2**

*CSEM **05** 11:11:48.1±0.3, 38°.98N×23°.36E, h12km, ML1.3, Error ellipse: s-maj=8.1km s-min=4.4km az=97.0*
ATH 05 11:11:48.5, 38°.99N×23°.31E, h14km±2km, ML1.3/6, Error ellipse: s-maj=2.9km s-min=0.8km az=111.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMIA	**Simia**	**0.14**	**215**	P	Pg	11 11 52.4	+0.2
SMIA				S	Sg	11 11 54.6	0.0
SMIA				AML	AML	11 11 54.7	
	comp=E,1696μm,0.2s						
SMIA				AML	AML	11 11 54.9	
	comp=N,1448μm,0.2s						
SMIA	**Simia**	**0.14**	**215**	P	Pg	11 11 52.2	0.0
SMIA				S	Sg	11 11 54.7	+0.1
SKIA	**Skiathos**	**0.21**	**35**	P	Pg	11 11 53.2	-0.2
SKIA				S	Sg	11 11 56.2	-0.4
SKIA				AML	AML	11 11 56.9	
	comp=E,510μm,0.2s						
SKIA				AML	AML	11 11 57.0	
	comp=N,342μm,0.3s						
SKIA	**Skiathos**	**0.21**	**35**	P	Pg	11 11 53.3	-0.1
SKIA				S	Sg	11 11 56.5	-0.2
NEO	**Neokhori**	**0.32**	**348**	P	Pb	11 11 55.7	-0.4
NEO				S	Sg	11 11 60.0	+0.2
NEO				AML	AML	11 12 00.2	
	comp=N,133μm,0.2s						
NEO				AML	AML	11 12 00.3	
	comp=E,110μm,0.2s						
NEO	**Neokhori**	**0.32**	**348**	P	Pg	11 11 55.4	+0.2
NEO				S	Sg	11 12 00.0	+0.2
XOR	**Xorichti**	**0.39**	**347**	P	Pg	11 11 56.5	+0.1
XOR				S	Sg	11 12 02.0	+0.4
XOR				AML	AML	11 12 02.6	
	comp=N,49μm,0.2s						
XOR				AML	AML	11 12 03.7	
	comp=E,39μm,0.2s						
XOR	**Xorichti**	**0.39**	**347**	P	Pg	11 11 56.4	0.0
XOR				S	Sg	11 12 02.0	+0.3
LKR	**Lokris**	**0.42**	**215**	P	Pg	11 11 56.8	-0.1
LKR				AML	AML	11 12 04.0	
	comp=N,56μm,0.2s						
LKR				AML	AML	11 12 04.6	
	comp=E,74μm,0.2s						
LKR	**Lokris**	**0.42**	**215**	P	Pg	11 11 56.8	-0.1
FYTO	**Fytoko, Volos**	**0.51**	**326**	P	Pg	11 11 58.7	+0.1
FYTO				S	Sb	11 12 05.9	-0.5
FYTO				AML	AML	11 12 07.7	
	comp=E,47μm,0.3s						
FYTO				AML	AML	11 12 07.8	
	comp=N,40μm,0.4s						
FYTO	**Fytoko, Volos**	**0.51**	**326**	P	Pg	11 11 58.6	+0.1
FYTO				S	Sg	11 12 05.8	+0.5
AGG	**Agios Georgios**	**0.76**	**273**	P	Pg	11 12 02.9	-0.5
AGG				S	Sg	11 12 13.3	-0.1
AGG	**Agios Georgios**	**0.76**	**273**	P	Pg	11 12 02.9	-0.5
AGG				S	Sg	11 12 13.5	+0.1
VIL2	**Platees**	**0.78**	**182**	P	Pg	11 12 02.8	-0.9
VIL2				S	Sn	11 12 17.2	+0.7
VILL	**Villia**	**0.82**	**180**	P	Pg	11 12 03.5	-1.0
VILL				S	Sb	11 12 16.5	+0.9
DSF	**Desfina**	**0.84**	**227**	P	Pn	11 12 05.7	-0.3
DSF				S	Sg	11 12 15.0	-0.9
DSF	**Desfina**	**0.84**	**227**	P	Pb	11 12 05.1	+0.2
DSF				S	Sg	11 12 15.6	-0.3
PAIG	**Paliouri**	**0.98**	**17**	P	Pb	11 12 06.6	-0.6
PAIG	**Paliouri**	**0.98**	**17**	P	Pb	11 12 06.9	-0.4

IDC 05 11:12:48.7±11.0, 14°.71N×91°.90E, h0km, mb3.7/3, mb1 3.8/3, mb1mx3.3/75, mbtmp3.7/3, Error ellipse: s-maj=663.8km s-min=28.4km az=61.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S3	**Diego Garcia H**	**29.38**	**222**	T	T	11 48 20.4	
	baz=43,slow=76,SNR=5.4						
H08S2	**Diego Garcia H**	**29.39**	**222**	T	T	11 48 22.2	
	baz=43,slow=76,SNR=5.3						
H08S1	**Diego Carcia H**	**29.40**	**222**	T	T	11 48 24.0	
	baz=43,slow=76,SNR=5.1						
MKAR	**Makanchi Array**	**32.98**	**348**	P	P	11 19 25.2	0.0
	1.3nm,0.9s,baz=169,slow=8.2,SNR=3.9						
WRA	**Warramunga Arr**	**54.11**	**128**	P	P	11 22 15.8	+0.1
	1.0nm,1.1s,baz=310,slow=7.5,SNR=5.5						
ASAR	**Alice Springs**	**56.05**	**132**	P	P	11 22 29.6	-0.2
	0.3nm,0.5s,baz=310,slow=6.9,SNR=6.7						

*SJA **05** 11:13:11.1±0.5, 30°.54S×72°.27W, h33km±23km, ML4.0, MW3.6*
*ISCJB **05** 11:13:17.3±1.2, 30°.36S±0°.04×71°.88W±0°.10, h16km, Error ellipse: s-maj=12.5km s-min=4.8km az=11.7*
*GUC **05** 11:13:20.2±0.7, 30°.36S×71°.34W, h78km±9km, ML3.7*
ISC 05 11:13:17.2±1.9, 30°.34S±0°.05×71°.9W±0°.1, h16km, n15, σ1°.41/22, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLL	**Tololo Astrono**	**0.96**	**80**	*e*P	**Pb**	**11 13 35.5**	**-0.3**
TLL				*e*S	**Sb**	**11 13 46.4**	**-1.9**
TLL				IAML		11 13 47.1	
	comp=N,8μm,0.5s						
GO04	**Tololo Observa**	**0.97**	**80**	*e*P	**Pb**	**11 13 35.2**	**-0.5**
LCO	**Las Campanas**	**1.69**	**38**	*e*P	**Pn**	**11 13 46.8**	**+0.4**
LCO				*e*S	**Sn**	**11 14 06.3**	**-1.5**
LCO				IAML		11 14 10.8	
	comp=E,761nm,0.5s						
ROCH	**El Roble**	**2.73**	**164**	*e*P	**Pn**	**11 14 01.9**	**+1.3**
ROCH				*e*S	**Sn**	**11 14 34.0**	**+0.6**
ROCH				IAML		11 14 50.8	
	comp=N,311nm,0.3s						
PEL	**Peldehue**	**2.98**	**160**	*e*P	**Pn**	**11 14 04.7**	**+0.8**
PEL				*e*S	**Sn**	**11 14 39.3**	**0.0**
PEL				IAML		11 14 54.1	
	comp=E,299nm,0.4s						
AMOG	**MOGNA**	**3.00**	**102**	*e*P	**Pn**	**11 14 05.6**	**+1.4**
AGUA	**GUANDACOL**	**3.08**	**75**	*e*P	**Pn**	**11 14 07.6**	**+2.3**
GO03	**Copiap**	**3.10**	**28**	*e*P	**Pn**	**11 14 05.9**	**+0.3**
RTLL	**Cerro Villicun**	**3.10**	**109**	*e*P	**Pn**	**11 14 06.7**	**+1.1**
RTLL				*e*S	**Sb**	**11 14 48.8**	**-1.0**
RTCV	**Cerro Valdivia**	**3.25**	**119**	*e*P	**Pn**	**11 14 08.1**	**+0.4**
FCH	**Farellones**	**3.28**	**156**	*e*P	**Pn**	**11 14 09.3**	**+1.0**
FCH				*e*S	**Sn**	**11 14 46.0**	**-1.1**
FCH				IAML		11 14 56.0	
	comp=E,161nm,0.3s						
ARCO	**CERRO ARCO**	**3.55**	**135**	*e*P	**Pn**	**11 14 11.0**	**-0.9**
ARCO				IAML		11 15 10.1	
	comp=Z,78nm,0.3s						
VCA	**Vinchina**	**3.59**	**64**	*e*P	**Pn**	**11 14 14.8**	**+2.3**
VCA				IAML		11 14 21.1	
	comp=Z,329nm,0.4s						
AAGR	**Agrelo**	**3.79**	**137**	*e*P	**Pn**	**11 14 13.9**	**-1.2**
AAGR				*e*S	**Sn**	**11 15 01.2**	**+1.9**
CYA	**Choya**	**5.65**	**72**	*e*P	**Pn**	**11 14 43.0**	**+2.5**

*ISCJB **05** 11:19:36.0±0.6, 62°.43N±0°.02×152°.78W±0°.04, h9km±3km, mb4.0/28, Error ellipse: s-maj=3.3km s-min=2.8km az=163.9*
*NEIC **05** 11:19:36.7±0.0, 62°.40N×152°.68W, h4km, mb4.2/5, MW3.9, ML4.0(AEIC), Moment Tensor Solution. s32 Moment tensor: Scale 10^{14}Nm; M_{rr}6.26; $M_{\theta\theta}$0.55; $M_{\phi\phi}$-6.81; $M_{r\theta}$-2.95; $M_{\theta\phi}$-2.82; $M_{\phi r}$0.85; Best double couple: $M_0$7.80000×10^{14} NP1:ϕ_s355.00000°, δ50.00000°, λ55.00000°. NP2:ϕ_s222.00000°, δ51.00000°, λ124.00000°. Principal axes: T 7.7600, Plg64.0000°, Azm198.0000°; N 0.0000, Plg26.0000°, Azm19.0000°; P -7.7700, Plg1.0000°, Azm289.0000°; After AEIC.*
*IDC **05** 11:19:45.9±2.5, 62°.67N×152°.33W, h79km±22km, mb3.7/24, mb1 3.8/28, mb1mx3.7/81, mbtmp3.9/28, MS2.8/1, Ms1 2.8/1, ms1mx2.4/70 Error ellipse: s-maj=18.8km s-min=11.8km az=24.0*
ISC 05 11:19:37.0±1.2, 62°.41N±0°.02×152°.65W±0°.03, h10km±7km, n125, σ1°.45/152, mb4.1/28, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPLA	**Purkeypile**	**0.54**	**23**	*e*Pg	**Pg**	**11 19 47.5**	**0.0**
PPLA				*e*Sg	**Sg**	**11 19 55.0**	**+0.5**
SKT	**Skwentna**	**0.68**	**129**	*e*Pg	**Pg**	**11 19 50.1**	**0.0**
SKT				*e*Sg	**Sb**	**11 20 00.6**	**+0.3**
CAST	**Castle Rocks**	**1.05**	**14**	*e*Pg	**Pg**	**11 19 56.6**	**-0.6**
CAST				*e*Sg	**Sg**	**11 20 10.9**	**+0.1**
SUA	**Susitna One**	**1.31**	**136**	*e*Pn	**Pg**	**11 20 00.9**	**-1.2**
SUA				*e*Sn	**Sg**	**11 20 18.8**	**-0.2**
KTH	**Kantishna Hill**	**1.40**	**34**	*e*Sn	**Sg**	**11 20 21.6**	**-0.3**
CHUM	**Lake Minchumin**	**1.49**	**6**	*e*Pn	**Pn**	**11 20 04.0**	**+0.2**
CHUM				*e*Sn	**Sn**	**11 20 24.1**	**+0.8**
HUR	**Hurricane**	**1.50**	**66**	*e*Pn	**Pn**	**11 20 04.3**	**+0.3**
TRF	**Thorofare Moun**	**1.51**	**45**	*e*Pn	**Pn**	**11 20 05.0**	**+0.8**
TRF				*e*Sn	**Sg**	**11 20 25.9**	**+0.4**
TT01	**Tatalina**	**1.64**	**289**	*e*Pn	**Pn**	**11 20 05.3**	**-0.5**
PMR	**Palmer**	**1.85**	**115**	*e*Pn	**Pn**	**11 20 08.9**	**+0.1**
PMR				*e*Sn	**Sn**	**11 20 31.0**	**-1.1**
NCT	**North Crescent**	**1.86**	**184**	*e*Pn	**Pn**	**11 20 09.3**	**+0.3**
BPAW	**Bear Paw Mtn.**	**1.86**	**23**	*e*Pn	**Pn**	**11 20 08.6**	**-0.3**
GHO	**Glory Hole Cre**	**1.86**	**108**	*e*Pn	**Pn**	**11 20 09.5**	**+0.5**
GHO				*e*Sn	**Sn**	**11 20 34.5**	**+1.8**
RC01	**Rabbit Creek A**	**1.92**	**132**	*e*Pn	**Pn**	**11 20 10.2**	**+0.5**
RC01				*e*Sn	**Sn**	**11 20 35.5**	**+1.7**
SVW2	**Sparrevohn**	**1.92**	**228**	*e*Pn	**Pn**	**11 20 09.7**	**0.0**
SVW2				*e*Sn	**Sg**	**11 20 36.8**	**-1.7**
RDWB	**Redoubt West**	**1.93**	**183**	*e*Pn	**Pn**	**11 20 10.4**	**+0.4**
RDWB				*e*Sn	**Sb**	**11 20 36.4**	**0.0**
RND	**Reindeer**	**2.01**	**58**	*e*Pn	**Pn**	**11 20 11.6**	**+0.6**
RND				*e*Sn	**Sn**	**11 20 38.2**	**+2.0**
SML	**Sawmill**	**2.12**	**105**	*e*Pn	**Pn**	**11 20 13.5**	**+1.1**
SML				*e*Sn	**Sb**	**11 20 41.9**	**+0.2**
MCK	**McKinley**	**2.15**	**50**	*e*Pn	**Pn**	**11 20 14.5**	**+1.6**
MCK				*e*Sn	**Sn**	**11 20 41.2**	**+1.5**
KNK	**Knik Glacier**	**2.22**	**115**	*e*Pn	**Pn**	**11 20 15.1**	**+1.3**
KNK				*e*Sn	**Sb**	**11 20 45.3**	**+0.6**
BWN	**Browne**	**2.28**	**38**	*e*Pn	**Pn**	**11 20 16.6**	**+1.9**
BWN				*e*Sn	**Sn**	**11 20 44.3**	**+1.5**
DHY	**Denali Highway**	**2.52**	**72**	*e*Pn	**Pn**	**11 20 17.9**	**-0.2**
DHY				*e*Sn	**Sn**	**11 20 48.2**	**-0.7**
SCM	**Sheep Creek Mo**	**2.57**	**101**	*e*Pn	**Pn**	**11 20 19.9**	**+1.3**
SCM				*e*Sn	**Sb**	**11 20 53.7**	**-1.0**
NEA	**Nenana**	**2.71**	**35**	*e*Pn	**Pn**	**11 20 19.8**	**-0.7**
MLY	**Manley**	**2.77**	**17**	*e*Pn	**Pn**	**11 20 21.2**	**-0.2**
SEW	**Seward**	**2.78**	**145**	*e*Pn	**Pn**	**11 20 23.3**	**+1.8**
BRLK	**Bradley Lake**	**2.79**	**161**	*e*Pn	**Pn**	**11 20 22.8**	**+1.1**
BRLK				*e*Sn	**Sb**	**11 20 58.9**	**-2.1**
HOM	**Homer**	**2.80**	**169**	*e*Pn	**Pn**	**11 20 23.7**	**+1.9**
WRH	**Wood River Hil**	**2.91**	**43**	*e*Pn	**Pn**	**11 20 24.5**	**+1.1**
GCSA	**Galena City Sc**	**3.02**	**323**	*e*Pn	**Pn**	**11 20 26.0**	**+1.3**
CCB	**Clear Creek Bu**	**3.12**	**42**	*e*Pn	**Pn**	**11 20 26.2**	**0.0**
JPK	**Jack Peak**	**3.18**	**113**	*e*Pn	**Pn**	**11 20 28.6**	**+1.5**
MDM	**Murphy Dome**	**3.23**	**36**	*e*Pn	**Pn**	**11 20 27.1**	**-0.7**
HDA	**Harding Lake**	**3.26**	**49**	*e*Pn	**Pn**	**11 20 29.4**	**+1.3**
COLA	**College**	**3.27**	**39**	*e*Pn	**Pn**	**11 20 28.5**	**+0.3**
KLU	**Klutina**	**3.31**	**103**	*e*Pn	**Pn**	**11 20 29.7**	**+0.8**
PAX	**Paxson**	**3.36**	**77**	*e*Pn	**Pn**	**11 20 30.2**	**+0.6**
PS08	**TAPS Pump Stn8**	**3.38**	**48**	*e*Pn	**Pn**	**11 20 31.6**	**+1.8**
HARP	**HAARP**	**3.49**	**87**	*e*Pn	**Pn**	**11 20 33.8**	**+2.5**
HARP				*e*Pg	Pb	11 20 34.0	-4.8
HARP				*e*Sg	**Sg**	**11 21 27.2**	**-1.7**
ILAR	**Eielson Array**	**3.50**	**45**	P	**Pn**	**11 20 33.0**	**+1.6**
	2.8nm,0.3s,baz=222,slow=14,SNR=62						
ILAR				S	**Sn**	**11 21 18.3**	**+5.4**
	19nm,0.3s,baz=223,slow=23,SNR=6.3						
ILB	**Eielson Array**	**3.50**	**45**	*e*Pn	**Pn**	**11 20 32.9**	**+1.4**
ILB				*e*Sg	**Sg**	**11 21 27.3**	**-2.0**
IL1	**Eielson Array**	**3.50**	**45**	*e*Pn	**Pn**	**11 20 32.2**	**+0.7**
DIV	**Divide**	**3.51**	**108**	*e*Pn	**Pn**	**11 20 32.5**	**+0.9**
PS06	**TAPS Pump Stn6**	**3.69**	**19**	*e*Pn	**Pn**	**11 20 34.8**	**+0.8**
RIDG	**Independ'e Rid**	**3.80**	**66**	*e*Pn	**Pn**	**11 20 36.6**	**+1.1**
RIDG				*e*Sg	**Sg**	**11 21 37.1**	**-1.7**
BMRM	**Bremner River**	**4.09**	**107**	*e*Pn	**Pn**	**11 20 40.2**	**+0.6**
BMRM				*e*Sg	**Sg**	**11 21 48.2**	**-0.1**
DOT	**Dot Lake**	**4.11**	**69**	*e*Pn	**Pn**	**11 20 40.9**	**+1.1**
DOT				*e*Sg	**Sg**	**11 21 47.2**	**-1.5**
SCRK	**Sand Creek**	**4.23**	**64**	*e*Pn	**Pn**	**11 20 41.8**	**+0.3**
MID	**Middleton Isla**	**4.29**	**131**	*e*Pn	**Pn**	**11 20 44.7**	**+2.4**
RAGM	**Ragged Mountai**	**4.34**	**114**	*e*Pn	**Pn**	**11 20 43.8**	**+0.9**
PS05	**TAPS Pump Stn5**	**4.51**	**10**	*e*Pn	**Pn**	**11 20 46.0**	**+0.8**
VRDI	**Verde Repeater**	**4.52**	**101**	*e*Pn	**Pn**	**11 20 47.5**	**+1.9**
KDAK	**Kodiak Island**	**4.64**	**180**	P	**Pn**	**11 20 48.2**	**+1.2**
	6.6nm,0.3s,baz=9.5,slow=12,SNR=93						
KDAK	**Kodiak Island**	**4.64**	**180**	*e*Pn	**Pn**	**11 20 47.6**	**+0.6**
MCARA	**McCarthy VSAT**	**4.67**	**98**	*e*Pn	**Pn**	**11 20 49.9**	**+2.5**
NICHA	**Nichawak Mount**	**4.71**	**114**	*e*Pn	**Pn**	**11 20 50.7**	**+2.6**
BERG	**Berg Lake**	**4.75**	**111**	*e*Pn	**Pn**	**11 20 51.5**	**+2.9**
CRQM	**Cirque**	**4.84**	**106**	*e*Pn	**Pn**	**11 20 51.6**	**+1.7**
KHIT	**Khitrov Hills**	**4.92**	**109**	*e*Pn	**Pn**	**11 20 52.3**	**+1.2**
COLD	**Coldfoot**	**4.95**	**11**	*e*Pn	**Pn**	**11 20 52.0**	**+0.6**
BCA3	**Beaver Creek A**	**5.04**	**78**	*e*Pn	**Pn**	**11 20 54.3**	**+1.6**
BALM	**Baldy**	**5.09**	**101**	*e*Pn	**Pn**	**11 20 53.7**	**+0.4**
OHAK	**Old Harbor**	**5.21**	**184**	*e*Pn	**Pn**	**11 20 56.1**	**+1.3**
FYU	**Fort Yukon**	**5.26**	**34**	*e*Pn	**Pn**	**11 20 56.7**	**+1.2**
EGAK	**Eagle**	**5.65**	**60**	*e*Pn	**Pn**	**11 21 01.0**	**+0.1**
SII	**Sitkinak Islan**	**5.92**	**188**	*e*Pn	**Pn**	**11 21 03.0**	**-1.6**
ANM	**Nome**	**6.09**	**296**	*e*Pn	**Pn**	**11 21 08.4**	**+1.4**
DAWY	**Dawson**	**6.22**	**69**	*e*Pn	**Pn**	**11 21 09.6**	**+0.9**
DAWY				*e*Sg	**Sg**	**11 22 56.4**	**0.0**
TOLK	**Toolik Lake Re**	**6.39**	**10**	*e*Pn	**Pn**	**11 21 12.8**	**+1.7**
TOLK				*e*Sg	**Sg**	**11 23 00.4**	**-1.5**
RDOG	**Red Dog Mine**	**7.11**	**327**	*e*Pn	**Pn**	**11 21 23.2**	**+2.2**
SDPT	**Sand Point**	**8.15**	**213**	*e*Pn	**Pn**	**11 21 36.7**	**+1.5**
WHY	**Whitehorse**	**8.66**	**94**	*e*Pn	**Pn**	**11 21 42.9**	**+0.5**
FALS	**False Pass**	**9.41**	**221**	*e*Pn	**Pn**	**11 21 56.4**	**+3.9**
BESE	**Bessie Mountai**	**9.57**	**106**	*e*Pn	**Pn**	**11 21 57.0**	**+2.3**
INK	**Inuvik**	**9.90**	**45**	P	**Pn**	**11 22 01.8**	**+2.7**
	0.3nm,0.3s,baz=244,slow=17,SNR=6.5						
INK	**Inuvik**	**9.90**	**45**	*e*Pn	Pn	11 22 05.4	+6.3
JIS	**Juneau Island**	**9.94**	**106**	*e*Pn	**Pn**	**11 22 02.0**	**+2.3**
DLBC	**Dease Lake**	**11.84**	**99**	P	Pn	11 22 30.6	+4.9
	0.1nm,0.3s,baz=282,slow=9.3,SNR=2.0						
DLBC				LR	LR	11 26 18.4	
	comp=Z,44nm,20.9s,baz=34,slow=33						
DLBC	**Dease Lake**	**11.84**	**99**	*e*Pn	**Pn**	**11 22 29.7**	**+4.0**
DIB	**Dawson Inlet,**	**14.10**	**122**	*e*Pn	**Pn**	**11 22 58.2**	**+1.7**
YKW3	**Yellowknife Ar**	**17.41**	**73**	*e*Pn	**P**	**11 23 41.6**	**+0.7**
	2.7nm,0.8s						
YKA	**Yellowknife Ar**	**17.43**	**73**	P	**Pn**	**11 23 39.4**	**-0.5**
	0.2nm,0.3s,baz=283,slow=10,SNR=11						
YKA				PcP	**PcP**	**11 28 18.3**	**-2.0**
	0.1nm,0.3s,baz=293,slow=1.5,SNR=8.0						
RES	**Resolute Bay**	**23.19**	**35**	P	**P**	**11 24 43.2**	**-0.1**
	0.4nm,0.4s,baz=247,slow=7.7,SNR=3.7						
SEY	**Seymchan**	**24.60**	**296**	P	**P**	**11 24 57.9**	**+1.0**
	1.4nm,0.6s,baz=90,slow=14,SNR=4.0						
WALA	**Waterton Lakes**	**25.11**	**104**	*e*P	**P**	**11 25 02.5**	**+0.7**
	3.3nm,0.6s						
NV01	**Mina Array Sit**	**31.82**	**123**	*e*P	**P**	**11 26 03.7**	**+1.9**
NVAR	**Mina Array Bea**	**31.82**	**123**	P	**P**	**11 26 03.9**	**+2.1**
	0.7nm,0.6s,baz=320,slow=5.1,SNR=3.6						
PDAR	**Pinedale Array**	**31.88**	**108**	P	**P**	**11 26 04.0**	**+1.6**
	0.6nm,0.6s,baz=304,slow=3.7,SNR=3.0						
PDAR				PcP	**PcP**	**11 28 51.7**	**-0.9**
	0.5nm,0.5s,baz=250,slow=3.0,SNR=3.4						
PDAR	**Pinedale Array**	**31.88**	**108**	*e*P	**P**	**11 26 03.5**	**+1.2**
ULM	**Lac du Bonnet**	**32.61**	**85**	P	**P**	**11 26 08.5**	**+0.1**
	1.2nm,0.5s,baz=309,slow=6.5,SNR=3.0						
RSSD	**Black Hills**	**33.31**	**100**	*e*P	**P**	**11 26 16.1**	**+1.3**
	5.2nm,0.6s						
PV01	**Paradox Valley**	**36.10**	**111**	*e*P	**P**	**11 26 40.2**	**+1.2**
EYMN	**Ely**	**36.28**	**84**	*e*P	**P**	**11 26 42.0**	**+1.8**
	2.4nm,0.8s						
ECSD	**EROS Data Cent**	**37.04**	**94**	*e*P	**P**	**11 26 46.9**	**+0.2**
	3.7nm,0.4s						
SPITS	**Spitsbergen Ar**	**39.49**	**4**	P	**P**	**11 27 06.0**	**-0.9**
	3.6nm,0.8s,baz=24,slow=6.5,SNR=4.8						
NRIK	**Noril'sk**	**41.82**	**332**	P	**P**	**11 27 25.5**	**-0.7**
	3.7nm,0.5s,baz=32,slow=5.9,SNR=4.6						
SCHQ	**Schefferville**	**42.14**	**59**	P	**P**	**11 27 26.7**	**-2.3**
	6.5nm,0.8s,baz=307,slow=20,SNR=3.8						
TX31	**Lajitas Ar. Si**	**45.72**	**113**	*e*P	**P**	**11 27 59.1**	**+1.0**
TXAR	**Lajitas Array**	**45.72**	**113**	P	**P**	**11 27 58.0**	**-0.1**
	1.0nm,0.7s,baz=306,slow=5.7,SNR=9.5						
W41B	**Gary Mavity, V**	**45.90**	**97**	*e*P	**P**	**11 28 00.8**	**+1.4**
MAJO	**Matsushiro**	**48.84**	**272**	*e*P	**P**	**11 28 23.4**	**+1.2**
MJAR	**Matsushiro Arr**	**48.84**	**272**	P	**P**	**11 28 23.4**	**+1.2**
	0.4nm,0.5s,baz=29,slow=7.9,SNR=4.8						
KSRS	**Korea Array**	**52.85**	**281**	P	**P**	**11 28 54.0**	**+1.6**
	1.5nm,0.6s,baz=29,slow=7.5,SNR=8.6						
SONA1	**Song

0.6nm,0.5s,baz=85,slow=4.8,SNR=3.2
ILAR Eielson Array 85.29 18 P **P 11 42 38.4 -0.9**
1.1nm,0.6s,baz=244,slow=4.8,SNR=21
ILAR pP **pP 11 43 25.6 -2.6**
1.0nm,0.8s,baz=235,slow=6.3,SNR=5.4
MKAR Makanchi Array 96.16 317 P **P 11 43 30.7 +0.2**
1.0nm,0.6s,baz=92,slow=6.2,SNR=7.5
ARCES ARCESS Array B 118.93 346 PKP **PKPdf 11 48 49.0 -0.5**
2.0nm,0.8s,baz=64,slow=2.8,SNR=6.6
KEST Kesra 150.10 322 PKPbc **PKPbc 11 49 53.0 +0.1**
4.9nm,0.7s,baz=265,slow=6.1,SNR=4.0
ESDC Sonseca Array 152.67 345 PKPbc **PKPbc 11 49 58.6 0.0**
0.2nm,0.3s,baz=348,slow=2.7,SNR=6.5
TORD Torodi Ar. Bea 165.84 271 PKP **PKPdf 11 50 06.7 -0.5**
0.6nm,0.9s,baz=27,slow=2.9,SNR=2.5

MEX 05 11:33:11.7±0.3, 17°.20N×100°.35W, h26km±9km, MD3.8, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.17**	**153**	*i* P	Pb	11 33 16.1	-1.0
CAIG				*e*S	Sb	11 33 19.2	-1.6
MEIG	**Mezcala**	**1.00**	**44**	*e*P	Pn	11 33 27.6	-2.6
MEIG				*e*S	Sb	11 33 39.9	-3.4
ARIG	**Puente Sto Nin**	**1.07**	**0**	*e*P	Pn	11 33 28.4	-2.8
ARIG				*e*S	Sn	11 33 41.6	-3.7
ZIIG	**Zihuatanejo**	**1.14**	**291**	*e*P	Pn	11 33 29.0	-3.0
PLIG	**Platanillo**	**1.43**	**34**	*e*P	Pn	11 33 33.5	-2.6
PLIG				*e*S	Sn	11 33 50.4	-3.8

*ISCJB **05** 11:43:31.2±0.8, 22°.24S±0°.10×178°.1W±0°.1, h300km, mb3.8/6, Error ellipse: s-maj=19.4km s-min=10.8km az=27.3*
*IDC **05** 11:43:33.2±3.2, 22°.15S×178°.11W, h309km±35km, mb3.6/6, mb1 3.8/8, mb1mx3.4/45, mbtmp4.4/8, Error ellipse: s-maj=33.7km s-min=15.8km az=145.0*
ISC 05 11:43:32.3±0.9, 22°.3S±0°.1×177°.9W±0°.1, h300km, n9, σ1§58/10, mb3.8/6, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**10.19**	**36**	P	**Pn**	**11 45 53.0**	**+0.1**
	2.9nm,0.3s,baz=166,slow=0.7,SNR=6.1						
AFI				S	S	11 47 38.6	-9.3
	7.0nm,0.3s,baz=230,slow=18,SNR=9.9						
DZM	**Mont Dzumac**	**14.47**	**268**	P	**Pn**	**11 46 46.7**	**+2.0**
	0.9nm,0.3s,baz=94,slow=12,SNR=12						
URZ	**Urewera**	**16.46**	**194**	P	**P**	**11 47 06.8**	**+1.6**
	1.5nm,0.3s,baz=267,slow=1.9,SNR=4.6						
URZ				S	**S**	**11 50 00.4**	**-1.6**
	1.1nm,0.3s,baz=18,slow=3.9,SNR=3.1						
CTA	**Charters Tower**	**33.42**	**267**	P	**P**	**11 49 43.2**	**-0.4**
	5.9nm,0.5s,baz=94,slow=9.7,SNR=12						
STKA	**Stephens Creek**	**37.09**	**246**	P	**P**	**11 50 14.7**	**0.0**
	2.0nm,0.4s,baz=94,slow=11,SNR=15						
ASAR	**Alice Springs**	**44.19**	**259**	P	**P**	**11 51 11.4**	**-1.1**
	5.9nm,0.7s,baz=95,slow=7.6,SNR=73						
WRA	**Warramunga Arr**	**44.44**	**264**	P	**P**	**11 51 12.7**	**-1.8**
	1.9nm,0.4s,baz=96,slow=8.0,SNR=75						
TXAR	**Lajitas Array**	**87.97**	**57**	P	**P**	**11 55 50.3**	**+1.3**
	0.3nm,0.7s,baz=219,slow=7.0,SNR=3.3						
ILAR	**Eielson Array**	**90.05**	**13**	P	**P**	**11 55 56.2**	**-1.4**
	0.4nm,0.4s,baz=217,slow=5.2,SNR=9.9						

*GCMT **05** 11:56:00.0±0.4, 40°.87S×85°.88E, h15km±2km, MW4.9/70, Moment Tensor Solution. s12,c12; s70,c90; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.31±.14; $M_{\theta\theta}$2.75±.14; $M_{\phi\phi}$-2.43±.12; $M_{r\theta}$1.02±.46; $M_{\theta\phi}$0.06±.10; $M_{r\phi}$0.64±.42; Best double couple: $M_0$2.84400×10^{16} NP1:ϕ_s45.00000°, δ90.00000°, λ156.00000°. NP2: ϕ_s135.00000°, δ66.00000°, λ0.00000°. Principal axes: T 3.0690, Plg17.0000°, Azm357.0000°; N -0.4440, Plg66.0000°, Azm224.0000°; P -2.6190, Plg17.0000°, Azm93.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
IDC 05 11:55:49.8±1.3, 41°.25S×85°.80E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.6/58, mbtmp3.9/4, MS4.1/31, Ms1 4.1/31, ms1mx3.9/55 Error ellipse: s-maj=43.4km s-min=28.5km az=108.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**23.13**	**83**	T	T	12 24 39.7	
	baz=246,slow=74,SNR=91						
H01W3	**Cape Leeuwin H**	**23.14**	**83**	T	T	12 24 38.6	
	baz=246,slow=74,SNR=104						
H01W1	**Cape Leeuwin H**	**23.14**	**83**	T	T	12 24 37.9	
	baz=246,slow=74,SNR=88						
NWAO	**Narrogin (SRO)**	**26.30**	**82**	LR	LR	12 09 18.8	
	comp=Z,497nm,21.2s,baz=111,slow=31						
MAW	**Mawson**	**29.21**	**198**	LR	LR	12 11 04.8	
	comp=Z,242nm,20.0s,baz=54,slow=31						
H08S2	**Diego Garcia H**	**35.49**	**337**	T	T	12 39 54.7	
	baz=162,slow=76,SNR=364						
H08S1	**Diego Garcia H**	**35.50**	**337**	T	T	12 39 55.1	
	baz=162,slow=76,SNR=288						
H08S3	**Diego Garcia H**	**35.51**	**337**	T	T	12 40 00.4	
	baz=162,slow=76,SNR=386						
H08N1	**Diego Garcia H**	**37.18**	**335**	T	T	12 42 20.2	
	baz=276,slow=77,SNR=4.9						
H08N3	**Diego Garcia H**	**37.18**	**335**	T	T	12 42 14.8	
	baz=276,slow=77,SNR=4.2						
H08N2	**Diego Garcia H**	**37.20**	**335**	T	T	12 42 19.6	
	baz=276,slow=77,SNR=4.3						
LEM	**Lembang**	**39.40**	**36**	LR	LR	12 16 16.4	
	comp=Z,181nm,20.4s,baz=208,slow=31						
OPO	**Ambohidratompo**	**39.93**	**293**	LR	LR	12 15 38.0	
	comp=Z,224nm,19.0s,baz=194,slow=30						
ASAR	**Alice Springs**	**43.63**	**82**	P	P	12 03 55.5	-0.5
	1.5nm,0.8s,baz=231,slow=6.7,SNR=9.0						
ASAR				LR	LR	12 20 15.2	
	comp=Z,621nm,19.4s,baz=240,slow=34						
STKA	**Stephens Creek**	**45.10**	**97**	LR	LR	12 19 10.4	
	comp=Z,246nm,21.9s,baz=209,slow=31						
PSI	**Prapat**	**45.44**	**19**	LR	LR	12 18 44.1	
	comp=Z,791nm,21.1s,baz=265,slow=30						
WRA	**Warramunga Arr**	**46.18**	**78**	P	P	12 04 16.7	+0.3
	1.1nm,0.9s,baz=231,slow=8.8,SNR=4.4						
VNDA	**Vanda**	**47.11**	**163**	P	P	12 04 23.8	+0.9
	1.0nm,0.6s,baz=280,slow=9.2,SNR=4.2						
VNDA				LR	LR	12 22 15.1	
	comp=Z,265nm,18.7s,baz=266,slow=34						
PALK	**Pallekele**	**48.51**	**353**	LR	LR	12 19 56.3	
	comp=Z,519nm,21.5s,baz=100,slow=30						
QSPA	**South Pole Qui**	**48.91**	**180**	P	P	12 04 36.2	-1.0
	2.6nm,0.8s,baz=327,slow=5.8,SNR=6.3						
BOSA	**Boshof**	**50.29**	**264**	LR	LR	12 22 06.5	
	comp=Z,362nm,18.9s,baz=198,slow=31						
SNAA	**Sanae**	**51.04**	**204**	LR	LR	12 25 56.4	
	comp=Z,95nm,18.2s,baz=0.0,slow=35						
SIJI	**Sorong**	**57.41**	**58**	LR	LR	12 29 46.8	
	comp=Z,40nm,18.1s,baz=234,slow=36						
RPZ	**Rata Peaks**	**60.16**	**124**	LR	LR	12 25 24.0	
	comp=Z,358nm,21.5s,baz=198,slow=30						
CMAR	**Chiang Mai Arr**	**60.64**	**14**	LR	LR	12 29 32.6	
	comp=Z,35nm,18.3s,baz=208,slow=33						
JAY	**Jayapura**	**62.50**	**67**	LR	LR	12 32 15.4	
	comp=Z,106nm,18.4s,slow=35						
ATD	**Arta Tunnel**	**65.77**	**313**	LR	LR	12 31 36.1	
	comp=Z,66nm,18.1s,baz=17,slow=33						
WSAR	**Wadi Sarin**	**68.94**	**333**	LR	LR	12 31 09.0	
	comp=Z,241nm,18.5s,baz=178,slow=31						
DZM	**Mont Dzumac**	**68.95**	**101**	LR	LR	12 32 12.9	
	comp=Z,126nm,21.2s,baz=237,slow=32						
HNR	**Honiara**	**71.93**	**87**	LR	LR	12 36 02.8	
	comp=Z,119nm,18.9s,baz=187,slow=34						
JOW	**Kunigami**	**78.34**	**38**	LR	LR	12 40 13.6	
	comp=Z,41nm,20.5s,baz=58,slow=34						
GEYT	**Alibeck**	**82.76**	**338**	LR	LR	12 39 26.5	
	comp=Z,95nm,21.2s,baz=40,slow=32						
JNU	**Nakatsue**	**84.86**	**37**	LR	LR	12 46 40.6	
	comp=Z,31nm,18.9s,baz=115,slow=36						
MKAR	**Makanchi Array**	**87.72**	**358**	LR	LR	12 44 35.6	
	comp=Z,171nm,21.6s,baz=235,slow=33						
SONM	**Songino Array**	**90.56**	**14**	LR	LR	12 48 35.1	
	comp=Z,84nm,19.6s,baz=215,slow=35						
BRTR	**Keskin Array B**	**93.52**	**322**	LR	LR	12 48 39.8	
	comp=Z,33nm,18.3s,baz=112,slow=34						
TORD	**Torodi Ar. Bea**	**94.19**	**284**	LR	LR	12 50 31.3	
	comp=Z,93nm,18.6s,baz=155,slow=35						
AKTO	**Aktyubinsk**	**94.49**	**343**	LR	LR	12 49 27.7	
	comp=Z,84nm,19.5s,baz=146,slow=34						
ZALV	**Zalesovo Beam**	**94.83**	**359**	LR	LR	12 49 41.6	
	comp=Z,124nm,19.8s,baz=248,slow=34						
BVAR	**Borovoye Array**	**94.84**	**351**	LR	LR	12 47 50.9	
	comp=Z,166nm,21.2s,baz=172,slow=33						
DBIC	**Dimbokro**	**94.84**	**275**	LR	LR	12 48 14.9	
	comp=Z,145nm,18.6s,baz=165,slow=33						
KOWA	**Kowa**	**99.27**	**281**	LR	LR	12 54 01.6	
	comp=Z,88nm,18.1s,baz=214,slow=35						
INK	**Inuvik**	**145.75**	**25**	PKPbc	PKPdf	12 15 28.6	-0.4
	2.5nm,1.1s,baz=276,slow=5.5,SNR=4.4						
RES	**Resolute Bay**	**146.47**	**0**	PKPbc	PKPbc	12 15 31.9	+0.4
	1.0nm,0.9s,baz=347,slow=4.9,SNR=2.4						
YKA	**Yellowknife Ar**	**155.49**	**23**	PKPab	PKPab	12 16 08.3	-1.7
	0.2nm,0.9s,baz=329,slow=2.3,SNR=3.0						

MAN 05 11:55:56.9, 9°.35N×126°.08E, h21km, mb4.1, ML2.9, MS2.6, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.59**	**230**	*e*P	Pb	11 56 08.7	0.0
BUTP				*e*S	Sn	11 56 19.6	+0.6
SCPH	**Surigao**	**0.72**	**307**	⇓*e*P	Pb	11 56 10.9	+0.1
SCPH				*e*S	Sn	11 56 23.5	+1.2
BUKP	**Musuan**	**1.77**	**215**	*e*P	Pb	11 56 28.3	-0.5
BESP	**Borongan**	**2.32**	**344**	*e*P	Pn	11 56 34.0	+0.1
BESP				*e*S	Sb	11 57 06.3	-0.1

*NNC **05** 12:03:35.5±2.4, 53°.55N×87°.69E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=19.5km s-min=9.8km az=60.0*
IDC 05 12:03:35.3±2.4, 53°.56N×87°.80E, h0km, mb1 3.4/3, mb1mx3.0/72, mbtmp3.4/3, ML3.1/3, 8C-1D, Error ellipse: s-maj=21.6km s-min=13.5km az=59.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.81**	**284**	*i*		12 14 50.0	
	baz=99,slow=326,SNR=4.3						
ZAA0	**Zalesovo Array**	**1.81**	**284**	Pg	Pn	12 04 06.9	-0.8
	7.0nm,0.5s						
ZAA0				⇑Lg	Lg	12 04 32.2	
	37nm,0.7s						
ZALV	**Zalesovo Beam**	**1.81**	**284**	Pn	Pn	12 04 06.3	-1.4
	5.5nm,0.3s,baz=103,slow=14,SNR=24						
ZALV				Lg	Lg	12 04 32.0	
	4.5nm,0.3s,baz=98,slow=22,SNR=8.9						
KURK	**Kurchatov**	**6.33**	**247**	⇑Pn	Pn	12 05 10.0	+0.3
	1.3nm,0.6s						
KURK				⇑Lg	Lg	12 06 55.1	
	9.3nm,1.0s						
KURBB	**Kurchatov Arra**	**6.42**	**246**	Pn	Pn	12 05 11.2	+0.2
	0.3nm,0.3s,baz=62,slow=14,SNR=9.8						
KURBB				Sn	Sn	12 06 25.9	+0.8
	0.0nm,0.3s,baz=54,slow=16,SNR=4.1						
KURBB				Lg	Lg	12 06 57.7	
	0.1nm,0.3s,baz=62,slow=35,SNR=11						
KURBB	**Kurchatov Arra**	**6.42**	**246**	⇑Pn	Pn	12 05 11.2	+0.2
	3.5nm,0.4s						
KURBB				⇑Sn	Sn	12 06 24.2	-0.8
	4.4nm,0.7s						
KURBB				⇓Lg	Lg	12 06 56.7	
	11nm,0.8s						
MK31	**Makanchi Array**	**7.64**	**210**	⇑Pn	Pn	12 05 28.8	+1.0
	0.6nm,0.5s,baz=27,slow=13,SNR=11						
MK31				⇑Sn	Sn	12 06 54.8	-0.3
	2.0nm,0.8s,baz=192,slow=36,SNR=3.8						
MK31				⇑Lg	Lg	12 07 35.2	
	1.5nm,0.6s,baz=29,slow=32,SNR=2.7						
MKAR	**Makanchi Array**	**7.64**	**210**	Pn	Pn	12 05 29.1	+1.3
	0.4nm,0.3s,baz=30,slow=13,SNR=12						
MKAR				Sn	Sn	12 06 54.4	-0.7
	0.2nm,0.3s,baz=32,slow=28,SNR=4.2						
MKAR				Lg	Lg	12 07 35.9	
	0.2nm,0.3s,baz=30,slow=32,SNR=5.2						
BVAR	**Borovoye Array**	**10.44**	**274**	Pn	Pn	12 06 05.8	-0.3
	0.2nm,0.3s,baz=81,slow=13,SNR=3.2						
BVAR				Sn	Sn	12 07 58.0	-5.6
	0.2nm,0.3s,baz=71,slow=25,SNR=4.5						

NNC 05 12:24:04.4±2.6, 53°.32N×87°.18E, h0km, mb4.3, mpv4.1, 3C-8D, Error ellipse: s-maj=24.4km s-min=10.5km az=55.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**1.54**	**295**	⇓P	Pn	12 24 31.6	-1.5
	34nm,0.6s						
ZAA0				⇓S	Sg	12 24 53.9	+0.1
	36nm,0.8s						
KURK	**Kurchatov**	**5.89**	**247**	⇓Pn	Pn	12 25 34.1	+1.2
	8.9nm,0.6s						
KURK				⇑Lg	Lg	12 27 12.3	
	25nm,1.1s						
KURBB	**Kurchatov Arra**	**5.99**	**247**	⇓Pn	Pn	12 25 35.5	+1.3
	17nm,0.5s						
KURBB				⇓Sn	Sn	12 26 41.9	-1.4
	9.9nm,0.6s						
KURBB				⇑Lg	Lg	12 27 12.1	
	39nm,0.8s						
MK31	**Makanchi Array**	**7.25**	**208**	⇓Pn	Pn	12 25 53.3	+1.8
	6.1nm,0.5s,baz=32,slow=13,SNR=139						
MK31				⇑Lg	Lg	12 27 53.2	
	4.7nm,0.6s,baz=32,slow=30,SNR=4.5						
MAKZ	**Makanchi**	**7.32**	**209**	⇓Pn	Pn	12 25 54.1	+1.5
	7.8nm,0.5s						
MAKZ				⇓Lg	Lg	12 27 57.6	
	11nm,1.1s						

*ISCJB **05** 12:33:45.9±1.4, 5°.5S±0°.2×149°.3E±0°.3, h10km, mb3.8/4, MS3.5/3, Error ellipse: s-maj=53.5km s-min=19.5km az=29.4*
*IDC **05** 12:33:45.1±1.4, 5°.60S×149°.62E, h0km, mb4.0/5, mb1 4.3/6, mb1mx3.7/49, mbtmp4.1/6, ML3.0/1, MS3.4/6, Ms1 3.4/6, ms1mx3.0/47, Error ellipse: s-maj=63.6km s-min=23.3km az=119.0*
ISC 05 12:33:47.4±1.4, 5°.6S±0°.2×149°.3E±0°.4, h10km, n13, σ1§80/9, mb3.9/4, MS3.4/3, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.36**	**208**	Pn	**Pn**	**12 34 54.9**	**+1.2**
	50nm,0.3s,baz=25,slow=5.1,SNR=98						
PMG				Sn	**Sn**	**12 35 41.6**	**-3.0**
	49nm,0.3s,baz=114,slow=22,SNR=12						
PMG				LR	LR	12 36 43.2	
	comp=Z,412nm,19.3s,baz=338,slow=40						
SIJI	**Sorong**	**18.54**	**284**	LR	LR	12 46 32.4	
	comp=Z,79nm,21.8s,baz=216,slow=41						
GUMO	**Guam**	**19.50**	**347**	LR	LR	12 44 36.2	
	comp=Z,52nm,20.6s,baz=174,slow=33						
WRA	**Warramunga Arr**	**20.37**	**224**	P	**P**	**12 38 25.2**	**+0.8**
	2.8nm,0.4s,baz=52,slow=11,SNR=48						
ASAR	**Alice Springs**	**23.30**	**218**	P	**P**	**12 38 56.0**	**+0.3**
	1.0nm,0.5s,baz=55,slow=9.0,SNR=46						
DZM	**Mont Dzumac**	**23.38**	**136**	LR	LR	12 46 30.8	
	comp=Z,134nm,19.3s,baz=274,slow=33						
FITZ	**Fitzroy Crossi**	**26.21**	**240**	P	**P**	**12 39 24.5**	**+1.9**
	3.9nm,0.5s,baz=90,slow=10						
STKA	**Stephens Creek**	**27.16**	**194**	P	**P**	**12 39 32.2**	**+1.2**
	2.8nm,0.7s,baz=6.6,slow=14,SNR=3.0						
LEM	**Lembang**	**41.40**	**266**	LR	LR	13 03 16.3	
	comp=Z,101nm,18.5s,baz=200,slow=42						
PETK	**Petropavlovsk-**	**58.87**	**6**	LR	LR	13 04 56.6	
	comp=Z,32nm,21.4s,baz=148,slow=32						
ILAR	**Eielson Array**	**84.19**	**23**	P	**P**	**12 46 18.0**	**-0.7**
	0.3nm,0.6s,baz=241,slow=5.3,SNR=4.2						
TORD	**Torodi Ar. Bea**	**147.13**	**286**	PKPbc	**PKPab**	**12 53 31.9**	**-1.6**
	1.2nm,0.4s,baz=82,slow=2.6,SNR=15						
KOWA	**Kowa**	**152.24**	**291**	PKPbc	**PKPbc**	**12 53 44.0**	**-0.5**
	2.3nm,0.5s,baz=90,slow=1.0,SNR=8.0						

NEIC 05 12:43:29.8±0.0, 19°.34N×155°.28W, h1km, ML3.6(HVO), After HVO., Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDHHI	**Sand Hill**	**0.05**	**347**	*e*Pg	Pg	12 43 31.7	+1.0
SDHHI				*e*Sg	Sg	12 43 32.9	+1.5
RIM	**Rim**	**0.05**	**9**	*e*Pg	Pg	12 43 31.9	+1.0
HLP	**Hilina Pali**	**0.05**	**206**	*e*Pg	Pg	12 43 32.1	+1.2
HLP				*e*Sg	Sg	12 43 34.3	+2.7
KKO	**Keanakako'i**	**0.06**	**17**	*e*Pg	Pg	12 43 32.1	+1.1
WRMHI	**West Rim**	**0.06**	**346**	*e*Pg	Pg	12 43 32.0	+0.9
WRMHI				*e*Sg	Sg	12 43 33.3	+1.3
NPH	**North Pit**	**0.07**	**2**	*e*Pg	Pg	12 43 32.1	+0.9
PUH	**Pauahi**	**0.07**	**65**	*e*Pg	Pg	12 43 32.4	+1.1
PUH				*e*Sg	Sg	12 43 34.2	+2.0
BYL	**Byron's Ledge**	**0.07**	**18**	*e*Pg	Pg	12 43 32.3	+1.0
BYL				*e*Sg	Sg	12 43 34.5	+2.2
OBL	**Observatory Le**	**0.07**	**359**	*e*Pg	Pg	12 43 32.3	+1.0
OBL				*e*Sg	Sg	12 43 34.2	+1.9
UWE	**Uwekahuna**	**0.08**	**353**	*e*Pg	Pg	12 43 32.4	+1.1
UWE				*e*Sg	Sg	12 43 33.9	+1.4
UWB	**Uwekahuna B**	**0.08**	**3**	*e*Pg	Pg	12 43 32.4	+1.0
UWB				*e*Sg	Sg	12 43 34.5	+2.0
HATHI	**Halema'uma'u T**	**0.08**	**15**	*e*Pg	Pg	12 43 32.5	+1.0
HATHI				*e*Sg	Sg	12 43 33.5	+1.0
SBLHI	**Steaming Bluff**	**0.08**	**10**	*e*Pg	Pg	12 43 32.5	+1.0
SBLHI				*e*Sg	Sg	12 43 34.6	+2.0
STCH	**Steam Cracks**	**0.15**	**75**	*e*Pg	Pg	12 43 33.7	+0.9
STCH				*e*Sg	Sg	12 43 37.0	+2.2
AIN	**Ainahou**	**0.17**	**280**	*e*Pg	Pg	12 43 34.3	+1.3
AIN				*e*Sg	Sg	12 43 36.8	+1.5
NPOC	**North of Pu'u**	**0.17**	**73**	*e*Pg	Pg	12 43 34.2	+1.1
NPOC				*e*Sg	Sg	12 43 36.1	+0.8
JCUZ	**Jacuzzi**	**0.18**	**77**	*e*Pg	Pg	12 43 34.3	+1.1
JCUZ				*e*Sg	Sg	12 43 36.5	+1.0
MLH	**Mauna Loa**	**0.18**	**327**	*e*Pg	Pg	12 43 34.5	+1.2
MLH				*e*Sg	Sg	12 43 37.1	+1.5
HULD	**Heiheiahulu Di**	**0.30**	**76**	*e*Pg	Pg	12 43 36.4	+0.9
HULD				*e*Sg	Sg	12 43 40.0	+0.6
HMH	**Humu'ula Sheep**	**0.32**	**324**	*e*Pg	Pg	12 43 37.0	+1.0
HMH				*e*Sg	Sg	12 43 40.8	+0.7
KHU	**Kahuku**	**0.33**	**253**	*e*Pg	Pb	12 43 37.7	-0.9
KHU				*e*Sg	Sg	12 43 42.0	+1.6
MWH	**Moku'aweowe**	**0.33**	**295**	*e*Pg	Pg	12 43 36.9	+0.8
MWH				*e*Sg	Sg	12 43 40.6	+0.2
MLOA	**Mauna Loa Obse**	**0.34**	**305**	*e*Pg	Pg	12 43 37.1	+0.9
MLOA				*e*Sg	Sg	12 43 41.5	+0.8
HPO	**Honuapo**	**0.36**	**225**	*e*Pg	Pb	12 43 37.9	-1.1
POHA	**Pohakuloa**	**0.47**	**330**	*e*Pg	Pg	12 43 39.6	+0.7
POHA				*e*Sg	Sg	12 43 44.6	-0.4
HUH	**Hualalai**	**0.62**	**303**	*e*Pg	Pg	12 43 42.7	+0.9
KHLU	**Kahalu'u**	**0.63**	**293**	*e*Pg	Pg	12 43 42.1	+0.3
KHLU				*e*Sg	Sg	12 43 50.5	+0.6
HPAH	**Hawaii Prepara**	**0.79**	**330**	*e*Pg	Pg	12 43 44.1	-0.8
HPAH				*e*Sg	Sg	12 43 55.8	+0.7
MHA	**Mahukona**	**1.02**	**325**	*e*Pg	Pg	12 43 48.0	-1.4
MHA				*e*Sg	Sg	12 44 02.6	-0.1

*DDA **05** 13:00:26.8, 37°.09N×28°.53E, h7km, Ml2.8, Suspected Mining explosion.*
*ISK **05** 13:00:26.9, 37°.08N×28°.52E, h9km±4km, ML2.6/8*
*ISCJB **05** 13:00:27.4±0.4, 37°.11N±0°.03×28°.49E±0°.03, h0km, Error ellipse: s-maj=3.9km s-min=3.6km az=15.6*
*CSEM **05** 13:00:27.3±0.2, 37°.12N×28°.54E, h1km, ML2.6, Error ellipse: s-maj=5.3km s-min=4.5km az=43.0, Suspected Mining explosion.*
ISC 05 13:00:26.2±0.8, 37°.15N±0°.02×28°.57E±0°.02, h0km, n33, σ0§98/50, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.23**	**265**	PG	**Pg**	**13 00 31.5**	**+0.9**
YER	**Yerkesik**	**0.23**	**265**	*e*Pg	**Pg**	**13 00 31.5**	**+0.9**
TURN	**Turunc**	**0.28**	**175**	PG	**Pb**	**13 00 34.6**	**+0.5**
TURN	**Turunc**	**0.28**	**175**	*i* P	**Pb**	**13 00 33.7**	**-0.4**
TURN				*i* S	**Sb**	**13 00 40.0**	**+0.7**
TURN	**Turunc**	**0.28**	**175**	P	**Pb**	**13 00 33.7**	**-0.4**
TURN	**Turunc**	**0.28**	**175**	*e*Pg	**Pb**	**13 00 34.6**	**+0.5**
TURN				S	**Sb**	**13 00 40.0**	**+0.7**
DALY	**Dalyan (Mu¨la**	**0.34**	**169**	PG	**Pg**	**13 00 33.1**	**+0.4**
DALY				SG	**Sg**	**13 00 37.6**	**+0.4**
DALY	**Dalyan (Mu¨la**	**0.34**	**169**	*i* P	**Pg**	**13 00 32.8**	**+0.1**
DALY				*i* S	**Sg**	**13 00 37.8**	**+0.7**
DALY	**Dalyan (Mu¨la**	**0.34**	**169**	P	**Pg**	**13 00 32.8**	**+0.1**
DALY	**Dalyan (Mu¨la**	**0.34**	**169**	*e*Pg	**Pg**	**13 00 33.1**	**+0.4**
DALY				*e*Sg	**Sg**	**13 00 37.6**	**+0.4**
TAVA	**DENIZLI_Tavas**	**0.41**	**41**	*i* P	**Pb**	**13 00 36.4**	**-0.1**
TAVA				*i* S	**Sb**	**13 00 44.9**	**+1.5**
TAVA	**DENIZLI_Tavas**	**0.41**	**41**	P	**Pb**	**13 00 36.3**	**-0.1**
TAVA				S	**Sb**	**13 00 44.8**	**+1.5**
MRSB	**Marmaris-Mugla**	**0.53**	**215**	PG	**Pg**	**13 00 36.3**	**0.0**
MRSB				SG	**Sg**	**13 00 42.8**	**-0.4**
MRSB	**Marmaris-Mugla**	**0.53**	**215**	*e*Pg	**Pg**	**13 00 36.3**	**0.0**
MRSB				*e*Sg	**Sg**	**13 00 42.8**	**-0.4**
MLSB	**Milas**	**0.65**	**283**	PG	**Pg**	**13 00 38.6**	**0.0**
MLSB	**Milas**	**0.65**	**283**	*e*Pg	**Pg**	**13 00 38.6**	**0.0**
FETY	**Fethiye**	**0.66**	**141**	P	**Pg**	**13 00 35.1**	**-3.7**
FETY				S	**Sg**	**13 00 44.0**	**-3.4**
AYDN	**Tasoluk**	**0.75**	**313**	*i* P	**Pb**	**13 00 41.6**	**-0.5**
AYDN				*i* S	**Sb**

comp=Z,55nm,19.0s,baz=100,slow=38
MAJO Matsushiro 3.49 261 *e*Pn **Pn 13 06 49.0 +1.8**
MAJO *e*Sn **Sn 13 07 30.8 +2.1**
MAT Matsushiro 3.49 261 P **Pn 13 06 48.9 +1.7**
MAT *e*S **Sb 13 07 32.6 -4.6**
MJB9 Matsu-Tunnel 3.50 261 *e*Pn **Pn 13 06 49.2 +1.9**
JHJ2 Mitsune 4.59 209 *e*Pn **Pn 13 07 02.9 +0.6**
JHJ Hachijo jima 2 4.60 210 Pn **Pn 13 07 01.9 -0.5**
18nm,0.3s,baz=31,slow=16,SNR=4.6
JHJ Sn **Sn 13 07 53.8 -2.1**
12nm,0.3s,baz=56,slow=22,SNR=3.1
INU Inuyama 4.78 250 *e*Pn **Pn 13 07 07.1 +2.3**
ERM Erimo 4.88 6 *e*Pn **Pn 13 07 05.3 -1.0**
ASAJ Asahikawa 6.96 1 Pn **Pn 13 07 36.3 +1.6**
0.7nm,0.3s,baz=107,slow=20,SNR=4.5
ASAJ LR LR 13 10 22.1
comp=Z,56nm,20.8s,baz=161,slow=38
ASAJ Asahikawa 6.96 1 *e*Pn **Pn 13 07 35.3 +0.6**
KSRS Korea Array 11.61 276 Pn **Pn 13 08 41.5 +3.0**
0.0nm,0.3s,baz=78,slow=15,SNR=2.6
KSRS LR LR 13 12 27.5
comp=Z,55nm,18.2s,baz=103,slow=34
KSAR Wonju Array Be 11.64 276 Pn **Pn 13 08 41.5 +2.5**
PETK Petropavlovsk- 19.16 29 *e*P **Pn 13 10 16.6 -0.4**
SEY Seymchan 26.52 10 P **P 13 11 31.6 +1.4**
2.0nm,0.8s,baz=180,slow=6.1,SNR=3.7
H11N2 WAKE ISLAND Hy 27.47 122 T T 13 40 28.0
baz=315,slow=75,SNR=22
H11N1 WAKE ISLAND Hy 27.48 123 T T 13 40 33.1
baz=315,slow=75,SNR=23
H11N3 WAKE ISLAND Hy 27.49 122 T T 13 40 31.0
baz=315,slow=75,SNR=23
H11S1 WAKE ISLAND Hy 28.20 125 T T 13 41 22.0
baz=317,slow=76,SNR=15
H11S3 WAKE ISLAND Hy 28.21 125 T T 13 41 20.9
baz=317,slow=76,SNR=20
H11S2 WAKE ISLAND Hy 28.22 125 T T 13 41 27.1
baz=317,slow=76,SNR=21
SONA0 Songino Array 28.44 304 *e*P **P 13 11 48.7 +0.9**
SONM Songino Array 28.44 304 P **P 13 11 48.7 +0.9**
0.6nm,0.5s,baz=90,slow=10,SNR=3.4
ZAA1 Zalesovo Array 42.48 312 *e*P **P 13 13 48.5 +0.7**
ZALV Zalesovo Beam 42.48 312 P **P 13 13 48.5 +0.7**
0.5nm,0.4s,baz=92,slow=7.5,SNR=3.0
MK01 Makanchi Array 44.79 302 *e*P **P 13 14 06.2 -0.4**
MK32 Makanchi Array 44.79 302 *e*P **P 13 14 06.5 -0.2**
MKAR Makanchi Array 44.79 302 P **P 13 14 06.5 -0.2**
0.8nm,0.8s,baz=95,slow=8.6,SNR=5.6
PMG Port Moresby 46.52 174 P **P 13 14 19.8 -0.6**
11nm,0.8s,baz=223,slow=12,SNR=3.7
KURK Kurchatov 46.54 308 *e*P **P 13 14 20.8 +0.5**
KURBB Kurchatov Arra 46.61 308 P **P 13 14 20.8 -0.1**
1.7nm,0.6s,baz=82,slow=7.9,SNR=6.3
ILAR Eielson Array 48.93 32 P **P 13 14 39.6 +0.8**
0.6nm,0.8s,baz=268,slow=5.7,SNR=6.3
ILB Eielson Array 48.93 32 *e*P **P 13 14 38.6 -0.1**
WR1 Warramunga Arr 57.30 189 *e*P **P 13 15 39.9 -1.0**
29nm,1.8s
WRA Warramunga Arr 57.30 189 P **P 13 15 39.9 -1.0**
1.2nm,0.6s,baz=6.3,slow=7.3,SNR=15
AS31 Alice Springs 61.03 189 *e*P **P 13 16 04.6 -2.0**
2.2nm,1.3s
ASAR Alice Springs 61.03 189 P **P 13 16 06.3 -0.4**
1.2nm,0.9s,baz=1.0,slow=6.4,SNR=10
YKA Yellowknife Ar 63.27 30 P **P 13 16 21.6 +0.4**
0.1nm,0.6s,baz=304,slow=7.1,SNR=3.0
FIA0 FINESS Array S 69.11 333 *e*P **P 13 16 59.2 +0.5**
FINES FINESS Array B 69.11 333 P **P 13 16 59.2 +0.5**
1.7nm,0.9s,baz=56,slow=8.5,SNR=3.4
NVAR Mina Array Bea 74.22 54 P **P 13 17 31.3 +1.0**
0.3nm,0.7s,baz=301,slow=7.3,SNR=2.7
HFS Hagfors 74.33 336 LR LR 13 56 33.2
comp=Z,21nm,18.3s,baz=261,slow=41
TXAR Lajitas Array 89.36 53 P **P 13 18 50.7 +0.8**
0.2nm,0.5s,baz=298,slow=3.9,SNR=2.8
KEST Kesra 95.45 323 LR LR 14 07 16.1
comp=Z,98nm,18.3s,baz=282,slow=39
LPAZ La Paz 145.88 61 PKPbc **PKPab 13 25 33.1 -1.0**
1.3nm,0.7s,baz=0.0,slow=3.0,SNR=4.7
LPAZ La Paz 145.88 61 *e*PKPdf **PKPbc 13 25 32.2 -1.5**

*ATH **05** 13:47:27.9, 37.°74N×26.°75E, $h18^{km}\pm2^{km}$, ML2.7/4, Error ellipse: s-maj=3.2km s-min=1.4km az=134.0*
*DDA **05** 13:47:28.5, 37.°80N×26.°73E, $h7^{km}$, Ml2.9*
*ISCJB **05** 13:47:28.4±0.4, 37.°77N±0.°02×26.°72E±0.°03, $h4^{km}\pm3^{km}$, Error ellipse: s-maj=4.2km s-min=3.0km az=150.7*
*THE **05** 13:47:28.6, 37.°74N×26.°69E, $h7^{km}\pm1^{km}$, ML2.7/3, Error ellipse: s-maj=2.4km s-min=0.6km az=55.0*
*ISK **05** 13:47:28.3, 37.°77N×26.°76E, $h10^{km}$, ML3.1/16*
*CSEM **05** 13:47:28.6±0.2, 37.°77N×26.°71E, $h5^{km}$, ML2.7, Error ellipse: s-maj=4.4km s-min=3.5km az=39.0*

ISC 05 13:47:28.7±0.8, 37.°76N±0.°02×26.°73E±0.°02, $h14^{km}\pm5^{km}$, n64, σ0.°73/94, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.10**	**124**	P	**Pg**	**13 47 32.1**	**+0.3**
SMG				S	**Sg**	**13 47 33.0**	**-0.9**
SMG				AML	AML	13 47 33.8	
	comp=N,40580μm,0.3s						
SMG				AML	AML	13 47 34.3	
	comp=E,18905μm,0.3s						
SMG	**Samos**	**0.10**	**124**	P	**Pg**	**13 47 31.7**	**-0.1**
SMG				S	**Sg**	**13 47 33.6**	**-0.3**
SMG	**Samos**	**0.10**	**124**	P	**Pg**	**13 47 31.7**	**-0.1**
SMG				S	**Sg**	**13 47 33.6**	**-0.3**
DGB	**˜zmir**	**0.31**	**22**	*i* P	**Pg**	**13 47 34.6**	**-0.5**
DGB				*i* S	**Sg**	**13 47 38.7**	**-0.8**
GMLD	**Gumuldur**	**0.34**	**25**	PG	**Pg**	**13 47 35.5**	**-0.2**
GMLD				SG	**Sg**	**13 47 40.5**	**0.0**
GCAM	**G?zelcaml?**	**0.40**	**99**	PG	**Pg**	**13 47 36.2**	**-0.5**
GCAM				SG	**Sg**	**13 47 42.5**	**+0.3**
GCAM	**G?zelcaml?**	**0.40**	**99**	*i* P	**Pg**	**13 47 36.5**	**-0.3**
GCAM				*i* S	**Sg**	**13 47 42.8**	**+0.6**
GCAM	**G?zelcaml?**	**0.40**	**99**	*e*Sg	**Sg**	**13 47 42.5**	**+0.3**
URLA	**Izmir**	**0.61**	**350**	PG	**Pg**	**13 47 40.6**	**0.0**
URLA	**Izmir**	**0.61**	**350**	*i* P	**Pg**	**13 47 39.3**	**-1.3**
URLA				*i* S	**Sg**	**13 47 48.0**	**-0.7**
URLA	**Izmir**	**0.61**	**350**	P	**Pg**	**13 47 39.3**	**-1.3**
URLA	**Izmir**	**0.61**	**350**	*e*Pg	**Pg**	**13 47 40.6**	**0.0**
URLA				S	**Sg**	**13 47 48.0**	**-0.7**
CESE	**˜e¯me**	**0.66**	**329**	PG	**Pg**	**13 47 41.3**	**-0.3**
CESE	**˜e¯me**	**0.66**	**329**	*e*Pg	**Pg**	**13 47 41.3**	**-0.3**
YKAV	**Yalikavak-Bodr**	**0.77**	**146**	PG	**Pb**	**13 47 43.9**	**-0.1**
CHOS	**Chios island**	**0.82**	**319**	PG	**Pb**	**13 47 45.7**	**+0.8**
CHOS	**Chios island**	**0.82**	**319**	P	**Pb**	**13 47 45.4**	**+0.5**
CHOS				S	**Sg**	**13 47 55.5**	**0.0**
CHOS				AML	AML	13 47 57.8	
	comp=E,1284μm,0.2s						
CHOS				AML	AML	13 47 59.0	
	comp=N,771μm,0.3s						
CHOS	**Chios island**	**0.82**	**319**	P	**Pg**	**13 47 44.3**	**-0.4**
CHOS				S	**Sb**	**13 47 56.1**	**+0.2**
CHOS	**Chios island**	**0.82**	**319**	P	**Pg**	**13 47 44.3**	**-0.4**
CHOS	**Chios island**	**0.82**	**319**	*e*Pg	**Pb**	**13 47 45.7**	**+0.8**
CHOS				S	**Sb**	**13 47 55.8**	**-0.1**
BODT	**Bodrum**	**0.84**	**147**	PG	**Pg**	**13 47 44.3**	**-0.6**
BODT				SG	**Sb**	**13 47 56.9**	**+0.7**
BODT	**Bodrum**	**0.84**	**147**	P	**Pg**	**13 47 44.3**	**-0.6**
BODT				S	**Sb**	**13 47 57.1**	**+0.9**
KRBN	**Karaburun**	**0.84**	**350**	PG	**Pg**	**13 47 44.3**	**-0.7**
KRBN	**Karaburun**	**0.84**	**350**	*e*Pg	**Pg**	**13 47 44.3**	**-0.7**
BDRM	**Kayabasi**	**0.90**	**141**	*i* P	**Pb**	**13 47 46.8**	**+0.7**
BDRM				*i* S	**Sb**	**13 47 58.9**	**+1.0**
AYDN	**Tasoluk**	**0.91**	**96**	*i* P	**Pg**	**13 47 45.8**	**-0.6**
AYDN				*i* S	**Sg**	**13 47 58.0**	**-0.4**
AYDN	**Tasoluk**	**0.91**	**96**	P	**Pg**	**13 47 45.8**	**-0.6**
AYDN				S	**Sg**	**13 47 58.0**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**0.93**	**78**	PG	**Pg**	**13 47 45.9**	**-0.9**
AYDB	**Zeytinkoy-Aydi**	**0.93**	**78**	*e*Pg	**Pg**	**13 47 45.9**	**-0.9**
FOCM	**Fo˜§a**	**0.95**	**360**	PG	**Pg**	**13 47 46.7**	**-0.3**
FOCM	**Fo˜§a**	**0.95**	**360**	*e*Pg	**Pg**	**13 47 46.7**	**-0.3**
MLSB	**Milas**	**0.95**	**119**	PG	**Pg**	**13 47 46.9**	**-0.2**
APE	**Apeiranthos**	**1.18**	**234**	PN	**Pn**	**13 47 51.9**	**+0.9**
APE	**Apeiranthos**	**1.18**	**234**	P	**Pg**	**13 47 51.1**	**-0.4**
APE				S	**Sg**	**13 48 06.0**	**-0.9**
APE				AML	AML	13 48 09.5	
	comp=N,225μm,0.2s						
APE				AML	AML	13 48 10.6	
	comp=E,247μm,0.2s						
APE	**Apeiranthos**	**1.18**	**234**	P	**Pg**	**13 47 50.7**	**-0.8**
APE	**Apeiranthos**	**1.18**	**234**	*e*Pn	**Pn**	**13 47 51.9**	**+0.9**
APE				S	**Sg**	**13 48 06.3**	**-0.6**
CAND	**Candarli**	**1.19**	**3**	PN	**Pn**	**13 47 51.5**	**+0.5**
DKL	**Dikili**	**1.31**	**6**	PN	**Pn**	**13 47 52.9**	**+0.2**
DKL	**Dikili**	**1.31**	**6**	*e*Pn	**Pn**	**13 47 52.9**	**+0.2**
YER	**Yerkesik**	**1.38**	**117**	PN	**Pb**	**13 47 54.7**	**+0.3**
YER	**Yerkesik**	**1.38**	**117**	*e*Pn	**Pb**	**13 47 54.7**	**+0.3**
AKHS	**Akhisar**	**1.40**	**37**	*i* P	**Pb**	**13 47 55.1**	**+0.5**
AKHS				*i* S	**Sn**	**13 48 13.2**	**+1.0**
AKHS	**Akhisar**	**1.40**	**37**	P	**Pb**	**13 47 55.2**	**+0.5**
AKHS				S	**Sn**	**13 48 13.2**	**+1.0**
PRK	**Paraskevi**	**1.52**	**346**	P	**Pb**	**13 47 56.9**	**+0.1**
PRK				S	**Sg**	**13 48 18.3**	**+0.5**
PRK				AML	AML	13 48 19.6	
	comp=N,588μm,0.8s						
PRK				AML	AML	13 48 21.9	
	comp=E,398μm,0.4s						
PRK	**Paraskevi**	**1.52**	**346**	P	**Pn**	**13 47 55.9**	**+0.3**
PRK				S	**Sn**	**13 48 15.5**	**+0.2**
PRK	**Paraskevi**	**1.52**	**346**	P	**Pn**	**13 47 55.9**	**+0.3**
PRK				S	**Sn**	**13 48 15.5**	**+0.2**
SIGR	**SIGRI**	**1.60**	**335**	PN	**Pn**	**13 47 57.3**	**+0.6**
SIGR	**SIGRI**	**1.60**	**335**	P	**Pn**	**13 47 55.3**	**-1.4**
SIGR	**SIGRI**	**1.60**	**335**	P	**Pn**	**13 47 56.6**	**-0.1**
SIGR	**SIGRI**	**1.60**	**335**	*e*Pn	**Pn**	**13 47 57.3**	**+0.6**
MANT	**Manisa**	**1.61**	**63**	*i* P	**Pg**	**13 48 00.1**	**+0.4**
MANT				*i* S	**Sn**	**13 48 17.4**	**-0.3**
MANT	**Manisa**	**1.61**	**63**	P	**Pg**	**13 48 00.1**	**+0.4**
MANT				S	**Sn**	**13 48 17.4**	**-0.3**
KULA	**Kula-Manisa**	**1.69**	**63**	PN	**Pn**	**13 47 58.5**	**+0.5**
KULA	**Kula-Manisa**	**1.69**	**63**	*e*Pn	**Pn**	**13 47 58.5**	**+0.5**
TURN	**Turunc**	**1.73**	**120**	PN	**Pn**	**13 47 56.2**	**-2.3**
TURN	**Turunc**	**1.73**	**120**	*i* P	**Pn**	**13 47 56.2**	**-2.3**
STEP	**BALIKESIR_Sava**	**1.79**	**25**	*i* P	**Pb**	**13 48 02.1**	**+0.8**
STEP				*i* S	**Sg**	**13 48 25.7**	**-0.5**
STEP	**BALIKESIR_Sava**	**1.79**	**25**	P	**Pb**	**13 48 02.1**	**+0.8**
STEP				S	**Sg**	**13 48 25.7**	**-0.5**
BAYC	**CANAKKALE_Bayr**	**1.98**	**356**	*i* P	**Pn**	**13 48 01.1**	**-0.8**
BAYC				*i* S	**Sg**	**13 48 31.4**	**-1.0**
BAYC	**CANAKKALE_Bayr**	**1.98**	**356**	P	**Pn**	**13 48 01.1**	**-0.8**
BAYC				S	**Sg**	**13 48 31.4**	**-1.0**
BALY	**Balya**	**2.09**	**19**	*i* P	**Pb**	**13 48 05.4**	**-1.1**
BALY	**Balya**	**2.09**	**19**	P	**Pb**	**13 48 05.4**	**-1.1**
DURS	**Dursunbey**	**2.29**	**36**	*i* P	**Pn**	**13 48 07.1**	**+0.9**
DURS	**Dursunbey**	**2.29**	**36**	P	**Pn**	**13 48 07.1**	**+0.9**

MEX 05 14:15:36.7±0.7, 17.°03N×100.°44W, $h14^{km}\pm5^{km}$, MD3.8, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.17**	**83**	*i* P	Pg	14 15 40.1	-0.6
CAIG				*e*S	Sg	14 15 43.0	-0.5
ZIIG	**Zihuatanejo**	**1.14**	**301**	*e*P	Pb	14 15 54.0	-4.1
ZIIG				*e*S	Sb	14 16 08.1	-4.6
MEIG	**Mezcala**	**1.19**	**41**	*e*P	Pn	14 15 54.9	-4.0
MEIG				*e*S	Sb	14 16 09.5	-4.9
ARIG	**Puente Sto Nin**	**1.25**	**4**	*i* P	Pn	14 15 56.8	-3.0
ARIG				*i* S	Sb	14 16 10.6	-5.4
PLIG	**Platanillo**	**1.62**	**33**	*e*P	Pn	14 16 01.3	-3.8
PLIG				*e*S	Sn	14 16 21.5	-4.3
TLIG	**Tlapa**	**1.87**	**73**	*e*P	Pn	14 16 05.1	-3.3
TLIG				*e*S	Sn	14 16 27.1	-4.7

*IDC **05** 14:15:51.9±2.9, 14.°91N×61.°37W, $h155^{km}\pm28^{km}$, mb3.2/8, mb1 3.5/12, mb1mx3.3/52, mbtmp3.8/12, MS3.1/1, Ms1 3.0/1, ms1mx2.5/18, Error ellipse: s-maj=29.1km s-min=15.8km az=52.0*
*ISCJB **05** 14:15:52.3±0.3, 14.°86N±0.°02×61.°36W±0.°06, $h179^{km}\pm2^{km}$, mb3.4/8, Error ellipse: s-maj=9.5km s-min=3.2km az=170.5*
*TRN **05** 14:15:52.4, 14.°89N×61.°30W, $h178^{km}$, MD3.7*

ISC 05 14:15:53.3±0.7, 14.°88N±0.°03×61.°29W±0.°06, $h177^{km}\pm5^{km}$, n58, σ1.°29/87, mb3.4/8, 3C, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCM	**Pelee Case Pet**	**0.10**	**132**	*e*P	**Pn**	**14 16 16.5**	**-0.3**
PCM	**Pelee Case Pet**	**0.10**	**132**	*e*P	**Pn**	**14 16 16.6**	**-0.3**
CXM	**Morne La Croix**	**0.13**	**122**	*e*P	**Pn**	**14 16 17.0**	**0.0**
CXM				*e*S	**Sn**	**14 16 34.8**	**-0.2**
PML	**Morne Lenard**	**0.14**	**135**	*e*P	**Pn**	**14 16 16.8**	**0.0**
BAMF	**Morne Balai**	**0.15**	**116**	*e*P	**Pn**	**14 16 16.8**	**-0.1**
FDF	**Fort de France**	**0.20**	**138**	*e*P	**Pn**	**14 16 17.4**	**+0.5**
FDF				*e*S	**Sn**	**14 16 34.8**	**-0.2**
DSHT	**Scott's Head**	**0.34**	**346**	*e*P	**Pn**	**14 16 17.1**	**0.0**
DSHT				*e*S	**Sn**	**14 16 35.2**	**-0.5**
DBCT	**Belle View Cho**	**0.39**	**352**	*e*P	**Pn**	**14 16 17.6**	**+0.2**
DBCT				*e*S	**Sn**	**14 16 36.0**	**-0.1**
ZAM	**Aeronautique**	**0.40**	**141**	*e*P	**Pn**	**14 16 17.0**	**-0.3**
TRMF	**Trois Ilets**	**0.41**	**146**	*e*P	**Pn**	**14 16 17.1**	**-0.4**
BIM	**Bigot**	**0.42**	**150**	*e*P	**Pn**	**14 16 17.6**	**0.0**
LPMF	**Morne Lapointe**	**0.44**	**135**	*e*P	**Pn**	**14 16 17.1**	**-0.4**
MDN	**Morne-Daniel**	**0.45**	**347**	*e*P	**Pn**	**14 16 18.4**	**+0.8**
MDN				*e*S	**Sn**	**14 16 36.0**	**-0.3**
DLPL	**La Plaine**	**0.45**	**5**	*e*P	**Pn**	**14 16 18.4**	**+0.8**
DLPL				*e*S	**Sn**	**14 16 36.8**	**+0.4**
MVM	**Montagne Vaucl**	**0.50**	**131**	*e*P	**Pn**	**14 16 17.4**	**-0.4**
H05S1	**Guadeloupe/Mar**	**0.63**	**136**	P	**Pn**	**14 16 18.2**	**-0.2**
	SNR=9976						
H05S1				S	**Sn**	**14 16 36.4**	**-1.2**
BBL	**Barber's Block**	**0.66**	**345**	⇑*i*P	**Pn**	**14 16 18.4**	**-0.1**
BBL				*e*S	**Sn**	**14 16 37.8**	**-0.4**
MDPO	**Dominica; Chan**	**0.71**	**347**	*e*P	**Pn**	**14 16 18.8**	**+0.1**
MDPO				*e*S	**Sn**	**14 16 39.0**	**+0.4**
MDVC	**Dominica, Viel**	**0.74**	**351**	*e*P	**Pn**	**14 16 19.8**	**+0.8**
MDVC				*e*S	**Sn**	**14 16 37.6**	**-1.3**
MDPV	**Dominica, Penn**	**0.75**	**350**	*e*P	**Pn**	**14 16 19.3**	**+0.3**
MDPV				*e*S	**Sn**	**14 16 38.6**	**-0.5**
TBG	**Guadaloupe-3**	**1.02**	**340**	*e*P	**Pn**	**14 16 20.6**	**-0.3**
TBG				*e*S	**Sn**	**14 16 42.1**	**-0.2**
MGG	**Marie-Galante**	**1.03**	**358**	*e*P	**Pn**	**14 16 20.6**	**-0.3**
MGG				*e*S	**Sn**	**14 16 41.7**	**-0.7**
SLB	**Belfond**	**1.08**	**167**	*e*P	**Pn**	**14 16 22.0**	**+0.5**
SLB				*e*S	**Sn**	**14 16 42.8**	**-0.3**
TAG	**Tarade**	**1.21**	**343**	⇑*i*P	**Pn**	**14 16 22.4**	**-0.1**
MCLT	**Moule a Chique**	**1.21**	**164**	*e*P	**Pn**	**14 16 22.1**	**-0.4**
MCLT				*e*S	**Sn**	**14 16 44.2**	**-0.8**
H05N1	**Guadeloupe/Mar**	**1.44**	**9**	P	**Pn**	**14 16 23.9**	**-0.6**
	SNR=1518						
H05N1				S	**Sn**	**14 16 46.2**	**-2.5**
SSV	**Crater Summit**	**1.55**	**177**	*e*P	**Pn**	**14 16 26.3**	**+0.7**
SSV				*e*S	**Sn**	**14 16 50.6**	**0.0**
SVV	**Soufriere Volc**	**1.56**	**177**	*e*P	**Pn**	**14 16 26.5**	**+0.8**
SVB	**Belmont**	**1.60**	**179**	*e*P	**Pn**	**14 16 25.9**	**-0.2**
SVB				*e*S	**Sn**	**14 16 50.9**	**-0.6**
SVCV	**St. Vincent, C**	**1.61**	**175**	*e*P	**Pn**	**14 16 25.8**	**-0.4**
SVCV				*e*S	**Sn**	**14 16 51.6**	**+0.1**
FCV	**Fort Charlotte**	**1.72**	**179**	⇑*i*P	**Pn**	**14 16 27.5**	**+0.3**
FCV				*e*S	**Sn**	**14 16 51.9**	**-1.6**
BPA	**Boggy Peak**	**2.22**	**346**	*e*P	**Pn**	**14 16 33.8**	**+1.1**
BPA				*e*S	**Sn**	**14 17 02.5**	**-0.8**
BBGH	**Gun Hill**	**2.41**	**136**	*e*P	**Pn**	**14 16 36.2**	**+1.4**
BBGH				*e*S	**Sn**	**14 17 06.2**	**-0.9**
BBSP	**Saint Philip**	**2.50**	**135**	*e*P	**Pn**	**14 16 36.8**	**+0.9**
BBSP				*e*S	**Sn**	**14 17 08.2**	**-0.8**
GRSS	**Sisters**	**2.59**	**187**	*e*P	**Pn**	**14 16 36.4**	**-0.6**
GRSS				*e*S	**Sn**	**14 17 09.5**	**-1.3**
GRHS	**Sauteurs**	**2.67**	**187**	*e*P	**Pn**	**14 16 37.4**	**-0.4**
GRHS				*e*S	**Sn**	**14 17 11.6**	**-0.9**
GRGR	**Grenville**	**2.76**	**187**	*e*P	**Pn**	**14 16 38.8**	**-0.2**
GRGR				*e*S	**Sn**	**14 17 12.9**	**-1.6**
ANWB	**Willy Bob**	**2.81**	**350**	*e*P	**Pn**	**14 16 38.0**	**-1.6**
ANWB				*e*S	**Sn**	**14 17 13.4**	**-2.3**
SMRT	**St. Maarten**	**3.59**	**332**	*e*S	**Sn**	**14 17 30.6**	**-2.2**
TOSP	**Speyside**	**3.64**	**168**	*e*P	**Pn**	**14 16 49.5**	**-0.2**
TOSP				*e*S	**Sn**	**14 17 31.3**	**-2.6**
TCE	**Chacachacare**	**4.18**	**186**	*e*P	**Pn**	**14 16 57.5**	**+0.8**
TCE	**Chacachacare**	**4.18**	**186**	*e*S	**Sn**	**14 17 43.3**	**-3.2**
TRN	**Trinidad (W)**	**4.21**	**182**	*e*S	**Sn**	**14 17 44.1**	**-2.9**
TBH	**Brigand Hill**	**4.38**	**177**	*e*P	**Pn**	**14 16 59.0**	**-0.3**
TBH	**Brigand Hill**	**4.38**	**177**	*e*S	**Sn**	**14 17 47.5**	**-3.4**
SJG	**San Juan**	**5.66**	**305**	P	**Pn**	**14 17 12.1**	**-3.8**
	12nm,0.3s,baz=123,slow=15,SNR=4.3						
SJG				S	**Sn**	**14 18 23.5**	**+2.7**
	4.4nm,0.3s,baz=290,slow=22,SNR=9.9						
PCRV	**Puerto La Cruz**	**5.71**	**215**	P	**Pn**	**14 17 15.6**	**-1.0**
	1.5nm,0.3s,baz=345,slow=3.5,SNR=4.0						
PCRV				S	**Sn**	**14 18 26.8**	**+4.8**
	0.6nm,0.3s,baz=274,slow=21,SNR=2.3						
SDV	**Santo Domingo**	**10.91**	**238**	P	**Pn**	**14 18 23.4**	**-1.7**
	0.3nm,0.3s,baz=91,slow=23,SNR=1.8						
PTGA	**Pitinga**	**15.57**	**175**	P	**Pn**	**14 19 23.6**	**-0.1**
	3.1nm,0.3s,baz=356,slow=16,SNR=24						
SCHQ	**Schefferville**	**40.10**	**355**	LR	LR	14 42 34.9	
	comp=Z,21nm,18.0s,baz=327,slow=40						
CPUP	**Villa Florida**	**41.15**	**175**	P	**P**	**14 23 20.0**	**-0.3**
	1.3nm,0.5s,baz=346,slow=7.6,SNR=4.5						
TXAR	**Lajitas Array**	**41.58**	**298**	P	**P**	**14 23 24.6**	**+0.6**
	0.3nm,0.6s,baz=113,slow=7.0,SNR=3.8						
ULM	**Lac du Bonnet**	**45.03**	**329**	P	**P**	**14 23 50.4**	**-0.8**
	1.0nm,0.4s,baz=104,slow=17,SNR=3.0						
PDAR	**Pinedale Array**	**49.72**	**314**	P	**P**	**14 24 27.6**	**-0.2**
	0.4nm,0.4s,baz=106,slow=9.7,SNR=3.6						
NVAR	**Mina Array Bea**	**55.15**	**307**	P	**P**	**14 25 08.7**	**+0.9**
	0.2nm,0.3s,baz=66,slow=7.0,SNR=2.1						
YKA	**Yellowknife Ar**	**60.38**	**335**	P	**P**	**14 25 43.5**	**0.0**
	0.3nm,0.7s,baz=106,slow=7.5,SNR=5.7						
TORD	**Torodi Ar. Bea**	**60.95**	**83**	P	**P**	**14 25 50.1**	**+1.9**
	0.5nm,0.8s,baz=283,slow=6.6,SNR=2.4						
ILAR	**Eielson Array**	**74.79**	**334**	P	**P**	**14 27 14.5**	**+0.7**
	0.2nm,0.5s,baz=94,slow=4.6,SNR=4.4						

*SOME **05** 14:18:18.8, 43.°62N×84.°22E, $h10^{km}$*
*IDC **05** 14:18:20.8±2.5, 43.°67N×84.°13E, $h0^{km}$, mb1 3.2/5, mb1mx3.1/69, mbtmp3.2/5, ML2.7/4, Error ellipse: s-maj=24.2km s-min=18.6km az=107.0*
*NNC **05** 14:18:27.6±1.7, 43.°94N×83.°86E, $h0^{km}$, mb3.5, mpv3.1, Error ellipse: s-maj=16.7km s-min=7.5km az=113.0*

ISC 05 14:18:21.8±1.4, 43.°75N±0.°06×84.°07E±0.°07, $h10^{km}$, n23, σ2.°35/33, 13C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**2.72**	**265**	*e*P	**Pb**	**14 19 11.6**	**+1.0**
	38nm,0.2s						
KTMS				*e*S	**Sg**	**14 19 49.7**	**+0.7**
	119nm,0.4s						
DJR	**Jarkent**	**3.14**	**282**	*e*P	**Pb**	**14 19 17.9**	**+0.2**
DJR				*e*S	**Sg**	**14 20 00.5**	**-2.1**
MK31	**Makanchi Array**	**3.29**	**338**	⇑Pn	**Pn**	**14 19 16.6**	**+3.2**
	0.2nm,0.2s,baz=156,slow=14,SNR=127						
MK31				⇓Pg	**Pg**	**14 19 23.7**	**-1.1**
	2.0nm,0.3s,baz=152,slow=15,SNR=47						
MK31				⇑Lg	Lg	14 20 06.7	
	8.5nm,0.3s,baz=150,slow=31,SNR=9.7						
MKAR	**Makanchi Array**	**3.29**	**338**	Pn	**Pn**	**14 19 16.7**	**+3.3**
	0.5nm,0.3s,baz=161,slow=14,SNR=22						
MKAR				Pg	**Pg**	**14 19 24.1**	**-0.7**
	4.0nm,0.3s,baz=156,slow=17,SNR=54						
MKAR				Sn	**Sb**	**14 19 58.9**	**-1.6**
	4.6nm,0.3s,baz=162,slow=24,SNR=7.4						
MKAR				Lg	Lg	14 20 07.6	
	12nm,0.3s,baz=158,slow=28,SNR=6.2						
PDGK	**Podgornoye**	**3.35**	**264**	⇑Pn	**Pb**	**14 19 19.5**	**-1.9**
	10.0nm,0.6s						
PDGK				⇑Lg	Lg	14 20 08.0	
	58nm,0.5s						
MAKZ	**Makanchi**	**3.40**	**335**	⇑Pn	**Pb**	**14 19 19.0**	**-3.1**
	2.7nm,0.3s						
MAKZ				⇑Lg	Lg	14 20 10.4	
	30nm,0.7s						
SHLS	**Shalkode**	**3.41**	**262**	*e*P	**Pn**	**14 19 17.7**	**+2.6**
	35nm,0.3s						
SHLS				*e*S	**Sb**	**14 20 00.9**	**-2.9**
	148nm,0.5s						
UZB	**Uzynbulak**	**3.72**	**262**	*e*P	**Pb**	**14 19 29.4**	**+1.7**
	7.0nm,0.4s						
UZB				*e*S	**Sg**	**14 20 20.0**	**-1.4**
	28nm,0.5s						
KPKS	**Kokpek**	**3.92**	**268**	*e*P	**Pg**	**14 19 33.9**	**-3.0**
	18nm,0.2s						
KPKS				*e*S	**Sg**	**14

KK31 ⇑Sn **Sn** **14 37 34.1 -0.2**
12nm,0.7s,baz=180,slow=24,SNR=3.9
KK31 ⇓Lg Lg 14 37 48.8
10nm,0.4s
EKS2 Erkin-Say 5.17 32 P Pn 14 36 46.6 +1.3
SNR=7.2
UCH Uchtor 5.18 40 P Pn 14 36 47.3 +1.7
SNR=14
KZA Kyzart 5.46 45 P Pn 14 36 51.9 +2.3
SNR=22
AAK Ala-Archa 5.48 37 ⇑Pn **Pn 14 36 50.4 +0.9**
7.0nm,0.6s
AAK ⇓Sn **Sn** **14 37 52.6 +1.0**
13nm,1.0s
AAK Ala-Archa 5.48 37 P Pn 14 36 50.9 +1.5
SNR=9.8
KBK Karagaybulak 5.71 39 P Pn 14 36 55.1 +2.4
SNR=12
CHMS Chumysh 5.88 36 P Pn 14 36 56.4 +1.6
SNR=5.8
USP Ospenovka 5.98 33 P Pn 14 36 57.0 +0.8
SNR=6.7
TKM2 Tokmak 2 6.23 41 ⇑Pn **Pn 14 37 01.0 +1.1**
19nm,0.5s
TKM2 Tokmak 2 6.23 41 P Pn 14 37 01.8 +1.9
SNR=8.7
AB31 Akbulak array 13.12 330 ⇓Pn **Pn 14 38 33.2 -0.7**
1.6nm,0.5s,baz=149,slow=12,SNR=2.8
AB31 ⇑Sn **Sn** **14 41 00.4 +1.5**
1.6nm,0.5s,baz=154,slow=23,SNR=9.8

IDC 05 14:44:37.6±26.0, 24°40S×179°63E, h514km±251km, mb3.3/5, mb1 3.4/5, mb1mx3.0/47, mbtmp4.2/5, Error ellipse: s-maj=161.0km s-min=96.9km az=88.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**31.14**	**271**	P	P	14 50 14.8	+0.8
	5.6nm,0.4s,baz=97,slow=11,SNR=12						
STKA	**Stephens Creek**	**34.23**	**249**	P	P	14 50 38.9	-1.2
	1.7nm,0.8s,baz=70,slow=8.0,SNR=3.9						
ASAR	**Alice Springs**	**41.62**	**261**	P	P	14 51 40.3	-0.4
	0.9nm,0.3s,baz=92,slow=8.3,SNR=32						
WRA	**Warramunga Arr**	**42.04**	**267**	P	P	14 51 43.2	-0.8
	1.0nm,0.3s,baz=99,slow=6.7,SNR=57						
FITZ	**Fitzroy Crossi**	**50.46**	**266**	P	P	14 52 48.8	+0.9
	1.8nm,0.8s,baz=107,slow=19,SNR=5.2						
HFS	**Hagfors**	**142.97**	**348**	PKP	PKPdf	15 03 11.4	-0.5
	1.1nm,0.4s,baz=16,slow=2.2,SNR=11						

*ISCJB **05** 14:44:50.1±0.4, 25°05S±0°06×179°57E±0°07, h507km, mb4.2/13, Error ellipse: s-maj=8.7km s-min=8.3km az=40.5*
*NEIC **05** 14:44:50.7±0.6, 25°13S×179°63E, h503km±7km, mb4.5/6, Error ellipse: s-maj=11.7km s-min=9.2km az=155.0*
*IDC **05** 14:44:53.3±2.3, 24°92S×179°57E, h532km±25km, mb3.8/10, mb1 3.8/11, mb1mx3.4/48, mbtmp4.7/11, Error ellipse: s-maj=37.1km s-min=15.2km az=164.0*
ISC 05 14:44:50.7±0.7, 25°13S±0°09×179°66E±0°09, h507km, n35, σ1§02/36, mb4.4/13, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.63**	**153**	*e*P	**P**	**14 46 15.3**	**+0.5**
MSVF	**Nonsavu**	**7.51**	**348**	*e*P	**P**	**14 46 41.5**	**-1.1**
DZM	**Mont Dzumac**	**12.49**	**281**	P	**P**	**14 47 36.5**	**+1.8**
	0.5nm,0.3s,baz=116,slow=20,SNR=6.4						
URZ	**Urewera**	**13.27**	**189**	S	**S**	**14 50 03.9**	**0.0**
	1.0nm,0.3s,baz=82,slow=21,SNR=5.6						
THZ	**Tophouse**	**17.51**	**197**	*e*P	**P**	**14 48 25.6**	**-0.5**
	181nm,1.5s						
KHZ	**Kahutara**	**17.96**	**195**	*e*P	**P**	**14 48 30.2**	**+0.1**
	382nm,1.9s						
LTZ	**Lake Taylor**	**18.63**	**197**	*e*P	**P**	**14 48 36.0**	**-0.3**
	367nm,2.0s						
HNR	**Honiara**	**24.40**	**306**	P	**P**	**14 49 27.1**	**-1.6**
	38nm,0.6s,baz=189,slow=4.2,SNR=4.3						
CTA	**Charters Tower**	**31.20**	**272**	P	**P**	**14 50 29.2**	**+1.1**
	25nm,0.4s,baz=95,slow=11,SNR=43						
CTAO	**Charters Tower**	**31.20**	**272**	*e*P	**P**	**14 50 29.0**	**+0.8**
	27nm,0.6s						
STKA	**Stephens Creek**	**33.99**	**250**	P	**P**	**14 50 52.0**	**+0.2**
	1.0nm,0.3s,baz=91,slow=8.7,SNR=9.1						
STKA	**Stephens Creek**	**33.99**	**250**	*e*P	**P**	**14 50 52.3**	**+0.5**
	12nm,2.0s						
PMG	**Port Moresby**	**34.62**	**291**	P	**P**	**14 50 57.6**	**+0.3**
	12nm,0.7s,baz=85,slow=5.8,SNR=7.5						
AS01	**Alice Springs**	**41.50**	**262**	*e*P	**P**	**14 51 53.6**	**+0.2**
AS31	**Alice Springs**	**41.54**	**262**	*e*P	**P**	**14 51 53.5**	**-0.2**
	5.0nm,1.4s						
ASAR	**Alice Springs**	**41.55**	**262**	P	**P**	**14 51 53.9**	**+0.2**
	3.3nm,0.4s,baz=92,slow=8.4,SNR=28						
ASAR				S	**S**	**14 57 31.8**	**-1.0**
	0.7nm,0.9s,baz=98,slow=14,SNR=4.5						
WB2	**Warramunga Arr**	**42.02**	**268**	*e*P	**P**	**14 51 56.9**	**-0.6**
WRAB	**Tennant Creek**	**42.02**	**268**	*e*P	**P**	**14 51 56.4**	**-1.0**
	8.2nm,0.6s						
WR1	**Warramunga Arr**	**42.03**	**268**	*e*P	**P**	**14 51 57.2**	**-0.3**
	45nm,1.5s						
WR1				*e*S	**S**	**14 57 39.0**	**-0.8**
WRA	**Warramunga Arr**	**42.03**	**268**	P	**P**	**14 51 57.2**	**-0.3**
	7.5nm,0.5s,baz=99,slow=6.8,SNR=44						
WRA				S	**S**	**14 57 39.0**	**-0.8**
	1.0nm,0.9s,baz=101,slow=13,SNR=3.8						
FITZ	**Fitzroy Crossi**	**50.44**	**267**	P	**P**	**14 53 01.6**	**+0.1**
	4.3nm,0.6s,baz=141,slow=7.9,SNR=14						
FITZ	**Fitzroy Crossi**	**50.44**	**267**	*e*P	**P**	**14 53 01.3**	**-0.2**
	35nm,1.8s						
SIJI	**Sorong**	**52.54**	**290**	P	**P**	**14 53 16.8**	**-0.1**
	13nm,0.7s,baz=112,slow=13,SNR=4.5						
KS01	**Wonju Array Si**	**79.03**	**320**	epP	pP	14 57 49.9	-1.2
EML	**El Monte Cty P**	**83.56**	**49**	*e*P	**P**	**14 56 24.8**	**-0.5**
LEOC	**Leona Valley**	**83.59**	**47**	*e*P	**P**	**14 56 26.1**	**+0.5**
PSRC	**Puddingstone R**	**83.61**	**48**	*e*P	**P**	**14 56 27.8**	**+2.3**
VNA3	**Neumayer Olymp**	**83.67**	**177**	P	**P**	**14 56 23.3**	**-1.9**
VNA2	**Neumayer--Watz**	**84.08**	**178**	P	**P**	**14 56 26.7**	**-0.6**
	baz=194,slow=2.6						
WBSM	**Bird Springs**	**84.24**	**46**	*e*P	**P**	**14 56 31.9**	**+3.0**
NV01	**Mina Array Sit**	**85.85**	**44**	*e*P	**P**	**14 56 36.4**	**-0.3**
NVAR	**Mina Array Bea**	**85.85**	**44**	P	**P**	**14 56 36.7**	**+0.1**
	0.4nm,0.6s,baz=218,slow=7.0,SNR=3.9						
TX31	**Lajitas Ar. Si**	**91.34**	**58**	*e*P	**P**	**14 57 01.6**	**-0.7**
TXAR	**Lajitas Array**	**91.34**	**58**	P	**P**	**14 57 02.9**	**+0.6**
	1.1nm,0.8s,baz=216,slow=6.2,SNR=11						
HFS	**Hagfors**	**143.69**	**348**	PKP	PKPab	15 03 24.9	-0.9
	1.7nm,0.3s,baz=54,slow=3.8,SNR=14						

*ISCJB **05** 14:46:24.9±0.7, 15°40S±0°08×167°3E±0°1, h124km, mb4.1/6, Error ellipse: s-maj=16.1km s-min=10.2km az=15.8*
*NEIC **05** 14:46:25.7±1.0, 15°31S×167°29E, h116km±10km, mb4.2/5, Error ellipse: s-maj=29.5km s-min=13.8km az=143.0*
*IDC **05** 14:46:27.2±9.2, 15°48S×167°45E, h142km±37km, mb3.8/4, mb1 3.9/5, mb1mx3.4/50, mbtmp4.2/5, MS3.3/2, Ms1 3.3/2, ms1mx2.7/50, Error ellipse: s-maj=114.8km s-min=36.7km az=63.0*
ISC 05 14:46:26.0±1.0, 15°40S±0°10×167°4E±0°2, h124km, n17, σ1§63/19, mb4.1/6, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.70**	**187**	P	**Pn**	**14 48 02.6**	**+0.6**
	6.2nm,0.3s,baz=12,slow=20,SNR=80						
DZM				S	**Sn**	**14 49 16.3**	**-0.6**
	baz=134,slow=22,SNR=2.0						
DZM				LR	LR	14 50 26.7	
	comp=Z,85nm,18.4s,baz=160,slow=36						
DZM	**Mont Dzumac**	**6.70**	**187**	*e*Pn	**Pn**	**14 48 01.9**	**0.0**
DZM				S	**Sn**	**14 49 16.3**	**-0.6**
EIDS	**Eidsvold**	**18.18**	**234**	*e*P	**Pn**	**14 50 32.3**	**+1.7**
	9.9nm,0.8s						
STKA	**Stephens Creek**	**28.64**	**231**	P	**P**	**14 52 11.4**	**+0.5**
	2.8nm,0.4s,baz=39,slow=9.0,SNR=13						
STKA	**Stephens Creek**	**28.64**	**231**	*e*P	**P**	**14 52 11.7**	**+0.8**
	5.0nm,1.8s						
WR1	**Warramunga Arr**	**31.75**	**257**	*e*P	**P**	**14 52 38.2**	**-0.4**
	19nm,1.5s						
WR1				*e*ScP	**ScP**	**14 58 55.8**	**-3.5**
WRA	**Warramunga Arr**	**31.76**	**257**	P	**P**	**14 52 38.2**	**-0.4**
	0.4nm,0.3s,baz=84,slow=8.3,SNR=3.2						
WRA				ScP	**ScP**	**14 58 55.8**	**-3.5**
	0.4nm,0.7s,baz=83,slow=4.5,SNR=2.8						
AS31	**Alice Springs**	**32.52**	**250**	*e*P	**P**	**14 52 44.8**	**-0.5**
	2.3nm,1.3s						
ASAR	**Alice Springs**	**32.52**	**250**	P	**P**	**14 52 45.0**	**-0.4**
	1.9nm,0.6s,baz=77,slow=8.8,SNR=8.5						
FITZ	**Fitzroy Crossi**	**39.98**	**260**	P	**P**	**14 53 48.9**	**+0.1**
	2.0nm,0.4s,baz=84,slow=9.2,SNR=5.3						
FITZ	**Fitzroy Crossi**	**39.98**	**260**	*e*P	**P**	**14 53 48.9**	**+0.1**
	35nm,1.8s						
FMP	**Fort Macarthur**	**85.92**	**54**	*e*P	**P**	**14 58 51.8**	**-0.5**
CLTC	**Calectric**	**86.81**	**54**	*e*P	**P**	**14 59 00.0**	**+3.3**
PLM	**Palomar**	**86.91**	**54**	*e*P	**P**	**14 58 58.3**	**+0.9**
B927	**Port Alberni**	**87.74**	**37**	*e*P	**P**	**14 58 59.9**	**-0.8**
PSUT	**Pine Spring**	**90.95**	**50**	epP	pP	14 59 47.3	-1.1
SNAA	**Sanae**	**92.89**	**183**	LR	LR	15 43 25.7	
	comp=Z,39nm,18.3s,baz=242,slow=37						

*TIR **05** 15:04:15.6, 38°97N×20°93E, h2km, Md3.5/4*
*ISCJB **05** 15:04:20.6±0.4, 39°20N±0°01×20°69E±0°02, h3km±3km, Error ellipse: s-maj=3.2km s-min=2.1km az=154.7*
*ATH **05** 15:04:20.3, 39°19N×20°76E, h20km±3km, ML3.0/8, Error ellipse: s-maj=3.7km s-min=0.8km az=164.0*
*BEO **05** 15:04:21.7±0.8, 39°16N×20°72E, h0km*
*CSEM **05** 15:04:21.1±0.1, 39°18N×20°71E, h2km, ML3.0, Error ellipse: s-maj=3.8km s-min=2.2km az=59.0*
*THE **05** 15:04:21.1, 39°19N×20°74E, h0km±1km, ML3.1/22, Error ellipse: s-maj=1.6km s-min=0.4km az=256.0*
ISC 05 15:04:21.2±1.0, 39°19N±0°01×20°73E±0°02, h6km±8km, n150, σ1§24/214, 3C-7D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DSL	**Palaion Diasel**	**0.29**	**100**	P	**Pg**	**15 04 26.0**	**-0.9**
DSL				S	**Sg**	**15 04 30.8**	**+0.1**
DSL				AML	AML	15 04 31.6	
	comp=E,12705μm,0.4s						
DSL				AML	AML	15 04 33.9	
	comp=N,10200μm,0.4s						
DSL	**Palaion Diasel**	**0.29**	**100**	P	**Pg**	**15 04 26.1**	**-0.8**
DSL				S	**Sg**	**15 04 31.2**	**+0.5**
DSL	**Palaion Diasel**	**0.29**	**100**	P	**Pg**	**15 04 26.2**	**-0.7**
DSL				S	**Sg**	**15 04 31.2**	**+0.5**
LKD2	**Lefkada island**	**0.40**	**188**	P	**Pb**	**15 04 29.9**	**-0.8**
LKD2				S	**Sg**	**15 04 35.4**	**+1.2**
LKD2				AML	AML	15 04 37.5	
	comp=N,6468μm,0.5s						
LKD2				AML	AML	15 04 37.8	
	comp=E,4123μm,0.5s						
LKD2	**Lefkada island**	**0.40**	**188**	P	**Pg**	**15 04 29.3**	**+0.3**
LKD2				S	**Sg**	**15 04 35.4**	**+1.2**
LKD2	**Lefkada island**	**0.40**	**188**	P	**Pg**	**15 04 29.4**	**+0.4**
LKD2				S	**Sg**	**15 04 35.2**	**+1.0**
IGT	**Igoumenitsa**	**0.47**	**318**	*e*Pg	**Pg**	**15 04 29.6**	**-0.7**
IGT				*e*Sg	**Sg**	**15 04 37.0**	**+0.7**
IGT	**Igoumenitsa**	**0.47**	**318**	P	**Pg**	**15 04 29.3**	**-1.0**
IGT				S	**Sg**	**15 04 35.8**	**-0.5**
IGT				AML	AML	15 04 41.3	
	comp=E,2785μm,0.3s						
IGT				AML	AML	15 04 41.8	
	comp=N,1856μm,0.2s						
IGT	**Igoumenitsa**	**0.47**	**318**	P	**Pg**	**15 04 29.7**	**-0.6**
IGT				S	**Sg**	**15 04 37.3**	**+0.9**
IGT	**Igoumenitsa**	**0.47**	**318**	P	**Pg**	**15 04 29.7**	**-0.6**
IGT				S	**Sg**	**15 04 36.4**	**+0.1**
IGT				*e*Sg	**Sg**	**15 04 37.0**	**+0.7**
JAN	**Janina**	**0.48**	**11**	P	**Pg**	**15 04 29.2**	**-1.3**
JAN				S	**Sg**	**15 04 38.1**	**+1.3**
JAN				AML	AML	15 04 43.2	
	comp=N,12360μm,0.3s						
JAN				AML	AML	15 04 43.2	
	comp=E,19436μm,0.3s						
JAN	**Janina**	**0.48**	**11**	P	**Pg**	**15 04 29.6**	**-0.9**
JAN				S	**Sg**	**15 04 37.6**	**+0.7**
JAN	**Janina**	**0.48**	**11**	P	**Pg**	**15 04 29.6**	**-0.9**
JAN				S	**Sg**	**15 04 37.5**	**+0.7**
SGD	**Sagiada**	**0.58**	**318**	P	**Pg**	**15 04 32.0**	**-0.3**
SGD	**Sagiada**	**0.58**	**318**	P	**Pg**	**15 04 32.0**	**-0.3**
PDO	**Prodromos**	**0.68**	**149**	P	**Pg**	**15 04 34.2**	**-0.2**
PDO				S	**Sb**	**15 04 44.9**	**-0.3**
PDO	**Prodromos**	**0.68**	**149**	P	**Pg**	**15 04 34.2**	**-0.2**
PDO				S	**Sb**	**15 04 44.9**	**-0.3**
FSK	**Fiskardo**	**0.74**	**190**	P	**Pg**	**15 04 34.5**	**-0.9**
FSK	**Fiskardo**	**0.74**	**190**	P	**Pg**	**15 04 34.6**	**-0.8**
FSK				S	**Sb**	**15 04 46.1**	**-0.6**
PVO	**Paravola**	**0.84**	**132**	P	**Pg**	**15 04 37.1**	**-0.3**
PVO				S	**Sb**	**15 04 49.5**	**-0.2**
PVO	**Paravola**	**0.84**	**132**	P	**Pg**	**15 04 37.1**	**-0.3**
PVO				S	**Sb**	**15 04 49.5**	**-0.2**
EVR	**Evrytania**	**0.88**	**107**	P	**Pg**	**15 04 38.0**	**-0.1**
EVR				S	**Sg**	**15 04 48.9**	**-0.6**
EVR				AML	AML	15 04 52.8	
	comp=E,1511μm,0.6s						
EVR				AML	AML	15 04 54.0	
	comp=N,2052μm,0.6s						
EVR	**Evrytania**	**0.88**	**107**	P	**Pg**	**15 04 37.5**	**-0.6**
EVR				S	**Sb**	**15 04 50.7**	**-0.3**
EVR	**Evrytania**	**0.88**	**107**	P	**Pg**	**15 04 37.5**	**-0.6**
EVR				S	**Sb**	**15 04 50.7**	**-0.3**
KEK	**Kerkira**	**0.90**	**306**	P	**Pg**	**15 04 38.4**	**-0.1**
KEK				S	**Sb**	**15 04 51.1**	**-0.3**
KEK				AML	AML	15 05 00.1	
	comp=N,1628μm,0.6s						
KEK				AML	AML	15 05 00.4	
	comp=E,2081μm,0.4s						
KEK	**Kerkira**	**0.90**	**306**	P	**Pg**	**15 04 38.0**	**-0.4**
KEK				S	**Sb**	**15 04 51.5**	**+0.1**
KEK	**Kerkira**	**0.90**	**306**	P	**Pg**	**15 04 38.0**	**-0.4**
KEK				S	**Sg**	**15 04 50.8**	**+0.7**
SRN	**Sarande**	**0.90**	**321**	P	**Pg**	**15 04 37.4**	**-1.1**
SRN	**Sarande**	**0.90**	**321**	*i* PG	**Pg**	**15 04 37.8**	**-0.7**
SRN				*i* SG	**Sn**	**15 04 56.4**	**+2.8**
SRN	**Sarande**	**0.90**	**321**	P	**Pg**	**15 04 37.4**	**-1.1**
SRN	**Sarande**	**0.90**	**321**	*i* Pg	**Pg**	**15 04 37.8**	**-0.7**
VLS	**Valsamata**	**1.01**	**186**	P	**Pg**	**15 04 39.1**	**-1.5**
VLS	**Valsamata**	**1.01**	**186**	P	**Pg**	**15 04 39.2**	**-1.5**
VLS				S	**Sb**	**15 04 55.6**	**+0.9**
VLS	**Valsamata**	**1.01**	**186**	P	**Pg**	**15 04 39.5**	**-1.2**
VLS				S	**Sb**	**15 04 55.6**	**+0.9**
PENT	**Pentalofos**	**1.06**	**17**	P	**Pg**	**15 04 40.1**	**-1.5**
PENT				S	**Sg**	**15 04 55.0**	**-0.2**
PENT				AML	AML	15 04 59.3	
	comp=E,1402μm,0.4s						
PENT				AML	AML	15 05 00.3	
	comp=N,1862μm,0.4s						
PENT	**Pentalofos**	**1.06**	**17**	P	**Pg**	**15 04 40.5**	**-1.1**
PENT				S	**Sg**	**15 04 55.6**	**+0.3**
PENT	**Pentalofos**	**1.06**	**17**	P	**Pg**	**15 04 40.5**	**-1.1**
PENT				S	**Sg**	**15 04 54.9**	**-0.4**
THL	**Klokotos Trika**	**1.06**	**69**	P	**Pg**	**15 04 40.0**	**-1.6**
THL				S	**Sg**	**15 04 53.6**	**-1.9**
THL				AML	AML	15 04 56.3	
	comp=E,1078μm,0.4s						
THL				AML	AML	15 04 59.5	
	comp=N,1171μm,0.8s						
THL	**Klokotos Trika**	**1.06**	**69**	P	**Pg**	**15 04 40.0**	**-1.6**
THL				S	**Sb**	**15 04 56.3**	**+0.1**
THL	**Klokotos Trika**	**1.06**	**69**	P	**Pg**	**15 04 40.1**	**-1.6**
THL				S	**Sb**	**15 04 56.3**	**+0.1**
KFL	**Anninata**	**1.07**	**178**	P	**Pg**	**15 04 40.2**	**-1.6**
KFL	**Anninata**	**1.07**	**178**	P	**Pg**	**15 04 40.6**	**-1.2**
KFL				S	**Sb**	**15 04 57.5**	**+1.0**
KFL	**Anninata**	**1.07**	**178**	P	**Pg**	**15 04 40.6**	**-1.2**
KFL				S	**Sb**	**15 04 57.5**	**+1.0**
ANX	**Ano Chora**	**1.10**	**122**	P	**Pg**	**15 04 41.2**	**-1.1**
ANX				S	**Sb**	**15 04 57.7**	**+0.4**
ANX	**Ano Chora**	**1.10**	**122**	P	**Pg**	**15 04 41.2**	**-1.1**
ANX				S	**Sb**	**15 04 57.7**	**+0.4**
EFP	**Efpalio**	**1.19**	**129**	P	**Pg**	**15 04 43.4**	**-0.6**
EFP				S	**Sn**	**15 05 01.5**	**+0.7**
EFP	**Efpalio**	**1.19**	**129**	P	**Pg**	**15 04 43.4**	**-0.6**
EFP				S	**Sn**	**15 05 01.5**	**+0.7**
NEST	**Nestorio**	**1.25**	**11**	P	**Pg**	**15 04 44.5**	**-0.8**
NEST	**Nestorio**	**1.25**	**11**	P	**Pg**	**15 04 44.8**	**-0.5**
NEST				S	**Sb**	**15 05 02.5**	**+0.7**
NEST	**Nestorio**	**1.25**	**11**	P	**Pg**	**15 04 44.8**	**-0.5**
NEST				S	**Sb**	**15 05 02.5**	**+0.7**
AGG	**Agios Georgios**	**1.25**	**97**	P	**Pg**	**15 04 44.1**	**-1.1**
AGG	**Agios Georgios**	**1.25**	**97**	P	**Pg**	**15 04 43.8**	**-1.5**
AGG				S	**Sn**	**15 05 03.1**	**+0.6**
AGG	**Agios Georgios**	**1.25**	**97**	P	**Pg**	**15 04 43.9**	**-1.4**
AGG				S	**Sn**	**15 05 03.1**	**+0.6**
RLS	**Riolos of Patr**	**1.26**	**153**	P	**Pg**	**15 04 44.3**	**-1.2**
RLS	**Riolos of Patr**	**1.26**	**153**	P	**Pg**	**15 04 44.3**	**-1.2**
SERG	**Sergoula**	**1.29**	**126**	P	**Pn**	**15 04 46.3**	**+0.5**
SERG	**Sergoula**	**1.29**	**126**	P	**Pn**	**15 04 46.3**	**+0.5**
TRIZ	**Trizonia**	**1.33**	**128**	P	**Pb**	**15 04 46.9**	**+0.4**
TRIZ	**Trizonia**	**1.33**	**128**	P	**Pb**	**15 04 46.9**	**+0.4**
KALE	**Kalithea**	**1.36**	**125**	P	**Pn**	**15 04 47.0**	**+0.3**
KALE	**Kalithea**	**1.36**	**125**	P	**Pn**	**15 04 47.0**	**+0.3**
KZN	**Kozani**	**1.38**	**35**	P	**Pn**	**15 04 45.7**	**-1.4**
KZN	**Kozani**	**1.38**	**35**	P	**Pn**	**15 04 46.3**	**-0.8**
KZN				S	**Sn**	**15 05 06.1**	**+0.5**
KZN	**Kozani**	**1.38**	**35**	P	**Pn**	**15 04 46.3**	**-0.8**
KZN				S	**Sn**	**15 05 06.1**	**+0.5**
KBN	**Korca**	**1.44**	**2**	P	**Pn**	**15 04 47.9**	**0.0**
KBN	**Korca**	**1.44**	**2**	*i* PG	**Pg**	**15 04 49.3**	**+0.5**
KBN				*i* SG	**Sn**	**15 05 12.3**	**+5.2**
KBN	**Korca**	**1.44**	**2**	P	**Pn**	**15 04 47.9**	**0.0**
KBN	**Korca**	**1.44**	**2**	*i* Pg	**Pg**	**15 04 49.3**	**+0.5**
DRO	**Drossia**	**1.45**	**148**	P	**Pn**	**15 04 47.7**	**-0.3**
DRO				S	**Sn**	**15 05 08.9**	**+1.6**
DRO	**Drossia**	**1.45**	**148**	P	**Pn**	**15 04 47.7**	**-0.3**
DRO				S	**Sn**	**15 05 08.9**	**+1.6**
AXAR	**Agios Charalam**	**1.56**	**105**	P	**Pn**	**15 04 49.8**	**+0.3**
AXAR				S	**Sg**	**15 05 11.3**	**0.0**
AXAR	**Agios Charalam**	**1.56**	**105**	P	**Pn**	**15 04 49.8**	**+0.3**
AXAR				S	**Sg**	**15 05 11.3**	**0.0**
DSF	**Desfina**	**1.60**	**118**	P	**Pn**	**15 04 50.6**	**+0.5**
DSF	**Desfina**	**1.60**	**118**	P	**Pn**	**15 04 50.6**	**+0.5**
KTI	**Kastanea**	**1.61**	**41**	P	**Pn**	**15 04 51.1**	**+0.8**
KTI	**Kastanea**	**1.61**	**41**	P	**Pn**	**15 04 51.1**	**+0.8**
LIT	**Litokhoron**	**1.64**	**55**	P	**Pn**	**15 04 51.0**	**+0.4**
LIT				S	**Sb**	**15 05 13.1**	**+0.4**
LIT	**Litokhoron**	**1.64**	**55**	P	**Pn**	**15 04 51.0**	**+0.4**
LIT				S	**Sb**	**15 05 13.1**	**+0.4**
FNA	**Florina**	**1.67**	**17**	*e*Pg	**Pn**	**15 04 51.4**	**+0.3**
FNA				*e*Sg	**Sg**	**15 05 15.5**	**+0.5**
FNA	**Florina**	**1.67**	**17**	P	**Pn**	**15 04 51.4**	**+0.3**
FNA				S	**Sn**	**15 05 13.8**	**+0.9**
FNA	**Florina**	**1.67**	**17**	P	**Pn**	**15 04 51.4**	**+0.3**
FNA				S	**Sn**	**15 05 13.8**	**+0.9**
FNA				*e*Sg	**Sg**	**15 05 15.5**	**+0.5**
LKR	**Lokris**	**1.85**	**106**	P	**Pn**	**15 04 54.5**	**+1.1**
LKR	**Lokris**	**1.85**	**106**	P	**Pn**	**15 04 54.5**	**+1.1**
BIA	**Bitola**	**1.89**	**14**	*i* Pn	**Pb**	**15 04 56.5**	**+0.4**
XOR	**Xorichti**	**1.92**	**84**	P	**Pb**	**15 04 55.8**	**-0.8**
XOR	**Xorichti**	**1.92**	**84**	P	**Pb**	**15 04 55.8**	**-0.8**
OHR	**Ohrid**	**1.93**	**1**	*i* Pn	**Pb**	**15 04 57.3**	**+0.5**
NEO	**Neokhori**	**1.94**	**86**	P	**Pn**	**15 04 55.0**	**+0.3**
NEO	**Neokhori**	**1.94**	**86**	P	**Pn**	**15 04 55.0**	**+0.3**
GRG	**Griva**	**2.19**	**35**	P	**Pn**	**15 04 58.9**	**+0.8**
GRG	**Griva**	**2.19**	**35**	P	**Pn**	**15 04 58.9**	**+0.8**
TIR	**Tirane**	**2.26**	**343**	*e*Pn	**Pn**	**15 05 01.1**	**+2.0**
TIR	**Tirane**	**2.26**	**343**	⇓*i*P	**Pb**	**15 05 02.6**	**+0.2**
TIR	**Tirane**	**2.26**	**343**	S	**Sg**	**15 05 35.8**	**+1.9**
TIR	**Tirane**	**2.26**	**343**	*e*Pn	**Pn**	**15 05 01.1**	**+2.0**
TIR	**Tirane**	**2.26**	**343**	⇓*i*P	**Pb**	**15 05 02.6**	**+0.2**
VAY	**Valandovo**	**2.56**	**33**	*e*Pn	**Pn**	**15 05 04.6**	**+1.4**
VAY	**Valandovo**	**2.56**	**33**	*e*Pn	**Pn**	**15 05 04.5**	**+1.4**
VAY	**Valandovo**	**2.56**	**33**	*e*Pn	**Pn**	**15 05 04.6**	**+1.4**
STIP	**Stip**	**2.74**	**23**	*i* Pn	**Pb**	**15 05 08.8**	**-1.8**
SRS	**Serrai**	**2.92**	**48**	*e*Pn	**Pn**	**15 05 08.9**	**+0.7**
SRS	**Serrai**	**2.92**	**48**	*e*Pn	**Pn**	**15 05 08.9**	**+0.7**
TIP	**Timpagrande**	**3.09**	**271**	⇓*i*P	**Pn**	**15 05 11.0**	**+0.4**
TIP	**Timpagrande**	**3.09**	**271**	S	**Sn**	**15 05 48.3**	**+0.5**
TIP	**Timpagrande**	**3.09**	**271**	⇓*i*P	**Pn**	**15 05 11.0**	**+0.4**
TIP				S	**Sn**	**15 05 48.3**	**+0.5**
DRME	**Dracevica, Mon**	**3.22**	**339**	*e*Pn	**Pn**	**15 05 12.8**	**+0.5**
PDG	**Podgorica**	**3.43**	**341**	*e*Pn	**Pn**	**15 05 16.0**	**+0.8**
PDG	**Podgorica**	**3.43**	**341**	⇓*i*P	**Pn**	**15 05 16.5**	**+1.3**
PDG	**Podgorica**	**3.43**	**341**	*e*Pn	**Pn**	**15 05 16.0**	**+0.8**
PDG	**Podgorica**	**3.43**	**341**	⇓*i*P	**Pn**	**15 05 16.5**	**+1.3**
HCY	**Herceg Novi**	**3.67**	**333**	*e*Pn	**Pn**	**15 05 17.8**	**-0.8**
BARS	**Barje**	**3.72**	**12**	*e*Pn	**Pn**	**15 05 20.8**	**+1.6**
BARS	**Barje**	**3.72**	**12**	*e*Pn	**Pn**	**15 05 20.8**	**+1.6**
VTS	**Vitosha**	**3.89**	**28**	*e*Pn	**Pn**	**15 05 23.0**	**+1.4**
VTS	**Vitosha**	**3.89**	**28**	⇑*i*P	**Pn**	**15 05 24.1**	**+2.5**
VTS	**Vitosha**	**3.89**	**28**	S	**Sn**	**15 06 08.5**	**+0.9**

GURO	**Guroymak-BITLI**	**1.34 273**	PG	**Pn**	**15 07 41.9**	**-1.3**
GURO	**Guroymak-BITLI**	**1.34 273**	*e*Pg	**Pn**	**15 07 41.9**	**-1.3**
SIRT	**Sirnak**	**1.43 226**	PN	**Pg**	**15 07 47.4**	**+1.4**
SIRT	**Sirnak**	**1.43 226**	*e*Pn	**Pg**	**15 07 47.4**	**+1.4**
GNI	**Garni**	**1.82 25**	PN	**Pg**	**15 07 55.9**	**+2.5**
GNI	**Garni**	**1.82 25**	*e*Pn	**Pg**	**15 07 55.9**	**+2.5**

CSEM ***05*** *15:07:55.4, 36°.49N×4°.79E, h0km, ML3.5*

CRAAG 05 15:07:55.4, 36°.49N×4°.79E, Ml3.5, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SET	**Setif**	**0.57 121**		P	Pn	15 08 10.0	-0.9
SET	**Setif**	**0.57 121**		P	Pn	15 08 10.0	-0.9
CKHR	**Kef el Ahmar**	**0.75 129**		P	Pb	15 08 12.4	+0.9
CKHR	**Kef el Ahmar**	**0.75 129**		P	Pb	15 08 12.4	+0.9
AKET	**Djebel Ketaf**	**0.86 239**		P	Pb	15 08 13.9	+0.6
AKET	**Djebel Ketaf**	**0.86 239**		P	Pb	15 08 13.9	+0.6
DFRA	**Djebel Bou Aff**	**0.88 86**		P	Pb	15 08 12.9	-0.7
DFRA	**Djebel Bou Aff**	**0.88 86**		P	Pb	15 08 12.9	-0.7
ADJB	**Djebel Djouab**	**1.14 253**		P	Pb	15 08 18.4	+0.3
ADJB	**Djebel Djouab**	**1.14 253**		P	Pb	15 08 18.4	+0.3
CTEI	**Djebel Teioual**	**1.38 108**		P	Pb	15 08 22.5	+0.4
CTEI	**Djebel Teioual**	**1.38 108**		P	Pb	15 08 22.5	+0.4
EMHD	**Djebel Mahouad**	**1.51 259**		P	Pb	15 08 25.5	+1.1
EMHD	**Djebel Mahouad**	**1.51 259**		P	Pb	15 08 25.5	+1.1
CKFL	**Kef-Lekhel**	**1.56 93**		P	Pg	15 08 26.4	+1.1
CKFL	**Kef-Lekhel**	**1.56 93**		P	Pg	15 08 26.4	+1.1
CAEH	**'Ain El Ouahch**	**1.68 80**		P	Pn	15 08 25.1	-1.0
CAEH	**'Ain El Ouahch**	**1.68 80**		P	Pn	15 08 25.1	-1.0
CMAH	**Djebel Manchou**	**2.12 86**		P	Pn	15 08 31.5	-0.7
CMAH	**Djebel Manchou**	**2.12 86**		P	Pn	15 08 31.5	-0.7

ISK ***05*** *15:10:56.9, 39°.99N×33°.55E, h7km, ML2.4/7, Suspected Mining explosion.*
ISCJB ***05*** *15:10:57.2±0.6, 39°.96N±0°.03×33°.60E±0°.05, h0km, Error ellipse: s-maj=5.4km s-min=3.7km az=1.8*
CSEM ***05*** *15:10:57.6±0.2, 39°.95N×33°.60E, h1km, MD2.7, Error ellipse: s-maj=4.7km s-min=3.9km az=91.0, Suspected Mining explosion.*
DDA ***05*** *15:10:57.5, 39°.96N×33°.62E, h7km, Md2.7*

ISC 05 15:10:56.8±0.8, 39°.90N±0°.03×33°.55E±0°.03, h0km, n29, σ0s52/41, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBAL	**Bala**	**0.48 223**		*i* P	**Pb**	**15 11 08.4**	**+0.2**
BBAL				*i* S	**Sb**	**15 11 16.0**	**+0.1**
BBAL	**Bala**	**0.48 223**		P	**Pb**	**15 11 08.4**	**+0.2**
BBAL				S	**Sb**	**15 11 16.0**	**+0.1**
AFSR	**Af¯ar-Bala (A**	**0.58 219**		PG	**Pb**	**15 11 09.7**	**-0.2**
AFSR				SG	**Sb**	**15 11 19.6**	**+0.9**
AFSR	**Af¯ar-Bala (A**	**0.58 219**		*e*Pg	**Pb**	**15 11 09.7**	**-0.2**
AFSR				*e*Sg	**Sb**	**15 11 19.6**	**+0.9**
ANTO	**Ankara**	**0.58 268**		PG	**Pb**	**15 11 09.3**	**-0.6**
ANTO	**Ankara**	**0.58 268**		*e*Pg	**Pb**	**15 11 09.3**	**-0.6**
ELDT	**Eldivan**	**0.60 351**		*i* P	**Pg**	**15 11 08.4**	**0.0**
ELDT				*i* S	**Sg**	**15 11 16.5**	**+0.4**
ELDT	**Eldivan**	**0.60 351**		P	**Pg**	**15 11 08.4**	**0.0**
ELDT				S	**Sg**	**15 11 16.5**	**+0.4**
LOD	**Lodumlu**	**0.60 270**		PG	**Pg**	**15 11 08.9**	**+0.6**
LOD	**Lodumlu**	**0.60 270**		*e*Pg	**Pg**	**15 11 08.9**	**+0.6**
KKUL	**Konya-Kulu**	**0.87 214**		*i* P	**Pn**	**15 11 16.6**	**+0.2**
KKUL				*i* S	**Sn**	**15 11 29.9**	**0.0**
KKUL	**Konya-Kulu**	**0.87 214**		P	**Pn**	**15 11 16.6**	**+0.2**
KKUL				S	**Sn**	**15 11 29.9**	**0.0**
CORM	**Corum**	**0.88 71**		PG	**Pg**	**15 11 13.6**	**-0.1**
CORM	**Corum**	**0.88 71**		*e*Pg	**Pg**	**15 11 13.6**	**-0.1**
SERE	**Sereflikochisa**	**0.95 179**		PG	**Pn**	**15 11 17.2**	**-0.3**
SERE	**Sereflikochisa**	**0.95 179**		*e*Pg	**Pn**	**15 11 17.2**	**-0.3**
KULU	**Kulu**	**0.95 206**		PG	**Pn**	**15 11 17.2**	**-0.3**
KULU	**Kulu**	**0.95 206**		*e*Pg	**Pn**	**15 11 17.2**	**-0.3**
YAYX	**Yaylak**	**0.98 168**		PG	**Pn**	**15 11 17.8**	**-0.1**
YAYX	**Yaylak**	**0.98 168**		*e*Pg	**Pn**	**15 11 17.8**	**-0.1**
CMDR	**Camlidere-ANKA**	**1.01 306**		*i* P	**Pn**	**15 11 18.6**	**+0.1**
CMDR				*i* S	**Sb**	**15 11 32.0**	**+0.7**
CMDR	**Camlidere-ANKA**	**1.01 306**		P	**Pn**	**15 11 18.6**	**+0.1**
CMDR				S	**Sb**	**15 11 32.0**	**+0.7**
YOZ	**Yozgat**	**1.39 100**		PN	**Pb**	**15 11 23.8**	**0.0**
YOZ	**Yozgat**	**1.39 100**		*e*Pn	**Pb**	**15 11 23.8**	**0.0**
BCAM	**Yenicaga**	**1.46 310**		*i* P	**Pb**	**15 11 24.9**	**0.0**
BCAM				*i* S	**Sg**	**15 11 42.1**	**-1.6**
BCAM	**Yenicaga**	**1.46 310**		P	**Pb**	**15 11 24.9**	**0.0**
BCAM				S	**Sg**	**15 11 42.1**	**-1.6**
KIZT	**Kizilcal**	**1.64 232**		PN	**Pb**	**15 11 27.6**	**-0.4**
KIZT	**Kizilcal**	**1.64 232**		*e*Pn	**Pb**	**15 11 27.6**	**-0.4**
BORA	**Eskisehir**	**2.38 271**		PN	**Pn**	**15 11 37.1**	**-0.1**

MEX 05 15:16:15.2±0.4, 13°.94N×92°.23W, h28km±20km, MD4.0, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**2.00 331**		*e*P	Pn	15 16 45.3	-1.8
PCIG				*e*S	Sn	15 17 08.3	-2.9
CCIG	**Comitan**	**2.33 2**		*e*P	Pn	15 16 49.8	-2.0
CCIG				*e*S	Sn	15 17 15.0	-4.6

MEX 05 15:20:50.7±0.3, 17°.71N×101°.26W, h32km±9km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.23 242**		*e*P	Pb	15 20 55.9	-1.5
ZIIG				*e*S	Sb	15 21 00.4	-1.6
ARIG	**Puente Sto Nin**	**1.03 57**		*e*P	Pn	15 21 06.8	-2.2
ARIG				*e*S	Sn	15 21 19.6	-2.8
CAIG	**El Cayaco**	**1.15 125**		*e*P	Pn	15 21 08.8	-1.8
CAIG				*e*S	Sn	15 21 22.1	-3.2
PLIG	**Platanillo**	**1.80 68**		*e*P	Pn	15 21 17.9	-1.8
PLIG				*e*S	Sn	15 21 39.2	-2.2

BEO ***05*** *15:25:39.9±0.4, 43°.11N×17°.77E, h8km±3km*
CSEM ***05*** *15:25:40.1±0.2, 43°.12N×17°.87E, h5km, ML3.2/4, Error ellipse: s-maj=4.4km s-min=2.4km az=43.0*
PDG ***05*** *15:25:40.0±0.2, 43°.12N×17°.84E, h13km, ML2.6/14, Error ellipse: s-maj=0.4km s-min=0.8km az=0.0*

ISC 05 15:25:39.8±1.1, 43°.14N±0°.02×17°.85E±0°.02, h2km±9km, n82, σ0s92/145, 23C-12D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STON	**Ston**	**0.29 202**		*e*Pg	**Pg**	**15 25 44.6**	**-0.7**
STON				*e*Sg	**Sg**	**15 25 49.2**	**+0.2**
STON	**Ston**	**0.29 202**		*i* Pg	**Pg**	**15 25 44.6**	**-0.7**
STON				Sg	**Sg**	**15 25 49.0**	**0.0**
STON	**Ston**	**0.29 202**		⇑*i*Pg	**Pg**	**15 25 44.5**	**-0.7**
STON				*e*Sg	**Sg**	**15 25 49.2**	**+0.2**
BRY	**Bratogost**	**0.56 115**		⇑*i*Pg	**Pg**	**15 25 50.2**	**-0.3**
BRY				*e*Sg	**Sb**	**15 25 59.8**	**-1.5**
BRY	**Bratogost**	**0.56 115**		⇑*i*Pg	**Pg**	**15 25 50.2**	**-0.3**
BRY				*e*Sg	**Sg**	**15 25 58.7**	**+0.9**
TREB	**Trebinje**	**0.56 139**		*e*Sg	**Sg**	**15 25 58.4**	**+0.6**
UPM	**Unac-Piva**	**0.78 85**		⇑*i*Pg	**Pg**	**15 25 54.1**	**-0.6**
UPM				*e*Sg	**Sb**	**15 26 06.7**	**-0.5**
UPM	**Unac-Piva**	**0.78 85**		⇑*i*Pg	**Pg**	**15 25 54.1**	**-0.6**
UPM				*e*Sg	**Sb**	**15 26 06.7**	**-0.5**
HCY	**Herceg Novi**	**0.84 145**		⇓*i*Pg	**Pg**	**15 25 55.3**	**-0.6**
HCY				*e*Sg	**Sb**	**15 26 08.4**	**-0.4**
HCY	**Herceg Novi**	**0.84 145**		⇓*i*Pg	**Pg**	**15 25 55.3**	**-0.6**
HCY				*e*Sg	**Sg**	**15 26 07.0**	**+0.3**
NKME	**Niksic**	**0.89 114**		⇓*i*Pg	**Pg**	**15 25 56.2**	**-0.7**
NKME				*e*Sg	**Sb**	**15 26 10.8**	**+0.4**
NKME	**Niksic**	**0.89 114**		⇓*i*Pg	**Pg**	**15 25 56.2**	**-0.7**
NKME				*e*Sg	**Sb**	**15 26 10.8**	**+0.4**
NKY	**Niksic**	**0.90 111**		⇓*i*Pg	**Pg**	**15 25 56.5**	**-0.6**
NKY				*e*Sg	**Sb**	**15 26 11.4**	**+0.7**
NKY	**Niksic**	**0.90 111**		⇓*i*Pg	**Pg**	**15 25 56.5**	**-0.6**
NKY				*e*Sg	**Sb**	**15 26 11.4**	**+0.7**
CEME	**Cevo**	**0.98 127**		⇑*i*Pg	**Pg**	**15 25 58.2**	**-0.5**
CEME				*e*Sg	**Sb**	**15 26 13.4**	**+0.3**
CEME	**Cevo**	**0.98 127**		⇑*i*Pg	**Pg**	**15 25 58.2**	**-0.5**
CEME				*e*Sg	**Sb**	**15 26 13.4**	**+0.3**
BUM	**Brajici-Budva**	**1.14 137**		⇑*i*Pg	**Pg**	**15 26 01.0**	**-0.6**
BUM				*e*Sg	**Sn**	**15 26 18.9**	**-0.1**
BUM	**Brajici-Budva**	**1.14 137**		⇑*i*Pg	**Pg**	**15 26 01.0**	**-0.6**
BUM				*e*Sg	**Sn**	**15 26 18.9**	**-0.1**
PLE	**Pljevlja**	**1.14 80**		⇑*i*Pg	**Pg**	**15 26 01.7**	**0.0**
PLE				*e*Sg	**Sn**	**15 26 19.5**	**+0.3**
PLE	**Pljevlja**	**1.14 80**		⇑*i*Pg	**Pg**	**15 26 01.7**	**0.0**
PLE				*e*Sg	**Sn**	**15 26 19.5**	**+0.3**
HAPS	**Han Pijesak,Bl**	**1.24 40**		*e*Pg	**Pg**	**15 26 02.5**	**-1.1**
HAPS				*e*Sg	**Sb**	**15 26 20.3**	**-0.2**
HAPS	**Han Pijesak,Bl**	**1.24 40**		*e*Pg	**Pg**	**15 26 02.5**	**-1.1**
HAPS				*e*Sg	**Sb**	**15 26 20.3**	**-0.2**
PDG	**Podgorica**	**1.26 124**		*e*Pg	**Pg**	**15 26 03.4**	**-0.4**
PDG				*e*Sg	**Sb**	**15 26 20.7**	**-0.1**
PDG	**Podgorica**	**1.26 124**		⇑*i*P	**Pg**	**15 26 03.4**	**-0.4**
PDG	**Podgorica**	**1.26 124**		⇑*i*P	**Pg**	**15 26 03.4**	**-0.4**
PDG				*e*Sg	**Sg**	**15 26 19.7**	**-0.4**
PDG				S	**Sg**	**15 26 21.8**	**0.0**
TTG	**Podgorica**	**1.26 124**		⇑*i*Pg	**Pg**	**15 26 03.2**	**-0.6**
TTG				*e*Sg	**Sn**	**15 26 22.5**	**+0.7**
KOME	**Kolasin**	**1.26 103**		⇑*i*Pg	**Pg**	**15 26 03.9**	**0.0**
KOME				*e*Sg	**Sn**	**15 26 23.3**	**+1.3**
KOME	**Kolasin**	**1.26 103**		⇑*i*Pg	**Pg**	**15 26 03.9**	**0.0**
KOME				*e*Sg	**Sn**	**15 26 23.3**	**+1.3**
BBLS	**Lazići**	**1.35 57**		*e*Pg	**Pn**	**15 26 05.6**	**-0.1**
BBLS				*e*Sg	**Sn**	**15 26 25.2**	**+1.0**
BBLS	**Lazići**	**1.35 57**		*e*Pg	**Pn**	**15 26 05.6**	**-0.1**
BBLS				*e*Sg	**Sn**	**15 26 24.0**	**-0.2**
DRME	**Dracevica, Mon**	**1.37 133**		⇑*i*Pg	**Pn**	**15 26 05.7**	**-0.2**
DRME				*e*Sg	**Sn**	**15 26 25.9**	**+1.3**
DRME	**Dracevica, Mon**	**1.37 133**		⇑*i*Pg	**Pn**	**15 26 05.7**	**-0.2**
DRME				*e*Sg	**Sn**	**15 26 23.9**	**-0.7**
BEY	**Berane**	**1.52 99**		*e*Pg	**Pn**	**15 26 08.2**	**+0.1**
BEY				*e*Sg	**Sg**	**15 26 30.4**	**+1.6**
IVA	**Berane**	**1.52 99**		*e*Pg	**Pn**	**15 26 08.2**	**+0.1**
IVA				*e*Sg	**Sg**	**15 26 30.4**	**+1.6**
SJES	**Sjenica**	**1.56 85**		*e*Pg	**Pb**	**15 26 09.5**	**+0.1**
SJES				*e*Sn	**Sg**	**15 26 30.5**	**+0.6**
ULC	**Ulcinj**	**1.56 138**		⇓*i*Pg	**Pn**	**15 26 08.4**	**-0.2**
ULC				*e*Sg	**Sg**	**15 26 30.4**	**+0.4**
ULC	**Ulcinj**	**1.56 138**		⇓*i*Pg	**Pn**	**15 26 08.4**	**-0.2**
ULC				*e*Sg	**Sg**	**15 26 30.4**	**+0.4**
PVY	**Plav**	**1.65 109**		⇑*i*Pn	**Pn**	**15 26 09.8**	**0.0**
PVY				*e*Sn	**Sg**	**15 26 33.3**	**+0.7**
PVY	**Plav**	**1.65 109**		⇑*i*Pn	**Pn**	**15 26 09.8**	**0.0**
PVY				*e*Sn	**Sg**	**15 26 33.3**	**+0.7**
BLY	**Banja Luka**	**1.68 344**		*e*Pg	**Pb**	**15 26 11.2**	**-0.2**
BLY				*e*Sg	**Sg**	**15 26 35.4**	**+1.6**
BLY	**Banja Luka**	**1.68 344**		⇓*i*P	**Pb**	**15 26 10.9**	**-0.5**
BLY	**Banja Luka**	**1.68 344**		⇑*i*Pn	**Pn**	**15 26 10.4**	**+0.2**
BLY	**Banja Luka**	**1.68 344**		⇓*i*P	**Pb**	**15 26 10.9**	**-0.5**
BLY	**Banja Luka**	**1.68 344**		*e*Pg	**Pb**	**15 26 11.2**	**-0.2**
BLY				*e*Sn	**Sb**	**15 26 33.0**	**0.0**
BLY				S	**Sg**	**15 26 34.3**	**+0.5**
BLY				*e*Sg	**Sg**	**15 26 35.4**	**+1.6**
IVAS	**Ivanjica**	**1.74 75**		*e*Pn	**Pn**	**15 26 11.4**	**+0.4**
IVAS	**Ivanjica**	**1.74 75**		*e*Pn	**Pn**	**15 26 11.4**	**+0.4**
DIVS	**Divibare**	**1.83 58**		*e*Pn	**Pn**	**15 26 12.1**	**-0.2**
DIVS				*e*Sg	**Sg**	**15 26 40.2**	**+1.6**
DIVS	**Divibare**	**1.83 58**		*e*Pn	**Pn**	**15 26 12.1**	**-0.2**
DIVS				*e*Sn	**Sb**	**15 26 36.6**	**-0.8**
DIVS				*e*Sg	**Sg**	**15 26 40.2**	**+1.6**
TEKS	**Tekeris**	**1.86 40**		*e*Pn	**Pn**	**15 26 12.7**	**0.0**
TEKS	**Tekeris**	**1.86 40**		*e*Pn	**Pn**	**15 26 12.7**	**0.0**
TEKS				*e*Sn	**Sn**	**15 26 37.2**	**+0.3**
UDBI	**Udbina**	**2.05 313**		*e*Pn	**Pb**	**15 26 17.6**	**-0.1**
UDBI				Sn	**Sg**	**15 26 46.0**	**+0.3**
UDBI	**Udbina**	**2.05 313**		*e*Pn	**Pb**	**15 26 17.6**	**-0.1**
UDBI				Sn	**Sg**	**15 26 45.9**	**+0.3**
TRUS	**Trudelj**	**2.15 59**		*e*Pn	**Pn**	**15 26 16.9**	**+0.2**
TRUS	**Trudelj**	**2.15 59**		*e*Pn	**Pn**	**15 26 16.9**	**+0.2**
GRUS	**Gruza**	**2.22 69**		*e*Pn	**Pn**	**15 26 17.4**	**-0.2**
GRUS	**Gruza**	**2.22 69**		*e*Pn	**Pn**	**15 26 17.4**	**-0.2**
SELS	**Selova**	**2.40 87**		*e*Pn	**Pn**	**15 26 20.1**	**+0.1**
SELS	**Selova**	**2.40 87**		*e*Pn	**Pn**	**15 26 20.1**	**+0.1**
NVLJ	**Novalja**	**2.58 305**		*e*Pn	**Pn**	**15 26 23.3**	**+0.7**
NVLJ				Sn	**Sn**	**15 26 56.0**	**+1.5**
NVLJ	**Novalja**	**2.58 305**		*e*Pn	**Pn**	**15 26 23.2**	**+0.7**
NVLJ				Sn	**Sn**	**15 26 56.0**	**+1.5**
MATE	**Matera**	**2.63 199**		⇓*i*P	**Pb**	**15 26 27.6**	**0.0**
MATE	**Matera**	**2.63 199**		⇓*i*P	**Pb**	**15 26 27.6**	**0.0**
OZLJ	**Ozalj**	**3.01 326**		*e*Pn	**Pn**	**15 26 30.5**	**+2.1**
OZLJ	**Ozalj**	**3.01 326**		*e*Pn	**Pn**	**15 26 30.5**	**+2.1**
CRES	**Cresnjev**	**3.19 328**		*e*Pn	**Pn**	**15 26 31.3**	**+0.4**
CRES				*e*Sn	**Sn**	**15 27 08.8**	**-0.6**
BEHE	**Becsehely**	**3.42 347**		*e*Pn	**Pn**	**15 26 34.4**	**+0.3**
BEHE				*e*Sn	**Sn**	**15 27 14.6**	**-0.6**
CEY	**Cerknica**	**3.57 318**		*e*Pn	**Pn**	**15 26 36.1**	**-0.1**
CEY				*e*Sn	**Sn**	**15 27 18.0**	**-1.0**
BZS	**Buzias**	**3.67 46**		⇑*i*P	**Pn**	**15 26 35.3**	**-2.2**
BZS	**Buzias**	**3.67 46**		⇑*i*P	**Pn**	**15 26 35.3**	**-2.2**
BZS				S	**Sn**	**15 27 18.2**	**-3.1**
SOKA	**Soboth** 1.2nm,0.2s	**4.07 332**		*i* Pn	**Pn**	**15 26 44.3**	**+1.2**
SOKA				*e*Sn	**Sn**	**15 27 30.4**	**-0.8**
SOKA	**Soboth** 8.0nm,0.7s 1.2nm,0.2s	**4.07 332**		Pn	**Pn**	**15 26 44.3**	**+1.2**
SOKA				Sn	**Sn**	**15 27 30.4**	**-0.8**
OBKA	**Obir** 8.0nm,0.7s 0.5nm,0.3s	**4.11 326**		*e*Pn	**Pn**	**15 26 45.8**	**+2.2**
OBKA				Pg	**Pg**	**15 26 57.2**	**-1.2**
OBKA	**Obir** 1.1nm,0.2s 0.5nm,0.3s	**4.11 326**		Pn	**Pn**	**15 26 45.8**	**+2.2**
ARSA	**Arzberg** 12nm,0.3s	**4.43 339**		*e*Pn	**Pn**	**15 26 49.1**	**+1.1**
ARSA				*e*Sn	**Sn**	**15 27 39.6**	**-0.5**
ARSA	**Arzberg** 4.9nm,0.4s 12nm,0.3s	**4.43 339**		Pn	**Pn**	**15 26 49.1**	**+1.1**
ARSA				Sn	**Sn**	**15 27 39.6**	**-0.5**
CONA	**Conrad Observa** 4.9nm,0.4s 1.6nm,0.4s	**4.99 344**		*e*Pn	**Pn**	**15 26 57.5**	**+1.8**
CONA				*e*Sn	**Sn**	**15 27 52.5**	**-1.5**
CONA	**Conrad Observa** 3.6nm,0.4s 1.6nm,0.4s	**4.99 344**		Pn	**Pn**	**15 26 57.5**	**+1.8**
CONA				Sn	**Sn**	**15 27 52.5**	**-1.5**
ABTA	**Abfaltersbach** 3.6nm,0.4s 1.0nm,0.3s	**5.23 315**		*e*Pn	**Pn**	**15 26 59.4**	**+0.3**
ABTA	**Abfaltersbach** 1.0nm,0.3s	**5.23 315**		Pn	**Pn**	**15 26 59.4**	**+0.3**
MOA	**Molln** 1.9nm,0.4s	**5.34 333**		*e*Pn	**Pn**	**15 27 02.6**	**+2.1**
MOA				*e*Sn	**Sn**	**15 28 02.7**	**+0.1**
MOA	**Molln** 8.4nm,0.6s 1.9nm,0.4s	**5.34 333**		Pn	**Pn**	**15 27 02.6**	**+2.1**
MOA				Sn	**Sn**	**15 28 02.7**	**+0.1**
KHC	**Kasperske Hory** 8.4nm,0.6s	**6.69 335**		*e*SN	**Sn**	**15 28 34.1**	**-1.6**

NIED ***05*** *15:58:00, 38°.60N×141°.90E, h47km, Mw3.6 Best double couple: M0=2.91000×10^14 NP1:φs=334.00000°, δ=29.00000°, λ=19.00000°. NP2:φs=227.00000°, δ=81.00000°, λ=118.00000°.*
JMA ***05*** *15:58:21.5, 38°.61N×141°.99E, h50km±1km, M3.8*
JMA Felt I J1.
IDC ***05*** *15:58:23.1±2.5, 38°.47N×142°.14E, h67km±22km, mb3.3/5, mb1 3.4/10, mb1mx3.2/77, mbtmp3.6/10, Error ellipse: s-maj=29.2km s-min=18.7km az=92.0*

ISC 05 15:58:19.9±1.7, 38°.48N±0°.04×142°.05E±0°.08, h26km±12km, n27, σ1s87/31, mb3.6/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**0.55 268**		P	**Pn**	**15 58 33.0**	**+1.0**
JIO				S	**Sn**	**15 58 40.9**	**+0.6**
OFUJ	**Ofunato**	**0.67 334**		P	**Pb**	**15 58 33.2**	**+0.2**
OFUJ				*e*S	**Sb**	**15 58 41.8**	**-0.1**
JMK	**Ichinoseki**	**0.80 306**		P	**Pb**	**15 58 35.3**	**+0.1**
JMK				*e*S	**Sb**	**15 58 45.1**	**-0.5**
JOU	**Okura**	**1.09 265**		P	**Pn**	**15 58 40.2**	**+0.7**
JOU				*e*S	**Sb**	**15 58 54.0**	**+0.1**
JOM	**Ohasama**	**1.15 330**		P	**Pn**	**15 58 39.8**	**-0.6**
JOM				S	**Sb**	**15 58 53.0**	**-2.7**
JMM	**Marumori**	**1.16 239**		P	**Pb**	**15 58 41.6**	**+0.3**
JYK	**Kaneyama**	**1.39 289**		P	**Pn**	**15 58 43.7**	**+0.1**
JYK				*e*S	**Sn**	**15 59 00.6**	**-0.6**
JRG	**Rokugo**	**1.43 310**		P	**Pn**	**15 58 43.9**	**-0.3**
JFK	**Kawauchi**	**1.45 220**		P	**Pb**	**15 58 46.5**	**+0.4**
JYS	**Shiratake**	**1.58 261**		P	**Pn**	**15 58 47.2**	**+1.0**
JYS				*e*S	**Sn**	**15 59 06.0**	**+0.2**
MJAR	**Matsushiro Arr** 3.0nm,0.3s,baz=34,slow=14,SNR=34	**3.61 239**		P	**Pn**	**15 59 17.6**	**+3.5**
MJAR	1.5nm,0.3s,baz=88,slow=27,SNR=4.1			S	**Sb**	**16 00 03.1**	**-3.3**
MAT	**Matsushiro**	**3.61 239**		P	**Pn**	**15 59 17.3**	**+3.1**
MAT				*e*S	**Sb**	**16 00 03.0**	**-3.4**
ASAJ	**Asahikawa** 0.6nm,0.3s,baz=211,slow=12,SNR=6.8	**5.65 4**		P	**Pn**	**15 59 43.7**	**+1.6**
ASAJ	1.2nm,0.3s,baz=237,slow=17,SNR=4.2			S	**Sn**	**16 00 49.4**	**+3.3**
JHJ	**Hachijo jima 2** 9.7nm,0.3s,baz=229,slow=18,SNR=2.5	**5.65 200**		P	**Pn**	**15 59 43.6**	**+1.4**
JHJ	3.9nm,0.3s,baz=120,slow=23,SNR=2.9			S	**Sn**	**16 00 46.1**	**-0.2**
USRK	**Ussuriysk Ar.** 0.3nm,0.3s,baz=116,slow=15,SNR=6.5	**9.48 310**		P	Pn	16 00 39.0	+4.3
KSRS	**Korea Array** 0.1nm,0.3s,baz=75,slow=14,SNR=3.1	**11.20 269**		P	**Pn**	**16 01 02.1**	**+3.8**
H11N2	**WAKE ISLAND Hy 28.50 124** baz=316,slow=75,SNR=34			T	T	16 34 30.9	
H11N1	**WAKE ISLAND Hy 28.50 124** baz=316,slow=75,SNR=46			T	T	16 34 31.9	
H11N3	**WAKE ISLAND Hy 28.51 124** baz=316,slow=75,SNR=46			T	T	16 34 32.2	
H11S1	**WAKE ISLAND Hy 29.26 126** baz=318,slow=76,SNR=9.4			T	T	16 35 29.9	
H11S3	**WAKE ISLAND Hy 29.26 126** baz=318,slow=76,SNR=20			T	T	16 35 29.6	
H11S2	**WAKE ISLAND Hy 29.28 126** baz=318,slow=76,SNR=10			T	T	16 35 30.1	
ZALV	**Zalesovo Beam** 0.4nm,0.3s,baz=96,slow=5.8,SNR=2.8	**41.33 311**		P	**P**	**16 06 02.7**	**-0.4**
MKAR	**Makanchi Array** 0.3nm,0.4s,baz=80,slow=9.7,SNR=3.4	**43.79 301**		P	**P**	**16 06 23.7**	**+0.3**
KURBB	**Kurchatov Arra** 0.8nm,0.3s,baz=81,slow=8.0,SNR=11	**45.52 307**		P	**P**	**16 06 34.8**	**-2.3**
ILAR	**Eielson Array** 0.2nm,0.5s,baz=270,slow=6.2,SNR=4.1	**48.01 33**		P	**P**	**16 06 55.2**	**-1.1**
WRA	**Warramunga Arr** 0.5nm,0.7s,baz=6.4,slow=7.0,SNR=10	**58.56 189**		P	**P**	**16 08 13.0**	**-1.3**

ISCJB ***05*** *16:15:14.0±0.5, 33°.10N±0°.02×35°.78E±0°.05, h9km±4km, Error ellipse: s-maj=7.4km s-min=3.0km az=16.6*
CSEM ***05*** *16:15:14.3±0.2, 33°.12N×35°.77E, h10km, MD2.2, Error ellipse: s-maj=4.6km s-min=2.0km az=100.0*
GII ***05*** *16:15:14.8±0.0, 33°.06N×35°.69E, h5km, MD2.2/4*
GRAL ***05*** *16:15:15.6±0.3, 33°.14N×35°.74E, h7km±1km, MD2.9*

ISC 05 16:15:14.0±0.9, 33°.12N±0°.02×35°.74E±0°.03, h13km±8km, n39, σ0s45/70, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSDI	**Kefar Szold**	**0.10 316**		Pg	**Pb**	**16 15 18.3**	**+0.4**
KSDI				Sg	**Sb**	**16 15 20.6**	**+0.1**
KSDI	**Kefar Szold**	**0.10 316**		Pg	**Pb**	**16 15 18.3**	**+0.4**
KSDI				Sg	**Sb**	**16 15 20.6**	**+0.1**
KSHT	**Keshet**	**0.14 157**		Pg	**Pb**	**16 15 19.0**	**+0.4**
KSHT	**Keshet**	**0.14 157**		Pg	**Pb**	**16 15 19.0**	**+0.4**
SHBL	**Chebaa**	**0.23 360**		*e*P	**Pb**	**16 15 19.8**	**-0.4**
SHBL				*e*S	**Sg**	**16 15 22.7**	**+0.1**
SHBL	**Chebaa**	**0.23 360**		*e*P	**Pb**	**16 15 19.8**	**-0.4**
SHBL				*e*S	**Sg**	**16 15 22.7**	**+0.1**
MMA0B	**Mount Meron ar**	**0.30 251**		Pg	**Pb**	**16 15 21.1**	**-0.2**

σ0°80/55, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.33**	**74**	*e*Pg	**Pg**	**16 18 59.5**	**0.0**
OJC				*e*Sg	**Sg**	**16 19 03.9**	**+0.1**
OJC	**Ojcow**	**0.33**	**74**	*e*Pg	**Pg**	**16 18 59.5**	**0.0**
OJC				*e*Sg	**Sg**	**16 19 03.9**	**+0.1**
OJC	**Ojcow**	**0.33**	**74**	*e*Pg	**Pg**	**16 18 59.5**	**0.0**
OJC				*e*Sg	**Sg**	**16 19 03.9**	**+0.1**
OKC	**Ostrava-Krasne**	**0.80**	**249**	*e*PG	**Pg**	**16 19 09.1**	**+0.6**
OKC				*e*SG	**Sg**	**16 19 19.4**	**+0.6**
	comp=Z,22nm,0.5s						
NIE	**Niedzica**	**0.96**	**137**	*e*Pg	**Pb**	**16 19 12.7**	**0.0**
NIE				*e*Sg	**Sb**	**16 19 26.5**	**+0.5**
NIE	**Niedzica**	**0.96**	**137**	*e*Pg	**Pb**	**16 19 12.7**	**0.0**
NIE				*e*Sg	**Sb**	**16 19 26.5**	**+0.5**
LANS	**Liptovska Anna**	**0.99**	**174**	*e*PG	**Pb**	**16 19 13.3**	**+0.2**
LANS				*e*SG	**Sb**	**16 19 27.1**	**+0.4**
LANS	**Liptovska Anna**	**0.99**	**174**	*e*Pg	**Pb**	**16 19 13.3**	**+0.2**
LANS				*e*Sg	**Sb**	**16 19 27.1**	**+0.4**
MORC	**Moravsky Berou**	**1.19**	**253**	*e*Pg	**Pg**	**16 19 16.1**	**+0.2**
	baz=70						
MORC				*e*Sg	**Sg**	**16 19 31.0**	**-0.3**
	22nm,0.3s,baz=70						
MORC	**Moravsky Berou**	**1.19**	**253**	*e*PG	**Pg**	**16 19 16.1**	**+0.2**
MORC				*e*SG	**Sg**	**16 19 31.1**	**-0.3**
MORC	**Moravsky Berou**	**1.19**	**253**	*e*Pg	**Pg**	**16 19 16.1**	**+0.2**
	baz=70						
MORC				*e*Sg	**Sg**	**16 19 31.0**	**-0.3**
	22nm,0.3s,baz=70						
KRLC	**Kraliky**	**1.62**	**269**	*e*PG	**Pn**	**16 19 22.4**	**-0.7**
KRLC				*e*SG	**Sn**	**16 19 44.5**	**-0.2**
	comp=Z,6.6nm,0.5s						
VYHS	**Vyhne**	**1.67**	**191**	*e*PN	**Pn**	**16 19 23.5**	**-0.1**
VYHS				*e*SN	**Sn**	**16 19 45.7**	**0.0**
VYHS				*e*LG	Lg	16 19 47.3	
KECS	**Kecovo**	**1.82**	**154**	*e*SN	**Sn**	**16 19 48.4**	**-1.1**
KECS				*e*LG	Lg	16 19 54.9	
KECS	**Kecovo**	**1.82**	**154**	*e*Sn	**Sn**	**16 19 48.4**	**-1.1**
DPC	**Dobruska-Polom**	**1.93**	**278**	*e*PG	**Pn**	**16 19 26.8**	**-0.4**
DPC				*e*SG	**Sn**	**16 19 52.3**	**+0.2**
	comp=Z,22nm,0.7s						
VRAC	**Vranov**	**1.94**	**246**	*e*Pn	**Pn**	**16 19 27.6**	**+0.2**
	baz=62						
VRAC				*e*Sg	**Sb**	**16 19 54.6**	**+0.5**
	9.5nm,0.3s,baz=62						
VRAC	**Vranov**	**1.94**	**246**	*e*PN	**Pn**	**16 19 27.7**	**+0.3**
VRAC				*e*SG	**Sb**	**16 19 54.6**	**+0.5**
VRAC	**Vranov**	**1.94**	**246**	*e*Pn	**Pn**	**16 19 27.6**	**+0.2**
	baz=62						
VRAC				*e*Sg	**Sb**	**16 19 54.6**	**+0.5**
	9.5nm,0.3s,baz=62						
KSP	**Ksiaz**	**2.05**	**292**	*e*Pg	**Pg**	**16 19 32.7**	**+0.3**
KSP				*e*Sg	**Sb**	**16 19 57.9**	**+0.6**
KSP	**Ksiaz**	**2.05**	**292**	*e*Pg	**Pg**	**16 19 32.7**	**+0.3**
KSP				*e*Sg	**Sb**	**16 19 57.9**	**+0.6**
KSP	**Ksiaz**	**2.05**	**292**	*e*Pg	**Pg**	**16 19 32.7**	**+0.3**
KSP				*e*Sg	**Sb**	**16 19 57.9**	**+0.6**
UPC	**Upice**	**2.14**	**281**	*e*SG	**Sg**	**16 20 01.5**	**-0.4**
	comp=Z,11nm,0.5s						
KRUC	**Moravsky**	**2.17**	**242**	*e*Pn	**Pn**	**16 19 30.8**	**+0.3**
	baz=58						
KRUC				*e*Sg	**Sb**	**16 20 01.9**	**+1.2**
	9.0nm,0.4s,baz=58						
KRUC	**Moravsky**	**2.17**	**242**	*e*PN	**Pn**	**16 19 30.9**	**+0.4**
KRUC				*e*SG	**Sb**	**16 20 02.0**	**+1.2**
KRUC	**Moravsky**	**2.17**	**242**	*e*Pn	**Pn**	**16 19 30.8**	**+0.3**
	baz=58						
KRUC				*e*Sg	**Sb**	**16 20 01.9**	**+1.2**
	9.0nm,0.4s,baz=58						
GOPC	**GO Pecny, Ondr**	**2.92**	**267**	*e*SG	**Sb**	**16 20 23.5**	**+1.2**
	comp=Z,5.4nm,0.4s						
PVCC	**Panska Ves**	**3.06**	**279**	*e*SG	**Sg**	**16 20 30.3**	**-1.1**
	comp=Z,9.0nm,0.4s						
PRU	**Pruhonice**	**3.07**	**269**	*e*SG	**Sb**	**16 20 28.1**	**+1.5**
	comp=Z,7.0nm,0.8s						
BRG	**Berggiesshubel**	**3.50**	**284**	PG	**Pg**	**16 20 00.5**	**+0.3**
BRG				SG	**Sg**	**16 20 43.4**	**-2.2**
	4.1nm,0.5s						
KHC	**Kasperske Hory**	**3.85**	**257**	*e*SG	**Sg**	**16 20 53.5**	**-3.4**
	comp=Z,5.2nm,0.6s						

TIF ***05*** *16:29:45.0, 41°.66N×46°.95E, h23km± 1km*
IDC ***05*** *16:29:44.9±0.7, 41°.50N×46°.62E, h0km, mb3.6/9, mb1 3.7/15, mb1mx3.6/67, mbtmp3.6/15, ML3.3/6, MS3.0/2, Ms1 3.0/2, ms1mx2.3/61, Error ellipse: s-maj=13.8km s-min=8.9km az=145.0*
AZER ***05*** *16:29:44.9±0.1, 41°.52N×46°.65E, h10km, ml3.6/28, Error ellipse: s-maj=0.7km s-min=0.4km az=228.0*
NSSP ***05*** *16:29:45.9, 41°.47N×46°.67E, h15km, Ms3.8*
MOS ***05*** *16:29:46.6±0.8, 41°.45N×46°.84E, h11km, mb4.2/5, Error ellipse: s-maj=5.8km s-min=3.7km az=99.3*
CSEM ***05*** *16:29:47.1±0.1, 41°.51N×46°.79E, h10km, ML3.6, Error ellipse: s-maj=3.0km s-min=2.7km az=69.0*
NEIC ***05*** *16:29:48.9±0.9, 41°.49N×46°.79E, h38km± 18km, mb4.2/2, Error ellipse: s-maj=18.1km s-min=8.6km az=178.0*
NNC ***05*** *16:30:01.1±4.9, 43°.64N×46°.41E, h0km, mb4.0, Error ellipse: s-maj=97.2km s-min=34.7km az=140.0*

ISC 05 16:29:46.8±0.8, 41°.51N±0°.01×46°.78E±0°.01, h14km±6km, n195, σ1°77/308, mb3.7/10, 53C-52D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKTA	**Zakatala**	**0.18**	**318**	P	**Pg**	**16 29 50.3**	**-0.8**
	SNR=1391						
ZKTA				⇑S	**Sg**	**16 29 53.2**	**-0.7**
SEKA	**Sheki**	**0.43**	**133**	PG	**Pg**	**16 29 55.1**	**-0.3**
SEKA	**Sheki**	**0.43**	**133**	Pg	**Pg**	**16 29 55.1**	**-0.3**
SEKA				⇑Sg	**Sb**	**16 30 02.9**	**+0.2**
SEKA	**Sheki**	**0.43**	**133**	Pg	**Pg**	**16 29 55.2**	**-0.3**
	SNR=306						
SEKA				⇑Sg	**Sb**	**16 30 02.9**	**+0.2**
DDFL	**Dedoflistskaro**	**0.50**	**263**	P	**Pb**	**16 29 58.6**	**+1.1**
DDFL				S	**Sb**	**16 30 07.1**	**+2.4**
DDFL	**Dedoflistskaro**	**0.50**	**263**	P	**Pb**	**16 29 58.6**	**+1.1**
DDFL				S	**Sb**	**16 30 07.1**	**+2.4**
KMKR	**Kumukh**	**0.67**	**21**	*e*PG	**Pg**	**16 29 59.7**	**-0.2**
KMKR				*e*S	**Sb**	**16 30 10.0**	**+0.3**
KMKR				pmax	pmax		
	comp=Z,827nm,0.3s						
KMKR	**Kumukh**	**0.67**	**21**	*e*Pg	**Pg**	**16 29 59.7**	**-0.2**
	comp=Z,827nm,0.3s						
KMKR				*e*Sg	**Sb**	**16 30 10.0**	**+0.3**
AKT	**Akhty**	**0.71**	**92**	⇓*i*PG	**Pg**	**16 30 00.2**	**-0.5**
AKT				*e*S	**Sb**	**16 30 10.7**	**-0.1**
AKT				pmax	pmax		
	comp=Z,391nm,0.6s						
AKT				smax	smax		
	comp=E,4μm,0.6s						
AKT				smax	smax		
	comp=N,4μm,0.5s						
AKT	**Akhty**	**0.71**	**92**	*i* Pg	**Pg**	**16 30 00.2**	**-0.5**
	comp=N,391nm,0.6s						
AKT				*e*Sg	**Sb**	**16 30 10.7**	**-0.1**
	comp=N,4μm,0.5s						
MNGR	**Mingechevir, A**	**0.77**	**162**	PG	**Pg**	**16 30 02.3**	**+0.6**
MNGR	**Mingechevir, A**	**0.77**	**162**	P	**Pg**	**16 30 02.3**	**+0.6**
	SNR=15						
MNGR	**Mingechevir, A**	**0.77**	**162**	P	**Pg**	**16 30 02.3**	**+0.6**
	SNR=15						
MNGR				⇓S	**Sn**	**16 30 15.3**	**+0.7**
GNBR	**Gunib**	**0.89**	**9**	*c* *i*PG	**Pg**	**16 30 03.9**	**-0.2**
GNBR				*e*S	**Sn**	**16 30 17.2**	**-0.6**
GNBR				pmax	pmax		
	comp=Z,984nm,0.6s						
GNBR				smax	smax		
	comp=E,4μm,0.9s						
GNBR	**Gunib**	**0.89**	**9**	*i* Pg	**Pg**	**16 30 03.9**	**-0.2**
	comp=E,984nm,0.6s						
GNBR				*e*Sg	**Sn**	**16 30 17.2**	**-0.6**
URKR	**Urkarakh**	**0.92**	**44**	⇓*i*PG	**Pb**	**16 30 05.0**	**+0.4**
URKR				*e*S	**Sn**	**16 30 18.5**	**0.0**
URKR	**Urkarakh**	**0.92**	**44**	*i* Pg	**Pb**	**16 30 05.0**	**+0.4**
URKR				*e*Sg	**Sn**	**16 30 18.5**	**0.0**
GANJ	**Ganja**	**0.93**	**202**	PG	**Pg**	**16 30 03.5**	**-1.2**
GANJ	**Ganja**	**0.93**	**202**	P	**Pg**	**16 30 03.6**	**-1.2**
	SNR=133						
GANJ				⇓S	**Sg**	**16 30 16.3**	**-0.6**
GANJ	**Ganja**	**0.93**	**202**	P	**Pg**	**16 30 03.6**	**-1.2**
	SNR=133						
GANJ				⇓S	**Sg**	**16 30 16.3**	**-0.6**
QBL	**Gabala**	**0.97**	**125**	⇑P	**Pg**	**16 30 05.6**	**0.0**
	SNR=9.4						
QBL	**Gabala**	**0.97**	**125**	⇑P	**Pg**	**16 30 05.6**	**0.0**
	SNR=9.4						
QBL				⇓S	**Sn**	**16 30 22.3**	**+2.5**
KSMR	**Kasumkent**	**1.01**	**84**	*e*PG	**Pn**	**16 30 07.0**	**+0.3**
KSMR				*e*S	**Sn**	**16 30 21.5**	**+0.6**
KSMR				pmax	pmax		
	comp=Z,1μm,0.2s						
KSMR	**Kasumkent**	**1.01**	**84**	*e*Pg	**Pn**	**16 30 07.0**	**+0.3**
	comp=Z,1μm,0.2s						
KSMR				*e*Sg	**Sn**	**16 30 21.5**	**+0.6**
XNZR	**Khunzakh**	**1.04**	**357**	⇑*i*PG	**Pg**	**16 30 06.8**	**-0.1**
XNZR				*e*S	**Sn**	**16 30 21.6**	**+0.1**
XNZR	**Khunzakh**	**1.04**	**357**	*i* Pg	**Pg**	**16 30 06.8**	**-0.1**
XNZR				*e*Sg	**Sn**	**16 30 21.6**	**+0.1**
XNQ	**Khinaliq**	**1.08**	**108**	⇓P	**Pg**	**16 30 07.2**	**-0.4**
	SNR=113						
XNQ	**Khinaliq**	**1.08**	**108**	⇓P	**Pg**	**16 30 07.2**	**-0.4**
	SNR=113						
XNQ				⇑S	**Sn**	**16 30 25.3**	**+2.7**
GDB	**GEDABAY**	**1.10**	**225**	P	**Pb**	**16 30 05.9**	**-1.9**
	SNR=232						
GDB				⇓S	**Sb**	**16 30 20.8**	**-1.3**
GDB	**GEDABAY**	**1.10**	**225**	P	**Pb**	**16 30 05.9**	**-1.9**
	SNR=232						
GDB				⇓S	**Sb**	**16 30 20.8**	**-1.3**
ARKR	**Arakani**	**1.11**	**8**	⇓*i*PG	**Pb**	**16 30 07.7**	**-0.1**
ARKR				*i* S	**Sn**	**16 30 23.7**	**+0.6**
ARKR				pmax	pmax		
	comp=Z,497nm,0.2s						
ARKR	**Arakani**	**1.11**	**8**	*i* Pg	**Pb**	**16 30 07.7**	**-0.1**
	comp=Z,497nm,0.2s						
ARKR				*i* Sg	**Sn**	**16 30 23.7**	**+0.6**
QSAR	**Qusar**	**1.11**	**89**	⇑P	**Pn**	**16 30 08.5**	**+0.5**
	SNR=7.0						
QSAR	**Qusar**	**1.11**	**89**	⇑P	**Pn**	**16 30 08.5**	**+0.5**
	SNR=7.0						
QSAR				⇑S	**Sn**	**16 30 25.8**	**+2.5**
QZX	**Qazax, Azerbai**	**1.15**	**248**	⇓P	**Pb**	**16 30 07.1**	**-1.5**
	SNR=636						
QZX				⇓S	**Sb**	**16 30 23.4**	**0.0**
QZX	**Qazax, Azerbai**	**1.15**	**248**	⇓P	**Pb**	**16 30 07.1**	**-1.5**
	SNR=636						
QZX				⇓S	**Sb**	**16 30 23.4**	**0.0**
SGKR	**Sergokala**	**1.16**	**34**	*e*PG	**Pn**	**16 30 09.5**	**+0.9**
SGKR				*e*S	**Sn**	**16 30 27.0**	**+2.7**
SGKR				pmax	pmax		
	comp=Z,979nm,0.2s						
SGKR	**Sergokala**	**1.16**	**34**	*e*Pg	**Pn**	**16 30 09.5**	**+0.9**
	comp=Z,979nm,0.2s						
SGKR				*e*Sg	**Sn**	**16 30 27.0**	**+2.7**
UNCR	**Uncukul**	**1.21**	**0**	⇓*i*PG	**Pb**	**16 30 09.7**	**+0.2**
UNCR				*e*S	**Sn**	**16 30 27.0**	**+1.4**
UNCR				pmax	pmax		
	comp=Z,596nm,0.5s						
UNCR	**Uncukul**	**1.21**	**0**	*i* Pg	**Pb**	**16 30 09.7**	**+0.2**
	comp=Z,596nm,0.5s						
UNCR				*e*Sg	**Sn**	**16 30 27.0**	**+1.4**
BTLR	**Botlikh**	**1.23**	**340**	⇑*i*PG	**Pn**	**16 30 09.7**	**0.0**
BTLR				*e*S	**Sg**	**16 30 26.7**	**+0.2**
BTLR				pmax	pmax		
	comp=Z,141nm,0.5s						
BTLR				pmax	pmax		
	comp=E,1μm,0.6s						
BTLR	**Botlikh**	**1.23**	**340**	*i* Pg	**Pn**	**16 30 09.7**	**0.0**
	comp=E,141nm,0.5s						
BTLR				*e*Sg	**Sg**	**16 30 26.7**	**+0.2**
DRN	**Derbent**	**1.27**	**65**	⇑*i*PG	**Pg**	**16 30 11.7**	**+0.4**
DRN				*e*S	**Sn**	**16 30 30.2**	**+3.2**
DRN				pmax	pmax		
	comp=Z,1μm,0.3s						
DRN				smax	smax		
	comp=N,2μm,0.4s						
DRN				smax	smax		
	comp=E,1μm,0.4s						
DRN				smax	smax		
	comp=N,2μm,0.5s						
DRN	**Derbent**	**1.27**	**65**	*i* Pg	**Pg**	**16 30 11.7**	**+0.4**
	comp=N,1μm,0.3s						
DRN				*e*Sg	**Sn**	**16 30 30.2**	**+3.2**
	comp=N,2μm,0.5s						
IML	**Ismayilli**	**1.28**	**124**	P	**Pn**	**16 30 10.4**	**+0.1**
	SNR=14						
IML	**Ismayilli**	**1.28**	**124**	P	**Pn**	**16 30 10.4**	**+0.1**
	SNR=14						
IML				⇑S	**Sn**	**16 30 31.3**	**+4.1**
BRDA	**Brd**	**1.28**	**166**	⇑P	**Pn**	**16 30 11.2**	**+1.0**
	SNR=16						
BRDA	**Brd**	**1.28**	**166**	⇑P	**Pn**	**16 30 11.2**	**+1.0**
	SNR=16						
BRDA				⇑S	**Sg**	**16 30 30.2**	**+2.1**
QUBA	**Quba, Azerbaij**	**1.30**	**96**	P	**Pg**	**16 30 12.3**	**+0.5**
	SNR=17						
QUBA	**Quba, Azerbaij**	**1.30**	**96**	P	**Pg**	**16 30 12.3**	**+0.5**
	SNR=17						
QUBA				⇑S	**Sn**	**16 30 32.3**	**+4.5**
MTKZ	**Martakert**	**1.30**	**179**	⇓*i*P	**Pn**	**16 30 10.4**	**-0.3**
MTKZ				⇓*i*S	**Sb**	**16 30 29.1**	**+1.3**
MTKZ	**Martakert**	**1.30**	**179**	⇓P	**Pn**	**16 30 10.4**	**-0.3**
MTKZ				S	**Sb**	**16 30 29.1**	**+1.3**
KRNR	**Karanay**	**1.32**	**4**	⇓*i*PG	**Pn**	**16 30 11.0**	**0.0**
KRNR				*e*S	**Sn**	**16 30 29.0**	**+0.5**
KRNR				pmax	pmax		
	comp=Z,233nm,0.2s						
KRNR	**Karanay**	**1.32**	**4**	*i* Pg	**Pn**	**16 30 11.0**	**0.0**
	comp=Z,233nm,0.2s						
KRNR				*e*Sg	**Sn**	**16 30 29.0**	**+0.5**
BUJR	**Buynaksk**	**1.34**	**10**	*i* PG	**Pg**	**16 30 12.5**	**-0.1**
BUJR				*i* S	**Sg**	**16 30 31.0**	**+0.9**
BUJR				pmax	pmax		
	comp=Z,271nm,0.2s						
BUJR	**Buynaksk**	**1.34**	**10**	*i* Pg	**Pg**	**16 30 12.5**	**-0.1**
	comp=Z,271nm,0.2s						
BUJR				*i* Sg	**Sg**	**16 30 31.0**	**+0.9**
ZRD	**Zardab**	**1.40**	**151**	⇑Pn	**Pb**	**16 30 13.2**	**+0.4**
	SNR=10						
ZRD	**Zardab**	**1.40**	**151**	⇑Pn	**Pb**	**16 30 13.2**	**+0.4**
	SNR=10						
ZRD				⇓Sn	**Sg**	**16 30 34.9**	**+2.8**
SEAG	**Tbilisi Sea**	**1.50**	**281**	P	**Pn**	**16 30 13.7**	**+0.2**
SEAG				S	**Sb**	**16 30 35.8**	**+2.2**
DBC	**Dubki**	**1.51**	**1**	⇓*i*PG	**Pb**	**16 30 15.0**	**+0.3**
DBC				*i* S	**Sg**	**16 30 36.3**	**+0.7**
DBC				pmax	pmax		
	comp=Z,70nm,0.3s						
DBC	**Dubki**	**1.51**	**1**	*i* Pg	**Pb**	**16 30 15.0**	**+0.3**
	comp=Z,70nm,0.3s						
DBC				*i* Sg	**Sg**	**16 30 36.3**	**+0.7**
DVE	**Vedeno**	**1.53**	**342**	*e*PG	**Pb**	**16 30 15.5**	**+0.5**
DVE				*e*S	**Sg**	**16 30 35.9**	**-0.2**
DVE	**Vedeno**	**1.53**	**342**	*e*Pg	**Pb**	**16 30 15.5**	**+0.5**
DVE				*e*Sg	**Sg**	**16 30 35.9**	**-0.2**
PQL	**Pirkuli**	**1.54**	**117**	⇓Pn	**Pb**	**16 30 15.3**	**0.0**
	SNR=32						
PQL	**Pirkuli**	**1.54**	**117**	⇓Pn	**Pb**	**16 30 15.3**	**0.0**
	SNR=32						
PQL				⇓Sn	**Sg**	**16 30 40.5**	**+3.9**
TBLG	**Delisi**	**1.55**	**279**	P	**Pn**	**16 30 14.1**	**+0.1**
TBLG				S	**Sb**	**16 30 36.7**	**+1.9**
TBLG	**Delisi**	**1.55**	**279**	*e*Pn	**Pn**	**16 30 13.6**	**-0.4**
TBLG				*e*Sn	**Sn**	**16 30 34.9**	**+0.9**
TBLG	**Delisi**	**1.55**	**279**	*e*PG	**Pn**	**16 30 14.1**	**+0.1**
TBLG				*e*S	**Sb**	**16 30 36.7**	**+1.9**
TBLG	**Delisi**	**1.55**	**279**	*e*Pn	**Pn**	**16 30 13.6**	**-0.4**
TBLG				*e*Sn	**Sn**	**16 30 34.9**	**+0.9**
TBLG				S	**Sb**	**16 30 36.7**	**+1.9**
MAK	**Makhachkala**	**1.55**	**20**	*e*PG	**Pb**	**16 30 16.2**	**-0.4**
MAK				*e*S	**Sg**	**16 30 36.8**	**+0.1**
MAK				pmax	pmax		
	comp=Z,191nm,0.6s						
MAK				smax	smax		
	comp=E,1μm,0.6s						
MAK	**Makhachkala**	**1.55**	**20**	*e*Pg	**Pg**	**16 30 16.2**	**-0.4**
	comp=E,191nm,0.6s						
MAK				*e*Sg	**Sg**	**16 30 36.8**	**+0.1**
KDMR	**Kurdemir**	**1.55**	**136**	⇓Pn	**Pn**	**16 30 15.2**	**+1.2**
KDMR				⇓Sn	**Sg**	**16 30 38.3**	**+1.5**
KDMR	**Kurdemir**	**1.55**	**136**	⇓Pn	**Pn**	**16 30 15.2**	**+1.2**
KDMR				⇓Sn	**Sg**	**16 30 38.3**	**+1.5**
DLMR	**Dylym**	**1.57**	**356**	⇓*e*PN	**Pb**	**16 30 16.0**	**+0.4**
DLMR				*e*S	**Sg**	**16 30 38.5**	**+1.2**
DLMR				pmax	pmax		
	comp=Z,267nm,0.2s						
DLMR	**Dylym**	**1.57**	**356**	*i* Pn	**Pb**	**16 30 16.0**	**+0.4**
	comp=Z,267nm,0.2s						
DLMR				*e*Sg	**Sg**	**16 30 38.5**	**+1.2**
SIZA	**Siyzn**	**1.65**	**104**	⇑Pn	**Pg**	**16 30 19.5**	**+1.0**
	SNR=8.5						
SIZA				⇓Sn	**Sg**	**16 30 43.0**	**+2.9**
DUS	**Dusheti**	**1.66**	**291**	P	**Pn**	**16 30 16.3**	**+0.7**
DUS				S	**Sb**	**16 30 39.1**	**+1.0**
DUS	**Dusheti**	**1.66**	**291**	*e*PN	**Pn**	**16 30 16.3**	**+0.7**
ATGJ	**Altiaghaj**	**1.75**	**111**	⇓Pn	**Pb**	**16 30 19.2**	**+0.4**
	SNR=25						
ATGJ	**Altiaghaj**	**1.75**	**111**	⇓Pn	**Pb**	**16 30 19.2**	**+0.4**
	SNR=25						
ATGJ				⇑Sn	**Sg**	**16 30 45.3**	**+2.1**
KZR	**Kazreti**	**1.78**	**267**	P	**Pn**	**16 30 15.6**	**-1.7**
KZR				S	**Sn**	**16 30 40.0**	**+0.2**
KZR	**Kazreti**	**1.78**	**267**	P	**Pn**	**16 30 15.6**	**-1.7**
KZR				S	**Sn**	**16 30 40.0**	**+0.2**
GROC	**Groznyy**	**1.85**	**337**	*e*PN	**Pb**	**16 30 21.6**	**+1.2**
GROC				*e*S	**Sg**	**16 30 47.5**	**+1.3**
GROC	**Groznyy**	**1.85**	**337**	*e*Sg	**Sg**	**16 30 47.5**	**+1.3**
GBS	**Qobustan**	**1.90**	**120**	⇓Pn	**Pb**	**16 30 21.3**	**-0.1**
	SNR=8.4						
GBS	**Qobustan**	**1.90**	**120**	⇓Pn	**Pb**	**16 30 21.3**	**-0.1**
	SNR=8.4						
GBS				⇑Sn	**Sg**	**16 30 51.5**	**+3.5**
GUDG	**Gudauri**	**1.97**	**300**	P	**Pn**	**16 30 21.6**	**+1.7**
GUDG				S	**Sb**	**16 30 47.6**	**+0.6**
GUDG	**Gudauri**	**1.97**	**300**	P	**Pn**	**16 30 21.6**	**+1.7**
GUDG				S	**Sb**	**16 30 47.6**	**+0.6**
GRS	**Goris**	**2.03**	**190**	⇑*i*P	**Pn**	**16 30 18.0**	**-2.8**
GRS				⇓*i*S	**Sn**	**16 30 45.0**	**-1.1**
GRS	**Goris**	**2.03**	**190**	⇑P	**Pn**	**16 30 18.0**	**-2.8**
GRS				S	**Sn**	**16 30 45.0**	**-1.1**
GNI	**Garni**	**2.06**	**229**	Pn	**Pn**	**16 30 22.4**	**+1.3**
	comp=Z,39nm,0.3s,baz=32,slow=4.8,SNR=97						
GNI				Sn	**Sb**	**16 30 50.3**	**+0.7**
	comp=Z,50nm,0.3s,baz=277,slow=7.6,SNR=4.8						
GNI	**Garni**	**2.06**	**229**	⇓*i*P	**Pn**	**16 30 22.4**	**+1.3**
GNI				⇑*i*S	**Sn**	**16 30 50.0**	**+3.3**
GNI	**Garni**	**2.06**	**229**	*e*Pn	**Pn**	**16 30 22.2**	**+1.1**
GNI	**Garni**	**2.06**	**229**	*d*PN	**Pn**	**16 30 22.3**	**+1.1**
SAAT	**Saatly**	**2.06**	**142**	⇑Sn	**Sn**	**16 30 48.4**	**+1.8**
SAAT	**Saatly**	**2.06**	**142**	⇑Sn	**Sn**	**16 30 48.4**	**+1.8**
VLKR	**Vladikavkaz**	**2.19**	**315**	*e*PN	**Pb**	**16 30 27.9**	**+1.6**
VLKR				*e*S	**Sg**	**16 30 57.9**	**+0.6**
VLKR	**Vladikavkaz**	**2.19**	**315**	*e*Pn	**Pb**	**16 30 27.9**	**+1.6**
LACR	**Lac**	**2.27**	**306**	*e*PN	**Pn**	**16 30 26.3**	**+2.3**
LACR				*e*S	**Sb**	**16 30 57.2**	**+1.6**
LACR	**Lac**	**2.27**	**306**	*e*Pn	**Pn**	**16 30 26.3**	**+2.3**
LACR				*e*Sn	**Sb**	**16 30 57.2**	**+1.6**
ALIB	**Äli-Bayra**	**2.29**	**132**	⇑Pn	**Pb**	**16 30 28.9**	**+1.0**
	SNR=7.8						
ALIB				⇑Sn	**Sb**	**16 30 58.3**	**+2.2**
SBZ	**Shahbuz**	**2.31**	**204**	⇑Pg	**Pn**	**16 30 25.1**	**+0.6**
SBZ				⇑Sg	**Sb**	**16 30 58.2**	**+1.5**
HYR	**Heyderabad**	**2.31**	**220**	⇑Pg	**Pn**	**16 30 27.2**	**+2.6**
HYR				⇑Sg	**Sb**	**16 30 58.6**	**+1.8**
GMRZ	**Gyumri**	**2.33**	**254**	*e*P	**Pn**	**16 30 27.0**	**+2.0**
GMRZ				S	**Sb**	**16 30 59.0**	**+1.5**
BGD	**Bogdanovka**	**2.41**	**265**	P	**Pn**	**16 30 27.0**	**+1.0**
BGD				S	**Sn**	**16 30 58.0**	**+2.6**
BGD	**Bogdanovka**	**2.41**	**265**	P	**Pn**	**16 30 27.0**	**+1.0**
BGD				S	**Sn**	**16 30 58.0**	**+2.6**
AKH	**Akhalkalaki**	**2.47**	**269**	P	**Pn**	**16 30 28.0**	**+1.1**
AKH				S	**Sn**	**16 31 00.2**	**+3.1**
AKH	**Akhalkalaki**	**2.47**	**269**	*e*Pn	**Pn**	**16 30 27.3**	**+0.4**
AKH	**Akhalkalaki**	**2.47**	**269**	*e*PN	**Pn**	**16 30 27.9**	**+1.1**
AKH				*e*S	**Sn**	**16 31 00.1**	**+3.1**
AKH	**Akhalkalaki**	**2.47**	**269**	*e*Pn	**Pn**	**16 30 27.3**	**+0.4**
AKH	**Akhalkalaki**	**2.47**	**269**	P	**Pn**	**16 30 28.0**	**+1.1**
AKH				*e*Sn	**Sn**	**16 31 00.1**	**+3.1**
ARNR	**Ardon**	**2.50**	**313**	*e*PN	**Pn**	**16 30 30.1**	**+3.1**
ARNR				*e*S	**Sb**	**16 31 03.8**	**+1.8**
NAX	**Nakhchivan**	**2.53**	**203**	PN	**Pn**	**16 30 29.1**	**+1.6**
NAX	**Nakhchivan**	**2.53**	**203**	Pn	**Pn**	**16 30 29.1**	**+1.6**
NAX	**Nakhchivan**	**2.53**	**203**	⇓Pg	**Pn**	**16 30 29.2**	**+1.6**
	SNR=13						
NAX				⇑Sg	**Sb**	**16 31 03.6**	**+0.6**
KORR	**Kora**	**2.56

BRTR pmax pmax
comp=Z,1.0nm,0.8s
AKTO Aktyubinsk 11.85 37 Pn **Pn 16 32 34.8 -0.6**
comp=Z,0.7nm,0.3s,baz=231,slow=10,SNR=12
AKTO LR LR 16 38 33.4
comp=Z,39nm,18.1s,baz=248,slow=44
AKTO Aktyubinsk 11.85 37 ⇑Pn **Pn 16 32 33.5 -1.9**
comp=Z,4.6nm,0.6s
AKTO ⇓Sn Sn 16 34 32.3 -15
comp=Z,6.1nm,0.8s
AKTO Aktyubinsk 11.85 37 P **Pn 16 32 33.5 -1.9**
AKTO pmax pmax
comp=Z,5.0nm,0.6s
AB31 Akbulak array 12.06 46 ⇓Pn **Pn 16 32 37.6 -0.5**
comp=Z,0.8nm,0.3s,baz=240,slow=14,SNR=29
AB31 ⇑Sn **Sn 16 34 44.3 -8.0**
comp=Z,3.1nm,0.6s,baz=246,slow=24,SNR=8.2
AB31 Akbulak array 12.06 46 P **Pn 16 32 37.6 -0.5**
AB31 pmax pmax
comp=Z,8.0nm,0.4s
AB31 Akbulak array 12.06 46 Pn **Pn 16 32 37.6 -0.5**
comp=Z,0.8nm,0.3s,SNR=29
AB31 Sn **Sn 16 34 44.3 -8.0**
comp=Z,3.1nm,0.6s,SNR=8.2
ABKAR Akbulak array 12.06 46 *e*Pn **Pn 16 32 37.5 -0.7**
ABKAR Akbulak array 12.06 46 *e*Pn **Pn 16 32 37.5 -0.7**
AKASG Malin Array Be 15.23 313 Pn **Pn 16 33 21.0 -0.3**
comp=Z,0.2nm,0.3s,baz=118,slow=12,SNR=2.9
AKASG Malin Array Be 15.23 313 *c*e**P** **P 16 33 25.8 -0.4**
AKASG pmax pmax
comp=Z,2.0nm,0.7s
BUR04 Bucovina Ar. S 16.52 299 *e*Pn **Pn 16 33 35.5 -2.6**
ARU Arti 16.78 23 Pn **P 16 33 42.7 -0.7**
comp=Z,0.0nm,0.3s,baz=263,slow=3.5,SNR=3.9
ARU Arti 16.78 23 *d i*P **Pn 16 33 42.6 +1.4**
ARU S **Sn 16 36 50.9 +3.6**
ARU pmax pmax
comp=Z,8.0nm,1.7s
KK31 Karatay Array 17.62 77 *e*Pn **Pn 16 33 51.9 +0.1**
KK31 Karatay Array 17.62 77 *e*P **Pn 16 33 51.9 +0.1**
KKAR Karatay Array 17.62 77 *e*Pn **Pn 16 33 51.9 +0.1**
KKAR Karatay Array 17.62 77 *e*P **Pn 16 33 51.9 +0.1**
SVE Sverdlovsk 17.75 26 *e*P **Pn 16 33 51.9 -1.5**
UZH Uzhgorod 18.66 301 *e*P **Pn 16 34 07.9 +3.4**
BRVK Borovoye 19.59 46 ⇑Pn **Pn 16 34 16.9 +1.2**
comp=Z,3.6nm,0.8s
BRVK Borovoye 19.59 46 *e*P **P 16 34 14.7 +0.3**
comp=Z,3.3nm,0.8s
BRVK Borovoye 19.59 46 *c*e*e*P **Pn 16 34 16.3 +0.6**
BVA0 Borovoye Array 19.63 46 ⇓Pn **Pn 16 34 17.3 +1.1**
comp=Z,2.0nm,0.6s,baz=247,slow=9.7,SNR=14
BVA0 ⇓Sn S 16 37 44.7 -11
comp=Z,4.3nm,1.4s,baz=240,slow=30,SNR=5.0
BVA0 Borovoye Array 19.63 46 P **Pn 16 34 17.3 +1.1**
BVA0 S S 16 37 44.7 -11
BVA0 pmax pmax
comp=Z,2.0nm,0.6s
BVA0 smax smax
comp=N,4.0nm,1.4s
BVAR Borovoye Array 19.63 46 P **Pn 16 34 16.8 +0.6**
comp=N,0.4nm,0.3s,baz=249,slow=9.9,SNR=11
AAK Ala-Archa 25.07 78 P Pn 16 34 27.5 -0.1
comp=N,0.7nm,0.3s,baz=90,slow=1.0,SNR=3.0
AAK Ala-Archa 20.57 78 ⇑*e*P Pn 16 34 27.8 +0.2
AAK pmax pmax
comp=Z,1.0nm,1.0s
AAK Ala-Archa 20.57 78 *e*P Pn 16 34 27.8 +0.2
comp=Z,1.0nm,1.0s
FINES FINESS Array B 23.57 335 P **P 16 34 55.9 -0.8**
comp=Z,0.7nm,0.4s,baz=140,slow=12,SNR=7.3
FINES FINESS Array B 23.57 335 *c*e**P** **P 16 34 55.5 -1.1**
FINES pmax pmax
comp=Z,1.0nm,0.3s
KURBB Kurchatov Arra 23.68 57 P **P 16 34 59.7 +1.8**
comp=Z,1.7nm,0.6s,baz=263,slow=10,SNR=14
KURK Kurchatov 23.76 56 *e*P **P 16 34 58.0 -0.6**
comp=Z,18nm,0.8s
KURK Kurchatov 23.76 56⇑*e*P **P 16 34 59.9 +1.3**
KURK pmax pmax
comp=Z,1.0nm,0.6s
GERES GERESS Array B 24.30 299 P **P 16 35 03.4 -0.5**
comp=Z,0.8nm,0.5s,baz=104,slow=9.7,SNR=6.2
CLL Collm 25.07 305 *e*(P) **P 16 35 12.0 +1.4**
MKAR Makanchi Array 25.87 66 P **P 16 35 18.4 +0.4**
comp=Z,0.4nm,0.4s,baz=267,slow=9.4,SNR=6.9
HFS Hagfors 27.56 324 P **P 16 35 31.6 -1.4**
comp=Z,1.9nm,0.9s,baz=110,slow=11,SNR=3.2
HFS Hagfors 27.56 324 P **P 16 35 31.6 -1.4**
HFS pmax pmax
comp=Z,1.0nm,0.7s
WMQ Urumqi 29.96 72 P **P 16 35 56.2 +1.5**
ARCES ARCESS Array B 30.21 345 P **P 16 35 55.3 -1.3**
comp=Z,1.3nm,0.8s,baz=161,slow=12,SNR=3.3
EKA Eskdalemuir Ar 35.11 311 P **P 16 36 38.6 -0.9**
comp=Z,0.3nm,0.4s,baz=94,slow=10.0,SNR=3.0
ES19 SONSECA Array 38.07 285 *e*P **P 16 37 03.4 -1.7**
JMIC Jan Mayen 40.19 335 LR LR 16 52 23.1
comp=Z,39nm,19.2s,baz=238,slow=34
CD2 Chengdu 46.43 84 P **P 16 38 09.9 -3.3**
CD2 pmax pmax
comp=Z,1.0nm,0.5s
HHC Hu-ho-hao-te 47.71 68 *e*P **P 16 38 23.5 +0.4**
TORD Torodi Ar. Bea 48.26 248 P **P 16 38 25.9 -1.6**
comp=Z,0.2nm,0.4s,baz=37,slow=9.8,SNR=2.7

IDC 05 16:46:08.9±3.3, 30°.30N×141°.24E, h0km, mb3.2/2, mb1 3.4/4, mb1mx3.1/72, mbtmp3.2/4, ML3.0/2, MS2.5/2, Ms1 2.5/2, ms1mx2.2/26, Error ellipse: s-maj=121.1km s-min=28.6km az=71.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**6.72**	**339**	Pn	Pn	16 47 47.8	-1.1
	0.2nm,0.3s,baz=157,slow=13,SNR=3.1						
JOW	**Kunigami**	**11.91**	**256**	LR	LR	16 53 01.8	
	comp=Z,48nm,18.1s,baz=76,slow=35						
KSRS	**Korea Array**	**13.16**	**306**	Pn	Pn	16 49 19.1	+2.1
	0.1nm,0.3s,baz=113,slow=11,SNR=2.5						
KLR	**Kul'dur**	**20.23**	**342**	LR	LR	16 58 59.5	
	comp=Z,4.7nm,18.1s,baz=39,slow=38						
H11N2	**WAKE ISLAND Hy**	**25.46**	**108**	T	T	17 19 15.5	
	baz=300,slow=75,SNR=17						
H11N1	**WAKE ISLAND Hy**	**25.47**	**108**	T	T	17 19 15.7	
	baz=300,slow=75,SNR=10						
H11N3	**WAKE ISLAND Hy**	**25.48**	**108**	T	T	17 19 16.8	
	baz=300,slow=75,SNR=17						
WRA	**Warramunga Arr**	**50.39**	**188**	P	P	16 55 07.8	-0.3
	0.3nm,0.7s,baz=2.5,slow=7.6,SNR=5.4						
ASAR	**Alice Springs**	**54.12**	**188**	P	P	16 55 35.6	-0.1
	0.1nm,0.5s,baz=4.4,slow=5.1,SNR=6.3						

IDC 05 17:00:24.0±3.8, 30°.73S×177°.71W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/48, mbtmp3.9/3, Error ellipse: s-maj=185.2km s-min=34.9km az=162.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**34.10**	**279**	P	P	17 07 11.2	+0.8
	1.1nm,0.5s,baz=86,slow=11,SNR=4.1						
ASAR	**Alice Springs**	**43.34**	**267**	P	P	17 08 27.8	-0.3
	0.3nm,0.3s,baz=105,slow=7.3,SNR=19						
WRA	**Warramunga Arr**	**44.36**	**272**	P	P	17 08 35.7	-0.6
	1.0nm,0.3s,baz=110,slow=8.1,SNR=44						
FINES	**FINESS Array B**	**145.54**	**340**	PKPbc	PKPdf	17 20 02.6	-0.7
	1.2nm,0.5s,baz=63,slow=3.8,SNR=11						
NOA	**NORSAR Array B**	**149.12**	**352**	PKPbc	PKPbc	17 20 13.2	-0.4
	1.4nm,0.8s,baz=4.7,slow=2.2,SNR=3.6						
HFS	**Hagfors**	**149.62**	**349**	PKPbc	PKPbc	17 20 14.3	-0.5
	1.6nm,0.9s,baz=64,slow=3.4,SNR=4.1						

MEX 05 17:09:53.7±0.6, 17°.12N×100°.31W, h22km±13km, MD3.5, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.09**	**151**	*i* P	Pb	17 09 56.7	-1.2
CAIG				*i* S	Sb	17 09 59.3	-1.3
ACX	**Acapulco**	**0.50**	**120**	*e*P	Pb	17 09 55.5	-8.3
ACX				*i* S	Sb	17 10 02.1	-8.7
MEIG	**Mezcala**	**1.03**	**39**	*e*P	Pn	17 10 09.8	-3.1
MEIG				*e*S	Sb	17 10 22.5	-3.7
ARIG	**Puente Sto Nin**	**1.15**	**358**	*e*P	Pn	17 10 11.8	-2.7
ARIG				*e*S	Sb	17 10 24.9	-4.5
PLIG	**Platanillo**	**1.48**	**31**	*e*P	Pn	17 10 15.2	-3.9
PLIG				*e*S	Sn	17 10 34.0	-3.8

KRSC 05 17:11:07.8±1.1, 55°.13N×164°.21E, h48km±23km, ML3.7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**1.01**	**85**	*e*P	Pn	17 11 26.2	+0.6
BKI				*e*S	Sn	17 11 38.8	+0.1
KBTR	**Krutoberegovo**	**1.34**	**325**	*e*P	Pn	17 11 29.8	-0.3
KBTR				*e*S	Sn	17 11 46.3	-0.5
MKZ	**Mys Kozlova**	**1.54**	**249**	*e*P	Pn	17 11 35.3	+2.5
MKZ				*e*S	Sn	17 11 53.6	+1.9
SMKR	**Semkarok**	**2.13**	**314**	*e*P	Pn	17 11 43.7	+2.8
SMKR				*e*S	Sn	17 12 08.4	+2.2
ZLN	**Zelenaya**	**2.13**	**296**	*e*P	Pn	17 11 44.4	+3.4
ZLN				*e*S	Sn	17 12 09.6	+3.3
BZGR	**Bezymyannyi-Gr**	**2.16**	**294**	*e*P	Pn	17 11 44.5	+3.1
BZGR				*e*S	Sn	17 12 09.6	+2.6
TUMD	**Tumrok D**	**2.19**	**274**	*e*P	Pn	17 11 44.8	+3.1
TUMD				*e*S	Sn	17 12 10.5	+2.9
CIRR	**Tsirk**	**2.20**	**298**	*e*P	Pn	17 11 44.3	+2.3
CIRR				*e*S	Sn	17 12 09.7	+1.6
LGNR	**Loginova**	**2.22**	**297**	*e*P	Pn	17 11 45.5	+3.2
LGNR				*e*S	Sn	17 12 11.7	+3.0
BDR	**Baidarnaya**	**2.23**	**312**	*e*P	Pn	17 11 45.2	+2.9
KZV	**Kizimen**	**2.25**	**271**	*e*P	Pn	17 11 45.7	+3.0
KZV				*e*S	Sn	17 12 12.2	+2.9
BZMR	**Bezymyannaya**	**2.27**	**293**	*e*P	Pn	17 11 46.1	+3.2
BZMR				*e*S	Sn	17 12 12.6	+2.9
BZWR	**Bezymyannyi-We**	**2.27**	**293**	*e*P	Pn	17 11 46.2	+3.2
BZWR				*e*S	Sn	17 12 13.0	+3.1
SRKR	**Sorokina**	**2.30**	**313**	*e*P	Pn	17 11 45.9	+2.6
SRKR				*e*S	Sn	17 12 12.4	+2.0
TUMR	**Tumrok**	**2.34**	**276**	*e*P	Pn	17 11 47.4	+3.6
TUMR				*e*S	Sn	17 12 15.0	+3.7
KRSR	**Krestovskiy**	**2.34**	**299**	*e*P	Pn	17 11 46.2	+2.4
KRSR				*e*S	Sn	17 12 13.0	+1.6
KLY	**Klyuchi**	**2.34**	**302**	*e*P	Pn	17 11 45.3	+1.6
KLY				*e*S	Sn	17 12 12.7	+1.5
KIRR	**Kirishev**	**2.35**	**292**	*e*P	Pn	17 11 47.6	+3.6
KIRR				*e*S	Sn	17 12 15.1	+3.4
KMNR	**Kamenistaya**	**2.35**	**287**	*e*P	Pn	17 11 47.6	+3.6
KMNR				*e*S	Sn	17 12 15.5	+3.8
KPT	**Kopyto**	**2.42**	**292**	*e*P	Pn	17 11 48.6	+3.7
KPT				*e*S	Sn	17 12 16.9	+3.6
KOZ	**Kozyrevsk**	**2.63**	**293**	*e*P	Pn	17 11 52.1	+4.3
KOZ				*e*S	Sn	17 12 22.9	+4.4
SPN	**Mys Shipunski**	**3.19**	**232**	*e*P	Pn	17 11 58.5	+3.0
SPN				*e*S	Sn	17 12 33.7	+1.4
NLC	**Nalytchevo**	**3.47**	**238**	*e*S	Sn	17 12 43.0	+4.1
SDLR	**Sedlovina**	**3.63**	**242**	*e*P	Pn	17 12 06.2	+4.6
SDLR				*e*S	Sn	17 12 46.4	+3.1
KRER	**Koryakskii**	**3.69**	**243**	*e*P	Pn	17 12 06.9	+4.4
UGLR	**Uglovaya**	**3.70**	**241**	*e*P	Pn	17 12 06.9	+4.3
UGLR				*e*S	Sn	17 12 48.6	+3.7
KRX	**Arik**	**3.71**	**244**	*e*S	Sn	17 12 49.8	+4.6
AVH	**Avacha**	**3.72**	**242**	*e*P	Pn	17 12 07.9	+5.2
AVH				*e*S	Sn	17 12 49.5	+4.3
PET	**Petropavlovsk**	**3.89**	**240**	*e*P	Pn	17 12 09.4	+4.4
PET				*e*S	Sn	17 12 52.7	+3.3
GNL	**Ganaly**	**3.93**	**251**	*e*P	Pn	17 12 10.5	+4.8
RUS	**Russkaya**	**4.32**	**234**	*e*P	Pn	17 12 14.7	+3.8
RUS				*e*S	Sn	17 13 01.7	+1.7
ASAK	**Asacha**	**4.64**	**236**	*e*P	Pn	17 12 20.6	+5.2
KDTR	**Khodutka, Kamc**	**4.95**	**230**	*e*P	Pn	17 12 23.2	+3.7

NIED ***05*** *17:21:00, 37°.40N×142°.00E, h8km, Mw3.3 Best double couple: M₀1.07000×10¹⁴ NP1:φ₀244.00000°, δ36.00000°, λ-71.00000°. NP2:φ₀41.00000°, δ57.00000°, λ-103.00000°.*

JMA 05 17:21:15.3±0.1, 37°.41N×141°.96E, h17km±2km, M3.5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.87**	**267**	P	Pb	17 21 31.6	-0.3
JFK				*e*S	Sb	17 21 43.0	-0.2
ONAJ	**Iwakimizuishiy**	**0.98**	**252**	P	Pb	17 21 33.6	-0.2
ONAJ				*e*S	Sb	17 21 46.6	+0.2
JMM	**Marumori**	**1.03**	**297**	P	Pb	17 21 34.1	-0.6
JMM				*e*S	Sb	17 21 47.4	-0.6
JIO	**Ouri**	**1.15**	**335**	P	Pn	17 21 36.0	-0.6
JIO				S	Sb	17 21 50.2	-1.1
JFT	**Otama**	**1.30**	**275**	P	Pb	17 21 39.1	-0.1
JFT				S	Sn	17 21 55.6	0.0
JHO	**Hitachi**	**1.37**	**235**	P	Pn	17 21 39.2	-0.4
JHO				S	Sn	17 21 55.8	-1.6
JOU	**Okura**	**1.40**	**313**	P	Pb	17 21 40.7	-0.3
JOU				S	Sb	17 21 58.8	+0.2
JMK	**Ichinoseki**	**1.65**	**339**	P	Pn	17 21 43.9	+0.5
JMK				*e*S	Sn	17 22 03.9	-0.3
JYS	**Shirataka**	**1.71**	**299**	P	Pb	17 21 45.5	-0.7
JYS				S	Sb	17 22 07.7	+0.3
JFY	**Yanaizu**	**1.80**	**271**	P	Pn	17 21 46.6	+1.1
JFY				S	Sb	17 22 09.8	-0.2

ISCJB ***05*** *17:30:00.8±0.5, 33°.33N±0°.02×35°.44E±0°.04, h7km±5km, Error ellipse: s-maj=6.5km s-min=2.9km az=28.2*
GII ***05*** *17:30:00.7±0.0, 33°.28N×35°.44E, h2km, MD1.6/2*
CSEM ***05*** *17:30:02.2, 33°.32N×35°.48E, h0km, ML2.7*
GRAL ***05*** *17:30:02.2±0.2, 33°.32N×35°.48E, h0km±41km, MD2.7*

ISC 05 17:30:00.8±0.9, 33°.33N±0°.03×35°.47E±0°.04, h14km±7km, n21, σ0°.38/37, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSDI	**Kefar Szold**	**0.21**	**131**	Pg	**Pg**	**17 30 05.5**	**+0.1**
KSDI				Sg	**Sb**	**17 30 09.5**	**-0.7**
SHBL	**Chebaa**	**0.23**	**86**	*e*P	**Pg**	**17 30 06.2**	**+0.3**
SHBL				*e*S	**Sg**	**17 30 09.1**	**-0.2**
SHBL	**Chebaa**	**0.23**	**86**	*e*P	**Pg**	**17 30 06.2**	**+0.3**
SHBL				*e*S	**Sg**	**17 30 09.1**	**-0.2**
QRWL	**Qaraoun**	**0.28**	**39**	*e*P	**Pb**	**17 30 07.2**	**-0.5**
QRWL				*e*S	**Sg**	**17 30 10.9**	**+0.2**
QRWL	**Qaraoun**	**0.28**	**39**	*e*P	**Pb**	**17 30 07.2**	**-0.5**
QRWL				*e*S	**Sg**	**17 30 10.9**	**+0.2**
MMA0B	**Mount Meron ar**	**0.32**	**190**	Pg	**Pg**	**17 30 06.8**	**-0.6**
MMA0B				Sg	**Sg**	**17 30 12.0**	**+0.1**
RCY	**Rachaya**	**0.35**	**62**	*e*P	**Pb**	**17 30 08.3**	**-0.5**
RCY				*e*S	**Sg**	**17 30 12.9**	**+0.2**
HNTI	**Hanita**	**0.35**	**225**	Pg	**Pg**	**17 30 07.3**	**-0.6**
HNTI				Sg	**Sg**	**17 30 12.7**	**0.0**
DQRL	**Deir Qamar**	**0.38**	**13**	*e*P	**Pb**	**17 30 09.1**	**-0.4**
DQRL				*e*S	**Sg**	**17 30 14.3**	**+0.5**
DQRL	**Deir Qamar**	**0.38**	**13**	*e*P	**Pb**	**17 30 09.1**	**-0.4**
DQRL				*e*S	**Sg**	**17 30 14.3**	**+0.5**
KSHT	**Keshet**	**0.45**	**141**	Pg	**Pb**	**17 30 10.4**	**-0.2**
BHL	**Bhannes**	**0.59**	**15**	*e*P	**Pb**	**17 30 12.9**	**-0.1**
BHL	**Bhannes**	**0.59**	**15**	*e*P	**Pb**	**17 30 12.9**	**-0.1**
BLGI	**Bet Lehem HaGe**	**0.64**	**202**	Pg	**Pg**	**17 30 13.3**	**0.0**
BLGI				Sg	**Sg**	**17 30 22.3**	**+0.5**
OFRI	**'Ofer**	**0.82**	**210**	Pg	**Pg**	**17 30 16.4**	**-0.2**
OFRI				Sg	**Sb**	**17 30 28.4**	**+0.7**
MMLI	**Mount Malkishu**	**0.89**	**183**	Pg	**Pg**	**17 30 17.8**	**-0.2**
MMLI				Sg	**Sb**	**17 30 30.1**	**+0.3**
HWQ	**Hawqa**	**1.02**	**23**	*e*P	**Pn**	**17 30 20.8**	**-0.1**
HMDT	**Nahal Hemdat**	**1.08**	**177**	Pg	**Pb**	**17 30 21.2**	**0.0**
HMDT				Sg	**Sn**	**17 30 36.4**	**+0.2**
SLTI	**Sal'it**	**1.15**	**199**	Pg	**Pb**	**17 30 22.3**	**-0.1**
SLTI				Sg	**Sn**	**17 30 38.3**	**+0.3**
DSI	**Dead Sea**	**1.76**	**183**	Pn	**Pn**	**17 30 30.7**	**-0.1**
DSI				Sn	**Sb**	**17 30 55.4**	**+0.7**
AMAZ	**Amatzia**	**1.85**	**195**	Sn	**Sb**	**17 30 57.7**	**+0.2**

NIED ***05*** *17:39:00, 40°.10N×142°.50E, h41km, Mw3.7 Best double couple: M₀4.41000×10¹⁴ NP1:φ₀170.00000°, δ24.00000°, λ57.00000°. NP2:φ₀26.00000°, δ70.00000°, λ104.00000°.*
ISCJB ***05*** *17:39:24.1±1.3, 40°.18N±0°.05×142°.52E±0°.08, h28km±6km, mb3.8/5, MS3.9/2, Error ellipse: s-maj=10.7km s-min=8.1km az=0.9*
JMA ***05*** *17:39:25.4±0.1, 40°.14N×142°.46E, h34km±1km, M4.0*
IDC ***05*** *17:39:28.9±1.9, 40°.64N×141°.24E, h0km, mb3.9/5, mb1 3.8/7, mb1mx3.5/66, mbtmp3.8/7, ML3.4/2, MS2.8/4, Ms1 2.8/4, ms1mx2.5/67, Error ellipse: s-maj=47.0km s-min=23.8km az=84.0*

ISC 05 17:39:26.9±1.6, 40°.12N±0°.04×142°.33E±0°.08, h29km±10km, n25, σ1°.62/24, mb3.8/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.40**	**243**	P	**Pb**	**17 39 35.9**	**+0.1**
JTH				S	**Sn**	**17 39 43.6**	**+0.3**
JANG	**Nango**	**0.67**	**292**	P	**Pb**	**17 39 39.4**	**-0.8**
JANG				S	**Sb**	**17 39 49.1**	**-0.1**
MIYJ	**Miyakonagasawa**	**0.67**	**216**	P	**Pb**	**17 39 39.2**	**-0.9**
MIYJ				S	**Sb**	**17 39 49.1**	**-0.1**
JKZ	**Kuzumaki**	**0.78**	**260**	P	**Pb**	**17 39 41.6**	**-0.4**
JKZ				S	**Sb**	**17 39 53.0**	**+0.7**
JOM	**Ohasama**	**1.03**	**231**	P	Pn	**17 39 45.4**	**0.0**
JOM				*e*S	**Sn**	**17 40 00.8**	**+2.0**
OFUJ	**Ofunato**	**1.16**	**206**	P	**Pn**	**17 39 46.5**	**-0.7**
JTM	**Tenmabayashi**	**1.17**	**305**	P	**Pn**	**17 39 46.8**	**-0.5**
JTM				S	**Sn**	**17 40 02.8**	**+0.5**
JAH	**Hinai**	**1.30**	**273**	P	**Pn**	**17 39 49.5**	**+0.4**
JAH				S	**Sb**	**17 40 07.5**	**+0.5**
ASAJ	**Asahikawa**	**4.00**	**3**	Pn	**Pn**	**17 40 25.7**	**-0.4**
	2.3nm,0.3s,baz=226,slow=9.9,SNR=17						
ASAJ				Sn	**Sn**	**17 41 16.5**	**+4.6**
	1.2nm,0.3s,baz=351,slow=19,SNR=2.9						
ASAJ				LR	LR	17 42 22.6	
	comp=Z,76nm,18.1s,baz=139,slow=48						
MAT	**Matsushiro**	**4.83**	**224**	P	**Pn**	**17 40 40.0**	**+2.4**
MAT				*e*S	**Sn**	**17 41 32.3**	**-0.2**
MJAR	**Matsushiro Arr**	**4.83**	**223**	Pn	**Pn**	**17 40 40.0**	**+2.4**
	1.3nm,0.3s,baz=31,slow=13,SNR=27						
MJAR				LR	LR	17 42 47.8	
	comp=Z,54nm,20.8s,baz=55,slow=42						
KSRS	**Korea Array**	**11.56**	**261**	LR	LR	17 46 05.5	
	comp=Z,35nm,20.7s,baz=55,slow=36						
H11N2	**WAKE ISLAND Hy**	**29.27**	**127**	T	T	18 16 06.3	
	baz=319,slow=75,SNR=59						
H11N1	**WAKE ISLAND Hy**	**29.27**	**127**	T	T	18 16 15.8	
	baz=319,slow=75,SNR=55						
H11N3	**WAKE ISLAND Hy**	**29.28**	**127**	T	T	18 16 20.6	
	baz=319,slow=75,SNR=38						
H11S1	**WAKE ISLAND Hy**	**30.08**	**129**	T	T	18 17 21.1	
	baz=321,slow=76,SNR=15						
H11S3	**WAKE ISLAND Hy**	**30.08**	**129**	T	T	18 17 19.4	
	baz=321,slow=76,SNR=12						
H11S2	**WAKE ISLAND Hy**	**30.10**	**129**	T	T	18 17 20.2	
	baz=321,slow=76,SNR=20						
ZALV	**Zalesovo Beam**	**40.43**	**310**	P	**P**	**17 47 00.4**	**-1.9**
	0.7nm,0.3s,baz=96,slow=9.0,SNR=4.4						
MKAR	**Makanchi Array**	**43.16**	**300**	P	**P**	**17 47 24.7**	**-0.1**
	0.7nm,0.5s,baz=84,slow=9.2,SNR=2.9						
KURBB	**Kurchatov Arra**	**44.73**	**306**	P	**P**	**17 47 35.0**	**-2.3**
	1.6nm,0.5s,baz=81,slow=8.8,SNR=9.9						
BVAR	**Borovoye Array**	**49.07**	**311**	P	**P**	**17 48 09.2**	**-1.9**
	1.1nm,0.4s,baz=73,slow=8.5,SNR=6.7						
WRA	**Warramunga Arr**	**60.22**	**189**	P	P	17 49 41.9	+10
	0.2nm,0.5s,baz=5.8,slow=7.2,SNR=4.8						
GEYT	**Alibeck**	**63.00**	**298**	LR	LR	18 17 16.2	
	comp=Z,45nm,20.4s,baz=160,slow=37						
PPT	**Papeete**	**85.39**	**117**	LR	LR	18 31 36.7	
	comp=Z,88nm,18.1s,baz=176,slow=36						

IDC ***05*** *17:43:11.0±2.7, 36°.14N×70°.28E, h170km±24km, mb3.4/12, mb1 3.5/18, mb1mx3.2/69, mbtmp4.0/18, Error ellipse: s-maj=20.2km s-min=14.1km az=5.0*
ISCJB ***05*** *17:43:14.1±0.3, 36°.48N±0°.03×70°.33E±0°.04, h204km, mb3.8/18, Error ellipse: s-maj=4.5km s-min=3.3km az=158.4*
NNC ***05*** *17:43:15.5±4.6, 36°.99N×69°.76E, h0km, mb4.3, mpv3.9, Error ellipse: s-maj=36.4km s-min=26.9km az=171.0*
NEIC ***05*** *17:43:15.2±0.5, 36°.56N×70°.33E, h191km±6km, mb4.2/12, Error ellipse: s-maj=7.6km s-min=5.7km az=142.0*

ISC 05 17:43:14.9±0.5, 36°.47N±0°.05×70°.33E±0°.05, h204km, n78, σ1°.78/90, mb3.7/18, 5C-10D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.19**	**209**	*e*Pn	**Pn**	**17 43 56.5**	**+0.5**
KBL				*e*Sn	**S**	**17 44 26.8**	**-0.6**
CEP	**Cherat**	**2.94**	**153**	⇓P	**Pn**	**17 44 05.2**	**+1.0**
CEP				S	**S**	**17 44 42.0**	**-0.1**
CHCP	**Chirah Chowk**	**3.70**	**139**	⇓P	**Pn**	**17 44 14.5**	**+1.4**
NIL	**Nilore**	**3.70**	**139**	*e*Pn	**Pn**	**17 44 14.5**	**+1.4**
NIL				*e*Sn	**S**	**17 44 52.5**	**-5.8**
THW	**Thamme Wali**	**3.85**	**162**	⇓P	**Pn**	**17 44 15.7**	**+0.7**
SFK	**Sufi-Kurgan**	**4.33**	**34**	⇓P	**Pn**	**17 44 21.5**	**+0.5**
	5.4nm,0.2s						
SFK				⇑S	**S**	**17 45 11.6**	**-1.1**
	92nm,0.6s						
SARP	**Sargodha**	**4.94**	**156**	P	**Pn**	**17 44 29.7**	**+1.1**
THN	**Thein Dam**	**6.00**	**131**	*e*P	**Pn**	**17 44 40.8**	**-1.4**
THN				*e*S	**S**	**17 45 46.0**	**-5.0**
AML	**Almayashu**	**6.22**	**24**	P	**Pn**	**17 44 45.3**	**-0.1**
	SNR=79						
MNAS	**Manas**	**6.24**	**15**	⇓P	**Pn**	**17 44 45.3**	**0.0**
	3.9nm,0.3s						
MNAS				⇓S	**S**	**17 45 53.1**	**-3.7**
	122nm,0.8s						
UCH	**Uchtor**	**6.60**	**28**	P	**Pn**	**17 44 50.2**	**0.0**
	SNR=22						
KK31	**Karatay Array**	**6.63**	**1**	⇑P	**Pn**	**17 44 49.8**	**-0.4**
	2.2nm,0.2s,baz=183,slow=14,SNR=137						
KK31				⇓S	**S**	**17 46 01.0**	**-4.7**
	6.7nm,0.4s,baz=192,slow=26,SNR=7.8						
KK31	**Karatay Array**	**6.63**	**1**	*e*Pn	**Pn**	**17 44 49.7**	**-0.5**
KK31				*e*Sn	S	17 45 56.5	-9.2
KKAR	**Karatay Array**	**6.63**	**1**	*e*Pn	**Pn**	**17

KURBB **Kurchatov Arra** 15.33 20 P Pn 17 46 40.4 -0.3
0.1nm,0.3s,baz=212,slow=10.0,SNR=13
KURK **Kurchatov** 15.44 20 eP Pn 17 46 41.1 -0.8
2.8nm,0.6s
PKIN **Phulchoki** 15.54 121 eP P 17 46 45.0 +1.3
53nm,0.4s
GUN **Gumba** 15.67 119 eP P 17 46 45.1 -0.2
45nm,0.4s
JIRN **Jiri** 16.04 119 eP Pn 17 46 50.1 +0.2
134nm,0.5s
AKTO **Aktyubinsk** 16.54 331 P P 17 46 54.5 +0.2
0.5nm,0.3s,baz=124,slow=6.5,SNR=6.6
BVAR **Borovoye Array** 16.55 0 P Pn 17 46 56.1 +0.8
0.6nm,0.3s,baz=168,slow=8.4,SNR=10
BRVK **Borovoye** 16.59 360 eP P 17 46 55.7 +1.0
3.6nm,0.6s
RAMN **Ramite** 16.77 120 eP P 17 46 57.9 +0.7
49nm,0.5s
ODAN **Odare** 17.38 119 eP Pn 17 47 05.9 +0.3
33nm,0.6s
LSA **Lhasa** 18.69 105 eP P 17 47 19.8 +1.4
3.8nm,0.6s
ZAA0 **Zalesovo Array** 20.17 25 eP P 17 47 33.6 +0.2
6.2nm,0.5s
ZALV **Zalesovo Beam** 20.17 25 P P 17 47 34.2 +0.7
5.4nm,0.3s,baz=212,slow=11,SNR=44
ZALV **Zalesovo Beam** 20.17 25 eP P 17 47 33.7 +0.2
AKH **Akhalkalaki** 21.41 292 eP P 17 47 49.1 +2.2
7.4nm,1.3s
ARU **Arti** 21.49 342 P P 17 47 50.4 +3.1
2.6nm,0.4s,baz=144,slow=5.5,SNR=5.2
ARU **Arti** 21.49 342 eP P 17 47 49.4 +2.1
4.1nm,0.5s
RAYN **Ar Rayn** 24.99 246 eP P 17 48 21.8 +1.7
11nm,1.8s
SONM **Songino Array** 28.80 55 P P 17 48 56.4 +2.6
0.4nm,0.4s,baz=263,slow=9.4,SNR=3.0
FIA1 **FINESS Array S** 37.21 326 eP P 17 50 07.0 +0.8
35nm,2.0s
FINES **FINESS Array B** 37.21 326 P P 17 50 07.7 +1.5
1.5nm,0.6s,baz=121,slow=11,SNR=9.9
LVZ **Lovozero** 37.29 339 eP P 17 50 08.6 +1.7
59nm,1.3s
ARCES **ARCESS Array B** 40.97 338 P P 17 50 38.8 +1.5
1.8nm,0.5s,baz=108,slow=8.1,SNR=16
HFS **Hagfors** 42.76 322 P P 17 50 53.0 +1.2
1.0nm,0.4s,baz=112,slow=11,SNR=7.7
NC405 **NORSAR Array S** 43.84 323 eP P 17 51 00.7 +0.2
NC303 **NORSAR Array S** 44.02 323 eP P 17 51 03.1 +1.2
NB201 **NORSAR Array S** 44.04 323 eP P 17 51 01.9 -0.2
NB2 **NORSAR Subarra** 44.08 323 P P 17 51 03.0 +0.6
comp=Z,0.4nm,0.5s,baz=102,slow=7.9
NOA **NORSAR Array B** 44.08 323 P P 17 51 03.5 +1.1
comp=Z,1.1nm,0.7s,baz=103,slow=7.7,SNR=4.2
YAK **Yakutsk** 44.30 36 eP P 17 51 05.4 +1.4
comp=Z,6.6nm,0.8s
NC204 **NORSAR Array S** 44.32 323 eP P 17 51 05.0 +0.7
TIXI **Tiksi** 46.00 22 eP P 17 51 18.0 +0.7
comp=Z,1.8nm,0.7s
SPITS **Spitsbergen Ar** 47.40 347 P P 17 51 30.0 +1.9
comp=Z,1.1nm,0.4s,baz=96,slow=8.0,SNR=6.5
TORD **Torodi Ar. Bea** 65.18 268 P P 17 53 33.6 -0.9
comp=Z,0.2nm,0.4s,baz=50,slow=6.1,SNR=7.2
PPLA **Purkeypile** 75.29 19 eP P 17 54 35.8 +0.6
comp=Z,17nm,1.6s
YKA **Yellowknife Ar** 81.30 2 P P 17 55 08.8 +0.9
comp=Z,0.3nm,0.4s,baz=350,slow=4.9,SNR=5.6
WRA **Warramunga Arr** 82.43 121 P P 17 55 13.5 -1.0
comp=Z,0.3nm,0.7s,baz=329,slow=5.0,SNR=5.5
ASAR **Alice Springs** 84.68 124 P P 17 55 24.8 -1.1
comp=Z,0.3nm,0.6s,baz=315,slow=4.9,SNR=5.7
SVTR **Two Rivers Sch** 95.71 8 eP P 17 56 14.7 -2.6

*TAP **05** 17:44:21.8, 23°.96N×122°.69E, h34km±1km, ML2.9, D*
*JMA **05** 17:44:21.3±0.1, 23°.94N×122°.68E, h39km, M2.5*
ISC 05 17:44:19.3±1.2, 23°.91N±0°.03×122°.70E±0°.02, h16km±9km, n86, σ0s92/124, 1C-2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.58**	**22**	P	**Pn**	**17 44 32.7**	**-0.1**
JYNG				S	**Sn**	**17 44 40.7**	**-1.3**
YOJ	**Yonaguni jima**	**0.62**	**27**	⇓P	**Pn**	**17 44 33.6**	**+0.3**
YOJ	baz=28			S	**Sn**	**17 44 41.9**	**-1.0**
YOJ	**Yonaguni jima**	**0.62**	**27**	P	**Pn**	**17 44 33.5**	**+0.2**
YOJ				S	**Sn**	**17 44 41.5**	**-1.4**
EOS1	**EOS1**	**0.82**	**321**	eP	**Pn**	**17 44 37.1**	**+1.0**
EOS1	baz=318			eS	**Sn**	**17 44 48.8**	**+0.9**
ENLB	**Shoufeng**	**1.01**	**270**	eP	**Pg**	**17 44 39.0**	**+0.2**
ENLB	baz=257			eS	**Sg**	**17 44 52.2**	**+0.3**
NANB	**Nanao**	**1.01**	**301**	P	**Pn**	**17 44 39.4**	**+0.7**
ENA	**Nanau**	**1.02**	**301**	eP	**Pn**	**17 44 39.3**	**+0.4**
HATJ	**Hateruma jima**	**1.02**	**82**	P	**Pn**	**17 44 39.8**	**+1.0**
HATJ				S	**Sn**	**17 44 53.2**	**+0.4**
TWD	**Chiawan**	**1.02**	**280**	eP	**Pb**	**17 44 38.7**	**+0.1**
IRIF	**Iriomote-Funau**	**1.03**	**66**	P	**Pn**	**17 44 39.9**	**+0.9**
IRIF				S	**Sn**	**17 44 53.6**	**+0.5**
TWC	**Suao**	**1.04**	**312**	eP	**Pn**	**17 44 39.6**	**+0.4**
TWC	baz=310			eS	**Sn**	**17 44 53.1**	**-0.3**
NACB	**Ninganchiao**	**1.04**	**285**	eP	**Pg**	**17 44 39.4**	**-0.1**
ESL	**Shilin**	**1.17**	**266**	eP	**Pn**	**17 44 40.0**	**-0.8**
EGFH	**Guangfu**	**1.19**	**259**	P	**Pn**	**17 44 41.8**	**+0.6**
EGFH	baz=245			S	**Sb**	**17 44 56.5**	**-0.1**
JKRS	**Kuro-shima**	**1.24**	**74**	P	**Pb**	**17 44 43.0**	**+0.8**
JKRS				S	**Sn**	**17 44 59.0**	**+0.8**
TWE	**Neicheng**	**1.24**	**311**	eP	**Pg**	**17 44 43.3**	**+0.1**
HGSD	**Ruisui**	**1.24**	**251**	eP	**Pn**	**17 44 42.0**	**+0.1**
HGSD	baz=248			eS	**Sb**	**17 44 56.9**	**-1.2**
ENTT	**Nioudou**	**1.27**	**305**	P	**Pg**	**17 44 43.7**	**0.0**
ENTT	baz=291			S	**Sg**	**17 44 59.7**	**-0.5**
NNSB	**Datong**	**1.31**	**293**	eP	**Pb**	**17 44 43.8**	**+0.3**
NNSB	baz=282			eS	**Sb**	**17 44 59.8**	**-0.4**
NNSH	**Datong**	**1.31**	**293**	eP	**Pb**	**17 44 44.0**	**+0.4**
NNSH	baz=282			eS	**Sb**	**17 44 59.9**	**-0.3**
NNS	**Nan Shan**	**1.32**	**294**	eP	**Pb**	**17 44 43.6**	**-0.1**
TIPB	**Shuangxi**	**1.32**	**323**	eP	**Pn**	**17 44 42.8**	**-0.3**
EHY	**Hungye**	**1.33**	**253**	P	**Pn**	**17 44 43.7**	**+0.6**
EHY	baz=250			S	**Sn**	**17 45 00.1**	**-0.3**
YULB	**Yu-li**	**1.39**	**248**	⇓P	**Pn**	**17 44 44.7**	**+0.8**
YULB	baz=237			eS	**Sn**	**17 45 01.6**	**-0.3**
JIJ	**Ishigaki jima**	**1.39**	**71**	P	**Pn**	**17 44 44.5**	**+0.5**
JIJ				S	**Sn**	**17 45 01.3**	**-0.7**
NWLT	**Wulai**	**1.39**	**309**	eP	**Pg**	**17 44 46.2**	**+0.1**
TWF1	**Yuli**	**1.40**	**247**	eP	**Pn**	**17 44 45.0**	**+0.9**
TWF1	baz=235			eS	**Sn**	**17 45 01.6**	**-0.7**
CHGB	**Renai**	**1.41**	**276**	eP	**Pb**	**17 44 45.4**	**+0.2**
YHNB	**Yeheng**	**1.43**	**302**	P	**Pg**	**17 44 46.0**	**-0.8**
YHNB	baz=301			eS	**Sn**	**17 45 02.7**	**-0.3**
NWF	**Wu-fen Shan**	**1.43**	**324**	eP	**Pb**	**17 44 45.4**	**-0.1**
NWF	baz=324			eS	**Sn**	**17 45 02.0**	**-1.0**
WFSB	**Wu-fen Shan**	**1.43**	**324**	eP	**Pb**	**17 44 45.5**	**+0.1**
WFSB	baz=324			eS	**Sn**	**17 45 02.5**	**-0.4**
TWT	**Tachien**	**1.44**	**284**	eP	**Pg**	**17 44 46.7**	**-0.2**
VWDT	**VWDT**	**1.44**	**264**	eP	**Pb**	**17 44 45.6**	**0.0**
VWDT	baz=262			S	**Sn**	**17 45 03.0**	**-0.2**
NSK	**Sanguang**	**1.44**	**302**	eP	**Pb**	**17 44 46.1**	**+0.4**
TDCB	**Techi**	**1.45**	**284**	eP	**Pb**	**17 44 46.2**	**+0.3**
CHKT	**Chengkung**	**1.47**	**237**	eP	**Pn**	**17 44 45.1**	**+0.1**
CHKT	baz=225			S	**Sn**	**17 45 01.7**	**-2.2**
FULB	**Fuli**	**1.47**	**242**	eP	**Pn**	**17 44 45.3**	**+0.2**
FULB	baz=230			eS	**Sn**	**17 45 02.7**	**-1.3**
TATO	**Taipei**	**1.53**	**314**	eP	**Pn**	**17 44 46.3**	**+0.4**
YM07	**YM07**	**1.60**	**322**	eP	**Pn**	**17 44 47.4**	**+0.5**
SSLB	**Suanglung**	**1.60**	**266**	eP	**Pn**	**17 44 47.9**	**+0.9**
JISG	**Ishigakijimahi**	**1.62**	**65**	P	**Pn**	**17 44 47.6**	**+0.5**
JISG				eS	**Sn**	**17 45 06.4**	**-1.1**
YM10	**YM10**	**1.62**	**320**	eP	**Pn**	**17 44 47.8**	**+0.7**
YM11	**YM11**	**1.62**	**321**	eP	**Pb**	**17 44 48.7**	**-0.1**
YM04	**YM04**	**1.63**	**320**	eP	**Pn**	**17 44 47.6**	**+0.3**
TWH	**Lutao**	**1.64**	**224**	eP	**Pn**	**17 44 47.6**	**+0.2**
TWH	baz=220			eS	**Sn**	**17 45 05.9**	**-2.2**
SMLT	**Sun Moon Lake**	**1.65**	**269**	eP	**Pb**	**17 44 48.9**	**-0.4**
TYC	**Yuchr**	**1.69**	**270**	⇑eP	**Pb**	**17 44 49.7**	**-0.2**
ELDTW	**Lidau**	**1.70**	**245**	eP	**Pn**	**17 44 48.8**	**+0.4**
ELDTW	baz=243			eS	**Sn**	**17 45 07.7**	**-2.2**
NSTT	**Nanjuang**	**1.71**	**295**	eP	**Pb**	**17 44 50.3**	**0.0**
ALS	**Alishan**	**1.78**	**257**	eP	**Pb**	**17 44 51.3**	**-0.4**
WJS	**Zhushan**	**1.81**	**268**	eP	**Pb**	**17 44 52.1**	**+0.1**
TWQ1	**Liyutan**	**1.81**	**284**	eP	**Pb**	**17 44 52.0**	**-0.1**
TWGBT	**Beinan**	**1.84**	**234**	eP	**Pn**	**17 44 50.8**	**+0.6**
TWGBT	baz=224			eS	**Sn**	**17 45 12.3**	**-0.9**
WNT	**Mingjian**	**1.85**	**269**	eP	**Pb**	**17 44 53.2**	**+0.6**
TWG	**Pinlang**	**1.85**	**234**	eP	**Pn**	**17 44 50.8**	**+0.6**
TWG	baz=224			eS	**Sn**	**17 45 12.0**	**-1.3**
NMLH	**Miaoli**	**1.85**	**290**	eP	**Pb**	**17 44 52.9**	**+0.2**
TCU	**Taichung**	**1.87**	**278**	eP	**Pb**	**17 44 53.2**	**+0.3**
CHN5	**Tsauling**	**1.88**	**261**	eP	**Pb**	**17 44 53.7**	**+0.5**
CHN5	baz=250			eS	**Sb**	**17 45 17.1**	**+0.6**
STEY	**Tauyuan**	**1.93**	**248**	eP	**Pb**	**17 44 54.3**	**+0.1**
JTJ	**Tarama**	**1.96**	**68**	P	**Pb**	**17 44 53.6**	**-1.0**
JTJ				eS	**Sn**	**17 45 16.0**	**-0.2**
WCHH	**Zhanghua**	**1.97**	**275**	eP	**Pb**	**17 44 54.8**	**+0.1**
WGK	**Gukeng**	**1.97**	**264**	eP	**Pb**	**17 44 54.8**	**0.0**
WDLH	**Douliu**	**1.99**	**264**	eP	**Pb**	**17 44 55.0**	**-0.2**
TPUB	**Ta-pu**	**2.00**	**253**	eP	**Pb**	**17 44 54.9**	**-0.3**
TPUB	baz=244			eS	**Sn**	**17 45 18.7**	**+1.8**
WTP	**Ta-pu**	**2.03**	**251**	eP	**Pb**	**17 44 55.2**	**-0.5**
WTP	baz=242			eS	**Sn**	**17 45 19.8**	**+2.0**
ECL	**Taimali**	**2.07**	**231**	eP	**Pn**	**17 44 54.5**	**+1.2**
ECL	baz=240			eS	**Sn**	**17 45 16.4**	**-2.4**
SLGT	**Liugui**	**2.10**	**245**	eP	**Pb**	**17 44 56.3**	**-0.6**
SGST	**Jiashian**	**2.11**	**247**	eP	**Pb**	**17 44 57.2**	**+0.1**
SGST	baz=237			eS	**Sn**	**17 45 22.0**	**+2.2**
CHN1	**Nanshi**	**2.12**	**251**	eP	**Pb**	**17 44 57.1**	**-0.3**
CHN1	baz=249			eS	**Sb**	**17 45 22.8**	**-0.6**
TWK	**Hsinying**	**2.13**	**253**	eP	**Pb**	**17 44 56.7**	**-0.8**
TWK	baz=251			eS	**Sb**	**17 45 23.3**	**-0.3**
RLNB	**Erlin**	**2.14**	**270**	eP	**Pb**	**17 44 57.2**	**-0.4**
WTCT	**Ta-ch'eng**	**2.22**	**269**	eP	**Pb**	**17 44 58.1**	**-0.8**
SSD	**Sandimen**	**2.23**	**239**	eP	**Pn**	**17 44 57.6**	**+2.2**
EAST	**Anshuo**	**2.29**	**229**	eP	**Pn**	**17 44 57.0**	**+0.7**
WSF	**Szhu**	**2.29**	**264**	eP	**Pb**	**17 44 58.9**	**-1.2**
MASBT	**Mashibuluo**	**2.30**	**236**	eP	**Pn**	**17 44 57.8**	**+1.3**
CHN8	**Yiju**	**2.35**	**257**	eP	**Pb**	**17 44 59.8**	**-1.4**
JIRB	**Irabujima**	**2.43**	**67**	eS	**Sn**	**17 45 28.2**	**+0.5**
SCZT	**Fangliau**	**2.45**	**232**	eP	**Pn**	**17 45 00.9**	**+2.3**
JIKM	**Ikemajima**	**2.53**	**66**	eS	**Sn**	**17 45 30.1**	**0.0**
WDGT	**Dungji**	**2.86**	**258**	eP	**Pn**	**17 45 06.0**	**+1.8**
PHUB	**P'eng-hu**	**2.90**	**263**	eP	**Pn**	**17 45 06.6**	**+1.9**
PHUB	baz=251			eS	**Sn**	**17 45 39.9**	**+0.8**
PNG	**Penghu**	**2.90**	**264**	eP	**Pn**	**17 45 06.7**	**+1.9**
VCHM	**Qimei**	**3.08**	**258**	eP	**Pn**	**17 45 09.2**	**+2.0**
VWUC	**VWUC**	**3.15**	**291**	eP	**Pn**	**17 45 08.7**	**+0.5**
KNMB	**Chin-men Tao**	**3.98**	**279**	eP	**Pn**	**17 45 20.6**	**+1.1**

*ISCJB **05** 18:03:00.9±0.5, 4°.99S±0°.07×152°.92E±0°.09, h35km, mb4.2/17, MS3.1/5, Error ellipse: s-maj=14.0km s-min=8.5km az=32.0*
*IDC **05** 18:03:03.1±6.2, 4°.93S×152°.86E, h40km±52km, mb3.8/10, mb1 3.9/11, mb1mx3.7/53, mbtmp4.0/11, ML1.6/1, MS3.2/7, Ms1 3.2/7, ms1mx2.9/49, Error ellipse: s-maj=53.0km s-min=23.5km az=114.0*
*NEIC **05** 18:03:04.9±1.5, 5°.03S×152°.87E, h59km±12km, mb4.6/8, Error ellipse: s-maj=15.6km s-min=9.3km az=110.0*
ISC 05 18:03:02.4±0.7, 5°.02S±0°.08×152°.8E±0°.1, h35km, n39, σ1s59/34, mb4.2/17, MS3.3/5, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.03**	**323**	ePn	**Pn**	**18 03 22.3**	**+1.9**
MANU	**Manus Island**	**6.17**	**299**	ePn	Pn	18 04 37.3	+6.2
PMG	**Port Moresby**	**7.08**	**232**	Pn	**Pn**	**18 04 46.4**	**+2.9**
PMG	0.6nm,0.3s,baz=24,slow=8.5,SNR=5.7			Sn	**Sn**	**18 05 58.8**	**-4.0**
PMG	0.4nm,0.3s,baz=261,slow=19,SNR=1.7			LR	LR	18 08 05.7	
PMG	**Port Moresby**	**7.08**	**232**	eP	**Pn**	**18 04 46.5**	**+2.9**
PMG				e		18 05 58.8	
PMG				eSn	**Sn**	**18 06 00.5**	**-2.4**
PMG				e		18 08 05.7	
HNR	**Honiara**	**8.35**	**122**	LR	LR	18 08 22.7	
GUMO	comp=Z,144nm,18.8s,baz=275,slow=38 **Guam**	**20.09**	**337**	LR	LR	18 14 00.5	
DZM	comp=Z,21nm,21.6s,baz=170,slow=33 **Mont Dzumac**	**21.50**	**143**	LR	LR	18 14 45.6	
DZM	comp=Z,116nm,19.7s,baz=261,slow=33 **Mont Dzumac**	**21.50**	**143**	eP	**P**	**18 07 48.4**	**+0.1**
WRAB	129nm,2.0s **Tennant Creek**	**23.27**	**229**	eP	**P**	**18 08 07.6**	**+0.5**
WB2	11nm,1.1s **Warramunga Arr**	**23.28**	**229**	eP	**P**	**18 08 06.5**	**-0.7**
WR1	12nm,1.3s **Warramunga Arr**	**23.29**	**229**	eP	**P**	**18 08 08.3**	**+1.1**
WRA	28nm,1.7s **Warramunga Arr**	**23.29**	**229**	P	**P**	**18 08 08.3**	**+1.1**
AS01	2.3nm,0.8s,baz=53,slow=9.7,SNR=12 **Alice Springs**	**25.94**	**223**	eP	**P**	**18 08 33.8**	**+2.1**
AS31	**Alice Springs**	**25.97**	**223**	eP	**P**	**18 08 34.3**	**+2.3**
ASAR	4.9nm,1.8s **Alice Springs**	**25.98**	**223**	P	**P**	**18 08 35.0**	**+2.9**
FITZ	0.9nm,0.8s,baz=66,slow=8.4,SNR=10 **Fitzroy Crossi**	**29.54**	**242**	P	**P**	**18 09 03.3**	**-0.6**
FITZ	1.5nm,0.6s,baz=74,slow=12,SNR=5.4 **Fitzroy Crossi**	**29.54**	**242**	eP	**P**	**18 09 03.0**	**-1.0**
DAV	42nm,1.8s **Davao City (W)**	**29.69**	**294**	LR	LR	18 20 07.0	
FORT	comp=Z,28nm,19.6s,baz=123,slow=34 **Forrest**	**34.61**	**219**	eP	**P**	**18 09 47.8**	**-0.4**
JNU	23nm,0.9s **Nakatsue**	**43.25**	**333**	P	**P**	**18 10 59.8**	**-0.9**
JNU	5.7nm,0.8s,baz=191,slow=10,SNR=5.4 **Nakatsue**	**43.25**	**333**	eP	**P**	**18 11 00.2**	**-0.4**
CMAR	39nm,1.4s **Chiang Mai Arr**	**57.96**	**295**	P	**P**	**18 12 53.2**	**+1.4**
PETK	1.7nm,0.9s,baz=124,slow=5.6,SNR=10 **Petropavlovsk-**	**58.06**	**3**	P	**P**	**18 12 52.3**	**+0.4**
PEA1	1.5nm,0.8s,baz=153,slow=5.7,SNR=5.1 **Petropavlovsk-**	**58.07**	**3**	eP	**P**	**18 12 52.3**	**+0.4**
MA2	**Magadan**	**64.42**	**359**	LR	LR	18 40 51.7	
KDAK	comp=Z,28nm,18.5s,baz=129,slow=35 **Kodiak Island**	**76.38**	**27**	LR	LR	18 42 47.7	
ZALV	comp=Z,31nm,21.7s,baz=265,slow=31 **Zalesovo Beam**	**81.33**	**326**	P	**P**	**18 15 14.7**	**-0.5**
ZAA1	0.8nm,0.5s,baz=98,slow=7.8,SNR=5.4 **Zalesovo Array**	**81.33**	**326**	eP	**P**	**18 15 14.7**	**-0.5**
ILAR	**Eielson Array**	**82.37**	**22**	P	**P**	**18 15 19.6**	**-0.8**
KURK	0.8nm,0.8s,baz=252,slow=5.1,SNR=5.2 **Kurchatov**	**83.94**	**322**	eP	**P**	**18 15 29.4**	**+0.6**
KURBB	**Kurchatov Arra**	**83.97**	**322**	P	**P**	**18 15 29.4**	**+0.5**
BVAR	0.5nm,0.7s,baz=104,slow=4.3,SNR=4.5 **Borovoye Array**	**89.41**	**323**	P	**P**	**18 15 55.1**	**-0.5**
VVHS	1.2nm,0.8s,baz=125,slow=7.2,SNR=6.9 **Vashon High Sc**	**90.12**	**43**	eP	**P**	**18 15 58.8**	**-0.2**
SYP	**Santa Ynez Pea**	**90.54**	**56**	eP	**P**	**18 16 02.9**	**+1.5**
WVOR	**Wild Horse Val**	**92.30**	**48**	eP	**P**	**18 16 07.7**	**-1.7**
HWB	24nm,0.8s **Hans Werner Br**	**92.92**	**57**	eP	**P**	**18 16 10.9**	**-1.5**
BORC	**Borrego Spring**	**93.39**	**57**	eP	**P**	**18 16 14.4**	**0.0**
TORD	**Torodi Ar. Bea**	**150.36**	**288**	PKPbc	**PKPbc**	**18 22 50.5**	**-0.6**
TOA1	2.3nm,0.9s,baz=62,slow=2.4,SNR=8.7 **Torodi Ar. Sit**	**150.36**	**288**	ePKPbc	**PKPbc**	**18 22 50.5**	**-0.6**

MAN 05 18:10:10.8, 15°.40N×121°.84E, h1km, mb4.7, ML3.5, MS3.4, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALP	**Baler**	**0.42**	**323**	eP	Pg	18 10 19.3	+0.5
BALP				eS	Sb	18 10 26.8	-1.0
CAUP	**Cauayan**	**1.53**	**360**	eP	Pn	18 10 37.7	-1.6
CAUP				eS	Sn	18 10 59.6	-0.2
GQP	**Guinayangan**	**1.60**	**158**	⇑P	Pn	18 10 39.9	-0.4
GQP				S	Sn	18 11 01.6	0.0
SCZP	**Santa Cruz**	**1.89**	**282**	eP	Pn	18 10 44.1	-0.1
SCZP				eS	Sn	18 11 09.4	+0.7
BOAC	**Boac**	**1.93**	**180**	eP	Pn	18 10 44.4	-0.4
BOAC				eS	Sb	18 11 11.0	-0.5
ABRA	**Dolores**	**2.48**	**334**	eP	Pn	18 10 54.1	+1.8
ABRA				eS	Sb	18 11 25.6	-1.6
APYP	**Conner**	**2.51**	**347**	eP	Pn	18 10 51.6	-1.1
APYP				eS	Sn	18 11 22.3	-1.7

*IDC **05** 18:11:40.4±1.1, 34°.62N×73°.27E, h0km, mb3.9/8, mb1 3.9/9, mb1mx3.6/66, mbtmp3.9/9, ML3.8/1, MS2.2/1, Ms1 2.2/1, ms1mx2.0/71, Error ellipse: s-maj=30.3km s-min=26.5km az=62.0*
*ISCJB **05** 18:11:41.7±0.6, 34°.65N±0°.07×73°.4E±0°.1, h22km, mb3.8/7, Error ellipse: s-maj=15.3km s-min=5.2km az=142.7*
*NNC **05** 18:11:49.5±4.8, 35°.01N×72°.20E, h0km, mb3.9, mpv3.6, Error ellipse: s-maj=52.3km s-min=35.0km az=104.0*
ISC 05 18:11:43.7±0.8, 34°.58N±0°.09×73°.2E±0°.1, h22km, n25, σ1s37/27, mb3.9/8, 3C-3D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	**Thein Dam**	**3.00**	**135**	eP	**Pb**	**18 12 36.4**	**0.0**
THN				eS	**Sb**	**18 13 13.0**	**+0.4**
SFK	**Sufi-Kurgan**	**5.43**	**2**	⇓Pn	Pn	18 13 08.1	+4.6
SFK	1.9nm,0.3s			⇓Sn	**Sn**	**18 14 08.9**	**+3.5**
MNAS	**Manas**	**7.92**	**356**	⇑Pn	**Pn**	**18 13 38.7**	**+1.2**
MNAS	0.8nm,0.3s			⇓Sn	**Sn**	**18 15 06.3**	**-0.2**
AAK	**Ala-Archa**	**8.11**	**7**	LR	LR	18 16 40.5	
KK31	comp=Z,16nm,19.4s,baz=178,slow=37 **Karatay Array**	**8.77**	**347**	⇑Pn	**Pn**	**18 13 49.8**	**+0.7**
KK31	1.9nm,0.3s,baz=164,slow=13,SNR=47			⇑Sn	**Sn**	**18 15 23.7**	**-3.5**
PYUN	1.1nm,0.3s,baz=170,slow=26 **Piuthan**	**10.57**	**125**	eP	**Pn**	**18 14 14.6**	**+0.6**
DANN	13nm,0.4s **Dangsing**	**10.95**	**122**	eP	**Pn**	**18 14 19.8**	**+0.5**
KOLN	9.5nm,0.2s **Koldanda**	**11.19**	**124**	eP	**Pn**	**18 14 22.4**	**-0.2**
GKN	6.4nm,0.3s **Gorkha**	**11.77**	**121**	eP	**Pn**	**18 14 29.4**	**-1.0**
DMN	9.7nm,0.3s **Daman**	**12.34**	**121**	eP	**Pn**	**18 14 37.9**	**-0.4**
KKN	9.1nm,0.3s **Kakani**	**12.36**	**120**	eP	**Pn**	**18 14 38.3**	**-0.2**
PKIN	5.1nm,0.4s **Phulchoki**	**12.56**	**120**	eP	**Pn**	**18 14 40.4**	**-1.0**
GUN	8.8nm,0.4s **Gumba**	**12.72**	**118**	eP	**Pn**	**18 14 42.6**	**-1.0**
JIRN	8.0nm,0.4s **Jiri**	**13.09**	**118**	eP	**Pn**	**18 14 47.2**	**-1.4**
RAMN	52nm,0.4s **Ramite**	**13.80**	**120**	eP	**Pn**	**18 14 56.2**	**-2.0**
ODAN	**Odare**	**14.42**	**118**	eP	**Pn**	**18 15 04.9**	**-1.8**
AKTO	11nm,0.4s **Aktyubinsk**	**19.34**	**330**	P	**Pn**	**18 16 07.5**	**-1.0**
ZALV	0.3nm,0.3s,baz=126,slow=12,SNR=8.1 **Zalesovo Beam**	**21.03**	**19**	P	**P**	**18 16 24.4**	**-1.3**
FINES	2.7nm,0.4s,baz=214,slow=11,SNR=16 **FINESS Array B**	**40.07**	**327**	P	**P**	**18 19 17.4**	**+0.3**
ARCES	1.5nm,0.9s,baz=123,slow=10,SNR=5.1 **ARCESS Array B**	**43.60**	**338**	P	**P**	**18 19 46.4**	**+0.6**
HFS	1.6nm,0.7s,baz=108,slow=7.8,SNR=4.5 **Hagfors**	**45.68**	**323**	P	**P**	**18 20 03.0**	**+0.5**
TORD	0.7nm,0.4s,baz=96,slow=12,SNR=4.5 **Torodi Ar. Bea**	**67.50**	**271**	P	**P**	**18 22 38.3**	**-0.1**
KOWA	0.4nm,0.5s,baz=46,slow=5.7,SNR=7.7 **Kowa**	**71.49**	**275**	P	**P**	**18 23 03.9**	**+0.9**
ASAR	1.4nm,0.5s,baz=63,slow=4.6,SNR=4.3 **Alice Springs**	**81.68**	**126**	P	**P**	**18 24 01.3**	**+0.8**
YKA	0.4nm,0.5s,baz=308,slow=5.1,SNR=7.4 **Yellowknife Ar**	**83.06**	**4**	P	**P**	**18 24 06.3**	**-0.8**
	0.2nm,0.5s,baz=346,slow=5.4,SNR=3.5						

*ISK **05** 18:15:28.5, 39°.56N×43°.84E, h5km, ML2.6/3*
*DDA **05** 18:15:28.9, 39°.45N×43°.90E, h7km, Md2.7*
*CSEM **05** 18:15:29.0±0.4, 39°.48N×43°.89E, h2km, MD2.7, Error ellipse: s-maj=7.5km s-min=5.6km az=103.0*
ISC 05 18:15:29.1±1.2, 39°.47N±0°.03×43°.89E±0°.03, h5km±11km,

n25,σ0°85/38, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DYDN	**Diyadin**	**0.18**	**297**	*i* P	**Pg**	**18 15 32.4**	**-0.3**
DYDN				*i* S	**Sg**	**18 15 35.5**	**+0.6**
DYDN	**Diyadin**	**0.18**	**297**	P	**Pg**	**18 15 32.3**	**-0.3**
DYDN				S	**Sg**	**18 15 35.5**	**+0.6**
IGDI	**IGDIR**	**0.43**	**20**	*i* P	**Pg**	**18 15 37.2**	**-0.1**
IGDI				*i* S	**Sb**	**18 15 44.1**	**-1.8**
VMUR	**Van-Muradiye**	**0.54**	**208**	*i* P	**Pg**	**18 15 38.5**	**-0.9**
VMUR				*i* S	**Sg**	**18 15 46.1**	**-0.3**
VMUR	**Van-Muradiye**	**0.54**	**208**	P	**Pg**	**18 15 38.5**	**-0.9**
VMUR				S	**Sg**	**18 15 46.1**	**-0.3**
AGRB	**Hanur-Agry**	**0.70**	**279**	PG	**Pg**	**18 15 42.2**	**-0.4**
AGRB				SG	**Sg**	**18 15 52.5**	**+0.7**
AGRB	**Hanur-Agry**	**0.70**	**279**	*e*Pg	**Pg**	**18 15 42.2**	**-0.4**
AGRB				*e*Sg	**Sg**	**18 15 52.5**	**+0.7**
GNI	**Garni**	**0.95**	**43**	PG	**Pg**	**18 15 47.1**	**-0.1**
GNI	**Garni**	**0.95**	**43**	*e*Pg	**Pg**	**18 15 47.1**	**-0.1**
VANB	**Van**	**0.95**	**204**	PN	**Pn**	**18 15 50.7**	**+1.5**
VANB	**Van**	**0.95**	**204**	*e*Pn	**Pn**	**18 15 50.7**	**+1.5**
TVAN	**Van**	**1.01**	**202**	*i* P	**Pb**	**18 15 48.9**	**-0.3**
TVAN				*i* S	**Sb**	**18 16 03.4**	**+0.6**
TVAN	**Van**	**1.01**	**202**	P	**Pb**	**18 15 48.9**	**-0.3**
TVAN				S	**Sb**	**18 16 03.4**	**+0.6**
DIGO	**Kars**	**1.03**	**337**	*i* P	**Pb**	**18 15 49.6**	**+0.1**
DIGO	**Kars**	**1.03**	**337**	P	**Pb**	**18 15 49.6**	**+0.1**
ADCV	**BITLIS_Adilcev**	**1.12**	**235**	*i* P	**Pn**	**18 15 51.5**	**-0.1**
ADCV	**BITLIS_Adilcev**	**1.12**	**235**	P	**Pn**	**18 15 51.5**	**-0.1**
EATA	**Eleskirt**	**1.15**	**291**	*i* P	**Pg**	**18 15 50.5**	**-0.7**
EATA				*i* S	**Sb**	**18 16 06.9**	**-0.1**
EATA	**Eleskirt**	**1.15**	**291**	P	**Pg**	**18 15 50.5**	**-0.7**
EATA				S	**Sb**	**18 16 06.9**	**-0.1**
EKAR	**Karacoban**	**1.43**	**262**	*i* P	**Pg**	**18 15 57.3**	**+0.8**
EKAR				*i* S	**Sb**	**18 16 13.3**	**-1.7**
EKAR	**Karacoban**	**1.43**	**262**	P	**Pg**	**18 15 57.3**	**+0.8**
EKAR				S	**Sb**	**18 16 13.3**	**-1.7**
BNGB	**Bing¶‖**	**2.54**	**260**	PN	**Pn**	**18 16 12.3**	**+1.3**
YEDI	**Yedisu-Bingol**	**2.59**	**270**	PN	**Pn**	**18 16 12.6**	**+0.8**
YEDI	**Yedisu-Bingol**	**2.59**	**270**	*e*Pn	**Pn**	**18 16 12.6**	**+0.8**
BINT	**Bingol**	**2.71**	**259**	*e*Pn	**Pn**	**18 16 12.3**	**-1.1**

IDC 05 18:17:39.6±2.8, 6°.42S×129°.84E, h126km±39km, mb3.2/1, mb1 3.4/5, mb1mx3.0/53, mbtmp3.7/5, Error ellipse: s-maj=73.3km s-min=21.1km az=89.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.69**	**15**	P	Pn	18 19 02.0	+0.1
	1.9nm,0.3s,baz=188,slow=22,SNR=37						
SIJI				S	Sn	18 20 01.0	-5.2
	0.6nm,0.3s,baz=233,slow=20,SNR=4.9						
FITZ	**Fitzroy Crossi**	**12.31**	**199**	P	Pn	18 20 31.2	+0.5
	0.4nm,0.3s,baz=34,slow=11,SNR=20						
FITZ				S	Sn	18 22 42.2	-4.2
	0.1nm,0.3s,baz=151,slow=19,SNR=3.8						
WRA	**Warramunga Arr**	**14.14**	**162**	P	Pn	18 20 52.7	-1.6
	0.4nm,0.3s,baz=328,slow=12,SNR=30						
WRA				S	Sn	18 23 20.9	-10
	0.5nm,0.3s,baz=335,slow=22,SNR=12						
ASAR	**Alice Springs**	**17.59**	**168**	P	Pn	18 21 37.1	+0.1
	0.2nm,0.3s,baz=341,slow=9.5,SNR=26						
MKAR	**Makanchi Array**	**67.66**	**327**	P	P	18 28 23.0	-0.1
	0.2nm,0.4s,baz=115,slow=8.2,SNR=4.3						

*CSEM **05** 18:31:12.7±0.5, 38°.56N×43°.85E, h2km, ML2.6, Error ellipse: s-maj=9.1km s-min=6.9km az=98.0*
*ISK **05** 18:31:13.5, 38°.58N×43°.75E, h8km, ML2.6/5*
*DDA **05** 18:31:13.0, 38°.55N×43°.81E, h7km, Md2.7*

ISC 05 18:31:12.6±1.4, 38°.55N±0°.03×43°.86E±0°.05, h6km±12km, n26, σ0°71/41, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVAN	**Van**	**0.36**	**267**	*i* P	**Pg**	**18 31 19.4**	**-0.2**
TVAN				*i* S	**Sg**	**18 31 24.7**	**+0.3**
TVAN	**Van**	**0.36**	**267**	P	**Pg**	**18 31 19.4**	**-0.2**
TVAN				S	**Sg**	**18 31 24.7**	**+0.3**
VANB	**Van**	**0.38**	**278**	PG	**Pg**	**18 31 19.4**	**-0.5**
VANB				SG	**Sg**	**18 31 24.0**	**-0.8**
VANB	**Van**	**0.38**	**278**	*e*Pg	**Pg**	**18 31 19.4**	**-0.5**
VANB				*e*Sg	**Sg**	**18 31 24.0**	**-0.8**
VMUR	**Van-Muradiye**	**0.50**	**333**	*i* P	**Pg**	**18 31 22.9**	**+0.7**
VMUR				*i* S	**Sb**	**18 31 32.8**	**+1.4**
VMUR	**Van-Muradiye**	**0.50**	**333**	P	**Pg**	**18 31 22.9**	**+0.7**
GEVA	**Gevas**	**0.67**	**250**	*i* P	**Pg**	**18 31 25.1**	**-0.4**
GEVA				*i* S	**Sg**	**18 31 35.0**	**+0.7**
GEVA	**Gevas**	**0.67**	**250**	P	**Pg**	**18 31 25.1**	**-0.4**
GEVA				S	**Sg**	**18 31 35.0**	**+0.7**
ADCV	**BITLIS_Adilcev**	**0.93**	**287**	*i* P	**Pg**	**18 31 30.1**	**-0.3**
ADCV				*i* S	**Sb**	**18 31 42.9**	**-1.0**
ADCV	**BITLIS_Adilcev**	**0.93**	**287**	P	**Pg**	**18 31 30.1**	**-0.3**
ADCV				S	**Sb**	**18 31 42.9**	**-1.0**
HAKT	**HAKKARI**	**0.99**	**187**	*i* P	**Pg**	**18 31 30.9**	**-0.8**
HAKT				*i* S	**Sb**	**18 31 46.2**	**+0.4**
HAKT	**HAKKARI**	**0.99**	**187**	P	**Pg**	**18 31 30.9**	**-0.8**
HAKT				S	**Sb**	**18 31 46.2**	**+0.4**
AGRB	**Hanur-Agry**	**1.23**	**327**	PN	**Pb**	**18 31 36.3**	**-0.1**
AGRB	**Hanur-Agry**	**1.23**	**327**	*e*Pn	**Pb**	**18 31 36.3**	**-0.1**
GURO	**Guroymak-BITLI**	**1.44**	**271**	PN	**Pn**	**18 31 38.9**	**-0.4**
GURO	**Guroymak-BITLI**	**1.44**	**271**	*e*Pn	**Pn**	**18 31 38.9**	**-0.4**
SIRT	**Sirnak**	**1.54**	**228**	PN	**Pb**	**18 31 41.6**	**+0.1**
SIRT	**Sirnak**	**1.54**	**228**	*e*Pn	**Pb**	**18 31 41.6**	**+0.1**
SIRN	**S¨–rnak**	**1.55**	**228**	*i* P	**Pg**	**18 31 43.4**	**+1.1**
SIRN				*i* S	**Sg**	**18 32 02.8**	**+0.3**
SIRN	**S¨–rnak**	**1.55**	**228**	P	**Pg**	**18 31 43.4**	**+1.1**
SIRN				S	**Sg**	**18 32 02.8**	**+0.3**
SRTM	**Siirt_Merkez**	**1.62**	**251**	*i* P	**Pg**	**18 31 43.7**	**0.0**
SRTM				*i* S	**Sg**	**18 32 06.2**	**+1.4**
SRTM	**Siirt_Merkez**	**1.62**	**251**	P	**Pg**	**18 31 43.7**	**0.0**
SRTM				S	**Sg**	**18 32 06.2**	**+1.4**
GNI	**Garni**	**1.74**	**23**	PN	**Pb**	**18 31 44.6**	**-0.4**
GNI	**Garni**	**1.74**	**23**	*e*Pn	**Pb**	**18 31 44.6**	**-0.4**
BNGB	**Bing¶‖**	**2.53**	**281**	PN	**Pn**	**18 31 54.9**	**+0.6**
BINT	**Bingol**	**2.66**	**278**	*e*Pn	**Pn**	**18 31 54.9**	**-1.2**

*IDC **05** 19:11:33.4±16.0, 18°.63S×174°.49W, h0km, mb4.2/5, mb1 4.3/5, mb1mx3.8/51, mbtmp4.2/5, Error ellipse: s-maj=315.8km s-min=137.6km az=80.0*
*NEIC **05** 19:11:34.2±0.6, 18°.29S×173°.99W, h35km, mb4.6/5, Error ellipse: s-maj=33.0km s-min=11.9km az=165.0*

ISC 05 19:11:31.6±0.8, 19°.0S±0°.3×173°.6W±0°.1, h28km, n16, σ1°25/16, mb4.5/7, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAR	**Rarotonga**	**13.15**	**102**	*e*Pn	**P**	**19 14 46.3**	**-0.1**
CTA	**Charters Tower**	**37.82**	**261**	P	**P**	**19 18 46.3**	**+0.2**
	1.1nm,0.3s,baz=89,slow=9.4,SNR=6.7						
CTAO	**Charters Tower**	**37.82**	**261**	*e*P	**P**	**19 18 46.9**	**+0.8**
	23nm,1.5s						
STKA	**Stephens Creek**	**42.21**	**243**	P	**P**	**19 19 22.5**	**+0.2**
	2.5nm,1.0s,baz=90,slow=11,SNR=2.9						
STKA	**Stephens Creek**	**42.21**	**243**	*e*P	**P**	**19 19 22.2**	**-0.1**
	6.5nm,1.7s						
AS31	**Alice Springs**	**48.94**	**255**	*e*P	**P**	**19 20 15.3**	**-0.5**
	1.6nm,0.9s						
ASAR	**Alice Springs**	**48.94**	**255**	P	**P**	**19 20 15.5**	**-0.3**
	3.0nm,0.5s,baz=90,slow=7.7,SNR=92						
WR1	**Warramunga Arr**	**48.97**	**260**	*e*P	**P**	**19 20 15.1**	**-0.9**
	28nm,1.7s						
WRA	**Warramunga Arr**	**48.97**	**260**	P	**P**	**19 20 15.1**	**-0.9**
	0.8nm,0.3s,baz=95,slow=7.6,SNR=34						
FITZ	**Fitzroy Crossi**	**57.39**	**260**	P	**P**	**19 21 18.7**	**+0.7**
	1.6nm,0.6s,baz=82,slow=7.1,SNR=6.8						
FITZ	**Fitzroy Crossi**	**57.39**	**260**	*e*P	**P**	**19 21 18.3**	**+0.4**
	23nm,1.4s						
PFO	**Pinyon Flats O**	**75.47**	**46**	*e*P	**P**	**19 23 16.3**	**+2.8**
ERRC	**Elmore Ranch**	**75.62**	**47**	*e*P	**P**	**19 23 13.0**	**-1.2**
O03D	**Paynes Creek**	**76.12**	**38**	*e*P	**P**	**19 23 17.9**	**+0.9**
BLYC	**Blythe**	**76.88**	**47**	*e*P	**P**	**19 23 22.3**	**+1.0**
SVTR	**Two Rivers Sch**	**80.81**	**33**	*e*P	**P**	**19 23 40.2**	**-2.4**

JMA 05 19:30:53.4±0.1, 35°.55N×140°.88E, h35km±1km, M1.7, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.15**	**354**	P	Pn	19 30 59.5	-0.3
CHOJ				S	Sn	19 31 04.4	+0.2
JCN	**Nagara**	**0.57**	**257**	P	Pn	19 31 05.2	+0.2
BSO4	**Boso 4**	**0.71**	**219**	P	Pn	19 31 07.6	+0.7
BSO3	**Boso 3**	**0.81**	**202**	P	Pn	19 31 08.1	+0.1
JYT	**Yasato**	**0.88**	**321**	P	Pn	19 31 09.4	+0.2
JYT				*e*S	Sn	19 31 21.3	+0.6

*NIED **05** 19:31:00, 34°.90N×141°.50E, h17km, Mw6.2 Best double couple: M0:2.03000×10^18 NP1:φs:218.00000°, δ82.00000°, λ5.00000°. NP2:φs:127.00000°, δ85.00000°, λ172.00000°.*
*BJI **05** 19:31:29.3, 35°.02N×141°.41E, h10km, mb5.9/71, mB5.8/61, Ms6.3/96, Ms7 6.2/87*
*ISCJB **05** 19:31:30.7±0.5, 34°.90N±0°.01×141°.21E±0°.01, h5km±2km, mb6.0/695, MS6.1/240, Error ellipse: s-maj=2.2km s-min=1.6km az=166.8*
*IDC **05** 19:31:31.5±0.3, 34°.92N×141°.18E, h0km, mb5.8/52, mb1 5.9/57, mb1mx5.8/64, mbtmp5.8/57, ML4.7/4, MS5.9/64, Ms1 5.9/64, ms1mx5.8/78, Error ellipse: s-maj=9.5km s-min=7.1km az=86.0*
*MOS **05** 19:31:33.0±0.9, 34°.95N×141°.18E, h23km, mb6.3/177, MS6.1/84, Error ellipse: s-maj=6.1km s-min=4.1km az=113.8*
*JMA **05** 19:31:33.3±0.3, 34°.99N×141°.37E, h37km±3km, M6.3*
JMA Felt III J1.
*GCMT **05** 19:31:33.8±0.1, 34°.96N×141°.21E, h15km, MW6.1/124, Moment Tensor Solution. s115,c245; s124,c455; Duration: ≥8 Moment tensor: Scale 10^18Nm; Mrr0.34±.01; Mθθ-1.99±.01; Mφφ1.65±.01; Mrθ0.37±.04; Mθφ-0.05±.01; Mφr-0.48±.04; Best double couple: M0:1.93000×10^18 NP1:φs:133.00000°, δ83.00000°, λ160.00000°. NP2:φs:225.00000°, δ70.00000°, λ7.00000°. Principal axes: T 1.8130, Plg19.0000°, Azm87.0000°; N 0.2350, Plg69.0000°, Azm295.0000°; P -2.0480, Plg9.0000°, Azm180.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **05** 19:31:33.8±0.1, 34°.94N×141°.13E, h15km, mb6.2/299, ME7.2, MS6.0/123, MW6.0, MW6.1, MW6.1 Error ellipse: s-maj=1.9km s-min=1.4km az=149.0, Moment Tensor Solution. s58 Moment tensor: Scale 10^18Nm; Mrr0.04; Mθθ-1.90; Mφφ1.86; Mrθ0.22; Mθφ0.07; Mφr-0.09; Best double couple: M0:1.90000×10^18 NP1:φs:226.00000°, δ84.00000°, λ-3.00000°. NP2:φs:316.00000°, δ87.00000°, λ-174.00000°. Principal axes: T 1.8600, Plg3.0000°, Azm91.0000°; N 0.0600, Plg83.0000°, Azm338.0000°; P -1.9200, Plg6.0000°, Azm181.0000°; Broadband fault plane solution: P waves. NP1:φs:136.00000°, δ80.00000°, λ-175.00000°. NP2:φs:45.00000°, δ85.00000°, λ-10.00000°. Principal axes: T Plg3.0000°, Azm91.0000°; N Plg0.0000°, Azm0.0000°; P Plg11.0000°, Azm0.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt [III] at Tokyo and Yokohama. Felt widely in the Kumagaya-Mito-Yokosuka area. Recorded [3 JMA] in Chiba, Ibaraki, Kanagawa and Shizuoka.
*NEIC **05** 19:31:34.0±0.0, 35°.55N×141°.55E, h15km, Moment Tensor Solution. s29 Moment tensor: Scale 10^18Nm; Mrr-0.02; Mθθ-1.38; Mφφ1.40; Mrθ0.93; Mθφ-0.09; Mφr0.69; Best double couple: M0:1.80000×10^18 NP1:φs:223.00000°, δ87.00000°, λ-38.00000°. NP2:φs:315.00000°, δ51.00000°, λ-176.00000°. Principal axes: T 1.7100, Plg24.0000°, Azm276.0000°; N 0.1900, Plg51.0000°, Azm40.0000°; P -1.9000, Plg28.0000°, Azm172.0000°;*
*NEIC **05** 19:31:44.5±0.0, 35°.04N×141°.18E, h10km, Moment Tensor Solution. s104 Moment tensor: Scale 10^18Nm; Mrr0.34; Mθθ-1.61; Mφφ1.27; Mrθ0.12; Mθφ0.01; Mφr0.02; Best double couple: M0:1.40000×10^18 NP1:φs:315.00000°, δ87.00000°, λ-178.00000°. NP2:φs:225.00000°, δ88.00000°, λ-3.00000°. Principal axes: T 1.2700, Plg1.0000°, Azm270.0000°; N 0.3400, Plg86.0000°, Azm20.0000°; P -1.6200, Plg4.0000°, Azm180.0000°;*

ISC 05 19:31:34.8±0.2, 34°.98N±0°.02×141°.28E±0°.03, h21km±2km, h21km:pP-P, n2440, σ1°55/2624, mb6.1/730, MS6.1/272, 97C-93D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.41**	**218**	⇓P	**Pb**	**19 31 43.2**	**+0.3**
BSO3	**Boso 3**	**0.66**	**255**	⇑P	**Pb**	**19 31 47.5**	**0.0**
BSO4	**Boso 4**	**0.78**	**271**	⇑P	**Pb**	**19 31 49.4**	**-0.2**
CHOJ	**Chosi**	**0.80**	**335**	P	**Pb**	**19 31 48.5**	**-1.6**
CHOJ				S	**Sb**	**19 31 58.4**	**-2.1**
KTR	**Katsuura**	**0.81**	**282**	⇑P	**Pb**	**19 31 49.5**	**-0.7**
I30JP	**ISUMI INFRASON**	**0.86**	**293**	Pn	**Pn**	**19 31 55.0**	**+3.3**
	baz=133,slow=38,SNR=5.2						
JCN	**Nagara**	**0.99**	**297**	⇑P	**Pb**	**19 31 52.5**	**-0.8**
JYT	**Yasato**	**1.53**	**325**	P	**Pn**	**19 32 00.3**	**-0.7**
JIM2	**Oshima 3**	**1.54**	**261**	⇑P	**Pn**	**19 31 59.1**	**-2.1**
JHO	**Hitachi**	**1.73**	**341**	⇓P	**Pn**	**19 32 02.5**	**-1.2**
AJI	**Ajiro2**	**1.80**	**273**	⇑P	**Pn**	**19 32 02.7**	**-1.9**
JOD2	**Odawara 2**	**1.82**	**280**	⇑P	**Pn**	**19 32 03.1**	**-1.9**
JOD2				S	**Sn**	**19 32 26.9**	**-0.6**
JIZS	**Izushimoda**	**1.99**	**263**	⇑P	**Pn**	**19 32 05.5**	**-1.8**
JAG	**Ashikaga**	**2.08**	**315**	⇑P	**Pn**	**19 32 08.1**	**-0.4**
ONAJ	**Iwakimizuishiy**	**2.16**	**350**	P	**Pn**	**19 32 07.8**	**-1.8**
JRY	**Ryogami san**	**2.20**	**299**	⇑P	**Pn**	**19 32 09.1**	**-1.1**
JHJ2	**Mitsune**	**2.22**	**214**	*e*Pn	**Pn**	**19 32 09.4**	**-1.0**
JHJ	**Hachijo jima 2**	**2.23**	**214**	Pn	**Pn**	**19 32 09.7**	**-1.0**
	4μm,0.3s,baz=207,slow=2.6,SNR=125						
JHJ				Sn	**Sn**	**19 32 34.3**	**-3.3**
	3μm,0.3s,baz=120,slow=20,SNR=8.2						
JHJ				LR	LR	19 33 13.1	
	comp=Z,176μm,21.0s,baz=46,slow=48						
JSB	**Shiboa**	**2.27**	**331**	P	**Pb**	**19 32 14.2**	**-1.0**
JYN	**Shimob**	**2.30**	**284**	⇑P	**Pn**	**19 32 10.2**	**-1.4**
JFK	**Kawauchi**	**2.41**	**352**	⇓P	**Pn**	**19 32 11.2**	**-1.9**
JKT	**Katashina**	**2.43**	**318**	P	**Pn**	**19 32 13.6**	**+0.1**
SHZ3	**Shizuoka 3**	**2.52**	**273**	⇑P	**Pn**	**19 32 14.0**	**-0.7**
JNT	**Takato**	**2.72**	**290**	⇑P	**Pn**	**19 32 16.8**	**-0.6**
JNY	**Yasuok**	**2.83**	**279**	⇑P	**Pn**	**19 32 18.8**	**-0.1**
JMM	**Marumori**	**2.91**	**352**	⇓P	**Pn**	**19 32 18.4**	**-1.5**
JYZW	**Yoshizawa**	**2.91**	**271**	P	**Pn**	**19 32 19.2**	**-0.8**
JHK	**Hiroka**	**2.92**	**322**	⇓P	**Pn**	**19 32 20.5**	**+0.5**
HMMJ	**Hamamatsu 2**	**2.93**	**269**	P	**Pn**	**19 32 19.3**	**-0.9**
MJAR	**Matsushiro Arr**	**2.95**	**303**	Pn	**Pn**	**19 32 20.2**	**-0.3**
	117nm,0.3s,baz=108,slow=7.3,SNR=488						
MAJO	**Matsushiro**	**2.95**	**303**	*e*Pn	**Pn**	**19 32 20.1**	**-0.3**
MAJO	**Matsushiro**	**2.95**	**303**	*c e*P	**Pn**	**19 32 20.8**	**+0.3**
MAT	**Matsushiro**	**2.95**	**303**	P	**Pn**	**19 32 20.4**	**-0.1**
MAT	**Matsushiro**	**2.95**	**303**	P	**Pn**	**19 32 20.0**	**-0.5**
MAT				*e*S	**Sb**	**19 33 00.8**	**-1.5**
MJB9	**Matsu-Tunnel**	**2.95**	**303**	*e*Pn	**Pn**	**19 32 20.3**	**-0.2**
JNG	**Nsakai**	**2.96**	**300**	⇑P	**Pn**	**19 32 20.4**	**-0.3**
JNS	**Sasagawa**	**3.25**	**331**	P	**Pn**	**19 32 24.4**	**-0.2**
JGF	**Kuroka**	**3.27**	**282**	⇑P	**Pn**	**19 32 25.1**	**+0.2**
JJN	**Nakama**	**3.30**	**311**	P	**Pn**	**19 32 26.4**	**+1.1**
JAO	**Obara**	**3.31**	**276**	P	**Pn**	**19 32 25.2**	**-0.3**
JYS	**Shiratake**	**3.38**	**344**	P	**Pn**	**19 32 26.1**	**-0.3**
JGN	**Niukaw**	**3.46**	**292**	⇑P	**Pn**	**19 32 27.7**	**+0.1**
JIO	**Ouri**	**3.47**	**1**	⇓P	**Pn**	**19 32 25.6**	**-2.0**
INU	**Inuyama**	**3.52**	**277**	*e*Pn	**Pn**	**19 32 27.2**	**-1.0**
JYA	**Atsumi**	**3.82**	**341**	⇓P	**Pn**	**19 32 32.5**	**0.0**
JAW	**Awa shima**	**3.84**	**335**	⇓P	**Pn**	**19 32 32.3**	**-0.4**
JSD	**Sado**	**3.91**	**322**	⇓P	**Pn**	**19 32 33.8**	**+0.2**
JYW	**Yuwa**	**4.63**	**350**	⇓P	**Pn**	**19 32 43.7**	**+0.1**
JTH	**Tanohata**	**4.97**	**5**	P	**Pn**	**19 32 45.7**	**-2.6**
JIW	**Iwasaki**	**5.70**	**350**	P	**Pn**	**19 32 57.7**	**-0.5**
JSI2	**Shiura 2**	**6.11**	**354**	⇓P	**Pn**	**19 33 03.0**	**-0.9**
JOT	**Ohata**	**6.40**	**358**	P	**Pn**	**19 33 05.9**	**-1.9**
ERM	**Erimo**	**7.18**	**11**	*e*Pn	**Pn**	**19 33 14.9**	**-3.6**
ERM				*e*Sn	**Sn**	**19 34 35.3**	**-4.1**
ERM	**Erimo**	**7.18**	**11**	*c e*P	**Pn**	**19 33 15.6**	**-2.9**
ERM				pmax	pmax		
	comp=Z,2μm,1.0s						
CBIJ	**Chichi jima**	**7.89**	**174**	*e*Pn	**Pn**	**19 33 24.8**	**-3.6**
CBIJ				*e*Sn	**Sn**	**19 34 48.5**	**-8.6**
JCJ	**Chichijima**	**7.89**	**174**	Pn	**Pn**	**19 33 25.1**	**-3.3**
	comp=Z,1μm,0.3s,baz=358,slow=5.2,SNR=42						
JCJ				Sn	**Sn**	**19 34 48.9**	**-8.3**
	comp=Z,328nm,0.3s,baz=300,slow=20,SNR=2.6						
JNU	**Nakatsue**	**8.83**	**261**	Pn	**Pn**	**19 33 41.8**	**+0.5**
	comp=Z,10nm,0.3s,baz=77,slow=7.7,SNR=103						
JNU	**Nakatsue**	**8.83**	**261**	*e*Pn	**Pn**	**19 33 40.8**	**-0.5**
ASAJ	**Asahikawa**	**9.18**	**6**	Pn	**Pn**	**19 33 42.5**	**-3.5**
	comp=Z,98nm,0.3s,baz=219,slow=11,SNR=326						
ASAJ				Sn	**Sn**	**19 35 25.7**	**-3.0**
	comp=Z,21nm,0.3s,baz=73,slow=19,SNR=1.8						
ASAJ	**Asahikawa**	**9.18**	**6**	*e*Pn	**Pn**	**19 33 42.2**	**-3.8**
ASAJ				*e*Sn	**Sn**	**19 35 25.1**	**-3.7**
GLVR	**Golovnino**	**9.34**	**19**	⇓*i*P	**Pn**	**19 33 44.3**	**-3.9**
GLVR				pmax	pmax		
	comp=Z,3μm,0.6s						
GLVR				pmax	pmax		
	comp=N,582nm,0.3s						
GLVR				pmax	pmax		
	comp=E,509nm,0.5s						
GLVR				MLR	MLR		
	comp=E,14μm,12.0s						
GRPR	**Tuman**	**9.65**	**20**	*c i*P	**Pn**	**19 33 47.9**	**-4.5**
GRPR				pmax	pmax		
	comp=N,1μm,0.4s						
GRPR				pmax	pmax		
	comp=E,826nm,0.4s						
GRPR				pmax	pmax		
	comp=Z,2μm,0.4s						
LAGR	**Lagunnoye**	**9.71**	**20**	*c i*P	**Pn**	**19 33 50.4**	**-2.8**
LAGR				pmax	pmax		
	comp=E,2μm,0.5s						
LAGR				pmax	pmax		
	comp=Z,5μm,0.5s						
LAGR				pmax	pmax		
	comp=N,2μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**9.71**	**20**	*c i*P	**Pn**	**19 33 48.8**	**-4.5**
YUK				pmax	pmax		
	comp=E,493nm,0.4s						
YUK				pmax	pmax		
	comp=Z,2μm,0.4s						
YUK				pmax	pmax		
	comp=N,2μm,0.5s						
SHO	**Shikotan**	**9.86**	**24**	*c i*P	Pn	19 33 49.9	-5.4
SHO				pmax	pmax		
	comp=Z,823nm,0.5s						
SHO				pmax	pmax		
	comp=E,332nm,0.6s						
SHO				pmax	pmax		
	comp=N,433nm,0.7s						
TEY	**Ternei**	**10.67**	**342**	*e*P	**Pn**	**19 34 05.0**	**-1.3**
TEY				pmax	pmax		
	comp=Z,1μm,1.0s						
TEY				pmax	pmax		
	comp=N,33nm,0.7s						
TEY				pmax	pmax		
	comp=E,21nm,0.7s						
TEY				pmax	pmax		
	comp=Z,33nm,0.7s						
MSHR	**Mys Shultsa**	**10.95**	**317**	⇑*e*P	**Pn**	**19 34 11.3**	**+1.0**
KSRS	**Korea Array**	**11.07**	**287**	Pn	**Pn**	**19 34 14.8**	**+2.9**
	comp=Z,4.7nm,0.3s,baz=102,slow=13,SNR=158						
KSRS				LR	LR	19 38 50.2	
	comp=Z,121μm,19.3s,baz=93,slow=40						
KS01	**Wonju Array Si**	**11.10**	**287**	*e*Pn	**Pn**	**19 34 13.9**	**+1.6**
KS15	**Wonju Array Si**	**11.10**	**287**	*e*Pn	**Pn**	**19 34 14.1**	**+1.7**
KSAR	**Wonju Array Be**	**11.10**	**287**	Pn	**Pn**	**19 34 14.8**	**+2.5**
KSAR	**Wonju Array Be**	**11.10**	**287**	P	**Pn**	**19 34 14.9**	**+2.5**
TJN	**Taejon**	**11.41**	**281**	*i* P	**Pn**	**19 34 20.5**	**+4.0**
KUR	**Kuril'sk**	**11.41**	**24**	*c i*P	**Pn**	**19 34 12.4**	**-4.1**
KUR				pmax	pmax		
	comp=Z,683nm,0.7s						
KUR				pmax	pmax		
	comp=E,124nm,0.4s						
KUR				pmax	pmax		
	comp=N,192nm,0.6s						
KUR				pmax	pmax		
	comp=Z,2μm,1.7s						
KUR				MLR	MLR		
	comp=Z,40μm,16.0s						
KUR				MLR	MLR		
	comp=E,27μm,15.0s						
USRK	**Ussuriysk Ar.**	**11.66**	**325**	Pn	**Pn**	**19 34 20.2**	**+0.2**
	comp=E,15nm,0.3s,baz=131,slow=14,SNR=163						
YSS	**Yuzh-Sakhalins**	**12.02**	**5**	*e*Pn	**Pn**	**19 34 21.0**	**-3.8**
YSS	**Yuzh-Sakhalins**	**12.02**	**5**	⇓*e*P	**Pn**	**19 34 21.3**	**-3.5**
YSS				pmax	pmax		
	comp=Z,920nm,1.1s						
YSS				pmax	pmax		
	comp=N,880nm,1.2s						
YSS				pmax	pmax		
	comp=E,220nm,0.9s						
INCN	**Inchon**	**12.09**	**286**	*e*Pn	**Pn**	**19 34 27.8**	**+1.9**
INCN	**Inchon**	**12.09**	**286**	Pn	**Pn**	**19 34 30.3**	**+4.4**
SNR=49							
INCN	**Inchon**	**12.09**	**286**	P	**Pn**	**19 34 30.3**	**+4.4**
SNR=49							
MDJ	**Mudanjiang**	**13.16**	**321**	P	**Pn**	**19 34 39.7**	**-0.7**
M

comp=Z,7μm,10.0s
NKL Nikolayevsk 18.17 359 *e*P **Pn** **19 35 41.0 -4.7**
NKL *e* 19 39 11.0
NKL pmax pmax
comp=N,460nm,1.0s
NKL pmax pmax
comp=E,220nm,1.0s
NKL pmax pmax
comp=Z,690nm,1.0s
NKL pmax pmax
comp=N,6μm,10.0s
NKL pmax pmax
comp=E,700nm,10.0s
NKL pmax pmax
comp=Z,9μm,10.0s
NJ2 Nanjing 18.92 267 *e*P **P** **19 35 53.8 -0.5**
NJ2 pP **Pn** **19 35 57.2 +2.2**
NJ2 sP **sP** **19 36 04.4 +1.6**
NJ2 S **Sn** **19 39 26.9 +0.7**
NJ2 pmax pmax
comp=Z,60nm,0.9s
NJ2 pmax pmax
comp=Z,4μm,6.2s
NJ2 LR LR
comp=Z,115μm,16.3s
NJ2 LR LR
comp=Z,79μm,19.5s
NJ2 LR LR
comp=Z,78μm,19.5s
YOJ Yonaguni jima 18.99 241 *e*P **P** **19 35 54.1 -0.9**
comp=Z,530nm,0.9s
YOJ Yonaguni jima 18.99 241 *e*P **P** **19 35 54.2 -0.9**
YOJ pmax pmax
comp=Z,531nm,0.9s
SKR Severo-Kuril's 19.04 30 *e*P **P** **19 35 55.3 -0.1**
SKR *e*S **S** **19 39 30.4 0.0**
SKR pmax pmax
comp=Z,8μm,3.1s
SKR MLR MLR
comp=Z,33μm,17.0s
TIA Tai'an 19.68 281 P **P** **19 36 01.7 -0.8**
TIA pmax pmax
comp=Z,3μm,6.6s
TIA LR LR
comp=Z,42μm,16.7s
TIA LR LR
comp=Z,23μm,18.8s
TIA LR LR
comp=Z,45μm,20.1s
TATO Taipei 19.80 245 *e*P **P** **19 36 03.4 -0.6**
comp=Z,1μm,1.7s
YHNB Yeheng 20.06 245 *e*P **P** **19 36 05.8 -1.1**
comp=Z,220nm,0.9s
NACB Ninganchiao 20.19 243 *e*P **P** **19 36 05.2 -3.0**
comp=Z,192nm,1.2s
BJI Beijing 20.52 292⇑ *i*P **P** **19 36 09.2 -2.5**
BJI S **S** **19 39 52.4 -7.9**
BJI pmax pmax
comp=Z,310nm,1.6s
BJT Baijiatuau 20.52 292 *e*P **P** **19 36 08.8 -2.9**
comp=Z,469nm,0.7s
BJT LR LR
comp=Z,52μm,19.0s
BJT Baijiatuau 20.52 292 *e*P **P** **19 36 08.8 -2.9**
BJT pmax pmax
comp=Z,469nm,0.7s
BJT MLR MLR
comp=Z,52μm,19.0s
YULB Yu-li 20.88 242 *e*P **P** **19 36 13.0 -2.7**
comp=Z,143nm,0.9s
SSLB Suanglung 20.89 243 *e*P **P** **19 36 13.1 -2.7**
comp=Z,171nm,0.9s
ZEA Zeya 21.20 337 *e*P **P** **19 36 15.2 -3.7**
ZEA *e*PPP PPP 19 36 54.0
ZEA *e*S **S** **19 40 16.0 +2.5**
ZEA *e* 19 40 44.0
ZEA pmax pmax
comp=E,420nm,0.8s
ZEA pmax pmax
comp=N,860nm,1.0s
ZEA pmax pmax
comp=Z,2μm,1.2s
ZEA pmax pmax
comp=Z,5μm,8.0s
ZEA smax smax
comp=E,9μm,6.0s
ZEA smax smax
comp=Z,17μm,6.0s
ZEA smax smax
comp=N,14μm,8.0s
ZEA MLR MLR
comp=E,39μm,16.0s
ZEA MLR MLR
comp=N,85μm,16.0s
HIA Hailar 21.32 319 *e*P **P** **19 36 16.4 -3.9**
comp=N,394nm,1.1s
HIA LR LR
comp=Z,26μm,19.0s
HIA Hailar 21.32 319 *e*P **P** **19 36 16.4 -3.9**
HIA pmax pmax
comp=Z,394nm,1.1s
HIA MLR MLR
comp=Z,26μm,19.0s
TWG Pinlang 21.39 241 *e*P **P** **19 36 19.3 -1.9**
comp=Z,932nm,0.9s
TWG *e*S Sn 19 40 22.7 -3.2
TPUB Ta-pu 21.42 243 *e*P **P** **19 36 19.1 -2.4**
comp=Z,146nm,0.7s
PEA0B Petropavlovsk- 21.54 28 *e*P **P** **19 36 21.9 -0.6**
comp=Z,864nm,1.0s
PETK Petropavlovsk- 21.54 28 P **P** **19 36 23.1 +0.6**
comp=Z,153nm,1.1s,baz=208,slow=2.9,SNR=47
PETK LR LR 19 46 28.1
comp=Z,26μm,18.6s,baz=218,slow=42
PETK Petropavlovsk- 21.54 28 *e*P **P** **19 36 22.1 -0.4**
GUMO Guam 21.54 170 P **P** **19 36 22.2 -0.6**
comp=Z,499nm,0.7s,baz=171,slow=7.5,SNR=18
GUMO LR LR 19 43 32.4
comp=Z,39μm,21.5s,baz=8.0,slow=34
GUMO Guam 21.54 170 *e*P **P** **19 36 22.5 -0.3**
GUMO pmax pmax
comp=Z,6μm,1.3s
PEA1 Petropavlovsk- 21.54 28 *e*P **P** **19 36 23.1 +0.6**
PET Petropavlovsk 21.84 29 *e*P **P** **19 36 24.9 -0.9**
comp=Z,804nm,1.2s
PET LR LR
comp=Z,46μm,22.0s
PET Petropavlovsk 21.84 29 *de*P **P** **19 36 25.9 +0.1**
PET *e*S **S** **19 40 17.4 -8.7**
PET pmax pmax
comp=Z,5μm,14.4s
PET pmax pmax
comp=Z,376nm,1.0s
PET pmax pmax
comp=Z,5μm,14.9s
PET MLR MLR
comp=Z,31μm,16.0s
QZH Quanzhou 22.01 249⇓ *i*P **P** **19 36 25.1 -2.7**
QZH S **S** **19 40 22.8 -7.0**
QZH LR LR
comp=Z,46μm,16.6s
QZH LR LR
comp=Z,32μm,15.5s
WHN Wuhan 23.05 267 P **P** **19 36 37.4 -1.4**
WHN S **S** **19 40 44.2 -4.3**
WHN pmax pmax
comp=Z,870nm,1.2s
WHN LR LR
comp=Z,142μm,14.7s
WHN LR LR
comp=Z,97μm,17.9s
WHN LR LR
comp=Z,140μm,14.4s
TIY Taiyuan 23.36 285 P **P** **19 36 40.6 -1.4**
TIY S **S** **19 40 55.5 +1.7**
TIY pmax pmax
comp=Z,730nm,6.0s
TIY LR LR
comp=Z,57μm,17.4s
TIY LR LR
comp=Z,29μm,16.0s
TIY LR LR
comp=Z,72μm,20.0s
HHC Hu-ho-hao-te 24.10 293 *e*P **P** **19 36 47.7 -1.4**
HHC pP pP 19 36 52.0 -3.4
HHC sP sP 19 36 54.6 -3.4
HHC PP **PnPn** **19 37 21.9 +3.6**
HHC S **S** **19 41 01.1 -4.6**
HHC sS pS 19 41 08.0 -4.4
HHC SS **SnSn** **19 41 52.0 +4.8**
HHC pmax pmax
comp=Z,530nm,5.0s
HHC LR LR
comp=Z,9μm,14.1s
HHC LR LR
comp=Z,21μm,14.3s
HHC LR LR
comp=Z,18μm,14.3s
CLNS Chul'man 24.53 338 *e*P **P** **19 36 50.2 -2.6**
CLNS *e**PP **sP** **19 37 02.7 +1.0**
CLNS *e* 19 37 24.2
CLNS *e* 19 40 24.5
CLNS *e*S **S** **19 41 09.1 -3.1**
CLNS *e*SS **SnSn** **19 42 04.3 +6.9**
CLNS pmax pmax
comp=Z,768nm,0.9s
CLNS pmax pmax
comp=N,621nm,1.2s
CLNS pmax pmax
comp=E,181nm,0.9s
CLNS pmax pmax
comp=N,447nm,1.1s
CLNS pmax pmax
comp=Z,265nm,1.0s
CLNS pmax pmax
comp=E,150nm,1.0s
CLNS smax smax
comp=E,3μm,11.7s
CLNS smax smax
comp=N,10μm,15.7s
CLNS MLR MLR
comp=Z,50μm,16.0s
CLNS MLR MLR
comp=N,44μm,17.0s
CLNS MLR MLR
comp=E,37μm,19.0s
APYP Conner 24.67 231 *e*P **P** **19 36 49.5 -4.8**
CAUP Cauayan 24.99 229 *e*P **P** **19 36 56.1 -1.1**
ABRA Dolores 25.17 232 *e*P **P** **19 36 57.0 -1.8**
BTO Baotou 25.26 292 *e*P **P** **19 36 56.6 -3.0**
BTO S **S** **19 41 19.1 -5.1**
BTO LR LR
comp=E,19μm,17.8s
BTO LR LR
comp=E,7μm,14.5s
MA2 Magadan 25.39 11 P **P** **19 37 00.8 +0.3**
comp=E,872nm,1.0s,baz=196,slow=7.7,SNR=76
MA2 LR LR 19 48 14.2
comp=E,35μm,19.4s,baz=203,slow=39
MA2 Magadan 25.39 11 *e*P **P** **19 36 59.8 -0.6**
comp=E,795nm,0.9s
MA2 Magadan 25.39 11 *e*P **P** **19 37 00.6 +0.2**
MA2 pmax pmax
comp=Z,944nm,1.0s
MA2 MLR MLR
comp=Z,36μm,18.8s
BALP Baler 26.06 228 *e*P **P** **19 37 04.2 -2.8**
CIT Chita 26.13 319 *e*P **P** **19 37 05.2 -2.1**
CIT *e* 19 37 18.9
CIT *e* 19 37 47.8
CIT *e* 19 37 58.1
CIT *e* 19 40 34.4
CIT *e*S **S** **19 41 39.0 +1.3**
CIT pmax pmax
comp=Z,725nm,1.1s
PVCP Virac 26.32 220 *e*P **P** **19 37 11.2 +2.0**
BOLP Bolinao 26.62 231 *e*P **P** **19 37 10.5 -1.5**
XAN Xi'an 26.62 277 P **P** **19 37 09.8 -2.2**
XAN pP pP 19 37 12.2 -6.1
XAN S **S** **19 41 36.1 -10**
XAN ScP **ScP** **19 44 16.3 +1.8**
XAN pmax pmax
comp=Z,490nm,1.2s
XAN pmax pmax
comp=Z,2μm,9.6s
XAN LR LR
comp=Z,61μm,19.6s
XAN LR LR
comp=Z,69μm,19.4s
GZH Guangzhou 27.06 252 P **P** **19 37 10.6 -5.3**
GZH LR LR
comp=Z,92μm,16.7s
GZH LR LR
comp=Z,56μm,16.5s
SCZP Santa Cruz 27.07 230 *e*P **P** **19 37 14.6 -1.4**
ENH Enshi 27.12 269 *e*P **P** **19 37 14.0 -2.5**
comp=Z,416nm,0.8s
ENH LR LR
comp=Z,64μm,20.0s
H11N2 WAKE ISLAND Hy 27.25 117 T T 20 05 50.8
baz=308
H11N1 WAKE ISLAND Hy 27.25 117 T T 20 05 55.3
baz=308,slow=74
H11N3 WAKE ISLAND Hy 27.26 117 T T 20 05 52.1
baz=308,slow=74
WAKE Wake Island 27.35 118 *e*P **P** **19 37 17.8 -0.7**
comp=Z,606nm,1.1s
WAKE LR LR
comp=Z,23μm,22.0s
MCO Taipa Grande 27.41 250 P **P** **19 37 21.0 +1.9**
BOAC Boac 27.70 224 *e*P **P** **19 37 20.3 -1.4**
TGY Tagaytay City 27.72 226 P **P** **19 37 21.4 -0.5**
comp=Z,627nm,1.1s,baz=36,slow=8.7,SNR=4.5
TGY LR LR 19 47 02.5
comp=Z,19μm,21.3s,baz=28,slow=34
H11S3 WAKE ISLAND Hy 27.89 119 T T 20 06 37.4
baz=312,slow=75,SNR=338
H11S1 WAKE ISLAND Hy 27.89 119 T T 20 06 41.8
baz=312,slow=75,SNR=588
H11S2 WAKE ISLAND Hy 27.90 119 T T 20 06 38.4
baz=312,slow=75,SNR=352
YAK Yakutsk 28.05 348 *e*P **P** **19 37 23.1 -1.4**
comp=Z,1μm,0.8s
YAK Yakutsk 28.05 348 *d i*P **P** **19 37 23.8 -0.6**
YAK *e**PP **sP** **19 37 35.0 +1.7**
YAK *e*S **S** **19 42 05.6 -2.1**
YAK *e**SS **sS** **19 42 21.6 +3.5**
YAK *e*SSS SSS 19 43 33.9
YAK *e* 19 48 07.8
YAK pmax pmax
comp=Z,1μm,0.8s
YAK pmax pmax
comp=E,26nm,0.7s
YAK pmax pmax
comp=N,210nm,1.0s
YAK smax smax
comp=N,2μm,4.7s
YAK smax smax
comp=E,1μm,4.3s
YAK MLR MLR
comp=Z,64μm,19.0s
YAK MLR MLR
comp=N,74μm,18.0s
YAK MLR MLR
comp=E,36μm,18.0s
OCLP Ormoc 28.24 217 *e*P **P** **19 37 30.6 +4.1**
ULN Ulaanbaatar 28.47 307 *e*P **P** **19 37 27.9 -0.6**
comp=E,288nm,1.2s
ULN LR LR
comp=Z,41μm,20.0s
ULN Ulaanbaatar 28.47 307 P **P** **19 37 29.4 +0.9**
SNR=148
ULN Ulaanbaatar 28.47 307 *d i*P **P** **19 37 29.0 +0.5**
ULN pmax pmax
comp=Z,95nm,0.9s
ULN MLR MLR
comp=Z,37μm,20.0s
SEY Seymchan 28.83 11 P **P** **19 37 31.4 +0.1**
comp=Z,101nm,0.8s,baz=198,slow=5.7,SNR=70
SEY LR LR 19 50 24.8
comp=Z,22μm,19.5s,baz=204,slow=39
SEY Seymchan 28.83 11 *de*P **P** **19 37 31.7 +0.4**
SONA1 Songino Array 28.89 307 *e*P **P** **19 37 31.3 -1.0**
SONA0 Songino Array 28.89 307 *e*P **P** **19 37 30.9 -1.3**
SONA0 *e*PcP **PcP** **19 40 42.1 +1.0**
SONM Songino Array 28.89 307 P **P** **19 37 30.9 -1.3**
comp=Z,83nm,1.0s,baz=109,slow=7.1,SNR=192
SONM PcP **PcP** **19 40 42.1 +1.0**
comp=Z,17nm,0.5s,baz=115,slow=2.5,SNR=11
SONM LR LR 19 49 22.7
comp=Z,47μm,21.6s,baz=106,slow=37
SMY Shemya 29.23 42 *e*P **P** **19 37 35.9 +1.0**
comp=Z,564nm,1.2s
SMY Shemya 29.23 42 *e*P **P** **19 37 35.9 +1.0**
SMY pmax pmax
comp=Z,564nm,1.2s
BUSP Coron 29.82 225 *e*P **P** **19 37 38.9 -1.6**
LZH Lanzhou 30.37 283 *e*P **P** **19 37 45.0 -0.5**
LZH pP pP 19 37 48.0 -3.8
LZH sP sP 19 37 50.1 -4.3
LZH PcP **PcP** **19 40 48.8 +3.7**
LZH *e*S **S** **19 42 42.9 -2.1**
LZH pmax pmax
comp=Z,510nm,1.1s
LZH pmax pmax
comp=Z,3μm,4.1s
LZH LR LR
comp=Z,88μm,14.0s
LZH LR LR
comp=Z,74μm,14.1s
LZH LR LR
comp=Z,94μm,15.1s
GYA Guiyang 30.83 264⇑ *i*P **P** **19 37 48.9 -0.7**
GYA pP pP 19 37 56.2 +0.3
GYA PP **PnPn** **19 38 52.0 +2.0**
GYA PcP **PcP** **19 40 48.4 +2.0**
GYA S **S** **19 42 52.8 +0.5**
GYA ScP **ScP** **19 44 29.0 +1.1**
GYA SS **SnSn** **19 44 34.6 +2.9**
GYA ScS **ScS** **19 48 24.2 -0.7**
GYA pmax pmax
comp=Z,210nm,1.0s
GYA pmax pmax
comp=Z,2μm,10.2s
GYA LR LR
comp=Z,78μm,17.7s
GYA LR LR
comp=Z,33μm,19.6s
GYA LR LR
comp=Z,45μm,18.9s
MATI Matì 31.14 210 *e*P **P** **19 37 50.4 -1.8**
DAV Davao City (W) 31.31 211 LR LR 19 51 06.5
comp=Z,16μm,18.9s,baz=49,slow=38
DAV Davao City (W) 31.31 211 *e*P **P** **19 37 52.5 -1.2**
DAV *e*pP **P** **19 37 53.4 -0.3**
IRK Irkutsk 31.44 315 *e*P **P** **19 37 54.7 +0.2**
IRK pmax pmax
comp=Z,279nm,1.9s
ZAK Zakamensk 31.50 311 *e*P **P** **19 37 56.1 +0.9**
ZAK pmax pmax
comp=Z,145nm,1.1s
PAGZ Pagadian 31.61 216 *e*P **P** **19 37 55.5 -0.8**
CD2 Chengdu 31.63 273 P **P** **19 37 54.4 -2.1**
CD2 sP pP 19 38 02.0 -0.9
CD2 PP **PP** **19 39 05.6 -2.4**
CD2 S **S** **19 42 58.8 -5.8**
CD2 sS pS 19 43 12.0 +0.2
CD2 pmax pmax
comp=Z,510nm,0.8s
CD2 pmax pmax
comp=Z,940nm,4.3s
CD2 LR LR
comp=Z,175μm,17.8s
CD2 LR LR
comp=Z,102μm,20.2s
TLY Talaya 31.63 314 *e*P **P** **19 37 55.3 -1.0**
comp=Z,175nm,1.0s
TLY LR LR
comp=Z,26μm,19.0s
TLY Talaya 31.63 314 *d i*P **P** **19 37 56.4 +0.1**
TLY *e* 19 40 48.3
TLY *e*S **S** **19 43 05.1 +0.9**
TLY *e*SS **SnSn** **19 44 52.4 +1.9**
TLY *e*SSS SSS 19 45 16.1
TLY pmax pmax
comp=Z,202nm,1.0s
TLY MLR MLR
comp=Z,26μm,19.0s
QIZ Qiongzhong 32.03 248 P **P** **19 38 00.5 +0.4**
QIZ sP **pP** **19 38 06.8 +0.4**
QIZ S **S** **19 43 13.3 +2.4**
QIZ sS **sS** **19 43 21.8 +0.4**
QIZ LR LR
comp=Z,27μm,18.1s
QIZ LR LR
comp=Z,31μm,19.1s
QIZ LR LR
comp=Z,16μm,20.1s
QIZ Qiongzhong 32.03 248 *e*P **P** **19 37 59.3 -0.7**
comp=Z,35nm,0.9s
QIZ LR LR
comp=Z,20μm,20.0s
PATS Pohnpei 32.10 147 *e*P **P** **19 38 01.9 +1.3**
comp=Z,424nm,1.2s
GTA Gaotai 33.12 290⇑P **P** **19 38 09.4 -0.2**
GTA pP pP 19 38 13.4 -2.5
GTA sP sP 19 38 16.7 -1.8
GTA S **S** **19 43 23.7 -4.1**
GTA SS **SnSn** **19 45 22.5 -4.6**
GTA ScS **ScS** **19 48 33.8 -2.3**
GTA pmax pmax
comp=Z,49nm,1.6s
GTA pmax pmax
comp=Z,1μm,9.6s
GTA LR LR
comp=Z,33μm,18.2s
GTA LR LR
comp=Z,39μm,20.6s
MOY Mondy 33.22 313 *e*P **P** **19 38 10.3 0.0**
MOY pmax pmax
comp=Z,211nm,1.3s
KIWB Kanaga Island 34.03 47 *e*P **P** **19 38 18.5 +1.3**
SGSI Sangihe 34.39 209 P **P** **19 38 20.1 -0.6**
KMI Kunming 34.60 264⇑P **P** **19 38 22.3 -0.4**
KMI pP pP 19 38 27.5 -1.5
KMI sP sP 19 38 30.0 -1.6
KMI PP **PP** **19 39 39.7 -1.4**
KMI PcP **PcP** **19 40 57.9 +0.9**
KMI S **S** **19 43 50.3 -0.8**
KMI sS pS 19 43 59.4 +0.9
KMI pmax pmax
comp=Z,86nm,1.2s
KMI pmax pmax
comp=Z,430nm,3.6s
KMI LR LR
comp=Z,26μm,15.8s
KMI LR LR
comp=Z,49μm,17.2s
KMI LR LR
comp=Z,54μm,16.8s
GSTR Great Sitkin T 34.75 47 *e*P **P** **19 38 24.7 +1.3**
MIDW Midway 35.66 89 *e*P **P** **19 38 31.9 +0.4**
comp=Z,266nm,0.8s
MIDW LR LR
comp=Z,12μm,22.0s
ATKA Atka Island 35.89 47 *e*P **P** **19 38 32.9 -0.4**
comp=Z,285nm,1.1s
BILL Bilibino 36.03 16 *e*P **P** **19 38 33.1 -1.1**
comp=Z,188nm,1.1s
BILL LR LR
comp=Z,41μm,20.0s
BILL Bilibino 36.03 16 *d i*P **P** **19 38 33.8 -0.4**
BILL *i* 19 38 41.4
BILL *i*S **S** **19 44 04.8 -7.0**
BILL *i*SS **SnSn** **19 46 39.7 +3.0**
BILL pmax pmax
comp=Z,223nm,1.2s
BILL MLR MLR
comp=Z,42μm,19.0s
BAKI Biak 36.30 189 P **P** **19 38 37.7 +0.6**
MYLDM Lahad Datu 36.37 221 *e*P **P** **19 38 36.2 -1.5**
comp=Z,170nm,1.0s
TNTI Ternate 36.42 204 *e*P **P** **19 38 36.9 -1.2**
comp=Z,545nm,1.4s
SIJI Sorong 36.87 197 LR LR 19 51 11.3
comp=Z,30μm,21.3s,baz=35,slow=32
RKPI Ransiki, Papua 36.90 192 P **P** **19 38 40.9 -1.3**
KKM Kota Kinabalu 36.92 225 *e*P **P** **19 38 41.5 -1.0**
comp=Z,92nm,1.1s
SRPI Serui, Papua 36.96 188 P **P** **19 38 42.1 -0.6**
MANU Manus Island 37.27 170 *e*P **P** **19 38 43.5 -1.8**
comp=Z,105nm,0.9s
JAY Jayapura 37.30 181 LR LR 19 54 34.8
comp=Z,20μm,18.2s,slow=37
JAY Jayapura 37.30 181 P **P** **19 38 45.2 -0.4**
JAY Jayapura 37.30 181 P **P** **19 38 47.3 +1.7**
JAY pmax pmax
comp=Z,2μm,1.0s

TIXI	**Tiksi**	**37.32 354**	*e*P	**P**	**19 38 44.0**	**-1.1**	
	comp=Z,152nm,1.1s						
TIXI			LR	LR			
	comp=Z,37µm,20.0s						
TIXI	**Tiksi**	**37.32 354**	*e*P	**P**	**19 38 44.0**	**-1.1**	
TIXI			pmax	pmax			
	comp=Z,152nm,1.1s						
TIXI			MLR	MLR			
	comp=Z,37µm,20.0s						
GENI	**Genyem**	**37.39 182**	P	**P**	**19 38 46.5**	**+0.2**	
HVS	**Khovu-Aksy**	**37.61 310**	*i* P	**P**	**19 38 49.4**	**+1.4**	
LBMI	**Labuha**	**37.70 203**	P	**P**	**19 38 48.6**	**-0.4**	
SKNT	**Sakolnakorn**	**37.75 251**	P	**P**	**19 38 48.0**	**-1.4**	
	comp=Z,77nm,1.3s						
NONG	**Nongkai**	**37.78 254**	P	**P**	**19 38 48.0**	**-1.7**	
	comp=Z,320nm,1.1s,comp=Z,3µm						
KMSI	**Cibinong**	**37.84 209**	P	**P**	**19 38 48.3**	**-1.9**	
FAKI	**Fak Fak**	**38.64 195**	P	**P**	**19 38 56.4**	**-0.5**	
FAKI	**Fak Fak**	**38.64 195**	*e*P	**P**	**19 38 55.8**	**-1.1**	
	comp=Z,832nm,1.4s						
WAMI	**Wamena**	**38.73 184**	P	**P**	**19 39 02.2**	**+4.6**	
MRSI	**Marisa**	**38.78 212**	P	**P**	**19 38 57.1**	**-1.0**	
KMPI	**Kaimana, Papua**	**39.09 192**	P	**P**	**19 38 59.5**	**-1.1**	
SPIA	**Saint Paul Isl**	**39.19 40**	*e*P	**P**	**19 39 01.3**	**+0.3**	
	comp=Z,491nm,1.3s						
NIKH	**Nikolski High**	**39.23 47**	*e*P	**P**	**19 39 00.9**	**-0.6**	
	comp=Z,574nm,0.7s						
SANI	**Sanana**	**39.53 204**	P	**P**	**19 39 02.2**	**-2.1**	
PAYA	**Payao**	**39.69 258**	P	**P**	**19 39 06.2**	**+0.5**	
	comp=Z,35nm,0.8s,comp=Z,284nm						
MPSI	**Mapaga**	**39.83 215**	P	**P**	**19 39 04.6**	**-2.2**	
MSAI	**Masohi**	**39.85 199**	P	**P**	**19 39 07.2**	**+0.2**	
CHAI	**Chaiyaphum**	**39.93 252**	P	**P**	**19 39 06.1**	**-1.6**	
	comp=Z,169nm,0.9s,comp=Z,1µm						
CMAI	**Chiengmai2**	**40.06 259**	P	**P**	**19 39 09.4**	**+0.4**	
	comp=Z,739nm,1.2s						
DIBR	**DIBRUGARH**	**40.07 272**	*e*P	**P**	**19 39 07.8**	**-1.0**	
APSI	**Ampana**	**40.15 211**	P	**P**	**19 39 07.0**	**-2.5**	
NLAI	**Namlea**	**40.28 202**	P	**P**	**19 39 10.8**	**+0.2**	
RABL	**Rabaul**	**40.28 163**	*e*P	**P**	**19 39 09.2**	**-1.4**	
	comp=Z,204nm,1.0s						
LAMP	**Lampang**	**40.32 257**	P	**P**	**19 39 09.9**	**-1.1**	
	comp=Z,138nm,0.8s,comp=Z,965nm						
PBKT	**Sadao Pong**	**40.34 253**	P	**P**	**19 39 08.5**	**-2.6**	
	comp=Z,420nm,1.1s,comp=Z,4µm						
PBKT	**Sadao Pong**	**40.34 253**	*e*P	**P**	**19 39 08.3**	**-2.8**	
AAI	**Ambon**	**40.38 200**	P	**P**	**19 39 09.1**	**-2.3**	
PHIT	**Phitsanulok**	**40.43 255**	P	**P**	**19 39 11.3**	**-0.5**	
	comp=Z,103nm,0.9s,comp=Z,994nm						
CHTO	**Chiang Mai**	**40.72 258**	P	**P**	**19 39 13.1**	**-1.2**	
	comp=Z,859nm,0.9s,comp=Z,7µm						
CHTO	**Chiang Mai**	**40.72 258**	*e*P	**P**	**19 39 12.5**	**-1.8**	
	comp=Z,134nm,0.8s						
CHTO			LR	LR			
	comp=Z,14µm,19.0s						
CHTO	**Chiang Mai**	**40.72 258**	P	**P**	**19 39 13.9**	**-0.4**	
	SNR=30						
CHTO	**Chiang Mai**	**40.72 258**	P	**P**	**19 39 13.9**	**-0.4**	
	SNR=30						
CHTO	**Chiang Mai**	**40.72 258**	*e*P	**P**	**19 39 12.5**	**-1.8**	
CHTO			pmax	pmax			
	comp=Z,130nm,0.9s						
BNDI	**Bandanaira**	**40.72 198**	P	**P**	**19 39 15.0**	**+0.8**	
	comp=Z,1µm,1.2s,comp=Z,15µm						
UNV	**Unalaska Valle**	**40.73 46**	*e*P	**P**	**19 39 14.7**	**+0.8**	
	comp=Z,198nm,1.4s						
JORH	**JORHAT**	**40.89 272**	*e*P	**P**	**19 39 13.7**	**-1.9**	
CM31	**Chiang Mai Arr**	**40.91 257**	*e*P	**P**	**19 39 14.1**	**-1.8**	
CM31			*e*PcP	**PcP**	**19 41 16.8**	**+0.5**	
CMAR	**Chiang Mai Arr**	**40.91 257**	P	**P**	**19 39 14.1**	**-1.8**	
	comp=Z,93nm,0.7s,baz=47,slow=7.3,SNR=169						
CMAR			PcP	**PcP**	**19 41 16.8**	**+0.5**	
	comp=Z,46nm,1.0s,baz=33,slow=3.3,SNR=8.3						
CMAR			LR	LR	19 58 56.8		
	comp=Z,18µm,18.5s,baz=37,slow=40						
CM01	**Chiang Mai Arr**	**40.92 257**	*e*P	**P**	**19 39 14.2**	**-1.8**	
ZIRO	**ZIRO**	**40.92 273**	*e*P	**P**	**19 39 14.6**	**-1.5**	
PCI	**Palu**	**40.95 214**	P	**P**	**19 39 13.8**	**-2.3**	
	comp=Z,318nm,1.1s,comp=Z,4µm						
SRAK	**Srakaew**	**41.01 249**	P	**P**	**19 39 12.1**	**-4.5**	
	comp=Z,779nm,1.0s,comp=Z,6µm						
AKUT	**Akutan**	**41.19 45**	*e*P	**P**	**19 39 19.1**	**+1.4**	
	comp=Z,586nm,1.8s						
CHBT	**CHBT**	**41.56 248**	P	**P**	**19 39 22.6**	**+1.4**	
	comp=Z,223nm,1.3s,comp=Z,76µm						
WMQ	**Urumqi**	**41.71 299**	P	**P**	**19 39 23.0**	**+0.8**	
WMQ			pP	pP	19 39 26.2	-2.5	
WMQ			sP	sP	19 39 33.0	+1.8	
WMQ			PcP	**PcP**	**19 41 21.4**	**+2.9**	
WMQ			S	**S**	**19 45 37.1**	**-0.9**	
WMQ			ScS	**ScS**	**19 49 17.7**	**-6.6**	
WMQ			pmax	pmax			
	comp=Z,1µm,1.1s						
WMQ			LR	LR			
	comp=Z,151µm,20.9s						
WMQ			LR	LR			
	comp=Z,41µm,20.9s						
WMQ			LR	LR			
	comp=Z,33µm,22.5s						
SMKI	**Samarinda**	**41.81 218**	P	**P**	**19 39 23.8**	**+0.6**	
IMP	**Imphal**	**41.93 269**	*e*P	**P**	**19 39 22.6**	**-1.6**	
TEZP	**TEZPUR**	**42.13 272**	*e*P	**P**	**19 39 24.5**	**-1.3**	
TEZP			IAmb	IAmb	19 39 39.0		
	comp=Z,917nm,1.5s						
SBUM	**Sibu**	**42.15 226**	*e*P	**P**	**19 39 24.6**	**-1.4**	
	comp=Z,89nm,1.0s						
LSA	**Lhasa**	**42.33 277**	P	**P**	**19 39 28.1**	**+0.2**	
LSA			pmax	pmax			
	comp=Z,400nm,9.5s						
LSA			LR	LR			
	comp=Z,8µm,15.8s						
LSA			LR	LR			
	comp=Z,9µm,15.8s						
LSA			LR	LR			
	comp=Z,35µm,22.1s						
LSA	**Lhasa**	**42.33 277**	*e*P	**P**	**19 39 27.7**	**-0.2**	
	comp=Z,71nm,0.8s						
LSA			LR	LR			
	comp=Z,38µm,21.0s						
LSA	**Lhasa**	**42.33 277**	P	**P**	**19 39 29.6**	**+1.7**	
LSA	**Lhasa**	**42.33 277**	*e*P	**P**	**19 39 27.7**	**-0.2**	
LSA			pmax	pmax			
	comp=Z,71nm,0.8s						
LSA			MLR	MLR			
	comp=Z,38µm,21.0s						
KDI	**Kendari**	**42.52 208**	P	**P**	**19 39 29.6**	**+0.7**	
	comp=Z,122nm,2.6s,comp=Z,3µm						
BKB	**Balikpapan**	**42.67 218**	P	**P**	**19 39 29.7**	**-0.5**	
	comp=Z,247nm,0.9s,comp=Z,4µm						
TTSI	**Tana Toraja**	**42.86 212**	P	**P**	**19 39 32.3**	**+0.6**	
	comp=Z,75nm,1.3s,comp=Z,2µm						
SRDT	**SRDT**	**43.07 252**	P	**P**	**19 39 32.9**	**-0.6**	
	comp=Z,258nm,0.9s,comp=Z,4µm						
GUWA	**GUWAHATI**	**43.21 272**	*e*P	**P**	**19 39 32.1**	**-2.5**	
ZAA0	**Zalesovo Array**	**43.24 314**	*e*P	**P**	**19 39 33.6**	**-0.8**	
	comp=Z,243nm,0.7s						
ZAA0			*e*PcP	**PcP**	**19 41 23.1**	**-0.2**	
ZAA1	**Zalesovo Array**	**43.24 314**	*e*P	**P**	**19 39 34.0**	**-0.4**	
ZAA1			*e*PcP	**PcP**	**19 41 23.3**	**0.0**	
ZAA1			*e*ScP	**ScP**	**19 45 12.4**	**-1.0**	
ZALV	**Zalesovo Beam**	**43.24 314**	P	**P**	**19 39 34.0**	**-0.4**	
	comp=Z,285nm,0.7s,baz=96,slow=6.6,SNR=167						
ZALV			PcP	**PcP**	**19 41 23.3**	**0.0**	
	comp=Z,125nm,0.6s,baz=107,slow=2.1,SNR=10						
ZALV			ScP	**ScP**	**19 45 12.4**	**-1.0**	
	comp=Z,37nm,1.0s,baz=73,slow=3.3,SNR=6.9						
ZALV	**Zalesovo Beam**	**43.24 314**	*e*P	**P**	**19 39 34.1**	**-0.3**	
ZALV			*e*PcP	**PcP**	**19 41 23.0**	**-0.3**	
ZALV			ScP	**ScP**	**19 45 12.4**	**-1.0**	
SHL	**Shillong**	**43.31 271**	*e*P	**P**	**19 39 33.1**	**-2.5**	
SHL			*e*P	**P**	**19 39 35.0**	**-0.6**	
SHL			IAmb	IAmb	19 39 37.6		
	comp=Z,366nm,0.1s						
SHL			*e*x	x	19 44 52.0		
SHL	**Shillong**	**43.31 271**	*e*P	**P**	**19 39 33.3**	**-2.3**	
	comp=Z,125nm,1.0s						
SHL			*e*PcP	**PcP**	**19 41 23.4**	**-0.9**	
SHL	**Shillong**	**43.31 271**	*e*P	**P**	**19 39 33.3**	**-2.3**	
SHL			*e*		19 41 23.4		
SHL			pmax	pmax			
	comp=Z,125nm,1.0s						
ZSN	**Zaisan**	**43.33 305**⇓	*i* P	**P**	**19 39 36.2**	**+0.9**	
	comp=Z,35nm,0.8s						
ZSN			*i* S	**S**	**19 46 03.4**	**+1.7**	
ZSN			LR	LR	19 59 25.4		
	comp=Z,1µm,13.7s						
ANM	**Nome**	**43.41 30**	*e*P	**P**	**19 39 36.5**	**+0.8**	
	comp=Z,306nm,1.0s						
ANM	**Nome**	**43.41 30**	*e*P	**P**	**19 39 36.5**	**+0.8**	
ANM			pmax	pmax			
	comp=Z,306nm,1.0s						
MTKI	**Muara Teweh, K**	**43.43 220**	P	**P**	**19 39 36.3**	**-0.1**	
AZL	**Aizawl**	**43.44 269**	*e*P	**P**	**19 39 34.0**	**-2.5**	
AZL			IAmb	IAmb	19 39 39.4		
	comp=Z,110nm,0.4s						
PHET	**Kaeng Krachan**	**43.53 250**	P	**P**	**19 39 36.7**	**-0.5**	
	comp=Z,178nm,0.9s,comp=Z,1µm						
SPSI	**Sidrap Palu**	**43.70 212**	P	**P**	**19 39 36.4**	**-2.1**	
SAUI	**Saumlaki**	**43.76 194**	P	**P**	**19 39 39.1**	**+0.2**	
SAUI	**Saumlaki**	**43.76 194**	*e*P	**P**	**19 39 38.8**	**-0.1**	
	comp=Z,3µm,1.2s						
KSM	**Kuching**	**44.08 228**	*e*P	**P**	**19 39 39.6**	**-2.0**	
	comp=Z,126nm,1.0s						
NVS	**Novosibirsk**	**44.20 315**⇑	*i* P	**P**	**19 39 42.5**	**+0.4**	
NVS			*e*S	**S**	**19 46 17.6**	**+3.4**	
NVS			*e*		19 49 36.3		
NVS			pmax	pmax			
	comp=Z,439nm,1.2s						
NVS			pmax	pmax			
	comp=N,38nm,0.6s						
NVS			pmax	pmax			
	comp=E,251nm,0.9s						
NVS			smax	smax			
	comp=N,124nm,2.0s						
NVS			smax	smax			
	comp=E,84nm,1.5s						
SDPT	**Sand Point**	**44.33 44**	*e*P	**P**	**19 39 42.0**	**-1.2**	
	comp=E,268nm,1.2s						
PMG	**Port Moresby**	**44.49 172**	*e*P	**P**	**19 39 44.6**	**-0.2**	
	comp=E,270nm,0.9s						
PMG			LR	LR			
	comp=Z,10µm,20.0s						
PMG	**Port Moresby**	**44.49 172**	*e*P	**P**	**19 39 44.6**	**-0.2**	
PMG			pmax	pmax			
	comp=Z,270nm,0.9s						
PMG			MLR	MLR			
	comp=Z,10µm,20.0s						
STKI	**Sintang**	**44.50 225**	P	**P**	**19 39 44.3**	**-0.7**	
AGT	**Agartala**	**44.55 270**	*e*P	**P**	**19 39 44.7**	**-0.7**	
TARA	**Tarawa**	**44.57 132**	*e*P	**P**	**19 39 45.9**	**+0.4**	
	comp=Z,500nm,1.3s						
TARA			LR	LR			
	comp=Z,1µm,20.0s						
TURI	**Tura**	**44.59 272**	*e*P	**P**	**19 39 45.3**	**-0.4**	
TURI			IAmb	IAmb	19 39 51.1		
	comp=Z,85nm,0.5s						
KAPI	**Kappang**	**44.65 211**	PFAKE		19 40 00.0	+14	
KAPI			LR	LR			
	comp=Z,11µm,21.0s						
BELO	**BELONIA**	**44.67 269**	*e*P	**P**	**19 39 44.3**	**-2.0**	
BKSI	**Bulukumba**	**44.77 211**	P	**P**	**19 39 47.3**	**+0.3**	
	comp=Z,69nm,0.8s,comp=Z,2µm						
NRIK	**Noril'sk**	**45.09 336**	P	**P**	**19 39 48.8**	**-0.3**	
	comp=Z,85nm,1.1s,baz=111,slow=8.1,SNR=54						
NRIK			LR	LR	20 01 43.9		
	comp=Z,56µm,18.4s,baz=106,slow=40						
NRIK	**Noril'sk**	**45.09 336**	P	**P**	**19 39 48.8**	**-0.3**	
NRIK			pmax	pmax			
	comp=Z,85nm,1.1s						
NRIK			MLR	MLR			
	comp=Z,56µm,18.4s						
MK01	**Makanchi Array**	**45.14 304**	*e*P	**P**	**19 39 49.0**	**-0.9**	
MK01			*e*PcP	**PcP**	**19 41 31.8**	**+1.8**	
MK31	**Makanchi Array**	**45.15 304**	*e*P	**P**	**19 39 49.1**	**-0.7**	
MK31	**Makanchi Array**	**45.15 304**	*i* P	**P**	**19 39 49.4**	**-0.5**	
MK31			pmax	pmax			
	comp=Z,192nm,0.8s						
MK32	**Makanchi Array**	**45.15 304**	*e*P	**P**	**19 39 49.4**	**-0.5**	
MK32			*e*PcP	**PcP**	**19 41 30.3**	**+0.2**	
MK32			*e*		20 17 39.2		
MKAR	**Makanchi Array**	**45.15 304**	P	**P**	**19 39 49.4**	**-0.5**	
	comp=Z,143nm,0.6s,baz=90,slow=10,SNR=158						
MKAR			PcP	**PcP**	**19 41 30.3**	**+0.2**	
	comp=Z,53nm,0.7s,baz=45,slow=4.9,SNR=3.6						
MKAR			LR	LR	19 59 56.3		
	comp=Z,27µm,18.1s,baz=86,slow=38						
MKAR			P4KPbc		20 17 39.2		
	comp=Z,0.5nm,0.6s,baz=80,slow=4.6,SNR=5.7						
MKAR	**Makanchi Array**	**45.15 304**	*e*P	**P**	**19 39 49.1**	**-0.7**	
	comp=Z,1µm,0.7s						
MKAR			PcP	**PcP**	**19 41 30.3**	**+0.2**	
MKAR			*e*		20 17 39.2		
GTK	**Tadong**	**45.30 275**	*e*P	**P**	**19 39 51.8**	**+0.4**	
GTK			IAmb	IAmb	19 40 03.8		
	comp=Z,125nm,1.2s						
MAKZ	**Makanchi**	**45.36 304**	*e*P	**P**	**19 39 50.8**	**-0.7**	
	comp=Z,233nm,0.9s						
MAKZ	**Makanchi**	**45.36 304**	*e*P	**P**	**19 39 50.8**	**-0.7**	
MAKZ			pmax	pmax			
	comp=Z,233nm,0.9s						
RDOG	**Red Dog Mine**	**45.39 26**	*e*P	**P**	**19 39 52.6**	**+1.2**	
	comp=Z,246nm,1.1s						
CHGN	**Chignik**	**45.53 43**	*e*P	**P**	**19 39 51.9**	**-0.8**	
	comp=Z,71nm,0.9s						
SEM	**Semipalatinsk**	**46.13 309**⇓	*e*P	**P**	**19 39 56.7**	**-1.1**	
	comp=Z,127nm,0.9s						
SEM			*e*S	**S**	**19 46 42.1**	**-0.5**	
SEM			LR	LR	20 02 48.5		
	comp=Z,7µm,15.7s						
ODAN	**Odare**	**46.47 275**	*e*Pn	**P**	**19 40 00.9**	**+0.1**	
	comp=Z,168nm,0.5s						
PBKI	**Pangkalan Bun**	**46.66 223**	P	**P**	**19 40 02.2**	**+0.2**	
MMRI	**Maumere**	**46.97 206**	P	**P**	**19 40 03.0**	**-1.4**	
MMRI	**Maumere**	**46.97 206**	*e*P	**P**	**19 40 03.1**	**-1.3**	
	comp=Z,623nm,1.2s						
RAMN	**Ramite**	**47.08 276**	*e*Pn	**P**	**19 40 04.6**	**-1.0**	
	comp=Z,772nm,0.8s						
JIRN	**Jiri**	**47.13 277**	*e*P	**P**	**19 40 05.8**	**-0.3**	
	comp=Z,638nm,0.4s						
KURK	**Kurchatov**	**47.14 310**	*e*P	**P**	**19 40 04.3**	**-1.1**	
	comp=Z,1µm,0.8s						
KURK			*e*PcP	**PcP**	**19 41 37.4**	**+0.5**	
KURK			*e*ScP	**ScP**	**19 45 30.9**	**+1.4**	
KURK			*e*S	**S**	**19 47 01.5**	**+4.9**	
KURK			*e*		20 17 48.4		
KURK			LR	LR			
	comp=Z,31µm,22.0s						
KURK	**Kurchatov**	**47.14 310**	*e*P	**P**	**19 40 04.3**	**-1.1**	
KURK			*e*		19 41 37.4		
KURK			*e*S	**S**	**19 47 01.5**	**+4.9**	
KURK			pmax	pmax			
	comp=Z,1µm,0.8s						
KURK			MLR	MLR			
	comp=Z,31µm,22.0s						
KURBB	**Kurchatov Arra**	**47.20 309**	P	**P**	**19 40 05.3**	**-0.6**	
	comp=Z,324nm,0.8s,baz=85,slow=8.6,SNR=339						
KURBB			PcP	**PcP**	**19 41 37.4**	**+0.3**	
	comp=Z,23nm,0.7s,baz=94,slow=3.2,SNR=2.8						
KURBB			ScP	**ScP**	**19 45 30.9**	**+1.1**	
	comp=Z,20nm,1.2s,baz=79,slow=3.4,SNR=6.6						
KURBB			S	**S**	**19 47 01.5**	**+4.0**	
	comp=Z,10nm,1.1s,baz=71,slow=15,SNR=7.9						
KURBB			P4KPbc		20 17 48.4		
	comp=Z,0.3nm,0.6s,baz=86,slow=4.2,SNR=4.6						
SVW2	**Sparrevohn**	**47.23 36**	*e*P	**P**	**19 40 06.4**	**+0.4**	
	comp=Z,172nm,1.0s						
EDFI	**Ende, Flores**	**47.27 207**	P	**P**	**19 40 04.8**	**-2.1**	
GUN	**Gumba**	**47.28 277**	*e*P	**P**	**19 40 06.7**	**-0.6**	
	comp=Z,848nm,0.8s						
SOEI	**Soe**	**47.31 203**	P	**P**	**19 40 05.1**	**-2.1**	
SOEI	**Soe**	**47.31 203**	*e*P	**P**	**19 40 05.5**	**-1.8**	
	comp=Z,1µm,0.9s						
JOHN	**Johnston Islan**	**47.35 100**	*e*P	**P**	**19 40 06.2**	**-1.2**	
	comp=Z,1µm,1.4s						
JOHN			LR	LR			
	comp=Z,451nm,20.0s						
HNR	**Honiara**	**47.57 155**	LR	LR	19 58 20.3		
	comp=Z,26µm,21.1s,baz=332,slow=34						
HNR	**Honiara**	**47.57 155**	*e*P	**P**	**19 40 11.0**	**+2.0**	
HNR	**Honiara**	**47.57 155**	*e*P	**P**	**19 40 11.0**	**+2.0**	
PDGK	**Podgornoye**	**47.67 300**	P	**P**	**19 40 08.8**	**-1.0**	
PDGK			pmax	pmax			
	comp=Z,988nm,1.1s						
KULM	**Kulim**	**47.71 241**	*e*P	**P**	**19 40 09.8**	**-0.5**	
	comp=Z,324nm,1.3s						
SHLS	**Shalkode**	**47.72 299**	*e*P	**P**	**19 40 07.7**	**-2.6**	
	comp=Z,110nm,0.9s						
SHLS			*i* S	**S**	**19 47 01.7**	**-3.7**	
SHLS			LR	LR	20 01 56.8		
	comp=Z,4µm,13.7s						
PKIN	**Phulchoki**	**47.81 277**	*e*P	**P**	**19 40 11.3**	**0.0**	
	comp=Z,576nm,0.7s						
KKN	**Kakani**	**47.82 278**	*e*P	**P**	**19 40 10.7**	**-0.6**	
	comp=Z,575nm,0.9s						
SII	**Sitkinak Islan**	**47.88 42**	*e*P	**P**	**19 40 11.7**	**+0.5**	
	comp=Z,389nm,1.3s						
BATI	**Baumata**	**47.93 204**	P	**P**	**19 40 10.9**	**-1.0**	
	comp=Z,904nm,0.9s,baz=99,slow=1.8,SNR=38						
BATI			PcP	**PcP**	**19 41 40.6**	**+0.5**	
	comp=Z,168nm,0.8s,baz=45,slow=1.4,SNR=1.8						
BATI			S	**S**	**19 47 09.0**	**+0.4**	
	comp=Z,80nm,1.0s,baz=73,slow=17,SNR=5.6						
BATI			LR	LR	19 58 44.0		
	comp=Z,7µm,21.5s,baz=14,slow=34						
BATI	**Baumata**	**47.93 204**	P	**P**	**19 40 10.3**	**-1.6**	
MYKOM	**Kota Tinggi**	**47.97 235**	*e*P	**P**	**19 40 11.8**	**-0.6**	
	comp=Z,123nm,1.2s						
IPM	**Ipoh**	**48.00 240**	*e*P	**P**	**19 40 11.1**	**-1.5**	
	comp=Z,307nm,1.1s						
DMN	**Daman**	**48.03 277**	*e*P	**P**	**19 40 12.1**	**-0.9**	
	comp=Z,674nm,1.2s						
UZB	**Uzynbulak**	**48.04 299**	*e*P	**P**	**19 40 12.2**	**-0.5**	
	comp=Z,74nm,0.8s						
UZB			*e*S	**S**	**19 47 10.4**	**+0.4**	
UZB			LR	LR	20 01 51.6		
	comp=Z,3µm,13.8s						
TPRI	**Tanjung Pinang**	**48.17 233**	P	**P**	**19 40 17.4**	**+3.6**	
KPKS	**Kokpek**	**48.22 300**	*e*P	**P**	**19 40 14.1**	**+0.1**	
	comp=Z,96nm,0.7s						
KPKS			*i* S	**S**	**19 47 13.4**	**+1.1**	
GKN	**Gorkha**	**48.26 278**	*e*P	**P**	**19 40 14.6**	**0.0**	
	comp=Z,2µm,0.9s						
OHAK	**Old Harbor**	**48.35 41**	*e*P	**P**	**19 40 14.2**	**-0.5**	
	comp=Z,165nm,1.0s						
ZHN	**Zhinishke**	**48.46 300**	*e*P	**P**	**19 40 15.9**	**0.0**	
	comp=Z,74nm,1.5s						
ZHN			*e*S	**S**	**19 47 16.7**	**+0.9**	
ZHN			LR	LR	20 01 59.5		
	comp=Z,2µm,12.5s						
SATY	**Saty**	**48.50 299**	*e*P	**P**	**19 40 17.0**	**+0.7**	
	comp=Z,84nm,0.9s						
SATY			LR	LR	20 02 08.2		
	comp=Z,4µm,11.9s						
MTN	**Manton Dam**	**48.52 193**	*e*P	**P**	**19 40 15.2**	**-1.2**	
	comp=Z,1µm,1.3s						
PRZ	**Przheval'sk**	**48.63 299**	*e*P	**P**	**19 40 16.7**	**-0.7**	
	comp=Z,543nm,0.8s						
PRZ	**Przheval'sk**	**48.63 299**	*e*P	**P**	**19 40 16.7**	**-0.7**	
PRZ			pmax	pmax			
	comp=Z,543nm,0.8s						
WSI	**Waingapu**	**48.64 208**	P	**P**	**19 40 13.6**	**-3.8**	
	comp=Z,462nm,0.6s,comp=Z,8µm						
COEN	**Coen**	**48.70 178**	*e*P	**P**	**19 40 17.3**	**-0.5**	
	comp=Z,2µm,1.5s						
KDAK	**Kodiak Island**	**48.71 41**	*e*P	**P**	**19 40 17.2**	**-0.2**	
	comp=Z,329nm,0.8s						
KDAK			LR	LR			
	comp=Z,10µm,22.0s						
KDAK	**Kodiak Island**	**48.71 41**	*e*P	**P**	**19 40 17.6**	**+0.1**	
KDAK			pmax	pmax			
	comp=Z,330nm,0.9s						
DANN	**Dangsing**	**48.84 279**	*e*P	**P**	**19 40 18.7**	**-0.5**	
	comp=Z,2µm,0.9s						
PLAI	**Plampang**	**48.91 212**	P	**P**	**19 40 14.9**	**-4.6**	
PPLA	**Purkeypile**	**48.92 34**	*e*P	**P**	**19 40 20.4**	**+1.2**	
	comp=Z,532nm,1.3s						
CAST	**Castle Rocks**	**48.99 33**	*e*P	**P**	**19 40 20.7**	**+1.0**	
	comp=Z,163nm,0.9s						
BOK	**Bokaro**	**49.00 272**	*e*P	**P**	**19 40 19.6**	**-0.5**	
BOK			IAmb	IAmb	19 40 25.0		
	comp=Z,170nm,0.3s						
BASI	**Baing, Sumba**	**49.04 207**	P	P	19 40 29.3	+8.9	
HOM	**Homer**	**49.15 38**	*e*P	**P**	**19 40 20.6**	**-0.3**	
	comp=Z,551nm,1.2s						
KOLN	**Koldanda**	**49.19 278**	*e*P	**P**	**19 40 21.5**	**-0.4**	
	comp=Z,914nm,1.2s						
SKT	**Skwentna**	**49.20 35**	*e*P	**P**	**19 40 21.4**	**+0.1**	
	comp=Z,113nm,0.9s						
TARG	**Taragay, Kyrgy**	**49.24 298**	*e*P	**P**	**19 40 21.5**	**-0.8**	
	comp=Z,318nm,0.8s						
SRBI	**Singaraja**	**49.41 215**	P	**P**	**19 40 23.8**	**+0.5**	
	comp=Z,188nm,0.9s,comp=Z,4µm						
MDOK	**Medeo**	**49.45 300**	*i* P	**P**	**19 40 23.6**	**0.0**	
	comp=Z,3µm,0.8s						
MDOK			*i* S	**S**	**19 47 30.8**	**+1.0**	
MDOK			LR	LR	20 02 06.5		
	comp=Z,11µm,18.7s						
PPBI	**Pangkal Pinang**	**49.49 229**	P	**P**	**19 40 24.2**	**+0.3**	
	comp=Z,0.7nm,0.6s,comp=Z,38nm						
BPAW	**Bear Paw Mtn.**	**49.51 32**	*e*P	**P**	**19 40 24.1**	**+0.5**	
	comp=Z,232nm,1.4s						
KTH	**Kantishna Hill**	**49.52 33**	*e*P	**P**	**19 40 24.2**	**+0.6**	
	comp=Z,278nm,1.0s						
AAA	**Alma-Ata**	**49.53 300**	*e*P	**P**	**19 40 25.1**	**+1.0**	
	comp=Z,131nm,0.7s						
AAA			*e*S	**S**	**19 47 32.6**	**+1.8**	
AAA			LR	LR	20 02 17.0		
	comp=Z,12µm,17.4s						
AAA	**Alma-Ata**	**49.53 300**	*i* P	**P**	**19 40 27.4**	**+3.3**	
AAA			*e*S	**S**	**19 47 31.8**	**+1.0**	
AAA			pmax	pmax			
	comp=Z,700nm,1.8s						
AAA			smax	smax			
	comp=E,5µm,10.6s						
BRLK	**Bradley Lake**	**49.53 38**	*e*P	**P**	**19 40 23.7**	**-0.1**	
	comp=E,148nm,1.1s						
PYUN	**Piuthan**	**49.56 279**	*e*P	**P**	**19 40 24.2**	**-0.5**	
	comp=E,2µm,1.1s						
SUA	**Susitna One

comp=Z,327nm,0.8s
RGRI Rengat 50.57 234 P P 19 40 35.1 +3.0
comp=Z,339nm,1.2s,comp=Z,5μm
NRN Naryn 50.62 298 *e*P **P 19 40 32.7 0.0**
comp=Z,120nm,0.9s
NRN Naryn 50.62 298 *e*P **P 19 40 32.7 0.0**
NRN pmax pmax
comp=Z,120nm,0.9s
NGJI Ngawi 50.66 220 P P 19 40 33.2 +0.4
PSI Prapat 50.67 240 P P 19 40 30.5 -2.6
comp=Z,51nm,0.7s,baz=0.2,slow=6.1,SNR=7.9
PSI LR LR 20 02 51.9
comp=Z,9μm,19.1s,baz=85,slow=37
PSI Prapat 50.67 240 *e*P **P 19 40 31.8 -1.3**
comp=Z,162nm,1.0s
PSI *e*PcP **PcP 19 41 50.5 +0.2**
PSI Prapat 50.67 240 *e*P **P 19 40 32.1 -1.0**
BWNR Bhubaneshwar 50.68 268 *e*P **P 19 40 31.0 -2.0**
MDM Murphy Dome 50.72 31 *e*P **P 19 40 33.6 +0.9**
comp=Z,451nm,0.9s
SML Sawmill 50.72 35 *e*P **P 19 40 33.0 +0.2**
comp=Z,307nm,0.8s
SML Sawmill 50.72 35 *e*P **P 19 40 33.0 +0.2**
SML pmax pmax
comp=Z,307nm,0.8s
WRH Wood River Hil 50.78 32 *e*P **P 19 40 33.3 +0.1**
WRH *e*PcP **PcP 19 41 50.4 +0.6**
COLA College 50.88 31 *e*P **P 19 40 34.4 +0.6**
comp=Z,223nm,0.9s
COLA LR LR
comp=Z,8μm,20.0s
COLA College 50.88 31 *e*P **P 19 40 34.4 +0.6**
COLA pmax pmax
comp=Z,223nm,0.9s
COLA MLR MLR
comp=Z,8μm,20.0s
CCB Clear Creek Bu 50.90 32 *e*P **P 19 40 33.6 -0.4**
comp=Z,63nm,0.9s
PMBI Palembang 50.93 230 P P 19 40 36.7 +1.8
SMRI Semarang 50.93 221 P P 19 40 36.4 +1.5
comp=Z,312nm,0.8s,comp=Z,6μm
SMRI Semarang 50.93 221 *e*P **P 19 40 33.9 -1.0**
comp=Z,352nm,1.1s
BKNI Bangkinang 50.95 236 P P 19 40 35.4 +0.4
BKNI Bangkinang 50.95 236 *e*P **P 19 40 34.8 -0.2**
comp=Z,563nm,1.0s
KZA Kyzart 51.00 299 P P 19 40 38.0 +2.4
SNR=22
KCSI Kotacane, Aceh 51.00 242 P P 19 40 32.6 -2.9
BRZS Berezniki 51.01 309 *e*P **P 19 40 34.7 -0.4**
comp=Z,7.7nm,0.8s
BRZS *i* S **S 19 47 51.4 +0.4**
KBK Karagaybulak 51.07 300 P P 19 40 36.0 +0.1
SNR=358
CHMS Chumysh 51.12 300 P P 19 40 36.0 -0.1
SNR=105
DHY Denali Highway 51.12 34 *e*P **P 19 40 35.7 -0.3**
comp=Z,85nm,1.0s
DHY *e*PcP **PcP 19 41 50.2 -1.2**
KSH Kashi 51.17 296 P **P 19 40 40.5 +3.9**
KSH pP sP 19 40 45.2 -0.5
KSH PP **PP 19 42 36.5 +3.2**
KSH S **S 19 47 59.1 +5.3**
KSH sS sS 19 48 07.9 +3.3
KSH SS **SS 19 51 32.7 +3.8**
KSH pmax pmax
comp=Z,470nm,0.8s
KSH LR LR
comp=Z,9μm,12.4s
KSH LR LR
comp=Z,11μm,11.1s
KSH LR LR
comp=Z,35μm,14.3s
SCM Sheep Creek Mo 51.20 35 *e*P **P 19 40 36.7 +0.3**
comp=Z,410nm,1.0s
SCM Sheep Creek Mo 51.20 35 *e*P **P 19 40 36.7 +0.3**
SCM pmax pmax
comp=Z,410nm,1.0s
USP Ospenovka 51.23 301 P P 19 40 36.4 -0.5
SNR=84
FRU Bishkek 51.26 300 *i* P **P 19 40 37.0 -0.1**
FRU *e*S **S 19 47 56.0 +1.3**
FRU pmax pmax
comp=Z,570nm,2.0s
FRU smax smax
comp=E,4μm,6.0s
HDA Harding Lake 51.27 32 *e*P **P 19 40 36.7 -0.2**
comp=E,286nm,1.1s
IL1 Eielson Array 51.29 31 *e*P **P 19 40 36.9 -0.1**
ILAR Eielson Array 51.29 31 P P 19 40 37.0 -0.1
comp=E,108nm,0.9s,baz=269,slow=6.2,SNR=318
ILAR LR LR 20 03 17.3
comp=E,5μm,20.1s,baz=280,slow=37
ILAR Eielson Array 51.29 31 P P 19 40 37.0 -0.1
ILB Eielson Array 51.29 31 *e*P **P 19 40 36.9 -0.1**
GLI Glacier Island 51.37 36 *e*P **P 19 40 37.9 +0.3**
comp=E,320nm,1.2s
AAK Ala-Archa 51.39 300 P P 19 40 38.5 +0.2
comp=E,71nm,0.7s,baz=83,slow=9.4,SNR=125
AAK LR LR 20 01 21.3
comp=E,23μm,21.2s,baz=66,slow=35
AAK Ala-Archa 51.39 300 P P 19 40 38.2 -0.1
SNR=91
AAK Ala-Archa 51.39 300 *e*P **P 19 40 37.8 -0.5**
comp=E,182nm,1.0s
AAK Ala-Archa 51.39 300 P P 19 40 39.0 +0.7
SNR=76
AAK Ala-Archa 51.39 300 P P 19 40 39.0 +0.7
SNR=76
AAK Ala-Archa 51.39 300 *i* P **P 19 40 37.9 -0.4**
SNR=104
AAK Ala-Archa 51.39 300 *de*P **P 19 40 38.3 -0.1**
AAK pmax pmax
comp=Z,84nm,0.8s
AAK MLR MLR
comp=Z,19μm,17.0s
UCH Uchtor 51.49 299 P P 19 40 40.7 +1.3
SNR=111
MLSI Meulaboh, Aceh 51.50 244 P P 19 40 36.8 -2.4
PCJI Pacitan 51.51 219 P P 19 40 36.2 -2.9
OTUK Ortayu 51.56 307 P P 19 40 39.6 +0.3
OTUK pmax pmax
comp=Z,517nm,0.7s
UGM Wanagama 51.61 220 P P 19 40 37.8 -2.2
UGM Wanagama 51.61 220 *e*P **P 19 40 37.6 -2.4**
comp=Z,1μm,1.4s
TPTI 51.61 242 P P 19 40 51.3 +11
MNSI Mandailing Nat 51.62 238 P P 19 40 38.9 -1.1
comp=Z,214nm,1.4s,comp=Z,3μm
MID Middleton Isla 51.86 38 *e*P **P 19 40 41.8 +0.5**
comp=Z,334nm,1.1s
MID Middleton Isla 51.86 38 *e*P **P 19 40 41.8 +0.5**
MID pmax pmax
comp=Z,334nm,1.1s
KLU Klutina 51.89 36 *e*P **P 19 40 42.2 +0.6**
comp=Z,248nm,1.0s
BVA0 Borovoye Array 51.89 313 P P 19 40 41.2 -0.5
BVA0 pmax pmax
comp=Z,380nm,1.3s
BVAR Borovoye Array 51.89 313 P P 19 40 42.1 +0.4
comp=Z,78nm,0.9s,baz=87,slow=7.4,SNR=142
BVAR PcP **PcP 19 41 54.5 +0.3**
comp=Z,86nm,0.6s,baz=97,slow=3.5,SNR=4.6
BVAR ScP **ScP 19 45 50.9 +1.0**
comp=Z,9.1nm,1.0s,baz=110,slow=6.3,SNR=3.8
BVAR S **S 19 48 03.9 +0.8**
comp=Z,3.7nm,0.8s,baz=94,slow=13,SNR=2.2
EKS2 Erkin-Say 51.90 300 P P 19 40 41.9 -0.1
SNR=134
FYU Fort Yukon 51.95 29 *e*P **P 19 40 43.3 +1.5**
comp=Z,733nm,1.3s
BRVK Borovoye 51.95 314 *e*P **P 19 40 41.5 -0.6**
comp=Z,235nm,0.9s
BRVK LR LR
comp=Z,13μm,19.0s
BRVK Borovoye 51.95 314 *de*P **P 19 40 41.6 -0.5**
BRVK pmax pmax
comp=Z,253nm,1.7s
BRVK MLR MLR
comp=Z,21μm,18.0s
PPI Padang Panjang 51.95 236 P P 19 40 41.1 -1.4
DIV Divide 51.99 36 *e*P **P 19 40 43.1 +0.8**
comp=Z,648nm,1.3s
KPJI Karang Pucung 51.99 222 P P 19 40 40.7 -2.1
PAX Paxson 51.99 34 *e*P **P 19 40 43.5 +1.1**
comp=Z,88nm,0.8s
PAX Paxson 51.99 34 *e*P **P 19 40 44.4 +2.0**
EYAK Cordova Ski Ar 52.05 37 *e*P **P 19 40 44.0 +1.3**
AML Almayashu 52.10 299 P P 19 40 44.4 +0.6
SNR=635
HARP HAARP 52.18 34 *e*P **P 19 40 44.6 +1.0**
comp=Z,313nm,0.8s
RIDG Independ'e Rid 52.23 33 *e*P **P 19 40 43.2 -0.9**
comp=Z,244nm,1.2s
PDSI Padang 52.24 236 P P 19 40 47.7 +3.0
comp=Z,64nm,1.0s
LEM Lembang 52.32 224 P P 19 40 43.8 -1.6
comp=Z,445nm,0.7s,baz=49,slow=7.4,SNR=46
LEM LR LR 20 03 51.4
comp=Z,9μm,19.0s,baz=12,slow=37
LEM Lembang 52.32 224 P P 19 40 43.8 -1.6
KLI Kotabumi 52.38 228 P P 19 40 44.6 -1.1
comp=Z,538nm,1.2s,comp=Z,5μm
KRJI Kerinci 52.44 234 P P 19 40 49.4 +3.1
comp=Z,308nm,0.8s,comp=Z,6μm
MDSI Maura Dua 52.51 229 P P 19 40 44.6 -2.1
comp=Z,314nm,1.0s,comp=Z,4μm
BLSI Bandar Lampung 52.55 228 P P 19 40 45.3 -1.6
comp=Z,381nm,0.7s,comp=Z,5μm
BMRM Bremner River 52.57 36 *e*P **P 19 40 47.3 +0.7**
comp=Z,453nm,1.0s
DOT Dot Lake 52.58 33 *e*P **P 19 40 46.5 -0.2**
comp=Z,338nm,0.9s
SCRK Sand Creek 52.59 32 *e*P **P 19 40 46.7 -0.1**
comp=Z,443nm,1.2s
DBJI Dramaga 52.60 225 P P 19 40 47.5 +0.2
comp=Z,177nm,1.5s,comp=Z,5μm
RAGM Ragged Mountai 52.60 37 *e*P **P 19 40 47.8 +1.0**
comp=Z,448nm,1.3s
SBJI Serang 52.61 226 P P 19 40 52.0 +4.6
comp=Z,220nm,1.5s,comp=Z,5μm
DDI Dehra Dun 52.66 284 *e*P **P 19 40 47.6 -0.2**
GSI Gunungsitoli 52.67 240 P P 19 40 48.2 +0.3
comp=Z,2μm,1.3s,comp=Z,15μm
GSI Gunungsitoli 52.67 240 *e*P **P 19 40 46.1 -1.8**
comp=Z,2μm,1.1s
MASI Maura Aman, Be 52.72 232 P P 19 40 48.1 -0.1
KEKH Kekaha 52.78 88 *e*P **P 19 40 50.0 +1.4**
comp=Z,266nm,1.1s
CISI Cisompet, Garu 52.80 223 P P 19 40 45.5 -3.4
CISI Cisompet, Garu 52.80 223 *e*P **P 19 40 45.4 -3.4**
comp=Z,356nm,1.3s
SFK Sufi-Kurgan 52.84 297 P P 19 40 49.1 -0.1
SFK pmax pmax
comp=Z,203nm,0.9s
MNAS Manas 52.85 300 P P 19 40 51.0 +1.9
MNAS pmax pmax
comp=Z,322nm,1.3s
CHLP Challavanipeta 53.00 268 *e*P **P 19 40 49.5 -0.7**
CHLP IAmb IAmb 19 40 52.8
comp=Z,122nm,1.0s
CHLP *e*S **S 19 48 17.3 -1.7**
CHLP IVMs_BB IVMs_BB 20 05 19.9
comp=Z,6μm,20.8s
LWLI Liwa 53.00 229 P P 19 40 47.6 -2.8
SMLA Simla 53.06 285 *e*P **P 19 40 50.2 -0.4**
SMLA IAmb IAmb 19 40 53.1
comp=Z,450nm,0.6s
SKJI Sukabumi 53.07 225 P P 19 40 51.0 +0.2
comp=Z,213nm,0.6s
KASI Kota Agung 53.12 228 P P 19 40 49.4 -1.8
comp=Z,199nm,0.8s,comp=Z,2μm
MNAI Manna 53.18 231 *e*P **P 19 40 51.8 +0.1**
comp=Z,629nm,1.1s
CGJI Cibinong 53.27 226 P P 19 40 50.1 -2.1
comp=Z,116nm,0.6s,comp=Z,2μm
CRQM Cirque 53.30 36 *e*P **P 19 40 52.9 +0.7**
comp=Z,353nm,1.0s
DHRM DHARAMSHALA 53.32 287 *e*P **P 19 40 51.7 -1.2**
TGL Tana Glacier 53.46 36 *e*P **P 19 40 53.8 +0.6**
comp=Z,225nm,1.0s
SISI Saibi 53.48 237 P P 19 40 57.3 +3.5
comp=Z,170nm,0.9s,comp=Z,3μm
BALM Baldy 53.65 36 *e*P **P 19 40 55.1 +0.4**
comp=Z,129nm,0.9s
BALM Baldy 53.65 36 *e*P **P 19 40 55.1 +0.4**
BALM pmax pmax
comp=Z,129nm,0.9s
EGAK Eagle 53.74 31 *e*P **P 19 40 55.2 +0.1**
comp=Z,126nm,0.8s
EGAK LR LR
comp=Z,10μm,22.0s
PPSI Pulau Pagai 53.90 235 P P 19 40 59.4 +2.5
comp=Z,596nm,0.9s
NDI New Delhi 53.98 282 *e*P **P 19 40 57.0 -0.4**
VIS Vishakhapatnam 53.99 267 *e*P **P 19 40 55.8 -1.8**
KK31 Karatay Array 54.08 301 *e*P **P 19 40 57.5 -0.4**
KK31 Karatay Array 54.08 301 *e*P **P 19 40 57.6 -0.4**
KKAR Karatay Array 54.08 301 *e*P **P 19 40 57.3 -0.7**
KKAR Karatay Array 54.08 301 *e*P **P 19 40 57.3 -0.7**
OPA Opana 54.31 87 *e*P **P 19 41 01.0 +1.1**
comp=Z,921nm,1.2s
OPA Opana 54.31 87 *e*P **P 19 41 02.1 +2.2**
KIP Kipapa 54.44 87 *e*P **P 19 41 02.1 +1.3**
comp=Z,447nm,1.1s
KIP LR LR
comp=Z,9μm,19.0s
KIP Kipapa 54.44 87 *e*P **P 19 41 03.2 +2.4**
HON Honolulu 54.49 87 *e*P **P 19 41 01.4 +0.2**
comp=Z,676nm,1.2s
HON Honolulu 54.49 87 *e*P **P 19 41 01.4 +0.2**
HON pmax pmax
comp=Z,676nm,1.2s
BRLS Borolday 54.58 301 *i* S **S 19 48 42.9 +2.9**
DAWY Dawson 54.59 32 *e*P **P 19 41 01.8 +0.4**
comp=Z,87nm,1.0s
IUG Iuzhnay 54.70 300 *e*P **P 19 41 03.2 +0.5**
comp=Z,349nm,1.0s
IUG *e*S **S 19 48 42.9 +1.0**
IUG LR LR 20 04 25.7
comp=Z,3μm,15.8s
FITZ Fitzroy Crossi 54.84 198 P P 19 41 03.4 -0.2
comp=Z,136nm,0.7s,baz=12,slow=12,SNR=110
FITZ Fitzroy Crossi 54.84 198 *e*P **P 19 41 02.6 -1.0**
comp=Z,414nm,1.2s
CHM Chimkent 54.95 301 *e*P **P 19 41 05.0 +0.7**
comp=Z,175nm,1.5s
CHM *e*S **S 19 48 46.5 +1.4**
CHM LR LR 20 04 47.6
comp=Z,3μm,16.5s
CTA Charters Tower 54.96 174 P P 19 41 03.9 -0.5
comp=Z,29nm,0.5s,baz=351,slow=12,SNR=53
CTA LR LR 20 04 45.5
comp=Z,4μm,20.1s,baz=354,slow=36
CTAO Charters Tower 54.96 174 *e*P **P 19 41 03.8 -0.7**
comp=Z,110nm,1.0s
CTAO LR LR
comp=Z,12μm,19.0s
CTAO Charters Tower 54.96 174 *e*P **P 19 41 03.8 -0.7**
CTAO pmax pmax
comp=Z,110nm,1.0s
CTAO MLR MLR
comp=Z,12μm,19.0s
WRAB Tennant Creek 55.00 188 *e*P **P 19 41 02.9 -1.8**
comp=Z,1μm,1.0s
WRAB LR LR
comp=Z,17μm,22.0s
WRAB Tennant Creek 55.00 188 *i* P **P 19 41 03.5 -1.3**
WR1 Warramunga Arr 55.01 188 *e*P **P 19 41 03.6 -1.2**
comp=Z,1μm,1.0s
WR1 *e*PcP **PcP 19 42 07.7 +1.3**
WR1 *e*ScP **ScP 19 46 04.3 +0.6**
WR1 *e*S **S 19 48 47.9 +1.9**
WR1 ⇑*e* 20 11 11.4
WR1 *e* 20 18 22.8
WRA Warramunga Arr 55.01 188 P **P 19 41 03.6 -1.2**
comp=Z,608nm,0.8s,baz=6.2,slow=7.3,SNR=371
WRA PcP **PcP 19 42 07.7 +1.3**
comp=Z,64nm,0.8s,baz=358,slow=3.7,SNR=2.0
WRA ScP **ScP 19 46 04.3 +0.6**
comp=Z,12nm,1.1s,baz=2.2,slow=4.3,SNR=5.6
WRA S **S 19 48 47.9 +1.9**
comp=Z,35nm,1.4s,baz=1.9,slow=13,SNR=9.3
WRA LR LR 20 04 43.6
comp=Z,7μm,19.4s,baz=35,slow=36
WRA PKPPKP **P'P'df 20 11 11.4 +5.7**
comp=Z,1.6nm,0.8s,baz=162,slow=2.1,SNR=5.5
WRA P4KPbc 20 18 22.8
comp=Z,1.8nm,1.0s,baz=356,slow=4.5,SNR=4.8
WC3 Warramunga Arr 55.02 188 *e*P **P 19 41 03.6 -1.3**
comp=Z,975nm,0.9s
NIL Nilore 55.18 290 *e*P **P 19 41 05.9 -0.2**
comp=Z,333nm,0.9s
NIL LR LR
comp=Z,10μm,20.0s
NIL Nilore 55.18 290 *e*P **P 19 41 05.9 -0.2**
NIL pmax pmax
comp=Z,333nm,0.9s
NIL MLR MLR
comp=Z,10μm,20.0s
YKU2 Yakutat 55.22 38 *e*P **P 19 41 06.7 +0.8**
comp=Z,386nm,1.0s
PVM Polavaram 55.63 268 *e*P **P 19 41 08.4 -1.0**
PVM IAmb IAmb 19 41 13.0
comp=Z,97nm,1.0s
PVM *e*S **S 19 48 53.8 -0.7**
PVM IVMs_BB IVMs_BB 20 03 38.2
comp=Z,6μm,25.4s
NGP Nagpur 55.82 273 *e*P **P 19 41 10.4 -0.5**
NGP IAmb IAmb 19 41 12.7
comp=Z,207nm,0.6s
NGP ⇑*e*S **S 19 48 55.9 -1.1**
NGP *e*x x 20 07 02.3
comp=Z,22μm,19.7s
KHLH Kahului Airpor 55.99 87 *e*P **P 19 41 14.2 +2.2**
comp=Z,1μm,1.3s
FUNA Funafuti 56.17 133 *e*P **P 19 41 14.8 +1.5**
comp=Z,843nm,1.7s
BHPL Bhopal 56.17 276 *e*P **P 19 41 10.6 -2.8**
BHPL IAmb IAmb 19 41 14.8
comp=Z,272nm,1.3s
HLK Haleakala 56.20 87 *e*P **P 19 41 15.1 +1.3**
comp=Z,1μm,1.4s
INK Inuvik 56.27 26 LR LR 20 06 52.6
comp=Z,18μm,21.6s,baz=274,slow=38
INK PKPPKP 20 11 13.1
comp=Z,9.3nm,1.0s,baz=118,slow=2.5,SNR=7.4
INK Inuvik 56.27 26 *e*P **P 19 41 13.4 +0.1**
comp=Z,206nm,1.0s
INK P'P' 20 11 13.1
INK Inuvik 56.27 26 *e*P **P 19 41 13.7 +0.4**
SVE Sverdlovsk 56.63 319 *c i*P **P 19 41 16.2 +0.1**
SVE *e*PPP PPP 19 44 36.9
SVE *e*S **S 19 49 04.5 -2.3**
SVE *e*SSS SSS 19 55 04.0
SVE pmax pmax
comp=Z,381nm,1.0s
SVE MLR MLR
comp=Z,26μm,17.0s
RPR Rampur 56.73 271 *e*P **P 19 41 16.2 -1.1**
RPR IAmb IAmb 19 41 19.4
comp=Z,106nm,0.9s
RPR *e*S **S 19 49 08.4 -0.8**
RPR IVMs_BB IVMs_BB 20 06 17.4
comp=Z,5μm,18.4s
MHA Mahukona 56.76 87 *e*P **P 19 41 18.4 +0.9**
MHA Mahukona 56.76 87 *e*P **P 19 41 18.4 +0.9**
KKH Kailua Kona 56.92 88 *e*P **P 19 41 19.9 +1.2**
KKH Kailua Kona 56.92 88 *e*P **P 19 41 19.9 +1.2**
HPAH Hawaii Prepara 57.00 88 *e*P **P 19 41 19.9 +0.5**
comp=Z,172nm,0.8s
KHLU Kahalu'u 57.06 88 *e*P **P 19 41 20.9 +1.2**
comp=Z,1μm,1.8s
HUH Hualalai 57.06 88 *e*P **P 19 41 19.3 -0.7**
comp=Z,413nm,1.2s
POHA Pohakuloa 57.27 88 *e*P **P 19 41 22.7 +1.3**
comp=Z,861nm,1.2s
POHA LR LR
comp=Z,9μm,20.0s
WHY Whitehorse 57.31 36 *e*P **P 19 41 22.3 +1.3**
comp=Z,136nm,0.9s
MLOA Mauna Loa Obse 57.34 88 *e*P **P 19 41 22.4 +0.2**
comp=Z,970nm,1.3s
MWH Moku'aweowe 57.35 88 *e*P **P 19 41 22.9 +0.5**
comp=Z,643nm,1.1s
HMH Humu'ula Sheep 57.39 88 *e*P **P 19 41 23.1 +0.8**
comp=Z,853nm,1.3s
SKAG Skagway 57.39 37 *e*P **P 19 41 22.4 +1.0**
comp=Z,471nm,1.7s
KHU Kahuku 57.45 88 *e*P **P 19 41 24.3 +1.6**
comp=Z,2μm,1.4s
KHU Kahuku 57.45 88 *e*P **P 19 41 24.3 +1.6**
KHU pmax pmax
comp=Z,2μm,1.4s
SRSP Sriramsagar 57.48 271 *e*P **P 19 41 21.4 -1.2**
SRSP IAmb IAmb 19 41 24.6
comp=Z,161nm,0.9s
SRSP *e*S **S 19 49 16.3 -2.8**
SRSP IVMs_BB IVMs_BB 20 09 44.2
comp=Z,4μm,21.0s
MLH Mauna Loa 57.52 88 *e*P **P 19 41 24.6 +1.4**
comp=Z,454nm,1.1s
MLH Mauna Loa 57.52 88 *e*P **P 19 41 24.6 +1.4**
MLH pmax pmax
comp=Z,454nm,1.1s
AIN Ainahou 57.52 88 *e*P **P 19 41 24.7 +1.5**
comp=Z,1μm,1.2s
HPO Honuapo 57.58 88 *e*P **P 19 41 24.5 +1.2**
HLP Hilina Pali 57.68 88 *e*P **P 19 41 26.1 +1.9**
comp=Z,588nm,1.1s
ADKI Addanki 57.71 267 *e*P **P 19 41 23.8 -0.4**
ADKI IAmb IAmb 19 41 28.1
comp=Z,98nm,1.0s
ADKI *e*S **S 19 49 20.5 -1.6**
ADKI IVMs_BB IVMs_BB 20 04 41.1
comp=Z,7μm,23.3s
PUH Pauahi 57.72 88 *e*P **P 19 41 23.2 -1.2**
comp=Z,459nm,1.1s
STCH Steam Cracks 57.79 88 *e*P **P 19 41 24.9 0.0**
comp=Z,1μm,1.6s
NPOC North of Pu'u 57.80 88 *e*P **P 19 41 24.5 -0.4**
comp=Z,1μm,1.7s
JCUZ Jacuzzi 57.81 88 *e*P **P 19 41 26.8 +1.8**
comp=Z,1μm,1.8s
ARU Arti 57.84 319 *e*P **P 19 41 23.8 -0.9**
comp=Z,260nm,0.8s
ARU LR LR
comp=Z,27μm,21.0s
ARU Arti 57.84 319 *d i*P **P 19 41 23.9 -0.7**
ARU 19 42 14.3
ARU 19 43 30.3
ARU S **S 19 49 24.5 +1.7**
ARU 19 51 16.1
ARU SS **SS 19 53 11.1 -1.9**
ARU pmax pmax
comp=Z,375nm,1.0s
ARU MLR MLR
comp=Z,30μm,18.0s
BESE Bessie Mountai 57.85 38 *e*P **P 19 41 25.7 +0.9**
comp=Z,235nm,1.3s
KNTN Kanton 57.86 120 *e*P **P 19 41 26.3 +1.0**
comp=Z,233nm,1.1s
NJS Nagarjunasagar 57.88 268 *e*P **P 19 41 24.3 -1.2**
NJS IAmb IAmb 19 41 29.2
comp=Z,152nm,0.9s
NJS *e*S **S 19 49 23.6 -0.8**
NJS IVMs_BB IVMs_BB 20 04 54.6
comp=Z,4μm,27.2s
HULD Heiheiahulu Di 57.90 88 *e*P **P 19 41 27.1 +1.5**
comp=Z,1μm,1.6s
HYB Hyderabad 58.06 270 *i* P **P 19 41 26.0 -0.8**
HYB *e*S **S 19 49 26.0 -0.8**
HYB Hyderabad 58.06 270 *e*P **P 19 41 24.7 -2.1**
HYB IAmb IAmb 19 41 29.3
comp=Z,231nm,0.9s
HYBB Hyderabad (bro 58.06 270 *e*P **P 19 41 25.7 -1.1**
HYBB IAmb IAmb 19 41 30.3
comp=Z,195nm,0.8s
HYBB *e*S **S 19 49 25.3 -1.5**
HYBB IVMs_BB IVMs_BB 20 10 01.9
comp=Z,5μm,18.0s
KBL Kabul 58.07 292 *e*P **P 19 41 26.8 -0.1**
comp=Z,166nm,0.9s
KBL Kabul 58.07 292 *e*P **P 19 41 26.8 -0.1**
KBL pmax pmax
comp=Z,166nm,0.9s
JIS Juneau Island 58.17 38 *e*P **P 19 41 28.1 +1.2**
comp=Z,180nm,1.1s
SRLM Srisailam 58.46 268 *e*P **P 19 41 28.4 -1.2**
SRLM IAmb IAmb 19 41 33.2
comp=Z,135nm,0.9s
SRLM *e*S **S 19 49 30.4 -1.6**
SRLM IVMs_BB IVMs_BB 20 07 08.0
comp=Z,4μm,21.0s
AS01 Alice Springs 58.73 188 *e*P **P 19 41 29.9 -1.3**
AS31 Alice Springs 58.74 188 *e*P **P 19 41 30.0 -1.3**
ASAR Alice Springs 58.74 188 P **P 19 41 30.1 -1.1**
comp=Z,176nm,0.9s,baz=0.4,slow=6.2,SNR=337
ASAR S **S 19 49 38.0 +2.9**

comp=Z,6.9nm,1.0s,baz=13,slow=12,SNR=6.8
ASAR LR LR 20 04 08.7
comp=Z,12µm,21.9s,baz=14,slow=33
ASAR PKP2bc 20 11 19.0
comp=Z,10nm,0.9s,baz=175,slow=1.9,SNR=20
ASAR P4KPbc 20 18 40.4
comp=Z,1.4nm,0.8s,baz=11,slow=4.7,SNR=12
MDRS Chennai 58.95 264 *e*P **P 19 41 33.1 +0.1**
SKHT Srikalahasti 59.03 265 *e*P **P 19 41 33.2 -0.3**
SKHT IAmb IAmb 19 41 39.5
comp=Z,169nm,0.8s
SKHT *e*S **S 19 49 37.6 -1.7**
SKHT IVMs_BB IVMs_BB 20 07 01.2
comp=Z,5µm,21.3s
AB31 Akbulak array 59.20 311 *e*P **P 19 41 33.3 -0.9**
AB31 pmax pmax
comp=Z,97nm,0.7s
ABKAR Akbulak array 59.20 311 *e*P **P 19 41 33.2 -1.0**
KLRI Killari 59.34 271 *e*P **P 19 41 34.2 -1.5**
KLRI IAmb IAmb 19 41 37.4
comp=Z,238nm,0.8s
KLRI *e*S **S 19 49 41.1 -2.3**
KLRI IVMs_BB IVMs_BB 20 12 18.4
comp=Z,6µm,16.0s
MBWA Marble Bar 59.46 203 *e*P **P 19 41 34.8 -1.4**
MBWA LR LR
comp=Z,348nm,0.8s
MBWA LR LR
comp=Z,3µm,20.0s
MBWA Marble Bar 59.46 203 P **P 19 41 36.7 +0.4**
SNR=13
MBWA Marble Bar 59.46 203 P **P 19 41 36.7 +0.4**
SNR=13
CRAG Craig 59.67 41 *e*P **P 19 41 38.1 +0.8**
comp=Z,123nm,1.1s
WRAK Wrangell Islan 59.78 40 PFAKE 19 41 50.0 +12
WRAK LR LR
comp=Z,10µm,21.0s
AKTO Aktyubinsk 59.98 313 P **P 19 41 39.0 -0.6**
comp=Z,87nm,0.6s,baz=74,slow=9.3,SNR=105
AKTO LR LR 20 09 04.4
comp=Z,13µm,20.6s,baz=64,slow=38
AKTO PKPPKP **P'P'df 20 11 07.5 -3.6**
comp=Z,0.7nm,0.5s,baz=172,slow=4.8,SNR=6.0
AKTO P4KPbc 20 18 43.1
comp=Z,2.1nm,0.7s,baz=53,slow=8.3,SNR=7.4
DLBC Dease Lake 60.32 37 *e*P **P 19 41 43.3 +1.4**
comp=Z,244nm,1.3s
URV Uravakonda 60.40 268 *e*P **P 19 41 41.6 -1.4**
URV IAmb IAmb 19 41 46.6
comp=Z,116nm,0.9s
URV *e*S **S 19 49 54.8 -2.3**
URV IVMs_BB IVMs_BB 20 06 08.6
comp=Z,5µm,22.2s
EIDS Eidsvold 60.73 170 *e*P **P 19 41 44.9 0.0**
comp=Z,138nm,0.8s
DIB Dawson Inlet, 60.77 43 *e*P **P 19 41 45.9 +1.0**
comp=Z,144nm,1.1s
POO Poona 61.36 273 *e*P **P 19 41 48.1 -1.4**
DZM Mont Dzumac 61.56 153 P **P 19 41 52.0 +1.3**
comp=Z,97nm,1.1s,baz=2.0,slow=9.4,SNR=23
DZM LR LR 20 06 44.6
comp=Z,19µm,20.5s,baz=337,slow=34
DZM Mont Dzumac 61.56 153 *e*P **P 19 41 51.8 +1.1**
comp=Z,578nm,1.2s
DZM *e*S **S 19 50 15.0 +3.5**
comp=Z,13µm,29.0s
DZM *e*LR LR 20 00 07.0
comp=Z,38µm,23.1s
DZM Mont Dzumac 61.56 153 *e*P **P 19 41 51.5 +0.8**
comp=Z,245nm,1.1s
PALK Pallekele 61.84 259 P **P 19 41 52.7 -0.1**
comp=Z,142nm,1.0s,baz=116,slow=5.1,SNR=22
PALK LR LR 20 11 48.8
comp=Z,10µm,19.2s,baz=27,slow=39
PALK Pallekele 61.84 259 *e*P **P 19 41 52.4 -0.4**
comp=Z,297nm,1.2s
PALK Pallekele 61.84 259 *i* P **P 19 41 52.7 -0.1**
SNR=19
PALK Pallekele 61.84 259 *i* P **P 19 41 53.3 +0.5**
PRGR Permogore 62.44 328⇓*i*P **P 19 41 55.3 -0.7**
PRGR pmax pmax
comp=Z,235nm,1.0s
BHJ Bhuj 62.48 280 *e*P **P 19 41 56.8 -0.2**
SPA0 Spitsbergen Ar 62.52 349 *e*P **P 19 41 57.0 +0.6**
SPA0 Spitsbergen Ar 62.52 349 *e*P **P 19 41 56.6 +0.3**
SPITS Spitsbergen Ar 62.52 349 P **P 19 41 57.1 +0.7**
comp=Z,55nm,0.8s,baz=85,slow=4.9,SNR=53
SPITS LR LR 20 12 42.5
comp=Z,22µm,19.3s,baz=30,slow=40
KBS Kingsbay 62.66 350 *e*P **P 19 41 58.1 +0.8**
comp=Z,143nm,0.9s
KBS LR LR
comp=Z,12µm,20.0s
KBS Kingsbay 62.66 350 *e*P **P 19 41 58.1 +0.8**
KBS pmax pmax
comp=Z,143nm,0.9s
KBS MLR MLR
comp=Z,12µm,20.0s
KBS Kingsbay 62.66 350 *e*P **P 19 41 58.0 +0.8**
GOA Goa 62.94 270 *e*P **P 19 41 59.0 -1.1**
MSVF Nonsavu 62.99 140 *e*P **P 19 42 01.8 +1.5**
comp=Z,394nm,1.3s
MSVF LR LR
comp=Z,7µm,20.0s
MSVF Nonsavu 62.99 140 *e*P **P 19 42 01.8 +1.5**
MSVF pmax pmax
comp=Z,394nm,1.3s
MSVF MLR MLR
comp=Z,7µm,20.0s
COCO West Island 63.03 230 *e*P **P 19 42 00.8 +0.2**
comp=Z,737nm,1.4s
COCO LR LR
comp=Z,4µm,20.0s
COCO West Island 63.03 230 *e*P **P 19 42 00.8 +0.2**
COCO pmax pmax
comp=Z,737nm,1.4s
COCO MLR MLR
comp=Z,4µm,20.0s
HSPB Hornsund (broa 63.43 348 *e*P **P 19 42 03.4 +1.0**
HSPB *e**PP **pP 19 42 06.8 -2.3**
HSPB *e* 19 44 22.7
HSPB *e*S **S 19 50 34.9 +1.2**
HSPB MLR MLR
comp=Z,34µm,20.7s
HSPB Hornsund (broa 63.43 348 *e*P **P 19 42 03.0 +0.6**
BBB Bella Bella 63.62 43 *e*P **P 19 42 05.6 +1.6**
comp=Z,156nm,1.4s
LVZ Lovozero 63.94 336 *e*P **P 19 42 05.5 -0.5**
comp=Z,98nm,0.8s
LVZ LR LR
comp=Z,20µm,19.0s
LVZ Lovozero 63.94 336 *de*P **P 19 42 05.2 -0.8**
LVZ pmax pmax
comp=Z,277nm,1.7s
LVZ MLR MLR
comp=Z,20µm,20.0s
TRD Trivandrum 64.16 262 *e*P **P 19 42 07.2 -0.9**
BJO Bjornoya 64.38 345 *e*P **P 19 42 08.8 +0.1**
TMCR Tamitsa 64.50 332 *e*P **P 19 42 08.6 -1.0**
TMCR pmax pmax
comp=Z,315nm,1.0s
APA Apatity 64.52 336⇑*i*P **P 19 42 09.3 -0.4**
APA *i* PPP PPP 19 46 14.0
APA *i* S **S 19 50 41.0 -6.4**
APA *i* 19 51 53.0
APA pmax pmax
comp=Z,129nm,0.8s
RES Resolute Bay 64.62 14 LR LR 20 09 15.1
comp=Z,5µm,21.9s,baz=327,slow=35
RES Resolute Bay 64.62 14 *e*P **P 19 42 09.9 -0.3**
comp=Z,246nm,1.0s
RES Resolute Bay 64.62 14 *e*P **P 19 42 09.9 -0.3**
RES pmax pmax
comp=Z,246nm,1.0s
GEYT Alibeck 64.75 300 P **P 19 42 11.7 -0.1**
comp=Z,97nm,0.8s,baz=26,slow=2.7,SNR=62
GYA0B ALIBECK ARRAY 64.75 300 *e*P **P 19 42 12.1 +0.3**
comp=Z,195nm,1.0s
KEV Kevo 65.33 340 *e*P **P 19 42 14.8 -0.1**
comp=Z,121nm,1.0s
KEV LR LR
comp=Z,27µm,20.0s
KEV Kevo 65.33 340 *e*P **P 19 42 14.8 -0.1**
KEV pmax pmax
comp=Z,121nm,1.0s
KEV MLR MLR
comp=Z,27µm,20.0s
KLMR Klimovskoe 65.44 328 *d i*P **P 19 42 15.4 -0.3**
KLMR PPP PPP 19 46 17.8
KLMR S **S 19 50 58.4 -0.4**
KLMR SS **SS 19 55 10.5 -1.1**
KLMR pmax pmax
comp=Z,867nm,2.0s
KLMR pmax pmax
comp=Z,242nm,1.0s
KLMR Klimovskoe 65.44 328⇓*i*P **P 19 42 15.5 -0.3**
KLMR ⇑*i*P **P 19 42 15.5 -0.3**
KLMR *e*P **P 19 42 15.5 -0.3**
KLMR AMP 19 42 18.8
comp=Z,867nm,2.0s
KLMR AMP 19 42 24.3
comp=Z,242nm,1.0s
KLMR *e*PP **PP 19 44 33.1 -6.3**
KLMR PPP PPP 19 46 17.9
KLMR S **S 19 50 58.5 -0.4**
KLMR S **S 19 50 58.5 -0.4**
KLMR SS **SS 19 55 10.5 -1.1**
KLMR SS **SS 19 55 10.5 -1.1**
KLMR LQ LQ 20 00 58.0
KLMR LQ LQ 20 00 58.0
KLMR LR LR 20 03 33.8
KLMR AMP 20 16 30.7
comp=Z,18µm,15.7s
XMAS Kiritimati 65.50 106 *e*P **P 19 42 17.4 +0.5**
comp=Z,398nm,1.3s
YKW3 Yellowknife Ar 65.60 30 *e*P **P 19 42 16.6 -0.2**
comp=Z,130nm,1.2s
YKA Yellowknife Ar 65.64 30 P **P 19 42 17.1 0.0**
comp=Z,50nm,0.9s,baz=295,slow=6.3,SNR=156
YKA PKPPKP P'P'df 20 10 50.6 -12
comp=Z,2.1nm,0.9s,baz=116,slow=2.4,SNR=7.9
HAMF Hammerfest 65.72 341 *e*P **P 19 42 17.7 +0.3**
ARMA Armidale 65.77 170 *e*P **P 19 42 18.3 -0.1**
comp=Z,327nm,1.5s
ARA0 ARCESS Array S 65.88 340 *e*P **P 19 42 18.9 +0.3**
ARA0 *e* 20 10 53.6
ARCES ARCESS Array B 65.88 340 P **P 19 42 18.9 +0.3**
comp=Z,48nm,0.7s,baz=69,slow=6.4,SNR=48
ARCES PKPPKP P'P'df 20 10 53.6 -8.4
comp=Z,1.7nm,0.8s,baz=288,slow=28,SNR=4.3
ARCES LR LR 20 16 48.1
comp=Z,20µm,18.4s,baz=30,slow=41
ARCES ARCESS Array B 65.88 340 *e*P **P 19 42 18.5 0.0**
ARCES P'P' 20 10 53.6
ARCES ARCESS Array B 65.88 340 *e*P **P 19 42 18.5 0.0**
ARE0 ARCESS Array S 65.88 340 *e*P **P 19 42 18.8 +0.3**
comp=Z,355nm,1.7s
ARE0 ARCESS Array S 65.88 340 *e*P **P 19 42 19.0 +0.5**
AFI Afiamalu 65.91 129 P **P 19 42 17.4 -2.1**
comp=Z,37nm,0.8s,baz=270,slow=20,SNR=3.3
AFI LR LR 20 05 51.6
comp=Z,10µm,21.1s,baz=320,slow=31
AFI Afiamalu 65.91 129 *e*P **P 19 42 18.8 -0.7**
AFI Afiamalu 65.91 129 *e*P **P 19 42 18.8 -0.7**
STKA Stephens Creek 66.50 180 P **P 19 42 22.2 -0.6**
comp=Z,70nm,0.8s,baz=341,slow=7.6,SNR=68
STKA PKP2bc 20 10 57.1
comp=Z,2.3nm,0.8s,baz=163,slow=8.3,SNR=3.1
STKA LR LR 20 13 08.6
comp=Z,6µm,18.6s,baz=9.7,slow=38
STKA Stephens Creek 66.50 180 *e*P **P 19 42 22.4 -0.4**
comp=Z,17nm,0.8s
STKA ⇑*e* 20 10 57.1
FORT Forrest 66.58 192 *e*P **P 19 42 22.9 -0.4**
comp=Z,737nm,0.8s
KTK1 Kautokeino 66.84 340 *e*P **P 19 42 24.9 +0.1**
TULEG Thule 67.15 7 *e*P **P 19 42 25.8 -0.7**
comp=Z,169nm,1.0s
BBOO Buckleboo 67.61 185 *e*P **P 19 42 29.3 -0.6**
comp=Z,174nm,0.8s
TRO Tromso 67.62 341 *e*P **P 19 42 29.4 -0.2**
DAG Danmarks Havn 67.81 355⇓*i*P **P 19 42 30.8 +0.1**
comp=Z,186nm,0.9s
DAG Danmarks Havn 67.81 355⇓*i*P **P 19 42 30.8 +0.1**
DAG pmax pmax
comp=Z,190nm,0.9s
LLLB Lillooet 67.82 43 *e*P **P 19 42 31.8 +0.6**
comp=Z,157nm,1.0s
PGC Sidney 67.84 45 *e*P **P 19 42 31.8 +0.5**
comp=Z,184nm,1.0s
A04D Lummi Island 68.25 45 P **P 19 42 35.0 +1.1**
baz=299
HDW Hoodsport 68.55 46 *e*P **P 19 42 37.8 +1.8**
MBW Mount Baker 68.68 45 *e*P **P 19 42 37.9 +1.0**
GNW Green Mountain 68.73 46 *e*P **P 19 42 38.7 +1.8**
E03A Lebam 68.78 48 *e*P **P 19 42 38.4 +1.2**
comp=Z,260nm,1.0s
SHUK Shuksan-Mt. Ba 68.78 45 *e*P **P 19 42 38.6 +1.2**
B05A Bryant 68.82 45 P **P 19 42 38.6 +1.2**
baz=299,SNR=42
B05A S **S 19 51 41.6 +1.5**
baz=299
MOS Moscow 68.84 324 *e*P **P 19 42 36.8 -0.7**
MOS *i* *PP **sP 19 42 47.9 +1.2**
MOS *e* 19 42 58.7
MOS *e* 19 45 09.0
MOS *e*S **S 19 51 37.8 -2.2**
MOS *e*SS **SS 19 56 02.7 -1.7**
MOS pmax pmax
comp=Z,558nm,1.5s
MOS pmax pmax
comp=Z,1µm,2.2s
MOS smax smax
comp=E,3µm,4.6s
MOS smax smax
comp=N,2µm,5.0s
JCW Jim Creek 68.95 45 *e*P **P 19 42 39.8 +1.5**
KDKW Coast Env Seat 69.00 46 *e*P **P 19 42 39.8 +1.2**
B06A Marblemount 69.05 45 *e*P **P 19 42 39.5 +0.6**
comp=N,484nm,1.3s
F03A Seaside 69.08 48 *e*P **P 19 42 40.6 +1.5**
comp=N,507nm,1.2s
D05A Enumclaw 69.41 46 *e*P **P 19 42 42.4 +1.3**
comp=N,273nm,1.1s
G03D McMinnville, O 69.61 49 P **P 19 42 43.9 +1.5**
baz=299,SNR=8.6
MAK Makhachkala 69.65 309 *e*P **P 19 42 38.1 -4.6**
MAK *e*PPP PPP 19 46 57.8
MAK *e*S **S 19 51 46.5 -3.5**
MAK pmax pmax
comp=Z,354nm,1.0s
TDL Tradedollar La 69.69 47 *e*P **P 19 42 44.6 +1.5**
C06D Leavenworth 69.69 45 P **P 19 42 43.8 +0.9**
baz=300
PNT Penticton 69.73 44 *e*P **P 19 42 43.9 +0.8**
PNT Penticton 69.73 44 *e*P **P 19 42 43.9 +0.8**
LON Longmire 69.73 47 *e*P **P 19 42 43.6 +0.3**
comp=Z,94nm,1.0s
LON Longmire 69.73 47 *e*P **P 19 42 43.6 +0.3**
LON pmax pmax
comp=Z,94nm,1.0s
STEI Steigen 69.77 341 *e*P **P 19 42 43.0 0.0**
COR Corvallis 69.89 49 *e*P **P 19 42 45.4 +1.3**
comp=Z,414nm,1.1s
COR Corvallis 69.89 49 *e*P **P 19 42 45.4 +1.3**
COR pmax pmax
comp=Z,414nm,1.1s
PUL Pulkovo 69.91 330⇓*e*P **P 19 42 44.7 +0.7**
PUL pmax pmax
comp=Z,340nm,0.7s
PUL MLR MLR
comp=Z,19µm,18.0s
KULLO Kullorsuaq 70.03 5⇓*i*P **P 19 42 44.5 0.0**
comp=Z,324nm,1.2s
comp=Z,16µm,18.0s
KULLO Kullorsuaq 70.03 5⇓*i*P **P 19 42 44.5 0.0**
KULLO pmax pmax
comp=Z,320nm,1.2s
KULLO MLR MLR
comp=Z,16µm,18.0s
LOF Lofoten 70.08 342 *e*P **P 19 42 44.8 -0.1**
KEBM Edson Butte 70.08 51 *e*P **P 19 42 45.9 +0.4**
comp=Z,359nm,0.9s
G04A Mulino 70.09 48 *e*P **P 19 42 47.0 +1.5**
VORR Voronezh 70.15 320 *e*P **P 19 42 44.0 -1.6**
VORR pmax pmax
comp=Z,500nm,2.0s
LTY Liberty 70.15 46 *e*P **P 19 42 46.2 +0.3**
comp=Z,134nm,1.0s
AKT Akhty 70.23 307 *e*P **P 19 42 45.4 -1.1**
AKT *e* 19 43 05.9
AKT pmax pmax
comp=Z,316nm,0.7s
I03D Drain, OR 70.30 50 P **P 19 42 48.4 +1.7**
baz=300,SNR=31
CAN Canberra 70.31 173 *e*P **P 19 42 47.1 +0.5**
comp=Z,143nm,1.0s
CAN Canberra 70.31 173 *e*P **P 19 42 47.1 +0.5**
CAN pmax pmax
comp=Z,143nm,1.0s
B08A Colville Reser 70.37 44 *e*P **P 19 42 47.4 +0.2**
comp=Z,264nm,1.1s
VSR Storozhevoye 70.41 319 *e*P **P 19 42 46.3 -0.9**
VSR *e*S **S 19 51 56.8 -1.9**
VSR pmax pmax
comp=Z,200nm,0.9s
VSR smax smax
comp=E,110nm,1.6s
VSR MLR MLR
comp=Z,37µm,20.0s
KBO Bosley Butte 70.47 52 *e*P **P 19 42 48.1 +0.1**
comp=Z,350nm,1.2s
VORD Divnogorie 70.47 319 *e*P **P 19 42 47.4 -0.2**
VORD pmax pmax
comp=Z,170nm,1.2s
VORD MLR MLR
comp=Z,10µm,14.0s
H04A Detroit Lake 70.53 49 *e*P **P 19 42 48.9 +0.8**
comp=Z,287nm,1.0s
FIA1 FINESS Array S 70.58 333 *e*P **P 19 42 47.5 -0.5**
FIA0 FINESS Array S 70.58 333 *e*P **P 19 42 47.6 -0.5**
FIA0 *e*P'P'df P'P'df 20 10 42.1 -12
FIA0 *e* 20 18 02.1
FIA0 FINESS Array S 70.58 333 *e*P **P 19 42 47.6 -0.5**
FINES FINESS Array B 70.58 333 P **P 19 42 47.6 -0.5**
comp=Z,185nm,0.7s,baz=74,slow=6.8,SNR=261
FINES PKPPKP P'P'df 20 10 42.1 -12
comp=Z,2.3nm,1.0s,baz=232,slow=6.8,SNR=4.0
FINES LR LR 20 18 02.1
comp=Z,34µm,20.1s,baz=26,slow=40
GROC Groznyy 70.62 310 *e*P **P 19 42 46.5 -2.2**
GROC *e* 19 43 07.4
GROC *e* 19 45 23.9
GROC *e*S **S 19 51 59.8 -1.6**
GROC pmax pmax
comp=Z,318nm,1.6s
SEKA Sheki 70.71 307 P **P 19 42 46.9 -2.4**
G05D Wamic, OR 70.78 48 P **P 19 42 50.9 +1.2**
baz=301,SNR=26
IRO Indian Ridge 70.83 49 *e*P **P 19 42 51.5 +1.3**
I04A Tendick Farm, 70.84 50 P **P 19 42 51.2 +1.1**
baz=300,SNR=42
ZKTA Zakatala 70.87 308 P **P 19 42 48.3 -2.0**
LKRN Lenkeran, Azer 70.89 304 P **P 19 42 48.5 -1.9**
L02D Cave Junction, 70.90 52 P **P 19 42 52.0 +1.5**
baz=300,SNR=25
PRLK Prince Lake 70.91 49 *e*P **P 19 42 52.1 +1.5**
E07A Sunnyside 70.99 46 *e*P **P 19 42 52.0 +1.1**
comp=Z,245nm,1.3s
MNGR Mingechevir, A 71.00 307 P **P 19 42 49.1 -1.9**
HUMO Hull Mountain 71.09 51 *e*P **P 19 42 52.5 +0.9**
comp=Z,55nm,0.9s
G06A Carlson Farm, 71.20 48 *e*P **P 19 42 53.0 +0.7**
comp=Z,157nm,1.0s
NWAO Narrogin (SRO) 71.22 201 P **P 19 42 51.3 -0.9**
comp=Z,215nm,0.9s,baz=265,slow=7.3,SNR=49
NWAO LR LR 20 13 60.0
comp=Z,3µm,19.8s,baz=237,slow=36
NWAO Narrogin (SRO) 71.22 201 P **P 19 42 54.7 +2.5**
SNR=10
NWAO Narrogin (SRO) 71.22 201 P **P 19 42 54.7 +2.5**
SNR=10
I05D Terrebonne, OR 71.23 49 P **P 19 42 53.7 +1.3**
baz=301,SNR=31
MOR8 Moi Rana 71.25 340 *e*P **P 19 42 50.7 -1.4**
HAWA Hanford 71.27 46 *e*P **P 19 42 53.0 +0.4**
comp=Z,134nm,1.2s
HAWA LR LR
comp=Z,4µm,19.0s
C09A Chrisman Ranch 71.27 44 *e*P **P 19 42 53.4 +0.8**
comp=Z,222nm,0.9s
D08A Wollman Farm, 71.28 45 *e*P **P 19 42 53.2 +0.5**
comp=Z,180nm,1.0s
F07A Phinny Hill Vi 71.29 47 *e*P **P 19 42 53.6 +1.0**
comp=Z,267nm,1.2s
DDFL Dedoflistskaro 71.29 308 P **P 19 42 54.7 +1.8**
JCC Jacoby Creek, 71.30 53 *e*P **P 19 42 54.4 +1.6**
comp=Z,289nm,1.2s
WSAR Wadi Sarin 71.31 286 LR LR 20 18 18.1
comp=Z,9µm,19.2s,baz=76,slow=39
J04D Umpqua Nationa 71.31 50 P **P 19 42 54.5 +1.3**
baz=301,SNR=43
WBK Wadi Bani Khal 71.36 285 P **P 19 42 57.0 +3.4**
SNR=15
WBK Wadi Bani Khal 71.36 285 P **P 19 42 57.0 +3.4**
SNR=15
KONS Konsvik 71.38 341 *e*P **P 19 42 52.9 0.0**
GOF Gofitskoye 71.39 312⇓*i*P **P 19 42 53.4 +0.1**
GOF *e*S **S 19 52 12.0 +1.7**
GOF pmax pmax
comp=Z,465nm,1.7s
GOF smax smax
comp=E,38nm,1.3s
KHMM Horse Mountain 71.47 53 *e*P **P 19 42 55.4 +1.4**
comp=E,265nm,1.1s
E08A Dider Farm, El 71.50 46 *e*P **P 19 42 54.6 +0.7**
comp=E,121nm,1.0s
BIDO Bidbid 71.56 286 P **P 19 42 56.0 +1.3**
SNR=57
BIDO Bidbid 71.56 286 P **P 19 42 56.0 +1.3**
SNR=57
GANJ Ganja 71.56 307 P **P 19 42 52.5 -2.0**
NEW Newport 71.68 44 P **P 19 42 55.9 +0.8**
baz=302,SNR=89
NEW Newport 71.68 44 *e*P **P 19 42 55.5 +0.4**
comp=E,247nm,1.1s
NEW LR LR
comp=Z,4µm,20.0s
NEW Newport 71.68 44 *e*P **P 19 42 55.5 +0.4**
NEW pmax pmax
comp=Z,247nm,1.1s
NEW MLR MLR
comp=Z,4µm,20.0s
YBH Yreka Blue Hor 71.69 52 P **P 19 42 56.8 +1.5**
comp=Z,81nm,0.9s,baz=309,slow=0.2,SNR=73
YBH LR LR 20 08 23.2
comp=Z,2µm,21.2s,baz=306,slow=31
YBH Yreka Blue Hor 71.69 52 *e*P **P 19 42 56.8 +1.5**
comp=Z,144nm,1.0s
YBH Yreka Blue Hor 71.69 52 *e*P **P 19 42 56.8 +1.5**
YBH pmax pmax
comp=Z,144nm,1.0s
PINE Pine Mountain 71.76 49 *e*P **P 19 42 56.9 +1.1**
comp=Z,500nm,1.1s
BANOM Banah 71.77 289 P **P 19 42 58.7 +2.7**
SNR=19
BANOM Banah 71.77 289 P **P 19 42 58.7 +2.7**
SNR=19
M02C Callahan 71.77 52 P **P 19 42 57.6 +1.8**
baz=301,SNR=53
DGRG David-gareji 71.77 308 P **P 19 42 55.4 -0.4**
DGRG David-gareji 71.77 308 *e*P **P 19 42 55.4 -0.4**
KMRM Mail Ridge 71.81 53 *e*P **P 19 42 57.1 +1.1**
comp=Z,266nm,1.4s
GUDG Gudauri 71.83 309 P **P 19 42 57.5 +1.2**
SHME Shamm 71.83 289 *i* P **P 19 42 56.5 +0.1**
SNR=34
J05D Fort Rock, OR 71.83 50 P **P 19 42 57.9 +1.6**
baz=301,SNR=50
K04D Chiloquin, OR 71.85 50 P **P 19 42 57.7 +1.4**
baz=301,SNR=7.0
NCK Nalchik 71.85 311 *de*P **P 19 42 56.1 -0.1**
NCK pmax pmax
comp=Z,302nm,1.8s
NCK MLR MLR
comp=Z,20µm,17.0s
SMDO Samad 71.86 286 P **P 19 43 01.0 +4.4**
SNR=18
SMDO Samad 71.86 286 P **P 19 43 01.0 +4.4**
SNR=18
DUS Dusheti 71.88 309 P **P 19 42 57.0 +0.6**
DUS Dusheti 71.88 309 *e*P **P 19 42 57.0 +0.6**
E09A Wood Farm, Sta 72.02 46 *e*P **P 19 42 58.0 +0.9**
comp=Z,200nm,1.0s
TBLG Delisi 72.04 309 P **P 19 42 57.4 +0.1**
TBLG Delisi 72.04 309 *e*P **P 19 42 57.1 -0.2**
comp=Z,342nm,1.2s

TBLG Delisi 72.04 309 *e*P **P 19 42 57.1 -0.2**
TBLG pmax pmax
comp=Z,342nm,1.2s
N02D Trinity Center 72.08 52 P **P 19 42 59.2 +1.5**
baz=301,SNR=75
KBZ Khabaz 72.17 311 P **P 19 42 58.4 +0.4**
comp=Z,106nm,0.8s,baz=63,slow=4.8,SNR=61
KBZ LR LR 20 16 23.2
comp=Z,20μm,19.3s,baz=42,slow=37
KCPM Cahto Peak 72.17 54 *e*P **P 19 42 59.5 +1.3**
comp=Z,436nm,1.1s
MSFE Esma-Masafi 72.17 289 *i* P **P 19 42 58.5 +0.2**
SNR=26
JMDO Jabal Madar 72.17 285 P P 19 43 03.1 +4.7
SNR=14
VSU Vasula 72.17 330 *de*P **P 19 42 57.0 -0.7**
VSU pmax pmax
comp=Z,1μm,1.2s
VSU MLR MLR
comp=Z,35μm,18.0s
HOQ Hoqain 72.17 287 P **P 19 43 03.0 +4.6**
SNR=32
HOQ Hoqain 72.17 287 P **P 19 43 03.0 +4.6**
SNR=32
KIV Kislovodsk 72.18 311 *e*P **P 19 42 58.8 +0.5**
comp=Z,2μm,1.8s
KIV LR LR
comp=Z,19μm,19.0s
KIV Kislovodsk 72.18 311 P **P 19 42 59.4 +1.2**
SNR=112
KIV Kislovodsk 72.18 311 P **P 19 42 59.4 +1.2**
SNR=112
KIV Kislovodsk 72.18 311 *i* P **P 19 42 58.2 +0.1**
SNR=111
KIV Kislovodsk 72.18 311 *e*P **P 19 42 58.3 +0.1**
KIV *e* 19 43 15.3
KIV *e* 19 45 38.8
KIV *e*S **S 19 52 20.2 +0.6**
KIV *e*SS **SS 19 56 59.3 +2.8**
KIV pmax pmax
comp=Z,88nm,3.2s
KIV pmax pmax
comp=Z,314nm,1.0s
G08A Pilot Rock 72.18 47 *e*P **P 19 42 58.5 +0.3**
comp=Z,51nm,0.9s
M04C Macdoel 72.23 51 P **P 19 43 00.0 +1.4**
baz=301,SNR=93
K05A Summer Lake 72.34 50 *e*P **P 19 43 00.4 +1.1**
comp=Z,524nm,1.1s
UOSS Minazif 72.34 288 *e*P **P 19 42 58.9 -0.5**
comp=Z,143nm,1.0s
UOSS Minazif 72.34 288 *i* P **P 19 42 58.3 -1.1**
SNR=40
WDC Whiskeytown Da 72.39 53 *e*P **P 19 42 59.9 +0.5**
comp=Z,199nm,1.1s
WDC Whiskeytown Da 72.39 53 *e*P **P 19 42 59.9 +0.5**
WDC pmax pmax
comp=Z,199nm,1.1s
ONI Oni 72.41 310 P **P 19 42 59.8 +0.2**
ONI Oni 72.41 310 *e*P **P 19 42 59.8 +0.2**
HATD Hatta, Dubai 72.46 288 *i* P **P 19 43 00.3 +0.2**
SNR=64
UMQ Umm Al-Quwin 72.47 289 *i* P **P 19 43 01.0 +1.0**
SNR=6.7
I07A Izee 72.49 48 *e*P **P 19 43 00.9 +0.8**
comp=Z,71nm,1.0s
NEY Neytrino 72.53 311 *ce*P **P 19 43 01.6 +1.2**
NEY pmax pmax
comp=Z,13nm,0.8s
NEY MLR MLR
comp=Z,8μm,18.0s
BSY Bisya 72.69 286 P **P 19 43 05.0 +3.5**
SNR=41
BSY Bisya 72.69 286 P **P 19 43 05.0 +3.5**
SNR=41
SUMG Summit 72.74 360⇓ *i*P **P 19 43 02.4 +1.0**
comp=Z,251nm,1.1s
comp=Z,27μm,20.0s
SUMG Summit 72.74 360 *e*P **P 19 43 01.8 +0.4**
comp=Z,267nm,1.1s
SUMG Summit 72.74 360 *e*P **P 19 43 01.8 +0.4**
SUMG pmax pmax
comp=Z,267nm,1.1s
NAZ Nazwa, Dubai 72.74 289 *i* P **P 19 43 02.9 +1.1**
SNR=23
GASB Alder Springs 72.76 54 *e*P **P 19 43 03.6 +1.9**
LTIM Timbered Crate 72.77 52 *e*P **P 19 43 03.2 +1.5**
F10A Beach Ranch, E 72.85 46 *e*P **P 19 43 02.7 +0.6**
comp=Z,125nm,1.0s
GNI Garni 72.86 307 P **P 19 43 02.7 +0.4**
comp=Z,104nm,0.9s,baz=46,slow=6.6,SNR=47
GNI LR LR 20 16 44.5
comp=Z,10μm,19.7s,baz=80,slow=37
GNI Garni 72.86 307 P **P 19 43 03.4 +1.0**
SNR=68
GNI Garni 72.86 307 P **P 19 43 03.4 +1.0**
SNR=68
GNI Garni 72.86 307 *i* P **P 19 43 02.8 +0.4**
SNR=76
GNI Garni 72.86 307 *d i*P **P 19 43 03.1 +0.7**
GNI pmax pmax
comp=Z,1μm,1.7s
GNI MLR MLR
comp=Z,23μm,18.0s
HOPS Hopland Field 72.86 54 *e*P **P 19 43 03.3 +1.0**
comp=Z,135nm,1.1s
NAX Nakhchivan 72.86 306 P **P 19 43 00.3 -2.1**
ARQ Araqi 72.92 287 P **P 19 43 07.0 +4.1**
SNR=32
ARQ Araqi 72.92 287 P **P 19 43 07.0 +4.1**
SNR=32
AKH Akhalkalaki 73.00 309 P **P 19 43 04.0 +0.8**
AKH Akhalkalaki 73.00 309 *e*P **P 19 43 04.2 +1.0**
AKH Akhalkalaki 73.00 309⇑ *i*P **P 19 43 04.3 +1.0**
AKH Akhalkalaki 73.00 309 *e*P **P 19 43 03.8 +0.5**
comp=Z,154nm,0.9s
AKH Akhalkalaki 73.00 309 *e*P **P 19 43 03.8 +0.5**
AKH pmax pmax
comp=Z,154nm,0.9s
BGD Bogdanovka 73.01 309 P **P 19 43 04.5 +1.1**
O03D Paynes Creek 73.02 53 P **P 19 43 03.9 +0.6**
baz=302,SNR=53
O03D Paynes Creek 73.02 53 *e*P **P 19 43 04.0 +0.8**
LBCM Butte Creek Ri 73.03 52 *e*P **P 19 43 04.7 +1.2**
WALA Waterton Lakes 73.03 42 *e*P **P 19 43 03.5 +0.3**
comp=Z,292nm,1.4s
MOD Modoc Plateau 73.14 51 *e*P **P 19 43 04.8 +0.7**
comp=Z,156nm,1.0s
GDXM Geysers 73.14 54 *e*P **P 19 43 04.8 +0.8**
comp=Z,217nm,1.2s
ALNE Al Ain 73.15 288 *i* P **P 19 43 04.0 -0.2**
SNR=72
NSS Namsos 73.17 340 *e*P **P 19 43 04.5 +1.0**
ASUD Al Ashush, Dub 73.19 288 *i* P **P 19 43 04.2 -0.2**
SNR=17
CHVG Ch'k'valeri 73.20 311 P **P 19 43 04.5 +0.3**
CHVG Ch'k'valeri 73.20 311⇑ *i*P **P 19 43 05.2 +1.0**
BMO Blue Mountains 73.41 47 *e*P **P 19 43 05.8 +0.3**
comp=Z,188nm,1.3s
BMO LR LR
comp=Z,4μm,19.0s
BMO Blue Mountains 73.41 47 *e*P **P 19 43 05.8 +0.3**
BMO pmax pmax
comp=Z,188nm,1.3s
BMO MLR MLR
comp=Z,4μm,19.0s
MCCM Marconi Confer 73.43 55 *e*P **P 19 43 06.4 +0.8**
comp=Z,172nm,0.8s
MGL Magalia 73.44 53 *e*P **P 19 43 06.6 +0.8**
AJN Ajban 73.49 289 *i* P **P 19 43 05.7 -0.5**
SNR=20
JTMT Jette 73.56 43 *e*P **P 19 43 06.8 +0.4**
comp=Z,256nm,0.9s
ORV Oroville 73.61 53 *e*P **P 19 43 06.8 +0.2**
comp=Z,137nm,1.0s
ORV Oroville 73.61 53 *e*P **P 19 43 06.9 +0.2**
ORV pmax pmax
comp=Z,137nm,1.0s
KARS Kars 73.68 308 *e*P **P 19 43 08.3 +1.0**
WVOR Wild Horse Val 73.91 49 *e*P **P 19 43 08.8 +0.3**
comp=Z,225nm,1.3s
WVOR Wild Horse Val 73.91 49 *e*P **P 19 43 08.8 +0.3**
WVOR pmax pmax
comp=Z,225nm,1.3s
IZAR Zarasai 74.09 328 *e*P **P 19 43 09.2 +0.1**
IZAR IAmb IAmb 19 43 13.2
comp=Z,165nm,1.3s

MICGM Minsk 74.14 326⇓ *i e*P **P 19 43 08.0 -1.4**
MICGM ⇓ *e*P **P 19 43 08.0 -1.4**
MICGM *e*PP **PP 19 45 50.0 -4.5**
MICGM *e*PPP PPP 19 47 44.0
MICGM *e*S **SKiKP 19 52 38.0 +2.1**
MICGM SM 19 52 39.0
comp=E,1.5nm,6.0s
MICGM *e*PS **PnS 19 53 08.0 -7.6**
MICGM *e*SS **SS 19 57 18.0 -7.5**
MICGM *e*SSS SSS 20 00 40.0
MICGM *e*LQ LQ 20 05 30.0
MICGM LQM 20 09 46.0
comp=N,11nm,30.0s
MICGM LQM 20 10 00.0
comp=E,9.2nm,30.0s
MICGM *e*LR LR 20 15 30.0
MICGM LRM MLR 20 20 04.0
comp=N,16nm,20.0s
MICGM LRM MLR 20 20 24.0
comp=E,27nm,24.0s
MICGM LRM MLR 20 20 26.0
comp=E,21nm,20.0s
MICGM LRM MLR 20 20 30.0
comp=Z,36nm,18.0s
MICGM LRM MLR 20 20 40.0
comp=Z,43nm,24.0s
MNK Minsk 74.14 326 *e*P **P 19 43 08.0 -1.4**
MNK *e* 19 45 50.0
MNK *e*PPP PPP 19 47 44.0
MNK *e*S **SKiKP 19 52 38.0 +2.1**
MNK *e*PS **PnS 19 53 08.0 -7.6**
MNK *e*SSS SSS 20 00 40.0
MNK smax smax
comp=E,2μm,6.0s
MNK MLR MLR
comp=E,27μm,24.0s
MNK MLR MLR
comp=Z,43μm,24.0s
IDID Didziasalis 74.14 327 *e*P **P 19 43 09.5 +0.1**
IDID IAmb IAmb 19 43 23.9
comp=Z,66nm,0.9s
SCO Scoresbysund 74.14 354⇓ *i*P **P 19 43 10.2 +1.0**
comp=Z,300nm,1.3s
SCO Scoresbysund 74.14 354 *e*P **P 19 43 09.9 +0.7**
comp=Z,387nm,1.4s
SCO Scoresbysund 74.14 354 *e*P **P 19 43 09.9 +0.7**
SCO pmax pmax
comp=Z,387nm,1.4s
BCA Borcka 74.18 310 *e*P **P 19 43 09.9 -0.1**
BEKR Beckworth 74.19 52 *e*P **P 19 43 10.7 +0.4**
comp=Z,199nm,0.8s
SOC Sochi 74.19 312 *d i*P **P 19 43 09.5 -0.5**
SOC *e**SP **pP 19 43 17.3 +0.5**
SOC *e* 19 45 53.6
SOC *e*PPP PPP 19 47 36.2
SOC *i* S **S 19 52 43.2 +0.9**
SOC *e*SS **SS 19 57 34.8 +7.8**
SOC pmax pmax
comp=Z,97nm,0.8s
SOC MLR MLR
comp=Z,7μm,15.0s
ISAL Salakas 74.25 328 *e*P **P 19 43 10.2 +0.2**
ISAL IAmb IAmb 19 43 24.7
comp=Z,118nm,0.9s
MSO Missoula 74.27 44 P **P 19 43 10.9 +0.4**
baz=305,SNR=33
MSO Missoula 74.27 44 *e*P **P 19 43 10.7 +0.1**
comp=Z,142nm,1.1s
AFDM Forest Hills D 74.28 53 *e*P **P 19 43 10.9 +0.3**
comp=Z,135nm,1.3s
AGRB Hanur-Agry 74.30 307 *e*P **P 19 43 13.7 +2.8**
IIGN Ignalina 74.35 328 *e*P **P 19 43 10.8 +0.1**
IIGN IAmb IAmb 19 43 25.1
comp=Z,127nm,1.1s
NACGM Naroch 74.38 327 *e*P **P 19 43 10.0 -0.9**
NACGM *e*P **P 19 43 10.0 -0.9**
NACGM PM 19 43 14.0
comp=Z,0.9nm,1.0s
NACGM *e*PP **PP 19 45 56.0 -0.5**
NACGM *e*PsP 19 49 00.0
NACGM *e*S **S 19 52 43.0 -1.0**
NACGM *e*PS PnS 19 53 34.0 +15
NACGM *e*SS SS 19 57 42.0 +13
NACGM *e*SSS SSS 20 01 20.0
NACGM *e*LQ LQ 20 06 26.0
NACGM *e*LR LR 20 15 18.0
NACGM LRM MLR 20 20 25.0
comp=Z,19nm,18.0s
IND Independence 74.46 53 *e*P **P 19 43 13.3 +1.4**
VANB Van 74.56 306 *e*P **P 19 43 13.9 +1.5**
RDG13 Poverty Ridge 74.57 55 *e*P **P 19 43 12.9 +0.5**
comp=Z,331nm,1.2s
RAO Raoul Island 74.58 144 PFAKE 19 43 20.0 +7.8
RAO LR LR
comp=Z,6μm,20.0s
PEAR Peavine Mounta 74.59 52 *e*P **P 19 43 14.0 +1.3**
TBLU Trondheim 74.63 339 *e*P **P 19 43 10.5 -1.7**
RUBR Rubicon Trail 74.76 53 *e*P **P 19 43 14.5 +0.8**
comp=Z,230nm,0.9s
ANN Anapa 74.88 314 *d i*P **P 19 43 13.5 -0.4**
ANN *e**PP **pP 19 43 19.6 -1.1**
ANN *e**PP **sP 19 43 20.0 -3.2**
ANN *e* 19 43 25.2
ANN *e* 19 46 09.1
ANN *i* S **S 19 52 49.3 -0.6**
ANN *e*SS **SS 19 57 38.1 +0.8**
ANN pmax pmax
comp=N,67nm,1.5s
ANN pmax pmax
comp=Z,364nm,1.6s
ANN pmax pmax
comp=E,82nm,1.5s
PAHR Pah Rah Range 74.91 52 *e*P **P 19 43 15.2 +0.7**
comp=E,288nm,1.3s
CHOM Cayeli-Rize 74.91 310 *e*P **P 19 43 14.5 +0.3**
GHS Gilroy Hot Spr 74.95 55 *e*P **P 19 43 15.7 +1.1**
VCNR Virginia City 74.96 53 *e*P **P 19 43 15.3 +0.5**
comp=E,94nm,0.9s
MCUB Copperopolis B 75.03 54 *e*P **P 19 43 16.5 +1.5**
MFID Camas Ranch 75.09 47 *e*P **P 19 43 16.0 +0.6**
comp=E,149nm,1.0s
PNTR Pine Nut 75.10 53 *e*P **P 19 43 16.5 +0.9**
comp=E,172nm,0.9s
FRP Fremont Peak 75.11 56 *e*P **P 19 43 16.2 +0.7**
FRP Fremont Peak 75.11 56 *e*P **P 19 43 16.2 +0.7**
SLD San Luis Dam 75.12 55 *e*P **P 19 43 17.1 +1.6**
SAO San Andreas Ge 75.13 56 *e*P **P 19 43 16.4 +0.8**
comp=E,121nm,0.9s
SAO San Andreas Ge 75.13 56 *e*P **P 19 43 16.4 +0.8**
SAO pmax pmax
comp=Z,121nm,0.9s
CMB Columbia Colle 75.16 54 *e*P **P 19 43 16.4 +0.6**
comp=Z,386nm,1.1s
CMB Columbia Colle 75.16 54 *e*P **P 19 43 16.4 +0.6**
CMB pmax pmax
comp=Z,386nm,1.1s
SFJWR San Luis Fatjo 75.16 55 *e*P **P 19 43 17.3 +1.5**
YERR Yerington 75.39 53 *e*P **P 19 43 18.2 +0.9**
comp=Z,253nm,0.8s
BVL Bear Valley 75.41 56 *e*P **P 19 43 18.4 +1.2**
MZR Muzera 75.48 288 *i* P **P 19 43 17.0 -0.8**
SNR=72
GURO Guroymak-BITLI 75.48 307 *e*P **P 19 43 18.6 +0.9**
FFC Flin Flon 75.49 32 *e*P **P 19 43 17.1 -0.2**
comp=Z,325nm,1.3s
FFC LR LR
comp=Z,5μm,21.0s
FFC Flin Flon 75.49 32 *e*P **P 19 43 17.1 -0.2**
FFC pmax pmax
comp=Z,325nm,1.3s
FFC MLR MLR
comp=Z,5μm,21.0s
HRY Holter Researc 75.53 43 *e*P **P 19 43 18.3 +0.5**
WAKR Walker 75.53 53 *e*P **P 19 43 18.8 +0.7**
comp=Z,153nm,0.9s
BAYT Ayd¨–ntepe-Bay 75.69 309 *e*P **P 19 43 19.6 +0.7**
LRM Limekiln Ridge 75.69 44 *e*P **P 19 43 19.4 +0.5**
ILULI Ilulissat 75.72 5 *i* P **P 19 43 18.5 +0.2**
comp=Z,213nm,1.1s
comp=Z,14μm,18.0s
ILULI Ilulissat 75.72 5 *e*P **P 19 43 19.1 +0.8**
comp=Z,185nm,1.1s
ILULI Ilulissat 75.72 5 *i* P **P 19 43 18.5 +0.2**
ILULI pmax pmax
comp=Z,210nm,1.1s

ILULI MLR MLR
comp=Z,14μm,18.0s
SIRT Sirnak 75.79 306 *e*P **P 19 43 19.7 +0.3**
NC405 NORSAR Array S 75.83 337 *e*P **P 19 43 17.4 -1.7**
NC303 NORSAR Array S 75.85 337 *e*P **P 19 43 18.9 -0.3**
HLID Hailey 75.85 47 P **P 19 43 21.0 +1.1**
baz=305,SNR=72
HLID Hailey 75.85 47 *e*P **P 19 43 20.4 +0.5**
comp=Z,130nm,1.0s
HLID LR LR
comp=Z,5μm,20.0s
AKASG Malin Array Be 75.86 323 P **P 19 43 18.6 -0.8**
comp=Z,125nm,0.7s,baz=48,slow=6.2,SNR=171
AKASG LR LR 20 18 05.1
comp=Z,11μm,19.3s,baz=45,slow=37
AKBB Malin Array Si 75.86 323 *e*P **P 19 43 18.3 -1.1**
comp=Z,210nm,1.0s
AKBB Malin Array Si 75.86 323 *e*P **P 19 43 18.3 -1.1**
AKBB pmax pmax
comp=Z,210nm,1.0s
PMPB Monarch Peak 75.86 56 *e*P **P 19 43 19.5 -0.4**
comp=Z,279nm,1.2s
DLMT Dillon 75.88 44 *e*P **P 19 43 19.5 -0.4**
comp=Z,238nm,1.0s
EGMT Eagleton 75.89 41 P **P 19 43 20.4 +0.6**
baz=307,SNR=57
EGMT Eagleton 75.89 41 *e*P **P 19 43 20.2 +0.4**
comp=Z,253nm,1.0s
EGMT LR LR
comp=Z,9μm,20.0s
FCC Fort Churchill 75.89 26 *e*P **P 19 43 18.9 -0.5**
comp=Z,450nm,1.1s
FCC Fort Churchill 75.89 26 *e*P **P 19 43 18.9 -0.5**
FCC pmax pmax
comp=Z,450nm,1.1s
BMN Battle Mountai 75.89 50 *e*P **P 19 43 21.1 +1.1**
comp=Z,307nm,1.4s
BMN Battle Mountai 75.89 50 *e*P **P 19 43 21.2 +1.1**
BMN pmax pmax
comp=Z,307nm,1.4s
AK11 Malin Array Si 75.90 323 *e*P **P 19 43 18.9 -0.7**
HFS Hagfors 75.92 336 P **P 19 43 19.5 -0.1**
comp=Z,97nm,0.7s,baz=69,slow=4.8,SNR=78
HFS PP **PP 19 46 11.0 +1.6**
comp=Z,17nm,0.8s,baz=60,slow=8.5,SNR=3.6
HFS LR LR 20 20 35.4
comp=Z,29μm,21.0s,baz=30,slow=39
DOMB Dombas 75.92 339 *e*P **P 19 43 19.9 +0.2**
MOL Molde 75.94 340 *e*P **P 19 43 19.5 -0.2**
NC204 NORSAR Array S 76.00 338 *e*P **P 19 43 19.5 -0.6**
NB201 NORSAR Array S 76.01 337 *e*P **P 19 43 19.0 -1.2**
NB2 NORSAR Subarra 76.04 337 P **P 19 43 20.1 -0.3**
comp=Z,170nm,0.9s,baz=40,slow=5.9
NB2 NORSAR Subarra 76.04 337 P **P 19 43 20.1 -0.3**
baz=40,slow=5.9
NB200 NORSAR Array S 76.04 337 *e*P **P 19 43 19.9 -0.5**
NB200 *e*PP **PP 19 46 13.2 +2.8**
NOA NORSAR Array B 76.04 337 P **P 19 43 19.9 -0.5**
comp=Z,159nm,0.8s,baz=38,slow=5.9,SNR=293
NOA PP **PP 19 46 13.3 +2.8**
comp=Z,12nm,0.8s,baz=41,slow=8.7,SNR=5.0
NOA LR LR 20 22 11.4
comp=Z,22μm,19.9s,baz=50,slow=40
MCMT McKenzie Canyo 76.05 45 *e*P **P 19 43 21.3 +0.3**
RYN Ryan 76.06 53 *e*P **P 19 43 21.8 +0.8**
comp=Z,193nm,1.0s
OUZ Omahuta 76.08 153 *e*P **P 19 43 20.8 +0.2**
comp=Z,416nm,1.9s
KVN Kaiserville 76.10 52 *e*P **P 19 43 22.2 +0.9**
comp=Z,342nm,1.1s
KVN Kaiserville 76.10 52 *e*P **P 19 43 22.2 +0.9**
KVN pmax pmax
comp=Z,342nm,1.1s
NC602 NORSAR Array S 76.17 337 *e*P **P 19 43 20.3 -0.7**
NC602 NORSAR Array S 76.17 337 *e*P **P 19 43 20.7 -0.3**
NBO00 NORSAR Array S 76.18 338 *e*P **P 19 43 20.8 -0.3**
MDPB Devils Postpil 76.24 54 *e*P **P 19 43 22.5 +0.2**
comp=Z,190nm,1.2s
SVAN Silvan-Diyarba 76.25 307 *e*P **P 19 43 22.8 +0.8**
LHV Little Huntoon 76.28 53 *e*P **P 19 43 24.1 +2.0**
NAO01 NORSAR Array S 76.29 337 *e*P **P 19 43 21.6 -0.2**
BOZ Bozeman (W) 76.29 44 P **P 19 43 23.2 +0.9**
baz=306,SNR=100
BOZ Bozeman (W) 76.29 44 *e*P **P 19 43 22.5 +0.3**
comp=Z,169nm,1.0s
BOZ LR LR
comp=Z,5μm,19.0s
BOZ Bozeman (W) 76.29 44 *e*P **P 19 43 22.5 +0.3**
BOZ pmax pmax
comp=Z,169nm,1.0s
BOZ MLR MLR
comp=Z,5μm,19.0s
OMMB Old Mammoth Mi 76.31 54 *e*P **P 19 43 23.5 +0.8**
comp=Z,243nm,1.3s
NV01 Mina Array Sit 76.31 53 *e*P **P 19 43 23.3 +0.7**
NVAR Mina Array Bea 76.31 53 P **P 19 43 23.9 +1.4**
comp=Z,182nm,0.7s,baz=287,slow=5.8,SNR=250
NVAR LR LR 20 15 20.2
comp=Z,3μm,18.1s,baz=64,slow=34
MLAC Mammoth, Mammo 76.40 54 P **P 19 43 24.7 +1.6**
baz=304,SNR=10
NV11 Mina Array Sit 76.41 53 *e*P **P 19 43 23.3 +0.2**
comp=Z,11nm,1.0s
AKN Aaknes 76.41 340 *e*P **P 19 43 23.3 +0.9**
SHAO Shalim 76.43 283 P **P 19 43 27.7 +4.4**
SNR=6.6
SHAO Shalim 76.43 283 P **P 19 43 27.7 +4.4**
SNR=6.6
PAGB Antelope Grade 76.50 56 *e*P **P 19 43 24.1 +0.7**
comp=Z,242nm,0.8s
SUW Suwalki 76.56 328 *e*P **P 19 43 22.9 -0.5**
SUW *e*S **S 19 53 08.4 +0.3**
SUW LMZ LR 20 21 26.5
comp=Z,26μm,20.4s
SUW Suwalki 76.56 328 *e*P **P 19 43 22.6 -0.8**
comp=Z,360nm,1.1s
SUW Suwalki 76.56 328 *e*P **P 19 43 22.9 -0.5**
SUW *e*S **S 19 53 08.4 +0.3**
SUW MLR MLR
comp=Z,26μm,20.4s
SIM Simferopol' 76.72 316 *d i*P **P 19 43 24.4 -0.1**
SIM *e* 19 43 36.0
SIM pmax pmax
comp=Z,115nm,0.9s
QLMT Earthquake Lak 76.86 44 *e*P **P 19 43 26.5 +0.9**
SMMC Simmler 76.91 56 P **P 19 43 27.5 +1.7**
baz=304,SNR=6.7
ELK Elko 76.96 49 LR LR 20 13 02.1
comp=Z,2μm,21.7s,baz=343,slow=32
PTK Pertek 77.01 308 *e*P **P 19 43 27.4 +0.9**
YHB Horse Butte 77.04 44 *e*P **P 19 43 27.6 +1.0**
comp=Z,253nm,1.2s
OSL Oslo 77.04 337 *e*P **P 19 43 26.2 +0.3**
TIN Tinemaha, Big 77.13 54 P **P 19 43 28.4 +1.4**
baz=304,SNR=12
MAZI Mazidag 77.13 307 *e*P **P 19 43 27.6 +0.5**
YHH Holmes Hill 77.22 44 *e*P **P 19 43 28.5 +0.8**
comp=Z,231nm,1.4s
ILIC ilic-Erzincan 77.22 309 *e*P **P 19 43 28.3 +0.8**
YMR Madison River 77.22 44 *e*P **P 19 43 28.9 +1.3**
comp=Z,232nm,1.2s
VES Vestal, Richgr 77.23 55 P **P 19 43 27.9 +0.4**
baz=304,SNR=50
DGAR Diego Garcia 77.23 251 PFAKE 19 43 40.0 +12
DGAR LR LR
comp=Z,4μm,20.0s
PKM Mcpherson Peak 77.27 56 P **P 19 43 29.4 +1.4**
baz=304,SNR=26
GCMT Greycliff 77.28 43 *e*P **P 19 43 28.3 +0.5**
SVRC Sivrice-ELAZID 77.36 308 *e*P **P 19 43 29.4 +1.0**
YNR Norris Junctio 77.36 44 *e*P **P 19 43 28.9 +0.5**
comp=Z,274nm,1.2s
YFT Old Faithful 77.43 44 *e*P **P 19 43 30.1 +1.3**
comp=Z,202nm,1.2s
KLNR Kaliningrad 77.44 329 *c i*P **P 19 43 28.4 +0.2**
KLNR pmax pmax
comp=Z,233nm,1.1s
KLNR MLR MLR
comp=Z,25μm,22.0s
HYA Hoyanger 77.46 339 *e*P **P 19 43 28.6 +0.4**
RSDY Resadiye-TOKAT 77.46 311 *e*P **P 19 43 26.5 -2.3**
YPP Pitchstone Pla 77.55 44 *e*P **P 19 43 30.6 +1.1**
comp=Z,96nm,1.0s
CWC Cottonwood Cre 77.57 54 P **P 19 43 30.4 +0.8**
baz=304
SBC Santa Barbara 77.58 57 P **P 19 43 30.8 +1.3**

baz=304
LKWY Lake 77.61 44 PFAKE 19 43 40.0 +10
LKWY LR LR
comp=Z,2µm,22.0s
H17A Grant Village 77.61 44 P **P 19 43 32.7 +2.8**
baz=307,SNR=134
H17A Grant Village 77.61 44 *e*P **P 19 43 31.6 +1.8**
comp=Z,414nm,1.3s
KONO Kongsberg 77.63 337 *e*P **P 19 43 29.2 0.0**
comp=Z,147nm,1.2s
KONO Kongsberg 77.63 337 *d i*P **P 19 43 29.1 -0.2**
KONO pmax pmax
comp=Z,191nm,1.7s
KONO Kongsberg 77.63 337 *e*P **P 19 43 29.3 0.0**
IMW Indian Meadow 77.70 45 *e*P **P 19 43 31.8 +1.4**
comp=Z,177nm,1.0s
TAU Tasmania Unive 77.71 175 *e*P **P 19 43 30.2 +0.5**
comp=Z,84nm,1.1s
TAU LR LR
comp=Z,7µm,20.0s
TAU Tasmania Unive 77.71 175 *e*P **P 19 43 30.2 +0.5**
TAU pmax pmax
comp=Z,84nm,1.1s
TAU MLR MLR
comp=Z,7µm,20.0s
ISA Isabella, Lake 77.74 55 P **P 19 43 30.8 +0.3**
baz=304,SNR=18
ISA Isabella, Lake 77.74 55 *e*P **P 19 43 29.7 -0.8**
comp=Z,60nm,0.9s
ISA Isabella, Lake 77.74 55 *e*P **P 19 43 29.7 -0.8**
ISA pmax pmax
comp=Z,60nm,0.9s
ARVC Arvin 77.80 56 P **P 19 43 31.5 +0.7**
baz=304,SNR=9.8
FXWY Fox Creek 77.80 45 *e*P **P 19 43 31.6 +0.7**
comp=Z,102nm,1.1s
SNOP Sinop 77.81 313 *e*P **P 19 43 30.6 0.0**
KVT Kavak 77.85 312 *e*P **P 19 43 31.8 +0.8**
HVU Hansel Valley 77.87 47 *e*P **P 19 43 32.0 +0.8**
comp=Z,185nm,1.0s
HVU Hansel Valley 77.87 47 *e*P **P 19 43 32.0 +0.8**
HVU pmax pmax
comp=Z,185nm,1.0s
SCZ2 Santa Cruz Isl 77.88 57 P **P 19 43 32.2 +1.0**
baz=304
MOOW Moose Ponds 77.90 45 *e*P **P 19 43 32.5 +1.0**
comp=Z,516nm,2.0s
RLMT Red Lodge 77.91 43 P **P 19 43 32.6 +1.2**
baz=308,SNR=26
RLMT Red Lodge 77.91 43 *e*P **P 19 43 32.2 +0.8**
comp=Z,248nm,1.6s
RLMT LR LR
comp=Z,6µm,19.0s
TPAW Teton Pass 77.94 45 *e*P **P 19 43 32.5 +0.8**
comp=Z,245nm,1.4s
SFJD Kangerlussuaq 77.94 5 P **P 19 43 31.5 +0.6**
comp=Z,79nm,0.9s,baz=352,slow=8.2,SNR=36
SFJD LR LR 20 20 06.2
comp=Z,10µm,20.9s,baz=348,slow=37
SFJD Kangerlussuaq 77.94 5 ⇓ *i*P **P 19 43 31.4 +0.6**
comp=Z,124nm,1.0s
SFJD Kangerlussuaq 77.94 5 *e*P **P 19 43 31.2 +0.4**
comp=Z,172nm,1.1s
SUE Sulen 77.95 340 *e*P **P 19 43 31.3 +0.3**
MALT Malatya 77.96 308 *e*P **P 19 43 32.3 +0.6**
WHFO Wadi Hawf 77.97 283 P **P 19 43 34.1 +2.2**
SNR=6.9
WHFO Wadi Hawf 77.97 283 P **P 19 43 34.1 +2.2**
SNR=6.9
DAC Darwin (Calif) 77.99 54 *e*P **P 19 43 32.6 +0.6**
comp=Z,108nm,1.0s
DAC Darwin (Calif) 77.99 54 *e*P **P 19 43 32.6 +0.6**
DAC pmax pmax
comp=Z,108nm,1.0s
DIKM Dikmen 78.00 313 *e*P **P 19 43 32.2 +0.5**
LOHW Long Hollow 78.06 45 *e*P **P 19 43 33.2 +0.9**
comp=Z,119nm,1.3s
SNOW Snow King Moun 78.07 45 *e*P **P 19 43 33.4 +1.0**
comp=Z,188nm,1.2s
REDW Red Top Meadow 78.07 45 *e*P **P 19 43 33.1 +0.7**
comp=Z,138nm,1.1s
R11A Troy Canyon, C 78.12 51 P **P 19 43 33.8 +1.2**
baz=305,SNR=268
R11A Troy Canyon, C 78.12 51 *e*P **P 19 43 33.2 +0.6**
comp=Z,234nm,1.1s
OSI Osito Audit: C 78.16 56 P **P 19 43 33.8 +1.0**
baz=304
OSI Osito Audit: C 78.16 56 *e*P **P 19 43 33.6 +0.8**
comp=Z,107nm,0.7s
MPMC Manual Prospec 78.18 54 P **P 19 43 34.0 +0.9**
baz=305,SNR=101
URFA Urfa 78.20 307 *e*P **P 19 43 34.2 +1.2**
BLG Laguna Peak, P 78.21 57 P **P 19 43 33.8 +0.8**
baz=304,SNR=5.2
BGU Big Grassy Mou 78.22 48 *e*P **P 19 43 34.0 +0.8**
comp=Z,96nm,1.0s
AHID Auburn Hatcher 78.28 46 *e*P **P 19 43 34.1 +0.6**
comp=Z,158nm,1.1s
AHID LR LR
comp=Z,4µm,21.0s
ASK Askoy 78.30 339 *e*P **P 19 43 34.1 +1.1**
BER Bergen 78.34 339 *e*P **P 19 43 33.9 +0.7**
ODD1 Odda 78.34 339 *e*P **P 19 43 34.0 +0.7**
FURC Furnace Creek, 78.36 54 P **P 19 43 35.0 +1.2**
baz=305,SNR=22
SNCC San Nicolas Is 78.38 58 P **P 19 43 34.8 +0.8**
baz=304
SNCC San Nicolas Is 78.38 58 *e*P **P 19 43 34.3 +0.3**
comp=Z,239nm,1.1s
LRMC Laurel Mtn Rad 78.38 55 P **P 19 43 34.7 +0.6**
baz=305,SNR=8.0
KIS Kishinev 78.39 320 *e*P **P 19 43 32.0 -1.7**
comp=Z,500nm,2.0s
KIS Kishinev 78.39 320 *e*PcP **PcP 19 43 47.0 +4.0**
KIS Kishinev 78.39 320 *e*PP PP 19 46 29.0 -1.5
KIS Kishinev 78.39 320 *e*P **P 19 43 32.0 -1.7**
KIS *e* 19 43 47.0
KIS *e* 19 46 29.0
KIS *e*S **S 19 53 25.0 -3.2**
KIS *e* 19 53 45.0
KIS *e*PS **PnS 19 54 12.0 +1.6**
KIS *e*SS **SS 19 58 36.0 +5.8**
KIS pmax pmax
comp=Z,500nm,2.0s
KIS pmax pmax
comp=Z,900nm,6.0s
KIS pmax pmax
comp=Z,900nm,12.0s
KIS smax smax
comp=E,1µm,8.0s
KIS smax smax
comp=N,1µm,8.0s
DARE Darende-Malaty 78.42 309 *e*P **P 19 43 35.0 +0.8**
TPNV Topopah Spring 78.49 53 P **P 19 43 35.8 +1.0**
baz=305,SNR=176
TPNV Topopah Spring 78.49 53 *e*P **P 19 43 35.3 +0.6**
comp=N,209nm,1.0s
TPNV Topopah Spring 78.49 53 *e*P **P 19 43 35.3 +0.6**
TPNV pmax pmax
comp=Z,209nm,1.0s
EDW2 Edwards Air Fo 78.51 56 P **P 19 43 35.8 +1.0**
baz=305,SNR=56
DGMT Dagmar 78.52 38 P **P 19 43 34.7 +0.2**
baz=310,SNR=9.9
DGMT Dagmar 78.52 38 *e*P **P 19 43 35.0 +0.5**
comp=Z,235nm,1.0s
DGMT LR LR
comp=Z,6µm,19.0s
BZK Bozkurt 78.57 313 *e*P **P 19 43 35.1 +0.3**
LAO LASA Array 78.60 40 P **P 19 43 35.7 +0.6**
baz=309
LAO LASA Array 78.60 40 *e*P **P 19 43 35.9 +0.8**
comp=Z,244nm,1.0s
LAO LR LR
comp=Z,6µm,21.0s
DECC Green Verdugo 78.63 56 P **P 19 43 36.2 +0.8**
baz=305,SNR=5.8
ABTO Aybut 78.65 283 P **P 19 43 39.0 +3.2**
SNR=6.6
ABTO Aybut 78.65 283 P **P 19 43 39.0 +3.2**
SNR=6.6
HWUT Hardware Ranch 78.70 47 *e*P **P 19 43 36.5 +0.6**
comp=Z,540nm,1.5s
HWUT LR LR
comp=Z,4µm,19.0s
PASC Pasadena Art C 78.78 56 *e*P **P 19 43 36.4 +0.2**
comp=Z,438nm,1.8s

JNH Juniper Hills 78.78 56 *e*P **P 19 43 37.6 +1.3**
BLS5 Blasjo 78.78 338 *e*P **P 19 43 36.3 +0.6**
DUG Dugway, Tooele 78.78 49 P **P 19 43 37.5 +1.3**
baz=306,SNR=90
DUG Dugway, Tooele 78.78 49 *e*P **P 19 43 37.2 +0.9**
comp=Z,253nm,1.0s
DUG LR LR
comp=Z,5µm,19.0s
DUG Dugway, Tooele 78.78 49 *e*P **P 19 43 37.2 +0.9**
DUG pmax pmax
comp=Z,253nm,1.0s
DUG MLR MLR
comp=Z,5µm,19.0s
FRB Frobisher Bay 78.80 13 LR LR 20 23 14.7
comp=Z,17µm,19.0s,baz=345,slow=39
MWC Mount Wilson 78.84 56 *e*P **P 19 43 37.1 +0.4**
comp=Z,257nm,1.2s
MWC Mount Wilson 78.84 56 *e*P **P 19 43 37.1 +0.4**
MWC pmax pmax
comp=Z,257nm,1.2s
IAS Iasi 78.93 320 ⇑ *i*P **P 19 43 37.8 +1.1**
FMP Fort Macarthur 78.96 57 P **P 19 43 37.6 +0.4**
baz=305
LVV L'vov 78.98 324 *i* P **P 19 43 38.0 +1.1**
LVV *e*S **S 19 53 34.0 -0.4**
LVV pmax pmax
comp=Z,800nm,1.8s
LEOM Leova 79.03 320 ⇑ *i*P **P 19 43 37.7 +0.5**
LEOM Leova 79.03 320 P **P 19 43 37.7 +0.5**
RAR Rarotonga 79.05 125 LR LR 20 16 54.1
comp=Z,4µm,18.4s,baz=312,slow=34
RAR Rarotonga 79.05 125 P **P 19 43 39.4 +1.8**
CIS Catalina Islan 79.06 57 P **P 19 43 38.4 +0.6**
baz=305,SNR=6.9
HOMB Homborsund 79.06 337 *e*P **P 19 43 35.5 -1.7**
GSC Goldstone, Bar 79.07 55 P **P 19 43 38.7 +0.9**
baz=305,SNR=56
GSC Goldstone, Bar 79.07 55 *e*P **P 19 43 38.2 +0.4**
comp=Z,191nm,1.3s
GSC Goldstone, Bar 79.07 55 *e*P **P 19 43 38.2 +0.4**
GSC pmax pmax
comp=Z,191nm,1.3s
SHOC Shoshone, Teco 79.08 54 P **P 19 43 38.7 +0.9**
baz=305,SNR=20
TCUT Toone Canyon 79.09 47 *e*P **P 19 43 39.0 +0.9**
comp=Z,309nm,1.1s
BFSC Mount Baldy Ra 79.10 56 P **P 19 43 38.8 +0.7**
baz=305,SNR=38
BEL Belsk 79.11 327 *e*P **P 19 43 38.4 +0.8**
BEL *e*S **S 19 53 38.9 +3.2**
BEL LMZ LR 20 23 20.1
comp=Z,24µm,21.3s
BEL Belsk 79.11 327 *e*P **P 19 43 38.4 +0.8**
BEL *e*S **S 19 53 38.9 +3.2**
BEL MLR MLR
comp=Z,24µm,21.3s
PSUT Pine Spring 79.11 51 *e*P **P 19 43 39.1 +0.9**
comp=Z,239nm,1.1s
CTU Camp Tracy 79.14 48 *e*P **P 19 43 39.3 +1.0**
comp=Z,182nm,1.2s
YOZ Yozgat 79.15 311 *e*P **P 19 43 37.9 -0.4**
RRX Edison Barstow 79.18 55 P **P 19 43 39.3 +0.9**
baz=305
BW06 Boulder Array 79.19 45 P **P 19 43 38.8 +0.3**
baz=308,SNR=11
BW06 Boulder Array 79.19 45 *e*P **P 19 43 38.5 0.0**
comp=Z,75nm,0.9s
BW06 LR LR
comp=Z,4µm,20.0s
PD31 Pinedale Array 79.19 45 *e*P **P 19 43 38.4 -0.1**
PDAR Pinedale Array 79.19 45 P **P 19 43 39.0 +0.5**
comp=Z,30nm,0.6s,baz=260,slow=1.6,SNR=67
PDAR PKKPbc **PKKPbc 20 02 28.9 +0.2**
comp=Z,1.0nm,0.6s,baz=126,slow=4.6,SNR=5.7
PDAR PKPPKP **P'P'df 20 10 32.8 -5.4**
comp=Z,0.3nm,0.4s,baz=101,slow=3.0,SNR=4.7
PDAR Pinedale Array 79.19 45 *e*P **P 19 43 38.1 -0.4**
PDAR PKKPbc **PKKPbc 20 02 28.9 +0.2**
PDAR P'P' 20 10 32.8
SARI SarD1z-Kayseri 79.19 309 *e*P **P 19 43 38.2 -0.4**
BSD Bornholm Skovb 79.20 332 *i* P **P 19 43 37.8 -0.2**
comp=Z,335nm,1.0s
comp=Z,23µm,17.0s
BSD Bornholm Skovb 79.20 332 *i* P **P 19 43 37.8 -0.2**
BSD pmax pmax
comp=Z,340nm,1.0s
BSD MLR MLR
comp=Z,23µm,17.0s
SCI2 San Clemente I 79.20 57 P **P 19 43 39.2 +0.7**
baz=305
CORM Corum 79.26 312 *e*P **P 19 43 38.5 -0.3**
ILGA Ilgaz 79.29 313 *e*P **P 19 43 39.4 +0.3**
comp=Z,140nm,1.0s
BNN Bunyan 79.29 310 *e*P **P 19 43 38.5 -0.5**
KMY Karmoy 79.32 339 *e*P **P 19 43 39.1 +0.5**
JLU Jordanelle 79.38 48 *e*P **P 19 43 40.6 +0.9**
comp=Z,295nm,1.3s
NLU North Lily Min 79.38 49 *e*P **P 19 43 40.9 +1.2**
comp=Z,108nm,0.9s
GAZ Gaziantep 79.41 308 *e*P **P 19 43 40.4 +0.8**
STAV Stavanger 79.41 338 *e*P **P 19 43 38.7 -0.4**
KMRS Kahramanmaras 79.41 308 *e*P **P 19 43 40.3 +0.7**
SNART Snartemo 79.42 337 *e*P **P 19 43 39.3 +0.2**
SHPR Sheep Range 79.46 53 *e*P **P 19 43 41.2 +1.1**
comp=Z,239nm,1.0s
HIZ Hauiti 79.46 154 *e*P **P 19 43 41.3 +1.8**
comp=Z,229nm,1.0s
PRAR RASCA 79.51 321 ⇑ *i*P **P 19 43 40.8 +0.9**
TLCR 79.54 318 ⇑ *i*P **P 19 43 40.4 +0.3**
TUQ Turquoise Moun 79.58 54 P **P 19 43 41.8 +1.2**
baz=306,SNR=23
BBRC Big Bear Solar 79.59 56 P **P 19 43 41.3 +0.4**
baz=305
MPU Maple Canyon 79.62 48 *e*P **P 19 43 42.1 +1.3**
comp=Z,238nm,1.2s
GKP Gorka Klasztor 79.62 330 *e*P **P 19 43 40.6 +0.2**
GKP *e*S **S 19 53 43.5 +2.4**
GKP LMZ LR 20 24 31.9
comp=Z,34µm,18.3s
GKP Gorka Klasztor 79.62 330 *e*P **P 19 43 40.6 +0.2**
GKP *e*S **S 19 53 43.5 +2.4**
GKP MLR MLR
comp=Z,34µm,18.3s
HEC Hector,Ludlow 79.65 55 P **P 19 43 42.0 +1.0**
baz=306,SNR=79
BORG Borgarnes 79.67 353 *e*P **P 19 43 42.4 +2.0**
comp=Z,615nm,1.5s
BORG LR LR
comp=Z,2µm,20.0s
BORG Borgarnes 79.67 353 *e*P **P 19 43 42.4 +2.0**
BORG pmax pmax
comp=Z,615nm,1.5s
BORG MLR MLR
comp=Z,2µm,20.0s
COP Copenhagen 79.71 333 ⇓ *i*P **P 19 43 41.2 +0.4**
comp=Z,259nm,0.8s
comp=Z,16µm,19.0s
COP Copenhagen 79.71 333 ⇓ *i*P **P 19 43 41.2 +0.4**
COP pmax pmax
comp=Z,260nm,0.8s
COP MLR MLR
comp=Z,16µm,19.0s
ANGG Ammassalik, Gr 79.73 360 *e*P **P 19 43 40.6 -0.1**
comp=Z,157nm,1.2s
KWP Kalwaria Pacla 79.74 325 *e*P **P 19 43 41.3 +0.2**
KWP *e*S **S 19 53 43.4 +0.9**
KWP LMZ LR 20 25 32.5
comp=Z,27µm,19.2s
KWP Kalwaria Pacla 79.74 325 *e*P **P 19 43 41.8 +0.7**
comp=Z,5µm,1.2s
KWP Kalwaria Pacla 79.74 325 *e*P **P 19 43 41.8 +0.7**
MURC Murrieta 79.78 56 P **P 19 43 42.4 +0.8**
baz=305,SNR=39
TESR Tescani 79.84 320 ⇓ *i*P **P 19 43 42.0 +0.3**
BUR08 Bucovina Ar. S 79.85 322 *e*P **P 19 43 41.1 -0.7**
BUR04 Bucovina Ar. S 79.86 322 *e*P **P 19 43 41.5 -0.4**
BURAR Bucovina Array 79.86 322 ⇓ *i*P **P 19 43 42.1 +0.2**
BURAR Bucovina Array 79.86 322 P **P 19 43 42.1 +0.2**
CFR Carcaliu 79.92 319 ⇓ *i*P **P 19 43 42.3 +0.2**
CFR Carcaliu 79.92 319 P **P 19 43 42.2 +0.2**
TCRU Three Creeks R 79.96 50 *e*P **P 19 43 43.9 +1.0**
comp=Z,271nm,1.2s
CCUT Cedar City 80.01 51 *e*P **P 19 43 44.0 +0.9**
comp=Z,265nm,1.0s
PETR Petresti 80.05 319 ⇑ *i*P **P 19 43 44.6 +1.8**
LLD Lille Linde 80.06 333 *i* P **P 19 43 43.2 +0.5**

LLD Lille Linde 80.06 333 *i* P **P 19 43 43.2 +0.5**
URZ Urewera 80.08 152 LR LR 20 15 04.2
comp=Z,11µm,21.4s,baz=330,slow=33
URZ Urewera 80.08 152 *e*P **P 19 43 42.6 -0.2**
comp=Z,116nm,1.2s
KOZT Kozan 80.11 309 *e*P **P 19 43 43.8 +0.4**
ODBI Odobesti 80.12 320 ⇓ *i*P **P 19 43 44.9 +1.7**
GMRC Granite Mounta 80.13 54 P **P 19 43 44.7 +1.0**
baz=306,SNR=137
BR101 Keskin Array S 80.14 312 *e*P **P 19 43 44.0 +0.4**
BR101 *e*PKKPbc **PKKPbc 20 02 28.0 +1.6**
BR131 Keskin Array S 80.14 312 *e*P **P 19 43 44.4 +0.8**
BRTR Keskin Array B 80.14 312 P **P 19 43 44.0 +0.4**
comp=Z,80nm,0.8s,baz=98,slow=3.6,SNR=87
BRTR PKKPbc **PKKPbc 20 02 28.0 +1.6**
comp=Z,0.7nm,0.8s,baz=240,slow=1.2,SNR=3.2
BRTR LR LR 20 21 54.3
comp=Z,8µm,20.6s,baz=30,slow=38
SZCU Shurtz Canyon 80.16 51 *e*P **P 19 43 44.7 +0.8**
comp=Z,170nm,1.0s
MSU Marysvale 80.19 50 *e*P **P 19 43 44.1 +0.1**
MSU Marysvale 80.19 50 *e*P **P 19 43 44.1 +0.1**
SNDA J Saunders Pla 80.20 56 *e*P **P 19 43 45.2 +1.1**
VRI Vrincioaia 80.22 320 ⇓ *i*P **P 19 43 44.7 +0.9**
VRI Vrincioaia 80.22 320 P **P 19 43 44.7 +0.9**
TIRR Tirgusor 80.23 318 ⇑ *i*P **P 19 43 44.1 +0.3**
TIRR Tirgusor 80.23 318 *e*P **P 19 43 43.9 +0.1**
comp=Z,187nm,1.5s
TIRR Tirgusor 80.23 318 *e*P **P 19 43 43.9 +0.1**
TIRR pmax pmax
comp=Z,187nm,1.5s
RGN Rugen 80.24 332 *e*P **P 19 43 43.7 +0.1**
comp=Z,349nm,0.9s
109C Camp Elliot, M 80.25 57 P **P 19 43 45.1 +0.9**
baz=306,SNR=13
CPE Camp Elliot 80.25 57 *e*P **P 19 43 44.9 +0.8**
comp=Z,237nm,1.0s
MUD Monsted U'grnd 80.27 335 *i* P **P 19 43 44.2 +0.4**
comp=Z,233nm,1.3s
comp=Z,20µm,20.0s
MUD Monsted U'grnd 80.27 335 *i* P **P 19 43 44.2 +0.4**
MUD pmax pmax
comp=Z,230nm,1.3s
MUD MLR MLR
comp=Z,20µm,20.0s
PFO Pinyon Flats O 80.28 56 P **P 19 43 45.3 +0.9**
baz=306,SNR=129
PFO Pinyon Flats O 80.28 56 *e*P **P 19 43 44.7 +0.2**
comp=Z,320nm,1.0s
PFO LR LR
comp=Z,7µm,20.0s
PFO Pinyon Flats O 80.28 56 *e*P **P 19 43 44.7 +0.2**
PFO pmax pmax
comp=Z,320nm,1.0s
PFO MLR MLR
comp=Z,7µm,20.0s
PLOR Plostina 80.28 320 ⇓ *i*P **P 19 43 45.1 +1.0**
PLOR Plostina 80.28 320 P **P 19 43 45.1 +1.0**
TMUT Trail Mountain 80.31 49 *e*P **P 19 43 46.2 +1.4**
comp=Z,199nm,1.4s
LRW Lerwick 80.32 342 *e*P **P 19 43 43.8 -0.2**
LRW IAMs_20 IAMs_20 20 22 26.4
comp=Z,11µm,19.5s
LDFC Landfair 80.33 54 *e*P **P 19 43 45.6 +0.9**
comp=Z,311nm,1.0s
HARR Harsova 80.34 318 ⇑ *i*P **P 19 43 45.0 +0.5**
HARR Harsova 80.34 318 P **P 19 43 44.9 +0.5**
TLB Topalu 80.35 318 ⇑ *i*P **P 19 43 44.7 +0.3**
TLB Topalu 80.35 318 P **P 19 43 44.6 +0.2**
BELC Belle Mtn. Jos 80.36 55 P **P 19 43 45.5 +0.6**
baz=306,SNR=107
LCMT Little Creek M 80.41 51 *e*P **P 19 43 46.0 +0.9**
comp=Z,377nm,0.9s
GRER 80.41 319 ⇓ *i*P **P 19 43 46.2 +1.4**
SAN1 Sandwick 80.44 342 *e*P **P 19 43 44.9 +0.3**
MTPU Mount Pierson 80.46 50 *e*P **P 19 43 46.5 +0.7**
comp=Z,316nm,1.1s
P17A Butcher Ranch, 80.49 48 *e*P **P 19 43 46.3 +0.7**
comp=Z,360nm,1.1s
YAYX Yaylak 80.51 311 *e*P **P 19 43 45.4 -0.2**
ANTO Ankara 80.56 312 *e*P **P 19 43 47.1 +1.2**
ANTO Ankara 80.56 312 ⇓ *i*P **P 19 43 47.0 +1.2**
ANTO Ankara 80.56 312 *e*P **P 19 43 46.1 +0.2**
comp=Z,151nm,0.6s
ANTO LR LR
comp=Z,7µm,20.0s
ANTO Ankara 80.56 312 P **P 19 43 47.0 +1.2**
SNR=49
ANTO Ankara 80.56 312 P **P 19 43 47.0 +1.2**
SNR=49
ANTO Ankara 80.56 312 *e*P **P 19 43 46.1 +0.2**
ANTO pmax pmax
comp=Z,151nm,0.6s
ANTO MLR MLR
comp=Z,7µm,20.0s
BR231 Keskin MP Arra 80.59 312 *e*P **P 19 43 46.2 +0.2**
GULA Gulagac 80.60 310 *e*P **P 19 43 46.3 +0.2**
UZH Uzhgorod 80.62 324 ⇑ *i*P **P 19 43 46.5 +0.7**
UZH *e* 19 43 53.3
UZH *e*S **S 19 53 51.5 -0.3**
YURE YUREGIR 80.63 308 *e*P **P 19 43 47.7 +1.5**
BKZ Black Stump Fm 80.64 153 *e*P **P 19 43 45.7 -0.2**
comp=Z,122nm,1.2s
ARCR ARCALIA 80.65 322 ⇓ *i*P **P 19 43 47.7 +1.6**
SERE Sereflikochisa 80.66 311 *e*P **P 19 43 48.3 +1.9**
BAR Barrett 80.67 57 *e*P **P 19 43 46.9 +0.4**
comp=Z,196nm,1.0s
KNB Kanab 80.67 51 *e*P **P 19 43 48.0 +1.4**
comp=Z,682nm,1.0s
KNB Kanab 80.67 51 *e*P **P 19 43 48.0 +1.4**
KNB pmax pmax
comp=Z,682nm,1.0s
BMR Baia Mare 80.68 323 ⇓ *i*P **P 19 43 47.5 +1.3**
OJC Ojcow 80.69 326 *e*P **P 19 43 46.0 -0.1**
OJC *e*S **S 19 53 50.9 -1.6**
OJC LMZ LR 20 24 33.0
comp=Z,38µm,20.1s
OJC Ojcow 80.69 326 *e*P **P 19 43 46.1 -0.1**
comp=Z,358nm,1.2s
OJC Ojcow 80.69 326 *e*P **P 19 43 46.1 -0.1**
OJC *e*S **S 19 53 50.9 -1.6**
OJC MLR MLR
comp=Z,38µm,20.1s
PGOR Pogoanele 80.71 319 ⇓ *i*P **P 19 43 47.9 +1.5**
AMRR Amara 80.72 319 ⇑ *i*P **P 19 43 47.7 +1.3**
MONP2 Monument Peak 80.72 56 P **P 19 43 47.6 +0.7**
baz=306,SNR=60
PKCU Pink Cliffs 80.74 51 *e*P **P 19 43 47.1 0.0**
comp=Z,207nm,1.0s
ICOR Ion Corvin 80.78 318 ⇑ *i*P **P 19 43 47.9 +1.1**
YAYL Yayladag 80.79 308 *e*P **P 19 43 47.5 +0.3**
ISR Istrita 80.81 319 ⇑ *i*P **P 19 43 48.5 +1.5**
CRVS Cervenica-Dubn 80.83 325 *e*P **P 19 43 48.2 +1.2**
CRVS pmax pmax
comp=Z,521nm,2.1s
CRVS Cervenica-Dubn 80.83 325 *e*P **P 19 43 48.2 +1.2**
CRVS Cervenica-Dubn 80.83 325 *e*S **S 19 53 54.5 +0.4**
CRVS *e*L L 20 23 51.4
NEE2 Needles Airpor 80.84 54 P **P 19 43 48.2 +0.9**
baz=306,SNR=8.0
IRM Iron Mountain 80.84 55 P **P 19 43 48.4 +1.0**
baz=306,SNR=138
SRU San Rafael Swe 80.85 48 *e*P **P 19 43 48.5 +1.0**
comp=Z,298nm,1.0s
SRU San Rafael Swe 80.85 48 *e*P **P 19 43 48.5 +1.0**
SRU pmax pmax
comp=Z,298nm,1.0s
PSN Preselentsi 80.85 317 P **P 19 43 48.6 +1.4**
DOPR Dopca 80.86 321 ⇓ *i*P **P 19 43 48.2 +0.9**
MLR Muntele Rosu 80.89 320 P **P 19 43 47.7 +0.1**
comp=Z,2.2nm,0.5s,baz=28,slow=4.5,SNR=32
MLR LR LR 20 25 03.2
comp=Z,3µm,18.8s,baz=40,slow=40
MLR Muntele Rosu 80.89 320 ⇑ *i*P **P 19 43 48.1 +0.6**
MLR Muntele Rosu 80.89 320 *e*P **P 19 43 47.4 -0.1**
comp=Z,194nm,1.5s
MLR Muntele Rosu 80.89 320 *e*P **P 19 43 47.4 -0.1**
MLR pmax pmax
comp=Z,194nm,1.5s
KULU Kulu 80.94 312 *e*P **P 19 43 48.3 +0.4**
KRTS Karatas 80.95 308 *e*P **P 19 43 48.8 +1.0**
K22A Casper 81.00 44 P **P 19 43 48.7 +0.4**
baz=310,SNR=21
K22A Casper 81.00 44 *e*P **P 19 43 48.1 -0.2**
comp=Z,113nm,1.0s

NIE	Niedzica	81.02	325	eP	P	19 43 48.5 +0.5
NIE				eS	S	19 53 56.5 +0.5
NIE				LMZ	LR	20 24 06.9
	comp=Z,14µm,21.5s					
NIE	Niedzica	81.02	325	eP	P	19 43 48.5 +0.5
NIE				eS	S	19 53 56.6 +0.5
NIE				MLR	MLR	
	comp=Z,14µm,21.5s					
CRR	Carrizo Plain	81.03	56	eP	P	19 43 49.5 +1.1
IKP	In-Ko-Pah, Jac	81.07	56	P	P	19 43 49.7 +1.0
	baz=306,SNR=73					
SWSC	Sam W. Stewart	81.11	56	P	P	19 43 49.5 +0.7
	baz=306,SNR=42					
SECR		81.12	320⇑	iP	P	19 43 50.3 +1.7
W13A	Hualapai Mount	81.12	53	eP	P	19 43 49.3 +0.2
	comp=Z,178nm,1.0s					
MDND	Maddock	81.22	37	P	P	19 43 49.5 +0.4
	baz=314,SNR=17					
MDND	Maddock	81.22	37	eP	P	19 43 49.3 +0.2
	comp=Z,475nm,1.2s					
RWWY	Rawlins	81.22	45	eP	P	19 43 49.0 -0.6
	comp=Z,113nm,0.9s					
YESY	Yesilyurt	81.25	310	eP	P	19 43 49.8 +0.2
SULR		81.25	319‖	iP	P	19 43 50.2 +0.9
ULM	Lac du Bonnet	81.28	33	P	P	19 43 49.1 -0.2
	comp=Z,137nm,1.1s,baz=313,slow=6.4,SNR=54					
ULM				PKKPbc	PKKPbc	20 02 22.2 -1.8
	comp=Z,4.9nm,0.7s,baz=120,slow=0.9,SNR=9.7					
ULM	Lac du Bonnet	81.28	33	eP	P	19 43 48.5 -0.8
	comp=Z,175nm,1.1s					
ULM				PKKPbc	PKKPbc	20 02 22.2 -1.8
ULM	Lac du Bonnet	81.28	33	eP	P	19 43 48.5 -0.8
ULM				pmax	pmax	
	comp=Z,175nm,1.1s					
CJR	Cluj-Napoca	81.28	322‖	iP	P	19 43 51.0 +1.5
CHBY	Cihanbeyli	81.30	311	eP	P	19 43 49.4 -0.4
MERS	Mersin	81.32	309	eP	P	19 43 49.8 -0.1
RAYN	Ar Rayn	81.34	293	eP	P	19 43 49.3 -0.9
	comp=Z,645nm,1.4s					
RAYN				LR	LR	
	comp=Z,8µm,21.0s					
RAYN	Ar Rayn	81.34	293	i P	P	19 43 49.9 -0.3
	SNR=196					
U15A	North Rim	81.37	51	eP	P	19 43 51.7 +1.2
	comp=Z,225nm,0.9s					
VOIR		81.39	320‖	iP	P	19 43 50.9 +0.7
VOIR		81.39	320	P	P	19 43 50.9 +0.7
PDMCI	Parker Dam,Lak	81.43	54	P	P	19 43 51.3 +0.9
	baz=307,SNR=147					
RSSD	Black Hills	81.43	41	P	P	19 43 50.6 -0.1
	baz=311					
RSSD	Black Hills	81.43	41	eP	P	19 43 50.5 -0.1
	comp=Z,48nm,0.8s					
RSSD	Black Hills	81.43	41	eP	P	19 43 50.5 -0.1
RSSD				pmax	pmax	
	comp=Z,48nm,0.8s					
Y12C	Blythe	81.50	55	P	P	19 43 51.9 +1.1
	baz=307,SNR=37					
Y12C	Blythe	81.50	55	eP	P	19 43 51.6 +0.8
	comp=Z,272nm,0.9s					
RAC	Raciborz	81.51	327	eP	P	19 43 51.0 +0.4
RAC				eS	S	19 54 00.1 -0.9
RAC				MLR	MLR	
	comp=Z,28µm,21.0s					
KECS	Kecovo	81.59	325	eP	P	19 43 50.6 -0.4
KECS				pmax	pmax	
	comp=Z,49nm,1.2s					
KECS	Kecovo	81.59	325	eP	P	19 43 50.6 -0.4
KECS				ePP	PP	19 46 58.1 +1.2
LANS	Liptovska Anna	81.59	326	eP	P	19 43 51.9 +0.8
LANS				e		19 47 01.1
LANS	Liptovska Anna	81.59	326	eP	P	19 43 51.8 +0.7
LANS				ePP	PP	19 47 01.1 +4.1
O20A	White River Ci	81.59	47	P	P	19 43 52.3 +0.8
	baz=309,SNR=18					
O20A	White River Ci	81.59	47	eP	P	19 43 51.8 +0.3
	comp=Z,205nm,1.4s					
PRD	Provadia	81.60	317	P	P	19 43 52.4 +1.3
A31A	Linda, St. Vin	81.62	35	P	P	19 43 50.8 -0.3
	baz=315					
LTVH	L``tav``rtes,	81.67	323‖	eSKKPdf	P	19 43 55.2 +3.8
DRGR		81.68	322⇑	iP	P	19 43 52.5 +0.9
THZ	Tophouse	81.69	157	eP	P	19 43 51.6 +0.1
	comp=Z,489nm,1.8s					
OKC	Ostrava-Krasne	81.71	327	eP	P	19 43 51.6 0.0
OKC				epP	pP	19 43 58.5 0.0
OKC				eS	S	19 54 02.2 -0.8
OKC				eSS	SS	19 59 22.5 +3.0
OKC				AMS	AMS	20 24 20.0
	comp=Z,21µm,19.2s					
OKC	Ostrava-Krasne	81.71	327	eP	P	19 43 51.6 0.0
OKC				e		19 43 58.5
OKC				eS	S	19 54 02.2 -0.8
OKC				eSS	SS	19 59 22.5 +3.0
OKC				MLR	MLR	
	comp=Z,21µm,19.2s					
SGRR	Singureni	81.71	319⇑	iP	P	19 43 53.0 +1.3
GLA	Glamis	81.71	55	P	P	19 43 53.2 +1.2
	baz=306,SNR=81					
GLA	Glamis	81.71	55	eP	P	19 43 52.7 +0.7
	comp=Z,302nm,0.9s					
GLA	Glamis	81.71	55	eP	P	19 43 52.7 +0.7
GLA				pmax	pmax	
	comp=Z,303nm,0.9s					
B31A	Greenbush Farm	81.76	35	P	P	19 43 51.9 0.0
	baz=315,SNR=12					
KIZK	Mersin	81.79	309	eP	P	19 43 51.9 -0.4
KSP	Ksiaz	81.79	328	eP	P	19 43 52.1 +0.1
KSP				eS	S	19 54 03.0 -0.9
KSP				LMZ	LR	20 24 59.1
	comp=Z,16µm,18.9s					
KSP	Ksiaz	81.79	328	eP	P	19 43 52.1 +0.1
KSP				eS	S	19 54 03.0 -0.9
KSP				MLR	MLR	
	comp=Z,16µm,18.9s					
LADK	Ladik-KONYA	81.86	311	eP	P	19 43 51.5 -1.3
BFZ	Birch Farm	81.88	154	eP	P	19 43 52.4 +0.1
	comp=Z,795nm,1.9s					
SNZO	South Karori	81.89	155	eP	P	19 43 53.0 +0.6
	comp=Z,342nm,1.3s					
SNZO				LR	LR	
	comp=Z,10µm,22.0s					
HWQ	Hawqa	81.95	306	eP	P	19 43 52.9 -0.5
A32A	Rocking H Ranc	81.95	34	P	P	19 43 52.6 -0.3
	baz=316,SNR=12					
MORC	Moravsky Berou	82.02	327⇑	iP	P	19 43 53.5 +0.2
MORC	Moravsky Berou	82.02	327	eP	P	19 43 52.8 -0.6
	comp=Z,508nm,1.1s					
MORC	Moravsky Berou	82.02	327	eP	P	19 43 52.8 -0.6
MORC				pmax	pmax	
	comp=Z,508nm,1.1s					
MORC	Moravsky Berou	82.02	327	eP	P	19 43 53.6 +0.2
MORC	Moravsky Berou	82.02	327	eS	S	19 54 06.2 -0.2
HUMR	Humele	82.04	320⇑	iP	P	19 43 53.7 +0.2
PV09	Paradox Valley	82.08	48	eP	P	19 43 55.2 +1.0
DPC	Dobruska-Polom	82.14	328	eP	P	19 43 54.3 +0.3
DPC				ePP	PP	19 46 56.5 -5.0
DPC				eS	S	19 54 06.9 -0.7
DPC				AMS	AMS	20 24 50.0
	comp=Z,17µm,17.0s					
DPC	Dobruska-Polom	82.14	328	eP	P	19 43 54.3 +0.3
DPC				e		19 46 56.5
DPC				eS	S	19 54 06.9 -0.7
DPC				MLR	MLR	
	comp=Z,17µm,17.0s					
UPC	Upice	82.16	328	eP	P	19 43 54.4 +0.4
UPC				ePP	PP	19 47 06.5 +4.9
UPC				eS	S	19 54 08.2 +0.5
UPC				eSS	SS	19 59 21.7 -4.6
UPC				AMS	AMS	20 25 00.0
	comp=Z,19µm,18.1s					
UPC	Upice	82.16	328	eP	P	19 43 54.4 +0.4
UPC				e		19 47 06.5
UPC				eS	S	19 54 08.2 +0.5
UPC				eSS	SS	19 59 21.7 -4.6
UPC				MLR	MLR	
	comp=Z,19µm,18.1s					
C31A	Landman Farms,	82.16	36	P	P	19 43 54.2 +0.1
	baz=315,SNR=45					
DEV	Deva	82.20	322⇑	iP	P	19 43 54.6 +0.3
PV10	Paradox Valley	82.21	48	eP	P	19 43 56.6 +1.7
	comp=Z,1µm,1.2s					
IKL	Isikli	82.23	309	eP	P	19 43 53.7 -0.9
TEVE	Tevekalti-Mers	82.27	309	eP	P	19 43 54.9 0.0
PSZ	Piszkesteto	82.27	325‖	iP	P	19 43 55.3 +0.6
PSZ	Piszkesteto	82.27	325‖	eSKKPdf	P	19 43 55.0 +0.3
PSZ	Piszkesteto	82.27	325	eP	P	19 43 54.9 +0.2
	comp=Z,244nm,1.2s					
PSZ	Piszkesteto	82.27	325	eP	P	19 43 54.9 +0.2
PSZ				pmax	pmax	
	comp=Z,244nm,1.2s					
PV04	Paradox Valley	82.29	48	eP	P	19 43 56.1 +1.0
	comp=Z,796nm,1.3s					
B32A	Ashes, Strandq	82.30	35	P	P	19 43 54.6 -0.2
	baz=316,SNR=31					
EREN	Erenkoy	82.35	308	eP	P	19 43 53.8 -1.5
VYHS	Vyhne	82.36	326	eP	P	19 43 55.6 +0.5
VYHS				pmax	pmax	
	comp=Z,488nm,2.4s					
VYHS	Vyhne	82.36	326	eP	P	19 43 55.6 +0.5
VYHS				ePP	PP	19 47 10.0 +6.7
VYHS				eS	S	19 54 12.7 +2.9
VYHS				e		20 25 38.8
SZH	Strazhica	82.36	318	P	P	19 43 55.4 +0.2
PV05	Paradox Valley	82.36	49	eP	P	19 43 56.8 +1.2
	comp=Z,914nm,1.2s					
BHL	Bhannes	82.37	306	eP	P	19 43 55.4 -0.2
AKKU	Akkuyu-Mersin	82.37	309	eP	P	19 43 55.0 -0.3
Y14A	Wickenburg	82.40	54	eP	P	19 43 56.2 +0.5
	comp=Z,208nm,1.0s					
PV03	Paradox Valley	82.41	48	eP	P	19 43 56.6 +0.8
	comp=Z,817nm,1.3s					
ZIMR		82.41	319⇑	iP	P	19 43 55.8 +0.4
PV07	Paradox Valley	82.42	48	eP	P	19 43 56.6 +0.8
	comp=Z,383nm,1.5s					
BIGH	Upper Bighouse	82.44	342	eP	P	19 43 56.0 +0.8
BIGH				IAmb	IAmb	19 43 58.0
	comp=Z,191nm,0.9s					
BIGH				IAMs_20	IAMs_20	20 31 10.5
	comp=Z,13µm,19.9s					
A33A	Warroad	82.44	34	P	P	19 43 55.2 -0.3
	baz=316,SNR=25					
N23A	Red Feather La	82.46	45	P	P	19 43 57.3 +1.2
	baz=310,SNR=74					
N23A	Red Feather La	82.46	45	eP	P	19 43 57.0 +0.9
	comp=Z,280nm,1.1s					
PHWY	Pilot Hill	82.48	44	eP	P	19 43 56.3 0.0
	comp=Z,87nm,1.0s					
RCY	Rachaya	82.49	306	eP	P	19 43 56.6 +0.4
PV02	Paradox Valley	82.50	48	eP	P	19 43 57.3 +0.9
	comp=Z,728nm,1.3s					
WUAZ	Wupatki	82.51	52	P	P	19 43 57.6 +1.3
	baz=308,SNR=77					
WUAZ	Wupatki	82.51	52	eP	P	19 43 57.4 +1.1
	comp=Z,357nm,1.1s					
WUAZ				LR	LR	
	comp=Z,7µm,22.0s					
JMB	Yambol	82.53	317	P	P	19 43 56.6 +0.5
QRWL	Qaraoun	82.56	306	eP	P	19 43 56.4 -0.2
SIRR	Siria	82.56	323‖	iP	P	19 43 57.1 +0.9
ASF	Jabal al Asfar	82.57	304	P	P	19 43 57.1 +0.5
	comp=Z,70nm,0.9s,baz=6.0,slow=1.7,SNR=64					
ASF				LR	LR	20 24 11.5
	comp=Z,4µm,19.6s,baz=354,slow=38					
PV15	Paradox Valley	82.58	48	eP	P	19 43 57.2 +0.5
	comp=Z,549nm,1.5s					
113A	Mohawk Valley,	82.59	55	eP	P	19 43 57.0 +0.5
	comp=Z,225nm,1.3s					
JAVC	Velka Javorina	82.63	326	eP	P	19 43 58.1 +1.5
SHBL	Chebaa	82.64	306	eP	P	19 43 57.4 +0.4
PV01	Paradox Valley	82.65	48	eP	P	19 43 57.9 +0.8
	comp=Z,378nm,1.1s					
AGMN	Agassiz Nation	82.69	34	P	P	19 43 56.4 -0.4
	baz=316,SNR=34					
AGMN	Agassiz Nation	82.69	34	eP	P	19 43 55.3 -1.5
	comp=Z,147nm,1.1s					
AGMN				LR	LR	
	comp=Z,9µm,21.0s					
D31A	Mcclaflin, Tow	82.69	36	P	P	19 43 56.9 0.0
	baz=315,SNR=35					
C32A	Crookston	82.71	35	P	P	19 43 56.7 -0.2
	baz=316,SNR=15					
PVCC	Panska Ves	82.76	329	eP	P	19 43 57.4 +0.3
PVCC				ex	x	19 44 06.1
PVCC				ePP	PP	19 47 10.7 +4.2
PVCC				eS	S	19 54 14.3 +0.4
PVCC				eSS	SS	19 59 43.9 +8.8
PVCC				AMS	AMS	20 28 20.0
	comp=Z,23µm,17.1s					
PVCC	Panska Ves	82.76	329	eP	P	19 43 57.4 +0.3
PVCC				e		19 44 06.1
PVCC				e		19 47 10.7
PVCC				eS	S	19 54 14.3 +0.4
PVCC				eSS	SS	19 59 43.9 +8.8
PVCC				MLR	MLR	
	comp=Z,23µm,17.1s					
BRG	Berggiesshubel	82.77	329	i P	P	19 43 57.4 +0.2
	comp=Z,137nm,1.2s					
BRG				i PP	PP	19 47 03.7 -2.8
	comp=Z,31nm,1.3s					
BRG				S	S	19 54 13.0 -0.9
BRG				SS	SS	19 59 30.0 -5.2
BRG				ePKPPKP	P'P'df	20 10 25.5 -6.1
	comp=Z,8.9nm,1.4s					
	comp=N,19µm,16.6s					
	comp=E,11µm,17.4s					
	comp=Z,28µm,17.8s					
BRG	Berggiesshubel	82.77	329	i P	P	19 43 57.3 +0.2
BRG				i		19 47 03.7
BRG				S	S	19 54 13.0 -0.9
BRG				pmax	pmax	
	comp=Z,137nm,1.3s					
BRG				pmax	pmax	
	comp=Z,31nm,1.3s					
BRG				MLR	MLR	
	comp=N,19µm,16.6s					
BRG				MLR	MLR	
	comp=E,11µm,17.4s					
BRG				MLR	MLR	
	comp=Z,28µm,17.8s					
VRAC	Vranov	82.79	327⇑	iP	P	19 43 58.4 +1.1
VRAC	Vranov	82.79	327	eP	P	19 43 57.8 +0.5
VRAC	Vranov	82.79	327	eS	S	19 54 15.8 +1.6
CLL	Collm	82.83	330	i P	P	19 43 57.2 -0.2
	comp=Z,126nm,1.1s					
CLL				ePmax		19 43 59.0
CLL				i Pmax		19 44 00.0
	comp=Z,237nm,1.0s					
CLL				e		19 44 09.0
CLL				ePP	PP	19 47 06.0 -1.0
CLL				e		19 47 25.0
CLL				eS	S	19 54 13.0 -1.4
CLL				eSS	ScS	19 54 29.0 -0.1
CLL				ePS	PnS	19 55 07.0 +1.5
CLL				e		19 55 54.0
CLL				eSS	SS	19 59 36.0 0.0
CLL				eSSS	SSS	20 03 18.0
CLL				eSSSS		20 05 42.0
CLL				ePKPPKPdf	P'P'df	20 10 27.0 -4.5
CLL				LmH		20 20 00.0
	comp=N,14µm,19.8s					
CLL				LmH		20 20 00.0
	comp=E,28µm,21.2s					
CLL				Lmax		20 26 00.0
CLL				LmV		20 26 00.0
	comp=Z,25µm,18.6s					
CLL	Collm	82.83	330	eP	P	19 43 56.3 -1.1
	comp=Z,215nm,1.0s					
CLL	Collm	82.83	330	eP	P	19 43 56.3 -1.1
CLL				pmax	pmax	
	comp=Z,215nm,1.0s					
B33A	Robert and Kas	82.83	34	P	P	19 43 57.1 -0.5
	baz=316,SNR=7.6					
SRE	Strehaia	82.88	321‖	iP	P	19 43 59.3 +1.4
SRE	Strehaia	82.88	321	P	P	19 43 59.3 +1.4
RPZ	Rata Peaks	82.88	159	LR	LR	20 15 05.3
	comp=Z,6µm,21.5s,baz=334,slow=32					
RPZ	Rata Peaks	82.88	159	eP	P	19 43 56.3 -1.2
	comp=Z,402nm,2.0s					
LFK	Lefkose	82.92	308	eP	P	19 44 08.7 +10
E31A	Nome	82.96	37	P	P	19 43 58.3 0.0
	baz=315,SNR=56					
SMCO	Snowmass	82.96	47	eP	P	19 43 59.2 +0.3
	comp=Z,515nm,1.8s					
D32A	Dogwood Acres,	82.97	36	P	P	19 43 57.7 -0.6
	baz=315					
BUD	Budapest	82.99	325‖	ex	P	19 43 58.4 0.0
BUD	Budapest	82.99	325	P	P	19 43 59.9 +1.5
SMOL	Smolenice	82.99	326	eP	P	19 43 59.3 +0.9
SMOL	Smolenice	82.99	326	eP	P	19 43 59.2 +0.9
BZS	Buzias	83.04	322⇑	iP	P	19 43 58.4 -0.3
KRUC	Moravsky	83.06	327	eP	P	19 43 58.9 +0.2
KRUC	Moravsky	83.06	327	eS	S	19 54 17.1 +0.2
MMAI	Mount Meron Ar	83.07	306	P	P	19 43 59.8 +0.7
	comp=Z,41nm,0.6s,baz=36,slow=5.4,SNR=72					
MMAI				LR	LR	20 23 02.1
	comp=Z,6µm,18.9s,baz=20,slow=37					
B34A	Aery, Baudette	83.11	34	P	P	19 43 58.4 -0.6
	baz=317,SNR=23					
C33A	Trail	83.12	35	P	P	19 43 58.6 -0.5
	baz=316,SNR=16					
GOPC	GO Pecny, Ondr	83.13	328	eP	P	19 43 59.2 +0.1
GOPC				ex	x	19 44 07.4
GOPC				ePP	PP	19 47 11.5 +2.0
GOPC				eS	S	19 54 18.3 +0.6
GOPC				eSS	SS	19 59 35.7 -5.0
GOPC				AMS	AMS	20 28 20.0
	comp=Z,20µm,17.0s					
GOPC	GO Pecny, Ondr	83.13	328	eP	P	19 43 59.2 +0.1
GOPC				e		19 44 07.4
GOPC				e		19 47 11.5
GOPC				eS	S	19 54 18.3 +0.6
GOPC				eSS	SS	19 59 35.7 -5.0
GOPC				MLR	MLR	
	comp=Z,20µm,17.0s					
X16A	Lo Mia Camp, P	83.14	53	eP	P	19 44 00.5 +0.8
	comp=Z,301nm,1.1s					
MODS	Modra-Piesok	83.16	326	eP	P	19 43 59.0 -0.3
MODS				pmax	pmax	
	comp=Z,669nm,1.8s					
MODS	Modra-Piesok	83.16	326	eP	P	19 43 59.0 -0.3
MODS	Modra-Piesok	83.16	326	eS	S	19 54 21.3 +3.2
MODS				eL	L	20 25 58.0
PRU	Pruhonice	83.18	329	eP	P	19 43 59.2 -0.1
PRU				epP	pP	19 44 06.8 +0.6
PRU				ePP	PP	19 47 08.6 -1.3
PRU				eS	S	19 54 18.4 +0.3
PRU				AMS	AMS	20 28 20.0
	comp=Z,17µm,17.1s					
PRU	Pruhonice	83.18	329	eP	P	19 43 59.2 -0.1
PRU				e		19 44 06.8
PRU				e		19 47 08.6
PRU				eS	S	19 54 18.4 +0.3
PRU				MLR	MLR	
	comp=Z,17µm,17.1s					
MAMC	Mammari	83.19	308	P	P	19 44 00.0 +0.4
ISP	Isparta	83.23	312	eP	P	19 43 59.4 -0.5
	comp=Z,213nm,1.5s					
ISP	Isparta	83.23	312	P	P	19 43 58.9 -1.0
ISP	Isparta	83.23	312	eP	P	19 43 59.4 -0.5
ISP				pmax	pmax	
	comp=Z,213nm,1.5s					
MME1	Meikle Cairn	83.24	341	eP	P	19 43 59.7 +0.2
LBZ	Lake Benmore	83.24	160	eP	P	19 43 59.3 -0.1
	comp=Z,120nm,0.9s					
CSS	Mathiatis	83.24	308	eP	P	19 44 00.7 +0.7
CSS	Mathiatis	83.24	308	eP	P	19 43 59.6 -0.4
	comp=Z,148nm,1.6s					
CSS	Mathiatis	83.24	308	P	P	19 44 00.3 +0.3
CSS	Mathiatis	83.24	308	P	P	19 43 58.4 -1.6
F31A	Hecla	83.27	37	P	P	19 43 59.7 -0.1
	baz=315,SNR=15					
MVCO	Mesa Verde	83.28	49	P	P	19 44 01.3 +0.9
	baz=309,SNR=81					
MVCO	Mesa Verde	83.28	49	eP	P	19 44 00.8 +0.4
	comp=Z,415nm,1.3s					
MVCO				LR	LR	
	comp=Z,5µm,20.0s					
WKZ	Wanaka	83.32	161	eP	P	19 43 59.1 -0.7
	comp=Z,343nm,1.6s					
E32A	Braaten, Kindr	83.33	36	P	P	19 43 60.0 -0.2
	baz=315					
ISCO	Idaho Springs	83.36	46	P	P	19 44 01.8 +1.0
	baz=311,SNR=53					
ISCO	Idaho Springs	83.36	46	eP	P	19 44 01.5 +0.6
	comp=Z,446nm,1.8s					
ISCO				LR	LR	
	comp=Z,5µm,21.0s					
ISCO	Idaho Springs	83.36	46	eP	P	19 44 01.5 +0.6
ISCO				pmax	pmax	
	comp=Z,446nm,1.8s					
ISCO				MLR	MLR	
	comp=Z,5µm,21.0s					
ZST	Bratislava	83.37	326	eP	P	19 44 00.1 -0.2
ZST				pmax	pmax	
	comp=Z,52nm,1.8s					
ZST	Bratislava	83.37	326	eP	P	19 44 00.1 -0.2
ZST	Bratislava	83.37	326	eS	S	19 54 21.8 +1.7
ZST				eL	L	20 26 14.9
LEF	Lefka	83.43	308	eP	P	19 44 00.6 -0.3
BANR	Banloc	83.44	322‖	iP	P	19 44 02.0 +1.3
PMOR	Pomariorio Ree	83.46	113	eP	P	19 44 03.1 +1.9
PMOR	Pomariorio Ree	83.46	113	eT	T	21 15 52.9
	comp=Z,35nm,0.2s					
D33A	AnnSam, Waubun	83.53	35	P	P	19 44 00.6 -0.6
	baz=316,SNR=13					
MDVR	Moldovita	83.57	321‖	iP	P	19 44 01.2 -0.3
MLZ	Mavora Lakes	83.58	161	eP	P	19 44 01.1 0.0
	comp=Z,192nm,1.7s					
ALFC	Alefka	83.59	309	P	P	19 44 01.4 -0.4
C34A	RKJ Ranch, Bem	83.60	34	P	P	19 44 00.9 -0.6
	baz=317,SNR=9.4					
B35A	Bob, Littlefor	83.62	33	P	P	19 44 01.3 -0.3
	baz=318,SNR=89					
MUKL	Al Mukalla	83.65	283	eP	P	19 44 02.9 +0.6
SZAC	Souni	83.66	308	P	P	19 44 01.9 -0.2
KDZ	Kurdzhali	83.72	317	P	P	19 44 04.2 +1.9
214A	Organ Pipe Nat	83.73	55	P	P	19 44 03.3 +0.8
	baz=308,SNR=68					
G31A	Conde	83.73	38	P	P	19 44 02.3 0.0
	baz=315,SNR=13					
VAH	Vaihoa	83.81	113	eP	P	19 44 04.9 +2.0
	comp=Z,166nm,1.3s					
W18A	Petrified Fore	83.81	51	P	P	19 44 04.2 +1.1
	baz=309,SNR=15					
W18A	Petrified Fore	83.81	51	eP	P	19 44 03.8 +0.7
	comp=Z,150nm,1.0s					
PLD	Plovdiv	83.81	318	P	P	19 44 03.2 +0.5
PPT	Papeete	83.81	116	LR	LR	20 17 27.0
	comp=Z,3µm,19.0s,baz=300,slow=33					
PPT	Papeete	83.81	116	eP	P	19 44 04.1 +1.1
PPT	Papeete	83.81	116	eP	P	19 44 04.1 +1.1
F32A	Veblen	83.82	37	P	P	19 44 02.3 -0.4
	baz=316,SNR=7.6					
PPT2	Papeete2	83.83	116	eP	P	19 44 05.3 +2.2
	comp=Z,104nm,1.4s					
PPT2	Papeete2	83.83	116	eS	S	19 54 25.2 -0.4
	comp=Z,5µm,30.2s					
PPT2				eSS	SS	19 59 58.7 +5.0
	comp=Z,2µm,28.5s					
PPT2				eLQ	LQ	20 06 15.2
	comp=Z,19µm,29.5s					
PPT2				eLR	LR	20 10 29.6
	comp=Z,10µm,23.5s,baz=305					
PPT2	Papeete2	83.83	116	eT	T	21 16 21.3
	comp=Z,12nm,0.3s					
PPTF	Pamatai, Papee	83.84	116	eP	P	19 44 04.2 +1.0
	comp=Z,346nm,1.5s					
AKMC	Akamas	83.85	309	P	P	19 44 02.3 -0.8
IVI	Ivigtut	83.85	5	eP	P	19 44 02.8 +0.3
	comp=Z,134nm,1.1s					
ALN	Alexandroupoli	83.87	316	eP	P	19 44 03.0 0.0
	comp=Z,74nm,1.1s					
ALN	Alexandroupoli	83.87	316	P	P	19 44 03.0 0.0
ALN	Alexandroupoli	83.87	316	eP	P	19 44 03.0 0.0
ALN				pmax	pmax	
	comp=Z,74nm,1.1s					
PAE	Paea	83.87	116	eP	P	19 44 05.0 +1.8
	comp=Z,16nm,1.3s					
NKC	Novy Kostel	83.87	330	eP	P	19 44 03.0 +0.1
NKC				ePP	PP	19 47 21.5 +5.9
NKC				eS	S	19 54 25.0 -0.2
NKC				AMS	AMS	20 27 00.0
	comp=Z,26µm,17.0s					
NKC	Novy Kostel	83.87	330	eP	P	19 44 03.0 +0.1
NKC				e		19 47 21.5
NKC				eS	S	19 54 25.0 -0.2
NKC				MLR	MLR	
	comp=Z,26µm,17.0s					
D34A	Park Rapids	83.87	35	P	P	19 44 02.7 -0.3
	baz=317,SNR=28					
KPL	Plockton	83.90	343⇑	eP	P	19 44 03.3 +0.5
KPL				IAmb	IAmb	19 44 06.7
	comp=Z,361nm,1.2s					

KPL IAMs_20 IAMs_20 20 23 31.1
comp=Z,8μm,19.5s
SUSD Miller 83.90 39 P **P 19 44 03.2 +0.1**
baz=314,SNR=13
E33A Westby DABS, E 83.91 36 P **P 19 44 03.2 +0.1**
baz=316,SNR=25
EDU Dundee 83.92 341 *e*P **P 19 44 03.5 +0.5**
PPCY Paphos 83.93 309 P **P 19 44 02.9 -0.5**
PYZ Puysegur Point 83.96 163 *e*P **P 19 44 03.4 +0.3**
comp=Z,699nm,1.8s
S22A 4UR Ranch, Cre 83.96 48 P **P 19 44 05.6 +1.6**
baz=310,SNR=106
S22A 4UR Ranch, Cre 83.96 48 *e*P **P 19 44 05.1 +1.1**
comp=Z,162nm,1.1s
ODZ Otahua Downs 83.98 160 *e*P **P 19 44 04.4 +1.3**
comp=Z,179nm,1.5s
TIAR Tiarei 83.98 116 *e*P **P 19 44 05.8 +2.0**
comp=Z,22nm,0.9s
TIAR Tiarei 83.98 116 *e*T T 21 16 32.2
comp=Z,4.9nm,0.3s
MANT Manisa 83.99 313 *e*P **P 19 44 04.3 +0.3**
C35A Jirik Farms, M 83.99 34 P **P 19 44 03.0 -0.5**
baz=317,SNR=78
RDO Rodhopi 83.99 317 P **P 19 44 03.1 -0.5**
SOP Sopron 84.00 326⇓*e*SKKPdf **P 19 44 04.1 +0.6**
SOP Sopron 84.00 326 P **P 19 44 04.3 +0.8**
X18A Snowflake 84.04 52 *e*P **P 19 44 04.5 +0.3**
comp=Z,149nm,0.9s
NRS Narsarsuaq 84.05 3 *i*P **P 19 44 04.5 +1.0**
comp=Z,14μm,20.0s
NRS Narsarsuaq 84.05 3 *e*P **P 19 44 03.4 -0.1**
comp=Z,136nm,1.2s
NRS Narsarsuaq 84.05 3 *e*P **P 19 44 03.4 -0.1**
NRS pmax pmax
comp=Z,136nm,1.2s
G32A Webster 84.07 37 P **P 19 44 04.1 +0.1**
baz=315,SNR=23
MORH M`‡r ¡gy, Hung 84.08 324⇓*e*SKKPdf **P 19 44 03.4 -0.6**
RZN Rozhen 84.09 318 P **P 19 44 05.2 +0.8**
H31A Wolsey 84.12 38 P **P 19 44 04.1 -0.2**
baz=315,SNR=6.1
CONA Conrad Observa 84.13 327 *e*PcP **P 19 44 05.1 +0.7**
comp=Z,119nm,1.0s,SNR=177
CONA PP **PP 19 47 22.3 +4.4**
comp=Z,42nm,1.3s
Q24A Divide 84.18 46 P **P 19 44 06.0 +0.9**
baz=311,SNR=32
Q24A Divide 84.18 46 *e*P **P 19 44 05.5 +0.4**
comp=Z,105nm,1.0s
BEO Beograd 84.18 322 *e*P **P 19 44 03.4 -1.1**
BEO Beograd 84.18 322 *e*P **P 19 44 03.4 -1.1**
TVO Taravao 84.19 116 *e*P **P 19 44 07.4 +2.5**
comp=Z,22nm,0.9s
KHC Kasperske Hory 84.24 329 *e*P **P 19 44 04.7 -0.1**
KHC *e*x x 19 44 13.5
KHC *e*PP **PP 19 47 22.0 +3.4**
KHC *e*S **S 19 54 29.7 +0.8**
KHC *e*SS **SS 19 59 49.6 -7.5**
KHC *e*PKKP **PKKPbc 20 02 17.6 +0.3**
KHC AMS AMS 20 26 10.0
comp=Z,18μm,18.0s
KHC Kasperske Hory 84.24 329 *e*P **P 19 44 04.7 -0.1**
KHC *e* 19 44 13.5
KHC *e* 19 47 22.0
KHC *e*S **S 19 54 29.7 +0.8**
KHC MLR MLR
comp=Z,18μm,18.0s
F33A 5 Mile Ranch, 84.25 36 P **P 19 44 05.1 +0.2**
baz=316,SNR=95
VTS Vitosha 84.30 319⇑*i*P **P 19 44 05.7 +0.3**
VTS Vitosha 84.30 319 *e*P **P 19 44 05.0 -0.4**
comp=Z,242nm,1.0s
VTS Vitosha 84.30 319 P **P 19 44 06.2 +0.8**
VTS Vitosha 84.30 319 P **P 19 44 05.5 +0.1**
VTS Vitosha 84.30 319 *e*P **P 19 44 05.0 -0.4**
VTS pmax pmax
comp=Z,242nm,1.0s
E34A Wadena 84.30 35 P **P 19 44 05.0 -0.2**
baz=317
ESY Stoneypath 84.37 341 *e*P **P 19 44 05.7 +0.4**
GEC2 GERESS Array S 84.40 328 *e*P **P 19 44 05.0 -0.7**
comp=Z,130nm,1.2s
GEC2 *e*PKKPbc **PKKPbc 20 02 16.3 -0.6**
GEC2 GERESS Array S 84.40 328 *e*P **P 19 44 05.0 -0.7**
GEC2 pmax pmax
comp=Z,130nm,1.2s
GERES GERESS Array B 84.40 328 P **P 19 44 05.1 -0.6**
comp=Z,36nm,0.6s,baz=37,slow=5.3,SNR=160
GERES PP **PP 19 47 20.0 0.0**
comp=Z,6.4nm,0.8s,baz=42,slow=8.1,SNR=3.6
GERES PKKPbc **PKKPbc 20 02 16.5 -0.4**
comp=Z,1.9nm,0.9s,baz=250,slow=2.0,SNR=8.8
GERES PKPPKP **P'P'df 20 10 22.8 -6.0**
comp=Z,1.1nm,0.9s,baz=170,slow=8.1,SNR=3.6
GERES LR LR 20 23 41.7
comp=Z,10μm,20.4s,baz=28,slow=37
GEA0 GERESS Array S 84.41 328 *e*P **P 19 44 04.6 -1.2**
I31A Royce, Wessing 84.41 39 P **P 19 44 05.6 -0.1**
baz=315
D35A Remer 84.41 34 P **P 19 44 05.0 -0.7**
baz=317,SNR=22
SMTH Samothraki Isl 84.45 316 P **P 19 44 05.5 -0.5**
C36A Pine Crest Far 84.47 33 P **P 19 44 05.6 -0.4**
baz=318,SNR=65
EDI Edinburgh 84.52 341 *e*P **P 19 44 07.0 +1.0**
EDI IAMs_20 IAMs_20 20 29 26.3
comp=Z,15μm,17.6s
WET Wettzell 84.53 329 P **P 19 44 06.7 +0.4**
EAB Aberfoyle 84.59 342⇑*e*P **P 19 44 07.2 +0.8**
E35A Pequot Lakes 84.63 35 P **P 19 44 06.5 -0.3**
baz=317,SNR=14
H32A Carlson Farm, 84.63 38 P **P 19 44 06.4 -0.5**
baz=315,SNR=6.4
G33A Ortonville 84.64 37 P **P 19 44 06.9 0.0**
baz=316
OGNE Ogallala 84.65 43 P **P 19 44 07.2 +0.1**
baz=313,SNR=15
OGNE Ogallala 84.65 43 *e*P **P 19 44 07.1 -0.1**
comp=Z,252nm,1.0s
OGNE LR LR
comp=Z,6μm,20.0s
MMB Musomiste 84.70 318 P **P 19 44 07.5 +0.2**
WTSB Winterswijk 84.70 334 *e*P **P 19 44 07.0 0.0**
comp=Z,357nm,1.5s
D36A Goodland 84.75 34 P **P 19 44 06.8 -0.6**
baz=318,SNR=21
SDCO Great Sand Dun 84.76 47 P **P 19 44 09.2 +1.1**
baz=311,SNR=125
SDCO Great Sand Dun 84.76 47 *e*P **P 19 44 08.9 +0.9**
comp=Z,127nm,1.1s
SDCO LR LR
comp=Z,4μm,19.0s
F34A Alexandria 84.78 36 P **P 19 44 07.4 -0.2**
baz=317,SNR=6.1
C37A Embarrass 84.78 33 P **P 19 44 07.1 -0.4**
baz=319,SNR=38
BEHE Becsehely 84.79 325 *e*P **P 19 44 07.4 -0.2**
NVR Nevrokopi 84.79 318 P **P 19 44 07.3 -0.4**
ARSA Arzberg 84.79 326 *i*PcP **P 19 44 08.1 +0.5**
comp=Z,40nm,0.8s,SNR=69
GRF Grafenberg Arr 84.80 330 P **P 19 44 08.3 +0.7**
GRFO Grafenberg 84.80 330 *e*P **P 19 44 07.7 +0.1**
comp=Z,540nm,1.3s
GRFO Grafenberg 84.80 330 *e*P **P 19 44 07.7 +0.1**
GRFO pmax pmax
comp=Z,540nm,1.3s
PRK Paraskevi 84.84 315 P **P 19 44 08.4 +0.4**
H33A Prehn Over Nor 84.86 37 P **P 19 44 08.0 0.0**
baz=316,SNR=75
KKB Krupnik 84.86 319 P **P 19 44 07.1 -1.0**
FETY Fethiye 84.87 312 P **P 19 44 06.2 -2.0**
TUC Tucson 84.87 54 P **P 19 44 09.3 +0.9**
baz=308
TUC Tucson 84.87 54 *e*P **P 19 44 08.2 -0.2**
comp=Z,259nm,1.1s
TUC LR LR
comp=Z,9μm,22.0s
TUC Tucson 84.87 54 *e*P **P 19 44 08.2 -0.2**
TUC pmax pmax
comp=Z,259nm,1.1s
TUC MLR MLR
comp=Z,9μm,22.0s
KSL Kastellorizon 84.87 311 P **P 19 44 07.8 -0.4**
MOA Molln 84.91 327 *e*PcP **P 19 44 08.5 +0.3**
comp=Z,49nm,0.9s,SNR=91
EYMN Ely 84.92 33 P **P 19 44 08.0 -0.2**
baz=319,SNR=60
EYMN Ely 84.92 33 *e*P **P 19 44 07.6 -0.7**
comp=Z,205nm,1.1s
EYMN LR LR
comp=Z,7μm,19.0s
DIVS Divibare 84.93 322 *e*P **P 19 44 07.8 -0.6**
comp=Z,232nm,1.0s
I32A Karley and Nic 84.96 38 P **P 19 44 08.5 0.0**
baz=315
PGBU Glenifferbraes 84.96 341 *e*P **P 19 44 08.8 +0.6**
PGBU IAmb IAmb 19 44 11.9
comp=Z,615nm,1.4s
PGBU IAMs_20 IAMs_20 20 21 48.9
comp=Z,9μm,19.8s
G34A Benson 85.00 36 P **P 19 44 08.7 +0.1**
baz=316,SNR=27
LIA Limnos Island 85.03 316 P **P 19 44 07.1 -1.8**
EKA Eskdalemuir Ar 85.03 341 P **P 19 44 08.6 0.0**
comp=Z,9.1nm,0.6s,baz=27,slow=4.3,SNR=35
EKA LR LR 20 26 42.5
comp=Z,9μm,19.1s,baz=5.0,slow=39
YER Yerkesik 85.03 312 P **P 19 44 08.6 -0.5**
KOGS Kog 85.05 325⇓*i*P **P 19 44 08.5 -0.4**
KOGS *e*S **S 19 54 32.2 -4.8**
KOGS *e*SS **SS 20 00 08.7 -0.4**
ESK Eskdalemuir 85.06 341 *e*P **P 19 44 08.8 0.0**
comp=Z,289nm,1.6s
ESK LR LR
comp=Z,13μm,19.0s
ESK Eskdalemuir 85.06 341 *e*P **P 19 44 08.1 -0.6**
ESK IAmb IAmb 19 44 11.1
comp=Z,686nm,2.2s
ESK IAMs_20 IAMs_20 20 29 41.6
comp=Z,15μm,16.9s
ESK Eskdalemuir 85.06 341 *e*P **P 19 44 08.8 0.0**
ESK pmax pmax
comp=Z,289nm,1.6s
ESK MLR MLR
comp=Z,13μm,19.0s
F35A Swanville 85.06 35 P **P 19 44 09.2 +0.2**
baz=317
SRS Serrai 85.09 318 P **P 19 44 08.4 -0.9**
D37A Cotton 85.10 34 P **P 19 44 08.5 -0.7**
baz=318,SNR=18
SIGR SIGRI 85.10 315 P **P 19 44 08.7 -0.6**
EDMD Edmundbyers 85.14 340 *e*P **P 19 44 09.2 +0.1**
EDMD IAMs_20 IAMs_20 20 26 20.1
comp=Z,17μm,19.7s
ECK Cauldkaine Hil 85.16 340⇑*e*P **P 19 44 09.8 +0.5**
C38A Sawbill Land. 85.19 33 P **P 19 44 09.2 -0.5**
baz=319,SNR=72
E36A McGregor 85.20 34 P **P 19 44 09.2 -0.4**
baz=318,SNR=37
BHH Howats Hill 85.26 340⇑*e*P **P 19 44 10.7 +1.0**
I33A Coleman 85.28 38 P **P 19 44 10.1 0.0**
baz=316,SNR=11
H34A Spellman Lake, 85.34 37 P **P 19 44 10.6 +0.2**
baz=316
OUR Ouranopolis 85.41 317 P **P 19 44 10.2 -0.6**
SOH Sokhos 85.43 318 P **P 19 44 09.9 -1.1**
SOKA Soboth 85.44 326 *e*PcP **P 19 44 10.7 -0.3**
comp=Z,56nm,0.6s,SNR=129
SOKA *e*PP **PP 19 47 32.2 +3.7**
comp=Z,24nm,1.3s
KNT Kendrikon 85.44 318 P **P 19 44 09.4 -1.6**
STIP Stip 85.46 319 *i*P **P 19 44 10.2 -0.9**
VAY Valandovo 85.51 318 P **P 19 44 10.7 -0.6**
VAY Valandovo 85.51 318 *i*P **P 19 44 12.1 +0.8**
VAY Valandovo 85.51 318 P **P 19 44 12.1 +0.8**
CHOS Chios island 85.54 315 P **P 19 44 10.5 -1.1**
E37A Wrenshall 85.56 34 P **P 19 44 11.4 0.0**
baz=319
F36A Milaca 85.56 35 P **P 19 44 10.8 -0.7**
baz=318,SNR=28
G35A Watkins 85.57 36 P **P 19 44 12.0 +0.4**
baz=317,SNR=34
ECSD EROS Data Cent 85.60 38 P **P 19 44 11.6 -0.1**
baz=316,SNR=61
ECSD EROS Data Cent 85.60 38 *e*P **P 19 44 11.1 -0.6**
comp=Z,134nm,1.0s
ECSD LR LR
comp=Z,7μm,20.0s
KSCO Kaye Shedlock' 85.62 45 P **P 19 44 12.7 +0.7**
baz=312
KSCO Kaye Shedlock' 85.62 45 *e*P **P 19 44 12.5 +0.4**
comp=Z,309nm,1.1s
C39A Grand Marais 85.62 32 P **P 19 44 11.3 -0.5**
baz=320,SNR=29
BODT Bodrum 85.67 313 P **P 19 44 10.6 -1.6**
GMK Mull of Kintyr 85.67 342 *e*P **P 19 44 11.3 -0.4**
SKO Skopje 85.67 320 P **P 19 44 12.6 +0.5**
SKO Skopje 85.67 320 *i*P **P 19 44 13.3 +1.3**
KESW Keswick, Cumbr 85.67 340⇑*e*P **P 19 44 12.5 +0.7**
KESW IAmb IAmb 19 44 15.5
comp=Z,357nm,1.3s
KESW IAMs_20 IAMs_20 20 30 02.2
comp=Z,14μm,17.2s
PLG Polygyros 85.68 317 P **P 19 44 13.1 +0.9**
HORT Hortiatis 85.72 318 P **P 19 44 13.4 +0.9**
ARG Arkhangelos 85.72 312 P **P 19 44 11.2 -1.3**
THE Thessaloniki 85.77 318 P **P 19 44 10.7 -1.9**
PLE Pljevlja 85.78 322 *e*P **P 19 44 12.1 -0.7**
TAOE Nuku Hiva Isla 85.78 104 *e*S **S 19 54 43.5 -1.7**
comp=Z,2μm,27.7s
TAOE Nuku Hiva Isla 85.78 104 *e*LQ LQ 20 07 38.2
comp=Z,15μm,26.8s
TAOE *e*LR LR 20 11 11.3
comp=Z,11μm,24.7s,baz=311
H35A Sunnyside Ranc 85.78 36 P **P 19 44 13.2 +0.6**
baz=317
OBKA Obir 85.79 326 *e*PcP **P 19 44 12.3 -0.4**
SNR=28
OBKA PP **PP 19 47 33.4 +2.0**
comp=Z,64nm,1.7s
HPK Haverah Park 85.80 339 *e*P **P 19 44 12.9 +0.5**
HPK IAmb IAmb 19 44 16.0
comp=Z,420nm,1.4s
HPK IAMs_20 IAMs_20 20 26 18.0
comp=Z,16μm,20.0s
T25A Trinidad 85.82 47 P **P 19 44 14.2 +1.0**
baz=312,SNR=39
T25A Trinidad 85.82 47 *e*P **P 19 44 13.5 +0.3**
comp=Z,150nm,0.9s
LMK Market Rasen 85.84 338 IAMs_20 IAMs_20 20 22 33.8
comp=Z,20μm,25.8s
IVA Berane 85.85 321⇑*i*P **P 19 44 12.8 -0.3**
BLY Banja Luka 85.85 324⇑*i*P **P 19 44 12.6 -0.3**
BLY Banja Luka 85.85 324 *e*P **P 19 44 12.3 -0.6**
comp=Z,224nm,1.4s
GRG Griva 85.86 318 P **P 19 44 14.5 +1.4**
PAIG Paliouri 85.86 317 P **P 19 44 11.9 -1.1**
KBA Koelnbreinsper 85.90 327 *e*P **P 19 44 12.6 -0.7**
SNR=64
KBA PP **PP 19 47 35.6 +3.2**
comp=Z,74nm,1.4s
KBA Koelnbreinsper 85.90 327 P **P 19 44 12.9 -0.5**
E38A The Farm, Brul 85.91 33 P **P 19 44 12.8 -0.4**
baz=319,SNR=70
G36A St. Michael 85.91 35 P **P 19 44 13.3 +0.1**
baz=318,SNR=14
LAZ Ladron 85.92 50 *e*P **P 19 44 14.6 +0.9**
C40A Isle Royale Na 85.97 31 P **P 19 44 13.1 -0.3**
baz=321,SNR=11
TASM ASL Pad, Albuq 85.99 50 P **P 19 44 15.0 +0.9**
baz=311,SNR=74
ANMO Albuquerque 86.00 50 P **P 19 44 15.3 +1.2**
comp=Z,53nm,1.1s,baz=296,slow=7.4,SNR=52
ANMO LR LR 20 18 43.0
comp=Z,3μm,20.5s,baz=319,slow=33
ANMO Albuquerque 86.00 50 P **P 19 44 15.0 +1.0**
baz=311
ANMO Albuquerque 86.00 50 *e*P **P 19 44 14.6 +0.5**
comp=Z,114nm,1.0s
ANMO Albuquerque 86.00 50 *d*/*i*P **P 19 44 14.8 +0.7**
ANMO pmax pmax
comp=Z,177nm,1.7s
ANMO MLR MLR
comp=Z,4μm,18.0s
TASL Snake Pit, Alb 86.00 50 P **P 19 44 15.1 +1.0**
baz=311,SNR=76
HGN Heimansgroeve 86.00 333 *e*P **P 19 44 12.9 -0.5**
HGN *e*P **P 19 44 13.0 -0.5**
comp=Z,837nm,1.8s
HGN Heimansgroeve 86.00 333 *e*SKS **S 19 54 45.8 -0.3**
HGN *e*S ScS 19 55 52.0 +57
HGN *e*SS **SS 20 00 30.3 +7.6**
PVY Plav 86.01 321 *e*P **P 19 44 13.6 -0.3**
OZLJ Ozalj 86.03 325 P **P 19 44 13.3 -0.4**
CLGH Cloghs, Cushen 86.03 342 *e*P **P 19 44 13.9 +0.3**
CLGH IAMs_20 IAMs_20 20 29 00.9
comp=Z,11μm,19.6s
KOME Kolasin 86.06 321⇑*i*P **P 19 44 14.0 -0.1**
BEBN Eben Emael 86.06 334⇓P **P 19 44 13.8 -0.1**
SKY Skiros Island 86.08 316 P **P 19 44 14.6 +0.4**
F37A Hinrichs Farm, 86.08 35 P **P 19 44 13.6 -0.4**
baz=318
MEM Membach 86.10 333⇑P **P 19 44 14.1 +0.1**
comp=Z,106nm,1.7s
MEM Membach 86.10 333 P **P 19 44 14.3 +0.3**
MYKA Terra Mystica 86.11 327 *e*P **P 19 44 12.8 -1.5**
comp=Z,44nm,0.9s,SNR=34
MYKA *e*PP **PP 19 47 33.6 -0.3**
comp=Z,11nm,0.8s
UPM Unac-Piva 86.12 322 *e*P **P 19 44 14.1 -0.4**
LJU Ljubljana 86.15 326⇓*e*P **P 19 44 13.9 -0.5**
LJU *e*PP **PP 19 47 38.5 +4.4**
LJU *e*S **S 19 54 39.5 -8.3**
LJU *e* 19 55 06.4
WACR West Acre 86.17 337 *e*P **P 19 44 14.2 -0.2**
WACR IAmb IAmb 19 44 18.7
comp=Z,384nm,1.2s
WACR IAMs_20 IAMs_20 20 30 11.8
comp=Z,15μm,17.4s
BOJS Bojanci 86.22 325⇓*i*P **P 19 44 14.5 -0.2**
BOJS *e*S S 19 54 39.6 -8.9
F38A Pierce - Schro 86.25 34 P **P 19 44 15.1 +0.2**
baz=319,SNR=62
Y22D IRIS PASSCAL I 86.27 51 P **P 19 44 16.2 +0.8**
baz=310
Y22D IRIS PASSCAL I 86.27 51 *e*P **P 19 44 16.4 +1.0**
comp=Z,345nm,1.5s
Y22E IRIS PASSCAL I 86.27 51 P **P 19 44 16.0 +0.6**
baz=310
LPM Los Pinos Moun 86.29 50 *e*P **P 19 44 16.1 +0.5**
H36A Jessenland, He 86.31 36 P **P 19 44 16.0 +0.8**
baz=318,SNR=13
LBWR Ladybower, Pea 86.31 339 *e*P **P 19 44 15.1 +0.1**
LBWR IAmb IAmb 19 44 18.0
comp=Z,278nm,1.1s
LBWR IAMs_20 IAMs_20 20 28 12.6
comp=Z,15μm,19.7s
STU Stuttgart 86.34 331 *e*P **P 19 44 14.7 -0.6**
comp=Z,238nm,1.0s
STU Stuttgart 86.34 331 *e*P **P 19 44 14.7 -0.6**
STU pmax pmax
comp=Z,238nm,1.0s
KTD Kalmit 86.35 331 P **P 19 44 15.5 +0.2**
IOMK Kirk Michael 86.36 341 *e*P **P 19 44 14.6 -0.6**
IOMK IAMs_20 IAMs_20 20 30 32.3
comp=Z,10μm,16.3s
CADS Cadrg 86.37 327⇓*i*P **P 19 44 13.9 -1.6**
CADS *e*PP **PP 19 47 42.6 +6.6**
SPMN Marine on St. 86.37 35 P **P 19 44 15.4 0.0**
baz=318,SNR=10
SPMN Marine on St. 86.37 35 *e*P **P 19 44 15.6 +0.1**
comp=Z,147nm,1.0s
BIA Bitola 86.40 319 *e*P **P 19 44 15.6 -0.2**
BNM Barren Site 86.40 50 *e*P **P 19 44 16.6 +0.5**
LIT Litokhoron 86.40 318 *e*P **P 19 44 15.2 -0.6**
comp=Z,130nm,1.1s
LIT Litokhoron 86.40 318 P **P 19 44 17.5 +1.7**
LIT Litokhoron 86.40 318 *e*P **P 19 44 15.2 -0.6**
LIT pmax pmax
comp=Z,130nm,1.1s
PHP Peshkopia 86.40 320 P **P 19 44 15.0 -0.8**
NKME Niksic 86.41 321⇑*i*P **P 19 44 15.1 -0.7**
319A Douglas 86.45 54 *e*P **P 19 44 17.0 +0.7**
comp=Z,140nm,1.1s
BGNE Belgrade 86.45 40 P **P 19 44 16.0 0.0**
baz=315,SNR=10
BGNE Belgrade 86.45 40 *e*P **P 19 44 16.0 0.0**
comp=Z,566nm,1.0s
WATA Walderalm 86.47 328 *e*PcP **P 19 44 16.0 -0.2**
comp=Z,4.9nm,0.4s,SNR=11
PDG Podgorica 86.49 321⇑*i*P **P 19 44 15.7 -0.4**
PDG Podgorica 86.49 321 P **P 19 44 15.7 -0.4**
TTG Podgorica 86.49 321⇑*i*P **P 19 44 15.5 -0.6**
TTG Podgorica 86.49 321 *e*P **P 19 44 15.5 -0.6**
comp=Z,216nm,1.1s
TTG Podgorica 86.49 321 *e*P **P 19 44 15.5 -0.6**
TTG pmax pmax
comp=Z,216nm,1.1s
WIM Isle of Man 86.49 341⇑*e*P **P 19 44 16.4 +0.5**
WTTA Wattenberg 86.50 328 *e*PcP **P 19 44 16.2 -0.2**
comp=Z,49nm,1.5s,SNR=17
BCLA Clavier 86.51 334⇓P **P 19 44 15.3 -0.8**
comp=Z,140nm,1.8s
XOR Xorichti 86.52 317 P **P 19 44 14.7 -1.7**
ABTA Abfaltersbach 86.52 328 *e*P **P 19 44 15.5 -0.8**
comp=Z,38nm,1.2s,SNR=31
BRY Bratogost 86.52 322⇑*i*P **P 19 44 15.5 -1.0**
E39A Mellen 86.53 33 P **P 19 44 16.0 -0.2**
baz=320,SNR=66
FNA Florina 86.54 319 *e*P **P 19 44 15.9 -0.5**
comp=Z,213nm,1.9s
FNA Florina 86.54 319 P **P 19 44 14.4 -2.1**
FNA Florina 86.54 319 *e*P **P 19 44 16.0 -0.5**
FNA pmax pmax
comp=Z,213nm,1.9s
UCC Uccle 86.54 334⇓P **P 19 44 15.6 -0.6**
comp=Z,75nm,2.0s
UCC Uccle 86.54 334 *e*P **P 19 44 15.8 -0.4**
comp=Z,239nm,1.5s
UCC Uccle 86.54 334 *e*P **P 19 44 15.8 -0.4**
UCC pmax pmax
comp=Z,239nm,1.5s
NEO Neokhori 86.54 317 P **P 19 44 16.4 -0.1**
CEME Cevo 86.58 321⇑*i*P **P 19 44 16.1 -0.6**
OHR Ohrid 86.62 319 *i*P **P 19 44 17.2 +0.3**
KZN Kozani 86.66 318 P **P 19 44 16.5 -0.6**
MOTA Moosalm 86.67 329 *e*P **P 19 44 15.9 -1.2**
comp=Z,8.3nm,0.4s,SNR=25
I36A Fitzsimmons Fa 86.68 36 P **P 19 44 17.2 +0.2**
baz=318,SNR=8.5
121A Cookes Peak, D 86.70 52 P **P 19 44 18.5 +0.9**
baz=310,SNR=24
UDBI Udbina 86.70 324 P **P 19 44 16.2 -1.0**
DRME Dracevica, Mon 86.70 321⇑*i*P **P 19 44 17.0 -0.2**
RETA Reutte 86.70 329 *e*PcP **P 19 44 17.1 -0.1**
comp=Z,105nm,1.3s,SNR=67
F39A Loretta 86.72 34 P **P 19 44 17.1 -0.2**
baz=320,SNR=66
APE Apeiranthos 86.72 314 P **P 19 44 15.3 -2.1**
APE Apeiranthos 86.72 314 *de*P **P 19 44 17.1 -0.3**
APE pmax pmax
comp=Z,43nm,0.8s
APE MLR MLR
comp=Z,7μm,22.0s
LANF Langenberg 86.73 331 P **P 19 44 17.2 0.0**
EREA Eretria 86.74 316 P **P 19 44 19.3 +1.8**
KARP Karpathos 86.75 312 *e*P **P 19 44 17.2 -0.4**
comp=Z,46nm,0.9s
KARP Karpathos 86.75 312 P **P 19 44 19.0 +1.4**
BUM Brajici-Budva 86.77 321⇑*i*P **P 19 44 17.8 +0.2**
E40A Wakefield 86.77 33 P **P 19 44 17.8 +0.4**
baz=320,SNR=137
H37A Dierke Farm, C 86.79 35 P **P 19 44 17.9 +0.3**
baz=318,SNR=19
HSIG 86.79 57 *e*P **P 19 44 18.3 +0.4**
comp=Z,141nm,1.3s
SNF Seneffe 86.81 334⇓P **P 19 44 17.5 0.0**
comp=Z,158nm,1.5s
WLF Walferdange 86.81 333⇑P **P 19 44 17.1 -0.4**
comp=Z,209nm,2.0s
WLF Walferdange 86.81 333 *e*P **P 19 44 17.5 0.0**
comp=Z,446nm,1.5s
WLF Walferdange 86.81 333 *e*P **P 19 44 17.5 0.0**
WLF pmax pmax
comp=Z,446nm,1.5s
ULC Ulcinj 86.83 321⇑*i*P **P 19 44 16.8 -1.1**
G38A Ridgeland 86.86 35 P **P 19 44 17.3 -0.6**
baz=319,SNR=24
HCY Herceg Novi 86.87 321⇑*i*P **P 19 44 17.9 -0.1**
D41A Chassel 86.88 32 P **P 19 44 18.1 +0.2**
baz=321,SNR=27
SRIG Santa Rosalia 86.94 59 *e*P **P 19 44 19.0 +0.4**
comp=Z,140nm,1.3s
GIVF Givet 86.95 334 *e*P **P 19 44 17.1 -1.1**
GIVF pmax pmax
comp=Z,272nm,1.5s
TIR Tirane 86.95 320 *e*P **P 19 44 18.3 -0.1**

comp=Z,70nm,0.9s
TIR Tirane 86.95 320 P P 19 44 18.0 -0.4
TIR Tirane 86.95 320 *eP* **P 19 44 18.3 -0.1**
TIR pmax pmax
comp=Z,70nm,0.9s
KBN Korca 86.97 319 P P 19 44 19.1 +0.5
STON Ston 86.97 322 P P 19 44 15.8 -2.6
NEST Nestorio 86.97 319 P P 19 44 19.0 +0.3
I37A Lemond, Waseca 86.98 36 P P 19 44 19.0 +0.5
baz=318,SNR=66
H38A Maiden Rock 87.03 35 P P 19 44 18.8 +0.1
baz=319,SNR=31
J36A Seneca 1, Swea 87.03 37 P P 19 44 18.9 +0.1
baz=317,SNR=14
DOU Dourbes 87.03 334 ⇓*P* **P 19 44 17.7 -1.0**
THL Klokotos Trika 87.04 318 P P 19 44 16.3 -2.5
BFO Black Forest 87.04 331 *eP* **P 19 44 18.1 -0.7**
comp=Z,207nm,1.2s
BFO LR LR
comp=Z,17µm,19.0s
BFO Black Forest 87.04 331 *i P* **P 19 44 18.7 -0.1**
WME Myndd Eilian 87.06 340 *eP* **P 19 44 18.6 -0.1**
F40A Park Falls 87.08 33 P P 19 44 18.5 -0.5
baz=320,SNR=62
PENT Pentalofos 87.08 318 P P 19 44 20.9 +1.7
FETA Feichten 87.08 329 *eP* **P 19 44 17.8 -1.3**
comp=Z,24nm,0.8s,SNR=29
G39A Holcombe 87.08 34 P P 19 44 18.7 -0.3
baz=320,SNR=32
NVLJ Novalja 87.10 325 P P 19 44 18.5 -0.5
WPS Cemaes, Angles 87.11 340 IAMs_20 IAMs_20 20 31 52.7
comp=Z,10µm,17.9s
LKR Lokris 87.12 316 P P 19 44 18.8 -0.5
E41A Kenton 87.17 32 P P 19 44 19.5 +0.1
baz=321,SNR=59
WLF1 Llynfaes 87.18 340⇑*eP* **P 19 44 19.7 +0.4**
WLF1 IAmb IAmb 19 44 23.0
comp=Z,254nm,0.9s
WLF1 IAMs_20 IAMs_20 20 27 31.6
comp=Z,24µm,20.7s
FOEL Foel Wylfa 87.19 339 *eP* **P 19 44 18.5 -0.9**
FOEL IAmb IAmb 19 44 21.9
comp=Z,264nm,0.8s
FOEL IAMs_20 IAMs_20 20 25 59.1
comp=Z,15µm,20.5s
BAIF Baives 87.21 334 *eP* **P 19 44 18.5 -0.9**
BAIF pmax pmax
comp=Z,155nm,1.5s
AXAR Agios Charalam 87.23 317 P P 19 44 20.6 +0.8
DAVA Damuels 87.23 329 *eP*c*P* **P 19 44 19.5 -0.4**
comp=Z,56nm,0.8s,SNR=42
SANT Santorini 87.24 313 *eP* **P 19 44 18.7 -1.3**
comp=Z,78nm,0.9s
AGG Agios Georgios 87.24 317 *eP* **P 19 44 19.0 -0.9**
comp=Z,73nm,1.0s
AGG Agios Georgios 87.24 317 P P 19 44 18.2 -1.7
AGG Agios Georgios 87.24 317 *eP* **P 19 44 19.0 -0.9**
AGG pmax pmax
comp=Z,73nm,1.0s
YLL Llanberis 87.25 340⇑*eP* **P 19 44 20.1 +0.5**
YRC Rhoscolyn 87.26 340 *eP* **P 19 44 19.7 +0.1**
VILL Villia 87.27 316 P P 19 44 19.5 -0.6
DAMY Dhamar 87.29 286 *eP* **P 19 44 20.9 +0.1**
comp=Z,116nm,1.1s
SCHQ Schefferville 87.34 16 P P 19 44 20.4 +0.4
comp=Z,60nm,0.8s,baz=12,slow=7.3,SNR=18
SCHQ LR LR 20 28 55.3
comp=Z,6µm,18.1s,baz=346,slow=39
SCHQ Schefferville 87.34 16 *eP* **P 19 44 19.7 -0.4**
comp=Z,121nm,1.1s
ELSH Elham, Standar 87.36 336 IAMs_20 IAMs_20 20 29 18.4
comp=Z,21µm,20.5s
LLW Llanuwchllyn 87.36 340 *eP* **P 19 44 20.6 +0.5**
COWI Conover 87.38 32 *eP* **P 19 44 20.1 -0.3**
comp=Z,134nm,1.0s
COWI LR LR
comp=Z,5µm,20.0s
CDF Champ du Feu 87.40 331 *eP* **P 19 44 18.5 -2.0**
CDF pmax pmax
comp=Z,206nm,1.3s
CBKS Cedar Bluff 87.40 43 P P 19 44 20.5 -0.2
baz=314,SNR=21
CBKS Cedar Bluff 87.40 43 *eP* **P 19 44 20.5 -0.2**
comp=Z,344nm,1.1s
CBKS LR LR
comp=Z,6µm,21.0s
CBKS Cedar Bluff 87.40 43 *eP* **P 19 44 20.5 -0.2**
CBKS pmax pmax
comp=Z,345nm,1.1s
CBKS MLR MLR
comp=Z,6µm,21.0s
HLM1 Long Mynd 87.43 339 *eP* **P 19 44 20.1 -0.4**
HLM1 IAMs_20 IAMs_20 20 21 52.5
comp=Z,13µm,25.7s
SLE Schleitheim 87.43 330 P P 19 44 20.5 -0.1
J37A Redenius Farm, 87.43 37 P P 19 44 20.7 -0.1
baz=318,SNR=24
I38A Scanlan Farm, 87.48 36 P P 19 44 20.8 -0.1
baz=319,SNR=49
K36A Gilmore City 87.48 38 P P 19 44 21.1 +0.1
baz=317,SNR=16
H39A Augusta 87.49 35 P P 19 44 20.9 -0.1
baz=319,SNR=46
G40A Rib Lake 87.54 34 P P 19 44 21.1 -0.1
baz=320,SNR=44
DSF Desfina 87.55 316 P P 19 44 19.1 -2.3
TBI Tubuai 87.57 121 *e*S **S 19 55 02.3 +0.4**
comp=Z,2µm,26.0s
TBI Tubuai 87.57 121 *e*LQ LQ 20 08 17.4
comp=Z,11µm,31.2s
TBI *e*LR LR 20 12 20.8
comp=Z,12µm,22.5s,baz=306
TBI Tubuai 87.57 121 *e*T T 21 21 01.3
comp=Z,17nm,0.3s
FUORN Ofenpass-Fuorn 87.59 329 *eP* **P 19 44 21.4 -0.3**
comp=Z,289nm,1.4s
SSW Stow on the Wo 87.60 338⇑*eP* **P 19 44 22.1 +0.7**
ECH Echery 87.60 331 *eP* **P 19 44 20.7 -0.8**
comp=Z,126nm,1.2s
ECH Echery 87.60 331 *eP* **P 19 44 20.7 -0.8**
ECH pmax pmax
comp=Z,126nm,1.2s
EVR Evrytania 87.60 317 P P 19 44 20.3 -1.4
JAN Janina 87.61 318 P P 19 44 22.5 +0.8
ZKR Zakros 87.62 312 P P 19 44 20.1 -1.7
E42A Champion 87.65 32 P P 19 44 21.8 +0.1
baz=322,SNR=47
F41A Three Lakes 87.67 33 P P 19 44 22.0 +0.2
baz=321,SNR=51
DSB Dublin 87.76 341 *eP* **P 19 44 22.0 0.0**
comp=Z,202nm,1.8s
L36A Harm Buss Farm 87.77 38 P P 19 44 22.4 +0.1
baz=317,SNR=23
ANX Ano Chora 87.77 317 P P 19 44 21.0 -1.5
K37A Belmond 87.79 37 P P 19 44 22.5 0.0
baz=318,SNR=71
DSL Palaion Diasel 87.85 318 P P 19 44 21.6 -1.2
STRD Stroud 87.86 338 *eP* **P 19 44 23.0 +0.4**
STRD IAmb IAmb 19 44 25.9
comp=Z,592nm,1.1s
STRD IAMs_20 IAMs_20 20 29 37.4
comp=Z,14µm,18.6s
EFP Efpalio 87.89 317 P P 19 44 22.0 -1.0
SRN Sarande 87.92 319 P P 19 44 22.9 -0.2
MCH1 Michaelchurch 87.92 339 *eP* **P 19 44 22.7 -0.1**
MCH1 IAmb IAmb 19 44 26.5
comp=Z,163nm,0.9s
MCH1 IAMs_20 IAMs_20 20 32 32.1
comp=Z,13µm,16.4s
H40A Chili 87.95 34 P P 19 44 23.0 -0.2
baz=320,SNR=47
J38A Wedel Dairy, R 87.95 36 P P 19 44 23.0 -0.2
baz=319,SNR=44
PVO Paravola 87.97 317 P P 19 44 22.8 -0.6
WOL Wolverton 87.97 338 *eP* **P 19 44 23.2 +0.1**
WOL IAmb IAmb 19 44 25.6
comp=Z,121nm,0.9s
WOL IAMs_20 IAMs_20 20 27 58.8
comp=Z,18µm,18.8s
LAKA Lakka 87.98 317 P P 19 44 22.5 -1.0
SWN1 Swindon 87.98 338⇑*eP* **P 19 44 23.8 +0.7**
SWN1 IAmb IAmb 19 44 26.7
comp=Z,500nm,1.1s
SWN1 IAMs_20 IAMs_20 20 23 35.5
comp=Z,17µm,25.7s
SGD Sagiada 87.98 319 P P 19 44 20.8 -2.6

IGT Igoumenitsa 87.98 318 P P 19 44 23.3 -0.1
MONM Monmouth 88.00 339 *eP* **P 19 44 23.6 +0.3**
MONM IAmb IAmb 19 44 26.9
comp=Z,158nm,0.9s
MONM IAMs_20 IAMs_20 20 31 10.5
comp=Z,16µm,17.3s
I39A Houston 88.00 35 P P 19 44 23.0 -0.4
baz=319,SNR=30
EPT El Paso 88.02 52 *eP* **P 19 44 24.6 +0.7**
comp=Z,199nm,1.8s
LAST Lasithi 88.04 312 P P 19 44 23.6 -0.3
G41A Antigo 88.04 33 P P 19 44 23.6 0.0
baz=321,SNR=7.2
HINF Hinteralfeld 88.04 331 *eP* **P 19 44 22.2 -1.4**
HINF pmax pmax
comp=Z,380nm,2.1s
F42A Maple Grove Fa 88.08 32 P P 19 44 24.1 +0.3
baz=322,SNR=7.7
OLDB Oldbury-Upon-S 88.08 338 *eP* **P 19 44 24.9 +1.3**
OLDB IAMs_20 IAMs_20 20 31 12.0
comp=Z,15µm,17.1s
E43A Lone Tree Farm 88.09 31 P P 19 44 23.8 +0.1
baz=322,SNR=47
HAU Haudompre 88.09 332 *eP* **P 19 44 22.6 -1.2**
HAU pmax pmax
comp=Z,24nm,0.6s
TUE Stuetta 88.10 329 *eP* **P 19 44 23.6 -0.5**
comp=Z,334nm,1.8s
KEK Kerkira 88.15 319 P P 19 44 24.7 +0.5
M36A Felix, Anita 88.17 39 P P 19 44 24.5 +0.2
baz=317,SNR=52
PDO Prodromos 88.17 317 P P 19 44 23.0 -1.3
HGH Gray Hill 88.18 339 *eP* **P 19 44 24.2 +0.2**
BATH Bath 88.20 338 IAMs_20 IAMs_20 20 29 46.8
comp=Z,14µm,19.3s
L37A Phoenix Point, 88.21 38 P P 19 44 24.5 0.0
baz=318,SNR=22
H41A Junction City 88.29 34 P P 19 44 24.7 -0.1
baz=321,SNR=22
H41A Junction City 88.29 34 *eP* **P 19 44 24.7 -0.1**
comp=Z,167nm,1.1s
IDI Anoyia 88.31 313 P P 19 44 24.1 -1.1
comp=Z,25nm,0.6s,baz=26,slow=11,SNR=18
IDI Anoyia 88.31 313⇓*iP* **P 19 44 24.5 -0.6**
IDI Anoyia 88.31 313 *eP* **P 19 44 24.2 -0.9**
comp=Z,44nm,0.8s
J39A Decorah 88.31 36 P P 19 44 24.3 -0.6
baz=319,SNR=43
K38A Parkersburg 88.31 37 P P 19 44 24.8 -0.1
baz=318,SNR=11
DRO Drossia 88.33 317 P P 19 44 24.8 -0.3
LKD2 Lefkada island 88.33 318 P P 19 44 25.5 +0.4
E44A Grand Marais A 88.34 30 P P 19 44 25.3 +0.3
baz=323,SNR=32
G42A Mountain 88.36 33 P P 19 44 25.3 +0.2
baz=321,SNR=60
G42A Mountain 88.36 33 *eP* **P 19 44 24.7 -0.3**
comp=Z,217nm,1.1s
I40A Norwalk 88.40 35 P P 19 44 25.3 0.0
baz=320,SNR=11
F43A Flat Rock, Esc 88.44 32 P P 19 44 25.7 +0.2
baz=322,SNR=53
VLI Veliai 88.49 315 P P 19 44 20.1 -5.7
N36A Muff Farm, Cla 88.55 39 P P 19 44 26.4 +0.3
baz=317,SNR=15
M37A Trindle Farm, 88.59 38 P P 19 44 26.8 +0.6
baz=318,SNR=16
L38A Oak Wood Farm, 88.59 37 P P 19 44 26.2 -0.1
baz=318,SNR=30
FSK Fiskardo 88.62 318 P P 19 44 26.0 -0.4
I41A Arkdale 88.62 34 P P 19 44 26.3 0.0
baz=320,SNR=12
AMT Artemida-Makis 88.63 316 P P 19 44 25.7 -0.8
SCIA State Center 88.64 37 P P 19 44 27.0 +0.5
baz=318,SNR=35
SCIA State Center 88.64 37 *eP* **P 19 44 26.6 +0.2**
comp=Z,344nm,0.9s
SCIA LR LR
comp=Z,8µm,22.0s
VAM Vamos 88.64 313 P P 19 44 25.4 -1.2
F44A Big Bay de Noc 88.65 31 P P 19 44 26.7 +0.3
baz=323,SNR=58
G43A Wallace 88.67 32 P P 19 44 26.8 +0.3
baz=322,SNR=35
G43A Wallace 88.67 32 *eP* **P 19 44 26.5 0.0**
comp=Z,268nm,1.1s
K39A Oelwein 88.69 36 P P 19 44 26.2 -0.5
baz=319,SNR=27
J40A Soldiers Grove 88.72 35 P P 19 44 26.4 -0.4
baz=320
ITM Ithomi 88.75 316 *eP* **P 19 44 25.4 -1.8**
comp=Z,127nm,0.6s
ITM Ithomi 88.75 316 P P 19 44 25.3 -1.8
MNTX Cornudas Mount 88.79 52 P P 19 44 27.8 +0.4
baz=311,SNR=42
MNTX Cornudas Mount 88.79 52 *eP* **P 19 44 27.4 0.0**
comp=Z,41nm,1.2s
MNTX LR LR
comp=Z,5µm,20.0s
DYR Agios Nikonas 88.81 315 P P 19 44 25.0 -2.4
ANKY Antikythira Is 88.86 314 P P 19 44 25.6 -2.0
E45A Wooded Hills, 88.86 30 P P 19 44 27.6 +0.1
baz=324,SNR=25
CPRX Cap Rock 88.87 50 *eP* **P 19 44 29.1 +1.2**
H42A Shiocton 88.88 33 P P 19 44 27.9 +0.3
baz=321,SNR=10
H42A Shiocton 88.88 33 *eP* **P 19 44 27.8 +0.3**
comp=Z,194nm,1.1s
KSU1 Kansas State U 88.92 41 P P 19 44 27.8 0.0
baz=316
KSU1 Kansas State U 88.92 41 *eP* **P 19 44 27.9 0.0**
comp=Z,246nm,0.9s
KSU1 LR LR
comp=Z,6µm,22.0s
MSTX Muleshoe 88.92 48 P P 19 44 28.2 +0.1
baz=313,SNR=9.0
MSTX Muleshoe 88.92 48 *eP* **P 19 44 28.0 -0.1**
comp=Z,51nm,1.1s
AMTX Amarillo 88.97 47 P P 19 44 28.9 +0.6
baz=313
AMTX Amarillo 88.97 47 *eP* **P 19 44 28.8 +0.5**
comp=Z,125nm,0.9s
N37A Lee Faris, Mou 88.98 39 P P 19 44 28.5 +0.4
baz=318,SNR=18
M38A Pleasantville 89.01 38 P P 19 44 28.6 +0.3
baz=318,SNR=55
SENIN Lac Senin/Sane 89.04 330 *eP* **P 19 44 28.2 -0.4**
comp=Z,46nm,1.1s
PYL PYLOS 89.05 316 P P 19 44 26.2 -2.3
K40A Colesburg 89.06 36 P P 19 44 28.1 -0.3
baz=320,SNR=15
L39A Vinton 89.08 37 P P 19 44 28.5 0.0
baz=319,SNR=56
J41A Loganville 89.08 35 P P 19 44 28.4 -0.2
baz=320,SNR=24
MATE Matera 89.10 321⇓*iP* **P 19 44 28.5 -0.1**
GDL2 Guadalupe Moun 89.11 51 *eP* **P 19 44 29.7 +0.7**
I42A Draeger Farm, 89.19 34 P P 19 44 29.1 +0.1
baz=321,SNR=24
I42A Draeger Farm, 89.19 34 *eP* **P 19 44 28.9 -0.1**
comp=Z,124nm,1.0s
HTL Hartland 89.24 339 IAMs_20 IAMs_20 20 31 05.7
comp=Z,7µm,19.1s
H43A Windswept, Lux 89.25 33 P P 19 44 29.5 +0.2
baz=322,SNR=22
H43A Windswept, Lux 89.25 33 *eP* **P 19 44 29.8 +0.5**
comp=Z,261nm,1.1s
F45A CMU Biological 89.26 31 P P 19 44 29.6 +0.3
baz=323,SNR=51
JFWS Jewell Farm 89.32 35 P P 19 44 29.2 -0.5
baz=320,SNR=11
JFWS Jewell Farm 89.32 35 *eP* **P 19 44 29.1 -0.5**
comp=Z,96nm,1.0s
JFWS LR LR
comp=Z,9µm,22.0s
JFWS Jewell Farm 89.32 35 *eP* **P 19 44 29.2 -0.5**
JFWS pmax pmax
comp=Z,96nm,1.0s
JFWS MLR MLR
comp=Z,9µm,22.0s
CABF La Chapelle 89.33 331 *eP* **P 19 44 28.0 -1.7**
CABF pmax pmax
comp=Z,289nm,1.7s
CLNB Carlsbad 89.37 50 *eP* **P 19 44 30.2 -0.1**
O37A Wolven Farm, M 89.45 39 P P 19 44 30.5 +0.2
baz=318,SNR=15
N38A Joes South For 89.46 38 P P 19 44 30.5 +0.2

baz=318,SNR=10
AQU L'Aquila 89.47 324 *eP* **P 19 44 30.1 -0.3**
comp=Z,190nm,1.1s
AQU L'Aquila 89.47 324 *eP* **P 19 44 30.1 -0.3**
AQU pmax pmax
comp=Z,190nm,1.1s
VLC Villacolmand 89.47 327 *eP* **P 19 44 31.1 +0.8**
comp=Z,90nm,1.0s
M39A Webster 89.48 37 P P 19 44 30.6 +0.2
baz=319,SNR=21
L40A Anamosa 89.50 36 P P 19 44 30.4 -0.1
baz=320,SNR=39
F46A Macinaw City C 89.50 30 P P 19 44 31.0 +0.5
baz=324,SNR=12
K41A Shullsburg 89.53 35 P P 19 44 30.5 -0.2
baz=320,SNR=13
J42A Columbus 89.53 34 P P 19 44 30.3 -0.3
baz=321,SNR=9.4
I43A Langenfeld Bro 89.54 33 P P 19 44 30.6 0.0
baz=322,SNR=13
DYA Yadsworthy 89.58 339 IAMs_20 IAMs_20 20 32 07.8
comp=Z,19µm,17.1s
N39A Derby Farms, D 89.76 38 P P 19 44 32.2 +0.4
baz=319,SNR=23
P37A Lathrop 89.77 40 P P 19 44 31.9 0.0
baz=318,SNR=17
J43A Natural Harves 89.81 34 P P 19 44 31.7 -0.2
baz=321,SNR=18
O38A Galt 89.83 39 P P 19 44 32.2 +0.1
baz=318
L41A Preston 89.84 36 P P 19 44 31.9 -0.2
baz=320,SNR=22
K42A Prairie Point, 89.85 35 P P 19 44 31.9 -0.3
baz=321,SNR=12
M40A Post Highland 89.86 37 P P 19 44 32.4 +0.2
baz=319,SNR=8.9
VAL Valentia 89.93 343 *eP* **P** 19 44 41.4 +9.2
FLN La Foliniere 89.94 336 P P 19 44 31.4 -1.0
LPL La Plagne 89.96 330 *eP* **P 19 44 31.9 -1.0**
LPL pmax pmax
comp=Z,77nm,1.1s
LPG La Plagne 89.97 330 *eP* **P 19 44 31.9 -1.1**
LPG pmax pmax
comp=Z,49nm,0.8s
CUC Castrocucco 90.04 321 *eP* **P 19 44 32.4 -0.8**
comp=Z,112nm,1.5s
TIP Timpagrande 90.16 320⇓*iP* **P 19 44 33.8 +0.1**
TIP Timpagrande 90.16 320 *eP* **P 19 44 32.9 -0.8**
comp=Z,106nm,1.5s
TIP Timpagrande 90.16 320 P P 19 44 32.8 -0.9
P38A Dawn 90.17 39 P P 19 44 34.0 +0.3
baz=318,SNR=15
SMF Signal de Mont 90.18 332 *eP* **P 19 44 32.9 -0.7**
SMF pmax pmax
comp=Z,281nm,1.6s
CCA1 Carnmenellis 90.18 339 IAMs_20 IAMs_20 20 31 25.1
comp=Z,14µm,16.9s
O39A Kirksville 90.21 38 P P 19 44 34.0 +0.2
baz=319,SNR=6.2
N40A Mertquake, Sal 90.22 37 P P 19 44 34.2 +0.3
baz=319,SNR=19
Q37A Longview Farm, 90.24 40 P P 19 44 33.5 -0.5
baz=317
AVF Avril sur Loir 90.24 333 *eP* **P 19 44 33.0 -0.9**
AVF pmax pmax
comp=Z,265nm,1.3s
ATD Arta Tunnel 90.27 284 P P 19 44 35.3 +0.7
comp=Z,42nm,1.0s,baz=26,slow=6.0,SNR=29
ATD LR LR 20 29 55.5
comp=Z,3µm,18.3s,baz=46,slow=39
ATD Arta Tunnel 90.27 284 *eP* **P 19 44 34.9 +0.2**
comp=Z,205nm,1.4s
L42A Oliver, Polo 90.30 35 P P 19 44 33.7 -0.5
baz=321,SNR=6.9
LPIG La Paz 90.30 60 P P 19 44 36.0 +1.5
comp=Z,39nm,0.4s,baz=317,slow=0.8,SNR=6.4
LPIG LR LR 20 18 25.2
comp=Z,2µm,21.2s,baz=308,slow=31
BNI Bardonecchia 90.36 330 *eP* **P 19 44 34.0 -0.6**
comp=Z,98nm,1.2s
BNI Bardonecchia 90.36 330 *eP* **P 19 44 34.1 -0.6**
BNI pmax pmax
comp=Z,98nm,1.2s
M41A Milan 90.36 36 P P 19 44 34.7 +0.2
baz=320
K43A Burlington 90.38 34 P P 19 44 34.3 -0.3
baz=322
GRR Gorron 90.39 336 *eP* **P 19 44 33.8 -0.7**
GRR pmax pmax
comp=Z,216nm,1.3s
L43A Garden Prairie 90.59 35 P P 19 44 35.3 -0.3
baz=321,SNR=8.9
Q38A Cooks Store, C 90.62 40 P P 19 44 35.5 -0.3
baz=318,SNR=27
O40A La Belle 90.65 38 P P 19 44 36.0 +0.2
baz=319,SNR=38
M42A Sheffield 90.67 36 P P 19 44 35.8 -0.1
baz=320
P39B Salisbury 90.67 39 P P 19 44 36.0 0.0
baz=318,SNR=15
N41A Harden Midland 90.71 37 P P 19 44 36.2 0.0
baz=320,SNR=19
WMOK Wichita Mounta 90.79 46 P P 19 44 37.1 +0.3
baz=315,SNR=22
WMOK Wichita Mounta 90.79 46 *eP* **P 19 44 36.8 +0.1**
comp=Z,79nm,1.0s
WMOK LR LR
comp=Z,5µm,19.0s
WMOK Wichita Mounta 90.79 46 *eP* **P 19 44 36.8 +0.1**
WMOK pmax pmax
comp=Z,79nm,1.0s
WMOK MLR MLR
comp=Z,5µm,19.0s
ORIF Oris-en-Rattie 90.79 330 *eP* **P 19 44 35.6 -1.0**
ORIF pmax pmax
comp=Z,61nm,0.9s
SLBS Sierra La Lagu 90.82 60 *eP* **P 19 44 38.4 +1.3**
comp=Z,93nm,1.1s
Q39A Willow Grove F 90.89 39 P P 19 44 37.3 +0.2
baz=318,SNR=46
L44A Lake County Fo 90.98 34 P P 19 44 37.2 -0.2
baz=322
P40A Paris 91.00 38 P P 19 44 37.7 +0.2
baz=319,SNR=41
N42A Yates City 91.02 36 P P 19 44 37.7 +0.1
baz=320,SNR=11
R38A Fenwick Farm, 91.04 40 P P 19 44 37.0 -0.8
baz=318,SNR=27
SSB Saint Sauveur 91.04 331 *eP* **P 19 44 37.5 -0.2**
comp=Z,265nm,1.9s
SSB Saint Sauveur 91.04 331 *eP* **P 19 44 37.5 -0.2**
SSB pmax pmax
comp=Z,265nm,1.9s
M43A Waltham Townsh 91.07 35 P P 19 44 38.0 +0.1
baz=321,SNR=31
O41A Passleys Farm, 91.15 37 P P 19 44 38.5 +0.3
baz=320,SNR=24
CEL Celeste 91.29 320 *eP* **P 19 44 38.9 -0.1**
comp=Z,167nm,1.4s
VIVF Saint-Julien-I 91.33 331 *eP* **P 19 44 38.2 -0.8**
N43A Stutzman Famil 91.35 36 P P 19 44 39.3 +0.1
baz=321,SNR=11
Q40A Laux Farm, Aux 91.39 39 P P 19 44 39.4 0.0
baz=319,SNR=27
P41A Barry, Barry 91.39 38 P P 19 44 39.7 +0.3
baz=320,SNR=18
R39A Chumby, Stover 91.40 40 P P 19 44 39.2 -0.2
baz=318,SNR=53
S38A Stockton 91.45 41 P P 19 44 38.9 -0.7
baz=318,SNR=28
TX31 Lajitas Ar. Si 91.46 52 *eP* **P 19 44 40.2 +0.2**
TXAR Lajitas Array 91.46 52 P P 19 44 40.5 +0.5
comp=Z,24nm,0.8s,baz=295,slow=2.2,SNR=110
TXAR PKKP **PKKPdf 20 01 53.8 -1.8**
comp=Z,0.4nm,0.7s,baz=151,slow=2.1,SNR=3.6
TXAR PKKPbc **PKKPbc 20 02 01.1 +1.6**
comp=Z,1.2nm,0.6s,baz=150,slow=5.6,SNR=6.8
TXAR PKPPKP **P'P'df 20 10 09.5 -5.4**
comp=Z,0.8nm,1.0s,baz=155,slow=3.6,SNR=4.5
TXAR LR LR 20 22 38.4
comp=Z,4µm,19.4s,baz=0.0,slow=34
O42A Bath 91.48 37 P P 19 44 39.8 0.0
baz=320
M44A Midewin, Midew 91.54 35 P P 19 44 40.0 0.0
baz=322,SNR=7.5
QUIF Quistinic 91.56 337 *eP* **P 19 44 39.1 -0.8**
QUIF pmax pmax
comp=Z,158nm,1.4s

FRF	La Foret Royal	91.58	329	eP	P	19 44 38.6	-1.6
FRF				pmax	pmax		
	comp=Z,140nm,1.2s						
HDIL	Hopedale	91.59	36	P	P	19 44 40.4	+0.1
	baz=321,SNR=6.8						
HDIL	Hopedale	91.59	36	eP	P	19 44 40.5	+0.3
	comp=Z,192nm,1.1s						
HDIL				LR	LR		
	comp=Z,6µm,20.0s						
TUL1	Leonard	91.67	43	P	P	19 44 40.9	+0.2
	baz=317,SNR=14						
TUL1	Leonard	91.67	43	eP	P	19 44 40.7	0.0
	comp=Z,162nm,0.9s						
T38A	Diamond	91.68	41	P	P	19 44 40.7	-0.1
	baz=318,SNR=78						
MFF	Saint Martin d	91.68	335	eP	P	19 44 40.1	-0.5
MFF				pmax	pmax		
	comp=Z,132nm,1.1s						
S39A	Bolivar	91.71	40	P	P	19 44 40.3	-0.6
	baz=318,SNR=56						
HPIG		91.72	55	eP	P	19 44 41.4	0.0
	comp=Z,104nm,1.2s						
ABTX	Abilene, Hawle	91.75	48	P	P	19 44 41.6	+0.3
	baz=314,SNR=19						
ABTX	Abilene, Hawle	91.75	48	eP	P	19 44 41.8	+0.6
	comp=Z,113nm,1.1s						
O43A	Sugar Creek Fa	91.79	36	P	P	19 44 41.1	-0.1
	baz=321						
P42A	Winchester	91.82	37	P	P	19 44 41.2	-0.2
	baz=320,SNR=27						
R40A	Maddies Statio	91.82	39	P	P	19 44 41.2	-0.2
	baz=319,SNR=48						
Q41A	Truxton	91.85	38	P	P	19 44 41.7	+0.2
	baz=320,SNR=28						
M45A	Boilermakers S	91.91	34	P	P	19 44 41.2	-0.5
	baz=322						
N44A	Piper City	91.96	35	P	P	19 44 42.1	+0.2
	baz=322,SNR=6.2						
T39A	Clever	92.18	41	P	P	19 44 43.0	0.0
	baz=318,SNR=29						
P43A	Skaggs, Pawnee	92.18	37	P	P	19 44 43.1	0.0
	baz=321,SNR=5.9						
N45A	Kentland	92.21	35	P	P	19 44 43.2	+0.1
	baz=322,SNR=13						
S40A	Lebanon	92.22	40	P	P	19 44 42.9	-0.4
	baz=319,SNR=49						
Q42A	Golden Eagle	92.24	38	P	P	19 44 43.4	+0.1
	baz=320,SNR=9.6						
R41A	Rosebud	92.28	39	P	P	19 44 43.5	0.0
	baz=319,SNR=44						
CAF	Calviac	92.30	332	eP	P	19 44 43.4	-0.1
CAF				pmax	pmax		
	comp=Z,100nm,1.0s						
O44A	Mansfield	92.30	36	P	P	19 44 43.0	-0.6
	baz=321						
M46A	Old House Fiel	92.31	34	P	P	19 44 43.2	-0.4
	baz=323						
HHAR	Hobbs	92.42	42	eP	P	19 44 43.5	-0.8
	comp=Z,91nm,1.0s						
CCM	Cathedral Cave	92.53	39	P	P	19 44 44.5	-0.2
	baz=320						
CCM	Cathedral Cave	92.53	39	eP	P	19 44 44.2	-0.4
	comp=Z,159nm,0.9s						
CCM	Cathedral Cave	92.53	39	eP	P	19 44 44.2	-0.4
CCM				pmax	pmax		
	comp=Z,159nm,0.9s						
N46A	Monticello	92.54	34	P	P	19 44 44.1	-0.5
	baz=322						
T40A	Mansfield	92.54	40	P	P	19 44 44.3	-0.4
	baz=319,SNR=48						
SADO	Sadowa	92.57	28	LR	LR	20 28 45.7	
	comp=Z,3µm,21.2s,baz=0.5,slow=37						
SADO	Sadowa	92.57	28	eP	P	19 44 44.2	-0.5
	comp=Z,67nm,1.2s						
O45A	Potomac	92.58	35	P	P	19 44 45.2	+0.3
	baz=322,SNR=16						
R42A	Luebbering	92.59	38	P	P	19 44 44.9	0.0
	baz=320,SNR=14						
U39A	Green Forest	92.60	41	P	P	19 44 44.8	-0.3
	baz=318,SNR=77						
SLM	Saint Louis	92.60	38	eP	P	19 44 44.7	-0.3
	comp=Z,102nm,0.9s						
SLM	Saint Louis	92.60	38	eP	P	19 44 44.7	-0.3
SLM				pmax	pmax		
	comp=Z,102nm,0.9s						
S41A	Jillco Farms,	92.62	39	P	P	19 44 44.7	-0.4
	baz=319,SNR=26						
Q43A	New Douglas	92.64	37	P	P	19 44 45.0	-0.1
	baz=320						
P44A	Sand Creek, Wi	92.76	36	P	P	19 44 45.8	+0.1
	baz=321,SNR=12						
SFIN	Lafayette	92.78	35	P	P	19 44 45.8	+0.1
	baz=322,SNR=11						
SFIN	Lafayette	92.78	35	eP	P	19 44 45.6	-0.1
	comp=Z,120nm,1.1s						
AAM	Ann Arbor	92.78	32	P	P	19 44 45.3	-0.4
	baz=325						
AAM	Ann Arbor	92.78	32	PFAKE		19 45 00.0	+14
AAM				LR	LR		
	comp=Z,11µm,20.0s						
V39A	Pettigrew	92.91	42	P	P	19 44 46.1	-0.4
	baz=318,SNR=58						
TRQ	Mont Tremblant	92.95	24	eP	P	19 44 46.4	-0.1
U40A	Yellville	92.95	41	P	P	19 44 46.4	-0.3
	baz=318,SNR=116						
S42A	Caledonia	92.97	39	P	P	19 44 46.6	-0.1
	baz=320,SNR=40						
FVM	French Village	93.00	38	eP	P	19 44 46.5	-0.3
	comp=Z,98nm,1.0s						
FVM	French Village	93.00	38	eP	P	19 44 46.5	-0.3
FVM				pmax	pmax		
	comp=Z,98nm,1.0s						
Q44A	Meyer Farm, Va	93.00	37	P	P	19 44 46.8	-0.1
	baz=321,SNR=10						
T41A	Mountain View	93.02	40	P	P	19 44 46.6	-0.4
	baz=319,SNR=39						
R43A	Red Bud	93.03	38	P	P	19 44 46.7	-0.2
	baz=320,SNR=10.0						
PLVO	Plevna	93.10	26	eP	P	19 44 47.1	-0.1
	comp=Z,62nm,1.1s						
P45A	Graceland, Par	93.14	36	P	P	19 44 47.3	-0.2
	baz=322,SNR=7.1						
JCT	Junction City	93.14	49	P	P	19 44 47.7	0.0
	baz=314,SNR=13						
JCT	Junction City	93.14	49	eP	P	19 44 47.6	0.0
	comp=Z,52nm,0.9s						
JCT				LR	LR		
	comp=Z,6µm,22.0s						
JCT	Junction City	93.14	49	eP	P	19 44 47.6	0.0
JCT				pmax	pmax		
	comp=Z,52nm,0.9s						
JCT				MLR	MLR		
	comp=Z,6µm,22.0s						
W39A	Magazine	93.31	42	P	P	19 44 48.3	0.0
	baz=318,SNR=25						
W39A	Magazine	93.31	42	eP	P	19 44 48.2	0.0
	comp=Z,139nm,1.3s						
O47A	Sheridan	93.32	34	P	P	19 44 47.8	-0.5
	baz=323						
P46A	Rosedale	93.32	35	P	P	19 44 48.3	+0.1
	baz=322,SNR=8.7						
T42A	Van Buren	93.38	39	P	P	19 44 48.5	-0.1
	baz=320,SNR=42						
V40A	Witts Springs	93.38	41	P	P	19 44 48.4	-0.2
	baz=318,SNR=18						
V40A	Witts Springs	93.38	41	eP	P	19 44 48.3	-0.4
	comp=Z,52nm,0.9s						
Q45A	Warren Harvey,	93.43	36	P	P	19 44 48.9	+0.1
	baz=322,SNR=13						
U41A	Viola	93.46	40	P	P	19 44 48.7	-0.3
	baz=319,SNR=24						
R44A	Waltonville	93.48	37	P	P	19 44 48.8	-0.2
	baz=321,SNR=10.0						
S43A	Fulton Ridge,	93.50	38	P	P	19 44 48.8	-0.3
	baz=320,SNR=12						
WHTX	Lake Whitney,	93.51	47	P	P	19 44 49.6	+0.3
	baz=316,SNR=19						
WHTX	Lake Whitney,	93.51	47	eP	P	19 44 49.7	+0.4
	comp=Z,145nm,0.9s						
MTLF	Montolieu	93.57	331	eP	P	19 44 48.9	-0.5
OLIL	Olney	93.58	37	eP	P	19 44 49.8	+0.3
	comp=Z,179nm,1.1s						
X39A	Fountain Ranch	93.63	43	P	P	19 44 50.0	+0.2
	baz=318,SNR=33						
W40A	Ferguson Farm,	93.70	42	P	P	19 44 50.2	+0.1
	baz=318,SNR=8.7						
W40A	Ferguson Farm,	93.70	42	eP	P	19 44 50.6	+0.5
	comp=Z,278nm,1.4s						
Q46A	CEJHS Indians,	93.72	36	P	P	19 44 50.0	-0.1
	baz=322						
V41A	Mountainview	93.76	41	P	P	19 44 49.9	-0.5
	baz=319,SNR=30						
T43A	Greenville	93.76	39	P	P	19 44 50.0	-0.3
	baz=320,SNR=21						
S44A	Carbondale	93.82	38	P	P	19 44 50.4	-0.2
	baz=321,SNR=7.0						
U42A	Revenden	93.82	40	P	P	19 44 50.1	-0.5
	baz=319,SNR=16						
R45A	Skylar, Fairfi	93.84	37	P	P	19 44 50.6	0.0
	baz=321						
P47A	Martinsville	93.87	35	P	P	19 44 50.6	-0.2
	baz=323,SNR=6.7						
MIAR	Mount Ida	93.90	43	P	P	19 44 51.2	+0.1
	baz=318,SNR=37						
MIAR	Mount Ida	93.90	43	eP	P	19 44 51.0	-0.1
	comp=Z,174nm,1.1s						
MIAR				LR	LR		
	comp=Z,7µm,22.0s						
MIAR	Mount Ida	93.90	43	eP	P	19 44 51.0	-0.1
MIAR				pmax	pmax		
	comp=Z,174nm,1.1s						
MIAR				MLR	MLR		
	comp=Z,7µm,22.0s						
PBMO	Poplar Bluff	93.92	39	eP	P	19 44 51.5	+0.4
	comp=Z,108nm,1.0s						
BLO	Bloomington	94.00	35	eP	P	19 44 51.7	+0.3
	comp=Z,80nm,1.1s						
BLO	Bloomington	94.00	35	eP	P	19 44 51.7	+0.3
BLO				pmax	pmax		
	comp=Z,80nm,1.1s						
WHAR	Wooly Hollow	94.06	41	eP	P	19 44 51.5	-0.2
	comp=Z,142nm,1.1s						
V42A	Cord	94.15	40	P	P	19 44 51.5	-0.7
	baz=319,SNR=12						
W41B	Gary Mavity, V	94.16	41	P	P	19 44 52.0	-0.2
	baz=319,SNR=23						
W41B	Gary Mavity, V	94.16	41	eP	P	19 44 52.0	-0.2
	comp=Z,88nm,1.2s						
S45A	Carrier Mills	94.17	37	P	P	19 44 52.0	-0.2
	baz=321						
Q47A	Bedord North L	94.23	35	P	P	19 44 52.6	+0.1
	baz=323,SNR=11						
U43A	Rector	94.24	39	P	P	19 44 52.1	-0.4
	baz=320						
R46A	Gibon Southern	94.28	36	P	P	19 44 53.0	+0.3
	baz=322,SNR=5.3						
435B	Jarrell	94.29	48	P	P	19 44 52.7	-0.2
	baz=315						
435B	Jarrell	94.29	48	eP	P	19 44 52.9	0.0
	comp=Z,61nm,1.0s						
LONY	Lake Ozonia	94.35	25	P	P	19 44 52.3	-0.6
	baz=331,SNR=7.7						
LONY	Lake Ozonia	94.35	25	eP	P	19 44 52.9	0.0
	comp=Z,33nm,1.1s						
LONY				LR	LR		
	comp=Z,12µm,20.0s						
X40A	Basin Creek Fa	94.36	42	P	P	19 44 53.0	-0.1
	baz=318,SNR=17						
X40A	Basin Creek Fa	94.36	42	eP	P	19 44 53.5	+0.4
	comp=Z,175nm,1.5s						
Y40A	Okolona	94.46	43	P	P	19 44 53.7	+0.1
	baz=318						
ERPA	Erie	94.47	29	P	P	19 44 52.8	-0.7
	baz=327						
ERPA	Erie	94.47	29	eP	P	19 44 53.1	-0.4
	comp=Z,77nm,0.9s						
W42A	Bald Knob	94.48	41	P	P	19 44 53.4	-0.2
	baz=319						
FRNY	Flat Rock	94.50	24	eP	P	19 44 52.5	-1.0
	comp=Z,52nm,1.6s						
U44A	Portageville	94.51	39	P	P	19 44 53.7	-0.1
	baz=320						
X41A	Kaden, Bauxite	94.53	42	P	P	19 44 53.6	-0.2
	baz=318						
PQI	Presque Isle	94.55	20	eP	P	19 44 53.7	-0.1
	comp=Z,67nm,1.0s						
EPF	Esparros	94.56	332	eP	P	19 44 55.7	+1.7
EPF				pmax	pmax		
	comp=Z,101nm,1.7s						
S46A	Don Dixon Farm	94.59	37	P	P	19 44 53.7	-0.5
	baz=322						
V43A	Jossboro	94.61	40	P	P	19 44 54.4	+0.1
	baz=320						
T45A	Paducah	94.65	38	P	P	19 44 54.3	-0.1
	baz=321						
R47A	Wooly Knot Far	94.69	36	P	P	19 44 54.5	-0.1
	baz=323,SNR=8.6						
ACSO	Alum Creek Sta	94.77	32	P	P	19 44 54.3	-0.6
	baz=325,SNR=12						
ACSO	Alum Creek Sta	94.77	32	eP	P	19 44 54.8	-0.2
	comp=Z,83nm,1.0s						
ACSO				LR	LR		
	comp=Z,9µm,20.0s						
MMNY	Mt. Morris Dam	94.77	28	eP	P	19 44 52.3	-2.6
	comp=Z,72nm,1.2s						
ALLY	Alegheny Colle	94.80	30	eP	P	19 44 55.3	+0.3
	comp=Z,54nm,0.9s						
U44B	Burton Farm, H	94.81	39	P	P	19 44 55.3	+0.1
	baz=321						
WCI	Wyandotte Cave	94.86	36	P	P	19 44 55.3	-0.1
	baz=323						
WCI	Wyandotte Cave	94.86	36	eP	P	19 44 55.3	-0.1
	comp=Z,65nm,1.0s						
WCI	Wyandotte Cave	94.86	36	eP	P	19 44 55.3	-0.1
WCI				pmax	pmax		
	comp=Z,65nm,1.0s						
833A	Chaparral WMA,	94.89	50	P	P	19 44 56.5	+0.8
	baz=314,SNR=6.5						
833A	Chaparral WMA,	94.89	50	eP	P	19 44 56.5	+0.8
	comp=Z,83nm,1.2s						
R48A	Northridge Ran	94.92	35	P	P	19 44 55.6	0.0
	baz=323						
V44A	Blytheville	94.92	39	P	P	19 44 55.6	-0.1
	baz=320						
Y41A	Eaglette Beard	94.93	42	P	P	19 44 55.8	+0.1
	baz=318						
Z40A	Long Farm, Mag	94.95	43	P	P	19 44 55.9	0.0
	baz=319						
X42A	Stuttgart	94.97	41	P	P	19 44 55.2	-0.7
	baz=319						
T46A	Princeton	95.00	37	P	P	19 44 56.1	0.0
	baz=322,SNR=17						
NCB	Newcomb	95.04	25	eP	P	19 44 55.7	-0.4
	comp=Z,32nm,1.1s						
W43A	Forest City	95.06	40	P	P	19 44 55.4	-0.9
	baz=320						
SJPF	Ste Jean	95.08	333	eP	P	19 44 57.3	+1.0
SJPF				pmax	pmax		
	comp=Z,75nm,1.8s						
U45A	Rockin P Farm,	95.11	38	P	P	19 44 56.2	-0.3
	baz=321						
M54A	Oil Creek Stat	95.11	30	P	P	19 44 55.7	-0.8
	baz=328,SNR=7.2						
M54A	Oil Creek Stat	95.11	30	eP	P	19 44 56.5	0.0
	comp=Z,44nm,0.8s						
VT1	Waterbury	95.22	24	eP	P	19 44 56.6	-0.3
	comp=Z,53nm,1.0s						
Z41A	Richland Creek	95.29	43	P	P	19 44 56.2	-1.2
	baz=318						
140A	Cam and Jess,	95.31	44	P	P	19 44 57.3	-0.2
	baz=318						
NATX	Nacogdoches	95.33	45	P	P	19 44 56.9	-0.7
	baz=317						
NATX	Nacogdoches	95.33	45	PFAKE		19 45 10.0	+12
NATX				LR	LR		
	comp=Z,7µm,20.0s						
U46A	Springville	95.39	38	P	P	19 44 57.4	-0.4
	baz=321						
X43A	Marvell	95.40	41	P	P	19 44 57.6	-0.3
	baz=320						
Y42A	Garnett, Star	95.42	42	P	P	19 44 57.8	-0.2
	baz=319						
S48A	Wiedeman Farm,	95.42	36	P	P	19 44 57.1	-0.9
	baz=323,SNR=11						
N54A	Moraine State	95.44	30	P	P	19 44 57.1	-0.9
	baz=327						
T47A	Sharon Grove	95.44	37	P	P	19 44 57.5	-0.5
	baz=322						
PKME	Peaks-Kenny Pk	95.47	21	P	P	19 44 56.9	-1.1
	baz=335,SNR=6.9						
PKME	Peaks-Kenny Pk	95.47	21	eP	P	19 44 58.6	+0.6
PKME				LR	LR		
	comp=Z,10µm,20.0s						
W44A	Shelby Farms P	95.49	40	P	P	19 44 58.0	-0.3
	baz=320						
LBNH	Lisbon	95.57	23	P	P	19 44 57.4	-1.1
	baz=333						
240A	Hunter Patters	95.64	44	P	P	19 44 59.1	+0.1
	baz=318						
T48A	Bowling Green	95.69	36	P	P	19 44 58.6	-0.6
	baz=323						
141A	Papa Simpson,	95.71	43	P	P	19 44 59.0	-0.3
	baz=318						
ACCN	Adirondack Com	95.75	25	eP	P	19 44 59.1	-0.3
	comp=Z,51nm,1.2s						
WVT	Waverly	95.75	38	P	P	19 44 58.4	-1.1
	baz=322						
WVT	Waverly	95.75	38	eP	P	19 44 58.6	-0.9
	comp=Z,28nm,1.0s						
WVT	Waverly	95.75	38	eP	P	19 44 58.6	-0.9
WVT				pmax	pmax		
	comp=Z,28nm,1.0s						
Z42A	Norrel Spur, H	95.75	42	P	P	19 44 59.5	0.0
	baz=319						
U47A	Clarksville	95.78	37	P	P	19 44 59.2	-0.3
	baz=322						
X44A	Crenshaw	95.80	40	P	P	19 44 59.1	-0.7
	baz=320						
W45A	Hickory Valley	95.81	39	P	P	19 44 59.4	-0.3
	baz=321						
Y43A	Makayla and Ka	95.83	41	P	P	19 44 59.1	-0.7
	baz=320						
V46A	Holladay	95.86	38	P	P	19 44 59.2	-0.8
	baz=321,SNR=7.0						
HKT	Hockley	95.94	47	eP	P	19 45 00.1	-0.2
	comp=Z,61nm,1.4s						
HKT	Hockley	95.94	47	eP	P	19 45 00.1	-0.2
HKT				pmax	pmax		
	comp=Z,61nm,1.4s						
BINY	Binghamton	95.95	27	P	P	19 44 59.9	-0.4
	baz=330,SNR=5.6						
BINY	Binghamton	95.95	27	eP	P	19 45 00.7	+0.4
	comp=Z,97nm,1.5s						
BINY				LR	LR		
	comp=Z,9µm,20.0s						
WVL	Waterville	95.99	22	eP	P	19 45 00.6	+0.2
	comp=Z,53nm,1.0s						
U48A	Cassie Pea, Po	96.09	37	P	P	19 44 59.9	-1.1
	baz=322						
T49A	Edmonton	96.11	36	P	P	19 45 00.5	-0.7
	baz=323,SNR=15						
241A	Mo Tay, Goldon	96.14	44	P	P	19 45 01.3	0.0
	baz=318						
V47A	Nunnelly	96.14	38	P	P	19 45 00.9	-0.4
	baz=322,SNR=7.8						
Y44A	Strider, Charl	96.18	41	P	P	19 45 01.3	-0.2
	baz=320						
OXF	Oxford	96.19	40	P	P	19 45 01.5	0.0
	baz=320						
OXF	Oxford	96.19	40	eP	P	19 45 02.0	+0.5
	comp=Z,74nm,1.0s						
OXF	Oxford	96.19	40	eP	P	19 45 02.0	+0.5
OXF				pmax	pmax		
	comp=Z,74nm,1.0s						
Z43A	Armstrong Fami	96.19	42	P	P	19 45 01.3	-0.2
	baz=319						
W46A	Michie	96.24	39	P	P	19 45 00.9	-0.8
	baz=321						
X45A	UM Field Stati	96.26	40	P	P	19 45 00.9	-1.0
	baz=320						
142A	Monroe	96.29	43	P	P	19 45 01.8	-0.2
	baz=319						
TRY	Troy	96.32	25	eP	P	19 45 03.1	+1.2
	comp=Z,37nm,1.1s						
KVTX	Kingsville	96.38	50	PFAKE		19 45 10.0	+7.5
KVTX				LR	LR		
	comp=Z,5µm,19.0s						
U49A	Red Boiling Sp	96.47	36	P	P	19 45 02.4	-0.3
	baz=323,SNR=18						
143A	Socs Landing,	96.48	42	P	P	19 45 02.7	-0.1
	baz=319						
341A	Kurthwood	96.50	44	P	P	19 45 02.9	0.0
	baz=318						
EMMW	East Machias	96.50	20	eP	P	19 45 02.4	-0.3
	comp=Z,53nm,1.1s						
MRIV	Mauritius Mete	96.51	250	eP	P	19 45 03.4	+0.4
	comp=Z,110nm,1.1s						
T50A	Nancy	96.51	35	P	P	19 45 01.9	-1.0
	baz=324,SNR=15						
PLAL	Pickwick Lake	96.52	39	eP	P	19 45 03.8	+0.8
	comp=Z,101nm,1.9s						
242A	Grayson	96.54	43	P	P	19 45 02.7	-0.5
	baz=319						
W47A	Westpoint	96.55	38	P	P	19 45 02.6	-0.6
	baz=322						
V48A	Smith Brothers	96.56	38	P	P	19 45 02.6	-0.6
	baz=322,SNR=7.0						
SSPA	Standing Stone	96.56	29	P	P	19 45 03.1	0.0
	baz=329						
SSPA	Standing Stone	96.56	29	eP	P	19 45 02.9	-0.2
	comp=Z,63nm,1.4s						
ZAIG	Zacatecas	96.57	57	eP	P	19 45 05.1	+1.3
	comp=Z,47nm,1.3s						
Z44A	Pea Ridge, Bel	96.58	41	P	P	19 45 02.9	-0.4
	baz=320						
X46A	Booneville	96.58	39	P	P	19 45 02.8	-0.4
	baz=321						
KEST	Kesra	96.59	322	P	P	19 45 03.2	-0.2
	comp=Z,9.1nm,0.8s,baz=283,slow=1.6,SNR=8.6						
KEST				LR	LR	20 35 09.5	
	comp=Z,13µm,19.0s,baz=328,slow=40						
KEST	Kesra	96.59	322	eP	P	19 45 03.5	+0.1
	comp=Z,68nm,1.2s						
KSPA	Keystone Colle	96.59	27	eP	P	19 45 03.0	-0.2
	comp=Z,65nm,1.4s						
MCWV	Mont Chateau	96.59	31	P	P	19 45 02.6	-0.6
	baz=327						
MCWV	Mont Chateau	96.59	31	eP	P	19 45 03.7	+0.5
	comp=Z,286nm,2.0s						
S51A	Beattyville	96.60	34	P	P	19 45 03.0	-0.3
	baz=324,SNR=5.6						
O56A	Blue Knob Stat	96.60	30	P	P	19 45 03.0	-0.4
	baz=328,SNR=6.8						
O56A	Blue Knob Stat	96.60	30	eP	P	19 45 02.9	-0.4
	comp=Z,33nm,0.9s						
Y45A	Yeager Farm, C	96.61	40	P	P	19 45 02.9	-0.5
	baz=320						
S52A	Salyersville	96.81	34	P	P	19 45 03.5	-0.7
	baz=325						
Z45A	Winona	96.91	41	P	P	19 45 04.6	-0.2
	baz=320						
441A	DeRidder	96.92	45	P	P	19 45 04.3	-0.5
	baz=318						
342A	Flagon Creek P	96.95	44	P	P	19 45 05.7	+0.7
	baz=318						
Y46A	Houston	96.96	40	P	P	19 45 04.5	-0.5
	baz=321						
W48A	Pulaski	96.98	38	P	P	19 45 04.7	-0.4
	baz=322,SNR=9.1						
X47A	Russelville	96.99	39	P	P	19 45 04.0	-1.1
	baz=322						
V49A	McMinnville	97.00	37	P	P	19 45 04.3	-0.9
	baz=323,SNR=8.7						
THTN	Thala	97.05	323	eP	P	19 45 05.4	-0.1
	comp=Z,49nm,1.1s						
243A	Waterproof	97.05	43	P	P	19 45 05.5	0.0
	baz=319						
144A	Alexander Plac	97.08	42	P	P	19 45 05.0	-0.6
	baz=320						
N59A	State Game Lan	97.14	27	P	P	19 45 05.5	-0.2
	baz=330						
N59A	State Game Lan	97.14	27	eP	Pdif	19 45 05.9	+0.1
	comp=Z,46nm,1.1s						
LNIG	Linares	97.21	53	eP	P	19 45 05.8	-0.5
	comp=Z,46nm,1.3s						
HRV	Adam Dziewonsk	97.24	24	P	P	19 45 05.4	-0.7
	baz=334						
T52A	Hallie	97.31	34	P	P	19 45 06.2	-0.4
	baz=325						
W49A	Belvidere	97.33	38	P	P	19 45 06.3	-0.4
	baz=323,SNR=9.9						
VBMS	Vicksburg	97.33	42	P	P	19 45 06.0	-0.7
	baz=320						
145A	Houston Renfro	97.36	42	P	P	19 45 06.3	-0.5
	baz=320						
442A	Mamou	97.39	44	P	Pdif	19 45 07.7	+0.7
	baz=318						
SWET	Sewanee	97.42	37	eP	P	19 45 06.7	-0.5
	comp=Z,36nm,1.0s						
343A	Vidalia	97.42	44	P	Pdif	19 45 07.6	+0.4
	baz=319						
541A	Lake Charles	97.43	45	P	P	19 45 06.3	-0.9
	baz=318						

Z46A	**Louisville**	**97.45**	**41**	P	**P**	**19 45 06.4**	**-0.8**
	baz=321						
V50A	**Pikevile**	**97.47**	**36**	P	**P**	**19 45 06.4**	**-0.9**
	baz=323						
Y47A	**UCPARC, Winfie**	**97.47**	**39**	P	**P**	**19 45 06.6**	**-0.7**
	baz=321						
TZTN	**Tazewell**	**97.51**	**35**	P	**P**	**19 45 07.2**	**-0.3**
	baz=324,SNR=7.4						
TZTN	**Tazewell**	**97.51**	**35**	*e*P	**P**	**19 45 07.5**	**0.0**
	comp=Z,51nm,1.1s						
MVL	**Millersville**	**97.71**	**28**	*e*P	**P**	**19 45 08.1**	**-0.2**
	comp=Z,54nm,1.7s						
443A	**Delano Plantat**	**97.72**	**44**	P	Pdif	19 45 08.6	+0.1
	baz=319						
V51A	**Loudon**	**97.72**	**36**	P	**P**	**19 45 08.1**	**-0.3**
	baz=324,SNR=7.7						
W50A	**Signal Mountai**	**97.74**	**37**	P	**P**	**19 45 07.6**	**-0.9**
	baz=323						
542A	**Morse**	**97.75**	**45**	P	**P**	**19 45 08.3**	**-0.3**
	baz=318						
X49A	**Woodville**	**97.78**	**38**	P	**P**	**19 45 07.4**	**-1.3**
	baz=322						
344A	**Westbrook Farm**	**97.80**	**43**	P	**P**	**19 45 08.3**	**-0.5**
	baz=319						
146A	**Union**	**97.81**	**41**	P	**P**	**19 45 08.2**	**-0.6**
	baz=321						
245A	**Little AP, Sta**	**97.82**	**42**	P	**P**	**19 45 08.8**	**-0.1**
	baz=320						
Y48A	**Jasper**	**97.82**	**39**	P	**P**	**19 45 07.7**	**-1.2**
	baz=322						
Z47A	**Carrollton**	**97.90**	**40**	P	**P**	**19 45 08.6**	**-0.6**
	baz=321						
CPCT	**Cooper Cave**	**97.93**	**36**	*e*P	**P**	**19 45 08.8**	**-0.6**
	comp=Z,46nm,1.2s						
Z48A	**Northport**	**98.04**	**40**	P	**P**	**19 45 09.0**	**-0.8**
	baz=322						
RKT	**Rikitea**	**98.07**	**112**	*e*SKSac	**SKSac**	**19 55 45.7**	**-1.0**
	comp=Z,575nm,28.0s						
RKT				*e*S	**S**	**19 56 33.8**	**-2.3**
	comp=Z,4μm,29.2s						
RKT	**Rikitea**	**98.07**	**112**	*e*PS	PS	19 58 04.4	+1.9
	comp=Z,1μm,35.0s						
RKT	**Rikitea**	**98.07**	**112**	*e*LR	LR	20 17 06.8	
	comp=Z,10μm,25.0s,baz=308						
U53A	**Fall Branch**	**98.11**	**34**	P	**P**	**19 45 09.4**	**-0.8**
	baz=325						
PSUB	**Penn St. - Bra**	**98.12**	**28**	*e*P	**P**	**19 45 08.8**	**-1.3**
	comp=Z,14nm,1.0s						
PBRG	**Braganca**	**98.15**	**336**	*e*P	**P**	**19 45 10.0**	**-0.3**
	comp=Z,47nm,1.4s						
PBRG	**Braganca**	**98.15**	**336**	*e*PP	PP	19 49 14.8	+6.2
X50B	**Fort Payne**	**98.16**	**38**	P	**P**	**19 45 09.4**	**-1.1**
	baz=323						
147A	**Livingston**	**98.20**	**40**	P	**P**	**19 45 10.1**	**-0.6**
	baz=321						
Y49A	**Blount Mountai**	**98.25**	**38**	P	**P**	**19 45 10.2**	**-0.6**
	baz=322						
BLA	**Blacksburg**	**98.39**	**32**	P	**P**	**19 45 10.6**	**-0.8**
	baz=327						
BLA	**Blacksburg**	**98.39**	**32**	*e*P	Pdif	19 45 11.7	+0.2
	comp=Z,49nm,0.8s						
BLA				LR	LR		
	comp=Z,8μm,20.0s						
BLA	**Blacksburg**	**98.39**	**32**	*e*P	Pdif	19 45 11.7	+0.2
BLA				pmax	pmax		
	comp=Z,49nm,0.8s						
BLA				MLR	MLR		
	comp=Z,8μm,20.0s						
X51A	**Calhoun**	**98.47**	**37**	P	**P**	**19 45 10.2**	**-1.6**
	baz=323						
PGAV	**Gavieira, Arco**	**98.50**	**338**	*e*P	Pdif	19 45 12.7	+0.8
	comp=Z,46nm,1.8s						
PGAV	**Gavieira, Arco**	**98.50**	**338**	*e*PP	PP	19 49 17.0	+5.7
PGAV	**Gavieira, Arco**	**98.50**	**338**	*e*LQ	LQ	20 17 42.1	
PGAV				*e*LR	LR	20 24 01.3	
	comp=Z,8μm,18.0s						
247A	**Quitman**	**98.50**	**41**	P	**P**	**19 45 11.3**	**-0.7**
	baz=321						
346A	**Big Creek Wild**	**98.55**	**42**	Pdiff	**P**	**19 45 11.9**	**-0.3**
	baz=320						
445A	**Amite**	**98.56**	**43**	Pdiff	Pdif	19 45 12.4	+0.1
	baz=320						
544A	**White Castle**	**98.56**	**44**	Pdiff	**P**	**19 45 11.3**	**-0.9**
	baz=319						
V53A	**Saluda**	**98.56**	**35**	P	Pdif	19 45 12.3	0.0
	baz=325,SNR=5.9						
Y50A	**Piedmont**	**98.57**	**38**	Pdiff	**P**	**19 45 11.5**	**-0.7**
	baz=323						
LRAL	**Lakeview Retre**	**98.59**	**39**	Pdiff	**P**	**19 45 11.0**	**-1.4**
	baz=322						
148A	**Greensboro**	**98.60**	**40**	Pdiff	**P**	**19 45 10.8**	**-1.6**
	baz=322						
IP04	**Greensprings**	**98.64**	**30**	*e*P	Pdif	19 45 13.2	+0.7
	comp=Z,162nm,2.0s						
PCAB	**Cabril**	**98.65**	**337**	*e*PP	PP	19 49 16.6	+4.2
Z49A	**Columbiana**	**98.71**	**39**	Pdiff	**P**	**19 45 11.7**	**-1.2**
	baz=322						
CVRD	**Centerville Ro**	**98.78**	**30**	*e*P	Pdif	19 45 14.1	+1.0
	comp=Z,32nm,1.1s						
SPRD	**Spring Road, M**	**98.79**	**30**	*e*P	Pdif	19 45 14.3	+1.1
	comp=Z,102nm,1.9s						
W53A	**Cullowhee**	**98.81**	**35**	Pdiff	**P**	**19 45 12.4**	**-1.0**
	baz=325						
MVO	**Moncorvo**	**98.82**	**336**	*e*P	Pdif	19 45 13.5	+0.1
	comp=Z,37nm,1.9s						
MVO	**Moncorvo**	**98.82**	**336**	*e*PP	PP	19 49 13.8	0.0
MVO	**Moncorvo**	**98.82**	**336**	*e*LQ	LQ	20 18 36.2	
MVO				*e*LR	LR	20 24 34.1	
	comp=Z,13μm,20.0s						
CBN	**Corbin Frederi**	**98.84**	**30**	PFAKE		19 45 20.0	+6.6
CBN				LR	LR		
	comp=Z,12μm,20.0s						
POLO	**Lamas de Olo**	**98.88**	**337**	*e*P	Pdif	19 45 13.8	+0.1
	comp=Z,17nm,1.8s						
POLO	**Lamas de Olo**	**98.88**	**337**	*e*PP	PP	19 49 18.3	+4.0
Y51A	**Rockmart**	**98.90**	**38**	Pdiff	**P**	**19 45 12.2**	**-1.6**
	baz=323						
X52A	**Dahlonega**	**98.91**	**36**	Pdiff	**P**	**19 45 13.1**	**-0.7**
	baz=324						
PVRL	**Vila Real**	**98.95**	**337**	*e*P	Pdif	19 45 14.1	+0.2
PVRL	**Vila Real**	**98.95**	**337**	*e*PP	PP	19 49 18.5	+3.8
Z50A	**Ashland**	**98.98**	**38**	Pdiff	**P**	**19 45 12.6**	**-1.5**
	baz=323						
ES19	**SONSECA Array**	**99.04**	**334**	*e*P	**Pdif**	**19 45 13.5**	**-0.8**
347A	**Saraland**	**99.04**	**41**	Pdiff	**Pdif**	**19 45 12.4**	**-2.0**
	baz=321						
149A	**Jones**	**99.04**	**39**	Pdiff	**Pdif**	**19 45 13.0**	**-1.4**
	baz=322						
446A	**Poplarville**	**99.06**	**42**	Pdiff	**Pdif**	**19 45 12.4**	**-2.1**
	baz=320						
BG3	**Lake Jocassee**	**99.06**	**35**	*e*P	**Pdif**	**19 45 14.0**	**-0.5**
	comp=Z,46nm,1.1s						
ESDC	**Sonseca Array**	**99.08**	**334**	P	**Pdif**	**19 45 14.0**	**-0.5**
	comp=Z,1.7nm,0.7s,baz=16,slow=4.5,SNR=14						
ESDC				PKKP	**PKKPbc**	**20 01 40.6**	**+1.0**
	comp=Z,4.2nm,1.3s,baz=213,slow=2.1,SNR=5.0						
ESDC				LR	LR	20 37 45.2	
	comp=Z,9μm,18.1s,baz=25,slow=40						
ESLA	**Sonseca Array**	**99.08**	**334**	*e*P	**Pdif**	**19 45 13.7**	**-0.8**
	comp=Z,18nm,1.2s						
EMHD	**Djebel Mahouad**	**99.24**	**327**	P	**PP**	**19 49 22.7**	**+5.4**
X53A	**Estanollee**	**99.28**	**36**	Pdiff	**Pdif**	**19 45 13.0**	**-2.5**
	baz=324						
Z51A	**Franklin**	**99.31**	**38**	Pdiff	**Pdif**	**19 45 14.1**	**-1.5**
	baz=323						
PAB	**San Pablo**	**99.34**	**334**	*e*P	**Pdif**	**19 45 15.0**	**-0.7**
	comp=Z,28nm,1.6s						
PAB				LR	LR		
	comp=Z,17μm,20.0s						
PAB	**San Pablo**	**99.34**	**334**	*e*P	**Pdif**	**19 45 15.0**	**-0.7**
PAB				pmax	pmax		
	comp=Z,28nm,1.6s						
PAB				MLR	MLR		
	comp=Z,17μm,20.0s						
249A	**Camden**	**99.36**	**40**	Pdiff	**Pdif**	**19 45 13.4**	**-2.4**
	baz=322						
348A	**Jackson**	**99.38**	**41**	Pdiff	**Pdif**	**19 45 13.4**	**-2.5**
	baz=321						
Y52A	**Lilburn**	**99.42**	**37**	Pdiff	**Pdif**	**19 45 13.8**	**-2.3**
	baz=324						
150A	**Eclectic**	**99.44**	**39**	Pdiff	**Pdif**	**19 45 13.5**	**-2.7**
	baz=322						
447A	**Lucedale**	**99.44**	**42**	Pdiff	**Pdif**	**19 45 14.8**	**-1.4**
	baz=321						
PVIS	**Viseu**	**99.51**	**337**	*e*PP	PP	19 49 22.3	+3.3
Y53A	**Monroe**	**99.67**	**37**	Pdiff	**Pdif**	**19 45 14.8**	**-2.3**
	baz=324						
MTE	**Manteigas**	**99.68**	**336**	*e*P	**Pdif**	**19 45 18.1**	**+0.9**
MTE	**Manteigas**	**99.68**	**336**	*e*PP	PP	19 49 26.0	+5.7
MTE	**Manteigas**	**99.68**	**336**	*e*LQ	LQ	20 18 22.4	
MTE				*e*LR	LR	20 25 00.8	
	comp=Z,16μm,18.0s						
MTE	**Manteigas**	**99.68**	**336**	*e*Pdif	**Pdif**	**19 45 16.1**	**-1.1**
	comp=Z,104nm,2.0s						
KMSC	**Kings Mountain**	**99.69**	**34**	Pdiff	**Pdif**	**19 45 14.7**	**-2.5**
	baz=326						
PAULI	**Pauline**	**99.73**	**35**	*e*Pdif	**Pdif**	**19 45 17.0**	**-0.4**
	comp=Z,23nm,1.0s						
448A	**Bay Minette**	**99.77**	**41**	Pdiff	**Pdif**	**19 45 16.1**	**-1.5**
	baz=321						
Z52A	**Williamson**	**99.79**	**38**	Pdiff	**Pdif**	**19 45 15.9**	**-1.9**
	baz=324						
EBNR	**Beni Rached**	**99.79**	**328**	P	**PP**	**19 49 24.4**	**+3.1**
250A	**Grady**	**99.80**	**40**	Pdiff	**Pdif**	**19 45 16.2**	**-1.6**
	baz=322						
349A	**Repton**	**99.81**	**41**	Pdiff	**Pdif**	**19 45 17.4**	**-0.4**
	baz=322						
ECHA	**Ech Chlef**	**99.98**	**328**	P	**PP**	**19 49 26.2**	**+3.5**
HODGE	**Hodges**	**100.00**	**35**	*e*Pdif	**Pdif**	**19 45 19.0**	**+0.4**
BRAL	**Brewton**	**100.02**	**41**	Pdiff	**Pdif**	**19 45 17.1**	**-1.7**
	baz=322						
BRAL	**Brewton**	**100.02**	**41**	PFAKE		19 45 30.0	+11
BRAL				LR	LR		
	comp=Z,7μm,19.0s						
152A	**Waverly Hall**	**100.05**	**38**	Pdiff	**Pdif**	**19 45 17.4**	**-1.5**
	baz=323						
GOGA	**Godfrey**	**100.08**	**37**	Pdiff	**Pdif**	**19 45 16.8**	**-2.2**
	baz=324						
GOGA	**Godfrey**	**100.08**	**37**	PFAKE		19 45 30.0	+11
GOGA				LR	LR		
	comp=Z,7μm,19.0s						
Y54A	**Tignall**	**100.09**	**36**	Pdiff	**Pdif**	**19 45 17.9**	**-1.2**
	baz=325						
Z53A	**Monticello**	**100.14**	**37**	Pdiff	**Pdif**	**19 45 18.7**	**-0.5**
	baz=324						
251A	**Midway**	**100.16**	**39**	Pdiff	**Pdif**	**19 45 17.3**	**-2.0**
	baz=323						
PCBR	**Castelo Branco**	**100.16**	**336**	*e*P	**Pdif**	**19 45 27.3**	**+8.1**
PCBR	**Castelo Branco**	**100.16**	**336**	*e*PP	PP	19 49 26.1	+2.2
350A	**Dozier**	**100.21**	**40**	Pdiff	**Pdif**	**19 45 17.2**	**-2.4**
	baz=322						
EANR	**'Ain N'Sour**	**100.27**	**328**	P	**PP**	**19 49 28.3**	**+3.3**
PCAS	**Casmilo, Conde**	**100.31**	**337**	*e*PP	PP	19 49 27.9	+2.9
PMRV	**Marv??o**	**100.50**	**336**	*e*P	**Pdif**	**19 45 21.0**	**+0.2**
PMRV	**Marv??o**	**100.50**	**336**	*e*PP	PP	19 49 32.4	+5.9
PMRV	**Marv??o**	**100.50**	**336**	*e*LQ	LQ	20 18 45.1	
PMRV				*e*LR	LR	20 25 26.2	
	comp=Z,14μm,18.0s						
153A	**Fort Valley**	**100.51**	**37**	Pdiff	**Pdif**	**19 45 19.7**	**-1.2**
	baz=324						
450A	**Crestview**	**100.56**	**40**	Pdiff	**Pdif**	**19 45 19.8**	**-1.4**
	baz=322						
252A	**Lumpkin**	**100.58**	**38**	Pdiff	**Pdif**	**19 45 19.8**	**-1.4**
	baz=323						
ETRT	**Tiaret**	**100.65**	**328**	P	**PP**	**19 49 35.4**	**+7.4**
PTOM	**Tomar**	**100.67**	**337**	*e*PP	PP	19 49 33.1	+5.4
351A	**Pinckard**	**100.70**	**40**	Pdiff	**Pdif**	**19 45 20.2**	**-1.6**
	baz=323						
253A	**Americus**	**100.84**	**38**	Pdiff	**Pdif**	**19 45 19.8**	**-2.6**
	baz=324						
352A	**Blakely**	**100.89**	**39**	Pdiff	**Pdif**	**19 45 20.9**	**-1.8**
	baz=323						
154A	**Montrose**	**100.90**	**37**	Pdiff	**Pdif**	**19 45 20.6**	**-2.1**
	baz=324						
PESTR	**Estremoz**	**101.08**	**336**	*e*P	**Pdif**	**19 45 25.4**	**+2.0**
PESTR	**Estremoz**	**101.08**	**336**	*e*PP	PP	19 49 36.2	+5.3
PMTG	**Montargil**	**101.11**	**336**	*e*P	**Pdif**	**19 45 24.5**	**+1.1**
PMTG	**Montargil**	**101.11**	**336**	*e*PP	PP	19 49 35.5	+4.5
ALMR	**Almeirim**	**101.14**	**337**	*e*Pdif	**Pdif**	**19 45 24.0**	**+0.4**
ALMR				*e*S	**SKSac**	**19 56 02.3**	**+0.5**
ALMR				AMS	AMS	20 37 36.5	
	comp=Z,13μm,22.7s						
ALMR	**Almeirim**	**101.14**	**337**	*e*PP	PP	19 49 36.8	+5.5
ALMR	**Almeirim**	**101.14**	**337**	*e*P	**Pdif**	**19 45 24.0**	**+0.4**
ALMR				*e*S	**SKSac**	**19 56 02.3**	**+0.5**
CNNC	**Cliffs of the**	**101.15**	**32**	PFAKE		19 45 40.0	+16
CNNC				LR	LR		
	comp=Z,9μm,22.0s						
451A	**Vernon**	**101.15**	**40**	Pdiff	**Pdif**	**19 45 22.0**	**-1.8**
	baz=322						
155A	**Kite**	**101.21**	**37**	Pdiff	**Pdif**	**19 45 22.3**	**-1.7**
	baz=325						
452A	**Marianna**	**101.26**	**39**	Pdiff	**Pdif**	**19 45 22.6**	**-1.6**
	baz=323						
254A	**Abbeville**	**101.35**	**37**	Pdiff	**Pdif**	**19 45 22.6**	**-2.1**
	baz=324						
353A	**Camilla**	**101.36**	**38**	Pdiff	**Pdif**	**19 45 22.8**	**-1.9**
	baz=324						
PBAR	**Barrancos**	**101.51**	**335**	*e*PP	PP	19 49 35.6	+1.5
PMAFR	**Mafra**	**101.56**	**337**	*e*PP	PP	19 49 49.3	+15
LIS	**Lisbon**	**101.73**	**337**	*e*Pdif	**Pdif**	**19 45 26.7**	**+0.5**
LIS				*e*PP	**PP**	**19 49 37.3**	**+1.6**
LIS				AMS	AMS	20 30 26.4	
	comp=E,15μm,21.1s						
LIS	**Lisbon**	**101.73**	**337**	*e*P	**Pdif**	**19 45 26.7**	**+0.5**
LIS				*e*		19 49 37.3	
PBEJ	**Beja**	**101.93**	**336**	*e*PP	PP	19 49 42.2	+4.9
PNCL	**Nicolau / Gran**	**102.07**	**336**	*e*PP	PP	19 49 37.6	-0.7
MESJ	**Messejana**	**102.22**	**336**	*e*Pdif	**Pdif**	**19 45 28.9**	**+0.4**
MESJ				*e*PP	**PP**	**19 49 40.9**	**+1.5**
MESJ				*e*S	**SKSac**	**19 56 07.5**	**+0.5**
MESJ				AMS	AMS	20 39 39.8	
	comp=Z,11μm,19.6s						
MESJ	**Messejana**	**102.22**	**336**	*e*P	**Pdif**	**19 45 40.5**	**+12**
MESJ	**Messejana**	**102.22**	**336**	*e*PP	PP	19 49 44.9	+5.5
MESJ	**Messejana**	**102.22**	**336**	*e*P	**Pdif**	**19 45 28.8**	**+0.4**
MESJ				*e*		19 49 40.8	
MESJ				*e*S	**SKSac**	**19 56 07.4**	**+0.5**
PCVE	**Castro Verde**	**102.34**	**336**	*e*PP	PP	19 49 47.1	+6.7
PVAQ	**Vaqueiros**	**102.44**	**335**	*e*PP	PP	19 49 43.4	+2.3
PVAQ	**Vaqueiros**	**102.44**	**335**	*e*LQ	LQ	20 19 26.8	
PVAQ				*e*LR	LR	20 27 00.3	
	comp=Z,16μm,18.0s						
554A	**Perry**	**102.65**	**39**	Pdiff	**Pdif**	**19 45 29.6**	**-0.9**
	baz=324						
PTEO	**Sao Teotonio**	**102.65**	**336**	*e*PP	PP	19 49 47.7	+5.0
PBDV	**Barranco-do-Ve**	**102.66**	**335**	*e*PP	PP	19 49 42.5	-0.3
MORF	**Marmelete**	**102.84**	**336**	*e*Pdif	**Pdif**	**19 45 31.7**	**+0.4**
MORF				*e*PP	**PP**	**19 49 45.5**	**+1.3**
MORF				*e*S	**SKSac**	**19 56 10.5**	**+0.3**
MORF				AMS	AMS	20 35 58.2	
	comp=Z,11μm,19.8s						
MORF	**Marmelete**	**102.84**	**336**	*e*PP	PP	19 49 46.8	+2.6
MORF	**Marmelete**	**102.84**	**336**	*e*P	**Pdif**	**19 45 31.7**	**+0.4**
MORF				*e*		19 49 45.5	
MORF				*e*S	**SKSac**	**19 56 10.4**	**+0.3**
PFVI	**Vila Bisbo**	**103.06**	**336**	*e*PP	PP	19 49 53.3	+7.6
CASY	**Casey**	**103.67**	**192**	PFAKE		19 45 40.0	+6.1
CASY				LR	LR		
	comp=Z,523nm,20.0s						
ABPO	**Ambohimpanom**	**103.87**	**256**	PFAKE		19 45 50.0	+14
ABPO				LR	LR		
	comp=Z,3μm,22.0s						
CMLA	**Cha da Macela**	**106.60**	**349**	PFAKE		19 50 10.0	
CMLA				LR	LR		
	comp=Z,5μm,21.0s						
MBAR	**Mbarara**	**107.11**	**282**	PFAKE		19 50 10.0	
MBAR				LR	LR		
	comp=Z,786nm,20.0s						
TEIG	**Tepich**	**107.70**	**49**	PFAKE		19 50 10.0	
TEIG				LR	LR		
	comp=Z,12nm,21.0s						
BBSR	**BB Station**	**108.70**	**23**	PFAKE		19 50 10.0	
BBSR				LR	LR		
	comp=Z,5μm,20.0s						
PMOZ	**Porto Moniz, M**	**109.60**	**341**	*e*LR	LR	20 24 27.8	
	comp=Z,5μm,20.0s						
VNDA	**Vanda**	**112.94**	**175**	PKiKP	**PKiKP**	**19 50 09.1**	**0.0**
	comp=Z,5.6nm,0.9s,baz=301,slow=3.9,SNR=9.9						
VNDA	**Vanda**	**112.94**	**175**	*e*PKiKP	**PKiKP**	**19 50 09.3**	**+0.3**
SBA	**Scott Base**	**113.62**	**174**	PFAKE		19 50 20.0	
SBA				LR	LR		
	comp=Z,2μm,21.0s						
MTDJ	**Mount Denham**	**115.51**	**41**	PFAKE		19 50 30.0	+14
MTDJ				LR	LR		
	comp=Z,5μm,21.0s						
GRTK	**Grand Turk**	**115.94**	**34**	PFAKE		19 50 30.0	+13
GRTK				LR	LR		
	comp=Z,7μm,20.0s						
JTS	**JuntasAbangare**	**117.24**	**53**	PKP	**PKPdf**	**19 50 19.6**	**+0.4**
	comp=Z,4.5nm,0.5s,baz=302,slow=15,SNR=4.6						
JTS	**JuntasAbangare**	**117.24**	**53**	PFAKE		19 50 30.0	+11
JTS				LR	LR		
	comp=Z,3μm,19.0s						
LSZ	**Lusaka**	**117.41**	**270**	PKKPbc	PKKPbc	20 00 44.3	+2.9
	comp=Z,2.4nm,0.8s,baz=193,slow=14,SNR=2.7						
LSZ	**Lusaka**	**117.41**	**270**	*e*PKPdf	**PKPdf**	**19 50 19.3**	**-0.2**
LSZ				*e*PKPdf	**PKiKP**	**19 50 19.7**	**+0.1**
LSZ				*e*PKKPbc	**PKKPab**	**20 00 43.9**	**-1.8**
LSZ				LR	LR		
	comp=Z,7μm,21.0s						
LSZ	**Lusaka**	**117.41**	**270**	*e*PKIKP	**PKPdf**	**19 50 19.3**	**-0.2**
LSZ				MLR	MLR		
	comp=Z,7μm,21.0s						
MAW	**Mawson**	**117.64**	**205**	PKP	**PKPdf**	**19 50 18.5**	**+0.3**
	comp=Z,17nm,0.6s,baz=88,slow=3.9,SNR=45						
MAW				PP	**PP**	**19 51 33.6**	**+2.0**
	comp=Z,28nm,1.0s,baz=72,slow=10,SNR=7.3						
MAW				PKKPbc	**PKKPab**	**20 00 41.0**	**0.0**
	comp=Z,4.7nm,0.9s,baz=256,slow=6.1,SNR=6.3						
MAW	**Mawson**	**117.64**	**205**	*e*PKPdf	**PKPdf**	**19 50 18.5**	**+0.3**
MAW				*e*PP	**PP**	**19 51 32.3**	**+0.6**
MAW				*e*PKKPbc	**PKKPbc**	**20 00 41.9**	**+0.4**
MAW	**Mawson**	**117.64**	**205**	*e*PKIKP	**PKPdf**	**19 50 18.5**	**+0.3**
MAW				*e*		19 51 32.3	
SDDR	**Presa de Saban**	**118.06**	**35**	PFAKE		19 50 30.0	+9.3
SDDR				LR	LR		
	comp=Z,11μm,20.0s						
TOA1	**Torodi Ar. Sit**	**118.69**	**314**	*e*PKPdf	**PKPdf**	**19 50 21.1**	**-0.9**
TOA1				*e*PP	**PP**	**19 51 42.4**	**+3.4**
TOA1				*e*PKKPbc	**PKKPbc**	**20 00 37.2**	**+0.4**
TOA0	**Torodi Ar. Sit**	**118.69**	**314**	*e*PKPdf	**PKPdf**	**19 50 20.6**	**-1.3**
TORD	**Torodi Ar. Bea**	**118.69**	**314**	PKP	**PKPdf**	**19 50 21.1**	**-0.9**
	comp=Z,15nm,0.6s,baz=19,slow=1.9,SNR=84						
TORD				PP	**PP**	**19 51 42.4**	**+3.4**
	comp=Z,13nm,1.0s,baz=50,slow=0.3,SNR=4.5						
TORD				PKKPbc	**PKKPbc**	**20 00 37.2**	**+0.4**
	comp=Z,9.4nm,1.1s,baz=212,slow=2.4,SNR=13						
RPN	**Rapa Nui**	**120.11**	**104**	PFAKE		19 50 40.0	+16
RPN				LR	LR		
	comp=Z,3μm,20.0s						
KOWA	**Kowa**	**120.79**	**320**	PKP	**PKPdf**	**19 50 25.2**	**-0.8**
	comp=Z,22nm,0.5s,baz=49,slow=1.8,SNR=45						
KOWA				PKKPbc	**PKKPbc**	**20 00 30.5**	**+1.3**
	comp=Z,1.4nm,0.5s,baz=209,slow=3.9,SNR=4.4						
KOWA	**Kowa**	**120.79**	**320**	*e*PKPdf	**PKPdf**	**19 50 25.2**	**-0.8**
KOWA				*e*PKPdf	**PKiKP**	**19 50 25.5**	**-0.6**
KOWA				*e*PKPbc	**PKKPbc**	**20 00 30.5**	**+1.3**
SJG	**San Juan**	**121.12**	**31**	PKP	**PKPdf**	**19 50 26.9**	**+0.4**
	comp=Z,5.0nm,0.3s,baz=307,slow=5.1,SNR=3.6						
SJG	**San Juan**	**121.12**	**31**	*e*PKPdf	**PKPdf**	**19 50 26.9**	**+0.4**
SJG				LR	LR		
	comp=Z,4μm,21.0s						
SJG	**San Juan**	**121.12**	**31**	*e*PKIKP	**PKPdf**	**19 50 26.9**	**+0.4**
SJG				MLR	MLR		
	comp=Z,4μm,21.0s						
PAYG	**Puerto Ayora**	**121.14**	**66**	PFAKE		19 50 40.0	+13
PAYG				LR	LR		
	comp=Z,4μm,20.0s						
BCIP	**Isla Barro Col**	**121.37**	**50**	PFAKE		19 50 40.0	+13
BCIP				LR	LR		
	comp=Z,3μm,19.0s						
SMRT	**St. Maarten**	**122.41**	**28**	*e*PKPdf	**PKPdf**	**19 50 28.3**	**-0.8**
ANWB	**Willy Bob**	**123.24**	**27**	PFAKE		19 50 40.0	+9.4
ANWB				LR	LR		
	comp=Z,4μm,20.0s						
MOTC	**Monteria, Cord**	**124.21**	**46**	*e*P	**PKPdf**	**19 50 35.8**	**+3.2**
LBTB	**Lobatse**	**124.26**	**262**	PKP	**PKPdf**	**19 50 32.6**	**+0.1**
	comp=Z,34nm,0.7s,baz=112,slow=1.9,SNR=33						
LBTB	**Lobatse**	**124.26**	**262**	*e*PKPdf	**PKPdf**	**19 50 32.2**	**-0.2**
CODC	**Agust`›n Codaz**	**124.55**	**43**	*e*P	**PKPdf**	**19 50 33.3**	**+0.1**
QSPA	**South Pole Qui**	**124.72**	**180**	PKP	**PKPdf**	**19 50 31.7**	**-0.3**
	comp=Z,90nm,1.0s,baz=314,slow=1.7,SNR=54						
QSPA	**South Pole Qui**	**124.72**	**180**	*e*PKPdf	**PKPdf**	**19 50 31.2**	**-0.8**
QSPA				*e*PP	**PP**	**19 52 20.6**	**+0.5**
QSPA				LR	LR		
	comp=Z,4μm,19.0s						
ZARC	**Zaragoza, Cauc**	**125.71**	**46**	*e*P	**PKPdf**	**19 50 34.3**	**-1.2**
OCAC	**Ocana**	**126.00**	**44**	*e*P	**PKPdf**	**19 50 37.6**	**+1.3**
BOSA	**Boshof**	**126.06**	**258**	PKP	**PKPdf**	**19 50 35.4**	**-0.5**
	comp=Z,17nm,0.7s,baz=104,slow=1.8,SNR=27						
BOSA	**Boshof**	**126.06**	**258**	*e*PKPdf	**PKPdf**	**19 50 34.2**	**-1.7**
BOSA				*e*PKPdf	**PKPdf**	**19 50 35.4**	**-0.5**
BOSA	**Boshof**	**126.06**	**258**	*e*PKIKP	**PKPdf**	**19 50 34.2**	**-1.7**
PCM	**Pelee Case Pet**	**126.07**	**27**	*e*P	**PKPdf**	**19 50 38.4**	**+2.2**
CXM	**Morne La Croix**	**126.09**	**27**	*e*P	**PKPdf**	**19 50 37.9**	**+1.5**
**BAMF

comp=Z,7.0nm,0.7s,baz=186,slow=7.4,SNR=24
SNAA Sanae 138.75 196 *e*PKPpre PKPpre 19 50 46.0
VNA2 Neumayer--Watz 140.31 196 PKP PKPpre 19 50 52.0
slow=2.2
VNA3 Neumayer Olymp 140.55 194 PKP PKPpre 19 50 53.2
PTGA Pitinga 140.58 35 PKhKP PKPpre 19 50 58.3
comp=Z,19nm,0.8s,baz=351,slow=3.2,SNR=18
PTGA Pitinga 140.58 35 *e*PKPpre PKPpre 19 50 58.3
PTGA LR LR
comp=Z,13μm,21.0s
VNA1 Neumayer--Stat 140.71 195 PKP PKPpre 19 50 55.1
SHEL Horse Pasture 144.95 294 *e*PKPdf PKPbc 19 51 10.4 +0.1
SHEL LR LR
comp=Z,2μm,20.0s
SHEL Horse Pasture 144.95 294 *e*PKIKP PKPbc 19 51 10.4 +0.2
SHEL MLR MLR
comp=Z,2μm,20.0s
ASCN Ascension 145.01 315 *e*PKPdf **PKPab 19 51 10.8 +0.3**
ASCN LR LR
comp=Z,4μm,21.0s
SAML Samuel 145.76 47 *e*PKPdf **PKPdf 19 51 11.9 -0.5**
SAML LR LR
comp=Z,3μm,20.0s
PMSA Palmer Station 146.48 161 PFAKE 19 51 20.0 +5.6
PMSA LR LR
comp=Z,4μm,21.0s
PB12 IPOC Station P 147.59 68⇑ *i*P **PKPdf 19 51 14.7 -0.8**
LPAZ La Paz 147.78 62 PKPbc **PKPdf 19 51 17.8 +1.2**
comp=Z,40nm,1.0s,baz=350,slow=5.1,SNR=46
LPAZ La Paz 147.78 62 *e*PKPdf **PKPdf 19 51 17.0 +0.5**
LPAZ La Paz 147.78 62⇓ *i*P **PKPdf 19 51 17.1 +0.5**
PB16 IPOC Station P 148.05 67⇓ *i*P **PKPdf 19 51 16.1 -0.8**
PSGCX **Pisagua 148.32 69**⇑ *i*P **PKPbc 19 51 18.9 -1.2**
MNMC Minye Minye 148.46 68 *e*PKPdf **PKPdf 19 51 17.8 +0.7**
MNMCX **Minye Minye 148.46 68**⇓ *i*P **PKPdf 19 51 17.9 +0.7**
PB08 IPOC Station P 149.38 69⇑ *i*P **PKPbc 19 51 21.2 -2.0**
PB01 IPOC Station P 149.63 71 *e*PKPdf **PKPdf 19 51 18.4 -0.4**
PB01 IPOC Station P 149.63 71⇑ *i*P **PKPbc 19 51 25.5 +2.1**
PB07 IPOC Station P 149.69 72⇑ *i*P **PKPdf 19 51 17.7 -1.2**
PB04 IPOC Station P 149.81 74 *e*PKPbc **PKPbc 19 51 23.8 -0.1**
PB04 IPOC Station P 149.81 74⇑ *i*P **PKPdf 19 51 20.5 +1.4**
PB10 IPOC Station P 150.09 76 *e*PKPdf **PKPdf 19 51 19.9 +0.6**
PB10 *e*PKPbc **PKPbc 19 51 24.7 +0.4**
PB10 IPOC Station P 150.09 76 *e*P **PKPdf 19 51 21.7 +2.4**
PB09 IPOC Station P 150.24 72⇓ *i*P **PKPbc 19 51 23.1 -1.8**
PB09 ⇓ *i*P **PKiKP 19 51 23.4 -2.3**
PB06 IPOC Station P 150.46 74 *e*P **PKPdf 19 51 20.0 -0.1**
PB14 IPOC Station P 150.74 78 *e*P **PKPbc 19 51 23.9 -2.3**
PB15 IPOC Station P 150.79 75 *e*P **PKPbc 19 51 23.9 -2.3**
RCBR Riachuelo 150.88 354 *e*PKPdf **PKPdf 19 51 21.5 +0.6**
RCBR *e*PKPbc **PKPbc 19 51 26.7 +0.2**
RCBR LR LR
comp=Z,26μm,21.0s
LCO Las Campanas 152.30 87 PFAKE 19 51 30.0 +0.3
LCO LR LR
comp=Z,3μm,20.0s
COCH Cobquecura 152.34 102 *e*P **PKPbc 19 51 29.6 +0.5**
SIV San Ignacio 152.46 52 PKP **PKPdf 19 51 23.6 +0.4**
comp=Z,34nm,1.0s,baz=341,slow=0.8,SNR=64
ROC1 El Roble 153.20 95 *e*PKPdf **PKPdf 19 51 24.6 +0.5**
ROC1 *e*PKPbc **pPKPdf 19 51 31.2 0.0**
ROC1 *e*PKPab **PKPab 19 51 42.2 -1.2**
PEL Peldehue 153.51 95 *e*P **PKPbc 19 51 32.3 +0.3**
CLCH Cerro Calan 153.69 96 *e*P **PKPbc 19 51 31.8 -0.5**
AROD Rodeo 153.70 88 *e*P **PKPdf 19 51 23.5 -1.4**
HJA Humahuaca 153.98 70 *e*P **PKPdf 19 51 24.2 -1.4**
ACDV Cuesta del Vie 153.99 88 *e*P **PKPdf 19 51 24.0 -1.2**
LMEL Las Melosas 154.05 97 *e*P **PKPbc 19 51 31.4 -1.8**
VCA Vinchina 154.25 84 *e*P **PKPdf 19 51 24.0 -1.6**
AGUA GUANDACOL 154.28 86 *e*P **PKPdf 19 51 24.0 -1.5**
PLCA Paso Flores 154.30 112 PKPbc **PKPbc 19 51 29.8 -3.6**
comp=Z,7.9nm,0.9s,baz=224,slow=9.3,SNR=5.2
PLCA Paso Flores 154.30 112 *e*PKPdf **PKPdf 19 51 25.5 +0.3**
PLCA *e*PKPbc **sPKPdf 19 51 34.8 +0.1**
PLCA *e*PKPab **PKPab 19 51 47.1 -0.4**
PLCA Paso Flores 154.30 112 *e*PKIKP **PKPdf 19 51 25.5 +0.3**
PLCA *e* 19 51 34.8
PLCA *e* 19 51 47.2
RTLS Leoncito 154.32 92 *e*P **PKPdf 19 51 24.9 -0.8**
AUSP Uspallata 154.35 93 *e*P **PKPdf 19 51 24.2 -1.5**
AMOG MOGNA 154.74 89 *e*P **PKPdf 19 51 24.7 -1.4**
ARCO CERRO ARCO 154.88 94 *e*P **PKPdf 19 51 24.5 -1.9**
ASAL Salagasta 154.90 93 *e*P **PKPdf 19 51 25.1 -1.1**
RTCV Cerro Valdivia 154.96 91 *e*P **PKPdf 19 51 24.9 -1.4**
FSA Cafayete 154.97 77 *e*P **PKPdf 19 51 25.6 -1.0**
AAGR Agrelo 155.02 94 *e*P **PKPdf 19 51 25.9 -0.6**
CYA Choya 156.10 82 *e*P **PKPdf 19 51 26.6 -1.4**
ACAN Cantantal 156.17 92 *e*P **PKPdf 19 51 26.8 -1.1**
APLL PUNTA DE LOS L 156.19 87 *e*P **PKPdf 19 51 26.6 -1.4**
EFI East Falkland 158.28 146 PFAKE 19 51 40.0 +10
EFI LR LR
comp=Z,5μm,22.0s
HOPE Hope Point 160.63 184 PFAKE 19 51 40.0 +7.5
HOPE LR LR
comp=Z,4μm,22.0s
TRQA Tornquist 161.06 106 *e*PKPdf **PKPdf 19 51 33.3 -0.3**
TRQA *e*PKPab **PKPab 19 52 17.2 +0.4**
TRQA LR LR
comp=Z,6μm,21.0s
TRQA Tornquist 161.06 106 PKIKP **PKPdf 19 51 32.9 -0.7**
CPUP Villa Florida 161.84 67 PKP **PKPdf 19 51 33.9 -0.8**
comp=Z,10nm,1.0s,baz=358,slow=2.0,SNR=11
CPUP PKPab **PKPab 19 52 20.5 +0.1**
comp=Z,15nm,1.1s,baz=338,slow=5.6,SNR=5.4
CPUP Villa Florida 161.84 67 *e*PKPdf **PKPdf 19 51 34.5 -0.2**
CPUP *e*PKPab **PKPab 19 52 19.9 -0.5**
SPB Sao Paulo 166.35 36 *e*PKPdf **PKPdf 19 51 39.4 +0.5**
SPB *e*PKPab **PKPab 19 52 37.5 -2.6**

ISCJB ***05*** *19:37:55.6±0.6, 33°.11N±0°.02×35°.74E±0°.06, h15km±3km, Error ellipse: s-maj=8.9km s-min=3.3km az=12.5*
CSEM ***05*** *19:37:55.5, 33°.09N×35°.77E, h18km, ML2.7*
GRAL ***05*** *19:37:55.5±0.3, 33°.09N×35°.77E, h18km±3km, MD2.7*
GII ***05*** *19:37:56.4±0.0, 33°.06N×35°.68E, h6km, MD1.2/3*
ISC 05 19:37:55.5±1.1, 33°.14N±0°.03×35°.74E±0°.06, h23km±6km, n20, σ0°.40/31, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSDI	**Kefar Szold**	**0.09**	**307**	Pg	**Pb**	**19 37 59.5**	**-0.2**
KSDI				Sg	**Sb**	**19 38 02.6**	**0.0**
KSHT	**Keshet**	**0.17**	**160**	Pg	**Pb**	**19 38 00.6**	**+0.1**
SHBL	**Chebaa**	**0.21**	**360**	*e*P	**Pb**	**19 38 01.1**	**-0.1**
SHBL				*e*S	**Sb**	**19 38 05.2**	**+0.1**
SHBL	**Chebaa**	**0.21**	**360**	*e*P	**Pb**	**19 38 01.1**	**-0.1**
SHBL				*e*S	**Sb**	**19 38 05.2**	**+0.1**
MMA0B	**Mount Meron ar**	**0.31**	**247**	Pg	**Pb**	**19 38 02.3**	**-0.3**
RCY	**Rachaya**	**0.37**	**12**	*e*P	**Pb**	**19 38 03.5**	**0.0**
RCY				*e*S	**Sb**	**19 38 09.2**	**+0.3**
QRWL	**Qaraoun**	**0.41**	**353**	*e*P	**Pb**	**19 38 04.2**	**0.0**
QRWL				*e*S	**Sb**	**19 38 10.6**	**+0.5**
QRWL	**Qaraoun**	**0.41**	**353**	*e*P	**Pb**	**19 38 04.2**	**0.0**
QRWL				*e*S	**Sb**	**19 38 10.6**	**+0.5**
HNTI	**Hanita**	**0.48**	**264**	Sg	**Sb**	**19 38 12.8**	**+0.8**
DQRL	**Deir Qamar**	**0.58**	**346**	*e*P	**Pb**	**19 38 07.0**	**-0.1**
DQRL	**Deir Qamar**	**0.58**	**346**	*e*P	**Pb**	**19 38 07.1**	**-0.1**
BLGI	**Bet Lehem HaGe**	**0.62**	**229**	Pg	**Pb**	**19 38 07.3**	**-0.3**
MMLI	**Mount Malkishu**	**0.75**	**201**	Pg	**Pb**	**19 38 09.6**	**-0.3**
MMLI				Sg	**Sb**	**19 38 20.2**	**+0.5**
BHL	**Bhannes**	**0.77**	**354**	*e*P	**Pb**	**19 38 09.9**	**-0.3**
BHL	**Bhannes**	**0.77**	**354**	*e*P	**Pb**	**19 38 09.9**	**-0.3**
OFRI	**'Ofer**	**0.82**	**231**	Pg	**Pb**	**19 38 10.9**	**-0.2**
OFRI				Sg	**Sn**	**19 38 22.4**	**-0.7**
HMDT	**Nahal Hemdat**	**0.90**	**192**	Pg	**Pb**	**19 38 12.0**	**-0.4**
HMDT				Sg	**Sn**	**19 38 24.6**	**-0.4**
SLTI	**Sal'it**	**1.07**	**214**	Pg	**Pn**	**19 38 15.0**	**-0.1**
SLTI				Sg	**Sn**	**19 38 29.9**	**+0.6**
DSI	**Dead Sea**	**1.59**	**191**	Pn	**Pb**	**19 38 24.1**	**-0.1**
DSI				Sn	**Sb**	**19 38 44.2**	**+0.3**
AMAZ	**Amatzia**	**1.75**	**204**	Sn	**Sb**	**19 38 49.3**	**+0.9**

CSEM ***05*** *19:42:26.6±0.1, 39°.11N×29°.14E, h8km, ML3.3, Error ellipse: s-maj=1.7km s-min=1.5km az=146.0*
DDA ***05*** *19:42:26.3, 39°.10N×29°.14E, h7km, Ml3.4*
ISK 05 19:42:26.2, 39°.12N×29°.13E, h6km, ML3.3/19, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMAA	**Simav-Kutahya**	**0.12**	**259**	PG	Pg	19 42 29.5	+0.7
SMAA				SG	Sg	19 42 31.9	+1.3
SMAA	**Simav-Kutahya**	**0.12**	**259**	*e*Pg	Pg	19 42 29.5	+0.7
SMAA				*e*Sg	Sg	19 42 31.9	+1.3
SHAP	**Saphane-Kutahy**	**0.12**	**145**	PG	Pg	19 42 29.4	+0.6
SHAP				SG	Sg	19 42 31.3	+0.7
SHAP	**Saphane-Kutahy**	**0.12**	**145**	*e*Pg	Pg	19 42 29.4	+0.6
SHAP				*e*Sg	Sg	19 42 31.3	+0.7
SIMA	**Simav-Kutahya**	**0.12**	**251**	PG	Pg	19 42 29.4	+0.5
SIMA				SG	Sg	19 42 31.4	+0.7
SIMA	**Simav-Kutahya**	**0.12**	**251**	*e*Pg	Pg	19 42 29.4	+0.5
SIMA				*e*Sg	Sg	19 42 31.4	+0.7
GEDZ	**Gediz**	**0.23**	**110**	PG	Pg	19 42 31.7	+0.9
GEDZ				SG	Sg	19 42 35.3	+1.4
GEDZ	**Gediz**	**0.23**	**110**	*e*Pg	Pg	19 42 31.7	+0.9
GEDZ				*e*Sg	Sg	19 42 35.3	+1.4
DEMI	**Demirci**	**0.33**	**256**	*i* P	Pg	19 42 33.3	+0.6
DEMI				*i* S	Sg	19 42 37.7	+0.5
DEMI	**Demirci**	**0.33**	**256**	P	Pg	19 42 33.3	+0.6
DEMI				S	Sg	19 42 37.7	+0.6
TVSB	**Tavsanli**	**0.41**	**38**	PG	Pg	19 42 34.1	-0.2
TVSB	**Tavsanli**	**0.41**	**38**	*e*Pg	Pg	19 42 34.1	-0.2
DST	**Dursunbey**	**0.62**	**321**	PG	Pg	19 42 38.5	+0.3
DST	**Dursunbey**	**0.62**	**321**	*e*Pg	Pg	19 42 38.5	+0.3
DURS	**Dursunbey**	**0.70**	**313**	*i* P	Pb	19 42 40.2	-0.6
DURS				*i* S	Sg	19 42 49.4	+0.7
DURS	**Dursunbey**	**0.70**	**313**	P	Pg	19 42 40.2	+0.5
DURS				S	Sg	19 42 49.4	+0.6
KULA	**Kula-Manisa**	**0.71**	**211**	PG	Pg	19 42 39.9	0.0
KULA	**Kula-Manisa**	**0.71**	**211**	*e*Pg	Pg	19 42 39.9	0.0
KUTH	**Kutahya**	**0.74**	**68**	PG	Pb	19 42 41.1	-0.5
KUTH	**Kutahya**	**0.74**	**68**	*e*Pg	Pb	19 42 41.1	-0.5
MANT	**Manisa**	**0.77**	**216**	*i* P	Pg	19 42 41.0	-0.1
MANT				*i* S	Sg	19 42 50.8	-0.4
MANT	**Manisa**	**0.77**	**216**	P	Pg	19 42 41.0	-0.1
MANT				S	Sg	19 42 50.8	-0.4
KHAL	**Karahalli**	**0.80**	**159**	*i* P	Pg	19 42 40.9	-0.7
KHAL				*i* S	Sg	19 42 50.8	-1.3
KHL	**Karahalli**	**0.85**	**159**	PG	Pg	19 42 42.8	+0.2
KHL	**Karahalli**	**0.85**	**159**	*e*Pg	Pg	19 42 42.8	+0.2
ORLT	**Orhaneli**	**0.94**	**349**	PG	Pb	19 42 44.6	-0.3
ORLT	**Orhaneli**	**0.94**	**349**	*e*Pg	Pb	19 42 44.6	-0.3
AUBOZ	**BOZOYUK**	**1.05**	**41**	PG	Pb	19 42 46.9	+0.1
AUBOZ	**BOZOYUK**	**1.05**	**41**	*e*Pg	Pb	19 42 46.9	+0.1
AKHS	**Akhisar**	**1.05**	**257**	*i* P	Pb	19 42 46.9	0.0
AKHS	**Akhisar**	**1.05**	**257**	P	Pb	19 42 46.9	+0.1
AKS	**Akhisar**	**1.06**	**257**	PG	Pb	19 42 47.1	+0.2
AKS	**Akhisar**	**1.06**	**257**	*e*Pg	Pb	19 42 47.1	+0.2
AUKUT	**KUTAHYA**	**1.08**	**39**	*i* P	Pg	19 42 41.1	-5.8
AUKUT				*i* S	Sg	19 42 51.5	-9.4
BALB	**Balikesir**	**1.10**	**298**	PN	Pn	19 42 48.1	0.0
BALB	**Balikesir**	**1.10**	**298**	*e*Pn	Pn	19 42 48.1	0.0
STEP	**BALIKESIR_Sava**	**1.13**	**283**	*i* P	Pn	19 42 48.9	+0.4
STEP				*i* S	Sn	19 43 05.2	+0.9
STEP	**BALIKESIR_Sava**	**1.13**	**283**	P	Pn	19 42 48.8	+0.3
STEP				S	Sn	19 43 05.2	+0.9
CAVI	**Cavuskoy**	**1.21**	**27**	PN	Pn	19 42 49.7	+0.1
CAVI	**Cavuskoy**	**1.21**	**27**	*e*Pn	Pn	19 42 49.7	+0.1
IZI	**Iznik**	**1.24**	**12**	PN	Pn	19 42 50.3	+0.2
IZI	**Iznik**	**1.24**	**12**	*e*Pn	Pn	19 42 50.3	+0.2
MDNY	**Mudanya-Bursa**	**1.26**	**351**	PN	Pg	19 42 50.7	+0.3
MDNY	**Mudanya-Bursa**	**1.26**	**351**	*e*Pn	Pg	19 42 50.7	+0.3
BORA	**Eskisehir**	**1.27**	**53**	PN	Pg	19 42 50.7	+0.1
BORA	**Eskisehir**	**1.27**	**53**	*e*Pn	Pg	19 42 50.7	+0.1
KCTX	**Karacabey (Bur**	**1.29**	**333**	PN	Pg	19 42 51.3	+0.4
KCTX	**Karacabey (Bur**	**1.29**	**333**	*e*Pn	Pg	19 42 51.3	+0.4
GEMT	**Gemlik**	**1.31**	**2**	PN	Pg	19 42 51.9	+0.5
GEMT	**Gemlik**	**1.31**	**2**	*e*Pn	Pg	19 42 51.9	+0.5
BALY	**Balya**	**1.32**	**298**	*i* P	Pb	19 42 51.4	-0.1
BALY	**Balya**	**1.32**	**298**	P	Pb	19 42 51.4	0.0
DENT	**Denizli**	**1.37**	**183**	PN	Pg	19 42 52.7	+0.3
DENT	**Denizli**	**1.37**	**183**	*e*Pn	Pg	19 42 52.7	+0.3
ADVT	**Abdulvahap**	**1.39**	**19**	PN	Pb	19 42 52.7	+0.2
ADVT	**Abdulvahap**	**1.39**	**19**	*e*Pn	Pb	19 42 52.7	+0.2
ESKT	**Eskisehir**	**1.39**	**73**	PN	Pg	19 42 52.9	0.0
ESKT	**Eskisehir**	**1.39**	**73**	*e*Pn	Pg	19 42 52.9	0.0
GONE	**Gonen-Balikesi**	**1.45**	**310**	PN	Pb	19 42 53.5	0.0
GONE	**Gonen-Balikesi**	**1.45**	**310**	*e*Pn	Pb	19 42 53.5	0.0
YLV	**Yalova**	**1.45**	**7**	PN	Pb	19 42 53.5	-0.2
YLV	**Yalova**	**1.45**	**7**	*e*Pn	Pb	19 42 53.5	-0.2
ARMT	**Armutlu**	**1.46**	**352**	PN	Pn	19 42 53.3	+0.3
ARMT	**Armutlu**	**1.46**	**352**	*e*Pn	Pn	19 42 53.3	+0.3
SBT5	**Esenkoy-Cinarc**	**1.52**	**353**	PN	Pb	19 42 54.8	+0.1
SBT5	**Esenkoy-Cinarc**	**1.52**	**353**	*e*Pn	Pb	19 42 54.8	+0.1
AYDB	**Zeytinkoy-Aydi**	**1.52**	**220**	PN	Pn	19 42 53.8	-0.3
AYDB	**Zeytinkoy-Aydi**	**1.52**	**220**	*e*Pn	Pn	19 42 53.8	-0.3
EDC	**Edincik**	**1.56**	**322**	PN	Pb	19 42 55.0	+0.5
EDC	**Edincik**	**1.56**	**322**	*e*Pn	Pb	19 42 55.0	+0.5
GULT	**Gulveren**	**1.69**	**39**	PN	Pb	19 42 57.1	-0.6
GULT	**Gulveren**	**1.69**	**39**	*e*Pn	Pb	19 42 57.1	-0.6
DKL	**Dikili**	**1.73**	**269**	PN	Pb	19 42 57.6	-0.8
DKL	**Dikili**	**1.73**	**269**	*e*Pn	Pb	19 42 57.6	-0.8
HRT	**Hereke**	**1.75**	**13**	PN	Pn	19 42 57.5	+0.5
HRT	**Hereke**	**1.75**	**13**	*e*Pn	Pn	19 42 57.5	+0.5

ISCJB ***05*** *20:03:03.8±0.2, 42°.36N±0°.03×138°.63E±0°.04, h251km±2km, mb4.0/36, Error ellipse: s-maj=5.7km s-min=4.3km az=41.1*
NEIC ***05*** *20:03:04.8±0.5, 42°.39N×138°.55E, h245km±6km, mb4.2/19, Error ellipse: s-maj=7.5km s-min=6.4km az=170.0*
IDC ***05*** *20:03:04.4±0.8, 42°.36N×138°.56E, h240km±8km, mb3.5/19, mb1 3.6/24, mb1mx3.4/80, mbtmp4.1/24, Error ellipse: s-maj=10.4km s-min=9.8km az=149.0*
JMA ***05*** *20:03:05.0±0.1, 42°.34N×138°.59E, h242km±1km, M3.7*
ISC 05 20:03:04.7±0.6, 42°.34N±0°.05×138°.63E±0°.05, h246km±5km, n98, σ0°.89/118, mb4.0/36, Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOSM	**Okushiri--Mats**	**0.68**	**112**	P	**Pn**	**20 03 37.7**	**-0.1**
JOSM				*e*S	**S**	**20 04 02.9**	**-0.8**
JSH	**Shimam**	**1.09**	**73**	P	**Pn**	**20 03 40.2**	**+0.4**
JSH				*e*S	**S**	**20 04 07.1**	**-0.3**
JYM2	**Yakumo 2**	**1.31**	**99**	P	**Pn**	**20 03 41.8**	**+0.6**
JYM2				*e*S	**S**	**20 04 10.7**	**+0.8**
JSR	**Shiriuchi**	**1.56**	**121**	P	**Pn**	**20 03 43.5**	**+0.4**
JSK	**Shakotan**	**1.69**	**53**	P	**Pn**	**20 03 44.4**	**+0.3**
JSK				*e*S	**S**	**20 04 14.3**	**-0.9**
JKB	**Kayabe**	**1.84**	**103**	P	**Pn**	**20 03 45.6**	**+0.2**
JOT	**Ohata**	**2.04**	**117**	P	**Pn**	**20 03 47.3**	**+0.1**
JOT				*e*S	**S**	**20 04 20.8**	**+0.1**
JEW	**Eniwo**	**2.14**	**75**	P	**Pn**	**20 03 48.9**	**+0.8**
JEW				*e*S	**S**	**20 04 23.0**	**+0.7**
JHR	**Hokuryu**	**2.67**	**57**	P	**Pn**	**20 03 54.6**	**+1.3**
JHR				*e*S	**S**	**20 04 32.8**	**+1.0**
JYG	**Yagishiri**	**2.92**	**43**	P	**Pn**	**20 03 56.5**	**+0.5**
JANG	**Nango**	**2.93**	**131**	P	**Pn**	**20 03 55.4**	**-0.8**
JFR	**Furan**	**3.03**	**73**	P	**Pn**	**20 03 57.3**	**0.0**
JFR				*e*S	**S**	**20 04 37.5**	**-1.3**
JNBK	**Urakawa-nobuka**	**3.06**	**90**	P	**Pn**	**20 03 57.3**	**-0.2**
ERM	**Erimo**	**3.38**	**94**	*e*Pn	**Pn**	**20 04 01.5**	**+0.4**
ERM				*e*S	**S**	**20 04 43.8**	**-2.0**
JKK2	**Kamakawa 2**	**3.38**	**62**	P	**Pn**	**20 04 01.8**	**+0.7**
JKK2				*e*S	**S**	**20 04 44.9**	**-1.0**
ASAJ	**Asahikawa**	**3.40**	**57**	P	**Pn**	**20 04 02.1**	**+0.8**
ASAJ	3.1nm,0.3s,baz=204,slow=11,SNR=33			S	**S**	**20 04 45.7**	**-0.5**
ASAJ	2.5nm,0.3s,baz=241,slow=19,SNR=21						
ASAJ	**Asahikawa**	**3.40**	**57**	*e*Pn	**Pn**	**20 04 01.9**	**+0.6**
ASAJ				*e*S	**S**	**20 04 45.5**	**-0.7**
JOM	**Ohasama**	**3.50**	**144**	P	**Pn**	**20 04 01.8**	**-0.8**
JCH	**Churui**	**3.51**	**84**	P	**Pn**	**20 04 02.1**	**-0.5**
JCH				*e*S	**S**	**20 04 46.3**	**-2.1**
JYK	**Kaneyama**	**3.66**	**158**	P	**Pn**	**20 04 04.2**	**-0.2**
JYK				*e*S	**S**	**20 04 51.4**	**-0.3**
JWK2	**Keihoku**	**3.80**	**37**	P	**Pn**	**20 04 07.2**	**+1.3**
JSE	**Soyaes**	**3.89**	**46**	P	**Pn**	**20 04 07.3**	**+0.4**
JSE				*e*S	**S**	**20 04 56.4**	**+0.2**
JAR	**Ashorobuto**	**3.90**	**74**	P	**Pn**	**20 04 06.6**	**-0.5**
JAR				*e*S	**S**	**20 04 53.9**	**-2.7**
JAW	**Awa shima**	**3.91**	**173**	P	**Pn**	**20 04 08.3**	**+1.1**
JMK	**Ichinoseki**	**3.91**	**149**	P	**Pn**	**20 04 06.0**	**-1.3**
JMK				*e*S	**S**	**20 04 56.2**	**-0.8**
JTKR	**Abashiri--Toko**	**4.19**	**65**	P	**Pn**	**20 04 10.4**	**-0.1**
JTKR				*e*S	**S**	**20 05 02.7**	**-0.1**
USRK	**Ussuriysk Ar.**	**5.19**	**293**	P	**Pn**	**20 04 21.9**	**-0.8**
	3.6nm,0.3s,baz=96,slow=13,SNR=48						
YSS	**Yuzh-Sakhalins**	**5.47**	**31**	*e*Pn	**Pn**	**20 04 26.9**	**+0.9**
MJB9	**Matsu-Tunnel**	**5.79**	**183**	*e*Pn	**Pn**	**20 04 31.2**	**+0.9**
MAJO	**Matsushiro**	**5.80**	**183**	*e*Pn	**Pn**	**20 04 31.0**	**+0.8**
MJAR	**Matsushiro Arr**	**5.80**	**183**	P	**Pn**	**20 04 30.9**	**+0.6**
	1.3nm,0.3s,baz=3.1,slow=12,SNR=15						
MDJ	**Mudanjiang**	**6.96**	**292**	*e*Pn	**Pn**	**20 04 43.4**	**-1.3**
INU	**Inuyama**	**7.09**	**191**	*e*Pn	**Pn**	**20 04 47.1**	**+0.6**
KLR	**Kul'dur**	**8.40**	**327**	P	**Pn**	**20 05 01.6**	**-1.3**
	0.1nm,0.3s,baz=154,slow=13,SNR=8.0						
KSRS	**Korea Array**	**9.56**	**243**	P	**Pn**	**20 05 19.0**	**+1.2**
	0.1nm,0.3s,baz=55,slow=13,SNR=3.1						
JNU	**Nakatsue**	**11.05**	**216**	P	**Pn**	**20 05 36.3**	**-0.3**
	0.2nm,0.3s,baz=52,slow=17,SNR=3.5						
YAK	**Yakutsk**	**20.44**	**348**	*e*P	**P**	**20 07 21.1**	**-2.1**
	9.0nm,0.5s						
ULN	**Ulaanbaatar**	**22.86**	**295**	*e*P	**P**	**20 07 44.9**	**-2.0**
	4.0nm,0.6s						
SONA1	**Songino Array**	**23.30**	**295**	*e*P	**P**	**20 07 49.8**	**-1.0**
SONM	**Songino Array**	**23.31**	**295**	P	**P**	**20 07 50.3**	**-0.5**
	1.3nm,0.5s,baz=95,slow=8.8,SNR=11						
TIXI	**Tiksi**	**29.78**	**354**	*e*P	**P**	**20 08 48.1**	**0.0**
	9.0nm,1.4s						
ATKA	**Atka Island**	**32.96**	**56**	*e*P	**P**	**20 09 16.0**	**-0.1**
	55nm,1.4s						
WAKE	**Wake Island**	**33.02**	**125**	*e*P	**P**	**20 09 16.6**	**-0.4**
	98nm,0.5s						
ZAA0	**Zalesovo Array**	**36.87**	**307**	*e*P	**P**	**20 09 49.3**	**-0.1**
	7.6nm,0.6s						
ZALV	**Zalesovo Beam**	**36.87**	**307**	P	**P**	**20 09 49.2**	**-0.2**
	7.4nm,0.5s,baz=89,slow=8.8,SNR=39						
ZALV				ScP	**ScP**	**20 15 29.2**	**+1.0**
	2.0nm,0.7s,baz=80,slow=4.9,SNR=7.3						
ZALV	**Zalesovo Beam**	**36.87**	**307**	*e*P	**P**	**20 09 48.9**	**-0.5**
MK01	**Makanchi Array**	**39.65**	**296**	*e*P	**P**	**20 10 12.1**	**-0.7**
MK31	**Makanchi Array**	**39.65**	**296**	*e*P	**P**	**20 10 12.4**	**-0.3**
MKAR	**Makanchi Array**	**39.65**	**296**	P	**P**	**20 10 12.4**	**-0.3**
	3.7nm,0.5s,baz=84,slow=12,SNR=52						
MKAR	**Makanchi Array**	**39.65**	**296**	*e*P	**P**	**20 10 12.4**	**-0.3**
	42nm,0.6s						
MAKZ	**Makanchi**	**39.86**	**296**	*e*P	**P**	**20 10 14.2**	**-0.2**
	6.2nm,0.8s						
KURK	**Kurchatov**	**41.10**	**303**	*e*P	**P**	**20 10 24.0**	**-0.3**
	12nm,0.8s						
KURBB	**Kurchatov Arra**	**41.17**	**303**	P	**P**	**20 10 24.6**	**-0.4**
	12nm,0.6s,baz=78,slow=8.9,SNR=107						
CAST	**Castle Rocks**	**44.17**	**37**	*e*P	**P**	**20 10 50.9**	**+2.0**
	7.0nm,1.1s						
TARG	**Taragay, Kyrgy**	**44.31**	**291**	*e*P	**P**	**20 10 51.3**	**+0.5**
	4.7nm,0.8s						
KDJ	**Kajisay**	**44.60**	**291**	*e*P	**P**	**20 10 52.9**	**+0.1**
	9.9nm,1.4s						
JIRN	**Jiri**	**44.70**	**268**	*e*P	**P**	**20 10 54.2**	**+0.2**
	5.1nm,0.2s						
RAMN	**Ramite**	**44.79**	**267**	*e*P	**P**	**20 10 53.7**	**-0.8**
GUN	**Gumba**	**44.80**	**269**	*e*P	**P**	**20 10 54.6**	**-0.1**
	18nm,0.5s						
SUA	**Susitna One**	**45.03**	**40**	*e*P	P	20 11 01.8	+6.0
	5.4nm,0.6s						
SUA				*e*S	**S**	**20 17 12.8**	**-2.5**
KKN	**Kakani**	**45.31**	**269**	*e*P	**P**	**20 10 58.5**	**0.0**
	6.4nm,0.5s						
PKIN	**Phulchoki**	**45.34**	**269**	*e*P	**P**	**20 10 59.1**	**+0.3**
	7.0nm,0.5s						
BVAR	**Borovoye Array**	**45.51**	**308**	P	**P**	**20 10 59.6**	**+0.1**
	4.4nm,0.4s,baz=74,slow=8.9,SNR=53						
DMN	**Daman**	**45.53**	**269**	*e*P	**P**	**20 11 00.5**	**+0.1**
	4.9nm,0.5s						
BRVK	**Borovoye**

COA	Coachella	0.87	37	ePn	Pn	20 18 31.3	+0.9
ECNX	Esteban Cantu	0.88	235⇑	eP	Pb	20 18 29.8	+0.2
ECBX	El Chinero	0.91	139	eP	Pb	20 18 28.7	-1.3
ECBX				eS	Sb	20 18 40.1	-1.9
PBX	Punta Banda	0.93	243⇑	eP	Pb	20 18 30.8	+0.4
BAR	Barrett	0.94	304	eP	Pg	20 18 31.6	+1.4
BAR	Barrett	0.94	304	ePg	Pg	20 18 31.7	+1.4
BAR				eSg	Sn	20 18 44.4	-0.4
BAR				eSn	Sg	20 18 44.9	+2.4
SPIG	San Pedro Mart	1.14	168	eP	Pn	20 18 34.1	-0.2
SPIG				eS	Sb	20 18 48.8	-0.3
SPIG	San Pedro Mart	1.14	168	eSg	Sb	20 18 48.6	-0.4
SPIG	San Pedro Mart	1.14	168	eP	Pn	20 18 34.0	-0.4
SPIG				i S	Sb	20 18 48.6	-0.4
SPX	San Pedro Mart	1.14	168	eP	Pn	20 18 34.2	-0.2
SPX				IAML		20 18 50.4	
	comp=N,380nm,0.1s						
SPX			⇑	e		20 18 50.4	
SPX	San Pedro Mart	1.14	168	ePg	Pn	20 18 33.6	-0.8
SPX	San Pedro Mart	1.14	168	eP	Pn	20 18 33.6	-0.8
SPX				eS	Sb	20 18 48.2	-0.9
GLA	Glamis	1.18	41	ePg	Pb	20 18 34.8	+0.2
GLA				eSn	Sn	20 18 50.1	-0.5
EML	El Monte Cty P	1.18	308	ePg	Pg	20 18 36.4	+1.5
DPP	Dos Picos Cty	1.31	310	ePn	Pg	20 18 39.0	+1.6
DPP				eSn	Sg	20 18 56.0	+1.5
HWB	Hans Werner Br	1.34	310	ePg	Pn	20 18 36.5	-0.3
HWB				ePn	Pg	20 18 39.0	+1.1
HWB				eSg	Sn	20 18 54.7	+0.1
HWB				eSn	Sg	20 18 57.0	+1.7
CPE	Camp Elliot	1.36	303	ePn	Pn	20 18 38.2	+1.2
CPE				eSn	Sg	20 18 56.6	+0.6
CPE				eSg	Sn	20 18 57.1	+2.1
FRD	Ford Ranch, An	1.51	332	ePn	Pg	20 18 42.8	+1.5
PLM	Palomar	1.51	322	ePn	Pg	20 18 42.8	+1.4
PFO	Pinyon Flats O	1.56	338	ePn	Pb	20 18 41.1	-0.1
113A	Mohawk Valley,	1.78	70	ePn	Pn	20 18 42.9	0.0
Y12C	Blythe	1.89	33	ePn	Pb	20 18 47.1	+0.5
DEVC	Devers	1.90	339	eSn	Sg	20 19 10.8	-2.6
BREC	Barre Substati	2.49	312	eSn	Sb	20 19 25.1	-2.5
DLAC	Del Amo	2.59	311	eSn	Sn	20 19 25.4	-0.1
BFSC	Mount Baldy Ra	2.62	323	ePn	Pn	20 18 57.2	+2.7
HEC	Hector,Ludlow	2.70	350	eSn	Sn	20 19 27.8	-0.6
MWC	Mount Wilson	2.82	317	ePn	Pn	20 18 59.3	+1.9
MWC				eSn	Sg	20 19 41.0	-2.0
PASC	Pasadena Art C	2.86	315	ePn	Pn	20 19 00.2	+2.5
PASC				eSn	Sg	20 19 42.2	-2.0
Y14A	Wickenburg	2.90	52	ePn	Pn	20 19 01.5	+3.1
GSC	Goldstone, Bar	3.25	345	ePn	Pb	20 19 07.9	-2.1
W13A	Hualapai Mount	3.31	27	ePn	Pb	20 19 08.4	-2.7
CCCA	Chr Cany lake	3.61	339	eSn	Sn	20 19 51.7	+0.9
TJR	Tejon Ranch	3.80	320	ePn	Pn	20 19 07.7	-2.9
TJR				ePg	Pg	20 19 26.6	+1.6
TJR				eSg	Sg	20 20 11.9	-2.2
WBSM	Bird Springs	3.91	330	eSn	Sb	20 20 06.3	-2.3
RCWM	Renegade Canyo	4.09	338	ePg	Pg	20 19 30.0	-0.6
SHPR	Sheep Range	4.36	6	ePn	Pn	20 19 22.0	+3.5
GATR	Gnd/Air Tx Cnt	4.64	302	eSn	Sn	20 20 19.8	+3.7
U15A	North Rim	5.12	33	ePn	Pn	20 19 32.2	+3.1
LCMT	Little Creek M	5.26	22	ePn	Pn	20 19 32.2	+1.4
SZCU	Shurtz Canyon	5.84	21	ePn	Pn	20 19 41.9	+3.0

IDC 05 20:29:53.0±1.6, 0°32N×126°13E, h0km, mb3.7/4, mb1 4.0/4, mb1mx3.5/56, mbtmp3.8/4, Error ellipse: s-maj=162.5km s-min=21.5km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.69	159	P	P	20 34 45.1	-0.5
	1.9nm,0.4s,baz=337,slow=11,SNR=39						
ASAR	Alice Springs	25.01	163	P	P	20 35 19.2	+0.3
	2.2nm,0.7s,baz=343,slow=11,SNR=30						
MKAR	Makanchi Array	60.02	327	P	P	20 40 02.0	+0.3
	0.3nm,0.3s,baz=122,slow=8.2,SNR=8.1						
KURBB	Kurchatov Arra	64.29	329	P	P	20 40 29.7	-0.5
	0.4nm,0.4s,baz=134,slow=6.4,SNR=3.5						

IDC 05 20:33:00.2±1.6, 0°32N×126°15E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/57, mbtmp3.6/4, Error ellipse: s-maj=167.9km s-min=20.9km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.68	159	P	P	20 37 52.0	-0.8
	1.1nm,0.4s,baz=337,slow=11,SNR=17						
ASAR	Alice Springs	25.01	163	P	P	20 38 26.6	+0.6
	1.7nm,0.8s,baz=343,slow=11,SNR=17						
MKAR	Makanchi Array	60.04	327	P	P	20 43 09.1	+0.1
	0.3nm,0.4s,baz=137,slow=5.3,SNR=7.0						
KURBB	Kurchatov Arra	64.30	329	P	P	20 43 37.3	-0.2
	0.3nm,0.5s,baz=129,slow=6.4,SNR=5.5						

*JMA **05** 20:37:22.9±0.1, 36°87N×141°35E, h30km±1km, M4.3*
JMA Felt II J1.
*ISCJB **05** 20:37:23.1±0.7, 36°84N±0°03×141°30E±0°04, h27km±4km, mb4.4/55, MS4.5/1, Error ellipse: s-maj=5.9km s-min=3.9km az=42.8*
*MOS **05** 20:37:24.8±1.3, 36°88N×141°18E, h38km, mb4.5/11, Error ellipse: s-maj=10.0km s-min=7.4km az=83.3*
*NEIC **05** 20:37:26.1±0.6, 36°83N×141°21E, h35km±5km, mb4.6/37, Error ellipse: s-maj=5.9km s-min=3.9km az=134.0*
NEIC Recorded [2 JMA] in Fukushima and Ibaraki.
*IDC **05** 20:37:27.9±2.5, 36°84N×141°11E, h50km±22km, mb3.6/18, mb1 3.8/21, mb1mx3.6/66, mbtmp3.8/21, ML2.7/4, MS4.7/1, Ms1 4.7/1, ms1mx3.5/70, Error ellipse: s-maj=18.7km s-min=13.7km az=90.0*

ISC 05 20:37:26.4±0.5, 36°88N±0°05×141°29E±0°06, h36km±2km, n139, σ1§55/148, mb4.5/55, 4C-1D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.45	300	P	Pn	20 37 32.8	-3.5
ONAJ				eS	Sn	20 37 39.9	-3.5
JFK	Kawauchi	0.59	326	P	Pn	20 37 35.0	-3.4
JFK				S	Sn	20 37 43.4	-3.4
JHO	Hitachi	0.64	246	P	Pn	20 37 35.8	-3.2
JHO				eS	Sn	20 37 45.2	-2.7
JFT	Otama	0.99	310	P	Pn	20 37 42.1	-1.7
JFT				eS	Sn	20 37 55.4	-1.2
JMM	Marumori	1.06	338	P	Pn	20 37 42.1	-2.6
JMM				S	Sn	20 37 56.3	-2.0
JYT	Yasato	1.10	234	P	Pn	20 37 42.5	-2.7
JYT				eS	Sn	20 37 57.1	-2.0
JSB	Shiboa	1.10	275	P	Pn	20 37 44.3	-1.0
JSB				eS	Sn	20 37 59.4	+0.1
JFY	Yanaizu	1.37	293	P	Pn	20 37 48.0	-1.0
JFY				eS	Sn	20 38 06.0	0.0
MJAR	Matsushiro Arr	2.50	263	P	Pn	20 38 04.0	-0.5
	9.4nm,0.3s,baz=90,slow=14,SNR=82						
MJAR				S	Sn	20 38 40.8	+7.0
	34nm,0.3s,baz=86,slow=26,SNR=7.8						
MAJO	Matsushiro	2.50	263	ePn	Pn	20 38 04.1	-0.5
MAJO				eSn	Sn	20 38 40.8	+7.0
MAJO	Matsushiro	2.50	263	d i P	Pn	20 38 04.4	-0.1
MAT	Matsushiro	2.50	263	P	Pn	20 38 04.5	0.0
MAT				eS	Sn	20 38 33.9	+0.1
MJB9	Matsu-Tunnel	2.50	263	ePn	Pn	20 38 04.2	-0.3
INU	Inuyama	3.78	247	ePn	Pn	20 38 22.2	+0.1
JHJ2	Mitsune	3.95	198	ePn	Pn	20 38 21.8	-2.6
ERM	Erimo	5.33	15	ePn	Pn	20 38 42.1	-1.3
ERM	Erimo	5.33	15	eP	Pn	20 38 42.1	-1.3
ASAJ	Asahikawa	7.30	7	P	Pn	20 39 08.9	-1.5
	1.3nm,0.3s,baz=226,slow=13,SNR=18						
ASAJ				S	Sn	20 40 32.4	+0.5
	0.8nm,0.3s,baz=197,slow=20,SNR=3.6						
ASAJ	Asahikawa	7.30	7	ePn	Pn	20 39 09.3	-1.1
ASAJ				S	Sn	20 40 32.4	+0.5
YUK	Yuzh-Kuril'sk	7.95	25	eP	Pn	20 39 23.1	+3.8
YUK				eS	Sn	20 40 46.0	-2.0
YUK				pmax	pmax		
	comp=Z,367nm,0.4s						
YUK				pmax	pmax		
	comp=N,59nm,0.5s						
YUK				pmax	pmax		
	comp=E,19nm,0.2s						
SHO	Shikotan	8.16	29	eP	Pn	20 39 23.0	+0.8
SHO				pmax	pmax		
	comp=N,5.0nm,0.5s						
SHO				pmax	pmax		
	comp=Z,8.0nm,0.5s						
SHO				pmax	pmax		
	comp=E,6.0nm,0.4s						
MSHR	Mys Shultsa	9.66	309	ceP	Pn	20 39 54.3	+12
KUR	Kuril'sk	9.71	29	P	Pn	20 39 46.1	+2.7
KUR				eS	Sn	20 41 27.6	-3.5
USRK	Ussuriysk Ar.	10.17	319	P	Pn	20 39 50.6	+0.8
	comp=E,0.1nm,0.3s,baz=126,slow=13,SNR=4.3						
KSRS	Korea Array	10.69	277	P	Pn	20 39 55.9	-1.0
	comp=E,0.1nm,0.3s,baz=82,slow=14,SNR=3.0						
KS01	Wonju Array Si	10.71	277	ePn	Pn	20 39 56.5	-0.7
KS15	Wonju Array Si	10.72	277	ePn	Pn	20 39 55.5	-1.7
KSAR	Wonju Array Be	10.72	277	P	Pn	20 39 55.9	-1.4
KSAR	Wonju Array Be	10.72	277	P	Pn	20 39 55.9	-1.4
KLR	Kul'dur	14.16	334	P	Pn	20 40 46.8	+2.5
	comp=E,0.0nm,0.3s,baz=151,slow=9.3,SNR=4.3						
ZEA	Zeya	19.48	334	eP	Pn	20 41 54.8	+3.4
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
YHNB	Yeheng	20.95	240	eP	P	20 42 05.9	-0.4
	comp=Z,42nm,1.3s						
NACB	Ninganchiao	21.12	239	eP	P	20 42 07.0	-1.0
	comp=Z,20nm,1.0s						
SSLB	Suanglung	21.81	239	eP	P	20 42 13.9	-1.6
	comp=Z,35nm,1.5s						
SONA1	Songino Array	27.79	304	eP	P	20 43 11.3	-0.7
SONA0	Songino Array	27.79	304	eP	P	20 43 11.1	-1.0
SONM	Songino Array	27.79	304	P	P	20 43 11.1	-1.0
	comp=Z,0.9nm,0.6s,baz=103,slow=8.9,SNR=5.1						
SONM				LR	LR	20 53 47.1	
	comp=Z,1μm,19.4s,baz=306,slow=35						
H11N2	WAKE ISLAND Hy	28.15	120	T	T	21 12 43.1	
	baz=313,slow=75,SNR=304						
H11N1	WAKE ISLAND Hy	28.16	120	T	T	21 12 41.9	
	baz=313,slow=75,SNR=432						
H11N3	WAKE ISLAND Hy	28.17	120	T	T	21 12 43.5	
	baz=313,slow=75,SNR=374						
H11S1	WAKE ISLAND Hy	28.86	122	T	T	21 13 34.9	
	baz=315,slow=76,SNR=106						
H11S3	WAKE ISLAND Hy	28.86	123	T	T	21 13 35.0	
	baz=315,slow=76,SNR=146						
H11S2	WAKE ISLAND Hy	28.87	122	T	T	21 13 36.0	
	baz=315,slow=76,SNR=111						
ZAA0	Zalesovo Array	41.95	313	eP	P	20 45 13.0	-0.5
	comp=Z,3.8nm,0.8s						
ZAA1	Zalesovo Array	41.95	313	eP	P	20 45 13.0	-0.5
ZALV	Zalesovo Beam	41.95	313	P	P	20 45 13.0	-0.5
	comp=Z,1.5nm,0.5s,baz=91,slow=7.4,SNR=8.8						
ZALV	Zalesovo Beam	41.95	313	eP	P	20 45 12.2	-1.3
ZALV	Zalesovo Beam	41.95	313	P	P	20 45 13.0	-0.5
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.5s						
RDOG	Red Dog Mine	43.69	27	eP	P	20 45 28.8	+1.4
	comp=Z,6.8nm,1.1s						
MK01	Makanchi Array	44.12	302	eP	P	20 45 30.4	-0.8
MK31	Makanchi Array	44.12	302	eP	P	20 45 31.1	-0.1
MK31	Makanchi Array	44.12	302	eP	P	20 45 31.1	-0.1
MK32	Makanchi Array	44.12	302	eP	P	20 45 30.9	-0.3
MKAR	Makanchi Array	44.12	302	P	P	20 45 30.9	-0.3
	comp=Z,1.1nm,0.6s,baz=90,slow=9.8,SNR=15						
MKAR	Makanchi Array	44.12	302	eP	P	20 45 30.7	-0.5
	comp=Z,14nm,0.8s						
MKAR	Makanchi Array	44.12	302	ceP	P	20 45 31.2	0.0
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MAKZ	Makanchi	44.33	302	eP	P	20 45 32.0	-0.9
	comp=Z,4.9nm,1.2s						
MAKZ	Makanchi	44.33	302	eP	P	20 45 32.0	-0.9
MAKZ				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KSM	Kuching	45.37	226	eP	P	20 45 41.6	+0.1
	comp=Z,16nm,1.4s						
KURK	Kurchatov	45.95	308	eP	P	20 45 45.0	-0.6
	comp=Z,11nm,1.3s						
KURK	Kurchatov	45.95	308	ceP	P	20 45 45.4	-0.2
KURK				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KURBB	Kurchatov Arra	46.02	308	P	P	20 45 45.6	-0.5
	comp=Z,2.4nm,0.6s,baz=83,slow=8.4,SNR=22						
ODAN	Odare	46.33	274	eP	P	20 45 48.7	-0.5
SII	Sitkinak Islan	46.49	44	eP	P	20 45 49.9	+0.1
	comp=Z,94nm,1.3s						
RAMN	Ramite	46.92	274	eP	P	20 45 52.6	-1.2
JIRN	Jiri	46.93	275	eP	P	20 45 54.4	+0.3
	comp=Z,19nm,0.8s						
GUN	Gumba	47.07	276	eP	P	20 45 55.8	+0.6
	comp=Z,16nm,0.8s						
KDAK	Kodiak Island	47.28	42	P	P	20 45 56.6	+0.7
	comp=Z,3.1nm,0.8s,baz=226,slow=8.9,SNR=5.5						
KDAK	Kodiak Island	47.28	42	eP	P	20 45 56.4	+0.5
KKN	Kakani	47.60	276	eP	P	20 45 59.5	+0.4
	comp=Z,5.7nm,0.6s						
DMN	Daman	47.82	276	eP	P	20 46 00.6	-0.3
	comp=Z,43nm,1.7s						
BPAW	Bear Paw Mtn.	47.91	33	eP	P	20 46 00.6	-0.2
	comp=Z,2.7nm,1.0s						
KTH	Kantishna Hill	47.93	34	eP	P	20 46 02.6	+1.6
	comp=Z,8.1nm,1.3s						
GKN	Gorkha	48.02	276	eP	P	20 46 02.3	0.0
	comp=Z,6.4nm,0.4s						
MLY	Manley	48.03	32	eP	P	20 46 02.9	+1.1
	comp=Z,2.7nm,0.9s						
SUA	Susitna One	48.04	37	eP	P	20 46 02.7	+0.7
	comp=Z,3.8nm,0.8s						
BRLK	Bradley Lake	48.05	39	eP	P	20 46 02.1	+0.2
	comp=Z,29nm,2.0s						
TARG	Targay, Kyrgy	48.38	296	eP	P	20 46 03.2	-2.0
	comp=Z,5.3nm,1.0s						
DANN	Dangsing	48.57	277	eP	P	20 46 07.1	+0.4
	comp=Z,10.0nm,0.5s						
TOLK	Toolik Lake Re	48.65	27	eP	P	20 46 07.9	+1.4
	comp=Z,4.9nm,1.0s						
KDJ	Kajisay	48.72	297	eP	P	20 46 07.8	+0.3
	comp=Z,7.8nm,1.7s						
RND	Reindeer	48.86	34	eP	P	20 46 09.2	+1.0
	comp=Z,6.5nm,1.2s						
RND	Reindeer	48.86	34	eP	P	20 46 09.2	+1.0
RND				pmax	pmax		
	comp=Z,7.0nm,1.2s						
GHO	Glory Hole Cre	48.90	36	eP	P	20 46 09.1	+0.7
	comp=Z,4.6nm,0.9s						
IPM	Ipoh	48.98	239	eP	P	20 46 08.7	-0.9
	comp=Z,38nm,1.5s						
MDM	Murphy Dome	49.10	32	eP	P	20 46 11.2	+1.3
	comp=Z,7.2nm,1.1s						
WRH	Wood River Hil	49.17	33	eP	P	20 46 11.6	+1.2
	comp=Z,17nm,2.0s						
PYUN	Piuthan	49.29	277	eP	P	20 46 12.1	0.0
	comp=Z,27nm,1.1s						
SCM	Sheep Creek Mo	49.65	36	eP	P	20 46 15.8	+1.6
	comp=Z,15nm,0.9s						
SCM	Sheep Creek Mo	49.65	36	eP	P	20 46 15.8	+1.6
SCM				pmax	pmax		
	comp=Z,15nm,0.9s						
HDA	Harding Lake	49.67	33	eP	P	20 46 14.6	+0.4
	comp=Z,3.0nm,0.8s						
ILAR	Eielson Array	49.68	32	P	P	20 46 14.6	+0.3
	comp=Z,2.0nm,0.8s,baz=273,slow=6.5,SNR=21						
ILB	Eielson Array	49.68	32	eP	P	20 46 14.2	0.0
BATI	Baumata	49.68	203	P	P	20 46 14.0	-0.8
	comp=Z,11nm,0.5s,baz=27,slow=6.8,SNR=3.6						
IL1	Eielson Array	49.68	32	eP	P	20 46 13.7	-0.6
GLI	Glacier Island	49.84	37	eP	P	20 46 16.3	+0.7
	comp=Z,26nm,1.1s						
FYU	Fort Yukon	50.29	30	eP	P	20 46 17.6	-1.2
	comp=Z,11nm,0.9s						
KLU	Klutina	50.35	37	eP	P	20 46 18.5	-1.0
	comp=Z,10.0nm,0.9s						
BVAR	Borovoye Array	50.60	312	P	P	20 46 21.2	-0.3
	comp=Z,0.4nm,0.4s,baz=81,slow=8.9,SNR=3.9						
BVAR				PcP	PcP	20 47 39.1	+0.4
	comp=Z,0.5nm,0.7s,baz=88,slow=3.6,SNR=2.2						
RIDG	Independ'e Rid	50.63	34	eP	P	20 46 21.4	-0.3
	comp=Z,9.1nm,0.8s						
SCRK	Sand Creek	50.99	33	eP	P	20 46 24.2	-0.2
	comp=Z,24nm,1.8s						
BMRM	Bremner River	51.04	37	eP	P	20 46 25.5	+0.8
	comp=Z,22nm,1.8s						
BALM	Baldy	52.12	37	eP	P	20 46 33.5	+0.6
	comp=Z,2.6nm,0.9s						
BALM	Baldy	52.12	37	eP	P	20 46 33.5	+0.6
BALM				pmax	pmax		
	comp=Z,3.0nm,0.9s						
INK	Inuvik	54.57	27	eP	P	20 46 51.4	+0.9
	comp=Z,7.2nm,1.4s						
INK	Inuvik	54.57	27	eP	P	20 46 51.4	+0.9
INK				pmax	pmax		
	comp=Z,7.0nm,1.4s						
HLK	Haleakala	56.12	88	eP	P	20 47 01.3	-1.5
	comp=Z,542nm,1.8s						
ARU	Arti	56.41	319	eP	P	20 47 03.7	-0.3
	comp=Z,7.3nm,1.1s						
ARU	Arti	56.41	319	eP	P	20 47 03.7	-0.3
ARU				pmax	pmax		
	comp=Z,7.0nm,1.1s						
FITZ	Fitzroy Crossi	56.64	198	P	P	20 47 05.3	-0.6
	comp=Z,2.9nm,0.9s,baz=3.7,slow=5.6,SNR=4.0						
FITZ	Fitzroy Crossi	56.64	198	eP	P	20 47 05.1	-0.8
WR1	Warramunga Arr	56.89	188	eP	P	20 47 07.5	-0.2
	comp=Z,22nm,1.6s						
WRA	Warramunga Arr	56.89	188	P	P	20 47 07.6	-0.2
	comp=Z,0.9nm,0.4s,baz=5.5,slow=7.3,SNR=43						
ABKAR	Akbulak array	57.97	310	eP	P	20 47 14.3	-0.7
AS01	Alice Springs	60.61	188	eP	P	20 47 33.1	-0.5
AS31	Alice Springs	60.62	188	eP	P	20 47 31.8	-1.8
	comp=Z,4.6nm,1.6s						
ASAR	Alice Springs	60.62	188	P	P	20 47 32.6	-1.1
	comp=Z,0.5nm,0.8s,baz=12,slow=9.5,SNR=11						
YKA	Yellowknife Ar	63.99	30	P	P	20 47 56.1	+0.4
	comp=Z,0.6nm,0.8s,baz=295,slow=7.3,SNR=4.8						
YKA	Yellowknife Ar	63.99	30	ceP	P	20 47 57.2	+1.5
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FIA0	FINESS Array S	68.91	332	eP	P	20 48 26.9	-0.3
FIA0	FINESS Array S	68.91	332	eP	P	20 48 26.9	-0.3
FINES	FINESS Array B	68.91	332	P	P	20 48 26.9	-0.3
	comp=Z,1.8nm,0.7s,baz=46,slow=8.1,SNR=6.3						
FINES	FINESS Array B	68.91	332	i P	P	20 48 27.2	0.0
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NB2	NORSAR Subarra	74.29	337	P	P	20 48 59.9	+0.2
	comp=Z,1.9nm,1.0s,baz=40,slow=5.9						
NB200	NORSAR Array S	74.29	337	eP	P	20 48 59.0	-0.6
NOA	NORSAR Array B	74.29	337	P	P	20 48 59.0	-0.6
	comp=Z,0.9nm,0.7s,baz=38,slow=5.9,SNR=3.8						
AKASG	Malin Array Be	74.36	322	P	P	20 48 59.5	-0.6
	comp=Z,0.6nm,0.3s,baz=49,slow=6.4,SNR=9.0						
AKASG	Malin Array Be	74.36	322	i P	P	20 49 02.4	+2.2
AKBB	Malin Array Si	74.36	322	eP	P	20 48 59.1	-1.1
	comp=Z,5.5nm,1.1s						
AKBB	Malin Array Si	74.36	322	eP	P	20 48 59.1	-1.1
AKBB				pmax	pmax		
	comp=Z,6.0nm,1.1s						
NV01	Mina Array Sit	75.16	53	eP	P	20 49 06.4	+1.1
NVAR	Mina Array Bea	75.16	53	P	P	20 49 06.7	+1.4
	comp=Z,0.3nm,0.5s,baz=285,slow=4.6,SNR=3.6						
BR101	Keskin Array S	78.88	311	eP	P	20 49 25.8	-0.3
BRTR	Keskin Array B	78.88	311	P	P	20 49 25.8	-0.3
	comp=Z,0.2nm,0.4s,baz=53,slow=4.8,SNR=2.6						
CLL	Collm	81.18	330	eP	P	20 49 38.0	-0.1
GERES	GERESS Array B	82.79	328	P	P	20 49 45.5	-1.3
	comp=Z,0.3nm,0.3s,baz=46,slow=7.0,SNR=7.7						
TXAR	Lajitas Array	90.29	52	P	P	20 50 25.8	+1.9
	comp=Z,0.2nm,0.6s,baz=276,slow=2.6,SNR=2.7						
LPAZ	La Paz	146.86	60	PKPbc	PKPbc	20 57 05.9	-0.2
	comp=Z,1.0nm,0.8s,baz=252,slow=3.2,SNR=4.4						
SIV	San Ignacio	151.26	50	PKPbc	PKPbc	20 57 17.4	+0.9
	comp=Z,1.1nm,0.9s,baz=270,slow=8.9,SNR=3.2						

*ISK **05** 20:39:15.9, 37°79N×26°71E, h8km, ML2.7/7*
*ATH **05** 20:39:15.4, 37°77N×26°79E, h22km±1km, ML2.7/5, Error ellipse: s-maj=2.3km s-min=1.2km az=83.0*
*THE **05** 20:39:16.5, 37°80N×26°75E, h8km±1km, ML2.4/5, Error ellipse: s-maj=1.2km s-min=0.5km az=55.0*
*CSEM **05** 20:39:16.7±0.2, 37°77N×26°73E, h10km, ML2.7, Error ellipse: s-maj=4.6km s-min=2.8km az=59.0*
*ISCJB **05** 20:39:16.4±0.4, 37°80N±0°02×26°74E±0°03, h8km±3km, Error ellipse: s-maj=4.3km s-min=2.8km az=151.7*
*DDA **05** 20:39:17.4, 37°81N×26°80E, h7km, Md2.7*

ISC 05 20:39:16.0±0.8, 37°80N±0°02×26°75E±0°02, h14km±6km, n74, σ0§78/107, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	Samos	0.12	143	P	Pg	20 39 19.9	+0.5
SMG				S	Sb	20 39 21.0	-1.7
SMG				AML	AML	20 39 21.7	
	comp=E,14404μm,0.4s						
SMG				AML	AML	20 39 21.8	
	comp=N,26559μm,0.3s						
SMG	Samos	0.12	143	P	Pg	20 39 19.6	+0.2
SMG				S	Sb	20 39 21.3	-1.4
SMG	Samos	0.12	143	P	Pg	20 39 19.6	+0.2
SMG				S	Sg	20 39 21.7	0.0
DGB	˜zmir	0.27	24	i P	Pb	20 39 22.6	0.0
DGB				i S	Sb	20 39 25.8	-1.3
GMLD	Gumuldur	0.30	26	PG	Pg	20 39 23.1	+0.8
GMLD				SG	Sb	20 39 28.4	+0.3
GMLD	Gumuldur	0.30	26	ePg	Pg	20 39 23.1	+0.8
GMLD				eSg	Sb	20 39 28.4	+0.3
ZEY	˜zmir	0.47	336	i P	Pb	20 39 26.4	+0.3
ZEY				i S	Sg	20 39 31.1	-0.7
URLA	Izmir	0.57	348	PG	Pb	20 39 26.9	-0.9
URLA				SG	Sg	20 39 35.9	+1.1
URLA	Izmir	0.57	348	i P	Pb	20 39

YER	**Yerkesik**	**1.39 118**	P	**Pn**	**20 39 41.3**	**+0.2**
YER			S	**Sb**	**20 40 00.0**	**+0.5**
YER	**Yerkesik**	**1.39 118**	P	**Pn**	**20 39 41.3**	**+0.2**
YER	**Yerkesik**	**1.39 118**	*e*Pn	**Pb**	**20 39 42.6**	**+0.8**
YER			S	**Sb**	**20 40 00.0**	**+0.5**
PRK	**Paraskevi**	**1.49 346**	P	**Pb**	**20 39 43.4**	**0.0**
PRK			S	**Sg**	**20 40 03.4**	**-0.6**
PRK			AML	AML	20 40 07.6	
	comp=N,449μm,0.7s					
PRK			AML	AML	20 40 09.1	
	comp=E,386μm,0.6s					
PRK	**Paraskevi**	**1.49 346**	P	**Pn**	**20 39 42.4**	**+0.1**
PRK			S	**Sb**	**20 40 02.2**	**+0.1**
PRK	**Paraskevi**	**1.49 346**	P	**Pb**	**20 39 43.5**	**+0.1**
PRK			S	**Sg**	**20 40 03.8**	**-0.1**
AYVA	**Ayvalik**	**1.50 358**	*i* P	**Pg**	**20 39 46.8**	**+1.9**
AYVA	**Ayvalik**	**1.50 358**	P	**Pg**	**20 39 46.8**	**+1.9**
SIGR	**SIGRI**	**1.57 334**	PN	**Pb**	**20 39 45.1**	**+0.3**
SIGR	**SIGRI**	**1.57 334**	P	**Pb**	**20 39 43.9**	**-0.9**
SIGR	**SIGRI**	**1.57 334**	P	**Pn**	**20 39 43.7**	**+0.3**
SIGR			S	**Sb**	**20 40 04.0**	**-0.5**
SIGR	**SIGRI**	**1.57 334**	P	**Pb**	**20 39 44.4**	**-0.4**
SIGR	**SIGRI**	**1.57 334**	*e*Pn	**Pb**	**20 39 45.1**	**+0.3**
SIGR			S	**Sb**	**20 40 04.0**	**-0.5**
MANT	**Manisa**	**1.58 64**	*i* P	**Pg**	**20 39 47.5**	**+1.0**
MANT			*i* S	**Sn**	**20 40 03.8**	**-0.5**
MANT	**Manisa**	**1.58 64**	P	**Pg**	**20 39 47.5**	**+1.0**
MANT			S	**Sn**	**20 40 03.8**	**-0.5**
ANAF	**Anafi Island**	**1.64 209**	P	**Pb**	**20 39 45.0**	**-1.0**
ANAF			AML	AML	20 40 14.1	
	comp=N,635μm,0.4s					
ANAF			AML	AML	20 40 15.7	
	comp=E,468μm,0.5s					
ANAF	**Anafi Island**	**1.64 209**	P	**Pn**	**20 39 44.9**	**+0.5**
KULA	**Kula-Manisa**	**1.67 64**	PN	**Pb**	**20 39 46.7**	**+0.2**
KULA	**Kula-Manisa**	**1.67 64**	*e*Pn	**Pb**	**20 39 46.7**	**+0.2**
TURN	**Turunc**	**1.75 122**	PN	**Pn**	**20 39 45.1**	**-0.7**
TURN	**Turunc**	**1.75 122**	*e*Pn	**Pn**	**20 39 45.1**	**-0.7**
ARG	**Arkhangelos**	**1.93 145**	PN	**Pb**	**20 39 50.2**	**-0.8**
ARG	**Arkhangelos**	**1.93 145**	P	**Pb**	**20 39 49.7**	**-1.3**
ARG	**Arkhangelos**	**1.93 145**	P	**Pn**	**20 39 49.1**	**+0.7**
ARG	**Arkhangelos**	**1.93 145**	*e*Pn	**Pb**	**20 39 50.2**	**-0.8**
SIMA	**Simav-Kutahya**	**2.17 53**	PN	**Pb**	**20 39 53.9**	**-1.2**
SIMA	**Simav-Kutahya**	**2.17 53**	*e*Pn	**Pb**	**20 39 53.9**	**-1.2**
FETY	**Fethiye**	**2.20 121**	PN	**Pb**	**20 39 54.1**	**-1.5**
FETY	**Fethiye**	**2.20 121**	*e*Pn	**Pb**	**20 39 54.1**	**-1.5**
DION	**Dionisos Attik**	**2.24 278**	P	**Pn**	**20 39 53.7**	**+1.0**
DION	**Dionisos Attik**	**2.24 278**	P	**Pn**	**20 39 53.9**	**+1.2**

*ATH **05** 20:54:11.7,37.°74N×26.°78E,h20km±1km, ML2.5/5, Error ellipse: s-maj=2.8km s-min=1.0km az=120.0*
*CSEM **05** 20:54:12.6±0.1,37.°75N×26.°73E,h5km, ML2.5, Error ellipse: s-maj=3.5km s-min=2.3km az=55.0*
*ISCJB **05** 20:54:12.3±0.4,37.°77N±0.°02×26.°75E±0.°03,h4km±3km, Error ellipse: s-maj=4.3km s-min=2.7km az=153.5*
*THE **05** 20:54:12.6,37.°79N×26.°75E,h10km±1km, ML2.4/3, Error ellipse: s-maj=2.2km s-min=0.7km az=56.0*
*ISK **05** 20:54:12.4,37.°77N×26.°77E,h5km, ML2.7/11*
*DDA **05** 20:54:12.9,37.°84N×26.°75E,h7km, Md2.6*

ISC 05 20:54:12.7±0.8, 37.°76N±0.°02×26.°74E±0.°02, h12km±5km, n71, σ0°86/105, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.10 124**		P	**Pg**	**20 54 15.8**	**+0.2**
SMG				S	**Sg**	**20 54 17.1**	**-0.5**
SMG				AML	AML	20 54 17.7	
	comp=N,26489μm,0.3s						
SMG				AML	AML	20 54 18.2	
	comp=E,12458μm,0.4s						
SMG	**Samos**	**0.10 124**		P	**Pg**	**20 54 15.5**	**0.0**
SMG				S	**Sg**	**20 54 17.5**	**-0.1**
SMG	**Samos**	**0.10 124**		P	**Pg**	**20 54 15.5**	**0.0**
SMG				S	**Sg**	**20 54 17.5**	**-0.1**
DGB	**˜zmir**	**0.31 22**	*i* P	**Pg**	**20 54 18.2**	**-0.8**
DGB			*i* S	**Sg**	**20 54 21.5**	**-1.9**
GMLD	**Gumuldur**	**0.34 24**	PG	**Pg**	**20 54 19.0**	**-0.7**
GMLD			SG	**Sg**	**20 54 24.4**	**+0.1**
GMLD	**Gumuldur**	**0.34 24**	*e*Pg	**Pg**	**20 54 19.0**	**-0.7**
GMLD			*e*Sg	**Sg**	**20 54 24.4**	**+0.1**
ZEY	**˜zmir**	**0.51 339**	*i* P	**Pg**	**20 54 22.3**	**-0.4**
ZEY			*i* S	**Sg**	**20 54 27.9**	**-1.6**
URLA	**Izmir**	**0.61 350**	PG	**Pg**	**20 54 24.2**	**-0.4**
URLA	**Izmir**	**0.61 350**	*i* P	**Pg**	**20 54 23.2**	**-1.4**
URLA			*i* S	**Sg**	**20 54 29.9**	**-2.6**
URLA	**Izmir**	**0.61 350**	P	**Pg**	**20 54 23.2**	**-1.4**
URLA	**Izmir**	**0.61 350**	*e*Pg	**Pg**	**20 54 24.2**	**-0.4**
URLA			S	**Sg**	**20 54 30.0**	**-2.6**
YKAV	**Yalikavak-Bodr**	**0.77 146**	PG	**Pg**	**20 54 27.6**	**0.0**
YKAV	**Yalikavak-Bodr**	**0.77 146**	*e*Pg	**Pg**	**20 54 27.6**	**0.0**
CHOS	**Chios island**	**0.82 319**	PG	**Pb**	**20 54 29.1**	**+0.1**
CHOS			SG	**Sb**	**20 54 41.3**	**+1.2**
CHOS	**Chios island**	**0.82 319**	P	**Pg**	**20 54 28.5**	**-0.2**
CHOS			S	**Sb**	**20 54 40.2**	**+0.2**
CHOS			AML	AML	20 54 41.7	
	comp=E,587μm,0.2s					
CHOS			AML	AML	20 54 42.9	
	comp=N,388μm,0.3s					
CHOS	**Chios island**	**0.82 319**	P	**Pg**	**20 54 28.2**	**-0.5**
CHOS			S	**Sg**	**20 54 39.8**	**+0.4**
CHOS	**Chios island**	**0.82 319**	P	**Pg**	**20 54 28.4**	**-0.2**
CHOS	**Chios island**	**0.82 319**	*e*Pg	**Pb**	**20 54 29.1**	**+0.1**
CHOS			S	**Sg**	**20 54 39.8**	**+0.4**
CHOS			*e*Sg	**Sb**	**20 54 41.3**	**+1.2**
BODT	**Bodrum**	**0.84 147**	PG	**Pg**	**20 54 28.6**	**-0.3**
BODT			SG	**Sb**	**20 54 40.8**	**+0.4**
BODT	**Bodrum**	**0.84 147**	P	**Pg**	**20 54 27.9**	**-1.0**
BODT			S	**Sb**	**20 54 40.8**	**+0.4**
BODT	**Bodrum**	**0.84 147**	P	**Pg**	**20 54 27.9**	**-1.0**
BODT	**Bodrum**	**0.84 147**	*e*Pg	**Pg**	**20 54 28.6**	**-0.3**
BODT			S	**Sb**	**20 54 40.8**	**+0.4**
KRBN	**Karaburun**	**0.84 350**	PG	**Pb**	**20 54 29.4**	**+0.1**
KRBN	**Karaburun**	**0.84 350**	*e*Pg	**Pb**	**20 54 29.4**	**+0.1**
BDRM	**Kayabasi**	**0.90 141**	*i* P	**Pb**	**20 54 30.8**	**+0.6**
BDRM			*i* S	**Sb**	**20 54 43.0**	**+0.9**
BDRM	**Kayabasi**	**0.90 141**	P	**Pb**	**20 54 30.8**	**+0.6**
BDRM			S	**Sb**	**20 54 43.0**	**+0.9**
AYDN	**Tasoluk**	**0.91 96**	*i* P	**Pg**	**20 54 30.1**	**-0.2**
AYDN			*i* S	**Sg**	**20 54 40.8**	**-1.5**
AYDN	**Tasoluk**	**0.91 96**	P	**Pg**	**20 54 30.1**	**-0.2**
AYDN			S	**Sg**	**20 54 40.8**	**-1.5**
AYDB	**Zeytinkoy-Aydi**	**0.93 78**	PG	**Pg**	**20 54 30.6**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	**0.93 78**	*e*Pg	**Pg**	**20 54 30.6**	**-0.1**
FOCM	**Fo˘§a**	**0.95 360**	PG	**Pb**	**20 54 31.4**	**+0.3**
FOCM	**Fo˘§a**	**0.95 360**	*e*Pg	**Pb**	**20 54 31.4**	**+0.3**
MLSB	**Milas**	**0.95 119**	PG	**Pg**	**20 54 30.9**	**-0.1**
MLSB	**Milas**	**0.95 119**	*e*Pg	**Pg**	**20 54 30.9**	**-0.1**
APE	**Apeiranthos**	**1.18 235**	PN	**Pn**	**20 54 35.8**	**+0.7**
APE	**Apeiranthos**	**1.18 235**	P	**Pg**	**20 54 35.0**	**-0.5**
APE			S	**Sg**	**20 54 50.7**	**-0.2**
APE			AML	AML	20 54 54.5	
	comp=E,177μm,0.1s					
APE			AML	AML	20 54 54.5	
	comp=N,158μm,0.2s					
APE	**Apeiranthos**	**1.18 235**	P	**Pg**	**20 54 34.7**	**-0.8**
APE			S	**Sg**	**20 54 51.0**	**+0.1**
APE	**Apeiranthos**	**1.18 235**	P	**Pg**	**20 54 34.7**	**-0.8**
APE	**Apeiranthos**	**1.18 235**	*e*Pn	**Pn**	**20 54 35.8**	**+0.7**
APE			S	**Sg**	**20 54 50.9**	**+0.1**
DKL	**Dikili**	**1.31 6**	PN	**Pg**	**20 54 38.4**	**+0.4**
DKL	**Dikili**	**1.31 6**	*e*Pn	**Pg**	**20 54 38.4**	**+0.4**
YER	**Yerkesik**	**1.38 117**	PN	**Pg**	**20 54 38.9**	**-0.4**
YER	**Yerkesik**	**1.38 117**	P	**Pn**	**20 54 37.0**	**-0.9**
YER	**Yerkesik**	**1.38 117**	P	**Pn**	**20 54 37.0**	**-0.9**
YER	**Yerkesik**	**1.38 117**	*e*Pn	**Pg**	**20 54 38.9**	**-0.4**
AKHS	**Akhisar**	**1.40 37**	*i* P	**Pn**	**20 54 38.0**	**-0.1**
AKHS			*i* S	**Sn**	**20 54 57.1**	**+0.6**
AKHS	**Akhisar**	**1.40 37**	P	**Pn**	**20 54 38.0**	**-0.1**
AKHS			S	**Sn**	**20 54 57.1**	**+0.6**
PRK	**Paraskevi**	**1.52 346**	P	**Pb**	**20 54 40.8**	**-0.1**
PRK			S	**Sb**	**20 55 01.0**	**+0.8**
PRK			AML	AML	20 55 03.9	
	comp=N,387μm,0.6s					
PRK			AML	AML	20 55 05.7	
	comp=E,335μm,0.9s					
PRK	**Paraskevi**	**1.52 346**	P	**Pn**	**20 54 40.6**	**+0.8**
PRK			S	**Sb**	**20 55 01.2**	**+1.0**
AYVA	**Ayvalik**	**1.54 359**	*i* P	**Pb**	**20 54 41.5**	**+0.3**
AYVA			*i* S	**Sg**	**20 55 01.7**	**-0.7**
AYVA	**Ayvalik**	**1.54 359**	P	**Pb**	**20 54 41.5**	**+0.3**
AYVA			S	**Sg**	**20 55 01.7**	**-0.7**
SIGR	**SIGRI**	**1.60 335**	PN	**Pb**	**20 54 42.5**	**+0.3**
SIGR	**SIGRI**	**1.60 335**	P	**Pn**	**20 54 41.4**	**+0.6**
SIGR			S	**Sg**	**20 55 03.8**	**-0.6**
SIGR			AML	AML	20 55 07.4	
	comp=E,121μm,0.4s					
SIGR			AML	AML	20 55 12.1	
	comp=N,146μm,0.5s					
SIGR	**SIGRI**	**1.60 335**	P	**Pn**	**20 54 41.5**	**+0.6**
SIGR	**SIGRI**	**1.60 335**	*e*Pn	**Pb**	**20 54 42.5**	**+0.3**
SIGR			S	**Sb**	**20 55 03.5**	**+1.1**
MANT	**Manisa**	**1.61 63**	*i* P	**Pg**	**20 54 45.0**	**+1.3**
MANT			*i* S	**Sn**	**20 55 00.2**	**-1.8**
MANT	**Manisa**	**1.61 63**	P	**Pg**	**20 54 45.0**	**+1.3**
MANT			S	**Sn**	**20 55 00.2**	**-1.8**
KULA	**Kula-Manisa**	**1.69 63**	PN	**Pb**	**20 54 43.4**	**-0.4**
KULA	**Kula-Manisa**	**1.69 63**	*e*Pn	**Pb**	**20 54 43.4**	**-0.4**
TURN	**Turunc**	**1.73 120**	PN	**Pn**	**20 54 41.4**	**-1.2**
TURN	**Turunc**	**1.73 120**	*e*Pn	**Pn**	**20 54 41.4**	**-1.2**
KARY	**Karystos**	**1.84 279**	P	**Pn**	**20 54 43.2**	**-0.9**
KARY	**Karystos**	**1.84 279**	P	**Pn**	**20 54 44.0**	**-0.1**
BALB	**Balikesir**	**2.08 25**	PN	**Pn**	**20 54 48.9**	**+1.5**
BALB	**Balikesir**	**2.08 25**	*e*Pn	**Pn**	**20 54 48.9**	**+1.5**
FETY	**Fethiye**	**2.19 120**	PN	**Pn**	**20 54 50.1**	**+1.2**
FETY	**Fethiye**	**2.19 120**	*e*Pn	**Pn**	**20 54 50.1**	**+1.2**
SIMA	**Simav-Kutahya**	**2.20 53**	PN	**Pn**	**20 54 50.5**	**+1.3**
SIMA	**Simav-Kutahya**	**2.20 53**	*e*Pn	**Pn**	**20 54 50.5**	**+1.3**
DION	**Dionisos Attik**	**2.24 279**	P	**Pn**	**20 54 49.2**	**-0.4**
DION	**Dionisos Attik**	**2.24 279**	P	**Pn**	**20 54 49.9**	**+0.3**

*ATH **05** 20:58:23.8,37.°74N×26.°78E,h19km, ML2.6/5, Error ellipse: s-maj=1.8km s-min=1.1km az=102.0*
*ISK **05** 20:58:23.3,37.°75N×26.°70E,h5km, ML2.8/16*
*ISCJB **05** 20:58:24.3±0.4,37.°78N±0.°02×26.°74E±0.°03,h4km±4km, Error ellipse: s-maj=4.2km s-min=2.7km az=151.2*
*DDA **05** 20:58:24.5,37.°82N×26.°78E,h7km, Md2.7*
*THE **05** 20:58:24.7,37.°79N×26.°78E,h6km±1km, ML2.7/6, Error ellipse: s-maj=1.4km s-min=0.6km az=74.0*
*CSEM **05** 20:58:24.6±0.1,37.°75N×26.°71E,h5km, ML2.6, Error ellipse: s-maj=3.7km s-min=2.1km az=60.0*

ISC 05 20:58:24.4±0.8, 37.°75N±0.°02×26.°74E±0.°02, h14km±5km, n81, σ0°93/114, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.09 118**		P	**Pg**	**20 58 27.9**	**+0.5**
SMG				S	**Sg**	**20 58 28.8**	**-0.6**
SMG				AML	AML	20 58 29.6	
	comp=E,19894μm,0.3s						
SMG				AML	AML	20 58 29.8	
	comp=N,40829μm,0.3s						
SMG	**Samos**	**0.09 118**		P	**Pg**	**20 58 27.5**	**+0.2**
SMG				S	**Sg**	**20 58 29.2**	**-0.1**
SMG	**Samos**	**0.09 118**		P	**Pg**	**20 58 27.5**	**+0.2**
SMG				S	**Sg**	**20 58 29.2**	**-0.1**
DGB	**˜zmir**	**0.32 20**	*i* P	**Pg**	**20 58 30.5**	**-0.5**
DGB			*i* S	**Sg**	**20 58 33.5**	**-2.0**
ZEY	**˜zmir**	**0.52 339**	*i* P	**Pg**	**20 58 34.1**	**-0.6**
ZEY			*i* S	**Sg**	**20 58 37.8**	**-3.9**
URLA	**Izmir**	**0.62 349**	PG	**Pg**	**20 58 36.3**	**-0.2**
URLA			SG	**Sg**	**20 58 43.9**	**-0.9**
URLA	**Izmir**	**0.62 349**	*i* P	**Pg**	**20 58 35.3**	**-1.3**
URLA			*i* S	**Sg**	**20 58 42.6**	**-2.2**
URLA	**Izmir**	**0.62 349**	P	**Pg**	**20 58 35.3**	**-1.3**
URLA	**Izmir**	**0.62 349**	*e*Pg	**Pg**	**20 58 36.3**	**-0.2**
URLA			S	**Sg**	**20 58 42.6**	**-2.2**
URLA			*e*Sg	**Sg**	**20 58 43.9**	**-0.9**
YKAV	**Yalikavak-Bodr**	**0.76 145**	PG	**Pb**	**20 58 39.5**	**+0.2**
YKAV	**Yalikavak-Bodr**	**0.76 145**	*e*Pg	**Pb**	**20 58 39.5**	**+0.2**
BODT	**Bodrum**	**0.82 146**	PG	**Pb**	**20 58 40.6**	**+0.1**
BODT	**Bodrum**	**0.82 146**	P	**Pg**	**20 58 39.8**	**-0.5**
BODT			S	**Sn**	**20 58 53.1**	**-0.5**
BODT	**Bodrum**	**0.82 146**	P	**Pg**	**20 58 39.8**	**-0.5**
BODT	**Bodrum**	**0.82 146**	*e*Pg	**Pb**	**20 58 40.6**	**+0.1**
BODT			S	**Sn**	**20 58 53.1**	**-0.5**
CHOS	**Chios island**	**0.84 320**	PG	**Pg**	**20 58 39.9**	**-0.6**
CHOS	**Chios island**	**0.84 320**	P	**Pb**	**20 58 41.2**	**+0.4**
CHOS			S	**Sg**	**20 58 51.7**	**+0.1**
CHOS			AML	AML	20 58 53.6	
	comp=E,976μm,0.2s					
CHOS			AML	AML	20 58 54.8	
	comp=N,569μm,0.3s					
CHOS	**Chios island**	**0.84 320**	P	**Pg**	**20 58 40.0**	**-0.6**
CHOS			S	**Sb**	**20 58 52.9**	**+1.0**
CHOS	**Chios island**	**0.84 320**	P	**Pg**	**20 58 40.0**	**-0.6**
CHOS			S	**Sb**	**20 58 52.1**	**+0.2**
KRBN	**Karaburun**	**0.86 350**	PG	**Pg**	**20 58 40.9**	**-0.1**
KRBN	**Karaburun**	**0.86 350**	*e*Pg	**Pg**	**20 58 40.9**	**-0.1**
BDRM	**Kayabasi**	**0.88 140**	*i* P	**Pn**	**20 58 42.4**	**0.0**
BDRM			*i* S	**Sn**	**20 58 54.8**	**-0.3**
BDRM	**Kayabasi**	**0.88 140**	P	**Pn**	**20 58 42.4**	**0.0**
BDRM			S	**Sn**	**20 58 54.8**	**-0.3**
AYDN	**Tasoluk**	**0.91 95**	*i* P	**Pg**	**20 58 41.6**	**-0.3**
AYDN			*i* S	**Sg**	**20 58 53.8**	**0.0**
AYDN	**Tasoluk**	**0.91 95**	P	**Pg**	**20 58 41.6**	**-0.3**
AYDN			S	**Sg**	**20 58 53.8**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**0.93 77**	PG	**Pb**	**20 58 42.8**	**+0.4**
AYDB	**Zeytinkoy-Aydi**	**0.93 77**	*e*Pg	**Pb**	**20 58 42.8**	**+0.4**
MLSB	**Milas**	**0.94 118**	PG	**Pn**	**20 58 43.2**	**0.0**
MLSB	**Milas**	**0.94 118**	*e*Pg	**Pn**	**20 58 43.2**	**0.0**
FOCM	**Fo˘§a**	**0.96 360**	PG	**Pg**	**20 58 42.9**	**-0.1**
FOCM	**Fo˘§a**	**0.96 360**	*e*Pg	**Pg**	**20 58 42.9**	**-0.1**
APE	**Apeiranthos**	**1.18 235**	PN	**Pg**	**20 58 46.5**	**-0.5**
APE	**Apeiranthos**	**1.18 235**	P	**Pg**	**20 58 46.8**	**-0.2**
APE			S	**Sn**	**20 59 02.7**	**+0.3**
APE			AML	AML	20 59 06.0	
	comp=Z,172μm,0.2s					
APE			AML	AML	20 59 07.4	
	comp=N,240μm,0.2s					
APE	**Apeiranthos**	**1.18 235**	P	**Pg**	**20 58 46.6**	**-0.5**
APE			S	**Sn**	**20 59 04.7**	**+2.3**
APE	**Apeiranthos**	**1.18 235**	P	**Pg**	**20 58 46.7**	**-0.4**
APE			S	**Sn**	**20 59 02.9**	**+0.5**
PSRA	**Psara**	**1.22 311**	P	**Pg**	**20 58 48.4**	**0.5**
PSRA	**Psara**	**1.22 311**	P	**Pg**	**20 58 47.9**	**0.0**
DATC	**Datca-Mugla**	**1.23 143**	PN	**Pg**	**20 58 48.3**	**+0.2**
DATC	**Datca-Mugla**	**1.23 143**	*e*Pn	**Pg**	**20 58 48.3**	**+0.2**
DKL	**Dikili**	**1.33 6**	PN	**Pg**	**20 58 49.9**	**0.0**
DKL	**Dikili**	**1.33 6**	*e*Pn	**Pg**	**20 58 49.9**	**0.0**
YER	**Yerkesik**	**1.37 116**	PN	**Pg**	**20 58 50.9**	**+0.1**
YER	**Yerkesik**	**1.37 116**	P	**Pb**	**20 58 49.9**	**0.0**
YER			S	**Sg**	**20 59 07.9**	**-0.7**
YER	**Yerkesik**	**1.37 116**	P	**Pb**	**20 58 49.9**	**0.0**
YER	**Yerkesik**	**1.37 116**	*e*Pn	**Pg**	**20 58 50.9**	**+0.1**
YER			S	**Sg**	**20 59 07.9**	**-0.7**
PRK	**Paraskevi**	**1.54 346**	P	**Pn**	**20 58 52.2**	**+0.8**
PRK			S	**Sg**	**20 59 13.9**	**0.0**
PRK			AML	AML	20 59 18.1	
	comp=E,449μm,0.4s					
PRK			AML	AML	20 59 18.2	
	comp=N,546μm,0.5s					
PRK	**Paraskevi**	**1.54 346**	P	**Pn**	**20 58 51.1**	**-0.3**
PRK			S	**Sn**	**20 59 11.4**	**+0.2**
PRK	**Paraskevi**	**1.54 346**	P	**Pb**	**20 58 52.4**	**-0.3**
PRK			S	**Sn**	**20 59 11.4**	**+0.2**
ANAF	**Anafi Island**	**1.59 209**	P	**Pb**	**20 58 53.2**	**-0.4**
ANAF			S	**Sg**	**20 59 15.0**	**-0.6**
ANAF	**Anafi Island**	**1.59 209**	P	**Pb**	**20 58 53.2**	**-0.4**
ANAF			S	**Sg**	**20 59 15.0**	**-0.6**
MANT	**Manisa**	**1.61 62**	*i* P	**Pg**	**20 58 55.4**	**0.0**
MANT			*i* S	**Sn**	**20 59 12.6**	**-0.8**
MANT	**Manisa**	**1.61 62**	P	**Pg**	**20 58 55.4**	**0.0**
MANT			S	**Sn**	**20 59 12.6**	**-0.8**
SIGR	**SIGRI**	**1.62 335**	PN	**Pb**	**20 58 53.9**	**-0.1**
SIGR	**SIGRI**	**1.62 335**	P	**Pn**	**20 58 53.1**	**+0.6**
SIGR			S	**Sg**	**20 59 16.7**	**+0.3**
SIGR			AML	AML	20 59 19.3	
	comp=E,158μm,0.4s					
SIGR			AML	AML	20 59 24.6	
	comp=N,208μm,0.6s					
SIGR	**SIGRI**	**1.62 335**	P	**Pn**	**20 58 52.0**	**-0.5**
SIGR			S	**Sn**	**20 59 13.4**	**+0.2**
SIGR	**SIGRI**	**1.62 335**	P	**Pn**	**20 58 53.4**	**+0.9**
SIGR	**SIGRI**	**1.62 335**	*e*Pn	**Pb**	**20 58 53.9**	**-0.1**
SIGR			S	**Sn**	**20 59 13.4**	**+0.2**
KULA	**Kula-Manisa**	**1.70 63**	PN	**Pb**	**20 58 55.9**	**+0.5**
KULA	**Kula-Manisa**	**1.70 63**	*e*Pn	**Pb**	**20 58 55.9**	**+0.5**
TURN	**Turunc**	**1.72 120**	PN	**Pn**	**20 58 53.5**	**-0.4**
TURN	**Turunc**	**1.72 120**	*e*Pn	**Pn**	**20 58 53.5**	**-0.4**
DALY	**Dalyan (Mu¨la**	**1.79 121**	PN	**Pb**	**20 58 56.9**	**0.0**
DALY	**Dalyan (Mu¨la**	**1.79 121**	*e*Pn	**Pb**	**20 58 56.9**	**0.0**
ARG	**Arkhangelos**	**1.89 144**	PN	**Pb**	**20 58 58.2**	**-0.5**
ARG	**Arkhangelos**	**1.89 144**	P	**Pb**	**20 58 57.6**	**-1.1**
ARG	**Arkhangelos**	**1.89 144**	P	**Pb**	**20 58 57.3**	**-1.4**
ARG	**Arkhangelos**	**1.89 144**	*e*Pn	**Pb**	**20 58 58.2**	**-0.5**
BALB	**Balikesir**	**2.09 25**	PN	**Pb**	**20 59 01.1**	**-0.9**
BALB	**Balikesir**	**2.09 25**	*e*Pn	**Pb**	**20 59 01.1**	**-0.9**
FETY	**Fethiye**	**2.18 120**	PN	**Pb**	**20 59 02.5**	**-1.1**
FETY	**Fethiye**	**2.18 120**	*e*Pn	**Pb**	**20 59 02.5**	**-1.1**
SIMA	**Simav-Kutahya**	**2.21 52**	PN	**Pb**	**20 59 02.9**	**-1.3**
SIMA	**Simav-Kutahya**	**2.21 52**	*e*Pn	**Pb**	**20 59 02.9**	**-1.3**
KARP	**Karpathos**	**2.22 171**	P	**Pn**	**20 59 00.8**	**0.0**
KARP	**Karpathos**	**2.22 171**	P	**Pn**	**20 59 01.3**	**+0.4**
GADA	**Gvkgeada**	**2.52 345**	PN	**Pn**	**20 59 06.9**	**+1.9**
GADA	**Gvkgeada**	**2.52 345**	*e*Pn	**Pn**	**20 59 06.9**	**+1.9**
KRBG	**Karabiga-Canak**	**2.68 9**	PN	**Pn**	**20 59 09.6**	**+2.5**
KRBG	**Karabiga-Canak**	**2.68 9**	*e*Pn	**Pn**	**20 59 09.6**	**+2.5**
TVSB	**Tavsanli**	**2.73 51**	PN	**Pn**	**20 59 10.3**	**+2.4**
TVSB	**Tavsanli**	**2.73 51**	*e*Pn	**Pn**	**20 59 10.3**	**+2.4**

*IDC **05** 21:02:31.4±0.8,39.°23N×20.°72E,h0km, mb3.7/12, mb1 3.7/19, mb1mx3.6/64, mbtmp3.6/19, ML3.6/6, Error ellipse: s-maj=15.4km s-min=14.1km az=153.0*
*ISCJB **05** 21:02:32.9±0.3,39.°24N±0.°01×20.°68E±0.°02,h4km±2km, mb3.7/12, Error ellipse: s-maj=2.6km s-min=1.4km az=149.5*
*THE **05** 21:02:33.8,39.°23N×20.°74E,h0km±1km, ML3.5/33, Error ellipse: s-maj=1.2km s-min=0.4km az=267.0*
*ATH **05** 21:02:33.3,39.°23N×20.°74E,h14km±1km, ML3.6/23, Error ellipse: s-maj=1.0km s-min=0.5km az=253.0*
*CSEM **05** 21:02:33.8±0.1,39.°23N×20.°74E,h2km, ML3.9, Error ellipse: s-maj=2.5km s-min=1.3km az=59.0*
*BEO **05** 21:02:35.8±1.3,39.°29N×20.°70E,h6km±5km*
*PDG **05** 21:02:35.5±0.9,39.°36N×20.°75E,h9km±1km, ML3.6/12, Error ellipse: s-maj=0.9km s-min=0.9km az=90.0*

ISC 05 21:02:33.5±0.9, 39.°23N±0.°01×20.°72E±0.°01, h10km±6km, n377, σ1°47/514, mb3.8/12, 40C-22D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DSL	**Palaion Diasel**	**0.31 107**		P	**Pg**	**21 02 38.1**	**-1.5**
DSL				S	**Sg**	**21 02 43.6**	**-0.1**
DSL				AML	AML	21 02 46.7	
	comp=N,73932μm,0.4s						
DSL				AML	AML	21 02 47.8	
	comp=E,53135μm,0.3s						
DSL	**Palaion Diasel**	**0.31 107**		P	**Pg**	**21 02 38.7**	**-0.9**
DSL				S	**Sg**	**21 02 44.1**	**+0.4**
DSL	**Palaion Diasel**	**0.31 107**		P	**Pg**	**21 02 38.8**	**-0.9**
DSL				S	**Sg**	**21 02 44.1**	**+0.4**
IGT	**Igoumenitsa**	**0.43 316**		*e*Pg	**Pg**	**21 02 41.9**	**+0.1**
IGT				*e*Sg	**Sb**	**21 02 49.9**	**+0.2**
IGT	**Igoumenitsa**	**0.43 316**		P	**Pg**	**21 02 42.0**	**+0.1**
IGT				S	**Sg**	**21 02 47.6**	**0.0**
IGT				AML	AML	21 02 52.9	
	comp=E,10423μm,0.6s						
IGT				AML	AML	21 02 54.0	
	comp=N,4857μm,0.4s						
IGT	**Igoumenitsa**	**0.43 316**		P	**Pg**	**21 02 41.7**	**-0.2**
IGT				S	**Sg**	**21 02 49.1**	**+1.6**
IGT	**Igoumenitsa**	**0.43 316**		P	**Pg**	**21 02 42.0**	**+0.1**
IGT				S	**Sg**	**21 02 47.9**	**+0.4**
LKD2	**Lefkada island**	**0.44 186**		P	**Pg**	**21 02 42.4**	**+0.3**
LKD2				S	**Sg**	**21 02 49.0**	**+1.2**
LKD2				AML	AML	21 02 52.3	
	comp=E,19617μm,0.6s						
LKD2

KFL	**Anninata**	**1.12 177**	P	**Pg**	**21 02 53.7**	**-1.1**
KFL			AML	AML	21 03 19.6	
	comp=E,7934µm,0.4s					
KFL			AML	AML	21 03 21.5	
	comp=N,8464µm,0.6s					
KFL	**Anninata**	**1.12 177**	P	**Pg**	**21 02 53.8**	**-1.1**
KFL			S	**Sn**	**21 03 11.2**	**+0.6**
KFL	**Anninata**	**1.12 177**	P	**Pg**	**21 02 54.1**	**-0.8**
KFL			S	**Sn**	**21 03 11.2**	**+0.6**
ANX	**Ano Chora**	**1.13 124**	P	**Pg**	**21 02 53.9**	**-1.3**
ANX			S	**Sb**	**21 03 11.1**	**+1.1**
ANX	**Ano Chora**	**1.13 124**	P	**Pg**	**21 02 54.2**	**-1.0**
ANX			S	**Sb**	**21 03 11.1**	**+1.1**
NEST	**Nestorio**	**1.21 12**	P	**Pn**	**21 02 57.4**	**+0.7**
NEST	**Nestorio**	**1.21 12**	P	**Pg**	**21 02 56.9**	**+0.1**
NEST			S	**Sn**	**21 03 14.0**	**+0.8**
NEST	**Nestorio**	**1.21 12**	P	**Pg**	**21 02 56.9**	**+0.1**
NEST			S	**Sn**	**21 03 14.0**	**+0.8**
EFP	**Efpalio**	**1.22 130**	P	**Pg**	**21 02 57.1**	**+0.2**
EFP			S	**Sn**	**21 03 13.7**	**+0.5**
EFP			AML	AML	21 03 21.5	
	comp=N,11354µm,0.8s					
EFP			AML	AML	21 03 22.9	
	comp=E,11035µm,0.6s					
EFP	**Efpalio**	**1.22 130**	P	**Pg**	**21 02 56.8**	**-0.1**
EFP			S	**Sn**	**21 03 14.9**	**+1.7**
EFP	**Efpalio**	**1.22 130**	P	**Pg**	**21 02 56.8**	**-0.1**
EFP			S	**Sb**	**21 03 13.3**	**+0.8**
UPR	**University Cam**	**1.26 138**	P	**Pg**	**21 02 57.8**	**+0.2**
UPR			S	**Sn**	**21 03 14.9**	**+0.8**
UPR	**University Cam**	**1.26 138**	P	**Pg**	**21 02 57.3**	**-0.3**
UPR			S	**Sb**	**21 03 14.5**	**+1.0**
AGG	**Agios Georgios**	**1.27 99**	P	**Pg**	**21 02 55.8**	**-2.0**
AGG			AML	AML	21 03 18.9	
	comp=N,18088µm,0.7s					
AGG			AML	AML	21 03 19.7	
	comp=E,13097µm,1.0s					
AGG	**Agios Georgios**	**1.27 99**	P	**Pg**	**21 02 56.5**	**-1.3**
AGG			S	**Sn**	**21 03 15.6**	**+1.1**
AGG	**Agios Georgios**	**1.27 99**	P	**Pg**	**21 02 56.5**	**-1.3**
AGG			S	**Sn**	**21 03 15.6**	**+1.1**
RLS	**Riolos of Patr**	**1.30 153**	P	**Pn**	**21 02 57.9**	**+0.1**
RLS			S	**Sb**	**21 03 14.9**	**0.0**
RLS			AML	AML	21 03 23.1	
	comp=N,4305µm,0.9s					
RLS			AML	AML	21 03 29.5	
	comp=E,3299µm,0.8s					
RLS	**Riolos of Patr**	**1.30 153**	P	**Pn**	**21 02 57.0**	**-0.8**
RLS			S	**Sn**	**21 03 17.2**	**+1.9**
RLS	**Riolos of Patr**	**1.30 153**	P	**Pn**	**21 02 57.9**	**+0.1**
RLS			S	**Sb**	**21 03 15.4**	**+0.5**
SERG	**Sergoula**	**1.32 127**	P	**Pn**	**21 02 58.4**	**+0.3**
SERG			S	**Sn**	**21 03 17.1**	**+1.3**
SERG	**Sergoula**	**1.32 127**	P	**Pn**	**21 02 58.4**	**+0.3**
SERG			S	**Sn**	**21 03 17.1**	**+1.3**
KZN	**Kozani**	**1.35 37**	P	**Pn**	**21 02 58.2**	**-0.2**
KZN			S	**Sn**	**21 03 17.5**	**+1.0**
KZN			AML	AML	21 03 27.4	
	comp=N,2349µm,1.2s					
KZN			AML	AML	21 03 29.8	
	comp=E,3050µm,0.5s					
KZN	**Kozani**	**1.35 37**	P	**Pn**	**21 02 58.0**	**-0.5**
KZN			S	**Sn**	**21 03 18.2**	**+1.7**
KZN	**Kozani**	**1.35 37**	P	**Pn**	**21 02 58.4**	**-0.1**
KZN			S	**Sn**	**21 03 17.2**	**+0.7**
TRIZ	**Trizonia**	**1.36 129**	P	**Pg**	**21 02 59.9**	**+0.3**
TRIZ	**Trizonia**	**1.36 129**	P	**Pg**	**21 02 59.7**	**+0.1**
TRIZ	**Trizonia**	**1.36 129**	P	**Pg**	**21 02 59.7**	**+0.1**
LRSO	**Larissa Observ**	**1.37 71**	P	**Pn**	**21 02 58.3**	**-0.3**
LRSO			S	**Sn**	**21 03 18.4**	**+1.6**
LRSO	**Larissa Observ**	**1.37 71**	P	**Pn**	**21 02 58.3**	**-0.3**
LRSO			S	**Sn**	**21 03 18.4**	**+1.6**
KALE	**Kalithea**	**1.39 126**	P	**Pn**	**21 02 59.4**	**+0.4**
KALE			S	**Sn**	**21 03 18.3**	**+0.9**
KALE			AML	AML	21 03 24.5	
	comp=E,4561µm,0.6s					
KALE			AML	AML	21 03 26.3	
	comp=N,5058µm,0.6s					
KALE	**Kalithea**	**1.39 126**	P	**Pn**	**21 02 59.0**	**0.0**
KALE			S	**Sn**	**21 03 19.3**	**+1.9**
KALE	**Kalithea**	**1.39 126**	P	**Pn**	**21 02 59.3**	**+0.4**
KALE			S	**Sn**	**21 03 18.3**	**+0.9**
LAKA	**Lakka**	**1.39 135**	P	**Pn**	**21 02 59.7**	**+0.7**
LAKA			S	**Sn**	**21 03 19.3**	**+1.8**
LAKA			AML	AML	21 03 25.8	
	comp=E,6204µm,0.8s					
LAKA			AML	AML	21 03 32.9	
	comp=N,3790µm,1.0s					
LAKA	**Lakka**	**1.39 135**	P	**Pn**	**21 02 59.2**	**+0.2**
LAKA			S	**Sn**	**21 03 19.4**	**+1.9**
LAKA	**Lakka**	**1.39 135**	P	**Pn**	**21 02 59.5**	**+0.5**
LAKA			S	**Sn**	**21 03 18.9**	**+1.4**
KBN	**Korca**	**1.40 2**	P	**Pg**	**21 03 01.0**	**+0.7**
KBN	**Korca**	**1.40 2**	P	**Pg**	**21 03 01.0**	**+0.7**
ALIK	**Aliki, Aigiali**	**1.45 131**	P	**Pb**	**21 03 01.2**	**+0.6**
ALIK			S	**Sg**	**21 03 20.8**	**+0.6**
ALIK	**Aliki, Aigiali**	**1.45 131**	P	**Pb**	**21 03 01.2**	**+0.6**
ALIK			S	**Sg**	**21 03 20.8**	**+0.6**
DRO	**Drossia**	**1.49 148**	P	**Pn**	**21 03 00.2**	**-0.2**
DRO			S	**Sg**	**21 03 21.7**	**+0.3**
DRO	**Drossia**	**1.49 148**	P	**Pn**	**21 03 00.2**	**-0.2**
DRO			S	**Sg**	**21 03 21.7**	**+0.3**
AXAR	**Agios Charalam**	**1.58 106**	P	**Pb**	**21 03 03.5**	**+0.7**
AXAR			S	**Sg**	**21 03 24.6**	**+0.3**
AXAR	**Agios Charalam**	**1.58 106**	P	**Pb**	**21 03 03.5**	**+0.7**
AXAR			S	**Sg**	**21 03 24.6**	**+0.3**
KTI	**Kastanea**	**1.59 42**	P	**Pn**	**21 03 02.7**	**+0.9**
KTI	**Kastanea**	**1.59 42**	P	**Pn**	**21 03 02.7**	**+0.9**
LIT	**Litokhoron**	**1.62 57**	P	**Pn**	**21 03 01.7**	**-0.4**
LIT			AML	AML	21 03 30.7	
	comp=E,1963µm,0.5s					
LIT			AML	AML	21 03 33.8	
	comp=N,2222µm,0.5s					
LIT	**Litokhoron**	**1.62 57**	P	**Pn**	**21 03 02.6**	**+0.4**
LIT			S	**Sg**	**21 03 25.2**	**-0.4**
LIT	**Litokhoron**	**1.62 57**	P	**Pn**	**21 03 02.6**	**+0.4**
LIT			S	**Sg**	**21 03 25.2**	**-0.4**
DSF	**Desfina**	**1.63 119**	P	**Pg**	**21 03 04.6**	**-0.1**
DSF			S	**Sg**	**21 03 25.7**	**-0.2**
DSF			AML	AML	21 03 30.5	
	comp=N,5033µm,0.7s					
DSF			AML	AML	21 03 30.9	
	comp=E,3138µm,0.7s					
DSF	**Desfina**	**1.63 119**	P	**Pn**	**21 03 02.6**	**+0.3**
DSF			S	**Sg**	**21 03 25.8**	**-0.1**
DSF	**Desfina**	**1.63 119**	P	**Pb**	**21 03 04.1**	**+0.4**
DSF			S	**Sg**	**21 03 25.6**	**-0.2**
FNA	**Florina**	**1.64 18**	*e*Pg	**Pn**	**21 03 03.3**	**+0.9**
FNA			*e*Sg	**Sg**	**21 03 25.6**	**-0.5**
FNA	**Florina**	**1.64 18**	P	**Pn**	**21 03 03.6**	**+1.2**
FNA			S	**Sg**	**21 03 27.0**	**+0.9**
FNA			AML	AML	21 03 33.9	
	comp=E,2493µm,0.5s					
FNA			AML	AML	21 03 35.4	
	comp=N,2166µm,0.5s					
FNA	**Florina**	**1.64 18**	P	**Pn**	**21 03 03.3**	**+0.9**
FNA			S	**Sg**	**21 03 25.9**	**-0.2**
FNA	**Florina**	**1.64 18**	*e*Pg	**Pn**	**21 03 03.3**	**+0.9**
FNA	**Florina**	**1.64 18**	P	**Pn**	**21 03 03.6**	**+1.2**
FNA			*e*Sg	**Sg**	**21 03 25.6**	**-0.5**
FYTO	**Fytoko, Volos**	**1.73 83**	P	**Pn**	**21 03 04.2**	**+0.5**
FYTO	**Fytoko, Volos**	**1.73 83**	P	**Pn**	**21 03 04.5**	**+0.9**
GUR	**Goura**	**1.81 135**	P	**Pb**	**21 03 07.0**	**+0.3**
GUR			AML	AML	21 03 40.3	
	comp=N,5052µm,1.2s					
GUR			AML	AML	21 03 42.4	
	comp=E,4070µm,0.6s					
GUR	**Goura**	**1.81 135**	P	**Pb**	**21 03 06.6**	**-0.2**
GUR			S	**Sb**	**21 03 30.1**	**+0.5**
GUR	**Goura**	**1.81 135**	P	**Pb**	**21 03 06.6**	**-0.2**
GUR			S	**Sb**	**21 03 30.1**	**+0.5**
BIA	**Bitola**	**1.85 14**	*i* Pn	**Pg**	**21 03 08.5**	**-0.4**
AMT	**Artemida-Makis**	**1.86 155**	P	**Pb**	**21 03 08.3**	**+0.7**
AMT	**Artemida-Makis**	**1.86 155**	P	**Pn**	**21 03 06.8**	**+1.3**
AMT			S	**Sb**	**21 03 31.7**	**+0.7**
AMT	**Artemida-Makis**	**1.86 155**	P	**Pn**	**21 03 06.8**	**+1.3**
AMT			S	**Sb**	**21 03 31.7**	**+0.7**
LKR	**Lokris**	**1.87 107**	P	**Pb**	**21 03 07.2**	**-0.5**
LKR	**Lokris**	**1.87 107**	P	**Pn**	**21 03 07.1**	**+1.6**
LKR			S	**Sb**	**21 03 31.4**	**+0.3**
LKR	**Lokris**	**1.87 107**	P	**Pn**	**21 03 07.1**	**+1.6**
LKR			S	**Sb**	**21 03 31.4**	**+0.3**
OHR	**Ohrid**	**1.88 2**	*i* Pn	**Pg**	**21 03 10.2**	**+0.6**
OHR			*i* Sn	**Sg**	**21 03 35.5**	**+1.4**
XOR	**Xorichti**	**1.92 85**	P	**Pn**	**21 03 06.1**	**-0.2**
XOR	**Xorichti**	**1.92 85**	P	**Pn**	**21 03 06.9**	**+0.6**
XOR	**Xorichti**	**1.92 85**	P	**Pn**	**21 03 06.9**	**+0.6**
THAL	**Thalero**	**1.93 127**	P	**Pn**	**21 03 07.2**	**+0.9**
THAL	**Thalero**	**1.93 127**	P	**Pn**	**21 03 07.5**	**+1.1**
SCTE	**Santa Cesarea**	**1.93 297**	P	**Pn**	**21 03 07.1**	**+0.7**
SCTE	**Santa Cesarea**	**1.93 297**	P	**Pn**	**21 03 07.6**	**+1.2**
NEO	**Neokhori**	**1.94 87**	P	**Pn**	**21 03 06.2**	**-0.4**
NEO	**Neokhori**	**1.94 87**	P	**Pn**	**21 03 07.1**	**+0.5**
NEO	**Neokhori**	**1.94 87**	P	**Pn**	**21 03 07.1**	**+0.5**
PROD	**Prodromos**	**1.96 119**	P	**Pn**	**21 03 08.5**	**+1.7**
PROD	**Prodromos**	**1.96 119**	P	**Pn**	**21 03 08.3**	**+1.5**
SMIA	**Simia**	**1.97 99**	P	**Pb**	**21 03 09.3**	**-0.1**
SMIA	**Simia**	**1.97 99**	P	**Pb**	**21 03 08.8**	**-0.6**
SMIA			S	**Sb**	**21 03 33.6**	**-0.4**
SMIA	**Simia**	**1.97 99**	P	**Pb**	**21 03 08.8**	**-0.6**
SMIA			S	**Sb**	**21 03 33.6**	**-0.4**
TRIP	**Tripoli**	**2.09 144**	P	**Pn**	**21 03 09.9**	**+1.3**
TRIP			S	**Sb**	**21 03 37.0**	**-0.5**
TRIP	**Tripoli**	**2.09 144**	P	**Pn**	**21 03 09.9**	**+1.3**
TRIP			S	**Sb**	**21 03 37.0**	**-0.5**
MES3	**Kyparissia**	**2.11 159**	P	**Pn**	**21 03 08.0**	**-0.9**
MES3	**Kyparissia**	**2.11 159**	P	**Pn**	**21 03 09.2**	**+0.3**
LTK	**Loutraki**	**2.13 124**	P	**Pb**	**21 03 11.8**	**-0.4**
LTK	**Loutraki**	**2.13 124**	P	**Pb**	**21 03 11.7**	**-0.5**
LTK	**Loutraki**	**2.13 124**	P	**Pn**	**21 03 11.2**	**+2.0**
SKIA	**Skiathos**	**2.13 91**	P	**Pb**	**21 03 11.2**	**-1.0**
SKIA	**Skiathos**	**2.13 91**	P	**Pn**	**21 03 10.9**	**+1.7**
SKIA	**Skiathos**	**2.13 91**	P	**Pn**	**21 03 10.9**	**+1.7**
GRG	**Griva**	**2.16 36**	P	**Pn**	**21 03 10.6**	**+1.0**
GRG	**Griva**	**2.16 36**	P	**Pn**	**21 03 10.8**	**+1.3**
GRG	**Griva**	**2.16 36**	P	**Pn**	**21 03 10.8**	**+1.3**
LOUT	**Loutraki**	**2.16 124**	P	**Pn**	**21 03 09.6**	**+0.1**
LOUT	**Loutraki**	**2.16 124**	P	**Pn**	**21 03 10.3**	**+0.8**
TIR	**Tirane**	**2.22 343**	*e*Pn	**Pb**	**21 03 12.9**	**-0.8**
TIR	**Tirane**	**2.22 343**	⇓*i*P	**Pb**	**21 03 12.9**	**-0.8**
TIR	**Tirane**	**2.22 343**	P	**Pb**	**21 03 12.9**	**-0.8**
TIR	**Tirane**	**2.22 343**	P	**Pn**	**21 03 12.4**	**+2.1**
TIR	**Tirane**	**2.22 343**	*e*Pn	**Pb**	**21 03 12.9**	**-0.8**
TIR			S	**Sb**	**21 03 42.3**	**+1.1**
VIL2	**Platees**	**2.24 116**	P	**Pb**	**21 03 13.5**	**-0.5**
ITM	**Ithomi**	**2.25 155**	P	**Pb**	**21 03 14.2**	**-0.1**
ITM	**Ithomi**	**2.25 155**	P	**Pb**	**21 03 13.3**	**-1.0**
ITM			S	**Sb**	**21 03 41.6**	**-0.6**
ITM	**Ithomi**	**2.25 155**	P	**Pb**	**21 03 13.3**	**-1.0**
ITM			S	**Sb**	**21 03 41.6**	**-0.6**
VLX	**Vlachokerasia**	**2.27 144**	P	**Pn**	**21 03 10.8**	**-0.3**
VLX	**Vlachokerasia**	**2.27 144**	P	**Pn**	**21 03 11.7**	**+0.6**
HORT	**Hortiatis**	**2.29 52**	P	**Pn**	**21 03 12.9**	**+1.5**
HORT	**Hortiatis**	**2.29 52**	P	**Pn**	**21 03 13.0**	**+1.6**
HORT	**Hortiatis**	**2.29 52**	P	**Pn**	**21 03 12.8**	**+1.5**
VILL	**Villia**	**2.29 117**	P	**Pn**	**21 03 13.2**	**+1.8**
VILL	**Villia**	**2.29 117**	P	**Pn**	**21 03 13.2**	**+1.8**
PAIG	**Paliouri**	**2.39 72**	P	**Pn**	**21 03 12.6**	**-0.1**
PAIG	**Paliouri**	**2.39 72**	P	**Pn**	**21 03 12.6**	**-0.1**
PLG	**Polygyros**	**2.39 61**	P	**Pn**	**21 03 12.4**	**-0.3**
PLG	**Polygyros**	**2.39 61**	P	**Pn**	**21 03 13.3**	**+0.5**
PLG	**Polygyros**	**2.39 61**	P	**Pn**	**21 03 13.3**	**+0.5**
PYL	**PYLOS**	**2.46 161**	P	**Pn**	**21 03 15.1**	**+1.3**
PYL	**PYLOS**	**2.46 161**	P	**Pn**	**21 03 15.0**	**+1.3**
PYL	**PYLOS**	**2.46 161**	P	**Pn**	**21 03 15.2**	**+1.5**
VAY	**Valandovo**	**2.53 33**	*e*Pn	**Pn**	**21 03 16.9**	**+2.3**
VAY	**Valandovo**	**2.53 33**	P	**Pn**	**21 03 15.3**	**+0.7**
VAY	**Valandovo**	**2.53 33**	*i* Pn	**Pn**	**21 03 17.2**	**+2.6**
VAY	**Valandovo**	**2.53 33**	P	**Pn**	**21 03 15.3**	**+0.7**
VAY	**Valandovo**	**2.53 33**	*e*Pn	**Pn**	**21 03 16.9**	**+2.3**
KNT	**Kendrikon**	**2.55 40**	P	**Pn**	**21 03 16.4**	**+1.4**
KNT	**Kendrikon**	**2.55 40**	P	**Pn**	**21 03 16.4**	**+1.4**
KNT	**Kendrikon**	**2.55 40**	P	**Pn**	**21 03 16.4**	**+1.4**
SOH	**Sokhos**	**2.58 51**	P	**Pn**	**21 03 16.3**	**+1.0**
SOH			AML	AML	21 03 54.2	
	comp=N,668µm,0.8s					
SOH			AML	AML	21 03 55.9	
	comp=E,1352µm,1.3s					
SOH	**Sokhos**	**2.58 51**	P	**Pn**	**21 03 16.5**	**+1.2**
SOH	**Sokhos**	**2.58 51**	P	**Pn**	**21 03 16.5**	**+1.2**
DID	**Didima**	**2.62 130**	P	**Pn**	**21 03 18.1**	**+2.2**
DID	**Didima**	**2.62 130**	P	**Pn**	**21 03 17.8**	**+1.9**
DID	**Didima**	**2.62 130**	P	**Pn**	**21 03 17.8**	**+1.9**
EREA	**Eretria**	**2.63 107**	P	**Pn**	**21 03 18.4**	**+2.3**
EREA	**Eretria**	**2.63 107**	P	**Pn**	**21 03 18.4**	**+2.3**
KRND	**KRANIDI**	**2.65 133**	P	**Pn**	**21 03 19.3**	**+2.9**
KRND	**KRANIDI**	**2.65 133**	P	**Pn**	**21 03 18.3**	**+2.0**
KRND	**KRANIDI**	**2.65 133**	P	**Pn**	**21 03 18.3**	**+2.0**
ATH	**Athens Observa**	**2.66 117**	P	**Pn**	**21 03 19.2**	**+2.8**
ATH	**Athens Observa**	**2.66 117**	P	**Pn**	**21 03 18.6**	**+2.2**
STIP	**Stip**	**2.71 24**	*i* Pn	**Pb**	**21 03 20.6**	**-1.4**
ATHU	**Athens Univers**	**2.71 117**	P	**Pn**	**21 03 16.0**	**-1.1**
ATHU			AML	AML	21 04 05.7	
	comp=E,276µm,0.8s					
ATHU			AML	AML	21 04 09.3	
	comp=N,555µm,1.1s					
ATHU	**Athens Univers**	**2.71 117**	P	**Pn**	**21 03 17.4**	**+0.3**
ATHU	**Athens Univers**	**2.71 117**	P	**Pn**	**21 03 17.4**	**+0.3**
PTL	**Penteli**	**2.73 115**	P	**Pn**	**21 03 18.9**	**+1.5**
PTL	**Penteli**	**2.73 115**	P	**Pn**	**21 03 19.1**	**+1.7**
PTL	**Penteli**	**2.73 115**	P	**Pn**	**21 03 18.9**	**+1.5**
OUR	**Ouranopolis**	**2.75 65**	P	**Pn**	**21 03 16.8**	**-0.8**
OUR	**Ouranopolis**	**2.75 65**	P	**Pn**	**21 03 18.5**	**+0.9**
OUR	**Ouranopolis**	**2.75 65**	P	**Pn**	**21 03 18.5**	**+0.9**
DION	**Dionisos Attik**	**2.77 114**	P	**Pn**	**21 03 19.2**	**+1.3**
DION	**Dionisos Attik**	**2.77 114**	P	**Pn**	**21 03 19.3**	**+1.4**
DYR	**Agios Nikonas**	**2.77 152**	P	**Pb**	**21 03 21.7**	**-1.4**
DYR	**Agios Nikonas**	**2.77 152**	P	**Pn**	**21 03 20.4**	**+2.4**
DYR	**Agios Nikonas**	**2.77 152**	P	**Pn**	**21 03 20.4**	**+2.4**
VLY	**Voula,Athens**	**2.77 119**	P	**Pn**	**21 03 20.3**	**+2.3**
VLY	**Voula,Athens**	**2.77 119**	P	**Pn**	**21 03 20.0**	**+2.0**
VLY	**Voula,Athens**	**2.77 119**	P	**Pn**	**21 03 20.0**	**+2.0**
SKO	**Skopje**	**2.80 11**	*e*Pn	**Pn**	**21 03 21.1**	**+2.8**
SKO	**Skopje**	**2.80 11**	*i* Pn	**Pb**	**21 03 21.9**	**-1.7**
SKO	**Skopje**	**2.80 11**	*e*Pn	**Pn**	**21 03 21.1**	**+2.8**
SRS	**Serrai**	**2.90 48**	*e*Pn	**Pn**	**21 03 21.5**	**+1.8**
SRS	**Serrai**	**2.90 48**	P	**Pn**	**21 03 19.4**	**-0.3**
SRS	**Serrai**	**2.90 48**	P	**Pn**	**21 03 20.4**	**+0.7**
SRS	**Serrai**	**2.90 48**	P	**Pn**	**21 03 20.4**	**+0.7**
SRS	**Serrai**	**2.90 48**	*e*Pn	**Pn**	**21 03 21.5**	**+1.8**
TAR1	**Taranto**	**2.94 297**	*e*Pn	**Pn**	**21 03 21.9**	**+1.6**
ULC	**Ulcinj**	**2.96 338**	⇑*i*Pn	**Pn**	**21 03 21.8**	**+1.3**
ULC			*e*Sn	**Sn**	**21 03 58.4**	**+2.3**
ULC	**Ulcinj**	**2.96 338**	⇑*i*Pn	**Pn**	**21 03 21.8**	**+1.3**
ULC			*e*Sn	**Sn**	**21 03 58.4**	**+2.3**
FASA	**Fasano**	**3.03 303**	*e*Pn	**Pn**	**21 03 23.6**	**+2.1**
VLI	**Veliai**	**3.06 144**	P	**Pn**	**21 03 24.4**	**+2.5**
VLI	**Veliai**	**3.06 144**	P	**Pn**	**21 03 24.1**	**+2.2**
VLI	**Veliai**	**3.06 144**	P	**Pn**	**21 03 24.1**	**+2.2**
TIP	**Timpagrande**	**3.08 270**	⇑*i*P	**Pn**	**21 03 24.4**	**+2.2**
TIP	**Timpagrande**	**3.08 270**	P	**Pn**	**21 03 23.2**	**+1.0**
TIP	**Timpagrande**	**3.08 270**	P	**Pn**	**21 03 23.7**	**+1.5**
TIP			S	**Sb**	**21 04 04.7**	**-1.3**
MASS	**Massafra**	**3.09 298**	*e*Pn	**Pn**	**21 03 23.3**	**+1.0**
DRME	**Dracevica, Mon**	**3.18 339**	⇑*i*Pn	**Pn**	**21 03 25.4**	**+1.8**
DRME			*e*Sn	**Sn**	**21 04 04.0**	**+2.5**
DRME	**Dracevica, Mon**	**3.18 339**	⇑*i*Pn	**Pn**	**21 03 25.4**	**+1.8**
DRME			*e*Sn	**Sn**	**21 04 04.0**	**+2.5**
KKB	**Krupnik**	**3.19 34**	*i* P	Pn	21 03 06.4	-17
NVR	**Nevrokopi**	**3.21 48**	P	**Pn**	**21 03 24.6**	**+0.7**
NVR	**Nevrokopi**	**3.21 48**	P	**Pn**	**21 03 25.1**	**+1.1**
NVR	**Nevrokopi**	**3.21 48**	P	**Pn**	**21 03 25.1**	**+1.1**
NOCI	**Noci**	**3.21 300**	P	**Pn**	**21 03 24.1**	**+0.1**
NOCI	**Noci**	**3.21 300**	P	**Pn**	**21 03 25.1**	**+1.1**
BUM	**Brajici-Budva**	**3.37 336**	⇓*i*Pn	**Pn**	**21 03 28.0**	**+1.8**
BUM			*e*Sn	**Sn**	**21 04 08.6**	**+2.3**
BUM	**Brajici-Budva**	**3.37 336**	⇓*i*Pn	**Pn**	**21 03 28.0**	**+1.8**
BUM			*e*Sn	**Sn**	**21 04 08.6**	**+2.3**
PDG	**Podgorica**	**3.39 341**	*e*Pn	**Pn**	**21 03 28.0**	**+1.6**
PDG	**Podgorica**	**3.39 341**	⇑*i*P	**Pn**	**21 03 28.9**	**+2.5**
PDG	**Podgorica**	**3.39 341**	*e*Pn	**Pn**	**21 03 28.0**	**+1.6**
PDG	**Podgorica**	**3.39 341**	⇑*i*P	**Pn**	**21 03 28.9**	**+2.5**
PDG			*e*Sn	**Sn**	**21 04 10.8**	**+4.1**
PDG			S	**Sb**	**21 04 11.6**	**-3.2**
TTG	**Podgorica**	**3.39 341**	⇓*i*Pn	**Pn**	**21 03 28.3**	**+1.9**
TTG			*e*Sn	**Sn**	**21 04 10.8**	**+4.1**
MATE	**Matera**	**3.40 296**	⇑*i*P	**Pn**	**21 03 30.1**	**+3.6**
MATE	**Matera**	**3.40 296**	⇑*i*P	**Pn**	**21 03 30.1**	**+3.6**
MATE			S	**Sb**	**21 04 13.0**	**-2.1**
PVY	**Plav**	**3.41 351**	⇓*i*Pn	**Pn**	**21 03 28.5**	**+1.6**
PVY			*e*Sn	**Sn**	**21 04 09.5**	**+2.0**
PVY	**Plav**	**3.41 351**	⇓*i*Pn	**Pn**	**21 03 28.5**	**+1.6**
PVY			*e*Sn	**Sn**	**21 04 09.5**	**+2.0**
KYTH	**Kithira**	**3.48 147**	P	**Pn**	**21 03 31.7**	**+3.9**
SG1	**Sgolgore (BA)**	**3.50 299**	*e*Pn	**Pn**	**21 03 29.2**	**+1.3**
CEME	**Cevo**	**3.59 338**	⇑*i*Pn	**Pn**	**21 03 30.4**	**+1.2**
CEME			*e*Sn	**Sn**	**21 04 12.3**	**+0.6**
CEME	**Cevo**	**3.59 338**	⇑*i*Pn	**Pn**	**21 03 30.4**	**+1.2**
CEME			*e*Sn	**Sn**	**21 04 12.3**	**+0.6**
HCY	**Herceg Novi**	**3.63 333**	⇓*i*Pn	**Pn**	**21 03 30.3**	**+0.5**
HCY			*e*Sn	**Sn**	**21 04 14.4**	**+1.6**
HCY	**Herceg Novi**	**3.63 333**	⇓*i*Pn	**Pn**	**21 03 30.3**	**+0.5**
HCY			*e*Sn	**Sn**	**21 04 14.4**	**+1.6**
BARS	**Barje**	**3.68 13**	*e*Pn	**Pn**	**21 03 33.5**	**+3.0**
BARS	**Barje**	**3.68 13**	*e*Pn	**Pn**	**21 03 33.5**	**+3.0**
BEY	**Berane**	**3.69 351**	*e*Pn	**Pn**	**21 03 32.9**	**+2.2**
BEY			*e*Sn	**Sn**	**21 04 16.1**	**+1.7**
IVA	**Berane**	**3.69 351**	*e*Pn	**Pn**	**21 03 32.9**	**+2.2**
IVA			*e*Sn	**Sn**	**21 04 16.1**	**+1.7**
KOME	**Kolasin**	**3.73 346**	*e*Pn	**Pn**	**21 03 34.1**	**+2.8**
KOME			*e*Sn	**Sn**	**21 04 19.4**	**+4.1**
KOME	**Kolasin**	**3.73 346**	*e*Pn	**Pn**	**21 03 34.1**	**+2.8**
KOME			*e*Sn	**Sn**	**21 04 19.4**	**+4.1**
NKME	**Niksic**	**3.78 340**	⇑*i*Pn	**Pn**	**21 03 33.4**	**+1.5**
NKME			*e*Sn	**Sn**	**21 04 18.0**	**+1.5**
NKME	**Niksic**	**3.78 340**	⇑*i*Pn	**Pn**	**21 03 33.4**	**+1.5**
NKME			*e*Sn	**Sn**	**21 04 18.0**	**+1.5**
VTS	**Vitosha**	**3.85 28**	*e*Pn	**Pn**	**21 03 35.6**	**+2.6**
VTS	**Vitosha**	**3.85 28**	⇑*i*P	**Pn**	**21 03 33.9**	**+0.9**
VTS	**Vitosha**	**3.85 28**	⇑*i*P	**Pn**	**21 03 33.9**	**+0.9**
VTS	**Vitosha**	**3.85 28**	*e*Pn	**Pn**	**21 03 35.6**	**+2.6**
VTS			S	**Sn**	**21 04 21.1**	**+2.7**
TREB	**Trebinje**	**3.92 334**	*e*Pn	**Pn**	**21 03 34.0**	**+0.2**
ANKY	**Antikythira Is**	**3.93 148**	P	**Pn**	**21 03 36.5**	**+2.6**
ANKY	**Antikythira Is**	**3.93 148**	P	**Pn**	**21 03 36.5**	**+2.6**
SELS	**Selova**	**4.00 4**	*e*Pn	**Pn**	**21 03 37.3**	**+2.4**
BRY	**Bratogost**	**4.02 337**	⇓*i*Pn	**Pn**	**21 03 36.8**	**+1.5**
BRY			*e*Sn	**Sn**	**21 04 24.3**	**+1.7**
BRY	**Bratogost**	**4.02 337**	⇓*i*Pn	**Pn**	**21 03 36.8**	**+1.5**
BRY			*e*Sn	**Sn**	**21 04 24.3**	**+1.7**
SJES	**Sjenica**	**4.07 352**	*e*Pn	**Pn**	**21 03 38.1**	**+2.2**
UPM	**Unac-Piva**	**4.20 342**	⇑*i*Pn	**Pn**	**21 03 40.0**	**+2.2**
UPM			*e*Sn	**Sn**	**21 04 28.1**	**+1.1**
UPM	**Unac-Piva**	**4.20 342**	⇑*i*Pn	**Pn**	**21 03 40.0**	**+2.2**
UPM			*e*Sn	**Sn**	**21 04 28.1**	**+1.1**
CHOS	**Chios island**	**4.25 100**	P	**Pn**	**21 03 40.1**	**+1.7**
CHOS	**Chios island**	**4.25 100**	P	**Pn**	**21 03 40.2**	**+1.8**
ZAPS	**Zavoj**

comp=N,6.2nm,0.7s
ABTA Abfaltersbach 9.62 324 Pn **Pn 21 04 53.1 +1.1**
comp=N,0.7nm,0.2s
MOA Molln 9.81 334 *e*Pn **Pn 21 04 56.2 +1.7**
comp=N,1.4nm,0.3s
MOA *e*Sn **Sn 21 06 43.7 -1.0**
comp=N,1.1nm,0.3s
MOA Molln 9.81 334 Pn **Pn 21 04 56.2 +1.7**
comp=N,1.4nm,0.3s
BRTR Keskin Array B 10.00 83 Pn **Pn 21 04 58.5 +1.2**
comp=N,0.2nm,0.3s,baz=256,slow=12,SNR=5.8
WTTA Wattenberg 10.41 323 *e*Sn **Sn 21 06 57.7 -1.9**
VRAC Vranov 10.50 345 ⇓*i*P **Pn 21 05 06.2 +2.2**
VRAC Vranov 10.50 345 ⇓*i*P **Pn 21 05 06.2 +2.2**
MOTA Moosalm 10.71 322 *e*Pn **Pn 21 05 07.8 +0.7**
comp=N,2.3nm,0.5s,SNR=5.6
MOTA Moosalm 10.71 322 Pn **Pn 21 05 07.8 +0.7**
comp=N,2.3nm,0.5s,SNR=5.6
MORC Moravsky Berou 10.79 349 ⇑*i*P **Pn 21 05 10.1 +2.1**
MORC Moravsky Berou 10.79 349 ⇑*i*P **Pn 21 05 10.1 +2.1**
GERES GERESS Array B 10.86 335 Pn **Pn 21 05 09.6 +0.6**
comp=N,0.3nm,0.3s,baz=156,slow=14,SNR=8.7
MMAI Mount Meron Ar 13.38 113 Pn **Pn 21 05 44.4 +0.8**
comp=N,0.6nm,0.3s,baz=316,slow=10,SNR=3.2
ESDC Sonseca Array 19.06 279 P **P 21 06 54.9 -1.0**
comp=N,0.2nm,0.3s,baz=77,slow=10,SNR=6.0
HFS Hagfors 21.39 350 P **P 21 07 20.2 -0.9**
comp=N,0.8nm,0.4s,baz=165,slow=11,SNR=8.9
FINES FINESS Array B 22.49 7 P **P 21 07 32.6 -0.2**
comp=N,0.7nm,0.4s,baz=180,slow=10,SNR=9.6
NB2 NORSAR Subarra 22.62 348 P **P 21 07 34.2 -0.1**
comp=Z,1.3nm,0.6s,baz=163,slow=11
NOA NORSAR Array B 22.62 348 P **P 21 07 33.0 -1.4**
comp=Z,9.3nm,1.2s,baz=158,slow=11,SNR=6.1
EKA Eskdalemuir Ar 22.67 323 P **P 21 07 34.6 -0.2**
comp=Z,2.0nm,0.5s,baz=119,slow=9.2,SNR=13
ARCES ARCESS Array B 30.48 3 P **P 21 08 44.7 -1.4**
comp=Z,1.4nm,0.8s,baz=189,slow=10.0,SNR=5.4
TORD Torodi Ar. Bea 30.95 218 P **P 21 08 50.9 +0.1**
comp=Z,1.2nm,0.9s,baz=24,slow=5.2,SNR=4.3
KOWA Kowa 32.87 228 P **P 21 09 07.4 -0.2**
comp=Z,2.7nm,1.0s,baz=54,slow=8.7,SNR=2.1
BVAR Borovoye Array 36.33 51 P **P 21 09 37.9 +0.6**
comp=Z,0.5nm,0.7s,baz=287,slow=12,SNR=3.5
KURBB Kurchatov Arra 41.49 54 P **P 21 10 19.4 -1.0**
comp=Z,2.3nm,1.1s,baz=285,slow=8.7,SNR=6.4
MKAR Makanchi Array 44.63 59 P **P 21 10 44.6 -1.4**
comp=Z,0.8nm,0.4s,baz=279,slow=7.8,SNR=20
ZALV Zalesovo Beam 44.88 49 P **P 21 10 46.6 -1.2**
comp=Z,1.3nm,0.5s,baz=278,slow=10,SNR=6.7
SONM Songino Array 59.68 51 P **P 21 12 39.1 +1.1**
comp=Z,0.4nm,0.5s,baz=275,slow=7.1,SNR=3.9

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*DDA **05** 21:06:42.3, 38.°52N×43.°85E, h7km, Md2.5*
*ISCJB **05** 21:06:43.9±0.9, 38.°53N±0.°04×43.°71E±0.°09, h24km±9km, Error ellipse: s-maj=12.1km s-min=6.8km az=3.0*
*CSEM **05** 21:06:43.0±0.3, 38.°49N×43.°74E, h15km, ML2.0, Error ellipse: s-maj=8.0km s-min=5.8km az=96.0*
*ISK **05** 21:06:44.0, 38.°76N×43.°50E, h7km, ML2.0/3*
ISC 05 21:06:42.4±1.2, 38.°55N±0.°03×43.°79E±0.°06, h21km±3km, n16, σ0°86/26, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TVAN	**Van**	**0.30**	**266**	*i* P		**21 06 49.1**	**-0.2**
TVAN				*i* S		**21 06 55.0**	**+0.9**
TVAN	**Van**	**0.30**	**266**	P		**21 06 49.1**	**-0.2**
TVAN				S		**21 06 55.0**	**+0.9**
VANB	**Van**	**0.32**	**278**	PG		**21 06 49.1**	**-0.4**
VANB				SG		**21 06 54.2**	**-0.1**
VANB	**Van**	**0.32**	**278**	*e*Pg		**21 06 49.1**	**-0.4**
VANB				*e*Sg		**21 06 54.2**	**-0.1**
VMUR	**Van-Muradiye**	**0.47**	**339**	*i* P		**21 06 52.7**	**+0.6**
VMUR				*i* S		**21 07 02.1**	**+0.2**
VMUR	**Van-Muradiye**	**0.47**	**339**	P		**21 06 52.7**	**+0.6**
VMUR				S		**21 07 02.1**	**+0.2**
GEVA	**Gevas**	**0.62**	**248**	*i* P		**21 06 54.7**	**-0.1**
GEVA				*i* S		**21 07 02.9**	**-0.3**
GEVA	**Gevas**	**0.62**	**248**	P		**21 06 54.7**	**-0.1**
GEVA				S		**21 07 02.9**	**-0.3**
HAKT	**HAKKARI**	**0.99**	**184**	*i* P		**21 07 00.7**	**-0.4**
HAKT				*i* S		**21 07 15.0**	**+0.1**
HAKT	**HAKKARI**	**0.99**	**184**	P		**21 07 00.7**	**-0.4**
HAKT				S		**21 07 15.0**	**+0.1**
AGRB	**Hanur-Agry**	**1.20**	**329**	PG		**21 07 01.9**	**-2.3**
GURO	**Guroymak-BITLI**	**1.38**	**271**	PN		**21 07 06.8**	**+0.2**
GURO	**Guroymak-BITLI**	**1.38**	**271**	*e*Pn		**21 07 06.8**	**+0.2**
SIRT	**Sirnak**	**1.50**	**226**	PN		**21 07 12.1**	**+2.5**
GNI	**Garni**	**1.76**	**24**	PN		**21 07 14.8**	**+0.8**
GNI	**Garni**	**1.76**	**24**	*e*Pn		**21 07 14.8**	**+0.8**

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*JMA **05** 21:20:21.3±0.3, 34.°92N×141.°33E, h48km±3km, M2.7*
*ISCJB **05** 21:20:22.8±1.3, 34.°9N±0.°1×141.°2E±0.°2, h48km, mb3.6/3, Error ellipse: s-maj=22.4km s-min=13.4km az=156.8*
*IDC **05** 21:20:26.8±2.3, 34.°06N×138.°80E, h0km, mb3.5/3, mb1 3.6/4, mb1mx3.3/70, mbtmp3.4/4, ML2.7/1, Error ellipse: s-maj=108.4km s-min=23.1km az=76.0*
ISC 05 21:20:24.4±1.5, 34.°94N±0.°09×141.°2E±0.°2, h48km, n9, σ2°08/9, mb3.6/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**0.36**	**217**	P		**21 20 31.1**	**-2.3**
BSO1				*e*X		21 20 37.8	
BSO3	**Boso 3**	**0.62**	**257**	P		**21 20 35.1**	**-1.6**
BSO4	**Boso 4**	**0.74**	**274**	P		**21 20 36.9**	**-1.6**
CHOJ	**Chosi**	**0.82**	**338**	P		**21 20 37.0**	**-2.7**
JOD2	**Odawara 2**	**1.79**	**281**	P		**21 20 50.9**	**-2.0**
MJAR	**Matsushiro Arr**	**2.94**	**304**	Pn		**21 21 09.0**	**+0.4**
1.5nm,0.3s,baz=159,slow=13,SNR=8.4
KURBB Kurchatov Arra 47.20 310 P **P 21 28 53.2 +1.0**
0.3nm,0.5s,baz=86,slow=7.8,SNR=6.9
WRA Warramunga Arr 54.98 188 P **P 21 29 51.5 +0.7**
0.5nm,0.5s,baz=4.4,slow=7.5,SNR=13
ASAR Alice Springs 58.70 188 P **P 21 30 18.7 +1.6**
0.5nm,1.0s,baz=7.0,slow=8.4,SNR=3.4

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*ISCJB **05** 21:25:06.9±0.4, 4.°89N±0.°04×125.°23E±0.°09, h250km, mb3.4/12, Error ellipse: s-maj=12.4km s-min=5.2km az=174.1*
*IDC **05** 21:25:13.1±4.9, 4.°95N×125.°25E, h309km±55km, mb3.1/11, mb1 3.3/13, mb1mx3.1/61, mbtmp3.9/13, Error ellipse: s-maj=34.0km s-min=11.8km az=80.0*
*DJA **05** 21:25:27.1±1.5, 4.°N±12.°×12.°5E±.°, h69km±51km, M4.3/4, mb3.9/3, MLv4.5/4*
ISC 05 21:25:07.7±0.6, 4.°91N±0.°05×125.°2E±0.°1, h250km, n25, σ1°84/28, mb3.5/12, 1C-1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**1.20**	**348**	⇓*i*P		**21 25 45.2**	**+1.1**
GSPH				*i* S		**21 26 13.5**	**+0.8**
SGSI	**Sangihe**	**1.26**	**165**	P		**21 25 45.9**	**+1.5**
SKMP	**Bagumbayan, Su**	**1.73**	**338**	*e*P		**21 25 48.5**	**+0.7**
DMPH	**Davao City--Mi**	**2.18**	**8**	⇑*e*P		**21 25 54.2**	**+2.3**
DMPH				*e*S		**21 26 29.9**	**+0.1**
MATI	**Mati**	**2.28**	**28**	*e*P		**21 25 53.0**	**+0.1**
MATI				*e*S		**21 26 27.4**	**-1.0**
LBMI	**Labuha**	**5.97**	**157**	P		**21 26 37.6**	**+2.0**
LBMI				S		**21 27 42.0**	**-3.9**
APSI	**Ampana**	**6.78**	**212**	P		**21 26 48.9**	**+3.2**
SANI	**Sanana**	**6.96**	**173**	P		21 26 55.5	+7.6
SANI				S		21 28 00.1	-8.3
MPSI	**Mapaga**	**6.97**	**230**	P		**21 26 48.4**	**+0.3**
NLAI	**Namlea**	**8.31**	**167**	P		21 27 13.7	+8.6
NLAI				S		**21 28 34.7**	**-5.0**
BATI	**Baumata**	**15.09**	**186**	P		**21 28 31.3**	**+2.1**
6.0nm,0.3s,baz=9.0,slow=3.9,SNR=6.3
JAY Jayapura 17.16 115 P **P 21 28 53.5 +2.0**
0.9nm,0.3s,baz=349,slow=19,SNR=4.8
FITZ Fitzroy Crossi 22.87 179 P **P 21 29 51.3 +1.6**
4.1nm,1.0s,baz=5.0,slow=8.8,SNR=11
WRA Warramunga Arr 26.28 160 P **P 21 30 20.8 +0.2**
0.5nm,0.4s,baz=330,slow=11,SNR=11
ASAR Alice Springs 29.65 164 P **P 21 30 50.2 -0.1**
0.3nm,0.3s,baz=344,slow=7.3,SNR=7.1
KSRS Korea Array 32.49 4 P **P 21 31 15.6 +0.7**
0.7nm,0.4s,baz=181,slow=11,SNR=7.9
STKA Stephens Creek 39.78 158 P **P 21 32 17.4 +0.7**

0.9nm,0.3s,baz=349,slow=6.7,SNR=6.0
KLR Kul'dur 44.51 6 P **P 21 32 53.8 -0.7**
0.1nm,0.5s,baz=176,slow=5.6,SNR=5.9
SONM Songino Array 45.71 342 P **P 21 33 03.3 -0.8**
0.4nm,0.7s,baz=142,slow=4.9,SNR=2.4
MKAR Makanchi Array 55.72 326 P **P 21 34 18.4 -0.1**
0.3nm,0.3s,baz=120,slow=7.5,SNR=8.8
KURBB Kurchatov Arra 59.93 328 P **P 21 34 46.9 -0.7**
0.6nm,0.6s,baz=127,slow=6.3,SNR=9.1
BVAR Borovoye Array 65.50 327 P **P 21 35 23.8 -0.5**
0.3nm,0.4s,baz=85,slow=1.7,SNR=4.7
BRTR Keskin Array B 88.09 310 P **P 21 37 30.5 0.0**
0.3nm,0.4s,baz=112,slow=6.4,SNR=2.9
FINES FINESS Array B 90.08 332 P **P 21 37 37.4 -1.7**
0.6nm,0.8s,baz=351,slow=6.4,SNR=3.4
TORD Torodi Ar. Bea 121.10 288 PKP **PKPdf 21 43 30.5 -1.2**
0.3nm,0.4s,baz=66,slow=1.8,SNR=10

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*IDC **05** 21:28:53.9±2.3, 5.°85S×133.°60E, h0km, mb3.9/4, mb1 3.9/8, mb1mx3.6/53, mbtmp3.8/8, ML3.8/4, Error ellipse: s-maj=110.1km s-min=24.3km az=83.0*
*ISCJB **05** 21:28:57.0±0.9, 6.°04S±0.°06×133.°4E±0.°2, h33km, mb3.7/4, Error ellipse: s-maj=23.5km s-min=7.9km az=178.3*
ISC 05 21:28:57.2±1.2, 5.°89S±0.°06×133.°5E±0.°2, h33km, n8, σ2°98/12, mb3.8/4, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.46**	**336**	Pn		**21 30 15.3**	**-1.0**
2.0nm,0.3s,baz=126,slow=19,SNR=4.0
SIJI Sn **Sn 21 31 13.1 -5.0**
5.8nm,0.3s,baz=226,slow=23,SNR=9.3
WRA Warramunga Arr 13.99 177 Pn **Pn 21 32 12.9 -0.4**
0.4nm,0.3s,baz=353,slow=13,SNR=11
WRA Sn **Sn 21 34 45.1 -2.5**
0.2nm,0.3s,baz=360,slow=23,SNR=3.7
FITZ Fitzroy Crossi 14.36 212 Pn **Pn 21 32 20.5 +2.2**
1.0nm,0.3s,baz=29,slow=11,SNR=23
FITZ Sn **Sn 21 34 54.6 -1.9**
0.3nm,0.3s,baz=36,slow=8.5,SNR=3.6
ASAR Alice Springs 17.68 179 P **Pn 21 33 02.1 +1.0**
0.3nm,0.3s,baz=356,slow=13,SNR=7.5
ASAR S **Sn 21 36 12.8 -4.3**
0.0nm,0.3s,baz=356,slow=25,SNR=2.6
MKAR Makanchi Array 69.26 325 P **P 21 40 04.1 +3.0**
1.5nm,0.8s,baz=126,slow=7.9,SNR=10
ZALV Zalesovo Beam 72.18 332 P **P 21 40 20.2 +1.5**
0.2nm,0.3s,baz=127,slow=4.5,SNR=2.7
KURBB Kurchatov Arra 73.43 327 P **P 21 40 28.4 +2.3**
0.7nm,0.6s,baz=127,slow=4.6,SNR=8.5
BVAR Borovoye Array 79.02 327 P **P 21 40 59.5 +1.6**
0.6nm,0.6s,baz=98,slow=10,SNR=5.2

NNC 05 21:37:10.4±3.1, 37.°03N×70.°40E, h0km, mb3.5, mpv3.1, 4C-2D, Error ellipse: s-maj=23.9km s-min=19.8km az=177.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**3.85**	**38**	⇓Pn		21 38 11.2	0.0
2.1nm,0.4s
SFK ⇑Sn Sn 21 38 58.7 +1.4
3.1nm,0.5s
MNAS Manas 5.69 16 ⇑Pn Pn 21 38 36.5 +0.1
1.9nm,1.0s
MNAS ⇑Sn Sn 21 39 43.1 +0.6
0.8nm,0.3s
KK31 Karatay Array 6.07 1 ⇓Pn Pn 21 38 41.4 -0.1
1.2nm,0.5s,baz=184,slow=14,SNR=5.1
KK31 ⇑Sn Sn 21 39 53.3 +1.6
0.9nm,0.5s,baz=179,slow=21,SNR=8.7

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*IDC **05** 21:38:05.9±1.4, 29.°75N×50.°59E, h0km, mb3.7/11, mb1 3.7/14, mb1mx3.6/63, mbtmp3.7/14, ML3.3/3, Error ellipse: s-maj=29.3km s-min=20.2km az=172.0*
*ISCJB **05** 21:38:07.6±0.6, 29.°62N±0.°05×50.°53E±0.°06, h24km, mb3.6/11, Error ellipse: s-maj=9.1km s-min=5.4km az=38.5*
*TEH **05** 21:38:07.7, 29.°80N×50.°79E, h10km, ML3.6*
*CSEM **05** 21:38:09.3±0.7, 29.°74N×50.°80E, h2km, ML3.5, Error ellipse: s-maj=18.2km s-min=7.4km az=64.0*
ISC 05 21:38:09.2±0.8, 29.°70N±0.°07×50.°72E±0.°06, h24km, n41, σ1°87/43, mb3.6/11, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AHBU	**AHRAM**	**0.98**	**149**	*e*Pg		**21 38 28.7**	**+1.3**
IKAZ	**Kazeroun**	**0.98**	**85**	*e*Pg		**21 38 25.4**	**-2.4**
IKAZ				*e*		21 38 31.5	
comp=Z,14μm,0.1s
IKAZ Kazeroun 0.98 85 *e*Pg **Pn 21 38 25.3 -2.5**
SHI Shiraz 1.56 92 *e*Pn **Pn 21 38 37.9 +2.3**
SHI *e*Sg **Sb 21 38 59.7 +2.7**
SHI *e* 21 39 01.7
comp=Z,13μm,0.4s
SHI Shiraz 1.56 92 *e*Pn **Pn 21 38 38.0 +2.3**
IBRJ Brojen 2.25 12 *e*Pn **Pn 21 38 46.7 +1.5**
IBRJ *e* 21 39 24.1
comp=Z,2μm,0.2s
ZNGN Zangian 2.41 3 *e*Pn **Pn 21 38 48.8 +1.3**
ZNGN *e* 21 39 26.8
comp=Z,99nm,0.4s
ZNGN Zangian 2.41 3 *e*Pn **Pn 21 38 49.3 +1.8**
GHIR Ghir-Karzin 2.44 125 *e*Pn **Pn 21 38 49.6 +1.9**
IRAM Ramesheh 2.54 34 *e*Pn **Pn 21 38 50.6 +1.4**
IRAM *e* 21 38 58.5
comp=Z,2μm,0.1s
IRAM Ramesheh 2.54 34 *e*Pn **Pn 21 38 50.3 +1.1**
ROKH ROKH 2.65 6 *e*Pn **Pn 21 38 52.1 +1.4**
ROKH *e* 21 39 39.9
comp=Z,99nm,0.3s
ROKH ROKH 2.65 6 *e*Pn **Pn 21 38 52.2 +1.5**
JHRM Jahrom 2.77 115 *e*Pn **Pn 21 38 55.1 +2.9**
IGAR Gharneh 2.92 23 *e*Pn **Pn 21 38 56.6 +2.2**
IGAR *e* 21 38 58.6
comp=Z,2μm,0.1s
ISAD Sadrabad 3.37 48 *e* 21 39 05.3
ISAD *e*Pn **Pn 21 39 02.4 +1.7**
comp=Z,1μm,0.1s
IZEF Zefreh 3.47 23 *e* 21 39 06.1
IZEF *e*Pn **Pn 21 39 03.6 +1.6**
comp=Z,746nm,0.1s
IKLH Kolahrood 3.68 11 *e* 21 39 08.4
IKLH *e*Pn **Pn 21 39 06.3 +1.4**
comp=Z,657nm,0.1s
IMEH Mehriz 3.76 62 *e* 21 39 10.5
IMEH *e*Pn **Pn 21 39 08.3 +2.4**
comp=Z,962nm,0.1s
KHMZ Khomeyn 4.08 351 *e*Pn **Pn 21 39 11.4 +1.1**
KHGB Koh Gabri 5.04 81 *e*Pn **Pn 21 39 26.1 +2.6**
IKOM Komasi 5.23 329 *e*Pn **Pn 21 39 28.7 +2.7**
NGRK Negar Kerman 5.23 89 *e*Pn **Pn 21 39 28.9 +2.6**
IBND Bandar-abas 5.59 112 *e*Pn **Pn 21 39 33.1 +2.2**
IBND *e* 21 39 37.5
comp=Z,701nm,0.1s
IBND Bandar-abas 5.59 112 *e*Pn **Pn 21 39 33.4 +2.5**
KHSK Kohestak 6.31 116 *e*Pn **Pn 21 39 40.7 -0.1**
TABS Tabas 6.72 53 *e*Pn **Pn 21 39 47.3 +0.7**
WSAR Wadi Sarin 9.57 130 Pn **Pn 21 40 25.5 -0.1**
comp=Z,0.3nm,0.3s,baz=330,slow=8.1,SNR=15
WSAR Sn **Sn 21 42 07.8 -4.7**
comp=Z,0.2nm,0.3s,baz=319,slow=11,SNR=2.5
GEYT Alibeck 10.25 35 Pn **Pn 21 40 36.0 +1.2**
comp=Z,0.4nm,0.3s,baz=209,slow=14,SNR=8.6
BRTR Keskin Array B 17.21 310 Pn **P 21 42 08.7 -0.8**
comp=Z,0.1nm,0.3s,baz=133,slow=16,SNR=2.8
AKTO Aktyubinsk 21.43 13 P **P 21 42 55.0 -0.4**
comp=Z,1.4nm,0.6s,baz=204,slow=14,SNR=4.2
AKASG Malin Array Be 26.46 328 P **P 21 43 43.1 -1.1**
comp=Z,0.5nm,0.4s,baz=139,slow=9.1,SNR=4.8
BVAR Borovoye Array 27.41 26 P **P 21 43 53.8 +1.1**
comp=Z,0.8nm,0.4s,baz=215,slow=9.0,SNR=9.5
KURBB Kurchatov Arra 29.52 37 P **P 21 44 12.3 +0.8**
comp=Z,0.4nm,0.7s,baz=235,slow=9.4,SNR=3.1
MKAR Makanchi Array 29.83 46 P **P 21 44 15.6 +1.1**
comp=Z,0.2nm,0.4s,baz=241,slow=9.2,SNR=4.4
ZALV Zalesovo Beam 34.56 36 P **P 21 44 56.1 +0.3**
comp=Z,0.8nm,0.5s,baz=263,slow=7.1,SNR=5.0
FINES FINESS Array B 35.67 340 P **P 21 45 04.4 -0.9**
comp=Z,0.4nm,0.5s,baz=141,slow=12,SNR=3.9
HFS Hagfors 39.24 332 P **P 21 45 34.9 -0.6**
comp=Z,6.1nm,1.1s,baz=129,slow=11,SNR=5.9

EKA Eskdalemuir Ar 45.76 320 P **P 21 46 27.5 -1.0**
comp=Z,0.1nm,0.3s,baz=99,slow=8.7,SNR=3.3
TORD Torodi Ar. Bea 48.15 261 P **P 21 46 48.2 +0.5**
comp=Z,0.8nm,0.7s,baz=52,slow=8.5,SNR=5.8
ILAR Eielson Array 84.84 7 P **P 21 50 41.1 -0.4**
comp=Z,0.4nm,0.6s,baz=345,slow=3.8,SNR=4.9

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*MOS **05** 21:42:49.2±1.9, 50.°68N×157.°57E, h52km, mb4.2/1, Error ellipse: s-maj=32.5km s-min=6.0km az=81.2*
KRSC 05 21:42:49.2±1.5, 50.°68N×157.°57E, h52km±21km, ML4.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**0.92**	**271**	*e*P		21 43 06.5	+0.6
SKR *e*S Sn 21 43 17.6 -0.6
SKR Severo-Kuril's 0.92 271 *e*PN **Pn** 21 43 06.8 +0.9
SKR *e*S Sn 21 43 17.8 -0.4
SKR smax smax
comp=N,1μm,0.2s
SKR smax smax
comp=E,506nm,0.3s
PAU Pauzhetka 0.93 329 *e*P Pn 21 43 07.5 +1.6
PAU *e*S Sn 21 43 19.9 +1.6
PAU Pauzhetka 0.93 329 PN Pn 21 43 07.5 +1.6
PAU S Sn 21 43 19.9 +1.6
KDTR Khodutka, Kamc 1.18 16 *e*P Pn 21 43 11.5 +2.2
KDTR *e*S Sn 21 43 26.3 +2.0
ASAK Asacha 1.72 7 *i* P Pn 21 43 19.3 +2.5
ASAK *e*S Sn 21 43 40.0 +2.3
ASAK Asacha 1.72 7 PN Pn 21 43 19.3 +2.5
ASAK S Sn 21 43 40.0 +2.3
MTVR Mutnovka 1.85 12 *e*P Pn 21 43 21.2 +2.6
MTVR *e*S Sn 21 43 43.0 +2.1
MTVR Mutnovka 1.85 12 PN Pn 21 43 21.2 +2.6
MTVR S Sn 21 43 43.0 +2.1
RUS Russkaya 1.86 18 *i* P Pn 21 43 20.7 +2.2
RUS *e*S Sn 21 43 42.3 +1.5
RUS Russkaya 1.86 18 PN Pn 21 43 20.7 +2.2
RUS S Sn 21 43 42.3 +1.5
KRMR Karymshinskiy 2.19 9 *e*P Pn 21 43 26.0 +3.0
KRMR Karymshinskiy 2.19 9 PN Pn 21 43 26.0 +3.0
APC Apacha 2.27 354 *e*P Pn 21 43 26.8 +2.6
APC Apacha 2.27 354 PN Pn 21 43 26.8 +2.6
PET Petropavlovsk 2.45 16 *i* P Pn 21 43 29.7 +3.1
PET *e*S Sn 21 43 59.0 +3.7
PET Petropavlovsk 2.45 16 *e*PN Pn 21 43 29.6 +3.0
PET *e*S Sn 21 43 58.4 +3.1
PET pmax pmax
comp=Z,18nm,0.3s
PET smax smax
comp=N,108nm,0.4s
PET smax smax
comp=E,75nm,0.5s
UGLR Uglovaya 2.65 17 *i* P Pn 21 43 32.4 +2.8
UGLR Uglovaya 2.65 17 PN Pn 21 43 32.4 +2.8
AVH Avacha 2.69 15 *e*P Pn 21 43 34.4 +4.3
AVH *e*S Sn 21 44 06.5 +5.0
AVH Avacha 2.69 15 PN Pn 21 43 34.4 +4.3
AVH S Sn 21 44 06.5 +5.0
KOK Koryaka 2.70 14 *e*P Pn 21 43 33.3 +3.1
KOK Koryaka 2.70 14 PN Pn 21 43 33.3 +3.1
NLC Nalytchevo 2.73 23 *e*S Sn 21 44 03.5 +1.3
SDLR Sedlovina 2.73 17 *i* P Pn 21 43 33.7 +3.1
SDLR Sedlovina 2.73 17 PN Pn 21 43 33.7 +3.1
KRER Koryakskii 2.73 15 *i* P Pn 21 43 34.8 +4.1
KRER Koryakskii 2.73 15 PN Pn 21 43 34.8 +4.1
KRX Arik 2.77 14 *e*P Pn 21 43 35.1 +3.9
KRX Arik 2.77 14 PN Pn 21 43 35.1 +3.9
SPN Mys Shipunski 2.86 31 *e*P Pn 21 43 35.5 +3.2
SPN *e*S Sn 21 44 08.1 +2.6
SPN Mys Shipunski 2.86 31 PN Pn 21 43 35.5 +3.2
SPN S Sn 21 44 08.1 +2.6
GNL Ganaly 3.03 4 *e*P Pn 21 43 38.4 +3.6
GNL Ganaly 3.03 4 PN Pn 21 43 38.4 +3.6
MKZ Mys Kozlova 4.64 31 *i* P Pn 21 43 59.6 +3.0
MKZ Mys Kozlova 4.64 31 PN Pn 21 43 59.6 +3.0
KBTR Krutoberegovo 6.37 27 *i* P Pn 21 44 23.4 +3.1
KBTR Krutoberegovo 6.37 27 PN Pn 21 44 23.4 +3.1

NNC 05 21:53:18.4±1.9, 37.°63N×71.°04E, h0km, mb3.7, mpv3.3, 3C-4D, Error ellipse: s-maj=14.3km s-min=12.2km az=172.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**3.06**	**38**	⇑Pn		21 54 08.0	-0.4
2.4nm,0.3s
SFK ⇓Sn Sn 21 54 47.4 +1.6
5.2nm,0.3s
MNAS Manas 4.98 13 ⇑Pn Pn 21 54 35.0 +0.3
2.2nm,0.5s
MNAS ⇓Sn Sn 21 55 33.7 +0.7
1.3nm,0.4s
KK31 Karatay Array 5.48 356 Pn Pn 21 54 42.5 +1.1
1.4nm,0.4s,baz=182,slow=12,SNR=32
KK31 ⇑Sn Sn 21 55 46.5 +1.3
1.0nm,0.5s,baz=179,slow=23,SNR=4.4
AAK Ala-Archa 5.66 27 ⇓Pn Pn 21 54 43.3 -0.7
2.0nm,0.3s
AAK ⇓Sn Sn 21 55 50.3 +0.6
1.1nm,0.5s

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*IDC **05** 22:06:59.2±0.8, 34.°90N×141.°22E, h0km, mb3.7/14, mb1 3.8/18, mb1mx3.7/70, mbtmp3.7/18, ML3.5/4, MS3.4/1, Ms1 3.4/1, ms1mx2.8/68, Error ellipse: s-maj=23.0km s-min=15.8km az=94.0*
*ISCJB **05** 22:07:02.7±0.6, 34.°96N±0.°05×141.°29E±0.°07, h35km, mb3.6/14, Error ellipse: s-maj=8.0km s-min=6.8km az=8.4*
*JMA **05** 22:07:02.2±0.3, 34.°98N×141.°32E, h37km±4km, M3.3*
ISC 05 22:07:04.6±0.7, 34.°97N±0.°05×141.°24E±0.°07, h35km, n35, σ1°56/36, mb3.6/14, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**0.38**	**214**	P		**22 07 11.7**	**-1.4**
BSO1 *e*X 22 07 19.6
BSO3 Boso 3 0.62 254 P **Pn 22 07 15.7 -1.0**
BSO3 X 22 07 26.2
BSO4 Boso 4 0.74 272 P **Pn 22 07 17.6 -0.8**
KTR Katsuura 0.78 283 P **Pn 22 07 18.1 -0.9**
KTR *e*S **Sn 22 07 28.9 -0.5**
CHOJ Chosi 0.79 337 P **Pn 22 07 16.9 -2.3**
JCN Nagara 0.96 298 S **Sn 22 07 33.3 -0.6**
JIM2 Oshima 3 1.51 261 P **Pn 22 07 27.6 -1.5**
JYT Yasato 1.51 326 P **Pn 22 07 28.8 -0.3**
JHJ Hachijo jima 2 2.21 214 Pn **Pn 22 07 37.9 -0.9**
28nm,0.3s,baz=85,slow=18,SNR=1.8
JHJ Sn **Sn 22 08 05.8 +0.9**
67nm,0.3s,baz=73,slow=20,SNR=2.9
MJAR Matsushiro Arr 2.92 303 Pn **Pn 22 07 48.7 +0.2**
4.6nm,0.3s,baz=45,slow=14,SNR=27
MJAR Sn **Sn 22 08 26.9 +4.6**
4.3nm,0.3s,baz=124,slow=13,SNR=6.7
MJAR LR LR 22 08 43.3
comp=Z,57nm,18.4s,baz=105,slow=36
MAT Matsushiro 2.92 303 P **Pn 22 07 50.7 +2.2**
MAT *e*S **Sn 22 08 19.0 -3.4**
ASAJ Asahikawa 9.19 6 Pn **Pn 22 09 12.6 -2.0**
1.3nm,0.3s,baz=237,slow=8.0,SNR=4.6
ASAJ Sn **Sn 22 10 55.1 -1.6**
0.2nm,0.3s,baz=8.1,slow=14,SNR=3.9
KSRS Korea Array 11.04 287 Pn **Pn 22 09 38.9 -1.0**
0.1nm,0.3s,baz=107,slow=12,SNR=3.1
KSRS LR LR 22 13 08.4
comp=Z,196nm,18.2s,baz=230,slow=33
H11N2 WAKE ISLAND Hy 27.28 117 T T 22 41 27.1
baz=317,slow=75
H11N1 WAKE ISLAND Hy 27.29 117 T T 22 41 44.2
baz=317,slow=75
H11N3 WAKE ISLAND Hy 27.30 117 T T 22 41 41.5
baz=317,slow=75
H11S1 WAKE ISLAND Hy 27.92 119 T T 22 42 40.0
baz=312,slow=75,SNR=6.9
H11S3 WAKE ISLAND Hy 27.92 119 T T 22 42 33.6
baz=312,slow=75,SNR=6.3
H11S2 WAKE ISLAND Hy 27.93 119 T T 22 42 39.8
baz=312,slow=75,SNR=6.6
SONM Songino Array 28.86 307 P **P 22 13 00.6 +0.8**
0.3nm,0.8s,baz=106,slow=11,SNR=3.5

CMAR Chiang Mai Arr 40.87 257 P **P 22 14 42.6 -0.7**
0.4nm,0.3s,baz=41,slow=8.4,SNR=2.8
ZALV Zalesovo Beam 43.22 314 P **P 22 15 01.9 -0.1**
1.2nm,0.7s,baz=90,slow=8.9,SNR=4.5
ZALV PcP **PcP 22 16 50.2 -0.6**
0.8nm,0.6s,baz=84,slow=5.9,SNR=3.3
MKAR Makanchi Array 45.12 304 P **P 22 15 17.6 +0.2**
0.4nm,0.5s,baz=91,slow=10,SNR=6.2
MKAR PcP **PcP 22 16 55.1 -2.4**
0.2nm,0.5s,baz=88,slow=3.3,SNR=2.4
KURBB Kurchatov Arra 47.18 309 P **P 22 15 33.4 -0.1**
1.7nm,0.5s,baz=84,slow=7.6,SNR=13
ILAR Eielson Array 51.31 31 P **P 22 16 06.8 +1.8**
0.3nm,0.7s,baz=280,slow=6.6,SNR=4.2
BVAR Borovoye Array 51.87 313 P **P 22 16 10.2 +1.0**
0.3nm,0.6s,baz=69,slow=5.2,SNR=3.2
WRA Warramunga Arr 55.01 189 P **P 22 16 31.8 -0.7**
2.4nm,0.7s,baz=5.0,slow=7.4,SNR=22
ASAR Alice Springs 58.73 188 P **P 22 16 57.9 -1.1**
0.5nm,0.8s,baz=3.0,slow=7.1,SNR=4.0
YKA Yellowknife Ar 65.66 30 P **P 22 17 47.3 +2.4**
0.2nm,0.7s,baz=300,slow=6.2,SNR=3.4
FINES FINESS Array B 70.57 333 P **P 22 18 15.7 0.0**
1.0nm,0.6s,baz=69,slow=10,SNR=6.3
AKASG Malin Array Be 75.84 323 P **P 22 18 46.8 -0.2**
0.4nm,0.4s,baz=50,slow=6.6,SNR=3.2
NB2 NORSAR Subarra 76.03 337 P **P 22 18 47.9 -0.1**
comp=Z,0.7nm,0.8s,baz=38,slow=5.9
NOA NORSAR Array B 76.03 337 P **P 22 18 47.8 -0.1**
comp=Z,1.2nm,0.7s,baz=39,slow=5.7,SNR=4.7
BRTR Keskin Array B 80.11 312 P **P 22 19 11.9 +0.8**
comp=Z,0.4nm,0.7s,baz=101,slow=6.0,SNR=2.9
TORD Torodi Ar. Bea 118.67 314 PKP **PKPdf 22 25 48.4 -1.1**
comp=Z,0.3nm,0.8s,baz=60,slow=1.4,SNR=2.8

*ISCJB **05** 22:22:49.2±0.5, 35°.5S±0°.1×78°.4E±0°.1, h14km, mb4.2/16, MS3.9/1, Error ellipse: s-maj=15.1km s-min=12.8km az=18.9*
*NEIC **05** 22:22:50.0±0.4, 35°.47S×78°.44E, h10km, mb4.4/7, Error ellipse: s-maj=12.8km s-min=11.0km az=198.0*
*IDC **05** 22:22:49.5±1.7, 35°.12S×78°.48E, h0km, mb4.1/9, mb1 4.1/9, mb1mx3.8/60, mbtmp4.1/9, MS3.9/1, Ms1 3.8/1, ms1mx3.1/58, Error ellipse: s-maj=67.4km s-min=27.7km az=20.0*
ISC 05 22:22:50.7±0.6, 35°.5S±0°.1×78°.5E±0°.1, h14km, n39, σ0§96/32, mb4.1/16, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**28.25**	**347**	T	T	22 58 15.8	
baz=170,slow=76							
H08S1	**Diego Garcia H**	**28.25**	**347**	T	T	22 58 09.7	
baz=170,slow=76							
H08S3	**Diego Garcia H**	**28.27**	**347**	T	T	22 58 11.5	
baz=170,slow=76							
H01W2	**Cape Leeuwin H**	**29.07**	**99**	T	T	22 59 18.5	
baz=260,slow=74							
H01W3	**Cape Leeuwin H**	**29.08**	**99**	T	T	22 59 18.6	
baz=260,slow=74							
H01W1	**Cape Leeuwin H**	**29.09**	**99**	T	T	22 59 17.9	
baz=260,slow=74							
MAW	**Mawson**	**33.38**	**191**	*e*P	**P**	**22 29 26.9**	**-1.3**
0.8nm,1.3s							
UGM	**Wanagama**	**40.18**	**55**	*e*P	**P**	**22 30 26.9**	**+0.2**
115nm,1.4s							
BOSA	**Boshof**	**45.15**	**263**	LR	LR	22 46 08.0	
comp=Z,122nm,18.1s,baz=183,slow=31							
ASAR	**Alice Springs**	**49.08**	**92**	P	**P**	**22 31 38.9**	**+1.1**
1.7nm,0.9s,baz=213,slow=6.0,SNR=7.4							
AS31	**Alice Springs**	**49.08**	**92**	*e*P	**P**	**22 31 38.9**	**+1.1**
3.6nm,1.4s							
AS01	**Alice Springs**	**49.12**	**92**	*e*P	**P**	**22 31 38.9**	**+0.8**
WRA	**Warramunga Arr**	**51.21**	**88**	P	**P**	**22 31 54.4**	**+0.5**
3.1nm,1.0s,baz=241,slow=7.7,SNR=5.1							
WR1	**Warramunga Arr**	**51.21**	**88**	*e*P	**P**	**22 31 54.4**	**+0.5**
12nm,1.4s							
WB2	**Warramunga Arr**	**51.22**	**88**	*e*P	**P**	**22 31 51.2**	**-2.8**
QSPA	**South Pole Qui**	**54.66**	**180**	*e*P	**P**	**22 32 20.3**	**+1.4**
5.8nm,1.4s							
TSUM	**Tsumeb**	**55.64**	**270**	*e*P	**P**	**22 32 26.8**	**+0.2**
1.9nm,1.0s							
PBKT	**Sadao Pong**	**56.01**	**26**	*e*P	**P**	**22 32 29.4**	**+0.5**
6.6nm,0.9s							
KK31	**Karatay Array**	**78.55**	**354**	*e*P	**P**	**22 34 52.3**	**+1.0**
KKAR	**Karatay Array**	**78.55**	**354**	*e*P	**P**	**22 34 52.4**	**+1.1**
MK01	**Makanchi Array**	**81.96**	**3**	*e*P	**P**	**22 35 09.2**	**-0.4**
MK32	**Makanchi Array**	**81.98**	**3**	*e*P	**P**	**22 35 08.9**	**-0.9**
MKAR	**Makanchi Array**	**81.98**	**3**	P	**P**	**22 35 08.9**	**-0.9**
0.9nm,0.8s,baz=168,slow=6.2,SNR=7.1							
BR101	**Keskin Array S**	**85.49**	**327**	*e*P	**P**	**22 35 27.6**	**-0.5**
BRTR	**Keskin Array B**	**85.49**	**327**	P	**P**	**22 35 27.6**	**-0.4**
0.8nm,0.7s,baz=161,slow=5.6,SNR=6.3							
KURBB	**Kurchatov Arra**	**85.74**	**0**	P	**P**	**22 35 28.3**	**-0.5**
3.6nm,0.8s,baz=192,slow=4.9,SNR=17							
KURK	**Kurchatov**	**85.83**	**0**	*e*P	**P**	**22 35 29.8**	**+0.6**
SONA0	**Songino Array**	**86.64**	**18**	*e*P	**P**	**22 35 32.8**	**-0.7**
SONM	**Songino Array**	**86.64**	**18**	P	**P**	**22 35 32.8**	**-0.7**
1.1nm,0.9s,baz=182,slow=4.7,SNR=4.9							
SONA1	**Songino Array**	**86.65**	**18**	*e*P	**P**	**22 35 32.7**	**-0.9**
TORD	**Torodi Ar. Bea**	**87.05**	**288**	P	**P**	**22 35 37.0**	**+0.8**
0.5nm,0.8s,baz=131,slow=4.4,SNR=3.0							
TOA1	**Torodi Ar. Sit**	**87.05**	**288**	*e*P	**P**	**22 35 37.0**	**+0.8**
BVAR	**Borovoye Array**	**88.43**	**355**	P	**P**	**22 35 41.2**	**-0.6**
0.4nm,0.5s,baz=173,slow=3.8,SNR=4.2							
ZALV	**Zalesovo Beam**	**89.24**	**4**	P	**P**	**22 35 45.1**	**-0.5**
1.4nm,0.7s,baz=203,slow=3.5,SNR=5.8							
ZALV	**Zalesovo Beam**	**89.24**	**4**	*e*P	**P**	**22 35 45.3**	**-0.3**
ZAA1	**Zalesovo Array**	**89.25**	**4**	*e*P	**P**	**22 35 45.1**	**-0.5**
YKA	**Yellowknife Ar**	**151.76**	**13**	PKPbc	**PKPbc**	**22 42 43.4**	**-0.5**
0.7nm,1.0s,baz=328,slow=2.6,SNR=5.0							
YKB5	**Yellowknife Ar**	**151.76**	**13**	*e*PKPbc	**PKPbc**	**22 42 43.4**	**-0.5**
PSUT	**Pine Spring**	**169.70**	**69**	*e*PKPdf	**PKPdf**	**22 42 56.6**	**-1.3**

*IDC **05** 22:31:42.0±1.2, 0°.52N×126°.61E, h0km, mb3.8/8, mb1 3.9/8, mb1mx3.7/54, mbtmp3.8/8, Error ellipse: s-maj=161.7km s-min=18.8km az=69.0*
*ISCJB **05** 22:31:46.4±0.9, 0°.5N±0°.4×126°.5E±0°.9, h47km, mb3.8/8, Error ellipse: s-maj=138.4km s-min=15.0km az=158.8*
ISC 05 22:31:48.3±1.2, 0°.5N±0°.4×126°.7E±°.7, h47km, n8, σ0§91/8, mb3.8/8, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.65**	**160**	P	**P**	**22 36 34.5**	**-0.5**
2.4nm,0.6s,baz=337,slow=11,SNR=17							
ASAR	**Alice Springs**	**25.01**	**164**	P	**P**	**22 37 08.4**	**+0.4**
1.3nm,0.5s,baz=338,slow=10,SNR=9.9							
SONM	**Songino Array**	**50.34**	**342**	P	**P**	**22 40 40.0**	**-0.7**
0.3nm,0.4s,baz=181,slow=8.4,SNR=2.3							
MKAR	**Makanchi Array**	**60.17**	**326**	P	**P**	**22 41 52.1**	**+0.8**
0.6nm,0.5s,baz=122,slow=7.9,SNR=8.1							
ZALV	**Zalesovo Beam**	**63.43**	**334**	P	**P**	**22 42 12.0**	**-1.1**
0.4nm,0.4s,baz=104,slow=6.1,SNR=2.4							
KURBB	**Kurchatov Arra**	**64.42**	**328**	P	**P**	**22 42 19.2**	**-0.4**
0.3nm,0.3s,baz=130,slow=6.1,SNR=4.5							
BVAR	**Borovoye Array**	**69.98**	**328**	P	**P**	**22 42 55.4**	**+0.5**
0.2nm,0.4s,baz=156,slow=7.3,SNR=2.8							
NRIK	**Noril'sk**	**73.55**	**347**	P	**P**	**22 43 17.1**	**+1.0**
0.7nm,0.4s,baz=142,slow=6.0,SNR=3.6							

*NEIC **05** 22:38:33.9±0.5, 21°.11S×68°.25W, h117km±6km, mb4.1/6, Error ellipse: s-maj=10.7km s-min=7.1km az=96.0*
*ISCJB **05** 22:38:34.1±0.3, 21°.06S±0°.03×68°.55W±0°.05, h143km±4km, mb4.2/9, Error ellipse: s-maj=7.7km s-min=4.5km az=1.8*
*IDC **05** 22:38:34.1±2.7, 21°.09S×68°.36W, h126km±21km, mb4.1/6, mb1 3.9/10, mb1mx3.6/40, mbtmp4.3/10, Error ellipse: s-maj=30.9km s-min=21.1km az=77.0*
*GUC **05** 22:38:35.3±0.7, 21°.01S×68°.69W, h140km±5km, ML4.0*
*SCB **05** 22:38:36.4±0.6, 20°.75S×68°.15W, h110km, Ml3.5/2, Error ellipse: s-maj=19.1km s-min=4.3km az=47.0*
ISC 05 22:38:34.2±0.7, 21°.02S±0°.04×68°.44W±0°.05, h129km±7km, n47, σ1§54/61, mb4.1/9, 12C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.98**	**268**	*e*Pn	**Pn**	**22 38 57.1**	**+0.1**
PB01				*e*Sn	**Sn**	**22 39 14.0**	**-0.2**
PB01	**IPOC Station P**	**0.98**	**268**	⇑*i*P	**Pn**	**22 38 57.6**	**+0.6**
PB01				*i* S	**Sn**	**22 39 14.2**	**-0.1**
PB01				IAML		22 39 17.4	
comp=E,3μm,0.2s							
PB09	**IPOC Station P**	**1.08**	**224**	⇑*i*P	**Pn**	**22 38 59.3**	**+1.3**
PB09				*i* S	**Sn**	**22 39 17.4**	**+1.4**
PB09				IAML		22 39 18.4	
comp=N,4μm,0.4s							
PB08	**IPOC Station P**	**1.10**	**322**	⇑*i*P	**Pn**	**22 39 00.1**	**+1.6**
PB08				*i* S	**Sn**	**22 39 18.4**	**+1.6**
PB08				IAML		22 39 20.0	
comp=E,2μm,0.3s							
PB02	**IPOC Station P**	**1.39**	**257**	*e*P	**Pn**	**22 39 01.8**	**+0.6**
PB02				*e*S	**Sn**	**22 39 20.5**	**-1.2**
PB02				IAML		22 39 22.0	
comp=N,6μm,0.5s							
PB07	**IPOC Station P**	**1.52**	**242**	⇑*i*P	**Pn**	**22 39 03.2**	**+0.5**
PB07				*i* S	**Sn**	**22 39 23.9**	**-0.5**
PB07				IAML		22 39 25.4	
comp=N,3μm,0.4s							
PB06	**IPOC Station P**	**1.98**	**212**	⇑*i*P	**Pn**	**22 39 09.0**	**+0.9**
PB06				*e*S	**Sn**	**22 39 34.0**	**0.0**
PB06				IAML		22 39 35.6	
comp=E,3μm,0.4s							
PB04	**IPOC Station P**	**2.06**	**230**	*e*Pn	**Pn**	**22 39 08.8**	**-0.3**
PB04	**IPOC Station P**	**2.06**	**230**	*e*P	**Pn**	**22 39 09.3**	**+0.2**
PB04				*i* S	**Sn**	**22 39 34.7**	**-1.1**
PB04				IAML		22 39 35.9	
comp=E,2μm,0.4s							
PSGC	**Pisagua**	**2.12**	**312**	⇑*i*P	**Pn**	**22 39 09.5**	**-0.3**
PSGC				*i* S	**Sn**	**22 39 35.6**	**-1.4**
PSGC				IAML		22 39 40.1	
comp=N,473nm,0.6s							
MNMC	**Minye Minye**	**2.17**	**330**	*e*Pn	**Pn**	**22 39 11.6**	**+1.0**
MNMC	**Minye Minye**	**2.17**	**330**	⇑*i*P	**Pn**	**22 39 11.7**	**+1.1**
MNMC				*i* S	**Sn**	**22 39 39.1**	**+0.7**
PB15	**IPOC Station P**	**2.38**	**204**	⇓*i*P	**Pn**	**22 39 14.2**	**+1.1**
PB15				*e*S	**Sn**	**22 39 43.2**	**+0.3**
MOCB	**Mochara**	**2.62**	**96**	*e*Pn	**Sn**	**22 39 19.6**	**+3.2**
MOCB				*e*Sn	**Sn**	**22 39 50.5**	**+1.7**
comp=N,277nm,0.6s							
PB12	**IPOC Station P**	**2.98**	**323**	⇑*i*P	**Pn**	**22 39 19.9**	**-0.8**
PB12				*e*S	**Sn**	**22 39 55.2**	**-1.3**
PB12				IAML		22 40 00.6	
comp=N,360nm,0.5s							
PB10	**IPOC Station P**	**3.16**	**218**	*e*Pn	**Pn**	**22 39 22.8**	**-0.1**
BBOJ	**La Paz, Jacaqu**	**4.03**	**3**	⇑*i*Pn	**Pn**	**22 39 38.3**	**+3.4**
GO02	**Mina Guanaco**	**4.26**	**194**	*e*Pn	**Pn**	**22 39 37.7**	**0.0**
BBOD	**La Paz, Gloria**	**4.36**	**358**	⇑*i*Pn	**Pn**	**22 39 42.8**	**+3.5**
BBOD				*e*Sn	**Sn**	**22 40 30.5**	**+0.7**
comp=N,15nm,0.6s							
LPAZ	**La Paz**	**4.71**	**4**	P	**Pn**	**22 39 46.7**	**+2.6**
comp=N,2.6nm,0.3s,baz=176,slow=5.9,SNR=54							
LPAZ	**La Paz**	**4.71**	**4**	*e*Pn	**Pn**	**22 39 46.5**	**+2.3**
LPAZ	**La Paz**	**4.71**	**4**	⇑*i*Pn	**Pn**	**22 39 46.6**	**+2.5**
BBOB	**La Paz, Bander**	**4.86**	**3**	⇑*i*Pn	**Pn**	**22 39 48.4**	**+2.4**
GO03	**Copiap**	**6.75**	**194**	*e*Pn	**Pn**	**22 40 08.6**	**-2.3**
SIV	**San Ignacio**	**8.59**	**56**	P	**Pn**	**22 40 34.2**	**-1.6**
comp=N,4.8nm,0.3s,baz=258,slow=9.8,SNR=87							
SIV				S	**Sn**	**22 42 07.1**	**-4.0**
comp=N,0.2nm,0.3s,baz=340,slow=16,SNR=8.1							
SIV	**San Ignacio**	**8.59**	**56**	*e*P	**Pn**	**22 40 34.6**	**-1.2**
CPUP	**Villa Florida**	**11.47**	**120**	P	**Pn**	**22 41 12.1**	**-2.0**
comp=N,0.2nm,0.3s,baz=308,slow=11,SNR=5.1							
CPUP	**Villa Florida**	**11.47**	**120**	*e*Pn	**Pn**	**22 41 10.7**	**-3.5**
TRQA	**Tornquist**	**17.88**	**163**	*e*P	**Pn**	**22 42 34.6**	**-0.1**
comp=N,31nm,1.4s							
PLCA	**Paso Flores**	**19.73**	**185**	P	**P**	**22 42 52.9**	**-1.0**
comp=N,0.1nm,0.3s,baz=24,slow=12,SNR=2.8							
PLCA	**Paso Flores**	**19.73**	**185**	*e*P	**P**	**22 42 52.9**	**-1.0**
comp=N,3.3nm,1.0s							
PTGA	**Pitinga**	**21.80**	**23**	P	**P**	**22 43 15.2**	**-0.9**
comp=N,2.1nm,0.3s,baz=316,slow=23,SNR=4.9							
PTGA	**Pitinga**	**21.80**	**23**	*e*P	**P**	**22 43 15.8**	**-0.3**
comp=N,5.8nm,1.0s							
RUSC	**La Rusia**	**27.13**	**350**	*e*P	**P**	**22 44 07.2**	**+1.3**
comp=N,5.9nm,1.4s							
DBIC	**Dimbokro**	**68.18**	**73**	P	**P**	**22 49 21.1**	**0.0**
comp=N,3.4nm,0.5s,baz=223,slow=8.8,SNR=10							
DBIC	**Dimbokro**	**68.18**	**73**	*e*P	**P**	**22 49 21.6**	**+0.5**
comp=N,5.4nm,0.8s							
KOWA	**Kowa**	**72.42**	**66**	P	**P**	**22 49 46.9**	**0.0**
comp=N,4.4nm,0.6s,baz=249,slow=8.6,SNR=18							
ULM	**Lac du Bonnet**	**75.00**	**342**	P	**P**	**22 50 01.2**	**+0.1**
comp=N,1.9nm,0.5s,baz=174,slow=4.5,SNR=5.0							
TOA0	**Torodi Ar. Sit**	**76.78**	**70**	*e*P	**P**	**22 50 12.3**	**+0.2**
TOA1	**Torodi Ar. Sit**	**76.78**	**70**	*e*P	**P**	**22 50 12.3**	**+0.3**
TORD	**Torodi Ar. Bea**	**76.78**	**70**	P	**P**	**22 50 12.3**	**+0.3**
comp=N,7.7nm,0.6s,baz=255,slow=5.4,SNR=65							
PAHR	**Pah Rah Range**	**76.87**	**322**	*e*P	**P**	**22 50 14.5**	**+2.2**
comp=N,3.2nm,0.9s							
BOSA	**Boshof**	**83.28**	**118**	P	**P**	**22 50 47.1**	**0.0**
comp=N,1.4nm,0.7s,baz=239,slow=5.9,SNR=2.5							
YKW3	**Yellowknife Ar**	**90.94**	**340**	*e*P	P	22 51 27.3	+4.3
comp=N,9.6nm,0.5s							
MK32	**Makanchi Array**	**144.99**	**36**	*e*PKPbc	**PKPdf**	**22 57 56.2**	**+0.1**
MKAR	**Makanchi Array**	**144.99**	**36**	PKPbc	**PKPdf**	**22 57 56.2**	**+0.1**
comp=N,0.7nm,0.5s,baz=336,slow=2.7,SNR=8.1							
MK01	**Makanchi Array**	**145.01**	**36**	*e*PKPbc	**PKPdf**	**22 57 57.3**	**+1.1**

*JMA **05** 22:52:13.6±0.1, 39°.11N×142°.40E, h33km±1km, M3.6*
JMA Felt I J1.
*IDC **05** 22:52:17.4±2.5, 39°.07N×142°.39E, h63km±21km, mb3.6/7, mb1 3.7/11, mb1mx3.4/72, mbtmp3.8/11, Error ellipse: s-maj=23.2km s-min=15.0km az=114.0*
ISC 05 22:52:12.3±1.8, 39°.07N±0°.04×142°.34E±0°.07, h14km±11km, n30, σ1§34/34, mb4.0/7, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.52**	**271**	P	**Pn**	**22 52 25.1**	**-0.3**
OFUJ				S	**Sb**	**22 52 32.8**	**+2.0**
MIYJ	**Miyakonagasawa**	**0.65**	**321**	P	**Pb**	**22 52 26.0**	**+0.6**
MIYJ				S	**Sb**	**22 52 34.6**	**+0.2**
JMK	**Ichinoseki**	**0.88**	**263**	P	**Pn**	**22 52 30.5**	**+0.2**
JMK				S	**Sb**	**22 52 42.5**	**+1.4**
JOM	**Ohasama**	**0.91**	**297**	P	**Pn**	**22 52 30.8**	**+0.1**
JOM				S	**Sb**	**22 52 43.1**	**+1.2**
JTH	**Tanohata**	**0.94**	**337**	P	**Pb**	**22 52 30.0**	**-0.5**
JTH				S	**Sb**	**22 52 42.5**	**-0.4**
JIO	**Ouri**	**0.99**	**232**	P	**Pb**	**22 52 31.5**	**+0.2**
JIO				S	**Sg**	**22 52 44.0**	**-0.4**
JKZ	**Kuzumaki**	**1.20**	**320**	P	**Pg**	**22 52 34.9**	**-0.6**
JKZ				S	**Sb**	**22 52 50.1**	**-0.3**
JRG	**Rokugo**	**1.37**	**284**	P	**Pb**	**22 52 37.7**	**0.0**
JRG				*e*S	**Sb**	**22 52 55.9**	**+0.9**
JANG	**Nango**	**1.45**	**334**	P	**Pn**	**22 52 38.0**	**-0.2**
JANG				S	**Sn**	**22 52 56.4**	**-0.6**
JOU	**Okura**	**1.49**	**242**	P	**Pn**	**22 52 39.5**	**+0.8**
JOU				S	**Sn**	**22 52 59.2**	**+1.2**
MAT	**Matsushiro**	**4.13**	**234**	P	**Pn**	**22 53 17.7**	**+2.6**
MAT				*e*S	**Sn**	**22 54 02.0**	**-1.3**
MJAR	**Matsushiro Arr**	**4.13**	**234**	P	**Pn**	**22 53 17.8**	**+2.7**
1.9nm,0.3s,baz=39,slow=11,SNR=54							
ASAJ	**Asahikawa**	**5.05**	**2**	P	**Pn**	**22 53 31.0**	**+3.4**
1.2nm,0.3s,baz=226,slow=15,SNR=5.5							
ASAJ				S	**Sn**	**22 54 27.0**	**+1.4**
0.5nm,0.3s,baz=233,slow=20,SNR=3.1							
USRK	**Ussuriysk Ar.**	**9.29**	**307**	P	**Pn**	**22 54 27.9**	**+2.1**
0.1nm,0.3s,baz=114,slow=18,SNR=2.8							
KSRS	**Korea Array**	**11.45**	**266**	P	Pn	22 55 01.0	+5.6
0.1nm,0.3s,baz=81,slow=12,SNR=2.7							
KLR	**Kul'dur**	**12.67**	**327**	P	Pn	22 55 16.9	+4.8
0.0nm,0.3s,baz=141,slow=17,SNR=1.9							
H11N2	**WAKE ISLAND Hy**	**28.64**	**125**	T	T	23 28 31.4	
baz=318,slow=76,SNR=85							
H11N1	**WAKE ISLAND Hy**	**28.65**	**125**	T	T	23 28 34.4	
baz=318,slow=76,SNR=61							
H11N3	**WAKE ISLAND Hy**	**28.66**	**125**	T	T	23 28 44.3	
baz=318,slow=76,SNR=55							
H11S1	**WAKE ISLAND Hy**	**29.43**	**127**	T	T	23 29 27.8	
baz=319,slow=76,SNR=11							
H11S3	**WAKE ISLAND Hy**	**29.43**	**127**	T	T	23 29 28.6	
baz=319,slow=76,SNR=12							
H11S2	**WAKE ISLAND Hy**	**29.44**	**127**	T	T	23 29 29.9	
baz=319,slow=76,SNR=7.4							
ZALV	**Zalesovo Beam**	**41.12**	**311**	P	**P**	**22 59 54.3**	**-1.3**
1.5nm,0.3s,baz=89,slow=8.9,SNR=2.5							
MKAR	**Makanchi Array**	**43.69**	**300**	P	**P**	**23 00 16.4**	**-0.4**
1.2nm,0.7s,baz=84,slow=9.9,SNR=9.3							
KURBB	**Kurchatov Arra**	**45.35**	**307**	P	**P**	**23 00 29.5**	**-0.4**
2.2nm,0.5s,baz=81,slow=8.2,SNR=21							
ILAR	**Eielson Array**	**47.39**	**33**	P	**P**	**23 00 45.5**	**-0.3**
0.8nm,0.6s,baz=265,slow=5.9,SNR=9.5							
BVAR	**Borovoye Array**	**49.76**	**311**	P	**P**	**23 01 03.7**	**-0.5**
1.2nm,0.6s,baz=75,slow=8.1,SNR=6.0							
WRA	**Warramunga Arr**	**59.18**	**189**	P	**P**	**23 02 11.4**	**-1.5**
0.3nm,0.4s,baz=6.6,slow=6.9,SNR=9.6							
TXAR	**Lajitas Array**	**88.31**	**53**	P	**P**	**23 05 02.6**	**-1.3**
0.1nm,0.6s,baz=297,slow=2.9,SNR=2.9							
SIV	**San Ignacio**	**149.19**	**48**	PKPbc	**PKPdf**	**23 11 57.9**	**+1.2**
0.6nm,0.6s,baz=191,slow=5.2,SNR=3.5							

*IDC **05** 22:59:09.0±18.0, 21°.58S×175°.43W, h0km, mb4.4/5, mb1 4.5/5, mb1mx3.9/52, mbtmp4.4/5, MS2.9/1, Ms1 2.9/1, ms1mx2.6/50, Error ellipse: s-maj=338.8km s-min=150.3km az=80.0*
*ISCJB **05** 23:00:31.6±0.6, 23°.4S±0°.1×179°.99W±0°.10, h532km, mb4.1/14, Error ellipse: s-maj=16.9km s-min=10.5km az=152.6*
*NEIC **05** 23:00:33.4±0.9, 23°.41S×179°.97W, h544km±11km, mb4.2/9, Error ellipse: s-maj=14.0km s-min=7.9km az=149.0*
ISC 05 23:00:32.5±0.9, 23°.4S±0°.1×179°.9W±0°.1, h532km, n29, σ0§67/28, mb4.1/14, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.98**	**341**	*e*P	**P**	**23 02 11.7**	**+1.4**
AFI	**Afiamalu**	**12.23**	**41**	LR	LR	23 03 56.8	
comp=Z,88nm,20.4s,baz=32,slow=34							
BFZ	**Birch Farm**	**17.49**	**190**	*e*P	**P**	**23 04 06.1**	**-0.3**
CTA	**Charters Tower**	**31.54**	**269**	P	**P**	**23 06 11.1**	**-0.3**
6.9nm,0.5s,baz=99,slow=9.7,SNR=9.0							
CTA	**Charters Tower**	**31.54**	**269**	*e*P	**P**	**23 06 11.1**	**-0.3**
CTAO	**Charters Tower**	**31.54**	**269**	*e*P	**P**	**23 06 11.5**	**+0.2**
PMG	**Port Moresby**	**34.40**	**288**	*e*P	**P**	**23 06 35.2**	**-0.4**
11nm,0.7s							
STKA	**Stephens Creek**	**34.95**	**248**	P	**P**	**23 06 40.4**	**+0.4**
2.0nm,0.6s,baz=96,slow=9.2,SNR=3.7							
STKA	**Stephens Creek**	**34.95**	**248**	*e*P	**P**	**23 06 40.4**	**+0.4**
BBOO	**Buckleboo**	**39.68**	**246**	*e*P	**P**	**23 07 18.5**	**-0.2**
9.0nm,1.0s							
AS31	**Alice Springs**	**42.17**	**260**	*e*P	**P**	**23 07 38.6**	**-0.1**
1.0nm,0.4s							
ASAR	**Alice Springs**	**42.17**	**260**	P	**P**	**23 07 38.6**	**-0.1**
3.2nm,0.8s,baz=99,slow=6.8,SNR=18							
ASAR	**Alice Springs**	**42.17**	**260**	P	**P**	**23 07 38.6**	**-0.1**
WC3	**Warramunga Arr**	**42.46**	**266**	*e*P	**P**	**23 07 40.8**	**-0.3**
4.3nm,0.6s							
WB2	**Warramunga Arr**	**42.49**	**266**	*e*P	**P**	**23 07 40.6**	**-0.6**
WRAB	**Tennant Creek**	**42.49**	**266**	*e*P	**P**	**23 07 40.7**	**-0.5**
2.9nm,0.5s							
WR1	**Warramunga Arr**	**42.50**	**266**	*e*P	**P**	**23 07 40.8**	**-0.5**
5.0nm,0.6s							
WRA	**Warramunga Arr**	**42.50**	**266**	P	**P**	**23 07 40.8**	**-0.6**
1.2nm,0.3s,baz=93,slow=8.4,SNR=86							
WRA	**Warramunga Arr**	**42.50**	**266**	P	**P**	**23 07 40.8**	**-0.6**
FITZ	**Fitzroy Crossi**	**50.92**	**265**	P	**P**	**23 08 45.4**	**+0.4**
1.3nm,0.4s,baz=75,slow=12,SNR=5.8							
FITZ	**Fitzroy Crossi**	**50.92**	**265**	*e*P	**P**	**23 08 45.4**	**+0.4**
QSPA	**South Pole Qui**	**66.64**	**180**	*e*P	**P**	**23 10 31.0**	**+1.0**
1.0nm,0.6s							
SAO	**San Andreas Ge**	**81.39**	**44**	*e*P	**P**	**23 11 51.6**	**-2.2**
8.8nm,0.9s							
CARC	**Carrizo Plain**	**81.55**	**46**	*e*P	**P**	**23 11 54.4**	**-0.3**
EML	**El Monte Cty P**	**82.19**	**49**	*e*P	**P**	**23 11 58.2**	**+0.2**
CHNC	**Chino**	**82.24**	**48**	*e*P	**P**	**23 11 58.5**	**+0.3**
DNR	**Dunn Ranch,Anz**	**82.71**	**49**	*e*P	**P**	**23 12 01.1**	**+0.3**
COLA	**College**	**91.46**	**13**	*e*P	**P**	**23 12 40.5**	**-0.8**
3.5nm,0.5s							
GNI	**Garni**	**138.99**	**305**	*e*PKPdf	**PKPdf**	**23 18 59.2**	**+0.3**

*MOS **05** 23:05:45.6±1.0, 48°.32N×154°.22E, h74km, mb4.5/21, Error

comp=E,330nm,2.0s
PET A A 23 08 21.0
comp=E,590nm,2.0s
PET Petropavlovsk 5.51 28 *e*Pn **Pn 23 07 08.1 +2.5**
PET *e*Sn **Sn 23 08 06.8 -0.7**
PET Petropavlovsk 5.51 28 ‖ *i*PN **Pn 23 07 07.3 +1.7**
PET *e*S **Sn 23 08 07.2 -0.3**
PET smax smax
comp=E,238nm,0.7s
PET MLR MLR
comp=Z,200nm,17.0s
UGLR Uglovaya 5.72 28 *e*P **Pn 23 07 09.0 +0.4**
UGLR Uglovaya 5.72 28 PN **Pn 23 07 09.0 +0.4**
KOK Koryaka 5.74 26 *e*P **Pn 23 07 10.3 +1.5**
KOK Koryaka 5.74 26 *e*P **Pn 23 07 10.3 +1.5**
KOK Koryaka 5.74 26 PN **Pn 23 07 10.3 +1.5**
AVH Avacha 5.74 27 *e*P **Pn 23 07 09.5 +0.6**
AVH Avacha 5.74 27 *e*P **Pn 23 07 09.5 +0.6**
AVH Avacha 5.74 27 PN **Pn 23 07 09.5 +0.6**
KRER Koryakskii 5.78 27 *e*P **Pn 23 07 09.9 +0.4**
KRER Koryakskii 5.78 27 PN **Pn 23 07 09.9 +0.4**
SDLR Sedlovina 5.80 28 *e*P **Pn 23 07 09.7 0.0**
SDLR Sedlovina 5.80 28 PN **Pn 23 07 09.7 0.0**
NLC Nalytchevo 5.86 31 *e*S **Sn 23 08 10.8 -5.2**
GNL Ganaly 5.91 21 *e*P **Pn 23 07 12.6 +1.4**
GNL Ganaly 5.91 21 PN **Pn 23 07 12.6 +1.4**
SHO Shikotan 6.83 233 *e*P Pn 23 07 19.0 -4.7
SHO AMB AMB 23 07 35.0
comp=Z,31nm,0.3s
SHO AMB AMB 23 07 35.0
comp=Z,12nm,0.3s
SHO *i* S **Sn 23 08 34.0 -5.9**
SHO A A 23 08 53.0
comp=Z,63nm,0.3s
SHO A A 23 08 53.0
comp=Z,35nm,0.3s
SHO Shikotan 6.83 233 *e*PN Pn 23 07 19.6 -4.0
SHO pmax pmax
comp=E,31nm,0.3s
SHO pmax pmax
comp=Z,12nm,0.3s
YUK Yuzh-Kuril'sk 7.26 238⇑ *e*PN **Pn 23 07 29.0 -0.5**
MKZ Mys Kozlova 7.82 33 *e*P **Pn 23 07 35.7 -1.4**
MKZ Mys Kozlova 7.82 33 PN **Pn 23 07 35.7 -1.4**
YSS Yuzh-Sakhalins 7.97 265 *e*P **Pn 23 07 39.6 +0.5**
YSS AMB AMB 23 07 40.9
comp=Z,20nm,0.7s
YSS AMB AMB 23 07 40.9
comp=Z,40nm,0.7s
YSS AMB AMB 23 07 40.9
comp=Z,50nm,0.7s
YSS *e*S **Sn 23 09 06.1 -1.5**
YSS A A 23 09 07.6
comp=Z,40nm,0.4s
YSS Yuzh-Sakhalins 7.97 265 *e*Pn **Pn 23 07 40.1 +1.0**
YSS Yuzh-Sakhalins 7.97 265 *e*PN **Pn 23 07 39.9 +0.8**
YSS *e*S **Sn 23 09 06.9 -0.7**
YSS pmax pmax
comp=E,40nm,0.7s
YSS pmax pmax
comp=Z,50nm,0.7s
YSS pmax pmax
comp=N,20nm,0.8s
YSS smax smax
comp=E,40nm,0.4s
JKA Kamikawa-asahi 9.15 248 *e*P **Pn 23 07 56.8 +1.4**
ASAJ Asahikawa 9.15 248 P **Pn 23 07 56.8 +1.4**
comp=E,2.0nm,0.3s,baz=73,slow=11,SNR=23
ASAJ Asahikawa 9.15 248 *e*Pn **Pn 23 07 58.4 +3.0**
ERM Erimo 10.07 236 *e*Pn **Pn 23 08 10.2 +2.3**
comp=E,13nm,0.4s
ERM Erimo 10.07 236⇑ *e*PN **Pn 23 08 05.4 -2.5**
MA2 Magadan 11.56 351 P **Pn 23 08 26.6 -1.5**
comp=E,3.1nm,0.3s,baz=166,slow=15,SNR=6.6
MA2 Magadan 11.56 351 *e*P **Pn 23 08 28.4 +0.3**
MA2 Magadan 11.56 351 *e*PN **Pn 23 08 28.4 +0.3**
MA2 pmax pmax
comp=Z,48nm,2.5s
EKMR Ekimchan 14.41 298 *e*P **Pn 23 09 05.0 -1.4**
EKMR AMB AMB 23 09 15.0
comp=Z,6.0nm,0.7s
SEY Seymchan 14.78 356 P **Pn 23 09 11.0 0.0**
comp=Z,0.2nm,0.3s,baz=171,slow=15,SNR=5.3
SEY Seymchan 14.78 356 *e*P **Pn 23 09 11.0 0.0**
SEY Seymchan 14.78 356 P **Pn 23 09 11.0 0.0**
KLR Kul'dur 14.96 282 P **P 23 09 16.0 -1.4**
comp=Z,0.0nm,0.3s,baz=101,slow=14,SNR=5.9
KLR Kul'dur 14.96 282⇑ *e*P **P 23 09 15.8 -1.6**
USRK Ussuriysk Ar. 16.00 264 P **Pn 23 09 26.7 0.0**
comp=Z,0.3nm,0.3s,baz=67,slow=13,SNR=3.2
MAJO Matsushiro 16.67 231 *e*Pn **Pn 23 09 35.6 +0.4**
MAJO Matsushiro 16.67 231 *e*P **Pn 23 09 35.6 +0.4**
MJAR Matsushiro Arr 16.67 231 P **Pn 23 09 34.9 -0.3**
comp=Z,0.5nm,0.3s,baz=26,slow=10.0,SNR=10
BMKR Bomnak 17.12 302 *e*P **Pn 23 09 40.0 -0.6**
MSHR Mys Shultsa 17.23 259 ‖ *e*P **Pn 23 09 41.3 -0.7**
YAK Yakutsk 19.58 324 *e*P **Pn 23 10 10.7 +0.7**
YAK Yakutsk 19.58 324⇑ *e*P **Pn 23 10 09.5 -0.5**
YAK pmax pmax
comp=Z,16nm,0.6s
KSRS Korea Array 22.08 251 P **P 23 10 35.1 -0.1**
comp=Z,8.4nm,0.7s,baz=48,slow=10,SNR=31
KSRS PcP **PcP 23 14 30.6 +0.4**
comp=Z,1.2nm,0.6s,baz=48,slow=0.6,SNR=5.3
KS01 Wonju Array Si 22.09 251 *e*P **P 23 10 34.6 -0.7**
KS15 Wonju Array Si 22.12 251 *e*P **P 23 10 35.9 +0.3**
KSAR Wonju Array Be 22.12 251 P **P 23 10 35.1 -0.4**
KSAR PcP **PcP 23 14 30.6 +0.3**
KSAR Wonju Array Be 22.12 251 P **P 23 10 35.2 -0.4**
KSAR 23 14 30.6
TJN Taejon 23.10 249 ‖ *e*P **P 23 10 46.2 +0.3**
BJI Beijing 28.38 268 *e*P **P 23 11 31.3 -2.2**
BJI pmax pmax
comp=Z,10.0nm,2.1s
H11N2 WAKE ISLAND Hy 30.19 156 T T 23 43 29.1
baz=344,slow=76,SNR=104
H11N1 WAKE ISLAND Hy 30.20 156 T T 23 43 34.4
baz=344,slow=76,SNR=210
H11N3 WAKE ISLAND Hy 30.20 156 T T 23 43 30.7
baz=344,slow=76,SNR=103
HHC Hu-ho-hao-te 31.07 272 *e*P **P 23 11 58.6 +1.1**
HHC PP **PnPn 23 13 02.7 +1.5**
HHC S **S 23 16 56.0 -1.6**
HHC sS sS 23 17 26.8 +0.2
HHC SS **SnSn 23 18 44.1 -0.9**
HHC pmax pmax
comp=Z,11nm,1.1s
HHC pmax pmax
comp=Z,93nm,5.7s
HHC LR LR
comp=N,63nm,13.5s
HHC LR LR
comp=E,60nm,14.1s
HHC LR LR
comp=Z,66nm,14.9s
ULN Ulaanbaatar 31.25 287 *e*P **P 23 11 58.2 -0.8**
ULN Ulaanbaatar 31.25 287 *e*P **P 23 11 57.6 -1.4**
comp=Z,1.0nm,0.6s
ULN Ulaanbaatar 31.25 287⇑ *e*P **P 23 11 58.2 -0.8**
ULN pmax pmax
comp=Z,1.0nm,1.1s
NJ2 Nanjing 31.27 252 *e*P **P 23 12 00.0 +0.9**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
H11S1 WAKE ISLAND Hy 31.30 157 T T 23 44 51.3
baz=344,slow=76,SNR=1211
H11S3 WAKE ISLAND Hy 31.31 157 T T 23 44 50.1
baz=344,slow=76,SNR=1513
H11S2 WAKE ISLAND Hy 31.32 157 T T 23 44 50.5
baz=344,slow=76,SNR=844
SONM Songino Array 31.68 288 P **P 23 12 02.0 -0.8**
comp=Z,0.3nm,0.3s,baz=77,slow=6.4,SNR=2.8
SONM PcP **PcP 23 14 52.6 -0.3**
comp=Z,0.7nm,0.8s,baz=81,slow=1.7,SNR=3.7
SML Sawmill 34.30 45 *e*P **P 23 12 27.0 +1.6**
SML Sawmill 34.30 45 *e*P **P 23 12 27.0 +1.6**
comp=Z,11nm,0.8s
SML Sawmill 34.30 45 *e*P **P 23 12 27.0 +1.6**
SML pmax pmax
comp=Z,11nm,0.8s
WRH Wood River Hil 34.34 40 *e*P **P 23 12 26.1 +0.5**
comp=Z,14nm,1.8s
COLA College 34.44 40 *e*P **P 23 12 28.1 +1.7**
COLA College 34.44 40 *e*P **P 23 12 28.0 +1.5**
comp=Z,3.4nm,0.5s
COLA College 34.44 40 *e*P **P 23 12 28.1 +1.7**
COLA pmax pmax
comp=Z,5.0nm,0.9s
DHY Denali Highway 34.68 43 *e*P **P 23 12 30.1 +1.3**
comp=Z,7.2nm,1.4s
SCM Sheep Creek Mo 34.78 45 P **P 23 12 31.2 +1.7**
SCM pmax pmax
comp=Z,47nm,1.8s
IL1 Eielson Array 34.85 40 *e*P **P 23 12 31.0 +1.0**
ILAR Eielson Array 34.85 40 P **P 23 12 30.4 +0.4**
comp=Z,0.9nm,0.7s,baz=259,slow=9.4,SNR=12
ILB Eielson Array 34.85 40 *e*P **P 23 12 30.5 +0.4**
BMRM Bremner River 36.17 46 *e*P **P 23 12 40.4 -1.1**
comp=Z,5.8nm,1.0s
CRQM Cirque 36.91 46 *e*P **P 23 12 48.2 +0.3**
comp=Z,9.6nm,0.9s
LZH Lanzhou 38.71 271 *e*P **P 23 13 02.6 -0.7**
LZH pP pP 23 13 20.1 -0.6
LZH sP sP 23 13 26.6 -2.3
LZH pmax pmax
comp=Z,19nm,1.0s
GTA Gaotai 39.60 278 *e*P **P 23 13 11.0 +0.3**
GTA pP pP 23 13 29.7 +1.7
GTA sP sP 23 13 38.2 +1.9
GTA pmax pmax
comp=Z,3.0nm,0.6s
INK Inuvik 39.94 33 P **P 23 13 12.7 -0.2**
comp=Z,1.5nm,0.5s,baz=255,slow=1.8,SNR=5.5
INK Inuvik 39.94 33 *e*P **P 23 13 12.9 0.0**
INK Inuvik 39.94 33 *e*P **P 23 13 12.9 0.0**
comp=Z,1.6nm,0.5s
INK Inuvik 39.94 33 *e*P **P 23 13 12.9 0.0**
INK pmax pmax
comp=Z,2.0nm,0.5s
CD2 Chengdu 41.87 265 P **P 23 13 27.0 -2.3**
CD2 pmax pmax
comp=Z,10.0nm,0.6s
ZALV Zalesovo Beam 42.45 305 P **P 23 13 30.4 -3.3**
comp=Z,0.4nm,0.3s,baz=50,slow=7.7,SNR=2.4
ZALV PcP **PcP 23 15 24.3 -1.0**
comp=Z,2.5nm,0.8s,baz=86,slow=1.9,SNR=8.9
ZALV LR LR 23 30 58.3
comp=Z,79nm,20.2s,baz=68,slow=36
WMQ Urumqi 45.20 290 P **P 23 13 58.0 +2.0**
WMQ LR LR
comp=N,93nm,19.5s
WMQ LR LR
comp=E,93nm,22.9s
WMQ LR LR
comp=Z,140nm,18.5s
KMI Kunming 46.36 259 P **P 23 14 05.5 0.0**
KMI pmax pmax
comp=Z,8.0nm,1.1s
MK31 Makanchi Array 47.03 297 *e*P **P 23 14 09.7 -0.6**
MK31 Makanchi Array 47.03 297 *e*P **P 23 14 09.7 -0.6**
MKAR Makanchi Array 47.03 297 P **P 23 14 08.5 -1.8**
comp=Z,0.7nm,0.5s,baz=69,slow=8.2,SNR=9.9
MKAR PcP **PcP 23 15 40.5 -0.8**
comp=Z,0.9nm,0.8s,baz=66,slow=5.1,SNR=4.2
MKAR Makanchi Array 47.03 297 *e*P **P 23 14 09.7 -0.6**
MKAR Makanchi Array 47.03 297 *ce*P **P 23 14 09.3 -1.0**
MKAR pmax pmax
comp=Z,1.0nm,0.5s
MK01 Makanchi Array 47.04 297 *e*P **P 23 14 08.4 -1.9**
KURK Kurchatov 47.27 303 *e*P **P 23 14 12.0 0.0**
KURK Kurchatov 47.27 303 P **P 23 14 10.8 -1.2**
KURK PcP **PcP 23 15 42.5 +0.5**
KURK Kurchatov 47.27 303⇑ *e*P **P 23 14 12.0 0.0**
KURK pmax pmax
comp=Z,7.0nm,2.5s
KURBB Kurchatov Arra 47.36 303 P **P 23 14 10.8 -1.9**
comp=Z,1.0nm,0.6s,baz=68,slow=8.1,SNR=7.4
KURBB PcP **PcP 23 15 42.5 +0.2**
comp=Z,1.3nm,0.8s,baz=68,slow=3.3,SNR=6.3
RES Resolute Bay 49.15 19 *e*P **P 23 14 26.6 +0.5**
RES Resolute Bay 49.15 19 *e*P **P 23 14 26.6 +0.5**
comp=Z,2.5nm,0.7s
RES Resolute Bay 49.15 19 *e*P **P 23 14 26.6 +0.5**
RES pmax pmax
comp=Z,2.0nm,0.7s
YKA Yellowknife Ar 49.22 38 P **P 23 14 27.9 +1.1**
comp=Z,2.7nm,0.8s,baz=298,slow=7.4,SNR=24
YKA PcP **PcP 23 15 48.7 -0.1**
comp=Z,0.3nm,0.6s,baz=304,slow=3.6,SNR=2.9
YKA Yellowknife Ar 49.22 38 *e*P **P 23 14 28.5 +1.7**
YKA Yellowknife Ar 49.22 38 *ce*P **P 23 14 28.6 +1.7**
YKA pmax pmax
comp=Z,3.0nm,0.8s
BVAR Borovoye Array 50.59 309 P **P 23 14 35.5 -1.8**
comp=Z,1.6nm,0.3s,baz=60,slow=7.1,SNR=14
BVAR PcP **PcP 23 15 53.8 -0.2**
comp=Z,1.8nm,0.6s,baz=67,slow=3.7,SNR=6.1
CHTO Chiang Mai 53.30 257 *e*P **P 23 14 57.5 -0.3**
comp=Z,5.8nm,0.8s
CHTO Chiang Mai 53.30 257 *e*P **P 23 14 57.6 -0.3**
CHTO pmax pmax
comp=Z,6.0nm,0.8s
CMAR Chiang Mai Arr 53.56 256 P **P 23 14 60.0 +0.2**
comp=Z,3.1nm,0.8s,baz=33,slow=6.9,SNR=14
CMAR Chiang Mai Arr 53.56 256 *e*P **P 23 15 00.5 +0.7**
CMAR Chiang Mai Arr 53.56 256 *ce*P **P 23 15 00.6 +0.7**
CMAR pmax pmax
comp=Z,3.0nm,0.6s
AAK Ala-Archa 53.95 296 LR LR 23 39 26.8
comp=Z,51nm,18.2s,baz=47,slow=38
AAK Ala-Archa 53.95 296 *e*P **P 23 15 01.5 -1.1**
AAK Ala-Archa 53.95 296 *e*P **P 23 15 01.4 -1.1**
comp=Z,0.9nm,0.4s
AAK Ala-Archa 53.95 296 *e*P **P 23 15 01.5 -1.1**
AAK pmax pmax
comp=Z,1.0nm,0.4s
ARU Arti 54.50 317 *e*P **P 23 15 05.2 -1.0**
ARU Arti 54.50 317 *e*P **P 23 15 05.0 -1.1**
comp=Z,1.4nm,0.5s
ARU Arti 54.50 317 *c i*P **P 23 15 05.2 -1.0**
ARU *PP **pP 23 15 20.9 -3.4**
ARU 23 16 07.8
ARU 23 17 08.4
ARU S **S 23 22 40.7 +1.2**
ARU SS **SS 23 26 15.7 -6.4**
ARU pmax pmax
comp=Z,3.0nm,1.2s
KSH Kashi 54.89 292 *e*P **P 23 15 13.2 +3.8**
KSH *e*pP sP 23 15 32.6 -3.0
KSH *e*PP **PP 23 17 19.7 +7.1**
KSH *e*S **S 23 22 48.4 +3.0**
KSH *e*sS sS 23 23 22.6 +6.3
KSH Kashi 54.89 292 *e*SS **SS 23 26 35.1 +6.0**
KSH pmax pmax
comp=Z,180nm,4.9s
KSH LR LR
comp=N,150nm,5.2s
KSH LR LR
comp=E,160nm,5.7s
KSH LR LR
comp=Z,350nm,5.7s
FFC Flin Flon 59.05 41 *e*P **P 23 15 39.0 +0.6**
FFC Flin Flon 59.05 41 *e*P **P 23 15 39.0 +0.6**
comp=Z,2.1nm,0.7s
FFC Flin Flon 59.05 41 *e*P **P 23 15 39.0 +0.6**
FFC pmax pmax
comp=Z,2.0nm,0.7s
FCC Fort Churchill 59.55 34 *e*P **P 23 15 41.8 +0.1**
comp=Z,3.0nm,0.7s
FCC Fort Churchill 59.55 34 *e*P **P 23 15 41.8 +0.1**
FCC pmax pmax
comp=Z,3.0nm,0.7s
BOZ Bozeman (W) 60.20 54 *e*P **P 23 15 46.8 +0.1**
comp=Z,5.0nm,0.9s
BOZ Bozeman (W) 60.20 54 *e*P **P 23 15 46.8 +0.1**
BOZ pmax pmax
comp=Z,5.0nm,0.9s
NVAR Mina Array Bea 60.99 64 P **P 23 15 53.1 +0.9**
comp=Z,1.2nm,0.8s,baz=294,slow=7.4,SNR=4.1
FINES FINESS Array B 63.06 335 P **P 23 16 04.4 -1.0**
comp=Z,0.9nm,0.5s,baz=30,slow=7.8,SNR=15
FINES FINESS Array B 63.06 335 *e*P **P 23 16 05.5 +0.1**
FINES FINESS Array B 63.06 335 *i*P **P 23 16 05.5 +0.1**
FINES pmax pmax
comp=Z,1.0nm,0.5s
PDAR Pinedale Array 63.18 55 P **P 23 16 07.7 +0.9**
comp=Z,0.4nm,0.5s,baz=253,slow=1.5,SNR=4.4
PDAR Pinedale Array 63.18 55 *e*P **P 23 16 07.6 +0.7**
GEYT Alibeck 66.58 301 P **P 23 16 27.4 -1.3**
comp=Z,1.2nm,0.6s,baz=64,slow=6.7,SNR=4.0
NOA NORSAR Array B 67.10 342 P **P 23 16 30.2 -1.4**
comp=Z,0.7nm,0.6s,baz=24,slow=6.5,SNR=4.5
HFS Hagfors 67.36 340 P **P 23 16 33.2 -0.1**
comp=Z,1.8nm,0.7s,baz=46,slow=4.2,SNR=14
WRAB Tennant Creek 70.19 200 *e*P **P 23 16 50.5 -0.6**
comp=Z,3.5nm,0.7s
WRAB Tennant Creek 70.19 200 *e*P **P 23 16 50.6 -0.6**
WRAB pmax pmax
comp=Z,3.0nm,0.7s
WB2 Warramunga Arr 70.20 200 *e*P **P 23 16 50.9 -0.4**
WRA Warramunga Arr 70.20 200 P **P 23 16 51.3 0.0**
comp=Z,4.5nm,0.7s,baz=17,slow=6.7,SNR=23
GNI Garni 72.22 311 *e*P **P 23 17 02.6 -1.0**
GNI Garni 72.22 311 *e*P **P 23 17 02.6 -1.0**
ASAR Alice Springs 73.89 200 P **P 23 17 14.3 +1.0**
comp=Z,1.6nm,0.5s,baz=12,slow=5.6,SNR=19
EKA Eskdalemuir Ar 75.09 347 P **P 23 17 20.2 +0.2**
comp=Z,1.9nm,0.5s,baz=16,slow=5.1,SNR=15
CLL Collm 75.46 336 *e*P **P 23 17 22.0 -0.1**
CLL Collm 75.46 336 *e*P **P 23 17 22.0 -0.1**
comp=Z,3.0nm,0.7s
CLL *e*(sP) **sP 23 17 53.0 +3.9**
CLL Collm 75.46 336 *e*P **P 23 17 22.0 -0.1**
CLL pmax pmax
comp=Z,3.0nm,0.7s
TX31 Lajitas Ar. Si 76.02 62 *e*P **P 23 17 27.6 +1.8**
TXAR Lajitas Array 76.02 62 P **P 23 17 27.4 +1.5**
comp=Z,1.4nm,0.7s,baz=310,slow=5.2,SNR=13
KHC Kasperske Hory 77.27 335 *e*P **P 23 17 32.9 +0.4**
KHC Kasperske Hory 77.27 335 *e*P **P 23 17 32.9 +0.4**
KHC Kasperske Hory 77.27 335 *e*P **P 23 17 32.9 +0.4**
GERES GERESS Array B 77.49 335 P **P 23 17 34.0 +0.2**
comp=Z,0.6nm,0.5s,baz=38,slow=6.8,SNR=8.8
GEA0 GERESS Array S 77.50 335 *e*P **P 23 17 34.0 +0.2**
BRTR Keskin Array B 77.89 317 P **P 23 17 36.5 +0.2**
comp=Z,1.2nm,0.9s,baz=67,slow=4.2,SNR=7.1
VTS Vitosha 79.84 326 *e*P **P 23 17 46.8 -0.1**
comp=Z,3.3nm,0.8s
VTS Vitosha 79.84 326 *e*P **P 23 17 46.8 -0.1**
VTS pmax pmax
comp=Z,3.0nm,0.8s
MMAI Mount Meron Ar 82.47 312 P **P 23 17 59.9 -1.0**
comp=Z,1.7nm,0.5s,baz=46,slow=4.8,SNR=12
RAYN Ar Rayn 84.46 299 *e*P **P 23 18 10.8 -0.4**
comp=Z,3.0nm,0.6s
RAYN Ar Rayn 84.46 299 P **P 23 18 11.6 +0.4**
RAYN pmax pmax
comp=Z,3.0nm,0.7s
APG El Apazote 94.78 61 LR LR 00 03 22.8
comp=Z,28nm,19.1s,baz=169,slow=36
TORD Torodi Ar. Bea 114.24 331 PKIKP **PKiKP 23 24 17.6 -0.2**
comp=Z,0.4nm,0.4s,baz=19,slow=2.1,SNR=9.4
DBIC Dimbokro 122.36 335 PKP **PKPdf 23 24 32.3 -1.1**
comp=Z,1.4nm,0.5s,baz=131,slow=1.1,SNR=4.2
QSPA South Pole Qui 137.97 180 PKP **PKPdf 23 25 01.3 0.0**
comp=Z,2.4nm,1.1s,baz=288,slow=2.4,SNR=4.1
CPUP Villa Florida 146.98 60 PKPbc **PKPbc 23 25 20.1 -0.4**
comp=Z,1.3nm,0.7s,baz=329,slow=6.1,SNR=3.3

MDD ***05*** *23:07:36.0±2.0, 37°.51N×13°.57W, h0km, mb3.9/11, Error ellipse: s-maj=18.6km s-min=15.9km az=39.0, PRXIMO*
IGIL ***05*** *23:07:37.4, 37°.51N×13°.55W, h0km, ML2.0*
INMG ***05*** *23:07:37.0±1.4, 37°.26N×14°.00W, h10km, ML2.3, Error ellipse: s-maj=8.7km s-min=8.0km az=17.0*
CSEM ***05*** *23:07:38.3±0.4, 37°.58N×13°.37W, h10km, mb3.9, Error ellipse: s-maj=7.5km s-min=6.9km az=39.0*
ISC 05 23:07:34.2±3.5**, 37°.49N**±0°.09×**13°.6W**±0°.2**, h10**km**, n76,**
σ1§**69**/138**, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC
PMAFR	**Mafra**	**3.71**	**65**	*e*Pn	**Pn**	**23 08 33.6**	**+2.1**
PMAFR				*e*Sn	**Sn**	**23 09 16.8**	**+1.5**
PMAFR				A	A	23 09 22.0	
	8.4nm,0.7s						
PMAFR	**Mafra**	**3.71**	**65**	P	**Pn**	**23 08 33.6**	**+2.1**
	3.7nm,0.1s,SNR=9.9						
PMAFR				S	**Sn**	**23 09 16.1**	**+0.8**
	2.0nm,0.2s,SNR=5.7						
PMAFR	**Mafra**	**3.71**	**65**	P	**Pn**	**23 08 33.6**	**+2.1**
	3.7nm,0.1s,SNR=9.9						
PMAFR				S	**Sn**	**23 09 16.1**	**+0.8**
	2.0nm,0.2s,SNR=5.7						
PMAFR				*e*Sn	Sb	23 09 16.8	-7.9
PFVI	**Vila Bisbo**	**3.83**	**94**	*e*Pn	**Pn**	**23 08 34.4**	**+1.2**
PFVI				*e*Sn	**Sn**	**23 09 16.4**	**-1.8**
PFVI				A	A	23 09 18.0	
	8.8nm,0.5s						
PFVI	**Vila Bisbo**	**3.83**	**94**	P	**Pn**	**23 08 34.2**	**+1.0**
	1.5nm,0.1s,SNR=4.0						
PFVI				S	**Sn**	**23 09 16.2**	**-2.0**
	20nm,0.2s,SNR=6.1						
PFVI	**Vila Bisbo**	**3.83**	**94**	*e*Pn	**Pn**	**23 08 34.4**	**+1.2**
PFVI				*e*Sn	**Sn**	**23 09 16.4**	**-1.8**
PTEO	**Sao Teotonio**	**3.88**	**88**	*e*Pn	**Pn**	**23 08 35.4**	**+1.5**
PTEO				*e*Sn	**Sn**	**23 09 18.7**	**-0.9**
PTEO				A	A	23 09 19.5	
	6.4nm,0.8s						
PTEO	**Sao Teotonio**	**3.88**	**88**	P	**Pn**	**23 08 35.4**	**+1.5**
PTEO				S	**Sn**	**23 09 18.7**	**-0.9**
	3.2nm,0.8s						
PTEO	**Sao Teotonio**	**3.88**	**88**	P	**Pn**	**23 08 35.4**	**+1.5**
PTEO				S	**Sn**	**23 09 18.7**	**-0.9**
	3.2nm,0.8s						
PNCL	**Nicolau / Gran**	**4.07**	**80**	*e*Pn	**Pn**	**23 08 37.9**	**+1.4**
PNCL				*e*Sn	**Sn**	**23 09 23.4**	**-0.8**
PNCL				A	A	23 09 25.4	
	2.2nm,0.2s						
PNCL	**Nicolau / Gran**	**4.07**	**80**	*e*Pn	**Pn**	**23 08 37.9**	**+1.4**
PNCL				*e*Sn	**Sn**	**23 09 23.4**	**-0.8**
MESJ	**Messejana**	**4.29**	**84**	*e*P	**Pn**	**23 08 41.0**	**+1.5**
MESJ				*e*S	**Sn**	**23 09 28.1**	**-1.5**
MESJ				AML	AML	23 09 29.9	
	comp=N,1.7nm,0.2s						
MESJ	**Messejana**	**4.29**	**84**	*e*Pn	**Pn**	**23 08 41.1**	**+1.5**
MESJ				*e*Sn	**Sn**	**23 09 28.5**	**-1.1**
MESJ				A	A	23 09 35.4	
	comp=N,3.2nm,0.3s						
MESJ	**Messejana**	**4.29**	**84**	P	**Pn**	**23 08 41.0**	**+1.5**
MESJ				S	**Sn**	**23 09 28.1**	**-1.5**
MESJ	**Messejana**	**4.29**	**84**	P	**Pn**	**23 08 41.0**	**+1.5**
MESJ				S	**Sn**	**23 09 28.1**	**-1.5**
ALMR	**Almeirim**	**4.29**	**66**	*e*P	**Pn**	**23 08 41.2**	**+1.7**
ALMR				*e*S	**Sn**	**23 09 28.1**	**-1.5**
ALMR				AML	AML	23 09 32.9	
	comp=E,6.2nm,0.3s						
ALMR	**Almeirim**	**4.29**	**66**	*e*Pn	**Pn**	**23 08 41.6**	**+2.1**
ALMR				*e*Sn	**Sn**	**23 09 31.2**	**+1.6**
ALMR				A	A	23 09 39.3	
	comp=E,6.8nm,0.8s						
ALMR	**Almeirim**	**4.29**	**66**	P	**Pn**	**23 08 41.2**	**+1.7**
ALMR				S	**Sn**	**23 09 28.1**	**-1.5**
	comp=E,3.1nm,0.3s						
ALMR	**Almeirim**	**4.29**	**66**	P	**Pn**	**23 08 41.2**	**+1.7**
ALMR	**Almeirim**	**4.29**	**66**	*e*Pn	**Pn**	**23 08 41.6**	**+2.1**
ALMR				S	**Sn**	**23 09 28.1**	**-1.5**
	comp=E,3.1nm,0.3s						
ALMR				*e*Sn	**Sn**	**23 09 31.2**	**+1.6**
PCVE	**Castro Verde**	**4.43**	**86**	*e*Pn	**Pn**	**23 08 42.5**	**+1.1**
PCVE				*e*Sn	**Sn**	**23 09 32.0**	**-1.0**
PCVE				A	A	23 09 38.1	
	comp=E,2.0nm,0.4s						
PCVE	**Castro Verde**	**4.43**	**86**	P	**Pn**	**23 08 42.5**	**+1.1**
PCVE				S	**Sn**	**23 09 32.0**	**-1.0**
	comp=E,2.0nm,0.4s						
PCVE	**Castro Verde**	**4.43**	**86**	P	**Pn**	**23 08 42.5**	**+1.1**
PCVE				S	**Sn**	**23 09 32.0**	**-1.0**
	comp=E,2.0nm,0.4s						
PMTG	**Montargil**	**4.52**	**68**	*e*Pn	**Pn**	**23 08 44.2**	**+1.5**
PMTG				*e*Sn	**Sn**	**23 09 35.9**	**+0.6**
PMTG				A	A	23 09 40.9	
	comp=E,1.3nm,0.1s						
PMTG	**Montargil**	**4.52**	**68**	*e*Pn	**Pn**	**23 08 44.2**	**+1.5**
PMTG				*e*Sn	**Sn**	**23 09 35.9**	**+0.6**
PBDV	**Barranco-do-Ve**	**4.53**	**91**	*e*Pn	**Pn**	**23 08 44.7**	**+1.9**
PBDV				*e*Sn	**Sn**	**23 09 34.4**	**-1.1**
PBDV				A	A	23 09 43.7	
	comp=E,3.6nm,0.7s						
PBDV	**Barranco-do-Ve**	**4.53**	**91**	P	**Pn**	**23 08 44.7**	**+1.9**
PBDV				S	**Sn**	**23 09 34.4**	**-1.1**
	comp=E,3.6nm,0.7s						
PBDV	**Barranco-do-Ve**	**4.53**	**91**	P	**Pn**	**23 08 44.7**	**+1.9**
PBDV				S	**Sn**	**23 09 34.4**	**-1.1**

comp=E,3.6nm,0.7s
PBEJ Beja 4.58 82 *e*Sn **Sn 23 09 37.0 +0.2**
PBEJ A A 23 09 49.4
comp=E,1.9nm,0.4s
PBEJ Beja 4.58 82 S **Sn 23 09 37.0 +0.2**
comp=E,0.9nm,0.4s
PBEJ Beja 4.58 82 S **Sn 23 09 37.0 +0.2**
comp=E,0.9nm,0.4s
PVAQ Vaqueiros 4.69 89 *e*Pn **Pn 23 08 47.4 +2.4**
PVAQ *e*Sn **Sn 23 09 38.0 -1.4**
PVAQ A A 23 09 43.5
comp=E,4.8nm,0.1s
PVAQ Vaqueiros 4.69 89 P **Pn 23 08 47.4 +2.4**
PVAQ S **Sn 23 09 38.0 -1.4**
comp=E,4.8nm,0.1s
PVAQ Vaqueiros 4.69 89 P **Pn 23 08 47.4 +2.4**
PVAQ S **Sn 23 09 38.0 -1.4**
comp=E,4.8nm,0.1s
PCAS Casmilo, Conde 4.74 56 *e*Pn **Pn 23 08 47.3 +1.5**
PCAS *e*Sn **Sn 23 09 42.6 +1.8**
PCAS A A 23 09 46.6
comp=E,1.9nm,0.6s
PCAS Casmilo, Conde 4.74 56 *e*Pn **Pn 23 08 47.3 +1.5**
PCAS *e*Sn **Sn 23 09 42.6 +1.8**
EGRO El Granado 4.87 88 P **Pn 23 08 48.7 +1.2**
comp=E,1.3nm,0.1s,SNR=7.9
EGRO S **Sn 23 09 41.9 -2.0**
comp=E,3.5nm,0.2s,SNR=7.9
EGRO El Granado 4.87 88 P **Pn 23 08 48.7 +1.2**
comp=E,1.3nm,0.1s,SNR=7.9
EGRO S **Sn 23 09 41.9 -2.0**
comp=E,3.5nm,0.2s,SNR=7.9
PESTR Estremoz 4.94 72 *e*Pn **Pn 23 08 50.9 +2.5**
PESTR *e*Sn **Sn 23 09 45.6 0.0**
PESTR A A 23 09 50.8
comp=E,1.6nm,0.5s
PESTR Estremoz 4.94 72 *e*Pn **Pn 23 08 50.9 +2.5**
PESTR *e*Sn **Sn 23 09 45.6 0.0**
PBAR Barrancos 5.24 81 *e*Pn **Pn 23 08 54.9 +2.3**
PBAR *e*Sn **Sn 23 09 53.1 0.0**
PBAR A A 23 09 59.1
comp=E,2.2nm,0.3s
PBAR Barrancos 5.24 81 P **Pn 23 08 54.9 +2.3**
PBAR S **Sn 23 09 53.1 0.0**
comp=E,2.2nm,0.3s
PBAR Barrancos 5.24 81 P **Pn 23 08 54.9 +2.3**
PBAR S **Sn 23 09 53.1 0.0**
comp=E,2.2nm,0.3s
PMRV Marv??o 5.25 66 *e*Pn **Pn 23 08 54.2 +1.5**
PMRV *e*Sn **Sn 23 09 52.8 -0.5**
PMRV A A 23 09 56.6
comp=E,1.1nm,0.2s
PMRV Marv??o 5.25 66 P **Pn 23 08 54.2 +1.5**
PMRV S **Sn 23 09 52.8 -0.5**
comp=E,1.1nm,0.2s
PMRV Marv??o 5.25 66 P **Pn 23 08 54.2 +1.5**
PMRV S **Sn 23 09 52.8 -0.5**
comp=E,1.1nm,0.2s
EBAD Badajoz 5.35 74 P **Pn 23 08 55.7 +1.6**
comp=E,0.9nm,0.1s,SNR=10.0
EBAD S **Sn 23 09 53.0 -2.7**
comp=E,1.5nm,0.2s,SNR=7.9
EBAD Badajoz 5.35 74 P **Pn 23 08 55.7 +1.6**
comp=E,0.9nm,0.1s,SNR=10.0
EBAD S **Sn 23 09 53.0 -2.7**
comp=E,1.5nm,0.2s,SNR=7.9
PVIS Viseu 5.49 52 *e*Pn **Pn 23 08 57.6 +1.6**
PVIS *e*Sn **Sn 23 09 59.1 -0.1**
PVIS A A 23 10 16.2
comp=E,2.2nm,0.6s
PVIS Viseu 5.49 52 P **Pn 23 08 57.6 +1.6**
PVIS Sn **Sn 23 09 59.1 -0.1**
comp=E,1.1nm,0.6s
PVIS Viseu 5.49 52 P **Pn 23 08 57.6 +1.6**
PVIS Sn **Sn 23 09 59.1 -0.1**
comp=E,1.1nm,0.6s
EMIN Mina Concepcio 5.51 85 P **Pn 23 08 57.5 +1.2**
comp=E,0.3nm,0.1s,SNR=8.5
EMIN S **Sn 23 09 55.9 -3.9**
comp=E,0.6nm,0.2s,SNR=7.9
EMIN Mina Concepcio 5.51 85 P **Pn 23 08 57.5 +1.2**
comp=E,0.3nm,0.1s,SNR=8.5
PVRL Vila Real 5.92 49 *e*Sn **Sn 23 10 09.8 -0.2**
PVRL Vila Real 5.92 49 *e*Sn **Sn 23 10 09.8 -0.2**
POLO Lamas de Olo 5.94 47 *e*Sn **Sn 23 10 10.8 +0.4**
POLO Lamas de Olo 5.94 47 *e*Sn **Sn 23 10 10.8 +0.4**
PGAV Gavieira, Arco 6.07 41 *e*Pn **Pn 23 09 05.6 +1.5**
PGAV *e*Sn **Sn 23 10 11.5 -2.2**
PGAV A A 23 10 19.0
comp=E,2.8nm,0.6s
PGAV Gavieira, Arco 6.07 41 *e*Pn **Pn 23 09 05.6 +1.5**
PGAV *e*Sn **Sn 23 10 11.5 -2.2**
ELOB Lobios 6.12 43 P **Pn 23 09 05.8 +1.1**
comp=E,0.4nm,0.2s,SNR=7.9
ELOB S **Sn 23 10 10.9 -3.9**
comp=E,0.3nm,0.1s,SNR=7.9
ELOB Lobios 6.12 43 P **Pn 23 09 05.8 +1.1**
comp=E,0.4nm,0.2s,SNR=7.9
MVO Moncorvo 6.28 52 *e*Pn **Pn 23 09 07.7 +0.7**
MVO *e*Sn **Sn 23 10 17.3 -1.5**
MVO A A 23 10 22.1
comp=E,1.4nm,0.8s
MVO Moncorvo 6.28 52 P **Pn 23 09 08.1 +1.1**
comp=E,0.6nm,0.2s,SNR=4.0
MVO S **Sn 23 10 16.4 -2.4**
comp=E,0.8nm,0.2s,SNR=7.9
MVO Moncorvo 6.28 52 *e*Pn **Pn 23 09 07.7 +0.7**
MVO Moncorvo 6.28 52 P **Pn 23 09 08.1 +1.1**
comp=E,0.6nm,0.2s,SNR=4.0
MVO S **Sn 23 10 16.4 -2.4**
comp=E,0.8nm,0.2s,SNR=7.9
MVO *e*Sn **Sn 23 10 17.3 -1.5**
EPLA Plasencia 6.42 64 P **Pn 23 09 10.2 +1.4**
comp=E,0.3nm,0.1s,SNR=7.9
EPLA S **Sn 23 10 18.9 -3.2**
comp=E,0.3nm,0.1s,SNR=7.9
EPLA Plasencia 6.42 64 P **Pn 23 09 10.2 +1.4**
comp=E,0.3nm,0.1s,SNR=7.9
EPLA S **Sn 23 10 18.9 -3.2**
comp=E,0.3nm,0.1s,SNR=7.9
EMAZ Mazaricos 6.50 32 S **Sn 23 10 19.7 -4.5**
comp=E,0.8nm,0.1s,SNR=4.0
ECAB El Cabril 6.51 82 P **Pn 23 09 11.6 +1.5**
comp=E,0.5nm,0.2s,SNR=12
ECAB S **Sn 23 10 21.5 -2.9**
comp=E,0.6nm,0.2s,SNR=7.9
ECAB El Cabril 6.51 82 P **Pn 23 09 11.6 +1.5**
comp=E,0.5nm,0.2s,SNR=12
ECAB S **Sn 23 10 21.5 -2.9**
comp=E,0.6nm,0.2s,SNR=7.9
EAGO Agolada(Pontev 6.78 37 P **Pn 23 09 14.1 +0.3**
comp=E,0.6nm,0.1s,SNR=7.9
EAGO S Sn 23 10 24.9 -6.2
comp=E,0.3nm,0.1s,SNR=7.9
EAGO Agolada(Pontev 6.78 37 P **Pn 23 09 14.1 +0.3**
comp=E,0.6nm,0.1s,SNR=7.9
PAB San Pablo 7.54 71 P **Pn 23 09 24.7 +0.4**
comp=E,0.2nm,0.2s,SNR=7.9
PAB S **Sn 23 10 46.7 -3.2**
comp=E,0.2nm,0.2s,SNR=4.0
PAB San Pablo 7.54 71 P **Pn 23 09 24.7 +0.4**
comp=E,0.2nm,0.2s,SNR=7.9
PAB S **Sn 23 10 46.7 -3.2**
comp=E,0.2nm,0.2s,SNR=4.0
ESDC Sonseca Array 7.86 71 P **Pn 23 09 29.9 +1.2**
comp=E,0.4nm,0.1s,baz=256,slow=12,SNR=5.8
ESDC Sonseca Array 7.86 71 P **Pn 23 09 29.9 +1.2**
comp=E,0.4nm,0.1s,baz=256,slow=12,SNR=5.8

*IDC **05** 23:07:48.4±0.6, 57°.94S×25°.56W, h0km, mb4.3/12, mb1 4.4/13, mb1mx4.1/33, mbtmp4.3/13, ML4.5/1, Error ellipse: s-maj=23.2km s-min=15.3km az=64.0*
*ISCJB **05** 23:07:53.4±0.5, 57°.86S±0°.07×25°.6W±0°.2, h49km, mb4.2/15, Error ellipse: s-maj=17.5km s-min=6.8km az=155.2*
*NEIC **05** 23:07:58.9±1.6, 57°.99S×25°.49W, h83km±15km, mb4.3/3, Error ellipse: s-maj=16.4km s-min=8.7km az=56.0*
ISC 05 23:07:55.1±0.5, 57°.90S±0°.08×25°.5W±0°.1, h49km, n48, σ1§15/52, mb4.2/15, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.12**	**296**	*e*Pn	Pn	23 09 42.6	+6.1
VNA1	**Neumayer--Stat**	**14.74**	**157**	P	**P**	**23 11 24.8**	**-0.4**
VNA3	**Neumayer Olymp**	**14.94**	**160**	P	**Pn**	**23 11 21.0**	**-1.9**
VNA3				S	**Sn**	**23 14 11.4**	**+4.5**
VNA2	**Neumayer--Watz**	**15.13**	**157**	P	**Pn**	**23 11 23.8**	**-1.6**
	baz=325,slow=14						
VNA2				S	**Sn**	**23 14 14.2**	**+2.7**
SNAA	**Sanae**	**16.68**	**155**	P	**Pn**	**23 11 44.2**	**-0.9**
SNAA				S	**S**	**23 14 55.3**	**-3.0**
SNAA	**Sanae**	**16.68**	**155**	Pn	**Pn**	**23 11 44.0**	**-1.1**
	1.8nm,0.3s,baz=317,slow=15,SNR=22						
SNAA	**Sanae**	**16.68**	**155**	Pn	**Pn**	**23 11 44.0**	**-1.1**
QSPA	**South Pole Qui**	**32.35**	**180**	P	**P**	**23 14 20.1**	**+0.6**
	4.5nm,0.6s,baz=184,slow=1.4,SNR=29						
QSPA	**South Pole Qui**	**32.35**	**180**	P	**P**	**23 14 20.1**	**+0.6**
PLCA	**Paso Flores**	**33.23**	**281**	P	**P**	**23 14 27.5**	**+0.1**
	1.5nm,0.4s,baz=164,slow=5.5,SNR=8.5						
PLCA	**Paso Flores**	**33.23**	**281**	P	**P**	**23 14 27.5**	**+0.1**
MAW	**Mawson**	**38.13**	**142**	P	**P**	**23 15 08.2**	**-0.6**
	1.2nm,0.6s,baz=248,slow=9.6,SNR=5.1						
MAW	**Mawson**	**38.13**	**142**	P	**P**	**23 15 08.2**	**-0.6**
CPUP	**Villa Florida**	**38.71**	**311**	P	**P**	**23 15 13.3**	**-0.9**
	1.5nm,0.8s,baz=175,slow=11,SNR=3.5						
CPUP				PcP	**PcP**	**23 17 25.3**	**+0.2**
	1.4nm,0.5s,baz=146,slow=3.6,SNR=3.0						
CPUP	**Villa Florida**	**38.71**	**311**	P	**P**	**23 15 13.3**	**-0.9**
CPUP				PcP	**PcP**	**23 17 25.3**	**+0.2**
SBA	**Scott Base**	**44.29**	**184**	*e*P	**P**	**23 16 00.9**	**+1.6**
	3.3nm,0.9s						
VNDA	**Vanda**	**44.76**	**182**	P	**P**	**23 16 02.0**	**-1.0**
	3.5nm,0.7s,baz=198,slow=6.8,SNR=7.6						
VNDA	**Vanda**	**44.76**	**182**	P	**P**	**23 16 02.0**	**-1.0**
SIV	**San Ignacio**	**49.50**	**313**	P	**P**	**23 16 40.2**	**-0.5**
	1.3nm,0.5s,baz=192,slow=8.4,SNR=15						
SIV	**San Ignacio**	**49.50**	**313**	P	**P**	**23 16 40.2**	**-0.5**
LPAZ	**La Paz**	**52.18**	**305**	P	**P**	**23 17 01.4**	**-0.1**
	1.0nm,0.4s,baz=174,slow=5.1,SNR=11						
LPAZ	**La Paz**	**52.18**	**305**	P	**P**	**23 17 01.4**	**-0.1**
SAML	**Samuel**	**56.74**	**314**	*e*P	**P**	**23 17 33.6**	**-0.3**
	3.5nm,0.6s						
LSZ	**Lusaka**	**58.24**	**66**	*e*P	**P**	**23 17 44.4**	**-0.2**
	2.6nm,1.0s						
DBIC	**Dimbokro**	**66.50**	**22**	P	**P**	**23 18 40.1**	**+0.6**
	1.1nm,0.3s,baz=179,slow=6.6,SNR=5.8						
DBIC	**Dimbokro**	**66.50**	**22**	P	**P**	**23 18 40.1**	**+0.6**
TORD	**Torodi Ar. Bea**	**74.25**	**28**	P	**P**	**23 19 27.8**	**+1.0**
	1.9nm,0.6s,baz=197,slow=6.1,SNR=45						
TORD	**Torodi Ar. Bea**	**74.25**	**28**	P	**P**	**23 19 27.8**	**+1.0**
KOWA	**Kowa**	**74.28**	**22**	P	**P**	**23 19 28.1**	**+1.1**
	1.0nm,0.4s,baz=194,slow=8.3,SNR=6.6						
KOWA	**Kowa**	**74.28**	**22**	P	**P**	**23 19 28.1**	**+1.1**
PCRV	**Puerto La Cruz**	**74.96**	**320**	P	**P**	**23 19 32.2**	**+1.3**
	14nm,0.6s,baz=148,slow=5.7,SNR=7.6						
PCRV	**Puerto La Cruz**	**74.96**	**320**	P	**P**	**23 19 32.2**	**+1.3**
ASAR	**Alice Springs**	**96.95**	**161**	P	**P**	**23 21 20.2**	**-1.0**
	0.7nm,0.7s,baz=182,slow=4.6,SNR=6.1						
ASAR	**Alice Springs**	**96.95**	**161**	P	**P**	**23 21 20.2**	**-1.0**
FINES	**FINESS Array B**	**125.60**	**28**	PKP	**PKPdf**	**23 26 49.0**	**-0.3**
	1.0nm,0.5s,baz=200,slow=1.3,SNR=13						
FINES	**FINESS Array B**	**125.60**	**28**	PKP	**PKPdf**	**23 26 49.0**	**-0.3**
ARCES	**ARCESS Array B**	**132.33**	**22**	PKP	**PKPdf**	**23 27 02.0**	**0.0**
	1.4nm,0.8s,baz=204,slow=2.0,SNR=4.6						
ARCES	**ARCESS Array B**	**132.33**	**22**	PKP	**PKPdf**	**23 27 02.0**	**0.0**
KURK	**Kurchatov**	**137.36**	**66**	*e*PKPdf	**PKPdf**	**23 27 11.8**	**-0.1**
YKA	**Yellowknife Ar**	**138.14**	**316**	PKP	**PKPdf**	**23 27 13.1**	**+0.1**
	1.3nm,0.5s,baz=129,slow=2.3,SNR=19						
YKA	**Yellowknife Ar**	**138.14**	**316**	PKP	**PKPdf**	**23 27 13.1**	**+0.1**
INK	**Inuvik**	**147.80**	**318**	*e*PKPbc	**PKPbc**	**23 27 32.7**	**-0.1**
DAWY	**Dawson**	**148.69**	**309**	*e*PKPbc	**PKPbc**	**23 27 35.3**	**0.0**
SONM	**Songino Array**	**149.91**	**88**	PKPbc	**PKPbc**	**23 27 38.9**	**0.0**
	2.1nm,0.6s,baz=233,slow=3.0,SNR=12						
SONM	**Songino Array**	**149.91**	**88**	PKPbc	**PKPbc**	**23 27 38.9**	**0.0**
ILAR	**Eielson Array**	**152.00**	**309**	PKPbc	**PKPbc**	**23 27 43.4**	**+0.2**
	3.0nm,0.4s,baz=141,slow=2.4,SNR=35						
ILAR	**Eielson Array**	**152.00**	**309**	PKPbc	**PKPbc**	**23 27 43.4**	**+0.2**
KDAK	**Kodiak Island**	**152.41**	**293**	*e*PKPbc	**PKPbc**	**23 27 44.7**	**+0.4**

*IDC **05** 23:08:07.2±0.4, 57°.91S×25°.54W, h0km, mb4.8/16, mb1 4.8/17, mb1mx4.5/33, mbtmp4.8/17, ML4.9/1, Error ellipse: s-maj=17.9km s-min=13.2km az=54.0*
*ISCJB **05** 23:08:11.7±0.3, 57°.90S±0°.06×25°.5W±0°.1, h40km, mb4.8/26, MS4.8/1, Error ellipse: s-maj=10.8km s-min=8.5km az=159.8*
*NEIC **05** 23:08:16.0±1.4, 57°.96S×25°.31W, h61km±11km, mb4.7/13, Error ellipse: s-maj=10.1km s-min=7.1km az=45.0*
*BJI **05** 23:08:16.4, 57°.90S×25°.30W, h56km, mB5.4/4, Ms5.2/2, Ms7 4.9/1*
ISC 05 23:08:13.2±0.3, 58°.00S±0°.08×25°.17W±0°.08, h40km, n134, σ1§43/141, mb4.8/26, 1C, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.34**	**296**	*e*Pn	**Pn**	**23 10 00.7**	**+3.1**
SNAA	**Sanae**	**16.50**	**155**	Pn	**P**	**23 12 03.2**	**-0.3**
	4.8nm,0.3s,baz=313,slow=15,SNR=18						
SNAA				Sn	**Sn**	**23 14 57.2**	**-6.0**
	0.6nm,0.3s,baz=212,slow=19,SNR=3.6						
PMSA	**Palmer Station**	**19.54**	**234**	*e*P	**Pn**	**23 12 38.0**	**-0.3**
SYO	**Syowa Base**	**29.38**	**138**	*e*X	P	23 14 18.2	+6.3
QSPA	**South Pole Qui**	**32.24**	**180**	P	**P**	**23 14 39.3**	**+1.9**
	14nm,0.6s,baz=206,slow=1.8,SNR=29						
PLCA	**Paso Flores**	**33.45**	**281**	P	**P**	**23 14 46.3**	**-1.7**
	6.4nm,0.8s,baz=100,slow=11,SNR=7.5						
PLCA	**Paso Flores**	**33.45**	**281**	P	**P**	**23 14 46.3**	**-1.7**
PLCA				*e*pP	**sP**	**23 15 02.4**	**-1.5**
MAW	**Mawson**	**37.92**	**141**	P	**P**	**23 15 27.8**	**+1.9**
	3.7nm,0.6s,baz=220,slow=8.1,SNR=13						
MAW	**Mawson**	**37.92**	**141**	*e*P	**P**	**23 15 27.9**	**+1.9**
	1.2nm,0.9s						
CPUP	**Villa Florida**	**38.93**	**311**	P	**P**	**23 15 32.3**	**-2.6**
	4.8nm,0.7s,baz=155,slow=9.5,SNR=8.5						
CPUP				PcP	**PcP**	**23 17 44.6**	**-0.3**
	3.2nm,0.6s,baz=130,slow=5.1,SNR=4.3						
CPUP	**Villa Florida**	**38.93**	**311**	*e*P	**P**	**23 15 33.6**	**-1.2**
	7.2nm,0.9s						
CPUP				PcP	**PcP**	**23 17 44.6**	**-0.3**
SBA	**Scott Base**	**44.20**	**184**	*e*P	**P**	**23 16 19.6**	**+2.1**
	19nm,0.9s						
VNDA	**Vanda**	**44.66**	**182**	P	**P**	**23 16 22.9**	**+1.8**
	15nm,0.7s,baz=188,slow=7.0,SNR=25						
BOSA	**Boshof**	**45.45**	**72**	P	**P**	**23 16 29.2**	**+1.1**
	4.4nm,0.8s,baz=206,slow=5.6,SNR=6.7						
LBTB	**Lobatse**	**48.59**	**70**	P	**P**	**23 16 54.2**	**+1.7**
	5.4nm,0.8s,baz=223,slow=7.1,SNR=6.3						
H10S2	**ASCENSION HYDR**	**49.60**	**14**	T	T	00 11 14.7	
	baz=188,slow=75,SNR=180						
H10S3	**ASCENSION HYDR**	**49.60**	**14**	T	T	00 11 15.0	
	baz=188,slow=75,SNR=173						
H10S1	**ASCENSION HYDR**	**49.62**	**14**	T	T	00 11 16.0	
	baz=188,slow=75,SNR=219						
SIV	**San Ignacio**	**49.72**	**312**	P	**P**	**23 16 60.0**	**-1.2**
	2.9nm,0.5s,baz=188,slow=8.7,SNR=14						
SIV				PcP	**PcP**	**23 18 22.0**	**+0.2**
	5.2nm,0.9s,baz=130,slow=2.4,SNR=5.8						
H10N1	**ASCENSION HYDR**	**50.72**	**14**	T	T	00 12 39.1	
	baz=181,slow=71,SNR=15						
H10N3	**ASCENSION HYDR**	**50.72**	**14**	T	T	00 12 40.2	
	baz=181,slow=71,SNR=38						
H10N2	**ASCENSION HYDR**	**50.73**	**14**	T	T	00 12 40.2	
	baz=181,slow=71,SNR=42						
CASY	**Casey**	**51.69**	**159**	*e*P	**P**	**23 17 15.5**	**+0.1**
	13nm,1.1s						
LPAZ	**La Paz**	**52.40**	**304**	P	**P**	**23 17 20.9**	**-1.2**
	4.3nm,0.6s,baz=154,slow=5.1,SNR=12						
SAML	**Samuel**	**56.96**	**313**	*e*P	**P**	**23 17 53.1**	**-1.2**
	14nm,0.7s						
LSZ	**Lusaka**	**58.11**	**66**	*e*P	**P**	**23 18 03.1**	**+0.5**
	12nm,1.0s						
LIC	**Lamto**	**66.06**	**22**	*e*P	**P**	**23 18 56.5**	**+0.8**
	38nm,0.8s						
KIC	**Kosan Boka**	**66.25**	**22**	*e*P	**P**	**23 18 57.2**	**+0.3**
	26nm,0.9s						
TIC	**Toumodi**	**66.47**	**22**	*e*P	**P**	**23 18 58.9**	**+0.6**
DBIC	**Dimbokro**	**66.53**	**22**	P	**P**	**23 18 59.2**	**+0.5**
	17nm,0.9s,baz=168,slow=7.3,SNR=12						
DBIC	**Dimbokro**	**66.53**	**22**	*e*P	**P**	**23 19 00.0**	**+1.4**
	17nm,1.0s						
OTAV	**Otavalo**	**71.65**	**302**	*e*P	**P**	**23 19 30.4**	**-0.7**
	7.2nm,1.0s						
PRAC	**Prado**	**73.20**	**307**	*e*P	**P**	**23 19 38.7**	**-1.0**
	15nm,0.7s						
TOA0	**Torodi Ar. Sit**	**74.25**	**27**	*e*P	**P**	**23 19 46.5**	**+0.7**
TORD	**Torodi Ar. Bea**	**74.25**	**27**	P	**P**	**23 19 46.9**	**+1.1**
	11nm,0.6s,baz=198,slow=6.2,SNR=26						
KOWA	**Kowa**	**74.31**	**21**	P	**P**	**23 19 47.2**	**+1.1**
	6.0nm,0.6s,baz=194,slow=8.6,SNR=13						
KOWA	**Kowa**	**74.31**	**21**	*e*P	**P**	**23 19 46.6**	**+0.4**
	8.6nm,0.8s						
RUSC	**La Rusia**	**74.42**	**310**	*e*P	**P**	**23 19 45.2**	**-2.2**
	4.0nm,1.2s						
PCRV	**Puerto La Cruz**	**75.16**	**320**	P	**P**	**23 19 50.6**	**-0.5**
	32nm,0.7s,baz=173,slow=6.7,SNR=9.3						
SDV	**Santo Domingo**	**76.17**	**313**	P	**P**	**23 19 55.7**	**-1.4**
	6.4nm,0.7s,baz=207,slow=6.8,SNR=8.2						
SDV	**Santo Domingo**	**76.17**	**313**	*e*P	**P**	**23 19 56.7**	**-0.4**
	8.5nm,0.9s						
TAM	**Tamanrasset**	**84.46**	**28**	*e*P	**P**	**23 20 44.3**	**+2.9**
	5.8nm,1.1s						
STKA	**Stephens Creek**	**89.78**	**169**	P	**P**	**23 21 06.6**	**-0.6**
	2.8nm,0.7s,baz=180,slow=11,SNR=3.3						
ASAR	**Alice Springs**	**96.78**	**161**	P	**P**	**23 21 39.6**	**+0.1**
	2.1nm,0.7s,baz=190,slow=4.7,SNR=13						
AS01	**Alice Springs**	**96.79**	**161**	*e*P	**P**	**23 21 39.2**	**-0.4**
WRA	**Warramunga Arr**	**100.50**	**160**	P	**Pdif**	**23 21 55.8**	**-0.4**
	0.4nm,0.7s,baz=194,slow=4.6,SNR=2.8						
AKASG	**Malin Array Be**	**117.14**	**36**	PKP	**PKPdf**	**23 26 52.4**	**-0.2**
	0.3nm,0.4s,baz=221,slow=31,SNR=2.8						
LCMT	**Little Creek M**	**119.54**	**293**	*e*PKPdf	**PKPdf**	**23 26 58.9**	**+1.0**
TPNV	**Topopah Spring**	**120.98**	**291**	*e*PKPdf	**PKPdf**	**23 27 01.7**	**+1.1**
PSUT	**Pine Spring**	**121.04**	**294**	*e*PKPdf	**PKPdf**	**23 27 02.2**	**+1.4**
PDAR	**Pinedale Array**	**122.30**	**300**	PKP	**PKPdf**	**23 27 01.4**	**-1.7**
	0.5nm,0.4s,baz=128,slow=2.4,SNR=5.5						
PDAR	**Pinedale Array**	**122.30**	**300**	*e*PKPdf	**PKPdf**	**23 27 02.0**	**-1.1**
ULM	**Lac du Bonnet**	**122.42**	**314**	PKP	**PKPdf**	**23 27 00.2**	**-2.5**
	2.4nm,0.5s,baz=119,slow=3.9,SNR=6.9						
NV01	**Mina Array Sit**	**123.15**	**290**	*e*PKPdf	**PKPdf**	**23 27 06.0**	**+1.1**
NVAR	**Mina Array Bea**	**123.15**	**290**	PKP	**PKPdf**	**23 27 04.9**	**+0.1**
	2.0nm,0.8s,baz=138,slow=3.3,SNR=9.7						
CM01	**Chiang Mai Arr**	**123.33**	**110**	*e*PKPdf	**PKPdf**	**23 27 05.3**	**-0.2**
CMAR	**Chiang Mai Arr**	**123.35**	**110**	PKP	**PKPdf**	**23 27 05.9**	**+0.4**
	1.7nm,0.5s,baz=244,slow=3.5,SNR=11						
MOOW	**Moose Ponds**	**123.61**	**300**	*e*PKPdf	**PKPdf**	**23 27 06.0**	**+0.5**
CMB	**Columbia Colle**	**123.89**	**289**	*e*PKPdf	**PKPdf**	**23 27 07.5**	**+1.4**
YERR	**Yerington**	**124.05**	**290**	*e*PKPdf	**PKPdf**	**23 27 08.6**	**+2.1**
BMN	**Battle Mountai**	**124.15**	**293**	*e*PKPdf	**PKPdf**	**23 27 07.9**	**+1.3**
AFDM	**Forest Hills D**	**124.89**	**289**	*e*PKPdf	**PKPdf**	**23 27 09.3**	**+1.4**
BEKR	**Beckworth**	**125.28**	**290**	*e*PKPdf	**PKPdf**	**23 27 10.0**	**+1.2**
FINES	**FINESS Array B**	**125.60**	**27**	PKP	**PKPdf**	**23 27 08.4**	**0.0**
	2.2nm,0.5s,baz=166,slow=2.1,SNR=16						
WVOR	**Wild Horse Val**	**126.36**	**293**	*e*PKPdf	**PKPdf**	**23 27 12.3**	**+1.6**
EGMT	**Eagleton**	**126.42**	**304**	*e*PKPdf	**PKPdf**	**23 27 10.8**	**+0.2**
MOD	**Modoc Plateau**	**126.78**	**292**	*e*PKPdf	**PKPdf**	**23 27 13.4**	**+1.8**
MSO	**Missoula**	**127.41**	**300**	*e*PKPdf	**PKPdf**	**23 27 13.2**	**+0.7**
ABKAR	**Akbulak array**	**127.57**	**55**	*e*PKPdf	**PKPdf**	**23 27 13.0**	**+0.4**
AKTO	**Aktyubinsk**	**127.61**	**53**	PKP	**PKPdf**	**23 27 11.7**	**-1.0**
	3.1nm,0.9s,baz=193,slow=2.8,SNR=7.5						
YBH	**Yreka Blue Hor**	**127.85**	**290**	PKP	**PKPdf**	**23 27 12.2**	**-1.4**
	0.8nm,0.5s,baz=68,slow=5.4,SNR=3.9						
KSH	**Kashi**	**128.03**	**74**	PKP	**PKPdf**	**23 27 14.9**	**+0.9**
KSH				PP	**PP**	**23 29 15.7**	**-2.4**
KSH				PKS	**PKSdf**	**23 30 47.4**	**-3.2**
KSH				SKKS		23 36 01.1	
KSH				SS	**SS**	**23 46 21.3**	**-7.6**
KSH				AMB	AMB		
	comp=Z,400nm,5.0s						
FFC	**Flin Flon**	**128.24**	**314**	*e*PKPdf	**PKPdf**	**23 27 13.8**	**0.0**
F10A	**Beach Ranch, E**	**128.32**	**297**	*e*PKPdf	**PKPdf**	**23 27 14.8**	**+0.4**
FCC	**Fort Churchill**	**128.51**	**322**	*e*PKPdf	**PKPdf**	**23 27 12.6**	**-1.5**
HUMO	**Hull Mountain**	**128.62**	**291**	*e*PKPdf	**PKPdf**	**23 27 16.6**	**+1.7**
G08A	**Pilot Rock**	**128.64**	**296**	*e*PKPdf	**PKPdf**	**23 27 16.2**	**+1.2**
AAK	**Ala-Archa**	**129.58**	**71**	*e*PKPdf	**PKPdf**	**23 27 17.1**	**+0.2**
B08A	**Colville Reser**	**131.03**	**298**	*e*PKPdf	**PKPdf**	**23 27 20.3**	**+1.0**
ARCES	**ARCESS Array B**	**132.35**	**22**	PKP	**PKPdf**	**23 27 20.3**	**-0.8**
	1.1nm,0.7s,baz=232,slow=1.4,SNR=5.8						
BVAR	**Borovoye Array**	**134.89**	**58**	PKP	**PKPdf**	**23 27 26.2**	**-0.2**
	1.1nm,0.7s,baz=207,slow=2.9,SNR=6.0						
CD2	**Chengdu**	**136.07**	**105**	PKP	**PKPdf**	**23 27 29.6**	**+0.2**
MK01	**Makanchi Array**	**136.44**	**72**	*e*PKPdf	**PKPdf**	**23 27 31.1**	**+1.6**
MK31	**Makanchi Array**	**136.45**	**72**	*e*PKPdf	**PKPdf**	**23 27 28.6**	**-1.0**
MKAR	**Makanchi Array**	**136.45**	**72**	PKP	**PKPdf**	**23 27 29.1**	**-0.4**
	1.1nm,0.8s,baz=233,slow=3.2,SNR=6.8						
KURBB	**Kurchatov Arra**	**137.12**	**65**	PKP	**PKPdf**	**23 27 30.1**	**-0.5**
	1.1nm,0.8s,baz=235,slow=2.6,SNR=7.5						
WMQ	**Urumqi**	**137.20**	**79**	PKP	**PKPdf**	**23 27 32.5**	**+1.4**
KURK	**Kurchatov**	**137.23**	**65**	*e*PKPdf	**PKPdf**	**23 27 30.8**	**0.0**
YKA	**Yellowknife Ar**	**138.35**	**316**	PKP	**PKPdf**	**23 27 32.6**	**+0.1**
	5.4nm,0.7s,baz=129,slow=2.3,SNR=8.0						
RES	**Resolute Bay**	**140.09**	**337**	*e*PKPdf	**PKPdf**	**23 27 35.8**	**+0.5**
LZH	**Lanzhou**	**140.16**	**101**	*e*PKP	**PKPdf**	**23 27 37.4**	**+0.5**
L

BJI ***05*** *23:23:00.4, 18°32S×168°71E, h223km, mb4.6/26, mB5.0/16*

ISC 05 23:22:55.7±0.5, 18°77S±0°05×168°98E±0°05, h202km±3km, h202km:pP-P, n497, σ1°24/499, mb4.9/117, 16C-40D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.06**	**215**	P	**Pn**	**23 23 58.9**	**+0.6**
	37nm,0.3s,baz=233,slow=21,SNR=185						
DZM				S	**Sn**	**23 24 46.9**	**-0.8**
	17nm,0.3s,baz=76,slow=9.1,SNR=9.8						
DZM				LR	LR	23 25 31.6	
	comp=Z,389nm,21.8s,baz=28,slow=38						
DZM	**Mont Dzumac**	**4.06**	**215**	*e*Pn	**Pn**	**23 23 59.8**	**+1.4**
	747nm,0.9s						
DZM				*e*Sn	**Sn**	**23 24 48.2**	**+0.5**
	4μm,1.1s						
MSVF	**Nonsavu**	**8.68**	**85**	*e*Pn	**Pn**	**23 25 00.1**	**+2.2**
MSVF	**Nonsavu**	**8.68**	**85**	*e*P	**Pn**	**23 25 00.1**	**+2.2**
HNR	**Honiara**	**12.76**	**315**	*e*P	**Pn**	**23 25 51.0**	**+0.8**
HNR	**Honiara**	**12.76**	**315**	P	**Pn**	**23 25 51.6**	**+1.5**
	26nm,0.3s,baz=170,slow=3.0,SNR=31						
HNR	**Honiara**	**12.76**	**315**	*e*Pn	**Pn**	**23 25 51.9**	**+1.7**
HNR	**Honiara**	**12.76**	**315**	*e*P	**Pn**	**23 25 51.9**	**+1.7**
RAO	**Raoul Island**	**15.87**	**134**	LR	LR	23 30 33.5	
	comp=Z,217nm,20.8s,baz=194,slow=29						
WCZ	**Waipu Caves**	**17.75**	**166**	P	**Pn**	**23 26 52.0**	**+1.4**
GRZ	**Great Barrier**	**18.33**	**163**	P	**Pn**	**23 26 59.9**	**+2.5**
AFI	**Afiamalu**	**19.08**	**78**	P	**P**	**23 27 01.3**	**-2.0**
	5.9nm,0.3s,baz=273,slow=11,SNR=8.3						
AFI	**Afiamalu**	**19.08**	**78**	*e*P	**P**	**23 27 02.4**	**-0.9**
	79nm,0.7s						
AFI	**Afiamalu**	**19.08**	**78**	*e*P	**P**	**23 27 02.4**	**-0.9**
AFI				pmax	pmax		
	comp=Z,79nm,0.7s						
TOZ	**Tahuroa Road**	**19.74**	**165**	P	**Pn**	**23 27 15.1**	**+1.0**
HAZ	**Te Kaha**	**20.43**	**160**	P	Pn	23 27 21.7	-0.9
HAZ				S	**S**	**23 30 57.2**	**+2.4**
RUGZ	**Raukumara Rang**	**20.58**	**160**	P	Pn	23 27 23.5	-1.2
PKGZ	**Pakihiroa**	**20.64**	**159**	P	Pn	23 27 22.8	-2.6
URZ	**Urewera**	**20.68**	**162**	P	**P**	**23 27 21.3**	**+1.2**
	comp=Z,23nm,0.6s,baz=253,slow=2.4,SNR=16						
URZ				S	**S**	**23 31 01.8**	**+2.2**
	comp=Z,20nm,0.7s,baz=194,slow=19,SNR=5.7						
URZ	**Urewera**	**20.68**	**162**	P	Pn	23 27 23.0	-2.8
URZ				S	**S**	**23 31 03.8**	**+4.3**
PUZ	**Puketiti**	**20.87**	**159**	P	**P**	**23 27 24.7**	**+2.5**
MWZ	**Matawai**	**20.87**	**161**	P	**P**	**23 27 24.3**	**+2.0**
MWZ				S	**S**	**23 31 05.0**	**+1.7**
TWGZ	**Tauwhareparae**	**20.87**	**160**	P	**P**	**23 27 23.8**	**+1.6**
TWGZ				S	**S**	**23 31 05.3**	**+2.0**
CNGZ	**Carnagh Statio**	**21.23**	**160**	P	**P**	**23 27 27.7**	**+1.8**
SNGZ	**Shannon Statio**	**21.23**	**162**	P	**P**	**23 27 28.1**	**+2.1**
RAHZ	**Arahi**	**21.28**	**162**	P	**P**	**23 27 28.9**	**+2.4**
RIGZ	**Rimuhau**	**21.29**	**161**	P	**P**	**23 27 28.3**	**+1.7**
CTA	**Charters Tower**	**21.47**	**263**	P	**P**	**23 27 30.8**	**+2.1**
	comp=Z,8.2nm,0.6s,baz=87,slow=11,SNR=12						
CTAO	**Charters Tower**	**21.47**	**263**	*e*P	**P**	**23 27 31.3**	**+2.6**
CTAO	**Charters Tower**	**21.47**	**263**	*e*P	**P**	**23 27 31.3**	**+2.6**
SNZO	**South Karori**	**23.00**	**169**	*e*P	**P**	**23 27 42.9**	**+0.1**
PMG	**Port Moresby**	**23.09**	**291**	P	**P**	**23 27 45.7**	**+1.8**
	comp=Z,23nm,0.7s,baz=134,slow=6.0,SNR=7.0						
PMG	**Port Moresby**	**23.09**	**291**	*e*P	**P**	**23 27 44.5**	**+0.6**
	comp=Z,34nm,0.9s						
PMG	**Port Moresby**	**23.09**	**291**	*e*P	**P**	**23 27 44.5**	**+0.6**
PMG				pmax	pmax		
	comp=Z,34nm,0.9s						
COEN	**Coen**	**25.20**	**277**	*e*P	**P**	**23 28 03.4**	**+0.3**
	comp=Z,30nm,1.0s						
STKA	**Stephens Creek**	**27.89**	**237**	P	**P**	**23 28 28.5**	**+1.5**
	comp=Z,1.2nm,0.4s,baz=48,slow=14,SNR=9.2						
STKA				pP	**pP**	**23 29 06.0**	**-1.8**
	comp=Z,9.7nm,0.9s,baz=51,slow=9.8,SNR=4.8						
STKA				PcP	**PcP**	**23 31 37.3**	**-0.1**
	comp=Z,9.9nm,0.6s,baz=64,slow=3.7,SNR=7.6						
WB2	**Warramunga Arr**	**32.66**	**262**	*e*P	**P**	**23 29 09.1**	**+0.1**
	comp=Z,47nm,1.7s						
WRAB	**Tennant Creek**	**32.66**	**262**	*e*P	**P**	**23 29 09.3**	**+0.2**
WRAB	**Tennant Creek**	**32.66**	**262↓**	*e*P	**P**	**23 29 09.5**	**+0.4**
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.9s						
WRA	**Warramunga Arr**	**32.67**	**262**	P	**P**	**23 29 09.7**	**+0.5**
	comp=Z,1.3nm,0.3s,baz=81,slow=6.2,SNR=23						
WRA				pP	**pP**	**23 29 47.3**	**-3.3**
	comp=Z,2.1nm,0.6s,baz=93,slow=8.5,SNR=3.9						
WRA				PcP	**PcP**	**23 31 49.5**	**-0.6**
	comp=Z,4.6nm,0.8s,baz=93,slow=2.7,SNR=6.9						
WRA				S	**S**	**23 34 09.3**	**-1.2**
	comp=Z,1.6nm,1.1s,baz=100,slow=15,SNR=4.4						
WRA				ScP	**ScP**	**23 35 16.5**	**+1.4**
	comp=Z,4.9nm,0.9s,baz=91,slow=3.7,SNR=11						
WRA				PKiKP	**PKiKP**	**23 39 14.4**	**-2.5**
	comp=Z,1.3nm,0.8s,baz=42,slow=0.2,SNR=8.2						
AS01	**Alice Springs**	**32.96**	**255**	*e*P	**P**	**23 29 12.1**	**+0.4**
AS31	**Alice Springs**	**33.01**	**255**	*e*P	**P**	**23 29 12.8**	**+0.7**
	comp=Z,9.3nm,0.3s						
ASAR	**Alice Springs**	**33.01**	**255**	P	**P**	**23 29 12.8**	**+0.7**
	comp=Z,8.2nm,0.5s,baz=82,slow=8.8,SNR=110						
ASAR				pP	**pP**	**23 29 50.8**	**-2.7**
	comp=Z,9.9nm,0.8s,baz=81,slow=9.0,SNR=3.4						
ASAR				PcP	**PcP**	**23 31 51.1**	**0.0**
	comp=Z,2.6nm,0.7s,baz=91,slow=3.2,SNR=5.3						
ASAR				S	**S**	**23 34 15.0**	**-0.7**
	comp=Z,1.6nm,0.9s,baz=84,slow=18,SNR=5.0						
ASAR				ScP	**ScP**	**23 35 17.6**	**+1.4**
	comp=Z,1.4nm,0.7s,baz=84,slow=3.9,SNR=6.2						
ASAR				PKiKP	**PKiKP**	**23 39 15.0**	**-2.1**
	comp=Z,0.3nm,0.3s,baz=104,slow=2.6,SNR=4.9						
ASAR				LR	LR	23 41 58.1	
	comp=Z,126nm,18.4s,baz=126,slow=34						
GUMO	**Guam**	**39.98**	**322**	P	**P**	**23 30 11.4**	**+0.5**
	comp=Z,64nm,0.4s,baz=120,slow=8.0,SNR=6.1						
FITZ	**Fitzroy Crossi**	**41.05**	**264**	P	**P**	**23 30 21.0**	**+1.2**
	comp=Z,7.2nm,0.8s,baz=100,slow=11,SNR=10						
FITZ				pP	**pP**	**23 30 59.3**	**-3.3**
	comp=Z,12nm,1.0s,baz=96,slow=9.2,SNR=3.1						
FITZ	**Fitzroy Crossi**	**41.05**	**264**	*e*P	**P**	**23 30 20.8**	**+1.0**
	comp=Z,26nm,0.8s						
FITZ				pP	**pP**	**23 30 59.3**	**-3.3**
MBWA	**Marble Bar**	**46.21**	**258**	*e*P	**P**	**23 31 01.5**	**+0.6**
KIP	**Kipapa**	**51.37**	**41**	*ce*P	**P**	**23 31 40.2**	**+0.2**
KIP				pmax	pmax		
	comp=Z,297nm,0.9s						
RKT	**Rikitea**	**52.26**	**105**	*e*P	**P**	**23 31 46.3**	**-0.4**
	comp=Z,62nm,0.9s						
VNDA	**Vanda**	**58.89**	**182**	P	**P**	**23 32 33.4**	**+0.4**
	comp=Z,2.7nm,0.7s,baz=342,slow=6.2,SNR=12						
VNDA	**Vanda**	**58.89**	**182**	*e*P	**P**	**23 32 33.4**	**+0.4**
	comp=Z,4.7nm,1.0s						
VNDA	**Vanda**	**58.89**	**182**	*e*P	**P**	**23 32 33.4**	**+0.4**
VNDA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SBA	**Scott Base**	**59.13**	**181**	*e*P	**P**	**23 32 36.1**	**+1.5**
	comp=Z,26nm,0.9s						
SBA	**Scott Base**	**59.13**	**181**	*e*P	**P**	**23 32 36.1**	**+1.5**
SBA				pmax	pmax		
	comp=Z,26nm,0.9s						
CASY	**Casey**	**60.46**	**203**	*e*P	**P**	**23 32 44.4**	**+0.6**
	comp=Z,11nm,0.7s						
LEM	**Lembang**	**60.75**	**273**	LR	LR	00 01 50.9	
	comp=Z,70nm,18.4s,baz=226,slow=38						
MJAR	**Matsushiro Arr**	**62.22**	**332**	P	**P**	**23 32 56.2**	**+0.2**
	comp=Z,2.7nm,0.8s,baz=158,slow=6.6,SNR=4.5						
JNU	**Nakatsue**	**63.14**	**325**	P	**P**	**23 33 02.5**	**+0.2**
	comp=Z,5.5nm,0.9s,baz=166,slow=4.2,SNR=2.9						
ASAJ	**Asahikawa**	**67.07**	**340**	P	**P**	**23 33 28.5**	**+1.3**
	comp=Z,2.5nm,0.3s,baz=234,slow=6.4,SNR=5.0						
TJN	**Taejon**	**67.49**	**325↑**	*e*P	**P**	**23 33 32.4**	**+2.4**
NJ2	**Nanjing**	**69.70**	**316**	*e*P	**P**	**23 33 44.1**	**+0.4**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
QSPA	**South Pole Qui**	**71.29**	**180**	P	**P**	**23 33 53.0**	**0.0**
	comp=Z,21nm,0.9s,baz=0.1,slow=4.8,SNR=33						
PSI	**Prapat**	**72.10**	**279**	*e*P	**P**	**23 33 56.0**	**-2.8**
	comp=Z,39nm,1.4s						
PSI	**Prapat**	**72.10**	**279**	*e*P	**P**	**23 33 56.0**	**-2.8**
PSI				pmax	pmax		
	comp=Z,39nm,1.4s						
PETK	**Petropavlovsk-**	**72.24**	**353**	P	**P**	**23 33 59.8**	**+1.2**
	comp=Z,10nm,0.7s,baz=141,slow=6.5,SNR=9.5						
PETK				PKKP	**PKKPdf**	**23 53 30.1**	**-0.7**
	comp=Z,1.4nm,0.5s,baz=76,slow=14,SNR=5.0						
PETK	**Petropavlovsk-**	**72.24**	**353**	*e*P	**P**	**23 33 59.2**	**+0.7**
PETK				PKKP	**PKKPdf**	**23 53 30.1**	**-0.7**
PETK	**Petropavlovsk-**	**72.24**	**353**	*e*P	**P**	**23 33 59.3**	**+0.7**
MDJ	**Mudanjiang**	**72.59**	**332**	P	**P**	**23 33 59.6**	**-1.2**
MDJ				pmax	pmax		
	comp=Z,8.0nm,0.5s						
MDJ				pmax	pmax		
	comp=Z,230nm,5.7s						
KLR	**Kul'dur**	**75.34**	**336**	P	**P**	**23 34 18.3**	**+1.6**
	comp=Z,0.1nm,0.7s,baz=65,slow=2.1,SNR=8.3						
KLR	**Kul'dur**	**75.34**	**336↑**	*i*P	**P**	**23 34 18.4**	**+1.7**
GYA	**Guiyang**	**75.35**	**305**	*e*P	**P**	**23 34 19.0**	**+1.6**
GYA				pP	pP	23 35 13.6	+8.0
GYA				sP	sP	23 35 37.4	+10
GYA				PP	**PP**	**23 37 13.2**	**+3.9**
GYA				S	**S**	**23 43 39.0**	**-1.6**
GYA				SKS	**SKSac**	**23 44 02.8**	**-5.3**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
BJI	**Beijing**	**76.42**	**321↓**	*i*P	**P**	**23 34 24.1**	**+1.2**
BJI				pmax	pmax		
	comp=Z,15nm,0.7s						
XAN	**Xi'an**	**77.61**	**313**	P	pP	23 35 16.5	-1.8
CM01	**Chiang Mai Arr**	**78.06**	**294**	*e*P	**P**	**23 34 33.0**	**+0.4**
CMAR	**Chiang Mai Arr**	**78.09**	**294**	P	**P**	**23 34 34.4**	**+1.6**
	comp=Z,1.4nm,0.3s,baz=133,slow=4.4,SNR=9.5						
CMAR	**Chiang Mai Arr**	**78.09**	**294**	*i*P	**P**	**23 34 34.4**	**+1.6**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
CHTO	**Chiang Mai**	**78.23**	**295**	*e*P	**P**	**23 34 33.9**	**+0.4**
	comp=Z,4.2nm,0.9s						
CHTO	**Chiang Mai**	**78.23**	**295**	*e*P	**P**	**23 34 33.9**	**+0.4**
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MAW	**Mawson**	**78.78**	**202**	P	**P**	**23 34 37.0**	**+1.4**
	comp=Z,16nm,0.7s,baz=117,slow=5.8,SNR=41						
MAW	**Mawson**	**78.78**	**202**	*e*P	**P**	**23 34 37.0**	**+1.4**
	comp=Z,4.1nm,0.8s						
MAW	**Mawson**	**78.78**	**202**	*e*P	**P**	**23 34 37.0**	**+1.4**
MAW				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MA2	**Magadan**	**79.47**	**351↓**	*i*P	**P**	**23 34 39.7**	**+0.4**
MA2				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CHGN	**Chignik**	**79.66**	**18**	*e*P	**P**	**23 34 40.2**	**-0.2**
	comp=Z,134nm,1.7s						
HHC	**Hu-ho-hao-te**	**79.70**	**319**	*e*P	**P**	**23 34 43.7**	**+2.5**
HHC				PP	**PP**	**23 37 49.4**	**+4.0**
HHC				S	**S**	**23 44 26.4**	**-0.4**
HHC				sS	sS	23 46 00.2	+8.4
HHC				pmax	pmax		
	comp=Z,8.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,120nm,5.8s						
CD2	**Chengdu**	**79.75**	**308**	P	**P**	**23 34 41.3**	**-0.3**
CD2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
CD2	**Chengdu**	**79.75**	**308**	P	**P**	**23 34 42.4**	**+0.8**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
OHAK	**Old Harbor**	**81.99**	**20**	*e*P	**P**	**23 34 53.4**	**+0.7**
	comp=Z,39nm,0.6s						
LZH	**Lanzhou**	**82.23**	**312**	*e*P	**P**	**23 34 58.3**	**+3.6**
LZH				pP	pP	23 35 46.4	+2.7
LZH				sP	sP	23 36 10.5	+5.5
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
SEY	**Seymchan**	**82.47**	**352↓**	*e*P	**P**	**23 34 56.1**	**+1.0**
KDAK	**Kodiak Island**	**82.67**	**20**	*e*P	**P**	**23 34 57.0**	**+0.8**
	comp=Z,27nm,0.8s						
KDAK	**Kodiak Island**	**82.67**	**20**	*e*P	**P**	**23 34 57.0**	**+0.8**
KDAK				pmax	pmax		
	comp=Z,27nm,0.8s						
SYO	**Syowa Base**	**85.32**	**196↑**	*e*eX	**P**	**23 35 06.2**	**-3.4**
SNCC	**San Nicolas Is**	**85.55**	**53**	P	**P**	**23 35 12.7**	**+1.3**
	baz=244						
KCPM	**Cahto Peak**	**85.58**	**46**	*e*P	**P**	**23 35 12.9**	**+1.4**
	comp=Z,70nm,0.7s						
GDXM	**Geysers**	**85.70**	**47**	*e*P	**P**	**23 35 13.5**	**+1.5**
	comp=Z,17nm,0.9s						
SAO	**San Andreas Ge**	**85.70**	**49**	*e*P	**P**	**23 35 13.6**	**+1.6**
	comp=Z,18nm,0.8s						
SAO	**San Andreas Ge**	**85.70**	**49**	*e*P	**P**	**23 35 13.6**	**+1.6**
SAO				pmax	pmax		
	comp=Z,18nm,0.8s						
SCZ2	**Santa Cruz Isl**	**85.80**	**52**	P	**P**	**23 35 13.1**	**+0.5**
	baz=244						
PKM	**Mcpherson Peak**	**86.05**	**51**	P	**P**	**23 35 14.7**	**+0.7**
	baz=244						
PAGB	**Antelope Grade**	**86.10**	**50**	*e*P	**P**	**23 35 15.3**	**+1.2**
	comp=Z,17nm,0.7s						
SMMC	**Simmler**	**86.10**	**51**	P	**P**	**23 35 15.1**	**+1.0**
	baz=244						
SUA	**Susitna One**	**86.18**	**18**	*e*P	**P**	**23 35 13.5**	**-0.5**
	comp=Z,10nm,0.7s						
RC01	**Rabbit Creek A**	**86.19**	**19**	*e*P	**P**	**23 35 14.2**	**+0.4**
	comp=Z,13nm,1.2s						
ULN	**Ulaanbaatar**	**86.34**	**323**	*e*P	**P**	**23 35 15.4**	**+0.3**
	comp=Z,12nm,1.1s						
ULN	**Ulaanbaatar**	**86.34**	**323↓**	*i*P	**P**	**23 35 15.5**	**+0.4**
ULN				*i* *pP	**pP**	**23 36 07.0**	**+2.5**
ULN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
YAK	**Yakutsk**	**86.35**	**343**	*e*P	**P**	**23 35 15.0**	**+0.5**
YAK				pmax	pmax		
	comp=Z,23nm,0.9s						
BILL	**Bilibino**	**86.58**	**359**	*e*P	**P**	**23 35 15.8**	**+0.2**
	comp=Z,22nm,0.8s						
BILL	**Bilibino**	**86.58**	**359**	*d*iP	**P**	**23 35 15.6**	**0.0**
BILL				*i* *PP	**pP**	**23 36 05.4**	**+0.4**
BILL				pmax	pmax		
	comp=Z,20nm,0.9s						
GTA	**Gaotai**	**86.62**	**314**	*e*P	**P**	**23 35 17.7**	**+1.0**
GTA				pP	pP	23 36 13.6	+7.5
GTA				sP	sP	23 36 35.5	+8.2
GTA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
FMP	**Fort Macarthur**	**86.68**	**53**	P	**P**	**23 35 17.7**	**+0.8**
	baz=245						
SONM	**Songino Array**	**86.70**	**323**	P	**P**	**23 35 17.7**	**+0.9**
	comp=Z,5.3nm,0.7s,baz=155,slow=6.1,SNR=37						
SONM				pP	**pP**	**23 36 04.9**	**-1.4**
	comp=Z,3.0nm,0.9s,baz=146,slow=4.2,SNR=2.1						
SONM				PKKPbc	**PKKPbc**	**23 53 10.8**	**-2.1**
	comp=Z,1.8nm,0.8s,baz=272,slow=2.9,SNR=7.1						
SONA1	**Songino Array**	**86.70**	**323**	*e*P	**P**	**23 35 17.2**	**+0.4**
WDC	**Whiskeytown Da**	**86.70**	**45**	*e*P	**P**	**23 35 17.7**	**+0.9**
	comp=Z,24nm,0.9s						
WDC	**Whiskeytown Da**	**86.70**	**45**	*e*P	**P**	**23 35 17.7**	**+0.9**
WDC				pmax	pmax		
	comp=Z,24nm,0.9s						
OSI	**Osito Audit: C**	**86.74**	**52**	P	**P**	**23 35 18.0**	**+0.7**
	baz=245						
L02D	**Cave Junction,**	**86.75**	**43**	P	**P**	**23 35 18.0**	**+1.0**
	baz=241						
N02D	**Trinity Center**	**86.78**	**45**	P	**P**	**23 35 18.5**	**+1.2**
	baz=242,SNR=15						
GLI	**Glacier Island**	**86.85**	**20**	*e*P	**P**	**23 35 16.4**	**-0.6**
	comp=Z,9.9nm,0.8s						
M02C	**Callahan**	**86.88**	**44**	P	**P**	**23 35 18.9**	**+1.2**
	baz=242,SNR=24						
DECC	**Green Verdugo**	**86.88**	**52**	P	**P**	**23 35 17.9**	**0.0**
	baz=245						
ARVC	**Arvin**	**86.88**	**51**	P	**P**	**23 35 18.3**	**+0.5**
	baz=244						
ORV	**Oroville**	**86.93**	**46**	*e*P	**P**	**23 35 17.8**	**-0.2**
	comp=Z,26nm,0.9s						
ORV	**Oroville**	**86.93**	**46**	*e*P	**P**	**23 35 17.8**	**-0.2**
ORV				pmax	pmax		
	comp=Z,26nm,0.9s						
GHO	**Glory Hole Cre**	**86.96**	**19**	*e*P	**P**	**23 35 17.1**	**-0.6**
	comp=Z,7.7nm,0.6s						
VES	**Vestal, Richgr**	**87.00**	**51**	P	**P**	**23 35 18.5**	**+0.1**
	baz=244						
AFDM	**Forest Hills D**	**87.02**	**47**	*e*P	**P**	**23 35 19.0**	**+0.5**
	comp=Z,32nm,0.9s						
CMB	**Columbia Colle**	**87.02**	**48**	*e*P	**P**	**23 35 18.9**	**+0.4**
	comp=Z,27nm,0.8s						
CMB	**Columbia Colle**	**87.02**	**48**	*e*P	**P**	**23 35 18.9**	**+0.4**
CMB				pmax	pmax		
	comp=Z,27nm,0.8s						
O03D	**Paynes Creek**	**87.07**	**46**	P	**P**	**23 35 19.1**	**+0.4**
	baz=242,SNR=19						
MWC	**Mount Wilson**	**87.08**	**52**	*e*P	**P**	**23 35 19.4**	**+0.4**
	comp=Z,24nm,0.6s						
MWC	**Mount Wilson**	**87.08**	**52**	*e*P	**P**	**23 35 19.4**	**+0.4**
MWC				pmax	pmax		
	comp=Z,25nm,0.6s						
YBH	**Yreka Blue Hor**	**87.13**	**44**	*e*P	**P**	**23 35 20.1**	**+1.1**
	comp=Z,34nm,1.1s						
YBH	**Yreka Blue Hor**	**87.13**	**44**	*e*P	**P**	**23 35 20.1**	**+1.1**
YBH				pmax	pmax		
	comp=Z,35nm,1.1s						
CAST	**Castle Rocks**	**87.36**	**16**	*e*P	**P**	**23 35 17.8**	**-1.7**
	comp=Z,12nm,0.6s						
ISA	**Isabella, Lake**	**87.37**	**51**	P	**P**	**23 35 20.9**	**+0.7**
	baz=245,SNR=9.9						
ISA	**Isabella, Lake**	**87.37**	**51**	*e*P	**P**	**23 35 21.0**	**+0.7**
	comp=Z,20nm,0.8s						
ISA	**Isabella, Lake**	**87.37**	**51**	*e*P	**P**	**23 35 21.0**	**+0.7**
ISA				pmax	pmax		
	comp=Z,20nm,0.8s						
BFSC	**Mount Baldy Ra**	**87.38**	**53**	P	**P**	**23 35 20.5**	**+0.1**
	baz=245						
HUMO	**Hull Mountain**	**87.38**	**43**	*e*P	**P**	**23 35 21.2**	**+1.2**
	comp=Z,31nm,0.9s						
EDW2	**Edwards Air Fo**	**87.40**	**52**	P	**P**	**23 35 20.9**	**+0.6**
	baz=245						
MURC	**Murrieta**	**87.47**	**53**	P	**P**	**23 35 20.8**	**+0.1**
	baz=246						
DIB	**Dawson Inlet,**	**87.59**	**31**	*e*P	**P**	**23 35 22.1**	**+1.4**
	comp=Z,21nm,0.9s						
RUBR	**Rubicon Trail**	**87.64**	**47**	*e*P	**P**	**23 35 22.8**	**+1.2**
	comp=Z,80nm,1.7s						
I03D	**Drain, OR**	**87.65**	**42**	P	**P**	**23 35 22.0**	**+0.8**
	baz=241						
M04C	**Macdoel**	**87.73**	**44**	P	**P**	**23 35 22.6**	**+0.7**
	baz=242,SNR=12						
MONP2	**Monument Peak**	**87.77**	**54**	P	**P**	**23 35 22.9**	**+0.5**
	baz=246,SNR=10.0						
MDPB	**Devils Postpil**	**87.78**	**49**	*e*P	**P**	**23 35 23.4**	**+1.0**
	comp=Z,24nm,1.1s						
OMMB	**Old Mammoth Mi**	**87.83**	**49**	*e*P	**P**	**23 35 23.3**	**+0.6**
	comp=Z,32nm,1.5s						
BEKR	**Beckworth**	**87.86**	**47**	*e*P	**P**	**23 35 23.2**	**+0.6**
	comp=Z,46nm,1.3s						
TRF	**Thorofare Moun**	**87.88**	**17**	*e*P	**P**	**23 35 20.8**	**-1.3**
	comp=Z,9.3nm,0.8s						
LRMC	**Laurel Mtn Rad**	**87.88**	**51**	P	**P**	**23 35 23.4**	**+0.6**
	baz=245						
IKP	**In-Ko-Pah, Jac**	**87.91**	**55**	P	**P**	**23 35 23.5**	**+0.6**
	baz=246						
MLAC	**Mammoth, Mammo**	**87.95**	**49**	P	**P**	**23 35 23.8**	**+0.7**
	baz=244						
CWC	**Cottonwood Cre**	**87.99**	**50**	P	**P**	**23 35 23.9**	**+0.6**
	baz=245						
PFO	**Pinyon Flats O**	**88.03**	**54**	P	**P**	**23 35 23.8**	**+0.3**
	baz=246						
PFO	**Pinyon Flats O**	**88.03**	**54**	*e*P	**P**	**23 35 23.8**	**+0.3**
	comp=Z,10.0nm,0.8s						
VCNR	**Virginia City**	**88.10**	**47**	*e*P	**P**	**23 35 24.5**	**+0.7**
	comp=Z,8.0nm,0.8s						
RRX	**Edison Barstow**	**88.14**	**52**	P	**P**	**23 35 24.6**	**+0.7**
	baz=246						
TIN	**Tinemaha, Big**	**88.14**	**50**	P	**P**	**23 35 24.6**	**+0.7**
	baz=245						
K04D	**Chiloquin, OR**	**88.18**	**44**	P	**P**	**23 35 24.5**	**+0.6**
	baz=242						
BPAW	**Bear Paw Mtn.**	**88.20**	**16**	*e*P	**P**	**23 35 24.9**	**+1.4**
	comp=Z,14nm,1.8s						
J04D	**Umpqua Nationa**	**88.23**	**43**	P	**P**	**23 35 25.0**	**+0.7**
	baz=242,SNR=7.6						
YERR	**Yerington**	**88.25**	**48**	*e*P	**P**	**23 35 25.3**	**+0.9**
	comp=Z,16nm,0.8s						
RND	**Reindeer**	**88.25**	**18**	*e*P	**P**	**23 35 22.9**	**-0.8**
	comp=Z,11nm,0.7s						
RND	**Reindeer**	**88.25**	**18**	*e*P	**P**	**23 35 22.9**	**-0.8**
RND				pmax	pmax		
	comp=Z,11nm,0.7s						
MPMC	**Manual Prospec**	**88.27**	**51**	P	**P**	**23 35 25.1**	**+0.4**
	baz=245,SNR=11						
SWSC	**Sam W. Stewart**	**88.27**	**54**	P	**P**	**23 35 24.9**	**+0.5**
	baz=246,SNR=5.3						
DAC	**Darwin (Calif)**	**88.28**	**51**	*e*P	**P**	**23 35 24.9**	**+0.2**
	comp=Z,34nm,1.5s						
I04A	**Tendick Farm,**	**88.30**	**42**	P	**P**	**23 35 24.7**	**+0.3**
	baz=242						
DHY	**Denali Highway**	**88.43**	**18**	*e*P	**P**	**23 35 23.8**	**-0.9**
	comp=Z,23nm,1.7s						
G03D	**McMinnville, O**	**88.43**	**41**	P	**P**	**23 35 25.6**	**+0.7**
	baz=241						
GSC	**Goldstone, Bar**	**88.46**	**52**	P	**P**	**23 35 25.7**	**+0.3**
	baz=246						
GSC	**Goldstone, Bar**	**88.46**	**52**	*e*P	**P**	**23 35 25.8**	**+0.3**
	comp=Z,23nm,1.4s				

G06A	Carlson Farm,	90.09	42	eP		P	23 35 33.5 +0.8
	comp=Z,18nm,0.9s						
SKAG	Skagway	90.12	25	eP		P	23 35 32.8 +0.3
	comp=Z,19nm,1.0s						
WVOR	Wild Horse Val	90.15	45	eP		P	23 35 33.6 +0.4
SHPR	Sheep Range	90.17	51	eP		P	23 35 34.4 +0.9
	comp=Z,19nm,1.1s						
214A	Organ Pipe Nat	90.22	56	P		P	23 35 34.2 +0.6
	baz=248						
VNA3	Neumayer Olymp	90.22	180	P		P	23 35 32.3 -0.7
TLY	Talaya	90.23	326	P		P	23 35 31.8 -1.5
	comp=Z,3.1nm,0.6s,baz=112,slow=11,SNR=3.9						
TLY	Talaya	90.23	326⇑	eP		P	23 35 33.9 +0.7
TLY				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BMN	Battle Mountai	90.27	47	eP		P	23 35 34.6 +0.7
BMN	Battle Mountai	90.27	47	eP		P	23 35 34.6 +0.7
I07A	Izee	90.30	43	eP		P	23 35 34.8 +1.0
	comp=Z,28nm,0.8s						
A04D	Lummi Island	90.44	38	P		P	23 35 35.1 +1.0
	baz=242						
VNA2	Neumayer--Watz	90.51	181	P		P	23 35 33.8 -0.5
	baz=179,slow=3.9						
W13A	Hualapai Mount	90.58	53	eP		P	23 35 36.4 +0.9
R11A	Troy Canyon, C	90.58	50	P		P	23 35 35.5 +0.1
	baz=246						
R11A	Troy Canyon, C	90.58	50	eP		P	23 35 35.5 +0.1
	comp=Z,7.0nm,0.8s						
B05A	Bryant	90.59	39	P		P	23 35 35.7 +0.9
	baz=242						
VNA1	Neumayer--Stat	90.80	181	P		P	23 35 35.1 -0.5
LTY	Liberty	90.98	40	eP		P	23 35 37.3 +0.4
	comp=Z,18nm,0.8s						
B06A	Marblemount	91.06	39	eP		P	23 35 37.8 +0.7
	comp=Z,26nm,0.9s						
HAWA	Hanford	91.29	41	eP		P	23 35 39.4 +1.1
EGAK	Eagle	91.56	19	eP		P	23 35 38.8 -0.2
	comp=Z,15nm,0.8s						
E08A	Dider Farm, El	91.63	41	eP		P	23 35 40.9 +1.1
	comp=Z,30nm,1.0s						
LLLB	Lillooet	91.80	37	eP		P	23 35 41.0 +0.5
	comp=Z,20nm,0.9s						
CCUT	Cedar City	91.89	51	eP		P	23 35 42.9 +1.3
	comp=Z,18nm,1.0s						
TUC	Tucson	91.95	57	P		P	23 35 42.4 +0.6
	baz=249						
TUC	Tucson	91.95	57	eP		P	23 35 42.8 +1.1
D08A	Wollman Farm,	91.96	41	eP		P	23 35 42.4 +1.0
	comp=Z,8.9nm,0.8s						
BMO	Blue Mountains	92.05	43	eP		P	23 35 41.5 -0.3
	comp=Z,7.8nm,0.8s						
BMO	Blue Mountains	92.05	43	eP		P	23 35 41.6 -0.3
BMO				pmax	pmax		
	comp=Z,8.0nm,0.8s						
B08A	Colville Reser	92.27	39	eP		P	23 35 43.0 +0.2
	comp=Z,13nm,1.0s						
MFID	Camas Ranch	92.44	45	eP		P	23 35 43.9 +0.2
	comp=Z,12nm,0.8s						
F10A	Beach Ranch, E	92.56	42	eP		P	23 35 44.2 -0.1
	comp=Z,10.0nm,0.7s						
DUG	Dugway, Tooele	93.28	49	eP		P	23 35 47.5 -0.3
	comp=Z,6.6nm,1.0s						
DUG	Dugway, Tooele	93.28	49	eP		P	23 35 47.5 -0.3
DUG				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HLID	Hailey	93.44	45	P		P	23 35 48.8 +0.4
	baz=247						
HLID	Hailey	93.44	45	eP		P	23 35 48.9 +0.4
	comp=Z,8.4nm,0.8s						
NEW	Newport	93.57	40	P		P	23 35 49.4 +0.6
	baz=246						
NEW	Newport	93.57	40	eP		P	23 35 49.4 +0.6
	comp=Z,5.8nm,0.9s						
NEW	Newport	93.57	40	eP		P	23 35 49.4 +0.6
NEW				pmax	pmax		
	comp=Z,6.0nm,0.9s						
W18A	Petrified Fore	93.75	54	P		P	23 35 50.4 +0.3
	baz=250						
121A	Cookes Peak, D	94.41	57	P		P	23 35 53.6 +0.4
	baz=251						
FXWY	Fox Creek	95.76	46	eP		P	23 35 59.5 +0.3
	comp=Z,3.2nm,0.9s						
BOZ	Bozeman (W)	96.04	44	P		P	23 36 00.7 +0.5
	baz=249						
BOZ	Bozeman (W)	96.04	44	eP		P	23 36 00.1 -0.2
	comp=Z,4.3nm,1.1s						
MNTX	Cornudas Mount	96.07	59	P		P	23 36 00.7 +0.1
	baz=252						
INK	Inuvik	96.17	18	eP		P	23 35 59.8 -0.3
	comp=Z,8.7nm,1.0s						
INK	Inuvik	96.17	18	eP		P	23 35 59.8 -0.3
INK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TASM	ASL Pad, Albuq	96.23	55	P		P	23 36 01.5 +0.1
	baz=252						
ANMO	Albuquerque	96.23	55	P		P	23 36 01.4 0.0
	comp=Z,3.3nm,0.7s,baz=256,slow=6.5,SNR=2.1						
ANMO	Albuquerque	96.23	55	P		P	23 36 01.6 +0.1
	baz=252						
ANMO	Albuquerque	96.23	55⇓	eP		P	23 36 02.1 +0.7
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TASL	Snake Pit, Alb	96.23	55	P		P	23 36 01.6 +0.1
	baz=252						
PDAR	Pinedale Array	96.47	47	P		P	23 36 01.9 -0.5
	comp=Z,0.8nm,0.5s,baz=204,slow=3.3,SNR=7.5						
PDAR	Pinedale Array	96.47	47	eP		P	23 36 01.6 -0.8
O20A	White River Ci	96.55	50	Pdiff		P	23 36 03.4 +0.6
	baz=251						
WMQ	Urumqi	96.70	314	P		P	23 36 04.0 +0.8
WMQ				pP	pP		23 36 59.7 +6.6
WMQ				sP	sP		23 37 23.3 +9.1
WMQ				pmax	pmax		
	comp=Z,62nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,410nm,4.9s						
TX31	Lajitas Ar. Si	96.75	61	eP		P	23 36 04.7 +0.9
TXAR	Lajitas Array	96.76	61	P		P	23 36 04.0 +0.2
	comp=Z,6.0nm,0.8s,baz=221,slow=5.8,SNR=36						
S22A	4UR Ranch, Cre	96.83	53	Pdiff		P	23 36 04.6 +0.4
	baz=252						
SMCO	Snowmass	97.17	51	eP		Pdif	23 36 08.0 +2.1
	comp=Z,10nm,0.9s						
SDCO	Great Sand Dun	97.83	53	Pdiff		Pdif	23 36 09.1 +0.4
	baz=252						
EGMT	Eagleton	98.07	42	Pdiff		Pdif	23 36 10.3 +1.0
	baz=251						
MSTX	Muleshoe	98.84	57	Pdiff		P	23 36 12.7 -0.4
	baz=253						
AMTX	Amarillo	99.97	57	Pdiff		Pdif	23 36 17.8 -0.3
	baz=254						
YKA	Yellowknife Ar	100.36	27	P		Pdif	23 36 18.4 -0.6
	comp=Z,4.1nm,0.6s,baz=254,slow=4.7,SNR=53						
YKA				PKKPbc		PKKPbc	23 52 33.9 -3.2
	comp=Z,0.2nm,0.6s,baz=64,slow=2.8,SNR=5.3						
RSSD	Black Hills	100.72	47	Pdiff		Pdif	23 36 20.9 -0.4
	baz=254						
ABTX	Abilene, Hawle	101.00	59	Pdiff		Pdif	23 36 22.3 -0.3
	baz=255						
MKAR	Makanchi Array	101.23	316	P		Pdif	23 36 23.8 +0.5
	comp=Z,1.2nm,0.5s,baz=87,slow=6.5,SNR=16						
MKAR				PKiKP		PKiKP	23 40 45.6 -1.4
	comp=Z,0.3nm,0.5s,baz=115,slow=1.0,SNR=4.9						
MKAR				PKKPbc		PKKPbc	23 52 30.8 -3.3
	comp=Z,1.0nm,0.5s,baz=265,slow=4.0,SNR=15						
MKAR	Makanchi Array	101.23	316	i P		Pdif	23 36 25.2 +1.9
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZALV	Zalesovo Beam	101.59	323	P		Pdif	23 36 25.6 +1.0
	comp=Z,0.5nm,0.4s,baz=72,slow=4.7,SNR=2.7						
ZALV				PKKPbc		PKKPbc	23 52 29.8 -3.4
	comp=Z,0.9nm,0.5s,baz=269,slow=3.1,SNR=4.6						
WMOK	Wichita Mounta	102.23	57	Pdiff		Pdif	23 36 27.9 -0.1
	baz=256						
KURK	Kurchatov	104.51	319	PKiKP		PKiKP	23 40 52.0 -0.6
KURK				PKKPbc		PKKPbc	23 52 21.9 -2.5
KURBB	Kurchatov Arra	104.55	319	PKiKP		PKiKP	23 40 52.0 -0.7
	comp=Z,0.9nm,0.8s,baz=95,slow=1.6,SNR=8.0						
KURBB				PKKPbc		PKKPbc	23 52 21.9 -2.4
	comp=Z,1.2nm,0.5s,baz=282,slow=3.6,SNR=11						
BVAR	Borovoye Array	109.90	321	PKiKP		PKiKP	23 41 02.1 -0.6
	comp=Z,1.0nm,0.3s,baz=135,slow=2.5,SNR=16						
BVAR				PKKPbc		PKKPbc	23 52 04.7 -3.1
	comp=Z,0.4nm,0.4s,baz=348,slow=6.7,SNR=5.0						
LPAZ	La Paz	113.89	118	PKiKP		PKiKP	23 41 11.1 -1.0
	comp=Z,0.5nm,0.4s,baz=314,slow=4.2,SNR=4.5						
CPUP	Villa Florida	116.51	134	PKP		PKPdf	23 41 15.0 -1.2
	comp=Z,2.2nm,0.7s,baz=321,slow=5.0,SNR=5.4						
ARU	Arti	116.71	324	ePKPdf		PKPdf	23 41 14.8 -0.8
ARU	Arti	116.71	324	PKIKP		PKPdf	23 41 14.9 -0.7
GEYT	Alibeck	117.55	304	PKP		PKPdf	23 41 17.8 0.0
	comp=Z,5.8nm,0.8s,baz=222,slow=2.0,SNR=13						
AKTO	Aktyubinsk	117.56	318	PKP		PKPdf	23 41 16.0 -1.4
	comp=Z,3.9nm,0.5s,baz=91,slow=4.5,SNR=12						
SPITS	Spitsbergen Ar	119.10	354	PKP		PKPdf	23 41 18.1 -1.6
	comp=Z,3.6nm,0.6s,baz=83,slow=2.9,SNR=13						
SUR	Sutherland	120.71	211	ePKPdf		PKPdf	23 41 24.7 +0.3
BOSA	Boshof	121.28	217	PKP		PKPdf	23 41 25.9 +0.3
	comp=Z,7.5nm,0.5s,baz=143,slow=1.5,SNR=43						
SDV	Santo Domingo	121.51	91	PKP		PKPdf	23 41 24.7 -1.6
	comp=Z,6.8nm,0.8s,baz=217,slow=5.1,SNR=7.9						
SAML	Samuel	121.66	114	ePKPdf		PKPdf	23 41 25.0 -1.4
SAML	Samuel	121.66	114	ePKIKP		PKPdf	23 41 25.0 -1.4
PRGR	Permogore	121.99	332	ePKIKP		PKPdf	23 41 24.1 -1.4
PRGR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
LBTB	Lobatse	123.75	221	PKP		PKPdf	23 41 29.5 -0.8
	baz=173,slow=3.9						
ARCES	ARCESS Array B	124.55	345	PKP		PKPdf	23 41 29.4 -0.9
	comp=Z,6.7nm,0.4s,baz=70,slow=1.7,SNR=98						
ARCES				PKKPab		PKKPab	23 51 11.1 -1.1
	comp=Z,3.3nm,1.0s,baz=211,slow=3.8,SNR=4.8						
KLMR	Klimovskoe	125.00	333	ePKIKP		PKPdf	23 41 29.7 -1.6
KLMR				pmax	pmax		
	comp=Z,11nm,1.0s						
KLMR	Klimovskoe	125.00	333	ePKPdf		PKPdf	23 41 29.8 -1.6
KLMR				AMP			23 41 31.4
	comp=Z,11nm,1.0s						
RAYN	Ar Rayn	127.35	286	ePKPdf		PKPdf	23 41 36.9 -0.2
GNI	Garni	127.88	307	PKP		PKPdf	23 41 38.4 +0.6
	comp=Z,3.8nm,0.8s,baz=117,slow=2.3,SNR=4.9						
GNI	Garni	127.88	307	ePKPdf		PKPdf	23 41 37.9 +0.1
GNI	Garni	127.88	307	⇓iPKIKP		PKPdf	23 41 39.1 +1.3
SJG	San Juan	127.88	81	ePKPdf		PKPdf	23 41 36.5 -1.5
SJG	San Juan	127.88	81	ePKIKP		PKPdf	23 41 36.6 -1.5
KBZ	Khabaz	128.67	311	PKP		PKPdf	23 41 39.4 +0.5
	comp=Z,1.7nm,0.7s,baz=180,slow=2.6,SNR=3.7						
LSZ	Lusaka	128.67	231	PKP		PKPdf	23 41 40.0 0.0
	comp=Z,2.6nm,0.6s,baz=128,slow=1.4,SNR=5.4						
LSZ	Lusaka	128.67	231	ePKPdf		PKPdf	23 41 40.4 +0.4
KIV	Kislovodsk	128.77	312	ePKPdf		PKPdf	23 41 39.7 +0.5
KIV	Kislovodsk	128.77	312	ePKIKP		PKPdf	23 41 39.7 +0.5
FINES	FINESS Array B	130.06	338	SKPbc		SKPbc	23 44 44.3 -0.5
	comp=Z,13nm,0.7s,baz=72,slow=6.2,SNR=33						
TSUM	Tsumeb	132.97	218	PKP		PKPdf	23 41 46.7 -1.3
	comp=Z,6.5nm,0.9s,baz=128,slow=4.7,SNR=8.9						
TSUM	Tsumeb	132.97	218	ePKPdf		PKPdf	23 41 49.0 +1.0
IZAR	Zarasai	133.64	332	eP		PKPdf	23 41 49.2 +1.3
IDID	Didziasalis	133.68	331	eP		PKPdf	23 41 48.1 +0.1
IDID				IAmb	IAmb		23 41 50.2
	comp=Z,4.9nm,0.9s						
ISAL	Salakas	133.80	332	eP		PKPdf	23 41 49.4 +1.2
ISAL				IAmb	IAmb		23 41 52.5
	comp=Z,4.0nm,0.9s						
IIGN	Ignalina	133.89	331	eP		PKPdf	23 41 48.5 +0.1
IIGN				IAmb	IAmb		23 41 51.9
	comp=Z,6.9nm,1.1s						
NB2	NORSAR Subarra	134.93	345	PKP		PKPdf	23 41 50.6 +0.3
	comp=Z,1.1nm,0.6s,baz=40,slow=2.9						
NOA	NORSAR Array B	134.93	345	PKP		PKPdf	23 41 49.1 -1.2
	comp=Z,1.2nm,0.5s,baz=13,slow=3.8,SNR=7.9						
AKASG	Malin Array Be	134.97	325	PKP		PKPdf	23 41 50.0 -0.5
	comp=Z,0.3nm,0.3s,baz=54,slow=2.1,SNR=5.4						
AKASG				SKPbc		SKPbc	23 45 02.1 0.0
	comp=Z,2.4nm,0.5s,baz=47,slow=4.2,SNR=11						
AKASG	Malin Array Be	134.97	325	i PKIKP		PKPdf	23 41 53.4 +2.8
HFS	Hagfors	135.04	343	PKP		PKPdf	23 41 49.9 -0.6
	comp=Z,1.2nm,0.4s,baz=107,slow=2.0,SNR=12						
HFS				SKPbc		SKPbc	23 45 01.6 -0.5
	comp=Z,2.9nm,0.9s,baz=56,slow=0.5,SNR=3.3						
ASF	Jabal al Asfar	135.07	297	PKP		PKPdf	23 41 51.7 +0.2
	comp=Z,0.7nm,0.3s,baz=22,slow=5.4,SNR=2.5						
MMAI	Mount Meron Ar	136.23	298	PKP		PKPdf	23 41 53.2 -0.5
	comp=Z,4.0nm,0.9s,baz=57,slow=5.3,SNR=6.1						
BRTR	Keskin Array B	136.33	308	PKP		PKPdf	23 41 52.8 -0.9
	comp=Z,1.3nm,0.6s,baz=143,slow=5.0,SNR=10						
VRI	Vrincioaia	138.78	320⇑	iP		PKPdf	23 41 57.4 -0.5
VRI	Vrincioaia	138.78	320	⇑PKIKP		PKPdf	23 41 57.4 -0.5
BURAR	Bucovina Array	138.81	323	⇓iP		PKPdf	23 41 58.2 +0.2
BURAR	Bucovina Array	138.81	323	⇓PKIKP		PKPdf	23 41 58.2 +0.2
MLR	Muntele Rosu	139.45	319	PKhKP		PKPpre	23 41 54.2
	comp=Z,0.3nm,0.8s,baz=172,slow=5.7,SNR=2.4						
MLR	Muntele Rosu	139.45	319	⇓iP		PKPdf	23 41 57.8 -1.4
MLR	Muntele Rosu	139.45	319	⇓PKIKP		PKPdf	23 41 57.8 -1.4
DOPR	Dopca	139.55	320	⇓iP		PKPdf	23 42 00.2 +0.9
HUMR	Humele	140.51	319	⇓iP		PKPdf	23 41 54.2 -6.8
MORC	Moravsky Berou	141.53	330	ePKP		PKPpre	23 41 59.5
SIRR	Siria	141.59	323	⇓iP		PKPdf	23 41 59.0 -3.9
DPC	Dobruska-Polom	141.69	332	ePKPpre		PKPpre	23 41 57.9
DPC				eSKP			23 45 21.8
DPC	Dobruska-Polom	141.69	332	ePKHKP		PKPpre	23 41 57.9
UPC	Upice	141.72	332	ePKPpre		PKPpre	23 41 58.9
UPC				eSKP			23 45 21.8
UPC	Upice	141.72	332	ePKIKP		PKPpre	23 41 58.9
VYHS	Vyhne	141.75	328	ePKIKP		PKPpre	23 41 58.8
VYHS	Vyhne	141.75	328	ePKP		PKPpre	23 41 58.8
JAVC	Velka Javorina	142.09	329	ePKP		PKPpre	23 42 01.8
VRAC	Vranov	142.30	330	⇓iP		PKPdf	23 42 01.3 -2.8
VRAC	Vranov	142.30	330	⇓PKIKP		PKPpre	23 42 01.3
VRAC	Vranov	142.30	330	ePKP		PKPpre	23 42 00.9
PVCC	Panska Ves	142.33	333	eSKP		SKPdf	23 45 23.1 +3.6
BRG	Berggiesshubel	142.34	334	ePKP		PKPpre	23 41 59.6
	comp=Z,4.1nm,0.9s						
BRG				eSKP			23 45 22.5
	comp=Z,5.7nm,0.7s						
BRG	Berggiesshubel	142.34	334	ePKHKP		PKPpre	23 41 59.6
BRG				e			23 45 22.5
BRG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BRG				pmax	pmax		
	comp=N,6.0nm,0.7s						
MDVR	Moldovita	142.38	321⇑	iP		PKPdf	23 41 59.8 -4.6
CLL	Collm	142.39	335⇑	iPKPpre		PKPpre	23 42 00.0
	comp=Z,3.0nm,0.5s						
CLL				i PKPdf		PKPdf	23 42 04.4 +0.3
	comp=Z,4.0nm,0.9s						
CLL				epPKPdf		pPKPdf	23 42 57.0 +0.6
CLL				eSKPdf		SKPdf	23 45 17.0 -2.6
CLL				⇓iSKPbc		SKPbc	23 45 22.4 -0.5
	comp=Z,6.0nm,0.9s						
CLL	Collm	142.39	335⇑	iPKHKP		PKPpre	23 42 00.0
CLL				i			23 45 22.4
CLL				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KRUC	Moravsky	142.57	330	ePKP		PKPpre	23 42 01.4
VTS	Vitosha	142.57	317⇑	iP		PKPdf	23 42 03.0 -2.0
VTS	Vitosha	142.57	317	⇑PKIKP		PKPdf	23 42 03.0 -2.0
MODS	Modra-Piesok	142.61	329	ePKIKP		PKPdf	23 42 07.1 +2.4
MODS	Modra-Piesok	142.61	329	ePKP		PKPdf	23 42 07.1 +2.4
GOPC	GO Pecny, Ondr	142.69	332	eSKP		SKPdf	23 45 23.6 +3.4
PRU	Pruhonice	142.75	333	ePKPdf		PKPdf	23 42 02.5 -2.3
PRU				eSKP			23 45 23.8
PRU	Pruhonice	142.75	333	ePKIKP		PKPdf	23 42 02.5 -2.3
PRU				e			23 45 23.8
SRS	Serrai	143.00	315	P		PKPab	23 42 02.0 +0.7
EKA	Eskdalemuir Ar	143.01	353	PKhKP		PKPpre	23 42 01.1
	comp=Z,1.3nm,0.4s,baz=0,2,slow=2.7,SNR=16						
NKC	Novy Kostel	143.44	335	ePKPpre		PKPpre	23 42 04.2
NKC				eSKP			23 45 25.9
NKC	Novy Kostel	143.44	335	ePKIKP		PKPbc	23 42 04.2 +0.3
NKC				e			23 45 25.9
VAY	Valandovo	143.59	315	P		PKPab	23 42 03.9 +0.3
VAY	Valandovo	143.59	315	i PKP		PKPab	23 42 04.0 +0.4
CONA	Conrad Observa	143.61	329	ePKPdf		PKPbc	23 42 05.3 +0.8
	comp=Z,18nm,0.6s,SNR=16						
GAL1	Galloway	143.64	354	eP		PKPab	23 42 03.4 0.0
NPS	Neapolis	143.71	304	P		PKPbc	23 42 05.5 +0.4
KHC	Kasperske Hory	143.80	332	ePKPDF		PKPbc	23 42 05.3 +0.3
KHC				ex	x		23 42 10.2
KHC				ex	x		23 42 32.1
KHC				epPKP	pPKPdf		23 42 59.0 -0.1
KHC				eSKP			23 45 26.7
KHC	Kasperske Hory	143.80	332	ePKIKP		PKPbc	23 42 05.3 +0.3
KHC				e			23 42 59.0
KHC				e			23 45 26.7
LAST	Lasithi	143.84	304	P		PKPbc	23 42 05.9 +0.3
GERES	GERESS Array B	143.96	332	PKP		PKPbc	23 42 05.4 -0.1
	comp=Z,9.6nm,0.8s,baz=36,slow=3.6,SNR=80						
GERES				SKPbc		SKPbc	23 45 26.8 -0.1
	comp=Z,2.9nm,0.7s,baz=50,slow=2.1,SNR=13						
SKO	Skopje	144.02	317	i PKP		PKPbc	23 42 06.4 +0.6
LIT	Litokhoron	144.21	314	P		PKPab	23 42 05.8 -0.3
ARSA	Arzberg	144.25	329	ePKPdf		PKPbc	23 42 06.7 +0.4
	comp=Z,11nm,0.6s,SNR=17						
IDI	Anoyia	144.26	305	PKP		PKPab	23 42 06.7 +0.2
	comp=Z,17nm,0.4s,baz=117,slow=4.5,SNR=65						
IDI	Anoyia	144.26	305	⇓iP		PKPab	23 42 06.7 +0.2
KTI	Kastanea	144.33	314	P		PKPab	23 42 06.7 0.0
GRFO	Grafenberg	144.36	335	ePKPdf		PKPbc	23 42 06.6 0.0
GRFO	Grafenberg	144.36	335	ePKIKP		PKPbc	23 42 06.6 0.0
SIVA	Sivas	144.41	304	P		PKPdf	23 42 08.0 -0.2
MOA	Molln	144.43	330	i PKPdf		PKPdf	23 42 07.5 -0.3
	comp=Z,49nm,0.6s,SNR=29						
IVA	Berane	144.53	319	⇓iP		PKPbc	23 42 07.8 +0.4
PLE	Pljevlja	144.58	320	eP		PKPbc	23 42 07.9 +0.3
PVY	Plav	144.63	319	⇓iP		PKPab	23 42 07.8 0.0
FNA	Florina	144.64	315	P		PKPab	23 42 07.3 -0.5
LBWR	Ladybower, Pea	144.69	350	eP		PKPab	23 42 07.0 -0.4
VAM	Vamos	144.76	305	P		PKPbc	23 42 08.2 -0.1
KOME	Kolasin	144.77	320	⇓iP		PKPab	23 42 08.4 +0.2
PHP	Peshkopia	144.81	317	P		PKPab	23 42 08.4 +0.1
KRND	KRANIDI	144.86	309	P		PKPbc	23 42 07.7 -0.8
OHR	Ohrid	144.87	316	i PKP		PKPab	23 42 08.6 0.0
SOKA	Soboth	144.88	328	ePKPdf		PKPab	23 42 08.6 +0.1
	comp=Z,35nm,0.5s,SNR=29						
IMMV	Iera Moni Meta	144.91	305	P		PKPbc	23 42 08.8 0.0
UPM	Unac-Piva	144.94	321	⇓iP		PKPbc	23 42 08.7 -0.2
THAL	Thalero	144.96	310	P		PKPbc	23 42 08.6 -0.2
BLY	Banja Luka	145.02	324⇑	iP		PKPab	23 42 09.4 +0.5
STNC	Stoke	145.06	351	eP		PKPbc	23 42 08.5 -0.1
SHEL	Horse Pasture	145.11	189	i PKP2		PKPab	23 42 12.5 +2.5
NKY	Niksic	145.11	320	⇓iP		PKPab	23 42 09.5 0.0
KBN	Korca	145.11	315	P		PKPdf	23 42 09.4 0.0
WPM1	Penmaenmawr	145.13	353	eP		PKPbc	23 42 08.5 -0.4
NKME	Niksic	145.16	320	eP		PKPab	23 42 09.6 0.0
PDG	Podgorica	145.16	319	⇑iP		PKPdf	23 42 09.2 -0.1
PDG	Podgorica	145.16	319	P		PKPbc	23 42 09.4 +0.1
TTG	Podgorica	145.16	319	⇓iP		PKPbc	23 42 09.4 +0.1
WLF1	Llynfaes	145.16	353	eP		PKPbc	23 42 08.7 -0.2
KALE	Kalithea	145.19	311	P		PKPdf	23 42 08.9 -0.7
EVR	Evrytania	145.20	312	P		PKPdf	23 42 08.7 -0.9
YRC	Rhoscolyn	145.22	353	eP		PKPdf	23 42 08.8 -0.2
GUR	Goura	145.23	310	P		PKPdf	23 42 09.5 -0.2
OBKA	Obir	145.24	328	ePKPab		PKPdf	23 42 09.3 -0.1
	comp=Z,24nm,0.8s,SNR=9.0						
SERG	Sergoula	145.24	311	P		PKPdf	23 42 09.3 -0.3
TRIZ	Trizonia	145.25	311	P		PKPdf	23 42 08.0 -1.5
CWF	Charnwood Fore	145.26	350	eP		PKPdf	23 42 07.4 -1.7
ANX	Ano Chora	145.26	312	P		PKPdf	23 42 08.9 -0.8
VLI	Veliai	145.27	308	P		PKPdf	23 42 09.1 -0.5
CEME	Cevo	145.31	320	⇓iP		PKPdf	23 42 09.7 +0.1
BRY	Bratogost	145.34	320	⇓iP		PKPdf	23 42 09.9 +0.1
DRME	Dracevica, Mon	145.34	319	⇓iP		PKPbc	23 42 10.1 +0.2
EFP	Efpalio	145.34	311	P		PKPab	23 42 10.3 -0.1
HGN	Heimansgroeve	145.34	341	ePKP		PKPab	23 42 10.1 +0.1
	comp=Z,22nm,0.8s						
KYTH	Kithira	145.35	307	P		PKPbc	23 42 10.1 0.0
TIR	Tirane	145.35	317	⇓iP		PKPbc	23 42 10.1 +0.2
TIR	Tirane	145.35	317	P		PKPab	23 42 10.7 +0.4
TIR	Tirane	145.35	317	⇓PKP2		PKPbc	23 42 10.1 +0.2
LAKA	Lakka	145.37	311	P		PKPab	23 42 10.6 +0.1
OZLJ	Ozalj	145.38	327	P		PKPbc	23 42 09.9 +0.1
BEBN	Eben Emael	145.39	341	⇓PKP		PKPbc	23 42 09.6 -0.1
FOEL	Foel Wylfa	145.40	352	eP		PKPdf

SHAP	Saphane-Kutahy	0.62 279	*e*Pg	Pg	23 27 18.8	+1.0
TVSB	Tavsanli	0.67 321	PG	Pg	23 27 19.5	+0.6
TVSB	Tavsanli	0.67 321	*e*Pg	Pg	23 27 19.5	+0.6
KZIL	AFYON_Kizioren	0.68 171	*i* P	Pb	23 27 20.1	-0.4
KZIL			*i* S	Sb	23 27 28.6	-1.7
KZIL	AFYON_Kizioren	0.68 171	P	Pb	23 27 20.1	-0.4
KZIL			S	Sb	23 27 28.6	-1.7
KHAL	Karahalli	0.69 216	*i* P	Pg	23 27 18.7	-0.4
KHAL			*i* S	Sg	23 27 26.7	-1.3
KHAL	Karahalli	0.69 216	P	Pg	23 27 18.7	-0.4
KHAL			S	Sg	23 27 26.7	-1.3
BOLV	Bolvadin	0.77 105	*i* P	Pb	23 27 21.5	-0.6
BOLV			*i* S	Sb	23 27 32.4	-0.6
BOLV	Bolvadin	0.77 105	P	Pb	23 27 21.5	-0.6
BOLV			S	Sb	23 27 32.4	-0.6
SIMA	Simav-Kutahya	0.81 281	PG	Pb	23 27 22.6	-0.2
SIMA	Simav-Kutahya	0.81 281	*e*Pg	Pb	23 27 22.6	-0.2
ESKT	Eskisehir	0.89 48	*i* P	Pg	23 27 22.7	-0.2
ESKT			*i* S	Sg	23 27 34.5	+0.1
SEYT	Eskypehyr	0.89 48	P	Pg	23 27 22.7	-0.2
SEYT			S	Sg	23 27 34.5	+0.1
DEMI	Demirci	1.01 277	*i* P	Pb	23 27 26.4	+0.2
DEMI			*i* S	Sb	23 27 40.0	+0.1
DEMI	Demirci	1.01 277	P	Pb	23 27 26.4	+0.2
BORA	Eskisehir	1.01 20	PG	Pb	23 27 26.5	+0.2
BORA	Eskisehir	1.01 20	*i* P	Pb	23 27 26.4	+0.1
BORA			*i* S	Sg	23 27 38.1	-0.5
BORA	Eskisehir	1.01 20	*e*Pg	Pb	23 27 26.5	+0.2
BORA			S	Sg	23 27 38.1	-0.5
AUKUT	KUTAHYA	1.03 1	*i* P	Pg	23 27 17.3	-8.4
AUKUT			*i* S	Sg	23 27 23.5	-16
KULA	Kula-Manisa	1.13 249	PN	Pb	23 27 27.9	-0.3
KULA	Kula-Manisa	1.13 249	*e*Pn	Pb	23 27 27.9	-0.3
BRDR	BURDUR-Merkez	1.23 178	*i* P	Pg	23 27 32.2	+2.7
BRDR			*i* S	Sn	23 27 48.5	+1.2
BRDR	BURDUR-Merkez	1.23 178	P	Pg	23 27 32.2	+2.7
BRDR			S	Sn	23 27 48.5	+1.2
AUSIV	SIVRIHISAR	1.30 66	PN	Pg	23 27 31.7	+0.8
AUSIV	SIVRIHISAR	1.30 66	*e*Pn	Pg	23 27 31.7	+0.8
KIZT	Kizilcal	1.46 91	PN	Pb	23 27 33.6	-0.3
KIZT	Kizilcal	1.46 91	*e*Pn	Pb	23 27 33.6	-0.3
AUMIH	MIHALICIK	1.48 50	PN	Pb	23 27 34.4	+0.1
AUMIH	MIHALICIK	1.48 50	*e*Pn	Pb	23 27 34.4	+0.1
ADVT	Abdulvahap	1.52 352	PN	Pg	23 27 35.5	+0.4
ADVT	Abdulvahap	1.52 352	*e*Pn	Pg	23 27 35.5	+0.4
GULT	Gulveren	1.56 15	PN	Pb	23 27 35.9	+0.4
GULT	Gulveren	1.56 15	*e*Pn	Pb	23 27 35.9	+0.4
YLV	Yalova	1.71 344	PN	Pb	23 27 37.9	-0.2
YLV	Yalova	1.71 344	*e*Pn	Pb	23 27 37.9	-0.2
MDUB	Mudurnu	1.80 30	PN	Pb	23 27 39.5	-0.1
MDUB	Mudurnu	1.80 30	*e*Pn	Pb	23 27 39.5	-0.1
KCTX	Karacabey (Bur	1.85 317	PN	Pb	23 27 40.6	+0.2
KCTX	Karacabey (Bur	1.85 317	*e*Pn	Pb	23 27 40.6	+0.2
ARMT	Armutlu	1.86 332	PN	Pb	23 27 40.3	-0.3
ARMT	Armutlu	1.86 332	*e*Pn	Pb	23 27 40.3	-0.3
SBT5	Esenkoy-Cinarc	1.91 333	PN	Pb	23 27 41.1	-0.3
SBT5	Esenkoy-Cinarc	1.91 333	*e*Pn	Pb	23 27 41.1	-0.3
AYDB	Zeytinkoy-Aydi	1.93 240	PN	Pn	23 27 39.7	-0.1
AYDB	Zeytinkoy-Aydi	1.93 240	*e*Pn	Pn	23 27 39.7	-0.1

*WEL **05** 23:35:37.6, 36°S±7″×17°8E±″, h166km±7km*
*IDC **05** 23:35:37.9±4.5, 36°37S×178°18E, h149km±33km, mb4.1/4, mb1 4.3/5, mb1mx3.7/50, mbtmp4.6/5, Error ellipse: s-maj=55.0km s-min=23.8km az=34.0*
*NEIC **05** 23:35:38.6±0.0, 36°38S×177°95E, h160km, mb4.3/1, After WEL.*
*ISCJB **05** 23:35:39.1±0.8, 36°73S±0°05×178°00E±0°08, h194km±3km, mb4.1/5, Error ellipse: s-maj=11.8km s-min=6.9km az=148.8*

ISC 05 23:35:41.4±0.9, **36°66S**±0°07×**177°89E**±0°07, **h178**km±6km, **n203**, σ1°81/216, **mb4.2**/5, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.96	160	Pn	Pn	23 36 06.2	-2.3
MXZ				Sn	Sn	23 36 26.9	-2.8
MXZ	Matakaoa Point	0.96	160	P	Pn	23 36 06.3	-2.3
MXZ				S	Sn	23 36 27.0	-2.8
WIZ	White Island	1.03	213	Pn	Pn	23 36 07.3	-1.8
WIZ	White Island	1.03	213	P	Pn	23 36 07.4	-1.7
HAZ	Te Kaha	1.10	185	P	Pn	23 36 07.5	-2.2
HAZ				S	Sn	23 36 30.1	-1.5
WMGZ	Waiomatatini S	1.23	160	Pn	Pn	23 36 09.1	-1.6
WMGZ				Sn	Sn	23 36 31.9	-1.6
WMGZ	Waiomatatini S	1.23	160	P	Pn	23 36 09.2	-1.6
WMGZ				S	Sn	23 36 32.0	-1.6
PKGZ	Pakihiroa	1.23	173	P	Pn	23 36 09.2	-1.6
PKGZ				S	Sn	23 36 32.5	-1.3
RUGZ	Raukumara Rang	1.31	187	P	Pn	23 36 09.6	-2.0
RUGZ				S	Sn	23 36 34.3	-0.8
WHRZ	Whale Island	1.40	211	P	Pn	23 36 12.4	+0.2
PUZ	Puketiti	1.44	168	Pn	Pn	23 36 10.9	-1.7
PUZ				Sn	Sn	23 36 35.3	-1.7
PUZ	Puketiti	1.44	168	P	Pn	23 36 10.9	-1.7
PUZ				S	Sn	23 36 35.6	-1.3
TWGZ	Tauwhareparae	1.51	177	Pn	Pn	23 36 12.6	-0.8
TWGZ	Tauwhareparae	1.51	177	P	Pn	23 36 12.6	-0.8
TWGZ				S	Sn	23 36 38.6	+0.3
OPRZ	Ohinepanea	1.59	222	Pn	Pn	23 36 13.0	-1.0
MARZ	Manawahe	1.64	216	Pn	Pn	23 36 14.0	-0.6
MARZ	Manawahe	1.64	216	P	Pn	23 36 14.1	-0.6
TGRZ	Tauranga	1.68	230	Pn	Pn	23 36 14.1	-0.9
TGRZ	Tauranga	1.68	230	P	Pn	23 36 14.1	-0.9
MWZ	Matawai	1.69	190	Pn	Pn	23 36 14.0	-1.2
MWZ	Matawai	1.69	190	P	Pn	23 36 14.0	-1.2
EDRZ	Edgecumbe	1.71	212	Pn	Pn	23 36 15.0	-0.3
EDRZ	Edgecumbe	1.71	212	P	Pn	23 36 15.1	-0.2
URZ	Urewera	1.71	201	P	Pn	23 36 14.0	-1.2
	306nm,0.3s,baz=274,slow=5.3,SNR=1098						
URZ				S	Sn	23 36 41.7	+0.1
	155nm,0.3s,baz=24,slow=20,SNR=10.0						
URZ	Urewera	1.71	201	P	Pn	23 36 14.1	-1.2
URZ				S	Sn	23 36 42.1	+0.4
KUZ	Kuaotunu	1.75	267	Pn	Pn	23 36 12.8	-2.8
KUZ	Kuaotunu	1.75	267	P	Pn	23 36 12.8	-2.8
TKGZ	Te Karaka	1.77	181	Pn	Pn	23 36 15.1	-0.8
CNGZ	Carnagh Statio	1.83	172	Pn	Pn	23 36 16.1	-0.5
RAGZ	Rawiri	1.87	192	Pn	Pn	23 36 16.5	-0.6
RAGZ	Rawiri	1.87	192	P	Pn	23 36 16.9	-0.1
RAGZ				S	Sn	23 36 46.2	+1.5
OMRZ	Omania	1.88	220	*e*Pn	Pn	23 36 17.0	-0.1
OMRZ	Omania	1.88	220	P	Pn	23 36 17.0	-0.1
KARZ	Kaharoa	1.89	224	Pn	Pn	23 36 16.7	-0.4
KARZ	Kaharoa	1.89	224	P	Pn	23 36 16.9	-0.3
TARZ	Mount Tarawera	1.92	215	P	Pn	23 36 18.1	+0.5
KMRZ	Kaimai	1.96	232	P	Pn	23 36 17.4	-0.5
NGRZ	Ngongotaha	1.98	223	P	Pn	23 36 18.8	+0.6
RRRZ	Republican Roa	2.00	213	Pn	Pn	23 36 19.0	+0.6
RRRZ	Republican Roa	2.00	213	P	Pn	23 36 19.2	+0.8
HLRZ	Highlands Stat	2.00	217	P	Pn	23 36 18.9	+0.4
GRZ	Great Barrier	2.01	281	P	Pn	23 36 14.9	-3.5
MUGZ	Murupara	2.02	206	P	Pn	23 36 18.2	-0.4
RIGZ	Rimuhau	2.04	183	P	Pn	23 36 18.1	-0.8
HSRZ	Hossack Road	2.10	218	P	Pn	23 36 20.4	+0.9
HRRZ	Handcock Road	2.15	216	Pn	Pn	23 36 21.1	+1.1
HRRZ	Handcock Road	2.15	216	P	Pn	23 36 20.8	+0.8
SNGZ	Shannon Statio	2.16	192	Pn	Pn	23 36 19.6	-0.6
SNGZ	Shannon Statio	2.16	192	P	Pn	23 36 19.6	-0.6
PRRZ	Plateau Road	2.19	213	Pn	Pn	23 36 20.4	+0.1
PRRZ	Plateau Road	2.19	213	P	Pn	23 36 20.5	+0.1
TOZ	Tahuroa Road	2.19	240	Pn	Pn	23 36 20.0	-0.4
TOZ	Tahuroa Road	2.19	240	P	Pn	23 36 20.1	-0.3
GRRZ	Galatos Road	2.20	220	P	Pn	23 36 21.2	+0.6
WIAZ	Waiheke Island	2.22	266	P	Pn	23 36 18.9	-1.9
MKAZ	Moumakai	2.23	258	Pn	Pn	23 36 19.4	-1.4
MKAZ	Moumakai	2.23	258	P	Pn	23 36 19.5	-1.4
MKAZ				P	Pn	23 36 19.5	-1.4
PRGZ	Paritu Road	2.26	180	Pn	Pn	23 36 20.2	-1.0
PRGZ	Paritu Road	2.26	180	P	Pn	23 36 20.2	-1.0
ALRZ	Allen Road	2.26	213	Pn	Pn	23 36 21.8	+0.6
ALRZ	Allen Road	2.26	213	P	Pn	23 36 21.9	+0.7
WPRZ	Whakapapatarin	2.31	216	Pn	Pn	23 36 22.3	+0.5
WPRZ	Whakapapatarin	2.31	216	P	Pn	23 36 22.6	+0.8
RAHZ	Arahi	2.34	196	P	Pn	23 36 21.7	-0.5
MTHZ	Maungataniwha	2.34	201	P	Pn	23 36 21.6	-0.5
KNZ	Kokohu	2.36	184	Pn	Pn	23 36 21.3	-1.0
KNZ	Kokohu	2.36	184	P	Pn	23 36 21.4	-1.0
ETAZ	East Tamaki Re	2.40	262	P	Pn	23 36 21.6	-1.2
KBAZ	Karaka Road Bo	2.45	259	P	Pn	23 36 22.8	-0.5
KUTZ	Kaahu Road	2.46	221	Pn	Pn	23 36 24.4	+0.8
KUTZ	Kaahu Road	2.46	221	P	Pn	23 36 24.3	+0.8
ABAZ	Army Bay	2.46	271	P	Pn	23 36 21.6	-2.0
MRHZ	Matea Rd	2.46	208	P	Pn	23 36 23.0	-0.6
WHHZ	Waihua	2.47	192	P	Pn	23 36 23.2	-0.4
WHHZ	Waihua	2.47	192	P	Sn	23 36 59.0	+2.5
MHGZ	Mahia Peninsul	2.49	180	Pn	Pn	23 36 23.0	-0.8
MHGZ	Mahia Peninsul	2.49	180	P	Pn	23 36 23.2	-0.6
TLZ	Tolley Road	2.51	228	P	Pn	23 36 24.8	+0.7
NMHZ	Naumai	2.58	199	Pn	Pn	23 36 25.0	0.0
NMHZ	Naumai	2.58	199	P	Pn	23 36 25.0	0.0
AWAZ	Awhitu Peninsu	2.64	260	P	Pn	23 36 24.7	-0.9
HATZ	Hinemaiaia	2.64	212	Pn	Pn	23 36 25.8	+0.1
HATZ	Hinemaiaia	2.64	212	P	Pn	23 36 25.7	+0.1
RVAZ	Riverhead Bore	2.67	267	P	Pn	23 36 24.4	-1.5
WATZ	Wairara	2.67	219	Pn	Pn	23 36 26.9	+1.0
WATZ	Wairara	2.67	219	P	Pn	23 36 27.0	+1.1
WTAZ	Waiatarua	2.68	263	P	Pn	23 36 25.1	-1.0
ARHZ	Aropaoanui	2.69	195	Pn	Pn	23 36 25.8	-0.4
ARHZ	Aropaoanui	2.69	195	P	Pn	23 36 25.8	-0.4
BKZ	Black Stump Fm	2.73	203	Pn	Pn	23 36 25.8	-1.0
BKZ	Black Stump Fm	2.73	203	P	Pn	23 36 25.9	-0.9
RATZ	Rangitukua	2.77	217	P	Pn	23 36 28.3	+1.1
RITZ	Rihia Road	2.82	214	Pn	Pn	23 36 28.5	+0.8
RITZ	Rihia Road	2.82	214	P	Pn	23 36 28.5	+0.8
KATZ	Kakaramea	2.89	216	P	Pn	23 36 30.1	+1.4
MCHZ	McNeill Hill	2.93	198	Pn	Pn	23 36 28.8	-0.3
MCHZ	McNeill Hill	2.93	198	P	Pn	23 36 28.8	-0.3
WCZ	Waipu Caves	2.96	283	P	Pn	23 36 26.3	-3.1
KWHZ	Kaweka Forest	2.99	202	P	Pn	23 36 29.0	-0.9
KRVZ	Karewarewa	3.01	216	Pn	Pn	23 36 30.6	+0.5
KRVZ	Karewarewa	3.01	216	P	Pn	23 36 30.7	+0.5
HIZ	Hauiti	3.04	232	Pn	Pn	23 36 31.7	+1.4
HIZ	Hauiti	3.04	232	P	Pn	23 36 31.8	+1.4
WTVZ	West Tongariro	3.05	216	Pn	Pn	23 36 31.2	+0.5
WTVZ	West Tongariro	3.05	216	P	Pn	23 36 31.1	+0.5
CKHZ	Cape Kidnapper	3.06	192	Pn	Pn	23 36 29.5	-1.1
CKHZ	Cape Kidnapper	3.06	192	P	Pn	23 36 29.6	-1.1
NGZ	Ngauruhoe	3.10	215	P	Pn	23 36 32.0	+0.7
COVZ	Chateau Observ	3.14	216	P	Pn	23 36 32.1	+0.3
TUVZ	Tukino	3.15	214	P	Pn	23 36 32.3	+0.4
BHHZ	Black Hill Sta	3.17	207	Pn	Pn	23 36 30.9	-1.1
BHHZ	Black Hill Sta	3.17	207	P	Pn	23 36 31.0	-1.0
FWVZ	Far West T-bar	3.18	215	Pn	Pn	23 36 32.4	0.0
FWVZ	Far West T-bar	3.18	215	P	Pn	23 36 32.5	0.0
WHVZ	Whangaehu Hut	3.19	214	Pn	Pn	23 36 32.5	+0.1
WHVZ	Whangaehu Hut	3.19	214	P	Pn	23 36 32.6	+0.1
DRZ	Dome Shelter	3.19	215	P	Pn	23 36 33.2	+0.6
KRHZ	Kereru	3.21	202	P	Pn	23 36 31.1	-1.5
MOVZ	Moawhango	3.22	216	Pn	Pn	23 36 31.7	-1.0
MOVZ	Moawhango	3.22	211	P	Pn	23 36 31.7	-1.0
TRVZ	Turoa	3.22	214	P	Pn	23 36 32.9	+0.1
WNVZ	Wahianoa	3.22	214	Pn	Pn	23 36 32.5	-0.3
KAHZ	Kahuranaki	3.23	194	Pn	Pn	23 36 31.9	-0.9
KAHZ	Kahuranaki	3.23	194	P	Pn	23 36 31.9	-0.9
PKVZ	Pokaka	3.31	217	P	Pn	23 36 34.3	+0.5
MTVZ	Mangateitei	3.32	214	Pn	Pn	23 36 34.0	+0.1
MTVZ	Mangateitei	3.32	214	P	Pn	23 36 34.1	+0.1
PXZ	Pawanui	3.46	193	Pn	Pn	23 36 33.9	-1.7
PXZ	Pawanui	3.46	193	P	Pn	23 36 33.9	-1.7
VRZ	Vera Road	3.49	224	Pn	Pn	23 36 37.4	+1.5
VRZ	Vera Road	3.49	224	P	Pn	23 36 37.5	+1.5
PNHZ	Pukenui	3.51	202	Pn	Pn	23 36 34.5	-1.7
PNHZ	Pukenui	3.51	202	P	Pn	23 36 34.5	-1.7
WPHZ	Waipukurau	3.58	198	Pn	Pn	23 36 35.8	-1.4
WPHZ	Waipukurau	3.58	198	P	Pn	23 36 35.8	-1.4
TSZ	Takapari Road	3.71	204	Pn	Pn	23 36 36.9	-2.0
TSZ	Takapari Road	3.71	204	P	Pn	23 36 36.9	-2.0
PRHZ	Porangahau	3.73	195	Pn	Pn	23 36 37.3	-1.7
PRHZ	Porangahau	3.73	195	P	Pn	23 36 37.3	-1.7
OUZ	Omahuta	3.77	291	P	Pn	23 36 36.2	-3.3
WAZ	Wanganui	3.84	216	Pn	Pn	23 36 40.4	-0.1
WAZ	Wanganui	3.84	216	P	Pn	23 36 40.4	-0.1
DVHZ	Dannevirke	3.88	200	Pn	Pn	23 36 38.6	-2.2
DVHZ	Dannevirke	3.88	200	P	Pn	23 36 38.7	-2.2
POWZ	Post Office Ro	4.08	203	Pn	Pn	23 36 41.9	-1.6
PRWZ	Pori Road	4.17	201	Pn	Pn	23 36 42.9	-1.7
BFZ	Birch Farm	4.21	197	Pn	Pn	23 36 43.0	-2.2
MRZ	Mangatainoka R	4.38	204	Pn	Pn	23 36 44.8	-2.6
TIWZ	Tintock	4.40	200	Pn	Pn	23 36 45.3	-2.3
CPWZ	Castlepoint	4.44	197	Pn	Pn	23 36 46.7	-1.3
HOWZ	Holdsworth Sta	4.62	203	Pn	Pn	23 36 47.4	-3.0
HOWZ	Holdsworth Sta	4.62	203	P	Pn	23 36 47.4	-3.0
OGWZ	Otaki Gorge	4.66	206	Pn	Pn	23 36 48.5	-2.4
TMWZ	Te Maipa	4.71	199	Pn	Pn	23 36 49.0	-2.5
KIW	Kapiti Island	4.80	208	Pn	Pn	23 36 49.9	-2.7
KIW	Kapiti Island	4.80	208	P	Pn	23 36 49.9	-2.7
MTW	Mount Morrison	4.86	202	Pn	Pn	23 36 50.3	-3.2
MTW	Mount Morrison	4.86	202	P	Pn	23 36 50.3	-3.2
CAW	Cannon Point	4.96	206	Pn	Pn	23 36 51.6	-3.1
CAW	Cannon Point	4.96	206	P	Pn	23 36 51.7	-3.0
TRWZ	Traveller	5.03	199	Pn	Pn	23 36 52.8	-2.9
PAWZ	Paruwai Farm	5.09	201	Pn	Pn	23 36 53.1	-3.4
PAWZ	Paruwai Farm	5.09	201	P	Pn	23 36 53.1	-3.3
DUWZ	D'Urville Isla	5.17	216	Pn	Pn	23 36 55.1	-2.4
MSWZ	Moikau Station	5.17	203	Pn	Pn	23 36 54.3	-3.3
MSWZ	Moikau Station	5.17	203	P	Pn	23 36 54.3	-3.3
WEL	Wellington	5.22	207	Pn	Pn	23 36 55.3	-2.7
BHW	Baring Head	5.29	205	Pn	Pn	23 36 55.8	-3.2
BHW	Baring Head	5.29	205	P	Pn	23 36 55.9	-3.2
PLWZ	Palliser	5.31	202	Pn	Pn	23 36 55.8	-3.6
PLWZ	Palliser	5.31	202	P	Pn	23 36 55.8	-3.6
TCW	Tory Channel	5.34	211	Pn	Pn	23 36 56.5	-3.3
TCW	Tory Channel	5.34	211	P	Pn	23 36 56.5	-3.2
TUWZ	Tuamarina	5.67	212	Pn	Pn	23 37 00.9	-3.1
TUWZ	Tuamarina	5.67	212	P	Pn	23 37 00.6	-3.3
NNZ	Nelson	5.75	216	Pn	Pn	23 37 02.5	-2.5
QRZ	Quartz Range	5.90	224	Pn	Pn	23 37 04.5	-2.6
BSWZ	Blackbirch Sta	5.93	210	Pn	Pn	23 37 04.3	-3.1
BSWZ	Blackbirch Sta	5.93	210	P	Pn	23 37 04.3	-3.1
THZ	Tophouse	6.40	216	Pn	Pn	23 37 10.9	-2.7
KHZ	Kahutara	6.66	209	Pn	Pn	23 37 13.6	-3.3
KHZ	Kahutara	6.66	209	P	Pn	23 37 13.4	-3.5
DSZ	Denniston Nort	6.94	221	Pn	Pn	23 37 17.8	-2.8
MQZ	McQueen's Vall	8.10	208	Pn	Pn	23 37 31.0	-4.9
WVZ	Waitaha Valley	8.44	218	Pn	Pn	23 37 38.0	-2.4
RPZ	Rata Peaks	8.77	214	P	Pn	23 37 41.6	-3.2
	8.9nm,0.3s,baz=260,slow=1.7,SNR=41						
RPZ				S	Sn	23 39 17.0	-5.7
	14nm,0.3s,baz=82,slow=22,SNR=16						
ODZ	Otahua Downs	10.01	211	Pn	Pn	23 37 57.1	-3.9
WKZ	Wanaka	10.57	217	Pn	Pn	23 38 03.9	-4.4
EAZ	Earnscleugh	10.74	214	Pn	Pn	23 38 06.9	-3.6
TUZ	Tuapeka	11.16	211	Pn	Pn	23 38 13.6	-2.3
MLZ	Mavora Lakes	11.40	217	Pn	Pn	23 38 15.7	-3.4
STKA	Stephens Creek	30.26	268	P	P	23 41 36.2	+0.6
	1.6nm,0.6s,baz=114,slow=10.0,SNR=3.4						
CTAO	Charters Tower	32.17	292	*e*P	P	23 41 51.1	-1.5
ASAR	Alice Springs	39.85	276	P	P	23 42 58.5	+0.7
	13nm,0.6s,baz=119,slow=7.9,SNR=121						
WRAB	Tennant Creek	41.42	282	*e*P	P	23 43 10.4	-0.2
	3.8nm,0.5s						
WRA	Warramunga Arr	41.43	282	P	P	23 43 11.0	+0.4
	9.5nm,0.6s,baz=120,slow=7.7,SNR=65						
FITZ	Fitzroy Crossi	49.33	277	P	P	23 44 14.1	+1.5
	3.6nm,0.9s,baz=135,slow=8.6,SNR=3.9						
QSPA	South Pole Qui	53.46	180	*e*P	P	23 44 47.2	+4.3
MMAI	Mount Meron Ar	149.13	274	PKPbc	PKPbc	23 55 09.9	+1.2
	0.4nm,0.4s,baz=93,slow=6.3,SNR=4.3						
FINES	FINESS Array B	149.53	333	PKPbc	PKPbc	23 55 07.1	-1.6
	1.2nm,0.6s,baz=34,slow=0.5,SNR=7.5						
DBIC	Dimbokro	150.04	175	PKPbc	PKPbc	23 55 12.0	+0.6
	2.9nm,0.8s,baz=162,slow=5.1,SNR=4.2						
BRTR	Keskin Array B	151.85	287	PKPbc	PKPbc	23 55 15.2	+0.1
	0.2nm,0.4s,baz=125,slow=2.4,SNR=3.8						
TORD	Torodi Ar. Bea	156.34	189	PKPbc	PKPbc	23 55 26.8	
	0.3nm,0.7s,baz=173,slow=3.1,SNR=4.6						
TORD				PKPab	PKPab	23 55 44.6	+0.4
	1.3nm,0.6s,baz=168,slow=3.1,SNR=14						

IDC 05 23:37:34.4±19.0, **18°11S×175°02W, h650**km±177km, **mb2.7**/3, **mb1 3.0**/3, **mb1mx2.6**/55, **mbtmp3.7**/3, **Error ellipse: s-maj=390.1km s-min=65.1km az=139.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	47.76	259	P	P	23 45 15.5	0.0
	1.2nm,1.1s,baz=97,slow=7.4,SNR=3.5						
ASAR	Alice Springs	47.84	254	P	P	23 45 16.4	+0.2
	1.3nm,0.8s,baz=89,slow=8.4,SNR=4.6						
ILAR	Eielson Array	85.40	12	P	P	23 49 04.8	+0.2
	0.3nm,0.5s,baz=207,slow=3.7,SNR=4.8						
BRTR	Keskin Array B	147.17	317	PKPbc	PKPbc	23 56 06.0	-0.8
	0.2nm,0.6s,baz=64,slow=3.4,SNR=2.2						

*ISCJB **05** 23:42:56.7±0.4, 37°77N±0°02×26°70E±0°02, h7km±3km, Error ellipse: s-maj=3.0km s-min=2.2km az=143.1*
*ATH **05** 23:42:56.0, 37°78N×26°76E, h23km±1km, ML3.3/6, Error ellipse: s-maj=1.3km s-min=0.8km az=76.0*
*ISK **05** 23:42:56.9, 37°77N×26°73E, h6km, ML3.5/20*
*THE **05** 23:42:57.4, 37°77N×26°73E, h8km±1km, ML3.2/6, Error ellipse: s-maj=1.6km s-min=0.7km az=56.0*
*CSEM **05** 23:42:57.4±0.1, 37°77N×26°72E, h10km, ML3.3, Error ellipse: s-maj=2.2km s-min=1.7km az=46.0*
*DDA **05** 23:42:57.1, 37°81N×26°75E, h7km, Ml3.4*

ISC 05 23:42:57.2±0.8, **37°77N**±0°01×**26°73E**±0°02, **h11**km±5km, **n187**, σ0°79/226, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	Samos	0.10	124	P	Pg	23 42 59.7	-0.3
SMG	Samos	0.10	124	P	Pg	23 43 00.1	+0.1
SMG				S	Sg	23 43 02.0	-0.1
SMG	Samos	0.10	124	P	Pg	23 43 00.1	+0.1
SMG				S	Sg	23 43 02.0	-0.1
DGB	¨zmir	0.31	23	*i* P	Pg	23 43 03.1	-0.4
DGB				*i* S	Sg	23 43 06.6	-1.1
GMLD	Gumuldur	0.34	26	PG	Pg	23 43 04.1	0.0
GMLD				SG	Sg	23 43 08.9	+0.2
GMLD	Gumuldur	0.34	26	*e*Pg	Pg	23 43 04.1	0.0
GMLD				*e*Sg	Sg	23 43 08.9	+0.2
DIDI	Didim-Aydin	0.56	134	PG	Pg	23 43 08.3	+0.1
DIDI	Didim-Aydin	0.56	134	*e*Pg	Pg	23 43 08.3	+0.1
URLA	Izmir	0.60	350	PG	Pg	23 43 07.9	-1.0
URLA	Izmir	0.60	350	*i* P	Pg	23 43 07.5	-1.4
URLA				*i* S	Sg	23 43 16.0	-0.8
URLA	Izmir	0.60	350	P	Pg	23 43 07.5	-1.4
URLA	Izmir	0.60	350	*e*Pg	Pg	23 43 07.9	-1.0
URLA				S	Sg	23 43 16.0	-0.8
CESE	¯e¯me	0.66	329	PG	Pg	23 43 09.9	0.0
CESE	¯e¯me	0.66	329	*e*Pg	Pg	23 43 09.9	0.0
YKAV	Yalikavak-Bodr	0.78	145	PG	Pg	23 43 12.1	-0.1
YKAV	Yalikavak-Bodr	0.78	145	*e*Pg	Pg	23 43 12.1	-0.1
CHOS	Chios island	0.81	320	PG	Pn

DENT	Denizli	1.83	90	PN	Pn	23 43 29.5	+1.0
DENT	Denizli	1.83	90	*e*Pn	Pn	23 43 29.5	+1.0
DNZL	Cakiroluk	1.84	92	*i* P	Pg	23 43 32.1	-0.4
DNZL	Cakiroluk	1.84	92	P	Pg	23 43 32.1	-0.4
ARG	Arkhangelos	1.91	144	PN	Pn	23 43 30.3	+0.7
ARG	Arkhangelos	1.91	144	P	Pn	23 43 30.4	+0.8
ARG	Arkhangelos	1.91	144	P	Pn	23 43 29.8	+0.2
ARG				S	Sn	23 43 53.9	+0.2
ARG	Arkhangelos	1.91	144	P	Pn	23 43 29.9	+0.3
ARG	Arkhangelos	1.91	144	*e*Pn	Pn	23 43 30.3	+0.7
ARG				S	Sn	23 43 53.9	+0.2
BAYC	CANAKKALE_Bayr	1.98	356	*i* P	Pn	23 43 29.8	-0.8
BAYC	CANAKKALE_Bayr	1.98	356	P	Pn	23 43 29.8	-0.8
DEMI	Demirci	2.02	50	*i* P	Pg	23 43 35.1	-0.8
DEMI	Demirci	2.02	50	P	Pg	23 43 35.1	-0.8
BALB	Balikesir	2.08	25	PN	Pn	23 43 33.2	+1.3
BALB	Balikesir	2.08	25	*e*Pn	Pn	23 43 33.2	+1.3
MHLO	Agia Marina, M	2.15	241	P	Pn	23 43 34.5	+1.7
MHLO				S	Sn	23 43 59.0	-0.5
MHLO				AML	AML	23 44 12.8	
	comp=N,2015μm,0.6s						
MHLO				AML	AML	23 44 12.8	
	comp=E,2662μm,1.0s						
MHLO	Agia Marina, M	2.15	241	P	Pn	23 43 33.8	+0.9
MHLO				S	Sn	23 43 59.6	+0.2
FETY	Fethiye	2.19	120	PN	Pn	23 43 34.7	+1.1
FETY	Fethiye	2.19	120	P	Pn	23 43 33.7	+0.1
FETY				S	Sn	23 44 01.1	+0.4
FETY	Fethiye	2.19	120	P	Pn	23 43 33.7	+0.1
FETY	Fethiye	2.19	120	*e*Pn	Pn	23 43 34.7	+1.1
FETY				S	Sn	23 44 01.1	+0.4
SIMA	Simav-Kutahya	2.21	53	PN	Pn	23 43 34.9	+1.1
SIMA	Simav-Kutahya	2.21	53	*e*Pn	Pn	23 43 34.9	+1.1
DION	Dionisos Attik	2.23	279	P	Pn	23 43 34.1	+0.1
DION	Dionisos Attik	2.23	279	P	Pn	23 43 34.2	+0.1
PTL	Penteli	2.28	278	P	Pn	23 43 35.1	+0.4
PTL	Penteli	2.28	278	P	Pn	23 43 35.0	+0.2
GLHS	Glhisar (BURDU	2.29	105	PN	Pn	23 43 36.2	+1.3
GLHS	Glhisar (BURDU	2.29	105	*e*Pn	Pn	23 43 36.2	+1.3
EREA	Eretria	2.30	287	P	Pn	23 43 35.7	+0.7
EREA	Eretria	2.30	287	P	Pn	23 43 35.4	+0.4
VLY	Voula,Athens	2.32	273	P	Pn	23 43 36.1	+0.7
VLY	Voula,Athens	2.32	273	P	Pn	23 43 35.8	+0.5
ATHU	Athens Univers	2.34	276	P	Pn	23 43 33.7	-1.8
ATHU	Athens Univers	2.34	276	P	Pn	23 43 34.7	-0.8
ATH	Athens Observa	2.39	276	P	Pn	23 43 37.1	+0.9
ATH	Athens Observa	2.39	276	P	Pn	23 43 36.8	+0.6
LIA	Limnos Island	2.44	331	P	Pn	23 43 37.0	+0.1
LIA				S	Sn	23 44 06.2	-0.7
LIA				AML	AML	23 44 19.9	
	comp=E,340μm,0.5s						
LIA				AML	AML	23 44 22.2	
	comp=N,253μm,1.1s						
LIA	Limnos Island	2.44	331	P	Pn	23 43 37.1	+0.1
LIA	Limnos Island	2.44	331	P	Pn	23 43 37.1	+0.1
LIA				S	Sn	23 44 06.5	-0.3
GEDZ	Gediz	2.46	58	PN	Pn	23 43 38.9	+1.6
GEDZ	Gediz	2.46	58	*e*Pn	Pn	23 43 38.9	+1.6
GADA	Gvkgeada	2.50	345	P	Pn	23 43 38.0	+0.2
GADA	Gvkgeada	2.50	345	P	Pn	23 43 38.0	+0.2
NPS	Neapolis	2.66	200	P	Pn	23 43 39.5	-0.4
NPS	Neapolis	2.66	200	P	Pn	23 43 39.9	0.0
ZKR	Zakros	2.68	189	P	Pn	23 43 40.8	+0.6
ZKR	Zakros	2.68	189	P	Pn	23 43 40.6	+0.4
ELL	Elmali	2.73	111	PN	Pn	23 43 42.2	+1.1
ELL	Elmali	2.73	111	*e*Pn	Pn	23 43 42.2	+1.1
AKAS	Kas	2.77	123	PN	Pn	23 43 43.0	+1.5
AKAS	Kas	2.77	123	*e*Pn	Pn	23 43 43.0	+1.5
DID	Didima	2.78	266	P	Pn	23 43 41.7	0.0
DID	Didima	2.78	266	P	Pn	23 43 41.9	+0.2
LAST	Lasithi	2.79	202	P	Pn	23 43 41.9	+0.2
LAST	Lasithi	2.79	202	P	Pn	23 43 42.0	+0.2
KSL	Kastellorizon	2.80	124	P	Pn	23 43 41.7	-0.1
SMTH	Samothraki Isl	2.86	341	P	Pn	23 43 42.1	-0.6
SMTH	Samothraki Isl	2.86	341	P	Pn	23 43 42.3	-0.4
IDI	Anoyia	2.88	211	PN	Pn	23 43 44.4	+1.3
IDI	Anoyia	2.88	211	*e*Pn	Pn	23 43 44.4	+1.3
SKIA	Skiathos	2.92	300	P	Pn	23 43 44.2	+0.7
SKIA	Skiathos	2.92	300	P	Pn	23 43 44.0	+0.5
LTK	Loutraki	2.98	276	P	Pn	23 43 44.9	+0.5
LTK	Loutraki	2.98	276	P	Pn	23 43 44.9	+0.5
KORT	Korkueli	2.99	104	PN	Pn	23 43 46.2	+1.6
KORT	Korkueli	2.99	104	*e*Pn	Pn	23 43 46.2	+1.6
PROD	Prodromos	3.06	280	P	Pn	23 43 46.6	+1.1
PROD	Prodromos	3.06	280	P	Pn	23 43 46.3	+0.8
LKR	Lokris	3.07	288	P	Pn	23 43 44.9	-0.6
LKR	Lokris	3.07	288	P	Pn	23 43 45.4	-0.1
VAM	Vamos	3.11	222	P	Pn	23 43 45.6	-0.6
VAM	Vamos	3.11	222	P	Pn	23 43 46.1	-0.1
ALN	Alexandroupoli	3.17	351	P	Pn	23 43 46.8	-0.1
ALN	Alexandroupoli	3.17	351	P	Pn	23 43 46.9	-0.1
IMMV	Iera Moni Meta	3.19	225	P	Pn	23 43 48.4	+1.2
IMMV	Iera Moni Meta	3.19	225	P	Pn	23 43 48.1	+0.9
VLI	Veliai	3.20	252	P	Pn	23 43 47.8	+0.4
VLI	Veliai	3.20	252	P	Pn	23 43 47.8	+0.4
OUR	Ouranopolis	3.34	321	P	Pn	23 43 49.2	-0.1
OUR	Ouranopolis	3.34	321	P	Pn	23 43 49.4	+0.2
ANKY	Antikythira Is	3.34	236	P	Pn	23 43 49.4	+0.1
ANKY	Antikythira Is	3.34	236	P	Pn	23 43 49.6	+0.3
DSF	Desfina	3.38	282	P	Pn	23 43 50.8	+1.0
DSF	Desfina	3.38	282	P	Pn	23 43 50.6	+0.8
RDO	Rodhopi	3.50	345	P	Pn	23 43 51.5	+0.1
RDO	Rodhopi	3.50	345	P	Pn	23 43 51.6	+0.1
KALE	Kalithea	3.67	281	P	Pn	23 43 56.4	+2.5
KALE	Kalithea	3.67	281	P	Pn	23 43 55.5	+1.6
LAKA	Lakka	3.78	279	P	Pn	23 43 57.7	+2.3
LAKA	Lakka	3.78	279	P	Pn	23 43 56.9	+1.5
ITM	Ithomi	3.86	263	P	Pn	23 43 56.3	-0.2
ITM	Ithomi	3.86	263	P	Pn	23 43 56.8	+0.3
EVR	Evrytania	4.03	288	P	Pn	23 44 01.4	+2.4
EVR	Evrytania	4.03	288	P	Pn	23 44 00.5	+1.6
THL	Klokotos Trika	4.10	297	P	Pn	23 44 00.1	+0.4
THL	Klokotos Trika	4.10	297	P	Pn	23 44 00.3	+0.6

ISCJB ***06*** *00:26:29.6±0.4, 23°.46S±0°.04×179°.82E±0°.09, h535km, mb4.2/22, Error ellipse: s-maj=10.5km s-min=4.5km az=172.2*
IDC ***06*** *00:26:31.1±1.3, 23°.44S×179°.99W, h549km±12km, mb3.8/20, mb1 3.9/21, mb1mx3.7/47, mbtmp4.7/21, Error ellipse: s-maj=14.5km s-min=10.9km az=55.0*
NEIC ***06*** *00:26:31.6±0.6, 23°.45S×179°.98E, h557km±6km, mb4.4/3, Error ellipse: s-maj=9.8km s-min=8.8km az=59.0*
WEL ***06*** *00:26:32.9±1.1, 24°S±9°×18°0W±4°6, h582km±18km*
ISC 06 00:26:29.8±0.5, 23°.51S±0°.06×179°.95E±0°.09, h535km, n70, σ1§92/88, mb4.2/22, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.01	342	*e*P	P	00 28 10.3	+2.3
	34nm,0.8s						
RIZ	Raoul Island	6.02	162	P	P	00 28 10.7	+2.9
RAO	Raoul Island	6.03	162	P	P	00 28 10.7	+2.9
	178nm,0.3s,baz=44,slow=20,SNR=8.4						
GLKZ	Green Lake	6.04	162	P	P	00 28 10.5	+2.5
GLKZ				S	S	00 29 30.6	+2.3
DZM	Mont Dzumac	12.54	274	P	P	00 29 16.4	+2.3
	0.8nm,0.3s,baz=91,slow=18,SNR=10						
HAZ	Te Kaha	14.33	187	P	P	00 29 33.1	+0.8
HAZ				S	S	00 31 60.0	-2.8
PUZ	Puketiti	14.59	185	P	P	00 29 34.8	-0.3
PUZ				S	S	00 32 06.7	-1.2
TOZ	Tahuroa Road	14.68	194	P	P	00 29 39.7	+3.6
KMRZ	Kaimai	14.70	193	P	P	00 29 38.4	+2.2
TWGZ	Tauwhareparae	14.72	186	P	P	00 29 37.2	+0.8
TWGZ				S	S	00 32 09.9	-0.6
URZ	Urewera	14.91	189	P	P	00 29 36.4	-1.9
	4.8nm,0.3s,baz=289,slow=5.9,SNR=14						
URZ				S	S	00 32 08.0	-5.8
	2.0nm,0.3s,baz=235,slow=22,SNR=8.4						
URZ	Urewera	14.91	189	P	P	00 29 37.1	-1.3
MWZ	Matawai	14.93	187	P	P	00 29 39.3	+0.7
MWZ				S	S	00 32 12.7	-1.6
CNGZ	Carnagh Statio	15.01	185	P	P	00 29 38.8	-0.6
HIZ	Hauiti	15.58	195	P	P	00 29 49.1	+3.8
BKZ	Black Stump Fm	15.89	190	P	P	00 29 46.7	-1.8
BKZ				S	S	00 32 25.6	-5.7
MOVZ	Moawhango	16.25	192	P	P	00 29 51.0	-1.0
BHHZ	Black Hill Sta	16.27	191	P	P	00 29 49.8	-2.5
BHHZ				S	S	00 32 34.1	-3.8
KAHZ	Kahuranaki	16.45	188	P	P	00 29 53.5	-0.4
KAHZ				S	S	00 32 38.1	-2.6
PNHZ	Pukenui	16.66	190	P	P	00 29 55.0	-1.0
PNHZ				S	S	00 32 41.2	-3.2
TSZ	Takapari Road	16.84	191	P	P	00 29 57.1	-0.6
TSZ				S	S	00 32 44.0	-3.4
ANWZ	Angora Road	17.16	189	P	P	00 29 59.8	-0.7
ANWZ				S	S	00 32 52.5	+0.1
BFZ	Birch Farm	17.41	189	P	P	00 30 01.6	-1.2
BFZ				S	S	00 32 55.3	-1.2
MRZ	Mangatainoka R	17.50	191	P	P	00 30 01.9	-1.7
RPZ	Rata Peaks	21.45	198	P	P	00 30 39.9	+0.4
	11nm,0.6s,baz=28,slow=3.2,SNR=5.5						
CTA	Charters Tower	31.43	270	P	P	00 32 09.1	+1.5
	37nm,0.3s,baz=94,slow=11,SNR=43						
CTAO	Charters Tower	31.43	270	*e*P	P	00 32 08.9	+1.3
PMG	Port Moresby	34.33	289	P	P	00 32 32.8	+0.7
	36nm,0.6s,baz=97,slow=4.2,SNR=13						
PMG	Port Moresby	34.33	289	*e*P	P	00 32 32.5	+0.4
STKA	Stephens Creek	34.83	248	P	P	00 32 37.2	+1.1
	1.5nm,0.4s,baz=92,slow=10,SNR=6.1						
ASAR	Alice Springs	42.06	260	P	P	00 33 35.4	+0.5
	7.4nm,0.5s,baz=98,slow=7.0,SNR=65						
ASAR				ScP	ScP	00 38 16.9	-0.1
	1.8nm,0.8s,baz=108,slow=5.3,SNR=8.2						
ASAR				S	S	00 39 12.8	-3.0
	1.6nm,0.8s,baz=100,slow=14,SNR=10						
WRAB	Tennant Creek	42.38	266	*e*P	P	00 33 36.9	-0.6
	12nm,0.8s						
WRA	Warramunga Arr	42.39	266	P	P	00 33 37.5	-0.1
	13nm,0.5s,baz=92,slow=8.5,SNR=183						
WRA				ScP	ScP	00 38 18.8	+0.4
	1.8nm,0.9s,baz=87,slow=4.6,SNR=5.1						
WRA				S	S	00 39 15.9	-4.6
	1.4nm,0.8s,baz=100,slow=14,SNR=3.5						
JAY	Jayapura	43.32	293	P	P	00 33 45.0	+0.1
	17nm,0.6s,baz=124,slow=4.6,SNR=10						
FITZ	Fitzroy Crossi	50.82	265	P	P	00 34 41.8	+0.5
	5.3nm,0.5s,baz=121,slow=5.2,SNR=16						
SBA	Scott Base	54.77	183	*e*P	P	00 35 10.4	+1.9
	14nm,0.9s						
VNDA	Vanda	54.77	185	P	P	00 35 10.2	+1.7
	2.7nm,0.5s,baz=350,slow=7.2,SNR=8.7						
BATI	Baumata	55.16	274	P	P	00 35 14.2	+1.9
	19nm,0.4s,baz=117,slow=11,SNR=2.8						
MBWA	Marble Bar	55.40	260	*e*P	P	00 35 13.1	-0.8
QSPA	South Pole Qui	66.58	180	P	P	00 36 27.6	+0.9
	19nm,0.6s,baz=354,slow=0.3,SNR=92						
JNU	Nakatsue	73.20	319	P	P	00 37 06.1	-0.4
	2.9nm,0.3s,baz=224,slow=6.7,SNR=5.3						
KSRS	Korea Array	77.92	320	P	P	00 37 33.2	+0.7
	0.9nm,0.6s,baz=128,slow=6.1,SNR=6.6						
KSAR	Wonju Array Be	77.93	320	P	P	00 37 33.2	+0.6
MAW	Mawson	78.10	200	P	P	00 37 33.7	+0.7
	5.0nm,0.6s,baz=135,slow=7.9,SNR=18						
PETK	Petropavlovsk-	78.71	347	P	P	00 37 35.4	-1.0
	3.2nm,0.6s,baz=117,slow=7.6,SNR=3.9						
USRK	Ussuriysk Ar.	80.41	327	P	P	00 37 46.1	+0.6
	1.8nm,0.5s,baz=153,slow=3.0,SNR=3.1						
NVAR	Mina Array Bea	84.50	44	P	P	00 38 06.6	0.0
	0.3nm,0.5s,baz=224,slow=7.6,SNR=2.8						
SNAA	Sanae	85.06	179	P	P	00 38 07.7	-1.0
	2.6nm,0.4s,baz=193,slow=12,SNR=27						
TXAR	Lajitas Array	90.26	58	P	P	00 38 34.3	+0.4
	1.4nm,0.7s,baz=207,slow=7.0,SNR=8.0						
PDAR	Pinedale Array	92.44	44	P	P	00 38 43.6	-0.1
	0.4nm,0.6s,baz=201,slow=4.8,SNR=3.1						
MKAR	Makanchi Array	111.86	313	PKiKP	PKiKP	00 44 02.6	-1.3
	0.2nm,0.5s,baz=186,slow=1.4,SNR=3.1						
KURK	Kurchatov	114.89	317	PKP	PKPdf	00 44 10.3	+0.8
KURBB	Kurchatov Arra	114.93	316	PKP	PKPdf	00 44 10.3	+0.7
	0.1nm,0.3s,baz=122,slow=1.2,SNR=2.3						
BVAR	Borovoye Array	120.12	319	PKP	PKPdf	00 44 16.9	-2.6
	0.4nm,0.4s,baz=127,slow=2.6,SNR=4.1						
SUR	Sutherland	120.96	201	PKP	PKPdf	00 44 21.7	-0.5
	0.7nm,1.1s,baz=190,slow=11,SNR=3.1						
ARCES	ARCESS Array B	131.49	348	PKP	PKPdf	00 44 40.4	-0.4
	2.8nm,0.9s,baz=74,slow=3.3,SNR=3.9						
LSZ	Lusaka	132.59	218	PKP	PKPdf	00 44 44.8	+0.1
	0.8nm,0.5s,baz=166,slow=4.2,SNR=4.9						
LSZ	Lusaka	132.59	218	PKP	PKPdf	00 44 44.8	+0.1
LSZ				*e*PKPdf	PKiKP	00 44 45.2	-0.6
FINES	FINESS Array B	138.06	342	PKP	PKPdf	00 44 52.7	-0.5
	2.1nm,1.1s,baz=64,slow=3.2,SNR=3.4						
FINES				SKPbc	SKPbc	00 47 34.4	-2.7
	2.0nm,0.7s,baz=51,slow=3.2,SNR=11						
GNI	Garni	138.95	305	*e*PKPdf	PKPdf	00 44 55.3	-0.4
NB2	NORSAR Subarra	141.69	351	PKP	SKPbc	00 47 44.1	-2.7
	comp=Z,0.4nm,0.6s,baz=9.2,slow=2.5						
NOA	NORSAR Array B	141.69	351	SKPbc	SKPbc	00 47 44.3	-2.5
	comp=Z,0.5nm,0.6s,baz=43,slow=2.1,SNR=3.5						
HFS	Hagfors	142.15	349	PKhKP	PKPpre	00 44 55.5	
	comp=Z,0.8nm,0.3s,baz=32,slow=3.8,SNR=17						
AKASG	Malin Array Be	144.62	328	PKP	PKPdf	00 45 04.3	-0.9
	comp=Z,0.8nm,0.4s,baz=38,slow=4.2,SNR=7.4						
AKASG				SKPbc	SKPbc	00 47 51.8	-2.2
	comp=Z,1.9nm,0.7s,baz=21,slow=1.7,SNR=5.5						
BRTR	Keskin Array B	147.31	308	PKPbc	PKPbc	00 45 13.4	-0.3
	comp=Z,1.5nm,0.6s,baz=141,slow=4.7,SNR=12						
MMAI	Mount Meron Ar	147.50	295	PKPbc	PKPbc	00 45 14.2	0.0
	comp=Z,1.4nm,0.5s,baz=95,slow=4.6,SNR=5.6						
EKA	Eskdalemuir Ar	148.13	3	PKPbc	PKPbc	00 45 13.8	-1.2
	comp=Z,0.3nm,0.3s,baz=345,slow=2.2,SNR=4.2						
CLL	Collm	150.47	343	*i* PKPbc	PKPbc	00 45 19.8	-0.9
	comp=Z,3.0nm,0.7s						
KEST	Kesra	165.34	328	PKPab	PKPab	00 46 35.1	+0.3
	comp=Z,2.3nm,0.8s,baz=28,slow=9.3,SNR=2.8						
TORD	Torodi Ar. Bea	169.57	189	PKP	PKPdf	00 45 34.4	-2.2
	comp=Z,0.7nm,0.9s,baz=227,slow=3.2,SNR=3.4						
TORD				PKPab	PKPab	00 46 53.0	-0.7
	comp=Z,2.1nm,0.9s,baz=173,slow=4.4,SNR=10.0						

IDC ***06*** *00:34:14.1±0.7, 25°.34S×70°.05E, h0km, mb4.1/18, mb1 4.2/18, mb1mx4.0/69, mbtmp4.1/18, MS4.0/7, Ms1 3.9/7, ms1mx3.5/58, Error ellipse: s-maj=19.0km s-min=18.0km az=160.0*
ISCJB ***06*** *00:34:15.3±0.5, 25°.35S±0°.10×70°.11E±0°.10, h21km, mb4.1/23, MS4.0/7, Error ellipse: s-maj=14.4km s-min=12.4km az=179.2*
NEIC ***06*** *00:34:15.6±0.3, 25°.34S×70°.08E, h10km, mb4.4/5, Error ellipse: s-maj=9.5km s-min=8.0km az=182.0*
ISC 06 00:34:17.3±0.7, 25°.3S±0°.1×70°.1E±0°.1, h21km, n37, σ0§55/25, mb4.2/23, MS3.9/7, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	17.74	8	T	T	00 56 39.3	
	baz=188,slow=76,SNR=61						
H08S2	Diego Garcia H	17.74	8	T	T	00 56 36.0	
	baz=188,slow=76,SNR=108						
H08S3	Diego Garcia H	17.76	8	T	T	00 56 34.0	
	baz=188,slow=76,SNR=64						
OPO	Ambohidratompo	22.24	283	P	P	00 39 14.1	+1.0
	7.5nm,0.9s,baz=89,slow=8.7,SNR=3.6						
PALK	Pallekele	34.02	19	LR	LR	00 51 23.9	
	comp=Z,376nm,20.8s,baz=118,slow=30						
H01W2	Cape Leeuwin H	39.04	115	T	T	01 23 44.1	
	baz=272,slow=75,SNR=8.7						
H01W3	Cape Leeuwin H	39.04	115	T	T	01 23 42.2	
	baz=272,slow=75,SNR=5.9						
H01W1	Cape Leeuwin H	39.05	115	T	T	01 23 45.3	
	baz=272,slow=75,SNR=8.3						
PSI	Prapat	39.56	49	LR	LR	00 54 46.3	
	comp=Z,198nm,18.8s,baz=268,slow=31						
BOSA	Boshof	39.89	255	P	P	00 41 49.9	-0.1
	7.0nm,1.1s,baz=90,slow=5.1,SNR=2.8						
BOSA				LR	LR	00 55 33.8	
	comp=Z,232nm,18.7s,baz=113,slow=32						
LEM	Lembang	40.31	69	LR	LR	00 55 14.7	
	comp=Z,154nm,18.5s,baz=190,slow=31						
LSZ	Lusaka	40.38	276	P	P	00 41 54.2	0.0
	0.9nm,0.5s,baz=143,slow=10,SNR=2.7						
NWAO	Narrogin (SRO)	41.62	112	LR	LR	00 56 22.4	
	comp=Z,115nm,18.3s,baz=129,slow=32						
MAW	Mawson	42.52	184	LR	LR	00 55 29.7	
	comp=Z,178nm,21.8s,baz=46,slow=30						
ATD	Arta Tunnel	45.23	321	P	P	00 42 32.5	-0.8
	2.0nm,0.4s,baz=258,slow=20,SNR=3.9						
CMAR	Chiang Mai Arr	51.82	36	P	P	00 43 25.0	+1.0
	2.7nm,0.9s,baz=226,slow=7.2,SNR=14						
CHTO	Chiang Mai	52.11	35	*e*P	P	00 43 26.6	+0.4
	5.5nm,1.0s						
RAYN	Ar Rayn	54.08	332	*e*P	P	00 43 40.0	-0.7
	3.6nm,1.1s						
ASAR	Alice Springs	57.62	103	P	P	00 44 06.2	-0.1
	0.8nm,0.7s,baz=251,slow=6.6,SNR=6.5						
WRA	Warramunga Arr	59.09	99	P	P	00 44 16.4	-0.1
	3.9nm,1.2s,baz=259,slow=6.2,SNR=4.8						
WRAB	Tennant Creek	59.10	99	*e*P	P	00 44 15.6	-1.0
	3.8nm,0.9s						
SNAA	Sanae	60.80	200	P	P	00 44 27.4	-0.1
	0.9nm,0.8s,baz=103,slow=16,SNR=2.9						
QSPA	South Pole Qui	64.80	180	P	P	00 44 54.4	+0.1
	1.9nm,1.0s,baz=301,slow=2.6,SNR=3.1						
GNI	Garni	69.28	339	P	P	00 45 23.5	+0.4
	4.5nm,1.0s,baz=155,slow=14,SNR=3.0						
GNI	Garni	69.28	339	*e*P	P	00 45 23.2	+0.1
MKAR	Makanchi Array	72.64	9	P	P	00 45 42.8	-0.3
	1.3nm,0.7s,baz=193,slow=6.5,SNR=11						
BRTR	Keskin Array B	73.10	331	P	P	00 45 46.2	0.0
	1.2nm,1.0s,baz=153,slow=7.4,SNR=4.8						
KURBB	Kurchatov Arra	75.99	6	P	P	00 46 02.8	+0.3
	1.6nm,0.8s,baz=201,slow=6.2,SNR=6.3						
KURK	Kurchatov	76.09	6	P	P	00 46 02.8	-0.2
AKTO	Aktyubinsk	76.18	352	P	P	00 46 03.6	0.0
	0.8nm,0.5s,baz=126,slow=4.8,SNR=5.1						
TORD	Torodi Ar. Bea	76.77	292	P	P	00 46 08.1	+0.3
	3.0nm,1.1s,baz=92,slow=4.4,SNR=6.4						
DBIC	Dimbokro	79.35	283	LR	LR	01 19 15.9	
	comp=Z,58nm,18.8s,baz=108,slow=34						
SONM	Songino Array	79.82	24	P	P	00 46 25.2	+1.1
	3.0nm,1.1s,baz=202,slow=5.3,SNR=8.7						
ZALV	Zalesovo Beam	79.98	9	P	P	00 46 24.3	-0.2
	1.1nm,0.6s,baz=194,slow=4.9,SNR=6.2						
ULN	Ulaanbaatar	80.09	24	*e*P	P	00 46 25.5	-0.1
	1.6nm,0.4s						
ARU	Arti	82.02	354	*e*P	P	00 46 35.4	0.0
	1.5nm,0.4s						
AKASG	Malin Array Be	83.86	335	P	P	00 46 44.5	-0.5
	0.3nm,0.3s,baz=125,slow=4.7,SNR=4.5						

IDC 06 00:41:24.1±3.1, 12°.59N×144°.10E, h67km±34km, mb3.4/5, mb1 3.6/5, mb1mx3.2/61, mbtmp3.7/5, Error ellipse: s-maj=54.1km s-min=27.6km az=98.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	1.24	37	P	Pn	00 41 43.3	-2.2
	25nm,0.3s,baz=186,slow=8.8,SNR=4.7						
GUMO				S	Sn	00 42 02.2	+0.6
	48nm,0.3s,baz=18,slow=20,SNR=3.8						
WRA	Warramunga Arr	33.73	197	P	P	00 47 59.9	+0.7
	0.8nm,0.8s,baz=19,slow=9.5,SNR=3.0						
MKAR	Makanchi Array	61.69	317	P	P	00 51 35.7	+0.5
	0.4nm,0.5s,baz=83,slow=10,SNR=4.5						
KURBB	Kurchatov Arra	64.90	320	P	P	00 51 56.5	+0.1
	0.8nm,0.5s,baz=103,slow=6.4,SNR=6.1						
BVAR	Borovoye Array	70.25	322	P	P	00 52 29.8	-0.2
	0.7nm,0.4s,baz=101,slow=7.3,SNR=5.0						
YKA	Yellowknife Ar	84.08	27	P	P	00 53 46.6	-0.7
	0.2nm,0.6s,baz=292,slow=5.5,SNR=2.8						

NIED ***06*** *01:08:00, 22°.50N×121°.50E, h8km, Mw5.5 Best double couple: M0 1.81000×10^17 NP1:φ0=86.00000°, δ57.00000°, λ-158.00000°. NP2:φ0=344.00000°, δ72.00000°, λ-35.00000°.*
BJI ***06*** *01:08:32.7, 22°.46N×121°.33E, h9km, mb5.3/79, mB5.7/65, ML5.7/9, Ms5.7/88, Ms7 5.6/82*
ISCJB ***06*** *01:08:33.3±0.2, 22°.366N±0°.008×121°.53E±0°.01, h20km±1km, mb5.5/406, MS5.3/510, Error ellipse: s-maj=1.8km s-min=1.4km az=11.9*
JMA ***06*** *01:08:33.8±0.1, 22°.47N×121°.51E, h18km±4km, M5.6*
TAP ***06*** *01:08:34.7, 22°.44N×121°.42E, h18km, ML5.9, C*
MOS ***06*** *01:08:34.5±1.0, 22°.34N×121°.51E, h33km, mb5.

HEN eS Sb 01 08 58.4 -3.5
baz=225
SCZT Fangliau 0.83 270⇑iP Pn 01 08 48.4 -3.1
baz=264
SCZT eS Sb 01 08 57.4 -5.1
baz=264
FULB Fuli 0.84 346⇑iP Pn 01 08 49.0 -2.6
baz=1.0
MASBT Mashibuluo 0.85 286 ⇓P Pn 01 08 48.6 -3.1
baz=283
MASBT eS Sb 01 08 57.5 -5.5
baz=283
SSPT Xinbi 0.89 277 eP Pn 01 08 49.8 -2.3
baz=273
SSPT eS Sb 01 09 00.7 -3.3
baz=273
SSD Sandimen 0.90 294 ⇓P Pn 01 08 49.2 -3.2
baz=293
ELDTW Lidau 0.93 330⇓iP Pn 01 08 49.7 -3.2
baz=322
TWF1 Yuli 0.99 348⇓iP Pn 01 08 51.2 -2.4
baz=338
SGLT Jiouru 1.01 290 ⇓P Pn 01 08 52.2 -1.6
baz=293
SLGT Liugui 1.01 307⇓eP Pn 01 08 51.5 -2.4
baz=302
YULB Yu-li 1.03 349 ⇓P Pn 01 08 51.6 -2.6
baz=339
YULB Yu-li 1.03 349 ePg Pn 01 08 50.5 -3.7
YULB eSg Sn 01 09 04.6 -3.1
STYT Tauyuan 1.05 318 ⇓P Pn 01 08 52.1 -2.4
baz=329
WLCH Liuqiu 1.06 269⇑eP Pb 01 08 55.3 -0.1
baz=252
TWP Hsiaoliuchiu 1.07 269⇑eP Pb 01 08 55.7 +0.1
baz=254
TWP eS Sb 01 09 10.7 +1.4
baz=254
TWM1 Shoushan 1.11 294 ⇓P Pn 01 08 54.7 -0.5
baz=283
HGSD Ruisui 1.11 355 ⇑P Pn 01 08 52.9 -2.4
baz=9.0
HGSD eS Sn 01 09 08.4 -1.2
baz=9.0
SGST Jiashian 1.11 309⇓iP Pn 01 08 54.2 -1.0
baz=307
SGST eS Sn 01 09 08.4 -1.2
baz=307
KAU Kaohsiung 1.14 280 eP Pb 01 08 56.1 -0.6
baz=276
EHY Hungye 1.14 351 ⇓P Pn 01 08 53.3 -2.3
baz=342
WTP Ta-pu 1.20 316⇓iP Pn 01 08 55.4 -1.2
baz=327
WTP S Sn 01 09 11.1 -0.8
baz=327
CHN1 Nanshi 1.22 311⇓iP Pn 01 08 56.4 -0.4
baz=312
CHN1 eS Sb 01 09 13.0 -0.5
baz=312
TPUB Ta-pu 1.23 318⇓iP Pn 01 08 56.0 -1.0
baz=320
TPUB S Sn 01 09 11.7 -1.0
baz=320
TPUB Ta-pu 1.23 318 ePg Pn 01 08 54.9 -2.0
TPUB eSg Sn 01 09 10.9 -1.7
CHN3 Shinhua 1.27 303 ⇓P Pb 01 08 58.3 -0.7
baz=303
CHN3 eS Sb 01 09 14.6 -0.4
baz=303
EGFH Guangfu 1.29 356 eP Pn 01 08 56.2 -1.5
baz=8.0
TWK Hsinying 1.30 313⇓iP Pn 01 08 57.4 -0.5
baz=314
TWK eS Sb 01 09 15.1 -0.8
baz=314
ALS Alishan 1.31 330 ⇓P Pn 01 08 57.0 -1.2
baz=332
TAI1 Yung-k'ang 1.36 299⇓iP Pn 01 08 58.5 -0.2
baz=298
TAI Tainan 1.37 297 P Pn 01 08 59.1 +0.3
VWDT VWDT 1.41 346 ⇓P Pn 01 08 58.1 -1.3
baz=358
ESL Shilin 1.43 357 eP Pn 01 08 57.7 -2.0
baz=9.0
ESL eS Sn 01 09 16.0 -1.5
baz=9.0
SCLT Jiali 1.46 303⇓iP Pn 01 08 59.9 -0.1
baz=303
SCLT S Sn 01 09 17.5 -0.6
baz=303
SSLB Suanglung 1.50 340 ⇓P Pn 01 08 59.6 -1.0
baz=353
SSLB eS Sn 01 09 18.4 -0.7
baz=353
SSLB Suanglung 1.50 340 ePn Pn 01 08 59.3 -1.3
SSLB eSn Sn 01 09 17.9 -1.3
CHN2 Minshiung 1.50 320 ⇓P Pn 01 09 01.1 +0.6
baz=322
CHN2 S Sb 01 09 20.4 -1.1
baz=322
CHY Chiayi 1.50 318 ⇓P Pn 01 09 01.0 +0.3
baz=319
CHY eS Sn 01 09 18.9 -0.4
baz=319
ENLB Shoufeng 1.52 3⇑iP Pn 01 08 59.5 -1.4
baz=17
ENLB eS Sn 01 09 17.8 -1.9
baz=17
CHN8 Yiju 1.54 309⇓iP Pn 01 09 01.0 -0.2
baz=309
CHN8 S Sn 01 09 20.1 -0.2
baz=309
WGK Gukeng 1.57 326⇓iP Pn 01 09 02.1 +0.5
baz=328
WGK S Sb 01 09 22.2 -1.4
baz=328
WDLH Douliu 1.59 325 ⇓P Pn 01 09 02.0 +0.2
baz=327
WDLH eS Sb 01 09 22.3 -1.8
baz=327
HWA Hwalien 1.59 3 ⇑P Pn 01 09 00.5 -1.4
baz=18
SMLT Sun Moon Lake 1.60 339 ⇓P Pn 01 09 01.9 -0.2
baz=342
WJS Zhushan 1.61 333 ⇓P Pn 01 09 02.5 +0.4
baz=336
WJS eS Sb 01 09 22.9 -1.9
baz=336
TYC Yuchr 1.64 338⇓iP Pn 01 09 02.9 +0.5
baz=341
TYC eS Sn 01 09 23.3 +0.8
baz=341
WNT Mingjian 1.68 333⇓iP Pn 01 09 03.7 +0.7
baz=317
WNT S Sb 01 09 25.0 -1.7
baz=317
TWD Chiawan 1.70 2 ⇑P Pn 01 09 01.8 -1.5
baz=17
CHGB Renai 1.71 349 ⇓P Pn 01 09 02.6 -1.0
baz=5.0
WSF Szhu 1.73 317⇓iP Pn 01 09 03.4 -0.4
baz=318
WSF S Sn 01 09 24.4 -0.6
baz=318
NACB Ninganchiao 1.79 2 ⇑P Pn 01 09 03.0 -1.6
baz=16
NACB eS Sn 01 09 23.1 -3.3
baz=16
NACB Ninganchiao 1.79 2 ePn Pn 01 09 02.9 -1.7
NACB eSn Sn 01 09 24.3 -2.0
RLNB Erlin 1.85 325 ⇓P Pn 01 09 05.3 -0.1
baz=326
RLNB eS Sn 01 09 26.6 -1.1
baz=326
TWT Tachien 1.89 350⇓eP Pn 01 09 05.8 -0.4
baz=353
TDCB Techi 1.90 350 ⇓P Pn 01 09 05.7 -0.5
baz=353
WCHH Zhanghua 1.91 333 ⇓P Pn 01 09 06.7 +0.4
baz=319
WCHH eS Sn 01 09 30.3 +1.0
baz=319
TCU Taichung 1.93 336⇓eP Pn 01 09 07.1 +0.7
baz=338
WDGT Dungji 1.93 297 ⇓P Pn 01 09 05.0 -1.5
baz=296
WDGT eS Sn 01 09 26.1 -3.6
baz=296
NNSB Datong 2.04 357⇓eP Pn 01 09 07.2 -1.0
baz=8.0
NNSH Datong 2.04 357 eP Pn 01 09 08.4 +0.1
baz=13
ENA Nanau 2.05 6 eP Pn 01 09 07.1 -1.1
baz=356
ENA eS Sn 01 09 30.9 -1.9
baz=356
NANB Nanao 2.05 6 ⇑P Pn 01 09 07.1 -1.1
baz=356
NANB eS Sn 01 09 31.6 -1.1
baz=356
NNS Nan Shan 2.06 356⇑eP Pn 01 09 07.7 -0.7
baz=8.0
TWQ1 Liyutan 2.08 341⇓iP Pn 01 09 09.4 +0.8
baz=344
TWQ1 S Sn 01 09 35.3 +1.8
baz=344
VCHM Qimei 2.10 294 ⇓P Pn 01 09 06.9 -1.9
baz=291
PHUB P'eng-hu 2.12 303 ⇓P Pn 01 09 07.5 -1.7
baz=301
NSY Sanyi 2.15 341⇓iP Pn 01 09 10.3 +0.8
baz=344
NSY S Sb 01 09 37.1 -2.9
baz=344
PNG Penghu 2.16 304 ⇓P Pn 01 09 07.9 -1.8
baz=303
PNG eS Sn 01 09 31.8 -3.7
baz=303
EOS1 EOS1 2.23 14⇑eP Pn 01 09 10.8 +0.2
baz=29
EOS1 eS Sn 01 09 36.3 -0.9
baz=29
TWC Suao 2.24 8 ⇑P Pn 01 09 10.4 -0.4
baz=22
TWC eS Sn 01 09 36.2 -1.3
baz=22
NMLH Miaoli 2.25 343 eP Pn 01 09 11.5 +0.6
baz=345
ENTT Nioudou 2.25 1⇑eP Pn 01 09 10.3 -0.6
baz=4.0
YHNB Yeheng 2.29 357 ⇑P Pn 01 09 11.6 +0.1
baz=12
YHNB Yeheng 2.29 357 ePn Pn 01 09 11.1 -0.4
YHNB eSn Sn 01 09 38.7 0.0
NSK Sanguang 2.29 356⇑eP Pn 01 09 11.7 +0.1
baz=12
NSTT Nanjuang 2.29 348⇓eP Pn 01 09 12.1 +0.5
baz=333
TWE Neicheng 2.34 3 eP Pn 01 09 11.6 -0.5
baz=7.0
SLBB Yuanshan 2.37 3 eP Pn 01 09 12.4 -0.2
baz=6.0
ILA Ilan 2.39 5 eP Pn 01 09 13.0 +0.3
baz=358
NWLT Wulai 2.39 360 eP Pn 01 09 13.1 +0.3
baz=3.0
NWLT eS Sn 01 09 42.9 +1.7
baz=3.0
JYNG Yonagunijimaku 2.44 32 P Pn 01 09 13.4 -0.2
JYNG eS Sn 01 09 40.1 -2.4
SBCB Hsinchu 2.45 349⇓eP Pn 01 09 14.1 +0.4
baz=351
HSN Hsinchu 2.47 348 eP Pn 01 09 13.8 -0.1
baz=352
NTC Toucheng 2.48 7⇑eP Pn 01 09 13.9 -0.2
baz=358
YOJ Yonaguni jima 2.49 33 ⇑P Pn 01 09 14.3 +0.1
baz=49
YOJ eS Sn 01 09 41.3 -2.2
baz=49
YOJ Yonaguni jima 2.49 33 ePn Pn 01 09 13.9 -0.2
YOJ eSn Sn 01 09 42.6 -0.9
YOJ Yonaguni jima 2.49 33 P Pn 01 09 13.7 -0.5
YOJ eS Sn 01 09 41.4 -2.1
YOJ Yonaguni jima 2.49 33 eP Pn 01 09 13.9 -0.2
YOJ e 01 09 42.6
TATO Taipei 2.59 359 eP Pn 01 09 15.7 +0.2
baz=3.0
TATO eS Sn 01 09 46.7 +0.7
baz=3.0
TATO Taipei 2.59 359 ePn Pn 01 09 15.6 0.0
TATO eSn Sn 01 09 42.6 -3.3
TATO Taipei 2.59 359 pPn Pn 01 09 16.3 +0.8
baz=351
SNR=81
TATO Taipei 2.59 359 P Pn 01 09 16.3 +0.8
SNR=81
TWA Mucha 2.59 1 eP Pn 01 09 16.2 +0.6
baz=5.0
NCUH Zhongli 2.60 353 eP Pn 01 09 15.9 +0.2
baz=339
TIPB Shuangxi 2.60 6⇑iP Pn 01 09 15.2 -0.5
baz=359
TIPB S Sn 01 09 46.6 +0.3
baz=359
NCU National Centr 2.60 353 eP Pn 01 09 15.1 -0.6
baz=339
HATJ Hateruma jima 2.69 51 P Pn 01 09 16.6 -0.3
HATJ S Sn 01 09 47.7 -0.7
NWF Wu-fen Shan 2.69 5 eP Pn 01 09 17.3 +0.2
baz=359
NWF eS Sn 01 09 50.1 +1.4
baz=359
WFSB Wu-fen Shan 2.69 5 eP Pn 01 09 17.3 +0.3
baz=359
WFSB eS Sn 01 09 50.7 +2.1
baz=359
TWS1 Kuangyinshan 2.71 358 eP Pn 01 09 18.1 +0.8
baz=12
TWS1 eS Sn 01 09 52.0 +2.9
baz=12
YM04 YM04 2.76 0⇑eP Pn 01 09 17.8 -0.2
baz=4.0
YM10 YM10 2.77 1 eP Pn 01 09 17.9 -0.2
baz=5.0
YM10 eS Sn 01 09 52.0 +1.4
baz=5.0
NTST Danshui 2.77 359 eP Pn 01 09 20.7 +2.6
baz=17
YM11 YM11 2.78 1 eP Pn 01 09 18.7 +0.5
baz=4.0
YM07 YM07 2.79 2⇑eP Pn 01 09 17.0 -1.3
baz=5.0
YM12 YM12 2.79 1 eP Pn 01 09 18.2 -0.2
baz=4.0
YM08 YM08 2.80 1 eP Pn 01 09 18.1 -0.4
baz=5.0
IRIF Iriomote-Funau 2.81 46 P Pn 01 09 19.0 +0.3
IRIF eS Sn 01 09 51.8 +0.2
TWY Chenhua 2.89 1 eP Pn 01 09 19.9 +0.3
baz=5.0
JKRS Kuro-shima 2.94 51 P Pn 01 09 20.6 +0.2
JKRS eS Sn 01 09 54.2 -0.6
JIJ Ishigaki jima 3.12 50 P Pn 01 09 22.6 -0.2
JIJ S Sn 01 09 57.4 -1.7
VWUC VWUC 3.22 324⇓eP Pn 01 09 23.0 -1.3
baz=323
JISG Ishigakijimahi 3.38 49 P Pn 01 09 25.3 -1.1
JISG eS Sn 01 10 04.1 -1.4
KNM Kinmen 3.49 306⇓eP Pn 01 09 27.9 0.0
baz=302
KNMB Chin-men Tao 3.55 306⇓eP Pn 01 09 27.2 -1.5
baz=304
JTJ Tarama 3.69 52 P Pn 01 09 30.8 +0.1
JTJ S Sn 01 10 12.4 -0.8
QZH Quanzhou 3.71 314⇓iPn Pn 01 09 29.4 -1.5
QZH Sn Sn 01 10 09.4 -4.2
QZH smax smax
comp=N,4μm,1.1s
QZH smax smax
comp=E,4μm,1.4s
QZH LR LR
comp=N,15μm,5.7s
QZH LR LR
comp=E,20μm,6.2s
QZH LR LR
comp=Z,49μm,9.9s
MATB Ma-tsu 4.02 339⇓eP Pn 01 09 33.9 -1.3
baz=340
JIRB Irabujima 4.14 53 P Pn 01 09 37.1 +0.1
JIRB S Sn 01 10 22.8 -1.6
SGCP Mt. Cagua 4.14 173 eP Pn 01 09 37.5 +0.5
SGCP eS Sn 01 10 24.9 +0.5
JMJ Miyako jima 2 4.23 54 ⇑P Pn 01 09 38.5 +0.3
baz=49
JMJ Miyako jima 2 4.23 54 P Pn 01 09 38.4 +0.3
JMJ S Sn 01 10 25.1 -1.4
JIKM Ikemajima 4.25 53 P Pn 01 09 38.6 +0.1
JIKM eS Sn 01 10 25.6 -1.6
JOGS Gusukube 4.28 56 P Pn 01 09 39.3 +0.4
JOGS S Sn 01 10 27.7 -0.2
APYP Conner 4.50 183 eP Pn 01 09 42.3 +0.4
APYP eS Sn 01 10 32.8 -0.5
VDOS Pratas Island 4.76 250⇑eP Pn 01 09 44.8 -0.7
baz=249
ABRA Dolores 4.76 189 eP Pn 01 09 45.4 -0.2
ABRA eS Sn 01 10 35.5 -4.2
CAUP Cauayan 5.41 177 eP Pn 01 09 56.9 +2.4
BOLP Bolinao 6.16 195 eP Pn 01 10 06.0 +1.4
BOLP eS Sn 01 11 21.4 +7.3
SCZP Santa Cruz 6.74 193 eP Pn 01 10 13.7 +1.0
SCZP eS Sn 01 11 35.5 +7.0
MCO Taipa Grande 7.38 270 P Pn 01 10 20.0 -1.4
JOW Kunigami 7.58 53 Pn Pn 01 10 22.2 -2.0
67nm,0.3s,baz=25,slow=7.1,SNR=43
JOW Sn Sn 01 11 42.9 -6.3
21nm,0.3s,baz=321,slow=29,SNR=5.7
JOW Kunigami 7.58 53⇓eP Pn 01 10 22.3 -1.8
baz=56
JOW Kunigami 7.58 53 ePn Pn 01 10 21.5 -2.7
JOW eSn Sn 01 11 42.9 -6.3
GZH Guangzhou 7.58 277 P Pn 01 10 20.2 -4.0
GZH smax smax
comp=N,4μm,1.0s
GZH smax smax
comp=E,4μm,1.0s
LQP Lukban 8.22 180⇓eP Pn 01 10 36.6 +3.4
TGY Tagaytay City 8.25 184 Pn Pn 01 10 34.2 +0.8
32nm,0.3s,baz=225,slow=20,SNR=7.6
TGY LR LR 01 14 08.7
comp=Z,21μm,21.7s,baz=20,slow=40
GQP Guinayangan 8.47 174⇑eP Pn 01 10 40.1 +3.7
LUBP Lubang 8.68 188 eP Pn 01 10 41.5 +2.2
SSE Sheshan 8.69 358 P Pn 01 10 40.1 +0.7
SSE S Sn 01 12 20.9 +4.6
SSE LR LR
comp=N,6μm,14.1s
SSE LR LR
comp=E,7μm,14.1s
SSE LR LR
comp=Z,8μm,12.7s
PVCP Virac 9.09 164 eP Pn 01 10 46.6 +1.8
NJ2 Nanjing 9.92 347 eP Pn 01 10 54.8 -1.5
NJ2 S Sn 01 12 47.3 +0.6
NJ2 pmax pmax
comp=Z,160nm,0.7s
NJ2 pmax pmax
comp=Z,500nm,3.5s
NJ2 smax smax
comp=N,1μm,1.4s
NJ2 smax smax
comp=E,950nm,1.5s
NJ2 LR LR
comp=N,49μm,14.1s
NJ2 LR LR
comp=E,61μm,14.6s
NJ2 LR LR
comp=Z,60μm,14.1s
CNP Cataraman 10.26 163 eP Pn 01 11 05.9 +5.0
WHN Wuhan 10.36 323 ⇑P Pn 01 11 00.6 -1.7
WHN S Sn 01 12 50.8 -6.6
WHN LR LR
comp=N,117μm,17.2s
WHN LR LR
comp=E,207μm,20.8s
WHN LR LR
comp=Z,57μm,17.0s
BUSP Coron 10.39 187 eP Pn 01 11 03.3 +0.5
RCP Roxas 10.82 174⇓eP Pn 01 11 12.2 +3.5
QIZ Qiongzhong 11.42 255 P Pn 01 11 15.9 -1.0
QIZ S Sn 01 13 26.9 +3.3
QIZ pmax pmax
comp=Z,54nm,1.2s
QIZ LR LR
comp=N,33μm,19.1s
QIZ LR LR
comp=E,21μm,10.3s
QIZ LR LR
comp=Z,32μm,12.2s
QIZ Qiongzhong 11.42 255 ePn Pn 01 11 15.4 -1.5
PLP Palo 11.63 163⇓eP Pn 01 11 21.1 +1.3
LLP Lapu-Lapu 12.22 169 eP Pn 01 11 27.7 -0.2
LLP eS Sn 01 14 09.2 +26
ENH Enshi 13.34 309 ePn Pn 01 11 43.2 0.0
ENH eSn Sn 01 14 15.5 +4.9
JNU Nakatsue 13.53 36 Pn Pn 01 11 45.1 -0.6
1.7nm,0.3s,baz=203,slow=7.6,SNR=33
JNU Nakatsue 13.53 36 ePn Pn 01 11 44.9 -0.7
GYA Guiyang 14.13 290⇓iP Pn 01 11 52.9 -1.1
GYA PP PnPn 01 12 05.4 +3.5
GYA S Sn 01 14 32.0 +2.1
GYA SS S 01 14 48.6 -1.7
GYA pmax pmax
comp=Z,70nm,1.1s
GYA pmax pmax
comp=Z,750nm,5.9s
GYA LR LR
comp=N,18μm,11.2s
GYA LR LR
comp=E,16μm,14.9s
GYA LR LR
comp=Z,16μm,17.4s
TIA Tai'an 14.30 345 P Pn 01 11 58.4 +2.2
TIA S Sn 01 14 37.4 +3.5
TIA pmax pmax
comp=Z,28nm,1.2s
TIA pmax pmax
comp=Z,1μm,8.6s
TIA LR LR
comp=N,14μm,14.7s
TIA LR LR
comp=E,14μm,16.1s
TIA LR LR
comp=Z,17μm,13.2s
BUKP Musuan 14.81 166 eP Pn 01 11 51.1 -12
TJN Taejon 14.85 19c iP Pn 01 12 05.5 +2.0
INCN Inchon 15.69 15 ePn P 01 12 17.1 -1.3
1μm,1.5s
INCN Inchon 15.69 15 pPn P 01 12 17.9 -0.5
SNR=69
INCN Inchon 15.69 15 P P 01 12 17.9 -0.5
SNR=69
DAV Davao City (W) 15.71 165 Pn P 01 12 20.2 +1.4
38nm,0.3s,baz=48,slow=19,SNR=2.1
DAV LR LR 01 18 25.7
comp=Z,16μm,20.6s,baz=349,slow=38
DAV Davao City (W) 15.71 165⇓eP P 01 12 17.2 -1.6
DAV Davao City (W) 15.71 165 ePn P 01 12 20.2 +1.4
414nm,1.1s
KS15 Wonju Array Si 15.99 19 ePn P 01 12 20.6 -1.1
KS15 ePcP PcP 01 17 14.9 +0.2
KS15 eScP ScP 01 20 45.9 -1.2
KSAR Wonju Array Be 15.99 19 Pn Pn 01 12 18.6 +0.1
KSAR Wonju Array Be 15.99 19 P Pn 01 12 18.6 +0.1
KSRS Korea Array 16.01 19 Pn Pn 01 12 18.6 -0.2
2.4nm,0.3s,baz=199,slow=13,SNR=479
KSRS PcP PcP 01 17 14.9 +0.2
0.2nm,0.3s,baz=192,slow=2.4,SNR=4.3
KSRS ScP ScP 01 20 45.9 -1.2
0.3nm,0.3s,baz=195,slow=1.6,SNR=4.3
KS01 Wonju Array Si 16.02 19 ePn Pn 01 12 18.8 -0.1
XAN Xi'an 16.05 319 P Pn 01 12 18.2 -1.2
XAN pP P 01 12 23.6 +1.1
XAN sP pP 01 12 27.5 -2.9
XAN PP sP 01 12 32.9 -1.2
XAN pmax pmax
comp=Z,180nm,1.7s
XAN pmax pmax
comp=Z,2μm,5.0s
XAN LR LR
comp=N,28μm,16.5s
XAN LR LR
comp=E,26μm,16.5s
XAN LR LR
comp=Z,18μm,15.1s
DL2 Dalian 16.48 0 P Pn 01 12 24.9 +0.3
DL2 S Sn 01 15 30.0 +3.4
DL2 pmax pmax
comp=Z,160nm,1.4s
DL2 pmax pmax

comp=Z,3μm,9.9s
DL2 LR LR
comp=N,7μm,22.2s
DL2 LR LR
comp=E,21μm,19.0s
DL2 LR LR
comp=Z,18μm,13.5s
UBPT Khong Chiam 16.74 248 P **Pn 01 12 28.8 +0.6**
484nm,1.1s,7μm
KKM Kota Kinabalu 17.03 198 *e*Pn **Pn 01 12 32.6 +0.7**
681nm,1.2s
TIY Taiyuan 17.17 335 P **P 01 12 35.4 +0.5**
TIY S **S 01 15 48.8 -3.6**
TIY pmax pmax
comp=Z,69nm,1.0s
TIY pmax pmax
comp=Z,3μm,4.2s
TIY LR LR
comp=N,54μm,12.0s
TIY LR LR
comp=E,34μm,12.2s
TIY LR LR
comp=Z,61μm,12.6s
MYLDM Lahad Datu 17.34 190 *e*Pn **P 01 12 38.7 +1.8**
552nm,1.2s
SKNT Sakolnakorn 17.36 255 P **Pn 01 12 36.2 +0.2**
104nm,1.1s,3μm
KMI Kunming 17.41 283 P **P 01 12 39.2 +1.4**
KMI pP pP 01 12 42.8 -2.8
KMI sP sP 01 12 45.7 -3.7
KMI S **Sn 01 15 48.6 -1.2**
KMI pmax pmax
comp=Z,41nm,1.2s
KMI pmax pmax
comp=Z,840nm,5.2s
KMI LR LR
comp=N,8μm,17.2s
KMI LR LR
comp=E,11μm,17.2s
KMI LR LR
comp=Z,13μm,15.7s
NONG Nongkai 17.77 259 P **P 01 12 43.0 +1.5**
106nm,2.0s,2μm
CD2 Chengdu 17.99 302 P **Pn 01 12 42.2 -1.5**
CD2 sP pP 01 12 48.9 -3.0
CD2 PP **sP 01 12 59.5 +3.9**
CD2 S **Sn 01 16 02.4 -1.2**
CD2 SS **SnSn 01 16 25.7 +8.4**
CD2 pmax pmax
comp=Z,350nm,0.9s
CD2 pmax pmax
comp=Z,3μm,6.9s
CD2 LR LR
comp=E,29μm,14.3s
CD2 LR LR
comp=Z,29μm,13.7s
BJT Baijiatuau 18.16 347 *e*Pn **P 01 12 46.5 +0.8**
352nm,1.0s
BJT Baijiatuau 18.16 347 *e*P **P 01 12 46.5 +0.8**
BJT pmax pmax
comp=Z,352nm,1.0s
BJI Beijing 18.18 347⇓*i*P **P 01 12 46.5 +0.5**
BJI S **S 01 16 10.9 -1.7**
BJI pmax pmax
comp=Z,460nm,1.1s
BJI pmax pmax
comp=Z,7μm,9.1s
BJI LR LR
comp=Z,7μm,14.2s
BJI LR LR
comp=Z,3μm,17.9s
INU Inuyama 18.71 43 *e*P **Pn 01 12 53.8 +1.5**
comp=Z,412nm,0.9s
SGSI Sangihe 18.98 168 P **Pn 01 12 56.8 +1.0**
CBIJ Chichi jima 19.34 72 *e*P **Pn 01 12 59.4 -0.6**
comp=Z,1μm,1.3s
JCJ Chichijima 19.34 72 P **Pn 01 12 59.4 -0.6**
comp=Z,16nm,0.3s,baz=278,slow=19,SNR=2.6
JCJ LR LR 01 19 37.7
comp=Z,2μm,21.4s,baz=313,slow=34
JHJ Hachijo jima 2 19.36 53 P **Pn 01 12 59.8 -0.4**
comp=Z,14nm,0.3s,baz=252,slow=20,SNR=1.6
JHJ2 Mitsune 19.38 53 *e*P **Pn 01 13 04.0 +3.7**
comp=Z,3μm,1.3s
SNY Shenyang 19.47 5⇓P **P 01 12 59.8 -0.3**
SNY S **S 01 16 31.4 -7.0**
SNY pmax pmax
comp=Z,39nm,1.1s
SNY LR LR
comp=Z,15μm,12.7s
SNY LR LR
comp=Z,11μm,13.0s
SNY LR LR
comp=Z,24μm,13.4s
PBKT Sadao Pong 20.21 257 P **P 01 13 08.9 +0.6**
comp=Z,219nm,1.0s,comp=Z,3μm
PBKT Sadao Pong 20.21 257 *e*P **P 01 13 09.2 +0.9**
comp=Z,143nm,1.1s
MAJO Matsushiro 20.21 42 *e*P Pn 01 13 11.9 +1.6
comp=Z,504nm,1.3s
MAJO *e*ScP **ScP 01 20 56.0 -0.2**
MAJO LR LR
comp=Z,5μm,22.0s
MAJO Matsushiro 20.21 42*c i*P Pn 01 13 10.0 -0.3
MAJO pmax pmax
comp=Z,327nm,1.6s
MAT Matsushiro 20.21 42 P Pn 01 13 11.1 +0.8
MAT S Sn 01 16 58.3 +1.2
MJAR Matsushiro Arr 20.21 42 P Pn 01 13 09.1 -1.2
comp=Z,262nm,1.2s,baz=238,slow=10,SNR=122
MJAR S Sn 01 17 03.5 +6.4
comp=Z,1.1nm,0.4s,baz=227,slow=12,SNR=3.1
MJAR ScP **ScP 01 20 56.0 -0.2**
comp=Z,3.4nm,0.8s,baz=212,slow=3.2,SNR=5.0
MJB9 Matsu-Tunnel 20.21 42 *e*P Pn 01 13 11.9 +1.6
comp=Z,511nm,1.3s
MJB9 LR LR
comp=Z,5μm,21.0s
HHC Hu-ho-hao-te 20.25 338⇑P Pn 01 13 10.5 -0.2
HHC sP sP 01 13 18.6 -1.8
HHC PP **PnPn 01 13 28.2 +2.4**
HHC *e*S **S 01 16 52.3 -2.1**
HHC sS Sn 01 17 00.2 +2.3
HHC SS **SnSn 01 17 19.6 +6.8**
HHC ScP **ScP 01 20 58.0 +1.6**
HHC pmax pmax
comp=Z,200nm,1.4s
HHC pmax pmax
comp=Z,800nm,3.7s
HHC LR LR
comp=Z,6μm,14.1s
HHC LR LR
comp=Z,6μm,11.2s
HHC LR LR
comp=Z,5μm,16.5s
PAYA Payao 20.45 266 P Pn 01 13 13.4 +0.2
comp=Z,83nm,0.9s,comp=Z,691nm
PHIT Phitsanulok 20.51 259 P Pn 01 13 13.1 -0.8
comp=Z,149nm,1.0s,comp=Z,1μm
LZH Lanzhou 20.56 316⇓P Pn 01 13 14.0 -0.5
LZH pP pP 01 13 17.8 -2.3
LZH sP sP 01 13 21.1 -2.8
LZH *e*S **S 01 16 58.0 -2.8**
LZH sS Sn 01 17 07.2 +1.6
LZH SS **SnSn 01 17 24.6 +4.1**
LZH pmax pmax
comp=Z,690nm,1.2s
LZH pmax pmax
comp=Z,5μm,5.2s
LZH LR LR
comp=Z,35μm,12.5s
LZH LR LR
comp=Z,19μm,11.6s
LZH LR LR
comp=Z,26μm,13.0s
BTO Baotou 20.61 334 *e*P **P 01 13 12.8 +0.1**
BTO pmax pmax
comp=Z,57nm,1.9s
CHBT CHBT 20.63 246 P Pn 01 13 22.0 +6.8
LAMP Lampang 20.86 263 P Pn 01 13 17.2 -0.8
comp=Z,36nm,0.8s,comp=Z,310nm
CHTO Chiang Mai 21.42 265 P **P 01 13 22.9 +1.5**
comp=Z,510nm,1.0s,comp=Z,12μm
CHTO Chiang Mai 21.42 265 *e*P **P 01 13 23.0 +1.5**
comp=Z,159nm,1.1s
CHTO LR LR
comp=Z,9μm,19.0s
CHTO Chiang Mai 21.42 265 P **P 01 13 23.4 +1.9**
SNR=30
CHTO Chiang Mai 21.42 265 P **P 01 13 23.4 +1.9**
SNR=30
CHTO Chiang Mai 21.42 265 *e*P **P 01 13 23.0 +1.5**
CHTO pmax pmax
comp=Z,160nm,1.1s
CM01 Chiang Mai Arr 21.50 264 *e*P **P 01 13 23.8 +1.5**
CM31 Chiang Mai Arr 21.51 264 *e*P **P 01 13 24.7 +2.3**
CM31 *e*S Sn 01 17 25.4 -3.2
CM31 *e*ScP **ScP 01 20 58.9 -0.8**
CMAR Chiang Mai Arr 21.51 264 P **P 01 13 24.1 +1.7**
comp=Z,38nm,0.9s,baz=70,slow=9.1,SNR=27
CMAR PcP **PcP 01 17 25.4 +0.7**
comp=Z,6.9nm,0.7s,baz=38,slow=0.9,SNR=7.9
CMAR ScP **ScP 01 20 58.9 -0.8**
comp=Z,4.5nm,0.8s,baz=47,slow=1.6,SNR=8.8
CMAR LR LR 01 23 41.5
comp=Z,10μm,18.6s,baz=81,slow=42
CN2 Changchun 21.61 8 *e*P **P 01 13 22.0 -1.2**
CN2 *e*S **S 01 17 18.6 -2.5**
CN2 pmax pmax
comp=Z,1μm,9.4s
CN2 LR LR
comp=Z,17μm,14.0s
CN2 LR LR
comp=Z,10μm,14.0s
CN2 LR LR
comp=Z,20μm,16.0s
MSHR Mys Shultsa 21.69 20*de*P **P 01 13 25.1 +1.0**
SBUM Sibu 21.77 206 *e*P **P 01 13 25.7 +0.5**
comp=Z,416nm,0.9s
SBUM LR LR
comp=Z,7μm,20.0s
MRSI Marisa 21.77 179 P **P 01 13 26.9 +1.7**
KMSI Cibinong 21.80 173 P **P 01 13 25.4 -0.1**
MPSI Mapaga 21.96 184 P **P 01 13 27.8 +0.6**
TNTI Ternate 22.22 164 *e*P **P 01 13 29.2 -0.8**
comp=Z,145nm,0.8s
TNTI LR LR
comp=Z,1μm,21.0s
SRDT SRDT 22.69 253 P **P 01 13 36.3 +1.3**
comp=Z,218nm,1.6s,comp=Z,6μm
PHET Kaeng Krachan 22.86 249 P **P 01 13 39.2 +2.4**
comp=Z,94nm,1.0s,comp=Z,749nm
SMKI Samarinda 23.07 191 P **P 01 13 40.5 +1.5**
SGKI Sangatta, Kali 23.09 190 P P 01 13 30.8 -8.3
APSI Ampana 23.15 180 P **P 01 13 40.6 +0.9**
MDJ Mudanjiang 23.16 15 P **P 01 13 36.4 -3.2**
MDJ S **S 01 17 50.5 +1.3**
MDJ SS **SnSn 01 18 26.3 +2.5**
MDJ pmax pmax
comp=Z,250nm,1.0s
MDJ LR LR
comp=Z,14μm,15.1s
MDJ LR LR
comp=Z,9μm,13.3s
MDJ LR LR
comp=Z,14μm,14.9s
MDJ Mudanjiang 23.16 15 *e*P **P 01 13 39.7 +0.1**
comp=Z,495nm,1.4s
MDJ LR LR
comp=Z,9μm,20.0s
PCI Palu 23.20 184 P **P 01 13 41.2 +0.9**
PCI Palu 23.20 184 P **P 01 13 42.1 +1.8**
USRK Ussuriysk Ar. 23.42 19 P **P 01 13 42.6 +0.4**
comp=Z,103nm,0.8s,baz=208,slow=8.9,SNR=138
USRK ScP **ScP 01 21 01.8 -2.3**
comp=Z,2.3nm,0.7s,baz=268,slow=5.7,SNR=4.5
KSM Kuching 23.47 209 *e*P **P 01 13 42.4 -0.5**
comp=Z,554nm,1.0s
KSM LR LR
comp=Z,4μm,22.0s
LBMI Labuha 23.61 165 P **P 01 13 42.6 -1.7**
GUMO Guam 23.84 108 P **P 01 13 47.1 +0.6**
comp=Z,113nm,0.7s,baz=191,slow=3.6,SNR=6.4
GUMO LR LR 01 22 14.8
comp=Z,2μm,20.6s,baz=287,slow=34
GUMO Guam 23.84 108 *e*P **P 01 13 48.7 +2.2**
GUMO Guam 23.84 108 *e*P **P 01 13 48.7 +2.2**
GUMO pmax pmax
comp=Z,460nm,1.0s
BKB Balikpapan 23.92 191 P **P 01 13 48.2 +1.0**
MTKI Muara Teweh, K 24.06 196 P **P 01 13 49.7 +1.2**
STKI Sintang 24.24 205 P **P 01 13 50.7 +0.5**
comp=Z,331nm,1.0s,comp=Z,23μm
SANI Sanana 24.67 169 P **P 01 13 48.1 -6.0**
SIJI Sorong 24.98 156 P **P 01 13 56.5 -0.5**
comp=Z,45nm,0.5s,baz=356,slow=12,SNR=17
SIJI LR LR 01 27 16.9
comp=Z,841nm,18.2s,baz=338,slow=45
GTA Gaotai 25.10 318⇓P **P 01 13 58.1 +0.1**
GTA pP pP 01 14 02.1 -4.4
GTA sP sP 01 14 04.4 -5.7
GTA S **S 01 18 20.5 -0.4**
GTA sS pS 01 18 27.8 -2.2
GTA SS **SnSn 01 19 21.3 +10**
GTA pmax pmax
comp=Z,20nm,1.2s
GTA pmax pmax
comp=Z,1μm,7.2s
GTA LR LR
comp=Z,10μm,22.0s
GTA LR LR
comp=Z,8μm,21.0s
GTA LR LR
comp=Z,14μm,12.7s
SKLT Songkhla 25.18 236 P **P 01 13 59.2 +0.4**
comp=Z,107nm,0.8s,comp=Z,2μm
TTSI Tana Toraja 25.32 184 P **P 01 14 02.2 +2.2**
TRTT Trang 25.50 239 P **P 01 14 02.3 +0.6**
comp=Z,40nm,1.3s
SURT Suratani 25.58 242 P **P 01 14 02.8 +0.5**
comp=Z,67nm,1.1s,comp=Z,1μm
TEY Ternei 25.76 25 *e*P **P 01 14 04.7 +0.9**
TEY pmax pmax
comp=Z,1μm,3.0s
TEY pmax pmax
comp=E,30nm,0.9s
TEY pmax pmax
comp=N,86nm,1.0s
TEY pmax pmax
comp=Z,129nm,1.0s
TEY MLR MLR
comp=N,6μm,13.0s
TEY MLR MLR
comp=Z,6μm,13.0s
NLAI Namlea 26.04 167 P **P 01 14 07.7 +1.2**
SPSI Sidrap Palu 26.24 184 P **P 01 14 09.8 +1.5**
KULM Kulim 26.38 233 *e*P **P 01 14 10.6 +0.9**
comp=Z,69nm,1.1s
KULM LR LR
comp=Z,7μm,21.0s
MSAI Masohi 26.57 163 P **P 01 14 17.4 +6.1**
IPM Ipoh 26.65 231 *e*P **P 01 14 11.8 -0.4**
comp=Z,121nm,1.0s
IPM LR LR
comp=Z,5μm,20.0s
ERM Erimo 26.68 38 *e*P **P 01 14 13.7 +1.6**
comp=Z,410nm,0.9s
ERM LR LR
comp=Z,7μm,21.0s
ERM Erimo 26.68 38*c i*P **P 01 14 13.9 +1.9**
ERM pmax pmax
comp=Z,503nm,1.0s
AAI Ambon 26.71 165 P **P 01 14 17.4 +4.8**
MYKOM Kota Tinggi 26.72 222 *e*P **P 01 14 13.6 +1.0**
comp=Z,508nm,1.2s
MYKOM LR LR
comp=Z,3μm,18.0s
PBKI Pangkalan Bun 26.72 202 P **P 01 14 13.8 +1.1**
comp=Z,576nm,1.0s
HIA Hailar 26.87 357 *e*P **P 01 14 13.8 0.0**
comp=Z,38nm,1.2s
HIA LR LR
comp=Z,9μm,19.0s
HIA Hailar 26.87 357*ce*P **P 01 14 13.3 -0.5**
HIA pmax pmax
comp=Z,20nm,0.9s
TPRI Tanjung Pinang 26.99 220 P **P 01 14 16.3 +1.2**
comp=Z,235nm,1.5s,comp=Z,8μm
FAKI Fak Fak 27.24 156 P **P 01 14 18.2 +0.8**
FAKI Fak Fak 27.24 156 *e*P **P 01 14 18.1 +0.8**
comp=Z,123nm,0.9s
FAKI LR LR
comp=Z,3μm,22.0s
SHL Shillong 27.24 283 *e*P **P 01 14 18.0 +0.4**
SHL *e*S **S 01 18 56.0 +0.9**
SHL Shillong 27.24 283 *e*P **P 01 14 18.4 +0.8**
comp=Z,286nm,1.2s
SHL LR LR
comp=Z,8μm,19.0s
SHL Shillong 27.24 283 *e*P **P 01 14 18.4 +0.8**
SHL pmax pmax
comp=Z,290nm,1.1s
KAPI Kappang 27.28 184 PFAKE 01 14 30.0 +12
KAPI LR LR
comp=Z,4μm,20.0s
BKSI Bulukumba 27.56 183 P **P 01 14 20.8 +0.6**
ASAJ Asahikawa 27.79 34 P **P 01 14 22.5 +0.4**
comp=Z,124nm,0.8s,baz=219,slow=11,SNR=26
ASAJ ScP **ScP 01 21 14.9 -1.8**
comp=Z,3.1nm,0.5s,baz=225,slow=8.6,SNR=5.3
ASAJ Asahikawa 27.79 34 *e*P **P 01 14 23.7 +1.6**
comp=Z,234nm,0.9s
ASAJ *e*ScP **ScP 01 21 14.9 -1.8**
ASAJ LR LR
comp=Z,4μm,22.0s
ULN Ulaanbaatar 27.95 339 *e*P **P 01 14 23.2 -0.4**
comp=Z,118nm,0.9s
ULN LR LR
comp=Z,21μm,20.0s
ULN Ulaanbaatar 27.95 339 P **P 01 14 23.7 0.0**
SNR=57
ULN Ulaanbaatar 27.95 339 P **P 01 14 23.7 0.0**
SNR=57
ULN Ulaanbaatar 27.95 339 *e*P **P 01 14 23.2 -0.4**
ULN pmax pmax
comp=Z,120nm,0.9s
KLR Kul'dur 28.00 14 P **P 01 14 24.3 +0.5**
comp=Z,6.3nm,0.9s,baz=222,slow=6.7,SNR=116
KLR PcP **PcP 01 17 38.8 +0.5**
comp=Z,0.8nm,0.8s,baz=193,slow=5.4,SNR=4.8
KLR ScP **ScP 01 21 15.3 -1.9**
comp=Z,2.2nm,0.9s,baz=266,slow=4.9,SNR=28
KLR Kul'dur 28.00 14*c i*P **P 01 14 25.5 +1.7**
SONA0 Songino Array 28.15 338 *e*P **P 01 14 24.9 -0.5**
SONA0 *e*PcP **PcP 01 17 39.7 +0.8**
SONA0 *e*ScP **ScP 01 21 15.9 -2.0**
SONM Songino Array 28.15 338 P **P 01 14 24.9 -0.5**
comp=Z,80nm,0.8s,baz=154,slow=9.7,SNR=344
SONM PcP **PcP 01 17 39.7 +0.8**
comp=Z,15nm,1.1s,baz=130,slow=2.7,SNR=5.7
SONM ScP **ScP 01 21 15.9 -2.0**
comp=Z,11nm,0.9s,baz=163,slow=2.9,SNR=15
SONM LR LR 01 26 45.7
comp=Z,24μm,19.5s,baz=150,slow=39
SONA1 Songino Array 28.16 338 *e*P **P 01 14 25.1 -0.4**
LSA Lhasa 28.19 291 P **P 01 14 27.7 +1.4**
LSA S **S 01 19 12.7 +2.2**
LSA pmax pmax
comp=Z,24nm,1.3s
LSA pmax pmax
comp=Z,180nm,5.2s
LSA LR LR
comp=Z,2μm,12.4s
LSA LR LR
comp=Z,3μm,20.0s
LSA LR LR
comp=Z,9μm,20.0s
LSA Lhasa 28.19 291 *e*P **P 01 14 28.5 +2.2**
comp=Z,136nm,1.1s
LSA LR LR
comp=Z,10μm,21.0s
LSA Lhasa 28.19 291 P **P 01 14 28.0 +1.7**
LSA Lhasa 28.19 291 *e*P **P 01 14 28.5 +2.2**
LSA pmax pmax
comp=Z,136nm,1.1s
LSA MLR MLR
comp=Z,10μm,21.0s
LHMI Lhok Sumawe 29.24 238 PFAKE 01 14 50.0 +15
LHMI LR LR
comp=Z,6μm,21.0s
PSI Prapat 29.32 232 P **P 01 14 36.8 +0.7**
comp=Z,70nm,0.9s,baz=0.4,slow=3.6,SNR=19
PSI PcP **PcP 01 17 41.9 -0.5**
comp=Z,36nm,0.8s,baz=181,slow=1.5,SNR=6.8
PSI ScP **ScP 01 21 20.4 -1.8**
comp=Z,35nm,1.0s,baz=359,slow=1.7,SNR=8.1
PSI LR LR 01 25 34.6
comp=Z,4μm,21.0s,baz=90,slow=35
PSI Prapat 29.32 232 *e*P **P 01 14 36.5 +0.4**
comp=Z,139nm,1.1s
PSI *e*PcP **PcP 01 17 42.4 0.0**
PSI *e*ScP **ScP 01 21 20.3 -1.9**
PSI Prapat 29.32 232 *e*P **P 01 14 36.5 +0.4**
PSI pmax pmax
comp=Z,140nm,1.1s
PBA Port Blair 29.45 254 PFAKE 01 14 50.0 +13
PBA LR LR
comp=Z,12μm,20.0s
YUK Yuzh-Kuril'sk 29.49 37 *e*P **P 01 14 39.0 +1.8**
YUK *e* 01 15 39.0
YUK *e*S **S 01 19 32.1 +2.3**
YUK pmax pmax
comp=Z,944nm,1.7s
YUK pmax pmax
comp=E,262nm,0.6s
YUK pmax pmax
comp=N,204nm,0.7s
YUK MLR MLR
comp=N,2μm,17.0s
YUK MLR MLR
comp=Z,2μm,17.0s
YUK MLR MLR
comp=E,1μm,15.0s
BKNI Bangkinang 29.63 225 P **P 01 14 39.9 +1.2**
comp=E,269nm,1.4s,comp=E,4μm
BKNI Bangkinang 29.63 225 *e*P **P 01 14 40.0 +1.2**
comp=E,288nm,1.1s
BKNI LR LR
comp=Z,3μm,20.0s
KCSI Kotacane, Aceh 29.69 234 P **P 01 14 40.1 +0.9**
YSS Yuzh-Sakhalins 29.91 30 *e*P **P 01 14 42.5 +1.7**
comp=Z,699nm,1.2s
YSS LR LR
comp=Z,900nm,19.0s
YSS Yuzh-Sakhalins 29.91 30⇓*i*P **P 01 14 42.7 +1.8**
YSS *e* 01 14 51.8
YSS *e* 01 15 53.1
YSS *e*S **S 01 19 41.3 +5.0**
YSS pmax pmax
comp=Z,390nm,1.2s
YSS MLR MLR
comp=Z,3μm,14.0s
YSS MLR MLR
comp=N,2μm,15.0s
YSS MLR MLR
comp=E,1μm,12.0s
MLSI Meulaboh, Aceh 30.26 237 P **P 01 14 47.4 +3.1**
comp=E,215nm,1.3s,comp=E,4μm
MNSI Mandailing Nat 30.27 228 P **P 01 14 44.5 +0.2**
comp=E,203nm,1.1s,comp=E,3μm
BSI Banda Aceh 30.39 240 P **P 01 14 46.6 +1.1**
TBJI Tambak Boyo 30.52 199 P **P 01 14 48.8 +2.3**
comp=E,339nm,1.6s
GRNR Gornyy 30.64 19 *e*P **P 01 14 49.8 +2.5**
GRNR pmax pmax
comp=Z,84nm,1.0s
MMRI Maumere 30.83 179 P **P 01 14 50.0 +0.8**
comp=Z,369nm,1.2s
MMRI Maumere 30.83 179 *e*P **P 01 14 48.9 -0.4**
comp=Z,408nm,1.2s
MMRI LR LR
comp=Z,2μm,20.0s
SRBI Singaraja 30.90 192 P **P 01 14 50.7 +0.9**
comp=Z,66nm,1.6s,comp=Z,1μm
BLJI Banyuglugur 30.93 195 P **P 01 14 50.9 +0.8**
comp=Z,321nm,0.9s,comp=Z,8μm
EDFI Ende, Flores 30.93 180 P **P 01 14 50.1 -0.2**
PDSI Padang 30.94 224 P **P 01 14 51.9 +1.6**
comp=Z,100nm,1.0s
JAY Jayapura 31.04 140 LR LR 01 25 06.6
comp=Z,4μm,20.7s,baz=288,slow=32
NGJI Ngawi 31.16 200 P **P 01 14 54.1 +1.9**
SMRI Semarang 31.19 202 P **P 01 14 54.6 +2.1**
comp=Z,170nm,1.1s,comp=Z,7μm
SMRI Semarang 31.19 202 *e*P **P 01 14 54.1 +1.6**
comp=Z,282nm,1.3s
SMRI LR LR
comp=Z,4μm,20.0s
KRJI Kerinci 31.22 221 P **P 01 14 54.5 +1.6**

comp=Z,566nm,1.0s,comp=Z,10μm
PLAI Plampang 31.23 187 P **P 01 14 53.8 +1.1**
comp=Z,133nm,1.0s,comp=Z,2μm
ODAN Odare 31.29 285 *e*P **P 01 14 54.3 +0.7**
comp=Z,310nm,1.2s
GSI Gunungsitoli 31.32 231 PFAKE 01 15 10.0 +16
GSI LR LR
comp=Z,4μm,20.0s
KUR Kuril'sk 31.36 37⇓*i*P **P 01 14 56.1 +2.5**
KUR *e* 01 15 02.3
KUR *e*S **S 01 20 00.6 +1.6**
KUR pmax pmax
comp=Z,347nm,1.2s
KUR pmax pmax
comp=Z,2μm,5.1s
KUR MLR MLR
comp=N,2μm,17.0s
KUR MLR MLR
comp=Z,3μm,17.0s
KUR MLR MLR
comp=E,1μm,14.0s
ZAK Zakamensk 31.40 337 *e*P **P 01 14 51.9 -2.2**
ZAK pmax pmax
comp=Z,38nm,1.0s
GMJI Gumukmas 31.47 195 P **P 01 14 55.1 +0.2**
comp=Z,120nm,1.0s,comp=Z,2μm
DNP Denpasar 31.48 192 P **P 01 14 56.4 +1.5**
comp=Z,712nm,1.5s
JAGI Jajag, Banyuwa 31.50 194 P **P 01 14 56.3 +1.2**
comp=Z,52nm,0.9s,comp=Z,2μm
JAGI Jajag, Banyuwa 31.50 194 *e*P **P 01 14 55.2 +0.1**
comp=Z,77nm,1.1s
JAGI LR LR
comp=Z,4μm,22.0s
MASI Maura Aman, Be 31.59 219 P **P 01 14 57.5 +1.4**
comp=Z,698nm,1.2s,comp=Z,6μm
KLI Kotabumi 31.60 213 P **P 01 14 58.0 +1.9**
comp=Z,279nm,1.2s
ZEA Zeya 31.61 6 *e*P **P 01 14 56.6 +0.8**
ZEA *e* 01 16 14.0
ZEA *e*S **S 01 20 04.0 +1.2**
ZEA *e*SS **SnSn 01 21 47.0 -2.9**
ZEA pmax pmax
comp=Z,500nm,6.0s
ZEA pmax pmax
comp=N,100nm,1.2s
ZEA pmax pmax
comp=E,72nm,1.2s
ZEA pmax pmax
comp=Z,160nm,1.2s
ZEA smax smax
comp=N,500nm,11.0s
ZEA MLR MLR
comp=N,13μm,14.0s
ZEA MLR MLR
comp=Z,11μm,14.0s
ZEA MLR MLR
comp=E,3μm,13.0s
IGBI Denpasar 31.63 192 P **P 01 14 57.6 +1.4**
comp=E,275nm,1.6s,comp=E,5μm
MDSI Maura Dua 31.63 215 P **P 01 14 57.1 +0.8**
comp=E,173nm,1.1s,comp=E,2μm
PWJI Pagerwojo 31.68 199 P **P 01 14 56.9 +0.2**
BLSI Bandar Lampung 31.84 212 P **P 01 15 00.2 +2.0**
comp=E,269nm,1.0s
UGM Wanagama 31.97 201 P **P 01 15 00.8 +1.4**
comp=E,409nm,1.5s,comp=E,7μm
UGM Wanagama 31.97 201 *e*P **P 01 14 59.9 +0.5**
comp=E,645nm,1.3s
UGM LR LR
comp=Z,3μm,19.0s
RAMN Ramite 32.00 285 *e*P **P 01 15 00.6 +0.8**
comp=Z,413nm,1.1s
KPJI Karang Pucung 32.00 204 P **P 01 15 01.2 +1.7**
comp=Z,225nm,1.5s,comp=Z,4μm
PCJI Pacitan 32.03 200 P **P 01 15 01.8 +2.0**
comp=Z,134nm,1.0s,comp=Z,3μm
SOEI Soe 32.05 175 P **P 01 15 01.4 +1.3**
comp=Z,148nm,0.9s
SOEI Soe 32.05 175 *e*P **P 01 14 59.5 -0.6**
comp=Z,66nm,0.6s
SOEI *e*S **S 01 20 10.2 -0.2**
SOEI LR LR
comp=Z,4μm,22.0s
LEM Lembang 32.06 207 P **P 01 15 00.6 +0.4**
comp=Z,129nm,1.0s,baz=65,slow=13,SNR=14
LEM LR LR 01 30 03.1
comp=Z,2μm,18.7s,baz=37,slow=40
SBJI Serang 32.08 210 P **P 01 15 02.2 +1.9**
comp=Z,332nm,1.6s
LWLI Liwa 32.14 214 P **P 01 15 02.1 +1.1**
comp=Z,307nm,0.8s,comp=Z,9μm
SISI Saibi 32.15 226 P **P 01 15 01.9 +1.0**
comp=Z,185nm,1.0s
DBJI Dramaga 32.19 208 P **P 01 15 03.4 +2.2**
comp=Z,330nm,1.5s,comp=Z,16μm
KASI Kota Agung 32.35 213 P **P 01 15 03.5 +0.9**
comp=Z,278nm,1.0s
TLY Talaya 32.36 339 ScP **ScP 01 21 29.9 -1.5**
comp=Z,4.5nm,0.8s,baz=228,slow=4.2,SNR=3.0
TLY LR LR 01 29 22.5
comp=Z,18μm,18.1s,baz=140,slow=38
TLY Talaya 32.36 339 *e*P **P 01 15 02.1 -0.3**
comp=Z,62nm,1.0s
TLY *e*ScP **ScP 01 21 29.9 -1.5**
TLY Talaya 32.36 339 P **P 01 15 02.4 0.0**
SNR=30
TLY Talaya 32.36 339 P **P 01 15 02.4 0.0**
SNR=30
TLY Talaya 32.36 339*d i*P **P 01 15 01.7 -0.8**
TLY pmax pmax
comp=Z,78nm,1.1s
TLY MLR MLR
comp=Z,19μm,14.0s
JIRN Jiri 32.37 287 *e*P **P 01 15 04.2 +1.0**
comp=Z,626nm,1.2s
BATI Baumata 32.45 176 P **P 01 15 01.7 -1.8**
comp=Z,85nm,0.7s,baz=4.6,slow=3.0,SNR=11
BATI Baumata 32.45 176 P **P 01 15 02.7 -0.8**
comp=Z,64nm,0.8s
CISI Cisompet, Garu 32.64 206 P **P 01 15 05.5 +0.3**
comp=Z,210nm,1.1s,comp=Z,6μm
CISI Cisompet, Garu 32.64 206 *e*P **P 01 15 05.0 -0.2**
comp=Z,199nm,1.0s
CISI LR LR
comp=Z,2μm,20.0s
GUN Gumba 32.65 287 *e*P **P 01 15 06.6 +0.9**
comp=Z,321nm,1.0s
CGJI Cibinong 32.72 210 P **P 01 15 05.8 0.0**
comp=Z,85nm,1.0s,comp=Z,8μm
TYV Tymovskoe 32.87 25 *e*P **P 01 15 09.0 +2.2**
TYV *e* 01 20 29.7
TYV pmax pmax
comp=Z,1μm,3.0s
TYV pmax pmax
comp=Z,228nm,1.2s
TYV MLR MLR
comp=Z,4μm,14.0s
PKIN Phulchoki 33.07 286 *e*P **P 01 15 09.6 +0.3**
comp=Z,96nm,0.8s
KKN Kakani 33.18 287 *e*P **P 01 15 10.6 +0.4**
comp=Z,284nm,1.2s
MOY Mondy 33.28 337 *e*P **P 01 15 09.8 -0.8**
MOY pmax pmax
comp=Z,149nm,1.9s
DMN Daman 33.33 287 *e*P **P 01 15 11.9 +0.4**
comp=Z,444nm,1.4s
GKN Gorkha 33.75 287 *e*P **P 01 15 15.1 0.0**
comp=Z,348nm,1.3s
NKL Nikolayevsk 34.03 21 *e*P **P 01 15 18.0 +1.1**
NKL *e* 01 16 35.0
NKL *e*S **S 01 20 40.0 -0.3**
NKL pmax pmax
comp=N,52nm,1.1s
NKL pmax pmax
comp=E,130nm,1.1s
NKL pmax pmax
comp=Z,220nm,1.1s
NKL pmax pmax
comp=N,700nm,8.0s
NKL pmax pmax
comp=E,500nm,8.0s
NKL pmax pmax
comp=Z,2μm,8.0s
NKL smax smax
comp=E,2μm,14.0s
NKL MLR MLR
comp=N,3μm,14.0s
NKL MLR MLR
comp=E,5μm,14.0s
NKL MLR MLR
comp=Z,9μm,14.0s
DANN Dangsing 34.53 288 *e*P **P 01 15 22.4 +0.4**
comp=Z,380nm,1.2s
KOLN Koldanda 34.67 287 *e*P **P 01 15 23.3 +0.2**
comp=Z,232nm,1.1s
MANU Manus Island 35.01 131 *e*P **P 01 15 27.2 +1.3**
comp=Z,80nm,0.9s
MANU LR LR
comp=Z,3μm,18.0s
WMQ Urumqi 35.14 316 P **P 01 15 28.0 +1.2**
WMQ pP pP 01 15 31.9 -3.5
WMQ PP **PP 01 16 48.0 +1.3**
WMQ S **S 01 20 59.2 +1.3**
WMQ ScS **ScS 01 25 48.5 +3.1**
WMQ pmax pmax
comp=Z,93nm,1.1s
WMQ pmax pmax
comp=Z,2μm,3.7s
WMQ LR LR
comp=Z,12μm,14.5s
WMQ LR LR
comp=Z,7μm,11.9s
WMQ LR LR
comp=Z,7μm,18.7s
PYUN Piuthan 35.21 287 *e*P **P 01 15 28.3 +0.6**
comp=Z,367nm,0.9s
CHLP Challavanipeta 35.26 271 *e*P **P 01 15 29.3 +1.4**
HVS Khovu-Aksy 35.93 330*ce*P **P 01 15 33.9 +0.4**
HVS pmax pmax
comp=Z,178nm,1.1s
MTN Manton Dam 36.25 164 *e*P **P 01 15 33.9 -2.5**
comp=Z,110nm,1.4s
MTN LR LR
comp=Z,1μm,19.0s
PVM Polavaram 37.80 270 *e*P **P 01 15 50.4 +0.8**
ZSN Zaisan 38.56 319⇓*i*P **P 01 15 56.2 +0.4**
comp=Z,9.0nm,1.3s
ZSN *i* PP **PP 01 17 24.5 +0.3**
ZSN *e*S **S 01 21 52.7 +2.9**
ZSN LR LR 01 33 08.7
comp=Z,166nm,10.2s
PATS Pohnpei 38.67 108 *e*P **P 01 15 59.2 +2.2**
comp=Z,677nm,1.2s
SKR Severo-Kuril's 39.04 35 *e*P **P 01 16 00.0 +0.4**
SKR *e*PPP PPP 01 18 11.7
SKR *e*S **S 01 22 03.8 +7.0**
SKR *e*SSS SSS 01 24 39.7
SKR pmax pmax
comp=Z,478nm,1.2s
SKR pmax pmax
comp=Z,700nm,3.9s
SKR pmax pmax
comp=Z,2μm,3.5s
SKR MLR MLR
comp=Z,2μm,16.0s
SKR MLR MLR
comp=Z,2μm,15.0s
RPR Rampur 39.59 273 *e*P **P 01 16 04.3 -0.3**
ADKI Addanki 39.70 268 *e*P **P 01 16 05.8 +0.2**
MK01 Makanchi Array 39.84 317 *e*P **P 01 16 06.2 -0.3**
MK31 Makanchi Array 39.86 317 *e*P **P 01 16 07.2 +0.6**
MK31 Makanchi Array 39.86 317 *e*P **P 01 16 07.2 +0.6**
MK32 Makanchi Array 39.86 317 *e*P **P 01 16 07.6 +1.0**
MK32 *e*PcP **PcP 01 18 13.2 +1.0**
MK32 *e*ScP **ScP 01 21 58.1 -0.9**
MKAR Makanchi Array 39.86 317 P **P 01 16 07.6 +1.0**
comp=Z,190nm,0.8s,baz=110,slow=8.7,SNR=364
MKAR PcP **PcP 01 18 13.2 +1.1**
comp=Z,21nm,0.9s,baz=98,slow=5.2,SNR=4.5
MKAR ScP **ScP 01 21 58.1 -0.9**
comp=Z,36nm,1.1s,baz=108,slow=4.0,SNR=22
MKAR LR LR 01 34 05.4
comp=Z,5μm,18.0s,baz=109,slow=38
MKAR Makanchi Array 39.86 317 *e*P **P 01 16 07.2 +0.6**
comp=Z,1μm,0.9s
MKAR LR LR
comp=Z,1μm,18.0s
MKAR Makanchi Array 39.86 317*ce*P **P 01 16 07.0 +0.4**
MKAR pmax pmax
comp=Z,191nm,0.8s
RABL Rabaul 39.94 128 PFAKE 01 16 20.0 +12
RABL LR LR
comp=Z,2μm,19.0s
YAK Yakutsk 40.02 6 *e*P **P 01 16 08.0 +0.3**
comp=Z,151nm,1.2s
YAK LR LR
comp=Z,7μm,19.0s
YAK Yakutsk 40.02 6 *e*P **P 01 16 07.3 -0.4**
YAK *e* 01 17 40.1
YAK *e* 01 18 11.1
YAK *e*S **S 01 22 13.8 +2.4**
YAK *e*SS **SS 01 25 06.4 -2.6**
YAK *e* 01 26 07.1
YAK pmax pmax
comp=Z,42nm,0.9s
YAK pmax pmax
comp=N,15nm,1.0s
YAK pmax pmax
comp=N,63nm,2.0s
YAK pmax pmax
comp=E,61nm,2.8s
YAK pmax pmax
comp=Z,81nm,2.6s
YAK smax smax
comp=N,72nm,2.0s
YAK smax smax
comp=E,42nm,2.3s
YAK MLR MLR
comp=Z,8μm,16.0s
YAK MLR MLR
comp=N,10μm,15.0s
YAK MLR MLR
comp=E,2μm,15.0s
MAKZ Makanchi 40.06 317 *e*P **P 01 16 08.8 +0.5**
comp=E,313nm,0.9s
MAKZ LR LR
comp=Z,6μm,18.0s
MAKZ Makanchi 40.06 317 *e*P **P 01 16 08.8 +0.5**
MAKZ pmax pmax
comp=Z,313nm,0.9s
MAKZ MLR MLR
comp=Z,6μm,18.0s
NJS Nagarjunasagar 40.12 269 *e*P **P 01 16 10.1 +1.0**
PMG Port Moresby 40.37 139 P **P 01 16 11.2 +0.1**
comp=Z,24nm,0.7s,baz=334,slow=10,SNR=4.7
PMG Port Moresby 40.37 139 *e*P **P 01 16 11.4 +0.3**
comp=Z,38nm,0.9s
PMG Port Moresby 40.37 139 *e*P **P 01 16 11.8 +0.7**
PMG pmax pmax
comp=Z,38nm,0.9s
SRSP Sriramsagar 40.45 273 *e*P **P 01 16 12.8 +1.0**
SHLS Shalkode 40.46 311⇓*i*P **P 01 16 10.3 -1.5**
comp=Z,25nm,0.9s
SHLS *e*S **S 01 22 17.5 -1.2**
SHLS LR LR 01 34 47.7
comp=Z,485nm,10.7s
PDGK Podgornoye 40.49 311 P **P 01 16 12.7 +0.7**
PDGK pmax pmax
comp=Z,195nm,1.0s
SKHT Srikalahasti 40.56 265 *e*P **P 01 16 13.1 +0.4**
HYB Hyderabad 40.60 271 *i* P P 01 16 21.0 +7.8
HYB *e*PcP **PcP 01 18 16.0 +1.0**
HYB *e*S **S 01 22 22.0 +0.8**
HYBB Hyderabad (bro 40.60 271 *e*P **P 01 16 13.8 +0.7**
SRLM Srisailam 40.63 269 *e*P **P 01 16 14.6 +1.3**
UZB Uzynbulak 40.76 311⇓*i*P **P 01 16 15.1 +0.8**
comp=Z,17nm,1.0s
UZB *i* PP **PP 01 17 49.2 +0.7**
UZB *e*S **S 01 22 26.5 +3.2**
PRZ Przheval'sk 41.02 310 *e*P **P 01 16 19.0 +2.5**
comp=Z,156nm,1.0s
PRZ LR LR
comp=Z,7μm,21.0s
PRZ Przheval'sk 41.02 310 *e*P **P 01 16 19.0 +2.5**
PRZ pmax pmax
comp=Z,160nm,1.0s
KPKS Kokpek 41.09 311⇓*i*P **P 01 16 17.7 +0.7**
comp=Z,22nm,0.9s
KPKS *i* S **S 01 22 31.1 +3.0**
KPKS LR LR 01 36 13.4
comp=Z,2μm,12.9s
SATY Saty 41.17 310 *e*P **P 01 16 18.8 +1.1**
comp=Z,33nm,0.8s
ZHN Zhinishke 41.18 311 *e*P **P 01 16 18.6 +0.9**
comp=Z,10nm,1.1s
ZHN LR LR 01 34 42.1
comp=Z,474nm,12.0s
PEA0B Petropavlovsk- 41.20 33 PFAKE 01 16 30.0 +12
PEA0B LR LR
comp=Z,2μm,19.0s
PETK Petropavlovsk- 41.20 33 P **P 01 16 17.4 -0.2**
comp=Z,22nm,0.7s,baz=206,slow=9.9,SNR=7.8
PETK LR LR 01 34 08.0
comp=Z,2μm,19.5s,baz=242,slow=37
PEA1 Petropavlovsk- 41.20 33 *e*P **P 01 16 17.4 -0.2**
TARG Taragay, Kyrgy 41.26 308 *e*P **P 01 16 20.2 +1.5**
comp=Z,129nm,1.1s
TARG LR LR
comp=Z,4μm,21.0s
PET Petropavlovsk 41.63 33 *e*P **P 01 16 22.9 +1.8**
comp=Z,214nm,0.9s
PET LR LR
comp=Z,2μm,19.0s
PET Petropavlovsk 41.63 33 *e*P **P 01 16 22.5 +1.4**
PET *e* 01 18 04.2
PET *e*S **S 01 22 36.2 +0.7**
PET *e*SS **SS 01 25 38.2 -3.0**
PET pmax pmax
comp=Z,290nm,1.0s
PET pmax pmax
comp=Z,800nm,10.5s
PET MLR MLR
comp=Z,3μm,19.0s
PET MLR MLR
comp=Z,2μm,14.0s
KDJ Kajisay 41.80 309 *e*P **P 01 16 24.3 +1.3**
comp=Z,89nm,1.0s
KDJ LR LR
comp=Z,4μm,19.0s
KDJ Kajisay 41.80 309 P **P 01 16 24.2 +1.3**
KDJ pmax pmax
comp=Z,89nm,1.0s
COEN Coen 41.89 148 *e*P **P 01 16 23.7 +0.1**
comp=Z,62nm,0.9s
COEN LR LR
comp=Z,4μm,21.0s
ZAA0 Zalesovo Array 41.93 328 *e*P **P 01 16 23.1 -0.4**
comp=Z,286nm,0.9s
ZAA0 LR LR
comp=Z,5μm,22.0s
ZALV Zalesovo Beam 41.93 328 P **P 01 16 23.2 -0.3**
comp=Z,194nm,0.8s,baz=116,slow=7.3,SNR=471
ZALV ScP **ScP 01 22 05.6 -1.4**
comp=Z,14nm,0.8s,baz=108,slow=4.8,SNR=11
ZALV LR LR 01 35 44.4
comp=Z,4μm,18.4s,baz=134,slow=39
ZALV Zalesovo Beam 41.93 328 *e*P **P 01 16 22.1 -1.4**
ZAA1 Zalesovo Array 41.93 328 *e*P **P 01 16 23.2 -0.3**
ZAA1 *e*ScP **ScP 01 22 05.6 -1.4**
PALK Pallekele 42.05 255 P **P 01 16 24.9 -0.2**
comp=Z,41nm,0.8s,baz=116,slow=4.0,SNR=11
PALK PcP **PcP 01 18 21.1 +1.3**
comp=Z,20nm,0.7s,baz=120,slow=3.0,SNR=5.1
PALK LR LR 01 36 13.6
comp=Z,4μm,18.1s,baz=119,slow=39
PALK Pallekele 42.05 255 *e*P **P 01 16 26.2 +1.1**
comp=Z,155nm,1.4s
PALK *e*PcP **PcP 01 18 21.1 +1.3**
PALK Pallekele 42.05 255 P **P 01 16 25.8 +0.7**
PALK Pallekele 42.05 255 *i* P **P 01 16 27.3 +2.2**
KSH Kashi 42.16 305⇓*i*P **P 01 16 29.1 +3.3**
KSH pP pP 01 16 31.1 -3.5
KSH PP **PP 01 18 07.3 +3.7**
KSH ScP **ScP 01 22 11.0 +2.6**
KSH S **S 01 22 51.6 +7.6**
KSH sS pS 01 22 54.8 +0.7
KSH SS **SS 01 25 49.1 -3.2**
KSH ScS **ScS 01 26 26.6 +0.3**
KSH pmax pmax
comp=Z,45nm,0.7s
KSH pmax pmax
comp=Z,2μm,5.1s
KSH LR LR
comp=Z,4μm,14.6s
KSH LR LR
comp=Z,3μm,9.8s
KSH LR LR
comp=Z,9μm,21.2s
MDOK Medeo 42.16 310 *i* P **P 01 16 27.1 +1.3**
comp=Z,486nm,0.7s
MDOK *i* PP **PP 01 18 04.3 +0.7**
MDOK *i* S **S 01 22 47.4 +3.4**
MDOK LR LR 01 35 13.3
comp=Z,2μm,16.7s
WAKE Wake Island 42.18 86 *e*P **P 01 16 28.7 +2.7**
comp=Z,250nm,1.0s
KLRI Killari 42.26 273 *e*P **P 01 16 27.4 +0.7**
AAA Alma-Ata 42.26 310 *e*P **P 01 16 28.2 +1.7**
AAA LR LR 01 34 29.9
comp=Z,2μm,16.2s
AAA Alma-Ata 42.26 310 *e*P **P 01 16 27.0 +0.5**
AAA *e*S **S 01 22 49.2 +3.8**
AAA pmax pmax
comp=Z,600nm,3.3s
AAA smax smax
comp=E,2μm,11.2s
AAA MLR MLR
comp=Z,2μm,15.0s
H11N1 WAKE ISLAND Hy 42.31 85 T T 02 01 36.5
baz=282,slow=75,SNR=1242
H11N2 WAKE ISLAND Hy 42.31 85 T T 02 01 41.2
baz=282,slow=75,SNR=16
H11N3 WAKE ISLAND Hy 42.33 85 T T 02 01 41.6
baz=282,slow=75,SNR=763
H11S3 WAKE ISLAND Hy 42.38 87 T T 02 02 02.3
baz=284,slow=74,SNR=5954
H11S1 WAKE ISLAND Hy 42.39 87 T T 02 02 04.8
baz=284,slow=74,SNR=6918
H11S2 WAKE ISLAND Hy 42.40 87 T T 02 01 43.7
baz=284,slow=74,SNR=474
URV Uravakonda 42.46 268 *e*P **P 01 16 29.2 +0.8**
NRN Naryn 42.51 307 *e*P **P 01 16 29.4 +0.6**
comp=Z,199nm,1.1s
NRN LR LR
comp=Z,4μm,18.0s
NRN Naryn 42.51 307 *e*P **P 01 16 29.5 +0.6**
NRN pmax pmax
comp=Z,199nm,1.1s
NRN MLR MLR
comp=Z,4μm,18.0s
ULHL Ulahol 42.51 309 P **P 01 16 30.0 +1.3**
SNR=14
MA2 Magadan 42.54 22 P **P 01 16 28.1 -0.3**
comp=Z,30nm,0.8s,baz=231,slow=10,SNR=8.7
MA2 ScP **ScP 01 22 07.2 -2.1**
comp=Z,14nm,0.8s,baz=173,slow=5.6,SNR=5.8
MA2 LR LR 01 35 14.3
comp=Z,3μm,18.2s,baz=205,slow=38
MA2 Magadan 42.54 22 *e*P **P 01 16 28.8 +0.4**
comp=Z,142nm,1.2s
MA2 *e*ScP **ScP 01 22 07.3 -2.0**
MA2 Magadan 42.54 22 *e*P **P 01 16 28.3 -0.1**
MA2 pmax pmax
comp=Z,93nm,1.7s
MA2 MLR MLR
comp=Z,3μm,16.6s
SEM Semipalatinsk 42.60 321⇓*i*P **P 01 16 29.4 0.0**
comp=Z,95nm,0.9s
SEM *i* PP **PP 01 18 08.5 +0.2**
SEM *e*S **S 01 22 52.7 +2.2**
SEM LR LR 01 35 49.5
comp=Z,691nm,13.7s
KUU Kurty 42.84 311⇓*i*P **P 01 16 32.2 +1.0**
comp=Z,40nm,0.8s
KUU *i* PP **PP 01 18 12.0 +1.2**
KUU *e*S **S 01 22 57.2 +3.4**
BMNS Besmoynak 43.12 310⇓*i*P **P 01 16 34.9 +1.3**
comp=Z,32nm,0.7s
BMNS *e*S **S 01 23 01.7 +3.5**
TKM2 Tokmak 2 43.13 309 P **P 01 16 35.0 +1.3**
SNR=98
TKM2 Tokmak 2 43.13 309 P **P 01 16 33.6 -0.1**
TKM2 pmax pmax
comp=Z,151nm,1.1s
KZA Kyzart 43.19 308 P **P 01 16 36.4 +1.9**
SNR=42
NVS Novosibirsk 43.20 328⇑*i*P **P 01 16 33.7 -0.1**
NVS *e* 01 18 20.4

NVS *e*S **S** **01 23 00.3 +1.8**
NVS pmax pmax
comp=N,243nm,1.8s
NVS pmax pmax
comp=E,303nm,1.8s
NVS pmax pmax
comp=Z,320nm,1.8s
NVS smax smax
comp=N,90nm,2.2s
NVS smax smax
comp=E,19nm,2.2s
MBWA Marble Bar 43.31 182 *e*P **P** **01 16 33.9 -1.1**
comp=E,34nm,0.7s
KBK Karagaybulak 43.54 309 P **P** **01 16 38.5 +1.6**
SNR=80
KURK Kurchatov 43.68 321 *e*P **P** **01 16 38.0 +0.3**
comp=E,168nm,0.9s
KURK *e*ScP **ScP** **01 22 13.2 -0.9**
KURK *e*S **S** **01 23 08.1 +2.4**
KURK *e* 01 48 17.3
KURK LR LR
comp=Z,3μm,20.0s
KURK Kurchatov 43.68 321 P **P** **01 16 38.4 +0.7**
SNR=125
KURK Kurchatov 43.68 321 P **P** **01 16 38.4 +0.7**
SNR=125
KURK Kurchatov 43.68 321 *d i*P **P** **01 16 37.9 +0.2**
KURK pmax pmax
comp=Z,342nm,1.7s
KURK MLR MLR
comp=Z,3μm,16.0s
KURBB Kurchatov Arra 43.69 321 P **P** **01 16 38.2 +0.3**
comp=Z,109nm,0.9s,baz=115,slow=7.7,SNR=196
KURBB ScP **ScP** **01 22 13.2 -1.0**
comp=Z,8.1nm,1.0s,baz=111,slow=3.3,SNR=8.5
KURBB S **S** **01 23 08.1 +2.2**
comp=Z,3.4nm,1.0s,baz=112,slow=13,SNR=2.2
KURBB PKPPKP P'P'df 01 48 17.3 -15
comp=Z,0.3nm,0.3s,baz=351,slow=1.8,SNR=4.1
NIL Nilore 43.72 296 *e*P **P** **01 16 39.3 +0.9**
comp=Z,96nm,0.9s
NIL LR LR
comp=Z,7μm,21.0s
NIL Nilore 43.72 296 *e*P **P** **01 16 39.3 +0.9**
NIL pmax pmax
comp=Z,96nm,0.9s
NIL MLR MLR
comp=Z,7μm,21.0s
CHMS Chumysh 43.75 309 P **P** **01 16 39.6 +1.1**
SNR=44
WB9 Warramunga Arr 43.76 162 PFAKE 01 16 50.0 +11
WB9 LR LR
comp=Z,2μm,20.0s
UCH Uchtor 43.76 308 P **P** **01 16 41.0 +1.9**
SNR=69
WB8 Warramunga Arr 43.78 162 PFAKE 01 16 50.0 +11
WB8 LR LR
comp=Z,2μm,18.0s
FRU Bishkek 43.81 309 *e*P **P** **01 16 38.0 -1.0**
FRU *e* 01 23 10.0
FRU pmax pmax
comp=Z,200nm,1.6s
WB4 Warramunga Arr 43.85 162 PFAKE 01 16 50.0 +11
WB4 LR LR
comp=Z,1μm,19.0s
AAK Ala-Archa 43.86 309 P **P** **01 16 39.9 +0.4**
comp=Z,32nm,0.7s,baz=104,slow=5.2,SNR=34
AAK PcP **PcP** **01 18 26.3 +0.7**
comp=Z,14nm,0.9s,baz=192,slow=5.8,SNR=2.9
AAK ScP **ScP** **01 22 14.2 -1.1**
comp=Z,9.0nm,0.9s,baz=78,slow=5.3,SNR=8.8
AAK LR LR 01 36 38.1
comp=Z,5μm,19.0s,baz=87,slow=38
AAK Ala-Archa 43.86 309 P **P** **01 16 40.9 +1.3**
SNR=9.2
AAK Ala-Archa 43.86 309 *e*P **P** **01 16 40.9 +1.3**
AAK *e*PcP **PcP** **01 18 26.3 +0.7**
AAK *e*ScP **ScP** **01 22 14.2 -1.1**
AAK Ala-Archa 43.86 309 pP **P** **01 16 41.0 +1.5**
SNR=42
AAK Ala-Archa 43.86 309 P **P** **01 16 41.0 +1.5**
SNR=42
AAK Ala-Archa 43.86 309 *i* P **P** **01 16 40.5 +0.9**
SNR=9.8
AAK Ala-Archa 43.86 309 P **P** **01 16 40.3 +0.7**
AAK pmax pmax
comp=Z,88nm,1.4s
WRAB Tennant Creek 43.88 162 *e*P **P** **01 16 38.6 -1.1**
comp=Z,38nm,0.8s
WRAB LR LR
comp=Z,2μm,18.0s
WRAB Tennant Creek 43.88 162 *e*P **P** **01 16 38.6 -1.1**
WRAB pmax pmax
comp=Z,38nm,0.8s
WRAB MLR MLR
comp=Z,2μm,18.0s
WRA Warramunga Arr 43.89 162 P **P** **01 16 38.1 -1.7**
comp=Z,27nm,0.7s,baz=344,slow=8.8,SNR=86
WRA S **S** **01 23 03.4 -6.0**
comp=Z,15nm,1.1s,baz=342,slow=15,SNR=11
WRA LR LR 01 36 18.2
comp=Z,1μm,19.8s,baz=345,slow=38
WRA Warramunga Arr 43.89 162 *i* P **P** **01 16 38.0 -1.7**
WRA pmax pmax
comp=Z,28nm,0.7s
WR1 Warramunga Arr 43.89 162 *e*P **P** **01 16 38.1 -1.7**
comp=Z,43nm,0.8s
WR1 *e*S **S** **01 23 03.4 -6.0**
WB2 Warramunga Arr 43.89 162 *e*P **P** **01 16 36.7 -3.1**
WR2 Warramunga Arr 43.90 162 PFAKE 01 16 50.0 +10
WR2 LR LR
comp=Z,1μm,20.0s
WR5 Warramunga Arr 43.92 162 PFAKE 01 16 50.0 +10
WR5 LR LR
comp=Z,1μm,20.0s
WR6 Warramunga Arr 43.93 162 PFAKE 01 16 50.0 +10
WR6 LR LR
comp=Z,1μm,21.0s
WR0 Warramunga Arr 43.96 162 PFAKE 01 16 50.0 +10
WR0 LR LR
comp=Z,2μm,22.0s
USP Ospenovka 43.99 310 P **P** **01 16 41.4 +0.9**
SNR=40
SFK Sufi-Kurgan 44.12 305 P **P** **01 16 42.5 +0.7**
SFK pmax pmax
comp=Z,118nm,1.2s
AML Almayashu 44.34 308 P **P** **01 16 45.4 +1.7**
SNR=88
EKS2 Erkin-Say 44.38 309 P **P** **01 16 45.0 +1.3**
SNR=40
MNAS Manas 45.27 308 P **P** **01 16 52.3 +1.5**
MNAS pmax pmax
comp=Z,171nm,1.0s
SEY Seymchan 45.57 19 P **P** **01 16 52.3 -0.4**
comp=Z,9.2nm,0.7s,baz=229,slow=5.3,SNR=16
SEY PcP **PcP** **01 18 31.5 +0.7**
comp=Z,25nm,0.8s,baz=190,slow=3.9,SNR=8.8
SEY ScP **ScP** **01 22 19.4 -2.2**
comp=Z,7.9nm,0.9s,baz=223,slow=3.7,SNR=6.8
SEY Seymchan 45.57 19⇓ *e*P **P** **01 16 54.3 +1.7**
DZA Taraz 46.19 309 *e*P **P** **01 16 59.4 +1.4**
comp=Z,26nm,0.7s
OTUK Ortayu 46.69 316 P **P** **01 17 02.6 +0.8**
OTUK pmax pmax
comp=Z,165nm,0.9s
KK31 Karatay Array 46.82 309 *e*P **P** **01 17 03.0 +0.1**
KK31 *e*PcP **PcP** **01 18 36.3 +0.7**
KK31 Karatay Array 46.82 309 *i* P **P** **01 17 03.5 +0.6**
KK31 pmax pmax
comp=Z,86nm,0.9s
KKAR Karatay Array 46.82 309 *e*P **P** **01 17 03.0 +0.1**
KKAR *e*PcP **PcP** **01 18 36.1 +0.5**
KKAR Karatay Array 46.82 309 *e*P **P** **01 17 03.0 +0.1**
KKAR *e* 01 18 36.1
BRZS Berezniki 46.97 318 *e*P **P** **01 17 04.6 +0.7**
comp=Z,5.8nm,1.0s
BRZS *e*S **S** **01 23 56.5 +3.1**
IUG Iuzhnay 47.03 307⇓ *i*P **P** **01 17 05.8 +1.2**
comp=Z,57nm,0.8s
IUG LR LR 01 37 55.2
comp=Z,690nm,14.9s
KBL Kabul 47.23 297 *e*P **P** **01 17 07.8 +1.4**
comp=Z,84nm,1.0s
KBL LR LR
comp=Z,3μm,21.0s
KBL Kabul 47.23 297 *e*P **P** **01 17 07.8 +1.4**
KBL pmax pmax
comp=Z,84nm,1.0s
AS31 Alice Springs 47.33 164 *e*P **P** **01 17 06.0 -1.0**
comp=Z,8.8nm,0.6s
AS31 *e*PcP **PcP** **01 18 38.2 +0.6**
AS31 *e*ScP **ScP** **01 22 27.3 -2.3**
AS31 *e*S **S** **01 23 56.0 -2.9**
AS31 *e* 01 48 12.9
ASAR Alice Springs 47.33 164 P **P** **01 17 05.8 -1.1**
comp=Z,16nm,0.5s,baz=351,slow=13,SNR=157
ASAR PcP **PcP** **01 18 38.2 +0.6**
comp=Z,11nm,0.8s,baz=357,slow=3.6,SNR=5.6
ASAR ScP **ScP** **01 22 27.3 -2.3**
comp=Z,6.0nm,1.0s,baz=344,slow=4.6,SNR=5.4
ASAR S **S** **01 23 56.0 -2.9**
comp=Z,4.1nm,1.1s,baz=349,slow=28,SNR=7.9
ASAR LR LR 01 38 36.8
comp=Z,617nm,20.1s,baz=339,slow=38
ASAR PKPPKP **P'P'df** **01 48 12.9 -5.1**
comp=Z,1.4nm,1.0s,baz=145,slow=3.4,SNR=4.1
AS01 Alice Springs 47.34 164 *e*P **P** **01 17 05.3 -1.7**
CHM Chimkent 47.37 307 *e*P **P** **01 17 08.6 +1.5**
comp=Z,19nm,0.8s
CHM LR LR 01 38 42.5
comp=Z,731nm,14.4s
CTA Charters Tower 48.63 148 P **P** **01 17 17.1 +0.1**
comp=Z,15nm,0.6s,baz=328,slow=12,SNR=17
CTA LR LR 01 35 45.6
comp=Z,2μm,21.8s,baz=324,slow=34
CTAO Charters Tower 48.63 148 *e*P **P** **01 17 17.5 +0.5**
comp=Z,42nm,1.0s
CTAO LR LR
comp=Z,3μm,22.0s
CTAO Charters Tower 48.63 148 *e*P **P** **01 17 17.5 +0.5**
CTAO pmax pmax
comp=Z,42nm,1.0s
HNR Honiara 49.17 126 LR LR 01 35 19.2
comp=Z,729nm,21.4s,baz=304,slow=33
BVAR Borovoye Array 49.27 322 P **P** **01 17 22.0 +0.4**
comp=Z,52nm,0.6s,baz=124,slow=7.7,SNR=126
BVAR PcP **PcP** **01 18 44.8 +0.6**
comp=Z,8.0nm,0.6s,baz=121,slow=2.3,SNR=5.0
BVAR ScP **ScP** **01 22 36.5 -0.9**
comp=Z,45nm,1.1s,baz=108,slow=4.8,SNR=21
BVAR S **S** **01 24 29.4 +3.6**
comp=Z,4.0nm,1.0s,baz=115,slow=16,SNR=4.8
BVAR LR LR 01 40 50.3
comp=Z,3μm,18.3s,baz=104,slow=39
BVAR Borovoye Array 49.27 322 P **P** **01 17 22.0 +0.4**
BRVK Borovoye 49.34 322 *e*P **P** **01 17 22.6 +0.4**
comp=Z,131nm,0.8s
BRVK LR LR
comp=Z,4μm,20.0s
BRVK Borovoye 49.34 322 P **P** **01 17 22.9 +0.7**
SNR=107
BRVK Borovoye 49.34 322 P **P** **01 17 22.9 +0.7**
SNR=107
BRVK Borovoye 49.34 322 *d i*P **P** **01 17 22.5 +0.4**
BRVK pmax pmax
comp=Z,222nm,1.2s
BRVK MLR MLR
comp=Z,3μm,16.0s
TIXI Tiksi 49.47 3 P **P** **01 17 22.1 -0.7**
comp=Z,20nm,0.9s,baz=165,slow=5.4,SNR=31
TIXI ScP **ScP** **01 22 35.2 -2.8**
comp=Z,8.6nm,0.9s,baz=145,slow=6.2,SNR=5.2
TIXI Tiksi 49.47 3 *e*P **P** **01 17 22.0 -0.8**
comp=Z,51nm,1.1s
TIXI *e*ScP **ScP** **01 22 35.2 -2.8**
TIXI LR LR
comp=Z,6μm,19.0s
NRIK Noril'sk 51.22 345 P **P** **01 17 35.4 -0.8**
comp=Z,168nm,1.1s,baz=134,slow=7.2,SNR=155
NRIK ScP **ScP** **01 22 44.9 -0.6**
comp=Z,11nm,0.7s,baz=130,slow=3.8,SNR=6.7
NRIK LR LR 01 41 06.3
comp=Z,7μm,18.6s,baz=148,slow=38
FORT Forrest 53.22 173 *e*P **P** **01 17 50.7 -0.7**
comp=Z,200nm,0.6s
BILL Bilibino 53.27 19 *e*P **P** **01 17 51.4 0.0**
comp=Z,56nm,1.2s
BILL LR LR
comp=Z,3μm,18.0s
BILL Bilibino 53.27 19 *d i*P **P** **01 17 50.8 -0.6**
BILL *e* 01 18 59.7
BILL *e* 01 19 52.9
BILL *i* S **S** **01 25 27.6 +7.0**
BILL pmax pmax
comp=Z,32nm,1.2s
BILL MLR MLR
comp=Z,3μm,17.0s
AB31 Akbulak array 54.93 315 *i* P **P** **01 18 04.3 +0.6**
AB31 pmax pmax
comp=Z,156nm,1.4s
ABKAR Akbulak array 54.93 315 *e*P **P** **01 18 04.3 +0.6**
MIDW Midway 55.06 70 *e*P **P** **01 18 09.1 +4.0**
comp=Z,153nm,0.9s
NWAO Narrogin (SRO) 55.15 184 P **P** **01 18 04.7 -0.7**
comp=Z,56nm,0.9s,baz=246,slow=10,SNR=16
NWAO LR LR 01 43 46.1
comp=Z,423nm,21.7s,baz=236,slow=38
NWAO Narrogin (SRO) 55.15 184 *e*P **P** **01 18 05.2 -0.2**
NWAO Narrogin (SRO) 55.15 184 *e*P **P** **01 18 05.2 -0.2**
EIDS Eidsvold 55.45 147 PFAKE 01 18 20.0 +12
EIDS LR LR
comp=Z,2μm,19.0s
SVE Sverdlovsk 55.68 324 *c i*P **P** **01 18 09.6 +0.6**
SVE *e*S **S** **01 25 51.5 -1.8**
SVE pmax pmax
comp=Z,202nm,0.9s
SVE MLR MLR
comp=Z,4μm,16.0s
GEYT Alibeck 55.99 301 P **P** **01 18 12.0 +0.4**
comp=Z,18nm,0.9s,baz=96,slow=3.0,SNR=30
GEYT PcP **PcP** **01 19 11.2 +1.4**
comp=Z,19nm,0.6s,baz=92,slow=4.0,SNR=7.4
GEYT LR LR 01 45 16.1
comp=Z,3μm,19.6s,baz=60,slow=39
GYA0B ALIBECK ARRAY 55.99 301 *e*P **P** **01 18 13.2 +1.6**
comp=Z,91nm,1.3s
GYA0B LR LR
comp=Z,3μm,19.0s
AKTO Aktyubinsk 56.28 317 P **P** **01 18 13.8 +0.3**
comp=Z,39nm,1.0s,baz=88,slow=6.7,SNR=43
AKTO ScP **ScP** **01 23 07.3 -0.7**
comp=Z,6.0nm,0.9s,baz=79,slow=7.1,SNR=4.8
AKTO LR LR 01 44 18.2
comp=Z,4μm,19.7s,baz=100,slow=38
BBOO Buckleboo 56.61 165 *e*P **P** **01 18 15.4 -0.5**
comp=Z,82nm,0.7s
ARU Arti 56.73 324 P **P** **01 18 16.3 -0.3**
comp=Z,68nm,0.5s,baz=101,slow=1.8,SNR=110
ARU Arti 56.73 324 *e*P **P** **01 18 16.0 -0.6**
comp=Z,123nm,0.8s
ARU LR LR
comp=Z,3μm,20.0s
ARU Arti 56.73 324 *d i*P **P** **01 18 16.2 -0.3**
ARU 01 19 13.4
ARU 01 20 20.2
ARU PPP PPP 01 21 37.9
ARU *e*S **S** **01 26 07.5 +0.2**
ARU 01 27 58.1
ARU SS **SS** **01 29 57.5 +2.4**
ARU pmax pmax
comp=Z,130nm,0.7s
ARU MLR MLR
comp=Z,3μm,22.0s
STKA Stephens Creek 57.27 160 P **P** **01 18 20.1 -0.5**
comp=Z,18nm,0.6s,baz=342,slow=6.5,SNR=40
STKA LR LR 01 44 18.0
comp=Z,733nm,21.5s,baz=327,slow=37
STKA Stephens Creek 57.27 160 *e*P **P** **01 18 20.1 -0.5**
comp=Z,4.9nm,0.8s
WSAR Wadi Sarin 57.55 284 P **P** **01 18 23.9 +0.9**
comp=Z,12nm,0.9s,baz=94,slow=11,SNR=6.8
WSAR PcP **PcP** **01 19 17.3 +1.1**
comp=Z,28nm,0.8s,baz=139,slow=7.2,SNR=8.3
WSAR LR LR 01 45 30.6
comp=Z,2μm,21.4s,baz=98,slow=38
BIDO Bidbid 57.95 284 pP pP 01 18 40.0 +5.2
SNR=6.8
MSFE Esma-Masafi 59.31 287 P **P** **01 18 36.8 +1.5**
UOSS Minazif 59.36 287 PFAKE 01 18 50.0 +14
UOSS LR LR
comp=Z,1μm,20.0s
HATD Hatta, Dubai 59.45 286 P **P** **01 18 37.2 +1.0**
ASUD Al Ashush, Dub 60.20 286 P **P** **01 18 42.6 +1.3**
DZM Mont Dzumac 62.19 132 *e*P **P** **01 18 55.2 +0.4**
comp=Z,120nm,1.6s
DZM *e*S **S** **01 27 15.9 -2.9**
comp=Z,1μm,28.8s
DZM Mont Dzumac 62.19 132 *e*LR LR 01 37 29.0
comp=Z,3μm,25.0s
DZM Mont Dzumac 62.19 132 P **P** **01 18 55.5 +0.7**
comp=Z,12nm,1.0s,baz=241,slow=16,SNR=6.3
DZM LR LR 01 42 31.1
comp=Z,1μm,21.4s,baz=313,slow=33
ANM Nome 62.77 28 PFAKE 01 19 10.0 +12
ANM LR LR
comp=Z,1μm,19.0s
LKRN Lenkeran, Azer 63.22 303 P **P** **01 19 00.2 -1.2**
FALS False Pass 63.46 39 PFAKE 01 19 20.0 +17
FALS LR LR
comp=Z,800nm,20.0s
MAK Makhachkala 63.63 308 *e*P **P** **01 19 01.8 -2.2**
MAK *e* 01 21 23.3
MAK *e*S **S** **01 27 36.3 +0.1**
MAK *e*SS **SS** **01 31 38.3 -5.4**
MAK pmax pmax
comp=Z,201nm,1.1s
MAK MLR MLR
comp=Z,2μm,17.0s
AKT Akhty 63.65 306 *e*P **P** **01 19 04.8 +0.5**
AKT *e* 01 19 38.4
AKT pmax pmax
comp=Z,116nm,1.3s
PRGR Permogore 63.88 329⇓ *i*P **P** **01 19 04.7 -0.6**
PRGR *e*S **S** **01 27 39.9 +1.3**
PRGR pmax pmax
comp=Z,101nm,0.8s
RDOG Red Dog Mine 64.06 24 *e*P **P** **01 19 08.0 +1.5**
comp=Z,73nm,1.4s
RDOG LR LR
comp=Z,2μm,19.0s
SEKA Sheki 64.08 306 P **P** **01 19 05.4 -1.7**
MNGR Mingechevir, A 64.22 306 P **P** **01 19 06.9 -1.1**
ZKTA Zakatala 64.45 307 P **P** **01 19 08.3 -1.2**
GANJ Ganja 64.81 306 P **P** **01 19 10.7 -1.2**
GROC Groznyy 64.84 308 *e*P **P** **01 19 10.7 -1.3**
GROC *e* 01 19 44.8
GROC *e* 01 21 32.2
GROC *e*S **S** **01 27 50.0 -1.3**
GROC *e* 01 29 02.1
GROC pmax pmax
comp=Z,140nm,1.4s
DDFL Dedoflistskaro 64.85 307 P **P** **01 19 14.5 +2.3**
DGRG David-gareji 65.40 307 P **P** **01 19 16.5 +0.8**
DGRG David-gareji 65.40 307 *e*P **P** **01 19 16.5 +0.8**
NAX Nakhchivan 65.68 304 P **P** **01 19 16.3 -1.3**
DUS Dusheti 65.80 307 P **P** **01 19 19.6 +1.3**
DUS Dusheti 65.80 307 *e*P **P** **01 19 19.6 +1.3**
TBLG Delisi 65.83 307 P **P** **01 19 19.6 +1.1**
TBLG Delisi 65.83 307 *e*P **P** **01 19 19.6 +1.1**
comp=Z,36nm,0.9s
TBLG Delisi 65.83 307 *e*P **P** **01 19 19.6 +1.1**
TBLG pmax pmax
comp=Z,36nm,0.9s
GUDG Gudauri 65.91 308 P **P** **01 19 21.2 +2.0**
GNI Garni 66.08 305 P **P** **01 19 21.2 +0.9**
comp=Z,27nm,1.0s,baz=90,slow=5.1,SNR=14
GNI LR LR 01 53 37.0
comp=Z,1μm,19.0s,baz=70,slow=41
GNI Garni 66.08 305 *e*P **P** **01 19 22.1 +1.8**
GNI Garni 66.08 305 pP **P** **01 19 22.5 +2.2**
SNR=22
GNI Garni 66.08 305 P **P** **01 19 22.5 +2.2**
SNR=22
GNI Garni 66.08 305 *i* P **P** **01 19 21.5 +1.2**
SNR=15
CHGN Chignik 66.22 37 PFAKE 01 19 30.0 +9.4
CHGN LR LR
comp=Z,600nm,22.0s
NCK Nalchik 66.39 309⇑ *e*P **P** **01 19 22.5 +0.5**
NCK pmax pmax
comp=Z,21nm,0.8s
NCK MLR MLR
comp=Z,2μm,16.0s
GOF Gofitskoye 66.54 311⇑ *e*P **P** **01 19 23.8 +0.9**
GOF pmax pmax
comp=Z,71nm,0.8s
ONI Oni 66.64 308 P **P** **01 19 25.2 +1.5**
ONI Oni 66.64 308 *e*P **P** **01 19 25.2 +1.5**
BGD Bogdanovka 66.75 307 P **P** **01 19 26.4 +1.8**
AKH Akhalkalaki 66.81 307 P **P** **01 19 26.7 +1.8**
AKH Akhalkalaki 66.81 307 *e*P **P** **01 19 26.8 +1.8**
comp=Z,59nm,0.9s
AKH LR LR
comp=Z,3μm,21.0s
AKH Akhalkalaki 66.81 307 *e*P **P** **01 19 26.8 +1.8**
AKH pmax pmax
comp=Z,59nm,0.9s
AKH MLR MLR
comp=Z,3μm,21.0s
KLMR Klimovskoe 66.85 328 *d i*P **P** **01 19 23.9 -0.6**
KLMR *e* 01 19 52.1
KLMR *e*S **S** **01 28 14.7 -0.4**
KLMR pmax pmax
comp=Z,413nm,1.4s
KLMR pmax pmax
comp=Z,289nm,1.3s
KLMR MLR MLR
comp=Z,7μm,16.0s
KLMR Klimovskoe 66.85 328⇓ *i*P **P** **01 19 24.0 -0.6**
KLMR *e*P **P** **01 19 24.0 -0.6**
KLMR *e*P **P** **01 19 24.0 -0.6**
KLMR AMP 01 19 31.5
comp=Z,413nm,1.4s
KLMR AMP 01 19 31.9
comp=Z,289nm,1.3s
KLMR *e*PcP **PcP** **01 19 52.2 -1.0**
KLMR *e*PP **PP** **01 21 44.2 -7.5**
KLMR *e*S **S** **01 28 14.7 -0.4**
KLMR *e*S **S** **01 28 14.7 -0.4**
KLMR LQ LQ 01 43 11.4
KLMR LQ LQ 01 43 11.4
KLMR LR LR 01 45 19.0
KLMR AMP 01 51 05.7
comp=Z,7μm,15.7s
KBZ Khabaz 66.85 309 P **P** **01 19 25.5 +0.6**
comp=Z,46nm,0.9s,baz=110,slow=4.6,SNR=70
KBZ PP **PP** **01 21 52.0 -0.1**
comp=Z,9.8nm,0.8s,baz=73,slow=11,SNR=3.1
KVAR Kislovodsk Arr 66.96 310 P **P** **01 19 26.7 +0.9**
comp=Z,86nm,0.8s,baz=162,slow=9.6,SNR=34
KIV Kislovodsk 66.97 310 *e*P **P** **01 19 26.6 +0.8**
comp=Z,99nm,1.0s
KIV LR LR
comp=Z,2μm,20.0s
KIV Kislovodsk 66.97 310 pP **P** **01 19 26.9 +1.1**
SNR=37
KIV Kislovodsk 66.97 310 P **P** **01 19 26.9 +1.1**
SNR=37
KIV Kislovodsk 66.97 310 *i* P **P** **01 19 26.8 +1.1**
SNR=13
KIV Kislovodsk 66.97 310 *e*P **P** **01 19 26.4 +0.6**
KIV *e* 01 21 54.1
KIV *e*S **S** **01 28 20.2 +2.9**
KIV *e*SS **SS** **01 32 39.4 +3.6**
KIV pmax pmax
comp=Z,54nm,4.1s
KIV pmax pmax
comp=Z,115nm,1.1s
KIV MLR MLR
comp=Z,1μm,17.0s
NEY Neytrino 67.06 309 *c e*P **P** **01 19 28.2 +1.7**
NEY pmax pmax
comp=Z,11nm,0.8s
NEY MLR MLR
comp=Z,694nm,17.0s
TMCR Tamitsa 67.28 332 *e*P **P** **01 19 26.4 -0.8**
TMCR pmax pmax
comp=Z,86nm,0.8s
CHVG Ch'k'valeri 67.61 308 P **P** **01 19 30.6 +0.8**
VORD Divnogorie 68.14 318 *e*P **P** **01 19 32.9 0.0**
VORD pmax pmax
comp=Z,20nm,0.4s
MSVF Nonsavu 68.17 121 *e*P **P** **01 19 35.7 +2.0**
comp=Z,44nm,0.9s
MSVF Nonsavu 68.17 121 *d i*P **P** **01 19 35.6 +2.0**
MSVF pmax pmax
comp=Z,33nm,1.2s
VSR Storozhevoye 68.18 318 *e*P **P** **01 19 32.4 -0.7**

VSR eS S 01 28 30.1 -1.3
VSR pmax pmax
comp=Z,140nm,1.1s
VSR pmax pmax
comp=Z,120nm,0.9s
VSR smax smax
comp=E,30nm,1.5s
VSR MLR MLR
comp=Z,3μm,17.0s
LVZ Lovozero 68.31 336 eP P 01 19 34.4 +0.6
comp=Z,42nm,0.9s
LVZ LR LR
comp=Z,3μm,18.0s
LVZ Lovozero 68.31 336 ceP P 01 19 33.9 +0.1
LVZ pmax pmax
comp=Z,82nm,1.7s
LVZ MLR MLR
comp=Z,3μm,15.0s
MOS Moscow 68.42 323 eP P 01 19 33.3 -1.3
MOS e 01 19 57.2
MOS e 01 22 03.8
MOS eS S 01 28 31.6 -2.5
MOS pmax pmax
comp=Z,400nm,1.5s
MOS pmax pmax
comp=Z,233nm,1.2s
MOS MLR MLR
comp=E,2μm,17.0s
MOS MLR MLR
comp=Z,3μm,17.0s
SII Sitkinak Islan 68.52 36 PFAKE 01 19 50.0 +15
SII LR LR
comp=Z,900nm,20.0s
CAST Castle Rocks 68.64 29 eP P 01 19 36.5 +0.6
comp=Z,57nm,1.0s
CAST LR LR
comp=Z,800nm,19.0s
PPLA Purkeypile 68.66 29 eP P 01 19 37.3 +1.1
comp=Z,56nm,1.1s
PPLA LR LR
comp=Z,900nm,20.0s
APA Apatity 68.82 336 ⇓iP P 01 19 36.1 -0.8
APA i 01 20 01.0
APA i 01 22 05.0
APA iPPP PPP 01 23 50.0
APA iS S 01 28 34.0 -4.5
APA i 01 29 08.0
APA pmax pmax
comp=Z,52nm,0.8s
APA MLR MLR
comp=Z,5μm,14.0s
OHAK Old Harbor 68.91 36 eP P 01 19 38.2 +0.6
comp=Z,52nm,1.1s
OHAK LR LR
comp=Z,900nm,20.0s
COLD Coldfoot 68.93 25 PFAKE 01 19 50.0 +12
COLD LR LR
comp=Z,800nm,20.0s
TOLK Toolik Lake Re 68.98 23 P P 01 19 38.4 +0.5
baz=278
TOLK Toolik Lake Re 68.98 23 eP P 01 19 38.9 +0.9
comp=Z,36nm,0.9s
TOLK LR LR
comp=Z,2μm,21.0s
MLY Manley 69.01 27 eP P 01 19 39.1 +0.9
comp=Z,49nm,1.1s
MLY LR LR
comp=Z,1μm,18.0s
BPAW Bear Paw Mtn. 69.03 28 eP P 01 19 39.2 +0.9
comp=Z,91nm,1.4s
BPAW LR LR
comp=Z,1μm,18.0s
SKT Skwentna 69.09 30 eP P 01 19 38.8 +0.1
comp=Z,21nm,0.9s
SKT LR LR
comp=Z,900nm,21.0s
OBN Obninsk 69.11 322 P P 01 19 39.5 +0.6
comp=Z,62nm,0.7s,baz=262,slow=4.0,SNR=28
OBN PP PP 01 22 08.1 -3.3
comp=Z,11nm,0.4s,baz=63,slow=10,SNR=3.4
KTH Kantishna Hill 69.14 29 PFAKE 01 19 50.0 +11
KTH LR LR
comp=Z,600nm,18.0s
SOC Sochi 69.15 310 eP P 01 19 39.4 0.0
SOC e 01 22 13.1
SOC ePPP PPP 01 23 50.2
SOC eS S 01 28 44.8 +1.6
SOC eSS SS 01 33 10.4 +1.1
SOC pmax pmax
comp=Z,48nm,0.7s
SOC MLR MLR
comp=Z,1μm,18.0s
RAYN Ar Rayn 69.17 288 eP P 01 19 40.5 +0.6
comp=Z,79nm,1.3s
RAYN LR LR
comp=Z,2μm,20.0s
RAYN Ar Rayn 69.17 288 iP P 01 19 40.1 +0.1
SNR=31
RAYN Ar Rayn 69.17 288 P P 01 19 40.5 +0.6
RAYN pmax pmax
comp=Z,79nm,1.2s
KDAK Kodiak Island 69.20 35 P P 01 19 38.8 -0.6
comp=Z,45nm,0.9s,baz=269,slow=6.0,SNR=30
KDAK PP PP 01 22 07.7 -4.5
comp=Z,9.8nm,0.9s,baz=325,slow=4.0,SNR=3.5
KDAK Kodiak Island 69.20 35 eP P 01 19 39.8 +0.4
comp=Z,128nm,1.4s
KDAK ePP PP 01 22 07.7 -4.5
KDAK LR LR
comp=Z,700nm,20.0s
KDAK Kodiak Island 69.20 35 iP P 01 19 39.7 +0.3
HOM Homer 69.39 33 PFAKE 01 19 50.0 +9.5
HOM LR LR
comp=Z,500nm,22.0s
TRF Thorofare Moun 69.44 29 eP P 01 19 41.6 +0.7
comp=Z,28nm,1.0s
TRF LR LR
comp=Z,600nm,20.0s
SUA Susitna One 69.54 31 eP P 01 19 42.2 +0.6
comp=Z,104nm,1.0s
SUA LR LR
comp=Z,700nm,18.0s
BWN Browne 69.68 28 eP P 01 19 46.7 +4.4
comp=Z,72nm,1.1s
BWN LR LR
comp=Z,900nm,21.0s
BRLK Bradley Lake 69.75 33 eP P 01 19 43.9 +1.1
comp=Z,62nm,1.0s
BRLK LR LR
comp=Z,500nm,22.0s
MCK McKinley 69.98 28 eP P 01 19 45.1 +0.9
comp=Z,187nm,1.5s
MCK LR LR
comp=Z,1μm,19.0s
MCK McKinley 69.98 28 eP P 01 19 45.1 +0.9
MCK pmax pmax
comp=Z,187nm,1.5s
MCK MLR MLR
comp=Z,1μm,19.0s
MDM Murphy Dome 70.07 27 eP P 01 19 45.5 +0.8
comp=Z,149nm,1.2s
MDM LR LR
comp=Z,1μm,18.0s
RND Reindeer 70.08 29 eP P 01 19 44.8 -0.1
comp=Z,84nm,0.8s
RND LR LR
comp=Z,800nm,18.0s
RND Reindeer 70.08 29 eP P 01 19 44.8 -0.1
RND pmax pmax
comp=Z,84nm,0.8s
RND MLR MLR
comp=Z,800nm,18.0s
RC01 Rabbit Creek A 70.08 31 eP P 01 19 45.6 +0.8
comp=Z,20nm,0.9s
RC01 LR LR
comp=Z,800nm,22.0s
WRH Wood River Hil 70.22 27 PFAKE 01 20 00.0 +14
WRH LR LR
comp=Z,1μm,18.0s
COLA College 70.25 27 eP P 01 19 49.1 +3.4
comp=Z,31nm,0.8s
COLA LR LR
comp=Z,1μm,19.0s
COLA College 70.25 27 eP P 01 19 46.9 +1.2
COLA pmax pmax
comp=Z,21nm,1.0s
PMR Palmer 70.28 31 eP P 01 19 46.6 +0.7
comp=Z,28nm,1.0s
PMR LR LR
comp=Z,700nm,18.0s
PMR Palmer 70.28 31 eP P 01 19 46.6 +0.7
PMR pmax pmax
comp=Z,28nm,1.0s
PMR MLR MLR
comp=Z,700nm,18.0s
CCB Clear Creek Bu 70.31 27 eP P 01 19 46.7 +0.6
comp=Z,34nm,1.2s
CCB LR LR
comp=Z,1μm,18.0s
GHO Glory Hole Cre 70.34 30 eP P 01 19 48.2 +1.7
comp=Z,38nm,1.2s
SEW Seward 70.40 32 eP P 01 19 47.5 +0.8
comp=Z,54nm,1.0s
SEW LR LR
comp=Z,600nm,20.0s
ANN Anapa 70.51 311 eP P 01 19 47.5 -0.2
ANN e 01 22 24.2
ANN eS S 01 28 59.4 +0.4
ANN pmax pmax
comp=Z,130nm,1.1s
ANN MLR MLR
comp=N,1μm,19.0s
ANN MLR MLR
comp=Z,2μm,19.0s
SML Sawmill 70.61 30 eP P 01 19 48.7 +0.6
comp=Z,51nm,0.9s
SML LR LR
comp=Z,800nm,18.0s
SML Sawmill 70.61 30 eP P 01 19 48.7 +0.6
SML pmax pmax
comp=Z,51nm,0.9s
SML MLR MLR
comp=Z,800nm,18.0s
ILAR Eielson Array 70.67 27 P P 01 19 48.1 -0.2
comp=Z,4.2nm,0.8s,baz=268,slow=4.4,SNR=38
ILAR PP PP 01 22 20.5 -4.3
comp=Z,5.2nm,1.1s,baz=286,slow=6.4,SNR=4.6
ILAR PKP2bc 01 47 39.7
comp=Z,1.4nm,1.0s,baz=108,slow=2.6,SNR=7.6
ILAR LR LR 01 54 49.4
comp=Z,1μm,18.7s,baz=304,slow=39
ILB Eielson Array 70.67 27 eP P 01 19 50.6 +2.3
ILB ePP PP 01 22 20.4 -4.3
IL1 Eielson Array 70.67 27 eP P 01 19 46.5 -1.8
HDA Harding Lake 70.72 27 eP P 01 19 49.5 +0.9
comp=Z,43nm,1.0s
KEV Kevo 70.76 338 eP P 01 19 48.4 -0.4
comp=Z,54nm,0.9s
KEV LR LR
comp=Z,3μm,18.0s
KEV Kevo 70.76 338 eP P 01 19 48.4 -0.4
KEV pmax pmax
comp=Z,54nm,0.9s
KEV MLR MLR
comp=Z,3μm,18.0s
DHY Denali Highway 70.80 29 eP P 01 19 50.1 +0.8
comp=Z,16nm,0.8s
DHY LR LR
comp=Z,800nm,19.0s
FYU Fort Yukon 70.98 25 PFAKE 01 20 00.0 +10
FYU LR LR
comp=Z,1μm,19.0s
SCM Sheep Creek Mo 71.07 30 eP P 01 19 51.3 +0.4
comp=Z,92nm,1.0s
SCM LR LR
comp=Z,800nm,19.0s
SCM Sheep Creek Mo 71.07 30 eP P 01 19 51.3 +0.4
SCM pmax pmax
comp=Z,92nm,1.0s
SCM MLR MLR
comp=Z,800nm,19.0s
SPA0 Spitsbergen Ar 71.31 348 eP P 01 19 52.2 +0.2
SPA0 Spitsbergen Ar 71.31 348 eP P 01 19 52.1 +0.1
SPITS Spitsbergen Ar 71.31 348 P P 01 19 51.8 -0.2
comp=Z,70nm,0.8s,baz=56,slow=7.4,SNR=62
SPITS LR LR 01 54 45.0
comp=Z,3μm,18.6s,baz=45,slow=39
ARA0 ARCESS Array S 71.32 338 eP P 01 19 52.1 -0.1
ARA0 ePKiKP PKiKP 01 25 58.5 -0.4
ARCES ARCESS Array B 71.32 338 P P 01 19 52.1 -0.1
comp=Z,22nm,0.6s,baz=68,slow=8.4,SNR=60
ARCES PKiKP PKiKP 01 25 58.5 -0.4
comp=Z,1.8nm,0.8s,baz=129,slow=1.7,SNR=5.4
ARCES LR LR 01 54 36.0
comp=Z,4μm,18.2s,baz=60,slow=39
ARCES ARCESS Array B 71.32 338 eP P 01 19 52.0 -0.3
ARE0 ARCESS Array S 71.32 338 eP P 01 19 52.6 +0.3
comp=Z,34nm,0.9s
ARE0 LR LR
comp=Z,4μm,18.0s
ARE0 ARCESS Array S 71.32 338 eP P 01 19 52.5 +0.3
GLI Glacier Island 71.39 31 eP P 01 19 53.0 +0.2
comp=Z,82nm,1.0s
GLI LR LR
comp=Z,800nm,19.0s
PUL Pulkovo 71.54 328 deP P 01 19 54.4 +0.8
PUL pmax pmax
comp=Z,159nm,0.7s
PUL MLR MLR
comp=Z,7μm,17.0s
HAMF Hammerfest 71.65 340 eP P 01 19 53.7 -0.5
PAX Paxson 71.67 29 eP P 01 19 56.8 +2.3
comp=Z,25nm,0.8s
PAX LR LR
comp=Z,1μm,18.0s
PAX Paxson 71.67 29 eP P 01 19 56.8 +2.3
PAX pmax pmax
comp=Z,25nm,0.8s
PAX MLR MLR
comp=Z,1μm,18.0s
RIDG Independ'e Rid 71.77 28 PFAKE 01 20 10.0 +15
RIDG LR LR
comp=Z,900nm,19.0s
KLU Klutina 71.80 30 eP P 01 19 55.8 +0.5
comp=Z,33nm,0.8s
KLU LR LR
comp=Z,800nm,19.0s
KBS Kingsbay 71.86 349 eP P 01 19 55.4 +0.1
comp=Z,28nm,0.8s
KBS LR LR
comp=Z,5μm,20.0s
KBS Kingsbay 71.86 349 eP P 01 19 55.4 +0.1
KBS pmax pmax
comp=Z,28nm,0.8s
KBS MLR MLR
comp=Z,5μm,20.0s
KBS Kingsbay 71.86 349 eP P 01 19 54.9 -0.3
HSPB Hornsund (broa 71.88 347 eP P 01 19 55.4 0.0
HSPB MLR MLR
comp=Z,5μm,22.4s
HSPB Hornsund (broa 71.88 347 eP P 01 19 55.5 0.0
HARP HAARP 71.94 29 eP P 01 19 58.6 +2.5
comp=Z,57nm,0.9s
DIV Divide 71.96 31 eP P 01 19 58.5 +2.3
comp=Z,66nm,1.1s
SCRK Sand Creek 72.08 28 eP P 01 19 57.5 +0.5
comp=Z,31nm,1.0s
SCRK LR LR
comp=Z,1μm,18.0s
MID Middleton Isla 72.08 32 PFAKE 01 20 10.0 +13
MID LR LR
comp=Z,500nm,18.0s
DOT Dot Lake 72.13 28 eP P 01 19 57.1 -0.1
comp=Z,121nm,1.0s
DOT LR LR
comp=Z,3μm,18.0s
KTK1 Kautokeino 72.24 338 eP P 01 19 58.2 +0.4
MENT Mentasta 72.45 29 eP P 01 20 01.6 +2.4
comp=Z,54nm,1.0s
MENT LR LR
comp=Z,900nm,20.0s
BMRM Bremner River 72.55 31 eP P 01 20 00.4 +0.6
comp=Z,45nm,1.0s
BMRM LR LR
comp=Z,1μm,19.0s
RAGM Ragged Mountai 72.66 31 eP P 01 20 03.2 +2.7
comp=Z,60nm,1.0s
RAGM LR LR
comp=Z,2μm,18.0s
SIM Simferopol' 72.77 312 deP P 01 20 01.1 -0.2
SIM eS S 01 29 24.0 -1.1
SIM pmax pmax
comp=Z,240nm,3.2s
DAMY Dhamar 72.89 279 eP P 01 20 04.7 +1.8
comp=Z,112nm,1.4s
EGAK Eagle 73.05 26 eP P 01 20 02.7 +0.1
comp=Z,48nm,1.0s
EGAK LR LR
comp=Z,1μm,19.0s
KIF Kilpisjarvi 73.08 338 eP P 01 20 02.4 -0.3
FIA1 FINESS Array S 73.15 330 eP P 01 20 03.0 -0.2
FIA0 FINESS Array S 73.16 330 eP P 01 20 02.9 -0.3
FIA0 FINESS Array S 73.16 330 eP P 01 20 02.9 -0.3
FINES FINESS Array B 73.16 330 P P 01 20 02.9 -0.3
comp=Z,60nm,0.8s,baz=73,slow=6.4,SNR=152
FINES LR LR 01 54 52.7
comp=Z,3μm,19.8s,baz=74,slow=38
CRQM Cirque 73.30 31 eP P 01 20 05.8 +1.4
comp=Z,80nm,0.9s
CRQM LR LR
comp=Z,900nm,20.0s
TGL Tana Glacier 73.44 31 eP P 01 20 06.0 +0.9
comp=Z,42nm,0.8s
TGL LR LR
comp=Z,1μm,22.0s
TRO Tromso 73.50 339 eP P 01 20 05.4 +0.3
BALM Baldy 73.59 30 PFAKE 01 20 20.0 +14
BALM LR LR
comp=Z,800nm,21.0s
VSU Vasula 73.65 327 diP P 01 20 05.9 -0.3
VSU pmax pmax
comp=Z,609nm,1.2s
VSU MLR MLR
comp=Z,11μm,19.0s
DAWY Dawson 74.00 27 eP P 01 20 08.3 0.0
comp=Z,48nm,0.9s
DAWY LR LR
comp=Z,1μm,20.0s
ILGA Ilgaz 74.07 308 eP P 01 20 10.1 +0.7
comp=Z,33nm,1.1s
ILGA LR LR
comp=Z,800nm,20.0s
ASF Jabal al Asfar 74.09 299 P P 01 20 09.8 +0.3
comp=Z,14nm,0.8s,baz=7.3,slow=3.3,SNR=33
MICGM Minsk 74.14 323 eP P 01 20 14.0 +4.8
MICGM eS S 01 29 56.0 +16
MICGM eLQ LQ 01 46 30.0
MICGM LQM 01 49 36.0
comp=N,4.0nm,18.0s
MICGM eLR LR 01 49 56.0
MICGM LRM MLR 01 55 14.0
comp=Z,3.5nm,14.0s
MICGM LRM MLR 01 55 18.0
comp=N,3.3nm,16.0s
MICGM LRM MLR 01 55 18.0
comp=E,8.4nm,14.0s
MNK Minsk 74.14 323 eP P 01 20 14.0 +4.8
MNK MLR MLR
comp=Z,3μm,14.0s
MNK MLR MLR
comp=E,2μm,14.0s
MNK MLR MLR
comp=N,4μm,16.0s
AKASG Malin Array Be 74.42 319 P P 01 20 10.3 -0.6
comp=N,18nm,0.7s,baz=60,slow=5.9,SNR=40
AKASG LR LR 01 55 12.7
comp=N,2μm,19.2s,baz=65,slow=38
AKASG Malin Array Be 74.42 319 ceP P 01 20 10.6 -0.3
AKASG pmax pmax
comp=Z,32nm,0.8s
AKBB Malin Array Si 74.42 319 eP P 01 20 10.5 -0.4
comp=Z,108nm,1.4s
AKBB Malin Array Si 74.42 319 eP P 01 20 10.5 -0.4
AKBB pmax pmax
comp=Z,108nm,1.4s
AK11 Malin Array Si 74.46 319 eP P 01 20 10.8 -0.4
BR101 Keskin Array S 74.49 307 eP P 01 20 11.9 +0.1
BR131 Keskin Array S 74.49 307 eP P 01 20 12.2 +0.4
BRTR Keskin Array B 74.49 307 P P 01 20 11.9 +0.1
comp=Z,16nm,0.6s,baz=115,slow=5.5,SNR=113
BRTR LR LR 01 57 43.3
comp=Z,806nm,20.6s,baz=53,slow=40
BRTR Keskin Array B 74.49 307 ceP P 01 20 11.8 0.0
BRTR pmax pmax
comp=Z,16nm,0.6s
IDID Didziasalis 74.55 324 eP P 01 20 12.0 +0.5
IDID lAmb lAmb 01 20 14.7
comp=Z,54nm,1.0s
RCY Rachaya 74.57 300 eP P 01 20 13.0 +0.7
BHL Bhannes 74.59 301 eP P 01 20 12.8 +0.4
AFI Afiamalu 74.63 112 LR LR 01 52 40.9
comp=Z,320nm,18.6s,baz=333,slow=36
NACGM Naroch 74.64 323 eP P 01 20 12.0 -0.1
NACGM PM 01 20 14.0
comp=Z,0.4nm,1.0s
NACGM eLQ LQ 01 47 08.0
NACGM eLR LR 01 56 03.0
SHBL Chebaa 74.68 300 eP P 01 20 14.0 +1.0
IZAR Zarasai 74.69 324 eP P 01 20 12.8 +0.5
IZAR lAmb lAmb 01 20 20.1
comp=Z,118nm,1.4s
INK Inuvik 74.78 22 P P 01 20 12.2 -0.5
comp=Z,24nm,0.8s,baz=289,slow=6.0,SNR=36
INK Inuvik 74.78 22 eP P 01 20 12.5 -0.1
comp=Z,76nm,1.3s
INK LR LR
comp=Z,2μm,20.0s
INK Inuvik 74.78 22 eP P 01 20 12.5 -0.1
INK pmax pmax
comp=Z,77nm,1.3s
INK MLR MLR
comp=Z,2μm,20.0s
ISAL Salakas 74.80 324 eP P 01 20 13.5 +0.5
ISAL lAmb lAmb 01 20 16.2
comp=Z,28nm,0.9s
IIGN Ignalina 74.82 324 eP P 01 20 13.6 +0.4
IIGN lAmb lAmb 01 20 19.8
comp=Z,41nm,1.0s
MMAI Mount Meron Ar 75.05 300 P P 01 20 15.8 +0.7
comp=Z,7.6nm,0.6s,baz=61,slow=9.0,SNR=27
MMAI LR LR 01 55 34.8
comp=Z,2μm,21.9s,baz=55,slow=38
ANTO Ankara 75.08 307 ⇓iP P 01 20 15.5 +0.5
ANTO Ankara 75.08 307 eP P 01 20 15.6 +0.5
comp=Z,56nm,0.7s
ANTO LR LR
comp=Z,900nm,20.0s
ANTO Ankara 75.08 307 pP P 01 20 15.8 +0.7
SNR=21
ANTO Ankara 75.08 307 P P 01 20 15.8 +0.7
SNR=21
ANTO Ankara 75.08 307 eP P 01 20 15.6 +0.5
ANTO pmax pmax
comp=Z,56nm,0.7s
ANTO MLR MLR
comp=Z,900nm,20.0s
ATD Arta Tunnel 75.32 277 P P 01 20 18.0 +1.1
comp=Z,8.9nm,1.0s,baz=22,slow=5.5,SNR=4.5
ATD LR LR 01 55 44.8
comp=Z,632nm,18.4s,baz=58,slow=38
STEI Steigen 75.38 338 eP P 01 20 15.8 -0.3
KIS Kishinev 75.75 315 eP P 01 20 17.0 -1.7
KIS Kishinev 75.75 315 ePP PP 01 23 10.0 +1.6
KIS eS S 01 29 54.0 -4.6
KIS Kishinev 75.75 315 eP P 01 20 17.0 -1.7
KIS e 01 20 22.0
KIS e 01 23 10.0
KIS eS S 01 29 54.0 -4.6
KIS ePS PnS 01 30 36.0 -1.2
KIS MLR MLR
comp=Z,2μm,22.0s
LOF Lofoten 75.88 338 eP P 01 20 18.7 -0.2
CSS Mathiatis 76.12 302 eP P 01 20 21.6 +0.6
comp=Z,32nm,1.0s
CSS LR LR
comp=Z,200nm,21.0s
CSS Mathiatis 76.12 302 P P 01 20 21.5 +0.5
CSS Mathiatis 76.12 302 P P 01 20 20.8 -0.2
MAMC Mammari 76.14 302 P P 01 20 21.6 +0.5
LEOM Leova 76.29 315 ⇑iP P 01 20 22.6 +0.9
LEOM Leova 76.29 315 ⇑P P 01 20 22.6 +0.9
TLCR 76.31 313 ⇑iP P 01 20 23.0 +1.2
TLCR 76.31 313 ⇑P P 01 20 23.0 +1.2
MOR8 Moi Rana 76.38 336 eP P 01 20 20.6 -1.3
EIL Elat 76.43 297 P P 01 20 27.9 +5.1
comp=Z,5.3nm,0.7s,baz=98,slow=15,SNR=5.3
MWH Moku'aweowe 76.48 74 PFAKE 01 20 40.0 +16
MWH LR LR
comp=Z,1μm,20.0s
IAS Iasi 76.51 316 ⇓iP P 01 20 24.3 +1.3

IAS	**Iasi**	**76.51 316**	⇓P	**P**	**01 20 24.3 +1.3**
SZAC	**Souni**	**76.53 302**	P	**P**	**01 20 23.4 0.0**
GIUM	**Giurgiulesti**	**76.62 314**	⇑*i*P	**P**	**01 20 25.5 +1.9**
ALFC	**Alefka**	**76.63 303**	P	**P**	**01 20 23.2 -0.7**
KONS	**Konsvik**	**76.73 337**	*e*P	**P**	**01 20 23.6 -0.2**
SDHHI	**Sand Hill**	**76.79 74**	PFAKE		01 20 40.0 +15
SDHHI			LR	LR	
	comp=Z,2μm,20.0s				
TIRR	**Tirgusor**	**76.80 313**	⇑*i*P	**P**	**01 20 25.4 +0.7**
TIRR	**Tirgusor**	**76.80 313**	*e*P	**P**	**01 20 24.4 -0.2**
	comp=Z,28nm,0.9s				
TIRR			LR	LR	
	comp=Z,2μm,19.0s				
TIRR	**Tirgusor**	**76.80 313**	⇑P	**P**	**01 20 25.4 +0.7**
AKMC	**Akamas**	**76.88 303**	P	**P**	**01 20 24.2 -1.1**
PPCY	**Paphos**	**76.91 302**	P	**P**	**01 20 25.7 +0.2**
SUW	**Suwalki**	**76.92 323**	*e*P	**P**	**01 20 24.5 -0.6**
SUW			*e*S	**S**	**01 30 10.5 -0.6**
SUW			LMZ	LR	01 58 49.0
	comp=Z,6μm,17.0s				
SUW	**Suwalki**	**76.92 323**	*e*P	**P**	**01 20 24.9 -0.2**
	comp=Z,284nm,1.1s				
SUW			LR	LR	
	comp=Z,5μm,18.0s				
SUW	**Suwalki**	**76.92 323**	*e*P	**P**	**01 20 24.9 -0.2**
SUW			pmax	pmax	
	comp=Z,284nm,1.1s				
SUW			MLR	MLR	
	comp=Z,5μm,18.0s				
STCH	**Steam Cracks**	**76.94 74**	PFAKE		01 20 40.0 +14
STCH			LR	LR	
	comp=Z,2μm,19.0s				
TLB	**Topalu**	**77.02 313**	⇓*i*P	**P**	**01 20 26.3 +0.5**
TLB	**Topalu**	**77.02 313**	⇓P	**P**	**01 20 26.3 +0.5**
HARR	**Harsova**	**77.06 313**	⇓*i*P	**P**	**01 20 27.5 +1.4**
HARR	**Harsova**	**77.06 313**	⇓P	**P**	**01 20 27.5 +1.4**
WHY	**Whitehorse**	**77.16 29**	*e*P	**P**	**01 20 27.6 +1.1**
	comp=Z,51nm,1.3s				
WHY			LR	LR	
	comp=Z,700nm,20.0s				
PSN	**Preselentsi**	**77.21 312**	P	**P**	**01 20 27.5 +0.5**
PRAR	**RASCA**	**77.32 316**	⇑*i*P	**P**	**01 20 29.5 +2.0**
TESR	**Tescani**	**77.32 315**	⇓*i*P	**P**	**01 20 28.3 +0.7**
ICOR	**Ion Corvin**	**77.33 313**	⇑*i*P	**P**	**01 20 29.1 +1.5**
ISP	**Isparta**	**77.39 306**	⇑*i*P	**P**	**01 20 28.3 +0.1**
ISP	**Isparta**	**77.39 306**	*e*P	**P**	**01 20 28.1 -0.1**
	comp=Z,90nm,1.0s				
ISP			LR	LR	
	comp=Z,1μm,21.0s				
ISP	**Isparta**	**77.39 306**	*d i*P	**P**	**01 20 27.2 -1.0**
ISP			pmax	pmax	
	comp=Z,58nm,0.8s				
SKAG	**Skagway**	**77.41 31**	*e*P	**P**	**01 20 29.7 +1.9**
	comp=Z,55nm,1.1s				
SKAG			LR	LR	
	comp=Z,900nm,20.0s				
GRER		**77.48 314**	⇑*i*P	**P**	**01 20 30.7 +2.2**
VRI	**Vrincioaia**	**77.48 314**	⇑*i*P	**P**	**01 20 29.9 +1.4**
VRI	**Vrincioaia**	**77.48 314**	⇑P	**P**	**01 20 29.9 +1.4**
PLOR	**Plostina**	**77.54 315**	P	**P**	**01 20 30.9 +2.1**
ISR	**Istrita**	**77.85 314**	⇑*i*P	**P**	**01 20 33.1 +2.5**
ISR	**Istrita**	**77.85 314**	⇑P	**P**	**01 20 33.1 +2.5**
LVV	**L'vov**	**77.86 319**	*e*P	**P**	**01 20 30.6 +0.1**
LVV			*e*		01 23 27.8
LVV			*e*PPP	PPP	01 25 15.4
LVV			*e*S	**S**	**01 30 20.0 -1.5**
LVV			*e*PS	**PnS**	**01 31 18.5 +14**
LVV			MLR	MLR	
	comp=E,900nm,18.0s				
LVV			MLR	MLR	
	comp=N,800nm,17.0s				
LVV			MLR	MLR	
	comp=Z,1μm,19.0s				
BURAR	**Bucovina Array**	**77.88 317**	⇓*i*P	**P**	**01 20 32.3 +1.5**
BURAR	**Bucovina Array**	**77.88 317**	⇓P	**P**	**01 20 32.3 +1.5**
BUR08	**Bucovina Ar. S**	**77.88 317**	*e*P	**P**	**01 20 31.3 +0.5**
BUR04	**Bucovina Ar. S**	**77.88 317**	*e*P	**P**	**01 20 30.8 -0.1**
PRD	**Provadia**	**77.90 312**	P	**P**	**01 20 31.2 +0.4**
BESE	**Bessie Mountai**	**77.98 31**	*e*P	**P**	**01 20 34.7 +3.6**
	comp=Z,60nm,1.3s				
BESE			LR	LR	
	comp=Z,800nm,21.0s				
NSS	**Namsos**	**78.03 335**	*e*P	**P**	**01 20 30.4 -0.8**
MLR	**Muntele Rosu**	**78.12 314**	P	**P**	**01 20 32.9 +0.6**
	comp=Z,9.3nm,0.8s,baz=78,slow=4.0,SNR=64				
MLR			LR	LR	01 59 54.8
	comp=Z,502nm,20.2s,baz=56,slow=39				
MLR	**Muntele Rosu**	**78.12 314**	⇑*i*P	**P**	**01 20 33.5 +1.3**
MLR	**Muntele Rosu**	**78.12 314**	*e*P	**P**	**01 20 32.8 +0.6**
	comp=Z,54nm,0.9s				
SULR		**78.19 313**	⇓*i*P	**P**	**01 20 34.7 +2.3**
DAG	**Danmarks Havn**	**78.19 351**	⇓*i*P	**P**	**01 20 30.8 -1.0**
	comp=Z,85nm,1.1s				
DAG	**Danmarks Havn**	**78.19 351**	⇓*i*P	**P**	**01 20 30.8 -1.0**
DAG			pmax	pmax	
	comp=Z,85nm,1.1s				
DOPR	**Dopca**	**78.33 315**	⇑*i*P	**P**	**01 20 35.5 +2.3**
JIS	**Juneau Island**	**78.33 32**	*e*P	**P**	**01 20 35.3 +2.4**
	comp=Z,38nm,1.1s				
JIS			LR	LR	
	comp=Z,700nm,20.0s				
ARCR	**ARCALIA**	**78.61 316**	⇓*i*P	**P**	**01 20 36.4 +1.7**
MANT	**Manisa**	**78.63 307**	*e*P	**P**	**01 20 35.6 +0.3**
	comp=Z,141nm,1.1s				
MANT			LR	LR	
	comp=Z,2μm,22.0s				
JMB	**Yambol**	**78.71 311**	P	**P**	**01 20 36.2 +0.8**
KWP	**Kalwaria Pacla**	**78.73 319**	*e*P	**P**	**01 20 35.6 +0.2**
KWP			*e*S	S	01 30 17.1 -14
KWP			LMZ	LR	01 57 06.0
	comp=Z,2μm,21.7s				
KWP	**Kalwaria Pacla**	**78.73 319**	*e*P	**P**	**01 20 35.8 +0.4**
	comp=Z,2μm,1.4s				
KWP			LR	LR	
	comp=Z,22μm,19.0s				
KWP	**Kalwaria Pacla**	**78.73 319**	*e*P	**P**	**01 20 35.8 +0.4**
KWP			MLR	MLR	
	comp=Z,22μm,19.0s				
VOIR		**78.73 314**	⇑*i*P	**P**	**01 20 36.3 +0.8**
VOIR		**78.73 314**	⇑P	**P**	**01 20 36.3 +0.8**
FETY	**Fethiye**	**78.86 305**	P	**P**	**01 20 34.5 -1.8**
BMR	**Baia Mare**	**78.95 317**	⇑*i*P	**P**	**01 20 38.7 +2.1**
BMR	**Baia Mare**	**78.95 317**	⇑P	**P**	**01 20 38.7 +2.1**
BEL	**Belsk**	**79.05 322**	*e*P	**P**	**01 20 38.0 +1.0**
BEL			*e*S	**S**	**01 30 33.3 -0.9**
BEL			LMZ	LR	01 56 53.0
	comp=Z,2μm,23.1s				
BEL	**Belsk**	**79.05 322**	*e*P	**P**	**01 20 38.0 +1.0**
BEL			*e*S	**S**	**01 30 33.3 -0.9**
BEL			MLR	MLR	
	comp=Z,2μm,23.1s				
HUMR	**Humele**	**79.10 314**	⇑*i*P	**P**	**01 20 37.1 -0.3**
ZIMR		**79.14 313**	⇑*i*P	**P**	**01 20 38.8 +1.1**
ZIMR		**79.14 313**	P	**P**	**01 20 38.8 +1.1**
CJR	**Cluj-Napoca**	**79.23 316**	⇓*i*P	**P**	**01 20 39.9 +1.7**
CJR	**Cluj-Napoca**	**79.23 316**	⇓P	**P**	**01 20 39.9 +1.7**
HFS	**Hagfors**	**79.29 331**	P	**P**	**01 20 37.8 -0.3**
	comp=Z,55nm,0.8s,baz=76,slow=6.3,SNR=92				
HFS			PP	**PP**	**01 23 35.9 -1.7**
	comp=Z,13nm,1.0s,baz=44,slow=11,SNR=3.8				
HFS			LR	LR	01 59 02.3
	comp=Z,8μm,19.5s,baz=64,slow=38				
YER	**Yerkesik**	**79.29 306**	P	**P**	**01 20 37.9 -0.8**
TBLU	**Trondheim**	**79.30 335**	*e*P	**P**	**01 20 36.6 -1.5**
UZH	**Uzhgorod**	**79.35 318**	*e*P	**P**	**01 20 38.1 -0.6**
UZH			*e*		01 20 44.7
UZH			*e*		01 20 47.1
UZH			*e*S	**S**	**01 30 34.1 -3.4**
TRPA	**Tarpa**	**79.38 318**	⇓*i*P	**P**	**01 20 39.8 +0.9**
TRPA	**Tarpa**	**79.38 318**	⇓*e*P	**P**	**01 20 39.4 +0.5**
LOT	**Lotru**	**79.57 315**	⇓*i*P	**P**	**01 20 41.1 +0.9**
ALN	**Alexandroupoli**	**79.63 310**	*e*P	**P**	**01 20 40.8 +0.4**
	comp=Z,21nm,0.8s				
ALN			LR	LR	
	comp=Z,800nm,19.0s				
ALN	**Alexandroupoli**	**79.63 310**	P	**P**	**01 20 40.4 0.0**
ALN	**Alexandroupoli**	**79.63 310**	*e*P	**P**	**01 20 40.8 +0.4**
ALN			pmax	pmax	
	comp=Z,21nm,0.8s				
ALN			MLR	MLR	
	comp=Z,800nm,19.0s				
NC405	**NORSAR Array S**	**79.71 332**	*e*P	**P**	**01 20 39.2 -1.3**
ARG	**Arkhangelos**	**79.73 305**	P	**P**	**01 20 41.3 +0.3**
CRVS	**Cervenica-Dubn**	**79.76 319**	*e*P	**P**	**01 20 42.3 +1.3**
CRVS			pmax	pmax	
	comp=Z,87nm,1.5s				
CRVS	**Cervenica-Dubn**	**79.76 319**	*e*P	**P**	**01 20 42.3 +1.3**
CRVS			*e*L	L	01 57 55.9
DRGR		**79.77 316**	⇓*i*P	**P**	**01 20 42.3 +1.1**
DRGR		**79.77 316**	⇓P	**P**	**01 20 42.3 +1.1**
NC303	**NORSAR Array S**	**79.81 333**	*e*P	**P**	**01 20 40.7 -0.3**
RDO	**Rodhopi**	**79.91 310**	P	**P**	**01 20 42.3 +0.4**
NB201	**NORSAR Array S**	**79.92 332**	*e*P	**P**	**01 20 40.2 -1.4**
RPZ	**Rata Peaks**	**79.93 146**	*e*P	**P**	**01 20 42.0 +0.3**
	comp=Z,102nm,1.0s				
LBZ	**Lake Benmore**	**79.95 147**	*e*P	**P**	**01 20 42.8 +0.9**
	comp=Z,76nm,1.1s				
NB2	**NORSAR Subarra**	**79.96 332**	P	**P**	**01 20 40.9 -1.0**
	comp=Z,48nm,1.0s,baz=62,slow=5.6				
NB2	**NORSAR Subarra**	**79.96 332**	P	**P**	**01 20 40.9 -1.0**
	baz=62,slow=5.6				
NB200	**NORSAR Array S**	**79.96 332**	*e*P	**P**	**01 20 41.1 -0.8**
NB200			*e*PP	**PP**	**01 23 43.3 +0.1**
NOA	**NORSAR Array B**	**79.96 332**	P	**P**	**01 20 41.1 -0.8**
	comp=Z,62nm,0.8s,baz=65,slow=5.1,SNR=147				
NOA			PP	**PP**	**01 23 43.3 +0.1**
	comp=Z,7.8nm,1.0s,baz=64,slow=8.0,SNR=3.3				
NOA			LR	LR	01 59 32.0
	comp=Z,7μm,18.6s,baz=65,slow=38				
NC602	**NORSAR Array S**	**79.96 332**	*e*P	**P**	**01 20 41.3 -0.5**
NC602	**NORSAR Array S**	**79.96 332**	*e*P	**P**	**01 20 41.5 -0.3**
DEV	**Deva**	**79.98 315**	⇑*i*P	**P**	**01 20 43.5 +1.3**
DEV	**Deva**	**79.98 315**	⇑P	**P**	**01 20 43.5 +1.3**
NC204	**NORSAR Array S**	**80.04 333**	*e*P	**P**	**01 20 41.6 -0.7**
PRK	**Paraskevi**	**80.05 308**	P	**P**	**01 20 43.1 +0.4**
LTVH	**L~tav~rtes,**	**80.06 317**	*e*P	**P**	**01 20 44.4 +1.8**
WRAK	**Wrangell Islan**	**80.11 33**	*e*P	**P**	**01 20 43.9 +1.2**
	comp=Z,21nm,0.9s				
WRAK			LR	LR	
	comp=Z,700nm,19.0s				
CRAG	**Craig**	**80.12 34**	PFAKE		01 21 00.0 +17
CRAG			LR	LR	
	comp=Z,600nm,22.0s				
PLD	**Plovdiv**	**80.15 311**	P	**P**	**01 20 43.9 +0.7**
NBO00	**NORSAR Array S**	**80.15 332**	*e*P	**P**	**01 20 42.5 -0.4**
NAO01	**NORSAR Array S**	**80.19 332**	*e*P	**P**	**01 20 42.4 -0.7**
OJC	**Ojcow**	**80.25 320**	*e*P	**P**	**01 20 43.9 +0.3**
OJC			*e*S	**S**	**01 30 43.0 -4.0**
OJC			LMZ	LR	01 56 53.8
	comp=Z,4μm,21.3s				
OJC	**Ojcow**	**80.25 320**	*e*P	**P**	**01 20 43.6 0.0**
	comp=Z,80nm,1.0s				
OJC	**Ojcow**	**80.25 320**	*e*P	**P**	**01 20 43.9 +0.3**
OJC			*e*S	**S**	**01 30 43.0 -4.0**
OJC			MLR	MLR	
	comp=Z,4μm,21.3s				
NIE	**Niedzica**	**80.27 319**	*e*P	**P**	**01 20 44.5 +0.7**
NIE			*e*S	**S**	**01 30 47.3 +0.1**
NIE			LMZ	LR	01 59 55.6
	comp=Z,1μm,22.1s				
NIE	**Niedzica**	**80.27 319**	*e*P	**P**	**01 20 44.5 +0.7**
NIE			*e*S	**S**	**01 30 47.3 +0.1**
NIE			MLR	MLR	
	comp=Z,1μm,22.1s				
RZN	**Rozhen**	**80.29 311**	P	**P**	**01 20 44.4 +0.2**
DLBC	**Dease Lake**	**80.34 30**	P	**P**	**01 20 44.0 0.0**
	comp=Z,6.2nm,0.7s,baz=292,slow=6.5,SNR=9.9				
DLBC	**Dease Lake**	**80.34 30**	*e*P	**P**	**01 20 45.5 +1.5**
	comp=Z,30nm,1.1s				
DLBC			LR	LR	
	comp=Z,700nm,21.0s				
PGB	**Panagyurishte**	**80.36 312**	P	**P**	**01 20 45.0 +0.6**
DOMB	**Dombas**	**80.37 334**	*e*P	**P**	**01 20 44.0 -0.1**
RES	**Resolute Bay**	**80.39 9**	P	**P**	**01 20 43.1 -0.8**
	comp=Z,7.4nm,0.7s,baz=291,slow=5.5,SNR=28				
RES	**Resolute Bay**	**80.39 9**	*e*P	**P**	**01 20 43.7 -0.1**
	comp=Z,56nm,1.1s				
RES			LR	LR	
	comp=Z,1μm,20.0s				
RES	**Resolute Bay**	**80.39 9**	*e*P	**P**	**01 20 43.7 -0.1**
RES			pmax	pmax	
	comp=Z,56nm,1.1s				
RES			MLR	MLR	
	comp=Z,1μm,20.0s				
GKP	**Gorka Klasztor**	**80.47 324**	*e*P	**P**	**01 20 44.6 -0.1**
GKP			*e*S	**S**	**01 30 48.0 -1.1**
GKP			LMZ	LR	02 00 15.1
	comp=Z,7μm,18.1s				
GKP	**Gorka Klasztor**	**80.47 324**	*e*P	**P**	**01 20 44.6 -0.1**
GKP			*e*S	**S**	**01 30 48.0 -1.1**
GKP			MLR	MLR	
	comp=Z,7μm,18.1s				
KECS	**Kecovo**	**80.52 319**	*e*P	**P**	**01 20 44.5 -0.6**
KECS			pmax	pmax	
	comp=Z,25nm,1.0s				
KECS	**Kecovo**	**80.52 319**	*e*P	**P**	**01 20 44.5 -0.6**
KARP	**Karpathos**	**80.69 305**	*e*P	**P**	**01 20 46.7 +0.4**
	comp=Z,89nm,0.9s				
KARP			LR	LR	
	comp=Z,300nm,21.0s				
KARP	**Karpathos**	**80.69 305**	P	**P**	**01 20 46.5 +0.2**
OSL	**Oslo**	**80.70 332**	*e*P	**P**	**01 20 46.4 +0.6**
MOL	**Molde**	**80.72 335**	*e*P	**P**	**01 20 45.1 -0.7**
BFZ	**Birch Farm**	**80.75 141**	*e*P	**P**	**01 20 46.5 +0.3**
	comp=Z,121nm,1.0s				
LANS	**Liptovska Anna**	**80.87 319**	*e*P	**P**	**01 20 48.3 +1.3**
LANS	**Liptovska Anna**	**80.87 319**	*e*P	**P**	**01 20 48.3 +1.3**
BZS	**Buzias**	**80.91 316**	⇑*i*P	**P**	**01 20 47.6 +0.4**
BZS	**Buzias**	**80.91 316**	⇑P	**P**	**01 20 47.6 +0.4**
BSD	**Bornholm Skovb**	**80.92 326**	*i* P	**P**	**01 20 45.2 -1.8**
	comp=Z,256nm,1.6s				
BSD	**Bornholm Skovb**	**80.92 326**	*i* P	**P**	**01 20 45.2 -1.8**
BSD			pmax	pmax	
	comp=Z,260nm,1.6s				
VTS	**Vitosha**	**81.00 312**	⇓*i*P	**P**	**01 20 48.6 +0.6**
VTS	**Vitosha**	**81.00 312**	*e*P	**P**	**01 20 48.2 +0.3**
	comp=Z,126nm,0.8s				
VTS			LR	LR	
	comp=Z,2μm,21.0s				
VTS	**Vitosha**	**81.00 312**	P	**P**	**01 20 48.7 +0.7**
VTS	**Vitosha**	**81.00 312**	P	**P**	**01 20 49.2 +1.2**
VTS	**Vitosha**	**81.00 312**	*e*P	**P**	**01 20 48.2 +0.3**
VTS			pmax	pmax	
	comp=Z,126nm,0.8s				
VTS			MLR	MLR	
	comp=Z,2μm,21.0s				
NVR	**Nevrokopi**	**81.01 311**	P	**P**	**01 20 48.1 +0.2**
MMB	**Musomiste**	**81.01 311**	P	**P**	**01 20 47.6 -0.3**
TULEG	**Thule**	**81.10 2**	*e*P	**P**	**01 20 48.0 +0.3**
	comp=Z,46nm,1.0s				
TULEG			LR	LR	
	comp=Z,2μm,20.0s				
PSZ	**Piszkesteto**	**81.11 318**	⇓*i*P	**P**	**01 20 49.0 +0.7**
PSZ	**Piszkesteto**	**81.11 318**	⇓*e*P	**P**	**01 20 48.4 +0.1**
PSZ	**Piszkesteto**	**81.11 318**	*e*P	**P**	**01 20 48.3 0.0**
	comp=Z,117nm,1.4s				
PSZ			LR	LR	
	comp=Z,3μm,19.0s				
PSZ	**Piszkesteto**	**81.11 318**	*e*P	**P**	**01 20 48.3 0.0**
PSZ			pmax	pmax	
	comp=Z,117nm,1.4s				
PSZ			MLR	MLR	
	comp=Z,3μm,19.0s				
AKN	**Aaknes**	**81.14 334**	*e*P	**P**	**01 20 48.5 +0.3**
MDVR	**Moldovita**	**81.17 315**	⇑*i*P	**P**	**01 20 49.6 +0.9**
RAC	**Raciborz**	**81.25 321**	*e*P	**P**	**01 20 49.9 +1.0**
RAC			MLR	MLR	
	comp=Z,3μm,21.4s				
SRS	**Serrai**	**81.28 311**	P	**P**	**01 20 49.3 0.0**
BANR	**Banloc**	**81.32 315**	⇓*i*P	**P**	**01 20 50.9 +1.5**
KONO	**Kongsberg**	**81.34 332**	*e*P	**P**	**01 20 49.8 +0.6**
	comp=Z,81nm,1.4s				
KONO			LR	LR	
	comp=Z,8μm,18.0s				
KONO	**Kongsberg**	**81.34 332**	*e*P	**P**	**01 20 49.8 +0.6**
KONO			pmax	pmax	
	comp=Z,81nm,1.4s				
KONO			MLR	MLR	
	comp=Z,8μm,18.0s				
KONO	**Kongsberg**	**81.34 332**	*e*P	**P**	**01 20 49.4 +0.2**
KKB	**Krupnik**	**81.36 312**	P	**P**	**01 20 49.8 +0.1**
APE	**Apeiranthos**	**81.38 306**	⇑*i*P	**P**	**01 20 49.3 -0.6**
APE	**Apeiranthos**	**81.38 306**	⇑P	**P**	**01 20 49.3 -0.6**
OKC	**Ostrava-Krasne**	**81.38 320**	⇑*e*P	**P**	**01 20 50.2 +0.6**
OKC			*e*x	x	01 21 10.0
OKC			*e*S	**S**	**01 30 56.2 -2.5**
OKC			*e*SS	**SS**	**01 36 10.0 -4.4**
OKC			AMS	AMS	01 57 20.0
	comp=Z,2μm,19.3s				
OKC	**Ostrava-Krasne**	**81.38 320**	*e*P	**P**	**01 20 50.2 +0.6**
OKC			*e*S	**S**	**01 30 56.2 -2.5**
OKC			*e*SS	**SS**	**01 36 10.0 -4.4**
OKC			MLR	MLR	
	comp=Z,2μm,19.3s				
VYHS	**Vyhne**	**81.52 319**	*e*P	**P**	**01 20 50.9 +0.5**
VYHS			pmax	pmax	
	comp=Z,36nm,0.9s				
VYHS	**Vyhne**	**81.52 319**	*e*P	**P**	**01 20 50.9 +0.5**
VYHS	**Vyhne**	**81.52 319**	*e*S	**S**	**01 30 59.6 -0.7**
ZKR	**Zakros**	**81.57 304**	P	**P**	**01 20 51.1 +0.2**
PAIG	**Paliouri**	**81.67 310**	P	**P**	**01 20 51.6 +0.3**
SANT	**Santorini**	**81.69 306**	⇑*i*P	**P**	**01 20 50.7 -0.9**
SANT	**Santorini**	**81.69 306**	*e*P	**P**	**01 20 49.8 -1.8**
	comp=Z,153nm,0.7s				
THR6	**Thira Island,**	**81.74 306**	P	**P**	**01 20 51.3 -0.5**
MORC	**Moravsky Berou**	**81.76 321**	⇑*i*P	**P**	**01 20 52.9 +1.2**
MORC	**Moravsky Berou**	**81.76 321**	*e*P	**P**	**01 20 52.0 +0.3**
	comp=Z,205nm,1.3s				
MORC			LR	LR	
	comp=Z,10μm,22.0s				
MORC	**Moravsky Berou**	**81.76 321**	*e*P	**P**	**01 20 52.0 +0.3**
MORC			pmax	pmax	
	comp=Z,205nm,1.3s				
MORC			MLR	MLR	
	comp=Z,10μm,22.0s				
MORC	**Moravsky Berou**	**81.76 321**	*e*P	**P**	**01 20 51.8 +0.1**
BUD	**Budapest**	**81.82 318**	*e*P	**P**	**01 20 52.2 +0.2**
BUD	**Budapest**	**81.82 318**	P	**P**	**01 20 53.0 +1.0**
COP	**Copenhagen**	**81.92 327**	*i* P	**P**	**01 20 53.2 +0.9**
	comp=Z,4μm,16.0s				
COP	**Copenhagen**	**81.92 327**	*i* P	**P**	**01 20 53.2 +0.9**
COP			MLR	MLR	
	comp=Z,4μm,16.0s				
VAY	**Valandovo**	**81.92 311**	P	**P**	**01 20 53.0 +0.3**
VAY	**Valandovo**	**81.92 311**	*i* P	**P**	**01 20 52.4 -0.3**
NPS	**Neapolis**	**81.97 305**	P	**P**	**01 20 53.0 -0.1**
RGN	**Rugen**	**82.00 326**	PFAKE		01 21 00.0 +7.3
RGN			LR	LR	
	comp=Z,6μm,19.0s				
HYA	**Hoyanger**	**82.00 334**	*e*P	**P**	**01 20 52.9 +0.2**
KSP	**Ksiaz**	**82.03 322**	*e*P	**P**	**01 20 53.5 +0.5**
KSP			*e*S	**S**	**01 31 05.2 -0.3**
KSP			LMZ	LR	02 02 16.4
	comp=Z,4μm,18.3s				
KSP	**Ksiaz**	**82.03 322**	*e*P	**P**	**01 20 53.5 +0.5**
KSP			*e*S	**S**	**01 31 05.2 -0.3**
STIP	**Stip**	**82.04 312**	*i* P	**P**	**01 20 51.5 -1.8**
JAVC	**Velka Javorina**	**82.07 320**	*e*P	**P**	**01 20 54.8 +1.4**
LAST	**Lasithi**	**82.11 305**	P	**P**	**01 20 54.0 +0.1**
GRG	**Griva**	**82.18 311**	P	**P**	**01 20 54.0 -0.1**
LLD	**Lille Linde**	**82.19 327**	*i* P	**P**	**01 20 53.3 -0.5**
	comp=Z,88nm,0.8s				
LLD	**Lille Linde**	**82.19 327**	*i* P	**P**	**01 20 53.3 -0.5**
LLD			pmax	pmax	
	comp=Z,88nm,0.8s				
DPC	**Dobruska-Polom**	**82.23 321**	*e*P	**P**	**01 20 55.2 +1.0**
DPC			*e*x	x	01 21 15.1
DPC			*e*PP	**PP**	**01 24 01.9 -0.4**
DPC			*e*S	**S**	**01 31 03.0 -4.6**
DPC			*e*SS	**SS**	**01 36 25.2 -1.9**
DPC			AMS	AMS	02 01 50.0
	comp=Z,3μm,16.9s				
DPC	**Dobruska-Polom**	**82.23 321**	*e*P	**P**	**01 20 55.2 +1.0**
DPC			*e*		01 24 01.9
DPC			*e*S	**S**	**01 31 03.0 -4.6**
DPC			*e*SS	**SS**	**01 36 25.2 -1.9**
DPC			MLR	MLR	
	comp=Z,3μm,16.9s				
CSKK	**Cs~‡kako**	**82.34 318**	*e*P	**P**	**01 20 55.6 +0.9**
UPC	**Upice**	**82.34 322**	⇑*e*P	**P**	**01 20 55.4 +0.7**
UPC			*e*PP	**PP**	**01 24 01.8 -1.4**
UPC			*e*S	**S**	**01 31 05.1 -3.5**
UPC			AMS	AMS	02 02 30.0
	comp=Z,4μm,17.9s				
UPC	**Upice**	**82.34 322**	*e*P	**P**	**01 20 55.4 +0.7**
UPC			*e*		01 24 01.8
UPC			*e*S	**S**	**01 31 05.1 -3.5**
UPC			MLR	MLR	
	comp=Z,4μm,17.9s				
FYTO	**Fytoko, Volos**	**82.39 309**	P	**P**	**01 20 54.5 -0.7**
LIT	**Litokhoron**	**82.45 310**	*e*P	**P**	**01 20 55.1 -0.4**
	comp=Z,64nm,0.6s				
LIT			LR	LR	
	comp=Z,1μm,20.0s				
LIT	**Litokhoron**	**82.45 310**	P	**P**	**01 20 54.8 -0.7**
LIT	**Litokhoron**	**82.45 310**	*e*P	**P**	**01 20 55.1 -0.4**
LIT			pmax	pmax	
	comp=Z,64nm,0.6s				
LIT			MLR	MLR	
	comp=Z,1μm,20.0s				
SKO	**Skopje**	**82.45 312**	P	**P**	**01 20 56.3 +0.9**
SKO	**Skopje**	**82.45 312**	*i* P	**P**	**01 20 55.7 +0.3**
ODD1	**Odda**	**82.49 333**	*e*P	**P**	**01 20 55.7 +0.4**
IDI	**Anoyia**	**82.52 305**	P	**P**	**01 20 55.3 -0.7**
	comp=Z,28nm,0.7s,baz=69,slow=8.6,SNR=13				
IDI	**Anoyia**	**82.52 305**	⇑*i*P	**P**	**01 20 55.5 -0.5**
IDI	**Anoyia**	**82.52 305**	*e*P	**P**	**01 20 55.5 -0.5**
	comp=Z,31nm,0.7s				
IDI			LR	LR	
	comp=Z,700nm,20.0s				
MODS	**Modra-Piesok**	**82.52 319**	*e*P	**P**	**01 20 56.2 +0.5**
MODS			pmax	pmax	
	comp=Z,125nm,1.8s				
MODS	**Modra-Piesok**	**82.52 319**	*e*P	**P**	**01 20 56.2 +0.5**
MODS	**Modra-Piesok**	**82.52 319**	*e*S	**S**	**01 31 08.6 -1.9**
MODS			*e*L	L	01 58 15.8
VRAC	**Vranov**	**82.52 320**	⇓*i*P	**P**	**01 20 56.9 +1.2**
VRAC	**Vranov**	**82.52 320**	⇓P	**P**	**01 20 56.9 +1.2**
VRAC	**Vranov**	**82.52 320**	*e*P	**P**	**01 20 56.2 +0.5**
HOMB	**Homborsund**	**82.52 331**	*e*P	**P**	**01 20 56.1 +0.6**
DIVS	**Divibare**	**82.58 315**	*e*P	**P**	**01 20 56.4 +0.2**
	comp=Z,69nm,1.1s				
DIVS			LR	LR	
	comp=Z,2μm,20.0s				
MORH	**M¨‡r¨¡gy, Hung**	**82.58 317**	⇓*e*P	**P**	**01 20 55.9 -0.1**
SUE	**Sulen**	**82.64 334**	*e*P	**P**	**01 20 56.6 +0.6**
SIVA	**Sivas**	**82.68 305**	P	**P**	**01 20 57.1 +0.4**
ZST	**Bratislava**	**82.70 319**	*e*P	**P**	**01 20 55.4 -1.2**
ZST			pmax	pmax	
	comp=Z,7.0nm,1.7s				
**

PVCC AMS AMS 02 03 00.0
comp=Z,4μm,15.4s
PVCC Panska Ves 83.16 322 *e*P **P 01 20 59.7 +0.8**
PVCC *e* 01 21 05.7
PVCC *e* 01 24 14.9
PVCC MLR MLR
comp=Z,4μm,15.4s
OHR Ohrid 83.23 312 *i* P **P 01 20 58.7 -0.8**
OHR Ohrid 83.23 312 P **P 01 20 59.5 -0.1**
SOP Sopron 83.25 319⇓*e*P **P 01 20 59.8 +0.4**
SOP Sopron 83.25 319 P **P 01 21 00.1 +0.7**
PHP Peshkopia 83.25 312 P **P 01 20 59.8 +0.1**
OPO Ambohidratompo 83.26 247 P **P 01 21 00.2 0.0**
comp=Z,44nm,0.7s,baz=64,slow=5.8,SNR=40
KULLO Kullorsuaq 83.27 360⇓*i*P **P 01 20 58.6 -0.4**
comp=Z,100nm,0.9s
comp=Z,1μm,16.0s
KULLO Kullorsuaq 83.27 360⇓*i*P **P 01 20 58.6 -0.4**
KULLO pmax pmax
comp=Z,100nm,0.9s
KULLO MLR MLR
comp=Z,1μm,16.0s
GOPC GO Pecny, Ondr 83.31 321 *e*P **P 01 21 00.7 +0.9**
GOPC *e*pP **pP 01 21 06.9 -2.3**
GOPC *e*PP **PP 01 24 11.3 +0.2**
GOPC *e*S **S 01 31 15.2 -3.4**
GOPC AMS AMS 02 03 00.0
comp=Z,3μm,14.8s
GOPC GO Pecny, Ondr 83.31 321 *e*P **P 01 21 00.7 +0.9**
GOPC *e* 01 21 06.9
GOPC *e* 01 24 11.3
GOPC *e*S **S 01 31 15.2 -3.4**
GOPC MLR MLR
comp=Z,3μm,14.8s
NEST Nestorio 83.34 311 P **P 01 20 59.8 -0.4**
BRG Berggiesshubel 83.35 323 *i* P **P 01 21 00.4 +0.5**
comp=Z,32nm,1.1s
BRG *i* 01 21 05.8
comp=Z,161nm,1.8s
BRG *e*PP **PP 01 24 08.6 -2.8**
comp=Z,5.4nm,1.1s
BRG S **S 01 31 22.0 +3.1**
BRG SS **SS 01 36 42.0 -1.6**
comp=N,3μm,15.1s
comp=E,4μm,15.5s
comp=Z,6μm,15.0s
BRG Berggiesshubel 83.35 323 *i* P **P 01 21 00.4 +0.5**
BRG *i* 01 21 05.8
BRG *e* 01 24 08.6
BRG S **S 01 31 22.0 +3.1**
BRG SS **SS 01 36 42.0 -1.6**
BRG pmax pmax
comp=Z,32nm,1.1s
BRG pmax pmax
comp=Z,5.0nm,1.1s
BRG MLR MLR
comp=N,3μm,15.1s
BRG MLR MLR
comp=E,4μm,15.5s
BRG MLR MLR
comp=Z,6μm,15.0s
EVR Evrytania 83.39 309 P **P 01 20 59.7 -0.8**
GUR Goura 83.39 308 P **P 01 20 59.1 -1.4**
SERG Sergoula 83.42 309 P **P 01 21 02.3 +1.8**
PRU Pruhonice 83.42 322⇑*e*P **P 01 21 01.1 +0.8**
PRU *e*pP **pP 01 21 07.5 -2.2**
PRU *e*S **S 01 31 16.2 -3.4**
PRU *e*SS **SS 01 36 46.8 +2.2**
PRU AMS AMS 02 03 10.0
comp=Z,3μm,17.9s
PRU Pruhonice 83.42 322 *e*P **P 01 21 01.1 +0.8**
PRU *e* 01 21 07.5
PRU *e*S **S 01 31 16.2 -3.4**
PRU *e*SS **SS 01 36 46.8 +2.2**
PRU MLR MLR
comp=Z,3μm,17.9s
STAV Stavanger 83.42 332 *e*P **P 01 20 59.6 -0.4**
ABPO Ambohimpanom 83.43 246 *e*P **P 01 21 01.7 +0.7**
comp=Z,51nm,0.8s
ABPO Ambohimpanom 83.43 246 *e*P **P 01 21 01.7 +0.7**
ABPO pmax pmax
comp=Z,51nm,0.8s
VLI Veliai 83.43 307 P **P 01 20 58.9 -1.7**
KBN Korca 83.44 311 P **P 01 21 00.4 -0.3**
ANX Ano Chora 83.44 309 P **P 01 21 00.0 -0.8**
KMY Karmoy 83.46 332 *e*P **P 01 20 59.9 -0.3**
ANKY Antikythira Is 83.49 306 P **P 01 21 00.4 -0.5**
EFP Efpalio 83.52 309 P **P 01 21 02.3 +1.3**
LAKA Lakka 83.54 309 P **P 01 21 00.4 -0.8**
CONA Conrad Observa 83.56 319 *e*P **P 01 21 02.2 +1.1**
comp=Z,53nm,1.0s,SNR=43
BEHE Becsehely 83.64 318 *e*P **P 01 21 02.1 +0.6**
CLL Collm 83.68 323⇑*i*P **P 01 21 01.8 +0.2**
comp=Z,56nm,1.0s
CLL *i*pP **PcP 01 21 07.4 +1.7**
CLL *e*PP **PP 01 24 16.0 +2.0**
CLL *e*S **S 01 31 22.0 -0.1**
CLL *e*PS **PnS 01 32 13.0 -3.4**
CLL *e*SS **SS 01 36 59.0 +11**
CLL *e* 01 41 24.0
CLL *e* 01 42 18.0
CLL LmH 01 55 00.0
comp=N,4μm,20.8s
CLL LmH 01 55 00.0
comp=E,3μm,20.3s
CLL Collm 83.68 323 *e*P **P 01 21 00.8 -0.8**
comp=E,156nm,1.5s
CLL LR LR
comp=Z,7μm,18.0s
CLL Collm 83.68 323⇑*i*P **P 01 21 01.8 +0.2**
CLL *i* 01 21 07.4
CLL *e*S **S 01 31 22.0 -0.1**
CLL pmax pmax
comp=Z,56nm,1.0s
PDG Podgorica 83.75 313⇓*i*P **P 01 21 01.5 -0.6**
TTG Podgorica 83.75 313 *e*P **P 01 21 01.9 -0.2**
comp=Z,32nm,0.8s
TTG LR LR
comp=Z,1μm,20.0s
TTG Podgorica 83.75 313 *e*P **P 01 21 01.9 -0.2**
TTG pmax pmax
comp=Z,32nm,0.8s
TTG MLR MLR
comp=Z,1μm,20.0s
TIR Tirane 83.78 312⇓*i*P **P 01 21 02.6 +0.3**
TIR Tirane 83.78 312 *e*P **P 01 21 02.3 0.0**
comp=Z,128nm,1.1s
TIR LR LR
comp=Z,2μm,20.0s
TIR Tirane 83.78 312 P **P 01 21 02.8 +0.5**
TIR Tirane 83.78 312 *e*P **P 01 21 02.3 0.0**
TIR pmax pmax
comp=Z,128nm,1.1s
TIR MLR MLR
comp=Z,2μm,20.0s
DSL Palaion Diasel 83.82 310 P **P 01 21 02.1 -0.5**
DYR Agios Nikonas 83.86 307 P **P 01 21 02.3 -0.6**
SCO Scoresbysund 83.88 348 *i* P **P 01 21 02.9 +0.7**
comp=Z,120nm,1.3s
comp=Z,2μm,18.0s
SCO Scoresbysund 83.88 348 *e*P **P 01 21 02.5 +0.3**
comp=Z,125nm,1.3s
SCO LR LR
comp=Z,2μm,19.0s
SCO Scoresbysund 83.88 348 *e*P **P 01 21 02.5 +0.3**
SCO pmax pmax
comp=Z,125nm,1.3s
SCO MLR MLR
comp=Z,2μm,19.0s
PDO Prodromos 83.97 309 P **P 01 21 02.8 -0.5**
ITM Ithomi 84.00 308 *e*P **P 01 21 02.6 -0.9**
comp=Z,230nm,0.6s
ITM LR LR
comp=Z,900nm,22.0s
ITM Ithomi 84.00 308 P **P 01 21 02.9 -0.6**
AMT Artemida-Makis 84.02 308 P **P 01 21 03.0 -0.6**
ARSA Arzberg 84.07 319 *i* P **P 01 21 04.2 +0.5**
comp=Z,22nm,0.9s,SNR=27
BLY Banja Luka 84.13 316⇓*i*P **P 01 21 04.3 +0.3**
BLY Banja Luka 84.13 316 *e*P **P 01 21 04.4 +0.4**
comp=Z,105nm,1.3s
IGT Igoumenitsa 84.20 310 P **P 01 21 03.8 -0.7**
SGD Sagiada 84.23 310 P **P 01 21 04.2 -0.4**
PYL PYLOS 84.25 307 P **P 01 21 03.7 -1.1**
BBB Bella Bella 84.26 35 PFAKE 01 21 20.0 +15
BBB LR LR
comp=Z,500nm,19.0s
SUMG Summit 84.32 354⇓*i*P **P 01 21 04.7 -0.3**
comp=Z,139nm,0.8s
SUMG Summit 84.32 354 *e*P **P 01 21 04.1 -0.9**
comp=Z,157nm,0.9s
SUMG LR LR
comp=Z,2μm,21.0s
SUMG Summit 84.32 354⇓*i*P **P 01 21 04.7 -0.3**
SUMG pmax pmax
comp=Z,140nm,0.8s
KHC Kasperske Hory 84.37 321⇑*i*P **P 01 21 05.9 +0.7**
KHC *e*pP **pP 01 21 12.2 -2.4**
KHC *e*PP **PP 01 24 18.8 -1.0**
KHC *e*S **S 01 31 25.1 -4.2**
KHC *e*x x 01 32 12.0
KHC AMS AMS 02 04 00.0
comp=Z,3μm,15.5s
KHC Kasperske Hory 84.37 321⇑*i*P **P 01 21 05.9 +0.7**
KHC *e* 01 21 12.2
KHC *e* 01 24 18.8
KHC *e*S **S 01 31 25.1 -4.2**
KHC MLR MLR
comp=Z,3μm,15.5s
GEC2 GERESS Array S 84.43 321 *e*P **P 01 21 06.2 +0.6**
comp=Z,61nm,0.9s
GEC2 GERESS Array S 84.43 321 *e*P **P 01 21 06.2 +0.6**
GEC2 pmax pmax
comp=Z,61nm,0.9s
GERES GERESS Array B 84.43 321 P **P 01 21 06.1 +0.5**
comp=Z,42nm,0.8s,baz=57,slow=4.9,SNR=278
GERES LR LR 02 02 55.1
comp=Z,2μm,19.1s,baz=60,slow=39
GEA0 GERESS Array S 84.43 321 *e*P **P 01 21 05.5 -0.1**
YKW3 Yellowknife Ar 84.46 23 *e*P **P 01 21 03.9 -1.4**
comp=Z,23nm,1.0s
YKW3 LR LR
comp=Z,900nm,19.0s
NKC Novy Kostel 84.50 322⇑*e*P **P 01 21 06.5 +0.7**
NKC *e*PP PP 01 24 28.9 +8.1
NKC *e*SKS **S 01 31 26.1 -4.4**
NKC AMS AMS 02 04 00.0
comp=Z,5μm,13.8s
NKC Novy Kostel 84.50 322 *e*P **P 01 21 06.5 +0.7**
NKC *e* 01 24 28.9
NKC *e*S **S 01 31 26.1 -4.4**
NKC MLR MLR
comp=Z,5μm,13.8s
YKA Yellowknife Ar 84.51 23 P **P 01 21 05.2 -0.4**
comp=Z,6.5nm,0.7s,baz=309,slow=4.4,SNR=41
YKA PKiKP **PKiKP 01 26 18.9 -0.1**
comp=Z,0.3nm,0.6s,baz=319,slow=1.5,SNR=3.7
YKA PKKPbc **PKKPbc 01 39 14.5 -3.3**
comp=Z,0.9nm,0.5s,baz=130,slow=2.5,SNR=25
YKA PKPPKP P'P'df 01 47 41.7 +15
comp=Z,1.4nm,1.2s,baz=126,slow=1.1,SNR=4.4
YKA LR LR 02 01 02.1
comp=Z,51nm,21.8s,baz=328,slow=37
YKB5 Yellowknife Ar 84.51 23 *e*PKiKP **PKiKP 01 26 18.9 -0.1**
YKB5 *e*PKKPbc **PKKPbc 01 39 14.5 -3.3**
YKB5 *e*P'P'df P'P'df 01 47 41.7 +15
MOA Molln 84.56 320 *e*P **P 01 21 06.0 -0.2**
comp=Z,35nm,0.8s,SNR=46
VLS Valsamata 84.57 309 P **P 01 21 05.9 -0.5**
PERS Pernice 84.59 318 *i* P **P 01 21 06.3 -0.1**
STON Ston 84.60 314 P **P 01 21 05.1 -1.4**
SOKA Soboth 84.63 318 *e*P **P 01 21 06.5 -0.2**
comp=Z,44nm,1.0s,SNR=50
MOX Moxa 84.76 323 P **P 01 21 07.6 +0.5**
WET Wettzell 84.77 321 P **P 01 21 08.0 +0.8**
OZLJ Ozalj 84.84 317 P **P 01 21 08.3 +0.8**
OBKA Obir 85.00 318 *e*P **P 01 21 08.4 -0.1**
comp=Z,54nm,0.9s,SNR=21
BOJS Bojanci 85.02 317 *e*P **P 01 21 09.1 +0.6**
UDBI Udbina 85.14 316 P **P 01 21 09.5 +0.3**
VISS Visnje 85.14 318 *e*P **P 01 21 09.1 -0.1**
GRF Grafenberg Arr 85.45 322 P **P 01 21 11.7 +1.1**
GRFO Grafenberg 85.45 322 *e*P **P 01 21 11.5 +0.9**
comp=Z,40nm,1.1s
GRFO LR LR
comp=Z,4μm,18.0s
GRFO Grafenberg 85.45 322 *e*P **P 01 21 11.5 +0.9**
GRFO pmax pmax
comp=Z,40nm,1.1s
GRFO MLR MLR
comp=Z,4μm,18.0s
KBA Koelnbreinsper 85.47 319 *e*P **P 01 21 10.7 -0.2**
comp=Z,63nm,1.3s,SNR=47
KBA Koelnbreinsper 85.47 319 P **P 01 21 10.7 -0.2**
MYKA Terra Mystica 85.50 319 *e*P **P 01 21 11.0 0.0**
comp=Z,25nm,1.1s,SNR=9.1
JAVS Javornik 85.58 318 *e*P **P 01 21 11.0 -0.4**
NVLJ Novalja 85.69 317 P **P 01 21 11.6 -0.2**
ABTA Abfaltersbach 86.13 319 *e*P **P 01 21 13.6 -0.5**
comp=Z,63nm,1.2s,SNR=22
FUR Furstenfeldbru 86.17 321 P **P 01 21 15.2 +1.0**
MATE Matera 86.24 313⇑*i*P **P 01 21 14.5 -0.1**
WATA Walderalm 86.40 320 *e*P **P 01 21 15.3 -0.2**
comp=Z,22nm,0.8s,SNR=8.5
WTTA Wattenberg 86.40 320 *i* P **P 01 21 15.1 -0.5**
comp=Z,40nm,0.8s,SNR=16
MOTA Moosalm 86.68 320 *e*P **P 01 21 15.5 -1.4**
comp=Z,39nm,1.0s,SNR=7.3
WTSB Winterswijk 86.68 326 *e*P **P 01 21 16.5 -0.1**
comp=Z,53nm,0.8s
RETA Reutte 86.81 321 *e*P **P 01 21 17.4 0.0**
comp=Z,15nm,1.0s,SNR=8.2
TIP Timpagrande 86.86 311⇓*i*P **P 01 21 17.9 +0.1**
TIP Timpagrande 86.86 311 *e*P **P 01 21 18.0 +0.2**
comp=Z,91nm,1.2s
TIP LR LR
comp=Z,2μm,19.0s
TIP Timpagrande 86.86 311 P **P 01 21 18.4 +0.6**
FETA Feichten 87.06 320 *e*PcP **P 01 21 18.9 +0.1**
comp=Z,38nm,0.9s,SNR=24
STU Stuttgart 87.06 322 PFAKE 01 21 30.0 +11
STU LR LR
comp=Z,4μm,21.0s
CUC Castrocucco 87.14 312 *e*P **P 01 21 19.0 -0.1**
comp=Z,24nm,1.1s
CUC LR LR
comp=Z,1μm,20.0s
DAVA Damuels 87.43 321 *e*PcP **P 01 21 20.7 +0.1**
comp=Z,30nm,1.0s,SNR=11
FUORN Ofenpass-Fuorn 87.54 320 *e*P **P 01 21 21.7 +0.5**
comp=Z,65nm,0.9s
FUORN LR LR
comp=Z,3μm,19.0s
AQU L'Aquila 87.67 315 *e*P **P 01 21 22.6 +1.0**
comp=Z,112nm,1.0s
AQU LR LR
comp=Z,2μm,22.0s
AQU L'Aquila 87.67 315 *e*P **P 01 21 22.7 +1.0**
AQU pmax pmax
comp=Z,112nm,1.0s
AQU MLR MLR
comp=Z,2μm,22.0s
LANF Langenberg 87.73 323 P **P 01 21 24.7 +2.9**
BFO Black Forest 87.78 322 *e*P **P 01 21 21.9 -0.1**
comp=Z,37nm,1.2s
BFO LR LR
comp=Z,3μm,20.0s
BFO Black Forest 87.78 322 *i* P **P 01 21 22.4 +0.3**
HGN Heimansgroeve 87.79 325 *e*P **P 01 21 22.1 +0.1**
comp=Z,36nm,0.8s
HGN *e*PP **PP 01 24 52.0 +4.7**
HGN *e*S **S 01 32 10.2 +7.6**
HGN *e*SS SS 01 38 02.1 +13
MEM Membach 87.84 325⇑P **P 01 21 22.3 +0.1**
comp=Z,24nm,1.0s
MEM Membach 87.84 325 P **P 01 21 22.6 +0.4**
CEL Celeste 87.87 311 *e*P **P 01 21 23.2 +0.5**
comp=Z,240nm,1.5s
BEBN Eben Emael 87.91 325⇑P **P 01 21 22.7 +0.2**
SLE Schleitheim 87.99 322 P **P 01 21 23.1 0.0**
RAR Rarotonga 88.11 114 LR LR 01 54 06.2
comp=Z,162nm,20.9s,baz=284,slow=31
TUE Stuetta 88.16 320 *e*P **P 01 21 23.7 -0.4**
comp=Z,29nm,0.8s
TUE LR LR
comp=Z,3μm,19.0s
WLF Walferdange 88.28 324⇑P **P 01 21 24.8 +0.5**
comp=Z,73nm,0.9s
WLF Walferdange 88.28 324 *e*P **P 01 21 24.8 +0.5**
comp=Z,82nm,0.8s
WLF LR LR
comp=Z,2μm,20.0s
WLF Walferdange 88.28 324 *e*P **P 01 21 24.8 +0.5**
WLF pmax pmax
comp=Z,82nm,0.8s
WLF MLR MLR
comp=Z,2μm,20.0s
BCLA Clavier 88.32 325⇑P **P 01 21 24.4 -0.1**
comp=Z,43nm,2.0s
CDF Champ du Feu 88.33 323 *e*P **P 01 21 24.3 -0.5**
CDF pmax pmax
comp=Z,52nm,1.2s
LLLB Lilloet 88.41 35 *e*P **P 01 21 26.7 +1.7**
comp=Z,48nm,1.3s
LLLB LR LR
comp=Z,700nm,19.0s
ECH Echery 88.51 322 *e*P **P 01 21 25.4 -0.1**
comp=Z,21nm,1.0s
ECH LR LR
comp=Z,4μm,18.0s
ECH Echery 88.51 322 *e*P **P 01 21 25.4 -0.1**
ECH pmax pmax
comp=Z,21nm,1.0s
ECH MLR MLR
comp=Z,4μm,18.0s
ILULI Ilulissat 88.52 357 PFAKE 01 21 40.0 +15
ILULI LR LR
comp=Z,1μm,18.0s
BORG Borgarnes 88.54 345 PFAKE 01 21 40.0 +15
BORG LR LR
comp=Z,3μm,20.0s
MDO Dochfour 88.56 334 *e*P **P 01 21 24.5 -1.0**
EDU Dundee 88.59 333 *e*P **P 01 21 25.3 -0.3**
UCC Uccle 88.60 326⇓P **P 01 21 25.4 -0.4**
comp=Z,19nm,0.9s
UCC Uccle 88.60 326 *e*P **P 01 21 25.9 +0.1**
comp=Z,36nm,0.8s
UCC LR LR
comp=Z,3μm,21.0s
UCC Uccle 88.60 326 *e*P **P 01 21 25.9 +0.1**
UCC pmax pmax
comp=Z,36nm,0.8s
UCC MLR MLR
comp=Z,3μm,21.0s
PGC Sidney 88.65 37 PFAKE 01 21 40.0 +14
PGC LR LR
comp=Z,500nm,21.0s
VLC Villacollemand 88.70 318 *e*P **P 01 21 27.3 +0.7**
comp=Z,48nm,0.8s
VLC LR LR
comp=Z,3μm,20.0s
GIVF Givet 88.75 325 *e*P **P 01 21 26.1 -0.4**
GIVF pmax pmax
comp=Z,41nm,0.8s
CASY Casey 88.77 184 *e*P **P 01 21 25.7 -0.3**
comp=Z,56nm,1.1s
SNF Seneffe 88.81 325⇑P **P 01 21 27.0 +0.2**
DOU Dourbes 88.88 325⇑P **P 01 21 27.2 +0.1**
comp=Z,44nm,0.8s
HINF Hinteralfeld 88.89 322 *e*P **P 01 21 26.5 -0.9**
HINF pmax pmax
comp=Z,16nm,0.8s
EDI Edinburgh 89.07 332 IAMs_20 IAMs_20 02 05 42.0
comp=Z,9μm,15.8s
BAIF Baives 89.10 325 *e*P **P 01 21 27.8 -0.4**
EDMD Edmundbyers 89.24 331 *e*P **P 01 21 28.1 -0.6**
EDMD IAmb IAmb 01 21 29.7
comp=Z,46nm,0.8s
EDMD IAMs_20 IAMs_20 02 06 34.7
comp=Z,6μm,15.5s
VAE Valguarnera 89.27 310 P **P 01 21 30.5 +1.2**
comp=Z,33nm,1.0s,baz=135,slow=5.7,SNR=7.7
VAE LR LR 02 09 32.9
comp=Z,960nm,18.1s,baz=28,slow=41
LMK Market Rasen 89.35 329 *e*P **P 01 21 28.4 -0.8**
LMK IAmb IAmb 01 21 29.6
comp=Z,157nm,0.9s
LMK IAMs_20 IAMs_20 02 05 17.0
comp=Z,5μm,20.2s
SENIN Lac Senin/Sane 89.42 321 *e*P **P 01 21 30.2 +0.1**
comp=Z,31nm,0.8s
SENIN LR LR
comp=Z,4μm,21.0s
EKA Eskdalemuir Ar 89.44 332 P **P 01 21 29.6 0.0**
comp=Z,23nm,0.9s,baz=44,slow=3.1,SNR=28
EKA LR LR 02 06 02.6
comp=Z,6μm,18.5s,baz=30,slow=38
ESK Eskdalemuir 89.47 332 *e*P **P 01 21 29.8 0.0**
comp=Z,44nm,1.0s
ESK LR LR
comp=Z,7μm,19.0s
ESK Eskdalemuir 89.47 332 *e*P **P 01 21 28.4 -1.4**
ESK IAmb IAmb 01 21 33.4
comp=Z,45nm,1.0s
ESK IAMs_20 IAMs_20 02 06 03.6
comp=Z,10μm,16.5s
ESK Eskdalemuir 89.47 332 *e*P **P 01 21 29.8 0.0**
ESK pmax pmax
comp=Z,44nm,1.0s
ESK MLR MLR
comp=Z,7μm,19.0s
ECK Cauldkaine Hil 89.53 332 *e*P **P 01 21 29.9 -0.2**
B05A Bryant 89.61 37 P **P 01 21 31.4 +0.8**
baz=304,SNR=5.1
HPK Haverah Park 89.64 330 *e*P **P 01 21 30.3 -0.4**
HPK IAmb IAmb 01 21 32.2
comp=Z,69nm,1.0s
HPK IAMs_20 IAMs_20 02 07 11.9
comp=Z,5μm,14.1s
PGBU Glenifferbraes 89.70 333 *e*P **P 01 21 30.8 0.0**
PGBU IAmb IAmb 01 21 32.6
comp=Z,77nm,1.0s
PGBU IAMs_20 IAMs_20 02 06 08.6
comp=Z,6μm,16.3s
E03A Lebam 89.73 39 *e*P **P 01 21 34.5 +3.3**
comp=Z,78nm,1.1s
B06A Marblemount 89.81 36 *e*P **P 01 21 33.6 +2.1**
comp=Z,38nm,1.0s
B06A LR LR
comp=Z,500nm,21.0s
WDD Wied Dalam 89.95 309 PFAKE 01 21 40.0 +7.5
WDD LR LR
comp=Z,800nm,22.0s
LBWR Ladybower, Pea 90.04 330 *e*P **P 01 21 32.1 -0.4**
LBWR IAmb IAmb 01 21 33.8
comp=Z,107nm,0.8s
LBWR IAMs_20 IAMs_20 02 05 57.7
comp=Z,4μm,19.2s
ELSH Elham, Standar 90.05 327 IAMs_20 IAMs_20 02 05 45.7
comp=Z,5μm,16.9s
CLTB Caltabellotta 90.06 311 *e*P **P 01 21 34.3 +1.2**
comp=Z,24nm,0.9s
CLTB LR LR
comp=Z,1μm,20.0s
LPG La Plagne 90.21 320 *e*P **P 01 21 33.8 -0.1**
LPG pmax pmax
comp=Z,52nm,0.8s
LPL La Plagne 90.21 320 *e*P **P 01 21 33.7 -0.1**
LPL pmax pmax
comp=Z,51nm,0.8s
D05A Enumclaw 90.27 38 *e*P **P 01 21 37.2 +3.5**
comp=Z,51nm,0.9s
STNC Stoke 90.46 330 *e*P **P 01 21 34.6 +0.1**
STNC IAmb IAmb 01 21 36.3
comp=Z,48nm,0.9s
STNC IAMs_20 IAMs_20 02 07 41.3
comp=Z,5μm,14.6s
BNI Bardonecchia 90.49 320 *e*P **P 01 21 34.4 -0.6**
comp=Z,52nm,1.2s
BNI LR LR
comp=Z,4μm,20.0s
BNI Bardonecchia 90.49 320 *e*P **P 01 21 34.4 -0.6**
BNI pmax pmax
comp=Z,52nm,1.2s
BNI MLR MLR
comp=Z,4μm,20.0s
LON Longmire 90.62 38 *e*P **P 01 21 38.0 +2.5**
comp=Z,19nm,1.0s
LON Longmire 90.62 38 *e*P **P 01 21 38.0 +2.5**
LON pmax pmax
comp=Z,19nm,1.0s
G03D McMinnville, O 90.63 40 P **P 01 21 36.7 +1.3**
baz=303
SFJD Kangerlussuaq 90.70 357 P **P 01 21 34.7 -0.6**
comp=Z,25nm,0.8s,baz=16,slow=3.4,SNR=11
SFJD Kangerlussuaq 90.70 357 *i* P **P 01 21 34.4 -0.9**
comp=Z,55nm,1.0s
comp=Z,1μm,20.0s

SFJD Kangerlussuaq 90.70 357 *e*P P 01 21 34.7 -0.6
SFJD LR LR
comp=Z,2µm,20.0s
SFJD Kangerlussuaq 90.70 357 *e*P P 01 21 34.7 -0.6
SFJD MLR MLR
comp=Z,2µm,20.0s
MONO Monmouth DOGAM 90.84 40 *e*P P 01 21 36.0 -0.4
ANGG Ammassalik, Gr 90.84 352 PFAKE 01 21 50.0 +14
ANGG LR LR
comp=Z,2µm,19.0s
CLGH Cloghs, Cushen 90.87 333 *e*P P 01 21 36.1 -0.3
CLGH IAmb IAmb 01 21 37.0
comp=Z,43nm,0.8s
CLGH IAMs_20 IAMs_20 02 06 45.2
comp=Z,4µm,15.1s
COR Corvallis 90.95 40 *e*P P 01 21 41.0 +4.1
comp=Z,62nm,0.9s
COR Corvallis 90.95 40 *e*P P 01 21 41.0 +4.1
COR pmax pmax
comp=Z,62nm,0.9s
MBAR Mbarara 90.95 270 *e*P P 01 21 38.9 +1.2
comp=Z,22nm,1.2s
MBAR LR LR
comp=Z,800nm,21.0s
MBAR Mbarara 90.95 270 *e*P P 01 21 38.9 +1.2
MBAR pmax pmax
comp=Z,22nm,1.2s
MBAR MLR MLR
comp=Z,800nm,21.0s
LTY Liberty 90.97 37 *e*P P 01 21 39.6 +2.5
comp=Z,21nm,1.1s
LTY LR LR
comp=Z,500nm,22.0s
ORIF Oris-en-Rattie 91.04 320 *e*P P 01 21 37.2 -0.3
ORIF pmax pmax
comp=Z,105nm,1.7s
FOEL Foel Wylfa 91.05 330 *e*P P 01 21 36.4 -0.9
FOEL IAmb IAmb 01 21 37.2
comp=Z,51nm,0.9s
FOEL IAMs_20 IAMs_20 02 06 28.8
comp=Z,4µm,17.3s
B08A Colville Reser 91.07 36 *e*P P 01 21 38.8 +1.3
comp=Z,29nm,0.9s
B08A LR LR
comp=Z,700nm,20.0s
WPM1 Penmaenmawr 91.13 331 *e*P P 01 21 37.4 -0.2
HLM1 Long Mynd 91.14 330 *e*P P 01 21 37.3 -0.3
HLM1 IAmb IAmb 01 21 39.4
comp=Z,60nm,1.4s
HLM1 IAMs_20 IAMs_20 02 08 10.5
comp=Z,4µm,13.9s
SSF Saint Saulge 91.20 323 *e*P P 01 21 37.6 -0.5
SSF pmax pmax
comp=Z,62nm,1.0s
WME Myndd Eilian 91.22 331 *e*P P 01 21 37.7 -0.3
WME IAmb IAmb 01 21 38.9
comp=Z,62nm,0.8s
KEBM Edson Butte 91.25 42 *e*P P 01 21 40.7 +2.2
comp=Z,58nm,1.0s
STRD Stroud 91.28 329 *e*P P 01 21 38.1 -0.2
STRD IAmb IAmb 01 21 38.4
comp=Z,49nm,0.9s
STRD IAMs_20 IAMs_20 02 08 22.7
comp=Z,4µm,15.5s
LLW Llanuwychllyn 91.29 330 *e*P P 01 21 38.2 -0.2
LLW IAMs_20 IAMs_20 02 06 39.3
comp=Z,39µm,19.6s
FRF La Foret Royal 91.32 319 *e*P P 01 21 37.5 -1.2
FRF pmax pmax
comp=Z,62nm,1.3s
YLL Llanberis 91.33 331 *e*P P 01 21 39.0 +0.5
WLF1 Llynfaes 91.33 331 *e*P P 01 21 38.4 -0.1
WLF1 IAMs_20 IAMs_20 02 07 49.6
comp=Z,13µm,14.8s
GMM Mts of Mourne 91.38 332 *e*P P 01 21 38.4 -0.3
I03D Drain, OR 91.41 41 P **P 01 21 40.8 +1.7**
baz=303
YRC Rhoscolyn 91.44 331 *e*P P 01 21 38.7 -0.3
AVF Avril sur Loir 91.44 323 *e*P P 01 21 37.9 -1.3
AVF pmax pmax
comp=Z,99nm,0.9s
MCH1 Michaelchurch 91.53 329 *e*P P 01 21 39.1 -0.4
MCH1 IAmb IAmb 01 21 39.6
comp=Z,44nm,0.9s
MCH1 IAMs_20 IAMs_20 02 06 53.1
comp=Z,4µm,15.7s
MONM Monmouth 91.55 329 *e*P P 01 21 38.8 -0.7
MONM IAMs_20 IAMs_20 02 06 44.3
comp=Z,3µm,19.2s
H04A Detroit Lake 91.56 40 *e*P P 01 21 42.3 +2.4
comp=Z,18nm,1.1s
SSB Saint Sauveur 91.63 321 *e*P P 01 21 40.1 0.0
comp=Z,14nm,0.8s
SSB LR LR
comp=Z,3µm,19.0s
SSB Saint Sauveur 91.63 321 *e*P P 01 21 40.1 0.0
SSB pmax pmax
comp=Z,14nm,0.8s
SSB MLR MLR
comp=Z,3µm,19.0s
VSL Villasalto 91.73 314 *e*P P 01 21 41.2 +0.5
comp=Z,90nm,1.0s
VSL LR LR
comp=Z,900nm,18.0s
G05D Wamic, OR 91.76 39 P **P 01 21 41.9 +1.2**
baz=305
VIVF Saint-Julien-l 91.79 321 *e*P P 01 21 40.5 -0.4
VIVF pmax pmax
comp=Z,15nm,0.8s
E07A Sunnyside 91.83 37 *e*P P 01 21 44.2 +3.1
comp=Z,26nm,1.1s
I04A Tendick Farm, 91.92 41 P **P 01 21 43.0 +1.5**
baz=304,SNR=8.1
C09A Chrisman Ranch 91.97 36 *e*P P 01 21 44.0 +2.4
comp=Z,14nm,0.8s
C09A LR LR
comp=Z,800nm,21.0s
D08A Wollman Farm, 92.06 37 *e*P P 01 21 44.9 +2.8
comp=Z,17nm,0.8s
L02D Cave Junction, 92.09 42 P **P 01 21 43.8 +1.5**
baz=303
HAWA Hanford 92.11 37 *e*P P 01 21 42.7 +0.4
comp=Z,23nm,1.3s
G06A Carlson Farm, 92.16 39 *e*P P 01 21 45.6 +3.0
comp=Z,32nm,1.3s
G06A LR LR
comp=Z,500nm,20.0s
F07A Phinny Hill Vi 92.18 38 PFAKE 01 21 50.0 +7.4
F07A LR LR
comp=Z,700nm,20.0s
DSB Dublin 92.24 332 *e*P P 01 21 41.7 -1.0
comp=Z,29nm,1.0s
DSB LR LR
comp=Z,6µm,18.0s
HUMO Hull Mountain 92.24 42 *e*P P 01 21 46.0 +3.0
comp=Z,12nm,1.1s
LDF La Druitiere 92.25 326 *e*P P 01 21 41.9 -1.0
I05D Terrebonne, OR 92.25 40 P **P 01 21 43.9 +0.8**
baz=305
NEW Newport 92.31 35 P **P 01 21 43.8 +0.6**
comp=Z,20nm,0.9s,baz=320,slow=3.2,SNR=19
NEW Newport 92.31 35 P **P 01 21 43.6 +0.4**
baz=308
NEW Newport 92.31 35 *e*P P 01 21 44.2 +1.0
comp=Z,24nm,1.0s
NEW LR LR
comp=Z,900nm,18.0s
TCF Toulx Ste Croi 92.38 323 *e*P P 01 21 43.4 -0.2
TCF pmax pmax
comp=Z,56nm,1.0s
J04D Umpqua Nationa 92.41 41 P **P 01 21 44.5 +0.5**
baz=304,SNR=7.9
KHMM Horse Mountain 92.70 44 PFAKE 01 22 00.0 +15
KHMM LR LR
comp=Z,700nm,19.0s
GRR Gorron 92.76 326 *e*P P 01 21 45.7 +0.4
GRR pmax pmax
comp=Z,26nm,1.1s
PINE Pine Mountain 92.80 40 *e*P P 01 21 47.6 +1.8
comp=Z,32nm,0.9s
E09A Wood Farm, Sta 92.81 37 *e*P P 01 21 48.6 +3.1
comp=Z,33nm,1.4s
E09A LR LR
comp=Z,700nm,19.0s
YBH Yreka Blue Hor 92.88 42 P **P 01 21 46.9 +0.8**
comp=Z,8.2nm,1.0s,baz=243,slow=2.3,SNR=8.6
YBH LR LR 01 59 31.7
comp=Z,146nm,20.3s,baz=328,slow=33
YBH Yreka Blue Hor 92.88 42 *e*P P 01 21 49.3 +3.2
comp=Z,17nm,1.2s
J05D Fort Rock, OR 92.91 41 P **P 01 21 46.3 0.0**
baz=305,SNR=11
K04D Chiloquin, OR 92.97 41 P **P 01 21 47.2 +0.7**
baz=304
M02C Callahan 92.97 43 P **P 01 21 46.6 +0.1**
baz=304
DYA Yadsworthy 93.00 329 IAMs_20 IAMs_20 02 09 35.6
comp=Z,3µm,14.0s
G08A Pilot Rock 93.08 38 *e*P P 01 21 49.8 +2.8
comp=Z,12nm,1.1s
G08A LR LR
comp=Z,500nm,19.0s
TAMR Tamra 93.17 312 PFAKE 01 22 00.0 +13
TAMR LR LR
comp=Z,800nm,18.0s
CAF Calviac 93.26 322 *e*P P 01 21 48.0 +0.3
CAF pmax pmax
comp=Z,49nm,1.0s
N02D Trinity Center 93.30 43 P **P 01 21 49.1 +1.1**
baz=304
RJF Les Rejaudoux 93.35 322 *e*P P 01 21 48.3 +0.2
RJF pmax pmax
comp=Z,130nm,0.9s
M04C Macdoel 93.39 42 P **P 01 21 49.9 +1.5**
baz=304
KCPM Cahto Peak 93.44 45 PFAKE 01 22 00.0 +11
KCPM LR LR
comp=Z,600nm,19.0s
K05A Summer Lake 93.44 41 *e*P P 01 21 50.4 +1.6
comp=Z,45nm,1.3s
WALA Waterton Lakes 93.46 33 *e*P P 01 21 51.2 +2.6
comp=Z,23nm,1.1s
WALA LR LR
comp=Z,900nm,21.0s
MFF Saint Martin d 93.49 324 *e*P P 01 21 48.4 -0.2
MFF pmax pmax
comp=Z,81nm,1.6s
WDC Whiskeytown Da 93.62 43 *e*P P 01 21 51.7 +2.3
comp=Z,7.1nm,1.0s
WDC Whiskeytown Da 93.62 43 *e*P P 01 21 51.7 +2.3
WDC pmax pmax
comp=Z,7.0nm,1.0s
F10A Beach Ranch, E 93.65 37 *e*P P 01 21 52.1 +2.5
comp=Z,10nm,0.9s
F10A LR LR
comp=Z,800nm,20.0s
KEST Kesra 93.68 311 P **P 01 21 50.6 +0.8**
comp=Z,20nm,0.8s,baz=334,slow=1.1,SNR=26
KEST LR LR 02 10 54.3
comp=Z,856nm,20.7s,baz=354,slow=40
KEST Kesra 93.68 311 *e*P P 01 21 50.6 +0.8
comp=Z,22nm,0.8s
CCA1 Carnmenellis 93.78 329 IAMs_20 IAMs_20 02 07 54.4
comp=Z,3µm,18.3s
FRB Frobisher Bay 93.80 4 P **P 01 21 48.8 -0.9**
comp=Z,13nm,0.7s,baz=337,slow=5.6,SNR=22
FCC Fort Churchill 93.96 18 *e*P P 01 21 51.6 +1.1
comp=Z,22nm,1.1s
FCC LR LR
comp=Z,2µm,21.0s
FCC Fort Churchill 93.96 18 *e*P P 01 21 51.6 +1.1
FCC pmax pmax
comp=Z,22nm,1.1s
FCC MLR MLR
comp=Z,2µm,21.0s
LFF La Frestale 94.01 322 *e*P P 01 21 51.3 +0.2
LFF pmax pmax
comp=Z,34nm,1.0s
MTLF Montolieu 94.11 320 *e*P P 01 21 51.3 -0.3
MTLF pmax pmax
comp=Z,12nm,0.9s
JTMT Jette 94.11 34 *e*P P 01 21 54.2 +2.5
comp=Z,12nm,0.9s
JTMT LR LR
comp=Z,800nm,19.0s
THTN Thala 94.22 311 *e*P P 01 21 53.4 +1.0
comp=Z,24nm,0.9s
THTN LR LR
comp=Z,900nm,20.0s
O03D Paynes Creek 94.25 43 P **P 01 21 53.2 +0.8**
baz=304
QUIF Quistinic 94.26 326 *e*P P 01 21 50.7 -1.4
QUIF pmax pmax
comp=Z,16nm,0.7s
MOD Modoc Plateau 94.27 41 *e*P P 01 21 55.1 +2.6
comp=Z,13nm,0.9s
BMO Blue Mountains 94.29 38 *e*P P 01 21 55.0 +2.5
comp=Z,8.6nm,0.9s
BMO LR LR
comp=Z,600nm,20.0s
BMO Blue Mountains 94.29 38 *e*P P 01 21 55.0 +2.5
BMO pmax pmax
comp=Z,9.0nm,0.9s
BMO MLR MLR
comp=Z,600nm,20.0s
GDXM Geysers 94.43 45 PFAKE 01 22 10.0 +17
GDXM LR LR
comp=Z,500nm,21.0s
FFC Flin Flon 94.66 24 *e*P P 01 21 54.8 +1.0
comp=Z,15nm,1.0s
FFC LR LR
comp=Z,1µm,21.0s
FFC Flin Flon 94.66 24 *e*P P 01 21 54.8 +1.0
FFC pmax pmax
comp=Z,15nm,1.0s
FFC MLR MLR
comp=Z,1µm,21.0s
ORV Oroville 94.85 44 *e*P P 01 21 56.7 +1.6
comp=Z,6.9nm,0.8s
ORV Oroville 94.85 44 *e*P P 01 21 56.7 +1.6
ORV pmax pmax
comp=Z,7.0nm,0.8s
MSO Missoula 94.88 35 P **P 01 21 55.7 +0.5**
baz=310
MSO Missoula 94.88 35 *e*P P 01 21 57.0 +1.8
comp=Z,13nm,1.3s
MSO LR LR
comp=Z,700nm,20.0s
WVOR Wild Horse Val 94.96 40 *e*P P 01 21 58.4 +2.7
comp=Z,13nm,1.2s
WVOR Wild Horse Val 94.96 40 *e*P P 01 21 58.4 +2.7
WVOR pmax pmax
comp=Z,13nm,1.2s
BEKR Beckworth 95.40 43 *e*P P 01 21 59.0 +1.2
comp=Z,9.1nm,0.9s
AFDM Forest Hills D 95.53 44 *e*P P 01 22 00.2 +1.9
comp=Z,6.3nm,0.9s
PPT Papeete 95.55 107 LR LR 01 55 14.0
comp=Z,298nm,21.3s,baz=284,slow=29
PPT2 Papeete2 95.56 107 *e*S S 01 33 09.3 -4.7
comp=Z,1µm,25.0s
PPT2 *e*SS **SS 01 39 41.2 -2.0**
comp=Z,592nm,24.5s
PPT2 *e*LQ LQ 01 48 48.4
comp=Z,1µm,25.5s
PPT2 *e*LR LR 01 52 54.5
comp=Z,690nm,23.5s,baz=292
ETSF Etsaut 96.00 321 *e*P P 01 22 00.4 +0.1
MFID Camas Ranch 96.01 38 *e*P P 01 22 03.0 +2.6
comp=Z,10nm,1.0s
MFID LR LR
comp=Z,500nm,20.0s
NRS Narsarsuaq 96.09 354 PFAKE 01 22 10.0 +10
NRS LR LR
comp=Z,2µm,22.0s
PAHR Pah Rah Range 96.11 43 *e*P P 01 22 03.2 +2.2
comp=Z,8.0nm,1.0s
PMOR Pomariorio Ree 96.11 104 *e*T T 03 08 45.4
comp=Z,2.6nm,0.2s
VCNR Virginia City 96.17 43 *e*P P 01 22 04.3 +2.9
comp=Z,6.0nm,0.8s
VCNR LR LR
comp=Z,400nm,21.0s
SJPF Ste Jean 96.25 322 *e*P P 01 22 01.8 +0.4
SJPF pmax pmax
comp=Z,16nm,1.1s
IVI Ivigtut 96.30 355 PFAKE 01 22 10.0 +8.9
IVI LR LR
comp=Z,1µm,20.0s
LRM Limekiln Ridge 96.32 35 *e*P P 01 22 04.1 +2.2
PNTR Pine Nut 96.33 43 *e*P P 01 22 05.0 +2.9
comp=Z,11nm,1.0s
CMB Columbia Colle 96.43 45 *e*P P 01 22 03.4 +1.1
comp=Z,12nm,1.1s
CMB LR LR
comp=Z,400nm,21.0s
CMB Columbia Colle 96.43 45 *e*P P 01 22 03.4 +1.1
CMB pmax pmax
comp=Z,12nm,1.1s
CMB MLR MLR
comp=Z,400nm,21.0s
DLMT Dillon 96.55 35 *e*P P 01 22 06.0 +3.1
comp=Z,8.9nm,0.9s
YERR Yerington 96.61 43 *e*P P 01 22 04.3 +1.0
comp=Z,15nm,1.4s
YERR LR LR
comp=Z,400nm,20.0s
HLID Hailey 96.72 37 P **P 01 22 04.4 +0.7**
baz=310
HLID Hailey 96.72 37 *e*P P 01 22 06.3 +2.5
comp=Z,10nm,1.3s
HLID LR LR
comp=Z,800nm,21.0s
WAKR Walker 96.77 44 *e*P P 01 22 05.9 +1.8
comp=Z,6.3nm,1.2s
BOZ Bozeman (W) 96.90 34 PFAKE 01 22 20.0 +16
BOZ LR LR
comp=Z,800nm,19.0s
BMN Battle Mountai 97.01 41 *e*P Pdif 01 22 08.5 +3.3
comp=Z,4.6nm,1.0s
BMN Battle Mountai 97.01 41 *e*P Pdif 01 22 08.5 +3.3
BMN pmax pmax
comp=Z,5.0nm,1.0s
RYN Ryan 97.28 43 *e*S S 01 33 28.7 +0.2
KVN Kaiserville 97.30 43 *e*P Pdif 01 22 08.7 +2.2
comp=Z,6.0nm,0.9s
KVN Kaiserville 97.30 43 *e*P Pdif 01 22 08.7 +2.2
KVN pmax pmax
comp=Z,6.0nm,0.9s
MDPB Devils Postpil 97.50 44 *e*P Pdif 01 22 10.2 +2.6
comp=Z,8.2nm,1.1s
MDPB LR LR
comp=Z,300nm,20.0s
NV01 Mina Array Sit 97.53 43 *e*P Pdif 01 22 09.3 +1.7
NV01 *e*PP **PP 01 26 04.1 -0.4**
NVAR Mina Array Bea 97.53 43 P Pdif 01 22 09.0 +1.3
comp=Z,2.8nm,0.9s,baz=290,slow=6.6,SNR=8.5
NVAR PP **PP 01 26 04.1 -0.4**
comp=Z,0.6nm,0.5s,baz=282,slow=7.3,SNR=4.4
NVAR LR LR 02 05 16.8
comp=Z,145nm,18.4s,baz=31,slow=35
OMMB Old Mammoth Mi 97.57 44 PFAKE 01 22 20.0 +12
OMMB LR LR
comp=Z,400nm,20.0s
YHB Horse Butte 97.70 35 PFAKE 01 22 20.0 +12
YHB LR LR
comp=Z,500nm,20.0s
TBI Tubuai 97.74 112 *e*S S 01 33 27.9 -4.5
comp=Z,765nm,26.5s
TBI *e*SS **SS 01 40 12.5 -1.3**
comp=Z,560nm,27.5s
TBI *e*LQ LQ 01 49 44.1
comp=Z,779nm,28.8s
TBI *e*LR LR 01 53 43.9
comp=Z,717nm,31.0s,baz=292
YMR Madison River 97.87 35 PFAKE 01 22 20.0 +11
YMR LR LR
comp=Z,600nm,21.0s
YNR Norris Junctio 97.99 35 PFAKE 01 22 20.0 +10
YNR LR LR
comp=Z,800nm,18.0s
YFT Old Faithful 98.09 35 PFAKE 01 22 20.0 +10
YFT LR LR
comp=Z,1µm,18.0s
YPP Pitchstone Pla 98.23 35 PFAKE 01 22 20.0 +9.3
YPP LR LR
comp=Z,1µm,20.0s
LKWY Lake 98.24 35 PFAKE 01 22 20.0 +9.3
LKWY LR LR
comp=Z,2µm,21.0s
H17A Grant Village 98.26 35 PFAKE 01 22 20.0 +9.2
H17A LR LR
comp=Z,900nm,20.0s
IMW Indian Meadow 98.41 35 PFAKE 01 22 20.0 +8.5
IMW LR LR
comp=Z,500nm,19.0s
RLMT Red Lodge 98.45 34 PFAKE 01 22 20.0 +8.4
RLMT LR LR
comp=Z,700nm,21.0s
DGMT Dagmar 98.48 29 PFAKE 01 22 20.0 +8.6
DGMT LR LR
comp=Z,900nm,19.0s
MOOW Moose Ponds 98.61 35 PFAKE 01 22 20.0 +7.7
MOOW LR LR
comp=Z,500nm,19.0s
TPAW Teton Pass 98.67 36 PFAKE 01 22 20.0 +7.3
TPAW LR LR
comp=Z,700nm,18.0s
LSZ Lusaka 98.69 257 *e*P P 01 22 12.3 -0.6
comp=Z,25nm,0.8s
LSZ LR LR
comp=Z,1µm,20.0s
LSZ Lusaka 98.69 257 *e*P P 01 22 12.3 -0.6
LSZ pmax pmax
comp=Z,25nm,0.8s
LSZ MLR MLR
comp=Z,1µm,20.0s
HVU Hansel Valley 98.79 38 PFAKE 01 22 30.0 +17
HVU LR LR
comp=Z,500nm,19.0s
ISA Isabella, Lake 99.05 46 PFAKE 01 22 30.0 +16
ISA LR LR
comp=Z,400nm,20.0s
AHID Auburn Hatcher 99.07 36 PFAKE 01 22 30.0 +16
AHID LR LR
comp=Z,600nm,22.0s
BGU Big Grassy Mou 99.19 39 PFAKE 01 22 30.0 +15
BGU LR LR
comp=Z,500nm,19.0s
SPUT South Promonto 99.28 38 PFAKE 01 22 30.0 +15
SPUT LR LR
comp=Z,600nm,18.0s
R11A Troy Canyon, C 99.29 42 Pdiff **Pdif 01 22 16.6 +1.2**
baz=308
R11A Troy Canyon, C 99.29 42 *e*P Pdif 01 22 18.2 +2.8
comp=Z,1.9nm,0.9s
R11A LR LR
comp=Z,500nm,20.0s
MPMC Manual Prospec 99.46 45 Pdiff **Pdif 01 22 17.1 +0.9**
baz=307
MAW Mawson 99.50 199 P **Pdif 01 22 14.7 -0.4**
comp=Z,5.3nm,1.1s,baz=40,slow=5.2,SNR=6.4
MAW LR LR 02 06 34.6
comp=Z,222nm,18.0s,baz=56,slow=35
MAW Mawson 99.50 199 *e*P Pdif 01 22 15.0 -0.2
comp=Z,1.4nm,1.0s
MAW Mawson 99.50 199 *e*P Pdif 01 22 15.0 -0.2
MAW pmax pmax
comp=Z,1.0nm,1.0s
CART Cartagena 99.52 317 PFAKE 01 22 30.0 +14
CART LR LR
comp=Z,1µm,22.0s
HWUT Hardware Ranch 99.58 37 PFAKE 01 22 30.0 +13
HWUT LR LR
comp=Z,700nm,18.0s
DUG Dugway, Tooele 99.79 39 PFAKE 01 22 30.0 +12
DUG LR LR
comp=Z,700nm,19.0s
BW06 Boulder Array 99.91 36 PFAKE 01 22 30.0 +12
BW06 LR LR
comp=Z,500nm,19.0s
PD31 Pinedale Array 99.91 36 *e*Pdif **Pdif 01 22 17.9 -0.3**
PD31 *e*PP **PP 01 26 20.7 -1.7**
PD31 *e*PKKPbc **PKKPbc 01 38 36.1 -2.1**
PDAR Pinedale Array 99.91 36 P **Pdif 01 22 17.9 -0.3**
comp=Z,0.5nm,0.7s,baz=261,slow=3.6,SNR=4.4
PDAR PP **PP 01 26 20.7 -1.7**
comp=Z,1.8nm,1.1s,baz=318,slow=6.0,SNR=4.4
PDAR PKKPbc **PKKPbc 01 38 36.1 -2.1**
comp=Z,4.8nm,1.3s,baz=122,slow=5.4,SNR=4.7
ES19 SONSECA Array 99.96 320 *e*Pdif **Pdif 01 22 18.4 +0.3**
ESDC Sonseca Array 100.02 320 P **Pdif 01 22 18.3 -0.1**
comp=Z,0.6nm,0.6s,baz=26,slow=5.2,SNR=5.6
ESDC PP **PP 01 26 21.9 -1.2**
comp=Z,4.4nm,0.9s,baz=46,slow=7.4,SNR=7.7
ESLA Sonseca Array 100.02 320 PFAKE 01 22 30.0 +12
ESLA LR LR
comp=Z,2µm,18.0s
CTU Camp Tracy 100.08 38 PFAKE 01 22 30.0 +11
CTU LR LR

comp=Z,600nm,19.0s
PASC **Pasadena Art C** **100.11** **47** PFAKE 01 22 30.0 +11
PASC LR LR
comp=Z,500nm,20.0s
PBRG **Braganca** **100.20** **323** *e*Pdif **Pdif** **01 22 17.8 -1.4**
PSUT **Pine Spring** **100.23** **41** PFAKE 01 22 30.0 +10
PSUT LR LR
comp=Z,500nm,18.0s
JLU **Jordanelle** **100.31** **38** PFAKE 01 22 30.0 +10
JLU LR LR
comp=Z,700nm,21.0s
PAB **San Pablo** **100.33** **320** PFAKE 01 22 30.0 +10
PAB LR LR
comp=Z,2µm,18.0s
ULM **Lac du Bonnet** **100.48** **23** P **Pdif** **01 22 20.9 +0.8**
comp=Z,2.8nm,0.9s,baz=349,slow=5.2,SNR=2.0
ULM **Lac du Bonnet** **100.48** **23** P **Pdif** **01 22 20.9 +0.8**
ULM LR LR
comp=Z,800nm,18.0s
ULM **Lac du Bonnet** **100.48** **23** P **Pdif** **01 22 21.0 +0.8**
ULM MLR MLR
comp=Z,800nm,18.0s
MVO **Moncorvo** **100.80** **323** *e*Pdif **Pdif** **01 22 22.1 +0.2**
MVO **Moncorvo** **100.80** **323** *e*LR LR 01 58 59.5
comp=Z,2µm,18.0s
PGAV **Gavieira, Arco** **100.93** **324** *e*LR LR 01 59 45.6
comp=Z,2µm,18.0s
MDND **Maddock** **100.94** **27** PFAKE 01 22 30.0 +7.7
MDND LR LR
comp=Z,900nm,19.0s
TAOE **Nuku Hiva Isla** **100.98** **95** *e*LR LR 01 54 45.6
comp=Z,483nm,28.5s
POLO **Lamas de Olo** **101.08** **324** *e*Pdif **Pdif** **01 22 24.3 +1.1**
CCUT **Cedar City** **101.16** **42** PFAKE 01 22 40.0 +16
CCUT LR LR
comp=Z,400nm,20.0s
P17A **Butcher Ranch,** **101.47** **39** PFAKE 01 22 40.0 +15
P17A LR LR
comp=Z,700nm,20.0s
LDFC **Landfair** **101.60** **44** PFAKE 01 22 40.0 +14
LDFC LR LR
comp=Z,400nm,19.0s
MTE **Manteigas** **101.60** **323** *e*LR LR 01 59 59.0
comp=Z,2µm,20.0s
MTE **Manteigas** **101.60** **323** PFAKE 01 22 40.0 +15
MTE LR LR
comp=Z,2µm,20.0s
RSSD **Black Hills** **101.78** **32** PFAKE 01 22 40.0 +14
RSSD LR LR
comp=Z,700nm,21.0s
KNB **Kanab** **101.83** **42** PFAKE 01 22 40.0 +13
KNB LR LR
comp=Z,400nm,20.0s
SRU **San Rafael Swe** **101.83** **39** PFAKE 01 22 40.0 +13
SRU LR LR
comp=Z,500nm,21.0s
PKCU **Pink Cliffs** **101.86** **41** PFAKE 01 22 40.0 +13
PKCU LR LR
comp=Z,800nm,21.0s
RWWY **Rawlins** **101.92** **35** PFAKE 01 22 40.0 +13
RWWY LR LR
comp=Z,800nm,22.0s
AGMN **Agassiz Nation** **102.08** **24** PFAKE 01 22 40.0 +13
AGMN LR LR
comp=Z,1µm,19.0s
PMRV **Marv??o** **102.17** **322** *e*LR LR 02 00 20.0
comp=Z,3µm,20.0s
O20A **White River Ci** **102.44** **37** PFAKE 01 22 40.0 +11
O20A LR LR
comp=Z,700nm,20.0s
VNDA **Vanda** **102.47** **172** P **Pdif** **01 22 29.4 +1.2**
comp=Z,1.3nm,0.7s,baz=277,slow=10,SNR=5.5
VNDA PP **PP** **01 26 39.0 -2.6**
comp=Z,1.7nm,0.4s,baz=330,slow=7.6,SNR=8.9
VNDA **Vanda** **102.47** **172** *e*Pdif **Pdif** **01 22 29.4 +1.2**
VNDA *e*PP **PP** **01 26 38.4 -3.2**
VNDA **Vanda** **102.47** **172** *e*P **Pdif** **01 22 29.4 +1.2**
VNDA *e* 01 26 38.4
U15A **North Rim** **102.53** **42** PFAKE 01 22 40.0 +10
U15A LR LR
comp=Z,600nm,20.0s
PESTR **Estremoz** **102.66** **322** PFAKE 01 22 40.0 +10
PESTR LR LR
comp=Z,2µm,20.0s
SCHQ **Schefferville** **102.77** **5** PFAKE 01 22 40.0 +10
SCHQ LR LR
comp=Z,2µm,19.0s
Y12C **Blythe** **102.79** **45** PFAKE 01 22 40.0 +9.2
Y12C LR LR
comp=Z,500nm,21.0s
N23A **Red Feather La** **103.15** **35** PFAKE 01 22 40.0 +7.4
N23A LR LR
comp=Z,900nm,19.0s
TAM **Tamanrasset** **103.21** **302** PFAKE 01 22 40.0 +6.9
TAM LR LR
comp=Z,700nm,20.0s
SFS **San Fernando** **103.45** **319** PFAKE 01 22 50.0 +16
SFS LR LR
comp=Z,2µm,20.0s
MESJ **Messejana** **103.72** **321** *e*PP PP 01 26 51.3 +0.4
MESJ *e*SS SS 01 41 39.1 +4.3
MESJ AMS AMS 02 07 37.5
comp=N,3µm,20.7s
PVAQ **Vaqueiros** **103.73** **321** *e*LR LR 02 02 29.4
comp=N,2µm,20.0s
SMCO **Snowmass** **103.80** **37** PFAKE 01 22 50.0 +14
SMCO LR LR
comp=Z,900nm,21.0s
EYMN **Ely** **103.98** **22** PFAKE 01 22 50.0 +14
EYMN LR LR
comp=Z,1µm,22.0s
ISCO **Idaho Springs** **104.11** **36** PFAKE 01 22 50.0 +13
ISCO LR LR
comp=Z,700nm,18.0s
MORF **Marmelete** **104.34** **321** *e*PP PP 01 26 56.0 +0.4
MORF AMS AMS 02 07 56.4
comp=E,4µm,19.4s
PFVI **Vila Bisbo** **104.56** **321** PFAKE 01 22 50.0 +11
PFVI LR LR
comp=Z,2µm,19.0s
MDT **Midelt** **104.80** **315** PKiKP **PKiKP** **01 26 55.0 -0.3**
comp=Z,3.9nm,0.8s,baz=65,slow=5.4,SNR=3.4
S22A **4UR Ranch, Cre** **104.89** **38** PFAKE 01 22 50.0 +10
S22A LR LR
comp=Z,800nm,21.0s
W18A **Petrified Fore** **104.96** **41** PFAKE 01 27 10.0
W18A LR LR
comp=Z,500nm,19.0s
OGNE **Ogallala** **105.13** **33** PFAKE 01 27 10.0
OGNE LR LR
comp=Z,800nm,21.0s
X18A **Snowflake** **105.22** **42** PFAKE 01 27 10.0
X18A LR LR
comp=Z,500nm,21.0s
RTC **Rabat Centre** **105.47** **317** PFAKE 01 27 10.0
RTC LR LR
comp=Z,5µm,20.0s
ECSD **EROS Data Cent** **105.48** **28** PKiKP **PKiKP** **01 26 55.8 -0.3**
baz=324
ECSD **EROS Data Cent** **105.48** **28** PFAKE 01 27 10.0
ECSD LR LR
comp=Z,1µm,20.0s
SDCO **Great Sand Dun** **105.63** **37** PKiKP **PKiKP** **01 26 55.6 -1.2**
baz=316
SDCO **Great Sand Dun** **105.63** **37** PFAKE 01 27 10.0
SDCO LR LR
comp=Z,700nm,21.0s
E39A **Mellen** **105.66** **22** PKiKP **PKiKP** **01 26 56.6 +0.3**
baz=330
SPMN **Marine on St.** **105.81** **24** PFAKE 01 27 10.0
SPMN LR LR
comp=Z,900nm,20.0s
E40A **Wakefield** **105.83** **22** PKiKP **PKiKP** **01 26 56.6 0.0**
baz=330
F39A **Loretta** **105.92** **23** PKiKP **PKiKP** **01 26 56.8 0.0**
baz=329
E41A **Kenton** **106.13** **21** PKiKP **PKiKP** **01 26 57.3 +0.1**
baz=331
TUC **Tucson** **106.14** **44** PFAKE 01 27 10.0
TUC LR LR
comp=Z,500nm,20.0s
F40A **Park Falls** **106.20** **22** PKiKP **PKiKP** **01 26 56.9 -0.4**
baz=330
COWI **Conover** **106.39** **22** PFAKE 01 27 10.0
COWI LR LR
comp=Z,1µm,20.0s

BGNE **Belgrade** **106.65** **30** PFAKE 01 27 10.0
BGNE LR LR
comp=Z,900nm,20.0s
T25A **Trinidad** **106.67** **37** PFAKE 01 27 10.0
T25A LR LR
comp=Z,600nm,22.0s
G40A **Rib Lake** **106.74** **23** PKiKP **PKiKP** **01 26 58.5 +0.2**
baz=330
TASM **ASL Pad, Albuq** **107.05** **40** PKiKP **PKiKP** **01 26 59.3 -0.1**
baz=314
ANMO **Albuquerque** **107.05** **40** PKiKP **PKiKP** **01 26 58.3 -1.1**
comp=Z,2.1nm,0.9s,baz=45,slow=1.4,SNR=2.8
ANMO PKKPab **PKKPdf** **01 38 30.5 +1.9**
comp=Z,1.5nm,0.9s,baz=125,slow=5.7,SNR=5.2
ANMO **Albuquerque** **107.05** **40** PKiKP **PKiKP** **01 26 59.3 -0.2**
baz=314
ANMO **Albuquerque** **107.05** **40** *e*PKiKP **PKiKP** **01 26 58.3 -1.1**
ANMO *e*PKKPdf **PKKPab** **01 38 31.9 -1.9**
ANMO LR LR
comp=Z,700nm,18.0s
TASL **Snake Pit, Alb** **107.05** **40** PKiKP **PKiKP** **01 26 59.4 0.0**
baz=314
Y22D **IRIS PASSCAL I** **107.37** **41** PFAKE 01 27 10.0
Y22D LR LR
comp=Z,700nm,22.0s
G42A **Mountain** **107.38** **22** PKiKP **PKiKP** **01 26 59.6 +0.1**
baz=331
G42A **Mountain** **107.38** **22** PFAKE 01 27 10.0
G42A LR LR
comp=Z,2µm,21.0s
H41A **Junction City** **107.50** **23** PFAKE 01 27 10.0
H41A LR LR
comp=Z,1µm,22.0s
G43A **Wallace** **107.62** **21** PFAKE 01 27 10.0
G43A LR LR
comp=Z,2µm,20.0s
319A **Douglas** **107.71** **44** PFAKE 01 27 10.0
319A LR LR
comp=Z,500nm,20.0s
H42A **Shiocton** **107.99** **22** PFAKE 01 27 10.0
H42A LR LR
comp=Z,1µm,20.0s
H43A **Windswept, Lux** **108.28** **22** PKiKP **PKiKP** **01 27 01.4 +0.2**
baz=332
H43A **Windswept, Lux** **108.28** **22** PFAKE 01 27 10.0
H43A LR LR
comp=Z,2µm,21.0s
SRIG **Santa Rosalia** **108.30** **49** PFAKE 01 27 10.0
SRIG LR LR
comp=Z,600nm,20.0s
I42A **Draeger Farm,** **108.39** **23** PFAKE 01 27 10.0
I42A LR LR
comp=Z,1µm,19.0s
SCIA **State Center** **108.42** **27** PFAKE 01 27 10.0
SCIA LR LR
comp=Z,1µm,19.0s
JFWS **Jewell Farm** **108.74** **24** PFAKE 01 27 10.0
JFWS LR LR
comp=Z,1µm,20.0s
KSU1 **Kansas State U** **109.19** **31** PFAKE 01 27 20.0
KSU1 LR LR
comp=Z,700nm,21.0s
EPT **El Paso** **109.20** **42** PFAKE 01 27 20.0
EPT LR LR
comp=Z,600nm,20.0s
TSUM **Tsumeb** **109.54** **257** PFAKE 01 27 20.0
TSUM LR LR
comp=Z,1µm,18.0s
MSTX **Muleshoe** **109.88** **38** PFAKE 01 27 20.0
MSTX LR LR
comp=Z,700nm,20.0s
MNTX **Cornudas Mount** **109.95** **41** PKiKP **PKiKP** **01 27 04.4 -0.3**
baz=314
RKT **Rikitea** **110.29** **107** *e*SS SS 01 43 05.3 -1.1
comp=Z,562nm,27.5s
RKT **Rikitea** **110.29** **107** *e*LQ LQ 01 54 52.3
comp=Z,608nm,29.5s
RKT *e*LR LR 01 58 46.2
comp=Z,530nm,25.2s,baz=294
SADO **Sadowa** **110.56** **16** PFAKE 01 27 20.0
SADO LR LR
comp=Z,1µm,22.0s
P39B **Salisbury** **110.62** **28** PKiKP **PKiKP** **01 27 05.6 -0.2**
baz=326
PLVO **Plevna** **110.80** **14** PFAKE 01 27 20.0
PLVO LR LR
comp=Z,1µm,19.0s
Q39A **Willow Grove F** **110.89** **28** PKiKP **PKiKP** **01 27 05.9 -0.4**
baz=326
HDIL **Hopedale** **111.13** **25** PFAKE 01 27 20.0
HDIL LR LR
comp=Z,1µm,21.0s
TOC2 **Torodi Ar. Sit** **111.25** **295** PFAKE 01 27 20.0
TOC2 LR LR
comp=Z,800nm,21.0s
TOC1 **Torodi Ar. Sit** **111.26** **295** PFAKE 01 27 20.0
TOC1 LR LR
comp=Z,900nm,20.0s
TOC3 **Torodi Ar. Sit** **111.26** **295** PFAKE 01 27 20.0
TOC3 LR LR
comp=Z,800nm,21.0s
TOB2 **Torodi Ar. Sit** **111.26** **295** PFAKE 01 27 20.0
TOB2 LR LR
comp=Z,700nm,19.0s
TOA2 **Torodi Ar. Sit** **111.27** **295** PFAKE 01 27 20.0
TOA2 LR LR
comp=Z,800nm,21.0s
TOB3 **Torodi Ar. Sit** **111.27** **295** PFAKE 01 27 20.0
TOB3 LR LR
comp=Z,800nm,21.0s
TOA1 **Torodi Ar. Sit** **111.28** **295** *e*PKiKP **PKiKP** **01 27 07.3 -0.2**
TOA1 *e*PKKPbc **PKKPbc** **01 38 02.7 +0.1**
TOA1 LR LR
comp=Z,800nm,21.0s
TORD **Torodi Ar. Bea** **111.28** **295** PKiKP **PKiKP** **01 27 07.3 -0.2**
comp=Z,3.8nm,0.8s,baz=17,slow=1.5,SNR=14
TORD PKKPbc **PKKPbc** **01 38 02.7 +0.1**
comp=Z,1.2nm,0.7s,baz=254,slow=2.2,SNR=6.3
TOA3 **Torodi Ar. Sit** **111.28** **295** PFAKE 01 27 20.0
TOA3 LR LR
comp=Z,800nm,20.0s
TOC7 **Torodi Ar. Sit** **111.28** **295** PFAKE 01 27 20.0
TOC7 LR LR
comp=Z,800nm,19.0s
TOB5 **Torodi Ar. Sit** **111.29** **295** PFAKE 01 27 20.0
TOB5 LR LR
comp=Z,800nm,19.0s
TOC4 **Torodi Ar. Sit** **111.29** **295** PFAKE 01 27 20.0
TOC4 LR LR
comp=Z,800nm,21.0s
TOB4 **Torodi Ar. Sit** **111.29** **295** PFAKE 01 27 20.0
TOB4 LR LR
comp=Z,700nm,19.0s
TOC5 **Torodi Ar. Sit** **111.30** **295** PFAKE 01 27 20.0
TOC5 LR LR
comp=Z,900nm,19.0s
R39A **Chumby, Stover** **111.47** **29** PKiKP **PKiKP** **01 27 06.5 -0.9**
baz=326
WMOK **Wichita Mounta** **111.51** **35** PFAKE 01 27 20.0
WMOK LR LR
comp=Z,900nm,20.0s
AAM **Ann Arbor** **111.57** **20** PFAKE 01 27 20.0
AAM LR LR
comp=Z,2µm,21.0s
LONY **Lake Ozonia** **111.72** **12** PFAKE 01 27 20.0
LONY LR LR
comp=Z,1µm,19.0s
R40A **Maddies Statio** **111.82** **28** PKiKP **PKiKP** **01 27 07.4 -0.6**
baz=326
S39A **Bolivar** **111.85** **29** PKiKP **PKiKP** **01 27 07.7 -0.4**
baz=325
T38A **Diamond** **111.94** **30** PKiKP **PKiKP** **01 27 07.2 -1.2**
baz=324
PKME **Peaks-Kenny Pk** **111.97** **8** PFAKE 01 27 20.0
PKME LR LR
comp=Z,1µm,20.0s
SFIN **Lafayette** **112.11** **23** PFAKE 01 27 20.0
SFIN LR LR
comp=Z,1µm,20.0s
TUL1 **Leonard** **112.12** **32** PFAKE 01 27 20.0
TUL1 LR LR
comp=Z,600nm,18.0s
QSPA **South Pole Qui** **112.18** **180** PKiKP **PKiKP** **01 27 07.3 -0.5**
comp=Z,4.5nm,1.0s,baz=297,slow=4.4,SNR=6.4
QSPA PKKPbc **PKKPbc** **01 37 57.9 -3.8**
comp=Z,1.4nm,0.8s,baz=210,slow=1.8,SNR=2.8

R41A **Rosebud** **112.20** **27** PKiKP **PKiKP** **01 27 08.5 -0.3**
baz=327
T39A **Clever** **112.37** **30** PKiKP **PKiKP** **01 27 08.4 -0.7**
baz=325
SLM **Saint Louis** **112.40** **26** PFAKE 01 27 20.0
SLM LR LR
comp=Z,1µm,19.0s
PMOZ **Porto Moniz, M** **112.42** **323** *e*LR LR 02 08 04.7
comp=Z,1µm,20.0s
CCM **Cathedral Cave** **112.46** **28** PKiKP **PKiKP** **01 27 08.4 -0.9**
baz=327
CCM **Cathedral Cave** **112.46** **28** PFAKE 01 27 20.0
CCM LR LR
comp=Z,1µm,21.0s
R42A **Luebbering** **112.46** **27** PKiKP **PKiKP** **01 27 09.1 -0.2**
baz=328
LBNH **Lisbon** **112.57** **10** PFAKE 01 27 20.0
LBNH LR LR
comp=Z,1µm,19.0s
S41A **Jillco Farms,** **112.64** **28** PKiKP **PKiKP** **01 27 09.0 -0.6**
baz=327
ABTX **Abilene, Hawle** **112.64** **37** PKiKP **PKiKP** **01 27 09.0 -0.8**
baz=319
ABTX **Abilene, Hawle** **112.64** **37** PFAKE 01 27 20.0
ABTX LR LR
comp=Z,1µm,19.0s
TXAR **Lajitas Array** **112.65** **42** PKiKP **PKiKP** **01 27 09.9 0.0**
comp=Z,2.4nm,0.8s,baz=207,slow=0.2,SNR=19
TXAR PKKPbc **PKKPbc** **01 37 57.7 -0.9**
comp=Z,0.6nm,0.9s,baz=153,slow=8.1,SNR=3.7
TXAR **Lajitas Array** **112.65** **42** PKIKP **PKiKP** **01 27 10.0 0.0**
T40A **Mansfield** **112.66** **29** PKiKP **PKiKP** **01 27 08.7 -1.0**
baz=326
ERPA **Erie** **112.82** **17** PFAKE 01 27 20.0
ERPA LR LR
comp=Z,1µm,20.0s
U39A **Green Forest** **112.85** **30** PKiKP **PKiKP** **01 27 09.2 -0.9**
baz=325
FVM **French Village** **112.87** **27** PFAKE 01 27 20.0
FVM LR LR
comp=Z,800nm,22.0s
S42A **Caledonia** **112.89** **27** PKiKP **PKiKP** **01 27 09.9 -0.2**
baz=328
Q45A **Warren Harvey,** **113.01** **25** PKiKP **PKiKP** **01 27 09.6 -0.7**
baz=330
T41A **Mountain View** **113.08** **29** PKiKP **PKiKP** **01 27 09.6 -0.9**
baz=327
U40A **Yellville** **113.16** **30** PKiKP **PKiKP** **01 27 10.5 -0.1**
baz=326
OLIL **Olney** **113.17** **25** PFAKE 01 27 20.0
OLIL LR LR
comp=Z,1µm,19.0s
P47A **Martinsville** **113.20** **23** PKiKP **PKiKP** **01 27 10.4 -0.2**
baz=332
R44A **Waltonville** **113.20** **26** PKiKP **PKiKP** **01 27 10.9 +0.3**
baz=329
ALLY **Alegheny Colle** **113.21** **18** PFAKE 01 27 20.0
ALLY LR LR
comp=Z,1µm,22.0s
V39A **Pettigrew** **113.21** **31** PKiKP **PKiKP** **01 27 09.9 -0.9**
baz=325
S43A **Fulton Ridge,** **113.36** **27** PKiKP **PKiKP** **01 27 10.2 -0.8**
baz=328
BLO **Bloomington** **113.38** **23** PFAKE 01 27 20.0
BLO LR LR
comp=Z,900nm,20.0s
T42A **Van Buren** **113.39** **28** PKiKP **PKiKP** **01 27 10.4 -0.7**
baz=327
M54A **Oil Creek Stat** **113.47** **17** PKiKP **PKiKP** **01 27 10.5 -0.7**
baz=339
M54A **Oil Creek Stat** **113.47** **17** PFAKE 01 27 20.0
M54A LR LR
comp=Z,900nm,19.0s
R45A **Skylar, Fairfi** **113.48** **25** PKiKP **PKiKP** **01 27 10.5 -0.7**
baz=330
U41A **Viola** **113.59** **29** PKiKP **PKiKP** **01 27 10.6 -0.9**
baz=326
V40A **Witts Springs** **113.63** **30** PKiKP **PKiKP** **01 27 10.7 -0.9**
baz=325
V40A **Witts Springs** **113.63** **30** PFAKE 01 27 20.0
V40A LR LR
comp=Z,800nm,18.0s
ACSO **Alum Creek Sta** **113.66** **20** PKiKP **PKiKP** **01 27 10.7 -0.8**
baz=335
ACSO **Alum Creek Sta** **113.66** **20** PFAKE 01 27 20.0
ACSO LR LR
comp=Z,1µm,21.0s
W39A **Magazine** **113.67** **31** PKiKP **PKiKP** **01 27 11.0 -0.6**
baz=324
T43A **Greenville** **113.69** **27** PKiKP **PKiKP** **01 27 10.8 -0.9**
baz=328
BINY **Binghamton** **113.74** **14** PFAKE 01 27 20.0
BINY LR LR
comp=Z,1µm,22.0s
PBMO **Poplar Bluff** **113.89** **28** PFAKE 01 27 20.0
PBMO LR LR
comp=Z,800nm,20.0s
N54A **Moraine State** **113.89** **18** PFAKE 01 27 20.0
N54A LR LR
comp=Z,1µm,20.0s
U42A **Revenden** **113.89** **29** PKiKP **PKiKP** **01 27 11.0 -1.1**
baz=327
V41A **Mountainview** **113.95** **30** PKiKP **PKiKP** **01 27 11.1 -1.2**
baz=326
USIN **University of** **114.00** **25** PFAKE 01 27 20.0 +7.8
USIN LR LR
comp=Z,2µm,20.0s
X39A **Fountain Ranch** **114.06** **32** PKiKP **PKiKP** **01 27 12.0 -0.4**
baz=324
JCT **Junction City** **114.15** **39** PKiKP **PKiKP** **01 27 12.3 -0.4**
baz=318
JCT **Junction City** **114.15** **39** PFAKE 01 27 30.0 +17
JCT LR LR
comp=Z,900nm,19.0s
R47A **Wooly Knot Far** **114.15** **24** PKiKP **PKiKP** **01 27 11.7 -0.8**
baz=332
PARMO **Parma** **114.27** **27** PFAKE 01 27 30.0 +17
PARMO LR LR
comp=Z,700nm,20.0s
V42A **Cord** **114.28** **29** PKiKP **PKiKP** **01 27 11.8 -1.0**
baz=327
MIAR **Mount Ida** **114.30** **31** PKiKP **PKiKP** **01 27 12.4 -0.5**
baz=324
MIAR **Mount Ida** **114.30** **31** PFAKE 01 27 30.0 +17
MIAR LR LR
comp=Z,900nm,18.0s
WHAR **Wooly Hollow** **114.30** **30** PFAKE 01 27 30.0 +17
WHAR LR LR
comp=Z,1µm,21.0s
WCI **Wyandotte Cave** **114.30** **24** PFAKE 01 27 30.0 +17
WCI LR LR
comp=Z,900nm,20.0s
R48A **Northridge Ran** **114.30** **23** PKiKP **PKiKP** **01 27 12.1 -0.7**
baz=332
HRV **Adam Dziewonsk** **114.32** **11** PFAKE 01 27 20.0 +7.3
HRV LR LR
comp=Z,2µm,22.0s
WHTX **Lake Whitney,** **114.32** **36** PFAKE 01 27 30.0 +17
WHTX LR LR
comp=Z,900nm,20.0s
W41B **Gary Mavity, V** **114.41** **30** PKiKP **PKiKP** **01 27 12.2 -0.8**
baz=326
W41B **Gary Mavity, V** **114.41** **30** PFAKE 01 27 30.0 +17
W41B LR LR
comp=Z,1µm,20.0s
H06E1 **SOCORRO T-PHAS** **114.42** **56** T T 03 32 24.9
PVMO **Portageville** **114.51** **27** PFAKE 01 27 30.0 +17
PVMO LR LR
comp=Z,800nm,19.0s
X40A **Basin Creek Fa** **114.70** **31** PKiKP **PKiKP** **01 27 13.1 -0.5**
baz=325
X40A **Basin Creek Fa** **114.70** **31** PFAKE 01 27 30.0 +16
X40A LR LR
comp=Z,1µm,21.0s
T46A **Princeton** **114.71** **26** PKiKP **PKiKP** **01 27 13.4 -0.2**
baz=330
SSPA **Standing Stone** **114.76** **16** PKiKP **PKiKP** **01 27 13.2 -0.4**
baz=340
SSPA **Standing Stone** **114.76** **16** PFAKE 01 27 30.0 +16
SSPA LR LR
comp=Z,2µm,22.0s
HBAR **Harrisburg** **114.81** **29** PFAKE 01 27 30.0 +16
HBAR LR LR
comp=Z,900nm,20.0s
S48A **Wiedeman Farm,** **114.89** **24** PKiKP **PKiKP** **01 27 13.1 -0.8**
baz=332
O56A **Blue Knob Stat** **114.92** **17** PKiKP **PKiKP** **01 27 13.4 -0.6**

baz=340
O56A Blue Knob Stat 114.92 17 PFAKE 01 27 30.0 +16
O56A LR LR
comp=Z,1μm,22.0s
N59A State Game Lan 115.01 14 PFAKE 01 27 30.0 +16
N59A LR LR
comp=Z,2μm,22.0s
HALT Halls 115.09 27 PFAKE 01 27 30.0 +16
HALT LR LR
comp=Z,600nm,20.0s
435B Jarrell 115.17 37 PFAKE 01 27 30.0 +15
435B LR LR
comp=Z,700nm,19.0s
T48A Bowling Green 115.24 24 PKiKP **PKiKP 01 27 13.6 -1.1**
baz=332
KOWA Kowa 115.27 299 PKP **PKPdf 01 27 14.3 -0.9**
comp=Z,4.6nm,0.6s,baz=328,slow=1.8,SNR=12
KOWA Kowa 115.27 299 *e*PKiKP **PKPdf 01 27 14.3 -0.9**
KOWA LR LR
comp=Z,1μm,20.0s
PAL Palisades 115.33 13 PFAKE 01 27 30.0 +15
PAL LR LR
comp=Z,1μm,21.0s
PAGS Pennsylvania G 115.44 15 PFAKE 01 27 30.0 +15
PAGS LR LR
comp=Z,1μm,20.0s
U47A Clarksville 115.47 25 PKiKP **PKiKP 01 27 14.4 -0.7**
baz=331
MET Memphis--Engin 115.50 28 PFAKE 01 27 30.0 +15
MET LR LR
comp=Z,700nm,20.0s
WVT Waverly 115.53 26 PKiKP **PKiKP 01 27 14.7 -0.5**
baz=330
WVT Waverly 115.53 26 *e*PKPdf **PKPdf 01 27 14.4 -0.8**
WVT LR LR
comp=Z,1μm,21.0s
WVT Waverly 115.53 26 *e*PKIKP **PKPdf 01 27 14.4 -0.8**
WVT MLR MLR
comp=Z,1μm,21.0s
X43A Marvell 115.58 29 PFAKE 01 27 30.0 +15
X43A LR LR
comp=Z,1μm,18.0s
U48A Cassie Pea, Po 115.71 25 PKiKP **PKiKP 01 27 14.9 -0.7**
baz=331
S51A Beattyville 115.79 22 PKiKP **PKiKP 01 27 15.1 -0.6**
baz=334
140A Cam and Jess, 115.83 33 PFAKE 01 27 30.0 +14
140A LR LR
comp=Z,1μm,19.0s
T50A Nancy 115.90 23 PKiKP **PKiKP 01 27 14.8 -1.1**
baz=333
V47A Nunnelly 115.91 26 PKiKP **PKiKP 01 27 14.7 -1.2**
baz=330
833A Chaparral WMA, 115.98 40 PKiKP **PKiKP 01 27 15.9 -0.4**
baz=318
833A Chaparral WMA, 115.98 40 PFAKE 01 27 30.0 +14
833A LR LR
comp=Z,1μm,20.0s
NATX Nacogdoches 115.98 34 PFAKE 01 27 30.0 +14
NATX LR LR
comp=Z,900nm,19.0s
U49A Red Boiling Sp 116.00 24 PKiKP **PKiKP 01 27 15.4 -0.7**
baz=332
W46A Michie 116.16 27 PKiKP **PKiKP 01 27 15.3 -1.1**
baz=329
240A Hunter Patters 116.22 33 PFAKE 01 27 30.0 +13
240A LR LR
comp=Z,700nm,20.0s
OXF Oxford 116.24 28 PKiKP **PKiKP 01 27 15.4 -1.2**
baz=328
OXF Oxford 116.24 28 PFAKE 01 27 30.0 +13
OXF LR LR
comp=Z,1μm,18.0s
V48A Smith Brothers 116.27 26 PKiKP **PKiKP 01 27 15.5 -1.1**
baz=331
X45A UM Field Stati 116.32 28 PKiKP **PKiKP 01 27 15.7 -1.0**
baz=328
W47A Westpoint 116.38 26 PKiKP **PKiKP 01 27 15.9 -1.0**
baz=330
PLAL Pickwick Lake 116.41 27 *e*PKPdf **PKPdf 01 27 15.3 -1.6**
PLAL LR LR
comp=Z,800nm,19.0s
W48A Pulaski 116.75 26 PKiKP **PKPdf 01 27 16.3 -1.3**
baz=331
HKT Hockley 116.78 36 *e*PKPdf **PKPdf 01 27 18.7 +1.0**
HKT LR LR
comp=Z,1μm,20.0s
HKT Hockley 116.78 36 *e*PKIKP **PKPdf 01 27 18.7 +1.0**
HKT MLR MLR
comp=Z,1μm,20.0s
TZTN Tazewell 116.79 22 PKiKP **PKPdf 01 27 16.9 -0.7**
baz=334
TZTN Tazewell 116.79 22 PFAKE 01 27 30.0 +12
TZTN LR LR
comp=Z,1μm,21.0s
Z44A Pea Ridge, Bel 116.82 30 PKiKP **PKPdf 01 27 17.1 -0.6**
baz=327
V50A Pikeville 117.00 24 PKiKP **PKPdf 01 27 17.1 -0.9**
baz=332
Y46A Houston 117.02 28 PKiKP **PKPdf 01 27 17.1 -1.0**
baz=328
W49A Belvidere 117.03 25 PKiKP **PKPdf 01 27 17.0 -1.1**
baz=331
SWET Sewanee 117.08 25 PFAKE 01 27 30.0 +12
SWET LR LR
comp=Z,1μm,21.0s
341A Kurthwood 117.09 33 PKiKP **PKPdf 01 27 17.4 -0.9**
baz=324
IP04 Greensprings 117.09 17 PFAKE 01 27 30.0 +12
IP04 LR LR
comp=Z,1μm,19.0s
V51A Loudon 117.16 23 PKiKP **PKPdf 01 27 17.3 -1.1**
baz=333
CBN Corbin Frederi 117.18 17 PFAKE 01 27 30.0 +12
CBN LR LR
comp=Z,1μm,21.0s
CVRD Centerville Ro 117.19 17 PFAKE 01 27 30.0 +12
CVRD LR LR
comp=Z,1μm,20.0s
SPRD Spring Road, M 117.21 17 PFAKE 01 27 30.0 +12
SPRD LR LR
comp=Z,1μm,20.0s
BLA Blacksburg 117.22 20 PFAKE 01 27 30.0 +11
BLA LR LR
comp=Z,1μm,21.0s
IP06 Yanceyville 117.27 17 PFAKE 01 27 30.0 +12
IP06 LR LR
comp=Z,3μm,19.0s
IP07 Quail 117.27 17 PFAKE 01 27 30.0 +12
IP07 LR LR
comp=Z,1μm,21.0s
X48A Hartselle 117.30 26 PKiKP **PKPdf 01 27 17.6 -1.1**
baz=330
W50A Signal Mountai 117.33 25 PKiKP **PKPdf 01 27 17.9 -0.9**
baz=332
V52A Sevierville 117.40 23 PKiKP **PKPdf 01 27 17.8 -1.1**
baz=334
CPCT Cooper Cave 117.41 24 PFAKE 01 27 30.0 +11
CPCT LR LR
comp=Z,900nm,20.0s
NVL N'lazarevskaya 117.42 201 *e*PKIKP PKPdf 01 27 27.8 +10
NVL *e*PPP PPP 01 31 04.3
Y47A UCPARC, Winfie 117.43 27 PKiKP **PKPdf 01 27 18.0 -0.9**
baz=329
X49A Woodville 117.54 26 PKiKP **PKPdf 01 27 18.4 -0.7**
baz=331
VBMS Vicksburg 117.66 31 PFAKE 01 27 30.0 +11
VBMS LR LR
comp=Z,900nm,20.0s
Y48A Jasper 117.71 27 PKiKP **PKPdf 01 27 18.2 -1.2**
baz=330
V53A Saluda 117.84 22 PKiKP **PKPdf 01 27 18.9 -0.9**
baz=335
ZAIG Zacatecas 117.90 47 PFAKE 01 27 30.0 +10
ZAIG LR LR
comp=Z,700nm,20.0s
W52A Murphy 117.95 24 PKiKP **PKPdf 01 27 18.7 -1.2**
baz=333
Z48A Northport 118.01 27 PKiKP **PKPdf 01 27 18.9 -1.2**
baz=330
Y49A Blount Mountai 118.07 26 PKiKP **PKPdf 01 27 19.1 -1.1**
baz=331
541A Lake Charles 118.10 34 PKiKP **PKPdf 01 27 19.5 -0.8**
baz=324
W53A Cullowhee 118.16 23 PKiKP **PKPdf 01 27 19.9 -0.6**
baz=334
Y50A Piedmont 118.32 26 PKiKP **PKPdf 01 27 19.7 -1.0**
baz=331
X52A Dahlonega 118.40 24 PKiKP **PKPdf 01 27 20.2 -0.6**
baz=333
LNIG Linares 118.43 43 *e*PKPdf **PKPdf 01 27 20.3 -0.8**
NCAT North Carolina 118.47 20 PFAKE 01 27 30.0 +9.1
NCAT LR LR
comp=Z,900nm,20.0s
LRAL Lakeview Retre 118.54 27 PKiKP **PKPdf 01 27 20.2 -0.9**
baz=330
LRAL Lakeview Retre 118.54 27 PFAKE 01 27 30.0 +8.9
LRAL LR LR
comp=Z,900nm,20.0s
Z49A Columbiana 118.60 27 PKiKP **PKPdf 01 27 20.3 -0.8**
baz=330
X53A Estanollee 118.71 23 PKiKP **PKPdf 01 27 20.8 -0.6**
baz=334
Z50A Ashland 118.80 26 PKiKP **PKPdf 01 27 20.8 -0.9**
baz=331
KMSC Kings Mountain 118.82 21 PKiKP **PKPdf 01 27 20.5 -1.0**
baz=336
KMSC Kings Mountain 118.82 21 PFAKE 01 27 30.0 +8.4
KMSC LR LR
comp=Z,1μm,22.0s
346A Big Creek Wild 118.84 30 PKiKP **PKPdf 01 27 20.7 -1.0**
baz=327
Y52A Lilburn 118.99 24 PKiKP **PKPdf 01 27 21.0 -0.9**
baz=333
149A Jones 119.00 27 PKiKP **PKPdf 01 27 21.5 -0.5**
baz=330
Z51A Franklin 119.04 25 PKiKP **PKPdf 01 27 21.5 -0.6**
baz=332
Y53A Monroe 119.18 24 PKiKP **PKPdf 01 27 21.7 -0.6**
baz=334
347A Saraland 119.26 29 PKiKP **PKPdf 01 27 21.8 -0.7**
baz=328
150A Eclectic 119.32 27 PKiKP **PKPdf 01 27 21.9 -0.7**
baz=331
HODGE Hodges 119.33 23 PFAKE 01 27 30.0 +7.4
HODGE LR LR
comp=Z,1μm,22.0s
249A Camden 119.40 28 PKiKP **PKPdf 01 27 22.1 -0.6**
baz=330
Z52A Williamson 119.45 25 PKiKP **PKPdf 01 27 22.3 -0.6**
baz=332
Y54A Tignall 119.51 23 PKiKP **PKPdf 01 27 22.3 -0.6**
baz=334
GOGA Godfrey 119.62 24 PKiKP **PKPdf 01 27 22.8 -0.3**
baz=334
GOGA Godfrey 119.62 24 PFAKE 01 27 40.0 +17
GOGA LR LR
comp=Z,1μm,21.0s
JSC Jenkinsville 119.63 22 PFAKE 01 27 40.0 +17
JSC LR LR
comp=Z,1μm,22.0s
151A Opelika 119.67 26 PKiKP **PKPdf 01 27 22.9 -0.4**
baz=331
Z53A Monticello 119.70 24 PKiKP **PKPdf 01 27 23.0 -0.3**
baz=333
447A Lucedale 119.72 30 PKiKP **PKPdf 01 27 23.2 -0.2**
baz=328
250A Grady 119.76 27 PKiKP **PKPdf 01 27 23.1 -0.3**
baz=330
152A Waverly Hall 119.80 25 PKiKP **PKPdf 01 27 23.1 -0.4**
baz=332
CNNC Cliffs of the 119.81 18 PFAKE 01 27 40.0 +17
CNNC LR LR
comp=Z,1μm,20.0s
Z54A Sparta 120.01 24 PKiKP **PKPdf 01 27 23.4 -0.5**
baz=334
251A Midway 120.02 26 PKiKP **PKPdf 01 27 23.6 -0.4**
baz=331
DBIC Dimbokro 120.11 292 PKP **PKPdf 01 27 24.2 -0.4**
comp=Z,11nm,0.8s,baz=47,slow=2.4,SNR=8.0
DBIC Dimbokro 120.11 292 *e*PKPdf **PKPdf 01 27 24.7 +0.2**
BRAL Brewton 120.12 28 PKiKP **PKPdf 01 27 24.1 -0.1**
baz=329
KIC Kosan Boka 120.16 292 *e*PKP1 **PKPdf 01 27 23.8 -0.9**
comp=Z,47nm,1.0s
TIC Toumodi 120.26 292 *e*PKP1 **PKPdf 01 27 24.7 -0.2**
252A Lumpkin 120.38 26 PKiKP **PKPdf 01 27 23.6 -1.0**
baz=332
449A Pace 120.40 29 PKiKP **PKPdf 01 27 24.4 -0.3**
baz=329
LIC Lamto 120.48 292 *e*PKP1 **PKPdf 01 27 24.3 -1.0**
comp=Z,51nm,0.8s
155A Kite 120.70 24 PKiKP **PKPdf 01 27 25.0 -0.2**
baz=334
JRQG Juriquilla Cam 120.75 47 PFAKE 01 27 40.0 +14
JRQG LR LR
comp=Z,1μm,21.0s
254A Abbeville 120.99 25 PKiKP **PKPdf 01 27 25.5 -0.3**
baz=333
TIGA Tifton 121.33 25 PKiKP **PKPdf 01 27 25.8 -0.7**
baz=333
TIGA Tifton 121.33 25 PFAKE 01 27 40.0 +14
TIGA LR LR
comp=Z,1μm,22.0s
SNAA Sanae 121.62 198 PKiKP **PKPdf 01 27 24.7 -1.1**
SNAA Sanae 121.62 198 PKP **PKPdf 01 27 25.3 -0.5**
comp=Z,1.2nm,0.5s,baz=268,slow=5.8,SNR=12
SNAA PKKPbc **PKKPab 01 37 24.6 0.0**
comp=Z,2.0nm,0.8s,baz=285,slow=8.7,SNR=4.7
SNAA Sanae 121.62 198 *e*PKPdf **PKPdf 01 27 25.3 -0.5**
SNAA *e*PKKPbc **PKKPab 01 37 24.6 0.0**
SNAA LR LR
comp=Z,800nm,21.0s
SNAA Sanae 121.62 198 *e*PKIKP **PKPdf 01 27 25.3 -0.5**
SNAA MLR MLR
comp=Z,800nm,21.0s
VNA2 Neumayer--Watz 123.27 198 PKiKP **PKPdf 01 27 28.9 -0.1**
baz=65,slow=1.4
657A Interlachen 123.65 25 PKiKP **PKPdf 01 27 29.6 -1.3**
baz=334
VNA1 Neumayer--Stat 123.66 198 PKiKP **PKPdf 01 27 29.5 -0.2**
VNA3 Neumayer Olymp 123.73 197 PKiKP **PKPdf 01 27 29.4 -0.5**
DWPF Disney Wildern 125.13 25 PFAKE 01 27 50.0 +16
DWPF LR LR
comp=Z,1μm,20.0s
859A Kempfer Cattle 125.39 24 PKiKP **PKPdf 01 27 33.3 -1.1**
baz=335
MYIG MØrida 127.22 38 PFAKE 01 27 50.0 +12
MYIG LR LR
comp=Z,500nm,20.0s
061Z Ochoppi 127.34 26 PKiKP **PKPdf 01 27 37.9 -0.3**
baz=334
TEIG Tepich 128.62 37 PFAKE 01 27 50.0 +9.3
TEIG LR LR
comp=Z,500nm,20.0s
APG El Apazote 131.40 43 PKP **PKPdf 01 27 46.6 +0.3**
comp=Z,4.1nm,0.8s,baz=308,slow=19,SNR=3.7
APG SKPbc **SKPbc 01 31 08.0 -1.5**
comp=Z,7.4nm,1.0s,baz=322,slow=11,SNR=4.5
TGUH Tegucigalpa,Un 134.09 41 PFAKE 01 28 00.0 +8.9
TGUH LR LR
comp=Z,600nm,20.0s
GRTK Grand Turk 134.66 17 PFAKE 01 28 00.0 +7.9
GRTK LR LR
comp=Z,1μm,22.0s
MTDJ Mount Denham 135.55 26 PFAKE 01 28 10.0 +16
MTDJ LR LR
comp=Z,1μm,20.0s
SDDR Presa de Saban 137.03 18 PFAKE 01 28 10.0 +13
SDDR LR LR
comp=Z,1μm,22.0s
ESPN Las Esperanzas 137.32 39 PFAKE 01 28 10.0 +13
ESPN LR LR
comp=Z,500nm,20.0s
JTS JuntasAbangare 138.44 41 PKhKP PKPpre 01 27 53.1
comp=Z,4.1nm,0.8s,baz=345,slow=16,SNR=3.1
JTS PKP **PKPdf 01 27 58.3 -1.0**
comp=Z,3.5nm,0.4s,baz=58,slow=9.5,SNR=3.5
AGP Aguadilla 138.59 12 PFAKE 01 28 10.0 +11
AGP LR LR
comp=Z,1μm,22.0s
AOPR Arecibo Observ 138.72 12 PFAKE 01 28 10.0 +10
AOPR LR LR
comp=Z,2μm,18.0s
ABVI Anegada Island 138.75 8 PFAKE 01 28 10.0 +10
ABVI LR LR
comp=Z,600nm,20.0s
MPR Mayaguez 138.78 13 PFAKE 01 28 10.0 +10
MPR LR LR
comp=Z,500nm,21.0s
CBYP Canovanas 138.96 11 PFAKE 01 28 10.0 +10
CBYP LR LR
comp=Z,1μm,22.0s
CRPR Cabo Rojo, PR 138.99 13 PFAKE 01 28 10.0 +10
CRPR LR LR
comp=Z,2μm,22.0s
STVI Saint Thomas 139.03 9 PFAKE 01 28 10.0 +10
STVI LR LR
comp=Z,800nm,22.0s
SJG San Juan 139.07 11 PFAKE 01 28 10.0 +10
SJG LR LR
comp=Z,800nm,22.0s
HUMP Col San Antoni 139.09 11 PFAKE 01 28 10.0 +10
HUMP LR LR
comp=Z,600nm,21.0s
MTP Monte Pirata 139.18 10 PFAKE 01 28 10.0 +9.5
MTP LR LR
comp=Z,1μm,22.0s
SABA Saba 139.97 7 PFAKE 01 28 10.0 +8.0
SABA LR LR
comp=Z,900nm,21.0s
ANWB Willy Bob 140.07 5 PFAKE 01 28 10.0 +7.8
ANWB LR LR
comp=Z,600nm,20.0s
SEUS St. Eustatius 140.13 7 PFAKE 01 28 10.0 +7.7
SEUS LR LR
comp=Z,800nm,20.0s
BCIP Isla Barro Col 142.30 36 PFAKE 01 28 20.0 +14
BCIP LR LR
comp=Z,700nm,21.0s
FDF Fort de France 143.03 4 PFAKE 01 28 20.0 +12
FDF LR LR
comp=Z,700nm,21.0s
FDF Fort de France 143.03 4 *e* **PKPdf 01 28 09.6 +2.0**
SJCC San Jacinto, C 143.99 29 *e*P PKPbc 01 28 07.5 +0.4
CAPC Capurgana 144.06 33 *e*P PKPbc 01 28 08.1 +0.8
SSV Crater Summit 144.42 5 *e* PKPab 01 27 54.6 -14
SVB Belmont 144.47 5 *e* PKPab 01 27 58.0 -10
CODC Agust^›n Codaz 144.69 26 *e*P **PKPab 01 28 08.9 -0.2**
MOTC Monteria, Cord 144.75 30 *e*P **PKPab 01 28 08.5 -0.9**
GRSS Sisters 145.40 5 *e* **PKPdf 01 28 12.9 +1.3**
GRGR Grenville 145.56 5 *e*PKPdf **PKPdf 01 28 11.4 -0.6**
GRGR LR LR
comp=Z,700nm,21.0s
GRGR Grenville 145.56 5 *e* **PKPdf 01 28 10.7 -1.3**
ZARC Zaragoza, Cauc 146.25 30 *e*P **PKPdf 01 28 12.0 -1.2**
OCAC Ocana 146.28 27 *e*P **PKPbc 01 28 14.3 -0.2**
TOSP Speyside 146.47 4 *e* **PKPdf 01 28 08.6 -4.9**
SDV Santo Domingo 146.72 22 PKPbc **PKPdf 01 28 14.3 0.0**
comp=Z,120nm,0.7s,baz=32,slow=0.6,SNR=64
SDV Santo Domingo 146.72 22 *e*PKPdf **PKPdf 01 28 14.2 0.0**
SDV LR LR
comp=Z,400nm,21.0s
SDV Santo Domingo 146.72 22 *e*P **PKPdf 01 28 14.2 0.0**
TRN Trinidad (W) 147.05 5 *e* **PKPab 01 28 17.6 -0.4**
HELC Santa Helena 147.06 32 *e*PKPdf **PKPdf 01 28 15.0 0.0**
HELC LR LR
comp=Z,2μm,22.0s
HELC Santa Helena 147.06 32 *e*P **PKPab 01 28 17.9 -0.7**
PCRV Puerto La Cruz 147.09 11 PKPbc **PKPdf 01 28 15.2 +0.6**
comp=Z,41nm,1.0s,baz=32,slow=2.0,SNR=9.7
TBH Brigand Hill 147.24 5 *e* **PKPab 01 28 20.2 +1.5**
PTBC PUERTO BERRIO 147.28 30 *e*P **PKPdf 01 28 13.8 -1.1**
PLMC San Jos^ del 147.77 35 *e*P **PKPdf 01 28 16.1 +0.3**
BARC Barichara 147.81 28 *e*P **PKPbc 01 28 18.8 -0.1**
MALC Bahia Malaga 147.94 37 *e*P **PKPbc 01 28 20.2 +1.2**
GRGC Isla de Gorgon 148.28 40 *e*P **PKPbc 01 28 19.0 -0.9**
RUSC La Rusia 148.47 29 *e*PKPdf **PKPdf 01 28 17.3 -0.2**
RUSC LR LR
comp=Z,200nm,20.0s
RUSC La Rusia 148.47 29 *e*P **PKPbc 01 28 20.5 -0.5**
YOTC Yotoco, Valle 148.51 36 *e*P **PKPdf 01 28 15.4 -1.7**
TOLC Tolima 148.54 34 *e*P **PKPbc 01 28 20.5 -0.5**
ANIL Santa Ana 148.58 34 *e*P **PKPbc 01 28 20.3 -0.8**
HORQ Saladito 148.77 37 *e*P **PKPdf 01 28 17.6 -0.1**
ROSC El Rosal 148.82 32 PKP **PKPdf 01 28 19.1 +1.2**
comp=Z,6.7nm,0.5s,baz=16,slow=3.4,SNR=15
ROSC PKPbc **PKiKP 01 28 22.9 -0.4**
comp=Z,20nm,0.7s,baz=51,slow=6.5,SNR=15
ROSC El Rosal 148.82 32 *e*PKPdf **PKPdf 01 28 19.4 +1.5**
TUMC Tumaco 148.87 42 PFAKE 01 28 30.0 +4.7
TUMC LR LR
comp=Z,700nm,18.0s
CHIC Chingaza 149.29 31 *e*P **PKPdf 01 28 18.6 -0.1**
PRAC Prado 149.51 34 *e*PKPdf **PKPdf 01 28 19.1 +0.5**
PRAC LR LR
comp=Z,700nm,20.0s
PRAC Prado 149.51 34 *e*P **PKPbc 01 28 23.0 -0.1**
POPC Popayan, Colom 149.52 38 *e*P **PKPbc 01 28 21.8 -1.6**
MARP Paez Belalcaza 149.67 36 *e*P **PKPbc 01 28 24.0 +0.2**
PCON Cinco Dias 149.85 38 *e*P **PKPbc 01 28 25.4 +0.8**
SOTA Rioblanco 149.89 38 *e*P **PKPbc 01 28 24.8 +0.2**
BETC Betania 150.09 36 *e*P **PKPbc 01 28 25.3 +0.7**
CRUC La Cruz 150.15 40 *e*P **PKPbc 01 28 26.2 +1.2**
GCUF Volcan Galeras 150.18 41 *e*P **PKPbc 01 28 23.1 -2.2**
OTAV Otavalo 150.27 44 *e*PKPdf **PKPdf 01 28 20.9 +0.5**
OTAV LR LR
comp=Z,800nm,22.0s
OTAV Otavalo 150.27 44 *e*P **PKPdf 01 28 20.9 +0.5**
OTAV Otavalo 150.27 44 PKIKP **PKPdf 01 28 20.8 +0.5**
FLOC Florencia 150.88 37 *e*P **PKPdf 01 28 20.8 0.0**
RCBR Riachuelo 152.68 304 *e*PKPbc **PKPbc 01 28 31.6 +1.1**
RCBR LR LR
comp=Z,21μm,21.0s
ATAH Atahualpa 155.55 55 PKP **PKPdf 01 28 28.4 +0.4**
comp=Z,5.8nm,0.7s,baz=294,slow=1.1,SNR=6.3
PTGA Pitinga 158.44 4 PKP **PKPdf 01 28 31.5 +0.3**
comp=Z,4.2nm,0.7s,baz=56,slow=0.9,SNR=8.9
PTGA PKPab **PKPab 01 29 05.3 -0.2**
comp=Z,15nm,0.9s,baz=30,slow=5.5,SNR=7.5
PTGA Pitinga 158.44 4 *e*PKPdf **PKPdf 01 28 31.4 +0.2**
PTGA *e*PKPab **PKPab 01 29 05.3 -0.2**
PTGA LR LR
comp=Z,600nm,22.0s
PLCA Paso Flores 159.05 154 PKPab **PKPab 01 29 05.5 -2.2**
comp=Z,9.1nm,1.0s,baz=214,slow=5.2,SNR=4.2
SAML Samuel 165.90 19 *e*PKPdf **PKPdf 01 28 38.8 +0.2**
LPAZ La Paz 169.06 58 PKP **PKPdf 01 28 41.5 0.0**
comp=Z,11nm,1.1s,baz=23,slow=2.4,SNR=22
LPAZ PKPab **PKPab 01 29 52.1 -1.0**
comp=Z,4.5nm,1.0s,baz=311,slow=3.4,SNR=2.7
MNMC Minye Minye 169.11 75 *e*PKPdf **PKPdf 01 28 42.0 +0.9**
SIV San Ignacio 173.19 22 PKP **PKPdf 01 28 42.6 -0.3**
comp=Z,3.6nm,0.7s,baz=164,slow=1.0,SNR=16
SIV PKPab **PKPab 01 30 10.7 +0.3**
comp=Z,4.3nm,1.0s,baz=328,slow=7.8,SNR=4.0
CPUP Villa Florida 175.93 195 PKP **PKPdf 01 28 42.6 -0.8**
comp=Z,6.0nm,1.0s,baz=175,slow=3.8,SNR=6.7
CPUP PKPab **PKPab 01 30 22.0 -0.2**
comp=Z,8.0nm,0.9s,baz=129,slow=4.7,SNR=8.8
CPUP Villa Florida 175.93 195 *e*PKPdf **PKPdf 01 28 43.2 -0.3**
CPUP *e*PKPab **PKPab 01 30 22.0 -0.2**

TAP 06 01:09:39.0, 22°.44N×121°.43E, h25km, ML4.7, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWH	**Lutao** baz=18	**0.27**	**9**	P	Pb	01 09 45.4	-0.2
TWH	baz=18			S	Sb	01 09 49.9	-0.2
TTN	**Taitung** baz=324	**0.41**	**320**	*e*P	Pn	01 09 48.7	-0.6
LAY	**Lan-yu** baz=164	**0.42**	**164**	*e*P	Pb	01 09 48.1	+0.3
ECL	**Taimali** baz=289	**0.47**	**289**	P	Pb	01 09 48.6	-0.1
ECL	baz=289			*e*S	Sb	01 09 55.6	+0.4
TWGBT	**Beinan** baz=305	**0.50**	**319**	*e*P	Pb	01 09 48.9	-0.3
TWGBT	baz=305			*e*S	Sb	01 09 56.7	+0.7
TAW	**Tawu** baz=259	**0.50**	**261**	*e*P	Pb	01 09 49.3	+0.1
TAW	baz=259			*e*S	Sb	01 09 56.1	-0.1
TWG	**Pinlang** baz=305	**0.50**	**319**	*e*P	Pb	01 09 49.2	-0.1
EAST	**Anshuo** baz=263	**0.54**	**264**	*e*P	Pb	01 09 49.6	-0.3
EAST	baz=263			*e*S	Sb	01 09 57.4	0.0
CHKT	**Chengkung** baz=3.0	**0.66**	**355**	*e*P	Pb	01 09 52.2	+0.3
CHKT	baz=3.0			*e*S	Sb	01 10 00.6	-0.1

TSEB	**Hengchuen, Pin**	**0.73 223**	*e*P	Pn	01 09 53.6	-0.1
	baz=231					
TSEB			*e*S	Sn	01 10 03.6	-0.5
	baz=231					
MASBT	**Mashibuluo**	**0.76 283**	*e*P	Pn	01 09 54.1	0.0
	baz=282					
TWKBT	**Hengchun**	**0.76 229**	*e*P	Pb	01 09 53.8	+0.2
	baz=228					
TWK1	**Hengchun**	**0.76 230**	*e*P	Pb	01 09 52.9	-0.8
	baz=228					
FULB	**Fuli**	**0.77 351**	*e*P	Pb	01 09 53.7	0.0
	baz=358					

TAP 06 01:10:33.4,22.°44N×121.°43E,h20km±2km,ML4.3,C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWH	**Lutao**	**0.27**	**8**	P	Pb	01 10 39.5	-0.1
	baz=21						
TWH				S	Sb	01 10 43.7	-0.1
	baz=21						
TTN	**Taitung**	**0.41 320**		*e*P	Pb	01 10 42.7	+0.6
	baz=328						
TTN				*e*S	Sb	01 10 49.4	+1.5
	baz=328						
LAY	**Lan-yu**	**0.41 165**		*e*P	Pg	01 10 41.9	-0.1
	baz=164						
LAY				*e*S	Sg	01 10 47.8	0.0
	baz=164						
ECL	**Taimali**	**0.47 290**		P	Pg	01 10 42.8	-0.2
	baz=290						
ECL				S	Sg	01 10 49.1	-0.4
	baz=290						
TWGBT	**Beinan**	**0.50 319**		*e*P	Pb	01 10 43.3	-0.2
	baz=303						
TWGBT				*e*S	Sb	01 10 51.9	+1.5
	baz=303						
TAW	**Tawu**	**0.50 261**		*e*P	Pb	01 10 43.1	-0.4
	baz=260						
TAW				*e*S	Sb	01 10 50.2	-0.3
	baz=260						
TWG	**Pinlang**	**0.51 319**		*e*P	Pg	01 10 44.0	+0.3
	baz=303						
TWG				*e*S	Sg	01 10 51.6	+1.0
	baz=303						
EAST	**Anshuo**	**0.55 264**		*e*P	Pb	01 10 43.9	-0.4
	baz=264						
EAST				*e*S	Sb	01 10 50.8	-0.8
	baz=264						
CHKT	**Chengkung**	**0.66 355**		*e*P	Pg	01 10 46.6	+0.1
	baz=2.0						
SCZT	**Fangliau**	**0.76 265**		*e*P	Pg	01 10 48.3	0.0
	baz=264						
TWKBT	**Hengchun**	**0.76 229**		*e*P	Pb	01 10 47.5	-0.4
	baz=229						
TWKBT				*e*S	Sb	01 10 57.3	-0.5
	baz=229						
MASBT	**Mashibuluo**	**0.76 283**		*e*P	Pb	01 10 47.3	-0.7
	baz=283						
FULB	**Fuli**	**0.77 350**		*e*P	Pb	01 10 48.2	+0.1
	baz=360						

*NEIC **06** 01:10:44.9±0.0,22.°39N×121.°47E,h16km,ML4.7(TAP), After TAP.*
NEIC Recorded [3 TAP] in Taitung.

TAP 06 01:10:45.9,22.°43N×121.°45E,h20km±1km,ML4.7,1D,C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWH	**Lutao**	**0.28**	**5**	P	Pb	01 10 52.2	-0.1
	baz=18						
TWH				S	Sb	01 10 56.3	-0.3
	baz=18						
LAY	**Lan-yu**	**0.40 166**		P	Pg	01 10 53.7	-0.6
	baz=165						
LAY				*e*S	Sg	01 10 59.1	-0.9
	baz=165						
TTN	**Taitung**	**0.43 319**		P	Pb	01 10 55.6	+0.7
	baz=327						
TTN				*e*S	Sb	01 11 02.4	+1.4
	baz=327						
ECL	**Taimali**	**0.49 290**		P	Pb	01 10 55.5	-0.4
	baz=290						
ECL				*e*S	Sg	01 11 02.4	-0.2
	baz=290						
TWGBT	**Beinan**	**0.52 319**		P	Pg	01 10 56.8	+0.4
	baz=303						
TWGBT				*e*S	Sg	01 11 04.3	+0.9
	baz=303						
TAW	**Tawu**	**0.52 262**		P	Pb	01 10 56.1	-0.3
	baz=261						
TAW				*e*S	Sb	01 11 02.7	-0.8
	baz=261						
TWG	**Pinlang**	**0.52 318**		*e*P	Pg	01 10 56.8	+0.3
	baz=303						
TWG				*e*S	Sg	01 11 04.0	+0.3
	baz=303						
TWG	**Pinlang**	**0.52 318**		*e*Pg	Pg	01 10 56.9	+0.3
TWG				*e*Sg	Sg	01 11 04.0	+0.3
EAST	**Anshuo**	**0.56 265**		P	Pb	01 10 56.6	-0.5
	baz=265						
EAST				*e*S	Sb	01 11 03.6	-1.0
	baz=265						
CHKT	**Chengkung**	**0.67 353**		*e*P	Pb	01 10 58.6	-0.4
	baz=3.0						
CHKT				S	Sb	01 11 07.9	+0.1
	baz=3.0						
TSEB	**Hengchuen, Pin**	**0.73 224**		*e*P	Pb	01 10 59.8	-0.3
	baz=226						
TSEB				*e*S	Sg	01 11 10.2	0.0
	baz=226						
TWKBT	**Hengchun**	**0.77 231**		P	Pb	01 10 59.9	-0.8
	baz=230						
TWKBT				S	Sb	01 11 09.5	-1.1
	baz=230						
TWK1	**Hengchun**	**0.77 231**		P	Pb	01 10 59.7	-1.0
	baz=230						
TWK1				S	Sb	01 11 09.8	-0.9
	baz=230						
SCZT	**Fangliau**	**0.77 266**		P	Pb	01 10 60.0	-0.7
	baz=265						
SCZT				S	Sb	01 11 09.8	-1.0
	baz=265						
MASBT	**Mashibuluo**	**0.78 284**		*e*P	Pb	01 11 00.0	-0.8
	baz=283						
FULB	**Fuli**	**0.78 349**		*e*P	Pb	01 11 00.6	-0.3
	baz=333						
FULB				S	Sg	01 11 11.8	+0.1
	baz=333						
HEN	**Hengchun**	**0.78 237**		P	Pb	01 11 00.7	-0.2
	baz=227						
HEN				*e*S	Sb	01 11 10.1	-1.0
	baz=227						
SSPT	**Xinbi**	**0.82 274**		*e*P	Pn	01 11 02.6	+0.3
	baz=273						
SSD	**Sandimen**	**0.82 293**		*e*P	Pb	01 11 00.7	-0.9
	baz=293						
ELDTW	**Lidau**	**0.85 332**		*e*P	Pb	01 11 01.7	-0.5
	baz=321						
TWF1	**Yuli**	**0.93 351**		*e*P	Pg	01 11 04.4	+0.3
	baz=337						
SLGT	**Liugui**	**0.93 307**		*e*P	Pb	01 11 02.8	-0.7
	baz=302						
SGLT	**Jiouru**	**0.93 289**		*e*P	Pg	01 11 04.3	+0.1
	baz=293						
YULB	**Yu-li**	**0.97 352**		*e*P	Pb	01 11 04.0	-0.1
	baz=337						
YULB	**Yu-li**	**0.97 352**		*e*Pg	Pb	01 11 03.8	-0.3
YULB				*e*Sg	Sg	01 11 17.3	-0.3
STYT	**Tauyuan**	**0.97 319**		*e*P	Pb	01 11 03.9	-0.2
	baz=328						
WLCH	**Liuqiu**	**0.99 266**		*e*P	Pg	01 11 07.1	+1.8
	baz=265						
TWP	**Hsiaoliuchiu**	**1.01 265**	⇓	*e*P	Pg	01 11 07.2	+1.6
	baz=265						
TWM1	**Shoushan**	**1.03 293**		*e*P	Pg	01 11 07.5	+1.5
	baz=283						
SGST	**Jiashian**	**1.03 309**		*e*P	Pg	01 11 06.4	+0.4
	baz=306						
SGST				*e*S	Sg	01 11 21.4	+1.8
	baz=306						
HGSD	**Ruisui**	**1.06 359**		*e*P	Pb	01 11 05.1	-0.5
	baz=8.0						
KAU	**Kaohsiung**	**1.06 278**		*e*P	Pg	01 11 06.8	+0.1
	baz=277						
EHY	**Hungye**	**1.08 354**		*e*P	Pb	01 11 05.5	-0.4
	baz=339						
WTP	**Ta-pu**	**1.12 317**		*e*P	Pg	01 11 07.5	-0.2
	baz=317						
WTP				*e*S	Sg	01 11 23.9	+1.4
	baz=317						
CHN1	**Nanshi**	**1.14 312**		*e*P	Pg	01 11 08.3	+0.3
	baz=312						
CHN1				*e*S	Sg	01 11 25.0	+2.1
	baz=312						
TPUB	**Ta-pu**	**1.15 319**		*e*P	Pb	01 11 07.5	+0.3
	baz=319						
TPUB				*e*S	Sg	01 11 24.6	+1.2
	baz=319						
TPUB	**Ta-pu**	**1.15 319**		*e*Pn	Pb	01 11 07.4	+0.2
TPUB				*e*Sn	Sg	01 11 23.5	0.0
CHN3	**Shinhua**	**1.19 303**		*e*P	Pg	01 11 10.1	+1.1
	baz=302						
TWK	**Hsinying**	**1.22 313**		*e*P	Pb	01 11 08.3	-0.1
	baz=325						
ALS	**Alishan**	**1.23 331**		*e*P	Pb	01 11 08.6	-0.1
	baz=331						
EGFH	**Guangfu**	**1.23 359**		*e*P	Pn	01 11 08.2	+0.1
	baz=7.0						
VWDT	**VWDT**	**1.35 348**		*e*P	Pb	01 11 10.3	-0.2
	baz=357						
SCLT	**Jiali**	**1.38 303**		*e*P	Pn	01 11 10.2	+0.2
	baz=303						
SCLT				*e*S	Sg	01 11 30.3	-0.2
	baz=303						
ESL	**Shilin**	**1.38 359**		*e*P	Pn	01 11 10.4	+0.3
	baz=10.0						
CHN2	**Minshiung**	**1.42 321**		*e*P	Pb	01 11 12.1	+0.4
	baz=320						
CHY	**Chiayi**	**1.42 319**		*e*P	Pb	01 11 11.6	-0.2
	baz=319						
CHY				*e*S	Sg	01 11 32.0	-0.1
	baz=319						
SSLB	**Suanglung**	**1.43 341**		*e*P	Pn	01 11 10.5	-0.3
	baz=352						
SSLB	**Suanglung**	**1.43 341**		*e*Pn	Pg	01 11 13.3	-0.2
SSLB				*e*Sn	Sb	01 11 30.6	+0.9
CHN8	**Yiju**	**1.46 309**		*e*P	Pn	01 11 11.8	+0.6
	baz=308						
ENLB	**Shoufeng**	**1.47 5**		*e*P	Pn	01 11 08.5	-2.9
	baz=16						
ENLB				*e*S	Sn	01 11 29.6	-0.5
	baz=16						
WGK	**Gukeng**	**1.49 327**		*e*P	Pb	01 11 13.7	+0.7
	baz=327						
WDLH	**Douliu**	**1.51 326**		*e*P	Pb	01 11 13.6	+0.3
	baz=326						
SMLT	**Sun Moon Lake**	**1.53 341**		*e*P	Pb	01 11 13.1	-0.7
	baz=341						
WJS	**Zhushan**	**1.54 335**		*e*P	Pb	01 11 13.2	-0.6
	baz=334						
TYC	**Yuchr**	**1.56 340**		*e*P	Pn	01 11 12.6	0.0
	baz=340						
WNT	**Mingjian**	**1.60 334**		*e*P	Pb	01 11 15.6	+0.7
	baz=335						
WNT				*e*S	Sg	01 11 38.1	+0.2
	baz=335						
CHGB	**Renai**	**1.64 351**		*e*P	Pb	01 11 15.3	-0.4
	baz=4.0						
TWD	**Chiawan**	**1.65 5**		*e*P	Pn	01 11 11.9	-1.9
	baz=16						
NACB	**Ninganchiao**	**1.74 4**		*e*P	Pn	01 11 13.8	-1.3
	baz=15						
NACB	**Ninganchiao**	**1.74 4**		*e*Pn	Pn	01 11 15.0	-0.1
NACB				*e*Sn	Sn	01 11 35.9	-0.8
TDCB	**Techi**	**1.83 352**		*e*P	Pn	01 11 17.3	+0.8
	baz=352						
WDGT	**Dungji**	**1.85 297**		*e*P	Pn	01 11 16.4	-0.2
	baz=296						
NNSB	**Datong**	**1.99 358**		*e*P	Pn	01 11 19.6	+1.0
	baz=359						
NNSH	**Datong**	**1.99 358**		*e*P	Pn	01 11 19.7	+1.0
	baz=358						
NNS	**Nan Shan**	**2.00 358**		*e*P	Pb	01 11 20.6	-1.2
	baz=359						
TWQ1	**Liyutan**	**2.01 342**		*e*P	Pb	01 11 20.5	-1.3
	baz=343						
TWQ1				*e*S	Sb	01 11 47.3	+0.8
	baz=343						
NSY	**Sanyi**	**2.08 342**		*e*P	Pb	01 11 22.4	-0.6
	baz=343						
ENTT	**Nioudou**	**2.20 3**		*e*P	Pn	01 11 23.1	+1.6
	baz=4.0						
YHNB	**Yeheng**	**2.23 358**		*e*Pn	Pn	01 11 23.4	+1.5
YHNB				*e*Sn	Sn	01 11 48.7	-0.2
TATO	**Taipei**	**2.53 1**		*e*Pn	Pn	01 11 27.7	+1.7
TATO				*e*Sn	Sn	01 11 53.5	-2.8

TAP 06 01:12:55.7,22.°42N×121.°38E,h14km±1km,ML3.5,C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWH	**Lutao**	**0.30**	**17**	P	Pg	01 13 02.1	+0.1
	baz=20						
TWH				S	Sg	01 13 06.4	+0.2
	baz=20						
TTN	**Taitung**	**0.40 327**		*e*P	Pb	01 13 05.1	+0.6
	baz=327						
LAY	**Lan-yu**	**0.41 158**		*e*P	Pg	01 13 03.9	-0.1
	baz=156						
ECL	**Taimali**	**0.43 294**		P	Pb	01 13 05.2	0.0
	baz=294						
ECL				*e*S	Sb	01 13 12.1	+0.5
	baz=294						
TAW	**Tawu**	**0.45 262**		*e*P	Pb	01 13 05.2	-0.3
	baz=261						
TAW				*e*S	Sb	01 13 12.3	+0.2
	baz=261						
TWGBT	**Beinan**	**0.48 325**		*e*P	Pb	01 13 06.2	+0.2
	baz=324						
TWGBT				*e*S	Sb	01 13 13.6	+0.6
	baz=324						
TWG	**Pinlang**	**0.49 324**		P	Pb	01 13 06.5	+0.4
	baz=324						
TWG				*e*S	Sb	01 13 14.1	+0.9
	baz=324						
EAST	**Anshuo**	**0.50 266**		P	Pb	01 13 06.3	+0.1
	baz=265						
EAST				S	Sb	01 13 13.6	+0.2
	baz=265						
TSEB	**Hengchuen, Pin**	**0.69 221**		*e*P	Pn	01 13 10.6	-0.4
	baz=223						
SCZT	**Fangliau**	**0.71 266**		*e*P	Pn	01 13 10.6	-0.7
	baz=265						
TWKBT	**Hengchun**	**0.71 228**		*e*P	Pb	01 13 10.0	+0.1
	baz=227						
TWK1	**Hengchun**	**0.72 228**		*e*P	Pb	01 13 09.9	-0.1
	baz=227						
MASBT	**Mashibuluo**	**0.72 285**		*e*P	Pg	01 13 09.7	0.0
	baz=285						
SSD	**Sandimen**	**0.77 295**		*e*P	Pn	01 13 12.1	0.0
	baz=295						

TAP 06 01:13:04.4,22.°39N×121.°40E,h12km,ML3.6,D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWH	**Lutao**	**0.33**	**12**	P	Pg	01 13 11.3	+0.3
	baz=14						
TWH				S	Sg	01 13 15.7	+0.2
	baz=14						
TTN	**Taitung**	**0.43 327**		*e*P	Pb	01 13 14.5	+0.5
	baz=327						
ECL	**Taimali**	**0.47 297**		P	Pb	01 13 14.7	+0.3
	baz=296						
ECL				S	Sb	01 13 22.0	+0.7
	baz=296						
TAW	**Tawu**	**0.47 266**		*e*P	Pb	01 13 14.8	+0.2
	baz=265						
TAW				S	Sb	01 13 21.9	+0.4
	baz=265						
EAST	**Anshuo**	**0.52 269**		P	Pb	01 13 15.5	+0.2
	baz=269						
EAST				S	Sb	01 13 23.4	+0.6
	baz=269						
TWGBT	**Beinan**	**0.52 325**		*e*P	Pb	01 13 16.2	+0.7
	baz=324						
TWG	**Pinlang**	**0.53 325**		*e*P	Pb	01 13 16.1	+0.5
	baz=324						
TSEB	**Hengchuen, Pin**	**0.68 224**		*e*P	Pn	01 13 19.1	-0.6
	baz=226						
TWKBT	**Hengchun**	**0.71 231**		*e*P	Pn	01 13 19.5	-0.6
	baz=230						
TWKBT				S	Sb	01 13 29.1	+0.8
	baz=230						
CHKT	**Chengkung**	**0.71 357**		*e*P	Pg	01 13 17.8	-0.3
	baz=357						
TWK1	**Hengchun**	**0.71 231**		*e*P	Pb	01 13 19.4	+0.7
	baz=230						
TWK1				*e*S	Sb	01 13 29.0	+0.6
	baz=230						
HEN	**Hengchun**	**0.73 238**		*e*P	Pn	01 13 20.0	-0.4
	baz=237						
HEN				*e*S	Sn	01 13 30.2	-1.2
	baz=237						
SCZT	**Fangliau**	**0.73 269**		*e*P	Pb	01 13 19.2	+0.3
	baz=268						
MASBT	**Mashibuluo**	**0.75 287**		*e*P	Pb	01 13 19.3	0.0
	baz=287						
SSD	**Sandimen**	**0.80 297**		*e*P	Pb	01 13 20.5	+0.4
	baz=296						

KRSC 06 01:14:52.4±0.9,53.°87N×161.°65E,h16km±15km,ML3.9, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.69**	**4**	*i* P	Pg	01 15 05.0	-0.9
SPN	**Mys Shipunski**	**1.24 232**		*e*P	Pn	01 15 14.6	-0.5
SPN				*e*S	Sb	01 15 31.1	-0.1
KII	**Karymskiy**	**1.31 278**		*e*P	Pn	01 15 16.1	0.0
KZV	**Kizimen**	**1.47 328**		*i* P	Pn	01 15 18.7	+0.2
KZV				*e*S	Sb	01 15 38.0	-0.1
NLC	**Nalytchevo**	**1.54 244**		*e*P	Pn	01 15 19.6	+0.4
NLC				*e*S	Sb	01 15 39.7	-0.1
TUMR	**Tumrok**	**1.66 329**		*e*P	Pn	01 15 21.5	+0.5
SDLR	**Sedlovina**	**1.75 251**		*i* P	Pn	01 15 22.9	+0.7
SDLR				*e*S	Sb	01 15 45.5	-0.5
UGLR	**Uglovaya**	**1.81 250**		*i* P	Pn	01 15 23.9	+0.9
UGLR				*e*S	Sb	01 15 47.2	-0.5
KRER	**Koryakskii**	**1.82 253**		*i* P	Pn	01 15 24.2	+1.0
KRER				*e*S	Sb	01 15 47.8	-0.2
AVH	**Avacha**	**1.84 252**		*e*P	Pn	01 15 24.4	+1.0
KRX	**Arik**	**1.86 255**		*e*P	Pn	01 15 24.3	+0.6
KRX				*e*S	Sn	01 15 47.9	+1.0
KOK	**Koryaka**	**1.89 253**		*e*P	Pn	01 15 24.3	+0.3
PET	**Petropavlovsk**	**1.98 246**		*e*S	Sb	01 15 51.4	-1.0
KMNR	**Kamenistaya**	**2.06 337**		*e*P	Pn	01 15 27.7	+1.3
BZMR	**Bezymyannaya**	**2.17 343**		*e*P	Pb	01 15 30.2	-1.2
BZWR	**Bezymyannyi-We**	**2.20 343**		*e*P	Pn	01 15 30.0	+1.6
GNL	**Ganaly**	**2.20 267**		*e*P	Pb	01 15 30.6	-1.3
ZLN	**Zelenaya**	**2.21 348**		*e*P	Pn	01 15 29.4	+0.9
KIRR	**Kirishev**	**2.22 341**		*e*P	Pb	01 15 30.5	-1.7
KPT	**Kopyto**	**2.25 339**		*e*P	Pb	01 15 31.2	-1.6
LGNR	**Loginova**	**2.29 346**		*e*P	Pn	01 15 31.1	+1.4
LGNR				*e*S	Sn	01 15 59.4	+1.8
CIRR	**Tsirk**	**2.31 347**		*e*P	Pn	01 15 31.3	+1.4
KRMR	**Karymshinskiy**	**2.35 245**		*e*P	Pn	01 15 31.9	+1.6
KRMR				*e*S	Sb	01 16 01.0	-2.1
RUS	**Russkaya**	**2.37 234**		*e*P	Pb	01 15 33.0	-1.7
KOZ	**Kozyrevsk**	**2.42 336**		*e*P	Pb	01 15 34.0	-1.5
KOZ				*e*S	Sb	01 16 04.2	-0.9
KRSR	**Krestovskiy**	**2.43 346**		*e*P	Pn	01 15 33.1	+1.5
KBTR	**Krutoberegovo**	**2.44 16**		*e*P	Pn	01 15 33.2	+1.7
KBTR				*e*S	Sn	01 16 03.1	+2.1
MTVR	**Mutnovka**	**2.50 238**		*e*P	Pb	01 15 35.8	-1.3
MTVR				*e*S	Sb	01 16 06.8	-0.9
ESO	**Esso**	**2.67 322**		*e*P	Pn	01 15 36.7	+1.9
ASAK	**Asacha**	**2.70 238**		*e*P	Pb	01 15 38.8	-1.6
SMKR	**Semkarok**	**2.72 358**		*e*P	Pb	01 15 38.8	-1.9
SRKR	**Sorokina**	**2.80 355**		*e*P	Pn	01 15 39.0	+2.4
APC	**Apacha**	**2.85 252**		*e*P	Pn	01 15 39.8	+2.6
BKI	**Bering**	**2.85 60**		*e*P	Pb	01 15 40.1	-2.8
KDTR	**Khodutka, Kamc**	**2.99 228**		*e*P	Pn	01 15 41.1	+2.0
KDTR				*e*S	Sn	01 16 16.6	+2.0

MEX 06 01:20:11.1±0.3,16.°35N×98.°20W,h16km±5km,MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.25 344**		*e*P	Pn	01 20 30.4	-3.7
TLIG				*e*S	Sb	01 20 45.6	-4.8
VHO	**Vista Hermosa**	**1.58**	**63**	*e*P	Pn	01 20 35.2	-3.4
VHO				*e*S	Sn	01 20 53.9	-4.8
ACX	**Acapulco**	**1.67 288**		*e*P	Pn	01 20 37.3	-2.4
ACX				*e*S	Sn	01 20 57.7	-3.1
HUIG	**Huatulco**	**2.09 106**		*e*P	Pn	01 20 41.9	-3.6
HUIG				*i* S	Sn	01 21 05.6	-5.6
CAIG	**El Cayaco**	**2.10 290**		*e*P	Pn	01 20 42.4	-3.1
CAIG				*e*S	Sn	01 21 06.7	-4.6

*IDC **06** 01:27:00.6±1.8,2.°79S×118.°90E,h0km,mb3.5/4, mb1 3.6/4,mb1mx3.4/55,mbtmp3.5/4,Error ellipse: s-maj=287.5km s-min=22.5km az=56.0*
*ISCJB **06** 01:27:06.0±0.5,1.°74S±0.°03×120.°54E±0.°05,h23km, mb3.5/4,Error ellipse: s-maj=7.2km s-min=5.0km az=2.0*
*DJA **06** 01:27:05.3±0.3,2.°S±3.°×12.°1E±.°,h10km,M4.0/7,mb4.2/1, MLv3.8/7*

ISC 06 01:27:06.3±0.8,1.°68S±0.°04×120.°52E±0.°05,h23km,n15, σ1§31/19,mb3.6/4,Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCI	**Palu**	**1.03 319**		P	**Pb**	**01 27 25.9**	**+0.4**
PCI				S	**Sn**	**01 27 39.7**	**+0.6**
APSI	**Ampana**	**1.37**	**56**	P	**Pn**	**01 27 29.6**	**-0.4**
APSI				S	**Sb**	**01 27 49.1**	**+0.9**
TTSI	**Tana Toraja**	**1.52 207**		P	**Pn**	**01 27 31.2**	**-0.9**
MPSI	**Mapaga**	**2.10 343**		P	**Pn**	**01 27 41.0**	**+0.9**
MPSI				S	**Sb**	**01 28 09.4**	**0.0**
SPSI	**Sidrap Palu**	**2.39 198**		P	**Pn**	**01 27 45.0**	**+1.0**
SPSI				S	**Sn**	**01 28 12.4**	**-0.2**
MRSI	**Marisa**	**2.57**	**34**	P	**Pn**	**01 27 47.5**	**+0.9**
BNSI	**Bone**	**2.73 189**		P	**Pn**	**01 27 50.4**	**+1.7**
KDI	**Kendari**	**3.08 137**		P	**Pb**	**01 28 01.9**	**+1.4**
SGKI	**Sangatta, Kali**	**3.13 291**		P	**Pn**	**01 27 55.8**	**+1.5**
BKSI	**Bulukumba**	**3.63 186**		P	**Pn**	**01 28 02.5**	**+1.3**
BKB	**Balikpapan**	**3.65 277**		P	**Pn**	**01 28 01.8**	**+0.5**
WRA	**Warramunga Arr**	**22.62 144**		P	**P**	**01 32 04.1**	**-1.7**
	1.6nm,1.0s,baz=318,slow=12,SNR=5.3						
ASAR	**Alice Springs**	**25.41 150**		P	**P**	**01 32 29.9**	**-2.4**
	0.4nm,0.6s,baz=318,slow=8.0,SNR=2.7						
MKAR	**Makanchi Array**	**58.78 330**		P	**P**	**01 37 03.4**	**+0.7**
	0.5nm,0.6s,baz=136,slow=7.1,SNR=6.6						
KURBB	**Kurchatov Arra**	**63.21 331**		P	**P**	**01 37 30.5**	**-2.1**
	0.2nm,0.3s,baz=128,slow=6.9,SNR=4.0						

*NEIC **06** 01:31:41.0±0.0,35.°79N×116.°27W,h11km,ML3.0(PAS), After PAS.*
NEIC Felt at Newberry Springs.

ISC 06 01:31:40.7±0.8,35.79N±0.°02×116.°27W±0.°02,h13km±6km, n68,σ1§30/94,Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHOC	**Shoshone, Teco**	**0.11 356**		P	**Pg**	**01 31 43.8**	**-0.1**
	baz=178,SNR=253						
SHOC				S	**Sg**	**01 31 45.9**	**-0.2**
	baz=178						
TUQ	**Turquoise Moun**	**0.45 141**		P	**Pg**	**01 31 49.5**	**-0.1**
	baz=321,SNR=22						
TUQ				S	**Sg**	**01 31 55.5**	**-0.1**
	baz=321						
TUQ	**Turquoise Moun**	**0.45 141**		*e*Pg	**Pg**	**01 31 49.7**	**+0.1**
GSC	**Goldstone, Bar**	**0.66 222**		P	**Pg**	**01 31 53.1**	**-0.3**
	baz=42,SNR=45						
GSC				S	**Sg**	**01 32 01.7**	**-0.4**
	baz=42						
GSC	**Goldstone, Bar**	**0.66 222**		*e*Sg	**Sg**	**01 32 02.2**	**+0.1**
DSCC	**Desert Studies**	**0.66 168**		*e*Pg	**Pg**	**01 31 53.7**	**+0.2**
FURC	**Furnace Creek,**	**0.83 325**		P	**Pg**	**01 31 56.2**	**-0.6**
	baz=145,SNR=33						
FURC				S	**Sg**	**01 32 08.1**	**+0.4**
	baz=145						
FURC	**Furnace Creek,**	**0.83 325**		*e*Pn	**Sg**	**01 32

baz=3.2,SNR=16
HEC S Sg 01 32 11.5 -0.2
baz=3.2
HEC Hector,Ludlow 0.96 183 ePg Pg 01 31 58.6 -0.5
HEC eSg Sg 01 32 11.8 +0.2
MPMC Manual Prospec 1.03 286 P Pg 01 31 59.8 -0.7
baz=105,SNR=293
MPMC S Sg 01 32 13.8 -0.2
baz=105
FLSC Flash Two Peak 1.03 218 eSn Sn 01 32 19.6 +4.2
RRX Edison Barstow 1.09 214 S Sb 01 32 15.6 +0.1
baz=33
GMRC Granite Mounta 1.12 153 P Pb 01 32 01.0 -0.9
baz=334,SNR=24
GMRC S Sb 01 32 16.7 +0.3
baz=334
GMRC Granite Mounta 1.12 153 eSn Sg 01 32 17.4 +0.7
TPNV Topopah Spring 1.16 1 P Pb 01 32 02.6 -0.1
baz=181,SNR=31
TPNV S Sg 01 32 18.7 +0.6
baz=181
LDFC Landfair 1.18 127 ePg Pb 01 32 01.8 -1.2
LDFC eSg Sb 01 32 15.2 -3.1
LDFC eSn Sg 01 32 17.5 -1.3
LRMC Laurel Mtn Rad 1.19 256 P Pb 01 32 02.5 -0.8
baz=75,SNR=12
LRMC S Sb 01 32 18.8 +0.1
baz=75
DANC Danby, Needles 1.36 147 ePg Pg 01 32 07.4 +0.7
DANC eSn Sg 01 32 25.0 +0.6
GRAC Grapevine Rang 1.50 324 P Pn 01 32 07.1 -0.2
baz=144
VTV Victorville 1.50 216 eSg Sg 01 32 29.1 +0.1
CWC Cottonwood Cre 1.61 294 Pb Pn 01 32 10.0 +1.0
baz=114
BBRC Big Bear Solar 1.61 200 eSg Sn 01 32 28.5 -1.4
EL2 El Mirage 2 1.63 220 eSn Sg 01 32 34.6 +1.3
EDW2 Edwards Air Fo 1.68 238 Pb Pb 01 32 11.2 -0.2
baz=57
EDW2 Sb Sb 01 32 33.1 +0.6
baz=57
TPC Twentynine Pal 1.69 174 ePn Pb 01 32 11.9 +0.2
NEE2 Needles Airpor 1.69 127 P Pn 01 32 09.2 -0.7
baz=307
BELC Belle Mtn. Jos 1.80 173 P Pn 01 32 11.1 -0.4
baz=353,SNR=13
BELC Sb Sb 01 32 37.1 +1.1
baz=353
BELC Belle Mtn. Jos 1.80 173 ePn Pb 01 32 14.2 +0.7
BELC eSn Sb 01 32 37.7 +1.7
ISA Isabella, Lake 1.80 267 P Pn 01 32 10.6 -1.0
baz=86,SNR=9.8
HOLC Holcomb Ridge 1.85 225 ePn Pb 01 32 15.4 +0.9
IRM Iron Mountain 1.87 150 P Pn 01 32 11.7 -0.7
baz=331
IRM Iron Mountain 1.87 150 ePn Pg 01 32 16.4 -0.1
BFSC Mount Baldy Ra 1.92 217 Pb Pb 01 32 15.6 -0.1
baz=36
BFSC Sb Sb 01 32 40.7 +1.0
baz=36
JNH Juniper Hills 1.92 226 ePn Pb 01 32 16.4 +0.7
SSK Sunset Peak 1.96 217 ePn Pb 01 32 17.3 +0.9
W13A Hualapai Mount 2.06 109 ePn Pn 01 32 14.0 -1.3
W13A eSn Sb 01 32 43.6 -0.2
PEM Pine Mountain 2.08 220 ePn Pb 01 32 19.4 +1.0
MWC Mount Wilson 2.14 224 ePn Pb 01 32 19.0 -0.5
MWC eSn Sg 01 32 49.0 -0.7
HMTC Hemet 2.16 197 ePn Pb 01 32 20.8 +1.1
PFO Pinyon Flats O 2.18 184 P Pn 01 32 16.3 -0.5
baz=4.1
PFO Pinyon Flats O 2.18 184 ePn Pn 01 32 16.2 -0.6
PFO eSn Sn 01 32 42.0 -1.7
PFO eSn Sb 01 32 46.0 -0.9
DGR Domenigoni Val 2.22 196 ePn Pb 01 32 21.8 +1.1
IR2C Iron Canyon 2.24 232 eSn Sg 01 32 51.5 -1.1
PASC Pasadena Art C 2.25 225 ePn Pb 01 32 20.6 -0.7
PASC eSn Sg 01 32 53.5 +0.4
VES Vestal, Richgr 2.29 272 P Pn 01 32 17.8 -0.4
baz=91
BAKC Calstate 2.36 260 eSn Sg 01 32 57.6 +1.1
Y12C Blythe 2.49 144 ePn Pn 01 32 22.5 +1.6
Y12C eSn Sn 01 32 52.3 +1.2
BORC Borrego Spring 2.52 183 eSn Sb 01 32 55.4 -1.3
R11A Troy Canyon, C 2.61 12 ePn Pb 01 32 28.9 +1.3
LCMT Little Creek M 2.73 62 ePn Pb 01 32 30.7 +1.3
LCMT eSn Sb 01 33 05.0 +2.2
OMMB Old Mammoth Mi 2.85 310 ePn Pb 01 32 33.5 +1.8
MDPB Devils Postpil 2.92 310 ePn Pb 01 32 34.6 +1.9
MDPB eSn Sg 01 33 16.5 +2.1
CCUT Cedar City 2.92 52 ePn Pb 01 32 34.7 +1.9
CARC Carrizo Plain 2.96 262 eSn Sb 01 33 08.7 -0.7
KNB Kanab 3.04 65 ePn Pb 01 32 36.0 +1.3
NV11 Mina Array Sit 3.04 331 eSn Sg 01 33 18.9 +0.5
NV01 Mina Array Sit 3.10 329 ePn Pg 01 32 39.5 -0.7
FIGC Figueroa Mtn. 3.22 252 eSn Sb 01 33 15.0 -2.1
U15A North Rim 3.28 78 ePn Pb 01 32 40.8 +1.9
PSUT Pine Spring 3.35 34 ePn Pg 01 32 43.5 -1.3
KVN Kaiserville 3.57 336 ePn Pg 01 32 47.0 -2.1
113A Mohawk Valley, 3.65 145 eSg Sb 01 33 28.8 -0.6
GATR Gnd/Air Tx Cnt 3.68 252 ePg Pg 01 32 50.5 -0.8
GATR eSn Sn 01 33 23.2 +2.5
GATR eLg Lg 01 33 46.6
CMB Columbia Colle 3.99 305 eSn Sb 01 33 34.4 -4.7
X16A Lo Mia Camp, P 4.18 108 ePg Pg 01 32 59.0 -1.9
MSU Marysvale 4.25 49 ePg Pg 01 33 00.2 -1.9
AFDM Forest Hills D 4.90 311 eSg Sg 01 34 16.3 -1.7

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*CSEM **06** 01:36:08.4, 41.28N×43.83E, h0km, ML2.4*
TIF 06 01:36:07.8, 41.22N×43.88E, h9km±2km,
Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BGD	**Bogdanovka**	**0.21**	**281**	P	Pg	01 36 12.6	+0.3
BGD				S	Sg	01 36 15.5	+0.1
BGD	**Bogdanovka**	**0.21**	**281**	P	Pg	01 36 12.6	+0.3
BGD				S	Sg	01 36 15.5	+0.1
AKH	**Akhalkalaki**	**0.34**	**303**	P	Pg	01 36 14.8	+0.1
AKH				S	Sg	01 36 19.2	-0.1
AKH	**Akhalkalaki**	**0.34**	**303**	P	Pg	01 36 14.8	+0.1
AKH				S	Sg	01 36 19.2	-0.1
TBLG	**Delisi**	**0.82**	**52**	P	Pg	01 36 23.4	-0.2
TBLG				S	Sb	01 36 36.3	+0.9
TBLG	**Delisi**	**0.82**	**52**	P	Pn	01 36 25.2	-0.3
TBLG				S	Sb	01 36 36.3	+0.9
DUS	**Dusheti**	**1.06**	**35**	P	Pn	01 36 29.3	+0.4
DUS				S	Sn	01 36 45.6	+1.7
DUS	**Dusheti**	**1.06**	**35**	P	Pn	01 36 29.4	+0.5
DUS				S	Sn	01 36 44.1	+0.2
CHVG	**Ch'k'valeri**	**2.00**	**319**	P	Pg	01 36 45.6	-0.6
CHVG				S	Sg	01 37 12.8	+0.5
CHVG	**Ch'k'valeri**	**2.00**	**319**	P	Pg	01 36 45.6	-0.6
CHVG				S	Sg	01 37 12.8	+0.6

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*CSEM **06** 01:44:59.4±0.1, 45.91N×0.64E, h5km, ML3.4/31, Error ellipse: s-maj=2.0km s-min=1.7km az=119.0*
*STR **06** 01:45:01.3±0.3, 46°N±3°×±°, h5km, M3.7/8, mb4.4/1, MLv3.3/8*
*LDG **06** 01:45:01.1±0.0, 45.90N×0.63E, h2km, Md2.9/4, Ml3.4/40, Error ellipse: s-maj=0.8km s-min=0.8km az=108.0*
ISC 06 01:44:59.3±1.0, 45.91N±0.01×0.64E±0.01, h12km±9km,
n162, σ1§18/270, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIF	**Chize**	**0.76**	**288**	Pg	Pb	01 45 15.5	+1.0
CHIF	**Chize**	**0.76**	**288**	Pg	Pb	01 45 15.5	+1.0
CHIF				Sg	Sb	01 45 25.1	+0.3
RJF	**Les Rejaudoux**	**0.86**	**134**	ePg	Pb	01 45 16.8	+0.6
RJF				eSg	Sb	01 45 27.9	+0.1
256nm,0.2s							
MFF	**Saint Martin d**	**0.88**	**322**	ePg	Pb	01 45 17.3	+0.8
MFF				eSg	Sb	01 45 28.9	+0.7
94nm,0.2s							
MFF	**Saint Martin d**	**0.88**	**322**	ePg	Pb	01 45 17.3	+0.8
MFF				eSg	Sb	01 45 28.9	+0.7
47nm,0.2s							
LFF	**La Frestale**	**0.97**	**176**	ePg	Pb	01 45 18.9	+0.9
LFF				eSg	Sb	01 45 31.8	+1.0
269nm,0.3s							
LFF	**La Frestale**	**0.97**	**176**	ePg	Pb	01 45 18.9	+0.9
LFF				eSg	Sb	01 45 31.8	+1.0
134nm,0.3s							
TCF	**Toulx Ste Croi**	**1.16**	**70**	ePg	Pn	01 45 22.8	+1.4
TCF				eSg	Sn	01 45 37.9	+0.7
220nm,0.2s							
TCF	**Toulx Ste Croi**	**1.16**	**70**	ePg	Pn	01 45 22.8	+1.4
TCF				eSg	Sn	01 45 37.9	+0.7
110nm,0.2s							
CAF	**Calviac**	**1.41**	**134**	ePg	Pb	01 45 25.8	+0.3
CAF				eSg	Sg	01 45 45.5	+0.9
142nm,0.2s							
CAF	**Calviac**	**1.41**	**134**	ePg	Pb	01 45 25.8	+0.3
CAF				eSg	Sg	01 45 45.5	+0.9
71nm,0.2s							
MONQ	**Montcuq**	**1.59**	**165**	Pg	Pg	01 45 30.4	+0.6
MONQ	**Montcuq**	**1.59**	**165**	Pg	Pg	01 45 30.4	+0.6
MONQ				Sn	Sg	01 45 50.8	+0.3
BGF	**Bois d'Agland**	**1.67**	**66**	ePn	Pb	01 45 29.8	-0.1
BGF	**Bois d'Agland**	**1.67**	**66**	ePg	Pg	01 45 32.4	+1.1
BGF				eSg	Sg	01 45 53.2	+0.3
332nm,0.3s							
BGF	**Bois d'Agland**	**1.67**	**66**	ePn	Pb	01 45 29.8	-0.1
BGF	**Bois d'Agland**	**1.67**	**66**	ePg	Pg	01 45 32.4	+1.1
BGF				eSg	Sg	01 45 53.2	+0.3
166nm,0.3s							
PYM	**Petit Puy Mans**	**1.67**	**95**	Pn	Pb	01 45 30.1	+0.1
PYM	**Petit Puy Mans**	**1.67**	**95**	Pn	Pb	01 45 30.1	+0.1
PYM				Sn	Sg	01 45 53.1	+0.2
AGO	**Saint Agoulin**	**1.75**	**84**	Pn	Pb	01 45 31.9	+0.6
AGO	**Saint Agoulin**	**1.75**	**84**	Pn	Pb	01 45 31.9	+0.6
HYF	**Humbligny**	**1.94**	**45**	ePn	Pb	01 45 33.9	-0.7
HYF	**Humbligny**	**1.94**	**45**	ePg	Pg	01 45 37.8	+1.3
HYF				eSg	Sg	01 46 02.8	+1.2
HYF	**Humbligny**	**1.94**	**45**	ePn	Pb	01 45 33.9	-0.7
HYF	**Humbligny**	**1.94**	**45**	ePg	Pg	01 45 37.8	+1.3
HYF				eSg	Sg	01 46 02.8	+1.2
LBL	**Lubilhac**	**1.96**	**109**	Pn	Pb	01 45 34.1	-0.8
LBL	**Lubilhac**	**1.96**	**109**	Pn	Pb	01 45 34.1	-0.8
AVF	**Avril sur Loir**	**2.08**	**64**	ePn	Pn	01 45 35.3	+1.3
AVF	**Avril sur Loir**	**2.08**	**64**	ePg	Pg	01 45 39.4	+0.3
AVF				eSn	Sn	01 45 59.8	0.0
AVF				eSg	Sg	01 46 04.9	-1.2
36nm,0.2s							
AVF	**Avril sur Loir**	**2.08**	**64**	ePn	Pn	01 45 35.3	+1.3
AVF	**Avril sur Loir**	**2.08**	**64**	ePg	Pg	01 45 39.4	+0.3
AVF				eSn	Sn	01 45 59.8	0.0
AVF				eSg	Sg	01 46 04.9	-1.2
18nm,0.2s							
SSF	**Saint Saulge**	**2.29**	**59**	ePn	Pn	01 45 38.2	+1.3
SSF	**Saint Saulge**	**2.29**	**59**	ePg	Pg	01 45 43.6	+0.3
SSF				eSg	Sg	01 46 11.8	-1.2
43nm,0.2s							
SSF	**Saint Saulge**	**2.29**	**59**	ePn	Pn	01 45 38.2	+1.3
SSF	**Saint Saulge**	**2.29**	**59**	ePg	Pg	01 45 43.6	+0.3
SSF				eSg	Sg	01 46 11.8	-1.2
22nm,0.2s							
SMF	**Signal de Mont**	**2.34**	**71**	ePn	Pn	01 45 38.8	+1.2
SMF	**Signal de Mont**	**2.34**	**71**	ePg	Pg	01 45 44.6	+0.4
SMF				eSn	Sn	01 46 07.2	+0.9
SMF				eSg	Sg	01 46 13.7	-0.8
19nm,0.2s							
SMF	**Signal de Mont**	**2.34**	**71**	ePn	Pn	01 45 38.8	+1.2
SMF	**Signal de Mont**	**2.34**	**71**	ePg	Pg	01 45 44.6	+0.4
SMF				eSn	Sn	01 46 07.2	+0.9
SMF				eSg	Sg	01 46 13.7	-0.8
9.6nm,0.2s							
LOR	**Lormes**	**2.61**	**57**	ePn	Pn	01 45 42.3	+1.1
baz=241							
LOR	**Lormes**	**2.61**	**57**	ePg	Pg	01 45 49.4	+0.2
baz=240							
LOR				eSn	Sn	01 46 13.0	+0.2
LOR				eSg	Sg	01 46 20.9	-2.1
65nm,0.3s							
LOR	**Lormes**	**2.61**	**57**	Pn	Pn	01 45 42.6	+1.3
LOR	**Lormes**	**2.61**	**57**	ePn	Pn	01 45 42.3	+1.1
LOR	**Lormes**	**2.61**	**57**	ePg	Pg	01 45 49.4	+0.2
LOR				eSn	Sn	01 46 13.0	+0.2
LOR				eSg	Sg	01 46 20.9	-2.1
32nm,0.3s							
GRR	**Gorron**	**2.68**	**338**	ePn	Pn	01 45 43.1	+0.8
GRR	**Gorron**	**2.68**	**338**	ePg	Pg	01 45 51.2	+0.5
GRR				eSn	Sn	01 46 14.9	+0.2
GRR				eSg	Sg	01 46 25.3	-0.1
46nm,0.2s							
GRR	**Gorron**	**2.68**	**338**	ePn	Pn	01 45 43.1	+0.8
GRR				eSn	Sn	01 46 14.9	+0.2
GRR				eSg	Sg	01 46 25.3	-0.1
23nm,0.2s							
LDF	**La Druitiere**	**2.74**	**349**	ePn	Pn	01 45 44.3	+1.3
LDF	**La Druitiere**	**2.74**	**349**	ePg	Pg	01 45 52.0	+0.3
LDF				eSn	Sn	01 46 15.9	-0.1
LDF				eSg	Sg	01 46 26.6	-0.5
34nm,0.3s							
LDF	**La Druitiere**	**2.74**	**349**	ePg	Pg	01 45 52.0	+0.3
LDF				eSn	Sn	01 46 15.9	-0.1
LDF				eSg	Sg	01 46 26.6	-0.5
17nm,0.3s							
MTLF	**Montolieu**	**2.81**	**156**	ePn	Pn	01 45 44.8	+0.8
MTLF	**Montolieu**	**2.81**	**156**	ePg	Pg	01 45 52.9	-0.1
MTLF				eSg	Sg	01 46 28.1	-1.2
15nm,0.2s							
MTLF	**Montolieu**	**2.81**	**156**	ePn	Pn	01 45 44.8	+0.8
MTLF	**Montolieu**	**2.81**	**156**	ePg	Pg	01 45 52.9	-0.1
MTLF				eSg	Sg	01 46 28.1	-1.2
7.7nm,0.2s							
EPF	**Esparros**	**2.88**	**184**	ePn	Pn	01 45 44.8	-0.3
EPF	**Esparros**	**2.88**	**184**	ePg	Pg	01 45 54.3	-0.3
EPF				eSn	Sn	01 46 18.0	-1.8
EPF				eSg	Sg	01 46 30.9	-1.0
8.6nm,0.2s							
EPF	**Esparros**	**2.88**	**184**	ePn	Pn	01 45 44.8	-0.3
EPF	**Esparros**	**2.88**	**184**	ePg	Pg	01 45 54.3	-0.3
EPF				eSn	Sn	01 46 18.0	-1.8
EPF				eSg	Sg	01 46 30.9	-1.0
4.3nm,0.2s							
LASF	**Ste Croix**	**2.93**	**128**	ePn	Pn	01 45 47.1	+1.4
LASF	**Ste Croix**	**2.93**	**128**	ePg	Pg	01 45 55.8	+0.4
LASF				eSg	Sg	01 46 33.1	-0.3
29nm,0.3s							
LASF	**Ste Croix**	**2.93**	**128**	ePn	Pn	01 45 47.1	+1.4
LASF	**Ste Croix**	**2.93**	**128**	ePg	Pg	01 45 55.8	+0.4
LASF				eSg	Sg	01 46 33.1	-0.3
15nm,0.3s							
FLN	**La Foliniere**	**2.96**	**346**	ePn	Pn	01 45 46.9	+0.9
FLN	**La Foliniere**	**2.96**	**346**	ePg	Pg	01 45 56.0	+0.1
baz=162							
FLN				eSn	Sn	01 46 21.2	-0.2
FLN				eSg	Sg	01 46 33.6	-0.6
47nm,0.3s							
FLN	**La Foliniere**	**2.96**	**346**	ePg	Pg	01 45 56.0	+0.1
FLN				eSn	Sn	01 46 21.2	-0.2
FLN				eSg	Sg	01 46 33.6	-0.6
23nm,0.3s							
TRBF	**Trabuc cave**	**2.97**	**126**	Pn	Pn	01 45 48.1	+1.9
TRBF	**Trabuc cave**	**2.97**	**126**	Pn	Pn	01 45 48.1	+1.9
MLS	**Moulis**	**2.97**	**173**	Pn	Pn	01 45 47.1	+0.9
MLS	**Moulis**	**2.97**	**173**	Pn	Pn	01 45 47.1	+0.9
ATE	**Arette**	**2.98**	**199**	Pg	Pg	01 45 55.2	-1.2
SNR=7.9							
ATE				Lg	Lg	01 46 33.4	
SNR=7.9							
VIVF	**Saint-Julien-l**	**3.03**	**109**	ePn	Pn	01 45 49.2	+2.1
VIVF	**Saint-Julien-l**	**3.03**	**109**	ePg	Pg	01 45 57.7	+0.3
VIVF				eSg	Sg	01 46 36.4	-0.3
9.3nm,0.2s							
VIVF	**Saint-Julien-l**	**3.03**	**109**	ePn	Pn	01 45 49.2	+2.1
VIVF	**Saint-Julien-l**	**3.03**	**109**	ePg	Pg	01 45 57.7	+0.3
VIVF				eSg	Sg	01 46 36.4	-0.3
4.7nm,0.2s							
EALK	**Alkurruntz**	**3.09**	**210**	Pg	Pg	01 45 57.9	-0.7
17nm,0.5s,SNR=13							
EALK				Lg	Lg	01 46 37.3	
SNR=7.9							
SJPF	**Ste Jean**	**3.10**	**206**	ePn	Pn	01 45 48.8	+0.8
SJPF	**Ste Jean**	**3.10**	**206**	ePg	Pg	01 45 58.3	-0.3
SJPF				eSg	Sg	01 46 37.4	-1.3
8.7nm,0.2s							
SJPF	**Ste Jean**	**3.10**	**206**	ePn	Pn	01 45 48.8	+0.8
SJPF	**Ste Jean**	**3.10**	**206**	ePg	Pg	01 45 58.3	-0.3
SJPF				eSg	Sg	01 46 37.4	-1.3
4.3nm,0.2s							
ETSF	**Etsaut**	**3.13**	**196**	ePn	Pn	01 45 48.0	-0.5
ETSF	**Etsaut**	**3.13**	**196**	ePg	Pg	01 45 58.5	-0.7
ETSF				eSg	Sg	01 46 38.8	-1.0
9.0nm,0.3s							
ETSF	**Etsaut**	**3.13**	**196**	ePn	Pn	01 45 48.0	-0.5
ETSF	**Etsaut**	**3.13**	**196**	ePg	Pg	01 45 58.5	-0.7
ETSF				eSg	Sg	01 46 38.8	-1.0
4.5nm,0.3s							
SGMF	**Saint Gilles**	**3.20**	**318**	ePn	Pn	01 45 50.8	+1.4
SGMF	**Saint Gilles**	**3.20**	**318**	ePg	Pg	01 46 00.4	-0.2
SGMF				eSn	Sn	01 46 26.7	-0.8
SGMF				eSg	Sg	01 46 41.4	-0.7
31nm,0.3s							
SGMF	**Saint Gilles**	**3.20**	**318**	ePn	Pn	01 45 50.8	+1.4
SGMF				eSn	Sn	01 46 26.7	-0.8
SGMF				eSg	Sg	01 46 41.4	-0.7
15nm,0.3s							
ECHI	**Chisagues Biel**	**3.26**	**186**	Pn	Pb	01 45 54.4	-2.7
SNR=7.9							
ECHI				Sn	Sn	01 46 32.4	+3.3
SNR=7.9							
QUIF	**Quistinic**	**3.29**	**309**	ePn	Pn	01 45 52.0	+1.4
QUIF	**Quistinic**	**3.29**	**309**	ePg	Pg	01 46 01.9	-0.4
QUIF				eSg	Sg	01 46 43.8	-1.1
20nm,0.2s							
QUIF	**Quistinic**	**3.29**	**309**	ePn	Pn	01 45 52.0	+1.4
QUIF				eSg	Sg	01 46 43.8	-1.1
10nm,0.2s							
EORO	**Oroz-Betelu**	**3.32**	**205**	Pn	Pn	01 45 51.2	+0.1
3.1nm,0.7s,SNR=8.6							
IELO	**Elcoad**	**3.35**	**204**	Pn	Pn	01 45 52.3	+0.8
SNR=7.9							
CSOR	**Sort**	**3.55**	**174**	Pn	Pn	01 45 58.1	+3.8
1.8nm,0.6s,SNR=7.7							
CSOR	**Sort**	**3.55**	**174**	Pg	Pg	01 46 07.3	0.0
6.6nm,0.3s,SNR=24							
CSOR				Sn	Sn	01 46 39.7	+3.4
SNR=7.9							
CLLI	**Llivia**	**3.56**	**164**	Pg	Pg	01 46 07.4	-0.1
2.6nm,0.3s,SNR=26							
CLLI				Lg	Lg	01 46 52.4	
SNR=7.9							
ROSF	**Rostrenen**	**3.61**	**314**	ePn	Pn	01 45 56.4	+1.4
ROSF	**Rostrenen**	**3.61**	**314**	ePg	Pg	01 46 08.0	-0.4
ROSF				eSn	Sn	01 46 36.4	-1.1
ROSF				eSg	Sg	01 46 54.0	-1.1
20nm,0.2s							
ROSF	**Rostrenen**	**3.61**	**314**	Pn	Pn	01 45 56.5	+1.6
ROSF	**Rostrenen**	**3.61**	**314**	ePn	Pn	01 45 56.4	+1.4
ROSF				eSn	Sn	01 46 36.4	-1.1
ROSF				eSg	Sg	01 46 54.0	-1.1
9.9nm,0.2s							
SFTF	**Sexfontaines**	**3.79**	**51**	ePg	Pg	01 46 12.5	+0.7
SFTF				eSn	Sn	01 46 41.7	-0.2
SFTF				eSg	Sg	01 46 58.9	-1.9
25nm,0.4s							
SFTF	**Sexfontaines**	**3.79**	**51**	ePg	Pg	01 46 12.5	+0.7
SFTF				eSn	Sn	01 46 41.7	-0.2
SFTF				eSg	Sg	01 46 58.9	-1.9
12nm,0.4s							
ORIF	**Oris-en-Rattie**	**3.82**	**103**	ePn	Pn	01 45 59.3	+1.2
ORIF	**Oris-en-Rattie**	**3.82**	**103**	ePg	Pg	01 46 13.7	+1.2
ORIF				eSn	Sn	01 46 42.4	-0.6
ORIF				eSg	Sg	01 47 01.6	-0.4
7.0nm,0.5s							
ORIF	**Oris-en-Rattie**	**3.82**	**103**	ePn	Pn	01 45 59.3	+1.2
ORIF	**Oris-en-Rattie**	**3.82**	**103**	ePg	Pg	01 46 13.7	+1.2
ORIF				eSn	Sn	01 46 42.4	-0.6
CABF	**La Chapelle**	**3.85**	**78**	ePn	Pn	01 45 59.7	+1.3
CABF	**La Chapelle**	**3.85**	**78**	ePg	Pg	01 46 12.7	-0.3
CABF				eSn	Sn	01 46 42.7	-0.8
CABF				eSg	Sg	01 47 02.4	-0.4
36nm,0.6s							
CABF	**La Chapelle**	**3.85**	**78**	ePn	Pn	01 45 59.7	+1.3
CABF	**La Chapelle**	**3.85**	**78**	ePg	Pg	01 46 12.7	-0.3
CABF				eSn	Sn	01 46 42.7	-0.8
CABF				eSg	Sg	01 47 02.4	-0.4
18nm,0.6s							
ELAN	**Lanestosa**	**3.95**	**229**	Pn	Pn	01 46 01.3	+1.5
3.2nm,0.8s,SNR=7.9							
RUSF	**Rustrel**	**3.97**	**118**	Pn	Pn	01 46 01.7	+1.7
RUSF	**Rustrel**	**3.97**	**118**	Pn	Pn	01 46 01.7	+1.7
MEZF	**Maizieres J'vi**	**3.97**	**48**	ePn	Pn	01 46 01.4	+1.4
MEZF	**Maizieres J'vi**	**3.97**	**48**	ePg	Pg	01 46 14.3	-1.1
baz=228							
MEZF				eSg	Sg	01 47 05.3	-1.5
24nm,0.4s							
MEZF	**Maizieres J'vi**	**3.97**	**48**	ePn	Pn	01 46 01.4	+1.4
MEZF	**Maizieres J'vi**	**3.97**	**48**	ePg	Pg	01 46 14.3	-1.1
MEZF				eSg	Sg	01 47 05.3	-1.5
12nm,0.4s							
SMRF	**Simiane la Rot**	**4.00**	**117**	ePn	Pn	01 46 02.3	+1.8
SMRF	**Simiane la Rot**	**4.00**	**117**	ePg	Pg	01 46 16.3	+0.3
SMRF				eSn	Sn	01 46 46.6	-0.7
SMRF				eSg	Sg	01 47 07.1	-0.7
2.1nm,0.2s							
SMRF	**Simiane la Rot**	**4.00**	**117**	ePn	Pn	01 46 02.3	+1.8
SMRF	**Simiane la Rot**	**4.00**	**117**	ePg	Pg	01 46 16.3	+0.3
SMRF				eSn	Sn	01 46 46.6	-0.7
SMRF				eSg	Sg	01 47 07.1	-0.7
1.0nm,0.2s							
EMIR	**Miracle**	**4.04**	**171**	Sn	Sn	01 46 49.4	+1.0
SNR=7.9							
ESAC	**San Caprasio**	**4.26**	**191**	Sn	Sn	01 46 53.7	0.0
SNR=7.9							
LPL	**La Plagne**	**4.29**	**93**	ePn	Pn	01 46 05.5	+0.9
LPL	**La Plagne**	**4.29**	**93**	ePg	Pg	01 46 21.3	-0.1
LPL				eSg	Sg	01 47 14.3	-2.7
3.5nm,0.3s							
LPL	**La Plagne**	**4.29**	**93**	ePn	Pn	01 46 05.5	+0.9
LPL	**La Plagne**	**4.29**	**93**	ePg	Pg	01 46 21.3	-0.1
LPL				eSg	Sg	01 47 14.3	-2.7
1.8nm,0.3s							
LPG	**La Plagne**	**4.30**	**93**	ePn	Pn	01 46 06.2	+1.4
LPG	**La Plagne**	**4.30**	**93**	ePg	Pg	01 46 21.9	+0.2
LPG				eSn	Sn	01 46 54.2	-0.9
LPG				eSg	Sg	01 47 16.1	-1.4
5.6nm,0.4s							
LPG	**La Plagne**	**4.30**	**93**	ePn	Pn	01 46 06.2	+1.4
LPG	**La Plagne**	**4.30**	**93**	ePg	Pg	01 46 21.9	+0.2
LPG				eSg	Sg	01 47 16.1	-1.4
2.8nm,0.4s							
PAGF	**Fort de Pagny**	**4.36**	**51**	ePn	Pn	01 46 06.7	+1.3
PAGF	**Fort de Pagny**	**4.36**	**51**	ePg	Pg	01 46 22.2	-0.6
baz=230							
PAGF				eSn	Sn	01 46 54.8	-1.3
PAGF				eSg	Sg	01 47 17.0	-2.3
12nm,0.3s							
PAGF	**Fort de Pagny**	**4.36**	**51**	ePn	Pn	01 46 06.7	+1.3
PAGF	**Fort de Pagny**	**4.36**	**51**	ePg	Pg	01 46 22.2	-0.6
PAGF				eSn	Sn	01 46 54.8	-1.

1.7nm,0.7s,SNR=6.2
EARI Sn **Sn** **01 47 07.7 -2.2**
2.2nm,0.4s,SNR=5.8
DOU Dourbes 4.96 31 Pn **Pn 01 46 15.2 +1.6**
DOU Dourbes 4.96 31 Pn **Pn 01 46 15.2 +1.6**
GIVF Givet 5.05 32 *e*Pn **Pn 01 46 15.9 +1.1**
GIVF Givet 5.05 32 *e*Pn **Pn 01 46 15.9 +1.1**
CDF Champ du Feu 5.17 59 *e*Pn **Pn 01 46 17.8 +1.2**
CDF Champ du Feu 5.17 59 *e*Pg **Pg 01 46 37.3 -1.1**
CDF *e*Sn **Sn 01 47 13.5 -2.8**
CDF *e*Sg **Sg 01 47 43.5 -1.9**
12nm,0.4s
CDF Champ du Feu 5.17 59 *e*Pn **Pn 01 46 17.8 +1.2**
CDF Champ du Feu 5.17 59 *e*Pg **Pg 01 46 37.3 -1.1**
CDF *e*Sn **Sn 01 47 13.5 -2.8**
CDF *e*Sg **Sg 01 47 43.5 -1.9**
5.8nm,0.4s
CCA1 Carnmenellis 5.81 320 Pn **Pn 01 46 25.9 +0.7**
CCA1 Carnmenellis 5.81 320 Pn **Pn 01 46 25.9 +0.7**
EPON Pontenova 6.13 248 Pn **Pn 01 46 30.2 +0.6**
SNR=7.9
EAGO Agolada(Pontev 6.98 247 Pn **Pn 01 46 42.4 +1.0**
SNR=7.9

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*MDD **06** 02:06:07.0±2.0, 37.°32N×12.°76W, h0km, mb3.5/7, Error ellipse: s-maj=18.7km s-min=17.1km az=178.0, PRXIMO*
*IGIL **06** 02:06:07.7, 37.°29N×12.°71W, h1km*
*CSEM **06** 02:06:09.8±0.4, 37.°39N×12.°51W, h10km, mb3.5, Error ellipse: s-maj=7.5km s-min=6.9km az=153.0*
*INMG **06** 02:06:09.1±1.1, 37.°16N×13.°08W, h10km, ML2.1, Error ellipse: s-maj=10.3km s-min=6.9km az=132.0*
ISC 06 02:06:12.0±3.5, 37.°44N±0.°09×12.°3W±0.°2, h10km, n68, σ1§31/122, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMST	**Lisbon--Monsan**	**2.80**	**62**	*e*Sn	**Sn**	**02 07 30.7**	**0.0**
PMST	**Lisbon--Monsan**	**2.80**	**62**	*e*Sn	**Sn**	**02 07 30.7**	**0.0**
PMAFR	**Mafra**	**2.84**	**57**	*e*Pn	**Pn**	**02 06 57.5**	**+0.1**
PMAFR				*e*Sn	**Sn**	**02 07 34.2**	**+2.5**
PMAFR				A	A	02 07 42.8	
9.1nm,0.4s							
PMAFR	**Mafra**	**2.84**	**57**	P	**Pn**	**02 06 57.6**	**+0.1**
2.2nm,0.2s,SNR=7.9							
PMAFR				S	**Sn**	**02 07 34.2**	**+2.5**
4.9nm,0.2s,SNR=9.0							
PMAFR	**Mafra**	**2.84**	**57**	P	**Pn**	**02 06 57.6**	**+0.1**
2.2nm,0.2s,SNR=7.9							
PMAFR				S	**Sn**	**02 07 34.2**	**+2.5**
4.9nm,0.2s,SNR=9.0							
PTEO	**Sao Teotonio**	**2.87**	**87**	*e*Pn	**Pn**	**02 06 58.9**	**+1.1**
PTEO				*e*Sn	**Sb**	**02 07 36.6**	**-1.9**
PTEO				A	A	02 07 49.2	
4.3nm,0.7s							
PTEO	**Sao Teotonio**	**2.87**	**87**	P	**Pn**	**02 06 58.9**	**+1.1**
PTEO				S	**Sb**	**02 07 36.6**	**-1.9**
2.2nm,0.7s							
PTEO	**Sao Teotonio**	**2.87**	**87**	P	**Pn**	**02 06 58.9**	**+1.1**
PTEO				*e*Sn	**Sb**	**02 07 36.6**	**-1.9**
PNCL	**Nicolau / Gran**	**3.09**	**76**	*e*Pn	**Pn**	**02 07 01.3**	**+0.5**
PNCL				*e*Sn	**Sn**	**02 07 39.0**	**+1.2**
PNCL				A	A	02 07 40.8	
2.5nm,0.7s							
PNCL	**Nicolau / Gran**	**3.09**	**76**	*e*Pn	**Pn**	**02 07 01.3**	**+0.5**
PNCL				*e*Sn	**Sn**	**02 07 39.0**	**+1.2**
MESJ	**Messejana**	**3.29**	**82**	*e*P	**Pn**	**02 07 02.9**	**-0.7**
MESJ	**Messejana**	**3.29**	**82**	*e*Pn	**Pn**	**02 07 03.7**	**+0.1**
MESJ				*e*Sn	**Sn**	**02 07 44.1**	**+1.4**
MESJ				A	A	02 07 49.5	
1.6nm,0.5s							
MESJ	**Messejana**	**3.29**	**82**	P	**Pn**	**02 07 02.9**	**-0.7**
MESJ				S	**Sn**	**02 07 44.1**	**+1.4**
1.6nm,0.5s							
MESJ	**Messejana**	**3.29**	**82**	P	**Pn**	**02 07 02.9**	**-0.7**
MESJ	**Messejana**	**3.29**	**82**	*e*Pn	**Pn**	**02 07 03.7**	**+0.1**
MESJ				S	**Sn**	**02 07 44.1**	**+1.4**
1.6nm,0.5s							
ALMR	**Almeirim**	**3.41**	**59**	*e*P	**Pn**	**02 07 04.9**	**-0.4**
ALMR	**Almeirim**	**3.41**	**59**	*e*Pn	**Pn**	**02 07 05.5**	**+0.2**
ALMR				*e*Sn	**Sn**	**02 07 48.2**	**+2.4**
ALMR				A	A	02 07 54.5	
5.3nm,0.8s							
ALMR	**Almeirim**	**3.41**	**59**	P	**Pn**	**02 07 04.9**	**-0.4**
ALMR				S	**Sn**	**02 07 48.2**	**+2.4**
2.7nm,0.8s							
ALMR	**Almeirim**	**3.41**	**59**	P	**Pn**	**02 07 04.9**	**-0.4**
ALMR	**Almeirim**	**3.41**	**59**	*e*Pn	**Pn**	**02 07 05.5**	**+0.2**
ALMR				S	**Sn**	**02 07 48.2**	**+2.4**
2.7nm,0.8s							
PCVE	**Castro Verde**	**3.42**	**86**	*e*Pn	**Pn**	**02 07 05.0**	**-0.4**
PCVE				*e*Sn	**Sn**	**02 07 48.1**	**+2.2**
PCVE				A	A	02 07 50.8	
2.2nm,0.6s							
PCVE	**Castro Verde**	**3.42**	**86**	P	**Pn**	**02 07 05.0**	**-0.4**
PCVE				S	**Sn**	**02 07 48.1**	**+2.2**
2.2nm,0.6s							
PCVE	**Castro Verde**	**3.42**	**86**	P	**Pn**	**02 07 05.0**	**-0.4**
PCVE				S	**Sn**	**02 07 48.1**	**+2.2**
2.2nm,0.6s							
PBDV	**Barranco-do-Ve**	**3.51**	**92**	*e*Pn	**Pn**	**02 07 06.4**	**-0.3**
PBDV				*e*Sn	**Sn**	**02 07 50.9**	**+2.6**
PBDV	**Barranco-do-Ve**	**3.51**	**92**	P	**Pn**	**02 07 06.4**	**-0.3**
PBDV				S	**Sn**	**02 07 50.9**	**+2.6**
PBDV	**Barranco-do-Ve**	**3.51**	**92**	P	**Pn**	**02 07 06.4**	**-0.3**
PBDV				S	**Sn**	**02 07 50.9**	**+2.6**
EVO	**Evora**	**3.58**	**71**	*e*Pn	**Pn**	**02 07 07.9**	**+0.3**
EVO				*e*Sn	**Sn**	**02 07 50.9**	**+0.9**
EVO	**Evora**	**3.58**	**71**	P	**Pn**	**02 07 07.9**	**+0.3**
EVO				S	**Sn**	**02 07 50.9**	**+0.9**
EVO	**Evora**	**3.58**	**71**	P	**Pn**	**02 07 07.9**	**+0.3**
EVO				S	**Sn**	**02 07 50.9**	**+0.9**
PMTG	**Montargil**	**3.62**	**62**	*e*Pn	**Pn**	**02 07 08.0**	**-0.1**
PMTG				*e*Sn	**Sn**	**02 07 52.5**	**+1.6**
PMTG				A	A	02 07 57.8	
1.1nm,0.4s							
PMTG	**Montargil**	**3.62**	**62**	*e*Pn	**Pn**	**02 07 08.0**	**-0.1**
PMTG				*e*Sn	**Sn**	**02 07 52.5**	**+1.6**
PVAQ	**Vaqueiros**	**3.67**	**89**	*e*Pn	**Pn**	**02 07 08.4**	**-0.5**
PVAQ				*e*Sn	**Sn**	**02 07 53.7**	**+1.4**
PVAQ				A	A	02 07 58.2	
1.7nm,0.3s							
PVAQ	**Vaqueiros**	**3.67**	**89**	P	**Pn**	**02 07 08.4**	**-0.5**
PVAQ				S	**Sn**	**02 07 53.7**	**+1.4**
1.7nm,0.3s							
PVAQ	**Vaqueiros**	**3.67**	**89**	P	**Pn**	**02 07 08.4**	**-0.5**
PVAQ				S	**Sn**	**02 07 53.7**	**+1.4**
1.7nm,0.3s							
PTOM	**Tomar**	**3.77**	**54**	*e*Pn	**Pn**	**02 07 10.7**	**+0.6**
PTOM				*e*Sn	**Sn**	**02 07 57.1**	**+2.6**
PTOM				A	A	02 08 01.0	
2.2nm,0.1s							
PTOM	**Tomar**	**3.77**	**54**	P	**Pn**	**02 07 10.7**	**+0.6**
PTOM				S	**Sn**	**02 07 57.1**	**+2.6**
1.1nm,0.1s							
PTOM	**Tomar**	**3.77**	**54**	P	**Pn**	**02 07 10.7**	**+0.6**
PTOM				S	**Sn**	**02 07 57.1**	**+2.6**
1.1nm,0.1s							
EGRO	**El Granado**	**3.86**	**87**	P	**Pn**	**02 07 10.7**	**-0.7**
0.6nm,0.2s,SNR=7.9							
EGRO				S	**Sn**	**02 07 59.3**	**+2.5**
0.7nm,0.1s,SNR=7.9							
EGRO	**El Granado**	**3.86**	**87**	P	**Pn**	**02 07 10.7**	**-0.7**
0.6nm,0.2s,SNR=7.9							
EGRO				S	**Sn**	**02 07 59.3**	**+2.5**
0.7nm,0.1s,SNR=7.9							
PCAS	**Casmilo, Conde**	**3.97**	**48**	*e*Sn	**Sn**	**02 08 01.9**	**+2.3**
PCAS	**Casmilo, Conde**	**3.97**	**48**	*e*Sn	**Sn**	**02 08 01.9**	**+2.3**
PESTR	**Estremoz**	**4.00**	**68**	*e*Pn	**Pn**	**02 07 14.0**	**+0.6**
PESTR				*e*Sn	**Sn**	**02 08 01.4**	**+1.1**
PESTR				A	A	02 08 09.0	
1.5nm,0.4s							
PESTR	**Estremoz**	**4.00**	**68**	*e*Pn	**Pn**	**02 07 14.0**	**+0.6**
PESTR				*e*Sn	**Sn**	**02 08 01.4**	**+1.1**
PBAR	**Barrancos**	**4.25**	**78**	*e*Pn	**Pn**	**02 07 16.8**	**-0.1**
PBAR				*e*Sn	**Sn**	**02 08 09.5**	**+2.9**
PBAR				A	A	02 08 15.3	
1.9nm,0.5s							
PBAR	**Barrancos**	**4.25**	**78**	P	**Pn**	**02 07 16.8**	**-0.1**
PBAR				S	**Sn**	**02 08 09.5**	**+2.9**
1.9nm,0.5s							
PBAR	**Barrancos**	**4.25**	**78**	P	**Pn**	**02 07 16.8**	**-0.1**
PBAR				S	**Sn**	**02 08 09.5**	**+2.9**
1.9nm,0.5s							
PMRV	**Marv??o**	**4.36**	**61**	*e*Pn	**Pn**	**02 07 18.1**	**-0.2**
PMRV				*e*Sn	**Sn**	**02 08 10.2**	**+1.1**
PMRV				A	A	02 08 17.1	
1.1nm,0.6s							
PMRV	**Marv??o**	**4.36**	**61**	P	**Pn**	**02 07 18.1**	**-0.2**
PMRV				S	**Sn**	**02 08 10.2**	**+1.1**
1.1nm,0.6s							
PMRV	**Marv??o**	**4.36**	**61**	P	**Pn**	**02 07 18.1**	**-0.2**
PMRV				S	**Sn**	**02 08 10.2**	**+1.1**
1.1nm,0.6s							
EBAD	**Badajoz**	**4.39**	**71**	P	**Pn**	**02 07 18.5**	**-0.3**
0.2nm,0.1s,SNR=7.9							
EBAD				S	**Sn**	**02 08 10.2**	**+0.1**
0.5nm,0.1s,SNR=7.9							
EBAD	**Badajoz**	**4.39**	**71**	P	**Pn**	**02 07 18.5**	**-0.3**
0.2nm,0.1s,SNR=7.9							
EBAD				S	**Sn**	**02 08 10.2**	**+0.1**
0.5nm,0.1s,SNR=7.9							
PCBR	**Castelo Branco**	**4.49**	**56**	*e*Pn	**Pn**	**02 07 20.4**	**+0.3**
PCBR	**Castelo Branco**	**4.49**	**56**	P	**Pn**	**02 07 20.4**	**+0.3**
PCBR	**Castelo Branco**	**4.49**	**56**	P	**Pn**	**02 07 20.4**	**+0.3**
EMIN	**Mina Concepcio**	**4.51**	**84**	P	**Pn**	**02 07 19.5**	**-0.8**
0.3nm,0.1s,SNR=7.9							
EMIN				S	**Sn**	**02 08 13.2**	**+0.4**
0.4nm,0.2s,SNR=7.9							
EMIN	**Mina Concepcio**	**4.51**	**84**	P	**Pn**	**02 07 19.5**	**-0.8**
0.3nm,0.1s,SNR=7.9							
EMIN				S	**Sn**	**02 08 13.2**	**+0.4**
0.4nm,0.2s,SNR=7.9							
PVIS	**Viseu**	**4.75**	**45**	*e*Pn	**Pn**	**02 07 23.6**	**-0.2**
PVIS				*e*Sn	**Sn**	**02 08 19.1**	**+0.1**
PVIS	**Viseu**	**4.75**	**45**	P	**Pn**	**02 07 23.6**	**-0.2**
PVIS				S	**Sn**	**02 08 19.1**	**+0.1**
PVIS	**Viseu**	**4.75**	**45**	P	**Pn**	**02 07 23.6**	**-0.2**
PVIS				S	**Sn**	**02 08 19.1**	**+0.1**
MTE	**Manteigas**	**4.76**	**50**	*e*Sn	**Sn**	**02 08 20.6**	**+1.4**
MTE	**Manteigas**	**4.76**	**50**	Sn	**Sn**	**02 08 20.6**	**+1.4**
MTE	**Manteigas**	**4.76**	**50**	Sn	**Sn**	**02 08 20.6**	**+1.4**
ECAB	**El Cabril**	**5.51**	**81**	P	**Pn**	**02 07 33.4**	**-0.8**
0.4nm,0.2s,SNR=7.9							
ECAB				S	**Sn**	**02 08 37.4**	**-0.3**
0.1nm,0.1s,SNR=7.9							
ECAB	**El Cabril**	**5.51**	**81**	P	**Pn**	**02 07 33.4**	**-0.8**
0.4nm,0.2s,SNR=7.9							
ECAB				S	**Sn**	**02 08 37.4**	**-0.3**
0.1nm,0.1s,SNR=7.9							
MVO	**Moncorvo**	**5.54**	**46**	P	**Pn**	**02 07 33.9**	**-0.8**
0.4nm,0.2s,SNR=7.9							
MVO				S	**Sn**	**02 08 36.8**	**-1.7**
0.2nm,0.1s,SNR=7.9							
MVO	**Moncorvo**	**5.54**	**46**	P	**Pn**	**02 07 33.9**	**-0.8**
0.4nm,0.2s,SNR=7.9							
MVO				*e*Sn	**Sn**	**02 08 38.0**	**-0.5**
EADA	**Adamuz**	**6.18**	**81**	P	**Pn**	**02 07 42.6**	**-0.8**
0.9nm,0.2s,SNR=7.9							
EADA				S	**Sn**	**02 08 54.7**	**+0.5**
0.6nm,0.2s,SNR=7.9							
EADA	**Adamuz**	**6.18**	**81**	P	**Pn**	**02 07 42.6**	**-0.8**
0.9nm,0.2s,SNR=7.9							
EADA				S	**Sn**	**02 08 54.7**	**+0.5**
0.6nm,0.2s,SNR=7.9							

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*NIED **06** 02:09:00, 22.°60N×121.°50E, h5km, Mw4.1 Best double couple: M0 1.68000×10^15 NP1:φs=98.00000°, δ51.00000°, λ-137.00000°. NP2:φs=337.00000°, δ58.00000°, λ-48.00000°.*
*ISCJB **06** 02:09:16.8±0.3, 22.°34N±0.°01×121.°52E±0.°02, h22km±2km, mb4.2/36, MS3.7/5, Error ellipse: s-maj=2.8km s-min=2.4km az=31.0*
*NEIC **06** 02:09:16.9±0.0, 22.°36N×121.°44E, h21km, mb4.5/16, ML4.8(TAP), After TAP.*
NEIC Recorded [3 TAP] in Taitung.
*BJI **06** 02:09:16.3, 22.°41N×121.°43E, h9km, mb4.1/13, mB4.2/2, ML4.0/3, Ms3.9/6, Ms7 3.9/6*
*TAP **06** 02:09:18.0, 22.°42N×121.°44E, h20km, ML4.4, B*
*JMA **06** 02:09:19.3±0.1, 22.°56N×121.°48E, h23km, M4.2*
*IDC **06** 02:09:19.5±3.3, 22.°25N×121.°46E, h33km±25km, mb3.9/23, mb1 4.1/25, mb1mx3.9/58, mbtmp4.2/25, ML3.7/2, MS3.6/8, Ms1 3.6/8, ms1mx3.2/67, Error ellipse: s-maj=18.5km s-min=12.8km az=78.0*
ISC 06 02:09:17.1±0.9, 22.°40N±0.°02×121.°48E±0.°02, h14km±6km, n200, σ1§21/251, mb4.2/36, MS4.0/5, 11C-29D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWH	**Lutao**	**0.31**	**359**	⇑*i*P	**Pb**	**02 09 24.3**	**-0.1**
TWH				*i* S	**Sb**	**02 09 28.9**	**-0.5**
LAY	**Lan-yu**	**0.37**	**170**	⇓*i*P	**Pb**	**02 09 25.8**	**+0.3**
LAY				*e*S	**Sg**	**02 09 30.7**	**+1.1**
TTN	**Taitung**	**0.47**	**319**	⇑*e*P	**Pb**	**02 09 27.7**	**+0.5**
TTN				*e*S	**Sb**	**02 09 34.6**	**+0.6**
ECL	**Taimali**	**0.53**	**292**	⇓*i*P	**Pb**	**02 09 27.6**	**-0.6**
ECL				*e*S	**Sb**	**02 09 34.2**	**-1.5**
TAW	**Tawu**	**0.54**	**266**	⇑*i*P	**Pb**	**02 09 27.8**	**-0.7**
TAW				*e*S	**Sg**	**02 09 34.2**	**-0.9**
TWGBT	**Beinan**	**0.56**	**318**	⇓P	**Pb**	**02 09 28.6**	**-0.1**
TWGBT				*e*S	**Sb**	**02 09 36.6**	**+0.1**
TWG	**Pinlang**	**0.56**	**318**	⇓*i*P	**Pb**	**02 09 28.7**	**-0.2**
TWG				S	**Sb**	**02 09 36.5**	**-0.3**
TWG	**Pinlang**	**0.56**	**318**	*e*Pg	**Pb**	**02 09 28.6**	**-0.3**
TWG				*e*Sn	**Sb**	**02 09 36.4**	**-0.3**
EAST	**Anshuo**	**0.59**	**268**	⇓P	**Pb**	**02 09 28.5**	**-0.8**
EAST				*e*S	**Sg**	**02 09 35.5**	**-1.0**
CHKT	**Chengkung**	**0.70**	**351**	⇑P	**Pg**	**02 09 30.7**	**-0.2**
CHKT				*e*S	**Sg**	**02 09 39.7**	**-0.5**
TSEB	**Hengchuen, Pin**	**0.73**	**227**	⇑*i*P	**Pb**	**02 09 31.7**	**0.0**
TSEB				*e*S	**Sb**	**02 09 41.3**	**-0.3**
TWKBT	**Hengchun**	**0.77**	**234**	⇑P	**Pg**	**02 09 31.7**	**-0.5**
TWKBT				*e*S	**Sg**	**02 09 40.2**	**-2.0**
TWK1	**Hengchun**	**0.78**	**234**	⇑P	**Pg**	**02 09 31.7**	**-0.5**
TWK1				*e*S	**Sg**	**02 09 40.8**	**-1.6**
SCZT	**Fangliau**	**0.80**	**268**	⇑P	**Pg**	**02 09 31.9**	**-0.7**
SCZT				*e*S	**Sg**	**02 09 40.3**	**-2.8**
FULB	**Fuli**	**0.81**	**348**	⇑P	**Pg**	**02 09 32.4**	**-0.6**
FULB				*e*S	**Sg**	**02 09 43.3**	**-0.3**
MASBT	**Mashibuluo**	**0.81**	**285**	⇓P	**Pg**	**02 09 32.0**	**-0.9**
SSPT	**Xinbi**	**0.85**	**276**	*e*P	**Pb**	**02 09 33.5**	**-0.2**
SSD	**Sandimen**	**0.86**	**294**	⇓P	**Pg**	**02 09 32.7**	**-1.0**
ELDTW	**Lidau**	**0.90**	**331**	⇓P	**Pg**	**02 09 33.4**	**-1.1**
TWF1	**Yuli**	**0.96**	**350**	⇓*e*P	**Pg**	**02 09 34.7**	**-1.1**
SGLT	**Jiouru**	**0.97**	**290**	*e*P	**Pn**	**02 09 36.2**	**-0.2**
SLGT	**Liugui**	**0.97**	**308**	*e*P	**Pg**	**02 09 35.4**	**-0.6**
YULB	**Yu-li**	**1.00**	**350**	⇓*e*P	**Pg**	**02 09 35.0**	**-1.4**
YULB	**Yu-li**	**1.00**	**350**	*e*Pn	**Pg**	**02 09 35.1**	**-1.4**
YULB				*e*Sn	**Sg**	**02 09 49.2**	**-0.5**
STYT	**Tauyuan**	**1.01**	**319**	⇓*e*P	**Pg**	**02 09 35.7**	**-1.0**
baz=329							
WLCH	**Liuqiu**	**1.02**	**267**	⇑*e*P	**Pn**	**02 09 38.8**	**+1.7**
baz=270							
WLCH				*e*S	**Sn**	**02 09 53.1**	**+1.9**
baz=270							
TWP	**Hsiaoliuchiu**	**1.04**	**267**	⇑*e*P	**Pn**	**02 09 38.9**	**+1.6**
baz=255							
TWM1	**Shoushan**	**1.07**	**293**	*e*P	**Pn**	**02 09 37.7**	**0.0**
baz=284							
SGST	**Jiashian**	**1.07**	**309**	⇓P	**Pn**	**02 09 37.7**	**-0.1**
baz=320							
HGSD	**Ruisui**	**1.09**	**357**	⇓*e*P	**Pb**	**02 09 36.8**	**-1.0**
baz=7.0							
HGSD				*e*S	**Sn**	**02 09 53.1**	**+0.2**
baz=7.0							
KAU	**Kaohsiung**	**1.10**	**279**	*e*P	**Pn**	**02 09 38.6**	**+0.4**
baz=277							
EHY	**Hungye**	**1.11**	**352**	*e*P	**Pb**	**02 09 36.8**	**-1.4**
baz=341							
WTP	**Ta-pu**	**1.16**	**317**	⇓P	**Pg**	**02 09 39.0**	**-0.5**
baz=318							
WTP				*e*S	**Sn**	**02 09 55.4**	**+0.6**
baz=318							
CHN1	**Nanshi**	**1.18**	**312**	⇓P	**Pn**	**02 09 39.6**	**+0.4**
baz=312							
CHN1				*e*S	**Sn**	**02 09 55.8**	**+0.7**
baz=312							
TPUB	**Ta-pu**	**1.19**	**319**	⇓P	**Pb**	**02 09 39.5**	**-0.1**
baz=320							
TPUB				*e*S	**Sn**	**02 09 56.2**	**+0.7**
baz=320							
TPUB	**Ta-pu**	**1.19**	**319**	*e*Pn	**Pb**	**02 09 39.3**	**-0.3**
TPUB				*e*Sn	**Sg**	**02 09 55.0**	**-0.7**
CHN3	**Shinhua**	**1.23**	**303**	*e*P	**Pg**	**02 09 41.5**	**+0.7**
baz=303							
CHN3				*e*S	**Sn**	**02 09 58.7**	**+2.3**
baz=303							
TWK	**Hsinying**	**1.26**	**313**	⇓P	**Pg**	**02 09 40.9**	**-0.6**
baz=314							
TWK				*e*S	**Sn**	**02 09 57.9**	**+0.7**
baz=314							
EGFH	**Guangfu**	**1.26**	**358**	*e*P	**Pn**	**02 09 40.1**	**-0.3**
baz=10.0							
EGFH				*e*S	**Sb**	**02 09 56.5**	**-0.4**
baz=10.0							
ALS	**Alishan**	**1.27**	**331**	⇓*e*P	**Pn**	**02 09 40.4**	**-0.4**
baz=323							
TAI1	**Yung-k'ang**	**1.32**	**299**	*e*P	**Pb**	**02 09 41.5**	**-0.2**
baz=298							
VWDT	**VWDT**	**1.38**	**347**	⇓*e*P	**Pn**	**02 09 41.5**	**-0.5**
baz=358							
ESL	**Shilin**	**1.41**	**358**	*e*P	**Pn**	**02 09 42.6**	**+0.2**
baz=9.0							
ESL				*e*S	**Sb**	**02 10 01.7**	**+0.6**
baz=9.0							
SCLT	**Jiali**	**1.42**	**303**	*e*P	**Pb**	**02 09 43.1**	**-0.2**
baz=303							
SCLT				*e*S	**Sg**	**02 10 01.5**	**-1.3**
baz=303							
CHN2	**Minshiung**	**1.46**	**321**	*e*P	**Pb**	**02 09 44.1**	**0.0**
baz=322							
CHN2				*e*S	**Sg**	**02 10 04.0**	**-0.2**
baz=322							
CHY	**Chiayi**	**1.46**	**318**	⇓*e*P	**Pb**	**02 09 43.9**	**-0.3**
baz=320							
CHY				*e*S	**Sg**	**02 10 03.9**	**-0.5**
baz=320							
SSLB	**Suanglung**	**1.46**	**341**	⇓P	**Pn**	**02 09 43.1**	**-0.1**
baz=353							
SSLB	**Suanglung**	**1.46**	**341**	*e*Pn	**Pn**	**02 09 42.4**	**-0.8**
SSLB				*e*Sn	**Sn**	**02 10 02.1**	**-0.1**
ENLB	**Shoufeng**	**1.50**	**4**	*e*P	**Pn**	**02 09 43.3**	**-0.3**
baz=17							
ENLB				*e*S	**Sn**	**02 10 01.6**	**-1.5**
baz=17							
CHN8	**Yiju**	**1.50**	**309**	*e*P	**Pn**	**02 09 43.8**	**+0.1**
baz=310							
CHN8				*e*S	**Sn**	**02 10 02.8**	**-0.3**
baz=310							
WGK	**Gukeng**	**1.54**	**327**	*e*P	**Pb**	**02 09 45.3**	**0.0**
baz=327							
WDLH	**Douliu**	**1.55**	**326**	⇓*e*P	**Pb**	**02 09 45.4**	**-0.3**
baz=326							
SMLT	**Sun Moon Lake**	**1.57**	**340**	*e*P	**Pn**	**02 09 45.4**	**+0.7**
baz=342							
SMLT				*e*S	**Sg**	**02 10 07.2**	**-0.6**
baz=342							
HWA	**Hwalien**	**1.57**	**4**	*e*P	**Pn**	**02 09 45.1**	**+0.5**
baz=16							
WJS	**Zhushan**	**1.58**	**334**	*e*P	**Pn**	**02 09 45.5**	**+0.8**
baz=335							
TYC	**Yuchr**	**1.60**	**339**	⇓P	**Pb**	**02 09 46.4**	**-0.1**
baz=350							
WNT	**Mingjian**	**1.64**	**334**	⇓P	**Pb**	**02 09 47.4**	**+0.2**
baz=316							
WNT				*e*S	**Sg**	**02 10 08.6**	**-1.5**
baz=316							
TWD	**Chiawan**	**1.68**	**4**	*e*P	**Pn**	**02 09 45.3**	**-0.7**
baz=17							
CHGB	**Renai**	**1.68**	**350**	*e*P	**Pn**	**02 09 46.4**	**+0.1**
baz=5.0							
WSF	**Szhu**	**1.69**	**317**	*e*P	**Pn**	**02 09 46.8**	**+0.5**
baz=317							
NACB	**Ninganchiao**	**1.77**	**3**	*e*P	**Pn**	**02 09 46.5**	**-0.9**
baz=15							
NACB				*e*S	**Sn**	**02 10 07.5**	**-2.2**
baz=15							
NACB	**Ninganchiao**	**1.77**	**3**	*e*Pn	**Pn**	**02 09 46.5**	**-0.9**
NACB				*e*Sn	**Sn**	**02 10 07.3**	**-2.4**
RLNB	**Erlin**	**1.81**	**325**	*e*P	**Pn**	**02 09 48.3**	**+0.5**
baz=327							
RLNB				*e*S	**Sn**	**02 10 11.1**	**+0.5**
baz=327							
TWT	**Tachien**	**1.87**	**351**	*e*P	**Pn**	**02 09 50.3**	**+1.4**
baz=352							
TDCB	**Techi**	**1.87**	**351**	*e*P	**Pn**	**02 09 50.2**	**+1.3**
baz=352							
WCHH	**Zhanghua**	**1.88**	**333**	*e*P	**Pn**	**02 09 50.0**	**+1.2**
baz=316							
WDGT	**Dungji**	**1.89**	**297**	⇓*e*P	**Pn**	**02 09 48.1**	**-0.9**
baz=296							
TCU	**Taichung**	**1.89**	**337**	*e*P	**Pn**	**02 09 50.4**	**+1.3**
baz=338							
NNSB	**Datong**	**2.02**	**357**	*e*P	**Pn**	**02 09 51.3**	**+0.3**
baz=8.0							
NNSH	**Datong**	**2.02**	**357**	*e*P	**Pn**	**02 09 51.7**	**+0.7**
baz=12							
ENA	**Nanau**	**2.03**	**7**	*e*P	**Pn**	**02 09 51.4**	**+0.4**
baz=355							
NANB	**Nanao**	**2.03**	**7**	*e*P	**Pn**	**02 09 50.5**	**-0.4**
baz=355							
NNS	**Nan Shan**	**2.03**	**357**	*e*P	**Pn**	**02 09 52.7**	**+1.6**
baz=8.0							
VCHM	**Qimei**	**2.06**	**293**	⇓*e*P	**Pn**	**02 09 50.4**	**-0.9**
baz=292							
PHUB	**P'eng-hu**	**2.08**	**303**	*e*P	**Pn**	**02 09 50.5**	**-1.2**
baz=302							
PHUB				*e*S	**Sn**	**02 10 14.2**	**-3.1**
baz=302							
NSY	**Sanyi**	**2.11**

TWE	Neicheng	2.32	4	eP		Pn	02 09 57.0 +2.1
	baz=7.0						
NWLT	Wulai	2.37	0	eP		Pn	02 09 57.6 +2.0
	baz=14						
JYNG	Yonagunijimaku	2.44	33	P		Pn	02 09 56.9 +0.3
JYNG				eS		Sn	02 10 23.3 -3.0
NTC	Toucheng	2.46	7	eP		Pb	02 10 00.1 -1.1
	baz=357						
EGS		2.47	10	eP		Pb	02 09 59.8 -1.5
	baz=22						
YOJ	Yonaguni jima	2.49	34	eP		Pn	02 09 58.5 +1.2
	baz=48						
YOJ				eS		Sn	02 10 27.9 +0.5
	baz=48						
YOJ	Yonaguni jima	2.49	34	ePn		Pn	02 09 59.0 +1.8
YOJ				eSn		Sn	02 10 28.6 +1.2
YOJ	Yonaguni jima	2.49	34	P		Pn	02 09 58.8 +1.6
YOJ				eS		Sn	02 10 26.1 -1.3
TATO	Taipei	2.56	0	eP		Pn	02 10 00.7 +2.5
	baz=13						
TATO	Taipei	2.56	0	ePn		Pb	02 10 02.2 -0.7
TIPB	Shuangxi	2.58	7	eP		Pn	02 09 58.9 +0.3
	baz=358						
NWF	Wu-fen Shan	2.67	6	eP		Pn	02 10 01.0 +1.1
	baz=8.0						
WFSB	Wu-fen Shan	2.67	6	eP		Pn	02 10 01.3 +1.5
	baz=8.0						
HATJ	Hateruma jima	2.70	52	P		Pn	02 10 00.6 +0.5
HATJ				eS		Sn	02 10 31.0 -1.6
YM10	YM10	2.74	1	eP		Pn	02 10 02.6 +1.7
	baz=4.0						
YM11	YM11	2.75	2	eP		Pn	02 10 03.7 +2.7
	baz=4.0						
YM07	YM07	2.77	3	eP		Pn	02 10 03.2 +2.1
	baz=5.0						
YM03	YM03	2.77	1	eP		Pb	02 10 05.0 -1.5
	baz=3.0						
IRIF	Iriomote-Funau	2.82	47	P		Pn	02 10 02.4 +0.5
IRIF				eS		Sn	02 10 35.4 -0.3
JKRS	Kuro-shima	2.96	51	P		Pn	02 10 04.4 +0.7
JKRS				eS		Sn	02 10 39.1 +0.1
JIJ	Ishigaki jima	3.13	51	P		Pn	02 10 06.0 -0.1
JIJ				eS		Sn	02 10 40.6 -2.7
VWUC	VWUC	3.18	325⇓	eP		Pn	02 10 06.5 -0.2
	baz=324						
JISG	Ishigakijimahi	3.39	49	P		Pn	02 10 09.6 0.0
JISG				eS		Sn	02 10 47.7 -1.9
KNM	Kinmen	3.45	306	eP		Pn	02 10 11.4 +1.0
	baz=302						
KNMB	Chin-men Tao	3.51	306⇓	eP		Pn	02 10 10.9 -0.4
	baz=304						
QZH	Quanzhou	3.66	314⇓	iPn		Pn	02 10 12.9 -0.5
QZH				Sn		Sn	02 10 53.7 -2.8
QZH				LR		LR	
	comp=Z,840nm,10.5s						
JTJ	Tarama	3.70	52	P		Pn	02 10 14.5 +0.6
JTJ				S		Sn	02 10 56.6 -0.8
MATB	Ma-tsu	3.99	340	eP		Pn	02 10 17.6 -0.2
	baz=340						
JIRB	Irabujima	4.16	54	P		Pn	02 10 20.7 +0.5
JIRB				eS		Sn	02 11 05.9 -2.8
JMJ	Miyako jima 2	4.24	55	P		Pn	02 10 22.1 +0.7
JIKM	Ikemajima	4.27	53	P		Pn	02 10 24.0 +2.3
JOGS	Gusukube	4.30	56	P		Pn	02 10 24.1 +1.9
VDOS	Pratas Island	4.74	250	eP		Pn	02 10 28.1 -0.1
	baz=248						
GZH	Guangzhou	7.54	277	P		Pn	02 11 03.0 -3.7
GZH				S		Sn	02 12 21.2 -11
GZH				smax		smax	
	comp=N,140nm,0.8s						
GZH				smax		smax	
	comp=E,110nm,0.9s						
JOW	Kunigami	7.59	53	Pn		Pn	02 11 08.3 +0.8
	comp=E,3.1nm,0.3s,baz=334,slow=16,SNR=5.1						
JOW				LR		LR	02 13 02.8
	comp=E,103nm,20.8s,baz=340,slow=29						
DAV	Davao City (W)	15.74	165	LR		LR	02 18 45.2
	comp=E,351nm,19.2s,baz=346,slow=36						
KS15	Wonju Array Si	15.98	19	ePn		Pn	02 13 03.9 +2.3
KSAR	Wonju Array Be	15.98	19	Pn		Pn	02 13 03.9 +2.3
KSRS	Korea Array	16.00	19	Pn		Pn	02 13 03.9 +2.1
	comp=E,0.2nm,0.3s,baz=199,slow=13,SNR=26						
KSRS				LR		LR	02 19 36.4
	comp=E,98nm,18.0s,baz=275,slow=38						
KS01	Wonju Array Si	16.01	19	ePn		Pn	02 13 04.4 +2.5
XAN	Xi'an	16.01	319	P		P	02 13 07.5 +2.0
XAN				pmax		pmax	
	comp=E,13nm,0.9s						
KMI	Kunming	17.37	283	P		Pn	02 13 20.1 +0.6
KMI				pmax		pmax	
	comp=E,19nm,0.5s						
MAJO	Matsushiro	20.22	42	eP		Pn	02 13 54.5 +0.7
MJAR	Matsushiro Arr	20.22	42	P		Pn	02 13 54.5 +0.7
	comp=E,3.3nm,0.7s,baz=231,slow=8.8,SNR=10						
MJAR				LR		LR	02 21 12.0
	comp=E,174nm,20.7s,baz=125,slow=35						
LZH	Lanzhou	20.52	316	eP		Pn	02 14 05.3 +7.9
LZH				pP		sP	02 14 11.6 +11
LZH				sP		pP	02 14 14.8 +16
LZH				pmax		pmax	
	comp=Z,20nm,1.3s						
CM31	Chiang Mai Arr	21.48	264	eP		P	02 14 06.2 +0.6
CMAR	Chiang Mai Arr	21.48	264	P		P	02 14 06.2 +0.6
	comp=Z,1.1nm,0.3s,baz=72,slow=11,SNR=5.4						
SBUM	Sibu	21.78	206	eP		P	02 14 08.8 +0.1
	comp=Z,12nm,0.9s						
USRK	Ussuriysk Ar.	23.41	19	P		P	02 14 27.5 +1.9
	comp=Z,1.4nm,0.5s,baz=209,slow=10,SNR=5.4						
KSM	Kuching	23.47	209	eP		P	02 14 26.2 -0.3
	comp=Z,24nm,1.1s						
GTA	Gaotai	25.06	318	eP		P	02 14 43.1 +1.8
GTA				pP		sP	02 14 47.5 +0.3
GTA				sP		pP	02 14 50.7 +5.2
GTA				pmax		pmax	
	comp=Z,2.0nm,0.6s						
ERM	Erimo	26.68	38	eP		P	02 14 57.6 +1.8
	comp=Z,30nm,1.2s						
KLR	Kul'dur	27.98	14	P		P	02 15 08.7 +1.3
	comp=Z,0.2nm,0.7s,baz=241,slow=6.9,SNR=9.3						
KLR				LR		LR	02 26 21.4
	comp=Z,23nm,18.8s,baz=274,slow=36						
SONA0	Songino Array	28.11	338	eP		P	02 15 08.5 -0.2
SONM	Songino Array	28.11	338	P		P	02 15 08.5 -0.2
	comp=Z,2.4nm,0.7s,baz=151,slow=9.9,SNR=11						
SONM				LR		LR	02 26 57.0
	comp=Z,358nm,19.2s,baz=330,slow=37						
SONA1	Songino Array	28.12	338	eP		P	02 15 08.4 -0.4
PSI	Prapat	29.31	232	P		P	02 15 18.9 -0.7
	comp=Z,7.4nm,0.7s,baz=360,slow=17,SNR=5.9						
PSI	Prapat	29.31	232	eP		P	02 15 18.9 -0.7
	comp=Z,7.7nm,0.8s						
WMQ	Urumqi	35.10	316	eP		P	02 16 12.9 +2.8
MK01	Makanchi Array	39.80	317	eP		P	02 16 50.5 +0.6
MK31	Makanchi Array	39.82	317	eP		P	02 16 50.8 +0.8
MK32	Makanchi Array	39.82	317	eP		P	02 16 50.9 +0.9
MK32				ePcP		PcP	02 18 54.8 -1.1
MK32				eScP		ScP	02 22 41.6 -2.9
MKAR	Makanchi Array	39.82	317	P		P	02 16 50.9 +0.9
	comp=Z,2.9nm,0.6s,baz=110,slow=9.0,SNR=21						
MKAR				PcP		PcP	02 18 54.8 -1.1
	comp=Z,0.3nm,0.6s,baz=101,slow=5.8,SNR=2.8						
MKAR				ScP		ScP	02 22 41.6 -2.9
	comp=Z,0.5nm,0.8s,baz=108,slow=4.7,SNR=4.4						
MKAR	Makanchi Array	39.82	317	eP		P	02 16 50.8 +0.8
	comp=Z,38nm,0.8s						
MKAR				PcP		PcP	02 18 54.8 -1.1
MKAR				ScP		ScP	02 22 41.6 -2.9
MAKZ	Makanchi	40.02	317	eP		P	02 16 52.8 +1.1
	comp=Z,7.1nm,0.8s						
ZAA0	Zalesovo Array	41.89	328	eP		P	02 17 07.5 +0.6
	comp=Z,8.9nm,0.8s						
ZALV	Zalesovo Beam	41.89	328	P		P	02 17 07.0 +0.1
	comp=Z,8.0nm,0.6s,baz=114,slow=7.7,SNR=26						
ZAA1	Zalesovo Array	41.89	328	eP		P	02 17 07.0 +0.1
COEN	Coen	41.92	148	eP		P	02 17 05.3 -2.3
	comp=Z,22nm,1.4s						
H11N1	WAKE ISLAND Hy	42.34	85	T		T	03 02 46.1
	baz=282,slow=74,SNR=39						
H11N2	WAKE ISLAND Hy	42.34	85	T		T	03 02 42.6
	baz=282,slow=74,SNR=74						
H11N3	WAKE ISLAND Hy	42.36	85	T		T	03 02 47.4
	baz=282,slow=74,SNR=75						
H11S3	WAKE ISLAND Hy	42.42	87	T		T	03 02 46.2
	baz=283,slow=75,SNR=146						
H11S1	WAKE ISLAND Hy	42.43	87	T		T	03 02 46.9
	baz=283,slow=75,SNR=63						
H11S2	WAKE ISLAND Hy	42.44	87	T		T	03 02 33.7
	baz=283,slow=75,SNR=36						
KURK	Kurchatov	43.64	321	eP		P	02 17 21.1 -0.1
	comp=Z,34nm,0.9s						
KURBB	Kurchatov Arra	43.65	321	P		P	02 17 21.1 -0.1
	comp=Z,3.2nm,0.8s,baz=116,slow=7.5,SNR=15						
WR1	Warramunga Arr	43.92	162	eP		P	02 17 21.1 -2.6
	comp=Z,4.1nm,0.7s						
WRA	Warramunga Arr	43.92	162	P		P	02 17 21.1 -2.6
	comp=Z,3.6nm,0.8s,baz=344,slow=8.8,SNR=13						
WB2	Warramunga Arr	43.92	162	eP		P	02 17 21.8 -1.9
KK31	Karatay Array	46.78	309	eP		P	02 17 47.8 +1.5
KKAR	Karatay Array	46.78	309	eP		P	02 17 47.8 +1.5
AS31	Alice Springs	47.36	164	eP		P	02 17 49.3 -1.6
	comp=Z,1.1nm,0.8s						
ASAR	Alice Springs	47.36	164	P		P	02 17 49.3 -1.6
	comp=Z,1.2nm,0.5s,baz=352,slow=15,SNR=15						
AS01	Alice Springs	47.37	164	eP		P	02 17 49.7 -1.3
BVAR	Borovoye Array	49.23	322	P		P	02 18 05.7 +0.6
	comp=Z,1.5nm,0.6s,baz=116,slow=9.8,SNR=7.0						
FORT	Forrest	53.25	173	eP		P	02 18 34.1 -1.3
	comp=Z,17nm,0.8s						
ABKAR	Akbulak array	54.89	315	eP		P	02 18 48.3 +1.0
STKA	Stephens Creek	57.30	160	P		P	02 19 03.6 -1.0
	comp=Z,1.9nm,0.5s,baz=337,slow=11,SNR=6.0						
STKA	Stephens Creek	57.30	160	eP		P	02 19 03.6 -1.0
	comp=Z,2.8nm,1.4s						
KBZ	Khabaz	66.81	309	P		P	02 20 08.3 -0.1
	comp=Z,1.7nm,0.8s,baz=146,slow=3.6,SNR=3.2						
SPA0	Spitsbergen Ar	71.28	348	eP		P	02 20 35.5 -0.1
SPITS	Spitsbergen Ar	71.28	348	P		P	02 20 35.5 -0.1
	comp=Z,3.4nm,0.6s,baz=353,slow=5.8,SNR=4.1						
ARA0	ARCESS Array S	71.29	338	eP		P	02 20 36.2 +0.4
ARCES	ARCESS Array B	71.29	338	P		P	02 20 36.2 +0.4
	comp=Z,2.4nm,0.8s,baz=76,slow=7.5,SNR=3.5						
FIA0	FINESS Array S	73.12	330	eP		P	02 20 46.9 0.0
FINES	FINESS Array B	73.12	330	P		P	02 20 46.9 0.0
	comp=Z,1.5nm,0.6s,baz=76,slow=8.0,SNR=5.9						
AKASG	Malin Array Be	74.38	319	P		P	02 20 54.6 +0.1
	comp=Z,0.4nm,0.4s,baz=69,slow=4.7,SNR=3.4						
AKBB	Malin Array Si	74.38	319	eP		P	02 20 54.6 +0.1
	comp=Z,6.4nm,1.4s						
BR101	Keskin Array S	74.45	307	eP		P	02 20 55.8 +0.4
BRTR	Keskin Array B	74.45	307	P		P	02 20 55.8 +0.4
	comp=Z,0.5nm,0.6s,baz=141,slow=3.5,SNR=6.4						
BUR04	Bucovina Ar. S	77.84	317	eP		P	02 21 14.8 +0.4
HFS	Hagfors	79.25	331	P		P	02 21 22.1 +0.3
	comp=Z,1.3nm,0.7s,baz=90,slow=7.2,SNR=3.3						
HFS				LR		LR	02 59 45.5
	comp=Z,155nm,19.2s,baz=82,slow=38						
NB2	NORSAR Subarra	79.92	332	P		P	02 21 25.0 -0.5
	comp=Z,0.5nm,0.8s,baz=62,slow=5.9						
NB200	NORSAR Array S	79.92	332	eP		P	02 21 24.6 -0.9
NOA	NORSAR Array B	79.92	332	P		P	02 21 24.6 -0.9
	comp=Z,1.6nm,0.7s,baz=60,slow=1.8,SNR=6.5						
NOA				LR		LR	02 59 29.6
	comp=Z,64nm,20.2s,baz=50,slow=38						
VTS	Vitosha	80.96	312	eP		P	02 21 32.7 +1.1
	comp=Z,5.4nm,0.9s						
CLL	Collm	83.64	323	eP		P	02 21 45.6 +0.4
GEC2	GERESS Array S	84.39	321	eP		P	02 21 49.4 +0.1
	comp=Z,2.1nm,0.8s						
GERES	GERESS Array B	84.39	321	P		P	02 21 49.4 +0.1
	comp=Z,0.8nm,0.7s,baz=60,slow=6.3,SNR=9.0						
GEA0	GERESS Array S	84.39	321	eP		P	02 21 50.0 +0.7
YKA	Yellowknife Ar	84.50	23	P		P	02 21 49.2 -0.2
	comp=Z,0.4nm,0.8s,baz=316,slow=5.2,SNR=3.8						
EKA	Eskdalemuir Ar	89.41	332	P		P	02 22 14.3 +0.9
	comp=Z,0.7nm,0.7s,baz=38,slow=3.6,SNR=3.3						
SDV	Santo Domingo	146.72	22	PKPbc		PKPdf	02 28 59.7 +1.5
	comp=Z,3.4nm,0.6s,baz=326,slow=3.6,SNR=4.5						
SDV	Santo Domingo	146.72	22	ePKPdf		PKPab	02 29 01.4 +0.6

ISCJB ***06*** *02:24:00.4±0.3, 22°.39N±0°.01×121°.53E±0°.02, h18km±2km, mb4.2/37, MS3.7/2, Error ellipse: s-maj=2.8km s-min=2.3km az=33.4*
NEIC ***06*** *02:24:00.8±0.0, 22°.44N×121°.41E, h34km, mb4.6/15, ML4.8(TAP), After TAP.*
NEIC Recorded [2 TAP] in Taitung and [1 TAP] in Pingtung.
NIED ***06*** *02:24:00, 22°.60N×121°.50E, h11km, Mw4.3 Best double couple: M0:3.34000×10^15 NP1:φ=69.00000°, δ=17.00000°, λ=-94.00000°. NP2:φ=253.00000°, δ=73.00000°, λ=-89.00000°.*
TAP ***06*** *02:24:01.9, 22°.46N×121°.41E, h22km, ML4.4, C*
JMA ***06*** *02:24:02.4±0.1, 22°.57N×121°.50E, h18km±4km, M4.4*
BJI ***06*** *02:24:02.5, 22°.40N×121°.42E, h32km, mb4.1/10, ML3.8/6, Ms3.8/3, Ms7 3.7/3*
IDC ***06*** *02:24:04.0±5.8, 22°.36N×121°.58E, h32km±44km, mb4.0/23, mb1 4.1/25, mb1mx4.0/68, mbtmp4.2/25, ML3.7/2, MS3.7/3, Ms1 3.8/3, ms1mx3.0/69, Error ellipse: s-maj=18.1km s-min=14.8km az=44.0*
ISC 06 02:24:00.8±1.0, 22°.45N±0°.02×121°.48E±0°.02, h10km±6km, n195, σ1$19/253, mb4.3/37, 13C-21D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWH	Lutao	0.26	359	⇓P	Pb	02 24 07.9	+0.2
	baz=29						
TWH				i S	Sg	02 24 12.1	+2.4
	baz=29						
LAY	Lan-yu	0.41	171	⇑iP	Pb	02 24 10.4	+0.1
	baz=162						
LAY				eS	Sg	02 24 16.1	+1.7
	baz=162						
TTN	Taitung	0.43	315	eP	Pb	02 24 10.7	+0.1
	baz=325						
ECL	Taimali	0.51	287	⇓P	Pg	02 24 11.1	+0.3
	baz=287						
ECL				eS	Sg	02 24 16.9	-0.5
	baz=287						
TWGBT	Beinan	0.52	315	⇑P	Pb	02 24 11.9	-0.3
	baz=305						
TWGBT				S	Sb	02 24 18.7	-1.1
	baz=305						
TWG	Pinlang	0.53	315	⇑P	Pb	02 24 11.9	-0.3
	baz=305						
TWG				S	Sg	02 24 18.7	+0.6
	baz=305						
TWG	Pinlang	0.53	315	ePg	Pg	02 24 11.6	+0.4
TWG				eSg	Sg	02 24 18.8	+0.6
TAW	Tawu	0.55	261	⇓iP	Pg	02 24 11.5	0.0
	baz=256						
TAW				eS	Sg	02 24 18.3	-0.4
	baz=256						
EAST	Anshuo	0.59	264	⇓iP	Pg	02 24 12.2	-0.1
	baz=260						
EAST				S	Sg	02 24 19.4	-0.6
	baz=260						
CHKT	Chengkung	0.66	351	⇑P	Pg	02 24 13.9	+0.3
	baz=4.0						
CHKT				eS	Sg	02 24 22.6	+0.3
	baz=4.0						
TSEB	Hengchuen, Pin	0.77	225	⇓P	Pg	02 24 15.8	+0.2
	baz=231						
TSEB				eS	Sg	02 24 25.0	-0.6
	baz=231						
FULB	Fuli	0.77	347	⇑P	Pg	02 24 15.5	-0.2
	baz=336						
TWKBT	Hengchun	0.80	231	⇓P	Pg	02 24 15.8	-0.4
	baz=226						
TWKBT				eS	Sg	02 24 23.8	-2.8
	baz=226						
SCZT	Fangliau	0.80	265	⇓P	Pg	02 24 15.6	-0.7
	baz=262						
MASBT	Mashibuluo	0.80	282	⇓P	Pg	02 24 15.6	-0.7
	baz=281						
TWK1	Hengchun	0.80	231	⇓iP	Pg	02 24 15.8	-0.5
	baz=226						
TWK1				eS	Sg	02 24 25.2	-1.5
	baz=226						
HEN	Hengchun	0.82	238	⇓eP	Pg	02 24 16.2	-0.3
	baz=225						
HEN				eS	Sg	02 24 25.9	-1.3
	baz=225						
SSD	Sandimen	0.84	291	⇓P	Pg	02 24 16.2	-0.8
	baz=291						
SSPT	Xinbi	0.84	273	⇓P	Pg	02 24 17.0	-0.1
	baz=271						
ELDTW	Lidau	0.85	330	eP	Pg	02 24 16.8	-0.5
	baz=323						
TWF1	Yuli	0.92	349	⇑eP	Pg	02 24 17.9	-0.7
	baz=340						
SLGT	Liugui	0.94	305	eP	Pg	02 24 18.7	-0.3
	baz=305						
SLGT				eS	Sb	02 24 31.7	-0.2
	baz=305						
SGLT	Jiouru	0.96	287	eP	Pg	02 24 19.3	+0.1
	baz=290						
YULB	Yu-li	0.96	350	⇑P	Pg	02 24 18.3	-0.9
	baz=340						
YULB	Yu-li	0.96	350	ePg	Pg	02 24 17.6	-1.7
YULB				eSg	Sg	02 24 31.1	-0.7
STYT	Tauyuan	0.98	317	eP	Pg	02 24 19.1	-0.6
	baz=320						
STYT				eS	Sb	02 24 33.1	+0.2
	baz=320						
WLCH	Liuqiu	1.02	265	eP	Pn	02 24 22.5	+1.2
	baz=262						
TWP	Hsiaoliuchiu	1.04	265	⇓P	Pn	02 24 22.5	+1.0
	baz=262						
TWP				eS	Sn	02 24 37.6	+1.5
	baz=262						
HGSD	Ruisui	1.04	357	eP	Pb	02 24 20.4	-0.6
	baz=7.0						
HGSD				eS	Sn	02 24 37.5	+1.3
	baz=7.0						
SGST	Jiashian	1.04	308	⇓P	Pg	02 24 21.1	+0.2
	baz=308						
SGST				eS	Sn	02 24 35.1	-1.1
	baz=308						
TWM1	Shoushan	1.05	291	eP	Pn	02 24 21.5	-0.1
	baz=294						
EHY	Hungye	1.06	352	eP	Pb	02 24 19.6	-1.8
	baz=344						
KAU	Kaohsiung	1.09	277	eP	Pn	02 24 22.7	+0.5
	baz=275						
WTP	Ta-pu	1.13	315	eP	Pg	02 24 22.5	-0.1
	baz=317						
WTP				eS	Sn	02 24 38.9	+0.5
	baz=317						
CHN1	Nanshi	1.15	310	⇓P	Pn	02 24 23.0	0.0
	baz=312						
CHN1				eS	Sn	02 24 39.4	+0.5
	baz=312						
TPUB	Ta-pu	1.16	317	⇑P	Pb	02 24 22.8	-0.1
	baz=319						
TPUB				eS	Sb	02 24 36.6	-1.5
	baz=319						
TPUB	Ta-pu	1.16	317	ePg	Pb	02 24 22.9	-0.1
TPUB				eSg	Sg	02 24 37.8	-0.3
CHN3	Shinhua	1.21	302	eP	Pg	02 24 24.8	+0.8
	baz=302						
CHN3				eS	Sn	02 24 42.3	+2.1
	baz=302						
EGFH	Guangfu	1.22	358	eP	Pn	02 24 23.3	-0.7
	baz=10.0						
TWK	Hsinying	1.23	312	⇓eP	Pb	02 24 24.2	0.0
	baz=314						
TWK				eS	Sn	02 24 41.1	+0.3
	baz=314						
ALS	Alishan	1.23	330	eP	Pb	02 24 23.8	-0.6
	baz=324						
TAI1	Yung-k'ang	1.30	297	eP	Pn	02 24 24.3	-0.8
	baz=297						
VWDT	VWDT	1.34	347	⇑P	Pn	02 24 24.9	-0.8
	baz=359						
ESL	Shilin	1.36	358	eP	Pn	02 24 25.0	-1.0
	baz=350						
SCLT	Jiali	1.39	302	eP	Pn	02 24 26.1	-0.2
	baz=302						
SCLT				eS	Sb	02 24 44.6	-0.2
	baz=302						
SSLB	Suanglung	1.42	340	⇑P	Pn	02 24 26.3	-0.5
	baz=353						
SSLB				eS	Sg	02 24 47.0	+0.4
	baz=353						
SSLB	Suanglung	1.42	340	ePn	Pn	02 24 26.3	-0.5
SSLB				eSn	Sg	02 24 46.0	-0.6
CHY	Chiayi	1.43	317	eP	Pb	02 24 27.4	-0.2
	baz=319						
CHY				eS	Sg	02 24 46.4	-0.4
	baz=319						
ENLB	Shoufeng	1.46	4	eP	Pn	02 24 26.3	-0.9
	baz=19						
ENLB				eS	Sn	02 24 44.7	-1.7
	baz=19						
CHN8	Yiju	1.47	308	eP	Pn	02 24 27.5	0.0
	baz=309						
CHN8				eS	Sb	02 24 46.8	-0.4
	baz=309						
WGK	Gukeng	1.50	326	eP	Pb	02 24 28.6	-0.2
	baz=328						
WGK				eS	Sg	02 24 48.3	-0.7
	baz=328						
WDLH	Douliu	1.51	325	⇑eP	Pb	02 24 29.1	+0.1
	baz=327						
WDLH				eS	Sg	02 24 49.0	-0.5
	baz=327						
HWA	Hwalien	1.53	4	eP	Pn	02 24 27.6	-0.6
	baz=18						
WJS	Zhushan	1.54	333	eP	Pb	02 24 29.4	-0.1
	baz=336						
WJS				eS	Sg	02 24 49.5	-0.7
	baz=336						
TYC	Yuchr	1.56	339	P	Pb	02 24 29.8	-0.1
	baz=342						
TYC				S	Sb	02 24 49.9	+0.2
	baz=342						
WNT	Mingjian	1.60	333	P	Pb	02 24 30.7	+0.1
	baz=317						
WNT				eS	Sg	02 24 51.4	-1.1
	baz=317						
TWD	Chiawan	1.63	4	eP	Pn	02 24 28.7	-0.9
	baz=20						
CHGB	Renai	1.63	350	⇑P	Pn	02 24 29.4	-0.5
	baz=6.0						
WSF	Szhu	1.66	316	eP	Pn	02 24 30.4	+0.4
	baz=317						
WSF				eS	Sn	02 24 51.2	-0.2
	baz=317						
NACB	Ninganchiao	1.72	3	P	Pn	02 24 30.0	-0.9
	baz=356						
NACB				eS	Sn	02 24 51.4	-1.7
	baz=356						
NACB	Ninganchiao	1.72	3	ePn	Pn	02 24 29.5	-1.4
NACB				eSn	Sn	02 24 52.4	-0.6
RLNB	Erlin	1.77	325	eP	Pn	02 24 32.0	+0.5
	baz=326						
RLNB				eS	Sn	02 24 54.2	+0.1
	baz=326						
TWT	Tachien	1.82	351	eP	Pn	02 24 32.4	0.0
	baz=354						
TDCB	Techi	1.82	351	eP	Pn	02 24 32.1	-0.3
	baz=354						
WCHH	Zhanghua	1.83	333	eP	Pn	02 24 32.5	0.0
	baz=316						
TCU	Taichung	1.85	337	eP	Pb	02 24 33.6	-1.1
	baz=339						
WDGT	Dungji	1.86	296	⇓P	Pn	02 24 31.2	-1.6
	baz=296						
WDGT				eS	Sn	02 24 53.1	-3.4
	baz=296						
NNSB	Datong	1.98	357	eP	Pn	02 24 34.6	+0.1
	baz=1.0						
NNSB				eS	Sb	02 25 00.8	-0.9
	baz=1.0						
NNSH	Datong	1.98	357	eP

baz=301
EOS1 EOS1 2.18 16 *e*P **Pn 02 24 37.6 +0.5**
baz=19
NMLH Miaoli 2.18 343 *e*P **Pb 02 24 38.7 -1.6**
baz=345
TWC Suao 2.18 9 *e*P **Pn 02 24 37.1 -0.1**
baz=23
TWC *e*S **Sn 02 25 03.5 -0.7**
baz=23
ENTT Nioudou 2.19 2 *e*P **Pn 02 24 38.0 +0.7**
baz=6.0
YHNB Yeheng 2.21 358 ⇓P **Pn 02 24 38.5 +0.7**
baz=1.0
YHNB *e*S **Sn 02 25 05.1 -0.2**
baz=1.0
YHNB Yeheng 2.21 358 *e*Pn **Pn 02 24 37.5 -0.3**
YHNB *e*Sn **Sn 02 25 04.3 -1.0**
NSTT Nanjuang 2.22 349 *e*P **Pn 02 24 38.8 +1.0**
baz=335
NSTT *e*S **Sb 02 25 07.0 -1.6**
baz=335
NSK Sanguang 2.22 357 *e*P **Pn 02 24 38.5 +0.6**
baz=1.0
NSK *e*S **Sn 02 25 06.0 +0.5**
baz=1.0
TWE Neicheng 2.27 4 *e*P **Pn 02 24 39.6 +1.2**
baz=8.0
SLBB Yuanshan 2.30 4 *e*P **Pn 02 24 40.3 +1.4**
baz=7.0
NWLT Wulai 2.32 0 *e*P **Pn 02 24 40.3 +1.1**
baz=4.0
SBCB Hsinchu 2.38 349 *e*P **Pn 02 24 41.2 +1.2**
baz=352
JYNG Yonagunijimaku 2.41 34 P **Pn 02 24 40.8 +0.5**
JYNG *e*S **Sn 02 25 07.6 -2.3**
YOJ Yonaguni jima 2.45 35 *e*P **Pn 02 24 40.7 -0.2**
baz=39
YOJ Yonaguni jima 2.45 35 *e*Pn **Pn 02 24 41.4 +0.5**
YOJ *e*Sn **Sn 02 25 11.2 +0.3**
YOJ Yonaguni jima 2.45 35 P **Pn 02 24 42.0 +1.1**
YOJ *e*S **Sn 02 25 10.4 -0.5**
TATO Taipei 2.52 0 *e*P **Pn 02 24 42.1 +0.3**
baz=15
TATO Taipei 2.52 0 *e*Pn **Pn 02 24 43.0 +1.2**
TATO *e*Sn **Sn 02 25 12.0 -0.6**
TIPB Shuangxi 2.53 7 *e*P **Pn 02 24 42.2 +0.1**
TIPB *e*S **Sn 02 25 12.9 -0.2**
NWF Wu-fen Shan 2.63 6 *e*P **Pn 02 24 43.7 +0.3**
baz=10.0
WFSB Wu-fen Shan 2.63 6 *e*P **Pn 02 24 44.2 +0.8**
baz=10.0
HATJ Hateruma jima 2.67 53 P **Pn 02 24 44.5 +0.5**
HATJ S **Sn 02 25 14.7 -1.7**
YM04 YM04 2.70 1 *e*P **Pn 02 24 45.7 +1.4**
baz=4.0
YM10 YM10 2.70 2 *e*P **Pn 02 24 45.3 +0.9**
baz=5.0
YM07 YM07 2.72 3 *e*P **Pn 02 24 43.6 -1.0**
baz=6.0
YM03 YM03 2.72 1 *e*P **Pn 02 24 45.8 +1.1**
baz=5.0
YM08 YM08 2.73 2 *e*P **Pn 02 24 45.5 +0.7**
baz=6.0
IRIF Iriomote-Funau 2.79 47 P **Pn 02 24 46.5 +0.9**
IRIF S **Sn 02 25 18.6 -0.8**
TWY Chenhua 2.82 2 *e*P **Pn 02 24 48.6 +2.6**
baz=6.0
JKRS Kuro-shima 2.93 52 P **Pn 02 24 48.4 +0.9**
JKRS *e*S **Sn 02 25 21.4 -1.4**
JIJ Ishigaki jima 3.10 52 P **Pn 02 24 50.2 +0.3**
JIJ S **Sn 02 25 24.6 -2.5**
VWUC VWUC 3.14 324 *e*P **Pn 02 24 50.0 -0.5**
baz=324
VWUC *e*S **Sn 02 25 24.4 -3.7**
baz=324
JISG Ishigakijimahi 3.36 50 P **Pn 02 24 53.4 0.0**
JISG S **Sn 02 25 32.0 -1.4**
KNM Kinmen 3.42 306 *e*P **Pn 02 24 54.6 +0.4**
baz=302
KNMB Chin-men Tao 3.48 306⇓*e*P **Pn 02 24 53.9 -1.1**
baz=303
QZH Quanzhou 3.63 314⇓*i*Pn **Pn 02 24 56.4 -0.8**
QZH Sn **Sn 02 25 36.2 -3.9**
QZH smax smax
comp=N,170nm,0.7s
QZH smax smax
comp=E,180nm,1.0s
QZH LR LR
comp=N,330nm,5.7s
QZH LR LR
comp=E,420nm,5.7s
QZH LR LR
comp=Z,460nm,8.8s
JTJ Tarama 3.68 53 *e*S **Sn 02 25 39.1 -2.1**
MATB Ma-tsu 3.95 340 *e*P **Pn 02 25 00.7 -0.8**
baz=339
JIRB Irabujima 4.13 54 P **Pn 02 25 04.6 +0.5**
JIRB *e*S **Sn 02 25 50.0 -2.5**
JMJ Miyako jima 2 4.22 55 *e*P **Pn 02 25 05.8 +0.6**
baz=59
JMJ Miyako jima 2 4.22 55 P **Pn 02 25 06.3 +1.1**
JIKM Ikemajima 4.24 54 P **Pn 02 25 06.1 +0.5**
JIKM S **Sn 02 25 53.4 -1.8**
JOGS Gusukube 4.27 57 P **Pn 02 25 07.1 +1.1**
VDOS Pratas Island 4.75 249⇓*e*P **Pn 02 25 11.8 -0.7**
baz=246
GZH Guangzhou 7.54 276 P **Pn 02 25 47.4 -3.4**
GZH smax smax
comp=N,45nm,0.9s
GZH smax smax
comp=E,44nm,0.7s
JOW Kunigami 7.57 53 Pn **Pn 02 25 50.3 -1.0**
2.6nm,0.3s,baz=119,slow=3.9,SNR=6.1
JOW Kunigami 7.57 53 *e*P **Pn 02 25 50.4 -0.8**
baz=58
JNU Nakatsue 13.49 36 LR LR 02 33 35.9
comp=Z,212nm,18.1s,baz=285,slow=42
KS15 Wonju Array Si 15.94 19 *e*Pn **P 02 27 49.9 +1.0**
KSAR Wonju Array Be 15.94 19 Pn **P 02 27 47.5 -1.3**
KSRS Korea Array 15.96 19 Pn **P 02 27 47.5 -1.5**
0.3nm,0.3s,baz=198,slow=13,SNR=15
KS01 Wonju Array Si 15.97 19 *e*Pn **Pn 02 27 47.1 +1.5**
MAJO Matsushiro 20.19 42 *e*P **P 02 28 30.3 -5.4**
MJAR Matsushiro Arr 20.19 42 P Pn 02 28 38.0 +0.3
5.5nm,0.9s,baz=232,slow=9.7,SNR=13
CM31 Chiang Mai Arr 21.48 263 *e*P **P 02 28 51.4 +1.5**
CMAR Chiang Mai Arr 21.48 263 P **P 02 28 51.4 +1.5**
1.7nm,0.5s,baz=71,slow=9.0,SNR=12
CMAR LR LR 02 36 32.3
comp=Z,114nm,21.5s,baz=200,slow=35
USRK Ussuriysk Ar. 23.37 19 P **P 02 29 11.7 +2.2**
2.2nm,0.7s,baz=202,slow=7.4,SNR=4.6
GUMO Guam 23.89 108 P **P 02 29 12.3 -2.7**
75nm,0.9s,baz=332,slow=1.5,SNR=3.6
GTA Gaotai 25.02 317 *e*P **P 02 29 29.2 +3.9**
GTA pP sP 02 29 33.4 +4.0
GTA sP pP 02 29 36.3 +8.1
GTA pmax pmax
comp=Z,2.0nm,0.6s
KLR Kul'dur 27.94 14 P **P 02 29 51.3 0.0**
0.2nm,0.9s,baz=258,slow=5.1,SNR=5.9
SONA0 Songino Array 28.07 338 *e*P **P 02 29 52.2 -0.5**
SONM Songino Array 28.07 338 P **P 02 29 52.2 -0.5**
1.6nm,0.7s,baz=155,slow=11,SNR=8.8
WMQ Urumqi 35.07 316 *e*P **P 02 30 54.8 +0.7**
MK01 Makanchi Array 39.77 317 *e*P **P 02 31 34.0 +0.1**
MK31 Makanchi Array 39.78 317 *e*P **P 02 31 34.6 +0.6**
MK32 Makanchi Array 39.78 317 *e*P **P 02 31 34.5 +0.5**
MKAR Makanchi Array 39.78 317 P **P 02 31 34.5 +0.5**
8.7nm,0.7s,baz=110,slow=9.5,SNR=69
MKAR Makanchi Array 39.78 317 *e*P **P 02 31 34.6 +0.5**
59nm,0.7s
MAKZ Makanchi 39.98 317 *e*P **P 02 31 36.4 +0.7**
12nm,0.8s
ZAA0 Zalesovo Array 41.85 328 *e*P **P 02 31 51.5 +0.6**
5.8nm,0.8s
ZALV Zalesovo Beam 41.85 328 P **P 02 31 50.6 -0.4**
4.8nm,0.7s,baz=114,slow=8.0,SNR=18
ZAA1 Zalesovo Array 41.85 328 *e*P **P 02 31 50.6 -0.4**
H11N1 WAKE ISLAND Hy 42.34 85 T T 03 17 24.1
baz=282,slow=75,SNR=60
H11N2 WAKE ISLAND Hy 42.34 85 T T 03 17 24.1
baz=282,slow=75,SNR=83
H11N3 WAKE ISLAND Hy 42.36 85 T T 03 17 36.9
baz=282,slow=75,SNR=95
H11S3 WAKE ISLAND Hy 42.42 87 T T 03 17 32.6
baz=283,slow=75,SNR=225
H11S1 WAKE ISLAND Hy 42.43 87 T T 03 17 33.3
baz=283,slow=75,SNR=77
H11S2 WAKE ISLAND Hy 42.44 87 T T 03 17 33.0
baz=283,slow=75,SNR=82
NRN Naryn 42.44 307 *e*P **P 02 31 57.6 +1.3**
5.8nm,0.8s
KURK Kurchatov 43.60 321 *e*P **P 02 32 06.0 +0.8**
KURBB Kurchatov Arra 43.62 321 P **P 02 32 05.2 -0.1**
2.4nm,0.6s,baz=116,slow=7.3,SNR=5.7
WR1 Warramunga Arr 43.96 162 *e*P **P 02 32 07.8 -0.5**
17nm,1.0s
WRA Warramunga Arr 43.96 162 P **P 02 32 07.9 -0.5**
1.1nm,0.6s,baz=0.2,slow=8.3,SNR=2.3
KK31 Karatay Array 46.75 309 *e*P **P 02 32 31.5 +1.1**
KKAR Karatay Array 46.75 309 *e*P **P 02 32 31.5 +1.1**
AS31 Alice Springs 47.40 164 *e*P **P 02 32 34.2 -1.4**
1.9nm,0.9s
ASAR Alice Springs 47.40 164 P **P 02 32 34.2 -1.4**
0.8nm,0.4s,baz=340,slow=7.2,SNR=4.1
BVAR Borovoye Array 49.19 322 P **P 02 32 50.6 +1.5**
2.5nm,0.6s,baz=100,slow=7.7,SNR=15
BRVK Borovoye 49.26 322 *e*P **P 02 32 51.5 +1.9**
5.0nm,0.8s
FORT Forrest 53.30 173 *e*P **P 02 33 18.6 -1.4**
21nm,0.9s
ABKAR Akbulak array 54.85 315 *e*P **P 02 33 32.6 +1.3**
AKTO Aktyubinsk 56.21 316 P **P 02 33 41.9 +0.8**
1.0nm,0.6s,baz=117,slow=5.5,SNR=5.6
ARU Arti 56.66 324 P **P 02 33 45.0 +0.9**
4.2nm,0.2s,baz=84,slow=4.6,SNR=5.6
ARU Arti 56.66 324 *e*P **P 02 33 45.0 +0.9**
11nm,1.3s
KBZ Khabaz 66.78 309 P **P 02 34 54.4 +1.8**
1.8nm,0.8s,baz=100,slow=3.4,SNR=4.2
KVAR Kislovodsk Arr 66.89 310 P **P 02 34 53.8 +0.3**
4.8nm,0.8s,baz=190,slow=6.1,SNR=3.5
KIV Kislovodsk 66.89 310 *e*P **P 02 34 53.8 +0.2**
5.4nm,0.8s
KDAK Kodiak Island 69.17 35 P **P 02 35 08.1 +0.8**
6.1nm,1.1s,baz=218,slow=5.5,SNR=4.8
KDAK Kodiak Island 69.17 35 *e*P **P 02 35 08.1 +0.8**
8.8nm,1.1s
MDM Murphy Dome 70.03 27 *e*P **P 02 35 13.9 +1.2**
4.3nm,1.1s
RND Reindeer 70.04 29 *e*P **P 02 35 13.1 +0.3**
5.6nm,0.8s
ILAR Eielson Array 70.63 27 P **P 02 35 16.6 +0.3**
0.3nm,0.6s,baz=263,slow=4.3,SNR=4.1
ILAR LR LR 03 09 19.9
comp=Z,132nm,20.4s,baz=246,slow=38
ILB Eielson Array 70.63 27 *e*P **P 02 35 16.6 +0.3**
ARA0 ARCESS Array S 71.25 338 *e*P **P 02 35 21.1 +1.2**
ARCES ARCESS Array B 71.25 338 P **P 02 35 21.1 +1.2**
2.6nm,0.9s,baz=72,slow=8.6,SNR=2.9
FIA0 FINESS Array S 73.08 330 *e*P **P 02 35 31.7 +0.7**
FINES FINESS Array B 73.08 330 P **P 02 35 31.7 +0.7**
1.5nm,0.7s,baz=49,slow=6.3,SNR=8.4
AKASG Malin Array Be 74.35 319 P **P 02 35 39.3 +0.6**
0.2nm,0.3s,baz=63,slow=6.6,SNR=3.6
AKBB Malin Array Si 74.35 319 *e*P **P 02 35 39.3 +0.6**
3.6nm,1.2s
BR101 Keskin Array S 74.42 307 *e*P **P 02 35 40.3 +0.7**
BRTR Keskin Array B 74.42 307 P **P 02 35 40.3 +0.7**
1.2nm,0.9s,baz=101,slow=5.7,SNR=7.6
HFS Hagfors 79.21 331 P **P 02 36 06.5 +0.5**
1.8nm,0.8s,baz=72,slow=4.7,SNR=3.9
NB2 NORSAR Subarra 79.88 332 P **P 02 36 09.4 -0.3**
comp=Z,1.7nm,0.9s,baz=56,slow=5.6
NB200 NORSAR Array S 79.88 332 *e*P **P 02 36 08.7 -1.0**
NOA NORSAR Array B 79.88 332 P **P 02 36 08.7 -1.0**
comp=Z,1.6nm,0.7s,baz=61,slow=1.4,SNR=7.0
VTS Vitosha 80.93 312 *e*P **P 02 36 16.5 +0.7**
comp=Z,6.3nm,1.2s
YKA Yellowknife Ar 84.46 23 P **P 02 36 33.3 -0.3**
comp=Z,0.7nm,0.8s,baz=308,slow=5.2,SNR=7.3
GATR Gnd/Air Tx Cnt 98.30 47 *e*P **P 02 37 39.1 -0.1**
SDV Santo Domingo 146.68 22 PKPbc **PKPdf 02 43 41.0 -1.5**
comp=Z,5.4nm,0.8s,baz=0.0,slow=6.1,SNR=5.0

BJI ***06*** *02:24:43.8, 10.°49S×161.°94E, h33km, mb5.0/49, mB5.1/30, Ms4.9/9, Ms7 4.6/6*
ISCJB ***06*** *02:24:45.0±0.2, 10.°72S±0.°04×161.°30E±0.°03, h28km, mb5.0/139, MS4.2/30, Error ellipse: s-maj=5.3km s-min=4.3km az=155.0*
MOS ***06*** *02:24:47.3±0.8, 10.°69S×161.°24E, h48km, mb5.2/35, Error ellipse: s-maj=8.6km s-min=7.3km az=117.8*
IDC ***06*** *02:24:48.3±2.5, 10.°71S×161.°32E, h42km±22km, mb4.6/29, mb1 4.6/31, mb1mx4.5/54, mbtmp4.8/31, ML4.5/2, MS4.1/29, Ms1 4.1/29, ms1mx4.0/51, Error ellipse: s-maj=16.7km s-min=11.3km az=93.0*
GCMT ***06*** *02:24:49.1±0.3, 10.°83S×161.°30E, h14km±2km, MW4.9/71, Moment Tensor Solution. s14,c18; s71,c89; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr0.68±.18; Mθθ-0.74±.13; Mφφ0.05±.14; Mrθ1.52±.40; Mθφ2.53±.13; Mφr-0.55±.34; Best double couple: M=2.96100×10^16 NP1:φs88.00000°, δ88.00000°, λ31.00000°. NP2: φs357.00000°, δ59.00000°, λ178.00000°. Principal axes: T 2.4600, Plg23.0000°, Azm317.0000°; N 1.0020, Plg59.0000°, Azm91.0000°; P -3.4620, Plg20.0000°, Azm218.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***06*** *02:24:49.1±0.8, 10.°73S×161.°26E, h49km±7km, mb4.9/90 Error ellipse: s-maj=5.4km s-min=5.0km az=139.0*
ISC 06 02:24:46.2±0.3, 10.°79S±0.°05×161.°41E±0.°06, h28km, n281, σ1$36/277, mb5.0/137, MS4.2/31, 7C-6D,
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.97**	**313**	*e*P		**Pn**		**02 25 16.0**	**-1.8**
HNR				*e*S		**Sb**		**02 25 48.0**	**+2.3**
HNR	**Honiara**	**1.97**	**313**	P		**Pn**		**02 25 17.4**	**-0.4**
HNR	246nm,0.3s,baz=199,slow=2.8,SNR=28			S		**Sn**		**02 25 42.3**	**+0.6**
DZM	**Mont Dzumac**	**12.21**	**157**	*e*Pn		**Pn**		**02 27 39.8**	**+1.3**
DZM	5.5nm,0.3s 2.6nm,0.2s			*e*Sn		**Sn**		**02 29 48.4**	**-5.4**
DZM	2μm,20.8s			*e*LR		LR		02 30 29.5	
DZM	**Mont Dzumac**	**12.21**	**157**	P		**Pn**		**02 27 39.9**	**+1.5**
DZM	1.3nm,0.3s,baz=14,slow=12,SNR=15 1.4nm,0.3s,baz=352,slow=23,SNR=5.6			S		**Sn**		**02 29 52.9**	**-0.9**
DZM	comp=Z,2μm,19.0s,baz=352,slow=35			LR		LR		02 31 58.4	
PMG	**Port Moresby**	**14.10**	**274**	*e*Pn		**Pn**		**02 28 05.6**	**+1.4**
PMG	**Port Moresby**	**14.10**	**274**	*e*P		**Pn**		**02 28 05.6**	**+1.4**
MANU	**Manus Island**	**16.43**	**301**	*e*Pn		**Pn**		**02 28 35.8**	**+0.8**
CTA	**Charters Tower**	**17.27**	**236**	P		**Pn**		**02 28 45.8**	**+0.2**
CTA	51nm,0.9s 1.9nm,0.3s,baz=68,slow=15,SNR=16 comp=Z,607nm,21.8s,baz=98,slow=32			LR		LR		02 34 06.0	
CTAO	**Charters Tower**	**17.27**	**236**	*e*Pn		**Pn**		**02 28 44.9**	**-0.7**
CTAO	81nm,1.4s **Charters Tower**	**17.27**	**236**	*e*P		**Pn**		**02 28 44.9**	**-0.7**
CTAO	comp=Z,81nm,1.4s			pmax		pmax			
EIDS	**Eidsvold**	**17.49**	**213**	*e*Pn		**P**		**02 28 49.1**	**-0.1**
MSVF	comp=Z,46nm,1.0s **Nonsavu**	**17.54**	**115**	*e*Pn		**P**		**02 28 53.0**	**+3.1**
MSVF	comp=Z,26nm,0.8s **Nonsavu**	**17.54**	**115**	⇑*i*P		**P**		**02 28 52.0**	**+2.2**
MSVF	comp=Z,26nm,0.9s			pmax		pmax			
PATS	**Pohnpei**	**17.78**	**350**	*e*Pn		**Pn**		**02 28 51.8**	**-0.1**
COEN	comp=Z,209nm,1.1s **Coen**	**18.08**	**258**	*e*P		**Pn**		**02 28 55.5**	**-0.1**
ARMA	comp=Z,47nm,1.2s **Armidale**	**21.54**	**204**	*e*P		**P**		**02 29 34.7**	**+1.1**
JAY	comp=Z,118nm,1.4s **Jayapura**	**22.13**	**290**	P		**P**		**02 29 38.3**	**-1.6**
JAY	comp=Z,30nm,0.6s,baz=109,slow=5.0,SNR=7.2 **Jayapura**	**22.13**	**290**	P		**P**		**02 29 39.3**	**-0.6**
GENI	comp=Z,609nm,0.9s,comp=Z,7μm **Genyem**	**22.60**	**290**	P		**P**		**02 29 45.4**	**+0.5**
AFI	comp=Z,116nm,0.9s **Afiamalu**	**26.37**	**100**	LR		LR		02 38 55.0	
	comp=Z,434nm,18.5s,baz=244,slow=32								
OUZ	**Omahuta**	**26.73**	**157**	*e*P		**P**		**02 30 23.2**	**-0.1**
BAKI	comp=Z,46nm,1.3s **Biak**	**26.88**	**289**	P		**P**		**02 30 26.5**	**+1.5**
WRAB	**Tennant Creek**	**27.59**	**248**	*e*P		**P**		**02 30 33.9**	**+2.5**
WB2	comp=Z,17nm,0.7s **Warramunga Arr**	**27.59**	**247**	*e*P		**P**		**02 30 31.9**	**+0.5**
WR1	**Warramunga Arr**	**27.60**	**248**	*e*P		**P**		**02 30 31.7**	**+0.2**
WRA	comp=Z,20nm,0.9s **Warramunga Arr**	**27.60**	**248**	P		**P**		**02 30 31.7**	**+0.2**
WRA	comp=Z,17nm,0.8s,baz=76,slow=9.8,SNR=41 comp=Z,734nm,18.5s,baz=70,slow=35			LR		LR		02 40 46.5	
WRA	**Warramunga Arr**	**27.60**	**248**	*i*P		**P**		**02 30 32.0**	**+0.5**
WRA	comp=Z,17nm,0.8s			pmax		pmax			
STKA	**Stephens Creek**	**27.85**	**218**	P		**P**		**02 30 34.4**	**+0.9**
STKA	comp=Z,7.9nm,0.8s,baz=24,slow=10,SNR=6.7 comp=Z,990nm,18.1s,baz=38,slow=35			LR		LR		02 40 51.6	
STKA	**Stephens Creek**	**27.85**	**218**	*e*P		**P**		**02 30 34.8**	**+1.3**
STKA	comp=Z,3.4nm,0.8s **Stephens Creek**	**27.85**	**218**	*e*P		**P**		**02 30 34.8**	**+1.3**
STKA	comp=Z,3.0nm,0.8s			pmax		pmax			
KMPI	**Kaimana, Papua**	**28.36**	**282**	P		**P**		**02 30 39.4**	**+1.1**
AS01	comp=Z,15μm,0.8s **Alice Springs**	**29.11**	**240**	*e*P		**P**		**02 30 44.3**	**-0.7**
AS31	**Alice Springs**	**29.15**	**240**	*e*P		**P**		**02 30 45.4**	**+0.1**
ASAR	comp=Z,2.0nm,0.7s **Alice Springs**	**29.15**	**240**	P		**P**		**02 30 44.8**	**-0.6**
ASAR	comp=Z,2.5nm,0.6s,baz=64,slow=9.9,SNR=17 comp=Z,723nm,21.7s,baz=67,slow=34			LR		LR		02 41 18.3	
GUMO	**Guam**	**29.26**	**326**	LR		LR		02 42 13.7	
MTN	comp=Z,269nm,18.2s,baz=152,slow=36 **Manton Dam**	**29.70**	**263**	*e*P		**P**		**02 30 49.4**	**-0.7**
BKZ	comp=Z,85nm,1.4s **Black Stump Fm**	**31.29**	**157**	*e*P		**P**		**02 31 05.1**	**+1.1**
BBOO	comp=Z,22nm,1.0s **Buckleboo**	**32.00**	**223**	*e*P		**P**		**02 31 10.9**	**+0.6**
LBMI	comp=Z,20nm,0.8s **Labuha**	**35.17**	**284**	P		**P**		**02 31 39.3**	**+1.2**
FITZ	**Fitzroy Crossi**	**35.34**	**254**	LR		LR		02 45 47.1	
SANI	comp=Z,274nm,18.7s,slow=36 **Sanana**	**36.22**	**281**	P		**P**		**02 31 48.4**	**+1.3**
BATI	**Baumata**	**37.10**	**267**	P		**P**		**02 31 55.4**	**+0.7**
BATI	comp=Z,90nm,0.6s,baz=185,slow=1.5,SNR=9.2			LR		LR		02 47 58.4	
RAR	comp=Z,364nm,18.4s,baz=112,slow=38 **Rarotonga**	**38.63**	**110**	LR		LR		02 44 48.5	
KMSI	comp=Z,101nm,21.1s,baz=275,slow=31 **Cibinong**	**38.89**	**285**	P		**P**		**02 32 11.5**	**+1.8**
DAV	**Davao City (W)**	**39.84**	**295**	LR		LR		02 48 21.6	
APSI	comp=Z,72nm,19.7s,baz=134,slow=36 **Ampana**	**40.70**	**281**	P		**P**		**02 32 25.6**	**+0.8**
MBWA	comp=Z,76nm,1.5s,comp=Z,961nm **Marble Bar**	**41.26**	**250**	*e*P		**P**		**02 32 29.5**	**+0.2**
KAPI	comp=Z,36nm,1.2s **Kappang**	**41.63**	**275**	*e*P		**P**		**02 32 31.7**	**-0.7**
KAPI	comp=Z,52nm,1.1s **Kappang**	**41.63**	**275**	*e*P		**P**		**02 32 31.7**	**-0.7**
KAPI	comp=Z,52nm,1.1s			pmax		pmax			
SPSI	**Sidrap Palu**	**41.81**	**276**	P		**P**		**02 32 34.1**	**+0.2**
TTSI	**Tana Toraja**	**41.96**	**277**	P		**P**		**02 32 35.9**	**+0.8**
PCI	**Palu**	**42.45**	**281**	P		**P**		**02 32 41.5**	**+2.3**
PCI	**Palu**	**42.45**	**281**	P		**P**		**02 32 42.0**	**+2.8**
PCI	comp=Z,108nm,1.1s			pmax		pmax			
MPSI	**Mapaga**	**42.72**	**282**	P		**P**		**02 32 40.9**	**-0.5**
MYLDM	**Lahad Datu**	**45.57**	**288**	*e*P		**P**		**02 33 05.9**	**+1.7**
IGBI	comp=Z,76nm,1.3s **Denpasar**	**45.60**	**268**	P		**P**		**02 33 06.6**	**+2.2**
NWAO	**Narrogin (SRO)**	**46.11**	**234**	LR		LR		02 51 20.5	
JAGI	comp=Z,454nm,19.3s,baz=349,slow=35 **Jajag, Banyuwa**	**46.61**	**269**	P		**P**		**02 33 11.2**	**-1.2**
JAGI	**Jajag, Banyuwa**	**46.61**	**269**	*e*P		**P**		**02 33 10.5**	**-1.9**
GMJI	comp=Z,85nm,0.6s **Gumukmas**	**47.33**	**269**	P		**P**		**02 33 17.6**	**-0.4**
PPT2	**Papeete2**	**47.89**	**104**	*e*LQ		LQ		02 45 08.8	
PPT2	comp=Z,532nm,25.2s			*e*LR		LR		02 47 08.6	
PPTF	comp=Z,333nm,24.0s,baz=289 **Pamatai, Papee**	**47.90**	**104**	*e*P		**P**		**02 33 23.0**	**+0.4**
TBI	comp=Z,26nm,1.0s **Tubuai**	**48.38**	**112**	*e*LQ		LQ		02 45 13.9	
TBI	comp=Z,473nm,30.8s			*e*LR		LR		02 47 20.0	
SBUM	comp=Z,278nm,30.2s **Sibu**	**50.68**	**282**	*e*P		**P**		**02 33 44.0**	**+0.3**
KIP	comp=Z,10nm,0.9s **Kipapa**	**51.12**	**51**⇓*e*P			**P**		**02 33 46.9**	**+0.1**
KIP	comp=Z,202nm,0.7s			pmax		pmax			
INU	**Inuyama**	**51.37**	**334**	*e*P		**P**		**02 33 48.4**	**-0.1**
MJAR	comp=Z,36nm,0.9s **Matsushiro Arr**	**51.90**	**336**	P		**P**		**02 33 50.8**	**-1.7**
MJAR	comp=Z,12nm,0.7s,baz=173,slow=8.7,SNR=23			LR		LR		02 55 18.1	
MAJO	comp=Z,135nm,20.1s,baz=185,slow=35 **Matsushiro**	**51.90**	**336**	*e*P		**P**		**02 33 51.1**	**-1.3**
MAJO	comp=Z,21nm,0.6s **Matsushiro**	**51.90**	**336**	*de*P		**P**		**02 33 51.2**	**-1.3**
MAJO	comp=Z,12nm,0.7s			pmax		pmax			
MAT	**Matsushiro**	**51.90**	**336**	P		**P**		**02 33 50.9**	**-1.6**
MJB9	**Matsu-Tunnel**	**51.91**	**336**	*e*P		**P**		**02 33 51.6**	**-1.0**
JNU	comp=Z,22nm,0.6s **Nakatsue**	**52.48**	**327**	P		**P**		**02 33 56.4**	**-0.5**
JNU	comp=Z,20nm,0.9s,baz=95,slow=3.7,SNR=7.4 **Nakatsue**	**52.48**	**327**	*e*P		**P**		**02 33 55.4**	**-1.4**
LEM	**Lembang**	**53.25**	**270**	LR		LR		03 00 23.9	
ERM	comp=Z,140nm,18.0s,baz=112,slow=40 **Erimo**	**55.16**	**343**⇓*e*P			**P**		**02 34 15.4**	**-0.8**
ERM	comp=Z,8.0nm,0.6s			pmax		pmax			
TJN	**Taejon**	**56.83**	**327**	*ce*P		**P**		**02 34 28.8**	**+0.5**
KUR	**Kuril'sk**	**57.09**	**349**⇑*e*P			**P**		**02 34 30.0**	**+0.1**
ASAJ	**Asahikawa**	**57.26**	**344**	P		**P**		**02 34 31.7**	**+0.5**
ASAJ	comp=Z,32nm,0.7s,baz=221,slow=11,SNR=22 comp=Z,424nm,19.6s,baz=178,slow=35			LR		LR		02 58 33.2	
ASAJ	**Asahikawa**	**57.26**	**344**	*e*P		**P**		**02 34 31.3**	**+0.1**
KSRS	comp=Z,42nm,0.9s **Korea Array**	**57.35**	**329**	P		**P**		**02 34 31.9**	**-0.1**
KSRS	comp=Z,7.8nm,1.0s,baz=143,slow=7.3,SNR=22 comp=Z,207nm,20.6s,baz=130,slow=34			LR		LR		02 57 16.1	
KS15	**Wonju Array Si**	**57.36**	**329**	*e*P		**P**		**02 34 31.9**	**-0.2**
KSAR	**Wonju Array Be**	**57.36**	**329**	P		**P**		**02 34 31.9**	**-0.2**
KSAR	**Wonju Array Be**	**57.36**	**329**	P		**P**		**02 34 31.9**	**-0.2**
KS01	**Wonju Array Si**	**57.38**	**329**	*e*P		**P**		**02 34 31.0**	**-1.2**
NJ2	**Nanjing**	**58.91**	**318**	*e*P		**P**		**02 34 44.5**	**+1.5**
NJ2	comp=Z,12nm,0.6s			pmax		pmax			
YSS	**Yuzh-Sakhalins**	**59.85**	**345**	*e*P		**P**		**02 34 49.4**	**+0.2**
YSS	comp=Z,30nm,1.3s			pmax		pmax			
USRK	**Ussuriysk Ar.**	**60.90**	**336**	P		**P**		**02 34 56.4**	**0.0**
USRK	comp=Z,34nm,0.9s,baz=139,slow=7.2,SNR=50 comp=Z,120nm,20.8s,baz=154,slow=34			LR		LR		02 59 06.9	
UBPT	**Khong Chiam**	**61.16**	**294**	P		**P**		**02 34 57.9**	**-0.8**
MDJ	comp=Z,45nm,1.0s **Mudanjiang**	**62.22**	**335**	P		**P**		**02 35 02.5**	**-2.9**
MDJ				pP		pP		02 35 12.6	-1.5
MDJ				sP		sP		02 35 16.7	-0.7
MDJ				PP		**PP**		**02 37 21.7**	**-1.0**
MDJ				S		**S**		**02 43 32.0**	**+2.6**
MDJ	comp=Z,24nm,0.4s			pmax		pmax			
MDJ	comp=Z,210nm,4.1s			pmax		pmax			
MDJ	comp=Z,490nm,21.5s			LR		LR			
MDJ	comp=Z,320nm,16.7s			LR		LR			
MDJ	comp=Z,390nm,16.7s			LR		LR			
MDJ	**Mudanjiang**	**62.22**	**335**	*e*P		**P**		**02 35 05.6**	**+0.2**
SKNT	comp=Z,17nm,0.8s **Sakolnakorn**	**63.11**	**295**	P		**P**		**02 35 10.6**	**-1.3**
CN2	comp=Z,21nm,1.1s,comp=Z,2μm **Changchun**	**63.41**	**332**	*e*P		**P**		**02 35 13.0**	**-0.3**
CN2				pmax		pmax			
	comp=Z,20nm,1.0s								

PETK	Petropavlovsk-	63.72	358	P	P	02 35 15.1	-0.1
	comp=Z,9.2nm,0.8s,baz=156,slow=6.9,SNR=6.4						
PEA1	Petropavlovsk-	63.73	358	eP	P	02 35 15.1	-0.1
NONG	Nongkai	64.26	296	P	P	02 35 19.3	-0.1
	comp=Z,28nm,0.9s,comp=Z,3μm						
GYA	Guiyang	64.79	306	P	P	02 35 25.0	+2.1
GYA				PP	PP	02 37 50.5	+4.8
GYA				S	S	02 44 02.2	-0.1
GYA				SKS	SKSac	02 45 13.0	-3.1
GYA				SS	SS	02 48 15.6	+1.4
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,5.4s						
GYA				LR	LR		
	comp=Z,520nm,18.8s						
GYA				LR	LR		
	comp=Z,460nm,19.0s						
GYA				LR	LR		
	comp=Z,440nm,19.4s						
KLR	Kul'dur	65.21	339	P	P	02 35 24.4	-0.6
	comp=Z,1.1nm,0.9s,baz=141,slow=3.5,SNR=29						
KLR	Kul'dur	65.21	339	ceP	P	02 35 24.8	-0.2
PBKT	Sadao Pong	65.66	294	P	P	02 35 27.8	-0.7
	comp=Z,30nm,0.8s,comp=Z,2μm						
PBKT	Sadao Pong	65.66	294	eP	P	02 35 26.4	-2.1
	comp=Z,24nm,1.0s						
BJI	Beijing	65.67	323	P	P	02 35 27.2	-0.9
BJI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PHIT	Phitsanulok	66.37	294	P	P	02 35 33.5	+0.4
	comp=Z,24nm,0.9s,comp=Z,484nm						
NANT	Nan	66.68	296	P	P	02 35 34.9	-0.2
	comp=Z,15nm,0.8s,comp=Z,240nm						
VNDA	Vanda	66.71	180	P	P	02 35 34.8	+0.5
	comp=Z,2.7nm,0.7s,baz=347,slow=6.9,SNR=12						
VNDA	Vanda	66.71	180	eP	P	02 35 35.5	+1.2
	comp=Z,4.7nm,1.0s						
VNDA	Vanda	66.71	180	eP	P	02 35 35.5	+1.2
VNDA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
XAN	Xi'an	66.85	314	P	P	02 35 34.7	-1.2
XAN				pP	pP	02 35 43.9	-0.8
XAN				sP	sP	02 35 48.8	+0.8
XAN				pmax	pmax		
	comp=Z,11nm,1.0s						
XAN				pmax	pmax		
	comp=Z,190nm,7.5s						
KMI	Kunming	67.38	303	P	P	02 35 40.6	+0.9
KMI				pP	pP	02 35 48.1	-0.4
KMI				sP	sP	02 35 54.8	+3.0
KMI				pmax	pmax		
	comp=Z,22nm,0.9s						
LAMP	Lampang	67.53	295	P	P	02 35 40.9	+0.4
	comp=Z,17nm,0.8s,comp=Z,137nm						
CM01	Chiang Mai Arr	68.10	295	eP	P	02 35 43.9	-0.2
CM31	Chiang Mai Arr	68.12	295	eP	P	02 35 44.5	+0.3
CMAR	Chiang Mai Arr	68.12	295	P	P	02 35 44.5	+0.3
	comp=Z,9.3nm,0.7s,baz=126,slow=4.9,SNR=8.5						
CMAR				LR	LR	03 06 57.9	
	comp=Z,40nm,18.6s,baz=260,slow=37						
CMAR	Chiang Mai Arr	68.12	295	i P	P	02 35 44.5	+0.3
CMAR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CHTO	Chiang Mai	68.25	295	P	P	02 35 45.1	+0.1
	comp=Z,76nm,1.1s						
CHTO	Chiang Mai	68.25	295	eP	P	02 35 45.3	+0.3
	comp=Z,32nm,1.4s						
CHTO	Chiang Mai	68.25	295	eP	P	02 35 45.3	+0.3
CHTO				pmax	pmax		
	comp=Z,32nm,1.4s						
HHC	Hu-ho-hao-te	68.93	322	eP	P	02 35 52.0	+3.0
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,100nm,4.5s						
HHC				LR	LR		
	comp=Z,75nm,11.2s						
HHC				LR	LR		
	comp=Z,55nm,13.0s						
CD2	Chengdu	69.10	309	P	P	02 35 50.1	0.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HIA	Hailar	70.11	332⇑	eP	P	02 35 55.4	-0.6
HIA				pmax	pmax		
	comp=Z,13nm,0.9s						
ZEA	Zeya	70.53	339	eP	P	02 35 58.2	-0.2
ZEA				pmax	pmax		
	comp=Z,46nm,1.0s						
MA2	Magadan	70.65	354	eP	P	02 35 58.2	-0.8
MA2				pmax	pmax		
	comp=Z,39nm,2.5s						
LZH	Lanzhou	71.47	314	eP	P	02 36 05.0	+0.3
LZH				pP	pP	02 36 14.5	+0.9
LZH				sP	sP	02 36 18.0	+1.1
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
SEY	Seymchan	73.83	356⇓	eP	P	02 36 17.7	-0.2
ULN	Ulaanbaatar	75.64	326	eP	P	02 36 28.8	-0.2
	comp=Z,28nm,1.0s						
ULN	Ulaanbaatar	75.64	326	c i P	P	02 36 29.0	0.0
ULN				pmax	pmax		
	comp=Z,51nm,1.7s						
GTA	Gaotai	75.85	315	P	P	02 36 30.5	+0.2
GTA				pP	pP	02 36 40.7	+1.5
GTA				sP	PcP	02 36 44.7	+1.9
GTA				pmax	pmax		
	comp=Z,13nm,0.9s						
SONA0	Songino Array	75.99	325	eP	P	02 36 30.8	-0.1
SONM	Songino Array	75.99	325	P	P	02 36 30.8	-0.1
	comp=Z,18nm,0.8s,baz=136,slow=5.9,SNR=69						
SONM				LR	LR	03 09 32.5	
	comp=Z,130nm,20.2s,baz=62,slow=35						
SONA1	Songino Array	75.99	325	eP	P	02 36 30.4	-0.6
SHL	Shillong	76.67	300	eP	P	02 36 35.0	-0.3
	comp=Z,14nm,0.6s						
SHL	Shillong	76.67	300	P	P	02 36 35.0	-0.3
SHL				pmax	pmax		
	comp=Z,14nm,0.6s						
YAK	Yakutsk	76.71	345	eP	P	02 36 33.3	-1.2
	comp=Z,58nm,0.9s						
YAK	Yakutsk	76.71	345	i P	P	02 36 33.5	-1.0
YAK				pmax	pmax		
	comp=Z,58nm,0.8s						
OHAK	Old Harbor	77.30	23	eP	P	02 36 38.6	+0.7
	comp=Z,18nm,0.9s						
KDAK	Kodiak Island	77.97	23	P	P	02 36 41.9	+0.3
	comp=Z,20nm,0.8s,baz=245,slow=4.7,SNR=23						
KDAK	Kodiak Island	77.97	23	eP	P	02 36 42.3	+0.7
	comp=Z,22nm,0.8s						
KDAK	Kodiak Island	77.97	23	eP	P	02 36 42.3	+0.7
KDAK				pmax	pmax		
	comp=Z,22nm,0.8s						
BILL	Bilibino	78.70	2	eP	P	02 36 45.2	-0.3
	comp=Z,17nm,0.9s						
BILL	Bilibino	78.70	2	eP	P	02 36 45.2	-0.3
BILL				pmax	pmax		
	comp=Z,17nm,0.9s						
ZAK	Zakamensk	79.09	326	eP	P	02 36 46.8	-1.4
ZAK				pmax	pmax		
	comp=Z,16nm,1.0s						
QSPA	South Pole Qui	79.21	180	P	P	02 36 49.6	+1.0
	comp=Z,6.2nm,0.7s,baz=2.2,slow=1.8,SNR=22						
QSPA	South Pole Qui	79.21	180	eP	P	02 36 49.8	+1.1
SVW2	Sparrevohn	79.26	20	eP	P	02 36 50.1	+1.4
	comp=Z,23nm,0.7s						
TLY	Talaya	79.59	328	eP	P	02 36 50.6	-0.2
	comp=Z,19nm,0.9s						
TLY	Talaya	79.59	328	eP	P	02 36 50.1	-0.6
TLY				pmax	pmax		
	comp=Z,21nm,0.9s						
BRLK	Bradley Lake	79.97	22	eP	P	02 36 53.1	+0.5
	comp=Z,13nm,0.9s						
ODAN	Odare	80.91	300	eP	P	02 36 58.2	-0.5
	comp=Z,23nm,0.6s						
SUA	Susitna One	81.17	21	eP	P	02 36 59.1	-0.1
	comp=Z,12nm,0.8s						
RC01	Rabbit Creek A	81.28	22	eP	P	02 37 00.5	+0.9
	comp=Z,7.4nm,0.8s						
RAMN	Ramite	81.61	299	eP	P	02 37 01.4	-1.0
	comp=Z,35nm,1.1s						
PMR	Palmer	81.84	22	eP	P	02 37 02.8	+0.3
	comp=Z,7.1nm,1.0s						
PMR	Palmer	81.84	22	eP	P	02 37 02.8	+0.3
PMR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GHO	Glory Hole Cre	82.03	21	eP	P	02 37 04.0	+0.4
	comp=Z,12nm,0.8s						
CAST	Castle Rocks	82.06	19	eP	P	02 37 03.1	-0.6
	comp=Z,19nm,0.8s						
GLI	Glacier Island	82.13	23	eP	P	02 37 04.3	+0.3
	comp=Z,12nm,0.8s						
JIRN	Jiri	82.16	300	eP	P	02 37 04.9	-0.6
SML	Sawmill	82.27	22	eP	P	02 37 05.3	+0.5
	comp=Z,7.9nm,0.8s						
SML	Sawmill	82.27	22	eP	P	02 37 05.3	+0.5
SML				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GUN	Gumba	82.49	300	eP	P	02 37 06.5	-0.7
	comp=Z,21nm,0.9s						
SCM	Sheep Creek Mo	82.65	22	eP	P	02 37 07.5	+0.6
	comp=Z,9.1nm,0.7s						
SCM	Sheep Creek Mo	82.65	22	eP	P	02 37 07.5	+0.6
SCM				pmax	pmax		
	comp=Z,9.0nm,0.7s						
RDOG	Red Dog Mine	82.67	13	eP	P	02 37 07.0	+0.3
	comp=Z,9.0nm,0.8s						
TRF	Thorofare Moun	82.68	20	eP	P	02 37 06.5	-0.6
	comp=Z,8.8nm,0.8s						
PKIN	Phulchoki	82.81	300	eP	P	02 37 08.4	-0.3
	comp=Z,14nm,0.6s						
BPAW	Bear Paw Mtn.	82.89	19	eP	P	02 37 07.4	-0.6
	comp=Z,6.0nm,1.0s						
KLU	Klutina	82.96	23	eP	P	02 37 09.1	+0.7
	comp=Z,10nm,0.8s						
KKN	Kakani	82.97	300	eP	P	02 37 08.9	-0.6
	comp=Z,9.0nm,0.5s						
DMN	Daman	83.07	300	eP	P	02 37 09.7	-0.4
	comp=Z,42nm,0.9s						
RND	Reindeer	83.13	20	eP	P	02 37 09.2	-0.1
	comp=Z,9.7nm,0.9s						
RND	Reindeer	83.13	20	eP	P	02 37 09.2	-0.1
RND				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BMRM	Bremner River	83.14	23	eP	P	02 37 10.4	+1.0
	comp=Z,10nm,0.9s						
MCK	McKinley	83.31	20	eP	P	02 37 10.1	-0.1
	comp=Z,24nm,1.0s						
MCK	McKinley	83.31	20	eP	P	02 37 10.1	-0.1
MCK				pmax	pmax		
	comp=Z,24nm,1.0s						
MAW	Mawson	83.34	202	P	P	02 37 11.1	+0.8
	comp=Z,9.7nm,0.7s,baz=101,slow=5.5,SNR=23						
MAW				LR	LR	03 09 52.7	
	comp=Z,86nm,21.7s,baz=247,slow=32						
MAW	Mawson	83.34	202	eP	P	02 37 11.6	+1.3
	comp=Z,3.9nm,1.0s						
MAW	Mawson	83.34	202	eP	P	02 37 11.6	+1.3
MAW				pmax	pmax		
	comp=Z,4.0nm,1.0s						
DHY	Denali Highway	83.42	21	eP	P	02 37 10.9	0.0
	comp=Z,3.6nm,0.7s						
GKN	Gorkha	83.57	300	eP	P	02 37 11.5	-1.0
	comp=Z,47nm,0.8s						
CRQM	Cirque	83.60	24	eP	P	02 37 12.7	+0.8
	comp=Z,16nm,0.8s						
MLY	Manley	83.60	18	eP	P	02 37 12.5	+0.7
	comp=Z,10nm,0.9s						
TGL	Tana Glacier	83.72	24	eP	P	02 37 13.7	+1.2
	comp=Z,8.2nm,0.8s						
HARP	HAARP	83.81	22	eP	P	02 37 14.0	+1.2
	comp=Z,16nm,0.9s						
WRH	Wood River Hil	84.08	20	eP	P	02 37 13.2	-0.9
	comp=Z,8.2nm,0.9s						
CCB	Clear Creek Bu	84.29	20	eP	P	02 37 14.5	-0.6
	comp=Z,5.5nm,0.9s						
MDM	Murphy Dome	84.35	19	eP	P	02 37 15.0	-0.5
	comp=Z,8.6nm,0.9s						
KOLN	Koldanda	84.40	300	eP	P	02 37 15.8	-1.0
	comp=Z,29nm,0.8s						
DANN	Dangsing	84.41	300	eP	P	02 37 15.7	-1.3
	comp=Z,27nm,0.7s						
COLA	College	84.42	19	eP	P	02 37 15.0	-0.7
	comp=Z,7.7nm,0.8s						
COLA	College	84.42	19	eP	P	02 37 15.0	-0.7
COLA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MENT	Mentasta	84.66	22	eP	P	02 37 18.0	+0.9
	comp=Z,7.6nm,0.8s						
ILAR	Eielson Array	84.67	20	P	P	02 37 16.4	-0.6
	comp=Z,2.8nm,0.7s,baz=265,slow=4.7,SNR=26						
ILB	Eielson Array	84.67	20	eP	P	02 37 16.5	-0.6
IL1	Eielson Array	84.67	20	eP	P	02 37 15.9	-1.2
RIDG	Independ'e Rid	84.73	21	eP	P	02 37 18.0	+0.5
	comp=Z,9.1nm,0.9s						
HVS	Khovu-Aksy	84.81	324⇑	eP	P	02 37 16.7	-1.5
HVS				pmax	pmax		
	comp=Z,12nm,0.8s						
DOT	Dot Lake	84.95	21	eP	P	02 37 18.8	+0.3
	comp=Z,22nm,0.8s						
PYUN	Piuthan	85.00	300	eP	P	02 37 18.2	-1.7
	comp=Z,28nm,0.9s						
TIXI	Tiksi	85.07	350	P	P	02 37 17.7	-1.2
	comp=Z,3.9nm,0.8s,baz=150,slow=3.6,SNR=8.1						
TIXI	Tiksi	85.07	350	eP	P	02 37 17.7	-1.2
	comp=Z,4.7nm,0.8s						
TIXI	Tiksi	85.07	350	eP	P	02 37 17.7	-1.2
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SCRK	Sand Creek	85.18	21	eP	P	02 37 20.5	+0.7
	comp=Z,7.0nm,0.9s						
WMQ	Urumqi	85.92	316	P	P	02 37 24.9	+1.0
WMQ				pP	pP	02 37 34.8	+1.9
WMQ				sP	sP	02 37 39.8	+3.6
WMQ				pmax	pmax		
	comp=Z,23nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,200nm,5.3s						
WMQ				LR	LR		
	comp=Z,130nm,31.3s						
WMQ				LR	LR		
	comp=Z,130nm,24.7s						
WMQ				LR	LR		
	comp=Z,210nm,20.9s						
EGAK	Eagle	86.64	21	eP	P	02 37 27.6	+0.7
	comp=Z,17nm,1.0s						
YBH	Yreka Blue Hor	86.79	47	P	P	02 37 29.7	+1.4
	comp=Z,2.3nm,0.7s,baz=26,slow=2.7,SNR=6.1						
YBH				LR	LR	03 07 38.0	
	comp=Z,80nm,21.4s,baz=328,slow=30						
YBH	Yreka Blue Hor	86.79	47	P	P	02 37 29.7	+1.4
BBB	Bella Bella	86.82	36	LR	LR	03 06 57.9	
	comp=Z,59nm,21.2s,baz=236,slow=29						
HUMO	Hull Mountain	86.88	46	eP	P	02 37 30.3	+1.7
	comp=Z,14nm,1.5s						
DAWY	Dawson	86.90	22	eP	P	02 37 28.5	+0.3
	comp=Z,17nm,1.1s						
AFDM	Forest Hills D	87.26	50	eP	P	02 37 31.6	+1.0
	comp=Z,6.4nm,1.1s						
BEKR	Beckworth	87.97	49	eP	P	02 37 35.1	+1.0
	comp=Z,3.5nm,0.9s						
ALPC	Antelope	88.22	54	eP	P	02 37 34.0	-1.2
K05A	Summer Lake	88.37	46	eP	P	02 37 37.5	+1.6
EML	El Monte Cty P	88.96	56	eP	P	02 37 42.0	+3.3
NV01	Mina Array Sit	89.14	51	eP	P	02 37 40.5	+0.8
NVAR	Mina Array Bea	89.14	51	P	P	02 37 40.6	+0.9
	comp=Z,1.9nm,0.7s,baz=236,slow=6.4,SNR=9.3						
NVAR				LR	LR	03 11 59.9	
	comp=Z,85nm,19.6s,baz=268,slow=32						
NVAR	Mina Array Bea	89.14	51	P	P	02 37 40.6	+0.9
DAC	Darwin (Calif)	89.16	53	eP	P	02 37 41.6	+1.7
	comp=Z,8.2nm,1.1s						
DAC	Darwin (Calif)	89.16	53	eP	P	02 37 41.6	+1.7
DAC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BBRC	Big Bear Solar	89.22	55	eP	P	02 37 43.2	+3.0
NV11	Mina Array Sit	89.25	51	eP	P	02 37 41.5	+1.3
	comp=Z,0.8nm,1.4s						
KVN	Kaiserville	89.45	50	eP	P	02 37 42.7	+1.6
	comp=Z,8.6nm,1.3s						
KVN	Kaiserville	89.45	50	eP	P	02 37 42.7	+1.6
KVN				pmax	pmax		
	comp=Z,9.0nm,1.3s						
WVOR	Wild Horse Val	89.90	47	eP	P	02 37 44.7	+1.6
	comp=Z,17nm,1.4s						
TPNV	Topopah Spring	90.37	53	eP	P	02 37 46.8	+1.4
	comp=Z,5.2nm,0.8s						
MK01	Makanchi Array	90.43	318	eP	P	02 37 43.4	-1.9
BMN	Battle Mountai	90.44	49	eP	P	02 37 47.2	+1.6
	comp=Z,4.9nm,0.8s						
MK31	Makanchi Array	90.44	318	eP	P	02 37 43.5	-1.9
MK31	Makanchi Array	90.44	318	eP	P	02 37 43.5	-1.9
MK32	Makanchi Array	90.44	318	eP	P	02 37 43.7	-1.7
MKAR	Makanchi Array	90.44	318	P	P	02 37 43.7	-1.7
	comp=Z,5.6nm,0.5s,baz=95,slow=6.0,SNR=60						
MKAR				LR	LR	03 20 29.3	
	comp=Z,60nm,19.0s,baz=66,slow=37						
MKAR	Makanchi Array	90.44	318	eP	P	02 37 43.5	-1.9
	comp=Z,48nm,0.4s						
MKAR	Makanchi Array	90.44	318	i P	P	02 37 44.2	-1.2
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.5s						
MAKZ	Makanchi	90.65	318	eP	P	02 37 44.0	-2.4
	comp=Z,6.4nm,0.9s						
MAKZ	Makanchi	90.65	318	eP	P	02 37 44.0	-2.4
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SYO	Syowa Base	90.75	198⇓	eP	P	02 37 44.4	-1.9
ZALV	Zalesovo Beam	90.88	325	P	P	02 37 44.9	-2.3
	comp=Z,2.8nm,0.6s,baz=121,slow=5.4,SNR=9.4						
ZALV				LR	LR	03 18 54.4	
	comp=Z,81nm,20.2s,baz=70,slow=36						
ZALV	Zalesovo Beam	90.88	325	eP	P	02 37 44.3	-2.9
ZAA1	Zalesovo Array	90.88	325	eP	P	02 37 44.9	-2.3
SHPR	Sheep Range	91.13	53	eP	P	02 37 50.6	+1.6
	comp=Z,5.6nm,0.9s						
R11A	Troy Canyon, C	91.20	51	eP	P	02 37 50.6	+1.3
	comp=Z,5.8nm,1.1s						
F10A	Beach Ranch, E	91.75	44	eP	P	02 37 52.3	+0.8
	comp=Z,5.5nm,0.9s						
W13A	Hualapai Mount	91.84	55	eP	P	02 37 53.7	+1.3
	comp=Z,3.0nm,0.8s						
NVS	Novosibirsk	92.02	325	eP	P	02 37 51.1	-1.3
NEW	Newport	92.35	41	eP	P	02 37 58.0	+3.8
	comp=Z,6.0nm,1.0s						
NEW	Newport	92.35	41	eP	P	02 37 58.0	+3.8
NEW				pmax	pmax		
	comp=Z,6.0nm,1.0s						
PSUT	Pine Spring	92.56	51	eP	P	02 37 59.7	+4.0
	comp=Z,2.6nm,0.8s						
LCMT	Little Creek M	92.74	53	eP	P	02 38 00.6	+4.2
	comp=Z,2.9nm,1.0s						
CCUT	Cedar City	92.75	52	eP	P	02 38 00.9	+4.3
	comp=Z,8.8nm,1.4s						
HLID	Hailey	93.17	46	eP	P	02 37 59.8	+1.5
	comp=Z,8.1nm,1.4s						
KSH	Kashi	93.29	309	P	P	02 38 08.4	+10
KSH				pP	sP	02 38 12.2	+1.0
KSH				pmax	pmax		
	comp=Z,320nm,4.8s						
KURK	Kurchatov	93.74	321	eP	P	02 37 58.6	-1.9
	comp=Z,8.9nm,1.1s						
KURK	Kurchatov	93.74	321	P	P	02 37 58.7	-1.7
KURK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KURBB	Kurchatov Arra	93.77	321	P	P	02 37 58.7	-2.0
	comp=Z,3.9nm,0.8s,baz=105,slow=3.5,SNR=34						
NRIK	Noril'sk	94.41	340	LR	LR	03 19 35.0	
	comp=Z,262nm,21.3s,baz=62,slow=35						
NVL	N'lazarevskaya	96.04	190	eP	P	02 38 08.6	-2.1
NVL				pmax	pmax		
	comp=Z,6.0nm,0.6s						
PD31	Pinedale Array	96.53	48	eP	P	02 38 14.7	+0.9
PDAR	Pinedale Array	96.53	48	P	P	02 38 14.7	+0.9
	comp=Z,0.6nm,0.6s,baz=235,slow=4.7,SNR=4.4						
PDAR	Pinedale Array	96.53	48	P	P	02 38 14.7	+0.9
YKA	Yellowknife Ar	96.72	28	P	P	02 38 12.8	-0.9
	comp=Z,1.6nm,0.8s,baz=256,slow=4.5,SNR=19						
SNAA	Sanae	97.05	185	P	P	02 38 15.3	0.0
SNAA	Sanae	97.05	185	P	P	02 38 14.8	-0.5
	comp=Z,3.9nm,1.1s,baz=219,slow=6.5,SNR=6.1						
SNAA	Sanae	97.05	185	eP	P	02 38 15.2	-0.1
	comp=Z,12nm,1.4s						
ANMO	Albuquerque	97.83	56	P	P	02 38 19.2	-0.6
	comp=Z,1.3nm,0.9s,baz=270,slow=9.1,SNR=2.3						
ANMO				LR	LR	03 16 51.5	
	comp=Z,66nm,19.4s,baz=154,slow=32						
ANMO	Albuquerque	97.83	56	eP	Pdif	02 38 24.6	+4.8
ANMO	Albuquerque	97.83	56	eP	Pdif	02 38 24.6	+4.8
VNA3	Neumayer Olymp	97.93	183	P	P	02 38 19.3	0.0
VNA2	Neumayer--Watz	98.12	184	P	P	02 38 19.8	-0.3
BVAR	Borovoye Array	99.14	322	P	Pdif	02 38 22.9	-2.0
	comp=Z,1.1nm,0.7s,baz=122,slow=5.4,SNR=7.1						
BVAR				LR	LR	03 24 21.7	
	comp=Z,92nm,19.4s,baz=66,slow=36						
BRVK	Borovoye	99.20	322⇓	eP	Pdif	02 38 23.1	-2.1
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
TXAR	Lajitas Array	99.46	62	P	Pdif	02 38 27.2	+0.1
	comp=Z,0.3nm,0.9s,baz=294,slow=4.5,SNR=2.7						
TXAR				LR	LR	03 15 33.6	
	comp=Z,84nm,21.7s,baz=0.0,slow=31						
TXAR	Lajitas Array	99.46	62	P	Pdif	02 38 27.2	+0.1
ARA0	ARCESS Array S	114.98	344	ePKiKP	PKiKP	02 43 22.6	-1.5
ARCES	ARCESS Array B	114.98	344	PKP	PKPdf	02 43 22.6	-1.5
	comp=Z,0.3nm,0.3s,baz=74,slow=1.6,SNR=10						
KIV	Kislovodsk	118.01	314	i PKIKP	PKPdf	02 43 29.5	-1.3
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
SDV	Santo Domingo	128.74	87	ePKPpre	PKPpre	02 43 43.5	
THTN	Thala	145.06	319	ePKPbc	PKPbc	02 44 18.9	-2.2
ES19	SONSECA Array	148.39	338	ePKPbc	PKPbc	02 44 29.9	-0.7
ESDC	Sonseca Array	148.43	338	PKPbc	PKPbc	02 44 30.4	-0.3
	comp=Z,0.9nm,0.7s,baz=10,slow=4.3,SNR=4.2						
TORD	Torodi Ar. Bea	160.02	279	PKP	PKPdf	02 44 43.0	-0.9
	comp=Z,1.1nm,1.0s,baz=30,slow=2.0,SNR=3.4						
TORD				PKPab	PKPab	02 45 23.6	0.0
	comp=Z,1.7nm,0.9s,baz=72,slow=3.8,SNR=5.3						
TOA1	Torodi Ar. Sit	160.02	279	ePKPdf	PKPdf	02 44 43.0	-0.9
TOA1				ePKPab	PKPab	02 45 23.6	0.0
KOWA	Kowa	165.31	286	PKPab	PKPab	02 45 46.5	-0.4
	comp=Z,2.8nm,0.8s,baz=66,slow=4.8,SNR=5.9						

MAN 06 02:25:12.3, 18°.42N×120°.65E, h38km, mb4.6, ML3.5, MS3.4, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABRA	Dolores	0.77	175	eP	Pn	02 25 27.0	+0.4
ABRA				eS	Sn	02 25 38.9	+1.9
APYP	Conner	0.80	134	eP	Pn	02 25 27.2	+0.3
APYP				eS	Sn	02 25 39.1	+1.5
SGCP	Mt. Cagua	1.34	97	eP	Pn	02 25 35.1	+0.7
SGCP				eS	Sn	02 25 52.6	+1.5
BOLP	Bolinao	2.15	199	eP	Pn	02 25 46.3	+0.8
BOLP				eS	Sn	02 26 12.2	+1.2

NNC 06 02:49:17.6±3.4, 36°.95N×70°.44E, h0km, mb3.7, mpv3.3, 3C-4D, Error ellipse: s-maj=29.3km s-min=26.5km az=85.0, Hindu Kush region

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

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.55**	**25**	⇑P	**Pn**	**03 02 55.4**	**+2.3**
	6.1nm,0.2s						
SFK				⇓S	**Sn**	**03 03 34.4**	**-0.1**
	45nm,0.4s						
THN	**Thein Dam**	**5.57**	**140**	*e*P	Pn	03 03 24.3	+4.4
THN				*e*S	**Sn**	**03 04 23.0**	**+0.4**
AML	**Almayashu**	**5.57**	**17**	P	**Pn**	**03 03 21.3**	**+1.1**
	SNR=138						
MNAS	**Manas**	**5.72**	**7**	⇓P	**Pn**	**03 03 23.1**	**+1.0**
	8.5nm,0.5s						
MNAS				⇑S	**Sn**	**03 04 22.5**	**-4.0**
	34nm,0.4s						
UCH	**Uchtor**	**5.88**	**22**	P	**Pn**	**03 03 26.0**	**+1.5**
	SNR=10						
KZA	**Kyzart**	**5.99**	**28**	P	**Pn**	**03 03 27.3**	**+1.3**
	SNR=6.5						
EKS2	**Erkin-Say**	**6.09**	**16**	P	**Pn**	**03 03 28.5**	**+1.4**
	SNR=12						
AAK	**Ala-Archa**	**6.25**	**21**	P	**Pn**	**03 03 30.5**	**+1.2**
	5.6nm,0.3s,baz=167,slow=5.9,SNR=36						
AAK				S	**Sn**	**03 04 36.3**	**-3.0**
	0.9nm,0.3s,baz=338,slow=21,SNR=4.7						
AAK	**Ala-Archa**	**6.25**	**21**	⇓P	**Pn**	**03 03 30.6**	**+1.4**
	7.3nm,0.4s						
AAK				⇓S	**Sn**	**03 04 37.1**	**-2.2**
	29nm,0.8s						
AAK	**Ala-Archa**	**6.25**	**21**	P	**Pn**	**03 03 30.7**	**+1.4**
	SNR=18						
KK31	**Karatay Array**	**6.33**	**353**	⇑P	**Pn**	**03 03 30.8**	**+0.6**
	18nm,0.5s,baz=217,slow=5.6,SNR=222						
KK31				S	**Sn**	**03 04 36.3**	**-4.8**
	10nm,0.4s,baz=177,slow=22,SNR=11						
CHMS	**Chumysh**	**6.66**	**21**	P	**Pn**	**03 03 35.9**	**+1.3**
	SNR=5.2						
USP	**Ospenovka**	**6.84**	**19**	P	**Pn**	**03 03 37.5**	**+0.4**
	SNR=5.6						
TKM2	**Tokmak 2**	**6.86**	**26**	⇑P	**Pn**	**03 03 38.7**	**+1.2**
	7.0nm,0.6s						
TKM2				⇑S	**Sn**	**03 04 52.3**	**-1.8**
	12nm,1.2s						
TKM2	**Tokmak 2**	**6.86**	**26**	P	**Pn**	**03 03 38.9**	**+1.4**
	SNR=16						
GEYT	**Alibeck**	**10.73**	**280**	P	**Pn**	**03 04 28.9**	**-0.9**
	2.2nm,0.3s,baz=112,slow=12,SNR=11						
GEYT				S	**Sn**	**03 06 23.6**	**-4.4**
	0.6nm,0.3s,baz=114,slow=14,SNR=4.4						
MKAR	**Makanchi Array**	**12.79**	**35**	P	**Pn**	**03 04 57.6**	**+0.6**
	0.1nm,0.3s,baz=224,slow=12,SNR=5.1						
PYUN	**Piuthan**	**12.99**	**129**	*e*P	**Pn**	**03 04 59.4**	**-0.6**
	29nm,0.3s						
DANN	**Dangsing**	**13.31**	**126**	*e*P	**Pn**	**03 05 03.3**	**-0.9**
	12nm,0.4s						
KOLN	**Koldanda**	**13.61**	**128**	*e*P	**Pn**	**03 05 07.3**	**-0.6**
	21nm,0.4s						
GKN	**Gorkha**	**14.12**	**125**	*e*P	**Pn**	**03 05 13.9**	**-0.6**
	18nm,0.4s						
KKN	**Kakani**	**14.69**	**124**	*e*P	**Pn**	**03 05 20.6**	**-1.2**
	10nm,0.4s						
DMN	**Daman**	**14.69**	**125**	*e*P	**P**	**03 05 21.9**	**-3.1**
	11nm,0.4s						
KURBB	**Kurchatov Arra**	**14.69**	**18**	P	**P**	**03 05 24.3**	**-0.2**
	0.1nm,0.3s,baz=206,slow=10,SNR=6.5						
PKIN	**Phulchoki**	**14.91**	**124**	*e*P	**P**	**03 05 24.3**	**-3.1**
	15nm,0.5s						
GUN	**Gumba**	**15.01**	**122**	*e*P	**Pn**	**03 05 24.9**	**-1.1**
	30nm,0.8s						
AB31	**Akbulak array**	**15.02**	**329**	⇑P	**Pn**	**03 05 24.9**	**-0.7**
	0.9nm,0.3s,baz=135,slow=14,SNR=57						
AB31				S	Sn	03 08 03.3	-8.2
	3.4nm,0.7s,baz=148,slow=23,SNR=10.0						
JIRN	**Jiri**	**15.38**	**122**	*e*P	**P**	**03 05 29.7**	**-3.1**
	50nm,0.5s						
RAMN	**Ramite**	**16.12**	**123**	*e*P	**P**	**03 05 38.9**	**-1.9**
	19nm,0.6s						
BVAR	**Borovoye Array**	**16.23**	**358**	P	**Pn**	**03 05 40.3**	**-0.3**
	0.2nm,0.3s,baz=165,slow=12,SNR=4.3						
ODAN	**Odare**	**16.71**	**122**	*e*P	**P**	**03 05 46.8**	**-0.6**
	9.0nm,0.4s						
AKTO	**Aktyubinsk**	**16.73**	**329**	P	**Pn**	**03 05 46.5**	**-0.2**
	0.5nm,0.3s,baz=136,slow=10,SNR=23						
AKTO	**Aktyubinsk**	**16.73**	**329**	⇑P	**Pn**	**03 05 47.0**	**+0.3**
	9.1nm,0.9s						
AKTO				⇑S	Sn	03 08 42.6	-10
	5.5nm,1.1s						
ZALV	**Zalesovo Beam**	**19.46**	**24**	P	**P**	**03 06 17.0**	**+0.2**
	0.4nm,0.3s,baz=228,slow=11,SNR=4.6						
KBZ	**Khabaz**	**22.84**	**296**	P	**P**	**03 06 55.0**	**+2.3**
	0.4nm,0.5s,baz=72,slow=20,SNR=1.6						
BRTR	**Keskin Array B**	**29.75**	**287**	P	**P**	**03 07 58.2**	**+3.1**
	0.3nm,0.7s,baz=96,slow=7.0,SNR=2.2						
IDI	**Anoyia**	**37.45**	**282**	LR	LR	03 27 27.8	
	comp=Z,44nm,19.0s,baz=220,slow=41						
FINES	**FINESS Array B**	**37.46**	**326**	P	**P**	**03 09 03.8**	**+2.4**
	0.6nm,0.4s,baz=114,slow=12,SNR=8.6						
ARCES	**ARCESS Array B**	**41.02**	**337**	P	**P**	**03 09 33.3**	**+2.4**
	2.0nm,0.8s,baz=106,slow=9.5,SNR=2.6						
HFS	**Hagfors**	**43.09**	**322**	P	**P**	**03 09 50.2**	**+2.5**
	0.9nm,0.5s,baz=92,slow=8.8,SNR=4.9						
NOA	**NORSAR Array B**	**44.39**	**323**	P	**P**	**03 09 58.1**	**-0.1**
	0.5nm,0.7s,baz=97,slow=7.6,SNR=2.6						
TORD	**Torodi Ar. Bea**	**66.15**	**269**	P	**P**	**03 12 35.6**	**+0.7**
	0.3nm,0.5s,baz=48,slow=5.8,SNR=12						
YKA	**Yellowknife Ar**	**80.91**	**3**	P	**P**	**03 14 02.2**	**+1.7**
	0.2nm,0.7s,baz=352,slow=4.7,SNR=3.4						
WRA	**Warramunga Arr**	**81.80**	**122**	P	**P**	**03 14 06.8**	**+1.0**
	1.0nm,1.0s,baz=325,slow=4.9,SNR=6.2						
ASAR	**Alice Springs**	**84.08**	**125**	P	**P**	**03 14 17.5**	**-0.1**
	0.6nm,0.7s,baz=311,slow=4.8,SNR=5.8						

IDC 06 03:07:07.8±2.0, 3°.34S×128°.72E, h0km, mb3.2/2, mb1 3.7/4, mb1mx3.4/55, mbtmp3.6/4, ML3.5/2, MS3.6/1, Ms1 3.6/1, ms1mx2.8/25, Error ellipse: s-maj=103.7km s-min=25.8km az=71.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**14.98**	**191**	Pn	Pn	03 10 41.4	+0.5
	0.1nm,0.3s,baz=13,slow=14,SNR=2.9						
WRA	**Warramunga Arr**	**17.39**	**162**	P	P	03 11 13.3	-0.2
	0.3nm,0.3s,baz=341,slow=11,SNR=13						
TGY	**Tagaytay City**	**18.97**	**336**	LR	LR	03 19 49.2	
	comp=Z,172nm,18.8s,baz=160,slow=40						
ASAR	**Alice Springs**	**20.82**	**167**	P	P	03 11 49.7	-1.4
	0.4nm,0.4s,baz=347,slow=12,SNR=7.3						
MKAR	**Makanchi Array**	**64.49**	**327**	P	P	03 17 46.7	+0.3
	0.2nm,0.4s,baz=111,slow=8.0,SNR=3.3						

IDC 06 03:09:00.6±3.2, 22°.46S×66°.06W, h271km±38km, mb3.4/2, mb1 3.3/4, mb1mx2.9/41, mbtmp3.9/4, Error ellipse: s-maj=42.3km s-min=27.4km az=130.0, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**6.44**	**342**	P	Pn	03 10 36.4	+1.1
	0.8nm,0.3s,baz=150,slow=8.4,SNR=37						
LPAZ				S	S	03 11 50.5	-0.8
	0.4nm,0.3s,baz=278,slow=20,SNR=7.1						
SIV	**San Ignacio**	**7.98**	**37**	P	Pn	03 10 54.0	+0.2
	0.9nm,0.3s,baz=231,slow=8.7,SNR=29						
QSPA	**South Pole Qui**	**67.74**	**180**	P	P	03 19 28.7	-0.3
	1.3nm,0.8s,baz=135,slow=3.3,SNR=3.9						
TORD	**Torodi Ar. Bea**	**75.21**	**69**	P	P	03 20 14.1	0.0
	0.6nm,0.4s,baz=260,slow=5.7,SNR=18						
WRA	**Warramunga Arr**	**133.38**	**207**	PKP	PKPdf	03 27 46.7	+1.4
	0.3nm,0.6s,baz=151,slow=1.5,SNR=2.7						

IDC 06 03:14:15.3±39.0, 20°.91N×145°.09E, h630km±291km, mb2.7/7, mb1 2.8/7, mb1mx2.5/68, mbtmp3.7/7, Error ellipse: s-maj=458.4km s-min=29.2km az=173.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**41.08**	**320**	P	P	03 21 06.7	+0.3
	0.4nm,0.5s,baz=132,slow=8.2,SNR=3.1						
MKAR	**Makanchi Array**	**56.53**	**313**	P	P	03 22 59.3	-0.4
	0.3nm,0.6s,baz=92,slow=8.5,SNR=4.1						
KURBB	**Kurchatov Arra**	**59.31**	**317**	P	P	03 23 18.3	0.0
	0.8nm,0.4s,baz=94,slow=7.3,SNR=11						
ILAR	**Eielson Array**	**61.94**	**27**	P	P	03 23 34.9	-0.3
	0.4nm,0.5s,baz=264,slow=5.5,SNR=8.2						
BVAR	**Borovoye Array**	**64.42**	**320**	P	P	03 23 51.6	+0.4
	0.9nm,0.4s,baz=97,slow=10,SNR=6.1						
YKA	**Yellowknife Ar**	**76.32**	**28**	P	P	03 25 01.6	+0.7
	0.1nm,0.3s,baz=283,slow=6.2,SNR=2.6						
FINES	**FINESS Array B**	**84.65**	**335**	P	P	03 25 43.3	-0.5
	0.3nm,0.4s,baz=72,slow=6.0,SNR=6.9						

IDC 06 03:16:08.8±8.1, 7°.51N×147°.16E, h0km, mb3.8/4, mb1 4.0/5, mb1mx3.6/57, mbtmp3.9/5, ML4.1/1, MS3.4/2, Ms1 3.4/2, ms1mx2.7/57, Error ellipse: s-maj=300.5km s-min=25.2km az=86.0, Eastern Caroline Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**6.45**	**340**	Pn	Pn	03 17 43.3	-1.7
	4.1nm,0.3s,baz=162,slow=20,SNR=2.4						
GUMO				Sn	Sn	03 19 00.0	+0.6
	4.1nm,0.3s,baz=184,slow=19,SNR=1.8						
SIJI	**Sorong**	**17.91**	**243**	LR	LR	03 25 32.2	
	comp=Z,88nm,19.0s,baz=70,slow=32						
WRA	**Warramunga Arr**	**30.06**	**205**	P	P	03 22 19.6	-0.3
	1.0nm,0.9s,baz=31,slow=9.8,SNR=12						
SONM	**Songino Array**	**52.99**	**327**	P	P	03 25 28.2	+0.8
	0.5nm,0.5s,baz=134,slow=5.9,SNR=5.2						
PALK	**Pallekele**	**65.84**	**275**	LR	LR	03 56 31.8	
	comp=Z,41nm,19.9s,baz=12,slow=37						
MKAR	**Makanchi Array**	**67.44**	**318**	P	P	03 27 06.9	+0.5
	0.3nm,0.6s,baz=88,slow=7.9,SNR=3.7						
KURBB	**Kurchatov Arra**	**70.72**	**321**	P	P	03 27 26.4	-0.3
	1.0nm,0.6s,baz=105,slow=5.3,SNR=6.6						

*IDC **06** 03:16:57.6±1.2, 2°.23N×79°.76W, h0km, mb3.8/7, mb1 4.0/7, mb1mx3.7/42, mbtmp3.8/7, MS3.5/1, Ms1 3.5/1, ms1mx2.8/39, Error ellipse: s-maj=49.6km s-min=24.9km az=39.0*

*RSNC **06** 03:16:58.9±0.6, 2°.20N×80°.10W, h56km±28km, ML2.8*

*ISCJB **06** 03:17:00.9±0.5, 2°.21N±0°.04×79°.90W±0°.05, h33km, mb3.8/7, MS3.3/1, Error ellipse: s-maj=6.8km s-min=5.2km az=179.3*

*IGQ **06** 03:17:03.8±1.1, 2°.N±10°.×7°.9W±1°.0, h10km, MLv4.2/9*

ISC 06 03:17:02.3±0.8, 2°.14N±0°.05×79°.94W±0°.07, h35km, n46, σ1ⁿ72/49, mb4.0/7, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUMC	**Tumaco**	**1.25**	**104**	*e*P	**Pn**	**03 17 21.7**	**-1.6**
TUMC				*e*S	**Sn**	**03 17 40.0**	**+1.0**
TUMC				*i*		03 17 47.1	
	comp=Z,245nm,0.3s						
GRGC	**Isla de Gorgon**	**1.97**	**64**	*e*P	**Pn**	**03 17 30.6**	**-2.6**
GRGC				*i*		03 17 41.2	
	comp=Z,21nm,0.1s						
MAG1	**Magdalena**	**2.20**	**176**	P	**Pn**	**03 17 34.7**	**-1.7**
URCU	**Urcuqui**	**2.38**	**135**	P	**Pn**	**03 17 37.7**	**-1.6**
OTAV	**Otavalo**	**2.40**	**142**	*e*P	**Pn**	**03 17 37.6**	**-2.0**
OTAV				*i*		03 18 12.7	
	comp=Z,3.9nm,0.6s						
OTAV	**Otavalo**	**2.40**	**142**	P	**Pn**	**03 17 36.8**	**-2.8**
CUIC	**Cuicocha-Domo**	**2.41**	**139**	P	**Pn**	**03 17 37.3**	**-2.4**
MAPC	**Malpelo**	**2.49**	**318**	*e*P	Pn	03 17 34.9	-5.5
MAPC				*e*S	Sn	03 18 01.8	-7.8
MAPC				*i*		03 18 02.6	
	comp=Z,88nm,0.2s						
IMBA	**Imbabura, San**	**2.54**	**137**	P	**Pn**	**03 17 40.7**	**-0.8**
YANA	**Yana**	**2.62**	**148**	P	**Pn**	**03 17 41.1**	**-1.5**
YANA				S	**Sn**	**03 18 11.8**	**-1.8**
PITA	**Cotopaxi Volc**	**3.07**	**151**	P	**Pn**	**03 17 49.0**	**+0.2**
PITA				S	**Sn**	**03 18 27.2**	**+2.6**
ANTG	**Antisana-Guama**	**3.12**	**147**	P	**Pn**	**03 17 49.3**	**-0.2**
NAS2	**Nasa**	**3.13**	**152**	P	**Pn**	**03 17 49.9**	**+0.2**
BNAS	**Cotopaxi Volca**	**3.15**	**152**	P	**Pn**	**03 17 50.1**	**+0.2**
ANTS	**Antisana-Sarah**	**3.16**	**146**	P	**Pn**	**03 17 49.7**	**-0.4**
VC1	**Cotopaxi 1**	**3.16**	**151**	P	**Pn**	**03 17 50.6**	**+0.5**
ANTM	**Antisana-La Mi**	**3.16**	**147**	P	**Pn**	**03 17 49.6**	**-0.5**
BREF	**Cotopaxi Volca**	**3.17**	**152**	P	**Pn**	**03 17 50.6**	**+0.3**
BVC2	**Cotopaxi Volca**	**3.17**	**151**	P	**Pn**	**03 17 50.3**	**+0.1**
BTAM	**Cotopaxi Volca**	**3.19**	**151**	P	**Pn**	**03 17 50.7**	**+0.1**
COV1	**Cotopaxi Volc**	**3.21**	**150**	P	**Pn**	**03 17 50.8**	**0.0**
BMOR	**Cotopaxi Volca**	**3.21**	**152**	P	**Pn**	**03 17 50.7**	**-0.2**
QUEV	**Quevedo**	**3.22**	**168**	P	**Pn**	**03 17 47.3**	**-3.1**
QUEV				S	**Sn**	**03 18 21.8**	**-5.9**
POPC	**Popayan, Colom**	**3.29**	**83**	*e*P	**Pn**	**03 17 50.4**	**-1.2**
POPC				*i*		03 17 54.3	
	comp=Z,69nm,0.3s						
PISA	**Pisayambo**	**3.53**	**154**	P	**Pn**	**03 17 55.8**	**+0.6**
HORQ	**Saladito**	**3.58**	**68**	*e*P	**Pn**	**03 17 53.1**	**-2.5**
HORQ				*e*S	**Sn**	**03 18 35.7**	**-1.1**
HORQ				*i*		03 18 36.4	
	comp=Z,18nm,0.6s						
POND	**Pondoa**	**3.83**	**157**	P	**Pn**	**03 18 00.3**	**+1.1**
BBIL	**Ulba Tungurahu**	**3.85**	**158**	P	**Pn**	**03 18 01.0**	**+1.6**
BRUN	**Tungurahua Vol**	**3.85**	**157**	P	**Pn**	**03 18 00.3**	**+0.9**
RETU	**Refugio**	**3.86**	**157**	P	**Pn**	**03 18 01.6**	**+1.8**
BULB	**Ulba Tungurahu**	**3.87**	**157**	P	**Pn**	**03 18 00.8**	**+1.1**
BMAS	**Trigal station**	**3.90**	**158**	P	**Pn**	**03 18 01.1**	**+1.0**
ARRY	**Arrayan**	**3.91**	**158**	P	**Pn**	**03 18 01.6**	**+1.3**
BPAT	**Tungurahua Vol**	**3.92**	**157**	P	**Pn**	**03 18 01.8**	**+1.3**
RIOE1	**Riobamba**	**4.08**	**161**	P	**Pn**	**03 18 03.7**	**+1.2**
FLOC	**Florencia**	**4.32**	**97**	*e*S	**Sn**	**03 18 55.1**	**+0.2**
FLOC				*i*		03 19 00.1	
	comp=Z,32nm,0.6s						
MILO	**Milagro-Astudi**	**4.40**	**175**	P	**Pn**	**03 18 03.2**	**-3.5**
COHC	**Cochancay**	**4.62**	**171**	P	**Pn**	**03 18 07.8**	**-1.9**
PTGA	**Pitinga**	**20.18**	**98**	LR	LR	03 29 26.5	
	comp=Z,144nm,20.5s,baz=250,slow=37						
ANMO	**Albuquerque**	**40.91**	**326**	P	**P**	**03 24 42.8**	**+1.1**
	comp=Z,3.1nm,0.7s,baz=137,slow=6.6,SNR=15						
NVAR	**Mina Array Bea**	**50.33**	**321**	P	**P**	**03 25 57.2**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=119,slow=7.5,SNR=3.0						
YKA	**Yellowknife Ar**	**65.52**	**343**	P	**P**	**03 27 41.4**	**-0.5**
	comp=Z,0.2nm,0.7s,baz=151,slow=5.2,SNR=3.3						
KOWA	**Kowa**	**75.84**	**76**	P	**P**	**03 28 45.8**	**+0.1**
	comp=Z,1.1nm,0.6s,baz=256,slow=6.2,SNR=4.4						
ILAR	**Eielson Array**	**78.39**	**336**	P	**P**	**03 28 59.9**	**+0.8**
	comp=Z,0.3nm,0.7s,baz=117,slow=4.7,SNR=4.4						
TORD	**Torodi Ar. Bea**	**81.38**	**77**	P	**P**	**03 29 15.9**	**-0.4**
	comp=Z,2.1nm,1.3s,baz=282,slow=6.0,SNR=3.4						
QSPA	**South Pole Qui**	**92.17**	**180**	P	**P**	**03 30 09.3**	**+1.1**
	comp=Z,1.7nm,0.7s,baz=149,slow=5.9,SNR=3.9						

IDC 06 03:18:55.8±5.9, 28°.60S×178°.73W, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.5/45, mbtmp3.5/2, Error ellipse: s-maj=222.6km s-min=95.7km az=162.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.59**	**265**	P	P	03 26 52.4	-1.5
	0.3nm,0.5s,baz=102,slow=8.2,SNR=3.7						
WRA	**Warramunga Arr**	**43.42**	**271**	P	P	03 27 02.0	+1.5
	0.3nm,0.3s,baz=112,slow=7.9,SNR=5.1						
FINES	**FINESS Array B**	**143.24**	**340**	PKP	PKPdf	03 38 30.5	-0.8
	0.8nm,0.5s,baz=27,slow=0.4,SNR=7.0						

*SFS **06** 03:36:18.0, 37°.29N×12°.90W, h0km, ML3.5*

*IGIL **06** 03:36:18.8, 37°.29N×12°.91W, h1km, ML2.1*

*MDD **06** 03:36:20.5±1.9, 37°.27N×12°.72W, h0km, mb3.7/8, Error ellipse: s-maj=17.6km s-min=16.8km az=179.0, PRXIMO*

*INMG **06** 03:36:22.9±1.1, 37°.10N×13°.02W, h10km, ML2.1, Error ellipse: s-maj=7.6km s-min=6.1km az=121.0*

*CSEM **06** 03:36:23.5±0.3, 37°.36N×12°.47W, h10km, mb3.7, Error ellipse: s-maj=6.0km s-min=5.8km az=108.0*

ISC 06 03:36:25.5±3.1, 37°.45N±0°.07×12°.2W±0°.1, h10km, n83, σ2ⁿ19/145, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMAFR	**Mafra**	**2.77**	**56**	*e*Pn	**Pn**	**03 37 11.3**	**+1.3**
PMAFR				*e*Sn	**Sb**	**03 37 48.2**	**-1.0**
PMAFR				A	A	03 38 02.0	
	7.7nm,0.9s						
PMAFR	**Mafra**	**2.77**	**56**	P	**Pn**	**03 37 10.6**	**+0.6**
	1.0nm,0.1s,SNR=7.9						
PMAFR				S	**Sb**	**03 37 48.1**	**-1.0**
	1.3nm,0.1s,SNR=7.9						
PMAFR	**Mafra**	**2.77**	**56**	P	**Pn**	**03 37 10.6**	**+0.6**
	1.0nm,0.1s,SNR=7.9						
PMAFR	**Mafra**	**2.77**	**56**	*e*Pn	**Pn**	**03 37 11.3**	**+1.3**
PMAFR				S	**Sb**	**03 37 48.1**	**-1.0**
	1.3nm,0.1s,SNR=7.9						
PTEO	**Sao Teotonio**	**2.80**	**87**	*e*Pn	**Pn**	**03 37 10.9**	**+0.6**
PTEO				*e*Sn	**Sn**	**03 37 46.0**	**+1.9**
PTEO				A	A	03 37 52.2	
	4.5nm,0.5s						
PTEO	**Sao Teotonio**	**2.80**	**87**	Pn	**Pn**	**03 37 10.9**	**+0.6**
PTEO				S	**Sn**	**03 37 46.0**	**+1.9**
	2.2nm,0.5s						
PTEO	**Sao Teotonio**	**2.80**	**87**	Pn	**Pn**	**03 37 10.9**	**+0.6**
PTEO				S	**Sn**	**03 37 46.0**	**+1.9**
	2.2nm,0.5s						
PNCL	**Nicolau / Gran**	**3.01**	**76**	*e*Pn	**Pn**	**03 37 14.5**	**+1.2**
PNCL				*e*Sn	**Sb**	**03 37 52.5**	**-3.6**
PNCL				A	A	03 37 59.3	
	1.9nm,0.3s						
PNCL	**Nicolau / Gran**	**3.01**	**76**	*e*Pn	**Pn**	**03 37 14.5**	**+1.2**
PNCL				*e*Sn	**Sb**	**03 37 52.5**	**-3.6**
MESJ	**Messejana**	**3.21**	**82**	*e*P	**Pn**	**03 37 16.3**	**+0.2**
MESJ				*e*S	**Sn**	**03 37 57.7**	**+3.2**
MESJ				AML	AML	03 38 00.3	
	comp=E,2.2nm,0.5s						
MESJ	**Messejana**	**3.21**	**82**	*e*Pn	**Pn**	**03 37 17.1**	**+1.0**
MESJ				*e*Sn	**Sn**	**03 37 57.0**	**+2.6**
MESJ				A	A	03 38 10.3	
	comp=E,2.5nm,0.7s						
MESJ	**Messejana**	**3.21**	**82**	P	**Pn**	**03 37 16.3**	**+0.2**
MESJ				S	**Sn**	**03 37 57.7**	**+3.2**
	comp=E,2.2nm,0.5s						
MESJ	**Messejana**	**3.21**	**82**	P	**Pn**	**03 37 16.3**	**+0.2**
MESJ	**Messejana**	**3.21**	**82**	*e*Pn	**Pn**	**03 37 17.1**	**+1.0**
MESJ				*e*Sn	**Sn**	**03 37 57.0**	**+2.6**
MESJ				S	**Sn**	**03 37 57.7**	**+3.2**
	comp=E,2.2nm,0.5s						
PCVE	**Castro Verde**	**3.34**	**86**	*e*Pn	**Pn**	**03 37 18.5**	**+0.6**
PCVE				*e*Sn	**Sn**	**03 38 01.3**	**+3.7**
PCVE				A	A	03 38 09.7	
	comp=E,2.0nm,0.4s						
PCVE	**Castro Verde**	**3.34**	**86**	P	**Pn**	**03 37 18.5**	**+0.6**
PCVE				S	**Sn**	**03 38 01.3**	**+3.7**
	comp=E,2.0nm,0.4s						
PCVE	**Castro Verde**	**3.34**	**86**	P	**Pn**	**03 37 18.5**	**+0.6**
PCVE				S	**Sn**	**03 38 01.3**	**+3.7**
	comp=E,2.0nm,0.4s						
ALMR	**Almeirim**	**3.35**	**58**	*e*P	**Pn**	**03 37 18.0**	**+0.1**
ALMR				*e*S	**Sn**	**03 38 01.1**	**+3.4**
ALMR				AML	AML	03 38 04.5	
	comp=N,10nm,0.5s						
ALMR	**Almeirim**	**3.35**	**58**	*e*Pn	**Pn**	**03 37 18.9**	**+1.0**
ALMR				*e*Sn	**Sb**	**03 38 02.0**	**-3.7**
ALMR				A	A	03 38 11.5	
	comp=N,6.0nm,0.4s						
ALMR	**Almeirim**	**3.35**	**58**	P	**Pn**	**03 37 18.0**	**+0.1**
ALMR				S	**Sn**	**03 38 01.1**	**+3.4**
	comp=N,5.1nm,0.5s						
ALMR	**Almeirim**	**3.35**	**58**	P	**Pn**	**03 37 18.0**	**+0.1**
ALMR	**Almeirim**	**3.35**	**58**	*e*Pn	**Pn**	**03 37 18.9**	**+1.0**
ALMR				S	**Sn**	**03 38 01.1**	**+3.4**
	comp=N,5.1nm,0.5s						
ALMR				*e*Sn	**Sb**	**03 38 02.0**	**-3.7**
PBDV	**Barranco-do-Ve**	**3.44**	**92**	*e*Pn	**Pn**	**03 37 19.8**	**+0.6**
PBDV				*e*Sn	**Sb**	**03 38 04.5**	**-4.0**
PBDV				A	A	03 38 12.1	
	comp=N,2.5nm,0.6s						
PBDV	**Barranco-do-Ve**	**3.44**	**92**	P	**Pn**	**03 37 19.8**	**+0.6**
PBDV				S	**Sb**	**03 38 04.5**	**-4.0**
	comp=N,2.5nm,0.6s						
PBDV	**Barranco-do-Ve**	**3.44**	**92**	P	**Pn**	**03 37 19.8**	**+0.6**
PBDV				*e*Sn	**Sb**	**03 38 04.5**	**-4.0**
EVO	**Evora**	**3.51**	**71**	*e*Pn	**Pn**	**03 37 21.2**	**+1.1**
EVO				*e*Sn	**Sn**	**03 38 04.3**	**+2.6**
EVO	**Evora**	**3.51**	**71**	P	**Pn**	**03 37 20.8**	**+0.6**
EVO				S	**Sn**	**03 38 04.3**	**+2.6**
EVO	**Evora**	**3.51**	**71**	P	**Pn**	**03 37 20.8**	**+0.6**
EVO	**Evora**	**3.51**	**71**	*e*Pn	**Pn**	**03 37 21.2**	**+1.1**
EVO				S	**Sn**	**03 38 04.3**	**+2.6**
PBEJ	**Beja**	**3.51**	**79**	*e*Pn	**Pn**	**03 37 21.1**	**+0.9**
PBEJ				*e*Sn	**Sb**	**03 38 09.1**	**-1.5**
PBEJ	**Beja**	**3.51**	**79**	P	**Pn**	**03 37 21.1**	**+0.9**
PBEJ	**Beja**	**3.51**	**79**	P	**Pn**	**03 37 21.1**	**+0.9**
PBEJ				*e*Sn	**Sb**	**03 38 09.1**	**-1.5**
PMTG	**Montargil**	**3.55**	**62**	*e*Pn	**Pn**	**03 37 21.4**	**+0.7**
PMTG				*e*Sn	**Sn**	**03 38 05.7**	**+3.0**
PMTG				A	A	03 38 09.5	
	comp=N,1.4nm,0.4s						
**P

PVIS				S	Sn	03 38 33.7	+2.7
PVIS	**Viseu**	**4.70**	**45**	P	**Pn**	**03 37 37.7**	**+1.2**
PVIS				S	Sn	03 38 33.7	+2.7
MTE	**Manteigas**	**4.70**	**50**	*e*Sn	**Sn**	**03 38 37.5**	**+6.4**
MTE	**Manteigas**	**4.70**	**50**	*e*Sn	**Sn**	**03 38 37.5**	**+6.4**
POLO	**Lamas de Olo**	**5.21**	**40**	*e*Sn	**Sn**	**03 38 44.9**	**+1.0**
POLO	**Lamas de Olo**	**5.21**	**40**	*e*Sn	**Sn**	**03 38 44.9**	**+1.0**
ECAB	**El Cabril**	**5.44**	**81**	P	**Pn**	**03 37 46.8**	**+0.1**
	comp=N,0.2nm,0.1s,SNR=7.2						
ECAB				S	**Sn**	**03 38 50.9**	**+1.5**
	comp=N,1.0nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**5.44**	**81**	P	**Pn**	**03 37 46.8**	**+0.1**
	comp=N,0.2nm,0.1s,SNR=7.2						
ECAB				S	**Sn**	**03 38 50.9**	**+1.5**
	comp=N,1.0nm,0.2s,SNR=7.9						
ELOB	**Lobios**	**5.46**	**35**	S	**Sn**	**03 38 50.3**	**+0.3**
	comp=N,0.4nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.46**	**35**	S	**Sn**	**03 38 50.3**	**+0.3**
	comp=N,0.4nm,0.1s,SNR=7.9						
EPLA	**Plasencia**	**5.47**	**60**	S	**Sn**	**03 38 52.1**	**+1.8**
	comp=N,0.5nm,0.2s,SNR=7.9						
EPLA	**Plasencia**	**5.47**	**60**	S	**Sn**	**03 38 52.1**	**+1.8**
	comp=N,0.5nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**5.48**	**46**	*e*Pn	**Pn**	**03 37 48.0**	**+0.7**
MVO				*e*Sn	**Sn**	**03 38 51.0**	**+0.5**
MVO				A	A	03 39 16.1	
	comp=N,1.5nm,0.8s						
MVO	**Moncorvo**	**5.48**	**46**	P	**Pn**	**03 37 47.3**	**0.0**
	comp=N,0.6nm,0.2s,SNR=7.9						
MVO				S	**Sn**	**03 38 51.0**	**+0.5**
	comp=N,0.7nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**5.48**	**46**	P	**Pn**	**03 37 47.3**	**0.0**
	comp=N,0.6nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**5.48**	**46**	*e*Pn	**Pn**	**03 37 48.0**	**+0.7**
MVO				S	**Sn**	**03 38 51.0**	**+0.5**
	comp=N,0.7nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**6.11**	**81**	P	**Pn**	**03 37 56.2**	**+0.3**
	comp=N,0.5nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**03 39 09.1**	**+3.2**
	comp=N,0.1nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**6.11**	**81**	P	**Pn**	**03 37 56.2**	**+0.3**
	comp=N,0.5nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**03 39 09.1**	**+3.2**
	comp=N,0.1nm,0.2s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.22**	**29**	S	**Sn**	**03 39 04.9**	**-3.6**
	comp=N,1.0nm,0.4s,SNR=7.9						
PAB	**San Pablo**	**6.53**	**69**	P	**Pn**	**03 38 02.5**	**+0.7**
	comp=N,0.2nm,0.2s,SNR=7.9						
PAB	**San Pablo**	**6.53**	**69**	P	**Pn**	**03 38 02.5**	**+0.7**
	comp=N,0.2nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	**6.85**	**69**	P	**Pn**	**03 38 07.1**	**+0.9**
	comp=N,0.4nm,0.3s,baz=253,slow=13,SNR=5.5						
ESDC	**Sonseca Array**	**6.85**	**69**	P	**Pn**	**03 38 07.1**	**+0.9**
	comp=N,0.4nm,0.3s,SNR=5.5						

NIED ***06*** *03:37:00,38˚.50N×142˚.10E,h47km,Mw3.7 Best double couple: M₀4.56000×10¹⁴ NP1:φs197.00000°,δ71.00000°, λ-10.00000°. NP2:φs291.00000°,δ80.00000°, λ-161.00000°.*
IDC ***06*** *03:37:31.2±1.6,38˚.48N×142˚.45E,h0km,mb3.6/4, mb1 3.8/7,mb1mx3.5/71,mbtmp3.8/7,ML3.7/3,MS3.5/1, Ms1 3.5/1,ms1mx2.4/67,Error ellipse: s-maj=45.5km s-min=21.1km az=79.0*
JMA ***06*** *03:37:36.8±0.1,38˚.55N×142˚.07E,h42km±1km,M3.8*
JMA Felt II J1.
ISC 06 03:37:32.3±2.0,**38˚.49N**±0˚.04×**142˚.31E**±0˚.08,**h12**km±10km, **n19**,σ2§**19**/32,**mb3.8**/4,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**0.75**	**267**	P	**Pb**	**03 37 48.6**	**+1.3**
JIO				S	**Sg**	**03 37 56.4**	**-0.3**
OFUJ	**Ofunato**	**0.77**	**320**	P	**Pb**	**03 37 49.3**	**+1.7**
OFUJ				S	**Sg**	**03 37 57.9**	**+0.7**
JMK	**Ichinoseki**	**0.96**	**299**	P	**Pg**	**03 37 51.6**	**+0.7**
JMK				S	**Sg**	**03 38 01.9**	**-1.5**
JOM	**Ohasama**	**1.26**	**321**	P	**Pg**	**03 37 56.4**	**0.0**
JOM				*e*S	**Sg**	**03 38 10.2**	**-2.6**
JOU	**Okura**	**1.30**	**265**	P	**Pn**	**03 37 56.4**	**+0.1**
JOU				S	**Sg**	**03 38 10.9**	**-3.1**
JMM	**Marumori**	**1.35**	**243**	P	**Pn**	**03 37 57.1**	**+0.2**
JMM				*e*S	**Sg**	**03 38 12.1**	**-3.5**
JYK	**Kaneyama**	**1.58**	**286**	P	**Pn**	**03 38 00.3**	**+0.1**
JYK				*e*S	**Sn**	**03 38 18.2**	**-2.4**
JRG	**Rokugo**	**1.58**	**305**	P	**Pn**	**03 38 00.7**	**+0.5**
JRG				*e*S	**Sn**	**03 38 18.8**	**-1.9**
JFK	**Kawauchi**	**1.60**	**226**	P	**Pn**	**03 38 01.1**	**+0.7**
JFK				*e*S	**Sn**	**03 38 19.1**	**-1.9**
JYS	**Shiratake**	**1.78**	**262**	P	**Pn**	**03 38 03.3**	**+0.4**
JYS				*e*S	**Sn**	**03 38 23.6**	**-2.0**
MJAR	**Matsushiro Arr**	**3.79**	**240**	Pn	**Pn**	**03 38 32.6**	**+1.9**
	6.1nm,0.3s,baz=40,slow=13,SNR=31						
MJAR				Sn	**Sb**	**03 39 23.9**	**-1.3**
	1.7nm,0.3s,baz=54,slow=32,SNR=2.9						
MAT	**Matsushiro**	**3.80**	**240**	P	**Pn**	**03 38 32.9**	**+2.2**
MAT				*e*S	**Sn**	**03 39 19.4**	**+4.1**
ASAJ	**Asahikawa**	**5.62**	**2**	Pn	**Pn**	**03 38 57.6**	**+1.9**
	1.1nm,0.3s,baz=215,slow=17,SNR=8.5						
ASAJ				Sn	**Sn**	**03 39 55.9**	**-4.3**
	1.0nm,0.3s,baz=105,slow=20,SNR=1.8						
ASAJ				LR	LR	03 40 28.6	
	comp=Z,43nm,20.9s,baz=160,slow=32						
JHJ	**Hachijo jima 2**	**5.74**	**202**	Pn	**Pn**	**03 38 58.5**	**+1.2**
	27nm,0.3s,baz=143,slow=20,SNR=2.5						
JHJ				Sn	**Sn**	**03 39 58.1**	**-5.1**
	29nm,0.3s,baz=60,slow=20,SNR=2.9						
MKAR	**Makanchi Array**	**43.96**	**301**	P	**P**	**03 45 40.3**	**+1.1**
	0.4nm,0.8s,baz=93,slow=8.7,SNR=3.5						
KURBB	**Kurchatov Arra**	**45.67**	**307**	P	**P**	**03 45 53.7**	**+0.9**
	0.6nm,0.4s,baz=80,slow=8.4,SNR=4.8						
WRA	**Warramunga Arr**	**58.61**	**189**	P	**P**	**03 47 29.4**	**+0.3**
	0.8nm,0.6s,baz=7.4,slow=7.1,SNR=11						
ASAR	**Alice Springs**	**62.33**	**189**	P	**P**	**03 47 55.9**	**+1.3**
	0.4nm,0.8s,baz=14,slow=7.3,SNR=3.2						
GEYT	**Alibeck**	**63.75**	**299**	LR	LR	04 15 57.3	
	comp=Z,36nm,19.5s,baz=100,slow=36						

IDC ***06*** *03:46:48.1±4.5,6˚.46N×126˚.76E,h64km±37km,mb3.6/6, mb1 3.7/6,mb1mx3.4/56,mbtmp3.9/6,ML5.0/1,Error ellipse: s-maj=67.7km s-min=14.4km az=63.0*
MAN ***06*** *03:46:51.6,6˚.49N×126˚.26E,h7km,mb4.6,ML3.5,MS3.4*
ISC 06 03:46:43.3±2.2,**6˚.28N**±0˚.09×**126˚.7E**±0˚.1,**h16**km±13km, **n15**,σ1§**47**/20,**mb3.9**/6,**2C-1D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.81**	**325**	*e*P	**Pn**	**03 47 01.0**	**+1.0**
MATI				*e*S	**Sn**	**03 47 12.8**	**+1.2**
DAV	**Davao City (W)**	**1.38**	**305**	P	**Pg**	**03 47 10.2**	**+0.3**
	199nm,0.3s,baz=33,slow=2.8,SNR=7.4						
DAV				LR	LR	03 47 26.3	
	comp=Z,68nm,20.0s,baz=156,slow=29						
DAV				S	**Sb**	**03 47 27.2**	**+1.1**
	418nm,0.3s,baz=278,slow=22,SNR=60						
DMPH	**Davao City--Mi**	**1.44**	**304⇑**	*e*P	**Pb**	**03 47 09.8**	**0.0**
DMPH				*e*S	**Sn**	**03 47 28.3**	**+0.9**
GSPH	**General Santos**	**1.77**	**264⇑**	*i*P	**Pn**	**03 47 11.9**	**-1.5**
GSPH				*i* s	Sn	03 47 26.2	-9.4
SKMP	**Bagumbayan, Su**	**2.17**	**276**	*e*P	**Pn**	**03 47 19.6**	**+0.8**
BUKP	**Musuan**	**2.29**	**314**	*e*P	**Pb**	**03 47 22.9**	**-1.3**
BUKP				*e*S	**Sn**	**03 47 47.4**	**-0.9**
CGP	**Cagayan de Oro**	**2.95**	**317⇓**	*e*P	**Pb**	**03 47 34.0**	**-1.5**
CGP				*es*	**Sn**	**03 48 06.8**	**+2.2**
BATI	**Baumata**	**16.66**	**191**	P	**P**	**03 50 40.0**	**+1.4**
	5.1nm,0.3s,baz=142,slow=9.9,SNR=4.2						
FITZ	**Fitzroy Crossi**	**24.25**	**182**	P	**P**	**03 52 01.1**	**+1.3**
	2.0nm,0.5s,baz=360,slow=7.3,SNR=10.0						
WRA	**Warramunga Arr**	**27.11**	**164**	P	**P**	**03 52 26.8**	**+1.0**
	0.4nm,0.5s,baz=344,slow=10,SNR=9.3						
ASAR	**Alice Springs**	**30.58**	**167**	P	**P**	**03 52 57.9**	**+1.3**
	0.5nm,0.5s,baz=342,slow=7.2,SNR=6.2						
STKA	**Stephens Creek**	**40.51**	**160**	P	**P**	**03 54 21.9**	**+0.2**
	2.2nm,0.7s,baz=352,slow=7.1,SNR=3.9						
MKAR	**Makanchi Array**	**55.48**	**324**	P	**P**	**03 56 15.5**	**-1.9**
	0.4nm,0.5s,baz=117,slow=9.1,SNR=4.9						
KURBB	**Kurchatov Arra**	**59.61**	**327**	P	**P**	**03 56 44.6**	**-1.8**
	0.5nm,0.2s,baz=128,slow=6.0,SNR=3.0						
TORD	**Torodi Ar. Bea**	**122.08**	**290**	PKP	**PKPdf**	**04 05 36.3**	**-2.0**
	0.4nm,0.7s,baz=48,slow=2.3,SNR=4.1						

IDC ***06*** *04:08:28.4±0.7,44˚.33N×12˚.29E,h0km,mb3.9/16, mb1 4.1/25,mb1mx3.9/73,mbtmp3.9/25,ML4.1/7,MS3.3/9, Ms1 3.3/9,ms1mx2.9/67,Error ellipse: s-maj=13.2km s-min=12.6km az=136.0*
MOS ***06*** *04:08:29.7±0.9,44˚.49N×12˚.26E,h18km,mb4.4/12,Error ellipse: s-maj=3.9km s-min=3.0km az=95.1*
LDG ***06*** *04:08:29.1±0.1,44˚.47N×12˚.31E,h2km,Ml4.6/22,Error ellipse: s-maj=1.9km s-min=1.5km az=56.0*
PDG ***06*** *04:08:30.6±0.5,44˚.46N×12˚.27E,h19km,ML4.4/11,Error ellipse: s-maj=0.3km s-min=0.4km az=0.0*
BEO ***06*** *04:08:30.5±0.8,44˚.48N×12˚.26E,h4km±9km*
NEIC ***06*** *04:08:31.0±0.0,44˚.43N×12˚.35E,h26km,mb4.6/9, ML4.5(ROM),ML4.6(LDG),After ROM.*
NEIC Felt at Ravenna.
CSEM ***06*** *04:08:31.2±0.1,44˚.45N×12˚.27E,h15km,mb4.3/14, ML4.5/15,Mw4.0,Error ellipse: s-maj=1.5km s-min=1.2km az=36.0*
ROM ***06*** *04:08:31.4±0.1,44˚.400N±0˚.008×12˚.32E±0˚.01, h31km±1km,ML4.5/87*
PRU ***06*** *04:08:33.2,44˚.48N×12˚.23E,h27km,M4.6*
STR ***06*** *04:08:39.4±0.9,45˚.N±5˚.×1˚.2E±˚.,h5km,M4.7/19,mB5.1/6, mb4.8/6,MLv4.9/19,Mw(mB)4.5/6*
ISC 06 04:08:30.1±0.9,**44˚.38N**±0˚.01×**12˚.25E**±0˚.02,**h7**km±6km, **n983**,σ1§**83**/1112,**mb4.1**/33,**MS3.3**/7,**59C-120D,Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAEN	**Faenza**	**0.28**	**252**	P	**Pn**	**04 08 39.1**	**-1.5**
FAEN	**Faenza**	**0.28**	**252**	P	**Pn**	**04 08 39.1**	**-1.5**
FAEN				S	**Sb**	**04 08 45.9**	**+3.5**
BLLA	**Bellaria**	**0.28**	**146⇓**	*e*P	Pg	04 08 38.7	+3.0
BLLA				S	**Sg**	**04 08 43.5**	**+4.0**
BLLA	**Bellaria**	**0.28**	**146**	*e*P	Pg	04 08 38.7	+2.9
BLLA				S	**Sg**	**04 08 43.5**	**+4.0**
BLLA				AML	AML		
	comp=E,62000µm,0.3s						
BLLA				AML	AML		
	comp=N,45950µm,1.3s						
BLLA				AML	AML		
	comp=E,62000µm,0.3s						
BLLA				AML	AML		
	comp=N,46000µm,1.3s						
BLLA				AML	AML		
	comp=E,62000µm,0.3s						
BLLA				AML	AML		
	comp=N,46000µm,1.3s						
BLLA				AML	AML		
	comp=E,62000µm,0.3s						
BLLA				AML	AML		
	comp=N,46000µm,1.3s						
IMOL	**Imola, Italy**	**0.36**	**267⇑**	*e*P	**Pn**	**04 08 40.1**	**-1.7**
IMOL	**Imola, Italy**	**0.36**	**267**	*e*P	**Pn**	**04 08 40.1**	**-1.7**
IMOL				S	**Sb**	**04 08 47.5**	**+2.7**
IMOL				AML	AML		
	comp=E,45900µm,0.3s						
IMOL				AML	AML		
	comp=N,54400µm,0.3s						
IMOL				AML	AML		
	comp=E,5400µm,1.1s						
IMOL				AML	AML		
	comp=N,6685µm,1.0s						
IMOL				AML	AML		
	comp=E,45950µm,0.2s						
IMOL				AML	AML		
	comp=N,54400µm,0.3s						
IMOL				AML	AML		
	comp=E,5390µm,1.1s						
IMOL				AML	AML		
	comp=N,6675µm,1.0s						
IMOL				AML	AML		
	comp=E,45950µm,0.2s						
IMOL				AML	AML		
	comp=N,54400µm,0.3s						
IMOL				AML	AML		
	comp=E,5390µm,1.1s						
IMOL				AML	AML		
	comp=N,6685µm,1.0s						
IMOL				AML	AML		
	comp=E,45950µm,0.2s						
IMOL				AML	AML		
	comp=N,6685µm,1.0s						
IMOL				AML	AML		
	comp=N,54400µm,0.3s						
IMOL				AML	AML		
	comp=E,5390µm,1.1s						
CMPO	**Campotto Po**	**0.38**	**303**	⇓P	**Pb**	**04 08 39.3**	**+0.2**
CMPO				S	**Sb**	**04 08 46.0**	**+0.9**
CMPO	**Campotto Po**	**0.38**	**303**	P	**Pb**	**04 08 39.3**	**+0.2**
CMPO				S	**Sb**	**04 08 47.0**	**+1.8**
CMPO				AML	AML		
	comp=E,82050µm,1.2s						
CMPO				AML	AML		
	comp=N,60850µm,0.6s						
CMPO				AML	AML		
	comp=E,82050µm,1.2s						
CMPO				AML	AML		
	comp=N,60850µm,0.6s						
CMPO				AML	AML		
	comp=E,82050µm,1.2s						
CMPO				AML	AML		
	comp=N,60850µm,0.6s						
CMPO				AML	AML		
	comp=E,82050µm,1.2s						
RSM	**Repubblica di**	**0.47**	**162**	*e*P	**Pn**	**04 08 41.7**	**-1.6**
RSM				S	**Sb**	**04 08 49.2**	**+1.3**
RSM				AML	AML		
	comp=E,20800µm,1.5s						
RSM				AML	AML		
	comp=N,31400µm,0.8s						
RSM				AML	AML		
	comp=E,20800µm,1.5s						
RSM				AML	AML		
	comp=N,31400µm,0.8s						
RSM				AML	AML		
	comp=E,20800µm,1.5s						
RSM				AML	AML		
	comp=N,31400µm,0.8s						
RSM				AML	AML		
	comp=E,20800µm,1.5s						
RSM				AML	AML		
	comp=N,31400µm,0.8s						
SFI	**Santa Sofia**	**0.55**	**211**	P	**Pn**	**04 08 43.1**	**-1.4**
SFI				S	**Sn**	**04 08 53.5**	**-0.5**
SFI	**Santa Sofia**	**0.55**	**211**	P	**Pn**	**04 08 43.1**	**-1.4**
SFI				S	**Sn**	**04 08 53.5**	**-0.5**
SFI				AML	AML		
	comp=E,33100µm,0.9s						
SFI				AML	AML		
	comp=N,42650µm,0.7s						
SFI				AML	AML		
	comp=E,34350µm,0.9s						
SFI				AML	AML		
	comp=N,44150µm,0.7s						
SFI				AML	AML		
	comp=E,33100µm,0.9s						
SFI				AML	AML		
	comp=N,42650µm,0.7s						
SFI				AML	AML		
	comp=E,34350µm,0.9s						
SFI				AML	AML		
	comp=N,44150µm,0.7s						
SFI				AML	AML		
	comp=E,33100µm,0.9s						
SFI				AML	AML		
	comp=E,34350µm,0.9s						
SFI				AML	AML		
	comp=N,42650µm,0.7s						
SFI				AML	AML		
	comp=N,44150µm,0.7s						
MTRZ	**Monterenzio**	**0.56**	**270⇑**	*e*P	**Pn**	**04 08 43.0**	**-1.6**
MTRZ	**Monterenzio**	**0.56**	**270**	*e*P	**Pn**	**04 08 44.0**	**-0.6**
MTRZ				AML	AML		
	comp=E,58400µm,0.3s						
MTRZ				AML	AML		
	comp=N,59000µm,0.4s						
MTRZ				AML	AML		
	comp=E,60850µm,0.3s						
MTRZ				AML	AML		
	comp=N,60150µm,0.4s						
MTRZ				AML	AML		
	comp=E,58400µm,0.3s						
MTRZ				AML	AML		
	comp=N,58950µm,0.4s						
MTRZ				AML	AML		
	comp=E,60850µm,0.3s						
MTRZ				AML	AML		
	comp=N,60150µm,0.4s						
MTRZ				AML	AML		
	comp=E,58400µm,0.3s						
MTRZ				AML	AML		
	comp=N,59000µm,0.4s						
MTRZ				AML	AML		
	comp=E,60850µm,0.3s						
MTRZ				AML	AML		
	comp=N,60150µm,0.4s						
MTRZ				AML	AML		
	comp=E,58400µm,0.3s						
CPGN	**Carpegna, Ital**	**0.58**	**175**	P	**Pn**	**04 08 43.8**	**-1.2**
CPGN	**Carpegna, Ital**	**0.58**	**175**	P	**Pn**	**04 08 43.8**	**-1.2**
CPGN				AML	AML		
	comp=E,27050µm,0.5s						
CPGN				AML	AML		
	comp=N,27200µm,1.4s						
CPGN				AML	AML		
	comp=E,26000µm,0.5s						
CPGN				AML	AML		
	comp=N,26400µm,1.4s						
CPGN				AML	AML		
	comp=E,27050µm,0.5s						
CPGN				AML	AML		
	comp=N,27200µm,1.4s						
CPGN				AML	AML		
	comp=E,25950µm,0.5s						
CPGN				AML	AML		
	comp=N,26400µm,1.4s						
CPGN				AML	AML		
	comp=E,27050µm,0.5s						
CPGN				AML	AML		
	comp=N,27200µm,1.4s						
CPGN				AML	AML		
	comp=E,25950µm,0.5s						
CPGN				AML	AML		
	comp=N,26350µm,1.4s						
CPGN				AML	AML		
	comp=E,27050µm,0.5s						
CPGN				AML	AML		
	comp=E,25950µm,0.5s						
CPGN				AML	AML		
	comp=N,27200µm,1.4s						
CPGN				AML	AML		
	comp=N,26350µm,1.4s						
FIU	**Minerbio Fiu**	**0.60**	**296⇓**	*e*P	**Pn**	**04 08 44.2**	**-0.9**
FIU	**Minerbio Fiu**	**0.60**	**296**	*e*P	**Pn**	**04 08 44.2**	**-0.9**
FIU				S	**Sn**	**04 08 54.9**	**-0.1**
FIU				AML	AML		
FIU				AML	AML		
FIU				AML	AML		
FIU				AML	AML		
FIU				AML	AML		
FIU				AML	AML		
FIU				AML	AML		
FIU				AML	AML		
PESA	**Pesaro**	**0.61**	**135**	P	**Pn**	**04 08 44.2**	**-1.0**
PESA				S	**Sn**	**04 08 54.3**	**-1.0**
PESA	**Pesaro**	**0.61**	**135**	P	**Pn**	**04 08 44.2**	**-1.0**
PESA				S	**Sn**	**04 08 54.3**	**-1.0**
PESA				AML	AML		
PESA				AML	AML		
PESA				AML	AML		
PESA				AML	AML		
PESA				AML	AML		
PESA				AML	AML		
PESA				AML	AML		
PESA				AML	AML		
T0820	**Chiesuol del F**	**0.63**	**311**	AML	AML		
T0820				AML	AML		
T0820				AML	AML		
T0820				AML	AML		
T0820				AML	AML		
T0820				AML	AML		
T0820				AML	AML		
T0820				AML	AML		
ASQU	**Asqua**	**0.67**	**210**	AML	AML		
	comp=E,38050µm,0.4s						
ASQU				AML	AML		
	comp=E,38050µm,0.4s						
ASQU				AML	AML		
	comp=N,28950µm,0.8s						
ASQU				AML	AML		
	comp=N,28950µm,0.8s						
ADRI	**Adria, Italy**	**0.68**	**346⇑**	*e*Pg	**Pn**	**04 08 46.1**	**-0.1**
ADRI				*e*Sg	**Sn**	**04 08 56.9**	**-0.1**
ADRI	**Adria, Italy**	**0.68**	**346**	*e*Pg	**Pn**	**04 08 46.1**	**-0.1**
T0821	**Loc. Casaglia**	**0.73**	**316**	P	**Pb**	**04 08 45.4**	**+0.2**
T0821	**Loc. Casaglia**	**0.73**	**316**	P	**Pb**	**04 08 45.4**	**+0.2**
T0821				S	**Sb**	**04 08 57.2**	**+1.9**
PARC	**Parchiule**	**0.73**	**180**	P	**Pn**	**04 08 45.5**	**-1.4**
PARC	**Parchiule**	**0.73**	**180**	P	**Pn**	**04 08 45.5**	**-1.4**
PARC				AML	AML		
	comp=E,28500µm,0.4s						
PARC				AML	AML		
	comp=N,24750µm,0.5s						
PARC				AML	AML		
	comp=E,28500µm,0.4s						
PARC				AML	AML		
	comp=N,24750µm,0.5s						
PARC				AML	AML		
	comp=N,24750µm,0.5s						
PARC				AML	AML		
	comp=E,28500µm,0.4s						
T0803	**Dosso, Cento (**	**0.75**	**302**	P	**Pn**	**04 08 46.5**	**-0.6**
T0803	**Dosso, Cento (**	**0.75**	**302**	P	**Pn**	**04 08 46.5**	**-0.6**
T0803				S	**Sn**	**04 08 59.8**	**+1.1**
FSSB	**Fossombrone**	**0.79**	**151**	P	**Pn**	**04 08 47.2**	**-0.5**
FSSB	**Fossombrone**	**0.79**	**151**	P	**Pn**	**04 08 47.2**	**-0.5**
FSSB				AML	AML		
	comp=E,93450µm,0.3s						
FSSB				AML	AML		
FSSB				AML	AML		
	comp=E,93450µm,0.3s						
FSSB				AML	AML		
FSSB				AML	AML		
FSSB				AML	AML		
	comp=E,93450µm,0.3s						
CRE	**Caprese Michel**	**0.79**	**196**	P	**Pb**	**04 08 45.2**	**-1.0**
CRE	**Caprese Michel**	**0.79**	**196**	P	**Pn**	**04 08 46.8**	**-0.9**
CRE	**Caprese Michel**	**0.79**	**196**	P	**Pn**	**04 08 46.9**	**-0.9**
CRE				AML	AML		
	comp=E,34100µm,0.5s						
CRE				AML	AML		
	comp=N,34000µm,0.4s						
CRE				AML	AML		
	comp=E,34100µm,0.5s						
CRE				AML	AML		
	comp=N,34000µm,0.4s						
CRE				AML	AML		
	comp=N,34000µm,0.4s						
CRE				AML	AML		
	comp=E,34100µm,0.5s						
T0822	**Casumaru (Bond**	**0.79**	**306**	P	**Pn**	**04 08 47.2**	**-0.5**
T0822	**Casumaru (Bond**	**0.79**	**306**	P	**Pn**	**04 08 47.2**	**-0.5**
T0822				S	**Sn**	**04 08 59.6**	**0.0**
T0822				AML	AML		
T0822				AML	AML		
T0822				AML	AML		
T0822				AML	AML		
T0822				AML	AML		
T0822				AML	AML		
NARO	**Abbazia di Nar**	**0.80**	**162**	P	**Pn**	**04 08 47.4**	**-0.5**
NARO	**Abbazia di Nar**	**0.80**	**162**	P	**Pn**	**04 08 47.4**	**-0.5**
NARO				AML	AML		
	comp=E,20150µm,0.3s						
NARO				AML	AML		
	comp=N,19450µm,0.7s						
NARO				AML	AML		
	comp=E,20150µm,0.3s						
NARO				AML	AML		
	comp=N,19450µm,0.7s						

NARO			AML	AML		
	comp=E,20150µm,0.3s					
NARO			AML	AML		
	comp=N,19450µm,0.7s					
SSP9	**Sansepolcro**	**0.81 186**	P	**Pn**	**04 08 47.4**	**-0.5**
SSP9	**Sansepolcro**	**0.81 186**	P	**Pn**	**04 08 47.4**	**-0.5**
SSP9			AML	AML		
	comp=E,14950µm,1.0s					
SSP9			AML	AML		
	comp=N,23200µm,0.8s					
SSP9			AML	AML		
	comp=E,14950µm,1.0s					
SSP9			AML	AML		
	comp=N,23200µm,0.8s					
SSP9			AML	AML		
	comp=N,23200µm,0.8s					
SSP9			AML	AML		
	comp=E,14950µm,1.0s					
ATCA	**Cantone**	**0.81 179**	P	**Pn**	**04 08 47.3**	**-0.7**
ATCA	**Cantone**	**0.81 179**	P	**Pn**	**04 08 47.3**	**-0.7**
ATCA			AML	AML		
	comp=E,21200µm,0.7s					
ATCA			AML	AML		
	comp=N,17650µm,0.7s					
ATCA			AML	AML		
	comp=E,21200µm,0.7s					
ATCA			AML	AML		
	comp=N,17650µm,0.7s					
FNVD	**Fontana Vidola**	**0.83 256**	P	**Pn**	**04 08 48.7**	**+0.3**
FNVD	**Fontana Vidola**	**0.83 256**	P	**Pn**	**04 08 48.7**	**+0.3**
MPAG	**Monte Paganucc**	**0.83 153**	P	**Pn**	**04 08 47.9**	**-0.5**
MPAG	**Monte Paganucc**	**0.83 153**	P	**Pn**	**04 08 47.9**	**-0.5**
MPAG			AML	AML		
	comp=E,29150µm,0.5s					
MPAG			AML	AML		
	comp=N,31350µm,1.1s					
MPAG			AML	AML		
	comp=E,29400µm,0.6s					
MPAG			AML	AML		
	comp=N,31350µm,1.1s					
MPAG			AML	AML		
	comp=E,29100µm,0.6s					
MPAG			AML	AML		
	comp=N,31350µm,1.1s					
MPAG			AML	AML		
	comp=E,29400µm,0.6s					
MPAG			AML	AML		
	comp=N,31350µm,1.1s					
MPAG			AML	AML		
	comp=N,31350µm,1.1s					
MPAG			AML	AML		
	comp=N,31350µm,1.1s					
MPAG			AML	AML		
	comp=E,29400µm,0.6s					
MPAG			AML	AML		
	comp=E,29100µm,0.6s					
T0805	**Bondeno (FE)**	**0.85 310**	P	**Pn**	**04 08 48.0**	**-0.5**
T0805	**Bondeno (FE)**	**0.85 310**	P	**Pn**	**04 08 48.0**	**-0.5**
T0805			S	**Sn**	**04 09 01.5**	**+0.3**
T0800	**Massa Finalese**	**0.85 304**	‖*e*P	**Pb**	**04 08 47.7**	**+0.4**
T0800	**Massa Finalese**	**0.85 304**	*e*P	**Pb**	**04 08 47.7**	**+0.4**
T0800			S	**Sn**	**04 09 01.8**	**+0.5**
T0800			AML	AML		
T0800			AML	AML		
T0800			AML	AML		
T0800			AML	AML		
T0800			AML	AML		
T0800			AML	AML		
T0800			AML	AML		
T0800			AML	AML		
T0800			AML	AML		
T0800			AML	AML		
T0800			AML	AML		
T0800			AML	AML		
PIEI	**Pieia**	**0.87 166**	P	**Pn**	**04 08 48.5**	**-0.3**
PIEI	**Pieia**	**0.87 166**	P	**Pn**	**04 08 48.5**	**-0.3**
PIEI			AML	AML		
	comp=E,25150µm,0.7s					
PIEI			AML	AML		
	comp=N,21550µm,0.6s					
PIEI			AML	AML		
	comp=E,25150µm,0.7s					
PIEI			AML	AML		
	comp=N,21600µm,0.6s					
PIEI			AML	AML		
	comp=E,25150µm,0.7s					
PIEI			AML	AML		
	comp=N,21600µm,0.6s					
BADI	**Badiali**	**0.87 180**	P	**Pn**	**04 08 48.3**	**-0.5**
BADI	**Badiali**	**0.87 180**	P	**Pn**	**04 08 48.3**	**-0.5**
BADI			AML	AML		
	comp=E,27150µm,0.7s					
BADI			AML	AML		
	comp=N,31200µm,1.6s					
BADI			AML	AML		
	comp=E,27150µm,0.7s					
BADI			AML	AML		
	comp=N,31200µm,1.6s					
BADI			AML	AML		
	comp=E,27150µm,0.7s					
BADI			AML	AML		
	comp=N,31200µm,1.6s					
RAVA	**Ravarino**	**0.89 296**	P	**Pn**	**04 08 49.6**	**+0.5**
RAVA	**Ravarino**	**0.89 296**	P	**Pn**	**04 08 49.6**	**+0.5**
RAVA			AML	AML		
RAVA			AML	AML		
RAVA			AML	AML		
RAVA			AML	AML		
RAVA			AML	AML		
RAVA			AML	AML		
ATPC	**Poggio Castell**	**0.91 170**	P	**Pn**	**04 08 48.8**	**-0.6**
ATPC	**Poggio Castell**	**0.91 170**	P	**Pn**	**04 08 48.8**	**-0.6**
ATPC			AML	AML		
	comp=E,11085µm,1.4s					
ATPC			AML	AML		
	comp=N,24400µm,1.2s					
ATPC			AML	AML		
	comp=E,39750µm,1.4s					
ATPC			AML	AML		
	comp=N,25000µm,1.2s					
ATPC			AML	AML		
	comp=E,11090µm,1.4s					
ATPC			AML	AML		
	comp=N,24400µm,1.2s					
ATPC			AML	AML		
	comp=E,39750µm,1.4s					
ATPC			AML	AML		
	comp=N,25000µm,1.2s					
ATPC			AML	AML		
	comp=N,25000µm,1.2s					
ATPC			AML	AML		
	comp=N,24400µm,1.2s					
ATPC			AML	AML		
	comp=E,39750µm,1.4s					
ATPC			AML	AML		
	comp=E,11090µm,1.4s					
ZCCA	**Zocca**	**0.91 269**	P	**Pn**	**04 08 50.5**	**+1.1**
ZCCA	**Zocca**	**0.91 269**	P	**Pn**	**04 08 50.5**	**+1.1**
ZCCA			AML	AML		
	comp=E,8725µm,0.9s					
ZCCA			AML	AML		
	comp=N,10900µm,1.0s					
ZCCA			AML	AML		
	comp=E,9100µm,1.0s					
ZCCA			AML	AML		
	comp=N,11700µm,0.5s					
ZCCA			AML	AML		
	comp=E,9100µm,1.0s					
ZCCA			AML	AML		
	comp=N,11700µm,0.5s					
ZCCA			AML	AML		
	comp=N,10900µm,1.0s					
ZCCA			AML	AML		
	comp=E,8725µm,0.9s					
CDCA	**Citt' di Caste**	**0.92 181**	AML	AML		
	comp=N,26400µm,0.7s					
CDCA			AML	AML		
	comp=E,34400µm,0.5s					
CDCA			AML	AML		
	comp=N,79450µm,1.6s					
CDCA			AML	AML		
	comp=E,28050µm,0.6s					
CDCA			AML	AML		
	comp=N,26400µm,0.7s					
CDCA			AML	AML		
	comp=E,28050µm,0.6s					
CDCA			AML	AML		
	comp=N,79450µm,1.6s					
CDCA			AML	AML		
	comp=E,34400µm,0.5s					
COR1	**Corinaldo**	**0.92 144**	AML	AML		
	comp=N,54250µm,0.6s					
COR1			AML	AML		
	comp=E,67150µm,0.4s					
COR1			AML	AML		
	comp=N,56750µm,0.6s					
COR1			AML	AML		
	comp=E,36900µm,1.4s					
COR1			AML	AML		
	comp=E,67150µm,0.4s					
COR1			AML	AML		
	comp=E,36900µm,1.4s					
COR1			AML	AML		
	comp=N,56750µm,0.6s					
COR1			AML	AML		
	comp=N,54250µm,0.6s					
FRON	**Frontone**	**0.93 158**	AML	AML		
	comp=N,30150µm,0.9s					
FRON			AML	AML		
	comp=E,15350µm,1.0s					
FRON			AML	AML		
	comp=N,30150µm,0.9s					
FRON			AML	AML		
	comp=E,15350µm,1.0s					
SERM	**Sermide**	**0.93 313**	P	**Pn**	**04 08 49.5**	**-0.1**
SERM	**Sermide**	**0.93 313**	P	**Pn**	**04 08 49.5**	**-0.1**
SERM			S	**Sn**	**04 09 03.6**	**+0.5**
SERM			AML	AML		
	comp=E,50250µm,0.8s					
SERM			AML	AML		
	comp=N,56350µm,0.7s					
SERM			AML	AML		
	comp=N,56350µm,0.7s					
SERM			AML	AML		
	comp=E,50250µm,0.8s					
ATBU	**Serra di Buran**	**0.93 166**	AML	AML		
	comp=N,58100µm,0.9s					
ATBU			AML	AML		
	comp=E,97100µm,0.4s					
ATBU			AML	AML		
	comp=N,58050µm,0.9s					
ATBU			AML	AML		
	comp=E,97150µm,0.4s					
ATBU			AML	AML		
	comp=N,58100µm,0.9s					
ATBU			AML	AML		
	comp=E,97150µm,0.4s					
ATMC	**Monte Cedrone**	**0.93 182**	AML	AML		
	comp=N,29350µm,0.4s					
ATMC			AML	AML		
	comp=E,26050µm,0.7s					
ATMC			AML	AML		
	comp=N,29350µm,0.4s					
ATMC			AML	AML		
	comp=E,26100µm,0.7s					
ATMC			AML	AML		
	comp=N,29350µm,0.4s					
ATMC			AML	AML		
	comp=E,26100µm,0.7s					
ATPI	**Pietralunga -**	**0.93 173**	AML	AML		
	comp=E,16900µm,1.1s					
ATPI			AML	AML		
	comp=E,16900µm,1.1s					
ATPI			AML	AML		
	comp=N,25850µm,0.7s					
ATPI			AML	AML		
	comp=N,25900µm,0.7s					
ATPI			AML	AML		
	comp=N,25900µm,0.7s					
ATPI			AML	AML		
	comp=E,16900µm,1.1s					
PTF	**Prato**	**0.94 244**	P	**Pn**	**04 08 49.4**	**-0.5**
PTF	**Prato**	**0.94 244**	P	**Pn**	**04 08 49.4**	**-0.5**
MODE	**Modena**	**0.96 286**	P	**Pn**	**04 08 51.5**	**+1.5**
MODE	**Modena**	**0.96 286**	P	**Pn**	**04 08 51.5**	**+1.5**
MODE			AML	AML		
MODE			AML	AML		
	comp=N,99650µm,0.6s					
MODE			AML	AML		
MODE			AML	AML		
	comp=N,99650µm,0.6s					
SENI	**Senigallia**	**0.98 133**	AML	AML		
	comp=E,29150µm,1.0s					
SENI			AML	AML		
SENI			AML	AML		
SENI			AML	AML		
	comp=E,29150µm,1.0s					
SENI			AML	AML		
	comp=N,33100µm,1.0s					
SENI			AML	AML		
SENI			AML	AML		
	comp=N,33100µm,1.0s					
SENI			AML	AML		
ATVO	**AVT- Monte Val**	**1.00 173**	AML	AML		
	comp=E,30800µm,0.6s					
ATVO			AML	AML		
	comp=E,30800µm,0.6s					
ATVO			AML	AML		
	comp=N,28050µm,0.8s					
ATVO			AML	AML		
	comp=N,28050µm,0.8s					
ATVO			AML	AML		
	comp=E,30800µm,0.6s					
ATVO			AML	AML		
	comp=N,28050µm,0.8s					
ARVD	**Arcevia**	**1.01 150**	AML	AML		
	comp=E,18300µm,1.3s					
ARVD			AML	AML		
	comp=E,18300µm,1.3s					
ARVD			AML	AML		
	comp=N,15000µm,0.9s					
ARVD			AML	AML		
	comp=N,15000µm,0.9s					
ARVD			AML	AML		
	comp=N,15000µm,0.9s					
ARVD			AML	AML		
	comp=E,18300µm,1.3s					
SSFR	**Montelago di S**	**1.02 157**	AML	AML		
	comp=E,67850µm,1.0s					
SSFR			AML	AML		
	comp=E,67850µm,1.0s					
SSFR			AML	AML		
	comp=N,53300µm,0.3s					
SSFR			AML	AML		
	comp=N,53300µm,0.3s					
TEOL	**Teolo**	**1.06 338**	‖*e*Pg	**Pb**	**04 08 50.4**	**-0.6**
TEOL			*e*Sg	**Sg**	**04 09 05.0**	**+0.6**
TEOL	**Teolo**	**1.06 338**	‖*e*P	**Pb**	**04 08 50.3**	**-0.6**
TEOL			*e*Sg	**Sg**	**04 09 05.0**	**+0.6**
TEOL	**Teolo**	**1.06 338**	*e*P	**Pb**	**04 08 50.3**	**-0.6**
TEOL			AML	AML		
	comp=E,46450µm,0.9s					
TEOL			AML	AML		
	comp=N,34400µm,0.7s					
TEOL			AML	AML		
	comp=E,46450µm,0.9s					
TEOL			AML	AML		
	comp=N,34400µm,0.7s					
TEOL			AML	AML		
	comp=E,46450µm,0.9s					
TEOL			AML	AML		
	comp=N,34400µm,0.7s					
CAFI	**Castiglion Fio**	**1.07 191**	AML	AML		
	comp=E,21350µm,1.3s					
CAFI			AML	AML		
	comp=N,14650µm,1.0s					
CAFI			AML	AML		
	comp=E,22000µm,1.3s					
CAFI			AML	AML		
	comp=N,15300µm,1.0s					
CAFI			AML	AML		
	comp=E,22000µm,1.3s					
CAFI			AML	AML		
	comp=E,21350µm,1.3s					
CAFI			AML	AML		
	comp=N,14650µm,1.0s					
CAFI			AML	AML		
	comp=N,15300µm,1.0s					
NDIM	**Novi di Modena**	**1.09 298**	AML	AML		
	comp=N,94250µm,0.9s					
NDIM			AML	AML		
	comp=E,68300µm,1.1s					
NDIM			AML	AML		
	comp=E,68450µm,1.1s					
NDIM			AML	AML		
	comp=N,92600µm,0.9s					
NDIM			AML	AML		
	comp=N,92600µm,0.9s					
NDIM			AML	AML		
	comp=N,94250µm,0.9s					
NDIM			AML	AML		
	comp=E,68450µm,1.1s					
NDIM			AML	AML		
	comp=E,68300µm,1.1s					
CRMI	**Carmignano**	**1.09 238**	P	**Pn**	**04 08 52.3**	**+0.5**
CRMI	**Carmignano**	**1.09 238**	P	**Pn**	**04 08 52.3**	**+0.5**
CRMI			AML	AML		
	comp=E,9540µm,0.6s					
CRMI			AML	AML		
	comp=N,8720µm,0.6s					
CRMI			AML	AML		
	comp=E,9540µm,0.6s					
CRMI			AML	AML		
	comp=N,8720µm,0.6s					
ATVA	**AVT- Monte Val**	**1.10 179**	AML	AML		
	comp=N,9295µm,0.6s					
ATVA			AML	AML		
	comp=E,11825µm,0.9s					
ATVA			AML	AML		
	comp=N,9295µm,0.6s					
ATVA			AML	AML		
	comp=E,11825µm,0.9s					
GAZZ	**Gazzo Veronese**	**1.10 312**	‖*e*Pg	**Pn**	**04 08 52.0**	**0.0**
GAZZ			*e*Sg	**Sb**	**04 09 06.9**	**+0.8**
GAZZ	**Gazzo Veronese**	**1.10 312**	*e*Pg	**Pn**	**04 08 52.0**	**0.0**
GAZZ			*e*Sg	**Sb**	**04 09 06.9**	**+0.8**
POPM	**Popiglio**	**1.12 253**	AML	AML		
	comp=E,12270µm,0.7s					
POPM			AML	AML		
	comp=N,13450µm,1.5s					
POPM			AML	AML		
	comp=N,13450µm,1.5s					
POPM			AML	AML		
	comp=E,12270µm,0.7s					
MURB	**Monte Urbino**	**1.13 170**	AML	AML		
	comp=E,38250µm,0.8s					
MURB			AML	AML		
	comp=E,38250µm,0.8s					
MURB			AML	AML		
	comp=N,36200µm,1.3s					
MURB			AML	AML		
	comp=E,40250µm,0.8s					
MURB			AML	AML		
	comp=N,39650µm,0.2s					
MURB			AML	AML		
	comp=N,39650µm,0.2s					
MURB			AML	AML		
	comp=N,36200µm,1.3s					
MURB			AML	AML		
	comp=E,40250µm,0.8s					
IESO	**Jesolo**	**1.16 11**	‖*e*Pg	**Pb**	**04 08 51.9**	**-0.6**
IESO	**Jesolo**	**1.16 11**	*e*Pg	**Pb**	**04 08 51.9**	**-0.6**
T0825	**Gonzaga (MN)**	**1.16 301**	P	**Pn**	**04 08 53.3**	**+0.5**
T0825	**Gonzaga (MN)**	**1.16 301**	P	**Pn**	**04 08 53.3**	**+0.5**
T0825			AML	AML		
T0825			AML	AML		
	comp=N,60750µm,1.0s					
T0825			AML	AML		
T0825			AML	AML		
	comp=N,60750µm,1.0s					
NOVE	**Novellara**	**1.17 292**	AML	AML		
	comp=N,99400µm,0.5s					
NOVE			AML	AML		
	comp=E,38950µm,0.6s					
NOVE			AML	AML		
	comp=N,99400µm,0.5s					
NOVE			AML	AML		
	comp=E,38950µm,0.6s					
ATTE	**AVT- Monte Tez**	**1.18 176**	AML	AML		
	comp=E,14165µm,1.3s					
ATTE			AML	AML		
	comp=E,14165µm,1.3s					
ATTE			AML	AML		
	comp=N,14365µm,1.6s					
ATTE			AML	AML		
	comp=N,14365µm,1.6s					
OPPE	**Oppeano**	**1.20 321**	P	**Pg**	**04 08 52.8**	**-0.4**
OPPE	**Oppeano**	**1.20 321**	P	**Pg**	**04 08 52.8**	**-0.4**
OPPE			AML	AML		
	comp=E,31500µm,0.4s					
OPPE			AML	AML		
	comp=N,31350µm,0.7s					
OPPE			AML	AML		
	comp=E,31500µm,0.4s					
OPPE			AML	AML		
	comp=N,31350µm,0.7s					
CING	**Cingoli**	**1.22 145**	AML	AML		
	comp=E,16950µm,0.6s					
CING			AML	AML		
	comp=N,14000µm,0.6s					
CING			AML	AML		
	comp=N,14000µm,0.6s					
CING			AML	AML		
	comp=E,16950µm,0.6s					
ATCC	**AVT- Casa Cast**	**1.23 166**	AML	AML		
	comp=E,34450µm,0.6s					
ATCC			AML	AML		
	comp=E,34450µm,0.6s					
ATCC			AML	AML		
	comp=N,21450µm,1.3s					
ATCC			AML	AML		
	comp=N,21450µm,1.3s					
BDI	**Bagni Di Lucca**	**1.23 256**	P	**Pn**	**04 08 54.7**	**+0.9**
BDI	**Bagni Di Lucca**	**1.23 256**	P	**Pn**	**04 08 54.7**	**+0.9**
BDI	**Bagni Di Lucca**	**1.23 256**	AML	AML		
	comp=E,11700µm,0.8s					
BDI			AML	AML		
	comp=E,13050µm,0.8s					
BDI			AML	AML		
	comp=N,12250µm,1.1s					
BDI			AML	AML		
	comp=N,13700µm,1.1s					
BDI			AML	AML		
	comp=N,13700µm,1.1s					
BDI			AML	AML		
	comp=N,12250µm,1.1s					
BDI			AML	AML		
	comp=E,11700µm,0.8s					
BDI			AML	AML		
	comp=E,13050µm,0.8s					
SNTG	**Esanatoglia**	**1.23 156**	AML	AML		
	comp=E,16200µm,0.6s					
SNTG			AML	AML		
	comp=E,16200µm,0.6s					
SNTG			AML	AML		
	comp=N,19050µm,0.4s					
SNTG			AML	AML		
	comp=N,19050µm,0.4s					
AOI	**Ancona**	**1.28 130**	AML	AML		
	comp=E,22550µm,0.3s					
AOI			AML	AML		
	comp=E,22550µm,0.3s					
AOI			AML	AML		
	comp=N,23200µm,0.3s					
AOI			AML	AML		
	comp=N,23200µm,0.3s					
MAIM	**Mastiano**	**1.35 250**	AML	AML		
	comp=N,4430µm,0.7s					
MAIM			AML	AML		
	comp=E,5595µm,0.4s					
MAIM			AML	AML		
	comp=N,4430µm,0.7s					
MAIM			AML	AML		
	comp=E,5595µm,0.4s					
VLC	**Villacollemand**	**1.35 261**	*e*Pn	**Pb**	**04 08 56.6**	**+0.7**
VLC			*e*Sn	**Sg**	**04 09 12.4**	**-1.2**
VLC	**Villacollemand**	**1.35 261**	*e*Pn	**Pb**	**04 08 56.6**	**+0.7**
VLC			*e*Sn	**Sg**	**04 09 12.4**	**-1.2**
VLC	**Villacollemand**	**1.35 261**	AML	AML		
	comp=E,4315µm,1.1s					
VLC			AML	AML		
	comp=E,4315µm,1.1s					
VLC			AML	AML		
	comp=N,5920µm,1.3s					
VLC			AML	AML		
	comp=N,5920µm,1.3s					
ASSB	**Assisi San Ben**	**1.37 167**	AML	AML		
	comp=N,11665µm,0.6s					
ASSB			AML	AML		
	comp=E,11350µm,1.2s					

ASSB				AML	AML		
	comp=N,11665µm,0.6s						
ASSB				AML	AML		
	comp=E,11350µm,1.2s						
FROS	**Frosini**	**1.41 214**		AML	AML		
	comp=N,7580µm,0.9s						
FROS				AML	AML		
	comp=E,9105µm,0.7s						
FROS				AML	AML		
	comp=N,7580µm,0.9s						
FROS				AML	AML		
	comp=E,9105µm,0.7s						
PRMA	**PARMA**	**1.43 286**		AML	AML		
	comp=E,12645µm,0.6s						
PRMA				AML	AML		
	comp=E,12645µm,0.6s						
PRMA				AML	AML		
	comp=N,12080µm,0.7s						
PRMA				AML	AML		
	comp=N,12080µm,0.7s						
MTLO	**Montello**	**1.44 356**	⇓	*e*Pg	**Pn**	**04 08 55.6**	**-1.0**
MTLO				*e*Sg	**Sg**	**04 09 13.1**	**-3.3**
MTLO	**Montello**	**1.44 356**		*e*Pg	**Pn**	**04 08 55.6**	**-1.0**
MTLO				*e*Sg	**Sg**	**04 09 13.1**	**-3.3**
CESI	**CESI - Serrava**	**1.45 161**		AML	AML		
	comp=N,5865µm,0.8s						
CESI				AML	AML		
	comp=E,5375µm,1.3s						
CESI				AML	AML		
	comp=E,5375µm,1.3s						
CESI				AML	AML		
	comp=N,5865µm,0.8s						
MARN	**Marana (Italy)**	**1.46 330**	⇓	*e*Pg	**Pn**	**04 08 55.8**	**-1.1**
MARN				*e*Sg	**Sg**	**04 09 13.8**	**-3.2**
MARN	**Marana (Italy)**	**1.46 330**		*e*Pg	**Pn**	**04 08 55.8**	**-1.1**
MARN				*e*Sg	**Sg**	**04 09 13.8**	**-3.2**
MGAB	**Montegabbione**	**1.47 184**		AML	AML		
	comp=E,11225µm,0.5s						
MGAB				AML	AML		
	comp=N,10275µm,1.0s						
MGAB				AML	AML		
	comp=E,12300µm,0.6s						
MGAB				AML	AML		
	comp=N,10510µm,1.0s						
MGAB				AML	AML		
	comp=N,10510µm,1.0s						
MGAB				AML	AML		
	comp=N,10275µm,1.0s						
MGAB				AML	AML		
	comp=E,11225µm,0.5s						
MGAB				AML	AML		
	comp=E,12300µm,0.6s						
FDMO	**Fiordimonte**	**1.47 155**		AML	AML		
	comp=E,12550µm,0.6s						
FDMO				AML	AML		
	comp=E,12550µm,0.6s						
FDMO				AML	AML		
	comp=N,11375µm,1.5s						
FDMO				AML	AML		
	comp=N,11375µm,1.5s						
ROVR	**Rover¯¤ Verone**	**1.52 327**	⇓	*i*P	**Pn**	**04 08 56.7**	**-1.1**
ROVR	**Rover¯¤ Verone**	**1.52 327**		*i* P	**Pn**	**04 08 56.7**	**-1.1**
ROVR				AML	AML		
	comp=E,10520µm,0.5s						
ROVR				AML	AML		
	comp=N,22100µm,0.4s						
ROVR				AML	AML		
	comp=N,22100µm,0.4s						
ROVR				AML	AML		
	comp=E,10520µm,0.5s						
CGRP	**Cima Grappa**	**1.54 348**	⇓	*e*Pg	**Pn**	**04 08 57.0**	**-1.2**
CGRP				*e*Sg	**Sn**	**04 09 15.8**	**-2.6**
CGRP	**Cima Grappa**	**1.54 348**	⇓	*i*P	**Pn**	**04 08 56.9**	**-1.2**
CGRP				*e*Sg	**Sn**	**04 09 15.8**	**-2.6**
CGRP				S	**Sn**	**04 09 16.3**	**-2.1**
CGRP	**Cima Grappa**	**1.54 348**		*i* P	**Pn**	**04 08 56.9**	**-1.3**
CGRP				S	**Sn**	**04 09 16.3**	**-2.1**
CGRP				AML	AML		
	comp=E,12550µm,0.8s						
CGRP				AML	AML		
	comp=N,16200µm,0.7s						
CGRP				AML	AML		
	comp=N,16200µm,0.7s						
CGRP				AML	AML		
	comp=E,12550µm,0.8s						
SACS	**San Casciano d**	**1.55 189**		AML	AML		
	comp=E,7615µm,0.6s						
SACS				AML	AML		
	comp=E,7765µm,0.6s						
SACS				AML	AML		
	comp=N,5630µm,0.6s						
SACS				AML	AML		
	comp=N,5635µm,0.6s						
SACS				AML	AML		
	comp=E,7765µm,0.6s						
SACS				AML	AML		
	comp=E,7615µm,0.6s						
SACS				AML	AML		
	comp=N,5635µm,0.6s						
SACS				AML	AML		
	comp=N,5630µm,0.6s						
MOMA	**Monte Martano**	**1.59 171**		AML	AML		
	comp=E,5525µm,0.8s						
MOMA				AML	AML		
	comp=E,5295µm,0.9s						
MOMA				AML	AML		
	comp=N,7035µm,1.0s						
MOMA				AML	AML		
	comp=E,5525µm,0.8s						
MOMA				AML	AML		
	comp=N,6865µm,1.0s						
MOMA				AML	AML		
	comp=E,5295µm,0.9s						
MOMA				AML	AML		
	comp=N,7035µm,1.0s						
MOMA				AML	AML		
	comp=N,6865µm,1.0s						
TRIF	**Trifonti**	**1.59 218**		AML	AML		
	comp=E,3105µm,0.5s						
TRIF				AML	AML		
	comp=N,2225µm,0.6s						
TRIF				AML	AML		
	comp=E,3105µm,0.5s						
TRIF				AML	AML		
	comp=N,2225µm,0.6s						
VARN	**Col Varnada, M**	**1.62 357**	⇓	*e*Pg	**Pn**	**04 08 57.9**	**-1.3**
VARN	**Col Varnada, M**	**1.62 357**		*e*Pg	**Pn**	**04 08 57.9**	**-1.3**
ARCI	**Arcidosso**	**1.62 200**		AML	AML		
	comp=E,3915µm,0.8s						
ARCI				AML	AML		
	comp=E,3915µm,0.8s						
ARCI				AML	AML		
	comp=N,8285µm,0.9s						
ARCI				AML	AML		
	comp=N,8285µm,0.9s						
CAE	**Caneva**	**1.63**	**5**	⇓ *e*Pg	**Pn**	**04 08 58.1**	**-1.3**
CAE	**Caneva**	**1.63**	**5**	*e*Pg	**Pn**	**04 08 58.1**	**-1.3**
BALD	**Monte Baldo**	**1.65 323**	⇓	*e*Pg	**Pn**	**04 08 58.7**	**-1.0**
BALD	**Monte Baldo**	**1.65 323**		*e*Pg	**Pn**	**04 08 58.7**	**-1.0**
MCIV	**Monte Civitell**	**1.65 195**		AML	AML		
	comp=E,1475µm,0.6s						
MCIV				AML	AML		
	comp=N,1480µm,0.8s						
MCIV				AML	AML		
	comp=E,1475µm,0.6s						
MCIV				AML	AML		
	comp=N,1480µm,0.8s						
POLC	**Polcenigo**	**1.66**	**6**	⇓ *e*P	**Pn**	**04 08 58.7**	**-1.0**
POLC	**Polcenigo**	**1.66**	**6**	*e*P	**Pn**	**04 08 58.6**	**-1.0**
POLC				AML	AML		
	comp=E,19400µm,0.6s						
POLC				AML	AML		
	comp=N,22850µm,0.6s						
POLC				AML	AML		
	comp=N,22850µm,0.6s						
POLC				AML	AML		
	comp=E,19400µm,0.6s						
TLI	**Talmassons**	**1.66**	**21**	⇓ *e*Pg	**Pn**	**04 08 58.6**	**-1.0**
TLI	**Talmassons**	**1.66**	**21**	*e*Pg	**Pn**	**04 08 58.6**	**-1.0**
NRCA	**Norcia**	**1.67 157**		AML	AML		
	comp=N,7265µm,0.8s						
NRCA				AML	AML		
	comp=E,7910µm,0.6s						
NRCA				AML	AML		
	comp=N,6770µm,0.4s						
NRCA				AML	AML		
	comp=E,7440µm,1.5s						
NRCA				AML	AML		
	comp=N,6770µm,0.4s						
NRCA				AML	AML		
	comp=E,7440µm,1.5s						
NRCA				AML	AML		
	comp=E,7910µm,0.6s						
NRCA				AML	AML		
	comp=N,7265µm,0.8s						
DOSS	**Dosso del Somm**	**1.68 334**		*e*Pg	**Pn**	**04 08 58.8**	**-1.3**
DOSS	**Dosso del Somm**	**1.68 334**		*e*Pg	**Pn**	**04 08 58.8**	**-1.3**
TRI	**Trieste**	**1.71**	**38**	⇓ *e*Pg	**Pn**	**04 08 59.0**	**-1.4**
TRI	**Trieste**	**1.71**	**38**	*e*Pg	**Pn**	**04 08 59.0**	**-1.4**
SKDS	**Skadanscina**	**1.71**	**46**	⇓ *i*Pn	**Pn**	**04 08 59.1**	**-1.4**
	comp=Z,2µm,0.2s						
SKDS	**Skadanscina**	**1.71**	**46**	Pn	**Pn**	**04 08 59.1**	**-1.4**
	comp=Z,2µm,0.2s						
CTI	**Castel Tesino**	**1.72 346**		P	**Pn**	**04 08 59.7**	**-0.9**
CTI	**Castel Tesino**	**1.72 346**	⇓	*i*P	**Pn**	**04 08 59.7**	**-0.9**
CTI	**Castel Tesino**	**1.72 346**		*i* P	**Pn**	**04 08 59.7**	**-0.9**
CTI				AML	AML		
	comp=E,9425µm,1.1s						
CTI				AML	AML		
	comp=N,7730µm,0.4s						
CTI				AML	AML		
	comp=E,9425µm,1.1s						
CTI				AML	AML		
	comp=N,7730µm,0.4s						
SALO	**Salr**	**1.74 316**		AML	AML		
	comp=N,18300µm,0.6s						
SALO				AML	AML		
	comp=E,12550µm,0.9s						
SALO				AML	AML		
	comp=N,18300µm,0.6s						
SALO				AML	AML		
	comp=E,12550µm,0.9s						
PLMA	**Palmaria, Port**	**1.75 260**		AML	AML		
	comp=N,4345µm,0.4s						
PLMA				AML	AML		
	comp=E,3705µm,0.5s						
PLMA				AML	AML		
	comp=N,4345µm,0.4s						
PLMA				AML	AML		
	comp=E,3705µm,0.5s						
OFFI	**Offida**	**1.78 144**		AML	AML		
	comp=N,45050µm,0.6s						
OFFI				AML	AML		
	comp=E,41950µm,0.7s						
OFFI				AML	AML		
	comp=E,41950µm,0.7s						
OFFI				AML	AML		
	comp=N,45050µm,0.6s						
CESX	**Cesi**	**1.78 172**		AML	AML		
	comp=E,6110µm,0.5s						
CESX				AML	AML		
	comp=E,6110µm,0.5s						
CESX				AML	AML		
	comp=N,5120µm,0.9s						
CESX				AML	AML		
	comp=N,5120µm,0.9s						
MLNI	**Malnisio**	**1.79**	**8**	⇓ *e*Pg	**Pn**	**04 09 00.4**	**-1.1**
MLNI	**Malnisio**	**1.79**	**8**	*e*Pg	**Pn**	**04 09 00.4**	**-1.1**
PANI	**Panarotta**	**1.79 339**		*e*Pg	**Pn**	**04 08 59.8**	**-1.9**
PANI	**Panarotta**	**1.79 339**		*e*Pg	**Pn**	**04 08 59.8**	**-1.9**
LATE	**Laterza**	**1.79 190**		AML	AML		
	comp=E,3665µm,0.6s						
LATE				AML	AML		
	comp=N,4010µm,0.5s						
LATE				AML	AML		
	comp=N,4010µm,0.5s						
LATE				AML	AML		
	comp=E,3665µm,0.6s						
GUMA	**Gualdo di Mace**	**1.80 136**		AML	AML		
	comp=N,47750µm,1.0s						
GUMA				AML	AML		
	comp=E,58100µm,0.5s						
GUMA				AML	AML		
	comp=N,47750µm,1.0s						
GUMA				AML	AML		
	comp=E,58100µm,0.5s						
MAGA	**Magasa**	**1.81 321**		AML	AML		
	comp=N,31800µm,0.5s						
MAGA				AML	AML		
	comp=E,50250µm,0.6s						
MAGA				AML	AML		
	comp=N,31800µm,0.5s						
MAGA				AML	AML		
	comp=E,50250µm,0.6s						
ARRO	**Arrone**	**1.84 168**		AML	AML		
	comp=E,3550µm,0.3s						
ARRO				AML	AML		
	comp=N,4065µm,0.6s						
ARRO				AML	AML		
	comp=E,3550µm,0.3s						
ARRO				AML	AML		
	comp=N,4065µm,0.6s						
RIY	**Rijeka**	**1.85**	**58**	*e*Pn	**Pn**	**04 09 01.7**	**-0.6**
RIY				*e*Sn	**Sn**	**04 09 25.4**	**-0.5**
FAU	**Forcella Aurin**	**1.86 354**		*e*Pg	**Pn**	**04 09 01.3**	**-1.3**
FAU	**Forcella Aurin**	**1.86 354**		*e*Pg	**Pn**	**04 09 01.3**	**-1.3**
SABO	**M.te Sabotino**	**1.87**	**30**	⇓ *e*Pn	**Pn**	**04 09 01.8**	**-0.8**
SABO	**M.te Sabotino**	**1.87**	**30**	⇓ *i*P	**Pn**	**04 09 01.7**	**-0.8**
SABO	**M.te Sabotino**	**1.87**	**30**	*i* P	**Pn**	**04 09 01.7**	**-0.8**
SABO				AML	AML		
	comp=E,15500µm,0.5s						
SABO				AML	AML		
	comp=N,18200µm,1.2s						
SABO				AML	AML		
	comp=N,18200µm,1.2s						
SABO				AML	AML		
	comp=E,15500µm,0.5s						
CASP	**Castiglione de**	**1.88 213**		AML	AML		
	comp=N,2690µm,1.3s						
CASP				AML	AML		
	comp=E,2290µm,0.3s						
CASP				AML	AML		
	comp=E,2290µm,0.3s						
CASP				AML	AML		
	comp=N,2690µm,1.3s						
NVLJ	**Novalja**	**1.89**	**83**	*e*Pn	**Pb**	**04 09 03.2**	**-1.8**
NVLJ				Sn	**Sn**	**04 09 26.0**	**-0.8**
NVLJ	**Novalja**	**1.89**	**83**	*e*Pn	**Pb**	**04 09 03.1**	**-1.8**
NVLJ				Sn	**Sn**	**04 09 26.0**	**-0.8**
CSO	**Casso**	**1.90**	**2**	*e*Pn	**Pn**	**04 09 01.5**	**-1.5**
CSO	**Casso**	**1.90**	**2**	*e*Pn	**Pn**	**04 09 01.5**	**-1.5**
AGOR	**Agordo**	**1.91 356**		*e*Pn	**Pn**	**04 09 02.0**	**-1.2**
AGOR	**Agordo**	**1.91 356**		*e*P	**Pn**	**04 09 02.6**	**-0.6**
AGOR				AML	AML		
	comp=E,3970µm,0.5s						
AGOR				AML	AML		
	comp=N,3445µm,0.8s						
AGOR				AML	AML		
	comp=N,3445µm,0.8s						
AGOR				AML	AML		
	comp=E,3970µm,0.5s						
STAL	**STALIGIAL**	**1.91**	**10**	⇓ *i*P	**Pn**	**04 09 01.8**	**-1.4**
STAL	**STALIGIAL**	**1.91**	**10**	*i* P	**Pn**	**04 09 01.8**	**-1.4**
STAL				AML	AML		
	comp=E,11745µm,0.3s						
STAL				AML	AML		
	comp=N,8510µm,0.7s						
STAL				AML	AML		
	comp=E,13635µm,0.5s						
STAL				AML	AML		
	comp=N,8920µm,0.8s						
STAL				AML	AML		
	comp=E,13635µm,0.5s						
STAL				AML	AML		
	comp=E,11745µm,0.3s						
STAL				AML	AML		
	comp=N,8510µm,0.7s						
STAL				AML	AML		
	comp=N,8920µm,0.8s						
SMA1	**SAN MARTINO**	**1.92 155**		AML	AML		
	comp=E,13150µm,1.6s						
SMA1				AML	AML		
	comp=E,13150µm,1.6s						
SMA1				AML	AML		
	comp=N,10125µm,0.8s						
SMA1				AML	AML		
	comp=N,10125µm,0.8s						
COLI	**Coloredo**	**1.93**	**24**	*e*Pn	**Pn**	**04 09 02.6**	**-0.8**
COLI	**Coloredo**	**1.93**	**24**	*e*Pn	**Pn**	**04 09 02.6**	**-0.8**
MPRI	**Monte Prat**	**1.94**	**15**	*e*Pn	**Pn**	**04 09 02.9**	**-0.6**
MPRI	**Monte Prat**	**1.94**	**15**	*e*Pn	**Pn**	**04 09 02.9**	**-0.6**
CIMO	**Cimolais**	**1.94**	**4**	*e*Pn	**Pn**	**04 09 02.0**	**-1.5**
CIMO	**Cimolais**	**1.94**	**4**	*e*Pn	**Pn**	**04 09 02.0**	**-1.5**
BUA	**Buia**	**1.94**	**18**	*e*Pn	**Pn**	**04 09 02.8**	**-0.7**
BUA	**Buia**	**1.94**	**18**	*e*Pn	**Pn**	**04 09 02.8**	**-0.7**
MSSA	**Maissana**	**1.96 269**		AML	AML		
	comp=E,3175µm,1.3s						
MSSA				AML	AML		
	comp=E,3175µm,1.3s						
MSSA				AML	AML		
	comp=N,3945µm,0.9s						
MSSA				AML	AML		
	comp=N,3945µm,0.9s						
TRTR	**Tortoreto Alta**	**1.98 142**		AML	AML		
	comp=E,23950µm,0.7s						
TRTR				AML	AML		
	comp=N,22050µm,0.7s						
TRTR				AML	AML		
	comp=E,23950µm,0.7s						
TRTR				AML	AML		
	comp=N,22050µm,0.7s						
CTL8	**Castelleone**	**1.98 298**		AML	AML		
	comp=N,3035µm,0.5s						
CTL8				AML	AML		
	comp=E,4775µm,0.7s						
CTL8				AML	AML		
	comp=N,3035µm,0.5s						
CTL8				AML	AML		
	comp=E,4775µm,0.7s						
JAVS	**Javornik**	**1.99**	**40**	⇓ *i*Pn	**Pn**	**04 09 03.0**	**-1.3**
	comp=Z,3µm,0.5s						
JAVS	**Javornik**	**1.99**	**40**	⇓ *i*Pn	**Pn**	**04 09 03.0**	**-1.3**
	comp=Z,3µm,0.5s						
GEPF	**Gemona**	**2.00**	**18**	⇓ *i*P	**Pn**	**04 09 03.3**	**-1.0**
GEPF	**Gemona**	**2.00**	**18**	*i* P	**Pn**	**04 09 03.3**	**-1.0**
GEPF				AML	AML		
	comp=E,5050µm,0.6s						
GEPF				AML	AML		
	comp=N,5985µm,0.7s						
GEPF				AML	AML		
	comp=E,5050µm,0.6s						
GEPF				AML	AML		
	comp=N,5985µm,0.7s						
TERO	**Teramo**	**2.01 150**		AML	AML		
	comp=N,9690µm,0.9s						
TERO				AML	AML		
	comp=E,7595µm,0.6s						
TERO				AML	AML		
	comp=E,3175µm,0.6s						
TERO				AML	AML		
	comp=N,4005µm,0.9s						
TERO				AML	AML		
	comp=E,7595µm,0.6s						
TERO				AML	AML		
	comp=E,3175µm,0.6s						
TERO				AML	AML		
	comp=N,4005µm,0.9s						
TERO				AML	AML		
	comp=N,9690µm,0.9s						
VINO	**Villanova**	**2.02**	**21**	⇓ *i*P	**Pn**	**04 09 03.6**	**-1.0**
VINO	**Villanova**	**2.02**	**21**	*i* P	**Pn**	**04 09 03.6**	**-1.0**
VINO				AML	AML		
	comp=E,11000µm,0.7s						
VINO				AML	AML		
	comp=N,9440µm,0.7s						
VINO				AML	AML		
	comp=E,11000µm,0.7s						
VINO				AML	AML		
	comp=N,9440µm,0.7s						
BOB	**Bobbio (Coli)**	**2.04 282**		P	**Pb**	**04 09 06.3**	**-1.2**
BOB	**Bobbio (Coli)**	**2.04 282**		P	**Pb**	**04 09 06.3**	**-1.2**
BOB	**Bobbio (Coli)**	**2.04 282**		AML	AML		
	comp=E,6260µm,0.7s						
BOB				AML	AML		
	comp=E,5870µm,0.8s						
BOB				AML	AML		
	comp=N,8470µm,0.9s						
BOB				AML	AML		
	comp=E,6260µm,0.7s						
BOB				AML	AML		
	comp=N,8745µm,0.8s						
BOB				AML	AML		
	comp=E,5870µm,0.8s						
BOB				AML	AML		
	comp=N,8745µm,0.8s						
BOB				AML	AML		
	comp=N,8470µm,0.9s						
CEY	**Cerknica**	**2.06**	**48**	*e*Pn	**Pn**	**04 09 04.0**	**-1.2**
CEY				*e*Sn	**Sn**	**04 09 29.7**	**-1.4**
CEY	**Cerknica**	**2.06**	**48**	⇓ *i*Pn	**Pn**	**04 09 03.9**	**-1.2**
	comp=Z,2µm,0.3s						
CEY	**Cerknica**	**2.06**	**48**	*e*Pn	**Pn**	**04 09 04.0**	**-1.2**
CEY				*e*Sn	**Sn**	**04 09 29.7**	**-1.4**
ROBS	**Robic**	**2.07**	**25**	⇓ *i*Pn	**Pn**	**04 09 04.3**	**-1.0**
	comp=Z,3µm,0.6s						
ROBS	**Robic**	**2.07**	**25**	⇓ *i*Pn	**Pn**	**04 09 04.3**	**-1.0**
	comp=Z,3µm,0.6s						
MABI	**Malga Bissina**	**2.08 324**		AML	AML		
	comp=E,2490µm,0.6s						
MABI				AML	AML		
	comp=E,2490µm,0.6s						
MABI				AML	AML		
	comp=N,2065µm,1.0s						
MABI				AML	AML		
	comp=N,2065µm,1.0s						
CADS	**Cadrg**	**2.13**	**29**	⇓ *i*Pn	**Pn**	**04 09 05.1**	**-1.1**
CADS	**Cadrg**	**2.13**	**29**	⇓ *i*Pn	**Pn**	**04 09 05.1**	**-1.1**
GBRS	**Gornja Briga**	**2.15**	**57**	⇓ *i*Pn	**Pn**	**04 09 06.0**	**-0.5**
GBRS	**Gornja Briga**	**2.15**	**57**	⇓ *i*Pn	**Pn**	**04 09 06.0**	**-0.5**
PTCC	**Patocco-Chiusa**	**2.17**	**21**	⇓ *i*P	**Pn**	**04 09 05.6**	**-1.1**
PTCC	**Patocco-Chiusa**	**2.17**	**21**	*i* P	**Pn**	**04 09 05.6**	**-1.1**
PTCC				AML	AML		
	comp=E,4415µm,0.7s						
PTCC				AML	AML		
	comp=N,5380µm,0.6s						
PTCC				AML	AML		
	comp=N,5380µm,0.6s						
PTCC				AML	AML		
	comp=E,4415µm,0.7s						
KOSI	**Kohlern**	**2.17 344**		AML	AML		
	comp=E,6865µm,0.8s						
KOSI				AML	AML		
	comp=E,6865µm,0.8s						
KOSI				AML	AML		
	comp=N,7620µm,0.6s						
KOSI				AML	AML		
	comp=N,7620µm,0.6s						
AQU	**L'Aquila**	**2.19 157**		*e*Pn	**Pb**	**04 09 07.9**	**-2.2**
AQU				*e*Sn	**Sg**	**04 09 36.6**	**-3.9**
AQU	**L'Aquila**	**2.19 157**		*e*P	**Pb**	**04 09 07.9**	**-2.2**
AQU				*e*		04 09 36.6	
AQU	**L'Aquila**	**2.19 157**		*e*Pn	**Pb**	**04 09 07.9**	**-2.2**
AQU				*e*Sn	**Sg**	**04 09 36.6**	**-3.9**
AQU	**L'Aquila**	**2.19 157**		AML	AML		
	comp=E,5320µm,1.6s						
AQU				AML	AML		
	comp=N,4895µm,1.4s						
AQU				AML	AML		
	comp=E,5320µm,1.6s						
AQU				AML	AML		
	comp=N,4895µm,1.4s						
GBAS	**Gorenja Brezov**	**2.20**	**44**	⇓ *i*Pn	**Pn**	**04 09 06.0**	**-1.0**
GBAS	**Gorenja Brezov**	**2.20**	**44**	⇓ *i*Pn	**Pn**	**04 09 06.1**	**-1.0**
CELB	**S.Piero in Cam**	**2.20 223**		AML	AML		
	comp=E,857µm,1.5s						
CELB				AML	AML		
	comp=E,857µm,1.5s						
CELB				AML	AML		
	comp=N,881µm,0.4s						
CELB				AML	AML		
	comp=N,881µm,0.4s						
FIAM	**Fiamignano**	**2.20 163**		AML	AML		
	comp=E,5045µm,0.7s						
FIAM				AML	AML		
	comp=E,5045µm,0.7s						
FIAM				AML	AML		
	comp=N,3045µm,0.9s						
FIAM				AML	AML		
	comp=N,3045µm,0.9s						
BOSI	**Bolzano**	**2.22 343**		AML	AML		
	comp=E,13700µm,0.8s						
BOSI				AML	AML		
	comp=E,13700µm,0.8s						
BOSI				AML	AML		
	comp=N,23300µm,0.9s						
BOSI				AML	AML		
	comp=N,23300µm,0.9s						
APPI	**Appiano**	**2.22 342**		AML	AML		
	comp=E,5640µm,0.6s						
APPI				AML	AML		

	comp=E,5640µm,0.6s						
APPI				AML	AML		
	comp=N,5000µm,0.8s						
APPI				AML	AML		
	comp=N,5000µm,0.8s						
CRNS	**Crni Vrh**	**2.22**	**39**	⇓*i*Pn	**Pn**	**04 09 06.5**	**-0.9**
CRNS	**Crni Vrh**	**2.22**	**39**	⇓*i*Pn	**Pn**	**04 09 06.5**	**-0.9**
FVI	**Forni Avoltri**	**2.25**	**9**	P	**Pn**	**04 09 07.1**	**-0.8**
FVI	**Forni Avoltri**	**2.25**	**9**	P	**Pn**	**04 09 07.1**	**-0.8**
FVI	**Forni Avoltri**	**2.25**	**9**	AML	AML		
	comp=E,5775µm,0.5s						
FVI				AML	AML		
	comp=N,8070µm,0.5s						
FVI				AML	AML		
	comp=N,8070µm,0.5s						
FVI				AML	AML		
	comp=E,5775µm,0.5s						
GORS	**Gorjuse**	**2.30**	**32**	⇓*i*Pn	**Pn**	**04 09 07.5**	**-1.0**
	comp=Z,1µm,0.5s						
GORS	**Gorjuse**	**2.30**	**32**	⇓*i*Pn	**Pn**	**04 09 07.5**	**-1.0**
	comp=Z,1µm,0.5s						
VCEL	**Villa Celiera**	**2.30**	**149**	AML	AML		
	comp=E,7560µm,0.5s						
VCEL				AML	AML		
	comp=E,7560µm,0.5s						
VCEL				AML	AML		
	comp=N,8375µm,0.6s						
VCEL				AML	AML		
	comp=N,8375µm,0.6s						
LJU	**Ljubljana**	**2.32**	**43**	*e*Pn	**Pn**	**04 09 08.1**	**-0.6**
LJU				*e*Sn	**Sn**	**04 09 36.8**	**-0.7**
LJU	**Ljubljana**	**2.32**	**43**	*e*Pn	**Pn**	**04 09 08.1**	**-0.6**
LJU	**Ljubljana**	**2.32**	**43**	P	**Pn**	**04 09 08.6**	**-0.1**
LJU				*e*Sn	**Sn**	**04 09 36.8**	**-0.7**
LJU	**Ljubljana**	**2.32**	**43**	P	**Pn**	**04 09 08.6**	**-0.1**
LJU				AML	AML		
	comp=E,18100µm,0.6s						
LJU				AML	AML		
	comp=N,16050µm,0.6s						
LJU				AML	AML		
	comp=E,18100µm,0.6s						
LJU				AML	AML		
	comp=N,16050µm,0.6s						
VISS	**Visnje**	**2.33**	**51**	⇓*i*Pn	**Pn**	**04 09 08.3**	**-0.5**
VISS				*e*Sn	**Sn**	**04 09 37.1**	**-0.6**
VISS	**Visnje**	**2.33**	**51**	⇓*i*Pn	**Pn**	**04 09 08.3**	**-0.5**
VISS				*e*Sn	**Sn**	**04 09 37.1**	**-0.6**
FAGN	**Fagnano**	**2.33**	**155**	AML	AML		
	comp=N,11300µm,0.6s						
FAGN				AML	AML		
	comp=E,15350µm,0.5s						
FAGN				AML	AML		
	comp=N,11300µm,0.6s						
FAGN				AML	AML		
	comp=E,15350µm,0.5s						
ACOM	**Acomizza, Ital**	**2.35**	**22**	AML	AML		
	comp=N,8630µm,0.6s						
ACOM				AML	AML		
	comp=E,9200µm,0.9s						
ACOM				AML	AML		
	comp=N,8630µm,0.6s						
ACOM				AML	AML		
	comp=E,9200µm,0.9s						
ABTA	**Abfaltersbach**	**2.38**	**4**	*e*Pn	**Pn**	**04 09 09.5**	**-0.1**
	comp=E,134nm,0.4s,SNR=119						
ABTA				*e*Pg	**Pg**	**04 09 15.9**	**+0.2**
	comp=E,325nm,0.4s						
ABTA				Sn	**Sn**	**04 09 38.7**	**-0.4**
	comp=E,1µm,0.8s						
ABTA				Sg	**Sg**	**04 09 50.6**	**+4.1**
	comp=E,2µm,0.6s						
ABTA	**Abfaltersbach**	**2.38**	**4**	Pn	**Pn**	**04 09 09.5**	**-0.1**
	comp=E,134nm,0.4s,SNR=119						
MTCE	**Montecelio**	**2.38**	**171**	AML	AML		
	comp=E,1510µm,1.5s						
MTCE				AML	AML		
	comp=E,1510µm,1.5s						
MTCE				AML	AML		
	comp=N,1440µm,0.7s						
MTCE				AML	AML		
	comp=N,1440µm,0.7s						
BOJS	**Bojanci**	**2.41**	**61**	⇓*i*Pn	**Pn**	**04 09 09.7**	**-0.3**
	comp=Z,1µm,0.5s						
BOJS	**Bojanci**	**2.41**	**61**	P	**Pn**	**04 09 09.6**	**-0.4**
BOJS	**Bojanci**	**2.41**	**61**	P	**Pn**	**04 09 09.6**	**-0.4**
BOJS				AML	AML		
	comp=E,3460µm,0.9s						
BOJS				AML	AML		
	comp=N,3280µm,0.6s						
BOJS				AML	AML		
	comp=N,3280µm,0.6s						
BOJS				AML	AML		
	comp=E,3460µm,0.9s						
ABSI	**Aberstueckl**	**2.44**	**345**	AML	AML		
	comp=N,8815µm,0.4s						
ABSI				AML	AML		
	comp=E,9810µm,0.6s						
ABSI				AML	AML		
	comp=N,8815µm,0.4s						
ABSI				AML	AML		
	comp=E,9810µm,0.6s						
VNDS	**Vrh nad Dolski**	**2.44**	**44**	⇓*i*Pn	**Pn**	**04 09 10.0**	**-0.5**
VNDS	**Vrh nad Dolski**	**2.44**	**44**	⇓*i*Pn	**Pn**	**04 09 10.0**	**-0.5**
MYKA	**Terra Mystica**	**2.46**	**23**	*e*Pn	**Pn**	**04 09 10.4**	**-0.3**
	comp=E,26nm,0.2s,SNR=56						
MYKA				Pg	**Pg**	**04 09 20.1**	**+2.9**
	comp=E,175nm,0.4s						
MYKA				Sn	**Sn**	**04 09 40.7**	**-0.3**
	comp=E,58nm,0.2s						
MYKA				Sg	**Sg**	**04 09 52.7**	**+3.6**
	comp=E,906nm,0.4s						
MYKA	**Terra Mystica**	**2.46**	**23**	Pn	**Pn**	**04 09 10.4**	**-0.3**
	comp=E,26nm,0.2s,SNR=56						
MOZS	**Mozjanca**	**2.46**	**38**	⇓*i*Pn	**Pn**	**04 09 10.1**	**-0.7**
MOZS	**Mozjanca**	**2.46**	**38**	⇓*i*Pn	**Pn**	**04 09 10.1**	**-0.7**
BRMO	**Bormio**	**2.48**	**329**	AML	AML		
	comp=N,2340µm,0.5s						
BRMO				AML	AML		
	comp=E,1435µm,0.5s						
BRMO				AML	AML		
	comp=N,2340µm,0.5s						
BRMO				AML	AML		
	comp=E,1435µm,0.5s						
CERT	**Cerreto**	**2.49**	**167**	AML	AML		
	comp=N,1520µm,0.6s						
CERT				AML	AML		
	comp=E,2300µm,0.6s						
CERT				AML	AML		
	comp=E,2300µm,0.6s						
CERT				AML	AML		
	comp=N,1520µm,0.6s						
PTQR	**Pietraquaria**	**2.50**	**160**	AML	AML		
	comp=E,1585µm,1.1s						
PTQR				AML	AML		
	comp=E,1585µm,1.1s						
PTQR				AML	AML		
	comp=N,1120µm,0.7s						
PTQR				AML	AML		
	comp=N,1120µm,0.7s						
UDBI	**Udbina**	**2.52**	**85**	*i* Pn	**Pb**	**04 09 13.4**	**-2.4**
UDBI				Sn	**Sn**	**04 09 42.6**	**0.0**
UDBI	**Udbina**	**2.52**	**85**	*i* Pn	**Pb**	**04 09 13.4**	**-2.4**
UDBI				Sn	**Sn**	**04 09 42.6**	**0.0**
MOSI	**Grossmontoni**	**2.54**	**333**	AML	AML		
	comp=E,6825µm,0.7s						
MOSI				AML	AML		
	comp=N,9630µm,1.0s						
MOSI				AML	AML		
	comp=E,6825µm,0.7s						
MOSI				AML	AML		
	comp=N,9630µm,1.0s						
PDKS	**Podkum**	**2.57**	**48**	⇓*i*Pn	**Pn**	**04 09 11.8**	**-0.5**
PDKS	**Podkum**	**2.57**	**48**	⇓*i*Pn	**Pn**	**04 09 11.8**	**-0.5**
RISI	**Rein**	**2.57**	**357**	AML	AML		
	comp=N,8320µm,0.4s						
RISI				AML	AML		
	comp=E,8105µm,0.5s						
RISI				AML	AML		
	comp=N,8320µm,0.4s						
RISI				AML	AML		
	comp=E,8105µm,0.5s						
OZLJ	**Ozalj**	**2.60**	**60**	*e*Pn	**Pn**	**04 09 12.7**	**+0.2**
OZLJ				Sn	**Sn**	**04 09 43.6**	**-0.7**
OZLJ	**Ozalj**	**2.60**	**60**	*e*Pn	**Pn**	**04 09 12.7**	**+0.2**
OZLJ				Sn	**Sn**	**04 09 43.6**	**-0.7**
ROSI	**Rosskopf**	**2.62**	**347**	AML	AML		
	comp=E,4760µm,0.7s						
ROSI				AML	AML		
	comp=E,4760µm,0.7s						
ROSI				AML	AML		
	comp=N,7010µm,0.9s						
ROSI				AML	AML		
	comp=N,7010µm,0.9s						
CAFR	**Castel Frentan**	**2.64**	**144**	AML	AML		
	comp=N,7235µm,0.7s						
CAFR				AML	AML		
	comp=E,6135µm,0.9s						
CAFR				AML	AML		
	comp=N,7235µm,0.7s						
CAFR				AML	AML		
	comp=E,6135µm,0.9s						
FUORN	**Ofenpass-Fuorn**	**2.64**	**329**	*e*Pn	**Pn**	**04 09 13.7**	**+0.3**
FUORN				*e*Sn	**Sn**	**04 09 44.2**	**-1.6**
FUORN	**Ofenpass-Fuorn**	**2.64**	**329**	*e*Pn	**Pn**	**04 09 13.7**	**+0.3**
FUORN				*e*Sn	**Sn**	**04 09 44.2**	**-1.6**
PCP	**Piancastagn**	**2.66**	**275**	AML	AML		
	comp=N,1535µm,0.4s						
PCP				AML	AML		
	comp=E,2595µm,1.1s						
PCP				AML	AML		
	comp=N,1535µm,0.4s						
PCP				AML	AML		
	comp=E,2595µm,1.1s						
INTR	**Introdacqua**	**2.66**	**152**	AML	AML		
	comp=N,6335µm,1.0s						
INTR				AML	AML		
	comp=E,4205µm,0.8s						
INTR				AML	AML		
	comp=E,4205µm,0.8s						
INTR				AML	AML		
	comp=N,6335µm,1.0s						
OBKA	**Obir**	**2.68**	**36**	*e*Pn	**Pn**	**04 09 13.2**	**-0.6**
	comp=N,11nm,0.2s,SNR=38						
OBKA				Pg	**Pg**	**04 09 20.8**	**-0.6**
	comp=N,623nm,0.5s						
OBKA				Sg	**Sg**	**04 09 57.1**	**+1.0**
	comp=N,3µm,0.6s						
OBKA	**Obir**	**2.68**	**36**	Pn	**Pn**	**04 09 13.2**	**-0.6**
	comp=N,11nm,0.2s,SNR=38						
LEGS	**Legarje**	**2.68**	**53**	⇓*i*Pn	**Pn**	**04 09 13.1**	**-0.6**
LEGS	**Legarje**	**2.68**	**53**	⇓*i*Pn	**Pn**	**04 09 13.1**	**-0.6**
CRES	**Cresnjev**	**2.69**	**56**	⇓*i*Pn	**Pn**	**04 09 13.6**	**-0.4**
CRES	**Cresnjev**	**2.69**	**56**	⇓*i*Pn	**Pn**	**04 09 13.5**	**-0.4**
GUAR	**Guarcino**	**2.70**	**163**	AML	AML		
	comp=E,680µm,0.7s						
GUAR				AML	AML		
	comp=E,680µm,0.7s						
GUAR				AML	AML		
	comp=N,694µm,0.5s						
GUAR				AML	AML		
	comp=N,694µm,0.5s						
LAV9	**Lanuvio**	**2.72**	**173**	AML	AML		
	comp=E,2920µm,0.6s						
LAV9				AML	AML		
	comp=N,3400µm,0.5s						
LAV9				AML	AML		
	comp=E,2970µm,0.6s						
LAV9				AML	AML		
	comp=N,3430µm,0.5s						
LAV9				AML	AML		
	comp=N,3430µm,0.5s						
LAV9				AML	AML		
	comp=N,3400µm,0.5s						
LAV9				AML	AML		
	comp=E,2970µm,0.6s						
LAV9				AML	AML		
	comp=E,2920µm,0.6s						
KBA	**Koelnbreinsper**	**2.81**	**16**	*e*Pn	**Pn**	**04 09 15.8**	**+0.1**
	comp=E,50nm,0.3s,SNR=101						
KBA				Pg	**Pg**	**04 09 23.1**	**-0.8**
	comp=E,72nm,0.3s						
KBA				Sn	**Sb**	**04 09 54.2**	**-1.2**
	comp=E,68nm,0.3s						
KBA	**Koelnbreinsper**	**2.81**	**16**	P	**Pn**	**04 09 15.7**	**+0.1**
KBA	**Koelnbreinsper**	**2.81**	**16**	P	**Pn**	**04 09 15.7**	**+0.1**
FETA	**Feichten**	**2.85**	**339**	*e*Pn	**Pn**	**04 09 16.1**	**-0.1**
	comp=E,49nm,0.7s,SNR=112						
FETA				Pg	**Pg**	**04 09 23.7**	**-1.0**
	comp=E,295nm,0.6s						
FETA				*e*Sn	**Sn**	**04 09 52.8**	**+2.0**
	comp=E,31nm,0.3s						
FETA				Sg	**Sg**	**04 10 03.7**	**+2.1**
	comp=E,314nm,0.5s						
FETA	**Feichten**	**2.85**	**339**	Pn	**Pn**	**04 09 16.1**	**-0.1**
	comp=E,49nm,0.7s,SNR=112						
POFI	**Posta Fibreno**	**2.87**	**157**	⇓Pn	**Pb**	**04 09 17.8**	**-3.9**
POFI	**Posta Fibreno**	**2.87**	**157**	P	**Pb**	**04 09 17.8**	**-3.9**
GOLS	**Golise**	**2.89**	**54**	⇓*i*Pn	**Pn**	**04 09 16.0**	**-0.6**
GOLS	**Golise**	**2.89**	**54**	⇓*i*Pn	**Pn**	**04 09 16.0**	**-0.6**
GIUL	**Giuliano Di Ro**	**2.91**	**165**	⇓Pn	**Pb**	**04 09 18.4**	**-4.0**
GIUL	**Giuliano Di Ro**	**2.91**	**165**	P	**Pb**	**04 09 18.4**	**-4.0**
WTTA	**Wattenberg**	**2.92**	**352**	*e*Pn	**Pn**	**04 09 17.6**	**+0.5**
	comp=E,18nm,0.3s,SNR=63						
WTTA				*e*Pg	**Pg**	**04 09 27.5**	**+1.4**
	comp=E,96nm,0.3s						
WTTA				Sn	**Sn**	**04 09 52.5**	**0.0**
	comp=E,236nm,0.6s						
WTTA				Sg	**Sg**	**04 10 05.3**	**+1.5**
	comp=E,339nm,0.5s						
WTTA	**Wattenberg**	**2.92**	**352**	Pn	**Pn**	**04 09 17.6**	**+0.5**
	comp=E,18nm,0.3s,SNR=63						
DAVOX	**Davos/Dischmat**	**2.92**	**326**	P	**Pn**	**04 09 18.6**	**+1.4**
TUE	**Stuetta**	**2.92**	**317**	*e*Pn	**Pn**	**04 09 17.2**	**-0.1**
TUE				*e*Sn	**Sn**	**04 09 51.5**	**-1.2**
TUE	**Stuetta**	**2.92**	**317**	*e*Pn	**Pn**	**04 09 17.2**	**-0.1**
TUE				*e*Sn	**Sn**	**04 09 51.5**	**-1.2**
FRES	**Fresagrandinar**	**2.99**	**143**	⇑Pn	**Pn**	**04 09 18.3**	**+0.4**
FRES	**Fresagrandinar**	**2.99**	**143**	P	**Pn**	**04 09 18.3**	**+0.4**
PGF	**Pioggiola**	**2.99**	**233**	*e*Pn	**Pn**	**04 09 19.2**	**+1.2**
PGF				*e*Sn	**Sn**	**04 09 54.6**	**+0.5**
	comp=E,618nm,0.4s						
PGF	**Pioggiola**	**2.99**	**233**	*e*Pn	**Pn**	**04 09 19.2**	**+1.2**
PGF				*e*Sn	**Sn**	**04 09 54.6**	**+0.5**
PGF	**Pioggiola**	**2.99**	**233**	*e*P	**Pn**	**04 09 19.2**	**+1.2**
PGF				*e*		04 09 54.6	
PGF	**Pioggiola**	**2.99**	**233**	*e*Pn	**Pn**	**04 09 19.2**	**+1.2**
PGF				*e*Sn	**Sn**	**04 09 54.6**	**+0.5**
	comp=E,309nm,0.4s						
WATA	**Walderalm**	**3.00**	**351**	*e*Pn	**Pn**	**04 09 18.8**	**+0.6**
	comp=E,56nm,0.3s,SNR=98						
WATA	**Walderalm**	**3.00**	**351**	Pn	**Pn**	**04 09 18.8**	**+0.6**
	comp=E,56nm,0.3s,SNR=98						
RORO	**Rocca Rossa**	**3.02**	**266**	⇓Pn	**Pn**	**04 09 18.9**	**+0.6**
RORO	**Rocca Rossa**	**3.02**	**266**	P	**Pn**	**04 09 18.9**	**+0.6**
RNI2	**Rionero Sannit**	**3.02**	**152**	⇑Pn	**Pb**	**04 09 19.6**	**-4.6**
RNI2	**Rionero Sannit**	**3.02**	**152**	P	**Pb**	**04 09 19.6**	**-4.6**
ZAG	**Zagreb**	**3.02**	**60**	*e*Pn	**Pb**	**04 09 22.2**	**-2.0**
SOKA	**Soboth**	**3.02**	**39**	Pn	**Pn**	**04 09 18.0**	**-0.5**
	comp=E,3.5nm,0.2s,SNR=24						
SOKA				*e*Pg	**Pg**	**04 09 26.8**	**-1.2**
	comp=E,106nm,0.4s						
SOKA				Sg	**Sg**	**04 10 09.0**	**+1.9**
	comp=E,1µm,0.5s						
SOKA	**Soboth**	**3.02**	**39**	Pn	**Pn**	**04 09 18.0**	**-0.5**
	comp=E,3.5nm,0.2s,SNR=24						
CERA	**Filignano**	**3.07**	**154**	⇑Pn	Pb	04 09 20.2	-4.9
CERA	**Filignano**	**3.07**	**154**	P	Pb	04 09 20.2	-4.9
MOTA	**Moosalm**	**3.07**	**345**	*e*Pn	**Pn**	**04 09 18.8**	**-0.4**
	comp=E,16nm,0.1s,SNR=194						
MOTA	**Moosalm**	**3.07**	**345**	Pn	**Pn**	**04 09 18.8**	**-0.4**
	comp=E,16nm,0.1s,SNR=194						
MIDA	**Miranda**	**3.11**	**151**	⇓Pn	**Pn**	**04 09 20.1**	**+0.5**
MIDA	**Miranda**	**3.11**	**151**	P	**Pn**	**04 09 20.1**	**+0.5**
TRIV	**Trivento**	**3.11**	**146**	⇓Pn	**Pn**	**04 09 20.5**	**+0.9**
TRIV	**Trivento**	**3.11**	**146**	P	**Pn**	**04 09 20.5**	**+0.9**
SMPL	**Sampolo**	**3.15**	**224**	⇑Pn	**Pb**	**04 09 22.1**	**-4.2**
SMPL	**Sampolo**	**3.15**	**224**	P	**Pb**	**04 09 22.1**	**-4.2**
MONC	**Moncucco Torin**	**3.16**	**284**	⇑Pn	**Pn**	**04 09 21.4**	**+1.2**
MONC	**Moncucco Torin**	**3.16**	**284**	P	**Pn**	**04 09 21.4**	**+1.2**
FUSIO	**Fusio**	**3.27**	**311**	⇓Pn	**Pn**	**04 09 21.2**	**-0.7**
FUSIO	**Fusio**	**3.27**	**311**	P	**Pn**	**04 09 21.2**	**-0.7**
RETA	**Reutte**	**3.28**	**342**	*i* Pn	**Pn**	**04 09 22.7**	**+0.7**
	SNR=112						
RETA				*e*Sn	**Sn**	**04 10 02.4**	**+1.1**
	comp=E,209nm,0.4s						
RETA	**Reutte**	**3.28**	**342**	Pn	**Pn**	**04 09 22.7**	**+0.7**
	SNR=112						
RETA				Sn	**Sn**	**04 10 02.4**	**+1.1**
	comp=E,209nm,0.4s						
BSSO	**Busso**	**3.31**	**148**	⇓Pn	**Pn**	**04 09 23.9**	**+1.4**
BSSO	**Busso**	**3.31**	**148**	P	**Pn**	**04 09 23.9**	**+1.4**
NEGI	**Seborga**	**3.31**	**262**	⇑Pn	**Pn**	**04 09 22.8**	**+0.3**
NEGI	**Seborga**	**3.31**	**262**	P	**Pn**	**04 09 22.8**	**+0.3**
PLONS	**Plons/SG**	**3.34**	**324**	P	**Pn**	**04 09 24.1**	**+1.3**
DAVA	**Damuels**	**3.35**	**331**	*e*Pn	**Pn**	**04 09 24.4**	**+1.4**
	comp=E,140nm,0.4s,SNR=124						
DAVA				*e*Sn	**Sn**	**04 10 03.7**	**+0.6**
	comp=E,255nm,0.7s						
DAVA	**Damuels**	**3.35**	**331**	Pn	**Pn**	**04 09 24.4**	**+1.4**
	comp=E,140nm,0.4s,SNR=124						
DAVA				Sn	**Sn**	**04 10 03.7**	**+0.6**
	comp=E,255nm,0.7s						
CIGN	**Sant'Elia a Pi**	**3.35**	**143**	⇓Pn	Pb	04 09 24.4	-5.4
CIGN	**Sant'Elia a Pi**	**3.35**	**143**	P	Pb	04 09 24.4	-5.4
SGG	**Gregorio Mates**	**3.38**	**152**	⇓Pn	Pb	04 09 24.9	-5.4
SGG	**Gregorio Mates**	**3.38**	**152**	P	Pb	04 09 24.9	-5.4
SAOF	**Saorge**	**3.40**	**265**	P	**Pn**	**04 09 24.5**	**+0.9**
SAOF	**Saorge**	**3.40**	**265**	⇑Pn	**Pn**	**04 09 24.2**	**+0.6**
SAOF	**Saorge**	**3.40**	**265**	P	**Pn**	**04 09 24.5**	**+0.9**
SAOF	**Saorge**	**3.40**	**265**	P	**Pn**	**04 09 24.2**	**+0.6**
MELA	**Melanico ??? S**	**3.40**	**141**	⇑Pn	**Pn**	**04 09 23.8**	**+0.1**
MELA	**Melanico ??? S**	**3.40**	**141**	P	**Pn**	**04 09 23.8**	**+0.1**
PTRJ	**Pietraroja**	**3.45**	**150**	⇑Pn	**Pn**	**04 09 25.2**	**+0.9**
PTRJ	**Pietraroja**	**3.45**	**150**	P	**Pn**	**04 09 25.2**	**+0.9**
GATE	**Gambatesa**	**3.47**	**145**	⇓Pn	**Pb**	**04 09 27.4**	**-4.5**
GATE	**Gambatesa**	**3.47**	**145**	P	**Pb**	**04 09 27.4**	**-4.5**
ENR	**Entracque**	**3.47**	**269**	⇓Pn	**Pn**	**04 09 25.3**	**+0.7**
ENR	**Entracque**	**3.47**	**269**	P	**Pn**	**04 09 25.3**	**+0.7**
SACR	**S. Croce Del S**	**3.48**	**148**	⇑Pn	**Pn**	**04 09 26.2**	**+1.4**
SACR	**S. Croce Del S**	**3.48**	**148**	P	**Pn**	**04 09 26.2**	**+1.4**
KOGS	**Kog**	**3.50**	**52**	⇓*i*Pn	**Pn**	**04 09 23.7**	**-1.2**
	comp=Z,2µm,1.0s						
KOGS	**Kog**	**3.50**	**52**	⇓Pn	**Pn**	**04 09 23.7**	**-1.2**
KOGS	**Kog**	**3.50**	**52**	P	**Pn**	**04 09 23.7**	**-1.2**
SBF	**Sospel**	**3.50**	**263**	*e*Pn	**Pn**	**04 09 25.6**	**+0.5**
SBF				*e*Sn	**Sn**	**04 10 06.0**	**-0.8**
	comp=Z,608nm,0.5s						
SBF	**Sospel**	**3.50**	**263**	*e*Pn	**Pn**	**04 09 25.6**	**+0.5**
SBF				*e*Sn	**Sn**	**04 10 06.0**	**-0.8**
SBF	**Sospel**	**3.50**	**263**	*e*P	**Pn**	**04 09 25.6**	**+0.5**
SBF				*e*		04 10 06.0	
SBF	**Sospel**	**3.50**	**263**	*e*Pn	**Pn**	**04 09 25.6**	**+0.5**
SBF				*e*Sn	**Sn**	**04 10 06.0**	**-0.8**
	comp=Z,304nm,0.5s						
STV	**Sant Anna di V**	**3.53**	**270**	⇓Pn	**Pn**	**04 09 25.9**	**+0.4**
STV	**Sant Anna di V**	**3.53**	**270**	P	**Pn**	**04 09 25.9**	**+0.4**
BLY	**Banja Luka**	**3.55**	**82**	*e*Pn	**Pn**	**04 09 26.3**	**+0.7**
BLY	**Banja Luka**	**3.55**	**82**	⇑*i*P	**Pn**	**04 09 26.5**	**+0.9**
BLY	**Banja Luka**	**3.55**	**82**	*e*Pn	**Pn**	**04 09 27.1**	**+1.5**
BLY				*e*Sn	**Sn**	**04 10 09.6**	**+1.8**
BLY	**Banja Luka**	**3.55**	**82**	*e*Pn	**Pn**	**04 09 26.3**	**+0.7**
BLY				S	**Sn**	**04 10 06.4**	**-1.4**
BLY				*e*Sn	**Sn**	**04 10 09.6**	**+1.8**
BLY	**Banja Luka**	**3.55**	**82**	P	**Pn**	**04 09 26.4**	**+0.7**
BNALP	**Bannalp**	**3.66**	**314**	⇓Pn	**Pn**	**04 09 28.3**	**+1.0**
BNALP	**Bannalp**	**3.66**	**314**	P	**Pn**	**04 09 28.3**	**+1.0**
SGRT	**San Giovanni R**	**3.67**	**134**	⇑Pn	**Pn**	**04 09 26.0**	**-1.3**
SGRT	**San Giovanni R**	**3.67**	**134**	P	**Pn**	**04 09 27.0**	**-0.4**
ARSA	**Arzberg**	**3.67**	**37**	*e*Pn	**Pn**	**04 09 26.9**	**-0.5**
ARSA	**Arzberg**	**3.67**	**37**	*i* Pn	**Pn**	**04 09 26.7**	**-0.7**
	comp=Z,7.1nm,0.3s,SNR=38						
ARSA				*e*Pg	**Pg**	**04 09 38.6**	**-1.9**
	comp=Z,8.8nm,0.2s						
ARSA				*i* Sn	**Sn**	**04 10 10.3**	**-0.6**
	comp=Z,80nm,0.6s						
ARSA				Sg	**Sg**	**04 10 27.7**	**-0.4**
	comp=Z,134nm,0.6s						
ARSA	**Arzberg**	**3.67**	**37**	⇓Pn	**Pn**	**04 09 26.7**	**-0.7**
ARSA	**Arzberg**	**3.67**	**37**	P	**Pn**	**04 09 26.7**	**-0.7**
MOCO	**Biccari - m.te**	**3.69**	**144**	P	**Pn**	**04 09 28.7**	**+1.0**
MOA	**Molln**	**3.75**	**21**	*e*Pn	**Pn**	**04 09 28.5**	**+0.1**
	comp=Z,38nm,0.1s,SNR=82						
MOA				*e*Sn	**Sn**	**04 10 12.0**	**-0.7**
	comp=Z,171nm,0.4s						
MOA	**Molln**	**3.75**	**21**	Pn	**Pn**	**04 09 28.5**	**+0.1**
	comp=Z,38nm,0.1s,SNR=82						
MOA				Sn	**Sn**	**04 10 12.0**	**-0.7**
	comp=Z,171nm,0.4s						
MSAG	**Monte S. Angel**	**3.78**	**134**	⇑Pn	**Pn**	**04 09 28.4**	**-0.5**
MSAG	**Monte S. Angel**	**3.78**	**134**	P	**Pn**	**04 09 28.4**	**-0.5**
MS1	**Monte Sant'Ang**	**3.80**	**133**	*e*Pn	**Pn**	**04 09 28.5**	**-0.7**
BEHE	**Becsehely**	**3.81**	**55**	*e*Pn	**Pn**	**04 09 29.7**	**+0.4**
BEHE				*e*Sn	**Sg**	**04 10 37.2**	**+4.6**
BEHE	**Becsehely**	**3.81**	**55**	*e*Pn	**Pn**	**04 09 28.0**	**-1.3**
BEHE	**Becsehely**	**3.81**	**55**	*e*P	**Pn**	**04 09 29.7**	**+0.4**
DIX	**Grande Dixence**	**3.82**	**298**	P	**Pn**	**04 09 29.1**	**-0.5**
DIX	**Grande Dixence**	**3.82**	**298**	P	**Pn**	**04 09 29.1**	**-0.5**
MRB1	**Monte Rocchett**	**3.82**	**147**	Pn	**Pn**	**04 09 30.0**	**+0.6**
MRB1	**Monte Rocchett**	**3.82**	**147**	P	**Pn**	**04 09 31.0**	**+1.6**
MRGE	**Morge**	**3.93**	**293**	P	**Pn**	**04 09 33.6**	**+2.6**
MBDF	**Montbardon**	**3.93**	**277**	*e*Pn	**Pn**	**04 09 30.2**	**-0.8**
MBDF	**Montbardon**	**3.93**	**277**	*e*Pn	**Pn**	**04 09 30.2**	**-0.8**
MBDF	**Montbardon**	**3.93**	**277**	*e*P	**Pn**	**04 09 30.2**	**-0.8**
MBDF	**Montbardon**	**3.93**	**277**	*e*Pn	**Pn**	**04 09 30.2**	**-0.8**
RRL	**Rocca Remolon**	**3.93**	**280**	P	**Pn**	**04 09 30.4**	**-0.7**
RRL	**Rocca Remolon**	**3.93**	**280**	P	**Pn**	**04 09 30.4**	**-0.7**
ZUR	**Degenried**	**3.94**	**321**	P	**Pn**	**04 09 31.5**	**+0.5**
ZUR	**Degenried**	**3.94**	**321**	P	**Pn**	**04 09 31.5**	**+0.5**
SGTA	**Sant Agata di**	**3.97**	**144**	⇓Pn	**Pn**	**04 09 31.0**	**-0.5**
SGTA	**Sant Agata di**	**3.97**	**144**	P	**Pn**	**04 09 32.0**	**+0.5**
CAFE	**Carife**	**4.01**	**146**	⇑

comp=Z,70nm,0.4s
PALZ Palazzo San Ge 4.39 140 ⇓Pn Pn 04 09 36.6 -0.6
PALZ Palazzo San Ge 4.39 140 P Pn 04 09 36.6 -0.6
SOP Sopron 4.47 41 *e*Pn Pn 04 09 37.6 -0.6
SOP *e*Sn **Sn** 04 10 28.6 -1.8
SOP Sopron 4.47 41 P Pn 04 09 38.7 +0.5
SOP Sopron 4.47 41 *e*P Pn 04 09 37.6 -0.6
SOP *e*Sn **Sn** 04 10 28.6 -1.8
CDRU Civita di Ruta 4.50 149 ⇓Pn Pn 04 09 39.6 +0.8
CDRU Civita di Ruta 4.50 149 P Pn 04 09 39.6 +0.8
ACER Acerenza 4.51 141 ⇓Pn Pn 04 09 38.7 -0.2
ACER Acerenza 4.51 141 P Pn 04 09 38.7 -0.2
GEA0 GERESS Array S 4.57 12 *e*Pn Pn 04 09 38.3 -1.4
GEA0 GERESS Array S 4.57 12 *e*Pn Pn 04 09 38.3 -1.4
ORIF Oris-en-Rattie 4.58 279 *e*Pn Pn 04 09 40.5 +0.7
ORIF *e*Sn **Sn** 04 10 30.1 -3.2
comp=Z,303nm,0.5s
ORIF Oris-en-Rattie 4.58 279 *e*Pn Pn 04 09 40.5 +0.7
ORIF *e*Sn **Sn** 04 10 30.1 -3.2
ORIF Oris-en-Rattie 4.58 279 P Pn 04 09 40.3 +0.4
ORIF Oris-en-Rattie 4.58 279 *e*P Pn 04 09 40.5 +0.7
ORIF *e* 04 10 30.1
ORIF Oris-en-Rattie 4.58 279 *e*Pn Pn 04 09 40.5 +0.7
ORIF *e*Sn **Sn** 04 10 30.1 -3.2
comp=Z,151nm,0.5s
GEC2 GERESS Array S 4.58 12 *e*Pn Pn 04 09 38.6 -1.2
GEC2 *e*Sn **Sn** 04 10 28.9 -4.5
GEC2 GERESS Array S 4.58 12 *e*P Pn 04 09 38.7 -1.2
GEC2 *e* 04 10 28.9
GEC2 GERESS Array S 4.58 12 *e*Pn Pn 04 09 38.7 -1.2
GEC2 *e*Sn **Sn** 04 10 28.9 -4.5
GERES GERESS Array B 4.58 12 Pn Pn 04 09 38.6 -1.2
comp=Z,9.6nm,0.3s,baz=193,slow=14,SNR=236
GERES Sn **Sn** 04 10 28.9 -4.5
comp=Z,23nm,0.3s,baz=193,slow=27,SNR=8.5
KIZ Kirchzarten 4.67 321 P Pn 04 09 40.5 -0.6
KIZ Kirchzarten 4.67 321 P Pn 04 09 40.5 -0.6
SLCN Sala Consilina 4.71 147 ⇓Pn Pn 04 09 42.7 +1.1
SLCN Sala Consilina 4.71 147 P Pn 04 09 42.7 +1.1
BAI Bari 4.72 132 *e*Pn Pn 04 09 41.1 -0.7
BAI Sn **Sn** 04 10 33.9 -2.9
AMUR Altamura 4.73 136 ⇑Pn Pn 04 09 41.4 -0.5
AMUR Altamura 4.73 136 P Pn 04 09 41.4 -0.5
TREB Trebinje 4.74 108 *e*Pn Pn 04 09 42.1 +0.1
BSTF la Bastide-des 4.78 266 P Pn 04 09 43.7 +1.2
WET Wettzell 4.79 5 P Pn 04 09 41.8 -0.9
WET Wettzell 4.79 5 P Pn 04 09 41.8 -0.9
BFO Black Forest 4.79 327 *e*Pn Pn 04 09 41.5 -1.3
BFO Black Forest 4.79 327 *i* P Pn 04 09 42.0 -0.8
BFO Black Forest 4.79 327 *e*Pn Pn 04 09 41.5 -1.3
BFO Black Forest 4.79 327 *i* P Pn 04 09 42.0 -0.8
BRY Bratogost 4.80 106 ⇑*i*Pn Pn 04 09 43.9 +1.0
BRY *e*Sn **Sn** 04 10 38.1 -0.8
BRY Bratogost 4.80 106 ⇑*i*Pn Pn 04 09 43.9 +1.0
BRY *e*Sn **Sn** 04 10 38.1 -0.8
LOMF Lomont 4.81 310 P Pn 04 09 42.9 -0.1
LOMF Lomont 4.81 310 P Pn 04 09 42.9 -0.1
LOMF S **Sn** 04 10 34.8 -4.3
SG1 Sgolgore (BA) 4.82 136 *e*Pn Pn 04 09 42.6 -0.5
SG1 Sn **Sn** 04 10 36.8 -2.3
SMRF Simiane la Rot 4.82 268 *e*Pn Pn 04 09 44.1 +1.0
SMRF Simiane la Rot 4.82 268 *e*Pn Pn 04 09 44.1 +1.0
SMRF Simiane la Rot 4.82 268 *e*Pn Pn 04 09 44.1 +1.0
HAPS Han Pijesak,Bl 4.83 91 *e*Pn Pn 04 09 43.6 +0.3
HAPS Han Pijesak,Bl 4.83 91 *e*Pn Pn 04 09 43.6 +0.3
KHC Kasperske Hory 4.84 10 ⇓*i*PN Pn 04 09 42.3 -1.1
KHC *ex* x 04 09 52.0
KHC *ex* x 04 10 01.8
KHC *e*SN **Sn** 04 10 35.9 -3.8
KHC *e*SG **Sg** 04 11 06.3 +0.7
comp=Z,184nm,0.7s
KHC AMS AMS 04 12 00.0
comp=Z,2μm,11.1s
KHC Kasperske Hory 4.84 10 ⇓*i*P Pn 04 09 42.3 -1.1
KHC *e* 04 10 35.9
KHC smax smax
comp=N,184nm,0.7s
KHC MLR MLR
comp=Z,2μm,11.1s
KHC Kasperske Hory 4.84 10 *i* P Pn 04 09 42.3 -1.1
KHC *e*S **Sn** 04 10 35.9 -3.8
comp=Z,2μm,11.1s
CHMF Charmoille 4.85 308 P Pn 04 09 42.8 -0.8
CHMF Charmoille 4.85 308 P Pn 04 09 42.8 -0.8
CABF La Chapelle 4.87 299 *e*Pn Pn 04 09 43.5 -0.4
CABF La Chapelle 4.87 299 *e*Pn Pn 04 09 43.5 -0.4
CABF La Chapelle 4.87 299 *e*P Pn 04 09 43.5 -0.4
CABF La Chapelle 4.87 299 *e*Pn Pn 04 09 43.5 -0.4
STU Stuttgart 4.87 336 *e*Pn Pn 04 09 42.9 -0.9
STU Stuttgart 4.87 336 *e*P Pn 04 09 42.9 -0.9
STU Stuttgart 4.87 336 *e*Pn Pn 04 09 42.9 -0.9
MORH M^‡r^így, Hung 4.87 66 *e*Pn Pn 04 09 42.1 -1.7
MORH *e*Sn **Sn** 04 10 35.7 -4.7
MORH M^‡r^így, Hung 4.87 66 *e*P Pn 04 09 42.1 -1.7
MORH *e*Sn **Sn** 04 10 35.7 -4.7
MIGL Miglionico 4.88 139 ⇓Pn Pn 04 09 44.3 +0.3
MIGL Miglionico 4.88 139 P Pn 04 09 44.3 +0.3
BULG Bulgheria - Ca 4.88 151 ⇓Pn Pn 04 09 46.3 +2.3
BULG Bulgheria - Ca 4.88 151 P Pn 04 09 46.3 +2.3
RUSF Rustrel 4.88 267 P Pn 04 09 44.9 +0.9
RUSF Rustrel 4.88 267 P Pn 04 09 44.9 +0.9
MGR Morigerati 4.90 149 ⇓Pn Pn 04 09 45.9 +1.7
MGR Morigerati 4.90 149 P Pn 04 09 45.9 +1.7
HCY Herceg Novi 4.94 111 ⇑*i*Pn Pn 04 09 45.8 +1.0
HCY *e*Sn **Sn** 04 10 41.7 -0.5
HCY Herceg Novi 4.94 111 ⇑*i*Pn Pn 04 09 45.8 +1.0
HCY *e*Sn **Sn** 04 10 41.7 -0.5
UPM Unac-Piva 4.96 101 ⇓*i*Pn Pn 04 09 46.6 +1.4
UPM *e*Sn **Sn** 04 10 42.5 -0.4
UPM Unac-Piva 4.96 101 ⇓*i*Pn Pn 04 09 46.6 +1.4
UPM Unac-Piva 4.96 101 P Pn 04 09 48.0 +2.8
UPM *e*Sn **Sn** 04 10 42.5 -0.4
MOF Molkenrain 4.97 316 P Pn 04 09 44.7 -0.6
MOF Molkenrain 4.97 316 P Pn 04 09 44.7 -0.6
MATE Matera 4.97 137 ⇑*i*P Pn 04 09 44.7 -0.5
MATE Matera 4.97 137 ⇑*i*P Pn 04 09 44.7 -0.5
MATE Matera 4.97 137 ⇑Pn Pn 04 09 45.4 +0.2
MATE S **Sn** 04 10 41.3 -1.6
MATE Matera 4.97 137 P Pn 04 09 45.4 +0.2
OPP Oppenau 4.98 327 P Pn 04 09 45.0 -0.3
OPP Oppenau 4.98 327 P Pn 04 09 45.0 -0.3
OG35 Corcelles 5.00 292 P Pn 04 09 45.6 -0.1
OG35 Corcelles 5.00 292 P Pn 04 09 45.6 -0.1
NOCI Noci 5.05 134 ⇓Pn Pn 04 09 45.7 -0.6
NOCI Noci 5.05 134 P Pn 04 09 45.7 -0.6
CRAC Craco 5.07 141 Pn Pn 04 09 47.5 +1.0
CRAC Craco 5.07 141 P Pn 04 09 47.5 +1.0
HINF Hinteralfeld 5.09 314 *e*Pn Pn 04 09 45.9 -0.9
HINF *e*Sn **Sn** 04 10 41.6 -4.2
comp=Z,678nm,0.5s
HINF Hinteralfeld 5.09 314 *e*Pn Pn 04 09 45.9 -0.9
HINF *e*Sn **Sn** 04 10 41.6 -4.2
HINF Hinteralfeld 5.09 314 *e*P Pn 04 09 45.9 -0.9
HINF *e* 04 10 41.6
HINF Hinteralfeld 5.09 314 *e*Pn Pn 04 09 45.9 -0.9
HINF *e*Sn **Sn** 04 10 41.6 -4.2
comp=Z,339nm,0.5s
ZST Bratislava 5.09 40 *e*P Pn 04 09 45.2 -1.6
ZST Bratislava 5.09 40 *e*PN Pn 04 09 45.2 -1.6
ZST *e*SG **Sg** 04 11 16.7 +3.2
ZST Bratislava 5.09 40 *e*Pn Pn 04 09 45.2 -1.6
ZST *e*Sg **Sg** 04 11 16.7 +3.2
CUC Castrocucco 5.12 148 *e*Pn Pn 04 09 49.2 +1.9
CUC Castrocucco 5.12 148 *e*Pn Pn 04 09 49.2 +1.9
NKME Niksic 5.13 106 ⇓*i*Pn Pn 04 09 48.2 +0.8
NKME *e*Sn **Sn** 04 10 46.2 -0.7
NKME Niksic 5.13 106 ⇓*i*Pn Pn 04 09 48.2 +0.8
NKME *e*Sn **Sn** 04 10 46.2 -0.7
NKY Niksic 5.14 105 ⇑*i*Pn Pn 04 09 48.6 +1.0
NKY *e*Sn **Sn** 04 10 46.4 -0.9
NKY Niksic 5.14 105 ⇑*i*Pn Pn 04 09 48.6 +1.0
NKY *e*Sn **Sn** 04 10 46.4 -0.9
CSKK Cs^‡kako 5.15 52 *e*pPn Pb 04 09 55.4 -5.1
BBLS Lazići 5.18 93 *e*Pn Pn 04 09 48.7 +0.6
BBLS *e*Sn **Sn** 04 10 46.3 -1.8
FASA Fasano 5.18 132 *e*Pn Pn 04 09 47.5 -0.6
FASA Sn **Sn** 04 10 43.8 -4.3
CEME Cevo 5.19 108 ⇑*i*Pn Pn 04 09 49.1 +0.9
CEME *e*Sn **Sn** 04 10 47.5 -0.9
CEME Cevo 5.19 108 ⇑*i*Pn Pn 04 09 49.1 +0.9
CEME *e*Sn **Sn** 04 10 47.5 -0.9
MASS Massafra 5.21 134 *e*Pn Pn 04 09 47.8 -0.6
MASS Sn **Sn** 04 10 44.1 -4.6
ECH Echery 5.21 319 *e*Pn Pn 04 09 47.7 -0.8
ECH Echery 5.21 319 P Pn 04 09 47.9 -0.6
ECH Echery 5.21 319 *e*P Pn 04 09 47.7 -0.8
ECH Echery 5.21 319 P Pn 04 09 47.9 -0.6
TEKS Tekeris 5.22 86 *e*Pn Pn 04 09 48.7 +0.1
WLS Welschbruch 5.27 322 P Pn 04 09 48.9 -0.4
WLS Welschbruch 5.27 322 P Pn 04 09 48.9 -0.4
PLE Pljevlja 5.27 99 ⇓*i*Pn Pn 04 09 50.0 +0.6
PLE *e*Sn **Sn** 04 10 48.9 -1.5
PLE Pljevlja 5.27 99 ⇓*i*Pn Pn 04 09 50.0 +0.6
PLE *e*Sn **Sn** 04 10 48.9 -1.5
BUM Brajici-Budva 5.27 111 ⇓*i*Pn Pn 04 09 50.3 +0.9
BUM *e*Sn **Sn** 04 10 49.9 -0.5
BUM Brajici-Budva 5.27 111 ⇓*i*Pn Pn 04 09 50.3 +0.9
BUM *e*Sn **Sn** 04 10 49.9 -0.5
MODS Modra-Piesok 5.30 39 *e*P Pn 04 09 47.7 -2.0
MODS Modra-Piesok 5.30 39 *e*PN Pn 04 09 47.7 -2.0
MODS Modra-Piesok 5.30 39 *e*Pn Pn 04 09 47.7 -2.0
CDF Champ du Feu 5.30 321 *e*Pn Pn 04 09 49.1 -0.7
CDF *e*Sn **Sn** 04 10 47.1 -4.0
comp=Z,592nm,0.7s
CDF Champ du Feu 5.30 321 *e*Pn Pn 04 09 49.1 -0.7
CDF *e*Sn **Sn** 04 10 47.1 -4.0
CDF Champ du Feu 5.30 321 *e*P Pn 04 09 49.1 -0.7
CDF *e* 04 10 47.1
CDF Champ du Feu 5.30 321 *e*Pn Pn 04 09 49.1 -0.7
CDF *e*Sn **Sn** 04 10 47.1 -4.0
comp=Z,296nm,0.7s
ORI Oriolo Calabro 5.32 143 P Pn 04 09 51.4 +1.4
ORI pmax pmax
comp=Z,8.0nm,0.5s
ORI Oriolo Calabro 5.32 143 P Pn 04 09 51.4 +1.4
comp=Z,8.0nm,0.5s
VSL Villasalto 5.33 205 *e*Pn Pn 04 09 52.8 +2.8
VSL Villasalto 5.33 205 ⇑Pn Pn 04 09 52.5 +2.4
VSL Villasalto 5.33 205 P Pn 04 09 52.5 +2.4
TAR1 Taranto 5.36 134 *e*Pn Pn 04 09 49.3 -1.2
TAR1 Sn **Sn** 04 10 49.3 -3.1
GRFO Grafenberg 5.36 353 *e*Pn Pn 04 09 49.2 -1.3
GRFO Grafenberg 5.36 353 *e*P Pn 04 09 49.2 -1.3
GRFO Grafenberg 5.36 353 *e*Pn Pn 04 09 49.2 -1.3
CGL1 Ceglie Messapi 5.36 132 *e*Pn Pn 04 09 50.4 -0.2
VIVF Saint-Julien-l 5.43 278 *e*Pn Pn 04 09 51.3 -0.2
VIVF *e*Sn **Sn** 04 10 50.9 -3.3
comp=Z,59nm,0.4s
VIVF Saint-Julien-l 5.43 278 *e*Pn Pn 04 09 51.3 -0.2
VIVF *e*Sn **Sn** 04 10 50.9 -3.3
VIVF Saint-Julien-l 5.43 278 *e*P Pn 04 09 51.3 -0.2
VIVF *e* 04 10 50.9
VIVF Saint-Julien-l 5.43 278 *e*Pn Pn 04 09 51.3 -0.2
SALB San Lorenzo Be 5.43 144 ⇑Pn Pn 04 09 52.3 +0.7
SALB San Lorenzo Be 5.43 144 P Pn 04 09 52.3 +0.7
FRGS Fruska Gora 5.44 79 *e*Pn Pn 04 09 51.3 -0.4
SUBF Surbourg 5.46 328 P Pn 04 09 51.7 -0.1
SUBF Surbourg 5.46 328 P Pn 04 09 51.7 -0.1
PDG Podgorica 5.46 108 *e*Pn Pn 04 09 53.1 +1.2
PDG *e*Sn **Sn** 04 10 54.7 -0.3
PDG Podgorica 5.46 108 ⇑*i*P Pn 04 09 53.1 +1.2
PDG Podgorica 5.46 108 P Pn 04 09 53.3 +1.4
PDG Podgorica 5.46 108 ⇓*i*Pn Pn 04 09 53.1 +1.2
PDG S **Sn** 04 10 54.8 -0.3
PDG Podgorica 5.46 108 P Pn 04 09 53.4 +1.5
TTG Podgorica 5.46 108 ⇓*i*Pn Pn 04 09 53.1 +1.2
TTG *e*Sn **Sn** 04 10 54.2 -0.8
TTG Podgorica 5.46 108 *e*Pn Pn 04 09 53.1 +1.2
TTG *e*Sn **Sn** 04 10 55.0 0.0
TTG Podgorica 5.46 108 *e*P Pn 04 09 53.1 +1.2
TTG *e* 04 10 55.0
TTG Podgorica 5.46 108 *e*Pn Pn 04 09 53.1 +1.2
TTG *e*Sn **Sn** 04 10 55.0 0.0
HAU Haudompre 5.47 314 *e*Pn Pn 04 09 51.2 -0.8
HAU *e*Sn **Sn** 04 10 50.4 -4.8
comp=Z,960nm,0.5s
HAU Haudompre 5.47 314 *e*Pn Pn 04 09 51.2 -0.8
HAU *e*Sn **Sn** 04 10 50.4 -4.8
HAU Haudompre 5.47 314 *e*P Pn 04 09 51.2 -0.8
HAU *e* 04 10 50.4
HAU Haudompre 5.47 314 *e*Pn Pn 04 09 51.2 -0.8
SMOL Smolenice 5.47 39 *e*P Pb 04 09 58.5 -7.5
SMOL Smolenice 5.47 39 *e*PN Pb 04 09 58.5 -7.5
CGL Cagliari Serpe 5.47 205 ⇓Pn Pn 04 09 55.3 +3.1
CGL Cagliari Serpe 5.47 205 P Pn 04 09 55.3 +3.1
KRUC Moravsky 5.49 30 *e*PN Pn 04 09 50.8 -1.4
KRUC *e*SG **Sg** 04 11 25.2 -1.0
KOME Kolasin 5.49 104 ⇓*i*Pn Pn 04 09 53.9 +1.5
KOME *e*Sn **Sn** 04 10 54.9 -1.0
KOME Kolasin 5.49 104 ⇓*i*Pn Pn 04 09 53.9 +1.5
KOME *e*Sn **Sn** 04 10 54.9 -1.0
DRME Dracevica, Mon 5.52 111 ⇓*i*Pn Pn 04 09 53.6 +0.9
DRME *e*Sn **Sn** 04 10 55.8 -0.5
DRME Dracevica, Mon 5.52 111 ⇓*i*Pn Pn 04 09 53.6 +0.9
DRME *e*Sn **Sn** 04 10 55.8 -0.5
LANF Langenberg 5.53 328 P Pn 04 09 52.7 -0.1
LANF Langenberg 5.53 328 P Pn 04 09 52.7 -0.1
SSB Saint Sauveur 5.55 282 *e*Pn Pn 04 09 51.9 -1.3
SSB *e*Sn **Sn** 04 10 52.7 -4.6
SSB Saint Sauveur 5.55 282 *e*P Pn 04 09 51.9 -1.3
SSB *e* 04 10 52.7
SSB Saint Sauveur 5.55 282 *e*Pn Pn 04 09 51.9 -1.3
DIVS Divibare 5.57 90 *e*Pn Pn 04 09 53.7 +0.2
DIVS Divibare 5.57 90 *e*Pn Pn 04 09 55.9 +2.4
DIVS *e*Sn **Sn** 04 11 00.7 +2.9
DIVS Divibare 5.57 90 *e*Pn Pn 04 09 53.7 +0.2
DIVS Divibare 5.57 90 P Pn 04 09 55.2 +1.7
ULC Ulcinj 5.66 113 ⇑*i*Pn Pn 04 09 54.9 +0.3
ULC *e*Sn **Sn** 04 10 58.8 -1.0
ULC Ulcinj 5.66 113 P Pn 04 09 55.1 +0.5
ULC *e*Sn **Sn** 04 10 58.8 -1.0
SJES Sjenica 5.70 99 *e*Pn Pn 04 09 56.2 +0.9
SJES *e*Sn **Sn** 04 10 59.4 -1.6
BEY Berane 5.75 103 ⇓*i*Pn Pn 04 09 57.4 +1.4
BEY Berane 5.75 103 P Pn 04 09 58.1 +2.1
BEY *e*Sn **Sn** 04 11 00.8 -1.4
IVA Berane 5.75 103 ⇓*i*Pn Pn 04 09 57.4 +1.4
IVA *e*Sn **Sn** 04 11 00.8 -1.4
IVAS Ivanjica 5.76 95 *e*Pn Pn 04 09 55.9 -0.2
IVAS Ivanjica 5.76 95 *e*Pn Pn 04 09 56.1 0.0
IVAS Ivanjica 5.76 95 *e*Pn Pn 04 09 56.1 0.0
VRAC Vranov 5.76 30 *e*Pn Pn 04 09 54.6 -1.4
VRAC *e*Sg **Sg** 04 11 32.9 -2.2
VRAC Vranov 5.76 30 *e*PN Pn 04 09 54.6 -1.4
VRAC *e*SG **Sg** 04 11 32.9 -2.2
THEF They Montfort 5.80 314 P Pn 04 09 56.3 -0.2
THEF They Montfort 5.80 314 P Pn 04 09 56.3 -0.2
GOPC GO Pecny, Ondr 5.80 16 ⇑*i*PN Pn 04 09 55.7 -0.9
GOPC *ex* x 04 10 04.3
GOPC *e*SN **Sn** 04 10 57.4 -6.0
GOPC *e*SG **Sg** 04 11 35.5 -0.9
comp=Z,284nm,1.0s
GOPC AMS AMS 04 12 40.0
comp=Z,1μm,11.6s
GOPC GO Pecny, Ondr 5.80 16 ⇑*i*P Pn 04 09 55.7 -0.9
GOPC *e* 04 10 57.4
GOPC smax smax
comp=N,284nm,1.0s
GOPC MLR MLR
comp=Z,1μm,11.6s
GOPC GO Pecny, Ondr 5.80 16 *i* P Pn 04 09 55.7 -0.9
PRU Pruhonice 5.83 15 ⇓*e*PN Pn 04 09 55.5 -1.4
PRU *ex* x 04 10 04.3
PRU *e*SN **Sn** 04 10 58.3 -5.6
PRU *e*SG **Sg** 04 11 37.5 +0.4
comp=Z,150nm,0.8s
PRU AMS AMS 04 12 40.0
comp=Z,1μm,10.8s
PRU Pruhonice 5.83 15 *e*P Pn 04 09 55.5 -1.4
PRU *e* 04 10 58.3
PRU smax smax
comp=N,150nm,0.8s
PRU MLR MLR
comp=Z,1μm,10.8s
PRU Pruhonice 5.83 15 *e*P Pn 04 09 55.5 -1.4
JAVC Velka Javorina 5.83 38 *e*PN Pn 04 09 56.9 -0.2
JAVC *e*SG Sg 04 11 47.3 +10
NKC Novy Kostel 5.86 1 ⇓*e*PN Pn 04 09 55.4 -2.0
NKC *ex* x 04 10 20.8
NKC *e*SN **Sn** 04 10 59.9 -4.9
NKC *e*SG **Sg** 04 11 37.6 -0.6
comp=Z,200nm,0.8s
NKC AMS AMS 04 12 50.0
comp=Z,2μm,12.0s
NKC Novy Kostel 5.86 1 *e*P Pn 04 09 55.4 -2.0
NKC *e* 04 10 59.9
NKC smax smax
comp=N,200nm,0.8s
NKC MLR MLR
comp=Z,2μm,12.0s
NKC Novy Kostel 5.86 1 *e*P Pn 04 09 55.4 -2.0
PVY Plav 5.89 105 ⇑*i*Pn Pn 04 09 59.2 +1.3
PVY *e*Sn **Sn** 04 11 04.5 -1.1
TRBF Trabuc cave 5.96 270 P Pn 04 09 59.0 +0.3
TRBF Trabuc cave 5.96 270 P Pn 04 09 59.0 +0.3
LASF Ste Croix 6.04 270 *e*Pn Pn 04 09 59.5 -0.3
LASF *e*Sn **Sn** 04 11 04.0 -5.2
comp=Z,35nm,0.6s
LASF Ste Croix 6.04 270 *e*Pn Pn 04 09 59.5 -0.3
LASF *e*Sn **Sn** 04 11 04.0 -5.2
LASF Ste Croix 6.04 270 *e*Pn Pn 04 09 59.5 -0.3
PUK Puka 6.05 110 *i* PN Pb 04 10 11.6 -4.4
PUK Puka 6.05 110 ⇑Pn Pn 04 10 01.4 +1.3
PUK Puka 6.05 110 P Pn 04 10 01.4 +1.3
IFIL Filicudi I Eol 6.06 163 P Pn 04 09 58.5 -1.7
PEJK Peje 6.09 104 P Pn 04 10 02.8 +2.2
GRUS Gruza 6.12 92 *e*Pn Pn 04 10 00.7 -0.2
GRUS Gruza 6.12 92 *e*Pn Pn 04 10 00.7 -0.2
VYHS Vyhne 6.14 46 *e*P Pn 04 10 00.1 -1.1
VYHS Vyhne 6.14 46 *e*PN Pn 04 10 00.1 -1.1
VYHS Vyhne 6.14 46 *e*Pn Pn 04 10 00.1 -1.1
PAGF Fort de Pagny 6.14 315 *e*Pn Pn 04 10 01.2 0.0
PAGF Fort de Pagny 6.14 315 *e*Pn Pn 04 10 01.2 0.0
PAGF Fort de Pagny 6.14 315 *e*Pn Pn 04 10 01.2 0.0
TIP Timpagrande 6.19 145 ⇓*i*P Pn 04 10 03.0 +1.0
TIP Timpagrande 6.19 145 *e*Pn Pn 04 10 04.1 +2.1
TIP Timpagrande 6.19 145 P Pn 04 10 03.3 +1.3
TIP Timpagrande 6.19 145 ⇓*i*P Pn 04 10 03.0 +1.0
TIP Timpagrande 6.19 145 *e*Pn Pn 04 10 04.1 +2.1
MOX Moxa 6.29 356 P Pn 04 10 01.1 -2.1
MOX pmax pmax
comp=Z,78nm,0.8s
MOX Moxa 6.29 356 P Pn 04 10 01.1 -2.1
comp=Z,78nm,0.8s
SFTF Sexfontaines 6.29 310 *e*Pn Pn 04 10 02.5 -0.8
SFTF *e*Sn **Sn** 04 11 11.6 -3.8
comp=Z,146nm,0.4s
SFTF Sexfontaines 6.29 310 *e*Pn Pn 04 10 02.5 -0.8
SFTF *e*Sn **Sn** 04 11 11.6 -3.8
SFTF Sexfontaines 6.29 310 *e*Pn Pn 04 10 02.5 -0.8
SCTE Santa Cesarea 6.31 131 P Pn 04 10 03.5 -0.1
SMF Signal de Mont 6.33 294 *e*Pn Pn 04 10 02.9 -0.9
SMF *e*Sn **Sn** 04 11 11.8 -4.5
comp=Z,459nm,0.6s
SMF Signal de Mont 6.33 294 *e*Pn Pn 04 10 02.9 -0.9
SMF *e*Sn **Sn** 04 11 11.8 -4.5
SMF Signal de Mont 6.33 294 *e*P Pn 04 10 02.9 -0.9
SMF *e* 04 11 11.8
SMF Signal de Mont 6.33 294 *e*Pn Pn 04 10 02.9 -0.9
PVCC Panska Ves 6.35 14 ⇓*e*PN Pn 04 10 02.4 -1.7
PVCC *ex* x 04 10 29.9
PVCC *e*SN **Sn** 04 11 10.3 -6.5
PVCC *e*SG **Sg** 04 11 53.6 -0.3
comp=Z,875nm,1.5s
PVCC AMS AMS 04 13 00.0
comp=Z,1μm,12.3s
PVCC Panska Ves 6.35 14 *e*P Pn 04 10 02.4 -1.7
PVCC *e* 04 11 10.3
PVCC smax smax
comp=N,875nm,1.5s
PVCC MLR MLR
comp=Z,1μm,12.3s
PVCC Panska Ves 6.35 14 *e*P Pn 04 10 02.4 -1.7
TIR Tirane 6.36 116 ⇓*i*P Pn 04 10 04.4 +0.1
TIR Tirane 6.36 116 *e*Pn Pn 04 10 04.1 -0.2
TIR *e*Sn **Sn** 04 11 13.2 -4.0
TIR Tirane 6.36 116 P Pn 04 10 04.5 +0.1
TIR Tirane 6.36 116 *e*P Pn 04 10 04.1 -0.2
TIR *e* 04 11 13.2
TIR Tirane 6.36 116 *e*Pn Pn 04 10 04.1 -0.2
TIR S **Sn** 04 11 16.8 -0.4
ABH Alteburg 6.37 331 P Pn 04 10 04.5 +0.1
ABH Alteburg 6.37 331 P Pn 04 10 04.5 +0.1
PSZ Piszkesteto 6.38 54 ⇑*i*P Pn 04 10 08.1 +3.5
PSZ Piszkesteto 6.38 54 *e*Pn Pn 04 10 04.4 -0.3
PSZ *e*Sn **Sn** 04 11 12.8 -5.0
PSZ Piszkesteto 6.38 54 *e*Pn Pn 04 10 04.3 -0.3
PSZ Piszkesteto 6.38 54 *e*P Pn 04 10 04.3 -0.3
PSZ Piszkesteto 6.38 54 *e*Pn Pn 04 10 04.3 -0.3
ZATK Zatriq 6.40 105 P Pn 04 10 06.5 +1.6
MEZF Maizieres J'vi 6.46 312 *e*Pn Pn 04 10 05.5 -0.1
MEZF *e*Sn **Sn** 04 11 14.6 -4.9
comp=Z,176nm,0.5s
MEZF Maizieres J'vi 6.46 312 *e*Pn Pn 04 10 05.5 -0.1
MEZF *e*Sn **Sn** 04 11 14.6 -4.9
MEZF Maizieres J'vi 6.46 312 *e*Pn Pn 04 10 05.5 -0.1
LBL Lubilhac 6.46 281 P Pn 04 10 05.5 -0.2
LBL Lubilhac 6.46 281 P Pn 04 10 05.5 -0.2
SMRK Smrekonice 6.49 100 P Pn 04 10 06.6 +0.6
MORC Moravsky Berou 6.50 32 *e*Pn Pn 04 10 05.2 -1.0
MORC Moravsky Berou 6.50 32 *e*P Pn 04 10 05.2 -1.0
MORC Moravsky Berou 6.50 32 *e*Pn Pn 04 10 05.2 -1.0
MORC *e*Sg **Sg** 04 11 59.5 +0.8
MORC Moravsky Berou 6.50 32 *e*PN Pn 04 10 04.9 -1.3
MORC *e*SG **Sg** 04 11 59.5 +0.8
LOR Lormes 6.53 299 *e*Pn Pn 04 10 05.9 -0.8
LOR *e*Sn **Sn** 04 11 16.6 -4.8
comp=Z,444nm,0.4s
LOR Lormes 6.53 299 *e*Pn Pn 04 10 05.9 -0.8
LOR *e*Sn **Sn** 04 11 16.6 -4.8
LOR Lormes 6.53 299 P Pn 04 10 05.9 -0.8
LOR Lormes 6.53 299 *e*P Pn 04 10 05.9 -0.8
LOR *e* 04 11 16.6
LOR Lormes 6.53 299 *e*Pn Pn 04 10 05.9 -0.8
PRZK Prizren 6.58 106 P Pn 04 10 09.7 +2.4
PHP Peshkopia 6.58 111 P Pn 04 10 09.0 +1.7
PHP Peshkopia 6.58 111 *i* PN Pn 04 09 59.3 -8.0
PHP Peshkopia 6.58 111 P Pn 04 10 09.0 +1.7
DPC Dobruska-Polom 6.58 23 ⇓*e*PN Pn 04 10 05.1 -2.2
DPC *e*SN **Sn** 04 11 15.5 -7.1
DPC *e*SG **Sg** 04 11 57.8 -3.6
comp=Z,96nm,0.9s
DPC AMS AMS 04 13 00.0
comp=Z,800nm,12.3s
DPC Dobruska-Polom 6.58 23 *e*P Pn 04 10 05.1 -2.2
DPC *e* 04 11 15.5
DPC smax smax
comp=N,96nm,0.9s
DPC MLR MLR
comp=Z,800nm,12.3s
DPC Dobruska-Polom 6.58 23 *e*P Pn 04 10 05.1 -2.2
BRG Berggiesshubel 6.60 9 PN Pn 04 10 05.8 -1.7
BRG PG **Pg** 04 10 37.1 +0.6
BRG SN **Sn** 04 11 18.6 -4.3
BRG SG **Sg** 04 12 00.8 -1.0
comp=Z,145nm,1.0s
comp=N,1μm,12.3s
comp=E,597nm,18.6s
comp=Z,2μm,10.7s
BRG Berggiesshubel 6.60 9 P Pn 04 10 05.8 -1.7
BRG 04 11 18.6
BRG smax smax
comp=N,145nm,1.0s
BRG MLR MLR
comp=N,1μm,12.3s
BRG MLR MLR
comp=E,597nm,18.6s
BRG MLR MLR
comp=Z,2μm,10.7s
BRG Berggiesshubel 6.60 9 P Pn 04 10 05.8 -1.7
BRG S **Sn** 04 11 18.6 -4.3
comp=Z,2μm,10.7s
UPC Upice 6.64 21 ⇓*e*PN Pn 04 10 06.2 -1.9
UPC *e*SN **Sn** 04 11 17.1 -6.9
UPC *ex* x 04 11 30.4
UPC *e*SG **Sg** 04 11 58.7 -4.6
comp=Z,258nm,0.8s
UPC AMS AMS 04 13 10.0
comp=Z,1μm,12.2s
UPC Upice 6.64 21 *e*P Pn 04 10 06.2 -1.9
UPC *e* 04 11 17.1
UPC smax smax
comp=N,258nm,0.8s
UPC MLR MLR

comp=Z,1μm,12.2s
UPC Upice 6.64 21 *e*P **Pn 04 10 06.2 -1.9**
AGO Saint Agoulin 6.65 288 P **Pn 04 10 08.0 -0.3**
AGO Saint Agoulin 6.65 288 P **Pn 04 10 07.0 -1.3**
SSF Saint Saulge 6.68 297 *e*Pn **Pn 04 10 08.0 -0.6**
SSF *e*Sn **Sn 04 11 20.0 -5.0**
comp=Z,136nm,0.5s
SSF Saint Saulge 6.68 297 *e*Pn **Pn 04 10 08.0 -0.6**
SSF *e*Sn **Sn 04 11 20.0 -5.0**
SSF Saint Saulge 6.68 297 *e*P **Pn 04 10 08.0 -0.6**
SSF *e* 04 11 20.0
SSF Saint Saulge 6.68 297 *e*Pn **Pn 04 10 08.0 -0.6**
AVF Avril sur Loir 6.69 294 *e*Pn **Pn 04 10 07.6 -1.2**
AVF *e*Sn **Sn 04 11 20.8 -4.4**
comp=Z,110nm,0.7s
AVF Avril sur Loir 6.69 294 *e*Pn **Pn 04 10 07.6 -1.2**
AVF *e*Sn **Sn 04 11 20.8 -4.4**
AVF Avril sur Loir 6.69 294 *e*P **Pn 04 10 07.6 -1.2**
AVF *e* 04 11 20.8
AVF Avril sur Loir 6.69 294 *e*Pn **Pn 04 10 07.6 -1.2**
WLF Walferdange 6.73 324 ⇓PN **Pn 04 10 09.8 +0.5**
WLF ⇑SN **Sn 04 11 20.8 -5.3**
comp=N,66nm,0.0s
WLF Walferdange 6.73 324 *e*Pn **Pn 04 10 09.1 -0.2**
WLF *e*Sn **Sn 04 11 19.9 -6.2**
WLF Walferdange 6.73 324 *e*P **Pn 04 10 09.1 -0.2**
WLF *e* 04 11 19.9
WLF Walferdange 6.73 324 *e*Pn **Pn 04 10 09.1 -0.2**
KUBS Kucevo 6.76 86 *e*Pn **Pn 04 10 08.8 -0.9**
KUBS Kucevo 6.76 86 *e*Pn **Pn 04 10 08.8 -0.9**
BZS Buzias 6.76 76 ⇓*i*P **Pn 04 10 11.0 +1.3**
BZS Buzias 6.76 76 ⇓*i*P **Pn 04 10 11.0 +1.3**
MDVR Moldovita 6.77 83 ⇑*i*P **Pn 04 10 11.7 +1.7**
MDVR Moldovita 6.77 83 ⇑*i*P **Pn 04 10 11.7 +1.7**
MDVR S **Sn 04 11 28.6 +1.3**
OKC Ostrava-Krasne 6.78 34 ⇓*e*PN **Pn 04 10 09.3 -0.7**
OKC *e*SN **Sn 04 11 23.9 -3.6**
OKC *ex* x 04 11 41.2
OKC *e*SG **Sg 04 12 08.2 +0.4**
comp=N,81nm,1.0s
OKC AMS AMS 04 13 10.0
comp=N,500nm,12.5s
OKC Ostrava-Krasne 6.78 34 *e*P **Pn 04 10 09.3 -0.7**
OKC *e* 04 11 23.9
OKC MLR MLR
comp=Z,500nm,12.5s
OKC Ostrava-Krasne 6.78 34 *e*P **Pn 04 10 09.3 -0.7**
OKC *e*S **Sn 04 11 23.9 -3.6**
comp=Z,500nm,12.5s
CLTB Caltabellotta 6.83 174 *e*Pn Pn 04 10 15.4 +4.6
LANS Liptovska Anna 6.88 44 *e*P **Pn 04 10 10.5 -0.9**
LANS Liptovska Anna 6.88 44 *e*PN **Pn 04 10 10.5 -0.9**
LANS Liptovska Anna 6.88 44 *e*Pn **Pn 04 10 10.5 -0.9**
CLL Collm 6.95 4 *e*Pn **Pn 04 10 11.0 -1.3**
comp=Z,51nm,0.4s
CLL *e* 04 11 25.0
CLL *e* 04 11 59.0
CLL *e*Sg **Sg 04 12 15.0 +1.8**
comp=Z,264nm,1.1s
CLL Collm 6.95 4 *e*Pn **Pn 04 10 10.0 -2.3**
CLL Collm 6.95 4 *e*P **Pn 04 10 11.0 -1.3**
CLL pmax pmax
comp=Z,51nm,0.4s
CLL Collm 6.95 4 *e*Pn **Pn 04 10 10.0 -2.3**
CLL Collm 6.95 4 *e*P **Pn 04 10 11.0 -1.3**
comp=Z,51nm,0.4s
BGF Bois d'Agland 6.96 292 *e*Pn **Pn 04 10 12.3 -0.2**
BGF *e*Sn **Sn 04 11 28.1 -3.7**
comp=Z,134nm,0.3s
BGF Bois d'Agland 6.96 292 *e*Pn **Pn 04 10 12.3 -0.2**
BGF *e*Sn **Sn 04 11 28.1 -3.7**
BGF Bois d'Agland 6.96 292 *e*P **Pn 04 10 12.3 -0.2**
BGF *e* 04 11 28.1
BGF Bois d'Agland 6.96 292 *e*Pn **Pn 04 10 12.3 -0.2**
KSP Ksiaz 7.02 21 *e*Pn **Pn 04 10 10.6 -2.7**
KSP Ksiaz 7.02 21 *e*P **Pn 04 10 10.6 -2.7**
KSP Ksiaz 7.02 21 *e*Pn **Pn 04 10 10.6 -2.7**
VAE Valguarnera 7.08 166 Pn Pn 04 10 20.7 +6.4
baz=339,slow=14,SNR=2.2
OHR Ohrid 7.09 114 *e*Pn **Pn 04 10 14.5 +0.2**
SKO Skopje 7.14 106 *e*Pn **Pn 04 10 13.8 -1.1**
CAF Calviac 7.28 278 *e*Pn **Pn 04 10 17.2 +0.3**
CAF Calviac 7.28 278 *e*Pn **Pn 04 10 17.2 +0.3**
CAF Calviac 7.28 278 *e*P **Pn 04 10 17.2 +0.3**
CAF Calviac 7.28 278 *e*Pn **Pn 04 10 17.2 +0.3**
KEK Kerkira 7.30 127 P **Pn 04 10 16.4 -0.8**
KEK Kerkira 7.30 127 P **Pn 04 10 16.4 -0.8**
HYF Humbligny 7.31 297 *e*Pn **Pn 04 10 17.1 -0.1**
HYF Humbligny 7.31 297 *e*Pn **Pn 04 10 17.1 -0.1**
HYF Humbligny 7.31 297 *e*Pn **Pn 04 10 17.1 -0.1**
SRN Sarande 7.31 125 P **Pn 04 10 17.4 +0.2**
SRN Sarande 7.31 125 P **Pn 04 10 17.4 +0.2**
MTLF Montolieu 7.32 265 *e*Pn **Pn 04 10 18.2 +0.7**
MTLF *e*Sn **Sn 04 11 37.3 -3.5**
comp=Z,21nm,0.6s
MTLF Montolieu 7.32 265 *e*Pn **Pn 04 10 18.2 +0.7**
MTLF *e*Sn **Sn 04 11 37.3 -3.5**
MTLF Montolieu 7.32 265 P **Pn 04 10 18.3 +0.8**
MTLF Montolieu 7.32 265 *e*P **Pn 04 10 18.2 +0.7**
MTLF *e* 04 11 37.3
MTLF Montolieu 7.32 265 *e*Pn **Pn 04 10 18.2 +0.7**
TCF Toulx Ste Croi 7.33 289 *e*Pn **Pn 04 10 17.1 -0.4**
TCF *e*Sn **Sn 04 11 36.0 -4.9**
comp=Z,60nm,0.4s
TCF Toulx Ste Croi 7.33 289 *e*Pn **Pn 04 10 17.1 -0.4**
TCF *e*Sn **Sn 04 11 36.0 -4.9**
TCF Toulx Ste Croi 7.33 289 *e*P **Pn 04 10 17.1 -0.4**
TCF *e* 04 11 36.0
TCF Toulx Ste Croi 7.33 289 *e*Pn **Pn 04 10 17.1 -0.4**
NIE Niedzica 7.47 45 *e*Pn **Pn 04 10 19.4 0.0**
NIE Niedzica 7.47 45 *e*P **Pn 04 10 19.5 0.0**
NIE Niedzica 7.47 45 *e*Pn **Pn 04 10 19.5 0.0**
BIA Bitola 7.48 114 *e*Pn **Pn 04 10 20.0 +0.3**
MEM Membach 7.53 328 ⇑PN **Pn 04 10 20.6 +0.3**
MEM ⇓SN **Sn 04 11 39.7 -6.1**
comp=E,43nm,0.0s
MEM Membach 7.53 328 P **Pn 04 10 22.0 +1.7**
MEM Membach 7.53 328 Pn **Pn 04 10 20.5 +0.3**
MEM Membach 7.53 328 P **Pn 04 10 22.0 +1.7**
SGD Sagiada 7.62 126 P **Pn 04 10 21.8 +0.3**
SGD Sagiada 7.62 126 P **Pn 04 10 21.8 +0.3**
NEST Nestorio 7.62 118 P **Pn 04 10 22.7 +1.0**
NEST Nestorio 7.62 118 P **Pn 04 10 22.7 +1.0**
GIVF Givet 7.63 321 *e*Pn **Pn 04 10 22.4 +0.7**
GIVF Givet 7.63 321 *e*Pn **Pn 04 10 22.4 +0.7**
GIVF Givet 7.63 321 *e*P **Pn 04 10 22.4 +0.7**
GIVF Givet 7.63 321 *e*Pn **Pn 04 10 22.4 +0.7**
FNA Florina 7.63 115 *e*Pn **Pn 04 10 23.6 +1.8**
FNA Florina 7.63 115 P **Pn 04 10 22.8 +1.0**
FNA Florina 7.63 115 *e*P **Pn 04 10 23.6 +1.8**
FNA Florina 7.63 115 *e*Pn **Pn 04 10 23.6 +1.8**
BCLA Clavier 7.66 325 ⇑PN **Pn 04 10 23.0 +1.0**
BCLA ⇑SN **Sn 04 11 42.6 -6.4**
comp=E,34nm,0.0s
BCLA Clavier 7.66 325 Pn **Pn 04 10 23.0 +1.0**
HGN Heimansgroeve 7.68 328 *e*Pn **Pn 04 10 22.9 +0.5**
comp=E,22nm,0.4s
HGN *e*Sn **Sn 04 11 42.7 -6.8**
HGN Heimansgroeve 7.68 328 *e*Pn **Pn 04 10 22.9 +0.5**
comp=E,22nm,0.4s
RJF Les Rejaudoux 7.68 281 *e*Pn **Pn 04 10 22.7 +0.3**
RJF *e*Sn **Sn 04 11 44.7 -5.0**
comp=E,27nm,0.6s
RJF Les Rejaudoux 7.68 281 *e*Pn **Pn 04 10 22.7 +0.3**
RJF *e*Sn **Sn 04 11 44.7 -5.0**
RJF Les Rejaudoux 7.68 281 *e*P **Pn 04 10 22.7 +0.3**
RJF *e* 04 11 44.7
RJF Les Rejaudoux 7.68 281 *e*Pn **Pn 04 10 22.7 +0.3**
DRGR 7.73 68 ⇑*i*P **Pn 04 10 24.1 +1.0**
DRGR 7.73 68 S **Sn 04 11 44.3 -6.6**
DRGR 7.73 68 ⇑*i*P **Pn 04 10 24.1 +1.0**
IGT Igoumenitsa 7.73 126 P **Pn 04 10 23.1 +0.1**
IGT Igoumenitsa 7.73 126 P **Pn 04 10 25.2 +2.2**
IGT Igoumenitsa 7.73 126 P **Pn 04 10 25.2 +2.2**
DOU Dourbes 7.73 320 ⇑PN **Pn 04 10 23.2 +0.1**
DOU ⇑SN **Sn 04 11 45.5 -5.3**
comp=N,33nm,0.0s
DOU Dourbes 7.73 320 Pn **Pn 04 10 23.1 +0.1**
STIP Stip 7.76 107 *e*Pn **Pn 04 10 24.6 +1.1**
PENT Pentalofos 7.80 119 P **Pn 04 10 25.1 +0.9**
PENT Pentalofos 7.80 119 P **Pn 04 10 25.1 +0.9**
BUG Bochum--Univer 7.82 336 P **Pn 04 10 25.4 +1.2**
BUG Bochum--Univer 7.82 336 P **Pn 04 10 25.4 +1.2**
UZH Uzhgorod 8.13 55 *e*P **Pn 04 10 31.5 +3.0**
SNF Seneffe 8.17 321 ⇑PN **Pn 04 10 29.5 +0.5**
SNF Seneffe 8.17 321 Pn **Pn 04 10 29.4 +0.5**
VTS Vitosha 8.17 99 ⇓*i*P **Pn 04 10 30.5 +1.3**
VTS Vitosha 8.17 99 *e*Pn **Pn 04 10 29.7 +0.5**
VTS Vitosha 8.17 99 *e*P **Pn 04 10 29.9 +0.7**
VTS Vitosha 8.17 99 *e*P **Pn 04 10 29.7 +0.5**
VTS Vitosha 8.17 99 *e*Pn **Pn 04 10 29.7 +0.5**
VAY Valandovo 8.18 108 *e*Pn **Pn 04 10 25.7 -3.5**
MLS Moulis 8.21 264 P **Pn 04 10 30.4 +0.7**
MLS Moulis 8.21 264 P **Pn 04 10 30.4 +0.7**
LFF La Frestale 8.22 278 *e*Pn **Pn 04 10 32.1 +2.3**
LFF La Frestale 8.22 278 *e*Pn **Pn 04 10 32.1 +2.3**
LFF La Frestale 8.22 278 *e*P **Pn 04 10 32.1 +2.3**
LFF La Frestale 8.22 278 *e*Pn **Pn 04 10 32.1 +2.3**
KKB Krupnik 8.31 104 *e*P **Pn 04 10 32.2 +1.1**
LKD2 Lefkada island 8.42 129 P **Pn 04 10 32.6 +0.1**
LKD2 Lefkada island 8.42 129 P **Pn 04 10 32.6 +0.1**
WTSB Winterswijk 8.42 336 *e*Pn **Pn 04 10 33.4 +1.0**
comp=N,18nm,0.5s
WTSB Winterswijk 8.42 336 *e*Pn **Pn 04 10 33.4 +1.0**
comp=N,18nm,0.5s
MMB Musomiste 8.87 104 *e*P **Pn 04 10 40.0 +1.3**
KWP Kalwaria Pacla 8.87 50 *e*Pn Pn 04 10 43.8 +5.1
KWP Kalwaria Pacla 8.87 50 *e*P Pn 04 10 43.8 +5.2
KEST Kesra 8.92 195 Pn Pn 04 10 45.0 +5.6
comp=N,2.7nm,0.3s,baz=297,slow=3.8,SNR=28
KEST Sn **Sn 04 12 23.2 +3.1**
baz=352,slow=18,SNR=2.1
KEST LR LR 04 13 22.3
comp=N,36nm,19.7s,baz=334,slow=33
KEST Kesra 8.92 195 *e*Pn Pn 04 10 45.8 +6.3
KEST *e*Sn **Sn 04 12 23.2 +3.1**
MFF Saint Martin d 8.99 289 *e*Pn **Pn 04 10 41.4 +1.2**
MFF *e*Sn **Sn 04 12 14.7 -6.9**
comp=N,42nm,0.8s
MFF Saint Martin d 8.99 289 *e*Pn **Pn 04 10 41.4 +1.2**
MFF *e*Sn **Sn 04 12 14.7 -6.9**
MFF Saint Martin d 8.99 289 *e*P **Pn 04 10 41.4 +1.2**
MFF *e* 04 12 14.7
MFF Saint Martin d 8.99 289 *e*Pn **Pn 04 10 41.4 +1.2**
VOIR 9.15 79 ⇑*i*P **Pn 04 10 45.1 +2.5**
THTN Thala 9.22 198 *e*Pn Pn 04 10 49.8 +6.3
ETSF Etsaut 9.40 265 *e*Pn **Pn 04 10 49.9 +3.8**
ETSF Etsaut 9.40 265 *e*Pn **Pn 04 10 49.9 +3.8**
ETSF Etsaut 9.40 265 *e*P **Pn 04 10 49.9 +3.8**
LDF La Druitiere 9.52 301 *e*Pn **Pn 04 10 48.5 +1.0**
LDF *e*Sn **Sn 04 12 26.7 -7.9**
comp=N,45nm,0.4s
LDF La Druitiere 9.52 301 *e*Pn **Pn 04 10 48.5 +1.0**
LDF *e*Sn **Sn 04 12 26.7 -7.9**
LDF La Druitiere 9.52 301 *e*P **Pn 04 10 48.5 +1.0**
LDF *e* 04 12 26.7
LDF La Druitiere 9.52 301 *e*Pn **Pn 04 10 48.5 +1.0**
RZN Rozhen 9.52 102 *e*P **Pn 04 10 48.3 +0.5**
BUR08 Bucovina Ar. S 9.59 66 *e*Pn **Pn 04 10 52.1 +3.5**
BUR04 Bucovina Ar. S 9.59 66 *e*Pn **Pn 04 10 51.7 +3.1**
BURAR Bucovina Array 9.59 66 ⇑*i*P **Pn 04 10 50.6 +1.9**
BURAR Bucovina Array 9.59 66 P **Pn 04 10 50.5 +1.9**
BURAR Bucovina Array 9.59 66 ⇑*i*P **Pn 04 10 50.6 +1.9**
MLR Muntele Rosu 9.78 79 Pn Pn 04 10 57.4 +6.1
comp=N,0.0nm,0.3s,baz=240,slow=18,SNR=2.1
FLN La Foliniere 9.80 301 P **Pn 04 10 50.2 -1.2**
FLN La Foliniere 9.80 301 P **Pn 04 10 50.2 -1.2**
GRR Gorron 9.90 298 *e*P **Pn 04 10 51.7 -1.1**
GRR Gorron 9.90 298 *e*P **Pn 04 10 51.7 -1.1**
QUIF Quistinic 11.26 294 P **Pn 04 11 10.8 -0.6**
QUIF Quistinic 11.26 294 P **Pn 04 11 10.8 -0.6**
ROSF Rostrenen 11.43 296 P **Pn 04 11 12.8 -0.9**
ROSF Rostrenen 11.43 296 P **Pn 04 11 12.8 -0.9**
KLNR Kaliningrad 11.46 24 ⇑*e*P **Pn 04 11 10.9 -3.2**
KLNR Kaliningrad 11.46 24 *e*P **Pn 04 11 10.9 -3.2**
ESDC Sonseca Array 12.93 254 Pn **Pn 04 11 33.6 -0.7**
comp=N,0.2nm,0.3s,baz=68,slow=12,SNR=8.0
AKASG Malin Array Be 13.09 55 Pn **Pn 04 11 35.9 -0.4**
comp=N,0.5nm,0.3s,baz=240,slow=13,SNR=3.6
AKBB Malin Array Si 13.09 55 *e*Pn **Pn 04 11 35.9 -0.4**
AKBB Malin Array Si 13.09 55 *e*P **Pn 04 11 35.9 -0.4**
AKBB Malin Array Si 13.09 55 *e*Pn **Pn 04 11 35.9 -0.4**
IDI Anoyia 13.28 129 Pn **Pn 04 11 36.0 -3.2**
baz=344,slow=13,SNR=1.8
IDI Sn Sn 04 13 53.4 -14
comp=N,0.3nm,0.3s,baz=338,slow=19,SNR=2.8
PBRG Braganca 14.11 266 *e*P **P 04 12 01.0 +2.8**
comp=N,15nm,2.0s
IIGN Ignalina 14.18 34 *e*P **P 04 11 55.0 -3.8**
IIGN IAmb IAmb 04 12 03.2
comp=Z,4.4nm,0.5s
ISAL Salakas 14.29 33 *e*P **P 04 11 56.3 -3.7**
ISAL IAmb IAmb 04 12 00.2
comp=Z,6.4nm,0.8s
IDID Didziasalis 14.36 35 *e*P **P 04 11 57.6 -3.2**
IDID IAmb IAmb 04 12 00.6
comp=Z,5.3nm,0.9s
IDID Didziasalis 14.36 35 *e*P **P 04 11 57.6 -3.2**
SNR=66
IZAR Zarasai 14.47 33 *e*P **Pn 04 11 58.0 +2.8**
IZAR IAmb IAmb 04 12 03.8
comp=Z,5.8nm,0.7s
MVO Moncorvo 14.52 264 *e*P **P 04 12 01.6 -1.1**
comp=Z,22nm,1.5s
MVO *e*LR LR 04 16 44.0
comp=Z,154nm,16.0s
MVO Moncorvo 14.52 264 *e*P **P 04 12 01.6 -1.1**
EKA Eskdalemuir Ar 14.76 323 Pn **Pn 04 11 57.6 -1.4**
baz=136,slow=14,SNR=17
EKA Sn Sn 04 14 30.6 -12
baz=134,slow=25,SNR=2.9
PCAB Cabril 15.06 267 *e*P **Pn 04 12 02.0 -1.3**
comp=Z,24nm,1.3s
MTE Manteigas 15.15 262 *e*P **P 04 12 10.7 +0.9**
comp=Z,20nm,1.8s
MTE *e*LR LR 04 18 22.3
comp=Z,154nm,16.0s
MTE Manteigas 15.15 262 *e*P **P 04 12 10.7 +0.9**
PGAV Gavieira, Arco 15.16 268 *e*LR LR 04 18 20.6
comp=Z,184nm,18.0s
PCBR Castelo Branco 15.32 260 *e*P **P 04 12 11.6 +0.1**
comp=Z,8.5nm,1.9s
PCBR Castelo Branco 15.32 260 *e*P **P 04 12 11.6 +0.1**
KONO Kongsberg 15.38 355 *e*Pn **P 04 12 12.2 +0.1**
comp=Z,38nm,1.3s
KONO Kongsberg 15.38 355 ⇓*e*P **Pn 04 12 06.0 -1.4**
KONO pmax pmax
comp=Z,15nm,1.5s
PMRV Marv??o 15.43 258 *e*P **P 04 12 11.9 -0.9**
comp=Z,12nm,1.7s
PMRV *e*LR LR 04 17 53.7
comp=Z,131nm,18.0s
PMRV Marv??o 15.43 258 *e*P **P 04 12 11.9 -0.9**
PBAR Barrancos 15.75 253 *e*P **P 04 12 16.7 +0.3**
comp=Z,29nm,1.5s
PBAR Barrancos 15.75 253 *e*P **P 04 12 16.7 +0.3**
HFS Hagfors 15.81 3 Pn **Pn 04 12 10.5 -2.4**
comp=Z,0.1nm,0.3s,baz=190,slow=22,SNR=3.3
HFS LR LR 04 19 06.7
comp=Z,207nm,18.1s,baz=184,slow=40
PESTR Estremoz 15.81 256 *e*P **P 04 12 17.3 +0.3**
comp=Z,8.6nm,2.3s
PESTR Estremoz 15.81 256 *e*P **P 04 12 17.3 +0.3**
NC602 NORSAR Array S 16.39 359 *e*Pn **P 04 12 22.5 -0.8**
NAO01 NORSAR Array S 16.52 358 *e*Pn **P 04 12 24.5 -0.2**
BR101 Keskin Array S 16.54 99 *e*Pn **Pn 04 12 22.3 -0.4**
BR101 Keskin Array S 16.54 99 *e*Pn **Pn 04 12 22.3 -0.4**
BR131 Keskin Array S 16.54 99 *e*Pn **P 04 12 29.7 +4.4**
BRTR Keskin Array B 16.54 99 Pn **Pn 04 12 22.3 -0.3**
comp=Z,0.1nm,0.3s,baz=291,slow=11,SNR=2.6
PVAQ Vaqueiros 16.60 252 *e*LR LR 04 19 33.9
comp=Z,108nm,18.0s
VSU Vasula 16.69 27 ⇑*e*P **Pn 04 12 22.9 -1.3**
VSU pmax pmax
comp=Z,67nm,1.2s
NB2 NORSAR Subarra 16.70 358 P **P 04 12 25.9 -0.9**
comp=Z,14nm,0.8s,baz=176,slow=11
NB200 NORSAR Array S 16.70 358 *e*Pn **Pn 04 12 22.6 -1.8**
NOA NORSAR Array B 16.70 358 Pn **Pn 04 12 22.6 -1.8**
comp=Z,0.4nm,0.3s,baz=175,slow=14,SNR=32
NOA LR LR 04 19 22.1
comp=Z,78nm,18.8s,baz=175,slow=39
NBO00 NORSAR Array S 16.70 358 *e*Pn **P 04 12 27.2 +0.4**
NB201 NORSAR Array S 16.71 358 *e*Pn **P 04 12 26.0 -0.9**
NC405 NORSAR Array S 16.77 359 *e*Pn **P 04 12 26.3 -1.2**
NC303 NORSAR Array S 16.89 359 *e*Pn **P 04 12 28.8 0.0**
NC204 NORSAR Array S 16.95 358 *e*Pn **P 04 12 30.3 +0.7**
MDT Midelt 17.48 234 LR LR 04 18 51.0
comp=Z,75nm,18.4s,baz=166,slow=36
FIA0 FINESS Array S 18.95 21 *e*P **P 04 12 49.4 -2.1**
FIA0 FINESS Array S 18.95 21 *e*P **P 04 12 49.4 -2.1**
FINES FINESS Array B 18.95 21 P **P 04 12 49.4 -2.1**
comp=Z,0.6nm,0.3s,baz=217,slow=7.6,SNR=21
FIA1 FINESS Array S 18.95 21 *e*P **P 04 12 50.2 -1.2**
VSR Storozhevoye 19.26 60 *e*P **P 04 12 53.9 -1.2**
VSR pmax pmax
comp=Z,8.0nm,0.9s
VORD Divnogorie 19.30 60 *e*P **P 04 12 54.4 -1.0**
VORD pmax pmax
comp=Z,20nm,1.0s
VAF Ylistaro 19.64 14 P **Pn 04 12 59.7 -0.7**
KIV Kislovodsk 21.78 80 *e*P **P 04 13 22.9 +0.3**
comp=Z,9.3nm,0.6s
KIV Kislovodsk 21.78 80 *e*P **P 04 13 23.2 +0.7**
KIV pmax pmax
comp=Z,12nm,1.0s
KIV MLR MLR
comp=Z,24nm,14.0s
KIV Kislovodsk 21.78 80 *e*P **P 04 13 22.9 +0.3**
comp=Z,9.3nm,0.6s
KVAR Kislovodsk Arr 21.79 80 P **P 04 13 22.9 +0.2**
comp=Z,4.3nm,0.5s,baz=176,slow=8.8,SNR=2.8
KVAR LR LR 04 24 48.5
comp=Z,32nm,18.4s,baz=310,slow=45
NEY Neytrino 21.96 82 ⇑*e*P **P 04 13 25.0 +0.4**
NEY pmax pmax
comp=Z,1.0nm,0.9s
NEY Neytrino 21.96 82 *e*P **P 04 13 25.0 +0.4**
comp=Z,1.0nm,0.9s
KBZ Khabaz 21.98 81 P **P 04 13 25.1 +0.6**
comp=Z,3.0nm,0.7s,baz=312,slow=4.9,SNR=6.9
OUL Oulu 22.10 15 P **P 04 13 28.9 +3.3**
TAM Tamanrasset 22.23 197 *e*P **P 04 13 28.1 +0.6**
comp=Z,6.4nm,1.0s
TAM Tamanrasset 22.23 197 *e*P **P 04 13 28.1 +0.6**
TAM pmax pmax
comp=Z,6.0nm,1.0s
TAM Tamanrasset 22.23 197 *e*P **P 04 13 28.1 +0.6**
comp=Z,6.4nm,1.0s
KLMR Klimovskoe 23.11 35 *e*P **P 04 13 34.5 -1.7**
KLMR pmax pmax
comp=Z,15nm,1.2s
KLMR Klimovskoe 23.11 35 *e*P **P 04 13 34.6 -1.7**
KLMR AMP 04 13 42.9
comp=Z,15nm,1.2s
GNI Garni 24.32 89 P **P 04 13 48.1 -0.4**
comp=Z,3.6nm,0.5s,baz=270,slow=2.0,SNR=2.7
GNI Garni 24.32 89 *e*P **P 04 13 53.4 +4.9**
TMCR Tamitsa 24.57 27 *e*P **P 04 13 56.2 +5.9**
TMCR pmax pmax
comp=Z,19nm,0.9s
PRGR Permogore 26.06 37 *e*P **P 04 14 03.0 -0.8**
PRGR pmax pmax
comp=Z,8.0nm,0.5s
ARA0 ARCESS Array S 26.11 11 *e*P **P 04 14 05.2 +0.9**
ARCES ARCESS Array B 26.11 11 P **P 04 14 05.2 +0.9**
comp=Z,3.0nm,0.9s,baz=196,slow=8.6,SNR=5.1
JMIC Jan Mayen 28.57 346 LR LR 04 27 06.7
comp=Z,52nm,18.2s,baz=164,slow=39
AKTO Aktyubinsk 31.16 62 P **P 04 14 48.6 -0.9**
comp=Z,1.4nm,0.6s,baz=274,slow=7.7,SNR=5.3
TOA1 Torodi Ar. Sit 32.40 199 *e*P **P 04 14 58.3 -2.3**
TOA0 Torodi Ar. Sit 32.41 199 *e*P **P 04 14 58.9 -1.8**
TORD Torodi Ar. Bea 32.41 199 P **P 04 14 58.3 -2.3**
comp=Z,2.7nm,0.5s,baz=12,slow=8.9,SNR=60
TORD LR LR 04 28 48.8
comp=Z,81nm,18.6s,baz=255,slow=38
ABKAR Akbulak array 32.57 64 *e*P **P 04 15 01.7 -0.1**
KOWA Kowa 32.85 210 P **P 04 15 03.1 -1.4**
comp=Z,1.7nm,0.7s,baz=22,slow=10.0,SNR=4.9
BRVK Borovoye 38.30 56 ⇑*e*P **P 04 15 49.7 -1.3**
BRVK pmax pmax
comp=Z,2.0nm,1.0s
BVAR Borovoye Array 38.36 56 P **P 04 15 50.9 -0.7**
comp=Z,0.6nm,0.6s,baz=282,slow=7.1,SNR=4.7
KK31 Karatay Array 41.34 71 *e*P **P 04 16 19.0 +2.5**
KK31 Karatay Array 41.34 71 *e*P **P 04 16 19.0 +2.5**
KKAR Karatay Array 41.34 71 *e*P **P 04 16 19.0 +2.5**
KKAR Karatay Array 41.34 71 *e*P **P 04 16 19.0 +2.5**
KURBB Kurchatov Arra 43.86 57 P **P 04 16 34.1 -2.7**
comp=Z,0.9nm,0.7s,baz=294,slow=9.6,SNR=4.6
KURK Kurchatov 43.89 57 *e*P **P 04 16 34.1 -2.9**
KURK Kurchatov 43.89 57 ⇓*e*P **P 04 16 34.7 -2.3**
KURK pmax pmax
comp=Z,3.0nm,1.9s
AAK Ala-Archa 44.21 69 ⇑*e*P **P 04 16 40.5 +0.6**
AAK pmax pmax
comp=Z,1.0nm,1.1s
ZALV Zalesovo Beam 46.44 51 LR LR 04 37 21.8
comp=Z,36nm,20.4s,baz=224,slow=37
KSH Kashi 46.59 73 P **P 04 16 57.3 -1.5**
KSH pmax pmax
comp=Z,290nm,4.4s
MK32 Makanchi Array 47.58 61 *e*P **P 04 17 06.3 0.0**
MKAR Makanchi Array 47.58 61 P **P 04 17 06.3 0.0**
comp=Z,1.8nm,0.6s,baz=290,slow=7.2,SNR=7.6
MK01 Makanchi Array 47.59 61 *e*P **P 04 17 06.3 -0.1**
WMQ Urumqi 52.31 62 P **P 04 17 44.2 +1.8**
SONA0 Songino Array 61.31 50 *e*P **P 04 18 45.9 -0.3**
SONM Songino Array 61.31 50 P **P 04 18 45.9 -0.3**
comp=Z,0.3nm,0.5s,baz=305,slow=5.1,SNR=2.9
YKA Yellowknife Ar 65.31 336 P **P 04 19 12.1 -0.2**
comp=Z,0.9nm,0.7s,baz=40,slow=5.9,SNR=18
BILL Bilibino 66.21 10 *e*P **P 04 19 17.9 -0.2**
BILL *e* 04 19 53.1
BILL *e* 04 21 44.9
BILL *e*PPP PPP 04 23 13.9
BILL pmax pmax
comp=Z,2.0nm,1.1s
BILL MLR MLR
comp=Z,91nm,20.0s
ULM Lac du Bonnet 66.97 318 P **P 04 19 22.9 -0.3**
comp=Z,1.3nm,0.5s,baz=11,slow=5.2,SNR=3.5
PALK Pallekele 69.58 100 LR LR 04 54 02.3
comp=Z,74nm,19.1s,baz=91,slow=39
ILAR Eielson Array 69.97 351 P **P 04 19 42.2 +0.5**
comp=Z,0.4nm,0.8s,baz=20,slow=5.1,SNR=4.3
ILB Eielson Array 69.97 351 *e*P **P 04 19 42.2 +0.5**
COLA College 69.98 351 ⇑*e*P **P 04 19 40.3 -1.4**
COLA pmax pmax
comp=Z,2.0nm,1.1s
RIDG Independ'e Rid 70.71 349 *e*P **P 04 19 47.8 +1.5**
comp=Z,16nm,1.5s
DHY Denali Highway 71.67 350 *e*P **P 04 19 52.8 +0.6**
comp=Z,3.3nm,0.9s
KSU1 Kansas State U 75.08 310 *e*P **P 04 20 12.8 +0.2**
comp=Z,4.7nm,0.6s
GCMT Greycliff 76.54 322 *e*P **P 04 20 21.6 +0.6**
PHWY Pilot Hill 78.05 317 *e*P **P 04 20 27.6 -2.1**
comp=Z,72nm,1.1s
PD31 Pinedale Array 78.86 320 *e*P **P 04 20 34.0 -0.1**
PDAR Pinedale Array 78.86 320 P **P 04 20 34.0 -0.1**
comp=Z,0.4nm,0.6s,baz=49,slow=8.5,SNR=3.6
WMOK Wichita Mounta 79.43 309 *e*P **P 04 20 37.9 +0.8**
comp=Z,7.0nm,1.3s
WMOK Wichita Mounta 79.43 309 *e*P **P 04 20 37.9 +0.8**
WMOK pmax pmax
comp=Z,7.0nm,1.3s
D05A Enumclaw 80.30 330 *e*P **P 04 20 43.1 +1.6**
comp=Z,34nm,0.8s
R11A Troy Canyon, C 85.13 321 *e*S **S 04 31 39.5 +2.3**
TX31 Lajitas Ar. Si 86.21 308 *e*P **P 04 21 14.1 +1.6**
TXAR Lajitas Array 86.21 308 P **P 04 21 13.9 +1.4**
comp=Z,0.4nm,0.5s,baz=78,slow=3.8,SNR=9.7
KCTM Capetown 86.94 328 *e*P **P 04 21 14.0 -1.8**

*BJI **06** 04:17:22.6, 1°.56S×127°.33E, h36km, mb5.1/36, mB5.1/20, Ms4.6/2*
*ISCJB **06** 04:17:28.2±0.2, 0°.92S±0°.02×126°.86E±0°.02, h34km, mb4.9/85, MS3.8/22, Error ellipse: s-maj=3.5km s-min=3.3km az=14.1*
*MOS **06** 04:17:28.7±0.8, 0°.96S×126°.84E, h43km, mb5.1/27, Error ellipse: s-maj=10.4km s-min=5.8km az=113.8*
*DJA **06** 04:17:28.5±0.2, 1°.5±3°×12°.7E±°, h10km, M5.0/20, mb5.2/20, mB5.4/11, MLv5.0/19, Mw(mB)4.9/11*
*IDC **06** 04:17:30.1±1.9, 0°.96S×126°.78E, h39km±16km, mb4.4/29, mb1 4.4/32, mb1mx4.3/55, mbtmp4.6/32, ML3.9/3, MS3.7/24, Ms1 3.7/24, ms1mx3.5/58, Error ellipse: s-maj=17.5km*

s-min=10.9km az=75.0
NEIC ***06*** *04:17:31.8±0.7, 0°95S×126°91E, h57km±7km, mb5.0/42,*
Error ellipse: s-maj=7.3km s-min=5.0km az=73.0
ISC 06 04:17:30.2±0.3, 0°90S±0°04×126°84E±0°04, h34km, n218,
σ1°48/214, mb4.9/85, MS3.7/22, 8C-4D, Southern
Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**0.71**	**69**	P	**Pn**	**04 17 42.3**	**-1.5**
SANI	**Sanana**	**1.42**	**217**	P	**Pn**	**04 17 51.5**	**-2.1**
TNTI	**Ternate**	**1.74**	**18**	*e*Pn	**Pn**	**04 17 58.3**	**+0.3**
TNTI				*e*Sn	**Sn**	**04 18 18.1**	**-1.0**
NLAI	**Namlea**	**2.34**	**174**	P	**Pn**	**04 18 05.7**	**-0.5**
AAI	**Ambon**	**3.08**	**154**	P	**Pn**	**04 18 17.5**	**+1.0**
AAI	**Ambon**	**3.08**	**154**	P	**Pn**	**04 18 19.4**	**+2.9**
MSAI	**Masohi**	**3.21**	**139**	P	**Pn**	**04 18 19.7**	**+1.5**
KMSI	**Cibinong**	**3.21**	**297**	P	**Pn**	**04 18 20.4**	**+2.2**
SIJI	**Sorong**	**4.43**	**90**	Pn	**Pn**	**04 18 35.2**	**+0.3**
	12nm,0.3s,baz=274,slow=14,SNR=17						
SIJI				Sn	**Sn**	**04 19 30.0**	**+4.6**
	7.9nm,0.3s,baz=194,slow=24,SNR=5.6						
SGSI	**Sangihe**	**4.74**	**344**	P	**Pn**	**04 18 40.9**	**+1.6**
MRSI	**Marisa**	**5.08**	**286**	P	**Pn**	**04 18 44.1**	**+0.1**
APSI	**Ampana**	**5.19**	**270**	P	**Pn**	**04 18 46.0**	**+0.6**
KDI	**Kendari**	**5.20**	**234**	P	**Pn**	**04 18 45.4**	**-0.1**
FAKI	**Fak Fak**	**5.77**	**110**	P	**Pn**	**04 18 54.8**	**+1.4**
FAKI	**Fak Fak**	**5.77**	**110**	*e*Pn	**Pn**	**04 18 55.2**	**+1.7**
FAKI				*e*Sn	**Sn**	**04 20 00.3**	**+1.9**
PCI	**Palu**	**7.00**	**270**	P	**Pn**	**04 19 11.3**	**+0.9**
PCI	**Palu**	**7.00**	**270**	P	**Pn**	**04 19 12.0**	**+1.6**
PCI				pmax	pmax		
	comp=Z,221nm,0.6s						
MPSI	**Mapaga**	**7.05**	**280**	P	**Pn**	**04 19 13.4**	**+2.4**
TTSI	**Tana Toraja**	**7.33**	**253**	P	**Pn**	**04 19 15.5**	**+0.6**
RKPI	**Ransiki, Papua**	**7.36**	**95**	P	**Pn**	**04 19 16.3**	**+1.0**
KMPI	**Kaimana, Papua**	**7.39**	**112**	P	**Pn**	**04 19 16.4**	**+0.7**
BNSI	**Bone**	**7.57**	**243**	P	**Pn**	**04 19 18.7**	**+0.5**
SPSI	**Sidrap Palu**	**7.69**	**247**	P	**Pn**	**04 19 20.4**	**+0.6**
DAV	**Davao City (W)**	**8.02**	**351**	LR	LR	04 22 59.9	
	comp=Z,309nm,21.3s,baz=30,slow=41						
BKSI	**Bulukumba**	**8.02**	**237**	P	**Pn**	**04 19 24.7**	**+0.4**
KAPI	**Kappang**	**8.17**	**240**	*e*Pn	**Pn**	**04 19 27.9**	**+1.5**
	comp=Z,127nm,1.0s						
KAPI				*e*Sn	**Sn**	**04 20 59.2**	**+1.6**
SOEI	**Soe**	**9.16**	**196**	P	**Pn**	**04 19 40.2**	**0.0**
SOEI	**Soe**	**9.16**	**196**	*e*Pn	Pn	04 19 48.3	+8.1
BAKI	**Biak**	**9.27**	**92**	P	Pn	04 19 49.3	+7.7
EDFI	**Ende, Flores**	**9.33**	**213**	P	**Pn**	**04 19 42.8**	**+0.3**
BATI	**Baumata**	**9.77**	**199**	LR	LR	04 23 59.1	
	comp=Z,352nm,20.3s,baz=24,slow=40						
MYLDM	**Lahad Datu**	**10.29**	**306**	*e*Pn	**Pn**	**04 20 00.1**	**+4.6**
MTN	**Manton Dam**	**12.61**	**160**	*e*Pn	**Pn**	**04 20 26.4**	**-0.9**
GENI	**Genyem**	**13.43**	**97**	P	**P**	**04 20 46.2**	**-1.2**
JAY	**Jayapura**	**13.95**	**97**	Pn	**Pn**	**04 20 45.9**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=273,slow=19,SNR=2.6						
JAY	**Jayapura**	**13.95**	**97**	P	**Pn**	**04 20 46.5**	**+0.8**
JAGI	**Jajag, Banyuwa**	**14.70**	**239**	P	**P**	**04 21 03.8**	**+2.2**
JAGI	**Jajag, Banyuwa**	**14.70**	**239**	*e*Pn	**P**	**04 21 02.9**	**+1.3**
TGY	**Tagaytay City**	**16.01**	**339**	Pn	**Pn**	**04 21 13.2**	**+0.2**
	comp=Z,28nm,0.3s,baz=117,slow=6.8,SNR=2.7						
PWJI	**Pagerwojo**	**16.57**	**244**	P	**P**	**04 21 21.9**	**-0.4**
NGJI	**Ngawi**	**16.62**	**247**	P	P	04 21 32.3	+9.4
KSM	**Kuching**	**16.70**	**278**	*e*Pn	**P**	**04 21 24.8**	**+1.0**
	comp=Z,22nm,1.1s						
FITZ	**Fitzroy Crossi**	**17.13**	**184**	P	**Pn**	**04 21 26.2**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=20,slow=7.7,SNR=8.2						
FITZ				LR	LR	04 29 05.5	
	comp=Z,278nm,18.9s,baz=7.0,slow=41						
FITZ	**Fitzroy Crossi**	**17.13**	**184**	*e*Pn	**Pn**	**04 21 26.1**	**-1.0**
	comp=Z,19nm,1.1s						
PCJI	**Pacitan**	**17.20**	**245**	P	**P**	**04 21 28.9**	**-0.4**
KPJI	**Karang Pucung**	**18.96**	**250**	P	**Pn**	**04 21 49.9**	**+0.3**
LEM	**Lembang**	**20.05**	**252**	P	Pn	04 22 03.2	+0.5
	comp=Z,3.3nm,0.3s,baz=85,slow=12,SNR=4.3						
LEM				LR	LR	04 30 23.7	
	comp=Z,256nm,20.2s,baz=69,slow=39						
WRAB	**Tennant Creek**	**20.30**	**159**	*e*P	**P**	**04 22 01.6**	**-1.7**
	comp=Z,27nm,0.9s						
WRAB	**Tennant Creek**	**20.30**	**159**	*e*P	**P**	**04 22 01.6**	**-1.7**
WRAB				pmax	pmax		
	comp=Z,27nm,0.9s						
WRA	**Warramunga Arr**	**20.30**	**159**	P	**P**	**04 22 01.6**	**-1.7**
	comp=Z,5.4nm,0.5s,baz=339,slow=11,SNR=30						
WRA				LR	LR	04 30 58.9	
	comp=Z,271nm,20.0s,baz=10.0,slow=40						
WB2	**Warramunga Arr**	**20.30**	**159**	*e*P	**P**	**04 22 02.0**	**-1.3**
	comp=Z,20nm,0.8s						
MANU	**Manus Island**	**20.55**	**93**	*e*P	Pn	04 22 10.8	+2.3
	comp=Z,46nm,0.9s						
COEN	**Coen**	**20.73**	**130**	*e*P	Pn	04 22 08.8	-1.7
	comp=Z,44nm,0.9s						
MBWA	**Marble Bar**	**21.30**	**199**	*e*P	**P**	**04 22 12.2**	**-1.8**
	comp=Z,70nm,1.0s						
PMG	**Port Moresby**	**21.91**	**113**	P	**P**	**04 22 22.5**	**+1.7**
	comp=Z,22nm,0.9s,baz=282,slow=9.3,SNR=4.2						
PMG				LR	LR	04 32 30.1	
	comp=Z,322nm,21.6s,baz=302,slow=41						
PMG	**Port Moresby**	**21.91**	**113**	*e*P	**P**	**04 22 25.5**	**+4.8**
	comp=Z,25nm,0.8s						
PMG	**Port Moresby**	**21.91**	**113**	*e*P	**P**	**04 22 25.5**	**+4.8**
PMG				pmax	pmax		
	comp=Z,25nm,0.8s						
KASI	**Kota Agung**	**22.77**	**258**	P	**P**	**04 22 33.7**	**+3.8**
MDSI	**Maura Dua**	**22.91**	**261**	P	**P**	**04 22 31.4**	**0.0**
GUMO	**Guam**	**22.95**	**51**	LR	LR	04 30 56.5	
	comp=Z,117nm,18.9s,baz=238,slow=35						
MYKOM	**Kota Tinggi**	**23.14**	**277**	*e*P	**P**	**04 22 32.2**	**-1.5**
	comp=Z,22nm,1.0s						
AS31	**Alice Springs**	**23.65**	**164**	*e*P	**P**	**04 22 37.9**	**-0.7**
	comp=Z,6.3nm,0.6s						
ASAR	**Alice Springs**	**23.65**	**164**	P	**P**	**04 22 37.5**	**-1.1**
	comp=Z,7.4nm,0.8s,baz=342,slow=10,SNR=46						
AS01	**Alice Springs**	**23.66**	**164**	*e*P	**P**	**04 22 36.7**	**-2.0**
MNAI	**Manna**	**24.10**	**261**	*e*P	**P**	**04 22 41.0**	**-2.0**
	comp=Z,230nm,1.0s						
TWG	**Pinlang**	**24.24**	**347**	*e*P	**P**	**04 22 41.5**	**-2.6**
	comp=Z,117nm,0.5s						
MASI	**Maura Aman, Be**	**24.68**	**264**	P	**P**	**04 22 52.9**	**+4.6**
YULB	**Yu-li**	**24.74**	**348**	*e*P	**P**	**04 22 47.0**	**-1.6**
	comp=Z,24nm,0.9s						
TPUB	**Ta-pu**	**24.80**	**346**	*e*P	**P**	**04 22 47.9**	**-1.4**
	comp=Z,115nm,1.1s						
SSLB	**Suanglung**	**25.20**	**347**	*e*P	**P**	**04 22 53.6**	**+0.8**
	comp=Z,29nm,0.7s						
NACB	**Ninganchiao**	**25.44**	**349**	*e*P	**P**	**04 22 53.8**	**-1.1**
	comp=Z,19nm,0.7s						
YOJ	**Yonaguni jima**	**25.48**	**352**	*e*P	**P**	**04 22 58.2**	**+2.9**
	comp=Z,114nm,0.8s						
YOJ	**Yonaguni jima**	**25.48**	**352**	*e*P	**P**	**04 22 58.2**	**+2.9**
YOJ				pmax	pmax		
	comp=Z,114nm,0.8s						
YHNB	**Yeheng**	**25.96**	**349**	*e*P	**P**	**04 23 00.3**	**+0.5**
	comp=Z,40nm,0.7s						
UBPT	**Khong Chiam**	**26.55**	**308**	P	**P**	**04 23 10.3**	**+5.2**
	comp=Z,21nm,1.0s						
GZH	**Guangzhou**	**27.22**	**332**	P	**P**	**04 23 17.4**	**+6.3**
JOW	**Kunigami**	**27.61**	**3**	P	**P**	**04 23 15.1**	**+0.6**
	comp=Z,146nm,0.9s,baz=207,slow=3.1,SNR=19						
JOW				LR	LR	04 35 17.6	
	comp=Z,88nm,20.6s,baz=237,slow=39						
JOW	**Kunigami**	**27.61**	**3**	*e*P	**P**	**04 23 14.2**	**-0.3**
	comp=Z,126nm,0.8s						
PSI	**Prapat**	**28.15**	**278**	P	**P**	**04 23 18.8**	**-0.8**
	comp=Z,16nm,0.9s,baz=360,slow=5.4,SNR=3.7						
BBOO	**Buckleboo**	**32.91**	**166**	*e*P	**P**	**04 24 01.3**	**0.0**
	comp=Z,66nm,1.4s						
NWAO	**Narrogin (SRO)**	**33.12**	**195**	LR	LR	04 39 12.9	
	comp=Z,210nm,18.4s,baz=224,slow=39						
CMAR	**Chiang Mai Arr**	**33.50**	**306**	P	**P**	**04 24 06.7**	**-0.1**
	comp=Z,1.6nm,0.3s,baz=138,slow=7.6,SNR=7.1						
CMAR				PcP	**PcP**	**04 26 46.5**	**-0.9**
	comp=Z,1.5nm,0.4s,baz=132,slow=2.7,SNR=6.4						
CHTO	**Chiang Mai**	**33.69**	**307**	*e*P	**P**	**04 24 08.5**	**+0.2**
	comp=Z,5.7nm,0.8s						
CHTO	**Chiang Mai**	**33.69**	**307**	*e*P	**P**	**04 24 08.5**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
STKA	**Stephens Creek**	**33.82**	**157**	P	**P**	**04 24 09.2**	**-0.1**
	comp=Z,9.3nm,0.8s,baz=311,slow=6.7,SNR=10						
STKA				LR	LR	04 38 30.2	
	comp=Z,236nm,21.2s,baz=357,slow=37						
STKA	**Stephens Creek**	**33.82**	**157**	*e*P	**P**	**04 24 09.1**	**-0.2**
	comp=Z,3.8nm,0.8s						
STKA	**Stephens Creek**	**33.82**	**157**	*e*P	**P**	**04 24 09.1**	**-0.2**
STKA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
HNR	**Honiara**	**34.01**	**106**	LR	LR	04 38 15.4	
	comp=Z,109nm,21.6s,baz=282,slow=37						
JNU	**Nakatsue**	**34.05**	**6**	P	**P**	**04 24 10.7**	**-0.7**
	comp=Z,15nm,0.9s,baz=173,slow=8.1,SNR=5.1						
JNU				LR	LR	04 37 37.4	
	comp=Z,66nm,21.8s,baz=120,slow=35						
JNU	**Nakatsue**	**34.05**	**6**	*e*P	**P**	**04 24 11.1**	**-0.2**
	comp=Z,36nm,1.2s						
KMI	**Kunming**	**34.84**	**320**	P	P	04 24 25.6	+7.1
KMI				pP	sP	04 24 35.2	+2.8
KMI				sP	pP	04 24 39.2	+11
KMI				pmax	pmax		
	comp=Z,13nm,0.5s						
KMI				pmax	pmax		
	comp=Z,130nm,6.3s						
KMI				LR	LR		
	comp=N,230nm,6.7s						
KMI				LR	LR		
	comp=E,470nm,7.0s						
KMI				LR	LR		
	comp=Z,510nm,8.1s						
ENH	**Enshi**	**35.13**	**333**	*e*P	**P**	**04 24 21.2**	**+0.4**
	comp=Z,24nm,0.9s						
TJN	**Taejon**	**37.09**	**1**	*de*P	**P**	**04 24 37.6**	**+0.3**
INU	**Inuyama**	**37.30**	**14**	*e*P	**P**	**04 24 38.1**	**-1.0**
	comp=Z,22nm,0.6s						
KS15	**Wonju Array Si**	**38.16**	**1**	*e*P	**P**	**04 24 46.1**	**-0.2**
KSAR	**Wonju Array Be**	**38.16**	**1**	P	**P**	**04 24 46.9**	**+0.5**
KSAR				PcP	**PcP**	**04 27 01.1**	**+0.4**
KSAR				ScP	**ScP**	**04 30 44.6**	**-1.5**
KSAR	**Wonju Array Be**	**38.16**	**1**	P	**P**	**04 24 46.9**	**+0.5**
KSAR						04 27 01.1	
KSAR						04 30 44.7	
KSRS	**Korea Array**	**38.17**	**1**	P	**P**	**04 24 46.9**	**+0.4**
	comp=Z,17nm,0.7s,baz=178,slow=9.7,SNR=83						
KSRS				PcP	**PcP**	**04 27 01.1**	**+0.4**
	comp=Z,1.7nm,0.8s,baz=196,slow=4.3,SNR=4.5						
KSRS				ScP	**ScP**	**04 30 44.6**	**-1.5**
	comp=Z,1.6nm,0.9s,baz=186,slow=3.7,SNR=5.0						
KS01	**Wonju Array Si**	**38.20**	**1**	*e*P	**P**	**04 24 46.3**	**-0.4**
CD2	**Chengdu**	**38.50**	**327**	P	**P**	**04 24 49.7**	**+0.3**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
XAN	**Xi'an**	**38.62**	**336**	P	**P**	**04 24 50.1**	**-0.2**
XAN				pP	pP	04 24 57.0	-3.3
XAN				pmax	pmax		
	comp=Z,39nm,0.7s						
XAN				pmax	pmax		
	comp=Z,120nm,4.3s						
MJAR	**Matsushiro Arr**	**38.72**	**15**	P	**P**	**04 24 49.5**	**-1.7**
	comp=Z,7.1nm,0.6s,baz=190,slow=9.9,SNR=17						
MAJO	**Matsushiro**	**38.72**	**15**	*e*P	**P**	**04 24 48.5**	**-2.7**
	comp=Z,39nm,1.4s						
MAJO	**Matsushiro**	**38.72**	**15**	*ce*P	**P**	**04 24 51.0**	**-0.1**
MAJO				pmax	pmax		
	comp=Z,13nm,0.8s						
MAT	**Matsushiro**	**38.72**	**15**	P	**P**	**04 24 49.1**	**-2.0**
MJB9	**Matsu-Tunnel**	**38.73**	**15**	*e*P	**P**	**04 24 47.0**	**-4.2**
	comp=Z,38nm,1.4s						
BJT	**Baijiatuao**	**41.88**	**348**	*e*P	**P**	**04 25 16.7**	**-0.5**
	comp=Z,29nm,0.8s						
BJT	**Baijiatuao**	**41.88**	**348**	*e*P	**P**	**04 25 16.7**	**-0.5**
BJT				pmax	pmax		
	comp=Z,29nm,0.8s						
LZH	**Lanzhou**	**42.57**	**332**	*e*P	**P**	**04 25 24.6**	**+1.5**
LZH				pP	pP	04 25 34.2	+1.0
LZH				sP	sP	04 25 38.4	+1.1
LZH				pmax	pmax		
	comp=Z,20nm,1.2s						
MSHR	**Mys Shultsa**	**43.46**	**5**	⇑*e*P	**P**	**04 25 30.2**	**+0.3**
USRK	**Ussuriysk Ar.**	**45.14**	**5**	P	**P**	**04 25 43.5**	**+0.1**
	comp=Z,14nm,0.6s,baz=188,slow=7.0,SNR=32						
MDJ	**Mudanjiang**	**45.38**	**3**	*e*P	**P**	**04 25 44.8**	**-0.5**
	comp=Z,40nm,1.0s						
ODAN	**Odare**	**46.94**	**309**	*e*P	**P**	**04 25 59.1**	**+0.9**
	comp=Z,24nm,0.6s						
ASAJ	**Asahikawa**	**46.98**	**16**	P	**P**	**04 25 58.1**	**+0.2**
	comp=Z,19nm,0.7s,baz=241,slow=16,SNR=9.8						
ASAJ				LR	LR	04 44 01.7	
	comp=Z,86nm,21.8s,baz=218,slow=34						
ASAJ	**Asahikawa**	**46.98**	**16**	*e*P	**P**	**04 25 58.6**	**+0.8**
	comp=Z,26nm,0.9s						
GTA	**Gaotai**	**47.14**	**331**	⇑P	**P**	**04 26 00.4**	**+0.9**
GTA				pP	pP	04 26 07.6	-2.0
GTA				sP	sP	04 26 11.1	-2.5
GTA				pmax	pmax		
	comp=Z,25nm,1.0s						
RAMN	**Ramite**	**47.60**	**309**	*e*P	**P**	**04 26 03.6**	**+0.2**
	comp=Z,48nm,0.7s						
JIRN	**Jiri**	**48.26**	**309**	*e*P	**P**	**04 26 09.4**	**+0.8**
	comp=Z,50nm,0.7s						
GUN	**Gumba**	**48.63**	**309**	*e*P	**P**	**04 26 12.1**	**+0.7**
	comp=Z,72nm,0.8s						
PKIN	**Phulchoki**	**48.84**	**309**	*e*P	**P**	**04 26 13.7**	**+0.7**
	comp=Z,15nm,0.6s						
KKN	**Kakani**	**49.03**	**309**	*e*P	**P**	**04 26 14.5**	**+0.1**
DMN	**Daman**	**49.08**	**309**	*e*P	**P**	**04 26 15.5**	**+0.7**
	comp=Z,60nm,0.9s						
GKN	**Gorkha**	**49.63**	**309**	*e*P	**P**	**04 26 19.6**	**+0.7**
	comp=Z,53nm,0.9s						
YSS	**Yuzh-Sakhalins**	**49.66**	**14**	*e*P	**P**	**04 26 18.6**	**+0.1**
KLR	**Kul'dur**	**50.11**	**4**	P	**P**	**04 26 21.6**	**-0.3**
	comp=Z,1.6nm,0.9s,baz=202,slow=4.6,SNR=39						
KLR	**Kul'dur**	**50.11**	**4**	*de*P	**P**	**04 26 21.9**	**0.0**
KOLN	**Koldanda**	**50.34**	**308**	*e*P	**P**	**04 26 24.8**	**+0.5**
	comp=Z,73nm,0.8s						
HIA	**Hailar**	**50.34**	**354**	*de*P	**P**	**04 26 24.2**	**+0.5**
HIA				pmax	pmax		
	comp=Z,11nm,1.3s						
DANN	**Dangsing**	**50.48**	**309**	*e*P	**P**	**04 26 25.6**	**+0.1**
	comp=Z,111nm,0.8s						
HYB	**Hyderabad**	**50.91**	**293**	*i* P	**P**	**04 26 29.0**	**+0.5**
PYUN	**Piuthan**	**50.97**	**308**	*e*P	**P**	**04 26 29.6**	**+0.5**
	comp=Z,87nm,0.8s						
ULN	**Ulaanbaatar**	**51.54**	**343**	*e*P	**P**	**04 26 33.2**	**+0.3**
	comp=Z,16nm,1.0s						
ULN	**Ulaanbaatar**	**51.54**	**343**	*e*P	**P**	**04 26 33.2**	**+0.3**
ULN				pmax	pmax		
	comp=Z,16nm,1.0s						
SONM	**Songino Array**	**51.70**	**343**	P	**P**	**04 26 34.5**	**+0.4**
	comp=Z,6.2nm,0.7s,baz=160,slow=8.7,SNR=29						
SONM				PcP	**PcP**	**04 27 46.0**	**-1.3**
	comp=Z,1.8nm,0.7s,baz=160,slow=5.0,SNR=2.0						
SONM				ScP	**ScP**	**04 31 41.5**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=145,slow=3.5,SNR=3.8						
SONM				LR	LR	04 50 02.7	
	comp=Z,67nm,19.2s,baz=119,slow=38						
SONA1	**Songino Array**	**51.71**	**343**	*e*P	**P**	**04 26 34.4**	**+0.2**
GRNR	**Gornyy**	**52.12**	**8**	*e*P	**P**	**04 26 37.2**	**+0.2**
GRNR				pmax	pmax		
	comp=Z,76nm,1.0s						
ZAK	**Zakamensk**	**54.91**	**342**	*e*P	**P**	**04 26 57.0**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
TLY	**Talaya**	**55.94**	**343**	*e*P	**P**	**04 27 06.4**	**+1.5**
TLY				pmax	pmax		
	comp=Z,3.0nm,0.6s						
WMQ	**Urumqi**	**56.59**	**327**	P	**P**	**04 27 11.2**	**+1.4**
WMQ				pP	pP	04 27 17.8	-2.3
WMQ				sP	sP	04 27 30.7	+6.6
WMQ				pmax	pmax		
	comp=Z,28nm,1.3s						
MOY	**Mondy**	**56.75**	**341**	*e*P	**P**	**04 27 11.3**	**+0.5**
MOY				pmax	pmax		
	comp=Z,5.0nm,1.5s						
RPZ	**Rata Peaks**	**57.97**	**143**	LR	LR	04 53 29.1	
	comp=Z,206nm,18.0s,baz=228,slow=37						
HVS	**Khovu-Aksy**	**58.98**	**336**	⇑*e*P	**P**	**04 27 26.8**	**+0.4**
HVS				pmax	pmax		
	comp=Z,19nm,1.0s						
URZ	**Urewera**	**59.16**	**135**	LR	LR	04 56 22.2	
	comp=Z,215nm,18.8s,baz=276,slow=39						
PETK	**Petropavlovsk-**	**59.67**	**21**	P	**P**	**04 27 31.6**	**+0.6**
	comp=Z,7.4nm,0.6s,baz=179,slow=4.8,SNR=9.7						
PETK	**Petropavlovsk-**	**59.67**	**21**	*e*P	**P**	**04 27 31.7**	**+0.7**
NIL	**Nilore**	**60.89**	**310**	*e*P	**P**	**04 27 38.6**	**-1.2**
	comp=Z,20nm,0.6s						
NIL	**Nilore**	**60.89**	**310**	*e*P	**P**	**04 27 38.6**	**-1.2**
NIL				pmax	pmax		
	comp=Z,21nm,0.6s						
PDGK	**Podgornoye**	**61.07**	**322**	P	**P**	**04 27 40.9**	**-0.1**
PDGK				pmax	pmax		
	comp=Z,16nm,0.9s						
MK01	**Makanchi Array**	**61.41**	**327**	*e*P	**P**	**04 27 43.2**	**+0.2**
KSH	**Kashi**	**61.43**	**317**	P	**P**	**04 27 44.9**	**+1.4**
KSH				pmax	pmax		
	comp=Z,32nm,1.0s						
KSH				pmax	pmax		
	comp=Z,320nm,4.7s						
MK31	**Makanchi Array**	**61.43**	**327**	*e*P	**P**	**04 27 43.5**	**+0.3**
MK31	**Makanchi Array**	**61.43**	**327**	*e*P	**P**	**04 27 43.5**	**+0.3**
MKAR	**Makanchi Array**	**61.43**	**327**	P	**P**	**04 27 43.5**	**+0.3**
	comp=Z,10nm,0.7s,baz=123,slow=7.9,SNR=52						
MKAR				ScP	**ScP**	**04 32 23.8**	**-0.6**
	comp=Z,0.8nm,0.8s,baz=145,slow=4.2,SNR=4.1						
MKAR				LR	LR	04 55 56.0	
	comp=Z,48nm,21.4s,baz=74,slow=38						
MKAR	**Makanchi Array**	**61.43**	**327**	*e*P	**P**	**04 27 43.5**	**+0.3**
	comp=Z,65nm,0.8s						
MKAR				ScP	**ScP**	**04 32 23.8**	**-0.6**
MKAR	**Makanchi Array**	**61.43**	**327**	*e*P	**P**	**04 27 43.5**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,65nm,0.8s						
KDJ	**Kajisay**	**61.90**	**320**	*e*P	**P**	**04 27 48.0**	**+1.4**
YAK	**Yakutsk**	**62.80**	**2**	*e*P	**P**	**04 27 51.7**	**-0.3**
	comp=Z,89nm,1.0s						
YAK	**Yakutsk**	**62.80**	**2**	*e*P	**P**	**04 27 50.9**	**-1.1**
YAK				*e**PP	**pP**	**04 28 01.8**	**-0.7**
YAK				*e*		04 28 29.2	
YAK				*e*		04 30 08.8	
YAK				*e*S	**S**	**04 36 18.0**	**-0.7**
YAK				*e**SS	**sS**	**04 36 38.8**	**+2.9**
YAK				*e*		04 37 38.8	
YAK				*e*SS	**SS**	**04 40 25.7**	**+1.6**
YAK				pmax	pmax		
	comp=Z,62nm,0.9s						
YAK				pmax	pmax		
	comp=N,13nm,1.1s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,82nm,3.1s						
YAK				pmax	pmax		
	comp=N,51nm,2.7s						
YAK				pmax	pmax		
	comp=E,56nm,2.8s						
YAK				smax	smax		
	comp=N,55nm,2.3s						
YAK				smax	smax		
	comp=E,78nm,2.5s						
KZA	**Kyzart**	**63.12**	**319**	P	**P**	**04 27 56.4**	**+1.3**
	SNR=13						
MA2	**Magadan**	**63.15**	**13**	*e*P	**P**	**04 27 55.5**	**+1.2**
	comp=E,19nm,0.8s						
MA2	**Magadan**	**63.15**	**13**	*e*P	**P**	**04 27 55.6**	**+1.2**
MA2				pmax	pmax		
	comp=Z,25nm,1.0s						
TKM2	**Tokmak 2**	**63.30**	**320**	P	**P**	**04 27 57.1**	**+1.0**
	SNR=12						
TKM2	**Tokmak 2**	**63.30**	**320**	*i* P	**P**	**04 27 56.3**	**+0.2**
TKM2				pmax	pmax		
	comp=Z,11nm,0.8s						
SFK	**Sufi-Kurgan**	**63.35**	**316**	P	**P**	**04 27 57.1**	**+0.7**
SFK				pmax	pmax		
	comp=Z,11nm,0.9s						
UCH	**Uchtor**	**63.68**	**319**	P	**P**	**04 28 00.4**	**+1.5**
	SNR=13						
AAK	**Ala-Archa**	**63.88**	**319**	*e*P	**P**	**04 28 01.2**	**+1.4**
	comp=Z,7.4nm,1.0s						
AAK	**Ala-Archa**	**63.88**	**319**	*e*P	**P**	**04 28 01.2**	**+1.4**
AAK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
AML	**Almayashu**	**64.17**	**319**	P	**P**	**04 28 03.0**	**+0.9**
	SNR=15						
USP	**Ospenovka**	**64.18**	**320**	P	**P**	**04 28 02.4**	**+0.7**
	SNR=8.4						
EKS2	**Erkin-Say**	**64.36**	**319**	P	**P**	**04 28 03.8**	**+0.9**
	SNR=8.0						
KBL	**Kabul**	**64.46**	**309**	*e*P	**P**	**04 28 04.6**	**+0.7**
	comp=Z,13nm,0.7s						
KBL	**Kabul**	**64.46**	**309**	*e*P	**P**	**04 28 04.6**	**+0.7**
KBL				pmax	pmax		
	comp=Z,13nm,0.7s						
ZALV	**Zalesovo Beam**	**64.75**	**334**	P	**P**	**04 28 04.4**	**-0.7**
	comp=Z,5.6nm,0.9s,baz=120,slow=5.8,SNR=8.4						
MNAS	**Manas**	**65.12**	**319**	P	**P**	**04 28 08.5**	**+0.6**
MNAS				pmax	pmax		
	comp=Z,11nm,0.9s						
KURBB	**Kurchatov Arra**	**65.69**	**329**	P	**P**	**04 28 10.8**	**-0.5**
	comp=Z,11nm,0.8s,baz=128,slow=5.9,SNR=36						
KURK	**Kurchatov**	**65.70**	**329**	*e*P	**P**	**04 28 10.4**	**-0.9**
	comp=Z,189nm,0.8s				

comp=Z,30nm,20.1s,baz=130,slow=40
DAWY Dawson 92.46 26 *e*P **P 04 30 36.4 -1.1**
comp=Z,7.8nm,1.3s
BRTR Keskin Array B 93.04 310 P **P 04 30 38.7 -2.1**
comp=Z,0.6nm,0.7s,baz=66,slow=3.6,SNR=3.3
ARCES ARCESS Array B 94.80 340 P **P 04 30 46.0 -2.1**
comp=Z,1.1nm,0.6s,baz=73,slow=7.5,SNR=5.9
SPITS Spitsbergen Ar 95.01 349 P **P 04 30 47.1 -1.8**
comp=Z,2.4nm,0.8s,baz=93,slow=6.1,SNR=2.4
FINES FINESS Array B 95.93 332 P **P 04 30 51.0 -2.4**
comp=Z,0.4nm,0.5s,baz=64,slow=3.2,SNR=3.8
FINES LR LR 05 16 40.8
comp=Z,35nm,20.0s,baz=30,slow=37
BOSA Boshof 99.73 241 LR LR 05 12 57.0
comp=Z,25nm,19.9s,baz=86,slow=33
YKA Yellowknife Ar 103.63 25 Pdiff **Pdif 04 31 27.7 -0.1**
comp=Z,0.2nm,0.7s,baz=296,slow=4.5,SNR=4.6
YKA PKiKP **PKiKP 04 35 45.1 -0.9**
comp=Z,0.2nm,0.6s,baz=312,slow=1.9,SNR=5.1
CLL Collm 105.41 323 *e*PP PP 04 35 57.0 -0.6
TORD Torodi Ar. Bea 124.35 285 PKP **PKPdf 04 36 26.2 -0.5**
comp=Z,2.1nm,0.7s,baz=63,slow=2.0,SNR=12
CPUP Villa Florida 152.63 172 PKPbc **PKPbc 04 37 22.2 -1.8**
comp=Z,3.0nm,0.9s,baz=207,slow=3.8,SNR=4.5

*IDC **06** 04:38:51.6±1.0,25°.25N×96°.48E, h0km, mb3.9/12, mb1 4.0/13, mb1mx3.7/73, mbtmp3.9/13, ML3.7/1, MS3.2/3, Ms1 3.3/3, ms1mx2.8/64, Error ellipse: s-maj=37.5km s-min=17.8km az=71.0*
*ISCJB **06** 04:38:52.8±0.5,25°.09N±0°.07×96°.25E±0°.06, h21km, mb3.9/12, MS3.5/2, Error ellipse: s-maj=9.7km s-min=7.6km az=20.2*
*NEIC **06** 04:38:58.0±1.0,25°.14N×96°.58E, h55km±12km, mb4.5/2, Error ellipse: s-maj=14.1km s-min=8.7km az=48.0*
ISC 06 04:38:54.6±0.8,25°.2N±0°.1×96°.28E±0°.08,h21km,n42,
σ1§79/42,mb4.0/12,Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**4.00**	**277**	*e*PN	**Pb**	**04 40 00.0**	**-4.4**
SHL				*e*SN	**Sn**	**04 40 42.0**	**+0.9**
SHL	**Shillong**	**4.00**	**277**	*e*Pn	**Pb**	**04 40 00.4**	**-4.0**
SHL				*e*Sn	**Sn**	**04 40 46.6**	**+5.5**
CM31	**Chiang Mai Arr**	**7.12**	**159**	*e*Pn	**Pn**	**04 40 38.0**	**+0.3**
CMAR	**Chiang Mai Arr**	**7.12**	**159**	Pn	**Pn**	**04 40 37.9**	**+0.3**
	0.3nm,0.3s,baz=331,slow=13,SNR=4.1						
CMAR				Pg	Pb	04 41 03.2	+5.7
	1.1nm,0.3s,baz=336,slow=17,SNR=18						
CMAR				Lg	Lg	04 42 39.2	
	0.9nm,0.3s,baz=333,slow=29,SNR=3.2						
CMAR				LR	LR	04 43 44.4	
	comp=Z,58nm,19.2s,baz=140,slow=41						
ODAN	**Odare**	**8.17**	**284**	*e*P	**Pn**	**04 40 53.2**	**+1.0**
	30nm,0.6s						
RAMN	**Ramite**	**8.88**	**284**	*e*P	**Pn**	**04 41 02.7**	**+0.7**
	40nm,0.6s						
JIRN	**Jiri**	**9.38**	**288**	*e*P	**Pn**	**04 41 09.9**	**+1.0**
	31nm,0.6s						
GUN	**Gumba**	**9.70**	**289**	*e*P	**Pn**	**04 41 14.4**	**+1.1**
	38nm,0.8s						
PKIN	**Phulchoki**	**10.05**	**286**	*e*P	**Pn**	**04 41 19.2**	**+1.2**
	28nm,0.6s						
KKN	**Kakani**	**10.19**	**287**	*e*P	**Pn**	**04 41 20.9**	**+1.0**
	9.3nm,0.4s						
DMN	**Daman**	**10.31**	**286**	*e*P	**Pn**	**04 41 22.4**	**+0.9**
	7.9nm,0.4s						
GKN	**Gorkha**	**10.79**	**288**	*e*P	**Pn**	**04 41 28.6**	**+0.5**
	14nm,0.4s						
DANN	**Dangsing**	**11.63**	**289**	*e*P	**Pn**	**04 41 37.5**	**-2.1**
	11nm,0.5s						
KOLN	**Koldanda**	**11.65**	**286**	*e*P	**Pn**	**04 41 38.0**	**-1.9**
PYUN	**Piuthan**	**12.24**	**287**	*e*P	**Pn**	**04 41 45.1**	**-2.8**
	11nm,0.7s						
SONA0	**Songino Array**	**24.00**	**17**	*e*P	**P**	**04 44 07.8**	**-0.1**
SONM	**Songino Array**	**24.00**	**17**	P	**P**	**04 44 07.8**	**-0.1**
	0.4nm,0.4s,baz=203,slow=11,SNR=2.2						
MK01	**Makanchi Array**	**24.27**	**336**	*e*P	**P**	**04 44 11.6**	**+1.2**
MK31	**Makanchi Array**	**24.30**	**336**	*e*P	**P**	**04 44 11.8**	**+1.3**
MK32	**Makanchi Array**	**24.30**	**336**	*e*P	**P**	**04 44 11.4**	**+0.9**
MKAR	**Makanchi Array**	**24.30**	**336**	P	**P**	**04 44 11.4**	**+0.9**
	4.1nm,0.7s,baz=146,slow=9.3,SNR=41						
MKAR	**Makanchi Array**	**24.30**	**336**	*e*P	**P**	**04 44 11.8**	**+1.3**
	29nm,0.8s						
AAK	**Ala-Archa**	**25.00**	**320**	P	**P**	**04 44 19.0**	**+2.0**
	1.0nm,0.4s,baz=189,slow=6.6,SNR=3.9						
KURBB	**Kurchatov Arra**	**28.87**	**336**	P	**P**	**04 44 52.3**	**+0.8**
	1.8nm,0.6s,baz=149,slow=8.9,SNR=14						
KURK	**Kurchatov**	**28.91**	**336**	*e*P	**P**	**04 44 52.7**	**+0.8**
ZALV	**Zalesovo Beam**	**29.99**	**346**	P	**P**	**04 45 02.3**	**+0.8**
	1.9nm,0.3s,baz=169,slow=8.9,SNR=2.9						
ZAA1	**Zalesovo Array**	**30.00**	**346**	*e*P	**P**	**04 45 02.3**	**+0.7**
BVAR	**Borovoye Array**	**33.96**	**332**	P	**P**	**04 45 37.5**	**+1.1**
	2.1nm,0.6s,baz=140,slow=11,SNR=10						
ABKAR	**Akbulak array**	**37.08**	**320**	*e*P	**P**	**04 46 04.4**	**+1.2**
AKTO	**Aktyubinsk**	**38.73**	**321**	LR	LR	05 05 56.6	
	comp=Z,61nm,20.1s,baz=109,slow=42						
ARA0	**ARCESS Array S**	**59.94**	**337**	*e*P	**P**	**04 48 59.1**	**+0.2**
ARCES	**ARCESS Array B**	**59.94**	**337**	P	**P**	**04 48 59.1**	**+0.2**
	0.7nm,0.7s,baz=95,slow=7.3,SNR=3.7						
HFS	**Hagfors**	**64.87**	**327**	P	**P**	**04 49 30.8**	**-1.2**
	1.1nm,0.8s,baz=108,slow=9.3,SNR=2.5						
NB2	**NORSAR Subarra**	**65.96**	**328**	P	P	04 49 34.0	-5.1
	comp=Z,1.2nm,1.1s,baz=84,slow=6.5						
NOA	**NORSAR Array B**	**65.96**	**328**	P	**P**	**04 49 38.6**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=82,slow=6.6,SNR=4.0						
NOA				LR	LR	05 20 53.3	
	comp=Z,29nm,18.1s,baz=60,slow=38						
GEC2	**GERESS Array S**	**66.74**	**315**	*e*P	**P**	**04 49 44.0**	**-0.4**
	comp=Z,2.3nm,1.0s						
GERES	**GERESS Array B**	**66.74**	**315**	P	**P**	**04 49 44.0**	**-0.4**
	comp=Z,1.1nm,0.6s,baz=64,slow=6.1,SNR=5.0						
ILAR	**Eielson Array**	**78.07**	**23**	P	**P**	**04 50 50.1**	**-1.4**
	comp=Z,0.2nm,0.5s,baz=297,slow=5.9,SNR=3.2						
ILB	**Eielson Array**	**78.07**	**23**	*e*P	**P**	**04 50 50.1**	**-1.4**
TOA1	**Torodi Ar. Sit**	**88.56**	**284**	*e*P	**P**	**04 51 48.4**	**+2.0**
TORD	**Torodi Ar. Bea**	**88.56**	**284**	P	**P**	**04 51 48.4**	**+2.0**
	comp=Z,0.7nm,0.9s,baz=72,slow=3.2,SNR=3.3						
SVOH	**Skagit Valley**	**98.98**	**25**	*e*P	**Pdif**	**04 52 31.2**	**-2.5**

*ISCJB **06** 04:39:07.6±0.5,22°.35N±0°.02×121°.53E±0°.02, h15km±4km, Error ellipse: s-maj=3.8km s-min=3.2km az=138.2*
*JMA **06** 04:39:08.2±0.1,22°.42N×121°.52E, h16km, M3.4*
*TAP **06** 04:39:09.0,22°.41N×121°.40E, h12km, ML3.3, C*
ISC 06 04:39:07.9±1.1,22°.40N±0°.02×121°.46E±0°.02,h12km±9km,
n72,σ0§79/108,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWH	**Lutao**	**0.32**	**3**	P	**Pb**	**04 39 15.3**	**-0.1**
	baz=17						
TWH				*e*S	**Sb**	**04 39 20.4**	**-0.1**
	baz=17						
LAY	**Lan-yu**	**0.36**	**166**	*e*P	**Pb**	**04 39 17.0**	**+0.7**
	baz=159						
LAY				*e*S	**Sb**	**04 39 22.9**	**+1.0**
	baz=159						
TTN	**Taitung**	**0.46**	**321**	*e*P	**Pb**	**04 39 18.5**	**+0.6**
	baz=337						
TTN				*e*S	**Sb**	**04 39 26.1**	**+1.4**
	baz=337						
ECL	**Taimali**	**0.51**	**293**	P	**Pb**	**04 39 18.1**	**-0.6**
	baz=294						
ECL				*e*S	**Sg**	**04 39 25.0**	**+0.4**
	baz=294						
TAW	**Tawu**	**0.52**	**266**	*e*P	**Pb**	**04 39 18.5**	**-0.5**
	baz=263						
TAW				*e*S	**Sg**	**04 39 24.9**	**-0.1**
	baz=263						
TWGBT	**Beinan**	**0.55**	**320**	P	**Pb**	**04 39 19.3**	**-0.1**
	baz=309						
TWGBT				*e*S	**Sb**	**04 39 27.5**	**+0.2**
	baz=309						
TWG	**Pinlang**	**0.56**	**320**	P	**Pb**	**04 39 19.3**	**-0.3**
	baz=309						
TWG				*e*S	**Sb**	**04 39 27.2**	**-0.2**
	baz=309						
EAST	**Anshuo**	**0.57**	**269**	P	**Pg**	**04 39 19.1**	**+0.1**
	baz=266						
EAST				*e*S	**Sg**	**04 39 26.3**	**-0.2**
	baz=266						
CHKT	**Chengkung**	**0.71**	**353**	*e*P	**Pg**	**04 39 21.7**	**+0.1**
	baz=10.0						
CHKT				*e*S	**Sg**	**04 39 31.1**	**+0.2**
	baz=10.0						
TSEB	**Hengchuen, Pin**	**0.71**	**227**	*e*P	**Pb**	**04 39 22.6**	**+0.3**
	baz=235						
TSEB				*e*S	**Sn**	**04 39 33.4**	**-1.3**
	baz=235						
TWKBT	**Hengchun**	**0.75**	**233**	P	**Pb**	**04 39 22.5**	**-0.4**
	baz=239						
TWKBT				*e*S	**Sb**	**04 39 32.5**	**-0.6**
	baz=239						
TWK1	**Hengchun**	**0.75**	**234**	*e*P	**Pg**	**04 39 22.4**	**-0.1**
	baz=239						
TWK1				*e*S	**Sb**	**04 39 32.6**	**-0.6**
	baz=239						
HEN	**Hengchun**	**0.77**	**240**	*e*P	**Pg**	**04 39 22.6**	**-0.2**
	baz=236						
HEN				S	**Sb**	**04 39 33.2**	**-0.5**
	baz=236						
SCZT	**Fangliau**	**0.78**	**268**	P	**Pg**	**04 39 22.6**	**-0.4**
	baz=267						
SCZT				*e*S	**Sb**	**04 39 33.2**	**-0.6**
	baz=267						
MASBT	**Mashibuluo**	**0.79**	**286**	P	**Pg**	**04 39 22.7**	**-0.5**
	baz=285						
FULB	**Fuli**	**0.81**	**349**	*e*P	**Pg**	**04 39 23.6**	**-0.1**
	baz=4.0						
SSD	**Sandimen**	**0.84**	**295**	P	**Pg**	**04 39 23.6**	**-0.5**
	baz=295						
ELDTW	**Lidau**	**0.89**	**333**	*e*P	**Pb**	**04 39 25.3**	**0.0**
	baz=336						
SLGT	**Liugui**	**0.96**	**309**	*e*P	**Pb**	**04 39 26.8**	**+0.3**
	baz=309						
TWF1	**Yuli**	**0.96**	**351**	*e*P	**Pg**	**04 39 26.6**	**0.0**
	baz=339						
WLCH	**Liuqiu**	**1.00**	**268**	*e*P	**Pn**	**04 39 28.5**	**+0.8**
	baz=255						
WLCH				*e*S	**Sn**	**04 39 43.5**	**+1.7**
	baz=255						
STYT	**Tauyuan**	**1.00**	**320**	*e*P	**Pb**	**04 39 27.1**	**-0.1**
	baz=322						
YULB	**Yu-li**	**1.00**	**351**	*e*P	**Pg**	**04 39 26.1**	**-1.2**
	baz=339						
TWP	**Hsiaoliuchiu**	**1.02**	**267**	*e*P	**Pn**	**04 39 28.4**	**+0.4**
	baz=266						
TWP				*e*S	**Sn**	**04 39 44.0**	**+1.8**
	baz=266						
TWM1	**Shoushan**	**1.05**	**294**	*e*P	**Pn**	**04 39 28.6**	**+0.2**
	baz=294						
SGST	**Jiashian**	**1.06**	**310**	*e*P	**Pn**	**04 39 28.6**	**0.0**
	baz=311						
HGSD	**Ruisui**	**1.09**	**358**	*e*P	**Pb**	**04 39 28.1**	**-0.7**
	baz=15						
EHY	**Hungye**	**1.11**	**354**	*e*P	**Pb**	**04 39 29.0**	**-0.1**
	baz=343						
WTP	**Ta-pu**	**1.15**	**318**	P	**Pg**	**04 39 29.8**	**-0.2**
	baz=330						
WTP				*e*S	**Sn**	**04 39 45.6**	**0.0**
	baz=330						
CHN1	**Nanshi**	**1.17**	**313**	*e*P	**Pn**	**04 39 30.2**	**+0.1**
	baz=314						
CHN1				*e*S	**Sn**	**04 39 47.1**	**+1.2**
	baz=314						
TPUB	**Ta-pu**	**1.18**	**320**	*e*P	**Pg**	**04 39 30.6**	**0.0**
	baz=332						
TPUB				*e*S	**Sn**	**04 39 47.0**	**+0.7**
	baz=332						
TWK	**Hsinying**	**1.25**	**314**	*e*P	**Pb**	**04 39 31.5**	**+0.1**
	baz=316						
TWK				*e*S	**Sn**	**04 39 48.5**	**+0.5**
	baz=316						
ALS	**Alishan**	**1.26**	**332**	*e*P	**Pb**	**04 39 32.0**	**+0.1**
	baz=343						
ALS				*e*S	**Sg**	**04 39 48.6**	**-0.1**
	baz=343						
EGFH	**Guangfu**	**1.27**	**359**	*e*P	**Pn**	**04 39 31.0**	**-0.5**
	baz=348						
VWDT	**VWDT**	**1.38**	**348**	*e*P	**Pn**	**04 39 32.5**	**-0.5**
	baz=1.0						
CHY	**Chiayi**	**1.45**	**319**	*e*P	**Pb**	**04 39 35.1**	**+0.2**
	baz=321						
CHY				*e*S	**Sg**	**04 39 55.1**	**+0.3**
	baz=321						
SSLB	**Suanglung**	**1.46**	**342**	*e*P	**Pn**	**04 39 34.7**	**+0.6**
	baz=355						
CHN8	**Yiju**	**1.49**	**310**	*e*S	**Sb**	**04 39 54.7**	**+0.3**
	baz=311						
WGK	**Gukeng**	**1.53**	**327**	*e*S	**Sg**	**04 39 57.8**	**+0.7**
	baz=329						
WDLH	**Douliu**	**1.54**	**327**	*e*P	**Pb**	**04 39 36.8**	**+0.4**
	baz=328						
WDLH				*e*S	**Sg**	**04 39 57.7**	**+0.1**
	baz=328						
SMLT	**Sun Moon Lake**	**1.57**	**341**	*e*P	**Pb**	**04 39 36.5**	**-0.4**
	baz=358						
SMLT				*e*S	**Sg**	**04 39 57.9**	**-0.5**
	baz=358						
WJS	**Zhushan**	**1.57**	**335**	*e*S	**Sg**	**04 39 58.7**	**+0.2**
	baz=337						
TYC	**Yuchr**	**1.60**	**340**	*e*P	**Pb**	**04 39 37.4**	**0.0**
	baz=355						
TYC				*e*S	**Sg**	**04 39 59.1**	**-0.4**
	baz=355						
WNT	**Mingjian**	**1.64**	**334**	*e*P	**Pb**	**04 39 38.4**	**+0.4**
	baz=336						
WNT				*e*S	**Sb**	**04 39 59.7**	**+1.0**
	baz=336						
CHGB	**Renai**	**1.68**	**351**	*e*P	**Pn**	**04 39 38.0**	**+0.7**
	baz=8.0						
TWD	**Chiawan**	**1.68**	**4**	*e*P	**Pn**	**04 39 36.2**	**-0.9**
	baz=17						
WSF	**Szhu**	**1.68**	**318**	*e*S	**Sb**	**04 39 59.5**	**-0.4**
	baz=319						
NACB	**Ninganchiao**	**1.77**	**4**	*e*P	**Pn**	**04 39 37.6**	**-0.8**
	baz=17						
WDGT	**Dungji**	**1.87**	**298**	*e*P	**Pn**	**04 39 39.1**	**-0.6**
	baz=298						
WDGT				*e*S	**Sn**	**04 40 02.5**	**-0.8**
	baz=298						
TCU	**Taichung**	**1.89**	**338**	*e*S	**Sb**	**04 40 05.5**	**-0.3**
	baz=340						
NNSB	**Datong**	**2.03**	**358**	*e*P	**Pn**	**04 39 43.1**	**+1.2**
	baz=12						
NNSH	**Datong**	**2.03**	**358**	*e*P	**Pn**	**04 39 42.5**	**+0.5**
	baz=11						
NNS	**Nan Shan**	**2.04**	**358**	*e*P	**Pn**	**04 39 43.0**	**+0.8**
	baz=12						
VCHM	**Qimei**	**2.04**	**294**	*e*P	**Pn**	**04 39 41.1**	**-0.9**
	baz=293						
NANB	**Nanao**	**2.04**	**7**	*e*P	**Pn**	**04 39 41.7**	**-0.3**
	baz=3.0						
PHUB	**P'eng-hu**	**2.06**	**303**	*e*P	**Pn**	**04 39 41.6**	**-0.8**
	baz=303						
PHUB				*e*S	**Sn**	**04 40 06.5**	**-1.6**
	baz=303						
EOS1	**EOS1**	**2.23**	**16**	*e*P	**Pn**	**04 39 45.3**	**+0.7**
	baz=17						
EOS1				*e*S	**Sn**	**04 40 13.0**	**+0.9**
	baz=17						
YHNB	**Yeheng**	**2.27**	**358**	*e*P	**Pn**	**04 39 46.2**	**+1.0**
	baz=12						
NSK	**Sanguang**	**2.27**	**358**	*e*P	**Pn**	**04 39 46.8**	**+1.5**
	baz=12						
NWLT	**Wulai**	**2.37**	**1**	*e*P	**Pn**	**04 39 47.9**	**+1.2**
	baz=3.0						
JYNG	**Yonagunijimaku**	**2.46**	**33**	P	**Pn**	**04 39 49.0**	**+1.2**
JYNG				S	**Sn**	**04 40 18.0**	**+0.2**
YOJ	**Yonaguni jima**	**2.50**	**34**	P	**Pn**	**04 39 50.2**	**+1.8**
TIPB	**Shuangxi**	**2.59**	**7**	*e*P	**Pn**	**04 39 49.9**	**+0.3**
	baz=10.0						
HATJ	**Hateruma jima**	**2.72**	**52**	P	**Pn**	**04 39 51.7**	**+0.3**
HATJ				*e*S	**Sn**	**04 40 22.7**	**-1.5**
IRIF	**Iriomote-Funau**	**2.84**	**47**	P	**Pn**	**04 39 53.7**	**+0.6**
IRIF				*e*S	**Sn**	**04 40 27.4**	**+0.1**
JKRS	**Kuro-shima**	**2.98**	**51**	P	**Pn**	**04 39 55.6**	**+0.7**
JKRS				*e*S	**Sn**	**04 40 29.5**	**-1.1**
JIJ	**Ishigaki jima**	**3.15**	**51**	P	**Pn**	**04 39 57.6**	**+0.3**
JIJ				S	**Sn**	**04 40 33.0**	**-1.8**
VWUC	**VWUC**	**3.17**	**325**	*e*P	**Pn**	**04 39 58.7**	**+1.1**
	baz=329						
JISG	**Ishigakijimahi**	**3.41**	**50**	P	**Pn**	**04 40 00.8**	**-0.1**
JISG				S	**Sn**	**04 40 39.5**	**-1.7**
KNM	**Kinmen**	**3.43**	**306**	*e*P	**Pn**	**04 40 02.8**	**+1.7**
	baz=307						
KNMB	**Chin-men Tao**	**3.49**	**307**	*e*P	**Pn**	**04 40 01.6**	**-0.5**
	baz=308						
KNMB				*e*S	**Sn**	**04 40 41.4**	**-1.9**
	baz=308						
MATB	**Ma-tsu**	**3.99**	**340**	*e*P	**Pn**	**04 40 10.4**	**+1.6**
	baz=343						

IDC 06 04:39:36.7±2.3,8°.36S×117°.52E,h0km,mb3.5/3,
mb1 3.7/4,mb1mx3.3/58,mbtmp3.5/4,ML3.7/1,MS3.6/5,
Ms1 3.6/5,ms1mx3.0/40,Error ellipse: s-maj=203.2km
s-min=23.4km az=52.0,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.94**	**127**	P	Pn	04 44 11.4	-0.7
	0.3nm,0.3s,baz=311,slow=9.0,SNR=14						
ASAR	**Alice Springs**	**21.87**	**136**	P	P	04 44 32.9	+1.6
	0.7nm,0.4s,baz=317,slow=8.2,SNR=9.0						
STKA	**Stephens Creek**	**32.38**	**140**	P	P	04 46 06.5	-1.8
	0.7nm,0.3s,baz=338,slow=11,SNR=4.0						
JHJ	**Hachijo jima 2**	**46.37**	**26**	LR	LR	05 06 31.0	
	comp=Z,244nm,19.9s,baz=69,slow=35						
MJAR	**Matsushiro Arr**	**48.71**	**22**	LR	LR	05 09 23.0	
	comp=Z,72nm,18.0s,baz=200,slow=37						
ASAJ	**Asahikawa**	**56.95**	**21**	LR	LR	05 14 18.0	
	comp=Z,48nm,19.1s,baz=290,slow=36						
MKAR	**Makanchi Array**	**63.23**	**334**	P	P	04 50 07.1	+0.1
	0.3nm,0.6s,baz=150,slow=6.1,SNR=3.3						
ZALV	**Zalesovo Beam**	**67.93**	**340**	LR	LR	05 23 29.8	
	comp=Z,31nm,18.5s,baz=70,slow=39						
AFI	**Afiamalu**	**69.39**	**102**	LR	LR	05 19 02.9	
	comp=Z,20nm,20.8s,baz=88,slow=34						

MEX 06 04:41:14.1±0.7,16°.57N×98°.42W,h20km±356km,MD4.0,
Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.00**	**352**	*i*P	Pb	04 41 29.4	-3.4
TLIG				*e*S	Sb	04 41 41.8	-3.8
ACX	**Acapulco**	**1.42**	**282**	*e*P	Pn	04 41 33.8	-4.9
ACX				*e*S	Sn	04 41 51.9	-4.9
VHO	**Vista Hermosa**	**1.69**	**72**	*e*P	Pn	04 41 39.7	-2.9
VHO				*e*S	Sn	04 42 00.1	-3.7
CAIG	**El Cayaco**	**1.84**	**285**	*e*P	Pn	04 41 41.6	-2.9
CAIG				*e*S	Sn	04 42 03.9	-3.3
HUIG	**Huatulco**	**2.35**	**109**	*e*P	Pn	04 41 50.3	-1.3

*BJI **06** 04:45:29.0,0°.90S×126°.90E, h20km, mb4.8/20, mB5.0/12, Ms4.2/1*
*ISCJB **06** 04:45:30.8±0.2,0°.92S±0°.03×126°.86E±0°.03, h34km, mb4.7/43, MS3.6/2, Error ellipse: s-maj=4.1km s-min=3.8km az=145.6*
*DJA **06** 04:45:31.7±0.2,1°.S±3°×12°.7E±°, h10km, M4.7/18, mb5.0/10, mB5.1/6, MLv4.7/18, Mw(mB)4.5/6*
*IDC **06** 04:45:34.5±2.7,1°.00S×126°.81E, h57km±25km, mb4.1/21, mb1 4.1/23, mb1mx4.0/55, mbtmp4.4/23, ML3.8/2, MS3.5/9, Ms1 3.5/9, ms1mx3.1/55, Error ellipse: s-maj=19.3km s-min=11.8km az=80.0*
*NEIC **06** 04:45:35.3±0.7,1°.00S×126°.91E, h66km±7km, mb4.8/26, Error ellipse: s-maj=8.3km s-min=4.4km az=71.0*
ISC 06 04:45:32.5±0.4,0°.94S±0°.04×126°.88E±0°.05,h34km,n110,
σ1§40/111,mb4.7/43,Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**0.69**	**65**	P	**Pn**	**04 45 45.2**	**-0.6**
SANI	**Sanana**	**1.42**	**219**	P	**Pn**	**04 45 54.6**	**-1.3**
TNTI	**Ternate**	**1.77**	**16**	*e*Pn	**Pb**	**04 46 04.2**	**0.0**
TNTI				*e*Sn	**Sb**	**04 46 27.9**	**+1.8**
NLAI	**Namlea**	**2.30**	**174**	P	**Pn**	**04 46 09.1**	**+1.1**
AAI	**Ambon**	**3.03**	**154**	P	**Pn**	**04 46 20.6**	**+2.5**
MSAI	**Masohi**	**3.15**	**139**	P	**Pn**	**04 46 21.5**	**+1.8**
KMSI	**Cibinong**	**3.26**	**297**	P	**Pn**	**04 46 22.5**	**+1.3**
SIJI	**Sorong**	**4.39**	**89**	P	**Pn**	**04 46 39.9**	**+3.1**
	12nm,0.3s,baz=274,slow=10,SNR=23						
SIJI				S	**Sn**	**04 47 30.5**	**+3.8**
	2.9nm,0.3s,baz=49,slow=20,SNR=1.9						
SGSI	**Sangihe**	**4.79**	**344**	P	**Pn**	**04 46 43.7**	**+1.5**
MRSI	**Marisa**	**5.13**	**286**	P	**Pn**	**04 46 47.1**	**+0.1**
KDI	**Kendari**	**5.21**	**235**	P	**Pn**	**04 46 48.7**	**+0.7**
	66nm,1.1s						
APSI	**Ampana**	**5.23**	**270**	P	**Pn**	**04 46 49.0**	**+0.7**
	148nm,0.4s,3μm						
FAKI	**Fak Fak**	**5.72**	**110**	P	**Pn**	**04 46 57.4**	**+2.4**
	162nm,1.1s						
FAKI	**Fak Fak**	**5.72**	**110**	*e*Pn	**Pn**	**04 46 56.6**	**+1.6**
FAKI				*e*Sn	**Sn**	**04 48 03.5**	**+3.9**
PCI	**Palu**	**7.04**	**270**	P	**Pn**	**04 47 13.8**	**+0.6**
MPSI	**Mapaga**	**7.09**	**280**	P	**Pn**	**04 47 15.6**	**+1.7**
TTSI	**Tana Toraja**	**7.36**	**253**	P	**Pn**	**04 47 18.1**	**+0.5**
	100nm,1.1s,1μm						
SPSI	**Sidrap Palu**	**7.71**	**247**	P	**Pn**	**04 47 23.7**	**+1.3**
BKSI	**Bulukumba**	**8.03**	**237**	P	**Pn**	**04 47 28.5**	**+1.7**
KAPI	**Kappang**	**8.19**	**240**	*e*Pn	**Pn**	**04 47 30.8**	**+1.8**
	60nm,0.7s						
KAPI				*e*Sn	**Sn**	**04 49 02.5**	**+2.1**
EDFI	**Ende, Flores**	**9.32**	**213**	P	**Pn**	**04 47 45.5**	**+0.8**
BATI	**Baumata**	**9.75**	**199**	LR	LR	04 51 59.2	
	comp=Z,252nm,18.7s,baz=66,slow=40						
MYLDM	**Lahad Datu**	**10.34**	**306**	*e*Pn	**Pn**	**04 48 02.7**	**+4.2**
MTN	**Manton Dam**	**12.56**	**161**	*e*Pn	**Pn**	**04 48 29.3**	**+0.4**
JAGI	**Jajag, Banyuwa**	**14.72**	**239**	*e*P	**P**	**04 49 06.5**	**+2.5**
TGY	**Tagaytay City**	**16.06**	**339**	LR	LR	04 56 44.3	
	comp=Z,90nm,19.0s,baz=78,slow=42						
FITZ	**Fitzroy Crossi**	**17.10**	**184**	P	**Pn**	**04 49 28.9**	**0.0**
	0.2nm,0.3s,baz=16,slow=7.4,SNR=3.8						
FITZ				LR	LR	04 57 08.7	
	comp=Z,82nm,18.9s,baz=12,slow=41						
WRAB	**Tennant Creek**	**20.25**	**159**	*e*P	**P**	**04 50 02.6**	**-2.4**
	25nm,1.4s						
WR1	**Warramunga Arr**	**20.25**	**159**	*e*P	**P**	**04 50 04.0**	**-1.1**
	19nm,1.1s						
WRA	**Warramunga Arr**	**20.25**	**159**	P	**P**	**

KS01	Wonju Array Si	38.23	1	eP	P	04 52 49.6	+0.3
XAN	Xi'an	38.67	336	P	P	04 52 53.2	+0.1
XAN				pP	pP	04 52 59.5	-3.5
XAN				pmax	pmax		
	comp=Z,17nm,0.9s						
XAN				pmax	pmax		
	comp=Z,51nm,3.6s						
MAJO	Matsushiro	38.75	15	eP	P	04 52 52.1	-1.5
MJAR	Matsushiro Arr	38.75	15	P	P	04 52 52.1	-1.5
	3.8nm,0.6s,baz=192,slow=10,SNR=13						
BJT	Baijiatuau	41.92	348	eP	P	04 53 20.1	+0.2
	48nm,1.4s						
LZH	Lanzhou	42.62	332	eP	P	04 53 27.7	+1.8
LZH				pP	sP	04 53 38.4	-1.6
LZH				pmax	pmax		
	comp=Z,20nm,1.2s						
USRK	Ussuriysk Ar.	45.17	5	P	P	04 53 46.1	+0.1
	8.3nm,0.7s,baz=195,slow=7.1,SNR=17						
MDJ	Mudanjiang	45.42	3	eP	P	04 53 48.6	+0.7
	16nm,0.8s						
ASAJ	Asahikawa	47.00	15	P	P	04 54 00.3	-0.1
	6.6nm,0.5s,baz=132,slow=17,SNR=4.0						
ASAJ	Asahikawa	47.00	15	eP	P	04 54 00.3	-0.1
	18nm,1.1s						
GTA	Gaotai	47.19	331	eP	P	04 54 03.3	+1.2
GTA				pP	pP	04 54 09.8	-2.5
GTA				sP	sP	04 54 13.6	-2.7
GTA				pmax	pmax		
	comp=Z,11nm,1.0s						
RAMN	Ramite	47.66	309	eP	P	04 54 07.3	+1.2
	18nm,0.6s						
GUN	Gumba	48.68	309	eP	P	04 54 14.4	+0.3
	39nm,0.8s						
DMN	Daman	49.14	309	eP	P	04 54 18.3	+0.8
	31nm,1.0s						
KOLN	Koldanda	50.39	308	eP	P	04 54 27.6	+0.6
	35nm,0.7s						
DANN	Dangsing	50.53	309	eP	P	04 54 28.2	0.0
	38nm,0.7s						
PYUN	Piuthan	51.02	308	eP	P	04 54 31.8	0.0
	59nm,0.9s						
ULN	Ulaanbaatar	51.58	343	eP	P	04 54 36.2	+0.6
	9.7nm,1.1s						
SONA0	Songino Array	51.75	343	eP	P	04 54 37.3	+0.5
SONM	Songino Array	51.75	343	P	P	04 54 37.3	+0.5
	3.3nm,0.7s,baz=159,slow=9.4,SNR=15						
SONA1	Songino Array	51.76	343	eP	P	04 54 37.2	+0.3
FUNA	Funafuti	52.63	100	eP	P	04 54 41.7	-2.1
	155nm,1.1s						
CRLZ	Canterbury Las	58.78	143	eP	P	04 55 26.0	-1.3
	86nm,1.4s						
BKZ	Black Stump Fm	59.08	136	eP	P	04 55 28.2	-1.4
PEA0B	Petropavlovsk-	59.69	21	eP	P	04 55 33.8	+0.3
	55nm,1.4s						
PETK	Petropavlovsk-	59.69	21	P	P	04 55 34.1	+0.6
	3.6nm,0.5s,baz=183,slow=4.9,SNR=22						
PETK	Petropavlovsk-	59.69	21	eP	P	04 55 33.4	-0.1
PEA1	Petropavlovsk-	59.69	21	eP	P	04 55 34.1	+0.6
MK01	Makanchi Array	61.46	327	eP	P	04 55 46.0	+0.2
MK31	Makanchi Array	61.48	327	eP	P	04 55 46.2	+0.4
MK32	Makanchi Array	61.48	327	eP	P	04 55 46.1	+0.2
MK32				eScP	ScP	05 00 24.7	-2.2
MKAR	Makanchi Array	61.48	327	P	P	04 55 46.1	+0.2
	3.0nm,0.6s,baz=122,slow=8.6,SNR=20						
MKAR				ScP	ScP	05 00 24.7	-2.2
	0.5nm,0.8s,baz=114,slow=3.5,SNR=3.6						
MKAR	Makanchi Array	61.48	327	eP	P	04 55 46.2	+0.4
	26nm,0.7s						
MKAR				ScP	ScP	05 00 24.7	-2.2
MAKZ	Makanchi	61.66	327	eP	P	04 55 47.6	+0.5
	5.0nm,1.0s						
AAK	Ala-Archa	63.94	319	P	P	04 56 02.3	-0.1
	0.6nm,0.3s,baz=121,slow=13,SNR=3.0						
ZALV	Zalesovo Beam	64.80	334	P	P	04 56 07.2	-0.5
	0.8nm,0.4s,baz=104,slow=6.3,SNR=4.5						
ZAA1	Zalesovo Array	64.81	334	eP	P	04 56 07.2	-0.5
KURBB	Kurchatov Arra	65.75	329	P	P	04 56 13.7	-0.2
	3.9nm,0.8s,baz=132,slow=6.2,SNR=19						
KURK	Kurchatov	65.75	329	eP	P	04 56 13.9	0.0
	10nm,0.9s						
SEY	Seymchan	66.52	12	P	P	04 56 19.5	+0.9
	2.9nm,0.6s,baz=171,slow=17,SNR=8.2						
BVAR	Borovoye Array	71.31	328	P	P	04 56 47.3	-1.3
	0.7nm,0.5s,baz=65,slow=6.8,SNR=4.2						
ATKA	Atka Island	72.25	34	eP	P	04 56 52.4	-1.9
	13nm,0.8s						
TIXI	Tiksi	72.47	1	eP	P	04 56 54.7	-0.5
	24nm,1.3s						
ABKAR	Abkulak array	75.85	322	eP	P	04 57 14.9	-0.4
AKTO	Aktyubinsk	77.40	322	P	P	04 57 23.3	-0.8
	0.8nm,0.3s,baz=97,slow=8.1,SNR=5.1						
VNDA	Vanda	78.81	173	LR	LR	05 32 09.0	
	comp=Z,76nm,19.3s,baz=38,slow=36						
RAYN	Ar Rayn	82.46	294	eP	P	04 57 52.5	+0.4
	10nm,1.4s						
QSPA	South Pole Qui	89.00	180	P	P	04 58 21.1	-2.6
	1.3nm,0.8s,baz=314,slow=6.1,SNR=6.2						
ILAR	Eielson Array	89.23	25	P	P	04 58 22.4	-2.3
	0.2nm,0.4s,baz=255,slow=4.6,SNR=3.1						
ILB	Eielson Array	89.23	25	eP	P	04 58 22.4	-2.3
EIL	Elat	92.14	299	LR	LR	05 43 13.2	
	comp=Z,20nm,18.5s,baz=61,slow=38						
ARA0	ARCESS Array S	94.85	340	eP	P	04 58 47.9	-2.7
ARCES	ARCESS Array B	94.85	340	P	P	04 58 47.9	-2.7
	2.5nm,0.9s,baz=72,slow=4.0,SNR=6.1						
CLL	Collm	105.47	323	ePP	PP	05 03 58.0	-2.3
TORD	Torodi Ar. Bea	124.39	285	PKP	PKPdf	05 04 28.8	-0.3
	1.0nm,0.6s,baz=40,slow=1.7,SNR=7.5						
TOA1	Torodi Ar. Sit	124.40	285	ePKPdf	PKPdf	05 04 28.8	-0.3

GUC 06 04:50:37.0±0.5, 23°.08S×70°.49W, h32km±5km, ML3.5, 3C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PB10	IPOC Station P	0.44	188	⇑	iP	Pb	04 50 46.2	-0.4
PB10					eS	Sb	04 50 52.6	-0.5
PB10					IAML		04 50 55.3	
	comp=N,3μm,0.1s							
PB04	IPOC Station P	0.81	23	⇓	iP	Pn	04 50 51.9	-0.4
PB04					eS	Sb	04 51 03.3	-0.1
PB04					IAML		04 51 05.0	
	comp=N,5μm,0.3s							
PB06	IPOC Station P	0.93	67	⇓	iP	Pn	04 50 53.9	0.0
PB06					eS	Sn	04 51 06.4	+0.2
PB06					IAML		04 51 07.0	
	comp=N,2μm,0.2s							
PB15	IPOC Station P	0.95	98		eP	Pn	04 50 54.5	+0.2
PB07	IPOC Station P	1.46	23	⇑	iP	Pn	04 51 01.6	+0.3
PB07					eS	Sb	04 51 21.0	-0.9
PB07					IAML		04 51 22.4	
	comp=E,2μm,0.3s							
PB14	IPOC Station P	1.54	177		eP	Pn	04 51 02.8	+0.2
PB09	IPOC Station P	1.72	42		eP	Pb	04 51 06.5	-1.6
PB02	IPOC Station P	1.84	18	⇑	iP	Pn	04 51 06.6	+0.2
PB02					eS	Sn	04 51 30.6	+2.0
PB02					IAML		04 51 38.1	
	comp=E,1μm,0.2s							

IDC 06 05:02:44.3±2.3, 6°.11S×129°.72E, h0km, mb3.6/1, mb1 3.7/4, mb1mx3.4/48, mbtmp3.5/4, ML3.4/3, MS2.2/1, Ms1 2.2/1, ms1mx2.1/42, Error ellipse: s-maj=93.0km s-min=29.1km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	5.42	17		LR	LR	05 07 22.8	
	comp=Z,20nm,18.0s,baz=245,slow=51							
FITZ	Fitzroy Crossi	12.57	198		Pn	Pn	05 05 44.7	+0.1
	0.0nm,0.3s,baz=9.5,slow=12,SNR=3.5							
FITZ					Sn	Sn	05 07 55.4	-10
	0.3nm,0.3s,baz=61,slow=19,SNR=5.1							
WRA	Warramunga Arr	14.47	162		Pn	Pn	05 06 08.9	-1.7
	0.3nm,0.3s,baz=345,slow=14,SNR=22							
WRA					Sn	Sn	05 08 36.7	-15
	0.3nm,0.3s,baz=332,slow=22,SNR=4.9							
ASAR	Alice Springs	17.92	167		P	P	05 06 56.1	+0.3
	0.2nm,0.3s,baz=336,slow=10.0,SNR=4.9							
ASAR					S	Sn	05 10 00.5	-15
	0.0nm,0.3s,baz=356,slow=27,SNR=3.2							
MKAR	Makanchi Array	67.33	327		P	P	05 13 41.2	0.0
	0.4nm,0.6s,baz=127,slow=7.6,SNR=4.5							

*NIED **06** 05:17:00, 37°.20N×142°.20E, h11km, Mw3.5 Best double couple: M₀1.90000×10¹⁴ NP1:φ₀39.00000°, δ40.00000°, λ-60.00000°. NP2:φ₀182.00000°, δ56.00000°, λ-113.00000°.*

JMA 06 05:17:21.2±0.3, 37°.25N×142°.17E, h20km±4km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JFK	Kawauchi	1.04	277		P	Pb	05 17 40.4	-0.1
JFK					eS	Sn	05 17 54.2	-0.4
ONAJ	Iwakimizuishiy	1.11	263		P	Pn	05 17 41.2	-0.4
JMM	Marumori	1.25	300		P	Pn	05 17 43.3	-0.3
JIO	Ouri	1.37	332		P	Pn	05 17 44.6	-0.5
JFT	Otama	1.48	281		P	Pb	05 17 47.9	-0.2
JOU	Okura	1.63	313		P	Pn	05 17 49.3	+0.5
JOU					eS	Sb	05 18 10.3	-0.5
JMK	Ichinoseki	1.86	336		P	Pb	05 17 53.4	-1.0
JFY	Yanaizu	1.97	275		P	Pn	05 17 54.8	+1.3
JYK	Kaneyama	2.19	320		P	Pn	05 17 57.4	+0.9
JOM	Ohasama	2.32	343		P	Pn	05 18 00.2	+1.9
JAG	Ashikaga	2.33	250		P	Pn	05 17 59.6	+1.2
MAT	Matsushiro	3.25	259		P	Pb	05 18 15.0	-3.3
MAT					eS	Sb	05 18 53.9	-3.6

IDC 06 05:18:43.8±10.0, 6°.20S×129°.30E, h155km±110km, mb3.1/1, mb1 3.8/5, mb1mx3.3/54, mbtmp4.2/5, MS2.8/1, Ms1 2.8/1, ms1mx2.4/20, Error ellipse: s-maj=113.7km s-min=30.2km az=48.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	6.85	234		P	Pn	05 20 22.4	+0.4
	4.4nm,0.3s,baz=107,slow=14,SNR=3.5							
BATI					S	Sn	05 21 37.0	-2.0
	3.3nm,0.3s,baz=54,slow=14,SNR=3.3							
FITZ	Fitzroy Crossi	12.35	196		P	Pn	05 21 33.7	-0.9
	1.7nm,0.3s,baz=12,slow=11,SNR=35							
FITZ					S	Sn	05 23 40.2	-11
	0.3nm,0.3s,baz=330,slow=8.1,SNR=2.5							
WRA	Warramunga Arr	14.51	161		P	Pn	05 22 01.6	-0.4
	0.4nm,0.3s,baz=343,slow=12,SNR=44							
WRA					S	Sn	05 24 34.4	-8.8
	0.4nm,0.3s,baz=323,slow=24,SNR=6.0							
ASAR	Alice Springs	17.92	166		P	P	05 22 42.6	+0.6
	1.1nm,0.3s,baz=339,slow=9.3,SNR=41							
ASAR					S	S	05 25 49.7	-10
	0.1nm,0.3s,baz=351,slow=23,SNR=3.4							
GUMO	Guam	25.01	38		LR	LR	05 34 40.3	
	comp=Z,18nm,18.5s,baz=172,slow=38							
MKAR	Makanchi Array	67.18	327		P	P	05 29 21.1	0.0
	0.3nm,0.5s,baz=119,slow=5.1,SNR=3.2							

*NEIC **06** 05:21:52.7±0.0, 16°.65N×94°.48W, h80km, MD4.0(MEX), After MEX.*

MEX 06 05:21:52.7±0.6, 16°.65N×94°.48W, h80km±19km, MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TGIG		1.31	84		ePn	Pn	05 22 14.1	-1.6
TGIG					eSn	Sn	05 22 31.6	-1.3
TGIG		1.31	84		eP	Pn	05 22 14.1	-1.6
TGIG					eS	Sn	05 22 31.6	-1.3
TGBT	Tuxtla Gutierr	1.34	84		eP	Pn	05 22 14.4	-1.5
TGBT					eS	Sn	05 22 31.5	-1.9
TUIG	Tuzandepetl	1.38	2		ePn	Pn	05 22 14.6	-1.8
TUIG					eSn	Sn	05 22 31.3	-3.0
TUIG	Tuzandepetl	1.38	2		iP	Pn	05 22 14.6	-1.8
TUIG					eS	Sn	05 22 31.3	-3.0
PCIG		1.54	128		ePn	Pn	05 22 17.2	-1.3
PCIG					eSn	Sn	05 22 36.6	-1.3
PCIG		1.54	128		eP	Pn	05 22 17.2	-1.3
PCIG					eS	Sn	05 22 36.6	-1.3
HUIG	Huatulco	1.79	241		ePn	Pn	05 22 19.2	-2.7
HUIG					eSn	Sn	05 22 42.0	-2.0
HUIG	Huatulco	1.79	241		eP	Pn	05 22 19.2	-2.7
HUIG					eS	Sn	05 22 42.0	-2.0
VHO	Vista Hermosa	2.20	281		ePn	Pn	05 22 26.7	-0.7
VHO					eSn	Sn	05 22 52.0	-1.8
VHO	Vista Hermosa	2.20	281		eP	Pn	05 22 26.7	-0.7
VHO					eS	Sn	05 22 52.0	-1.8
CCIG	Comitan	2.28	99		ePn	Pn	05 22 26.6	-1.9
CCIG					eSn	Sn	05 22 51.2	-4.7
LVIG	Laguna Verde	3.57	329		ePn	Pn	05 22 41.7	-4.1
TLIG	Tlapa	4.01	284		ePn	Pn	05 22 47.7	-4.2
TLIG					eSn	Sn	05 23 37.0	-0.8
TLIG	Tlapa	4.01	284		eS	Sn	05 23 34.2	-3.6

SJA 06 05:49:24.3±0.6, 33°.34S×69°.97W, h13km±101km, ML2.7, MW3.6, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ROC1	El Roble	0.95	292		iP	Pb	05 49 42.9	+0.1
ROC1					iS	Sn	05 49 56.7	-0.5
AAGR	Agrelo	0.99	76		iP	Pg	05 49 43.5	+0.2
ARCO	CERRO ARCO	1.00	61		iP	Pb	05 49 43.5	0.0
ARCO					IAML		05 49 57.9	
ARCO					iS	Sn	05 49 58.2	0.0
ASAL	Salagasta	1.21	52		iP	Pb	05 49 47.2	+0.2
AUSP	Uspallata	1.21	24		iP	Pb	05 49 47.4	+0.2
RTLS	Leoncito	1.63	20		iP	Pg	05 49 55.3	-0.4
RTLS					IAML		05 49 56.0	
	comp=Z,87nm,0.3s							
RTLS					iS	Sg	05 50 18.7	+1.8

*NEIC **06** 05:49:39.0±0.0, 16°.31N×98°.30W, h14km, MD4.0(MEX), After MEX.*

MEX 06 05:49:39.0±0.5, 16°.31N×98°.30W, h14km±7km, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TLIG	Tlapa	1.27	348		eP	Pn	05 49 58.9	-3.7
TLIG					eS	Sb	05 50 14.1	-5.1
TLIG	Tlapa	1.27	348		eP	Pn	05 49 58.9	-3.7
TLIG					eS	Sb	05 50 14.1	-5.1
ACX	Acapulco	1.60	291		eP	Pn	05 50 04.6	-2.3
ACX					eS	Sn	05 50 23.4	-4.0
ACX	Acapulco	1.60	291		eP	Pn	05 50 04.6	-2.3
ACX					eS	Sn	05 50 23.4	-4.0
VHO	Vista Hermosa	1.68	63		eP	Pn	05 50 04.6	-3.6
VHO					eS	Sn	05 50 24.9	-4.8
VHO	Vista Hermosa	1.68	63		eP	Pn	05 50 04.6	-3.6
VHO					eS	Sn	05 50 24.9	-4.8
CAIG	El Cayaco	2.03	292		eP	Pn	05 50 09.8	-2.9
CAIG					eS	Sn	05 50 33.1	-4.7
CAIG	El Cayaco	2.03	292		eP	Pn	05 50 09.8	-2.9
CAIG					eS	Sn	05 50 33.1	-4.7
HUIG	Huatulco	2.17	104		eP	Pn	05 50 11.6	-3.2
HUIG	Huatulco	2.17	104		eP	Pn	05 50 11.6	-3.2

*DDA **06** 05:52:34.4, 41°.20N×43°.81E, h7km, Ml2.9*
*ISK **06** 05:52:34.5, 41°.22N×43°.85E, h12km, ML2.1/2*
*ISCJB **06** 05:52:35.1±0.5, 41°.19N±0°.02×43°.83E±0°.03, h5km±5km, Error ellipse: s-maj=4.8km s-min=3.6km az=38.4*
*CSEM **06** 05:52:35.0±0.1, 41°.19N×43°.83E, h5km, ML2.3, Error ellipse: s-maj=3.5km s-min=2.5km az=135.0*
*TIF **06** 05:52:35.0, 41°.24N×43°.85E, h16km±1km*

ISC 06 05:52:35.2±0.9, 41°.20N±0°.02×43°.84E±0°.02, h11km±8km, n31, σ0°.62/54, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BGD	Bogdanovka	0.19	289		P	Pg	05 52 39.7	+0.3
BGD					S	Sg	05 52 42.6	+0.3
BGD	Bogdanovka	0.19	289		P	Pg	05 52 39.7	+0.3
BGD					S	Sg	05 52 42.7	+0.3
AKH	Akhalkalaki	0.33	309		PG	Pg	05 52 41.5	-0.4
AKH					SG	Sg	05 52 46.7	+0.3
AKH	Akhalkalaki	0.33	309		P	Pg	05 52 41.9	-0.1
AKH					S	Sg	05 52 46.3	-0.2
AKH	Akhalkalaki	0.33	309		ePg	Pg	05 52 41.5	-0.4
AKH	Akhalkalaki	0.33	309		P	Pg	05 52 41.9	-0.1
AKH					S	Sg	05 52 46.3	-0.2
EAK	Akyaka	0.54	199		iP	Pg	05 52 44.6	-1.2
EAK					iS	Sg	05 52 53.1	+0.1
EAK	Akyaka	0.54	199		P	Pg	05 52 44.6	-1.2
EAK					S	Sg	05 52 53.1	+0.1
KARS	Kars	0.81	225		PG	Pg	05 52 50.9	0.0
KARS					SG	Sb	05 53 02.9	+0.5
KARS	Kars	0.81	225		ePg	Pg	05 52 50.9	0.0
KARS					eSg	Sb	05 53 02.9	+0.5
TBLG	Delisi	0.86	52		PG	Pg	05 52 51.2	-0.6
TBLG					SG	Sb	05 53 03.3	-0.4
TBLG	Delisi	0.86	52		P	Pb	05 52 51.6	-0.6
TBLG					S	Sb	05 53 03.7	-0.1
TBLG	Delisi	0.86	52		ePg	Pg	05 52 51.2	-0.6
TBLG	Delisi	0.86	52		P	Pb	05 52 51.6	-0.6
TBLG					eSg	Sb	05 53 03.3	-0.4
DIGO	Kars	0.86	204		iP	Pg	05 52 51.3	-0.6
DIGO					iS	Sg	05 53 03.6	+0.5
DIGO	Kars	0.86	204		P	Pg	05 52 51.3	-0.6
DIGO					S	Sg	05 53 03.6	+0.5
EPOS	Posof	0.89	290		iP	Pg	05 52 50.9	-1.4
EPOS					iS	Sg	05 53 02.8	-1.1
EPOS	Posof	0.89	290		P	Pg	05 52 50.9	-1.4
EPOS					S	Sg	05 53 02.8	-1.1
DUS	Dusheti	1.10	36		P	Pn	05 52 57.1	+0.5
DUS					S	Sn	05 53 12.8	+0.9
DUS	Dusheti	1.10	36		P	Pn	05 52 57.1	+0.5
DUS					S	Sn	05 53 12.8	+0.9
DGRG	David-gareji	1.18	77		P	Pg	05 52 57.7	-0.3
DGRG					S	Sn	05 53 15.1	+1.2
DGRG	David-gareji	1.18	77		P	Pg	05 52 57.7	-0.3
DGRG					S	Sn	05 53 15.1	+1.2
GNI	Garni	1.26	146		PN	Pn	05 52 58.5	-0.4
GNI	Garni	1.26	146		ePn	Pn	05 52 58.5	-0.4
GUDG	Gudauri	1.35	21		P	Pg	05 53 00.8	-0.3
GUDG					S	Sg	05 53 18.8	+0.1
GUDG	Gudauri	1.35	21		P	Pg	05 53 00.9	-0.3
GUDG					S	Sg	05 53 18.8	+0.1
ONI	Oni	1.42	348		P	Pb	05 53 01.5	-0.2
ONI					S	Sg	05 53 20.6	-0.2
DDEM	Demirkent	1.61	260		iP	Pb	05 53 05.2	+0.2
DDEM	Demirkent	1.61	260		P	Pb	05 53 05.2	+0.2
BCA	Borcka	1.69	279		PN	Pn	05 53 04.5	-0.1
BCA	Borcka	1.69	279		ePn	Pn	05 53 04.5	-0.1

*SJA **06** 06:07:08.5±0.7, 33°.07S×71°.29W, h68km±3km, ML3.2, MW3.9*
*GUC **06** 06:07:10.2±0.6, 33°.03S×71°.04W, h69km±4km, ML3.9*

ISC 06 06:07:10.9±2.8, 33°.16S±0°.06×71°.2W±0°.1, h56km±11km, n15, σ0°.64/24, 4C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ROC1	El Roble	0.26	44		iP	Pn	06 07 20.5	-0.2
ROC1					iS	Sn	06 07 28.5	+0.8
ROCH	El Roble	0.27	44	⇑	iP	Pn	06 07 20.6	-0.1
ROCH					eS	Sn	06 07 28.2	+0.6
ROCH					IAML		06 07 28.5	
	comp=E,12μm,0.1s							
PEL	Peldehue	0.46	88		eP	Pn	06 07 21.2	-1.0
PEL					eS	Sn	06 07 30.2	-0.2
CLCH	Cerro Calan	0.63	112	⇑	iP	Pn	06 07 23.8	-0.3
CLCH					eS	Sn	06 07 34.1	+0.3
CLCH					IAML		06 07 34.4	
	comp=N,8μm,0.2s							
ANTU	Antumapu	0.64	129	⇑	iP	Pn	06 07 24.3	0.0
ANTU					eS	Sn	06 07 34.7	+0.7
ANTU					IAML		06 07 34.9	
	comp=E,13μm,0.1s							
FCH	Farellones	0.81	102		eP	Pn	06 07 25.5	-1.1
FCH					eS	Sn	06 07 37.3	-0.8
FCH					IAML		06 07 37.7	
	comp=N,5μm,0.2s							
LMEL	Las Melosas	1.10	129	⇑	iP	Pn	06 07 30.1	-0.2
LMEL					eS	Sn	06 07 45.2	+0.6
LMEL					IAML		06 07 45.9	
	comp=E,7μm,0.2s							
AUSP	Uspallata	1.82	59		iP	Pn	06 07 39.8	-0.3
AUSP					iS	Sn	06 08 02.9	+0.7
ARCO	CERRO ARCO	1.96	81		iP	Pn	06 07 42.1	+0.2
ARCO					IAML		06 08 13.2	
	comp=Z,95nm,0.4s							
AAGR	Agrelo	2.02	88		iP	Pn	06 07 42.8	+0.1
ASAL	Salagasta	2.10	75		iP	Pn	06 07 43.9	+0.2
RTLS	Leoncito	2.13	51		iP	Pn	06 07 44.4	0.0
RTLS					iS	Sn	06 08 10.8	+1.0
RTLS					IAML		06 08 14.3	
	comp=Z,299nm,0.4s							
AMOG	MOGNA	3.22	47		iP	Pn	06 07 58.4	-0.6
AROD	Rodeo	3.34	27		iP	Pn	06 08 00.6	-0.4
AGUA	GUANDACOL	4.35	33		iP	Pn	06 08 13.6	-1.0

*ISK **06** 06:24:51.6, 39°.45N×42°.61E, h8km, ML2.2/4*
*CSEM **06** 06:24:52.0±0.3, 39°.39N×42°.73E, h12km, ML2.2, Error ellipse: s-maj=7.0km s-min=5.8km az=110.0*
*DDA **06** 06:24:52.2, 39°.42N×42°.79E, h7km, Ml2.9*

ISC 06 06:24:52.2±1.1, 39°.41N±0°.02×42°.73E±0°.03, h5km±10km, n28, σ1°.89/44, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AGRB	Hanur-Agry	0.26	50		PG	Pg	06 24 58.4	+1.0
AGRB					SG	Sg	06 25 03.6	+2.7
AGRB	Hanur-Agry	0.26	50		ePg	Pg	06 24 58.4	+1.0
AGRB					eSg	Sg	06 25 03.6	+2.7
EATA	Eleskirt	0.49	338		iP	Pn	06 25 03.0	-3.2
EATA					iS	Sb	06 25 13.5	+2.3
EATA	Eleskirt	0.49	338		P	Pn	06 25 03.0	-3.2
EKAR	Karacoban	0.54	254		iP	Pb	06 25 02.7	-1.6
EKAR					iS	Sb	06 25 13.2	+0.8
EKAR	Karacoban	0.54	254		P	Pb	06 25 02.7	-1.6
EKAR					S	Sb	06 25 13.2	+0.8
ADCV	BITLIS_Adilcev	0.60	180		iP	Pg	06 25 03.0	-0.7
ADCV					iS	Sg	06 25 12.7	+1.2
ADCV	BITLIS_Adilcev	0.60	180		P	Pg	06 25 03.0	-0.7
ADCV					S	Sg	06 25 12.7	+1.2
DYDN	Diyadin	0.75	79		iP	Pg	06 25 05.8	-0.9
DYDN					iS	Sg	06 25 16.6	+0.1
DYDN	Diyadin	0.75	79		P	Pg

0.5nm,0.8s,baz=107,slow=3.2,SNR=3.7
WRA Warramunga Arr 44.83 262 P P 06 37 07.5 -0.6
0.6nm,0.3s,baz=96,slow=8.2,SNR=68
FITZ Fitzroy Crossi 53.25 262 P P 06 38 11.4 +0.6
1.9nm,1.0s,baz=87,slow=5.7,SNR=4.3
BRTR Keskin Array B 146.64 313 PKPbc PKPbc 06 48 24.9 -0.4
0.5nm,0.5s,baz=116,slow=3.8,SNR=3.1
GERES GERESS Array B 149.79 345 PKPbc PKPbc 06 48 31.9 -0.9
0.3nm,0.2s,baz=5.7,slow=3.0,SNR=3.5

MEX 06 06:32:34.8±0.4, 16°.68N×98°.37W, h12km±6km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**0.90**	**348**	*e*P	Pg	06 32 49.3	-3.0
TLIG				*e*S	Sg	06 33 01.2	-2.8
VHO	**Vista Hermosa**	**1.61**	**76**	*e*P	Pn	06 32 59.9	-3.4
VHO				*e*S	Sn	06 33 19.2	-5.0
CAIG	**El Cayaco**	**1.86**	**282**	*e*P	Pn	06 33 00.3	-6.2
CAIG				*e*S	Sn	06 33 25.4	-4.6
HUIG	**Huatulco**	**2.35**	**112**	*e*P	Pn	06 33 10.3	-3.0

*IDC **06** 06:36:38.4±2.3, 13°.34N×91°.43W, h0km, mb3.4/2, mb1 3.6/5, mb1mx3.4/49, mbtmp3.3/5, ML3.2/3, MS3.1/1, Ms1 3.1/1, ms1mx2.3/27, Error ellipse: s-maj=37.6km s-min=27.5km az=14.0*

ISC 06 06:36:41.8±1.3, 13°.5N±0°.1×91°.39W±0°.09, h28km, n7, σ1°§64/8, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APG	**El Apazote**	**1.79**	**30**	Pn	**Pb**	**06 37 13.6**	**-0.5**
	19nm,0.3s,baz=207,slow=15,SNR=141						
APG				Sn	**Sb**	**06 37 37.0**	**+0.8**
	15nm,0.3s,baz=295,slow=19,SNR=7.0						
CMIG	**Matias Romero**	**4.95**	**318**	Pn	**Pn**	**06 37 54.2**	**-0.1**
	0.6nm,0.3s,baz=132,slow=14,SNR=7.1						
CMIG				Sn	**Sn**	**06 38 48.8**	**-1.8**
	0.8nm,0.3s,baz=89,slow=6.8,SNR=4.2						
JTS	**JuntasAbangare**	**7.04**	**116**	**Pn**	**Pn**	**06 38 22.4**	**-0.7**
	0.1nm,0.3s,baz=285,slow=12,SNR=2.4						
TXAR	**Lajitas Array**	**19.48**	**326**	**P**	**Pn**	**06 41 07.3**	**-0.8**
	0.0nm,0.3s,baz=152,slow=14,SNR=5.4						
SDV	**Santo Domingo**	**20.86**	**100**	LR	LR	06 49 04.2	
	comp=Z,59nm,20.6s,baz=275,slow=36						
NVAR	**Mina Array Bea**	**34.47**	**321**	P	**P**	**06 43 30.4**	**+2.8**
	0.5nm,0.8s,baz=135,slow=10,SNR=3.0						
YKA	**Yellowknife Ar**	**51.70**	**347**	P	**P**	**06 45 45.7**	**-0.4**
	0.3nm,0.7s,baz=151,slow=7.5,SNR=5.0						

IDC 06 06:39:03.4±2.0, 7°.03S×129°.79E, h0km, mb3.7/1, mb1 4.0/4, mb1mx3.6/52, mbtmp3.8/4, ML3.9/3, Error ellipse: s-maj=76.2km s-min=27.9km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.72**	**200**	Pn	Pn	06 41 53.1	+1.0
	0.7nm,0.3s,baz=25,slow=11,SNR=28						
FITZ				Sn	Sn	06 43 52.9	-11
	0.4nm,0.3s,baz=78,slow=19,SNR=3.7						
WRA	**Warramunga Arr**	**13.58**	**161**	Pn	Pn	06 42 16.6	-0.8
	0.5nm,0.3s,baz=340,slow=13,SNR=33						
WRA				Sn	Sn	06 44 37.3	-12
	0.6nm,0.3s,baz=330,slow=22,SNR=10						
ASAR	**Alice Springs**	**17.01**	**167**	P	Pn	06 43 02.7	-0.2
	0.3nm,0.3s,baz=345,slow=9.8,SNR=10						
ASAR				S	Sn	06 46 00.3	-12
	0.1nm,0.3s,baz=355,slow=28,SNR=3.5						
MKAR	**Makanchi Array**	**68.13**	**327**	P	P	06 50 05.3	0.0
	0.4nm,0.5s,baz=116,slow=7.2,SNR=7.9						

TRN 06 06:41:18.4, 16°.72N×60°.71W, h19km, MD3.6, 3D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SEG	**Port Louis**	**0.82**	**248**	⇓*i*P	Pn	06 41 36.2	+1.2
MGG	**Marie-Galante**	**0.99**	**216**	*e*P	Pg	06 41 38.2	+0.6
MGG				*e*S	Sn	06 41 53.6	+2.9
PHG	**Guadaloupe-2**	**1.14**	**232**	⇓*i*P	Pg	06 41 40.9	+0.4
TAG	**Tarade**	**1.14**	**234**	⇓*i*P	Pg	06 41 40.9	+0.4
BPA	**Boggy Peak**	**1.15**	**287**	*e*P	Pg	06 41 41.1	+0.5
BPA				*e*S	Sg	06 41 57.0	+1.3
TBG	**Guadaloupe-3**	**1.25**	**226**	*e*P	Pg	06 41 42.0	-0.5
TBG				*e*S	Sg	06 42 00.8	+2.0
MDPV	**Dominica, Penn**	**1.28**	**212**	*e*P	Pg	06 41 43.2	0.0
MDPV				*e*S	Sg	06 42 02.2	+2.1
MDVC	**Dominica, Viel**	**1.29**	**211**	*e*P	Pg	06 41 43.2	-0.1
MDVC				*e*S	Sg	06 42 01.5	+1.4
MDPO	**Dominica; Chan**	**1.34**	**212**	*e*P	Pb	06 41 43.4	+0.5
MDPO				*e*S	Sg	06 42 02.5	+0.6
BBL	**Barber's Block**	**1.39**	**212**	*e*P	Pb	06 41 44.2	+0.4
BBL				*e*S	Sg	06 42 04.1	+0.5
ANWB	**Willy Bob**	**1.40**	**313**	*e*P	Pb	06 41 43.9	0.0
ANWB				*e*S	Sg	06 42 04.4	+0.7
MBWH		**1.42**	**271**	*e*P	Pg	06 41 45.2	-0.7
MLYT	**Lee's Yard**	**1.42**	**270**	*e*P	Pg	06 41 46.1	+0.2
MLYT				*e*S	Sg	06 42 04.3	-0.1
DLPL	**La Plaine**	**1.47**	**201**	*e*P	Pb	06 41 45.3	+0.1
DLPL				*e*S	Sg	06 42 05.1	-1.0
NEV	**Hard Times**	**1.83**	**283**	*e*P	Pb	06 41 51.5	+0.2
BAMF	**Morne Balai**	**1.94**	**193**	*e*P	Pb	06 41 52.0	-1.2
CXM	**Morne La Croix**	**1.95**	**193**	*e*P	Pb	06 41 52.5	-0.9
CXM				*e*S	Sb	06 42 16.4	-1.0
PCM	**Pelee Case Pet**	**1.95**	**194**	*e*P	Pb	06 41 52.1	-1.4
PCM	**Pelee Case Pet**	**1.95**	**194**	*e*P	Pb	06 41 52.2	-1.2
PML	**Morne Lenard**	**1.98**	**193**	*e*P	Pn	06 41 52.4	+1.4
FDF	**Fort de France**	**2.02**	**192**	*e*P	Pn	06 41 53.0	+1.4
FDF				*e*S	Sb	06 42 17.9	-1.4
LPMF	**Morne Lapointe**	**2.15**	**187**	*e*P	Pn	06 41 54.9	+1.7
ZAM	**Aeronautique**	**2.16**	**188**	*e*P	Pb	06 41 55.1	-1.7
MVM	**Montagne Vaucl**	**2.16**	**185**	*e*P	Pb	06 41 55.3	-1.7
TRMF	**Trois Ilets**	**2.19**	**189**	*e*P	Pn	06 41 55.6	+1.8
SEUS	**St. Eustatius**	**2.30**	**290**	*e*P	Pn	06 41 57.4	+2.0
SABA	**Saba**	**2.58**	**291**	*e*P	Pb	06 42 01.9	-2.2
SLB	**Belfond**	**2.89**	**186**	*e*P	Pn	06 42 05.7	+2.2
SLB				*e*S	Sn	06 42 40.2	+2.4
SSV	**Crater Summit**	**3.40**	**188**	*e*P	Pn	06 42 12.4	+1.8
SVV	**Soufriere Volc**	**3.42**	**188**	*e*P	Pn	06 42 13.4	+2.7
SVCV	**St. Vincent, C**	**3.45**	**187**	*e*P	Pn	06 42 13.4	+2.2
SVCV				*e*S	Sn	06 42 54.4	+2.8
SVB	**Belmont**	**3.47**	**189**	*e*P	Pn	06 42 14.0	+2.6
SVB				*e*S	Sn	06 42 54.1	+2.2
FCV	**Fort Charlotte**	**3.58**	**188**	*e*P	Pn	06 42 15.0	+2.1
GRSS	**Sisters**	**4.48**	**191**	*e*P	Pn	06 42 28.7	+3.4
GRHS	**Sauteurs**	**4.56**	**192**	*e*P	Pn	06 42 29.1	+2.7
GRGR	**Grenville**	**4.65**	**191**	*e*P	Pn	06 42 30.8	+3.1
GRGR	**Grenville**	**4.65**	**191**	*e*S	Sn	06 43 22.2	+1.0

IDC 06 07:04:16.7±2.8, 42°.20N×129°.41E, h0km, mb1 2.6/2, mb1mx2.6/72, mbtmp2.6/2, ML1.8/2, Error ellipse: s-maj=46.5km s-min=17.8km az=120.0, North Korea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I45RU	**USSURIYSK INFR**	**2.75**	**42**	*i*		07 24 10.0	
	baz=226,slow=316,SNR=3.5						
USRK	**Ussuriysk Ar.**	**2.75**	**42**	Pn	Pn	07 05 02.5	+0.4
	0.2nm,0.3s,baz=239,slow=17,SNR=3.5						
USRK				Pg	Pb	07 05 07.2	+0.5
	0.9nm,0.3s,baz=241,slow=15,SNR=10						
USRK				Lg	Lg	07 05 43.2	
	2.0nm,0.3s,baz=220,slow=26,SNR=9.3						
KSRS	**Korea Array**	**4.87**	**194**	Pn	Pn	07 05 31.6	+0.4
	0.3nm,0.3s,baz=13,slow=13,SNR=4.7						
KSRS				Sn	Sn	07 06 28.9	+0.6
	0.3nm,0.3s,baz=10,slow=24,SNR=3.3						

*CSEM **06** 07:05:56.8±0.2, 38°.76N×43°.22E, h30km, ML2.3, Error ellipse: s-maj=5.0km s-min=4.8km az=79.0*
*ISK **06** 07:05:56.4, 38°.73N×43°.25E, h30km, ML2.3/3*
*DDA **06** 07:05:58.1, 38°.78N×43°.19E, h7km, Ml2.5*

ISC 06 07:05:56.9±0.9, 38°.76N±0°.03×43°.22E±0°.03, h31km±7km, n14, σ0§47/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.21**	**140**	PG	**Pn**	**07 06 03.9**	**-0.1**
VANB				SG	**Sb**	**07 06 08.9**	**+0.9**
VANB	**Van**	**0.21**	**140**	*i* Pg	**Pn**	**07 06 03.9**	**-0.1**
VANB				*e*Sg	**Sb**	**07 06 08.9**	**+0.9**
TVAN	**Van**	**0.27**	**147**	*i* P	**Pb**	**07 06 03.9**	**-0.4**
TVAN				*i* S	**Sb**	**07 06 09.1**	**-0.2**
TVAN	**Van**	**0.27**	**147**	P	**Pb**	**07 06 03.9**	**-0.4**
TVAN				S	**Sb**	**07 06 09.1**	**-0.2**
VMUR	**Van-Muradiye**	**0.36**	**50**	*i* P	**Pb**	**07 06 05.4**	**-0.1**
VMUR				*i* S	**Sn**	**07 06 11.8**	**-0.5**
VMUR	**Van-Muradiye**	**0.36**	**50**	P	**Pb**	**07 06 05.4**	**-0.1**
VMUR				S	**Sn**	**07 06 11.8**	**-0.5**
ADCV	**BITLIS_Adilcev**	**0.39**	**278**	*i* P	**Pb**	**07 06 05.3**	**-0.6**
ADCV				*i* S	**Sb**	**07 06 12.0**	**0.0**
ADCV	**BITLIS_Adilcev**	**0.39**	**278**	P	**Pb**	**07 06 05.3**	**-0.6**
ADCV				S	**Sb**	**07 06 12.0**	**0.0**
GEVA	**Gevas**	**0.46**	**196**	*i* P	**Pb**	**07 06 06.5**	**-0.3**
GEVA				*i* S	**Sn**	**07 06 15.4**	**+0.6**
GEVA	**Gevas**	**0.46**	**196**	P	**Pb**	**07 06 06.6**	**-0.3**
GEVA				S	**Sn**	**07 06 15.4**	**+0.6**
AGRB	**Hanur-Agry**	**0.84**	**348**	PG	**Pn**	**07 06 12.8**	**+0.1**
AGRB				SG	**Sn**	**07 06 24.7**	**+0.6**
AGRB	**Hanur-Agry**	**0.84**	**348**	*e*Pg	**Pn**	**07 06 12.8**	**+0.1**
AGRB				*e*Sg	**Sn**	**07 06 24.7**	**+0.6**
GURO	**Guroymak-BITLI**	**0.95**	**258**	PG	**Pn**	**07 06 14.3**	**+0.1**
GURO				SG	**Sb**	**07 06 27.4**	**+0.1**
GURO	**Guroymak-BITLI**	**0.95**	**258**	*e*Pg	**Pn**	**07 06 14.3**	**+0.1**
GURO				*e*Sg	**Sb**	**07 06 27.4**	**+0.1**

*IDC **06** 07:26:08.0±0.7, 44°.17N×79°.96E, h0km, mb4.1/16, mb1 4.2/23, mb1mx3.9/74, mbtmp4.1/23, ML3.5/7, MS3.1/6, Ms1 3.1/6, ms1mx2.7/69, Error ellipse: s-maj=13.2km s-min=9.1km az=142.0*
*ISCJB **06** 07:26:09.1±0.6, 44°.39N±0°.02×80°.04E±0°.03, h9km±3km, mb4.2/24, MS3.1/1, Error ellipse: s-maj=3.8km s-min=2.4km az=40.2*
*BJI **06** 07:26:10.4, 44°.34N×79°.86E, h16km, mb4.2/6, mB4.3/1, ML4.1/10, Ms3.8/1*
*SOME **06** 07:26:10.8, 44°.32N×79°.90E, h15km, MS3.0*
*NNC **06** 07:26:10.3±0.8, 44°.24N×80°.17E, h12km±7km, mb4.5, mpv4.2, Error ellipse: s-maj=11.1km s-min=3.5km az=122.0*
*MOS **06** 07:26:13.2±1.4, 44°.39N×79°.83E, h43km, mb4.4/8, Error ellipse: s-maj=8.0km s-min=5.4km az=73.9*
*NEIC **06** 07:26:14.6±0.4, 44°.34N×79°.89E, h42km±4km, mb4.5/6, Error ellipse: s-maj=6.4km s-min=3.8km az=137.0*

ISC 06 07:26:10.5±0.8, 44°.36N±0°.02×79°.93E±0°.02, h14km±5km, n144, σ1§73/194, mb4.3/24, 27C-16D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**0.10**	**256**	*e*P	**Pg**	**07 26 14.2**	**+0.4**
	50μm,0.1s						
DJR				*e*S	**Sg**	**07 26 16.4**	**+0.4**
	28μm,0.2s						
KTMS	**Ketmen**	**0.96**	**161**	*e*P	**Pb**	**07 26 28.6**	**-0.3**
	416nm,0.3s						
KTMS				*e*S	**Sb**	**07 26 41.1**	**-0.4**
	1μm,0.2s						
KAPS	**Kapalarasan**	**1.01**	**337**	*e*P	**Pg**	**07 26 30.0**	**-0.1**
	613nm,0.5s						
KAPS				*e*S	**Sg**	**07 26 43.7**	**+0.4**
	2μm,0.4s						
PDGK	**Podgornoye**	**1.07**	**197**	⇑P	**Pb**	**07 26 30.1**	**-0.8**
	2μm,0.6s						
PDGK				⇓S	**Sb**	**07 26 44.2**	**-0.6**
	1μm,0.4s						
PDGK	**Podgornoye**	**1.07**	**197**	P	**Pb**	**07 26 30.5**	**-0.4**
PDGK				S	**Sb**	**07 26 44.2**	**-0.6**
PDGK				pmax	pmax		
	comp=Z,2μm,0.6s						
PDGK				smax	smax		
	comp=N,1μm,0.4s						
MNBS	**Baschi**	**1.13**	**256**	*e*P	**Pb**	**07 26 31.5**	**-0.3**
	comp=N,268nm,0.2s						
MNBS				*e*S	**Sb**	**07 26 46.1**	**-0.3**
	comp=N,887nm,0.2s						
SHLS	**Shalkode**	**1.24**	**196**	*e*P	**Pn**	**07 26 32.2**	**-1.3**
	comp=N,1μm,0.3s						
SHLS				*e*S	**Sb**	**07 26 47.8**	**-1.9**
	comp=N,1μm,0.4s						
TDK	**Taldyqorghan**	**1.26**	**301**	*e*P	**Pb**	**07 26 34.2**	**+0.1**
	comp=N,498nm,0.5s						
TDK				*e*S	**Sg**	**07 26 50.6**	**-0.6**
	comp=N,5μm,0.5s						
KPKS	**Kokpek**	**1.26**	**226**	*e*P	**Pn**	**07 26 33.4**	**-0.4**
	comp=N,2μm,0.2s						
KPKS				*e*S	**Sb**	**07 26 49.5**	**-0.7**
	comp=N,8μm,0.3s						
UZB	**Uzynbulak**	**1.37**	**209**	*e*P	**Pn**	**07 26 35.1**	**-0.2**
	comp=N,293nm,0.2s						
UZB				*e*S	**Sn**	**07 26 53.0**	**-0.4**
	comp=N,3μm,0.1s						
ARXS	**Arharly**	**1.51**	**265**	*e*P	**Pb**	**07 26 38.3**	**-0.1**
	comp=N,277nm,0.2s						
ARXS				*e*S	**Sb**	**07 26 57.1**	**-0.3**
	comp=N,2μm,0.3s						
KURS	**Kuram**	**1.54**	**236**	*e*P	**Pb**	**07 26 38.1**	**-0.6**
	comp=N,118nm,0.5s						
KURS				*e*S	**Sb**	**07 26 58.0**	**-0.1**
	comp=N,1μm,0.7s						
ZHN	**Zhinishke**	**1.60**	**223**	*e*P	**Pn**	**07 26 39.1**	**+0.6**
	comp=N,445nm,0.2s						
ZHN				*e*S	**Sn**	**07 26 59.4**	**+0.3**
	comp=N,8μm,0.2s						
SATY	**Saty**	**1.70**	**221**	⇓*i*P	**Pb**	**07 26 41.4**	**-0.2**
	comp=N,2μm,0.2s						
SATY				⇑*i*S	**Sb**	**07 27 03.5**	**+0.7**
	comp=N,7μm,0.3s						
CHKK	**Chushkaly**	**2.17**	**258**	*e*P	**Pb**	**07 26 48.8**	**-0.8**
	comp=N,89nm,0.2s						
CHKK				*e*S	**Sb**	**07 27 16.6**	**+0.3**
	comp=N,3μm,0.2s						
PRZ	**Przheval'sk**	**2.18**	**211**	*e*Pn	**Pb**	**07 26 49.4**	**-0.3**
PRZ				*e*Sn	**Sb**	**07 27 16.1**	**-0.5**
PRZ	**Przheval'sk**	**2.18**	**211**	*e*PN	**Pb**	**07 26 49.4**	**-0.3**
PRZ				*e*		07 27 16.1	
KOTS	**Kotyrbulak**	**2.33**	**242**	*e*P	**Pb**	**07 26 51.3**	**-1.0**
	comp=N,126nm,0.1s						
KOTS				*e*S	**Sb**	**07 27 20.9**	**+0.1**
	comp=N,2μm,0.5s						
MDOK	**Medeo**	**2.40**	**241**	⇑Pn	**Pb**	**07 26 51.7**	**-1.8**
	comp=N,171nm,0.6s						
MDOK				⇑Sn	**Sb**	**07 27 23.3**	**+0.3**
	comp=N,1μm,0.6s						
MDOK	**Medeo**	**2.40**	**241**	*e*P	**Pb**	**07 26 53.7**	**+0.2**
	comp=N,156nm,0.4s						
MDOK				*e*S	**Sb**	**07 27 24.1**	**+1.0**
	comp=N,1μm,0.6s						
KTBS	**Karatobe**	**2.42**	**256**	*e*P	**Pb**	**07 26 52.7**	**-1.2**
	comp=N,107nm,0.5s						
KTBS				*e*S	**Sb**	**07 27 24.0**	**+0.4**
	comp=N,2μm,0.6s						
KNDC	**Almaty**	**2.43**	**243**	⇓Pn	**Pb**	**07 26 52.3**	**-1.6**
	comp=N,331nm,0.8s						
KNDC				⇓Sn	**Sb**	**07 27 24.3**	**+0.7**
	comp=N,2μm,0.6s						
AAA	**Alma-Ata**	**2.46**	**243**	*e*PN	**Pb**	**07 26 55.5**	**+1.0**
AAA				*e*S	**Sb**	**07 27 26.2**	**+1.5**
AAA				pmax	pmax		
	comp=Z,136nm,0.2s						
AAA				smax	smax		
	comp=E,2μm,0.5s						
AAA	**Alma-Ata**	**2.46**	**243**	*e*P	**Pb**	**07 26 55.2**	**+0.6**
	comp=E,136nm,0.2s						
AAA				*e*S	**Sb**	**07 27 26.5**	**+1.8**
	comp=E,2μm,0.5s						
TNSS	**Tian-Shan**	**2.53**	**240**	*e*P	**Pb**	**07 26 55.7**	**-0.2**
	comp=E,96nm,0.2s						
TNSS				*e*S	**Sb**	**07 27 28.2**	**+1.2**
	comp=E,771nm,0.4s						
KUU	**Kurty**	**2.62**	**261**	*e*P	**Pb**	**07 26 57.8**	**+0.5**
	comp=E,160nm,0.5s						
KUU				*e*S	**Sb**	**07 27 31.0**	**+1.7**
	comp=E,771nm,0.2s						
IZV	**Izvestkoviy**	**2.74**	**242**	*e*P	**Pb**	**07 27 00.2**	**+0.9**
	comp=E,130nm,0.2s						
IZV				*e*S	**Sg**	**07 27 35.5**	**-3.0**
	comp=E,801nm,0.5s						
MTBS	**Maitube**	**2.81**	**245**	*e*P	**Pb**	**07 26 59.6**	**-0.9**
	comp=E,56nm,0.1s						
MTBS				*e*S	**Sb**	**07 27 35.2**	**+0.4**
	comp=E,953nm,0.3s						
MAKZ	**Makanchi**	**2.84**	**30**	⇓Pn	**Pb**	**07 26 58.8**	**-2.2**
	comp=E,11nm,0.5s						
MAKZ				⇓Pg	**Pg**	**07 27 04.3**	**-0.6**
	comp=E,84nm,0.4s						
MAKZ				⇓Sn	**Sn**	**07 27 28.3**	**-1.2**
	comp=E,198nm,0.7s						
MAKZ				⇑Lg	Lg	07 27 39.7	
	comp=E,262nm,0.7s						
MAKZ	**Makanchi**	**2.84**	**30**	*e*Pn	**Pb**	**07 26 59.1**	**-1.9**
MAKZ	**Makanchi**	**2.84**	**30**	PN	**Pb**	**07 26 59.8**	**-1.2**
MAKZ						07 27 39.6	
MAKZ				pmax	pmax		
	comp=Z,11nm,0.5s						
MAKZ				pmax	pmax		
	comp=N,262nm,0.7s						
MK01	**Makanchi Array**	**2.94**	**34**	*e*Pn	**Pb**	**07 26 59.9**	**-2.7**
MK31	**Makanchi Array**	**2.95**	**33**	Pn	**Pn**	**07 26 60.0**	**+3.1**
	comp=N,9.4nm,0.2s,baz=212,slow=15,SNR=1256						
MK31				⇑Pg	**Pg**	**07 27 06.1**	**-0.9**
	comp=N,72nm,0.6s,baz=228,slow=13,SNR=8.6						
MK31				⇓Sn	**Sn**	**07 27 33.0**	**+1.0**
	comp=N,140nm,0.6s,baz=213,slow=18,SNR=5.8						
MK31				⇓Lg	Lg	07 27 44.4	
	comp=N,86nm,0.3s,baz=215,slow=27,SNR=15						
MK31	**Makanchi Array**	**2.95**	**33**	*e*Pn	**Pb**	**07 27 00.3**	**-2.5**
MK31	**Makanchi Array**	**2.95**	**33**	*e*PN	**Pb**	**07 27 00.3**	**-2.5**
MK32	**Makanchi Array**	**2.95**	**33**	*e*Pn	**Pb**	**07 27 00.3**	**-2.5**
MK32				*e*Sn	**Sb**	**07 27 37.8**	**-1.0**
MKAR	**Makanchi Array**	**2.95**	**33**	Pn	**Pb**	**07 27 00.3**	**-2.5**
	comp=N,16nm,0.3s,baz=211,slow=17,SNR=200						
MKAR				Sn	**Sb**	**07 27 37.8**	**-1.0**
	comp=N,84nm,0.3s,baz=214,slow=26,SNR=13						
KDJ	**Kajisay**	**3.00**	**223**	*e*Pn	**Pn**	**07 27 00.0**	**+2.4**
TARG	**Taragay, Kyrgy**	**3.05**	**211**	*e*Pn	**Pn**	**07 27 00.9**	**+2.3**
KST	**Kastek**	**3.16**	**247**	*e*P	**Pb**	**07 27 05.1**	**-1.3**
	comp=N,41nm,0.6s						
KST				*e*S	**Sb**	**07 27 44.5**	**-0.3**
	comp=N,410nm,0.6s						
BMNS	**Besmoynak**	**3.33**	**249**	*e*P	**Pb**	**07 27 08.7**	**-0.6**
	comp=N,43nm,0.3s						
BMNS				*e*S	**Sb**	**07 27 50.5**	**+0.8**
	comp=N,618nm,0.5s						
ULHL	**Ulahol**	**3.42**	**233**	P	**Pn**	**07 27 06.1**	**+2.6**
	SNR=31						
TKM2	**Tokmak 2**	**3.45**	**247**	⇑Pn	**Pn**	**07 27 05.1**	**+1.1**
	comp=N,68nm,0.5s						
TKM2				⇑Pg	**Pg**	**07 27 18.2**	**+1.5**
	comp=N,68nm,0.5s						
TKM2				⇑Lg	Lg	07 28 01.0	
	comp=N,299nm,0.6s						
TKM2	**Tokmak 2**	**3.45**	**247**	P	**Pn**	**07 27 05.9**	**+1.9**
	SNR=6.2						
TKM2	**Tokmak 2**	**3.45**	**247**	PN	**Pn**	**07 27 05.0**	**+1.1**
TKM2						07 27 55.3	
TKM2				pmax	pmax		
	comp=Z,68nm,0.5s						
TKM2				pmax	pmax		
	comp=N,299nm,0.6s						
CHMS	**Chumysh**	**3.99**	**252**	P	**Pn**	**07 27 12.6**	**+1.4**
	SNR=9.8						
KBK	**Karagaybulak**	**4.00**	**247**	P	**Pn**	**07 27 13.4**	**+2.0**
	SNR=18						
USP	**Ospenovka**	**4.07**	**256**	P	**Pn**	**07 27 13.8**	**+1.5**
	SNR=14						
NRN	**Naryn**	**4.10**	**226**	*e*Pn	**Pn**	**07 27 15.2**	**+2.2**
NRN	**Naryn**	**4.10**	**226**	*e*PN	**Pn**	**07 27 15.2**	**+2.2**
KZA	**Kyzart**	**4.11**	**238**	P	**Pn**	**07 27 16.0**	**+2.9**
	SNR=13						
FRU	**Bishkek**	**4.14**	**250**	*e*PN	**Pn**	**07 27 14.0**	**+0.7**
AAK	**Ala-Archa**	**4.31**	**248**	Pn	**Pn**	**07 27 17.1**	**+1.4**
	comp=N,1.2nm,0.3s,baz=80,slow=6.4,SNR=13						
AAK				Lg	Lg	07 28 21.2	
	comp=N,7.6nm,0.3s,baz=180,slow=20,SNR=4.6						
AAK				LR	LR	07 28 36.7	
	comp=N,12nm,21.0s,baz=354,slow=35						
AAK	**Ala-Archa**	**4.31**	**248**	⇑Pn	**Pn**	**07 27 17.4**	**+1.8**
	comp=N,12nm,0.9s						
AAK				⇓Pg	**Pg**	**07 27 30.0**	**-2.9**
	comp=N,28nm,0.5s						
AAK				⇑Lg	Lg	07 28 29.7	
	comp=N,310nm,0.7s						
AAK	**Ala-Archa**	**4.31**	**248**	P	**Pn**	**07 27 17.5**	**+1.8**
	SNR=6.3						
AAK	**Ala-Archa**	**4.31**	**248**	*e*Pn	**Pn**	**07 27 17.1**	**+1.4**
AAK				*e*Pn	Pb	07 27 17.4	-8.6
AAK				*e*Sn	**Sb**	**07 28 21.2**	**+3.3**
UCH	**Uchtor**	**4.49**	**244**	P	**Pn**	**07 27 20.9**	**+2.5**
	SNR=11						
ZSN	**Zaisan**	**4.63**	**46**	*e*P	**Pb**	**07 27 31.5**	**0.0**
	comp=N,3.3nm,0.2s						
ZSN				*e*S	**Sb**	**07 28 29.9**	**+2.8**
	comp=N,166nm,0.4s						
EKS2	**Erkin-Say**	**4.78**	**251**	P	**Pn**	**07 27 23.8**	**+1.6**
	SNR=5.8						
AML	**Almayashu**	**5.07**	**246**	P	**Pn**	**07 27 29.0**	**+2.7**
	SNR=17						
WMQ	**Urumqi**	**5.62**	**93**	Pn	**Pn**	**07 27 36.0**	**+2.4**
WMQ				Sn	**Sn**	**07 28 39.8**	**+1.8**
WMQ				smax	smax		
	comp=N,250nm,0.7s						
WMQ				smax	smax		
	comp=N,260nm,0.9s						
MNAS	**Manas**	**5.72**	**254**	⇑Pn	**Pn**	**07 27 36.5**	**+1.5**
	comp=N,1.1nm,0.5s						
MNAS				⇑Pg	**Pg**	**07 27 58.3**	**-1.6**
	comp=N,20nm,0.9s						
MNAS				⇑Lg	Lg	07 29 15.6	
	comp=N,103

ZALV 07 30 25.0
ZAA1 Zalesovo Array 10.12 17 *e*Pn **Pn 07 28 35.4 +0.2**
ZAA1 *e*Sn **Sn 07 30 25.0 -3.4**
ZAA1 *e* 07 31 30.2
NVS Novosibirsk 10.71 10 *e*P **Pn 07 28 44.7 +1.4**
NVS *e* 07 30 38.2
BVA0 Borovoye Array 10.71 327 ⇑Pn Pn 07 28 48.6 +5.3
comp=Z,2.6nm,0.7s,baz=145,slow=11,SNR=6.2
BVA0 ⇑Sn **Sn 07 30 46.8 +3.8**
comp=Z,4.0nm,0.5s,baz=137,slow=17,SNR=4.0
BVA0 ⇓Lg Lg 07 31 52.6
comp=Z,54nm,1.1s,baz=143,slow=26,SNR=4.4
BVA0 Borovoye Array 10.71 327 P Pn 07 28 48.6 +5.3
BVA0 pmax pmax
comp=Z,3.0nm,0.7s
BVAR Borovoye Array 10.71 327 Pn **Pn 07 28 44.7 +1.4**
comp=Z,0.5nm,0.3s,baz=135,slow=14,SNR=4.7
BVAR Sn **Sn 07 30 38.5 -4.5**
comp=Z,1.3nm,0.3s,baz=137,slow=24,SNR=5.2
BVAR Lg Lg 07 31 48.5
comp=Z,2.0nm,0.3s,baz=93,slow=27,SNR=7.4
BVAR LR LR 07 32 55.6
comp=Z,143nm,19.2s,baz=104,slow=37
BRVK Borovoye 10.78 327 *e*Pn **Pn 07 28 46.5 +2.3**
BRVK Borovoye 10.78 327 *i* P **Pn 07 28 44.7 +0.5**
HVS Khovu-Aksy 11.48 49 *i* P **Pn 07 28 55.5 +1.6**
AB31 Akbulak array 14.52 297 Pn **Pn 07 29 32.6 -2.8**
comp=Z,5.3nm,0.6s,baz=100,slow=14,SNR=79
AB31 Akbulak array 14.52 297 P **Pn 07 29 32.6 -2.8**
AB31 pmax pmax
comp=Z,5.0nm,0.6s
ABKAR Akbulak array 14.52 297 *e*Pn **Pn 07 29 32.8 -2.6**
AKTO Aktyubinsk 16.00 300 Pn **Pn 07 29 52.8 -2.2**
comp=Z,0.3nm,0.3s,baz=99,slow=12,SNR=8.2
AKTO Sn **Sn 07 32 43.2 -8.9**
comp=Z,0.2nm,0.3s,baz=230,slow=17,SNR=2.3
AKTO Lg Lg 07 34 38.9
comp=Z,0.0nm,0.3s,baz=8.5,slow=19,SNR=2.8
AKTO LR LR 07 36 34.3
comp=Z,39nm,21.8s,baz=92,slow=39
AKTO Aktyubinsk 16.00 300 ⇑Pn **Pn 07 29 53.5 -1.5**
comp=Z,6.5nm,1.1s
ZAK Zakamensk 16.89 61 *e*P **P 07 30 10.0 +1.6**
ZAK pmax pmax
comp=Z,4.0nm,1.2s
GEYT Alibeck 17.61 256 LR LR 07 37 48.8
comp=Z,54nm,18.9s,baz=115,slow=40
SONA0 Songino Array 18.65 70 *e*P **Pn 07 30 28.9 +0.8**
SONM Songino Array 18.65 70 P **Pn 07 30 28.9 +0.8**
comp=Z,0.4nm,0.3s,baz=271,slow=11,SNR=8.3
SONA1 Songino Array 18.66 70 *e*P **Pn 07 30 29.8 +1.5**
ULN Ulaanbaatar 19.09 70 *e*P **P 07 30 33.2 +0.5**
comp=Z,2.8nm,0.9s
ULN Ulaanbaatar 19.09 70 *i* P **Pn 07 30 33.3 -0.2**
ULN pmax pmax
comp=Z,2.0nm,1.0s
NRIK Noril'sk 25.35 6 P **P 07 31 37.6 +1.1**
comp=Z,3.4nm,0.5s,baz=199,slow=6.2,SNR=7.0
NCK Nalchik 26.05 281 *i* P **P 07 31 45.7 +2.5**
NCK pmax pmax
comp=Z,13nm,0.7s
KVAR Kislovodsk Arr 26.57 282 LR LR 07 44 11.3
comp=Z,48nm,19.4s,baz=94,slow=41
KMI Kunming 26.68 128 P P 07 32 00.5 +11
KMI pP sP 07 32 02.5 +7.1
KMI sP pP 07 32 04.5 +11
KMI pmax pmax
comp=Z,12nm,0.5s
KLMR Klimovskoe 28.96 319 *e*P **P 07 32 08.8 -0.3**
KLMR pmax pmax
comp=Z,5.0nm,0.7s
KLMR Klimovskoe 28.96 319 *e*P **P 07 32 08.8 -0.3**
KLMR AMP 07 32 10.5
comp=Z,5.0nm,0.7s
BR101 Keskin Array S 34.33 279 *e*P **P 07 32 57.6 +1.0**
BRTR Keskin Array B 34.33 279 P **P 07 32 57.6 +1.0**
comp=Z,0.8nm,0.8s,baz=98,slow=6.4,SNR=4.8
BRTR Keskin Array B 34.33 279 *i* P **P 07 32 58.7 +2.1**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
FIA0 FINESS Array S 35.48 318 *e*P **P 07 33 06.8 +0.8**
FIA0 FINESS Array S 35.48 318 *e*P **P 07 33 06.8 +0.8**
FINES FINESS Array B 35.48 318 P **P 07 33 06.8 +0.8**
comp=Z,1.9nm,0.8s,baz=99,slow=10.0,SNR=7.2
FINES FINESS Array B 35.48 318 *i* P **P 07 33 07.1 +1.0**
FINES pmax pmax
comp=Z,1.0nm,0.6s
TIXI Tiksi 35.90 24 P **P 07 33 10.7 +1.2**
comp=Z,2.5nm,0.5s,baz=304,slow=4.2,SNR=8.6
TIXI Tiksi 35.90 24 *e*P **P 07 33 10.6 +1.0**
comp=Z,2.7nm,0.6s
TIXI *e*P **P 07 33 10.7 +1.2**
TIXI Tiksi 35.90 24 *i* P **P 07 33 09.9 +0.4**
TIXI pmax pmax
comp=Z,2.0nm,0.8s
ARA0 ARCESS Array S 36.97 332 *e*P **P 07 33 20.4 +1.7**
ARCES ARCESS Array B 36.97 332 P **P 07 33 20.4 +1.7**
comp=Z,1.9nm,0.7s,baz=92,slow=9.7,SNR=10
HFS Hagfors 41.59 316 P **P 07 33 58.2 +0.7**
comp=Z,0.9nm,0.4s,baz=98,slow=10,SNR=7.5
NB2 NORSAR Subarra 42.66 318 P **P 07 34 06.7 +0.5**
comp=Z,1.1nm,0.5s,baz=81,slow=8.6
NB200 NORSAR Array S 42.66 318 *e*P **P 07 34 07.0 +0.8**
NOA NORSAR Array B 42.66 318 P **P 07 34 07.0 +0.8**
comp=Z,2.1nm,0.7s,baz=79,slow=8.3,SNR=7.4
NOA LR LR 07 52 51.2
comp=Z,25nm,18.5s,baz=305,slow=37
NOA NORSAR Array B 42.66 318 P **P 07 34 07.0 +0.8**
GERES GERESS Array B 44.43 300 P **P 07 34 22.1 +1.4**
comp=Z,0.3nm,0.2s,baz=61,slow=8.2,SNR=3.3
BILL Bilibino 48.49 30 *e*P **P 07 34 53.4 +1.2**
BILL *e* 07 36 17.1
BILL *e* 07 36 41.1
BILL pmax pmax
comp=Z,1.0nm,0.9s
BILL MLR MLR
comp=Z,106nm,23.0s
IL1 Eielson Array 65.22 20 *e*P **P 07 36 51.4 +0.6**
ILAR Eielson Array 65.22 20 P **P 07 36 51.6 +0.8**
comp=Z,1.6nm,0.7s,baz=318,slow=5.2,SNR=18
ILB Eielson Array 65.22 20 *e*P **P 07 36 51.6 +0.8**
RND Reindeer 65.83 22 *e*P **P 07 36 55.4 +0.5**
comp=Z,3.6nm,0.7s
RND Reindeer 65.83 22 *e*P **P 07 36 55.4 +0.5**
RND pmax pmax
comp=Z,4.0nm,0.7s
RIDG Independ'e Rid 66.58 20 *e*P **P 07 37 00.0 +0.3**
comp=Z,3.9nm,0.6s
SCM Sheep Creek Mo 67.53 22 *e*P **P 07 37 06.8 +1.0**
comp=Z,5.5nm,0.6s
SCM *e*S **S 07 45 59.8 -1.6**
SCM Sheep Creek Mo 67.53 22 *e*P **P 07 37 06.8 +1.0**
SCM *e*S **S 07 45 59.8 -1.6**
SCM pmax pmax
comp=Z,6.0nm,0.6s
KDAK Kodiak Island 69.24 27 P **P 07 37 17.3 +0.9**
comp=Z,2.7nm,0.7s,baz=319,slow=5.9,SNR=5.6
TOA1 Torodi Ar. Sit 72.54 271 *e*P **P 07 37 36.6 -0.5**
TOA0 Torodi Ar. Sit 72.54 271 *e*P **P 07 37 37.0 -0.1**
TORD Torodi Ar. Bea 72.54 271 P **P 07 37 36.6 -0.5**
comp=Z,2.5nm,0.7s,baz=41,slow=5.3,SNR=19
YKA Yellowknife Ar 72.86 7 P **P 07 37 39.3 +1.0**
comp=Z,1.7nm,0.8s,baz=346,slow=5.9,SNR=27
KOWA Kowa 75.72 276 P **P 07 37 55.7 0.0**
comp=Z,1.7nm,0.6s,baz=83,slow=5.8,SNR=4.4
WR1 Warramunga Arr 81.00 129 *e*P **P 07 38 23.6 -1.1**
comp=Z,5.0nm,1.1s
WRA Warramunga Arr 81.00 129 P **P 07 38 23.6 -1.1**
comp=Z,1.4nm,0.8s,baz=334,slow=5.0,SNR=7.7
FFC Flin Flon 81.28 1 *i* P **P 07 38 27.0 +1.2**
DBIC Dimbokro 81.65 271 P **P 07 38 28.2 -0.1**
comp=Z,2.1nm,0.5s,baz=34,slow=5.9,SNR=3.3
ASAR Alice Springs 83.76 132 P **P 07 38 38.8 -0.3**
comp=Z,1.1nm,0.7s,baz=329,slow=5.4,SNR=11
JBNB Ben Lomond Mou 96.47 18 *e*P **P 07 39 36.1 -3.2**

NIED ***06*** *07:48:00, 22.°50N×121.°50E, h5km, Mw3.9 Best double couple: M0 8.71000×10^14 NP1:φ0 271.00000°, δ51.00000°, λ169.00000°. NP2:φ0 7.00000°, δ82.00000°, λ40.00000°.*
IDC ***06*** *07:48:49.2±0.7, 22.°17N×121.°42E, h0km, mb3.8/16, mb1 4.0/18, mb1mx3.8/64, mbtmp3.9/18, ML3.6/2, MS3.4/10, Ms1 3.4/10, ms1mx3.0/64, Error ellipse: s-maj=22.2km s-min=14.7km az=73.0*

NEIC ***06*** *07:48:50.9±0.4, 22.°26N×121.°41E, h10km, mb4.6/5, ML4.5(TAP), Error ellipse: s-maj=9.8km s-min=7.0km az=79.0*
NEIC Recorded [2 TAP] at Taitung.
ISCJB ***06*** *07:48:51.1±0.4, 22.°33N±0.°02×121.°55E±0.°02, h19km±2km, mb3.8/18, MS3.5/8, Error ellipse: s-maj=3.1km s-min=2.5km az=42.3*
BJI ***06*** *07:48:52.9, 22.°44N×121.°33E, h15km, ML3.6/3*
TAP ***06*** *07:48:52.6, 22.°41N×121.°43E, h18km, ML4.2, B*
JMA ***06*** *07:48:53.0±0.1, 22.°51N×121.°53E, h16km±4km, M4.0*
ISC 06 07:48:51.7±1.0, 22.°41N±0.°02×121.°48E±0.°02, h13km±6km, n170, σ1$23/221, mb3.9/18, MS3.4/8, 11C-23D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWH	**Lutao** baz=20	**0.30**	**359**	⇑*i*P	**Pb**	**07 48 59.1**	**+0.1**
TWH	baz=20			S	**Sb**	**07 49 03.6**	**-0.3**
LAY	**Lan-yu** baz=163	**0.37**	**170**	⇓*i*P	**Pg**	**07 49 00.5**	**+1.3**
LAY	baz=163			S	**Sg**	**07 49 06.1**	**+1.9**
TTN	**Taitung** baz=330	**0.47**	**318**	*e*P	**Pb**	**07 49 02.3**	**+0.6**
TTN	baz=330			*e*S	**Sb**	**07 49 09.1**	**+0.5**
ECL	**Taimali** baz=293	**0.53**	**291**	⇓P	**Pb**	**07 49 02.2**	**-0.6**
ECL	baz=293			S	**Sg**	**07 49 08.7**	**-0.3**
TAW	**Tawu** baz=263	**0.55**	**265**	⇑P	**Pg**	**07 49 02.4**	**0.0**
TAW	baz=263			*e*S	**Sg**	**07 49 08.8**	**-0.8**
TWGBT	**Beinan** baz=305	**0.55**	**318**	⇓P	**Pb**	**07 49 03.3**	**0.0**
TWGBT	baz=305			S	**Sb**	**07 49 11.6**	**+0.5**
TWG	**Pinlang** baz=305	**0.56**	**317**	⇓*i*P	**Pb**	**07 49 03.3**	**-0.1**
TWG	baz=305			S	**Sb**	**07 49 12.0**	**+0.7**
TWG	**Pinlang**	**0.56**	**317**	*e*Pg	**Pb**	**07 49 03.3**	**-0.1**
TWG				*e*Sg	**Sb**	**07 49 10.6**	**-0.7**
EAST	**Anshuo** baz=267	**0.59**	**268**	⇑*i*P	**Pg**	**07 49 03.1**	**-0.1**
EAST	baz=267			*e*S	**Sg**	**07 49 09.6**	**-1.4**
CHKT	**Chengkung** baz=4.0	**0.70**	**351**	P	**Pg**	**07 49 05.4**	**+0.1**
CHKT	baz=4.0			*e*S	**Sg**	**07 49 14.6**	**+0.1**
TSEB	**Hengchuen, Pin** baz=226	**0.74**	**227**	⇑P	**Pg**	**07 49 06.3**	**+0.3**
TSEB	baz=226			*e*S	**Sb**	**07 49 16.3**	**-0.1**
TWKBT	**Hengchun** baz=230	**0.78**	**233**	⇑P	**Pg**	**07 49 06.3**	**-0.4**
TWKBT	baz=230			S	**Sg**	**07 49 15.7**	**-1.3**
TWK1	**Hengchun** baz=230	**0.78**	**234**	⇑*i*P	**Pg**	**07 49 06.3**	**-0.5**
TWK1	baz=230			*e*S	**Sg**	**07 49 15.5**	**-1.6**
HEN	**Hengchun** baz=225	**0.80**	**240**	⇑P	**Pg**	**07 49 06.8**	**-0.3**
HEN	baz=225			*e*S	**Sg**	**07 49 16.2**	**-1.4**
SCZT	**Fangliau** baz=267	**0.80**	**268**	⇑*i*P	**Pg**	**07 49 06.5**	**-0.7**
FULB	**Fuli** baz=2.0	**0.81**	**348**	P	**Pg**	**07 49 07.1**	**-0.3**
FULB	baz=2.0			S	**Sb**	**07 49 18.5**	**+0.1**
MASBT	**Mashibuluo** baz=285	**0.81**	**285**	⇓P	**Pg**	**07 49 06.7**	**-0.8**
SSPT	**Xinbi** baz=275	**0.85**	**275**	*e*P	**Pb**	**07 49 08.4**	**+0.1**
SSD	**Sandimen** baz=294	**0.86**	**293**	⇓P	**Pg**	**07 49 07.4**	**-0.9**
ELDTW	**Lidau** baz=322	**0.89**	**331**	⇓*e*P	**Pg**	**07 49 08.0**	**-1.0**
TWF1	**Yuli** baz=338	**0.96**	**350**	⇓P	**Pb**	**07 49 09.2**	**-1.0**
SLGT	**Liugui** baz=309	**0.97**	**307**	*e*P	**Pg**	**07 49 10.0**	**-0.4**
SGLT	**Jiouru** baz=297	**0.97**	**289**	*e*P	**Pg**	**07 49 10.0**	**-0.4**
YULB	**Yu-li** baz=338	**1.00**	**350**	⇓P	**Pb**	**07 49 09.7**	**-1.1**
YULB	**Yu-li**	**1.00**	**350**	*e*Pg	**Pb**	**07 49 09.8**	**-1.1**
YULB				*e*Sg	**Sb**	**07 49 20.0**	**-3.9**
STYT	**Tauyuan** baz=331	**1.01**	**318**	⇓P	**Pb**	**07 49 10.3**	**-0.7**
WLCH	**Liuqiu** baz=267	**1.02**	**267**	⇑*e*P	**Pn**	**07 49 13.3**	**+1.7**
TWP	**Hsiaoliuchiu** baz=254	**1.04**	**267**	⇑P	**Pn**	**07 49 13.3**	**+1.4**
TWP	baz=254			*e*S	**Sn**	**07 49 28.0**	**+1.7**
TWM1	**Shoushan** baz=294	**1.06**	**293**	*e*P	**Pn**	**07 49 12.4**	**+0.1**
SGST	**Jiashian** baz=311	**1.07**	**309**	⇓P	**Pg**	**07 49 12.3**	**0.0**
SGST	baz=311			*e*S	**Sn**	**07 49 27.3**	**+0.2**
HGSD	**Ruisui** baz=8.0	**1.08**	**357**	⇓*e*P	**Pb**	**07 49 11.5**	**-0.7**
EHY	**Hungye** baz=340	**1.10**	**352**	*e*P	**Pb**	**07 49 11.6**	**-1.1**
WTP	**Ta-pu** baz=328	**1.16**	**316**	⇓P	**Pn**	**07 49 13.7**	**+0.1**
WTP	baz=328			*e*S	**Sn**	**07 49 30.6**	**+1.3**
CHN1	**Nanshi** baz=313	**1.17**	**312**	⇓P	**Pg**	**07 49 14.3**	**0.0**
CHN1	baz=313			*e*S	**Sn**	**07 49 31.1**	**+1.4**
TPUB	**Ta-pu** baz=320	**1.19**	**319**	⇓P	**Pb**	**07 49 14.1**	**0.0**
TPUB	baz=320			*e*S	**Sn**	**07 49 30.9**	**+0.8**
TPUB	**Ta-pu**	**1.19**	**319**	*e*Pg	**Pn**	**07 49 14.2**	**+0.1**
TPUB				*e*Sn	**Sn**	**07 49 31.3**	**+1.2**
CHN3	**Shinhua** baz=304	**1.23**	**303**	*e*P	**Pg**	**07 49 16.6**	**+1.2**
CHN3	baz=304			*e*S	**Sn**	**07 49 33.3**	**+2.3**
CHN4	**Tsaushan** baz=321	**1.25**	**319**	⇓P	**Pb**	**07 49 15.3**	**+0.2**
CHN4	baz=321			*e*S	**Sg**	**07 49 33.6**	**+1.6**
TWK	**Hsinying** baz=315	**1.26**	**313**	⇓P	**Pb**	**07 49 15.4**	**+0.2**
TWK	baz=315			*e*S	**Sg**	**07 49 32.6**	**+0.4**
EGFH	**Guangfu** baz=8.0	**1.26**	**358**	*e*P	**Pn**	**07 49 14.3**	**-0.7**
ALS	**Alishan** baz=333	**1.26**	**331**	⇓P	**Pn**	**07 49 15.0**	**-0.3**
ALS	baz=333			*e*S	**Sn**	**07 49 33.7**	**+1.4**
TAI1	**Yung-k'ang** baz=299	**1.32**	**299**	*e*P	**Pg**	**07 49 18.2**	**+1.1**
VWDT	**VWDT** baz=359	**1.38**	**347**	⇓*e*P	**Pn**	**07 49 16.1**	**-0.4**
ESL	**Shilin** baz=11	**1.40**	**358**	*e*P	**Pn**	**07 49 17.1**	**+0.2**
SCLT	**Jiali** baz=304	**1.42**	**303**	*e*P	**Pb**	**07 49 17.8**	**-0.1**
SCLT	baz=304			*e*S	**Sg**	**07 49 36.4**	**-0.9**
CHN2	**Minshiung** baz=322	**1.46**	**321**	*e*P	**Pg**	**07 49 19.2**	**-0.5**
CHN2	baz=322			*e*S	**Sg**	**07 49 38.6**	**0.0**
SSLB	**Suanglung** baz=354	**1.46**	**341**	⇓*e*P	**Pn**	**07 49 17.4**	**-0.4**
SSLB	**Suanglung**	**1.46**	**341**	*e*Pn	**Pn**	**07 49 17.5**	**-0.2**
CHY	**Chiayi** baz=320	**1.46**	**318**	*e*P	**Pb**	**07 49 18.9**	**+0.2**
CHY	baz=320			*e*S	**Sg**	**07 49 37.8**	**-1.0**
ENLB	**Shoufeng** baz=18	**1.50**	**4**	*e*P	**Pn**	**07 49 17.9**	**-0.4**
ENLB	baz=18			*e*S	**Sn**	**07 49 36.7**	**-0.8**
CHN8	**Yiju** baz=310	**1.50**	**309**	*e*P	**Pn**	**07 49 18.5**	**+0.2**
CHN8	baz=310			*e*S	**Sb**	**07 49 38.1**	**-0.2**
WGK	**Gukeng** baz=328	**1.53**	**327**	*e*P	**Pb**	**07 49 19.8**	**-0.1**
WDLH	**Douliu** baz=327	**1.54**	**326**	*e*P	**Pn**	**07 49 19.6**	**+0.8**
SMLT	**Sun Moon Lake** baz=342	**1.56**	**340**	*e*P	**Pb**	**07 49 20.4**	**-0.2**
SMLT	baz=342			*e*S	**Sg**	**07 49 41.3**	**-0.8**
HWA	**Hwalien** baz=17	**1.57**	**4**	*e*P	**Pn**	**07 49 19.4**	**+0.2**
WJS	**Zhushan** baz=336	**1.57**	**334**	⇓*e*P	**Pb**	**07 49 20.5**	**-0.1**
WJS	baz=336			*e*S	**Sg**	**07 49 42.2**	**-0.1**
TYC	**Yuchr** baz=352	**1.60**	**339**	⇓P	**Pb**	**07 49 21.2**	**+0.2**
WNT	**Mingjian** baz=335	**1.64**	**334**	⇓P	**Pb**	**07 49 22.1**	**+0.3**
TWD	**Chiawan** baz=16	**1.67**	**4**	*e*P	**Pn**	**07 49 20.1**	**-0.5**
CHGB	**Renai** baz=5.0	**1.67**	**350**	*e*P	**Pn**	**07 49 21.0**	**+0.2**
WSF	**Szhu** baz=318	**1.69**	**317**	*e*P	**Pn**	**07 49 21.6**	**+0.7**
WSF	baz=318			*e*S	**Sb**	**07 49 42.6**	**-1.1**
NACB	**Ninganchiao** baz=16	**1.76**	**3**	*e*P	**Pn**	**07 49 21.1**	**-0.8**
NACB	baz=16			*e*S	**Sn**	**07 49 42.7**	**-1.5**
NACB	**Ninganchiao**	**1.76**	**3**	*e*Pn	**Pn**	**07 49 21.5**	**-0.4**
NACB				*e*Sn	**Sn**	**07 49 42.7**	**-1.5**
RLNB	**Erlin** baz=327	**1.80**	**325**	*e*P	**Pn**	**07 49 23.1**	**+0.6**
RLNB	baz=327			*e*S	**Sb**	**07 49 46.8**	**-0.2**
WTCT	**Ta-ch'eng** baz=324	**1.82**	**323**	*e*P	**Pn**	**07 49 23.6**	**+0.9**
TWT	**Tachien** baz=353	**1.86**	**351**	*e*P	**Pn**	**07 49 24.7**	**+1.3**
TDCB	**Techi** baz=352	**1.86**	**351**	*e*P	**Pb**	**07 49 25.0**	**-0.7**
WCHH	**Zhanghua** baz=316	**1.87**	**333**	*e*P	**Pn**	**07 49 24.1**	**+0.7**
WDGT	**Dungji** baz=297	**1.88**	**297**	*e*P	**Pn**	**07 49 23.1**	**-0.4**
WDGT	baz=297			*e*S	**Sn**	**07 49 44.5**	**-2.6**
TCU	**Taichung** baz=339	**1.89**	**337**	*e*P	**Pn**	**07 49 24.5**	**+0.9**
NNSB	**Datong** baz=8.0	**2.02**	**357**	*e*P	**Pn**	**07 49 26.6**	**+1.1**
NNSH	**Datong** baz=8.0	**2.02**	**357**	*e*P	**Pn**	**07 49 27.0**	**+1.5**
NANB	**Nanao** baz=355	**2.03**	**7**	*e*P	**Pn**	**07 49 24.9**	**-0.6**
NANB	baz=355			*e*S	**Sn**	**07 49 50.5**	**-0.2**
NNS	**Nan Shan** baz=359	**2.03**	**357**	*e*P	**Pn**	**07 49 27.4**	**+1.7**
NNS	baz=359			*e*S	**Sn**	**07 49 51.7**	**+0.8**
VCHM	**Qimei** baz=293	**2.06**	**293**	*e*P	**Pn**	**07 49 25.3**	**-0.6**
VCHM	baz=293			*e*S	**Sn**	**07 49 48.9**	**-2.6**
PHUB	**P'eng-hu** baz=302	**2.08**	**302**	*e*P	**Pn**	**07 49 25.4**	**-0.8**
PHUB	baz=302			*e*S	**Sn**	**07 49 48.9**	**-3.1**
NSY	**Sanyi** baz=344	**2.11**	**342**	*e*P	**Pb**	**07 49 29.3**	**-0.4**
NSY	baz=344			*e*S	**Sb**	**07 49 55.9**	**+0.1**
EOS1	**EOS1** baz=29	**2.21**	**15**	*e*P	**Pn**	**07 49 28.9**	**+0.9**
EOS1	baz=29			*e*S	**Sn**	**07 49 55.4**	**+0.1**
TWC	**Suao** baz=21	**2.22**	**9**	*e*P	**Pn**	**07 49 28.2**	**0.0**
ENTT	**Nioudou** baz=4.0	**2.23**	**2**	*e*P	**Pn**	**07 49 29.7**	**+1.4**
YHNB	**Yeheng** baz=360	**2.26**	**358**	*e*P	**Pn**	**07 49 29.8**	**+1.1**
YHNB	baz=360			*e*S	**Sn**	**07 49 57.6**	**+1.1**
YHNB	**Yeheng**	**2.26**	**358**	*e*Pn	**Pn**	**07 49 29.9**	**+1.1**
YHNB				*e*Sn	**Sn**	**07 49 57.2**	**+0.8**
NSTT	**Nanjuang** baz=3.0	**2.26**	**349**	*e*P	**Pn**	**07 49 30.6**	**+1.9**
NSK	**Sanguang** baz=12	**2.26**	**357**	*e*P	**Pn**	**07 49 30.0**	**+1.2**
LIOB	**Emei** baz=3.0	**2.27**	**349**	*e*P	**Pn**	**07 49 29.9**	**+1.0**
TWE	**Neicheng** baz=356	**2.31**	**4**	*e*P	**Pb**	**07 49 32.1**	**-1.1**
NWLT	**Wulai** baz=14	**2.36**	**0**	*e*P	**Pn**	**07 49 31.3**	**+1.2**
JYNG	**Yonagunijimaku**	**2.44**	**33**	P	**Pn**	**07 49 31.5**	**+0.3**
JYNG				S	**Sn**	**07 49 59.3**	**-1.6**
YOJ	**Yonaguni jima** baz=48	**2.48**	**34**	*e*P	**Pn**	**07 49 33.4**	**+1.6**
YOJ	baz=48			*e*S	**Sn**	**07 50 02.9**	**+1.0**
YOJ	**Yonaguni jima**	**2.48**	**34**	*e*Pn	**Pn**	**07 49 33.2**	**+1.4**
YOJ	**Yonaguni jima**	**2.48**	**34**	P	**Pn**	**07 49 33.7**	**+1.9**
YOJ				*e*S	**Sn**	**07 50 01.5**	**-0.4**
TATO	**Taipei** baz=2.0	**2.56**	**0**	*e*P	**Pb**	**07 49 36.0**	**-1.4**
TATO	baz=2.0			*e*S	**Sn**	**07 50 05.0**	**+1.2**
TATO	**Taipei** baz=2.0	**2.56**	**0**	*e*Pn	**Pn**	**07 49 34.0**	**+1.2**
TWA	**Mucha** baz=4.0	**2.56**	**2**	*e*P	**Pn**	**07 49 34.4**	**+1.5**
TIPB	**Shuangxi** baz=358	**2.57**	**7**	*e*P	**Pn**	**07 49 33.9**	**+0.8**
TWB1	**Santiao Chiao** baz=12	**2.63**	**10**	*e*P	**Pn**	**07 49 35.9**	**+2.0**
NWF	**Wu-fen Shan** baz=358	**2.67**	**6**	P	**Pn**	**07 49 36.5**	**+2.1**
NWF	baz=358			*e*S	**Sn**	**07 50 08.8**	**+2.2**
WFSB	**Wu-fen Shan** baz=359	**2.67**	**6**	*e*P	**Pn**	**07 49 36.6**	**+2.2**
WFSB	baz=359			*e*S	**Sn**	**07 50 08.5**	**+2.0**
HATJ	**Hateruma jima**	**2.69**	**52**	P	**Pn**	**07 49 35.4**	**+0.7**
HATJ				*e*S	**Sn**	**07 50 05.5**	**-1.7**
YM04	**YM04** baz=3.0	**2.74**	**1**	*e*P	**Pn**	**07 49 38.5**	**+3.1**
YM10	**YM10** baz=4.0	**2.74**	**1**	*e*P	**Pn**	**07 49 37.8**	**+2.5**
YM11	**YM11** baz=4.0	**2.75**	**2**	*e*P	**Pn**	**07 49 38.6**	**+3.1**
YM07	**YM07** baz=5.0	**2.76**	**3**	*e*P	**Pn**	**07 49 37.2**	**+1.6**
YM03	**YM03** baz=3.0	**2.76**	**1**	*e*P	**Pn**	**07 49 38.1**	**+2.4**
YM12	**YM12** baz=4.0	**2.76**	**2**	*e*P	**Pn**	**07 49 37.6**	**+1.9**
YM08	**YM08** baz=4.0	**2.77**	**2**	*e*P	**Pn**	**07 49 38.6**	**+2.8**
IRIF	**Iriomote-Funau**	**2.82**	**47**	P	**Pn**	**07 49 37.3**	**+0.9**
IRIF				S	**Sn**	**07 50 10.3**	**0.0**
JKRS	**Kuro-shima**	**2.95**	**51**	P	**Pn**	**07 49 39.2**	**+1.0**
JKRS				*e*S	**Sn**	**07 50 12.4**	**-1.1**
JIJ	**Ishigaki jima**	**3.12**	**51**	P	**Pn**	**07 49 41.4**	**+0.8**
JIJ				*e*S	**Sn**	**07 50 15.6**	**-2.2**
VWUC	**VWUC** baz=324	**3.18**	**324**	*e*P	**Pn**	**07 49 41.0**	**-0.3**
JISG	**Ishigakijimahi**	**3.38**	**50**	P	**Pn**	**07 49 44.4**	**+0.2**
JISG				*e*S	**Sn**	**07 50 21.4**	**-2.8**
KNM	**Kinmen** baz=302	**3.44**	**306**	*e*P	**Pn**	**07 49 46.0**	**+1.0**
KNMB	**Chin-men Tao** baz=304	**3.50**	**306**	*e*P	**Pn**	**07 49 45.0**	**-0.8**
QZH	**Quanzhou**	**3.66**	**314**	⇑*i*Pn	**Pn**	**07 49 47.7**	**-0.3**
QZH				Sn	**Sn**	**07 50 27.8**	**-3.2**
QZH	comp=N,170nm,0.3s			smax	smax		
QZH				smax	smax		

comp=E,140nm,0.3s
JTJ Tarama 3.70 52 P **Pn 07 49 49.3 +0.8**
JTJ eS **Sn 07 50 30.3 -1.6**
MATB Ma-tsu 3.98 340 eP **Pn 07 49 52.4 -0.1**
baz=340
JIRB Irabujima 4.16 54 P **Pn 07 49 55.7 +0.9**
JIRB eS **Sn 07 50 41.8 -1.4**
JIKM Ikemajima 4.26 53 P **Pn 07 49 56.7 +0.4**
JIKM S **Sn 07 50 44.5 -1.4**
VDOS Pratas Island 4.74 250 eP **Pn 07 50 02.5 -0.3**
baz=249
JOW Kunigami 7.59 53 Pn **Pn 07 50 43.0 +1.0**
1.8nm,0.3s,baz=299,slow=19,SNR=4.0
JOW Kunigami 7.59 53 ePn **Pn 07 50 43.0 +1.0**
JNU Nakatsue 13.52 36 LR LR 07 56 57.7
comp=Z,106nm,18.0s,baz=119,slow=36
KSAR Wonju Array Be 15.97 19 Pn **P 07 52 39.6 +0.1**
KSRS Korea Array 15.99 19 Pn **P 07 52 39.6 -0.2**
0.3nm,0.3s,baz=197,slow=11,SNR=9.9
KSRS LR LR 07 58 41.5
comp=Z,74nm,19.8s,baz=170,slow=36
MAJO Matsushiro 20.21 42 eP Pn 07 53 29.8 +1.5
MJAR Matsushiro Arr 20.22 42 P Pn 07 53 29.8 +1.5
4.8nm,1.0s,baz=232,slow=14,SNR=6.4
CMAR Chiang Mai Arr 21.48 264 P **P 07 53 40.6 +0.5**
0.7nm,0.3s,baz=74,slow=9.4,SNR=5.8
CMAR LR LR 08 03 33.0
comp=Z,52nm,18.9s,baz=220,slow=41
KLR Kul'dur 27.98 14 P **P 07 54 45.4 +3.4**
0.1nm,0.7s,baz=224,slow=8.9,SNR=4.4
SONA0 Songino Array 28.11 338 eP **P 07 54 43.5 +0.2**
SONM Songino Array 28.11 338 P **P 07 54 43.5 +0.2**
1.0nm,0.6s,baz=150,slow=10.0,SNR=3.8
SONM LR LR 08 07 30.5
comp=Z,74nm,18.7s,baz=132,slow=40
SONA1 Songino Array 28.12 338 eP **P 07 54 43.3 -0.1**
TLY Talaya 32.33 339 LR LR 08 09 05.1
comp=Z,55nm,19.3s,baz=139,slow=37
WMQ Urumqi 35.10 316 P **P 07 55 48.0 +3.3**
MK01 Makanchi Array 39.80 317 eP **P 07 56 25.8 +1.3**
MK31 Makanchi Array 39.81 317 eP **P 07 56 26.3 +1.7**
MK32 Makanchi Array 39.81 317 ePcP **P 07 56 25.7 +1.1**
MK32 ePcP **PcP 07 58 30.6 0.0**
MKAR Makanchi Array 39.81 317 P **P 07 56 25.7 +1.1**
2.2nm,0.7s,baz=114,slow=9.3,SNR=19
MKAR PcP **PcP 07 58 30.6 0.0**
0.4nm,0.7s,baz=144,slow=2.7,SNR=3.6
MKAR Makanchi Array 39.81 317 eP **P 07 56 25.7 +1.1**
19nm,0.9s
MKAR PcP **PcP 07 58 30.6 0.0**
MAKZ Makanchi 40.02 317 eP **P 07 56 27.3 +1.0**
3.0nm,0.8s
FITZ Fitzroy Crossi 40.46 174 P **P 07 56 28.0 -2.1**
2.2nm,0.8s,baz=333,slow=6.8,SNR=3.5
PETK Petropavlovsk- 41.19 33 LR LR 08 14 36.5
comp=Z,38nm,18.5s,baz=104,slow=37
ZALV Zalesovo Beam 41.89 328 P **P 07 56 42.1 +0.6**
1.5nm,0.4s,baz=118,slow=8.0,SNR=7.4
ZALV Zalesovo Beam 41.89 328 eP **P 07 56 42.6 +1.1**
ZAA1 Zalesovo Array 41.89 328 eP **P 07 56 42.1 +0.5**
H11N1 WAKE ISLAND Hy 42.34 85 T T 08 42 11.8
baz=282,slow=75,SNR=35
H11N2 WAKE ISLAND Hy 42.34 85 T T 08 42 17.8
baz=282,slow=75,SNR=51
H11N3 WAKE ISLAND Hy 42.36 85 T T 08 42 19.0
baz=282,slow=75,SNR=35
H11S3 WAKE ISLAND Hy 42.42 87 T T 08 42 24.8
baz=284,slow=74,SNR=75
H11S1 WAKE ISLAND Hy 42.43 87 T T 08 42 26.0
baz=284,slow=74,SNR=69
H11S2 WAKE ISLAND Hy 42.44 87 T T 08 42 19.6
baz=284,slow=74,SNR=31
KURK Kurchatov 43.63 321 eP **P 07 56 56.6 +0.9**
KURBB Kurchatov Arra 43.65 321 P **P 07 56 56.6 +0.7**
1.2nm,0.8s,baz=115,slow=7.5,SNR=11
WRA Warramunga Arr 43.92 162 P **P 07 56 55.6 -2.8**
0.8nm,0.6s,baz=344,slow=9.1,SNR=6.4
WR1 Warramunga Arr 43.92 162 eP **P 07 56 55.6 -2.8**
26nm,1.6s
AS31 Alice Springs 47.36 164 eP **P 07 57 23.6 -1.9**
3.9nm,1.5s
ASAR Alice Springs 47.36 164 P **P 07 57 23.6 -1.9**
0.5nm,0.3s,baz=343,slow=7.0,SNR=14
BVAR Borovoye Array 49.23 322 P **P 07 57 40.2 +0.6**
0.7nm,0.6s,baz=96,slow=9.1,SNR=5.1
NRIK Noril'sk 51.18 345 LR LR 08 23 29.4
comp=Z,44nm,18.2s,baz=161,slow=40
ABKAR Akbulak array 54.88 315 eP **P 07 58 21.5 -0.3**
FIA0 FINESS Array S 73.11 330 eP **P 08 00 21.5 0.0**
FINES FINESS Array B 73.11 330 P **P 08 00 21.5 0.0**
1.3nm,0.8s,baz=40,slow=9.9,SNR=4.1
BR101 Keskin Array S 74.45 307 eP **P 08 00 30.9 +0.9**
BRTR Keskin Array B 74.45 307 P **P 08 00 30.9 +0.9**
0.6nm,0.5s,baz=141,slow=4.7,SNR=4.1
NB200 NORSAR Array S 79.92 332 eP **P 08 00 59.0 -1.2**
NOA NORSAR Array B 79.92 332 P **P 08 00 59.0 -1.2**
0.9nm,0.7s,baz=57,slow=4.9,SNR=3.7
NOA LR LR 08 38 39.8
comp=Z,19nm,18.5s,baz=315,slow=37
OPO Ambohidratompo 83.24 247 LR LR 08 35 17.1
comp=Z,91nm,21.8s,baz=299,slow=34
GEC2 GERESS Array S 84.39 321 eP **P 08 01 23.8 -0.1**
10nm,1.7s
GERES GERESS Array B 84.39 321 P **P 08 01 23.8 -0.1**
0.3nm,0.3s,baz=48,slow=1.5,SNR=6.0
YKA Yellowknife Ar 84.49 23 P **P 08 01 24.2 +0.2**
0.2nm,0.7s,baz=313,slow=5.1,SNR=4.3
YKA LR LR 08 45 10.4
comp=Z,27nm,18.3s,baz=165,slow=40
SDV Santo Domingo 146.71 22 PKPbc **PKPbc 08 08 34.4 0.0**
1.3nm,0.3s,baz=350,slow=2.4,SNR=4.8

*ISCJB **06** 07:55:46.5±1.1, 18°.81N±0°.04×145°.37E±0°.05, h217km±11km, mb4.4/131, Error ellipse: s-maj=7.6km s-min=5.7km az=169.0*
*BJI **06** 07:55:46.6, 18°.68N×145°.67E, h237km, mb4.5/17, mB4.4/8*
*IDC **06** 07:55:47.7±0.8, 18°.82N×145°.46E, h218km±7km, mb4.0/35, mb1 4.1/38, mb1mx4.0/68, mbtmp4.6/38, Error ellipse: s-maj=11.9km s-min=6.1km az=87.0*
*NEIC **06** 07:55:48.9±0.8, 18°.77N×145°.40E, h227km±8km, mb4.5/96, Error ellipse: s-maj=4.8km s-min=3.4km az=90.0*
ISC 06 07:55:47.8±0.6, 18°.76N±0°.05×145°.48E±0°.09, h219km±5km, h220km; pP-P, n177, σ1910/194, mb4.5/131, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.17**	**187**	P	**Pn**	**07 57 06.7**	**+1.7**
	15nm,0.3s,baz=33,slow=5.4,SNR=9.4						
GUMO				S	**S**	**07 58 03.2**	**-2.6**
	18nm,0.3s,baz=17,slow=19,SNR=5.0						
GUMO	**Guam**	**5.17**	**187**	ePn	**Pn**	**07 57 06.1**	**+1.1**
GUMO				ePn	Pn	07 57 06.7	+1.7
GUMO				eS	**S**	**07 58 03.2**	**-2.6**
GUMO				eS	S	07 58 09.0	+3.1
JOW	**Kunigami**	**17.77**	**300**	P	**P**	**07 59 40.1**	**+0.2**
	14nm,0.3s,baz=90,slow=4.6,SNR=14						
JOW	**Kunigami**	**17.77**	**300**	eP	**P**	**07 59 40.2**	**+0.4**
	69nm,0.5s						
MJAR	**Matsushiro Arr**	**18.84**	**342**	P	**P**	**07 59 51.4**	**+0.1**
	2.0nm,0.3s,baz=168,slow=10.0,SNR=16						
MJAR				S	**S**	**08 03 13.4**	**-0.3**
	0.1nm,0.3s,baz=175,slow=17,SNR=5.9						
MAJO	**Matsushiro**	**18.84**	**342**	eP	**P**	**07 59 52.3**	**+1.0**
	15nm,0.8s						
MAJO				eS	**S**	**08 03 13.8**	**0.0**
MAT	**Matsushiro**	**18.84**	**342**	P	**P**	**07 59 51.3**	**0.0**
MJB9	**Matsu-Tunnel**	**18.84**	**342**	eP	**P**	**07 59 52.7**	**+1.3**
	15nm,0.8s						
MANU	**Manus Island**	**20.76**	**175**	eP	**P**	**08 00 12.0**	**0.0**
	107nm,0.9s						
JAY	**Jayapura**	**21.66**	**193**	P	**P**	**08 00 22.1**	**+0.8**
	27nm,0.8s,baz=340,slow=5.3,SNR=8.4						
RABL	**Rabaul**	**23.74**	**163**	eP	**P**	**08 00 40.0**	**-0.3**
	47nm,0.6s						
SIJI	**Sorong**	**23.99**	**217**	P	**P**	**08 00 43.7**	**+1.0**
	4.5nm,0.3s,baz=61,slow=8.3,SNR=7.2						
KSRS	**Korea Array**	**24.14**	**324**	P	**P**	**08 00 43.0**	**-0.8**
	4.4nm,0.9s,baz=144,slow=8.7,SNR=12						
KSRS				pP	**pP**	**08 01 24.1**	**-0.7**
	4.0nm,0.8s,baz=146,slow=8.6,SNR=5.1						
KS15	**Wonju Array Si**	**24.16**	**324**	eP	**P**	**08 00 43.0**	**-0.9**
KS15				epP	**pP**	**08 01 24.1**	**-0.8**
KSAR	**Wonju Array Be**	**24.16**	**324**	P	**P**	**08 00 43.0**	**-0.9**
KSAR				pP	**pP**	**08 01 24.1**	**-0.8**
KS01	**Wonju Array Si**	**24.18**	**324**	eP	**P**	**08 00 44.5**	**+0.4**
ASAJ	**Asahikawa**	**25.40**	**355**	P	**P**	**08 00 56.4**	**+1.3**
	17nm,0.8s,baz=194,slow=13,SNR=9.5						
ASAJ	**Asahikawa**	**25.40**	**355**	eP	**P**	**08 00 56.4**	**+1.3**
	24nm,1.1s						
NJ2	**Nanjing**	**27.36**	**304**	eP	**P**	**08 01 14.0**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
PMG	**Port Moresby**	**28.04**	**176**	P	**P**	**08 01 18.5**	**-0.4**
	9.3nm,0.6s,baz=324,slow=8.7,SNR=3.2						
KLR	**Kul'dur**	**32.35**	**343**	P	**P**	**08 01 56.5**	**0.0**
	0.6nm,0.6s,baz=150,slow=9.4,SNR=24						
PETK	**Petropavlovsk-**	**35.58**	**13**	P	**P**	**08 02 24.4**	**+0.3**
	6.5nm,0.7s,baz=180,slow=7.9,SNR=6.9						
PEA1	**Petropavlovsk-**	**35.58**	**13**	eP	**P**	**08 02 24.4**	**+0.3**
HHC	**Hu-ho-hao-te**	**36.41**	**315**	eP	**P**	**08 02 32.7**	**+1.2**
HHC				pmax	pmax		
	comp=Z,12nm,1.3s						
HHC				pmax	pmax		
	comp=Z,91nm,4.9s						
CTA	**Charters Tower**	**38.62**	**179**	P	**P**	**08 02 50.0**	**-0.1**
	5.6nm,0.7s,baz=9.1,slow=7.6,SNR=5.9						
CD2	**Chengdu**	**39.53**	**296**	P	**P**	**08 02 57.6**	**-0.1**
CD2				pmax	pmax		
	comp=Z,15nm,0.5s						
WRAB	**Tennant Creek**	**39.97**	**196**	eP	**P**	**08 03 01.8**	**+0.5**
	17nm,0.7s						
WB2	**Warramunga Arr**	**39.98**	**196**	eP	**P**	**08 03 00.9**	**-0.4**
WB2				eP	**P**	**08 03 02.2**	**+0.8**
WR1	**Warramunga Arr**	**39.98**	**196**	eP	**P**	**08 03 02.2**	**+0.8**
	27nm,0.7s						
WRA	**Warramunga Arr**	**39.98**	**196**	P	**P**	**08 03 02.2**	**+0.8**
	11nm,0.6s,baz=23,slow=9.2,SNR=113						
KMI	**Kunming**	**40.02**	**287**	P	**P**	**08 03 00.4**	**-1.6**
KMI				pmax	pmax		
	comp=Z,23nm,0.5s						
LZH	**Lanzhou**	**40.44**	**304**	eP	**P**	**08 03 03.0**	**-2.2**
LZH				pP	pP	08 03 55.9	+4.7
LZH				sP	sP	08 04 21.5	+5.4
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
FITZ	**Fitzroy Crossi**	**41.49**	**209**	P	**P**	**08 03 14.3**	**+0.7**
	13nm,0.8s,baz=27,slow=10,SNR=25						
SONA0	**Songino Array**	**42.97**	**321**	eP	**P**	**08 03 25.3**	**-0.1**
SONM	**Songino Array**	**42.97**	**321**	P	**P**	**08 03 25.3**	**-0.1**
	1.5nm,0.6s,baz=140,slow=7.9,SNR=5.9						
SONM				ScP	**ScP**	**08 08 40.9**	**-1.0**
	0.6nm,0.7s,baz=255,slow=17,SNR=5.1						
SONA1	**Songino Array**	**42.97**	**321**	eP	**P**	**08 03 25.4**	**-0.1**
AS01	**Alice Springs**	**43.64**	**195**	eP	**P**	**08 03 31.3**	**+0.4**
AS31	**Alice Springs**	**43.65**	**195**	eP	**P**	**08 03 31.8**	**+0.8**
	2.7nm,0.6s						
ASAR	**Alice Springs**	**43.66**	**195**	P	**P**	**08 03 31.8**	**+0.7**
	3.8nm,0.6s,baz=14,slow=7.9,SNR=52						
ASAR				ScP	**ScP**	**08 08 43.6**	**-1.2**
	0.6nm,0.7s,baz=16,slow=4.3,SNR=4.7						
CMAR	**Chiang Mai Arr**	**44.00**	**277**	P	**P**	**08 03 36.6**	**+2.6**
	1.1nm,0.4s,baz=90,slow=3.6,SNR=3.2						
DZM	**Mont Dzumac**	**45.47**	**152**	P	**P**	**08 03 45.8**	**+0.3**
	19nm,0.9s,baz=339,slow=10,SNR=11						
STKA	**Stephens Creek**	**50.48**	**184**	P	**P**	**08 04 23.0**	**-0.6**
	2.3nm,0.7s,baz=350,slow=11,SNR=4.9						
UNV	**Unalaska Valle**	**50.73**	**35**	eP	**P**	**08 04 24.5**	**-0.6**
	22nm,0.9s						
BILL	**Bilibino**	**50.99**	**10**	eP	**P**	**08 04 27.1**	**+0.2**
	20nm,0.9s						
FALS	**False Pass**	**52.78**	**34**	eP	**P**	**08 04 40.7**	**+0.4**
	57nm,0.6s						
TIXI	**Tiksi**	**53.78**	**354**	P	**P**	**08 04 46.1**	**-1.2**
	1.4nm,0.3s,baz=141,slow=5.7,SNR=4.1						
WMQ	**Urumqi**	**54.11**	**311**	P	**P**	**08 04 52.6**	**+2.3**
WMQ				pmax	pmax		
	comp=Z,12nm,0.6s						
SDPT	**Sand Point**	**54.54**	**35**	eP	**P**	**08 04 53.5**	**+0.5**
	63nm,0.7s						
CHGN	**Chignik**	**55.95**	**34**	eP	**P**	**08 05 02.5**	**-0.5**
	19nm,0.8s						
ZALV	**Zalesovo Beam**	**57.84**	**323**	P	**P**	**08 05 15.6**	**-0.7**
	2.2nm,0.6s,baz=107,slow=7.7,SNR=3.9						
ZAA1	**Zalesovo Array**	**57.84**	**323**	eP	**P**	**08 05 15.6**	**-0.7**
NWAO	**Narrogin (SRO)**	**58.06**	**208**	P	**P**	**08 05 18.9**	**+0.8**
	30nm,1.1s,baz=304,slow=6.0,SNR=5.6						
MK01	**Makanchi Array**	**58.26**	**314**	eP	**P**	**08 05 19.5**	**0.0**
MK31	**Makanchi Array**	**58.27**	**314**	eP	**P**	**08 05 19.8**	**+0.2**
MK32	**Makanchi Array**	**58.27**	**314**	eP	**P**	**08 05 19.8**	**+0.2**
MKAR	**Makanchi Array**	**58.27**	**314**	P	**P**	**08 05 19.8**	**+0.2**
	2.9nm,0.6s,baz=88,slow=9.0,SNR=29						
MKAR				ScP	**ScP**	**08 09 45.7**	**-1.7**
	0.7nm,0.8s,baz=94,slow=4.9,SNR=4.1						
MKAR	**Makanchi Array**	**58.27**	**314**	eP	**P**	**08 05 19.8**	**+0.2**
	17nm,0.6s						
SII	**Sitkinak Islan**	**58.28**	**34**	eP	**P**	**08 05 20.3**	**+0.9**
	60nm,0.8s						
RDOG	**Red Dog Mine**	**58.84**	**20**	eP	**P**	**08 05 23.8**	**+0.7**
	14nm,1.1s						
OHAK	**Old Harbor**	**58.92**	**34**	eP	**P**	**08 05 24.6**	**+0.9**
	19nm,0.9s						
KDAK	**Kodiak Island**	**59.42**	**33**	P	**P**	**08 05 27.1**	**-0.1**
	8.5nm,0.9s,baz=302,slow=6.9,SNR=18						
KDAK	**Kodiak Island**	**59.42**	**33**	eP	**P**	**08 05 27.5**	**+0.3**
	9.9nm,0.9s						
PPLA	**Purkeypile**	**60.94**	**28**	eP	**P**	**08 05 38.5**	**+0.9**
	8.8nm,1.2s						
SKT	**Skwentna**	**60.99**	**29**	eP	**P**	**08 05 37.8**	**0.0**
	12nm,1.0s						
KURK	**Kurchatov**	**61.09**	**318**	eP	**P**	**08 05 38.4**	**-0.2**
KURK				epP	**pP**	**08 06 26.8**	**-1.7**
KURBB	**Kurchatov Arra**	**61.13**	**318**	P	**P**	**08 05 38.4**	**-0.5**
	4.3nm,0.6s,baz=95,slow=7.4,SNR=25						
KURBB				pP	**pP**	**08 06 26.8**	**-2.0**
	2.5nm,0.8s,baz=92,slow=7.4,SNR=3.8						
CAST	**Castle Rocks**	**61.14**	**27**	eP	**P**	**08 05 39.4**	**+0.7**
	18nm,0.8s						
IM3	**Indian Mountai**	**61.25**	**24**	eP	**P**	**08 05 39.8**	**+0.4**
NRIK	**Noril'sk**	**61.48**	**340**	P	**P**	**08 05 39.8**	**-1.1**
	4.5nm,0.5s,baz=104,slow=12,SNR=8.0						
SEW	**Seward**	**61.53**	**31**	eP	**P**	**08 05 41.8**	**+0.4**
	20nm,0.9s						
RC01	**Rabbit Creek A**	**61.60**	**30**	eP	**P**	**08 05 41.9**	**0.0**
	15nm,0.7s						
BPAW	**Bear Paw Mtn.**	**61.80**	**26**	eP	**P**	**08 05 43.7**	**+0.6**
	18nm,0.7s						
TRF	**Thorofare Moun**	**61.92**	**27**	eP	**P**	**08 05 44.0**	**-0.2**
	12nm,0.9s						
PMR	**Palmer**	**62.00**	**29**	eP	**P**	**08 05 44.5**	**0.0**
	14nm,1.1s						
GHO	**Glory Hole Cre**	**62.14**	**29**	eP	**P**	**08 05 45.8**	**+0.2**
	11nm,0.7s						
MLY	**Manley**	**62.15**	**26**	eP	**P**	**08 05 46.5**	**+1.0**
	11nm,0.8s						
SML	**Sawmill**	**62.42**	**29**	eP	**P**	**08 05 47.9**	**+0.5**
	29nm,0.8s						
RND	**Reindeer**	**62.54**	**28**	eP	**P**	**08 05 47.8**	**-0.3**
	5.9nm,0.7s						
KSH	**Kashi**	**62.66**	**305**	P	**P**	**08 05 53.9**	**+4.4**
KSH				pmax	pmax		
	comp=Z,220nm,5.0s						
SCM	**Sheep Creek Mo**	**62.89**	**29**	eP	**P**	**08 05 51.3**	**+0.8**
	26nm,0.9s						
WRH	**Wood River Hil**	**63.11**	**26**	eP	**P**	**08 05 51.7**	**-0.1**
	7.0nm,0.7s						
DHY	**Denali Highway**	**63.12**	**28**	eP	**P**	**08 05 52.7**	**+0.6**
	3.6nm,0.6s						
MDM	**Murphy Dome**	**63.16**	**26**	eP	**P**	**08 05 52.5**	**+0.3**
	9.7nm,0.6s						
CCB	**Clear Creek Bu**	**63.27**	**26**	eP	**P**	**08 05 52.8**	**-0.1**
	5.1nm,1.2s						
COLA	**College**	**63.30**	**26**	eP	**P**	**08 05 52.4**	**-0.6**
	8.7nm,0.8s						
KLU	**Klutina**	**63.49**	**30**	eP	**P**	**08 05 55.4**	**+1.0**
	9.5nm,0.9s						
HDA	**Harding Lake**	**63.58**	**27**	eP	**P**	**08 05 54.3**	**-0.6**
	6.9nm,0.8s						
TOLK	**Toolik Lake Re**	**63.61**	**22**	eP	**P**	**08 05 56.2**	**+1.1**
	10nm,0.6s						
IL1	**Eielson Array**	**63.68**	**26**	eP	**P**	**08 05 53.9**	**-1.7**
ILAR	**Eielson Array**	**63.68**	**26**	P	**P**	**08 05 54.5**	**-1.1**
	7.1nm,0.8s,baz=257,slow=5.0,SNR=72						
ILB	**Eielson Array**	**63.68**	**26**	eP	**P**	**08 05 54.5**	**-1.1**
PAX	**Paxson**	**63.95**	**28**	eP	**P**	**08 05 57.5**	**+0.1**
	6.6nm,0.6s						
HARP	**HAARP**	**64.00**	**29**	eP	**P**	**08 05 58.7**	**+1.0**
	20nm,0.8s						
BMRM	**Bremner River**	**64.04**	**31**	eP	**P**	**08 05 59.0**	**+1.0**
	21nm,1.2s						
RIDG	**Independ'e Rid**	**64.36**	**28**	eP	**P**	**08 05 59.1**	**-1.0**
	14nm,0.8s						
DOT	**Dot Lake**	**64.69**	**28**	eP	**P**	**08 06 02.5**	**+0.3**
	10nm,0.7s						
CRQM	**Cirque**	**64.72**	**31**	eP	**P**	**08 06 03.3**	**+0.7**
	16nm,0.8s						
SCRK	**Sand Creek**	**64.78**	**27**	eP	**P**	**08 06 03.1**	**+0.3**
	11nm,1.0s						
TGL	**Tana Glacier**	**64.87**	**31**	eP	**P**	**08 06 04.4**	**+1.0**
	12nm,1.1s						
EGAK	**Eagle**	**66.10**	**27**	eP	**P**	**08 06 11.4**	**+0.3**
	2.3nm,0.6s						
BVAR	**Borovoye Array**	**66.29**	**320**	P	**P**	**08 06 12.3**	**-0.3**
	5.7nm,0.5s,baz=91,slow=7.9,SNR=28						
BVAR				pP	**pP**	**08 07 02.0**	**-1.2**
	2.3nm,0.6s,baz=87,slow=7.6,SNR=3.4						
BRVK	**Borovoye**	**66.36**	**320**	eP	**P**	**08 06 12.8**	**-0.1**
	4.8nm,0.6s						
KK31	**Karatay Array**	**66.57**	**310**	eP	**P**	**08 06 14.8**	**+0.3**
KK31				epP	**pP**	**08 07 09.1**	**+3.9**
KKAR	**Karatay Array**	**66.57**	**310**	eP	**P**	**08 06 14.8**	**+0.3**
KKAR				epP	**pP**	**08 07 09.1**	**+3.9**
DAWY	**Dawson**	**66.80**	**28**	eP	**P**	**08 06 16.5**	**+0.9**
	5.5nm,0.8s						
SKAG	**Skagway**	**68.56**	**33**	eP	**P**	**08 06 28.0**	**+1.5**
	7.4nm,0.8s						
WHY	**Whitehorse**	**68.77**	**31**	eP	**P**	**08 06 29.0**	**+1.0**
	5.0nm,0.9s						
INK	**Inuvik**	**69.40**	**23**	eP	**P**	**08 06 31.8**	**+0.3**
	9.7nm,0.8s						
DLBC	**Dease Lake**	**71.36**	**34**	eP	**P**	**08 06 45.3**	**+1.5**
	8.0nm,0.8s						
ABKAR	**Akbulak array**	**73.15**	**317**	eP	**P**	**08 06 54.4**	**-0.1**
AKTO	**Aktyubinsk**	**74.18**	**318**	P	**P**	**08 07 00.0**	**-0.4**
	1.8nm,0.6s,baz=80,slow=8.6,SNR=7.7						
LLLB	**Lillooet**	**77.38**	**41**	eP	**P**	**08 07 19.8**	**+1.3**
	11nm,0.9s						
YKW3	**Yellowknife Ar**	**78.01**	**28**	eP	**P**	**08 07 21.7**	**0.0**
	5.6nm,0.6s						
YKA	**Yellowknife Ar**	**78.03**	**28**	P	**P**	**08 07 21.6**	**-0.2**
	4.9nm,0.6s,baz=290,slow=5.4,SNR=75						
YKB5	**Yellowknife Ar**	**78.03**	**28**	eP	**P**	**08 07 21.6**	**-0.2**
LTY	**Liberty**	**79.01**	**44**	eP	**P**	**08 07 27.6**	**0.0**
	6.8nm,0.8s						
YBH	**Yreka Blue Hor**	**79.07**	**50**	P	**P**	**08 07 29.0**	**+1.0**
	5.4nm,0.9s,baz=280,slow=6.4,SNR=10						
YBH	**Yreka Blue Hor**	**79.07**	**50**	eP	**P**	**08 07 28.1**	**0.0**
	5.0nm,0.9s						
SPA0	**Spitsbergen Ar**	**79.07**	**351**	eP	**P**	**08 07 28.1**	**+0.8**
SPITS	**Spitsbergen Ar**	**79.07**	**351**	P	**P**	**08 07 28.1**	**+0.8**
	7.5nm,1.0s,baz=22,slow=8.1,SNR=4.8						
RES	**Resolute Bay**	**79.41**	**14**	eP	**P**	**08 07 29.2**	**+0.1**
	5.5nm,0.8s						
B08A	**Colville Reser**	**79.57**	**42**	eP	**P**	**08 07 31.4**	**+0.9**
	8.4nm,0.8s						
PINE	**Pine Mountain**	**79.77**	**47**	eP	**P**	**08 07 32.9**	**+0.9**
	19nm,0.8s						
K05A	**Summer Lake**	**80.10**	**48**	eP	**P**	**08 07 35.0**	**+1.3**
	13nm,0.8s						
ORV	**Oroville**	**80.55**	**52**	eP	**P**	**08 07 36.6**	**+0.7**
	6.3nm,0.9s						
MOD	**Modoc Plateau**	**80.75**	**49**	eP	**P**	**08 07 38.1**	**+0.9**
	5.5nm,0.9s						
NEW	**Newport**	**81.01**	**42**	eP	**P**	**08 07 39.0**	**+0.7**
	7.1nm,0.9s						
AFDM	**Forest Hills D**	**81.12**	**52**	eP	**P**	**08 07 40.2**	**+1.2**
	4.6nm,0.9s						
BEKR	**Beckworth**	**81.31**	**51**	eP	**P**	**08 07 40.9**	**+0.7**
	9.5nm,0.8s						
WVOR	**Wild Horse Val**	**81.78**	**48**	eP	**P**	**08 07 43.4**	**+0.9**
	5.6nm,0.9s						
CMB	**Columbia Colle**	**81.83**	**53**	eP	**P**	**08 07 43.6**	**+0.9**
	6.6nm,0.8s						
VCNR	**Virginia City**	**82.00**	**51**	eP	**P**	**08 07 45.0**	**+1.2**
	6.0nm,0.9s						
PAHR	**Pah Rah Range**	**82.07**	**51**	eP	**P**	**08 07 44.9**	**+0.8**
	6.0nm,1.0s						
PNTR	**Pine Nut**	**82.10**	**52**	eP	**P**	**08 07 45.6**	**+1.3**
	12nm,0.7s						
ARA0	**ARCESS Array S**	**82.37**	**342**	eP	**P**	**08 07 44.5**	**-0.4**
ARCES	**ARCESS Array B**	**82.37**	**342**	P	**P**	**08 07 44.5**	**-0.4**
	1.0nm,0.5s,baz=76,slow=7.8,SNR=9.4						
YERR	**Yerington**	**82.40**	**52**	eP	**P**	**08 07 46.9**	**+1.0**
	7.9nm,0.8s						
WAKR	**Walker**	**82.40**	**52**	eP	**P**	**08 07 47.2**	**+1.3**
	5.1nm,0.7s						
GATR	**Gnd/Air Tx Cnt**	**82.78**	**56**	eP	**P**	**08 07 49.3**	**+1.6**
RYN	**Ryan**	**83.04**	**52**	eP	**P**	**08 07 50.2**	**+1.0**
	6.9nm,0.8s						
KVN	**Kaiserville**	**83.22**	**51**	eP	**P**	**08 07 51.0**	**+0.9**
	7.7nm,0.8s						
NV01	**Mina Array Sit**	**83.27**	**52**	eP	**P**	**08 07 51.0**	**+0.6**
NVAR	**Mina Array Bea**	**83.27**	**52**	P	**P**	**08 07 51.1**	**+0.7**
	8.6nm,0.7s,baz=263,slow=6.0,SNR=67						
NV11	**Mina Array Sit**	**83.38**	**52**	eP	**P**	**08 07 51.8**	**+1.0**
	0.6nm,0.9s						
TPNV	**Topopah Spring**	**85.29**	**53**	eP	**P**	**08 08 01.3**	**+0.8**
	7.7nm,0.8s						
R11A	**Troy Canyon, C**	**85.31**	**51**	eP	**P**	**08 08 01.5**	**+0.9**
	1.2nm,0.8s						
PSUT	**Pine Spring**	**86.52**	**51**	eP	**P**	**08 08 07.3**	**+0.7**
	5.4nm,0.9s						
DUG	**Dugway, Tooele**	**86.66**	**49**	eP	**P**	**08 08 07.9**	**+0.7**
	3.7nm,0.7s						
TPAW	**Teton Pass**	**86.71**	**45**	eP	**P**	**08 08 08.8**	**+1.3**
	2.7nm,0.6s						
FIA1	**FINESS Array S**	**86.74**	**335**	epP	**pP**	**08 08 56.4**	**-3.8**
FIA1				epP	pP	08 08 57.5	-2.

*NEIC **06** 07:58:13.9±0.0, 54°.15N×10°.90W, h3km, ML4.0(BGS), After BGS.*
NEIC Felt [III] at Westport.
*IDC **06** 07:58:14.4±2.5, 54°.35N×10°.69W, h0km, mb3.3/4, mb1 3.5/5, mb1mx3.2/67, mbtmp3.4/5, ML4.2/1, Error ellipse: s-maj=43.0km s-min=23.1km az=4.0*
*LDG **06** 07:58:17.0±0.3, 54°.17N×10°.65W, h5km, Ml4.1/20, Error ellipse: s-maj=7.5km s-min=3.2km az=89.0*
ISC 06 07:58:15.2±0.7, 54°.06N±0°.04×10°.50W±0°.06, h10km, n155, σ2°38/205, mb3.6/3, 4D, Eire

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGLA	**Glengowla, Co**	**0.93**	**133**	*e*P	**Pn**	**07 58 35.3**	**+1.1**
IGLA				*e*S	**Sn**	**07 58 50.5**	**+2.9**
IGLA				IAML		07 58 52.8	
	comp=N,2μm,0.5s						
IGLA				IAML		07 58 53.0	
	comp=E,2μm,0.3s						
IGLA	**Glengowla, Co**	**0.93**	**133**	*e*P	**Pn**	**07 58 35.3**	**+1.1**
IGLA				*e*S	**Sn**	**07 58 50.5**	**+2.9**
IGLA				IAML		07 58 52.8	
	comp=N,2μm,0.5s						
IGLA				IAML		07 58 53.0	
	comp=E,2μm,0.3s						
IDGL	**Inch Island, C**	**2.02**	**59**	*e*P	**Pn**	**07 58 49.9**	**+0.7**
IDGL				IAML		07 59 24.3	
	comp=N,1μm,0.3s						
IDGL				IAML		07 59 26.5	
	comp=E,724nm,0.4s						
IDGL	**Inch Island, C**	**2.02**	**59**	*e*P	**Pn**	**07 58 49.9**	**+0.7**
IDGL				IAML		07 59 24.3	
	comp=N,1μm,0.3s						
IDGL				IAML		07 59 26.5	
	comp=E,724nm,0.4s						
IDGL	**Inch Island, C**	**2.02**	**59**	*e*P	**Pn**	**07 58 49.9**	**+0.7**
VAL	**Valentia**	**2.13**	**176**	*e*P	**Pn**	**07 58 51.7**	**+1.0**
VAL				*i* S	**Sg**	**07 59 26.9**	**+3.3**
VAL	**Valentia**	**2.13**	**176**	*e*P	**Pn**	**07 58 51.1**	**+0.4**
VAL				*e*S	**Sn**	**07 59 17.9**	**+0.7

ARG	Arkhangelos	0.99	183	PG	Pg	08 08 10.4	-0.1
ARG	Arkhangelos	0.99	183	*e*Pg	Pg	08 08 10.4	-0.1
AKAS	Kas	1.49	130	PN	Pn	08 08 18.5	+0.2
AKAS	Kas	1.49	130	*e*Pn	Pn	08 08 18.5	+0.2

*IDC **06** 08:15:39.1±0.9, 17°.16N×101°.24W, h0km, mb4.3/14, mb1 4.4/19, mb1mx4.1/56, mbtmp4.2/19, ML3.7/5, MS3.9/31, Ms1 3.9/31, ms1mx3.8/48, Error ellipse: s-maj=27.8km s-min=14.2km az=33.0*

*MEX **06** 08:15:41.9±1.4, 17°.19N×101°.38W, h2km±11km, MD4.7*

*NEIC **06** 08:15:41.9±0.0, 17°.19N×101°.38W, h2km, mb4.3/105, MD4.7(MEX), After MEX.*

ISC 06 08:15:40.0±1.4, 17°.28N±0°.04×101°.27W±0°.03, h5km±8km, n424, σ1.976/434, mb4.3/82, MS4.0/26, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.37	329	*e*P	Pb	08 15 49.5	+0.5
ZIIG				*e*Pg	Sb	08 15 55.3	+0.1
ZIIG	Zihuatanejo	0.37	329	*i* P	Pb	08 15 49.5	+0.5
ZIIG				*e*S	Sb	08 15 55.3	+0.1
CAIG	El Cayaco	0.98	104	*e*Pg	Pg	08 15 59.4	+0.5
CAIG				*e*Sn	Sn	08 16 14.1	-0.6
CAIG	El Cayaco	0.98	104	*e*P	Pg	08 15 59.4	+0.5
CAIG				*i* S	Sn	08 16 14.1	-0.6
ARIG	Puente Sto Nin	1.32	41	*e*P	Pg	08 16 05.6	+0.3
ARIG				*e*S	Sg	08 16 23.6	+1.0
ARIG	Puente Sto Nin	1.32	41	*e*P	Pg	08 16 05.6	+0.3
ARIG				*e*S	Sg	08 16 23.6	+1.0
ACP2	Acapulco	1.38	107	*e*P	Pg	08 16 06.7	+0.2
ACP2				*e*S	Sb	08 16 21.1	-3.1
ACX	Acapulco	1.41	107	*e*Pn	Pn	08 16 05.8	-0.5
ACX				*e*Sn	Sb	08 16 23.8	-1.2
ACX	Acapulco	1.41	107	*e*P	Pn	08 16 05.8	-0.5
ACX				*e*S	Sb	08 16 23.8	-1.2
MEIG	Mezcala	1.69	68	*e*Pn	Pb	08 16 11.2	-0.5
MEIG				*e*Sn	Sg	08 16 34.1	-0.3
MEIG	Mezcala	1.69	68	*e*P	Pb	08 16 11.2	-0.5
MEIG				*e*S	Sg	08 16 34.1	-0.3
MMIG	Aquila	2.22	297	*e*Pn	Pn	08 16 15.7	-1.7
MMIG				*e*Sn	Sn	08 16 41.3	-3.9
MMIG	Aquila	2.22	297	*e*P	Pn	08 16 15.7	-1.7
MMIG				*e*S	Sn	08 16 41.3	-3.9
MAVM	Malinalco, Edo	2.37	45	*e*P	Pb	08 16 23.5	+0.3
MAVM	Malinalco, Edo	2.37	45	*e*P	Pb	08 16 23.5	+0.3
MOIG	Morelia	2.38	2	*e*Pn	Pn	08 16 20.9	+1.0
MOIG				*e*Pn	Pb	08 16 21.6	-1.9
MOIG				*e*Sn	Sb	08 16 52.5	-0.8
MOIG	Morelia	2.38	2	*e*P	Pn	08 16 20.9	+1.0
MOIG				*e*S	Sb	08 16 52.5	-0.8
TLIG	Tlapa	2.59	83	*e*Pn	Pn	08 16 23.6	+0.9
TLIG				*e*Pg	Pn	08 16 23.7	+1.0
TLIG				*e*S	Sb	08 16 56.1	-3.1
TLIG	Tlapa	2.59	83	*e*P	Pn	08 16 23.7	+1.0
TLIG				*e*S	Sb	08 16 56.1	-3.1
YAIG	Yautepec	2.62	53	*e*Pn	Pn	08 16 23.4	+0.4
YAIG				*e*Sn	Sg	08 17 02.0	-2.0
YAIG	Yautepec	2.62	53	*e*P	Pn	08 16 23.4	+0.4
YAIG				*e*S	Sg	08 17 02.0	-2.0
HMTT	Tlapaneco	2.63	78	*e*P	Pn	08 16 24.5	+1.3
HMTT				*e*S	Sg	08 17 02.9	-1.7
UNM	Universidad Na	2.84	44	*e*Pn	Pn	08 16 27.7	+1.4
UNM				*e*Pn	Pb	08 16 28.2	-3.1
UNM				*e*Sn	Sn	08 17 01.1	+0.1
UNM	Universidad Na	2.84	44	*e*P	Pn	08 16 27.7	+1.4
UNM				*e*S	Sn	08 17 01.1	+0.1
AZVM	Cuida Lopez Ma	2.96	39	*e*P	Pn	08 16 29.0	+1.1
VCVM	Valle de Chalc	2.97	47	*e*P	Pb	08 16 33.0	-0.5
VCVM	Valle de Chalc	2.97	47	*e*P	Pb	08 16 33.0	-0.5
PBVM	Pinon	2.98	44	*e*P	Pn	08 16 21.4	-6.5
PBVM	Pinon	2.98	44	*e*P	Pn	08 16 21.4	-6.5
AMVM	AMECAMECA	2.99	52	*e*P	Pn	08 16 58.7	+0.4
PPM	Popocatepetl	3.07	54	*e*Pn	Pn	08 16 31.9	+2.3
PPM				*e*Sg	Sg	08 17 18.9	+0.1
PPM	Popocatepetl	3.07	54	*e*P	Pn	08 16 31.9	+2.3
PPM				*e*S	Sg	08 17 18.9	+0.1
EZ5V		3.11	315	*e*P	Pn	08 16 31.1	+1.2
EZ5V				*e*S	Sn	08 17 05.9	-1.8
ZUVM	ZUMPANGO	3.27	39	*e*P	Pn	08 16 26.8	-5.4
PHPU	Puebla	3.43	59	*e*P	Pn	08 16 33.0	-1.3
PHPU				*e*S	Sb	08 17 25.3	+1.9
IGIG	Irapuato, Guan	3.45	359	*e*P	Pb	08 16 38.7	-3.0
IGIG				*e*S	Sb	08 17 20.5	-3.5
IGIG	Irapuato, Guan	3.45	359	*e*P	Pb	08 16 38.7	-3.0
IGIG				*e*S	Sb	08 17 20.5	-3.5
IGIG				*i* S	Sb	08 17 20.6	-3.5
JRQG	Juriquilla Cam	3.49	13	*e*Pn	Pn	08 16 38.0	+2.9
DEIG	Demacu	3.67	35	*e*Pn	Pn	08 16 37.6	0.0
DEIG				*e*Pg	Pg	08 16 48.7	-1.6
DEIG	Demacu	3.67	35	*e*P	Pn	08 16 37.6	0.0
DEIG				*e*S	Pg	08 16 48.7	-1.6
TPIG	Tehuac#an	3.89	73	*e*Pn	Pn	08 16 41.5	+1.0
TPIG				*e*Sg	Sb	08 17 34.6	-1.9
TPIG	Tehuac#an	3.89	73	*e*P	Pn	08 16 41.5	+1.0
TPIG				*e*S	Sb	08 17 34.6	-1.9
CJM	Chamela	4.21	302	*e*Pn	Pn	08 16 44.4	-0.4
CJM				*e*Sn	Sb	08 17 44.0	-1.6
CJM	Chamela	4.21	302	*e*P	Pn	08 16 44.4	-0.4
CJM				*e*S	Sb	08 17 44.0	-1.6
VHO	Vista Hermosa	4.34	92	*e*Pn	Pn	08 16 48.5	+1.7
VHO				*e*Sn	Sn	08 17 39.2	+1.3
VHO	Vista Hermosa	4.34	92	*e*P	Pn	08 16 48.5	+1.7
VHO				*e*S	Sn	08 17 39.2	+1.3
HUIG	Huatulco	5.17	106	*e*Pn	Pn	08 16 59.6	+1.5
HUIG				*e*Sn	Sn	08 17 51.1	-7.0
HUIG	Huatulco	5.17	106	*e*P	Pn	08 16 59.6	+1.5
HUIG				*i* S	Sn	08 17 51.1	-7.0
LVIG	Laguna Verde	5.20	61	*e*Pn	Pn	08 17 02.6	+4.2
LVIG				*e*Pn	Pb	08 17 04.7	-6.8
LVIG	Laguna Verde	5.20	61	*e*P	Pn	08 17 04.7	+6.2
ZAIG	Zacatecas	5.59	348	*e*Pn	Pn	08 17 07.8	+3.7
CMIG	Matias Romero	6.10	91	Pn	Pn	08 17 11.2	+0.3
	4.3nm,0.3s,baz=255,slow=12,SNR=58						
CMIG				Sn	Sn	08 18 16.0	-5.1
	8.2nm,0.3s,baz=265,slow=11,SNR=5.2						
CMIG				Lg	Lg	08 18 51.9	
	22nm,0.3s,baz=23,slow=21,SNR=12						
CMIG				LR	LR	08 19 20.5	
	comp=Z,513nm,21.6s,baz=262,slow=36						
LNIG	Linares	7.76	12	*e*Pn	Pn	08 17 35.8	+2.2
LNIG				*e*Pn	Pn	08 17 40.7	+7.1
CCIG	Comitan	8.80	95	*e*Pn	Pn	08 17 49.2	+1.2
H06E1	SOCORRO T-PHAS	9.31	281	T	T	08 27 28.3	
	SNR=510						
H06S1	SOCORRO T	9.33	280	T	T	08 27 37.6	
	SNR=36						
H06N1	SOCORRO T-PHAS	9.38	281	T	T	08 27 34.8	
	SNR=8.8						
HPIG		10.43	338	*e*Pn	Pn	08 18 14.2	+3.7
APG	El Apazote	10.62	101	Pn	Pn	08 18 13.4	+0.3
	1.7nm,0.3s,baz=270,slow=19,SNR=17						
APG				Sn	Sn	08 20 10.9	-1.8
	1.0nm,0.3s,baz=305,slow=16,SNR=2.7						
APG				Lg	Lg	08 21 15.5	
	0.4nm,0.3s,baz=347,slow=19,SNR=4.7						
APG				LR	LR	08 22 12.4	
	comp=Z,649nm,20.6s,baz=286,slow=37						
LPIG	La Paz	10.84	310	LR	LR	08 22 03.6	
	comp=Z,779nm,20.8s,baz=33,slow=35						
833A	Chaparral WMA,	11.12	9	P	Pn	08 18 22.6	+2.9
	baz=190						
833A	Chaparral WMA,	11.12	9	*e*Pn	Pn	08 18 23.4	+3.7
TXAR	Lajitas Array	12.20	350	Pn	Pn	08 18 39.2	+4.7
	0.1nm,0.3s,baz=162,slow=15,SNR=13						
TXAR				Lg	Lg	08 22 05.4	
	0.1nm,0.3s,baz=174,slow=27,SNR=3.3						
TXAR				LR	LR	08 23 09.4	
	comp=Z,371nm,20.7s,baz=0.0,slow=36						
TX31	Lajitas Ar. Si	12.20	350	*e*Pn	Pn	08 18 38.8	+4.3
JCT	Junction City	13.21	6	P	Pn	08 18 50.9	+2.7
	baz=187,SNR=6.7						
JCT	Junction City	13.21	6	*e*Pn	Pn	08 18 52.8	+4.5
HKT	Hockley	13.55	21	*e*Pn	P	08 18 58.0	-4.1
435B	Jarrell	13.85	13	*e*Pn	Pn	08 19 00.7	+3.7
TGUH	Tegucigalpa,Un	13.85	101	*e*Pn	Pn	08 18 58.9	+1.9
MNTX	Cornudas Mount	14.83	346	P	P	08 19 17.5	+1.1
	baz=165,SNR=15						
MNTX	Cornudas Mount	14.83	346	*e*Pn	P	08 19 15.9	-0.5
WHTX	Lake Whitney,	15.04	13	P	Pn	08 19 15.7	+2.4
	baz=194,SNR=9.4						
WHTX	Lake Whitney,	15.04	13	*e*Pn	P	08 19 16.3	-2.5
	24nm,0.9s						
GDL2	Guadalupe Moun	15.12	350	*e*Pn	Pn	08 19 15.0	+0.7
EPT	El Paso	15.19	343	*e*Pn	P	08 19 20.3	-0.1
	8.1nm,0.7s						
441A	DeRidder	15.29	27	P	Pn	08 19 17.7	+1.1
	baz=211						
ABTX	Abilene, Hawle	15.35	5	P	P	08 19 21.9	-0.3
	baz=186,SNR=16						
ABTX	Abilene, Hawle	15.35	5	*e*Pn	P	08 19 22.1	0.0
	29nm,0.8s						
NATX	Nacogdoches	15.61	21	P	Pn	08 19 22.1	+1.4
	baz=204						
NATX	Nacogdoches	15.61	21	*e*Pn	P	08 19 24.4	-0.7
	43nm,0.8s						
341A	Kurthwood	15.80	26	P	Pn	08 19 24.0	+0.8
	baz=210,SNR=7.0						
341A	Kurthwood	15.80	26	*e*Pn	P	08 19 26.5	-0.7
	26nm,0.9s						
319A	Douglas	15.81	334	*e*Pn	P	08 19 27.5	+0.1
	6.6nm,0.8s						
240A	Hunter Patters	16.19	23	*e*Pn	P	08 19 29.8	-1.6
	39nm,0.7s						
121A	Cookes Peak, D	16.29	340	P	P	08 19 31.5	-1.2
	baz=158						
241A	Mo Tay, Goldon	16.51	26	P	Pn	08 19 32.8	+0.5
	baz=209						
MSTX	Muleshoe	16.67	356	P	Pn	08 19 35.6	+1.1
	baz=175,SNR=8.9						
MSTX	Muleshoe	16.67	356	*e*Pn	P	08 19 36.0	-1.0
140A	Cam and Jess,	16.80	23	*e*Pn	P	08 19 37.4	-0.8
	62nm,0.9s						
141A	Papa Simpson,	17.02	25	P	P	08 19 39.6	-1.1
	baz=208						
344A	Westbrook Farm	17.04	32	P	Pn	08 19 39.1	0.0
	baz=217						
TUC	Tucson	17.26	332	P	P	08 19 44.4	+0.9
	baz=148						
TUC	Tucson	17.26	332	*e*Pn	P	08 19 45.0	+1.6
	5.6nm,1.1s						
446A	Poplarville	17.27	37	P	Pn	08 19 40.9	-1.1
	baz=222						
JTS	JuntasAbangare	17.29	112	P	Pn	08 19 42.1	-0.3
	0.2nm,0.3s,baz=12,slow=20,SNR=2.2						
Z40A	Long Farm, Mag	17.41	23	P	Pn	08 19 44.1	+0.5
	baz=206						
BNM	Barren Site	17.47	345	*e*Pn	P	08 19 48.4	+2.5
Y22D	IRIS PASSCAL I	17.47	344	*e*Pn	P	08 19 47.4	+1.5
	13nm,0.8s						
WMOK	Wichita Mounta	17.52	7	P	Pn	08 19 45.1	0.0
	baz=188,SNR=7.5						
WMOK	Wichita Mounta	17.52	7	*e*Pn	Pn	08 19 45.3	+0.2
	3.9nm,0.6s						
AMTX	Amarillo	17.53	359	P	Pn	08 19 45.3	0.0
	baz=179						
AMTX	Amarillo	17.53	359	*e*Pn	Pn	08 19 45.4	+0.1
	12nm,0.7s						
244A	Avery, Jackson	17.54	31	P	Pn	08 19 44.2	-1.1
	baz=216						
LPM	Los Pinos Moun	17.63	345	*e*Pn	P	08 19 49.7	+2.2
143A	Socs Landing,	17.75	28	P	Pn	08 19 47.5	-0.3
	baz=212						
VBMS	Vicksburg	17.77	31	*e*Pn	P	08 19 48.4	-0.6
	25nm,1.1s						
LAZ	Ladron	17.84	344	*e*Pn	P	08 19 50.6	+0.7
214A	Organ Pipe Nat	17.97	327	P	P	08 19 52.5	+1.4
	baz=142						
Z42A	Norrel Spur, H	18.00	26	P	Pn	08 19 50.3	-0.6
	baz=210						
TASL	Snake Pit, Alb	18.19	346	P	P	08 19 55.7	+1.8
	baz=164,SNR=13						
ANMO	Albuquerque	18.19	346	P	P	08 19 55.5	+1.7
	0.1nm,0.3s,baz=151,slow=12,SNR=23						
ANMO				Lg	Lg	08 25 19.2	
	0.1nm,0.3s,baz=143,slow=20,SNR=4.1						
ANMO				LR	LR	08 26 56.8	
	comp=Z,386nm,19.7s,baz=163,slow=37						
ANMO	Albuquerque	18.19	346	P	P	08 19 55.3	+1.5
	baz=164						
ANMO	Albuquerque	18.19	346	*e*P	P	08 19 56.0	+2.2
	5.2nm,0.9s						
ANMO				*e*		08 25 20.2	
TASM	ASL Pad, Albuq	18.19	346	P	P	08 19 55.7	+1.8
	baz=164,SNR=12						
Y41A	Eaglette Beard	18.26	24	P	Pn	08 19 53.7	-0.5
	baz=207						
X39A	Fountain Ranch	18.31	19	P	Pn	08 19 54.0	-0.8
	baz=202,SNR=6.0						
MIAR	Mount Ida	18.52	20	P	P	08 19 55.6	-1.6
	baz=204						
MIAR	Mount Ida	18.52	20	*e*P	P	08 19 56.1	-1.1
	12nm,1.1s						
CCAR	Cane Creek	18.63	25	*e*P	Pn	08 19 59.4	+0.7
	24nm,1.0s						
X18A	Snowflake	18.85	337	*e*P	Pn	08 20 03.5	+1.9
	4.4nm,1.0s						
W39A	Magazine	19.05	19	P	P	08 20 02.4	-0.6
	baz=203,SNR=12						
W39A	Magazine	19.05	19	*e*P	P	08 20 02.9	-0.1
	11nm,0.8s						
TUL1	Leonard	19.18	14	P	P	08 20 03.3	-1.1
	baz=196,SNR=19						
TUL1	Leonard	19.18	14	*e*P	P	08 20 03.5	-1.0
	36nm,0.8s						
X42A	Stuttgart	19.24	25	P	P	08 20 04.2	-0.9
	baz=209						
W40A	Ferguson Farm,	19.28	21	P	P	08 20 04.8	-0.7
	baz=204						
W40A	Ferguson Farm,	19.28	21	*e*P	P	08 20 05.4	-0.1
	10nm,0.8s						
W18A	Petrified Fore	19.30	339	*e*P	Pn	08 20 08.1	+1.0
	4.4nm,0.9s						
X16A	Lo Mia Camp, P	19.34	334	*e*P	Pn	08 20 09.3	+1.9
	8.1nm,0.8s						
Y44A	Strider, Charl	19.34	29	P	P	08 20 06.0	-0.2
	baz=214						
X43A	Marvell	19.52	26	P	P	08 20 08.3	+0.2
	baz=211,SNR=9.7						
X43A	Marvell	19.52	26	*e*P	Pn	08 20 08.8	-0.6
	85nm,0.9s						
W41B	Gary Mavity, V	19.55	23	P	P	08 20 07.5	-1.0
	baz=207						
W41B	Gary Mavity, V	19.55	23	*e*P	P	08 20 08.1	-0.4
	5.0nm,0.6s						
Y45A	Yeager Farm, C	19.58	30	P	P	08 20 08.1	-0.7
	baz=215						
WHAR	Wooly Hollow	19.64	22	*e*P	P	08 20 09.1	-0.4
	9.2nm,0.7s						
Y14A	Wickenburg	19.65	330	*e*P	Pn	08 20 11.9	+0.9
	6.3nm,1.0s						
148A	Greensboro	19.67	36	P	P	08 20 08.7	-1.1
	baz=222						
V39A	Pettigrew	19.68	19	P	P	08 20 09.2	-0.8
	baz=202,SNR=18						
V40A	Witts Springs	19.91	21	P	P	08 20 11.8	-0.8
	baz=204,SNR=24						
V40A	Witts Springs	19.91	21	*e*P	P	08 20 11.9	-0.6
	22nm,0.6s						
Y46A	Houston	19.93	32	P	P	08 20 11.8	-0.8
	baz=217,SNR=5.6						
T25A	Trinidad	19.97	353	P	Pn	08 20 14.5	-0.6
	baz=172,SNR=8.8						
T25A	Trinidad	19.97	353	*e*P	Pn	08 20 15.2	+0.1
	15nm,0.8s						
HHAR	Hobbs	20.01	18	*e*P	P	08 20 12.4	-1.2
	14nm,0.6s						
149A	Jones	20.08	38	P	P	08 20 13.2	-1.2
	baz=224						
X45A	UM Field Stati	20.11	30	P	P	08 20 14.1	-0.5
	baz=215						
V41A	Mountainview	20.13	22	P	P	08 20 13.9	-0.9
	baz=206,SNR=31						
OXF	Oxford	20.17	29	P	P	08 20 14.0	-1.3
	baz=215						
U39A	Green Forest	20.24	18	P	P	08 20 14.6	-1.4
	baz=202,SNR=7.7						
Y12C	Blythe	20.26	327	P	Pn	08 20 18.6	+0.4
	baz=141,SNR=8.4						
Y12C	Blythe	20.26	327	*e*P	Pn	08 20 19.1	+0.9
	19nm,0.8s						
WUAZ	Wupatki	20.27	336	P	Pn	08 20 19.0	+0.5
	baz=152,SNR=15						
WUAZ	Wupatki	20.27	336	*e*P	Pn	08 20 19.8	+1.4
	28nm,0.9s						
LRAL	Lakeview Retre	20.28	37	P	P	08 20 15.2	-1.3
	baz=223						
LRAL	Lakeview Retre	20.28	37	*e*P	P	08 20 15.8	-0.8
	8.1nm,1.0s						
SWSC	Sam W. Stewart	20.37	323	P	Pn	08 20 19.4	-0.1
	baz=137						
U40A	Yellville	20.41	20	P	P	08 20 16.5	-1.4
	baz=204,SNR=12						
V42A	Cord	20.43	24	P	P	08 20 17.0	-1.1
	baz=208,SNR=7.3						
PDMCI	Parker Dam,Lak	20.50	328	P	Pn	08 20 20.5	-0.5
	baz=143,SNR=5.5						
453A	Whigham	20.50	46	P	P	08 20 18.6	-0.4
	baz=233						
251A	Midway	20.58	41	P	P	08 20 18.7	-1.0
	baz=228						
X46A	Booneville	20.61	31	P	P	08 20 18.6	-1.4
	baz=217,SNR=6.3						
T38A	Diamond	20.62	16	P	P	08 20 18.6	-1.5
	baz=199,SNR=18						
U41A	Viola	20.71	22	P	P	08 20 20.2	-1.0
	baz=206,SNR=11						
SDCO	Great Sand Dun	20.72	350	P	P	08 20 22.4	+0.8
	baz=169,SNR=26						
SDCO	Great Sand Dun	20.72	350	*e*P	P	08 20 22.6	+1.0
	16nm,0.9s						
W45A	Hickory Valley	20.81	29	P	P	08 20 20.7	-1.5
	baz=214						
Y48A	Jasper	20.84	35	P	P	08 20 20.4	-2.1
	baz=221						
MVCO	Mesa Verde	20.85	344	P	P	08 20 23.8	+0.9
	baz=161,SNR=14						
MVCO	Mesa Verde	20.85	344	*e*P	P	08 20 24.1	+1.2
	16nm,0.8s						
T39A	Clever	20.86	18	P	P	08 20 21.5	-1.3
	baz=202,SNR=12						
353A	Camilla	20.87	45	P	P	08 20 20.9	-2.0
	baz=232						
454A	Quitman	20.90	47	P	P	08 20 19.5	-3.7
	baz=234						
IRM	Iron Mountain	20.91	326	P	Pn	08 20 25.4	-0.4
	baz=141						
151A	Opelika	20.92	41	P	P	08 20 21.6	-1.8
	baz=227						
X47A	Russelville	20.94	32	P	P	08 20 21.5	-2.2
	baz=218						
S22A	4UR Ranch, Cre	20.96	348	P	Pn	08 20 25.6	-1.1
	baz=165,SNR=20						
S22A	4UR Ranch, Cre	20.96	348	*e*P	Pn	08 20 25.9	-0.8
	9.8nm,0.8s						
U42A	Revenden	20.97	23	P	P	08 20 22.7	-1.3
	baz=208,SNR=8.4						
W13A	Hualapai Mount	21.01	330	*e*P	P	08 20 27.1	+2.4
	5.0nm,0.8s						
Z50A	Ashland	21.06	38	P	P	08 20 23.4	-1.6
	baz=225,SNR=5.0						
PLAL	Pickwick Lake	21.20	31	*e*P	P	08 20 25.6	-0.8
	27nm,1.0s						
T40A	Mansfield	21.24	20	P	P	08 20 25.4	-1.5
	baz=204						
BELC	Belle Mtn. Jos	21.25	324	P	P	08 20 28.0	+0.8
	baz=138						
S38A	Stockton	21.28	16	P	P	08 20 25.8	-1.5
	baz=200,SNR=30						
X48A	Hartselle	21.31	34	P	P	08 20 25.6	-2.1
	baz=220						
455A	Stateville	21.34	48	P	P	08 20 26.5	-1.5
	baz=235						
T41A	Mountain View	21.40	21	P	P	08 20 26.6	-2.0
	baz=206						
U15A	North Rim	21.42	335	*e*P	P	08 20 31.9	+2.7
	12nm,1.1s						
CBKS	Cedar Bluff	21.49	3	P	P	08 20 28.1	-1.6
	baz=184,SNR=5.8						
CBKS	Cedar Bluff	21.49	3	*e*P	P	08 20 28.4	-1.2
	13nm,0.8s						
S39A	Bolivar	21.50	17	P	P	08 20 27.8	-1.8
	baz=201,SNR=10						
LDFC	Landfair	21.60	328	*e*P	P	08 20 35.1	+4.2
	27nm,1.1s						
T42A	Van Buren	21.62	23	P	P	08 20 30.8	-0.2
	baz=207,SNR=5.3						
W47A	Westpoint	21.65	32	P	P	08 20 29.1	-2.2
	baz=218						
MURC	Murrieta	21.65	322	P	P	08 20 31.6	+0.2
	baz=135						
PBMO	Poplar Bluff	21.65	24	*e*P	P	08 20 30.3	-1.0
	7.4nm,0.8s						
GMRC	Granite Mounta	21.66	326	P	P	08 20 31.9	+0.3
	baz=140						
S40A	Lebanon	21.66	19	P	P	08 20 29.8	-1.5
	baz=203,SNR=7.6						
KSCO	Kaye Shedlock'	21.68	357	P	P	08 20 31.5	-0.2
	baz=177,SNR=6.6						
KSCO	Kaye Shedlock'	21.68	357	*e*P	P	08 20 31.9	+0.2
	14nm,0.8s						
PV01	Paradox Valley	21.74	344	*e*P	P	08 20 34.0	+1.5
	6.6nm,1.0s						
R38A	Fenwick Farm,	21.80	16	P	P	08 20 30.6	-2.3
	baz=199						
V46A	Holladay	21.83	30	P	P	08 20 31.9	-1.4
	baz=216,SNR=6.5						
PV02	Paradox Valley	21.85	344	*e*P	P	08 20 35.5	+1.8
	6.0nm,0.9s						
254A	Abbeville	21.86	45	P	P	08 20 31.4	-2.2
	baz=232						
S41A	Jillco Farms,	21.89	21	P	P	08 20 31.7	-2.2
	baz=205						
PV15	Paradox Valley	21.91	345	*e*P	P	08 20 36.2	+1.9
	7.2nm,0.9s						
PV03	Paradox Valley	21.93	344	*e*P	P	08 20 36.1	+1.7
	7.8nm,1.0s						
U45A	Rockin P Farm,	21.98	28	P	P	08 20 34.1	-0.8
	baz=214						
Y51A	Rockmart	22.02	38	P	P	08 20 33.7	-1.6
	baz=225,SNR=6.0						
PV07	Paradox Valley	22.05	344	*e*P	P	08 20 37.8	+2.0
	6.1nm,0.8s						
HEC	Hector,Ludlow	22.05	325	P	P	08 20 37.2	+1.4
	baz=139						
PV04	Paradox Valley	22.07	344	*e*P	P	08 20 38.6	+2.7
	8.7nm,0.9s						
KSU1	Kansas State U	22.11	10	P	P	08 20 34.4	-1.9
	baz=192						
KSU1	Kansas State U	22.11	10

S44A	Carbondale	22.91	25	P	P	08 20 42.8	-1.9
	baz=211						
V49A	McMinnville	22.92	34	P	P	08 20 41.8	-3.0
	baz=220						
T46A	Princeton	22.95	28	P	P	08 20 43.1	-2.1
	baz=215						
Z54A	Sparta	22.96	43	P	P	08 20 43.0	-2.3
	baz=231						
P37A	Lathrop	23.02	14	P	P	08 20 44.2	-1.7
	baz=197						
SRU	San Rafael Swe	23.20	341	eP	P	08 20 49.8	+1.9
	3.9nm,0.7s						
MSU	Marysvale	23.21	338	eP	P	08 20 49.3	+1.3
P38A	Dawn	23.25	15	P	P	08 20 45.8	-2.4
	baz=199						
V50A	Pikevile	23.28	35	P	P	08 20 45.6	-3.0
	baz=222						
P39B	Salisbury	23.33	17	P	P	08 20 47.0	-2.1
	baz=201						
X53A	Estanollee	23.50	40	P	P	08 20 49.0	-1.7
	baz=228						
Q42A	Golden Eagle	23.50	21	P	P	08 20 48.5	-2.2
	baz=207						
W52A	Murphy	23.53	38	P	P	08 20 48.5	-2.6
	baz=225						
U49A	Red Boiling Sp	23.55	33	P	P	08 20 48.4	-2.8
	baz=220						
O20A	White River Ci	23.56	347	eP	P	08 20 53.4	+1.8
	3.9nm,0.8s						
P40A	Paris	23.57	18	P	P	08 20 49.6	-1.9
	baz=203						
OGNE	Ogallala	23.59	359	P	P	08 20 50.7	-1.0
	baz=178						
TPNV	Topopah Spring	23.64	329	P	P	08 20 54.0	+1.7
	baz=142,SNR=20						
TPNV	Topopah Spring	23.64	329	eP	P	08 20 54.5	+2.2
	22nm,0.9s						
T48A	Bowling Green	23.71	31	P	P	08 20 50.2	-2.6
	baz=218						
O38A	Galt	23.74	15	P	P	08 20 51.2	-1.8
	baz=199						
V51A	Loudon	23.79	36	P	P	08 20 51.4	-2.2
	baz=224						
USIN	University of	23.81	27	eP	P	08 20 53.4	-0.4
	16nm,0.5s						
R45A	Skylar, Fairfi	23.82	26	P	P	08 20 52.3	-1.6
	baz=212						
Q43A	New Douglas	23.82	23	P	P	08 20 53.0	-0.9
	baz=208,SNR=5.4						
ISA	Isabella, Lake	23.86	323	P	P	08 20 56.1	+1.8
	baz=136						
PSUT	Pine Spring	23.87	335	eP	P	08 20 56.4	+1.9
	5.8nm,0.9s						
N23A	Red Feather La	23.87	351	P	P	08 20 55.0	+0.3
	baz=169						
N23A	Red Feather La	23.87	351	eP	P	08 20 56.0	+1.3
	5.9nm,0.9s						
P41A	Barry, Barry	24.01	20	P	P	08 20 53.8	-1.9
	baz=205						
W53A	Cullowhee	24.03	39	P	P	08 20 55.3	-0.8
	baz=227						
Q44A	Meyer Farm, Va	24.05	24	P	P	08 20 54.5	-1.6
	baz=210						
BG3	Lake Jocassee	24.05	39	eP	P	08 20 55.4	-0.7
	15nm,1.1s						
O39A	Kirksville	24.11	17	P	P	08 20 54.9	-1.7
	baz=201						
T49A	Edmonton	24.14	32	P	P	08 20 55.1	-1.8
	baz=219						
P42A	Winchester	24.17	21	P	P	08 20 54.9	-2.2
	baz=206						
O40A	La Belle	24.17	18	P	P	08 20 55.3	-1.9
	baz=202						
PHWY	Pilot Hill	24.21	352	eP	P	08 20 58.1	+0.2
	3.8nm,0.8s						
OLIL	Olney	24.27	26	eP	P	08 20 57.3	-0.8
	13nm,0.8s						
VES	Vestal, Richgr	24.33	323	P	P	08 21 00.1	+1.4
	baz=135						
Q45A	Warren Harvey,	24.39	25	P	P	08 20 57.0	-2.2
	baz=212						
T50A	Nancy	24.43	33	P	P	08 20 56.9	-2.7
	baz=221						
R11A	Troy Canyon, C	24.45	332	P	P	08 21 00.9	+0.9
	baz=146,SNR=7.0						
R11A	Troy Canyon, C	24.45	332	eP	P	08 21 01.6	+1.6
	6.6nm,1.1s						
P43A	Skaggs, Pawnee	24.51	22	P	P	08 20 58.6	-1.7
	baz=208						
V53A	Saluda	24.58	38	P	P	08 20 59.5	-1.5
	baz=227						
R47A	Wooly Knot Far	24.60	29	P	P	08 20 59.6	-1.5
	baz=216						
WCI	Wyandotte Cave	24.65	29	eP	P	08 21 01.4	-0.2
	8.6nm,0.8s						
P44A	Sand Creek, Wi	24.69	24	P	P	08 21 00.2	-1.7
	baz=210,SNR=6.9						
N39A	Derby Farms, D	24.70	16	P	P	08 21 00.8	-1.2
	baz=200,SNR=11						
M37A	Trindle Farm,	24.82	13	P	P	08 21 00.4	-2.7
	baz=197						
DUG	Dugway, Tooele	24.93	339	P	P	08 21 05.0	+0.8
	baz=153,SNR=6.4						
DUG	Dugway, Tooele	24.93	339	eP	P	08 21 05.8	+1.5
	3.9nm,0.8s						
M38A	Pleasantville	25.03	14	P	P	08 21 03.5	-1.5
	baz=199						
P45A	Graceland, Par	25.09	25	P	P	08 21 03.7	-1.8
	baz=212						
KMSC	Kings Mountain	25.14	41	P	P	08 21 03.7	-2.3
	baz=230						
Q47A	Bedord North L	25.16	28	P	P	08 21 04.7	-1.4
	baz=215						
TCUT	Toone Canyon	25.31	342	eP	P	08 21 09.6	+1.8
	5.8nm,0.8s						
O44A	Mansfield	25.34	23	P	P	08 21 06.4	-1.4
	baz=210						
M39A	Webster	25.35	16	P	P	08 21 06.7	-1.1
	baz=201,SNR=5.5						
N42A	Yates City	25.39	20	P	P	08 21 06.7	-1.5
	baz=206						
P46A	Rosedale	25.39	26	P	P	08 21 06.3	-1.9
	baz=213						
HDIL	Hopedale	25.40	22	P	P	08 21 06.3	-2.0
	baz=208						
HDIL	Hopedale	25.40	22	eP	P	08 21 06.8	-1.4
	17nm,0.8s						
M40A	Post Highland	25.46	17	P	P	08 21 07.3	-1.6
	baz=202						
S51A	Beattyville	25.55	34	P	P	08 21 07.3	-2.4
	baz=222						
OMMB	Old Mammoth Mi	25.56	326	eP	P	08 21 12.8	+2.6
	12nm,1.2s						
L37A	Phoenix Point,	25.58	13	P	P	08 21 08.8	-1.1
	baz=197,SNR=5.6						
K22A	Casper	25.68	351	P	P	08 21 11.1	0.0
	baz=169						
K22A	Casper	25.68	351	eP	P	08 21 13.5	+2.4
	14nm,1.1s						
O45A	Potomac	25.71	24	P	P	08 21 09.7	-1.4
	baz=211						
M41A	Milan	25.72	19	P	P	08 21 09.5	-1.7
	baz=204						
NV11	Mina Array Sit	25.74	328	eP	P	08 21 14.0	+2.4
	1.2nm,1.0s						
L38A	Oak Wood Farm,	25.77	14	P	P	08 21 10.8	-0.9
	baz=199						
N43A	Stutzman Famil	25.78	21	P	P	08 21 10.2	-1.6
	baz=208						
HWUT	Hardware Ranch	25.80	342	eP	P	08 21 13.4	+1.2
	7.0nm,0.9s						
NV01	Mina Array Sit	25.81	328	eP	P	08 21 14.4	+2.1
NV01				ePcP	PcP	08 24 43.2	+1.2
NVAR	Mina Array Bea	25.81	328	P	P	08 21 14.9	+2.6
	14nm,0.8s,baz=148,slow=8.8,SNR=66						
NVAR				PcP	PcP	08 24 43.2	+1.2
	0.4nm,0.8s,baz=126,slow=4.6,SNR=2.7						
NVAR				LR	LR	08 31 26.7	
	comp=Z,329nm,18.8s,baz=218,slow=37						
L39A	Vinton	26.00	16	P	P	08 21 13.2	-0.5
	baz=201						
RYN	Ryan	26.07	328	eP	P	08 21 17.3	+2.7
	16nm,1.2s						
SFIN	Lafayette	26.08	25	P	P	08 21 13.4	-1.1
	baz=212						
KVN	Kaiserville	26.19	329	eP	P	08 21 18.0	+2.2
	20nm,1.0s						
ELK	Elko	26.31	336	P	P	08 21 19.6	+2.7
	2.0nm,0.9s,baz=199,slow=7.7,SNR=7.1						
N45A	Kentland	26.31	24	P	P	08 21 15.7	-0.9
	baz=211						
BW06	Boulder Array	26.37	346	P	P	08 21 17.7	+0.3
	baz=162						
BW06	Boulder Array	26.37	346	eP	P	08 21 20.1	+2.7
	6.7nm,1.0s						
PD31	Pinedale Array	26.37	346	eP	P	08 21 20.5	+3.1
PD31				ePcP	PcP	08 24 41.7	-1.5
PDAR	Pinedale Array	26.37	346	P	P	08 21 18.0	+0.7
	5.2nm,1.0s,baz=161,slow=9.4,SNR=19						
PDAR				PcP	PcP	08 24 41.7	-1.5
	0.5nm,0.7s,baz=163,slow=3.7,SNR=3.3						
PDAR				LR	LR	08 33 59.5	
	comp=Z,191nm,20.4s,baz=184,slow=42						
PDAR	Pinedale Array	26.37	346	eP	P	08 21 17.2	-0.1
PDAR				PcP	PcP	08 24 41.7	-1.5
L41A	Preston	26.37	18	P	P	08 21 16.1	-1.0
	baz=204						
WAKR	Walker	26.45	327	eP	P	08 21 20.4	+2.3
	7.6nm,1.0s						
ECSD	EROS Data Cent	26.66	8	P	P	08 21 18.9	-0.8
	baz=190						
ECSD	EROS Data Cent	26.66	8	eP	P	08 21 21.4	+1.7
	2.2nm,0.6s						
YERR	Yerington	26.71	328	eP	P	08 21 23.0	+2.6
	6.8nm,1.2s						
BMN	Battle Mountai	26.88	332	eP	P	08 21 24.0	+2.1
	6.6nm,0.8s						
PNTR	Pine Nut	26.97	327	eP	P	08 21 25.8	+2.9
	14nm,1.1s						
BLA	Blacksburg	27.05	39	eP	P	08 21 28.1	+4.8
	16nm,1.0s						
J39A	Decorah	27.21	15	P	P	08 21 25.0	+0.3
	baz=200						
REDW	Red Top Meadow	27.24	345	eP	P	08 21 26.3	+1.1
	7.7nm,1.1s						
SNOW	Snow King Moun	27.31	345	eP	P	08 21 27.0	+1.2
	6.7nm,1.1s						
H32A	Carlson Farm,	27.33	6	P	P	08 21 25.7	-0.1
	baz=188						
TPAW	Teton Pass	27.39	345	eP	P	08 21 31.3	+4.7
	5.6nm,1.0s						
I37A	Lemond, Waseca	27.46	12	P	P	08 21 26.3	-0.6
	baz=197						
FXWY	Fox Creek	27.54	345	eP	P	08 21 28.8	+0.9
	3.3nm,1.1s						
H36A	Jessenland, He	27.90	11	P	P	08 21 30.7	-0.1
	baz=195						
J42A	Columbus	27.92	19	P	P	08 21 31.8	+0.7
	baz=206						
BEKR	Beckworth	27.94	328	eP	P	08 21 34.0	+2.5
	3.5nm,0.9s						
HLID	Hailey	28.47	340	eP	P	08 21 37.2	+1.0
	1.6nm,1.0s						
MOD	Modoc Plateau	29.46	330	eP	P	08 21 47.0	+2.1
	5.5nm,0.9s						
BOZ	Bozeman (W)	29.53	345	eP	P	08 21 45.9	+0.4
	8.2nm,0.8s						
DLMT	Dillon	29.56	344	eP	P	08 21 47.5	+1.7
	8.8nm,1.1s						
LRM	Limekiln Ridge	29.95	344	eP	P	08 21 50.6	+1.3
M04C	Macdoel	30.12	328	P	P	08 21 51.9	+1.2
	baz=138						
YBH	Yreka Blue Hor	30.52	327	LR	LR	08 34 28.0	
	comp=Z,101nm,20.1s,baz=164,slow=37						
SDV	Santo Domingo	30.95	102	LR	LR	08 34 56.1	
	comp=Z,111nm,21.1s,baz=53,slow=38						
F44A	Big Bay de Noc	31.16	20	P	P	08 21 58.2	-1.5
	baz=208						
C36A	Pine Crest Far	31.17	11	P	P	08 21 58.8	-1.0
	baz=196						
AGMN	Agassiz Nation	31.25	7	P	P	08 21 59.2	-1.2
	baz=190						
MSO	Missoula	31.27	343	P	P	08 22 01.6	+0.8
	baz=156						
J04D	Umpqua Nationa	31.34	330	P	P	08 22 03.1	+1.4
	baz=140						
D41A	Chassel	31.49	17	P	P	08 22 03.1	+0.5
	baz=204						
B34A	Aery, Baudette	31.59	8	P	P	08 22 03.4	0.0
	baz=192						
B35A	Bob, Littlefor	31.60	10	P	P	08 22 03.3	-0.3
	baz=194						
A33A	Warroad	31.93	7	P	P	08 22 05.6	-0.9
	baz=191						
ULM	Lac du Bonnet	33.17	6	P	P	08 22 16.8	-0.5
	3.3nm,0.7s,baz=196,slow=9.0,SNR=7.9						
ULM				PcP	PcP	08 24 58.7	-1.4
	2.0nm,0.7s,baz=171,slow=2.3,SNR=3.4						
ULM				LR	LR	08 37 00.6	
	comp=Z,307nm,19.4s,baz=194,slow=38						
ULM	Lac du Bonnet	33.17	6	eP	P	08 22 16.9	-0.5
	4.1nm,0.9s						
ULM				PcP	PcP	08 24 58.7	-1.4
PAL	Palisades	33.36	39	P	P	08 22 17.9	-1.2
	baz=233						
PTGA	Pitinga	44.44	110	P	P	08 23 51.9	-0.4
	0.8nm,0.3s,baz=314,slow=5.9,SNR=5.0						
RPN	Rapa Nui	44.84	190	LR	LR	08 38 17.8	
	comp=Z,161nm,21.4s,baz=64,slow=30						
SCHQ	Schefferville	45.83	27	LR	LR	08 45 02.7	
	comp=Z,180nm,18.1s,baz=352,slow=38						
YKA	Yellowknife Ar	46.12	351	P	P	08 24 05.0	+0.1
	5.4nm,0.8s,baz=160,slow=7.2,SNR=64						
YKA				PcP	PcP	08 25 40.9	0.0
	1.0nm,0.8s,baz=158,slow=3.0,SNR=9.5						
YKB5	Yellowknife Ar	46.12	351	eP	P	08 24 05.0	+0.1
YKB5				ePcP	PcP	08 25 40.9	0.0
YKW3	Yellowknife Ar	46.19	351	eP	P	08 24 05.0	-0.4
	5.8nm,0.8s						
DLBC	Dease Lake	46.24	339	eP	P	08 24 08.1	+2.1
	9.5nm,0.9s						
TAOE	Nuku Hiva Isla	46.38	239	eLR	LR	08 36 59.9	
	197nm,25.6s						
TAOE	Nuku Hiva Isla	46.38	239	eT	T	09 13 38.5	
	136nm,0.2s						
LPAZ	La Paz	46.68	134	LR	LR	08 41 51.6	
	comp=Z,169nm,18.2s,baz=249,slow=34						
RKT	Rikitea	51.94	220	eT	T	09 20 41.2	
	14nm,0.2s						
DAWY	Dawson	53.44	340	eP	P	08 25 02.1	+1.4
	5.0nm,1.1s						
EGAK	Eagle	54.49	340	eP	P	08 25 09.5	+1.2
	4.7nm,1.0s						
INK	Inuvik	54.93	346	P	P	08 25 11.9	+0.4
	10nm,1.1s,baz=136,slow=9.2,SNR=10						
SCM	Sheep Creek Mo	54.94	335	eP	P	08 25 13.6	+1.9
	11nm,0.8s						
PMOR	Pomariorio Ree	56.08	238	eT	T	09 25 48.5	
	26nm,0.2s						
IL1	Eielson Array	56.41	338	eP	P	08 25 22.2	+0.1
ILAR	Eielson Array	56.41	338	P	P	08 25 22.8	+0.6
	1.7nm,0.9s,baz=153,slow=4.8,SNR=13						
ILAR				PcP	PcP	08 26 19.2	0.0
	1.1nm,0.8s,baz=173,slow=3.1,SNR=4.9						
ILB	Eielson Array	56.41	338	eP	P	08 25 23.8	+1.6
ILB				ePcP	PcP	08 26 19.2	0.0
TRF	Thorofare Moun	56.95	336	eP	P	08 25 27.4	+1.2
	8.2nm,1.0s						
RES	Resolute Bay	57.52	2	eP	P	08 25 29.5	-0.3
	3.2nm,0.8s						
PPT	Papeete	58.83	236	LR	LR	08 44 22.1	
	comp=Z,73nm,20.1s,baz=350,slow=29						
PPT2	Papeete2	58.84	236	eLR	LR	08 42 46.9	
	190nm,25.2s						
SFJD	Kangerlussuaq	59.36	21	LR	LR	08 51 38.2	
	comp=Z,88nm,21.6s,baz=235,slow=36						
TOLK	Toolik Lake Re	59.50	341	P	P	08 25 43.9	+0.1
	baz=124						
TBI	Tubuai	62.03	231	eLR	LR	08 44 16.8	
	172nm,30.8s						
TBI	Tubuai	62.03	231	eT	T	09 33 18.5	
	4.6nm,0.2s						
PLCA	Paso Flores	64.39	155	LR	LR	08 46 53.7	
	comp=Z,170nm,19.5s,baz=258,slow=29						
SUMG	Summit	65.60	17	eP	P	08 26 25.4	+0.5
	11nm,1.0s						
RAR	Rarotonga	68.93	238	LR	LR	08 48 49.9	
	comp=Z,96nm,22.0s,baz=228,slow=29						
SPA0	Spitsbergen Ar	78.61	11	eP	P	08 27 44.8	+2.5
SPITS	Spitsbergen Ar	78.61	11	P	P	08 27 44.8	+2.5
	1.2nm,0.7s,baz=307,slow=5.2,SNR=3.4						
SPITS				LR	LR	09 04 03.4	
	comp=Z,155nm,19.0s,baz=330,slow=37						
EKA	Eskdalemuir Ar	80.48	35	P	P	08 27 52.6	-0.3
	1.8nm,0.8s,baz=297,slow=3.9,SNR=3.7						
EKA				LR	LR	09 05 23.3	
	comp=Z,40nm,18.7s,baz=320,slow=37						
SEY	Seymchan	81.98	334	P	P	08 28 01.9	+1.2
	0.9nm,0.3s,baz=90,slow=10,SNR=3.8						
ESDC	Sonseca Array	84.60	50	LR	LR	09 07 27.0	
	comp=Z,38nm,18.3s,baz=260,slow=37						
TIXI	Tiksi	85.06	346	P	P	08 28 16.1	-0.3
	3.4nm,0.8s,baz=340,slow=5.7,SNR=5.5						
NB200	NORSAR Array S	85.40	27	eP	P	08 28 19.1	+0.8
NOA	NORSAR Array B	85.40	27	P	P	08 28 19.1	+0.8
	1.5nm,0.9s,baz=300,slow=5.3,SNR=3.1						
NOA				LR	LR	09 07 11.6	
	comp=Z,60nm,21.5s,baz=295,slow=36						
ARA0	ARCESS Array S	85.68	16	eP	P	08 28 20.8	+1.3
ARCES	ARCESS Array B	85.68	16	P	P	08 28 20.8	+1.3
	2.2nm,0.8s,baz=295,slow=9.0,SNR=4.1						
MDT	Midelt	86.21	57	LR	LR	09 02 16.6	
	comp=Z,64nm,21.1s,baz=270,slow=32						
HFS	Hagfors	86.91	27	LR	LR	09 08 07.3	
	comp=Z,75nm,20.6s,baz=294,slow=36						
FINES	FINESS Array B	91.12	22	LR	LR	09 12 10.7	
	comp=Z,57nm,18.6s,baz=330,slow=37						
KOWA	Kowa	92.48	74	LR	LR	09 06 38.8	
	comp=Z,59nm,20.5s,baz=216,slow=33						
GERES	GERESS Array B	92.56	37	LR	LR	09 10 52.8	
	comp=Z,49nm,20.3s,baz=286,slow=36						
NRIK	Norilʼsk	93.38	357	LR	LR	09 14 35.5	
	comp=Z,91nm,18.0s,baz=18,slow=38						
DBIC	Dimbokro	94.12	82	LR	LR	09 12 09.7	
	comp=Z,41nm,18.2s,baz=210,slow=36						
TORD	Torodi Ar. Bea	98.16	74	LR	LR	09 14 48.1	
	comp=Z,45nm,18.0s,baz=265,slow=36						
DZM	Mont Dzumac	98.38	250	eLR	LR	09 01 01.0	
	159nm,23.1s						
DZM	Mont Dzumac	98.38	250	LR	LR	09 03 48.1	
	comp=Z,102nm,20.6s,baz=188,slow=29						
AKASG	Malin Array Be	99.59	29	LR	LR	09 14 57.4	
	comp=Z,25nm,20.9s,baz=265,slow=36						
GEYT	Alibeck	121.76	19	PKP	PKPdf	08 34 35.1	-0.4
	70nm,0.8s,baz=240,slow=8.1,SNR=7.7						
CD2	Chengdu	126.38	333	PKP	PKPdf	08 34 44.3	-0.3
WR1	Warramunga Arr	127.43	258	ePKPdf	PKPdf	08 34 46.3	-0.5
WRA	Warramunga Arr	127.43	258	PKP	PKPdf	08 34 46.3	-0.5
	0.8nm,0.8s,baz=67,slow=1.9,SNR=5.3						
AS31	Alice Springs	128.18	253	ePKPdf	PKPdf	08 34 47.9	-0.3
ASAR	Alice Springs	128.18	253	PKP	PKPdf	08 34 47.9	-0.3
	0.3nm,0.7s,baz=133,slow=5.5,SNR=4.1						

MEX 06 08:23:57.1±0.3, 17°.17N×101°.42W, h19km±25km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.44**	**354**	*i* P	Pg	08 24 04.8	-1.4
ZIIG				*e*S	Sg	08 24 10.6	-1.7
CAIG	**El Cayaco**	**1.10**	**96**	*e*P	Pn	08 24 14.2	-3.3
CAIG				*e*S	Sb	08 24 27.4	-4.2
ARIG	**Puente Sto Nin**	**1.50**	**42**	*e*P	Pn	08 24 20.2	-2.9
ARIG				*e*S	Sn	08 24 37.5	-4.6
ACX	**Acapulco**	**1.52**	**101**	*e*P	Pn	08 24 22.3	-0.9
ACX				*i* S	Sn	08 24 40.6	-1.8
MEIG	**Mezcala**	**1.87**	**66**	*e*P	Pn	08 24 25.3	-2.8
MEIG				*e*S	Sn	08 24 47.5	-3.8
TLIG	**Tlapa**	**2.75**	**81**	*e*P	Pn	08 24 38.0	-2.2
TLIG				*e*S	Sn	08 25 09.5	-3.6

*ISCJB **06** 08:36:39.8±1.0, 17°.22N±0°.06×101°.31W±0°.04, h22km±7km, mb3.4/3, Error ellipse: s-maj=11.7km s-min=4.9km az=25.2*
*MEX **06** 08:36:41.6±0.5, 17°.20N×101°.41W, h16km±14km, MD4.1*
*NEIC **06** 08:36:41.6±0.0, 17°.20N×101°.41W, h16km, MD4.1(MEX), After MEX.*
*IDC **06** 08:36:42.0±5.1, 17°.60N×101°.05W, h0km, mb3.5/3, mb1 3.8/5, mb1mx3.6/44, mbtmp3.5/5, ML3.2/2, Error ellipse: s-maj=119.9km s-min=20.5km az=24.0*
ISC 06 08:36:40.1±1.5, 17°.22N±0°.08×101°.31W±0°.04, h16km±9km, n23, σ1°.46/30, mb3.6/3, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.41**	**339**	*i* P	**Pg**	**08 36 48.6**	**+0.1**
ZIIG				*e*S	**Sg**	**08 36 54.0**	**-0.1**
ZIIG	**Zihuatanejo**	**0.41**	**339**	*i* P	**Pg**	**08 36 48.6**	**+0.1**
ZIIG				*e*S	**Sg**	**08 36 54.0**	**-0.1**
CAIG	**El Cayaco**	**1.01**	**99**	*e*P	**Pb**	**08 36 58.2**	**-1.1**
CAIG				*e*S	**Sb**	**08 37 11.6**	**-0.8**
CAIG	**El Cayaco**	**1.01**	**99**	*e*P	**Pb**	**08 36 58.2**	**-1.1**
CAIG				*e*S	**Sb**	**08 37 11.6**	**-0.8**
ARIG	**Puente Sto Nin**	**1.40**	**41**	*e*P	Pn	08 37 04.6	-0.5
ARIG				*e*S	**Sn**	**08 37 21.1**	**-2.2**
ARIG	**Puente Sto Nin**	**1.40**	**41**	*e*P	Pn	08 37 04.6	-0.5
ARIG				*e*S	**Sn**	**08 37 21.1**	**-2.2**
ACP2	**Acapulco**	**1.41**	**104**	*e*P	**Pn**	**08 37 04.6**	**-0.5**
ACP2				*e*S	**Sn**	**08 37 23.0**	**-0.3**
ACX	**Acapulco**	**1.43**	**104**	*e*P	Pn	08 37 04.5	-0.9
ACX				*e*S	**Sn**	**08 37 21.5**	**-2.5**
ACX	**Acapulco**	**1.43**	**104**	*e*P	Pn	08 37 04.5	-0.9
ACX				*e*S	**Sn**	**08 37 21.5**	**-2.5**
MEIG	**Mezcala**	**1.76**	**66**	*e*P	Pn	08 37 09.7	-0.3
MEIG				*e*S	**Sn**	**08 37 31.2**	**-1.1**
MEIG	**Mezcala**	**1.76**	**66**	*e*P	Pn	08 37 09.7	-0.3
MEIG				*e*S	**Sn**	**08 37 31.2**	**-1.1**
MMIG	**Aquila**	**2.21**	**299**	*i* P	**Pn**	**08 37 15.4**	**-0.8**
MMIG				*e*S	**Sn**	**08 37 41.2**	**-2.1**
MMIG	**Aquila**	**2.21**	**299**	*i* P	**Pn**	**08 37 15.4**	**-0.8**
MMIG				*e*S	**Sn**	**08 37 41.2**	**-2.1**
TLIG	**Tlapa**	**2.64**	**82**	*e*P	**Pn**	**08 37 22.4**	**+0.1**
TLIG				*e*S	**Sn**	**08 37 53.9**	**-0.1**
TLIG	**Tlapa**	**2.64**	**82**	*e*P	**Pn**	**08 37 22.4**	**+0.1**
TLIG				*e*S	**Sn**	**08 37 53.9**	**-0.1**
PHPU	**Puebla**	**3.50**	**58**	*e*P	**Pb**	**08 37 41.4**	**-0.4**
CMIG	**Matias Romero**	**6.14**	**90**	Pn	**Pn**	**08 38 11.2**	**+0.9**
	0.4nm,0.3s,baz=254,slow=11,SNR=10.0						
CMIG				Sn	Sn	08 39 14.5	-5.9
	0.5nm,0.3s,baz=268,slow=8.8,SNR=5.3						
CMIG				Lg	Lg	08 39 50.4	
	1.4nm,0.3s,baz=215,slow=22,SNR=5.1						
H06E1	**SOCORRO T-PHAS**	**9.28**	**281**	T	T	08 48 24.5	
	SNR=46						
APG	**El Apazote**	**10.65**	**100**	Pn	**Pn**	**08 39 13.7**	**+1.3**
	0.3nm,0.3s,baz=346,slow=19,SNR=4.2						
APG				Lg	Lg	08 42 13.0	
	0.2nm,0.3s,baz=341,slow=18,SNR=1.9						
TXAR	**Lajitas Array**	**12.25**	**350**	Lg	Lg	08 42 57.7	
	0.0nm,0.3s,baz=174,slow=25,SNR=4.2						
NVAR	**Mina Array Bea**	**25.84**	**328**	P	**P**	**08 42 14.2**	**+3.0**
	1.

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.13**	**266**	P	**Pb**	**08 44 13.4**	**+0.8**
KRJI	**Kerinci**	**1.48**	**64**	P	**Pg**	**08 44 36.6**	**-0.5**
SISI	**Saibi**	**1.76**	**324**	P	**Pn**	**08 44 38.1**	**-0.3**
SISI				S	**Sn**	**08 45 00.3**	**-0.2**
PDSI	**Padang**	**1.86**	**10**	P	**Pn**	**08 44 40.8**	**+1.0**
MASI	**Maura Aman, Be**	**2.13**	**100**	P	**Pn**	**08 44 44.9**	**+1.3**
MNAI	**Manna**	**3.23**	**120**	P	**Pn**	**08 44 59.4**	**+0.7**
MNAI	**Manna**	**3.23**	**120**	*e*Pn	**Pn**	**08 44 59.5**	**+0.8**
MNAI				*e*Sn	**Sn**	**08 45 35.4**	**-1.5**
MNSI	**Mandailing Nat**	**3.57**	**351**	P	**Pn**	**08 45 03.9**	**+0.6**
MDSI	**Maura Dua**	**4.38**	**113**	P	**Pn**	**08 45 15.9**	**+1.4**
CMAR	**Chiang Mai Arr**	**21.11**	**357**	P	**P**	**08 48 54.0**	**+1.3**
	1.7nm,0.4s,baz=197,slow=7.4,SNR=5.6						
CMAR				LR	LR	08 58 40.9	
	comp=Z,56nm,18.0s,baz=194,slow=41						
H08S2	**Diego Garcia H**	**27.95**	**259**	T	T	09 18 52.3	
	baz=81,slow=75,SNR=899						
H08S3	**Diego Garcia H**	**27.95**	**259**	T	T	09 18 52.7	
	baz=81,slow=75,SNR=807						
H08S1	**Diego Carcia H**	**27.97**	**259**	T	T	09 18 60.0	
	baz=81,slow=75,SNR=661						
H01W3	**Cape Leeuwin H**	**34.52**	**159**	T	T	09 27 14.1	
	baz=336,slow=76,SNR=8.0						
H01W2	**Cape Leeuwin H**	**34.53**	**159**	T	T	09 27 06.4	
	baz=336,slow=76,SNR=7.8						
H01W1	**Cape Leeuwin H**	**34.53**	**159**	T	T	09 27 17.2	
	baz=336,slow=76,SNR=6.3						
WR1	**Warramunga Arr**	**37.50**	**120**	*e*P	**P**	**08 51 20.6**	**-1.3**
	4.4nm,1.0s						
WRA	**Warramunga Arr**	**37.50**	**120**	P	**P**	**08 51 20.6**	**-1.3**
	0.3nm,0.3s,baz=311,slow=9.0,SNR=17						
ASAR	**Alice Springs**	**38.70**	**125**	P	**P**	**08 51 31.1**	**-1.0**
	0.8nm,0.7s,baz=301,slow=7.7,SNR=7.2						
KSAR	**Wonju Array Be**	**47.57**	**30**	P	**P**	**08 52 43.2**	**-0.3**
KSRS	**Korea Array**	**47.60**	**30**	P	**P**	**08 52 43.2**	**-0.5**
	0.6nm,0.4s,baz=222,slow=8.9,SNR=4.2						
STKA	**Stephens Creek**	**48.55**	**131**	P	**P**	**08 52 51.8**	**+0.5**
	1.5nm,0.7s,baz=282,slow=9.3,SNR=2.7						
SONA0	**Songino Array**	**50.68**	**5**	*e*P	**P**	**08 53 07.8**	**+0.4**
SONM	**Songino Array**	**50.68**	**5**	P	**P**	**08 53 07.8**	**+0.4**
	1.0nm,0.4s,baz=188,slow=10,SNR=7.5						
SONA1	**Songino Array**	**50.69**	**5**	*e*P	**P**	**08 53 08.0**	**+0.6**
MK01	**Makanchi Array**	**51.76**	**344**	*e*P	**P**	**08 53 15.7**	**+0.3**
MK31	**Makanchi Array**	**51.79**	**344**	*e*P	**P**	**08 53 16.2**	**+0.6**
MK32	**Makanchi Array**	**51.79**	**344**	*e*P	**P**	**08 53 15.9**	**+0.4**
MKAR	**Makanchi Array**	**51.79**	**344**	P	**P**	**08 53 15.9**	**+0.4**
	4.2nm,0.6s,baz=151,slow=8.3,SNR=41						
MKAR	**Makanchi Array**	**51.79**	**344**	*e*P	**P**	**08 53 16.2**	**+0.6**
	26nm,0.5s						
USRK	**Ussuriysk Ar.**	**54.75**	**28**	P	**P**	**08 53 38.0**	**+0.6**
	3.4nm,0.7s,baz=162,slow=1.4,SNR=4.9						
KURBB	**Kurchatov Arra**	**56.31**	**344**	P	**P**	**08 53 48.4**	**0.0**
	1.7nm,0.8s,baz=163,slow=7.1,SNR=12						
KURK	**Kurchatov**	**56.37**	**344**	*e*P	**P**	**08 53 48.4**	**-0.4**
KURK				*e*P	**P**	**08 53 49.0**	**+0.2**
ZALV	**Zalesovo Beam**	**57.93**	**349**	P	**P**	**08 53 59.6**	**-0.3**
	1.2nm,0.5s,baz=165,slow=6.2,SNR=5.9						
ZALV	**Zalesovo Beam**	**57.93**	**349**	*e*P	**P**	**08 53 59.2**	**-0.7**
ZAA1	**Zalesovo Array**	**57.94**	**349**	*e*P	**P**	**08 53 59.6**	**-0.3**
BVAR	**Borovoye Array**	**60.94**	**340**	LR	LR	09 26 35.0	
	comp=Z,99nm,18.3s,baz=28,slow=42						
ABKAR	**Akbulak array**	**62.36**	**331**	*e*P	**P**	**08 54 29.7**	**-0.7**
ARA0	**ARCESS Array S**	**87.22**	**340**	*e*P	**P**	**08 56 53.7**	**-0.1**
ARCES	**ARCESS Array B**	**87.22**	**340**	P	**P**	**08 56 53.7**	**-0.1**
	2.1nm,1.0s,baz=98,slow=5.5,SNR=3.5						
TXAR	**Lajitas Array**	**145.21**	**38**	PKPbc	**PKPbc**	**09 03 46.0**	**+0.1**
	1.1nm,0.7s,baz=284,slow=1.1,SNR=17						

MEX 06 08:53:09.5±0.4, 17°.21N×101°.34W, h19km±72km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.41**	**343**	*i* P	Pg	08 53 16.5	-1.5
ZIIG				*e*S	Sg	08 53 22.3	-1.4
CAIG	**El Cayaco**	**1.04**	**99**	*e*P	Pb	08 53 25.8	-3.1
CAIG				*e*S	Sb	08 53 38.0	-4.1
ARIG	**Puente Sto Nin**	**1.42**	**42**	*e*P	Pn	08 53 32.5	-1.9
ARIG				*e*S	Sn	08 53 47.8	-4.8
ACX	**Acapulco**	**1.46**	**103**	*e*P	Pn	08 53 33.1	-1.8
ACX				*e*S	Sn	08 53 49.0	-4.5
MEIG	**Mezcala**	**1.79**	**66**	*e*P	Pn	08 53 36.3	-3.2
MEIG				*e*S	Sn	08 53 57.7	-4.0
TLIG	**Tlapa**	**2.67**	**82**	*e*S	Sn	08 54 20.3	-3.3

MEX 06 08:55:11.4±0.7, 17°.19N×101°.39W, h16km±999km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.42**	**350**	*i* P	Pg	08 55 18.6	-1.4
ZIIG				*e*S	Sg	08 55 24.0	-1.8
CAIG	**El Cayaco**	**1.08**	**97**	*e*P	Pb	08 55 28.0	-3.8
CAIG				*e*S	Sb	08 55 41.2	-4.4
ARIG	**Puente Sto Nin**	**1.47**	**42**	*e*P	Pn	08 55 34.7	-2.6
ARIG				*e*S	Sn	08 55 51.0	-5.3
MEIG	**Mezcala**	**1.84**	**66**	*e*P	Pn	08 55 40.4	-2.1
MEIG				*e*S	Sn	08 56 00.5	-5.0
TLIG	**Tlapa**	**2.72**	**82**	*e*P	Pn	08 55 51.8	-2.8
TLIG				*e*S	Sn	08 56 23.3	-3.9

MEX 06 08:57:42.5±0.4, 17°.17N×101°.49W, h19km±169km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.44**	**3**	*i* P	Pg	08 57 50.1	-1.4
ZIIG				*e*S	Sg	08 57 55.8	-1.8
CAIG	**El Cayaco**	**1.17**	**96**	*e*P	Pn	08 58 00.0	-3.9
CAIG				*e*S	Sb	08 58 14.3	-4.6
ARIG	**Puente Sto Nin**	**1.55**	**44**	*e*P	Pn	08 58 06.2	-3.0
ARIG				*e*S	Sn	08 58 24.3	-4.5
MEIG	**Mezcala**	**1.93**	**67**	*e*P	Pn	08 58 12.0	-2.5
MEIG				*e*S	Sn	08 58 34.0	-4.4
TLIG	**Tlapa**	**2.82**	**82**	*e*S	Sn	08 58 53.5	-6.7

*ISCJB **06** 09:00:18.4±0.5, 64°.69N±0°.02×30°.25E±0°.08, h0km, Error ellipse: s-maj=4.9km s-min=3.5km az=13.5*
*CSEM **06** 09:00:20.1±0.7, 64°.67N×30°.24E, h2km, ML2.1, Error ellipse: s-maj=14.3km s-min=8.2km az=88.0, Mining explosion.*
*HEL **06** 09:00:20.8±0.1, 64°.66N×30°.49E, h0km, ML2.1, Explosion*
*IDC **06** 09:00:21.6±2.1, 64°.67N×30°.91E, h0km, mb1 3.3/4, mb1mx3.0/63, mbtmp3.2/4, ML2.8/4, Error ellipse: s-maj=29.1km s-min=9.6km az=101.0*
*BER **06** 09:00:21.7±3.6, 64°.69N×30°.60E, h0km, ML2.4(NAO), Suspected explosion*
*KOLA **06** 09:00:21.8, 64°.68N×30°.80E, h0km*
*NAO **06** 09:00:23.2±1.9, 64°.74N×30°.17E, ML2.4*

ISC 06 09:00:20.7±0.9, 64°.72N±0°.03×30°.52E±0°.05, h0km, n50, σ1§35/79, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KU6	**Riekki**	**1.33**	**349**	PG	**Pg**	**09 00 45.4**	**-0.8**
	baz=167						
KU6				MSG		09 01 02.5	
	comp=Z,13nm,0.2s						
KU6				SG	**Sb**	**09 01 03.9**	**-0.3**
KU6	**Riekki**	**1.33**	**349**	Pg	**Pg**	**09 00 45.4**	**-0.8**
KU6				Sg	**Sb**	**09 01 03.9**	**-0.3**
	comp=Z,13nm,0.2s						
MSF	**Maaselka**	**1.34**	**333**	PN	**Pg**	**09 00 46.5**	**+0.1**
	baz=155						
MSF				SG	**Sg**	**09 01 03.9**	**0.0**
MSF	**Maaselka**	**1.34**	**333**	Pn	**Pg**	**09 00 46.5**	**+0.1**
MSF				Sg	**Sg**	**09 01 03.9**	**0.0**
JOF	**Joensuu**	**1.85**	**169**	PG	**Pn**	**09 00 52.5**	**-1.1**
JOF				SN	**Sn**	**09 01 16.7**	**-0.9**
JOF	**Joensuu**	**1.85**	**169**	Pg	**Pn**	**09 00 52.5**	**-1.1**
JOF				Sn	**Sn**	**09 01 16.7**	**-0.9**
OUL	**Oulu**	**2.01**	**282**	PG	**Pn**	**09 00 56.2**	**+0.4**
	baz=101						
OUL				SG	**Sb**	**09 01 23.9**	**+0.4**
OUL	**Oulu**	**2.01**	**282**	Pg	**Pn**	**09 00 56.2**	**+0.4**
OUL				Sg	**Sb**	**09 01 23.9**	**+0.4**
OUF	**Merijarvi**	**2.53**	**264**	PG	**Pn**	**09 01 04.2**	**+1.3**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OUF				MSG		09 01 34.6	
	comp=Z,18nm,0.2s						
OUF				SG	**Sb**	**09 01 38.6**	**+0.1**
OUF	**Merijarvi**	**2.53**	**264**	Pg	**Pn**	**09 01 04.2**	**+1.3**
OUF				Sg	**Sb**	**09 01 38.6**	**+0.1**
	comp=Z,18nm,0.2s						
RNF	**Rovaniemi**	**2.66**	**317**	PG	**Pb**	**09 01 07.5**	**-1.6**
RNF				SG	**Sb**	**09 01 42.5**	**+0.3**
RNF	**Rovaniemi**	**2.66**	**317**	Pg	**Pb**	**09 01 07.5**	**-1.6**
RNF				Sg	**Sb**	**09 01 42.5**	**+0.3**
TOF	**Tornio**	**2.93**	**300**	PG	**Pb**	**09 01 14.0**	**+0.3**
TOF				MSG		09 01 47.3	
	comp=Z,5.9nm,0.2s						
TOF				SG	**Sb**	**09 01 49.4**	**-0.7**
TOF	**Tornio**	**2.93**	**300**	Pg	**Pb**	**09 01 14.0**	**+0.3**
TOF				Sg	**Sb**	**09 01 49.3**	**-0.7**
	comp=Z,5.9nm,0.2s						
VRF	**Varrio**	**3.06**	**353**	PN	**Pn**	**09 01 11.0**	**+0.7**
VRF				SN	**Sn**	**09 01 48.0**	**+0.5**
VRF				MSG		09 01 52.3	
	comp=Z,5.1nm,0.2s						
VRF	**Varrio**	**3.06**	**353**	Pn	**Pn**	**09 01 11.0**	**+0.7**
VRF				Sn	**Sn**	**09 01 48.0**	**+0.5**
APA0	**Apatity Array**	**3.06**	**18**	P	**Pn**	**09 01 10.8**	**+0.5**
APA0				S	**Sn**	**09 01 47.5**	**-0.1**
APA	**Apatity**	**3.09**	**21**	P	**Pn**	**09 01 11.1**	**+0.5**
APA				S	**Sn**	**09 01 48.0**	**-0.2**
SGF	**Sodankyl**	**3.18**	**331**	SB	**Sb**	**09 01 56.9**	**-0.3**
SGF	**Sodankyl**	**3.18**	**331**	Sb	**Sb**	**09 01 56.9**	**-0.3**
KALU	**Kalix**	**3.22**	**294**	PB	**Pn**	**09 01 14.6**	**+2.2**
KALU	**Kalix**	**3.22**	**294**	Pb	**Pn**	**09 01 14.6**	**+2.2**
KEF	**Keuruu**	**3.61**	**227**	PB	**Pn**	**09 01 19.6**	**+1.8**
	baz=40						
KEF	**Keuruu**	**3.61**	**227**	Pb	**Pn**	**09 01 19.6**	**+1.8**
FIA0	**FINESS Array S**	**3.86**	**214**	Pn	**Pn**	**09 01 21.8**	**+0.5**
	baz=27,slow=16						
FIA0				Pg	**Pb**	**09 01 30.0**	**+0.4**
	baz=36,slow=16						
FIA0				Lg	Lg	09 02 19.2	
	baz=29,slow=37						
FIA0	**FINESS Array S**	**3.86**	**214**	PN	**Pn**	**09 01 21.5**	**+0.2**
FIA0				SG	**Sb**	**09 02 19.2**	**+2.3**
FIA0	**FINESS Array S**	**3.86**	**214**	Pn	**Pn**	**09 01 21.5**	**+0.2**
FIA0	**FINESS Array S**	**3.86**	**214**	Pg	**Pb**	**09 01 30.0**	**+0.4**
	SNR=7.8						
FIA0				Sg	**Sb**	**09 02 19.2**	**+2.3**
FIA0	**FINESS Array S**	**3.86**	**214**	Pn	**Pn**	**09 01 21.8**	**+0.5**
	baz=27,slow=16						
FIA0				Pg	**Pb**	**09 01 30.0**	**+0.4**
	baz=36,slow=16						
FIA0				Lg	Lg	09 02 19.2	
	baz=29,slow=37						
FINES	**FINESS Array B**	**3.86**	**214**	Pn	**Pn**	**09 01 21.7**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=34,slow=14,SNR=13						
FINES				Pg	**Pb**	**09 01 30.1**	**+0.5**
	comp=Z,1.0nm,0.3s,baz=36,slow=14,SNR=18						
FINES				Lg	Lg	09 02 18.8	
	comp=Z,0.9nm,0.3s,baz=35,slow=30,SNR=16						
ERTU	**Ertsjaerv**	**3.91**	**302**	PN	**Pn**	**09 01 24.0**	**+2.1**
ERTU	**Ertsjaerv**	**3.91**	**302**	Pn	**Pn**	**09 01 24.0**	**+2.1**
BURU	**Burvik**	**3.94**	**272**	PN	**Pn**	**09 01 22.5**	**+0.2**
	baz=80						
BURU	**Burvik**	**3.94**	**272**	Pn	**Pn**	**09 01 22.5**	**+0.2**
UMAU	**Umeaa**	**4.37**	**263**	PG	**Pb**	**09 01 39.5**	**+1.3**
UMAU				SN	**Sn**	**09 02 19.8**	**+0.1**
UMAU	**Umeaa**	**4.37**	**263**	Pg	**Pb**	**09 01 39.5**	**+1.3**
UMAU				Sn	**Sn**	**09 02 19.8**	**+0.1**
HEF	**Hetta**	**4.60**	**327**	SG	**Sb**	**09 02 43.0**	**+4.8**
ARA0	**ARCESS Array S**	**5.21**	**340**	Pn	**Pn**	**09 01 39.9**	**+0.1**
	baz=153,slow=14						
ARA0				Sn	**Sn**	**09 02 38.1**	**-2.4**
	baz=156,slow=28						
ARA0				Lg	Lg	09 03 00.1	
	baz=159,slow=28						
ARA0	**ARCESS Array S**	**5.21**	**340**	Pn	**Pn**	**09 01 39.9**	**+0.1**
	baz=153,slow=14						
ARA0				Sn	**Sn**	**09 02 38.1**	**-2.4**
	baz=156,slow=28						
ARA0				Lg	Lg	09 03 00.1	
	baz=159,slow=28						
ARCES	**ARCESS Array B**	**5.21**	**340**	Pn	**Pn**	**09 01 39.9**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=152,slow=13,SNR=50						
ARCES				Sn	**Sn**	**09 02 38.4**	**-2.1**
	comp=Z,0.5nm,0.3s,baz=155,slow=24,SNR=5.7						
ARCES				Lg	Lg	09 02 58.8	
	comp=Z,1.7nm,0.3s,baz=151,slow=30,SNR=12						
KIF	**Kilpisjarvi**	**5.75**	**323**	Sn	**Sn**	**09 02 53.2**	**-0.6**
KIF				Lg	Lg	09 03 20.7	
KIF	**Kilpisjarvi**	**5.75**	**323**	Sn	**Sn**	**09 02 53.2**	**-0.6**
KIF				Lg	Lg	09 03 20.7	
HFS	**Hagfors**	**9.05**	**247**	Pn	**Pn**	**09 02 31.8**	**-0.5**
	baz=70,slow=12						
HFS	**Hagfors**	**9.05**	**247**	Pn	**Pn**	**09 02 31.7**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=59,slow=12,SNR=9.8						
HFS				Sn	**Sn**	**09 04 08.6**	**-6.2**
	comp=Z,0.2nm,0.3s,baz=57,slow=28,SNR=3.6						
HFS				Lg	Lg	09 04 60.0	
	comp=Z,0.3nm,0.3s,baz=66,slow=26,SNR=4.8						
HFS	**Hagfors**	**9.05**	**247**	Pn	**Pn**	**09 02 31.8**	**-0.5**
	baz=70,slow=12						
NB2	**NORSAR Subarra**	**9.54**	**256**	Pn	**Pn**	**09 02 39.9**	**+0.7**
	baz=58,slow=16						
NB2	**NORSAR Subarra**	**9.54**	**256**	Pn	**Pn**	**09 02 39.9**	**+0.7**
	baz=58,slow=16						
NOA	**NORSAR Array B**	**9.54**	**256**	Pn	**Pn**	**09 02 38.4**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=66,slow=14,SNR=4.5						
NOA				Lg	Lg	09 05 12.7	
	comp=Z,0.3nm,0.3s,baz=48,slow=25,SNR=6.0						
NRA0	**NORESS Array S**	**9.57**	**254**	Pn	**Pn**	**09 02 39.0**	**-0.5**
	baz=70,slow=14						
NRA0	**NORESS Array S**	**9.57**	**254**	Pn	**Pn**	**09 02 39.0**	**-0.5**
	baz=70,slow=14						

MEX 06 09:02:18.2±0.3, 17°.25N×101°.33W, h11km±18km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.38**	**340**	*i* P	Pg	09 02 25.3	-0.5
ZIIG				*e*S	Sg	09 02 31.0	+0.2
CAIG	**El Cayaco**	**1.03**	**101**	*e*P	Pg	09 02 34.8	-3.4
CAIG				*e*S	Sg	09 02 47.9	-3.8
ARIG	**Puente Sto Nin**	**1.39**	**42**	*e*P	Pn	09 02 41.2	-2.4
ARIG				*e*S	Sn	09 02 56.9	-5.2
ACX	**Acapulco**	**1.46**	**105**	*e*P	Pn	09 02 36.5	-8.0
ACX				*e*S	Sn	09 02 53.6	-10
MEIG	**Mezcala**	**1.77**	**67**	*e*P	Pn	09 02 46.8	-2.0
MEIG				*e*S	Sn	09 03 06.6	-4.8
TLIG	**Tlapa**	**2.66**	**83**	*e*P	Pn	09 02 58.3	-2.8
TLIG				*e*S	Sn	09 03 29.2	-4.2

*ISK **06** 09:05:55.7, 39°.59N×26°.23E, h21km, ML2.3/15*
*ISCJB **06** 09:05:57.1±0.3, 39°.61N±0°.02×26°.13E±0°.04, h29km±3km, Error ellipse: s-maj=5.4km s-min=3.8km az=178.8*
*CSEM **06** 09:05:57.1±0.2, 39°.63N×26°.15E, h20km, ML2.9, Error ellipse: s-maj=5.6km s-min=4.3km az=101.0*
*ATH **06** 09:05:57.2, 39°.59N×26°.02E, h30km±1km, ML1.8/6, Error ellipse: s-maj=2.9km s-min=0.9km az=239.0*
*DDA **06** 09:05:58.0, 39°.62N×26°.11E, h5km, Ml2.9*

ISC 06 09:05:56.9±1.0, 39°.60N±0°.02×26°.12E±0°.02, h18km±4km, n56, σ1§10/79, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOZC	**Bozcaada**	**0.25**	**348**	*i* P	**Pb**	**09 06 02.6**	**-0.3**
BOZC				*i* S	**Sb**	**09 06 06.3**	**-0.6**
BAYC	**CANAKKALE_Bayr**	**0.36**	**66**	*i* P	**Pn**	**09 06 06.1**	**-1.2**
BAYC				*i* S	**Sb**	**09 06 11.8**	**+1.6**
BAYC	**CANAKKALE_Bayr**	**0.36**	**66**	P	**Pn**	**09 06 06.1**	**-1.2**
BAYC				S	**Sb**	**09 06 11.8**	**+1.6**
PRK	**Paraskevi**	**0.37**	**162**	P	**Pn**	**09 06 06.5**	**-0.9**
PRK				S	**Sb**	**09 06 12.0**	**+1.6**
PRK				AML	AML	09 06 12.6	
	comp=N,842μm,0.4s						
PRK				AML	AML	09 06 12.9	
	comp=E,692μm,0.2s						
PRK	**Paraskevi**	**0.37**	**162**	P	**Pn**	**09 06 06.4**	**-0.9**
PRK				S	**Sn**	**09 06 12.4**	**-1.7**
SIGR	**SIGRI**	**0.44**	**208**	PG	**Pg**	**09 06 05.9**	**0.0**
SIGR				SG	**Sb**	**09 06 13.3**	**+0.9**
SIGR	**SIGRI**	**0.44**	**208**	P	**Pg**	**09 06 06.3**	**+0.5**
SIGR				S	**Sg**	**09 06 12.3**	**+0.4**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR				AML	AML	09 06 13.7	
	comp=E,300μm,0.2s						
SIGR				AML	AML	09 06 14.2	
	comp=N,238μm,0.3s						
SIGR	**SIGRI**	**0.44**	**208**	*e*Pg	**Pg**	**09 06 05.9**	**0.0**
SIGR	**SIGRI**	**0.44**	**208**	P	**Pg**	**09 06 06.3**	**+0.5**
SIGR				S	**Sb**	**09 06 12.6**	**+0.2**
SIGR				*e*Sg	**Sb**	**09 06 13.3**	**+0.9**
AYVA	**Ayvalik**	**0.53**	**123**	*i* P	**Pn**	**09 06 09.3**	**-0.2**
AYVA				*i* S	**Sn**	**09 06 21.1**	**+3.1**
AYVA	**Ayvalik**	**0.53**	**123**	P	**Pn**	**09 06 09.4**	**-0.2**
GADA	**Gvkgeada**	**0.62**	**344**	PG	**Pb**	**09 06 08.9**	**-0.3**
GADA	**Gvkgeada**	**0.62**	**344**	*e*Pg	**Pb**	**09 06 08.9**	**-0.3**
LIA	**Limnos Island**	**0.79**	**293**	P	**Pb**	**09 06 11.9**	**-0.2**
LIA				S	**Sb**	**09 06 21.8**	**-0.6**
LIA				AML	AML	09 06 24.6	
	comp=E,143μm,0.3s						
LIA				AML	AML	09 06 24.7	
	comp=N,132μm,0.4s						
LIA	**Limnos Island**	**0.79**	**293**	P	**Pb**	**09 06 11.7**	**-0.4**
LIA				S	**Sb**	**09 06 21.9**	**-0.5**
DKL	**Dikili**	**0.80**	**131**	PG	**Pb**	**09 06 10.7**	**-1.6**
GELI	**Tayfur-Gelibol**	**0.84**	**18**	PG	**Pb**	**09 06 12.4**	**-0.7**
GELI				SG	**Sg**	**09 06 24.5**	**-0.1**
GELI	**Tayfur-Gelibol**	**0.84**	**18**	*e*Pg	**Pb**	**09 06 12.4**	**-0.7**
GELI				*e*Sg	**Sg**	**09 06 24.5**	**-0.1**
LPK	**Lapseki**	**0.92**	**32**	PG	**Pb**	**09 06 13.2**	**-1.1**
LPK				SG	**Sb**	**09 06 26.1**	**-0.1**
LPK	**Lapseki**	**0.92**	**32**	*e*Pg	**Pb**	**09 06 13.2**	**-1.1**
LPK				*e*Sg	**Sb**	**09 06 26.1**	**-0.1**
SMTH	**Samothraki Isl**	**0.98**	**333**	P	**Pb**	**09 06 15.8**	**+0.3**
SMTH				S	**Sg**	**09 06 29.2**	**+0.1**
SMTH				AML	AML	09 06 31.8	
	comp=N,93μm,0.1s						
SMTH				AML	AML	09 06 32.1	
	comp=E,53μm,0.1s						
SMTH	**Samothraki Isl**	**0.98**	**333**	P	**Pb**	**09 06 15.8**	**+0.3**
SMTH				S	**Sg**	**09 06 29.2**	**+0.1**
FOCM	**Fo^§a**	**1.00**	**152**	PG	**Pb**	**09 06 14.5**	**-1.2**
ERIK	**Erikli-Kesan**	**1.11**	**15**	PN	**Pn**	**09 06 16.5**	**-1.1**
ERIK	**Erikli-Kesan**	**1.11**	**15**	*e*Pn	**Pn**	**09 06 16.5**	**-1.1**
ENEZ	**Enez**	**1.14**	**1**	PN	**Pn**	**09 06 17.1**	**-0.9**
ENEZ	**Enez**	**1.14**	**1**	*e*Pn	**Pn**	**09 06 17.1**	**-0.9**
BALY	**Balya**	**1.16**	**82**	*i* P	**Pg**	**09 06 19.9**	**+0.5**
BALY				*i* S	**Sg**	**09 06 37.2**	**+2.5**
KRBG	**Karabiga-Canak**	**1.20**	**48**	PN	**Pn**	**09 06 17.1**	**-1.8**
KRBG	**Karabiga-Canak**	**1.20**	**48**	*e*Pn	**Pn**	**09 06 17.1**	**-1.8**
CHOS	**Chios island**	**1.21**	**183**	PN	**Pn**	**09 06 18.1**	**-0.9**
CHOS	**Chios island**	**1.21**	**183**	P	**Pg**	**09 06 20.6**	**+0.3**
CHOS				S	**Sn**	**09 06 35.7**	**+0.7**
CHOS				AML	AML	09 06 41.1	
	comp=E,148μm,0.4s						
CHOS				AML	AML	09 06 43.4	
	comp=N,73μm,0.3s						
GONE	**Gonen-Balikesi**	**1.28**	**69**	PN	**Pn**	**09 06 17.7**	**-2.3**
GONE	**Gonen-Balikesi**	**1.28**	**69**	*e*Pn	**Pn**	**09 06 17.7**	**-2.3**
URLA	**Izmir**	**1.29**	**163**	PN	**Pn**	**09 06 18.8**	**-1.3**
KESN	**Edirne-Kesan**	**1.30**	**19**	*i* P	**Pg**	**09 06 22.3**	**+0.2**
KESN				*i* S	**Sg**	**09 06 40.7**	**+1.5**
ALN	**Alexandroupoli**	**1.30**	**357**	PN	**Pn**	**09 06 19.5**	**-0.7**
ALN	**Alexandroupoli**	**1.30**	**357**	P	**Pb**	**09 06 21.6**	**+0.7**
ALN				S	**Sb**	**09 06 38.2**	**+1.0**
ALN				AML	AML	09 06 39.5	
	comp=E,27μm,0.5s						
ALN				AML	AML	09 06 40.4	
	comp=N,22μm,0.6s						
ALN	**Alexandroupoli**	**1.30**	**357**	*e*Pn	**Pn**	**09 06 19.5**	**-0.7**
ALN	**Alexandroupoli**	**1.30**	**357**	P	**Pb**	**09 06 21.5**	**+0.7**
ALN				S	**Sg**	**09 06 38.6**	**-0.5**
RKY	**Sarkoy-Tekirda**	**1.36**	**36**	PN	**Pn**	**09 06 19.5**	**-1.6**
RKY	**Sarkoy-Tekirda**	**1.36**	**36**	*e*Pn	**Pn**	**09 06 19.5**	**-1.6**
RDO	**Rodhopi**	**1.61**	**344**	PN	**Pn**	**09 06 24.1**	**-0.4**
RDO	**Rodhopi**	**1.61**	**344**	P	**Pn**	**09 06 23.8**	**-0.7**
RDO	**Rodhopi**	**1.61**	**344**	*e*Pn	**Pn**	**09 06 24.1**	**-0.4**
RDO	**Rodhopi**	**1.61**	**344**	P	**Pn**	**09 06 24.6**	**+0.1**
SBT3	**Marmara-Eregli**	**1.91**	**47**	PN	**Pn**	**09 06 27.3**	**-1.2**
SBT3	**Marmara-Eregli**	**1.91**	**47**	*e*Pn	**Pn**	**09 06 27.3**	**-1.2**
EDRB	**Edirne**	**2.30**	**12

*ISCJB **06** 09:33:15.4±0.6, 22°.33N±0°.02×121°.59E±0°.02, h9km±3km, mb3.3/4, MS3.2/1, Error ellipse: s-maj=3.7km s-min=2.8km az=155.1*
*TAP **06** 09:33:16.9, 22°.37N×121°.40E, h5km±1km, ML3.6, C*
*JMA **06** 09:33:17.4±0.1, 22°.53N×121°.59E, h2km±2km, M3.6*
ISC 06 09:33:15.7±1.2, 22°.41N±0°.02×121°.55E±0°.03, h3km±9km, n62, σ0s88/90, mb3.4/4, Taiwan region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
TWH	**Lutao** baz=14	**0.31**	**347**	*i* P	**Pb**	**09 33 24.2**	**+0.3**
TWH	baz=14			S	**Sb**	**09 33 29.0**	**-0.4**
LAY	**Lan-yu** baz=156	**0.37**	**180**	P	**Pb**	**09 33 25.7**	**+0.8**
LAY	baz=156			S	**Sb**	**09 33 31.2**	**+0.1**
TTN	**Taitung** baz=328	**0.51**	**312**	P	**Pb**	**09 33 27.6**	**+0.3**
TTN	baz=328			S	**Sb**	**09 33 34.2**	**-0.9**
ECL	**Taimali** baz=298	**0.58**	**289**	P	**Pg**	**09 33 27.5**	**+0.5**
ECL	baz=298			*e*S	**Sg**	**09 33 34.9**	**+0.3**
TWGBT	**Beinan** baz=326	**0.60**	**313**	P	**Pb**	**09 33 28.6**	**-0.2**
TWGBT	baz=326			*e*S	**Sb**	**09 33 37.2**	**-0.4**
TWG	**Pinlang** baz=326	**0.60**	**313**	P	**Pb**	**09 33 28.6**	**-0.3**
TWG	baz=326			*e*S	**Sb**	**09 33 37.2**	**-0.7**
TAW	**Tawu** baz=267	**0.61**	**265**	P	**Pg**	**09 33 27.7**	**+0.2**
TAW	baz=267			S	**Sg**	**09 33 34.4**	**-1.0**
EAST	**Anshuo** baz=271	**0.65**	**268**	P	**Pg**	**09 33 28.4**	**+0.1**
EAST	baz=271			S	**Sg**	**09 33 35.7**	**-1.1**
TSEB	**Hengchuen, Pin** baz=227	**0.79**	**230**	P	**Pb**	**09 33 31.6**	**-0.5**
TSEB	baz=227			S	**Sg**	**09 33 41.8**	**+0.7**
FULB	**Fuli** baz=353	**0.82**	**343**	*e*P	**Pb**	**09 33 32.7**	**0.0**
FULB	baz=353			*e*S	**Sb**	**09 33 43.9**	**-0.3**
TWKBT	**Hengchun** baz=231	**0.83**	**236**	P	**Pg**	**09 33 31.7**	**0.0**
TWKBT	baz=231			*e*S	**Sg**	**09 33 42.3**	**-0.1**
TWK1	**Hengchun** baz=231	**0.83**	**236**	P	**Pg**	**09 33 31.7**	**-0.1**
TWK1	baz=231			*e*S	**Sg**	**09 33 41.5**	**-1.1**
HEN	**Hengchun** baz=238	**0.86**	**242**	P	**Pg**	**09 33 32.2**	**0.0**
HEN	baz=238			*e*S	**Sg**	**09 33 42.8**	**-0.5**
SCZT	**Fangliau** baz=269	**0.86**	**268**	P	**Pg**	**09 33 31.9**	**-0.4**
MASBT	**Mashibuluo** baz=288	**0.88**	**284**	P	**Pg**	**09 33 32.4**	**-0.1**
SSD	**Sandimen** baz=297	**0.92**	**292**	*e*P	**Pg**	**09 33 32.9**	**-0.4**
ELDTW	**Lidau** baz=336	**0.92**	**328**	*e*P	**Pb**	**09 33 34.5**	**+0.1**
TWF1	**Yuli** baz=354	**0.97**	**346**	*e*P	**Pn**	**09 33 36.5**	**+0.2**
TWF1	baz=354			*e*S	**Sb**	**09 33 48.6**	**+0.2**
YULB	**Yu-li** baz=354	**1.01**	**346**	P	**Pn**	**09 33 37.2**	**+0.4**
SLGT	**Liugui** baz=311	**1.02**	**305**	*e*P	**Pb**	**09 33 35.6**	**-0.4**
SLGT	baz=311			*e*S	**Sn**	**09 33 52.1**	**+0.3**
STYT	**Tauyuan** baz=323	**1.05**	**316**	*e*P	**Pg**	**09 33 36.0**	**+0.1**
SGST	**Jiashian** baz=313	**1.12**	**307**	P	**Pn**	**09 33 37.8**	**-0.5**
SGST	baz=313			*e*S	**Sb**	**09 33 53.2**	**+0.5**
WTP	**Ta-pu** baz=320	**1.20**	**314**	P	**Pn**	**09 33 39.2**	**-0.3**
WTP	baz=320			*e*S	**Sn**	**09 33 55.5**	**-0.8**
CHN1	**Nanshi** baz=315	**1.22**	**309**	*e*P	**Pn**	**09 33 39.7**	**0.0**
CHN1	baz=315			*e*S	**Sn**	**09 33 56.6**	**-0.2**
TPUB	**Ta-pu** baz=322	**1.23**	**316**	P	**Pn**	**09 33 40.1**	**+0.3**
TPUB	baz=322			*e*S	**Sn**	**09 33 58.2**	**+1.2**
CHN4	**Tsaushan** baz=322	**1.29**	**317**	*e*P	**Pb**	**09 33 41.0**	**+0.3**
CHN4	baz=322			*e*S	**Sn**	**09 33 59.4**	**+0.9**
ALS	**Alishan** baz=334	**1.29**	**328**	*e*P	**Pn**	**09 33 41.9**	**+0.9**
TWK	**Hsinying** baz=316	**1.30**	**311**	P	**Pb**	**09 33 41.0**	**+0.1**
TWK	baz=316			*e*S	**Sn**	**09 33 58.8**	**0.0**
VWDT	**VWDT** baz=350	**1.39**	**344**	*e*P	**Pg**	**09 33 42.4**	**0.0**
CHN5	**Tsauling** baz=331	**1.43**	**326**	P	**Pg**	**09 33 43.2**	**0.0**
SSLB	**Suanglung** baz=343	**1.48**	**338**	P	**Pg**	**09 33 44.7**	**+0.6**
SSLB	baz=343			*e*S	**Sn**	**09 34 02.6**	**-0.6**
CHN2	**Minshiung** baz=323	**1.50**	**319**	*e*S	**Sg**	**09 34 05.5**	**+1.7**
CHY	**Chiayi** baz=321	**1.50**	**316**	*e*S	**Sg**	**09 34 03.9**	**-0.2**
WDLH	**Douliu** baz=328	**1.58**	**324**	*e*P	**Pg**	**09 33 45.8**	**-0.2**
WDLH	baz=328			*e*S	**Sb**	**09 34 05.8**	**-0.2**
SMLT	**Sun Moon Lake** baz=343	**1.59**	**338**	*e*P	**Pg**	**09 33 46.1**	**-0.1**
TYC	**Yuchr** baz=342	**1.62**	**337**	*e*P	**Pg**	**09 33 46.9**	**+0.1**
TYC	baz=342			*e*S	**Sg**	**09 34 07.9**	**0.0**
TWD	**Chiawan** baz=6.0	**1.66**	**1**	*e*P	**Pb**	**09 33 46.9**	**-0.2**
NNSB	**Datong** baz=359	**2.02**	**356**	*e*P	**Pb**	**09 33 53.0**	**-0.2**
NNS	**Nan Shan** baz=359	**2.03**	**355**	*e*P	**Pb**	**09 33 53.2**	**-0.1**
YHNB	**Yeheng** baz=359	**2.26**	**356**	*e*P	**Pb**	**09 33 55.6**	**-1.6**
YHNB	baz=359			*e*S	**Sb**	**09 34 24.8**	**-0.8**
JYNG	**Yonagunijimaku**	**2.40**	**32**	P	**Pb**	**09 33 58.0**	**-1.6**
JYNG				S	**Sn**	**09 34 24.4**	**-1.5**
YOJ	**Yonaguni jima**	**2.44**	**33**	P	**Pb**	**09 33 58.9**	**-1.4**
YOJ				S	**Sn**	**09 34 27.2**	**+0.3**
HATJ	**Hateruma jima**	**2.64**	**51**	P	**Pn**	**09 34 00.8**	**+1.6**
HATJ				*e*S	**Sn**	**09 34 30.0**	**-1.8**
IRIF	**Iriomote-Funau**	**2.77**	**46**	P	**Pn**	**09 34 02.7**	**+1.7**
IRIF				S	**Sn**	**09 34 34.6**	**-0.4**
JKRS	**Kuro-shima**	**2.90**	**51**	P	**Pn**	**09 34 04.2**	**+1.4**
JKRS				*e*S	**Sn**	**09 34 37.5**	**-0.7**
JIJ	**Ishigaki jima**	**3.07**	**50**	P	**Pn**	**09 34 06.5**	**+1.3**
JIJ				S	**Sn**	**09 34 40.9**	**-1.6**
JISG	**Ishigakijimahi**	**3.33**	**49**	P	**Pn**	**09 34 09.6**	**+0.9**
JISG				S	**Sn**	**09 34 48.3**	**-0.5**
JTJ	**Tarama**	**3.65**	**52**	P	**Pn**	**09 34 14.6**	**+1.6**
JTJ				S	**Sn**	**09 34 55.9**	**-0.7**
JIRB	**Irabujima**	**4.10**	**53**	P	**Pn**	**09 34 20.8**	**+1.5**
JIRB				*e*S	**Sn**	**09 35 06.5**	**-1.3**
JIKM	**Ikemajima**	**4.21**	**53**	S	**Sn**	**09 35 10.4**	**-0.1**
JOGS	**Gusukube**	**4.24**	**56**	P	**Pn**	**09 34 23.1**	**+1.9**
JOGS				*e*S	**Sn**	**09 35 11.8**	**+0.6**
MKAR	**Makanchi Array** baz=108,slow=9.3,SNR=2.9	**39.85**	**317**	P	**P**	**09 40 53.3**	**+2.7**
H11N1	**WAKE ISLAND Hy** baz=284	**42.28**	**85**	T	T	10 26 27.6	
H11N2	**WAKE ISLAND Hy** baz=284	**42.28**	**85**	T	T	10 26 28.8	
H11N3	**WAKE ISLAND Hy** baz=284	**42.29**	**85**	T	T	10 26 27.9	
H11S3	**WAKE ISLAND Hy** baz=279	**42.35**	**87**	T	T	10 26 30.6	
H11S1	**WAKE ISLAND Hy** baz=279	**42.36**	**87**	T	T	10 26 32.9	
H11S2	**WAKE ISLAND Hy** baz=279	**42.37**	**87**	T	T	10 26 31.2	
KURBB	**Kurchatov Arra** 0.2nm,0.4s,baz=115,slow=8.0,SNR=3.0	**43.69**	**321**	P	**P**	**09 41 22.5**	**+0.7**
WRA	**Warramunga Arr** 0.5nm,0.7s,baz=344,slow=9.0,SNR=4.3	**43.91**	**163**	P	**P**	**09 41 21.8**	**-2.1**
ASAR	**Alice Springs** 0.2nm,0.3s,baz=345,slow=7.3,SNR=10	**47.35**	**165**	P	**P**	**09 41 50.0**	**-1.2**
AKTO	**Aktyubinsk** comp=Z,22nm,21.5s,baz=194,slow=38	**56.28**	**317**	LR	LR	10 08 55.4	

*SJA **06** 09:35:27.1±0.6, 27°.59S×63°.08W, h608km±5km, MW4.4*
*ISCJB **06** 09:35:33.6±0.2, 27°.32S±0°.03×63°.27W±0°.04, h578km±2km, mb4.4/172, Error ellipse: s-maj=5.4km s-min=4.5km az=153.4*
*NEIC **06** 09:35:34.5±0.1, 27°.43S×63°.26W, mb4.4/138, MD4.4(SJA), Error ellipse: s-maj=5.1km s-min=3.8km az=55.0*
*IDC **06** 09:35:34.8±0.4, 27°.32S×63°.22W, h577km±4km, mb3.9/28, mb1 4.0/32, mb1mx4.0/46, mbtmp4.8/32, Error ellipse: s-maj=11.4km s-min=6.8km az=65.0*
ISC 06 09:35:34.5±0.3, 27°.39S±0°.04×63°.32W±0°.05, h578km±3km, h579km; pP-P, n674, σ0s97/720, mb4.4/170, 3C-2D, Santiago del Estero Province

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
AHML	**Horco Molle**	**1.89**	**288**	*e*P	**P**	**09 36 45.5**	**-1.0**
AHML				*e*S	**S**	**09 37 43.2**	**-1.8**
CYA	**Choya**	**2.43**	**244**	*e*P	**P**	**09 36 47.5**	**-1.3**
CYA				*e*S	**S**	**09 37 46.4**	**-3.0**
SLA	**San Lorenzo**	**3.30**	**323**	*e*P	**P**	**09 36 53.8**	**-0.3**
APLL	**PUNTA DE LOS L**	**4.11**	**222**	*e*P	**P**	**09 36 57.5**	**-1.7**
APLL				⇓*e*S	**S**	**09 38 04.7**	**-3.7**
VCA	**Vinchina**	**4.52**	**252**	*e*P	**P**	**09 37 02.6**	**+0.1**
VCA				*e*S	**S**	**09 38 12.8**	**-1.4**
AGUA	**GUANDACOL**	**5.01**	**244**	*e*P	**P**	**09 37 06.3**	**+0.1**
AGUA				*e*S	**S**	**09 38 20.0**	**-1.1**
MRA	**San Martin**	**5.43**	**202**	*e*P	**P**	**09 37 08.0**	**-1.7**
CPUP	**Villa Florida** 31nm,0.3s,baz=249,slow=8.6,SNR=743	**5.46**	**80**	P	**P**	**09 37 09.5**	**-0.4**
CPUP	baz=140,slow=18,SNR=2.3			S	**S**	**09 38 27.3**	**-0.4**
CPUP	**Villa Florida**	**5.46**	**80**	*e*P	**P**	**09 37 09.9**	**+0.1**
CPUP				*e*S	**S**	**09 38 28.1**	**+0.4**
AMOG	**MOGNA**	**5.74**	**231**	*e*P	**P**	**09 37 12.6**	**+0.3**
ACDV	**Cuesta del Vie**	**5.79**	**240**	*e*P	**P**	**09 37 13.7**	**+0.8**
ACDV				*e*S	**S**	**09 38 32.6**	**-0.8**
ACAN	**Cantantal**	**5.92**	**214**	*e*P	**P**	**09 37 13.3**	**-0.5**
ACAN				*e*S	**S**	**09 38 31.8**	**-3.2**
GO02	**Mina Guanaco**	**6.05**	**290**	*e*P	**P**	**09 37 15.8**	**+0.4**
GO02				*e*S	**S**	**09 38 37.8**	**+0.1**
GO03	**Copiap**	**6.14**	**266**	*e*P	**P**	**09 37 15.5**	**-0.4**
GO03				*e*S	**S**	**09 38 38.4**	**-0.3**
LCO	**Las Campanas**	**6.71**	**254**	*e*P	**P**	**09 37 21.1**	**-0.1**
LCO				*e*S	**S**	**09 38 48.8**	**+0.3**
PB10	**IPOC Station P**	**7.59**	**299**	*e*P	**P**	**09 37 29.3**	**+0.1**
PB10				*e*S	**S**	**09 39 03.6**	**+0.4**
PB04	**IPOC Station P**	**7.98**	**308**	*e*P	**P**	**09 37 33.0**	**-0.2**
PB04				*e*S	**S**	**09 39 09.5**	**-1.0**
PB01	**IPOC Station P**	**8.46**	**317**	*e*P	**P**	**09 37 37.3**	**-0.5**
PB01				*e*S	**S**	**09 39 16.9**	**-1.9**
ROC1	**El Roble**	**8.68**	**228**	*e*P	**P**	**09 37 38.9**	**-1.0**
ROC1				*e*S	**S**	**09 39 22.1**	**-0.7**
CPSB	**Cacapava Do Su**	**9.17**	**111**	⇑*i*P	**P**	**09 37 43.7**	**-0.9**
CPSB				*i*		09 37 44.1	
CPSB				*i*		09 37 45.2	
MNMC	**Minye Minye**	**10.04**	**324**	*e*P	**P**	**09 37 54.2**	**+0.5**
MNMC				*e*S	**S**	**09 39 47.1**	**-0.7**
GO05	**HualaæØ**	**10.58**	**222**	*e*P	**P**	**09 37 57.2**	**-1.4**
GO05				*e*S	**S**	**09 39 55.3**	**-1.8**
TRQA	**Tornquist**	**10.70**	**174**	*e*P	**P**	**09 37 58.4**	**-1.3**
SIV	**San Ignacio** 1.8nm,0.3s,baz=210,slow=9.5,SNR=106	**11.53**	**11**	P	**P**	**09 38 08.3**	**-0.3**
SIV	0.2nm,0.3s,baz=274,slow=16,SNR=5.6			S	**S**	**09 40 14.0**	**-1.2**
LPAZ	**La Paz** 2.5nm,0.3s,baz=122,slow=5.7,SNR=86	**11.91**	**337**	P	**P**	**09 38 12.4**	**-0.7**
LPAZ	0.6nm,0.3s,baz=266,slow=14,SNR=4.5			S	**S**	**09 40 19.3**	**-4.0**
PLCA	**Paso Flores** 2.2nm,0.3s,baz=44,slow=11,SNR=45	**14.59**	**202**	P	**P**	**09 38 37.5**	**-1.8**
PLCA	0.0nm,0.3s,baz=348,slow=19,SNR=1.7			S	**S**	**09 41 10.8**	**+0.1**
PLCA	0.3nm,0.3s,baz=348,slow=2.5,SNR=6.6			PcP	**PcP**	**09 43 09.3**	**+0.3**
SPB	**Sao Paulo**	**14.84**	**79**	*e*P	**P**	**09 38 42.3**	**+0.4**
SAML	**Samuel** 23nm,0.9s	**18.34**	**0**	*e*P	**P**	**09 39 14.4**	**+0.1**
NNA	**Nana** 1.0nm,0.3s,baz=152,slow=5.2,SNR=6.3	**19.89**	**318**	P	**P**	**09 39 28.3**	**-0.2**
NNA	**Nana** 40nm,1.0s	**19.89**	**318**	*e*P	**P**	**09 39 28.9**	**+0.5**
ATAH	**Atahualpa** 9.7nm,0.9s,baz=156,slow=7.1,SNR=5.5	**24.70**	**322**	P	**P**	**09 40 12.7**	**+0.8**
PTGA	**Pitinga** 31nm,0.6s,baz=194,slow=13,SNR=77	**26.70**	**7**	P	**P**	**09 40 28.4**	**-0.5**
PTGA	**Pitinga** 25nm,0.6s	**26.70**	**7**	*e*P	**P**	**09 40 28.6**	**-0.3**
OTAV	**Otavalo** 7.8nm,0.9s	**31.08**	**330**	*e*P	**P**	**09 41 06.8**	**-0.6**
OTAV				*e*PcP	**sP**	**09 43 46.5**	**-1.8**
POPC	**Popayan, Colom**	**32.42**	**335**	*e*P	**P**	**09 41 19.8**	**+1.3**
VILC	**Villavicencio,**	**32.88**	**341**	*e*P	**P**	**09 41 22.4**	**+0.2**
HORQ	**Saladito**	**33.27**	**335**	*e*P	**P**	**09 41 24.5**	**-1.2**
CHIC	**Chingaza**	**33.38**	**341**	*e*P	**P**	**09 41 26.4**	**-0.4**
YOTC	**Yotoco, Valle**	**33.62**	**336**	*e*P	**P**	**09 41 27.8**	**-0.7**
ROSC	**El Rosal** 5.2nm,0.4s,baz=156,slow=12,SNR=2.8	**33.75**	**340**	P	**P**	**09 41 30.5**	**+0.6**
ROSC	**El Rosal** 3.8nm,0.6s	**33.75**	**340**	*e*P	**P**	**09 41 30.2**	**+0.4**
RCBR	**Riachuelo** 14nm,0.8s	**33.76**	**56**	*e*P	**P**	**09 41 30.3**	**+0.8**
RUSC	**La Rusia** 8.7nm,0.4s	**34.40**	**343**	*e*P	**P**	**09 41 34.9**	**-0.5**
RUSC				*e*PcP	**PcP**	**09 43 53.5**	**-0.7**
RUSC				*e*S	**S**	**09 46 20.9**	**-2.9**
RUSC	**La Rusia**	**34.40**	**343**	*e*P	**P**	**09 41 34.8**	**-0.5**
PLMC	**San Jos¨ del**	**34.46**	**337**	*e*P	**P**	**09 41 34.5**	**-0.9**
ZARC	**Zaragoza, Cauc**	**36.43**	**340**	*e*P	**P**	**09 41 49.5**	**-2.0**
SDV	**Santo Domingo** 10nm,0.3s,baz=116,slow=2.0,SNR=28	**36.75**	**348**	P	**P**	**09 41 52.9**	**-1.4**
SDV	**Santo Domingo** 12nm,0.4s	**36.75**	**348**	*e*P	**P**	**09 41 52.5**	**-1.9**
SDV	**Santo Domingo**	**36.75**	**348**	*e*P	**P**	**09 41 53.0**	**-1.4**
PCRV	**Puerto La Cruz** 12nm,0.4s,baz=79,slow=1.5,SNR=9.2	**37.36**	**358**	P	**P**	**09 41 59.1**	**-0.1**
MOTC	**Monteria, Cord**	**37.89**	**340**	*e*P	**P**	**09 42 02.0**	**-1.5**
GRGR	**Grenville**	**39.32**	**3**	*e*P	**P**	**09 42 15.1**	**+0.1**
JTS	**JuntasAbangare** 2.1nm,0.4s,baz=180,slow=20,SNR=5.3	**42.93**	**328**	P	**P**	**09 42 45.3**	**+1.8**
SJG	**San Juan** 5.5nm,0.3s,baz=204,slow=20,SNR=2.6	**45.31**	**356**	P	**P**	**09 43 00.4**	**-1.4**
APG	**El Apazote** 2.6nm,0.3s,baz=124,slow=7.3,SNR=9.1	**49.69**	**325**	P	**P**	**09 43 34.9**	**0.0**
062Z	**Marathon** baz=161	**54.56**	**340**	P	**P**	**09 44 08.8**	**-0.4**
SNAA	**Sanae** 5.9nm,0.6s,baz=296,slow=6.4,SNR=32	**55.06**	**160**	P	**P**	**09 44 12.7**	**+0.4**
SNAA				PcP	**PcP**	**09 45 05.1**	**+0.3**
SNAA	3.8nm,0.7s,baz=325,slow=10,SNR=5.8			pP	**pP**	**09 46 02.3**	**+0.3**
SNAA	**Sanae** 18nm,1.2s	**55.06**	**160**	*e*P	**P**	**09 44 12.6**	**+0.3**
SNAA	7.4nm,1.0s,baz=297,slow=6.6,SNR=10			PcP	**PcP**	**09 45 05.1**	**+0.3**
SNAA				*e*pP	**pP**	**09 46 02.2**	**+0.3**
061Z	**Ochoppi** baz=161	**55.59**	**341**	P	**P**	**09 44 16.0**	**-0.4**
353A	**Camilla** baz=159	**61.71**	**340**	P	**P**	**09 44 57.1**	**-0.2**
254A	**Abbeville** baz=160	**61.99**	**341**	P	**P**	**09 44 59.1**	**0.0**
352A	**Blakely** baz=158	**62.06**	**339**	P	**P**	**09 44 59.3**	**-0.3**
351A	**Pinckard** baz=158	**62.09**	**338**	P	**P**	**09 44 59.6**	**-0.2**
155A	**Kite** baz=161	**62.39**	**342**	P	**P**	**09 45 01.8**	**0.0**
252A	**Lumpkin** baz=159	**62.48**	**340**	P	**P**	**09 45 01.5**	**-0.8**
154A	**Montrose** baz=160	**62.57**	**341**	P	**P**	**09 45 02.7**	**-0.2**
LNIG	**Linares** 6.3nm,0.8s	**62.58**	**323**	*e*P	**P**	**09 45 03.3**	**+0.2**
349A	**Repton** baz=156	**62.69**	**337**	P	**P**	**09 45 03.0**	**-0.7**
251A	**Midway** baz=158	**62.78**	**339**	P	**P**	**09 45 03.8**	**-0.4**
QSPA	**South Pole Qui** 9.9nm,0.4s,baz=165,slow=3.5,SNR=68	**62.83**	**180**	P	**P**	**09 45 05.0**	**+0.7**
QSPA	**South Pole Qui** 12nm,0.8s	**62.83**	**180**	*e*P	**P**	**09 45 05.1**	**+0.7**
QSPA				*e*pP	**pP**	**09 47 00.3**	**+1.9**
446A	**Poplarville** baz=154	**62.97**	**335**	P	**P**	**09 45 05.2**	**-0.2**
348A	**Jackson** baz=156	**63.00**	**336**	P	**P**	**09 45 05.4**	**-0.3**
Z54A	**Sparta** baz=161	**63.08**	**342**	P	**P**	**09 45 06.0**	**-0.1**
152A	**Waverly Hall** baz=159	**63.10**	**340**	P	**P**	**09 45 05.8**	**-0.5**
151A	**Opelika** baz=158	**63.15**	**339**	P	**P**	**09 45 06.0**	**-0.6**
347A	**Saraland** baz=155	**63.22**	**336**	P	**P**	**09 45 06.4**	**-0.6**
249A	**Camden** baz=156	**63.24**	**337**	P	**P**	**09 45 06.7**	**-0.4**
Z53A	**Monticello** baz=160	**63.33**	**341**	P	**P**	**09 45 07.1**	**-0.6**
GOGA	**Godfrey** baz=160	**63.42**	**341**	P	**P**	**09 45 07.8**	**-0.4**
150A	**Eclectic** baz=158	**63.45**	**339**	P	**P**	**09 45 08.4**	**-0.2**
Z52A	**Williamson** baz=159	**63.49**	**340**	P	**P**	**09 45 08.8**	**0.0**
346A	**Big Creek Wild** baz=154	**63.54**	**335**	P	**P**	**09 45 09.0**	**-0.2**
248A	**Dixon Mills** baz=156	**63.56**	**337**	P	**P**	**09 45 09.2**	**0.0**
Y54A	**Tignall** baz=161	**63.62**	**342**	P	**P**	**09 45 09.3**	**-0.3**
JSC	**Jenkinsville** 17nm,1.0s	**63.64**	**343**	*e*P	**P**	**09 45 10.5**	**+0.8**
149A	**Jones** baz=157	**63.70**	**338**	P	**P**	**09 45 09.5**	**-0.6**
247A	**Quitman** baz=155	**63.83**	**336**	P	**P**	**09 45 10.9**	**0.0**
Z51A	**Franklin** baz=158	**63.84**	**340**	P	**P**	**09 45 10.8**	**-0.2**
Y53A	**Monroe** baz=160	**63.87**	**341**	P	**P**	**09 45 11.2**	**0.0**
148A	**Greensboro** baz=156	**64.00**	**337**	P	**P**	**09 45 11.7**	**-0.3**
Y52A	**Lilburn** baz=160	**64.01**	**341**	P	**P**	**09 45 12.0**	**-0.1**
Z50A	**Ashland** baz=158,SNR=9.4	**64.02**	**339**	P	**P**	**09 45 11.9**	**-0.2**
Z49A	**Columbiana** baz=157	**64.16**	**338**	P	**P**	**09 45 12.8**	**-0.2**
LRAL	**Lakeview Retre** baz=157,SNR=7.4	**64.16**	**338**	P	**P**	**09 45 12.8**	**-0.3**
LRAL	**Lakeview Retre** 9.5nm,0.7s	**64.16**	**338**	*e*P	**P**	**09 45 13.2**	**+0.1**
147A	**Livingston** baz=156	**64.27**	**337**	P	**P**	**09 45 14.0**	**+0.3**
245A	**Little AP, Sta** baz=154	**64.28**	**335**	P	**P**	**09 45 13.5**	**-0.4**
Y51A	**Rockmart** baz=159	**64.34**	**340**	P	**P**	**09 45 14.1**	**-0.1**
X53A	**Estanollee** baz=160	**64.40**	**342**	P	**P**	**09 45 14.7**	**+0.2**
KMSC	**Kings Mountain** baz=162,SNR=6.1	**64.48**	**344**	P	**P**	**09 45 15.1**	**+0.1**
KMSC	**Kings Mountain** 15nm,0.8s	**64.48**	**344**	*e*P	**P**	**09 45 15.9**	**+0.9**
Y50A	**Piedmont** baz=158	**64.54**	**339**	P	**P**	**09 45 15.3**	**-0.2**
244A	**Avery, Jackson** baz=153	**64.59**	**334**	P	**P**	**09 45 16.0**	**+0.2**
342A	**Flagon Creek P** baz=152	**64.65**	**333**	P	**P**	**09 45 17.1**	**+1.0**
X52A	**Dahlonega** baz=160	**64.66**	**341**	P	**P**	**09 45 16.1**	**-0.1**
Z48A	**Northport** baz=156,SNR=5.5	**64.66**	**338**	P	**P**	**09 45 15.9**	**-0.2**
VBMS	**Vicksburg** baz=153	**64.68**	**335**	P	**P**	**09 45 16.5**	**+0.2**
Y49A	**Blount Mountai** baz=157,SNR=7.1	**64.73**	**339**	P	**P**	**09 45 16.5**	**-0.1**
145A	**Houston Renfro** baz=154	**64.81**	**335**	P	**P**	**09 45 17.2**	**+0.1**
X51A	**Calhoun** baz=159	**64.90**	**340**	P	**P**	**09 45 17.7**	**0.0**
341A	**Kurthwood** baz=151,SNR=5.2	**64.96**	**332**	P	**P**	**09 45 19.3**	**+1.2**
341A	**Kurthwood** 24nm,1.0s	**64.96**	**332**	*e*P	**P**	**09 45 19.3**	**+1.2**
Z46A	**Louisville** baz=155	**64.98**	**336**	P	**P**	**09 45 18.5**	**+0.3**
W53A	**Cullowhee** baz=161	**64.98**	**342**	P	**P**	**09 45 18.4**	**0.0**
Y48A	**Jasper** baz=157	**65.03**	**338**	P	**P**	**09 45 18.0**	**-0.5**
X50B	**Fort Payne** baz=158	**65.05**	**340**	P	**P**	**09 45 18.2**	**-0.4**
W52A	**Murphy** baz=160	**65.12**	**341**	P	**P**	**09 45 19.0**	**-0.1**
242A	**Grayson** baz=152	**65.19**	**333**	P	**P**	**09 45 20.3**	**+0.8**
Y47A	**UCPARC, Winfie** baz=156,SNR=8.5	**65.24**	**338**	P	**P**	**09 45 19.9**	**+0.1**
X49A	**Woodville** baz=158	**65.30**	**339**	P	**P**	**09 45 20.0**	**-0.2**
833A	**Chaparral WMA,** baz=145,SNR=5.2	**65.31**	**325**	P	**P**	**09 45 21.0**	**+0.6**
V53A	**Saluda** baz=161	**65.36**	**343**	P	**P**	**09 45 20.8**	**+0.2**
143A	**Socs Landing,** baz=153	**65.45**	**334**	P	**P**	**09 45 21.7**	**+0.5**
241A	**Mo Tay, Goldon** baz=151,SNR=5.7	**65.46**	**333**	P	**P**	**09 45 22.6**	**+1.4**
X48A	**Hartselle** baz=157,SNR=6.7	**65.48**	**339**	P	**P**	**09 45 21.2**	**-0.1**
Y46A	**Houston** baz=155	**65.57**	**337**	P	**P**	**09 45 21.4**	**-0.5**
Z44A	**Pea Ridge, Bel** baz=154	**65.60**	**335**	P	**P**	**09 45 22.3**	**+0.3**
CPCT	**Cooper Cave** 13nm,0.7s	**65.63**	**341**	*e*P	**P**	**09 45 22.2**	**0.0**
W50A	**Signal Mountai** baz=159	**65.63**	**340**	P	**P**	**09 45 22.1**	**-0.2**
V52A	**Sevierville** baz=160	**65.73**	**342**	P	**P**	**09 45 22.7**	**-0.2**
Y45A	**Yeager Farm, C** baz=155	**65.80**	**336**	P	**P**	**09 45 23.7**	**+0.4**
X47A	**Russelville** baz=156,SNR=5.9	**65.81**	**338**	P	**P**	**09 45 22.9**	**-0.5**
240A	**Hunter Patters** baz=150	**65.83**	**332**	P	**P**	**09 45 24.6**	**+1.1**
SWET	**Sewanee** 16nm,0.4s	**65.83**	**340**	*e*P	**P**	**09 45 23.3**	**-0.2**
W49A	**Belvidere** baz=158,SNR=7.7	**65.84**	**340**	P	**P**	**09 45 23.2**	**-0.3**
DBIC	**Dimbokro** 23nm,0.6s,baz=213,slow=3.6,SNR=37	**65.85**	**68**	P	**P**	**09 45 23.9**	**-0.1**
DBIC	**Dimbokro** 25nm,0.8s	**65.85**	**68**	*e*P	**P**	**09 45 24.0**	**-0.1**
V51A	**Loudon** baz=160	**65.91**	**341**	P	**P**	**09 45 23.5**	**-0.4**
141A	**Papa Simpson,** baz=151	**65.96**	**333**	P	**P**	**09 45 25.3**	**+1.0**
NATX	**Nacogdoches** baz=150	**65.97**	**331**	P	**P**	**09 45 25.5**	**+1.1**
V50A	**Pikevile** baz=159,SNR=9.9	**66.00**	**341**	P	**P**	**09 45 24.4**	**-0.2**
W48A	**Pulaski** baz=157,SNR=12	**66.07**	**339**	P	**P**	**09 45 24.7**	**-0.3**
X46A	**Booneville** baz=156	**66.09**	**337**	P	**P**	**09 45 24.5**	**-0.5**
Y44A	**Strider, Charl** baz=154	**66.13**	**336**	P	**P**	**09 45 25.3**	**0.0**
BLA	**Blacksburg** baz=163	**66.23**	**345**	P	**P**	**09 45 26.6**	**+0.6**
IP05	**Hopewell Churc**	**66.27**	**348**	*e*P	**P**	**09 45 27.1**	**+1.0**

14nm,0.9s
PLAL Pickwick Lake 66.30 338 eP P 09 45 26.4 0.0
16nm,0.4s
V49A McMinnville 66.33 340 P P 09 45 25.8 -0.8
baz=158,SNR=17
OXF Oxford 66.33 337 P P 09 45 25.4 -1.2
baz=155
Y43A Makayla and Ka 66.35 335 P P 09 45 26.7 0.0
baz=153
TZTN Tazewell 66.38 342 P P 09 45 26.6 -0.3
baz=160
W47A Westpoint 66.39 338 P P 09 45 26.4 -0.5
baz=157,SNR=21
IP07 Quail 66.41 347 eP P 09 45 28.0 +1.0
22nm,0.9s
IP01 Cuckoo 66.42 347 eP P 09 45 28.1 +1.0
15nm,1.0s
IP03 Louisa 66.51 347 eP P 09 45 28.6 +1.0
8.1nm,0.6s
W46A Michie 66.54 338 P P 09 45 26.9 -0.9
baz=156,SNR=6.3
V48A Smith Brothers 66.59 339 P P 09 45 27.7 -0.5
baz=157,SNR=9.8
Z40A Long Farm, Mag 66.74 333 P P 09 45 30.1 +1.0
baz=151
W45A Hickory Valley 66.84 337 P P 09 45 29.4 -0.2
baz=155,SNR=6.9
V47A Nunnelly 66.89 339 P P 09 45 29.2 -0.8
baz=157,SNR=12
Y41A Eaglette Beard 66.97 334 P P 09 45 31.1 +0.6
baz=152
U49A Red Boiling Sp 66.99 340 P P 09 45 29.7 -0.9
baz=158,SNR=6.4
V46A Holladay 67.06 338 P P 09 45 29.9 -1.2
baz=156,SNR=9.8
U48A Cassie Pea, Po 67.21 340 P P 09 45 31.4 -0.6
baz=158,SNR=5.3
WVT Waverly 67.27 339 P P 09 45 31.6 -0.7
baz=156
WVT Waverly 67.27 339 eP P 09 45 31.8 -0.5
13nm,0.6s
JCT Junction City 67.28 326 P P 09 45 32.7 +0.2
baz=145
JCT Junction City 67.28 326 eP P 09 45 33.3 +0.8
8.9nm,0.6s
V45A Humboldt 67.29 338 P P 09 45 32.1 -0.4
baz=155
Y40A Okolona 67.35 333 P P 09 45 33.3 +0.5
baz=151,SNR=7.2
U47A Clarksville 67.38 339 P P 09 45 32.2 -0.7
baz=157,SNR=5.1
WHTX Lake Whitney, 67.41 329 P P 09 45 33.3 0.0
baz=147
WHTX Lake Whitney, 67.41 329 eP P 09 45 33.9 +0.6
6.2nm,0.6s
S51A Beattyville 67.42 343 P P 09 45 32.8 -0.4
baz=161,SNR=5.2
T49A Edmonton 67.46 341 P P 09 45 32.8 -0.7
baz=159,SNR=15
X41A Kaden, Bauxite 67.47 334 P P 09 45 33.4 -0.2
baz=152
X40A Basin Creek Fa 67.59 334 P P 09 45 33.8 -0.4
baz=152
HPIG 67.63 319 eP P 09 45 35.9 +0.9
HPIG ePcP PcP 09 45 56.6 -0.3
T48A Bowling Green 67.72 340 P P 09 45 34.4 -0.7
baz=158
W42A Bald Knob 67.78 335 P P 09 45 35.1 -0.3
baz=153
T47A Sharon Grove 67.83 340 P P 09 45 35.0 -0.7
baz=157,SNR=7.7
GNAR Gosnell 67.86 337 eP P 09 45 36.6 +0.7
88nm,1.0s
V43A Jonesboro 67.88 336 P P 09 45 36.1 +0.1
baz=154
MIAR Mount Ida 67.93 333 P P 09 45 36.5 +0.1
baz=151,SNR=7.0
MIAR Mount Ida 67.93 333 eP P 09 45 36.9 +0.5
6.3nm,0.5s
W41B Gary Mavity, V 67.97 335 P P 09 45 36.9 +0.3
baz=152
W41B Gary Mavity, V 67.97 335 eP P 09 45 36.8 +0.3
28nm,1.5s
WHAR Wooly Hollow 68.08 335 eP P 09 45 37.6 +0.3
18nm,1.3s
X39A Fountain Ranch 68.12 333 P P 09 45 38.4 +0.9
baz=151,SNR=11
T46A Princeton 68.12 339 P P 09 45 37.0 -0.5
baz=157
S48A Wiedeman Farm, 68.13 341 P P 09 45 36.7 -0.8
baz=158
V42A Cord 68.21 336 P P 09 45 37.7 -0.3
baz=153
U44A Portageville 68.23 337 P P 09 45 37.8 -0.3
baz=155
W40A Ferguson Farm, 68.30 334 P P 09 45 39.4 +0.8
baz=152,SNR=7.6
W40A Ferguson Farm, 68.30 334 eP P 09 45 39.4 +0.8
50nm,1.4s
U43A Rector 68.36 337 P P 09 45 38.8 -0.1
baz=154,SNR=8.4
TXAR Lajitas Array 68.36 323 P P 09 45 39.7 +0.4
1.5nm,0.4s,baz=150,slow=7.4,SNR=66
TX31 Lajitas Ar. Si 68.36 323 eP P 09 45 39.9 +0.6
PARMO Parma 68.39 337 eP P 09 45 39.6 +0.5
81nm,0.7s
PAGS Pennsylvania G 68.41 349 eP P 09 45 40.1 +1.0
18nm,0.9s
MCWV Mont Chateau 68.46 346 P P 09 45 39.5 +0.1
baz=164
V41A Mountainview 68.47 335 P P 09 45 39.5 -0.1
baz=153,SNR=52
W39A Magazine 68.58 334 P P 09 45 40.9 +0.6
baz=151,SNR=8.3
W39A Magazine 68.58 334 eP P 09 45 41.5 +1.2
14nm,0.6s
U42A Revenden 68.64 336 P P 09 45 40.5 -0.1
baz=154,SNR=17
T44A Benton 68.72 338 P P 09 45 40.4 -0.7
baz=155
WCI Wyandotte Cave 68.73 341 P P 09 45 40.7 -0.4
baz=158
WCI Wyandotte Cave 68.73 341 eP P 09 45 40.8 -0.4
16nm,1.0s
PBMO Poplar Bluff 68.73 337 eP P 09 45 41.1 -0.1
27nm,0.9s
V40A Witts Springs 68.74 335 P P 09 45 41.1 -0.2
baz=152,SNR=18
V40A Witts Springs 68.74 335 eP P 09 45 41.3 0.0
20nm,0.4s
R48A Northridge Ran 68.77 341 P P 09 45 41.1 -0.2
baz=159
O56A Blue Knob Stat 68.79 348 P P 09 45 42.3 +0.8
baz=166
O56A Blue Knob Stat 68.79 348 eP P 09 45 42.8 +1.3
12nm,0.8s
R47A Wooly Knot Far 68.86 341 P P 09 45 41.1 -0.8
baz=158
U41A Viola 68.88 336 P P 09 45 41.9 -0.2
baz=153,SNR=23
S45A Carrier Mills 68.92 339 P P 09 45 42.3 0.0
baz=156
N59A State Game Lan 68.93 350 P P 09 45 43.1 +0.8
baz=168
N59A State Game Lan 68.93 350 eP P 09 45 42.7 +0.4
38nm,1.5s
ABTX Abilene, Hawle 68.96 328 P P 09 45 42.6 -0.1
baz=146
ABTX Abilene, Hawle 68.96 328 eP P 09 45 43.1 +0.5
7.6nm,0.9s
T43A Greenville 68.96 337 P P 09 45 41.9 -0.6
baz=154,SNR=12
V39A Pettigrew 69.09 334 P P 09 45 43.7 +0.3
baz=151,SNR=12
S44A Carbondale 69.16 338 P P 09 45 42.9 -0.8
baz=156,SNR=7.0
T42A Van Buren 69.19 336 P P 09 45 43.3 -0.6
baz=154
SYO Syowa Base 69.19 158 eP P 09 45 42.6 -0.9
SYO Syowa Base 69.19 158 epP pP 09 47 39.8 -0.9
U40A Yellville 69.24 335 P P 09 45 44.2 -0.1
baz=152,SNR=9.5
S43A Fulton Ridge, 69.33 338 P P 09 45 43.8 -0.9
baz=155,SNR=8.1
R45A Skylar, Fairfi 69.39 339 P P 09 45 44.1 -0.9
baz=156
Q47A Bedord North L 69.42 341 P P 09 45 44.5 -0.8
baz=158

T41A Mountain View 69.44 336 P P 09 45 45.3 -0.1
baz=153,SNR=18
U39A Green Forest 69.50 334 P P 09 45 45.7 -0.1
baz=152,SNR=22
KSPA Keystone Colle 69.56 350 eP P 09 45 46.8 +0.8
14nm,1.1s
HHAR Hobbs 69.59 334 eP P 09 45 46.4 +0.1
9.1nm,0.6s
BLO Bloomington 69.67 341 eP P 09 45 46.9 +0.2
15nm,0.8s
ACSO Alum Creek Sta 69.72 344 P P 09 45 46.7 -0.3
baz=161
ACSO Alum Creek Sta 69.72 344 eP P 09 45 47.3 +0.3
12nm,0.8s
N54A Moraine State 69.74 347 P P 09 45 47.9 +0.8
baz=164,SNR=9.4
N54A Moraine State 69.74 347 eP P 09 45 47.9 +0.8
22nm,0.7s
S42A Caledonia 69.75 337 P P 09 45 46.5 -0.8
baz=154,SNR=7.0
T40A Mansfield 69.81 335 P P 09 45 47.3 -0.4
baz=152
FVM French Village 69.82 337 eP P 09 45 47.7 +0.1
13nm,0.8s
P47A Martinsville 69.89 341 P P 09 45 47.4 -0.6
baz=158
Q45A Warren Harvey, 69.90 340 P P 09 45 47.3 -0.8
baz=157,SNR=9.2
R43A Red Bud 69.91 338 P P 09 45 47.3 -0.8
baz=155
S41A Jillco Farms, 69.92 336 P P 09 45 48.0 -0.3
baz=153,SNR=27
HRV Adam Dziewonsk 69.96 354 P P 09 45 49.4 +1.1
baz=172
TUL1 Leonard 70.01 332 P P 09 45 49.1 +0.2
baz=150
TUL1 Leonard 70.01 332 eP P 09 45 49.4 +0.6
9.7nm,0.8s
T39A Clever 70.03 335 P P 09 45 48.9 0.0
baz=152,SNR=6.9
CCM Cathedral Cave 70.16 337 P P 09 45 49.2 -0.5
baz=154
CCM Cathedral Cave 70.16 337 eP P 09 45 49.6 0.0
16nm,0.7s
Q44A Meyer Farm, Va 70.18 339 P P 09 45 48.6 -1.2
baz=156
M54A Oil Creek Stat 70.20 347 P P 09 45 50.4 +0.5
baz=165,SNR=9.4
M54A Oil Creek Stat 70.20 347 eP P 09 45 50.3 +0.5
21nm,0.8s
S40A Lebanon 70.20 336 P P 09 45 49.8 -0.2
baz=153,SNR=11
R42A Luebbering 70.21 337 P P 09 45 49.5 -0.4
baz=154,SNR=9.9
BINY Binghamton 70.22 350 P P 09 45 51.1 +1.2
baz=168
BINY Binghamton 70.22 350 eP P 09 45 50.6 +0.7
12nm,0.9s
P46A Rosedale 70.28 341 P P 09 45 49.5 -0.9
baz=158
WMOK Wichita Mounta 70.31 330 P P 09 45 51.0 +0.3
baz=147
WMOK Wichita Mounta 70.31 330 eP P 09 45 50.9 +0.3
2.7nm,0.8s
P45A Graceland, Par 70.36 340 P P 09 45 49.5 -1.3
baz=157
T38A Diamond 70.39 334 P P 09 45 51.0 0.0
baz=151,SNR=12
R41A Rosebud 70.43 337 P P 09 45 50.6 -0.6
baz=154,SNR=8.1
Q43A New Douglas 70.44 338 P P 09 45 50.4 -0.8
baz=155
O47A Sheridan 70.56 342 P P 09 45 51.0 -1.0
baz=159,SNR=5.3
P44A Sand Creek, Wi 70.57 339 P P 09 45 51.0 -1.0
baz=156
S39A Bolivar 70.59 335 P P 09 45 52.3 +0.1
baz=152,SNR=14
Q42A Golden Eagle 70.69 338 P P 09 45 52.0 -0.7
baz=154,SNR=6.8
R40A Maddies Statio 70.73 336 P P 09 45 52.5 -0.5
baz=153,SNR=11
S38A Stockton 70.76 335 P P 09 45 53.0 -0.2
baz=151,SNR=15
ERPA Erie 70.85 347 P P 09 45 54.2 +0.5
baz=164,SNR=7.2
ERPA Erie 70.85 347 eP P 09 45 54.6 +0.9
45nm,0.7s
SFIN Lafayette 70.95 341 P P 09 45 53.3 -1.0
baz=158
Q41A Truxton 70.96 337 P P 09 45 54.0 -0.4
baz=154
KOWA Kowa 70.99 62 P P 09 45 54.8 -0.2
17nm,0.7s,baz=241,slow=5.3,SNR=32
KOWA Kowa 70.99 62 eP P 09 45 55.2 +0.2
24nm,0.8s
O45A Potomac 71.02 340 P P 09 45 53.6 -1.0
baz=157,SNR=5.3
P43A Skaggs, Pawnee 71.02 339 P P 09 45 53.8 -0.8
baz=156,SNR=9.3
R39A Chumby, Stover 71.03 336 P P 09 45 54.5 -0.3
baz=152,SNR=10.0
MMNY Mt. Morris Dam 71.05 349 eP P 09 45 55.6 +0.8
20nm,0.7s
MNTX Cornudas Mount 71.13 323 P P 09 45 55.1 -0.4
baz=141,SNR=6.0
MNTX Cornudas Mount 71.13 323 eP P 09 45 55.3 -0.2
9.5nm,1.5s
O44A Mansfield 71.15 340 P P 09 45 54.7 -0.8
baz=156
P42A Winchester 71.23 338 P P 09 45 55.1 -0.8
baz=155,SNR=9.4
R38A Fenwick Farm, 71.25 335 P P 09 45 55.7 -0.3
baz=152,SNR=12
SUR Sutherland 71.29 117 P P 09 45 57.5 +0.6
0.7nm,0.6s,baz=242,slow=5.8,SNR=15
Q40A Laux Farm, Aux 71.29 337 P P 09 45 56.0 -0.3
baz=153,SNR=5.4
N46A Monticello 71.33 341 P P 09 45 55.6 -0.8
baz=158
N45A Kentland 71.51 341 P P 09 45 56.6 -0.9
baz=157
O43A Sugar Creek Fa 71.54 339 P P 09 45 56.9 -0.8
baz=156
P41A Barry, Barry 71.55 338 P P 09 45 56.9 -0.9
baz=154,SNR=11
MSTX Muleshoe 71.57 326 P P 09 45 58.4 +0.2
baz=144,SNR=9.2
MSTX Muleshoe 71.57 326 eP P 09 45 59.0 +0.8
25nm,1.1s
N44A Piper City 71.64 340 P P 09 45 57.4 -0.9
baz=157
Q39A Willow Grove F 71.66 336 P P 09 45 57.9 -0.5
baz=152,SNR=17
O42A Bath 71.70 339 P P 09 45 58.0 -0.6
baz=155
LBNH Lisbon 71.71 353 P P 09 46 00.1 +1.5
baz=172
P40A Paris 71.76 337 P P 09 45 58.5 -0.5
baz=153,SNR=6.7
HDIL Hopedale 71.78 339 P P 09 45 58.4 -0.7
baz=156,SNR=7.9
HDIL Hopedale 71.78 339 eP P 09 45 59.1 +0.1
24nm,0.5s
AMTX Amarillo 71.78 328 P P 09 45 59.8 +0.4
baz=145
AMTX Amarillo 71.78 328 P P 09 45 56.8 -2.5
Q38A Cooks Store, C 71.82 336 P P 09 45 59.4 0.0
baz=152
O41A Passleys Farm, 71.89 338 P P 09 45 59.0 -0.8
baz=154
VNDA Vanda 71.93 189 P P 09 46 01.2 +1.7
5.3nm,1.1s,baz=134,slow=4.2,SNR=13
VNDA Vanda 71.93 189 eP P 09 46 00.7 +1.2
3.7nm,0.8s
P39B Sabbury 71.97 336 P P 09 45 59.6 -0.6
baz=153,SNR=11
Q37A Longview Farm, 72.06 335 P P 09 46 00.2 -0.6
baz=151
N43A Stutzman Famil 72.09 340 P P 09 46 00.8 -0.1
baz=156
M44A Midewin, Midew 72.16 341 P P 09 46 01.5 +0.2
baz=157
O40A La Belle 72.23 337 P P 09 46 01.2 -0.5
baz=154,SNR=9.7
N42A Yates City 72.26 339 P P 09 46 01.3 -0.5
baz=155,SNR=6.1
P38A Dawn 72.37 336 P P 09 46 02.0 -0.5

baz=152,SNR=15
LONY Lake Ozonia 72.39 352 P P 09 46 03.4 +0.8
baz=170,SNR=5.0
LONY Lake Ozonia 72.39 352 eP P 09 46 03.8 +1.3
9.9nm,0.9s
N41A Harden Midland 72.41 338 P P 09 46 02.0 -0.7
baz=154
M43A Waltham Townsh 72.48 340 P P 09 46 02.6 -0.5
baz=156,SNR=5.1
FRNY Flat Rock 72.48 352 eP P 09 46 04.5 +1.5
11nm,0.8s
PKME Peaks-Kenny Pk 72.51 356 P P 09 46 04.3 +1.2
baz=174
P37A Lathrop 72.64 335 P P 09 46 03.3 -0.8
baz=151,SNR=5.7
O38A Galt 72.79 336 P P 09 46 04.3 -0.6
baz=152
N40A Mertquake, Sal 72.81 338 P P 09 46 04.4 -0.6
baz=154,SNR=7.1
M41A Milan 72.91 339 P P 09 46 04.9 -0.7
baz=155,SNR=8.3
319A Douglas 73.04 320 eP P 09 46 08.4 +1.7
8.6nm,0.8s
O37A Wolven Farm, M 73.07 336 P P 09 46 06.4 -0.1
baz=152
KSU1 Kansas State U 73.08 333 P P 09 46 06.5 -0.2
baz=149
KSU1 Kansas State U 73.08 333 eP P 09 46 07.3 +0.7
KSU1 epP pP 09 48 11.9 +6.1
L43A Garden Prairie 73.09 341 P P 09 46 06.5 -0.2
baz=156
N39A Derby Farms, D 73.12 337 P P 09 46 06.0 -0.7
baz=153,SNR=12
L42A Oliver, Polo 73.21 340 P P 09 46 06.9 -0.4
baz=156
SADO Sadowa 73.25 348 eP P 09 46 07.9 +0.5
15nm,1.0s
M40A Post Highland 73.26 338 P P 09 46 06.9 -0.6
baz=154,SNR=7.2
N38A Joes South For 73.30 337 P P 09 46 07.5 -0.3
baz=152
K43A Burlington 73.45 341 P P 09 46 08.5 -0.1
baz=157,SNR=5.4
L41A Preston 73.53 339 P P 09 46 08.7 -0.4
baz=155,SNR=10
M39A Webster 73.54 338 P P 09 46 08.5 -0.6
baz=154
TSUM Tsumeb 73.60 103 P P 09 46 10.8 +0.5
9.5nm,0.8s,baz=225,slow=5.9,SNR=13
TSUM Tsumeb 73.60 103 eP P 09 46 10.3 0.0
11nm,0.8s
N37A Lee Faris, Mou 73.61 336 P P 09 46 09.3 -0.3
baz=152
L40A Anamosa 73.75 339 P P 09 46 10.0 -0.3
baz=154,SNR=14
K42A Prairie Point, 73.82 340 P P 09 46 10.5 -0.2
baz=156,SNR=7.1
M38A Pleasantville 73.84 337 P P 09 46 10.4 -0.4
baz=153,SNR=7.7
N36A Muff Farm, Cla 73.94 336 P P 09 46 11.0 -0.4
baz=151
K41A Shullsburg 73.95 340 P P 09 46 11.3 -0.2
baz=155,SNR=6.4
TRQ Mont Tremblant 73.97 352 eP P 09 46 12.2 +0.7
L39A Vinton 74.06 338 P P 09 46 11.7 -0.4
baz=154,SNR=7.6
J43A Natural Harves 74.10 341 P P 09 46 12.2 -0.1
baz=157,SNR=8.5
M37A Trindle Farm, 74.13 336 P P 09 46 12.4 -0.1
baz=152,SNR=18
CBKS Cedar Bluff 74.13 331 P P 09 46 13.6 +0.9
baz=147,SNR=11
CBKS Cedar Bluff 74.13 331 eP P 09 46 13.9 +1.2
31nm,0.8s
LAZ Ladron 74.15 323 eP P 09 46 14.9 +1.9
TASL Snake Pit, Alb 74.21 324 P P 09 46 14.8 +1.5
baz=141,SNR=7.9
ANMO Albuquerque 74.21 324 P P 09 46 14.6 +1.3
3.5nm,0.5s,baz=152,slow=9.0,SNR=17
ANMO Albuquerque 74.21 324 P P 09 46 15.0 +1.6
baz=141
TASM ASL Pad, Albuq 74.21 324 P P 09 46 14.7 +1.3
baz=141,SNR=7.6
JFWS Jewell Farm 74.22 340 P P 09 46 12.8 -0.1
baz=155,SNR=13
JFWS Jewell Farm 74.22 340 eP P 09 46 13.2 +0.2
33nm,0.6s
J42A Columbus 74.25 341 P P 09 46 13.1 0.0
baz=156,SNR=13
SCIA State Center 74.28 337 P P 09 46 13.1 -0.2
baz=153
K40A Colesburg 74.30 339 P P 09 46 13.1 -0.3
baz=154
L38A Oak Wood Farm, 74.40 338 P P 09 46 14.0 0.0
baz=153
M36A Felix, Anita 74.44 336 P P 09 46 13.9 -0.3
baz=151
I43A Langenfeld Bro 74.49 342 P P 09 46 14.2 -0.3
baz=157
K39A Oelwein 74.55 339 P P 09 46 14.1 -0.8
baz=154,SNR=11
J41A Loganville 74.56 340 P P 09 46 14.5 -0.3
baz=156,SNR=6.6
TUC Tucson 74.59 320 P P 09 46 16.2 +0.8
baz=137
I42A Draeger Farm, 74.71 341 P P 09 46 15.6 -0.1
baz=157,SNR=16
I42A Draeger Farm, 74.71 341 eP P 09 46 16.1 +0.4
23nm,0.9s
K38A Parkersburg 74.79 338 P P 09 46 14.9 -1.2
baz=153
TOA0 Torodi Ar. Sit 74.79 66 eP P 09 46 16.7 -0.1
TOA0 epP pP 09 48 17.6 +0.9
TORD Torodi Ar. Bea 74.79 66 P P 09 46 16.2 -0.6
32nm,0.7s,baz=275,slow=5.9,SNR=172
TORD pP pP 09 48 16.2 -0.4
2.2nm,0.9s,baz=248,slow=5.2,SNR=3.8
J40A Soldiers Grove 74.81 340 P P 09 46 15.9 -0.4
baz=155,SNR=9.1
T25A Trinidad 74.90 327 P P 09 46 18.7 +1.4
baz=143,SNR=7.4
T25A Trinidad 74.90 327 eP P 09 46 18.9 +1.6
12nm,1.0s
H43A Windswept, Lux 74.92 342 P P 09 46 16.8 -0.1
baz=158,SNR=7.2
H43A Windswept, Lux 74.92 342 eP P 09 46 17.1 +0.2
16nm,0.8s
L36A Harm Buss Farm 74.96 336 P P 09 46 16.7 -0.4
baz=151
J39A Decorah 75.05 339 P P 09 46 17.2 -0.4
baz=154,SNR=12
I41A Arkdale 75.14 341 P P 09 46 17.8 -0.3
baz=156
H42A Shiocton 75.17 342 P P 09 46 17.8 -0.4
baz=157
H42A Shiocton 75.17 342 eP P 09 46 19.0 +0.8
16nm,0.8s
K37A Belmond 75.19 337 P P 09 46 18.5 +0.1
baz=152
I40A Norwalk 75.22 340 P P 09 46 18.5 -0.1
baz=155
J38A Wedel Dairy, R 75.29 338 P P 09 46 18.4 -0.5
baz=153
K36A Gilmore City 75.35 337 P P 09 46 19.3 -0.1
baz=152
F46A Macinaw City C 75.38 345 P P 09 46 19.4 +0.1
baz=160
I39A Houston 75.46 339 P P 09 46 19.4 -0.5
baz=154,SNR=6.4
F45A CMU Biological 75.47 344 P P 09 46 19.9 +0.1
baz=160,SNR=17
214A Organ Pipe Nat 75.52 318 P P 09 46 22.2 +1.6
baz=136
KSCO Kaye Shedlock' 75.57 329 P P 09 46 22.2 +1.4
baz=144
H41A Junction City 75.59 341 P P 09 46 20.4 -0.2
baz=156
H41A Junction City 75.59 341 eP P 09 46 20.9 +0.3
9.4nm,0.6s
G43A Wallace 75.63 342 P P 09 46 20.9 +0.1
baz=158,SNR=5.9
G43A Wallace 75.63 342 eP P 09 46 21.2 +0.5
6.4nm,0.6s
J37A Redenius Farm, 75.64 338 P P 09 46 20.5 -0.4
baz=152
BGNE Belgrade 75.67 334 P P 09 46 21.2 0.0
baz=148
BGNE Belgrade 75.67 334 eP P 09 46 21.8 +0.6

76nm,1.3s
X18A **Snowflake** 75.76 322 *e*P P 09 46 23.7 +1.7
6.0nm,1.0s
H40A **Chili** 75.81 340 P P 09 46 21.6 -0.2
baz=155,SNR=5.6
G42A **Mountain** 75.82 342 P P 09 46 22.0 +0.2
baz=157,SNR=5.3
G42A **Mountain** 75.82 342 *e*P P 09 46 22.6 +0.8
I38A **Scanlan Farm,** 75.89 339 P P 09 46 22.0 -0.2
baz=154,SNR=7.3
SDCO **Great Sand Dun** 75.91 327 P P 09 46 24.1 +1.2
baz=142,SNR=9.1
SDCO **Great Sand Dun** 75.91 327 *e*P P 09 46 24.3 +1.4
10nm,1.4s
J36A **Seneca 1, Swea** 75.92 337 P P 09 46 22.1 -0.4
baz=152
F44A **Big Bay de Noc** 75.97 344 P P 09 46 22.8 +0.2
baz=159,SNR=14
G41A **Antigo** 76.00 341 P P 09 46 23.3 +0.4
baz=156
E45A **Wooded Hills,** 76.02 345 P P 09 46 23.5 +0.6
baz=160,SNR=6.5
F43A **Flat Rock, Esc** 76.03 343 P P 09 46 23.0 +0.1
baz=158,SNR=21
W18A **Petrified Fore** 76.08 322 P P 09 46 23.8 0.0
baz=138
H39A **Augusta** 76.13 340 P P 09 46 23.4 -0.2
baz=155
I37A **Lemond, Waseca** 76.21 338 P P 09 46 24.1 0.0
baz=153,SNR=7.5
BOSA **Boshof** 76.27 115 P P 09 46 24.8 -0.2
12nm,0.5s,baz=229,slow=3.8,SNR=32
BOSA **Boshof** 76.27 115 *e*P P 09 46 24.6 -0.5
15nm,0.8s
G40A **Rib Lake** 76.34 341 P P 09 46 24.9 +0.2
baz=156
H38A **Maiden Rock** 76.44 339 P P 09 46 25.4 +0.1
baz=154
E44A **Grand Marais A** 76.45 344 P P 09 46 25.7 +0.5
baz=159,SNR=6.3
F41A **Three Lakes** 76.46 342 P P 09 46 25.7 +0.4
baz=157,SNR=12
E43A **Lone Tree Farm** 76.49 343 P P 09 46 25.8 +0.3
baz=158,SNR=20
X16A **Lo Mia Camp, P** 76.51 321 *e*P P 09 46 27.5 +1.3
5.8nm,0.8s
H37A **Dierke Farm, C** 76.56 339 P P 09 46 25.9 0.0
baz=153
S22A **4UR Ranch, Cre** 76.57 326 P P 09 46 27.7 +1.2
baz=141,SNR=5.8
S22A **4UR Ranch, Cre** 76.57 326 *e*P P 09 46 27.4 +0.8
3.5nm,0.9s
G39A **Holcombe** 76.65 340 P P 09 46 26.8 +0.5
baz=155
Q24A **Divide** 76.70 328 P P 09 46 28.5 +1.3
baz=143,SNR=5.1
Q24A **Divide** 76.70 328 *e*P P 09 46 29.1 +1.9
10nm,0.8s
G38A **Ridgeland** 76.75 340 P P 09 46 26.5 -0.4
baz=154
E42A **Champion** 76.78 343 P P 09 46 27.4 +0.3
baz=158,SNR=15
COWI **Conover** 76.80 342 *e*P P 09 46 27.9 +0.6
16nm,1.2s
H36A **Jessenland, He** 76.89 338 P P 09 46 27.8 +0.2
baz=152
F40A **Park Falls** 76.91 341 P P 09 46 28.3 +0.5
baz=156,SNR=10.0
MVCO **Mesa Verde** 77.00 324 P P 09 46 29.8 +1.0
baz=140,SNR=5.8
MVCO **Mesa Verde** 77.00 324 *e*P P 09 46 30.3 +1.5
7.4nm,0.8s
Y14A **Wickenburg** 77.05 319 *e*P P 09 46 29.8 +0.8
4.7nm,0.8s
ECSD **EROS Data Cent** 77.08 336 P P 09 46 28.7 -0.1
baz=150,SNR=17
ECSD **EROS Data Cent** 77.08 336 *e*P P 09 46 29.0 +0.2
13nm,0.9s
E41A **Kenton** 77.09 342 P P 09 46 29.3 +0.6
baz=157
SPMN **Marine on St.** 77.10 339 P P 09 46 28.5 -0.3
baz=153,SNR=5.3
SPMN **Marine on St.** 77.10 339 *e*P P 09 46 29.2 +0.4
11nm,0.4s
F39A **Loretta** 77.14 341 P P 09 46 29.4 +0.4
baz=155,SNR=6.4
MAW **Mawson** 77.21 162 P P 09 46 29.4 +0.2
6.3nm,0.6s,baz=229,slow=5.5,SNR=23
MAW pP pP 09 48 29.7 -0.2
2.6nm,0.8s,baz=259,slow=8.9,SNR=3.7
MAW **Mawson** 77.21 162 *e*P P 09 46 29.8 +0.7
MAW pP pP 09 48 29.7 -0.2
WUAZ **Wupatki** 77.28 322 P P 09 46 31.8 +1.6
baz=137,SNR=5.2
WUAZ **Wupatki** 77.28 322 *e*P P 09 46 32.3 +2.1
9.3nm,1.1s
H35A **Sunnyside Ranc** 77.30 338 P P 09 46 29.9 0.0
baz=152,SNR=8.7
E40A **Wakefield** 77.33 342 P P 09 46 30.8 +0.7
baz=156,SNR=9.9
G36A **St. Michael** 77.41 338 P P 09 46 30.5 0.0
baz=153
I33A **Coleman** 77.42 336 P P 09 46 30.8 +0.2
baz=150
E39A **Mellen** 77.45 341 P P 09 46 31.2 +0.5
baz=155,SNR=6.5
F38A **Pierce - Schro** 77.47 340 P P 09 46 31.3 +0.5
baz=154,SNR=6.0
F37A **Hinrichs Farm,** 77.49 339 P P 09 46 31.4 +0.5
baz=154
D41A **Chassel** 77.53 343 P P 09 46 31.7 +0.6
baz=157,SNR=20
ISCO **Idaho Springs** 77.58 328 P P 09 46 33.2 +1.2
baz=142,SNR=9.5
ISCO **Idaho Springs** 77.58 328 *e*P P 09 46 33.7 +1.7
5.2nm,0.8s
H34A **Spellman Lake,** 77.59 337 P P 09 46 31.7 +0.2
baz=151
PV01 **Paradox Valley** 77.74 325 *e*P P 09 46 34.0 +1.2
8.9nm,1.2s
SMCO **Snowmass** 77.75 327 *e*P P 09 46 35.0 +2.0
7.4nm,0.7s
PV15 **Paradox Valley** 77.86 325 *e*P P 09 46 35.6 +2.2
16nm,1.2s
F36A **Milaca** 77.89 339 P P 09 46 33.3 +0.2
baz=153
H33A **Prehn Over Nor** 77.95 336 P P 09 46 33.7 +0.2
baz=150
E38A **The Farm, Brul** 77.95 341 P P 09 46 33.4 0.0
baz=155
PV03 **Paradox Valley** 77.98 325 *e*P P 09 46 35.6 +1.5
10nm,1.5s
PV07 **Paradox Valley** 78.01 325 *e*P P 09 46 35.6 +1.4
9.1nm,1.0s
LBTB **Lobatse** 78.02 112 *e*P P 09 46 34.2 -0.3
21nm,0.8s
H32A **Carlson Farm,** 78.05 336 P P 09 46 34.0 0.0
baz=149
G34A **Benson** 78.05 337 P P 09 46 33.6 -0.3
baz=151
F35A **Swanville** 78.23 338 P P 09 46 35.0 +0.1
baz=152
G33A **Ortonville** 78.28 337 P P 09 46 35.8 +0.6
baz=150
PV09 **Paradox Valley** 78.31 325 *e*P P 09 46 37.3 +1.4
W13A **Hualapai Mount** 78.39 320 *e*P P 09 46 37.9 +1.6
5.5nm,1.1s
E36A **McGregor** 78.39 339 P P 09 46 36.1 +0.3
baz=153
F34A **Alexandria** 78.40 338 P P 09 46 36.0 +0.2
baz=151
H31A **Wolsey** 78.41 335 P P 09 46 35.9 0.0
baz=149
U15A **North Rim** 78.45 322 *e*P P 09 46 38.6 +1.9
5.8nm,0.8s
IRM **Iron Mountain** 78.46 318 P P 09 46 37.5 +1.1
baz=135
C40A **Isle Royale Na** 78.47 343 P P 09 46 36.3 +0.2
baz=157
N23A **Red Feather La** 78.60 328 P P 09 46 38.8 +1.4
baz=142
C39A **Grand Marais** 78.65 342 P P 09 46 37.0 -0.1
baz=156,SNR=11
PHWY **Pilot Hill** 78.70 329 *e*P P 09 46 39.3 +1.4
34nm,0.5s
D37A **Cotton** 78.71 340 P P 09 46 37.7 +0.2
baz=154,SNR=6.8
F33A **5 Mile Ranch,** 78.80 337 P P 09 46 37.8 -0.1
baz=150
C38A **Sawbill Land.** 78.88 341 P P 09 46 38.0 -0.4
baz=155,SNR=8.0
D36A **Goodland** 78.95 340 P P 09 46 38.9 +0.2
baz=153,SNR=5.2
O20A **White River Ci** 79.11 327 P P 09 46 41.1 +1.1
baz=140,SNR=5.7
O20A **White River Ci** 79.11 327 *e*P P 09 46 41.2 +1.1
8.2nm,0.9s
D35A **Remer** 79.14 339 P P 09 46 40.2 +0.4
baz=152,SNR=5.3
EYMN **Ely** 79.15 341 P P 09 46 39.7 -0.1
baz=155,SNR=5.9
EYMN **Ely** 79.15 341 *e*P P 09 46 39.8 +0.1
9.0nm,0.6s
C37A **Embarrass** 79.15 341 P P 09 46 39.8 0.0
baz=154,SNR=6.1
KNB **Kanab** 79.17 322 *e*P P 09 46 42.3 +1.9
18nm,0.9s
GMRC **Granite Mounta** 79.20 318 P P 09 46 41.8 +1.3
baz=134
E33A **Westby DABS, E** 79.28 338 P P 09 46 40.4 0.0
baz=151
MURC **Murrieta** 79.31 317 P P 09 46 41.5 +0.5
baz=133
C36A **Pine Crest Far** 79.37 340 P P 09 46 41.1 +0.2
baz=154,SNR=6.5
LCMT **Little Creek M** 79.40 321 *e*P P 09 46 42.0 +0.5
3.3nm,0.9s
SRU **San Rafael Swe** 79.48 325 *e*P P 09 46 43.1 +1.2
13nm,1.1s
F31A **Hecla** 79.50 336 P P 09 46 41.7 0.0
baz=149
D34A **Park Rapids** 79.52 338 P P 09 46 41.8 0.0
baz=152
MTPU **Mount Pierson** 79.57 323 *e*P P 09 46 44.0 +1.4
5.5nm,0.7s
HEC **Hector,Ludlow** 79.63 318 P P 09 46 44.2 +1.5
baz=134
C35A **Jirik Farms, M** 79.67 340 P P 09 46 42.6 +0.1
baz=153,SNR=19
SZCU **Shurtz Canyon** 79.73 322 *e*P P 09 46 45.0 +1.6
11nm,1.5s
D33A **AnnSam, Waubun** 79.78 338 P P 09 46 43.3 +0.2
baz=151,SNR=7.3
RWWY **Rawlins** 79.82 328 *e*P P 09 46 44.2 +0.5
13nm,0.7s
CCUT **Cedar City** 79.85 322 *e*P P 09 46 46.0 +2.0
8.4nm,0.8s
MSU **Marysvale** 79.91 323 *e*P P 09 46 46.1 +1.9
C34A **RKJ Ranch, Bem** 79.92 339 P P 09 46 44.0 +0.2
baz=152
E31A **Nome** 79.97 337 P P 09 46 44.4 +0.3
baz=149,SNR=6.0
TMUT **Trail Mountain** 79.97 324 *e*P P 09 46 46.0 +1.3
3.5nm,0.6s
SHPR **Sheep Range** 80.12 320 *e*P P 09 46 45.7 +0.4
5.4nm,1.2s
D32A **Dogwood Acres,** 80.17 337 P P 09 46 45.3 +0.2
baz=150
B35A **Bob, Littlefor** 80.18 340 P P 09 46 45.4 +0.3
baz=153,SNR=18
K22A **Casper** 80.25 329 P P 09 46 46.8 +0.9
baz=142
K22A **Casper** 80.25 329 *e*P P 09 46 47.0 +1.2
11nm,1.0s
C33A **Trail** 80.30 338 P P 09 46 46.0 +0.2
baz=151,SNR=15
D31A **Mcclaflin, Tow** 80.34 337 P P 09 46 46.5 +0.6
baz=149
B34A **Aery, Baudette** 80.58 339 P P 09 46 47.2 +0.1
baz=152,SNR=5.1
B33A **Robert and Kas** 80.69 339 P P 09 46 48.1 +0.3
baz=151,SNR=5.1
AGMN **Agassiz Nation** 80.80 339 P P 09 46 48.6 +0.2
baz=151,SNR=10
AGMN **Agassiz Nation** 80.80 339 *e*P P 09 46 49.2 +0.9
15nm,0.8s
PSUT **Pine Spring** 80.83 322 *e*P P 09 46 50.5 +1.5
4.4nm,0.8s
C31A **Landman Farms,** 80.98 337 P P 09 46 49.4 +0.1
baz=150,SNR=8.2
TPNV **Topopah Spring** 81.05 320 P P 09 46 51.5 +1.3
baz=134
JLU **Jordanelle** 81.07 325 *e*P P 09 46 51.2 +1.0
12nm,1.2s
B32A **Ashes, Strandq** 81.10 338 P P 09 46 50.1 +0.2
baz=150,SNR=21
A33A **Warroad** 81.21 339 P P 09 46 50.8 +0.4
baz=152,SNR=6.7
DAC **Darwin (Calif)** 81.37 318 *e*P P 09 46 52.4 +0.5
9.9nm,1.3s
TCUT **Toone Canyon** 81.43 325 *e*P P 09 46 52.3 +0.2
26nm,1.4s
DUG **Dugway, Tooele** 81.47 324 P P 09 46 53.2 +1.0
baz=137
DUG **Dugway, Tooele** 81.47 324 *e*P P 09 46 53.0 +0.8
2.9nm,0.8s
ISA **Isabella, Lake** 81.48 317 P P 09 46 51.6 -0.7
baz=133
B31A **Greenbush Farm** 81.50 338 P P 09 46 52.4 +0.5
baz=150
A32A **Rocking H Ranc** 81.54 339 P P 09 46 53.2 +1.1
baz=151
R11A **Troy Canyon, C** 81.65 321 P P 09 46 54.6 +1.5
baz=135,SNR=6.4
R11A **Troy Canyon, C** 81.65 321 *e*P P 09 46 54.7 +1.5
3.0nm,0.8s
MDND **Maddock** 81.68 336 P P 09 46 53.7 +0.8
baz=148
MDND **Maddock** 81.68 336 *e*P P 09 46 54.2 +1.3
58nm,1.0s
BW06 **Boulder Array** 81.76 327 P P 09 46 54.1 +0.4
baz=140
BW06 **Boulder Array** 81.76 327 *e*P P 09 46 54.0 +0.4
6.3nm,1.1s
PD31 **Pinedale Array** 81.76 327 *e*P P 09 46 54.3 +0.5
PDAR **Pinedale Array** 81.76 327 P P 09 46 54.2 +0.5
2.8nm,0.5s,baz=124,slow=7.8,SNR=22
PDAR **Pinedale Array** 81.76 327 *e*P P 09 46 54.4 +0.7
MDT **Midelt** 81.83 47 P P 09 46 54.3 +0.2
7.7nm,0.8s,baz=234,slow=3.9,SNR=8.0
HWUT **Hardware Ranch** 81.87 326 *e*P P 09 46 54.9 +0.6
8.6nm,0.6s
SCHQ **Schefferville** 81.94 358 P P 09 46 54.3 +0.3
11nm,0.7s,baz=152,slow=2.9,SNR=5.4
VES **Vestal, Richgr** 81.97 317 P P 09 46 55.3 +0.7
baz=132
ULM **Lac du Bonnet** 82.51 340 P P 09 46 57.2 +0.3
8.3nm,0.7s,baz=135,slow=5.5,SNR=17
ULM pP pP 09 49 00.4 +0.3
3.6nm,1.0s,baz=115,slow=4.9,SNR=4.8
ULM **Lac du Bonnet** 82.51 340 *e*P P 09 46 57.3 +0.3
8.9nm,0.8s
ULM *e*pP pP 09 49 00.9 +0.8
PBDV **Barranco-do-Ve** 82.69 41 *e*P P 09 46 59.4 +1.2
37nm,1.5s
PCVE **Castro Verde** 82.89 41 *e*P P 09 46 59.9 +0.7
20nm,1.8s
LOHW **Long Hollow** 82.90 327 *e*P P 09 46 59.0 -0.4
3.8nm,0.8s
MESJ **Messejana** 82.92 41 *e*P P 09 47 00.4 +1.0
15nm,1.4s
PVAQ **Vaqueiros** 82.92 41 *e*P P 09 46 59.2 -0.2
28nm,1.9s
PNCL **Nicolau / Gran** 82.93 41 *e*P P 09 46 59.8 +0.4
24nm,1.3s
TPAW **Teton Pass** 82.97 327 *e*P P 09 47 00.7 +0.8
2.7nm,0.8s
TAM **Tamanrasset** 83.11 60 *e*P P 09 47 01.0 +0.1
14nm,1.0s
FXWY **Fox Creek** 83.12 327 *e*P P 09 47 01.4 +0.9
2.9nm,1.0s
ELK **Elko** 83.15 323 P P 09 47 03.4 +2.6
1.9nm,0.4s,baz=210,slow=3.2,SNR=14
NV01 **Mina Array Sit** 83.25 320 *e*P P 09 47 02.3 +1.1
NVAR **Mina Array Bea** 83.25 320 P P 09 47 02.1 +0.8
1.1nm,0.8s,baz=131,slow=4.9,SNR=8.4
PBEJ **Beja** 83.25 41 *e*P P 09 47 01.8 +0.8
15nm,1.5s
KVN **Kaiserville** 83.56 320 *e*P P 09 47 03.3 +0.5
4.3nm,0.8s
PMTG **Montargil** 83.75 40 *e*P P 09 47 04.4 +1.0
27nm,1.1s
PBAR **Barrancos** 83.84 41 *e*P P 09 47 04.3 +0.4
32nm,1.6s
YHH **Holmes Hill** 83.90 328 *e*P P 09 47 05.3 +0.8
5.1nm,0.7s
PESTR **Estremoz** 83.98 40 *e*P P 09 47 05.3 +0.7
15nm,1.5s
PTOM **Tomar** 84.02 39 *e*P P 09 47 05.9 +1.1
37nm,1.0s
PCAS **Casmilo, Conde** 84.27 39 *e*P P 09 47 06.9 +0.9
44nm,1.7s
LSZ **Lusaka** 84.42 104 *e*P P 09 47 08.9 +1.3
26nm,0.9s
PMRV **Marv??o** 84.47 40 *e*P P 09 47 07.4 +0.4
14nm,1.2s
PCBR **Castelo Branco** 84.70 40 *e*P P 09 47 08.2 +0.1
20nm,1.2s
PAHR **Pah Rah Range** 84.73 320 *e*P P 09 47 09.8 +1.3
8.6nm,1.1s
HLID **Hailey** 84.73 325 P P 09 47 09.7 +1.3
baz=136,SNR=24
HLID **Hailey** 84.73 325 *e*P P 09 47 09.8 +1.3
13nm,1.0s
MCMT **McKenzie Canyo** 84.88 327 *e*P P 09 47 10.9 +1.8
MTE **Manteigas** 85.04 39 *e*P P 09 47 10.2 +0.4
21nm,1.0s
MTE **Manteigas** 85.04 39 *e*P P 09 47 10.1 +0.4
MTE *e*PcP P 09 47 10.2 +0.4
PVIS **Viseu** 85.06 39 *e*P P 09 47 10.3 +0.4
9.4nm,1.4s
DLMT **Dillon** 85.15 328 *e*P P 09 47 11.0 +0.6
11nm,1.2s
MFID **Camas Ranch** 85.35 325 *e*P P 09 47 12.3 +1.0
6.3nm,1.1s
BEKR **Beckworth** 85.40 320 *e*P P 09 47 12.8 +1.1
5.2nm,1.0s
LRM **Limekiln Ridge** 85.42 328 *e*P P 09 47 12.8 +1.1
PVRL **Vila Real** 85.53 39 *e*P P 09 47 13.1 +1.0
20nm,0.8s
POLO **Lamas de Olo** 85.56 38 *e*P P 09 47 13.6 +1.3
10nm,1.1s
PCAB **Cabril** 85.66 38 *e*P P 09 47 13.6 +0.9
MVO **Moncorvo** 85.84 39 *e*P P 09 47 14.4 +0.8
21nm,2.2s
EGMT **Eagleton** 85.86 331 P P 09 47 13.8 +0.2
baz=140
EGMT **Eagleton** 85.86 331 *e*P P 09 47 14.2 +0.7
11nm,1.1s
PAB **San Pablo** 86.32 42 *e*P P 09 47 16.5 +0.5
18nm,1.6s
O03D **Paynes Creek** 86.51 319 P P 09 47 17.0 +0.1
baz=131
ESDC **Sonseca Array** 86.63 42 P P 09 47 17.6 +0.2
2.0nm,0.6s,baz=241,slow=5.1,SNR=11
ES19 **SONSECA Array** 86.68 42 *e*P P 09 47 17.6 0.0
MOD **Modoc Plateau** 86.72 321 *e*P P 09 47 19.2 +1.3
4.6nm,0.9s
BMO **Blue Mountains** 87.12 325 *e*P P 09 47 20.3 +0.7
16nm,2.0s
M04C **Macdoel** 87.50 320 P P 09 47 22.5 +1.0
baz=131
K05A **Summer Lake** 87.59 322 *e*P P 09 47 23.4 +1.4
29nm,1.5s
M02C **Callahan** 87.83 320 P P 09 47 24.1 +1.1
baz=130
F10A **Beach Ranch, E** 87.86 326 *e*P P 09 47 21.4 -1.6
9.7nm,0.9s
YBH **Yreka Blue Hor** 87.97 320 P P 09 47 23.4 -0.3
2.2nm,0.6s,baz=89,slow=5.1,SNR=7.5
J05D **Fort Rock, OR** 88.15 322 P P 09 47 25.9 +1.4
baz=131
FFC **Flin Flon** 88.28 339 *e*P P 09 47 25.3 +0.7
6.6nm,1.1s
L02D **Cave Junction,** 88.75 320 P P 09 47 28.4 +1.3
baz=130
I05D **Terrebonne, OR** 88.90 323 P P 09 47 28.9 +1.1
baz=131
FCC **Fort Churchill** 89.56 345 *e*P P 09 47 30.7 +0.3
6.9nm,0.8s
I03D **Drain, OR** 89.59 321 P P 09 47 32.2 +1.2
baz=130
EKA **Eskdalemuir Ar** 97.05 30 P Pdif 09 48 04.0 -0.7
1.8nm,0.7s,baz=224,slow=3.0,SNR=4.3
YKA **Yellowknife Ar** 98.45 339 P Pdif 09 48 10.8 0.0
1.0nm,0.6s,baz=128,slow=4.5,SNR=26
ILAR **Eielson Array** 111.76 333 PKiKP **PKiKP** 09 53 03.1 -0.3
0.2nm,0.4s,baz=106,slow=1.0,SNR=6.8
FINES **FINESS Array B** 113.38 32 PKiKP **PKiKP** 09 53 06.6 0.0
0.5nm,0.5s,baz=189,slow=3.5,SNR=4.1
TOLK **Toolik Lake Re** 113.86 336 P **PKiKP** 09 53 07.9 +0.4
baz=104
ARCES **ARCESS Array B** 114.96 23 PKP PKPdf 09 53 08.9 -0.6
0.7nm,0.7s,baz=262,slow=4.5,SNR=5.9
ARCES PKKPbc **PKKPbc** 10 03 48.0 -1.4
0.9nm,0.5s,baz=70,slow=4.1,SNR=12
KBZ **Khabaz** 119.69 53 PKP **PKPdf** 09 53 19.4 +0.2
1.4nm,0.6s,baz=221,slow=6.3,SNR=3.9
CTA **Charters Tower** 124.79 214 PKP **PKPdf** 09 53 29.9 -0.1
1.9nm,0.6s,baz=135,slow=1.4,SNR=4.2
AS01 **Alice Springs** 126.58 200 *e*PKPdf **PKPdf** 09 53 32.8 -0.5
AS31 **Alice Springs** 126.59 200 *e*PKPdf **PKPdf** 09 53 32.6 -0.8
ASAR **Alice Springs** 126.59 200 PKP **PKPdf** 09 53 32.9 -0.5
4.0nm,0.6s,baz=139,slow=1.7,SNR=59
ASAR pPKP **pPKPdf** 09 55 45.8 -1.7
1.4nm,0.8s,baz=148,slow=2.2,SNR=8.7
ASAR SKPbc SKPbc 09 55 55.5
0.3nm,0.6s,baz=153,slow=4.3,SNR=4.8
ASAR PKKPbc **PKKPbc** 10 03 06.2 -0.6
0.5nm,0.8s,baz=353,slow=3.5,SNR=4.6
WSAR **Wadi Sarin** 127.76 81 PKP **PKPdf** 09 53 35.2 -0.2
5.6nm,0.8s,baz=124,slow=23,SNR=6.9
BILL **Bilibino** 129.85 338 *e*PKPdf **PKPdf** 09 53 38.7 +0.6
WB2 **Warramunga Arr** 129.93 202 *e*PKPpre PKPpre 09 53 32.1
WB2 *e*PKPdf **PKPdf** 09 53 39.6 -0.1
WRA **Warramunga Arr** 129.94 202 PKP **PKPdf** 09 53 39.4 -0.4
1.7nm,0.4s,baz=164,slow=1.7,SNR=54
WRA pPKP **pPKPdf** 09 55 52.2 -1.8
2.0nm,0.9s,baz=174,slow=1.8,SNR=10
WRA SKPbc SKPbc 09 56 08.3 -0.8
2.1nm,0.5s,baz=156,slow=3.6,SNR=32
AKTO **Aktyubinsk** 130.35 46 PKP **PKPdf** 09 53 40.5 +1.0
1.1nm,0.3s,baz=291,slow=0.5,SNR=6.6
ABKAR **Akbulak array** 131.70 47 *e*PKPdf **PKPdf** 09 53 43.0 +0.9
FITZ **Fitzroy Crossi** 133.96 192 PKP **PKPdf** 09 53 47.8 +0.4
2.3nm,0.5s,baz=27,slow=4.5,SNR=19
BRVK **Borovoye** 137.30 40 *e*PKPdf **PKPdf** 09 53 53.6 +1.2
BVAR **Borovoye Array** 137.38 40 PKP **PKPdf** 09 53 53.3 +0.8
3.0nm,0.6s,baz=299,slow=3.1,SNR=14
BVAR pPKP **pPKPdf** 09 56 07.5 +0.6
1.0nm,0.6s,baz=298,slow=3.2,SNR=3.6
PETK **Petropavlovsk-** 140.31 322 PKhKP PKPpre 09 53 53.6
1.4nm,0.6s,baz=93,slow=2.2,SNR=3.3
AML **Almayashu** 142.16 56 P **PKPdf** 09 53 59.1 -3.0
SNR=7.9
NIL **Nilore** 142.28 70 *e*PKPpre PKPpre 09 53 59.5
AAK **Ala-Archa** 142.66 55 PKP **PKPdf** 09 54 01.0 -1.7
11nm,0.9s,baz=240,slow=3.4,SNR=21
AAK **Ala-Archa** 142.66 55 P **PKPdf** 09 54 01.0 -1.7
SNR=8.5
AAK **Ala-Archa** 142.66 55 *e*PKPpre **PKPdf** 09 54 01.0 -1.7
UCH **Uchtor** 142.74 55 P **PKPdf** 09 54 01.5 -1.7
SNR=18
CHMS **Chumysh** 142.78 54 P **PKPdf** 09 54 01.0 -1.7
SNR=6.1
KURBB **Kurchatov Arra** 142.95 41 PKP **PKPdf** 09 54 01.1 -1.6
23nm,0.8s,baz=294,slow=3.8,SNR=121
KURBB pPKP **pPKPdf** 09 56 17.0 -0.2
1.9nm,0.8s,baz=299,slow=3.3,SNR=5.6
KURK **Kurchatov** 142.97 41 *e*PKPpre **PKPdf** 09 54 01.1 -1.6
KURK pPKP **pPKPdf** 09 56 17.0 -0.2
KBK **Karagaybulak** 142.98 55 P **PKPdf** 09 54 02.4 -0.8
SNR=21
KZA **Kyzart** 143.31 56 P **PKPdf** 09 54 03.7 -0.4
SNR=7.6
TKM2 **Tokmak 2** 143.40 54 P PKPbc 09 54 03.2 +0.5
SNR=5.4
NRN **Naryn** 143.97 56 *e*PKPbc PKPbc 09 54 04.8 +0.1
ULHL **Ulahol** 144.00 55 P **PKPdf** 09 54 05.5 +0.4
SNR=14
KSH **Kashi** 144.23 60⇓*i*PKP PKPbc 09 54 04.7 -0.6
KSH pPKP pPKPdf 09 56 19.1 -0.9
KSH PP sPKPdf 09 57 13.2 -2.4
KSH PKS **PKSdf** 09 57 35.2 -5.9
KSH SKS **SKSdf** 10 00 12.7 -7.9
KSH SKKS **SKKSac** 10 03 17.1 -5.4
ZAA0 **Zalesovo Array** 144.63 33 *e*PKPdf PKPbc 09 54 06.2 +0.3
ZALV **Zalesovo Beam** 144.63 33 PKP PKPbc 09 54 06.2 +0.4
24nm,0.5s,baz=292,slow=4.1,SNR=76
ZALV pPKP pPKPdf 09 56 19.3 -0.7
2.8nm,0.7s,baz=306,slow=3.5,SNR=3.6
KDJ **Kajisay** 144.71 55 *e*PKPdf PKPbc 09 54 07.1 +0.4
LEM **Lembang** 144.88 164 PKP **PKPab** 09 54 08.9 +0.2

60nm,0.6s,baz=118,slow=15,SNR=5.1
TARG Taragay, Kyrgy 145.24 55 *e*PKPdf **PKPdf 09 54 08.3 +0.8**
TARG *e*PKPbc **PKPbc 09 54 09.5 +0.9**
PRZ Przheval'sk 145.51 54 *e*PKPdf **PKPbc 09 54 10.1 +1.0**
MAKZ Makanchi 146.58 45 *e*PKPdf **PKPdf 09 54 10.0 +0.9**
MK31 Makanchi Array 146.78 45 *e*PKPdf **PKPdf 09 54 10.4 +1.0**
MK31 *e*PKPbc **PKPbc 09 54 13.1 +0.8**
MKAR Makanchi Array 146.78 45 PKPbc **PKPdf 09 54 10.2 +0.8**
19nm,0.6s,baz=284,slow=1.9,SNR=97
MKAR pPKPbc pPKPab 09 56 24.3 -0.2
2.4nm,0.7s,baz=299,slow=4.5,SNR=7.7
MKAR Makanchi Array 146.78 45 *e*PKPdf **PKPdf 09 54 10.4 +1.0**
MKAR *e*PKPbc **PKPbc 09 54 13.1 +0.8**
MKAR pPKPbc pPKPab 09 56 24.3 -0.2
MK01 Makanchi Array 146.80 45 *e*PKPdf **PKPdf 09 54 10.2 +0.8**
MK01 *e*PKPbc **PKPbc 09 54 13.1 +0.8**
PYUN Piuthan 150.23 81 *e*P **PKPdf 09 54 16.1 +0.3**
KOLN Koldanda 150.73 81 *e*P **PKPdf 09 54 16.8 +0.3**
DANN Dangsing 150.93 80 *e*P **PKPdf 09 54 17.7 +0.8**
WMQ Urumqi 151.49 47 P **PKPdf 09 54 17.2 +0.2**
GKN Gorkha 151.66 81 *e*P **PKPdf 09 54 17.8 -0.1**
DMN Daman 152.03 82 *e*P **PKPdf 09 54 18.2 -0.4**
KKN Kakani 152.21 82 *e*P **PKPdf 09 54 18.7 -0.1**
PKIN Phulchoki 152.28 82 *e*P **PKPdf 09 54 19.0 +0.1**
GUN Gumba 152.75 82 *e*P **PKPdf 09 54 20.1 +0.4**
RAMN Ramite 153.27 84 *e*P **PKPdf 09 54 20.9 +0.6**
KLR Kul'dur 155.28 336 PKP **PKPdf 09 54 22.1 +0.1**
0.2nm,0.8s,baz=350,slow=2.0,SNR=5.5
SONA1 Songino Array 158.05 19 *e*PKPdf **PKPdf 09 54 26.3 +0.5**
SONA1 *e*PKPab **PKPab 09 55 03.7 +0.5**
SONM Songino Array 158.06 19 PKP **PKPdf 09 54 26.5 +0.6**
2.8nm,0.9s,baz=246,slow=1.4,SNR=9.6
SONM PKPab **PKPab 09 55 04.0 +0.8**
1.5nm,0.6s,baz=322,slow=5.7,SNR=6.3
ULN Ulaanbaatar 158.22 18 *e*PKPdf **PKPdf 09 54 26.5 +0.5**
ULN *e*PKPab **PKPab 09 55 04.9 +1.0**
HHC Hu-ho-hao-te 165.92 16 *e*P **PKPdf 09 54 37.3 +3.5**
KSRS Korea Array 166.19 319 PKP **PKPdf 09 54 33.6 -0.3**
0.8nm,0.8s,baz=333,slow=0.6,SNR=4.6
KSRS PKPab **PKPab 09 55 39.9 +0.8**
0.3nm,0.3s,baz=67,slow=1.5,SNR=3.8
KSAR Wonju Array Be 166.22 319 PKP **PKPdf 09 54 33.6 -0.4**
KSAR PKPab **PKPab 09 55 39.9 +0.6**
CD2 Chengdu 168.18 70 PKP **PKPdf 09 54 34.7 -1.0**

*IDC **06** 09:36:45.2±1.2,22°.27N×121°.40E,h0km,mb3.6/7, mb1 3.7/8,mb1mx3.4/68,mbtmp3.6/8,ML3.4/1,MS2.8/1, Ms1 2.8/1,ms1mx2.3/60,Error ellipse: s-maj=70.0km s-min=19.1km az=66.0*
*ISCJB **06** 09:36:46.7±0.5,22°.33N±0°.02×121°.55E±0°.02,h18km±4km, mb3.5/7,Error ellipse: s-maj=3.9km s-min=3.3km az=139.7*
*JMA **06** 09:36:47.2±0.1,22°.48N×121°.55E,h7km±3km,M4.0*
*TAP **06** 09:36:47.9,22°.41N×121°.38E,h8km,ML3.8,C*
ISC 06 09:36:47.1±1.1,22°.42N±0°.02×121°.49E±0°.03,h11km±8km, n67,σ0°73/98,mb3.6/7,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWH	**Lutao**	**0.29**	**358**	P	**Pb**	**09 36 54.6**	**+0.2**
TWH	baz=19			*e*S	**Sb**	**09 36 59.3**	**0.0**
LAY	**Lan-yu**	**0.38**	**171**	P	**Pb**	**09 36 57.0**	**+1.2**
LAY	baz=156			*e*S	**Sb**	**09 37 03.1**	**+1.4**
TTN	**Taitung**	**0.46**	**317**	*e*P	**Pb**	**09 36 57.4**	**+0.2**
ECL	baz=328 **Taimali**	**0.53**	**290**	P	**Pg**	**09 36 57.6**	**+0.3**
ECL	baz=295			*e*S	**Sg**	**09 37 04.5**	**+0.2**
TWGBT	**Beinan**	**0.55**	**317**	P	**Pb**	**09 36 58.6**	**-0.1**
TWGBT	baz=325			*e*S	**Sb**	**09 37 06.5**	**-0.1**
TWG	**Pinlang**	**0.56**	**317**	P	**Pb**	**09 36 58.6**	**-0.2**
TWG	baz=325			*e*S	**Sb**	**09 37 06.5**	**-0.3**
EAST	**Anshuo**	**0.59**	**267**	P	**Pg**	**09 36 58.5**	**-0.1**
EAST	baz=267			S	**Sg**	**09 37 06.0**	**-0.5**
TWKBT	**Hengchun**	**0.78**	**233**	P	**Pb**	**09 37 02.4**	**-0.3**
TWKBT	baz=228			S	**Sg**	**09 37 12.4**	**-0.1**
TWK1	**Hengchun**	**0.79**	**233**	P	**Pb**	**09 37 02.4**	**-0.4**
TWK1	baz=228			*e*S	**Sb**	**09 37 13.0**	**-0.4**
FULB	**Fuli**	**0.80**	**347**	*e*P	**Pb**	**09 37 03.3**	**+0.3**
FULB	baz=354			*e*S	**Sb**	**09 37 14.0**	**+0.1**
SCZT	**Fangliau**	**0.80**	**267**	P	**Pg**	**09 37 02.2**	**-0.4**
HEN	baz=267 **Hengchun**	**0.81**	**240**	*e*P	**Pg**	**09 37 02.5**	**-0.1**
HEN	baz=235			S	**Sb**	**09 37 14.0**	**0.0**
MASBT	**Mashibuluo**	**0.81**	**284**	*e*P	**Pg**	**09 37 02.2**	**-0.6**
MASBT	baz=286			S	**Sg**	**09 37 13.2**	**-0.2**
SSD	**Sandimen**	**0.86**	**293**	P	**Pg**	**09 37 03.1**	**-0.5**
ELDTW	baz=296 **Lidau**	**0.88**	**331**	P	**Pb**	**09 37 04.4**	**-0.1**
TWF1	baz=336 **Yuli**	**0.95**	**349**	P	**Pn**	**09 37 06.2**	**-0.2**
TWF1	baz=355			*e*S	**Sn**	**09 37 20.2**	**+0.3**
SGLT	**Jiouru**	**0.97**	**289**	*e*P	**Pn**	**09 37 06.4**	**-0.2**
YULB	baz=291 **Yu-li**	**0.99**	**350**	P	**Pn**	**09 37 07.1**	**+0.2**
YULB	baz=355			S	**Sn**	**09 37 21.6**	**+0.8**
STYT	**Tauyuan**	**1.00**	**318**	*e*P	**Pg**	**09 37 05.7**	**-0.8**
WLCH	baz=322 **Liuqiu**	**1.03**	**267**	P	**Pg**	**09 37 06.4**	**-0.4**
TWM1	baz=266 **Shoushan**	**1.06**	**293**	*e*P	**Pn**	**09 37 08.4**	**+0.4**
SGST	baz=295 **Jiashian**	**1.07**	**309**	P	**Pb**	**09 37 07.5**	**-0.1**
EHY	baz=312 **Hungye**	**1.10**	**352**	P	**Pn**	**09 37 08.9**	**+0.6**
EHY	baz=357			S	**Sn**	**09 37 25.1**	**+1.5**
WTP	**Ta-pu**	**1.15**	**316**	P	**Pb**	**09 37 09.1**	**0.0**
WTP	baz=319			*e*S	**Sn**	**09 37 26.1**	**+1.1**
CHN1	**Nanshi**	**1.17**	**311**	P	**Pg**	**09 37 09.7**	**+0.1**
CHN1	baz=314			*e*S	**Sn**	**09 37 27.2**	**+1.8**
TPUB	**Ta-pu**	**1.18**	**318**	P	**Pg**	**09 37 09.7**	**-0.1**
TPUB	baz=322			*e*S	**Sn**	**09 37 27.4**	**+1.7**
CHN4	**Tsaushan**	**1.24**	**319**	P	**Pg**	**09 37 10.9**	**0.0**
CHN4	baz=322			*e*S	**Sn**	**09 37 28.7**	**+1.5**
TWK	**Hsinying**	**1.25**	**313**	P	**Pb**	**09 37 10.8**	**+0.1**
TWK	baz=316			*e*S	**Sn**	**09 37 29.5**	**+2.1**
ALS	baz=316 **Alishan**	**1.26**	**330**	P	**Pb**	**09 37 11.2**	**+0.2**
VWDT	baz=334 **VWDT**	**1.37**	**347**	*e*P	**Pn**	**09 37 12.2**	**+0.1**
CHN5	baz=350 **Tsauling**	**1.39**	**328**	P	**Pb**	**09 37 13.1**	**-0.1**
CHN5	baz=331			*e*S	**Sg**	**09 37 33.2**	**+1.2**
ESL	baz=331 **Shilin**	**1.39**	**358**	P	**Pg**	**09 37 13.8**	**0.0**
ESL	baz=2.0			*e*S	**Sg**	**09 37 32.1**	**+0.2**
CHN2	**Minshiung**	**1.45**	**320**	*e*P	**Pg**	**09 37 14.7**	**-0.3**
CHN2	baz=323			*e*S	**Sg**	**09 37 34.4**	**+0.6**
SSLB	baz=323 **Suanglung**	**1.45**	**340**	P	**Pg**	**09 37 14.8**	**-0.2**
SSLB	baz=343			*e*S	**Sg**	**09 37 33.7**	**-0.1**
WDLH	baz=343 **Douliu**	**1.54**	**326**	*e*P	**Pb**	**09 37 15.1**	**-0.5**
WDLH	baz=328			*e*S	**Sn**	**09 37 34.3**	**-0.2**
SMLT	baz=328 **Sun Moon Lake**	**1.56**	**340**	P	**Pb**	**09 37 16.2**	**+0.2**
SMLT	baz=343			*e*S	**Sg**	**09 37 38.0**	**+0.7**
TYC	baz=343 **Yuchr**	**1.59**	**339**	P	**Pb**	**09 37 16.9**	**+0.4**
TYC	baz=342			*e*S	**Sb**	**09 37 37.0**	**+0.4**
WNT	baz=342 **Mingjian**	**1.63**	**333**	P	**Pb**	**09 37 17.7**	**+0.5**
WNT	baz=336			*e*S	**Sb**	**09 37 37.8**	**0.0**
CHGB	baz=336 **Renai**	**1.66**	**350**	*e*P	**Pb**	**09 37 17.5**	**-0.3**
NACB	baz=353 **Ninganchiao**	**1.75**	**3**	*e*P	**Pn**	**09 37 16.3**	**-1.1**
NNS	baz=6.0 **Nan Shan**	**2.02**	**357**	*e*P	**Pn**	**09 37 21.6**	**+0.5**
NSK	baz=359 **Sanguang**	**2.25**	**357**	*e*P	**Pn**	**09 37 25.9**	**+1.6**
NSK	baz=359			*e*S	**Sb**	**09 37 55.3**	**-0.5**
JYNG	**Yonagunijimaku**	**2.43**	**33**	P	**Pn**	**09 37 27.5**	**+0.8**
JYNG				S	**Sn**	**09 37 55.5**	**-0.9**
YOJ	**Yonaguni jima**	**2.47**	**34**	P	**Pn**	**09 37 28.4**	**+1.1**
YOJ				S	**Sn**	**09 37 57.8**	**+0.4**
HATJ	**Hateruma jima**	**2.69**	**52**	P	**Pn**	**09 37 30.9**	**+0.7**
HATJ				S	**Sn**	**09 38 02.2**	**-0.5**
IRIF	**Iriomote-Funau**	**2.81**	**47**	P	**Pn**	**09 37 33.1**	**+1.2**
IRIF				*e*S	**Sn**	**09 38 06.0**	**+0.2**
JKRS	**Kuro-shima**	**2.94**	**51**	P	**Pn**	**09 37 34.9**	**+1.1**
JKRS				S	**Sn**	**09 38 08.6**	**-0.5**
JIJ	**Ishigaki jima**	**3.12**	**51**	P	**Pn**	**09 37 36.8**	**+0.7**
JIJ				*e*S	**Sn**	**09 38 12.3**	**-1.1**
JISG	**Ishigakijimahi**	**3.38**	**50**	P	**Pn**	**09 37 40.1**	**+0.4**
JISG				*e*S	**Sn**	**09 38 18.7**	**-1.0**
JTJ	**Tarama**	**3.69**	**52**	P	**Pn**	**09 37 44.8**	**+0.8**
JTJ				S	**Sn**	**09 38 27.0**	**-0.5**
JIRB	**Irabujima**	**4.15**	**54**	P	**Pn**	**09 37 51.1**	**+0.8**
JIRB				S	**Sn**	**09 38 38.6**	**-0.2**
JOGS	**Gusukube**	**4.29**	**56**	P	**Pn**	**09 37 53.6**	**+1.4**
JOGS				S	**Sn**	**09 38 42.7**	**+0.5**
DAV	**Davao City (W)**	**15.76**	**165**	LR	LR	09 45 55.6	
	comp=Z,36nm,18.7s,baz=7.5,slow=35						
KSRS	**Korea Array**	**15.98**	**19**	Pn	**P**	**09 40 34.2**	**-1.2**
	0.2nm,0.3s,baz=196,slow=11,SNR=5.6						
SONM	**Songino Array**	**28.10**	**338**	P	**P**	**09 42 38.9**	**-0.1**
	0.4nm,0.5s,baz=158,slow=9.8,SNR=2.3						
MKAR	**Makanchi Array**	**39.81**	**317**	P	**P**	**09 44 20.7**	**+0.4**
	1.8nm,0.8s,baz=116,slow=9.8,SNR=14						
ZALV	**Zalesovo Beam**	**41.88**	**328**	P	**P**	**09 44 37.3**	**+0.2**
	0.7nm,0.5s,baz=141,slow=7.1,SNR=2.5						
H11N1	**WAKE ISLAND Hy**	**42.34**	**85**	T	T	10 30 11.0	
	baz=282,slow=75,SNR=16						
H11N2	**WAKE ISLAND Hy**	**42.34**	**85**	T	T	10 29 53.8	
	baz=282,slow=75,SNR=17						
H11N3	**WAKE ISLAND Hy**	**42.35**	**85**	T	T	10 30 12.0	
	baz=282,slow=75,SNR=15						
H11S3	**WAKE ISLAND Hy**	**42.41**	**87**	T	T	10 30 01.9	
	baz=283,slow=75,SNR=26						
H11S1	**WAKE ISLAND Hy**	**42.42**	**87**	T	T	10 30 07.2	
	baz=283,slow=75,SNR=19						
H11S2	**WAKE ISLAND Hy**	**42.43**	**87**	T	T	10 30 11.8	
	baz=283,slow=75,SNR=27						
KURBB	**Kurchatov Arra**	**43.64**	**321**	P	**P**	**09 44 52.0**	**+0.4**
	0.5nm,0.6s,baz=111,slow=9.4,SNR=3.4						
WRA	**Warramunga Arr**	**43.93**	**162**	P	**P**	**09 44 52.4**	**-1.7**
	0.3nm,0.7s,baz=341,slow=7.6,SNR=4.4						
ASAR	**Alice Springs**	**47.37**	**164**	P	**P**	**09 45 20.6**	**-0.7**
	0.2nm,0.3s,baz=340,slow=7.1,SNR=5.4						
BVAR	**Borovoye Array**	**49.22**	**322**	P	**P**	**09 45 35.9**	**+0.6**
	0.6nm,0.5s,baz=98,slow=6.5,SNR=2.8						

DJA 06 09:37:58.9±1.6,0°.5±4°.×12°.3E±°,h12km±14km,M3.8/7, mb3.9/1,MLv3.7/7,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**1.57**	**295**	P	Pn	09 38 26.1	-0.5
MRSI				S	Sn	09 38 46.1	-0.8
APSI	**Ampana**	**1.85**	**248**	P	Pn	09 38 31.2	+0.7
APSI				S	Sb	09 38 55.0	-0.8
SANI	**Sanana**	**3.21**	**125**	P	Pn	09 38 48.6	-0.5
MPSI	**Mapaga**	**3.50**	**279**	P	Pn	09 38 53.0	-0.2
LBMI	**Labuha**	**4.16**	**96**	P	Pn	09 39 02.4	+0.1
TTSI	**Tana Toraja**	**4.53**	**231**	P	Pn	09 39 07.2	-0.1
SPSI	**Sidrap Palu**	**5.18**	**224**	P	Pn	09 39 16.1	-0.2

IDC 06 09:40:14.3±4.7,15°.90S×176°.23W,h0km,mb4.2/4, mb1 4.4/4,mb1mx3.7/51,mbtmp4.2/4,Error ellipse: s-maj=165.9km s-min=93.7km az=157.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.43**	**240**	P	P	09 48 03.0	+0.1
	1.0nm,0.4s,baz=90,slow=7.5,SNR=4.7						
WRA	**Warramunga Arr**	**47.08**	**257**	P	P	09 48 48.0	-0.4
	0.4nm,0.3s,baz=85,slow=8.0,SNR=32						
ASAR	**Alice Springs**	**47.37**	**252**	P	P	09 48 50.2	-0.4
	6.3nm,0.5s,baz=88,slow=8.0,SNR=118						
ASAR				PcP	PcP	09 50 21.3	-0.2
	0.4nm,0.9s,baz=90,slow=3.7,SNR=2.9						
FITZ	**Fitzroy Crossi**	**55.44**	**259**	P	P	09 49 51.4	+0.2
	2.8nm,0.8s,baz=96,slow=9.2,SNR=3.8						

MEX 06 09:42:20.0±1.3,17°.11N×101°.42W,h16km±70km,MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.50**	**355**	*i* P	Pg	09 42 28.4	-1.5
ZIIG				*e*S	Sg	09 42 34.0	-2.6
CAIG	**El Cayaco**	**1.10**	**93**	*e*P	Pb	09 42 36.7	-4.1
CAIG				*i* S	Sb	09 42 49.7	-5.2
ACX	**Acapulco**	**1.51**	**99**	*i* P	Pn	09 42 46.4	-0.1
ACX				*i* S	Sn	09 43 03.0	-2.9
ARIG	**Puente Sto Nin**	**1.55**	**41**	*e*P	Pn	09 42 44.4	-2.6
ARIG				*e*S	Sn	09 42 59.2	-7.6
MEIG	**Mezcala**	**1.90**	**64**	*e*P	Pn	09 42 50.6	-1.2
MEIG				*e*S	Sn	09 43 08.6	-6.9
TLIG	**Tlapa**	**2.76**	**80**	*e*P	Pn	09 42 59.0	-4.8
TLIG				*e*S	Sn	09 43 30.5	-6.4

SJA 06 09:48:38.1±0.6,31°.43S×69°.50W,h109km±4km,ML2.5, MW3.6,San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLS	**Leoncito**	**0.41**	**155**	*i* P	Pn	09 48 55.9	+1.2
RTLS				*i* S	Sn	09 49 08.9	+1.8
RTLS				IAML		09 49 09.2	
	comp=Z,109nm,0.2s						
AUSP	**Uspallata**	**0.80**	**173**	*i* P	Pn	09 48 58.7	+1.1
AUSP				*i* S	Sn	09 49 13.8	+1.6
RTCV	**Cerro Valdivia**	**0.93**	**118**	*i* P	Pn	09 48 59.0	+0.5
RTCV				*i* S	Sn	09 49 15.4	+1.5
AMOG	**MOGNA**	**0.99**	**61**	*i* P	Pn	09 49 00.2	+1.0
AMOG				*i* S	Sn	09 49 15.9	+0.8
ASAL	**Salagasta**	**1.29**	**154**	*i* P	Pn	09 49 03.5	+1.0
ASAL				*i* S	Sn	09 49 22.0	+1.0
ARCO	**CERRO ARCO**	**1.49**	**161**	*i* P	Pn	09 49 06.1	+1.2
ARCO				*i* S	Sn	09 49 26.6	+1.3
ARCO				IAML		09 49 28.3	
	comp=Z,47nm,0.3s						

MEX 06 09:55:14.4±0.5,17°.26N×101°.33W,h12km±13km,MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.36**	**340**	*i* P	Pg	09 55 21.2	-0.5
ZIIG				*e*S	Sg	09 55 26.6	0.0
CAIG	**El Cayaco**	**1.04**	**102**	*e*P	Pb	09 55 30.9	-3.4
CAIG				*e*S	Sb	09 55 43.6	-4.4
ARIG	**Puente Sto Nin**	**1.38**	**43**	*i* P	Pn	09 55 37.2	-2.3
ARIG				*e*S	Sn	09 55 52.1	-5.6
ACX	**Acapulco**	**1.46**	**105**	*e*P	Pn	09 55 39.0	-1.7
ACX				*e*S	Sn	09 55 57.0	-2.8
MEIG	**Mezcala**	**1.76**	**68**	*e*P	Pn	09 55 42.1	-2.7
MEIG				*e*S	Sn	09 56 02.7	-4.5
TLIG	**Tlapa**	**2.66**	**83**	*e*P	Pn	09 55 53.7	-3.5
TLIG				*e*S	Sn	09 56 25.8	-3.7

NNC 06 09:58:18.6±2.4,38°.41N×70°.47E,h0km,mb3.5,mpv3.1, 5C-5D,Error ellipse: s-maj=19.1km s-min=14.3km az=47.0,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**2.85**	**55**	⇓Pn	Pn	09 59 05.7	+0.1
SFK	7.1nm,0.5s			⇓Lg	Lg	09 59 46.4	
MNAS	**Manas**	**4.36**	**20**	⇑Pn	Pn	09 59 26.4	+0.2
MNAS	1.5nm,0.4s			⇓Sn	Sn	10 00 20.4	+2.6
KK31	**Karatay Array**	**4.69**	**0**	⇑Pn	Pn	09 59 29.8	-0.9
KK31	0.8nm,0.4s,baz=188,slow=13,SNR=8.9			⇓Pg	Pb	09 59 42.7	+1.0
KK31	1.0nm,0.4s,baz=187,slow=16,SNR=4.0			⇓Sn	Sn	10 00 26.8	+1.0
KK31	1.4nm,0.5s			⇑Lg	Lg	10 00 45.4	
AAK	7.2nm,0.8s,baz=177,slow=30,SNR=6.9 **Ala-Archa**	**5.22**	**35**	⇑Pn	Pn	09 59 39.1	+1.0
AAK	3.9nm,0.8s			⇑Sn	Sn	10 00 40.8	+1.7
	4.6nm,0.9s						

*ISCJB **06** 10:01:43.0±0.3,31°.30S±0°.04×68°.87W±0°.07,h110km, mb4.0/11,Error ellipse: s-maj=8.8km s-min=5.1km az=167.1*
*NEIC **06** 10:01:42.8±0.9,31°.38S×68°.89W,h105km±8km, MD4.3(SJA),Error ellipse: s-maj=12.5km s-min=7.9km az=65.0*
NEIC Felt [III] at San Juan.
*IDC **06** 10:01:42.9±3.9,31°.36S×68°.91W,h104km±33km,mb3.8/11, mb1 3.9/14,mb1mx3.7/35,mbtmp4.1/14,Error ellipse: s-maj=24.2km s-min=15.0km az=78.0*
*SJA **06** 10:01:43.0±0.7,31°.37S×69°.01W,h114km±5km,ML4.0, MW4.3*
ISC 06 10:01:43.5±0.5,31°.36S±0°.05×68°.90W±0°.07,h110km,n42, σ1°.05/51,mb4.0/11,San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZON	**Zonda**	**0.27**	**135**	*i* P	**Pn**	**10 02 00.2**	**+1.0**
SJA	**San Juan**	**0.34**	**121**	*i* P	**Pn**	**10 02 00.8**	**+1.3**
SJA				IAML		10 02 00.9	
	comp=Z,4μm,0.2s						
RTLL	**Cerro Villicun**	**0.36**	**86**	*i* P	**Pn**	**10 02 00.5**	**+0.9**
AMOG	**MOGNA**	**0.54**	**40**	*i* P	**Pn**	**10 02 02.0**	**+1.2**
RTLS	**Leoncito**	**0.56**	**217**	*i* P	**Pn**	**10 02 01.4**	**+0.3**
RTLS				IAML		10 02 01.5	
	comp=Z,3μm,0.2s						
RTLS				*i* S	**Sn**	**10 02 15.1**	**+0.8**
RTCV	**Cerro Valdivia**	**0.59**	**149**	*i* P	**Pn**	**10 02 02.1**	**+1.0**
AUSP	**Uspallata**	**0.96**	**205**	*i* P	**Pn**	**10 02 05.0**	**+0.4**
ASAL	**Salagasta**	**1.23**	**177**	*i* P	**Pn**	**10 02 08.2**	**+0.9**
AROD	**Rodeo**	**1.28**	**337**	*i* P	**Pn**	**10 02 09.2**	**+1.1**
ARCO	**CERRO ARCO**	**1.48**	**181**	*i* P	**Pn**	**10 02 11.1**	**+0.8**
ARCO				*i* S	**Sn**	**10 02 31.5**	**+0.9**
ARCO				IAML		10 02 33.8	
	comp=Z,2μm,0.3s						
ACAN	**Cantantal**	**1.72**	**123**	*i* P	**Pn**	**10 02 14.7**	**+1.7**
AAGR	**Agrelo**	**1.73**	**178**	*i* P	**Pn**	**10 02 13.8**	**+0.7**
AVIZ	**Vizcacheras**	**2.14**	**171**	*i* P	**Pn**	**10 02 18.9**	**+0.6**
LCO	**Las Campanas**	**2.81**	**326**	*e*Pn	**Pn**	**10 02 26.5**	**-0.7**
LCO				*e*Sn	**Sn**	**10 02 59.5**	**-1.4**
MRA	**San Martin**	**2.91**	**112**	*i* P	**Pn**	**10 02 29.7**	**+1.3**
TRQA	**Tornquist**	**8.78**	**141**	*e*Pn	**Pn**	**10 03 46.8**	**-0.7**
	comp=Z,52nm,0.8s						
TRQA				*e*Sn	**Sn**	**10 05 20.9**	**-3.8**
CPUP	**Villa Florida**	**11.31**	**67**	P	**Pn**	**10 04 19.8**	**-2.0**
	comp=Z,0.4nm,0.3s,baz=238,slow=9.8,SNR=8.7						
LPAZ	**La Paz**	**15.02**	**3**	P	**Pn**	**10 05 11.3**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=170,slow=7.7,SNR=5.9						
SIV	**San Ignacio**	**16.88**	**27**	P	**P**	**10 05 33.5**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=220,slow=10,SNR=14						
VNA3	**Neumayer Olymp**	**50.84**	**159**	P	**P**	**10 10 32.9**	**+0.5**
SNAA	**Sanae**	**53.06**	**159**	P	**P**	**10 10 48.9**	**0.0**
SNAA	**Sanae**	**53.06**	**159**	P	**P**	**10 10 49.3**	**+0.3**
	comp=Z,2.6nm,0.8s,baz=275,slow=10,SNR=14						
QSPA	**South Pole Qui**	**58.88**	**180**	P	**P**	**10 11 30.9**	**+0.3**
	comp=Z,3.7nm,0.6s,baz=121,slow=1.5,SNR=19						
TXAR	**Lajitas Array**	**68.82**	**328**	P	**P**	**10 12 36.4**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=156,slow=8.9,SNR=10.0						
DBIC	**Dimbokro**	**71.81**	**70**	P	**P**	**10 12 55.0**	**+0.5**
	comp=Z,8.2nm,1.1s,baz=183,slow=9.7,SNR=2.7						
ANMO	**Albuquerque**	**74.82**	**329**	P	**P**	**10 13 12.8**	**+0.9**
	comp=Z,0.8nm,0.7s,baz=144,slow=17,SNR=3.5						
MAW	**Mawson**	**74.94**	**163**	P	**P**	**10 13 12.2**	**+0.2**
	comp=Z,1.8nm,0.8s,baz=260,slow=22,SNR=6.0						
JFWS	**Jewell Farm**	**76.46**	**344**	*e*P	**P**	**10 13 20.1**	**-0.8**
KOWA	**Kowa**	**77.12**	**64**	P	**P**	**10 13 25.4**	**+0.2**
	comp=Z,0.9nm,0.3s,baz=258,slow=9.3,SNR=3.4						
TORD	**Torodi Ar. Bea**	**80.80**	**69**	P	**P**	**10 13 45.3**	**0.0**
	comp=Z,1.4nm,0.6s,baz=243,slow=5.1,SNR=12						
TORD				pP	**pP**	**10 14 15.3**	**+1.8**
	comp=Z,0.5nm,0.6s,baz=282,slow=6.7,SNR=2.3						
PDAR	**Pinedale Array**	**82.67**	**331**	P	**P**	**10 13 54.5**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=172,slow=3.0,SNR=3.9						
NVAR	**Mina Array Bea**	**83.30**	**323**	P	**P**	**10 13 58.9**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=141,slow=5.8,SNR=5.8						
ULM	**Lac du Bonnet**	**84.69**	**343**	P	**P**	**10 14 04.0**	**-0.7**
	comp=Z,1.7nm,0.5s,baz=209,slow=2.2,SNR=5.3						
YKA	**Yellowknife Ar**	**100.44**	**340**	P	**Pdif**	**10 15 16.3**	**-1.2**
	comp=Z,0.1nm,0.5s,baz=141,slow=5.2,SNR=3.7						
ASAR	**Alice Springs**	**121.09**	**205**	PKP	**PKPdf**	**10 20 21.9**	**-2.0**
	comp=Z,0.1nm,0.4s,baz=129,slow=2.0,SNR=4.9						
WRA	**Warramunga Arr**	**124.33**	**207**	PKP	**PKPdf**	**10 20 28.6**	**-1.5**
	comp=Z,0.5nm,0.6s,baz=151,slow=1.9,SNR=13						
AAK	**Ala-Archa**	**148.90**	**58**	PKPbc	**PKPbc**	**10 21 19.1**	**+0.6**
	comp=Z,3.6nm,0.7s,baz=176,slow=2.1,SNR=9.1						
AAK	**Ala-Archa**	**148.90**	**58**	PKPbc	**PKPbc**	**10 21 19.1**	**+0.6**
AAK				*e*PKPab	**PKPab**	**10 21 23.4**	**+0.6**
KURBB	**Kurchatov Arra**	**149.14**	**42**	PKPbc	**PKPbc**	**10 21 18.6**	**+0.1**
	comp=Z,1.1nm,0.6s,baz=292,slow=3.2,SNR=7.3						
KURK	**Kurchatov**	**149.15**	**42**	PKPbc	**PKPbc**	**10 21 18.6**	**+0.1**
ZALV	**Zalesovo Beam**	**150.58**	**32**	PKPbc	**PKPbc**	**10 21 21.8**	**-0.1**
	comp=Z,5.4nm,0.8s,baz=294,slow=3.5,SNR=12						
ZALV				pPKPbc	**pPKPbc**	**10 21 52.4**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=289,slow=4.5,SNR=2.5						

az=24.5
*GUC **06** 10:09:55.1±0.5, 22°.66S×68°.86W, h110km±4km, ML3.6*
*IDC **06** 10:09:55.2±3.6, 22°.71S×68°.45W, h97km±32km, mb3.4/5, mb1 3.5/7, mb1mx3.3/35, mbtmp3.7/7, Error ellipse: s-maj=32.1km s-min=24.1km az=86.0*

ISC 06 10:09:54.6±0.9, 22°.67S±0°.06×68°.61W±0°.09, h94km±9km, n16, σ1s00/23, mb3.7/5, 6C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB06	**IPOC Station P**	**0.89**	**267**	⇑*i*P	**Pn**	**10 10 13.7**	**+0.1**
PB06				*e*S	**Sn**	**10 10 27.9**	**0.0**
PB06				IAML		10 10 29.3	
	comp=N,2μm,0.1s						
PB15	**IPOC Station P**	**0.96**	**236**	⇑*i*P	**Pn**	**10 10 15.1**	**+0.7**
PB15				*e*S	**Sn**	**10 10 29.9**	**+0.6**
PB04	**IPOC Station P**	**1.46**	**283**	⇑*i*P	**Pn**	**10 10 19.9**	**-0.4**
PB04				*e*S	**Sn**	**10 10 38.5**	**-1.2**
PB04				IAML		10 10 40.7	
	comp=N,2μm,0.1s						
PB07	**IPOC Station P**	**1.51**	**308**	⇑*i*P	**Pn**	**10 10 21.0**	**+0.1**
PB07				*e*S	**Sn**	**10 10 40.0**	**-0.8**
PB07				IAML		10 10 41.3	
	comp=E,2μm,0.4s						
PB02	**IPOC Station P**	**1.80**	**318**	⇑*i*P	**Pn**	**10 10 24.5**	**0.0**
PB02				*e*S	**Sn**	**10 10 46.7**	**-0.4**
PB02				IAML		10 10 51.9	
	comp=E,1μm,0.3s						
PB01	**IPOC Station P**	**1.81**	**333**	⇑*e*P	**Pn**	**10 10 25.1**	**+0.5**
PB01				*e*S	**Sn**	**10 10 48.3**	**+0.8**
PB01				IAML		10 10 48.9	
	comp=E,899nm,0.3s						
PB10	**IPOC Station P**	**1.98**	**244**	*e*P	**Pn**	**10 10 25.6**	**-1.1**
PB10				IAML		10 10 49.1	
	comp=E,289nm,0.3s						
LPAZ	**La Paz**	**6.36**	**4**	P	**Pn**	**10 11 28.4**	**+2.0**
	comp=E,0.3nm,0.3s,baz=234,slow=2.6,SNR=23						
SIV	**San Ignacio**	**9.73**	**48**	P	**Pn**	**10 12 10.7**	**-1.0**
	comp=E,0.5nm,0.3s,baz=250,slow=9.9,SNR=28						
SIV				S	**Sn**	**10 13 57.2**	**-2.0**
	comp=E,0.1nm,0.3s,baz=285,slow=19,SNR=1.8						
SNAA	**Sanae**	**61.09**	**161**	P	**P**	**10 19 59.1**	**+0.7**
	comp=E,0.8nm,0.6s,baz=287,slow=11,SNR=4.8						
TXAR	**Lajitas Array**	**61.74**	**325**	P	**P**	**10 20 05.0**	**+1.6**
	comp=E,0.1nm,0.4s,baz=151,slow=5.8,SNR=2.5						
QSPA	**South Pole Qui**	**67.53**	**180**	P	**P**	**10 20 39.8**	**-0.8**
	comp=E,1.0nm,0.5s,baz=144,slow=2.9,SNR=7.0						
TORD	**Torodi Ar. Bea**	**77.48**	**70**	P	**P**	**10 21 40.5**	**+0.1**
	comp=E,0.3nm,0.3s,baz=256,slow=5.6,SNR=8.3						
YKA	**Yellowknife Ar**	**92.38**	**340**	P	**P**	**10 22 53.5**	**-0.5**
	comp=E,0.2nm,0.6s,baz=138,slow=4.7,SNR=3.6						
WRA	**Warramunga Arr**	**132.09**	**210**	PKP	**PKPdf**	**10 28 58.3**	**+0.2**
	comp=E,0.4nm,0.8s,baz=159,slow=1.9,SNR=4.2						
MKAR	**Makanchi Array**	**146.40**	**37**	PKPbc	**PKPbc**	**10 29 23.9**	**-0.7**
	comp=E,0.4nm,0.7s,baz=300,slow=3.3,SNR=3.4						

MEX 06 10:41:45.1±0.4, 17°.29N×101°.23W, h6km±18km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.39**	**325**	*i*P	Pg	10 41 52.3	-0.3
ZIIG				*e*S	Sg	10 41 57.7	0.0
CAIG	**El Cayaco**	**0.95**	**104**	*e*P	Pg	10 42 01.1	-2.3
CAIG				*e*S	Sg	10 42 13.3	-2.5
ARIG	**Puente Sto Nin**	**1.30**	**40**	*e*P	Pn	10 42 08.3	-1.5
ARIG				*e*S	Sg	10 42 22.5	-4.4
ACX	**Acapulco**	**1.38**	**107**	*e*P	Pn	10 42 08.3	-2.6
ACX				*i*S	Sb	10 42 26.7	-2.5
MEIG	**Mezcala**	**1.67**	**67**	*i*P	Pn	10 42 11.2	-3.7
MEIG				*e*S	Sn	10 42 31.7	-4.9

*ISK **06** 10:53:12.9, 38°.65N×37°.48E, h2km, ML1.8/6*
*ISCJB **06** 10:53:14.7±0.5, 38°.57N±0°.04×37°.47E±0°.03, h8km±6km, Error ellipse: s-maj=6.6km s-min=4.3km az=176.7*
*DDA **06** 10:53:14.8, 38°.56N×37°.47E, h7km, Ml2.7*
*CSEM **06** 10:53:14.2±0.2, 38°.60N×37°.47E, h8km, ML1.8, Error ellipse: s-maj=6.9km s-min=4.8km az=163.0*

ISC 06 10:53:14.3±1.0, 38°.56N±0°.03×37°.48E±0°.02, h3km±7km, n21, σ0s76/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DARE	**Darende-Malaty**	**0.02**	**14**	PG	**Pg**	**10 53 14.8**	**-0.3**
DARE	**Darende-Malaty**	**0.02**	**14**	*i*Pg	**Pg**	**10 53 14.8**	**-0.3**
CUGUR	**Gurin_S¨VAS**	**0.23**	**316**	*i*P	**Pg**	**10 53 19.1**	**+0.3**
CUGUR				*i*S	**Sg**	**10 53 23.6**	**+1.7**
CUGUR	**Gurin_S¨VAS**	**0.23**	**316**	P	**Pg**	**10 53 19.1**	**+0.3**
CUGUR				S	**Sg**	**10 53 23.6**	**+1.7**
ELBS	**KAHRAMANMARAS**	**0.36**	**230**	*i*P	**Pg**	**10 53 21.5**	**+0.3**
ELBS				*i*S	**Sb**	**10 53 28.2**	**-1.2**
ELBS	**KAHRAMANMARAS**	**0.36**	**230**	P	**Pg**	**10 53 21.5**	**+0.3**
ELBS				S	**Sb**	**10 53 28.2**	**-1.2**
AKCD	**Akcadag**	**0.43**	**126**	*i*P	**Pg**	**10 53 23.3**	**+0.6**
AKCD				*i*S	**Sb**	**10 53 30.7**	**-1.0**
AKCD	**Akcadag**	**0.43**	**126**	P	**Pg**	**10 53 23.3**	**+0.6**
AKCD				S	**Sb**	**10 53 30.7**	**-1.0**
HEKM	**Malatya_Hekimh**	**0.50**	**49**	*i*P	**Pg**	**10 53 24.3**	**+0.4**
HEKM				*i*S	**Sb**	**10 53 33.0**	**-0.6**
HEKM	**Malatya_Hekimh**	**0.50**	**49**	P	**Pg**	**10 53 24.3**	**+0.4**
HEKM				S	**Sb**	**10 53 33.0**	**-0.6**
MALT	**Malatya**	**0.78**	**108**	PG	**Pg**	**10 53 29.5**	**+0.2**
MALT				SG	**Sb**	**10 53 41.6**	**-0.1**
MALT	**Malatya**	**0.78**	**108**	*e*Pg	**Pg**	**10 53 29.5**	**+0.2**
MALT				*e*Sg	**Sb**	**10 53 41.6**	**-0.1**
SARI	**SarD1z-Kayseri**	**0.84**	**260**	PG	**Pg**	**10 53 29.8**	**-0.7**
SARI				SG	**Sb**	**10 53 43.3**	**-0.3**
KMRS	**Kahramanmaras**	**1.14**	**204**	PN	**Pn**	**10 53 37.2**	**0.0**
KMRS	**Kahramanmaras**	**1.14**	**204**	*e*Pn	**Pn**	**10 53 37.2**	**0.0**
GAZ	**Gaziantep**	**1.40**	**189**	PN	**Pg**	**10 53 41.5**	**+0.4**
GAZ	**Gaziantep**	**1.40**	**189**	*e*Pn	**Pg**	**10 53 41.5**	**+0.4**
SVRC	**Sivrice-ELAZID**	**1.45**	**96**	PN	**Pn**	**10 53 41.1**	**-0.4**
SVRC	**Sivrice-ELAZID**	**1.45**	**96**	*e*Pn	**Pn**	**10 53 41.1**	**-0.4**
PTK	**Pertek**	**1.53**	**77**	PN	**Pn**	**10 53 41.8**	**-1.0**
PTK	**Pertek**	**1.53**	**77**	*e*Pn	**Pn**	**10 53 41.8**	**-1.0**

NNC 06 10:54:01.8±2.3, 53°.68N×88°.32E, h1km±17km, mb3.8, mpv3.4, 6C-3D, Error ellipse: s-maj=22.2km s-min=9.0km az=67.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**2.09**	**279**	⇑Pn	Pn	10 54 37.5	-0.5
	19nm,0.5s						
ZAA0				⇓Sn	Sb	10 55 05.9	-1.1
	22nm,0.4s						
KURK	**Kurchatov**	**6.66**	**247**	⇑Pn	Pn	10 55 41.2	+0.4
	2.7nm,0.6s						
KURK				⇑Lg	Lg	10 57 34.2	
	6.2nm,0.7s						
MK31	**Makanchi Array**	**7.90**	**212**	Pn	Pn	10 55 59.6	+1.7
	0.6nm,0.5s,baz=120,slow=14,SNR=16						
MK31				⇓Sn	Sn	10 57 28.1	+0.3
	0.7nm,0.5s,baz=32,slow=26,SNR=3.2						
MK31				⇑Lg	Lg	10 58 11.6	
	1.5nm,0.5s,baz=29,slow=31,SNR=4.2						
MAKZ	**Makanchi**	**7.99**	**213**	⇓Pn	Pn	10 55 60.0	+0.9
	1.5nm,0.8s						
MAKZ				⇑Sn	Sn	10 57 30.7	+0.7
	2.2nm,0.7s						
MAKZ				⇑Lg	Lg	10 58 14.4	
	4.7nm,0.8s						

*IDC **06** 11:02:43.5±1.9, 35°.01N×141°.67E, h0km, mb3.7/2, mb1 3.8/4, mb1mx3.4/70, mbtmp3.6/4, ML3.4/2, MS2.8/1, Ms1 3.0/1, ms1mx2.3/63, Error ellipse: s-maj=60.5km s-min=27.9km az=75.0*
*JMA **06** 11:02:47.8±0.3, 35°.00N×141°.25E, h38km±4km, M2.9*
*ISCJB **06** 11:02:48.2±1.0, 34°.89N±0°.07×141°.20E±0°.09, h35km, mb3.8/2, MS2.7/1, Error ellipse: s-maj=11.9km s-min=8.7km az=140.8*

ISC 06 11:02:48.4±1.4, 35°.01N±0°.08×141°.26E±0°.10, h35km, n19, σ1s54/14, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.43**	**213**	P	**Pn**	**11 02 57.1**	**-0.4**
BSO1				X		11 03 05.1	
BSO3	**Boso 3**	**0.65**	**252**	P	**Pn**	**11 03 00.5**	**-0.5**
BSO3				X		11 03 12.3	
BSO4	**Boso 4**	**0.76**	**269**	P	**Pn**	**11 03 02.5**	**-0.1**
BSO4				X		11 03 14.8	
CHOJ	**Chosi**	**0.77**	**335**	P	**Pn**	**11 03 02.1**	**-0.7**
KTR	**Katsuura**	**0.79**	**280**	P	**Pn**	**11 03 02.4**	**-0.6**
KTR				*e*S	**Sn**	**11 03 12.3**	**-1.3**
JYT	**Yasato**	**1.49**	**325**	P	**Pn**	**11 03 14.2**	**+1.4**
JIM2	**Oshima 3**	**1.53**	**260**	P	**Pn**	**11 03 12.3**	**-1.0**
JIM2				*e*S	**Sn**	**11 03 29.6**	**-2.5**
MJAR	**Matsushiro Arr**	**2.92**	**302**	Pn	**Pn**	**11 03 35.0**	**+2.7**
	2.0nm,0.3s,baz=122,slow=7.8,SNR=15						
MAT	**Matsushiro**	**2.92**	**302**	P	Pn	11 03 35.8	+3.4
MAT				*e*S	**Sn**	**11 04 07.9**	**+1.7**
ASAJ	**Asahikawa**	**9.15**	**6**	Pn	**Pn**	**11 04 56.2**	**-1.8**
	0.6nm,0.3s,baz=219,slow=11,SNR=5.7						
H11N2	**WAKE ISLAND Hy**	**27.28**	**117**	T	T	11 37 02.7	
	baz=309,slow=75,SNR=5.5						
H11N1	**WAKE ISLAND Hy**	**27.28**	**117**	T	T	11 37 05.0	
	baz=309,slow=75,SNR=4.6						
H11N3	**WAKE ISLAND Hy**	**27.29**	**117**	T	T	11 37 04.2	
	baz=309,slow=75,SNR=6.6						
H11S3	**WAKE ISLAND Hy**	**27.92**	**120**	T	T	11 37 52.6	
	baz=312,slow=76,SNR=5.4						
H11S1	**WAKE ISLAND Hy**	**27.92**	**119**	T	T	11 37 52.9	
	baz=312,slow=76,SNR=7.1						
H11S2	**WAKE ISLAND Hy**	**27.93**	**120**	T	T	11 37 54.2	
	baz=312,slow=76,SNR=5.5						
CMAR	**Chiang Mai Arr**	**40.90**	**257**	LR	LR	11 30 18.7	
	comp=Z,11nm,19.0s,baz=165,slow=40						
WRA	**Warramunga Arr**	**55.04**	**188**	P	**P**	**11 12 17.6**	**+0.9**
	1.0nm,0.5s,baz=4.8,slow=7.3,SNR=39						
ASAR	**Alice Springs**	**58.77**	**188**	P	**P**	**11 12 43.1**	**+0.1**
	0.2nm,0.4s,baz=0.9,slow=6.2,SNR=4.7						

DJA 06 11:17:56.4±1.6, 2°.N±8°.×9°.5E±1°.6, h22km±28km, M3.5/4, MLv3.5/4, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**2.30**	**103**	P	Pn	11 18 33.2	+0.1
GSI				S	Sn	11 19 01.4	+0.6
TPTI		**2.34**	**52**	P	Pn	11 18 33.5	0.0
TPTI				S	Sn	11 19 02.0	+0.4
MLSI	**Meulaboh, Aceh**	**2.66**	**24**	P	Pn	11 18 37.9	0.0
MLSI				S	Sn	11 19 10.2	+0.7
KCSI	**Kotacane, Aceh**	**2.97**	**55**	P	Pn	11 18 42.1	-0.1
KCSI				S	Sn	11 19 18.3	+1.1

*DDA **06** 11:28:18.4, 41°.21N×43°.82E, h7km, Ml2.5*
*ISCJB **06** 11:28:19.0±0.7, 41°.18N±0°.03×43°.85E±0°.05, h1km±9km, Error ellipse: s-maj=6.4km s-min=5.1km az=169.5*
*CSEM **06** 11:28:19.1±0.1, 41°.18N×43°.82E, h5km, ML2.0, Error ellipse: s-maj=3.5km s-min=2.3km az=133.0*
*TIF **06** 11:28:19.6, 41°.26N×43°.85E, h10km±1km*

ISC 06 11:28:19.1±1.0, 41°.19N±0°.03×43°.86E±0°.03, h8km±10km, n19, σ0s41/36, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BGD	**Bogdanovka**	**0.21**	**292**	P	**Pg**	**11 28 23.8**	**+0.4**
BGD				S	**Sg**	**11 28 26.6**	**+0.3**
BGD	**Bogdanovka**	**0.21**	**292**	P	**Pg**	**11 28 23.8**	**+0.4**
BGD				S	**Sg**	**11 28 26.6**	**+0.3**
AKH	**Akhalkalaki**	**0.35**	**309**	P	**Pg**	**11 28 25.8**	**-0.3**
AKH				S	**Sg**	**11 28 30.3**	**-0.5**
AKH	**Akhalkalaki**	**0.35**	**309**	P	**Pg**	**11 28 25.8**	**-0.3**
AKH				S	**Sg**	**11 28 30.3**	**-0.5**
EAK	**Akyaka**	**0.53**	**201**	*i*P	Pg	11 28 24.8	-4.7
EAK				*i*S	**Sg**	**11 28 36.7**	**+0.3**
EAK	**Akyaka**	**0.53**	**201**	P	Pg	11 28 24.8	-4.6
EAK				S	**Sg**	**11 28 36.7**	**+0.3**
DIGO	**Kars**	**0.85**	**206**	*i*P	**Pg**	**11 28 35.2**	**-0.3**
DIGO				*i*S	**Sb**	**11 28 47.7**	**-0.3**
DIGO	**Kars**	**0.85**	**206**	P	**Pg**	**11 28 35.2**	**-0.3**
DIGO				S	**Sb**	**11 28 47.7**	**-0.3**
TBLG	**Delisi**	**0.86**	**50**	P	**Pg**	**11 28 35.2**	**-0.4**
TBLG				S	**Sb**	**11 28 47.6**	**-0.3**
TBLG	**Delisi**	**0.86**	**50**	P	**Pg**	**11 28 35.2**	**-0.4**
TBLG				S	**Sb**	**11 28 47.6**	**-0.3**
SEAG	**Tbilisi Sea**	**0.92**	**51**	P	**Pb**	**11 28 37.2**	**-0.1**
SEAG				S	**Sb**	**11 28 50.0**	**+0.3**
SEAG	**Tbilisi Sea**	**0.92**	**51**	P	**Pb**	**11 28 37.2**	**-0.1**
SEAG				S	**Sb**	**11 28 50.0**	**+0.3**
DUS	**Dusheti**	**1.10**	**35**	P	**Pn**	**11 28 41.1**	**+0.1**
DUS				S	**Sn**	**11 28 56.5**	**+0.1**
DUS	**Dusheti**	**1.10**	**35**	P	**Pn**	**11 28 41.1**	**+0.1**
DUS				S	**Sn**	**11 28 56.3**	**-0.2**
DGRG	**David-gareji**	**1.17**	**76**	P	**Pg**	**11 28 41.1**	**-0.5**
DGRG				S	**Sn**	**11 28 58.7**	**+0.6**
DGRG	**David-gareji**	**1.17**	**76**	P	**Pg**	**11 28 42.0**	**+0.4**
DGRG				S	**Sn**	**11 28 58.4**	**+0.3**
GUDG	**Gudauri**	**1.36**	**20**	P	**Pg**	**11 28 45.4**	**+0.2**
GUDG				S	**Sn**	**11 29 03.8**	**+0.8**
GUDG	**Gudauri**	**1.36**	**20**	P	**Pg**	**11 28 45.4**	**+0.2**
GUDG				S	**Sn**	**11 29 03.8**	**+0.8**
ONI	**Oni**	**1.44**	**348**	P	**Pn**	**11 28 45.2**	**-0.3**
ONI				S	**Sg**	**11 29 04.5**	**-0.7**

MEX 06 11:35:30.0±0.7, 17°.20N×101°.36W, h16km±48km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.42**	**346**	*i*P	Pg	11 35 36.9	-1.6
ZIIG				*e*S	Sg	11 35 42.5	-1.7
CAIG	**El Cayaco**	**1.05**	**98**	*e*P	Pb	11 35 46.6	-3.3
CAIG				*e*S	Sb	11 35 58.6	-4.8
ARIG	**Puente Sto Nin**	**1.44**	**42**	*e*P	Pn	11 35 52.8	-2.8
ARIG				*e*S	Sn	11 36 09.6	-4.5
ACX	**Acapulco**	**1.47**	**103**	*e*P	Pn	11 35 54.3	-1.6
ACX				*e*S	Sn	11 36 10.9	-4.0
MEIG	**Mezcala**	**1.81**	**66**	*e*P	Pn	11 35 57.2	-3.4
MEIG				*e*S	Sn	11 36 18.1	-5.1
TLIG	**Tlapa**	**2.69**	**82**	*i*P	Pn	11 36 09.9	-2.9
TLIG				*e*S	Sn	11 36 40.5	-4.6

*IDC **06** 11:40:02.2±1.3, 20°.25S×177°.97W, h508km±14km, mb3.8/24, mb1 3.8/27, mb1mx3.7/47, mbtmp4.6/27, Error ellipse: s-maj=14.8km s-min=8.8km az=149.0*
*NEIC **06** 11:40:03.6±0.6, 20°.23S×177°.95W, h529km±7km, mb4.5/20, Error ellipse: s-maj=9.7km s-min=6.0km az=154.0*
*ISCJB **06** 11:40:04.6±0.3, 20°.30S±0°.07×178°.04W±0°.06, h550km, mb4.3/48, Error ellipse: s-maj=9.6km s-min=6.4km az=154.3*

ISC 06 11:40:05.9±0.4, 20°.25S±0°.09×178°.06W±0°.07, h550km, n83, σ1s43/90, mb4.4/48, 2C-1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.45**	**303**	*e*P	**P**	**11 41 30.3**	**-1.2**
MSVF				*e*S	**S**	**11 42 35.0**	**-6.1**
AFI	**Afiamalu**	**8.70**	**45**	P	P	11 42 04.8	-6.1
	8.7nm,0.3s,baz=85,slow=1.3,SNR=10						
AFI				S	S	11 43 42.0	-11
	5.8nm,0.3s,baz=51,slow=22,SNR=6.7						
AFI	**Afiamalu**	**8.70**	**45**	*e*P	P	11 42 05.0	-5.8
AFI				*e*S	S	11 43 35.7	-18
AFI				S	S	11 43 42.0	-11
DZM	**Mont Dzumac**	**14.58**	**260**	P	**P**	**11 43 10.7**	**-0.5**
	1.3nm,0.3s,baz=91,slow=18,SNR=15						
RAR	**Rarotonga**	**17.13**	**96**	*e*P	**P**	**11 43 33.5**	**-2.4**
	63nm,1.2s						
URZ	**Urewera**	**18.43**	**192**	P	**P**	**11 43 44.6**	**-3.0**
	0.8nm,0.3s,baz=271,slow=5.0,SNR=4.5						
BKZ	**Black Stump Fm**	**19.43**	**193**	*e*P	**P**	**11 43 57.3**	**+0.6**
	110nm,1.8s						
RPZ	**Rata Peaks**	**25.11**	**199**	*e*P	**P**	**11 44 47.2**	**-0.2**
	244nm,1.8s						
PPT	**Papeete**	**27.06**	**89**	P	**P**	**11 45 03.2**	**-1.8**
	38nm,0.8s,baz=93,slow=6.9,SNR=4.3						
EIDS	**Eidsvold**	**28.87**	**254**	*e*P	**P**	**11 45 19.1**	**-1.6**
	28nm,1.4s						
CAN	**Canberra**	**32.61**	**236**	*e*P	**P**	**11 45 53.5**	**+0.8**
	88nm,1.7s						
RABL	**Rabaul**	**33.09**	**295**	*e*P	**P**	**11 45 55.4**	**-1.6**
	14nm,0.7s						
CTA	**Charters Tower**	**33.46**	**264**	P	**P**	**11 46 00.1**	**0.0**
	7.3nm,0.4s,baz=99,slow=11,SNR=25						
CTAO	**Charters Tower**	**33.46**	**264**	*e*P	**P**	**11 46 00.0**	**0.0**
	16nm,0.8s						
PMG	**Port Moresby**	**35.24**	**283**	P	**P**	**11 46 13.2**	**-1.7**
	8.6nm,0.6s,baz=250,slow=10,SNR=3.9						
STKA	**Stephens Creek**	**37.85**	**244**	P	**P**	**11 46 36.1**	**-0.1**
	5.9nm,0.8s,baz=94,slow=11,SNR=12						
STKA				PcP	**PcP**	**11 48 38.6**	**+0.4**
	1.7nm,0.8s,baz=24,slow=8.8,SNR=2.4						
AS01	**Alice Springs**	**44.48**	**256**	*e*P	**P**	**11 47 28.9**	**0.0**
AS31	**Alice Springs**	**44.53**	**256**	*e*P	**P**	**11 47 29.3**	**0.0**
	12nm,1.3s						
ASAR	**Alice Springs**	**44.53**	**256**	P	**P**	**11 47 29.1**	**-0.1**
	23nm,0.8s,baz=95,slow=7.7,SNR=220						
ASAR				PcP	**PcP**	**11 49 00.8**	**+0.2**
	2.0nm,0.8s,baz=112,slow=3.5,SNR=5.4						
ASAR				ScP	**ScP**	**11 52 04.2**	**+3.7**
	1.1nm,0.8s,baz=111,slow=4.0,SNR=5.7						
ASAR				S	**S**	**11 53 25.2**	**0.0**
	0.3nm,0.7s,baz=94,slow=13,SNR=3.4						
WB2	**Warramunga Arr**	**44.57**	**262**	*e*P	**P**	**11 47 28.6**	**-1.0**
	33nm,1.2s						
WRAB	**Tennant Creek**	**44.58**	**262**	*e*P	**P**	**11 47 28.9**	**-0.7**
	22nm,1.1s						
WRA	**Warramunga Arr**	**44.59**	**262**	P	**P**	**11 47 29.0**	**-0.8**
	9.4nm,0.5s,baz=96,slow=7.7,SNR=340						
WRA				PcP	**PcP**	**11 49 00.5**	**-0.4**
	0.9nm,0.7s,baz=91,slow=5.7,SNR=2.9						
WRA				ScP	**ScP**	**11 52 05.0**	**+4.2**
	1.3nm,1.0s,baz=91,slow=4.2,SNR=4.1						
MTN	**Manton Dam**	**49.11**	**270**	*e*P	**P**	**11 48 02.9**	**-1.0**
	25nm,0.8s						
FITZ	**Fitzroy Crossi**	**53.01**	**262**	P	**P**	**11 48 32.4**	**+0.3**
	4.3nm,0.6s,baz=123,slow=9.9						
SOEI	**Soe**	**56.44**	**272**	*e*P	**P**	**11 48 57.4**	**+1.1**
	43nm,0.8s						
NWAO	**Narrogin (SRO)**	**58.44**	**243**	P	**P**	**11 49 09.3**	**-0.2**
	15nm,1.0s,baz=4.6,slow=9.4,SNR=4.8						
QSPA	**South Pole Qui**	**69.82**	**180**	P	**P**	**11 50 21.5**	**+0.3**
	1.9nm,0.8s,baz=356,slow=0.5,SNR=6.7						
MJAR	**Matsushiro Arr**	**69.97**	**324**	P	**P**	**11 50 22.1**	**-0.3**
	2.8nm,0.5s,baz=162,slow=5.9,SNR=11						
JNU	**Nakatsue**	**72.06**	**317**	P	**P**	**11 50 35.1**	**+0.3**
	6.3nm,1.0s,baz=63,slow=9.6,SNR=3.4						
LEM	**Lembang**	**72.99**	**269**	P	**P**	**11 50 41.5**	**+0.7**
	25nm,0.7s,baz=329,slow=17,SNR=4.9						
ASAJ	**Asahikawa**	**73.48**	**332**	P	**P**	**11 50 43.4**	**+0.8**
	12nm,0.8s,baz=242,slow=6.4,SNR=7.7						
PETK	**Petropavlovsk-**	**76.01**	**345**	P	**P**	**11 50 56.4**	**-0.3**
	5.6nm,0.7s,baz=109,slow=6.7,SNR=11						
KSRS	**Korea Array**	**76.66**	**319**	P	**P**	**11 51 01.4**	**+0.8**
	0.9nm,0.5s,baz=127,slow=5.7,SNR=8.4						
KSAR	**Wonju Array Be**	**76.68**	**319**	P	**P**	**11 51 01.4**	**+0.7**
USRK	**Ussuriysk Ar.**	**78.73**	**326**	P	**P**	**11 51 13.1**	**+1.5**
	4.4nm,0.8s,baz=128,slow=3.9,SNR=5.8						
NJ2	**Nanjing**	**79.68**	**310**	*e*P	**P**	**11 51 17.3**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
YBH	**Yreka Blue Hor**	**80.12**	**39**	P	**P**	**11 51 19.7**	**+0.6**
	comp=Z,2.5nm,0.8s,baz=207,slow=3.8,SNR=8.6						
NV01	**Mina Array Sit**	**80.88**	**43**	*e*P	**P**	**11 51 22.9**	**-0.3**
NVAR	**Mina Array Bea**	**80.88**	**43**	P	**P**	**11 51 23.4**	**+0.1**
	comp=Z,1.8nm,0.8s,baz=224,slow=9.3,SNR=12						
MAW	**Mawson**	**81.78**	**200**	P	**P**	**11 51 27.1**	**0.0**
	comp=Z,2.2nm,1.0s,baz=143,slow=10,SNR=3.3						
TUC	**Tucson**	**82.86**	**52**	*e*P	**P**	**11 51 32.8**	**-0.5**
	comp=Z,2.7nm,0.9s						
U15A	**North Rim**	**83.83**	**48**	*e*P	**P**	**11 51 37.9**	**-0.4**
	comp=Z,4.0nm,0.8s						
CRQM	**Cirque**	**85.50**	**16**	*e*P	**P**	**11 51 45.7**	**0.0**
	comp=Z,9.8nm,0.8s						
TMUT	**Trail Mountain**	**86.02**	**46**	*e*P	**P**	**11 51 47.9**	**-1.0**
	comp=Z,6.7nm,1.4s						
TRF	**Thorofare Moun**	**86.21**	**12**	*e*P	**P**	**11 51 47.7**	**-1.3**
	comp=Z,20nm,1.9s						
RND	**Reindeer**	**86.46**	**13**	*e*P	**P**	**11 51 49.3**	**-0.8**
	comp=Z,6.0nm,1.2s						
MNTX	**Cornudas Mount**	**86.65**	**55**	*e*P	**P**	**11 51 51.9**	**+0.2**
	comp=Z,2.6nm,1.0s						
TX31	**Lajitas Ar. Si**	**86.96**	**57**	*e*P	**P**	**11 51 53.5**	**+0.2**
TXAR	**Lajitas Array**	**86.96**	**57**	P	**P**	**11 51 53.8**	**+0.5**
	comp=Z,1.4nm,0.6s,baz=216,slow=6.9,SNR=27						
HDA	**Harding Lake**	**87.75**	**13**	*e*P	**P**	**11 51 55.2**	**-0.8**
	comp=Z,2.3nm,0.7s						
MCMT	**McKenzie Canyo**	**87.79**	**40**	*e*P	**P**	**11 51 54.5**	**-2.6**
XAN	**Xi'an**	**87.94**	**307**	P	**P**	**11 51 58.9**	**+1.2**
XAN				pmax	pmax		
	comp=Z,11nm,0.8s						
XAN				pmax	pmax		

McLaughlin (2009) selection criteria Bond˙r and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009

*ISCJB **06** 11:43:50.6±0.2, 22˙73N±0˙01×120˙71E±0˙02, h28km±1km, Error ellipse: s-maj=2.4km s-min=2.1km az=168.3*

ISC 06 11:43:50.5±0.9, **22˙76N**±0˙02×**120˙71E**±0˙02, **h25**km±5km, **n102**, σ0˙96/166, **8C-18D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSD	**Sandimen**	**0.07**	**255**	⇑*i*P	**Pb**	**11 43 54.2**	**-0.7**
SSD	baz=254			*i*S	**Sb**	**11 43 57.1**	**-0.9**
MASBT	**Mashibuluo**	**0.17**	**204**	⇑P	**Pb**	**11 43 55.0**	**-0.7**
MASBT	baz=213			S	**Sb**	**11 43 58.6**	**-0.7**
SGLT	**Jiouru**	**0.20**	**259**	⇑*i*P	**Pb**	**11 43 56.5**	**+0.3**
SGLT	baz=259			*e*S	**Sb**	**11 44 02.3**	**+2.3**
SLGT	**Liugui**	**0.23**	**347**	⇑*i*P	**Pb**	**11 43 56.2**	**-0.4**
SLGT	baz=350			S	**Sb**	**11 44 00.7**	**-0.1**
TWM1	**Shoushan**	**0.27**	**283**	⇑P	**Pb**	**11 43 57.7**	**+0.6**
ECL	baz=288			S	**Sb**	**11 44 01.2**	**-0.7**
SSPT	**Xinbi**	**0.31**	**204**	⇑P	**Pb**	**11 43 57.5**	**-0.1**
SSPT	baz=202			*e*S	**Sb**	**11 44 03.1**	**+0.7**
SGST	**Jiashian**	**0.34**	**340**	⇓P	**Pb**	**11 43 58.2**	**+0.1**
SGST	baz=344			S	**Sb**	**11 44 04.1**	**+0.9**
TWG	**Pinlang**	**0.34**	**81**	⇓*i*P	**Pb**	**11 43 58.0**	**-0.2**
TWG	baz=81			S	**Sb**	**11 44 03.5**	**0.0**
TWGBT	**Beinan**	**0.35**	**81**	⇓P	**Pb**	**11 43 58.0**	**-0.3**
TWGBT	baz=81			S	**Sb**	**11 44 03.5**	**-0.1**
SCZT	**Fangliau**	**0.40**	**191**	⇑*i*P	**Pb**	**11 43 58.6**	**-0.5**
SCZT	baz=195			S	**Sb**	**11 44 04.4**	**-0.5**
STYT	**Tauyuan**	**0.40**	**7**	⇓*i*P	**Pb**	**11 43 58.9**	**-0.2**
STYT	baz=10.0			S	**Sb**	**11 44 05.8**	**+0.8**
EAST	**Anshuo**	**0.40**	**161**	⇓*i*P	**Pb**	**11 43 58.6**	**-0.5**
EAST	baz=158			*i*S	**Sb**	**11 44 04.9**	**-0.1**
TTN	**Taitung**	**0.41**	**91**	P	**Pb**	**11 43 59.6**	**+0.4**
TTN	baz=85			S	**Sn**	**11 44 07.1**	**-0.6**
KAU	**Kaohsiung**	**0.41**	**242**	*e*P	**Pn**	**11 44 00.5**	**-0.4**
KAU	baz=242			*e*S	**Sn**	**11 44 09.5**	**+1.7**
CHN3	**Shinhua**	**0.44**	**315**	*e*P	**Pn**	**11 44 01.3**	**+0.1**
TAW	**Tawu**	**0.44**	**156**	P	**Pb**	**11 43 59.2**	**-0.5**
TAW	baz=154			*e*S	**Sb**	**11 44 05.6**	**-0.4**
CHN1	**Nanshi**	**0.45**	**339**	⇑*i*P	**Pb**	**11 44 00.2**	**+0.3**
CHN1	baz=349			*e*S	**Sn**	**11 44 08.6**	**-0.2**
WTP	**Ta-pu**	**0.49**	**350**	⇓*i*P	**Pb**	**11 44 00.4**	**-0.2**
WTP	baz=350			*e*S	**Sn**	**11 44 09.3**	**-0.4**
WLCH	**Liuqiu**	**0.51**	**216**	*e*P	**Pn**	**11 44 03.0**	**+0.7**
ELDTW	**Lidau**	**0.51**	**34**	⇓P	**Pb**	**11 44 00.4**	**-0.6**
ELDTW	baz=34			*e*S	**Sb**	**11 44 08.5**	**+0.4**
TAI1	**Yung-k'ang**	**0.52**	**302**	*e*P	**Pb**	**11 44 01.6**	**+0.6**
TWP	**Hsiaoliuchiu**	**0.52**	**217**	⇓*e*P	**Pn**	**11 44 02.7**	**+0.3**
TWP	baz=218			*e*S	**Sn**	**11 44 13.3**	**+2.8**
TPUB	**Ta-pu**	**0.54**	**353**	⇓P	**Pb**	**11 44 01.0**	**-0.4**
TPUB	baz=352			*e*S	**Sn**	**11 44 10.4**	**-0.5**
TWK	**Hsinying**	**0.54**	**338**	*e*P	**Pb**	**11 44 01.7**	**+0.2**
TWK	baz=338			S	**Sn**	**11 44 10.6**	**-0.4**
SCLT	**Jiali**	**0.62**	**311**	⇓P	**Pb**	**11 44 03.1**	**+0.3**
SCLT	baz=311			*e*S	**Sn**	**11 44 13.6**	**+0.6**
CHKT	**Chengkung**	**0.69**	**61**	*e*P	**Pb**	**11 44 03.5**	**-0.5**
CHKT	baz=73			*e*S	**Sn**	**11 44 14.0**	**-0.7**
FULB	**Fuli**	**0.69**	**51**	⇓P	**Pb**	**11 44 04.0**	**-0.1**
FULB	baz=44			S	**Sn**	**11 44 14.2**	**-0.5**
TWH	**Lutao**	**0.71**	**94**	P	**Pb**	**11 44 03.5**	**-0.9**
CHN8	**Yiju**	**0.74**	**322**	*e*P	**Pb**	**11 44 04.8**	**+0.1**
CHN8	baz=322			*e*S	**Sn**	**11 44 16.1**	**+0.4**
ALS	**Alishan**	**0.75**	**7**	*e*P	**Pb**	**11 44 05.0**	**-0.1**
ALS	baz=7.0			*e*S	**Sn**	**11 44 16.4**	**-0.1**
HEN	**Hengchun**	**0.76**	**178**	*e*P	**Pb**	**11 44 04.8**	**-0.2**
HEN	baz=172			*e*S	**Sn**	**11 44 16.9**	**+0.7**
CHY	**Chiayi**	**0.77**	**341**	*e*P	**Pb**	**11 44 05.4**	**0.0**
CHY	baz=340			*e*S	**Sn**	**11 44 17.1**	**+0.4**
CHN2	**Minshiung**	**0.79**	**345**	*e*P	**Pn**	**11 44 06.6**	**+0.5**
CHN2	baz=344			*e*S	**Sn**	**11 44 18.1**	**+1.0**
TWF1	**Yuli**	**0.80**	**43**	⇓P	**Pb**	**11 44 05.4**	**-0.4**
TWF1	baz=39			*e*S	**Sb**	**11 44 15.8**	**-0.4**
TWK1	**Hengchun**	**0.82**	**173**	*e*P	**Pb**	**11 44 06.1**	**-0.1**
TWK1	baz=174			S	**Sn**	**11 44 18.2**	**+0.4**
TWKBT	**Hengchun**	**0.83**	**173**	⇓P	**Pb**	**11 44 06.0**	**-0.2**
TWKBT	baz=174			*e*S	**Sn**	**11 44 18.6**	**+0.6**
YULB	**Yu-li**	**0.83**	**41**	*e*P	**Pb**	**11 44 05.6**	**-0.7**
YULB	baz=36			*e*S	**Sb**	**11 44 16.4**	**-0.7**
TSEB	**Hengchuen, Pin**	**0.88**	**168**	*e*P	**Pb**	**11 44 07.2**	**0.0**
TSEB	baz=179			*e*S	**Sn**	**11 44 20.4**	**+1.1**
WGK	**Gukeng**	**0.93**	**352**	*e*P	**Pn**	**11 44 08.0**	**+0.1**
WGK	baz=352			*e*S	**Sn**	**11 44 21.4**	**+1.0**
EHY	**Hungye**	**0.93**	**37**	*e*P	**Pb**	**11 44 07.8**	**-0.3**
EHY	baz=37			*e*S	**Sn**	**11 44 21.0**	**+0.4**
WDLH	**Douliu**	**0.93**	**351**	*e*P	**Pb**	**11 44 07.7**	**-0.4**
WDLH	baz=350			*e*S	**Sn**	**11 44 22.5**	**+1.9**
WSF	**Szhu**	**0.98**	**333**	*e*P	**Pb**	**11 44 07.8**	**-1.0**
WSF	baz=333			*e*S	**Sn**	**11 44 21.9**	**+0.3**
HGSD	**Ruisui**	**0.98**	**42**	*e*P	**Pn**	**11 44 08.8**	**+0.1**
HGSD	baz=42			*e*S	**Sn**	**11 44 23.1**	**+1.3**
SSLB	**Suanglung**	**1.04**	**13**	⇓*e*P	**Pb**	**11 44 09.5**	**-0.4**
SSLB	baz=12			*e*S	**Sn**	**11 44 24.0**	**+0.6**
WJS	**Zhushan**	**1.05**	**1**	*e*P	**Pb**	**11 44 09.8**	**-0.3**
VWDT	**VWDT**	**1.06**	**22**	*e*P	**Pn**	**11 44 10.0**	**+0.2**
VWDT	baz=24			*e*S	**Sn**	**11 44 26.2**	**+2.4**
LAY	**Lan-yu**	**1.06**	**133**	*e*P	**Pb**	**11 44 09.0**	**-1.3**
LAY	baz=133			*e*S	**Sn**	**11 44 24.4**	**+0.5**
WDGT	**Dungji**	**1.08**	**297**	⇓P	**Pn**	**11 44 08.6**	**-1.5**
WDGT	baz=297			*e*S	**Sn**	**11 44 24.5**	**+0.2**
EGFH	**Guangfu**	**1.12**	**36**	*e*P	**Pn**	**11 44 10.7**	**+0.1**
EGFH	baz=44			*e*S	**Sn**	**11 44 25.9**	**+0.7**
SMLT	**Sun Moon Lake**	**1.13**	**9**	*e*P	**Pb**	**11 44 11.5**	**0.0**
SMLT	baz=357			*e*S	**Sn**	**11 44 28.1**	**+2.5**
TYC	**Yuchr**	**1.14**	**7**	*e*P	**Pn**	**11 44 11.2**	**+0.3**
TYC	baz=7.0			*e*S	**Sn**	**11 44 27.1**	**+1.3**
WTCT	**Ta-ch'eng**	**1.16**	**340**	*e*P	**Pn**	**11 44 11.5**	**+0.3**
WTCT	baz=325			*e*S	**Sn**	**11 44 27.0**	**+0.7**
RLNB	**Erlin**	**1.17**	**344**	*e*P	**Pn**	**11 44 11.2**	**0.0**
RLNB	baz=328			*e*S	**Sn**	**11 44 27.1**	**+0.8**
ESL	**Shilin**	**1.24**	**33**	*e*P	**Pn**	**11 44 12.7**	**+0.4**
ESL	baz=38			*e*S	**Sn**	**11 44 30.1**	**+1.8**
VCHM	**Qimei**	**1.26**	**291**	⇓*e*P	**Pn**	**11 44 10.9**	**-1.5**
PHUB	**P'eng-hu**	**1.28**	**306**	⇓P	**Pn**	**11 44 11.2**	**-1.6**
PHUB	baz=305			*e*S	**Sn**	**11 44 26.5**	**-2.7**
WCHH	**Zhanghua**	**1.32**	**354**	*e*P	**Pb**	**11 44 13.9**	**-0.6**
PNG	**Penghu**	**1.33**	**307**	*e*P	**Pn**	**11 44 11.9**	**-1.5**
CHGB	**Renai**	**1.36**	**18**	*e*P	**Pn**	**11 44 14.3**	**+0.1**
CHGB	baz=2.0			*e*S	**Sb**	**11 44 33.2**	**+0.7**
TCU	**Taichung**	**1.38**	**359**	*e*P	**Pb**	**11 44 15.8**	**+0.1**
ENLB	**Shoufeng**	**1.40**	**36**	*e*P	**Pb**	**11 44 15.7**	**-0.3**
TDCB	**Techi**	**1.54**	**16**	*e*P	**Pn**	**11 44 16.9**	**+0.4**
TDCB	baz=14			*e*S	**Sb**	**11 44 37.6**	**0.0**
TWD	**Chiawan**	**1.54**	**32**	*e*P	**Pn**	**11 44 17.2**	**+0.7**
TWD	baz=31			*e*S	**Sb**	**11 44 38.0**	**+0.5**
TWT	**Tachien**	**1.54**	**16**	*e*P	**Pn**	**11 44 17.1**	**+0.5**
TWQ1	**Liyutan**	**1.58**	**2**	*e*P	**Pn**	**11 44 17.9**	**+0.9**
TWQ1	baz=1.0			*e*S	**Sb**	**11 44 38.5**	**-0.1**
NACB	**Ninganchiao**	**1.62**	**30**	*e*P	**Pn**	**11 44 17.9**	**+0.4**
NACB	baz=44			*e*S	**Sb**	**11 44 39.9**	**0.0**
NNSB	**Datong**	**1.77**	**20**	*e*P	**Pn**	**11 44 20.5**	**+0.8**
NNSH	**Datong**	**1.77**	**20**	*e*P	**Pn**	**11 44 20.4**	**+0.7**
NNS	**Nan Shan**	**1.78**	**20**	*e*P	**Pn**	**11 44 21.0**	**+1.2**
NNS	baz=19			*e*S	**Sb**	**11 44 44.3**	**-0.1**
NSTT	**Nanjuang**	**1.88**	**8**	*e*P	**Pn**	**11 44 21.5**	**+0.5**
LIOB	**Emei**	**1.89**	**9**	*e*P	**Pn**	**11 44 21.5**	**+0.2**
NANB	**Nanao**	**1.91**	**30**	*e*P	**Pn**	**11 44 21.7**	**+0.2**
YHNB	**Yeheng**	**1.99**	**18**	*e*P	**Pb**	**11 44 24.4**	**-1.7**
NSK	**Sanguang**	**2.00**	**17**	*e*P	**Pb**	**11 44 24.5**	**-1.7**
ENTT	**Nioudou**	**2.03**	**23**	*e*P	**Pn**	**11 44 24.7**	**+1.6**
TWC	**Suao**	**2.12**	**30**	*e*P	**Pb**	**11 44 26.3**	**-1.8**
NWLT	**Wulai**	**2.13**	**20**	*e*P	**Pn**	**11 44 26.1**	**+1.5**
TWE	**Neicheng**	**2.14**	**24**	*e*P	**Pb**	**11 44 26.9**	**-1.7**
EOS1	**EOS1**	**2.21**	**36**	*e*P	**Pb**	**11 44 27.8**	**-1.9**
TATO	**Taipei**	**2.31**	**18**	*e*P	**Pn**	**11 44 27.7**	**+0.6**
TIPB	**Shuangxi**	**2.42**	**25**	*e*P	**Pn**	**11 44 29.2**	**+0.6**
VWUC	**VWUC**	**2.50**	**333**	*e*P	**Pn**	**11 44 28.0**	**-1.6**
NWF	**Wu-fen Shan**	**2.50**	**23**	*e*P	**Pn**	**11 44 31.9**	**+2.3**
WFSB	**Wu-fen Shan**	**2.50**	**23**	*e*P	**Pn**	**11 44 31.6**	**+2.0**
YM10	**YM10**	**2.51**	**18**	*e*P	**Pn**	**11 44 30.4**	**+0.7**
YM11	**YM11**	**2.52**	**18**	*e*P	**Pb**	**11 44 32.9**	**-2.2**
TWB1	**Santiao Chiao**	**2.52**	**27**	*e*P	**Pb**	**11 44 33.4**	**-1.7**
YM07	**YM07**	**2.54**	**19**	*e*P	**Pn**	**11 44 32.0**	**+1.8**
JYNG	**Yonagunijimaku**	**2.65**	**50**	P	**Pn**	**11 44 32.6**	**+0.9**
JYNG				S	**Sn**	**11 45 04.7**	**+1.6**
YOJ	**Yonaguni jima**	**2.71**	**51**	*e*P	**Pn**	**11 44 33.0**	**+0.5**
YOJ	**Yonaguni jima**	**2.71**	**51**	P	**Pn**	**11 44 32.8**	**+0.4**
YOJ				S	**Sn**	**11 45 06.5**	**+2.1**
KNMB	**Chin-men Tao**	**2.72**	**309**	*e*P	**Pn**	**11 44 31.5**	**-1.0**
HATJ	**Hateruma jima**	**3.12**	**65**	P	**Pn**	**11 44 38.6**	**+0.4**
HATJ				*e*S	**Sn**	**11 45 14.6**	**-0.1**
IRIF	**Iriomote-Funau**	**3.19**	**60**	P	**Pn**	**11 44 40.3**	**+1.3**
IRIF				S	**Sn**	**11 45 18.4**	**+2.2**
JKRS	**Kuro-shima**	**3.37**	**64**	P	**Pn**	**11 44 42.5**	**+1.0**
JKRS				*e*S	**Sn**	**11 45 21.3**	**+0.6**
MATB	**Ma-tsu**	**3.44**	**349**	*e*P	**Pn**	**11 44 41.6**	**-1.0**
JIJ	**Ishigaki jima**	**3.53**	**63**	P	**Pn**	**11 44 44.1**	**+0.3**
JIJ				S	**Sn**	**11 45 25.1**	**+0.3**
JISG	**Ishigakijimahi**	**3.77**	**61**	P	**Pn**	**11 44 47.3**	**+0.2**
JISG				*e*S	**Sn**	**11 45 30.7**	**0.0**
JTJ	**Tarama**	**4.11**	**62**	P	**Pn**	**11 44 51.7**	**-0.1**
JTJ				S	**Sn**	**11 45 39.9**	**+0.8**
VDOS	**Pratas Island**	**4.23**	**242**	*e*P	**Pn**	**11 44 53.0**	**-0.3**
JIRB	**Irabujima**	**4.58**	**62**	P	**Pn**	**11 44 58.5**	**+0.3**

*DDA **06** 11:45:58.9, 41˙20N×43˙83E, h7km, Ml3.2*
*ISCJB **06** 11:45:59.3±0.5, 41˙19N±0˙02×43˙82E±0˙03, h1km±4km, Error ellipse: s-maj=3.7km s-min=3.1km az=148.4*
*CSEM **06** 11:45:59.5±0.2, 41˙19N×43˙82E, h2km, ML2.8, Error ellipse: s-maj=4.1km s-min=3.0km az=148.0*
*TIF **06** 11:45:59.5, 41˙24N×43˙86E, h15km±1km*

*ISK **06** 11:45:59.3, 41˙21N×43˙85E, h8km, ML2.6/3*

ISC 06 11:45:59.7±0.9, **41˙21N**±0˙02×**43˙83E**±0˙02, **h12**km±6km, **n45**, σ0˙71/76, **Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BGD	**Bogdanovka**	**0.18**	**289**	P	**Pg**	**11 46 04.1**	**+0.2**
BGD				S	**Sg**	**11 46 07.0**	**+0.1**
BGD	**Bogdanovka**	**0.18**	**289**	P	**Pg**	**11 46 04.1**	**+0.2**
BGD				S	**Sg**	**11 46 06.9**	**+0.1**
AKH	**Akhalkalaki**	**0.32**	**309**	PG	**Pb**	**11 46 07.1**	**-0.5**
AKH				SG	**Sg**	**11 46 11.4**	**+0.6**
AKH	**Akhalkalaki**	**0.32**	**309**	P	**Pg**	**11 46 06.2**	**-0.2**
AKH				S	**Sg**	**11 46 10.6**	**-0.2**
AKH	**Akhalkalaki**	**0.32**	**309**	P	**Pg**	**11 46 06.2**	**-0.2**
AKH	**Akhalkalaki**	**0.32**	**309**	*e*Pg	**Pb**	**11 46 07.1**	**-0.5**
AKH				S	**Sg**	**11 46 10.6**	**-0.2**
AKH				*e*Sg	**Sg**	**11 46 11.4**	**+0.6**
KZR	**Kazreti**	**0.48**	**68**	P	**Pg**	**11 46 09.1**	**-0.1**
KZR				S	**Sg**	**11 46 15.4**	**-0.1**
KZR	**Kazreti**	**0.48**	**68**	P	**Pg**	**11 46 09.1**	**-0.1**
KZR				S	**Sg**	**11 46 15.4**	**-0.1**
EAK	**Akyaka**	**0.55**	**198**	*i*P	**Pg**	**11 46 09.6**	**-0.8**
EAK				*i*S	**Sg**	**11 46 17.7**	**0.0**
EAK	**Akyaka**	**0.55**	**198**	P	**Pg**	**11 46 09.6**	**-0.8**
EAK				S	**Sg**	**11 46 17.7**	**0.0**
KARS	**Kars**	**0.81**	**225**	PG	**Pg**	**11 46 15.3**	**-0.1**
KARS	**Kars**	**0.81**	**225**	*e*Pg	**Pg**	**11 46 15.3**	**-0.1**
DIGO	**Kars**	**0.86**	**204**	*i*P	**Pg**	**11 46 15.4**	**-1.0**
DIGO				*i*S	**Sg**	**11 46 27.9**	**+0.2**
DIGO	**Kars**	**0.86**	**204**	P	**Pg**	**11 46 15.4**	**-1.0**
DIGO				S	**Sg**	**11 46 27.9**	**+0.2**
TBLG	**Delisi**	**0.86**	**52**	PG	**Pb**	**11 46 16.5**	**-0.2**
TBLG				SG	**Sb**	**11 46 27.6**	**-0.6**
TBLG	**Delisi**	**0.86**	**52**	P	**Pg**	**11 46 15.8**	**-0.6**
TBLG				S	**Sb**	**11 46 27.9**	**-0.4**
TBLG	**Delisi**	**0.86**	**52**	P	**Pg**	**11 46 16.0**	**-0.4**
TBLG	**Delisi**	**0.86**	**52**	*e*Pg	**Pb**	**11 46 16.5**	**-0.2**
TBLG				*e*Sg	**Sb**	**11 46 27.6**	**-0.6**
EPOS	**Posof**	**0.88**	**290**	*i*P	**Pg**	**11 46 15.3**	**-1.4**
EPOS				*i*S	**Sg**	**11 46 26.8**	**-1.4**
EPOS	**Posof**	**0.88**	**290**	P	**Pg**	**11 46 15.3**	**-1.4**
DUS	**Dusheti**	**1.10**	**36**	P	**Pn**	**11 46 21.4**	**+0.3**
DUS				S	**Sn**	**11 46 36.6**	**+0.3**
DUS	**Dusheti**	**1.10**	**36**	P	**Pn**	**11 46 21.4**	**+0.3**
DUS				S	**Sn**	**11 46 36.6**	**+0.3**
DGRG	**David-gareji**	**1.19**	**78**	P	**Pg**	**11 46 21.5**	**-1.2**
DGRG				S	**Sn**	**11 46 39.2**	**+0.7**
DGRG	**David-gareji**	**1.19**	**78**	P	**Pg**	**11 46 21.5**	**-1.2**
DGRG				S	**Sn**	**11 46 38.9**	**+0.4**
GNI	**Garni**	**1.27**	**146**	PN	**Pg**	**11 46 23.6**	**-0.5**
GNI	**Garni**	**1.27**	**146**	*e*Pn	**Pg**	**11 46 23.6**	**-0.5**
GUDG	**Gudauri**	**1.35**	**21**	P	**Pg**	**11 46 25.4**	**-0.3**
GUDG				S	**Sn**	**11 46 43.3**	**+0.7**
GUDG	**Gudauri**	**1.35**	**21**	P	**Pg**	**11 46 25.4**	**-0.3**
GUDG				S	**Sn**	**11 46 44.0**	**+1.4**
IGDI	**IGDIR**	**1.35**	**172**	*i*P	**Pn**	**11 46 24.3**	**-0.2**
IGDI				*i*S	**Sb**	**11 46 42.1**	**-0.2**
ONI	**Oni**	**1.41**	**349**	P	**Pn**	**11 46 25.6**	**+0.3**
ONI				S	**Sn**	**11 46 44.7**	**+0.8**
ONI	**Oni**	**1.41**	**349**	P	**Pn**	**11 46 25.6**	**+0.3**
ONI				S	**Sn**	**11 46 44.7**	**+0.8**
DDEM	**Demirkent**	**1.60**	**259**	*i*P	**Pb**	**11 46 29.3**	**0.0**
DDEM				*i*S	**Sn**	**11 46 49.5**	**+0.9**
DDEM	**Demirkent**	**1.60**	**259**	P	**Pb**	**11 46 29.3**	**0.0**
DDEM				S	**Sn**	**11 46 49.5**	**+0.9**
DBOC	**Borcka**	**1.63**	**276**	*i*P	**Pb**	**11 46 29.8**	**0.0**
DBOC				*i*S	**Sn**	**11 46 50.5**	**+1.2**
DBOC	**Borcka**	**1.63**	**276**	P	**Pb**	**11 46 29.8**	**0.0**
DBOC				S	**Sn**	**11 46 50.5**	**+1.2**
BCA	**Borcka**	**1.68**	**279**	PN	**Pn**	**11 46 29.8**	**+0.9**
BCA	**Borcka**	**1.68**	**279**	*e*Pn	**Pn**	**11 46 29.8**	**+0.9**
DDFL	**Dedoflistskaro**	**1.74**	**81**	P	**Pg**	**11 46 33.0**	**-0.2**
DDFL				S	**Sg**	**11 46 57.5**	**+1.6**
DDFL	**Dedoflistskaro**	**1.74**	**81**	P	**Pg**	**11 46 33.0**	**-0.2**
CHVG	**Ch'k'valeri**	**1.99**	**320**	PN	**Pn**	**11 46 32.0**	**-1.3**
CHVG	**Ch'k'valeri**	**1.99**	**320**	P	**Pb**	**11 46 35.9**	**0.0**
CHVG				S	**Sg**	**11 47 03.1**	**-0.6**
CHVG	**Ch'k'valeri**	**1.99**	**320**	*e*Pn	**Pn**	**11 46 32.0**	**-1.3**
CHVG	**Ch'k'valeri**	**1.99**	**320**	P	**Pb**	**11 46 35.9**	**0.0**
CHOM	**Cayeli-Rize**	**2.32**	**268**	PN	**Pn**	**11 46 38.9**	**+1.2**
CHOM	**Cayeli-Rize**	**2.32**	**268**	*e*Pn	**Pn**	**11 46 38.9**	**+1.2**

*ISK **06** 11:48:42.4, 36˙99N×41˙91E, h13km, ML2.4/4*
*CSEM **06** 11:48:43.2±0.8, 37˙03N×41˙77E, h1km, ML2.6, Error ellipse: s-maj=15.7km s-min=7.5km az=169.0, Suspected Mining explosion.*
*ISCJB **06** 11:48:44.2±1.1, 37˙11N±0˙06×41˙80E±0˙04, h0km, Error ellipse: s-maj=8.9km s-min=4.5km az=171.0*
*DDA **06** 11:48:46.0, 37˙16N×41˙79E, h7km, Ml2.6, Suspected Mining explosion.*

ISC 06 11:48:43.1±1.6, **37˙08N**±0˙09×**41˙77E**±0˙04, **h0**km, **n18**, σ0˙37/30, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRN	**S¨–rnak**	**0.66**	**51**	*i*P	**Pb**	**11 48 57.6**	**+0.1**
SIRN				*i*S	**Sg**	**11 49 04.9**	**+0.5**
SIRN	**S¨–rnak**	**0.66**	**51**	P	**Pb**	**11 48 57.7**	**+0.1**
SIRN				S	**Sg**	**11 49 04.9**	**+0.5**
SIRT	**Sirnak**	**0.68**	**52**	PG	**Pg**	**11 48 55.8**	**-0.4**
SIRT				SG	**Sg**	**11 49 05.5**	**+0.5**
SIRT	**Sirnak**	**0.68**	**52**	*e*Pg	**Pg**	**11 48 55.8**	**-0.4**
SIRT				*e*Sg	**Sg**	**11 49 05.5**	**+0.5**
MARD	**Mardin**	**0.82**	**287**	*i*P	**Pn**	**11 49 02.0**	**-0.1**
MARD				*i*S	**Sn**	**11 49 14.8**	**-0.2**
BTMN	**Batman**	**0.90**	**334**	*i*P	**Pg**	**11 49 00.6**	**+0.2**
BTMN				*i*S	**Sb**	**11 49 14.1**	**-0.2**
BTMN	**Batman**	**0.90**	**334**	P	**Pg**	**11 49 00.6**	**+0.2**
BTMN				S	**Sb**	**11 49 14.1**	**-0.2**
SRTM	**Siirt_Merkez**	**0.92**	**8**	*i*P	**Pn**	**11 49 03.4**	**-0.1**
SRTM				*i*S	**Sb**	**11 49 14.9**	**+0.1**
SRTM	**Siirt_Merkez**	**0.92**	**8**	P	**Pn**	**11 49 03.3**	**-0.1**
SRTM				S	**Sb**	**11 49 14.9**	**+0.1**
MAZI	**Mazidag**	**1.12**	**290**	PN	**Pn**	**11 49 06.3**	**+0.1**
MAZI	**Mazidag**	**1.12**	**290**	*e*Pn	**Pn**	**11 49 06.3**	**+0.1**
SVAN	**Silvan-Diyarba**	**1.16**	**337**	PN	**Pn**	**11 49 06.7**	**0.0**
SVAN	**Silvan-Diyarba**	**1.16**	**337**	*e*Pn	**Pn**	**11 49 06.7**	**0.0**
HANI	**Diyarbakir_Han**	**1.72**	**321**	*i*P	**Pg**	**11 49 15.9**	**-0.1**
HANI				*i*S	**Sn**	**11 49 36.7**	**-0.4**
HANI	**Diyarbakir_Han**	**1.72**	**321**	P	**Pg**	**11 49 15.9**	**-0.1**
HANI				S	**Sn**	**11 49 36.7**	**-0.4**
BNGL	**BINGOL**	**1.93**	**346**	*i*P	**Pb**	**11 49 18.8**	**-0.5**
BNGL				*i*S	**Sn**	**11 49 42.0**	**-0.5**
PTK	**Pertek**	**2.60**	**315**	PN	**Pn**	**11 49 27.5**	**+0.8**
PTK	**Pertek**	**2.60**	**315**	*e*Pn	**Pn**	**11 49 27.5**	**+0.8**

*CSEM **06** 11:49:16.4, 42˙79N×12˙78E, h11km, MD1.5/4*

ROM 06 11:49:16.4±0.1, **42˙790N**±0˙002×**12˙776E**±0˙005, **h11**km, **Md1.5/4, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOMA	**Monte Martano**	**0.15**	**275**	P	Pg	11 49 20.5	+0.6
MOMA				S	Sg	11 49 23.3	+0.9
MOMA	**Monte Martano**	**0.15**	**275**	P	Pg	11 49 20.5	+0.6
MOMA				S	Sg	11 49 23.3	+0.9
MOMA				END			
MOMA				END			
ARRO	**Arrone**	**0.21**	**182**	P	Pg	11 49 21.5	+0.7
ARRO				S	Sg	11 49 25.9	+2.1
ARRO	**Arrone**	**0.21**	**182**	P	Pb	11 49 21.5	-0.7
ARRO				S	Sg	11 49 25.9	+2.1
ARRO				END			
ARRO				END			
CESI	**CESI - Serrava**	**0.23**	**24**	P	Pg	11 49 21.9	+0.6
CESI				S	Sg	11 49 25.9	+1.3
CESI	**CESI - Serrava**	**0.23**	**24**	P	Pg	11 49 21.9	+0.6
CESI				S	Sg	11 49 25.9	+1.3
NRCA	**Norcia**	**0.25**	**80**	P	Pg	11 49 22.1	+0.5
NRCA				S	Sb	11 49 26.4	-1.1
NRCA	**Norcia**	**0.25**	**80**	P	Pg	11 49 22.1	+0.5
NRCA				S	Sb	11 49 26.4	-1.1
NRCA				END			
NRCA				END			
FDMO	**Fiordimonte**	**0.34**	**43**	P	Pg	11 49 23.5	+0.4
FDMO				S	Sg	11 49 28.7	+1.1
FDMO	**Fiordimonte**	**0.34**	**43**	P	Pg	11 49 23.5	+0.3

FDMO			S	Sg	11 49 28.7	+1.1
FDMO			END			
FDMO			END			
AQU	**L'Aquila**	**0.64 133**	AML	AML		
	comp=N,529μm,0.1s					
AQU			AML	AML		
	comp=E,482μm,0.2s					
AQU			AML	AML		
	comp=E,482μm,0.2s					
AQU			AML	AML		
	comp=N,529μm,0.1s					
T0805	**Bondeno (FE)**	**2.37 334**	AML	AML		
	comp=E,4885μm,0.8s					
T0805			AML	AML		
	comp=N,9390μm,0.2s					
T0805			AML	AML		
	comp=E,4880μm,0.8s					
T0805			AML	AML		
	comp=N,9380μm,0.2s					
T0805			AML	AML		
	comp=E,4880μm,0.8s					
T0805			AML	AML		
	comp=N,9380μm,0.2s					
NDIM	**Novi di Modena**	**2.50 328**	AML	AML		
	comp=N,1195μm,0.7s					
NDIM			AML	AML		
	comp=E,1655μm,1.2s					
NDIM			AML	AML		
	comp=E,1655μm,1.2s					
NDIM			AML	AML		
	comp=N,1195μm,0.7s					
MAGA	**Magasa**	**3.36 333**	AML	AML		
	comp=E,78μm,0.5s					
MAGA			AML	AML		
	comp=E,78μm,0.5s					
MAGA			AML	AML		
	comp=N,59μm,0.5s					
MAGA			AML	AML		
	comp=N,59μm,0.5s					
SATI	**Passo dei Sala**	**4.68 313**	AML	AML		
	comp=E,28μm,0.8s					
SATI			AML	AML		
	comp=E,28μm,0.8s					
SATI			AML	AML		
	comp=N,29μm,1.1s					
SATI			AML	AML		
	comp=N,29μm,1.1s					

*ISN **06** 12:17:13.0±0.9, 32°.53N×46°.94E, h2km±4km, ML2.7*

TEH 06 12:17:15.0, 32°.51N×46°.97E, h10km, ML2.7, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKFM	**Kafar-mosalman**	**1.26**	**36**	*e*Pn	Pn	12 17 38.6	0.0
IKFM				*e*		12 18 07.5	
	comp=Z,99nm,0.2s						
IKOM	**Komasi**	**1.72**	**15**	*e*Pn	Pn	12 17 45.9	+0.7
IKOM				*e*		12 17 53.0	
	comp=Z,99nm,0.3s						
IVIS	**Veis**	**2.02**	**357**	*e*Pn	Pn	12 17 49.2	0.0
IVIS				*e*Sn	Sn	12 18 14.0	-0.5
IVIS				*e*		12 18 24.6	
	comp=Z,404nm,0.2s						
ILIN	**Lien**	**2.41**	**360**	*e*Pn	Pn	12 17 54.0	-0.7
ILIN				*e*		12 18 55.0	
	comp=Z,402nm,0.0s						

MEX 06 12:30:18.6±0.3, 17°.15N×101°.44W, h15km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.46**	**357**	*e*P	Pg	12 30 26.5	-1.3
ZIIG				*e*S	Sg	12 30 32.6	-1.4
ARIG	**Puente Sto Nin**	**1.54**	**43**	*e*P	Pn	12 30 42.1	-3.4
ARIG				*e*S	Sn	12 31 00.1	-5.2
MEIG	**Mezcala**	**1.91**	**66**	*e*P	Pn	12 30 47.2	-3.5
MEIG				*e*S	Sn	12 31 09.7	-4.7

IDC 06 12:41:35.4±3.2, 0°.61S×99°.23E, h0km, mb3.5/4, mb1 3.5/5, mb1mx3.4/61, mbtmp3.4/5, ML2.6/1, Error ellipse: s-maj=140.0km s-min=21.0km az=58.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**3.40**	**355**	Pn	Pn	12 42 30.6	+0.8
	0.7nm,0.3s,baz=180,slow=19,SNR=2.6						
H08S2	**Diego Garcia H**	**27.55**	**255**	T	T	13 15 22.3	
	baz=76,slow=75,SNR=21						
H08S3	**Diego Garcia H**	**27.55**	**255**	T	T	13 15 18.3	
	baz=76,slow=75,SNR=24						
H08S1	**Diego Carcia H**	**27.57**	**255**	T	T	13 15 19.3	
	baz=76,slow=75,SNR=12						
WRA	**Warramunga Arr**	**39.37**	**121**	P	P	12 49 06.7	-0.3
	0.3nm,0.6s,baz=303,slow=9.2,SNR=4.3						
ASAR	**Alice Springs**	**40.70**	**127**	P	P	12 49 18.3	+0.2
	0.5nm,1.0s,baz=304,slow=8.1,SNR=3.8						
MKAR	**Makanchi Array**	**49.49**	**345**	P	P	12 50 27.6	-0.1
	0.5nm,0.6s,baz=156,slow=7.9,SNR=4.6						
ZALV	**Zalesovo Beam**	**55.67**	**350**	P	P	12 51 12.4	-0.9
	0.9nm,0.3s,baz=170,slow=8.8,SNR=3.0						

MEX 06 12:42:42.7±0.9, 17°.20N×101°.35W, h20km±63km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.42**	**345**	*i* P	Pb	12 42 49.6	-1.8
ZIIG				*e*S	Sb	12 42 55.3	-2.0
CAIG	**El Cayaco**	**1.05**	**98**	*e*P	Pb	12 42 58.8	-3.4
CAIG				*e*S	Sb	12 43 11.3	-4.3
ARIG	**Puente Sto Nin**	**1.44**	**42**	*e*P	Pn	12 43 05.5	-2.3
ARIG				*e*S	Sn	12 43 21.1	-5.0
ACX	**Acapulco**	**1.47**	**103**	*e*P	Pn	12 43 06.7	-1.3
ACX				*e*S	Sn	12 43 23.7	-3.0
MEIG	**Mezcala**	**1.81**	**66**	*e*P	Pn	12 43 10.0	-2.8
MEIG				*e*S	Sn	12 43 30.9	-4.2
TLIG	**Tlapa**	**2.69**	**82**	*e*P	Pn	12 43 23.2	-1.8
TLIG				*i* S	Sn	12 43 53.2	-3.7

MEX 06 12:44:59.6±1.0, 17°.14N×101°.42W, h18km±98km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.47**	**355**	*i* P	Pg	12 45 07.4	-1.7
ZIIG				*e*S	Sg	12 45 12.9	-2.6
CAIG	**El Cayaco**	**1.11**	**94**	*e*P	Pb	12 45 16.6	-3.7
CAIG				*e*S	Sb	12 45 29.4	-5.0
ACX	**Acapulco**	**1.52**	**100**	*e*P	Pn	12 45 24.8	-1.1
ACX				*i* S	Sn	12 45 41.7	-3.6
ARIG	**Puente Sto Nin**	**1.53**	**42**	*e*P	Pn	12 45 23.5	-2.6
ARIG				*e*S	Sn	12 45 40.9	-4.7
MEIG	**Mezcala**	**1.89**	**65**	*e*P	Pn	12 45 27.7	-3.4
MEIG				*e*S	Sn	12 45 49.8	-4.8

IDC 06 12:55:19.6±2.6, 3°.03S×140°.98E, h0km, mb3.3/2, mb1 3.6/3, mb1mx3.4/43, mbtmp3.4/3, ML3.7/1, MS3.2/1, Ms1 3.2/1, ms1mx2.5/23, Error ellipse: s-maj=73.5km s-min=11.0km az=72.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**0.58**	**331**	Pg	Pg	12 55 29.5	-1.2
	baz=141,slow=7.1						
JAY				Lg	Lg	12 55 39.5	
	baz=120,slow=20						
WRA	**Warramunga Arr**	**18.02**	**201**	P	Pn	12 59 31.4	-0.2
	0.3nm,0.3s,baz=22,slow=12,SNR=17						
ASAR	**Alice Springs**	**21.63**	**198**	P	P	13 00 10.5	-1.1
	0.5nm,0.5s,baz=31,slow=10,SNR=12						
JNU	**Nakatsue**	**37.20**	**346**	LR	LR	13 15 28.3	
	comp=Z,31nm,19.1s,baz=350,slow=32						
MKAR	**Makanchi Array**	**71.43**	**322**	P	P	13 06 43.3	+1.4
	0.3nm,0.6s,baz=126,slow=7.3,SNR=2.7						

*ISCJB **06** 13:03:32.3±0.6, 37°.44S±0°.04×177°.39E±0°.05, h149km±4km, mb3.8/3, Error ellipse: s-maj=7.6km s-min=5.2km az=136.7*

*IDC **06** 13:03:32.8±0.8, 37°.79S×177°.34E, h157km±5km, mb3.5/3, mb1 3.7/4, mb1mx3.4/43, mbtmp4.0/4, Error ellipse: s-maj=30.6km s-min=23.0km az=134.0*

*WEL **06** 13:03:33.4, 37°.5±3°×17°.7E±°, h136km±4km*

ISC 06 13:03:32.2±0.8, 37°.44S±0°.05×177°.37E±0°.05, h152km±5km, n100, σ0.97/112, mb3.7/3, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	**White Island**	**0.17**	**240**	P	**Pn**	**13 03 52.4**	**-0.2**
HAZ	**Te Kaha**	**0.45**	**134**	P	**Pn**	**13 03 53.3**	**-0.2**
HAZ				S	**Sn**	**13 04 08.0**	**-1.8**
WHRZ	**Whale Island**	**0.52**	**217**	P	**Pn**	**13 03 54.4**	**+0.5**
RUGZ	**Raukumara Rang**	**0.58**	**155**	P	**Pn**	**13 03 53.8**	**-0.5**
RUGZ				S	**Sn**	**13 04 08.9**	**-2.3**
MXZ	**Matakaoa Point**	**0.76**	**99**	P	**Pn**	**13 03 55.5**	**+0.3**
MXZ				S	**Sn**	**13 04 12.7**	**-0.1**
OPRZ	**Ohinepanea**	**0.76**	**238**	P	**Pn**	**13 03 55.1**	**-0.2**
OPRZ				S	**Sn**	**13 04 11.6**	**-1.3**
MARZ	**Manawahe**	**0.77**	**225**	P	**Pn**	**13 03 55.5**	**+0.1**
EDRZ	**Edgecumbe**	**0.83**	**217**	P	**Pn**	**13 03 56.3**	**+0.4**
URZ	**Urewera**	**0.84**	**194**	P	**Pn**	**13 03 55.9**	**+0.1**
	189nm,0.3s,baz=287,slow=2.9,SNR=927						
URZ				S	**Sn**	**13 04 13.2**	**-0.8**
	139nm,0.3s,baz=193,slow=22,SNR=55						
URZ	**Urewera**	**0.84**	**194**	P	**Pn**	**13 03 56.0**	**+0.1**
URZ				S	**Sn**	**13 04 13.1**	**-1.0**
TWGZ	**Tauwhareparae**	**0.88**	**147**	P	**Pn**	**13 03 57.3**	**+1.1**
MWZ	**Matawai**	**0.90**	**172**	P	**Pn**	**13 03 56.8**	**+0.5**
MWZ				S	**Sn**	**13 04 14.9**	**-0.1**
WMGZ	**Waiomatatini S**	**0.91**	**115**	P	**Pn**	**13 03 57.1**	**+0.8**
WMGZ				S	**Sn**	**13 04 15.4**	**+0.5**
TGRZ	**Tauranga**	**0.93**	**252**	P	**Pn**	**13 03 56.4**	**-0.1**
PUZ	**Puketiti**	**0.94**	**132**	P	**Pn**	**13 03 57.3**	**+0.6**
PUZ				P	**Pn**	**13 03 57.3**	**+0.6**
PUZ				S	**Sn**	**13 04 15.0**	**-0.5**
LIRZ	**Lichensteins R**	**0.96**	**234**	P	**Pn**	**13 03 57.2**	**+0.4**
MKRZ	**Makatiti**	**1.00**	**226**	P	**Pn**	**13 03 58.7**	**+1.5**
OMRZ	**Omania**	**1.03**	**230**	P	**Pn**	**13 03 57.8**	**+0.4**
TARZ	**Mount Tarawera**	**1.05**	**221**	P	**Pn**	**13 03 58.4**	**+0.8**
RAGZ	**Rawiri**	**1.05**	**178**	P	**Pn**	**13 03 58.2**	**+0.5**
KARZ	**Kaharoa**	**1.06**	**237**	P	**Pn**	**13 03 58.0**	**+0.3**
TKGZ	**Te Karaka**	**1.06**	**159**	P	**Pn**	**13 03 58.4**	**+0.7**
TKGZ				S	**Sn**	**13 04 17.5**	**+0.3**
RRRZ	**Republican Roa**	**1.12**	**217**	P	**Pn**	**13 03 58.7**	**+0.5**
MUGZ	**Murupara**	**1.14**	**204**	P	**Pn**	**13 03 58.6**	**+0.3**
NGRZ	**Ngongotaha**	**1.14**	**235**	P	**Pn**	**13 03 59.3**	**+0.8**
UTU	**Utuhina**	**1.19**	**231**	P	**Pn**	**13 03 59.6**	**+0.8**
KMRZ	**Kaimai**	**1.20**	**250**	P	**Pn**	**13 03 59.4**	**+0.4**
KMRZ				S	**Sn**	**13 04 19.3**	**-0.2**
CNGZ	**Carnagh Statio**	**1.23**	**148**	P	**Pn**	**13 04 00.6**	**+1.4**
HSRZ	**Hossack Road**	**1.24**	**225**	P	**Pn**	**13 04 00.3**	**+1.0**
HRRZ	**Handcock Road**	**1.28**	**222**	P	**Pn**	**13 04 00.5**	**+0.9**
RIGZ	**Rimuhau**	**1.30**	**166**	P	**Pn**	**13 04 00.7**	**+0.8**
PRRZ	**Plateau Road**	**1.31**	**216**	P	**Pn**	**13 04 00.5**	**+0.6**
SNGZ	**Shannon Statio**	**1.34**	**181**	P	**Pn**	**13 04 00.9**	**+0.7**
GRRZ	**Galatos Road**	**1.35**	**227**	P	**Pn**	**13 04 01.4**	**+1.0**
ALRZ	**Allen Road**	**1.38**	**216**	P	**Pn**	**13 04 01.4**	**+0.7**
WPRZ	**Whakapapatarin**	**1.44**	**221**	P	**Pn**	**13 04 02.4**	**+1.1**
MTHZ	**Maungataniwha**	**1.47**	**196**	P	**Pn**	**13 04 01.9**	**+0.3**
RAHZ	**Arahi**	**1.49**	**189**	P	**Pn**	**13 04 02.6**	**+0.9**
KUZ	**Kuaotunu**	**1.49**	**297**	P	**Pn**	**13 04 00.9**	**-0.9**
TOZ	**Tahuroa Road**	**1.51**	**258**	P	**Pn**	**13 04 02.5**	**+0.6**
PRGZ	**Paritu Road**	**1.53**	**165**	P	**Pn**	**13 04 03.1**	**+0.8**
MRHZ	**Matea Rd**	**1.58**	**208**	P	**Pn**	**13 04 03.1**	**+0.3**
KNZ	**Kokohu**	**1.59**	**171**	P	**Pn**	**13 04 03.6**	**+0.8**
KUTZ	**Kaahu Road**	**1.61**	**229**	P	**Pn**	**13 04 04.1**	**+1.1**
WHHZ	**Waihua**	**1.64**	**184**	P	**Pn**	**13 04 04.2**	**+0.9**
TLZ	**Tolley Road**	**1.70**	**238**	P	**Pn**	**13 04 05.1**	**+1.1**
NMHZ	**Naumai**	**1.71**	**195**	P	**Pn**	**13 04 05.4**	**+1.3**
MHGZ	**Mahia Peninsul**	**1.76**	**166**	P	**Pn**	**13 04 05.8**	**+1.2**
MKAZ	**Moumakai**	**1.79**	**280**	P	**Pn**	**13 04 05.3**	**+0.3**
ARHZ	**Aropaoanui**	**1.84**	**189**	P	**Pn**	**13 04 06.3**	**+0.7**
BKZ	**Black Stump Fm**	**1.85**	**202**	P	**Pn**	**13 04 05.8**	**+0.1**
RATZ	**Rangitukua**	**1.90**	**221**	P	**Pn**	**13 04 07.4**	**+1.2**
WIAZ	**Waiheke Island**	**1.90**	**289**	P	**Pn**	**13 04 06.4**	**+0.1**
RITZ	**Rihia Road**	**1.94**	**217**	P	**Pn**	**13 04 07.9**	**+1.2**
GRZ	**Great Barrier**	**1.94**	**307**	P	**Pn**	**13 04 06.1**	**-0.6**
KBAZ	**Karaka Road Bo**	**2.01**	**279**	P	**Pn**	**13 04 08.4**	**+1.0**
ETAZ	**East Tamaki Re**	**2.01**	**283**	P	**Pn**	**13 04 08.1**	**+0.6**
KATZ	**Kakaramea**	**2.02**	**220**	P	**Pn**	**13 04 10.8**	**+3.0**
MCHZ	**McNeill Hill**	**2.07**	**195**	P	**Pn**	**13 04 09.0**	**+0.8**
KWHZ	**Kaweka Forest**	**2.11**	**200**	P	**Pn**	**13 04 09.1**	**+0.3**
KRVZ	**Karewarewa**	**2.14**	**219**	P	**Pn**	**13 04 10.0**	**+0.9**
EPAZ	**Eden Park BICE**	**2.17**	**284**	P	**Pn**	**13 04 10.2**	**+0.8**
WTVZ	**West Tongariro**	**2.18**	**219**	P	Pn	13 04 14.6	+5.0
HBAZ	**Herne Bay Bore**	**2.19**	**285**	P	**Pn**	**13 04 10.2**	**+0.7**
ABAZ	**Army Bay**	**2.20**	**292**	P	**Pn**	**13 04 10.2**	**+0.5**
AWAZ	**Awhitu Peninsu**	**2.21**	**279**	P	**Pn**	**13 04 10.4**	**+0.6**
NGZ	**Ngauruhoe**	**2.22**	**218**	P	**Pn**	**13 04 11.1**	**+0.9**
CKHZ	**Cape Kidnapper**	**2.22**	**186**	P	**Pn**	**13 04 10.5**	**+0.5**
TWVZ	**Taurewa**	**2.23**	**223**	P	**Pn**	**13 04 11.2**	**+1.0**
HIZ	**Hauiti**	**2.25**	**241**	P	**Pn**	**13 04 11.8**	**+1.4**
BHHZ	**Black Hill Sta**	**2.29**	**206**	P	**Pn**	**13 04 10.7**	**-0.1**
WTAZ	**Waiatarua**	**2.29**	**282**	P	**Pn**	**13 04 11.5**	**+0.7**
FWVZ	**Far West T-bar**	**2.31**	**218**	P	**Pn**	**13 04 11.8**	**+0.6**
WHVZ	**Whangaehu Hut**	**2.31**	**217**	P	**Pn**	**13 04 13.7**	**+2.5**
RVAZ	**Riverhead Bore**	**2.33**	**286**	P	**Pn**	**13 04 11.8**	**+0.5**
KRHZ	**Kereru**	**2.33**	**199**	P	**Pn**	**13 04 11.1**	**-0.3**
MOVZ	**Moawhango**	**2.34**	**212**	P	**Pn**	**13 04 11.2**	**-0.2**
KAHZ	**Kahuranaki**	**2.38**	**189**	P	**Pn**	**13 04 12.3**	**+0.4**
MTVZ	**Mangateitei**	**2.45**	**217**	P	**Pn**	**13 04 13.6**	**+0.8**
PXZ	**Pawanui**	**2.61**	**189**	P	**Pn**	**13 04 14.4**	**-0.3**
PNHZ	**Pukenui**	**2.63**	**200**	P	**Pn**	**13 04 14.5**	**-0.5**
VRZ	**Vera Road**	**2.65**	**230**	P	**Pn**	**13 04 17.9**	**+2.6**
WPHZ	**Waipukurau**	**2.72**	**195**	P	**Pn**	**13 04 15.6**	**-0.4**
TSZ	**Takapari Road**	**2.83**	**202**	P	**Pn**	**13 04 16.8**	**-0.7**
WCZ	**Waipu Caves**	**2.86**	**301**	P	**Pn**	**13 04 17.7**	**-0.1**
PRHZ	**Porangahau**	**2.88**	**191**	P	**Pn**	**13 04 18.0**	**0.0**
WAZ	**Wanganui**	**2.97**	**218**	P	**Pn**	**13 04 20.0**	**+0.8**
DVHZ	**Dannevirke**	**3.00**	**198**	P	**Pn**	**13 04 18.5**	**-1.1**
ANWZ	**Angora Road**	**3.09**	**193**	P	**Pn**	**13 04 20.2**	**-0.5**
POWZ	**Post Office Ro**	**3.20**	**202**	P	**Pn**	**13 04 21.7**	**-0.4**
PRWZ	**Pori Road**	**3.29**	**199**	P	**Pn**	**13 04 22.9**	**-0.3**
BFZ	**Birch Farm**	**3.35**	**195**	P	**Pn**	**13 04 22.9**	**-1.1**
RPZ	**Rata Peaks**	**7.89**	**216**	P	**Pn**	**13 05 20.8**	**-3.2**
	1.1nm,0.3s,baz=281,slow=2.7,SNR=6.9						
RPZ				S	Sn	13 06 44.4	-7.6
	2.0nm,0.3s,baz=126,slow=23,SNR=9.4						
ASAR	**Alice Springs**	**39.53**	**278**	P	**P**	**13 10 49.1**	**+0.8**
	1.0nm,0.6s,baz=122,slow=8.2,SNR=18						
ASAR				PcP	**PcP**	**13 12 51.9**	**-0.9**
	0.6nm,0.5s,baz=118,slow=3.9,SNR=10						
WRA	**Warramunga Arr**	**41.18**	**283**	P	**P**	**13 11 02.4**	**+0.5**
	1.4nm,0.7s,baz=121,slow=7.9,SNR=28						
KSRS	**Korea Array**	**87.41**	**323**	P	**P**	**13 16 04.3**	**+2.4**
	1.7nm,0.9s,baz=147,slow=6.1,SNR=7.9						
ARCES	**ARCESS Array B**	**144.45**	**343**	PKP	**PKPdf**	**13 22 48.1**	**-1.1**
	1.6nm,0.5s,baz=49,slow=2.8,SNR=18						
FINES	**FINESS Array B**	**150.04**	**332**	PKPbc	**PKPbc**	**13 23 02.3**	**-1.4**
	0.4nm,0.3s,baz=76,slow=5.9,SNR=5.4						
BRTR	**Keskin Array B**	**151.68**	**286**	PKPbc	**PKPbc**	**13 23 08.0**	**-0.5**
	0.6nm,0.6s,baz=130,slow=4.5,SNR=3.2						
TORD	**Torodi Ar. Bea**	**155.50**	**190**	PKPab	**PKPab**	**13 23 34.7**	**+0.4**
	0.5nm,0.4s,baz=158,slow=4.3,SNR=6.1						

*CSEM **06** 13:37°.41.8±0.2, 45°.62N×26°.42E, h158km±2km, MD3.7, Error ellipse: s-maj=3.8km s-min=3.0km az=153.0*

BUC 06 13:37:41.8±0.8, 45°.61N×26°.39E, h164km±7km, MD3.7/4, 60C-15D, Error ellipse: s-maj=5.6km s-min=4.8km az=340.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLOR	**Plostina**	**0.30**	**37**	*i*P	Pn	13 38 03.8	-0.3
PLOR	**Plostina**	**0.30**	**37**	*i*P	Pn	13 38 03.8	-0.3
PLOR				*i* S	Sn	13 38 19.8	-1.5
PLOR	**Plostina**	**0.30**	**37**	*i*P	Pn	13 38 03.8	-0.3
PLOR				*i* S	Sn	13 38 19.8	-1.5
MLR	**Muntele Rosu**	**0.34**	**249**	*i*P	Pn	13 38 04.1	-0.3
MLR	**Muntele Rosu**	**0.34**	**249**	*i*P	Pn	13 38 04.1	-0.3
MLR				*i* S	Sn	13 38 21.0	-0.5
MLR	**Muntele Rosu**	**0.34**	**249**	*i*P	Pn	13 38 04.1	-0.3
MLR				*i* S	Sn	13 38 21.0	-0.5
VRI	**Vrincioaia**	**0.35**	**43**	*i*P	Pn	13 38 04.0	-0.2
VRI	**Vrincioaia**	**0.35**	**43**	*i*P	Pn	13 38 04.0	-0.2
VRI				*i* S	Sn	13 38 20.1	-1.4
VRI	**Vrincioaia**	**0.35**	**43**	*i*P	Pn	13 38 04.0	-0.2
VRI				*i* S	Sn	13 38 20.1	-1.4
GRER		**0.47**	**119**	*i*P	Pn	13 38 04.8	+0.1
GRER		**0.47**	**119**	*i*P	Pn	13 38 04.8	+0.1
GRER				*i* S	Sn	13 38 20.7	-1.4
GRER		**0.47**	**119**	*i*P	Pn	13 38 04.8	+0.1
GRER				*i* S	Sn	13 38 20.7	-1.4
ODBI	**Odobesti**	**0.49**	**72**	*i*P	Pn	13 38 04.9	+0.2
ODBI	**Odobesti**	**0.49**	**72**	*i*P	Pn	13 38 04.9	+0.2
ODBI	**Odobesti**	**0.49**	**72**	*i*P	Pn	13 38 04.9	+0.2
ISR	**Istrita**	**0.51**	**168**	*i*P	Pn	13 38 05.0	+0.1
ISR	**Istrita**	**0.51**	**168**	*i*P	Pn	13 38 05.0	+0.1
ISR				*i* S	Sn	13 38 21.5	-1.1
ISR	**Istrita**	**0.51**	**168**	*i*P	Pn	13 38 05.0	+0.1
ISR				*i* S	Sn	13 38 21.5	-1.1
PETR	**Petresti**	**0.60**	**79**	*i*P	Pn	13 38 05.3	+0.1
PETR	**Petresti**	**0.60**	**79**	*i*P	Pn	13 38 05.3	+0.1
PETR				*i* S	Sn	13 38 21.9	-1.3
PETR	**Petresti**	**0.60**	**79**	*i*P	Pn	13 38 05.3	+0.1
PETR				*i* S	Sn	13 38 21.9	-1.3
SECR		**0.62**	**202**	*i*P	Pn	13 38 05.5	0.0
SECR				S	Sn	13 38 23.4	-0.1
SECR		**0.62**	**202**	*i*P	Pn	13 38 05.5	0.0
SECR				*i* S	Sn	13 38 23.4	-0.1
SECR		**0.62**	**202**	*i*P	Pn	13 38 05.5	0.0
SECR				*i* S	Sn	13 38 23.4	-0.1
PLAR	**PLOIESTI**	**0.74**	**200**	*i*P	Pn	13 38 06.3	+0.2
PLAR	**PLOIESTI**	**0.74**	**200**	*i*P	Pn	13 38 06.3	+0.2
PLAR				*i* S	Sn	13 38 24.3	-0.4
PLAR	**PLOIESTI**	**0.74**	**200**	*i*P	Pn	13 38 06.3	+0.2
PLAR				*i* S	Sn	13 38 24.3	-0.4
DOPR	**Dopca**	**0.79**	**297**	*i*P	Pn	13 38 06.0	-0.4
DOPR	**Dopca**	**0.79**	**297**	*i*P	Pn	13 38 06.0	-0.4
DOPR	**Dopca**	**0.79**	**297**	*i*P	Pn	13 38 06.0	-0.4
TESR	**Tescani**	**0.92**	**11**	*i*P	Pn	13 38 06.2	-1.1
TESR	**Tescani**	**0.92**	**11**	*i*P	Pn	13 38 06.2	-1.1
TESR				*i* S	Sn	13 38 25.2	-1.8
TESR	**Tescani**	**0.92**	**11**	*i*P	Pn	13 38 06.2	-1.1
TESR				*i* S	Sn	13 38 25.2	-1.8
SULR		**0.94**	**186**	*i*P	Pn	13 38 07.3	-0.2
SULR		**0.94**	**186**	*i*P	Pn	13 38 07.3	-0.2
SULR				*i* S	Sn	13 38 26.8	-0.4
SULR		**0.94**	**186**	*i*P	Pn	13 38 07.3	-0.2
SULR				*i* S	Sn	13 38 26.8	-0.4
VOIR		**0.96**	**260**	*i*P	Pn	13 38 08.2	+0.5
VOIR		**0.96**	**260**	*i*P	Pn	13 38 08.2	+0.5
VOIR				*i* S	Sn	13 38 26.8	-0.8
VOIR		**0.96**	**260**	*i*P	Pn	13 38 08.2	+0.5
VOIR				*i* S	Sn	13 38 26.8	-0.8
GIUM	**Giurgiulesti**	**1.28**	**95**	*i*P	Pn	13 38 10.4	+0.1
GIUM				S	Sn	13 38 31.7	-0.6
GIUM	**Giurgiulesti**	**1.28**	**95**	*i*P	Pn	13 38 10.4	+0.1
GIUM				*i* S	Sn	13 38 31.7	-0.6
GIUM	**Giurgiulesti**	**1.28**	**95**	*i*P	Pn	13 38 10.4	+0.1
GIUM				*i* S	Sn	13 38 31.7	-0.6
BUC1	**Bucharest**	**1.29**	**192**	S	Sn	13 38 31.5	-1.0
BUC1	**Bucharest**	**1.29**	**192**	*i* S	Sn	13 38 31.5	-1.0
BUC1	**Bucharest**	**1.29**	**192**	*i* S	Sn	13 38 31.5	-1.0
SGRR	**Singureni**	**1.42**	**192**	S	Sn	13 38 33.0	-1.7
SGRR	**Singureni**	**1.42**	**192**	*i* S	Sn	13 38 33.0	-1.7
SGRR	**Singureni**	**1.42**	**192**	*i* S	Sn	13 38 33.0	-1.7
HARR	**Harsova**	**1.43**	**130**	*i*P	Pn	13 38 11.5	-0.2
HARR	**Harsova**	**1.43**	**130**	*i*P	Pn	13 38 11.5	-0.2
HARR	**Harsova**	**1.43**	**130**	*i*P	Pn	13 38 11.5	-0.2
HUMR	**Humele**	**1.48**	**223**	*i*P	Pn	13 38 11.6	-0.6
HUMR	**Humele**	**1.48**	**223**	*i*P	Pn	13 38 11.6	-0.6
HUMR				*i* S	Sn	13 38 34.8	-0.8
HUMR	**Humele**	**1.48**	**223**	*i*P	Pn	13 38 11.6	-0.6
HUMR				*i* S	Sn	13 38 34.8	-0.8
LEOM	**Leova**	**1.55**	**56**	*i*P	Pn	13 38 13.0	+0.1
LEOM	**Leova**	**1.55**	**56**	*i*P	Pn	13 38 13.0	+0.1
LEOM				*i* S	Sn	13 38 35.5	-1.5
LEOM	**Leova**	**1.55**	**56**	*i*P	Pn	13 38 13.0	+0.1
LEOM				S	Sn	13 38 35.9	-1.1
TLB	**Topalu**	**1.56**	**131**	*i*P	Pn	13 38 12.8	-0.2
TLB	**Topalu**	**1.56**	**131**	*i*P	Pn	13 38 12.8	-0.2
TLB				*i* S	Sn	13 38 35.2	-1.8
TLB	**Topalu**	**1.56**	**131**	*i*P	Pn	13 38 12.8	-0.2
TLB				*i* S	Sn	13 38 35.2	-1.8
TLCR		**1.76**	**103**	*i*P	Pn	13 38 15.2	+0.1
TLCR		**1.76**	**103**	*i*P	Pn	13 38 15.2	+0.1
TLCR				*i* S

ISC 06 14:04:16.9±0.4,51°.77N±0°.03×96°.00E±0°.02,h14km±2km, h14km:pP-P,n1060,σ1°52/1163,mb5.1/362,MS4.7/91, 87C-33D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KZLR	**Kyzyl**	**0.96**	**267**	*i*	Pg		**Pb**	**14 04 33.2**	**-2.2**
KZLR				*e*	Sg		**Sb**	**14 04 45.7**	**-2.3**
KZLR	**Kyzyl**	**0.96**	**267**	*i*	PG		**Pb**	**14 04 33.3**	**-2.2**
KZLR				*e*				14 04 45.7	
HVS	**Khovu-Aksy**	**1.57**	**247**	*d i*	P*		**Pn**	**14 04 42.8**	**-1.7**
ORL	**Orlik**	**2.47**	**70**	*e*	PN		**Pn**	**14 04 58.7**	**+1.9**
ORL				*e*				14 05 31.2	
ORL					pmax	pmax			
	comp=Z,7μm,0.4s								
ORL					smax	smax			
	comp=N,10μm,0.8s								
TBRR	**Tiberkul'**	**2.52**	**328**	⇓	PN		**Pb**	**14 05 02.2**	**+0.3**
TBRR					S		**Sb**	**14 05 35.2**	**+2.4**
CERR	**Cheremushki**	**3.02**	**293**	*e*	Pn		**Pn**	**14 05 05.6**	**+1.4**
CERR				*e*	Pg		**Pb**	**14 05 10.5**	**+0.2**
CERR				*e*	Sg		**Sb**	**14 05 49.0**	**+1.9**
CERR	**Cheremushki**	**3.02**	**293**	*e*	PN		**Pn**	**14 05 05.6**	**+1.4**
CERR				*e*				14 05 10.5	
CERR				*e*				14 05 48.0	
MOY	**Mondy**	**3.11**	**90**	*e*	PN		**Pb**	**14 05 10.5**	**-1.5**
MOY				*e*				14 05 50.4	
MOY					pmax	pmax			
	comp=Z,7μm,1.2s								
MOY					smax	smax			
	comp=N,3μm,1.5s								
ARS	**Arshan**	**3.99**	**85**	*e*	PN		**Pb**	**14 05 25.9**	**-1.0**
ARS				*e*				14 06 16.8	
ARS					pmax	pmax			
	comp=Z,6μm,1.1s								
ARS					smax	smax			
	comp=N,61μm,1.0s								
TLY	**Talaya**	**4.75**	**88**		Pn		**Pn**	**14 05 28.9**	**+0.8**
	comp=N,0.0nm,0.3s,baz=286,slow=5.8,SNR=6.4								
TLY					Pg		**Pb**	**14 05 35.2**	**-4.8**
	comp=N,1.2nm,0.3s,baz=285,slow=12,SNR=141								
TLY					Lg	Lg		14 06 40.6	
	comp=N,3.6nm,0.3s,baz=354,slow=19,SNR=18								
TLY	**Talaya**	**4.75**	**88**	*e*	Pn		**Pn**	**14 05 28.4**	**+0.3**
TLY				*e*	Pg		Pb	14 05 34.9	-5.0
TLY					Lg	Lg		14 06 40.6	
TLY	**Talaya**	**4.75**	**88**	*e*	PN		**Pb**	**14 05 38.8**	**-1.2**
TLY				*e*				14 06 40.4	
TLY					pmax	pmax			
	comp=Z,532nm,0.4s								
TLY					smax	smax			
	comp=N,4.0nm,0.7s								
ZAK	**Zakamensk**	**4.80**	**104**	*e*	PN		**Pn**	**14 05 29.3**	**+0.5**
ZAK				*e*				14 05 38.5	
ZAK				*e*				14 06 41.3	
ZAK					pmax	pmax			
	comp=Z,2μm,1.3s								
ZAK					smax	smax			
	comp=N,21μm,1.1s								
TASR	**Tashtagol**	**5.08**	**284**	*i*	Pn		**Pn**	**14 05 33.7**	**+1.0**
TASR				*e*	Pg		**Pb**	**14 05 47.3**	**+1.7**
TASR				*e*	Sn		**Sn**	**14 06 26.6**	**-4.5**
TASR				*e*	Sg		**Sb**	**14 06 50.5**	**+4.0**
TASR	**Tashtagol**	**5.08**	**284**	*i*	PN		**Pn**	**14 05 33.7**	**+1.0**
TASR				*e*				14 05 47.3	
TASR				*e*				14 06 50.5	
IRK	**Irkutsk**	**5.13**	**81**	*e*	PN		**Pb**	**14 05 45.9**	**-0.5**
IRK				*e*				14 06 51.4	
IRK					pmax	pmax			
	comp=Z,2μm,1.0s								
IRK					smax	smax			
	comp=N,52μm,1.7s								
ELT	**Eltsovka**	**6.14**	**288**	*e*	Pn		**Pn**	**14 05 47.4**	**+0.2**
ELT				*e*	Pg		**Pb**	**14 06 03.9**	**+0.3**
ELT				*e*	Sg		**Sb**	**14 07 24.8**	**+7.8**
ELT	**Eltsovka**	**6.14**	**288**	*e*	PN		**Pn**	**14 05 47.4**	**+0.2**
ELT				*e*				14 06 03.9	
ELT				*e*				14 07 24.8	
TRG	**Tyrgan**	**6.43**	**77**	*e*	PN		**Pn**	**14 05 51.9**	**+0.7**
TRG				*e*				14 06 11.3	
TRG				*e*				14 07 33.2	
TRG					pmax	pmax			
	comp=Z,788nm,1.3s								
TRG					smax	smax			
	comp=N,4μm,1.4s								
UKR	**Ust'-Kan**	**7.08**	**268**	*e*	Pn		**Pn**	**14 06 01.8**	**+1.6**
UKR				*e*	Pg		Pb	14 06 24.7	+5.0
UKR				*e*	Sg		Sb	14 07 53.4	+9.4
UKR	**Ust'-Kan**	**7.08**	**268**	*e*	PN		**Pn**	**14 06 01.8**	**+1.6**
UKR				*e*				14 06 24.7	
ZAA0	**Zalesovo Array**	**7.11**	**292**	⇓	Pn		**Pn**	**14 06 01.5**	**+1.0**
	comp=N,226nm,1.0s								
ZAA0				⇑	Pg		**Pb**	**14 06 22.0**	**+1.9**
	comp=N,280nm,1.4s								
ZAA0				⇑	Lg	Lg		14 07 55.3	
	comp=N,5μm,1.4s								
ZAA0	**Zalesovo Array**	**7.11**	**292**	*e*	Pn		**Pn**	**14 06 01.3**	**+0.8**
ZALV	**Zalesovo Beam**	**7.11**	**292**		Pn		**Pn**	**14 06 01.5**	**+1.1**
	comp=N,15nm,0.3s,baz=106,slow=14,SNR=134								
ZALV					Lg	Lg		14 07 55.4	
	comp=N,82nm,0.3s,baz=111,slow=23,SNR=12								
ZALV					LR	LR		14 08 50.3	
	comp=N,3μm,18.4s,baz=126,slow=38								
ZALV	**Zalesovo Beam**	**7.11**	**292**	*e*	Pn		**Pn**	**14 06 01.2**	**+0.7**
ZALV					Lg	Lg		14 07 55.4	
OGRR	**Ongureny**	**7.29**	**71**	*e*	P		**Pn**	**14 06 03.0**	**+0.1**
SONA1	**Songino Array**	**7.79**	**116**	*e*	Pn		**Pn**	**14 06 09.9**	**0.0**
SONM	**Songino Array**	**7.79**	**116**		Pn		**Pn**	**14 06 08.7**	**-1.2**
	comp=N,0.9nm,0.3s,baz=304,slow=15,SNR=13								
SONM					Pg		**Pb**	**14 06 32.6**	**+0.8**
	comp=N,12nm,0.3s,baz=293,slow=16,SNR=103								
SONM					Lg	Lg		14 08 12.4	
	comp=N,34nm,0.3s,baz=291,slow=30,SNR=6.8								
SONM					LR	LR		14 09 08.0	
	comp=N,4μm,18.2s,baz=308,slow=38								
I34MN	**SONGINO INFRAS**	**7.82**	**116**		Lg	Lg		14 08 20.0	
	baz=317,slow=30,SNR=1.3								
ULN	**Ulaanbaatar**	**8.15**	**114**	*e*	Pn		**Pn**	**14 06 15.8**	**+1.0**
ULN	**Ulaanbaatar**	**8.15**	**114**		Pn		**Pn**	**14 06 16.4**	**+1.6**
	SNR=26								
ULN	**Ulaanbaatar**	**8.15**	**114**		P		**Pn**	**14 06 16.4**	**+1.6**
	SNR=26								
ULN	**Ulaanbaatar**	**8.15**	**114**	*c i*	P		**Pn**	**14 06 14.2**	**-0.6**
ULN					pmax	pmax			
	comp=Z,51nm,1.2s								
NVS	**Novosibirsk**	**8.24**	**297**	*e*	Pn		**Pn**	**14 06 16.3**	**+0.4**
NVS				*e*	Pg		Pb	14 06 46.2	+6.9
NVS				*e*	Sg		Sb	14 08 28.1	+11
NVS	**Novosibirsk**	**8.24**	**297**	*e*	P		**Pn**	**14 06 17.0**	**+1.1**
ZSN	**Zaisan**	**8.42**	**243**	*e*	Pn		**Pn**	**14 06 18.8**	**+0.3**
	comp=Z,1.6nm,0.9s								
ZSN				*i*	Pg		Pg	14 06 50.5	-7.6
ZSN					LR	LR		14 09 34.2	
	comp=Z,469nm,7.0s								
WMQ	**Urumqi**	**9.72**	**218**		P		**Pn**	**14 06 38.3**	**+2.0**
WMQ					pP			14 06 42.6	
WMQ					S		**Sn**	**14 08 31.6**	**+6.4**
WMQ					pmax	pmax			
	comp=Z,180nm,1.5s								
WMQ					pmax	pmax			
	comp=Z,1μm,3.7s								
WMQ					smax	smax			
	comp=Z,2μm,1.9s								
WMQ					smax	smax			
	comp=Z,2μm,1.1s								
WMQ					LR	LR			
	comp=Z,10μm,6.1s								
WMQ					LR	LR			
	comp=Z,17μm,6.9s								
WMQ					LR	LR			
	comp=Z,5μm,13.9s								
SEM	**Semipalatinsk**	**10.01**	**268**	⇑	*i* P		**Pn**	**14 06 40.8**	**+0.5**
	comp=Z,31nm,1.4s								
SEM					LR	LR		14 09 32.1	
	comp=Z,848nm,10.4s								
MK31	**Makanchi Array**	**10.24**	**246**	⇓	Pn		**Pn**	**14 06 42.2**	**-1.2**
	comp=Z,1.5nm,0.3s,baz=79,slow=13,SNR=190								
MK31				⇓	Pg			14 07 15.3	
	comp=Z,33nm,0.5s,baz=69,slow=13,SNR=5.0								
MK31				⇑	Lg	Lg		14 09 30.8	
	comp=Z,1μm,1.1s,baz=63,slow=14,SNR=6.9								
MK31	**Makanchi Array**	**10.24**	**246**	*e*	Pn		**Pn**	**14 06 42.7**	**-0.8**
MK31	**Makanchi Array**	**10.24**	**246**		P		**Pn**	**14 06 42.2**	**-1.2**
MK31					pmax	pmax			
	comp=Z,2.0nm,0.3s								
MKAR	**Makanchi Array**	**10.24**	**246**		Pn		**Pn**	**14 06 43.4**	**-0.1**
	comp=Z,1.6nm,0.3s,baz=83,slow=13,SNR=66								
MKAR					Pg			14 07 24.2	
	comp=Z,7.3nm,0.3s,baz=62,slow=19,SNR=9.8								
MKAR					Sn		**Sn**	**14 08 33.9**	**-4.2**
	comp=Z,8.1nm,0.3s,baz=51,slow=21,SNR=3.1								
MKAR					Lg	Lg		14 09 39.4	
	comp=Z,16nm,0.3s,baz=50,slow=28,SNR=7.7								
MKAR					LR	LR		14 11 04.4	
	comp=Z,3μm,21.0s,baz=52,slow=40								
MKAR	**Makanchi Array**	**10.24**	**246**	*e*	Pn		**Pn**	**14 06 42.9**	**-0.6**
MKAR					Pg			14 07 24.2	
MKAR					Sn		**Sn**	**14 08 33.9**	**-4.2**
MKAR					Lg	Lg		14 09 39.4	
MK01	**Makanchi Array**	**10.25**	**246**	*e*	Pn		**Pn**	**14 06 42.5**	**-1.1**
MAKZ	**Makanchi**	**10.42**	**247**	*e*	Pn		**Pn**	**14 06 44.6**	**-1.2**
MAKZ	**Makanchi**	**10.42**	**247**	*e*	P		**Pn**	**14 06 44.6**	**-1.2**
KURK	**Kurchatov**	**10.95**	**271**	⇑	Pn		**Pn**	**14 06 52.5**	**-0.5**
	comp=Z,43nm,1.2s								
KURK				⇑	Lg	Lg		14 09 52.8	
	comp=Z,2μm,1.4s								
KURK	**Kurchatov**	**10.95**	**271**	*e*	Pn		**Pn**	**14 06 52.7**	**-0.3**
KURK					Lg	Lg		14 10 05.8	
KURK	**Kurchatov**	**10.95**	**271**		Pn		**Pn**	**14 06 53.6**	**+0.6**
	SNR=17								
KURK	**Kurchatov**	**10.95**	**271**		P		**Pn**	**14 06 53.6**	**+0.6**
	SNR=17								
KURK	**Kurchatov**	**10.95**	**271**	*c e*	P		**Pn**	**14 06 53.5**	**+0.5**
KURK					pmax	pmax			
	comp=Z,62nm,1.7s								
KURBB	**Kurchatov Arra**	**11.03**	**271**		Pn		**Pn**	**14 06 55.2**	**+1.2**
	comp=Z,0.9nm,0.3s,baz=73,slow=15,SNR=54								
KURBB					Lg	Lg		14 10 05.8	
	comp=Z,3.3nm,0.3s,baz=75,slow=36,SNR=11								
BOD	**Bodaibo**	**12.00**	**53**	*e*	P		**Pn**	**14 07 04.6**	**-2.8**
BOD				*e*				14 09 28.5	
GTA	**Gaotai**	**12.64**	**166**	⇓	P		**Pn**	**14 07 16.2**	**-0.2**
GTA					pP		P	14 07 20.6	-7.2
GTA					sP			14 07 23.6	
GTA					S		**Sn**	**14 09 36.8**	**-0.2**
GTA					SS		**SnSn**	**14 09 48.7**	**-0.2**
GTA					pmax	pmax			
	comp=Z,5.0nm,1.3s								
GTA					pmax	pmax			
	comp=Z,120nm,4.0s								
GTA					LR	LR			
	comp=Z,8μm,9.6s								
GTA					LR	LR			
	comp=Z,21μm,9.6s								
GTA					LR	LR			
	comp=Z,15μm,10.1s								
PDGK	**Podgornoye**	**13.96**	**239**	⇑	Pn		**Pn**	**14 07 32.0**	**-2.4**
	comp=Z,98nm,1.3s								
PDGK				⇓	Lg	Lg		14 11 28.2	
	comp=Z,731nm,1.3s								
PDGK	**Podgornoye**	**13.96**	**239**		P		**Pn**	**14 07 31.9**	**-2.4**
PDGK					pmax	pmax			
	comp=Z,98nm,1.3s								
SHLS	**Shalkode**	**14.10**	**239**	⇑	*i* P		**Pn**	**14 07 32.6**	**-3.5**
	comp=Z,42nm,1.3s								
KPKS	**Kokpek**	**14.31**	**241**	*e*	P		**Pn**	**14 07 37.9**	**-1.1**
	comp=Z,12nm,1.1s								
KPKS					LR	LR		14 12 40.9	
	comp=Z,1μm,10.1s								
UZB	**Uzynbulak**	**14.34**	**240**	*i*	P		**Pn**	**14 07 37.9**	**-1.6**
	comp=Z,15nm,1.2s								
UZB					LR	LR		14 12 56.9	
	comp=Z,683nm,9.4s								
ZHN	**Zhinishke**	**14.64**	**241**	*e*	P		**Pn**	**14 07 42.3**	**-1.3**
	comp=Z,10nm,1.4s								
ZHN					LR	LR		14 12 56.6	
	comp=Z,788nm,10.8s								
SATY	**Saty**	**14.73**	**241**	*i*	P		**Pn**	**14 07 43.5**	**-1.4**
	comp=Z,29nm,1.3s								
SATY					LR	LR		14 13 02.2	
	comp=Z,2μm,11.6s								
BTO	**Baotou**	**14.77**	**134**	*e*	P		**Pn**	**14 07 43.7**	**-1.7**
BTO					pmax	pmax			
	comp=Z,17nm,0.9s								
BRZS	**Berezniki**	**14.82**	**272**	*e*	P		**Pn**	**14 07 46.1**	**+0.2**
BRZS				*e*	S		**Sn**	**14 10 30.1**	**+0.3**
PRZ	**Przheval'sk**	**15.12**	**239**	*e*	Pn		**Pn**	**14 07 48.3**	**-1.9**
	comp=Z,267nm,1.5s								
PRZ	**Przheval'sk**	**15.12**	**239**	*e*	P		**Pn**	**14 07 48.3**	**-1.9**
PRZ					pmax	pmax			
	comp=Z,267nm,1.5s								
HIA	**Hailar**	**15.29**	**90**	*e*	Pn		**P**	**14 07 57.3**	**+0.3**
	comp=Z,124nm,0.9s								
HIA	**Hailar**	**15.29**	**90**	*e*	P		**P**	**14 07 57.3**	**+0.3**
HIA					pmax	pmax			
	comp=Z,125nm,0.9s								
HHC	**Hu-ho-hao-te**	**15.29**	**129**	*e*	P		**Pn**	**14 07 53.0**	**+0.6**
HHC					S		**Sn**	**14 10 37.2**	**-4.3**
HHC					LR	LR			
	comp=N,2μm,5.9s								
HHC					LR	LR			
	comp=E,1μm,5.7s								
HHC	**Hu-ho-hao-te**	**15.29**	**129**	*e*	P		**Pn**	**14 07 52.8**	**+0.4**
HHC					pP		P	14 07 56.4	-0.8
HHC					sP		sP	14 08 02.7	-0.2
HHC					PP		**pP**	**14 08 06.4**	**+5.4**
HHC					S		**Sn**	**14 10 43.6**	**+2.1**
HHC					sS		S	14 10 47.5	-11
HHC					SS		**SnSn**	**14 11 01.1**	**+7.1**
HHC					pmax	pmax			
	comp=E,41nm,1.4s								
HHC					pmax	pmax			
	comp=E,120nm,5.1s								
HHC					LR	LR			
	comp=E,2μm,7.1s								
HHC					LR	LR			
	comp=E,1μm,4.9s								
HHC					LR	LR			
	comp=E,1μm,7.0s								
KUU	**Kurty**	**15.34**	**247**	*e*	P		**Pn**	**14 07 50.7**	**-2.3**
	comp=E,51nm,1.5s								
KUU					LR	LR		14 13 25.5	
	comp=E,4μm,9.7s								
MDOK	**Medeo**	**15.40**	**243**	⇑	Pn		**Pn**	**14 07 52.1**	**-1.8**
	comp=E,106nm,1.5s								
MDOK				⇓	Lg	Lg		14 12 11.1	
	comp=E,1μm,1.8s								
MDOK	**Medeo**	**15.40**	**243**	*i*	P		**Pn**	**14 07 51.9**	**-1.9**
	comp=E,385nm,1.5s								
MDOK				*e*	S		**Sn**	**14 10 42.9**	**-1.4**
MDOK					LR	LR		14 13 28.7	
	comp=E,3μm,11.3s								
KNDC	**Almaty**	**15.42**	**244**	⇑	Pn		**Pn**	**14 07 52.8**	**-1.1**
	comp=E,150nm,1.4s								
KNDC				⇑	Lg	Lg		14 12 14.9	
	comp=E,2μm,1.6s								
AAA	**Alma-Ata**	**15.45**	**244**	*i*	P		**Pn**	**14 07 54.0**	**-0.4**
	comp=E,80nm,1.3s								
AAA					LR	LR		14 13 31.2	
	comp=E,2μm,10.2s								
AAA	**Alma-Ata**	**15.45**	**244**	*e*	P		**Pn**	**14 07 53.9**	**-0.4**
AAA					pmax	pmax			
	comp=Z,600nm,4.8s								
AAA					MLR	MLR			
	comp=Z,1μm,5.0s								
OTUK	**Ortayu**	**15.60**	**266**	⇓	Pn		**Pn**	**14 07 55.0**	**-1.3**
	comp=Z,84nm,1.3s								
OTUK				⇓	Lg	Lg		14 12 21.9	
	comp=Z,2μm,1.6s								
OTUK	**Ortayu**	**15.60**	**266**		P		**Pn**	**14 07 54.9**	**-1.3**
OTUK					pmax	pmax			
	comp=Z,84nm,1.3s								
BVA0	**Borovoye Array**	**15.66**	**285**	⇓	Pn		**Pn**	**14 07 54.5**	**-2.5**
	comp=Z,78nm,1.1s,baz=88,slow=12,SNR=369								
BVA0				⇑	Lg	Lg		14 12 24.5	
	comp=Z,207nm,1.2s								
BVA0	**Borovoye Array**	**15.66**	**285**		P		**Pn**	**14 07 54.4**	**-2.6**
BVA0					pmax	pmax			
	comp=Z,79nm,1.1s								
BVAR	**Borovoye Array**	**15.66**	**285**		Pn		**Pn**	**14 07 54.5**	**-2.5**
	comp=Z,1.9nm,0.3s,baz=80,slow=13,SNR=90								
BVAR					LR	LR		14 14 14.7	
	comp=Z,2μm,19.4s,baz=84,slow=38								
BRVK	**Borovoye**	**15.72**	**285**	*e*	Pn		**Pn**	**14 07 54.9**	**-2.8**
	comp=Z,49nm,0.9s								
BRVK	**Borovoye**	**15.72**	**285**		Pn		**Pn**	**14 07 55.6**	**-2.2**
	SNR=32								
BRVK	**Borovoye**	**15.72**	**285**	*c i*	P		**Pn**	**14 07 56.4**	**-1.3**
BRVK					pmax	pmax			
	comp=Z,35nm,1.1s								
TARG	**Taragay, Kyrgy**	**15.97**	**238**	*e*	Pn		**Pn**	**14 07 59.3**	**-2.1**
	comp=Z,163nm,1.7s								
KDJ	**Kajisay**	**16.02**	**240**	*e*	Pn		**Pn**	**14 07 59.8**	**-2.2**
	comp=Z,69nm,0.9s								
KDJ	**Kajisay**	**16.02**	**240**		P		**Pn**	**14 07 59.7**	**-2.2**
KDJ					pmax	pmax			
	comp=Z,69nm,1.0s								
BMNS	**Besmoynak**	**16.21**	**246**	*i*	P		**Pn**	**14 08 02.9**	**-1.5**
	comp=Z,40nm,1.4s								
BMNS				*i*	P		**Pn**	**14 08 02.9**	**-1.5**
	comp=Z,40nm,1.4s								
BMNS					LR	LR		14 13 59.9	
	comp=Z,1μm,9.4s								
TKM2	**Tokmak 2**	**16.37**	**245**	⇓	Pn		**Pn**	**14 08 04.1**	**-2.3**
	comp=Z,116nm,1.4s								
TKM2				⇓	Lg	Lg		14 12 44.5	
	comp=Z,895nm,1.9s								
TKM2	**Tokmak 2**	**16.37**	**245**		P		**Pn**	**14 08 05.4**	**-1.1**
	SNR=33								
ULHL	**Ulahol**	**16.46**	**242**		P		**Pn**	**14 08 07.5**	**0.0**
	SNR=6.2								
LZH	**Lanzhou**	**16.65**	**157**	⇓	*i* P		**Pn**	**14 08 09.3**	**-0.6**
LZH					pP		P	14 08 12.9	+0.6
LZH					sP		pP	14 08 14.6	-1.6
LZH					PP		**PnPn**	**14 08 27.3**	**+8.2**
LZH				*e*	S		**Sn**	**14 11 13.2**	**-1.4**
LZH					sS		S	14 11 19.2	-6.7
LZH					SS		**SnSn**	**14 11 29.0**	**+1.4**
LZH					pmax	pmax			
	comp=Z,110nm,1.1s								
LZH					pmax	pmax			
	comp=Z,500nm,4.3s								
LZH					LR	LR			
	comp=Z,18μm,10.5s								
LZH					LR	LR			
	comp=Z,19μm,10.4s								
LZH					LR	LR			
	comp=Z,18μm,11.3s								
KBK	**Karagaybulak**	**16.91**	**246**		P		**Pn**	**14 08 12.3**	**-0.9**
	SNR=30								
FRU	**Bishkek**	**16.99**	**247**	*e*	P		**Pn**	**14 08 11.0**	**-3.0**
FRU				*e*	S		**Sn**	**14 11 24.0**	**+1.5**
FRU					pmax	pmax			
	comp=Z,200nm,2.0s								
KZA	**Kyzart**	**17.12**	**244**		P		**Pn**	**14 08 15.3**	**-0.7**
	SNR=42								
NRN	**Naryn**	**17.14**	**241**	*e*	Pn		**Pn**	**14 08 13.8**	**-2.5**
	comp=Z,35nm,1.0s								
NRN	**Naryn**	**17.14**	**241**	*e*	P		**Pn**	**14 08 13.8**	**-2.5**
NRN					pmax	pmax			
	comp=Z,35nm,1.0s								
AAK	**Ala-Archa**	**17.18**	**246**		P		**Pn**	**14 08 14.8**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=66,slow=14,SNR=29								
AAK					LR	LR		14 14 45.1	
	comp=Z,2μm,19.8s,baz=29,slow=37								
AAK	**Ala-Archa**	**17.18**	**246**	⇑	Pn		**Pn**	**14 08 13.2**	**-3.3**
	comp=Z,92nm,1.7s								
AAK				⇑	Lg	Lg		14 13 07.4	
	comp=Z,868nm,1.8s								
AAK	**Ala-Archa**	**17.18**	**246**		P		**Pn**	**14 08 15.3**	**-1.2**
	SNR=12								
AAK	**Ala-Archa**	**17.18**	**246**	*e*	Pn		**Pn**	**14 08 14.6**	**-2.0**
	comp=Z,143nm,1.8s								
AAK	**Ala-Archa**	**17.18**	**246**		Pn		**Pn**	**14 08 15.7**	**-0.9**
	SNR=38								
AAK	**Ala-Archa**	**17.18**	**246**		P		**Pn**	**14 08 15.7**	**-0.9**
	SNR=38								
AAK	**Ala-Archa**	**17.18**	**246**	*i*	P		**Pn**	**14 08 14.6**	**-2.0**
	SNR=17								
AAK	**Ala-Archa**	**17.18**	**246**	*d i*	P		**Pn**	**14 08 15.0**	**-1.6**
AAK					pmax	pmax			
	comp=Z,25nm,1.2s								
UCH	**Uchtor**	**17.43**	**245**		P		**Pn**	**14 08 19.2**	**-0.8**
	SNR=36								
EKS2	**Erkin-Say**	**17.57**	**248**		P		**Pn**	**14 08 20.4**	**-1.0**
	SNR=6.6								
AML	**Almayashu**	**17.96**	**246**		P		**Pn**	**14 08 25.9**	**-0.6**
	SNR=22								
NRIK	**Noril'sk**	**18.07**	**350**		P		**Pn**	**14 08 24.2**	**-3.1**
	comp=Z,0.4nm,0.3s,baz=174,slow=12,SNR=13								
NRIK					S		**S**	**14 11 53.0**	**-1.2**
	comp=Z,1.9nm,0.3s,baz=84,slow=17,SNR=2.6								
NRIK					LR	LR		14 15 36.9	
	comp=Z,3μm,20.9s,baz=166,slow=38								
TIY	**Taiyuan**	**18.21**	**134**	*e*	P		**Pn**	**14 08 27.8**	**-1.4**
TIY					S		**S**	**14 11 57.9**	**+0.4**
TIY					pmax	pmax			
	comp=Z,240nm,6.1s								
TIY					LR	LR			
	comp=Z,3μm,8.3s								
TIY					LR	LR			
	comp=Z,3μm,12.0s								
BJI	**Beijing**	**18.23**	**122**		P		**P**	**14 08 30.2**	**+0.7**
BJI					S		**Sn**	**14 11 47.0**	**-5.4**
BJI					pmax	pmax			
	comp=Z,43nm,1.1s								
BJI					pmax	pmax			
	comp=Z,750nm,4.7s								
BJI					LR	LR			
	comp=Z,540nm,8.4s								
BJT	**Baijiatuau**	**18.24**	**122**	*e*	Pn		**Pn**	**14 08 28.4**	**-1.1**
	comp=Z,87nm,1.4s								
BJT	**Baijiatuau**	**18.24**	**122**	*e*	P		**Pn**	**14 08 28.4**	**-1.1**
BJT					pmax	pmax			
	comp=Z,87nm,1.4s								
MNAS	**Manas**	**18.42**	**249**	⇓	Pn		**P**	**14 08 29.2**	**-2.7**
	comp=Z,88nm,1.5s								
MNAS				⇑	Lg	Lg		14 13 49.6	
	comp=Z,575nm,1.8s								
MNAS	**Manas**	**18.42**	**249**		P		**P**	**14 08 29.1**	**-2.7**
MNAS					pmax	pmax			
	comp=Z,88nm,1.5s								
KSH	**Kashi**	**18.53**	**236**	⇓	*i* P		**Pn**	**14 08 38.5**	**+5.3**
KSH					pP

XAN			sS	sS	14 12 41.4	+0.9
XAN			SS	**SnSn**	**14 13 01.0**	**+10**
XAN			pmax	pmax		
	comp=Z,20nm,1.2s					
XAN			pmax	pmax		
	comp=Z,430nm,5.3s					
XAN			LR	LR		
	comp=Z,4μm,13.7s					
XAN			LR	LR		
	comp=Z,9μm,13.2s					
XAN			LR	LR		
	comp=Z,6μm,11.9s					
IUG	**Iuzhnay**	**20.07 252**	*e*P	**P**	**14 08 49.8**	**-0.1**
	comp=Z,8.4nm,1.0s					
IUG			LR	LR	14 16 17.0	
	comp=Z,406nm,7.8s					
YAK	**Yakutsk**	**20.81 47**	*e*P	**P**	**14 08 56.6**	**-1.0**
	comp=Z,129nm,0.7s					
YAK	**Yakutsk**	**20.81 47***c i*P		**P**	**14 08 57.3**	**-0.2**
YAK			*e**PP	**pP**	**14 09 00.8**	**-0.7**
YAK			*e*PPP	PPP	14 09 23.5	
YAK			*e*S	**S**	**14 12 50.9**	**+1.8**
YAK			*e*		14 13 02.1	
YAK			*e*SS	**SnSn**	**14 13 13.1**	**+4.2**
YAK			*e*SSS	SSS	14 13 25.8	
YAK			pmax	pmax		
	comp=Z,34nm,0.9s					
YAK			pmax	pmax		
	comp=E,37nm,1.4s					
YAK			smax	smax		
	comp=N,268nm,1.5s					
YAK			smax	smax		
	comp=E,377nm,2.0s					
YAK			MLR	MLR		
	comp=Z,2μm,14.0s					
YAK			MLR	MLR		
	comp=N,857nm,16.0s					
YAK			MLR	MLR		
	comp=E,2μm,15.0s					
SVE	**Sverdlovsk**	**21.08 298***d i*P		**P**	**14 09 00.9**	**+0.4**
SVE			*e*S	**S**	**14 12 53.1**	**-1.5**
SVE			pmax	pmax		
	comp=Z,224nm,1.4s					
SVE			MLR	MLR		
	comp=Z,2μm,15.0s					
CN2	**Changchun**	**21.22 100**	*e*P	**P**	**14 09 01.8**	**-0.3**
CN2			*e*pP	pP	14 09 05.9	-0.1
CN2			*e*S	**S**	**14 12 55.7**	**-1.8**
CN2			pmax	pmax		
	comp=Z,20nm,1.4s					
CN2			pmax	pmax		
	comp=Z,200nm,3.0s					
CN2			LR	LR		
	comp=Z,12μm,13.0s					
CN2			LR	LR		
	comp=Z,10μm,13.0s					
CN2			LR	LR		
	comp=Z,7μm,10.0s					
SNY	**Shenyang**	**21.22 107**	⇑P	**P**	**14 09 01.0**	**-1.1**
SNY			S	**S**	**14 13 00.2**	**+2.7**
SNY			pmax	pmax		
	comp=Z,27nm,1.1s					
SNY			LR	LR		
	comp=Z,3μm,10.3s					
SNY			LR	LR		
	comp=Z,4μm,10.0s					
SNY			LR	LR		
	comp=Z,4μm,11.0s					
CD2	**Chengdu**	**21.62 162**	P	**P**	**14 09 06.3**	**-0.2**
CD2			sP	sP	14 09 13.9	+1.6
CD2			PP	**PnPn**	**14 09 33.4**	**+6.3**
CD2			S	**S**	**14 13 05.8**	**+0.2**
CD2			sS	pS	14 13 14.1	+0.1
CD2			SS	**SnSn**	**14 13 37.5**	**+8.0**
CD2			pmax	pmax		
	comp=Z,110nm,1.1s					
CD2			pmax	pmax		
	comp=Z,330nm,5.9s					
CD2			LR	LR		
	comp=Z,25μm,12.7s					
CD2			LR	LR		
	comp=Z,8μm,9.6s					
TIA	**Tai'an**	**21.63 128**	P	**P**	**14 09 05.8**	**-0.7**
TIA			pmax	pmax		
	comp=Z,16nm,1.8s					
TIA			pmax	pmax		
	comp=Z,240nm,4.1s					
TIA			LR	LR		
	comp=Z,1μm,12.8s					
TIA			LR	LR		
	comp=Z,880nm,12.9s					
TIA			LR	LR		
	comp=Z,2μm,15.1s					
ARU	**Arti**	**22.25 297**	P	**P**	**14 09 12.5**	**-0.5**
	comp=Z,54nm,0.8s,baz=86,slow=7.3,SNR=38					
ARU			LR	LR	14 19 01.9	
	comp=Z,2μm,19.1s,baz=86,slow=40					
ARU	**Arti**	**22.25 297**	*e*P	**P**	**14 09 12.1**	**-0.9**
	comp=Z,125nm,1.0s					
ARU	**Arti**	**22.25 297***c i*P		**P**	**14 09 12.2**	**-0.8**
ARU			PPP	PPP	14 09 42.3	
ARU			S	**S**	**14 13 18.9**	**+1.7**
ARU			SS	**SnSn**	**14 13 47.3**	**+3.1**
ARU			SSS	SSS	14 14 01.6	
ARU			pmax	pmax		
	comp=Z,247nm,1.7s					
ARU			MLR	MLR		
	comp=Z,3μm,15.0s					
LSA	**Lhasa**	**22.34 191**	P	**P**	**14 09 15.4**	**+0.6**
LSA			S	**S**	**14 13 16.9**	**-3.4**
LSA			pmax	pmax		
	comp=Z,22nm,0.9s					
LSA			LR	LR		
	comp=Z,970nm,9.8s					
LSA			LR	LR		
	comp=Z,640nm,12.5s					
LSA			LR	LR		
	comp=Z,3μm,10.7s					
LSA	**Lhasa**	**22.34 191**	*e*P	**P**	**14 09 15.1**	**+0.3**
	comp=Z,43nm,1.0s					
LSA	**Lhasa**	**22.34 191**	P	**P**	**14 09 15.5**	**+0.7**
LSA	**Lhasa**	**22.34 191**	*e*P	**P**	**14 09 15.1**	**+0.3**
LSA			pmax	pmax		
	comp=Z,43nm,1.0s					
KLR	**Kul'dur**	**22.74 82**	P	**P**	**14 09 17.6**	**-0.7**
	comp=Z,1.4nm,1.1s,baz=281,slow=9.6,SNR=16					
KLR			Lg	Lg	14 16 03.9	
	comp=Z,2.1nm,1.1s,baz=344,slow=20,SNR=6.9					
KLR	**Kul'dur**	**22.74 82***c i*P		**P**	**14 09 18.5**	**+0.1**
AB31	**Akbulak array**	**22.92 278**	⇑P	**P**	**14 09 19.3**	**-0.9**
	comp=Z,83nm,1.4s,baz=74,slow=11,SNR=164					
AB31	**Akbulak array**	**22.92 278**	*e*P	**P**	**14 09 19.6**	**-0.6**
AB31			pmax	pmax		
	comp=Z,83nm,1.4s					
ABKAR	**Akbulak array**	**22.92 278**	*e*P	**P**	**14 09 19.2**	**-1.0**
MDJ	**Mudanjiang**	**23.35 95**	P	**P**	**14 09 21.6**	**-3.1**
MDJ			pP	pP	14 09 27.0	-1.7
MDJ			sP	sP	14 09 29.4	-1.1
MDJ			S	**S**	**14 13 36.5**	**-0.4**
MDJ			sS	sS	14 13 44.5	+0.7
MDJ			SS	**SnSn**	**14 14 15.3**	**+3.8**
MDJ			pmax	pmax		
	comp=Z,17nm,0.6s					
MDJ			LR	LR		
	comp=Z,12μm,6.9s					
MDJ			LR	LR		
	comp=Z,7μm,5.1s					
MDJ			LR	LR		
	comp=Z,5μm,10.5s					
ENH	**Enshi**	**23.69 150**	*e*P	**P**	**14 09 27.2**	**-1.0**
	comp=Z,71nm,1.2s					
AKTO	**Aktyubinsk**	**23.71 282**	P	**P**	**14 09 28.1**	**-0.1**
	comp=Z,43nm,0.8s,baz=84,slow=9.2,SNR=93					
AKTO			Lg	Lg	14 16 48.7	
	comp=Z,13nm,1.0s,baz=158,slow=19,SNR=2.7					
AKTO			LR	LR	14 19 19.5	
	comp=Z,681nm,20.0s,baz=71,slow=38					
AKTO	**Aktyubinsk**	**23.71 282**	⇑P	**P**	**14 09 27.6**	**-0.6**
	comp=Z,119nm,1.1s					
DHRM	**DHARAMSHALA**	**24.25 224**	*e*P	**P**	**14 09 32.1**	**-1.5**
DHRM			IAmb	IAmb	14 09 44.4	
	comp=Z,90nm,1.3s					
NIL	**Nilore**	**24.48 231**	*e*P	**P**	**14 09 35.1**	**-0.4**
	comp=Z,167nm,1.4s					
NIL	**Nilore**	**24.48 231**	*e*P	**P**	**14 09 35.1**	**-0.4**
NIL			pmax	pmax		
	comp=Z,167nm,1.4s					
ITAN	**ITANAGAR**	**24.66 185**	*e*P	**P**	**14 09 36.6**	**-0.4**
ITAN			IAmb	IAmb	14 09 44.9	
	comp=Z,98nm,0.8s					
TIXI	**Tiksi**	**24.70 24**	P	**P**	**14 09 36.9**	**-0.2**
	comp=Z,187nm,0.7s,baz=237,slow=5.6,SNR=206					
TIXI			S	**S**	**14 14 00.4**	**+2.3**
	comp=Z,5.5nm,0.7s,baz=32,slow=19,SNR=1.8					
TIXI			Lg	Lg	14 17 04.8	
	comp=Z,74nm,1.1s,baz=150,slow=20,SNR=4.9					
TIXI			LR	LR	14 19 03.4	
	comp=Z,792nm,19.0s,baz=240,slow=36					
TIXI	**Tiksi**	**24.70 24**	*e*P	**P**	**14 09 36.8**	**-0.2**
	comp=Z,295nm,1.0s					
TIXI			S	**S**	**14 14 00.4**	**+2.3**
TIXI			Lg	Lg	14 17 04.8	
TIXI	**Tiksi**	**24.70 24***ce*P		**P**	**14 09 36.7**	**-0.4**
TIXI			pmax	pmax		
	comp=Z,294nm,1.0s					
SMLA	**Simla**	**24.86 221**	*e*P	**P**	**14 09 37.4**	**-1.5**
SMLA			IAmb	IAmb	14 09 46.6	
	comp=Z,158nm,1.5s					
GUN	**Gumba**	**25.02 202**	*e*P	**P**	**14 09 40.4**	**-0.3**
	comp=Z,164nm,1.0s					
JORH	**JORHAT**	**25.03 184**	*ex*	**P**	**14 09 34.0**	**-6.5**
USRK	**Ussuriysk Ar.**	**25.05 93**	P	**P**	**14 09 40.1**	**-0.3**
	comp=Z,11nm,0.7s,baz=298,slow=8.4,SNR=19					
USRK			Lg	Lg	14 17 17.5	
	comp=Z,5.2nm,1.1s,baz=310,slow=18,SNR=5.8					
USRK			LR	LR	14 20 24.8	
	comp=Z,665nm,20.1s,baz=294,slow=39					
GTK	**Tadong**	**25.05 196**	*ex*	**P**	**14 09 34.8**	**-6.0**
GRNR	**Gornyy**	**25.09 76**	*e*P	**P**	**14 09 42.2**	**+1.4**
GRNR			pmax	pmax		
	comp=Z,29nm,0.8s					
DANN	**Dangsing**	**25.13 206**	*e*P	**P**	**14 09 41.2**	**-0.5**
	comp=Z,124nm,0.9s					
WHN	**Wuhan**	**25.18 140**	⇑P	**P**	**14 09 40.9**	**-0.8**
WHN			S	**S**	**14 14 09.9**	**+3.6**
WHN			LR	LR		
	comp=Z,6μm,10.7s					
WHN			LR	LR		
	comp=Z,2μm,4.0s					
WHN			LR	LR		
	comp=Z,7μm,14.8s					
JIRN	**Jiri**	**25.19 201**	*e*P	**P**	**14 09 42.3**	**0.0**
	comp=Z,136nm,1.0s					
DDI	**Dehra Dun**	**25.21 219**	*e*P	**P**	**14 09 39.9**	**-2.3**
GKN	**Gorkha**	**25.23 204**	*e*P	**P**	**14 09 42.1**	**-0.3**
	comp=Z,258nm,1.3s					
TEZP	**TEZPUR**	**25.24 187**	*e*P	**P**	**14 09 38.8**	**-3.5**
KKN	**Kakani**	**25.27 203**	*e*P	**P**	**14 09 42.6**	**-0.3**
	comp=Z,133nm,1.0s					
MSHR	**Mys Shultsa**	**25.39 97***ce*P		**P**	**14 09 43.5**	**-0.1**
MOKO	**MOKOCHONG**	**25.44 183**	*e*P	**P**	**14 09 45.1**	**+0.7**
PKIN	**Phulchoki**	**25.45 202**	*e*P	**P**	**14 09 44.6**	**0.0**
	comp=Z,85nm,0.8s					
DMN	**Daman**	**25.49 203**	*e*P	**P**	**14 09 44.9**	**0.0**
	comp=Z,217nm,1.5s					
PYUN	**Piuthan**	**25.58 207**	*e*P	**P**	**14 09 44.8**	**-0.9**
	comp=Z,101nm,0.9s					
ODAN	**Odare**	**25.72 198**	*e*P	**P**	**14 09 46.6**	**-0.4**
	comp=Z,97nm,0.7s					
KOLN	**Koldanda**	**25.73 206**	*e*P	**P**	**14 09 46.5**	**-0.5**
	comp=Z,82nm,0.9s					
GUWA	**GUWAHATI**	**25.75 189**	*e*P	**P**	**14 09 43.8**	**-3.2**
RAMN	**Ramite**	**25.79 200**	*e*P	**P**	**14 09 46.7**	**-0.9**
	comp=Z,109nm,1.0s					
INCN	**Inchon**	**25.83 112**	*e*P	**P**	**14 09 44.2**	**-3.4**
	comp=Z,26nm,1.0s					
NJ2	**Nanjing**	**25.84 131**	*e*P	**P**	**14 09 47.8**	**+0.1**
NJ2			pP	**pP**	**14 09 51.7**	**-0.2**
NJ2			sP	**sP**	**14 09 53.5**	**-0.2**
NJ2			S	**S**	**14 14 19.6**	**+2.8**
NJ2			sS	**sS**	**14 14 25.1**	**+1.3**
NJ2			pmax	pmax		
	comp=Z,26nm,0.9s					
NJ2			pmax	pmax		
	comp=Z,420nm,5.4s					
NJ2			LR	LR		
	comp=Z,2μm,10.8s					
NJ2			LR	LR		
	comp=Z,1μm,13.6s					
NJ2			LR	LR		
	comp=Z,2μm,10.8s					
KBL	**Kabul**	**25.92 239**	*e*P	**P**	**14 09 47.6**	**-1.1**
	comp=Z,52nm,1.3s					
KBL	**Kabul**	**25.92 239**	*e*P	**P**	**14 09 47.6**	**-1.1**
KBL			pmax	pmax		
	comp=Z,53nm,1.3s					
DHUB	**DHUBRI**	**26.12 192**	*e*P	**P**	**14 09 49.1**	**-1.2**
SHL	**Shillong**	**26.36 188**	*e*P	**P**	**14 09 51.7**	**-1.0**
SHL			IAmb	IAmb	14 09 54.1	
	comp=Z,44nm,1.2s					
SHL	**Shillong**	**26.36 188**	*e*P	**P**	**14 09 51.8**	**-0.9**
	comp=Z,111nm,1.3s					
SHL	**Shillong**	**26.36 188**	*e*P	**P**	**14 09 51.8**	**-0.9**
SHL			pmax	pmax		
	comp=Z,111nm,1.3s					
TURI	**Tura**	**26.54 192**	*e*P	**P**	**14 09 52.2**	**-1.9**
GYA	**Guiyang**	**26.54 158**⇑*i*P		**P**	**14 09 53.3**	**-1.0**
GYA			PP	**PnPn**	**14 10 38.9**	**+4.4**
GYA			PcP	**PcP**	**14 13 20.2**	**+1.6**
GYA			SS		14 15 36.0	
GYA			ScP	**ScP**	**14 16 56.8**	**-1.1**
GYA			pmax	pmax		
	comp=Z,20nm,0.8s					
GYA			pmax	pmax		
	comp=Z,130nm,5.0s					
GYA			LR	LR		
	comp=Z,3μm,15.2s					
GYA			LR	LR		
	comp=Z,2μm,16.9s					
GYA			LR	LR		
	comp=Z,2μm,16.4s					
KS01	**Wonju Array Si**	**26.57 110**	*e*P	**P**	**14 09 53.4**	**-0.9**
KS15	**Wonju Array Si**	**26.58 110**	*e*P	**P**	**14 09 53.0**	**-1.4**
KSAR	**Wonju Array Be**	**26.58 110**	P	**P**	**14 09 54.1**	**-0.4**
KSAR			Lg	Lg	14 18 12.4	
KSAR	**Wonju Array Be**	**26.58 110**	P	**P**	**14 09 54.1**	**-0.4**
KSRS	**Korea Array**	**26.60 110**	P	**P**	**14 09 54.1**	**-0.5**
	comp=Z,13nm,0.9s,baz=321,slow=7.3,SNR=83					
KSRS			Lg	Lg	14 18 12.4	
	comp=Z,12nm,1.3s,baz=311,slow=27,SNR=6.9					
KSRS			LR	LR	14 21 10.6	
	comp=Z,772nm,18.5s,baz=312,slow=38					
IMP	**Imphal**	**26.95 184**	*e*P	**P**	**14 09 56.0**	**-1.8**
NDI	**New Delhi**	**27.00 219**	*e*P	**P**	**14 09 58.0**	**-0.3**
TJN	**Taejon**	**27.02 112***ce*P		**P**	**14 09 56.2**	**-2.2**
KMI	**Kunming**	**27.10 166**	P	**P**	**14 10 00.6**	**+1.1**
KMI			pP	pP	14 10 04.5	+0.8
KMI			sP	sP	14 10 05.8	+0.4
KMI			PP	**PnPn**	**14 10 47.2**	**+4.9**
KMI			S	**S**	**14 14 37.2**	**-0.1**
KMI			SS	**SnSn**	**14 15 51.2**	**+7.2**
KMI			pmax	pmax		
	comp=Z,19nm,0.6s					
KMI			pmax	pmax		
	comp=Z,270nm,4.7s					
KMI			LR	LR		
	comp=Z,3μm,9.2s					
KMI			LR	LR		
	comp=Z,2μm,10.4s					
KMI			LR	LR		
	comp=Z,4μm,10.1s					
AZL	**Aizawl**	**28.10 186**	*e*P	**P**	**14 10 07.8**	**-0.5**
AZL			IAmb	IAmb	14 10 16.7	
	comp=Z,57nm,0.2s					
PRGR	**Permogore**	**28.64 310**	*e*P	**P**	**14 10 12.4**	**-0.2**
PRGR			pmax	pmax		
	comp=Z,30nm,0.8s					
TYV	**Tymovskoe**	**28.79 73**	*e*P	**P**	**14 10 10.5**	**-3.6**
TYV			pmax	pmax		
	comp=Z,19nm,1.9s					
BOK	**Bokaro**	**29.00 199**	*e*P	**P**	**14 10 15.4**	**-0.8**
BOK			IAmb	IAmb	14 10 16.2	
	comp=Z,23nm,1.2s					
GEYT	**Alibeck**	**29.84 257**	P	**P**	**14 10 23.9**	**+0.3**
	comp=Z,2.2nm,0.6s,baz=21,slow=4.8,SNR=3.0					
YSS	**Yuzh-Sakhalins**	**30.41 80**	*e*P	**P**	**14 10 27.5**	**-0.9**
YSS			*e*		14 10 31.7	
YSS			*e**SP	**sP**	**14 10 35.8**	**+1.4**
YSS			*e*		14 11 29.9	
YSS			*e*S	**S**	**14 15 27.7**	**-0.8**
YSS			*e*SS	**SnSn**	**14 17 01.5**	**-2.2**
YSS			*e*		14 17 29.0	
YSS			pmax	pmax		
	comp=Z,20nm,1.0s					
YSS			MLR	MLR		
	comp=Z,2μm,11.3s					
YSS			MLR	MLR		
	comp=N,600nm,11.0s					
YSS			MLR	MLR		
	comp=E,2μm,12.0s					
MA2	**Magadan**	**31.03 54**	P	**P**	**14 10 34.3**	**+0.5**
	comp=E,9.1nm,0.8s,baz=260,slow=6.9,SNR=6.0					
MA2			LR	LR	14 24 35.3	
	comp=E,254nm,18.3s,baz=274,slow=39					
MA2	**Magadan**	**31.03 54**	*e*P	**P**	**14 10 33.6**	**-0.2**
	comp=E,17nm,1.0s					
MA2	**Magadan**	**31.03 54**⇑*e*P		**P**	**14 10 34.9**	**+1.1**
MA2			pmax	pmax		
	comp=Z,27nm,1.7s					
SEY	**Seymchan**	**31.34 47**	P	**P**	**14 10 37.1**	**+0.6**
	comp=Z,6.1nm,0.7s,baz=277,slow=12,SNR=26					
SEY	**Seymchan**	**31.34 47***ce*P		**P**	**14 10 36.5**	**0.0**
JNU	**Nakatsue**	**31.36 113**	P	**P**	**14 10 36.1**	**-1.0**
	comp=Z,16nm,0.9s,baz=275,slow=2.0,SNR=8.7					
JNU			LR	LR	14 22 41.5	
	comp=Z,670nm,18.6s,baz=312,slow=35					
JNU	**Nakatsue**	**31.36 113**	*e*P	**P**	**14 10 36.2**	**-0.9**
	comp=Z,20nm,0.9s					
GZH	**Guangzhou**	**31.61 148**	P	**P**	**14 10 35.1**	**-4.1**
GZH			S	**S**	**14 15 46.8**	**-0.8**
GZH			SS	**SnSn**	**14 17 39.4**	**+6.0**
GZH			LR	LR		
	comp=Z,1μm,11.6s					
GZH			LR	LR		
	comp=Z,4μm,11.1s					
KLMR	**Klimovskoe**	**31.66 309***c i*P		**P**	**14 10 39.3**	**0.0**
KLMR			*e*		14 11 45.3	
KLMR			S	**S**	**14 15 49.4**	**+1.6**
KLMR			pmax	pmax		
	comp=Z,95nm,1.0s					
KLMR	**Klimovskoe**	**31.66 309**⇑*i*P		**P**	**14 10 39.4**	**+0.1**
KLMR		⇑*e*P		**P**	**14 10 39.4**	**+0.1**
KLMR		⇑*e*P		**P**	**14 10 39.4**	**+0.1**
KLMR			AMP		14 10 40.9	
	comp=Z,95nm,1.0s					
KLMR			*e*PP	**PnPn**	**14 11 45.4**	**+2.5**
KLMR			⇓S	**S**	**14 15 49.4**	**+1.6**
KLMR			⇓S	**S**	**14 15 49.4**	**+1.6**
KLMR			LQ	LQ	14 20 47.7	
KLMR			LQ	LQ	14 20 47.7	
QZH	**Quanzhou**	**31.85 139**	*e*P	**P**	**14 10 41.9**	**+0.6**
QZH			S	**S**	**14 15 49.8**	**-1.6**
QZH			LR	LR		
	comp=Z,770nm,9.1s					
QZH			LR	LR		
	comp=Z,1μm,10.6s					
QZH			LR	LR		
	comp=Z,1μm,11.2s					
BHPL	**Bhopal**	**31.88 214**	*e*P	**P**	**14 10 39.8**	**-1.8**
BHPL			IAmb	IAmb	14 10 46.1	
	comp=Z,47nm,1.3s					
TMCR	**Tamitsa**	**31.93 315**	*e*P	**P**	**14 10 42.2**	**+0.6**
TMCR			pmax	pmax		
	comp=Z,62nm,1.1s					
LVZ	**Lovozero**	**33.07 323**	*e*P	**P**	**14 10 53.4**	**+1.7**
LVZ			pmax	pmax		
	comp=Z,25nm,1.5s					
LAMP	**Lampang**	**33.30 174**	P	**P**	**14 10 54.5**	**+0.4**
	comp=Z,18nm,0.9s,comp=Z,132nm					
CMAR	**Chiang Mai Arr**	**33.32 175**	P	**P**	**14 10 53.5**	**-0.8**
	comp=Z,2.1nm,0.7s,baz=351,slow=8.6,SNR=12					
CMAR			LR	LR	14 25 24.4	
	comp=Z,1μm,18.7s,baz=350,slow=38					
CM01	**Chiang Mai Arr**	**33.36 175**	*e*P	**P**	**14 10 54.2**	**-0.4**
MJAR	**Matsushiro Arr**	**33.37 100**	P	**P**	**14 10 52.4**	**-2.2**
	comp=Z,2.3nm,1.1s,baz=315,slow=11,SNR=4.2					
MJAR			PcP	**PcP**	**14 13 34.7**	**-1.3**
	comp=Z,1.9nm,1.1s,baz=316,slow=3.5,SNR=4.3					
MJAR			LR	LR	14 24 30.3	
	comp=Z,548nm,19.7s,baz=0.0,slow=36					
MAK	**Makhachkala**	**33.45 274**	*e*P	**P**	**14 10 54.7**	**-0.5**
MAK			*e*		14 12 07.2	
MAK			*e*S	**S**	**14 16 17.5**	**+1.4**
MAK			pmax	pmax		
	comp=Z,147nm,1.1s					
MAK			MLR	MLR		
	comp=Z,606nm,11.0s					
APA	**Apatity**	**33.56 322**⇑*i*P		**P**	**14 10 51.3**	**-4.6**
APA			pmax	pmax		
	comp=Z,10.0nm,1.0s					
APA			MLR	MLR		
	comp=Z,2μm,14.0s					
YUK	**Yuzh-Kuril'sk**	**33.73 83**	*e*P	P	14 10 50.4	-7.2
YUK			S	**S**	**14 16 21.1**	**+0.7**
YUK			MLR	MLR		
	comp=N,1μm,15.0s					
YUK			MLR	MLR		
	comp=E,1μm,12.0s					
MOS	**Moscow**	**33.85 300**	*e*P	**P**	**14 10 57.5**	**-1.1**
MOS			*e*		14 12 14.8	
MOS			*e*		14 13 35.0	
MOS			*e*S	**S**	**14 16 21.3**	**-0.7**
MOS			pmax	pmax		
	comp=Z,153nm,1.4s					
MOS			MLR	MLR		
	comp=Z,2μm,13.0s					
NONG	**Nongkai**	**34.11 168**	P	**P**	**14 11 00.9**	**-0.2**
	comp=Z,17nm,0.9s					
YULB	**Yu-li**	**34.36 136**	*e*P	**P**	**14 11 02.4**	**-0.9**
	comp=Z,13nm,0.9s					
GROC	**Groznyy**	**34.38 276**	*e*P	**P**	**14 11 00.9**	**-2.4**
GROC			*e*		14 12 16.3	
GROC			*e*		14 13 36.6	
GROC			*e*S	**S**	**14 16 30.1**	**-0.4**
GROC			pmax	pmax		
	comp=Z,12nm,0.4s					
QIZ	**Qiongzhong**	**34.44 156**	P	**P**	**14 11 04.7**	**+0.7**
QIZ			sP	**pP**	**14 11 08.8**	**+0.5**
QIZ			S	**S**	**14 16 36.2**	**+4.5**
QIZ			sS	**sS**	**14 16 38.7**	**0.0**
QIZ			ScS	**ScS**	**14 21 27.1**	**+0.5**
QIZ			LR	LR		
	comp=Z,4μm,11.6s					
QIZ			LR	LR		
	comp=Z,4μm,12.8s					
QIZ			LR	LR		
	comp=Z,5μm,11.4s					
VSR	**Storozhevoye**	**34.62 292**	*e*P	**P**	**14 11 04.9**	**-0.3**
VSR			*e*S	**S**	**14 16 34.1**	**+0.2**
VSR			pmax	pmax		
	comp=Z,110nm,1.3s					
VSR			smax	smax		
	comp=N,80nm,1.8s					
VSR			MLR	MLR		
	comp=Z,800nm,11.0s					
OBN	**Obninsk**	**34.63 299**	P	**P**	**14 11 05.2**	**-0.1**
	comp=Z,31nm,0.5s,baz=20,slow=3.4,SNR=23					
VORD	**Divnogorie**	**34.65 292**	*e*P	**P**	**14 11 05.4**	**-0.1**
VORD			pmax	pmax		
	comp=Z,100nm,1.2s					
JOW	**Kunigami**	**34.79 123**	LR	LR	14 26 56.9	
	comp=Z,581nm,18.9s,baz=349,slow=39					
JOF	**Joensuu**	**35.09 314**	P	**P**	**14 11 09.6**	**+0.4**
JOF			pmax	pmax		
	comp=Z,36nm,1.2s					
GOF	**Gofitskoye**	**35.11 280**⇑*e*P		**P**	**14 11 10.9**	**+1.3**
GOF			pmax	pmax		
	comp=Z,72nm,0.8s					
SKNT	**Sakolnakorn**	**35.29 167**	P	**P**	**14 11 11.3**	**0.0**
	comp=Z,21nm,2.0s					
PBKT	**Sadao Pong**	**35.34 172**	P	**P**	**14 11 12.0**	**+0.3**
	comp=Z,13nm,1.2s					
PBKT	**Sadao Pong**	**35.34 172**	*e*P	**P**	**14 11 09.8**	**-1.9**
	comp=Z,14nm,1.1s					
MSF	**Maaselka**	**35.48 319**	P	**P**	**14 11 13.1**	**+0.6**
MSF			pmax	pmax		
	comp=Z,30nm,1.3s					
NCK	**Nalchik**	**35.59 278**	*i* P	**P**	**14 11 14.7**	**+1.0**
NCK			pmax	pmax		
	comp=Z,16nm,0.9s					
ZEI	**Tsey**	**35.78 277**	*e*P	P	14 11 09.8	-5.8
ZEI			pmax	pmax		
	comp=Z,18nm,0.9s					
TBLG	**Delisi**	**35.84 274**	*e*P	**P**	**14 11 15.1**	**-0.9**
	comp=Z,58nm,1.1s					
TBLG	**Delisi**	**35.84 274**	*e*P	**P**	**14 11 15.1**	**-0.9**

TBLG pmax pmax
comp=Z,58nm,1.1s
KBZ Khabaz 35.89 279 P **P 14 11 16.4 +0.2**
comp=Z,12nm,1.0s,baz=66,slow=8.9,SNR=12
KBZ LR LR 14 27 36.2
comp=Z,751nm,18.8s,baz=174,slow=39
KVAR Kislovodsk Arr 35.89 279 P **P 14 11 17.3 +0.8**
comp=Z,26nm,0.9s,baz=24,slow=2.5,SNR=23
KIV Kislovodsk 35.90 279 *e*P **P 14 11 17.3 +0.8**
comp=Z,46nm,0.9s
KIV Kislovodsk 35.90 279 P **P 14 11 18.3 +1.8**
SNR=15
KIV Kislovodsk 35.90 279 P **P 14 11 18.3 +1.8**
SNR=15
KIV Kislovodsk 35.90 279 *i* P **P 14 11 18.0 +1.5**
SNR=6.9
KIV Kislovodsk 35.90 279 *e*P **P 14 11 17.5 +1.0**
KIV *e*S **S 14 16 56.7 +2.7**
KIV pmax pmax
comp=Z,54nm,1.0s
KIV pmax pmax
comp=Z,48nm,3.1s
KIV MLR MLR
comp=Z,367nm,16.0s
CHAI Chaiyaphum 36.10 170 P P 14 11 24.3 +6.0
comp=Z,3.6nm,1.0s
ARCES ARCESS Array B 36.25 326 P **P 14 11 19.5 +0.4**
comp=Z,9.3nm,0.9s,baz=73,slow=8.2,SNR=16
ARCES PP **PP 14 12 43.9 +2.6**
comp=Z,4.4nm,0.9s,baz=68,slow=9.7,SNR=4.2
ARCES LR LR 14 28 01.1
comp=Z,708nm,19.0s,baz=46,slow=39
ARCES ARCESS Array B 36.25 326 *e*P **P 14 11 18.7 -0.4**
ARCES PP **PP 14 12 43.9 +2.6**
ARE0 ARCESS Array S 36.25 326 *e*P **P 14 11 19.1 0.0**
comp=Z,16nm,1.1s
NEY Neytrino 36.26 278*d i*P **P 14 11 20.3 +0.7**
NEY pmax pmax
comp=Z,10.0nm,1.0s
PUL Pulkovo 36.36 309*ce*P **P 14 11 21.4 +1.3**
PUL pmax pmax
comp=Z,114nm,0.4s
BILL Bilibino 36.40 37 *e*P **P 14 11 19.4 -1.0**
comp=Z,46nm,1.6s
BILL Bilibino 36.40 37*ce*P **P 14 11 21.3 +0.9**
BILL *e* 14 12 44.1
BILL *e*PPP PPP 14 13 01.8
BILL *e* 14 13 44.2
BILL *e*S **S 14 17 03.9 +2.9**
BILL *e*SS **SnSn 14 19 28.1 -0.4**
BILL pmax pmax
comp=Z,27nm,1.7s
BILL MLR MLR
comp=Z,2μm,16.0s
PEA0B Petropavlovsk- 36.61 63 *e*P **P 14 11 22.4 +0.1**
comp=Z,57nm,1.2s
PETK Petropavlovsk- 36.61 63 P **P 14 11 23.1 +0.8**
comp=Z,22nm,0.9s,baz=297,slow=5.6,SNR=21
PETK LR LR 14 27 15.9
comp=Z,1μm,18.1s,baz=291,slow=38
PETK Petropavlovsk- 36.61 63 *e*P **P 14 11 22.5 +0.2**
JHJ Hachijo jima 2 36.62 103 LR LR 14 27 18.2
comp=Z,546nm,18.5s,baz=320,slow=38
GNI Garni 36.75 272 P **P 14 11 25.4 +1.6**
comp=Z,27nm,1.0s,baz=130,slow=1.4,SNR=17
GNI Garni 36.75 272 *e*P **P 14 11 25.2 +1.3**
comp=Z,72nm,1.3s
GNI Garni 36.75 272 P **P 14 11 26.5 +2.7**
SNR=9.9
GNI Garni 36.75 272 P **P 14 11 26.5 +2.7**
SNR=9.9
GNI Garni 36.75 272 P **P 14 11 26.0 +2.1**
GNI Garni 36.75 272*ce*P **P 14 11 23.5 -0.4**
GNI pmax pmax
comp=Z,143nm,1.0s
AKH Akhalkalaki 36.80 275 *e*P **P 14 11 24.3 0.0**
comp=Z,41nm,1.0s
AKH Akhalkalaki 36.80 275 *e*P **P 14 11 24.3 0.0**
AKH pmax pmax
comp=Z,41nm,1.0s
PET Petropavlovsk 37.17 63 *e*P P 14 11 34.8 +7.7
PET *e* 14 13 00.4
PET *e*S **S 14 17 19.3 +6.4**
PET pmax pmax
comp=Z,300nm,13.8s
PET MLR MLR
comp=Z,2μm,12.0s
PET MLR MLR
comp=Z,2μm,14.0s
SPA0 Spitsbergen Ar 37.84 341 *e*P **P 14 11 33.4 +0.9**
SPITS Spitsbergen Ar 37.84 341 P **P 14 11 33.3 +0.8**
comp=Z,7.2nm,0.8s,baz=110,slow=8.3,SNR=15
SPITS LR LR 14 30 26.7
comp=Z,986nm,18.5s,baz=55,slow=41
FIA1 FINESS Array S 37.85 313 *e*P **P 14 11 32.6 0.0**
comp=Z,50nm,1.1s
FINES FINESS Array B 37.85 313 P **P 14 11 33.1 +0.4**
comp=Z,16nm,0.8s,baz=78,slow=9.9,SNR=45
FINES LR LR 14 27 48.1
comp=Z,346nm,18.4s,baz=83,slow=37
SOC Sochi 37.92 280 *e*P **P 14 11 34.0 +0.5**
SOC *e* 14 12 58.5
SOC *e*S **S 14 17 27.1 +2.6**
SOC *e*SSS SSS 14 20 32.5
SOC pmax pmax
comp=Z,46nm,0.9s
SOC MLR MLR
comp=Z,776nm,14.0s
VSU Vasula 38.54 308*ce*P **P 14 11 38.6 +0.1**
VSU pmax pmax
comp=Z,360nm,1.2s
KBS Kingsbay 38.63 342 *e*P **P 14 11 39.2 +0.1**
comp=Z,24nm,1.1s
KBS Kingsbay 38.63 342 *e*P **P 14 11 39.2 +0.1**
KBS pmax pmax
comp=Z,24nm,1.1s
ANN Anapa 38.66 283 *e*P **P 14 11 39.8 +0.1**
ANN *e*S **S 14 17 37.5 +1.9**
ANN pmax pmax
comp=Z,113nm,1.1s
ANN MLR MLR
comp=Z,824nm,13.0s
VAF Ylistaro 38.86 316 P **P 14 11 42.0 +0.8**
VAF pmax pmax
comp=Z,44nm,1.3s
MICGM Minsk 39.51 302 *e*P **P 14 11 50.0 +3.3**
MICGM PM 14 11 51.0
comp=Z,0.5nm,1.0s
MICGM *e*LR LR 14 27 10.0
MNK Minsk 39.51 302‖*e*P **P 14 11 50.0 +3.3**
MNK pmax pmax
comp=Z,530nm,1.0s
SHME Shamm 39.53 245 *i* P **P 14 11 47.3 +0.1**
SNR=12
BANOM Banah 39.54 245 P **P 14 11 48.8 +1.5**
SNR=9.9
BANOM Banah 39.54 245 P **P 14 11 48.8 +1.5**
SNR=9.9
BANOM Banah 39.54 245 *i* P **P 14 11 48.0 +0.7**
SNR=14
IDID Didziasalis 39.77 303 *e*P **P 14 11 49.7 +0.8**
IDID IAmb IAmb 14 11 51.2
comp=Z,49nm,1.0s
IZAR Zarasai 39.84 304 *e*P **P 14 11 50.3 +0.8**
IZAR IAmb IAmb 14 11 51.7
comp=Z,67nm,1.0s
NACGM Naroch 39.92 303 *e* **P 14 11 50.0 -0.1**
NACGM *e*LQ LQ 14 26 07.0
NACGM *e*LR LR 14 29 14.0
ISAL Salakas 39.98 304 *e*P **P 14 11 51.4 +0.8**
ISAL IAmb IAmb 14 11 53.0
comp=Z,56nm,1.0s
IIGN Ignalina 40.02 304 *e*P **P 14 11 51.7 +0.7**
IIGN IAmb IAmb 14 11 53.4
comp=Z,54nm,1.1s
MSFE Esma-Masafi 40.06 244 P **P 14 11 52.0 +0.3**
GOA Goa 40.30 214 *e*P **P 14 11 51.4 -2.2**
UOSS Minazif 40.36 244 *e*P **P 14 11 53.5 -0.6**
comp=Z,18nm,1.3s
UOSS Minazif 40.36 244 P **P 14 11 54.4 +0.3**
WSAR Wadi Sarin 40.39 239 PcP **PcP 14 13 56.9 -0.5**
comp=Z,11nm,0.7s,baz=96,slow=3.8,SNR=9.0
WSAR LR LR 14 31 32.4
comp=Z,561nm,19.6s,baz=64,slow=40
AKASG Malin Array Be 40.49 296 P **P 14 11 54.6 -0.3**
comp=Z,5.8nm,0.5s,baz=55,slow=8.9,SNR=40
AKASG LR LR 14 29 50.9
comp=Z,1μm,18.4s,baz=65,slow=38
AKBB Malin Array Si 40.49 296 *e*P **P 14 11 54.3 -0.6**
comp=Z,32nm,1.0s
AKBB Malin Array Si 40.49 296 *e*P **P 14 11 54.3 -0.6**
AKBB pmax pmax
comp=Z,32nm,1.0s
HATD Hatta, Dubai 40.49 244 P **P 14 11 55.1 -0.1**
AK11 Malin Array Si 40.53 296 *e*P **P 14 11 54.1 -1.2**
SIM Simferopol' 40.57 286*ce*P **P 14 11 56.0 +0.3**
SIM 14 13 32.0
SIM S **S 14 18 07.8 +3.4**
SIM pmax pmax
comp=Z,48nm,0.8s
NAZ Nazwa, Dubai 40.63 244 P **P 14 11 56.4 0.0**
MDRS Chennai 40.65 204 *e*P **P 14 11 55.2 -1.3**
ASUD Al Ashush, Dub 41.10 244 P **P 14 11 59.6 -0.6**
ALNE Al Ain 41.31 243 P **P 14 12 02.1 +0.1**
SUW Suwalki 42.20 303 *e*P **P 14 12 09.0 +0.1**
SUW Suwalki 42.20 303 *e*P **P 14 12 08.0 -0.9**
comp=Z,68nm,0.9s
SUW Suwalki 42.20 303 *e*P **P 14 12 09.0 +0.1**
SORM Soroca 42.27 293‖*i*P **P 14 12 10.0 +0.5**
SORM Soroca 42.27 293 P **P 14 12 09.5 0.0**
TGY Tagaytay City 42.58 143 LR LR 14 31 07.3
comp=Z,705nm,18.4s,baz=304,slow=38
KIS Kishinev 42.59 291 *i* P **P 14 12 11.0 -1.2**
comp=Z,300nm,5.0s
KIS Kishinev 42.59 291 *e*PP PP 14 13 53.0 +2.2
KIS *e*S **S 14 18 34.0 -0.3**
KIS *e*SS **SnSn 14 21 55.0 -3.3**
KIS *e*LQ LQ 14 27 10.0
comp=Z,2μm,16.0s
KIS LRM MLR 14 34 06.0
comp=Z,1μm,16.0s
KIS Kishinev 42.59 291*c i*P **P 14 12 11.0 -1.2**
KIS *e* 14 13 53.0
KIS *e*S **S 14 18 34.0 -0.3**
KIS pmax pmax
comp=Z,300nm,5.0s
KIS MLR MLR
comp=E,700nm,16.0s
KIS MLR MLR
comp=Z,1μm,16.0s
KIS MLR MLR
comp=Z,1μm,16.0s
MILM Milestii Mici 42.64 291⇑*i*P **P 14 12 12.9 +0.3**
KLNR Kaliningrad 43.45 305*c i*P **P 14 12 19.4 +0.4**
KLNR pmax pmax
comp=Z,156nm,1.1s
LVV L'vov 43.82 297 *e*P **P 14 12 22.9 +0.8**
BR131 Keskin Array S 43.86 280 *e*P **P 14 12 22.7 0.0**
BRTR Keskin Array B 43.86 280 P **P 14 12 23.6 +0.9**
comp=Z,29nm,1.0s,baz=79,slow=6.4,SNR=78
BRTR LR LR 14 33 18.0
comp=Z,404nm,18.0s,baz=32,slow=40
HFS Hagfors 43.95 314 P **P 14 12 23.2 +0.2**
comp=Z,38nm,0.9s,baz=65,slow=7.0,SNR=58
HFS LR LR 14 31 26.4
comp=Z,698nm,21.1s,baz=50,slow=37
TESR Tescani 44.11 292⇑*i*P **P 14 12 24.3 -0.2**
TIRR Tirgusor 44.23 288⇑*i*P **P 14 12 26.2 +0.8**
TIRR Tirgusor 44.23 288 *e*P **P 14 12 25.5 +0.1**
comp=Z,13nm,0.8s
TIRR Tirgusor 44.23 288 *e*P **P 14 12 25.5 +0.1**
TIRR pmax pmax
comp=Z,13nm,0.8s
ANTO Ankara 44.29 280⇑*i*P **P 14 12 27.1 +1.0**
ANTO Ankara 44.29 280 *e*P **P 14 12 26.5 +0.4**
comp=Z,35nm,0.9s
ANTO Ankara 44.29 280 P **P 14 12 27.5 +1.4**
SNR=7.9
ANTO Ankara 44.29 280 P **P 14 12 27.5 +1.4**
SNR=7.9
ANTO Ankara 44.29 280 *e*P **P 14 12 26.5 +0.4**
ANTO pmax pmax
comp=Z,35nm,0.9s
BUR08 Bucovina Ar. S 44.32 294 *e*P **P 14 12 26.6 +0.3**
BURAR Bucovina Array 44.33 294⇑*i*P **P 14 12 26.8 +0.5**
BURAR Bucovina Array 44.33 294 P **P 14 12 27.2 +0.9**
BUR04 Bucovina Ar. S 44.33 294 *e*P **P 14 12 26.4 0.0**
TLB Topalu 44.38 289⇑*i*P **P 14 12 27.4 +0.8**
VRI Vrincioaia 44.42 291‖*i*P **P 14 12 28.4 +1.4**
VRI Vrincioaia 44.42 291 P **P 14 12 28.4 +1.4**
NC303 NORSAR Array S 44.45 317 *e*P **P 14 12 27.1 +0.1**
PLOR Plostina 44.48 291⇑*i*P **P 14 12 29.1 +1.6**
BEL Belsk 44.53 301 *e*P **P 14 12 28.4 +0.6**
BEL Belsk 44.53 301 *e*P **P 14 12 28.3 +0.6**
NB201 NORSAR Array S 44.57 316 *e*P **P 14 12 26.8 -1.2**
NB2 NORSAR Subarra 44.61 316 P **P 14 12 28.1 -0.2**
comp=Z,37nm,1.0s,baz=60,slow=7.9
NB2 NORSAR Subarra 44.61 316 P **P 14 12 28.1 -0.2**
baz=60,slow=7.9
NOA NORSAR Array B 44.61 316 P **P 14 12 28.4 +0.1**
comp=Z,28nm,0.9s,baz=62,slow=7.9,SNR=49
NOA LR LR 14 33 16.3
comp=Z,826nm,19.2s,baz=60,slow=39
NC602 NORSAR Array S 44.61 316 *e*P **P 14 12 27.2 -1.0**
NC602 NORSAR Array S 44.61 316 *e*P **P 14 12 28.3 0.0**
KWP Kalwaria Pacla 44.65 298 *e*P **P 14 12 29.7 +1.0**
KWP Kalwaria Pacla 44.65 298 *e*P **P 14 12 29.3 +0.5**
comp=Z,914nm,1.2s
KWP Kalwaria Pacla 44.65 298‖*e*P **P 14 12 29.7 +1.0**
NC204 NORSAR Array S 44.69 317 *e*P **P 14 12 28.7 -0.2**
NBO00 NORSAR Array S 44.80 316 *e*P **P 14 12 29.8 0.0**
NAO01 NORSAR Array S 44.84 316 *e*P **P 14 12 29.7 -0.5**
DOMB Dombas 45.03 318 *e*P **P 14 12 32.4 +0.8**
MLR Muntele Rosu 45.09 291 P **P 14 12 33.6 +1.1**
comp=Z,1.6nm,0.7s,baz=66,slow=3.4,SNR=9.5
MLR LR LR 14 32 47.5
comp=Z,152nm,19.0s,baz=75,slow=38
MLR Muntele Rosu 45.09 291⇑*i*P **P 14 12 33.5 +1.1**
MLR Muntele Rosu 45.09 291 *e*P **P 14 12 32.9 +0.5**
comp=Z,42nm,1.5s
DOPR Dopca 45.14 292‖*i*P **P 14 12 34.6 +1.9**
DAG Danmarks Havn 45.35 343⇑*i*P **P 14 12 33.6 -0.4**
comp=Z,23nm,0.9s
DAG Danmarks Havn 45.35 343⇑*i*P **P 14 12 33.6 -0.4**
DAG pmax pmax
comp=Z,23nm,0.9s
MOL Molde 45.40 319 *e*P **P 14 12 34.6 +0.1**
UZH Uzhgorod 45.42 297 *e*P **P 14 12 33.5 -1.3**
UZH *e* 14 12 38.1
PRD Provadia 45.55 288 P **P 14 12 35.5 -0.5**
TRPA Tarpa 45.56 296⇑*i*P **P 14 12 37.0 +1.0**
TRPA Tarpa 45.56 296⇑*e*P **P 14 12 36.9 +1.0**
STRU Stroemstad 45.60 314 *e*P **P 14 12 36.4 +0.2**
VOIR 45.64 291‖*i*P **P 14 12 37.2 +0.4**
VOIR 45.64 291 P **P 14 12 37.7 +0.9**
GKP Gorka Klasztor 45.64 305 *e*P **P 14 12 38.0 +1.5**
GKP Gorka Klasztor 45.64 305 *e*P **P 14 12 38.0 +1.5**
CRVS Cervenica-Dubn 45.73 297 *e*P **P 14 12 37.5 +0.1**
CRVS pmax pmax
comp=Z,217nm,3.5s
CRVS Cervenica-Dubn 45.73 297 *e*P **P 14 12 37.5 +0.1**
CRVS *e*L L 14 32 53.6
AKN Aaknes 45.81 319 *e*P **P 14 12 38.7 +0.8**
BSD Bornholm Skovb 45.84 308⇑*i*P **P 14 12 38.0 -0.1**
comp=Z,48nm,1.1s
BSD Bornholm Skovb 45.84 308⇑*i*P **P 14 12 38.0 -0.1**
BSD pmax pmax
comp=Z,48nm,1.1s
TRD Trivandrum 45.88 207 *e*P **P 14 12 35.0 -3.8**
OJC Ojcow 45.92 300 *e*P **P 14 12 39.0 +0.2**
OJC Ojcow 45.92 300 *e*P **P 14 12 38.9 +0.1**
comp=Z,56nm,1.1s
OJC Ojcow 45.92 300⇑*e*P **P 14 12 39.0 +0.2**
KONO Kongsberg 45.99 315 *e*P **P 14 12 39.7 +0.5**
comp=Z,39nm,1.3s
KONO Kongsberg 45.99 315*ce*P **P 14 12 39.1 -0.1**
KONO pmax pmax
comp=Z,24nm,1.2s
KONO Kongsberg 45.99 315 *e*P **P 14 12 40.0 +0.7**
NIE Niedzica 46.09 299 *e*P **P 14 12 41.4 +1.2**
NIE Niedzica 46.09 299⇑*e*P **P 14 12 41.4 +1.2**
PALK Pallekele 46.12 201 LR LR 14 34 26.8
comp=Z,348nm,19.8s,baz=227,slow=39
DRGR 46.21 294⇑*i*P **P 14 12 42.7 +1.5**
DRGR 46.21 294 P **P 14 12 42.6 +1.4**
KECS Kecovo 46.50 297 *e*P **P 14 12 44.6 +1.2**
KECS Kecovo 46.50 297 *e*P **P 14 12 44.6 +1.2**
HYA Hoyanger 46.66 318 *e*P **P 14 12 45.3 +0.8**
LANS Liptovska Anna 46.69 299 *e*P **P 14 12 46.1 +1.2**
LANS Liptovska Anna 46.69 299 *e*P **P 14 12 46.1 +1.2**
ASF Jabal al Asfar 46.70 269 P **P 14 12 46.5 +1.2**
comp=Z,16nm,1.0s,baz=356,slow=2.2,SNR=20
ISP Isparta 46.95 280*c i*P **P 14 12 47.3 +0.1**
ISP pmax pmax
comp=Z,31nm,1.1s
OKC Ostrava-Krasne 47.02 300 *e*P **P 14 12 48.3 +0.9**
OKC *e*S **S 14 19 42.0 +3.6**
OKC *e*SS **SS 14 23 06.6 +1.9**
OKC AMS AMS 14 33 40.0
comp=Z,1μm,18.2s
OKC Ostrava-Krasne 47.02 300 *e*P **P 14 12 48.3 +0.9**
OKC *e*S **S 14 19 42.0 +3.6**
OKC MLR MLR
comp=Z,1μm,18.2s
CSS Mathiatis 47.06 275 *e*P **P 14 12 47.8 -0.1**
comp=Z,20nm,1.3s
MMAI Mount Meron Ar 47.06 271 P **P 14 12 48.9 +0.8**
comp=Z,13nm,0.9s,baz=24,slow=10,SNR=10.0
MMAI LR LR 14 34 54.4
comp=Z,272nm,21.0s,baz=25,slow=39
SIRR Siria 47.10 294‖*i*P **P 14 12 50.1 +1.9**
ODD1 Odda 47.14 317 *e*P **P 14 12 49.9 +1.6**
PSZ Piszkesteto 47.15 297⇑*e*P **P 14 12 49.5 +0.9**
PSZ Piszkesteto 47.15 297 *e*P **P 14 12 49.3 +0.8**
comp=Z,82nm,1.7s
PSZ Piszkesteto 47.15 297 *e*P **P 14 12 49.3 +0.8**
PSZ pmax pmax
comp=Z,82nm,1.7s
HOMB Homborsund 47.19 314 *e*P **P 14 12 48.8 +0.2**
MORC Moravsky Berou 47.38 300⇑*i*P **P 14 12 50.5 +0.2**
MORC Moravsky Berou 47.38 300 *e*P **P 14 12 50.9 +0.6**
comp=Z,180nm,1.1s
MORC Moravsky Berou 47.38 300 *e*P **P 14 12 50.9 +0.6**
MORC pmax pmax
comp=Z,180nm,1.1s
MORC Moravsky Berou 47.38 300 *e*P **P 14 12 51.1 +0.8**
VYHS Vyhne 47.40 298 *e*P **P 14 12 51.8 +1.3**
VYHS pmax pmax
comp=Z,23nm,1.0s
VYHS Vyhne 47.40 298 *e*P **P 14 12 51.8 +1.3**
BER Bergen 47.43 318 *e*P **P 14 12 50.9 +0.4**
ASK Askoy 47.44 318 *e*P **P 14 12 51.5 +0.9**
KSP Ksiaz 47.44 302 *e*P **P 14 12 51.5 +0.7**
KSP Ksiaz 47.44 302⇑*e*P **P 14 12 51.5 +0.7**
BLS5 Blasjo 47.47 316 *e*P **P 14 12 51.7 +0.8**
BZS Buzias 47.51 294⇑*i*P **P 14 12 51.8 +0.5**
RAYN Ar Rayn 47.64 253 *e*P **P 14 12 52.6 -0.1**
comp=Z,28nm,0.9s
RAYN Ar Rayn 47.64 253 *i* P **P 14 12 52.9 +0.3**
SNR=23
RAYN Ar Rayn 47.64 253 P **P 14 12 52.7 0.0**
RAYN pmax pmax
comp=Z,28nm,1.0s
DPC Dobruska-Polom 47.70 302 *e*P **P 14 12 54.2 +1.4**
DPC *ex* x 14 13 11.6
DPC *e*PP **PP 14 14 44.3 +0.1**
DPC *e*S **S 14 19 52.0 +3.8**
DPC *e*SS **SS 14 23 13.8 -2.1**
DPC AMS AMS 14 34 00.0
comp=Z,1μm,13.6s
DPC Dobruska-Polom 47.70 302 *e*P **P 14 12 54.2 +1.4**
DPC *e* 14 14 44.3
DPC *e*S **S 14 19 52.0 +3.8**
DPC *e*SS **SS 14 23 13.8 -2.1**
DPC MLR MLR
comp=Z,1μm,13.6s
SNART Snartemo 47.73 315 *e*P **P 14 12 53.7 +0.9**
ALN Alexandroupoli 47.74 286 *e*P **P 14 12 53.5 +0.3**
comp=Z,15nm,1.0s
ALN Alexandroupoli 47.74 286 *e*P **P 14 12 53.5 +0.3**
ALN pmax pmax
comp=Z,15nm,1.0s
UPC Upice 47.78 302 *e*P **P 14 12 54.5 +1.1**
UPC *ep*P **sP 14 12 58.9 -0.5**
UPC *e*PP **PP 14 14 45.2 +0.4**
UPC *e*S **S 14 19 49.3 +0.1**
UPC *e*SS **SS 14 23 17.3 +0.2**
UPC AMS AMS 14 34 20.0
comp=Z,2μm,14.5s
UPC Upice 47.78 302 *e*P **P 14 12 54.5 +1.1**
UPC *e* 14 12 58.9
UPC *e* 14 14 45.2
UPC *e*S **S 14 19 49.3 +0.1**
UPC *e*SS **SS 14 23 17.3 +0.2**
UPC MLR MLR
comp=Z,2μm,14.5s
PLD Plovdiv 47.80 288 P **P 14 12 54.7 +1.1**
JAVC Velka Javorina 47.83 299 *e*P **P 14 12 55.7 +1.9**
MUD Monsted U'grnd 47.87 312 *e*P **P 14 12 52.9 -1.0**
MDVR Moldovita 47.94 293‖*i*P **P 14 12 55.4 +0.6**
RZN Rozhen 48.05 287 P **P 14 12 56.0 +0.2**
STAV Stavanger 48.07 316 *e*P **P 14 12 56.0 +0.6**
VRAC Vranov 48.15 300⇑*i*P **P 14 12 57.8 +1.5**
VRAC Vranov 48.15 300 *e*P **P 14 12 57.3 +1.0**
SMOL Smolenice 48.16 299 P **P 14 12 58.5 +2.2**
MODS Modra-Piesok 48.32 299 *e*P **P 14 12 57.8 +0.2**
MODS pmax pmax
comp=Z,54nm,1.5s
MODS Modra-Piesok 48.32 299 *e*P **P 14 12 57.8 +0.2**
MODS *e*L L 14 34 44.9
VTS Vitosha 48.39 289‖*i*P **P 14 12 59.3 +0.9**
VTS Vitosha 48.39 289 *e*P **P 14 12 58.3 -0.1**
comp=Z,22nm,0.9s
VTS Vitosha 48.39 289 P **P 14 12 57.0 -1.4**
VTS Vitosha 48.39 289 *e*P **P 14 12 58.3 -0.1**
VTS pmax pmax
comp=Z,22nm,0.9s
KRUC Moravsky 48.40 300 *e*P **P 14 12 59.2 +1.0**
ZST Bratislava 48.52 299 *e*P **P 14 12 59.3 +0.2**
ZST Bratislava 48.52 299 *e*P **P 14 12 59.3 +0.2**
ZST *e*L L 14 34 55.3
PVCC Panska Ves 48.53 303 *e*P **P 14 13 00.4 +1.3**
PVCC *ep*P **sP 14 13 05.0 -0.2**
PVCC *e*PP **PP 14 14 52.2 +0.6**
PVCC AMS AMS 14 34 50.0
comp=Z,1μm,15.1s
PVCC Panska Ves 48.53 303 *e*P **P 14 13 00.4 +1.3**
PVCC *e* 14 13 05.0
PVCC *e* 14 14 52.2
PVCC MLR MLR
comp=Z,1μm,15.1s
BRG Berggiesshubel 48.66 303 *e*P **P 14 13 00.9 +0.8**
comp=Z,40nm,1.1s
BRG *e*PP **PP 14 14 52.0 -0.7**
comp=Z,21nm,1.4s
BRG S **S 14 20 05.0 +3.5**
BRG SS **SS 14 23 35.0 +3.8**
comp=N,514nm,12.5s
comp=E,847nm,13.4s
comp=Z,858nm,14.6s
BRG Berggiesshubel 48.66 303 *e*P **P 14 13 00.9 +0.8**
BRG *e* 14 14 52.0
BRG S **S 14 20 05.0 +3.5**
BRG pmax pmax
comp=Z,40nm,1.1s
BRG pmax pmax
comp=Z,21nm,1.4s
BRG MLR MLR
comp=N,514nm,12.5s
BRG MLR MLR
comp=E,847nm,13.4s
BRG MLR MLR
comp=Z,858nm,14.6s
GOPC GO Pecny, Ondr 48.77 302 *e*P **P 14 13 01.7 +0.7**
GOPC *ep*P **sP 14 13 06.7 -0.4**
GOPC *e*PP **PP 14 14 54.2 +0.4**
GOPC *e*S **S 14 20 03.3 +0.1**
GOPC *e*SS **SS 14 23 35.0 +2.0**
GOPC AMS AMS 14 35 00.0
comp=Z,1μm,14.5s
GOPC GO Pecny, Ondr 48.77 302 *e*P **P 14 13 01.7 +0.7**
GOPC *e* 14 13 06.7
GOPC *e* 14 14 54.2
GOPC *e*S **S 14 20 03.3 +0.1**
GOPC *e*SS **SS 14 23 35.0 +2.0**
GOPC MLR MLR
comp=Z,1μm,14.5s
MORH M̈‡r̈igy, Hung 48.83 296⇑*e*P **P 14 13 02.0 +0.5**
PRU Pruhonice 48.85 302 *e*P **P 14 13 02.6 +1.0**
PRU *e*PP **PP 14 14 55.2 +0.6**
PRU *e*S **S 14 20 08.5 +4.2**
PRU *e*SS **SS 14 23 37.1 +2.7**
PRU AMS AMS 14 35 00.0

comp=Z,1µm,17.1s
PRU Pruhonice 48.85 302 *e*P **P 14 13 02.6 +1.0**
PRU *e* 14 14 55.2
PRU *e*S **S 14 20 08.5 +4.2**
PRU *e*SS **SS 14 23 37.1 +2.7**
PRU MLR MLR
comp=Z,1µm,17.1s
PSI Prapat 48.86 176 LR LR 14 34 39.0
comp=Z,1µm,18.0s,baz=273,slow=37
CLL Collm 48.89 304⇑*i*P **P 14 13 02.3 +0.4**
comp=Z,51nm,0.9s
CLL *e*sP **sP 14 13 09.0 +1.0**
CLL *e*PP **PP 14 14 54.0 -0.9**
CLL *e*S **S 14 20 09.0 +4.2**
CLL *e*SS **SS 14 23 36.0 +1.1**
CLL LmV 14 35 00.0
comp=Z,1µm,19.5s
CLL Collm 48.89 304 *e*P **P 14 13 02.3 +0.4**
comp=Z,58nm,1.0s
CLL Collm 48.89 304⇑*i*P **P 14 13 02.3 +0.4**
CLL *e* 14 13 09.0
CLL *e*S **S 14 19 59.0 -5.8**
CLL pmax pmax
comp=Z,51nm,0.9s
CLL MLR MLR
comp=Z,1µm,19.5s
SOP Sopron 49.12 299⇑*e*P **P 14 13 05.3 +1.6**
SOP Sopron 49.12 299 P **P 14 13 05.7 +2.0**
DIVS Divibare 49.34 293 *e*P **P 14 13 05.0 -0.5**
comp=Z,16nm,0.9s
CONA Conrad Observa 49.35 299 *i*pP **P 14 13 07.3 +1.7**
comp=Z,34nm,1.2s,SNR=24
EIL Elat 49.64 268 P P 14 13 14.1 +6.2
comp=Z,14nm,0.9s,baz=47,slow=5.4,SNR=11
NKC Novy Kostel 49.80 303 *e*P **P 14 13 10.1 +1.2**
NKC *e*x x 14 13 28.5
NKC *e*PP **PP 14 15 04.8 +1.5**
NKC *e*S **S 14 20 23.6 +5.9**
NKC AMS AMS 14 35 40.0
comp=Z,1µm,16.8s
NKC Novy Kostel 49.80 303 *e*P **P 14 13 10.1 +1.2**
NKC *e* 14 15 04.8
NKC *e*S **S 14 20 23.6 +5.9**
NKC MLR MLR
comp=Z,1µm,16.8s
KHC Kasperske Hory 49.86 302 *e*P **P 14 13 10.5 +1.1**
KHC *e*x x 14 13 28.1
KHC *e*PP **PP 14 15 04.4 +0.5**
KHC *e*S **S 14 20 25.4 +6.8**
KHC *e*SS **SS 14 23 54.9 +4.2**
KHC AMS AMS 14 35 40.0
comp=Z,1µm,14.0s
KHC Kasperske Hory 49.86 302 *e*P **P 14 13 10.5 +1.1**
KHC *e* 14 15 04.4
KHC *e*S **S 14 20 25.4 +6.8**
KHC *e*SS **SS 14 23 54.9 +4.2**
KHC MLR MLR
comp=Z,1µm,14.0s
ARSA Arzberg 49.94 299 *i*pP **P 14 13 11.6 +1.6**
comp=Z,22nm,1.1s,SNR=10
GEC2 GERESS Array S 49.97 301 *e*P **P 14 13 10.4 +0.1**
comp=Z,22nm,1.0s
GEC2 GERESS Array S 49.97 301 *e*P **P 14 13 10.4 +0.1**
GEC2 pmax pmax
comp=Z,22nm,1.0s
GERES GERESS Array B 49.97 301 P **P 14 13 11.0 +0.7**
comp=Z,8.2nm,0.8s,baz=52,slow=7.5,SNR=45
GERES LR LR 14 36 20.0
comp=Z,586nm,18.0s,baz=63,slow=38
GEA0 GERESS Array S 49.97 301 *e*P **P 14 13 10.2 -0.1**
SCO Scoresbysund 50.20 337⇑*i*P **P 14 13 13.2 +1.6**
comp=Z,61nm,1.2s
SCO Scoresbysund 50.20 337 *e*P **P 14 13 12.7 +1.1**
comp=Z,61nm,1.2s
SCO Scoresbysund 50.20 337⇑*i*P **P 14 13 13.2 +1.6**
SCO pmax pmax
comp=Z,61nm,1.2s
MOA Molln 50.26 300 *i*pP **P 14 13 13.8 +1.4**
comp=Z,28nm,1.1s,SNR=15
LIT Litokhoron 50.36 287 *e*P **P 14 13 12.9 -0.3**
comp=Z,29nm,1.0s
LIT Litokhoron 50.36 287 *e*P **P 14 13 12.9 -0.3**
LIT pmax pmax
comp=Z,29nm,1.0s
APE Apeiranthos 50.48 282⇑*i*P **P 14 13 13.9 -0.3**
APE Apeiranthos 50.48 282*c i*P **P 14 13 13.8 -0.4**
APE pmax pmax
comp=Z,55nm,1.0s
SOKA Soboth 50.55 298 *i*pP **P 14 13 15.7 +1.0**
comp=Z,22nm,1.2s,SNR=14
FNA Florina 50.59 289 *e*P **P 14 13 14.9 -0.1**
comp=Z,13nm,0.9s
FNA Florina 50.59 289 *e*P **P 14 13 14.9 -0.1**
FNA pmax pmax
comp=Z,13nm,0.9s
TOLK Toolik Lake Re 50.59 26 P **P 14 13 14.2 -0.4**
baz=313
TOLK Toolik Lake Re 50.59 26 *e*P **P 14 13 14.1 -0.5**
comp=Z,50nm,1.6s
GRFO Grafenberg 50.76 303 *e*P **P 14 13 17.6 +1.4**
comp=Z,83nm,1.2s
GRFO Grafenberg 50.76 303 *e*P **P 14 13 17.6 +1.4**
GRFO pmax pmax
comp=Z,83nm,1.2s
TTG Podgorica 50.79 292 *e*P **P 14 13 16.1 -0.4**
comp=Z,26nm,0.9s
TTG Podgorica 50.79 292 *e*P **P 14 13 16.1 -0.4**
TTG pmax pmax
comp=Z,26nm,0.9s
DAV Davao City (W) 50.79 141 LR LR 14 35 59.8
comp=Z,595nm,19.8s,baz=337,slow=38
OBKA Obir 50.92 298 *i*P **P 14 13 18.4 +0.9**
comp=Z,24nm,0.8s,SNR=9.1
SBUM Sibu 51.00 159 *e*P **P 14 13 17.7 -0.5**
comp=Z,28nm,1.4s
AGG Agios Georgios 51.14 286 *e*P **P 14 13 18.8 -0.4**
comp=Z,294nm,2.0s
AGG Agios Georgios 51.14 286 *e*P **P 14 13 18.8 -0.4**
AGG pmax pmax
comp=Z,295nm,2.0s
KBA Koelnbreinsper 51.23 300 *i*pP **P 14 13 21.5 +1.5**
comp=Z,65nm,0.9s,SNR=37
KBA Koelnbreinsper 51.23 300 P **P 14 13 21.4 +1.5**
MYKA Terra Mystica 51.34 299 *i*pP **P 14 13 22.0 +1.4**
comp=Z,35nm,0.8s,SNR=21
TULEG Thule 51.59 356 *e*P **P 14 13 21.2 -0.8**
comp=Z,30nm,1.1s
ABTA Abfaltersbach 51.88 300 *i*P **P 14 13 25.4 +0.7**
comp=Z,9.6nm,0.8s,SNR=6.8
SUMG Summit 51.97 344⇑*i*P **P 14 13 25.5 +0.1**
comp=Z,23nm,0.9s
SUMG Summit 51.97 344 *e*P **P 14 13 25.2 -0.2**
comp=Z,22nm,0.8s
SUMG Summit 51.97 344⇑*i*P **P 14 13 25.5 +0.1**
SUMG pmax pmax
comp=Z,23nm,0.9s
IGT Igoumenitsa 52.00 288 P **P 14 13 25.8 +0.2**
WTTA Wattenberg 52.03 301 *i*pP **P 14 13 27.2 +1.3**
comp=Z,40nm,1.6s,SNR=9.3
IDI Anoyia 52.04 281 P **P 14 13 24.5 -1.5**
comp=Z,15nm,0.9s,baz=58,slow=9.5,SNR=4.4
IDI LR LR 14 39 15.2
comp=Z,275nm,18.3s,baz=80,slow=40
IDI Anoyia 52.04 281‖*i*P **P 14 13 24.5 -1.5**
TOD Tromm 52.06 305 P **P 14 13 27.1 +1.2**
MOTA Moosalm 52.26 301 *i*P **P 14 13 27.9 +0.3**
comp=Z,16nm,0.8s,SNR=7.7
RETA Reutte 52.35 301 *i*pP **P 14 13 29.5 +1.3**
comp=Z,37nm,1.5s,SNR=8.2
STU Stuttgart 52.38 303 *e*P **P 14 13 28.7 +0.5**
comp=Z,56nm,0.8s
STU Stuttgart 52.38 303 *e*P **P 14 13 28.7 +0.5**
STU pmax pmax
comp=Z,56nm,0.8s
KULLO Kullorsuaq 52.66 351⇑*i*P **P 14 13 29.5 -0.5**
comp=Z,29nm,1.0s
KULLO Kullorsuaq 52.66 351⇑*i*P **P 14 13 29.5 -0.5**
KULLO pmax pmax
comp=Z,29nm,1.0s
FETA Feichten 52.66 301 *i*pP **P 14 13 31.6 +1.0**
comp=Z,39nm,1.0s,SNR=20
MLY Manley 52.75 29 *e*P **P 14 13 30.9 0.0**
comp=Z,41nm,1.6s
MEM Membach 52.85 307⇑P **P 14 13 32.4 +0.7**
comp=Z,28nm,1.3s
MEM Membach 52.85 307 P **P 14 13 33.1 +1.4**

DAVA Damuels 52.95 302 *i*pP **P 14 13 33.8 +1.1**
comp=Z,53nm,1.0s,SNR=15
LANF Langenberg 52.96 304 P **P 14 13 34.0 +1.4**
BFO Black Forest 53.10 304 *e*P **P 14 13 33.9 +0.2**
comp=Z,62nm,1.5s
BFO Black Forest 53.10 304 *i*P **P 14 13 34.4 +0.7**
FUORN Ofenpass-Fuorn 53.16 301 *e*P **P 14 13 34.5 0.0**
comp=Z,59nm,0.9s
BPAW Bear Paw Mtn. 53.33 30 *e*P **P 14 13 35.1 0.0**
comp=Z,46nm,1.5s
MDM Murphy Dome 53.55 28 *e*P **P 14 13 36.8 0.0**
comp=Z,46nm,1.5s
CDF Champ du Feu 53.59 304 *e*P **P 14 13 37.2 -0.1**
CDF pmax pmax
comp=Z,30nm,1.1s
RES Resolute Bay 53.62 4 *e*P **P 14 13 36.9 -0.1**
comp=Z,16nm,1.1s
RES Resolute Bay 53.62 4 *e*P **P 14 13 36.9 -0.1**
RES pmax pmax
comp=Z,16nm,1.1s
COLA College 53.73 28 *e*P **P 14 13 38.0 +0.1**
comp=Z,55nm,1.6s
COLA College 53.73 28 *e*P **P 14 13 38.0 +0.1**
COLA pmax pmax
comp=Z,55nm,1.6s
TUE Stuetta 53.75 301 *e*P **P 14 13 38.6 0.0**
comp=Z,24nm,1.3s
GIVF Givet 53.76 307 *e*P **P 14 13 38.5 +0.1**
GIVF pmax pmax
comp=Z,92nm,1.8s
ECH Echery 53.78 304 *e*P **P 14 13 38.8 +0.1**
comp=Z,22nm,0.9s
ECH Echery 53.78 304 *e*P **P 14 13 38.8 +0.1**
ECH pmax pmax
comp=Z,22nm,0.9s
PPLA Purkeypile 53.79 32 *e*P **P 14 13 38.5 -0.1**
comp=Z,53nm,1.5s
DOU Dourbes 53.87 307 P **P 14 13 39.7 +0.5**
CCB Clear Creek Bu 53.91 29 *e*P **P 14 13 38.7 -0.6**
comp=Z,24nm,1.2s
WRH Wood River Hil 53.95 29 *e*P **P 14 13 39.1 -0.5**
comp=Z,19nm,1.0s
TRF Thorofare Moun 54.01 31 *e*P **P 14 13 40.1 -0.1**
comp=Z,32nm,1.3s
IL1 Eielson Array 54.09 28 *e*P **P 14 13 39.2 -1.4**
ILAR Eielson Array 54.09 28 P **P 14 13 40.2 -0.4**
comp=Z,5.2nm,0.9s,baz=317,slow=4.2,SNR=58
ILAR LR LR 14 39 39.0
comp=Z,666nm,18.6s,baz=328,slow=39
ILB Eielson Array 54.09 28 *e*P **P 14 13 40.1 -0.4**
BAIF Baives 54.09 307 *e*P **P 14 13 41.0 +0.2**
EKA Eskdalemuir Ar 54.09 316 P **P 14 13 40.4 -0.3**
comp=Z,5.7nm,0.8s,baz=53,slow=8.3,SNR=7.0
EKA PcP **PcP 14 14 45.0 -0.4**
comp=Z,3.6nm,0.8s,baz=31,slow=3.9,SNR=4.4
EKA LR LR 14 39 19.7
comp=Z,738nm,18.9s,baz=45,slow=39
ESK Eskdalemuir 54.12 316 *e*P **P 14 13 40.5 -0.4**
comp=Z,38nm,1.2s
ESK Eskdalemuir 54.12 316 *e*P **P 14 13 40.5 -0.4**
ESK pmax pmax
comp=Z,38nm,1.2s
AQU L'Aquila 54.18 295 *e*P **P 14 13 41.9 +0.2**
comp=Z,57nm,1.0s
AQU L'Aquila 54.18 295 *e*P **P 14 13 41.9 +0.2**
AQU pmax pmax
comp=Z,57nm,1.0s
HINF Hinteralfeld 54.19 304 *e*P **P 14 13 41.4 -0.3**
HINF pmax pmax
comp=Z,28nm,1.2s
MCK McKinley 54.23 30 *e*P **P 14 13 41.8 +0.1**
comp=Z,16nm,1.0s
MCK McKinley 54.23 30 *e*P **P 14 13 41.8 +0.1**
MCK pmax pmax
comp=Z,16nm,1.0s
TIP Timpagrande 54.33 290⇑*i*P **P 14 13 43.6 +0.8**
TIP Timpagrande 54.33 290 *e*P **P 14 13 42.8 0.0**
comp=Z,45nm,1.0s
HAU Haudompre 54.33 304 *e*P **P 14 13 42.6 -0.1**
HAU pmax pmax
comp=Z,57nm,1.3s
HDA Harding Lake 54.34 28 *e*P **P 14 13 41.3 -1.1**
comp=Z,8.7nm,0.9s
CUC Castrocucco 54.34 291 *e*P **P 14 13 42.9 +0.1**
comp=Z,26nm,0.9s
RND Reindeer 54.49 30 *e*P **P 14 13 42.5 -1.1**
comp=Z,5.5nm,0.9s
RND Reindeer 54.49 30 *e*P **P 14 13 42.5 -1.1**
RND pmax pmax
comp=Z,6.0nm,0.9s
GUMO Guam 54.52 116 LR LR 14 37 57.6
comp=Z,171nm,20.4s,baz=341,slow=37
INK Inuvik 54.73 20 P **P 14 13 45.2 +0.1**
comp=Z,16nm,0.8s,baz=344,slow=9.3,SNR=29
INK Inuvik 54.73 20 *e*P **P 14 13 44.9 -0.3**
comp=Z,32nm,1.0s
SENIN Lac Senin/Sane 54.90 302 *e*P **P 14 13 46.4 -0.6**
comp=Z,17nm,0.9s
DHY Denali Highway 55.19 30 *e*P **P 14 13 48.0 -0.8**
comp=Z,13nm,0.7s
SUA Susitna One 55.29 32 *e*P **P 14 13 49.3 -0.2**
comp=Z,16nm,0.8s
CABF La Chapelle 55.37 303 *e*P **P 14 13 49.9 -0.4**
CABF pmax pmax
comp=Z,26nm,1.1s
CEL Celeste 55.44 290 *e*P **P 14 13 51.1 +0.2**
comp=Z,52nm,0.9s
RIDG Independ'e Rid 55.45 28 *e*P **P 14 13 49.1 -1.5**
comp=Z,22nm,1.3s
SCRK Sand Creek 55.52 28 *e*P **P 14 13 50.2 -1.0**
comp=Z,6.8nm,1.0s
GHO Glory Hole Cre 55.66 31 *e*P **P 14 13 51.5 -0.6**
comp=Z,26nm,1.3s
EGAK Eagle 55.70 26 *e*P **P 14 13 51.4 -0.8**
comp=Z,20nm,1.4s
PMR Palmer 55.73 32 *e*P **P 14 13 52.0 -0.4**
comp=Z,16nm,1.4s
PMR Palmer 55.73 32 *e*P **P 14 13 52.0 -0.4**
PMR pmax pmax
comp=Z,16nm,1.4s
DOT Dot Lake 55.75 28 *e*P **P 14 13 51.3 -1.4**
comp=Z,25nm,1.0s
LPL La Plagne 55.75 302 *e*P **P 14 13 53.2 0.0**
LPL pmax pmax
comp=Z,28nm,1.0s
LPG La Plagne 55.76 302 *e*P **P 14 13 53.3 0.0**
LPG pmax pmax
comp=Z,15nm,0.8s
SML Sawmill 55.82 31 *e*P **P 14 13 52.5 -0.8**
comp=Z,32nm,1.0s
SML Sawmill 55.82 31 *e*P **P 14 13 52.5 -0.8**
SML pmax pmax
comp=Z,32nm,1.0s
PAX Paxson 55.85 29 *e*P **P 14 13 52.4 -1.1**
comp=Z,13nm,1.1s
PAX Paxson 55.85 29 *e*P **P 14 13 52.4 -1.1**
PAX pmax pmax
comp=Z,13nm,1.1s
BNI Bardonecchia 56.09 301 *e*P **P 14 13 55.6 +0.1**
comp=Z,62nm,0.9s
BNI Bardonecchia 56.09 301 *e*P **P 14 13 55.6 +0.1**
BNI pmax pmax
comp=Z,62nm,0.9s
SCM Sheep Creek Mo 56.13 31 *e*P **P 14 13 55.0 -0.5**
comp=Z,51nm,1.6s
SCM Sheep Creek Mo 56.13 31 *e*P **P 14 13 55.0 -0.5**
SCM pmax pmax
comp=Z,51nm,1.6s
MENT Mentasta 56.39 28 *e*P **P 14 13 55.8 -1.5**
comp=Z,5.7nm,0.8s
ORIF Oris-en-Rattie 56.60 302 *e*P **P 14 13 58.9 -0.2**
ORIF pmax pmax
comp=Z,32nm,0.9s
AVF Avril sur Loir 56.66 305 *e*P **P 14 13 58.9 -0.5**
AVF pmax pmax
comp=Z,27nm,1.1s
SEW Seward 56.72 33 *e*P **P 14 13 58.8 -0.8**
comp=Z,26nm,1.2s
DAWY Dawson 56.73 26 *e*P **P 14 13 58.8 -0.9**
comp=Z,13nm,1.1s
KLU Klutina 56.83 30 *e*P **P 14 13 59.9 -0.6**
comp=Z,13nm,0.9s
DSB Dublin 56.89 316 *e*P **P 14 14 01.2 +0.3**
comp=Z,130nm,1.9s
ILULI Ilulissat 56.93 347⇑*i*P **P 14 14 00.1 -0.8**
comp=Z,56nm,1.1s
ILULI Ilulissat 56.93 347 *e*P **P 14 14 00.1 -0.8**

comp=Z,64nm,1.2s
ILULI Ilulissat 56.93 347⇑*i*P **P 14 14 00.1 -0.8**
ILULI pmax pmax
comp=Z,56nm,1.1s
SSB Saint Sauveur 57.06 303 *e*P **P 14 14 02.0 -0.3**
comp=Z,84nm,2.0s
SSB Saint Sauveur 57.06 303 *e*P **P 14 14 02.0 -0.3**
SSB pmax pmax
comp=Z,84nm,2.0s
LDF La Druitiere 57.18 308 *e*P **P 14 14 02.3 -0.8**
LDF pmax pmax
comp=Z,44nm,1.2s
FLN La Foliniere 57.24 309 *e*P **P 14 14 02.7 -0.8**
FLN pmax pmax
comp=Z,56nm,1.2s
VIVF Saint-Julien-l 57.28 302 *e*P **P 14 14 03.3 -0.6**
VIVF pmax pmax
comp=Z,18nm,1.1s
KDAK Kodiak Island 57.31 36 *i*P **P 14 14 04.1 +0.3**
OHAK Old Harbor 57.46 37 *e*P **P 14 14 04.6 -0.2**
comp=Z,114nm,1.9s
ANGG Ammassalik, Gr 57.67 339 *e*P **P 14 14 05.9 -0.3**
comp=Z,13nm,0.8s
GRR Gorron 57.68 308 *e*P **P 14 14 05.7 -0.9**
CRQM Cirque 58.26 30 *e*P **P 14 14 10.7 0.0**
comp=Z,35nm,1.3s
TGL Tana Glacier 58.35 30 *e*P **P 14 14 11.3 0.0**
comp=Z,24nm,1.0s
CAF Calviac 58.59 304 *e*P **P 14 14 13.4 +0.4**
CAF pmax pmax
comp=Z,45nm,1.4s
RJF Les Rejaudoux 58.61 304 *e*P **P 14 14 13.0 -0.1**
RJF pmax pmax
comp=Z,17nm,1.2s
ATD Arta Tunnel 58.62 247 LR LR 14 40 37.4
comp=Z,432nm,19.5s,baz=40,slow=37
SFJD Kangerlussuaq 58.90 345 P **P 14 14 13.5 -1.3**
comp=Z,30nm,0.9s,baz=35,slow=5.1,SNR=9.8
SFJD Kangerlussuaq 58.90 345 *i*P **P 14 14 14.1 -0.7**
comp=Z,40nm,1.0s
SFJD Kangerlussuaq 58.90 345 *e*P **P 14 14 13.7 -1.1**
comp=Z,46nm,1.0s
SFJD Kangerlussuaq 58.90 345 P **P 14 14 14.4 -0.4**
SFJD pmax pmax
comp=Z,45nm,1.0s
QUIF Quistinic 59.12 309 *e*P **P 14 14 16.1 -0.5**
QUIF pmax pmax
comp=Z,83nm,1.3s
LEM Lembang 59.21 167 LR LR 14 40 15.9
comp=Z,865nm,19.8s,baz=314,slow=37
EPF Esparros 60.80 303 *e*P **P 14 14 27.4 -0.9**
KEST Kesra 60.98 292 P **P 14 14 29.9 +0.2**
comp=Z,15nm,0.8s,baz=322,slow=0.8,SNR=16
KEST LR LR 14 43 31.6
comp=Z,304nm,18.6s,baz=346,slow=39
KEST Kesra 60.98 292 *e*P **P 14 14 29.3 -0.4**
comp=Z,23nm,1.0s
SJPF Ste Jean 61.55 304 *e*P **P 14 14 29.7 -3.7**
SJPF pmax pmax
comp=Z,11nm,1.1s
SKAG Skagway 61.62 27 *e*P **P 14 14 33.7 +0.2**
comp=Z,18nm,1.0s
ANKE Ethiopia-Afar 61.97 248 *i*P P 14 14 42.5 +5.6
ANKE Ethiopia-Afar 61.97 248 *i*P P 14 14 42.5 +5.6
BESE Bessie Mountai 62.49 27 *e*P **P 14 14 40.0 +0.5**
comp=Z,34nm,1.4s
YKW3 Yellowknife Ar 63.47 15 *e*P **P 14 14 45.1 -0.7**
comp=Z,38nm,1.7s
YKA Yellowknife Ar 63.53 15 P **P 14 14 45.5 -0.7**
comp=Z,3.8nm,0.8s,baz=337,slow=6.9,SNR=30
YKA PKPPKP P'P'df 14 43 41.6 -8.6
comp=Z,0.6nm,0.7s,baz=151,slow=2.6,SNR=5.0
YKA LR LR 14 46 15.4
comp=Z,24nm,18.5s,baz=344,slow=40
IVI Ivigtut 63.79 342 *e*P **P 14 14 46.8 -1.1**
comp=Z,46nm,0.9s
DLBC Dease Lake 63.93 25 *e*pP pP 14 14 54.5 +1.0
PBRG Braganca 65.30 307 *e*P **P 14 14 59.1 +0.9**
comp=Z,18nm,1.0s
ES19 SONSECA Array 65.41 303 *e*P **P 14 14 59.0 0.0**
ESDC Sonseca Array 65.47 303 P **P 14 14 59.9 +0.6**
comp=Z,16nm,0.8s,baz=43,slow=6.9,SNR=67
ESDC LR LR 14 46 12.2
comp=Z,360nm,18.1s,baz=20,slow=38
ESLA Sonseca Array 65.47 303 *e*P **P 14 14 59.8 +0.5**
comp=Z,27nm,1.0s
PAB San Pablo 65.76 303 *e*P **P 14 15 01.0 -0.3**
comp=Z,15nm,1.1s
PAB San Pablo 65.76 303 *e*P **P 14 15 01.0 -0.3**
PAB pmax pmax
comp=Z,15nm,1.1s
MVO Moncorvo 65.92 306 *e*P **P 14 15 03.2 +0.9**
comp=Z,31nm,1.4s
MVO Moncorvo 65.92 306 *e*LQ LQ 14 39 26.4
MVO *e*LR LR 14 41 42.4
comp=Z,790nm,18.0s
PGAV Gavieira, Arco 65.94 308 *e*LR LR 14 41 33.2
comp=Z,448nm,18.0s
PCAB Cabril 66.01 307 *e*P **P 14 15 04.2 +1.4**
comp=Z,50nm,1.7s
POLO Lamas de Olo 66.14 307 *e*P **P 14 15 05.3 +1.6**
comp=Z,19nm,1.5s
PVIS Viseu 66.69 307 *e*P **P 14 15 08.4 +1.2**
comp=Z,26nm,1.4s
MTE Manteigas 66.75 306 *e*P **P 14 15 08.7 +1.1**
comp=Z,48nm,1.4s
MTE Manteigas 66.75 306 *e*LQ LQ 14 40 18.3
MTE *e*LR LR 14 42 11.3
comp=Z,655nm,18.0s
MTE Manteigas 66.75 306 *e*P **P 14 15 08.2 +0.6**
comp=Z,35nm,1.3s
PMRV Marv??o 67.41 305 *e*P **P 14 15 12.5 +0.8**
comp=Z,15nm,1.7s
PMRV Marv??o 67.41 305 *e*LQ LQ 14 41 20.8
PMRV *e*LR LR 14 43 12.8
comp=Z,656nm,18.0s
PCAS Casmilo, Conde 67.49 306 *e*P **P 14 15 13.6 +1.4**
comp=Z,53nm,1.6s
PESTR Estremoz 67.93 305 *e*P **P 14 15 15.5 +0.5**
comp=Z,24nm,1.3s
PMTG Montargil 68.10 306 *e*P **P 14 15 16.6 +0.6**
comp=Z,30nm,1.6s
PBAR Barrancos 68.17 304 *e*P **P 14 15 16.9 +0.4**
comp=Z,92nm,1.6s
ALMR Almeirim 68.21 306 *e*P **P 14 15 17.7 +1.0**
comp=Z,86nm,1.0s
EVO Evora 68.40 305 *e*P **P 14 15 19.0 +1.1**
comp=Z,23nm,1.4s
PBEJ Beja 68.71 305 *e*P **P 14 15 20.7 +0.8**
comp=Z,33nm,1.4s
PMAFR Mafra 68.72 306 *e*P **P 14 15 20.7 +0.8**
comp=Z,75nm,1.7s
PNCL Nicolau / Gran 68.98 305 *e*P **P 14 15 22.8 +1.2**
comp=Z,25nm,1.6s
MESJ Messejana 69.03 305 *e*P **P 14 15 21.8 -0.1**
MESJ AMS AMS 14 50 07.3
comp=Z,532nm,15.4s
MESJ Messejana 69.03 305 *e*P **P 14 15 22.8 +0.9**
comp=Z,32nm,1.6s
MESJ Messejana 69.03 305 *e*P **P 14 15 21.8 -0.1**
PCVE Castro Verde 69.10 304 *e*P **P 14 15 23.4 +1.1**
comp=Z,31nm,1.3s
PVAQ Vaqueiros 69.11 304 *e*P **P 14 15 23.2 +0.8**
comp=Z,38nm,1.2s
PVAQ Vaqueiros 69.11 304 *e*LQ LQ 14 42 17.7
PVAQ *e*LR LR 14 43 46.0
comp=Z,420nm,18.0s
PBDV Barranco-do-Ve 69.34 304 *e*P **P 14 15 25.3 +1.4**
comp=Z,29nm,1.6s
FCC Fort Churchill 69.52 6 *e*P **P 14 15 23.3 -1.2**
comp=Z,23nm,1.1s
FCC Fort Churchill 69.52 6 *e*P **P 14 15 23.3 -1.2**
FCC pmax pmax
comp=Z,23nm,1.1s
MDT Midelt 70.96 299 P **P 14 15 34.4 +0.4**
comp=Z,19nm,0.9s,baz=67,slow=9.6,SNR=16
MDT LR LR 14 49 08.0
comp=Z,190nm,18.4s,baz=30,slow=38
TAM Tamanrasset 72.72 285 *e*P **P 14 15 44.5 -0.2**
comp=Z,13nm,0.9s
TAM Tamanrasset 72.72 285 *e*P **P 14 15 44.5 -0.2**
TAM pmax pmax
comp=Z,13nm,0.9s
SCHQ Schefferville 72.81 350 P **P 14 15 43.5 -1.0**
comp=Z,18nm,1.0s,baz=20,slow=6.7,SNR=5.2
SCHQ LR LR 14 51 00.1
comp=Z,450nm,18.9s,baz=22,slow=38

SCHQ	Schefferville	72.81	350	eP		P	14 15 43.4	-1.2
	comp=Z,33nm,1.1s							
FFC	Flin Flon	72.82	11	eP		P	14 15 43.6	-1.0
	comp=Z,11nm,0.8s							
FFC	Flin Flon	72.82	11	eP		P	14 15 43.6	-1.0
FFC					pmax	pmax		
	comp=Z,11nm,0.8s							
FITZ	Fitzroy Crossi	74.23	151	P		P	14 15 51.6	-1.6
	comp=Z,11nm,0.7s,baz=343,slow=4.6,SNR=15							
PMG	Port Moresby	75.09	127	LR		LR	14 48 14.0	
	comp=Z,126nm,21.7s,baz=332,slow=35							
B08A	Colville Reser	75.78	23	eP		P	14 16 01.7	-0.3
	comp=Z,14nm,1.1s							
LTY	Liberty	76.46	25	eP		P	14 16 05.3	-0.6
	comp=Z,11nm,1.3s							
C09A	Chrisman Ranch	76.55	23	eP		P	14 16 06.4	0.0
	comp=Z,26nm,1.3s							
PMOZ	Porto Moniz, M	77.49	308	eLR		LR	14 47 15.0	
	comp=Z,167nm,20.0s							
ULM	Lac du Bonnet	77.86	8	P		P	14 16 12.2	-1.4
	comp=Z,10nm,0.9s,baz=356,slow=6.0,SNR=18							
ULM				LR		LR	14 50 14.4	
	comp=Z,266nm,20.6s,baz=353,slow=35							
ULM	Lac du Bonnet	77.86	8	eP		P	14 16 11.5	-2.1
	comp=Z,15nm,1.0s							
G06A	Carlson Farm,	78.34	26	eP		P	14 16 15.4	-1.1
	comp=Z,20nm,1.3s							
MSO	Missoula	78.47	20	P		P	14 16 17.1	-0.2
	baz=342							
MSO	Missoula	78.47	20	eP		P	14 16 16.6	-0.6
	comp=Z,12nm,1.1s							
F10A	Beach Ranch, E	78.52	23	eP		P	14 16 17.3	-0.2
	comp=Z,24nm,1.2s							
G08A	Pilot Rock	78.72	24	eP		P	14 16 18.7	0.0
	comp=Z,6.6nm,1.0s							
WRA	Warramunga Arr	78.88	144	P		P	14 16 17.6	-2.0
	comp=Z,11nm,0.9s,baz=344,slow=5.9,SNR=42							
WRA	Warramunga Arr	78.88	144	i P		P	14 16 17.8	-1.8
WRA					pmax	pmax		
	comp=Z,11nm,0.8s							
WB2	Warramunga Arr	78.89	143	eP		P	14 16 17.8	-1.8
I03D	Drain, OR	79.00	28	P		P	14 16 20.9	+0.9
	baz=336							
A31A	Linda, St. Vin	79.04	9	P		P	14 16 19.0	-1.2
	baz=352							
A32A	Rocking H Ranc	79.12	8	P		P	14 16 19.3	-1.3
	baz=352							
A33A	Warroad	79.20	8	P		P	14 16 19.7	-1.4
	baz=353							
BMO	Blue Mountains	79.55	23	eP		P	14 16 21.9	-1.3
	comp=Z,11nm,1.1s							
BMO	Blue Mountains	79.55	23	eP		P	14 16 21.9	-1.3
BMO					pmax	pmax		
	comp=Z,11nm,1.1s							
PINE	Pine Mountain	79.59	26	eP		P	14 16 23.5	-0.1
	comp=Z,20nm,1.1s							
B32A	Ashes, Strandq	79.64	8	P		P	14 16 22.4	-1.1
	baz=352							
B34A	Aery, Baudette	79.71	7	P		P	14 16 22.6	-1.2
	baz=353							
I07A	Izee	79.71	25	eP		P	14 16 24.2	+0.2
	comp=Z,15nm,1.2s							
LRM	Limekiln Ridge	79.74	20	eP		P	14 16 23.9	-0.5
J04D	Umpqua Nationa	79.77	27	P		P	14 16 25.1	+0.5
	baz=337							
AGMN	Agassiz Nation	79.79	8	P		P	14 16 23.0	-1.3
	baz=352							
AGMN	Agassiz Nation	79.79	8	eP		P	14 16 22.8	-1.6
	comp=Z,15nm,1.0s							
MDND	Maddock	79.86	11	P		P	14 16 24.3	-0.4
	baz=350							
B35A	Bob, Littlefor	79.90	7	P		P	14 16 23.8	-1.0
	baz=354							
J05D	Fort Rock, OR	79.98	27	P		P	14 16 26.5	+0.9
	baz=338							
HUMO	Hull Mountain	80.11	28	eP		P	14 16 26.1	-0.1
	comp=Z,17nm,1.3s							
C31A	Landman Farms,	80.12	9	P		P	14 16 24.9	-1.2
	baz=351							
BOZ	Bozeman (W)	80.13	19	P		P	14 16 26.0	-0.4
	baz=343							
BOZ	Bozeman (W)	80.13	19	eP		P	14 16 25.3	-1.1
	comp=Z,22nm,1.8s							
BOZ	Bozeman (W)	80.13	19	eP		P	14 16 25.3	-1.1
BOZ					pmax	pmax		
	comp=Z,23nm,1.8s							
GCMT	Greycliff	80.33	18	eP		P	14 16 27.8	+0.3
EYMN	Ely	80.45	5	P		P	14 16 26.8	-1.0
	baz=355							
EYMN	Ely	80.45	5	eP		P	14 16 26.9	-1.0
	comp=Z,21nm,1.0s							
C34A	RKJ Ranch, Bem	80.52	7	P		P	14 16 27.1	-1.2
	baz=353							
C35A	Jirik Farms, M	80.54	7	P		P	14 16 26.9	-1.4
	baz=354							
C36A	Pine Crest Far	80.56	6	P		P	14 16 27.3	-1.2
	baz=354							
K05A	Summer Lake	80.59	27	eP		P	14 16 29.1	+0.1
	comp=Z,44nm,1.5s							
C40A	Isle Royale Na	80.59	4	P		P	14 16 27.5	-1.1
	baz=357							
MCMT	McKenzie Canyo	80.61	20	eP		P	14 16 28.6	-0.5
C37A	Embarrass	80.63	6	P		P	14 16 27.7	-1.1
	baz=355							
C39A	Grand Marais	80.65	4	P		P	14 16 27.4	-1.5
	baz=356							
C38A	Sawbill Land.	80.69	5	P		P	14 16 28.0	-1.2
	baz=355							
D31A	Mcclaflin, Tow	80.86	9	P		P	14 16 28.7	-1.3
	baz=351							
D33A	AnnSam, Waubun	80.94	8	P		P	14 16 29.5	-1.1
	baz=353							
YBH	Yreka Blue Hor	80.98	28	LR		LR	14 54 03.0	
	comp=Z,189nm,19.2s,baz=345,slow=37							
RLMT	Red Lodge	81.05	18	eP		P	14 16 31.1	-0.3
	comp=Z,43nm,1.5s							
D34A	Park Rapids	81.05	8	P		P	14 16 29.9	-1.2
	baz=353							
D36A	Goodland	81.12	6	P		P	14 16 30.4	-1.1
	baz=354							
D35A	Remer	81.15	7	P		P	14 16 30.4	-1.2
	baz=354							
D37A	Cotton	81.18	6	P		P	14 16 30.5	-1.3
	baz=355							
M04C	Macdoel	81.19	28	P		P	14 16 32.2	+0.1
	baz=337							
M02C	Callahan	81.25	29	P		P	14 16 32.7	+0.4
	baz=337							
MFID	Camas Ranch	81.26	23	eP		P	14 16 32.2	-0.2
	comp=Z,12nm,1.2s							
E31A	Nome	81.32	10	P		P	14 16 31.4	-1.2
	baz=351							
HLID	Hailey	81.46	22	P		P	14 16 33.2	-0.4
	baz=342							
HLID	Hailey	81.46	22	eP		P	14 16 31.9	-1.7
	comp=Z,3.8nm,1.0s							
D41A	Chassel	81.47	3	P		P	14 16 32.4	-0.9
	baz=357							
WVOR	Wild Horse Val	81.47	25	eP		P	14 16 33.8	+0.2
	comp=Z,16nm,1.1s							
WVOR	Wild Horse Val	81.47	25	eP		P	14 16 33.8	+0.2
WVOR					pmax	pmax		
	comp=Z,16nm,1.1s							
MOD	Modoc Plateau	81.52	27	eP		P	14 16 34.0	+0.2
	comp=Z,14nm,1.1s							
E33A	Westby DABS, E	81.56	8	P		P	14 16 33.0	-0.9
	baz=352							
E35A	Pequot Lakes	81.64	7	P		P	14 16 33.3	-1.0
	baz=354							
E36A	McGregor	81.77	6	P		P	14 16 34.2	-0.7
	baz=354							
E38A	The Farm, Brul	81.79	5	P		P	14 16 33.8	-1.1
	baz=355							
HNR	Honiara	81.85	116	LR		LR	14 52 52.4	
	comp=Z,126nm,19.9s,baz=320,slow=36							
IMW	Indian Meadow	81.90	19	eP		P	14 16 35.9	-0.2
	comp=Z,20nm,1.2s							
E40A	Wakefield	82.03	4	P		P	14 16 35.7	-0.6
	baz=356							
E41A	Kenton	82.05	3	P		P	14 16 35.3	-1.1
	baz=357							
E39A	Mellen	82.07	5	P		P	14 16 35.4	-1.1
	baz=356							
MOOW	Moose Ponds	82.08	19	eP		P	14 16 37.2	+0.3
	comp=Z,18nm,1.3s							
E42A	Champion	82.12	3	P		P	14 16 35.8	-1.0
	baz=358							
FXWY	Fox Creek	82.13	19	eP		P	14 16 37.2	+0.1
	comp=Z,15nm,1.0s							
AS31	Alice Springs	82.14	145	eP		P	14 16 35.3	-1.7
	comp=Z,3.2nm,0.8s							
ASAR	Alice Springs	82.14	145	P		P	14 16 35.4	-1.6
	comp=Z,12nm,0.8s,baz=338,slow=5.5,SNR=71							
ASAR				LR		LR	14 56 40.0	
	comp=Z,84nm,18.0s,baz=252,slow=38							
AS01	Alice Springs	82.15	145	eP		P	14 16 35.0	-2.1
F33A	5 Mile Ranch,	82.19	9	P		P	14 16 36.3	-0.8
	baz=352							
E43A	Lone Tree Farm	82.20	2	P		P	14 16 36.2	-1.0
	baz=358							
E45A	Wooded Hills,	82.25	1	P		P	14 16 36.7	-0.7
	baz=359							
TPAW	Teton Pass	82.28	19	eP		P	14 16 37.8	-0.3
	comp=Z,15nm,1.3s							
F35A	Swanville	82.32	7	P		P	14 16 36.8	-1.1
	baz=353							
F34A	Alexandria	82.33	8	P		P	14 16 36.7	-1.2
	baz=353							
F36A	Milaca	82.40	7	P		P	14 16 37.0	-1.3
	baz=354							
COWI	Conover	82.41	4	eP		P	14 16 37.1	-1.2
	comp=Z,14nm,1.1s							
F38A	Pierce - Schro	82.41	6	P		P	14 16 37.5	-0.8
	baz=355							
REDW	Red Top Meadow	82.43	19	eP		P	14 16 38.8	0.0
	comp=Z,13nm,1.1s							
TOA0	Torodi Ar. Sit	82.44	282	eP		P	14 16 38.2	-0.7
TORD	Torodi Ar. Bea	82.44	282	P		P	14 16 38.5	-0.4
	comp=Z,15nm,0.9s,baz=37,slow=5.2,SNR=56							
TORD				PP		PP	14 19 50.1	+2.4
	comp=Z,2.5nm,1.1s,baz=41,slow=7.8,SNR=3.5							
F39A	Loretta	82.51	5	P		P	14 16 38.0	-0.9
	baz=356							
PKME	Peaks-Kenny Pk	82.51	350	P		P	14 16 39.6	+0.8
	baz=9.1							
F40A	Park Falls	82.55	4	P		P	14 16 37.8	-1.2
	baz=356							
O03D	Paynes Creek	82.58	28	P		P	14 16 38.7	-0.6
	baz=337							
F44A	Big Bay de Noc	82.61	2	P		P	14 16 38.3	-1.0
	baz=358							
F43A	Flat Rock, Esc	82.74	2	P		P	14 16 39.2	-0.8
	baz=358							
F41A	Three Lakes	82.77	4	P		P	14 16 39.4	-0.8
	baz=357							
G33A	Ortonville	82.82	9	P		P	14 16 39.4	-1.1
	baz=352							
F45A	CMU Biological	82.92	1	P		P	14 16 40.1	-0.8
	baz=359							
RSSD	Black Hills	82.92	14	P		P	14 16 40.7	-0.6
	baz=348							
RSSD	Black Hills	82.92	14	eP		P	14 16 40.7	-0.6
	comp=Z,35nm,1.4s							
RSSD	Black Hills	82.92	14	eP		P	14 16 40.7	-0.6
RSSD					pmax	pmax		
	comp=Z,35nm,1.4s							
G36A	St. Michael	83.01	7	P		P	14 16 40.4	-1.0
	baz=354							
SPMN	Marine on St.	83.08	6	P		P	14 16 41.0	-0.8
	baz=354							
SPMN	Marine on St.	83.08	6	eP		P	14 16 40.8	-1.0
	comp=Z,20nm,0.9s							
G39A	Holcombe	83.12	5	P		P	14 16 40.8	-1.2
	baz=356							
G40A	Rib Lake	83.19	4	P		P	14 16 41.4	-1.0
	baz=356							
BW06	Boulder Array	83.26	19	P		P	14 16 41.8	-1.3
	baz=344							
PDAR	Pinedale Array	83.26	19	P		P	14 16 42.1	-1.0
	comp=Z,0.8nm,0.8s,baz=354,slow=3.0,SNR=5.1							
PDAR				LR		LR	14 59 11.0	
	comp=Z,246nm,18.0s,baz=350,slow=40							
G42A	Mountain	83.29	3	P		P	14 16 42.0	-0.9
	baz=357							
G42A	Mountain	83.29	3	eP		P	14 16 41.5	-1.3
	comp=Z,21nm,1.0s							
SUSD	Miller	83.30	11	P		P	14 16 42.1	-0.8
	baz=351							
H33A	Prehn Over Nor	83.30	9	P		P	14 16 42.4	-0.5
	baz=352							
G43A	Wallace	83.30	3	P		P	14 16 42.1	-0.8
	baz=358							
G43A	Wallace	83.30	3	eP		P	14 16 41.7	-1.2
	comp=Z,32nm,1.0s							
ORV	Oroville	83.35	28	eP		P	14 16 42.7	-0.6
	comp=Z,15nm,1.4s							
ORV	Oroville	83.35	28	eP		P	14 16 42.7	-0.6
ORV					pmax	pmax		
	comp=Z,15nm,1.4s							
BEKR	Beckworth	83.39	27	eP		P	14 16 43.3	-0.4
	comp=Z,15nm,1.0s							
H32A	Carlson Farm,	83.40	10	P		P	14 16 42.6	-0.9
	baz=352							
H34A	Spellman Lake,	83.40	8	P		P	14 16 42.6	-0.9
	baz=353							
HVU	Hansel Valley	83.53	21	eP		P	14 16 44.2	-0.2
	comp=Z,4.9nm,0.9s							
HVU	Hansel Valley	83.53	21	eP		P	14 16 44.2	-0.2
HVU					pmax	pmax		
	comp=Z,5.0nm,0.9s							
LONY	Lake Ozonia	83.64	353	P		P	14 16 45.0	+0.3
	baz=5.8							
LONY	Lake Ozonia	83.64	353	eP		P	14 16 44.3	-0.4
	comp=Z,14nm,0.9s							
H36A	Jessenland, He	83.65	7	P		P	14 16 44.6	-0.1
	baz=354							
H38A	Maiden Rock	83.67	6	P		P	14 16 44.0	-0.8
	baz=355							
BMN	Battle Mountai	83.72	25	eP		P	14 16 45.4	0.0
	comp=Z,12nm,1.0s							
BMN	Battle Mountai	83.72	25	eP		P	14 16 45.4	0.0
BMN					pmax	pmax		
	comp=Z,12nm,1.0s							
H39A	Augusta	83.72	5	P		P	14 16 44.4	-0.7
	baz=355							
LBNH	Lisbon	83.80	351	P		P	14 16 46.4	+0.9
	baz=7.5							
PAHR	Pah Rah Range	83.81	27	eP		P	14 16 45.6	-0.3
	comp=Z,11nm,1.2s							
H40A	Chili	83.83	5	P		P	14 16 45.0	-0.6
	baz=356							
H41A	Junction City	83.87	4	P		P	14 16 44.8	-1.0
	baz=356							
H41A	Junction City	83.87	4	eP		P	14 16 44.6	-1.2
	comp=Z,12nm,0.8s							
CTA	Charters Tower	83.92	133	P		P	14 16 45.1	-1.1
	comp=Z,7.9nm,1.0s,baz=5.2,slow=11,SNR=5.0							
CTAO	Charters Tower	83.92	133	eP		P	14 16 45.4	-0.9
	comp=Z,14nm,1.1s							
CTAO	Charters Tower	83.92	133	eP		P	14 16 45.4	-0.9
CTAO					pmax	pmax		
	comp=Z,14nm,1.1s							
AFDM	Forest Hills D	84.06	28	eP		P	14 16 46.8	-0.2
	comp=Z,15nm,1.3s							
H43A	Windswept, Lux	84.08	3	P		P	14 16 46.2	-0.7
	baz=358							
H43A	Windswept, Lux	84.08	3	eP		P	14 16 46.1	-0.9
	comp=Z,24nm,1.0s							
ECSD	EROS Data Cent	84.25	9	P		P	14 16 46.9	-0.9
	baz=352							
ECSD	EROS Data Cent	84.25	9	eP		P	14 16 46.4	-1.4
	comp=Z,23nm,1.0s							
BGU	Big Grassy Mou	84.28	22	eP		P	14 16 47.7	-0.5
	comp=Z,18nm,1.8s							
I38A	Scanlan Farm,	84.29	6	P		P	14 16 47.3	-0.7
	baz=355							
PNTR	Pine Nut	84.33	27	eP		P	14 16 48.3	-0.3
	comp=Z,14nm,0.9s							
TCUT	Toone Canyon	84.46	20	eP		P	14 16 49.1	-0.1
	comp=Z,15nm,0.9s							
I39A	Houston	84.53	5	P		P	14 16 48.1	-1.1
	baz=355							
I40A	Norwalk	84.54	5	P		P	14 16 48.8	-0.5
	baz=356							
I42A	Draeger Farm,	84.62	4	P		P	14 16 49.0	-0.6
	baz=357							
I42A	Draeger Farm,	84.62	4	eP		P	14 16 48.5	-1.2
	comp=Z,19nm,1.0s							
I43A	Langenfeld Bro	84.66	3	P		P	14 16 49.0	-0.8
	baz=357							
KVN	Kaiserville	84.78	26	eP		P	14 16 50.3	-0.5
	comp=Z,9.4nm,1.1s							
KVN	Kaiserville	84.78	26	eP		P	14 16 50.3	-0.5
KVN					pmax	pmax		
	comp=Z,9.0nm,1.1s							
KOWA	Kowa	84.82	287	P		P	14 16 50.8	-0.3
	comp=Z,14nm,0.9s,baz=28,slow=4.0,SNR=17							
KOWA	Kowa	84.82	287	eP		P	14 16 50.5	-0.6
	comp=Z,40nm,1.2s							
WAKR	Walker	84.92	27	eP		P	14 16 51.6	+0.1
	comp=Z,6.8nm,1.0s							
J37A	Redenius Farm,	84.94	7	P		P	14 16 50.9	-0.3
	baz=354							
JLU	Jordanelle	84.94	21	eP		P	14 16 51.8	0.0
	comp=Z,11nm,1.2s							
J38A	Wedel Dairy, R	85.00	6	P		P	14 16 50.6	-1.0
	baz=355							
DUG	Dugway, Tooele	85.03	22	P		P	14 16 52.0	0.0
	baz=342							
DUG	Dugway, Tooele	85.03	22	eP		P	14 16 51.6	-0.4
	comp=Z,15nm,1.0s							
DUG	Dugway, Tooele	85.03	22	eP		P	14 16 51.6	-0.4
DUG					pmax	pmax		
	comp=Z,15nm,1.0s							
J40A	Soldiers Grove	85.03	5	P		P	14 16 50.6	-1.1
	baz=356							
J39A	Decorah	85.04	6	P		P	14 16 50.7	-1.1
	baz=355							
RYN	Ryan	85.06	26	eP		P	14 16 52.4	+0.2
	comp=Z,8.3nm,1.0s							
J41A	Loganville	85.10	4	P		P	14 16 51.2	-0.9
	baz=356							
NV01	Mina Array Sit	85.30	26	eP		P	14 16 53.2	-0.3
NVAR	Mina Array Bea	85.30	26	P		P	14 16 53.7	+0.2
	comp=Z,3.4nm,0.8s,baz=306,slow=3.9,SNR=25							
NVAR				LR		LR	14 59 14.7	
	comp=Z,135nm,19.1s,baz=4.5,slow=39							
NV11	Mina Array Sit	85.34	26	eP		P	14 16 52.6	-1.0
	comp=Z,0.5nm,1.0s							
PHWY	Pilot Hill	85.44	16	eP		P	14 16 52.4	-1.8
	comp=Z,13nm,1.1s							
K37A	Belmond	85.47	7	P		P	14 16 53.4	-0.6
	baz=354							
K36A	Gilmore City	85.53	8	P		P	14 16 53.3	-1.0
	baz=354							
JFWS	Jewell Farm	85.54	5	P		P	14 16 53.4	-0.8
	baz=356							
JFWS	Jewell Farm	85.54	5	eP		P	14 16 53.5	-0.8
	comp=Z,27nm,0.8s							
JFWS	Jewell Farm	85.54	5	eP		P	14 16 53.5	-0.8
JFWS					pmax	pmax		
	comp=Z,27nm,0.8s							
K39A	Oelwein	85.65	6	P		P	14 16 53.5	-1.4
	baz=355							
K40A	Colesburg	85.70	5	P		P	14 16 54.3	-0.8
	baz=356							
N23A	Red Feather La	85.75	17	P		P	14 16 55.3	-0.4
	baz=346							
N23A	Red Feather La	85.75	17	eP		P	14 16 55.0	-0.8
	comp=Z,19nm,1.3s							
K43A	Burlington	85.83	3	P		P	14 16 55.1	-0.6
	baz=357							
MDPB	Devils Postpil	85.83	27	eP		P	14 16 55.5	-0.7
	comp=Z,10nm,1.1s							
K41A	Shullsburg	85.84	5	P		P	14 16 54.9	-0.9
	baz=356							
OMMB	Old Mammoth Mi	85.87	27	eP		P	14 16 56.5	+0.1
	comp=Z,11nm,1.2s							
L36A	Harm Buss Farm	86.05	8	P		P	14 16 56.0	-0.9
	baz=353							
O20A	White River Ci	86.06	18	P		P	14 16 57.1	-0.1
	baz=345							
O20A	White River Ci	86.06	18	eP		P	14 16 57.0	-0.2
	comp=Z,38nm,1.5s							
R11A	Troy Canyon, C	86.10	24	P		P	14 16 57.1	-0.3
	baz=341							
R11A	Troy Canyon, C	86.10	24	eP		P	14 16 56.8	-0.7
	comp=Z,6.6nm,1.2s							
L38A	Oak Wood Farm,	86.14	7	P		P	14 16 56.7	-0.6
	baz=354							
P17A	Butcher Ranch,	86.18	20	eP		P	14 16 57.3	-0.5
	comp=Z,13nm,0.9s							
L39A	Vinton	86.22	6	P		P	14 16 56.5	-1.2
	baz=355							
TMUT	Trail Mountain	86.25	21	eP		P	14 16 56.9	-1.4
	comp=Z,8.2nm,1.0s							
L43A	Garden Prairie	86.33	4	P		P	14 16 57.3	-0.9
	baz=357							
L40A	Anamosa	86.33	5	P		P	14 16 57.1	-1.1
	baz=356							
OGNE	Ogallala	86.33	14	P		P	14 16 57.7	-0.7
	baz=349							
SCIA	State Center	86.36	7	P		P	14 16 57.7	-0.7
	baz=354							
L41A	Preston	86.36	5	P		P	14 16 57.6	-0.8
	baz=356							
PSUT	Pine Spring	86.36	23	eP		P	14 16 56.7	-2.1
	comp=Z,7.0nm,1.0s							
NWAO	Narrogin (SRO)	86.38	162	LR		LR	14 57 08.0	
	comp=Z,332nm,21.0s,baz=193,slow=37							
L42A	Oliver, Polo	86.47	4	P		P	14 16 57.9	-1.0
	baz=356							
SRU	San Rafael Swe	86.58	20	eP		P	14 16 58.5	-1.2
	comp=Z,3.8nm,0.8s							
SRU	San Rafael Swe	86.58	20	eP		P	14 16 58.5	-1.2
SRU					pmax	pmax		
	comp=Z,4.0nm,0.8s							
MSU	Marysvale	86.78	22	eP		P	14 17 00.4	-0.4
MSU	Marysvale	86.78	22	eP		P	14 17 00.4	-0.4
M38A	Pleasantville	86.84	7	P		P	14 17 00.2	-0.6
	baz=354							
M39A	Webster	86.86	6	P		P	14 17 00.1	-0.7
	baz=355							
ISCO	Idaho Springs	86.87	17	P		P	14 17 01.2	-0.1
	baz=347							
ISCO	Idaho Springs	86.87	17	eP		P	14 17 01.0	-0.4
	comp=Z,17nm,1.4s							
ISCO	Idaho Springs	86.87	17	eP		P	14 17 01.0	-0.4
ISCO					pmax	pmax		
	comp=Z,17nm,1.4s							
ALLY	Alegheny Colle	86.90	357	eP		P	14 17 00.5	-0.6
	comp=Z,34nm,0.9s							
GRAC	Grapevine Rang	86.90	26	P		P	14 17 01.7	+0.5
	baz=340							
M54A	Oil Creek Stat	87.02	357	P		P	14 17 01.3	-0.4
	baz=2.7							
M54A	Oil Creek Stat	87.02	357	eP		P	14 17 01.0	-0.6
	comp=Z,36nm,1.2s							
M43A	Waltham Townsh	87.07	4	P		P	14 17 01.2	-0.6
	baz=357							
M44A	Midewin, Midew	87.15	3	P		P	14 17 01.8	-0.5
	baz=358							
MTPU	Mount Pierson	87.23	22	eP		P	14 17 02.7	-0.5
	comp=Z,17nm,1.5s							
SMCO	Snowmass	87.23	18	eP		P	14 17 02.5	-0.7
	comp=Z,26nm,1.3s							
N36A	Muff Farm, Cla	87.30	8	P		P	14 17 02.5	-0.4
	baz=353							
N59A	State Game Lan	87.41	354	P		P	14 17 03.5	-0.1
	baz=5.1							
N59A	State Game Lan	87.41	354	eP		P	14 17 03.2	-0.4
	comp=Z,24nm,1.0s							
CCUT	Cedar City	87.41	23	eP		P	14 17 03.8	-0.1
	comp=Z,3.9nm,1.0s							
N37A	Lee Faris, Mou	87.42	8	P		P	14 17 03.1	-0.5
	baz=354							
SZCU	Shurtz Canyon	87.44	23	eP		P	14 17 04.8	+0.7
	comp=Z,12nm,1.3s							
PV09	Paradox Valley	87.46	19	eP		P	14 17 03.9	-0.3
N38A	Joes South For

PV03	Paradox Valley	87.75	19	eP	P	14 17 05.7	+0.2
	comp=Z,27nm,1.6s						
Q24A	Divide	87.77	16	P	P	14 17 05.3	-0.4
	baz=347						
SSPA	Standing Stone	87.81	355	P	P	14 17 05.3	-0.2
	baz=3.8						
PV02	Paradox Valley	87.82	19	eP	P	14 17 05.6	-0.2
	comp=Z,19nm,1.3s						
PV01	Paradox Valley	87.92	19	eP	P	14 17 06.0	-0.3
	comp=Z,21nm,1.2s						
HDIL	Hopedale	87.93	4	P	P	14 17 05.2	-0.8
	baz=357						
SHPR	Sheep Range	87.95	25	eP	P	14 17 06.6	+0.1
	comp=Z,11nm,1.2s						
LCMT	Little Creek M	87.95	23	eP	P	14 17 06.2	-0.2
	comp=Z,8.9nm,1.0s						
O37A	Wolven Farm, M	88.01	8	P	P	14 17 05.8	-0.6
	baz=354						
O39A	Kirksville	88.05	7	P	P	14 17 06.0	-0.6
	baz=355						
KNB	Kanab	88.05	23	eP	P	14 17 07.1	+0.2
	comp=Z,19nm,1.1s						
KNB	Kanab	88.05	23	eP	P	14 17 07.1	+0.2
KNB				pmax	pmax		
	comp=Z,19nm,1.1s						
O38A	Galt	88.11	7	P	P	14 17 06.5	-0.4
	baz=354						
KSCO	Kaye Shedlock'	88.14	14	eP	P	14 17 05.6	-1.6
	comp=Z,31nm,1.1s						
PAGS	Pennsylvania G	88.16	354	eP	P	14 17 06.0	-1.1
	comp=Z,9.3nm,0.7s						
SFIN	Lafayette	88.19	2	P	P	14 17 07.1	-0.2
	baz=358						
SFIN	Lafayette	88.19	2	eP	P	14 17 06.4	-0.8
	comp=Z,27nm,1.0s						
O56A	Blue Knob Stat	88.21	356	P	P	14 17 07.2	-0.3
	baz=3.3						
O56A	Blue Knob Stat	88.21	356	eP	P	14 17 07.1	-0.3
	comp=Z,23nm,0.9s						
O40A	La Belle	88.23	6	P	P	14 17 06.8	-0.6
	baz=355						
LRMC	Laurel Mtn Rad	88.24	27	P	P	14 17 08.2	+0.4
	baz=340						
O42A	Bath	88.25	5	P	P	14 17 07.2	-0.3
	baz=356						
O41A	Passleys Farm,	88.29	5	P	P	14 17 06.9	-0.8
	baz=356						
O45A	Potomac	88.30	3	P	P	14 17 07.8	0.0
	baz=358						
O47A	Sheridan	88.35	2	P	P	14 17 07.4	-0.6
	baz=359						
ACSO	Alum Creek Sta	88.37	359	eP	P	14 17 06.8	-1.3
	comp=Z,33nm,1.0s						
P37A	Lathrop	88.57	8	P	P	14 17 08.8	-0.3
	baz=354						
P38A	Dawn	88.60	7	P	P	14 17 08.8	-0.4
	baz=354						
S22A	4UR Ranch, Cre	88.64	18	P	P	14 17 10.4	+0.6
	baz=346						
S22A	4UR Ranch, Cre	88.64	18	eP	P	14 17 10.6	+0.7
	comp=Z,14nm,1.4s						
P41A	Barry, Barry	88.72	5	P	P	14 17 09.3	-0.5
	baz=356						
U15A	North Rim	88.74	22	eP	P	14 17 10.5	+0.2
	comp=Z,2.6nm,0.8s						
CBKS	Cedar Bluff	88.75	12	P	P	14 17 09.3	-0.7
	baz=350						
CBKS	Cedar Bluff	88.75	12	eP	P	14 17 09.7	-0.3
	comp=Z,27nm,1.0s						
CBKS	Cedar Bluff	88.75	12	eP	P	14 17 09.7	-0.3
CBKS				pmax	pmax		
	comp=Z,27nm,1.0s						
P39B	Salisbury	88.80	7	P	P	14 17 09.6	-0.5
	baz=355						
P40A	Paris	88.80	6	P	P	14 17 09.8	-0.3
	baz=355						
MVCO	Mesa Verde	88.83	19	P	P	14 17 11.4	+0.7
	baz=345						
MVCO	Mesa Verde	88.83	19	eP	P	14 17 09.2	-1.4
	comp=Z,8.0nm,1.0s						
P43A	Skaggs, Pawnee	88.83	4	P	P	14 17 10.1	-0.2
	baz=357						
P42A	Winchester	88.85	5	P	P	14 17 09.7	-0.7
	baz=356						
SDCO	Great Sand Dun	88.89	17	P	P	14 17 10.6	-0.4
	baz=347						
SDCO	Great Sand Dun	88.89	17	eP	P	14 17 10.6	-0.4
	comp=Z,13nm,1.1s						
P46A	Rosedale	88.94	2	P	P	14 17 10.7	-0.1
	baz=358						
P45A	Graceland, Par	89.02	3	P	P	14 17 11.1	0.0
	baz=358						
P44A	Sand Creek, Wi	89.05	4	P	P	14 17 11.2	-0.1
	baz=357						
P47A	Martinsville	89.09	2	P	P	14 17 11.4	-0.1
	baz=359						
Q39A	Willow Grove F	89.22	7	P	P	14 17 11.7	-0.4
	baz=354						
Q38A	Cooks Store, C	89.25	7	P	P	14 17 11.8	-0.4
	baz=354						
Q37A	Longview Farm,	89.27	8	P	P	14 17 12.0	-0.4
	baz=354						
Q40A	Laux Farm, Aux	89.33	6	P	P	14 17 12.0	-0.7
	baz=355						
Q41A	Truxton	89.43	6	P	P	14 17 12.6	-0.5
	baz=356						
Q42A	Golden Eagle	89.51	5	P	P	14 17 13.6	+0.1
	baz=356						
Q43A	New Douglas	89.53	4	P	P	14 17 13.3	-0.3
	baz=356						
Q46A	CEJHS Indians,	89.53	3	P	P	14 17 13.8	+0.2
	baz=358						
W13A	Hualapai Mount	89.61	24	eP	P	14 17 14.2	-0.2
	comp=Z,5.2nm,1.0s						
Q45A	Warren Harvey,	89.64	3	P	P	14 17 13.9	-0.2
	baz=357						
T25A	Trinidad	89.67	16	P	P	14 17 14.2	-0.4
	baz=348						
T25A	Trinidad	89.67	16	eP	P	14 17 12.4	-2.2
OLIL	Olney	89.80	3	eP	P	14 17 14.4	-0.4
	comp=Z,37nm,0.9s						
WUAZ	Wupatki	89.83	22	P	P	14 17 15.8	+0.6
	baz=343						
WUAZ	Wupatki	89.83	22	eP	P	14 17 15.9	+0.6
	comp=Z,11nm,0.9s						
R39A	Chumby, Stover	89.94	7	P	P	14 17 15.2	-0.3
	baz=354						
R38A	Fenwick Farm,	90.00	8	P	P	14 17 14.9	-0.9
	baz=354						
R40A	Maddies Statio	90.02	6	P	P	14 17 15.0	-0.9
	baz=355						
R41A	Rosebud	90.07	6	P	P	14 17 15.7	-0.4
	baz=355						
R42A	Luebbering	90.12	5	P	P	14 17 16.0	-0.4
	baz=356						
R48A	Northridge Ran	90.19	1	P	P	14 17 16.6	-0.1
	baz=359						
R45A	Skylar, Fairfi	90.23	3	P	P	14 17 16.7	-0.1
	baz=357						
R44A	Waltonville	90.24	4	P	P	14 17 16.7	-0.2
	baz=357						
R47A	Wooly Knot Far	90.28	2	P	P	14 17 17.2	+0.1
	baz=358						
CCM	Cathedral Cave	90.32	6	P	P	14 17 16.6	-0.7
	baz=356						
CCM	Cathedral Cave	90.32	6	eP	P	14 17 16.3	-1.0
	comp=Z,17nm,1.0s						
CCM	Cathedral Cave	90.32	6	eP	P	14 17 16.3	-1.0
CCM				pmax	pmax		
	comp=Z,17nm,1.0s						
PFO	Pinyon Flats O	90.33	27	P	P	14 17 17.8	+0.2
	baz=341						
TPFO	Pinon Flats	90.34	27	P	P	14 17 17.9	+0.2
	baz=341						
WCI	Wyandotte Cave	90.35	2	P	P	14 17 17.7	+0.2
	baz=359						
WCI	Wyandotte Cave	90.35	2	eP	P	14 17 16.8	-0.6
	comp=Z,41nm,1.4s						
WCI	Wyandotte Cave	90.35	2	eP	P	14 17 16.8	-0.6
WCI				pmax	pmax		
	comp=Z,41nm,1.4s						
FVM	French Village	90.44	5	eP	P	14 17 17.1	-0.8
	comp=Z,16nm,0.9s						
FVM	French Village	90.44	5	eP	P	14 17 17.1	-0.8
FVM				pmax	pmax		
	comp=Z,16nm,0.9s						
S39A	Bolivar	90.54	7	P	P	14 17 17.7	-0.7
	baz=354						
S38A	Stockton	90.55	8	P	P	14 17 17.3	-1.0
	baz=354						
W18A	Petrified Fore	90.58	21	P	P	14 17 19.1	+0.3
	baz=344						
W18A	Petrified Fore	90.58	21	eP	P	14 17 19.1	+0.3
	comp=Z,24nm,1.4s						
S42A	Caledonia	90.63	5	P	P	14 17 18.3	-0.5
	baz=356						
S40A	Lebanon	90.69	7	P	P	14 17 18.4	-0.7
	baz=355						
S41A	Jillco Farms,	90.75	6	P	P	14 17 19.0	-0.4
	baz=355						
S44A	Carbondale	90.79	4	P	P	14 17 19.5	0.0
	baz=357						
X16A	Lo Mia Camp, P	90.86	22	eP	P	14 17 20.4	+0.3
	comp=Z,8.7nm,1.2s						
S48A	Wiedeman Farm,	90.92	2	P	P	14 17 20.1	0.0
	baz=359						
Y14A	Wickenburg	90.94	24	eP	P	14 17 20.1	-0.2
	comp=Z,3.9nm,0.9s						
T38A	Diamond	91.11	8	P	P	14 17 20.4	-0.6
	baz=354						
T40A	Mansfield	91.14	7	P	P	14 17 20.3	-0.8
	baz=355						
T39A	Clever	91.19	7	P	P	14 17 20.8	-0.6
	baz=354						
T41A	Mountain View	91.30	6	P	P	14 17 21.6	-0.3
	baz=355						
GLA	Glamis	91.31	25	P	P	14 17 22.8	+0.7
	baz=342						
IKP	In-Ko-Pah, Jac	91.33	27	P	P	14 17 22.1	-0.1
	baz=341						
T43A	Greenville	91.34	5	P	P	14 17 21.8	-0.3
	baz=356						
T42A	Van Buren	91.35	6	P	P	14 17 21.7	-0.4
	baz=356						
ANMO	Albuquerque	91.43	18	P	P	14 17 23.1	+0.3
	comp=Z,8.1nm,1.0s,baz=357,slow=5.2,SNR=16						
ANMO				LR	LR	15 04 14.6	
	comp=Z,261nm,18.0s,baz=352,slow=39						
ANMO	Albuquerque	91.43	18	P	P	14 17 23.5	+0.7
	baz=346						
ANMO	Albuquerque	91.43	18	eP	P	14 17 22.7	-0.1
	comp=Z,18nm,1.2s						
ANMO	Albuquerque	91.43	18	c iP	P	14 17 23.5	+0.7
ANMO				pmax	pmax		
	comp=Z,12nm,1.1s						
TASM	ASL Pad, Albuq	91.43	18	P	P	14 17 23.4	+0.6
	baz=346						
TASL	Snake Pit, Alb	91.43	18	P	P	14 17 23.3	+0.6
	baz=346						
T48A	Bowling Green	91.47	2	P	P	14 17 22.7	+0.1
	baz=358						
DBIC	Dimbokro	91.48	283	LR	LR	15 04 39.4	
	comp=Z,104nm,19.0s,baz=15,slow=40						
LAZ	Ladron	91.82	19	eP	P	14 17 24.5	-0.1
U39A	Green Forest	91.82	8	P	P	14 17 23.5	-0.8
	baz=354						
HHAR	Hobbs	91.88	8	eP	P	14 17 23.6	-1.0
	comp=Z,31nm,1.7s						
U40A	Yellville	91.90	7	P	P	14 17 24.1	-0.6
	baz=354						
U41A	Viola	91.98	6	P	P	14 17 24.5	-0.6
	baz=355						
U42A	Revenden	92.02	6	P	P	14 17 24.7	-0.4
	baz=356						
U48A	Cassie Pea, Po	92.06	2	P	P	14 17 25.4	+0.1
	baz=358						
AMTX	Amarillo	92.33	14	P	P	14 17 27.0	+0.2
	baz=349						
V39A	Pettigrew	92.35	8	P	P	14 17 25.9	-0.9
	baz=354						
STKA	Stephens Creek	92.40	143	P	P	14 17 24.3	-2.4
	comp=Z,4.9nm,0.9s,baz=345,slow=7.1,SNR=5.2						
STKA				LR	LR	15 02 54.0	
	comp=Z,134nm,20.9s,baz=2.7,slow=38						
WVT	Waverly	92.40	3	P	P	14 17 26.9	-0.1
	baz=358						
WVT	Waverly	92.40	3	eP	P	14 17 26.8	-0.1
	comp=Z,10nm,1.0s						
WVT	Waverly	92.40	3	eP	P	14 17 26.8	-0.1
WVT				pmax	pmax		
	comp=Z,10.0nm,1.0s						
V40A	Witts Springs	92.45	7	P	P	14 17 26.5	-0.7
	baz=354						
V40A	Witts Springs	92.45	7	eP	P	14 17 26.2	-1.1
	comp=Z,8.6nm,1.1s						
V41A	Mountainview	92.52	7	P	P	14 17 27.0	-0.5
	baz=355						
V42A	Cord	92.55	6	P	P	14 17 27.1	-0.5
	baz=355						
V51A	Loudon	92.79	0	P	P	14 17 27.0	-1.8
	baz=360						
WMOK	Wichita Mounta	92.89	12	P	P	14 17 29.4	+0.2
	baz=351						
WMOK	Wichita Mounta	92.89	12	eP	P	14 17 28.7	-0.6
	comp=Z,8.2nm,1.3s						
WMOK	Wichita Mounta	92.89	12	eP	P	14 17 28.7	-0.6
WMOK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
W41B	Gary Mavity, V	93.12	7	P	P	14 17 29.8	-0.5
	baz=355						
W41B	Gary Mavity, V	93.12	7	eP	P	14 17 29.4	-0.9
121A	Cookes Peak, D	93.49	20	P	P	14 17 32.9	+0.6
	baz=346						
X47A	Russelville	94.01	3	P	P	14 17 33.7	-0.7
	baz=358						
MNTX	Cornudas Mount	94.79	18	P	P	14 17 38.3	+0.2
	baz=347						
MNTX	Cornudas Mount	94.79	18	eP	P	14 17 36.8	-1.3
	comp=Z,5.5nm,1.4s						
DZM	Mont Dzumac	95.73	119	eLR	LR	14 48 43.3	
	comp=Z,242nm,26.1s						
DZM	Mont Dzumac	95.73	119	LR	LR	15 00 20.5	
	comp=Z,51nm,20.7s,baz=331,slow=35						
TX31	Lajitas Ar. Si	97.41	17	eP	P	14 17 48.7	-1.5
TXAR	Lajitas Array	97.41	17	P	Pdif	14 17 50.4	+0.2
	comp=Z,0.4nm,0.8s,baz=343,slow=3.9,SNR=4.5						
TXAR				LR	LR	15 07 51.2	
	comp=Z,187nm,19.2s,baz=0.0,slow=39						
TAOE	Nuku Hiva Isla	117.51	68	eLR	LR	14 58 52.8	
	comp=Z,204nm,30.9s						
PPT2	Papeete2	118.71	82	eLR	LR	14 59 26.4	
	comp=Z,160nm,21.5s						
MAW	Mawson	121.62	194	PKP	PKPdf	14 23 08.0	-0.5
	comp=Z,1.6nm,0.7s,baz=63,slow=4.5,SNR=2.3						
TBI	Tubuai	123.09	86	eLR	LR	15 01 27.9	
	comp=Z,119nm,29.2s						
RKT	Rikitea	131.77	74	eLR	LR	15 05 29.5	
	comp=Z,2μm,38.2s						
SAML	Samuel	134.02	331	ePKPdf	PKPdf	14 23 31.8	-2.1
SNAA	Sanae	140.67	210	PKhKP	PKPpre	14 23 35.5	
	comp=Z,0.8nm,0.9s,baz=46,slow=2.9,SNR=2.4						
QSPA	South Pole Qui	141.54	180	PKhKP	PKPpre	14 23 37.4	
	comp=Z,1.5nm,0.8s,baz=302,slow=4.9,SNR=4.7						
QSPA				PKP	PKPdf	14 23 43.4	-2.7
	comp=Z,4.9nm,0.9s,baz=302,slow=0.9,SNR=9.5						
LPAZ	La Paz	142.41	335	PKhKP	PKPpre	14 23 43.1	
	comp=Z,1.5nm,0.8s,baz=321,slow=6.5,SNR=4.3						
MNMC	Minye Minye	145.51	335	ePKPdf	PKPdf	14 23 53.6	-1.3
PB01	IPOC Station P	147.31	334	ePKPbc	PKPdf	14 23 58.7	+1.0
CPUP	Villa Florida	147.56	311	ePKPbc	PKPdf	14 23 58.2	+0.5
	comp=Z,9.9nm,0.8s,baz=2.1,slow=2.3,SNR=18						
CPUP	Villa Florida	147.56	311	ePKPdf	PKPdf	14 23 56.9	-0.9
PLCA	Paso Flores	165.59	315	PKP	PKPdf	14 24 19.0	-1.5
	comp=Z,4.2nm,1.1s,baz=351,slow=9.9,SNR=3.6						

MEX 06 14:07:16.5±0.5, 17°.14N×101°.50W, h16km±21km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.47	4	i P	Pg	14 07 24.4	-1.5
ZIIG				eS	Sg	14 07 30.4	-1.9
CAIG	El Cayaco	1.19	94	eP	Pn	14 07 34.3	-4.1
CAIG				eS	Sb	14 07 48.7	-5.0
ARIG	Puente Sto Nin	1.58	44	eP	Pn	14 07 40.5	-3.5
ARIG				eS	Sn	14 07 58.7	-5.5
ACX	Acapulco	1.60	99	eP	Pn	14 07 42.1	-2.0
ACX				eS	Sn	14 08 00.8	-3.6

*IDC **06** 14:23:08.0±0.9, 8°.49N×82°.55W, h0km, mb4.0/11, mb1 4.2/13, mb1mx4.0/46, mbtmp4.0/13, ML4.0/2, MS2.9/3, Ms1 2.9/3, ms1mx2.7/43, Error ellipse: s-maj=37.3km s-min=16.5km az=41.0*

*UCR **06** 14:23:08.9±2.8, 8°.00N×82°.88W, h9km±14km, MD4.4, mb4.6(NEIC)*

*ISCJB **06** 14:23:11.7±0.6, 8°.28N±0°.07×82°.67W±0°.05, h45km±4km, mb4.3/24, Error ellipse: s-maj=14.0km s-min=3.9km az=28.4*

*NEIC **06** 14:23:13.8±0.6, 8°.54N×82°.57W, h40km±5km, mb4.6/16, Error ellipse: s-maj=11.5km s-min=4.9km az=215.0*

ISC 06 14:23:11.9±1.4, 8°.31N±0°.07×82°.67W±0°.06, h29km±9km, n97, σ1.9±61/104, mb4.5/24, 7C-3D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	Volcan	0.48	358	↓eP	Pn	14 23 22.6	-0.4
EDSV	San Vito	0.59	330	↑eP	Pb	14 23 23.7	0.0
EDSV				eS	Sn	14 23 37.4	+4.3
ACR	Cerro Adams	0.60	305	↓eP	Pb	14 23 21.0	-2.9
ACR				eS	Sb	14 23 31.5	-0.5
EDPN	Palmar Norte	1.01	310	↑eP	Pn	14 23 28.9	-1.2
EDPN				eS	Sb	14 23 45.4	+1.6
EDLM	Las Mercedes	1.32	317	eP	Pn	14 23 34.3	-0.2
EDLM				eS	Sb	14 23 55.2	+2.5
EDDO	Dominical	1.50	309	↑eP	Pn	14 23 36.1	-0.8
EDDO				eS	Sb	14 23 57.6	-0.3
BUS	Buena Vista	1.64	319	↑eP	Pn	14 23 39.0	-0.2
BUS				eS	Sb	14 24 03.2	+1.1
QCR1	Quepos	1.85	307	↑eP	Pn	14 23 40.1	-1.5
QCR1				eS	Sn	14 24 04.9	+0.8
URSC	Urasca	1.87	324	eP	Pn	14 23 43.3	+1.2
VTR0	Volcan Turrial	2.01	328	eP	Pb	14 23 46.0	-2.0
CVTR	Volcan Turrial	2.01	328	↑eP	Pn	14 23 45.8	+1.6
SJS	Escuela Geolog	2.12	320	eS	Sb	14 24 15.9	+0.3
HDC	Heredia	2.20	320	ePn	Pn	14 23 47.3	+0.6
CGA2	Cerro Gallo 2	2.45	314	eP	Pn	14 23 49.7	-0.4
CGA2				eS	Sn	14 24 21.1	+1.9
FORC	Fortuna	2.91	318	eP	Pn	14 23 59.3	+3.0
BCIP	Isla Barro Col	2.93	73	ePn	Pn	14 23 56.6	+0.1
BCIP	Isla Barro Col	2.93	73	eP	Pn	14 23 58.5	+2.0
BCIP	Isla Barro Col	2.93	73	eP	Pn	14 23 58.1	+1.6
CEDE	Laguna Cede˜–o	2.95	317	eP	Pn	14 23 58.7	+1.8
JTS	JuntasAbangare	2.99	311	Pn	Pn	14 23 56.7	-0.7
	40nm,0.3s,baz=150,slow=20,SNR=90						
JTS				Sn	Sn	14 24 33.6	+1.2
	27nm,0.3s,baz=136,slow=24,SNR=6.8						
JTS				Lg	Lg	14 24 42.1	
	38nm,0.3s,baz=49,slow=19,SNR=8.4						
JTS				LR	LR	14 25 00.5	
	comp=Z,63nm,19.0s,baz=133,slow=38						
UPA	Univ. de Panam	3.17	78	eP	Pn	14 24 02.3	+2.4
AMAS	Alto Masis	3.24	315	eP	Pn	14 24 01.2	+0.4
ACAL	Aguas Claras	3.28	315	eP	Pn	14 24 03.0	+1.5
PTEN	Parque Tenorio	3.31	316	eP	Pn	14 24 03.2	+1.4
CUI	Cuipilapa	3.39	314	↑eP	Pn	14 24 03.0	+0.1
CUI				eS	Sn	14 24 43.6	+1.4
COLC	Colonia	3.42	313	↓eP	Pn	14 24 04.6	+1.3
VCR	Vista de Mar	3.43	302	eP	Pn	14 24 01.8	-1.8
HORNC	Hornillas	3.44	314	eP	Pn	14 24 03.9	+0.3
MESS	Mesas	3.47	314	eP	Pn	14 24 04.2	+0.2
MESS				eP	Pb	14 24 04.9	-7.7
MESS				eS	Sn	14 24 48.8	+4.6
LIM1	Limonal	3.48	313	eP	Pn	14 24 05.1	+0.9
GPS2	Hotel Rinc˜‡n	3.59	313	eP	Pn	14 24 06.0	+0.3
GPS2				eS	Sn	14 24 49.7	+2.6
GPS1	Guardaparques	3.60	313	eP	Pn	14 24 06.9	+1.0
BUEV	Buena Vista	3.66	313	eP	Pn	14 24 07.4	+0.7
BUEV				eS	Sn	14 24 52.5	+3.6
GBS3	Finca Las Im˜¡	3.68	312	eP	Pn	14 24 07.9	+0.9
CRZ1	La Cruz	4.01	313	eP	Pn	14 24 10.0	-1.4
ESPN	Las Esperanzas	4.18	338	ePn	Pn	14 24 10.3	-3.4
SOLC	Bahia Solano	5.62	111	eP	Pn	14 24 29.1	-4.4
ESTN	Estel	5.99	323	ePn	Pn	14 24 37.8	-0.9
MOTC	Monteria, Cord	6.95	86	eP	Pn	14 24 56.4	+4.6
TGUH	Tegucigalpa,Un	7.28	322	ePn	Pn	14 24 57.0	+0.7
HELC	Santa Helena	7.39	106	ePn	Pn	14 24 58.3	+0.1
SJCC	San Jacinto, C	7.56	77	eP	Pn	14 25 03.7	+3.4
ZARC	Zaragoza, Cauc	7.78	95	eP	Pn	14 25 04.4	+1.1
ROSC	El Rosal	8.98	112	LR	LR	14 28 20.9	
	comp=Z,95nm,20.1s,baz=97,slow=35						
PRAC	Prado	8.99	120	ePn	Pn	14 25 21.4	+1.5
PRAC	Prado	8.99	120	eP	Pn	14 25 21.0	+1.1
OTAV	Otavalo	9.06	152	ePn	Pn	14 25 23.8	+2.6
RUSC	La Rusia	9.81	104	ePn	Pn	14 25 33.1	+1.5
RUSC	La Rusia	9.81	104	eP	Pn	14 25 34.3	+2.7
APG	El Apazote	10.12	312	Pn	Pn	14 25 38.1	+2.5
	0.7nm,0.3s,baz=157,slow=23,SNR=5.8						
SDV	Santo Domingo	11.92	86	Pn	Pn	14 26 02.2	+2.0
	0.5nm,0.3s,baz=276,slow=13,SNR=3.0						
SDV				LR	LR	14 32 13.7	
	comp=Z,133nm,18.4s,baz=268,slow=46						
SDV	Santo Domingo	11.92	86	ePn	Pn	14 26 00.1	-0.1
CMIG	Matias Romero	14.76	307	Pn	Pn	14 26 39.9	+1.1
	0.3nm,0.3s,baz=99,slow=13,SNR=3.3						
AOPR	Arecibo Observ	18.41	56	eP	P	14 27 24.0	-1.0
	84nm,1.7s						
PTGA	Pitinga	24.35	111	P	P	14 28 27.5	-0.1
	2.8nm,0.6s,baz=284,slow=9.3,SNR=5.7						
IP06	Yanceyville	29.80	7	eP	P	14 29 15.4	-0.8
	13nm,1.2s						
IP03	Louisa	29.88	7	eP	P	14 29 16.6	-0.4
	28nm,1.3s						
SPRD	Spring Road, M	29.90	8	eP	P	14 29 14.3	-2.8
	18nm,1.1s						
IP04	Greensprings	29.94	7	eP	P	14 29 14.0	-3.5
	18nm,1.1s						
CVRD	Centerville Ro	29.95	8	eP	P	14 29 15.0	-2.6
	19nm,1.0s						
EML	El Monte Cty P	39.96	313	eP	P	14 30 43.8	-0.2
PD31	Pinedale Array	41.66	330	eP	P	14 30 56.1	-2.0
PDAR	Pinedale Array	41.66	330	P	P	14 30 57.8	-0.3
	0.3nm,0.7s,baz=98,slow=4.7,SNR=4.2						
PDAR	Pinedale Array	41.66	330	eP	P	14 30 56.4	-1.7
AGOC	Agoura	41.98	313	eP	P	14 31 01.8	+1.2
ULM	Lac du Bonnet	43.23	348	P	P	14 31 09.3	-1.1
	3.8nm,0.8s,baz=158,slow=13,SNR=9.1						
ULM	Lac du Bonnet	43.23	348	eP	P	14 31 09.3	-1.1
	6.9nm,0.9s						
RLMT	Red Lodge	43.29	332	eP	P	14 31 10.5	-0.9
	36nm,1.1s						
NV01	Mina Array Sit	43.89	319	eP	P	14 31 17.0	+0.6
NVAR	Mina Array Bea	43.89	319	P	P	14 31 17.5	+1.2
	1.3nm,0.8s,baz=129,slow=7.1,SNR=8.5						
BOZ	Bozeman (W)	44.75	331	eP	P	14 31 23.4	+0.5
	9.6nm,1.5s						
WVOR	Wild Horse Val	46.41	323	eP	P	14 31 35.3	-0.8
	3.0nm,0.9s						
PLCA	Paso Flores	50.06	168	P	P	14 32 07.0	+2.8
	2.9nm,0.8s,baz=353,slow=8.1,SNR=3.9						
FCC	Fort Churchill	51.09	352	eP	P	14 32 10.3	-1.3

WR1 **Warramunga Arr 142.38 248** *e*PKPpre PKPpre 14 42 36.1
WRA **Warramunga Arr 142.38 248** PKhKP PKPpre 14 42 36.1
1.0nm,0.8s,baz=101,slow=3.0,SNR=4.8
CMAR **Chiang Mai Arr 153.35 357** PKPbc **PKPbc 14 43 07.0 -1.4**
0.7nm,0.4s,baz=318,slow=3.9,SNR=3.8

IDC 06 14:32:17.6±62.0, 13°.88S×165°.91E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.5/45, mbtmp3.7/3, Error ellipse: s-maj=1047.0km s-min=110.7km az=63.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**28.57**	**227**	P	P	14 38 15.7	+0.2
	0.5nm,0.3s,baz=55,slow=12,SNR=4.5						
WRA	**Warramunga Arr**	**30.77**	**254**	P	P	14 38 35.0	-0.1
	0.5nm,0.7s,baz=86,slow=8.9,SNR=6.0						
ASAR	**Alice Springs**	**31.76**	**247**	P	P	14 38 43.7	-0.1
	0.9nm,0.5s,baz=75,slow=9.4,SNR=21						

IDC 06 14:41:53.1±4.1, 20°.63S×178°.21W, h571km±161km, mb2.9/4, mb1 3.2/6, mb1mx2.9/45, mbtmp4.1/6, Error ellipse: s-maj=112.1km s-min=35.2km az=71.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**9.08**	**44**	P	P	14 44 02.2	-0.1
	1.6nm,0.3s,baz=229,slow=19,SNR=3.0						
URZ	**Urewera**	**18.02**	**192**	P	P	14 45 30.0	0.0
	0.5nm,0.3s,baz=314,slow=3.1,SNR=2.5						
CTA	**Charters Tower**	**33.28**	**265**	P	P	14 47 44.6	+0.1
	4.1nm,1.0s,baz=75,slow=11,SNR=3.3						
STKA	**Stephens Creek**	**37.55**	**244**	P	P	14 48 19.3	-0.4
	2.8nm,1.0s,baz=94,slow=10,SNR=3.2						
ASAR	**Alice Springs**	**44.30**	**257**	P	P	14 49 13.3	+0.1
	1.1nm,0.8s,baz=96,slow=7.5,SNR=12						
WRA	**Warramunga Arr**	**44.39**	**262**	P	P	14 49 13.4	-0.5
	0.3nm,0.4s,baz=97,slow=8.5,SNR=14						

*ISCJB **06** 14:49:57.1±0.9, 32°.77S±0°.04×70°.42W±0°.06, h3km±11km, Error ellipse: s-maj=8.4km s-min=6.2km az=10.5*
*GUC **06** 14:49:57.3±0.5, 32°.79S×70°.40W, h19km±3km, ML2.9*
*SJA **06** 14:49:59.0±0.7, 32°.65S×70°.31W, h11km±4km, ML2.6, MW3.2*
ISC 06 14:49:57.3±1.1, 32°.79S±0°.04×70°.41W±0°.04, h16km±12km, n11, σ1°59/21, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PEL	**Peldehue**	**0.42**	**213**	*e*P	Pg	14 50 05.6	-0.3
PEL				*i* S	Sg	14 50 12.1	+0.4
ROCH	**El Roble**	**0.54**	**250**	*e*P	Pg	14 50 08.0	-0.1
ROCH				*i* S	Sg	14 50 15.8	+0.6
ROCH				IAML		14 50 17.6	
	comp=E,767nm,0.4s						
FCH	**Farellones**	**0.55**	**169**	*e*P	Pg	14 50 08.2	-0.1
FCH				*i* S	Sb	14 50 16.2	-0.2
FCH				IAML		14 50 16.5	
	comp=E,3μm,0.2s						
CLCH	**Cerro Calan**	**0.61**	**190**	*e*P	Pg	14 50 09.2	-0.3
CLCH				*i* S	Sg	14 50 17.7	+0.1
CLCH				IAML		14 50 19.0	
	comp=E,2μm,0.1s						
AUSP	**Uspallata**	**1.03**	**57**	*e*P	Pb	14 50 16.3	-0.7
AUSP				*e*S	Sb	14 50 29.8	-0.7
LMEL	**Las Melosas**	**1.07**	**171**	*e*P	Pb	14 50 17.4	-0.1
LMEL				*i* S	Sg	14 50 32.0	-0.1
LMEL				IAML		14 50 35.4	
	comp=N,612nm,0.1s						
ARCO	**CERRO ARCO**	**1.25**	**93**	*e*P	Pg	14 50 21.2	-0.2
ARCO				IAML		14 50 41.6	
	comp=Z,120nm,0.2s						
ASAL	**Salagasta**	**1.34**	**82**	*e*P	Pg	14 50 22.9	-0.4
ASAL				*e*S	Sg	14 50 39.9	-0.9
AAGR	**Agrelo**	**1.36**	**103**	*e*P	Pg	14 50 24.0	+0.4
AAGR				*e*S	Sg	14 50 43.0	+1.5
RTLS	**Leoncito**	**1.37**	**44**	*e*P	Pb	14 50 22.8	+0.1
RTLS				*e*S	Sn	14 50 40.4	+0.4
RTLS				IAML		14 50 41.8	
	comp=Z,96nm,0.6s						
RTCV	**Cerro Valdivia**	**1.84**	**60**	*e*P	Pb	14 50 30.6	+0.1
RTCV				*e*S	Sb	14 50 54.0	+0.7

*ISCJB **06** 14:59:23.1±0.8, 24°.95N±0°.08×123°.13E±0°.06, h142km±6km, mb3.3/2, Error ellipse: s-maj=14.0km s-min=7.7km az=154.2*
*JMA **06** 14:59:23.8±0.2, 24°.91N×123°.10E, h141km±3km, M3.6*
*IDC **06** 14:59:25.2±8.6, 24°.86N×123°.52E, h138km±101km, mb3.1/2, mb1 3.4/4, mb1mx2.9/64, mbtmp3.7/4, ML3.6/2, Error ellipse: s-maj=81.1km s-min=45.4km az=57.0*
ISC 06 14:59:23.7±1.2, 25°.03N±0°.09×123°.13E±0°.07, h140km±9km, n17, σ1°09/31, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.58**	**191**	P	Pn	14 59 44.2	-0.2
YOJ				S	Sn	14 59 59.3	-0.7
JYNG	**Yonagunijimaku**	**0.60**	**196**	P	Pn	14 59 44.4	-0.1
JYNG				*e*S	Sn	14 59 59.3	-1.0
IRIF	**Iriomote-Funau**	**0.88**	**141**	P	Pn	14 59 46.3	-0.3
IRIF				S	Sn	15 00 03.8	-0.1
JKRS	**Kuro-shima**	**1.13**	**134**	P	Pn	14 59 48.9	+0.2
JKRS				S	Sn	15 00 07.1	-0.6
JIJ	**Ishigaki jima**	**1.14**	**125**	P	Pn	14 59 48.6	-0.2
JIJ				S	Sn	15 00 06.3	-1.6
HATJ	**Hateruma jima**	**1.15**	**147**	P	Pn	14 59 49.1	+0.2
HATJ				S	Sn	15 00 07.1	-1.0
JISG	**Ishigakijimahi**	**1.16**	**112**	P	Pn	14 59 49.0	0.0
JISG				S	Sn	15 00 07.9	-0.4
JTJ	**Tarama**	**1.48**	**105**	P	Pn	14 59 52.7	+0.4
JTJ				S	Sn	15 00 14.0	-0.2
JIRB	**Irabujima**	**1.87**	**96**	P	Pn	14 59 57.0	+0.3
JIRB				S	Sn	15 00 21.6	-0.3
JIKM	**Ikemajima**	**1.93**	**93**	P	Pn	14 59 58.2	+0.8
JIKM				S	Sn	15 00 23.5	+0.3
JMJ	**Miyako jima 2**	**1.98**	**96**	P	Pn	14 59 58.9	+0.9
JMJ				S	Sn	15 00 24.2	0.0
JOGS	**Gusukube**	**2.09**	**97**	P	Pn	15 00 00.3	+1.0
JOGS				S	Sn	15 00 26.8	+0.2
JKE	**Kume jima 2**	**3.54**	**68**	P	Pn	15 00 17.6	-0.1
JKE				S	Sn	15 00 59.5	-0.1
JOW	**Kunigami**	**4.97**	**68**	P	Pn	15 00 34.9	-1.7
	6.1nm,0.3s,baz=197,slow=11,SNR=25						
JOW				S	Sn	15 01 29.2	-4.1
	4.4nm,0.3s,baz=306,slow=18,SNR=3.7						
KSRS	**Korea Array**	**13.04**	**17**	P	Pn	15 02 25.4	+1.8
	0.3nm,0.3s,baz=193,slow=12,SNR=9.4						
WRA	**Warramunga Arr**	**46.02**	**165**	P	P	15 07 32.8	-0.5
	0.6nm,0.5s,baz=349,slow=9.1,SNR=8.8						
ASAR	**Alice Springs**	**49.52**	**167**	P	P	15 08 00.1	-0.1
	0.2nm,0.4s,baz=346,slow=6.9,SNR=7.2						

*ISCJB **06** 15:02:39.0±0.4, 4°.31N±0°.10×32°.38W±0°.08, h11km, mb4.0/19, MS3.6/12, Error ellipse: s-maj=15.2km s-min=9.4km az=147.3*
*IDC **06** 15:02:39.0±0.6, 4°.28N×32°.37W, h0km, mb4.0/16, mb1 4.2/17, mb1mx3.9/59, mbtmp4.0/17, ML4.5/1, MS3.6/12, Ms1 3.7/12, ms1mx3.3/57, Error ellipse: s-maj=23.6km s-min=13.7km az=134.0*
*NEIC **06** 15:02:40.3±0.3, 4°.27N×32°.42W, h10km, mb4.6/7, Error ellipse: s-maj=12.4km s-min=7.9km az=137.0*
ISC 06 15:02:40.6±0.5, 4°.3N±0°.1×32°.4W±0°.1, h11km, n51, σ1°00/40, mb4.2/19, MS3.7/12, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**10.61**	**199**	Pn	Pn	15 05 11.2	-1.5
	3.7nm,0.3s,baz=10,slow=1.8,SNR=6.5						
RCBR				Sn	Sn	15 07 02.7	-8.9
	3.4nm,0.3s,baz=340,slow=1.8,SNR=5.0						
H10N3	**ASCENSION HYDR**	**21.53**	**124**	T	T	15 30 00.4	
	baz=303,slow=74,SNR=210						
H10N2	**ASCENSION HYDR**	**21.53**	**124**	T	T	15 29 54.0	
	baz=303,slow=74,SNR=222						
H10N1	**ASCENSION HYDR**	**21.55**	**124**	T	T	15 29 56.2	
	baz=303,slow=74,SNR=242						
H10S3	**ASCENSION HYDR**	**22.02**	**127**	T	T	15 30 36.9	
	baz=306,slow=75,SNR=286						
H10S1	**ASCENSION HYDR**	**22.03**	**127**	T	T	15 30 37.3	
	baz=306,slow=75,SNR=285						
H10S2	**ASCENSION HYDR**	**22.04**	**127**	T	T	15 30 39.1	
	baz=306,slow=75,SNR=246						
DBIC	**Dimbokro**	**27.52**	**84**	LR	LR	15 17 27.5	
	comp=Z,143nm,18.2s,baz=243,slow=32						
PTGA	**Pitinga**	**27.99**	**260**	LR	LR	15 18 31.8	
	comp=Z,274nm,19.9s,baz=28,slow=34						
KOWA	**Kowa**	**29.75**	**68**	P	**P**	**15 08 48.4**	**+1.0**
	1.1nm,0.3s,baz=288,slow=6.4,SNR=4.6						
KOWA				LR	LR	15 19 18.4	
	comp=Z,293nm,19.6s,baz=214,slow=34						
SIV	**San Ignacio**	**34.78**	**234**	P	**P**	**15 09 32.3**	**+0.8**
	0.5nm,0.5s,baz=154,slow=5.9,SNR=3.9						
TOA1	**Torodi Ar. Sit**	**34.80**	**73**	*e*P	**P**	**15 09 32.0**	**+0.3**
TOA1				*e*PcP	**PcP**	**15 12 05.4**	**+0.2**
TORD	**Torodi Ar. Bea**	**34.80**	**73**	P	**P**	**15 09 32.0**	**+0.3**
	2.6nm,1.0s,baz=256,slow=6.9,SNR=6.6						
TORD				PcP	**PcP**	**15 12 05.4**	**+0.2**
	1.1nm,1.1s,baz=266,slow=4.2,SNR=2.9						
TORD				LR	LR	15 21 32.8	
	comp=Z,147nm,21.3s,baz=245,slow=33						
MDT	**Midelt**	**38.49**	**39**	LR	LR	15 24 50.4	
	comp=Z,119nm,18.8s,baz=270,slow=35						
CPUP	**Villa Florida**	**38.83**	**217**	P	**P**	**15 10 06.6**	**+0.8**
	0.5nm,0.3s,baz=8.9,slow=8.9,SNR=2.8						
LPAZ	**La Paz**	**40.81**	**239**	P	**P**	**15 10 24.2**	**+1.1**
	1.0nm,0.8s,baz=49,slow=9.3,SNR=3.7						
ROSC	**El Rosal**	**41.79**	**272**	P	**P**	**15 10 32.2**	**+1.2**
	8.9nm,0.5s,baz=82,slow=19,SNR=3.4						
ROSC				LR	LR	15 28 33.4	
	comp=Z,96nm,19.7s,baz=97,slow=37						
ROSC	**El Rosal**	**41.79**	**272**	*e*P	**P**	**15 10 31.8**	**+0.8**
	6.8nm,0.8s						
ESDC	**Sonseca Array**	**43.64**	**32**	P	**P**	**15 10 46.2**	**+0.9**
	0.7nm,0.7s,baz=214,slow=8.9,SNR=5.1						
GEA0	**GERESS Array S**	**59.19**	**34**	*e*P	**P**	**15 12 41.6**	**-0.2**
GEC2	**GERESS Array S**	**59.19**	**34**	*e*P	**P**	**15 12 41.8**	**0.0**
	5.2nm,1.1s						
GERES	**GERESS Array B**	**59.19**	**34**	P	**P**	**15 12 42.0**	**+0.2**
	0.7nm,0.7s,baz=221,slow=5.3,SNR=7.1						
DIVS	**Divibare**	**60.68**	**41**	*e*P	**P**	**15 12 53.6**	**+1.5**
	3.0nm,1.0s						
BOSA	**Boshof**	**64.28**	**124**	P	**P**	**15 13 16.6**	**+0.1**
	4.3nm,0.9s,baz=283,slow=10,SNR=4.6						
MLR	**Muntele Rosu**	**65.13**	**41**	P	**P**	**15 13 22.2**	**+0.4**
	1.4nm,0.8s,baz=335,slow=5.0,SNR=7.8						
MLR				LR	LR	15 42 26.7	
	comp=Z,13nm,18.8s,baz=144,slow=37						
MLR	**Muntele Rosu**	**65.13**	**41**	*e*P	**P**	**15 13 22.0**	**+0.3**
	12nm,1.1s						
NB2	**NORSAR Subarra**	**65.43**	**22**	P	**P**	**15 13 23.2**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=229,slow=6.5						
NB200	**NORSAR Array S**	**65.43**	**22**	*e*P	**P**	**15 13 22.1**	**-1.2**
NOA	**NORSAR Array B**	**65.43**	**22**	P	**P**	**15 13 22.1**	**-1.2**
	comp=Z,3.2nm,1.0s,baz=232,slow=6.6,SNR=3.1						
NOA				LR	LR	15 40 08.1	
	comp=Z,14nm,18.2s,baz=230,slow=34						
BR101	**Keskin Array S**	**68.94**	**49**	*e*P	**P**	**15 13 45.8**	**-0.4**
BRTR	**Keskin Array B**	**68.94**	**49**	P	**P**	**15 13 45.8**	**-0.4**
	comp=Z,1.1nm,0.9s,baz=243,slow=5.4,SNR=5.9						
AKASG	**Malin Array Be**	**69.00**	**37**	P	**P**	**15 13 46.0**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=248,slow=6.6,SNR=6.9						
FIA0	**FINESS Array S**	**71.63**	**26**	*e*P	**P**	**15 14 02.1**	**+0.2**
FINES	**FINESS Array B**	**71.63**	**26**	P	**P**	**15 14 02.1**	**+0.2**
	comp=Z,3.8nm,1.1s,baz=339,slow=4.7,SNR=5.5						
FIA1	**FINESS Array S**	**71.63**	**26**	*e*P	**P**	**15 14 02.0**	**+0.1**
ANMO	**Albuquerque**	**74.51**	**305**	LR	LR	15 43 17.0	
	comp=Z,73nm,20.1s,baz=78,slow=33						
PDAR	**Pinedale Array**	**77.69**	**313**	LR	LR	15 48 45.6	
	comp=Z,17nm,18.1s,baz=82,slow=36						
SNAA	**Sanae**	**78.20**	**171**	P	**P**	**15 14 40.7**	**+0.9**
	comp=Z,0.8nm,0.9s,baz=7.1,slow=8.1,SNR=3.2						
SNAA	**Sanae**	**78.20**	**171**	*e*P	**P**	**15 14 40.5**	**+0.7**
	comp=Z,17nm,1.9s						
RES	**Resolute Bay**	**78.84**	**346**	*e*P	**P**	**15 14 42.6**	**-0.7**
	comp=Z,16nm,1.8s						
CCUT	**Cedar City**	**80.25**	**307**	*e*P	**P**	**15 14 51.0**	**-1.1**
	comp=Z,8.1nm,1.5s						
HEC	**Hector,Ludlow**	**82.61**	**304**	*e*P	**P**	**15 15 05.0**	**+0.7**
YKA	**Yellowknife Ar**	**82.64**	**332**	P	**P**	**15 15 02.3**	**-1.5**
	comp=Z,0.2nm,0.5s,baz=80,slow=4.1,SNR=4.7						
YKB5	**Yellowknife Ar**	**82.64**	**332**	*e*P	**P**	**15 15 02.4**	**-1.4**
PFO	**Pinyon Flats O**	**82.72**	**303**	*e*P	**P**	**15 15 07.2**	**+2.2**
BFSC	**Mount Baldy Ra**	**83.71**	**304**	*e*P	**P**	**15 15 09.3**	**-0.8**
NV01	**Mina Array Sit**	**84.17**	**308**	*e*P	**P**	**15 15 11.2**	**-1.4**
NVAR	**Mina Array Bea**	**84.17**	**308**	LR	LR	15 48 15.8	
	comp=Z,59nm,21.9s,baz=276,slow=33						
SBI	**Santa Barbara**	**84.86**	**303**	*e*P	**P**	**15 15 14.7**	**-1.1**
YBH	**Yreka Blue Hor**	**87.43**	**311**	LR	LR	15 50 35.1	
	comp=Z,31nm,20.8s,baz=86,slow=33						
ASAR	**Alice Springs**	**156.61**	**147**	PKPab	**PKPab**	**15 23 03.1**	**-2.5**
	comp=Z,0.7nm,0.8s,baz=207,slow=3.7,SNR=6.6						

NNC 06 15:06:07.8±4.6, 36°.47N×70°.05E, h0km, mb3.6, mpv3.2, 5C-1D, Error ellipse: s-maj=38.2km s-min=34.5km az=136.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**4.46**	**37**	⇑P	Pn	15 07 16.3	-0.6
	1.9nm,0.3s						
SFK				⇑S	Sn	15 08 11.6	+2.0
	1.6nm,0.3s						
MNAS	**Manas**	**6.30**	**17**	⇑P	Pn	15 07 42.5	+0.4
	1.1nm,0.6s						
MNAS				⇓S	Sn	15 08 54.4	-0.4
	1.2nm,0.4s						
KK31	**Karatay Array**	**6.63**	**3**	⇑P	Pn	15 07 47.2	+0.6
	0.5nm,0.3s,baz=0.0,slow=0.1,SNR=6.0						
KK31				⇑S	Sn	15 09 04.7	+1.8
	0.4nm,0.3s,baz=178,slow=23,SNR=4.7						

TIR 06 15:37:26.7, 41°.99N×20°.23E, h1km, Md1.8/3, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUK	**Puka**	**0.26**	**282**	*i* PG	Pg	15 37 32.8	+1.1
PUK				*i* SG	Sb	15 37 37.4	-1.8
PHP	**Peshkopia**	**0.34**	**153**	*i* PG	Pg	15 37 34.2	+0.9
PHP				*i* SG	Sb	15 37 40.5	-1.2
BCI	**Bajram Curri**	**0.40**	**342**	*i* PG	Pg	15 37 35.2	+0.9
BCI				*i* SG	Sb	15 37 42.2	-1.0

*ISCJB **06** 15:38:26.9±0.3, 1°.15S±0°.04×27°.13E±0°.04, h10km, mb4.7/108, MS3.7/35, Error ellipse: s-maj=6.2km s-min=5.6km az=139.0*
*IDC **06** 15:38:27.4±0.5, 1°.18S×27°.12E, h0km, mb4.5/35, mb1 4.5/35, mb1mx4.4/59, mbtmp4.5/35, MS3.7/32, Ms1 3.7/32, ms1mx3.6/63, Error ellipse: s-maj=16.3km s-min=11.2km az=102.0*
*MOS **06** 15:38:27.1±1.0, 1°.11S×27°.16E, h10km, mb5.0/44, Error ellipse: s-maj=11.4km s-min=4.8km az=82.9*
*NEIC **06** 15:38:28.6±0.2, 1°.19S×27°.10E, h10km, mb4.8/32, Error ellipse: s-maj=6.6km s-min=5.2km az=99.0*
*BJI **06** 15:38:30.6, 0°.63S×27°.57E, h6km, mb4.8/30, mB5.1/17, Ms4.9/7, Ms7 4.7/5*
ISC 06 15:38:28.8±0.3, 1°.15S±0°.05×27°.24E±0°.07, h10km, n265, σ1°21/262, mb4.8/111, MS3.7/34, 15C-12D, Zaire

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MBAR	**Mbarara**	**3.55**	**81**	*e*Pn	**Pn**	**15 39 26.0**	**+1.9**
MBAR	**Mbarara**	**3.55**	**81**	*e*P	**Pn**	**15 39 26.0**	**+1.9**
LODK	**Lodwar**	**9.31**	**61**	*e*P	**Sn**	**15 42 23.2**	**-5.0**
LODK				*e*		15 42 23.7	
	baz=197,slow=28						
LODK				AMP		15 43 17.4	
	comp=N,11μm,1.8s						
LODK				AMP		15 43 21.8	
	comp=E,7μm,0.5s						
LSZ	**Lusaka**	**14.06**	**176**	Pn	**Pn**	**15 41 44.4**	**-4.1**
	comp=E,1.8nm,0.3s,baz=1.9,slow=11,SNR=29						
LSZ				Sn	Sn	15 44 11.0	-14
	comp=E,1.0nm,0.3s,baz=319,slow=19,SNR=3.9						
LSZ				Lg	Lg	15 45 42.0	
	baz=270,slow=20,SNR=3.7						
LSZ	**Lusaka**	**14.06**	**176**	*e*Pn	**Pn**	**15 41 45.0**	**-3.4**
LSZ				Sn	Sn	15 44 11.0	-14
LSZ				Lg	Lg	15 45 42.0	
LSZ	**Lusaka**	**14.06**	**176**	*e*P	**Pn**	**15 41 45.0**	**-3.4**
BLWY	**Bulawayo**	**18.92**	**176**	*i* P	**P**	**15 42 49.9**	**-0.2**
BLWY	**Bulawayo**	**18.92**	**176**	*i* P	**P**	**15 42 49.9**	**-0.2**
ATD	**Arta Tunnel**	**19.99**	**51**	P	**Pn**	**15 43 04.6**	**+1.1**
	comp=E,8.9nm,0.9s,baz=253,slow=12,SNR=2.0						
ATD				Lg	Lg	15 48 57.4	
	comp=E,2.3nm,0.3s,baz=252,slow=20,SNR=2.5						
ATD				LR	LR	15 50 15.0	
	comp=E,367nm,18.7s,baz=234,slow=35						
TSUM	**Tsumeb**	**20.28**	**207**	P	**P**	**15 43 04.0**	**-0.9**
	comp=E,6.2nm,0.7s,baz=17,slow=14,SNR=4.0						
TSUM				S	S	15 46 39.8	-13
	comp=E,13nm,0.8s,baz=260,slow=18,SNR=3.0						
TSUM				Lg	Lg	15 48 59.8	
	comp=E,48nm,1.0s,baz=324,slow=19,SNR=5.9						
TSUM				LR	LR	15 51 09.7	
	comp=E,275nm,18.0s,baz=28,slow=38						
TSUM	**Tsumeb**	**20.28**	**207**	*e*P	**P**	**15 43 04.0**	**-0.9**
	comp=E,26nm,1.0s						
TSUM				S	S	15 46 39.8	-13
TSUM				Lg	Lg	15 48 59.8	
LBTB	**Lobatse**	**23.77**	**184**	P	**P**	**15 43 40.9**	**-1.0**
	comp=E,8.0nm,0.8s,baz=350,slow=12,SNR=8.7						
LBTB				S	**S**	**15 47 58.6**	**+1.1**
	comp=E,1.6nm,0.5s,baz=12,slow=18,SNR=2.2						
LBTB				Lg	Lg	15 50 49.2	
	comp=E,18nm,0.9s,baz=312,slow=23,SNR=4.5						
LBTB				LR	LR	15 53 42.4	
	comp=E,229nm,18.1s,baz=16,slow=38						
LBTB	**Lobatse**	**23.77**	**184**	*e*P	**P**	**15 43 41.0**	**-0.8**
	comp=E,42nm,1.1s						
LBTB				S	**S**	**15 47 58.6**	**+1.1**
LBTB				Lg	Lg	15 50 49.2	
LBTB	**Lobatse**	**23.77**	**184**	*e*P	**P**	**15 43 41.0**	**-0.8**
LBTB				S	**S**	**15 47 58.6**	**+1.1**
LBTB				pmax	pmax		
	comp=Z,42nm,1.1s						
OPO	**Ambohidratompo**	**26.13**	**133**	LR	LR	15 54 24.3	
	comp=Z,192nm,19.0s,baz=235,slow=36						
BOSA	**Boshof**	**27.37**	**184**	P	**P**	**15 44 13.5**	**-1.1**
	comp=Z,11nm,0.7s,baz=359,slow=9.0,SNR=13						
BOSA				LR	LR	15 55 41.6	
	comp=Z,149nm,20.1s,baz=16,slow=38						
BOSA	**Boshof**	**27.37**	**184**	*e*P	**P**	**15 44 13.5**	**-1.1**
	comp=Z,18nm,0.9s						
BOSA	**Boshof**	**27.37**	**184**	*e*P	**P**	**15 44 13.5**	**-1.1**
BOSA				pmax	pmax		
	comp=Z,18nm,0.9s						
TOA0	**Torodi Ar. Sit**	**29.04**	**300**	*e*P	**P**	**15 44 28.4**	**-1.1**
	comp=Z,28nm,1.0s						
TORD	**Torodi Ar. Bea**	**29.04**	**300**	P	**P**	**15 44 28.7**	**-0.8**
	comp=Z,15nm,0.5s,baz=108,slow=7.7,SNR=59						
TORD				Lg	Lg	15 53 38.8	
	comp=Z,4.2nm,1.0s,baz=114,slow=27,SNR=6.7						
TORD				LR	LR	15 55 44.6	
	comp=Z,317nm,19.1s,baz=125,slow=36						
EIL	**Elat**	**31.52**	**13**	P	**P**	**15 44 54.5**	**+3.2**
	comp=Z,3.0nm,0.6s,baz=158,slow=11,SNR=3.5						
EIL				LR	LR	15 57 35.7	
	comp=Z,140nm,18.3s,baz=245,slow=36						
SUR	**Sutherland**	**31.65**	**190**	P	**P**	**15 44 52.3**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=5.9,slow=6.4,SNR=3.1						
SUR				LR	LR	15 57 55.0	
	comp=Z,31nm,19.9s,baz=7.0,slow=37						
KIC	**Kosan Boka**	**32.78**	**284**	*e*P	**P**	**15 45 00.4**	**-2.1**
	comp=Z,51nm,1.1s						
DBIC	**Dimbokro**	**32.96**	**284**	P	**P**	**15 45 02.6**	**-1.5**
	comp=Z,8.1nm,0.7s,baz=88,slow=9.5,SNR=4.7						
DBIC				LR	LR	15 58 40.4	
	comp=Z,147nm,20.3s,baz=98,slow=37						
LIC	**Lamto**	**33.03**	**283**	*e*P	**P**	**15 45 03.7**	**-1.0**
	comp=Z,42nm,0.7s						
TIC	**Toumodi**	**33.11**	**284**	*e*P	**P**	**15 45 04.5**	**-0.9**
ASF	**Jabal al Asfar**	**34.38**	**15**	P	**P**	**15 45 17.4**	**+1.0**
	comp=Z,0.9nm,0.3s,baz=248,slow=5.4,SNR=3.1						
KOWA	**Kowa**	**34.62**	**298**	P	**P**	**15 45 17.7**	**-0.9**
	comp=Z,12nm,0.7s,baz=94,slow=9.2,SNR=7.4						
KOWA				LR	LR	15 59 15.6	
	comp=Z,143nm,21.5s,baz=98,slow=36						
KOWA	**Kowa**	**34.62**	**298**	*e*P	**P**	**15 45 16.5**	**-2.0**
	comp=Z,13nm,0.7s						
MMAI	**Mount Meron Ar**	**34.85**	**12**	LR	LR	15 59 40.0	
	comp=Z,117nm,18.6s,baz=210,slow=36						
IDI	**Anoyia**	**36.32**	**357**	P	**P**	**15 45 33.9**	**+1.0**
	comp=Z,7.5nm,0.8s,baz=180,slow=12,SNR=4.2						
IDI				LR	LR	16 00 51.7	
	comp=Z,48nm,20.1s,baz=259,slow=37						
APE	**Apeiranthos**	**38.06**	**358**	*i* P	**P**	**15 45 46.2**	**-1.5**
APE				pmax	pmax		
	comp=Z,23nm,1.1s						
UOSS	**Minazif**	**38.22**	**45**	*e*P	**P**	**15 45 48.6**	**-0.6**
	comp=Z,7.7nm,0.8s						
WSAR	**Wadi Sarin**	**39.00**	**50**	P	**P**	**15 45 57.8**	**+2.0**
	comp=Z,4.3nm,0.8s,baz=253,slow=14,SNR=3.1						
WSAR				LR	LR	16 02 38.1	
	comp=Z,111nm,18.6s,baz=258,slow=37						
AGG	**Agios Georgios**	**40.23**	**354**	*e*P	**P**	**15 46 05.5**	**-0.3**
	comp=Z,42nm,0.8s						
AGG	**Agios Georgios**	**40.23**	**354**	*e*P	**P**	**15 46 05.5**	**-0.3**
AGG				pmax	pmax		
	comp=Z,42nm,0.8s						
KEST	**Kesra**	**40.31**	**337**	P	**P**	**15 46 06.9**	**+0.3**
	comp=Z,3.2nm,0.7s,baz=141,slow=6.5,SNR=2.8						
KEST	**Kesra**	**40.31**	**337**	*e*P	**P**	**15 46 06.0**	**-0.6**
	comp=Z,9.9nm,0.9s						
BRTR	**Keskin Array B**	**41.10**	**8**	P	**P**	**15 46 14.3**	**+1.2**
	comp=Z,8.9nm,0.6s,baz=184,slow=10,SNR=53						
BRTR				LR	LR	16 03 27.9	
	comp=Z,20nm,21.2s,baz=220,slow=36						
BR131	**Keskin Array

comp=Z,2.0nm,0.7s,baz=256,slow=4.4,SNR=4.5
GEYT LR LR 16 08 39.7
comp=Z,117nm,18.2s,baz=80,slow=38
BURAR Bucovina Array 48.60 358 ⇓ *i*P **P 15 47 15.0 +2.3**
BURAR Bucovina Array 48.60 358 ⇓ P **P 15 47 15.0 +2.3**
BUR04 Bucovina Ar. S 48.60 358 *e*P **P 15 47 13.2 +0.5**
BUR08 Bucovina Ar. S 48.63 358 *e*P **P 15 47 13.1 +0.2**
OBKA Obir 48.76 348 *e*P **P 15 47 15.7 +1.7**
comp=Z,6.3nm,0.8s
SOKA Soboth 48.83 349 *e*P **P 15 47 15.2 +0.7**
comp=Z,2.2nm,0.5s
MYKA Terra Mystica 49.06 348 *e*P **P 15 47 18.1 +1.8**
comp=Z,3.7nm,0.8s
SORM Soroca 49.10 1 ⇑ *i*P **P 15 47 16.0 -0.4**
SORM Soroca 49.10 1 ⇑ P **P 15 47 16.0 -0.4**
TRPA Tarpa 49.25 356 ⇓ *i*P **P 15 47 18.4 +0.8**
ARSA Arzberg 49.28 349 *e*P **P 15 47 18.5 +0.6**
comp=Z,5.8nm,0.6s
PSZ Piszkesteto 49.29 353 ⇑ *i*P **P 15 47 18.3 +0.3**
PSZ Piszkesteto 49.29 353 *e*P **P 15 47 17.8 -0.2**
comp=Z,9.9nm,0.8s
PSZ Piszkesteto 49.29 353 *e*P **P 15 47 17.8 -0.2**
PSZ pmax pmax
comp=Z,10.0nm,0.8s
ABTA Abfaltersbach 49.43 347 *e*P **P 15 47 19.5 +0.5**
comp=Z,5.9nm,0.9s
KBA Koelnbreinsper 49.55 348 *e*P **P 15 47 20.8 +0.7**
comp=Z,11nm,1.2s
KBA Koelnbreinsper 49.55 348 P **P 15 47 21.3 +1.2**
KBA pmax pmax
comp=Z,10.0nm,1.2s
ESDC Sonseca Array 49.66 328 P **P 15 47 21.1 +0.2**
comp=Z,0.3nm,0.4s,baz=148,slow=8.4,SNR=3.0
ESDC PcP **PcP 15 48 43.0 +0.7**
comp=Z,0.2nm,0.3s,baz=142,slow=2.2,SNR=2.9
UZH Uzhgorod 49.77 356 *e*P **P 15 47 24.3 +2.8**
UZH *e* 15 47 31.9
CONA Conrad Observa 49.88 350 *e*P **P 15 47 22.9 +0.4**
comp=Z,4.3nm,0.7s
TUE Stuetta 49.97 344 *e*P **P 15 47 22.8 -0.5**
comp=Z,7.6nm,0.9s
VYHS Vyhne 49.98 353 *e*P **P 15 47 23.5 +0.3**
VYHS pmax pmax
comp=Z,5.0nm,1.2s
VYHS Vyhne 49.98 353 *e*P **P 15 47 23.5 +0.3**
MODS Modra-Piesok 50.08 351 *e*P **P 15 47 26.4 +2.5**
MODS pmax pmax
comp=Z,41nm,2.2s
MODS Modra-Piesok 50.08 351 *e*P **P 15 47 26.4 +2.5**
MOA Molln 50.10 349 *e*P **P 15 47 24.2 +0.2**
CRVS Cervenica-Dubn 50.11 355 *e*P **P 15 47 25.1 +0.9**
CRVS pmax pmax
comp=Z,13nm,1.3s
CRVS Cervenica-Dubn 50.11 355 *e*P **P 15 47 25.0 +0.9**
FETA Feichten 50.11 345 *e*P **P 15 47 25.3 +1.0**
comp=Z,6.5nm,1.0s
WTTA Wattenberg 50.12 346 *e*P **P 15 47 25.2 +0.8**
comp=Z,5.6nm,0.7s
MOTA Moosalm 50.32 346 *e*P **P 15 47 24.9 -1.1**
comp=Z,5.4nm,0.7s
JAVC Velka Javorina 50.50 352 *e*P **P 15 47 27.7 +0.6**
RETA Reutte 50.54 346 *e*P **P 15 47 27.1 -0.4**
comp=Z,3.4nm,0.5s
LANS Liptovska Anna 50.55 353 *e*P **P 15 47 28.4 +0.9**
LANS Liptovska Anna 50.55 353 *e*P **P 15 47 28.4 +0.9**
DAVA Damuels 50.58 345 *e*P **P 15 47 27.1 -0.8**
comp=Z,8.6nm,0.6s
NIE Niedzica 50.73 354 *e*P **P 15 47 29.4 +0.6**
NIE Niedzica 50.73 354 *e*P **P 15 47 29.4 +0.6**
KWP Kalwaria Pacla 50.74 356 *e*P **P 15 47 29.1 +0.2**
comp=Z,410nm,0.8s
KWP Kalwaria Pacla 50.74 356 *e*P **P 15 47 29.1 +0.2**
KRUC Moravsky 50.89 351 *e*P **P 15 47 29.6 -0.4**
VRAC Vranov 51.10 351 *e*P **P 15 47 31.2 -0.4**
GEA0 GERESS Array S 51.15 349 *e*P **P 15 47 31.1 -1.0**
GEC2 GERESS Array S 51.16 349 *e*P **P 15 47 31.0 -1.2**
comp=Z,5.1nm,0.7s
GEC2 GERESS Array S 51.16 349 *e*P **P 15 47 31.0 -1.2**
GEC2 pmax pmax
comp=Z,5.0nm,0.7s
GERES GERESS Array B 51.16 349 P **P 15 47 32.0 -0.1**
comp=Z,2.6nm,0.6s,baz=169,slow=8.2,SNR=17
GERES LR LR 16 10 39.0
comp=Z,38nm,18.6s,baz=260,slow=38
MORC Moravsky Berou 51.41 352 ⇑ *i*P **P 15 47 34.2 +0.2**
MORC Moravsky Berou 51.41 352 *e*P **P 15 47 33.5 -0.5**
comp=Z,34nm,1.1s
MORC Moravsky Berou 51.41 352 *e*P **P 15 47 33.5 -0.5**
MORC pmax pmax
comp=Z,34nm,1.1s
MORC Moravsky Berou 51.41 352 *e*P **P 15 47 33.9 -0.1**
KHC Kasperske Hory 51.46 349 *e*P **P 15 47 34.2 -0.1**
KHC *e*pP **pP 15 47 37.4 -0.1**
KHC Kasperske Hory 51.46 349 *e*P **P 15 47 34.2 -0.1**
KHC *e* 15 47 37.4
OJC Ojcow 51.57 354 *e*P **P 15 47 34.8 -0.3**
OJC Ojcow 51.57 354 *e*P **P 15 47 34.8 -0.3**
AKASG Malin Array Be 51.69 2 P **P 15 47 35.4 -0.5**
comp=Z,5.6nm,0.7s,baz=185,slow=6.9,SNR=13
AKBB Malin Array Si 51.69 2 *e*P **P 15 47 35.0 -0.9**
comp=Z,6.9nm,0.6s
AKBB Malin Array Si 51.69 2 *e*P **P 15 47 35.0 -0.9**
AKBB pmax pmax
comp=Z,7.0nm,0.6s
BFO Black Forest 51.95 344 *i*P **P 15 47 38.7 +0.7**
DPC Dobruska-Polom 52.15 351 *e*P **P 15 47 39.3 -0.2**
DPC *e*pP **pP 15 47 43.0 +0.3**
DPC Dobruska-Polom 52.15 351 *e*P **P 15 47 39.3 -0.2**
DPC *e* 15 47 43.0
NKC Novy Kostel 52.74 348 *e*P **P 15 47 44.2 +0.4**
NKC Novy Kostel 52.74 348 *e*P **P 15 47 44.2 +0.4**
VORD Divnogorie 52.93 10 *e*P **P 15 47 45.7 +0.5**
VORD pmax pmax
comp=Z,8.0nm,0.8s
VSR Storozhevoye 53.15 9 *e*P **P 15 47 46.3 -0.5**
VSR pmax pmax
comp=Z,5.0nm,0.5s
CLL Collm 53.65 349 *e*P **P 15 47 49.0 -1.4**
CLL Collm 53.65 349 *e*P **P 15 47 49.0 -1.4**
PALK Pallekele 53.99 80 LR LR 16 09 18.6
comp=Z,93nm,18.8s,baz=294,slow=34
SUW Suwalki 55.08 357 *e*P **P 15 48 00.5 -0.4**
SUW Suwalki 55.08 357 *e*P **P 15 48 00.4 -0.4**
comp=Z,40nm,0.8s
SUW Suwalki 55.08 357 *e*P **P 15 48 00.4 -0.4**
SUW pmax pmax
comp=Z,40nm,0.8s
NIL Nilore 55.38 47 *e*P **P 15 48 04.6 +1.1**
comp=Z,19nm,0.9s
NIL Nilore 55.38 47 *e*P **P 15 48 04.6 +1.1**
NIL pmax pmax
comp=Z,19nm,0.9s
NACGM Naroch 55.87 360 *e* **P 15 48 07.0 +0.5**
KLNR Kaliningrad 55.87 355 *i*P **P 15 48 05.4 -1.1**
KLNR pmax pmax
comp=Z,30nm,1.1s
IDID Didziasalis 56.28 360 *e*P **P 15 48 09.4 0.0**
IDID IAmb IAmb 15 48 10.2
comp=Z,3.0nm,0.9s
IIGN Ignalina 56.32 359 *e*P **P 15 48 09.8 0.0**
IIGN IAmb IAmb 15 48 10.7
comp=Z,6.5nm,0.6s
ISAL Salakas 56.54 359 *e*P **P 15 48 11.3 0.0**
ISAL IAmb IAmb 15 48 12.1
comp=Z,5.5nm,0.8s
MOS Moscow 57.34 7 *e*P P 15 48 01.4 -16
MOS *e* 15 49 08.5
AB31 Akbulak array 57.58 25 *e*P **P 15 48 18.7 -0.1**
AB31 pmax pmax
comp=Z,3.0nm,0.9s
ABKAR Akbulak array 57.58 25 *e*P **P 15 48 18.6 -0.2**
AKTO Aktyubinsk 57.73 23 P **P 15 48 19.9 +0.1**
comp=Z,3.5nm,0.8s,baz=228,slow=11,SNR=6.3
AKTO LR LR 16 15 10.0
comp=Z,36nm,18.2s,baz=147,slow=38
KK31 Karatay Array 58.70 36 *e*P **P 15 48 27.1 +0.3**
KK31 Karatay Array 58.70 36 *e*P **P 15 48 27.1 +0.3**
KKAR Karatay Array 58.70 36 *e*P **P 15 48 27.3 +0.5**
KKAR Karatay Array 58.70 36 *e*P **P 15 48 27.3 +0.5**
SFK Sufi-Kurgan 58.80 40 P **P 15 48 28.7 +0.9**
SFK pmax pmax
comp=Z,9.0nm,0.9s
VSU Vasula 59.44 360 *i*P **P 15 48 30.5 -1.0**
VSU pmax pmax
comp=Z,15nm,0.8s
MNAS Manas 59.53 38 P **P 15 48 33.0 +0.2**
MNAS pmax pmax
comp=Z,8.0nm,0.8s
KSH Kashi 60.17 42 P **P 15 48 34.9 -2.3**
KSH pP sP 15 48 41.6 0.0
KSH S **S 15 56 47.7 -3.4**
KSH sS pS 15 56 55.1 +0.1
KSH pmax pmax
comp=Z,6.0nm,0.6s
KSH pmax pmax
comp=Z,180nm,4.5s
KSH LR LR
comp=Z,130nm,4.8s
KSH LR LR
comp=Z,220nm,5.0s
PYUN Piuthan 60.81 57 *e*P **P 15 48 42.0 +0.1**
comp=Z,36nm,1.1s
AAK Ala-Archa 60.84 38 *e*P **P 15 48 42.1 +0.3**
comp=Z,4.6nm,1.0s
AAK Ala-Archa 60.84 38 *i*P **P 15 48 40.7 -1.0**
AAK pmax pmax
comp=Z,3.0nm,1.2s
NRN Naryn 61.16 40 *e*P **P 15 48 44.4 +0.3**
comp=Z,5.5nm,0.8s
NRN Naryn 61.16 40 *e*P **P 15 48 44.4 +0.3**
NRN pmax pmax
comp=Z,6.0nm,0.8s
KOLN Koldanda 61.22 57 *e*P **P 15 48 44.5 -0.1**
comp=Z,15nm,0.9s
DANN Dangsing 61.54 57 *e*P **P 15 48 46.8 -0.1**
comp=Z,27nm,0.8s
EKA Eskdalemuir Ar 61.55 341 P **P 15 48 46.2 +0.2**
comp=Z,1.6nm,0.6s,baz=129,slow=6.5,SNR=4.8
TKM2 Tokmak 2 61.68 39 P **P 15 48 47.6 +0.1**
TKM2 pmax pmax
comp=Z,5.0nm,0.7s
HFS Hagfors 62.02 352 P **P 15 48 49.6 +0.5**
comp=Z,2.3nm,0.6s,baz=168,slow=7.4,SNR=7.2
HFS LR LR 16 16 59.0
comp=Z,24nm,20.0s,baz=200,slow=37
GKN Gorkha 62.16 57 *e*P **P 15 48 51.0 0.0**
comp=Z,43nm,1.0s
FINES FINESS Array B 62.43 359 P **P 15 48 51.5 -0.3**
comp=Z,2.5nm,0.5s,baz=181,slow=4.9,SNR=26
DMN Daman 62.44 58 *e*P **P 15 48 53.2 +0.3**
TARG Taragay, Kyrgy 62.48 41 *e*P **P 15 48 53.5 +0.4**
comp=Z,9.5nm,0.7s
KLMR Klimovskoe 62.56 7 *e*P **P 15 48 50.6 -2.1**
KLMR pmax pmax
comp=Z,17nm,1.2s
KLMR Klimovskoe 62.56 7 *e*P **P 15 48 50.7 -2.0**
KLMR AMP 15 48 53.2
comp=Z,17nm,1.2s
KKN Kakani 62.64 58 *e*P **P 15 48 54.5 +0.3**
comp=Z,27nm,0.7s
PKIN Phulchoki 62.68 58 *e*P **P 15 48 54.6 +0.1**
comp=Z,12nm,0.8s
ARU Arti 62.75 19 *e*P **P 15 48 54.0 -0.1**
comp=Z,5.3nm,0.9s
ARU Arti 62.75 19 *c i*P **P 15 48 54.5 +0.4**
ARU 15 49 32.9
ARU 15 51 07.2
ARU S **S 15 57 20.6 -2.3**
ARU SS **SS 16 01 23.2 -4.6**
ARU pmax pmax
comp=Z,24nm,2.5s
NC602 NORSAR Array S 62.90 351 *e*P **P 15 48 55.0 0.0**
NAO01 NORSAR Array S 63.10 351 *e*P **P 15 48 56.4 0.0**
GUN Gumba 63.19 58 *e*P **P 15 48 58.1 +0.1**
comp=Z,36nm,0.8s
NB201 NORSAR Array S 63.24 351 *e*P **P 15 48 56.3 -1.0**
NB2 NORSAR Subarra 63.24 351 P **P 15 48 57.2 -0.1**
comp=Z,5.5nm,0.8s,baz=164,slow=6.5
NB2 NORSAR Subarra 63.24 351 P **P 15 48 54.7 -2.6**
NB2 pmax pmax
comp=Z,9.0nm,0.9s
NOA NORSAR Array B 63.24 351 P **P 15 48 57.5 +0.2**
comp=Z,4.5nm,0.7s,baz=165,slow=6.5,SNR=9.3
NOA LR LR 16 18 27.2
comp=Z,21nm,18.1s,baz=210,slow=38
NBO00 NORSAR Array S 63.30 351 *e*P **P 15 48 57.6 -0.1**
JIRN Jiri 63.38 58 *e*P **P 15 48 59.2 -0.1**
comp=Z,27nm,0.7s
NC303 NORSAR Array S 63.40 351 *e*P **P 15 48 58.0 -0.3**
RAMN Ramite 63.53 59 *e*P **P 15 48 59.9 -0.3**
NC204 NORSAR Array S 63.53 351 *e*P **P 15 48 59.0 -0.2**
ODAN Odare 64.18 59 *e*P **P 15 49 04.3 -0.2**
PRGR Permogore 64.18 10 *e*P **P 15 49 02.6 -0.8**
PRGR *e*PP **sP 15 49 11.8 +3.9**
PRGR pmax pmax
comp=Z,14nm,0.8s
BRVK Borovoye 64.84 27 *e*P **P 15 49 07.4 -0.6**
comp=Z,5.2nm,0.9s
BRVK Borovoye 64.84 27 *c e*P **P 15 49 07.8 -0.2**
BRVK pmax pmax
comp=Z,3.0nm,0.8s
BVA0 Borovoye Array 64.87 27 *i*P **P 15 49 07.8 -0.4**
BVA0 pmax pmax
comp=Z,6.0nm,0.9s
BVAR Borovoye Array 64.87 27 P **P 15 49 07.8 -0.3**
comp=Z,4.2nm,0.8s,baz=234,slow=5.4,SNR=27
BVAR LR LR 16 20 15.0
comp=Z,82nm,21.0s,baz=227,slow=39
TMCR Tamitsa 65.65 5 *e*P **P 15 49 11.0 -1.9**
TMCR pmax pmax
comp=Z,39nm,0.5s
KURBB Kurchatov Arra 67.49 33 P **P 15 49 25.5 +0.5**
comp=Z,6.6nm,0.7s,baz=243,slow=6.8,SNR=29
MAKZ Makanchi 67.55 37 *e*P **P 15 49 25.5 0.0**
comp=Z,13nm,1.2s
MAKZ Makanchi 67.55 37 *e*P **P 15 49 25.5 0.0**
MAKZ pmax pmax
comp=Z,13nm,1.2s
KURK Kurchatov 67.59 32 *e*P **P 15 49 25.9 +0.3**
comp=Z,8.7nm,0.9s
KURK Kurchatov 67.59 32 *c e*P **P 15 49 25.7 +0.1**
KURK pmax pmax
comp=Z,10.0nm,1.0s
MK01 Makanchi Array 67.73 38 *e*P **P 15 49 26.8 +0.1**
MK31 Makanchi Array 67.73 37 *e*P **P 15 49 26.8 +0.1**
MK31 Makanchi Array 67.73 37 *e*P **P 15 49 26.8 +0.1**
MKAR Makanchi Array 67.73 37 P **P 15 49 27.1 +0.5**
comp=Z,4.5nm,0.5s,baz=247,slow=5.4,SNR=66
MKAR LR LR 16 22 58.0
comp=Z,119nm,21.6s,baz=238,slow=39
MKAR Makanchi Array 67.73 37 *e*P **P 15 49 26.8 +0.1**
comp=Z,61nm,0.4s
MKAR Makanchi Array 67.73 37 *e*P **P 15 49 26.8 +0.1**
MKAR pmax pmax
comp=Z,61nm,0.4s
APA Apatity 68.72 3 ⇑ *i*P **P 15 49 32.0 -0.4**
APA pmax pmax
comp=Z,7.0nm,0.7s
WMQ Urumqi 69.94 42 P **P 15 49 41.9 +1.3**
WMQ pP sP 15 49 47.4 +2.4
WMQ sP pP 15 49 52.3 +8.5
WMQ pmax pmax
comp=Z,18nm,0.9s
WMQ pmax pmax
comp=Z,300nm,5.3s
WMQ LR LR
comp=Z,160nm,24.1s
WMQ LR LR
comp=Z,170nm,26.7s
WMQ LR LR
comp=Z,140nm,24.1s
ARCES ARCESS Array B 70.56 359 P **P 15 49 43.4 -0.4**
comp=Z,4.7nm,0.5s,baz=178,slow=6.0,SNR=58
MAW Mawson 70.74 166 P **P 15 49 46.2 +1.4**
comp=Z,5.8nm,0.8s,baz=351,slow=9.8,SNR=3.8
MAW Mawson 70.74 166 *e*P **P 15 49 46.6 +1.7**
comp=Z,1.6nm,0.8s
PSI Prapat 71.77 87 LR LR 16 18 13.2
comp=Z,61nm,19.1s,baz=110,slow=33
NVS Novosibirsk 72.12 30 *e*P **P 15 49 53.7 +0.3**
NVS pmax pmax
comp=N,8.0nm,1.3s
NVS pmax pmax
comp=E,5.0nm,1.3s
NVS pmax pmax
comp=Z,12nm,1.3s
ZAA0 Zalesovo Array 72.50 32 *e*P **P 15 49 55.2 -0.5**
comp=Z,8.1nm,0.7s
ZALV Zalesovo Beam 72.50 32 P **P 15 49 55.1 -0.7**
comp=Z,5.0nm,0.5s,baz=254,slow=5.7,SNR=18
ZALV Zalesovo Beam 72.50 32 *e*P **P 15 49 54.8 -0.9**
ZALV Zalesovo Beam 72.50 32 *e*P **P 15 49 54.8 -0.9**
SNAA Sanae 72.98 190 LR LR 16 19 22.8
comp=Z,127nm,18.4s,baz=338,slow=34
SNAA Sanae 72.98 190 *e*P P 15 50 05.0 +6.6
CM31 Chiang Mai Arr 73.05 70 *e*P **P 15 49 59.2 -0.5**
CMAR Chiang Mai Arr 73.05 70 P **P 15 50 01.1 +1.3**
comp=Z,6.0nm,0.9s,baz=262,slow=6.9,SNR=28
CMAR LR LR 16 21 52.9
comp=Z,36nm,18.6s,baz=221,slow=36
CMAR Chiang Mai Arr 73.05 70 *c e*P **P 15 50 01.3 +1.6**
CMAR pmax pmax
comp=Z,9.0nm,1.0s
CM01 Chiang Mai Arr 73.06 70 *e*P **P 15 50 00.1 +0.3**
CHTO Chiang Mai 73.09 70 *e*P **P 15 50 00.6 +0.6**
comp=Z,12nm,1.1s
CHTO Chiang Mai 73.09 70 *e*P **P 15 50 00.6 +0.6**
CHTO pmax pmax
comp=Z,12nm,1.1s
PHET Kaeng Krachan 73.12 76 P **P 15 50 02.6 +2.4**
comp=Z,17nm,0.9s
CMAI Chiengmai2 73.33 69 P **P 15 50 03.8 +2.2**
comp=Z,76nm,1.5s
LAMP Lampang 73.71 70 P **P 15 50 05.7 +2.1**
comp=Z,7.3nm,0.9s
SRAK Srakaew 75.55 75 P P 15 50 20.2 +5.8
NONG Nongkai 76.97 71 P **P 15 50 24.1 +1.7**
comp=Z,43nm,0.9s
GTA Gaotai 77.33 49 *e*P **P 15 50 25.6 +1.4**
GTA pP sP 15 50 29.7 +1.0
GTA sP PcP 15 50 32.7 -2.1
GTA pmax pmax
comp=Z,5.0nm,1.3s
KMI Kunming 77.39 64 P **P 15 50 26.9 +2.0**
KMI pP sP 15 50 30.4 +1.0
KMI sP PcP 15 50 32.8 -2.6
KMI pmax pmax
comp=Z,8.0nm,0.5s
SKNT Sakolnakorn 77.67 72 P **P 15 50 27.2 +0.9**
CD2 Chengdu 79.05 58 P **P 15 50 33.4 -0.4**
CD2 pmax pmax
comp=Z,16nm,0.6s
SPITS Spitsbergen Ar 79.46 358 P **P 15 50 35.9 +0.8**
comp=Z,3.5nm,0.6s,baz=217,slow=4.5,SNR=9.4
LZH Lanzhou 79.87 53 *e*P **P 15 50 36.0 -2.3**
LZH pmax pmax
comp=Z,18nm,1.1s
NRIK Noril'sk 80.97 18 P **P 15 50 44.7 +1.4**
comp=Z,4.5nm,1.0s,baz=226,slow=2.4,SNR=6.7
NRIK LR LR 16 31 11.9
comp=Z,36nm,18.1s,baz=174,slow=39
SONM Songino Array 83.58 42 P **P 15 50 56.7 -0.9**
comp=Z,1.2nm,0.9s,baz=197,slow=4.5,SNR=7.4
SONA1 Songino Array 83.58 42 *e*P **P 15 50 58.3 +0.7**
SUMG Summit 83.98 344 *i*P **P 15 51 00.5 +1.1**
comp=Z,7.1nm,1.0s
SUMG Summit 83.98 344 *e*P **P 15 50 59.7 +0.3**
comp=Z,13nm,1.2s
SUMG Summit 83.98 344 *e*P **P 15 50 59.7 +0.3**
SUMG pmax pmax
comp=Z,13nm,1.2s
ULN Ulaanbaatar 84.02 42 *e*P **P 15 51 00.2 +0.3**
comp=Z,9.3nm,0.7s
ULN Ulaanbaatar 84.02 42 *c e*P **P 15 51 01.0 +1.1**
ULN pmax pmax
comp=Z,9.0nm,1.7s
SFJD Kangerlussuaq 86.31 337 LR LR 16 29 41.4
comp=Z,60nm,18.3s,baz=120,slow=36
HHC Hu-ho-hao-te 86.45 49 *e*P **P 15 51 12.5 +0.3**
HHC S **S 16 01 45.0 -3.7**
HHC pmax pmax
comp=Z,13nm,1.1s
HHC pmax pmax
comp=Z,130nm,5.1s
HHC LR LR
comp=Z,110nm,9.5s
HHC LR LR
comp=Z,120nm,10.4s
HHC LR LR
comp=Z,140nm,10.1s
QSPA South Pole Qui 88.89 180 P **P 15 51 24.5 +1.2**
comp=Z,5.6nm,1.0s,baz=257,slow=3.4,SNR=6.6
QSPA South Pole Qui 88.89 180 *e*P **P 15 51 24.9 +1.5**
comp=Z,12nm,1.3s
NJ2 Nanjing 91.98 58 *e*P **P 15 51 38.9 +0.6**
NJ2 pmax pmax
comp=Z,11nm,0.5s
SCHQ Schefferville 93.29 325 LR LR 16 32 33.6
comp=Z,49nm,18.3s,baz=344,slow=35
TIXI Tiksi 94.75 18 LR LR 16 39 51.0
comp=Z,46nm,18.6s,baz=273,slow=39
TIXI Tiksi 94.75 18 *i*P **P 15 51 50.0 -0.2**
TIXI pmax pmax
comp=Z,2.0nm,1.2s
LPAZ La Paz 94.83 254 P **P 15 51 52.9 +0.4**
comp=Z,2.7nm,0.9s,baz=87,slow=6.7,SNR=6.8
VT1 Waterbury 97.95 314 *e*P **P 15 52 04.9 -0.5**
comp=Z,29nm,1.4s
NCB Newcomb 99.05 314 *e*P **Pdif 15 52 09.6 -0.7**
BILL Bilibino 107.61 15 *i*P **Pdif 15 52 47.9 +0.1**
BILL pmax pmax
comp=Z,1.0nm,1.2s
ILAR Eielson Array 116.38 357 PKP **PKPdf 15 57 11.7 -0.8**
comp=Z,0.4nm,0.8s,baz=308,slow=1.9,SNR=3.9
PDAR Pinedale Array 123.38 323 PKP **PKPdf 15 57 26.6 -0.3**
comp=Z,0.7nm,0.8s,baz=90,slow=2.3,SNR=3.2
MNTX Cornudas Mount 125.98 309 *e*PKPdf **PKPdf 15 57 31.7 -0.3**
MFID Camas Ranch 126.58 327 *e*PKPdf **PKPdf 15 57 32.4 -0.5**
NVAR Mina Array Bea 131.28 324 PKP **PKPdf 15 57 43.9 +1.7**
comp=Z,1.6nm,0.9s,baz=75,slow=1.0,SNR=6.1

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*ISCJB **06** 15:55:15.7±0.6, 37°.79N±0°.03×26°.76E±0°.05, h7km±7km,*
Error ellipse: s-maj=7.2km s-min=4.4km az=147.0
*CSEM **06** 15:55:15.9±0.1, 37°.80N×26°.77E, h12km, ML2.4, Error*
ellipse: s-maj=3.8km s-min=2.1km az=62.0
*ISK **06** 15:55:15.2, 37°.79N×26°.76E, h10km, ML2.4/9*
*DDA **06** 15:55:16.1, 37°.82N×26°.81E, h7km, Ml2.6*
ISC 06 15:55:16.0±1.0, 37°.79N±0°.03×26°.76E±0°.04, h12km±10km,
n27, σ0°41/43, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGB	**˜zmir**	**0.28**	**20**	*i* P	**Pg**	**15 55 21.6**	**-0.1**
DGB				*i* S	**Sg**	**15 55 25.8**	**+0.3**
GMLD	**Gumuldur**	**0.31**	**23**	PG	**Pg**	**15 55 22.0**	**-0.3**
GMLD				SG	**Sg**	**15 55 26.9**	**+0.4**
GMLD	**Gumuldur**	**0.31**	**23**	*e*Pg	**Pg**	**15 55 22.0**	**-0.3**
GMLD				*e*Sg	**Sg**	**15 55 26.9**	**+0.4**
ZEY	**˜zmir**	**0.49**	**335**	*i* P	**Pb**	**15 55 26.1**	**-0.5**
ZEY				*i* S	**Sb**	**15 55 33.1**	**-0.6**
URLA	**Izmir**	**0.58**	**347**	PG	**Pg**	**15 55 27.1**	**-0.2**
URLA	**Izmir**	**0.58**	**347**	*i* P	**Pg**	**15 55 27.1**	**-0.2**
URLA				*i* S	**Sg**	**15 55 34.9**	**-0.1**
URLA	**Izmir**	**0.58**	**347**	P	**Pg**	**15 55 27.1**	**-0.2**
URLA				S	**Sg**	**15 55 34.9**	**-0.1**
BLCB	**Balcova**	**0.63**	**20**	PG	**Pg**	**15 55 28.2**	**-0.1**
BLCB	**Balcova**	**0.63**	**20**	*e*Pg	**Pg**	**15 55 28.2**	**-0.1**
CHOS	**Chios island**	**0.81**	**317**	PG	**Pg**	**15 55 31.5**	**-0.2**
CHOS				SG	**Sb**	**15 55 43.2**	**+0.1**
CHOS	**Chios island**	**0.81**	**317**	*e*Pg	**Pg**	**15 55 31.5**	**-0.2**
CHOS				*e*Sg	**Sb**	**15 55 43.2**	**+0.1**
KRBN	**Karaburun**	**0.82**	**348**	PG	**Pg**	**15 55 31.6**	**-0.2**
KRBN				SG	**Sb**	**15 55 43.3**	**+0.3**
KRBN	**Karaburun**	**0.82**	**348**	*e*Pg	**Pg**	**15 55 31.6**	**-0.2**
KRBN				*e*Sg	**Sb**	**15 55 43.3**	**+0.3**
BODT	**Bodrum**	**0.85**	**149**	PG	**Pg**	**15 55 32.0**	**-0.4**
BODT				SG	**Sb**	**15 55 44.1**	**+0.1**
BODT	**Bodrum**	**0.85**	**149**	*e*Pg	**Pg**	**15 55 32.0**	**-0.4**
BODT				*e*Sg	**Sb**	**15 55 44.1**	**+0.1**
AYDN	**Tasoluk**	**0.90**	**98**	*i* P	**Pg**	**15 55 32.2**	**-1.1**
AYDN				*i* S	**Sg**	**15 55 44.9**	**-0.1**
AYDN	**Tasoluk**	**0.90**	**98**	P	**Pg**	**15 55 32.2**	**-1.1**
AYDN				S	**Sg**	**15 55 44.9**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	**0.91**	**80**	PG	**Pg**	**15 55 33.1**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**0.91**	**80**	*e*Pg	**Pg**	**15 55 33.1**	**-0.4**
BDRM	**Kayabasi**	**0.91**	**143**	*i* P	**Pb**	**15 55 34.2**	**+0.6**
BDRM				*i* S	**Sb**	**15 55 46.4**	**+0.7**
BDRM	**Kayabasi**	**0.91**	**143**	P	**Pb**	**15 55 34.2**	**+0.6**
BDRM				S	**Sb**	**15 55 46.4**	**+0.7**
APE	**Apeiranthos**	**1.22**	**234**	PN	**Pn**	**15 55 38.8**	**0.0**
APE	**Apeiranthos**	**1.22**	**234**	*e*Pn	**Pn**	**15 55 38.8**	**0.0**
DAT	**Datca**	**1.25**	**148**	PN	**Pn**	**15 55 39.2**	**-0.1**
DAT	**Datca**	**1.25**	**148**	*e*Pn	**Pn**	**15 55 39.2**	**-0.1**
DKL	**Dikili**	**1.28**	**5**	PN	**Pn**	**15 55 39.8**	**+0.1**

DKL Dikili 1.28 5 *e*Pn **Pn 15 55 39.8 +0.1**

ISCJB ***06*** *16:02:46.7±0.9, 40°.63N±0°.04×42°.09E±0°.07, h11km±8km, Error ellipse: s-maj=9.0km s-min=5.7km az=155.0*
CSEM ***06*** *16:02:46.5±0.1, 40°.62N×42°.08E, h10km, ML3.2, Error ellipse: s-maj=4.0km s-min=2.4km az=74.0*
ISK ***06*** *16:02:46.6, 40°.66N×42°.07E, h11km, ML2.1/4*
DDA ***06*** *16:02:46.0, 40°.61N×42°.16E, h7km, Ml3.2*
ISC 06 16:02:46.3±1.1, 40°.63N±0°.02×42°.07E±0°.04, h10km±10km**, n18,** σ0**93/30, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDEM	**Demirkent**	**0.36**	**317**	*i* P	**Pg**	**16 02 54.3**	**+0.8**
DDEM				*i* S	**Sb**	**16 03 00.1**	**-0.5**
DDEM	**Demirkent**	**0.36**	**317**	P	**Pg**	**16 02 54.3**	**+0.8**
DDEM				S	**Sb**	**16 03 00.2**	**-0.5**
HOMI	**Horasan**	**0.60**	**192**	*i* P	**Pg**	**16 02 57.9**	**-0.1**
HOMI				*i* S	**Sb**	**16 03 07.7**	**+0.1**
DBOC	**Borcka**	**0.78**	**337**	*i* P	**Pg**	**16 03 01.9**	**+0.5**
DBOC				*i* S	**Sg**	**16 03 07.4**	**-4.1**
DBOC	**Borcka**	**0.78**	**337**	P	**Pg**	**16 03 01.9**	**+0.5**
EATA	**Eleskirt**	**0.83**	**157**	*i* P	**Pb**	**16 03 03.1**	**0.0**
EATA				*i* S	**Sg**	**16 03 12.7**	**-0.6**
EATA	**Eleskirt**	**0.83**	**157**	P	**Pb**	**16 03 03.1**	**0.0**
EATA				S	**Sg**	**16 03 12.7**	**-0.6**
BCA	**Borcka**	**0.88**	**337**	PG	**Pg**	**16 03 03.4**	**0.0**
BCA				SG	**Sg**	**16 03 15.8**	**+0.9**
BCA	**Borcka**	**0.88**	**337**	*e*Pg	**Pg**	**16 03 03.4**	**0.0**
BCA				*e*Sg	**Sg**	**16 03 15.8**	**+0.9**
ERZM	**Erzurum**	**0.90**	**217**	*i* P	**Pg**	**16 03 03.9**	**+0.2**
ERZM				*i* S	**Sg**	**16 03 15.5**	**0.0**
ERZM	**Erzurum**	**0.90**	**217**	P	**Pg**	**16 03 03.9**	**+0.2**
ERZM				S	**Sg**	**16 03 15.5**	**0.0**
CHOM	**Cayeli-Rize**	**1.10**	**296**	PN	**Pb**	**16 03 07.8**	**+0.3**
CHOM				SN	**Sn**	**16 03 23.2**	**+0.1**
CHOM	**Cayeli-Rize**	**1.10**	**296**	*e*Pn	**Pb**	**16 03 07.8**	**+0.3**
CHOM				*e*Sn	**Sn**	**16 03 23.2**	**+0.1**
AGRB	**Hanur-Agry**	**1.27**	**146**	PN	**Pg**	**16 03 11.2**	**+0.5**
AKH	**Akhalkalaki**	**1.33**	**54**	PN	**Pn**	**16 03 11.4**	**+0.2**
AKH	**Akhalkalaki**	**1.33**	**54**	*e*Pn	**Pn**	**16 03 11.4**	**+0.2**
BAYT	**Ayd¨–ntepe-Bay**	**1.49**	**262**	PN	**Pb**	**16 03 14.2**	**-0.1**
BAYT	**Ayd¨–ntepe-Bay**	**1.49**	**262**	*e*Pn	**Pb**	**16 03 14.2**	**-0.1**

MOS ***06*** *16:11:11.9±1.1, 26°.90S×177°.53W, h94km, mb5.1/22, Error ellipse: s-maj=10.9km s-min=9.5km az=94.0*
ISCJB ***06*** *16:11:12.2±0.2, 27°.40S±0°.03×177°.60W±0°.05, h106km, mb4.9/89, Error ellipse: s-maj=6.6km s-min=2.9km az=21.2*
IDC ***06*** *16:11:15.0±0.5, 27°.06S×177°.51W, h109km±3km, mb4.6/29, mb1 4.7/30, mb1mx4.6/47, mbtmp4.9/30, MS3.8/16, Ms1 3.8/16, ms1mx3.6/46, Error ellipse: s-maj=11.7km s-min=7.0km az=91.0*
NEIC ***06*** *16:11:14.5±0.8, 27°.03S×177°.44W, h111km±7km, mb5.0/69, Error ellipse: s-maj=6.0km s-min=4.6km az=158.0*
GCMT ***06*** *16:11:14.5±0.3, 27°.07S×177°.28W, h108km±2km, MW5.1/81, Moment Tensor Solution. s53,c72; s81,c138; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr1.60±.18; Mθθ-3.73±.18; Mφφ2.13±.17; Mrθ-3.05±.13; Mφφ2.48±.17; Mφr~3.62±.10; Best double couple: M0 6.07600×10^16 NP1:φ248.00000°, δ77.00000°, λ46.00000°. NP2: φ144.00000°, δ45.00000°, λ162.00000°. Principal axes: T 6.9220, Plg41.0000°, Azm117.0000°; N -1.6930, Plg43.0000°, Azm260.0000°; P -5.2290, Plg20.0000°, Azm9.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
BJI ***06*** *16:11:14.6, 27°.00S×177°.40W, h120km, mb5.2/22, mB5.4/11*
WEL ***06*** *16:11:14.0, 27°.03S×177°.44W, h111km*
ISC 06 16:11:14.3±0.5, 27°.08S±0°.05×177°.40W±0°.07, h110km±3km**, h110**km**:pP-P, n369,** σ1**9/41/363, mb5.0/88, 2C-2D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**2.21**	**192**	P	**Pn**	**16 11 50.7**	**+0.7**
RIZ				S	**Sn**	**16 12 20.9**	**+3.7**
RAO	**Raoul Island**	**2.21**	**192**	P	**Pn**	**16 11 50.7**	**+0.7**
RAO	680nm,0.3s,baz=34,slow=5.6,SNR=20			S	**Sn**	**16 12 18.1**	**+0.8**
RAO	**Raoul Island**	**2.21**	**192**	*e*Pn	**Pn**	**16 11 50.4**	**+0.4**
RAO	9μm,0.3s,baz=86,slow=21,SNR=14			*e*Sn	**Sn**	**16 12 18.1**	**+0.8**
RAO				*e*Sn	Sn	16 12 19.7	+2.4
GLKZ	**Green Lake**	**2.22**	**192**	P	**Pn**	**16 11 50.8**	**+0.7**
GLKZ				S	**Sn**	**16 12 20.7**	**+3.1**
OUZ	**Omahuta**	**11.19**	**221**	*e*Pn	**Pn**	**16 13 52.9**	**+2.0**
WMGZ	**Waiomatatini S**	**11.27**	**197**	P	Pn	16 13 43.9	-8.1
WMGZ				S	Sn	16 15 46.5	-9.4
HAZ	**Te Kaha**	**11.39**	**200**	P	Pn	16 13 44.4	-9.2
HAZ				S	**Sn**	**16 15 51.7**	**-7.1**
PKGZ	**Pakihiroa**	**11.43**	**198**	P	Pn	16 13 44.6	-10
PKGZ				S	Sn	16 15 50.2	-10
PUZ	**Puketiti**	**11.55**	**197**	P	Pn	16 13 46.6	-9.2
PUZ				S	Sn	16 15 51.9	-11
RUGZ	**Raukumara Rang**	**11.62**	**200**	P	Pn	16 13 48.0	-8.8
RUGZ				S	Sn	16 15 54.8	-10
TWGZ	**Tauwhareparae**	**11.73**	**198**	P	Pn	16 13 48.9	-9.2
TWGZ				S	Sn	16 15 56.8	-10
CNGZ	**Carnagh Statio**	**11.95**	**197**	P	Pn	16 13 51.5	-10
MWZ	**Matawai**	**12.00**	**200**	P	Pn	16 13 51.5	-10
MWZ				S	Sn	16 16 03.5	-10
TKGZ	**Te Karaka**	**12.01**	**198**	P	Pn	16 13 52.0	-10
TKGZ				S	Sn	16 16 04.1	-10
URZ	**Urewera**	**12.06**	**201**	P	Pn	16 13 55.0	-7.5
URZ	1.0nm,0.3s,baz=269,slow=5.9,SNR=9.4			S	Sn	16 16 05.0	-10
URZ	**Urewera**	**12.06**	**201**	P	Pn	16 13 52.9	-10
URZ	12nm,0.3s,baz=29,slow=23,SNR=8.1			S	Sn	16 16 05.1	-10
RIGZ	**Rimuhau**	**12.28**	**198**	P	Pn	16 13 55.9	-9.5
RIGZ				S	Sn	16 16 08.5	-12
BKZ	**Black Stump Fm**	**13.09**	**201**	*e*Pn	Pn	16 14 10.2	-5.8
BKZ	**Black Stump Fm**	**13.09**	**201**	P	Pn	16 14 05.9	-10
BHHZ	**Black Hill Sta**	**13.52**	**202**	P	Pn	16 14 12.3	-9.4
KAHZ	**Kahuranaki**	**13.54**	**199**	P	Pn	16 14 11.7	-10
PNHZ	**Pukenui**	**13.86**	**201**	P	Pn	16 14 19.7	-7.0
TSZ	**Takapari Road**	**14.07**	**201**	P	Pn	16 14 19.5	-9.2
AFI	**Afiamalu**	**14.12**	**23**	P	Pn	16 14 20.6	-8.9
AFI	29nm,0.3s,baz=4.4,slow=3.8,SNR=27			S	Sn	16 16 42.9	-22
AFI	**Afiamalu**	**14.12**	**23**	*e*P	Pn	16 14 21.1	-8.5
AFI	5.8nm,0.3s,baz=41,slow=20,SNR=3.1			S	Sn	16 16 43.0	-22
AFI				*e*Sn	S	16 16 49.1	-30
AFI	**Afiamalu**	**14.12**	**23**	*e*P	Pn	16 14 21.1	-8.4
BFZ	**Birch Farm**	**14.55**	**200**	P	Pn	16 14 24.7	-10
DZM	**Mont Dzumac**	**15.51**	**285**	*e*Pn	P	16 14 58.0	+8.8
DZM	339nm,1.4s			*e*LR	LR	16 18 29.3	
DZM	**Mont Dzumac**	**15.51**	**285**	P	**P**	**16 14 51.8**	**+2.7**
DZM	1μm,28.6s 0.3nm,0.3s,baz=88,slow=18,SNR=4.3			LR	LR	16 18 35.0	
DZM	**Mont Dzumac**	**15.51**	**285**	*e*P	**P**	**16 14 52.3**	**+3.2**
THZ	**Tophouse**	**16.67**	**206**	*e*Pn	**Pn**	**16 14 54.6**	**-6.6**
KHZ	**Kahutara**	**17.00**	**204**	*e*Pn	Pn	16 14 56.4	-8.8
RAR	**Rarotonga**	**17.11**	**74**	P	**P**	**16 15 05.0**	**-1.7**
RAR	9.1nm,0.3s,baz=82,slow=19,SNR=9.6			S	Sn	16 18 00.0	-17
RAR	**Rarotonga**	**17.11**	**74**	*e*Pn	**P**	**16 15 05.2**	**-1.5**
RAR	comp=Z,304nm,21.1s,baz=242,slow=30			LR	LR	16 20 00.4	
RAR	**Rarotonga**	**17.11**	**74**	*e*Pn	**P**	**16 15 05.2**	**-1.5**
RAR	397nm,1.7s			S	Sn	16 18 00.1	-17
RAR	**Rarotonga**	**17.11**	**74**	*e*P	**P**	**16 15 05.2**	**-1.5**
RAR	comp=Z,397nm,1.7s			pmax	pmax		
CRLZ	**Canterbury Las**	**18.34**	**204**	*e*P	**P**	**16 15 16.8**	**-3.2**
OXZ	comp=Z,319nm,1.9s **Oxford**	**18.34**	**205**	*e*P	P	16 15 11.6	-8.4
	comp=Z,33nm,0.8s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MQZ	**McQueen's Vall**	**18.44**	**203**	*e*P	**P**	**16 15 16.1**	**-5.0**
	comp=Z,260nm,1.9s						
FUNA	**Funafuti**	**18.73**	**349**	*e*P	**P**	**16 15 18.9**	**-5.7**
	comp=Z,594nm,1.7s						
RPZ	**Rata Peaks**	**19.05**	**206**	P	**P**	**16 15 23.2**	**-4.5**
	comp=Z,1.3nm,0.3s,baz=5.7,slow=10,SNR=5.1						
RPZ				S	S	16 18 37.9	-20
	comp=Z,1.7nm,0.3s,baz=312,slow=18,SNR=9.0						
RPZ	**Rata Peaks**	**19.05**	**206**	*e*P	**P**	**16 15 23.2**	**-4.5**
	comp=Z,130nm,1.6s						
RPZ				*e*		16 18 37.9	
FOZ	**Fox Glacier**	**19.41**	**209**	*e*P	**P**	**16 15 31.9**	**+0.2**
	comp=Z,179nm,1.3s						
LBZ	**Lake Benmore**	**19.95**	**207**	*e*P	**P**	**16 15 37.9**	**+0.3**
	comp=Z,122nm,1.7s						
KNTN	**Kanton**	**24.77**	**14**	*e*P	**P**	**16 16 24.6**	**-1.3**
	comp=Z,359nm,1.4s						
PAE	**Paea**	**27.33**	**76**	*e*T	T	16 44 43.9	
	comp=Z,14nm,0.3s						
PPT2	**Papeete2**	**27.36**	**76**	*e*LQ	LQ	16 22 38.2	
	comp=Z,643nm,26.0s						
PPT2				*e*LR	LR	16 23 48.9	
	comp=Z,717nm,28.2s						
PPT2	**Papeete2**	**27.36**	**76**	*e*T	T	16 44 46.7	
	comp=Z,13nm,0.4s						
PPT	**Papeete**	**27.38**	**76**	LR	LR	16 25 06.7	
	comp=Z,98nm,20.6s,baz=241,slow=30						
TVO	**Taravao**	**27.57**	**76**	*e*T	T	16 45 00.4	
	comp=Z,4.3nm,0.3s						
HNR	**Honiara**	**27.68**	**305**	LR	LR	16 26 50.3	
	comp=Z,115nm,18.4s,baz=138,slow=34						
VAH	**Vaihoa**	**30.09**	**73**	*e*T	T	16 48 11.0	
	comp=Z,23nm,0.3s						
CTA	**Charters Tower**	**33.94**	**274**	P	**P**	**16 17 47.5**	**+0.3**
	comp=Z,12nm,0.5s,baz=97,slow=10,SNR=23						
CTAO	**Charters Tower**	**33.94**	**274**	*e*P	**P**	**16 17 47.9**	**+0.7**
	comp=Z,27nm,1.1s						
CTAO	**Charters Tower**	**33.94**	**274**	*e*P	**P**	**16 17 47.9**	**+0.7**
CTAO				pmax	pmax		
	comp=Z,27nm,1.1s						
STKA	**Stephens Creek**	**35.86**	**252**	P	**P**	**16 18 04.4**	**+0.8**
	comp=Z,2.1nm,0.8s,baz=110,slow=14,SNR=5.5						
STKA				pP	**pP**	**16 18 27.7**	**-0.7**
	comp=Z,7.1nm,0.8s,baz=93,slow=8.7,SNR=3.6						
STKA				LR	LR	16 31 29.8	
	comp=Z,224nm,18.7s,baz=71,slow=34						
STKA	**Stephens Creek**	**35.86**	**252**	*e*P	**P**	**16 18 04.5**	**+0.9**
	comp=Z,2.7nm,1.0s						
STKA				pP	**pP**	**16 18 27.7**	**-0.7**
STKA	**Stephens Creek**	**35.86**	**252**	*e*P	**P**	**16 18 04.5**	**+0.9**
STKA				*PP	**pP**	**16 18 27.7**	**-0.7**
STKA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
RABL	**Rabaul**	**36.91**	**303**	*e*P	**P**	**16 18 12.1**	**-0.6**
	comp=Z,37nm,0.6s						
PMG	**Port Moresby**	**37.78**	**291**	LR	LR	16 31 13.9	
	comp=Z,98nm,20.3s,baz=128,slow=32						
RKT	**Rikitea**	**38.50**	**94**	*e*LQ	LQ	16 27 18.7	
	comp=Z,339nm,27.0s						
RKT				*e*LR	LR	16 28 58.0	
	comp=Z,2μm,33.0s						
COEN	**Coen**	**38.99**	**282**	*e*P	**P**	**16 18 31.2**	**+1.0**
	comp=Z,30nm,1.0s						
TAOE	**Nuku Hiva Isla**	**39.60**	**70**	*e*LR	LR	16 29 09.3	
	comp=Z,296nm,31.6s						
MANU	**Manus Island**	**41.94**	**300**	*e*P	**P**	**16 18 53.2**	**-1.2**
	comp=Z,88nm,1.3s						
AS01	**Alice Springs**	**43.87**	**263**	*e*P	**P**	**16 19 08.9**	**-1.2**
AS31	**Alice Springs**	**43.91**	**263**	*e*P	**P**	**16 19 09.7**	**-0.6**
	comp=Z,10nm,1.1s						
ASAR	**Alice Springs**	**43.91**	**263**	P	**P**	**16 19 10.0**	**-0.4**
	comp=Z,4.9nm,0.8s,baz=92,slow=6.8,SNR=35						
ASAR				pP	**pP**	**16 19 35.2**	**-0.6**
	comp=Z,27nm,1.1s,baz=105,slow=8.1,SNR=14						
ASAR				PcP	**PP**	**16 20 55.0**	**+0.3**
	comp=Z,2.1nm,0.8s,baz=111,slow=4.7,SNR=2.4						
ASAR				ScP	**ScP**	**16 24 36.5**	**+0.3**
	comp=Z,1.2nm,0.9s,baz=116,slow=5.3,SNR=3.8						
ASAR				LR	LR	16 37 52.9	
	comp=Z,190nm,18.0s,baz=122,slow=36						
WB2	**Warramunga Arr**	**44.59**	**268**	*e*P	**P**	**16 19 14.8**	**-0.9**
	comp=Z,28nm,0.8s						
WRAB	**Tennant Creek**	**44.60**	**268**	*e*P	**P**	**16 19 14.8**	**-1.0**
	comp=Z,40nm,1.0s						
WRAB	**Tennant Creek**	**44.60**	**268**	*e*P	**P**	**16 19 14.8**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,40nm,1.0s						
WR1	**Warramunga Arr**	**44.60**	**268**	*e*P	**P**	**16 19 15.5**	**-0.4**
WR1				*e*pP	**pP**	**16 19 40.4**	**-1.0**
WR1				*e*ScP	**ScP**	**16 24 38.0**	**-1.1**
WRA	**Warramunga Arr**	**44.60**	**268**	P	**P**	**16 19 15.5**	**-0.4**
	comp=Z,14nm,0.7s,baz=107,slow=6.3,SNR=74						
WRA				pP	**pP**	**16 19 40.4**	**-1.0**
	comp=Z,22nm,0.8s,baz=105,slow=8.2,SNR=10						
WRA				ScP	**ScP**	**16 24 38.0**	**-1.1**
	comp=Z,2.2nm,1.1s,baz=104,slow=4.4,SNR=3.5						
SBA	**Scott Base**	**51.37**	**184**	*e*P	**P**	**16 20 09.7**	**+2.6**
	comp=Z,78nm,1.8s						
SBA	**Scott Base**	**51.37**	**184**	*e*P	**P**	**16 20 09.7**	**+2.6**
SBA				pmax	pmax		
	comp=Z,78nm,1.8s						
VNDA	**Vanda**	**51.44**	**186**	P	**P**	**16 20 09.6**	**+2.0**
	comp=Z,3.2nm,0.7s,baz=6.7,slow=7.0,SNR=22						
VNDA				LR	LR	16 39 59.6	
	comp=Z,83nm,18.0s,baz=16,slow=34						
VNDA	**Vanda**	**51.44**	**186**	*e*P	**P**	**16 20 09.2**	**+1.6**
FITZ	**Fitzroy Crossi**	**52.97**	**267**	*e*P	**P**	**16 20 20.5**	**+0.7**
GUMO	**Guam**	**54.55**	**313**	P	**P**	**16 20 30.6**	**-0.6**
	comp=Z,58nm,0.8s,baz=86,slow=13,SNR=3.5						
GUMO				LR	LR	16 40 47.3	
	comp=Z,92nm,21.9s,baz=144,slow=32						
CASY	**Casey**	**58.32**	**207**	*e*P	**P**	**16 20 56.5**	**-0.8**
	comp=Z,46nm,1.6s						
QSPA	**South Pole Qui**	**63.02**	**180**	P	**P**	**16 21 30.8**	**+1.4**
	comp=Z,15nm,0.8s,baz=31,slow=3.4,SNR=49						
QSPA	**South Pole Qui**	**63.02**	**180**	*e*P	**P**	**16 21 30.6**	**+1.2**
	comp=Z,62nm,1.4s						
CBIJ	**Chichi jima**	**66.42**	**321**	*e*P	**P**	**16 21 51.5**	**-0.2**
	comp=Z,1μm,1.9s						
JCJ	**Chichijima**	**66.42**	**321**	LR	LR	16 46 55.9	
	comp=Z,2μm,21.2s,baz=78,slow=32						
LEM	**Lembang**	**73.56**	**271**	P	**P**	**16 22 36.7**	**+0.7**
	comp=Z,35nm,0.6s,baz=101,slow=5.2,SNR=14						
JOW	**Kunigami**	**74.85**	**311**	P	**P**	**16 22 43.1**	**+0.2**
	comp=Z,17nm,0.8s,baz=262,slow=14,SNR=5.0						
KSM	**Kuching**	**74.95**	**280**	*e*P	**P**	**16 22 43.4**	**-0.5**
	comp=Z,19nm,0.7s						
INU	**Inuyama**	**75.56**	**323**	*e*P	**P**	**16 22 46.9**	**+0.1**
	comp=Z,27nm,0.8s						
MAW	**Mawson**	**75.59**	**200**	P	**P**	**16 22 47.5**	**+0.9**
	comp=Z,9.2nm,0.6s,baz=137,slow=9.3,SNR=28						
MAW				LR	LR	16 55 44.4	
	comp=Z,131nm,18.1s,baz=228,slow=35						
MAW	**Mawson**	**75.59**	**200**	*e*P	**P**	**16 22 47.2**	**+0.6**
	comp=Z,2.2nm,0.8s						
MJAR	**Matsushiro Arr**	**75.84**	**324**	P	**P**	**16 22 48.1**	**-0.3**
	comp=Z,28nm,0.7s,baz=168,slow=6.1,SNR=59						
MAJO	**Matsushiro**	**75.84**	**324**	*e*P	**P**	**16 22 47.8**	**-0.6**
	comp=Z,40nm,0.8s						
MAJO	**Matsushiro**	**75.84**	**324**	*e*P	**P**	**16 22 47.8**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,40nm,0.8s						
MAT	**Matsuhiro**	**75.84**	**324**	P	**P**	**16 22 48.2**	**-0.2**
MJB9	**Matsu-Tunnel**	**75.84**	**324**	*e*P	**P**	**16 22 47.8**	**-0.7**
	comp=Z,41nm,0.8s						
JNU	**Nakatsue**	**77.45**	**318**	P	**P**	**16 22 57.9**	**+0.3**
	comp=Z,21nm,0.8s,baz=125,slow=5.2,SNR=20						
JNU	**Nakatsue**	**77.45**	**318**	*e*P	**P**	**16 22 57.7**	**+0.1**
	comp=Z,24nm,0.8s						
ERM	**Erimo**	**77.81**	**331**	*i* P	**P**	**16 22 58.2**	**-1.1**
ERM				pmax	pmax		
	comp=Z,29nm,1.0s						
ASAJ	**Asahikawa**	**79.76**	**332**	P	**P**	**16 23 11.2**	**+1.2**
	comp=Z,43nm,0.8s,baz=261,slow=1.8,SNR=21						
ASAJ	**Asahikawa**	**79.76**	**332**	*e*P	**P**	**16 23 11.3**	**+1.4**
	comp=Z,49nm,0.9s						
NIKH	**Nikolski High**	**80.06**	**5**	*e*P	**P**	**16 23 11.5**	**+0.2**
	comp=Z,84nm,1.0s						
SYO	**Syowa Base**	**80.46**	**193**	‖*e*P	**P**	**16 23 12.0**	**-1.5**
SYO	**Syowa Base**	**80.46**	**193**	‖*e*PcP	**PcP**	**16 23 18.4**	**-1.7**
MYKOM	**Kota Tinggi**	**80.80**	**277**	*e*P	**P**	**16 23 16.2**	**0.0**
	comp=Z,17nm,0.6s						
SNAA	**Sanae**	**81.45**	**178**	P	**P**	**16 23 19.3**	**+0.5**
SNAA	**Sanae**	**81.45**	**178**	P	**P**	**16 23 19.3**	**+0.5**
	comp=Z,9.0nm,0.8s,baz=186,slow=4.7,SNR=38						
SNAA				LR	LR	16 56 04.8	
	comp=Z,58nm,21.6s,baz=193,slow=33						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**81.45**	**178**	*e*P	**P**	**16 23 18.8**	**-0.1**
	comp=Z,105nm,2.0s						
VNA3	**Neumayer Olymp**	**81.57**	**176**	P	**P**	**16 23 19.8**	**+0.4**
TJN	**Taejon**	**81.78**	**318**	*i* P	**P**	**16 23 18.8**	**-2.1**
YSS	**Yuzh-Sakhalins**	**82.00**	**334**	*e*P	**P**	**16 23 22.1**	**+0.3**
	comp=Z,58nm,1.0s						
YSS	**Yuzh-Sakhalins**	**82.00**	**334**	↑*i* P	**P**	**16 23 22.3**	**+0.5**
YSS				*e*		16 23 44.8	
YSS				pmax	pmax		
	comp=Z,50nm,0.9s						
KSRS	**Korea Array**	**82.18**	**319**	P	**P**	**16 23 23.9**	**+0.9**
	comp=Z,17nm,0.6s,baz=133,slow=6.0,SNR=106						
KS15	**Wonju Array Si**	**82.19**	**319**	*e*P	**P**	**16 23 23.7**	**+0.6**
KSAR	**Wonju Array Be**	**82.19**	**319**	P	**P**	**16 23 23.9**	**+0.8**
KSAR	**Wonju Array Be**	**82.19**	**319**	P	**P**	**16 23 23.9**	**+0.8**
KS01	**Wonju Array Si**	**82.21**	**319**	*e*P	**P**	**16 23 23.3**	**+0.1**
VNA1	**Neumayer--Stat**	**82.24**	**176**	P	**P**	**16 23 23.6**	**+0.8**
PKM	**Mcpherson Peak**	**82.24**	**44**	P	**P**	**16 23 25.2**	**+1.6**
	baz=229						
LPIG	**La Paz**	**82.34**	**58**	LR	LR	16 53 18.5	
	comp=Z,33nm,18.8s,baz=9.5,slow=31						
PETK	**Petropavlovsk-**	**82.74**	**345**	P	**P**	**16 23 25.9**	**+0.4**
	comp=Z,11nm,0.8s,baz=124,slow=7.5,SNR=17						
PETK				LR	LR	16 54 46.0	
	comp=Z,36nm,20.1s,baz=169,slow=32						
PEA1	**Petropavlovsk-**	**82.75**	**345**	*e*P	**P**	**16 23 25.9**	**+0.3**
PEA1				*e*		16 54 46.0	
MWC	**Mount Wilson**	**82.92**	**46**	*e*P	**P**	**16 23 28.1**	**+0.9**
MWC	**Mount Wilson**	**82.92**	**46**	*e*P	**P**	**16 23 28.1**	**+0.9**
JNH	**Juniper Hills**	**83.13**	**46**	*e*P	**P**	**16 23 26.1**	**-2.1**
ISA	**Isabella, Lake**	**83.58**	**45**	P	**P**	**16 23 32.5**	**+2.2**
	baz=230						
ERRC	**Elmore Ranch**	**83.69**	**48**	*e*P	**P**	**16 23 30.7**	**-0.1**
MSHR	**Mys Shultsa**	**83.96**	**324**	*i* P	**P**	**16 23 29.4**	**-2.6**
BELC	**Belle Mtn. Jos**	**84.12**	**47**	P	**P**	**16 23 35.4**	**+2.1**
	baz=232						
BELC	**Belle Mtn. Jos**	**84.12**	**47**	*e*P	**P**	**16 23 30.7**	**-2.5**
GLA	**Glamis**	**84.31**	**49**	*e*P	**P**	**16 23 33.9**	**-0.2**
	comp=Z,11nm,0.9s						
GLA	**Glamis**	**84.31**	**49**	*e*P	**P**	**16 23 33.9**	**-0.2**
GLA				pmax	pmax		
	comp=Z,11nm,0.9s						
PLCA	**Paso Flores**	**84.38**	**133**	P	**P**	**16 23 35.9**	**+1.3**
	comp=Z,17nm,0.9s,baz=244,slow=5.9,SNR=27						
PLCA	**Paso Flores**	**84.38**	**133**	*e*P	**P**	**16 23 35.7**	**+1.1**
	comp=Z,23nm,0.9s						
GSC	**Goldstone, Bar**	**84.40**	**46**	P	**P**	**16 23 36.8**	**+2.2**
	baz=231						
HEC	**Hector,Ludlow**	**84.41**	**46**	P	**P**	**16 23 36.5**	**+1.9**
	baz=232						
MPMC	**Manual Prospec**	**84.44**	**45**	P	**P**	**16 23 36.8**	**+1.8**
	baz=231						
N02D	**Trinity Center**	**84.59**	**38**	P	**P**	**16 23 37.7**	**+2.4**
	baz=227						
USRK	**Ussuriysk Ar.**	**84.70**	**326**	P	**P**	**16 23 36.7**	**+1.0**
	comp=Z,10nm,0.7s,baz=131,slow=4.5,SNR=17						
IRM	**Iron Mountain**	**84.77**	**47**	P	**P**	**16 23 38.7**	**+2.3**
	baz=232						
M02C	**Callahan**	**84.79**	**38**	P	**P**	**16 23 38.8**	**+2.4**
	baz=227						
GMRC	**Granite Mounta**	**84.82**	**47**	P	**P**	**16 23 38.7**	**+2.0**
	baz=232						
214A	**Organ Pipe Nat**	**85.03**	**50**	P	**P**	**16 23 40.0**	**+2.3**
	baz=234						
YBH	**Yreka Blue Hor**	**85.10**	**38**	P	**P**	**16 23 39.4**	**+1.5**
	comp=Z,2.4nm,0.8s,baz=220,slow=7.9,SNR=9.3						
YBH				LR	LR	16 55 31.7	
	comp=Z,36nm,19.3s,baz=200,slow=31						
YBH	**Yreka Blue Hor**	**85.10**	**38**	*e*P	**P**	**16 23 38.9**	**+1.0**
	comp=Z,8.8nm,1.2s						
GRAC	**Grapevine Rang**	**85.11**	**44**	P	**P**	**16 23 40.7**	**+2.6**
	baz=231						
NV01	**Mina Array Sit**	**85.45**	**43**	*e*P	**P**	**16 23 40.5**	**+0.6**
NVAR	**Mina Array Bea**	**85.45**	**43**	P	**P**	**16 23 41.1**	**+1.2**
	comp=Z,3.1nm,0.7s,baz=221,slow=8.6,SNR=16						
NVAR				pP	**pP**	**16 24 09.4**	**+1.0**
	comp=Z,2.2nm,0.8s,baz=220,slow=9.2,SNR=3.5						
NVAR				LR	LR	16 54 48.2	
	comp=Z,37nm,21.9s,baz=262,slow=30						
NV11	**Mina Array Sit**	**85.54**	**43**	*e*P	**P**	**16 23 41.4**	**+1.2**
	comp=Z,0.3nm,1.0s						
TPNV	**Topopah Spring**	**85.78**	**45**	P	**P**	**16 23 43

HVU	Hansel Valley	90.85	43	eP		P	16 24 05.8	+0.3
	comp=Z,7.0nm,1.4s							
HVU	Hansel Valley	90.85	43	eP		P	16 24 05.8	+0.3
HVU				pmax	pmax			
	comp=Z,7.0nm,1.4s							
HLID	Hailey	90.95	40	P		P	16 24 07.6	+1.6
	baz=233							
HLID	Hailey	90.95	40	eP		P	16 24 07.1	+1.2
	comp=Z,2.3nm,0.9s							
TASM	ASL Pad, Albuq	91.09	51	P		P	16 24 08.5	+1.7
	baz=237							
ANMO	Albuquerque	91.09	51	P		P	16 24 08.2	+1.3
	comp=Z,2.8nm,0.7s,baz=207,slow=7.2,SNR=7.9							
ANMO	Albuquerque	91.09	51	P		P	16 24 08.5	+1.7
	baz=237							
ANMO	Albuquerque	91.09	51	eP		P	16 24 08.3	+1.5
	comp=Z,4.0nm,0.9s							
ANMO	Albuquerque	91.09	51	i P		P	16 24 04.2	-2.6
TASL	Snake Pit, Alb	91.09	51	P		P	16 24 08.4	+1.6
	baz=237							
GHO	Glory Hole Cre	91.48	13	eP		P	16 24 06.9	-0.9
	comp=Z,9.2nm,0.8s							
PNT	Penticton	91.80	34	eP		P	16 24 10.5	+1.0
PNT	Penticton	91.80	34	eP		P	16 24 10.5	+1.0
S22A	4UR Ranch, Cre	92.35	48	P		P	16 24 14.3	+1.6
	baz=237							
S22A	4UR Ranch, Cre	92.35	48	eP		P	16 24 12.5	-0.2
	comp=Z,3.4nm,0.9s							
XAN	Xi'an	92.53	307	P		P	16 24 15.1	+1.8
XAN				pmax	pmax			
	comp=Z,12nm,0.9s							
XAN				pmax	pmax			
	comp=Z,120nm,4.7s							
TRF	Thorofare Moun	92.75	12	eP		P	16 24 13.5	-0.2
	comp=Z,8.3nm,0.7s							
CM01	Chiang Mai Arr	92.78	289	eP		P	16 24 14.8	0.0
KMI	Kunming	92.80	297	P		P	16 24 17.2	+2.2
KMI				pmax	pmax			
	comp=Z,12nm,0.8s							
KMI				pmax	pmax			
	comp=Z,140nm,5.4s							
CMAR	Chiang Mai Arr	92.81	289	P		P	16 24 16.2	+1.3
	comp=Z,1.5nm,0.8s,baz=132,slow=3.6,SNR=11							
CMAR				pP		pP	16 24 44.0	+0.4
	comp=Z,2.0nm,0.9s,baz=140,slow=3.0,SNR=5.2							
CMAR				PKKPbc	PKKPbc		16 41 26.3	+1.2
	comp=Z,0.2nm,0.5s,baz=279,slow=3.4,SNR=4.3							
SEY	Seymchan	92.88	347	P		P	16 24 14.3	+0.3
	comp=Z,7.3nm,0.7s,baz=152,slow=5.0,SNR=16							
SEY	Seymchan	92.88	347	i P		P	16 24 12.0	-2.1
CHTO	Chiang Mai	92.97	289	eP		P	16 24 15.6	0.0
	comp=Z,12nm,1.3s							
CHTO	Chiang Mai	92.97	289	eP		P	16 24 15.6	0.0
CHTO				pmax	pmax			
	comp=Z,12nm,1.3s							
RND	Reindeer	92.97	12	eP		P	16 24 13.4	-1.2
	comp=Z,6.4nm,1.0s							
RND	Reindeer	92.97	12	eP		P	16 24 13.4	-1.2
RND				pmax	pmax			
	comp=Z,6.0nm,1.0s							
MSTX	Muleshoe	93.18	53	P		P	16 24 17.6	+1.2
	baz=239							
MSTX	Muleshoe	93.18	53	eP		P	16 24 16.5	+0.1
	comp=Z,6.6nm,0.9s							
SDCO	Great Sand Dun	93.24	49	P		P	16 24 18.0	+1.2
	baz=238							
BW06	Boulder Array	93.37	43	P		P	16 24 18.6	+1.4
	baz=236							
BW06	Boulder Array	93.37	43	eP		P	16 24 17.2	0.0
	comp=Z,2.3nm,0.6s							
PD31	Pinedale Array	93.37	43	eP		P	16 24 16.6	-0.6
PDAR	Pinedale Array	93.37	43	P		P	16 24 18.1	+0.9
	comp=Z,2.3nm,0.9s,baz=204,slow=3.3,SNR=13							
PDAR	Pinedale Array	93.37	43	eP		P	16 24 17.5	+0.3
ZEA	Zeya	93.62	331	eP		P	16 24 17.6	-0.1
WRH	Wood River Hil	94.08	12	eP		P	16 24 19.5	-0.1
	comp=Z,21nm,1.8s							
DOT	Dot Lake	94.18	14	eP		P	16 24 20.5	+0.3
	comp=Z,31nm,1.6s							
HDA	Harding Lake	94.25	13	eP		P	16 24 20.4	0.0
	comp=Z,5.8nm,0.7s							
CCB	Clear Creek Bu	94.30	12	eP		P	16 24 19.6	-1.0
	comp=Z,2.9nm,0.6s							
HIA	Hailar	94.34	324	i P		P	16 24 19.7	-1.5
HIA				pmax	pmax			
	comp=Z,8.0nm,0.9s							
COLA	College	94.49	12	i P		P	16 24 21.4	-0.1
COLA				pmax	pmax			
	comp=Z,4.0nm,0.9s							
IL1	Eielson Array	94.58	13	eP		P	16 24 21.5	-0.5
ILAR	Eielson Array	94.58	13	P		P	16 24 21.8	-0.1
	comp=Z,1.6nm,0.7s,baz=217,slow=5.3,SNR=19							
ILAR				PP		PP	16 28 08.3	-3.4
	comp=Z,0.6nm,0.9s,baz=208,slow=7.3,SNR=3.1							
ILB	Eielson Array	94.58	13	eP		P	16 24 21.2	-0.7
BILL	Bilibino	95.61	354	eP		P	16 24 26.5	0.0
	comp=Z,15nm,1.5s							
BILL	Bilibino	95.61	354	eP		P	16 24 25.1	-1.4
BILL				e			16 28 19.5	
BILL				ePPP	PPP		16 30 19.3	
BILL				pmax	pmax			
	comp=Z,5.0nm,1.2s							
YAK	Yakutsk	98.39	338	i P		Pdif	16 24 41.2	+2.0
YAK				pmax	pmax			
	comp=Z,6.0nm,0.9s							
LPAZ	La Paz	99.00	113	P		Pdif	16 24 45.6	+1.7
	comp=Z,1.5nm,0.7s,baz=223,slow=4.3,SNR=8.1							
LPAZ				LR	LR		17 04 04.5	
	comp=Z,38nm,18.0s,baz=148,slow=32							
SONA0	Songino Array	101.03	318	ePKKPbc	PKKPbc		16 41 03.8	-0.2
SONM	Songino Array	101.03	318	PKKPbc	PKKPbc		16 41 03.8	-0.2
	comp=Z,1.0nm,0.7s,baz=271,slow=3.3,SNR=5.8							
YKA	Yellowknife Ar	102.23	25	PP	PP		16 29 08.7	-1.4
	comp=Z,0.6nm,0.9s,baz=246,slow=6.7,SNR=3.5							
ZALV	Zalesovo Beam	115.88	319	PKP	PKPdf		16 29 42.5	-1.1
	comp=Z,1.4nm,0.7s,baz=208,slow=2.1,SNR=5.0							
ZALV	Zalesovo Beam	115.88	319	ePKPdf	PKPdf		16 29 42.1	-1.4
ZAA1	Zalesovo Array	115.89	319	ePKPdf	PKPdf		16 29 42.5	-1.1
MK01	Makanchi Array	116.00	311	ePKPdf	PKPdf		16 29 42.8	-1.3
MK31	Makanchi Array	116.02	311	ePKPdf	PKPdf		16 29 42.8	-1.3
MK31	Makanchi Array	116.02	311	ePKIKP	PKPdf		16 29 42.8	-1.3
MK32	Makanchi Array	116.02	311	ePKPdf	PKPdf		16 29 43.1	-1.0
MK32				epPKPdf	pPKPdf		16 30 13.8	-0.3
MK32				ePKPPbc	PKKPbc		16 40 16.0	+0.1
MKAR	Makanchi Array	116.02	311	PKP	PKPdf		16 29 43.1	-1.0
	comp=Z,1.1nm,0.8s,baz=160,slow=1.0,SNR=7.7							
MKAR				pPKP	pPKPdf		16 30 13.8	-0.3
	comp=Z,1.4nm,0.9s,baz=88,slow=3.5,SNR=4.1							
MKAR				PKKPbc	PKKPbc		16 40 16.0	+0.1
	comp=Z,1.4nm,0.8s,baz=279,slow=3.9,SNR=8.4							
MKAR	Makanchi Array	116.02	311	ePKPdf	PKPdf		16 29 42.8	-1.3
MKAR				pPKP	pPKPdf		16 30 13.8	-0.3
MKAR				PKKPbc	PKKPbc		16 40 16.0	+0.1
KURK	Kurchatov	119.11	315	PKIKP	PKPdf		16 29 49.0	-0.9
KURK				pmax	pmax			
	comp=Z,2.0nm,0.7s							
KURBB	Kurchatov Arra	119.15	315	PKP	PKPdf		16 29 49.0	-1.0
	comp=Z,1.9nm,0.7s,baz=106,slow=2.0,SNR=13							
BOSA	Boshof	120.51	203	PKP	PKPdf		16 29 53.3	-0.3
	comp=Z,3.1nm,1.0s,baz=243,slow=2.3,SNR=2.9							
KK31	Karatay Array	123.63	305	ePKPdf	PKPdf		16 29 58.0	-0.8
KK31	Karatay Array	123.63	305	ePKIKP	PKPdf		16 29 58.1	-0.8
KKAR	Karatay Array	123.63	305	ePKPdf	PKPdf		16 29 58.2	-0.7
KKAR	Karatay Array	123.63	305	ePKIKP	PKPdf		16 29 58.2	-0.7
BVAR	Borovoye Array	124.36	317	PKP	PKPdf		16 29 60.0	+0.1
	comp=Z,1.9nm,0.5s,baz=97,slow=1.3,SNR=15							
BVAR	Borovoye Array	124.36	317	PKIKP	PKPdf		16 30 00.0	+0.1
BRVK	Borovoye	124.43	317	i PKIKP	PKPdf		16 29 57.3	-2.7
SPA0	Spitsbergen Ar	128.44	356	ePKPdf	PKPdf		16 30 07.1	0.0
SPITS	Spitsbergen Ar	128.44	356	PKP	PKPdf		16 30 07.2	+0.1
	comp=Z,3.3nm,0.7s,baz=72,slow=4.7,SNR=6.5							
DAG	Danmarks Havn	129.20	6	i PKIKP	PKPpre		16 30 00.6	
AKTO	Aktyubinsk	132.20	315	PKP	PKPdf		16 30 15.4	+0.4
	comp=Z,1.9nm,0.7s,baz=142,slow=2.0,SNR=5.7							
AKTO				SKPbc	SKPbc		16 33 31.0	-0.4
	comp=Z,2.5nm,0.9s,baz=83,slow=5.1,SNR=4.7							
GEYT	Alibeck	132.56	298	PKP	PKPdf		16 30 17.4	+1.3
	comp=Z,1.5nm,0.8s,baz=151,slow=3.3,SNR=3.9							
GEYT				SKPbc	SKPbc		16 33 33.0	-0.1
	comp=Z,1.2nm,0.6s,baz=208,slow=2.9,SNR=6.3							
ARA0	ARCESS Array S	135.46	349	ePKPpre	PKPpre		16 30 12.1	
ARA0				ePKPdf	PKPdf		16 30 20.6	+0.1
ARA0				eSKPbc	SKPbc		16 33 41.5	0.0
ARCES	ARCESS Array B	135.46	349	PKhKP	PKPpre		16 30 12.1	
	comp=Z,0.6nm,0.5s,baz=316,slow=3.3,SNR=3.8							
ARCES				PKP	PKPdf		16 30 20.6	+0.1
	comp=Z,2.2nm,0.6s,baz=352,slow=0.6,SNR=14							
ARCES				SKPbc	SKPbc		16 33 41.5	0.0
	comp=Z,5.7nm,1.0s,baz=341,slow=6.4,SNR=5.5							
KLMR	Klimovskoe	138.06	334	ePKIKP	PKPdf		16 30 30.6	+5.1
KLMR				pmax	pmax			
	comp=Z,7.0nm,1.0s							
KLMR	Klimovskoe	138.06	334	ePKPdf	PKPdf		16 30 30.6	+5.1
KLMR				AMP			16 30 38.4	
	comp=Z,7.0nm,1.0s							
H10S3	ASCENSION HYDR	140.46	153	T	T		19 07 35.6	
	baz=206,slow=74,SNR=4.4							
H10S2	ASCENSION HYDR	140.47	153	T	T		19 07 26.1	
	baz=206,slow=74,SNR=4.2							
H10S1	ASCENSION HYDR	140.48	153	T	T		19 07 33.9	
	baz=206,slow=74,SNR=5.1							
H10N3	ASCENSION HYDR	141.53	152	T	T		19 08 46.9	
	baz=204,slow=74,SNR=9.2							
H10N1	ASCENSION HYDR	141.54	152	T	T		19 08 47.4	
	baz=204,slow=74,SNR=8.9							
H10N2	ASCENSION HYDR	141.55	152	T	T		19 08 48.2	
	baz=204,slow=74,SNR=8.3							
FIA1	FINESS Array S	142.19	342	ePKPpre	PKPpre		16 30 26.3	
FIA0	FINESS Array S	142.19	342	ePKPpre	PKPpre		16 30 27.1	
FIA0	FINESS Array S	142.19	342	ePKHKP	PKPpre		16 30 27.1	
FINES	FINESS Array B	142.19	342	PKhKP	PKPpre		16 30 27.1	
	comp=Z,3.8nm,0.7s,baz=47,slow=3.2,SNR=20							
VSR	Storozhevoye	143.36	321	ePKIKP	PKPab		16 30 31.7	+0.1
VSR				pmax	pmax			
	comp=Z,5.0nm,0.4s							
KBZ	Khabaz	143.60	308	PKhKP	PKPpre		16 30 33.8	
	comp=Z,2.3nm,0.8s,baz=69,slow=2.7,SNR=3.3							
KIV	Kislovodsk	143.69	308	i PKHKP	PKPpre		16 30 31.1	
KIV				pmax	pmax			
	comp=Z,9.0nm,1.1s							
NEY	Neytrino	143.83	307	i PKIKP	PKPdf		16 30 35.9	-0.8
VSU	Vasula	144.38	338	i PKHKP	PKPpre		16 30 32.6	
NC303	NORSAR Array S	145.35	353	ePKPdf	PKPdf		16 30 38.0	-0.6
NC204	NORSAR Array S	145.37	353	ePKPdf	PKPdf		16 30 38.3	-0.4
NB201	NORSAR Array S	145.53	353	ePKPdf	PKPdf		16 30 38.0	-0.9
NB2	NORSAR Subarra	145.55	353	PKP	PKPdf		16 30 38.4	-0.6
	comp=Z,8.5nm,0.7s,baz=10,slow=3.3							
NB2	NORSAR Subarra	145.55	353	PKP2	PKPdf		16 30 36.2	-2.8
NB2				pmax	pmax			
	comp=Z,9.0nm,0.7s							
NB200	NORSAR Array S	145.55	353	ePKPdf	PKPbc		16 30 39.2	-0.1
NB200				epPKPab	pPKPab		16 31 07.7	-1.3
NB200				eSKPbc	SKiKP		16 34 09.4	+0.4
NOA	NORSAR Array B	145.55	353	PKPbc	PKPbc		16 30 39.2	-0.1
	comp=Z,14nm,0.7s,baz=25,slow=3.4,SNR=55							
NOA				pPKPbc	pPKPab		16 31 07.7	-1.3
	comp=Z,13nm,0.8s,baz=9.5,slow=2.4,SNR=4.3							
NOA				SKPbc	SKiKP		16 34 09.5	+0.4
	comp=Z,1.6nm,0.8s,baz=14,slow=4.2,SNR=3.6							
NBO00	NORSAR Array S	145.61	353	ePKPdf	PKPbc		16 30 39.3	-0.2
NAO01	NORSAR Array S	145.78	353	ePKPdf	PKPdf		16 30 39.5	+0.2
NC602	NORSAR Array S	145.81	352	ePKPdf	PKPdf		16 30 39.3	0.0
HFS	Hagfors	146.09	350	PKPbc	PKPdf		16 30 40.4	+0.5
	comp=Z,14nm,0.5s,baz=54,slow=2.5,SNR=95							
ANN	Anapa	147.03	312	i PKP2	PKPbc		16 30 43.3	-0.8
ANN				pmax	pmax			
	comp=Z,48nm,1.1s							
KONO	Kongsberg	147.09	353	ePKPbc	PKPbc		16 30 43.5	-0.3
KONO	Kongsberg	147.09	353	i PKP2	PKPdf		16 30 42.6	+1.1
AKASG	Malin Array Be	148.91	327	PKPbc	PKPbc		16 30 48.4	-0.4
	comp=Z,3.5nm,0.4s,baz=44,slow=3.8,SNR=23							
AKBB	Malin Array Si	148.91	327	ePKPbc	PKPbc		16 30 48.2	-0.7
AKBB	Malin Array Si	148.91	327	ePKP2	PKPbc		16 30 48.2	-0.7
AK11	Malin Array Si	148.95	327	ePKPbc	PKPbc		16 30 48.2	-0.7
ASF	Jabal al Asfar	149.83	288	PKPbc	PKPbc		16 30 52.5	+0.6
	comp=Z,4.8nm,0.7s,baz=76,slow=4.9,SNR=6.1							
BSD	Bornholm Skovb	150.59	346	i PKIKP	PKPbc		16 30 52.8	0.0
MMAI	Mount Meron Ar	151.07	290	PKPbc	PKPbc		16 30 55.7	+0.9
	comp=Z,7.0nm,0.5s,baz=78,slow=3.4,SNR=21							
MMAI				pPKPbc	pPKPbc		16 31 25.4	+0.7
	comp=Z,12nm,0.8s,baz=77,slow=3.1,SNR=4.5							
BR101	Keskin Array S	151.33	304	ePKPbc	PKPbc		16 30 55.3	0.0
BR101				ePKPab	PKPab		16 31 04.3	+0.6
BR101				epPKPab	pPKPbc		16 31 25.9	+0.7
BRTR	Keskin Array B	151.33	304	PKPbc	PKPbc		16 30 55.3	0.0
	comp=Z,2.3nm,0.6s,baz=128,slow=3.7,SNR=9.4							
BRTR				PKPab	PKPab		16 31 04.3	+0.6
	comp=Z,7.0nm,0.6s,baz=101,slow=3.2,SNR=21							
BRTR				pPKPbc	pPKPbc		16 31 25.9	+0.7
	comp=Z,4.6nm,0.9s,baz=72,slow=2.0,SNR=3.8							
EKA	Eskdalemuir Ar	151.46	7	PKPbc	PKPbc		16 30 54.8	-0.1
	comp=Z,1.0nm,0.5s,baz=325,slow=1.8,SNR=5.7							
EKA				PKPab	PKPab		16 31 03.4	-0.1
	comp=Z,3.4nm,0.6s,baz=342,slow=3.0,SNR=13							
KWP	Kalwaria Pacla	152.68	331	ePKPbc	PKPbc		16 30 58.0	+0.2
KWP	Kalwaria Pacla	152.68	331	ePKIKP	PKPbc		16 30 58.0	+0.2
BUR08	Bucovina Ar. S	152.90	325	ePKPbc	PKPbc		16 30 58.4	-0.1
BUR04	Bucovina Ar. S	152.91	325	ePKPbc	PKPbc		16 30 58.9	+0.3
OJC	Ojcow	153.40	335	ePKPbc	PKPbc		16 30 59.0	-0.4
OJC	Ojcow	153.40	335	ePKIKP	PKPbc		16 30 59.0	-0.4
CRVS	Cervenica-Dubn	153.76	331	ePKP2	PKPab		16 31 13.6	+0.1
CRVS	Cervenica-Dubn	153.76	331	ePKP	PKPab		16 31 13.5	+0.1
MLR	Muntele Rosu	153.85	321	PKPab	PKPab		16 31 15.1	+0.9
	comp=Z,1.0nm,0.7s,baz=0.0,slow=5.1,SNR=4.8							
UPC	Upice	154.46	340	ePKPAB	PKPab		16 31 16.9	+0.5
UPC				epPKP	pPKPdf		16 31 22.6	-0.7
UPC	Upice	154.46	340	ePKP2	PKPab		16 31 16.9	+0.5
DPC	Dobruska-Polom	154.50	339	⇑ ePKP	PKPbc		16 31 02.7	+0.9
DPC				ePKPAB	PKPab		16 31 17.6	+1.0
DPC				epPKP	pPKPdf		16 31 23.3	-0.1
DPC				eSPKP			16 31 45.5	
DPC				AMS	AMS		17 34 10.0	
CLL	Collm	154.55	345	ePKPdf	PKPdf		16 30 52.0	-1.3
CLL				i PKPbc	PKiKP		16 31 02.3	+0.5
	comp=Z,5.0nm,0.7s							
CLL				i PKPab	PKPab		16 31 16.1	-0.6
	comp=Z,6.0nm,0.7s							
CLL				i pPKPdf	pPKPdf		16 31 22.1	-1.3
	comp=Z,16nm,1.4s							
CLL				i			16 31 39.2	
CLL				i pPKPab	sPKPbc		16 31 43.8	+0.7
CLL				ePP	PP		16 34 51.0	-1.0
CLL				LmV			18 04 00.0	
	comp=Z,100nm,21.8s							
CLL	Collm	154.55	345	ePKPbc	PKPbc		16 31 01.9	+0.2
CLL				ePKPab	PKPab		16 31 15.9	-0.8
CLL	Collm	154.55	345	ePKIKP	PKPdf		16 30 52.0	-1.3
CLL				i			16 31 16.1	
CLL				i			16 31 22.1	
MORC	Moravsky Berou	154.59	337	ePKP	PKPab		16 31 17.3	+0.3
BRG	Berggiesshubel	154.72	343	ePKP	PKPbc		16 31 02.7	+0.6
	comp=Z,2.9nm,0.6s							
BRG				e			16 31 17.4	
	comp=Z,5.9nm,0.9s							
BRG				e			16 31 23.2	
	comp=Z,5.0nm,0.7s							
BRG	Berggiesshubel	154.72	343	ePKIKP	PKPbc		16 31 02.7	+0.6
BRG				e			16 31 17.4	
BRG				pmax	pmax			
	comp=Z,3.0nm,0.6s							
BRG				pmax	pmax			
	comp=Z,6.0nm,0.9s							
PVCC	Panska Ves	154.86	342	ePKPAB	PKPab		16 31 18.8	+0.7
PVCC				epPKP	pPKPdf		16 31 24.8	+1.0
PVCC	Panska Ves	154.86	342	ePKP2	PKPab		16 31 18.8	+0.7
VYHS	Vyhne	155.17	334	ePKP2	PKPab		16 31 19.8	+0.3
VYHS	Vyhne	155.17	334	ePKP	PKPab		16 31 19.8	+0.3
VRAC	Vranov	155.31	338	ePKP	PKPab		16 31 20.7	+0.6
JAVC	Velka Javorina	155.31	336	ePKP	PKPab		16 31 21.5	+1.4
PRU	Pruhonice	155.35	341	ePKPAB	PKPab		16 31 20.6	+0.4
PRU	Pruhonice	155.35	341	ePKP2	PKPab		16 31 20.6	+0.4
KRUC	Moravsky	155.59	338	ePKP	PKPab		16 31 21.6	+0.4
NKC	Novy Kostel	155.68	345	ePKPAB	PKPab		16 31 22.0	+0.4
NKC	Novy Kostel	155.68	345	ePKP2	PKPab		16 31 22.0	+0.4
KHC	Kasperske Hory	156.40	342	ePKPAB	PKPab		16 31 25.0	+0.2
KHC				ex	x		16 31 31.0	
KHC				epPKP	pPKPab		16 31 53.0	-0.7
KHC				AMS	AMS		17 29 20.0	
KHC	Kasperske Hory	156.40	342	ePKP2	PKPab		16 31 25.0	+0.2
GERES	GERESS Array B	156.62	341	PKPbc	PKPbc		16 31 06.4	
	comp=Z,0.4nm,0.3s,baz=121,slow=0.6,SNR=3.6							
GERES				PKPab	PKPab		16 31 25.9	+0.1
	comp=Z,0.5nm,0.3s,baz=35,slow=3.6,SNR=4.1							
CONA	Conrad Observa	156.74	337	ePKPab	PKPab		16 31 26.9	+0.5
	comp=Z,6.2nm,0.7s							
VTS	Vitosha	157.16	318	ePKPab	PKPab		16 31 28.2	-0.3
VTS	Vitosha	157.16	318	ePKP2	PKPab		16 31 28.2	-0.3
MOA	Molln	157.34	339	ePKPab	PKPab		16 31 27.0	-1.8
	comp=Z,3.3nm,1.1s							
ARSA	Arzberg	157.44	337	epPKPdf	PKPab		16 31 29.8	+0.5
	comp=Z,4.4nm,0.8s							
LIC	Lamto	158.03	159	ePKP2	PKPab		16 31 33.0	+0.4
	comp=Z,103nm,1.4s							
SOKA	Soboth	158.11	337	epPKPdf	PKPab		16 31 32.2	0.0
	comp=Z,5.5nm,1.0s							
PERS	Pernice	158.11	336	i PKPdf	PKPab		16 31 34.3	+2.0
KIC	Kosan Boka	158.24	160	ePKP2	PKPab		16 31 34.1	+0.6
	comp=Z,32nm,0.8s							
KBA	Koelnbreinsper	158.31	340	i pPKPdf	PKPab		16 31 33.9	+0.6
	comp=Z,2.1nm,0.5s							
OBKA	Obir	158.42	337	epPKPdf	PKPab		16 31 31.2	-2.4
	comp=Z,3.4nm,0.6s							
TIC	Toumodi	158.42	159	ePKP2	PKPab		16 31 34.6	+0.3
DBIC	Dimbokro	158.50	159	PKPab	PKPab		16 31 34.5	-0.1
	comp=Z,11nm,1.0s,baz=163,slow=3.3,SNR=4.4							
MYKA	Terra Mystica	158.62	339	epPKPdf	PKPab		16 31 30.3	-4.2
	comp=Z,5.6nm,0.6s							
WTTA	Wattenberg	158.63	343	ePKPab	PKPab		16 31 35.3	+0.6
	comp=Z,3.8nm,0.4s							
RETA	Reutte	158.64	345	ePKPab	PKPab		16 31 34.6	0.0
	comp=Z,4.5nm,0.7s							
MOTA	Moosalm	158.69	344	ePKPab	PKPab		16 31 34.3	-0.5
	comp=Z,6.1nm,0.7s							
ABTA	Abfaltersbach	158.86	341	ePKPab	PKPab		16 31 35.5	-0.1
	comp=Z,3.6nm,0.8s							
VISS	Visnje	158.92	336	i PKPdf	PKPab		16 31 37.0	+1.3
LIT	Litokhoron	159.00	313	ePKPab	PKPab		16 31 35.6	-0.8
LIT	Litokhoron	159.00	313	ePKP2	PKPab		16 31 35.6	-0.8
BOJS	Bojanci	159.02	335	i PKPdf	PKPab		16 31 37.5	+1.4
DAVA	Damuels	159.03	346	ePKPab	PKPab		16 31 36.1	-0.2
	comp=Z,6.5nm,0.9s							
FETA	Feichten	159.09	344	ePKPab	PKPab		16 31 36.8	+0.2
	comp=Z,3.7nm,1.0s							
JAVS	Javornik	159.12	337	i PKPdf	PKPab		16 31 37.2	+0.5
IDI	Anoyia	159.28	299	PKPab	PKPab		16 31 37.7	-0.1
	comp=Z,5.0nm,0.7s,baz=103,slow=12,SNR=2.6							
FUORN	Ofenpass-Fuorn	159.57	345	ePKPab	PKPab		16 31 38.8	0.0
KOWA	Kowa	166.04	152	PKP	PKPdf		16 31 07.1	+0.1
	comp=Z,3.3nm,0.8s,baz=176,slow=2.0,SNR=5.1							
KOWA				PKPab	PKPab		16 32 08.3	+0.7
	comp=Z,3.3nm,0.7s,baz=216,slow=3.4,SNR=4.9							
TOA0	Torodi Ar. Sit	166.11	176	ePKPdf	PKPdf		16 31 06.1	-0.9
TOA0				ePKPdf	PKPdf		16 31 06.5	-0.6
TOA0				ePKPab	PKPab		16 32 07.6	-0.2
TORD	Torodi Ar. Bea	166.11	176	PKP	PKPdf		16 31 06.8	-0.2
	comp=Z,3.6nm,0.7s,baz=300,slow=0.8,SNR=18							
TORD				PKPab	PKPab		16 32 08.3	+0.5
	comp=Z,6.9nm,0.7s,baz=192,slow=3.9,SNR=22							
TOA1	Torodi Ar. Sit	166.12	176	ePKPdf	PKPdf		16 31 06.8	-0.2
TOA1				ePKPab	PKPab		16 32 08.3	+0.5
ESDC	Sonseca Array	166.30	22	PKPab	PKPab		16 32 08.4	+0.1
	comp=Z,0.2nm,0.4s,baz=327,slow=2.9,SNR

ZALV Zalesovo Beam 7.15 292 *e*Pn **Pn 16 18 06.7 +2.7**
ZALV Lg Lg 16 20 00.4
ZALV Zalesovo Beam 7.15 292 *e*PN **Pn 16 18 06.7 +2.7**
OGRR Ongureny 7.28 70 *e*P **Pn 16 18 07.5 +1.7**
OGRR pmax pmax
comp=Z,66nm,1.0s
SONA1 Songino Array 7.75 116 *e*Pn **Pn 16 18 10.6 -1.8**
SONM Songino Array 7.75 116 Pg **Pb 16 18 36.2 +2.2**
comp=Z,1.1nm,0.3s,baz=303,slow=17,SNR=12
SONM Lg Lg 16 20 18.7
comp=Z,8.1nm,0.3s,baz=303,slow=30,SNR=8.5
SONM LR LR 16 21 23.3
comp=Z,146nm,21.0s,baz=281,slow=40
ULN Ulaanbaatar 8.11 114 *e*Pn **Pn 16 18 16.5 -0.8**
ULN Ulaanbaatar 8.11 114 *ce*P **Pn 16 18 18.3 +1.0**
ULN pmax pmax
comp=Z,5.0nm,1.7s
NVS Novosibirsk 8.28 297 *e*Pn **Pn 16 18 21.4 +1.9**
NVS *e*Pg Pg 16 18 50.7 -7.2
NVS *e*Sg **Sg 16 20 37.2 -7.7**
NVS Novosibirsk 8.28 297 *e*P **Pn 16 18 21.4 +1.9**
WMQ Urumqi 9.71 219 *e*P **Pn 16 18 40.4 +1.2**
WMQ S **Sn 16 20 30.5 +2.2**
WMQ pmax pmax
comp=Z,25nm,0.6s
WMQ LR LR
comp=Z,780nm,3.9s
WMQ LR LR
comp=Z,830nm,4.0s
MK31 Makanchi Array 10.26 247 Pn **Pn 16 18 48.1 +1.4**
comp=Z,9.8nm,0.9s,baz=66,slow=12,SNR=28
MK31 ⇓Pg 16 19 26.7
comp=Z,9.6nm,0.8s,baz=65,slow=15,SNR=5.5
MK31 ⇑Lg Lg 16 21 41.3
comp=Z,41nm,0.9s,baz=76,slow=27,SNR=4.9
MK31 Makanchi Array 10.26 247 *e*Pn **Pn 16 18 48.0 +1.3**
MK31 Makanchi Array 10.26 247 *i* P **Pn 16 18 48.1 +1.4**
MK31 pmax pmax
comp=Z,10.0nm,0.9s
MKAR Makanchi Array 10.26 247 Pn **Pn 16 18 46.2 -0.5**
comp=Z,0.3nm,0.3s,baz=71,slow=9.1,SNR=26
MKAR Pg 16 19 26.9
comp=Z,0.4nm,0.3s,baz=72,slow=17,SNR=5.0
MKAR Lg Lg 16 21 39.1
comp=Z,0.5nm,0.3s,baz=56,slow=28,SNR=4.1
MKAR Makanchi Array 10.26 247 *e*Pn **Pn 16 18 48.1 +1.4**
MKAR Pg 16 19 26.9
MKAR Lg Lg 16 21 39.1
MKAR Makanchi Array 10.26 247 *i* P **Pn 16 18 49.2 +2.5**
MKAR pmax pmax
comp=Z,6.0nm,0.9s
MK01 Makanchi Array 10.27 246 *e*Pn **Pn 16 18 47.3 +0.5**
MAKZ Makanchi 10.43 247 ⇑Pn **Pn 16 18 50.0 +1.0**
comp=Z,8.3nm,0.9s
MAKZ ⇓Pg 16 19 30.3
comp=Z,10nm,1.1s
MAKZ ⇓Lg Lg 16 21 44.1
comp=Z,93nm,1.3s
MAKZ Makanchi 10.43 247 *e*Pn **Pn 16 18 49.5 +0.5**
MAKZ Makanchi 10.43 247 *e*P **Pn 16 18 49.5 +0.5**
KURK Kurchatov 10.98 271 ⇑Pn **Pn 16 18 59.0 +2.6**
comp=Z,5.2nm,1.0s
KURK ⇓Pg 16 19 37.0
comp=Z,8.7nm,1.0s
KURK ⇓Lg Lg 16 22 03.1
comp=Z,86nm,1.0s
KURK Kurchatov 10.98 271 Pn **Pn 16 18 57.3 +0.8**
KURK Lg Lg 16 22 02.2
KURK Kurchatov 10.98 271 *ce*P **Pn 16 18 58.1 +1.6**
KURK pmax pmax
comp=Z,19nm,0.8s
KURBB Kurchatov Arra 11.05 271 Pn **Pn 16 18 57.3 -0.2**
comp=Z,0.0nm,0.3s,baz=74,slow=16,SNR=2.6
KURBB Lg Lg 16 22 02.2
comp=Z,0.1nm,0.3s,baz=313,slow=16,SNR=4.7
GTA Gaotai 12.61 167 *e*P Pn 16 19 26.8 +7.9
GTA pP 16 19 31.1
GTA sP 16 19 34.0
GTA pmax pmax
comp=Z,2.0nm,0.6s
GTA pmax pmax
comp=Z,48nm,6.2s
GTA LR LR
comp=Z,460nm,9.1s
GTA LR LR
comp=Z,380nm,6.4s
GTA LR LR
comp=Z,640nm,9.6s
PDGK Podgornoye 13.97 239 ⇑Pn **Pn 16 19 40.2 +2.7**
comp=Z,10nm,1.2s
PDGK ⇓Lg Lg 16 23 36.2
comp=Z,46nm,1.1s
PDGK Podgornoye 13.97 239 P **Pn 16 19 40.2 +2.7**
PDGK pmax pmax
comp=Z,10.0nm,1.2s
HHC Hu-ho-hao-te 15.25 130 *e*P **Pn 16 19 54.6 -0.3**
HHC S **Sn 16 22 40.4 -3.4**
HHC pmax pmax
comp=Z,7.0nm,1.0s
HHC pmax pmax
comp=Z,52nm,4.1s
HHC LR LR
comp=Z,1μm,6.6s
HHC LR LR
comp=Z,1μm,7.8s
HHC LR LR
comp=Z,1μm,8.6s
HIA Hailar 15.26 90 *e*Pn **Pn 16 19 54.0 -0.9**
comp=Z,17nm,0.9s
HIA Hailar 15.26 90 *i* P **Pn 16 19 55.3 +0.4**
MDOK Medeo 15.42 244 ⇑Lg Lg 16 24 21.8
comp=Z,36nm,1.4s
OTUK Ortayu 15.62 266 ⇑Pn **Pn 16 20 00.8 +1.2**
comp=Z,5.2nm,0.8s
OTUK ⇓Lg Lg 16 24 26.9
comp=Z,51nm,1.5s
OTUK Ortayu 15.62 266 P **Pn 16 20 00.8 +1.2**
OTUK pmax pmax
comp=Z,5.0nm,0.8s
BVA0 Borovoye Array 15.70 285 P **Pn 16 20 01.0 +0.5**
BVA0 pmax pmax
comp=Z,7.0nm,0.8s
BVAR Borovoye Array 15.70 285 Pn **Pn 16 19 59.1 -1.3**
comp=Z,0.2nm,0.3s,baz=72,slow=14,SNR=18
BRVK Borovoye 15.76 285 *e*Pn **P 16 20 04.1 -1.1**
comp=Z,7.5nm,0.7s
BRVK Borovoye 15.76 285 *i* P **P 16 20 03.5 -1.7**
TKM2 Tokmak 2 16.39 245 ⇑Pn **P 16 20 12.2 -0.3**
comp=Z,15nm,1.2s
TKM2 ⇓Lg Lg 16 24 54.1
comp=Z,30nm,1.5s
LZH Lanzhou 16.61 157 *e*P **Pn 16 20 12.9 +0.4**
LZH pP P 16 20 15.0 0.0
LZH pmax pmax
comp=Z,17nm,1.0s
LZH LR LR
comp=Z,840nm,9.5s
LZH LR LR
comp=Z,870nm,10.0s
LZH LR LR
comp=Z,790nm,10.8s
FRU Bishkek 17.00 247 *e*P **P 16 20 19.0 -0.1**
FRU pmax pmax
comp=E,80nm,1.7s
NRN Naryn 17.15 241 *e*Pn **P 16 20 21.1 0.0**
comp=E,7.8nm,1.1s
NRN Naryn 17.15 241 *e*P **P 16 20 21.1 0.0**
NRN pmax pmax
comp=Z,8.0nm,1.1s
AAK Ala-Archa 17.19 246 P **P 16 20 23.9 +2.5**
comp=Z,0.3nm,0.3s,baz=68,slow=10,SNR=6.8
AAK Lg Lg 16 25 18.2
comp=Z,0.3nm,0.3s,baz=259,slow=16,SNR=4.7
AAK Ala-Archa 17.19 246 ⇑Pn **P 16 20 22.6 +1.2**
comp=Z,11nm,1.8s
AAK ⇓Lg Lg 16 25 17.9
comp=Z,32nm,1.8s
AAK Ala-Archa 17.19 246 *ce*P **P 16 20 22.4 +1.0**
AAK pmax pmax
comp=Z,21nm,1.7s
NRIK Noril'sk 18.11 350 P **Pn 16 20 29.9 -0.9**
comp=Z,0.1nm,0.3s,baz=170,slow=13,SNR=3.1
NRIK S **S 16 23 58.6 +0.3**
comp=Z,0.3nm,0.3s,baz=72,slow=20,SNR=2.0
NRIK Lg Lg 16 25 42.2
comp=Z,0.3nm,0.3s,baz=72,slow=13,SNR=2.1

BJI Beijing 18.18 122 P **Pn 16 20 31.1 -0.8**
MNAS Manas 18.43 249 ⇑Pn **Pn 16 20 39.0 +3.9**
comp=Z,13nm,1.3s
MNAS ⇑Lg Lg 16 25 59.5
comp=Z,17nm,1.5s
MNAS Manas 18.43 249 P **Pn 16 20 39.0 +3.9**
MNAS pmax pmax
comp=Z,13nm,1.3s
SFK Sufi-Kurgan 19.50 242 P **Pn 16 20 50.1 +2.0**
SFK pmax pmax
comp=Z,7.0nm,1.1s
YAK Yakutsk 20.81 47 *e*P **P 16 20 59.1 -1.6**
comp=Z,22nm,0.8s
YAK Yakutsk 20.81 47 *e*P **P 16 21 00.5 -0.2**
YAK *e**PP **sP 16 21 04.9 +0.1**
YAK *e*PPP PPP 16 21 27.9
YAK *e*S **S 16 24 54.2 +1.7**
YAK *e**SS **pS 16 25 02.7 +1.9**
YAK *e* 16 25 05.1
YAK *e*SS **SnSn 16 25 16.4 +4.1**
YAK *e*SSS SSS 16 25 33.2
YAK *e* 16 32 28.1
YAK pmax pmax
comp=Z,7.0nm,0.9s
YAK pmax pmax
comp=N,3.0nm,1.3s
YAK pmax pmax
comp=E,7.0nm,1.2s
YAK smax smax
comp=N,105nm,4.0s
YAK smax smax
comp=E,79nm,3.2s
YAK MLR MLR
comp=Z,40nm,11.0s
YAK MLR MLR
comp=N,75nm,17.0s
YAK MLR MLR
comp=E,54nm,14.0s
SVE Sverdlovsk 21.12 298 *e*P **P 16 21 05.4 +1.3**
CD2 Chengdu 21.58 162 P **P 16 21 08.2 -1.0**
CD2 pmax pmax
comp=E,30nm,0.5s
ARU Arti 22.28 297 P **P 16 21 13.4 -3.1**
comp=E,1.0nm,0.3s,baz=107,slow=19,SNR=2.2
ARU LR LR 16 30 57.2
comp=E,87nm,19.2s,baz=107,slow=39
ARU Arti 22.28 297 *e*P **P 16 21 17.2 +0.7**
comp=E,8.8nm,0.9s
ARU Arti 22.28 297 *d i*P **P 16 21 19.0 +2.5**
ARU 16 21 40.3
ARU SS Sn 16 25 59.9 +27
ARU pmax pmax
comp=Z,11nm,1.0s
KLR Kul'dur 22.72 82 P **P 16 21 21.3 +0.1**
comp=Z,0.2nm,0.8s,baz=306,slow=14,SNR=2.5
KLR Lg Lg 16 28 11.5
comp=Z,0.1nm,0.5s,baz=180,slow=20,SNR=1.7
KLR Kul'dur 22.72 82 *ce*P **P 16 21 20.1 -1.1**
AB31 Akbulak array 22.95 278 *i* P **P 16 21 23.3 -0.4**
AB31 pmax pmax
comp=Z,2.0nm,0.7s
ABKAR Akbulak array 22.95 278 *e*P **P 16 21 23.2 -0.4**
AKTO Aktyubinsk 23.75 282 P **P 16 21 32.4 +0.7**
comp=Z,7.8nm,0.7s,baz=86,slow=9.3,SNR=35
AKTO Lg Lg 16 28 43.1
comp=Z,0.6nm,0.5s,baz=174,slow=15,SNR=2.4
TIXI Tiksi 24.72 24 P **P 16 21 40.3 -0.1**
comp=Z,20nm,0.6s,baz=234,slow=5.7,SNR=75
TIXI Lg Lg 16 29 08.0
comp=Z,1.5nm,0.6s,baz=63,slow=4.5,SNR=4.0
TIXI Tiksi 24.72 24 *e*P **P 16 21 40.2 -0.2**
comp=Z,52nm,0.9s
TIXI Lg Lg 16 29 08.0
TIXI Tiksi 24.72 24 *e*P **P 16 21 40.2 -0.2**
TIXI pmax pmax
comp=Z,51nm,0.9s
USRK Ussuriysk Ar. 25.02 93 P **P 16 21 41.4 -2.0**
comp=Z,2.0nm,0.6s,baz=300,slow=6.0,SNR=5.7
WHN Wuhan 25.13 140 P **P 16 21 43.6 -0.9**
NJ2 Nanjing 25.80 131 *e*P **P 16 21 49.9 -0.6**
NJ2 pmax pmax
comp=Z,12nm,0.5s
KSAR Wonju Array Be 26.55 110 P **P 16 21 57.3 0.0**
KSAR Wonju Array Be 26.55 110 P **P 16 21 57.3 0.0**
KSRS Korea Array 26.56 110 P **P 16 21 57.3 -0.1**
comp=Z,0.6nm,0.7s,baz=325,slow=7.6,SNR=6.1
GEYT Alibeck 29.86 257 LR LR 16 35 09.9
comp=Z,63nm,19.4s,baz=235,slow=38
SEY Seymchan 31.34 47 P **P 16 22 40.4 +0.8**
comp=Z,1.0nm,0.8s,baz=246,slow=4.3,SNR=5.7
KLMR Klimovskoe 31.70 309 *e*P **P 16 22 40.3 -2.5**
KLMR pmax pmax
comp=Z,9.0nm,1.3s
KLMR Klimovskoe 31.70 309 *e*P **P 16 22 40.3 -2.5**
KLMR AMP 16 22 50.6
comp=Z,9.0nm,1.3s
CMAR Chiang Mai Arr 33.29 175 P **P 16 22 57.0 -0.1**
comp=Z,0.8nm,0.9s,baz=349,slow=9.2,SNR=3.1
CMAR LR LR 16 37 46.3
comp=Z,38nm,19.7s,baz=214,slow=39
APA Apatity 33.60 322 ⇑*i*P **P 16 22 57.0 -2.4**
APA pmax pmax
comp=Z,4.0nm,1.1s
VSR Storozhevoye 34.66 292 *e*P **P 16 23 09.0 +0.3**
VSR pmax pmax
comp=Z,6.0nm,0.4s
VORD Divnogorie 34.69 292 *e*P **P 16 23 09.1 +0.1**
VORD pmax pmax
comp=Z,10.0nm,0.7s
KBZ Khabaz 35.92 279 P **P 16 23 20.8 +1.1**
comp=Z,1.7nm,0.8s,baz=98,slow=6.1,SNR=2.5
KIV Kislovodsk 35.93 279 *e*P **P 16 23 22.5 +2.6**
KIV pmax pmax
comp=Z,7.0nm,0.9s
NEY Neytrino 36.29 278 *ce*P **P 16 23 25.0 +1.9**
NEY pmax pmax
comp=Z,1.0nm,0.8s
ARCES ARCESS Array B 36.29 326 P **P 16 23 23.1 +0.5**
comp=Z,0.7nm,0.6s,baz=74,slow=8.9,SNR=8.1
BILL Bilibino 36.41 37 *e*P **P 16 23 24.0 +0.4**
BILL *e* 16 24 43.0
BILL *e*PPP PPP 16 25 00.6
BILL pmax pmax
comp=Z,2.0nm,0.9s
BILL MLR MLR
comp=Z,66nm,15.0s
PEA0B Petropavlovsk- 36.60 63 *e*P **P 16 23 24.7 -0.7**
comp=Z,57nm,1.4s
PETK Petropavlovsk- 36.60 63 *e*P **P 16 23 24.7 -0.7**
GNI Garni 36.78 272 *ce*P **P 16 23 29.5 +2.2**
GNI pmax pmax
comp=Z,25nm,1.2s
FINES FINESS Array B 37.89 313 P **P 16 23 36.9 +0.7**
comp=Z,1.4nm,0.6s,baz=86,slow=9.7,SNR=8.2
FINES FINESS Array B 37.89 313 *i* P **P 16 23 37.0 +0.7**
FINES pmax pmax
comp=Z,1.0nm,0.6s
ANN Anapa 38.69 284 *e*P **P 16 23 43.2 +0.1**
ANN pmax pmax
comp=Z,24nm,1.3s
WSAR Wadi Sarin 40.40 240 LR LR 16 43 06.6
comp=Z,60nm,19.1s,baz=174,slow=40
AKASG Malin Array Be 40.53 296 P **P 16 23 58.3 -0.1**
comp=Z,0.5nm,0.3s,baz=56,slow=8.6,SNR=7.4
BR131 Keskin Array S 43.89 280 *e*P **P 16 24 26.5 +0.4**
BRTR Keskin Array B 43.89 280 P **P 16 24 25.4 -0.7**
comp=Z,2.3nm,0.7s,baz=210,slow=31,SNR=12
BRTR Keskin Array B 43.89 280 *i* P **P 16 24 27.7 +1.6**
BRTR pmax pmax
comp=Z,2.0nm,0.7s
HFS Hagfors 43.99 314 P **P 16 24 26.6 +0.1**
comp=Z,2.8nm,0.6s,baz=65,slow=8.1,SNR=13
BUR08 Bucovina Ar. S 44.36 294 *e*P **P 16 24 30.2 +0.5**
BURAR Bucovina Array 44.37 294 ⇓*i*P **P 16 24 31.2 +1.4**
NB2 NORSAR Subarra 44.65 316 P **P 16 24 32.1 +0.3**
comp=Z,2.0nm,0.5s,baz=61,slow=8.6
NOA NORSAR Array B 44.65 316 P **P 16 24 32.1 +0.3**
comp=Z,2.9nm,0.7s,baz=62,slow=7.8,SNR=8.3
NOA LR LR 16 44 58.7
comp=Z,27nm,19.2s,baz=50,slow=38
NBO00 NORSAR Array S 44.84 317 *e*P **P 16 24 33.4 +0.1**
TRPA Tarpa 45.59 296 ⇑*i*P **P 16 24 40.8 +1.4**
ASF Jabal al Asfar 46.73 269 P **P 16 24 49.3 +0.6**
comp=Z,2.6nm,0.6s,baz=22,slow=5.4,SNR=4.7
MMAI Mount Meron Ar 47.09 271 P **P 16 24 52.3 +0.8**
comp=Z,3.1nm,0.8s,baz=61,slow=8.9,SNR=3.4

MORC Moravsky Berou 47.42 300 ⇑*i*P **P 16 24 55.5 +1.7**
MORC Moravsky Berou 47.42 300 *e*P **P 16 24 55.2 +1.4**
VYHS Vyhne 47.44 298 *e*P **P 16 24 55.6 +1.7**
VYHS pmax pmax
comp=Z,2.0nm,0.8s
VYHS Vyhne 47.44 298 *e*P **P 16 24 55.6 +1.7**
RAYN Ar Rayn 47.66 253 *e*P **P 16 24 56.4 +0.3**
comp=Z,7.9nm,0.8s
RAYN Ar Rayn 47.66 253 P **P 16 24 56.3 +0.3**
RAYN pmax pmax
comp=Z,8.0nm,0.8s
DPC Dobruska-Polom 47.74 302 *e*P **P 16 24 57.2 +0.9**
DPC *e*pP **sP 16 25 02.3 +1.6**
DPC Dobruska-Polom 47.74 302 *e*P **P 16 24 57.2 +0.9**
DPC *e* 16 25 02.3
JAVC Velka Javorina 47.87 299 *e*P **P 16 24 59.5 +2.2**
KRUC Moravsky 48.44 300 *e*P **P 16 25 03.2 +1.5**
CLL Collm 48.93 304 *i* P **P 16 25 06.2 +0.8**
comp=Z,6.0nm,0.6s
CLL Collm 48.93 304 *e*P **P 16 25 05.9 +0.5**
comp=Z,5.3nm,0.6s
CLL Collm 48.93 304 *i* P **P 16 25 06.2 +0.8**
CLL pmax pmax
comp=Z,6.0nm,0.6s
KHC Kasperske Hory 49.90 302 *e*P **P 16 25 14.8 +1.9**
KHC *e*pP **sP 16 25 18.6 +1.3**
KHC Kasperske Hory 49.90 302 *e*P **P 16 25 14.8 +1.9**
KHC *e* 16 25 18.6
GERES GERESS Array B 50.01 301 P **P 16 25 14.5 +0.7**
comp=Z,0.9nm,0.8s,baz=52,slow=10,SNR=8.0
GERES LR LR 16 48 11.4
comp=Z,42nm,19.5s,baz=302,slow=38
KBA Koelnbreinsper 51.27 300 P **P 16 25 25.0 +1.6**
KBA pmax pmax
comp=Z,7.0nm,0.8s
ILAR Eielson Array 54.10 28 P **P 16 25 43.4 -0.5**
comp=Z,0.7nm,0.8s,baz=311,slow=3.9,SNR=5.8
INK Inuvik 54.75 20 P **P 16 25 48.3 -0.2**
comp=Z,2.1nm,0.6s,baz=353,slow=9.1,SNR=3.9
BNI Bardonecchia 56.13 301 *e*P **P 16 25 59.8 +0.8**
comp=Z,8.0nm,0.9s
BNI Bardonecchia 56.13 301 *e*P **P 16 25 59.8 +0.8**
BNI pmax pmax
comp=Z,8.0nm,0.9s
YKA Yellowknife Ar 63.56 15 P **P 16 26 47.9 -1.7**
comp=Z,0.2nm,0.6s,baz=338,slow=7.3,SNR=3.5
ES19 SONSECA Array 65.45 303 *e*P **P 16 27 02.9 +0.4**
ESDC Sonseca Array 65.50 303 P **P 16 27 02.1 -0.7**
comp=Z,1.5nm,0.7s,baz=41,slow=7.1,SNR=11
FITZ Fitzroy Crossi 74.19 151 P **P 16 27 55.0 -1.2**
comp=Z,3.2nm,0.8s,baz=315,slow=7.1,SNR=4.3
WRA Warramunga Arr 78.84 144 P **P 16 28 21.0 -1.5**
comp=Z,1.6nm,0.9s,baz=343,slow=6.2,SNR=6.7
WRA Warramunga Arr 78.84 144 P **P 16 28 21.0 -1.5**
ASAR Alice Springs 82.10 145 P **P 16 28 39.4 -0.6**
comp=Z,1.5nm,0.7s,baz=329,slow=5.3,SNR=13
AS01 Alice Springs 82.11 145 *e*P **P 16 28 39.0 -1.0**
TOA0 Torodi Ar. Sit 82.47 282 *e*P **P 16 28 42.0 -0.3**
TORD Torodi Ar. Bea 82.47 282 P **P 16 28 42.3 +0.1**
comp=Z,1.6nm,0.8s,baz=32,slow=6.1,SNR=7.9
CMB Columbia Colle 85.09 28 *e*P **P 16 28 55.3 -0.2**
comp=Z,17nm,1.9s
CMB Columbia Colle 85.09 28 *e*P **P 16 28 55.3 -0.2**
CMB pmax pmax
comp=Z,17nm,1.9s
NVAR Mina Array Bea 85.32 26 P **P 16 28 56.6 -0.1**
comp=Z,0.2nm,0.3s,baz=329,slow=0.5,SNR=3.6

NEIC ***06*** *16:27:14.5±0.0, 52°.71N×169°.50W, h5km, ML3.2(AEIC), After AEIC.*
IDC ***06*** *16:27:16.8±7.4, 52°.90N×168°.74W, h0km, mb3.6/3, mb1 3.8/5, mb1mx3.3/87, mbtmp3.5/5, ML3.0/2, MS3.1/1, Ms1 3.1/1, ms1mx2.4/72, Error ellipse: s-maj=134.8km s-min=45.3km az=93.0*

ISC 06 16:27:13.9±1.8, 52.7N±0°.1×169°.51W±0°.06, h3km±12km, n36, σ1.9/39/35, mb3.4/3, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**0.46**	**59**	P	**Pb**	**16 27 24.7**	**+0.1**
NIKH				S	**Sb**	**16 27 31.7**	**0.0**
OKWE	**Okmok W'ng Wal**	**1.06**	**46**	P	**Pg**	**16 27 34.9**	**+0.8**
OKAK	**Okmok**	**1.09**	**39**	P	**Pg**	**16 27 33.5**	**-1.2**
OKTU	**Okmok Mt. Tuli**	**1.09**	**53**	P	**Pg**	**16 27 35.1**	**+0.3**
OKID	**Okmok Mt. Idak**	**1.26**	**53**	P	**Pg**	**16 27 37.9**	**-0.1**
OKID				S	**Sg**	**16 27 55.3**	**+1.0**
MSOM	**Makushin Julie**	**1.88**	**54**	P	**Pn**	**16 27 47.2**	**+0.4**
MCIR	**Makushin Cirqu**	**1.98**	**51**	P	**Pn**	**16 27 49.6**	**+1.3**
MSW	**Makushin Switc**	**2.01**	**53**	P	**Pn**	**16 27 49.2**	**+0.5**
MTBL	**Makushin Table**	**2.09**	**53**	P	**Pn**	**16 27 50.5**	**+0.6**
UNV	**Unalaska Valle**	**2.12**	**57**	P	**Pn**	**16 27 50.1**	**0.0**
UNV				S	**Sn**	**16 28 16.9**	**+0.1**
AKMO	**Akutan Morgan**	**2.49**	**56**	P	**Pn**	**16 27 56.5**	**+1.3**
AHB	**Akutan Harbor**	**2.60**	**57**	P	**Pn**	**16 27 58.0**	**+1.2**
AKSA	**Akutan Strait**	**2.67**	**57**	P	**Pn**	**16 27 58.6**	**+0.9**
AKSA				S	**Sn**	**16 28 33.4**	**+2.9**
KOFP	**Korovin Flat P**	**2.84**	**262**	P	**Pn**	**16 28 00.8**	**+0.7**
KOKL	**Mount Kliuchef**	**2.90**	**264**	P	**Pn**	**16 28 01.6**	**+0.8**
ATKA	**Atka Island**	**2.92**	**261**	P	**Pn**	**16 28 00.8**	**-0.2**
ATKA				S	**Sb**	**16 28 40.4**	**-2.0**
WESP	**Westdahl Peak**	**3.35**	**56**	P	**Pn**	**16 28 07.4**	**+0.3**
WESE	**West Dahl East**	**3.41**	**57**	P	**Pn**	**16 28 08.6**	**+0.8**
GSMY	**Great Sitkin M**	**4.07**	**263**	P	**Pn**	**16 28 17.9**	**+1.0**
GSTD	**Great Sitkin T**	**4.12**	**263**	P	**Pn**	**16 28 18.7**	**+1.0**
GSTD				S	**Sn**	**16 29 09.6**	**+3.2**
FALS	**False Pass**	**4.19**	**57**	P	**Pn**	**16 28 20.0**	**+1.5**
ADAG	**Mount Adagdak**	**4.42**	**263**	P	**Pn**	**16 28 23.5**	**+1.8**
SPIA	**Saint Paul Isl**	**4.47**	**355**	P	**Pn**	**16 28 23.6**	**+1.3**
KIKV	**Kanaga Island**	**4.78**	**263**	P	**Pn**	**16 28 28.5**	**+1.8**
KDAK	**Kodiak Island**	**10.88**	**56**	**Pn**	**Pn**	**16 29 50.4**	**+0.1**
	0.2nm,0.3s,baz=265,slow=11,SNR=2.7						
ILAR	**Eielson Array**	**16.69**	**35**	Pn	**Pn**	**16 31 04.9**	**-3.5**
	0.0nm,0.3s,baz=222,slow=10,SNR=4.3						
YKA	**Yellowknife Ar**	**30.06**	**49**	P	**P**	**16 33 22.9**	**-0.9**
	0.3nm,0.6s,baz=275,slow=7.3,SNR=3.7						
H11N2	**WAKE ISLAND Hy**	**37.69**	**218**	T	T	17 14 20.7	
	baz=24,slow=76,SNR=12						
H11N3	**WAKE ISLAND Hy**	**37.70**	**218**	T	T	17 14 22.6	
	baz=24,slow=76,SNR=20						
H11N1	**WAKE ISLAND Hy**	**37.71**	**218**	T	T	17 14 21.8	
	baz=24,slow=76,SNR=16						
H11S1	**WAKE ISLAND Hy**	**38.88**	**218**	T	T	17 15 50.1	
	baz=23,slow=76,SNR=209						
H11S2	**WAKE ISLAND Hy**	**38.90**	**218**	T	T	17 15 52.2	
	baz=23,slow=76,SNR=161						
H11S3	**WAKE ISLAND Hy**	**38.90**	**218**	T	T	17 15 52.0	
	baz=23,slow=76,SNR=146						
MJAR	**Matsushiro Arr**	**39.63**	**267**	LR	LR	16 50 41.3	
	comp=Z,30nm,22.0s,baz=150,slow=35						
PDAR	**Pinedale Array**	**40.42**	**79**	P	**P**	**16 34 52.9**	**-0.4**
	0.4nm,0.4s,baz=332,slow=5.2,SNR=3.4						
TXAR	**Lajitas Array**	**52.82**	**89**	P	**P**	**16 36 30.3**	**-0.2**
	0.7nm,0.6s,baz=297,slow=5.1,SNR=8.9						

BER ***06*** *16:40:12.4±0.8, 71°.27N×9°.59W, h0km±218km, ML2.6*

ISC 06 16:40:06.3±2.4, 71°.5N±0°.3×9°.9W±0°.4, h10km, n5, σ0.15/7, 1C, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNW	**Jan Mayen West**	**0.68**	**135**	⇑*i*P	**Pn**	**16 40 22.1**	**+0.2**
JMIC	**Jan Mayen**	**0.69**	**139**	*e*P	**Pn**	**16 40 22.0**	**-0.2**
JMIC				*e*S	**Sg**	**16 40 28.8**	**0.0**
JMIC				IAML		16 40 39.7	
	comp=Z,228nm,0.4s						
JMI	**Jan Mayen**	**0.70**	**147**	*e*P	**Pn**	**16 40 22.3**	**+0.1**
JNE	**Jan Mayen East**	**0.74**	**135**	*e*P	**Pn**	**16 40 22.8**	**+0.1**
JNE				*e*S	**Sb**	**16 40 31.2**	**-0.1**
JNE				IAML		16 40 32.1	
	comp=Z,338nm,0.1s						
DAG	**Danmarks Havn**	**5.80**	**340**	*i* P	Pn	16 41 37.3	+5.2
DAG				*i* S	**Sn**	**16 42 38.5**	**0.0**

BJI ***06*** *16:55:55.3, 1°.10N×126°.26E, h10km, mb4.7/55, mB5.1/34, Ms4.8/25, Ms7 4.5/14*
ISCJB ***06*** *16:55:57.8±0.2, 1°.47N±0°.03×126°.37E±0°.03, h16km, mb4.7/115, MS4.0/25, Error ellipse: s-maj=5.4km s-min=3.1km az=150.2*
IDC ***06*** *16:55:57.2±0.4, 1°.45N×126°.31E, h0km, mb4.6/39,*

mb1 4.6/43,mb1mx4.5/59,mbtmp4.5/43,ML3.9/4,MS3.8/19, Ms1 3.8/19,ms1mx3.5/59,Error ellipse: s-maj=15.6km s-min=8.6km az=73.0

NEIC ***06*** *16:55:58.2±0.2,1.49N×126.35E,h10km,mb4.9/42,Error ellipse: s-maj=5.1km s-min=3.3km az=67.0*

MOS ***06*** *16:56:00.1±1.2,1.52N×126.39E,h33km,mb5.1/29,Error ellipse: s-maj=10.8km s-min=5.5km az=116.3*

DJA ***06*** *16:56:02.2±0.8,2.7N±3.3×12.7E±.,h14km±6km,M4.7/16, mB5.2/12,mb5.0/14,MLv4.7/16,Mw(mB)4.5/12*

ISC 06 16:55:59.3±0.8,1.55N±0.03×126.44E±0.05,h13km±4km, n256,σ1°62/274,mb4.8/115,MS4.0/26,10C-11D,Northern Moluccа Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.20**	**130**	*e*Pg	**Pn**	**16 56 21.0**	**-0.8**
SGSI	**Sangihe**	**2.31**	**337**	P	**Pb**	**16 56 39.2**	**-1.7**
LBMI	**Labuha**	**2.41**	**154**	P	**Pn**	**16 56 38.7**	**+0.2**
LBMI				S	**Sn**	**16 57 10.0**	**+2.0**
LBMI				Sg	**Sg**	**16 57 21.0**	**+4.0**
KMSI	**Cibinong**	**2.65**	**249**	P	**Pb**	**16 56 44.8**	**-1.8**
SANI	**Sanana**	**3.60**	**187**	P	**Pn**	**16 56 56.9**	**+2.0**
MRSI	**Marisa**	**4.63**	**257**	P	**Pn**	**16 57 12.2**	**+3.2**
GSPH	**General Santos**	**4.75**	**342**	⇑*i*P	**Pn**	**16 57 13.1**	**+2.3**
NLAI	**Namlea**	**4.80**	**172**	P	**Pn**	**16 57 11.9**	**+0.6**
SKMP	**Bagumbayan, Su**	**5.29**	**339**	*e*P	**Pn**	**16 57 20.0**	**+1.9**
SKMP				*e*S	**Sn**	**16 58 20.9**	**+1.9**
APSI	**Ampana**	**5.38**	**243**	P	Pn	16 57 23.8	+4.5
	306nm,0.8s,4μm1.3nm						
SIJI	**Sorong**	**5.39**	**116**	Pn	**Pn**	**16 57 19.9**	**+0.5**
	1.7nm,0.3s,baz=183,slow=22,SNR=10						
SIJI				LR	LR	16 59 32.2	
	comp=Z,1μm,19.7s,baz=305,slow=39						
MSAI	**Masohi**	**5.46**	**153**	P	**Pn**	**16 57 23.6**	**+3.2**
AAI	**Ambon**	**5.49**	**161**	P	**Pn**	**16 57 23.9**	**+3.1**
	177nm,0.8s,0.7nm						
DAV	**Davao City (W)**	**5.55**	**351**	Pn	**Pn**	**16 57 19.3**	**-2.4**
	46nm,0.3s,baz=225,slow=13,SNR=2.6						
DAV	**Davao City (W)**	**5.55**	**351**	*e*Pn	**Pn**	**16 57 19.4**	**-2.3**
CTBH	**Cotabato--PC H**	**6.05**	**339**	⇓*e*P	**Pn**	**16 57 31.8**	**+3.2**
CTBH				*i* S	**Sn**	**16 58 40.8**	**+3.2**
BUKP	**Musuan**	**6.44**	**348**	*e*P	Pn	16 57 40.1	+6.1
BUKP				*e*S	**Sb**	**16 59 03.0**	**-5.4**
MPSI	**Mapaga**	**6.65**	**260**	P	**Pn**	**16 57 41.0**	**+4.1**
	44nm,0.9s,694nm						
KDI	**Kendari**	**6.67**	**215**	P	**Pn**	**16 57 40.8**	**+3.7**
	97nm,1.0s,2μm						
PAGZ	**Pagadian**	**6.96**	**334**	*e*P	**Pn**	**16 57 42.8**	**+1.7**
PCI	**Palu**	**7.04**	**250**	P	Pn	16 57 46.5	+4.3
FAKI	**Fak Fak**	**7.30**	**127**	P	**Pn**	**16 57 49.3**	**+3.5**
	198nm,1.1s,2μm						
FAKI	**Fak Fak**	**7.30**	**127**	*e*Pn	**Pn**	**16 57 47.2**	**+1.4**
BUTP	**Butuan**	**7.42**	**354**	*e*P	Pb	16 57 59.2	-8.8
TTSI	**Tana Toraja**	**8.04**	**235**	P	**Pn**	**16 57 59.1**	**+3.2**
	120nm,0.9s,1μm						
RKPI	**Ransiki, Papua**	**8.31**	**111**	P	**Pn**	**16 58 01.0**	**+1.4**
	46nm,1.0s,812nm						
SPSI	**Sidrap Palu**	**8.63**	**231**	P	Pn	16 58 08.8	+4.8
	43nm,0.5s						
BKSI	**Bulukumba**	**9.30**	**223**	P	Pn	16 58 18.4	+5.3
	32nm,0.8s,422nm						
BAKI	**Biak**	**10.04**	**106**	P	**Pn**	**16 58 26.5**	**+3.2**
SRPI	**Serui, Papua**	**10.37**	**109**	P	**Pn**	**16 58 29.7**	**+1.9**
SOEI	**Soe**	**11.44**	**191**	*e*Pn	**Pn**	**16 58 39.6**	**-3.0**
BATI	**Baumata**	**12.00**	**193**	Pn	**Pn**	**16 58 48.9**	**-1.3**
	2.4nm,0.3s,baz=311,slow=15,SNR=2.5						
TGY	**Tagaytay City**	**13.61**	**337**	LR	LR	17 04 43.6	
	comp=Z,582nm,21.4s,baz=149,slow=39						
SBUM	**Sibu**	**14.24**	**274**	*e*Pn	**Pn**	**16 59 18.4**	**-2.5**
JAY	**Jayapura**	**14.82**	**106**	Pn	**Pn**	**16 59 28.9**	**+0.1**
	0.1nm,0.3s,baz=270,slow=10,SNR=2.8						
MTN	**Manton Dam**	**15.04**	**162**	*e*Pn	**Pn**	**16 59 30.3**	**-1.4**
JAGI	**Jajag, Banyuwa**	**15.79**	**231**	*e*Pn	**Pn**	**16 59 39.3**	**-2.2**
	90nm,1.0s						
KSM	**Kuching**	**16.13**	**270**	*e*Pn	**Pn**	**16 59 44.5**	**-1.5**
	38nm,1.0s						
FITZ	**Fitzroy Crossi**	**19.54**	**182**	P	**P**	**17 00 25.4**	**-1.4**
	0.6nm,0.3s,baz=6.0,slow=3.2,SNR=17						
FITZ				LR	LR	17 08 48.2	
	comp=Z,157nm,19.5s,baz=15,slow=40						
FITZ	**Fitzroy Crossi**	**19.54**	**182**	*e*P	**P**	**17 00 25.6**	**-1.2**
	46nm,1.5s						
LEM	**Lembang**	**20.55**	**246**	P	**P**	**17 00 36.6**	**-1.4**
	3.9nm,0.3s,baz=42,slow=10,SNR=1.8						
TWG	**Pinlang**	**21.78**	**347**	*e*P	**P**	**17 00 48.9**	**-2.2**
	78nm,0.8s						
GUMO	**Guam**	**21.81**	**56**	LR	LR	17 08 39.6	
	comp=Z,143nm,21.2s,baz=274,slow=35						
YULB	**Yu-li**	**22.28**	**347**	*e*P	**P**	**17 00 54.2**	**-2.3**
	27nm,1.0s						
TPUB	**Ta-pu**	**22.35**	**346**	*e*P	**P**	**17 00 54.9**	**-2.2**
	142nm,1.3s						
WRA	**Warramunga Arr**	**22.72**	**160**	P	**P**	**17 00 59.4**	**-1.7**
	34nm,0.7s,baz=339,slow=11,SNR=212						
WRA				PcP	**PcP**	**17 04 53.5**	**+0.1**
	0.8nm,0.8s,baz=335,slow=2.0,SNR=3.0						
WRA				S	**S**	**17 05 07.2**	**-2.3**
	2.8nm,0.9s,baz=341,slow=18,SNR=3.8						
WB2	**Warramunga Arr**	**22.72**	**160**	*e*P	**P**	**17 00 58.9**	**-2.3**
SSLB	**Suanglung**	**22.74**	**347**	*e*P	**P**	**17 01 00.5**	**-0.9**
	31nm,0.9s						
PMG	**Port Moresby**	**23.33**	**118**	LR	LR	17 14 00.7	
	comp=Z,483nm,18.1s,baz=280,slow=46						
YHNB	**Yeheng**	**23.50**	**348**	*e*P	**P**	**17 01 08.8**	**-0.4**
	54nm,1.2s						
QIZ	**Qiongzhong**	**23.80**	**318**	P	**P**	**17 01 14.0**	**+1.9**
QIZ				S	**S**	**17 05 30.0**	**+2.4**
QIZ				pmax	pmax		
	comp=Z,120nm,1.9s						
QIZ				LR	LR		
	comp=N,360nm,12.6s						
QIZ				LR	LR		
	comp=E,270nm,14.5s						
UBPT	**Khong Chiam**	**24.79**	**305**	P	**P**	**17 01 23.8**	**+2.6**
	19nm,2.1s						
JOW	**Kunigami**	**25.20**	**4**	P	**P**	**17 01 27.1**	**+2.3**
	24nm,0.7s,baz=188,slow=4.4,SNR=7.1						
JOW	**Kunigami**	**25.20**	**4**	*e*P	**P**	**17 01 25.7**	**+0.9**
	76nm,1.0s						
AS31	**Alice Springs**	**26.09**	**164**	*e*P	**P**	**17 01 32.5**	**-0.5**
	9.9nm,0.7s						
ASAR	**Alice Springs**	**26.09**	**164**	P	**P**	**17 01 32.2**	**-0.8**
	9.3nm,0.5s,baz=347,slow=7.4,SNR=89						
ASAR				PcP	**PcP**	**17 05 00.8**	**+0.1**
	1.7nm,0.7s,baz=350,slow=2.1,SNR=4.9						
ASAR				S	**S**	**17 06 06.0**	**+1.7**
	0.6nm,0.8s,baz=341,slow=20,SNR=2.7						
AS01	**Alice Springs**	**26.10**	**164**	*e*P	**P**	**17 01 32.3**	**-0.8**
RABL	**Rabaul**	**26.33**	**103**	*e*P	**P**	**17 01 34.5**	**-0.8**
	27nm,0.6s						
PSI	**Prapat**	**27.53**	**273**	P	**P**	**17 01 45.5**	**-0.6**
	10nm,0.8s,baz=180,slow=15,SNR=3.2						
PSI				LR	LR	17 13 32.7	
	comp=Z,211nm,20.7s,baz=90,slow=38						
CHAI	**Chaiyaphum**	**28.01**	**302**	P	**P**	**17 01 52.5**	**+2.2**
	6.2nm,0.8s						
NONG	**Nongkai**	**28.15**	**307**	P	P	17 01 57.2	+5.6
	20nm,0.8s						
CTA	**Charters Tower**	**28.98**	**139**	P	**P**	**17 01 58.9**	**0.0**
	1.5nm,0.2s,baz=306,slow=13,SNR=2.4						
CTA				PcP	**PcP**	**17 05 07.8**	**+0.1**
	3.4nm,0.6s,baz=18,slow=3.2,SNR=2.3						
PBKT	**Sadao Pong**	**29.18**	**302**	*e*P	**P**	**17 01 60.0**	**-0.8**
	5.9nm,0.9s						
PHIT	**Phitsanulok**	**29.94**	**303**	P	**P**	**17 02 10.9**	**+3.4**
	11nm,0.9s,328nm						
NANT	**Nan**	**30.51**	**306**	P	**P**	**17 02 14.2**	**+1.7**
	6.5nm,0.7s,66nm						
WHN	**Wuhan**	**31.04**	**339**	⇑P	**P**	**17 02 20.3**	**+3.3**
WHN				LR	LR		
	comp=Z,1μm,25.7s						
NJ2	**Nanjing**	**31.18**	**347**	*e*P	**P**	**17 02 17.0**	**-1.2**
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
GYA	**Guiyang**	**31.23**	**324**	P	**P**	**17 02 20.6**	**+1.7**
GYA				PP	**PnPn**	**17 03 23.4**	**+2.5**
GYA				PcP	**PcP**	**17 05 14.5**	**+0.9**
GYA				S	**S**	**17 07 27.3**	**+2.1**
GYA				SS	**SnSn**	**17 09 13.0**	**+5.2**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,5.2s						
GYA				LR	LR		
	comp=N,520nm,16.2s						
GYA				LR	LR		
	comp=E,560nm,17.9s						
GYA				LR	LR		
	comp=Z,540nm,17.4s						
JNU	**Nakatsue**	**31.68**	**7**	P	**P**	**17 02 23.6**	**+0.9**
	5.9nm,0.9s,baz=187,slow=2.7,SNR=4.1						
JNU	**Nakatsue**	**31.68**	**7**	*e*P	**P**	**17 02 23.0**	**+0.3**
	19nm,1.0s						
CM01	**Chiang Mai Arr**	**31.75**	**304**	*e*P	**P**	**17 02 21.9**	**-1.5**
CMAR	**Chiang Mai Arr**	**31.78**	**304**	P	**P**	**17 02 23.8**	**+0.1**
	1.9nm,0.9s,baz=125,slow=7.4,SNR=12						
CMAR				PcP	**PcP**	**17 05 15.6**	**+0.6**
	0.4nm,0.3s,baz=150,slow=2.2,SNR=2.6						
CMAR				LR	LR	17 16 07.8	
	comp=Z,88nm,18.5s,baz=115,slow=38						
CHTO	**Chiang Mai**	**31.95**	**304**	P	**P**	**17 02 27.8**	**+2.6**
	37nm,1.2s						
CHTO	**Chiang Mai**	**31.95**	**304**	*e*P	**P**	**17 02 23.8**	**-1.4**
	8.0nm,1.1s						
KMI	**Kunming**	**32.75**	**318**	P	**P**	**17 02 36.5**	**+4.1**
KMI				pP	sP	17 02 42.7	+4.7
KMI				sP	pP	17 02 46.3	+10
KMI				PP	**PP**	**17 03 47.2**	**+0.7**
KMI				S	**S**	**17 07 53.3**	**+4.1**
KMI				pmax	pmax		
	comp=Z,15nm,1.5s						
KMI				pmax	pmax		
	comp=Z,110nm,3.5s						
KMI				LR	LR		
	comp=N,180nm,13.9s						
KMI				LR	LR		
	comp=E,290nm,21.8s						
ENH	**Enshi**	**32.79**	**332**	*e*P	**P**	**17 02 31.5**	**-0.9**
	29nm,0.8s						
TJN	**Taejon**	**34.67**	**1**	*i* P	**P**	**17 02 46.8**	**-1.8**
NWAO	**Narrogin (SRO)**	**35.38**	**193**	P	**P**	**17 02 53.9**	**-0.9**
	10nm,0.9s,baz=263,slow=9.5,SNR=4.8						
KSAR	**Wonju Array Be**	**35.74**	**2**	P	**P**	**17 03 00.1**	**+2.1**
KSAR				PcP	**PcP**	**17 05 26.1**	**+0.2**
KSRS	**Korea Array**	**35.76**	**2**	P	**P**	**17 03 00.1**	**+2.0**
	5.6nm,0.9s,baz=182,slow=9.7,SNR=13						
KSRS				PcP	**PcP**	**17 05 26.1**	**+0.2**
	0.5nm,0.5s,baz=200,slow=2.6,SNR=2.8						
STKA	**Stephens Creek**	**36.22**	**158**	P	**P**	**17 03 00.9**	**-1.1**
	6.4nm,0.7s,baz=338,slow=8.7,SNR=7.6						
STKA				PcP	**PcP**	**17 05 27.0**	**-0.4**
	3.3nm,0.7s,baz=342,slow=3.2,SNR=3.2						
STKA	**Stephens Creek**	**36.22**	**158**	*e*P	**P**	**17 02 59.7**	**-2.3**
	3.4nm,1.1s						
STKA				PcP	**PcP**	**17 05 27.0**	**-0.4**
STKA	**Stephens Creek**	**36.22**	**158**	*e*P	**P**	**17 02 59.7**	**-2.3**
STKA						17 05 27.0	
STKA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
XAN	**Xi'an**	**36.24**	**335**	P	**P**	**17 03 01.8**	**-0.5**
XAN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,140nm,4.3s						
CD2	**Chengdu**	**36.25**	**326**	P	**P**	**17 03 02.6**	**+0.1**
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
CD2				LR	LR		
	comp=Z,460nm,6.0s						
CD2				LR	LR		
	comp=Z,340nm,15.5s						
MAJO	**Matsushiro**	**36.48**	**16**	P	**P**	**17 03 02.9**	**-1.5**
	comp=Z,14nm,0.9s						
MAJO	**Matsushiro**	**36.48**	**16**	*i* P	**P**	**17 03 03.3**	**-1.0**
MAJO				pmax	pmax		
	comp=Z,6.0nm,1.2s						
MAT	**Matsushiro**	**36.48**	**16**	P	**P**	**17 03 08.4**	**+4.1**
MJAR	**Matsushiro Arr**	**36.48**	**16**	P	**P**	**17 03 04.1**	**-0.2**
	comp=Z,4.9nm,0.8s,baz=191,slow=10,SNR=5.0						
MJAR				LR	LR	17 17 05.3	
	comp=Z,103nm,21.7s,baz=190,slow=35						
BJT	**Baijiatuau**	**39.42**	**348**	*e*P	**P**	**17 03 29.8**	**+0.8**
	comp=Z,23nm,1.0s						
BJT	**Baijiatuau**	**39.42**	**348**	*e*P	**P**	**17 03 29.8**	**+0.8**
BJT				pmax	pmax		
	comp=Z,23nm,1.0s						
BJI	**Beijing**	**39.44**	**348**	⇓*i*P	**P**	**17 03 31.4**	**+2.3**
BJI				pmax	pmax		
	comp=Z,18nm,1.1s						
LZH	**Lanzhou**	**40.25**	**331**	*e*P	**P**	**17 03 36.8**	**+0.6**
LZH				pP	pP	17 03 38.9	-1.3
LZH				pmax	pmax		
	comp=Z,31nm,1.3s						
LZH				pmax	pmax		
	comp=Z,160nm,4.6s						
LZH				LR	LR		
	comp=Z,370nm,10.6s						
LZH				LR	LR		
	comp=Z,470nm,15.4s						
LZH				LR	LR		
	comp=Z,580nm,15.4s						
SHL	**Shillong**	**40.97**	**309**	*e*P	**P**	**17 03 41.2**	**-1.1**
	comp=Z,14nm,0.8s						
SHL	**Shillong**	**40.97**	**309**	*e*P	**P**	**17 03 41.2**	**-1.1**
SHL				pmax	pmax		
	comp=Z,14nm,0.8s						
MSHR	**Mys Shultsa**	**41.07**	**5**	*i* P	**P**	**17 03 41.3**	**-1.3**
HHC	**Hu-ho-hao-te**	**41.38**	**343**	*e*P	**P**	**17 03 47.2**	**+1.8**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,100nm,4.2s						
HHC				LR	LR		
	comp=Z,1μm,13.8s						
HHC				LR	LR		
	comp=Z,1μm,11.2s						
HHC				LR	LR		
	comp=Z,1μm,13.0s						
USRK	**Ussuriysk Ar.**	**42.76**	**6**	P	**P**	**17 03 58.1**	**+1.7**
	comp=Z,2.3nm,0.7s,baz=205,slow=6.4,SNR=3.2						
MDJ	**Mudanjiang**	**42.98**	**3**	P	**P**	**17 03 59.8**	**+1.6**
MDJ				pmax	pmax		
	comp=Z,23nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,210nm,4.3s						
MDJ	**Mudanjiang**	**42.98**	**3**	*e*P	**P**	**17 03 57.4**	**-0.8**
	comp=Z,17nm,0.9s						
LSA	**Lhasa**	**43.69**	**313**	*e*P	**P**	**17 04 04.8**	**0.0**
	comp=Z,55nm,1.7s						
LSA	**Lhasa**	**43.69**	**313**	*e*P	**P**	**17 04 04.8**	**0.0**
LSA				pmax	pmax		
	comp=Z,55nm,1.7s						
ASAJ	**Asahikawa**	**44.75**	**17**	P	**P**	**17 04 13.9**	**+1.5**
	comp=Z,3.5nm,0.8s,baz=188,slow=7.1,SNR=4.2						
ASAJ				LR	LR	17 22 41.5	
	comp=Z,148nm,21.3s,baz=206,slow=36						
GTA	**Gaotai**	**44.83**	**330**	*e*P	**P**	**17 04 12.9**	**-0.5**
GTA				pP	pP	17 04 17.3	-0.1
GTA				sP	sP	17 04 20.2	+1.2
GTA				PcP	**PcP**	**17 05 56.2**	**+1.0**
GTA				S	**S**	**17 10 50.3**	**-0.4**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,52nm,5.5s						
GTA				LR	LR		
	comp=Z,93nm,15.5s						
GTA				LR	LR		
	comp=Z,130nm,13.1s						
ODAN	**Odare**	**45.13**	**307**	*e*P	**P**	**17 04 16.3**	**+0.2**
	comp=Z,32nm,1.1s						
DZM	**Mont Dzumac**	**45.55**	**123**	P	**P**	**17 04 19.9**	**+0.6**
	comp=Z,10nm,1.0s,baz=270,slow=14,SNR=4.5						
DZM				LR	LR	17 25 39.8	
	comp=Z,181nm,18.1s,baz=326,slow=39						
RAMN	**Ramite**	**45.80**	**307**	*e*P	**P**	**17 04 21.8**	**+0.4**
	comp=Z,82nm,1.2s						
PALK	**Pallekele**	**45.94**	**279**	LR	LR	17 24 21.5	
	comp=Z,120nm,20.7s,baz=131,slow=37						
JIRN	**Jiri**	**46.44**	**308**	*e*P	**P**	**17 04 25.7**	**-0.9**
GUN	**Gumba**	**46.80**	**308**	*e*P	**P**	**17 04 28.6**	**-0.8**
	comp=Z,18nm,0.4s						
PKIN	**Phulchoki**	**47.03**	**307**	*e*P	**P**	**17 04 31.3**	**+0.1**
KKN	**Kakani**	**47.22**	**307**	*e*P	**P**	**17 04 31.9**	**-0.7**
	comp=Z,8.3nm,0.5s						
DMN	**Daman**	**47.28**	**307**	*e*P	**P**	**17 04 33.1**	**0.0**
YSS	**Yuzh-Sakhalins**	**47.41**	**15**	*i* P	**P**	**17 04 33.1**	**-0.3**
YSS				pmax	pmax		
	comp=Z,11nm,1.1s						
GKN	**Gorkha**	**47.83**	**307**	*e*P	**P**	**17 04 36.8**	**-0.4**
	comp=Z,60nm,1.4s						
KOLN	**Koldanda**	**48.55**	**307**	*e*P	**P**	**17 04 42.1**	**-0.8**
	comp=Z,24nm,0.6s						
DANN	**Dangsing**	**48.67**	**307**	*e*P	**P**	**17 04 42.8**	**-1.1**
	comp=Z,40nm,0.7s						
ULN	**Ulaanbaatar**	**49.10**	**343**	*e*P	**P**	**17 04 47.1**	**+0.5**
	comp=Z,7.4nm,0.8s						
ULN	**Ulaanbaatar**	**49.10**	**343**	*i* P	**P**	**17 04 44.9**	**-1.8**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
PYUN	**Piuthan**	**49.18**	**307**	*e*P	**P**	**17 04 47.0**	**-0.7**
	comp=Z,151nm,1.3s						
SONM	**Songino Array**	**49.27**	**342**	P	**P**	**17 04 48.5**	**+0.6**
	comp=Z,2.1nm,0.5s,baz=155,slow=7.7,SNR=11						
SONM				LR	LR	17 27 29.6	
	comp=Z,124nm,19.6s,baz=154,slow=38						
SONA1	**Songino Array**	**49.28**	**342**	*e*P	**P**	**17 04 47.7**	**-0.3**
CIT	**Chita**	**51.45**	**350**	*e*P	**P**	**17 05 05.6**	**+1.4**
CIT				pmax	pmax		
	comp=Z,76nm,1.6s						
ZEA	**Zeya**	**52.02**	**1**	*e*P	**P**	**17 05 07.0**	**-1.4**
ZEA				pmax	pmax		
	comp=Z,14nm,1.2s						
ZAK	**Zakamensk**	**52.48**	**341**	*e*P	**P**	**17 05 12.3**	**+0.2**
ZAK				*e*		17 06 23.6	
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
TLY	**Talaya**	**53.51**	**343**	*i* P	**P**	**17 05 18.5**	**-1.0**
TLY				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MOY	**Mondy**	**54.33**	**341**	*e*P	**P**	**17 05 27.6**	**+2.0**
WMQ	**Urumqi**	**54.35**	**326**	P	**P**	**17 05 27.7**	**+1.8**
WMQ				pP	pP	17 05 30.7	+0.7
WMQ				sP	sP	17 05 33.6	+2.0
WMQ				pmax	pmax		
	comp=Z,33nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,180nm,3.8s						
WMQ				LR	LR		
	comp=Z,230nm,29.1s						
WMQ				LR	LR		
	comp=Z,190nm,24.7s						
WMQ				LR	LR		
	comp=Z,260nm,23.3s						
PETK	**Petropavlovsk-**	**57.55**	**22**	P	**P**	**17 05 49.6**	**+1.1**
	comp=Z,2.0nm,0.5s,baz=176,slow=4.5,SNR=11						
PDGK	**Podgornoye**	**58.92**	**321**	P	**P**	**17 05 57.8**	**-0.7**
PDGK				pmax	pmax		
	comp=Z,12nm,1.3s						
MK01	**Makanchi Array**	**59.17**	**326**	*e*P	**P**	**17 05 59.5**	**-0.5**
MK31	**Makanchi Array**	**59.19**	**326**	*e*P	**P**	**17 05 59.7**	**-0.4**
MK31	**Makanchi Array**	**59.19**	**326**	*e*P	**P**	**17 05 59.7**	**-0.4**
MKAR	**Makanchi Array**	**59.19**	**326**	P	**P**	**17 06 00.1**	**-0.1**
	comp=Z,4.2nm,0.5s,baz=120,slow=8.0,SNR=109						
MKAR				LR	LR	17 32 24.4	
	comp=Z,143nm,21.9s,baz=64,slow=37						
MKAR	**Makanchi Array**	**59.19**	**326**	*e*P	**P**	**17 05 59.7**	**-0.4**
	comp=Z,39nm,0.6s						
MKAR	**Makanchi Array**	**59.19**	**326**	*ce*P	**P**	**17 05 59.9**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.4s						
MAKZ	**Makanchi**	**59.37**	**326**	*e*P	**P**	**17 06 00.9**	**-0.5**
	comp=Z,12nm,1.0s						
MAKZ	**Makanchi**	**59.37**	**326**	*e*P	**P**	**17 06 00.9**	**-0.5**
MAKZ				pmax	pmax		
	comp=Z,12nm,1.0s						
KSH	**Kashi**	**59.39**	**316**	P	**P**	**17 06 04.5**	**+2.7**
KSH				pP	sP	17 06 08.3	+0.7
KSH				PcP	**PcP**	**17 06 53.1**	**+3.4**
KSH				S	**S**	**17 14 11.5**	**+0.8**
KSH				sS	sS	17 14 19.3	+1.7
KSH				SS	**SS**	**17 18 06.6**	**+0.8**
KSH				pmax	pmax		
	comp=Z,420nm,4.8s						
KSH				LR	LR		
	comp=Z,260nm,5.2s						
KSH				LR	LR		
	comp=Z,220nm,5.7s						
KSH				LR	LR		
	comp=Z,260nm,5.0s						
NRN	**Naryn**	**60.24**	**318**	*e*P	**P**	**17 06 07.7**	**-0.2**
	comp=Z,3.9nm,0.9s						
NRN	**Naryn**	**60.24**	**318**	*e*P	**P**	**17 06 07.7**	**-0.2**
NRN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
YAK	**Yakutsk**	**60.38**	**2**	*e*P	**P**	**17 06 08.4**	**+0.4**
	comp=Z,32nm,0.9s						
YAK	**Yakutsk**	**60.38**	**2**	*e*P	**P**	**17 06 08.0**	**0.0**
YAK				pmax	pmax		
	comp=Z,18nm,0.9s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.5s						
MA2	**Magadan**	**60.88**	**14**	*e*P	**P**	**17 06 12.6**	**+1.1**
	comp=N,17nm,1.0s						
MA2	**Magadan**	**60.88**	**14**	*i* P	**P**	**17 06 12.7**	**+1.3**
MA2				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KZA	**Kyzart**	**61.03**	**318**	P	**P**	**17 06 13.7**	**+0.3**
	SNR=7.0						
URZ	**Urewera**	**61.17**	**136**	LR	LR	17 31 51.8	
	comp=Z,177nm,21.9s,baz=314,slow=35						
TKM2	**Tokmak 2**	**61.20**	**319**	P	**P**	**17 06 13.8**	**-0.4**
	SNR=7.5						
TKM2	**Tokmak 2**	**61.20**	**319**	P	**P**	**17 06 13.1**	**-1.1**
TKM2				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SFK	**Sufi-Kurgan**	**61.33**	**316**	P	**P**	**17 06 14.8**	**-0.4**
SFK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
UCH	**Uchtor**	**61.59**	**318**	P	**P**	**17 06 17.7**	**+0.5**
	SNR=7.3						
AAK	**Ala-Archa**	**61.79**	**319**	*i* P	**P**	**17 06 17.2**	**-1.0**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
USP	**Ospenovka**	**62.07**	**319**	P	**P**	**17 06 19.4**	**-0.5**
	SNR=7.2						
AML	**Almayashu**	**62.09**	**318**	P	**P**	**17 06 20.6**	**+0.1**
	SNR=7.9						
EKS2	**Erkin-Say**	**62.27**	**319**	P	**P**	**17 06 21.7**	**+0.3**
	SNR=6.8						

TIXI Tiksi 70.02 1 *ceP* **P 17 07 10.2 -0.1**
TIXI pmax pmax
comp=Z,13nm,1.7s
BILL Bilibino 71.72 15 *eP* **P 17 07 22.2 +1.4**
BILL *e* 17 07 41.3
BILL *e* 17 10 01.2
BILL pmax pmax
comp=Z,2.0nm,0.9s
GEYT Alibeck 72.04 309 P **P 17 07 23.3 -0.1**
comp=Z,6.0nm,1.1s,baz=119,slow=5.2,SNR=5.9
NRIK Noril'sk 72.47 346 P **P 17 07 26.0 +0.7**
comp=Z,12nm,0.6s,baz=120,slow=4.3,SNR=7.6
AB31 Akbulak array 73.66 321 *i P* **P 17 07 31.9 -0.8**
AB31 pmax pmax
comp=Z,3.0nm,0.6s
ABKAR Akbulak array 73.66 321 *eP* **P 17 07 32.0 -0.7**
AKTO Aktyubinsk 75.19 322 P **P 17 07 41.4 -0.2**
comp=Z,3.1nm,0.6s,baz=95,slow=10,SNR=12
AKTO LR LR 17 42 27.6
comp=Z,82nm,22.0s,baz=100,slow=37
AKTO Aktyubinsk 75.19 322 P **P 17 07 40.5 -1.1**
AKTO pmax pmax
comp=Z,16nm,1.5s
SVE Sverdlovsk 75.66 329⇑ *eP* **P 17 07 44.6 +0.4**
SVE pmax pmax
comp=Z,27nm,1.0s
ARU Arti 76.62 328 *eP* **P 17 07 48.9 -0.8**
comp=Z,12nm,0.8s
ARU Arti 76.62 328 *d i P* **P 17 07 49.0 -0.6**
ARU S **S 17 17 35.3 -0.4**
ARU SS **SS 17 22 30.2 -0.9**
ARU pmax pmax
comp=Z,17nm,1.0s
RAYN Ar Rayn 81.08 293 *eP* **P 17 08 13.8 -1.1**
comp=Z,9.3nm,0.9s
RAYN Ar Rayn 81.08 293 *eP* **P 17 08 13.8 -1.1**
RAYN pmax pmax
comp=Z,9.0nm,0.9s
VNDA Vanda 81.31 173 P **P 17 08 14.7 -0.2**
comp=Z,4.6nm,0.7s,baz=317,slow=6.1,SNR=29
VNDA Vanda 81.31 173 *eP* **P 17 08 14.8 -0.2**
comp=Z,6.5nm,0.8s
VNDA Vanda 81.31 173 *eP* **P 17 08 14.8 -0.2**
VNDA pmax pmax
comp=Z,7.0nm,0.8s
MAW Mawson 81.62 200 P **P 17 08 16.3 -0.4**
comp=Z,2.6nm,1.0s,baz=80,slow=7.0,SNR=6.3
GROC Groznyy 82.12 313 *eP* **P 17 08 16.5 -3.4**
GROC *e* 17 08 22.7
GROC *eS* **S 17 18 33.4 -1.3**
GROC pmax pmax
comp=Z,13nm,0.4s
SBA Scott Base 82.23 172 *eP* **P 17 08 18.6 -1.2**
comp=Z,14nm,1.1s
SBA Scott Base 82.23 172 *eP* **P 17 08 18.6 -1.2**
SBA pmax pmax
comp=Z,14nm,1.1s
GNI Garni 82.66 310 P **P 17 08 23.5 +0.4**
comp=Z,1.8nm,0.3s,baz=130,slow=7.9,SNR=4.5
GNI Garni 82.66 310 *eP* **P 17 08 20.7 -2.4**
comp=Z,171nm,1.3s
GNI Garni 82.66 310 *ceP* **P 17 08 24.4 +1.4**
GNI pmax pmax
comp=Z,70nm,1.7s
ATD Arta Tunnel 83.42 281 P **P 17 08 26.8 -0.6**
comp=Z,4.3nm,0.6s,baz=114,slow=8.9,SNR=2.9
ATD LR LR 17 47 22.5
comp=Z,21nm,18.3s,baz=344,slow=37
ZEI Tsey 83.47 313 *eP* **P 17 08 26.9 -0.4**
ZEI pmax pmax
comp=Z,17nm,0.7s
AKH Akhalkalaki 83.69 311 *eP* **P 17 08 28.4 +0.1**
comp=Z,14nm,0.9s
AKH Akhalkalaki 83.69 311 *eP* **P 17 08 28.5 +0.1**
AKH pmax pmax
comp=Z,14nm,0.9s
NCK Nalchik 83.75 313 *i P* **P 17 08 28.3 -0.1**
NCK pmax pmax
comp=Z,11nm,1.0s
KDAK Kodiak Island 83.88 32 *i P* P 17 08 33.6 +4.9
RSO Redoubt South 84.12 29 *eP* **P 17 08 31.3 +1.2**
KBZ Khabaz 84.27 314 P **P 17 08 30.9 -0.1**
comp=Z,4.8nm,0.8s,baz=128,slow=5.9,SNR=12
PRGR Permogore 84.28 332 *eP* **P 17 08 29.5 -1.1**
PRGR *e*PP* **sP 17 08 37.2 +0.7**
PRGR pmax pmax
comp=Z,30nm,1.1s
NEY Neytrino 84.37 313 *i P* **P 17 08 32.1 +0.3**
NEY pmax pmax
comp=Z,3.0nm,0.9s
KIV Kislovodsk 84.43 314 *eP* **P 17 08 31.6 -0.4**
comp=Z,11nm,1.0s
KIV Kislovodsk 84.43 314 *eP* **P 17 08 32.1 +0.1**
KIV pmax pmax
comp=Z,12nm,1.0s
KIV MLR MLR
comp=Z,42nm,19.0s
BRLK Bradley Lake 84.97 30 *eP* **P 17 08 34.5 +0.2**
comp=Z,16nm,0.9s
SUA Susitna One 85.21 29 *eP* **P 17 08 35.6 +0.1**
comp=Z,13nm,0.8s
VORD Divnogorie 87.01 321 *eP* **P 17 08 43.8 -0.7**
VORD pmax pmax
comp=Z,20nm,1.4s
VSR Storozhevoye 87.09 321 *eP* **P 17 08 44.7 -0.2**
VSR pmax pmax
comp=Z,10.0nm,1.2s
KLMR Klimovskoe 87.16 331 *eP* **P 17 08 42.5 -2.5**
KLMR pmax pmax
comp=Z,28nm,1.5s
KLMR Klimovskoe 87.16 331 *eP* **P 17 08 42.5 -2.5**
KLMR AMP 17 08 55.8
comp=Z,28nm,1.5s
ILAR Eielson Array 87.19 25 P **P 17 08 44.6 -0.4**
comp=Z,0.5nm,0.6s,baz=246,slow=5.3,SNR=7.0
PAX Paxson 87.76 27 *eP* **P 17 08 47.8 -0.2**
comp=Z,4.9nm,1.0s
PAX Paxson 87.76 27 *eP* **P 17 08 47.8 -0.2**
PAX pmax pmax
comp=Z,5.0nm,1.0s
ANN Anapa 88.22 315 *eP* **P 17 08 49.9 -0.5**
ANN pmax pmax
comp=Z,32nm,1.0s
DOT Dot Lake 88.40 27 *eP* **P 17 08 51.3 +0.3**
comp=Z,10nm,1.0s
ASF Jabal al Asfar 88.80 302 P **P 17 08 53.9 +0.2**
comp=Z,11nm,1.0s,baz=54,slow=5.5,SNR=12
MMAI Mount Meron Ar 90.04 303 P **P 17 08 59.2 -0.2**
comp=Z,2.5nm,0.6s,baz=72,slow=9.3,SNR=5.5
MMAI LR LR 17 59 05.1
comp=Z,35nm,18.1s,baz=190,slow=42
BRTR Keskin Array B 91.18 310 P **P 17 09 03.1 -1.6**
comp=Z,0.7nm,0.6s,baz=127,slow=4.4,SNR=4.3
BRTR Keskin Array B 91.18 310 *ceP* **P 17 09 08.1 +3.4**
BRTR pmax pmax
comp=Z,2.0nm,0.9s
INK Inuvik 92.28 21 P **P 17 09 09.0 +0.1**
comp=Z,2.0nm,0.9s,baz=305,slow=6.2,SNR=2.8
ARCES ARCESS Array B 92.39 340 P **P 17 09 08.5 -0.9**
comp=Z,3.6nm,0.9s,baz=28,slow=5.5,SNR=6.6
ARCES ARCESS Array B 92.39 340 *eP* **P 17 09 08.1 -1.3**
ARCES ARCESS Array B 92.39 340 *eP* **P 17 09 08.1 -1.3**
SPITS Spitsbergen Ar 92.55 349 P **P 17 09 10.0 0.0**
comp=Z,7.1nm,1.0s,baz=3.4,slow=7.2,SNR=2.4
AKASG Malin Array Be 93.39 321 P **P 17 09 14.4 0.0**
comp=Z,0.3nm,0.3s,baz=73,slow=3.8,SNR=5.0
AKASG Malin Array Be 93.39 321 *ceP* **P 17 09 18.0 +3.6**
FINES FINESS Array B 93.61 332 P **P 17 09 14.1 -1.1**
comp=Z,1.3nm,0.7s,baz=45,slow=5.7,SNR=4.9
FINES LR LR 17 55 16.8
comp=Z,59nm,20.9s,baz=75,slow=38
FINES FINESS Array B 93.61 332 *i P* **P 17 09 16.6 +1.5**
FINES pmax pmax
comp=Z,2.0nm,0.6s
VSU Vasula 93.77 329 *i P* **P 17 09 18.3 +2.4**
VSU pmax pmax
comp=Z,20nm,1.1s
TESR Tescani 95.63 317 ⇓ *i P* **P 17 09 21.4 -3.4**
VRI Vrincioaia 95.66 316 ⇓ *i P* **P 17 09 27.0 +2.0**
VRI Vrincioaia 95.66 316 ⇓ *P* **P 17 09 27.0 +2.0**
PLOR Plostina 95.72 316 ⇓ *i P* **P 17 09 25.0 -0.3**
PLOR Plostina 95.72 316 ⇓ *P* **P 17 09 25.0 -0.3**
MLR Muntele Rosu 96.26 316 P **P 17 09 28.7 +0.8**
comp=Z,0.5nm,0.5s,baz=75,slow=9.0,SNR=2.3
MLR Muntele Rosu 96.26 316 ⇓ *i P* **P 17 09 30.3 +2.4**
BURAR Bucovina Array 96.43 318 ⇓ *i P* **P 17 09 28.5 0.0**
BURAR Bucovina Array 96.43 318 ⇓ *P* **P 17 09 28.5 0.0**
BUR04 Bucovina Ar. S 96.43 318 *eP* **P 17 09 27.3 -1.2**
BUR08 Bucovina Ar. S 96.43 318 *eP* **P 17 09 27.4 -1.2**
NOA NORSAR Array B 100.60 333 P **Pdif 17 09 45.0 -1.8**
comp=Z,0.6nm,0.6s,baz=63,slow=4.4,SNR=2.2
YKA Yellowknife Ar 101.59 25 P **Pdif 17 09 51.4 +0.2**
comp=Z,0.3nm,0.6s,baz=300,slow=4.9,SNR=2.7
TXAR Lajitas Array 123.14 53 PKP **PKPdf 17 14 57.1 +0.5**
comp=Z,0.4nm,0.7s,baz=338,slow=1.6,SNR=6.2
TOA0 Torodi Ar. Sit 123.30 287 *ePKPdf* **PKPdf 17 14 55.5 -1.7**
TORD Torodi Ar. Bea 123.30 287 PKP **PKPdf 17 14 55.9 -1.3**
comp=Z,0.9nm,0.7s,baz=57,slow=1.7,SNR=5.3
JTS JuntasAbangare 146.61 69 PKPbc **PKPab 17 15 42.7 -0.2**
comp=Z,3.4nm,0.4s,baz=329,slow=12,SNR=3.8
LCO Las Campanas 148.17 151 *ePKPdf* **PKPdf 17 15 40.9 -2.0**
LCO Las Campanas 148.17 151 *ePKIKP* **PKPdf 17 15 40.9 -2.0**
CPUP Villa Florida 155.09 172 PKPbc **PKPdf 17 15 56.7 +3.7**
comp=Z,1.5nm,0.8s,baz=252,slow=3.2,SNR=3.2
LPAZ La Paz 159.49 136 PKP **PKPdf 17 16 00.2 +0.6**
comp=Z,0.6nm,0.6s,baz=180,slow=1.0,SNR=3.5
SDV Santo Domingo 160.07 58 PKP **PKPdf 17 15 59.6 -0.2**
comp=Z,3.3nm,0.8s,baz=329,slow=5.9,SNR=2.2

MAN 06 17:12:49.2, 5°.60N×123°.96E, h35km, mb4.0, ML2.8, MS2.4, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKMP	**Bagumbayan, Su**	**1.08**	**32**	*eP*	Pn	17 13 06.7	-1.2
SKMP				*eS*	Sn	17 13 21.0	-0.7
CTBH	**Cotabato--PC H**	**1.64**	**10⇑**	*i P*	Pn	17 13 15.8	+0.3
CTBH				*i S*	Sn	17 13 36.4	+1.0
PAGZ	**Pagadian**	**2.31**	**346**	*eP*	Pn	17 13 26.0	+1.2
PAGZ				*eS*	Sn	17 13 53.0	+1.0
BUKP	**Musuan**	**2.52**	**26**	*eP*	Pn	17 13 28.6	+0.9

*IDC **06** 17:12:51.6±0.5, 43°.70N×28°.91W, h0km, mb4.0/28, mb1 4.2/29, mb1mx4.0/73, mbtmp4.0/29, ML4.6/1, MS3.6/29, Ms1 3.6/29, ms1mx3.5/60, Error ellipse: s-maj=14.5km s-min=11.8km az=172.0*
*ISCJB **06** 17:12:52.6±0.3, 43°.72N±0°.06×29°.08W±0°.05, h14km, mb4.2/43, MS3.6/28, Error ellipse: s-maj=8.6km s-min=4.4km az=21.7*
*NEIC **06** 17:12:53.3±0.2, 43°.65N×28°.86W, h10km, mb4.7/15, Error ellipse: s-maj=8.0km s-min=5.4km az=189.0*
*CSEM **06** 17:12:53.5±0.1, 43°.72N×28°.96W, h10km, mb4.7/14, Error ellipse: s-maj=9.4km s-min=4.6km az=16.0*
ISC 06 17:12:53.8±0.5, 43°.64N±0°.08×28°.92W±0°.07, h14km, n119, σ1°.27/105, mb4.4/43, MS3.7/28, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSET	**Sete Cidades**	**6.30**	**156**	*eP*	**Pn**	**17 14 25.0**	**-1.3**
PDA	**Ponta Delgada**	**6.39**	**156**	*eP*	**Pn**	**17 14 26.2**	**-1.2**
CMLA	**Cha da Macela**	**6.41**	**155**	*eP*	**Pn**	**17 14 26.6**	**-1.2**
CMLA	**Cha da Macela**	**6.41**	**155**	*ePn*	**Pn**	**17 14 26.4**	**-1.4**
CMLA	**Cha da Macela**	**6.41**	**155**	*ePn*	**Pn**	**17 14 26.4**	**-1.4**
BART	**Pico Bartolome**	**6.51**	**153**	*eP*	**Pn**	**17 14 27.5**	**-1.8**
PSMA	**Santa Maria**	**7.24**	**155**	*eP*	**Pn**	**17 14 37.7**	**-1.5**
PSMN	**Pico do Norte,**	**7.25**	**155**	*eP*	**Pn**	**17 14 37.8**	**-1.6**
PMOZ	**Porto Moniz, M**	**14.18**	**136**	*eP*	**Pn**	**17 16 14.8**	**+0.5**
PMOZ	**Porto Moniz, M**	**14.18**	**136**	*eP*	**Pn**	**17 16 14.8**	**+0.5**
PMAR	**Madeira**	**14.40**	**135**	*eP*	**Pn**	**17 16 17.1**	**-0.3**
PMAR	**Madeira**	**14.40**	**135**	*eP*	**Pn**	**17 16 17.1**	**-0.3**
PMPS	**Porto Santo**	**14.45**	**133**	*eP*	**Pn**	**17 16 19.6**	**+1.8**
PMPS	**Porto Santo**	**14.45**	**133**	*eP*	**Pn**	**17 16 19.6**	**+1.8**
FUL	**Funchal**	**14.47**	**135**	*eP*	**Pn**	**17 16 21.2**	**+3.0**
FUL	**Funchal**	**14.47**	**135**	*eP*	**Pn**	**17 16 21.2**	**+3.0**
PGAV	**Gavieira, Arco** 46nm,2.0s	**15.25**	**89**	*eP*	**P**	**17 16 35.0**	**+1.4**
PGAV	**Gavieira, Arco**	**15.25**	**89**	*eP*	**P**	**17 16 35.0**	**+1.4**
PCAS	**Casmilo, Conde** 44nm,1.7s	**15.63**	**96**	*eP*	**P**	**17 16 38.8**	**+1.1**
PCAS	**Casmilo, Conde**	**15.63**	**96**	*eP*	**P**	**17 16 38.8**	**+1.1**
POLO	**Lamas de Olo** 26nm,1.6s	**15.74**	**91**	*eP*	**P**	**17 16 40.1**	**+1.0**
POLO	**Lamas de Olo**	**15.74**	**91**	*eP*	**P**	**17 16 40.1**	**+1.0**
PTOM	**Tomar** 50nm,1.3s	**15.85**	**98**	*eP*	**P**	**17 16 41.2**	**+1.1**
PTOM	**Tomar**	**15.85**	**98**	*eP*	**P**	**17 16 41.2**	**+1.1**
ALMR	**Almeirim** 73nm,1.0s	**15.90**	**99**	*eP*	**P**	**17 16 41.9**	**+1.2**
ALMR	**Almeirim**	**15.90**	**99**	*eP*	**P**	**17 16 41.9**	**+1.2**
PMTG	**Montargil** 42nm,1.1s	**16.19**	**99**	*eP*	**P**	**17 16 44.6**	**+0.7**
PMTG	**Montargil**	**16.19**	**99**	*eP*	**P**	**17 16 44.6**	**+0.7**
MTE	**Manteigas** 21nm,1.1s	**16.21**	**94**	*eP*	**P**	**17 16 46.0**	**+1.8**
MTE	**Manteigas**	**16.21**	**94**	*eP*	**P**	**17 16 46.0**	**+1.8**
MVO	**Moncorvo** 28nm,1.8s	**16.36**	**91**	*eP*	**P**	**17 16 47.2**	**+1.4**
MVO	**Moncorvo**	**16.36**	**91**	*eP*	**P**	**17 16 47.2**	**+1.4**
PNCL	**Nicolau / Gran** 35nm,1.7s	**16.37**	**103**	*eP*	**P**	**17 16 47.1**	**+1.2**
PNCL	**Nicolau / Gran**	**16.37**	**103**	*eP*	**P**	**17 16 47.1**	**+1.2**
PCBR	**Castelo Branco** 22nm,1.5s	**16.44**	**96**	*eP*	**P**	**17 16 48.2**	**+1.5**
PCBR	**Castelo Branco**	**16.44**	**96**	*eP*	**P**	**17 16 48.2**	**+1.5**
PTEO	**Sao Teotonio** 41nm,1.5s	**16.49**	**105**	*eP*	**P**	**17 16 48.7**	**+1.5**
PTEO	**Sao Teotonio**	**16.49**	**105**	*eP*	**P**	**17 16 48.7**	**+1.5**
EVO	**Evora** 24nm,1.3s	**16.56**	**101**	*eP*	**P**	**17 16 49.2**	**+1.2**
EVO	**Evora**	**16.56**	**101**	*eP*	**P**	**17 16 49.2**	**+1.2**
PFVI	**Vila Bisbo**	**16.61**	**106**	*eP*	**P**	**17 16 50.6**	**+2.0**
PFVI	**Vila Bisbo**	**16.61**	**106**	*eP*	**P**	**17 16 50.6**	**+2.0**
PMRV	**Marv??o** 17nm,1.7s	**16.65**	**97**	*eP*	**P**	**17 16 50.1**	**+1.0**
PMRV	**Marv??o**	**16.65**	**97**	*eP*	**P**	**17 16 50.1**	**+1.0**
MESJ	**Messejana** 26nm,1.4s	**16.71**	**103**	*eP*	**P**	**17 16 49.7**	**0.0**
MESJ	**Messejana**	**16.71**	**103**	*eP*	**P**	**17 16 49.7**	**0.0**
PBEJ	**Beja** 26nm,1.4s	**16.88**	**102**	*eP*	**P**	**17 16 53.3**	**+1.8**
PBEJ	**Beja**	**16.88**	**102**	*eP*	**P**	**17 16 53.3**	**+1.8**
PCVE	**Castro Verde** 27nm,2.3s	**16.93**	**104**	*eP*	**P**	**17 16 53.8**	**+1.7**
PCVE	**Castro Verde**	**16.93**	**104**	*eP*	**P**	**17 16 53.8**	**+1.7**
PBDV	**Barranco-do-Ve** 37nm,1.0s	**17.19**	**105**	*eP*	**P**	**17 16 57.4**	**+2.4**
PBDV	**Barranco-do-Ve**	**17.19**	**105**	*eP*	**P**	**17 16 57.4**	**+2.4**
PBAR	**Barrancos** 44nm,1.5s	**17.40**	**101**	*eP*	**P**	**17 16 59.2**	**+1.9**
PBAR	**Barrancos**	**17.40**	**101**	*eP*	**P**	**17 16 59.2**	**+1.9**
PAB	**San Pablo** 12nm,1.1s	**18.81**	**94**	*eP*	**P**	**17 17 12.8**	**-0.2**
ESDC	**Sonseca Array** 0.4nm,0.3s,baz=289,slow=10,SNR=8.2	**19.04**	**93**	P	**Pn**	**17 17 15.8**	**-0.5**
ESDC				LR	LR	17 22 49.6	
comp=Z,135nm,21.2s,baz=205,slow=31							
EKA	**Eskdalemuir Ar** 2.0nm,0.7s,baz=247,slow=10,SNR=5.1	**20.29**	**46**	P	Pn	17 17 29.6	-1.3
MDT	**Midelt** 3.7nm,0.9s,baz=317,slow=13,SNR=4.1	**21.86**	**111**	P	**P**	**17 17 47.5**	**+1.3**
MDT				LR	LR	17 24 25.4	
comp=Z,97nm,19.8s,baz=330,slow=32							
SFJD	**Kangerlussuaq** 1.0nm,0.7s,baz=238,slow=8.3,SNR=3.0	**26.17**	**341**	LR	LR	17 26 21.3	
SCHQ	**Schefferville** comp=Z,200nm,20.3s,baz=78,slow=33	**26.84**	**308**	LR	LR	17 27 24.7	
JMIC	**Jan Mayen** comp=Z,79nm,18.8s,baz=250,slow=31	**29.22**	**14**	LR	LR	17 27 44.9	
NOA	**NORSAR Array B** comp=Z,47nm,18.2s,baz=5.0,slow=34	**29.44**	**40**	LR	LR	17 29 26.6	
GERES	**GERESS Array B** 0.4nm,0.6s,baz=265,slow=7.5,SNR=3.5	**29.64**	**65**	P	**P**	**17 18 58.3**	**-0.4**
GERES				LR	LR	17 29 37.1	
comp=Z,60nm,19.7s,baz=300,slow=34							
KEST	**Kesra** 4.0nm,0.9s,baz=265,slow=16,SNR=3.5	**30.28**	**92**	P	**P**	**17 19 04.3**	**-0.2**
KEST				LR	LR	17 30 44.7	
comp=Z,52nm,18.7s,baz=205,slow=35							
HFS	**Hagfors** 1.0nm,0.7s,baz=238,slow=8.3,SNR=3.0	**30.37**	**42**	P	**P**	**17 19 04.9**	**-0.1**
KOWA	**Kowa** 3.2nm,0.7s,baz=342,slow=13,SNR=7.9	**36.02**	**136**	P	**P**	**17 19 55.1**	**+0.5**
KOWA				LR	LR	17 33 37.0	
comp=Z,173nm,19.0s,baz=24,slow=34							
FINES	**FINESS Array B** 2.7nm,0.7s,baz=328,slow=6.8,SNR=10.0	**36.56**	**41**	P	**P**	**17 19 58.5**	**-0.2**
FINES				LR	LR	17 33 32.8	
comp=Z,67nm,19.1s,baz=273,slow=34							
AKASG	**Malin Array Be** 0.2nm,0.3s,baz=284,slow=7.6,SNR=2.8	**39.25**	**59**	P	**P**	**17 20 20.5**	**-1.1**
TORD	**Torodi Ar. Bea** 3.7nm,0.9s,baz=326,slow=7.2,SNR=7.2	**40.18**	**130**	P	**P**	**17 20 29.6**	**0.0**
TORD				LR	LR	17 35 33.6	
comp=Z,181nm,20.9s,baz=300,slow=34							
IDI	**Anoyia** comp=Z,30nm,21.2s,baz=48,slow=34	**41.74**	**83**	LR	LR	17 36 50.6	
RES	**Resolute Bay** 2.0nm,1.0s,baz=104,slow=9.0,SNR=4.8	**42.14**	**339**	P	**P**	**17 20 45.5**	**+0.4**
DBIC	**Dimbokro** comp=Z,103nm,21.7s,baz=323,slow=33	**42.45**	**143**	LR	LR	17 36 00.2	
ULM	**Lac du Bonnet** comp=Z,206nm,20.1s,baz=60,slow=34	**44.79**	**303**	LR	LR	17 38 10.8	
BRTR	**Keskin Array B** 1.4nm,0.9s,baz=309,slow=4.8,SNR=5.0	**45.91**	**72**	P	**P**	**17 21 13.8**	**-2.3**
BRTR				LR	LR	17 42 01.0	
comp=Z,23nm,18.4s,baz=10,slow=38							
CCM	**Cathedral Cave** 48nm,1.0s	**46.50**	**285**	*eP*	**P**	**17 21 20.8**	**+0.3**
ECSD	**EROS Data Cent**	**47.66**	**295**	*eP*	**P**	**17 21 28.1**	**-1.4**
MIAR	**Mount Ida** 7.1nm,0.8s	**49.85**	**283**	*eP*	**P**	**17 21 47.2**	**+0.8**
YKA	**Yellowknife Ar** 0.8nm,0.7s,baz=64,slow=8.2,SNR=4.5	**50.62**	**323**	P	**P**	**17 21 51.7**	**-0.1**
YKA				LR	LR	17 40 34.0	
comp=Z,8.2nm,19.3s,baz=70,slow=33							
PTGA	**Pitinga** comp=Z,89nm,18.3s,baz=162,slow=32	**52.18**	**221**	LR	LR	17 40 53.0	
WMOK	**Wichita Mounta** 4.8nm,1.0s	**53.42**	**286**	*eP*	**P**	**17 22 12.5**	**-0.7**
ARU	**Arti** 5.3nm,0.9s	**53.88**	**43**	*eP*	**P**	**17 22 16.2**	**+0.1**
AMTX	**Amarillo** 8.2nm,0.9s	**55.36**	**287**	*eP*	**P**	**17 22 28.4**	**+1.0**
BOZ	**Bozeman (W)** 4.7nm,1.0s	**56.33**	**303**	*eP*	**P**	**17 22 35.0**	**+0.7**
AKTO	**Aktyubinsk** 3.1nm,0.8s,baz=316,slow=5.9,SNR=8.9	**56.39**	**50**	P	**P**	**17 22 33.9**	**-0.6**
PDAR	**Pinedale Array** 1.4nm,0.8s,baz=60,slow=8.8,SNR=6.7	**56.48**	**299**	P	**P**	**17 22 35.0**	**-0.5**
PDAR				LR	LR	17 45 59.6	
comp=Z,98nm,18.8s,baz=27,slow=35							
NRIK	**Noril'sk** 2.6nm,0.5s,baz=17,slow=2.2,SNR=5.5	**58.13**	**22**	P	**P**	**17 22 47.3**	**+1.0**
NEW	**Newport** 4.6nm,0.8s,baz=27,slow=14,SNR=2.9	**58.20**	**308**	P	**P**	**17 22 45.5**	**-1.8**
HWUT	**Hardware Ranch** 5.6nm,0.9s	**58.36**	**299**	*eP*	**P**	**17 22 49.3**	**+0.7**
JTS	**JuntasAbangare** comp=Z,60nm,21.9s,baz=68,slow=31	**58.58**	**253**	LR	LR	17 43 16.0	
ANMO	**Albuquerque** 0.8nm,0.4s,baz=56,slow=8.7,SNR=3.6	**58.61**	**290**	P	**P**	**17 22 50.8**	**+0.2**
ANMO				LR	LR	17 47 49.3	
comp=Z,168nm,18.8s,baz=30,slow=36							
TXAR	**Lajitas Array** 2.7nm,0.8s,baz=71,slow=6.9,SNR=28	**59.87**	**283**	P	**P**	**17 22 59.4**	**+0.2**
TXAR				LR	LR	17 48 22.8	
comp=Z,71nm,20.1s,baz=0.0,slow=36							
DUG	**Dugway, Tooele** 6.2nm,1.0s	**59.92**	**298**	*eP*	**P**	**17 23 00.3**	**+0.9**
ELK	**Elko** 2.8nm,0.8s,baz=98,slow=6.5,SNR=9.3	**61.15**	**300**	P	**P**	**17 23 11.3**	**+3.4**
BRVK	**Borovoye** 7.8nm,0.9s	**61.43**	**43**	*eP*	**P**	**17 23 09.8**	**+0.5**
BVAR	**Borovoye Array** 1.9nm,0.7s,baz=305,slow=5.1,SNR=15	**61.50**	**43**	P	**P**	**17 23 10.1**	**+0.2**
ILAR	**Eielson Array** 0.4nm,0.8s,baz=46,slow=6.8,SNR=5.1	**61.61**	**335**	P	**P**	**17 23 10.2**	**-0.2**
ILAR				LR	LR	17 47 59.7	
comp=Z,56nm,18.6s,baz=318,slow=34							
WVOR	**Wild Horse Val** 9.1nm,1.3s	**62.29**	**303**	*eP*	**P**	**17 23 16.9**	**+1.5**
BMN	**Battle Mountai** 5.0nm,0.9s	**62.57**	**301**	*eP*	**P**	**17 23 18.8**	**+1.4**
TUC	**Tucson** 2.3nm,0.6s	**63.08**	**290**	*eP*	**P**	**17 23 22.4**	**+1.6**
MOD	**Modoc Plateau** 3.6nm,0.8s	**63.61**	**304**	*eP*	**P**	**17 23 25.6**	**+1.3**
TIXI	**Tiksi** 7.8nm,1.3s	**63.93**	**8**	*eP*	**P**	**17 23 26.3**	**+0.6**
NVAR	**Mina Array Bea** 1.0nm,0.8s,baz=52,slow=6.6,SNR=5.9	**64.42**	**299**	P	**P**	**17 23 29.5**	**-0.2**
NVAR				LR	LR	17 51 05.9	
comp=Z,81nm,19.7s,baz=278,slow=36							
YBH	**Yreka Blue Hor** comp=Z,84nm,19.8s,baz=328,slow=35	**65.16**	**305**	LR	LR	17 50 33.5	
SIV	**San Ignacio** 1.6nm,0.9s,baz=47,slow=8.7,SNR=6.7	**66.24**	**214**	P	**P**	**17 23 41.8**	**+0.4**
KURK	**Kurchatov**	**66.94**	**41**	*eP*	**P**	**17 23 44.9**	**-0.6**
KURBB	**Kurchatov Arra** 3.1nm,0.7s,baz=316,slow=6.8,SNR=24	**66.95**	**41**	P	**P**	**17 23 45.3**	**-0.3**
ZALV	**Zalesovo Beam** 0.9nm,0.6s,baz=302,slow=8.5,SNR=5.8	**67.55**	**36**	P	**P**	**17 23 48.8**	**-0.5**
ZALV				LR	LR	17 53 45.4	
comp=Z,54nm,18.2s,baz=72,slow=36							
LPIG	**La Paz** comp=Z,54nm,18.5s,baz=24,slow=36	**67.75**	**283**	LR	LR	17 53 43.9	
LPAZ	**La Paz** 2.9nm,1.1s,baz=21,slow=8.9,SNR=4.9	**69.60**	**220**	P	**P**	**17 24 03.8**	**+0.5**
MKAR	**Makanchi Array** 5.3nm,1.2s,baz=319,slow=5.3,SNR=12	**71.39**	**43**	P	**P**	**17 24 12.9**	**-0.3**
CPUP	**Villa Florida** 1.6nm,0.6s,baz=17,slow=4.6,SNR=4.1	**74.35**	**206**	P	**P**	**17 24 31.1**	**+0.3**
SONM	**Songino Array** 1.2nm,0.8s,baz=321,slow=5.7,SNR=5.5	**80.77**	**29**	P	**P**	**17 25 06.6**	**-0.1**
SONM				LR	LR	18 04 06.8	
comp=Z,42nm,18.0s,baz=96,slow=38							
PETK	**Petropavlovsk-** comp=Z,42nm,19.4s,baz=117,slow=36	**83.46**	**356**	LR	LR	18 02 50.0	
GTA	**Gaotai**	**85.24**	**37**	*eP*	**P**	**17 25 29.9**	**-0.2**
GTA				pP	pP	17 25 34.1	-0.7
GTA				sP	sP	17 25 37.1	+0.7
GTA				pmax	pmax		
comp=Z,3.0nm,1.1s							
ASAJ	**Asahikawa** comp=Z,27nm,18.4s,baz=132,slow=36	**92.30**	**6**	LR	LR	18 07 52.2	
QSPA	**South Pole Qui** comp=Z,4.1nm,1.2s,baz=209,slow=2.2,SNR=3.2	**133.52**	**180**	PKP	**PKPdf**	**17 32 08.3**	**-0.3**
VNDA	**Vanda** comp=Z,2.1nm,0.8s,baz=201,slow=2.6,SNR=10.0	**145.73**	**184**	PKPbc	**PKPab**	**17 32 31.8**	**+0.6**
WRA	**Warramunga Arr** comp=Z,1.4nm,0.9s,baz=327,slow=2.0,SNR=6.3	**152.53**	**36**	PKPbc	**PKPbc**	**17 32 49.1**	**-0.8**
ASAR	**Alice Springs** comp=Z,0.4nm,0.8s,baz=327,slow=4.4,SNR=3.8	**155.57**	**41**	PKPab	**PKPab**	**17 33 11.9**	**-1.2**

*ISCJB **06** 17:25:32.5±0.8, 21°.67S±0°.06×66°.6W±0°.1, h219km, mb3.2/1, Error ellipse: s-maj=14.9km s-min=8.1km az=12.2*
*IDC **06** 17:25:37.7±6.8, 21°.27S×66°.52W, h231km±52km, mb3.1/1, mb1 3.1/3, mb1mx2.9/39, mbtmp3.7/3, Error ellipse: s-maj=77.8km s-min=27.0km az=8.0*
ISC 06 17:25:34.1±1.0, 21°.56S±0°.08×66°.7W±0°.1, h219km, n9, σ2°.02/10, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz** 2.4nm,0.3s,baz=154,slow=8.3,SNR=55	**5.43**	**345**	P	**Pn**	**17 26 55.7**	**+0.7**
LPAZ				S	**S**	**17 27 58.5**	**-0.3**
baz=98,slow=14,SNR=1.4							
CYA	**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCED	**Cedros**	**0.48**	**89**	*eP*	Pg	17 36 58.4	-1.2
PCED				*eS*	Sg	17 37 04.4	-1.5
PCED				A	A	17 37 06.2	
	145nm,0.2s						
PCED	**Cedros**	**0.48**	**89**	*eP*	Pg	17 36 58.4	-1.2
PCED				*eS*	Sg	17 37 04.4	-1.5
CALA	**Caldeira**	**0.48**	**95**	*eP*	Pg	17 36 58.7	-0.9
CALA				*eS*	Sg	17 37 04.4	-1.5
CALA	**Caldeira**	**0.48**	**95**	*eP*	Pg	17 36 58.7	-0.9
CALA				*eS*	Sg	17 37 04.4	-1.5
HOR	**Horta**	**0.54**	**100**	*eS*	Sg	17 37 06.3	-1.6
HOR				A	A	17 37 08.3	
	345nm,0.2s						
HOR	**Horta**	**0.54**	**100**	*eS*	Sg	17 37 06.3	-1.6
PCAN	**Candelaria**	**0.67**	**103**	*eP*	Pg	17 37 00.9	-2.3
PCAN				*i* S	Sg	17 37 09.4	-2.5
PCAN				A	A	17 37 12.1	
	198nm,0.3s						
PCAN	**Candelaria**	**0.67**	**103**	*eP*	Pg	17 37 00.9	-2.3
PCAN				*i* S	Sg	17 37 09.4	-2.5
PICO	**Pico**	**0.70**	**100**	⇓*i* P	Pg	17 37 01.9	-2.0
PICO				*eS*	Sg	17 37 10.4	-2.7
PICO				A	A	17 37 11.6	
	322nm,0.3s						
PICO	**Pico**	**0.70**	**100**	⇓*i* P	Pg	17 37 01.9	-2.0
PICO				*eS*	Sg	17 37 10.4	-2.7
ROSA	**Rosais**	**0.84**	**83**	⇓*i* P	Pg	17 37 03.8	-2.7
ROSA				*eS*	Sg	17 37 13.2	-4.3
ROSA				A	A	17 37 15.0	
	187nm,0.2s						
ROSA	**Rosais**	**0.84**	**83**	⇓*i* P	Pg	17 37 03.8	-2.7
ROSA				*eS*	Sg	17 37 13.2	-4.3
PMAN	**Manadas**	**0.96**	**89**	*eS*	Sg	17 37 16.6	-4.6
PMAN				A	A	17 37 17.3	
	72nm,0.3s						
PMAN	**Manadas**	**0.96**	**89**	*eS*	Sg	17 37 16.6	-4.6
PSMA	**Santa Maria**	**3.69**	**115**	*eP*	Pn	17 37 43.1	-4.5
PSMN	**Pico do Norte,**	**3.73**	**114**	*eP*	Pn	17 37 43.6	-4.6
PSMN	**Pico do Norte,**	**3.73**	**114**	*eP*	Pn	17 37 43.6	-4.6

MAN 06 17:37:40.3, 16°.06N×120°.28E, h1km, mb4.4, ML3.3, MS3.1, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCZP	**Santa Cruz**	**0.45**	**232**	*eP*	Pg	17 37 49.6	+0.6
BOLP	**Bolinao**	**0.48**	**312**	*eP*	Pg	17 37 48.5	-1.0
BALP	**Baler**	**1.29**	**104**	*eP*	Pg	17 38 03.7	-1.3
BALP				*eS*	Sn	17 38 24.1	+0.9
ABRA	**Dolores**	**1.64**	**15**	*eP*	Pn	17 38 10.7	+0.5
ABRA				*eS*	Sg	17 38 33.2	+0.3
CAUP	**Cauayan**	**1.72**	**59**	*eP*	Pn	17 38 10.9	-0.5
CAUP				*eS*	Sb	17 38 34.8	-0.1
APYP	**Conner**	**2.02**	**27**	*eP*	Pb	17 38 17.4	-0.4

*ISK **06** 17:47:50.9, 35°.98N×31°.21E, h16km, ML2.1/4*
*CSEM **06** 17:47:51.0±0.6, 35°.94N×31°.19E, h10km, ML2.5, Error ellipse: s-maj=15.4km s-min=8.1km az=26.0*
*DDA **06** 17:48:00.0, 36°.99N×32°.08E, h7km, Ml2.5*
ISC 06 17:47:51.6±1.9, 36°.05N±0°.07×31°.22E±0°.04, h8km±13km, n20, σ2§11/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAZI	**Gazipasa**	**0.91**	**78**	*i* P	**Pn**	**17 48 14.0**	**+3.4**
GAZI				*i* S	**Sn**	**17 48 27.8**	**+4.0**
GAZI	**Gazipasa**	**0.91**	**78**	P	**Pn**	**17 48 14.0**	**+3.4**
GAZI				S	**Sn**	**17 48 27.8**	**+4.0**
KEPZ	**Antalya-Kepez**	**0.91**	**20**	*i* P	**Pn**	**17 48 11.5**	**+0.8**
KEPZ				*i* S	**Sb**	**17 48 23.2**	**+1.3**
KEPZ	**Antalya-Kepez**	**0.91**	**20**	P	**Pn**	**17 48 11.5**	**+0.8**
KEPZ				S	**Sb**	**17 48 23.2**	**+1.3**
ANTB	**Antalya**	**0.97**	**332**	PG	**Pb**	**17 48 11.1**	**+0.5**
ANTB				SG	**Sn**	**17 48 25.8**	**+0.4**
ANTB	**Antalya**	**0.97**	**332**	*e*Pg	**Pb**	**17 48 11.1**	**+0.5**
ANTB				*e*Sg	**Sn**	**17 48 25.8**	**+0.4**
SUTC	**Sutluce-Ispart**	**1.44**	**353**	PN	**Pn**	**17 48 17.8**	**-0.3**
SUTC	**Sutluce-Ispart**	**1.44**	**353**	*e*Pn	**Pn**	**17 48 17.8**	**-0.3**
ERMK	**Ermenek**	**1.49**	**66**	*i* P	**Pg**	**17 48 20.1**	**0.0**
ERMK				*i* S	**Sn**	**17 48 38.3**	**-0.2**
ERMK	**Ermenek**	**1.49**	**66**	P	**Pg**	**17 48 20.1**	**0.0**
ERMK				S	**Sn**	**17 48 38.3**	**-0.2**
FETY	**Fethiye**	**1.82**	**289**	PN	**Pn**	**17 48 22.7**	**-0.5**
FETY	**Fethiye**	**1.82**	**289**	*e*Pn	**Pn**	**17 48 22.7**	**-0.5**
GULN	**MERSIN_Gulnar**	**1.89**	**85**	*i* P	**Pb**	**17 48 25.0**	**-1.2**
GULN				*i* S	**Sn**	**17 48 47.5**	**-0.5**
GULN	**MERSIN_Gulnar**	**1.89**	**85**	P	**Pb**	**17 48 25.0**	**-1.2**
GULN				S	**Sn**	**17 48 47.5**	**-0.5**
AKKU	**Akkuyu-Mersin**	**1.89**	**86**	PN	**Pn**	**17 48 23.7**	**-0.4**
AKKU	**Akkuyu-Mersin**	**1.89**	**86**	*e*Pn	**Pn**	**17 48 23.7**	**-0.4**
IKL	**Isikli**	**2.00**	**84**	PN	**Pn**	**17 48 25.3**	**-0.4**
IKL	**Isikli**	**2.00**	**84**	*e*Pn	**Pn**	**17 48 25.3**	**-0.4**
KERG	**Konya-Eregli**	**2.70**	**59**	*i* P	**Pn**	**17 48 33.8**	**-1.6**
KERG				*i* S	**Sn**	**17 49 03.2**	**-5.2**
KERG	**Konya-Eregli**	**2.70**	**59**	P	**Pn**	**17 48 33.8**	**-1.6**
KERG				S	**Sn**	**17 49 03.2**	**-5.2**

*ISCJB **06** 18:07:13.8±0.5, 43°.85N±0°.05×105°.18W±0°.06, h0km, mb4.1/5, Error ellipse: s-maj=8.1km s-min=5.9km az=150.7*
*NEIC **06** 18:07:15.6±0.4, 43°.84N×105°.16W, h0km, ML3.4, Error ellipse: s-maj=7.8km s-min=5.7km az=148.0, Suspected Mining explosion.*
NEIC 60 km [37 miles] SSE of Gillette.
*IDC **06** 18:07:16.0±1.4, 43°.97N×105°.55W, h0km, mb4.1/5, mb1 3.9/11, mb1mx3.6/69, mbtmp3.8/11, ML3.1/5, Error ellipse: s-maj=43.5km s-min=7.2km az=147.0*
ISC 06 18:07:15.5±0.7, 43°.85N±0°.07×105°.23W±0°.06, h0km, n25, σ1§26/26, mb4.0/5, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.90**	**72**	*e*Pn	**Pg**	**18 07 33.2**	**+0.4**
LAO	**LASA Array**	**2.93**	**346**	*e*Pn	**Pn**	**18 08 04.4**	**+1.0**
RLMT	**Red Lodge**	**3.16**	**295**	*e*Pn	**Pn**	**18 08 06.9**	**+0.2**
BW06	**Boulder Array**	**3.34**	**253**	*e*Pn	**Pn**	**18 08 09.5**	**+0.2**
PDAR	**Pinedale Array**	**3.34**	**253**	Pn	**Pn**	**18 08 09.2**	**-0.1**
	7.9nm,0.3s,baz=72,slow=17,SNR=50						
PDAR				Lg	Lg	18 08 55.2	
	20nm,0.3s,baz=77,slow=32,SNR=15						
OGNE	**Ogallala**	**3.74**	**140**	*e*P	**Pn**	**18 08 15.0**	**+0.4**
ISCO	**Idaho Springs**	**4.05**	**184**	*e*P	**Pn**	**18 08 18.7**	**-0.4**
AHID	**Auburn Hatcher**	**4.42**	**258**	*e*P	**Pn**	**18 08 24.0**	**-0.1**
DGMT	**Dagmar**	**4.68**	**8**	*e*P	**Pn**	**18 08 29.8**	**+2.4**
HWUT	**Hardware Ranch**	**5.18**	**247**	*e*P	**Pn**	**18 08 35.1**	**+0.7**
	14nm,0.6s						
SDCO	**Great Sand Dun**	**6.10**	**182**	*e*P	**Pn**	**18 08 47.3**	**+0.1**
	2.2nm,0.5s						
ECSD	**EROS Data Cent**	**6.24**	**88**	*e*P	**Pn**	**18 08 49.5**	**+0.7**
	8.3nm,0.4s						
HLID	**Hailey**	**6.67**	**271**	*e*P	**Pn**	**18 08 56.5**	**+1.6**
	2.4nm,0.6s						
DUG	**Dugway, Tooele**	**6.72**	**240**	*e*P	**Pn**	**18 08 54.7**	**-1.0**
	14nm,0.5s						
ELK	**Elko**	**8.04**	**251**	Pn	**Pn**	**18 09 15.6**	**+1.8**
	0.6nm,0.3s,baz=95,slow=11,SNR=6.7						
ELK				Pg	**Pb**	**18 09 35.5**	**-0.4**
	0.8nm,0.3s,baz=187,slow=6.7,SNR=7.2						
ULM	**Lac du Bonnet**	**9.04**	**42**	Pn	**Pn**	**18 09 26.4**	**-0.7**
	1.3nm,0.3s,baz=228,slow=12,SNR=14						
ULM				Pg		18 10 01.4	
	1.3nm,0.3s,baz=228,slow=17,SNR=4.7						
ULM				Sn	**Sn**	**18 11 08.0**	**-1.6**
	0.1nm,0.3s,baz=151,slow=14,SNR=3.1						
ULM				Lg	Lg	18 11 56.8	
	0.5nm,0.3s,baz=142,slow=14,SNR=3.9						
NVAR	**Mina Array Bea**	**11.24**	**246**	Pn	**Pn**	**18 09 57.9**	**+0.2**
	baz=56,slow=11,SNR=5.5						
YBH	**Yreka Blue Hor**	**13.02**	**267**	Pn	**Pn**	**18 10 23.6**	**+1.9**
	0.1nm,0.3s,baz=96,slow=6.1,SNR=3.9						
TXAR	**Lajitas Array**	**14.54**	**175**	Lg	Lg	18 14 55.1	
	0.0nm,0.3s,baz=345,slow=27,SNR=4.9						
YKA	**Yellowknife Ar**	**19.47**	**347**	P	**P**	**18 11 43.1**	**-0.5**
	0.1nm,0.3s,baz=156,slow=9.6,SNR=2.8						
SCHQ	**Schefferville**	**26.98**	**52**	P	**P**	**18 13 02.1**	**+3.3**
	3.7nm,0.5s,baz=247,slow=15,SNR=3.2						
TIXI	**Tiksi**	**58.64**	**343**	P	**P**	**18 17 12.5**	**-1.4**
	0.7nm,0.3s,baz=303,slow=2.4,SNR=5.4						
ARCES	**ARCESS Array B**	**61.30**	**18**	P	**P**	**18 17 31.6**	**-0.7**
	0.6nm,0.5s,baz=335,slow=5.4,SNR=6.9						
ZALV	**Zalesovo Beam**	**82.20**	**354**	P	**P**	**18 19 37.2**	**-0.9**
	0.5nm,0.5s,baz=23,slow=7.8,SNR=3.3						
MKAR	**Makanchi Array**	**89.50**	**355**	P	**P**	**18 20 14.3**	**-0.1**
	0.5nm,0.7s,baz=22,slow=4.4,SNR=6.4						

*ISK **06** 18:07:56.3, 38°.72N×43°.36E, h25km, ML2.4/5*
*CSEM **06** 18:07:57.5±0.2, 38°.74N×43°.30E, h12km, ML2.4, Error ellipse: s-maj=4.6km s-min=3.6km az=118.0*
*DDA **06** 18:07:57.8, 38°.74N×43°.29E, h7km, Ml2.6*
*ISCJB **06** 18:07:58.0±0.4, 38°.75N±0°.02×43°.29E±0°.04, h14km±4km, Error ellipse: s-maj=5.6km s-min=3.7km az=10.1*
ISC 06 18:07:56.8±0.9, 38°.73N±0°.02×43°.36E±0°.03, h25km±6km, n28, σ0§95/49, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.14**	**170**	PG	**Pn**	**18 08 02.4**	**-1.1**
VANB				SG	**Sb**	**18 08 06.9**	**+1.4**
VANB	**Van**	**0.14**	**170**	*e*Pg	**Pn**	**18 08 02.4**	**-1.1**
TVAN	**Van**	**0.21**	**169**	*i* P	**Pb**	**18 08 02.8**	**0.0**
TVAN				*i* S	**Sb**	**18 08 07.2**	**+0.3**
TVAN	**Van**	**0.21**	**169**	P	**Pb**	**18 08 02.8**	**0.0**
TVAN				S	**Sb**	**18 08 07.2**	**+0.3**
ERCV	**ERCIS-VAN**	**0.29**	**357**	PG	**Pb**	**18 08 03.8**	**-0.1**
ERCV				SG	**Sb**	**18 08 09.3**	**+0.6**
ERCV	**ERCIS-VAN**	**0.29**	**357**	*e*Pg	**Pb**	**18 08 03.8**	**-0.1**
ERCV				*e*Sg	**Sb**	**18 08 09.3**	**+0.6**
VMUR	**Van-Muradiye**	**0.31**	**33**	*i* P	**Pn**	**18 08 05.2**	**-0.7**
VMUR				*i* S	**Sn**	**18 08 11.4**	**-0.3**
VMUR	**Van-Muradiye**	**0.31**	**33**	P	**Pn**	**18 08 05.2**	**-0.7**
VMUR				S	**Sn**	**18 08 11.4**	**-0.3**
GEVA	**Gevas**	**0.48**	**209**	*i* P	**Pb**	**18 08 06.5**	**-0.4**
GEVA				*i* S	**Sn**	**18 08 14.3**	**-1.5**
GEVA	**Gevas**	**0.48**	**209**	P	**Pb**	**18 08 06.4**	**-0.4**
GEVA				S	**Sn**	**18 08 14.4**	**-1.5**
ADCV	**BITLIS_Adilcev**	**0.50**	**279**	*i* P	**Pb**	**18 08 06.7**	**-0.5**
ADCV				*i* S	**Sb**	**18 08 13.8**	**-0.4**
ADCV	**BITLIS_Adilcev**	**0.50**	**279**	P	**Pb**	**18 08 06.7**	**-0.5**
ADCV				S	**Sb**	**18 08 13.8**	**-0.4**
CLDR	**Caldiran**	**0.60**	**47**	PG	**Pn**	**18 08 09.1**	**-0.9**
CLDR				SG	**Sn**	**18 08 18.2**	**-0.8**
CLDR	**Caldiran**	**0.60**	**47**	*i* P	**Pn**	**18 08 09.8**	**-0.1**
CLDR				*i* S	**Sn**	**18 08 19.5**	**+0.5**
CLDR	**Caldiran**	**0.60**	**47**	*e*Pg	**Pn**	**18 08 09.1**	**-0.9**
CLDR	**Caldiran**	**0.60**	**47**	P	**Pn**	**18 08 09.8**	**-0.1**
CLDR				*e*Sg	**Sn**	**18 08 18.2**	**-0.8**
CLDR				S	**Sn**	**18 08 19.5**	**+0.5**
TUTA	**Tutak**	**0.79**	**328**	*i* P	**Pb**	**18 08 11.9**	**-0.2**
TUTA				*i* S	**Sb**	**18 08 21.9**	**-0.7**
TUTA	**Tutak**	**0.79**	**328**	P	**Pb**	**18 08 11.9**	**-0.2**
TUTA				S	**Sb**	**18 08 21.9**	**-0.7**
AGRB	**Hanur-Agry**	**0.89**	**342**	PG	**Pn**	**18 08 13.9**	**0.0**
AGRB				SG	**Sn**	**18 08 26.5**	**+0.4**
AGRB	**Hanur-Agry**	**0.89**	**342**	*e*Pg	**Pn**	**18 08 13.9**	**0.0**
AGRB				*e*Sg	**Sn**	**18 08 26.5**	**+0.4**
GURO	**Guroymak-BITLI**	**1.05**	**261**	PG	**Pb**	**18 08 15.9**	**-0.6**
GURO	**Guroymak-BITLI**	**1.05**	**261**	*e*Pg	**Pb**	**18 08 15.9**	**-0.6**
EKAR	**Karacoban**	**1.14**	**298**	*i* P	**Pb**	**18 08 19.5**	**+1.6**
EKAR	**Karacoban**	**1.14**	**298**	P	**Pb**	**18 08 19.5**	**+1.6**
HAKT	**HAKKARI**	**1.20**	**167**	*i* P	**Pb**	**18 08 19.9**	**+0.8**
HAKT	**HAKKARI**	**1.20**	**167**	P	**Pb**	**18 08 19.9**	**+0.8**
SRTM	**Siirt_Merkez**	**1.35**	**237**	*i* P	**Pb**	**18 08 22.3**	**+0.8**
SRTM				*i* S	**Sb**	**18 08 41.1**	**+2.8**
SRTM	**Siirt_Merkez**	**1.35**	**237**	P	**Pb**	**18 08 22.3**	**+0.8**
SRTM				S	**Sb**	**18 08 41.1**	**+2.8**

*ISCJB **06** 18:11:18.9±0.5, 3°.43N±0°.06×126°.6E±0°.1, h53km, mb4.0/8, MS2.9/1, Error ellipse: s-maj=16.7km s-min=4.6km az=150.0*
*NEIC **06** 18:11:18.6±0.7, 3°.52N×126°.58E, h35km, mb4.6/1, Error ellipse: s-maj=25.2km s-min=11.3km az=57.0*
*IDC **06** 18:11:22.2±3.8, 3°.56N×126°.81E, h74km±40km, mb3.7/7, mb1 4.0/9, mb1mx3.5/59, mbtmp4.2/9, ML4.5/2, MS3.1/1, Ms1 3.1/1, ms1mx2.4/59, Error ellipse: s-maj=44.4km s-min=16.9km az=63.0*
ISC 06 18:11:20.7±0.7, 3°.43N±0°.09×126°.6E±0°.1, h53km, n18, σ1§28/21, mb4.2/8, 2C-1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**3.11**	**328**	⇑*i* P	**Pn**	**18 12 06.7**	**-0.7**
MATI	**Mati**	**3.51**	**354**	*e*P	**Pn**	**18 12 11.5**	**-1.3**
SKMP	**Bagumbayan, Su**	**3.69**	**326**	*e*P	**Pn**	**18 12 14.9**	**-0.4**
SKMP				*e*S	**Sn**	**18 12 57.3**	**-0.3**
DMPH	**Davao City--Mi**	**3.79**	**343**	⇑*e*P	**Pn**	**18 12 17.2**	**+0.6**
DMPH				*e*S	**Sn**	**18 12 59.9**	**-0.1**
BUKP	**Musuan**	**4.68**	**341**	*e*P	**Pn**	**18 12 28.2**	**-0.7**
BUKP				*e*S	**Sn**	**18 13 25.4**	**+3.4**
CGP	**Cagayan de Oro**	**5.34**	**339**	⇓*e*P	**Pn**	**18 12 40.3**	**+2.4**
SIJI	**Sorong**	**6.32**	**132**	P	**Pn**	**18 12 51.9**	**+0.4**
	16nm,0.3s,baz=131,slow=23,SNR=63						
SIJI				S	**Sn**	**18 14 02.6**	**+0.2**
	baz=258,slow=19,SNR=2.5						
JAY	**Jayapura**	**15.29**	**113**	P	**Pn**	**18 14 53.8**	**+0.4**
	1.4nm,0.3s,baz=294,slow=6.7,SNR=10.0						
FITZ	**Fitzroy Crossi**	**21.41**	**182**	P	**P**	**18 16 05.2**	**+0.9**
	1.5nm,0.5s,baz=354,slow=3.8,SNR=12						
PMG	**Port Moresby**	**24.13**	**122**	LR	LR	18 26 10.1	
	comp=Z,47nm,21.7s,baz=116,slow=37						
WRAB	**Tennant Creek**	**24.43**	**162**	*e*P	**P**	**18 16 34.3**	**-0.3**
	15nm,0.8s						
WRA	**Warramunga Arr**	**24.44**	**162**	P	**P**	**18 16 34.4**	**-0.3**
	6.5nm,0.5s,baz=332,slow=12,SNR=66						
ASAR	**Alice Springs**	**27.86**	**166**	P	**P**	**18 17 06.8**	**+1.3**
	0.6nm,0.5s,baz=351,slow=14,SNR=21						
CMAR	**Chiang Mai Arr**	**30.91**	**301**	P	**P**	**18 17 33.4**	**+0.7**
	0.3nm,0.7s,baz=110,slow=7.8,SNR=3.4						
STKA	**Stephens Creek**	**37.90**	**159**	P	**P**	**18 18 32.3**	**-0.6**
	4.4nm,0.6s,baz=332,slow=9.8,SNR=13						
MKAR	**Makanchi Array**	**57.73**	**325**	P	**P**	**18 21 05.5**	**-0.7**
	0.8nm,0.4s,baz=122,slow=7.4,SNR=17						
KURK	**Kurchatov**	**61.92**	**328**	*e*P	**P**	**18 21 33.8**	**-1.1**
ARCES	**ARCESS Array B**	**90.68**	**340**	P	**P**	**18 24 15.7**	**-1.7**
	0.6nm,0.6s,baz=74,slow=6.7,SNR=3.9						

*ISCJB **06** 18:13:21.9±0.9, 42°.82N±0°.06×145°.12E±0°.06, h52km±11km, Error ellipse: s-maj=11.4km s-min=4.8km az=152.4*
*JMA **06** 18:13:22.7±0.1, 42°.86N×145°.08E, h50km±1km, M3.1*
*SKHL **06** 18:13:22.9±0.3, 42°.77N×145°.25E, h33km±2km, mb4.1/6*
ISC 06 18:13:22.4±1.7, 42°.80N±0°.08×145°.12E±0°.05, h47km±16km, n14, σ0§64/28, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAK	**Akkeshi**	**0.36**	**302**	P	**Pn**	**18 13 32.0**	**+0.2**
JAK				*e*S	**Sn**	**18 13 38.9**	**+0.4**
NEM2	**Nemuro 2**	**0.72**	**39**	P	**Pn**	**18 13 36.2**	**-0.1**
NEM2				*e*S	**Sn**	**18 13 46.4**	**0.0**
JNK	**Nakash**	**0.83**	**340**	P	**Pn**	**18 13 37.4**	**-0.4**
JNK				*e*S	**Sn**	**18 13 47.7**	**-1.3**
JOB	**Onbets**	**0.95**	**276**	P	**Pn**	**18 13 39.2**	**-0.1**
JOB				*e*S	**Sn**	**18 13 51.4**	**-0.3**
GLVR	**Golovnino**	**0.98**	**17**	*i* P	**Pn**	**18 13 39.9**	**+0.2**
GLVR				AMB	AMB	18 13 40.1	
	43nm,0.3s						
GLVR				*e*S	**Sn**	**18 13 52.9**	**+0.4**
GLVR				A	A	18 13 57.2	
	760nm,0.3s						
GLVR				A	A	18 13 57.2	
	410nm,0.3s						
JAR	**Ashorobuto**	**1.10**	**297**	P	**Pn**	**18 13 41.2**	**-0.2**
JAR				*e*S	**Sn**	**18 13 55.2**	**-0.3**
JRA	**Rausu**	**1.13**	**0**	P	**Pn**	**18 13 41.6**	**-0.2**
JRA				*e*S	**Sn**	**18 13 55.4**	**-0.8**
GRPR	**Tuman**	**1.28**	**22**	*i* P	**Pn**	**18 13 44.2**	**+0.4**
GRPR				AMB	AMB	18 13 44.4	
	21nm,0.1s						
GRPR				*i* S	**Sn**	**18 14 00.1**	**+0.2**
GRPR				A	A	18 14 00.6	
	880nm,0.3s						
GRPR				A	A	18 14 00.6	
	730nm,0.3s						
JCH	**Churui**	**1.31**	**262**	P	**Pn**	**18 13 44.1**	**-0.1**
JCH				*e*S	**Sn**	**18 14 00.8**	**+0.3**
LAGR	**Lagunnoye**	**1.34**	**21**	*i* P	**Pn**	**18 13 45.2**	**+0.5**
LAGR				AMB	AMB	18 13 46.0	
	28nm,0.1s						
LAGR				*i* S	**Sn**	**18 14 02.0**	**+0.7**
LAGR				A	A	18 14 04.1	
	632nm,0.3s						
LAGR				A	A	18 14 04.1	
	600nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.34**	**24**	*i* P	**Pn**	**18 13 44.7**	**0.0**
YUK				AMB	AMB	18 13 45.7	
	44nm,0.1s						
YUK				AMB	AMB	18 13 45.7	
	18nm,0.1s						
YUK				*i* S	**Sn**	**18 14 01.1**	**-0.3**
YUK				A	A	18 14 03.3	
	240nm,0.3s						
YUK				A	A	18 14 03.3	
	363nm,0.3s						
JTKR	**Abashiri--Toko**	**1.46**	**323**	P	**Pn**	**18 13 46.6**	**+0.3**
JTKR				*e*S	**Sn**	**18 14 04.9**	**+0.7**
SHO	**Shikotan**	**1.64**	**49**	*i* P	**Pn**	**18 13 48.3**	**-0.5**
SHO				AMB	AMB	18 13 48.5	
	65nm,0.2s						
SHO				*i* S	**Sn**	**18 14 06.9**	**-1.8**
SHO				A	A	18 14 08.5	
	260nm,0.2s						
SHO				A	A	18 14 08.5	
	320nm,0.2s						
KUR	**Kuril'sk**	**3.14**	**38**	*e*P	**Pn**	**18 14 10.5**	**+1.3**
KUR				AMB	AMB	18 14 12.6	
	13nm,0.2s						
KUR				*e*S	**Sn**	**18 14 45.4**	**0.0**
KUR				A	A	18 14 52.1	
	46nm,0.2s						
KUR				A	A	18 14 52.1	
	43nm,0.2s						

MAN 06 18:15:59.9, 16°.09N×120°.29E, h1km, mb4.1, ML2.9, MS2.6, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.46**	**309**	*e*P	Pg	18 16 08.7	0.0
SCZP	**Santa Cruz**	**0.48**	**229**	*e*P	Pb	18 16 10.7	-0.3
SCZP				*e*S	Sb	18 16 21.4	+2.8
BALP	**Baler**	**1.29**	**105**	*e*P	Pg	18 16 24.0	-0.6
BALP				*e*S	Sn	18 16 45.5	+2.6
ABRA	**Dolores**	**1.60**	**15**	*e*P	Pg	18 16 32.4	+1.8
APYP	**Conner**	**1.98**	**27**	*e*P	Pn	18 16 35.5	+0.9

*ISK **06** 18:23:22.5, 38°.58N×40°.66E, h8km, ML2.1/9*
*ISCJB **06** 18:23:23.1±0.4, 38°.58N±0°.02×40°.65E±0°.04, h12km±5km, Error ellipse: s-maj=5.4km s-min=3.8km az=5.4*
*DDA **06** 18:23:23.2, 38°.57N×40°.67E, h7km, Ml2.8*
*CSEM **06** 18:23:23.1±0.2, 38°.57N×40°.66E, h15km, ML2.8, Error ellipse: s-maj=4.7km s-min=3.1km az=52.0*
ISC 06 18:23:23.3±0.9, 38°.57N±0°.02×40°.67E±0°.02, h15km±8km, n32, σ0§63/49, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HANI	**Diyarbakir_Han**	**0.27**	**233**	*i* P	**Pg**	**18 23 28.6**	**-0.4**
HANI				*i* S	**Sg**	**18 23 33.0**	**0.0**
HANI	**Diyarbakir_Han**	**0.27**	**233**	P	**Pg**	**18 23 28.6**	**-0.4**
HANI				S	**Sg**	**18 23 33.0**	**0.0**
BINT	**Bingol**	**0.33**	**335**	*e*Pg	**Pb**	**18 23 31.1**	**+0.1**
BINT				*e*Sg	**Sb**	**18 23 37.4**	**+1.2**
BGOL	**Bingol**	**0.41**	**0**	*i* P	**Pg**	**18 23 31.5**	**-0.2**
BGOL				*i* S	**Sg**	**18 23 37.9**	**+0.5**
BGOL	**Bingol**	**0.41**	**0**	P	**Pg**	**18 23 31.5**	**-0.2**
BGOL				S	**Sg**	**18 23 37.9**	**+0.5**
BNGB	**Bing^¶l**	**0.42**	**1**	PG	**Pg**	**18 23 31.1**	**-0.7**
BNGB				SG	**Sg**	**18 23 37.4**	**-0.1**
BNGL	**BINGOL**	**0.53**	**45**	*i* P	**Pg**	**18 23 34.1**	**+0.2**
BNGL				*i* S	**Sg**	**18 23 41.7**	**+0.6**
SVAN	**Silvan-Diyarba**	**0.59**	**135**	PG	**Pg**	**18 23 34.7**	**-0.3**
SVAN				SG	**Sb**	**18 23 43.5**	**-0.1**
SVAN	**Silvan-Diyarba**	**0.59**	**135**	*i* P	**Pg**	**18 23 35.2**	**+0.3**
SVAN				*i* S	**Sg**	**18 23 43.2**	**+0.4**
SVAN	**Silvan-Diyarba**	**0.59**	**135**	*e*Pg	**Pg**	**18 23 34.7**	**-0.3**
SVAN	**Silvan-Diyarba**	**0.59**	**135**	P	**Pg**	**18 23 35.2**	**+0.3**
SVAN				S	**Sg**	**18 23 43.2**	**+0.4**
BTMN	**Batman**	**0.83**	**145**	*i* P	**Pg**	**18 23 39.4**	**0.0**
BTMN				*i* S	**Sb**	**18 23 51.0**	**+0.5**
BTMN	**Batman**	**0.83**	**145**	P	**Pg**	**18 23 39.4**	**0.0**
BTMN				S	**Sb**	**18 23 51.0**	**+0.5**
YEDI	**Yedisu-Bingol**	**0.87**	**354**	PG	**Pg**	**18 23 39.4**	**-0.8**
YEDI				SG	**Sb**	**18 23 51.9**	**+0.2**
YEDI	**Yedisu-Bingol**	**0.87**	**354**	*e*Pg	**Pg**	**18 23 39.4

PB15	**IPOC Station P**	**2.60**	**272**	*e*P	**Pn**	**18 27 44.4**	**+0.5**
PB15				*i* S	**Sn**	**18 28 17.7**	**-1.3**
PB15				IAML		18 28 22.3	
	comp=E,2μm,0.4s						
PB06	**IPOC Station P**	**2.77**	**283⇑**	*i* P	**Pn**	**18 27 46.4**	**+0.6**
PB06				*i* S	**Sn**	**18 28 20.7**	**-1.7**
PB06				IAML		18 28 23.0	
	comp=E,516nm,0.3s						
FSA	**Cafayete**	**2.82**	**168**	*e*P	**Pn**	**18 27 47.8**	**+1.4**
PB09	**IPOC Station P**	**2.85**	**302**	*e*P	**Pn**	**18 27 47.9**	**+1.1**
PB09				*e*S	**Sn**	**18 28 23.6**	**-0.5**
GO02	**Mina Guanaco**	**3.24**	**235⇑**	*i* P	**Pn**	**18 27 52.1**	**+0.6**
GO02				*i* S	**Sn**	**18 28 31.8**	**-0.9**
GO02				IAML		18 28 34.3	
	comp=N,372nm,0.4s						
PB04	**IPOC Station P**	**3.39**	**287**	*e*P	**Pn**	**18 27 53.0**	**-0.1**
PB04				*i* S	**Sn**	**18 28 32.7**	**-2.8**
PB04				IAML		18 28 34.5	
	comp=N,496nm,0.5s						
PB07	**IPOC Station P**	**3.40**	**298⇑**	*i* P	**Pn**	**18 27 53.3**	**0.0**
PB07				*i* S	**Sn**	**18 28 32.7**	**-3.2**
PB07				IAML		18 28 33.1	
	comp=N,999nm,0.3s						
PB01	**IPOC Station P**	**3.49**	**310**	*e*P	**Pn**	**18 27 54.4**	**+0.1**
PB01				*i* S	**Sn**	**18 28 35.4**	**-2.4**
PB10	**IPOC Station P**	**3.60**	**267⇑**	*i* P	**Pn**	**18 27 55.5**	**0.0**
PB10				*i* S	**Sn**	**18 28 36.5**	**-3.3**
AHML	**Horco Molle**	**3.63**	**161**	*e*P	Pn	18 28 01.1	+5.2
VCA	**Vinchina**	**5.55**	**194**	*e*P	**Pn**	**18 28 18.4**	**-2.0**
VCA				IAML		18 28 23.8	
	comp=Z,8.6nm,0.5s						
ACLC	**CERRO LA CRUZ**	**6.06**	**183**	*e*P	**Pn**	**18 28 26.5**	**-0.5**
AGUA	**GUANDACOL**	**6.34**	**195**	*e*P	**Pn**	**18 28 29.8**	**-0.7**
APLL	**PUNTA DE LOS L**	**7.03**	**179**	*e*P	**Pn**	**18 28 39.8**	**+0.4**
LPAZ	**La Paz**	**7.16**	**348**	P	**Pn**	**18 28 42.9**	**+1.1**
	comp=Z,1.0nm,0.3s,baz=158,slow=6.9,SNR=18						
LPAZ				S	**Sn**	**18 30 03.3**	**0.0**
	comp=Z,0.1nm,0.3s,baz=315,slow=11,SNR=4.1						
SIV	**San Ignacio**	**9.00**	**37**	P	**Pn**	**18 29 04.8**	**-0.4**
	comp=Z,2.1nm,0.3s,baz=234,slow=10,SNR=24						
PLCA	**Paso Flores**	**17.65**	**190**	P	**Pn**	**18 30 57.1**	**+4.2**
	comp=Z,0.3nm,0.3s,baz=26,slow=10,SNR=9.3						
PTGA	**Pitinga**	**23.39**	**17**	P	**P**	**18 31 49.1**	**-1.1**
	comp=Z,2.1nm,0.6s,baz=202,slow=8.9,SNR=2.5						
SDV	**Santo Domingo**	**32.27**	**353**	P	**P**	**18 33 08.0**	**-1.5**
	comp=Z,3.0nm,0.3s,baz=269,slow=17,SNR=3.3						
SNAA	**Sanae**	**59.86**	**161**	P	**P**	**18 36 44.5**	**+1.1**
	comp=Z,0.5nm,0.8s,baz=256,slow=12,SNR=3.1						
TXAR	**Lajitas Array**	**63.34**	**324**	P	**P**	**18 37 07.7**	**+0.3**
	comp=Z,0.1nm,0.4s,baz=146,slow=9.8,SNR=2.9						
QSPA	**South Pole Qui**	**66.86**	**180**	P	**P**	**18 37 31.0**	**+1.5**
	comp=Z,1.3nm,0.5s,baz=140,slow=1.9,SNR=8.4						
KOWA	**Kowa**	**71.86**	**65**	P	**P**	**18 38 00.0**	**-0.8**
	comp=Z,2.0nm,1.0s,baz=270,slow=8.1,SNR=2.3						
TORD	**Torodi Ar. Bea**	**76.03**	**69**	P	**P**	**18 38 24.6**	**-0.4**
	comp=Z,1.2nm,0.6s,baz=256,slow=5.3,SNR=21						
ZALV	**Zalesovo Beam**	**142.66**	**28**	PKP	**PKPdf**	**18 46 09.3**	**+1.0**
	comp=Z,0.5nm,0.4s,baz=242,slow=3.1,SNR=2.8						
MKAR	**Makanchi Array**	**145.81**	**39**	PKPbc	**PKPab**	**18 46 15.8**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=320,slow=3.6,SNR=3.7						

BJI ***06*** *18:27:46.9,0°.56S×96°.98E,h15km,mb4.7/24,mB5.0/18, Ms4.4/4,Ms7 4.1/4*

DJA ***06*** *18:27:52.2±1.1,0°.N±3°.×9°.7E±°.,h15km±8km,M4.9/18, mb5.0/14,mB5.5/6,MLv4.9/18,Mw(mB)5.0/6*

MOS ***06*** *18:27:55.8±1.0,0°.32N×96°.98E,h33km,mb5.0/31,Error ellipse: s-maj=10.4km s-min=5.2km az=112.5*

ISCJB ***06*** *18:27:56.1±0.2,0°.24N±0°.04×97°.05E±0°.03,h38km, mb4.7/76,MS3.8/27,Error ellipse: s-maj=6.3km s-min=3.8km az=37.8*

IDC ***06*** *18:27:57.9±0.5,0°.21N×96°.95E,h37km±2km,mb4.3/32, mb1 4.4/35,mb1mx4.2/63,mbtmp4.5/35,ML4.1/3,MS3.8/29, Ms1 3.8/29,ms1mx3.6/62,Error ellipse: s-maj=15.2km s-min=9.3km az=41.0*

NEIC ***06*** *18:27:58.0±0.2,0°.25N×97°.01E,mb4.8/13,Error ellipse: s-maj=7.4km s-min=5.0km az=47.0*

ISC 06 18:27:57.9±0.4,0°.23N±0°.05×96°.96E±0°.06,h39km±3km, h39km:pP-P,n233,σ1°.32/238,mb4.8/89,MS3.8/27, 14C-11D,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.23**	**30**	P		**Pn**	**18 28 16.2**	**-2.5**
PBSI	**Pulau Batu**	**1.35**	**102**	P		**Pn**	**18 28 18.5**	**-1.7**
SISI	**Saibi**	**2.63**	**126**	P		**Pn**	**18 28 35.8**	**-2.0**
MNSI	**Mandailing Nat**	**2.68**	**78**	P		**Pn**	**18 28 36.7**	**-1.8**
TPTI		**3.02**	**4**	P		**Pn**	**18 28 39.9**	**-3.3**
PSI	**Prapat**	**3.22**	**37**	Pn		**Pn**	**18 28 43.7**	**-2.5**
	8.5nm,0.3s,baz=358,slow=1.9,SNR=18							
PSI				LR		LR	18 30 21.2	
	comp=Z,3μm,19.2s,baz=270,slow=45							
KCSI	**Kotacane, Aceh**	**3.37**	**14**	P		**Pn**	**18 28 45.7**	**-2.4**
TSI	**Tuntungan**	**3.62**	**26**	P		**Pn**	**18 28 50.1**	**-1.4**
PDSI	**Padang**	**3.68**	**108**	P		**Pn**	**18 28 49.9**	**-2.4**
MLSI	**Meulaboh, Aceh**	**4.05**	**352**	P		**Pn**	**18 28 54.2**	**-3.2**
BKNI	**Bangkinang**	**4.08**	**89**	P		**Pn**	**18 28 56.8**	**-1.0**
BKNI				S		**Sn**	**18 29 46.1**	**+1.8**
PPSI	**Pulau Pagai**	**4.25**	**134**	P		**Pn**	**18 28 57.6**	**-2.6**
LHMI	**Lhok Sumawe**	**4.97**	**360**	P		**Pn**	**18 29 06.9**	**-3.1**
KRJI	**Kerinci**	**5.05**	**117**	P		**Pn**	**18 29 09.2**	**-2.1**
	313nm,0.5s,6μm1.7nm							
MASI	**Maura Aman, Be**	**6.25**	**122**	P		**Pn**	**18 29 25.4**	**-2.2**
	144nm,0.6s,3μm0.9nm							
TRTT	**Trang**	**8.03**	**20**	P		Pn	18 29 59.5	+7.4
	25nm,1.3s							
MDSI	**Maura Dua**	**8.60**	**123**	P		**Pn**	**18 29 56.9**	**-3.0**
	68nm,0.9s							
LEM	**Lembang**	**12.73**	**124**	LR		LR	18 36 37.1	
	comp=Z,508nm,19.4s,baz=240,slow=41							
STKI	**Sintang**	**14.52**	**91**	P		**P**	**18 31 27.2**	**+0.3**
SRAK	**Srakaew**	**14.59**	**20**	P		P	18 31 40.0	+12
PBKT	**Sadao Pong**	**16.71**	**13**	P		**Pn**	**18 31 50.1**	**+0.8**
	76nm,0.9s							
UBPT	**Khong Chiam**	**17.16**	**29**	P		P	18 32 04.4	+8.3
PHIT	**Phitsanulok**	**17.20**	**11**	P		**P**	**18 31 57.2**	**+0.7**
	59nm,1.2s,510nm							
PALK	**Pallekele**	**17.66**	**294**	P		**P**	**18 32 01.5**	**-0.3**
	0.5nm,0.3s,baz=120,slow=8.7,SNR=4.6							
PALK				S		Sn	18 35 02.6	-14
	0.8nm,0.3s,baz=117,slow=18,SNR=4.4							
PALK				LR		LR	18 37 57.5	
	comp=Z,376nm,19.0s,baz=116,slow=34							
MTKI	**Muara Teweh, K**	**17.97**	**94**	P		**Pn**	**18 32 04.2**	**-0.8**
MTKI				S		**Pn**	**18 32 02.1**	**-2.9**
SKNT	**Sakolnakorn**	**18.02**	**22**	P		P	18 32 15.6	+10
CMAR	**Chiang Mai Arr**	**18.22**	**6**	P		**P**	**18 32 07.0**	**-0.8**
	0.5nm,0.3s,baz=197,slow=11,SNR=25							
CMAR				PcP		**PcP**	**18 36 40.5**	**+0.8**
	0.1nm,0.3s,baz=227,slow=2.6,SNR=5.7							
CMAR				pPcP			18 36 52.6	
	0.1nm,0.3s,baz=216,slow=3.0,SNR=4.8							
CMAR				LR		LR	18 39 25.8	
	comp=Z,238nm,18.3s,baz=187,slow=38							
CHTO	**Chiang Mai**	**18.57**	**6**	P		**Pn**	**18 32 14.7**	**+2.4**
	118nm,1.6s							
CHTO	**Chiang Mai**	**18.57**	**6**	*e*P		**P**	**18 32 10.9**	**-0.9**
	16nm,0.9s							
CHTO	**Chiang Mai**	**18.57**	**6**	*e*P		**P**	**18 32 10.9**	**-0.9**
CHTO				pmax		pmax		
	comp=Z,16nm,0.9s							
NONG	**Nongkai**	**18.74**	**19**	P		Pn	18 32 22.7	+8.5
CMAI	**Chiengmai2**	**19.69**	**6**	P		**Pn**	**18 32 26.3**	**+0.5**
	comp=Z,171nm,1.7s							
BWNR	**Bhubaneshwar**	**22.74**	**332**	*e*P		**P**	**18 32 56.4**	**-0.4**
BWNR				IAmb		IAmb	18 32 58.9	
	comp=Z,43nm,0.3s							
BELO	**BELONIA**	**23.50**	**347**	*ex*		P	18 32 54.7	-10
AZL	**Aizawl**	**23.74**	**350**	*e*P		**P**	**18 33 06.3**	**-0.5**
AZL				IAmb		IAmb	18 33 07.6	
	comp=Z,19nm,0.4s							
AGT	**Agartala**	**24.16**	**347**	*e*P		**P**	**18 33 07.3**	**-3.3**
AGT				IAmb		IAmb	18 33 10.5	
	comp=Z,45nm,0.7s							
IMP	**Imphal**	**24.63**	**353**	*e*P		**P**	**18 33 14.5**	**-0.5**
IMP				IAmb		IAmb	18 33 27.1	
	comp=Z,14nm,1.4s							
APSI	**Ampana**	**24.71**	**93**	P		**P**	**18 33 15.3**	**-0.5**
KMI	**Kunming**	**25.37**	**12**	P		**P**	**18 33 27.2**	**+5.3**
KMI				PP		**PnPn**	**18 34 06.6**	**+8.6**
KMI				S		**S**	**18 37 47.0**	**+0.9**
KMI				sS		sS	18 38 03.5	-0.4
KMI				LR		LR		
	comp=Z,470nm,15.0s							
KMI				LR		LR		
	comp=Z,320nm,12.1s							
KMI				LR		LR		
	comp=Z,510nm,14.6s							
H08S2	**Diego Garcia H**	**25.62**	**252**	T		T	19 00 26.8	
	baz=72,slow=75,SNR=241							
H08S3	**Diego Garcia H**	**25.62**	**252**	T		T	19 00 31.3	
	baz=72,slow=75,SNR=262							
H08S1	**Diego Garcia H**	**25.64**	**252**	T		T	19 00 28.3	
	baz=72,slow=75,SNR=140							
SHL	**Shillong**	**25.66**	**349**	*e*P		**P**	**18 33 24.6**	**+0.1**
SHL	**Shillong**	**25.66**	**349**	P		**P**	**18 33 24.6**	**+0.1**
SHL				pmax		pmax		
	comp=Z,80nm,0.9s							
BOK	**Bokaro**	**25.78**	**336**	*e*P		**P**	**18 33 25.9**	**+0.6**
BOK				IAmb		IAmb	18 33 26.6	
	comp=Z,1μm,3.4s							
TURI	**Tura**	**25.98**	**346**	*e*P		**P**	**18 33 27.3**	**+0.2**
MOKO	**MOKOCHONG**	**26.05**	**355**	*e*P		**P**	**18 33 26.7**	**-1.3**
MOKO				IAmb		IAmb	18 33 42.9	
	comp=Z,33nm,1.1s							
GUWA	**GUWAHATI**	**26.31**	**349**	*e*P		**P**	**18 33 30.2**	**+0.1**
GUWA				IAmb		IAmb	18 33 32.5	
	comp=Z,22nm,0.8s							
TEZP	**TEZPUR**	**26.54**	**352**	*e*P		**P**	**18 33 32.9**	**+0.7**
TEZP				IAmb		IAmb	18 33 35.6	
	comp=Z,25nm,1.5s							
ITAN	**ITANAGAR**	**26.94**	**354**	*e*P		**P**	**18 33 35.9**	**+0.1**
ITAN				IAmb		IAmb	18 33 47.0	
	comp=Z,2μm,3.6s							
TGY	**Tagaytay City**	**27.44**	**59**	LR		LR	18 44 15.1	
	comp=Z,172nm,21.3s,baz=234,slow=36							
ODAN	**Odare**	**28.04**	**342**	*e*P		**P**	**18 33 47.2**	**+1.3**
GTK	**Tadong**	**28.11**	**344**	*e*P		**P**	**18 33 46.4**	**0.0**
RAMN	**Ramite**	**28.38**	**340**	*e*P		**P**	**18 33 50.4**	**+1.5**
	comp=Z,72nm,1.0s							
BATI	**Baumata**	**28.51**	**112**	P		**P**	**18 33 48.8**	**-1.2**
	comp=Z,16nm,0.7s,baz=49,slow=9.3,SNR=3.7							
BATI				LR		LR	18 47 20.4	
	comp=Z,309nm,18.0s,baz=278,slow=41							
POO	**Poona**	**29.09**	**310**	*e*P		**P**	**18 33 55.2**	**+0.1**
JIRN	**Jiri**	**29.17**	**340**	*e*P		**P**	**18 33 57.2**	**+1.1**
	comp=Z,104nm,0.9s							
DAV	**Davao City (W)**	**29.34**	**76**	LR		LR	18 46 16.0	
	comp=Z,171nm,21.1s,baz=258,slow=37							
PKIN	**Phulchoki**	**29.37**	**339**	*e*P		**P**	**18 33 59.2**	**+1.4**
GUN	**Gumba**	**29.51**	**340**	*e*P		**P**	**18 34 00.2**	**+1.1**
	comp=Z,38nm,0.7s							
DMN	**Daman**	**29.51**	**338**	*e*P		**P**	**18 33 59.8**	**+0.8**
	comp=Z,13nm,0.6s							
KKN	**Kakani**	**29.61**	**339**	*e*P		**P**	**18 34 00.8**	**+1.0**
	comp=Z,26nm,0.9s							
BHPL	**Bhopal**	**29.73**	**322**	*e*P		**P**	**18 33 60.0**	**-0.8**
BHPL				IAmb		IAmb	18 34 01.6	
	comp=Z,5.6nm,0.6s							
LSA	**Lhasa**	**29.83**	**350**	*e*P		**P**	**18 34 02.8**	**+0.8**
	comp=Z,23nm,1.0s							
LSA	**Lhasa**	**29.83**	**350**	*e*P		**P**	**18 34 02.8**	**+0.8**
LSA				pmax		pmax		
	comp=Z,23nm,1.0s							
GKN	**Gorkha**	**30.04**	**338**	*e*P		**P**	**18 34 04.7**	**+1.1**
	comp=Z,36nm,0.8s							
KOLN	**Koldanda**	**30.24**	**336**	*e*P		**P**	**18 34 06.6**	**+1.2**
	comp=Z,84nm,0.9s							
DANN	**Dangsing**	**30.69**	**337**	*e*P		**P**	**18 34 10.6**	**+1.1**
	comp=Z,82nm,1.0s							
PYUN	**Piuthan**	**30.78**	**335**	*e*P		**P**	**18 34 11.1**	**+0.9**
	comp=Z,26nm,0.8s							
ENH	**Enshi**	**32.17**	**21**	*e*P		**P**	**18 34 21.6**	**-0.6**
	comp=Z,20nm,0.9s							
FITZ	**Fitzroy Crossi**	**33.57**	**124**	P		**P**	**18 34 34.2**	**-0.4**
	comp=Z,7.1nm,0.6s,baz=321,slow=10.0,SNR=30							
DDI	**Dehra Dun**	**34.92**	**331**	*e*P		**P**	**18 34 46.8**	**+0.6**
XAN	**Xi'an**	**35.46**	**17**	P		P	18 35 01.3	+11
XAN				pmax		pmax		
	comp=Z,15nm,0.9s							
XAN				pmax		pmax		
	comp=Z,97nm,4.1s							
SMLA	**Simla**	**36.01**	**330**	*e*P		**P**	**18 34 52.7**	**-2.8**
H01W3	**Cape Leeuwin H**	**38.45**	**157**	T		T	19 16 48.6	
	baz=334,slow=76,SNR=18							
H01W2	**Cape Leeuwin H**	**38.46**	**157**	T		T	19 16 38.7	
	baz=334,slow=76,SNR=26							
H01W1	**Cape Leeuwin H**	**38.46**	**157**	T		T	19 16 55.8	
	baz=334,slow=76,SNR=22							
GTA	**Gaotai**	**39.08**	**4**	*e*P		**P**	**18 35 21.7**	**+0.2**
GTA				pP		pP	18 35 25.9	-6.6
GTA				sP		sP	18 35 29.1	-8.0
GTA				pmax		pmax		
	comp=Z,4.0nm,1.0s							
NIL	**Nilore**	**40.01**	**329**	*e*P		**P**	**18 35 28.2**	**-1.1**
	comp=Z,70nm,0.8s							
NIL	**Nilore**	**40.01**	**329**	*e*P		**P**	**18 35 28.2**	**-1.1**
NIL				pmax		pmax		
	comp=Z,70nm,0.8s							
JOW	**Kunigami**	**40.08**	**46**	LR		LR	18 51 32.6	
	comp=Z,69nm,21.9s,baz=245,slow=35							
WRA	**Warramunga Arr**	**41.73**	**121**	P		**P**	**18 35 43.1**	**-0.5**
	comp=Z,8.9nm,0.5s,baz=303,slow=8.9,SNR=222							
WRA				pP		**pP**	**18 35 54.9**	**+0.2**
	comp=Z,15nm,0.7s,baz=300,slow=9.1,SNR=17							
WRAB	**Tennant Creek**	**41.74**	**121**	*e*P		**P**	**18 35 43.6**	**-0.1**
	comp=Z,15nm,0.6s							
WRAB	**Tennant Creek**	**41.74**	**121**	*e*P		**P**	**18 35 43.6**	**-0.1**
WRAB				pmax		pmax		
	comp=Z,15nm,0.6s							
ASAR	**Alice Springs**	**43.01**	**126**	P		**P**	**18 35 54.0**	**+0.1**
	comp=Z,2.5nm,0.5s,baz=295,slow=7.9,SNR=93							
ASAR				LR		LR	18 53 36.9	
	comp=Z,98nm,21.2s,baz=11,slow=36							
BJT	**Baijiatuau**	**43.30**	**22**	*e*P		**P**	**18 35 56.9**	**+0.9**
	comp=Z,9.7nm,0.8s							
BJT	**Baijiatuau**	**43.30**	**22**	*e*P		**P**	**18 35 56.9**	**+0.9**
BJT				pmax		pmax		
	comp=Z,10.0nm,0.8s							
KSH	**Kashi**	**43.56**	**336**	P		**P**	**18 35 57.1**	**-1.1**
KSH				pmax		pmax		
	comp=Z,9.0nm,0.5s							
KSH				pmax		pmax		
	comp=Z,240nm,4.3s							
SFK	**Sufi-Kurgan**	**45.00**	**334**	*i* P		**P**	**18 36 10.4**	**+0.4**
SFK				pmax		pmax		
	comp=Z,42nm,1.4s							
PDGK	**Podgornoye**	**45.67**	**342**	P		**P**	**18 36 15.4**	**+0.3**
PDGK				pmax		pmax		
	comp=Z,22nm,1.0s							
JNU	**Nakatsue**	**45.69**	**41**	LR		LR	18 55 45.1	
	comp=Z,151nm,20.3s,baz=282,slow=36							
UCH	**Uchtor**	**46.44**	**337**	P		**P**	**18 36 22.7**	**+1.1**
	SNR=9.6							
TKM2	**Tokmak 2**	**46.63**	**338**	P		**P**	**18 36 24.1**	**+1.4**
	SNR=11							
TKM2	**Tokmak 2**	**46.63**	**338**	P		**P**	**18 36 23.0**	**+0.3**
TKM2				pmax		pmax		
	comp=Z,24nm,1.2s							
KBK	**Karagaybulak**	**46.64**	**338**	P		**P**	**18 36 24.5**	**+1.7**
	SNR=8.0							
AML	**Almayashu**	**46.69**	**336**	P		**P**	**18 36 24.7**	**+1.3**
	SNR=9.3							
KSAR	**Wonju Array Be**	**46.75**	**34**	P		**P**	**18 36 23.6**	**+0.1**
KSAR				pP		**pP**	**18 36 34.5**	**-0.1**
KSAR	**Wonju Array Be**	**46.75**	**34**	P		**P**	**18 36 23.6**	**+0.1**
KSAR				*PP		**pP**	**18 36 34.6**	**-0.1**
KSRS	**Korea Array**	**46.78**	**34**	P		**P**	**18 36 23.6**	**-0.1**
	comp=Z,2.8nm,0.8s,baz=225,slow=8.8,SNR=16							
KSRS				pP		**pP**	**18 36 34.5**	**-0.3**
	comp=Z,9.5nm,0.9s,baz=222,slow=8.9,SNR=15							
AAK	**Ala-Archa**	**46.80**	**337**	*e*P		**P**	**18 36 25.5**	**+1.5**
	comp=Z,4.7nm,0.8s							
AAK	**Ala-Archa**	**46.80**	**337**	*i* P		**P**	**18 36 23.6**	**-0.4**
AAK				pmax		pmax		
	comp=Z,3.0nm,1.0s							
FRU	**Bishkek**	**46.92**	**337**	*e*P		**P**	**18 36 25.0**	**+0.2**
FRU				*e*			18 36 42.0	
EKS2	**Erkin-Say**	**47.10**	**337**	P		**P**	**18 36 27.6**	**+1.3**
	SNR=14							
USP	**Ospenovka**	**47.33**	**338**	P		**P**	**18 36 29.4**	**+1.4**
	SNR=17							
MNAS	**Manas**	**47.47**	**335**	P		**P**	**18 36 29.5**	**+0.3**
MNAS				pmax		pmax		
	comp=Z,27nm,1.4s							
SONM	**Songino Array**	**48.12**	**9**	P		**P**	**18 36 34.8**	**+0.7**
	comp=Z,4.8nm,0.7s,baz=192,slow=9.0,SNR=24							
SONM				pP		**pP**	**18 36 46.0**	**+0.6**
	comp=Z,3.2nm,0.8s,baz=190,slow=9.0,SNR=7.8							
MK31	**Makanchi Array**	**48.12**	**346**	*i* P		**P**	**18 36 34.4**	**+0.4**
MK31				pmax		pmax		
	comp=Z,24nm,1.1s							
MKAR	**Makanchi Array**	**48.12**	**346**	P		**P**	**18 36 34.6**	**+0.5**
	comp=Z,9.4nm,0.7s,baz=157,slow=8.0,SNR=110							
MKAR				pP		**pP**	**18 36 45.6**	**+0.3**
	comp=Z,10.0nm,0.6s,baz=166,slow=7.7,SNR=21							
ULN	**Ulaanbaatar**	**48.25**	**9**	*e*P		**P**	**18 36 35.3**	**+0.2**
	comp=Z,11nm,1.5s							
ULN	**Ulaanbaatar**	**48.25**	**9**	*ce*P		**P**	**18 36 35.9**	**+0.7**
ULN				pmax		pmax		
	comp=Z,8.0nm,1.7s							
KK31	**Karatay Array**	**48.82**	**334**	*i* P		**P**	**18 36 39.6**	**+0.1**
KK31				pmax		pmax		
	comp=Z,4.0nm,0.6s							
TLY	**Talaya**	**51.58**	**5**	LR		LR	19 01 02.2	
	comp=Z,157nm,19.4s,baz=172,slow=38							
TLY	**Talaya**	**51.58**	**5**	*i* P		**P**	**18 37 01.2**	**+1.0**
TLY				pmax		pmax		
	comp=Z,3.0nm,0.8s							
GEYT	**Alibeck**	**51.81**	**321**	P		**P**	**18 37 02.1**	**-0.1**
	comp=Z,6.3nm,0.8s,baz=140,slow=9.4,SNR=9.5							
GEYT				pP		**pP**	**18 37 13.2**	**-0.3**
	comp=Z,3.9nm,0.7s,baz=147,slow=8.5,SNR=7.1							
JHJ	**Hachijo jima 2**	**51.85**	**46**	LR		LR	18 59 07.8	
	comp=Z,43nm,18.1s,baz=116,slow=36							
CTAO	**Charters Tower**	**52.29**	**116**	*e*P		**P**	**18 37 06.6**	**+0.6**
CTAO	**Charters Tower**	**52.29**	**116**	*e*P		**P**	**18 37 06.6**	**+0.6**
OTUK	**Ortayu**	**52.37**	**339**	P		**P**	**18 37 06.3**	**+0.1**
OTUK				pmax		pmax		
	comp=Z,30nm,0.8s							
MJAR	**Matsushiro Arr**	**52.57**	**42**	P		**P**	**18 37 07.5**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=223,slow=8.1,SNR=5.8							
MJAR				LR		LR	19 00 08.3	
	comp=Z,70nm,20.7s,baz=215,slow=37							
KURK	**Kurchatov**	**52.67**	**345**	*e*P		**P**	**18 37 08.3**	**+0.1**
	comp=Z,174nm,1.1s							
KURK	**Kurchatov**	**52.67**	**345**	*ce*P		**P**	**18 37 08.4**	**+0.1**
KURK				pmax		pmax		
	comp=Z,19nm,1.7s							
STKA	**Stephens Creek**	**52.89**	**131**	P		**P**	**18 37 10.7**	**+0.4**
	comp=Z,7.5nm,0.9s,baz=317,slow=2.8,SNR=9.1							
STKA				LR		LR	18 59 44.3	
	comp=Z,71nm,21.7s,baz=212,slow=36							
USRK	**Ussuriysk Ar.**	**53.72**	**31**	P		**P**	**18 37 16.8**	**+0.6**
	comp=Z,9.1nm,0.8s,baz=223,slow=5.9,SNR=11							
USRK				pP		**pP**	**18 37 28.5**	**+1.0**
	comp=Z,6.8nm,0.8s,baz=245,slow=6.7,SNR=4.6							
USRK				LR		LR	19 01 04.9	
	comp=Z,139nm,19.7s,baz=217,slow=37							
ZALV	**Zalesovo Beam**	**54.48**	**351**	P		**P**	**18 37 21.9**	**+0.4**
	comp=Z,19nm,0.6s,baz=182,slow=6.6,SNR=85							
ZALV				pP		**pP**	**18 37 33.1**	**+0.3**
	comp=Z,13nm,0.4s,baz=179,slow=6.3,SNR=19							
ZALV				LR		LR	19 06 27.1	
	comp=Z,35nm,18.2s,baz=325,slow=42							
RAYN	**Ar Rayn**	**55.01**	**299**	*e*P		**P**	**18 37 26.5**	**+0.6**
	comp=Z,8.3nm,1.0s							
RAYN	**Ar Rayn**	**55.01**	**299**	*e*P		**P**	**18 37 26.5**	**+0.6**
RAYN				pmax		pmax		
	comp=Z,8.0nm,1.0s							
NVS	**Novosibirsk**	**55.59**	**350**	*e*P		**P**	**18 37 29.3**	**-0.2**
NVS				pmax		pmax		
	comp=N,17nm,1.4s							
NVS				pmax		pmax		
	comp=E,10.0nm,1.4s							
NVS				pmax		pmax		
	comp=Z,26nm,1.4s							
BVA0	**Borovoye Array**	**57.09**	**341**	*i* P		**P**	**18 37 39.9**	**-0.3**
BVA0				pmax		pmax		
	comp=Z,7.0nm,0.8s							
BVAR	**Borovoye Array**	**57.09**	**341**	LR		LR	19 05 25.1	
	comp=Z,50nm,18.1s,baz=114,slow=39							
BRVK	**Borovoye**	**57.15**	**341**	*e*P		**P**	**18 37 40.1**	**-0.5**
	comp=Z,8.7nm,0.8s							
BRVK	**Borovoye**	**57.15**	**341**	*ce*P		**P**	**18 37 39.3**	**-1.3**
BRVK				pmax		pmax		
	comp=Z,8.0nm,1.7s							
AB31	**Akbulak array**	**58.26**	**332**	*i* P		**P**	**18 37

comp=E,4.6nm,0.7s,baz=132,slow=6.8,SNR=14
VORD Divnogorie 70.05 325 *e*P **P 18 39 04.3 -1.5**
VORD pmax pmax
comp=Z,3.0nm,0.7s
VSR Storozhevoye 70.23 326 *e*P **P 18 39 05.8 -1.1**
VSR pmax pmax
comp=Z,7.0nm,0.7s
MAW Mawson 71.72 193 LR LR 19 06 07.4
comp=Z,94nm,18.9s,baz=236,slow=32
PRGR Permogore 72.43 337 *e*P **P 18 39 18.9 -1.1**
PRGR *e**PP **pP 18 39 29.4 -2.4**
PRGR *e* 18 39 35.0
PRGR pmax pmax
comp=Z,16nm,0.6s
PETK Petropavlovsk- 72.67 33 LR LR 19 14 41.3
comp=Z,50nm,18.4s,baz=257,slow=39
MOS Moscow 73.04 329 *e*P **P 18 39 23.2 -0.6**
MOS *e* 18 39 34.3
LBTB Lobatse 73.25 244 LR LR 19 07 56.6
comp=Z,86nm,18.3s,baz=132,slow=33
BOSA Boshof 74.09 240 LR LR 19 04 51.6
comp=Z,79nm,20.1s,baz=150,slow=30
TIXI Tiksi 74.18 10 *e*P **P 18 39 29.4 -0.8**
comp=Z,11nm,0.8s
TIXI *e*pP **pP 18 39 40.8 -1.1**
TIXI Tiksi 74.18 10 *e*P **P 18 39 29.4 -0.8**
TIXI *e**PP **pP 18 39 40.8 -1.1**
TIXI pmax pmax
comp=Z,11nm,0.8s
KLMR Klimovskoe 74.52 335 *e*P **P 18 39 30.4 -1.9**
KLMR pmax pmax
comp=Z,18nm,1.5s
KLMR Klimovskoe 74.52 335 *e*P **P 18 39 30.4 -1.9**
KLMR AMP 18 39 44.3
comp=Z,18nm,1.5s
SEY Seymchan 74.74 23 *i*P **P 18 39 33.2 -0.4**
IDI Anoyia 75.28 306 P **P 18 39 37.1 -0.3**
comp=Z,5.9nm,0.5s,baz=84,slow=7.1,SNR=6.7
IDI pP **pP 18 39 48.8 -0.4**
comp=Z,6.2nm,0.5s,baz=96,slow=6.5,SNR=2.7
SORM Soroca 75.69 320 ⇓*i*P **P 18 39 39.0 -0.3**
SORM Soroca 75.69 320 ⇓P **P 18 39 39.0 -0.3**
AKASG Malin Array Be 75.88 323 P **P 18 39 38.8 -1.5**
comp=Z,1.0nm,0.4s,baz=91,slow=4.8,SNR=12
AKASG pP **pP 18 39 50.9 -1.3**
comp=Z,8.9nm,0.7s,baz=88,slow=5.1,SNR=14
AKASG Malin Array Be 75.88 323 *ce*P **P 18 39 39.5 -0.9**
AKASG pmax pmax
comp=Z,2.0nm,0.4s
VRI Vrincioaia 76.17 317⇑*i*P **P 18 39 42.8 +0.6**
VRI Vrincioaia 76.17 317 ⇑P **P 18 39 42.8 +0.6**
PLOR Plostina 76.22 317 ⇓*i*P **P 18 39 43.1 +0.6**
PLOR Plostina 76.22 317 ⇓P **P 18 39 43.1 +0.6**
TESR Tescani 76.38 318⇑*i*P **P 18 39 43.0 -0.3**
MLR Muntele Rosu 76.61 317 P **P 18 39 44.8 0.0**
comp=Z,2.3nm,1.0s,baz=99,slow=1.3,SNR=7.9
MLR Muntele Rosu 76.61 317 ⇓*i*P **P 18 39 45.3 +0.5**
MLR Muntele Rosu 76.61 317 ⇓P **P 18 39 45.3 +0.5**
TMCR Tamitsa 76.72 337 *e*P **P 18 39 44.1 -0.7**
TMCR pmax pmax
comp=Z,12nm,1.1s
BURAR Bucovina Array 77.59 319 ⇓*i*P **P 18 39 51.3 +1.0**
BURAR Bucovina Array 77.59 319 ⇓P **P 18 39 51.3 +1.0**
VTS Vitosha 77.92 314 ⇓*i*P **P 18 39 52.0 -0.3**
VTS Vitosha 77.92 314 ⇓P **P 18 39 52.0 -0.3**
SUR Sutherland 78.44 237 LR LR 19 07 08.2
comp=Z,8.0nm,18.8s,baz=95,slow=30
IDID Didziasalis 78.66 327 *e*P **P 18 39 56.5 +0.6**
IDID IAmb IAmb 18 40 08.7
comp=Z,6.5nm,1.0s
LVV L'vov 78.86 321 *e*P **P 18 39 58.4 +1.3**
IIGN Ignalina 78.95 327 *e*P **P 18 39 58.2 +0.7**
IIGN IAmb IAmb 18 40 09.4
comp=Z,10.0nm,1.1s
IZAR Zarasai 79.05 327 *e*P **P 18 39 58.8 +0.8**
IZAR IAmb IAmb 18 40 10.6
comp=Z,5.6nm,0.8s
ISAL Salakas 79.07 327 *e*P **P 18 39 58.9 +0.8**
ISAL IAmb IAmb 18 40 10.9
comp=Z,7.9nm,1.0s
TRPA Tarpa 79.47 319 ⇓*i*P **P 18 40 00.9 +0.5**
BZS Buzias 79.61 316⇑*i*P **P 18 40 01.6 +0.3**
BZS Buzias 79.61 316 ⇑P **P 18 40 01.6 +0.3**
SIRR Siria 79.70 317⇑*i*P **P 18 40 02.5 +0.7**
TSUM Tsumeb 80.04 251 LR LR 19 09 58.0
comp=Z,68nm,19.4s,baz=16,slow=32
CRVS Cervenica-Dubn 80.32 320 *e*P **P 18 40 05.6 +0.5**
CRVS Cervenica-Dubn 80.32 320 *e*P **P 18 40 05.6 +0.5**
FINES FINESS Array B 80.75 333 P **P 18 40 07.1 +0.1**
comp=Z,2.4nm,0.8s,baz=107,slow=6.0,SNR=8.6
FINES pP **pP 18 40 18.3 -0.6**
comp=Z,1.5nm,0.5s,baz=93,slow=3.8,SNR=5.3
VYHS Vyhne 81.96 319 *e*P **P 18 40 14.1 +0.3**
VYHS Vyhne 81.96 319 *e*P **P 18 40 14.1 +0.3**
BILL Bilibino 82.15 21 *e*P **P 18 40 16.2 +1.8**
BILL pmax pmax
comp=Z,1.0nm,1.0s
KLNR Kaliningrad 82.15 325 *i*P **P 18 40 13.9 -0.7**
KLNR pmax pmax
comp=Z,34nm,1.0s
OKC Ostrava-Krasne 82.61 320 *e*P **P 18 40 18.2 +1.0**
OKC *e*pP **pP 18 40 27.4 -1.7**
OKC Ostrava-Krasne 82.61 320 *e*P **P 18 40 18.2 +1.0**
OKC *e* 18 40 27.4
JAVC Velka Javorina 82.78 319 *e*P **P 18 40 19.4 +1.3**
MODS Modra-Piesok 82.97 319 *e*P **P 18 40 19.0 -0.1**
MODS pmax pmax
comp=Z,12nm,1.5s
MODS Modra-Piesok 82.97 319 *e*P **P 18 40 19.0 -0.1**
MORC Moravsky Berou 82.99 320⇑*i*P **P 18 40 20.0 +0.8**
MORC Moravsky Berou 82.99 320 ⇑P **P 18 40 20.0 +0.8**
MORC Moravsky Berou 82.99 320 *e*P **P 18 40 19.7 +0.5**
ARCES ARCESS Array B 83.36 340 P **P 18 40 21.3 +0.6**
comp=Z,4.6nm,0.8s,baz=95,slow=6.1,SNR=14
ARCES pP **pP 18 40 33.8 +1.2**
comp=Z,1.6nm,0.5s,baz=105,slow=4.5,SNR=4.4
DPC Dobruska-Polom 83.84 321 *e*P **P 18 40 24.7 +1.1**
DPC *e*pP **pP 18 40 35.2 -0.3**
DPC Dobruska-Polom 83.84 321 *e*P **P 18 40 24.7 +1.1**
DPC *e* 18 40 35.2
VNDA Vanda 84.92 169 P **P 18 40 28.9 +0.4**
comp=Z,0.7nm,0.8s,baz=8.5,slow=5.1,SNR=3.1
PRU Pruhonice 84.94 320 *e*P **P 18 40 29.9 +0.8**
PRU *e*pP **pP 18 40 41.2 +0.2**
PRU Pruhonice 84.94 320 *e*P **P 18 40 29.9 +0.8**
PRU *e* 18 40 41.2
GERES GERESS Array B 85.38 319 P **P 18 40 32.0 +0.6**
comp=Z,2.7nm,1.0s,baz=100,slow=5.5,SNR=20
GERES pP **pP 18 40 42.7 -0.7**
comp=Z,3.7nm,1.0s,baz=94,slow=4.3,SNR=9.3
BRG Berggiesshubel 85.41 321 *e*P **P 18 40 32.0 +0.6**
comp=Z,12nm,1.6s
BRG Berggiesshubel 85.41 321 *e*P **P 18 40 32.0 +0.6**
BRG pmax pmax
comp=Z,12nm,1.6s
CLL Collm 86.04 321 *e*P **P 18 40 34.0 -0.5**
CLL *i*pP **pP 18 40 46.1 -0.4**
comp=Z,6.0nm,1.1s
CLL Collm 86.04 321 *e*P **P 18 40 34.0 -0.5**
CLL *i* 18 40 46.1
HFS Hagfors 86.44 330 P **P 18 40 36.4 +0.1**
comp=Z,11nm,1.0s,baz=124,slow=2.1,SNR=12
HFS LR LR 19 23 25.8
comp=Z,38nm,18.1s,baz=70,slow=38
NB2 NORSAR Subarra 87.73 331 P **P 18 40 42.5 -0.1**
comp=Z,5.3nm,0.9s,baz=94,slow=5.1
NOA NORSAR Array B 87.73 331 P **P 18 40 42.2 -0.4**
comp=Z,3.6nm,0.9s,baz=93,slow=4.6,SNR=5.7
NOA pP **pP 18 40 54.0 -0.6**
comp=Z,4.0nm,0.9s,baz=92,slow=4.6,SNR=6.1
NOA LR LR 19 24 34.9
comp=Z,26nm,19.1s,baz=25,slow=39
SPITS Spitsbergen Ar 87.85 348 P **P 18 40 43.1 +0.2**
comp=Z,6.3nm,1.0s,baz=110,slow=13,SNR=3.0
SPITS LR LR 19 27 10.5
comp=Z,55nm,19.2s,baz=140,slow=40
KEST Kesra 87.93 306 P **P 18 40 44.6 +0.5**
comp=Z,5.2nm,0.9s,baz=236,slow=2.1,SNR=4.7
NVL N'lazarevskaya 88.60 199 *e*P **P 18 40 48.9 +2.5**
NVL pmax pmax
comp=Z,6.0nm,0.7s
QSPA South Pole Qui 90.18 180 P **P 18 40 54.5 +0.4**
comp=Z,4.2nm,1.1s,baz=308,slow=4.2,SNR=5.7
SNAA Sanae 93.30 198 LR LR 19 19 41.7
comp=Z,67nm,18.6s,baz=337,slow=33
EKA Eskdalemuir Ar 95.58 326 P **P 18 41 19.2 +0.2**
comp=Z,1.4nm,0.7s,baz=104,slow=5.2,SNR=5.0
NVAR Mina Array Bea 129.71 36 PKP **PKPdf 18 47 05.1 +1.3**
comp=Z,1.7nm,0.9s,baz=247,slow=0.9,SNR=9.2
CPUP Villa Florida 144.13 222 PKP PKPbc 18 47 29.0 +0.6
comp=Z,8.3nm,0.8s,baz=134,slow=3.6,SNR=13
TXAR Lajitas Array 144.61 32 PKP PKPbc 18 47 30.6 +0.5
comp=Z,5.2nm,0.9s,baz=254,slow=1.7,SNR=45
JCT Junction City 145.55 26 *e*P **PKPbc 18 47 33.1 +0.2**
JCT *e* 18 47 44.7
JCT Junction City 145.55 26 *e*PKIKP **PKPbc 18 47 33.1 +0.2**
JCT *e* 18 47 44.7

ISK ***06*** *18:31:17.9,34°.73N×27°.72E,h17km,ML2.5/9*
ISCJB ***06*** *18:31:18.6±0.5,34°.64N±0°.05×27°.76E±0°.05,h71km±21km,*
Error ellipse: s-maj=9.2km s-min=6.3km az=155.7
ATH ***06*** *18:31:19.9,34°.77N×27°.63E,h86km±7km,ML2.6/3,Error*
ellipse: s-maj=7.3km s-min=2.9km az=64.0
HLW ***06*** *18:31:20.4,34°.56N×27°.74E,h31km±8km,Md3.8*
CSEM ***06*** *18:31:20.0±0.1,34°.67N×27°.73E,h60km,ML2.6,Error*
ellipse: s-maj=3.6km s-min=3.3km az=158.0
THE ***06*** *18:31:21.1,34°.71N×27°.74E,h98km±9km,ML2.4/2,Error*
ellipse: s-maj=10.0km s-min=1.9km az=352.0
ISC 06 18:31:19.4±1.3,34°.64N±0°.05×27°.76E±0°.05,h55km±32km,
n60,σ1§05/71,Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**1.03**	**332**	PG	**Pn**	**18 31 36.5**	**-1.3**
KARP				SG	**Sn**	**18 31 49.9**	**-1.4**
KARP	**Karpathos**	**1.03**	**332**	P	**Pn**	**18 31 38.5**	**+0.7**
KARP				AML	AML	18 31 58.4	
comp=N,317μm,0.8s							
KARP				AML	AML	18 32 07.7	
comp=E,329μm,0.9s							
KARP	**Karpathos**	**1.03**	**332**	P	**Pn**	**18 31 38.5**	**+0.7**
KARP				S	**Sn**	**18 31 53.0**	**+1.7**
KARP	**Karpathos**	**1.03**	**332**	*e*Pg	**Pn**	**18 31 36.5**	**-1.3**
KARP	**Karpathos**	**1.03**	**332**	P	**Pn**	**18 31 38.5**	**+0.7**
KARP				*e*Sg	**Sn**	**18 31 49.9**	**-1.4**
KARP				S		18 31 53.0	
ZKR	**Zakros**	**1.35**	**291**	P	**Pn**	**18 31 41.4**	**-0.6**
ZKR				S	**Sn**	**18 31 59.0**	**0.0**
ZKR				AML	AML	18 32 01.2	
comp=E,201μm,0.8s							
ZKR				AML	AML	18 32 01.5	
comp=N,88μm,0.7s							
ZKR	**Zakros**	**1.35**	**291**	P	**Pn**	**18 31 42.1**	**+0.1**
ZKR				S	**Sn**	**18 31 59.2**	**+0.2**
ARG	**Arkhangelos**	**1.60**	**11**	PN	**Pn**	**18 31 45.1**	**-0.3**
ARG	**Arkhangelos**	**1.60**	**11**	P	**Pn**	**18 31 47.0**	**+1.5**
ARG	**Arkhangelos**	**1.60**	**11**	P	**Pn**	**18 31 46.5**	**+1.1**
ARG	**Arkhangelos**	**1.60**	**11**	*e*Pn	**Pn**	**18 31 45.1**	**-0.3**
ARG	**Arkhangelos**	**1.60**	**11**	P	**Pn**	**18 31 46.5**	**+1.1**
LAST	**Lasithi**	**1.95**	**286**	P	**Pn**	**18 31 51.5**	**+1.3**
LAST	**Lasithi**	**1.95**	**286**	P	**Pn**	**18 31 50.7**	**+0.6**
LAST				S	**Sn**	**18 32 14.7**	**+1.2**
LAST	**Lasithi**	**1.95**	**286**	P	**Pn**	**18 31 50.7**	**+0.6**
LAST				S	**Sn**	**18 32 14.7**	**+1.2**
DAT	**Datca**	**2.09**	**356**	PN	**Pn**	**18 31 51.9**	**-0.3**
DAT	**Datca**	**2.09**	**356**	*e*Pn	**Pn**	**18 31 51.9**	**-0.3**
AKAS	**Kas**	**2.19**	**43**	PN	**Pn**	**18 31 54.0**	**+0.4**
AKAS	**Kas**	**2.19**	**43**	*e*Pn	**Pn**	**18 31 54.0**	**+0.4**
FETY	**Fethiye**	**2.27**	**28**	PN	**Pn**	**18 31 54.8**	**+0.3**
FETY	**Fethiye**	**2.27**	**28**	*e*Pn	**Pn**	**18 31 54.8**	**+0.3**
DALY	**Dalyan (Mu¨la**	**2.29**	**18**	PN	**Pn**	**18 31 55.0**	**+0.2**
DALY	**Dalyan (Mu¨la**	**2.29**	**18**	*e*Pn	**Pn**	**18 31 55.0**	**+0.2**
TURN	**Turunc**	**2.34**	**17**	PN	**Pn**	**18 31 53.1**	**-2.3**
TURN	**Turunc**	**2.34**	**17**	*e*Pn	**Pn**	**18 31 53.1**	**-2.3**
ANAF	**Anafi Island**	**2.36**	**317**	P	**Pn**	**18 31 55.3**	**-0.4**
ANAF				AML	AML	18 32 22.7	
comp=N,595μm,0.4s							
ANAF				S	**Sn**	**18 32 22.8**	**-0.8**
ANAF				AML	AML	18 32 22.9	
comp=E,811μm,0.4s							
ANAF	**Anafi Island**	**2.36**	**317**	P	**Pn**	**18 31 55.8**	**0.0**
ANAF				S	**Sn**	**18 32 22.6**	**-1.0**
ANAF	**Anafi Island**	**2.36**	**317**	P	**Pn**	**18 31 55.8**	**0.0**
ANAF				S	**Sn**	**18 32 22.6**	**-1.0**
IDI	**Anoyia**	**2.44**	**286**	PN	**Pn**	**18 31 57.5**	**+0.6**
IDI	**Anoyia**	**2.44**	**286**	*e*Pn	**Pn**	**18 31 57.5**	**+0.6**
BODT	**Bodrum**	**2.45**	**352**	PN	**Pn**	**18 31 56.9**	**-0.1**
BODT	**Bodrum**	**2.45**	**352**	*e*Pn	**Pn**	**18 31 56.9**	**-0.1**
SIVA	**Sivas**	**2.46**	**280**	P	**Pn**	**18 31 58.6**	**+1.6**
SIVA	**Sivas**	**2.46**	**280**	P	**Pn**	**18 31 57.6**	**+0.6**
SIVA	**Sivas**	**2.46**	**280**	P	**Pn**	**18 31 57.6**	**+0.6**
YER	**Yerkesik**	**2.53**	**10**	PN	**Pn**	**18 31 58.2**	**+0.1**
YER	**Yerkesik**	**2.53**	**10**	*e*Pn	**Pn**	**18 31 58.2**	**+0.1**
SANT	**Santorini**	**2.55**	**313**	PN	**Pn**	**18 31 58.6**	**+0.2**
SANT	**Santorini**	**2.55**	**313**	*e*Pn	**Pn**	**18 31 58.6**	**+0.2**
VAM	**Vamos**	**3.02**	**286**	P	**Pn**	**18 32 05.6**	**+0.9**
VAM	**Vamos**	**3.02**	**286**	P	**Pn**	**18 32 05.5**	**+0.7**
KORT	**Korkueli**	**3.16**	**41**	PN	**Pn**	**18 32 07.8**	**+1.0**
KORT	**Korkueli**	**3.16**	**41**	*e*Pn	**Pn**	**18 32 07.8**	**+1.0**
IMMV	**Iera Moni Meta**	**3.21**	**286**	P	**Pn**	**18 32 07.9**	**+0.6**
IMMV	**Iera Moni Meta**	**3.21**	**286**	P	**Pn**	**18 32 09.1**	**+1.8**
IMMV	**Iera Moni Meta**	**3.21**	**286**	P	**Pn**	**18 32 07.9**	**+0.6**
AYDB	**Zeytinkoy-Aydi**	**3.31**	**2**	PN	**Pn**	**18 32 09.2**	**+0.4**
AYDB	**Zeytinkoy-Aydi**	**3.31**	**2**	*e*Pn	**Pn**	**18 32 09.2**	**+0.4**
SLUM	**Salum**	**3.79**	**215**	P	**Pn**	**18 32 15.7**	**+0.3**
baz=216							
SLUM	**Salum**	**3.79**	**215**	P	**Pn**	**18 32 15.7**	**+0.3**
SUTC	**Sutluce-Ispart**	**3.86**	**42**	PN	**Pn**	**18 32 17.8**	**+1.4**
SUTC	**Sutluce-Ispart**	**3.86**	**42**	*e*Pn	**Pn**	**18 32 17.8**	**+1.4**
KYTH	**Kithira**	**4.18**	**294**	P	**Pn**	**18 32 19.7**	**-0.9**
KYTH	**Kithira**	**4.18**	**294**	P	**Pn**	**18 32 20.5**	**-0.1**
SWA2		**5.72**	**201**	P	**Pn**	**18 32 42.0**	**+0.3**
baz=201							
SWA2				S	**Sn**	**18 33 42.0**	**-4.1**
baz=201							
SWA2		**5.72**	**201**	P	**Pn**	**18 32 42.1**	**+0.3**
GLL	**Jalalah**	**6.05**	**145**	P	**Pn**	**18 32 47.4**	**+1.0**
baz=144							
GLL	**Jalalah**	**6.05**	**145**	P	**Pn**	**18 32 47.4**	**+1.0**
RSH		**6.21**	**124**	P	**Pn**	**18 32 49.8**	**+1.2**
baz=123							
RSH		**6.21**	**124**	P	**Pn**	**18 32 49.8**	**+1.2**

ISCJB ***06*** *18:39:42.5±0.4,39°.63N±0°.02×26°.03E±0°.03,h6km±3km,*
Error ellipse: s-maj=3.7km s-min=2.8km az=164.0
CSEM ***06*** *18:39:42.8±0.1,39°.63N×26°.04E,h8km,ML2.8,Error*
ellipse: s-maj=2.2km s-min=1.7km az=85.0
ATH ***06*** *18:39:42.3,39°.63N×26°.05E,h22km±1km,ML1.8/8,Error*
ellipse: s-maj=2.1km s-min=0.8km az=245.0
ISK ***06*** *18:39:42.0,39°.63N×26°.01E,h5km,ML2.4/18*
DDA ***06*** *18:39:42.9,39°.63N×26°.12E,h7km,Ml2.8*
ISC 06 18:39:43.0±0.9,39°.63N±0°.02×26°.04E±0°.02,h11km±7km,
n85,σ0§57/117,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOZC	**Bozcaada**	**0.21**	**2**	*i*P	**Pg**	**18 39 47.5**	**+0.1**
BOZC				*i*S	**Sg**	**18 39 51.2**	**+0.7**
BAYC	**CANAKKALE_Bayr**	**0.40**	**74**	*i*P	**Pg**	**18 39 51.0**	**0.0**
BAYC				*i*S	**Sg**	**18 39 56.6**	**+0.3**
BAYC	**CANAKKALE_Bayr**	**0.40**	**74**	P	**Pg**	**18 39 51.0**	**0.0**
BAYC				S	**Sg**	**18 39 56.6**	**+0.3**
PRK	**Paraskevi**	**0.42**	**155**	P	**Pg**	**18 39 51.3**	**-0.1**
PRK				S	**Sg**	**18 39 57.1**	**+0.2**
PRK				AML	AML	18 39 57.5	
comp=N,1074μm,0.4s							
PRK				AML	AML	18 39 58.2	
comp=E,1172μm,0.6s							
PRK	**Paraskevi**	**0.42**	**155**	P	**Pg**	**18 39 51.2**	**-0.1**
PRK				S	**Sg**	**18 39 57.3**	**+0.4**
SIGR	**SIGRI**	**0.44**	**199**	PG	**Pg**	**18 39 51.0**	**-0.7**
SIGR				SG	**Sg**	**18 39 57.5**	**0.0**
SIGR	**SIGRI**	**0.44**	**199**	P	**Pg**	**18 39 51.0**	**-0.7**
SIGR				S	**Sg**	**18 39 57.1**	**-0.4**
SIGR				AML	AML	18 39 58.6	
comp=E,475μm,0.2s							
SIGR				AML	AML	18 39 59.1	
comp=N,333μm,0.3s							
SIGR	**SIGRI**	**0.44**	**199**	*i*Pg	**Pg**	**18 39 51.0**	**-0.7**
SIGR	**SIGRI**	**0.44**	**199**	P	**Pg**	**18 39 51.2**	**-0.5**
SIGR				*e*Sg	**Sg**	**18 39 57.5**	**0.0**
GADA	**Gvkgeada**	**0.57**	**349**	PG	**Pg**	**18 39 53.3**	**-0.8**
GADA				SG	**Sg**	**18 40 01.6**	**0.0**
GADA	**Gvkgeada**	**0.57**	**349**	*e*Pg	**Pg**	**18 39 53.3**	**-0.8**
GADA				*e*Sg	**Sg**	**18 40 01.6**	**0.0**
AYVA	**Ayvalik**	**0.60**	**123**	*i*P	**Pg**	**18 39 54.3**	**-0.3**
AYVA				*i*S	**Sn**	**18 40 06.5**	**-0.5**
AYVA	**Ayvalik**	**0.60**	**123**	P	**Pg**	**18 39 54.3**	**-0.3**
LIA	**Limnos Island**	**0.71**	**292**	P	**Pb**	**18 39 57.2**	**-0.2**
LIA				S	**Sg**	**18 40 06.0**	**-0.1**
LIA				AML	AML	18 40 09.9	
comp=E,167μm,0.2s							
LIA				AML	AML	18 40 10.1	
comp=N,144μm,0.4s							
LIA	**Limnos Island**	**0.71**	**292**	P	**Pg**	**18 39 56.8**	**0.0**
LIA				S	**Sg**	**18 40 06.3**	**+0.2**
GELI	**Tayfur-Gelibol**	**0.83**	**23**	PG	**Pg**	**18 39 58.8**	**-0.3**
GELI	**Tayfur-Gelibol**	**0.83**	**23**	*e*Pg	**Pg**	**18 39 58.8**	**-0.3**
DKL	**Dikili**	**0.87**	**130**	PG	**Pg**	**18 39 59.6**	**-0.2**
DKL	**Dikili**	**0.87**	**130**	*e*Pg	**Pg**	**18 39 59.6**	**-0.2**
CAND	**Candarli**	**0.90**	**139**	PG	**Pg**	**18 40 00.0**	**-0.2**
LPK	**Lapseki**	**0.92**	**36**	PG	**Pg**	**18 39 59.5**	**-1.3**
LPK	**Lapseki**	**0.92**	**36**	*e*Pg	**Pg**	**18 39 59.5**	**-1.3**
SMTH	**Samothraki Isl**	**0.93**	**335**	P	**Pb**	**18 40 01.0**	**-0.1**
SMTH				S	**Sg**	**18 40 12.3**	**-0.6**
SMTH				AML	AML	18 40 16.2	
comp=E,84μm,0.2s							
SMTH				AML	AML	18 40 16.7	
comp=N,118μm,0.1s							
SMTH	**Samothraki Isl**	**0.93**	**335**	P	**Pg**	**18 40 00.6**	**-0.2**
SMTH				S	**Sg**	**18 40 12.7**	**-0.2**
ERIK	**Erikli-Kesan**	**1.10**	**19**	PN	**Pg**	**18 40 03.4**	**-0.7**
ERIK	**Erikli-Kesan**	**1.10**	**19**	*e*Pn	**Pg**	**18 40 03.4**	**-0.7**
ENEZ	**Enez**	**1.11**	**4**	PN	**Pg**	**18 40 03.8**	**-0.5**
ENEZ	**Enez**	**1.11**	**4**	*e*Pn	**Pg**	**18 40 03.8**	**-0.5**
BALY	**Balya**	**1.22**	**84**	*i*P	**Pb**	**18 40 04.7**	**-1.4**
BALY				*i*S	**Sg**	**18 40 21.8**	**-0.5**
BALY	**Balya**	**1.22**	**84**	P	**Pb**	**18 40 04.7**	**-1.4**
BALY				S	**Sg**	**18 40 21.8**	**-0.5**
KRBG	**Karabiga-Canak**	**1.23**	**51**	PN	**Pb**	**18 40 05.9**	**-0.3**
KRBG	**Karabiga-Canak**	**1.23**	**51**	*e*Pn	**Pb**	**18 40 05.9**	**-0.3**
CHOS	**Chios island**	**1.24**	**180**	PN	**Pn**	**18 40 06.3**	**-0.1**
CHOS	**Chios island**	**1.24**	**180**	P	**Pn**	**18 40 05.9**	**-0.5**
CHOS				S	**Sn**	**18 40 23.9**	**+0.8**
CHOS				AML	AML	18 40 26.0	
comp=E,202μm,0.3s							
CHOS				AML	AML	18 40 26.7	
comp=N,95μm,0.3s							
CHOS	**Chios island**	**1.24**	**180**	P	**Pn**	**18 40 05.9**	**-0.5**
CHOS	**Chios island**	**1.24**	**180**	*e*Pn	**Pn**	**18 40 06.3**	**-0.1**
CHOS				S	**Sn**	**18 40 23.5**	**+0.4**
ALN	**Alexandroupoli**	**1.26**	**0**	PN	**Pn**	**18 40 06.7**	**+0.1**
ALN	**Alexandroupoli**	**1.26**	**0**	P	**Pn**	**18 40 06.4**	**-0.2**
ALN				S	**Sb**	**18 40 23.2**	**+0.1**
ALN				AML	AML	18 40 24.4	
comp=E,50μm,0.5s							
ALN				AML	AML	18 40 25.3	
comp=N,43μm,0.5s							
ALN	**Alexandroupoli**	**1.26**	**0**	P	**Pn**	**18 40 06.3**	**-0.3**
ALN	**Alexandroupoli**	**1.26**	**0**	*e*Pn	**Pn**	**18 40 06.7**	**+0.1**
ALN				S	**Sg**	**18 40 23.5**	**-0.2**
KESN	**Edirne-Kesan**	**1.29**	**22**	*i*P	**Pn**	**18 40 07.3**	**0.0**
KESN				*i*S	**Sn**	**18 40 25.5**	**+0.8**
KESN	**Edirne-Kesan**	**1.29**	**22**	P	**Pn**	**18 40 07.3**	**0.0**
KESN				S	**Sn**	**18 40 25.5**	**+0.8**
KNL	**Bal¨–kesir**	**1.31**	**60**	*i*P	**Pn**	**18 40 06.1**	**-1.1**
KNL				*i*S	**Sn**	**18 40 25.3**	**+0.7**
STEP	**BALIKESIR_Sava**	**1.32**	**101**	*i*P	**Pn**	**18 40 07.5**	**+0.1**
STEP				*i*S	**Sb**	**18 40 24.9**	**+0.2**
STEP	**BALIKESIR_Sava**	**1.32**	**101**	P	**Pn**	**18 40 07.5**	**+0.1**
STEP				S	**Sb**	**18 40 25.0**	**+0.2**
GONE	**Gonen-Balikesi**	**1.33**	**71**	PN	**Pb**	**18 40 08.1**	**+0.1**
GONE	**Gonen-Balikesi**	**1.33**	**71**	*e*Pn	**Pb**	**18 40 08.1**	**+0.1**
URLA	**Izmir**	**1.34**	**161**	PN	**Pn**	**18 40 08.0**	**+0.3**
URLA	**Izmir**	**1.34**	**161**	*e*Pn	**Pn**	**18 40 08.0**	**+0.3**
RKY	**Sarkoy-Tekirda**	**1.37**	**39**	PN	**Pb**	**18 40 08.5**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.37**	**39**	*e*Pn	**Pb**	**18 40 08.5**	**-0.1**
SART	**Tekirdag**	**1.37**	**39**	*i*P	**Pn**	**18 40 07.4**	**-0.7**
SART				*i*S	**Sb**	**18 40 26.3**	**+0.1**
SART	**Tekirdag**	**1.37**	**39**	P	**Pn**	**18 40 07.4**	**-0.7**
SART				S	**Sb**	**18 40 26.3**	**+0.1**
SKY	**Skiros Island**	**1.38**	**237**	P	**Pb**	**18 40 08.9**	**+0.1**
SKY	**Skiros Island**	**1.38**	**237**	P	**Pn**	**18 40 08.6**	**+0.4**
BALB	**Balikesir**	**1.42**	**89**	PN	**Pn**	**18 40 08.9**	**+0.2**
BALB	**Balikesir**	**1.42**	**89**	*e*Pn	**Pn**	**18 40 08.9**	**+0.2**
RDO	**Rodhopi**	**1.56**	**346**	PN	**Pn**	**18 40 10.9**	**+0.2**
RDO	**Rodhopi**	**1.56**	**346**	P	**Pb**	**18 40 11.5**	**-0.4**
RDO				S	**Sn**	**18 40 30.9**	**0.0**
RDO				AML	AML	18 40 32.2	
comp=N,20μm,0.2s							
RDO				AML	AML	18 40 32.8	
comp=E,17μm,0.2s							
RDO	**Rodhopi**	**1.56**	**346**	*e*Pn	**Pn**	**18 40 10.9**	**+0.2**
RDO	**Rodhopi**	**1.56**	**346**	P	**Pn**	**18 40 11.2**	**+0.5**
RDO				S	**Sn**	**18 40 31.3**	**+0.4**
EDC	**Edincik**	**1.57**	**62**	PN	**Pb**	**18 40 11.6**	**-0.4**
EDC	**Edincik**	**1.57**	**62**	*e*Pn	**Pb**	**18 40 11.6**	**-0.4**
OUR	**Ouranopolis**	**1.73**	**295**	PN	**Pn**	**18 40 13.2**	**+0.2**
OUR	**Ouranopolis**	**1.73**	**295**	*e*Pn	**Pn**	**18 40 13.2**	**+0.2**
KAVA	**Kavala**	**1.80**	**320**	P	**Pn**	**18 40 13.3**	**-0.6**
KAVA				AML	AML	18 40 35.3	
comp=E,52μm,0.3s							
KAVA				AML	AML	18 40 36.0	
comp=N,52μm,0.4s							
KAVA	**Kavala**	**1.80**	**320**	P	**Pn**	**18 40 13.7**	**-0.2**
DURS	**Dursunbey**	**1.88**	**90**	*i*P	**Pn**	**18 40 14.8**	**-0.3**
DURS				*i*S	**Sn**	**18 40 38.8**	**-0.1**
DURS	**Dursunbey**	**1.88**	**90**	P	**Pn**	**18 40 14.8**	**-0.3**
DURS	

*NEIC **06** 19:33:31.5±0.9, 41°.00N×112°.77W, h0km, ML1.5, Error ellipse: s-maj=15.8km s-min=10.9km az=150.0, Suspected Mining explosion.*
NEIC 65 km [40 miles] NW of Tooele.
*IDC **06** 19:33:31.7±2.1, 41°.00N×112°.79W, h0km, mb1 2.2/1, mb1mx2.2/69, mbtmp1.8/1, ML2.9/1, Error ellipse: s-maj=50.0km s-min=5.6km az=160.0*
ISC 06 19:33:33.2±1.2, 41°.11N±0°.08×112°.78W±0°.08, h0km, n7, σ0s73/6, Utah

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUG	**Dugway, Tooele**	**0.92**	**181**	*e*Pn	**Pg**	**19 33 50.1**	**-0.7**
HWUT	**Hardware Ranch**	**1.04**	**61**	*e*Pn	**Pg**	**19 33 52.6**	**-0.6**
ELK	**Elko**	**1.90**	**260**	Pg	**Pn**	**19 34 07.7**	**+0.6**
	1.2nm,0.3s,baz=110,slow=10,SNR=16						
ELK				Lg	Lg	19 34 30.9	
	0.9nm,0.3s,baz=234,slow=19,SNR=6.8						
HLID	**Hailey**	**2.73**	**334**	*e*Pn	**Pn**	**19 34 18.2**	**-0.3**
PDAR	**Pinedale Array**	**2.92**	**54**	Pn	**Pn**	**19 34 21.5**	**+0.3**
	0.2nm,0.3s,baz=235,slow=12,SNR=2.8						
PDAR				Pg	**Pb**	**19 34 26.9**	**+0.5**
	0.7nm,0.3s,baz=228,slow=14,SNR=6.9						
PDAR				Lg	Lg	19 35 06.9	
	0.7nm,0.3s,baz=230,slow=26,SNR=5.0						
I56US	**NEWPORT INFRAS**	**7.79**	**338**	*i*		20 17 40.0	
	baz=157,slow=324,SNR=2.4						
I57US	**PINON FLAT INF**	**8.04**	**202**	*i*		20 22 50.0	
	baz=16,slow=312,SNR=1.9						

*IDC **06** 19:35:27.0±2.5, 52°.28N×172°.34E, h0km, mb3.4/5, mb1 3.7/6, mb1mx3.4/85, mbtmp3.5/6, ML2.2/1, Error ellipse: s-maj=78.2km s-min=23.0km az=177.0*
ISC 06 19:35:32.0±2.5, 52°.6N±0°.6×172°.3E±0°.1, h24km, n6, σ0s38/6, mb3.4/4, Near Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**8.83**	**279**	Pn	**Pn**	**19 37 38.1**	**+0.1**
	0.1nm,0.3s,baz=101,slow=15,SNR=2.8						
KDAK	**Kodiak Island**	**20.54**	**62**	P	**P**	**19 40 07.9**	**-0.3**
	1.3nm,0.5s,baz=249,slow=14,SNR=5.4						
ILAR	**Eielson Array**	**23.94**	**44**	P	**P**	**19 40 44.2**	**+0.4**
	0.2nm,0.5s,baz=239,slow=7.6,SNR=3.5						
YKA	**Yellowknife Ar**	**38.34**	**46**	P	**P**	**19 42 50.3**	**0.0**
	0.8nm,0.9s,baz=279,slow=8.2,SNR=2.7						
MKAR	**Makanchi Array**	**54.82**	**303**	P	**P**	**19 44 59.4**	**-0.3**
	0.1nm,0.3s,baz=52,slow=7.5,SNR=3.2						
TXAR	**Lajitas Array**	**63.80**	**75**	P	**P**	**19 46 02.2**	**+0.2**
	0.5nm,0.4s,baz=301,slow=5.7,SNR=11						

*IDC **06** 19:55:14.2±0.7, 29°.79N×50°.75E, h0km, mb4.2/20, mb1 4.2/27, mb1mx4.0/64, mbtmp4.1/27, ML3.7/7, MS3.1/5, Ms1 3.1/5, ms1mx2.7/60, Error ellipse: s-maj=17.1km s-min=12.9km az=163.0*
*ISCJB **06** 19:55:16.4±0.2, 29°.64N±0°.03×50°.68E±0°.03, h25km, mb4.3/38, MS3.3/2, Error ellipse: s-maj=4.7km s-min=3.0km az=43.6*
*DSN **06** 19:55:17.0±0.7, 29°.77N×50°.72E, h15km, mb4.4/2, ML3.9/10, Error ellipse: s-maj=9.3km s-min=7.8km az=40.0*
*MOS **06** 19:55:17.0±1.7, 29°.58N×50°.77E, h33km, mb4.5/18, Error ellipse: s-maj=8.8km s-min=5.7km az=101.1*
*TEH **06** 19:55:18.0, 29°.74N×50°.75E, h5km, ML3.9*
*THR **06** 19:55:18.8±0.4, 29°.73N×50°.70E, h44km±4km, ML3.9*
*NEIC **06** 19:55:18.0±0.0, 29°.74N×50°.75E, h5km, mb4.5/5, MN3.9(TEH), After TEH.*
*CSEM **06** 19:55:20.0±0.2, 29°.71N×50°.70E, h44km±2km, mb4.4/16, Error ellipse: s-maj=5.3km s-min=3.7km az=51.0*
ISC 06 19:55:18.3±0.4, 29°.74N±0°.04×50°.75E±0°.04, h25km, n192, σ1s58/196, mb4.3/38, 12C-11D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKAZ	**Kazeroun**	**0.95**	**87**	*e*Pg	**Pb**	**19 55 34.7**	**-1.7**
IKAZ				*e*		19 55 50.1	
	comp=Z,35μm,0.3s						
AHBU	**AHRAM**	**0.99**	**151**	*e*Pg	**Pb**	**19 55 38.1**	**+1.2**
AHBU				*e*Sg	**Sn**	**19 55 52.2**	**+2.3**
SHI	**Shiraz**	**1.54**	**93**	*e*Pn	**Pb**	**19 55 46.2**	**-0.1**
SHI				*e*		19 56 10.2	
	comp=Z,33μm,0.3s						
SHI	**Shiraz**	**1.54**	**93**	P	**Pb**	**19 55 46.1**	**-0.2**
SHI	**Shiraz**	**1.54**	**93**	*e*Pn	**Pb**	**19 55 46.2**	**-0.1**
IPAR	**Pars**	**2.00**	**86**	*e*Pn	**Pn**	**19 55 52.6**	**+1.7**
IPAR				*e*		19 56 33.5	
	comp=Z,11μm,0.4s						
IPAR	**Pars**	**2.00**	**86**	*e*Pn	**Pn**	**19 55 52.9**	**+2.0**
IBRJ	**Brojen**	**2.21**	**11**	*e*Pn	**Pn**	**19 55 55.0**	**+1.3**
IBRJ				*e*Sg	**Sb**	**19 56 26.2**	**+1.4**
IBRJ				*e*		19 56 33.1	
	comp=Z,7μm,0.5s						
ZNGN	**Zangian**	**2.37**	**2**	*e*Pn	**Pn**	**19 55 57.5**	**+1.5**
ZNGN				*e*		19 56 35.1	
	comp=Z,99nm,0.4s						
ZNGN	**Zangian**	**2.37**	**2**	*e*Pn	**Pn**	**19 55 57.7**	**+1.7**
GHIR	**Ghir-Karzin**	**2.44**	**126**	*e*Pn	**Pn**	**19 55 58.0**	**+1.3**
GHIR				*e*Sg	**Sb**	**19 56 34.7**	**+3.4**
GHIR	**Ghir-Karzin**	**2.44**	**126**	*e*Pn	**Pn**	**19 55 58.0**	**+1.3**
IRAM	**Ramesheh**	**2.50**	**34**	*e*Pn	**Pn**	**19 55 58.8**	**+1.1**
IRAM				*e*		19 56 05.0	
	comp=Z,5μm,0.1s						
IRAM	**Ramesheh**	**2.50**	**34**	*e*Pn	**Pn**	**19 55 58.7**	**+1.1**
ROKH	**ROKH**	**2.61**	**5**	*e*Pn	**Pn**	**19 56 00.0**	**+0.8**
ROKH				*e*		19 56 45.2	
	comp=Z,99nm,0.4s						
ROKH	**ROKH**	**2.61**	**5**	*e*Pn	**Pn**	**19 56 00.3**	**+1.1**
IGAR	**Gharneh**	**2.88**	**22**	*e*Pn	**Pn**	**19 56 04.8**	**+1.9**
IGAR				*e*		19 56 57.9	
	comp=Z,7μm,0.5s						
SHGR	**Shooshtar-Gavs**	**2.89**	**325**	*e*P	**Pn**	**19 56 03.1**	**+0.4**
SHGR				AML	AML	19 56 56.2	
	comp=E,464nm,0.4s						
SHGR				AML	AML	19 56 59.0	
	comp=N,823nm,0.8s						
SHGR	**Shooshtar-Gavs**	**2.89**	**325**	*e*P	**Pn**	**19 56 03.2**	**+0.4**
ISAD	**Sadrabad**	**3.33**	**49**	*e*Pn	**Pn**	**19 56 10.9**	**+1.8**
ISAD				*e*		19 56 20.1	
	comp=Z,2μm,0.2s						
ISAD	**Sadrabad**	**3.33**	**49**	*e*Pn	**Pn**	**19 56 10.6**	**+1.5**
IZEF	**Zefreh**	**3.43**	**23**	*e*Pn	**Pn**	**19 56 11.5**	**+1.1**
IZEF				*e*		19 56 25.9	
	comp=Z,2μm,0.2s						
IZEF	**Zefreh**	**3.43**	**23**	*e*Pn	**Pn**	**19 56 11.6**	**+1.1**
NASN	**Na'in**	**3.52**	**30**	*e*Pn	**Pn**	**19 56 13.1**	**+1.3**
NASN	**Na'in**	**3.52**	**30**	*e*Pn	**Pn**	**19 56 13.1**	**+1.3**
IKLH	**Kolahrood**	**3.64**	**11**	*e*Pn	**Pn**	**19 56 14.9**	**+1.6**
IKLH				*e*		19 57 16.8	
	comp=Z,2μm,0.4s						
IKLH	**Kolahrood**	**3.64**	**11**	*e*Pn	**Pn**	**19 56 15.0**	**+1.6**
IMEH	**Mehriz**	**3.72**	**63**	*e*Pn	**Pn**	**19 56 16.6**	**+2.2**
IMEH				*e*		19 56 18.7	
	comp=Z,1μm,0.1s						
IMEH	**Mehriz**	**3.72**	**63**	*e*Pn	**Pn**	**19 56 16.2**	**+1.8**
ICHK	**Chekchek**	**4.02**	**51**	*e*Pn	**Pn**	**19 56 19.8**	**+1.3**
ICHK				*e*		19 56 41.4	
	comp=Z,905nm,0.2s						
ICHK	**Chekchek**	**4.02**	**51**	*e*Pn	**Pn**	**19 56 19.8**	**+1.3**
KHMZ	**Khomeyn**	**4.04**	**351**	*e*Pn	**Pn**	**19 56 19.9**	**+1.1**
KHMZ	**Khomeyn**	**4.04**	**351**	*e*Pn	**Pn**	**19 56 19.9**	**+1.1**
ANAR	**Anarak**	**4.28**	**36**	*e*		19 57 38.3	
	comp=Z,99nm,0.5s						
ANAR	**Anarak**	**4.28**	**36**	*e*Pn	**Pn**	**19 56 23.3**	**+1.3**
IKFM	**Kafar-mosalman**	**4.51**	**328**	*e*Pn	**Pn**	**19 56 27.0**	**+2.0**
IKFM				*e*		19 57 52.3	
	comp=Z,99nm,0.7s						
IKFM	**Kafar-mosalman**	**4.51**	**328**	*e*Pn	**Pn**	**19 56 26.1**	**+1.1**
ASAO	**Ashtian**	**4.83**	**353**	*e*Pn	**Pn**	**19 56 30.8**	**+1.0**
ASAO	**Ashtian**	**4.83**	**353**	*e*Pn	**Pn**	**19 56 30.8**	**+1.0**
KHGB	**Koh Gabri**	**5.01**	**81**	*e*Pn	**Pn**	**19 56 33.5**	**+1.4**
KHGB				*e*		19 56 51.9	
	comp=Z,99nm,0.5s						
KHGB	**Koh Gabri**	**5.01**	**81**	*e*Pn	**Pn**	**19 56 33.3**	**+1.2**
IKOM	**Komasi**	**5.21**	**329**	*e*Pn	**Pn**	**19 56 36.3**	**+1.5**
IKOM				*e*		19 58 29.2	
	comp=Z,99nm,1.1s						
IKOM	**Komasi**	**5.21**	**329**	*e*Pn	**Pn**	**19 56 35.9**	**+1.1**
NGRK	**Negar Kerman**	**5.21**	**90**	*e*Pn	**Pn**	**19 56 36.7**	**+1.7**
IVIS	**Veis**	**5.80**	**326**	*e*Pn	**Pn**	**19 56 43.7**	**+0.7**
IVIS				*e*		19 57 50.3	
	comp=Z,693nm,0.3s						
CHMN	**Cheshme madani**	**5.91**	**87**	*e*Pn	**Pn**	**19 56 46.8**	**+2.2**
SHME	**Shamm**	**6.03**	**126**	P	**Pn**	**19 56 46.5**	**+0.5**
ILIN	**Lien**	**6.08**	**329**	*e*Pn	**Pn**	**19 56 47.4**	**+0.6**
ILIN				*e*		19 57 58.9	
	comp=Z,982nm,0.2s						
ILIN	**Lien**	**6.08**	**329**	*e*Pn	**Pn**	**19 56 47.2**	**+0.4**
BANOM	**Banah**	**6.21**	**126**	*i* P	**Pn**	**19 56 48.7**	**+0.2**
	SNR=39						
BANOM	**Banah**	**6.21**	**126**	P	**Pn**	**19 56 48.7**	**+0.2**
	SNR=39						
KHSK	**Kohestak**	**6.31**	**117**	*e*Pn	**Pn**	**19 56 49.4**	**-0.3**
KHSK				*e*		19 56 56.0	
	comp=Z,99nm,0.1s						
KHSK	**Kohestak**	**6.31**	**117**	*e*Pn	**Pn**	**19 56 49.5**	**-0.3**
AJN	**Ajban**	**6.39**	**143**	P	**Pn**	**19 56 52.2**	**+1.3**
NAZ	**Nazwa, Dubai**	**6.44**	**136**	P	**Pn**	**19 56 52.5**	**+0.9**
NAZ	**Nazwa, Dubai**	**6.44**	**136**	P	**Pn**	**19 56 52.5**	**+0.9**
MSFE	**Esma-Masafi**	**6.49**	**131**	P	**Pn**	**19 56 52.4**	**+0.1**
MSFE	**Esma-Masafi**	**6.49**	**131**	*e*Pn	**Pn**	**19 56 52.4**	**+0.1**
ASUD	**Al Ashush, Dub**	**6.53**	**140**	*i* P	**Pn**	**19 56 54.2**	**+1.4**
	SNR=27						
ASUD	**Al Ashush, Dub**	**6.53**	**140**	P	**Pn**	**19 56 54.2**	**+1.4**
	SNR=27						
MDH	**Madha**	**6.62**	**131**	P	**Pn**	**19 56 52.4**	**-1.7**
UOSS	**Minazif**	**6.81**	**133**	P	**Pn**	**19 56 57.2**	**+0.5**
UOSS	**Minazif**	**6.81**	**133**	P	**Pn**	**19 56 57.2**	**+0.5**
HATD	**Hatta, Dubai**	**6.85**	**134**	P	**Pn**	**19 56 57.1**	**-0.1**
HATD	**Hatta, Dubai**	**6.85**	**134**	P	**Pn**	**19 56 57.1**	**-0.1**
HATD	**Hatta, Dubai**	**6.85**	**134**	*e*Pn	**Pn**	**19 56 58.6**	**+1.4**
MZR	**Muzera**	**7.14**	**159**	*i* P	**Pn**	**19 57 02.9**	**+1.6**
	SNR=16						
ALNE	**Al Ain**	**7.21**	**141**	*i* P	**Pn**	**19 57 03.0**	**+0.8**
	SNR=12						
ALNE	**Al Ain**	**7.21**	**141**	*e*Pn	**Pn**	**19 57 03.3**	**+1.1**
SOHO	**SOHO**	**7.60**	**136**	P	**Pn**	**19 57 07.5**	**-0.1**
SOHO	**SOHO**	**7.60**	**136**	P	**Pn**	**19 57 07.5**	**-0.1**
RAYN	**Ar Rayn**	**7.77**	**218**	*e*Pn	**Pn**	**19 57 09.1**	**-0.8**
	comp=Z,9.9nm,0.5s						
RAYN	**Ar Rayn**	**7.77**	**218**	P	**Pn**	**19 57 09.1**	**-0.8**
RAYN	**Ar Rayn**	**7.77**	**218**	*e*P	**Pn**	**19 57 09.1**	**-0.8**
RAYN				pmax	pmax		
	comp=Z,10.0nm,0.5s						
RAYN	**Ar Rayn**	**7.77**	**218**	P	**Pn**	**19 57 09.1**	**-0.8**
WSAR	**Wadi Sarin**	**9.58**	**131**	Pn	**Pn**	**19 57 34.0**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=332,slow=4.9,SNR=14						
WSAR				Sn	**Sn**	**19 59 18.2**	**-3.3**
	comp=Z,0.8nm,0.3s,baz=150,slow=20,SNR=4.5						
GEYT	**Alibeck**	**10.21**	**35**	Pn	**Pn**	**19 57 42.6**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=217,slow=12,SNR=20						
GNI	**Garni**	**11.49**	**336**	*i* P	**Pn**	**19 58 05.0**	**+4.1**
ASF	**Jabal al Asfar**	**12.13**	**285**	Pn	**Pn**	**19 58 06.4**	**-3.3**
	comp=Z,0.6nm,0.3s,baz=41,slow=9.8,SNR=5.8						
MMAI	**Mount Meron Ar**	**13.51**	**288**	Pn	**Pn**	**19 58 26.3**	**-2.1**
	comp=Z,0.7nm,0.3s,baz=95,slow=16,SNR=4.2						
MMAI				LR	LR	20 04 59.6	
	comp=Z,92nm,19.6s,baz=180,slow=43						
EIL	**Elat**	**13.73**	**274**	Pn	**Pn**	**19 58 32.3**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=79,slow=8.2,SNR=4.0						
EIL				LR	LR	20 04 11.6	
	comp=Z,46nm,20.5s,baz=62,slow=39						
GROC	**Groznyy**	**14.01**	**345**	*e*P	**Pn**	**19 58 39.7**	**+4.5**
GROC				*e*S	S	20 01 21.3	-10
GROC				pmax	pmax		
	comp=Z,12nm,0.5s						
ZEI	**Tsey**	**14.14**	**339**	*e*P	**P**	**19 58 43.3**	**-1.2**
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
NCK	**Nalchik**	**14.87**	**339**	*i* P	**P**	**19 58 52.0**	**-0.5**
NCK	**Nalchik**	**14.87**	**339**	*i* P	**P**	**19 58 52.0**	**-0.5**
NEY	**Neytrino**	**14.94**	**337**	*i* P	**P**	**19 58 53.9**	**+0.6**
NEY				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NEY	**Neytrino**	**14.94**	**337**	*i* P	**P**	**19 58 53.9**	**+0.6**
	comp=Z,4.0nm,0.8s						
KBZ	**Khabaz**	**15.30**	**338**	Pn	**Pn**	**19 58 52.9**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=117,slow=2.3,SNR=3.8						
KIV	**Kislovodsk**	**15.57**	**338**	*e*Pn	**Pn**	**19 58 57.0**	**+0.7**
	comp=Z,20nm,1.0s						
KIV	**Kislovodsk**	**15.57**	**338**	*i* P	**Pn**	**19 58 56.9**	**+0.7**
	SNR=6.7						
KIV	**Kislovodsk**	**15.57**	**338**	*e*P	**P**	**19 59 00.3**	**0.0**
KIV				pmax	pmax		
	comp=Z,21nm,1.0s						
KIV	**Kislovodsk**	**15.57**	**338**	*e*Pn	**Pn**	**19 58 57.0**	**+0.7**
	comp=Z,20nm,1.0s						
KIV	**Kislovodsk**	**15.57**	**338**	*e*P	**P**	**19 59 00.3**	**0.0**
	comp=Z,21nm,1.0s						
BRTR	**Keskin Array B**	**17.21**	**310**	P	**Pn**	**19 59 17.1**	**0.0**
	comp=Z,0.1nm,0.3s,baz=130,slow=12,SNR=7.8						
BRTR	**Keskin Array B**	**17.21**	**310**	*ce*P	**P**	**19 59 19.6**	**+1.1**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR	**Keskin Array B**	**17.21**	**310**	*e*P	**P**	**19 59 19.6**	**+1.1**
	comp=Z,1.0nm,0.7s						
ANN	**Anapa**	**18.35**	**329**	*e*P	**P**	**19 59 28.6**	**-2.3**
ANN				*e*S	**Sn**	**20 02 57.4**	**+2.2**
ANN				pmax	pmax		
	comp=Z,25nm,1.8s						
ANN	**Anapa**	**18.35**	**329**	*e*P	**P**	**19 59 28.6**	**-2.3**
	comp=Z,25nm,1.8s						
NIL	**Nilore**	**19.54**	**73**	*e*P	**P**	**19 59 42.9**	**-1.2**
	comp=Z,31nm,0.9s						
NIL	**Nilore**	**19.54**	**73**	*e*P	**P**	**19 59 42.9**	**-1.2**
NIL				pmax	pmax		
	comp=Z,31nm,0.9s						
NIL	**Nilore**	**19.54**	**73**	*e*P	**P**	**19 59 42.9**	**-1.2**
	comp=Z,31nm,0.9s						
ATD	**Arta Tunnel**	**19.55**	**204**	LR	LR	20 08 35.8	
	comp=Z,35nm,19.9s,baz=360,slow=41						
SFK	**Sufi-Kurgan**	**21.25**	**55**	P	**P**	**20 00 03.7**	**+0.9**
SFK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SFK	**Sufi-Kurgan**	**21.25**	**55**	P	**P**	**20 00 03.7**	**+0.9**
	comp=Z,9.0nm,0.8s						
AKTK	**Aktyubinsk**	**21.39**	**13**	P	**P**	**20 00 03.4**	**-0.5**
AKTO	**Aktyubinsk**	**21.39**	**13**	P	**P**	**20 00 03.4**	**-0.6**
	comp=Z,5.1nm,0.7s,baz=202,slow=11,SNR=22						
MNAS	**Manas**	**21.62**	**48**	P	**P**	**20 00 08.5**	**+1.8**
MNAS				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MNAS	**Manas**	**21.62**	**48**	P	**P**	**20 00 08.5**	**+1.8**
	comp=Z,9.0nm,1.1s						
IDI	**Anoyia**	**22.46**	**291**	P	**P**	**20 00 16.3**	**+0.5**
	comp=Z,9.5nm,0.8s,baz=96,slow=12,SNR=5.2						
AAK	**Ala-Archa**	**23.00**	**50**	P	**P**	**20 00 21.9**	**+0.6**
	comp=Z,0.8nm,0.4s,baz=198,slow=15,SNR=5.3						
AAK				LR	LR	20 10 26.9	
	comp=Z,67nm,20.8s,baz=207,slow=40						
AAK	**Ala-Archa**	**23.00**	**50**	*e*P	**P**	**20 00 22.4**	**+1.0**
	comp=Z,4.6nm,0.8s						
AAK	**Ala-Archa**	**23.00**	**50**	*e*P	**P**	**20 00 22.4**	**+1.0**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AAK	**Ala-Archa**	**23.00**	**50**	*e*P	**P**	**20 00 22.4**	**+1.0**
	comp=Z,4.6nm,0.8s						
VSR	**Storozhevoye**	**23.14**	**341**	*e*P	**P**	**20 00 21.3**	**-1.2**
VSR				*e*S	**S**	**20 04 27.6**	**-4.7**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VSR				smax	smax		
	comp=N,40nm,1.2s						
VSR	**Storozhevoye**	**23.14**	**341**	*e*P	**P**	**20 00 21.3**	**-1.2**
	comp=N,10.0nm,0.8s						
TLB	**Topalu**	**23.28**	**316**	⇓*i*P	**P**	**20 00 23.6**	**-0.4**
TLB	**Topalu**	**23.28**	**316**	⇓P	**P**	**20 00 23.6**	**-0.4**
TLB	**Topalu**	**23.28**	**316**	P	**P**	**20 00 23.6**	**-0.4**
VRI	**Vrincioaia**	**24.75**	**317**	⇑*i*P	**P**	**20 00 38.5**	**+0.8**
VRI	**Vrincioaia**	**24.75**	**317**	⇑P	**P**	**20 00 38.6**	**+0.8**
VRI	**Vrincioaia**	**24.75**	**317**	P	**P**	**20 00 38.6**	**+0.8**
PLOR	**Plostina**	**24.79**	**317**	⇓*i*P	**P**	**20 00 35.2**	**-3.0**
PLOR	**Plostina**	**24.79**	**317**	⇓P	**P**	**20 00 35.2**	**-3.0**
OTUK	**Ortayu**	**24.82**	**36**	P	**P**	**20 00 39.6**	**+1.2**
OTUK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
OTUK	**Ortayu**	**24.82**	**36**	P	**P**	**20 00 39.6**	**+1.2**
	comp=Z,8.0nm,0.8s						
MLR	**Muntele Rosu**	**25.02**	**316**	P	**P**	**20 00 41.3**	**+0.9**
	comp=Z,1.3nm,0.8s,baz=55,slow=9.0,SNR=8.4						
MLR	**Muntele Rosu**	**25.02**	**316**	⇑*i*P	**P**	**20 00 41.1**	**+0.7**
TESR	**Tescani**	**25.14**	**318**	⇓*i*P	**P**	**20 00 40.7**	**-0.7**
SORM	**Soroca**	**25.16**	**323**	⇓*i*P	**P**	**20 00 40.1**	**-1.4**
SORM	**Soroca**	**25.16**	**323**	⇓P	**P**	**20 00 40.1**	**-1.4**
SORM	**Soroca**	**25.16**	**323**	P	**P**	**20 00 40.1**	**-1.4**
VOIR		**25.54**	**315**	⇑*i*P	**P**	**20 00 47.5**	**+2.4**
VOIR		**25.54**	**315**	P	**P**	**20 00 47.2**	**+2.1**
VOIR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
VOIR		**25.54**	**315**	P	**P**	**20 00 47.2**	**+2.1**
	comp=Z,8.0nm,0.9s						
GRG	**Griva**	**25.58**	**304**	P	**P**	**20 00 47.8**	**+2.4**
GRG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
DOPR	**Dopca**	**25.60**	**316**	⇓*i*P	**P**	**20 00 47.2**	**+1.7**
PRAR	**RASCA**	**25.86**	**320**	⇑*i*P	**P**	**20 00 48.4**	**+0.6**
AKASG	**Malin Array Be**	**26.44**	**328**	P	**P**	**20 00 51.8**	**-1.3**
	comp=Z,10nm,0.8s,baz=133,slow=9.0,SNR=20						
AKASG	**Malin Array Be**	**26.44**	**328**	*ce*P	**P**	**20 00 55.0**	**+2.0**
AKASG				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BURAR	**Bucovina Array**	**26.57**	**319**	⇑*i*P	**P**	**20 00 55.3**	**+0.9**
BURAR	**Bucovina Array**	**26.57**	**319**	⇑P	**P**	**20 00 55.3**	**+0.9**
PDGK	**Podgornoye**	**26.63**	**52**	P	**P**	**20 00 59.8**	**+4.7**
PDGK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ARU	**Arti**	**27.25**	**9**	*d i*P	**P**	**20 01 00.7**	**+0.5**
ARU				PPP	PPP	20 01 51.9	
ARU				S	**S**	**20 05 43.6**	**+5.9**
ARU				SS	**SnSn**	**20 06 54.7**	**+8.1**
ARU				pmax	pmax		
	comp=Z,11nm,2.5s						
ARU	**Arti**	**27.25**	**9**	*i* P	**P**	**20 01 00.7**	**+0.5**
	comp=Z,11nm,2.5s						
BRVK	**Borovoye**	**27.35**	**26**	*e*P	**P**	**20 01 01.6**	**+0.4**
	comp=Z,13nm,1.0s						
BRVK	**Borovoye**	**27.35**	**26**	*ce*P	**P**	**20 01 01.1**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BRVK	**Borovoye**	**27.35**	**26**	*e*P	**P**	**20 01 01.6**	**+0.4**
	comp=Z,13nm,1.0s						
MDVR	**Moldovita**	**27.37**	**311**	⇑*i*P	P	20 01 09.1	+7.5
PYUN	**Piuthan**	**28.23**	**85**	*e*P	**P**	**20 01 09.6**	**0.0**
	comp=Z,21nm,0.9s						
KOLN	**Koldanda**	**28.82**	**86**	*e*P	**P**	**20 01 14.6**	**-0.3**
DANN	**Dangsing**	**28.84**	**85**	*e*P	**P**	**20 01 15.1**	**-0.1**
KURK	**Kurchatov**	**29.57**	**37**	*e*P	**P**	**20 01 21.4**	**+0.4**
	comp=Z,32nm,1.1s						
KURK	**Kurchatov**	**29.57**	**37**	*e*P	**P**	**20 01 21.4**	**+0.4**
KURK				pmax	pmax		
	comp=Z,33nm,1.1s						
KURK	**Kurchatov**	**29.57**	**37**	*e*P	**P**	**20 01 21.4**	**+0.4**
	comp=Z,32nm,1.1s						
GKN	**Gorkha**	**29.67**	**85**	*e*P	**P**	**20 01 22.0**	**-0.4**
MKAR	**Makanchi Array**	**29.79**	**46**	P	**P**	**20 01 23.2**	**+0.2**
	comp=Z,0.9nm,0.6s,baz=239,slow=10,SNR=9.5						
DMN	**Daman**	**30.16**	**86**	*e*P	**P**	**20 01 26.7**	**-0.1**
	comp=Z,29nm,1.2s						
KKN	**Kakani**	**30.27**	**85**	*e*P	**P**	**20 01 27.2**	**-0.6**
	comp=Z,5.4nm,0.5s						
PKIN	**Phulchoki**	**30.42**	**85**	*e*P	**P**	**20 01 29.9**	**+0.8**
	comp=Z,29nm,1.1s						
GUN	**Gumba**	**30.77**	**85**	*e*P	**P**	**20 01 32.2**	**-0.1**
	comp=Z,19nm,0.8s						
JIRN	**Jiri**	**31.09**	**85**	*e*P	**P**	**20 01 34.8**	**-0.3**
KLMR	**Klimovskoe**	**32.01**	**350**	*e*P	**P**	**20 01 39.7**	**-2.7**
KLMR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KLMR	**Klimovskoe**	**32.01**	**350**	*e*P	**P**	**20 01 39.7**	**-2.7**
KLMR				AMP		20 01 41.5	
	comp=Z,9.0nm,0.9s						
PRGR	**Permogore**	**32.08**	**355**	*e*P	**P**	**20 01 41.4**	**-1.6**
PRGR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ZALV	**Zalesovo Beam**	**34.52**	**36**	P	**P**	**20 02 04.9**	**+0.5**
	comp=Z,4.6nm,0.7s,baz=247,slow=10,SNR=14						
CLL	**Collm**	**35.32**	**318**	⇓*i*P	**P**	**20 02 10.5**	**-0.9**
	comp=Z,11nm,1.5s						
CLL	**Collm**	**35.32**	**318**	⇓*i*P	**P**	**20 02 10.5**	**-0.9**
CLL				pmax	pmax		
	comp=Z,11nm,1.5s			

0.1nm,0.4s,baz=71,slow=9.4,SNR=4.5
FITZ Fitzroy Crossi 39.71 260 P P 20 07 56.7 +0.8
6.1nm,0.9s,baz=108,slow=11,SNR=7.2
ILAR Eielson Array 86.79 18 P P 20 13 07.2 0.0
0.4nm,0.5s,baz=234,slow=5.2,SNR=6.2

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*DSN **06** 20:02:32.4±2.6, 30°.41N×50°.61E, h15km, ML3.7/9, Error ellipse: s-maj=33.1km s-min=8.2km az=172.0*
*IDC **06** 20:02:36.6±0.9, 29°.72N×50°.63E, h0km, mb3.9/17, mb1 4.0/21, mb1mx3.8/66, mbtmp3.9/21, ML3.3/4, MS3.1/1, Ms1 3.1/1, ms1mx2.3/59, Error ellipse: s-maj=21.5km s-min=15.6km az=174.0*
*ISCJB **06** 20:02:38.7±0.3, 29°.62N±0°.03×50°.59E±0°.04, h25km, mb3.9/19, MS3.0/1, Error ellipse: s-maj=5.4km s-min=3.7km az=140.3*
*THR **06** 20:02:41.2±0.4, 29°.71N×50°.66E, h46km±4km, ML3.6*
*TEH **06** 20:02:42.2, 29°.78N×50°.73E, h16km, ML3.7*
*CSEM **06** 20:02:42.2±0.2, 29°.69N×50°.65E, h44km±2km, ML3.8, Error ellipse: s-maj=5.8km s-min=3.3km az=65.0*
*NEIC **06** 20:02:42.2±0.0, 29°.78N×50°.73E, h16km, mb4.3/4, MN3.7(TEH), After TEH.*

ISC 06 20:02:40.7±0.5, 29.73N±0°.05×50.69E±0°.05, h25km, n106, σ1§49/110, mb3.9/19, 2C-5D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKAZ	**Kazeroun**	**1.00**	**87**	*e*Pg	**Pb**	**20 02 59.7**	**+0.1**
IKAZ				*e*		20 03 12.8	
	comp=Z,26μm,0.3s						
IKAZ				*e*Sg	**Sb**	**20 03 12.8**	**+0.3**
AHBU	**AHRAM**	**1.01**	**148**	*e*Pg	**Pb**	**20 03 00.8**	**+1.2**
AHBU				*e*Sg	**Sn**	**20 03 14.7**	**+2.0**
SHI	**Shiraz**	**1.59**	**93**	*e*		20 03 32.6	
	comp=Z,28μm,0.3s						
SHI				*e*Pn	**Pb**	**20 03 09.2**	**-0.3**
IPAR	**Pars**	**2.05**	**86**	*e*Pn	**Pn**	**20 03 15.3**	**+1.4**
IPAR				*e*Sg	**Sb**	**20 03 45.2**	**+2.5**
IPAR				*e*		20 03 55.8	
	comp=Z,7μm,0.4s						
IPAR	**Pars**	**2.05**	**86**	*e*Pn	**Pn**	**20 03 15.5**	**+1.6**
IBRJ	**Brojen**	**2.23**	**13**	*e*Pn	**Pn**	**20 03 17.4**	**+1.1**
IBRJ				*e*		20 03 58.8	
	comp=Z,3μm,0.3s						
ZNGN	**Zangian**	**2.38**	**3**	*e*Pn	**Pn**	**20 03 20.5**	**+2.0**
ZNGN				*e*		20 03 57.7	
	comp=Z,99nm,0.4s						
ZNGN	**Zangian**	**2.38**	**3**	*e*Pn	**Pn**	**20 03 20.2**	**+1.7**
GHIR	**Ghir-Karzin**	**2.47**	**125**	*e*Pn	**Pn**	**20 03 20.4**	**+0.8**
GHIR				*e*Sg	**Sb**	**20 03 57.7**	**+3.0**
GHIR				AML	AML	20 04 08.3	
	comp=E,274nm,0.4s						
GHIR				AML	AML	20 04 17.4	
	comp=N,237nm,0.6s						
GHIR	**Ghir-Karzin**	**2.47**	**125**	*e*Pn	**Pn**	**20 03 20.4**	**+0.8**
IRAM	**Ramesheh**	**2.53**	**35**	*e*Pn	**Pn**	**20 03 21.6**	**+1.1**
IRAM				*e*		20 03 29.7	
	comp=Z,3μm,0.1s						
IRAM	**Ramesheh**	**2.53**	**35**	*e*Pn	**Pn**	**20 03 21.5**	**+1.1**
ROKH	**ROKH**	**2.62**	**6**	*e*Pn	**Pn**	**20 03 23.2**	**+1.4**
ROKH				*e*		20 04 10.2	
	comp=Z,99nm,0.6s						
ROKH	**ROKH**	**2.62**	**6**	*e*Pn	**Pn**	**20 03 22.9**	**+1.1**
SHGR	**Shooshtar-Gavs**	**2.87**	**326**	*e*P	**Pn**	**20 03 25.6**	**+0.6**
SHGR	**Shooshtar-Gavs**	**2.87**	**326**	*e*Pn	**Pn**	**20 03 25.6**	**+0.6**
IGAR	**Gharneh**	**2.91**	**23**	*e*Pn	**Pn**	**20 03 27.4**	**+1.8**
IGAR				*e*		20 03 30.3	
	comp=Z,4μm,0.1s						
ISAD	**Sadrabad**	**3.37**	**49**	*e*Pn	**Pn**	**20 03 33.7**	**+1.6**
ISAD				*e*		20 03 35.9	
	comp=Z,1μm,0.1s						
ISAD	**Sadrabad**	**3.37**	**49**	*e*Pn	**Pn**	**20 03 33.5**	**+1.4**
IZEF	**Zefreh**	**3.45**	**24**	*e*Pn	**Pn**	**20 03 34.4**	**+1.2**
IZEF				*e*		20 03 37.0	
	comp=Z,1μm,0.1s						
IZEF	**Zefreh**	**3.45**	**24**	*e*Pn	**Pn**	**20 03 34.2**	**+1.0**
NASN	**Na'in**	**3.56**	**30**	*e*Pn	**Pn**	**20 03 35.8**	**+1.2**
NASN	**Na'in**	**3.56**	**30**	*e*Pn	**Pn**	**20 03 35.8**	**+1.2**
IKLH	**Kolahrood**	**3.66**	**12**	*e*Pn	**Pn**	**20 03 37.4**	**+1.4**
IKLH				*e*		20 03 39.3	
	comp=Z,2μm,0.1s						
IKLH	**Kolahrood**	**3.66**	**12**	*e*Pn	**Pn**	**20 03 37.3**	**+1.3**
IMEH	**Mehriz**	**3.77**	**63**	*e*Pn	**Pn**	**20 03 39.1**	**+1.6**
IMEH				*e*		20 03 42.1	
	comp=Z,1μm,0.1s						
IMEH	**Mehriz**	**3.77**	**63**	*e*Pn	**Pn**	**20 03 38.9**	**+1.4**
KHMZ	**Khomeyn**	**4.05**	**351**	*e*Pn	**Pn**	**20 03 42.5**	**+1.2**
KHMZ	**Khomeyn**	**4.05**	**351**	*e*Pn	**Pn**	**20 03 42.5**	**+1.2**
ICHK	**Chekchek**	**4.06**	**51**	*e*Pn	**Pn**	**20 03 42.3**	**+0.8**
ICHK	**Chekchek**	**4.06**	**51**	*e*Pn	**Pn**	**20 03 42.5**	**+1.0**
ANAR	**Anarak**	**4.32**	**36**	*e*Pn	**Pn**	**20 03 46.1**	**+1.2**
ANAR				*e*		20 05 00.8	
	comp=Z,99nm,0.4s						
ANAR	**Anarak**	**4.32**	**36**	*e*Pn	**Pn**	**20 03 46.1**	**+1.2**
ASAO	**Ashtian**	**4.84**	**353**	*e*Pn	**Pn**	**20 03 53.1**	**+0.9**
ASAO	**Ashtian**	**4.84**	**353**	*e*Pn	**Pn**	**20 03 53.1**	**+0.9**
KHGB	**Koh Gabri**	**5.06**	**81**	*e*Pn	**Pn**	**20 03 56.6**	**+1.4**
KHGB				*e*		20 06 04.5	
	comp=Z,99nm,0.7s						
KHGB	**Koh Gabri**	**5.06**	**81**	*e*Pn	**Pn**	**20 03 56.6**	**+1.4**
IKOM	**Komasi**	**5.19**	**329**	*e*Pn	**Pn**	**20 03 58.7**	**+1.7**
IKOM				*e*		20 05 56.6	
	comp=Z,99nm,1.0s						
IKOM	**Komasi**	**5.19**	**329**	*e*Pn	**Pn**	**20 03 58.2**	**+1.2**
NGRK	**Negar Kerman**	**5.25**	**89**	*e*Pn	**Pn**	**20 03 59.5**	**+1.4**
NGRK				*e*		20 04 01.0	
	comp=Z,99nm,0.1s						
NGRK	**Negar Kerman**	**5.25**	**89**	*e*Pn	**Pn**	**20 03 59.3**	**+1.2**
IVIS	**Veis**	**5.79**	**327**	*e*Pn	**Pn**	**20 04 06.5**	**+1.4**
IVIS				*e*		20 05 22.9	
	comp=Z,225nm,0.3s						
SHME	**Shamm**	**6.06**	**126**	P	**Pn**	**20 04 07.8**	**-1.0**
ILIN	**Lien**	**6.06**	**330**	*e*Pn	**Pn**	**20 04 10.2**	**+1.2**
ILIN				*e*		20 04 15.4	
	comp=Z,297nm,0.1s						
ILIN	**Lien**	**6.06**	**330**	*e*Pn	**Pn**	**20 04 09.4**	**+0.4**
BANOM	**Banah**	**6.25**	**126**	*i* P	**Pn**	**20 04 11.3**	**-0.1**
	SNR=26						
BANOM	**Banah**	**6.25**	**126**	P	**Pn**	**20 04 11.3**	**-0.1**
	SNR=26						
NAZ	**Nazwa, Dubai**	**6.47**	**136**	P	**Pn**	**20 04 15.5**	**+1.1**
NAZ	**Nazwa, Dubai**	**6.47**	**136**	*e*Pn	**Pn**	**20 04 15.2**	**+0.8**
NAZ	**Nazwa, Dubai**	**6.47**	**136**	P	**Pn**	**20 04 15.5**	**+1.1**
MSFE	**Esma-Masafi**	**6.52**	**131**	P	**Pn**	**20 04 14.5**	**-0.6**
MSFE	**Esma-Masafi**	**6.52**	**131**	*e*Pn	**Pn**	**20 04 14.7**	**-0.4**
ASUD	**Al Ashush, Dub**	**6.55**	**140**	*i* P	**Pn**	**20 04 16.1**	**+0.6**
	SNR=30						
ASUD	**Al Ashush, Dub**	**6.55**	**140**	P	**Pn**	**20 04 16.1**	**+0.6**
	SNR=30						
MDH	**Madha**	**6.65**	**130**	P	**Pn**	**20 04 16.3**	**-0.6**
MDH	**Madha**	**6.65**	**130**	P	**Pn**	**20 04 16.3**	**-0.6**
UOSS	**Minazif**	**6.84**	**133**	P	**Pn**	**20 04 19.1**	**-0.3**
UOSS	**Minazif**	**6.84**	**133**	P	**Pn**	**20 04 19.1**	**-0.3**
HATD	**Hatta, Dubai**	**6.88**	**134**	P	**Pn**	**20 04 21.1**	**+1.1**
HATD	**Hatta, Dubai**	**6.88**	**134**	P	**Pn**	**20 04 21.1**	**+1.1**
MZR	**Muzera**	**7.15**	**159**	*i* P	**Pn**	**20 04 25.4**	**+1.6**
	SNR=7.0						
ALNE	**Al Ain**	**7.23**	**140**	P	**Pn**	**20 04 25.9**	**+0.9**
ALNE	**Al Ain**	**7.23**	**140**	*e*Pn	**Pn**	**20 04 25.8**	**+0.9**
SOHO	**SOHO**	**7.63**	**136**	P	**Pn**	**20 04 30.1**	**-0.2**
SOHO	**SOHO**	**7.63**	**136**	P	**Pn**	**20 04 30.1**	**-0.2**
RAYN	**Ar Rayn**	**7.73**	**218**	*i* P	**Pn**	**20 04 31.7**	**-0.1**
	SNR=84						
RAYN	**Ar Rayn**	**7.73**	**218**	P	**Pn**	**20 04 31.7**	**-0.1**
	SNR=84						
WSAR	**Wadi Sarin**	**9.61**	**130**	Pn	**Pn**	**20 04 55.9**	**-1.6**
	comp=Z,0.7nm,0.3s,baz=330,slow=9.8,SNR=17						
WSAR				Sn	**Sn**	**20 06 38.5**	**-6.2**
	comp=Z,0.7nm,0.3s,baz=79,slow=21,SNR=6.1						
GEYT	**Alibeck**	**10.24**	**35**	Pn	**Pn**	**20 05 07.0**	**+0.9**
	comp=Z,0.5nm,0.3s,baz=223,slow=14,SNR=8.7						
KBZ	**Khabaz**	**15.29**	**338**	Pn	**Pn**	**20 06 15.7**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=166,slow=10,SNR=2.4						
KIV	**Kislovodsk**	**15.56**	**338**	*e*Pn	**P**	**20 06 23.4**	**+0.8**
	comp=Z,16nm,1.1s						
BRTR	**Keskin Array B**	**17.18**	**310**	P	**Pn**	**20 06 37.2**	**-1.9**
	comp=Z,0.0nm,0.3s,baz=136,slow=13,SNR=3.2						
AKTO	**Aktyubinsk**	**21.41**	**13**	P	**P**	**20 07 25.9**	**-0.7**
	comp=Z,2.4nm,0.6s,baz=195,slow=13,SNR=6.7						
AAK	**Ala-Archa**	**23.04**	**50**	P	**P**	**20 07 44.6**	**+0.4**
	comp=Z,0.9nm,0.3s,baz=223,slow=10,SNR=2.7						
AAK	**Ala-Archa**	**23.04**	**50**	*e*P	**P**	**20 07 45.4**	**+1.2**
	comp=Z,2.5nm,0.9s						
AAK	**Ala-Archa**	**23.04**	**50**	*e*P	**P**	**20 07 45.4**	**+1.2**
	comp=Z,2.5nm,0.9s						
VRI	**Vrincioaia**	**24.72**	**317**	*i* P	**P**	**20 08 05.8**	**+5.8**
MLR	**Muntele Rosu**	**25.00**	**316**	P	**P**	**20 08 02.4**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=63,slow=10,SNR=5.0						
MLR	**Muntele Rosu**	**25.00**	**316**	*i* P	**P**	**20 08 05.9**	**+3.3**
SORM	**Soroca**	**25.14**	**323**	*i* P	**P**	**20 08 01.9**	**-1.8**
SORM	**Soroca**	**25.14**	**323**	*i* P	**P**	**20 08 01.9**	**-1.8**
VOIR		**25.52**	**315**	*i* P	**P**	**20 08 10.0**	**+2.8**
DOPR	**Dopca**	**25.57**	**316**	*i* P	**P**	**20 08 10.0**	**+2.3**
AKASG	**Malin Array Be**	**26.42**	**328**	P	**P**	**20 08 14.5**	**-0.8**
	comp=Z,1.7nm,0.6s,baz=133,slow=8.9,SNR=9.6						
BURAR	**Bucovina Array**	**26.54**	**319**	*i* P	**P**	**20 08 19.7**	**+3.1**
OBN	**Obninsk**	**27.32**	**342**	LR	LR	20 21 38.6	
	comp=Z,36nm,18.9s,baz=88,slow=42						
BRVK	**Borovoye**	**27.38**	**26**	*e*P	**P**	**20 08 24.1**	**+0.2**
	comp=Z,7.8nm,0.9s						
BRVK	**Borovoye**	**27.38**	**26**	*e*P	**P**	**20 08 24.1**	**+0.2**
	comp=Z,7.8nm,0.9s						
BVAR	**Borovoye Array**	**27.39**	**26**	P	**P**	**20 08 24.3**	**+0.2**
	comp=Z,1.6nm,0.5s,baz=221,slow=8.6,SNR=17						
KURBB	**Kurchatov Arra**	**29.51**	**37**	P	**P**	**20 08 43.5**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=243,slow=8.7,SNR=4.1						
KURK	**Kurchatov**	**29.61**	**37**	*e*P	**P**	**20 08 44.6**	**+0.8**
	comp=Z,26nm,1.2s						
KURK	**Kurchatov**	**29.61**	**37**	*e*P	**P**	**20 08 44.6**	**+0.8**
	comp=Z,26nm,1.2s						
MKAR	**Makanchi Array**	**29.83**	**46**	P	**P**	**20 08 46.2**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=250,slow=6.7,SNR=4.7						
ZALV	**Zalesovo Beam**	**34.56**	**36**	P	**P**	**20 09 27.2**	**+0.1**
	comp=Z,1.6nm,0.6s,baz=249,slow=9.7,SNR=8.1						
FINES	**FINESS Array B**	**35.64**	**340**	P	**P**	**20 09 34.5**	**-1.9**
	comp=Z,1.1nm,0.8s,baz=140,slow=11,SNR=3.6						
HFS	**Hagfors**	**39.21**	**332**	P	**P**	**20 10 05.4**	**-1.2**
	comp=Z,0.8nm,0.5s,baz=116,slow=9.8,SNR=9.2						
EKA	**Eskdalemuir Ar**	**45.73**	**320**	P	**P**	**20 10 58.2**	**-1.4**
	comp=Z,1.1nm,0.7s,baz=101,slow=7.7,SNR=3.7						
TORD	**Torodi Ar. Bea**	**48.13**	**261**	P	**P**	**20 11 18.7**	**-0.2**
	comp=Z,1.9nm,0.7s,baz=55,slow=7.9,SNR=11						
KOWA	**Kowa**	**52.45**	**266**	P	**P**	**20 11 51.7**	**+0.1**
	comp=Z,2.7nm,0.6s,baz=63,slow=12,SNR=5.3						
KSAR	**Wonju Array Be**	**63.12**	**60**	P	**P**	**20 13 05.8**	**-0.6**
KSAR	**Wonju Array Be**	**63.12**	**60**	P	**P**	**20 13 05.8**	**-0.6**
KSRS	**Korea Array**	**63.14**	**60**	P	**P**	**20 13 05.8**	**-0.7**
	comp=Z,0.8nm,0.5s,baz=286,slow=6.3,SNR=5.2						
SEY	**Seymchan**	**69.02**	**29**	P	**P**	**20 13 44.2**	**+0.4**
	comp=Z,0.7nm,0.4s,baz=280,slow=11,SNR=4.3						
ILAR	**Eielson Array**	**84.81**	**7**	P	**P**	**20 15 12.4**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=330,slow=4.2,SNR=5.7						
FITZ	**Fitzroy Crossi**	**86.42**	**113**	P	**P**	**20 15 20.7**	**-0.7**
	comp=Z,2.3nm,0.7s,baz=297,slow=11,SNR=4.9						
SBA	**Scott Base**	**124.27**	**167**	*e*P	**PKPdf**	**20 21 34.7**	**-1.5**

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*MOS **06** 20:10:36.8±1.2, 29°.66N×50°.72E, h17km, mb4.6/39, Error ellipse: s-maj=7.2km s-min=4.4km az=100.7*
*BJI **06** 20:10:37.0, 29°.70N×50°.70E, h10km, mb4.8/28, mB4.9/17, Ms4.2/2*
*ISCJB **06** 20:10:38.7±0.2, 29°.67N±0°.02×50°.69E±0°.02, h27km, mb4.5/87, MS3.5/14, Error ellipse: s-maj=3.4km s-min=2.1km az=35.7*
*GII **06** 20:10:38.2±0.0, 29°.74N×50°.74E, h1km*
*CSEM **06** 20:10:39.2±0.1, 29°.75N×50°.67E, h15km, mb4.5/35, Error ellipse: s-maj=4.9km s-min=2.8km az=42.0*
*THR **06** 20:10:39.6±0.6, 29°.82N×50°.81E, h18km±8km, ML4.3*
*IDC **06** 20:10:39.2±3.0, 29°.73N×50°.72E, h19km±18km, mb4.4/32, mb1 4.4/40, mb1mx4.3/63, mbtmp4.4/40, ML3.8/7, MS3.4/19, Ms1 3.5/19, ms1mx3.2/57, Error ellipse: s-maj=12.9km s-min=10.2km az=178.0*
*DSN **06** 20:10:40.2±0.5, 29°.69N×50°.76E, h15km, mb4.8/3, ML4.3/10, Error ellipse: s-maj=7.9km s-min=5.5km az=59.0*
*TEH **06** 20:10:42.8, 29°.82N×50°.76E, h20km, ML4.3*
*NEIC **06** 20:10:42.8±0.0, 29°.82N×50°.76E, h20km, mb4.6/12, MN4.3(TEH), After TEH.*
*OMAN **06** 20:10:47.2±2.1, 29°.20N×50°.90E, h15km, Error ellipse: s-maj=21.8km s-min=15.5km az=35.0*

ISC 06 20:10:39.4±0.3, 29.71N±0°.04×50.70E±0°.03, h20km±3km, n346, σ1§61/382, mb4.5/89, MS3.5/14, 28C-11D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AHBU	**AHRAM**	**0.99**	**148**	*e*Pg	**Pn**	**20 10 58.9**	**+0.8**
AHBU				*e*Sg	**Sn**	**20 11 13.3**	**+1.8**
IKAZ	**Kazeroun**	**1.00**	**86**	*e*Pg	**Pb**	**20 10 58.2**	**0.0**
IKAZ				*e*Sg	**Sn**	**20 11 12.7**	**+0.5**
IKAZ				*e*		20 11 15.4	
	comp=Z,38μm,0.3s						
IKAZ	**Kazeroun**	**1.00**	**86**	*e*Pg	**Pb**	**20 10 55.8**	**-2.4**
IPAR	**Pars**	**2.05**	**86**	*e*Pn	**Pb**	**20 11 14.6**	**-1.5**
IPAR				*e*Sg	**Sb**	**20 11 45.1**	**+3.8**
IPAR				*e*		20 11 56.4	
	comp=Z,30μm,0.4s						
IPAR	**Pars**	**2.05**	**86**	*e*Pn	**Pb**	**20 11 14.6**	**-1.5**
IBRJ	**Brojen**	**2.24**	**12**	*e*Pn	**Pn**	**20 11 16.8**	**+1.2**
IBRJ				*e*		20 11 54.8	
	comp=Z,20μm,0.2s						
ZNGN	**Zangian**	**2.40**	**3**	*e*Pn	**Pn**	**20 11 19.9**	**+2.0**
ZNGN				*e*		20 11 57.4	
	comp=Z,99nm,0.4s						
ZNGN	**Zangian**	**2.40**	**3**	*e*Pn	**Pn**	**20 11 19.6**	**+1.7**
GHIR	**Ghir-Karzin**	**2.46**	**125**	*e*Pn	**Pn**	**20 11 20.4**	**+1.9**
GHIR				*e*Sg	**Sb**	**20 11 56.2**	**+3.3**
GHIR				AML	AML	20 12 14.3	
	comp=E,1μm,0.5s						
GHIR				AML	AML	20 12 15.8	
	comp=N,903nm,0.7s						
GHIR	**Ghir-Karzin**	**2.46**	**125**	*e*Pn	**Pn**	**20 11 20.4**	**+1.9**
IRAM	**Ramesheh**	**2.55**	**34**	*e*Pn	**Pn**	**20 11 21.4**	**+1.7**
IRAM				*e*		20 11 59.4	
	comp=Z,18μm,0.4s						
IRAM	**Ramesheh**	**2.55**	**34**	*e*Pn	**Pn**	**20 11 21.1**	**+1.4**
ROKH	**ROKH**	**2.64**	**6**	*e*Pn	**Pn**	**20 11 22.6**	**+1.5**
ROKH				*e*		20 12 07.6	
	comp=Z,99nm,0.4s						
ROKH	**ROKH**	**2.64**	**6**	*e*Pn	**Pn**	**20 11 22.4**	**+1.3**
KFJS		**2.85**	**239**	P	**Pb**	**20 11 27.2**	**-2.4**
KFJS				S	**Sb**	**20 12 03.5**	**-0.6**
IGAR	**Gharneh**	**2.92**	**23**	*e*Pn	**Pn**	**20 11 26.9**	**+2.0**
IGAR				*e*		20 12 20.3	
	comp=Z,10μm,0.4s						
ISAD	**Sadrabad**	**3.38**	**49**	*e*Pn	**Pn**	**20 11 33.1**	**+1.8**
ISAD				*e*		20 12 17.3	
	comp=Z,7μm,0.4s						
ISAD	**Sadrabad**	**3.38**	**49**	*e*Pn	**Pn**	**20 11 33.0**	**+1.8**
IZEF	**Zefreh**	**3.47**	**23**	*e*Pn	**Pn**	**20 11 33.8**	**+1.3**
IZEF				*e*		20 11 46.4	
	comp=Z,4μm,0.2s						
IZEF	**Zefreh**	**3.47**	**23**	*e*Pn	**Pn**	**20 11 33.8**	**+1.3**
NASN	**Na'in**	**3.57**	**30**	*e*Pn	**Pn**	**20 11 34.8**	**+0.8**
NASN	**Na'in**	**3.57**	**30**	*e*Pn	**Pn**	**20 11 34.8**	**+0.8**
IKLH	**Kolahrood**	**3.68**	**12**	*e*Pn	**Pn**	**20 11 37.5**	**+2.2**
IKLH				*e*		20 12 57.7	
	comp=Z,6μm,0.5s						
IKLH	**Kolahrood**	**3.68**	**12**	*e*Pn	**Pn**	**20 11 36.9**	**+1.6**
IMEH	**Mehriz**	**3.77**	**63**	*e*Pn	**Pn**	**20 11 38.8**	**+2.2**
IMEH				*e*		20 12 28.3	
	comp=Z,4μm,0.2s						
IMEH	**Mehriz**	**3.77**	**63**	*e*Pn	**Pn**	**20 11 38.3**	**+1.7**
BOQSS		**4.00**	**197**	P	**Pn**	**20 11 44.0**	**+4.5**
BOQSS				S	**Sb**	**20 12 34.1**	**-3.1**
KHMZ	**Khomeyn**	**4.07**	**351**	*e*Pn	**Pn**	**20 11 42.1**	**+1.5**
KHMZ	**Khomeyn**	**4.07**	**351**	*e*Pn	**Pn**	**20 11 42.1**	**+1.5**
ICHK	**Chekchek**	**4.07**	**51**	*e*Pn	**Pn**	**20 11 42.0**	**+1.3**
ICHK				*e*		20 12 33.7	
	comp=Z,3μm,0.2s						
ICHK	**Chekchek**	**4.07**	**51**	*e*Pn	**Pn**	**20 11 41.8**	**+1.1**
IKFM	**Kafar-mosalman**	**4.51**	**328**	*e*Pn	**Pn**	**20 11 48.2**	**+1.7**
ASAO	**Ashtian**	**4.86**	**353**	*e*Pn	**Pn**	**20 11 52.9**	**+1.3**
ASAO	**Ashtian**	**4.86**	**353**	*e*Pn	**Pn**	**20 11 52.9**	**+1.3**
SLWS		**4.89**	**181**	P	**Pn**	**20 11 55.3**	**+3.5**
KHGB	**Koh Gabri**	**5.06**	**81**	*e*Pn	**Pn**	**20 11 56.2**	**+1.9**
KHGB				*e*		20 12 14.1	
	comp=Z,99nm,0.5s						
KHGB	**Koh Gabri**	**5.06**	**81**	*e*Pn	**Pn**	**20 11 55.5**	**+1.2**
IKOM	**Komasi**	**5.21**	**330**	*e*Pn	**Pn**	**20 11 58.7**	**+2.4**
IKOM				*e*		20 14 08.2	
	comp=Z,99nm,1.1s						
IKOM	**Komasi**	**5.21**	**330**	*e*Pn	**Pn**	**20 11 57.4**	**+1.1**
NGRK	**Negar Kerman**	**5.25**	**89**	*e*Pn	**Pn**	**20 11 59.4**	**+2.3**
NGRK				*e*		20 13 02.3	
	comp=Z,99nm,0.1s						
NGRK	**Negar Kerman**	**5.25**	**89**	*e*Pn	**Pn**	**20 11 58.6**	**+1.5**
GENO	**Geno**	**5.34**	**114**	*e*Pn	**Pn**	**20 11 58.5**	**+0.4**
BTHS		**5.64**	**179**	P	**Pn**	**20 12 05.7**	**+3.6**
BTHS				S	**Sn**	**20 13 10.5**	**+4.2**
CHMN	**Cheshme madani**	**5.95**	**87**	*e*		20 12 35.3	
	comp=Z,99nm,0.4s						
CHMN				*e*Pn	**Pn**	**20 12 08.6**	**+1.9**
DAMV	**Damavand**	**6.00**	**10**	*e*Pn	**Pn**	**20 12 08.2**	**+1.0**
DAMV				AML	AML	20 13 17.0	
	comp=E,136nm,0.6s						
DAMV	**Damavand**	**6.00**	**10**	*e*Pn	**Pn**	**20 12 08.2**	**+1.0**
SHME	**Shamm**	**6.04**	**126**	P	**Pn**	**20 12 08.0**	**+0.4**
SHME	**Shamm**	**6.04**	**126**	P	**Pn**	**20 12 09.0**	**+1.3**
SHME				S	**Sn**	**20 13 15.3**	**-1.0**
BANOM	**Banah**	**6.23**	**126**	P	**Pn**	**20 12 13.0**	**+2.7**
BANOM				S	**Sn**	**20 13 21.0**	**0.0**
BANOM	**Banah**	**6.23**	**126**	*i* P	**Pn**	**20 12 11.3**	**+1.1**
	SNR=23						
BANOM	**Banah**	**6.23**	**126**	P	**Pn**	**20 12 11.3**	**+1.1**
	SNR=23						
BANOM				S	**Sn**	**20 13 21.0**	**0.0**
KHSK	**Kohestak**	**6.33**	**116**	*e*Pn	**Pn**	**20 12 11.4**	**-0.2**
AJN	**Ajban**	**6.39**	**142**	P	**Pn**	**20 12 14.1**	**+1.6**
NAZ	**Nazwa, Dubai**	**6.45**	**136**	P	**Pn**	**20 12 15.0**	**+1.8**
NAZ	**Nazwa, Dubai**	**6.45**	**136**	P	**Pn**	**20 12 15.0**	**+1.8**
NAZ	**Nazwa, Dubai**	**6.45**	**136**	*e*Pn	**Pn**	**20 12 15.3**	**+2.1**
MSFE	**Esma-Masafi**	**6.50**	**130**	*i* P	**Pn**	**20 12 14.5**	**+0.5**
	SNR=10.0						
MSFE	**Esma-Masafi**	**6.50**	**130**	*e*Pn	**Pn**	**20 12 15.3**	**+1.3**
ASUD	**Al Ashush, Dub**	**6.53**	**140**	P	**Pn**	**20 12 16.7**	**+2.4**
	SNR=49						
ASUD				S	**Sn**	**20 13 28.4**	**+0.2**
ASUD	**Al Ashush, Dub**	**6.53**	**140**	*i* P	**Pn**	**20 12 16.4**	**+2.1**
	SNR=49						
ASUD	**Al Ashush, Dub**	**6.53**	**140**	P	**Pn**	**20 12 16.4**	**+2.1**
	SNR=49						
ASUD				S	**Sn**	**20 13 28.4**	**+0.2**
MDH	**Madha**	**6.64**	**130**	P	**Pn**	**20 12 16.1**	**+0.3**
MDH	**Madha**	**6.64**	**130**	P	**Pn**	**20 12 17.8**	**+2.0**
UOSS	**Minazif**	**6.82**	**133**	P	**Pn**	**20 12 20.0**	**+1.7**
UOSS				S	**Sn**	**20 13 35.2**	**-0.2**
UOSS	**Minazif**	**6.82**	**133**	*i* P	**Pn**	**20 12 18.8**	**+0.4**
	SNR=12						
UOSS	**Minazif**	**6.82**	**133**	P	**Pn**	**20 12 20.0**	**+1.7**
UOSS				S	**Sn**	**20 13 35.2**	**-0.2**
HATD	**Hatta, Dubai**	**6.86**	**134**	*i* P	**Pn**	**20 12 20.0**	**+1.2**
	SNR=8.6						
HATD	**Hatta, Dubai**	**6.86**	**134**	P	**Pn**	**20 12 20.0**	**+1.2**
	SNR=8.6						
HATD	**Hatta, Dubai**	**6.86**	**134**	*e*Pn	**Pn**	**20 12 21.2**	**+2.3**
MZR	**Muzera**	**7.13**	**159**	*i* P	**Pn**	**20 12 24.5**	**+1.9**
	SNR=23						
ALNE	**Al Ain**	**7.22**	**140**	*i* P	**Pn**	**20 12 25.3**	**+1.5**
	SNR=23						
ALNE	**Al Ain**	**7.22**	**140**	*e*Pn	**Pn**	**20 12 25.2**	**+1.5**
ALNE	**Al Ain**	**7.22**	**140**	P	**Pn**	**20 12 26.0**	**+2.2**
	SNR=11						
SOHO	**SOHO**	**7.61**	**135**	P	**Pn**	**20 12 29.1**	**-0.1**
SOHO	**SOHO**	**7.61**	**135**	P

ANN pmax pmax
comp=Z,17nm,1.1s
ANN Anapa 18.36 329 *eP* **P 20 14 52.1 -0.5**
comp=Z,17nm,1.1s
CEP Cherat 18.49 72 P **P 20 14 53.6 -0.8**
CEP S **Sn 20 18 18.0 -2.7**
TAS Tashkent 19.02 47 P **Pn 20 15 04.6 +3.9**
TAS Tashkent 19.02 47 *eP* **Pn 20 15 01.3 +0.6**
ATD Arta Tunnel 19.51 204 LR LR 20 23 58.2
comp=Z,97nm,20.2s,baz=334,slow=41
CHCP Chirah Chowk 19.60 73 P **P 20 15 06.1 -0.3**
SIM Simferopol' 20.07 324 P Pn 20 15 14.2 +1.0
SIM S **S 20 18 54.0 -1.9**
SIM pmax pmax
comp=Z,9.0nm,0.8s
SIM Simferopol' 20.07 324 P Pn 20 15 14.2 +1.0
comp=Z,9.0nm,0.8s
KK31 Karatay Array 20.74 45 *i* P **P 20 15 19.1 +0.4**
KK31 pmax pmax
comp=Z,15nm,0.7s
KK31 Karatay Array 20.74 45 *i* P **P 20 15 19.1 +0.4**
comp=Z,15nm,0.7s
AB31 Akbulak array 20.75 17 *i* P **P 20 15 18.1 -0.6**
AB31 pmax pmax
comp=Z,4.0nm,0.6s
AKTK Aktyubinsk 21.42 13 *i* P **P 20 15 25.3 -0.7**
comp=Z,14nm,0.6s
AKTO Aktyubinsk 21.42 13 P **P 20 15 25.4 -0.5**
comp=Z,18nm,0.8s,baz=201,slow=9.7,SNR=59
AKTO S **S 20 19 24.9 +2.2**
comp=Z,1.2nm,0.5s,baz=83,slow=18,SNR=3.0
AKTO LR LR 20 25 43.8
comp=Z,65nm,18.1s,baz=190,slow=42
AKTO Aktyubinsk 21.42 13 *i* P **P 20 15 25.3 -0.7**
AKTO pmax pmax
comp=Z,14nm,0.6s
AML Almayashu 22.29 50 P **P 20 15 36.2 +0.4**
SNR=43
IDI Anoyia 22.43 291 P **P 20 15 38.3 +1.2**
comp=Z,9.9nm,0.7s,baz=91,slow=12,SNR=8.2
IDI LR LR 20 28 09.2
comp=Z,38nm,20.4s,baz=91,slow=47
EKS2 Erkin-Say 22.59 49 P **P 20 15 40.0 +1.3**
SNR=27
UCH Uchtor 22.88 50 P **P 20 15 43.7 +1.6**
SNR=18
VORD Divnogorie 22.89 341 *eP* **P 20 15 40.6 -1.0**
VORD pmax pmax
comp=Z,10.0nm,0.4s
VORD Divnogorie 22.89 341 *eP* **P 20 15 40.6 -1.0**
comp=Z,10.0nm,0.4s
KSH Kashi 22.92 58 P **P 20 15 38.0 -4.2**
KSH pmax pmax
comp=Z,58nm,1.0s
KSH pmax pmax
comp=Z,520nm,5.2s
ALN Alexandroupoli 22.93 306 P **P 20 15 45.8 +3.7**
ALN pmax pmax
comp=Z,4.0nm,0.4s
TIRR Tirgusor 22.98 316⇑ *iP* **P 20 15 43.3 +0.7**
TIRR Tirgusor 22.98 316⇑ *iP* **P 20 15 43.3 +0.7**
AAK Ala-Archa 23.05 50 P **P 20 15 44.7 +1.2**
comp=Z,11nm,0.8s,baz=204,slow=6.6,SNR=18
AAK Ala-Archa 23.05 50 P **P 20 15 45.2 +1.6**
SNR=11
AAK Ala-Archa 23.05 50 *i* P **P 20 15 44.9 +1.4**
SNR=12
AAK Ala-Archa 23.05 50 *i* P **P 20 15 44.6 +1.1**
AAK pmax pmax
comp=Z,9.0nm,1.0s
AAK Ala-Archa 23.05 50 *i* P **P 20 15 44.6 +1.1**
comp=Z,9.0nm,1.0s
VSR Storozhevoye 23.15 341 *eP* **P 20 15 41.9 -2.3**
VSR *e*S **S 20 19 49.5 -5.1**
VSR pmax pmax
comp=Z,20nm,0.9s
VSR smax smax
comp=N,120nm,1.4s
FRU Bishkek 23.22 49 *eP* **P 20 15 45.0 -0.1**
FRU *e* 20 16 20.0
FRU Bishkek 23.22 49 *eP* **P 20 15 45.0 -0.1**
TLB Topalu 23.27 316⇑ *iP* **P 20 15 47.2 +1.7**
TLB Topalu 23.27 316⇑ *iP* **P 20 15 47.2 +1.7**
KZA Kyzart 23.32 51 P **P 20 15 46.2 -0.3**
SNR=13
USP Ospenovka 23.34 48 P **P 20 15 46.9 +0.6**
SNR=6.6
KBK Karagaybulak 23.36 50 P **P 20 15 48.4 +1.7**
SNR=8.5
CHMS Chumysh 23.38 49 P **P 20 15 48.1 +1.4**
SNR=7.8
VORR Voronezh 23.55 342 *eP* **P 20 15 48.0 -0.2**
VORR pmax pmax
comp=Z,250nm,1.4s
VORR Voronezh 23.55 342 *eP* **P 20 15 48.0 -0.2**
comp=Z,250nm,1.4s
TKM2 Tokmak 2 23.90 50 P **P 20 15 52.8 +0.8**
SNR=12
TKM2 Tokmak 2 23.90 50 *i* P **P 20 15 52.0 0.0**
TKM2 pmax pmax
comp=Z,16nm,1.1s
TKM2 Tokmak 2 23.90 50 *i* P **P 20 15 52.0 0.0**
comp=Z,16nm,1.1s
VRI Vrincioaia 24.74 317⇑ *iP* **P 20 16 00.5 +1.1**
VRI Vrincioaia 24.74 317⇑ *iP* **P 20 16 00.5 +1.1**
SRS Serrai 24.75 305 P **P 20 16 04.8 +5.3**
SRS pmax pmax
comp=Z,9.0nm,1.5s
PLOR Plostina 24.78 317⇑ *iP* **P 20 16 01.4 +1.6**
PLOR Plostina 24.78 317⇑ *iP* **P 20 16 01.4 +1.6**
SOH Sokhos 24.83 304 P **P 20 16 04.1 +3.8**
SOH pmax pmax
comp=Z,11nm,0.8s
MLR Muntele Rosu 25.01 316 P **P 20 16 04.9 +2.9**
comp=Z,2.4nm,0.9s,baz=14,slow=3.5,SNR=14
MLR Muntele Rosu 25.01 316⇓ *iP* **P 20 16 03.1 +1.1**
MLR Muntele Rosu 25.01 316⇓ *iP* **P 20 16 03.1 +1.1**
TESR Tescani 25.14 319⇑ *iP* **P 20 16 02.8 -0.2**
TESR Tescani 25.14 319⇑ *iP* **P 20 16 02.8 -0.2**
HUMR Humele 25.14 313⇑ *iP* **P 20 16 04.6 +1.6**
HUMR Humele 25.14 313⇑ *iP* **P 20 16 04.6 +1.6**
SORM Soroca 25.16 323⇓ *iP* **P 20 16 02.3 -0.8**
SORM Soroca 25.16 323 P **P 20 16 02.3 -0.8**
SORM Soroca 25.16 323 P **P 20 16 02.3 -0.8**
VTS Vitosha 25.52 308⇑ *iP* **P 20 16 07.5 +0.8**
VTS Vitosha 25.52 308⇑ *iP* **P 20 16 07.5 +0.8**
VOIR 25.53 315⇑ *iP* **P 20 16 08.3 +1.6**
VOIR 25.53 315 P **P 20 16 09.1 +2.4**
VOIR pmax pmax
comp=Z,24nm,0.8s
VOIR 25.53 315 P **P 20 16 09.1 +2.4**
comp=Z,24nm,0.8s
GRG Griva 25.56 304 P **P 20 16 08.2 +1.3**
GRG pmax pmax
comp=Z,15nm,0.9s
GRG Griva 25.56 304 P **P 20 16 08.2 +1.3**
comp=Z,15nm,0.9s
DOPR Dopca 25.59 316⇓ *iP* **P 20 16 08.9 +1.8**
DOPR Dopca 25.59 316⇓ *iP* **P 20 16 08.9 +1.8**
PRAR RASCA 25.85 320⇓ *iP* **P 20 16 10.0 +0.6**
PRAR RASCA 25.85 320⇓ *iP* **P 20 16 10.0 +0.6**
STIP Stip 25.93 305 *i* P **P 20 16 09.3 -1.0**
FNA Florina 26.25 303 P **P 20 16 18.8 +5.6**
FNA pmax pmax
comp=Z,9.0nm,0.9s
AKASG Malin Array Be 26.44 328 P **P 20 16 13.6 -1.1**
comp=Z,14nm,0.7s,baz=130,slow=9.4,SNR=17
AKASG S **S 20 20 48.7 +1.5**
comp=Z,0.3nm,0.3s,baz=129,slow=19,SNR=2.3
AKASG Malin Array Be 26.44 328 *ceP* **P 20 16 13.8 -0.9**
AKASG pmax pmax
comp=Z,14nm,0.7s
BURAR Bucovina Array 26.56 319⇑ *iP* **P 20 16 17.3 +1.3**
BURAR Bucovina Array 26.56 319 P **P 20 16 17.3 +1.3**
BURAR Bucovina Array 26.56 319⇑ *iP* **P 20 16 17.3 +1.3**
ZAGS Zajecar 26.64 310⇓ *iP* **P 20 16 16.9 +0.3**
KUBS Kucevo 27.24 311 *eP* **P 20 16 20.2 -1.8**
ARU Arti 27.28 10 P **P 20 16 22.0 -0.2**
comp=Z,2.1nm,0.7s,baz=165,slow=7.0,SNR=5.2
ARU Arti 27.28 10 *eP* **P 20 16 22.0 -0.2**
comp=Z,6.6nm,0.8s
ARU Arti 27.28 10 *d iP* **P 20 16 22.3 +0.1**
ARU PPP PPP 20 17 14.4
ARU S **S 20 21 03.1 +2.7**
ARU SS **SnSn 20 22 10.2 +1.0**

ARU pmax pmax
comp=Z,10.0nm,1.7s
ARU Arti 27.28 10 *i P* **P 20 16 22.3 +0.1**
comp=Z,10.0nm,1.7s
MDVR Moldovita 27.36 311⇑ *iP* **P 20 16 23.9 +0.8**
MDVR Moldovita 27.36 311⇑ *iP* **P 20 16 23.9 +0.8**
BRVK Borovoye 27.39 26 *eP* **P 20 16 23.8 +0.5**
comp=Z,33nm,0.9s
BRVK Borovoye 27.39 26 *eP* **P 20 16 23.8 +0.5**
BRVK pmax pmax
comp=Z,33nm,0.9s
BRVK Borovoye 27.39 26 *eP* **P 20 16 23.8 +0.5**
comp=Z,33nm,0.9s
BVAR Borovoye Array 27.41 26 P **P 20 16 23.9 +0.5**
comp=Z,14nm,0.7s,baz=220,slow=7.5,SNR=90
BVAR PcP **PcP 20 19 42.3 +0.5**
comp=Z,2.3nm,0.7s,baz=238,slow=2.7,SNR=7.9
BVAR LR LR 20 28 54.0
comp=Z,68nm,19.7s,baz=216,slow=40
BZS Buzias 27.76 313⇑ *iP* **P 20 16 27.2 +0.5**
BZS Buzias 27.76 313 P **P 20 16 27.2 +0.5**
BZS Buzias 27.76 313 P **P 20 16 27.2 +0.5**
SVE Sverdlovsk 28.00 12 *eP* **P 20 16 29.6 +1.0**
PYUN Piuthan 28.27 85 *eP* **P 20 16 31.8 +0.2**
comp=Z,45nm,0.8s
FGSL Fruska Gora 28.75 311 *eP* **P 20 16 36.4 +0.9**
KOLN Koldanda 28.86 86 *eP* **P 20 16 36.8 -0.1**
comp=Z,8.5nm,0.6s
DANN Dangsing 28.89 84 *eP* **P 20 16 37.7 +0.4**
comp=Z,57nm,0.9s
CRVS Cervenica-Dubn 29.37 319 *eP* **P 20 16 41.6 +0.6**
CRVS pmax pmax
comp=Z,4.0nm,0.9s
CRVS Cervenica-Dubn 29.37 319 *eP* **P 20 16 41.6 +0.6**
CRVS Cervenica-Dubn 29.37 319 *eP* **P 20 16 41.6 +0.6**
comp=Z,4.0nm,0.9s
KURBB Kurchatov Arra 29.52 37 P **P 20 16 43.7 +1.4**
comp=Z,4.9nm,0.8s,baz=238,slow=9.2,SNR=23
KURBB PcP **PcP 20 19 47.7 +0.6**
comp=Z,1.0nm,0.7s,baz=225,slow=3.3,SNR=3.4
KURBB ScP **ScP 20 23 27.6 -0.3**
comp=Z,0.7nm,0.9s,baz=228,slow=3.8,SNR=4.5
KURK Kurchatov 29.62 37 P **P 20 16 43.7 +0.6**
KURK PcP **PcP 20 19 47.7 +0.3**
KURK ScP **ScP 20 23 27.6 -0.6**
KURK Kurchatov 29.62 37 *ceP* **P 20 16 43.4 +0.3**
KURK pmax pmax
comp=Z,12nm,1.0s
KURK Kurchatov 29.62 37 P **P 20 16 43.7 +0.6**
GKN Gorkha 29.72 85 *eP* **P 20 16 44.1 -0.3**
MK31 Makanchi Array 29.84 46 *i P* **P 20 16 45.4 +0.2**
MK31 pmax pmax
comp=Z,3.0nm,0.5s
MK31 Makanchi Array 29.84 46 *i P* **P 20 16 45.4 +0.2**
comp=Z,3.0nm,0.5s
MKAR Makanchi Array 29.84 46 P **P 20 16 45.7 +0.5**
comp=Z,1.9nm,0.5s,baz=243,slow=9.4,SNR=33
MKAR PcP **PcP 20 19 47.8 -0.3**
comp=Z,0.8nm,0.7s,baz=250,slow=4.3,SNR=4.5
MKAR LR LR 20 29 42.2
comp=Z,56nm,20.7s,baz=240,slow=38
DMN Daman 30.20 85 *eP* **P 20 16 48.7 -0.2**
comp=Z,30nm,0.8s
KKN Kakani 30.32 85 *eP* **P 20 16 49.7 -0.1**
comp=Z,47nm,1.1s
PKIN Phulchoki 30.46 85 *eP* **P 20 16 51.4 +0.2**
comp=Z,30nm,0.8s
LANS Liptovska Anna 30.64 318 *eP* **P 20 16 52.5 +0.3**
LANS Liptovska Anna 30.64 318 *eP* **P 20 16 52.5 +0.3**
LANS Liptovska Anna 30.64 318 *eP* **P 20 16 52.5 +0.3**
VYHS Vyhne 30.72 317 *eP* **P 20 16 52.2 -0.7**
VYHS pmax pmax
comp=Z,14nm,2.5s
VYHS Vyhne 30.72 317 *eP* **P 20 16 52.2 -0.7**
VYHS Vyhne 30.72 317 *eP* **P 20 16 52.2 -0.7**
comp=Z,14nm,2.5s
GUN Gumba 30.81 85 *eP* **P 20 16 54.3 0.0**
comp=Z,42nm,0.7s
JIRN Jiri 31.13 85 *eP* **P 20 16 57.1 -0.1**
comp=Z,47nm,0.8s
RAMN Ramite 31.65 86 *eP* **P 20 16 59.8 -1.8**
comp=Z,27nm,0.9s
OKC Ostrava-Krasne 31.72 319 *eP* **P 20 17 03.4 +1.7**
OKC Ostrava-Krasne 31.72 319 *eP* **P 20 17 03.4 +1.7**
OKC Ostrava-Krasne 31.72 319 *eP* **P 20 17 03.4 +1.7**
KLMR Klimovskoe 32.03 350 *eP* **P 20 17 02.1 -2.1**
KLMR pmax pmax
comp=Z,18nm,0.8s
KLMR Klimovskoe 32.03 350 *eP* **P 20 17 02.1 -2.1**
KLMR AMP 20 17 03.8
comp=Z,18nm,0.8s
MORC Moravsky Berou 32.05 318 P **P 20 17 06.8 +2.2**
MORC pmax pmax
comp=Z,6.0nm,1.0s
PRGR Permogore 32.11 355 *eP* **P 20 17 03.2 -1.7**
PRGR pmax pmax
comp=Z,15nm,0.6s
ARSA Arzberg 32.28 313 *pP* **P 20 17 09.5 +2.8**
comp=Z,0.9nm,0.4s
CONA Conrad Observa 32.31 314 *eP* **P 20 17 07.9 +0.9**
comp=Z,3.1nm,1.2s
CONA Conrad Observa 32.31 314 P **P 20 17 07.9 +0.9**
comp=Z,3.1nm,1.2s
ODAN Odare 32.35 86 *eP* **P 20 17 06.8 -1.0**
comp=Z,22nm,1.0s
SOKA Soboth 32.41 311 *eP* **P 20 17 06.9 -0.9**
comp=Z,1.5nm,1.0s
SOKA Soboth 32.41 311 P **P 20 17 06.9 -0.9**
comp=Z,1.5nm,1.0s
OBKA Obir 32.67 311 *eP* **P 20 17 09.4 -0.8**
comp=Z,6.1nm,1.4s
OBKA Obir 32.67 311 P **P 20 17 09.4 -0.8**
comp=Z,6.1nm,1.4s
DPC Dobruska-Polom 33.00 318 *eP* **P 20 17 12.9 -0.1**
DPC *ep*P **pP 20 17 19.7 +0.4**
DPC Dobruska-Polom 33.00 318 *eP* **P 20 17 12.9 -0.1**
DPC *e* 20 17 19.7
DPC Dobruska-Polom 33.00 318 *eP* **P 20 17 12.9 -0.1**
UPC Upice 33.25 318 *eP* **P 20 17 15.4 +0.3**
UPC *ep*P **pP 20 17 22.8 +1.4**
UPC Upice 33.25 318 *eP* **P 20 17 15.4 +0.3**
UPC *e* 20 17 22.8
UPC Upice 33.25 318 *eP* **P 20 17 15.4 +0.3**
MOA Molln 33.29 313 P **P 20 17 16.2 +0.7**
comp=Z,1.0nm,0.4s
MOA Molln 33.29 313 P **P 20 17 16.2 +0.7**
comp=Z,1.0nm,0.4s
KBA Koelnbreinsper 33.63 312 *eP* **P 20 17 18.1 -0.6**
comp=Z,2.9nm,0.6s
KBA Koelnbreinsper 33.63 312 P **P 20 17 18.1 -0.6**
comp=Z,2.9nm,0.6s
GERES GERESS Array B 33.98 315 P **P 20 17 20.8 -0.8**
comp=Z,0.5nm,0.6s,baz=124,slow=8.8,SNR=4.2
GERES PcP **PcP 20 19 59.8 +0.4**
comp=Z,0.9nm,0.7s,baz=169,slow=2.0,SNR=4.1
GERES ScP **ScP 20 23 43.5 +0.4**
comp=Z,1.0nm,0.8s,baz=142,slow=6.6,SNR=5.0
ABTA Abfaltersbach 34.08 311 *epP* pP 20 17 26.1 -2.7
comp=Z,3.6nm,0.9s
NVS Novosibirsk 34.26 34 *eP* **P 20 17 24.7 +0.9**
NVS pmax pmax
comp=N,7.0nm,1.1s
NVS pmax pmax
comp=Z,9.0nm,1.1s
ZALV Zalesovo Beam 34.57 36 P **P 20 17 26.8 +0.3**
comp=Z,11nm,0.7s,baz=248,slow=9.6,SNR=52
ZALV PcP **PcP 20 19 59.7 -1.1**
comp=Z,1.1nm,0.7s,baz=242,slow=3.1,SNR=2.3
ZALV LR LR 20 33 27.5
comp=Z,50nm,21.6s,baz=250,slow=40
BRG Berggiesshubel 34.60 318 *eP* **P 20 17 27.4 +0.6**
comp=Z,8.0nm,1.3s
BRG Berggiesshubel 34.60 318 *eP* **P 20 17 27.4 +0.6**
BRG pmax pmax
comp=Z,8.0nm,1.3s
WTTA Wattenberg 34.80 311 *eP* **P 20 17 28.7 -0.1**
comp=Z,5.2nm,0.8s
WTTA Wattenberg 34.80 311 P **P 20 17 28.7 -0.1**
comp=Z,5.2nm,0.8s
LSA Lhasa 35.01 80 *eP* **P 20 17 31.7 +0.5**
comp=Z,5.1nm,0.9s
LSA Lhasa 35.01 80 *eP* **P 20 17 31.7 +0.5**
LSA pmax pmax
comp=Z,5.0nm,0.9s
MOTA Moosalm 35.17 311 *eP* **P 20 17 30.6 -1.4**
comp=Z,1.6nm,0.6s

MOTA Moosalm 35.17 311 P **P 20 17 30.6 -1.4**
comp=Z,1.6nm,0.6s
CLL Collm 35.32 318 *eP* **P 20 17 32.0 -1.0**
comp=Z,6.0nm,0.9s
CLL *ep*P **pP 20 17 39.0 -0.3**
CLL Collm 35.32 318 *eP* **P 20 17 32.0 -1.0**
CLL *e* 20 17 39.0
CLL pmax pmax
comp=Z,6.0nm,0.9s
FETA Feichten 35.33 311 *eP* **P 20 17 33.3 -0.1**
comp=Z,2.5nm,0.8s
FETA Feichten 35.33 311 P **P 20 17 33.3 -0.1**
comp=Z,2.5nm,0.8s
TMCR Tamitsa 35.40 350 *eP* **P 20 17 32.4 -1.0**
TMCR pmax pmax
comp=Z,13nm,0.5s
FINES FINESS Array B 35.66 340 P **P 20 17 34.8 -1.0**
comp=Z,2.5nm,0.6s,baz=144,slow=9.5,SNR=20
DAVA Damuels 35.96 311 *eP* **P 20 17 37.7 -1.0**
comp=Z,3.8nm,0.5s
DAVA Damuels 35.96 311 P **P 20 17 37.7 -1.0**
comp=Z,3.8nm,0.5s
PALK Pallekele 35.96 122 LR LR 20 33 35.1
comp=Z,50nm,18.6s,baz=5.2,slow=38
HFS Hagfors 39.23 332 P **P 20 18 05.1 -0.9**
comp=Z,3.8nm,0.5s,baz=134,slow=8.3,SNR=37
HFS PcP **PcP 20 20 13.2 -1.6**
comp=Z,0.7nm,0.5s,baz=123,slow=5.3,SNR=2.7
NB2 NORSAR Subarra 40.75 332 P **P 20 18 17.4 -1.3**
comp=Z,3.3nm,1.0s,baz=121,slow=8.6
NOA NORSAR Array B 40.75 332 P **P 20 18 17.7 -1.0**
comp=Z,2.3nm,0.9s,baz=124,slow=8.1,SNR=7.0
NOA PP **PP 20 19 53.2 +0.6**
comp=Z,1.6nm,0.8s,baz=111,slow=10,SNR=3.8
GTA Gaotai 41.16 63 *eP* **P 20 18 23.5 +1.0**
GTA pP sP 20 18 34.3 +2.9
GTA sP pP 20 18 38.2 +9.4
GTA pmax pmax
comp=Z,14nm,0.7s
ARCES ARCESS Array B 42.40 347 P **P 20 18 31.9 -0.2**
comp=Z,1.2nm,0.6s,baz=141,slow=7.8,SNR=5.1
ARCES PP **PP 20 20 05.5 -4.8**
comp=Z,1.7nm,0.7s,baz=146,slow=9.7,SNR=4.2
MOY Mondy 42.95 45 *eP* **P 20 18 38.3 +1.3**
MOY pmax pmax
comp=Z,12nm,1.9s
ZAK Zakamensk 44.18 47 *eP* **P 20 18 46.1 -0.7**
ZAK *e* 20 20 29.4
ZAK pmax pmax
comp=Z,49nm,1.1s
ZAK pmax pmax
comp=Z,2.0nm,1.2s
NRIK Noril'sk 44.92 18 P **P 20 18 51.2 -1.2**
comp=Z,6.6nm,0.6s,baz=238,slow=4.6,SNR=6.9
NRIK LR LR 20 41 20.4
comp=Z,69nm,20.1s,baz=162,slow=41
CHTO Chiang Mai 45.02 93 *eP* **P 20 18 52.9 -0.9**
comp=Z,2.4nm,0.9s
CHTO Chiang Mai 45.02 93 *eP* **P 20 18 52.9 -0.9**
CHTO pmax pmax
comp=Z,2.0nm,0.9s
CMAR Chiang Mai Arr 45.16 93 P **P 20 18 54.1 -0.9**
comp=Z,1.3nm,0.9s,baz=284,slow=8.1,SNR=6.0
CMAR PcP **PcP 20 20 34.9 -0.3**
comp=Z,1.6nm,0.8s,baz=296,slow=4.7,SNR=6.9
CMAR LR LR 20 42 23.4
comp=Z,90nm,18.5s,baz=256,slow=42
ESDC Sonseca Array 45.42 298 PcP **PcP 20 20 36.4 +0.6**
comp=Z,0.6nm,0.6s,baz=59,slow=3.2,SNR=4.2
EKA Eskdalemuir Ar 45.74 320 P **P 20 18 58.4 -0.6**
comp=Z,1.4nm,0.4s,baz=109,slow=8.6,SNR=11
SONM Songino Array 46.00 51 P **P 20 19 01.8 +0.4**
comp=Z,2.8nm,0.9s,baz=267,slow=8.4,SNR=10
KMI Kunming 46.11 83 P **P 20 19 02.3 -0.4**
KMI pP sP 20 19 11.4 -0.2
KMI sP pP 20 19 15.6 +6.5
KMI pmax pmax
comp=Z,8.0nm,0.9s
ULN Ulaanbaatar 46.44 51 *eP* **P 20 19 05.1 +0.2**
comp=Z,2.1nm,0.5s
ULN Ulaanbaatar 46.44 51 *eP* **P 20 19 05.1 +0.2**
ULN pmax pmax
comp=Z,2.0nm,0.5s
TORD Torodi Ar. Bea 48.13 261 P **P 20 19 19.1 +0.8**
comp=Z,9.0nm,0.8s,baz=55,slow=7.9,SNR=23
TORD LR LR 20 43 49.1
comp=Z,63nm,18.1s,baz=180,slow=41
XAN Xi'an 49.07 69 P **P 20 19 25.2 -0.1**
XAN pmax pmax
comp=Z,20nm,0.6s
XAN pmax pmax
comp=Z,84nm,4.2s
LSZ Lusaka 49.72 209 *eP* **P 20 19 33.5 +3.2**
comp=Z,13nm,1.4s
LSZ Lusaka 49.72 209 *eP* **P 20 19 33.6 +3.2**
LSZ pmax pmax
comp=Z,13nm,1.4s
ENH Enshi 50.41 74 *eP* **P 20 19 33.5 -2.1**
comp=Z,5.4nm,0.9s
ENH Enshi 50.41 74 *eP* **P 20 19 33.5 -2.1**
comp=Z,5.4nm,0.9s
SPITS Spitsbergen Ar 50.90 351 P **P 20 19 38.7 +0.2**
comp=Z,3.7nm,0.6s,baz=151,slow=3.3,SNR=6.5
KOWA Kowa 52.45 266 P **P 20 19 52.0 +1.1**
comp=Z,10nm,0.7s,baz=57,slow=13,SNR=18
HIA Hailar 54.80 48 *i P* **P 20 20 07.9 +0.1**
HIA pmax pmax
comp=Z,9.0nm,0.9s
DAG Danmarks Havn 56.60 345 *i P* **P 20 20 19.4 -0.8**
comp=Z,1.4nm,0.7s
DAG Danmarks Havn 56.60 345 *i P* **P 20 20 19.4 -0.8**
DAG pmax pmax
comp=Z,1.0nm,0.7s
DBIC Dimbokro 56.93 258 P **P 20 20 24.8 +1.4**
comp=Z,12nm,0.7s,baz=35,slow=9.0,SNR=9.3
DBIC LR LR 20 45 48.0
comp=Z,76nm,19.5s,baz=45,slow=37
KIC Kosan Boka 56.99 257 *eP* **P 20 20 26.2 +2.3**
comp=Z,124nm,1.7s
TIC Toumodi 57.08 258 *eP* **P 20 20 25.5 +0.9**
LIC Lamto 57.30 257 *eP* **P 20 20 27.2 +1.1**
comp=Z,53nm,0.8s
TIXI Tiksi 58.38 21 *eP* **P 20 20 32.6 -0.3**
comp=Z,2.1nm,0.6s
TIXI Tiksi 58.38 21 *ceP* **P 20 20 32.2 -0.7**
TIXI pmax pmax
comp=Z,11nm,2.5s
ZEA Zeya 58.88 42 *eP* **P 20 20 37.4 +0.8**
ZEA pmax pmax
comp=Z,12nm,1.0s
YAK Yakutsk 59.12 33 *eP* **P 20 20 36.4 -1.7**
YAK pmax pmax
comp=Z,13nm,0.9s
YAK pmax pmax
comp=N,2.0nm,1.4s
YAK pmax pmax
comp=E,3.0nm,1.3s
SUMG Summit 61.70 340 *i P* **P 20 20 56.3 +0.2**
comp=E,4.4nm,0.8s
SUMG Summit 61.70 340 *i P* **P 20 20 56.3 +0.2**
SUMG pmax pmax
comp=Z,4.0nm,0.8s
BOSA Boshof 62.88 205 P **P 20 21 04.0 -0.2**
comp=Z,6.3nm,0.8s,baz=22,slow=7.6,SNR=10
KSAR Wonju Array Be 63.12 60 P **P 20 21 05.2 -0.5**
KSAR Wonju Array Be 63.12 60 P **P 20 21 05.3 -0.5**
KSAR Wonju Array Be 63.12 60 P **P 20 21 05.2 -0.5**
KSRS Korea Array 63.15 60 P **P 20 21 05.2 -0.6**
comp=Z,4.6nm,0.7s,baz=280,slow=6.8,SNR=33
KSRS LR LR 20 53 36.2
comp=Z,37nm,21.7s,baz=200,slow=41
JNU Nakatsue 66.88 64 P **P 20 21 29.4 -0.8**
comp=Z,3.6nm,0.8s,baz=309,slow=19,SNR=3.4
SEY Seymchan 69.03 29 *ceP* **P 20 21 44.0 +0.8**
MA2 Magadan 69.69 32 *i P* **P 20 21 47.2 -0.2**
MA2 pmax pmax
comp=Z,6.0nm,0.9s
MJAR Matsushiro Arr 71.17 58 P **P 20 21 56.6 -0.3**
comp=Z,1.4nm,0.7s,baz=292,slow=5.6,SNR=4.2
ASAJ Asahikawa 71.26 49 LR LR 20 56 06.3
comp=Z,61nm,19.5s,baz=172,slow=38
BILL Bilibino 71.60 21 *eP* **P 20 21 58.8 -0.1**
comp=Z,8.8nm,1.0s
BILL Bilibino 71.60 21 *ceP* **P 20 21 58.6 -0.3**
BILL *e* 20 22 09.8
BILL *e* 20 22 15.4
BILL *e* 20 24 38.4

BILL					pmax	pmax		
	comp=Z,7.0nm,1.0s							
JHJ	Hachijo jima 2	73.75	61	LR		LR	20 59 56.6	
	comp=Z,37nm,18.5s,baz=60,slow=40							
PETK	Petropavlovsk-	76.11	36	LR		LR	20 59 28.4	
	comp=Z,58nm,19.3s,baz=153,slow=38							
BATI	Baumata	80.56	107	P		P	20 22 50.4	-0.3
	comp=Z,14nm,0.6s,baz=288,slow=3.2,SNR=4.3							
ILAR	Eielson Array	84.83	7	P		P	20 23 12.1	-0.1
	comp=Z,2.2nm,0.7s,baz=326,slow=4.1,SNR=24							
ILAR					PP	PP	20 26 28.5	+0.8
	comp=Z,0.2nm,0.4s,baz=336,slow=5.9,SNR=5.2							
EGAK	Eagle	85.37	5	eP		P	20 23 14.9	+0.1
	comp=Z,21nm,1.6s							
DAWY	Dawson	86.20	4	eP		P	20 23 19.2	+0.1
	comp=Z,9.4nm,1.3s							
FITZ	Fitzroy Crossi	86.41	113	P		P	20 23 20.8	+0.1
	comp=Z,8.8nm,0.7s,baz=300,slow=4.4,SNR=16							
YKA	Yellowknife Ar	87.36	353	P		P	20 23 24.9	+0.3
	comp=Z,1.9nm,0.7s,baz=9.0,slow=5.1,SNR=9.9							
WRA	Warramunga Arr	94.39	110	P		P	20 23 56.9	-1.3
	comp=Z,0.7nm,0.8s,baz=312,slow=4.0,SNR=6.4							
WRA					PKKPbc	PKKPbc	20 40 57.5	+0.2
	comp=Z,0.5nm,0.7s,baz=113,slow=2.7,SNR=5.4							
ASAR	Alice Springs	95.88	114	P		P	20 24 03.9	-1.1
	comp=Z,0.7nm,0.6s,baz=302,slow=4.6,SNR=11							

MEX 06 20:31:28.2±0.3, 14°.87N×93°.20W, h54km±11km, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCIG		0.83	359	i P		Pn	20 31 42.1	-1.7
PCIG				eS		Sn	20 31 53.5	-1.7
CCIG	Comitan	1.74	36	eP		Pn	20 31 54.7	-1.5
CCIG				eS		Sn	20 32 15.4	-1.9

IDC 06 20:39:11.8±3.0, 0°.79S×91°.08E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.3/65, mbtmp3.4/4, MS3.2/2, Ms1 3.2/2, ms1mx2.7/38, Error ellipse: s-maj=92.4km s-min=30.1km az=58.0, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	Prapat	8.62	66	LR		LR	20 44 29.5	
	comp=Z,155nm,18.1s,baz=240,slow=37							
PALK	Pallekele	13.09	308	LR		LR	20 47 09.4	
	comp=Z,71nm,18.4s,baz=117,slow=36							
CMAR	Chiang Mai Arr	20.63	22	P		P	20 43 53.8	+0.8
	1.0nm,0.8s,baz=213,slow=12,SNR=5.3							
WRA	Warramunga Arr	46.39	117	P		P	20 47 40.2	-0.3
	0.8nm,0.5s,baz=297,slow=8.4,SNR=7.0							
MKAR	Makanchi Array	48.01	352	P		P	20 47 52.3	-0.3
	0.3nm,0.6s,baz=157,slow=7.8,SNR=3.0							
KURBB	Kurchatov Arra	52.33	350	P		P	20 48 25.1	-0.2
	0.3nm,0.6s,baz=173,slow=7.2,SNR=3.3							

*IDC **06** 20:40:16.2±2.3, 10°.79S×161°.59E, h0km, mb3.8/6, mb1 3.9/7, mb1mx3.7/50, mbtmp3.8/7, ML4.0/1, MS3.5/2, Ms1 3.5/2, ms1mx2.8/43, Error ellipse: s-maj=47.1km s-min=30.1km az=93.0*

ISC 06 20:40:19.7±1.6, 10°.9S±0°.2×161°.7E±0°.2, h28km, n15, σ1°21/10, mb3.8/6, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	2.23	310	eP		Pn	20 40 54.0	-0.8
HNR				eS		Sb	20 41 28.0	+1.5
HNR	Honiara	2.23	310	Pn		Pn	20 40 53.0	-1.8
	44nm,0.3s,baz=150,slow=14,SNR=25							
HNR					Sn	Sn	20 41 20.6	-0.8
	66nm,0.3s,baz=218,slow=18,SNR=3.0							
PMG	Port Moresby	14.37	275	LR		LR	20 48 24.6	
	comp=Z,168nm,18.6s,baz=178,slow=34							
WRA	Warramunga Arr	27.81	248	P		P	20 46 07.6	+0.8
	0.9nm,0.8s,baz=75,slow=9.6,SNR=6.1							
ASAR	Alice Springs	29.34	241	P		P	20 46 19.3	-1.0
	0.3nm,0.8s,baz=67,slow=9.7,SNR=2.7							
ASAR					LR	LR	20 56 19.0	
	comp=Z,85nm,19.6s,baz=96,slow=33							
H11S2	WAKE ISLAND Hy	29.60	10	T		T	21 17 29.5	
	baz=188,slow=76							
H11S3	WAKE ISLAND Hy	29.61	10	T		T	21 17 17.7	
	baz=188,slow=76							
H11S1	WAKE ISLAND Hy	29.62	10	T		T	21 17 20.3	
	baz=188,slow=76							
H11N1	WAKE ISLAND Hy	30.83	10	T		T	21 18 53.8	
	baz=191							
H11N3	WAKE ISLAND Hy	30.84	10	T		T	21 18 51.5	
	baz=191							
H11N2	WAKE ISLAND Hy	30.85	10	T		T	21 18 59.4	
	baz=191							
FITZ	Fitzroy Crossi	35.57	254	P		P	20 47 16.0	+1.1
	2.9nm,0.8s,baz=75,slow=12,SNR=3.3							
CMAR	Chiang Mai Arr	68.40	295	P		P	20 51 19.9	+0.6
	0.5nm,0.6s,baz=126,slow=5.5,SNR=3.4							
SONM	Songino Array	76.21	325	P		P	20 52 06.2	+0.6
	1.0nm,0.8s,baz=133,slow=6.1,SNR=4.4							
MKAR	Makanchi Array	90.69	318	P		P	20 53 19.8	-0.1
	0.3nm,0.5s,baz=96,slow=6.4,SNR=4.2							

NNC 06 20:54:16.7±1.1, 37°.16N×70°.80E, h0km, mb3.5, mpv3.2, 3C-2D, Error ellipse: s-maj=8.2km s-min=7.2km az=169.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	3.55	36	⇑P		Pn	20 55 13.3	+0.1
	1.4nm,0.3s							
SFK				⇓S		Sn	20 55 57.2	+1.2
	3.4nm,0.3s							
MNAS	Manas	5.48	13	⇑P		Pn	20 55 39.5	-0.2
	1.2nm,0.5s							
MNAS				⇓S		Sn	20 56 44.6	+1.1
	1.9nm,0.5s							
KK31	Karatay Array	5.94	358	P		Pn	20 55 46.1	+0.2
	1.5nm,0.5s,baz=178,slow=13,SNR=15							
KK31				⇑S		Sn	20 56 56.1	+1.4
	0.5nm,0.3s,baz=182,slow=21,SNR=4.0							

UCR 06 21:02:37.3±2.6, 12°.28N×87°.45W, h19km±10km, MD4.4, ML3.4, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNGN	Cerro Negro	0.77	73	eP		Pg	21 02 52.5	0.0
CNGN				eS		Sg	21 03 03.0	+0.2
CNGN					IAML		21 03 08.3	
COPN	Copaltepe	0.85	96	eP		Pb	21 02 53.2	-0.3
MOMN	Momotombo	0.90	82	eP		Pb	21 02 54.3	-0.1
XAVN	Gruta Xavier	1.11	96	eP		Pn	21 02 57.1	-0.7
LCND	La Ca¯–ada	1.11	338	eP		Pn	21 02 55.2	-2.6
LCND				eS		Sb	21 03 11.2	-0.8
BRAN	Las Pilas	1.17	68	eP		Pn	21 02 56.8	-1.8
MGAN	Managua	1.19	96	eP		Pn	21 02 57.8	-1.0
MGAN				eS		Sb	21 03 13.2	-1.0
MGAN					AML	AML	21 03 15.3	
	comp=N,279nm,0.2s							
ESTN	Estel	1.34	52	eP		Pn	21 03 01.1	0.0
ESTN				eS		Sb	21 03 19.0	+0.3
VSM	San Miguel	1.40	325	eP		Pn	21 03 02.4	+0.4
LCY	Lacayo	1.40	324	eP		Pn	21 03 02.5	+0.5
PACA	Pacayal	1.46	325	eP		Pn	21 03 03.1	+0.3
PACA				eS		Sb	21 03 21.9	-0.2
TECA	Tecapa	1.58	320	eP		Pn	21 03 04.8	+0.2
MATN	Matagalpa	1.63	66	eP		Pn	21 03 05.0	-0.1
UESV	Ojushtada	1.70	310	eS		Sg	21 03 31.7	-0.7
UESV					IAML		21 03 39.6	
	comp=Z,648nm,0.3s							
RCON	San Juan de Ri	1.74	46	eP		Pb	21 03 07.8	-1.0
BOAB	BOACO BROADBAN	1.75	84	eP		Pn	21 03 06.0	-0.7
TGUH	Tegucigalpa,Un	1.78	6	eP		Pn	21 03 07.8	+0.8
SNVI	San Vicente	1.89	315	eP		Pn	21 03 08.3	-0.5
SNVI				eS		Sn	21 03 33.3	+1.1
CONN	Concepcion	1.93	111	eP		Pn	21 03 07.1	-2.0
LFRS	El Faro	2.06	311	eP		Pn	21 03 11.2	+0.2
LFRS				eS		Sn	21 03 36.7	+0.4
CRZ1	La Cruz	2.15	124	eP		Pn	21 03 11.8	-0.4
LFU	La Fuente	2.18	312	eP		Pn	21 03 13.3	+0.7
UEES	San Salvador	2.26	310	IAML			21 03 43.9	
	comp=Z,469nm,0.3s							
BOQS	Boqueron	2.29	309	eP		Pn	21 03 14.1	-0.3
BUEV	Buena Vista	2.49	126	eP		Pn	21 03 16.1	-0.8
SBLS	San Blas	2.62	307	eP		Pn	21 03 19.7	+0.8
MESS	Mesas	2.69	124	eP		Pn	21 03 18.0	-1.6
CUI	Cuipilapa	2.76	125	eP		Pn	21 03 19.0	-1.6
MTO3	Montecristo	2.81	319	eP		Pn	21 03 21.1	-0.3
JTS	JuntasAbangare	3.15	129	eP		Pn	21 03 28.7	+2.8
JTS				eS		Sn	21 04 02.6	-0.4
URSC	Urasca	4.35	124	eP		Pn	21 03 45.5	+2.9

*ISCJB **06** 21:05:44.7±0.6, 13°.00S±0°.06×166°.8E±0°.1, h180km, mb4.1/21, Error ellipse: s-maj=16.3km s-min=7.8km az=179.9*

*IDC **06** 21:05:46.9±3.2, 13°.07S×166°.95E, h189km±28km, mb3.8/15, mb1 3.9/16, mb1mx3.7/52, mbtmp4.3/16, Error ellipse: s-maj=19.4km s-min=13.1km az=85.0*

*NEIC **06** 21:05:48.4±1.6, 13°.08S×166°.87E, h203km±14km, mb4.2/7, Error ellipse: s-maj=10.7km s-min=9.6km az=66.0*

ISC 06 21:05:46.0±0.6, 13°.04S±0°.07×166°.9E±0°.1, h180km, n32, σ0°71/38, mb4.1/21, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	8.99	183	P		Pn	21 07 54.3	+1.8
	0.3nm,0.3s,baz=310,slow=18,SNR=5.7							
DZM				S		Sn	21 09 31.9	-1.1
	0.3nm,0.3s,baz=142,slow=19,SNR=2.6							
PMG	Port Moresby	19.70	279	eP		P	21 10 02.2	+0.5
	12nm,0.6s							
CTAO	Charters Tower	20.99	248	eP		P	21 10 14.7	-0.9
STKA	Stephens Creek	29.85	227	P		P	21 11 37.3	+0.7
	11nm,0.5s,baz=48,slow=9.7,SNR=62							
STKA				PcP		PcP	21 14 35.3	0.0
	1.2nm,0.9s,baz=89,slow=2.3,SNR=3.7							
WRAB	Tennant Creek	31.92	253	eP		P	21 11 53.9	-1.1
	3.7nm,0.8s							
WRA	Warramunga Arr	31.93	253	P		P	21 11 54.1	-0.9
	2.3nm,0.6s,baz=85,slow=9.2,SNR=24							
WRA				PcP		PcP	21 14 41.1	0.0
	0.7nm,0.8s,baz=75,slow=3.2,SNR=2.6							
ASAR	Alice Springs	32.98	247	P		P	21 12 03.8	-0.4
	4.6nm,0.6s,baz=75,slow=9.2,SNR=106							
ASAR				PcP		PcP	21 14 43.0	-1.0
	0.9nm,0.8s,baz=72,slow=2.9,SNR=4.1							
FITZ	Fitzroy Crossi	40.01	257	P		P	21 13 04.5	+0.8
	3.3nm,0.9s,baz=53,slow=8.6,SNR=8.6							
KAPI	Kappang	47.18	275	eP		P	21 14 01.2	+0.2
	4.4nm,0.5s							
MJAR	Matsushiro Arr	56.25	332	P		P	21 15 07.5	-0.2
	1.3nm,0.7s,baz=174,slow=9.7,SNR=6.9							
ASAJ	Asahikawa	61.04	340	P		P	21 15 40.6	0.0
	2.2nm,0.4s,baz=159,slow=8.6,SNR=4.7							
KSRS	Korea Array	62.15	326	P		P	21 15 48.4	+0.2
	0.8nm,0.8s,baz=144,slow=6.2,SNR=5.0							
KSAR	Wonju Array Be	62.17	325	P		P	21 15 48.4	+0.1
VNDA	Vanda	64.53	181	P		P	21 16 03.1	-0.1
	1.2nm,0.5s,baz=355,slow=7.8,SNR=11							
PETK	Petropavlovsk-	66.35	354	P		P	21 16 16.3	+1.1
	2.1nm,0.5s,baz=150,slow=5.3,SNR=5.2							
ENH	Enshi	70.03	309	eP		P	21 16 38.4	-0.2
	5.3nm,0.8s							
CMAR	Chiang Mai Arr	73.95	294	P		P	21 17 03.4	+1.2
	1.9nm,0.7s,baz=126,slow=4.9,SNR=13							
CHTO	Chiang Mai	74.07	294	eP		P	21 17 02.8	0.0
	2.3nm,0.7s							
QSPA	South Pole Qui	76.98	180	P		P	21 17 18.4	-0.3
	6.5nm,0.6s,baz=2.2,slow=1.0,SNR=32							
ULN	Ulaanbaatar	80.57	324	eP		P	21 17 38.5	0.0
	2.8nm,0.7s							
BILL	Bilibino	80.86	360	eP		P	21 17 39.5	+0.1
	11nm,1.0s							
SONM	Songino Array	80.94	324	P		P	21 17 40.8	+0.4
	1.1nm,0.6s,baz=122,slow=7.2,SNR=6.7							
ILAR	Eielson Array	85.04	18	P		P	21 18 00.2	-0.7
	1.1nm,0.4s,baz=236,slow=5.1,SNR=18							
MKAR	Makanchi Array	95.74	317	P		P	21 18 51.5	-0.1
	0.7nm,0.6s,baz=96,slow=6.2,SNR=9.1							
ZALV	Zalesovo Beam	95.83	324	P		P	21 18 50.9	-0.8
	0.3nm,0.3s,baz=125,slow=7.2,SNR=4.4							
ARCES	ARCESS Array B	118.54	346	PKP		PKPdf	21 24 11.2	-0.6
	2.1nm,0.6s,baz=62,slow=1.5,SNR=16							
FINES	FINESS Array B	124.03	339	PKP		PKPdf	21 24 22.0	-0.5
	0.3nm,0.4s,baz=90,slow=0.8,SNR=5.9							
NB2	NORSAR Subarra	128.91	345	PKPdf		PKPdf	21 24 31.8	-0.2
	comp=Z,0.4nm,0.6s,baz=29,slow=1.9							
NOA	NORSAR Array B	128.91	345	PKP		PKPdf	21 24 30.8	-1.1
	comp=Z,1.0nm,0.6s,baz=36,slow=2.0,SNR=4.1							
HFS	Hagfors	129.01	343	PKP		PKPdf	21 24 31.6	-0.5
	comp=Z,0.9nm,0.7s,baz=222,slow=1.9,SNR=2.4							
ESDC	Sonseca Array	152.27	345	PKPbc		PKPbc	21 25 20.9	0.0
	comp=Z,1.2nm,0.7s,baz=17,slow=2.5,SNR=9.8							
ESDC				PKPab		PKPab	21 25 32.2	+1.0
	comp=Z,0.4nm,0.6s,baz=2.1,slow=3.7,SNR=4.5							
TORD	Torodi Ar. Bea	165.59	272	PKP		PKPdf	21 25 29.5	-0.6
	comp=Z,0.9nm,1.0s,baz=113,slow=2.0,SNR=3.4							
TORD				PKPab		PKPab	21 26 29.4	-0.5
	comp=Z,2.0nm,1.0s,baz=84,slow=4.4,SNR=6.5							

TEH 06 21:21:20.3, 29°.57N×50°.68E, h14km, ML2.5, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IKAZ	Kazeroun	1.04	78	ePg		Pb	21 21 39.3	-0.9
IKAZ				eSg		Sb	21 21 52.8	-1.0
IKAZ				e			21 22 02.6	
	comp=Z,1μm,0.1s							
IBRJ	Brojen	2.39	12	ePn		Pn	21 21 58.6	-0.6
IBRJ				e			21 22 06.1	
	comp=Z,151nm,0.2s							
IRAM	Ramesheh	2.67	33	e			21 22 08.2	
	comp=Z,155nm,0.1s							
IRAM				ePn		Pn	21 22 02.9	-0.2
IGAR	Gharneh	3.06	22	ePn		Pn	21 22 08.4	0.0
ISAD	Sadrabad	3.49	47	ePn		Pn	21 22 14.8	+0.4
ISAD				e			21 23 10.7	
	comp=Z,103nm,0.1s							
IZEF	Zefreh	3.61	23	ePn		Pn	21 22 15.7	-0.3
IKLH	Kolahrood	3.82	11	ePn		Pn	21 22 18.2	-0.7
IKLH				e			21 22 20.1	
	comp=Z,115nm,0.1s							
IMEH	Mehriz	3.85	61	ePn		Pn	21 22 18.2	-1.2
IMEH				e			21 23 12.9	
	comp=Z,84nm,0.1s							
ANAR	Anarak	4.46	35	ePn		Pn	21 22 27.4	-0.1
ANAR				e			21 23 29.1	
	comp=Z,99nm,0.1s							

*IDC **06** 21:27:13.1±0.6, 34°.78N×141°.36E, h0km, mb4.0/18, mb1 4.1/23, mb1mx3.9/72, mbtmp3.9/23, ML3.0/5, MS3.3/12, Ms1 3.3/12, ms1mx3.0/73, Error ellipse: s-maj=15.8km s-min=14.8km az=103.0*

*ISCJB **06** 21:27:15.1±0.4, 34°.79N±0°.04×141°.41E±0°.05, h27km, mb3.9/24, MS3.4/8, Error ellipse: s-maj=6.3km s-min=5.6km az=155.6*

*JMA **06** 21:27:15.1±0.5, 34°.74N×141°.39E, h47km±3km, M3.4*

*NEIC **06** 21:27:17.2±3.3, 34°.76N×141°.31E, h29km±22km, mb4.2/6, Error ellipse: s-maj=11.3km s-min=10.3km az=83.0*

ISC 06 21:27:17.0±0.6, 34°.85N±0°.06×141°.37E±0°.07, h27km, n61, σ1°11/61, mb4.0/24, MS3.4/8, 1C-3D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSO1	Boso 1	0.38	240	⇓P		Pb	21 27 24.4	-0.5
BSO3	Boso 3	0.71	267	⇓P		Pb	21 27 29.5	-1.1
BSO4	Boso 4	0.86	280	⇓P		Pn	21 27 32.0	-1.2
BSO4				X			21 27 44.4	
CHOJ	Chosi	0.95	334	⇑P		Pn	21 27 33.8	-0.8
CHOJ				eS		Sn	21 27 47.5	+0.2
JIM2	Oshima 3	1.60	266	P		Pn	21 27 41.4	-2.2
JHJ	Hachijo jima 2	2.17	218	Pn		Pn	21 27 50.9	-0.4
	50nm,0.3s,baz=12,slow=6.3,SNR=8.9							
JHJ				Sn		Sn	21 28 17.3	0.0
	109nm,0.3s,baz=253,slow=19,SNR=7.3							
MJAR	Matsushiro Arr	3.08	304	Pn		Pn	21 28 04.6	+0.7
	5.0nm,0.3s,baz=124,slow=8.9,SNR=58							
MJAR				Sn		Sn	21 28 42.7	+2.8
	4.8nm,0.3s,baz=119,slow=15,SNR=6.1							
MJAR				LR		LR	21 29 04.6	
	comp=Z,154nm,19.2s,baz=135,slow=36							
MAJO	Matsushiro	3.08	304	ePn		Pn	21 28 03.7	-0.2
MAT	Matsushiro	3.08	304	P		Pn	21 28 04.9	+1.0
MAT				S		Sn	21 28 40.9	+1.0
ERM	Erimo	7.29	11	ePn		Pn	21 28 58.9	-2.8
	12nm,0.4s							
JNU	Nakatsue	8.88	262	Pn		Pn	21 29 21.8	-1.8
	0.1nm,0.3s,baz=88,slow=8.4,SNR=2.6							
JNU				LR		LR	21 32 15.6	
	comp=Z,111nm,20.7s,baz=114,slow=34							
ASAJ	Asahikawa	9.31	5	Pn		Pn	21 29 25.9	-3.3
	1.5nm,0.3s,baz=207,slow=12,SNR=12							
KSRS	Korea Array	11.18	287	Pn		Pn	21 29 55.7	+0.7
	0.2nm,0.3s,baz=94,slow=14,SNR=3.3							
KSRS				LR		LR	21 33 17.1	
	comp=Z,12nm,20.8s,baz=89,slow=32							
KSAR	Wonju Array Be	11.21	287	Pn		Pn	21 29 55.7	+0.3
USRK	Ussuriysk Ar.	11.81	325	Pn		Pn	21 30 03.5	-0.1
	0.1nm,0.3s,baz=161,slow=11,SNR=4.6							
USRK				LR		LR	21 35 01.7	
	comp=Z,116nm,18.4s,baz=130,slow=40							
JOW	Kunigami	13.79	238	LR		LR	21 35 33.2	
	comp=Z,68nm,21.7s,baz=140,slow=36							
PETK	Petropavlovsk-	21.62	27	LR		LR	21 39 59.8	
	comp=Z,45nm,21.4s,baz=183,slow=35							
ULN	Ulaanbaatar	28.61	308	eP		P	21 33 10.8	-0.2
	1.3nm,0.6s							
SONM	Songino Array	29.03	307	P		P	21 33 16.2	+1.4
	0.6nm,0.5s,baz=102,slow=8.3,SNR=4.5							
SONM				LR		LR	21 45 01.0	
	comp=Z,55nm,19.4s,baz=104,slow=37							
DAV	Davao City (W)	31.24	211	LR		LR	21 45 54.0	
	comp=Z,42nm,19.7s,baz=37,slow=36							
CMAR	Chiang Mai Arr	40.95	258	P		P	21 34 56.2	-1.4
	0.9nm,0.6s,baz=45,slow=7.9,SNR=7.3							
CMAR				LR		LR	21 52 28.1	
	comp=Z,62nm,20.1s,baz=147,slow=37							
ZALV	Zalesovo Beam	43.39	314	P		P	21 35 17.1	+0.2
	1.0nm,0.6s,baz=98,slow=6.8,SNR=6.0							
ZALV				PcP		PcP	21 37 05.4	+0.4
	1.0nm,0.6s,baz=108,slow=3.2,SNR=3.6							
NRIK	Noril'sk	45.24	336	LR		LR	21 56 27.8	
	comp=Z,43nm,20.3s,baz=126,slow=39							
MKAR	Makanchi Array	45.28	304	P		P	21 35 32.3	+0.1
	1.8nm,0.6s,baz=92,slow=9.4,SNR=15							
MKAR				PcP		PcP	21 37 12.7	+1.0
	0.6nm,0.8s,baz=92,slow=3.5,SNR=2.5							
RAMN	Ramite	47.17	276	eP		P	21 35 47.8	+0.3
JIRN	Jiri	47.22	277	eP		P	21 35 47.7	-0.4
	10nm,0.4s							
KURK	Kurchatov	47.28	310	P		P	21 35 49.1	+1.3
KURBB	Kurchatov Arra	47.34	310	P		P	21 35 49.1	+0.8
	2.8nm,0.9s,baz=84,slow=7.5,SNR=16							
PKIN	Phulchoki	47.90	277	eP		P	21 35 53.1	-0.2
KKN	Kakani	47.91	278	eP		P	21 35 52.3	-1.0
DMN	Daman	48.12	278	eP		P	21 35 55.4	+0.4
GKN	Gorkha	48.35	278	eP		P	21 35 57.4	+0.8
	16nm,1.1s							
KDAK	Kodiak Island	48.76	41	P		P	21 35 58.9	-0.2
	2.4nm,0.8s,baz=262,slow=19,SNR=3.9							
DANN	Dangsing	48.93	279	eP		P	21 36 01.3	+0.1
	20nm,0.9s							
PYUN	Piuthan	49.65	279	eP		P	21 36 07.8	+1.1
	16nm,1.0s							
ILAR	Eielson Array	51.37	31	P		P	21 36 19.6	+0.7
	0.8nm,0.8s,baz=268,slow=6.7,SNR=7.4							
BVAR	Borovoye Array	52.04	314	P		P	21 36 25.5	+1.5
	0.5nm,0.5s,baz=123,slow=10,SNR=3.0							
BVAR				PcP		PcP	21 37 35.4	-0.5
	0.6nm,0.6s,baz=53,slow=7.4,SNR=3.3							
WRAB	Tennant Creek	54.88	188	eP		P	21 36 44.5	-0.6
WRA	Warramunga Arr	54.89	188	P		P	21 36 45.0	-0.3
	4.1nm,0.6s,baz=3.8,slow=7.5,SNR=60							
ARU	Arti	57.99	319	eP		P	21 37 06.7	-0.2
	2.9nm,0.8s							
ASAR	Alice Springs	58.62	188	P		P	21 37 11.3	-0.3
	1.2nm,0.7s,baz=6.4,slow=7.9,SNR=12							
DZM	Mont Dzumac	61.41	153	LR		LR	21 59 17.6	
	comp=Z,109nm,21.6s,baz=42,slow=31							
SPITS	Spitsbergen Ar	62.66	349	LR		LR	22 06 25.5	
	comp=Z,31nm,20.6s,baz=305,slow=38							
FINES	FINESS Array B	70.73	333	P		P	21 38 30.3	+0.1
	1.8nm,0.8s,baz=45,slow=8.4,SNR=7.8							
KBZ	Khabaz	72.31	311	P		P	21 38 40.8	+0.8
	1.0nm,0.6s,baz=7.7,slow=3.4,SNR=4.9							
KIV	Kislovodsk	72.32	311	eP		P	21 38 38.0	-2.2
	3.6nm,0.8s							
GNI	Garni	72.99	307	eP		P	21 38 43.8	-0.6
MOD	Modoc Plateau	73.17	51	eP		P	21 38 44.5	-0.9
	2.3nm,0.6s							
BMO	Blue Mountains	73.44	47	eP		P	21 38 48.1	+1.2
	1.3nm,0.7s							
AKASG	Malin Array Be	76.01	323	P		P	21 39 00.8	-0.8
	0.2nm,0.3s,baz=49,slow=6.6,SNR=3.7							
HFS	Hagfors	76.07	336	LR		LR	22 15 58.0	
	comp=Z,43nm,18.3s,baz=26,slow=38							
NB2	NORSAR Subarra	76.19	337	P		P	21 39 02.5	+0.1
	comp=Z,0.5nm,0.8s,baz=40,slow=6.2							
NOA	NOR

SRN				S	Sg	21 41 22.9	+0.4
SRN	**Sarande**	**0.80**	**158**	*i* PG	**Pb**	21 41 11.7	-0.2
SRN				*i* SG	**Sg**	21 41 23.1	+0.7
SRN	**Sarande**	**0.80**	**158**	P	**Pb**	21 41 11.4	-0.5
SRN	**Sarande**	**0.80**	**158**	*i* Pg	**Pb**	21 41 11.6	-0.2
SRN				S	**Sg**	21 41 22.9	+0.4
SRN				*i* Sg	**Sg**	21 41 23.1	+0.7
KBN	**Korca**	**0.89**	**89**	*i* PG	**Pb**	21 41 12.1	-1.5
KBN				*i* SG	**Sb**	21 41 24.9	-0.4
KBN	**Korca**	**0.89**	**89**	*i* Pg	**Pb**	21 41 12.1	-1.5
KBN				*i* Sg	**Sb**	21 41 24.9	-0.4
KEK	**Kerkira**	**0.92**	**171**	P	**Pn**	21 41 14.2	-0.4
KEK				AML	AML	21 41 30.6	
	comp=E,565μm,0.6s						
KEK				AML	AML	21 41 32.1	
	comp=N,345μm,0.4s						
KEK	**Kerkira**	**0.92**	**171**	P	**Pb**	21 41 13.6	-0.3
KEK				S	**Sn**	21 41 27.2	-0.3
KEK	**Kerkira**	**0.92**	**171**	P	**Pb**	21 41 13.6	-0.3
KEK				S	**Sn**	21 41 27.2	-0.3
OHR	**Ohrid**	**1.02**	**61**	*i* Pg	**Pb**	21 41 15.5	-0.3
OHR				*i* Sg	**Sn**	21 41 30.4	+0.2
SCTE	**Santa Cesarea**	**1.03**	**238**	P	**Pg**	21 41 16.7	+0.3
SCTE	**Santa Cesarea**	**1.03**	**238**	P	**Pg**	21 41 16.3	-0.1
SGD	**Sagiada**	**1.11**	**154**	P	**Pn**	21 41 17.2	-0.1
SGD	**Sagiada**	**1.11**	**154**	P	**Pn**	21 41 17.2	-0.1
NEST	**Nestorio**	**1.11**	**100**	P	**Pb**	21 41 16.6	-0.8
NEST				S	**Sg**	21 41 32.8	+0.2
NEST				AML	AML	21 41 36.7	
	comp=N,233μm,0.6s						
NEST				AML	AML	21 41 37.3	
	comp=E,139μm,0.5s						
NEST	**Nestorio**	**1.11**	**100**	P	**Pb**	21 41 15.8	-1.5
NEST	**Nestorio**	**1.11**	**100**	P	**Pb**	21 41 17.0	-0.3
NEST				S	**Sg**	21 41 32.8	+0.2
IGT	**Igoumenitsa**	**1.22**	**153**	P	**Pg**	21 41 19.7	-0.2
IGT				S	**Sn**	21 41 35.0	0.0
IGT				AML	AML	21 41 40.4	
	comp=N,223μm,0.6s						
IGT				AML	AML	21 41 41.3	
	comp=E,242μm,0.4s						
IGT	**Igoumenitsa**	**1.22**	**153**	P	**Pb**	21 41 19.1	0.0
IGT				S	**Sg**	21 41 36.2	+0.4
IGT	**Igoumenitsa**	**1.22**	**153**	P	**Pb**	21 41 19.1	0.0
IGT				S	**Sg**	21 41 35.2	-0.6
PHP	**Peshkopia**	**1.23**	**30**	P	**Pn**	21 41 18.9	-0.1
PHP				S	**Sg**	21 41 35.9	-0.5
PHP	**Peshkopia**	**1.23**	**30**	*i* PN	**Pg**	21 41 20.3	+0.1
PHP				*i* SG	**Sg**	21 41 37.7	+1.3
PHP	**Peshkopia**	**1.23**	**30**	P	**Pn**	21 41 18.9	-0.1
PHP	**Peshkopia**	**1.23**	**30**	*i* Pn	**Pg**	21 41 20.3	+0.1
PHP				S	**Sg**	21 41 35.9	-0.5
PHP				*i* Sg	**Sg**	21 41 37.7	+1.3
PENT	**Pentalofos**	**1.24**	**109**	P	**Pn**	21 41 18.9	-0.2
PENT	**Pentalofos**	**1.24**	**109**	P	**Pn**	21 41 19.1	-0.1
FNA	**Florina**	**1.35**	**82**	P	**Pn**	21 41 20.3	-0.3
FNA				S	**Sg**	21 41 40.9	+0.8
FNA				AML	AML	21 41 42.3	
	comp=E,419μm,0.4s						
FNA				AML	AML	21 41 43.6	
	comp=N,434μm,0.6s						
FNA	**Florina**	**1.35**	**82**	P	**Pn**	21 41 19.8	-0.8
FNA	**Florina**	**1.35**	**82**	P	**Pn**	21 41 20.7	+0.1
FNA				S	**Sg**	21 41 40.1	0.0
BIA	**Bitola**	**1.36**	**72**	P	**Pn**	21 41 20.2	-0.6
BIA				S	**Sb**	21 41 38.9	+0.3
BIA	**Bitola**	**1.36**	**72**	⇑*i* Pg	**Pn**	21 41 20.7	0.0
BIA				*i* Sg	**Sg**	21 41 40.7	+0.3
BIA				*i* Sg	**Sb**	21 41 41.0	+2.3
BIA	**Bitola**	**1.36**	**72**	P	**Pn**	21 41 20.2	-0.6
BIA				S	**Sb**	21 41 38.9	+0.3
ULC	**Ulcinj**	**1.37**	**348**	⇓*i* Pg	**Pn**	21 41 21.1	+0.2
ULC				*e*Sg	**Sg**	21 41 41.3	+0.6
ULC	**Ulcinj**	**1.37**	**348**	⇓*i* Pg	**Pn**	21 41 21.1	+0.2
ULC				*e*Sg	**Sg**	21 41 41.3	+0.6
PUK	**Puka**	**1.44**	**8**	*i* PN	**Pb**	21 41 23.0	+0.1
PUK				*i* SN	**Sg**	21 41 44.5	+1.7
PUK	**Puka**	**1.44**	**8**	*i* Pn	**Pb**	21 41 23.0	+0.1
PUK				*i* Sn	**Sg**	21 41 44.5	+1.7
KPRO	**Kipourio**	**1.49**	**116**	P	**Pb**	21 41 24.2	+0.4
KPRO				AML	AML	21 41 51.6	
	comp=E,257μm,0.5s						
KPRO				AML	AML	21 41 51.7	
	comp=N,211μm,0.8s						
KPRO	**Kipourio**	**1.49**	**116**	P	**Pn**	21 41 22.6	0.0
KPRO	**Kipourio**	**1.49**	**116**	P	**Pb**	21 41 23.6	-0.2
DRME	**Dracevica, Mon**	**1.60**	**348**	⇑*i* Pg	**Pn**	21 41 24.7	+0.7
DRME				*e*Sg	**Sg**	21 41 47.0	-1.0
DRME	**Dracevica, Mon**	**1.60**	**348**	*e*Pn	**Pn**	21 41 24.1	+0.1
DRME	**Dracevica, Mon**	**1.60**	**348**	⇑*i* Pg	**Pn**	21 41 24.7	+0.7
DRME				*e*Sg	**Sg**	21 41 47.0	-1.0
KZN	**Kozani**	**1.68**	**100**	P	**Pb**	21 41 26.3	-0.6
KZN	**Kozani**	**1.68**	**100**	P	**Pb**	21 41 26.0	-0.9
FASA	**Fasano**	**1.73**	**277**	*e*P	**Pn**	21 41 25.7	-0.1
BUM	**Brajici-Budva**	**1.76**	**342**	*e*Pn	**Pn**	21 41 26.5	+0.1
BUM				*e*Sn	**Sb**	21 41 50.9	+0.6
BUM	**Brajici-Budva**	**1.76**	**342**	*e*Pn	**Pn**	21 41 26.5	+0.1
BUM				*e*Sn	**Sb**	21 41 50.9	+0.6
BCI	**Bajram Curri**	**1.78**	**11**	*i* PN	**Pb**	21 41 28.1	-0.5
BCI				*i* SN	**Sg**	21 41 53.3	-0.4
BCI	**Bajram Curri**	**1.78**	**11**	*i* Pn	**Pb**	21 41 28.1	-0.5
BCI				*i* Sn	**Sg**	21 41 53.3	-0.4
PDG	**Podgorica**	**1.83**	**352**	*e*Pg	**Pb**	21 41 29.1	-0.4
PDG				*e*Sn	**Sb**	21 41 53.2	+1.1
PDG	**Podgorica**	**1.83**	**352**	⇓*i* Pn	**Pn**	21 41 28.0	+0.8
PDG	**Podgorica**	**1.83**	**352**	*e*Pg	**Pb**	21 41 29.1	-0.4
PDG				*e*Sn	**Sb**	21 41 52.4	+0.3
TTG	**Podgorica**	**1.83**	**352**	⇓*i* Pn	**Pn**	21 41 28.0	+0.8
TTG				*e*Sn	**Sb**	21 41 52.4	+0.3
DSL	**Palaion Diasel**	**1.87**	**142**	P	**Pn**	21 41 27.0	-0.8
DSL	**Palaion Diasel**	**1.87**	**142**	P	**Pn**	21 41 27.6	-0.2
MASS	**Massafra**	**1.88**	**271**	*e*P	**Pn**	21 41 28.9	+1.0
NOCI	**Noci**	**1.94**	**276**	P	**Pn**	21 41 27.8	-1.0
NOCI	**Noci**	**1.94**	**276**	P	**Pn**	21 41 28.6	-0.2
PVY	**Plav**	**1.99**	**7**	*e*Pn	**Pb**	21 41 31.0	-1.3
PVY				*e*Sn	**Sb**	21 41 56.4	-0.5
PVY	**Plav**	**1.99**	**7**	*e*Pn	**Pb**	21 41 31.0	-1.3
PVY				*e*Sn	**Sb**	21 41 56.4	-0.5
CEME	**Cevo**	**2.00**	**345**	⇓*i* Pn	**Pn**	21 41 29.7	+0.2
CEME				*e*Sn	**Sb**	21 41 56.7	-0.3
CEME	**Cevo**	**2.00**	**345**	⇓*i* Pn	**Pn**	21 41 29.7	+0.2
CEME				*e*Sn	**Sb**	21 41 56.7	-0.3
LKD2	**Lefkada island**	**2.00**	**156**	P	**Pn**	21 41 30.5	+1.0
LKD2	**Lefkada island**	**2.00**	**156**	P	**Pn**	21 41 30.3	+0.8
HCY	**Herceg Novi**	**2.01**	**336**	⇓*i* Pn	**Pn**	21 41 30.3	+0.6
HCY				*e*Sn	**Sb**	21 41 57.0	-0.3
HCY	**Herceg Novi**	**2.01**	**336**	⇓*i* Pn	**Pn**	21 41 30.3	+0.6
HCY				*e*Sn	**Sb**	21 41 57.0	-0.3
THL	**Klokotos Trika**	**2.12**	**119**	P	**Pn**	21 41 31.4	+0.2
THL				AML	AML	21 42 12.2	
	comp=N,98μm,0.7s						
THL				AML	AML	21 42 12.3	
	comp=E,40μm,0.7s						
THL	**Klokotos Trika**	**2.12**	**119**	P	**Pn**	21 41 31.6	+0.4
BAI	**Bari**	**2.13**	**284**	*e*P	**Pn**	21 41 31.5	+0.2
GRG	**Griva**	**2.14**	**80**	P	**Pn**	21 41 32.2	+0.7
GRG				AML	AML	21 42 04.1	
	comp=N,64μm,0.6s						
GRG				AML	AML	21 42 04.7	
	comp=E,48μm,0.3s						
GRG	**Griva**	**2.14**	**80**	P	**Pn**	21 41 32.3	+0.7
NKME	**Niksic**	**2.20**	**347**	*e*Pn	**Pn**	21 41 33.0	+0.7
NKME				*e*Sn	**Sb**	21 42 01.7	-1.2
NKME	**Niksic**	**2.20**	**347**	*e*Pn	**Pn**	21 41 33.0	+0.7
NKME				*e*Sn	**Sb**	21 42 01.7	-1.2
STIP	**Stip**	**2.22**	**60**	*i* Pn	**Pb**	21 41 35.1	-1.1
KOME	**Kolasin**	**2.23**	**358**	*e*Pn	**Pn**	21 41 33.7	+0.9
KOME				*e*Sn	**Sb**	21 42 02.1	-1.7
KOME	**Kolasin**	**2.23**	**358**	*e*Pn	**Pn**	21 41 33.7	+0.9
KOME				*e*Sn	**Sb**	21 42 02.1	-1.7
NKY	**Niksic**	**2.24**	**348**	⇑*i* Pn	**Pn**	21 41 33.5	+0.6
NKY				*e*Sn	**Sb**	21 42 02.2	-1.9
NKY	**Niksic**	**2.24**	**348**	⇑*i* Pn	**Pn**	21 41 33.5	+0.6
NKY				*e*Sn	**Sb**	21 42 02.2	-1.9
SG1	**Sgolgore (BA)**	**2.24**	**277**	*e*P	**Pn**	21 41 32.8	-0.1
LIT	**Litokhoron**	**2.26**	**102**	P	**Pn**	21 41 33.4	+0.3
LIT	**Litokhoron**	**2.26**	**102**	P	**Pn**	21 41 33.6	+0.5
BEY	**Berane**	**2.26**	**5**	⇓*i* Pn	**Pn**	21 41 34.4	+1.2
BEY				*e*Sn	**Sb**	21 42 02.9	-1.7
IVA	**Berane**	**2.26**	**5**	⇓*i* Pn	**Pn**	21 41 34.4	+1.2
IVA				*e*Sn	**Sb**	21 42 02.9	-1.7
TREB	**Trebinje**	**2.30**	**336**	*e*Pn	**Pb**	21 41 38.6	+1.1
EVR	**Evrytania**	**2.40**	**134**	P	**Pn**	21 41 35.3	+0.2
EVR	**Evrytania**	**2.40**	**134**	P	**Pn**	21 41 35.5	+0.4
BRY	**Bratogost**	**2.42**	**341**	⇑*i* Pn	**Pn**	21 41 36.1	+0.7
BRY				*e*Sn	**Sn**	21 42 06.5	+1.8
BRY	**Bratogost**	**2.42**	**341**	⇑*i* Pn	**Pn**	21 41 36.1	+0.7
BRY				*e*Sn	**Sn**	21 42 06.5	+1.8
KNT	**Kendrikon**	**2.55**	**77**	P	**Pn**	21 41 37.7	+0.7
KNT	**Kendrikon**	**2.55**	**77**	P	**Pn**	21 41 37.8	+0.7
AGG	**Agios Georgios**	**2.63**	**126**	P	**Pn**	21 41 37.7	-0.5
AGG	**Agios Georgios**	**2.63**	**126**	P	**Pn**	21 41 38.4	+0.2
UPM	**Unac-Piva**	**2.63**	**349**	*e*Pn	**Pn**	21 41 39.1	+0.7
UPM				*e*Sn	**Sn**	21 42 11.9	+1.8
UPM	**Unac-Piva**	**2.63**	**349**	*e*Pn	**Pn**	21 41 39.1	+0.7
UPM				*e*Sn	**Sn**	21 42 11.9	+1.8
SJES	**Sjenica**	**2.65**	**6**	*e*Pn	**Pn**	21 41 39.8	+1.2
SJES				*e*Sn	**Sb**	21 42 14.5	-1.5
SJES	**Sjenica**	**2.65**	**6**	*e*Pn	**Pn**	21 41 39.8	+1.2
SJES				*e*Sn	**Sb**	21 42 14.5	-1.5
STON	**Ston**	**2.67**	**328**	*e*Pn	**Pn**	21 41 37.8	-0.9
STON				*e*Sn	**Sn**	21 42 09.6	-1.0
STON	**Ston**	**2.67**	**328**	*e*Pn	**Pn**	21 41 36.8	-1.8
STON				Sn	**Sn**	21 42 09.1	-1.6
STON	**Ston**	**2.67**	**328**	*e*Pn	**Pn**	21 41 37.8	-0.9
STON				Sn	**Sn**	21 42 09.0	-1.6
BARS	**Barje**	**2.75**	**36**	*e*Pn	**Pn**	21 41 40.7	+0.9
BARS	**Barje**	**2.75**	**36**	*e*Pn	**Pn**	21 41 40.7	+0.9
EFP	**Efpalio**	**2.82**	**140**	P	**Pn**	21 41 41.5	+0.8
EFP	**Efpalio**	**2.82**	**140**	P	**Pn**	21 41 41.6	+0.8
SELS	**Selova**	**2.83**	**23**	*e*Pn	**Pn**	21 41 42.7	+1.7
CUC	**Castrocucco**	**2.97**	**259**	P	**Pn**	21 41 43.8	+0.9
CUC	**Castrocucco**	**2.97**	**259**	P	**Pn**	21 41 43.8	+0.9
IVAS	**Ivanjica**	**2.98**	**8**	*e*Pn	**Pn**	21 41 43.8	+0.7
IVAS	**Ivanjica**	**2.98**	**8**	*e*Pn	**Pn**	21 41 43.8	+0.7
BBLS	**Lazići**	**3.25**	**357**	*e*Pn	**Pn**	21 41 45.9	-0.8
BBLS	**Lazići**	**3.25**	**357**	*e*Pn	**Pn**	21 41 45.9	-0.8
NVR	**Nevrokopi**	**3.30**	**76**	P	**Pn**	21 41 49.7	+2.3
NVR	**Nevrokopi**	**3.30**	**76**	P	**Pn**	21 41 49.1	+1.7
GRUS	**Gruza**	**3.37**	**14**	*e*Pn	**Pn**	21 41 48.4	+0.1
GRUS	**Gruza**	**3.37**	**14**	*e*Pn	**Pn**	21 41 48.4	+0.1
ZAPS	**Zavoj**	**3.48**	**39**	*e*Pn	**Pn**	21 41 51.2	+1.3
ZAPS	**Zavoj**	**3.48**	**39**	*e*Pn	**Pn**	21 41 51.4	+1.5
ZAPS	**Zavoj**	**3.48**	**39**	*e*Pn	**Pn**	21 41 51.2	+1.3
DIVS	**Divibare**	**3.49**	**4**	*e*Pn	**Pn**	21 41 50.4	+0.3
DIVS	**Divibare**	**3.49**	**4**	*e*Pn	**Pn**	21 41 50.4	+0.3
HAPS	**Han Pijesak,BI**	**3.50**	**352**	*e*Pg	**Pb**	21 41 59.6	+1.6
HAPS	**Han Pijesak,BI**	**3.50**	**352**	*e*Pg	**Pb**	21 41 59.6	+1.6
ZAGS	**Zajecar**	**3.74**	**31**	*e*Pn	**Pn**	21 41 54.1	+0.7
ZAGS	**Zajecar**	**3.74**	**31**	*e*Pn	**Pn**	21 41 54.1	+0.7
KUBS	**Kucevo**	**4.08**	**21**	*e*Pn	**Pn**	21 41 58.1	-0.1
KUBS	**Kucevo**	**4.08**	**21**	*e*Pn	**Pn**	21 41 58.1	-0.1
UDBI	**Udbina**	**4.83**	**325**	*e*Pn	**Pn**	21 42 09.6	+1.1
UDBI	**Udbina**	**4.83**	**325**	*e*Pn	**Pn**	21 42 09.5	+1.1
NVLJ	**Novalja**	**5.27**	**320**	*e*Pn	**Pn**	21 42 14.5	+0.1
NVLJ				Sn	**Sn**	21 43 13.9	-0.9
NVLJ	**Novalja**	**5.27**	**320**	*e*Pn	**Pn**	21 42 14.5	+0.1
NVLJ				Sn	**Sn**	21 43 13.8	-0.9
CRES	**Cresnjev**	**6.02**	**331**	*e*Pn	**Pn**	21 42 24.1	-0.7
CEY	**Cerknica**	**6.37**	**325**	*e*Pn	**Pn**	21 42 28.1	-1.4

ISCJB ***06*** *21:41:21.8±0.5, 26°.37N±0°.07×126°.86E±0°.06, h81km±4km, mb3.6/14, Error ellipse: s-maj=12.5km s-min=9.4km az=171.4*
JMA ***06*** *21:41:23.4±0.2, 26°.35N×126°.90E, h71km±2km, M3.3*
JMA Felt I J1.
IDC ***06*** *21:41:23.4±2.4, 26°.42N×126°.94E, h82km±27km, mb3.4/14, mb1 3.5/14, mb1mx3.3/65, mbtmp3.8/14, Error ellipse: s-maj=31.9km s-min=14.8km az=66.0*
ISC 06 21:41:22.8±0.8, 26°.39N±0°.09×126°.87E±0°.06, h75km±6km, n21, σ0°.47/28, mb3.7/14, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKE	**Kume jima 2**	**0.10**	**227**	P	**Pn**	21 41 33.7	0.0
JKE				*i* S	**Sn**	21 41 41.5	-0.1
JAGN	**Aguni-jima**	**0.39**	**60**	P	**Pn**	21 41 35.2	0.0
JAGN				S	**Sn**	21 41 44.3	0.0
JJT3	**Tamagusuku3**	**0.86**	**106**	P	**Pn**	21 41 40.2	+0.3
JJT3				S	**Sn**	21 41 53.3	+0.6
JNTH	**Nagotoyohara**	**1.04**	**83**	P	**Pn**	21 41 42.2	+0.1
JNTH				S	**Sn**	21 41 55.9	-0.7
JIH	**Iheya**	**1.18**	**57**	P	**Pn**	21 41 44.4	+0.6
JIH				S	**Sn**	21 41 59.7	+0.2
JOW	**Kunigami**	**1.34**	**71**	P	**Pn**	21 41 46.0	+0.2
	baz=308,slow=18						
JOW				S	**Sn**	21 42 02.7	-0.5
	109nm,0.3s,baz=301,slow=19,SNR=34						
JOW	**Kunigami**	**1.34**	**71**	P	**Pn**	21 41 45.9	+0.1
JOW				S	**Sn**	21 42 02.8	-0.4
SONM	**Songino Array**	**26.76**	**328**	P	**P**	21 46 55.3	-0.4
	0.4nm,0.5s,baz=148,slow=10,SNR=2.3						
CMAR	**Chiang Mai Arr**	**26.95**	**259**	P	**P**	21 46 57.9	+0.4
	0.4nm,0.4s,baz=56,slow=8.0,SNR=3.7						
MKAR	**Makanchi Array**	**40.52**	**312**	P	**P**	21 48 54.0	-0.5
	0.5nm,0.4s,baz=97,slow=9.7,SNR=14						
ZALV	**Zalesovo Beam**	**41.38**	**323**	P	**P**	21 49 01.5	0.0
	1.5nm,0.5s,baz=113,slow=10,SNR=7.4						
KURBB	**Kurchatov Arra**	**43.89**	**317**	P	**P**	21 49 22.8	+0.9
	0.4nm,0.4s,baz=106,slow=9.3,SNR=5.0						
WRA	**Warramunga Arr**	**46.63**	**170**	P	**P**	21 49 43.1	-0.6
	0.7nm,0.7s,baz=352,slow=8.6,SNR=4.4						
BVAR	**Borovoye Array**	**49.34**	**318**	P	**P**	21 50 04.3	-0.1
	0.5nm,0.3s,baz=108,slow=8.1,SNR=4.7						
ASAR	**Alice Springs**	**50.23**	**172**	P	**P**	21 50 11.3	-0.1
	0.4nm,0.5s,baz=355,slow=8.3,SNR=8.4						
STKA	**Stephens Creek**	**59.62**	**165**	P	**P**	21 51 19.2	+0.1
	1.0nm,0.7s,baz=345,slow=16,SNR=3.1						
FINES	**FINESS Array B**	**72.12**	**330**	P	**P**	21 52 38.8	-0.2
	0.6nm,0.4s,baz=63,slow=6.4,SNR=11						
AKASG	**Malin Array Be**	**74.61**	**319**	P	**P**	21 52 53.0	-0.8
	0.9nm,0.5s,baz=68,slow=5.9,SNR=2.4						
HFS	**Hagfors**	**78.11**	**332**	P	**P**	21 53 13.2	-0.2
	0.3nm,0.4s,baz=72,slow=9.5,SNR=3.5						
NOA	**NORSAR Array B**	**78.62**	**333**	P	**P**	21 53 16.2	-0.2
	0.6nm,0.7s,baz=56,slow=5.6,SNR=2.9						
GERES	**GERESS Array B**	**84.33**	**322**	P	**P**	21 53 47.8	+1.0
	0.1nm,0.3s,baz=54,slow=8.9,SNR=2.4						

NIED ***06*** *21:47:00, 29°.70N×141°.50E, h59km, Mw4.1 Best double couple: Ms1.47000×10^15 NP1:φ=187.00000°, δ16.00000°, λ152.00000°. NP2:φ=304.00000°, δ83.00000°, λ76.00000°.*
ISCJB ***06*** *21:47:15.6±0.5, 29°.61N±0°.08×141°.2E±0°.2, h35km, mb3.8/13, MS2.6/1, Error ellipse: s-maj=23.1km s-min=7.4km az=158.2*
IDC ***06*** *21:47:18.9±1.8, 29°.52N×141°.21E, h55km±19km, mb3.6/13, mb1 3.8/17, mb1mx3.5/76, mbtmp3.8/17, ML3.4/3, MS2.6/3, Ms1 2.6/3, ms1mx2.4/66, Error ellipse: s-maj=26.6km s-min=12.1km az=63.0*
ISC 06 21:47:17.7±0.6, 29°.64N±0°.09×141°.4E±0°.1, h35km, n21, σ1°.81/20, mb3.8/13, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**2.64**	**164**	P	**Pn**	21 47 59.3	+1.5
	28nm,0.3s,baz=345,slow=20,SNR=5.3						
JCJ				S	**Sn**	21 48 28.4	-0.2
	42nm,0.3s,baz=294,slow=20,SNR=5.1						
MJAR	**Matsushiro Arr**	**7.37**	**340**	P	**Pn**	21 49 03.7	+0.9
	1.2nm,0.3s,baz=165,slow=12,SNR=14						
KSRS	**Korea Array**	**13.64**	**308**	P	**Pn**	21 50 31.3	+2.7
	baz=114,slow=12,SNR=2.5						
KSRS				LR	LR	21 55 08.2	
	comp=Z,18nm,19.9s,baz=105,slow=34						
ASAJ	**Asahikawa**	**14.48**	**4**	LR	LR	21 57 25.2	
	comp=Z,25nm,18.7s,baz=190,slow=42						
USRK	**Ussuriysk Ar.**	**16.33**	**335**	P	**Pn**	21 51 05.6	+1.4
	0.2nm,0.3s,baz=161,slow=10.0,SNR=5.3						
PETK	**Petropavlovsk-**	**26.33**	**22**	LR	LR	22 07 33.2	
	comp=Z,17nm,19.0s,baz=166,slow=46						
SONM	**Songino Array**	**32.41**	**314**	P	**P**	21 53 44.5	+0.3
	0.4nm,0.5s,baz=111,slow=8.2,SNR=3.2						
MKAR	**Makanchi Array**	**48.32**	**308**	P	**P**	21 55 53.7	-1.9
	0.1nm,0.5s,baz=78,slow=9.1,SNR=2.5						
WRA	**Warramunga Arr**	**49.76**	**189**	P	**P**	21 56 04.8	-2.1
	0.6nm,0.3s,baz=6.9,slow=7.8,SNR=19						
KURBB	**Kurchatov Arra**	**50.76**	**313**	P	**P**	21 56 12.5	-1.6
	0.3nm,0.4s,baz=90,slow=8.8,SNR=7.4						
BVAR	**Borovoye Array**	**55.70**	**316**	P	**P**	21 56 49.4	-1.0
	0.6nm,0.4s,baz=110,slow=9.2,SNR=4.3						
ILAR	**Eielson Array**	**55.85**	**29**	P	**P**	21 56 50.9	-0.4
	0.4nm,0.4s,baz=255,slow=5.4,SNR=5.4						
ARCES	**ARCESS Array B**	**70.91**	**340**	P	**P**	21 58 30.3	-0.6
	1.1nm,0.6s,baz=55,slow=7.8,SNR=6.9						
FINES	**FINESS Array B**	**75.35**	**333**	P	**P**	21 58 56.1	-1.1
	0.7nm,0.5s,baz=71,slow=5.9,SNR=12						
NVAR	**Mina Array Bea**	**79.52**	**52**	P	**P**	21 59 21.4	+0.2
	0.8nm,0.7s,baz=299,slow=4.5,SNR=6.1						
HFS	**Hagfors**	**80.81**	**336**	P	**P**	21 59 25.6	-1.9
	1.2nm,0.6s,baz=72,slow=4.7,SNR=5.7						
NB2	**NORSAR Subarra**	**80.99**	**338**	P	**P**	21 59 27.0	-1.5
	comp=Z,0.5nm,0.6s,baz=44,slow=5.9						
NOA	**NORSAR Array B**	**80.99**	**338**	P	**P**	21 59 27.3	-1.2
	comp=Z,0.5nm,0.8s,baz=97,slow=2.7,SNR=3.7						
BRTR	**Keskin Array B**	**83.75**	**312**	P	**P**	21 59 42.8	-0.7
	comp=Z,2.7nm,0.7s,baz=99,slow=4.5,SNR=19						
TXAR	**Lajitas Array**	**94.65**	**53**	P	**P**	22 00 35.9	+0.3
	comp=Z,0.3nm,0.7s,baz=298,slow=1.9,SNR=3.3						
LPAZ	**La Paz**	**149.87**	**70**	PKPbc	**PKPdf**	22 07 05.4	+4.7
	comp=Z,0.6nm,0.4s,baz=50,slow=3.8,SNR=4.2						

IDC ***06*** *21:49:14.3±0.8, 22°.96S×174°.70W, h0km, mb4.4/16, mb1 4.5/17, mb1mx4.3/53, mbtmp4.4/17, ML4.1/1, MS3.4/5, Ms1 3.4/5, ms1mx3.0/53, Error ellipse: s-maj=30.0km s-min=16.1km az=147.0*
NEIC ***06*** *21:49:15.7±0.6, 22°.81S×174°.66W, h10km, mb4.6/4, Error ellipse: s-maj=19.1km s-min=10.4km az=140.0*
ISC 06 21:49:19.0±0.7, 23°.2S±0°.1×174°.6W±0°.1, h36km, n32, σ1°.33/30, mb4.3/21, MS3.4/4, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**9.67**	**17**	Pn	Pn	21 51 25.7	-10
	6.0nm,0.3s,baz=191,slow=10,SNR=3.2						
AFI				Sn	Sn	21 53 04.1	-19
	11nm,0.3s,baz=147,slow=18,SNR=3.2						
RAR	**Rarotonga**	**13.92**	**85**	Pn	Pn	21 52 25.2	-8.5
	4.4nm,0.3s,baz=264,slow=7.9,SNR=14						
RAR				Sn	Sn	21 54 42.7	-24
	3.2nm,0.3s,baz=74,slow=17,SNR=3.9						
RAR				LR	LR	21 57 08.9	
	comp=Z,44nm,20.0s,baz=318,slow=34						
URZ	**Urewera**	**16.55**	**203**	Pn	**P**	21 53 11.9	+1.4
	0.7nm,0.3s,baz=24,slow=19,SNR=2.6						
URZ				Sn	**Sn**	21 56 06.4	-4.4
	0.7nm,0.3s,baz=41,slow=19,SNR=3.0						
DZM	**Mont Dzumac**	**17.50**	**270**	P	**P**	21 53 22.0	+0.8
	0.2nm,0.3s,baz=114,slow=18,SNR=2.4						
HNR	**Honiara**	**

IGAR e 21 57 12.7
comp=Z,599nm,0.1s
ISAD Sadrabad 3.36 50 *e*Pn **Pn 21 57 16.9 +2.1**
ISAD e 21 57 19.9
comp=Z,346nm,0.1s
IZEF Zefreh 3.43 24 *e*Pn **Pn 21 57 18.3 +2.6**
IZEF e 21 57 22.2
comp=Z,284nm,0.2s
IKLH Kolahrood 3.63 12 *e*Pn **Pn 21 57 20.9 +2.4**
IKLH e 21 57 23.1
comp=Z,233nm,0.1s
IMEH Mehriz 3.76 63 *e*Pn **Pn 21 57 22.3 +2.0**
IMEH e 21 58 11.5
comp=Z,334nm,0.3s
ICHK Chekchek 4.05 51 *e*Pn **Pn 21 57 25.7 +1.5**
ICHK e 21 57 30.2
comp=Z,247nm,0.1s
ANAR Anarak 4.30 37 *e*Pn **Pn 21 57 29.8 +2.3**
ANAR e 21 57 40.8
comp=Z,99nm,0.2s
WSAR Wadi Sarin 9.64 131 Pn **Pn 21 58 40.5 -0.2**
comp=Z,0.2nm,0.3s,baz=315,slow=10.0,SNR=6.8
WSAR Sn **Sn 22 00 23.3 -5.1**
comp=Z,0.3nm,0.3s,baz=289,slow=6.8,SNR=4.4
GEYT Alibeck 10.23 35 Pn **Pn 21 58 49.4 +0.6**
comp=Z,0.2nm,0.3s,baz=226,slow=16,SNR=4.8
BVAR Borovoye Array 27.37 26 P **P 22 02 06.9 +0.1**
comp=Z,0.8nm,0.5s,baz=250,slow=3.8,SNR=4.0
KURBB Kurchatov Arra 29.49 37 P **P 22 02 26.5 +0.8**
comp=Z,0.2nm,0.6s,baz=236,slow=9.3,SNR=2.6
MKAR Makanchi Array 29.82 46 P **P 22 02 29.5 +0.8**
comp=Z,0.2nm,0.5s,baz=245,slow=9.8,SNR=4.4
ZALV Zalesovo Beam 34.54 36 P **P 22 03 10.7 +0.8**
comp=Z,0.4nm,0.3s,baz=258,slow=7.2,SNR=3.2
FINES FINESS Array B 35.61 340 P **P 22 03 18.1 -1.0**
comp=Z,1.4nm,1.1s,baz=148,slow=11,SNR=3.8
TORD Torodi Ar. Bea 48.12 261 P **P 22 05 03.0 +1.1**
comp=Z,0.5nm,0.7s,baz=51,slow=6.8,SNR=3.3

CSEM ***06*** *22:02:45.8±0.1, 41°.19N×43°.81E, h5km, ML2.1, Error ellipse: s-maj=2.3km s-min=1.8km az=134.0*
DDA ***06*** *22:02:45.2, 41°.20N×43°.83E, h7km, Ml2.7*
TIF ***06*** *22:02:45.8, 41°.24N×43°.86E, h14km±1km*
ISK ***06*** *22:02:45.3, 41°.23N×43°.83E, h8km, MD2.3/1*
ISCJB ***06*** *22:02:46.1±0.6, 41°.20N±0°.02×43°.81E±0°.03, h6km±5km, Error ellipse: s-maj=4.1km s-min=3.5km az=30.2*
ISC 06 22:02:46.2±0.9,**41°.21N**±0°.02×**43°.81E**±0°.02,**h12**km±7km,
n37,σ0°**61**/63,**Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BGD	**Bogdanovka**	**0.17**	**288**	P	**Pg**	**22 02 50.4**	**+0.2**
BGD				S	**Sg**	**22 02 53.2**	**+0.2**
BGD	**Bogdanovka**	**0.17**	**288**	P	**Pg**	**22 02 50.4**	**+0.2**
BGD				S	**Sg**	**22 02 53.2**	**+0.2**
AKH	**Akhalkalaki**	**0.31**	**310**	PG	**Pg**	**22 02 52.2**	**-0.4**
AKH				SG	**Sg**	**22 02 56.5**	**-0.4**
AKH	**Akhalkalaki**	**0.31**	**310**	P	**Pg**	**22 02 52.5**	**-0.1**
AKH				S	**Sg**	**22 02 56.9**	**0.0**
AKH	**Akhalkalaki**	**0.31**	**310**	*e*Pg	**Pg**	**22 02 52.2**	**-0.4**
AKH	**Akhalkalaki**	**0.31**	**310**	P	**Pg**	**22 02 52.5**	**-0.1**
AKH				*e*Sg	**Sg**	**22 02 56.5**	**-0.4**
EAK	**Akyaka**	**0.55**	**196**	*i* P	**Pg**	**22 02 55.9**	**-1.0**
EAK				*i* S	**Sg**	**22 03 04.0**	**-0.2**
EAK	**Akyaka**	**0.55**	**196**	P	**Pg**	**22 02 55.9**	**-1.0**
EAK				S	**Sg**	**22 03 04.0**	**-0.2**
KARS	**Kars**	**0.81**	**224**	PG	**Pg**	**22 03 01.7**	**-0.1**
KARS	**Kars**	**0.81**	**224**	*e*Pg	**Pg**	**22 03 01.7**	**-0.1**
DIGO	**Kars**	**0.86**	**203**	*i* P	**Pg**	**22 03 02.0**	**-0.9**
DIGO				*i* S	**Sg**	**22 03 14.3**	**+0.1**
DIGO	**Kars**	**0.86**	**203**	P	**Pg**	**22 03 02.0**	**-0.9**
DIGO				S	**Sg**	**22 03 14.3**	**+0.1**
EPOS	**Posof**	**0.86**	**290**	*i* P	**Pg**	**22 03 01.8**	**-1.1**
EPOS				*i* S	**Sg**	**22 03 13.4**	**-0.8**
EPOS	**Posof**	**0.86**	**290**	P	**Pg**	**22 03 01.8**	**-1.1**
EPOS				S	**Sg**	**22 03 13.4**	**-0.8**
TBLG	**Delisi**	**0.87**	**53**	PG	**Pg**	**22 03 02.2**	**-0.8**
TBLG				SG	**Sb**	**22 03 14.2**	**-0.6**
TBLG	**Delisi**	**0.87**	**53**	P	**Pg**	**22 03 02.1**	**-0.9**
TBLG				S	**Sb**	**22 03 14.2**	**-0.6**
TBLG	**Delisi**	**0.87**	**53**	P	**Pg**	**22 03 02.2**	**-0.8**
TBLG				S	**Sb**	**22 03 14.2**	**-0.6**
SEAG	**Tbilisi Sea**	**0.93**	**53**	P	**Pg**	**22 03 03.4**	**-0.7**
SEAG				S	**Sb**	**22 03 16.5**	**0.0**
SEAG	**Tbilisi Sea**	**0.93**	**53**	P	**Pg**	**22 03 03.4**	**-0.7**
SEAG				S	**Sb**	**22 03 16.5**	**0.0**
DUS	**Dusheti**	**1.10**	**37**	P	**Pn**	**22 03 07.8**	**+0.3**
DUS				S	**Sn**	**22 03 23.3**	**+0.6**
DUS	**Dusheti**	**1.10**	**37**	P	**Pn**	**22 03 07.8**	**+0.3**
DUS				S	**Sn**	**22 03 23.3**	**+0.6**
DGRG	**David-gareji**	**1.20**	**78**	P	**Pn**	**22 03 08.9**	**+0.1**
DGRG				S	**Sn**	**22 03 25.6**	**+0.6**
DGRG	**David-gareji**	**1.20**	**78**	P	**Pn**	**22 03 08.9**	**+0.1**
DGRG				S	**Sn**	**22 03 24.7**	**-0.3**
TASB	**TASBURUN-IGDIR**	**1.27**	**165**	PN	**Pn**	**22 03 09.8**	**+0.1**
TASB	**TASBURUN-IGDIR**	**1.27**	**165**	*e*Pn	**Pn**	**22 03 09.8**	**+0.1**
GNI	**Garni**	**1.28**	**146**	PN	**Pn**	**22 03 10.1**	**+0.2**
GNI	**Garni**	**1.28**	**146**	*e*Pn	**Pn**	**22 03 10.1**	**+0.2**
GUDG	**Gudauri**	**1.35**	**22**	P	**Pg**	**22 03 12.1**	**0.0**
GUDG				S	**Sn**	**22 03 30.2**	**+1.3**
GUDG	**Gudauri**	**1.35**	**22**	P	**Pg**	**22 03 12.1**	**0.0**
GUDG				S	**Sn**	**22 03 30.2**	**+1.3**
IGDI	**IGDIR**	**1.36**	**171**	*i* P	**Pn**	**22 03 10.8**	**-0.1**
IGDI				*i* S	**Sb**	**22 03 29.5**	**+0.6**
ONI	**Oni**	**1.40**	**349**	P	**Pb**	**22 03 12.1**	**-0.2**
ONI				S	**Sg**	**22 03 31.2**	**-0.1**
DDEM	**Demirkent**	**1.59**	**259**	*i* P	**Pb**	**22 03 15.9**	**+0.4**
DDEM				*i* S	**Sg**	**22 03 37.5**	**+0.2**
DBOC	**Borcka**	**1.62**	**275**	*i* P	**Pb**	**22 03 16.1**	**+0.1**
DBOC				*i* S	**Sn**	**22 03 36.2**	**+0.8**
BCA	**Borcka**	**1.66**	**279**	PN	**Pn**	**22 03 15.7**	**+0.6**
BCA	**Borcka**	**1.66**	**279**	*e*Pn	**Pn**	**22 03 15.7**	**+0.6**
DDFL	**Dedoflistskaro**	**1.75**	**82**	P	**Pg**	**22 03 20.3**	**+0.5**
CHVG	**Ch'k'valeri**	**1.98**	**320**	PN	**Pn**	**22 03 17.9**	**-1.6**

IDC ***06*** *22:14:39.8±0.8, 29°.73N×50°.66E, h0km, mb4.0/18, mb1 4.0/24, mb1mx3.9/66, mbtmp4.0/24, ML3.3/6, MS2.9/3, Ms1 2.9/3, ms1mx2.5/71, Error ellipse: s-maj=20.3km s-min=13.4km az=164.0*
CSEM ***06*** *22:14:42.6±0.2, 29°.72N×50°.61E, h15km, ML3.8, Error ellipse: s-maj=6.6km s-min=4.5km az=43.0*
THR ***06*** *22:14:43.5±0.5, 29°.85N×50°.88E, h18km±7km, ML3.7*
TEH ***06*** *22:14:44.5, 29°.76N×50°.67E, h13km, ML3.7*
NEIC ***06*** *22:14:44.5±0.0, 29°.76N×50°.67E, h13km, mb4.1/5, ML3.7(THR), MN3.7(TEH), After TEH.*
ISC 06 22:14:42.9±0.5,**29°.74N**±0°.05×**50°.64E**±0°.04,**h20**km±4km,
n110,σ1°**66**/117,**mb4.0**/20,**7C-3D**,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IKAZ	**Kazeroun**	**1.04**	**88**	Pg	**Pn**	**22 15 03.4**	**+0.7**
IKAZ				Sg	**Sn**	**22 15 16.4**	**-0.4**
IKAZ	**Kazeroun**	**1.04**	**88**	*e*Sg	**Sn**	**22 15 16.5**	**-0.4**
IKAZ				*e*Pg	**Pn**	**22 15 03.4**	**+0.7**
IKAZ				*e*		22 15 18.1	
	comp=Z,42μm,0.4s						
AHBU	**AHRAM**	**1.05**	**147**	*e*Pg	**Pn**	**22 15 03.1**	**+0.7**
AHBU				*e*Sg	**Sn**	**22 15 17.5**	**+1.2**
SHI	**Shiraz**	**1.63**	**93**	*e*Pn	**Pb**	**22 15 12.2**	**-0.2**
SHI				*e*Sg	**Sb**	**22 15 34.9**	**+2.3**
SHI				*e*		22 15 36.3	
	comp=Z,24μm,0.3s						
IBRJ	**Brojen**	**2.22**	**14**	Pn	**Pn**	**22 15 20.4**	**+1.6**
IBRJ	**Brojen**	**2.22**	**14**	*e*Pn	**Pn**	**22 15 20.4**	**+1.6**
IBRJ				*e*		22 15 58.9	
	comp=Z,4μm,0.3s						
ZNGN	**Zangian**	**2.38**	**4**	*e*Pn	**Pb**	**22 15 23.3**	**-1.9**
ZNGN				*e*		22 16 00.4	
	comp=Z,99nm,0.3s						
ZNGN	**Zangian**	**2.38**	**4**	*e*Pn	**Pn**	**22 15 23.0**	**+2.0**
GHIR	**Ghir-Karzin**	**2.52**	**125**	Pn	**Pn**	**22 15 24.0**	**+1.3**
GHIR				Sg	**Sb**	**22 15 59.0**	**+1.0**
GHIR	**Ghir-Karzin**	**2.52**	**125**	*e*Pn	**Pn**	**22 15 24.2**	**+1.5**
GHIR				*e*Sg	**Sb**	**22 15 59.5**	**+1.5**
GHIR				AML	AML	22 16 18.2	
	comp=N,296nm,0.6s						
GHIR				AML	AML	22 16 19.2	
	comp=E,278nm,0.6s						
GHIR	**Ghir-Karzin**	**2.52**	**125**	Pn	**Pn**	**22 15 24.0**	**+1.3**
IRAM	**Ramesheh**	**2.55**	**36**	Pn	**Pn**	**22 15 25.3**	**+2.0**
IRAM	**Ramesheh**	**2.55**	**36**	*e*Pn	**Pn**	**22 15 25.4**	**+2.1**
IRAM				*e*		22 16 04.5	
	comp=Z,4μm,0.4s						
IRAM	**Ramesheh**	**2.55**	**36**	*e*Pn	**Pn**	**22 15 24.6**	**+1.3**
ROKH	**ROKH**	**2.62**	**7**	*e*Pn	**Pn**	**22 15 25.9**	**+1.7**
ROKH				*e*		22 16 20.6	
	comp=Z,99nm,0.5s						
ROKH	**ROKH**	**2.62**	**7**	*e*Pn	**Pn**	**22 15 25.8**	**+1.6**
SHGR	**Shooshtar-Gavs**	**2.84**	**327**	Pn	**Pn**	**22 15 30.0**	**+3.0**
SHGR	**Shooshtar-Gavs**	**2.84**	**327**	*e*Pn	**Pb**	**22 15 30.6**	**-2.3**
SHGR				AML	AML	22 16 20.1	
	comp=E,410nm,0.5s						
SHGR				AML	AML	22 16 21.1	
	comp=N,315nm,0.4s						
SHGR	**Shooshtar-Gavs**	**2.84**	**327**	Pn	**Pn**	**22 15 30.0**	**+3.0**
IGAR	**Gharneh**	**2.91**	**24**	*e*Pn	**Pn**	**22 15 30.5**	**+2.2**
IGAR				*e*		22 16 23.6	
	comp=Z,3μm,0.5s						
ISAD	**Sadrabad**	**3.40**	**50**	Pn	**Pn**	**22 15 36.6**	**+1.6**
ISAD	**Sadrabad**	**3.40**	**50**	*e*Pn	**Pn**	**22 15 36.6**	**+1.6**
ISAD				*e*		22 15 43.2	
	comp=Z,1μm,0.3s						
ISAD	**Sadrabad**	**3.40**	**50**	*e*Pn	**Pn**	**22 15 36.5**	**+1.6**
IZEF	**Zefreh**	**3.46**	**24**	Pn	**Pn**	**22 15 37.0**	**+1.2**
IZEF	**Zefreh**	**3.46**	**24**	*e*Pn	**Pn**	**22 15 37.1**	**+1.2**
IZEF				*e*		22 15 41.8	
	comp=Z,794nm,0.1s						
IZEF	**Zefreh**	**3.46**	**24**	*e*Pn	**Pn**	**22 15 37.1**	**+1.2**
IKLH	**Kolahrood**	**3.66**	**12**	Pn	**Pn**	**22 15 40.5**	**+2.0**
IKLH	**Kolahrood**	**3.66**	**12**	*e*Pn	**Pn**	**22 15 40.5**	**+2.0**
IKLH				*e*		22 16 59.4	
	comp=Z,1μm,0.4s						
IKLH	**Kolahrood**	**3.66**	**12**	*e*Pn	**Pn**	**22 15 40.3**	**+1.8**
IMEH	**Mehriz**	**3.80**	**63**	Pn	**Pn**	**22 15 42.9**	**+2.5**
IMEH	**Mehriz**	**3.80**	**63**	*e*Pn	**Pn**	**22 15 43.0**	**+2.5**
IMEH				*e*		22 15 44.7	
	comp=Z,885nm,0.1s						
IMEH	**Mehriz**	**3.80**	**63**	*e*Pn	**Pn**	**22 15 41.5**	**+1.0**
KHMZ	**Khomeyn**	**4.03**	**352**	Pn	**Pn**	**22 15 45.0**	**+1.4**
KHMZ	**Khomeyn**	**4.03**	**352**	*e*Pn	**Pn**	**22 15 45.6**	**+2.0**
KHMZ	**Khomeyn**	**4.03**	**352**	Pn	**Pn**	**22 15 45.0**	**+1.4**
QAM	**Ghamsar**	**4.06**	**9**	*e*Pn	**Pn**	**22 15 46.8**	**+2.7**
QAM				*e*		22 15 50.5	
	comp=Z,2μm,0.1s						
ICHK	**Chekchek**	**4.08**	**51**	*e*Pn	**Pn**	**22 15 45.5**	**+1.2**
ICHK				*e*		22 15 49.8	
	comp=Z,945nm,0.3s						
ICHK	**Chekchek**	**4.08**	**51**	*e*Pn	**Pn**	**22 15 45.6**	**+1.2**
ANAR	**Anarak**	**4.33**	**37**	*e*Pn	**Pn**	**22 15 49.2**	**+1.5**
ANAR				*e*		22 17 16.8	
	comp=Z,99nm,0.4s						
ANAR	**Anarak**	**4.33**	**37**	*e*Pn	**Pn**	**22 15 49.1**	**+1.4**
KHGB	**Koh Gabri**	**5.10**	**81**	*e*Pn	**Pn**	**22 15 59.7**	**+1.4**
KHGB				*e*		22 17 47.0	
	comp=Z,99nm,0.5s						
KHGB	**Koh Gabri**	**5.10**	**81**	*e*Pn	**Pn**	**22 15 59.5**	**+1.2**
IKOM	**Komasi**	**5.16**	**330**	Pn	**Pn**	**22 16 01.1**	**+2.0**
IKOM	**Komasi**	**5.16**	**330**	*e*Pn	**Pn**	**22 16 01.2**	**+2.1**
IKOM				*e*		22 18 10.5	
	comp=Z,99nm,0.7s						
IKOM	**Komasi**	**5.16**	**330**	Pn	**Pn**	**22 16 01.1**	**+2.0**
NGRK	**Negar Kerman**	**5.30**	**90**	*e*		22 16 05.0	
	comp=Z,99nm,0.1s						
NGRK				*e*Pn	**Pn**	**22 16 03.0**	**+1.8**
NGRK	**Negar Kerman**	**5.30**	**90**	*e*Pn	**Pn**	**22 16 02.7**	**+1.5**
GENO	**Geno**	**5.40**	**114**	*e*		22 16 12.0	
	comp=Z,99nm,0.1s						
GENO				*e*Pn	**Pn**	**22 16 03.6**	**+1.2**
GENO	**Geno**	**5.40**	**114**	*e*Pn	**Pn**	**22 16 02.0**	**-0.4**
IBND	**Bandar-abas**	**5.67**	**112**	*e*Pn	**Pn**	**22 16 07.8**	**+1.9**
IVIS	**Veis**	**5.75**	**327**	Pn	**Pn**	**22 16 08.3**	**+1.1**
IVIS	**Veis**	**5.75**	**327**	*e*Pn	**Pn**	**22 16 08.4**	**+1.3**
IVIS				*e*		22 17 40.6	
	comp=Z,395nm,0.3s						
IVIS	**Veis**	**5.75**	**327**	*e*Pn	**Pn**	**22 16 08.5**	**+1.3**
CHMN	**Cheshme madani**	**6.00**	**87**	*e*Pn	**Pn**	**22 16 12.4**	**+1.6**
CHMN				*e*		22 16 44.8	
	comp=Z,99nm,0.4s						
CHMN	**Cheshme madani**	**6.00**	**87**	*e*Pn	**Pn**	**22 16 12.3**	**+1.5**
KHSK	**Kohestak**	**6.39**	**116**	*e*Pn	**Pn**	**22 16 15.7**	**-0.2**
NAZ	**Nazwa, Dubai**	**6.51**	**136**	*e*Pn	**Pn**	**22 16 17.7**	**+0.2**
MSFE	**Esma-Masafi**	**6.56**	**130**	*e*Pn	**Pn**	**22 16 18.4**	**+0.1**
ASUD	**Al Ashush, Dub**	**6.59**	**140**	*e*Pn	**Pn**	**22 16 20.2**	**+1.6**
HATD	**Hatta, Dubai**	**6.92**	**134**	*e*Pn	**Pn**	**22 16 24.5**	**+1.4**
ALNE	**Al Ain**	**7.27**	**140**	*e*Pn	**Pn**	**22 16 29.3**	**+1.3**
RAYN	**Ar Rayn**	**7.71**	**218**	*e*Pn	**Pn**	**22 16 34.7**	**+0.6**
	comp=Z,32nm,0.7s						
RAYN	**Ar Rayn**	**7.71**	**218**	*e*Pn	**Pn**	**22 16 34.7**	**+0.6**
	comp=Z,32nm,0.7s						
WSAR	**Wadi Sarin**	**9.65**	**130**	Pn	**Pn**	**22 16 59.2**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=319,slow=7.5,SNR=7.1						
WSAR				Sn	**Sn**	**22 18 43.0**	**-5.5**
	comp=Z,0.5nm,0.3s,baz=47,slow=19,SNR=6.3						
GEYT	**Alibeck**	**10.26**	**35**	Pn	**Pn**	**22 17 09.9**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=219,slow=12,SNR=15						
ASF	**Jabal al Asfar**	**12.04**	**285**	Pn	**Pn**	**22 17 32.4**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=135,slow=10.0,SNR=4.0						
MMAI	**Mount Meron Ar**	**13.42**	**288**	Pn	**Pn**	**22 17 51.0**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=105,slow=17,SNR=5.2						
MMAI				LR	LR	22 24 15.6	
	comp=Z,38nm,20.0s,baz=90,slow=43						
MMAI	**Mount Meron Ar**	**13.42**	**288**	Pn	**Pn**	**22 17 51.0**	**-1.3**
KBZ	**Khabaz**	**15.27**	**338**	Pn	**Pn**	**22 18 18.8**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=105,slow=12,SNR=1.8						
KIV	**Kislovodsk**	**15.54**	**338**	*e*Pn	**Pn**	**22 18 19.6**	**-1.2**
	comp=Z,14nm,1.1s						
KIV	**Kislovodsk**	**15.54**	**338**	*e*Pn	**Pn**	**22 18 19.6**	**-1.2**
	comp=Z,14nm,1.1s						
BRTR	**Keskin Array B**	**17.13**	**310**	P	**Pn**	**22 18 40.8**	**-0.4**
	comp=Z,0.0nm,0.3s,baz=139,slow=12,SNR=2.6						
NIL	**Nilore**	**19.62**	**73**	*e*P	**P**	**22 19 09.3**	**-0.8**
	comp=Z,30nm,1.1s						
NIL	**Nilore**	**19.62**	**73**	*e*P	**P**	**22 19 09.3**	**-0.8**
	comp=Z,30nm,1.1s						
AKTO	**Aktyubinsk**	**21.40**	**13**	P	**P**	**22 19 28.5**	**-0.7**
	comp=Z,4.3nm,0.7s,baz=199,slow=10,SNR=18						
AAK	**Ala-Archa**	**23.07**	**50**	P	**P**	**22 19 45.3**	**-1.8**
	comp=Z,1.0nm,0.4s,baz=207,slow=16,SNR=1.9						
AAK	**Ala-Archa**	**23.07**	**50**	*e*P	**P**	**22 19 45.8**	**-1.4**
	comp=Z,2.5nm,0.7s						
AAK	**Ala-Archa**	**23.07**	**50**	*e*P	**P**	**22 19 45.8**	**-1.4**
	comp=Z,2.5nm,0.7s						
TLB	**Topalu**	**23.21**	**316**	*i*P	**P**	**22 19 50.7**	**+2.2**
TLB	**Topalu**	**23.21**	**316**	*i*P	**P**	**22 19 50.7**	**+2.2**
MLR	**Muntele Rosu**	**24.95**	**316**	*i*P	**P**	**22 20 05.7**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=127,slow=20,SNR=2.3						
MLR	**Muntele Rosu**	**24.95**	**316** ⇑	*i*P	**P**	**22 20 09.8**	**+4.8**
TESR	**Tescani**	**25.08**	**319** ⇑	*i*P	**P**	**22 20 05.8**	**-0.1**
TESR	**Tescani**	**25.08**	**319** ⇑	*i*P	**P**	**22 20 05.8**	**-0.1**
SORM	**Soroca**	**25.11**	**323** ⇑	*i*P	**P**	**22 20 06.6**	**+0.5**
SORM	**Soroca**	**25.11**	**323** ⇑	*i*P	**P**	**22 20 06.6**	**+0.5**
VOIR		**25.48**	**315**	*i*P	**P**	**22 20 13.1**	**+3.5**
AKASG	**Malin Array Be**	**26.39**	**329**	P	**P**	**22 20 17.8**	**0.0**
	comp=Z,1.4nm,0.5s,baz=128,slow=9.2,SNR=9.1						
BURAR	**Bucovina Array**	**26.50**	**319** ⇑	*i*P	**P**	**22 20 23.1**	**+4.1**
ARU	**Arti**	**27.26**	**10**	*e*P	**P**	**22 20 25.6**	**+0.1**
	comp=Z,1.4nm,0.5s						
ARU	**Arti**	**27.26**	**10**	*e*P	**P**	**22 20 25.6**	**+0.1**
	comp=Z,1.4nm,0.5s						
MDVR	**Moldovita**	**27.30**	**311** ⇑	*i*P	**P**	**22 20 30.0**	**+3.9**
BVAR	**Borovoye Array**	**27.40**	**26**	P	**P**	**22 20 27.3**	**+0.4**
	comp=Z,3.4nm,0.7s,baz=224,slow=7.2,SNR=23						
BVAR				LR	LR	22 32 15.3	
	comp=Z,26nm,20.6s,baz=110,slow=38						
KURBB	**Kurchatov Arra**	**29.53**	**37**	P	**P**	**22 20 47.1**	**+1.4**
	comp=Z,1.1nm,0.7s,baz=237,slow=9.3,SNR=8.6						
KURK	**Kurchatov**	**29.63**	**37**	*e*P	**P**	**22 20 47.1**	**+0.4**
MKAR	**Makanchi Array**	**29.85**	**46**	P	**P**	**22 20 49.4**	**+0.6**
	comp=Z,1.3nm,0.9s,baz=237,slow=8.2,SNR=8.3						
MKAR				LR	LR	22 34 23.6	
	comp=Z,35nm,19.5s,baz=176,slow=40						
ZALV	**Zalesovo Beam**	**34.57**	**36**	P	**P**	**22 21 30.5**	**+0.5**
	comp=Z,2.7nm,0.7s,baz=247,slow=10.0,SNR=13						
FINES	**FINESS Array B**	**35.62**	**340**	P	**P**	**22 21 38.3**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=146,slow=8.6,SNR=4.2						
HFS	**Hagfors**	**39.18**	**332**	P	**P**	**22 22 08.7**	**-0.4**
	comp=Z,2.0nm,0.7s,baz=129,slow=8.0,SNR=11						
NOA	**NORSAR Array B**	**40.70**	**332**	P	**P**	**22 22 21.8**	**0.0**
	comp=Z,0.6nm,0.7s,baz=131,slow=8.1,SNR=2.7						
ULN	**Ulaanbaatar**	**46.46**	**51**	*e*P	**P**	**22 23 08.2**	**-0.3**
	comp=Z,1.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**48.09**	**261**	P	**P**	**22 23 22.6**	**+1.2**
	comp=Z,2.8nm,0.8s,baz=56,slow=8.1,SNR=15						
KOWA	**Kowa**	**52.41**	**266**	P	**P**	**22 23 55.3**	**+1.2**
	comp=Z,3.1nm,0.6s,baz=65,slow=9.9,SNR=10						
DBIC	**Dimbokro**	**56.89**	**258**	P	**P**	**22 24 25.9**	**-0.7**
	comp=Z,13nm,1.1s,baz=15,slow=5.7,SNR=6.6						
KSAR	**Wonju Array Be**	**63.15**	**60**	P	**P**	**22 25 09.2**	**-0.1**
KSAR	**Wonju Array Be**	**63.15**	**60**	P	**P**	**22 25 09.2**	**-0.1**
KSRS	**Korea Array**	**63.18**	**60**	P	**P**	**22 25 09.2**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=280,slow=6.8,SNR=6.0						
SEY	**Seymchan**	**69.03**	**29**	P	**P**	**22 25 45.9**	**-0.8**
	comp=Z,2.1nm,0.7s,baz=274,slow=7.6,SNR=6.5						
ILAR	**Eielson Array**	**84.81**	**7**	P	**P**	**22 27 15.8**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=333,slow=5.1,SNR=6.5						
FITZ	**Fitzroy Crossi**	**86.46**	**113**	P	**P**	**22 27 23.7**	**-0.7**
	comp=Z,4.2nm,1.2s,baz=342,slow=6.4,SNR=3.9						

NIED ***06*** *22:28:00, 44°.90N×149°.50E, h35km, Mw3.9 Best double couple: M0 8.41000×10^14 NP1:φ205.00000°, δ35.00000°, λ107.00000°. NP2:φ 4.00000°, δ57.00000°, λ78.00000°.*
JMA ***06*** *22:28:41.8±0.6, 44°.87N×149°.46E, h30km, M4.5*
ISCJB ***06*** *22:28:42.4±0.9, 44°.52N±0°.06×149°.52E±0°.08, h44km±7km, mb3.9/25, Error ellipse: s-maj=11.0km s-min=7.5km az=138.4*
MOS ***06*** *22:28:43.8±1.1, 44°.65N×149°.37E, h52km, mb4.3/13, Error ellipse: s-maj=10.6km s-min=9.4km az=178.8*
SKHL ***06*** *22:28:43.8±0.0, 44°.52N×149°.58E, h50km±4km, mb4.4/7*
IDC ***06*** *22:28:48.4±2.7, 44°.66N×149°.33E, h75km±23km, mb3.6/19, mb1 3.7/23, mb1mx3.5/76, mbtmp3.9/23, Error ellipse: s-maj=21.6km s-min=15.3km az=148.0*
ISC 06 22:28:42.5±1.1,**44°.45N**±0°.06×**149°.55E**±0°.07,**h31**km±7km,
n105,σ1°**76**/117,**mb4.0**/25,**2C-3D**,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.43**	**304**	*e*P	**Pn**	**22 29 05.0**	**-1.3**
KUR				AMB	AMB	22 29 06.5	
	336nm,0.3s						
KUR				AMB	AMB	22 29 06.5	
	382nm,0.3s						
KUR				AMB	AMB	22 29 06.5	
	96nm,0.3s						
KUR				*i* S	**Sn**	**22 29 20.9**	**-3.1**
KUR				A	A	22 29 25.5	
	2μm,0.3s						
KUR				A	A	22 29 25.5	
	552nm,0.3s						
KUR	**Kuril'sk**	**1.43**	**304**	*d* iPN	**Pn**	**22 29 04.9**	**-1.3**
KUR				*e*S	**Sn**	**22 29 20.8**	**-3.2**
KUR				pmax	pmax		
	comp=Z,1μm,0.9s						
KUR				pmax	pmax		
	comp=Z,961nm,0.3s						
KUR				pmax	pmax		
	comp=N,336nm,0.4s						
KUR				pmax	pmax		
	comp=E,382nm,0.4s						
KUR				smax	smax		
	comp=N,2μm,0.3s						
KUR				smax	smax		
	comp=E,552nm,0.4s						
SHO	**Shikotan**	**2.04**	**254**	*i* P	**Pn**	**22 29 13.9**	**-0.8**
SHO				AMB	AMB	22 29 18.4	
	comp=E,140nm,0.4s						
SHO				*i* S	**Sn**	**22 29 39.2**	**+0.1**
SHO				A	A	22 29 40.8	
	comp=E,310nm,0.3s						
SHO				A	A	22 29 40.8	
	comp=E,625nm,0.3s						
SHO	**Shikotan**	**2.04**	**254**	*d* iPN	**Pn**	**22 29 13.3**	**-1.4**
SHO				*i* S	**Sn**	**22 29 39.2**	**+0.1**
SHO				pmax	pmax		
	comp=E,69nm,0.2s						

JRA	Rausu	3.23 262	P		Pn	22 29 32.0 +1.1
JRA			eS		Sn	22 30 10.4 +2.1
JNK	Nakash	3.59 258	P		Pn	22 29 36.7 +0.7
JAK	Akkeshi	3.81 249	P		Pn	22 29 39.4 +0.5
JTKR	Abashiri--Toko	4.09 265	P		Pn	22 29 43.6 +0.9
JAR	Ashorobuto	4.34 257	P		Pn	22 29 48.0 +1.8
JOB	Onbets	4.43 252	P		Pn	22 29 48.5 +1.1
JMP	Maruseppu	4.47 266	P		Pn	22 29 49.6 +1.5
HRK	Horoka	4.74 260	eP		Pn	22 29 54.3 +2.5
JCH	Churui	4.86 250	P		Pn	22 29 54.2 +0.8
JKA	Kamikawa-asahi	5.00 269	eP		Pn	22 29 59.5 +4.1
ASAJ	Asahikawa	5.01 269	P		Pn	22 29 59.5 +4.1
	comp=N,2.9nm,0.3s,baz=69,slow=13,SNR=14					
MYR	Moyori	5.05 247	eP		Pn	22 29 57.6 +1.6
JFR	Furan	5.20 258	P		Pn	22 30 01.6 +3.6
JEM	Erimo	5.27 245	P		Pn	22 30 01.1 +2.1
ERM	Erimo	5.27 245	eP		Pn	22 30 01.3 +2.3
ERM	Erimo	5.27 245	c iPN		Pn	22 30 01.3 +2.3
YSS	Yuzh-Sakhalins	5.38 300	eP		Pn	22 30 02.5 +2.0
YSS			AMB		AMB	22 30 08.3
	comp=N,19nm,0.3s					
YSS	Yuzh-Sakhalins	5.38 300	i PN		Pn	22 29 59.7 -0.8
JNBK	Urakawa-nobuka	5.41 249	P		Pn	22 30 01.6 +0.7
JBT2	Biratori 2	5.48 255	P		Pn	22 30 03.1 +1.2
JNB	Noboribetsu	6.50 255	P		Pn	22 30 17.4 +1.4
JNB			eS		Sn	22 31 28.8 -0.3
JKB	Kayabe	6.74 251	P		Pn	22 30 19.7 +0.6
JANG	Nango	7.21 238	P		Pn	22 30 24.3 -1.3
JANG			eS		Sn	22 31 40.5 -5.9
JTM	Tenmabayashi	7.25 243	P		Pn	22 30 26.7 +0.5
JTM			eS		Sn	22 31 42.8 -4.6
JSR	Shiriuchi	7.31 250	P		Pn	22 30 27.6 +0.7
JOSM	Okushiri--Mats	7.73 256	P		Pn	22 30 33.8 +1.1
JRG	Rokugo	8.35 236	P		Pn	22 30 40.7 -0.6
JRG			eS		Sn	22 32 09.0 -5.4
PETK	Petropavlovsk-	10.19 29	P		Pn	22 31 12.0 +5.5
	comp=N,0.6nm,0.3s,baz=203,slow=13,SNR=5.9					
PETK	Petropavlovsk-	10.19 29	PN		Pn	22 31 12.0 +5.6
PETK			pmax		pmax	
	comp=Z,1.0nm,0.3s					
USRK	Ussuriysk Ar.	12.59 275	P		Pn	22 31 41.4 +2.2
	comp=Z,0.3nm,0.3s,baz=87,slow=14,SNR=4.2					
EKMR	Ekimchan	13.91 314	eP		Pn	22 31 58.0 +0.7
BMKR	Bomnak	16.84 315	eP		Pn	22 32 32.0 -3.7
KSRS	Korea Array	17.74 254	P		P	22 32 48.9 +1.3
	comp=Z,0.2nm,0.3s,baz=64,slow=12,SNR=4.8					
YAK	Yakutsk	21.09 334	eP		P	22 33 24.1 +0.2
YAK	Yakutsk	21.09 334	eP		P	22 33 26.8 +2.9
YAK			pmax		pmax	
	comp=Z,25nm,1.1s					
YAK			pmax		pmax	
	comp=E,8.0nm,1.5s					
YAK			pmax		pmax	
	comp=N,9.0nm,1.3s					
BILL	Bilibino	25.22 15	eP		P	22 34 05.9 +0.8
BILL	Bilibino	25.22 15	eP		P	22 34 05.9 +0.8
BILL			e			22 34 41.7
BILL			pmax		pmax	
	comp=Z,1.0nm,1.1s					
H11N2	WAKE ISLAND Hy	28.57 144	T		T	23 05 23.3
	baz=334,slow=76,SNR=95					
H11N1	WAKE ISLAND Hy	28.59 144	T		T	23 05 23.3
	baz=334,slow=76,SNR=74					
H11N3	WAKE ISLAND Hy	28.59 144	T		T	23 05 24.4
	baz=334,slow=76,SNR=90					
H11S1	WAKE ISLAND Hy	29.59 145	T		T	23 06 42.9
	baz=334,slow=76,SNR=78					
H11S3	WAKE ISLAND Hy	29.59 146	T		T	23 06 43.5
	baz=334,slow=76,SNR=98					
H11S2	WAKE ISLAND Hy	29.60 145	T		T	23 06 43.5
	baz=334,slow=76,SNR=85					
SONM	Songino Array	29.81 292	P		P	22 34 44.6 -1.9
	comp=Z,0.4nm,0.4s,baz=99,slow=7.6,SNR=4.1					
ILAR	Eielson Array	39.90 37	P		P	22 36 13.2 +0.2
	comp=Z,0.3nm,0.5s,baz=284,slow=9.3,SNR=4.8					
ILAR	Eielson Array	39.90 37	eP		P	22 36 16.6 +3.6
MKAR	Makanchi Array	45.79 298	P		P	22 37 00.7 -0.3
	comp=Z,1.8nm,0.7s,baz=75,slow=7.9,SNR=19					
MKAR			PcP		PcP	22 38 38.0 -0.2
	comp=Z,0.3nm,0.6s,baz=53,slow=5.6,SNR=2.7					
KURK	Kurchatov	46.57 304	eP		P	22 37 05.6 -1.4
KURK	Kurchatov	46.57 304	i P		P	22 37 05.6 -1.4
KURK			pmax		pmax	
	comp=Z,1.0nm,0.9s					
KURBB	Kurchatov Arra	46.66 304	P		P	22 37 06.5 -1.3
	comp=Z,0.8nm,0.5s,baz=74,slow=8.4,SNR=3.7					
BRVK	Borovoye	50.44 310	eP		P	22 37 36.8 0.0
BRVK	Borovoye	50.44 310	i P		P	22 37 36.8 0.0
BRVK			pmax		pmax	
	comp=Z,1.0nm,0.7s					
AAK	Ala-Archa	52.61 296	P		P	22 37 53.7 +0.3
	comp=Z,0.9nm,0.3s,baz=100,slow=15					
AAK	Ala-Archa	52.61 296	eP		P	22 37 53.5 +0.1
AAK	Ala-Archa	52.61 296	i P		P	22 37 53.5 +0.1
AAK			pmax		pmax	
	comp=Z,1.0nm,0.9s					
JIRN	Jiri	52.62 274	eP		P	22 37 54.4 +0.5
	comp=Z,12nm,0.4s					
GUN	Gumba	52.70 274	eP		P	22 37 55.0 +0.6
	comp=Z,8.5nm,0.4s					
RAMN	Ramite	52.75 273	eP		P	22 37 54.9 +0.2
	comp=Z,15nm,0.4s					
KKN	Kakani	53.19 275	eP		P	22 37 58.6 +0.6
DMN	Daman	53.43 275	eP		P	22 38 00.1 +0.4
	comp=Z,4.3nm,0.5s					
GKN	Gorkha	53.53 275	eP		P	22 38 00.6 +0.3
RES	Resolute Bay	53.79 17	P		P	22 38 01.4 +0.1
	comp=Z,1.7nm,0.8s,baz=331,slow=5.9,SNR=6.6					
DANN	Dangsing	53.95 276	eP		P	22 38 04.4 +0.8
	comp=Z,17nm,0.9s					
YKA	Yellowknife Ar	54.25 35	P		P	22 38 05.2 +0.3
	comp=Z,0.4nm,0.6s,baz=297,slow=6.8,SNR=3.4					
KOLN	Koldanda	54.41 276	eP		P	22 38 07.2 +0.4
	comp=Z,3.2nm,0.4s					
PYUN	Piuthan	54.64 276	eP		P	22 38 09.0 +0.5
FINES	FINESS Array B	65.03 334	P		P	22 39 16.8 -2.3
	comp=Z,2.1nm,1.0s,baz=21,slow=6.5,SNR=7.6					
FINES	FINESS Array B	65.03 334	P		P	22 39 16.8 -2.3
FINES			pmax		pmax	
	comp=Z,1.0nm,0.8s					
WRA	Warramunga Arr	65.57 196	P		P	22 39 24.7 +1.6
	comp=Z,0.7nm,0.8s,baz=14,slow=6.7,SNR=3.2					
VSR	Storozhevoye	67.31 320	eP		P	22 39 32.7 -1.2
VSR			pmax		pmax	
	comp=Z,3.0nm,0.6s					
VORD	Divnogorie	67.43 320	eP		P	22 39 32.6 -2.1
VORD			pmax		pmax	
	comp=Z,7.0nm,0.7s					
ASAR	Alice Springs	69.28 195	P		P	22 39 48.1 +1.6
	comp=Z,0.3nm,0.6s,baz=17,slow=4.2,SNR=3.9					
NB2	NORSAR Subarra	69.56 340	P		P	22 39 46.4 -1.5
	comp=Z,0.8nm,0.5s,baz=31,slow=6.5					
NOA	NORSAR Array B	69.56 340	P		P	22 39 46.6 -1.2
	comp=Z,0.9nm,0.5s,baz=33,slow=6.6,SNR=9.9					
HFS	Hagfors	69.70 338	P		P	22 39 47.4 -1.3
	comp=Z,1.1nm,0.5s,baz=54,slow=7.3,SNR=12					
KBZ	Khabaz	70.62 313	P		P	22 39 55.2 +0.7
	comp=Z,3.6nm,0.8s,baz=41,slow=4.3,SNR=8.5					
AKASG	Malin Array Be	72.02 325	P		P	22 40 02.5 -0.4
	comp=Z,1.6nm,0.6s,baz=35,slow=6.0,SNR=4.3					
AKASG	Malin Array Be	72.02 325	P		P	22 40 02.6 -0.4
AKASG			pmax		pmax	
	comp=Z,1.0nm,0.4s					
DPC	Dobruska-Polom	77.20 331	eP		P	22 40 34.1 +1.1
DPC	Dobruska-Polom	77.20 331	eP		P	22 40 34.1 +1.1
EKA	Eskdalemuir Ar	77.93 344	P		P	22 40 37.0 0.0
	comp=Z,0.2nm,0.3s,baz=16,slow=5.7,SNR=4.4					
EKA	Eskdalemuir Ar	77.93 344	eP		P	22 40 37.0 0.0
EKA	Eskdalemuir Ar	77.93 344	P		P	22 40 37.0 0.0
BRTR	Keskin Array B	78.30 315	P		P	22 40 39.1 -0.4
	comp=Z,0.4nm,0.5s,baz=37,slow=3.6,SNR=3.7					
KHC	Kasperske Hory	79.17 332	eP		P	22 40 42.4 -1.6
KHC			epP		sP	22 40 57.3 -0.2
KHC	Kasperske Hory	79.17 332	eP		P	22 40 42.4 -1.6
KHC	Kasperske Hory	79.17 332	eP		P	22 40 42.4 -1.6
KHC			e			22 40 57.3
GERES	GERESS Array B	79.37 332	P		P	22 40 45.2 0.0
	comp=Z,0.7nm,0.6s,baz=23,slow=5.3,SNR=4.0					
GERES	GERESS Array B	79.37 332	eP		P	22 40 44.7 -0.5
GERES	GERESS Array B	79.37 332	eP		P	22 40 44.7 -0.5
GERES			pmax		pmax	
	comp=Z,1.0nm,0.6s					
TXAR	Lajitas Array	80.82 58	P		P	22 40 54.7 +1.4
	comp=Z,0.4nm,0.7s,baz=299,slow=4.2,SNR=5.3					
MMAI	Mount Meron Ar	82.40 309	P		P	22 41 02.3 +0.7

comp=Z,1.2nm,0.7s,baz=33,slow=6.3,SNR=3.8

*ISCJB **06** 22:31:24.2±0.4, 24°.53N±0°.02×122°.50E±0°.02, h91km±4km, Error ellipse: s-maj=3.8km s-min=2.6km az=171.9*
*JMA **06** 22:31:24.4±0.2, 24°.47N×122°.47E, h93km±2km, M2.9*
*TAP **06** 22:31:24.1, 24°.56N×122°.51E, h97km, ML3.4, C*
ISC 06 22:31:24.1±1.4, 24°.54N±0°.04×122°.49E±0°.02, h96km±8km, n85, σ0=84/150, 8C-6D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.33 271		⇓P	Pn	22 31 38.8	+0.6
	baz=268						
EOS1				eS	Sn	22 31 49.4	+0.6
	baz=268						
JYNG	Yonagunijimaku	0.42 102		P	Pn	22 31 39.1	+0.3
JYNG				eS	Sn	22 31 49.9	+0.1
YOJ	Yonaguni jima	0.48 99		⇓P	Pn	22 31 39.5	+0.3
	baz=107						
YOJ				S	Sn	22 31 50.4	-0.1
	baz=107						
YOJ	Yonaguni jima	0.48 99		P	Pn	22 31 39.5	+0.3
YOJ				eS	Sn	22 31 50.4	-0.1
TWC	Suao	0.59 277		⇓i P	Pn	22 31 40.1	0.0
	baz=275						
TWC				eS	Sn	22 31 51.2	-0.9
	baz=275						
EGS		0.59 301		eP	Pn	22 31 40.0	-0.1
	baz=290						
TWB1	Santiao Chiao	0.65 315		P	Pn	22 31 40.9	+0.2
	baz=309						
TWB1				eS	Sn	22 31 52.6	-0.4
	baz=309						
NTC	Toucheng	0.68 297		eP	Pn	22 31 40.8	-0.1
	baz=291						
NTC				eS	Sn	22 31 53.0	-0.4
	baz=291						
NANB	Nanao	0.69 261		P	Pn	22 31 41.5	+0.5
	baz=255						
NANB				eS	Sn	22 31 53.8	+0.2
	baz=255						
ENA	Nanau	0.69 261		eP	Pn	22 31 41.6	+0.6
	baz=255						
ENA				eS	Sn	22 31 54.1	+0.4
	baz=255						
ILA	Ilan	0.71 288		eP	Pn	22 31 41.1	-0.1
	baz=284						
ILA				S	Sn	22 31 54.0	0.0
	baz=284						
TIPB	Shuangxi	0.74 305		⇓eP	Pn	22 31 40.7	-0.8
	baz=303						
TIPB				eS	Sn	22 31 52.9	-1.7
	baz=303						
TWE	Neicheng	0.77 284		⇓P	Pn	22 31 42.2	+0.4
	baz=282						
TWE				eS	Sn	22 31 54.5	-0.5
	baz=282						
NWF	Wu-fen Shan	0.83 309		P	Pn	22 31 42.8	+0.3
	baz=301						
NWF				eS	Sn	22 31 55.8	-0.5
	baz=301						
WFSB	Wu-fen Shan	0.83 309		⇓P	Pn	22 31 42.9	+0.5
	baz=302						
WFSB				eS	Sn	22 31 55.6	-0.6
	baz=302						
ENTT	Nioudou	0.85 277		eP	Pn	22 31 43.4	+0.8
	baz=275						
ENTT				eS	Sn	22 31 57.3	+0.8
	baz=275						
NACB	Ninganchiao	0.90 246		P	Pn	22 31 42.9	-0.1
	baz=241						
NACB				eS	Sn	22 31 56.2	-1.0
	baz=241						
NWLT	Wulai	0.93 285		eP	Pn	22 31 43.7	+0.3
	baz=290						
NWLT				eS	Sn	22 31 57.7	-0.3
	baz=290						
TWD	Chiawan	0.94 241		⇑P	Pn	22 31 43.4	-0.1
	baz=236						
TWD				eS	Sn	22 31 57.6	-0.5
	baz=236						
HWA	Hwalien	0.99 235		eP	Pn	22 31 44.3	+0.3
	baz=229						
HWA				eS	Sn	22 31 59.2	+0.2
	baz=229						
YM07	YM07	1.01 309		eP	Pn	22 31 43.6	-0.8
	baz=299						
YM07				eS	Sn	22 31 58.2	-1.4
	baz=299						
NNSB	Datong	1.02 264		eP	Pn	22 31 44.8	+0.4
	baz=256						
NNSB				S	Sn	22 32 00.1	+0.2
	baz=256						
NNSH	Datong	1.02 264		eP	Pn	22 31 44.6	+0.1
	baz=258						
NNSH				eS	Sn	22 31 59.8	-0.1
	baz=258						
NNS	Nan Shan	1.03 265		eP	Pn	22 31 45.1	+0.5
	baz=258						
NNS				eS	Sn	22 31 59.9	-0.1
	baz=258						
YHNB	Yeheng	1.03 277		⇑P	Pn	22 31 45.2	+0.7
	baz=276						
YHNB				S	Sn	22 31 59.9	0.0
	baz=276						
ENLB	Shoufeng	1.03 232		P	Pn	22 31 44.7	+0.2
	baz=229						
ENLB				eS	Sn	22 32 00.5	+0.6
	baz=229						
YM11	YM11	1.04 307		eP	Pn	22 31 45.7	+1.0
	baz=298						
NSK	Sanguang	1.04 278		eP	Pn	22 31 45.4	+0.7
	baz=276						
NSK				eS	Sn	22 32 00.4	+0.2
	baz=276						
YM08	YM08	1.04 308		eP	Pn	22 31 44.8	+0.1
	baz=299						
YM10	YM10	1.04 306		eP	Pn	22 31 44.9	+0.2
	baz=296						
YM10				eS	Sn	22 31 59.4	-0.9
	baz=296						
YM12	YM12	1.05 307		eP	Pn	22 31 44.8	0.0
	baz=297						
YM04	YM04	1.06 305		eP	Pn	22 31 44.4	-0.5
	baz=296						
YM04				eS	Sn	22 31 59.7	-0.8
	baz=296						
YM03	YM03	1.07 306		eP	Pn	22 31 44.6	-0.5
	baz=296						
TWS1	Kuangyinshan	1.12 300		eP	Pn	22 31 44.8	-0.7
	baz=294						
TWS1				eS	Sn	22 32 01.5	-0.3
	baz=294						
IRIF	Iriomote-Funau	1.15 100		P	Pn	22 31 46.1	+0.3
IRIF				S	Sn	22 32 02.2	0.0
ESL	Shilin	1.21 233		eP	Pn	22 31 46.3	-0.2
	baz=228						
ESL				eS	Sn	22 32 02.1	-1.4
	baz=228						
TWT	Tachien	1.23 257		eP	Pn	22 31 48.4	+1.3
	baz=256						
TWT				eS	Sn	22 32 05.0	+0.6
	baz=256						
TDCB	Techi	1.25 257		⇑P	Pn	22 31 48.1	+0.9
	baz=256						
TDCB				eS	Sn	22 32 04.7	0.0
	baz=256						
HATJ	Hateruma jima	1.29 112		P	Pn	22 31 48.5	+1.0
HATJ				eS	Sn	22 32 04.6	-0.6
CHGB	Renai	1.30 249		⇑P	Pn	22 31 48.5	+0.7
	baz=242						
CHGB				S	Sn	22 32 05.6	-0.2
	baz=242						
EGFH	Guangfu	1.30 229		eP	Pn	22 31 47.8	0.0
	baz=228						
EGFH				eS	Sn	22 32 05.1	-0.5
	baz=228						
LIOB	Emei	1.35 275		eP	Pn	22 31 49.0	+0.8
	baz=274						
LIOB				eS	Sn	22 32 06.6	0.0
	baz=274						
NSTT	Nanjuang	1.36 274		eP	Pn	22 31 49.2	+0.8
	baz=273						
NSTT				eS	Sn	22 32 07.2	+0.4
	baz=273						
JKRS	Kuro-shima	1.41 102		P	Pn	22 31 49.8	+0.8
JKRS				S	Sn	22 32 08.0	+0.1
HGSD	Ruisui	1.43 223		⇑P	Pn	22 31 49.2	0.0
	baz=223						
HGSD				eS	Sn	22 32 07.6	-0.7
	baz=223						
VWDT	VWDT	1.46 238		⇑P	Pn	22 31 50.4	+0.8
	baz=233						
VWDT				S	Sn	22 32 08.7	-0.3
	baz=233						
JIJ	Ishigaki jima	1.51 96		P	Pn	22 31 50.5	+0.3
JIJ				S	Sn	22 32 09.3	-0.8
NMLH	Miaoli	1.55 270		eP	Pn	22 31 51.5	+0.8
	baz=269						
NMLH				eS	Sn	22 32 11.5	+0.5
	baz=269						
TWQ1	Liyutan	1.58 263		P	Pn	22 31 51.8	+0.7
	baz=262						
TWQ1				S	Sn	22 32 11.8	+0.1
	baz=262						
YULB	Yu-li	1.58 224		⇑P	Pn	22 31 50.8	-0.4
	baz=231						
YULB				eS	Sn	22 32 10.3	-1.4
	baz=231						
NSY	Sanyi	1.58 266		eP	Pn	22 31 52.1	+1.0
	baz=265						
NSY				eS	Sn	22 32 12.0	+0.3
	baz=265						
SSLB	Suanglung	1.59 242		eP	Pn	22 31 52.0	+0.7
	baz=239						
SSLB				eS	Sn	22 32 12.2	+0.2
	baz=239						
SMLT	Sun Moon Lake	1.60 246		eP	Pn	22 31 52.3	+0.9
	baz=239						
SMLT				eS	Sn	22 32 13.2	+1.1
	baz=239						
TWF1	Yuli	1.61 223		eP	Pn	22 31 51.2	-0.3
	baz=230						
TWF1				eS	Sn	22 32 11.0	-1.3
	baz=230						
TYC	Yuchr	1.62 247		eP	Pn	22 31 52.7	+1.0
	baz=241						
JISG	Ishigakijimahi	1.66 88		P	Pn	22 31 52.5	+0.5
JISG				S	Sn	22 32 12.7	-0.6
FULB	Fuli	1.73 220		P	Pn	22 31 53.0	0.0
	baz=214						
FULB				eS	Sn	22 32 14.2	-0.8
	baz=214						
WJS	Zhushan	1.77 246		eP	Pn	22 31 54.7	+1.3
	baz=257						
WJS				eS	Sn	22 32 17.6	+1.8
	baz=257						
CHKT	Chengkung	1.77 216		eP	Pn	22 31 53.0	-0.5
	baz=210						
CHKT				eS	Sn	22 32 14.0	-1.9
	baz=210						
WNT	Mingjian	1.78 249		eP	Pn	22 31 55.1	+1.5
	baz=257						
ELDTW	Lidau	1.91 225		⇑P	Pn	22 31 55.3	-0.1
	baz=223						
ELDTW				eS	Sn	22 32 18.4	-0.9
	baz=223						
WDLH	Douliu	1.98 245		eP	Pn	22 31 57.6	+1.5
	baz=255						
JTJ	Tarama	2.01 87		P	Pn	22 31 57.5	+0.9
JTJ				eS	Sn	22 32 21.5	0.0
TWH	Lutao	2.05 207		eP	Pn	22 31 57.0	-0.1
	baz=207						
TWH				eS	Sn	22 32 21.4	-0.9
	baz=207						
RLNB	Erlin	2.05 252		eP	Pn	22 31 57.8	+0.6
	baz=251						
STYT	Tauyuan	2.10 230		eP	Pn	22 31 59.1	+1.3
	baz=223						
TPUB	Ta-pu	2.11 234		eP	Pn	22 31 59.2	+1.3
	baz=234						
TPUB				eS	Sn	22 32 25.3	+1.5
	baz=234						
TWGBT	Beinan	2.15 217		eP	Pn	22 31 58.1	-0.3
	baz=223						
TWGBT				eS	Sn	22 32 23.3	-1.4
	baz=223						
WTP	Ta-pu	2.15 234		eP	Pn	22 31 59.9	+1.4
	baz=233						
WTP				eS	Sn	22 32 25.7	+0.9
	baz=233						
TWG	Pinlang	2.15 218		eP	Pn	22 31 58.0	-0.5
	baz=223						
TWG				eS	Sn	22 32 23.3	-1.5
	baz=223						
TWK	Hsinying	2.23 236		P	Pn	22 32 00.8	+1.2
	baz=235						
TWK				eS	Sn	22 32 28.2	+1.5
	baz=235						
CHN1	Nanshi	2.25 234		eP	Pn	22 32 01.2	+1.5
	baz=233						
CHN1				eS	Sn	22 32 28.5	+1.4
	baz=233						
WSF	Szhu	2.26 247		eP	Pn	22 32 00.2	+0.3
	baz=246						
SGST	Jiashian	2.27 231		eP	Pn	22 32 01.7	+1.6
	baz=239						
SLGT	Liugui	2.29 228		eP	Pn	22 32 02.0	+1.8
	baz=237						
MASBT	Mashibuluo	2.57 222		eP	Pn	22 32 05.5	+1.6
	baz=222						
LAY	Lan-yu	2.64 199		eP	Pn	22 32 04.4	-0.5
	baz=199						
LAY				eS	Sn	22 32 34.5	-1.8
	baz=199						
SCZT	Fangliau	2.76 219		eP	Pn	22 32 07.7	+1.2
	baz=230						
VWUC	VWUC	2.80 280		eP	Pn	22 32 06.9	-0.1
	baz=279						
PNG	Penghu	2.86 251		eP	Pn	22 32 07.3	-0.5
	baz=250						
PNG				eS	Sn	22 32 39.4	-2.1
	baz=250						
PHUB	P'eng-hu	2.86 250		eP	Pn	22 32 06.2	-1.6
	baz=249						
PHUB				eS	Sn	22 32 39.6	-1.9
	baz=249						
WDGT	Dungji	2.89 244		eP	Pn	22 32 08.6	+0.4
	baz=244						
TWKBT	Hengchun	3.02 211		eP	Pn	22 32 10.7	+0.7
	baz=211						
TWK1	Hengchun	3.02 211		eP	Pn	22 32 10.7	+0.7
	baz=211						
VCHM	Qimei	3.10 245		eP	Pn	22 32 10.8	-0.3
	baz=237						

*ISCJB **06** 22:39:00.6±0.4, 51°.56N±0°.09×96°.04E±0°.05, h10km, mb4.1/12, MS2.8/1, Error ellipse: s-maj=13.2km s-min=4.2km az=2.3*
*MOS **06** 22:39:00.9±1.5, 51°.56N×96°.03E, h13km, mb4.2/5, Error ellipse: s-maj=12.4km s-min=8.6km az=12.7*
*IDC **06** 22:39:00.3±0.8, 51°.68N×96°.28E, h0km, mb3.9/6, mb1 3.8/10, mb1mx3.5/78, mbtmp3.7/10, ML3.0/4, MS2.7/2, Ms1 2.7/2, ms1mx2.3/77, Error ellipse: s-maj=22.2km s-min=9.4km az=179.0*
*NEIC **06** 22:39:00.9±0.5, 51°.58N×96°.44E, h10km, mb4.0/4, Error ellipse: s-maj=12.6km s-min=6.5km az=185.0*
*ASRS **06** 22:39:04.8±1.7, 51°.84N×95°.79E, h15km, Ms3.2/1*
ISC 06 22:39:01.7±0.5, 51°.56N±0°.08×96°.06E±0°.03, h10km, n55, σ0=31/60, mb4.0/12, 1C, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZLR	Kyzyl	1.01 279		ePg	Pb	22 39 20.3	-1.0
KZLR				eSg	Sg	22 39 33.0	-1.2
KZLR	Kyzyl	1.01 279		ePG	Pb	22 39 20.3	-1.0
KZLR				e		22 39 33.1	
ORL	Orlik	2.52 66		ePN	Pb	22 39 45.1	-1.9
ORL				e		22 40 17.7	
ORL				pmax	pmax		
	comp=Z,172nm,0.3s						
ORL				smax	smax		
	comp=N,597nm,0.8s						
MOY	Mondy	3.08 86		ePN	Pb	22 39 56.7	0.0
MOY				e		22 40 37.3	
MOY				pmax	pmax		
	comp=Z,133nm,1.1s						
MOY				smax	smax		
	comp=N,626nm,1.2s						
CERR	Cheremushki	3.13 296		ePn	Pn	22 39 52.5	+1.3
CERR				ePg	Pb	22 39 56.0	-1.5

CERR				*e*Sg	**Sb**	**22 40 33.7**	**-2.0**
CERR	**Cheremushki**	**3.13**	**296**	*e*PN	**Pn**	**22 39 52.5**	**+1.3**
CERR				*e*		22 40 33.7	
ARS	**Arshan**	**3.97**	**82**	*e*PN	**Pg**	**22 40 14.5**	**-3.3**
ARS				*e*		22 41 03.7	
ARS				pmax	pmax		
	comp=Z,170nm,1.1s						
ARS				smax	smax		
	comp=E,781nm,0.8s						
ZAK	**Zakamensk**	**4.72**	**102**	*e*PN	**Pb**	**22 40 25.8**	**+1.3**
ZAK				*e*		22 41 27.1	
ZAK				pmax	pmax		
	comp=Z,42nm,0.9s						
ZAK				smax	smax		
	comp=N,192nm,1.2s						
TLY	**Talaya**	**4.73**	**86**	Pg	**Pb**	**22 40 20.9**	**-3.8**
	comp=N,0.0nm,0.3s,baz=357,slow=2.7,SNR=3.9						
TLY				Lg	Lg	22 41 27.5	
	comp=N,0.0nm,0.3s,baz=130,slow=9.8,SNR=3.6						
TLY	**Talaya**	**4.73**	**86**	*e*Pg	**Pb**	**22 40 25.9**	**+1.2**
TLY				*e*Sg	**Sb**	**22 41 26.7**	**+5.0**
TLY				Lg	Lg	22 41 27.5	
TLY	**Talaya**	**4.73**	**86**	*i* PN	**Pn**	**22 40 13.8**	**+0.7**
IRK	**Irkutsk**	**5.13**	**79**	*e*PN	**Pb**	**22 40 34.0**	**+2.4**
IRK				*e*		22 41 38.3	
IRK				pmax	pmax		
	comp=Z,129nm,0.2s						
IRK				smax	smax		
	comp=N,648nm,0.5s						
TASR	**Tashtagol**	**5.17**	**287**	*e*Pn	**Pn**	**22 40 21.2**	**+2.1**
TASR				*e*Pg	**Pb**	**22 40 35.1**	**+2.8**
TASR				*e*Sg	**Sb**	**22 41 38.9**	**+4.5**
TASR	**Tashtagol**	**5.17**	**287**	*e*PN	**Pn**	**22 40 21.3**	**+2.1**
TASR				*e*		22 40 35.1	
TASR				*e*		22 41 38.9	
ELT	**Eltsovka**	**6.24**	**290**	*e*Pn	**Pn**	**22 40 35.1**	**+1.2**
ELT				*e*Pg	**Pb**	**22 41 49.4**	**-1.1**
ELT				*e*Sg	**Sb**	**22 42 11.4**	**+6.3**
ELT	**Eltsovka**	**6.24**	**290**	*e*PN	**Pn**	**22 40 35.1**	**+1.2**
ELT				*e*		22 42 11.4	
TRG	**Tyrgan**	**6.45**	**75**	*e*PN	**Pn**	**22 40 37.1**	**+0.4**
TRG				*e*		22 40 57.0	
TRG				*e*		22 42 17.8	
TRG				pmax	pmax		
	comp=Z,20nm,0.6s						
TRG				smax	smax		
	comp=N,211nm,1.2s						
UKR	**Ust'-Kan**	**7.11**	**269**	*e*Pg	**Pg**	**22 41 13.3**	**-4.5**
UKR				*e*Sg	Sb	22 42 38.1	+7.9
UKR	**Ust'-Kan**	**7.11**	**269**	*e*P[3]	**Pg**	**22 41 13.3**	**-4.5**
UKR				*e*		22 42 38.1	
ZALV	**Zalesovo Beam**	**7.23**	**294**	Pn	**Pn**	**22 40 49.2**	**+1.9**
	comp=N,0.6nm,0.3s,baz=108,slow=12,SNR=12						
ZALV				Lg	Lg	22 42 42.0	
	comp=N,2.4nm,0.3s,baz=114,slow=15,SNR=3.9						
OGRR	**Ongureny**	**7.33**	**69**	*e*P	**Pn**	**22 40 51.9**	**+3.1**
SONM	**Songino Array**	**7.67**	**115**	Pg	Pb	22 41 19.7	+4.8
	comp=N,0.7nm,0.3s,baz=302,slow=18,SNR=9.7						
SONM				Lg	Lg	22 43 03.3	
	comp=N,2.3nm,0.3s,baz=300,slow=27,SNR=5.5						
ULN	**Ulaanbaatar**	**8.03**	**113**	*i* P	**Pn**	**22 41 01.8**	**+3.3**
NVS	**Novosibirsk**	**8.37**	**298**	*e*Pg	Pb	22 41 32.2	+5.7
NVS				*e*Sg	Sg	22 43 18.4	-12
NVS	**Novosibirsk**	**8.37**	**298**	*e*P	Pn	22 41 13.3	+10
NIZ	**Nizh Angarsk**	**9.04**	**57**	*e*P	**Pn**	**22 41 13.2**	**+0.9**
MKAR	**Makanchi Array**	**10.20**	**247**	Pn	**Pn**	**22 41 30.8**	**+2.8**
	comp=N,0.3nm,0.3s,baz=58,slow=14,SNR=13						
MKAR				Lg	Lg	22 44 25.4	
	comp=N,0.5nm,0.3s,baz=58,slow=32,SNR=5.4						
MKAR				LR	LR	22 45 52.0	
	comp=N,28nm,21.4s,baz=3.5,slow=40						
KURK	**Kurchatov**	**10.99**	**272**	Pn	**Pn**	**22 41 40.8**	**+1.9**
KURK				Lg	Lg	22 44 57.8	
KURK	**Kurchatov**	**10.99**	**272**	*i* P	**Pn**	**22 41 40.9**	**+2.0**
KURBB	**Kurchatov Arra**	**11.06**	**272**	Pn	**Pn**	**22 41 40.8**	**+0.9**
	comp=N,0.1nm,0.3s,baz=79,slow=6.9,SNR=2.8						
KURBB				Lg	Lg	22 44 57.8	
	comp=N,0.2nm,0.3s,baz=73,slow=30,SNR=7.3						
HIA	**Hailar**	**15.26**	**89**	*i* P	**P**	**22 42 40.0**	**-2.0**
HIA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BVAR	**Borovoye Array**	**15.75**	**285**	Pn	**Pn**	**22 42 41.4**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=82,slow=10,SNR=4.5						
BRVK	**Borovoye**	**15.81**	**286**	*e*P	**P**	**22 42 46.0**	**-2.1**
	comp=Z,5.5nm,0.6s						
BRVK	**Borovoye**	**15.81**	**286**	*i* P	**P**	**22 42 46.4**	**-1.7**
AAK	**Ala-Archa**	**17.13**	**247**	Lg	Lg	22 48 07.7	
	comp=Z,0.3nm,0.3s,baz=183,slow=14,SNR=2.6						
ARU	**Arti**	**22.37**	**297**	*e*P	**P**	**22 44 01.6**	**+1.8**
	comp=Z,4.7nm,0.9s						
ARU	**Arti**	**22.37**	**297***c*	*i* P	**P**	**22 44 01.1**	**+1.4**
ARU						22 44 20.0	
ARU				S	**S**	**22 48 09.2**	**+3.9**
ARU				SS	**SnSn**	**22 48 34.8**	**+2.0**
ARU				pmax	pmax		
	comp=Z,4.0nm,1.0s						
AKTO	**Aktyubinsk**	**23.79**	**282**	P	**P**	**22 44 14.8**	**+0.5**
	comp=Z,2.6nm,0.6s,baz=84,slow=13,SNR=7.9						
TIXI	**Tiksi**	**24.88**	**24**	P	**P**	**22 44 23.6**	**-0.5**
	comp=Z,2.8nm,0.3s,baz=249,slow=5.8,SNR=15						
TIXI	**Tiksi**	**24.88**	**24**	*e*P	**P**	**22 44 23.7**	**-0.4**
KSRS	**Korea Array**	**26.50**	**110**	LR	LR	22 54 30.4	
	comp=Z,25nm,20.6s,baz=167,slow=35						
YSS	**Yuzh-Sakhalins**	**30.41**	**80**	*i* P	**P**	**22 45 15.3**	**+1.4**
YSS				pmax	pmax		
	comp=Z,14nm,1.3s						
MA2	**Magadan**	**31.13**	**53**	*i* P	**P**	**22 45 18.6**	**-1.5**
MA2				pmax	pmax		
	comp=Z,6.0nm,1.2s						
CHTO	**Chiang Mai**	**32.76**	**175**	*e*P	**P**	**22 45 33.7**	**-1.1**
	comp=Z,1.2nm,0.5s						
CHTO	**Chiang Mai**	**32.76**	**175**	*e*P	**P**	**22 45 33.7**	**-1.1**
CHTO				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARCES	**ARCESS Array B**	**36.44**	**326**	P	**P**	**22 46 05.9**	**-0.3**
	comp=Z,2.6nm,1.0s,baz=94,slow=10.0,SNR=4.1						
FINES	**FINESS Array B**	**38.02**	**313**	P	**P**	**22 46 19.2**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=67,slow=11,SNR=6.5						
CBIJ	**Chichi jima**	**42.30**	**107**	P	**P**	**22 46 53.4**	**-2.1**
JCJ	**Chichijima**	**42.30**	**107**	P	**P**	**22 46 53.4**	**-2.1**
	comp=Z,54nm,0.4s,baz=303,slow=17,SNR=4.1						
BRTR	**Keskin Array B**	**43.93**	**280**	P	**P**	**22 47 10.5**	**+1.8**
	comp=Z,0.8nm,0.8s,baz=81,slow=7.6,SNR=4.9						
NB2	**NORSAR Subarra**	**44.78**	**317**	P	**P**	**22 47 14.8**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=66,slow=9.3						
NOA	**NORSAR Array B**	**44.78**	**317**	P	**P**	**22 47 15.0**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=70,slow=8.9,SNR=6.5						
NOA	**NORSAR Array B**	**44.78**	**317**	P	**P**	**22 47 15.0**	**-0.2**
GRFO	**Grafenberg**	**50.91**	**304**	*e*P	**P**	**22 48 03.9**	**+1.2**
	comp=Z,2.0nm,0.6s						
GRFO	**Grafenberg**	**50.91**	**304**	*e*P	**P**	**22 48 03.9**	**+1.2**
GRFO				pmax	pmax		
	comp=Z,2.0nm,0.6s						

*IDC **06** 22:40:42.6±2.3, 37°.38N×141°.81E, h0km, mb3.5/3, mb1 3.5/4, mb1mx3.3/74, mbtmp3.4/4, ML2.9/1, MS3.5/1, Ms1 3.5/1, ms1mx2.4/58, Error ellipse: s-maj=43.5km s-min=34.4km az=65.0*

*JMA **06** 22:40:44.6±0.1, 37°.37N×141°.69E, h27km±2km, M3.4*

ISC 06 22:40:43.1±2.1, 37°.38N±0°.05×141°.74E±0°.08, h6km±11km, n21, σ1$09/23, mb3.4/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.69**	**269**	P	**Pg**	**22 40 57.3**	**+0.9**
JFK				*e*S	**Sg**	**22 41 05.5**	**+0.1**
ONAJ	**Iwakimizuishiy**	**0.80**	**250**	P	**Pg**	**22 40 58.8**	**+0.3**
ONAJ				*e*S	**Sg**	**22 41 09.3**	**+0.3**
JMM	**Marumori**	**0.90**	**303**	P	**Pg**	**22 41 00.4**	**+0.1**
JMM				*e*S	**Sg**	**22 41 11.4**	**-0.5**
JIO	**Ouri**	**1.12**	**344**	P	**Pb**	**22 41 04.4**	**-0.4**
JIO				*e*S	**Sb**	**22 41 18.9**	**-0.7**
JFT	**Otama**	**1.13**	**277**	P	**Pb**	**22 41 04.7**	**-0.3**
JFT				*e*S	**Sb**	**22 41 18.4**	**-1.5**
JHO	**Hitachi**	**1.21**	**231**	P	**Pn**	**22 41 05.0**	**-1.6**
JHO				*e*S	**Sb**	**22 41 20.1**	**-2.3**
JOU	**Okura**	**1.30**	**319**	P	**Pn**	**22 41 07.8**	**-0.1**
JOU				S	**Sb**	**22 41 24.1**	**-0.9**
JMK	**Ichinoseki**	**1.62**	**345**	P	**Pb**	**22 41 12.7**	**-0.7**
JFY	**Yanaizu**	**1.62**	**272**	P	**Pn**	**22 41 12.2**	**-0.1**
MJAR	**Matsushiro Arr**	**2.95**	**255**	Pn	**Pn**	**22 41 31.7**	**+1.1**
	1.8nm,0.3s,baz=77,slow=14,SNR=14						
MJAR				Sn	**Sn**	**22 42 07.4**	**+1.1**
	3.6nm,0.3s,baz=86,slow=28,SNR=6.6						
MAT	**Matsushiro**	**2.95**	**255**	P	**Pn**	**22 41 32.9**	**+2.3**
MAT				*e*S	**Sn**	**22 42 05.9**	**-0.4**
H11N2	**WAKE ISLAND Hy**	**28.10**	**122**	T	T	23 16 05.2	
	baz=314,slow=75,SNR=46						
H11N1	**WAKE ISLAND Hy**	**28.11**	**122**	T	T	23 16 03.2	
	baz=314,slow=75,SNR=42						
H11N3	**WAKE ISLAND Hy**	**28.12**	**122**	T	T	23 16 06.4	
	baz=314,slow=75,SNR=48						
H11S1	**WAKE ISLAND Hy**	**28.83**	**124**	T	T	23 16 59.9	
	baz=316,slow=76,SNR=22						
H11S3	**WAKE ISLAND Hy**	**28.83**	**124**	T	T	23 17 00.5	
	baz=316,slow=76,SNR=27						
H11S2	**WAKE ISLAND Hy**	**28.85**	**124**	T	T	23 17 01.8	
	baz=316,slow=76,SNR=19						
MKAR	**Makanchi Array**	**44.16**	**302**	P	**P**	**22 48 53.1**	**+0.5**
	0.4nm,0.6s,baz=88,slow=9.5,SNR=3.1						
KURBB	**Kurchatov Arra**	**45.99**	**308**	P	**P**	**22 49 07.5**	**+0.5**
	0.4nm,0.4s,baz=81,slow=7.6,SNR=2.2						
WRA	**Warramunga Arr**	**57.44**	**188**	P	**P**	**22 50 33.2**	**+0.4**
	0.2nm,0.5s,baz=6.7,slow=7.2,SNR=3.2						
DLBC	**Dease Lake**	**58.19**	**38**	LR	LR	23 14 47.7	
	comp=Z,44nm,20.1s,baz=201,slow=35						

*MOS **06** 22:48:40.4±1.0, 54°.11N×169°.02E, h12km, mb4.1/3, Error ellipse: s-maj=17.3km s-min=9.5km az=14.4*

*IDC **06** 22:48:41.9±2.3, 54°.45N×169°.02E, h0km, mb3.6/6, mb1 3.7/7, mb1mx3.4/84, mbtmp3.6/7, ML2.8/1, Error ellipse: s-maj=66.5km s-min=24.6km az=176.0*

*ISCJB **06** 22:48:43.1±0.8, 54°.11N±0°.08×168°.80E±0°.08, h25km, mb3.5/6, Error ellipse: s-maj=11.4km s-min=6.9km az=177.5*

*KRSC **06** 22:48:44.5±1.4, 53°.99N×168°.14E, h7km±30km, ML4.0*

ISC 06 22:48:44.2±1.0, 54°.10N±0°.09×168°.85E±0°.08, h25km, n47, σ1$61/48, mb3.4/6, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**2.01**	**305**	*e*P	**Pn**	**22 49 15.1**	**-1.3**
BKI				*e*S	**Sn**	**22 49 39.3**	**-1.4**
BKI	**Bering**	**2.01**	**305**	PN	**Pn**	**22 49 15.1**	**-1.3**
BKI				S	**Sn**	**22 49 39.3**	**-1.4**
KBTR	**Krutoberegovo**	**4.06**	**304**	*e*P	**Pn**	**22 49 45.8**	**+1.3**
KBTR	**Krutoberegovo**	**4.06**	**304**	PN	**Pn**	**22 49 45.8**	**+1.3**
MKZ	**Mys Kozlova**	**4.20**	**279**	*e*P	**Pn**	**22 49 46.5**	**+0.1**
MKZ				*e*S	**Sn**	**22 50 31.9**	**-2.7**
MKZ	**Mys Kozlova**	**4.20**	**279**	PN	**Pn**	**22 49 46.5**	**+0.1**
ZLN	**Zelenaya**	**5.01**	**296**	*e*P	**Pn**	**22 49 59.8**	**+2.0**
ZLN	**Zelenaya**	**5.01**	**296**	PN	**Pn**	**22 49 59.8**	**+2.0**
TUMD	**Tumrok D**	**5.03**	**286**	*e*P	**Pn**	**22 50 00.2**	**+2.2**
TUMD				*e*S	**Sn**	**22 50 56.1**	**+0.8**
BZGR	**Bezymyannyi-Gr**	**5.04**	**295**	*e*S	**Sn**	**22 50 56.1**	**+0.4**
KZV	**Kizimen**	**5.08**	**285**	*e*P	**Pn**	**22 50 00.7**	**+2.0**
KZV	**Kizimen**	**5.08**	**285**	PN	**Pn**	**22 50 00.7**	**+2.0**
TUMR	**Turok**	**5.19**	**287**	PN	**Pn**	**22 50 00.2**	**0.0**
KMNR	**Kamenistaya**	**5.24**	**292**	*e*P	**Pn**	**22 50 03.2**	**+2.3**
KMNR	**Kamenistaya**	**5.24**	**292**	PN	**Pn**	**22 50 03.2**	**+2.3**
SPN	**Mys Shipunski**	**5.35**	**263**	*e*P	**Pn**	**22 50 02.7**	**+0.4**
SPN				*e*S	**Sn**	**22 51 00.3**	**-2.8**
SPN	**Mys Shipunski**	**5.35**	**263**	PN	**Pn**	**22 50 02.7**	**+0.4**
NLC	**Nalytchevo**	**5.73**	**265**	*e*S	**Sn**	**22 51 10.8**	**-1.6**
SDLR	**Sedlovina**	**5.98**	**266**	*e*P	**Pn**	**22 50 12.1**	**+1.0**
SDLR	**Sedlovina**	**5.98**	**266**	PN	**Pn**	**22 50 12.1**	**+1.0**
UGLR	**Uglovaya**	**6.03**	**266**	*e*P	**Pn**	**22 50 13.0**	**+1.2**
UGLR	**Uglovaya**	**6.03**	**266**	PN	**Pn**	**22 50 13.0**	**+1.2**
KRER	**Koryakskii**	**6.05**	**267**	*e*P	**Pn**	**22 50 13.3**	**+1.1**
KRER	**Koryakskii**	**6.05**	**267**	PN	**Pn**	**22 50 13.3**	**+1.1**
AVH	**Avacha**	**6.07**	**266**	*e*P	**Pn**	**22 50 13.6**	**+1.3**
AVH	**Avacha**	**6.07**	**266**	PN	**Pn**	**22 50 13.6**	**+1.3**
RUS	**Russkaya**	**6.42**	**259**	*e*P	**Pn**	**22 50 18.9**	**+1.9**
RUS	**Russkaya**	**6.42**	**259**	PN	**Pn**	**22 50 18.9**	**+1.9**
GNL	**Ganaly**	**6.46**	**271**	*e*P	**Pn**	**22 50 19.7**	**+2.0**
GNL	**Ganaly**	**6.46**	**271**	PN	**Pn**	**22 50 19.7**	**+2.0**
PETK	**Petropavlovsk-**	**6.71**	**266**	Pn	**Pn**	**22 50 23.4**	**+2.3**
	0.8nm,0.3s,baz=89,slow=20,SNR=5.7						
PETK				Sn	**Sn**	**22 51 37.0**	**+0.4**
	0.9nm,0.3s,baz=88,slow=20,SNR=4.1						
ASAK	**Asacha**	**6.79**	**260**	*e*P	**Pn**	**22 50 23.8**	**+1.6**
ASAK	**Asacha**	**6.79**	**260**	PN	**Pn**	**22 50 23.8**	**+1.6**
KDTR	**Khodutka, Kamc**	**6.90**	**255**	*e*P	**Pn**	**22 50 24.2**	**+0.6**
KDTR				*e*S	**Sn**	**22 51 38.2**	**-3.0**
ILAR	**Eielson Array**	**24.37**	**46**	P	**P**	**22 53 58.0**	**-1.7**
	0.3nm,0.6s,baz=254,slow=6.9,SNR=6.8						
ILAR	**Eielson Array**	**24.37**	**46**	P	**P**	**22 53 58.1**	**-1.7**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**34.34**	**183**	T	T	23 32 00.7	
	baz=2.1,slow=76,SNR=111						
H11N3	**WAKE ISLAND Hy**	**34.35**	**183**	T	T	23 32 00.8	
	baz=2.1,slow=76,SNR=75						
H11N1	**WAKE ISLAND Hy**	**34.35**	**183**	T	T	23 31 59.4	
	baz=2.1,slow=76,SNR=129						
H11S1	**WAKE ISLAND Hy**	**35.56**	**184**	T	T	23 33 30.4	
	baz=2.0,slow=76,SNR=33						
H11S3	**WAKE ISLAND Hy**	**35.57**	**184**	T	T	23 33 29.5	
	baz=2.0,slow=76,SNR=29						
H11S2	**WAKE ISLAND Hy**	**35.58**	**184**	T	T	23 33 32.1	
	baz=2.0,slow=76,SNR=46						
MKAR	**Makanchi Array**	**52.30**	**300**	P	**P**	**22 57 53.3**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=50,slow=8.0,SNR=3.2						
BVAR	**Borovoye Array**	**53.72**	**312**	P	**P**	**22 58 04.3**	**+0.6**
	comp=Z,1.4nm,0.5s,baz=38,slow=10,SNR=11						
ARCES	**ARCESS Array B**	**53.82**	**345**	P	**P**	**22 58 03.3**	**-0.8**
	comp=Z,1.4nm,0.7s,baz=17,slow=8.9,SNR=5.9						
TXAR	**Lajitas Array**	**65.39**	**74**	P	**P**	**22 59 25.1**	**+0.5**
	comp=Z,0.2nm,0.7s,baz=290,slow=3.7,SNR=3.7						
BRTR	**Keskin Array B**	**78.93**	**326**	P	**P**	**23 00 46.8**	**+1.4**
	comp=Z,0.3nm,0.7s,baz=9.5,slow=1.8,SNR=2.6						

*ISCJB **06** 22:58:21.8±0.4, 37°.13N±0°.05×139°.41E±0°.09, h150km±3km, mb3.8/13, Error ellipse: s-maj=11.4km s-min=7.4km az=9.9*

*IDC **06** 22:58:22.2±1.3, 37°.20N×139°.45E, h137km±9km, mb3.7/13, mb1 3.7/17, mb1mx3.4/81, mbtmp4.1/17, Error ellipse: s-maj=23.2km s-min=16.9km az=86.0*

*JMA **06** 22:58:23.3±0.1, 37°.14N×139°.35E, h145km±2km, M3.3*

ISC 06 22:58:22.7±0.8, 37°.19N±0°.05×139°.53E±0°.08, h148km±5km, n31, σ1$64/42, mb4.0/13, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFY	**Yanaizu**	**0.26**	**33**	P	**Pn**	**22 58 43.7**	**+0.8**
JFY				S	**Sn**	**22 58 58.8**	**+0.4**
JSB	**Shiboa**	**0.38**	**125**	P	**Pn**	**22 58 44.5**	**+1.1**
JHK	**Hiroka**	**0.41**	**279**	P	**Pn**	**22 58 43.1**	**-0.3**
JHK				S	**Sn**	**22 58 57.8**	**-1.4**
JKT	**Katashina**	**0.47**	**208**	P	**Pn**	**22 58 43.4**	**-0.5**
JKT				S	**Sn**	**22 58 59.2**	**-0.7**
JNS	**Sasagawa**	**0.65**	**345**	P	**Pn**	**22 58 45.0**	**+0.3**
JNS				S	**Sn**	**22 59 01.1**	**-0.4**
JFT	**Otama**	**0.72**	**63**	P	**Pn**	**22 58 46.9**	**+1.7**
JAG	**Ashikaga**	**0.76**	**184**	P	**Pn**	**22 58 45.4**	**-0.1**
MJAR	**Matsushiro Arr**	**1.24**	**239**	P	**Pn**	**22 58 48.6**	**-0.8**
	81nm,0.3s,baz=48,slow=7.8,SNR=898						
MJAR				S	**Sn**	**22 59 06.7**	**-3.2**
	7.6nm,0.3s,baz=2.0,slow=33,SNR=24						
MAT	**Matsushiro**	**1.24**	**239**	P	**Pn**	**22 58 48.8**	**-0.7**
MAT				S	**Sn**	**22 59 08.0**	**-1.9**
MAT	**Matsushiro**	**1.24**	**239**	P	**Pn**	**22 58 48.8**	**-0.7**
MAT				S	**Sn**	**22 59 08.0**	**-1.9**
JRY	**Ryogami san**	**1.27**	**203**	P	**Pn**	**22 58 49.6**	**-0.2**
JRY				S	**Sn**	**22 59 09.0**	**-1.6**
JAW	**Awa shima**	**1.29**	**350**	P	**Pn**	**22 58 50.8**	**+0.9**
JSD	**Sado**	**1.31**	**311**	P	**Pn**	**22 58 49.5**	**-0.7**
JHJ	**Hachijo jima 2**	**4.06**	**177**	P	**Pn**	**22 59 23.1**	**-0.7**
	90nm,0.3s,baz=320,slow=1.8,SNR=8.0						
JHJ				S	**Sn**	**23 00 08.0**	**-3.2**
	49nm,0.3s,baz=57,slow=23,SNR=6.5						
ASAJ	**Asahikawa**	**7.30**	**18**	P	**Pn**	**23 00 05.1**	**-1.6**
	1.8nm,0.3s,baz=214,slow=9.3,SNR=6.7						
ASAJ				S	**Sn**	**23 01 21.2**	**-7.1**
	0.5nm,0.3s,baz=191,slow=10,SNR=1.8						
USRK	**Ussuriysk Ar.**	**9.04**	**323**	P	**Pn**	**23 00 30.2**	**+0.3**
	0.5nm,0.3s,baz=108,slow=15,SNR=5.7						
KSRS	**Korea Array**	**9.25**	**275**	P	**Pn**	**23 00 33.8**	**+1.2**
	0.3nm,0.3s,baz=90,slow=14,SNR=11						
SONM	**Songino Array**	**26.45**	**304**	P	**P**	**23 03 44.9**	**-0.9**
	4.6nm,0.6s,baz=106,slow=8.9,SNR=32						
TIXI	**Tiksi**	**34.97**	**354**	P	**P**	**23 05 00.1**	**+0.1**
	2.2nm,0.5s,baz=133,slow=4.5,SNR=8.8						
ZALV	**Zalesovo Beam**	**40.70**	**312**	P	**P**	**23 05 47.4**	**-1.0**
	1.4nm,0.4s,baz=94,slow=7.0,SNR=9.5						
MKAR	**Makanchi Array**	**42.76**	**302**	P	**P**	**23 06 05.3**	**+0.1**
	0.7nm,0.6s,baz=85,slow=10,SNR=10						
MKAR				PcP	**PcP**	**23 07 53.9**	**0.0**
	0.3nm,0.7s,baz=93,slow=2.9,SNR=2.6						
KURBB	**Kurchatov Arra**	**44.72**	**308**	P	**P**	**23 06 21.0**	**+0.2**
	6.2nm,0.6s,baz=82,slow=7.7,SNR=51						
WRA	**Warramunga Arr**	**57.03**	**186**	P	**P**	**23 07 53.7**	**+0.6**
	0.4nm,0.8s,baz=0.7,slow=7.4,SNR=3.6						
AKTO	**Aktyubinsk**	**57.45**	**311**	P	**P**	**23 07 56.2**	**+0.4**
	1.6nm,0.7s,baz=76,slow=13,SNR=5.4						
ARCES	**ARCESS Array B**	**63.32**	**339**	P	**P**	**23 08 35.9**	**+0.7**
	1.6nm,0.7s,baz=58,slow=7.6,SNR=6.2						
FINES	**FINESS Array B**	**67.97**	**332**	P	**P**	**23 09 05.8**	**+0.6**
	1.6nm,0.7s,baz=49,slow=6.3,SNR=7.6						
AKASG	**Malin Array Be**	**73.25**	**321**	P	**P**	**23 09 38.0**	**+0.7**
	1.0nm,0.4s,baz=49,slow=5.6,SNR=6.7						
NB2	**NORSAR Subarra**	**73.45**	**337**	P	**P**	**23 09 39.1**	**+0.7**
	comp=Z,2.9nm,0.8s,baz=42,slow=6.2						
NOA	**NORSAR Array B**	**73.45**	**337**	P	**P**	**23 09 39.3**	**+0.9**
	comp=Z,1.4nm,0.6s,baz=44,slow=6.0,SNR=9.9						
BRTR	**Keskin Array B**	**77.61**	**311**	P	**P**	**23 10 03.6**	**+0.9**
	comp=Z,0.4nm,0.6s,baz=145,slow=4.5,SNR=4.1						
GERES	**GERESS Array B**	**81.78**	**327**	P	**P**	**23 10 25.4**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=16,slow=6.9,SNR=4.6						

IDC 06 23:08:52.3±2.0, 16°.03S×178°.29W, h0km, mb3.7/4, mb1 4.1/4, mb1mx3.7/50, mbtmp3.7/4, Error ellipse: s-maj=118.7km s-min=26.7km az=151.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.11**	**258**	P	P	23 17 11.1	+0.3
	0.4nm,0.4s,baz=95,slow=7.4,SNR=9.9						
ASAR	**Alice Springs**	**45.44**	**252**	P	P	23 17 12.9	-0.4
	3.7nm,0.6s,baz=87,slow=8.5,SNR=32						
ILAR	**Eielson Array**	**84.04**	**13**	P	P	23 21 23.9	-0.5
	0.2nm,0.5s,baz=227,slow=3.6,SNR=2.6						
TXAR	**Lajitas Array**	**84.90**	**58**	P	P	23 21 30.0	+0.4
	0.2nm,0.6s,baz=220,slow=6.8,SNR=3.1						

IDC 06 23:28:11.6±8.9, 24°.32S×179°.76E, h571km±81km, mb3.2/5, mb1 3.3/6, mb1mx3.0/47, mbtmp4.3/6, Error ellipse: s-maj=106.4km s-min=49.0km az=140.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.45**	**278**	P	P	23 30 54.9	-0.2
	1.3nm,0.3s,baz=90,slow=18,SNR=9.1						
CTA	**Charters Tower**	**31.26**	**271**	P	P	23 33 46.3	+0.4
	5.3nm,0.5s,baz=94,slow=10,SNR=10						
STKA	**Stephens Creek**	**34.37**	**249**	P	P	23 34 11.3	-0.6
	1.0nm,0.5s,baz=103,slow=10,SNR=4.5						
ASAR	**Alice Springs**	**41.75**	**261**	P	P	23 35 11.8	-0.3
	0.7nm,0.5s,baz=95,slow=6.9,SNR=9.7						
WRA	**Warramunga Arr**	**42.16**	**267**	P	P	23 35 14.8	-0.5
	2.3nm,0.5s,baz=101,slow=8.3,SNR=24						
FITZ	**Fitzroy Crossi**	**50.58**	**266**	P	P	23 36 19.1	+0.3
	2.9nm,0.7s,baz=117,slow=6.8,SNR=3.1						
HFS	**Hagfors**	**142.91**	**348**	PKP	PKPdf	23 46 38.4	-1.8
	1.4nm,0.4s,baz=35,slow=3.5,SNR=23						
EKA	**Eskdalemuir Ar**	**148.95**	**3**	PKPbc	PKPbc	23 46 55.5

URZ	Urewera	16.78	203	ePn		P	00 06 24.9	-0.9
	69nm,1.4s							
URZ				S		Sn	00 09 15.4	-14
DZM	Mont Dzumac	17.46	269	eP		P	00 06 35.7	+2.1
	116nm,0.9s							
DZM	Mont Dzumac	17.46	269	P		P	00 06 35.6	+2.1
	1.0nm,0.3s,baz=88,slow=16,SNR=15							
DZM	Mont Dzumac	17.46	269	ePn		P	00 06 36.3	+2.8
	45nm,0.8s							
TBI	Tubuai	23.19	96	eLQ		LQ	00 11 41.4	
	670nm,27.2s							
TBI				eLR		LR	00 12 39.2	
	536nm,31.5s							
RPZ	Rata Peaks	23.81	206	P		P	00 07 40.8	-0.3
	25nm,0.8s,baz=278,slow=4.1,SNR=8.2							
PPT2	Papeete2	24.14	82	eLQ		LQ	00 12 12.1	
	722nm,28.0s							
PPT2				eLR		LR	00 13 02.4	
	422nm,30.2s							
PPT	Papeete	24.14	82	LR		LR	00 15 58.1	
	comp=Z,294nm,18.5s,baz=262,slow=33							
DCZ	Deep Cove	26.88	209	eP		P	00 08 10.9	+1.9
	50nm,1.1s							
HNR	Honiara	27.77	295	LR		LR	00 19 36.6	
	comp=Z,226nm,18.6s,baz=161,slow=37							
ARMA	Armidale	30.91	249	eP		P	00 08 45.1	-0.1
	20nm,1.0s							
EIDS	Eidsvold	31.28	259	eP		P	00 08 47.7	-0.6
	24nm,1.1s							
CTA	Charters Tower	36.38	267	P		P	00 09 32.4	-0.3
	44nm,0.7s,baz=95,slow=10,SNR=61							
CTA				pP		pP	00 09 45.0	+0.9
	22nm,0.5s,baz=101,slow=10,SNR=8.9							
CTAO	Charters Tower	36.38	267	eP		P	00 09 32.4	-0.3
CTAO	Charters Tower	36.38	267	eP		P	00 09 32.4	-0.3
PMG	Port Moresby	38.91	284	P		P	00 09 53.6	-0.6
	39nm,1.0s,baz=124,slow=9.2,SNR=3.0							
PMG	Port Moresby	38.91	284	eP		P	00 09 53.3	-0.8
	54nm,1.1s							
PMG	Port Moresby	38.91	284	eP		P	00 09 53.3	-0.8
PMG				pmax		pmax		
	comp=Z,54nm,1.1s							
STKA	Stephens Creek	39.59	247	P		P	00 09 59.2	-0.5
	comp=Z,8.1nm,0.6s,baz=90,slow=9.6,SNR=16							
COEN	Coen	40.84	275	eP		P	00 10 10.1	-0.1
	comp=Z,20nm,0.9s							
ASAR	Alice Springs	47.00	258	P		P	00 10 58.6	-1.0
	comp=Z,25nm,0.9s,baz=98,slow=7.8,SNR=122							
ASAR				pP		pP	00 11 11.8	+0.5
	comp=Z,10nm,0.7s,baz=94,slow=6.8,SNR=8.1							
ASAR				S		S	00 17 48.4	-0.2
	comp=Z,0.4nm,0.6s,baz=99,slow=16,SNR=3.0							
WRA	Warramunga Arr	47.35	264	P		P	00 11 00.7	-1.6
	comp=Z,37nm,0.7s,baz=102,slow=8.0,SNR=149							
WRA				pP		pP	00 11 13.8	-0.3
	comp=Z,22nm,0.7s,baz=103,slow=8.0,SNR=14							
WRA				PcP		PcP	00 12 32.7	-0.1
	comp=Z,2.3nm,0.7s,baz=107,slow=2.9,SNR=3.7							
JAY	Jayapura	47.75	289	P		P	00 11 04.5	-1.0
	comp=Z,38nm,0.8s,baz=129,slow=2.4,SNR=17							
SBA	Scott Base	55.65	185	eP		P	00 12 06.4	+2.9
	comp=Z,4.7nm,1.0s							
SBA	Scott Base	55.65	185	eP		P	00 12 06.4	+2.9
SBA				pmax		pmax		
	comp=Z,5.0nm,1.0s							
VNDA	Vanda	55.76	186	P		P	00 12 05.9	+1.6
	comp=Z,2.6nm,0.9s,baz=8.5,slow=6.5,SNR=12							
VNDA				PcP		PcP	00 13 04.9	+1.8
	comp=Z,3.8nm,0.8s,baz=340,slow=3.0,SNR=8.1							
SIJI	Sorong	56.85	285	P		P	00 12 12.4	-0.6
	comp=Z,92nm,0.8s,baz=91,slow=6.3,SNR=38							
SIJI				pP		pP	00 12 25.1	+0.1
	comp=Z,50nm,0.7s,baz=107,slow=8.0,SNR=8.2							
MBWA	Marble Bar	60.34	258	eP		P	00 12 36.5	-0.8
CASY	Casey	63.08	206	eP		P	00 12 55.9	+0.9
	comp=Z,17nm,1.0s							
MJAR	Matsushiro Arr	74.03	322	P		P	00 14 03.9	+0.3
	comp=Z,13nm,0.7s,baz=166,slow=6.0,SNR=29							
MAJO	Matsushiro	74.03	322	eP		P	00 14 03.0	-0.6
	comp=Z,18nm,0.8s							
MAJO	Matsushiro	74.03	322	eP		P	00 14 03.1	-0.6
MAJO				pmax		pmax		
	comp=Z,18nm,0.8s							
MAT	Matsushiro	74.03	322	P		P	00 14 04.2	+0.5
LEM	Lembang	76.06	268	P		P	00 14 16.9	+0.8
	comp=Z,28nm,0.7s,baz=120,slow=16,SNR=4.5							
LEM	Lembang	76.06	268	P		P	00 14 17.0	+0.8
JNU	Nakatsue	76.19	315	P		P	00 14 16.6	+0.4
	comp=Z,23nm,0.9s,baz=116,slow=5.4,SNR=14							
JNU	Nakatsue	76.19	315	eP		P	00 14 16.3	+0.1
	comp=Z,25nm,0.9s							
KSM	Kuching	76.80	277	eP		P	00 14 21.3	+1.2
	comp=Z,29nm,0.8s							
ASAJ	Asahikawa	77.38	330	P		P	00 14 24.8	+2.2
	comp=Z,19nm,0.8s,baz=110,slow=7.1,SNR=14							
TPUB	Ta-pu	77.90	302	eP		P	00 14 25.2	-0.8
	comp=Z,23nm,0.8s							
MURC	Murrieta	78.48	46	P		P	00 14 28.6	-0.4
	baz=232							
BFSC	Mount Baldy Ra	78.57	45	P		P	00 14 29.6	-0.1
	baz=232							
MONP2	Monument Peak	78.57	47	P		P	00 14 29.7	-0.1
	baz=233							
IKP	In-Ko-Pah, Jac	78.64	47	P		P	00 14 29.9	-0.1
	baz=233							
VES	Vestal, Richgr	78.65	43	P		P	00 14 29.3	-0.5
	baz=231							
EDW2	Edwards Air Fo	78.74	44	P		P	00 14 30.4	-0.1
	baz=232,SNR=8.3							
KMRM	Mail Ridge	78.77	37	eP		P	00 14 31.7	+1.2
	comp=Z,32nm,0.9s							
ISA	Isabella, Lake	78.92	44	P		P	00 14 31.6	+0.2
	baz=231							
ISA	Isabella, Lake	78.92	44	eP		P	00 14 32.1	+0.6
	comp=Z,9.5nm,0.9s							
ISA	Isabella, Lake	78.92	44	eP		P	00 14 32.1	+0.6
ISA				pmax		pmax		
	comp=Z,10.0nm,0.9s							
PFO	Pinyon Flats O	78.98	46	P		P	00 14 31.8	-0.1
	baz=233							
KHMM	Horse Mountain	79.20	37	eP		P	00 14 34.1	+1.1
	comp=Z,17nm,1.0s							
CMB	Columbia Colle	79.25	41	eP		P	00 14 33.2	0.0
	comp=Z,12nm,1.0s							
CMB	Columbia Colle	79.25	41	eP		P	00 14 33.2	0.0
CMB				pmax		pmax		
	comp=Z,12nm,1.0s							
LRMC	Laurel Mtn Rad	79.31	44	P		P	00 14 33.5	-0.2
	baz=232,SNR=6.8							
PETK	Petropavlovsk-	79.47	343	P		P	00 14 34.5	+0.5
	comp=Z,25nm,0.8s,baz=124,slow=8.6,SNR=28							
AFDM	Forest Hills D	79.49	40	eP		P	00 14 34.7	+0.2
	comp=Z,11nm,1.0s							
YSS	Yuzh-Sakhalins	79.49	332	eP		P	00 14 35.6	+1.4
YSS	Yuzh-Sakhalins	79.49	332	∥iP		P	00 14 35.5	+1.3
YSS				pmax		pmax		
	comp=Z,40nm,1.0s							
BELC	Belle Mtn. Jos	79.52	46	P		P	00 14 34.6	-0.3
	baz=233,SNR=5.1							
ORV	Oroville	79.58	39	eP		P	00 14 35.3	+0.4
	comp=Z,8.0nm,0.9s							
ORV	Oroville	79.58	39	eP		P	00 14 35.3	+0.4
ORV				pmax		pmax		
	comp=Z,8.0nm,0.9s							
CWC	Cottonwood Cre	79.66	43	P		P	00 14 35.3	-0.2
	baz=231							
WDC	Whiskeytown Da	79.67	38	eP		P	00 14 35.6	+0.3
	comp=Z,15nm,1.0s							
WDC	Whiskeytown Da	79.67	38	eP		P	00 14 35.6	+0.3
WDC				pmax		pmax		
	comp=Z,15nm,1.0s							
GSC	Goldstone, Bar	79.77	45	P		P	00 14 35.9	-0.2
	baz=232							
GSC	Goldstone, Bar	79.77	45	eP		P	00 14 36.4	+0.3
	comp=Z,8.2nm,0.8s							
GSC	Goldstone, Bar	79.77	45	eP		P	00 14 36.4	+0.3
GSC				pmax		pmax		
	comp=Z,8.0nm,0.8s							
MDPB	Devils Postpil	79.78	42	eP		P	00 14 36.9	+0.5
	comp=Z,11nm,0.8s							
HEC	Hector,Ludlow	79.79	45	P		P	00 14 35.3	-0.9
	baz=233,SNR=5.6							
MPMC	Manual Prospec	79.79	44	P		P	00 14 36.3	-0.1
	baz=232,SNR=11							
OMMB	Old Mammoth Mi	79.82	42	eP		P	00 14 37.2	+0.6
	comp=Z,11nm,1.1s							
N02D	Trinity Center	79.84	37	P		P	00 14 37.1	+0.7
	baz=228,SNR=7.3							
O03D	Paynes Creek	79.90	38	P		P	00 14 36.5	-0.2
	baz=228,SNR=6.7							
MLAC	Mammoth, Mammo	79.93	42	P		P	00 14 37.5	+0.4
	baz=231							
TIN	Tinemaha, Big	79.94	43	P		P	00 14 37.4	+0.4
	baz=231							
M02C	Callahan	80.04	37	P		P	00 14 38.1	+0.6
	baz=227,SNR=8.5							
WAKR	Walker	80.12	41	eP		P	00 14 38.9	+0.8
	comp=Z,21nm,1.0s							
L02D	Cave Junction,	80.15	36	P		P	00 14 38.7	+0.8
	baz=227							
IRM	Iron Mountain	80.18	47	P		P	00 14 38.3	0.0
	baz=234,SNR=7.7							
GMRC	Granite Mounta	80.21	46	P		P	00 14 38.4	-0.1
	baz=233							
MAW	Mawson	80.27	199	P		P	00 14 40.0	+1.8
	comp=Z,19nm,0.8s,baz=132,slow=7.3,SNR=34							
MAW	Mawson	80.27	199	P		P	00 14 40.0	+1.8
YBH	Yreka Blue Hor	80.35	37	P		P	00 14 40.0	+0.9
	comp=Z,9.1nm,0.8s,baz=196,slow=1.9,SNR=28							
YBH	Yreka Blue Hor	80.35	37	eP		P	00 14 39.8	+0.7
	comp=Z,11nm,0.8s							
YBH	Yreka Blue Hor	80.35	37	eP		P	00 14 39.8	+0.7
YBH				pmax		pmax		
	comp=Z,11nm,0.8s							
Y12C	Blythe	80.36	47	P		P	00 14 39.2	0.0
	baz=234							
PNTR	Pine Nut	80.39	40	eP		P	00 14 40.3	+0.7
	comp=Z,27nm,0.8s							
TUQ	Turquoise Moun	80.42	45	P		P	00 14 39.7	0.0
	baz=233							
FURC	Furnace Creek,	80.44	44	P		P	00 14 39.6	+0.1
	baz=232							
BEKR	Beckworth	80.45	39	eP		P	00 14 40.2	+0.4
	comp=Z,14nm,1.3s							
GRAC	Grapevine Rang	80.45	43	P		P	00 14 40.1	+0.4
	baz=232,SNR=5.2							
SHOC	Shoshone, Teco	80.48	45	P		P	00 14 39.7	-0.1
	baz=233							
VCNR	Virginia City	80.50	40	eP		P	00 14 40.8	+0.7
	comp=Z,12nm,0.9s							
214A	Organ Pipe Nat	80.51	49	P		P	00 14 40.1	0.0
	baz=235							
YERR	Yerington	80.54	41	eP		P	00 14 40.8	+0.5
	comp=Z,14nm,0.9s							
RYN	Ryan	80.75	41	eP		P	00 14 42.0	+0.5
	comp=Z,8.8nm,1.1s							
NVAR	Mina Array Bea	80.76	42	P		P	00 14 42.0	+0.4
	comp=Z,11nm,0.7s,baz=223,slow=8.9,SNR=48							
NVAR				pP		pP	00 14 55.3	+1.3
	comp=Z,3.0nm,0.7s,baz=221,slow=8.7,SNR=4.5							
KSRS	Korea Array	80.78	317	P		P	00 14 43.1	+1.8
	comp=Z,8.3nm,0.9s,baz=139,slow=6.1,SNR=33							
KSRS				pP		pP	00 14 55.3	+1.5
	comp=Z,4.3nm,0.9s,baz=133,slow=7.3,SNR=5.1							
KSAR	Wonju Array Be	80.80	317	P		P	00 14 43.1	+1.7
KSAR				pP		pP	00 14 55.3	+1.4
KSAR	Wonju Array Be	80.80	317	P		P	00 14 43.2	+1.7
KSAR				*PP		pP	00 14 55.3	+1.4
HUMO	Hull Mountain	80.81	36	eP		P	00 14 42.0	+0.5
	comp=Z,21nm,1.3s							
M04C	Macdoel	80.87	37	P		P	00 14 42.1	+0.2
	baz=228,SNR=6.4							
PAHR	Pah Rah Range	80.92	40	eP		P	00 14 42.4	+0.1
	comp=Z,8.7nm,1.0s							
PDMCI	Parker Dam,Lak	80.94	47	P		P	00 14 42.4	+0.1
	baz=234							
TPNV	Topopah Spring	81.13	44	P		P	00 14 43.8	+0.2
	baz=233							
TPNV	Topopah Spring	81.13	44	eP		P	00 14 43.7	+0.2
	comp=Z,8.6nm,0.8s							
TPNV	Topopah Spring	81.13	44	eP		P	00 14 43.7	+0.2
TPNV				pmax		pmax		
	comp=Z,9.0nm,0.8s							
KVN	Kaiserville	81.27	41	eP		P	00 14 44.5	+0.3
	comp=Z,9.1nm,1.0s							
KVN	Kaiserville	81.27	41	eP		P	00 14 44.5	+0.3
KVN				pmax		pmax		
	comp=Z,9.0nm,1.0s							
I03D	Drain, OR	81.34	35	P		P	00 14 44.8	+0.5
	baz=227							
Y14A	Wickenburg	81.50	48	eP		P	00 14 45.6	+0.2
	comp=Z,6.5nm,0.8s							
SHPR	Sheep Range	81.56	45	eP		P	00 14 46.3	+0.5
	comp=Z,6.1nm,0.9s							
W13A	Hualapai Mount	81.57	46	eP		P	00 14 46.5	+0.6
	comp=Z,6.0nm,1.0s							
J04D	Umpqua Nationa	81.70	36	P		P	00 14 46.7	+0.3
	baz=228							
MOD	Modoc Plateau	81.81	38	eP		P	00 14 46.8	-0.1
	comp=Z,7.4nm,0.8s							
K05A	Summer Lake	82.02	37	eP		P	00 14 48.9	+0.8
	comp=Z,30nm,1.3s							
TUC	Tucson	82.13	50	eP		P	00 14 48.3	-0.5
	comp=Z,6.9nm,0.9s							
TUC	Tucson	82.13	50	eP		P	00 14 48.3	-0.5
TUC				pmax		pmax		
	comp=Z,7.0nm,0.9s							
J05D	Fort Rock, OR	82.20	36	P		P	00 14 49.4	+0.4
	baz=228							
R11A	Troy Canyon, C	82.39	43	P		P	00 14 50.1	-0.1
	baz=233							
G03D	McMinnville, O	82.43	34	P		P	00 14 50.4	+0.5
	baz=227							
KDAK	Kodiak Island	82.54	12	P		P	00 14 50.4	+0.3
	comp=Z,4.0nm,0.8s,baz=188,slow=7.1,SNR=3.1							
H04A	Detroit Lake	82.63	35	eP		P	00 14 51.9	+0.9
	comp=Z,19nm,1.1s							
BMN	Battle Mountai	82.66	40	eP		P	00 14 51.1	-0.4
	comp=Z,16nm,1.1s							
BMN	Battle Mountai	82.66	40	eP		P	00 14 51.1	-0.4
BMN				pmax		pmax		
	comp=Z,15nm,1.1s							
PINE	Pine Mountain	82.70	36	eP		P	00 14 52.1	+0.5
	comp=Z,25nm,0.9s							
319A	Douglas	82.70	52	eP		P	00 14 52.5	+0.6
	comp=Z,10nm,0.8s							
USRK	Ussuriysk Ar.	82.74	324	P		P	00 14 53.1	+1.5
	comp=Z,7.1nm,0.7s,baz=103,slow=3.2,SNR=8.7							
X16A	Lo Mia Camp, P	82.84	48	eP		P	00 14 53.1	+0.5
	comp=Z,10nm,0.9s							
I05D	Terrebonne, OR	82.84	35	P		P	00 14 52.4	+0.2
	baz=228							
WVOR	Wild Horse Val	83.10	38	eP		P	00 14 53.8	+0.2
	comp=Z,16nm,1.0s							
WVOR	Wild Horse Val	83.10	38	eP		P	00 14 53.8	+0.2
WVOR				pmax		pmax		
	comp=Z,16nm,1.0s							
LCMT	Little Creek M	83.10	45	eP		P	00 14 54.4	+0.6
	comp=Z,12nm,1.0s							
HPIG		83.12	57	eP		P	00 14 53.7	-0.5
	comp=Z,6.9nm,0.7s							
E03A	Lebam	83.19	33	eP		P	00 14 54.9	+1.1
	comp=Z,52nm,1.0s							
CCUT	Cedar City	83.34	45	eP		P	00 14 55.9	+0.7
	comp=Z,15nm,1.0s							
KNB	Kanab	83.38	45	eP		P	00 14 56.4	+1.1
	comp=Z,17nm,0.9s							
KNB	Kanab	83.38	45	eP		P	00 14 56.4	+1.1
KNB				pmax		pmax		
	comp=Z,17nm,0.9s							
U15A	North Rim	83.39	46	eP		P	00 14 56.1	+0.6
	comp=Z,20nm,1.0s							
G05D	Wamic, OR	83.46	35	P		P	00 14 55.5	+0.2
	baz=228							
WUAZ	Wupatki	83.50	47	eP		P	00 14 56.7	+0.8
	comp=Z,12nm,1.0s							
SZCU	Shurtz Canyon	83.54	45	eP		P	00 14 57.2	+1.1
	comp=Z,17nm,1.1s							
PSUT	Pine Spring	83.59	44	eP		P	00 14 56.7	+0.3
	comp=Z,7.6nm,0.8s							
I07A	Izee	83.67	37	eP		P	00 14 57.2	+0.7
	comp=Z,9.4nm,0.8s							
G06A	Carlson Farm,	83.82	35	eP		P	00 14 57.6	+0.4
	comp=Z,14nm,0.8s							
NJ2	Nanjing	83.82	308	eP		P	00 14 58.0	+0.6
NJ2				pP		pP	00 15 06.3	-3.6
NJ2				sP		sP	00 15 12.2	-2.4
NJ2				pmax		pmax		
	comp=Z,17nm,0.7s							
X18A	Snowflake	83.92	49	eP		P	00 14 59.0	+0.9
	comp=Z,4.9nm,0.8s							
PKCU	Pink Cliffs	83.96	45	eP		P	00 15 00.3	+1.8
	comp=Z,24nm,1.0s							
LON	Longmire	84.22	33	eP		P	00 14 59.1	-0.1
	comp=Z,7.4nm,0.8s							
LON	Longmire	84.22	33	eP		P	00 14 59.1	-0.1
LON				pmax		pmax		
	comp=Z,7.0nm,0.8s							
MDJ	Mudanjiang	84.31	324	P		P	00 14 58.8	-0.8
MDJ				pmax		pmax		
	comp=Z,17nm,0.8s							
MDJ				pmax		pmax		
	comp=Z,210nm,4.3s							
MDJ	Mudanjiang	84.31	324	eP		P	00 15 01.7	+2.1
	comp=Z,14nm,1.0s							
MTPU	Mount Pierson	84.38	45	eP		P	00 15 01.9	+1.3
	comp=Z,26nm,0.9s							
121A	Cookes Peak, D	84.39	51	P		P	00 15 00.9	+0.3
	baz=238							
W18A	Petrified Fore	84.39	48	P		P	00 15 00.7	+0.2
	baz=237							
D05A	Enumclaw	84.42	33	eP		P	00 15 01.3	+1.2
	comp=Z,44nm,1.0s							
TLIG	Tlapa	84.57	68	eP		P	00 15 01.9	+0.2
	comp=Z,22nm,1.3s							
MSU	Marysvale	84.66	44	eP		P	00 15 02.8	+1.0
MSU	Marysvale	84.66	44	eP		P	00 15 02.8	+1.0
G08A	Pilot Rock	84.75	36	eP		P	00 15 02.1	+0.1
	comp=Z,26nm,0.8s							
SYO	Syowa Base	84.98	192	∥eP		P	00 15 01.6	-1.1
B05A	Bryant	85.10	32	P		P	00 15 03.8	+0.3
	baz=227							
A04D	Lummi Island	85.11	32	P		P	00 15 04.2	+0.7
	baz=227							
DUG	Dugway, Tooele	85.22	43	eP		P	00 15 04.7	+0.2
	comp=Z,3.4nm,1.0s							
DUG	Dugway, Tooele	85.22	43	eP		P	00 15 04.7	+0.2
DUG				pmax		pmax		
	comp=Z,3.0nm,1.0s							
MFID	Camas Ranch	85.32	39	eP		P	00 15 04.7	-0.2
	comp=Z,12nm,1.0s							
PLCA	Paso Flores	85.34	132	P		P	00 15 05.3	0.0
	comp=Z,6.9nm,1.2s,baz=306,slow=14,SNR=3.0							
BMO	Blue Mountains	85.37	37	eP		P	00 15 04.9	-0.2
	comp=Z,8.0nm,0.8s							
BMO	Blue Mountains	85.37	37	eP		P	00 15 04.9	-0.2
BMO				pmax		pmax		
	comp=Z,8.0nm,0.8s							
SNAA	Sanae	85.44	177	P		P	00 15 05.1	0.0
SNAA				S		S	00 25 32.8	-0.3
SNAA	Sanae	85.44	177	P		P	00 15 05.0	0.0
	comp=Z,6.8nm,0.9s,baz=214,slow=3.8,SNR=17							
SNAA	Sanae	85.44	177	eP		P	00 15 05.1	0.0
	comp=Z,13nm,1.1s							
SNAA	Sanae	85.44	177	eP		P	00 15 05.1	0.0
SNAA				pmax		pmax		
	comp=Z,13nm,1.1s							
VNA3	Neumayer Olymp	85.46	175	P		P	00 15 05.1	0.0
MNTX	Cornudas Mount	85.71	53	eP		P	00 15 07.0	0.0
	comp=Z,12nm,0.9s							
TMUT	Trail Mountain	85.72	44	eP		P	00 15 08.0	+0.8
	comp=Z,18nm,0.8s							
LAZ	Ladron	85.82	50	eP		P	00 15 08.6	+0.9
TXAR	Lajitas Array	85.83	56	P		P	00 15 07.7	0.0
	comp=Z,9.5nm,0.9s,baz=218,slow=7.9,SNR=89							
TXAR				pP		pP	00 15 20.8	+0.5
	comp=Z,2.9nm,0.9s,baz=213,slow=9.0,SNR=5.4							
MPU	Maple Canyon	85.86	43	eP		P	00 15 08.4	+0.7
	comp=Z,6.8nm,1.0s							
SRU	San Rafael Swe	86.06	45	eP		P	00 15 09.1	+0.4
	comp=Z,14nm,1.0s							
SRU	San Rafael Swe	86.06	45	eP		P	00 15 09.1	+0.4
SRU				pmax		pmax		
	comp=Z,14nm,1.0s							
SPUT	South Promonto	86.08	42	eP		P	00 15 09.2	+0.4
	comp=Z,11nm,1.1s							
F10A	Beach Ranch, E	86.12	36	eP		P	00 15 08.1	-0.7
	comp=Z,8.7nm,0.8s							
P17A	Butcher Ranch,	86.12	44	eP		P	00 15 09.7	+0.7
	comp=Z,13nm,1.1s							
LPM	Los Pinos Moun	86.14	50	eP		P	00 15 09.9	+0.6
CN2	Changchun	86.14	321	eP		P	00 15 10.0	+1.2
CN2				pmax		pmax		
	comp=Z,10.0nm,0.9s							
VNA1	Neumayer--Stat	86.14	176	P		P	00 15 09.0	+0.5
VNA1				S		S	00 25 37.6	-2.1
HVU	Hansel Valley	86.16	41	eP		P	00 15 09.3	+0.2
	comp=Z,4.9nm,0.9s							
HVU	Hansel Valley	86.16	41	eP		P	00 15 09.3	+0.2
HVU				pmax		pmax		
	comp=Z,5.0nm,0.9s							
HLID	Hailey	86.23	39	eP		P	00 15 09.7	+0.2
	comp=Z,3.0nm,0.8s							
SUA	Susitna One	86.32	11	eP		P	00 15 09.4	0.0
	comp=Z,12nm,0.8s							
WHN	Wuhan	86.38	305	∥iP		P	00 15 12.1	+1.8
WHN				pmax		pmax		
	comp=Z,150nm,1.7s							
NVL	N'lazarevskaya	86.41	182	eP		P	00 14 59.4	-10
NVL				pmax		pmax		
	comp=Z,4.0nm,0.6s							
B08A	Colville Reser	86.54	33	eP		P	00 15 10.6	-0.1
	comp=Z,5.5nm,0.9s							
TASM	ASL Pad, Albuq	86.58	50	P		P	00 15 11.6	+0.2
	baz=239							
ANMO	Albuquerque	86.58	50	P		P	00 15 11.6	+0.1
	comp=Z,8.6nm,0.9s,baz=219,slow=5.7,SNR=22							
ANMO	Albuquerque	86.58	50	eP		P	00 15 11.6	+0.1
	comp=Z,13nm,1.0s							
ANMO	Albuquerque	86.58	50	eP		P	00 15 11.6	+0.1
ANMO				pmax		pmax		
	comp=Z,13nm,1.0s							
TASL	Snake Pit, Alb	86.58	50	P		P	00 15 11.6	+0.2
	baz=239							
TCUT	Toone Canyon	86.62	43	eP		P	00 15 11.9	+0.4
	comp=Z,19nm,0.9s							
PV09	Paradox Valley	86.63	46	eP		P	00 15 12.0	+0.2
C09A	Chrisman Ranch	86.72	34	eP		P	00 15 11.8	+0.2
	comp=Z,14nm,1.0s							
LLLB	Lillooet	86.79	31	eP		P	00 15 12.4	+0.5

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BOZ  Bozeman (W)      89.03  39  eP          P        00 15 23.1 +0.3
     comp=Z,6.6nm,1.3s
BOZ  Bozeman (W)      89.03  39  eP          P        00 15 23.1 +0.3
BOZ                              pmax        pmax
     comp=Z,7.0nm,1.3s
T25A Trinidad         89.12  49  P           P        00 15 23.2 -0.4
     baz=240
DLBC Dease Lake       89.15  22  eP          P        00 15 24.3 +1.3
     comp=Z,14nm,1.4s
Q24A Divide           89.53  47  P           P        00 15 25.1 -0.4
     baz=240
RIDG Independ'e Rid   89.54  13  eP          P        00 15 25.0 +0.3
     comp=Z,15nm,1.2s
MLY  Manley           89.65  10  eP          P        00 15 23.8 -1.3
     comp=Z,5.1nm,1.1s
ENH  Enshi            89.97 303 eP           P        00 15 29.4 +2.0
N23A Red Feather La   89.98  45  P           P        00 15 27.2 -0.3
     baz=239
COLA College          89.99  11  eP          P        00 15 26.1 -0.5
COLA College          89.99  11  eP          P        00 15 26.1 -0.5
MDM  Murphy Dome      90.00  11  eP          P        00 15 26.7 -0.1
     comp=Z,17nm,1.1s
ILAR Eielson Array    90.07  12  P           P        00 15 26.7 -0.3
     comp=Z,6.1nm,0.9s,baz=217,slow=5.5,SNR=50
ILAR                             pP          pP       00 15 39.1 -0.5
     comp=Z,3.1nm,1.0s,baz=215,slow=7.0,SNR=4.5
ABTX Abilene, Hawle   90.43  55  P           P        00 15 29.0 -0.5
     baz=243
GYA  Guiyang          90.54 298 eP           P        00 15 32.4 +2.1
GYA                              pP          pP       00 15 42.3 -0.6
GYA                              PP          PP       00 19 10.0 +4.2
GYA                              SKS         SKSac    00 25 59.4 +0.5
GYA                              S           ScS      00 26 23.2 -3.4
GYA                              pmax        pmax
     comp=Z,20nm,1.0s
GYA                              pmax        pmax
     comp=Z,120nm,5.8s
APG  El Apazote       90.58  74  P           P        00 15 31.2 +0.3
     comp=Z,24nm,1.0s,baz=249,slow=10,SNR=11
DAWY Dawson           91.02  15  eP          P        00 15 32.2 +0.7
RDOG Red Dog Mine     91.17   4  eP          P        00 15 33.1 +1.0
     comp=Z,14nm,1.0s
EGAK Eagle            91.23  14  eP          P        00 15 32.7 +0.3
KSCO Kaye Shedlock'   91.26  48  P           P        00 15 33.2 -0.2
     baz=241
PBKT Sadao Pong       91.31 287 eP           P        00 15 35.4 +1.5
     comp=Z,8.8nm,1.2s
EGMT Eagleton         91.46  37  eP          P        00 15 34.8 +0.8
     comp=Z,24nm,1.1s
WHTX Lake Whitney,    91.80  56  P           P        00 15 35.2 -0.7
     baz=244
BILL Bilibino         91.83 353 eP           P        00 15 34.7 -0.4
     comp=Z,4.8nm,0.8s
BILL Bilibino         91.83 353 eP           P        00 15 33.5 -1.6
BILL                             pmax        pmax
     comp=Z,5.0nm,0.9s
XAN  Xi'an            92.07 306 P            P        00 15 38.5 +1.3
XAN                              pmax        pmax
     comp=Z,14nm,1.0s
XAN                              pmax        pmax
     comp=Z,110nm,5.4s
HKT  Hockley          92.18  58  eP          P        00 15 38.4 +0.8
     comp=Z,15nm,1.4s
HKT  Hockley          92.18  58  eP          P        00 15 38.4 +0.8
HKT                              pmax        pmax
     comp=Z,15nm,1.4s
LAO  LASA Array       92.78  40  eP          P        00 15 41.0 +0.9
RSSD Black Hills      92.82  43  eP          P        00 15 40.3 -0.3
     comp=Z,6.3nm,0.8s
RSSD Black Hills      92.82  43  eP          P        00 15 40.3 -0.3
RSSD                             pmax        pmax
     comp=Z,6.0nm,0.8s
TOLK Toolik Lake Re   93.17   9  P           P        00 15 41.9 +0.5
     baz=203
KMI  Kunming          93.20 296 P            P        00 15 46.5 +3.7
KMI                              pP          pP       00 15 54.7 -0.7
KMI                              pmax        pmax
     comp=Z,16nm,0.8s
KMI                              pmax        pmax
     comp=Z,130nm,6.0s
KMI                              LR          LR
     comp=Z,160nm,15.9s
KMI                              LR          LR
     comp=Z,260nm,19.6s
KMI                              LR          LR
     comp=Z,350nm,24.8s
HHC  Hu-ho-hao-te     93.28 313 eP           P        00 15 42.6  0.0
HHC                              S           S        00 26 46.4 -0.6
HHC                              pmax        pmax
     comp=Z,12nm,1.3s
HHC                              pmax        pmax
     comp=Z,100nm,7.6s
HHC                              LR          LR
     comp=Z,130nm,18.4s
HHC                              LR          LR
     comp=Z,130nm,18.0s
HHC                              LR          LR
     comp=Z,70nm,17.7s
JTS  JuntasAbangare   93.70  80  P           P        00 15 45.9 +0.8
     comp=Z,4.8nm,0.8s,baz=211,slow=5.9,SNR=3.6
JTS  JuntasAbangare   93.70  80  eP          P        00 15 45.2 +0.1
     comp=Z,5.6nm,0.6s
JTS  JuntasAbangare   93.70  80  eP          P        00 15 45.2 +0.1
JTS                              pmax        pmax
     comp=Z,6.0nm,0.6s
CMAR Chiang Mai Arr   93.83 288 P            P        00 15 47.3 +1.8
     comp=Z,3.6nm,0.8s,baz=137,slow=3.1,SNR=13
CMAR                             sP          sP       00 16 02.4 -0.4
     comp=Z,3.9nm,0.9s,baz=114,slow=2.6,SNR=4.0
CHTO Chiang Mai       93.97 289 eP           P        00 15 46.2  0.0
     comp=Z,3.4nm,0.7s
CHTO Chiang Mai       93.97 289 eP           P        00 15 46.2  0.0
CHTO                             pmax        pmax
     comp=Z,3.0nm,0.7s
CD2  Chengdu          94.71 301 P            P        00 15 49.7 +0.3
CD2                              pmax        pmax
     comp=Z,10.0nm,0.6s
DGMT Dagmar           94.86  39  eP          P        00 15 50.3 +0.7
V39A Pettigrew        96.29  54  P           P        00 15 57.1 +0.6
     baz=246
LZH  Lanzhou          96.71 306 eP           P        00 16 01.3 +2.8
LZH                              pP          pP       00 16 09.2 -2.0
LZH                              sP          sP       00 16 12.9 -2.9
LZH                              pmax        pmax
     comp=Z,19nm,1.1s
X42A Stuttgart        97.31  56  P           Pdif     00 16 01.5 +0.4
     baz=247
ECSD EROS Data Cent   97.42  46  eP          Pdif     00 16 01.6 +0.1
     comp=Z,9.1nm,1.3s
YKA  Yellowknife Ar   97.48  24  P           Pdif     00 16 00.8 -0.3
     comp=Z,1.0nm,0.9s,baz=235,slow=4.7,SNR=5.0
SONM Songino Array    99.64 318  P           Pdif     00 16 09.9 -1.5
     comp=Z,0.6nm,0.6s,baz=129,slow=3.9,SNR=2.2
ULM  Lac du Bonnet   100.53  40  P           Pdif     00 16 13.4 -1.7
     comp=Z,1.0nm,0.4s,baz=220,slow=5.0,SNR=3.4
GTA  Gaotai          100.92 308 eP           Pdif     00 16 20.3 +3.1
GTA                              pP          pP       00 16 31.0 +1.0
GTA                              sP          sPdif    00 16 34.8 +0.3
GTA                              pmax        pmax
     comp=Z,4.0nm,0.8s
D37A Cotton          101.47  44  P           Pdif     00 16 19.7 +0.3
     baz=249
Y51A Rockmart        102.14  58  P           Pdif     00 16 22.8 +0.1
     baz=250
WMQ  Urumqi          110.87 310  PKP         PKiKP    00 21 01.8 +1.0
WMQ                              LR          LR
     comp=Z,120nm,30.5s
WMQ                              LR          LR
     comp=Z,71nm,20.9s
WMQ                              LR          LR
     comp=Z,87nm,20.9s
ZALV Zalesovo Beam   114.35 320  PKP         PKPdf    00 21 06.1 -0.9
     comp=Z,0.6nm,0.5s,baz=204,slow=1.5,SNR=3.9
MKAR Makanchi Array  115.13 312  PKP         PKPdf    00 21 08.1 -0.7
     comp=Z,0.7nm,0.7s,baz=132,slow=0.6,SNR=7.0
KURK Kurchatov       117.89 316 ePKPdf       PKPdf    00 21 13.3 -0.6
KURK Kurchatov       117.89 316 PKIKP        PKPdf    00 21 12.3 -1.6
KURK                             pmax        pmax
     comp=Z,1.0nm,0.7s
KURBB Kurchatov Arra 117.95 316 PKP          PKPdf    00 21 12.3 -1.8
     comp=Z,0.9nm,0.7s,baz=100,slow=1.7,SNR=10.0
KSH  Kashi           118.82 304 PKP          PKPdf    00 21 19.6 +3.3
KSH                              PP          PP       00 22 43.4 +7.8
KSH                              AMB         AMB
     comp=Z,150nm,3.6s
BVAR Borovoye Array  122.95 319 PKP          PKPdf    00 21 23.3 -0.3
     comp=Z,1.7nm,0.8s,baz=131,slow=4.1,SNR=10
BRVK Borovoye        123.01 319 ePKPdf       PKPdf    00 21 23.4 -0.3
BRVK Borovoye        123.01 319 ePKIKP       PKPdf    00 21 23.4 -0.3
KKAR Karatay Array   123.19 307 ePKPdf       PKPdf    00 21 24.1 -0.3
KKAR Karatay Array   123.19 307 ePKIKP       PKPdf    00 21 24.2 -0.3
SPITS Spitsbergen Ar 124.49 357 PKP          PKPdf    00 21 26.2 +0.2
     comp=Z,5.9nm,0.8s,baz=70,slow=5.4,SNR=3.7
SUMG Summit          124.79  15 ePKIKP       PKPdf    00 21 26.2 -0.9
SUMG                             pmax        pmax
     comp=Z,8.0nm,1.1s
DAG  Danmarks Havn   124.86   7 i PKIKP      PKPdf    00 21 25.6 -1.0
DAG                              pmax        pmax
     comp=Z,3.0nm,0.9s
BOSA Boshof          125.23 202  PKP          PKPdf    00 21 30.4 +1.3
     comp=Z,4.7nm,0.9s,baz=190,slow=6.1,SNR=3.4
ARU  Arti            128.98 325 ePKPdf       PKPdf    00 21 35.7 +0.6
ARU  Arti            128.98 325  PKIKP       PKPdf    00 21 35.1 +0.1
ARCES ARCESS Array B 131.87 351  PKP          PKPdf    00 21 40.7 +0.5
     comp=Z,4.3nm,0.8s,baz=4.0,slow=1.3,SNR=14
GEYT Alibeck         132.70 301  PKP          PKPdf    00 21 42.8 +0.1
     comp=Z,5.9nm,0.7s,baz=39,slow=9.6,SNR=7.3
LSZ  Lusaka          135.88 213 ePKPdf       PKPdf    00 21 49.8 +0.3
LSZ  Lusaka          135.88 213 ePKIKP       PKPdf    00 21 49.8 +0.3
FINES FINESS Array B 138.97 345 PKhKP        PKPpre   00 21 42.2
     comp=Z,1.1nm,0.9s,baz=356,slow=4.5,SNR=2.6
FINES                            PKP         PKiKP    00 21 52.5 -3.3
     comp=Z,3.2nm,0.7s,baz=190,slow=3.3,SNR=4.2
NB2  NORSAR Subarra141.74 355    PKP         PKPpre   00 21 52.4
     comp=Z,0.8nm,0.9s,baz=10,slow=3.2
NOA  NORSAR Array B141.74 355    PKhKP       PKPpre   00 21 53.1
     comp=Z,2.4nm,0.7s,baz=18,slow=4.7,SNR=10
HFS  Hagfors         142.40 353  PKhKP       PKPpre   00 21 54.8
     comp=Z,2.4nm,0.6s,baz=67,slow=3.7,SNR=14
GNI  Garni           142.65 307 ePKPdf       PKPdf    00 22 01.4 +0.2
GNI  Garni           142.65 307 ePKIKP       PKPdf    00 22 01.4 +0.2
KBZ  Khabaz          142.82 313  PKhKP       PKPpre   00 21 56.7
     comp=Z,2.0nm,0.9s,baz=98,slow=7.1,SNR=3.7
KIV  Kislovodsk      142.88 313 ePKPdf       PKPdf    00 22 01.0 -0.3
KIV  Kislovodsk      142.88 313 ePKIKP       PKPdf    00 22 01.0 -0.3
RAYN Ar Rayn         143.15 279 ePKPdf       PKPdf    00 21 59.7 -2.7
AKH  Akhalkalaki     143.19 309 ePKPdf       PKPdf    00 22 00.5 -1.6
AKH  Akhalkalaki     143.19 309 ePKIKP       PKPdf    00 22 00.5 -1.6
KPL  Plockton        144.75  10 eP           PKPdf    00 22 02.5 -1.5
MDO  Dochfour        144.85   9 eP           PKPdf    00 22 03.1 -1.1
ANN  Anapa           145.92 318 i PKP2       PKPab    00 22 06.9 -0.8
ANN                              e           PKPab    00 25 28.3
ANN                              eSS         SS       00 44 17.8 -2.5
ANN                              pmax        pmax
     comp=Z,64nm,1.3s
MBAR Mbarara         145.93 230 ePKPdf       PKPab    00 22 10.0 +1.1
MBAR Mbarara         145.93 230  PKP2        PKPab    00 22 09.9 +1.1
EAB  Aberfoyle       146.07  10 eP           PKPab    00 22 07.2 -0.7
SUW  Suwalki         146.20 341 ePKP         PKPab    00 22 07.7 -0.7
SUW  Suwalki         146.20 341 ePKPdf       PKPbc    00 22 05.8 -1.9
SUW  Suwalki         146.20 341 ePKIKP       PKPbc    00 22 05.8 -1.9
MUD  Monsted U'grnd  146.44 356 i PKP2       PKPab    00 22 08.3 -0.9
MUD                              pmax        pmax
     comp=Z,29nm,0.9s
EDI  Edinburgh       146.49   9 eP           PKPab    00 22 08.5 -1.0
ESY  Stoneypath      146.57   8 eP           PKPab    00 22 08.6 -1.2
AKASG Malin Array Be 146.64 332  PKPbc       PKPab    00 22 08.6 -1.6
     comp=Z,16nm,0.8s,baz=39,slow=4.0,SNR=43
EKA  Eskdalemuir Ar  147.07   9  PKPbc       PKPab    00 22 10.0 -1.8
     comp=Z,8.4nm,0.8s,baz=349,slow=2.8,SNR=16
EKA  Eskdalemuir Ar  147.07   9  PKP2        PKPab    00 22 10.0 -1.8
ESK  Eskdalemuir     147.08   9 ePKPbc       PKPab    00 22 09.7 -2.1
ESK  Eskdalemuir     147.08   9 ePKP2        PKPab    00 22 09.7 -2.1
BSD  Bornholm Skovb  147.11 350 i PKP2       PKPab    00 22 09.1 -2.8
BSD                              pmax        pmax
     comp=Z,29nm,1.0s
KESW Keswick, Cumbr  147.80   9 eP           PKPab    00 22 12.3 -2.4
WIM  Isle of Man     147.97  11 eP           PKPab    00 22 12.9 -2.5
GKP  Gorka Klasztor  148.42 346 ePKP         PKPab    00 22 14.1 -3.1
GKP  Gorka Klasztor  148.42 346 ePKP2        PKPab    00 22 14.1 -3.1
HPK  Haverah Park    148.62   8 eP           PKPab    00 22 14.6 -3.4
BEL  Belsk           148.81 341 ePKP         PKPab    00 22 15.5 -3.3
BEL  Belsk           148.81 341 ePKP2        PKPab    00 22 15.5 -3.3
WLF1 Llynfaes        148.84  11 eP           PKPab    00 22 14.7 -4.2
SORM Soroca          148.90 330 ⇓i PKP       PKPab    00 22 15.2 -4.1
SORM Soroca          148.90 330  PKP2        PKPab    00 22 15.2 -4.1
STNC Stoke           149.38   9 eP           PKPab    00 22 16.9 -4.2
FOEL Foel Wylfa      149.43  10 eP           PKPbc    00 22 15.4 -1.1
LVV  L'vov           149.43 336 ePKP2        PKPab    00 22 17.0 -4.4
MILM Milestii Mici   149.53 327 ⇓i PKP       PKPbc    00 22 16.9  0.0
KWP  Kalwaria Pacla  150.08 337 ePKP         PKPbc    00 22 18.6 +0.4
KWP  Kalwaria Pacla  150.08 337 ePKPbc       PKPbc    00 22 18.5 +0.4
KWP  Kalwaria Pacla  150.08 337 ePKP2        PKPbc    00 22 18.6 +0.4
ILGA Ilgaz           150.11 314 ePKPbc       PKPab    00 22 20.1 -4.8
MCH1 Michaelchurch   150.32  10 eP           PKPbc    00 22 18.3 -0.3
MONM Monmouth        150.51  10 eP           PKPbc    00 22 18.4 -0.7
SSW  Stow on the Wo  150.53   9 eP           PKPbc    00 22 19.4 +0.3
OJC  Ojcow           150.53 341 ePKP         PKPbc    00 22 19.6 +0.3
OJC  Ojcow           150.53 341 ePKPbc       PKPbc    00 22 19.5 +0.3
OJC  Ojcow           150.53 341 ePKIKP       PKPbc    00 22 19.5 +0.3
GIRR Girov           150.62 330 ⇓i PKP       PKPbc    00 22 20.0 +0.4
ASF  Jabal al Asfar  150.63 295  PKPbc       PKPbc    00 22 21.1 +0.9
     comp=Z,3.7nm,0.8s,baz=88,slow=3.4,SNR=9.3
BURAR Bucovina Array 150.70 332 ⇓i PKP       PKPbc    00 22 20.7 +0.8
BURAR Bucovina Array 150.70 332  PKIKP       PKPbc    00 22 20.7 +0.8
HGH  Gray Hill       150.70  10 eP           PKPbc    00 22 19.4 -0.2
BRTR Keskin Array B  150.78 311  PKPbc       PKPbc    00 22 20.2 -0.2
     comp=Z,4.7nm,0.8s,baz=117,slow=3.1,SNR=28
BRTR                             PKPab       pPKPdf   00 22 27.7 -0.1
     comp=Z,3.8nm,0.7s,baz=117,slow=3.3,SNR=11
TESR Tescani         150.87 329 ⇓i PKP       PKPbc    00 22 19.7 -0.5
KSP  Ksiaz           150.89 346 ePKP         PKPbc    00 22 20.8 +0.8
KSP  Ksiaz           150.89 346 ePKIKP       PKPbc    00 22 20.8 +0.8
SWN1 Swindon         150.98   9 eP           PKPbc    00 22 20.0 -0.2
UZH  Uzhgorod        151.06 336 ⇑i PKIKP     PKPbc    00 22 19.6 -0.9
UZH                              e           PKPbc    00 22 27.3
UZH                              e           PKPbc    00 22 30.7
NIE  Niedzica        151.08 340 ePKP         PKPbc    00 22 21.5 +0.9
NIE  Niedzica        151.08 340 ePKIKP       PKPbc    00 22 21.5 +0.9
CLL  Collm           151.09 350 ePKPdf       PKPdf    00 22 15.0 +0.3
CLL                              ⇓i PKPbc    PKiKP    00 22 20.7 -0.3
     comp=Z,31nm,0.9s
CLL                              i (pPKPbc)  PKPbc    00 22 23.0
CLL                              ePKPab      pPKPdf   00 22 28.0 +0.3
CLL                              epPKPab     sPKPdf   00 22 33.0 +0.8
CLL                              LmH         PKPbc    01 43 00.0
     comp=N,100nm,21.6s
CLL                              LmH         PKPbc    01 43 00.0
     comp=E,100nm,19.4s
CLL                              LmV         PKPbc    01 48 00.0
     comp=Z,100nm,21.3s
CLL  Collm           151.09 350 ⇓ePKIKP      PKPdf    00 22 15.0 +0.3
CLL                              i           PKPbc    00 22 20.7
CLL                              e           PKPbc    00 22 28.0
CRVS Cervenica-Dubn  151.13 338 ePKIKP       PKPbc    00 22 21.2 +0.5
CRVS Cervenica-Dubn  151.13 338 ePKP         PKPbc    00 22 21.2 +0.5
PETR Petresti        151.15 327 ⇓i PKP       PKPab    00 22 29.9 +1.3
WOL  Wolverton       151.26   9 eP           PKPbc    00 22 20.7 -0.1
UPC  Upice           151.27 346 ⇑ePKP        PKPbc    00 22 22.0 +1.0
UPC                              AMS         AMS      01 55 00.0
     comp=Z,200nm,21.8s
UPC  Upice           151.27 346 ePKIKP       PKPbc    00 22 22.0 +1.0
UPC                              MLR         MLR
     comp=Z,200nm,21.8s
ANTO Ankara          151.29 312 ePKPbc       PKPbc    00 22 22.0 +0.5
ANTO Ankara          151.29 312 ePKIKP       PKPbc    00 22 22.0 +0.5
VRI  Vrincioaia      151.30 328 ⇓i PKP       PKPbc    00 22 21.3 +0.1
VRI  Vrincioaia      151.30 328  PKIKP       PKPbc    00 22 21.3 +0.1
DPC  Dobruska-Polom  151.35 345 ePKPDF       PKPdf    00 22 15.8 +0.6
DPC                              ⇑ePKP       PKiKP    00 22 22.1 +0.4
DPC                              ePKPAB      pPKPdf   00 22 30.0 +1.8
DPC                              ex          x        00 22 38.6
DPC                              AMS         AMS      01 53 10.0
DPC  Dobruska-Polom  151.35 345 ePKIKP       PKPdf    00 22 15.8 +0.6
DPC                              e           PKPbc    00 22 22.1
DPC                              e           PKPbc    00 22 30.0
PLOR Plostina        151.35 328 ⇓i PKP       PKPbc    00 22 21.4  0.0
PLOR Plostina        151.35 328  PKIKP       PKPbc    00 22 21.4  0.0
BRG  Berggiesshubel  151.35 349 ePKP         PKPdf    00 22 15.4 +0.3
     comp=Z,4.2nm,1.1s
BRG  Berggiesshubel  151.35 349 i PKP        PKPbc    00 22 21.5 +0.4
     comp=Z,21nm,0.8s
BRG  Berggiesshubel  151.35 349 ePKIKP       PKPdf    00 22 15.4 +0.3
BRG                              i           PKPbc    00 22 21.5
BRG                              pmax        pmax
     comp=Z,4.0nm,1.1s
OKC  Ostrava-Krasne  151.35 343 ⇑ePKP        PKPbc    00 22 21.9 +0.7
OKC                              ePKPAB      pPKPdf   00 22 30.3 +2.2
OKC                              ex          x        00 22 42.3
OKC  Ostrava-Krasne  151.35 343 ePKIKP       PKPbc    00 22 21.9 +0.7
OKC                              e           PKPbc    00 22 30.3
TRPA Tarpa           151.38 336 ⇓i PKP       PKPbc    00 22 21.6 +0.3
PVCC Panska Ves      151.56 348 ⇑ePKP        PKPbc    00 22 22.5 +0.9
PVCC                             epPKP       pPKPbc   00 22 34.2 -0.4
PVCC                             ex          x        00 22 39.9
PVCC                             AMS         AMS      01 50 00.0
     comp=Z,200nm,16.2s
PVCC Panska Ves      151.56 348 ePKIKP       PKPbc    00 22 22.5 +0.9
PVCC                             e           PKPbc    00 22 34.2
PVCC                             MLR         MLR
     comp=Z,200nm,16.2s
MORC Moravsky Berou  151.57 343 ⇓i PKP       PKPbc    00 22 22.0 +0.2
MORC Moravsky Berou  151.57 343 ePKPbc       PKPbc    00 22 21.9 +0.2
MORC Moravsky Berou  151.57 343 ePKIKP       PKPbc    00 22 21.9 +0.2
MORC Moravsky Berou  151.57 343 ePKP         PKPbc    00 22 22.2 +0.5
LANS Liptovska Anna  151.58 340 ePKIKP       PKPbc    00 22 23.0 +1.2
LANS Liptovska Anna  151.58 340 ePKP         PKPbc    00 22 23.0 +1.2
MMAI Mount Meron Ar  151.70 297  PKPbc       PKPbc    00 22 23.7 +1.1
     comp=Z,7.2nm,0.8s,baz=74,slow=6.2,SNR=11
MMAI                             PKPab       sPKPdf   00 22 33.0 -0.9
     comp=Z,8.3nm,0.7s,baz=66,slow=4.1,SNR=15
DOPR Dopca           151.87 329 ⇓i PKP       PKPbc    00 22 23.4 +0.9
MLR  Muntele Rosu    151.95 328  PKPbc       PKPbc    00 22 22.9 +0.1
     comp=Z,1.3nm,0.9s,baz=348,slow=7.9,SNR=5.8
MLR                              PKPab       sPKPdf   00 22 33.6 -0.3
     comp=Z,1.2nm,0.7s,baz=87,slow=2.5,SNR=4.9
MLR  Muntele Rosu    151.95 328 ⇓i PKP       PKPbc    00 22 23.0 +0.1
PRU  Pruhonice       152.08 347 ⇑ePKP        PKPbc    00 22 23.4 +0.6
PRU                              ex          x        00 22 30.0
PRU                              AMS         AMS      01 49 10.0
     comp=Z,200nm,21.7s
PRU  Pruhonice       152.08 347 ePKIKP       PKPbc    00 22 23.4 +0.6
PRU                              e           PKPbc    00 22 30.0
PRU                              MLR         MLR
     comp=Z,200nm,21.7s
CJR  Cluj-Napoca     152.10 333 ⇓i PKP       PKPbc    00 22 23.8 +0.8
CJR  Cluj-Napoca     152.10 333  PKIKP       PKPbc    00 22 23.8 +0.8
GOPC GO Pecny, Ondr  152.10 347 ⇑ePKP        PKPbc    00 22 23.3 +0.4
GOPC                             ePKPAB      sPKPdf   00 22 32.7 -1.2
GOPC                             AMS         AMS      01 49 10.0
GOPC GO Pecny, Ondr  152.10 347 ePKIKP       PKPbc    00 22 23.3 +0.4
GOPC                             e           PKPbc    00 22 32.7
UCC  Uccle           152.21   1 ePKPbc       PKPbc    00 22 24.1 +1.1
UCC  Uccle           152.21   1 ePKIKP       PKPbc    00 22 24.1 +1.1
NKC  Novy Kostel     152.22 350 ⇑ePKP        PKPbc    00 22 23.9 +0.7
NKC                              ePKPAB      sPKPdf   00 22 33.2 -0.8
NKC  Novy Kostel     152.22 350 ePKIKP       PKPbc    00 22 23.9 +0.7
NKC                              e           PKPbc    00 22 33.2
VRAC Vranov          152.25 344 ⇓i PKP       PKPbc    00 22 23.9 +0.7
VRAC Vranov          152.25 344  PKIKP       PKPbc    00 22 23.9 +0.7
VRAC Vranov          152.25 344  ePKP        PKPbc    00 22 23.6 +0.4
VYHS Vyhne           152.35 340 ePKIKP       PKPbc    00 22 23.9 +0.4
VYHS                             e           PKPbc    00 22 34.6
VYHS Vyhne           152.35 340 ePKP         PKPbc    00 22 23.9 +0.4
VYHS                             e           PKPbc    00 22 34.6
JAVC Velka Javorina  152.37 342 ePKP         PKPbc    00 22 25.0 +1.4
MEM  Membach         152.41 359 ⇓PKP         PKPbc    00 22 23.4 -0.1
VOIR                 152.42 329 ⇓i PKP       PKPbc    00 22 24.2 +0.3
VOIR                 152.42 329  PKIKP       PKPbc    00 22 24.2 +0.3
PSZ  Piszkesteto     152.51 338 ePKPab       PKPab    00 22 35.5 +1.2
KRUC Moravsky        152.52 344 ePKP         PKPbc    00 22 24.1 +0.2
BCLA Clavier         152.60   0 ⇑PKP         PKPab    00 22 34.3 -0.2
MODS Modra-Piesok    152.92 342 ePKIKP       PKPbc    00 22 24.8  0.0
MODS Modra-Piesok    152.92 342 ePKP         PKPbc    00 22 24.8  0.0
DOU  Dourbes         152.92   1 ⇓PKP         PKPbc    00 22 24.9 +0.2
GRFO Grafenberg      152.93 352 ePKPbc       PKPbc    00 22 25.1 +0.3
GRFO Grafenberg      152.93 352 ePKIKP       PKPbc    00 22 25.1 +0.3
KHC  Kasperske Hory  153.09 348 ePKPDF       PKPdf    00 22 18.0 +0.2
KHC                              ⇑ePKP       PKiKP    00 22 25.6 +0.3
KHC                              x           ex       00 22 32.7
KHC                              ePKPAB      sPKPdf   00 22 36.3 +0.9
KHC                              ex          x        00 22 44.5
KHC                              AMS         AMS      01 56 10.0
     comp=Z,200nm,23.1s
KHC  Kasperske Hory  153.09 348 ePKIKP       PKPdf    00 22 18.0 +0.2
KHC                              e           PKPdf    00 22 25.6
KHC                              e           PKPdf    00 22 32.7
KHC                              e           PKPdf    00 22 36.3
KHC                              MLR         MLR
     comp=Z,200nm,23.1s
SIRR Siria           153.25 334 ⇑i P         PKPbc    00 22 26.0 +0.4
GERES GERESS Array B 153.34 348  PKP         PKPdf    00 22 18.6 +0.4
     comp=Z,0.2nm,0.3s,baz=166,slow=2.8,SNR=5.0
GERES                            PKPbc       PKiKP    00 22 25.8 -0.1
     comp=Z,2.1nm,0.8s,baz=60,slow=3.2,SNR=12
WLF  Walferdange     153.35 359 ⇓PKP         PKPbc    00 22 26.6 +0.9
CONA Conrad Observa  153.71 344 i PKPdf      PKPdf    00 22 18.6 -0.2
     comp=Z,3.0nm,1.0s
CONA                             i PKiKP     PKiKP    00 22 27.2 +0.5
     comp=Z,7.6nm,1.7s
CONA                             i PKPab     pPKPbc   00 22 39.9 +0.3
     comp=Z,6.7nm,1.1s
BZS  Buzias          153.80 333 ⇓i P         PKPdf    00 22 18.7 -0.2
BZS  Buzias          153.80 333  PKIKP       PKPdf    00 22 18.7 -0.2
BFO  Black Forest    154.58 355 ePKPdf       PKPdf    00 22 19.6 -0.3
BFO                              ePKPbc      PKiKP    00 22 28.5 +0.1
BFO                              ePKPab      pPKPbc   00 22 43.1 +1.7
BFO  Black Forest    154.58 355 ePKIKP       PKPdf    00 22 19.6 -0.3
BFO                              e           PKPdf    00 22 28.5
BFO                              e           PKPdf    00 22 43.1
RETA Reutte          155.15 351 i sPKPdf     PKPdf    00 22 27.4 +6.6
     comp=Z,3.7nm,1.2s
VTS  Vitosha         155.41 327 ⇑i P         PKPab    00 22 48.2 +1.2
VTS  Vitosha         155.41 327 ePKPab       PKPab    00 22 48.0 +1.1
VTS  Vitosha         155.41 327  PKP2        PKPab    00 22 48.2 +1.2
ABTA Abfaltersbach   155.58 348 i PKPdf      PKPdf    00 22 20.7 -0.7
     comp=Z,5.0nm,1.4s
FETA Feichten        155.61 351 i PKPdf      PKPdf    00 22 21.6 +0.1
     comp=Z,5.0nm,1.0s
DIVS Divibare        155.71 334 ePKPab       PKPab    00 22 48.8 +0.8
FUORN Ofenpass-Fuorn 156.07 352 ePKPab       PKPab    00 22 50.5 +0.8
DBIC Dimbokro        161.06 147  PKP         PKPdf    00 22 28.8 -0.1
     comp=Z,6.3nm,0.8s,baz=234,slow=6.3,SNR=3.8
ESDC Sonseca Array   161.58  23  PKPab       PKPab    00 23 13.3 -0.2
     comp=Z,0.1nm,0.3s,baz=323,slow=6.2,SNR=5.4
KOWA Kowa            167.79 132  PKPab       PKPab    00 23 41.3 -0.2
     comp=Z,1.6nm,0.7s,baz=211,slow=5.9,SNR=3.2
TORD Torodi Ar. Bea  169.64 160  PKP         PKPdf    00 22 34.9 -1.1
     comp=Z,2.1nm,0.9s,baz=301,slow=0.7,SNR=8.9
TORD                             PKPab       PKPab    00 23 49.8 +0.3
     comp=Z,0.6nm,0.7s,baz=192,slow=3.0,SNR=5.3
```

CSEM ***07*** *00:22:04.1, 40.64N×22.80E, h12km, ML0.8/3*

ATH 07 00:22:04.1, 40.64N×22.80E, h12km±3km, ML0.8/3, Error ellipse: s-maj=3.5km s-min=1.0km az=90.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THE	**Thessaloniki**	**0.13**	**94**	P	Pg	00 22 07.2	-0.1
THE				S	Sg	00 22 09.6	0.0
THE	**Thessaloniki**	**0.13**	**94**	P	Pg	00 22 07.2	-0.1
THE				S	Sg	00 22 09.6	0.0
HORT	**Hortiatis**	**0.23**	**100**	P	Pg	00 22 09.0	0.0
HORT				S	Sg	00 22 13.0	+0.6
HORT	**Hortiatis**	**0.23**	**100**	P	Pg	00 22 09.0	-0.1
HORT				S	Sg	00 22 12.8	+0.3
GRG	**Griva**	**0.44**	**317**	P	Pg	00 22 12.2	-0.5
GRG	**Griva**	**0.44**	**317**	P	Pg	00 22 12.4	-0.3
SOH	**Sokhos**	**0.46**	**67**	P	Pg	00 22 13.6	+0.4
SOH				S	Sg	00 22 20.0	+0.7
SOH				AML	AML	00 22 20.5	
	comp=E,52μm,0.5s						
SOH				AML	AML	00 22 23.5	
	comp=N,39μm,0.3s						
SOH	**Sokhos**	**0.46**	**67**	P	Pg	00 22 13.3	+0.2
SOH				S	Sg	00 22 19.8	+0.5
KNT	**Kendrikon**	**0.53**	**8**	P	Pg	00 22 14.4	0.0
KNT				S	Sg	00 22 21.3	-0.1
KNT				AML	AML	00 22 22.4	
	comp=N,19μm,0.1s						
KNT				AML	AML	00 22 23.2	
	comp=E,22μm,0.1s						
KNT	**Kendrikon**	**0.53**	**8**	P	Pg	00 22 14.4	0.0
KNT				S	Sg	00 22 21.5	+0.1
PLG	**Polygyros**	**0.56**	**118**	P	Pg	00 22 14.7	-0.3
PLG				S	Sg	00 22 22.6	+0.1
PLG	**Polygyros**	**0.56**	**118**	P	Pg	00 22 14.8	-0.2
PLG				S	Sg	00 22 22.7	+0.2
LIT	**Litokhoron**	**0.59**	**204**	P	Pg	00 22 15.5	-0.1
LIT	**Litokhoron**	**0.59**	**204**	P	Pg	00 22 15.4	-0.1

SRS	Serrai	0.77	51	P	Pg	00 22 18.7	-0.2
SRS				AML	AML	00 22 32.5	
	comp=E,17μm,0.4s						
SRS				AML	AML	00 22 33.9	
	comp=N,14μm,0.3s						
SRS	Serrai	0.77	51	P	Pg	00 22 18.6	-0.3
KZN	Kozani	0.85	247	P	Pb	00 22 21.2	+0.4
KZN	Kozani	0.85	247	P	Pb	00 22 20.7	-0.1
OUR	Ouranopolis	0.95	108	P	Pg	00 22 22.1	-0.3
OUR	Ouranopolis	0.95	108	P	Pg	00 22 22.1	-0.3
PAIG	Paliouri	0.98	136	P	Pg	00 22 21.8	-1.2
PAIG	Paliouri	0.98	136	P	Pg	00 22 22.1	-0.9
NVR	Nevrokopi	1.07	48	P	Pb	00 22 24.1	-0.5
NVR	Nevrokopi	1.07	48	P	Pb	00 22 24.2	-0.4
FNA	Florina	1.09	278	P	Pb	00 22 23.9	-1.0
FNA	Florina	1.09	278	P	Pb	00 22 24.2	-0.7

*IDC **07** 00:22:46.5±1.0, 15°.25S×177°.96W, h0km, mb4.1/13, mb1 4.3/13, mb1mx4.2/46, mbtmp4.1/13, MS4.3/35, Ms1 4.3/35, ms1mx4.3/48, Error ellipse: s-maj=40.4km s-min=17.1km az=154.0*
*NEIC **07** 00:22:48.1±0.5, 15°.30S×177°.96W, h10km, mb4.6/5, Error ellipse: s-maj=24.3km s-min=8.5km az=155.0*
*ISCJB **07** 00:22:50.2±0.7, 15°.2S±0°.2×178°.0W±0°.1, h33km, mb4.2/17, MS4.4/31, Error ellipse: s-maj=31.2km s-min=12.6km az=157.2*
*GCMT **07** 00:22:51.9±0.2, 15°.08S×177°.84W, h16km±1km, MW5.1/108, Moment Tensor Solution. s54,c70; s108,c169; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=0.79±.13; Mθθ=2.81±.13; Mϕϕ3.60±.12; Mrθ=1.39±.39; Mθϕ4.72±.12; Mϕr0.01±.34; Best double couple: M0=5.89400×10^16 NP1:ϕs72.00000°, δ84.00000°, λ-14.00000°. NP2:ϕs164.00000°, δ76.00000°, λ-174.00000°. Principal axes: T 6.1610, Plg5.0000°, Azm118.0000°; N -0.5320, Plg75.0000°, Azm229.0000°; P -5.6260, Plg14.0000°, Azm27.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 07 00:22:52.0±1.1, 15°.3S±0°.3×178°.0W±0°.2, h35km, n52, σ0s61/23, mb4.3/17, MS4.4/31, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	6.15	78	LR	LR	00 26 16.7	
	comp=Z,2μm,18.6s,baz=258,slow=34						
RAO	Raoul Island	13.91	180	LR	LR	00 29 34.8	
	comp=Z,572nm,20.1s,baz=202,slow=29						
DZM	Mont Dzumac	16.23	243	eLR	LR	00 30 50.7	
	1μm,23.8s						
DZM	Mont Dzumac	16.23	243	LR	LR	00 31 58.8	
	comp=Z,1μm,18.4s,baz=72,slow=34						
RAR	Rarotonga	18.26	112	LR	LR	00 32 14.1	
	comp=Z,2μm,21.8s,baz=264,slow=31						
HNR	Honiara	22.33	283	LR	LR	00 35 05.0	
	comp=Z,4μm,20.3s,baz=132,slow=33						
PPT	Papeete	27.32	99	LR	LR	00 36 31.3	
	comp=Z,700nm,20.9s,baz=266,slow=30						
PPT2	Papeete2	27.32	99	eLQ	LQ	00 34 07.0	
	2μm,27.8s						
PPT2				eLR	LR	00 35 22.8	
	3μm,26.5s,baz=263						
TBI	Tubuai	28.04	111	eLQ	LQ	00 34 36.3	
	912nm,26.2s						
TBI				eLR	LR	00 35 53.0	
	4μm,27.2s,baz=286						
PMG	Port Moresby	34.53	276	LR	LR	00 41 53.0	
	comp=Z,680nm,19.3s,baz=98,slow=33						
STKA	Stephens Creek	40.30	239	P	P	00 30 26.1	0.0
	6.4nm,1.0s,baz=69,slow=7.7,SNR=6.8						
STKA				LR	LR	00 45 26.7	
	comp=Z,766nm,20.3s,baz=72,slow=34						
JAY	Jayapura	42.65	283	P	P	00 30 46.5	+0.9
	10.0nm,0.9s,baz=312,slow=6.0,SNR=3.5						
WRA	Warramunga Arr	45.57	257	P	P	00 31 08.3	-0.6
	2.5nm,1.1s,baz=90,slow=7.4,SNR=5.0						
WRA				LR	LR	00 48 51.1	
	comp=Z,422nm,19.9s,baz=110,slow=34						
ASAR	Alice Springs	45.95	252	P	P	00 31 11.1	-0.9
	1.3nm,0.6s,baz=84,slow=7.0,SNR=10						
ASAR				LR	LR	00 48 54.6	
	comp=Z,422nm,19.7s,baz=95,slow=34						
BATI	Baumata	57.01	268	LR	LR	00 55 49.8	
	comp=Z,319nm,21.1s,baz=124,slow=35						
NWAO	Narrogin (SRO)	60.83	241	LR	LR	00 58 42.6	
	comp=Z,339nm,18.9s,baz=328,slow=35						
JHJ	Hachijo jima 2	62.79	321	LR	LR	01 00 44.6	
	comp=Z,223nm,18.1s,baz=34,slow=36						
VNDA	Vanda	63.09	185	LR	LR	00 57 47.1	
	comp=Z,170nm,18.1s,baz=37,slow=33						
RPN	Rapa Nui	64.40	113	LR	LR	00 54 31.7	
	comp=Z,164nm,21.3s,baz=266,slow=30						
MJAR	Matsushiro Arr	66.07	322	LR	LR	00 56 36.2	
	comp=Z,143nm,21.6s,baz=155,slow=31						
JOW	Kunigami	66.90	308	LR	LR	00 57 10.4	
	comp=Z,173nm,22.0s,baz=131,slow=31						
JNU	Nakatsue	68.55	315	LR	LR	00 58 42.2	
	comp=Z,197nm,21.7s,baz=117,slow=31						
ASAJ	Asahikawa	69.19	331	LR	LR	01 01 05.7	
	comp=Z,433nm,18.7s,baz=170,slow=33						
PETK	Petropavlovsk-	71.26	345	P	P	00 34 07.2	-0.3
	2.4nm,0.7s,baz=132,slow=9.9,SNR=2.7						
PETK				LR	LR	00 58 08.7	
	comp=Z,116nm,21.1s,baz=173,slow=30						
KSRS	Korea Array	73.04	318	P	P	00 34 18.8	+0.4
	0.4nm,0.3s,baz=128,slow=6.1,SNR=6.4						
KSRS				LR	LR	01 00 35.3	
	comp=Z,287nm,21.7s,baz=129,slow=31						
KSAR	Wonju Array Be	73.06	318	P	P	00 34 18.8	+0.2
USRK	Ussuriysk Ar.	74.70	325	P	P	00 34 27.6	-0.4
	2.3nm,1.0s,baz=87,slow=6.3,SNR=3.9						
USRK				LR	LR	01 01 15.8	
	comp=Z,135nm,21.3s,baz=131,slow=31						
YBH	Yreka Blue Hor	76.23	39	P	P	00 34 37.4	+0.4
	2.8nm,0.9s,baz=284,slow=4.2,SNR=5.0						
YBH				LR	LR	01 00 31.1	
	comp=Z,377nm,21.0s,baz=240,slow=30						
LPIG	La Paz	76.77	60	LR	LR	00 59 35.3	
	comp=Z,224nm,21.8s,baz=214,slow=29						
NVAR	Mina Array Bea	77.25	44	P	P	00 34 42.8	-0.3
	2.9nm,0.8s,baz=229,slow=8.3,SNR=13						
NVAR				LR	LR	01 04 04.9	
	comp=Z,171nm,18.2s,baz=102,slow=32						
WVOR	Wild Horse Val	79.14	40	eP	P	00 34 53.4	+0.1
	4.4nm,1.1s						
DUG	Dugway, Tooele	81.83	45	eP	P	00 35 08.0	+0.2
	5.4nm,1.3s						
HLID	Hailey	82.38	41	eP	P	00 35 10.7	0.0
	7.3nm,1.3s						
ILAR	Eielson Array	83.25	13	P	P	00 35 13.4	-1.0
	0.6nm,0.9s,baz=241,slow=6.8,SNR=3.6						
ILAR				LR	LR	01 06 19.9	
	comp=Z,143nm,19.7s,baz=216,slow=31						
MNTX	Cornudas Mount	83.73	55	eP	P	00 35 17.9	+0.2
	4.5nm,1.3s						
ANMO	Albuquerque	84.14	52	P	P	00 35 20.2	+0.2
	0.9nm,0.8s,baz=345,slow=2.1,SNR=3.0						
ANMO				LR	LR	01 05 02.4	
	comp=Z,294nm,20.4s,baz=248,slow=30						
ANMO	Albuquerque	84.14	52	eP	P	00 35 19.7	-0.3
	5.5nm,1.2s						
TXAR	Lajitas Array	84.24	58	P	P	00 35 21.0	+0.5
	1.4nm,0.9s,baz=220,slow=6.3,SNR=9.6						
TXAR				LR	LR	01 05 53.1	
	comp=Z,248nm,19.3s,baz=0.0,slow=31						
PDAR	Pinedale Array	85.17	43	P	P	00 35 24.4	-0.6
	1.0nm,0.7s,baz=242,slow=3.2,SNR=9.6						
MAW	Mawson	86.46	200	LR	LR	01 11 02.0	
	comp=Z,256nm,20.7s,baz=78,slow=34						
APG	El Apazote	91.54	75	LR	LR	01 10 05.9	
	comp=Z,104nm,18.2s,baz=252,slow=31						
YKA	Yellowknife Ar	91.78	25	LR	LR	01 12 54.3	
	comp=Z,59nm,18.5s,baz=238,slow=33						
PLCA	Paso Flores	92.83	133	LR	LR	01 09 20.6	
	comp=Z,123nm,21.9s,baz=234,slow=30						
SNAA	Sanae	93.20	178	LR	LR	01 13 43.5	
	comp=Z,139nm,21.1s,baz=202,slow=33						
JTS	JuntasAbangare	95.54	81	LR	LR	01 11 12.4	
	comp=Z,68nm,18.1s,baz=326,slow=30						
ULM	Lac du Bonnet	96.64	40	LR	LR	01 13 08.5	
	comp=Z,238nm,19.9s,baz=268,slow=31						
ARU	Arti	120.89	327	ePKPdf	PKPdf	00 41 41.0	+0.6
BRTR	Keskin Array B	143.18	318	PKhKP	PKPpre	00 42 19.3	
	1.2nm,0.9s,baz=90,slow=4.3,SNR=5.2						
KHC	Kasperske Hory	144.94	347	ePKP	PKPdf	00 42 27.1	+1.6
KHC				ex	x	00 42 31.7	
MMAI	Mount Meron Ar	145.00	306	PKP	PKPbc	00 42 25.4	-0.1
	5.5nm,1.0s,baz=224,slow=4.0,SNR=6.7						
GERES	GERESS Array B	145.18	346	PKPbc	PKPdf	00 42 26.0	0.0
	0.3nm,0.4s,baz=29,slow=3.0,SNR=5.9						
BFO	Black Forest	146.63	352	ePKPbc	PKPab	00 42 31.0	-0.1

KRSC 07 00:22:52.1±1.8, 50°.08N×157°.08E, h49km±23km, ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.86	315	eP	Pn	00 23 07.5	-0.4
SKR				eS	Sn	00 23 18.9	-0.6
PAU	Pauzhetka	1.40	353	eP	Pn	00 23 16.9	+1.7
PAU				eS	Sn	00 23 35.3	+2.8
KDTR	Khodutka, Kamc	1.84	20	eP	Pn	00 23 22.8	+1.6
KDTR				eS	Sn	00 23 45.8	+2.5
MIPR	Malaya Ipel'ka	2.21	355	eP	Pn	00 23 28.7	+2.5
ASAK	Asacha	2.36	12	eP	Pn	00 23 31.7	+3.3
MTVR	Mutnovka	2.50	16	eP	Pn	00 23 33.6	+3.2
MTVR				eS	Sn	00 24 03.2	+3.4
RUS	Russkaya	2.52	20	eP	Pn	00 23 33.1	+2.6
RUS				eS	Sn	00 24 03.5	+3.5
KRMR	Karymshinskiy	2.83	13	eP	Pn	00 23 39.1	+4.4
PET	Petropavlovsk	3.11	18	eP	Pn	00 23 42.6	+4.1
UGLR	Uglovaya	3.31	18	eP	Pn	00 23 46.2	+4.7
AVH	Avacha	3.35	17	eP	Pn	00 23 45.3	+3.3
KRER	Koryakskii	3.39	17	eP	Pn	00 23 47.2	+4.6
SDLR	Sedlovina	3.39	19	eP	Pn	00 23 46.2	+3.6
KRX	Arik	3.42	16	eP	Pn	00 23 46.6	+3.6
SPN	Mys Shipunski	3.53	30	eP	Pn	00 23 47.9	+3.5
SPN				eS	Sn	00 24 28.6	+3.7
GNL	Ganaly	3.66	8	eP	Pn	00 23 50.8	+4.6
MKZ	Mys Kozlova	5.31	31	eP	Pn	00 24 11.5	+2.8
KBTR	Krutoberegovo	7.04	27	eP	Pn	00 24 35.6	+3.2

MEX 07 00:27:25.8±0.9, 16°.34N×92°.91W, h166km±12km, MD3.8, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		0.48	334	eP	Pn	00 27 47.4	-1.6
TGIG				eS	Sn	00 28 04.8	-2.1
PCIG		0.70	206	eP	Pn	00 27 48.5	-1.5
PCIG				eS	Sn	00 28 06.5	-2.2
CCIG	Comitan	0.74	94	eP	Pn	00 27 51.9	+1.4
CCIG				eS	Sn	00 28 07.4	-2.0

KRSC 07 00:28:34.5±0.7, 53°.83N×160°.85E, h67km±16km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KII	Karymskiy	0.85	285	eP	Pn	00 28 52.1	+1.0
KII				eS	Sn	00 29 04.2	+0.8
SPN	Mys Shipunski	0.88	214	eP	Pn	00 28 52.8	+1.4
SPN				eS	Sn	00 29 05.3	+1.5
MKZ	Mys Kozlova	0.90	35	iP	Pn	00 28 53.4	+1.9
MKZ				eS	Sn	00 29 06.3	+2.2
NLC	Nalytchevo	1.11	234	eP	Pn	00 28 55.9	+1.6
NLC				eS	Sn	00 29 10.3	+1.3
SDLR	Sedlovina	1.30	246	iP	Pn	00 28 58.7	+1.9
SDLR				eS	Sn	00 29 15.3	+1.9
KZV	Kizimen	1.33	346	iP	Pn	00 28 58.7	+1.4
KZV				eS	Sn	00 29 15.3	+1.0
KRER	Koryakskii	1.36	248	iP	Pn	00 28 59.9	+2.2
KRER				eS	Sn	00 29 17.3	+2.3
UGLR	Uglovaya	1.36	244	iP	Pn	00 28 59.6	+2.0
UGLR				eS	Sn	00 29 17.2	+2.3
AVH	Avacha	1.38	247	eP	Pn	00 29 00.2	+2.3
AVH				eS	Sn	00 29 17.8	+2.4
KRX	Arik	1.39	251	eP	Pn	00 28 59.9	+1.8
KRX				eS	Sn	00 29 17.3	+1.5
KOK	Koryaka	1.43	249	eP	Pn	00 29 00.5	+2.0
KOK				eS	Sn	00 29 17.7	+1.2
TUMR	Tumrok	1.52	345	iP	Pn	00 29 01.6	+1.9
TUMR				eS	Sn	00 29 20.6	+2.0
PET	Petropavlovsk	1.54	239	iP	Pn	00 29 02.0	+2.1
PET				eS	Sn	00 29 21.0	+2.0
GNL	Ganaly	1.73	267	iP	Pn	00 29 04.0	+1.4
GNL				eS	Sn	00 29 24.4	+0.6
KRMR	Karymshinskiy	1.91	240	eP	Pn	00 29 07.2	+2.3
KRMR				eS	Sn	00 29 30.3	+2.3
KMNR	Kamenistaya	1.97	350	iP	Pn	00 29 08.3	+2.6
RUS	Russkaya	1.98	226	eP	Pn	00 29 07.7	+1.9
RUS				eS	Sn	00 29 30.8	+1.2
MTVR	Mutnovka	2.10	231	eP	Pn	00 29 10.0	+2.5
MTVR				eS	Sn	00 29 35.1	+2.5
BZGR	Bezymyannyi-Gr	2.12	358	eP	Pn	00 29 10.6	+2.8
BZMR	Bezymyannaya	2.12	355	eP	Pn	00 29 10.5	+2.6
BZMR				eS	Sn	00 29 35.7	+2.4
KPT	Kopyto	2.17	351	eP	Pn	00 29 10.3	+1.8
KPT				eS	Sn	00 29 35.2	+0.8
ZLN	Zelenaya	2.19	359	eP	Pn	00 29 11.6	+2.8
LGNR	Loginova	2.26	358	eP	Pn	00 29 13.0	+3.1
ASAK	Asacha	2.29	232	eP	Pn	00 29 13.0	+2.9
KOZ	Kozyrevsk	2.31	346	eP	Pn	00 29 12.4	+2.2
APC	Apacha	2.39	249	eP	Pn	00 29 13.6	+2.3
APC				eS	Sn	00 29 41.2	+1.7
KRSR	Krestovskiy	2.40	356	eP	Pn	00 29 14.2	+2.6
KDTR	Khodutka, Kamc	2.63	221	eP	Pn	00 29 17.5	+2.9
KBTR	Krutoberegovo	2.64	25	eP	Pn	00 29 17.0	+2.3
SRKR	Sorokina	2.84	4	eP	Pn	00 29 20.3	+2.8
BKI	Bering	3.29	63	eS	Sn	00 30 01.0	-0.4

SJA 07 00:33:29.8±0.9, 30°.01S×66°.23W, h29km±4km, ML3.1, MW3.6,5D, La Rioja Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APLL	PUNTA DE LOS L	0.46	214	eP	Pn	00 33 40.3	-0.4
APLL				eS	Sn	00 33 47.4	-0.6
APLL				IAML		00 33 47.7	
	comp=Z,2μm,0.4s						
CYA	Choya	1.61	14	⇓eP	Pn	00 33 56.7	+0.4
CYA				⇓eS	Sb	00 34 19.2	+0.4
CYA				IAML		00 34 22.0	
	comp=Z,182nm,0.3s						
AGUA	GUANDACOL	2.04	284	⇓eP	Pn	00 34 02.7	+0.4
VCA	Vinchina	2.14	306	eP	Pb	00 34 06.8	-1.3
VCA				IAML		00 34 50.2	
	comp=Z,70nm,0.6s						
AMOG	MOGNA	2.16	244	eP	Pn	00 34 05.3	+1.3
AMOG				eS	Sb	00 34 33.3	-1.5
RTLL	Cerro Villicun	2.34	235	eP	Pn	00 34 08.4	+2.0
RTLL				IAML		00 34 46.4	
	comp=Z,112nm,0.4s						
ACAN	Cantantal	2.40	200	eP	Pb	00 34 09.9	-2.5
MRA	San Martin	2.44	170	eP	Pn	00 34 10.2	+2.3
MRA				IAML		00 34 53.5	
	comp=Z,183nm,0.6s						
ACDV	Cuesta del Vie	2.51	266	eP	Pn	00 34 11.1	+2.2
RTCV	Cerro Valdivia	2.71	226	eP	Pb	00 34 14.9	-2.8
RTCV				eS	Sb	00 34 52.1	+1.6
AROD	Rodeo	2.82	266	eP	Pn	00 34 14.9	+1.7
RTLS	Leoncito	3.18	235	⇓eP	Pn	00 34 20.3	+2.0
RTLS				IAML		00 35 08.1	
	comp=Z,44nm,0.2s						
AHML	Horco Molle	3.31	14	eP	Pn	00 34 20.1	+0.3
AHML				IAML		00 35 19.6	
	comp=Z,39nm,0.3s						
ASAL	Salagasta	3.41	220	⇓eP	Pn	00 34 24.6	+3.5
AUSP	Uspallata	3.50	230	eP	Pn	00 34 25.2	+2.7
AUSP				eS	Sb	00 35 14.2	+0.9
ARCO	CERRO ARCO	3.65	219	eP	Pn	00 34 28.0	+3.5
ARCO				IAML		00 35 30.8	
	comp=Z,57nm,0.2s						
AAGR	Agrelo	3.79	215	eP	Pn	00 34 29.4	+3.1

IDC 07 00:50:05.3±17.0, 21°.40S×174°.74W, h0km, mb4.3/5, mb1 4.5/5, mb1mx3.9/49, mbtmp4.3/5, Error ellipse: s-maj=319.0km s-min=141.4km az=81.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	36.44	265	P	P	00 57 13.3	+1.2
	5.4nm,0.4s,baz=96,slow=9.6,SNR=10						
STKA	Stephens Creek	40.17	246	P	P	00 57 42.4	-1.0
	1.3nm,0.4s,baz=97,slow=12,SNR=6.4						
ASAR	Alice Springs	47.29	257	P	P	00 58 39.7	-1.2
	2.6nm,0.7s,baz=101,slow=6.7,SNR=24						
WRA	Warramunga Arr	47.50	262	P	P	00 58 42.0	-0.6
	1.5nm,0.3s,baz=92,slow=8.5,SNR=63						
FITZ	Fitzroy Crossi	55.93	262	P	P	00 59 46.5	+1.0
	1.8nm,0.5s,baz=81,slow=8.3						

*IDC **07** 00:59:51.8±1.3, 36°.03N×140°.99E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.4/64, mbtmp3.4/5, ML3.2/1, MS4.1/1, Ms1 4.1/1, ms1mx2.9/49, Error ellipse: s-maj=30.7km s-min=25.4km az=24.0*
*ISCJB **07** 00:59:53.9±0.9, 36°.15N±0°.05×141°.05E±0°.07, h27km±6km, mb3.5/4, MS4.1/1, Error ellipse: s-maj=10.0km s-min=7.5km az=159.7*
*JMA **07** 00:59:54.7, 36°.13N×140°.95E, h36km±1km, M3.9*
JMA Felt II J1.

ISC 07 00:59:53.9±1.7, 36°.16N±0°.05×141°.03E±0°.08, h15km±10km, n19, σ0s98/17, mb3.6/4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.48	197	P	Pb	01 00 04.2	+0.2
CHOJ				eS	Sb	01 00 10.9	+0.1
JHO	Hitachi	0.58	321	P	Pg	01 00 06.0	+0.6
JHO				S	Sg	01 00 14.1	+1.0
JYT	Yasato	0.68	276	P	Pg	01 00 06.9	-0.3
JYT				eS	Sg	01 00 15.4	-0.7
ONAJ	Iwakimizuishiy	0.96	349	P	Pb	01 00 11.7	-0.5
JFK	Kawauchi	1.21	354	P	Pn	01 00 15.0	-1.3
JAG	Ashikaga	1.30	282	P	Pn	01 00 15.9	-1.6
MJAR	Matsushiro Arr	2.31	280	Pn	Pn	01 00 31.2	-0.2
	5.8nm,0.3s,baz=110,slow=7.5,SNR=27						
MJAR				Sn	Sn	01 00 58.7	-0.8
	7.2nm,0.3s,baz=323,slow=49,SNR=6.7						
MJAR				Lg	Lg	01 01 09.1	
	16nm,0.3s,baz=94,slow=31,SNR=6.9						
MAT	Matsushiro	2.31	280	P	Pn	01 00 31.6	+0.2
MAT				S	Sn	01 01 01.2	+1.6
H11N2	WAKE ISLAND Hy	27.98	119	T	T	01 35 07.8	
	baz=312						
H11N1	WAKE ISLAND Hy	27.99	119	T	T	01 35 11.1	
	baz=312						
H11N3	WAKE ISLAND Hy	28.00	119	T	T	01 35 06.3	
	baz=312						
H11S1	WAKE ISLAND Hy	28.66	121	T	T	01 35 56.0	
	baz=313						
H11S3	WAKE ISLAND Hy	28.66	121	T	T	01 35 57.4	
	baz=319						
H11S2	WAKE ISLAND Hy	28.68	121	T	T	01 35 55.8	
	baz=313						
JAY	Jayapura	38.48	181	LR	LR	01 20 46.4	
	comp=Z,289nm,20.3s,baz=298,slow=33						
MKAR	Makanchi Array	44.32	303	P	P	01 08 04.2	+0.9
	0.4nm,0.9s,baz=99,slow=9.5,SNR=3.2						
KURBB	Kurchatov Arra	46.30	309	P	P	01 08 18.9	+0.1
	0.2nm,0.4s,baz=83,slow=8.0,SNR=3.6						
ILAR	Eielson Array	50.40	32	P	P	01 08 51.2	+1.0
	0.7nm,0.8s,baz=274,slow=6.2,SNR=7.9						
WRA	Warramunga Arr	56.16	188	P	P	01 09 32.2	-0.9
	0.6nm,0.8s,baz=6.6,slow=7.6,SNR=3.5						

*DDA **07** 01:08:25.7, 41°.56N×43°.82E, h3km, Ml2.9*
*ISK **07** 01:08:25.9, 41°.57N×43°.84E, h5km, ML2.8/6*
*ISCJB **07** 01:08:26.5±0.5, 41°.57N±0°.02×43°.81E±0°.02, h1km±4km, Error ellipse: s-maj=3.8km s-min=2.7km az=154.0*
*CSEM **07** 01:08:26.7±0.2, 41°.57N×43°.81E, h2km, ML2.8, Error ellipse: s-maj=4.3km s-min=3.1km az=164.0*
*TIF **07** 01:08:26.3, 41°.59N×43°.84E, h13km±2km*

ISC 07 01:08:26.6±0.9, 41°.58N±0°.02×43°.83E±0°.02, h15km±7km, n51, σ0s81/86, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKH	Akhalkalaki	0.30	237	PG	Pg	01 08 33.1	0.0
AKH				SG	Sb	01 08 38.5	-0.1
AKH	Akhalkalaki	0.30	237	P	Pg	01 08 33.1	0.0
AKH				S	Sg	01 08 37.5	0.0
AKH	Akhalkalaki	0.30	237	ePg	Pg	01 08 33.1	0.0
AKH				S	Sg	01 08 37.5	0.0
AKH				eSg	Sb	01 08 38.5	-0.1
BGD	Bogdanovka	0.36	209	P	Pg	01 08 34.0	0.0
BGD				S	Sg	01 08 39.0	0.0
KZR	Kazreti	0.48	114	P	Pg	01 08 36.2	0.0
KZR				S	Sg	01 08 42.8	+0.1
KZR	Kazreti	0.48	114	P	Pg	01 08 36.2	0.0
KZR				S	Sg	01 08 42.8	+0.1
TBLG	Delisi	0.70	77	PG	Pg	01 08 40.1	-0.2
TBLG				SG	Sb	01 08 50.9	+1.0
TBLG	Delisi	0.70	77	P	Pg	01 08 40.1	-0.2
TBLG				S	Sb	01 08 50.0	+0.1
TBLG	Delisi	0.70	77	P	Pg	01 08 40.1	-0.2
TBLG				S	Sb	01 08 50.0	+0.1
SEAG	Tbilisi Sea	0.75	75	P	Pb	01 08 41.3	-0.1
SEAG				S	Sn	01 08 52.6	-1.2
SEAG	Tbilisi Sea	0.75	75	P	Pb	01 08 41.3	-0.1
SEAG				S	Sn	01 08 52.6	-1.2
EPOS	Posof	0.83	265	iP	Pb	01 08 41.2	-1.6
EPOS				iS	Sb	01 08 52.6	-1.2
EPOS	Posof	0.83	265	P	Pb	01 08 41.2	-1.6
EPOS				S	Sb	01 08 52.6	-1.2
DUS	Dusheti	0.83	51	P	Pg	01 08 43.3	+0.5
DUS				S	Sn	01 08 55.5	-0.3
EAK	Akyaka	0.90	191	iP	Pb	01 08 42.6	-1.4
EAK				iS	Sb	01 08 55.6	-0.3
EAK	Akyaka	0.90	191	P	Pb	01 08 42.7	-1.4
EAK				S	Sb	01 08 55.6	-0.3
GUDG	Gudauri	1.01	28	P	Pn	01 08 46.8	+0.3
GUDG				S	Sn	01 09 01.0	+0.5
ONI	Oni	1.05	345	P	Pb	01 08 46.4	-0.2
ONI				S	Sg	01 09 00.7	0.0
ONI	Oni	1.05	345	P	Pb	01 08 46.4	-0.2
ONI				S	Sg	01 09 00.7	0.0
KARS	Kars	1.10	211	PN	Pg	01 08 48.2	+0.3
KARS				SN	Sn	01 09 03.6	+1.0
KARS

CHOM	Cayeli-Rize	2.36 259	PN	Pb	01 09 07.5	-1.3
CHOM	Cayeli-Rize	2.36 259	*e*Pn	Pb	01 09 07.5	-1.3
ERZM	Erzurum	2.51 229	*i* P	Pg	01 09 14.8	+0.1
BAYT	Ayd¨–ntepe-Bay	3.03 248	PN	Pn	01 09 17.1	+3.0
BAYT	Ayd¨–ntepe-Bay	3.03 248	*e*Pn	Pn	01 09 17.1	+3.0

*IDC **07** 01:10:24.3±0.3, 1˚.59N×126˚.46E, h0km, mb4.9/40, mb1 4.9/43, mb1mx4.8/57, mbtmp4.8/43, ML4.2/3, MS3.9/22, Ms1 3.9/22, ms1mx3.6/50, Error ellipse: s-maj=14.7km s-min=8.9km az=68.0*

*NEIC **07** 01:10:25.9±0.1, 1˚.60N×126˚.48E, h10km, mb5.1/68, Error ellipse: s-maj=5.4km s-min=3.2km az=67.0*

NEIC Felt [III] at Jailolo and [II] on Pulau Ternate, Indonesia.

*BJI **07** 01:10:25.9, 0˚.97N×126˚.61E, h52km, mb4.9/53, mB5.1/37, Ms4.7/22, Ms7 4.4/19*

*GCMT **07** 01:10:25.9±0.3, 1˚.66N×126˚.41E, h40km±1km, MW5.1/70, Moment Tensor Solution. s40,c53; s70,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.36±.24; $M_{\theta\theta}$2.36±.17; $M_{\phi\phi}$-4.71±.19; $M_{r\theta}$-1.92±.23; $M_{\theta\phi}$-3.54±.18; $M_{\phi r}$0.07±.26; Best double couple: $M_0$5.64100×10^{16} NP1:ϕ_s242.00000°, δ70.00000°, λ151.00000°. NP2: ϕ_s342.00000°, δ63.00000°, λ22.00000°. Principal axes: T 5.0500, Plg34.0000°, Azm200.0000°; N 1.1930, Plg55.0000°, Azm30.0000°; P -6.2330, Plg5.0000°, Azm293.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **07** 01:10:27.7±1.2, 1˚.59N×126˚.44E, h33km, mb5.3/52 Error ellipse: s-maj=9.9km s-min=4.8km az=116.1*

*ISCJB **07** 01:10:30.5±0.4, 1˚.63N±0˚.02×126˚.60E±0˚.03, h59km±3km, mb5.0/153, MS4.0/28, Error ellipse: s-maj=4.7km s-min=3.3km az=157.4*

*DJA **07** 01:10:33.0±0.2, 2˚N±2˚×12˚7E±˚, h76km±2km, M5.0/43, mB5.4/19, mb5.2/43, MLv5.2/17, Mw(mB)4.9/19*

ISC 07 01:10:33.0±0.6,**1˚.57N**±0˚.03×**126˚.60E**±0˚.04,**h65**km±4km, **n372**, σ1§**70**/402, **mb5.0**/152, **16C-6D, Northern Moluccas Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.10**	**136**	*e*Pn	**Pn**	**01 10 49.9**	**-2.7**
TNTI				*e*Sn	**Sn**	**01 11 03.9**	**-3.1**
LBMI	**Labuha**	**2.37**	**158**	P	**Pn**	**01 11 08.5**	**-1.1**
LBMI				S	**Sn**	**01 11 35.1**	**-2.4**
SGSI	**Sangihe**	**2.37**	**333**	P	**Pn**	**01 11 07.5**	**-2.1**
KMSI	**Cibinong**	**2.80**	**249**	P	**Pn**	**01 11 14.5**	**-1.0**
SANI	**Sanana**	**3.64**	**190**	P	**Pn**	**01 11 25.6**	**-1.4**
LUWI	**Luwuk**	**4.62**	**236**	P	**Pn**	**01 11 41.4**	**+1.0**
LUWI	**Luwuk**	**4.62**	**236**	*e*Pn	**Pn**	**01 11 36.8**	**-3.6**
LUWI				*e*Sn	**Sn**	**01 12 28.3**	**-4.6**
GSPH	**General Santos**	**4.79**	**340**	⇓*i*P	**Pn**	**01 11 41.0**	**-1.8**
MRSI	**Marisa**	**4.79**	**257**	P	**Pn**	**01 11 42.3**	**-0.4**
NLAI	**Namlea**	**4.80**	**174**	P	**Pn**	**01 11 43.1**	**+0.3**
SIJI	**Sorong**	**5.25**	**117**	Pn	**Pn**	**01 11 46.1**	**-2.9**
	6.8nm,0.3s,baz=306,slow=9.2,SNR=34						
SIJI				LR	LR	01 13 50.6	
	comp=Z,1μm,21.4s,baz=29,slow=38						
SKMP	**Bagumbayan, Su**	**5.33**	**337**	*e*P	**Pn**	**01 11 48.5**	**-1.7**
SKMP				*e*S	**Sn**	**01 12 46.9**	**-3.4**
MSAI	**Masohi**	**5.40**	**155**	P	**Pn**	**01 11 53.8**	**+2.7**
	64nm,0.9s,3μm0.4nm						
AAI	**Ambon**	**5.45**	**163**	P	**Pn**	**01 11 53.2**	**+1.4**
	265nm,0.8s,4μm1.3nm						
APSI	**Ampana**	**5.53**	**244**	P	**Pn**	**01 11 54.7**	**+1.8**
	387nm,0.6s,6μm3.3nm						
CTBH	**Cotabato--PC H**	**6.09**	**337**	⇑*e*P	**Pn**	**01 12 00.7**	**+0.1**
CTBH				*i* S	**Sn**	**01 13 05.3**	**-3.5**
BUKP	**Musuan**	**6.46**	**346**	*e*P	**Pn**	**01 12 06.1**	**+0.5**
BUKP				*e*S	**Sn**	**01 13 24.5**	**+6.5**
KDI	**Kendari**	**6.78**	**216**	P	**Pn**	**01 12 10.0**	**0.0**
	215nm,1.3s,3μm0.7nm						
MPSI	**Mapaga**	**6.81**	**260**	P	**Pn**	**01 12 11.8**	**+1.4**
	117nm,0.9s,1μm0.4nm						
PAGZ	**Pagadian**	**7.02**	**333**	*e*P	**Pn**	**01 12 10.2**	**-3.1**
PAGZ				*e*S	**Sn**	**01 13 24.5**	**-7.2**
FAKI	**Fak Fak**	**7.19**	**128**	P	**Pn**	**01 12 17.9**	**+2.3**
	267nm,1.0s,3μm1.0nm						
FAKI	**Fak Fak**	**7.19**	**128**	*e*Pn	**Pn**	**01 12 15.5**	**-0.1**
PCI	**Palu**	**7.20**	**250**	P	**Pn**	**01 12 18.8**	**+3.0**
	216nm,1.1s,2μm0.7nm						
PCI	**Palu**	**7.20**	**250**	P	**Pn**	**01 12 18.7**	**+3.0**
PCI				pmax	pmax		
	comp=Z,216nm,1.1s						
BBSI	**Bau Bau**	**8.08**	**210**	P	**Pn**	**01 12 28.2**	**+0.4**
RKPI	**Ransiki, Papua**	**8.16**	**112**	P	Pn	01 12 34.8	+5.9
TTSI	**Tana Toraja**	**8.18**	**236**	P	**Pn**	**01 12 29.5**	**+0.3**
	comp=Z,164nm,0.6s,comp=Z,2μm						
SPSI	**Sidrap Palu**	**8.77**	**231**	P	**Pn**	**01 12 38.4**	**+1.3**
	comp=Z,103nm,0.5s,comp=Z,1μm						
BNSI	**Bone**	**8.79**	**228**	P	**Pn**	**01 12 39.2**	**+1.7**
MYLDM	**Lahad Datu**	**8.85**	**294**	*e*Pn	**Pn**	**01 12 39.3**	**+1.0**
BKSI	**Bulukumba**	**9.42**	**223**	P	**Pn**	**01 12 47.2**	**+1.1**
KAPI	**Kappang**	**9.46**	**226**	*e*Pn	**Pn**	**01 12 45.9**	**-0.8**
	comp=Z,54nm,0.5s						
KAPI				*e*Sn	**Sn**	**01 14 28.6**	**-3.0**
BAKI	**Biak**	**9.89**	**106**	P	**Pn**	**01 12 55.5**	**+3.0**
	comp=Z,465nm,1.0s,comp=Z,6μm						
MMRI	**Maumere**	**11.03**	**203**	P	Pn	01 13 20.6	+13
KKM	**Kota Kinabalu**	**11.28**	**294**	*e*Pn	**Pn**	**01 13 12.6**	**+1.0**
BATP	**Bataraza**	**11.33**	**310**	*e*P	**Pn**	**01 13 12.9**	**+0.7**
EDFI	**Ende, Flores**	**11.36**	**205**	P	**Pn**	**01 13 15.2**	**+2.5**
	comp=Z,92nm,0.8s,comp=Z,2μm						
SOEI	**Soe**	**11.48**	**192**	P	**Pn**	**01 13 18.6**	**+4.2**
	comp=Z,438nm,1.1s,comp=Z,4μm						
SOEI	**Soe**	**11.48**	**192**	*e*Pn	**Pn**	**01 13 17.5**	**+3.1**
KBKI	**Kotabaru**	**11.50**	**245**	P	Pn	01 13 25.9	+11
BATI	**Baumata**	**12.05**	**194**	Pn	Pn	01 13 16.8	-5.4
	comp=Z,4.0nm,0.3s,baz=2.6,slow=12,SNR=2.1						
BATI	**Baumata**	**12.05**	**194**	P	P	01 13 27.8	-4.9
PLAI	**Plampang**	**13.56**	**220**	P	**P**	**01 13 51.7**	**+2.2**
TGY	**Tagaytay City**	**13.66**	**336**	LR	LR	01 18 53.2	
	comp=Z,522nm,20.8s,baz=162,slow=38						
GENI	**Genyem**	**14.18**	**107**	P	**P**	**01 13 59.8**	**+3.5**
SBUM	**Sibu**	**14.40**	**274**	*e*Pn	**Pn**	**01 13 53.6**	**-0.1**
JAY	**Jayapura**	**14.67**	**106**	Pn	**Pn**	**01 13 56.0**	**-1.2**
	comp=Z,0.4nm,0.3s,baz=118,slow=17,SNR=5.8						
JAY	**Jayapura**	**14.67**	**106**	P	**P**	**01 14 00.5**	**-1.3**
SRBI	**Singaraja**	**14.86**	**230**	P	**P**	**01 14 06.8**	**+2.9**
MTN	**Manton Dam**	**15.00**	**163**	*e*Pn	**Pn**	**01 13 59.8**	**-1.7**
	comp=Z,44nm,0.7s						
STKI	**Sintang**	**15.20**	**265**	P	**P**	**01 14 06.6**	**-1.1**
DNP	**Denpasar**	**15.25**	**228**	P	**P**	**01 14 11.7**	**+3.5**
DNP	**Denpasar**	**15.25**	**228**	P	**P**	**01 14 11.6**	**+3.4**
DNP				pmax	pmax		
	comp=Z,1μm,1.4s						
IGBI	**Denpasar**	**15.39**	**228**	P	**P**	**01 14 09.6**	**-0.2**
	comp=Z,278nm,0.8s,comp=Z,3μm						
JAGI	**Jajag, Banyuwa**	**15.92**	**231**	P	**P**	**01 14 18.2**	**+2.5**
JAGI	**Jajag, Banyuwa**	**15.92**	**231**	*e*Pn	**P**	**01 14 18.3**	**+2.5**
	comp=Z,145nm,1.0s						
BLJI	**Banyuglugur**	**15.94**	**234**	P	**P**	**01 14 16.6**	**+0.8**
	comp=Z,81nm,0.8s,comp=Z,2μm						
KSM	**Kuching**	**16.29**	**270**	*e*Pn	**P**	**01 14 21.2**	**+1.3**
	comp=Z,73nm,1.0s						
GMJI	**Gumukmas**	**16.36**	**233**	P	**P**	**01 14 21.2**	**+0.6**
	comp=Z,115nm,0.9s						
NGJI	**Ngawi**	**17.52**	**239**	P	P	01 14 44.2	+11
PWJI	**Pagerwojo**	**17.57**	**237**	P	**Pn**	**01 14 33.1**	**-0.6**
	comp=Z,68nm,0.9s						
PCJI	**Pacitan**	**18.18**	**238**	P	**Pn**	**01 14 43.0**	**+1.8**
	comp=Z,155nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.56**	**183**	*e*P	**P**	**01 14 54.3**	**-1.5**
KPJI	**Karang Pucung**	**19.73**	**243**	P	**P**	**01 14 56.2**	**-1.4**
	comp=Z,99nm,0.9s						
LEM	**Lembang**	**20.70**	**246**	LR	LR	01 24 12.7	
	comp=Z,386nm,18.3s,baz=70,slow=40						
TWG	**Pinlang**	**21.80**	**346**	*e*P	**P**	**01 15 17.3**	**-2.6**
	comp=Z,125nm,0.7s						
DSRI	**Dabo**	**22.12**	**265**	P	**P**	**01 15 23.0**	**-0.4**
	comp=Z,204nm,1.2s,comp=Z,12μm						
YULB	**Yu-li**	**22.30**	**347**	*e*P	**P**	**01 15 20.9**	**-4.4**
	comp=Z,15nm,0.7s						
TPUB	**Ta-pu**	**22.37**	**345**	*e*P	**P**	**01 15 23.1**	**-3.0**
	comp=Z,53nm,0.7s						
COEN	**Coen**	**22.53**	**134**	*e*P	**P**	**01 15 26.8**	**-1.0**
	comp=Z,26nm,0.9s						
WRAB	**Tennant Creek**	**22.68**	**161**	*e*P	**P**	**01 15 28.1**	**-1.2**
	comp=Z,120nm,0.6s						
WRAB	**Tennant Creek**	**22.68**	**161**	*e*P	**P**	**01 15 28.1**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,120nm,0.6s						
WR1	**Warramunga Arr**	**22.68**	**161**	*e*P	**P**	**01 15 27.8**	**-1.6**
	comp=Z,144nm,0.8s						
WR1				*e*S	**S**	**01 19 32.3**	**-0.8**
WRA	**Warramunga Arr**	**22.68**	**161**	P	**P**	**01 15 27.8**	**-1.6**
	comp=Z,95nm,0.5s,baz=338,slow=11,SNR=351						
WRA				S	**S**	**01 19 32.3**	**-0.8**
	comp=Z,13nm,1.2s,baz=346,slow=20,SNR=5.7						
WB2	**Warramunga Arr**	**22.68**	**161**	*e*P	**P**	**01 15 27.6**	**-1.8**
	comp=Z,136nm,0.7s						
MYKOM	**Kota Tinggi**	**22.75**	**271**	*e*P	**P**	**01 15 28.8**	**-1.3**
	comp=Z,42nm,0.9s						
SSLB	**Suanglung**	**22.76**	**347**	*e*P	**P**	**01 15 27.1**	**-3.1**
	comp=Z,25nm,0.8s						
KASI	**Kota Agung**	**23.18**	**252**	P	**P**	**01 15 34.8**	**+0.4**
	comp=Z,56nm,1.0s						
PMG	**Port Moresby**	**23.20**	**118**	P	**P**	**01 15 35.7**	**+1.1**
	comp=Z,26nm,0.8s,baz=300,slow=20,SNR=3.0						
PMG				LR	LR	01 26 51.3	
	comp=Z,356nm,18.3s,baz=342,slow=42						
PMG	**Port Moresby**	**23.20**	**118**	*e*P	**P**	**01 15 34.0**	**-0.6**
PMG				*e*pP	**P**	**01 15 35.7**	**+1.1**
PMG	**Port Moresby**	**23.20**	**118**	*e*P	**P**	**01 15 34.0**	**-0.6**
MDSI	**Maura Dua**	**23.20**	**255**	P	**P**	**01 15 31.9**	**-2.8**
	comp=Z,32nm,1.3s						
YHNB	**Yeheng**	**23.52**	**348**	*e*P	**P**	**01 15 36.9**	**-0.7**
	comp=Z,48nm,1.1s						
MBWA	**Marble Bar**	**23.57**	**196**	*e*P	**P**	**01 15 36.6**	**-1.3**
	comp=Z,52nm,0.9s						
QIZ	**Qiongzhong**	**23.89**	**318**	P	**P**	**01 15 38.7**	**-2.3**
QIZ				sP	**pP**	**01 15 59.7**	**+3.4**
QIZ				S	**S**	**01 19 54.4**	**+1.5**
QIZ				pmax	pmax		
	comp=Z,19nm,1.1s						
QIZ				LR	LR		
	comp=Z,300nm,15.2s						
QIZ				LR	LR		
	comp=Z,240nm,20.1s						
QIZ	**Qiongzhong**	**23.89**	**318**	*e*P	**P**	**01 15 38.8**	**-2.3**
	comp=Z,26nm,0.9s						
MASI	**Maura Aman, Be**	**24.80**	**259**	P	**P**	**01 15 50.1**	**+0.7**
	comp=Z,246nm,0.9s						
UBPT	**Khong Chiam**	**24.91**	**304**	P	**P**	**01 15 49.6**	**-0.7**
	comp=Z,28nm,0.8s						
JOW	**Kunigami**	**25.17**	**4**	P	**P**	**01 15 52.2**	**-0.3**
	comp=Z,69nm,0.7s,baz=129,slow=3.6,SNR=18						
JOW	**Kunigami**	**25.17**	**4**	*e*P	**P**	**01 15 50.4**	**-2.2**
	comp=Z,104nm,0.9s						
IPM	**Ipoh**	**25.70**	**277**	*e*P	**P**	**01 15 56.3**	**-1.2**
	comp=Z,40nm,0.9s						
AS31	**Alice Springs**	**26.07**	**165**	*e*P	**P**	**01 16 00.0**	**-0.7**
	comp=Z,31nm,0.9s						
AS31				*e*PcP	**PcP**	**01 19 27.1**	**-0.2**
AS31				*e*S	**S**	**01 20 32.5**	**+5.0**
ASAR	**Alice Springs**	**26.07**	**165**	P	**P**	**01 16 00.0**	**-0.7**
	comp=Z,26nm,0.4s,baz=349,slow=13,SNR=180						
ASAR				PcP	**PcP**	**01 19 27.1**	**-0.2**
	comp=Z,4.4nm,0.8s,baz=331,slow=2.0,SNR=4.8						
ASAR				S	**S**	**01 20 32.5**	**+5.0**
	comp=Z,7.8nm,0.9s,baz=354,slow=20,SNR=4.3						
SKNT	**Sakolnakorn**	**27.01**	**306**	P	**P**	**01 16 09.4**	**+0.1**
	comp=Z,8.4nm,0.9s						
MNSI	**Mandailing Nat**	**27.03**	**269**	P	**P**	**01 16 08.6**	**-0.9**
	comp=Z,25nm,0.7s						
PSI	**Prapat**	**27.69**	**273**	P	**P**	**01 16 13.9**	**-1.6**
	comp=Z,27nm,0.9s,baz=0.6,slow=3.0,SNR=9.6						
PSI				LR	LR	01 28 48.1	
	comp=Z,348nm,18.3s,baz=90,slow=40						
PSI	**Prapat**	**27.69**	**273**	*e*P	**P**	**01 16 14.4**	**-1.1**
	comp=Z,31nm,0.9s						
PSI	**Prapat**	**27.69**	**273**	*e*P	**P**	**01 16 14.4**	**-1.1**
PSI				pmax	pmax		
	comp=Z,31nm,0.9s						
NONG	**Nongkai**	**28.27**	**307**	P	**P**	**01 16 21.6**	**+1.1**
	comp=Z,19nm,0.9s,comp=Z,2μm						
KCSI	**Kotacane, Aceh**	**28.87**	**274**	P	**P**	**01 16 24.2**	**-1.7**
	comp=Z,17nm,0.8s						
CTA	**Charters Tower**	**28.89**	**139**	P	**P**	**01 16 26.2**	**+0.2**
	comp=Z,16nm,1.0s,baz=329,slow=14,SNR=3.9						
GSI	**Gunungsitoli**	**29.02**	**270**	P	**P**	**01 16 24.4**	**-2.9**
GSI	**Gunungsitoli**	**29.02**	**270**	*e*P	**P**	**01 16 25.0**	**-2.3**
	comp=Z,135nm,1.4s						
PBKT	**Sadao Pong**	**29.31**	**302**	*e*P	**P**	**01 16 27.9**	**-1.9**
	comp=Z,11nm,1.1s						
PHIT	**Phitsanulok**	**30.07**	**303**	P	**P**	**01 16 37.2**	**+0.7**
	comp=Z,17nm,0.8s,comp=Z,394nm						
NANT	**Nan**	**30.63**	**306**	P	**P**	**01 16 41.4**	**0.0**
	comp=Z,8.2nm,0.6s,comp=Z,963nm						
WHN	**Wuhan**	**31.08**	**339**	P	**P**	**01 16 47.0**	**+1.8**
NJ2	**Nanjing**	**31.19**	**347**	*e*P	**P**	**01 16 46.2**	**0.0**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
GYA	**Guiyang**	**31.30**	**324**	⇑*i*P	**P**	**01 16 46.4**	**-1.0**
GYA				pP	pP	01 17 01.8	-1.4
GYA				PP	**PnPn**	**01 17 54.2**	**+2.1**
GYA				PcP	**PcP**	**01 19 41.0**	**+0.6**
GYA				S	**S**	**01 21 51.5**	**+1.5**
GYA				sS	sS	01 22 15.6	-1.2
GYA				ScP	**ScP**	**01 23 19.8**	**+1.7**
GYA				SS	**SnSn**	**01 23 41.4**	**+2.4**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,5.1s						
GYA				LR	LR		
	comp=Z,510nm,16.6s						
GYA				LR	LR		
	comp=Z,480nm,17.2s						
GYA				LR	LR		
	comp=Z,460nm,17.0s						
LAMP	**Lampang**	**31.36**	**304**	P	**P**	**01 16 50.6**	**+2.7**
	comp=Z,3.3nm,0.9s						
JNU	**Nakatsue**	**31.65**	**7**	*e*P	**P**	**01 16 49.7**	**-0.5**
	comp=Z,24nm,1.0s						
CM31	**Chiang Mai Arr**	**31.90**	**304**	*e*P	**P**	**01 16 51.8**	**-0.9**
CM31				*e*PcP	**PcP**	**01 19 42.1**	**+0.1**
CMAR	**Chiang Mai Arr**	**31.90**	**304**	P	**P**	**01 16 51.8**	**-0.9**
	comp=Z,1.8nm,0.4s,baz=122,slow=7.1,SNR=7.7						
CMAR				PcP	**PcP**	**01 19 42.1**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=155,slow=1.6,SNR=4.9						
CMAR				LR	LR	01 30 13.2	
	comp=Z,121nm,18.9s,baz=114,slow=37						
CHTO	**Chiang Mai**	**32.07**	**304**	P	**P**	**01 16 55.0**	**+0.9**
	comp=Z,78nm,1.2s						
CHTO	**Chiang Mai**	**32.07**	**304**	*e*P	**P**	**01 16 53.0**	**-1.1**
	comp=Z,8.7nm,0.8s						
CHTO	**Chiang Mai**	**32.07**	**304**	*e*P	**P**	**01 16 53.0**	**-1.1**
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
FORT	**Forrest**	**32.19**	**178**	*e*P	**P**	**01 16 55.3**	**+0.3**
	comp=Z,95nm,0.6s						
CMAI	**Chiengmai2**	**32.55**	**306**	P	**P**	**01 16 58.9**	**+0.4**
	comp=Z,89nm,1.3s						
KMI	**Kunming**	**32.85**	**317**	P	**P**	**01 17 01.1**	**0.0**
KMI				pP	pP	01 17 14.7	-2.2
KMI				S	**S**	**01 22 17.6**	**+3.4**
KMI				pmax	pmax		
	comp=Z,15nm,1.1s						
KMI				pmax	pmax		
	comp=Z,130nm,6.1s						
KMI				LR	LR		
	comp=Z,170nm,24.7s						
KMI				LR	LR		
	comp=Z,280nm,22.5s						
KMI				LR	LR		
	comp=Z,390nm,25.8s						
ENH	**Enshi**	**32.85**	**332**	*e*P	**P**	**01 16 58.9**	**-1.9**
	comp=Z,26nm,0.8s						
TJN	**Taejon**	**34.65**	**1**	*i* P	**P**	**01 17 15.6**	**-0.7**
HNR	**Honiara**	**34.96**	**109**	LR	LR	01 32 32.1	
	comp=Z,108nm,20.0s,baz=267,slow=38						
INU	**Inuyama**	**34.98**	**15**	*e*P	**P**	**01 17 17.4**	**-1.8**
	comp=Z,17nm,0.8s						
BBOO	**Buckleboo**	**35.34**	**166**	*e*P	**P**	**01 17 21.8**	**-0.5**
	comp=Z,97nm,1.3s						
NWAO	**Narrogin (SRO)**	**35.43**	**194**	P	**P**	**01 17 22.3**	**-0.8**
	comp=Z,14nm,0.7s,baz=258,slow=9.4,SNR=13						
KS15	**Wonju Array Si**	**35.72**	**2**	*e*P	**P**	**01 17 25.6**	**+0.2**
KS15				*e*PcP	**PcP**	**01 19 52.3**	**-0.2**
KSAR	**Wonju Array Be**	**35.72**	**2**	P	**P**	**01 17 25.6**	**+0.2**
KSAR	**Wonju Array Be**	**35.72**	**2**	P	**P**	**01 17 25.7**	**+0.2**
KSRS	**Korea Array**	**35.73**	**2**	P	**P**	**01 17 25.6**	**+0.1**
	comp=Z,2.9nm,0.7s,baz=180,slow=9.7,SNR=13						
KSRS				PcP	**PcP**	**01 19 52.3**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=191,slow=3.6,SNR=2.7						
EIDS	**Eidsvold**	**35.76**	**140**	*e*P	**P**	**01 17 25.7**	**-0.3**
	comp=Z,41nm,1.1s						
STKA	**Stephens Creek**	**36.17**	**158**	P	**P**	**01 17 28.2**	**-1.3**
	comp=Z,25nm,0.8s,baz=331,slow=8.4,SNR=25						
STKA				PcP	**PcP**	**01 19 54.9**	**+0.9**
	comp=Z,4.7nm,0.6s,baz=350,slow=9.4,SNR=3.1						
STKA				LR	LR	01 33 04.3	
	comp=Z,186nm,20.6s,baz=348,slow=38						
XAN	**Xi'an**	**36.30**	**335**	P	**P**	**01 17 29.5**	**-1.0**
XAN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,100nm,4.4s						
CD2	**Chengdu**	**36.33**	**326**	P	**P**	**01 17 29.4**	**-1.5**
MAJO	**Matsushiro**	**36.42**	**16**	*e*P	**P**	**01 17 32.4**	**+0.8**
	comp=Z,18nm,0.8s						
MAJO	**Matsushiro**	**36.42**	**16**	*i* P	**P**	**01 17 31.1**	**-0.4**
MAJO				pmax	pmax		
	comp=Z,13nm,0.8s						
MAT	**Matsushiro**	**36.42**	**16**	P	**P**	**01 17 32.8**	**+1.3**
MJAR	**Matsushiro Arr**	**36.42**	**16**	P	**P**	**01 17 30.5**	**-1.1**
	comp=Z,6.1nm,0.6s,baz=194,slow=9.7,SNR=19						
MJAR				LR	LR	01 31 54.6	
	comp=Z,149nm,21.7s,baz=100,slow=35						
BJT	**Baijiatuau**	**39.43**	**347**	*e*P	**P**	**01 17 56.1**	**-0.8**
	comp=Z,26nm,1.1s						
BJT	**Baijiatuau**	**39.43**	**347**	*e*P	**P**	**01 17 56.1**	**-0.8**
BJT				pmax	pmax		
	comp=Z,26nm,1.1s						
SNY	**Shenyang**	**40.17**	**356**	⇓P	**P**	**01 18 06.3**	**+3.4**
SNY				pmax	pmax		
	comp=Z,24nm,0.5s						
LZH	**Lanzhou**	**40.31**	**331**	*e*P	**P**	**01 18 01.4**	**-3.0**
LZH				pP	pP	01 18 18.8	-1.7
LZH				sP	sP	01 18 25.6	-2.4
LZH				pmax	pmax		
	comp=Z,20nm,1.2s						
LZH				pmax	pmax		
	comp=Z,110nm,5.2s						
LZH				LR	LR		
	comp=Z,520nm,14.9s						
LZH				LR	LR		
	comp=Z,570nm,16.0s						
LZH				LR	LR		
	comp=Z,390nm,16.3s						
MSHR	**Mys Shultsa**	**41.04**	**5**	*i* P	**P**	**01 18 10.1**	**+0.1**
SHL	**Shillong**	**41.08**	**308**	*e*P	**P**	**01 18 10.0**	**-1.0**
SHL	**Shillong**	**41.08**	**308**	*e*P	**P**	**01 18 08.5**	**-2.5**
SHL	**Shillong**	**41.08**	**308**	*e*P	**P**	**01 18 08.5**	**-2.5**
HHC	**Hu-ho-hao-te**	**41.41**	**343**	*e*P	**P**	**01 18 14.8**	**+1.5**
HHC				S	**S**	**01 24 24.3**	**+0.6**
HHC				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC				pmax	pmax		
	comp=Z,89nm,5.7s						
HHC				LR	LR		
	comp=Z,600nm,14.3s						
HHC				LR	LR		
	comp=Z,540nm,14.3s						
HHC				LR	LR		
	comp=Z,600nm,14.3s						
CN2	**Changchun**	**42.07**	**359**	*e*P	**P**	**01 18 16.2**	**-2.3**
USRK	**Ussuriysk Ar.**	**42.72**	**6**	P	**P**	**01 18 23.8**	**0.0**
	comp=Z,3.9nm,0.5s,baz=186,slow=7.3,SNR=12						
MDJ	**Mudanjiang**	**42.95**	**3**	P	**P**	**01 18 24.5**	**-1.1**
MDJ				pmax	pmax		
	comp=Z,12nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,310nm,5.9s						
LSA	**Lhasa**	**43.79**	**313**	*e*P	**P**	**01 18 32.8**	**-0.4**
	comp=Z,14nm,0.7s						
LSA	**Lhasa**	**43.79**	**313**	*e*P	**P**	**01 18 32.8**	**-0.4**
LSA				pmax	pmax		
	comp=Z,14nm,0.7s						
TEY	**Ternei**	**44.18**	**10**	*e*P	**P**	**01 18 35.2**	**-0.3**
ASAJ	**Asahikawa**	**44.69**	**16**	P	**P**	**01 18 39.8**	**+0.2**
	comp=Z,12nm,0.8s,baz=138,slow=16,SNR=3.9						
ASAJ	**Asahikawa**	**44.69**	**16**	*e*P	**P**	**01 18 39.8**	**+0.2**
	comp=Z,18nm,1.0s						
GTA	**Gaotai**	**44.89**	**330**	⇑P	**P**	**01 18 40.8**	**-0.7**
GTA				pP	pP	01 18 53.2	-4.6
GTA				sP	sP	01 18 59.7	-5.6
GTA				PcP	**PcP**	**01 20 23.6**	**+1.5**
GTA				S	**S**	**01 25 13.9**	**-0.9**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,59nm,5.4s						
GTA				LR	LR		
	comp=Z,100nm,15.2s						
GTA				LR	LR		
	comp=Z,140nm,15.2s						
GTA				LR	LR		
	comp=Z,280nm,16.5s						
ODAN	**Odare**	**45.24**	**307**	*e*P	**P**	**01 18 42.9**	**-1.7**
	comp=Z,51nm,0.8s		

WMQ LR LR
comp=Z,390nm,25.5s
PETK Petropavlovsk- 57.47 22 P **P 01 20 15.8 +0.5**
comp=Z,3.7nm,0.6s,baz=169,slow=1.9,SNR=5.7
PEA1 Petropavlovsk- 57.48 22 *e*P **P 01 20 15.8 +0.5**
NIL Nilore 59.16 309 *e*P **P 01 20 25.0 -2.5**
comp=Z,25nm,1.2s
NIL Nilore 59.16 309 *e*P **P 01 20 25.0 -2.5**
NIL pmax pmax
comp=Z,25nm,1.2s
MK31 Makanchi Array 59.26 326 *e*P **P 01 20 26.3 -1.6**
MK31 pmax pmax
comp=Z,7.0nm,0.4s
MK32 Makanchi Array 59.26 326 *e*P **P 01 20 26.5 -1.5**
MKAR Makanchi Array 59.26 326 P **P 01 20 26.5 -1.5**
comp=Z,15nm,0.4s,baz=121,slow=8.7,SNR=45
MKAR LR LR 01 46 25.1
comp=Z,149nm,21.8s,baz=83,slow=36
MKAR Makanchi Array 59.26 326 *e*P **P 01 20 26.4 -1.5**
comp=Z,148nm,0.4s
PRZ Przheval'sk 59.26 320 *e*P **P 01 20 28.9 +0.6**
comp=Z,25nm,0.9s
PRZ Przheval'sk 59.26 320 *e*P **P 01 20 28.9 +0.6**
PRZ pmax pmax
comp=Z,25nm,0.9s
TARG Taragay, Kyrgy 59.28 319 *e*P **P 01 20 28.6 0.0**
comp=Z,12nm,0.8s
MAKZ Makanchi 59.44 326 *e*P **P 01 20 27.9 -1.3**
comp=Z,40nm,1.2s
MAKZ Makanchi 59.44 326 P **P 01 20 27.3 -1.9**
MAKZ pmax pmax
comp=Z,15nm,0.6s
KSH Kashi 59.49 316 P **P 01 20 30.2 +0.4**
KSH pP pP 01 20 46.3 -0.5
KSH PP **PP 01 22 46.0 +4.2**
KSH S **S 01 28 34.4 -0.3**
KSH sS sS 01 28 59.9 -3.7
KSH SS **SS 01 32 37.3 +6.3**
KSH pmax pmax
comp=Z,18nm,0.7s
KSH pmax pmax
comp=Z,410nm,5.1s
KSH LR LR
comp=Z,400nm,6.4s
KSH LR LR
comp=Z,230nm,8.2s
KSH LR LR
comp=Z,460nm,6.1s
KDJ Kajisay 59.88 319 *e*P **P 01 20 29.8 -2.8**
comp=Z,22nm,1.0s
NRN Naryn 60.34 318 *e*P **P 01 20 34.5 -1.3**
comp=Z,8.9nm,0.9s
NRN Naryn 60.34 318 *e*P **P 01 20 34.5 -1.3**
NRN pmax pmax
comp=Z,9.0nm,0.9s
YAK Yakutsk 60.36 2 *e*P **P 01 20 32.8 -2.3**
comp=Z,62nm,0.5s
YAK Yakutsk 60.36 2 *e*P **P 01 20 37.3 +2.2**
YAK *e**PP **pP 01 20 55.0 +2.8**
YAK *e* 01 21 22.6
YAK *e* 01 22 50.4
YAK *e*PPP PPP 01 24 13.0
YAK *e*S **S 01 28 48.3 +3.5**
YAK *e**SS **pS 01 29 06.6 +2.0**
YAK *e* 01 30 21.2
YAK *e*SS **SS 01 32 45.0 +1.6**
YAK pmax pmax
comp=Z,27nm,0.8s
YAK pmax pmax
comp=E,4.0nm,0.9s
YAK pmax pmax
comp=N,7.0nm,1.0s
YAK pmax pmax
comp=Z,17nm,0.6s
YAK pmax pmax
comp=N,2.0nm,0.6s
YAK pmax pmax
comp=E,5.0nm,0.6s
YAK smax smax
comp=N,143nm,5.1s
YAK smax smax
comp=E,74nm,2.4s
YAK MLR MLR
comp=Z,44nm,8.0s
MA2 Magadan 60.82 14 *e*P **P 01 20 39.1 +0.8**
comp=Z,21nm,0.9s
MA2 Magadan 60.82 14⇑ *e*P **P 01 20 39.7 +1.4**
MA2 pmax pmax
comp=Z,71nm,2.5s
KZA Kyzart 61.13 318 P **P 01 20 40.3 -1.0**
SNR=22
TKM2 Tokmak 2 61.29 319 P **P 01 20 41.0 -1.1**
SNR=22
TKM2 Tokmak 2 61.29 319 P **P 01 20 40.6 -1.5**
TKM2 pmax pmax
comp=Z,9.0nm,0.7s
SFK Sufi-Kurgan 61.42 316 P **P 01 20 42.0 -1.1**
SFK pmax pmax
comp=Z,12nm,0.7s
UCH Uchtor 61.68 318 P **P 01 20 43.8 -1.3**
SNR=22
AAK Ala-Archa 61.88 319 P **P 01 20 44.5 -1.6**
comp=Z,3.4nm,0.4s,baz=146,slow=5.7,SNR=12
AAK Ala-Archa 61.88 319 *e*P **P 01 20 45.8 -0.2**
AAK Ala-Archa 61.88 319 *i* P **P 01 20 45.2 -0.8**
AAK pmax pmax
comp=Z,6.0nm,0.9s
FRU Bishkek 61.89 319 *e*P **P 01 20 44.0 -1.9**
USP Ospenovka 62.16 319 P **P 01 20 46.6 -1.1**
SNR=20
AML Almayashu 62.19 318 P **P 01 20 47.6 -0.8**
SNR=26
EKS2 Erkin-Say 62.37 318 P **P 01 20 48.5 -0.7**
SNR=15
ZALV Zalesovo Beam 62.45 334 P **P 01 20 47.9 -1.5**
comp=Z,3.7nm,0.4s,baz=129,slow=5.9,SNR=15
ZALV LR LR 01 49 39.9
comp=Z,50nm,19.9s,baz=68,slow=38
ZAA1 Zalesovo Array 62.46 334 *e*P **P 01 20 47.9 -1.5**
KBL Kabul 62.75 308 *e*P **P 01 20 50.5 -1.5**
comp=Z,13nm,0.8s
KBL Kabul 62.75 308 *e*P **P 01 20 50.5 -1.5**
KBL pmax pmax
comp=Z,13nm,0.8s
AFI Afiamalu 62.94 106 LR LR 01 46 38.5
comp=Z,60nm,21.2s,baz=54,slow=34
MNAS Manas 63.14 318 P **P 01 20 53.3 -1.1**
MNAS pmax pmax
comp=Z,16nm,0.9s
KURBB Kurchatov Arra 63.49 328 P **P 01 20 54.9 -1.4**
comp=Z,21nm,0.7s,baz=127,slow=6.0,SNR=75
KURK Kurchatov 63.49 328 *e*P **P 01 20 54.5 -1.8**
comp=Z,45nm,0.7s
KURK Kurchatov 63.49 328*c*e**P P 01 20 54.6 -1.8**
KURK pmax pmax
comp=Z,57nm,1.0s
KKAR Karatay Array 64.73 318 *e*P **P 01 21 03.7 -1.0**
KKAR Karatay Array 64.73 318 *e*P **P 01 21 03.7 -1.0**
OTUK Ortayu 65.77 323 P **P 01 21 09.9 -1.4**
OTUK pmax pmax
comp=Z,11nm,0.9s
CASY Casey 68.67 187 *e*P **P 01 21 29.5 +0.3**
comp=Z,14nm,0.9s
BVA0 Borovoye Array 69.06 327 *i* P **P 01 21 30.7 -1.3**
BVA0 pmax pmax
comp=Z,38nm,1.2s
BVAR Borovoye Array 69.06 327 P **P 01 21 31.3 -0.7**
comp=Z,3.3nm,0.4s,baz=120,slow=6.6,SNR=26
BVAR LR LR 01 52 20.6
comp=Z,94nm,21.2s,baz=111,slow=36
BRVK Borovoye 69.13 327 *e*P **P 01 21 31.6 -0.8**
BRVK Borovoye 69.13 327*c*e**P P 01 21 31.1 -1.3**
BRVK pmax pmax
comp=Z,16nm,1.2s
TIXI Tiksi 69.99 1 *e*P **P 01 21 36.0 -1.3**
comp=Z,12nm,1.1s
TIXI Tiksi 69.99 1*c*e**P P 01 21 36.4 -0.9**
TIXI pmax pmax
comp=Z,14nm,1.2s
BILL Bilibino 71.67 15 *e*P **P 01 21 47.5 -0.1**
BILL pmax pmax
comp=Z,2.0nm,1.2s
GEYT Alibeck 72.15 309 P **P 01 21 50.8 -0.4**
comp=Z,6.4nm,0.8s,baz=142,slow=5.1,SNR=6.1
NRIK Noril'sk 72.49 346 P **P 01 21 51.7 -0.7**
comp=Z,14nm,0.8s,baz=128,slow=6.8,SNR=21
NRIK LR LR 01 57 24.4
comp=Z,56nm,19.2s,baz=159,slow=39
AB31 Akbulak array 73.74 321 *e*P **P 01 21 59.0 -1.3**
AB31 pmax pmax
comp=Z,2.0nm,0.4s
ABKAR Akbulak array 73.74 321 *e*P **P 01 21 59.1 -1.2**
AKTO Aktyubinsk 75.27 322 P **P 01 22 08.2 -0.9**
comp=Z,11nm,0.7s,baz=95,slow=9.0,SNR=36
AKTO LR LR 01 57 31.9
comp=Z,56nm,20.2s,baz=101,slow=38
SVE Sverdlovsk 75.73 329*c*e**P P 01 22 11.8 +0.2**
SVE pmax pmax
comp=Z,56nm,1.0s
ARU Arti 76.69 328 *e*P **P 01 22 15.8 -1.3**
comp=Z,29nm,1.0s
ARU Arti 76.69 328*c i*P **P 01 22 15.6 -1.5**
ARU 01 22 27.7
ARU S **S 01 31 59.4 +0.6**
ARU pmax pmax
comp=Z,43nm,1.2s
SDPT Sand Point 79.05 34 *e*P **P 01 22 30.4 +0.3**
comp=Z,43nm,0.9s
OPO Ambohidratompo 80.47 251 P **P 01 22 39.9 +1.0**
comp=Z,13nm,0.8s,baz=89,slow=4.6,SNR=8.9
AKT Akhty 80.63 312 *e*P **P 01 22 38.8 -0.4**
AKT *e* 01 22 46.1
AKT pmax pmax
comp=Z,12nm,0.8s
RAYN Ar Rayn 81.22 293 *e*P **P 01 22 41.4 -1.2**
comp=Z,17nm,0.9s
VNDA Vanda 81.31 173 P **P 01 22 42.1 +0.2**
comp=Z,12nm,0.6s,baz=316,slow=6.7,SNR=108
VNDA LR LR 01 56 41.7
comp=Z,80nm,22.0s,baz=341,slow=34
MAW Mawson 81.69 200 P **P 01 22 44.4 +0.3**
comp=Z,5.4nm,0.6s,baz=76,slow=5.2,SNR=22
DAMY Dhamar 82.07 284 *e*P **P 01 22 47.8 +0.2**
comp=Z,20nm,1.2s
SBA Scott Base 82.22 172 *e*P **P 01 22 47.9 +1.2**
comp=Z,7.8nm,1.0s
SBA Scott Base 82.22 172 *e*P **P 01 22 47.9 +1.2**
SBA pmax pmax
comp=Z,8.0nm,1.0s
GROC Groznyy 82.23 313 *e*P **P 01 22 45.3 -2.1**
GROC *e* 01 22 50.6
GROC *e* 01 25 54.4
GROC *e*S **S 01 32 56.3 -1.6**
GROC pmax pmax
comp=Z,43nm,1.3s
GNI Garni 82.77 310 P **P 01 22 51.4 +0.8**
comp=Z,3.6nm,0.6s,baz=225,slow=5.2,SNR=6.7
GNI Garni 82.77 310 *e*P **P 01 22 51.7 +1.1**
GNI Garni 82.77 310*c*e**P P 01 22 50.9 +0.3**
GNI pmax pmax
comp=Z,79nm,1.7s
TBLG Delisi 82.89 312 *e*P **P 01 22 51.2 +0.2**
comp=Z,16nm,0.9s
TBLG Delisi 82.89 312 *e*P **P 01 22 51.2 +0.2**
TBLG pmax pmax
comp=Z,17nm,0.9s
OHAK Old Harbor 83.33 33 *e*P **P 01 22 53.7 +0.9**
comp=Z,12nm,0.8s
ATD Arta Tunnel 83.57 281 P **P 01 22 55.2 +0.1**
comp=Z,12nm,0.8s,baz=317,slow=2.5,SNR=15
ATD LR LR 02 01 16.3
comp=Z,36nm,18.6s,baz=39,slow=37
ZEI Tsey 83.58 313 *e*P **P 01 22 52.7 -2.1**
ZEI pmax pmax
comp=Z,22nm,0.9s
KDAK Kodiak Island 83.78 32 *i* P **P 01 22 56.7 +1.6**
AKH Akhalkalaki 83.80 311 *e*P **P 01 22 56.8 +1.0**
comp=Z,23nm,0.9s
AKH Akhalkalaki 83.80 311 *e*P **P 01 22 56.8 +1.0**
AKH pmax pmax
comp=Z,23nm,0.9s
NCK Nalchik 83.85 313 *i* P **P 01 22 55.7 -0.2**
NCK pmax pmax
comp=Z,11nm,0.8s
PRGR Permogore 84.34 332 ||*i* P **P 01 22 57.2 -0.7**
PRGR pmax pmax
comp=Z,20nm,0.7s
GOF Gofitskoye 84.34 315⇑ *e*P **P 01 22 59.6 +1.3**
GOF pmax pmax
comp=Z,28nm,0.8s
KBZ Khabaz 84.37 314 P **P 01 22 56.5 -1.9**
comp=Z,6.1nm,0.8s,baz=59,slow=3.6,SNR=11
NEY Neytrino 84.47 313 *i* P **P 01 22 59.8 +0.6**
NEY pmax pmax
comp=Z,3.0nm,0.8s
KVAR Kislovodsk Arr 84.53 314 P **P 01 22 59.5 +0.1**
comp=Z,10nm,0.7s,baz=161,slow=2.0,SNR=9.0
KIV Kislovodsk 84.53 314 *e*P **P 01 22 56.2 -3.3**
comp=Z,16nm,1.0s
KIV Kislovodsk 84.53 314 *e*P **P 01 22 59.1 -0.3**
KIV pmax pmax
comp=Z,17nm,1.1s
SKT Skwentna 84.80 28 *e*P **P 01 23 00.5 +0.2**
comp=Z,8.6nm,0.9s
BRLK Bradley Lake 84.87 30 *e*P **P 01 23 01.1 +0.4**
comp=Z,25nm,1.0s
SUA Susitna One 85.11 29 *e*P **P 01 23 04.1 +2.1**
comp=Z,27nm,1.1s
RND Reindeer 86.16 27 *e*P **P 01 23 08.3 +1.2**
comp=Z,4.7nm,0.8s
RND Reindeer 86.16 27 *e*P **P 01 23 08.3 +1.2**
RND pmax pmax
comp=Z,5.0nm,0.8s
SML Sawmill 86.29 28 *e*P **P 01 23 08.6 +0.9**
comp=Z,12nm,0.8s
SML Sawmill 86.29 28 *e*P **P 01 23 08.6 +0.9**
SML pmax pmax
comp=Z,12nm,0.8s
CCB Clear Creek Bu 86.70 25 *e*P **P 01 23 11.6 +2.0**
comp=Z,6.5nm,1.2s
VORD Divnogorie 87.10 321 *e*P **P 01 23 10.8 -1.0**
VORD pmax pmax
comp=Z,30nm,0.9s
ILAR Eielson Array 87.10 25 P **P 01 23 12.8 +1.3**
comp=Z,1.0nm,0.6s,baz=242,slow=5.6,SNR=11
ILB Eielson Array 87.10 25 *e*P **P 01 23 12.8 +1.3**
VSR Storozhevoye 87.18 321 *e*P **P 01 23 11.3 -0.9**
VSR pmax pmax
comp=Z,40nm,0.9s
KLMR Klimovskoe 87.22 331 *e*P **P 01 23 09.3 -2.9**
KLMR pmax pmax
comp=Z,30nm,0.9s
KLMR Klimovskoe 87.22 331 *e*P **P 01 23 09.4 -2.8**
KLMR AMP 01 23 16.5
comp=Z,30nm,0.9s
TMCR Tamitsa 87.98 334 *e*P **P 01 23 12.7 -3.0**
TMCR pmax pmax
comp=Z,25nm,1.5s
MOS Moscow 88.14 326 *e*P **P 01 23 16.9 +0.2**
MOS pmax pmax
comp=Z,22nm,0.7s
DOT Dot Lake 88.31 27 *e*P **P 01 23 19.2 +1.8**
comp=Z,9.3nm,1.0s
ANN Anapa 88.32 315 *e*P **P 01 23 14.6 -3.2**
ANN *e**PP **PcP 01 23 24.7 +5.3**
ANN *e*S **SKSac 01 33 39.6 -1.6**
ANN pmax pmax
comp=Z,48nm,1.0s
ASF Jabal al Asfar 88.93 302 P **P 01 23 21.7 +0.6**
comp=Z,22nm,1.0s,baz=102,slow=2.4,SNR=17
MMAI Mount Meron Ar 90.17 303 P **P 01 23 26.1 -0.7**
comp=Z,11nm,0.9s,baz=81,slow=6.0,SNR=14
SYO Syowa Base 90.37 201⇑ *e*P **P 01 23 24.8 -2.0**
SIM Simferopol' 90.67 315 *e*P **P 01 23 28.1 -0.7**
SIM pmax pmax
comp=Z,14nm,0.7s
EIL Elat 90.67 300 P **P 01 23 28.6 -0.6**
comp=Z,4.5nm,0.8s,baz=73,slow=11,SNR=3.0
BR101 Keskin Array S 91.30 310 *e*P **P 01 23 31.1 -0.9**
BRTR Keskin Array B 91.30 310 P **P 01 23 31.1 -0.9**
comp=Z,2.3nm,0.8s,baz=140,slow=5.4,SNR=12
QSPA South Pole Qui 91.49 180 *e*P **P 01 23 32.8 +0.6**
comp=Z,10nm,1.2s
ARA0 ARCESS Array S 92.42 340 *e*P **P 01 23 35.8 -0.6**
ARCES ARCESS Array B 92.42 340 P **P 01 23 35.8 -0.6**
comp=Z,4.4nm,0.9s,baz=68,slow=3.3,SNR=9.4
ARCES PKKP **PKKPdf 01 40 50.4 +0.3**
comp=Z,1.5nm,1.0s,baz=336,slow=2.7,SNR=3.7
ARCES LR LR 02 12 47.0
comp=Z,35nm,18.0s,baz=70,slow=40
SPA0 Spitsbergen Ar 92.56 349 *e*P **P 01 23 36.0 -1.0**
SPITS Spitsbergen Ar 92.56 349 P **P 01 23 36.0 -1.0**
comp=Z,3.6nm,0.7s,baz=100,slow=6.0,SNR=2.7
SPITS LR LR 02 10 12.0
comp=Z,62nm,19.8s,baz=60,slow=39
SPITS Spitsbergen Ar 92.56 349 P **P 01 23 36.0 -1.0**
WHY Whitehorse 92.83 29 *e*P **P 01 23 41.9 +3.3**
comp=Z,10nm,1.1s
AKASG Malin Array Be 93.48 321 P **P 01 23 40.8 -0.9**
comp=Z,0.5nm,0.4s,baz=79,slow=4.8,SNR=5.7
AKBB Malin Array Si 93.48 321 *e*P **P 01 23 40.8 -0.9**
AKBB Malin Array Si 93.48 321 *e*P **P 01 23 40.8 -0.9**
FIA0 FINESS Array S 93.67 332 *e*P **P 01 23 40.9 -1.4**
FIA0 FINESS Array S 93.67 332 *e*P **P 01 23 40.9 -1.4**
FINES FINESS Array B 93.67 332 P **P 01 23 40.9 -1.4**
comp=Z,2.4nm,0.7s,baz=83,slow=2.6,SNR=9.8
FINES LR LR 02 09 10.5
comp=Z,70nm,18.8s,baz=99,slow=38
SORM Soroca 94.36 318 ||*i*P **P 01 23 44.5 -1.2**
SORM Soroca 94.36 318 P **P 01 23 44.5 -1.2**
TESR Tescani 95.72 317 ||*i*P **P 01 23 50.2 -1.9**
VRI Vrincioaia 95.76 316 ⇑*i*P **P 01 23 53.7 +1.4**
VRI Vrincioaia 95.76 316 P **P 01 23 53.7 +1.4**
MLR Muntele Rosu 96.36 316 ⇑*i*P **P 01 23 52.5 -2.7**
MLR Muntele Rosu 96.36 316 P **P 01 23 52.5 -2.7**
BURAR Bucovina Array 96.52 318 ||*i*P **P 01 23 55.3 -0.5**
BURAR Bucovina Array 96.52 318 P **P 01 23 55.3 -0.5**
UZH Uzhgorod 98.26 319 *e*P **P 01 24 02.5 -0.9**
UZH *i* 01 24 12.9
UZH *i* 01 24 18.9
CRVS Cervenica-Dubn 98.74 320 *e*P Pdif 01 24 05.9 +0.3
CRVS Cervenica-Dubn 98.74 320 *e*PDIFF Pdif 01 24 05.9 +0.3
VTS Vitosha 98.78 313 *e*P Pdif 01 24 07.7 +1.5
comp=Z,3.4nm,1.1s
VTS Vitosha 98.78 313 *e*P Pdif 01 24 07.7 +1.5
VTS pmax pmax
comp=Z,3.0nm,1.1s
HERR Herculane 98.92 316 ⇑*i*P **P 01 24 05.8 -0.7**
HFS Hagfors 99.86 332 P **Pdif 01 24 08.9 -1.5**
comp=Z,0.5nm,0.4s,baz=126,slow=7.3,SNR=5.1
HFS LR LR 02 13 14.2
comp=Z,93nm,19.1s,baz=73,slow=38
RES Resolute Bay 99.95 10 *e*Pdif **Pdif 01 24 10.4 0.0**
comp=Z,2.3nm,0.8s
RES Resolute Bay 99.95 10 *e*P **Pdif 01 24 10.4 0.0**
RES pmax pmax
comp=Z,2.0nm,0.8s
NB2 NORSAR Subarra 100.66 333 P **Pdif 01 24 12.8 -1.1**
comp=Z,1.7nm,0.9s,baz=71,slow=4.6
NB200 NORSAR Array S 100.66 333 *e*Pdif **Pdif 01 24 13.1 -0.8**
NOA NORSAR Array B 100.66 333 P **Pdif 01 24 13.1 -0.8**
comp=Z,1.3nm,0.9s,baz=82,slow=3.1,SNR=3.6
YKA Yellowknife Ar 101.51 25 P **Pdif 01 24 16.2 -1.4**
comp=Z,0.5nm,0.7s,baz=299,slow=4.7,SNR=2.9
YKB5 Yellowknife Ar 101.51 25 *e*Pdif **Pdif 01 24 16.2 -1.4**
BRG Berggiesshubel 102.89 323 *e*P **Pdif 01 24 25.9 +1.9**
comp=Z,6.6nm,1.3s
BRG Berggiesshubel 102.89 323 *e*P **Pdif 01 24 25.9 +1.9**
BRG pmax pmax
comp=Z,7.0nm,1.3s
SNAA Sanae 103.10 195 Pdiff **Pdif 01 24 22.7 -1.9**
comp=Z,1.0nm,1.1s,baz=72,slow=16,SNR=2.9
ANMO Albuquerque 118.56 48 *i* PKIKP **PKPdf 01 29 16.4 +2.0**
MNTX Cornudas Mount 120.70 51 *e*PKPdf **PKPdf 01 29 19.6 +1.2**
F36A Milaca 120.98 32 P **PKPdf 01 29 18.1 -0.4**
baz=312
C40A Isle Royale Na 121.71 28 P **PKPdf 01 29 19.4 -0.4**
baz=317
E39A Mellen 122.14 30 P **PKPdf 01 29 20.3 -0.4**
baz=315
F39A Loretta 122.28 30 P **PKPdf 01 29 20.5 -0.5**
baz=314
G38A Ridgeland 122.31 31 P **PKPdf 01 29 20.2 -0.9**
baz=313
E40A Wakefield 122.41 29 P **PKPdf 01 29 21.3 0.0**
baz=316
J37A Redenius Farm, 122.62 34 P **PKPdf 01 29 21.2 -0.6**
baz=310
F40A Park Falls 122.68 30 P **PKPdf 01 29 21.4 -0.4**
baz=315
TXAR Lajitas Array 123.00 53 PKP **PKPdf 01 29 22.8 -0.2**
comp=Z,0.5nm,0.7s,baz=162,slow=1.2,SNR=7.9
COWI Conover 123.03 29 *e*PKPdf **PKPdf 01 29 22.1 -0.3**
F41A Three Lakes 123.31 29 P **PKPdf 01 29 23.3 +0.3**
baz=316
I39A Houston 123.38 32 P **PKPdf 01 29 22.2 -0.9**
baz=313
TORD Torodi Ar. Bea 123.44 287 PKP **PKPdf 01 29 23.4 -0.7**
comp=Z,1.7nm,0.8s,baz=88,slow=2.0,SNR=13
TORD PKKPbc **PKKPbc 01 39 12.6 -0.3**
comp=Z,0.7nm,0.6s,baz=254,slow=3.0,SNR=7.3
TOA1 Torodi Ar. Sit 123.45 287 *e*PKPdf **PKPdf 01 29 23.4 -0.7**
M37A Trindle Farm, 123.54 36 P **PKPdf 01 29 23.4 -0.1**
baz=309
J39A Decorah 123.63 33 P **PKPdf 01 29 22.8 -0.8**
baz=312
G42A Mountain 123.99 29 *e*PKPdf **PKPdf 01 29 24.1 -0.1**
L39A Vinton 124.27 34 P **PKPdf 01 29 24.4 -0.5**
baz=311
G43A Wallace 124.34 29 P **PKPdf 01 29 24.8 -0.2**
baz=317
K40A Colesburg 124.36 33 P **PKPdf 01 29 24.5 -0.6**
baz=312
JCT Junction City 125.55 50 *e*PKPdf **PKPdf 01 29 28.5 +0.7**
JCT Junction City 125.55 50 *e*PKIKP **PKPdf 01 29 28.5 +0.7**
S39A Bolivar 126.27 39 P **PKPdf 01 29 28.9 0.0**
baz=308
R40A Maddies Statio 126.56 38 P **PKPdf 01 29 29.5 +0.1**
baz=309
U41A Viola 127.98 40 P **PKPdf 01 29 32.4 +0.2**
baz=308
PLCA Paso Flores 138.03 160 PKP **PKPdf 01 29 53.3 +2.2**
comp=Z,4.2nm,0.9s,baz=261,slow=1.7,SNR=4.9
ROC1 El Roble 144.64 154 *e*PKPdf **PKPdf 01 30 03.1 -0.2**
LCO Las Campanas 148.11 150 *e*PKPbc **PKPbc 01 30 13.5 +0.9**
LPAZ La Paz 159.39 136 PKP **PKPdf 01 30 26.9 +0.9**
comp=Z,3.2nm,1.1s,baz=68,slow=0.4,SNR=4.9
SDV Santo Domingo 159.93 59 PKP **PKPdf 01 30 26.5 +0.3**
comp=Z,1.9nm,0.5s,baz=284,slow=12,SNR=3.8
SDV Santo Domingo 159.93 59 *e*PKPdf **PKPdf 01 30 27.6 +1.4**
SIV San Ignacio 163.79 153 PKP **PKPdf 01 30 30.0 +0.2**
comp=Z,1.9nm,1.0s,baz=78,slow=4.6,SNR=4.9
SIV PKPab **PKPab 01 31 23.1 +1.0**
comp=Z,3.0nm,0.6s,baz=225,slow=2.1,SNR=12

DDA ***07*** *01:15:45.3, 38.°79N×44.°73E, h5km, Ml2.6*
CSEM ***07*** *01:15:47.5±0.7, 38.°80N×44.°68E, h2km, ML2.8, Error ellipse: s-maj=13.1km s-min=9.3km az=109.0*
ISK ***07*** *01:15:47.5, 38.°84N×44.°55E, h5km, ML2.8/5*
TEH ***07*** *01:15:48.1, 38.°54N×44.°63E, h4km, ML2.5*
ISC 07 01:15:46.7±1.1**, 38.°78N**±0.°03×**44.°70E**±0.°02**, h10**km±12km**, n40,** σ1°**27**/53**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLDR	**Caldiran**	**0.71**	**301**	PG	**Pg**	**01 15 58.7**	**-1.7**
CLDR				SG	**Sg**	**01 16 09.5**	**-0.3**
CLDR	**Caldiran**	**0.71**	**301**	*i* P	**Pg**	**01 15 58.8**	**-1.7**
CLDR				*i* S	**Sg**	**01 16 10.1**	**+0.3**
CLDR	**Caldiran**	**0.71**	**301**	P	**Pg**	**01 15 58.8**	**-1.7**
CLDR				*e*Sg	**Sg**	**01 16 09.5**	**-0.3**
CLDR				S	**Sg**	**01 16 10.1**	**+0.3**
ISHB	**Shabestar**	**0.87**	**124**	*e*		01 16 03.9	
	comp=Z,4μm,0.1s						
ISHB				*e*Pg	**Pg**	**01 16 02.3**	**-1.2**
VMUR	**Van-Muradiye**	**0.90**	**284**	*i* P	**Pg**	**01 16 03.7**	**-0.4**
VMUR				*i* S	**Sb**	**01 16 17.8**	**+1.0**
VMUR	**Van-Muradiye**	**0.90**	**284**	P	**Pg**	**01 16 03.7**	**-0.4**
VMUR				S	**Sb**	**01 16 17.8**	**+1.0**
VANB	**Van**	**1.04**	**260**	PG	**Pg**	**01 16 06.6**	**-0.1**
VANB	**Van**	**1.04**	**260**	*e*Pg	**Pg**	**01 16 06.6**	**-0.1**
TVAN	**Van**	**1.04**	**257**	*i* P	**Pg**	**01 16 06.8**	**+0.1**
TVAN	**Van**	**1.04**	**257**	P	**Pg**	**01 16 06.8**	**+0.1**
IGDI	**IGDIR**	**1.19**	**336**	*i* P	**Pb**	**01 16 09.4**	**0.0**
YOVA	**Hakkari_Y¨…kse**	**1.23**	**195**	*i* P	**Pn**	**01 16 08.8**	**-1.4**
YOVA	**Hakkari_Y¨…kse**	**1.23**	**195**	P	**Pn**	**01 16 08.8**	**-1.4**
TASB	**TASBURUN-IGDIR**	**1.26**	**344**	PN	**Pb**	**01 16 10.5**	**0.0**
TASB	**TASBURUN-IGDIR**	**1.26**	**344**	*e*Pn	**Pb**	**01 16 10.5**	**0.0**
ITBZ	**Tabriz**	**1.26**	**115**	*e*		01 16 15.2	
	comp=Z,674nm,0.1s						
ITBZ				*e*Pn	**Pn**	**01 16 08.8**	**-1.7**
ITBZ				*e*Sg	**Sb**	**01 16 26.6**	**-0.4**
GEVA	**Gevas**	**1.37**	**251**	*i* P	**Pn**	**01 16 08.5**	**-3.5**
GEVA				*i* S	**Sg**	**01 16 32.5**	**+1.8**
GNI	**Garni**	**1.37**	**1**	PN	**Pg**	**01 16 13.6**	**+0.6**

GNI	**Garni**	**1.37**	**1**	*e*Pn	**Pg**	**01 16 13.6**	**+0.6**
HAKT	**HAKKARI**	**1.45**	**213**	*i* P	**Pn**	**01 16 13.5**	**+0.3**
HAKT				*i* S	**Sg**	**01 16 36.3**	**+3.1**
HAKT	**HAKKARI**	**1.45**	**213**	P	**Pn**	**01 16 13.5**	**+0.3**
HAKT				S	**Sg**	**01 16 36.3**	**+3.1**
ADCV	**BITLIS_Adilcev**	**1.54**	**272**	*i* P	**Pb**	**01 16 15.8**	**+0.3**
ADCV				*i* S	**Sg**	**01 16 37.4**	**+1.1**
ADCV	**BITLIS_Adilcev**	**1.54**	**272**	P	**Pb**	**01 16 15.8**	**+0.3**
ADCV				S	**Sg**	**01 16 37.4**	**+1.1**
TUTA	**Tutak**	**1.59**	**294**	*i* P	**Pb**	**01 16 16.1**	**-0.3**
TUTA	**Tutak**	**1.59**	**294**	P	**Pb**	**01 16 16.1**	**-0.3**
IHRS	**Heris**	**1.89**	**103**	*e*Pn	**Pb**	**01 16 21.3**	**-0.2**
IHRS				*e*		01 16 24.7	
	comp=Z,729nm,0.1s						
DIGO	**Kars**	**1.93**	**328**	*i* P	**Pb**	**01 16 22.8**	**+0.7**
DIGO	**Kars**	**1.93**	**328**	P	**Pb**	**01 16 22.8**	**+0.7**
EATA	**Eleskirt**	**2.02**	**303**	*i* P	**Pb**	**01 16 24.4**	**+0.7**
EATA	**Eleskirt**	**2.02**	**303**	P	**Pb**	**01 16 24.5**	**+0.7**
IBST	**Bostanabad**	**2.04**	**121**	*e*	**Sg**	**01 16 51.9**	**-0.2**
	comp=Z,213nm,0.2s						
GURO	**Guroymak-BITLI**	**2.10**	**265**	PN	**Pb**	**01 16 23.7**	**-1.2**
GURO	**Guroymak-BITLI**	**2.10**	**265**	*e*Pn	**Pb**	**01 16 23.7**	**-1.2**
EKAR	**Karacoban**	**2.11**	**284**	*i* P	**Pb**	**01 16 25.7**	**+0.6**
EKAR	**Karacoban**	**2.11**	**284**	P	**Pb**	**01 16 25.7**	**+0.6**
SIRT	**Sirnak**	**2.19**	**235**	PN	**Pb**	**01 16 25.9**	**-0.6**
SIRT	**Sirnak**	**2.19**	**235**	*e*Pn	**Pb**	**01 16 25.9**	**-0.6**
SRTM	**Siirt_Merkez**	**2.32**	**251**	*i* P	**Pb**	**01 16 27.2**	**-1.5**
SRTM				*i* S	**Sg**	**01 17 03.8**	**+2.6**
SRTM	**Siirt_Merkez**	**2.32**	**251**	P	**Pb**	**01 16 27.2**	**-1.5**
ISRB	**Sarab**	**2.52**	**111**	*e*Pn	**Pn**	**01 16 29.8**	**+1.9**
ISRB				*e*		01 16 41.9	
	comp=Z,223nm,0.2s						

ISC 07 01:33:28.9±0.8, 49°.95N±0°.03×18°.66E±0°.02, h0km, n25, σ1§12/47, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.35**	**252**	*e*PG	**Pg**	**01 33 35.8**	**+0.3**
OKC				*e*SG	**Sg**	**01 33 41.2**	**+1.2**
	comp=Z,22nm,0.5s						
CHZP	**Chorzow**	**0.41**	**32**	*e*Pg	**Pg**	**01 33 36.5**	**-0.2**
CHZP				Sg	**Sg**	**01 33 42.8**	**+0.8**
CHZP	**Chorzow**	**0.41**	**32**	*e*Pg	**Pg**	**01 33 36.5**	**-0.2**
CHZP				Sg	**Sg**	**01 33 42.8**	**+0.8**
MORC	**Moravsky Berou**	**0.74**	**257**	*e*PG	**Pg**	**01 33 42.6**	**-0.5**
MORC				*e*SG	**Sg**	**01 33 53.2**	**+0.5**
OJC	**Ojcow**	**0.78**	**69**	*e*Pg	**Pg**	**01 33 42.8**	**-1.2**
OJC				*e*Sg	**Sg**	**01 33 53.6**	**-0.4**
OJC	**Ojcow**	**0.78**	**69**	*e*Pg	**Pg**	**01 33 42.8**	**-1.2**
OJC				*e*Sg	**Sg**	**01 33 53.6**	**-0.4**
LANS	**Liptovska Anna**	**0.96**	**146**	*e*PG	**Pg**	**01 33 47.3**	**+0.1**
LANS				*e*SG	**Sg**	**01 34 00.8**	**+1.2**
NIE	**Niedzica**	**1.19**	**116**	*e*Pg	**Pg**	**01 33 51.6**	**-0.2**
NIE				*e*Sg	**Sb**	**01 34 09.5**	**+1.1**
NIE	**Niedzica**	**1.19**	**116**	*e*Pg	**Pg**	**01 33 51.6**	**-0.2**
NIE				*e*Sg	**Sb**	**01 34 09.5**	**+1.1**
JAVC	**Velka Javorina**	**1.27**	**211**	*e*PG	**Pb**	**01 33 54.0**	**+0.4**
JAVC				*e*SG	**Sn**	**01 34 12.4**	**+0.8**
VYHS	**Vyhne**	**1.46**	**175**	*e*PG	**Pn**	**01 33 56.2**	**-0.3**
VYHS				*e*SG	**Sg**	**01 34 15.0**	**-0.7**
VYHS				*e*LG	Lg	01 34 19.3	
VRAC	**Vranov**	**1.49**	**245**	*e*PG	**Pn**	**01 33 55.9**	**-1.0**
VRAC				*e*SG	**Sg**	**01 34 16.2**	**-0.4**
DPC	**Dobruska-Polom**	**1.56**	**286**	*e*PG	**Pn**	**01 33 57.4**	**-0.5**
DPC				*e*SG	**Sg**	**01 34 17.4**	**-1.4**
	comp=Z,15nm,0.5s						
SMOL	**Smolenice**	**1.65**	**210**	*e*SG	**Sn**	**01 34 21.2**	**+0.3**
KRUC	**Moravsky**	**1.72**	**240**	*e*PN	**Pn**	**01 33 59.8**	**-0.3**
KRUC				*e*SG	**Sn**	**01 34 22.5**	**-0.2**
UPC	**Upice**	**1.79**	**289**	*e*PG	**Pn**	**01 34 01.7**	**+0.7**
UPC				*e*SG	**Sn**	**01 34 24.7**	**+0.3**
	comp=Z,6.9nm,0.4s						
KECS	**Kecovo**	**1.89**	**140**	*e*SN	**Sn**	**01 34 24.7**	**-2.3**
CRVS	**Cervenica-Dubn**	**2.11**	**119**	*e*PN	**Pb**	**01 34 08.0**	**0.0**
GOPC	**GO Pecny, Ondr**	**2.50**	**271**	*e*PG	**Pb**	**01 34 13.2**	**-1.5**
GOPC				*e*SG	**Sb**	**01 34 46.0**	**0.0**
	comp=Z,5.0nm,0.3s						
PRU	**Pruhonice**	**2.66**	**272**	*e*PG	**Pb**	**01 34 16.4**	**-0.9**
PRU				*e*SG	**Sb**	**01 34 51.2**	**+0.7**
	comp=Z,2.3nm,0.3s						
PVCC	**Panska Ves**	**2.69**	**284**	*e*PG	**Pb**	**01 34 18.2**	**+0.4**
PVCC				*e*SG	**Sg**	**01 34 53.4**	**-1.8**
	comp=Z,6.7nm,0.2s						
BRG	**Berggiesshubel**	**3.15**	**289**	PG	**Pb**	**01 34 27.6**	**+1.9**
BRG				SG	**Sb**	**01 35 07.2**	**+2.5**
	6.1nm,1.0s						
KHC	**Kasperske Hory**	**3.41**	**258**	*e*PN	**Pn**	**01 34 23.8**	**+0.5**
KHC				*e*PN	**Pb**	**01 34 31.1**	**+1.0**
KHC				*e*SG	**Sg**	**01 35 15.1**	**-3.2**
	comp=Z,3.3nm,0.4s						
CLL	**Collm**	**3.85**	**293**	*e*Pg	**Pg**	**01 34 43.0**	**+0.4**
CLL				*e*Sg	**Sg**	**01 35 30.0**	**-2.5**
NKC	**Novy Kostel**	**4.01**	**276**	*e*SG	**Sg**	**01 35 37.0**	**-0.6**
	comp=Z,3.8nm,0.6s						

*IDC **07** 01:45:42.0±3.9, 36°.31N×72°.24E, h0km, mb3.4/1, mb1 3.5/4, mb1mx3.2/59, mbtmp3.5/4, ML3.2/3, Error ellipse: s-maj=99.9km s-min=29.4km az=133.0*
*NNC **07** 01:45:50.6±3.1, 37°.32N×70°.83E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=30.3km s-min=19.2km az=148.0*
ISC 07 01:45:50.3±3.1, 37°.0N±0°.2×70°.9E±0°.1, h35km, n10, σ1§59/11, 5C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.66**	**34**	⇓P	**Pn**	**01 46 44.3**	**-0.4**
	16nm,0.7s						
SFK				⇓S	**Sn**	**01 47 27.6**	**+0.9**
	44nm,0.9s						
MNAS	**Manas**	**5.64**	**12**	⇑P	**Pn**	**01 47 13.4**	**+1.7**
	2.6nm,0.5s						
MNAS				⇑S	**Sn**	**01 48 13.4**	**-1.9**
	3.4nm,0.5s						
KK31	**Karatay Array**	**6.11**	**358**	P	**Pn**	**01 47 18.2**	**+0.1**
	2.2nm,0.5s,baz=179,slow=13,SNR=35						
KK31				⇑S	**Sn**	**01 48 25.5**	**-1.3**
	1.7nm,0.4s,baz=187,slow=22,SNR=4.3						
AAK	**Ala-Archa**	**6.30**	**25**	⇑P	**Pn**	**01 47 20.3**	**-0.5**
	2.8nm,0.7s						
AAK				⇑S	**Sn**	**01 48 33.6**	**+2.0**
	4.2nm,0.8s						
MKAR	**Makanchi Array**	**12.97**	**37**	Pn	Pn	01 48 47.9	-4.1
	0.0nm,0.3s,baz=226,slow=15,SNR=4.4						
AB31	**Akbulak array**	**14.60**	**331**	P	Pn	01 49 13.3	-0.9
	0.4nm,0.5s,baz=149,slow=12,SNR=7.8						
BVAR	**Borovoye Array**	**16.04**	**359**	Pn	**Pn**	**01 49 34.0**	**+1.0**
	0.2nm,0.3s,baz=177,slow=13,SNR=2.7						
AKTO	**Aktyubinsk**	**16.30**	**330**	⇓P	**Pn**	**01 49 37.7**	**+1.3**
	2.2nm,0.7s						
ZALV	**Zalesovo Beam**	**19.52**	**25**	P	**P**	**01 50 12.3**	**-2.1**
	0.4nm,0.3s,baz=216,slow=11,SNR=6.6						
TORD	**Torodi Ar. Bea**	**65.62**	**268**	P	P	01 56 35.2	+4.2
	0.3nm,0.7s,baz=43,slow=6.5,SNR=4.6						

IDC 07 01:46:12.1±8.7, 3°.64S×140°.34E, h0km, mb3.1/2, mb1 3.3/3, mb1mx3.2/42, mbtmp3.2/3, ML2.9/1, Error ellipse: s-maj=338.8km s-min=31.2km az=89.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.23**	**199**	P	Pn	01 50 12.8	-1.6
	0.0nm,0.3s,baz=21,slow=13,SNR=2.6						
ASAR	**Alice Springs**	**20.86**	**197**	P	P	01 50 56.6	+0.8
	0.4nm,0.6s,baz=29,slow=9.7,SNR=3.7						
MKAR	**Makanchi Array**	**71.52**	**322**	P	P	01 57 35.0	0.0
	0.2nm,0.7s,baz=124,slow=4.2,SNR=3.3						

*DDA **07** 01:46:20.0, 41°.27N×46°.95E, h5km, Ml3.2*
*NSSP **07** 01:46:23.9, 41°.45N×46°.70E, h8km, Ms3.0*
*CSEM **07** 01:46:25.5±0.2, 41°.51N×46°.76E, h2km, mb4.4, Error ellipse: s-maj=3.7km s-min=2.9km az=140.0*
*MOS **07** 01:46:25.3±1.4, 41°.44N×46°.79E, h14km, mb4.4/1, Error ellipse: s-maj=7.4km s-min=4.7km az=95.8*
*TIF **07** 01:46:26.6, 41°.49N×46°.73E, h30km±3km*
ISC 07 01:46:24.9±1.1, 41°.49N±0°.02×46°.73E±0°.02, h3km±10km, n83, σ1§06/139, 7C-7D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKTA	**Zakatala**	**0.17**	**332**	PG	**Pg**	**01 46 28.4**	**+0.1**
ZKTA	**Zakatala**	**0.17**	**332**	Pg	**Pg**	**01 46 28.4**	**+0.1**
SEKA	**Sheki**	**0.45**	**128**	PG	**Pg**	**01 46 33.8**	**+0.3**
SEKA	**Sheki**	**0.45**	**128**	Pg	**Pg**	**01 46 33.8**	**+0.3**
DDFL	**Dedoflistskaro**	**0.46**	**265**	P	**Pn**	**01 46 36.9**	**-1.7**
DDFL				S	Sb	01 46 52.8	+10
DDFL	**Dedoflistskaro**	**0.46**	**265**	P	**Pn**	**01 46 36.9**	**-1.7**
KMKR	**Kumukh**	**0.70**	**23**	⇑*i*PG	**Pg**	**01 46 38.0**	**-0.4**
KMKR				*i* S	**Sg**	**01 46 47.0**	**-0.5**
KMKR				pmax	pmax		
	comp=Z,264nm,0.2s						
KMKR	**Kumukh**	**0.70**	**23**	*i* Pg	**Pg**	**01 46 38.0**	**-0.4**
	comp=Z,264nm,0.2s						
KMKR				*i* Sg	**Sg**	**01 46 47.0**	**-0.5**
AKT	**Akhty**	**0.75**	**90**	⇓*i*PG	**Pg**	**01 46 38.8**	**-0.5**
AKT				*e*		01 46 48.8	
AKT				pmax	pmax		
	comp=Z,85nm,0.2s						
AKT				smax	smax		
	comp=E,1μm,0.3s						
AKT				smax	smax		
	comp=E,833nm,0.3s						
AKT				smax	smax		
	comp=N,474nm,0.3s						
AKT	**Akhty**	**0.75**	**90**	*i* Pg	**Pg**	**01 46 38.8**	**-0.5**
	comp=N,85nm,0.2s						
AKT				*e*Sg	**Sg**	**01 46 48.8**	**-0.3**
	comp=N,474nm,0.3s						
GANJ	**Ganja**	**0.89**	**200**	PG	**Pg**	**01 46 42.0**	**-0.1**
GANJ	**Ganja**	**0.89**	**200**	Pg	**Pg**	**01 46 42.0**	**-0.1**
GNBR	**Gunib**	**0.92**	**11**	⇑*i*PG	**Pg**	**01 46 42.5**	**-0.1**
GNBR				*i* S	**Sb**	**01 46 55.2**	**-1.1**
GNBR				pmax	pmax		
	comp=Z,582nm,0.6s						
GNBR	**Gunib**	**0.92**	**11**	*i* Pg	**Pg**	**01 46 42.5**	**-0.1**
	comp=Z,582nm,0.6s						
GNBR				*i* Sg	**Sb**	**01 46 55.2**	**-1.1**
URKR	**Urkarakh**	**0.96**	**44**	⇑*i*PG	**Pg**	**01 46 43.0**	**-0.3**
URKR				*i* S	**Sb**	**01 46 57.0**	**-0.4**
URKR				pmax	pmax		
	comp=Z,371nm,0.1s						
URKR	**Urkarakh**	**0.96**	**44**	*i* Pg	**Pg**	**01 46 43.0**	**-0.3**
	comp=Z,371nm,0.1s						
URKR				*i* Sg	**Sb**	**01 46 57.0**	**-0.4**
DGRG	**David-gareji**	**1.02**	**269**	P	**Pg**	**01 46 44.1**	**-0.5**
DGRG				S	**Sb**	**01 46 58.8**	**-0.4**
DGRG	**David-gareji**	**1.02**	**269**	⇓*i*PG	**Pg**	**01 46 44.0**	**-0.5**
DGRG				*e*S	**Sb**	**01 46 58.7**	**-0.4**
DGRG	**David-gareji**	**1.02**	**269**	P	**Pg**	**01 46 44.1**	**-0.5**
DGRG				*e*Sg	**Sb**	**01 46 58.7**	**-0.4**
KSMR	**Kasumkent**	**1.05**	**83**	*e*PG	**Pn**	**01 46 46.0**	**-0.7**
KSMR				*e*S	**Sn**	**01 47 01.0**	**-1.0**
KSMR				pmax	pmax		
	comp=Z,201nm,0.2s						
KSMR	**Kasumkent**	**1.05**	**83**	*e*Pg	**Pn**	**01 46 46.0**	**-0.7**
	comp=Z,201nm,0.2s						
KSMR				*e*Sg	**Sn**	**01 47 01.0**	**-1.0**
XNZR	**Khunzakh**	**1.06**	**359**	⇑*i*PG	**Pg**	**01 46 44.9**	**-0.3**
XNZR				*e*S	**Sb**	**01 46 59.8**	**-0.5**
XNZR	**Khunzakh**	**1.06**	**359**	*i* Pg	**Pg**	**01 46 44.9**	**-0.3**
XNZR				*e*Sg	**Sb**	**01 46 59.8**	**-0.5**
ARKR	**Arakani**	**1.13**	**10**	⇓*i*PG	**Pb**	**01 46 46.0**	**-1.2**
ARKR				*i* S	**Sb**	**01 47 02.0**	**-0.4**
ARKR				pmax	pmax		
	comp=Z,80nm,0.2s						
ARKR	**Arakani**	**1.13**	**10**	*i* Pg	**Pb**	**01 46 46.0**	**-1.2**
	comp=Z,80nm,0.2s						
ARKR				*i* Sg	**Sb**	**01 47 02.0**	**-0.4**
SGKR	**Sergokala**	**1.19**	**35**	*e*PG	**Pg**	**01 46 48.0**	**+0.2**
SGKR				*e*S	**Sn**	**01 47 06.5**	**+1.2**
SGKR	**Sergokala**	**1.19**	**35**	*e*Pg	**Pg**	**01 46 48.0**	**+0.2**
UNCR	**Uncukul**	**1.23**	**2**	⇓*i*PG	**Pn**	**01 46 47.8**	**-1.3**
UNCR				*e*S	**Sg**	**01 47 04.8**	**+0.4**
UNCR				pmax	pmax		
	comp=Z,150nm,0.2s						
UNCR	**Uncukul**	**1.23**	**2**	*i* Pg	**Pn**	**01 46 47.8**	**-1.3**
	comp=Z,150nm,0.2s						
UNCR				*e*Sg	**Sg**	**01 47 04.8**	**+0.4**
BTLR	**Botlikh**	**1.24**	**342**	*e*PG	**Pn**	**01 46 48.0**	**-1.2**
BTLR				*e*S	**Sb**	**01 47 04.6**	**-0.8**
BTLR	**Botlikh**	**1.24**	**342**	*e*Pg	**Pn**	**01 46 48.0**	**-1.2**
BTLR				*e*Sg	**Sb**	**01 47 04.6**	**-0.8**
DRN	**Derbent**	**1.31**	**65**	⇑*i*PG	**Pg**	**01 46 50.0**	**-0.1**
DRN				*e*S	**Sg**	**01 47 09.0**	**+1.9**
DRN	**Derbent**	**1.31**	**65**	*i* Pg	**Pg**	**01 46 50.0**	**-0.1**
DRN				*e*Sg	**Sg**	**01 47 09.0**	**+1.9**
BUJR	**Buynaksk**	**1.37**	**12**	*i* PG	**Pg**	**01 46 51.0**	**-0.2**
BUJR				*i* S	**Sg**	**01 47 10.0**	**+1.1**
BUJR	**Buynaksk**	**1.37**	**12**	*i* Pg	**Pg**	**01 46 51.0**	**-0.2**
BUJR				*i* Sg	**Sg**	**01 47 10.0**	**+1.1**
SEAG	**Tbilisi Sea**	**1.47**	**282**	P	**Pn**	**01 46 51.9**	**-0.6**
SEAG				S	**Sg**	**01 47 13.6**	**+1.3**
SEAG	**Tbilisi Sea**	**1.47**	**282**	P	**Pn**	**01 46 51.9**	**-0.6**
SEAG				S	**Sg**	**01 47 13.6**	**+1.3**
TBLG	**Delisi**	**1.52**	**280**	P	**Pn**	**01 46 52.6**	**-0.5**
TBLG				S	**Sg**	**01 47 13.8**	**+0.2**
TBLG	**Delisi**	**1.52**	**280**	*e*PG	**Pn**	**01 46 52.5**	**-0.5**
TBLG				*e*S	**Sg**	**01 47 13.8**	**+0.2**
TBLG	**Delisi**	**1.52**	**280**	P	**Pn**	**01 46 52.6**	**-0.5**
TBLG				S	**Sb**	**01 47 13.5**	**+0.1**
DBC	**Dubki**	**1.54**	**3**	⇑*i*PG	**Pb**	**01 46 53.2**	**-0.9**
DBC				*i* S	**Sg**	**01 47 14.1**	**-0.2**
DBC				pmax	pmax		
	comp=Z,45nm,0.6s						
DBC	**Dubki**	**1.54**	**3**	*i* Pg	**Pb**	**01 46 53.2**	**-0.9**
	comp=Z,45nm,0.6s						
DBC				*i* Sg	**Sg**	**01 47 14.1**	**-0.2**
DVE	**Vedeno**	**1.54**	**343**	*e*PG	**Pn**	**01 46 52.5**	**-0.9**
DVE				*e*S	**Sg**	**01 47 14.4**	**0.0**
DVE	**Vedeno**	**1.54**	**343**	*e*Pg	**Pn**	**01 46 52.5**	**-0.9**
DVE				*e*Sg	**Sg**	**01 47 14.4**	**0.0**
MAK	**Makhachkala**	**1.58**	**21**	*e*PG	**Pg**	**01 46 56.2**	**+0.9**
MAK				*e*		01 47 20.1	
MAK				pmax	pmax		
	comp=Z,49nm,0.3s						
MAK				smax	smax		
	comp=E,206nm,0.7s						
MAK				smax	smax		
	comp=E,260nm,0.4s						
MAK	**Makhachkala**	**1.58**	**21**	*e*Pg	**Pg**	**01 46 56.2**	**+0.9**
	comp=E,49nm,0.3s						
DLMR	**Dylym**	**1.58**	**357**	*i* PN	**Pb**	**01 46 54.0**	**-0.9**
DLMR				*e*S	**Sg**	**01 47 16.5**	**+0.6**
DLMR				pmax	pmax		
	comp=Z,43nm,0.2s						
DLMR	**Dylym**	**1.58**	**357**	*i* Pn	**Pb**	**01 46 54.0**	**-0.9**
	comp=Z,43nm,0.2s						
DLMR				*e*Sg	**Sg**	**01 47 16.5**	**+0.6**
DUS	**Dusheti**	**1.63**	**292**	P	**Pn**	**01 46 54.7**	**0.0**
DUS				S	**Sg**	**01 47 18.0**	**+0.6**
DUS	**Dusheti**	**1.63**	**292**	*e*PN	**Pn**	**01 46 54.6**	**0.0**
DUS				*e*S	**Sg**	**01 47 18.0**	**+0.6**
DUS	**Dusheti**	**1.63**	**292**	P	**Pn**	**01 46 54.7**	**0.0**
DUS				S	**Sg**	**01 47 18.0**	**+0.6**
GROC	**Groznyy**	**1.85**	**338**	*e*PN	**Pb**	**01 46 59.1**	**-0.3**
GROC				*e*S	**Sg**	**01 47 25.8**	**+1.4**
GROC				pmax	pmax		
	comp=Z,17nm,0.8s						
GROC				smax	smax		
	comp=E,94nm,0.5s						
GROC				smax	smax		
	comp=E,80nm,0.5s						
GROC	**Groznyy**	**1.85**	**338**	*e*Pn	**Pb**	**01 46 59.1**	**-0.3**
	comp=E,17nm,0.8s						
GROC				*e*Sg	**Sg**	**01 47 25.8**	**+1.4**
GUDG	**Gudauri**	**1.94**	**301**	P	**Pb**	**01 47 00.4**	**-0.8**
GUDG				S	**Sg**	**01 47 27.4**	**-0.1**
GUDG	**Gudauri**	**1.94**	**301**	P	**Pb**	**01 47 00.4**	**-0.8**
GRS	**Goris**	**2.01**	**189**	⇓*i*P	**Pb**	**01 47 02.0**	**-0.2**
GRS				⇓*i*S	**Sg**	**01 47 29.0**	**-0.4**
GRS	**Goris**	**2.01**	**189**	⇓P	**Pb**	**01 47 02.0**	**-0.2**
GRS				S	**Sg**	**01 47 29.0**	**-0.4**
GNI	**Garni**	**2.02**	**229**	*c*iPN	**Pn**	**01 47 00.4**	**+0.4**
GNI	**Garni**	**2.02**	**229**	*i* Pn	**Pn**	**01 47 00.4**	**+0.4**
LACR	**Lac**	**2.25**	**307**	*e*PN	**Pb**	**01 47 05.1**	**-1.3**
LACR				*e*S	**Sb**	**01 47 35.4**	**+0.7**
LACR	**Lac**	**2.25**	**307**	*e*Pn	**Pb**	**01 47 05.1**	**-1.3**
BGD	**Bogdanovka**	**2.37**	**266**	P	**Pn**	**01 47 06.1**	**+1.2**
BGD				S	**Sb**	**01 47 37.9**	**-0.2**
BGD	**Bogdanovka**	**2.37**	**266**	P	**Pn**	**01 47 06.1**	**+1.2**
BGD				S	**Sb**	**01 47 37.9**	**-0.2**
AKH	**Akhalkalaki**	**2.44**	**269**	P	**Pn**	**01 47 07.0**	**+1.1**
AKH				S	**Sb**	**01 47 38.0**	**-2.0**
AKH	**Akhalkalaki**	**2.44**	**269**	*e*PN	**Pn**	**01 47 06.9**	**+1.1**
AKH				*e*S	**Sb**	**01 47 38.0**	**-2.0**
AKH	**Akhalkalaki**	**2.44**	**269**	*e*Pn	**Pn**	**01 47 06.9**	**+1.1**
AKH				S	**Sb**	**01 47 38.0**	**-2.0**
ZEI	**Tsey**	**2.48**	**303**	*e*PN	**Pn**	**01 47 07.7**	**+1.3**
ZEI				*e*S	**Sb**	**01 47 40.5**	**-0.7**
ZEI	**Tsey**	**2.48**	**303**	*e*Pn	**Pn**	**01 47 07.7**	**+1.3**
ARNR	**Ardon**	**2.48**	**314**	*e*PN	**Pb**	**01 47 11.1**	**+0.9**
ARNR				*e*S	**Sg**	**01 47 43.4**	**-1.3**
EAK	**Akyaka**	**2.49**	**252**	*i* P	**Pn**	**01 47 06.5**	**-0.1**
EAK				*i* S	**Sb**	**01 47 40.9**	**-0.7**
EAK	**Akyaka**	**2.49**	**252**	P	**Pn**	**01 47 06.5**	**-0.1**
EAK				S	**Sb**	**01 47 40.9**	**-0.7**
DIGO	**Kars**	**2.76**	**248**	*i* P	**Pn**	**01 47 12.2**	**+1.9**
DIGO	**Kars**	**2.76**	**248**	P	**Pn**	**01 47 12.2**	**+1.9**
EPOS	**Posof**	**3.01**	**272**	*i* P	**Pn**	**01 47 13.8**	**+0.2**
EPOS				*i* S	**Sg**	**01 47 59.6**	**-2.0**
EPOS	**Posof**	**3.01**	**272**	P	**Pn**	**01 47 13.8**	**+0.2**
NCK	**Nalchik**	**3.07**	**312**	*i* PN	**Pn**	**01 47 16.5**	**+2.1**
NCK	**Nalchik**	**3.07**	**312**	*i* Pn	**Pn**	**01 47 16.5**	**+2.1**
NEY	**Neytrino**	**3.45**	**302**	*i* PN	**Pn**	**01 47 22.3**	**+2.5**
NEY	**Neytrino**	**3.45**	**302**	*i* Pn	**Pn**	**01 47 22.3**	**+2.5**
KIV	**Kislovodsk**	**3.87**	**311**	*e*PN	**Pn**	**01 47 28.6**	**+3.2**
KIV				*e*S	**Sb**	**01 48 16.6**	**-4.6**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BRVK	**Borovoye**	**19.63**	**46**	*i* P	**Pn**	**01 50 56.4**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRVK	**Borovoye**	**19.63**	**46**	*i* P	**Pn**	**01 50 56.4**	**+0.6**
	comp=Z,1.0nm,0.8s						
KLNR	**Kaliningrad**	**21.90**	**316**	*i* P	**P**	**01 51 20.5**	**+1.6**
KLNR				pmax	pmax		
	comp=Z,21nm,0.8s						

*ISCJB **07** 01:47:44.6±0.2, 44°.85N±0°.02×10°.90E±0°.02, h23km±1km, Error ellipse: s-maj=2.8km s-min=2.0km az=179.0*
*BEO **07** 01:47:44.8±1.1, 44°.96N×10°.95E, h0km*
*ROM **07** 01:47:44.6±0.0, 44°.882N±0°.002×10°.894E±0°.001, h7km, ML3.2/70*
*CSEM **07** 01:47:45.1±0.1, 44°.94N×10°.91E, h10km, ML3.3/28, Error ellipse: s-maj=2.4km s-min=2.0km az=10.0*
*LDG **07** 01:47:45.0±0.1, 44°.91N×11°.03E, h2km, Ml3.1/20, Error ellipse: s-maj=2.3km s-min=1.7km az=43.0*
*PRU **07** 01:47:46.3, 45°.02N×10°.73E, h14km*
ISC 07 01:47:44.7±0.7, 44°.93N±0°.02×10°.87E±0°.02, h13km±4km, n307, σ1§25/356, 13C-24D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0825	**Gonzaga (MN)**	**0.04**	**343**	AML	AML		
T0825				AML	AML		
T0827	**Moglia (MN)**	**0.05**	**81**	⇑*i*P	**Pg**	**01 47 47.2**	**+0.1**
T0827				⇑*i*S	**Sg**	**01 47 49.8**	**+1.0**
T0827	**Moglia (MN)**	**0.05**	**81**	*i* P	**Pg**	**01 47 47.2**	**+0.1**
T0827				*i* S	**Sg**	**01 47 49.8**	**+1.0**
NDIM	**Novi di Modena**	**0.05**	**151**	*i* P	**Pg**	**01 47 46.6**	**-0.5**
NDIM				*i* S	**Sg**	**01 47 47.8**	**-1.0**
T0826	**Rio Saliceto (**	**0.10**	**203**	AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0828	**Loc. Fossoli,**	**0.11**	**161**	⇓*i*P	**Pg**	**01 47 46.7**	**-1.0**
T0828				⇓*i*S	**Sg**	**01 47 49.4**	**-0.4**
T0828	**Loc. Fossoli,**	**0.11**	**161**	*i* P	**Pg**	**01 47 46.7**	**-1.0**
T0828				*i* S	**Sg**	**01 47 49.4**	**-0.4**
T0818	**Loc. Fossa, Co**	**0.12**	**88**	⇑*i*P	**Pg**	**01 47 48.2**	**+0.3**
T0818				⇑*i*S	**Sb**	**01 47 51.7**	**+0.1**
T0818	**Loc. Fossa, Co**	**0.12**	**88**	*i* P	**Pg**	**01 47 48.2**	**+0.3**
T0818				*i* S	**Sb**	**01 47 51.6**	**+0.1**
SBPO	**S.Benedetto Po**	**0.13**	**18**	⇓*i*P	**Pb**	**01 47 49.4**	**+0.4**
SBPO	**S.Benedetto Po**	**0.13**	**18**	*i* P	**Pb**	**01 47 49.4**

T0800				AML	AML	
	comp=N,10470µm,0.4s					
T0800				AML	AML	
	comp=E,14700µm,0.7s					
T0800				AML	AML	
	comp=E,13650µm,0.9s					
T0800				AML	AML	
	comp=N,11295µm,0.4s					
T0800				AML	AML	
	comp=N,10470µm,0.4s					
T0811	**Palata Pepoli**	**0.30**	**120**	*e*P	**Pg**	**01 47 50.3 -0.5**
T0811				*e*S	**Sb**	**01 47 56.5 -0.2**
T0811	**Palata Pepoli**	**0.30**	**120**	*e*P	**Pg**	**01 47 50.3 -0.5**
T0811				*e*S	**Sb**	**01 47 56.5 -0.2**
MODE	**Modena**	**0.31**	**169⇓**	*e*P	**Pg**	**01 47 51.1 +0.1**
MODE	**Modena**	**0.31**	**169**	*e*P	**Pg**	**01 47 51.1 +0.1**
SERM	**Sermide**	**0.32**	**75**	*e*P	**Pg**	**01 47 51.7 +0.5**
SERM	**Sermide**	**0.32**	**75**	*e*P	**Pg**	**01 47 51.7 +0.5**
SERM				AML	AML	
	comp=E,2945µm,0.3s					
SERM				AML	AML	
	comp=N,1845µm,0.5s					
SERM				AML	AML	
	comp=E,5050µm,0.7s					
SERM				AML	AML	
	comp=N,2910µm,0.6s					
SERM				AML	AML	
	comp=E,2945µm,0.3s					
SERM				AML	AML	
	comp=N,1845µm,0.5s					
SERM				AML	AML	
	comp=E,5075µm,0.7s					
SERM				AML	AML	
	comp=N,2900µm,0.6s					
SERM				AML	AML	
	comp=E,2950µm,0.3s					
SERM				AML	AML	
	comp=N,1845µm,0.4s					
SERM				AML	AML	
	comp=E,5080µm,0.7s					
SERM				AML	AML	
	comp=N,2905µm,0.6s					
SERM				AML	AML	
	comp=N,1845µm,0.4s					
SERM				AML	AML	
	comp=E,2950µm,0.3s					
SERM				AML	AML	
	comp=E,5080µm,0.7s					
SERM				AML	AML	
	comp=N,2905µm,0.6s					
T0805	**Bondeno (FE)**	**0.33**	**92**	*e*P	**Pg**	**01 47 51.2 -0.1**
T0805	**Bondeno (FE)**	**0.33**	**92**	*e*P	**Pg**	**01 47 51.2 -0.1**
T0805				AML	AML	
	comp=E,10445µm,0.5s					
T0805				AML	AML	
	comp=N,10830µm,0.5s					
T0805				AML	AML	
	comp=E,10415µm,0.5s					
T0805				AML	AML	
	comp=N,10840µm,0.5s					
T0805				AML	AML	
	comp=E,10415µm,0.5s					
T0805				AML	AML	
	comp=N,10840µm,0.5s					
T0822	**Casumaru (Bond**	**0.35**	**106⇑**	*e*P	**Pg**	**01 47 51.5 -0.4**
T0822	**Casumaru (Bond**	**0.35**	**106**	*e*P	**Pg**	**01 47 51.5 -0.4**
T0803	**Dosso, Cento (**	**0.38**	**115**	*e*P	**Pg**	**01 47 52.1 -0.3**
T0803	**Dosso, Cento (**	**0.38**	**115**	*e*P	**Pg**	**01 47 52.1 -0.3**
T0803				AML	AML	
	comp=E,5610µm,1.1s					
T0803				AML	AML	
	comp=N,5230µm,0.7s					
T0803				AML	AML	
	comp=E,5610µm,1.0s					
T0803				AML	AML	
	comp=N,5230µm,0.7s					
T0803				AML	AML	
	comp=N,5230µm,0.7s					
T0803				AML	AML	
	comp=E,5610µm,1.0s					
T0823	**Castello D'Arg**	**0.38**	**130⇑**	*e*P	**Pg**	**01 47 52.4 0.0**
T0823	**Castello D'Arg**	**0.38**	**130**	*e*P	**Pg**	**01 47 52.4 0.0**
T0817	**Loc. Veratica,**	**0.42**	**81**	*e*P	**Pb**	**01 47 54.4 +0.3**
T0817	**Loc. Veratica,**	**0.42**	**81**	*e*P	**Pb**	**01 47 54.4 +0.3**
PRMA	**PARMA**	**0.43**	**247**	AML	AML	
	comp=E,2825µm,1.1s					
PRMA				AML	AML	
	comp=E,2825µm,1.1s					
PRMA				AML	AML	
	comp=N,2445µm,0.9s					
PRMA				AML	AML	
	comp=N,2445µm,0.9s					
PRMA				AML	AML	
	comp=E,2825µm,1.1s					
PRMA				AML	AML	
	comp=N,2445µm,0.9s					
PRMA				AML	AML	
	comp=N,2445µm,0.9s					
PRMA				AML	AML	
	comp=E,2825µm,1.1s					
T0821	**Loc. Casaglia**	**0.48**	**93**	AML	AML	
	comp=E,3300µm,0.8s					
T0821				AML	AML	
	comp=N,3140µm,0.9s					
T0821				AML	AML	
	comp=E,3260µm,0.8s					
T0821				AML	AML	
	comp=N,3285µm,0.9s					
T0821				AML	AML	
	comp=E,3295µm,0.8s					
T0821				AML	AML	
	comp=N,3145µm,0.9s					
T0821				AML	AML	
	comp=E,3260µm,0.8s					
T0821				AML	AML	
	comp=N,3285µm,0.9s					
T0821				AML	AML	
	comp=N,3145µm,0.9s					
T0820	**Chiesuol del F**	**0.52**	**105**	AML	AML	
	comp=N,5065µm,0.8s					
T0820				AML	AML	
	comp=E,5080µm,0.5s					
T0820				AML	AML	
	comp=N,5065µm,0.8s					
T0820				AML	AML	
	comp=E,5520µm,0.5s					
T0820				AML	AML	
	comp=N,4035µm,1.5s					
T0820				AML	AML	
	comp=E,5080µm,0.5s					
T0820				AML	AML	
	comp=E,5520µm,0.5s					
T0820				AML	AML	
	comp=N,4030µm,1.5s					
T0820				AML	AML	
	comp=N,5065µm,0.8s					
T0820				AML	AML	
	comp=N,4030µm,1.5s					
T0820				AML	AML	
	comp=E,5080µm,0.5s					
T0820				AML	AML	
	comp=E,5520µm,0.5s					
FIU	**Minerbio Fiu**	**0.53**	**123**	AML	AML	
	comp=N,2025µm,0.7s					
FIU				AML	AML	
	comp=E,3070µm,0.9s					
FIU				AML	AML	
	comp=N,2025µm,0.7s					
FIU				AML	AML	
	comp=E,3065µm,0.9s					
FIU				AML	AML	
	comp=N,2025µm,0.7s					
FIU				AML	AML	
	comp=E,3065µm,0.9s					
T0816	**San Bartolomeo**	**0.56**	**112**	*e*P	**Pg**	**01 47 55.9 +0.2**
T0816	**San Bartolomeo**	**0.56**	**112**	*e*P	**Pg**	**01 47 55.9 +0.2**
ZCCA	**Zocca**	**0.58**	**172⇓**	*e*P	**Pb**	**01 47 57.5 +0.6**
ZCCA	**Zocca**	**0.58**	**172**	*e*P	**Pb**	**01 47 57.5 +0.6**
ZCCA				AML	AML	
	comp=E,3200µm,1.1s					
ZCCA				AML	AML	
	comp=N,3545µm,0.9s					
ZCCA				AML	AML	
	comp=E,2825µm,1.1s					
ZCCA				AML	AML	
	comp=N,4045µm,0.9s					
ZCCA				AML	AML	
	comp=E,3200µm,1.1s					
ZCCA				AML	AML	
	comp=N,3545µm,0.9s					
ZCCA				AML	AML	
	comp=E,2825µm,1.1s					
ZCCA				AML	AML	
	comp=N,4045µm,0.9s					
ZCCA				AML	AML	
	comp=N,4045µm,0.9s					
ZCCA				AML	AML	
	comp=N,3545µm,0.9s					
ZCCA				AML	AML	
	comp=E,2825µm,1.1s					
ZCCA				AML	AML	
	comp=E,3200µm,1.1s					
T0815	**Correggio (RE)**	**0.61**	**95**	*e*P	**Pb**	**01 47 57.5 +0.2**
T0815	**Correggio (RE)**	**0.61**	**95**	*e*P	**Pb**	**01 47 57.5 +0.2**
MTRZ	**Monterenzio**	**0.70**	**142⇑**	*e*P	**Pn**	**01 48 00.8 +0.4**
MTRZ	**Monterenzio**	**0.70**	**142**	*e*P	**Pn**	**01 48 00.8 +0.4**
MTRZ				AML	AML	
	comp=E,3885µm,0.6s					
MTRZ				AML	AML	
	comp=N,3550µm,0.8s					
MTRZ				AML	AML	
	comp=E,4015µm,0.6s					
MTRZ				AML	AML	
	comp=N,3670µm,0.8s					
MTRZ				AML	AML	
	comp=N,3670µm,0.8s					
MTRZ				AML	AML	
	comp=N,3550µm,0.8s					
MTRZ				AML	AML	
	comp=E,4015µm,0.6s					
MTRZ				AML	AML	
	comp=E,3885µm,0.6s					
TEOL	**Teolo**	**0.71**	**53⇓**	*e*Pg	**Pb**	**01 47 59.0 -0.1**
TEOL				*e*Sg	**Sn**	**01 48 11.7 +0.2**
TEOL	**Teolo**	**0.71**	**53⇓**	*e*P	**Pg**	**01 47 58.0 -0.6**
TEOL	**Teolo**	**0.71**	**53**	*e*Pg	**Pb**	**01 47 59.0 -0.1**
TEOL	**Teolo**	**0.71**	**53**	*e*P	**Pb**	**01 47 59.0 -0.1**
TEOL				AML	AML	
	comp=E,10255µm,0.7s					
TEOL				AML	AML	
	comp=N,7585µm,0.4s					
TEOL				AML	AML	
	comp=E,10255µm,0.7s					
TEOL				AML	AML	
	comp=N,7585µm,0.4s					
TEOL				AML	AML	
	comp=N,7585µm,0.4s					
TEOL				AML	AML	
	comp=E,10255µm,0.7s					
SALO	**Salr**	**0.73**	**341**	AML	AML	
	comp=E,5305µm,0.6s					
SALO				AML	AML	
	comp=N,5375µm,0.3s					
SALO				AML	AML	
	comp=E,5305µm,0.6s					
SALO				AML	AML	
	comp=N,5375µm,0.3s					
SALO				AML	AML	
	comp=E,5305µm,0.6s					
SALO				AML	AML	
	comp=N,5375µm,0.3s					
ROVR	**Rover¯¤ Verone**	**0.73**	**11**	AML	AML	
	comp=N,7545µm,0.3s					
ROVR				AML	AML	
	comp=E,3495µm,1.5s					
ROVR				AML	AML	
	comp=E,3495µm,1.5s					
ROVR				AML	AML	
	comp=N,7545µm,0.3s					
ROVR				AML	AML	
	comp=N,7545µm,0.3s					
ROVR				AML	AML	
	comp=E,3495µm,1.5s					
MARN	**Marana (Italy)**	**0.75**	**19⇓**	*e*Pg	**Pb**	**01 47 59.8 +0.1**
MARN				*e*Sg	**Sn**	**01 48 12.8 +0.4**
MARN	**Marana (Italy)**	**0.75**	**19**	*e*Pg	**Pb**	**01 47 59.8 +0.1**
BALD	**Monte Baldo**	**0.75**	**357⇓**	*e*Pg	**Pb**	**01 48 00.1 +0.2**
BALD				*e*Sg	**Sn**	**01 48 12.4 -0.3**
BALD	**Monte Baldo**	**0.75**	**357**	*e*Pg	**Pb**	**01 48 00.1 +0.2**
BALD				*e*Sg	**Sn**	**01 48 12.4 -0.3**
CMPO	**Campotto Po**	**0.76**	**117**	*e*P	**Pn**	**01 48 01.4 +0.3**
CMPO	**Campotto Po**	**0.76**	**117**	*e*P	**Pn**	**01 48 01.4 +0.3**
CMPO				AML	AML	
	comp=E,4465µm,0.8s					
CMPO				AML	AML	
	comp=N,4965µm,0.6s					
CMPO				AML	AML	
	comp=E,4465µm,0.8s					
CMPO				AML	AML	
	comp=N,4965µm,0.6s					
CMPO				AML	AML	
	comp=N,4965µm,0.6s					
CMPO				AML	AML	
	comp=E,4465µm,0.8s					
FNVD	**Fontana Vidola**	**0.78**	**166**	AML	AML	
	comp=N,2120µm,0.7s					
FNVD				AML	AML	
	comp=E,2195µm,0.6s					
FNVD				AML	AML	
	comp=N,2120µm,0.7s					
FNVD				AML	AML	
	comp=E,2195µm,0.6s					
VLC	**Villacollemand**	**0.84**	**204**	AML	AML	
	comp=E,558µm,0.7s					
VLC				AML	AML	
	comp=E,558µm,0.7s					
VLC				AML	AML	
	comp=N,863µm,1.0s					
VLC				AML	AML	
	comp=E,558µm,0.7s					
VLC				AML	AML	
	comp=N,863µm,1.0s					
VLC				AML	AML	
	comp=N,863µm,1.0s					
IMOL	**Imola, Italy**	**0.85**	**132**	AML	AML	
	comp=N,4245µm,0.6s					
IMOL				AML	AML	
	comp=E,2425µm,1.0s					
IMOL				AML	AML	
	comp=N,4245µm,0.5s					
IMOL				AML	AML	
	comp=E,438µm,0.8s					
IMOL				AML	AML	
	comp=N,404µm,0.7s					
IMOL				AML	AML	
	comp=E,2425µm,1.0s					
IMOL				AML	AML	
	comp=N,4245µm,0.6s					
IMOL				AML	AML	
	comp=E,2425µm,1.0s					
CTL8	**Castelleone**	**0.85**	**294**	AML	AML	
	comp=E,1024µm,0.7s					
CTL8				AML	AML	
	comp=E,2960µm,0.9s					
CTL8				AML	AML	
	comp=N,3475µm,0.6s					
CTL8				AML	AML	
	comp=N,726µm,0.8s					
CTL8				AML	AML	
	comp=E,2960µm,0.9s					
CTL8				AML	AML	
	comp=N,3470µm,0.6s					
CTL8				AML	AML	
	comp=E,1026µm,0.7s					
CTL8				AML	AML	
	comp=N,727µm,0.8s					
CTL8				AML	AML	
	comp=E,2960µm,0.9s					
CTL8				AML	AML	
	comp=E,1026µm,0.7s					
CTL8				AML	AML	
	comp=N,727µm,0.8s					
CTL8				AML	AML	
	comp=N,3470µm,0.6s					
MAGA	**Magasa**	**0.86**	**349**	AML	AML	
	comp=E,15200µm,0.4s					
MAGA				AML	AML	
	comp=N,13800µm,0.5s					
MAGA				AML	AML	
	comp=E,15200µm,0.4s					
MAGA				AML	AML	
	comp=N,13800µm,0.5s					
MAGA				AML	AML	
	comp=N,13800µm,0.5s					
MAGA				AML	AML	
	comp=E,15200µm,0.4s					
BDI	**Bagni Di Lucca**	**0.89**	**193**	AML	AML	
	comp=E,1084µm,0.4s					
BDI				AML	AML	
	comp=E,1240µm,0.6s					
BDI				AML	AML	
	comp=N,1125µm,0.7s					
BDI				AML	AML	
	comp=N,1485µm,0.7s					
BDI				AML	AML	
	comp=E,1240µm,0.6s					
BDI				AML	AML	
	comp=N,1485µm,0.7s					
BDI				AML	AML	
	comp=N,1125µm,0.7s					
BDI				AML	AML	
	comp=E,1084µm,0.4s					
POPM	**Popiglio**	**0.89**	**185**	AML	AML	
	comp=E,904µm,1.3s					
POPM				AML	AML	
	comp=E,904µm,1.3s					
POPM				AML	AML	
	comp=N,1565µm,0.7s					
POPM				AML	AML	
	comp=N,1565µm,0.7s					
POPM				AML	AML	
	comp=N,1565µm,0.7s					
POPM				AML	AML	
	comp=E,904µm,1.3s					
DOSS	**Dosso del Somm**	**0.98**	**13⇓**	*e*Pg	**Pb**	**01 48 03.9 +0.2**
DOSS				*e*Sg	**Sn**	**01 48 19.7 +1.5**
DOSS	**Dosso del Somm**	**0.98**	**13**	*e*Pg	**Pb**	**01 48 03.9 +0.2**
DOSS				*e*Sg	**Sn**	**01 48 19.7 +1.5**
MAIM	**Mastiano**	**1.05**	**195**	AML	AML	
	comp=N,1225µm,0.4s					
MAIM				AML	AML	
	comp=E,1210µm,0.3s					
MAIM				AML	AML	
	comp=N,1225µm,0.4s					
MAIM				AML	AML	
	comp=E,1210µm,0.3s					
MAIM				AML	AML	
	comp=N,1225µm,0.4s					
MAIM				AML	AML	
	comp=E,1210µm,0.3s					
RNI	**Roncone**	**1.06**	**351⇑**	*e*Pg	**Pb**	**01 48 04.7 -0.5**
RNI				*e*Sg	**Sn**	**01 48 21.6 +1.1**
RNI	**Roncone**	**1.06**	**351**	*e*Pg	**Pb**	**01 48 04.7 -0.5**
RNI				*e*Sg	**Sn**	**01 48 21.5 +1.1**
PLMA	**Palmaria, Port**	**1.14**	**220**	AML	AML	
	comp=N,2005µm,0.3s					
PLMA				AML	AML	
	comp=E,745µm,0.3s					
PLMA				AML	AML	
	comp=E,745µm,0.3s					
PLMA				AML	AML	
	comp=N,2005µm,0.3s					
MSSA	**Maissana**	**1.14**	**238**	AML	AML	
	comp=E,542µm,0.8s					
MSSA				AML	AML	
	comp=E,542µm,0.8s					
MSSA				AML	AML	
	comp=N,673µm,1.1s					
MSSA				AML	AML	
	comp=N,673µm,1.1s					
CRMI	**Carmignano**	**1.14**	**176**	AML	AML	
	comp=N,390µm,0.8s					
CRMI				AML	AML	
	comp=E,462µm,0.6s					
CRMI				AML	AML	
	comp=N,390µm,0.8s					
CRMI				AML	AML	
	comp=E,462µm,0.6s					
CRMI				AML	AML	
	comp=N,390µm,0.8s					
CRMI				AML	AML	
	comp=E,462µm,0.6s					
MABI	**Malga Bissina**	**1.15**	**348**	AML	AML	
	comp=E,1011µm,0.2s					
MABI				AML	AML	
	comp=E,1011µm,0.2s					
MABI				AML	AML	
	comp=N,880µm,0.2s					
MABI				AML	AML	
	comp=N,880µm,0.2s					
MABI				AML	AML	
	comp=E,1011µm,0.2s					
MABI				AML	AML	
	comp=N,880µm,0.2s					
CGRP	**Cima Grappa**	**1.16**	**34⇓**	*e*Pg	**Pg**	**01 48 07.0 0.0**
CGRP				*e*Sg	**Sn**	**01 48 24.5 +1.9**
CGRP	**Cima Grappa**	**1.16**	**34**	*e*Pg	**Pg**	**01 48 07.0 0.0**
CGRP				*e*Sg	**Sn**	**01 48 24.5 +1.9**
CGRP	**Cima Grappa**	**1.16**	**34**	AML	AML	
	comp=E,1550µm,0.8s					
CGRP				AML	AML	
	comp=E,1550µm,0.8s					
CGRP				AML	AML	
	comp=N,1408µm,1.2s					
CGRP				AML	AML	
	comp=E,1550µm,0.8s					
CGRP				AML	AML	
	comp=N,1408µm,1.2s					
CGRP				AML	AML	
	comp=N,1408µm,1.2s					
PANI	**Panarotta**	**1.17**	**16**	*e*Pg	**Pb**	**01 48 07.0 0.0**
PANI				*e*Sg	**Sn**	**01 48 24.8 +1.8**
PANI	**Panarotta**	**1.17**	**16**	*e*Pg	**Pb**	**01 48 06.9 0.0**
PANI				*e*Sg	**Sn**	**01 48 24.8 +1.8**
MTLO	**Montello**	**1.24**	**44⇑**	*e*Pg	**Pb**	**01 48 08.1 +0.1**
MTLO	**Montello**	**1.24**	**44**	*e*Pg	**Pb**	**01 48 08.1 +0.1**
SFI	**Santa Sofia**	**1.24**	**145**	AML	AML	
	comp=E,654µm,0.7s					
SFI				AML	AML	
	comp=E,675µm,0.7s					
SFI				AML	AML	
	comp=N,1575µm,0.9s					
SFI				AML	AML	
	comp=E,654µm,0.7s					
SFI				AML	AML	
	comp=N,1685µm,0.9s					
SFI				AML	AML	
	comp=N,1685µm,0.9s					
SFI				AML	AML	
	comp=N,1575µm,0.9s					
SFI				AML	AML	
	comp=E,675µm,0.7s					
ASQU	**Asqua**	**1.31**	**149**	AML	AML	
	comp=N,592µm,0.7s					
ASQU				AML	AML	
	comp=E,858µm,0.6s					
ASQU				AML	AML	
	comp=E,858µm,0.6s					
ASQU				AML	AML	
	comp=N,592µm,0.7s					
VARN	**Col Varnada, M**	**1.38**	**39**	*e*Pg	**Pb**	**01 48 10.8 +0.4**
VARN	**Col Varnada, M**	**1.38**	**39**	*e*Pg	**Pb**	**01 48 10.8 +0.4**
OZOL	**Ozolo**	**1.48**	**5**	*e*Pg	**Pn**	**01 48 11.6 +0.3**
OZOL	**Ozolo**	**1.48**	**5**	*e*Pg	**Pn**	**01 48 11.6 +0.3**
CARE	**Lago del Cares**	**1.50**	**355**	*e*Pg	**Pb**	**01 48 12.2 -0.4**
CARE	**Lago del Cares**	**1.50**	**355**	*e*Pg	**Pb**	**01 48 12.2 -0.4**
CRE	**Caprese Michel**	**1.52**	**149**	AML	AML	
	comp=E,468µm,0.6s					
CRE				AML	AML	
	comp=N,500µm,0.4s					
CRE				AML	AML	
	comp=N,500µm,0.4s					
CRE				AML	AML	
	comp=E,468µm,0.6s					
CAE	**Caneva**	**1.54**	**45⇑**	*e*Pg	**Pn**	**01 48 12.3 +0.2**
CAE	**Caneva**	**1.54**	**45**	*e*Pg	**Pn**	**01 48 12.3 +0.2**
APPI	**Appiano**	**1.57**	**9**	AML	AML	
	comp=E,2480µm,0.4s					
APPI				AML	AML	
	comp=N,1620µm,1.2s					
APPI				AML	AML	
	comp=E,2480µm,0.4s					
APPI				AML	AML	
	comp=N,1620µm,1.2s					
KOSI	**Kohlern**	**1.57**	**13**	AML	AML	

	comp=N,1680µm,0.8s					
KOSI				AML	AML	
	comp=E,1495µm,0.7s					
KOSI				AML	AML	
	comp=N,1680µm,0.8s					
KOSI				AML	AML	
	comp=E,1495µm,0.7s					
BRMO	**Bormio**	**1.58**	**348**	AML	AML	
	comp=N,716µm,0.5s					
BRMO				AML	AML	
	comp=E,607µm,0.5s					
BRMO				AML	AML	
	comp=E,607µm,0.5s					
BRMO				AML	AML	
	comp=N,716µm,0.5s					
AGOR	**Agordo**	**1.59**	**31⇓**	*e*Pg	**Pb**	**01 48 13.7 -0.3**
AGOR	**Agordo**	**1.59**	**31**	AML	AML	
	comp=E,754µm,1.2s					
AGOR				AML	AML	
	comp=E,754µm,1.2s					
AGOR				AML	AML	
	comp=N,575µm,0.8s					
AGOR				AML	AML	
	comp=N,575µm,0.8s					
POLC	**Polcenigo**	**1.59**	**46**	AML	AML	
	comp=E,1930µm,0.7s					
POLC				AML	AML	
	comp=E,1930µm,0.7s					
POLC				AML	AML	
	comp=N,1235µm,0.4s					
POLC				AML	AML	
	comp=N,1235µm,0.4s					
PARC	**Parchiule**	**1.62**	**142**	AML	AML	
	comp=N,357µm,0.7s					
PARC				AML	AML	
	comp=E,386µm,0.6s					
PARC				AML	AML	
	comp=E,386µm,0.6s					
PARC				AML	AML	
	comp=N,357µm,0.7s					
PCP	**Piancastagn**	**1.70**	**258**	AML	AML	
	comp=E,276µm,1.2s					
PCP				AML	AML	
	comp=N,305µm,0.5s					
PCP				AML	AML	
	comp=N,305µm,0.5s					
PCP				AML	AML	
	comp=E,276µm,1.2s					
MOSI	**Grossmontoni**	**1.70**	**353**	AML	AML	
	comp=N,2120µm,1.2s					
MOSI				AML	AML	
	comp=E,1330µm,1.0s					
MOSI				AML	AML	
	comp=N,2120µm,1.2s					
MOSI				AML	AML	
	comp=E,1330µm,1.0s					
MLNI	**Malnisio**	**1.73**	**45**	*e*Pn	**Pb**	**01 48 16.1 -0.3**
MLNI	**Malnisio**	**1.73**	**45**	*e*Pn	**Pb**	**01 48 16.1 -0.3**
FROS	**Frosini**	**1.73**	**173**	AML	AML	
	comp=E,297µm,0.5s					
FROS				AML	AML	
	comp=E,297µm,0.5s					
FROS				AML	AML	
	comp=N,232µm,0.6s					
FROS				AML	AML	
	comp=N,232µm,0.6s					
VARE	**Varese**	**1.75**	**303**	AML	AML	
	comp=N,846µm,1.1s					
VARE				AML	AML	
	comp=E,844µm,0.4s					
VARE				AML	AML	
	comp=E,844µm,0.4s					
VARE				AML	AML	
	comp=N,846µm,1.1s					
ATMC	**Monte Cedrone**	**1.76**	**147**	AML	AML	
	comp=E,540µm,0.8s					
ATMC				AML	AML	
	comp=E,540µm,0.8s					
ATMC				AML	AML	
	comp=N,358µm,0.7s					
ATMC				AML	AML	
	comp=N,358µm,0.7s					
CIMO	**Cimolais**	**1.77**	**38**	*e*Pn	**Pb**	**01 48 16.2 -0.9**
CIMO	**Cimolais**	**1.77**	**38**	*e*Pn	**Pb**	**01 48 16.2 -0.9**
CAFI	**Castiglion Fio**	**1.79**	**153**	AML	AML	
	comp=N,195µm,0.6s					
CAFI				AML	AML	
	comp=E,293µm,0.6s					
CAFI				AML	AML	
	comp=N,195µm,0.6s					
CAFI				AML	AML	
	comp=E,293µm,0.6s					
ROTM	**Rocchetta Tana**	**1.79**	**268**	AML	AML	
	comp=E,980µm,0.8s					
ROTM				AML	AML	
	comp=E,980µm,0.8s					
ROTM				AML	AML	
	comp=N,1159µm,0.7s					
ROTM				AML	AML	
	comp=N,1159µm,0.7s					
NARO	**Abbazia di Nar**	**1.81**	**136**	AML	AML	
	comp=N,177µm,0.6s					
NARO				AML	AML	
	comp=E,199µm,0.9s					
NARO				AML	AML	
	comp=N,177µm,0.6s					
NARO				AML	AML	
	comp=E,199µm,0.9s					
ABSI	**Aberstueckl**	**1.83**	**10**	AML	AML	
	comp=E,2140µm,0.5s					
ABSI				AML	AML	
	comp=N,1485µm,1.2s					
ABSI				AML	AML	
	comp=N,1485µm,1.2s					
ABSI				AML	AML	
	comp=E,2140µm,0.5s					
PIEI	**Pieia**	**1.84**	**139**	AML	AML	
	comp=N,131µm,0.5s					
PIEI				AML	AML	
	comp=E,194µm,0.4s					
PIEI				AML	AML	
	comp=N,131µm,0.5s					
PIEI				AML	AML	
	comp=E,194µm,0.4s					
ATPC	**Poggio Castell**	**1.85**	**141**	AML	AML	
	comp=E,320µm,0.7s					
ATPC				AML	AML	
	comp=E,320µm,0.7s					
ATPC				AML	AML	
	comp=N,236µm,0.6s					
ATPC				AML	AML	
	comp=N,236µm,0.6s					
ATPI	**Pietralunga -**	**1.85**	**143**	AML	AML	
	comp=N,212µm,0.8s					
ATPI				AML	AML	
	comp=E,234µm,1.0s					
ATPI				AML	AML	
	comp=N,212µm,0.8s					
ATPI				AML	AML	
	comp=E,234µm,1.0s					
STAL	**STALIGIAL**	**1.86**	**44**	AML	AML	
	comp=N,978µm,0.2s					
STAL				AML	AML	
	comp=E,588µm,1.1s					
STAL				AML	AML	
	comp=N,978µm,0.2s					
STAL				AML	AML	
	comp=E,745µm,0.3s					
STAL				AML	AML	
	comp=N,818µm,0.3s					
STAL				AML	AML	
	comp=N,818µm,0.3s					
STAL				AML	AML	
	comp=E,745µm,0.3s					
STAL				AML	AML	
	comp=E,588µm,1.1s					
TUE	**Stuetta**	**1.87**	**326**	AML	AML	
	comp=N,543µm,0.7s					
TUE				AML	AML	
	comp=E,388µm,0.4s					
TUE				AML	AML	
	comp=E,388µm,0.4s					
TUE				AML	AML	
	comp=N,543µm,0.7s					
MPAG	**Monte Paganucc**	**1.88**	**133**	AML	AML	
	comp=E,217µm,0.9s					
MPAG				AML	AML	
	comp=E,217µm,0.9s					
MPAG				AML	AML	
	comp=N,342µm,0.6s					
MPAG				AML	AML	
	comp=N,342µm,0.6s					
ATBU	**Serra di Buran**	**1.89**	**140**	AML	AML	
	comp=N,618µm,0.7s					
ATBU				AML	AML	
	comp=E,696µm,0.9s					
ATBU				AML	AML	
	comp=N,618µm,0.7s					
ATBU				AML	AML	
	comp=E,696µm,0.9s					
QLNO	**Quiliano**	**1.90**	**252**	AML	AML	
	comp=N,151µm,0.8s					
QLNO				AML	AML	
	comp=E,133µm,0.6s					
QLNO				AML	AML	
	comp=E,133µm,0.6s					
QLNO				AML	AML	
	comp=N,151µm,0.8s					
ATVO	**AVT- Monte Val**	**1.90**	**144**	AML	AML	
	comp=E,309µm,0.8s					
ATVO				AML	AML	
	comp=E,309µm,0.8s					
ATVO				AML	AML	
	comp=N,315µm,1.2s					
ATVO				AML	AML	
	comp=N,315µm,1.2s					
ATVA	**AVT- Monte Val**	**1.94**	**148**	AML	AML	
	comp=N,111µm,0.7s					
ATVA				AML	AML	
	comp=E,128µm,0.5s					
ATVA				AML	AML	
	comp=N,111µm,0.7s					
ATVA				AML	AML	
	comp=E,128µm,0.5s					
ROSI	**Rosskopf**	**2.03**	**11**	AML	AML	
	comp=E,1245µm,0.6s					
ROSI				AML	AML	
	comp=N,1485µm,0.5s					
ROSI				AML	AML	
	comp=E,1245µm,0.6s					
ROSI				AML	AML	
	comp=N,1485µm,0.5s					
MONC	**Moncucco Torin**	**2.09**	**275**	AML	AML	
	comp=N,530µm,0.5s					
MONC				AML	AML	
	comp=E,424µm,0.5s					
MONC				AML	AML	
	comp=N,530µm,0.5s					
MONC				AML	AML	
	comp=E,424µm,0.5s					
FETA	**Feichten**	**2.09**	**357**	*e*Pn	**Pb**	**01 48 22.9 +0.2**
	comp=E,5.7nm,0.5s					
FETA				*i* Sg	**Sg**	**01 48 52.6 +0.6**
	comp=E,48nm,0.3s					
FETA	**Feichten**	**2.09**	**357**	Pn	**Pb**	**01 48 22.9 +0.2**
	comp=E,5.7nm,0.5s					
FETA				Sg	**Sg**	**01 48 52.6 +0.6**
	comp=E,48nm,0.3s					
ARCI	**Arcidosso**	**2.12**	**168**	AML	AML	
	comp=N,72µm,0.9s					
ARCI				AML	AML	
	comp=E,60µm,0.8s					
ARCI				AML	AML	
	comp=N,72µm,0.9s					
ARCI				AML	AML	
	comp=E,60µm,0.8s					
CASP	**Castiglione de**	**2.14**	**180**	AML	AML	
	comp=N,102µm,0.5s					
CASP				AML	AML	
	comp=E,80µm,0.5s					
CASP				AML	AML	
	comp=E,80µm,0.5s					
CASP				AML	AML	
	comp=N,102µm,0.5s					
ABTA	**Abfaltersbach**	**2.15**	**32**	*e*Pg	**Pg**	**01 48 25.1 -0.9**
	SNR=25					
ABTA	**Abfaltersbach**	**2.15**	**32**	Pg	**Pg**	**01 48 25.1 -0.9**
	SNR=25					
RORO	**Rocca Rossa**	**2.16**	**249**	AML	AML	
	comp=E,94µm,1.2s					
RORO				AML	AML	
	comp=N,109µm,0.7s					
RORO				AML	AML	
	comp=E,94µm,1.2s					
RORO				AML	AML	
	comp=N,109µm,0.7s					
ATCC	**AVT- Casa Cast**	**2.16**	**143**	AML	AML	
	comp=N,330µm,0.7s					
ATCC				AML	AML	
	comp=E,373µm,0.6s					
ATCC				AML	AML	
	comp=E,373µm,0.6s					
ATCC				AML	AML	
	comp=N,330µm,0.7s					
RISI	**Rein**	**2.19**	**22**	AML	AML	
	comp=N,942µm,0.4s					
RISI				AML	AML	
	comp=E,951µm,0.5s					
RISI				AML	AML	
	comp=N,942µm,0.4s					
RISI				AML	AML	
	comp=E,951µm,0.5s					
MGAB	**Montegabbione**	**2.21**	**155**	AML	AML	
	comp=N,166µm,0.7s					
MGAB				AML	AML	
	comp=E,241µm,0.7s					
MGAB				AML	AML	
	comp=N,166µm,0.7s					
MGAB				AML	AML	
	comp=E,241µm,0.7s					
CELB	**S.Piero in Cam**	**2.23**	**192**	AML	AML	
	comp=N,214µm,0.6s					
CELB				AML	AML	
	comp=E,155µm,0.6s					
CELB				AML	AML	
	comp=N,214µm,0.6s					
CELB				AML	AML	
	comp=E,155µm,0.6s					
SNTG	**Esanatoglia**	**2.25**	**138**	AML	AML	
	comp=N,162µm,1.2s					
SNTG				AML	AML	
	comp=E,168µm,0.6s					
SNTG				AML	AML	
	comp=N,162µm,1.2s					
SNTG				AML	AML	
	comp=E,168µm,0.6s					
ASSB	**Assisi San Ben**	**2.29**	**145**	AML	AML	
	comp=N,115µm,0.8s					
ASSB				AML	AML	
	comp=E,134µm,0.5s					
ASSB				AML	AML	
	comp=N,115µm,0.8s					
ASSB				AML	AML	
	comp=E,134µm,0.5s					
SKDS	**Skadanscina**	**2.31**	**73**	*i* Pn	**Pn**	**01 48 21.9 -0.6**
SKDS				*i* Sn	**Sn**	**01 48 49.1 -1.8**
	comp=Z,38nm,0.3s					
SKDS	**Skadanscina**	**2.31**	**73**	*i* Pn	**Pn**	**01 48 21.9 -0.6**
SKDS				*i* Sn	**Sn**	**01 48 49.1 -1.8**
	comp=Z,38nm,0.3s					
WTTA	**Wattenberg**	**2.40**	**13**	*e*Pn	**Pb**	**01 48 27.7 -0.1**
	comp=Z,6.6nm,0.2s,SNR=14					
WTTA				*i* Sg	**Sg**	**01 49 00.6 -1.1**
	comp=Z,75nm,0.4s					
WTTA	**Wattenberg**	**2.40**	**13**	Pg	**Pb**	**01 48 26.6 -1.2**
WTTA	**Wattenberg**	**2.40**	**13**	Pn	**Pb**	**01 48 27.7 -0.1**
	comp=Z,6.6nm,0.2s,SNR=14					
WTTA				Sg	**Sg**	**01 49 00.6 -1.1**
	comp=Z,75nm,0.4s					
MOTA	**Moosalm**	**2.42**	**4**	*e*Pn	**Pb**	**01 48 26.3 -1.9**
	comp=Z,23nm,0.4s,SNR=26					
MOTA				*i* Sg	**Sg**	**01 49 02.0 -0.5**
	comp=Z,31nm,0.3s					
MOTA	**Moosalm**	**2.42**	**4**	Pn	**Pb**	**01 48 26.3 -1.9**
	comp=Z,23nm,0.4s,SNR=26					
MOTA				Sg	**Sg**	**01 49 02.0 -0.5**
	comp=Z,31nm,0.3s					
JAVS	**Javornik**	**2.45**	**66**	*i* Pn	**Pn**	**01 48 24.3 -0.3**
JAVS				*i* Sn	**Sn**	**01 48 54.1 -0.3**
	comp=Z,36nm,0.4s					
JAVS	**Javornik**	**2.45**	**66**	*i* Pn	**Pn**	**01 48 24.3 -0.3**
JAVS				*i* Sn	**Sn**	**01 48 54.1 -0.3**
	comp=Z,36nm,0.4s					
DAVA	**Damuels**	**2.45**	**344**	*e*Pn	**Pb**	**01 48 28.0 -0.9**
	SNR=9.5					
DAVA				*i* Sn	**Sb**	**01 49 00.8 +1.7**
	comp=Z,42nm,0.5s					
DAVA	**Damuels**	**2.45**	**344**	Pn	**Pb**	**01 48 28.0 -0.9**
	SNR=9.5					
FDMO	**Fiordimonte**	**2.48**	**139**	AML	AML	
	comp=E,106µm,0.6s					
FDMO				AML	AML	
	comp=N,110µm,0.5s					
FDMO				AML	AML	
	comp=E,106µm,0.6s					
FDMO				AML	AML	
	comp=N,110µm,0.5s					
SAOF	**Saorge**	**2.55**	**249**	AML	AML	
	comp=N,168µm,1.3s					
SAOF				AML	AML	
	comp=E,171µm,1.0s					
SAOF				AML	AML	
	comp=N,168µm,1.3s					
SAOF				AML	AML	
	comp=E,171µm,1.0s					
RETA	**Reutte**	**2.56**	**358**	*e*Pn	**Pb**	**01 48 29.3 -1.3**
	comp=E,4.0nm,0.2s,SNR=13					
RETA	**Reutte**	**2.56**	**358**	Pn	**Pb**	**01 48 29.3 -1.3**
	comp=E,4.0nm,0.2s,SNR=13					
MYKA	**Terra Mystica**	**2.58**	**48**	*e*Pg	**Pg**	**01 48 33.4 -0.8**
	comp=E,7.4nm,0.3s,SNR=16					
MYKA				*i* Sg	**Sg**	**01 49 11.1 +3.4**
	comp=E,26nm,0.3s					
MYKA	**Terra Mystica**	**2.58**	**48**	Pg	**Pg**	**01 48 33.4 -0.8**
	comp=E,7.4nm,0.3s,SNR=16					
MYKA				Sg	**Sg**	**01 49 11.1 +3.4**
	comp=E,26nm,0.3s					
RIY	**Rijeka**	**2.59**	**80**	*e*Pn	**Pn**	**01 48 26.1 -0.3**
CEY	**Cerknica**	**2.64**	**71**	*e*Pn	**Pn**	**01 48 26.8 -0.3**
CEY	**Cerknica**	**2.64**	**71**	*e*Pn	**Pn**	**01 48 26.8 -0.3**
NRCA	**Norcia**	**2.65**	**141**	AML	AML	
	comp=E,109µm,0.6s					
NRCA				AML	AML	
	comp=E,109µm,0.6s					
NRCA				AML	AML	
	comp=N,126µm,0.7s					
NRCA				AML	AML	
	comp=N,126µm,0.7s					
SBF	**Sospel**	**2.68**	**248**	*e*Pn	**Pn**	**01 48 29.8 +2.1**
SBF				*e*Sn	**Sn**	**01 49 00.3 +0.3**
	comp=N,14nm,0.2s					
SBF	**Sospel**	**2.68**	**248**	*e*Pn	**Pn**	**01 48 29.8 +2.1**
SBF				*e*Sn	**Sn**	**01 49 00.3 +0.3**
	comp=N,6.9nm,0.2s					
PGF	**Pioggiola**	**2.74**	**210**	*e*Pn	**Pn**	**01 48 29.2 +0.7**
PGF				*e*Sn	**Sn**	**01 49 00.7 -0.8**
	comp=N,13nm,0.3s					
PGF	**Pioggiola**	**2.74**	**210**	*e*Pn	**Pn**	**01 48 29.2 +0.7**
KBA	**Koelnbreinsper**	**2.76**	**38**	*e*Pg	**Pb**	**01 48 35.5 +1.5**
	comp=N,26nm,0.4s,SNR=28					
KBA	**Koelnbreinsper**	**2.76**	**38**	Pg	**Pb**	**01 48 35.5 +1.5**
	comp=N,26nm,0.4s,SNR=28					
LJU	**Ljubljana**	**2.81**	**65**	*e*Pn	**Pn**	**01 48 29.7 +0.3**
LJU	**Ljubljana**	**2.81**	**65**	*e*Pn	**Pn**	**01 48 29.7 +0.3**
NVLJ	**Novalja**	**2.88**	**96**	*e*Pn	**Pn**	**01 48 30.3 0.0**
NVLJ				Sn	**Sn**	**01 49 02.5 -2.3**
MBDF	**Montbardon**	**2.92**	**267**	*e*Pn	**Pn**	**01 48 30.4 -0.7**
MBDF				*e*Sn	**Sn**	**01 49 07.4 +1.3**
	comp=N,24nm,0.5s					
MBDF	**Montbardon**	**2.92**	**267**	*e*Pn	**Pn**	**01 48 30.4 -0.7**
MBDF				*e*Sn	**Sn**	**01 49 07.4 +1.3**
	comp=N,12nm,0.5s					
LPG	**La Plagne**	**2.96**	**282**	*e*Pn	**Pn**	**01 48 32.9 +1.1**
LPG				*e*Sn	**Sn**	**01 49 08.2 +0.9**
	comp=N,4.0nm,0.3s					
LPG	**La Plagne**	**2.96**	**282**	*e*Pn	**Pn**	**01 48 32.9 +1.1**
LPG				*e*Sn	**Sn**	**01 49 08.2 +0.9**
	comp=N,2.0nm,0.3s					
LPL	**La Plagne**	**2.98**	**283**	*e*Pn	**Pb**	**01 48 35.7 -2.1**
LPL				*e*Sn	**Sn**	**01 49 08.9 +1.3**
	comp=N,13nm,0.4s					
LPL	**La Plagne**	**2.98**	**283**	*e*Pn	**Pb**	**01 48 35.7 -2.1**
LPL				*e*Sn	**Sn**	**01 49 08.9 +1.3**
	comp=N,6.3nm,0.4s					
OBKA	**Obir**	**3.02**	**57**	*e*Pg	**Pg**	**01 48 41.9 -0.8**
	comp=N,12nm,0.3s,SNR=7.8					
OBKA				*i* Sg	**Sg**	**01 49 24.3 +2.4**
	comp=N,62nm,0.6s					
OBKA	**Obir**	**3.02**	**57**	Pg	**Pg**	**01 48 41.9 -0.8**
	comp=N,12nm,0.3s,SNR=7.8					
OBKA				Sg	**Sg**	**01 49 24.3 +2.4**
	comp=N,62nm,0.6s					
CALF	**Calern**	**3.06**	**249**	P	**Pn**	**01 48 34.8 +1.8**
CALF	**Calern**	**3.06**	**249**	P	**Pn**	**01 48 34.8 +1.8**
AQU	**L'Aquila**	**3.17**	**144**	*e*Pn	**Pn**	**01 48 36.0 +1.7**
OZLJ	**Ozalj**	**3.32**	**76**	*e*Pn	**Pn**	**01 48 36.5 +0.1**
OZLJ				Sn	**Sn**	**01 49 14.4 -1.3**
OZLJ	**Ozalj**	**3.32**	**76**	*e*Pn	**Pn**	**01 48 36.5 +0.1**
OZLJ				Sn	**Sn**	**01 49 14.4 -1.3**
FRF	**La Foret Royal**	**3.33**	**247**	*e*Pn	**Pn**	**01 48 37.7 +1.2**
FRF				*e*Sn	**Sn**	**01 49 16.1 +0.2**
	comp=N,6.5nm,0.2s					
FRF	**La Foret Royal**	**3.33**	**247**	*e*Pn	**Pn**	**01 48 37.7 +1.2**
FRF				*e*Sn	**Sn**	**01 49 16.1 +0.2**
	comp=N,3.2nm,0.2s					
CRES	**Cresnjev**	**3.36**	**73⇓**	*i* Pn	**Pn**	**01 48 37.0 +0.1**
UDBI	**Udbina**	**3.52**	**95**	*e*Pn	**Pn**	**01 48 40.3 +1.1**
UDBI				Sn	**Sn**	**01 49 17.0 -3.6**
UDBI	**Udbina**	**3.52**	**95**	*e*Pn	**Pn**	**01 48 40.2 +1.1**
UDBI				Sn	**Sn**	**01 49 17.0 -3.6**
LMR	**La Mourre**	**3.52**	**245**	*e*Pn	**Pn**	**01 48 40.2 +1.1**
LMR				*e*Sn	**Sn**	**01 49 20.2 -0.4**
	comp=N,19nm,0.3s					
LMR	**La Mourre**	**3.52**	**245**	*e*Pn	**Pn**	**01 48 40.2 +1.1**
ORIF	**Oris-en-Rattie**	**3.54**	**272**	*e*Pn	**Pn**	**01 48 41.4 +1.9**
ORIF				*e*Sn	**Sn**	**01 49 22.0 +0.7**
	comp=N,7.8nm,0.3s					
ORIF	**Oris-en-Rattie**	**3.54**	**272**	P	**Pn**	**01 48 41.1 +1.6**
ORIF	**Oris-en-Rattie**	**3.54**	**272**	*e*Pn	**Pn**	**01 48 41.4 +1.9**
ORIF				*e*Sn	**Sn**	**01 49 22.0 +0.7**
	comp=N,3.9nm,0.3s					
KIZ	**Kirchzarten**	**3.65**	**327**	P	**Pn**	**01 48 41.8 +0.9**
KIZ	**Kirchzarten**	**3.65**	**327**	P	**Pn**	**01 48 41.8 +0.9**
LOMF	**Lomont**	**3.71**	**312**	P	**Pn**	**01 48 42.7 +0.9**
LOMF	**Lomont**	**3.71**	**312**	P	**Pn**	**01 48 42.7 +0.9**
CHMF	**Charmoille**	**3.74**	**310**	P	**Pn**	**01 48 43.9 +1.7**
CHMF	**Charmoille**	**3.74**	**310**	P	**Pn**	**01 48 43.9 +1.7**
CABF	**La Chapelle**	**3.74**	**298**	*e*Pn	**Pn**	**01 48 44.1 +1.8**
CABF	**La Chapelle**	**3.74**	**298**	*e*Pn	**Pn**	**01 48 44.1 +1.8**
OG35	**Corcelles**	**3.89**	**289**	P	**Pn**	**01 48 45.9 +1.7**
OG35	**Corcelles**	**3.89**	**289**	P	**Pn**	**01 48 45.9 +1.7**
MOF	**Molkenrain**	**3.90**	**320**	P	**Pn**	**01 48 45.5 +1.0**
MOF	**Molkenrain**	**3.90**	**320**	P	**Pn**	**01 48 45.5 +1.0**
SMRF	**Simiane la Rot**	**3.91**	**258**	*e*Pn	**Pn**	**01 48 46.3 +1.8**
SMRF				*e*Sn	**Sn**	**01 49 30.4 +0.1**
	comp=N,5.7nm,0.5s					
SMRF	**Simiane la Rot**	**3.91**	**258**	*e*Pn	**Pn**	**01 48 46.3 +1.8**
SMRF				*e*Sn	**Sn**	**01 49 30.4 +0.1**
	comp=N,2.8nm,0.5s					
ARSA	**Arzberg**	**3.99**	**53**	*e*Pn	**Pn**	**01 48 46.7 +1.1**
ARSA	**Arzberg**	**3.99**	**53**	*e*Pn	**Pn**	**01 48 46.7 +1.1**
HINF	**Hinteralfeld**	**4.00**	**318**	*e*Pn	**Pn**	**01 48 46.7 +0.8**
HINF				*e*Sn	**Sn**	**01 49 31.9 -0.8**
	comp=N,15nm,0.3s					
HINF	**Hinteralfeld**	**4.00**	**318**	*e*Pn	**Pn**	**01 48 46.7 +0.8**
HINF				*e*Sn	**Sn**	**01 49 31.9 -0.8**
	comp=N,7.5nm,0.3s					
OPP	**Oppenau**	**4.01**	**334**	P	**Pn**	**01 48 47.4 +1.4**
OPP	**Oppenau**	**4.01**	**334**	P	**Pn**	**01 48 47.4 +1.4**
ECH	**Echery**	**4.16**	**323**	P	**Pn**	**01 48 49.0 +0.9**
ECH	**Echery**	**4.16**	**323**	P	**Pn**	**01 48 48.0 0.0**
WLS	**Welschbruch**	**4.24**	**326**	P	**Pn**	**01 48 50.2 +1.1**
WLS	**Welschbruch**	**4.24**	**326**	P	**Pn**	**01 48 50.2 +1.1**
CDF	**Champ du Feu**	**4.27**	**326**	*e*Pn	**Pn**	**01 48 50.6 +1.1**
CDF	**Champ du Feu**	**4.27**	**326**	*e*Pn	**Pn**	**01 48 50.6 +1.1**
HAU	**Haudompre**	**4.38**	**316**	*e*Pn	**Pn**	**01 48 52.0 +1.0**
HAU				*e*Sn	**Sn**	**01 49 42.6 +0.7**
	comp=N,45nm,0.4s					
HAU	**Haudompre**	**4.38**	**316**	*e*Pn	**Pn**	**01 48 52.0 +1.0**
HAU				*e*Sn	**Sn**	**01 49 42.6 +0.7**
	comp=N,22nm,0.4s					
VIVF	**Saint-Julien-l**	**4.40**	**271**	*e*Pn	**Pn**	**01 48 52.1 +0.8**
VIVF				*e*Sn	**Sn**	**01 49 42.1 -0.3**
	comp=N,1.2nm,0.2s					
VIVF	**Saint-Julien-l**	**4.40**	**271**	*e*Pn	**Pn**	**01 48 52.1 +0.8**
VIVF				*e*Sn	**Sn**	**01 49 42.1 -0.3**
	comp=N,0.6nm,0.2s					
SUBF	**Surbourg**	**4.49**	**334**	P	**Pn**	**01 48 54.2 +1.8**
SUBF	**Surbourg**	**4.49**	**334**	P	**Pn**	**01 48 54.2 +1.8**
BLY	**Banja Luka**	**4.50**	**90**	*e*Pn	**Pn**	**01 48 53.0 +0.4**

BLY				*e*Sn		**Sn**	**01 49 44.2**	**-0.6**
BLY	**Banja Luka**	**4.50**	**90**	*e*Pn		**Pn**	**01 48 53.0**	**+0.4**
KHC	**Kasperske Hory**	**4.59**	**23**	*e*PN		**Pn**	**01 48 54.7**	**+0.8**
KHC				*ex*		x	01 49 13.0	
KHC				*e*SN		**Sn**	**01 49 47.0**	**-0.2**
KHC				*e*SG		**Sg**	**01 50 11.3**	**-0.8**
	comp=N,24nm,0.7s							
KHC	**Kasperske Hory**	**4.59**	**23**	Pn		**Pn**	**01 48 54.7**	**+0.8**
KHC				Sn		**Sn**	**01 49 47.0**	**-0.2**
KHC				Sg		**Sg**	**01 50 11.3**	**-0.8**
	comp=N,24nm,0.7s							
THEF	**They Montfort**	**4.71**	**316**	P		**Pn**	**01 48 56.8**	**+1.3**
THEF	**They Montfort**	**4.71**	**316**	P		**Pn**	**01 48 56.8**	**+1.3**
LASF	**Ste Croix**	**5.08**	**263**	*e*Pn		**Pn**	**01 49 00.9**	**+0.2**
LASF				*e*Sn		**Sn**	**01 49 58.7**	**-0.6**
	comp=N,2.3nm,0.3s							
LASF	**Ste Croix**	**5.08**	**263**	*e*Pn		**Pn**	**01 49 00.9**	**+0.2**
LASF				*e*Sn		**Sn**	**01 49 58.7**	**-0.6**
	comp=N,1.1nm,0.3s							
SFTF	**Sexfontaines**	**5.18**	**311**	*e*Sn		**Sn**	**01 50 00.2**	**-1.5**
	comp=N,2.3nm,0.2s							
SFTF	**Sexfontaines**	**5.18**	**311**	*e*Sn		**Sn**	**01 50 00.2**	**-1.5**
	comp=N,1.1nm,0.2s							
SMF	**Signal de Mont**	**5.20**	**292**	*e*Pn		**Pn**	**01 49 03.6**	**+1.3**
SMF				*e*Sn		**Sn**	**01 50 01.0**	**-1.2**
	comp=N,25nm,0.5s							
SMF	**Signal de Mont**	**5.20**	**292**	*e*Pn		**Pn**	**01 49 03.6**	**+1.3**
SMF				*e*Sn		**Sn**	**01 50 01.0**	**-1.2**
	comp=N,12nm,0.5s							
STON	**Ston**	**5.35**	**110**	*e*Pn		**Pn**	**01 49 03.9**	**-0.4**
STON				*e*Sn		**Sn**	**01 50 04.5**	**-1.2**
STON	**Ston**	**5.35**	**110**	*e*Pn		**Pn**	**01 49 03.2**	**-1.1**
STON				Sn		**Sn**	**01 50 01.4**	**-4.3**
STON	**Ston**	**5.35**	**110**	*e*Pn		**Pn**	**01 49 03.9**	**-0.4**
STON				*e*Sn		**Sn**	**01 50 04.5**	**-1.2**
LOR	**Lormes**	**5.40**	**298**	*e*Pn		**Pn**	**01 49 06.4**	**+1.3**
	baz=119							
LOR				*e*Sn		**Sn**	**01 50 05.8**	**-1.3**
	comp=N,6.0nm,0.3s							
LOR	**Lormes**	**5.40**	**298**	P		**Pn**	**01 49 06.8**	**+1.8**
LOR	**Lormes**	**5.40**	**298**	*e*Pn		**Pn**	**01 49 06.4**	**+1.3**
NKC	**Novy Kostel**	**5.41**	**11**	*e*PN		**Pn**	**01 49 05.7**	**+0.5**
NKC				*e*PG		**Pg**	**01 49 29.9**	**+1.6**
NKC				*e*SN		**Sn**	**01 50 05.3**	**-2.0**
NKC				*ex*		x	01 50 17.4	
NKC				*e*SG		**Sg**	**01 50 35.5**	**-2.9**
	comp=N,16nm,0.7s							
ABH	**Alteburg**	**5.44**	**337**	P		**Pn**	**01 49 07.8**	**+2.2**
ABH	**Alteburg**	**5.44**	**337**	P		**Pn**	**01 49 07.8**	**+2.2**
SSF	**Saint Saulge**	**5.55**	**295**	*e*Pn		**Pn**	**01 49 08.2**	**+1.1**
SSF				*e*Sn		**Sn**	**01 50 10.1**	**-0.7**
	comp=N,2.0nm,0.3s							
SSF	**Saint Saulge**	**5.55**	**295**	*e*Pn		**Pn**	**01 49 08.2**	**+1.1**
SSF				*e*Sn		**Sn**	**01 50 10.1**	**-0.7**
	comp=N,1.0nm,0.3s							
AVF	**Avril sur Loir**	**5.57**	**292**	*e*Pn		**Pn**	**01 49 08.2**	**+0.9**
AVF				*e*Sn		**Sn**	**01 50 10.5**	**-0.6**
	comp=N,2.9nm,0.4s							
AVF	**Avril sur Loir**	**5.57**	**292**	*e*Pn		**Pn**	**01 49 08.2**	**+0.9**
AVF				*e*Sn		**Sn**	**01 50 10.5**	**-0.6**
	comp=N,1.5nm,0.4s							
MODS	**Modra-Piesok**	**5.60**	**50**	*e*PG		**Pg**	**01 49 28.4**	**-3.5**
KRUC	**Moravsky**	**5.60**	**40**	*e*PN		**Pn**	**01 49 08.0**	**+0.3**
KRUC				*e*SG		**Sg**	**01 50 43.8**	**-0.7**
PRU	**Pruhonice**	**5.64**	**25**	*e*PN		**Pn**	**01 49 09.3**	**+1.0**
PRU				*e*PG		**Pg**	**01 49 35.6**	**+2.9**
PRU				*e*SN		**Sn**	**01 50 09.4**	**-3.5**
PRU				*e*SG		**Sg**	**01 50 44.8**	**-0.9**
	comp=N,12nm,0.8s							
PRU	**Pruhonice**	**5.64**	**25**	Pn		**Pn**	**01 49 09.3**	**+1.0**
PRU				Sg		**Sg**	**01 50 44.8**	**-0.9**
	comp=N,12nm,0.8s							
GOPC	**GO Pecny, Ondr**	**5.65**	**27**	*e*PG		**Pg**	**01 49 30.1**	**-2.8**
GOPC				*e*SN		**Sn**	**01 50 09.3**	**-3.9**
GOPC				*e*SG		**Sg**	**01 50 44.6**	**-1.4**
	comp=N,31nm,1.2s							
BGF	**Bois d'Agland**	**5.84**	**289**	*e*Pn		**Pn**	**01 49 12.1**	**+1.0**
BGF				*e*Sn		**Sn**	**01 50 16.4**	**-1.5**
	comp=N,34nm,0.5s							
BGF	**Bois d'Agland**	**5.84**	**289**	*e*Pn		**Pn**	**01 49 12.1**	**+1.0**
HAPS	**Han Pijesak,BI**	**5.84**	**95**	*e*Pn		**Pn**	**01 49 11.0**	**-0.2**
HAPS	**Han Pijesak,BI**	**5.84**	**95**	*e*Pn		**Pn**	**01 49 11.0**	**-0.2**
TREB	**Trebinje**	**5.85**	**110**	*e*Pn		**Pn**	**01 49 11.1**	**-0.1**
VRAC	**Vranov**	**5.87**	**40**	*e*Sg		**Sg**	**01 50 51.2**	**-1.8**
VRAC	**Vranov**	**5.87**	**40**	*e*SG		**Sg**	**01 50 51.2**	**-1.8**
BRY	**Bratogost**	**5.90**	**107**	*e*Pn		**Pn**	**01 49 12.5**	**+0.5**
UPM	**Unac-Piva**	**6.04**	**104**	*e*Pn		**Pn**	**01 49 15.7**	**+1.7**
HCY	**Herceg Novi**	**6.06**	**111**	*e*Pn		**Pn**	**01 49 14.3**	**+0.2**
PVCC	**Panska Ves**	**6.13**	**23**	*e*SG		**Sg**	**01 50 59.9**	**-1.5**
	comp=N,24nm,1.0s							
PVCC	**Panska Ves**	**6.13**	**23**	Sg		**Sg**	**01 50 59.9**	**-1.5**
	comp=N,24nm,1.0s							
HYF	**Humbligny**	**6.18**	**295**	*e*Pn		**Pn**	**01 49 16.8**	**+1.1**
HYF				*e*Sn		**Sn**	**01 50 24.8**	**-1.4**
HYF	**Humbligny**	**6.18**	**295**	*e*Pn		**Pn**	**01 49 16.8**	**+1.1**
TEKS	**Tekeris**	**6.18**	**90**	*e*Pn		**Pn**	**01 49 16.0**	**+0.2**
TEKS	**Tekeris**	**6.18**	**90**	*e*Pn		**Pn**	**01 49 16.0**	**+0.2**
BBLS	**Lazići**	**6.21**	**97**	*e*Pn		**Pn**	**01 49 16.4**	**+0.2**
BBLS	**Lazići**	**6.21**	**97**	*e*Pn		**Pn**	**01 49 16.4**	**+0.2**
TCF	**Toulx Ste Croi**	**6.22**	**286**	*e*Sn		**Sn**	**01 50 27.3**	**0.0**
	comp=N,3.7nm,0.3s							
TCF	**Toulx Ste Croi**	**6.22**	**286**	*e*Sn		**Sn**	**01 50 27.3**	**0.0**
	comp=N,1.9nm,0.3s							
CAF	**Calviac**	**6.25**	**273**	*e*Pn		**Pn**	**01 49 17.9**	**+1.2**
CAF	**Calviac**	**6.25**	**273**	*e*Pn		**Pn**	**01 49 17.9**	**+1.2**
BRG	**Berggiesshubel**	**6.30**	**18**	PN		**Pn**	**01 49 18.1**	**+0.9**
BRG				PG		**Pg**	**01 49 44.0**	**-1.2**
BRG				SN		**Sn**	**01 50 24.0**	**-5.0**
BRG				SG		**Sg**	**01 51 06.7**	**0.0**
	comp=N,12nm,1.0s							
FRGS	**Fruska Gora**	**6.34**	**85**	*e*Pn		**Pn**	**01 49 18.5**	**+0.6**
CLL	**Collm**	**6.54**	**12**	*e*Pn		**Pn**	**01 49 21.0**	**+0.4**
CLL				*e*			01 49 25.0	
CLL				*e*Pg		**Pg**	**01 49 53.0**	**+3.1**
CLL				*e*			01 50 35.0	
CLL				*i* Sg		**Sg**	**01 51 12.6**	**-1.9**
	comp=Z,14nm,0.7s							
CLL				LmV			02 19 00.0	
	comp=Z,100nm,19.1s							
DPC	**Dobruska-Polom**	**6.56**	**32**	*e*PN		**Pn**	**01 49 22.1**	**+1.2**
DPC				*e*SN		**Sn**	**01 50 32.2**	**-3.3**
DPC				*ex*		x	01 50 43.8	
DPC				*e*SG		**Sg**	**01 51 15.0**	**0.0**
	comp=Z,8.4nm,0.8s							
DPC	**Dobruska-Polom**	**6.56**	**32**	Pn		**Pn**	**01 49 22.1**	**+1.2**
DPC				Sg		**Sg**	**01 51 15.0**	**0.0**
	comp=Z,8.4nm,0.8s							
PDG	**Podgorica**	**6.58**	**109**	*e*Pn		**Pn**	**01 49 22.0**	**+0.9**
PDG	**Podgorica**	**6.58**	**109**	*e*Pn		**Pn**	**01 49 22.0**	**+0.9**
DRME	**Dracevica, Mon**	**6.64**	**111**	*e*Pn		**Pn**	**01 49 22.2**	**+0.2**
MORC	**Moravsky Berou**	**6.64**	**41**	*e*SG		**Sg**	**01 51 24.7**	**+7.1**
FNEB	**N^bias**	**6.64**	**255**	P		**Pn**	**01 49 24.1**	**+2.0**
FNEB	**N^bias**	**6.64**	**255**	P		**Pn**	**01 49 24.1**	**+2.0**
SJES	**Sjenica**	**6.77**	**101**	*e*Pn		**Pn**	**01 49 24.1**	**+0.2**
IVAS	**Ivanjica**	**6.81**	**98**	*e*Pn		**Pn**	**01 49 24.8**	**+0.4**
IVAS	**Ivanjica**	**6.81**	**98**	*e*Pn		**Pn**	**01 49 24.8**	**+0.4**
GRUS	**Gruza**	**7.13**	**95**	*e*Pn		**Pn**	**01 49 28.7**	**-0.1**
GRUS	**Gruza**	**7.13**	**95**	*e*Pn		**Pn**	**01 49 28.7**	**-0.1**
TIR	**Tirane**	**7.49**	**115**	*e*Pn		**Pn**	**01 49 33.2**	**-0.5**
TIR	**Tirane**	**7.49**	**115**	*e*Pn		**Pn**	**01 49 33.2**	**-0.5**
SELS	**Selova**	**7.58**	**99**	*e*Pn		**Pn**	**01 49 33.7**	**-1.2**
SELS	**Selova**	**7.58**	**99**	*e*Pn		**Pn**	**01 49 33.7**	**-1.2**
ZAPS	**Zavoj**	**8.63**	**97**	*e*Pn		**Pn**	**01 49 49.5**	**+0.1**
STIP	**Stip**	**8.87**	**107**	*i* Pn		**Pn**	**01 49 53.4**	**+0.9**

IDC 07 02:06:53.7±16.0, 18°.98S×173°.03W, h0km, mb4.1/5, mb1 4.3/5, mb1mx3.8/48, mbtmp4.1/5, Error ellipse: s-maj=313.0km s-min=153.4km az=80.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.19**	**14**	Sn	Sn	02 09 08.8	-4.4
	8.2nm,0.3s,baz=168,slow=4.5,SNR=5.8						
CTA	**Charters Tower**	**38.32**	**261**	P	P	02 14 17.0	+0.5
	1.4nm,0.3s,baz=75,slow=8.8,SNR=3.5						
STKA	**Stephens Creek**	**42.66**	**243**	P	P	02 14 52.5	+0.2
	1.2nm,0.4s,baz=73,slow=11,SNR=4.0						
ASAR	**Alice Springs**	**49.43**	**255**	P	P	02 15 45.1	-0.7
	1.4nm,0.5s,baz=97,slow=7.3,SNR=19						
WRA	**Warramunga Arr**	**49.46**	**260**	P	P	02 15 45.3	-0.8
	0.8nm,0.3s,baz=97,slow=7.2,SNR=41						
FITZ	**Fitzroy Crossi**	**57.88**	**260**	P	P	02 16 48.4	+0.5
	1.9nm,1.0s,baz=76,slow=4.2,SNR=2.5						

NIED ***07*** *02:21:00, 36°.80N×141°.20E, h62km, Mw3.8 Best double couple: M₀5.99000×10¹⁴ NP1:φ₀212.00000°, δ26.00000°, λ90.00000°. NP2:φ₀32.00000°, δ64.00000°, λ90.00000°.*
JMA ***07*** *02:21:08.5±0.1, 36°.81N×141°.17E, h44km±1km, M3.9*
JMA Felt I J1.
IDC ***07*** *02:21:10.9±3.2, 36°.69N×141°.10E, h72km±29km, mb3.2/5, mb1 3.5/7, mb1mx3.2/66, mbtmp3.6/7, MS2.7/3, Ms1 2.7/3, ms1mx2.4/28, Error ellipse: s-maj=29.0km s-min=12.4km az=59.0*
ISC 07 02:21:04.9±1.7, 36°.79N±0°.04×141°.20E±0°.07, h14km±10km, n18, σ1°.40/26, mb3.5/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.45**	**314**	P	**Pn**	**02 21 18.4**	**+1.5**
ONAJ				S	**Sn**	**02 21 25.1**	**+0.3**
JHO	**Hitachi**	**0.54**	**251**	P	**Pn**	**02 21 19.6**	**+1.5**
JHO				S	**Sn**	**02 21 27.4**	**+0.4**
JFK	**Kawauchi**	**0.63**	**336**	P	**Pn**	**02 21 20.6**	**+1.2**
JFK				S	**Sn**	**02 21 28.9**	**-0.4**
JYT	**Yasato**	**0.99**	**236**	P	**Pn**	**02 21 26.0**	**+1.7**
JYT				S	**Sn**	**02 21 38.3**	**+0.3**
JFT	**Otama**	**1.00**	**317**	P	**Pn**	**02 21 26.6**	**+2.1**
JFT				S	**Sn**	**02 21 39.3**	**+0.9**
JMM	**Marumori**	**1.12**	**343**	P	**Pg**	**02 21 27.3**	**+0.8**
JMM				S	**Sg**	**02 21 41.2**	**+0.1**
JFY	**Yanaizu**	**1.34**	**298**	P	**Pg**	**02 21 30.9**	**+0.1**
JFY				*e*S	**Sn**	**02 21 47.6**	**+0.7**
JAG	**Ashikaga**	**1.45**	**256**	P	**Pg**	**02 21 32.3**	**-0.5**
MJAR	**Matsushiro Arr**	**2.42**	**265**	P	**Pb**	**02 21 46.6**	**-1.6**
	12nm,0.3s,baz=90,slow=15,SNR=64						
MJAR				S	**Sn**	**02 22 15.0**	**+1.6**
	11nm,0.3s,baz=82,slow=14,SNR=11						
MJAR				LR	LR	02 23 01.4	
	comp=Z,153nm,21.3s,baz=105,slow=48						
MAT	**Matsushiro**	**2.42**	**265**	P	**Pb**	**02 21 46.9**	**-1.3**
MAT				S	**Sn**	**02 22 15.6**	**+2.2**
JHJ	**Hachijo jima 2**	**3.84**	**198**	P	**Pn**	**02 22 06.5**	**+2.9**
	15nm,0.3s,baz=253,slow=20,SNR=2.8						
JHJ				S	**Sn**	**02 22 48.7**	**+0.1**
	22nm,0.3s,baz=255,slow=20,SNR=3.2						
KSRS	**Korea Array**	**10.62**	**278**	LR	LR	02 27 05.6	
	comp=Z,29nm,18.9s,baz=85,slow=34						
JOW	**Kunigami**	**14.80**	**232**	LR	LR	02 29 40.5	
	comp=Z,46nm,21.8s,baz=135,slow=35						
SONM	**Songino Array**	**27.78**	**304**	P	**P**	**02 26 53.7**	**+0.4**
	0.5nm,0.6s,baz=111,slow=7.9,SNR=2.7						
MKAR	**Makanchi Array**	**44.10**	**302**	P	**P**	**02 29 12.2**	**-0.3**
	0.2nm,0.5s,baz=83,slow=9.6,SNR=3.4						
KURBB	**Kurchatov Arra**	**46.02**	**308**	P	**P**	**02 29 25.3**	**-2.4**
	0.8nm,0.6s,baz=81,slow=7.7,SNR=7.1						
ILAR	**Eielson Array**	**49.79**	**32**	P	**P**	**02 29 56.9**	**+0.2**
	0.4nm,0.9s,baz=270,slow=5.6,SNR=4.5						
WRA	**Warramunga Arr**	**56.80**	**188**	P	**P**	**02 30 47.4**	**-1.3**
	0.5nm,0.5s,baz=5.2,slow=7.3,SNR=6.5						

ISCJB ***07*** *02:33:43.5±0.3, 7°.77S±0°.03×127°.87E±0°.04, h200km, mb4.2/18, Error ellipse: s-maj=5.1km s-min=3.4km az=158.8*
DJA ***07*** *02:33:43.5±0.5, 8°.5S±4°.×12°.8E±°., h186km±15km, M4.7/9, mB5.4/2, mb4.5/6, MLv4.8/9, Mw(mB)4.8/2*
IDC ***07*** *02:33:44.5±2.0, 7°.57S×127°.66E, h172km±18km, mb3.9/14, mb1 3.9/16, mb1mx3.7/50, mbtmp4.4/16, Error ellipse: s-maj=21.1km s-min=10.9km az=77.0*
NEIC ***07*** *02:33:44.1±0.7, 7°.64S×127°.74E, h174km±7km, mb4.5/10, Error ellipse: s-maj=9.4km s-min=6.9km az=57.0*
ISC 07 02:33:44.3±0.5, 7°.87S±0°.04×127°.83E±0°.04, h200km, n61, σ2°.41/69, mb4.2/17, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**3.44**	**92**	P	**Pn**	**02 34 40.1**	**+0.8**
SAUI				S	**Sn**	**02 35 20.8**	**-1.4**
SAUI	**Saumlaki**	**3.44**	**92**	*e*Pn	**Pn**	**02 34 38.5**	**-0.8**
SAUI				*e*Sn	**Sn**	**02 35 19.6**	**-2.6**
BNDI	**Bandanaira**	**3.91**	**32**	P	**Pn**	**02 34 42.9**	**-2.1**
SOEI	**Soe**	**3.99**	**242**	P	**Pn**	**02 34 45.8**	**-0.3**
SOEI	**Soe**	**3.99**	**242**	*e*Pn	**Pn**	**02 34 45.6**	**-0.6**
SOEI				*e*Sn	**Sn**	**02 35 31.4**	**-3.2**
MSAI	**Masohi**	**4.62**	**14**	P	**Pn**	**02 34 50.0**	**-4.0**
BATI	**Baumata**	**4.73**	**240**	P	**Pn**	**02 34 55.1**	**-0.1**
	144nm,0.3s,baz=119,slow=2.1,SNR=74						
BATI				S	**Sn**	**02 35 46.4**	**-4.8**
	68nm,0.3s,baz=18,slow=8.4,SNR=4.4						
BATI	**Baumata**	**4.73**	**240**	P	**Pn**	**02 34 55.2**	**-0.1**
MMRI	**Maumere**	**5.59**	**262**	P	**Pn**	**02 35 04.0**	**-2.3**
	135nm,1.4s						
MTN	**Manton Dam**	**5.92**	**147**	*e*Pn	**Pn**	**02 35 12.5**	**+1.9**
MTN				*e*Sn	**Sn**	**02 36 17.4**	**-1.5**
EDFI	**Ende, Flores**	**6.14**	**261**	P	**Pn**	**02 35 11.8**	**-1.7**
FAKI	**Fak Fak**	**6.59**	**42**	P	**Pn**	**02 35 15.8**	**-3.6**
FAKI	**Fak Fak**	**6.59**	**42**	*e*Pn	**Pn**	**02 35 15.8**	**-3.6**
FAKI				*e*Sn	Sn	02 36 24.6	-10
SIJI	**Sorong**	**7.75**	**26**	P	**Pn**	**02 35 31.2**	**-3.2**
	21nm,0.3s,baz=206,slow=8.9,SNR=19						
SIJI				S	**Sn**	**02 36 56.2**	**-5.7**
	0.6nm,0.3s,baz=323,slow=20,SNR=1.9						
RKPI	**Ransiki, Papua**	**8.94**	**45**	P	**Pn**	**02 35 47.0**	**-2.8**
FITZ	**Fitzroy Crossi**	**10.39**	**192**	P	**Pn**	**02 36 08.0**	**-0.6**
	8.3nm,0.3s,baz=30,slow=11,SNR=66						
FITZ				S	**Sn**	**02 38 02.1**	**-2.7**
	5.2nm,0.3s,baz=319,slow=19,SNR=8.1						
FITZ	**Fitzroy Crossi**	**10.39**	**192**	*e*Pn	**Pn**	**02 36 08.3**	**-0.3**
FITZ				*e*Sn	**Sn**	**02 38 02.1**	**-2.7**
WRAB	**Tennant Creek**	**13.56**	**153**	*e*Pn	**P**	**02 36 51.3**	**-0.1**
WRAB				*e*Sn	**S**	**02 39 16.0**	**-4.1**
WRA	**Warramunga Arr**	**13.56**	**153**	P	**P**	**02 36 50.5**	**-0.9**
	1.3nm,0.3s,baz=321,slow=14,SNR=15						
WRA				S	**S**	**02 39 15.3**	**-4.8**
	3.1nm,0.3s,baz=327,slow=21,SNR=9.7						
WR1	**Warramunga Arr**	**13.56**	**153**	*e*Pn	**P**	**02 36 50.5**	**-0.9**
WR1				*e*Sn	**S**	**02 39 15.3**	**-4.8**
WB2	**Warramunga Arr**	**13.57**	**153**	*e*Pn	**P**	**02 36 49.9**	**-1.5**
WB2				*e*Sn	S	02 39 11.9	-8.4
MBWA	**Marble Bar**	**15.36**	**210**	*e*Pn	**P**	**02 37 12.0**	**+0.8**
	34nm,1.3s						
MBWA				*e*S	**S**	**02 40 00.3**	**-1.3**
COEN	**Coen**	**16.23**	**113**	*e*P	**Pn**	**02 37 25.0**	**+3.4**
	9.9nm,0.8s						
COEN				*e*S	**S**	**02 40 15.6**	**-5.5**
AS31	**Alice Springs**	**16.76**	**160**	*e*P	**Pn**	**02 37 31.4**	**+3.5**
	6.9nm,0.5s						
AS31				*e*S	**S**	**02 40 30.7**	**-0.9**
ASAR	**Alice Springs**	**16.76**	**160**	P	**Pn**	**02 37 31.4**	**+3.5**
	2.5nm,0.3s,baz=338,slow=12,SNR=41						
ASAR				S	**S**	**02 40 30.7**	**-0.9**
	1.6nm,0.3s,baz=329,slow=16,SNR=8.0						
SBUM	**Sibu**	**18.64**	**303**	*e*P	**Pn**	**02 37 49.2**	**-0.8**
	12nm,0.8s						
TGY	**Tagaytay City**	**22.87**	**343**	P	**P**	**02 38 31.8**	**+1.1**
	109nm,0.3s,baz=157,slow=19,SNR=3.7						
BBOO	**Buckleboo**	**25.97**	**164**	*e*P	**P**	**02 39 01.3**	**+2.7**
	20nm,1.2s						
PSI	**Prapat**	**30.72**	**289**	P	**P**	**02 39 41.0**	**-0.1**
	19nm,0.7s,baz=5.5,slow=0.9,SNR=9.3						
PSI	**Prapat**	**30.72**	**289**	*e*P	**P**	**02 39 41.6**	**+0.5**
	24nm,0.8s						
PSI				*e*pP	pP	02 40 10.2	-12
CM31	**Chiang Mai Arr**	**38.68**	**313**	*e*P	**P**	**02 40 49.4**	**+0.4**
CMAR	**Chiang Mai Arr**	**38.68**	**313**	P	**P**	**02 40 49.4**	**+0.4**
	1.6nm,0.5s,baz=140,slow=7.2,SNR=9.0						
KS15	**Wonju Array Si**	**45.07**	**0**	*e*P	**P**	**02 41 41.5**	**+1.1**
KSAR	**Wonju Array Be**	**45.07**	**0**	P	**P**	**02 41 41.5**	**+1.1**
KSRS	**Korea Array**	**45.08**	**0**	P	**P**	**02 41 41.5**	**+1.0**
	1.4nm,0.6s,baz=175,slow=10,SNR=5.2						
SONA0	**Songino Array**	**58.61**	**343**	*e*P	**P**	**02 43 21.0**	**+0.6**
SONM	**Songino Array**	**58.61**	**343**	P	**P**	**02 43 21.0**	**+0.6**
	0.7nm,0.4s,baz=166,slow=6.3,SNR=4.8						
NIL	**Nilore**	**66.17**	**312**	*e*P	**P**	**02 44 11.3**	**+0.6**
	9.1nm,0.4s						
MK32	**Makanchi Array**	**67.79**	**328**	*e*P	**P**	**02 44 21.9**	**+1.3**
MKAR	**Makanchi Array**	**67.79**	**328**	P	**P**	**02 44 21.9**	**+1.3**
	1.9nm,0.5s,baz=122,slow=8.0,SNR=26						
MKAR	**Makanchi Array**	**67.79**	**328**	*e*P	**P**	**02 44 22.1**	**+1.5**
	12nm,0.5s						
ZALV	**Zalesovo Beam**	**71.42**	**335**	P	**P**	**02 44 42.8**	**+0.2**
	1.3nm,0.4s,baz=127,slow=5.2,SNR=7.2						
ZAA1	**Zalesovo Array**	**71.43**	**335**	*e*P	**P**	**02 44 42.8**	**+0.2**
VNDA	**Vanda**	**71.86**	**173**	P	P	02 44 49.6	+4.6
	0.9nm,0.7s,baz=329,slow=6.1,SNR=7.2						
KURBB	**Kurchatov Arra**	**72.14**	**330**	P	**P**	**02 44 48.0**	**+1.0**
	4.6nm,0.6s,baz=135,slow=5.2,SNR=46						
KURK	**Kurchatov**	**72.15**	**330**	*e*P	**P**	**02 44 48.1**	**+1.1**
MAW	**Mawson**	**73.37**	**201**	P	P	02 44 58.5	+4.6
	1.5nm,0.7s,baz=21,slow=6.1,SNR=5.1						
BVAR	**Borovoye Array**	**77.66**	**329**	P	**P**	**02 45 20.2**	**+1.7**
	0.9nm,0.4s,baz=121,slow=6.9,SNR=4.3						
ABKAR	**Akbulak array**	**81.86**	**322**	*e*P	**P**	**02 45 42.4**	**+1.2**
QSPA	**South Pole Qui**	**82.12**	**180**	P	P	02 45 46.7	+4.3
	3.7nm,0.7s,baz=271,slow=1.0,SNR=14						
AKTO	**Aktyubinsk**	**83.45**	**323**	P	**P**	**02 45 50.5**	**+1.2**
	1.5nm,0.4s,baz=114,slow=7.7,SNR=11						
RAYN	**Ar Rayn**	**86.13**	**294**	*e*P	**P**	**02 46 05.1**	**+1.6**
	3.4nm,0.8s						
SNAA	**Sanae**	**94.32**	**194**	P	P	02 46 45.9	+5.2
	0.6nm,0.6s,baz=313,slow=14,SNR=6.2						
SNAA	**Sanae**	**94.32**	**194**	*e*P	P	02 46 45.9	+5.2
	4.6nm,1.5s						
BR101	**Keskin Array S**	**98.18**	**309**	*e*P	Pdif	02 46 58.9	-0.1
BRTR	**Keskin Array B**	**98.18**	**309**	P	Pdif	02 46 58.9	-0.2
	0.4nm,0.8s,baz=97,slow=3.3,SNR=3.1						
TORD	**Torodi Ar. Bea**	**126.86**	**281**	PKP	**PKPdf**	**02 52 27.7**	**+2.4**
	0.9nm,0.7s,baz=27,slow=1.8,SNR=13						
TOA1	**Torodi Ar. Sit**	**126.86**	**281**	*e*PKPdf	**PKPdf**	**02 52 27.7**	**+2.4**
TXAR	**Lajitas Array**	**127.22**	**59**	PKP	**PKPdf**	**02 52 27.9**	**+2.2**
	0.3nm,1.0s,baz=142,slow=4.6,SNR=2.7						
CPUP	**Villa Florida**	**145.64**	**172**	PKPbc	**PKPab**	**02 53 04.0**	**+3.3**
	2.1nm,0.6s,baz=209,slow=2.6,SNR=6.7						
LPAZ	**La Paz**	**151.27**	**147**	PKPbc	**PKPab**	**02 53 20.1**	**-4.2**
	1.3nm,0.4s,baz=26,slow=4.7,SNR=13						
LPAZ				PKPab	PKiKP	02 53 30.4	+14
	4.3nm,0.6s,baz=176,slow=1.8,SNR=16						

MEX 07 02:34:17.7±0.4, 16°.02N×93°.90W, h88km±5km, MD4.0, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.72**	**115**	*e*P	Pn	02 34 32.9	-1.4
PCIG				*e*S	Sn	02 34 45.1	-1.6
TGIG		**1.06**	**44**	*e*P	Pn	02 34 36.7	-1.4
TGIG				*e*S	Sn	02 34 52.0	-1.4
CCIG	**Comitan**	**1.72**	**81**	*e*P	Pn	02 34 46.5	+0.2
CCIG				*e*S	Sn	02 35 06.5	-1.5

CSEM ***07*** *02:55:38.9±0.4, 36°.95N×7°.27W, h2km, ML1.7, Error ellipse: s-maj=6.3km s-min=3.6km az=152.0*
IGIL ***07*** *02:55:40.5, 36°.99N×7°.27W, h6km, ML1.4*
INMG ***07*** *02:55:40.5±1.4, 36°.98N×7°.26W, h9km±5km, ML1.5, Error ellipse: s-maj=4.5km s-min=3.5km az=158.0*
**MDD 07 02:55

EADA	**Adamuz**	**2.47**	**60**	P	Pn	02 56 21.6 -0.1
	comp=N,0.1nm,0.1s,SNR=4.0					
EADA				S	Sb	02 56 55.2 -1.2
	comp=N,0.3nm,0.2s,SNR=4.0					

NIED ***07*** *03:06:00, 38.°00N×144.°20E, h5km, Mw4.7 Best double couple: M0 1.32000×10^16 NP1:φs 53.00000°, δ22.00000°, λ-106.00000°. NP2:φs 251.00000°, δ69.00000°, λ-84.00000°.*

IDC ***07*** *03:06:15.0±0.4, 37.°78N×144.°42E, h0km, mb4.3/35, mb1 4.5/43, mb1mx4.4/68, mbtmp4.4/43, ML4.2/7, MS3.8/39, Ms1 3.8/39, ms1mx3.6/70, Error ellipse: s-maj=12.9km s-min=10.2km az=121.0*

BJI ***07*** *03:06:17.4, 38.°27N×144.°16E, h6km, mb4.7/43, mB4.9/28, Ms4.4/21, Ms7 4.2/20*

ISCJB ***07*** *03:06:17.5±1.0, 38.°07N±0.°03×144.°22E±0.°02, h13km±6km, mb4.7/187, MS4.1/45, Error ellipse: s-maj=4.7km s-min=2.8km az=173.9*

JMA ***07*** *03:06:19.1±0.2, 37.°97N×144.°23E, h46km, M4.8*

JMA Felt I J1.

GCMT ***07*** *03:06:21.1±0.4, 38.°04N×144.°44E, h17km±1km, MW4.9/56, Moment Tensor Solution. s21,c29; s56,c77; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-1.66±.18; Mθθ 1.89±.12; Mφφ-0.23±.12; Mrθ 0.92±.29; Mθφ 1.05±.09; Mφr 0.94±.39; Best double couple: M0 2.41400×10^16 NP1:φs 231.00000°, δ63.00000°, λ-109.00000°. NP2: φs 89.00000°, δ33.00000°, λ-57.00000°. Principal axes: T 2.6650, Plg16.0000°, Azm335.0000°; N -0.5000, Plg17.0000°, Azm240.0000°; P -2.1640, Plg66.0000°, Azm105.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***07*** *03:06:21.1±0.2, 37.°87N×144.°28E, mb4.8/115 Error ellipse: s-maj=5.6km s-min=3.3km az=156.0*

NEIC Recorded [1 JMA] in Fukushima and Miyagi.

MOS ***07*** *03:06:21.0±1.0, 38.°27N×144.°23E, h33km, mb5.0/68, MS4.2/10, Error ellipse: s-maj=6.8km s-min=4.3km az=102.9*

ISC 07 03:06:19.2±0.6**, 37.°98N**±0.°04×**144.°42E**±0.°04**, h23**km±3km**, h23**km**:pP-P, n404**, σ2≥**06**/428**, mb4.8**/198**, MS4.1**/46**, 18C-3D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.42**	**298**	P		**Pn**	**03 06 55.7**	**-1.7**
OFUJ				*e*S		**Sn**	**03 07 22.9**	**-3.4**
JIO	**Ouri**	**2.46**	**282**	P		**Pn**	**03 06 56.1**	**-1.9**
JIO				S		**Sn**	**03 07 23.2**	**-4.2**
MIYJ	**Miyakonagasawa**	**2.58**	**309**	P		**Pn**	**03 06 57.8**	**-1.8**
MIYJ				*e*S		**Sn**	**03 07 26.7**	**-3.6**
JMK	**Ichinoseki**	**2.69**	**292**	P		**Pn**	**03 06 59.6**	**-1.5**
JMK				*e*S		**Sn**	**03 07 29.8**	**-3.2**
JOM	**Ohasama**	**2.86**	**302**	P		**Pn**	**03 07 02.2**	**-1.3**
JOM				*e*S		**Sn**	**03 07 34.9**	**-2.3**
JFT	**Otama**	**3.27**	**263**	P		**Pn**	**03 07 07.6**	**-1.5**
JFT				S		**Sn**	**03 07 43.5**	**-3.8**
JANG	**Nango**	**3.29**	**317**	P		**Pn**	**03 07 07.7**	**-1.6**
JANG				*e*S		**Sn**	**03 07 45.1**	**-2.6**
JYK	**Kaneyama**	**3.32**	**288**	P		**Pn**	**03 07 08.8**	**-1.0**
JYK				*e*S		**Sn**	**03 07 45.4**	**-3.2**
ERM	**Erimo**	**4.14**	**347**	*e*Pn		**Pn**	**03 07 20.4**	**-0.6**
ERM				*e*Sn		**Sn**	**03 08 03.0**	**-5.8**
ERM	**Erimo**	**4.14**	**347**	*ce*P		**Pn**	**03 07 20.2**	**-0.8**
ERM				pmax		pmax		
	comp=Z,97nm,0.8s							
JOT	**Ohata**	**4.28**	**324**	P		**Pn**	**03 07 22.4**	**-0.5**
JOT				*e*S		**Sn**	**03 08 07.5**	**-4.5**
BSO1	**Boso 1**	**4.33**	**221**	P		**Pn**	**03 07 19.9**	**-3.3**
BSO1				*e*S		**Sn**	**03 08 08.2**	**-4.5**
JKB	**Kayabe**	**4.69**	**327**	P		**Pn**	**03 07 27.4**	**-1.1**
JKB				*e*S		**Sn**	**03 08 17.7**	**-4.5**
JCH	**Churui**	**4.70**	**350**	P		**Pn**	**03 07 27.1**	**-1.6**
JCH				*e*S		**Sn**	**03 08 17.4**	**-5.0**
JRY	**Ryogami san**	**4.83**	**248**	P		**Pn**	**03 07 28.1**	**-2.5**
JRY				*e*S		**Sn**	**03 08 19.0**	**-6.9**
JOD2	**Odawara 2**	**5.08**	**239**	P		**Pn**	**03 07 30.7**	**-3.2**
JOD2				*e*S		**Sn**	**03 08 24.5**	**-7.3**
MJAR	**Matsushiro Arr**	**5.16**	**256**	Pn		**Pn**	**03 07 34.3**	**-0.7**
	comp=Z,21nm,0.3s,baz=82,slow=14,SNR=175							
MJAR				Sn		**Sn**	**03 08 31.2**	**-2.6**
	comp=Z,15nm,0.3s,baz=90,slow=27,SNR=5.2							
MJAR				LR		LR	03 10 08.2	
	comp=Z,1μm,18.2s,baz=70,slow=46							
MAJO	**Matsushiro**	**5.16**	**256**	*e*Pn		**Pn**	**03 07 34.1**	**-0.9**
MAJO				*e*Sn		**Sn**	**03 08 31.2**	**-2.7**
MAJO				*e*			03 08 31.4	
MAJO	**Matsushiro**	**5.16**	**256**	*c i*P		**Pn**	**03 07 34.3**	**-0.8**
MAT	**Matsushiro**	**5.16**	**256**	P		**Pn**	**03 07 34.5**	**-0.6**
MAT				S		**Sn**	**03 08 27.7**	**-6.2**
NEM2	**Nemuro 2**	**5.47**	**10**	P		**Pn**	**03 07 36.4**	**-2.9**
NEM2				*e*S		**Sn**	**03 08 34.8**	**-6.6**
JOSM	**Okushiri--Mats**	**5.58**	**319**	P		**Pn**	**03 07 40.3**	**-0.5**
JTKR	**Abashiri--Toko**	**6.00**	**356**	P		**Pn**	**03 07 45.0**	**-1.5**
JTKR				*e*S		**Sn**	**03 08 48.3**	**-6.0**
GRPR	**Tuman**	**6.09**	**9**	*e*P		**Pn**	**03 07 45.0**	**-2.8**
GRPR				*e*S		**Sn**	**03 08 49.4**	**-7.3**
GRPR				pmax		pmax		
	comp=Z,691nm,0.3s							
GRPR				pmax		pmax		
	comp=N,284nm,0.4s							
GRPR				pmax		pmax		
	comp=E,337nm,0.4s							
GRPR				smax		smax		
	comp=N,581nm,0.5s							
GRPR				smax		smax		
	comp=E,2μm,0.4s							
JHR	**Hokuryu**	**6.11**	**341**	P		**Pn**	**03 07 48.9**	**+0.9**
JHR				*e*S		**Sn**	**03 08 54.7**	**-2.4**
JHJ2	**Mitsune**	**6.14**	**219**	*e*Pn		Pn	03 07 44.4	-4.1
JHJ2				*e*Sn		Sn	03 08 49.6	-8.4
JHJ2	**Mitsune**	**6.14**	**219**	P		**Pn**	**03 07 45.1**	**-3.4**
JHJ2				*e*S		Sn	03 08 47.7	-10
YUK	**Yuzh-Kuril'sk**	**6.14**	**10**	*i* P		**Pn**	**03 07 45.8**	**-2.7**
YUK				*i* S		**Sn**	**03 08 51.4**	**-6.6**
YUK				pmax		pmax		
	comp=Z,455nm,0.3s							
YUK				pmax		pmax		
	comp=N,95nm,0.2s							
YUK				pmax		pmax		
	comp=E,124nm,0.2s							
YUK				smax		smax		
	comp=E,2μm,0.4s							
YUK				smax		smax		
	comp=N,668nm,0.6s							
JHJ	**Hachijo jima 2**	**6.15**	**219**	Pn		**Pn**	**03 07 45.2**	**-3.4**
	comp=N,54nm,0.3s,baz=299,slow=24,SNR=9.0							
JHJ				Sn		Sn	03 08 47.4	-11
	comp=N,198nm,0.3s,baz=51,slow=21,SNR=9.6							
JHJ				LR		LR	03 10 38.1	
	comp=N,183nm,19.0s,baz=304,slow=44							
LAGR	**Lagunnoye**	**6.15**	**9**	*e*P		**Pn**	**03 07 46.6**	**-2.0**
LAGR				*e*S		**Sn**	**03 08 52.2**	**-6.1**
LAGR				pmax		pmax		
	comp=E,78nm,0.3s							
LAGR				pmax		pmax		
	comp=Z,513nm,0.3s							
LAGR				pmax		pmax		
	comp=N,115nm,0.1s							
LAGR				smax		smax		
	comp=N,2μm,0.4s							
LAGR				smax		smax		
	comp=E,3μm,0.4s							
SHO	**Shikotan**	**6.16**	**16**	*i* P		**Pn**	**03 07 44.6**	**-4.1**
SHO				*i* S		Sn	03 08 49.2	-9.2
SHO				pmax		pmax		
	comp=N,85nm,0.3s							
SHO				pmax		pmax		
	comp=Z,194nm,0.3s							
SHO				pmax		pmax		
	comp=E,101nm,0.4s							
SHO				smax		smax		
	comp=E,409nm,0.3s							
SHO				smax		smax		
	comp=N,689nm,0.4s							
ASAJ	**Asahikawa**	**6.28**	**348**	Pn		**Pn**	**03 07 50.0**	**-0.4**
	comp=N,36nm,0.3s,baz=197,slow=14,SNR=39							
ASAJ				Sn		**Sn**	**03 08 57.8**	**-3.6**
	comp=N,10nm,0.3s,baz=208,slow=30,SNR=4.1							
ASAJ				LR		LR	03 10 45.5	
	comp=N,532nm,20.1s,baz=203,slow=42							
ASAJ	**Asahikawa**	**6.28**	**348**	*e*Pn		**Pn**	**03 07 49.6**	**-0.8**
ASAJ				*e*Sn		**Sn**	**03 08 57.8**	**-3.6**
INU	**Inuyama**	**6.50**	**248**	*e*Pn		**Pn**	**03 07 52.7**	**-0.8**
INU				*e*Sn		**Sn**	**03 09 04.6**	**-2.4**
KUR	**Kuril'sk**	**7.69**	**19**	‖*e*P		**Pn**	**03 08 07.6**	**-2.1**
KUR				*i* S		**Sn**	**03 09 28.1**	**-8.0**
KUR				pmax		pmax		
	comp=Z,127nm,0.5s							
KUR				pmax		pmax		
	comp=E,63nm,0.4s							
KUR				pmax		pmax		
	comp=N,62nm,0.3s							
KUR				smax		smax		
	comp=E,205nm,0.4s							
KUR				smax		smax		
	comp=N,130nm,0.2s							
KUR				MLR		MLR		
	comp=Z,1μm,11.0s							
KUR				MLR		MLR		
	comp=E,2μm,10.0s							
YSS	**Yuzh-Sakhalins**	**9.05**	**353**	*e*Pn		**Pn**	**03 08 27.8**	**-0.6**
YSS	**Yuzh-Sakhalins**	**9.05**	**353**	*e*P		**Pn**	**03 08 28.3**	**-0.1**
YSS				*e*S		**Sn**	**03 10 06.3**	**-3.2**
YSS				pmax		pmax		
	comp=Z,20nm,0.5s							
YSS				MLR		MLR		
	comp=Z,400nm,13.0s							
YSS				MLR		MLR		
	comp=N,700nm,12.0s							
YSS				MLR		MLR		
	comp=E,800nm,14.0s							
TEY	**Ternei**	**9.16**	**323**	*e*P		**Pn**	**03 08 30.5**	**+0.6**
TEY				pmax		pmax		
	comp=N,52nm,0.8s							
TEY				pmax		pmax		
	comp=E,34nm,0.8s							
TEY				pmax		pmax		
	comp=Z,45nm,0.8s							
JCJ	**Chichijima**	**11.02**	**190**	Sn		Sn	03 10 44.6	-13
	comp=Z,17nm,0.3s,baz=348,slow=17,SNR=5.4							
MSHR	**Mys Shultsa**	**11.12**	**299**	*i* P		**Pn**	**03 08 55.4**	**-1.4**
USRK	**Ussuriysk Ar.**	**11.24**	**307**	Pn		**Pn**	**03 08 59.6**	**+1.2**
	comp=Z,0.9nm,0.3s,baz=118,slow=15,SNR=12							
USRK				LR		LR	03 13 05.1	
	comp=Z,333nm,21.3s,baz=116,slow=36							
JNU	**Nakatsue**	**12.05**	**250**	Pn		**Pn**	**03 09 06.2**	**-3.3**
	comp=Z,0.4nm,0.3s,baz=46,slow=11,SNR=8.4							
JNU	**Nakatsue**	**12.05**	**250**	*e*Pn		**Pn**	**03 09 07.9**	**-1.6**
TYV	**Tymovskoe**	**12.94**	**355**	*e*P		Pn	03 09 11.6	-10
TYV				pmax		pmax		
	comp=Z,400nm,6.7s							
TYV				pmax		pmax		
	comp=Z,17nm,1.0s							
MDJ	**Mudanjiang**	**12.96**	**305**	P		**Pn**	**03 09 18.8**	**-3.1**
MDJ				pP		P	03 09 21.3	-11
MDJ				S		**Sn**	**03 11 38.2**	**-7.1**
MDJ				sS			03 11 51.0	
MDJ				pmax		pmax		
	comp=Z,71nm,1.0s							
MDJ				pmax		pmax		
	comp=Z,280nm,5.4s							
MDJ				LR		LR		
	comp=Z,520nm,17.5s							
MDJ				LR		LR		
	comp=Z,1μm,16.5s							
MDJ				LR		LR		
	comp=Z,1μm,16.2s							
MDJ	**Mudanjiang**	**12.96**	**305**	*e*Pn		**Pn**	**03 09 22.3**	**+0.4**
KSRS	**Korea Array**	**13.08**	**273**	Pn		**Pn**	**03 09 24.4**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=86,slow=13,SNR=22							
KSRS				LR		LR	03 13 56.3	
	comp=Z,98nm,18.8s,baz=69,slow=35							
KS15	**Wonju Array Si**	**13.11**	**273**	*e*Pn		**Pn**	**03 09 24.4**	**+0.4**
KSAR	**Wonju Array Be**	**13.11**	**273**	Pn		**Pn**	**03 09 24.4**	**+0.4**
KSAR	**Wonju Array Be**	**13.11**	**273**	P		**Pn**	**03 09 24.4**	**+0.4**
TJN	**Taejon**	**13.70**	**268**	*ce*P		**Pn**	**03 09 30.4**	**-1.6**
GRNR	**Gornyy**	**13.99**	**339**	*e*P		**Pn**	**03 09 35.0**	**-1.0**
GRNR				pmax		pmax		
	comp=N,96nm,1.0s							
GRNR				pmax		pmax		
	comp=E,80nm,1.0s							
GRNR				pmax		pmax		
	comp=Z,84nm,1.0s							
KLR	**Kul'dur**	**14.49**	**325**	Pn		**Pn**	**03 09 40.3**	**-2.5**
	comp=Z,0.1nm,0.3s,baz=127,slow=7.5,SNR=17							
KLR				LR		LR	03 15 11.8	
	comp=Z,51nm,19.8s,baz=134,slow=37							
CN2	**Changchun**	**15.47**	**298**	*e*P		**Pn**	**03 09 49.9**	**-6.0**
CN2				pmax		pmax		
	comp=Z,10.0nm,0.6s							
CN2				LR		LR		
	comp=Z,560nm,16.0s							
CN2				LR		LR		
	comp=Z,540nm,16.0s							
CN2				LR		LR		
	comp=Z,520nm,17.0s							
JOW	**Kunigami**	**17.57**	**235**	P		**Pn**	**03 10 20.1**	**-2.5**
	comp=Z,1.6nm,0.3s,baz=100,slow=28,SNR=5.3							
JOW				LR		LR	03 16 36.0	
	comp=Z,139nm,19.9s,baz=264,slow=36							
JOW	**Kunigami**	**17.57**	**235**	*e*Pn		**Pn**	**03 10 20.1**	**-2.5**
	comp=Z,61nm,1.2s							
PETK	**Petropavlovsk-**	**17.71**	**27**	P		**P**	**03 10 25.2**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=169,slow=8.5,SNR=5.4							
PETK				LR		LR	03 18 44.3	
	comp=Z,119nm,18.9s,baz=211,slow=42							
PEA1	**Petropavlovsk-**	**17.71**	**27**	*e*Pn		**P**	**03 10 25.2**	**+0.2**
ZEA	**Zeya**	**19.70**	**329**	*e*P		**P**	**03 10 47.1**	**+0.4**
ZEA				pmax		pmax		
	comp=E,29nm,1.2s							
ZEA				pmax		pmax		
	comp=N,65nm,1.4s							
ZEA				pmax		pmax		
	comp=Z,83nm,1.4s							
ZEA				MLR		MLR		
	comp=N,900nm,14.0s							
ZEA				MLR		MLR		
	comp=E,500nm,14.0s							
ZEA				MLR		MLR		
	comp=Z,800nm,14.0s							
HIA	**Hailar**	**21.03**	**310**	*e*P		**P**	**03 11 02.3**	**+1.0**
	comp=Z,30nm,0.5s							
HIA	**Hailar**	**21.03**	**310**	*e*P		**P**	**03 11 02.3**	**+1.0**
HIA				pmax		pmax		
	comp=Z,30nm,0.5s							
TIA	**Tai'an**	**21.82**	**274**	P		**P**	**03 11 12.9**	**+3.1**
TIA				pmax		pmax		
	comp=Z,12nm,1.0s							
TIA				LR		LR		
	comp=Z,190nm,15.6s							
TIA				LR		LR		
	comp=Z,82nm,6.6s							
TIA				LR		LR		
	comp=Z,94nm,7.1s							
MA2	**Magadan**	**21.99**	**9**	P		**P**	**03 11 13.0**	**+1.6**
	comp=Z,4.2nm,0.4s,baz=166,slow=12,SNR=3.8							
MA2	**Magadan**	**21.99**	**9**	‖*e*P		**P**	**03 11 10.5**	**-0.9**
MA2				pmax		pmax		
	comp=Z,23nm,1.3s							
CLNS	**Chul'man**	**22.88**	**332**	*e*P		**P**	**03 11 21.6**	**+0.6**
CLNS				*e*PP		**sP**	**03 11 29.8**	**-0.6**
CLNS				*e*			03 11 45.2	
CLNS				*e*			03 15 11.6	
CLNS				pmax		pmax		
	comp=N,20nm,1.1s							
CLNS				pmax		pmax		
	comp=Z,25nm,1.0s							
CLNS				pmax		pmax		
	comp=E,11nm,1.1s							
CLNS				pmax		pmax		
	comp=Z,8.0nm,0.9s							
CLNS				pmax		pmax		
	comp=N,23nm,1.0s							
CLNS				pmax		pmax		
	comp=E,5.0nm,0.7s							
CLNS				MLR		MLR		
	comp=Z,301nm,14.0s							
CLNS				MLR		MLR		
	comp=N,890nm,16.0s							
CLNS				MLR		MLR		
	comp=E,465nm,13.0s							
GUMO	**Guam**	**24.30**	**179**	LR		LR	03 19 32.4	
	comp=E,186nm,21.4s,baz=24,slow=33							
YULB	**Yu-li**	**24.55**	**240**	*e*P		**P**	**03 11 35.7**	**-1.6**
	comp=E,17nm,0.9s							
TPUB	**Ta-pu**	**25.07**	**241**	*e*P		**P**	**03 11 41.6**	**-0.4**
	comp=E,36nm,1.1s							
TWG	**Pinlang**	**25.08**	**240**	*e*P		**P**	**03 11 44.8**	**+2.7**
	comp=E,126nm,1.1s							
YAK	**Yakutsk**	**25.74**	**344**	*e*P		**P**	**03 11 50.9**	**+3.2**
YAK				*e*PP		**sP**	**03 11 58.6**	**+1.2**
YAK				pmax		pmax		
	comp=Z,18nm,2.0s							
YAK				pmax		pmax		
	comp=N,19nm,1.5s							
YAK				pmax		pmax		
	comp=E,13nm,1.6s							
YAK				MLR		MLR		
	comp=Z,280nm,18.0s							
YAK				MLR		MLR		
	comp=E,190nm,16.0s							
YAK				MLR		MLR		
	comp=N,1μm,23.0s							
BTO	**Baotou**	**26.65**	**286**	*e*P		**P**	**03 11 56.6**	**+0.3**
ULN	**Ulaanbaatar**	**28.84**	**302**	*e*P		P	03 12 20.7	+4.8
	comp=N,16nm,1.4s							
ULN	**Ulaanbaatar**	**28.84**	**302**	*ce*P		**P**	**03 12 14.6**	**-1.3**
ULN				pmax		pmax		
	comp=Z,6.0nm,1.0s							
XAN	**Xi'an**	**28.88**	**273**	P		**P**	**03 12 19.9**	**+3.7**
XAN				pP		pP	03 12 24.0	+0.9
XAN				sP		sP	03 12 26.8	+0.9
XAN				PP		**PnPn**	**03 13 11.5**	**+3.8**
XAN				S		**S**	**03 17 11.5**	**+6.3**
XAN				sS		sS	03 17 18.4	+1.8
XAN				pmax		pmax		
	comp=Z,6.0nm,0.6s							
XAN				pmax		pmax		
	comp=Z,110nm,6.5s							
XAN				LR		LR		
	comp=Z,240nm,12.9s							
XAN				LR		LR		
	comp=Z,270nm,12.6s							
XAN				LR		LR		
	comp=Z,290nm,12.9s							
SONA0	**Songino Array**	**29.28**	**302**	*e*P		**P**	**03 12 22.8**	**+3.0**
SONM	**Songino Array**	**29.28**	**302**	P		**P**	**03 12 22.8**	**+3.0**
	comp=Z,2.0nm,0.8s,baz=92,slow=8.8,SNR=7.8							
SONM				LR		LR	03 24 22.0	
	comp=Z,65nm,18.2s,baz=88,slow=37							
ENH	**Enshi**	**29.79**	**266**	*e*P		**P**	**03 12 22.0**	**-2.4**
	comp=Z,23nm,0.8s							
TLY	**Talaya**	**31.55**	**309**	*e*P		P	03 12 45.7	+6.0
TLY				*e*S		**S**	**03 17 44.0**	**-2.8**
TLY				pmax		pmax		
	comp=Z,11nm,1.0s							
TLY				MLR		MLR		
	comp=Z,483nm,14.0s							
ZAK	**Zakamensk**	**31.59**	**306**	*e*P		**P**	**03 12 40.3**	**+0.2**
ZAK				pmax		pmax		
	comp=Z,7.0nm,1.2s							
LZH	**Lanzhou**	**32.27**	**279**	*e*P		**P**	**03 12 46.9**	**+0.6**
LZH				pP		sP	03 12 55.6	-0.5
LZH				sP		pP	03 12 59.7	+6.5
LZH				pmax		pmax		
	comp=Z,21nm,1.4s							
BILL	**Bilibino**	**32.47**	**15**	*e*P		**P**	**03 12 47.4**	**0.0**
	comp=Z,5.2nm,1.0s							
BILL	**Bilibino**	**32.47**	**15**	*e*P		**P**	**03 12 47.5**	**0.0**
BILL				pmax		pmax		
	comp=Z,5.0nm,1.0s							
GYA	**Guiyang**	**33.73**	**261**	*e*P		**P**	**03 12 58.8**	**-0.3**
GYA				pmax		pmax		
	comp=Z,10.0nm,0.8s							
GTA	**Gaotai**	**34.58**	**287**	⇑P		**P**	**03 13 08.0**	**+1.7**
GTA				pP		pP	03 13 14.3	+1.0
GTA				sP		sP	03 13 17.8	+1.7
GTA				PcP		**PcP**	**03 15 41.5**	**+0.9**
GTA				S		**S**	**03 18 38.6**	**+4.3**
GTA				pmax		pmax		
	comp=Z,5.0nm,1.2s							
GTA				pmax		pmax		
	comp=Z,100nm,4.9s							
GTA				LR		LR		
	comp=Z,490nm,17.1s							
GTA				LR		LR		
	comp=Z,410nm,16.5s							
GTA				LR		LR		
	comp=Z,570nm,15.9s							
TIXI	**Tiksi**	**34.67**	**351**	P		**P**	**03 13 06.4**	**-0.2**
	comp=Z,1.1nm,0.3s,baz=311,slow=5.4,SNR=2.4							
TIXI	**Tiksi**	**34.67**	**351**	*ce*P		**P**	**03 13 06.3**	**-0.2**
TIXI				pmax		pmax		
	comp=Z,8.0nm,2.5s							
DAV	**Davao City (W)**	**35.20**	**214**	LR		LR	03 27 44.3	
	comp=Z,29nm,18.9s,baz=339,slow=37							
KMI	**Kunming**	**37.46**	**262**	P		**P**	**03 13 31.7**	**+0.4**
KMI				pP		pP	03 13 38.9	+0.6
KMI				sP		sP	03 13 41.3	+0.2
KMI				pmax		pmax		
	comp=Z,22nm,0.6s							
KMI				pmax		pmax		
	comp=Z,110nm,4.9s							
KMI				LR		LR		
	comp=Z,170nm,15.2s							
KMI				LR		LR		
	comp=Z,250nm,15.2s							
KMI				LR		LR		
	comp=Z,330nm,13.3s							
NONG	**Nongkai**	**41.08**	**253**	P		**P**	**03 14 02.4**	**+1.2**
	comp=Z,38nm,1.3s							
SKNT	**Sakolnakorn**	**41.12**	**251**	P		**P**	**03 14 01.5**	**-0.1**
	comp=Z,8.9nm,1.1s							
ZAA1	**Zalesovo Array**	**43.06**	**312**	*e*P		**P**	**03 14 17.6**	**+0.6**
ZAA1				*e*PcP		**PcP**	**03 16 06.8**	**+0.1**
ZALV	**Zalesovo Beam**	**43.06**	**312**	P		**P**	**03 14 17.6**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=108,slow=3.2,SNR=4.3							
ZALV				PcP		**PcP**	**03 16 06.8**	**+0.1**
	comp=Z,3.6nm,0.5s,baz=94,slow=3.4,SNR=5.2							
ZALV				LR		LR	03 32 34.0	
	comp=Z,147nm,21.6s,baz=70,slow=37							
NRIK	**Noril'sk**	**43.43**	**334**	P		**P**	**03 14 19.6**	**-0.2**
	comp=Z,4.0nm,0.9s,baz=100,slow=5.9,SNR=5.2							
NRIK				LR		LR	03 33 24.1	
	comp=Z,255nm,19.7s,baz=90,slow=37							
LAMP	**Lampang**	**43.48**	**256**	P		**P**	**03 14 22.7**	**+1.9**
	comp=Z,4.5nm,1.0s							
PBKT	**Sadao Pong**	**43.63**	**253**	P		**P**	**03 14 22.0**	**0.0**
	comp=Z,19nm,1.0s							
PBKT	**Sadao Pong**	**43.63**	**253**	*e*P		**P**	**03 14 22.1**	**0.0**
CHTO	**Chiang Mai**	**43.84**	**257**	P		**P**	**03 14 27.7**	**+4.0**
	comp=Z,41nm,1.4s							
CM31	**Chiang Mai Arr**	**44.05**	**257**	*e*P		**P**	**03 14 25.8**	**+0.4**
CMAR	**Chiang Mai Arr**	**44.05**	**257**	P		**P**	**03 14 25.8**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=44,slow=7.3,SNR=5.7							
CMAR				LR		LR	03 35 44.3	
	comp=Z,94nm,19.7s,baz=60,slow=40							
SRAK	**Srakaew**	**44.44**	**249**	P		**P**	**03 14 26.3**	**-2.2**
	comp=Z,77nm,1.0s							
KDAK	**Kodiak Island**	**44.79**	**43**	*e*P		**P**	**03 14 31.4**	**+0.6**
	comp=Z,70nm,1.6s							
KDAK	**Kodiak Island**	**44.79**	**43**	*i* P		**P**	**03 14 31.1**	**+0.3**
PPLA	**Purkeypile**	**45.02**	**35**	*e*P		**P**	**03 14 35.8**	**+3.0**
	comp=Z,14nm,1.2s							
BPAW	**Bear Paw Mtn.**	**45.62**	**34**	*e*P		**P**	**03 14 39.6**	**+2.2**
	comp=Z,10nm,1.4s							
MK31	**Makanchi Array**	**45.65**	**302**	*i* P		**P**	**03 14 38.1**	**+0.2**
MK31				pmax		pmax		
	comp=Z,7.0nm,0.7s							
MK32	**Makanchi Array**	**45.65**	**302**	*e*P		**P**	**03 14 38.0**	**+0.2**
MKAR	**Makanchi Array**	**45.65**	**302**	P		**P**	**03 14 38.0**	**+0.2**

PHET	Kaeng Krachan	46.93 250	P	P	03 14 52.4 +4.1
	comp=Z,12nm,0.9s				
COLA	College	46.99 33	*i* P	P	03 14 48.6 +0.5
COLA			pmax	pmax	
	comp=Z,4.0nm,1.1s				
PMG	Port Moresby	47.21 176	LR	LR	03 33 34.9
	comp=Z,81nm,19.3s,baz=120,slow=35				
DHY	Denali Highway	47.22 35	*e*P	P	03 14 51.0 +0.9
	comp=Z,12nm,1.4s				
KURK	Kurchatov	47.23 308	*e*P	P	03 14 50.3 +0.1
	comp=Z,15nm,0.8s				
KURK	Kurchatov	47.23 308	*ce*P	P	03 14 49.9 -0.3
KURK			pmax	pmax	
	comp=Z,18nm,1.2s				
SCM	Sheep Creek Mo	47.28 37	*e*P	P	03 14 51.8 +1.2
	comp=Z,17nm,1.2s				
SCM	Sheep Creek Mo	47.28 37	*e*P	P	03 14 51.8 +1.2
SCM			pmax	pmax	
	comp=Z,17nm,1.2s				
KURBB	Kurchatov Arra	47.31 308	P	P	03 14 51.1 +0.3
	comp=Z,6.9nm,0.6s,baz=81,slow=7.9,SNR=33				
HDA	Harding Lake	47.38 33	*e*P	P	03 14 52.3 +1.1
	comp=Z,16nm,1.5s				
ILAR	Eielson Array	47.41 33	P	P	03 14 51.7 +0.3
	comp=Z,2.9nm,0.8s,baz=260,slow=6.0,SNR=33				
ILB	Eielson Array	47.41 33	*e*P	P	03 14 51.7 +0.3
KLU	Klutina	47.97 37	*e*P	P	03 14 57.4 +1.5
	comp=Z,13nm,1.2s				
RIDG	Independ'e Rid	48.33 34	*e*P	P	03 14 59.8 +1.2
	comp=Z,28nm,1.8s				
PDGK	Podgornoye	48.44 298	P	P	03 15 00.4 +0.5
PDGK			pmax	pmax	
	comp=Z,31nm,1.4s				
BMRM	Bremner River	48.65 38	*e*P	P	03 15 02.8 +1.6
	comp=Z,28nm,1.4s				
DOT	Dot Lake	48.68 34	*e*P	P	03 15 02.1 +0.8
	comp=Z,7.6nm,0.8s				
SCRK	Sand Creek	48.70 34	*e*P	P	03 15 02.4 +0.9
	comp=Z,22nm,1.5s				
ODAN	Odare	48.73 274	*e*P	P	03 15 02.4 0.0
JIRN	Jiri	49.31 276	*e*P	P	03 15 07.4 +0.4
	comp=Z,12nm,0.4s				
RAMN	Ramite	49.31 275	*e*P	P	03 15 07.2 +0.3
	comp=Z,20nm,0.6s				
HNR	Honiara	49.35 160	LR	LR	03 33 18.3
	comp=Z,166nm,21.3s,baz=320,slow=33				
CRQM	Cirque	49.39 38	*e*P	P	03 15 08.8 +1.9
	comp=Z,55nm,1.4s				
GUN	Gumba	49.43 276	*e*P	P	03 15 08.3 +0.4
TGL	Tana Glacier	49.54 38	*e*P	P	03 15 10.2 +2.2
	comp=Z,21nm,1.2s				
KKN	Kakani	49.96 277	*e*P	P	03 15 12.1 +0.3
TARG	Taragay, Kyrgy	50.12 296	*e*P	P	03 15 14.7 +1.6
	comp=Z,10nm,0.9s				
GKN	Gorkha	50.37 277	*e*P	P	03 15 15.1 +0.3
	comp=Z,48nm,1.0s				
DANN	Dangsing	50.89 278	*e*P	P	03 15 19.5 +0.6
	comp=Z,71nm,0.7s				
TKM2	Tokmak 2	51.28 299	P	P	03 15 22.3 +0.8
TKM2			pmax	pmax	
	comp=Z,23nm,1.1s				
KOLN	Koldanda	51.29 277	*e*P	P	03 15 22.0 +0.2
PYUN	Piuthan	51.61 278	*e*P	P	03 15 24.7 +0.5
	comp=Z,57nm,1.0s				
BVA0	Borovoye Array	51.70 312	P	P	03 15 24.8 +0.5
BVA0			pmax	pmax	
	comp=Z,6.0nm,0.9s				
BVAR	Borovoye Array	51.70 312	P	P	03 15 25.6 +1.3
	comp=Z,4.5nm,0.9s,baz=70,slow=8.3,SNR=13				
BVAR			PcP	PcP	03 16 35.7 -1.8
	comp=Z,2.4nm,0.7s,baz=59,slow=5.6,SNR=2.7				
BVAR			LR	LR	03 37 50.1
	comp=Z,154nm,20.9s,baz=74,slow=37				
BRVK	Borovoye	51.76 312	*e*P	P	03 15 26.2 +1.5
	comp=Z,5.6nm,0.8s				
BRVK	Borovoye	51.76 312	*ce*P	P	03 15 25.0 +0.3
BRVK			pmax	pmax	
	comp=Z,10.0nm,1.2s				
OTUK	Ortayu	51.81 306	P	P	03 15 25.2 0.0
OTUK			pmax	pmax	
	comp=Z,6.0nm,0.7s				
AAK	Ala-Archa	52.14 299	LR	LR	03 37 16.6
	comp=Z,145nm,21.2s,baz=60,slow=36				
AAK	Ala-Archa	52.14 299	*e*P	P	03 15 29.3 +1.4
	comp=Z,7.1nm,1.3s				
AAK	Ala-Archa	52.14 299	*i* P	P	03 15 26.7 -1.2
AAK			pmax	pmax	
	comp=Z,5.0nm,1.2s				
INK	Inuvik	52.45 28	P	P	03 15 30.6 +1.1
	comp=Z,3.8nm,0.5s,baz=321,slow=6.6,SNR=19				
INK	Inuvik	52.45 28	*e*P	P	03 15 30.6 +1.1
	comp=Z,4.6nm,0.6s				
INK	Inuvik	52.45 28	*e*P	P	03 15 30.6 +1.1
INK			pmax	pmax	
	comp=Z,5.0nm,0.6s				
MNAS	Manas	53.57 299	P	P	03 15 39.0 +0.5
MNAS			pmax	pmax	
	comp=Z,10.0nm,0.6s				
SFK	Sufi-Kurgan	53.78 296	P	P	03 15 41.2 +1.1
SFK			pmax	pmax	
	comp=Z,11nm,0.6s				
PSI	Prapat	54.34 241	P	P	03 15 43.3 -1.0
	comp=Z,8.6nm,0.7s,baz=0.0,slow=11,SNR=3.5				
PSI	Prapat	54.34 241	*e*P	P	03 15 43.3 -1.0
	comp=Z,13nm,0.9s				
PSI	Prapat	54.34 241	*e*P	P	03 15 43.3 -1.0
PSI			pmax	pmax	
	comp=Z,13nm,0.9s				
KK31	Karatay Array	54.71 300	P	P	03 15 45.1 -1.5
KK31			pmax	pmax	
	comp=Z,4.0nm,0.8s				
KKAR	Karatay Array	54.71 300	*e*P	P	03 15 47.6 +1.0
KKAR	Karatay Array	54.71 300	*e*P	P	03 15 47.6 +1.0
SVE	Sverdlovsk	56.02 319	*e*P	P	03 15 56.6 +0.9
SVE			pmax	pmax	
	comp=Z,18nm,0.9s				
SVE			MLR	MLR	
	comp=Z,741nm,16.0s				
LEM	Lembang	56.23 226	P	P	03 15 55.0 -2.9
	comp=Z,73nm,1.0s,baz=144,slow=19,SNR=3.4				
NIL	Nilore	56.58 289	*e*P	P	03 16 02.1 +1.9
	comp=Z,18nm,0.8s				
NIL	Nilore	56.58 289	*e*P	P	03 16 02.1 +1.9
NIL			pmax	pmax	
	comp=Z,18nm,0.8s				
ARU	Arti	57.23 319	LR	LR	03 44 26.1
	comp=Z,255nm,18.7s,baz=62,slow=40				
ARU	Arti	57.23 319	*e*P	P	03 16 05.4 +1.0
	comp=Z,14nm,1.0s				
ARU	Arti	57.23 319	*c i*P	P	03 16 05.4 +1.0
ARU					03 16 55.6
ARU					03 18 08.1
ARU			S	S	03 24 03.1 +4.5
ARU			SS	SS	03 27 43.1 -4.1
ARU			pmax	pmax	
	comp=Z,20nm,1.2s				
ARU			MLR	MLR	
	comp=Z,577nm,15.0s				
WRAB	Tennant Creek	58.38 191	*e*P	P	03 16 11.2 -1.6
	comp=Z,20nm,0.9s				
WRAB	Tennant Creek	58.38 191	*e*P	P	03 16 11.2 -1.6
WRAB			pmax	pmax	
	comp=Z,20nm,0.9s				
WR1	Warramunga Arr	58.39 191	*e*P	P	03 16 10.8 -2.0
	comp=Z,21nm,0.9s				
WRA	Warramunga Arr	58.39 191	P	P	03 16 10.8 -2.0
	comp=Z,14nm,0.9s,baz=11,slow=7.3,SNR=58				
FITZ	Fitzroy Crossi	58.51 201	P	P	03 16 11.4 -2.2
	comp=Z,15nm,1.1s,baz=18,slow=8.9,SNR=7.3				
FITZ	Fitzroy Crossi	58.51 201	*e*P	P	03 16 13.5 -0.2
	comp=Z,16nm,1.1s				
AB31	Akbulak array	59.15 311	*i* P	P	03 16 17.7 -0.2
AB31			pmax	pmax	
	comp=Z,7.0nm,0.7s				
ABKAR	Akbulak array	59.15 311	*e*P	P	03 16 18.1 +0.1
AKTO	Aktyubinsk	59.81 312	P	P	03 16 23.5 +1.0
	comp=Z,5.6nm,0.8s,baz=76,slow=9.6,SNR=11				
AKTO			LR	LR	03 44 05.4
	comp=Z,125nm,18.2s,baz=67,slow=38				
SPITS	Spitsbergen Ar	60.05 349	LR	LR	03 44 08.6
	comp=Z,74nm,20.2s,baz=60,slow=38				
RES	Resolute Bay	61.08 15	*e*P	P	03 16 31.0 +0.3
	comp=Z,7.2nm,1.1s				
RES	Resolute Bay	61.08 15	*e*P	P	03 16 31.0 +0.3
RES			pmax	pmax	
	comp=Z,7.0nm,1.1s				
PRGR	Permogore	61.26 327	*e*P	P	03 16 32.5 +0.3
PRGR			pmax	pmax	
	comp=Z,10.0nm,0.8s				
YKA	Yellowknife Ar	61.77 31	P	P	03 16 35.9 +0.4
	comp=Z,2.2nm,0.9s,baz=298,slow=6.7,SNR=9.1				
YKA	Yellowknife Ar	61.77 31	P	P	03 16 36.0 +0.4
YKB5	Yellowknife Ar	61.77 31	*e*P	P	03 16 35.9 +0.3
AS31	Alice Springs	62.11 191	*e*P	P	03 16 36.8 -1.6
	comp=Z,1.2nm,0.9s				
ASAR	Alice Springs	62.11 191	P	P	03 16 36.8 -1.6
	comp=Z,3.1nm,0.8s,baz=10,slow=5.9,SNR=22				
TMCR	Tamitsa	63.05 332	*e*P	P	03 16 44.9 +0.8
TMCR			pmax	pmax	
	comp=Z,18nm,0.9s				
ARA0	ARCESS Array S	63.94 340	*e*P	P	03 16 50.1 +0.2
ARCES	ARCESS Array B	63.94 340	P	P	03 16 50.1 +0.2
	comp=Z,2.3nm,0.7s,baz=56,slow=7.4,SNR=6.3				
ARCES			LR	LR	03 50 05.2
	comp=Z,114nm,18.1s,baz=48,slow=41				
KLMR	Klimovskoe	64.22 328	*e*P	P	03 16 49.6 -2.3
KLMR			*e*		03 17 23.2
KLMR			pmax	pmax	
	comp=Z,17nm,1.4s				
KLMR	Klimovskoe	64.22 328	*e*P	P	03 16 49.6 -2.3
KLMR			AMP		03 16 55.8
	comp=Z,17nm,1.4s				
KLMR			*e*PcP	PcP	03 17 23.2 -3.4
SGF	Sodankyl	64.99 338	P	P	03 16 59.8 +3.0
SGF			pmax	pmax	
	comp=Z,14nm,0.7s				
DAG	Danmarks Havn	65.02 356	*i* P	P	03 16 55.9 -1.0
	comp=Z,6.8nm,1.0s				
DAG	Danmarks Havn	65.02 356	*e*P	P	03 16 55.9 -1.0
DAG			pmax	pmax	
	comp=Z,7.0nm,1.0s				
MSF	Maaselka	65.18 336	P	P	03 17 00.3 +2.2
GEYT	Alibeck	65.45 300	P	P	03 17 01.1 +0.7
	comp=Z,4.8nm,0.9s,baz=32,slow=4.2,SNR=6.4				
GEYT			LR	LR	03 48 33.4
	comp=Z,86nm,18.4s,baz=75,slow=39				
D05A	Enumclaw	65.52 48	*e*P	P	03 17 03.8 +3.3
	comp=Z,46nm,1.5s				
AFI	Afiamalu	65.96 133	LR	LR	03 40 28.5
	comp=Z,61nm,20.2s,baz=90,slow=31				
JOF	Joensuu	66.24 333	P	P	03 17 07.9 +3.0
JOF			pmax	pmax	
	comp=Z,9.0nm,1.1s				
OUL	Oulu	66.72 336	P	P	03 17 10.4 +2.5
OUL			pmax	pmax	
	comp=Z,9.0nm,1.2s				
NEW	Newport	67.77 46	*e*P	P	03 17 16.4 +1.4
	comp=Z,9.3nm,1.1s				
NEW	Newport	67.77 46	*e*P	P	03 17 16.4 +1.4
NEW			pmax	pmax	
	comp=Z,9.0nm,1.1s				
YBH	Yreka Blue Hor	67.86 54	P	P	03 17 17.7 +1.9
	comp=Z,1.5nm,0.4s,baz=318,slow=5.1,SNR=5.9				
YBH	Yreka Blue Hor	67.86 54	*e*P	P	03 17 17.9 +2.1
	comp=Z,8.2nm,1.2s				
YBH	Yreka Blue Hor	67.86 54	*e*P	P	03 17 17.9 +2.1
YBH			pmax	pmax	
	comp=Z,8.0nm,1.2s				
PINE	Pine Mountain	67.89 51	*e*P	P	03 17 18.3 +2.3
	comp=Z,32nm,1.3s				
K05A	Summer Lake	68.48 52	*e*P	P	03 17 22.1 +2.3
	comp=Z,35nm,1.3s				
FIA0	FINESS Array S	69.07 333	*e*P	P	03 17 21.8 -1.0
FIA0	FINESS Array S	69.07 333	*e*P	P	03 17 21.8 -1.0
FINES	FINESS Array B	69.07 333	P	P	03 17 21.8 -1.0
	comp=Z,5.1nm,0.8s,baz=57,slow=7.0,SNR=11				
FINES			LR	LR	03 51 08.6
	comp=Z,203nm,19.3s,baz=42,slow=39				
MOD	Modoc Plateau	69.30 53	*e*P	P	03 17 26.4 +1.6
	comp=Z,5.8nm,0.9s				
BMO	Blue Mountains	69.52 49	*e*P	P	03 17 27.5 +1.5
	comp=Z,4.8nm,1.0s				
BMO	Blue Mountains	69.52 49	*e*P	P	03 17 27.5 +1.5
BMO			pmax	pmax	
	comp=Z,5.0nm,1.0s				
STKA	Stephens Creek	69.55 183	P	P	03 17 23.7 -2.3
	comp=Z,2.8nm,0.8s,baz=178,slow=17,SNR=4.3				
SUMG	Summit	69.72 1	*i* P	P	03 17 27.7 +0.5
	comp=Z,12nm,1.1s				
SUMG	Summit	69.72 1	*e*P	P	03 17 28.4 +1.2
	comp=Z,13nm,1.1s				
SUMG	Summit	69.72 1	*e*P	P	03 17 28.4 +1.2
SUMG			pmax	pmax	
	comp=Z,13nm,1.1s				
VSR	Storozhevoye	69.78 320	*e*P	P	03 17 26.0 -1.4
VSR			pmax	pmax	
	comp=Z,9.0nm,0.7s				
ORV	Oroville	69.80 55	*e*P	P	03 17 29.2 +1.4
	comp=Z,7.6nm,1.0s				
ORV	Oroville	69.80 55	*e*P	P	03 17 29.2 +1.4
ORV			pmax	pmax	
	comp=Z,8.0nm,1.0s				
WVOR	Wild Horse Val	70.04 51	*e*P	P	03 17 31.0 +1.6
	comp=Z,5.8nm,0.9s				
WVOR	Wild Horse Val	70.04 51	*e*P	P	03 17 31.0 +1.6
WVOR			pmax	pmax	
	comp=Z,6.0nm,0.9s				
MSO	Missoula	70.36 46	*e*P	P	03 17 32.9 +1.7
	comp=Z,8.6nm,1.3s				
BEKR	Beckworth	70.37 54	*e*P	P	03 17 32.8 +1.3
	comp=Z,9.2nm,1.1s				
VSU	Vasula	70.83 330	*ce*P	P	03 17 33.9 +0.3
VSU			pmax	pmax	
	comp=Z,28nm,1.2s				
MFID	Camas Ranch	71.20 49	*e*P	P	03 17 38.0 +1.6
	comp=Z,8.4nm,1.1s				
CMB	Columbia Colle	71.36 56	*e*P	P	03 17 38.5 +1.1
	comp=Z,9.9nm,1.1s				
CMB	Columbia Colle	71.36 56	*e*P	P	03 17 38.5 +1.1
CMB			pmax	pmax	
	comp=Z,10.0nm,1.1s				
YERR	Yerington	71.58 55	*e*P	P	03 17 40.5 +1.7
	comp=Z,9.8nm,1.1s				
FFC	Flin Flon	71.60 34	*e*P	P	03 17 39.3 +0.9
	comp=Z,15nm,1.2s				
FFC	Flin Flon	71.60 34	*e*P	P	03 17 39.3 +0.9
FFC			pmax	pmax	
	comp=Z,15nm,1.2s				
LRM	Limekiln Ridge	71.78 46	*e*P	P	03 17 41.0 +1.0
NCK	Nalchik	71.80 311	*i* P	P	03 17 40.0 +0.1
NCK			pmax	pmax	
	comp=Z,5.0nm,0.9s				
HLID	Hailey	71.96 49	*e*P	P	03 17 42.7 +1.6
	comp=Z,6.1nm,1.2s				
EGMT	Eagleton	71.97 43	*e*P	P	03 17 42.1 +1.3
	comp=Z,19nm,1.5s				
DLMT	Dillon	71.97 46	*e*P	P	03 17 42.4 +1.4
	comp=Z,16nm,1.4s				
DLMT			*ep*P	sP	03 17 53.7 +2.5
BMN	Battle Mountai	72.05 53	*e*P	P	03 17 43.5 +1.9
	comp=Z,9.6nm,1.1s				
BMN	Battle Mountai	72.05 53	*e*P	P	03 17 43.5 +1.9
BMN			pmax	pmax	
	comp=Z,10.0nm,1.1s				
FCC	Fort Churchill	72.07 28	*e*P	P	03 17 41.2 +0.1
	comp=Z,12nm,1.0s				
FCC	Fort Churchill	72.07 28	*e*P	P	03 17 41.2 +0.1
FCC			pmax	pmax	
	comp=Z,12nm,1.0s				
KIV	Kislovodsk	72.07 312	*e*P	P	03 17 41.2 -0.4
KIV			pmax	pmax	
	comp=Z,11nm,1.0s				
KBZ	Khabaz	72.08 312	P	P	03 17 42.5 +1.1
	comp=Z,3.3nm,0.8s,baz=66,slow=6.7,SNR=5.8				
KBZ			LR	LR	03 51 18.2
	comp=Z,81nm,18.9s,baz=50,slow=37				
KVN	Kaiserville	72.28 54	*e*P	P	03 17 44.7 +1.7
	comp=Z,14nm,1.2s				
KVN	Kaiserville	72.28 54	*e*P	P	03 17 44.7 +1.7
KVN			pmax	pmax	
	comp=Z,14nm,1.2s				
BOZ	Bozeman (W)	72.38 46	*e*P	P	03 17 44.9 +1.4
	comp=Z,6.6nm,1.3s				
BOZ	Bozeman (W)	72.38 46	*e*P	P	03 17 44.9 +1.4
BOZ			pmax	pmax	
	comp=Z,7.0nm,1.3s				
NEY	Neytrino	72.46 311	*i* P	P	03 17 44.4 +0.4
NEY			pmax	pmax	
	comp=Z,1.0nm,1.2s				
NV01	Mina Array Sit	72.50 55	*e*P	P	03 17 45.7 +1.3
NVAR	Mina Array Bea	72.50 55	P	P	03 17 45.7 +1.3
	comp=Z,2.9nm,0.7s,baz=287,slow=6.1,SNR=20				
GNI	Garni	73.04 308	LR	LR	03 53 42.2
	comp=Z,113nm,18.0s,baz=67,slow=39				
GNI	Garni	73.04 308	*i* P	P	03 17 46.3 -1.2
GNI			pmax	pmax	
	comp=Z,13nm,0.8s				
YPP	Pitchstone Pla	73.65 46	*e*P	P	03 17 54.5 +3.3
	comp=Z,17nm,1.8s				
H17A	Grant Village	73.70 46	*e*P	P	03 17 54.6 +3.2
	comp=Z,10nm,1.1s				
BAKC	Calstate	73.73 58	*e*P	P	03 17 54.4 +3.0
IMW	Indian Meadow	73.80 47	*e*P	P	03 17 54.3 +2.2
	comp=Z,16nm,1.5s				
FXWY	Fox Creek	73.90 47	*e*P	P	03 17 54.7 +2.1
	comp=Z,11nm,1.3s				
HVU	Hansel Valley	73.99 49	*e*P	P	03 17 55.0 +1.9
	comp=Z,7.6nm,1.2s				
HVU	Hansel Valley	73.99 49	*e*P	P	03 17 55.0 +1.9
HVU			pmax	pmax	
	comp=Z,8.0nm,1.2s				
MOOW	Moose Ponds	74.00 47	*e*P	P	03 17 55.3 +2.2
	comp=Z,16nm,1.4s				
TPAW	Teton Pass	74.03 47	*e*P	P	03 17 55.2 +1.7
	comp=Z,19nm,1.4s				
REDW	Red Top Meadow	74.17 47	*e*P	P	03 17 56.7 +2.5
	comp=Z,12nm,1.3s				
HFS	Hagfors	74.19 337	P	P	03 17 53.8 +0.2
	comp=Z,5.8nm,0.8s,baz=49,slow=6.5,SNR=31				
HFS			LR	LR	03 55 06.1
	comp=Z,114nm,18.4s,baz=38,slow=39				
DAC	Darwin (Calif)	74.20 56	*e*P	P	03 17 55.5 +1.1
	comp=Z,14nm,1.5s				
DAC	Darwin (Calif)	74.20 56	*e*P	P	03 17 55.5 +1.1
DAC			pmax	pmax	
	comp=Z,14nm,1.5s				
NB2	NORSAR Subarra	74.21 338	P	P	03 17 53.9 0.0
	comp=Z,5.7nm,0.9s,baz=37,slow=5.9				
NB200	NORSAR Array S	74.21 338	*e*P	P	03 17 54.1 +0.3
NOA	NORSAR Array B	74.21 338	P	P	03 17 54.1 +0.3
	comp=Z,4.6nm,0.8s,baz=38,slow=5.7,SNR=16				
NOA			LR	LR	03 54 19.2
	comp=Z,123nm,22.0s,baz=40,slow=39				
R11A	Troy Canyon, C	74.28 54	*e*P	P	03 17 56.0 +1.2
	comp=Z,8.3nm,1.2s				
BGU	Big Grassy Mou	74.35 50	*e*P	P	03 17 57.5 +2.4
	comp=Z,11nm,1.6s				
SPUT	South Promonto	74.47 50	*e*P	P	03 17 58.3 +2.5
	comp=Z,14nm,1.5s				
TPNV	Topopah Spring	74.68 55	*e*P	P	03 17 58.4 +1.2
	comp=Z,7.2nm,1.0s				
TPNV	Topopah Spring	74.68 55	*e*P	P	03 17 58.4 +1.2
TPNV			pmax	pmax	
	comp=Z,7.0nm,1.0s				
SFJD	Kangerlussuaq	74.72 6	LR	LR	03 52 53.2
	comp=Z,58nm,21.0s,baz=326,slow=37				
HWUT	Hardware Ranch	74.82 49	*e*P	P	03 17 59.8 +1.8
	comp=Z,17nm,1.4s				
DUG	Dugway, Tooele	74.92 51	*e*P	P	03 18 00.3 +1.8
	comp=Z,15nm,1.4s				
DUG	Dugway, Tooele	74.92 51	*e*P	P	03 18 00.3 +1.8
DUG			pmax	pmax	
	comp=Z,15nm,1.4s				
AKASG	Malin Array Be	74.99 323	P	P	03 17 58.5 0.0
	comp=Z,2.5nm,0.5s,baz=44,slow=6.2,SNR=12				
AKASG			LR	LR	03 54 41.7
	comp=Z,98nm,19.1s,baz=275,slow=39				
AKBB	Malin Array Si	74.99 323	*e*P	P	03 17 58.5 0.0
AKBB	Malin Array Si	74.99 323	*e*P	P	03 17 58.5 0.0
TCUT	Toone Canyon	75.21 49	*e*P	P	03 18 02.7 +2.4
	comp=Z,40nm,1.6s				
PSUT	Pine Spring	75.27 53	*e*P	P	03 18 02.3 +1.7
	comp=Z,12nm,1.4s				
BW06	Boulder Array	75.28 47	*e*P	P	03 18 01.6 +0.9
	comp=Z,8.8nm,1.5s				
PD31	Pinedale Array	75.28 47	*e*P	P	03 18 01.4 +0.8
PDAR	Pinedale Array	75.28 47	P	P	03 18 01.4 +0.8
	comp=Z,1.2nm,0.8s,baz=260,slow=4.4,SNR=9.4				
JLU	Jordanelle	75.50 50	*e*P	P	03 18 04.3 +2.4
	comp=Z,13nm,1.3s				
SHPR	Sheep Range	75.65 55	*e*P	P	03 18 04.5 +1.7
	comp=Z,7.5nm,1.1s				
BBRC	Big Bear Solar	75.82 58	*e*P	P	03 18 05.8 +1.9
CCUT	Cedar City	76.17 53	*e*P	P	03 18 07.9 +2.1
	comp=Z,13nm,1.3s				
SZCU	Shurtz Canyon	76.32 53	*e*P	P	03 18 08.3 +1.7
	comp=Z,15nm,1.5s				
MSU	Marysvale	76.33 52	*e*P	P	03 18 09.0 +2.3
MSU	Marysvale	76.33 52	*e*P	P	03 18 09.0 +2.3
LCMT	Little Creek M	76.57 54	*e*P	P	03 18 09.8 +1.8
	comp=Z,11nm,1.2s				
MTPU	Mount Pierson	76.61 52	*e*P	P	03 18 10.6 +2.1
	comp=Z,9.3nm,1.3s				
P17A	Butcher Ranch,	76.62 50	*e*P	P	03 18 10.1 +1.8
	comp=Z,21nm,1.4s				
KNB	Kanab	76.84 53	*e*P	P	03 18 11.7 +2.2
	comp=Z,20nm,1.3s				
KNB	Kanab	76.84 53	*e*P	P	03 18 11.7 +2.2
KNB			pmax	pmax	
	comp=Z,20nm,1.3s				
SRU	San Rafael Swe	76.98 50	*e*P	P	03 18 11.7 +1.4
	comp=Z,16nm,1.3s				
SRU	San Rafael Swe	76.98 50	*e*P	P	03 18 11.7 +1.4
SRU			pmax	pmax	
	comp=Z,16nm,1.3s				
ULM	Lac du Bonnet	77.38 35	P	P	03 18 12.4 +0.3
	comp=Z,3.8nm,1.2s,baz=309,slow=8.6,SNR=3.6				
U15A	North Rim	77.53 54	*e*P	P	03 18 15.2 +1.6
	comp=Z,14nm,1.4s				
O20A	White River Ci	77.70 49	*e*P	P	03 18 15.8 +1.4
	comp=Z,6.3nm,0.9s				
N23A	Red Feather La	78.56 47	*e*P	P	03 18 21.5 +2.3
	comp=Z,17nm,1.5s				
PV02	Paradox Valley	78.63 50	*e*P	P	03 18 21.3 +1.7
WUAZ	Wupatki	78.68 54	*e*P	P	03 18 21.5 +1.7
	comp=Z,10nm,1.3s				
KWP	Kalwaria Pacla	78.72 326	*e*P	P	03 18 20.8 +1.2
	comp=Z,104nm,1.0s				
KWP	Kalwaria Pacla	78.72 326	*e*P	P	03 18 20.8 +1.2
KWP			pmax	pmax	
	comp=Z,104nm,1.0s				
AGMN	Agassiz Nation	78.78 36	*e*P	P	03 18 20.6 +0.7
	comp=Z,11nm,1.4s				
RAR	Rarotonga	78.82 128	LR	LR	03 50 29.5
	comp=Z,50nm,19.9s,baz=269,slow=34				
BURAR	Bucovina Array	79.02 323 ⇓	*i* P	P	03 18 23.1 +1.7
BURAR	Bucovina Array	79.02 323 ⇓	P	P	03 18 23.1 +1.7
GIUM	Giurgiulesti	79.05 320 ⇑	*i* P	P	03 18 33.3 +12
SMCO	Snowmass	79.07 49	*e*P	P	03 18 22.6 +0.5
	comp=Z,8.8nm,0.8s				
X16A	Lo Mia Camp, P	79.32 55	*e*P	P	03 18 25.2 +1.8
	comp=Z,6.4nm,1.1s				
MVCO	Mesa Verde	79.41 51	*e*P	P	03 18 25.3 +1.4
	comp=Z,18nm,1.6s				
ISCO	Idaho Springs	79.46 47	*e*P	P	03 18 25.6 +1.4
	comp=Z,20nm,1.9s				
ISCO	Idaho Springs	79.46 47	*e*P	P	03 18 25.6 +1.4
ISCO			pmax	pmax	
	comp=Z,20nm,1.9s				
OJC	Ojcow	79.56 327	*e*P	P	03 18 24.6 +0.5
	comp=Z,11nm,1.1s				
OJC	Ojcow	79.56 327	*e*P	P	03 18 24.6 +0.5
OJC			pmax	pmax	
	comp=Z,11nm,1.1s				
UZH	Uzhgorod	79.64 325	*e*P	P	03 18 18.1 -6.5
UZH			*i*		03 18 38.3
TRPA	Tarpa	79.90 325 ⇑	*i* P	P	03 18 27.7 +1.7
BR101	Keskin Array S	79.99 313	*e*P	P	03 18 27.9 +1.1
BRTR	Keskin Array B	79.99 313	P	P	03 18 27.9 +1.1
	comp=Z,1.0nm,0.8s,baz=97,slow=5.0,SNR=5.8				
BRTR			LR	LR	03 58 58.0
	comp=Z,58nm,18.8s,baz=52,slow=40				
BRTR	Keskin Array B	79.99 313	*i* P	P	03 18 27.6 +0.8
BRTR			pmax	pmax	
	comp=Z,1.0nm,0.8s				
S22A	4UR Ranch, Cre	80.08 50	*e*P	P	03 18 29.4 +1.8
	comp=Z,16nm,1.

comp=Z,7.7nm,1.5s
DPC Dobruska-Polom 80.90 329 *e*P **P 03 18 32.8 +1.4**
DPC *ex* x 03 19 04.9
DPC AMS AMS 04 00 10.0
comp=Z,100nm,14.8s
DPC Dobruska-Polom 80.90 329 *e*P **P 03 18 32.8 +1.4**
DPC MLR MLR
comp=Z,100nm,14.8s
UPC Upice 80.90 330 AMS AMS 04 00 10.0
comp=Z,200nm,13.9s
VYHS Vyhne 81.27 327 *e*P **P 03 18 33.6 +0.2**
VYHS pmax pmax
comp=Z,3.0nm,1.1s
VYHS Vyhne 81.27 327 *e*P **P 03 18 33.6 +0.2**
BRG Berggiesshubel 81.42 331 *e*P **P 03 18 35.1 +1.0**
comp=Z,5.8nm,1.3s
comp=N,134nm,13.3s
comp=E,132nm,15.5s
comp=Z,219nm,17.3s
BRG Berggiesshubel 81.42 331 *e*P **P 03 18 35.1 +1.0**
BRG pmax pmax
comp=Z,6.0nm,1.3s
BRG MLR MLR
comp=N,134nm,13.3s
BRG MLR MLR
comp=E,132nm,15.5s
BRG MLR MLR
comp=Z,219nm,17.3s
CLL Collm 81.43 332 *i* P **P 03 18 34.4 +0.3**
comp=Z,8.0nm,1.1s
CLL *i* pP **sP 03 18 45.0 +0.6**
comp=Z,8.0nm,0.9s
CLL *e*SS SS 03 34 00.0 +0.9
CLL *e*SSS SSS 03 38 00.0
CLL LmH 03 52 00.0
comp=N,100nm,22.0s
CLL LmH 03 52 00.0
comp=E,100nm,20.6s
CLL LmV 03 58 00.0
comp=Z,100nm,18.1s
CLL Collm 81.43 332 *e*P **P 03 18 35.1 +1.0**
CLL *e*pP **sP 03 18 44.2 -0.2**
CLL Collm 81.43 332 *e*P **P 03 18 35.1 +1.0**
CLL *e**PP **sP 03 18 44.2 -0.2**
PVCC Panska Ves 81.45 330 *e*P **P 03 18 35.7 +1.4**
PVCC AMS AMS 03 59 30.0
comp=Z,200nm,17.1s
PVCC Panska Ves 81.45 330 *e*P **P 03 18 35.7 +1.4**
PVCC MLR MLR
comp=Z,200nm,17.1s
JAVC Velka Javorina 81.49 328 *e*P **P 03 18 36.6 +2.0**
VRAC Vranov 81.59 328 *e*P **P 03 18 36.3 +1.2**
ECSD EROS Data Cent 81.67 40 *e*P **P 03 18 36.0 +0.4**
comp=Z,3.3nm,0.8s
GOPC GO Pecny, Ondr 81.85 330 AMS AMS 03 59 20.0
comp=Z,200nm,17.6s
KRUC Moravsky 81.87 328 *e*P **P 03 18 37.6 +1.1**
PRU Pruhonice 81.89 330 *e*P **P 03 18 37.8 +1.2**
PRU *e*pP **sP 03 18 46.3 -0.5**
PRU AMS AMS 04 04 10.0
comp=Z,200nm,11.9s
PRU Pruhonice 81.89 330 *e*P **P 03 18 37.8 +1.2**
PRU *e* 03 18 46.3
PRU MLR MLR
comp=Z,200nm,11.9s
LAZ Ladron 82.07 52 *e*P **P 03 18 40.6 +2.5**
ANMO Albuquerque 82.14 52 P **P 03 18 39.4 +1.0**
comp=Z,2.0nm,0.9s,baz=319,slow=11,SNR=8.7
ANMO Albuquerque 82.14 52 *e*P **P 03 18 40.1 +1.7**
comp=Z,15nm,1.6s
ANMO Albuquerque 82.14 52 *ce*P **P 03 18 39.7 +1.3**
ANMO pmax pmax
comp=Z,7.0nm,1.2s
RAYN Ar Rayn 82.48 294 *e*P **P 03 18 40.7 +0.5**
comp=Z,6.3nm,1.1s
NKC Novy Kostel 82.51 331 AMS AMS 04 00 30.0
PPT Papeete 82.95 119 LR LR 03 46 40.0
comp=Z,72nm,21.6s,baz=306,slow=29
KHC Kasperske Hory 82.95 330 *e*P **P 03 18 43.2 +1.0**
KHC *e*pP **sP 03 18 53.3 +0.8**
KHC *ex* x 03 19 18.9
KHC AMS AMS 04 00 20.0
comp=Z,200nm,17.4s
KHC Kasperske Hory 82.95 330 *e*P **P 03 18 43.2 +1.0**
KHC *e* 03 18 53.3
KHC MLR MLR
comp=Z,200nm,17.4s
CONA Conrad Observa 82.98 328 *i* pP **P 03 18 43.8 +1.4**
comp=Z,6.3nm,1.3s
EKA Eskdalemuir Ar 83.00 342 P **P 03 18 41.4 -0.9**
comp=Z,1.4nm,0.5s,baz=27,slow=4.8,SNR=8.7
EKA LR LR 04 02 19.1
comp=Z,44nm,18.5s,baz=230,slow=40
GEC2 GERESS Array S 83.13 330 *e*P **P 03 18 43.6 +0.4**
GEC2 GERESS Array S 83.13 330 *e*P **P 03 18 43.7 +0.4**
GERES GERESS Array B 83.13 330 P **P 03 18 43.6 +0.4**
comp=Z,0.6nm,0.7s,baz=35,slow=5.4,SNR=5.4
GERES LR LR 03 58 44.7
comp=Z,135nm,20.2s,baz=38,slow=38
MMAI Mount Meron Ar 83.34 307 P **P 03 18 45.5 +1.0**
comp=Z,4.0nm,0.7s,baz=34,slow=5.4,SNR=8.3
MMAI LR LR 03 58 22.6
comp=Z,54nm,21.8s,baz=160,slow=38
VTS Vitosha 83.64 321 ⇑*i*P **P 03 18 47.7 +1.7**
VTS Vitosha 83.64 321 *e*P **P 03 18 47.5 +1.5**
comp=Z,7.8nm,1.1s
VTS Vitosha 83.64 321 *e*P **P 03 18 47.5 +1.5**
VTS pmax pmax
comp=Z,8.0nm,1.1s
ARSA Arzberg 83.65 328 *i* pP **P 03 18 46.9 +1.1**
comp=Z,4.1nm,1.1s
MOA Molln 83.70 329 *i* pP **P 03 18 47.0 +0.9**
comp=Z,6.9nm,1.6s
DIVS Divibare 84.08 323 *e*P **P 03 18 48.8 +0.6**
comp=Z,22nm,2.0s
SOKA Soboth 84.31 328 *i* pP **P 03 18 49.8 +0.5**
comp=Z,11nm,1.1s
OBKA Obir 84.64 328 *i* PcP **P 03 18 53.0 +2.0**
comp=Z,3.8nm,1.0s
KBA Koelnbreinsper 84.69 329 *i* PcP **P 03 18 53.2 +1.8**
comp=Z,3.9nm,0.9s
MNTX Cornudas Mount 84.96 53 *e*P **P 03 18 54.4 +1.6**
comp=Z,10.0nm,1.5s
MOTA Moosalm 85.37 330 *i* pP **P 03 18 55.2 +0.5**
comp=Z,8.2nm,1.0s
RETA Reutte 85.39 331 *i* pP **P 03 18 55.7 +1.0**
comp=Z,8.2nm,1.0s
BFO Black Forest 85.61 332 *e*P **P 03 18 56.4 +0.6**
comp=Z,19nm,1.3s
BFO Black Forest 85.61 332 *i* P **P 03 18 56.9 +1.2**
FETA Feichten 85.78 330 *i* pP **P 03 18 56.6 -0.2**
comp=Z,6.5nm,1.2s
DAVA Damuels 85.90 331 *i* pP **P 03 18 57.9 +0.6**
comp=Z,10nm,1.0s
FUORN Ofenpass-Fuorn 86.30 330 *e*P **P 03 19 00.0 +0.6**
comp=Z,8.2nm,0.8s
TUE Stuetta 86.78 331 *e*P **P 03 19 04.5 +2.8**
comp=Z,8.7nm,1.1s
WMOK Wichita Mounta 86.89 47 *e*P **P 03 19 03.4 +1.1**
comp=Z,8.8nm,1.4s
WMOK Wichita Mounta 86.89 47 *e*P **P 03 19 03.4 +1.1**
WMOK pmax pmax
comp=Z,9.0nm,1.4s
TXAR Lajitas Array 87.64 54 P **P 03 19 06.5 +0.5**
comp=Z,1.1nm,0.9s,baz=292,slow=3.5,SNR=7.6
IDI Anoyia 88.06 315 LR LR 04 04 02.5
comp=Z,41nm,18.9s,baz=80,slow=39
MIAR Mount Ida 89.98 44 *e*P **P 03 19 18.2 +1.3**
comp=Z,18nm,1.4s
MIAR Mount Ida 89.98 44 *e*P **P 03 19 18.2 +1.3**
MIAR pmax pmax
comp=Z,18nm,1.4s
TOA1 Torodi Ar. Sit 118.29 318 *e*PKPdf **PKPdf 03 25 04.0 -1.1**
TORD Torodi Ar. Bea 118.30 318 PKP **PKPdf 03 25 04.0 -1.1**
comp=Z,0.9nm,1.0s,baz=323,slow=1.9,SNR=5.2
KOWA Kowa 119.98 324 PKP **PKPdf 03 25 08.5 +0.1**
comp=Z,1.7nm,0.6s,baz=108,slow=3.5,SNR=4.2
QSPA South Pole Qui 127.72 180 PKP **PKPdf 03 25 21.4 -0.3**
comp=Z,2.6nm,1.0s,baz=308,slow=5.3,SNR=4.0
SNAA Sanae 142.34 196 PKhKP PKPpre 03 25 43.7
comp=Z,1.3nm,0.8s,baz=159,slow=3.9,SNR=6.8
LPAZ La Paz 144.14 62 PKP **PKPab 03 25 51.2 -0.7**
comp=Z,1.9nm,0.6s,baz=354,slow=3.8,SNR=7.9
PLCA Paso Flores 152.93 107 PKPbc **PKPbc 03 26 11.5 -2.9**
comp=Z,2.7nm,1.0s,baz=241,slow=13,SNR=2.4

CSEM ***07*** *03:17:11.0, 37°.42N×24°.45W, h10km, ML3.1*
PDA 07 03:17:11.0±1.1, 37°.42N×24°.45W, h10km, MD3.6, ML3.1, Error ellipse: s-maj=7.8km s-min=3.3km az=80.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSMN	**Pico do Norte,**	**0.65**	**230**	*e*P	Pg	03 17 21.6	-1.9
PSMN				*e*S	Sg	03 17 29.3	-2.7
PSMN				A	A	03 17 31.7	
	95nm,0.2s						
PSMN	**Pico do Norte,**	**0.65**	**230**	*e*P	Pg	03 17 21.6	-1.9
PSMN				*e*S	Sg	03 17 29.3	-2.7
BART	**Pico Bartolome**	**0.68**	**302**	*e*P	Pg	03 17 21.5	-2.6
BART				*e*S	Sg	03 17 29.3	-3.7
BART				A	A	03 17 31.8	
	583nm,0.2s						
BART	**Pico Bartolome**	**0.68**	**302**	*e*P	Pg	03 17 21.5	-2.6
BART				*e*S	Sg	03 17 29.3	-3.7
PSMA	**Santa Maria**	**0.69**	**232**	*e*P	Pg	03 17 22.0	-2.4
PSMA				*e*S	Sg	03 17 30.2	-3.2
PSMA				A	A	03 17 32.0	
	113nm,0.1s						
CMLA	**Cha da Macela**	**0.92**	**292**	*e*P	Pg	03 17 25.2	-3.6
CMLA				*e*S	Sg	03 17 36.6	-4.2
CMLA				A	A	03 17 39.3	
	427nm,0.4s						
CMLA	**Cha da Macela**	**0.92**	**292**	*e*P	Pg	03 17 25.2	-3.6
CMLA				*e*S	Sg	03 17 36.6	-4.2
GRON	**Grota Negra**	**0.93**	**292**	*e*P	Pg	03 17 23.9	-5.0
GRON				*e*S	Sg	03 17 34.1	-7.0
GRON				A	A	03 17 36.4	
	109nm,0.2s						
PDA	**Ponta Delgada**	**1.02**	**289**	*e*P	Pg	03 17 26.6	-4.0
PDA				*e*S	Sg	03 17 38.9	-5.0
PDA				A	A	03 17 40.0	
	107nm,0.2s						
PDA	**Ponta Delgada**	**1.02**	**289**	*e*P	Pg	03 17 26.6	-4.0
PDA				*e*S	Sg	03 17 38.9	-5.0
PSET	**Sete Cidades**	**1.09**	**292**	*e*P	Pg	03 17 27.6	-4.4
PSET				*e*S	Sg	03 17 40.2	-5.9
PSET				A	A	03 17 43.0	
	218nm,0.3s						
PSET	**Sete Cidades**	**1.09**	**292**	*e*P	Pg	03 17 27.6	-4.4
PSET				*e*S	Sg	03 17 40.2	-5.9
PSCM	**Serra do Cume**	**2.47**	**302**	*e*P	Pn	03 17 46.8	-4.5
PSCM				*e*S	Sn	03 18 13.5	-8.0
PSCM				A	A	03 18 14.4	
	13nm,0.1s						
PSCM	**Serra do Cume**	**2.47**	**302**	*e*P	Pn	03 17 46.8	-4.5
PSCM				*e*S	Sn	03 18 13.5	-8.0
ADH	**Angra Heroismo**	**2.52**	**300**	*e*P	Pn	03 17 47.9	-4.1
ADH				*e*S	Sn	03 18 14.7	-8.2
ADH				A	A	03 18 21.6	
	28nm,0.3s						
ADH	**Angra Heroismo**	**2.52**	**300**	*e*P	Pn	03 17 47.9	-4.1
ADH				*e*S	Sn	03 18 14.7	-8.2
ROSA	**Rosais**	**3.27**	**295**	*e*P	Pn	03 17 58.3	-4.0
ROSA				*e*S	Sn	03 18 32.7	-8.5
ROSA				A	A	03 18 35.9	
	10nm,0.3s						
ROSA	**Rosais**	**3.27**	**295**	*e*P	Pn	03 17 58.3	-4.0
ROSA				*e*S	Sn	03 18 32.7	-8.5
PICO	**Pico**	**3.33**	**290**	*e*P	Pn	03 17 58.9	-4.2
PICO				*e*S	Sn	03 18 38.7	-4.1
PICO				A	A	03 18 39.9	
	76nm,0.2s						
PICO	**Pico**	**3.33**	**290**	*e*P	Pn	03 17 58.9	-4.2
PICO				*e*S	Sn	03 18 38.7	-4.1
PCAN	**Candelaria**	**3.36**	**289**	*e*P	Pn	03 17 59.0	-4.6
PCAN				*e*S	Sn	03 18 35.5	-8.0
PCAN				A	A	03 18 36.3	
	15nm,0.3s						
PCAN	**Candelaria**	**3.36**	**289**	*e*P	Pn	03 17 59.0	-4.6
PCAN				*e*S	Sn	03 18 35.5	-8.0

JMA 07 03:21:46.4±0.2, 37°.98N×144°.20E, h52km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.27**	**300**	P	Pn	03 22 22.4	+1.0
JIO	**Ouri**	**2.29**	**283**	P	Pn	03 22 23.1	+1.3
JIO				S	Sn	03 22 49.7	+0.9
MIYJ	**Miyakonagasawa**	**2.45**	**311**	S	Sn	03 22 53.6	+1.0
JOM	**Ohasama**	**2.72**	**304**	P	Pn	03 22 29.0	+1.4
JOM				S	Sn	03 23 01.3	+2.0
JFT	**Otama**	**3.10**	**263**	*e*S	Sn	03 23 09.9	+1.3
JYK	**Kaneyama**	**3.16**	**288**	P	Pn	03 22 35.6	+2.0
JYK				*e*S	Sn	03 23 12.5	+2.5
JANG	**Nango**	**3.17**	**320**	P	Pn	03 22 34.9	+1.1
JRY	**Ryogami san**	**4.67**	**247**	P	Pn	03 22 55.0	+0.6
JCH	**Churui**	**4.67**	**352**	P	Pn	03 22 53.8	-0.6

IDC ***07*** *03:31:20.2±0.8, 3°.66N×126°.16E, h0km, mb3.9/9, mb1 4.1/11, mb1mx3.7/64, mbtmp4.0/11, ML3.9/2, MS3.2/3, Ms1 3.2/3, ms1mx2.7/59, Error ellipse: s-maj=52.9km s-min=14.3km az=63.0*
ISCJB ***07*** *03:31:25.1±0.5, 3°.7N±0°.1×126°.4E±0°.1, h53km, mb4.1/13, MS3.0/2, Error ellipse: s-maj=23.7km s-min=7.7km az=145.7*
NEIC ***07*** *03:31:27.0±2.2, 3°.62N×126°.26E, h51km±22km, mb4.3/5, Error ellipse: s-maj=25.2km s-min=9.2km az=75.0*
ISC 07 03:31:27.1±0.7, 3°.7N±0°.1×126°.5E±0°.2, h53km, n27, σ0°91/23, mb4.1/13, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.62**	**133**	Pn	**Pn**	**03 33 01.7**	**-0.2**
	5.5nm,0.3s,baz=323,slow=15,SNR=9.1						
SIJI				Sn	**Sn**	**03 34 14.2**	**-1.9**
	1.1nm,0.3s,baz=180,slow=20,SNR=2.6						
FAKI	**Fak Fak**	**8.77**	**139**	*e*Pn	**Pn**	**03 33 32.1**	**+0.7**
TGY	**Tagaytay City**	**11.68**	**333**	LR	LR	03 38 54.8	
	comp=Z,200nm,18.4s,baz=2.5,slow=39						
JAY	**Jayapura**	**15.53**	**113**	Pn	**Pn**	**03 35 05.0**	**+2.1**
	0.2nm,0.3s,baz=262,slow=2.8,SNR=4.2						
FITZ	**Fitzroy Crossi**	**21.68**	**182**	P	**P**	**03 36 13.6**	**0.0**
	0.5nm,0.3s,baz=13,slow=9.2,SNR=6.1						
FITZ	**Fitzroy Crossi**	**21.68**	**182**	*e*P	**P**	**03 36 13.6**	**0.0**
	15nm,1.3s						
PMG	**Port Moresby**	**24.40**	**122**	LR	LR	03 47 15.5	
	comp=Z,121nm,18.7s,baz=130,slow=39						
WR1	**Warramunga Arr**	**24.75**	**162**	*e*P	**P**	**03 36 43.0**	**-0.9**
	14nm,1.2s						
WRA	**Warramunga Arr**	**24.75**	**162**	P	**P**	**03 36 43.0**	**-0.9**
	1.5nm,0.5s,baz=335,slow=11,SNR=21						
WB2	**Warramunga Arr**	**24.75**	**162**	*e*P	**P**	**03 36 42.7**	**-1.2**
	7.6nm,0.8s						
AS31	**Alice Springs**	**28.16**	**165**	*e*P	**P**	**03 37 15.1**	**+0.4**
	0.9nm,0.4s						
ASAR	**Alice Springs**	**28.16**	**165**	P	**P**	**03 37 15.1**	**+0.4**
	0.3nm,0.5s,baz=357,slow=14,SNR=3.2						
KSRS	**Korea Array**	**33.61**	**2**	LR	LR	03 51 52.3	
	comp=Z,12nm,19.6s,baz=195,slow=37						
STKA	**Stephens Creek**	**38.21**	**159**	P	**P**	**03 38 41.6**	**-0.3**
	1.0nm,0.4s,baz=334,slow=11,SNR=5.4						
MK32	**Makanchi Array**	**57.42**	**325**	*e*P	**P**	**03 41 09.7**	**-0.7**
MKAR	**Makanchi Array**	**57.42**	**325**	P	**P**	**03 41 09.7**	**-0.7**
	0.8nm,0.4s,baz=119,slow=7.4,SNR=16						
MKAR	**Makanchi Array**	**57.42**	**325**	*e*P	**P**	**03 41 10.2**	**-0.2**
	10nm,0.3s						
KURBB	**Kurchatov Arra**	**61.61**	**327**	P	**P**	**03 41 38.5**	**-0.7**
	0.5nm,0.4s,baz=129,slow=6.7,SNR=9.3						
KURK	**Kurchatov**	**61.61**	**328**	*e*P	**P**	**03 41 38.2**	**-1.0**
	2.2nm,0.8s						
BVAR	**Borovoye Array**	**67.19**	**327**	P	**P**	**03 42 15.8**	**+0.1**
	0.5nm,0.5s,baz=121,slow=10,SNR=3.8						
GEYT	**Alibeck**	**70.69**	**309**	P	**P**	**03 42 36.9**	**-0.8**
	2.9nm,0.3s,baz=64,slow=10,SNR=2.9						
PPT2	**Papeete2**	**85.37**	**108**	*e*LR	LR	03 43 55.2	
	152nm,25.8s						
ARA0	**ARCESS Array S**	**90.37**	**340**	*e*P	**P**	**03 44 23.2**	**+0.9**
ARCES	**ARCESS Array B**	**90.37**	**340**	P	**P**	**03 44 23.2**	**+0.9**
	1.4nm,0.9s,baz=96,slow=6.4,SNR=3.1						
TAOE	**Nuku Hiva Isla**	**93.92**	**99**	*e*LR	LR	03 44 02.4	
	142nm,32.4s						
TORD	**Torodi Ar. Bea**	**122.66**	**288**	PKP	**PKPdf**	**03 50 18.0**	**0.0**
	0.3nm,0.9s,baz=80,slow=1.4,SNR=3.3						
TOA1	**Torodi Ar. Sit**	**122.66**	**288**	*e*PKPdf	**PKPdf**	**03 50 18.0**	**0.0**

IDC ***07*** *03:31:20.2±0.8, 3°.66N×126°.16E, h0km, mb3.9/9, mb1 4.1/11, mb1mx3.7/64, mbtmp4.0/11, ML3.9/2, MS3.2/3, Ms1 3.2/3, ms1mx2.7/59, Error ellipse: s-maj=52.9km s-min=14.3km az=63.0*
ISCJB ***07*** *03:31:25.1±0.5, 3°.7N±0°.1×126°.4E±0°.1, h53km, mb4.1/13, MS3.0/2, Error ellipse: s-maj=23.7km s-min=7.7km az=145.7*
NEIC ***07*** *03:31:27.0±2.2, 3°.62N×126°.26E, h51km±22km, mb4.3/5, Error ellipse: s-maj=25.2km s-min=9.2km az=75.0*
ISC 07 03:31:27.1±0.7, 3°.7N±0°.1×126°.5E±0°.2, h53km, n27, σ0°91/23, mb4.1/13, Talaud Islands

CSEM ***07*** *03:40:07.7, 39°.20N×20°.78E, h19km±4km, ML1.8/5*
ATH 07 03:40:07.7, 39°.20N×20°.78E, h19km±4km, ML1.8/5, Error ellipse: s-maj=4.5km s-min=1.0km az=71.0, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DSL	**Palaion Diasel**	**0.26**	**106**	P	Pg	03 40 13.2	-0.4
DSL				S	Sb	03 40 17.1	-0.4
DSL				AML	AML	03 40 19.2	
	comp=N,596μm,0.2s						
DSL				AML	AML	03 40 19.9	
	comp=E,667μm,0.3s						
DSL	**Palaion Diasel**	**0.26**	**106**	P	Pg	03 40 12.5	-1.1
DSL				S	Sb	03 40 17.6	0.0
DSL				AML	AML	03 40 19.2	
	comp=N,596μm,0.2s						
DSL				AML	AML	03 40 19.9	
	comp=E,667μm,0.3s						
DSL	**Palaion Diasel**	**0.26**	**106**	P	Pg	03 40 13.3	-0.3
DSL				S	Sb	03 40 17.4	-0.2
LKD2	**Lefkada island**	**0.42**	**193**	P	Pb	03 40 16.6	-0.1
LKD2				S	Sb	03 40 23.8	+1.0
LKD2				AML	AML	03 40 24.6	
	comp=N,368μm,0.5s						
LKD2				AML	AML	03 40 24.8	
	comp=E,357μm,0.2s						
LKD2	**Lefkada island**	**0.42**	**193**	P	Pb	03 40 17.1	+0.4
LKD2				S	Sb	03 40 22.9	+0.2
LKD2	**Lefkada island**	**0.42**	**193**	P	Pg	03 40 16.5	+0.1
LKD2				S	Sb	03 40 23.2	+0.4
JAN	**Janina**	**0.46**	**7**	P	Pg	03 40 16.2	-0.8
JAN				S	Sb	03 40 24.4	+0.7
JAN				AML	AML	03 40 30.3	
	comp=N,421μm,0.2s						
JAN				AML	AML	03 40 30.3	
	comp=E,611μm,0.3s						
JAN	**Janina**	**0.46**	**7**	P	Pg	03 40 16.4	-0.7
JAN	**Janina**	**0.46**	**7**	P	Pg	03 40 16.5	-0.5
JAN				S	Sb	03 40 24.0	+0.3
IGT	**Igoumenitsa**	**0.48**	**314**	P	Pg	03 40 16.4	-0.9
IGT				S	Sg	03 40 23.6	-0.2
IGT				AML	AML	03 40 29.3	
	comp=E,141μm,0.3s						
IGT				AML	AML	03 40 31.4	
	comp=N,98μm,0.3s						
IGT	**Igoumenitsa**	**0.48**	**314**	P	Pg	03 40 16.2	-1.1
IGT				S	Sg	03 40 23.7	-0.2
IGT				AML	AML	03 40 29.3	
	comp=E,141μm,0.3s						
IGT				AML	AML	03 40 31.4	
	comp=N,97μm,0.3s						
IGT	**Igoumenitsa**	**0.48**	**314**	P	Pg	03 40 16.8	-0.6
IGT				S	Sg	03 40 23.9	0.0
EVR	**Evrytania**	**0.85**	**109**	P	Pn	03 40 24.7	-0.1
EVR	**Evrytania**	**0.85**	**109**	P	Pn	03 40 25.4	+0.6
EVR	**Evrytania**	**0.85**	**109**	P	Pg	03 40 24.4	+0.1
KPRO	**Kipourio**	**0.88**	**31**	P	Pn	03 40 26.1	+1.0
KPRO	**Kipourio**	**0.88**	**31**	P	Pn	03 40 26.0	+0.9
KPRO				S	Sn	03 40 38.0	+0.6
KPRO				AML	AML	03 40 44.4	
	comp=N,143μm,0.5s						
KPRO				AML	AML	03 40 50.4	
	comp=E,117μm,0.6s						
KPRO	**Kipourio**	**0.88**	**31**	P	Pn	03 40 25.3	+0.2
KEK	**Kerkira**	**0.91**	**304**	P	Pg	03 40 25.5	0.0
KEK	**Kerkira**	**0.91**	**304**	P	Pn	03 40 26.9	+1.4
KEK	**Kerkira**	**0.91**	**304**	P	Pg	03 40 25.3	-0.2
THL	**Klokotos Trika**	**1.02**	**69**	P	Pg	03 40 27.3	-0.2
THL	**Klokotos Trika**	**1.02**	**69**	P	Pg	03 40 28.5	+0.9
THL	**Klokotos Trika**	**1.02**	**69**	P	Pn	03 40 27.3	+0.2
PENT	**Pentalofos**	**1.03**	**16**	P	Pn	03 40 27.2	-0.1
VLS	**Valsamata**	**1.03**	**188**	P	Pb	03 40 26.3	-0.7
VLS				S	Sg	03 40 42.6	+1.2
VLS				AML	AML	03 40 46.7	
	comp=E,73μm,0.3s						
VLS				AML	AML	03 40 48.3	
	comp=N,113μm,0.4s						
VLS	**Valsamata**	**1.03**	**188**	P	Pb	03 40 26.0	-1.0
VLS				S	Sn	03 40 41.0	-0.2
VLS	**Valsamata**	**1.03**	**188**	P	Pb	03 40 26.8	-0.2
VLS				S	Sg	03 40 42.2	+0.8
KFL	**Anninata**	**1.09**	**180**	P	Pb	03 40 27.4	-0.6
KFL	**Anninata**	**1.09**	**180**	P	Pg	03 40 28.4	-0.4
KFL				S	Sg	03 40 43.2	0.0
KFL	**Anninata**	**1.09**	**180**	P	Pb	03 40 27.9	-0.1
AGG	**Agios Georgios**	**1.22**	**98**	P	Pb	03 40 30.1	-0.1
AGG	**Agios Georgios**	**1.22**	**98**	P	Pn	03 40 29.7	-0.1
AGG				S	Sg	03 40 49.1	+1.8
AGG	**Agios Georgios**	**1.22**	**98**	P	Pb	03 40 30.5	+0.3
NEST	**Nestorio**	**1.23**	**10**	P	Pg	03 40 34.3	+2.8

IDC ***07*** *04:05:03.0±0.3, 36°.07S×70°.73W, h0km, mb5.3/29, mb1 5.3/32, mb1mx5.3/37, mbtmp5.3/32, ML4.8/3, MS5.7/33, Ms1 5.7/33, ms1mx5.7/36, Error ellipse: s-maj=14.6km s-min=9.8km az=85.0*
ISCJB ***07*** *04:05:03.0±0.1, 36°.02S±0°.02×70°.80W±0°.03, h10km, mb5.7/362, MS5.8/545, Error ellipse: s-maj=3.4km s-min=2.5km az=12.1*
SJA ***07*** *04:05:03.8±0.6, 36°.03S×70°.97W, h24km±3km, ML5.3, MW5.8*
GCMT ***07*** *04:05:04.5±0.1, 36°.23S×70°.97W, h17km, MW6.0/134, Moment Tensor Solution. s131,c273; s134,c434; Duration: 2s4 Moment tensor: Scale 10^18Nm; Mrr-0.27±.01; Mθθ0.18±.01; Mφφ0.08±.01; Mrθ0.39±.03; Mrφ1.15±.01; Mθφ-0.02±.03; Best double couple: M0 1.22300×10^18 NP1:φs269.00000°, δ84.00000°, λ-21.00000°. NP2:φs2.00000°, δ69.00000°, λ-173.00000°. Principal axes: T 1.3320, Plg10.0000°, Azm317.0000°; N -0.2160, Plg68.0000°, Azm73.0000°; P -1.1150, Plg19.0000°, Azm224.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
BJI ***07*** *04:05:04.4, 35°.89S×70°.81W, h8km, mB5.7/59, Ms6.0/69, Ms7 5.9/64*
NEIC ***07*** *04:05:04.5±0.1, 36°.07S×70°.57W, h8km, mb5.9/299, ME6.3, MS5.7/299, MW5.9, MW6.0, ML5.7(GUC), Error ellipse: s-maj=5.7km s-min=3.2km az=81.0, Moment Tensor Solution. s83 Moment tensor: Scale 1017Nm; Mrr-2.86; Mθθ3.84; Mφφ-0.99; Mrθ5.32; Mrφ6.90; Mθφ-1.33; Best double couple: M0 9.50000×10^17 NP1:φs274.00000°, δ77.00000°, λ-40.00000°. NP2:φs14.00000°, δ51.00000°, λ-164.00000°. Principal axes: T 9.8400, Plg17.0000°, Azm329.0000°; N -0.7900, Plg48.0000°, Azm79.0000°; P -9.0500, Plg37.0000°, Azm226.0000°; Broadband fault plane solution: P waves. NP1:φs9.00000°, δ67.00000°, λ-158.00000°. NP2:φs270.00000°, δ70.00000°, λ-25.00000°. Principal axes: T Plg2.0000°, Azm320.0000°; N Plg0.0000°, Azm0.0000°; P Plg32.0000°, Azm229.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt [VII] at Parral; [VI] at Cauquenes, Linares, Longavi, Retiro and San Clemente; [V] at Chanco, Concepcion, Pelarco, Pelluhue, Quirihue, Rio Claro, Talca and Talcahuano. Felt widely in central Chile as far as Quillota and Temuco. Also felt at Cutral-Co, Argentina.
GUC ***07*** *04:05:05.5±0.7, 36°.08S×71°.00W, h5km, ML5.7*
NEIC ***07*** *04:05:05.0±0.0, 36°.19S×70°.53W, h15km Best double couple: NP1:φs273.00000°, δ73.00000°, λ-27.00000°. NP2:φs12.00000°, δ63.00000°, λ-161.00000°. Principal axes: T 1.1500, Plg6.0000°, Azm324.0000°; N -0.0700, Plg57.0000°, Azm64.0000°; P -1.0800, Plg31.0000°, Azm230.0000°;*
MOS ***07*** *04:05:06.2±0.9, 35°.98S×70°.93W, h23km, mb6.0/69, MS5.9/22 Error ellipse: s-maj=14.9km s-min=5.8km az=98.8*
ISC 07 04:05:04.1±0.5, 36°.05S±0°.02×70°.86W±0°.02, h6km±2km, h6km:pP-P, n1730, σ1°58/1713, mb5.8/361, MS5.8/548, 30C-26D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NICH	**Los Niches**	**1.09**	**344

NICH eS Sg 04 05 39.3 +0.2
CCHI Chillan 1.13 241 eP Pg 04 05 23.8 -1.9
CCHI eS Sg 04 05 39.6 -0.8
CCHI Chillan 1.13 241 eP Pg 04 05 23.6 -2.2
CCHI eS Sg 04 05 36.9 -3.5
CCHI IAML 04 05 40.7
comp=N,388μm,1.0s
GO05 HualaæØ 1.36 320 ePn Pn 04 05 27.9 -1.8
GO05 eSn Sb 04 05 45.8 -1.9
GO05 HualaæØ 1.36 320 i P Pn 04 05 28.2 -1.5
GO05 eP Pn 04 05 28.2 -1.5
GO05 eS Sb 04 05 46.5 -1.1
GO05 i S Sn 04 05 46.7 -1.4
GO05 HualaæØ 1.36 320⇑ iP Pn 04 05 27.9 -1.8
GO05 eS Sb 04 05 45.6 -2.0
GO05 IAML 04 05 47.1
comp=E,340μm,1.2s
COCH Cobquecura 1.57 267 eP Pn 04 05 30.9 -1.6
COCH eS Sn 04 05 50.7 -2.4
COCH Cobquecura 1.57 267⇓ iP Pn 04 05 30.5 -2.0
COCH eS Sn 04 05 49.6 -3.5
COCH IAML 04 05 56.1
comp=N,131μm,1.0s
CANA Caviahue 1.84 185 i P Pn 04 05 35.8 -0.6
CANA i S Sn 04 06 00.4 +0.3
CANA IAML 04 06 03.9
comp=Z,119μm,0.5s
CHPI Pichilemu 1.91 330 eP Pn 04 05 36.0 -1.1
CHPI eS Sn 04 06 00.8 -0.7
CCSP San Pedro de C 1.98 246 eP Pn 04 05 36.6 -1.6
CCSP eS Sn 04 06 00.9 -2.4
CCSP IAML 04 06 03.2
comp=N,138μm,1.2s
LMEL Las Melosas 2.26 14⇓ iP Pb 04 05 44.5 -1.0
LMEL eS Sg 04 06 17.0 +0.2
LMEL IAML 04 06 27.7
comp=N,57μm,2.2s
RFA San Rafael 2.33 57 eP Pn 04 05 44.7 +1.7
RFA eS Sg 04 06 18.8 -0.2
ANTU Antumapu 2.48 4⇑ iP Pb 04 05 48.1 -1.0
ANTU eS Sb 04 06 21.4 +1.4
CLCH Cerro Calan 2.66 6 eP Pn 04 05 50.0 +2.4
CLCH eS Sb 04 06 23.7 -1.5
FCH Farellones 2.76 10⇑ iP Pb 04 05 52.4 -1.6
FCH i S Sg 04 06 31.6 -1.1
PEL Peldehue 2.90 3⇑ iP Pn 04 05 53.2 +2.2
TMU Temuco 3.02 207⇑ iP Pn 04 05 52.5 +0.1
TMU eS Sn 04 06 28.4 -0.5
TMU IAML 04 06 43.0
comp=E,12μm,0.7s
ROC1 El Roble 3.07 357 ePn Pn 04 05 55.4 +2.0
ROC1 eSn Sn 04 06 29.5 -1.1
ROC1 El Roble 3.07 357 eP Pn 04 05 55.6 +2.2
ROC1 eS Sb 04 06 35.4 -1.7
ROCH El Roble 3.08 358⇓ iP Pn 04 05 55.3 +1.9
ROCH i S Sn 04 06 34.0 +3.4
AVIZ Vizcacheras 3.21 37 eP Pn 04 05 58.4 +3.2
AAGR Agrelo 3.40 30 eP Pb 04 06 01.6 -3.2
ARCO CERRO ARCO 3.58 27 eP Pb 04 06 07.0 -0.8
ARCO IAML 04 06 16.4
comp=Z,6μm,0.5s
ARCO i S Sn 04 06 38.0 -4.9
ASAL Salagasta 3.83 26 eP Pb 04 06 09.8 -2.4
AUSP Uspallata 4.01 18 eP Pb 04 06 11.7 -3.6
VLCH Valdivia 4.20 206⇑ iP Pn 04 06 09.4 +0.8
RTLS Leoncito 4.43 17 eP Pn 04 06 17.3 +5.1
RTLS eS Sg 04 07 26.0 -0.6
RTLS IAML 04 07 29.3
comp=Z,5μm,0.7s
RTCV Cerro Valdivia 4.60 25 eP Pn 04 06 19.4 +5.2
PLCA Paso Flores 4.68 177 Pn Pn 04 06 16.7 +1.3
comp=Z,10.0nm,0.3s,baz=22,slow=12,SNR=140
PLCA Pg Pb 04 06 27.4 +0.8
comp=Z,148nm,0.3s,baz=21,slow=14,SNR=53
PLCA Lg Lg 04 07 25.2
comp=Z,499nm,0.3s,baz=122,slow=22,SNR=20
PLCA LR LR 04 08 21.9
comp=Z,112μm,19.7s,baz=24,slow=43
ACAN Cantantal 4.84 40 eP Pn 04 06 21.3 +3.8
SJA San Juan 4.90 24 eP Pn 04 06 12.7 -5.7
RTLL Cerro Villicun 5.11 24 eP Pn 04 06 25.6 +4.4
RTLL eS Sg 04 07 51.2 +3.0
RTLL IAML 04 08 05.2
comp=Z,1μm,0.6s
AMOG MOGNA 5.47 22 eP Pn 04 06 30.4 +4.2
AMOG eS Sg 04 08 04.0 +4.4
MRA San Martin 5.59 51 eP Pn 04 06 29.9 +2.0
MRA eS Sg 04 07 58.0 -5.5
SUCO SUCO 5.61 63 eP Pn 04 06 30.3 +2.2
SUCO eS Sg 04 07 57.9 -6.3
AROD Rodeo 5.98 12 eP Pn 04 06 36.6 +3.2
AROD eS Sb 04 07 55.0 -6.0
ACDV Cuesta del Vie 6.04 14 eP Pn 04 06 37.4 +3.2
ACDV IAML 04 08 26.0
comp=Z,834nm,0.6s
APLL PUNTA DE LOS L 6.71 34 eP Pn 04 06 46.5 +3.3
APLL IAML 04 07 19.3
comp=Z,560nm,0.6s
APLL eS Sb 04 08 22.0 +0.5
AGUA GUANDACOL 6.84 18 eP Pn 04 06 47.2 +2.1
AGUA eS Sb 04 08 21.5 -4.0
LCO Las Campanas 7.02 1 ePn Pn 04 06 49.6 +1.9
LCO eSn Sn 04 08 04.3 -3.8
LCO Las Campanas 7.02 1 eP Pn 04 06 48.2 +0.5
LCO eS Sn 04 08 11.9 +3.8
LCO Las Campanas 7.02 1 P Pn 04 06 49.1 +1.4
LCO pmax pmax
comp=Z,914nm,1.4s
TRQA Tornquist 7.37 108 ePn Pn 04 06 52.9 +0.6
TRQA eSn Sn 04 08 13.5 -2.8
TRQA Tornquist 7.37 108 P Pn 04 06 52.0 -0.3
ACLC CERRO LA CRUZ 7.38 28 eP Pn 04 06 57.0 +4.4
VCA Vinchina 7.63 18 eP Pn 04 07 00.4 +4.4
VCA eS Sg 04 09 02.3 -6.8
CYA Choya 8.71 31 eP Pn 04 07 11.1 +0.4
CYA eS Sg 04 09 26.3 -17
CYA IAML 04 09 45.8
comp=Z,616nm,0.9s
AHML Horco Molle 10.37 29 i P Pn 04 07 32.8 -0.7
comp=Z,184nm,0.8s
AHML IAML 04 10 42.6
comp=Z,184nm,0.8s
GO02 Mina Guanaco 10.91 6 ePn Pn 04 07 39.2 -1.9
GO02 eSn Sn 04 09 35.5 -8.2
CHRN Cochrane 11.26 186 ePn Pn 04 07 46.7 +1.2
CHRN Cochrane 11.26 186 eP Pn 04 07 43.6 -2.0
CHRN IAML 04 07 48.4
comp=Z,82nm,0.7s
PB14 IPOC Station P 11.39 2 eP Pn 04 07 51.8 +4.1
PB14 eS Sn 04 10 11.1 +15
SLA San Lorenzo 12.20 24 eP Pn 04 07 59.1 +0.5
PB10 IPOC Station P 12.50 1 ePn Pn 04 08 02.6 +0.1
PB10 eSn Sn 04 10 11.8 -10
PB10 IPOC Station P 12.50 1 eP Pn 04 08 05.3 +2.8
HJA Humahuaca 13.64 22 eP Pn 04 08 18.8 +0.3
PB04 IPOC Station P 13.68 3 ePn Pn 04 08 21.1 +2.2
PB04 eSn Sn 04 10 49.4 -2.0
YJA Yavi 14.59 20 eP Pn 04 08 31.8 +0.3
PB01 IPOC Station P 15.00 5 ePn Pn 04 08 36.8 0.0
PB01 eSn Sn 04 11 19.8 -3.6
CPUP Villa Florida 15.08 54 Pn Pn 04 08 36.6 -1.1
comp=Z,0.3nm,0.3s,baz=211,slow=12,SNR=8.4
CPUP Lg Lg 04 13 06.2
comp=Z,1.3nm,0.3s,baz=322,slow=20,SNR=2.7
CPUP Villa Florida 15.08 54 ePn Pn 04 08 36.6 -1.1
CPUP eSn Sn 04 11 20.9 -4.3
CPUP Villa Florida 15.08 54 eP Pn 04 08 36.7 -1.1
CPUP e 04 11 20.9
I41PY VILLA FLORIDA 15.08 54 i 05 30 00.0
baz=222,slow=321,SNR=2.0
CPSB Cacapava Do Su 15.62 74⇓ iP Pn 04 08 45.9 +1.1
CPSB i 04 08 48.2
CPSB i 04 08 58.0
CPSB i 04 09 07.6
CPSB i 04 09 37.3
CPSB i S S 04 11 47.9 -5.9
CPSB e 04 13 03.5
CPSB i 04 13 31.9
MNMC Minye Minye 16.89 4 ePn Pn 04 09 01.4 0.0
comp=Z,2μm,1.0s
EFI East Falkland 18.09 154 ePn Pn 04 09 16.0 +0.1
comp=Z,2μm,1.6s
EFI East Falkland 18.09 154 eP Pn 04 09 16.0 +0.1
EFI pmax pmax
comp=Z,2μm,1.6s
LPAZ La Paz 19.83 8 P Pn 04 09 37.9 +0.1
comp=Z,3.3nm,0.3s,baz=180,slow=7.8,SNR=64
LPAZ LR LR 04 18 33.7
comp=Z,63μm,18.6s,baz=151,slow=41
SIV San Ignacio 21.80 26 P P 04 09 56.6 -0.4
comp=Z,101nm,1.1s,baz=222,slow=11,SNR=76
SIV LR LR 04 19 19.8
comp=Z,64μm,21.8s,baz=216,slow=39
SPB Sao Paulo 23.75 65 eP P 04 10 16.8 -0.4
comp=Z,492nm,1.1s
SPB LR LR
comp=Z,39μm,21.0s
NNA Nana 24.56 346 P P 04 10 24.7 -0.2
comp=Z,14nm,0.8s,baz=196,slow=9.6,SNR=5.8
NNA LR LR 04 18 12.6
comp=Z,8μm,21.4s,baz=158,slow=32
NNA Nana 24.56 346 eP P 04 10 26.3 +1.4
NNA Nana 24.56 346 i P P 04 10 26.8 +1.9
BSCB Bom Sucesso 27.27 64 eP P 04 10 47.5 -2.0
BSCB i 04 10 50.4
BSCB e 04 10 57.9
BSCB i 04 11 37.9
BSCB i S S 04 15 31.6 +2.2
BSCB i 04 15 43.9
BSCB i 04 16 15.6
BSCB i 04 17 24.7
SAML Samuel 27.87 16 eP P 04 10 54.4 -0.3
comp=Z,168nm,1.4s
SAML LR LR
comp=Z,55μm,20.0s
SAML Samuel 27.87 16 P P 04 10 54.4 -0.3
SAML pmax pmax
comp=Z,170nm,1.3s
I09BR BRASILIA INFRA 28.78 51 i 06 57 40.0
baz=217,slow=320,SNR=0.8
PMSA Palmer Station 29.05 174 P P 04 11 03.8 -0.9
comp=Z,33nm,0.8s,baz=8.0,slow=13,SNR=1.9
PMSA LR LR 04 22 28.3
comp=Z,17μm,18.4s,baz=336,slow=36
ATAH Atahualpa 29.60 345 P P 04 11 12.9 +2.4
comp=Z,15nm,0.9s,baz=169,slow=7.1,SNR=12
ATAH LR LR 04 21 32.2
comp=Z,9μm,19.1s,baz=160,slow=33
HOPE Hope Point 29.91 138 PFAKE 04 11 20.0 +7.6
HOPE LR LR
comp=Z,26μm,19.0s
RPN Rapa Nui 33.79 274 LR LR 04 21 45.2
comp=Z,12μm,19.7s,baz=115,slow=30
RPN Rapa Nui 33.79 274 eP P 04 11 47.5 +0.7
comp=Z,482nm,1.4s
RPN Rapa Nui 33.79 274 eP P 04 11 47.6 +0.7
RPN pmax pmax
comp=Z,481nm,1.4s
PTGA Pitinga 36.57 18 LR LR 04 28 42.2
comp=Z,22μm,18.6s,baz=197,slow=39
PTGA Pitinga 36.57 18 eP P 04 12 09.9 -1.0
comp=Z,220nm,1.3s
OTAV Otavalo 36.79 347 eP P 04 12 14.8 +1.4
comp=Z,206nm,1.5s
OTAV LR LR
comp=Z,8μm,22.0s
OTAV Otavalo 36.79 347 eP P 04 12 15.6 +2.3
OTAV Otavalo 36.79 347 P P 04 12 14.7 +1.4
OTAV pmax pmax
comp=Z,210nm,1.5s
FLOC Florencia 37.71 352 eP P 04 12 21.6 +1.0
CRUC La Cruz 37.86 350 eP P 04 12 24.9 +2.7
SOTA Rioblanco 38.37 351 eP P 04 12 30.2 +3.5
PCON Cinco Dias 38.53 351 eP P 04 12 30.9 +2.7
BETC Betania 38.77 353⇑ eP P 04 12 31.5 +2.0
MARP Paez Belalcaza 38.98 352 eP P 04 12 32.2 +0.6
GRGC Isla de Gorgon 39.45 348 eP P 04 12 38.2 +3.0
PAYG Puerto Ayora 39.56 329 eP P 04 12 38.1 +2.0
comp=Z,186nm,1.2s
PAYG LR LR
comp=Z,12μm,21.0s
HORQ Saladito 39.70 351 eP P 04 12 40.8 +3.2
PRAC Prado 39.74 354 eP P 04 12 38.9 +1.2
comp=Z,841nm,1.8s
PRAC LR LR
comp=Z,15μm,20.0s
VILC Villavicencio, 40.04 356 eP P 04 12 42.1 +1.9
YOTC Yotoco, Valle 40.16 351 eP P 04 12 40.2 -1.0
CHIC Chingaza 40.56 356 eP P 04 12 46.1 +1.3
ROSC El Rosal 40.81 355 P P 04 12 49.3 +2.4
comp=Z,43nm,0.8s,baz=177,slow=5.2,SNR=26
ROSC LR LR 04 29 44.2
comp=Z,22μm,20.1s,baz=196,slow=36
ROSC El Rosal 40.81 355 eP P 04 12 48.8 +1.9
NORC Norcasia 41.57 354 eP P 04 12 53.5 +0.7
RUSC La Rusia 41.77 357 eP P 04 12 55.6 +0.6
comp=Z,405nm,1.4s
RUSC LR LR
comp=Z,7μm,21.0s
HELC Santa Helena 42.25 353 eP P 04 12 58.7 0.0
comp=Z,579nm,1.0s
HELC eS S 04 19 22.2 +2.3
HELC LR LR
comp=Z,22μm,21.0s
HELC Santa Helena 42.25 353 eP P 04 12 59.4 +0.8
BARC Barichara 42.47 357 eP P 04 13 00.8 +0.4
RCBR Riachuelo 43.95 55 PFAKE 04 13 20.0 +7.8
RCBR LR LR
comp=Z,61μm,18.0s
SDV Santo Domingo 44.70 0 P P 04 13 17.6 -0.7
comp=Z,82nm,0.8s,baz=200,slow=10,SNR=31
SDV LR LR 04 32 47.7
comp=Z,14μm,21.4s,baz=176,slow=37
SDV Santo Domingo 44.70 0 eP P 04 13 17.6 -0.7
comp=Z,96nm,0.9s
BCIP Isla Barro Col 45.77 348 eP P 04 13 27.3 +0.8
comp=Z,299nm,1.5s
BCIP LR LR
comp=Z,6μm,19.0s
CODC Agust`›n Codaz 45.80 356 eP P 04 13 25.4 -1.4
PCRV Puerto La Cruz 46.35 8 P P 04 13 31.6 +0.4
comp=Z,20nm,1.0s,baz=164,slow=4.9,SNR=1.9
PCRV LR LR 04 34 31.0
comp=Z,32μm,19.8s,baz=172,slow=38
VNA3 Neumayer Olymp 47.10 157 P P 04 13 36.7 +0.3
VNA1 Neumayer--Stat 47.41 156 P P 04 13 39.3 +0.5
HDC Heredia 47.48 342 eP P 04 13 42.0 +1.9
comp=Z,627nm,1.7s
HDC LR LR
comp=Z,6μm,20.0s
JTS JuntasAbangare 47.97 341 P P 04 13 44.9 +1.1
comp=Z,28nm,1.0s,baz=180,slow=4.0,SNR=14
GRGR Grenville 48.70 12 PFAKE 04 14 00.0 +11
GRGR LR LR
comp=Z,17μm,18.0s
SNAA Sanae 49.32 157 P P 04 13 53.3 -0.4
SNAA Sanae 49.32 157 P P 04 13 53.2 -0.4
comp=Z,79nm,1.1s,baz=276,slow=5.5,SNR=64
SNAA LR LR 04 32 53.7
comp=Z,11μm,20.4s,baz=286,slow=34
SNAA Sanae 49.32 157 eP P 04 13 53.2 -0.4
comp=Z,719nm,1.4s
SNAA Sanae 49.32 157 c iP P 04 13 52.6 -1.1
ESPN Las Esperanzas 49.64 343 eP P 04 13 57.1 +0.6
comp=Z,404nm,1.7s
ESPN LR LR
comp=Z,3μm,19.0s
TRMF Trois Ilets 51.16 12 eP P 04 14 07.8 -0.2
FDF Fort de France 51.34 12 PFAKE 04 14 20.0 +11
FDF LR LR
comp=Z,15μm,21.0s
FDF Fort de France 51.34 12 eP P 04 14 09.1 -0.3
PCM Pelee Case Pet 51.41 12 eP P 04 14 12.8 +2.9
BAMF Morne Balai 51.42 12 eP P 04 14 20.6 +11
GDHS Morne Mazeau, 52.74 11 eP P 04 14 22.3 +2.4
comp=Z,166nm,1.0s
GDHS LR LR
comp=Z,14μm,21.0s
H05N1 Guadeloupe/Mar 52.90 12 P P 04 14 20.4 -0.6
SEUS St. Eustatius 53.77 9 PFAKE 04 14 40.0 +13
SEUS LR LR
comp=Z,13μm,19.0s
SABA Saba 53.86 9 PFAKE 04 14 40.0 +12
SABA LR LR
comp=Z,18μm,19.0s
CRPR Cabo Rojo, PR 53.88 4 eP P 04 14 28.9 +0.7
comp=Z,157nm,1.0s
CRPR LR LR
comp=Z,19μm,22.0s
OBIP Obispado Ponce 53.95 5 eP P 04 14 28.1 -0.6
comp=Z,86nm,0.9s
SJG San Juan 54.05 6 eP P 04 14 29.0 -0.4
comp=Z,171nm,1.4s
SJG LR LR
comp=Z,13μm,19.0s
SJG San Juan 54.05 6 eP P 04 14 29.0 -0.4
SJG pmax pmax
comp=Z,170nm,1.4s
NVL N'lazarevskaya 54.06 156⇓ iP P 04 14 25.9 -3.0
NVL ePPP PPP 04 17 47.5
NVL i S S 04 22 02.0 -3.2
NVL pmax pmax
comp=Z,157nm,0.9s
APG El Apazote 54.06 336 P P 04 14 30.6 +0.7
comp=Z,23nm,0.7s,baz=200,slow=5.9,SNR=25
APG LR LR 04 32 40.6
comp=Z,7μm,21.0s,baz=144,slow=31
MPR Mayaguez 54.08 4 PFAKE 04 14 40.0 +10
MPR LR LR
comp=Z,8μm,21.0s
MTP Monte Pirata 54.09 6 eP P 04 14 33.3 +3.6
comp=Z,61nm,1.1s
MTP LR LR
comp=Z,20μm,19.0s
HUMP Col San Antoni 54.10 6 eP P 04 14 30.2 +0.4
comp=Z,92nm,1.4s
HUMP LR LR
comp=Z,16μm,18.0s
ANWB Willy Bob 54.11 11 eP P 04 14 29.6 -0.3
comp=Z,354nm,1.2s
ANWB LR LR
comp=Z,9μm,20.0s
QSPA South Pole Qui 54.19 180 P P 04 14 30.2 0.0
comp=Z,97nm,0.9s,baz=151,slow=5.8,SNR=165
QSPA South Pole Qui 54.19 180 eP P 04 14 30.2 0.0
QSPA LR LR
comp=Z,6μm,21.0s
CBYP Canovanas 54.23 6 eP P 04 14 28.5 -2.3
comp=Z,252nm,1.4s
CBYP LR LR
comp=Z,17μm,20.0s
AOPR Arecibo Observ 54.24 5 eP P 04 14 35.4 +4.6
comp=Z,116nm,1.3s
AGP Aguadilla 54.27 4 PFAKE 04 14 40.0 +8.9
AGP LR LR
comp=Z,14μm,21.0s
SMRT St. Maarten 54.31 9 PFAKE 04 14 40.0 +8.7
SMRT LR LR
comp=Z,15μm,22.0s
MTDJ Mount Denham 54.35 352 PFAKE 04 14 40.0 +8.3
MTDJ LR LR
comp=Z,5μm,19.0s
STVI Saint Thomas 54.39 7 PFAKE 04 14 40.0 +8.1
STVI LR LR
comp=Z,12μm,20.0s
SDDR Presa de Saban 54.73 359 eP P 04 14 34.7 +0.3
comp=Z,64nm,1.3s
SDDR LR LR
comp=Z,9μm,19.0s
ABVI Anegada Island 54.83 8 PFAKE 04 14 50.0 +15
ABVI LR LR
comp=Z,14μm,18.0s
CCIG Comitan 55.81 335 PFAKE 04 15 00.0 +18
CCIG LR LR
comp=Z,8μm,22.0s
LCCY Blossom Villag 56.10 350 eP P 04 14 47.4 +3.2
comp=Z,955nm,1.5s
RKT Rikitea 56.33 264 eS S 04 22 32.3 -4.6
comp=Z,2μm,29.0s
RKT eLQ LQ 04 28 51.5
comp=Z,12μm,31.2s
RKT eLR LR 04 31 07.8
comp=Z,7μm,30.0s,baz=122
GRTK Grand Turk 57.25 360 PFAKE 04 15 00.0 +7.7
GRTK LR LR
comp=Z,6μm,19.0s
CMIG Matias Romero 57.54 333 LR LR 04 34 44.8
comp=Z,4μm,19.4s,baz=144,slow=31
TEIG Tepich 58.35 341 PFAKE 04 15 10.0 +10
TEIG LR LR
comp=Z,3μm,18.0s
ASCN Ascension 58.44 76 PFAKE 04 15 10.0 +9.0
ASCN LR LR
comp=Z,6μm,18.0s
TLIG Tlapa 59.42 329 eP P 04 15 09.4 +1.6
comp=Z,77nm,1.2s
TLIG LR LR
comp=Z,10μm,21.0s
MYIG MØrida 59.45 339 eP P 04 15 10.5 +2.7
comp=Z,396nm,1.3s
MYIG LR LR
comp=Z,4μm,22.0s
LVIG Laguna Verde 60.52 332 eP P 04 15 15.8 +0.7
comp=Z,97nm,1.5s
LVIG LR LR
comp=Z,4μm,22.0s
SHEL Horse Pasture 60.78 89 PFAKE 04 15 30.0 +13
SHEL LR LR
comp=Z,6μm,20.0s
UNM Universidad Na 61.26 329 PFAKE 04 15 30.0 +9.5
UNM LR LR
comp=Z,6μm,22.0s
SBA Scott Base 61.27 192 eP P 04 15 21.2 +1.6
comp=Z,238nm,1.6s
SBA LR LR
comp=Z,3μm,18.0s
SBA Scott Base 61.27 192 eP P 04 15 21.2 +1.6
SBA pmax pmax
comp=Z,240nm,1.6s
VNDA Vanda 62.28 191 P P 04 15 27.4 +1.0
comp=Z,24nm,0.9s,baz=142,slow=5.7,SNR=39
VNDA LR LR 04 38 02.9
comp=Z,4μm,21.7s,baz=138,slow=32
VNDA PKPPKP P'P'df 04 44 29.7 -11
comp=Z,1.6nm,1.2s,baz=316,slow=7.3,SNR=3.2
MOIG Morelia 62.42 328 eP P 04 15 29.9 +1.5
comp=Z,119nm,1.1s
MOIG LR LR
comp=Z,8μm,22.0s
060Z West Palm Beac 62.79 350 P P 04 15 30.5 +0.2
baz=171
059Z Ave Maria 62.85 349 P P 04 15 31.4 +0.7
baz=170
JRQG Juriquilla Cam 63.01 329 eP P 04 15 33.8 +1.5
comp=Z,228nm,1.3s
JRQG LR LR
comp=Z,17μm,20.0s
059A Moore Haven 63.43 350 P P 04 15 33.3 -1.2
baz=170
SYO Syowa Base 63.60 158⇑ iP P 04 15 32.8 -2.5
058A Arcadia 63.62 349 P P 04 15 36.0 +0.2
baz=170
959A Okeechobee 63.94 350 P P 04 15 36.4 -1.5
baz=171
957A Wimauma 64.28 349 P P 04 15 38.9 -1.3
baz=170
859A Kempfer Cattle 64.47 350 P P 04 15 39.8 -1.6
baz=171
DWPF Disney Wildern 64.59 350 PFAKE 04 15 50.0 +7.8
DWPF LR LR
comp=Z,6μm,20.0s
857A Zephyrhills 64.87 349 P P 04 15 42.7 -1.3
baz=170
757A Oxford 65.50 349 P P 04 15 45.7 -2.4
baz=170
ZAIG Zacatecas 65.74 328 eP P 04 15 51.8 +1.6
comp=Z,60nm,1.3s
ZAIG LR LR
comp=Z,8μm,21.0s
656A Willston 66.00 349 P P 04 15 49.7 -1.6
baz=170
657A Interlachen 66.11 350 P P 04 15 50.5 -1.4
baz=170
655A Horseshoe Beac 66.25 348 S S 04 24 45.1 +2.6
baz=169
LNIG Linares 66.38 332 eP P 04 15 53.4 -0.4
comp=Z,129nm,1.6s
LNIG LR LR
comp=Z,2μm,22.0s
556A Lake Butler 66.60 349 P P 04 15 54.3 -0.8
baz=170
555A McAlpin 66.80 349 P P 04 15 55.2 -1.2
baz=169
456A Hilliard 67.25 350 P P 04 15 58.3 -0.9
baz=170

455A	Stateville	67.42 349	P	P	04 15 59.5	-0.9
	baz=169					
454A	Quitman	67.49 348	P	P	04 16 00.1	-0.6
	baz=169					
SACV	Santiago Islan	67.59 50	PFAKE		04 16 10.0	+8.2
SACV			LR	LR		
	comp=Z,10µm,18.0s					
646A	Port Sulphur	67.68 342	P	P	04 16 01.8	-0.2
	baz=163					
453A	Whigham	67.75 348	P	P	04 16 02.0	-0.4
	baz=168					
451A	Vernon	67.78 346	P	P	04 16 02.2	-0.4
	baz=167					
TBI	Tubuai	67.79 257	eP	P	04 16 04.8	+1.8
	comp=Z,362nm,1.4s					
TBI			eS	S	04 24 57.6	-4.1
	comp=Z,2µm,26.0s					
TBI			eLQ	LQ	04 33 40.9	
	comp=Z,8µm,25.8s					
TBI			eLR	LR	04 36 33.6	
	comp=Z,6µm,31.5s,baz=139					
355A	Pearson	67.98 349	P	P	04 16 03.0	-0.9
	baz=169					
TAOE	Nuku Hiva Isla	68.11 275	eS	S	04 25 02.2	-3.8
	comp=Z,3µm,24.5s					
TAOE			eLQ	LQ	04 33 42.3	
	comp=Z,7µm,33.2s					
TAOE			eLR	LR	04 36 32.8	
	comp=Z,7µm,28.2s,baz=126					
450A	Crestview	68.12 345	P	P	04 16 03.8	-1.0
	baz=166					
TIGA	Tifton	68.19 348	P	P	04 16 04.2	-1.0
	baz=169					
TIGA	Tifton	68.19 348	eP	P	04 16 05.4	+0.2
	comp=Z,518nm,2.0s					
TIGA			LR	LR		
	comp=Z,4µm,20.0s					
KVTX	Kingsville	68.20 334	eP	P	04 16 08.2	+2.9
	comp=Z,391nm,1.3s					
353A	Camilla	68.21 348	P	P	04 16 04.1	-1.1
	baz=168					
449A	Pace	68.21 345	P	P	04 16 05.7	+0.3
	baz=166					
BBSR	BB Station	68.31 6	PFAKE		04 16 20.0	+14
BBSR			LR	LR		
	comp=Z,6µm,22.0s					
351A	Pinckard	68.39 346	P	P	04 16 05.2	-1.2
	baz=167					
256A	Glennville	68.46 350	P	P	04 16 05.4	-1.4
	baz=170					
352A	Blakely	68.46 347	P	P	04 16 06.5	-0.4
	baz=168					
255A	Hazlehurst	68.50 349	P	P	04 16 06.3	-0.8
	baz=170					
448A	Bay Minette	68.52 344	P	P	04 16 06.8	-0.5
	baz=165					
544A	White Castle	68.53 341	P	P	04 16 06.9	-0.4
	baz=162					
447A	Lucedale	68.56 344	P	P	04 16 06.6	-0.9
	baz=164					
BRAL	Brewton	68.57 345	P	P	04 16 07.2	-0.3
	baz=166					
BRAL	Brewton	68.57 345	eP	P	04 16 08.7	+1.1
	comp=Z,162nm,1.0s					
254A	Abbeville	68.64 349	P	P	04 16 06.8	-1.1
	baz=169					
350A	Dozier	68.67 346	P	P	04 16 08.0	-0.2
	baz=166					
543A	St. Martinvill	68.69 341	P	P	04 16 07.8	-0.5
	baz=162					
446A	Poplarville	68.73 343	P	P	04 16 09.0	+0.5
	baz=164,SNR=12					
349A	Repton	68.78 345	P	P	04 16 08.6	-0.2
	baz=166					
253A	Americus	68.89 348	P	P	04 16 08.4	-1.1
	baz=168					
445A	Amite	68.91 342	P	P	04 16 09.2	-0.4
	baz=163					
542A	Morse	68.92 340	P	P	04 16 09.6	-0.1
	baz=161					
252A	Lumpkin	68.93 347	P	P	04 16 08.8	-1.0
	baz=168					
348A	Jackson	68.99 344	P	P	04 16 10.1	-0.1
	baz=165					
444A	Pine Grove	68.99 342	P	P	04 16 10.1	-0.1
	baz=163					
541A	Lake Charles	69.03 339	P	P	04 16 10.8	+0.4
	baz=161					
156A	Sylvania	69.07 350	P	P	04 16 09.6	-1.0
	baz=171					
347A	Saraland	69.12 344	P	P	04 16 10.6	-0.4
	baz=165,SNR=10.0					
251A	Midway	69.15 347	P	P	04 16 10.3	-0.9
	baz=167,SNR=10.0					
155A	Kite	69.18 350	P	P	04 16 10.5	-0.8
	baz=170					
250A	Grady	69.20 346	P	P	04 16 10.4	-1.0
	baz=166					
154A	Montrose	69.27 349	P	P	04 16 10.9	-1.0
	baz=169					
443A	Delano Plantat	69.31 341	P	P	04 16 12.7	+0.6
	baz=162					
346A	Big Creek Wild	69.32 343	P	P	04 16 12.1	-0.2
	baz=164					
NHSC	New Hope	69.35 352	P	P	04 16 12.3	0.0
	baz=172					
NHSC	New Hope	69.35 352	eP	P	04 16 13.4	+1.0
	comp=Z,739nm,1.6s					
NHSC			LR	LR		
	comp=Z,6µm,19.0s					
249A	Camden	69.37 345	P	P	04 16 12.0	-0.5
	baz=166					
345A	Thompson Farm,	69.38 343	P	P	04 16 12.7	0.0
	baz=163					
153A	Fort Valley	69.42 348	P	P	04 16 11.9	-0.9
	baz=169					
442A	Mamou	69.44 340	P	P	04 16 12.3	-0.6
	baz=161					
833A	Chaparral WMA,	69.45 333	P	P	04 16 13.4	+0.3
	baz=156,SNR=34					
833A	Chaparral WMA,	69.45 333	eP	P	04 16 13.8	+0.7
	comp=Z,416nm,1.4s					
151A	Opelika	69.56 347	P	P	04 16 12.6	-1.1
	baz=167,SNR=14					
152A	Waverly Hall	69.58 348	P	P	04 16 12.6	-1.2
	baz=168					
248A	Dixon Mills	69.61 345	P	P	04 16 12.7	-1.3
	baz=165					
441A	DeRidder	69.68 340	P	P	04 16 14.5	0.0
	baz=161					
344A	Westbrook Farm	69.69 342	P	P	04 16 14.1	-0.4
	baz=163,SNR=10.0					
Z55A	Blythe	69.72 350	P	P	04 16 13.8	-0.8
	baz=170					
HKT	Hockley	69.73 337	eP	P	04 16 15.6	+0.9
	comp=Z,236nm,1.5s					
HKT			LR	LR		
	comp=Z,3µm,21.0s					
HKT	Hockley	69.73 337	eP	P	04 16 15.6	+0.9
HKT			pmax	pmax		
	comp=Z,240nm,1.5s					
343A	Vidalia	69.76 341	P	P	04 16 14.5	-0.4
	baz=162					
150A	Eclectic	69.76 346	P	P	04 16 14.2	-0.7
	baz=167,SNR=12					
247A	Quitman	69.76 344	P	P	04 16 14.5	-0.5
	baz=165,SNR=11					
Z54A	Sparta	69.83 349	P	P	04 16 14.7	-0.7
	baz=170					
246A	Jackson Lee, B	69.84 344	P	P	04 16 14.8	-0.6
	baz=164					
149A	Jones	69.91 346	P	P	04 16 14.7	-1.2
	baz=166,SNR=8.3					
SLBS	Sierra La Lagu	69.97 322	eP	P	04 16 18.1	+1.6
	comp=Z,105nm,1.3s					
SLBS			LR	LR		
	comp=Z,2µm,18.0s					
Z53A	Monticello	69.99 349	P	P	04 16 15.2	-1.1
	baz=169					
342A	Flagon Creek P	70.03 341	P	P	04 16 16.9	+0.2
	baz=162,SNR=14					
245A	Little AP, Sta	70.04 343	P	P	04 16 16.6	-0.1
	baz=164,SNR=14					
Z52A	Williamson	70.04 348	P	P	04 16 15.3	-1.4
	baz=168,SNR=11					
GOGA	Godfrey	70.10 349	P	P	04 16 16.5	-0.4
	baz=169,SNR=10.0					
GOGA	Godfrey	70.10 349	eP	P	04 16 16.6	-0.4
	comp=Z,109nm,1.3s					
GOGA			LR	LR		
	comp=Z,4µm,19.0s					
GOGA	Godfrey	70.10 349	eP	P	04 16 16.6	-0.4
GOGA			pmax	pmax		
	comp=Z,110nm,1.2s					
148A	Greensboro	70.11 345	P	P	04 16 16.3	-0.7
	baz=166					
341A	Kurthwood	70.23 340	P	P	04 16 18.1	+0.2
	baz=161,SNR=34					
341A	Kurthwood	70.23 340	eP	P	04 16 18.5	+0.7
	comp=Z,485nm,1.3s					
341A			LR	LR		
	comp=Z,2µm,22.0s					
244A	Avery, Jackson	70.24 342	P	P	04 16 17.8	-0.1
	baz=163,SNR=18					
147A	Livingston	70.29 344	P	P	04 16 17.9	-0.2
	baz=165,SNR=9.2					
243A	Waterproof	70.29 341	P	P	04 16 18.6	+0.5
	baz=162					
Z51A	Franklin	70.30 347	P	P	04 16 17.3	-1.0
	baz=168					
LRAL	Lakeview Retre	70.37 346	P	P	04 16 18.0	-0.7
	baz=166,SNR=11					
LRAL	Lakeview Retre	70.37 346	eP	P	04 16 18.3	-0.3
	comp=Z,109nm,1.3s					
LRAL			LR	LR		
	comp=Z,3µm,20.0s					
VBMS	Vicksburg	70.37 342	P	P	04 16 18.7	+0.1
	baz=163					
VBMS	Vicksburg	70.37 342	eP	P	04 16 20.3	+1.7
	comp=Z,285nm,1.3s					
VBMS			LR	LR		
	comp=Z,2µm,19.0s					
Z50A	Ashland	70.37 347	P	P	04 16 17.8	-0.9
	baz=167,SNR=16					
146A	Union	70.43 344	P	P	04 16 18.9	-0.1
	baz=164,SNR=15					
Y54A	Tignall	70.43 350	P	P	04 16 18.3	-0.7
	baz=170					
Z49A	Columbiana	70.43 346	P	P	04 16 18.4	-0.6
	baz=166,SNR=13					
LPIG	La Paz	70.50 322	P	P	04 16 21.1	+1.5
	comp=Z,56nm,1.0s,baz=135,slow=2.9,SNR=3.7					
LPIG			LR	LR	04 40 26.0	
	comp=Z,1µm,21.9s,baz=134,slow=30					
TVO	Taravao	70.54 262	eP	P	04 16 22.3	+2.0
	comp=Z,42nm,1.2s					
Y53A	Monroe	70.56 349	P	P	04 16 18.9	-0.9
	baz=169					
145A	Houston Renfro	70.60 343	P	P	04 16 19.9	-0.1
	baz=164					
242A	Grayson	70.64 341	P	P	04 16 20.6	+0.3
	baz=162,SNR=36					
Y52A	Lilburn	70.64 348	P	P	04 16 19.5	-0.8
	baz=168,SNR=14					
JSC	Jenkinsville	70.64 351	eP	P	04 16 20.9	+0.6
JSC			LR	LR		
	comp=Z,48nm,1.1s					
JSC			LR	LR		
	comp=Z,6µm,22.0s					
JSC	Jenkinsville	70.64 351	eP	P	04 16 20.9	+0.6
JSC			pmax	pmax		
	comp=Z,48nm,1.0s					
HODGE	Hodges	70.73 350	PFAKE		04 16 30.0	+9.2
HODGE			LR	LR		
	comp=Z,6µm,21.0s					
HPIG		70.73 327	eP	P	04 16 21.6	+0.4
	comp=Z,194nm,1.5s					
HPIG			LR	LR		
	comp=Z,5µm,21.0s					
TIAR	Tiarei	70.74 262	eP	P	04 16 23.0	+1.6
	comp=Z,44nm,1.0s					
TIAR	Tiarei	70.74 262	eT	T	05 31 57.2	
	comp=Z,3.1nm,0.3s					
144A	Alexander Plac	70.74 343	P	P	04 16 20.9	0.0
	baz=163					
Z47A	Carrollton	70.75 345	P	P	04 16 20.6	-0.3
	baz=165,SNR=20					
241A	Mo Tay, Goldon	70.81 340	P	P	04 16 21.4	+0.1
	baz=161,SNR=20					
Z48A	Northport	70.81 345	P	P	04 16 20.8	-0.6
	baz=166,SNR=10.0					
Y51A	Rockmart	70.85 348	P	P	04 16 20.9	-0.7
	baz=168,SNR=15					
PAE	Paea	70.87 262	eP	P	04 16 24.2	+2.0
	comp=Z,40nm,1.1s					
PPTF	Pamatai, Papee	70.89 262	eP	P	04 16 24.9	+2.4
	comp=Z,191nm,1.0s					
PPT2	Papeete2	70.90 262	eP	P	04 16 24.5	+2.0
	comp=Z,153nm,1.0s					
PPT2			eS	S	04 25 34.4	-4.3
	comp=Z,3µm,26.8s					
PPT2			eLQ	LQ	04 34 58.6	
	comp=Z,8µm,26.5s					
PPT2			eLR	LR	04 37 54.1	
	comp=Z,5µm,22.5s,baz=123					
PPT	Papeete	70.92 262	P	P	04 16 23.2	+0.7
	comp=Z,110nm,1.1s,baz=100,slow=14,SNR=4.2					
PPT			LR	LR	04 39 45.2	
	comp=Z,6µm,18.6s,baz=110,slow=29					
Z46A	Louisville	70.93 344	P	P	04 16 22.4	+0.3
	baz=164,SNR=12					
MAW	Mawson	70.94 163	P	P	04 16 21.5	-0.3
	comp=Z,23nm,0.8s,baz=218,slow=8.4,SNR=23					
MAW			PKP2ab		04 44 14.3	
	comp=Z,5.3nm,1.1s,baz=74,slow=11,SNR=4.2					
MAW			LR	LR	04 45 50.8	
	comp=Z,9µm,22.0s,baz=228,slow=34					
Y50A	Piedmont	70.96 347	P	P	04 16 22.0	-0.2
	baz=167					
142A	Monroe	71.05 341	P	P	04 16 22.8	0.0
	baz=162					
Y49A	Blount Mountai	71.05 346	P	P	04 16 22.7	-0.2
	baz=166					
143A	Socs Landing,	71.05 342	P	P	04 16 22.8	0.0
	baz=162,SNR=62					
NATX	Nacogdoches	71.06 339	P	P	04 16 23.1	+0.2
	baz=160					
NATX	Nacogdoches	71.06 339	eP	P	04 16 24.6	+1.7
	comp=Z,337nm,1.3s					
240A	Hunter Patters	71.06 340	P	P	04 16 22.9	0.0
	baz=160					
240A	Hunter Patters	71.06 340	eP	P	04 16 24.6	+1.7
	comp=Z,382nm,1.4s					
435B	Jarrell	71.06 336	P	P	04 16 23.2	+0.2
	baz=157					
435B	Jarrell	71.06 336	eP	P	04 16 23.8	+0.9
	comp=Z,140nm,1.1s					
435B			LR	LR		
	comp=Z,2µm,20.0s					
X53A	Estanollee	71.15 349	P	P	04 16 22.4	-1.0
	baz=169					
CNNC	Cliffs of the	71.23 354	P	P	04 16 23.5	-0.3
	baz=174					
CNNC	Cliffs of the	71.23 354	eP	P	04 16 24.0	+0.2
	comp=Z,215nm,1.4s					
CNNC			LR	LR		
	comp=Z,4µm,20.0s					
PAULI	Pauline	71.25 350	eP	P	04 16 24.6	+0.6
	comp=Z,61nm,1.4s					
PAULI			LR	LR		
	comp=Z,5µm,22.0s					
Y48A	Jasper	71.25 346	P	P	04 16 23.6	-0.4
	baz=166					
Z45A	Winona	71.28 343	P	P	04 16 23.8	-0.3
	baz=164					
X52A	Dahlonega	71.34 349	P	P	04 16 23.9	-0.7
	baz=169,SNR=14					
141A	Papa Simpson,	71.35 340	P	P	04 16 25.0	+0.3
	baz=161					
Z44A	Pea Ridge, Bel	71.36 343	P	P	04 16 24.8	+0.1
	baz=163,SNR=20					
Y47A	UCPARC, Winfie	71.38 345	P	P	04 16 24.6	-0.2
	baz=165,SNR=37					
X51A	Calhoun	71.46 348	P	P	04 16 24.9	-0.3
	baz=168,SNR=27					
Z43A	Armstrong Fami	71.50 342	P	P	04 16 25.1	-0.3
	baz=162					
X50B	Fort Payne	71.50 347	P	P	04 16 25.0	-0.6
	baz=167,SNR=17					
KMSC	Kings Mountain	71.50 351	P	P	04 16 24.5	-1.0
	baz=171,SNR=13					
KMSC	Kings Mountain	71.50 351	eP	P	04 16 25.1	-0.4
	comp=Z,63nm,1.0s					
KMSC			LR	LR		
	comp=Z,6µm,22.0s					
JCT	Junction City	71.55 334	P	P	04 16 26.1	+0.1
	baz=156,SNR=48					
JCT	Junction City	71.55 334	eP	P	04 16 26.3	+0.3
	comp=Z,266nm,1.2s					
JCT			LR	LR		
	comp=Z,2µm,22.0s					
JCT	Junction City	71.55 334	eP	P	04 16 26.3	+0.3
JCT			pmax	pmax		
	comp=Z,270nm,1.2s					
140A	Cam and Jess,	71.57 340	P	P	04 16 25.7	-0.2
	baz=161					
140A	Cam and Jess,	71.57 340	eP	P	04 16 29.9	+4.0
	comp=Z,279nm,1.3s					
BG3	Lake Jocassee	71.57 350	eP	P	04 16 26.0	0.0
	comp=Z,255nm,1.6s					
BG3			LR	LR		
	comp=Z,5µm,20.0s					
Y46A	Houston	71.58 344	P	P	04 16 25.5	-0.5
	baz=164,SNR=22					
X49A	Woodville	71.67 347	P	P	04 16 26.0	-0.5
	baz=167,SNR=15					
Y45A	Yeager Farm, C	71.72 344	P	P	04 16 26.6	-0.2
	baz=164,SNR=18					
Z42A	Norrel Spur, H	71.73 341	P	P	04 16 26.9	0.0
	baz=162					
X48A	Hartselle	71.75 346	P	P	04 16 26.5	-0.5
	baz=166,SNR=35					
W53A	Cullowhee	71.78 349	P	P	04 16 26.5	-0.9
	baz=169,SNR=12					
W52A	Murphy	71.82 349	P	P	04 16 27.1	-0.3
	baz=169					
Y44A	Strider, Charl	71.96 343	P	P	04 16 28.0	-0.2
	baz=163					
X47A	Russelville	71.98 345	P	P	04 16 27.7	-0.7
	baz=165,SNR=24					
TXAR	Lajitas Array	71.99 330	P	P	04 16 28.9	+0.1
	comp=Z,22nm,1.0s,baz=152,slow=6.7,SNR=87					
TXAR			LR	LR	04 43 15.8	
	comp=Z,7µm,19.9s,baz=0.0,slow=32					
TXAR			PKPPKP	P'P'df	04 44 16.0	+5.0
	comp=Z,0.3nm,0.9s,baz=7.4,slow=2.1,SNR=3.1					
Y43A	Makayla and Ka	72.09 343	P	P	04 16 29.1	+0.1
	baz=163,SNR=11					
Z40A	Long Farm, Mag	72.11 340	P	P	04 16 29.1	-0.1
	baz=161					
WHTX	Lake Whitney,	72.14 336	P	P	04 16 28.8	-0.6
	baz=158					
WHTX	Lake Whitney,	72.14 336	eP	P	04 16 30.3	+0.9
	comp=Z,256nm,1.2s					
WHTX			LR	LR		
	comp=Z,1µm,18.0s					
W50A	Signal Mountai	72.16 348	P	P	04 16 29.3	-0.2
	baz=168					
X46A	Booneville	72.17 345	P	P	04 16 29.0	-0.5
	baz=165,SNR=7.2					
X45A	UM Field Stati	72.22 344	P	P	04 16 28.9	-0.9
	baz=164,SNR=23					
V53A	Saluda	72.22 350	P	P	04 16 28.7	-1.1
	baz=170					
Y42A	Garnett, Star	72.23 342	P	P	04 16 29.2	-0.7
	baz=162					
NCAT	North Carolina	72.24 352	eP	P	04 16 30.1	+0.2
	comp=Z,38nm,1.1s					
NCAT			LR	LR		
	comp=Z,3µm,20.0s					
W49A	Belvidere	72.25 347	P	P	04 16 28.5	-1.5
	baz=167					
CPCT	Cooper Cave	72.27 348	eP	P	04 16 29.9	-0.2
	comp=Z,82nm,1.0s					
CPCT			LR	LR		
	comp=Z,4µm,21.0s					
SWET	Sewanee	72.28 347	eP	P	04 16 30.0	-0.3
	comp=Z,290nm,1.3s					
SWET			LR	LR		
	comp=Z,3µm,20.0s					
CCAR	Cane Creek	72.30 342	eP	P	04 16 31.9	+1.6
	comp=Z,418nm,1.4s					
OXF	Oxford	72.31 344	P	P	04 16 28.7	-1.7
	baz=164,SNR=19					
OXF	Oxford	72.31 344	eP	P	04 16 29.6	-0.7
	comp=Z,249nm,1.4s					
OXF			LR	LR		
	comp=Z,4µm,20.0s					
OXF	Oxford	72.31 344	eP	P	04 16 29.6	-0.7
OXF			pmax	pmax		
	comp=Z,250nm,1.3s					
W48A	Pulaski	72.39 346	P	P	04 16 30.4	-0.4
	baz=166,SNR=38					
X44A	Crenshaw	72.46 343	P	P	04 16 30.4	-0.9
	baz=164					
PLAL	Pickwick Lake	72.47 345	eP	P	04 16 30.4	-0.9
	comp=Z,182nm,1.3s					
PLAL			LR	LR		
	comp=Z,2µm,19.0s					
Y41A	Eaglette Beard	72.48 341	P	P	04 16 31.4	0.0
	baz=162,SNR=17					
V52A	Sevierville	72.50 349	P	P	04 16 29.9	-1.6
	baz=169					
V50A	Pikevile	72.58 348	P	P	04 16 31.1	-0.9
	baz=168					
V51A	Loudon	72.58 349	P	P	04 16 32.2	+0.2
	baz=168					
W47A	Westpoint	72.63 346	P	P	04 16 31.7	-0.6
	baz=166,SNR=55					
X43A	Marvell	72.65 343	P	P	04 16 31.8	-0.6
	baz=163,SNR=12					
X43A	Marvell	72.65 343	eP	P	04 16 32.9	+0.5
	comp=Z,584nm,1.6s					
W46A	Michie	72.68 345	P	P	04 16 31.6	-1.0
	baz=165					
Y40A	Okolona	72.78 341	P	P	04 16 32.8	-0.4
	baz=161					
V49A	McMinnville	72.81 347	P	P	04 16 32.4	-0.9
	baz=167					
X42A	Stuttgart	72.87 342	P	P	04 16 33.3	-0.3
	baz=162,SNR=11					
W45A	Hickory Valley	72.88 344	P	P	04 16 32.9	-0.9
	baz=164					
V48A	Smith Brothers	72.96 346	P	P	04 16 33.3	-0.9
	baz=166,SNR=66					
W44A	Shelby Farms P	73.00 344	P	P	04 16 33.2	-1.2
	baz=164					
SUR	Sutherland	73.00 118	eP	P	04 16 35.3	+0.2
	comp=Z,153nm,1.1s					
SUR			LR	LR		
	comp=Z,8µm,20.0s					
SUR	Sutherland	73.00 118	P	P	04 16 39.9	+4.8
	SNR=6.8					
SUR	Sutherland	73.00 118	P	P	04 16 39.9	+4.8
	SNR=6.8					
X41A	Kaden, Bauxite	73.04 341	P	P	04 16 33.5	-1.1
	baz=162,SNR=9.6					
X40A	Basin Creek Fa	73.11 341	P	P	04 16 34.1	-1.0
	baz=161,SNR=11					
X40A	Basin Creek Fa	73.11 341	eP	P	04 16 35.0	-0.1
	comp=Z,49nm,1.3s					
X40A			LR	LR		
	comp=Z,2µm,22.0s					
W43A	Forest City	73.16 343	P	P	04 16 34.1	-1.3
	baz=163					
V47A	Nunnelly	73.18 346	P	P	04 16 34.4	-1.1
	baz=166,SNR=58					
TZTN	Tazewell	73.19 349	P	P	04 16 34.1	-1.4
	baz=169					
TZTN	Tazewell	73.19 349	eP	P	04 16 34.9	-0.7
	comp=Z,42nm,0.9s					
TZTN			LR	LR		
	comp=Z,4µm,22.0s					
V46A	Holladay	73.27 345	P	P	04 16 35.0	-1.0
	baz=165,SNR=44					
MIAR	Mount Ida	73.37 341	P	P	04 16 35.9	-0.7
	baz=161,SNR=24					
MIAR	Mount Ida	73.37 341	eP	P	04 16 36.6	0.0
	comp=Z,90nm,1.1s					
MIAR			LR	LR		
	comp=Z,1µm,22.0s					
MIAR	Mount Ida	73.37 341	eP	P	04 16 36.6	0.0
MIAR			pmax	pmax		
	comp=Z,90nm,1.1s					
V45A	Humboldt	73.39 345	P	P	04 16 35.6	-1.2
	baz=165					
BLA	Blacksburg	73.43 352	P	P	04 16 35.9	-1.1
	baz=172					
BLA	Blacksburg	73.43 352	eP	P	04 16 37.8	+0.7
	comp=Z,58nm,1.1s					
BLA			LR	LR		
	comp=Z,3µm,19.0s					
BLA	Blacksburg	73.43 352	eP	P	04 16 37.8	+0.7
BLA			pmax	pmax		
	comp=Z,58nm,1.1s					

ABTX	Abilene, Hawle	73.44 335	P	P	04 16 36.8	-0.4
	baz=156,SNR=32					
ABTX	Abilene, Hawle	73.44 335	eP	P	04 16 37.2	0.0
	comp=Z,496nm,1.5s					
ABTX			LR	LR		
	comp=Z,2μm,21.0s					
X39A	Fountain Ranch	73.48 340	P	P	04 16 37.0	-0.3
	baz=160,SNR=42					
URVA	University of	73.52 354	eP	P	04 16 37.9	+0.4
U49A	Red Boiling Sp	73.52 348	P	P	04 16 36.8	-0.7
	baz=167					
W42A	Bald Knob	73.53 342	P	P	04 16 37.1	-0.5
	baz=162					
WVT	Waverly	73.53 346	P	P	04 16 37.0	-0.6
	baz=166					
WVT	Waverly	73.53 346	eP	P	04 16 37.0	-0.6
	comp=Z,238nm,0.9s					
WVT			LR	LR		
	comp=Z,3μm,20.0s					
WVT	Waverly	73.53 346	eP	P	04 16 37.0	-0.6
WVT			pmax	pmax		
	comp=Z,240nm,1.0s					
HBAR	Harrisburg	73.59 343	eP	P	04 16 38.7	+0.8
	comp=Z,230nm,1.5s					
HBAR			LR	LR		
	comp=Z,3μm,19.0s					
W41B	Gary Mavity, V	73.61 342	P	P	04 16 37.1	-1.0
	baz=162,SNR=18					
W41B	Gary Mavity, V	73.61 342	eP	P	04 16 37.7	-0.4
	comp=Z,443nm,2.0s					
W41B			LR	LR		
	comp=Z,2μm,19.0s					
U48A	Cassie Pea, Po	73.65 347	P	P	04 16 37.3	-1.0
	baz=167,SNR=18					
T52A	Hallie	73.66 350	P	P	04 16 37.1	-1.3
	baz=170					
V44A	Blytheville	73.68 344	P	P	04 16 38.4	-0.1
	baz=164					
U47A	Clarksville	73.73 346	P	P	04 16 38.1	-0.6
	baz=166,SNR=27					
WHAR	Wooly Hollow	73.73 342	eP	P	04 16 38.8	0.0
	comp=Z,298nm,1.3s					
WHAR			LR	LR		
	comp=Z,2μm,19.0s					
V43A	Jonesboro	73.78 343	P	P	04 16 38.4	-0.6
	baz=163					
IP05	Hopewell Churc	73.79 354	eP	P	04 16 39.7	+0.7
	comp=Z,96nm,1.1s					
IP05			LR	LR		
	comp=Z,4μm,20.0s					
U46A	Springville	73.82 346	P	P	04 16 38.5	-0.8
	baz=165,SNR=13					
GNAR	Gosnell	73.84 344	eP	P	04 16 40.4	+1.1
	comp=Z,778nm,1.8s					
W40A	Ferguson Farm,	73.84 341	P	P	04 16 39.5	+0.1
	baz=161,SNR=21					
W40A	Ferguson Farm,	73.84 341	eP	P	04 16 39.9	+0.5
	comp=Z,601nm,1.9s					
W40A			LR	LR		
	comp=Z,2μm,20.0s					
T50A	Nancy	73.85 348	P	P	04 16 38.8	-0.7
	baz=168					
IP07	Quail	73.90 354	eP	P	04 16 41.0	+1.3
	comp=Z,131nm,1.2s					
IP07			LR	LR		
	comp=Z,4μm,20.0s					
IP06	Yanceyville	73.91 354	eP	P	04 16 41.1	+1.4
	comp=Z,46nm,1.1s					
IP06			LR	LR		
	comp=Z,4μm,21.0s					
IP01	Cuckoo	73.93 354	eP	P	04 16 40.5	+0.6
	comp=Z,144nm,1.4s					
IP01			LR	LR		
	comp=Z,4μm,20.0s					
U45A	Rockin P Farm,	73.93 345	P	P	04 16 39.4	-0.5
	baz=165,SNR=27					
UTMT	University of	73.95 345	eP	P	04 16 40.2	+0.2
	comp=Z,431nm,1.1s					
GLAT	Glass	73.97 345	eP	P	04 16 41.2	+1.0
	comp=Z,676nm,1.4s					
SPRD	Spring Road, M	73.99 354	eP	P	04 16 40.8	+0.6
	comp=Z,95nm,1.2s					
SPRD			LR	LR		
	comp=Z,4μm,21.0s					
IP03	Louisa	74.00 354	eP	P	04 16 40.8	+0.6
	comp=Z,90nm,1.1s					
IP03			LR	LR		
	comp=Z,5μm,21.0s					
V42A	Cord	74.00 343	P	P	04 16 39.2	-1.1
	baz=163,SNR=18					
CVRD	Centerville Ro	74.03 354	eP	P	04 16 41.6	+1.2
	comp=Z,166nm,1.6s					
CVRD			LR	LR		
	comp=Z,4μm,21.0s					
W39A	Magazine	74.03 341	P	P	04 16 40.2	-0.3
	baz=161,SNR=64					
W39A	Magazine	74.03 341	eP	P	04 16 40.8	+0.3
	comp=Z,245nm,1.1s					
W39A			LR	LR		
	comp=Z,2μm,21.0s					
U44B	Burton Farm, H	74.05 345	P	P	04 16 40.2	-0.4
	baz=164,SNR=30					
T49A	Edmonton	74.05 348	P	P	04 16 39.5	-1.1
	baz=168					
IP04	Greensprings	74.08 354	eP	P	04 16 41.0	+0.3
	comp=Z,105nm,1.0s					
IP04			LR	LR		
	comp=Z,5μm,21.0s					
SRIG	Santa Rosalia	74.13 322	eP	P	04 16 42.7	+1.4
	comp=Z,108nm,1.3s					
CBN	Corbin Frederi	74.13 355	P	P	04 16 40.4	-0.7
	baz=174					
CBN	Corbin Frederi	74.13 355	eP	P	04 16 41.5	+0.4
	comp=Z,62nm,1.0s					
CBN			LR	LR		
	comp=Z,3μm,22.0s					
V41A	Mountainview	74.17 342	P	P	04 16 40.2	-1.2
	baz=162,SNR=47					
T48A	Bowling Green	74.21 347	P	P	04 16 40.2	-1.4
	baz=167,SNR=21					
T47A	Sharon Grove	74.22 347	P	P	04 16 40.2	-1.4
	baz=166,SNR=24					
S52A	Salyersville	74.23 350	P	P	04 16 40.8	-0.9
	baz=170					
S51A	Beattyville	74.27 350	P	P	04 16 39.3	-2.6
	baz=169					
U44A	Portageville	74.28 344	P	P	04 16 40.6	-1.3
	baz=164,SNR=12					
U43A	Rector	74.31 344	P	P	04 16 41.2	-0.9
	baz=164					
V40A	Witts Springs	74.36 342	P	P	04 16 41.6	-0.9
	baz=162,SNR=29					
V40A	Witts Springs	74.36 342	eP	P	04 16 41.8	-0.7
	comp=Z,82nm,1.1s					
V40A			LR	LR		
	comp=Z,2μm,18.0s					
T46A	Princeton	74.43 346	P	P	04 16 41.3	-1.5
	baz=166,SNR=29					
PARMO	Parma	74.45 344	eP	P	04 16 43.3	+0.4
	comp=Z,290nm,0.9s					
U42A	Revenden	74.49 343	P	P	04 16 42.4	-0.8
	baz=163,SNR=27					
LIC	Lamto	74.53 70	eP	P	04 16 44.2	+0.2
	comp=Z,464nm,1.2s					
T45A	Paducah	74.56 345	P	P	04 16 42.3	-1.2
	baz=165					
V39A	Pettigrew	74.60 341	P	P	04 16 42.9	-1.1
	baz=161,SNR=27					
U41A	Viola	74.64 342	P	P	04 16 43.0	-1.1
	baz=162,SNR=17					
S48A	Wiedeman Farm,	74.68 348	P	P	04 16 42.3	-1.9
	baz=167,SNR=20					
PBMO	Poplar Bluff	74.71 344	eP	P	04 16 43.6	-0.8
	comp=Z,107nm,1.0s					
MNTX	Cornudas Mount	74.77 330	P	P	04 16 44.0	-1.0
	baz=152,SNR=77					
MNTX	Cornudas Mount	74.77 330	eP	P	04 16 43.9	-1.1
	comp=Z,45nm,1.0s					
MNTX			LR	LR		
	comp=Z,6μm,20.0s					
TIC	Toumodi	74.80 70	eP	P	04 16 44.6	-1.0
GDL2	Guadalupe Moun	74.81 331	eP	P	04 16 45.6	+0.3
T44A	Benton	74.82 345	P	P	04 16 44.1	-1.0
	baz=164,SNR=11					
KIC	Kosan Boka	74.83 70	eP	P	04 16 46.1	+0.4
	comp=Z,421nm,1.2s					
U40A	Yellville	74.89 342	P	P	04 16 44.7	-0.8
	baz=162,SNR=41					
HSIG		74.92 324	eP	P	04 16 47.0	+1.1
	comp=Z,120nm,1.3s					
HSIG			LR	LR		
	comp=Z,3μm,19.0s					
DBIC	Dimbokro	74.94 70	P	P	04 16 46.3	-0.1
	comp=Z,53nm,0.7s,baz=194,slow=5.2,SNR=22					
DBIC			LR	LR	04 47 52.4	
	comp=Z,6μm,18.0s,baz=205,slow=34					
DBIC	Dimbokro	74.94 70	eP	P	04 16 46.3	-0.1
	comp=Z,170nm,1.1s					
DBIC	Dimbokro	74.94 70	eP	P	04 16 46.3	-0.1
DBIC			pmax	pmax		
	comp=Z,170nm,1.1s					
T43A	Greenville	74.97 344	P	P	04 16 45.0	-1.0
	baz=164,SNR=39					
S46A	Don Dixon Farm	75.01 346	P	P	04 16 45.0	-1.1
	baz=166,SNR=11					
U39A	Green Forest	75.07 341	P	P	04 16 45.6	-1.0
	baz=161,SNR=28					
WMOK	Wichita Mounta	75.09 336	P	P	04 16 46.0	-0.7
	baz=157,SNR=47					
WMOK	Wichita Mounta	75.09 336	eP	P	04 16 46.4	-0.3
	comp=Z,200nm,1.4s					
WMOK			LR	LR		
	comp=Z,1μm,22.0s					
WMOK	Wichita Mounta	75.09 336	eP	P	04 16 46.4	-0.3
WMOK			pmax	pmax		
	comp=Z,200nm,1.4s					
HHAR	Hobbs	75.10 341	eP	P	04 16 46.2	-0.5
	comp=Z,125nm,1.3s					
HHAR			LR	LR		
	comp=Z,2μm,20.0s					
T42A	Van Buren	75.10 343	P	P	04 16 45.8	-0.9
	baz=163,SNR=25					
S45A	Carrier Mills	75.18 346	P	P	04 16 45.7	-1.4
	baz=165					
TUL1	Leonard	75.26 339	P	P	04 16 46.7	-1.0
	baz=159,SNR=23					
TUL1	Leonard	75.26 339	eP	P	04 16 47.2	-0.5
	comp=Z,174nm,1.1s					
TUL1			LR	LR		
	comp=Z,2μm,20.0s					
T41A	Mountain View	75.27 343	P	P	04 16 47.0	-0.7
	baz=162,SNR=35					
USIN	University of	75.28 346	eP	P	04 16 46.9	-0.8
	comp=Z,177nm,1.0s					
USIN			LR	LR		
	comp=Z,3μm,18.0s					
WCI	Wyandotte Cave	75.28 347	P	P	04 16 46.0	-1.7
	baz=167					
WCI	Wyandotte Cave	75.28 347	eP	P	04 16 47.4	-0.3
	comp=Z,47nm,0.9s					
WCI			LR	LR		
	comp=Z,6μm,18.0s					
WCI	Wyandotte Cave	75.28 347	eP	P	04 16 47.4	-0.3
WCI			pmax	pmax		
	comp=Z,47nm,1.0s					
SDMD	Soldier's Deli	75.29 355	eP	P	04 16 48.5	+0.7
	comp=Z,26nm,1.0s					
SDMD			LR	LR		
	comp=Z,2μm,21.0s					
EPT	El Paso	75.30 329	eP	P	04 16 49.5	+1.3
	comp=Z,129nm,1.3s					
EPT			LR	LR		
	comp=Z,7μm,21.0s					
S44A	Carbondale	75.33 345	P	P	04 16 47.1	-0.9
	baz=164,SNR=15					
R48A	Northridge Ran	75.37 348	P	P	04 16 46.9	-1.4
	baz=167,SNR=15					
R47A	Wooly Knot Far	75.39 347	P	P	04 16 46.6	-1.7
	baz=167,SNR=11					
S43A	Fulton Ridge,	75.39 344	P	P	04 16 47.3	-1.1
	baz=164,SNR=47					
R46A	Gibon Southern	75.48 347	P	P	04 16 47.1	-1.8
	baz=166					
T40A	Mansfield	75.56 342	P	P	04 16 48.5	-0.8
	baz=162,SNR=31					
T39A	Clever	75.65 342	P	P	04 16 49.4	-0.5
	baz=161,SNR=35					
R45A	Skylar, Fairfi	75.71 346	P	P	04 16 48.3	-1.9
	baz=165,SNR=14					
PSUB	Penn St. - Bra	75.72 356	eP	P	04 16 51.5	+1.3
	comp=Z,151nm,1.6s					
S42A	Caledonia	75.74 344	P	P	04 16 49.3	-1.1
	baz=163,SNR=32					
MSTX	Muleshoe	75.77 333	P	P	04 16 50.4	-0.4
	baz=154,SNR=24					
MSTX	Muleshoe	75.77 333	eP	P	04 16 50.6	-0.2
	comp=Z,395nm,1.5s					
MSTX			LR	LR		
	comp=Z,2μm,21.0s					
S41A	Jillco Farms,	75.79 343	P	P	04 16 50.2	-0.5
	baz=162,SNR=67					
MCWV	Mont Chateau	75.79 353	P	P	04 16 49.9	-0.7
	baz=172,SNR=18					
MCWV	Mont Chateau	75.79 353	eP	P	04 16 50.6	0.0
	comp=Z,75nm,1.0s					
MCWV			LR	LR		
	comp=Z,4μm,21.0s					
R44A	Waltonville	75.83 345	P	P	04 16 49.5	-1.3
	baz=165					
MVL	Millersville	75.85 356	eP	P	04 16 51.8	+0.9
	comp=Z,70nm,1.1s					
FVM	French Village	75.86 344	eP	P	04 16 50.2	-0.8
	comp=Z,192nm,1.1s					
FVM			LR	LR		
	comp=Z,3μm,20.0s					
FVM	French Village	75.86 344	eP	P	04 16 50.3	-0.8
FVM			pmax	pmax		
	comp=Z,190nm,1.1s					
T38A	Diamond	75.90 341	P	P	04 16 50.5	-0.8
	baz=160,SNR=44					
S40A	Lebanon	75.98 342	P	P	04 16 51.2	-0.6
	baz=162,SNR=67					
Q47A	Bedord North L	75.99 348	P	P	04 16 50.6	-1.1
	baz=167					
R43A	Red Bud	76.03 345	P	P	04 16 50.8	-1.2
	baz=164					
PAGS	Pennsylvania G	76.10 355	eP	P	04 16 53.4	+1.1
	comp=Z,90nm,1.2s					
PAGS			LR	LR		
	comp=Z,5μm,22.0s					
OLIL	Olney	76.10 346	eP	P	04 16 52.1	-0.3
	comp=Z,92nm,1.1s					
OLIL			LR	LR		
	comp=Z,2μm,20.0s					
CCM	Cathedral Cave	76.12 344	P	P	04 16 51.4	-1.1
	baz=163					
CCM	Cathedral Cave	76.12 344	eP	P	04 16 52.0	-0.5
	comp=Z,151nm,0.9s					
CCM			LR	LR		
	comp=Z,2μm,19.0s					
CCM	Cathedral Cave	76.12 344	eP	P	04 16 52.0	-0.5
CCM			pmax	pmax		
	comp=Z,150nm,1.0s					
319A	Douglas	76.15 327	eP	P	04 16 54.2	+1.2
	comp=Z,187nm,1.1s					
319A			LR	LR		
	comp=Z,3μm,19.0s					
AMTX	Amarillo	76.20 334	P	P	04 16 53.0	-0.2
	baz=155					
AMTX	Amarillo	76.20 334	eP	P	04 16 52.8	-0.4
	comp=Z,269nm,1.2s					
AMTX			LR	LR		
	comp=Z,1μm,21.0s					
R42A	Luebbering	76.23 344	P	P	04 16 52.2	-0.9
	baz=163,SNR=15					
BLO	Bloomington	76.24 348	eP	P	04 16 52.3	-0.8
	comp=Z,273nm,1.7s					
BLO			LR	LR		
	comp=Z,4μm,18.0s					
BLO	Bloomington	76.24 348	eP	P	04 16 52.3	-0.8
BLO			pmax	pmax		
	comp=Z,270nm,1.7s					
Q46A	CEJHS Indians,	76.24 347	P	P	04 16 51.4	-1.7
	baz=166					
Q45A	Warren Harvey,	76.27 346	P	P	04 16 51.5	-1.8
	baz=166,SNR=28					
S39A	Bolivar	76.27 342	P	P	04 16 52.4	-1.0
	baz=161,SNR=60					
O56A	Blue Knob Stat	76.28 354	P	P	04 16 53.2	-0.2
	baz=173,SNR=7.4					
O56A	Blue Knob Stat	76.28 354	eP	P	04 16 53.4	-0.1
	comp=Z,129nm,1.5s					
O56A			LR	LR		
	comp=Z,4μm,21.0s					
S38A	Stockton	76.36 341	P	P	04 16 52.9	-1.0
	baz=161,SNR=46					
R41A	Rosebud	76.38 344	P	P	04 16 53.4	-0.6
	baz=163,SNR=54					
LUPA	Lehigh Univers	76.39 356	eP	P	04 16 55.4	+1.4
	comp=Z,5.2nm,1.1s					
BRNJ	Basking Ridge	76.44 357	eP	P	04 16 55.0	+0.8
	comp=Z,97nm,1.1s					
BRNJ			LR	LR		
	comp=Z,5μm,22.0s					
SLM	Saint Louis	76.45 344	eP	P	04 16 54.9	+0.6
	comp=Z,120nm,0.9s					
SLM			LR	LR		
	comp=Z,2μm,19.0s					
SLM	Saint Louis	76.45 344	eP	P	04 16 54.9	+0.6
SLM			pmax	pmax		
	comp=Z,120nm,1.0s					
Q44A	Meyer Farm, Va	76.45 346	P	P	04 16 52.9	-1.5
	baz=165,SNR=9.4					
121A	Cookes Peak, D	76.49 329	P	P	04 16 55.5	+0.5
	baz=150,SNR=31					
P47A	Martinsville	76.50 348	P	P	04 16 53.1	-1.5
	baz=167					
R40A	Maddies Statio	76.58 343	P	P	04 16 54.2	-1.0
	baz=162,SNR=66					
SSPA	Standing Stone	76.59 355	P	P	04 16 54.5	-0.6
	baz=174					
SSPA	Standing Stone	76.59 355	eP	P	04 16 55.3	+0.2
	comp=Z,73nm,1.2s					
SSPA			LR	LR		
	comp=Z,3μm,22.0s					
Q43A	New Douglas	76.62 345	P	P	04 16 54.4	-1.0
	baz=164,SNR=20					
ACSO	Alum Creek Sta	76.73 350	P	P	04 16 55.2	-0.7
	baz=170,SNR=18					
ACSO	Alum Creek Sta	76.73 350	eP	P	04 16 55.2	-0.7
	comp=Z,107nm,0.9s					
ACSO			LR	LR		
	comp=Z,4μm,19.0s					
N59A	State Game Lan	76.73 356	P	P	04 16 55.7	-0.3
	baz=176,SNR=21					
N59A	State Game Lan	76.73 356	eP	P	04 16 56.8	+0.8
	comp=Z,159nm,1.4s					
N59A			LR	LR		
	comp=Z,4μm,20.0s					
PAL	Palisades	76.73 358	P	P	04 16 53.7	-2.2
	baz=177					
PAL	Palisades	76.73 358	eP	P	04 16 57.0	+1.1
	comp=Z,69nm,1.4s					
PAL			LR	LR		
	comp=Z,5μm,22.0s					
PAL	Palisades	76.73 358	eP	P	04 16 57.0	+1.1
PAL			pmax	pmax		
	comp=Z,69nm,1.3s					
Q42A	Golden Eagle	76.78 344	P	P	04 16 55.6	-0.7
	baz=164,SNR=14					
R39A	Chumby, Stover	76.79 342	P	P	04 16 55.4	-0.9
	baz=162,SNR=37					
P46A	Rosedale	76.79 347	P	P	04 16 54.9	-1.4
	baz=166,SNR=14					
P45A	Graceland, Par	76.80 347	P	P	04 16 54.7	-1.6
	baz=166,SNR=15					
R38A	Fenwick Farm,	76.89 342	P	P	04 16 55.5	-1.4
	baz=161,SNR=15					
P44A	Sand Creek, Wi	76.91 346	P	P	04 16 55.5	-1.4
	baz=165					
MIR	Mirnyy	76.97 173	⇓iP	P	04 16 56.0	-1.1
MIR			*i*		04 16 58.0	
MIR			*e*		04 17 09.0	
MIR			*e*		04 19 58.0	
MIR			*e*S	S	04 26 46.0	+0.6
MIR			*e*PS	PnS	04 27 33.0	+10
MIR			*e*SS	SS	04 31 52.0	+11
MIR			*e*SSS	SSS	04 35 08.0	
MIR			pmax	pmax		
	comp=Z,2μm,6.0s					
Q41A	Truxton	76.97 344	P	P	04 16 56.2	-1.2
	baz=163,SNR=31					
RAR	Rarotonga	76.99 253	LR	LR	04 43 47.2	
	comp=Z,3μm,18.3s,baz=130,slow=30					
YLE	Yale	77.02 358	eP	P	04 16 59.5	+2.1
	comp=Z,204nm,1.2s					
YLE			LR	LR		
	comp=Z,6μm,21.0s					
N54A	Moraine State	77.10 353	P	P	04 16 56.9	-1.1
	baz=172,SNR=15					
N54A	Moraine State	77.10 353	eP	P	04 16 57.5	-0.5
	comp=Z,92nm,1.1s					
N54A			LR	LR		
	comp=Z,4μm,21.0s					
Q40A	Laux Farm, Aux	77.20 343	P	P	04 16 58.0	-0.6
	baz=162,SNR=47					
O47A	Sheridan	77.21 348	P	P	04 16 57.1	-1.6
	baz=167,SNR=17					
M65A	Busby, Falmout	77.24 0	P	P	04 16 57.0	-1.8
	baz=180					
P43A	Skaggs, Pawnee	77.26 345	P	P	04 16 57.7	-1.2
	baz=164,SNR=15					
KSPA	Keystone Colle	77.37 356	eP	P	04 17 00.0	+0.6
	comp=Z,100nm,1.4s					
KSPA			LR	LR		
	comp=Z,4μm,20.0s					
P42A	Winchester	77.38 345	P	P	04 16 58.6	-1.0
	baz=164,SNR=10					
BNM	Barren Site	77.42 330	eP	P	04 17 01.4	+1.2
Q39A	Willow Grove F	77.47 343	P	P	04 16 59.1	-1.0
	baz=162,SNR=18					
Y22D	IRIS PASSCAL I	77.47 330	P	P	04 17 01.4	+1.0
	baz=151					
Y22D	IRIS PASSCAL I	77.47 330	PFAKE		04 17 10.0	+10
Y22D			LR	LR		
	comp=Z,6μm,20.0s					
Y22E	IRIS PASSCAL I	77.47 330	P	P	04 17 01.5	+1.1
	baz=151					
O45A	Potomac	77.50 347	P	P	04 16 58.8	-1.4
	baz=166,SNR=13					
SFIN	Lafayette	77.51 347	P	P	04 16 58.5	-1.8
	baz=166					
SFIN	Lafayette	77.51 347	eP	P	04 16 59.9	-0.4
	comp=Z,40nm,1.0s					
SFIN			LR	LR		
	comp=Z,4μm,20.0s					
O44A	Mansfield	77.55 346	P	P	04 16 59.0	-1.5
	baz=165,SNR=13					
Q38A	Cooks Store, C	77.55 342	P	P	04 16 60.0	-0.6
	baz=161,SNR=59					
LPM	Los Pinos Moun	77.56 330	eP	P	04 17 02.0	+1.0
BRYW	Bryant College	77.60 359	eP	P	04 17 02.4	+1.6
	comp=Z,210nm,1.4s					
M54A	Oil Creek Stat	77.61 353	P	P	04 17 00.1	-0.8
	baz=172					
M54A	Oil Creek Stat	77.61 353	eP	P	04 17 00.5	-0.4
	comp=Z,170nm,1.8s					
M54A			LR	LR		
	comp=Z,3μm,21.0s					
TUC	Tucson	77.61 326	P	P	04 17 01.4	+0.2
	baz=148					
TUC	Tucson	77.61 326	eP	P	04 17 02.0	+0.8
	comp=Z,113nm,1.4s					
TUC			LR	LR		
	comp=Z,3μm,21.0s					
TUC	Tucson	77.61 326	eP	P	04 17 02.0	+0.8
TUC			pmax	pmax		
	comp=Z,110nm,1.4s					
P41A	Barry, Barry	77.62 344	P	P	04 16 59.8	-1.1
	baz=163,SNR=17					
Q37A	Longview Farm,	77.68 341	P	P	04 17 00.6	-0.7
	baz=160,SNR=10					
P40A	Paris	77.71 343	P	P	04 17 00.9	-0.6
	baz=162,SNR=82					
TSUM	Tsumeb	77.73 105	eP	P	04 17 01.8	-0.6
	comp=Z,355nm,1.8s					
TSUM			LR	LR		
	comp=Z,5μm,19.0s					
ALLY	Alegheny Colle	77.79 353	eP	P	04 17 02.3	+0.5
	comp=Z,75nm,1.0s					
ALLY			LR	LR		
	comp=Z,4μm,21.0s					
P39B	Salisbury	77.83 343	P	P	04 17 01.4	-0.8
	baz=162,SNR=58					
O43A	Sugar Creek Fa	77.84 346	P	P	04 17 01.0	-1.1
	baz=165,SNR=19					
LAZ	Ladron	77.84 330	eP	P	04 17 04.0	+1.4
O42A	Bath	77.91 345	P	P	04 17 01.8	-0.7
	baz=164					
N46A	Monticello	77.95 348	P	P	04 17 01.1	-1.6
	baz=167,SNR=15					
QUA2	Belchertown	77.97 359	eP	P	04 17 03.6	+0.8
	comp=Z,98nm,1.1s					
CASY	Casey	77.99 181	eP	P	04 17 03.1	+0.3

comp=Z,212nm,1.5s
CASY LR LR
comp=Z,8μm,18.0s
O41A Passleys Farm, 78.01 344 P **P** 04 17 02.2 -0.8
baz=163,SNR=25
BCX Boston College 78.01 360 *e*P **P** 04 17 04.7 +1.6
comp=Z,65nm,1.2s
BINY Binghamton 78.02 356 P **P** 04 17 02.4 -0.7
baz=176,SNR=15
BINY Binghamton 78.02 356 *e*P **P** 04 17 03.1 0.0
comp=Z,80nm,1.1s
BINY LR LR
comp=Z,4μm,20.0s
N45A Kentland 78.04 347 P **P** 04 17 02.1 -1.1
baz=166
TASL Snake Pit, Alb 78.04 331 P **P** 04 17 03.9 +0.2
baz=151
ANMO Albuquerque 78.04 331 P **P** 04 17 04.7 +1.0
comp=Z,61nm,1.3s,baz=144,slow=8.9,SNR=40
ANMO PKKPbc **PKKPbc** 04 36 05.6 +0.7
comp=Z,1.0nm,0.9s,baz=323,slow=5.1,SNR=2.8
ANMO LR LR 04 46 43.0
comp=Z,7μm,21.4s,baz=142,slow=32
ANMO Albuquerque 78.04 331 P **P** 04 17 04.0 +0.3
baz=151
ANMO Albuquerque 78.04 331 *e*P **P** 04 17 04.4 +0.7
comp=Z,136nm,1.4s
ANMO *e*PKKPbc **PKKPbc** 04 36 05.6 +0.7
ANMO Albuquerque 78.04 331 *e*P **P** 04 17 03.4 -0.3
ANMO pmax pmax
comp=Z,81nm,1.2s
TASM ASL Pad, Albuq 78.05 331 P **P** 04 17 03.9 +0.2
baz=151
WES Weston 78.06 360 *e*P **P** 04 17 05.0 +1.7
comp=Z,107nm,1.3s
WES Weston 78.06 360 *e*P **P** 04 17 05.0 +1.7
WES pmax pmax
comp=Z,110nm,1.2s
HDIL Hopedale 78.10 346 P **P** 04 17 02.6 -1.0
baz=165,SNR=18
HDIL Hopedale 78.10 346 *e*P **P** 04 17 03.2 -0.4
comp=Z,128nm,1.0s
HDIL LR LR
comp=Z,3μm,19.0s
N44A Piper City 78.11 347 P **P** 04 17 02.0 -1.6
baz=166,SNR=31
P38A Dawn 78.15 342 P **P** 04 17 02.8 -1.1
baz=161,SNR=38
HRV Adam Dziewonsk 78.19 359 P **P** 04 17 02.4 -1.6
baz=179
HRV Adam Dziewonsk 78.19 359 *e*P **P** 04 17 05.1 +1.1
comp=Z,98nm,1.1s
HRV LR LR
comp=Z,4μm,21.0s
HRV Adam Dziewonsk 78.19 359 *e*P **P** 04 17 05.1 +1.1
HRV pmax pmax
comp=Z,98nm,1.1s
O40A La Belle 78.23 344 P **P** 04 17 03.4 -0.9
baz=163,SNR=18
ERPA Erie 78.24 353 P **P** 04 17 03.3 -1.1
baz=172
ERPA Erie 78.24 353 *e*P **P** 04 17 04.2 -0.2
comp=Z,83nm,1.0s
ERPA LR LR
comp=Z,3μm,20.0s
214A Organ Pipe Nat 78.25 325 P **P** 04 17 05.6 +0.9
baz=146,SNR=24
BOSA Boshof 78.27 117 P **P** 04 17 04.6 -0.7
comp=Z,59nm,1.0s,baz=231,slow=5.2,SNR=31
BOSA LR LR 04 48 16.4
comp=Z,5μm,19.0s,baz=232,slow=33
P37A Lathrop 78.32 342 P **P** 04 17 03.6 -1.2
baz=161,SNR=18
M46A Old House Fiel 78.39 348 P **P** 04 17 03.6 -1.5
baz=167
N43A Stutzman Famil 78.44 346 P **P** 04 17 04.3 -1.2
baz=165
TRY Troy 78.45 358 *e*P **P** 04 17 06.5 +1.1
comp=Z,179nm,1.1s
KSU1 Kansas State U 78.47 340 P **P** 04 17 05.1 -0.6
baz=159
KSU1 Kansas State U 78.47 340 *e*P **P** 04 17 05.6 -0.1
comp=Z,304nm,1.8s
KSU1 LR LR
comp=Z,2μm,20.0s
N42A Yates City 78.51 345 P **P** 04 17 04.7 -1.1
baz=164,SNR=12
O39A Kirksville 78.51 343 P **P** 04 17 05.2 -0.7
baz=162,SNR=11
M45A Boilermakers S 78.52 347 P **P** 04 17 04.3 -1.6
baz=166
N41A Harden Midland 78.57 345 P **P** 04 17 04.8 -1.3
baz=163,SNR=19
O38A Galt 78.61 342 P **P** 04 17 05.8 -0.6
baz=161,SNR=11
M44A Midewin, Midew 78.66 347 P **P** 04 17 05.7 -1.0
baz=166,SNR=14
MMNY Mt. Morris Dam 78.67 355 *e*P **P** 04 17 06.9 +0.2
comp=Z,144nm,1.1s
MMNY LR LR
comp=Z,4μm,20.0s
O37A Wolven Farm, M 78.82 342 P **P** 04 17 06.9 -0.7
baz=161,SNR=24
AAM Ann Arbor 78.85 350 P **P** 04 17 06.6 -1.1
baz=169
AAM Ann Arbor 78.85 350 *e*P **P** 04 17 07.9 +0.2
comp=Z,140nm,1.5s
AAM LR LR
comp=Z,4μm,20.0s
AAM Ann Arbor 78.85 350 *e*P **P** 04 17 07.9 +0.2
AAM pmax pmax
comp=Z,140nm,1.5s
M43A Waltham Townsh 78.88 346 P **P** 04 17 06.9 -0.9
baz=165,SNR=20
N40A Mertquake, Sal 78.89 344 P **P** 04 17 06.9 -1.1
baz=163,SNR=12
M42A Sheffield 79.06 346 P **P** 04 17 07.7 -1.2
baz=164,SNR=11
N39A Derby Farms, D 79.10 343 P **P** 04 17 08.4 -0.7
baz=162,SNR=27
ACCN Adirondack Com 79.10 358 *e*P **P** 04 17 09.3 +0.3
comp=Z,161nm,1.4s
ACCN LR LR
comp=Z,4μm,21.0s
X18A Snowflake 79.13 328 *e*P **P** 04 17 11.0 +1.3
comp=Z,82nm,1.1s
X18A LR LR
comp=Z,4μm,19.0s
CBKS Cedar Bluff 79.13 337 P **P** 04 17 09.6 +0.2
baz=156,SNR=9.8
CBKS Cedar Bluff 79.13 337 *e*P **P** 04 17 10.1 +0.7
comp=Z,243nm,1.2s
CBKS Cedar Bluff 79.13 337 *e*P **P** 04 17 10.1 +0.7
CBKS pmax pmax
comp=Z,240nm,1.2s
M41A Milan 79.14 345 P **P** 04 17 08.0 -1.3
baz=164,SNR=18
FFD Franklin Falls 79.15 359 *e*P **P** 04 17 10.5 +1.2
comp=Z,143nm,1.0s
N38A Joes South For 79.19 343 P **P** 04 17 09.0 -0.6
baz=162,SNR=16
T25A Trinidad 79.20 333 P **P** 04 17 10.7 +0.7
baz=153,SNR=66
T25A Trinidad 79.20 333 *e*P **P** 04 17 10.8 +0.8
comp=Z,342nm,1.1s
T25A LR LR
comp=Z,2μm,20.0s
113A Mohawk Valley, 79.37 324 *e*P **P** 04 17 12.1 +1.3
comp=Z,128nm,1.8s
113A LR LR
comp=Z,2μm,20.0s
M40A Post Highland 79.38 344 P **P** 04 17 09.5 -1.1
baz=163,SNR=12
HNH Hanover 79.39 359 *e*P **P** 04 17 11.5 +0.9
comp=Z,421nm,1.9s
N37A Lee Faris, Mou 79.39 342 P **P** 04 17 09.4 -1.3
baz=161
L44A Lake County Fo 79.40 347 P **P** 04 17 09.7 -1.0
baz=166
W18A Petrified Fore 79.54 328 P **P** 04 17 12.5 +0.6
baz=149,SNR=22
W18A Petrified Fore 79.54 328 *e*P **P** 04 17 13.1 +1.2
comp=Z,125nm,1.2s
W18A LR LR
comp=Z,4μm,20.0s
L43A Garden Prairie 79.56 347 P **P** 04 17 10.4 -1.1
baz=165,SNR=23
L42A Oliver, Polo 79.57 346 P **P** 04 17 10.8 -0.9
baz=164,SNR=20
M39A Webster 79.59 344 P **P** 04 17 10.7 -1.1
baz=162,SNR=14
N36A Muff Farm, Cla 79.64 342 P **P** 04 17 11.2 -0.8
baz=160
X16A Lo Mia Camp, P 79.68 327 *e*P **P** 04 17 13.9 +1.2
comp=Z,111nm,1.0s
X16A LR LR
comp=Z,3μm,19.0s
NCB Newcomb 79.71 358 *e*P **P** 04 17 12.6 +0.3
comp=Z,38nm,1.0s
NCB LR LR
comp=Z,3μm,20.0s
M38A Pleasantville 79.77 343 P **P** 04 17 11.8 -1.0
baz=162,SNR=23
L41A Preston 79.80 345 P **P** 04 17 12.0 -0.9
baz=164,SNR=44
LBNH Lisbon 79.92 359 P **P** 04 17 13.3 -0.2
baz=179,SNR=22
LBNH Lisbon 79.92 359 *e*P **P** 04 17 14.2 +0.7
comp=Z,76nm,1.0s
LBNH LR LR
comp=Z,4μm,20.0s
LBNH Lisbon 79.92 359 *e*P **P** 04 17 14.2 +0.7
LBNH pmax pmax
comp=Z,76nm,1.0s
L40A Anamosa 79.94 345 P **P** 04 17 12.7 -0.9
baz=163,SNR=20
M37A Trindle Farm, 79.96 342 P **P** 04 17 13.3 -0.5
baz=161,SNR=29
Y14A Wickenburg 79.99 325 *e*P **P** 04 17 15.1 +0.9
comp=Z,67nm,1.1s
Y14A LR LR
comp=Z,2μm,19.0s
K43A Burlington 79.99 347 P **P** 04 17 13.1 -0.8
baz=168,SNR=15
VT1 Waterbury 80.03 359 *e*P **P** 04 17 15.4 +1.3
comp=Z,80nm,1.4s
GLA Glamis 80.11 324 P **P** 04 17 15.4 +0.5
baz=145,SNR=12
GLA Glamis 80.11 324 *e*P **P** 04 17 17.1 +2.2
comp=Z,175nm,1.5s
GLA LR LR
comp=Z,3μm,21.0s
GLA Glamis 80.11 324 *e*P **P** 04 17 17.1 +2.2
GLA pmax pmax
comp=Z,170nm,1.5s
SDCO Great Sand Dun 80.14 333 P **P** 04 17 15.0 -0.2
baz=152,SNR=28
SDCO Great Sand Dun 80.14 333 *e*P **P** 04 17 15.7 +0.5
comp=Z,65nm,1.1s
SDCO LR LR
comp=Z,3μm,20.0s
L39A Vinton 80.17 344 P **P** 04 17 13.7 -1.1
baz=163,SNR=14
M36A Felix, Anita 80.20 342 P **P** 04 17 14.1 -1.0
baz=160
SCIA State Center 80.24 343 P **P** 04 17 14.6 -0.7
baz=162
SCIA State Center 80.24 343 *e*P **P** 04 17 15.2 -0.1
comp=Z,281nm,1.5s
SCIA LR LR
comp=Z,3μm,21.0s
KSCO Kaye Shedlock' 80.25 335 P **P** 04 17 15.7 +0.1
baz=154,SNR=13
KSCO Kaye Shedlock' 80.25 335 *e*P **P** 04 17 16.7 +1.1
comp=Z,286nm,1.4s
KSCO LR LR
comp=Z,2μm,20.0s
WVL Waterville 80.25 1 *e*P **P** 04 17 16.3 +1.0
comp=Z,140nm,1.5s
K42A Prairie Point, 80.25 346 P **P** 04 17 14.2 -1.2
baz=165,SNR=33
K41A Shullsburg 80.28 346 P **P** 04 17 14.6 -0.8
baz=164,SNR=21
LONY Lake Ozonia 80.37 357 P **P** 04 17 14.9 -1.1
baz=177,SNR=35
LONY Lake Ozonia 80.37 357 *e*P **P** 04 17 16.0 +0.1
comp=Z,159nm,1.4s
LONY LR LR
comp=Z,3μm,22.0s
L38A Oak Wood Farm, 80.40 344 P **P** 04 17 14.7 -1.5
baz=162,SNR=20
IKP In-Ko-Pah, Jac 80.41 323 P **P** 04 17 17.3 +0.8
baz=144
EMMW East Machias 80.44 2 *e*P **P** 04 17 17.1 +0.8
comp=Z,75nm,1.0s
SWSC Sam W. Stewart 80.50 323 P **P** 04 17 17.1 +0.3
baz=144
K40A Colesburg 80.54 345 P **P** 04 17 15.0 -1.8
baz=163,SNR=14
Y12C Blythe 80.54 324 P **P** 04 17 18.1 +1.0
baz=145,SNR=18
Y12C Blythe 80.54 324 *e*P **P** 04 17 18.4 +1.3
comp=Z,91nm,1.1s
Y12C LR LR
comp=Z,3μm,21.0s
FRNY Flat Rock 80.55 358 *e*P **P** 04 17 17.0 +0.1
comp=Z,70nm,1.0s
FRNY LR LR
comp=Z,3μm,20.0s
JFWS Jewell Farm 80.56 346 P **P** 04 17 15.9 -1.0
baz=164,SNR=18
JFWS Jewell Farm 80.56 346 *e*P **P** 04 17 16.6 -0.4
comp=Z,208nm,1.5s
JFWS LR LR
comp=Z,5μm,18.0s
JFWS Jewell Farm 80.56 346 *e*P **P** 04 17 16.6 -0.4
JFWS pmax pmax
comp=Z,210nm,1.5s
L37A Phoenix Point, 80.57 343 P **P** 04 17 15.8 -1.2
baz=161
WUAZ Wupatki 80.58 328 P **P** 04 17 18.2 +0.7
baz=148,SNR=30
WUAZ Wupatki 80.58 328 *e*P **P** 04 17 18.9 +1.4
comp=Z,428nm,2.0s
WUAZ LR LR
comp=Z,3μm,19.0s
KOWA Kowa 80.62 64 P **P** 04 17 17.7 -0.3
comp=Z,81nm,1.1s,baz=230,slow=5.2,SNR=32
KOWA LR LR 04 51 27.1
comp=Z,13μm,18.7s,baz=230,slow=35
KOWA Kowa 80.62 64 *e*P **P** 04 17 17.7 -0.3
comp=Z,336nm,1.5s
S22A 4UR Ranch, Cre 80.64 332 P **P** 04 17 18.3 +0.4
baz=151,SNR=28
S22A 4UR Ranch, Cre 80.64 332 *e*P **P** 04 17 18.6 +0.7
comp=Z,66nm,1.2s
S22A LR LR
comp=Z,4μm,22.0s
J43A Natural Harves 80.66 347 P **P** 04 17 16.4 -1.1
baz=166,SNR=11
K39A Oelwein 80.70 344 P **P** 04 17 16.0 -1.7
baz=163,SNR=13
BAR Barrett 80.71 322 *e*P **P** 04 17 20.2 +2.2
comp=Z,54nm,1.1s
BAR LR LR
comp=Z,3μm,19.0s
J42A Columbus 80.73 347 P **P** 04 17 16.9 -1.0
baz=165,SNR=57
MONP2 Monument Peak 80.76 323 P **P** 04 17 19.0 +0.4
baz=144
L36A Harm Buss Farm 80.77 342 P **P** 04 17 17.1 -1.1
baz=160
SADO Sadowa 80.80 354 *e*P **P** 04 17 17.7 -0.5
comp=Z,121nm,1.1s
SADO LR LR
comp=Z,4μm,20.0s
PDMCI Parker Dam,Lak 80.81 325 P **P** 04 17 19.2 +0.6
baz=146
MVCO Mesa Verde 80.83 330 P **P** 04 17 19.2 +0.3
baz=150,SNR=19
MVCO Mesa Verde 80.83 330 *e*P **P** 04 17 19.5 +0.7
comp=Z,149nm,1.3s
MVCO LR LR
comp=Z,7μm,20.0s
K38A Parkersburg 80.84 344 P **P** 04 17 17.2 -1.3
baz=162
PLVO Plevna 80.91 356 *e*P **P** 04 17 18.8 0.0
comp=Z,160nm,1.2s
PLVO LR LR
comp=Z,6μm,22.0s
J41A Loganville 80.95 346 P **P** 04 17 18.0 -1.1
baz=164,SNR=15
PKME Peaks-Kenny Pk 80.95 1 P **P** 04 17 17.0 -2.0
baz=181,SNR=11
PKME Peaks-Kenny Pk 80.95 1 *e*P **P** 04 17 19.4 +0.4
comp=Z,60nm,1.1s
PKME LR LR
comp=Z,5μm,21.0s
BGNE Belgrade 81.05 340 P **P** 04 17 19.2 -0.4
baz=158
BGNE Belgrade 81.05 340 *e*P **P** 04 17 20.1 +0.4
comp=Z,322nm,1.2s
BGNE LR LR
comp=Z,2μm,21.0s
Q24A Divide 81.08 334 P **P** 04 17 20.5 +0.3
baz=152,SNR=32
Q24A Divide 81.08 334 *e*P **P** 04 17 20.6 +0.3
comp=Z,72nm,0.9s
Q24A LR LR
comp=Z,2μm,22.0s
109C Camp Elliot, M 81.09 322 P **P** 04 17 20.7 +0.6
baz=144
CPE Camp Elliot 81.09 322 *e*P **P** 04 17 24.8 +4.7
comp=Z,52nm,1.4s
CPE LR LR
comp=Z,3μm,21.0s
I43A Langenfeld Bro 81.10 347 P **P** 04 17 18.0 -1.9
baz=166,SNR=11
J40A Soldiers Grove 81.12 345 P **P** 04 17 18.7 -1.3
baz=164,SNR=18
K37A Belmond 81.16 343 P **P** 04 17 18.7 -1.5
baz=161
IRM Iron Mountain 81.17 324 P **P** 04 17 20.9 +0.4
baz=145,SNR=20
K36A Gilmore City 81.23 343 P **P** 04 17 19.4 -1.1
baz=161,SNR=15
I42A Draeger Farm, 81.24 347 P **P** 04 17 19.7 -0.9
baz=165,SNR=18
I42A Draeger Farm, 81.24 347 *e*P **P** 04 17 20.0 -0.6
comp=Z,44nm,0.9s
I42A LR LR
comp=Z,3μm,22.0s
J39A Decorah 81.26 345 P **P** 04 17 19.4 -1.4
baz=163,SNR=18
W13A Hualapai Mount 81.35 326 *e*P **P** 04 17 22.7 +1.0
comp=Z,64nm,1.3s
W13A LR LR
comp=Z,2μm,18.0s
PFO Pinyon Flats O 81.36 323 P **P** 04 17 22.6 +0.9
baz=144,SNR=18
PFO Pinyon Flats O 81.36 323 *e*P **P** 04 17 22.9 +1.3
comp=Z,66nm,1.0s
PFO LR LR
comp=Z,3μm,18.0s
PFO Pinyon Flats O 81.36 323 *e*P **P** 04 17 22.9 +1.3
PFO pmax pmax
comp=Z,66nm,1.0s
J38A Wedel Dairy, R 81.42 344 P **P** 04 17 20.1 -1.4
baz=162,SNR=21
NEE2 Needles Airpor 81.42 325 P **P** 04 17 22.2 +0.5
baz=145
BELC Belle Mtn. Jos 81.45 323 P **P** 04 17 23.2 +1.1
baz=144,SNR=23
I40A Norwalk 81.57 346 P **P** 04 17 21.2 -1.2
baz=164
I41A Arkdale 81.59 346 P **P** 04 17 20.9 -1.5
baz=164
H43A Windswept, Lux 81.60 348 P **P** 04 17 21.6 -0.8
baz=166,SNR=19
H43A Windswept, Lux 81.60 348 *e*P **P** 04 17 22.3 -0.2
comp=Z,84nm,1.0s
H43A LR LR
comp=Z,3μm,19.0s
J37A Redenius Farm, 81.65 343 P **P** 04 17 22.0 -0.8
baz=161,SNR=22
PV01 Paradox Valley 81.65 331 *e*P **P** 04 17 24.3 +1.0
comp=Z,99nm,1.3s
MURC Murrieta 81.71 322 P **P** 04 17 24.2 +0.8
baz=144,SNR=9.7
I39A Houston 81.72 345 P **P** 04 17 22.2 -1.0
baz=163,SNR=25
U15A North Rim 81.75 327 *e*P **P** 04 17 24.9 +1.1
comp=Z,304nm,2.0s
U15A LR LR
comp=Z,3μm,20.0s
H42A Shiocton 81.77 347 P **P** 04 17 22.3 -1.0
baz=165
H42A Shiocton 81.77 347 *e*P **P** 04 17 23.2 -0.2
comp=Z,239nm,1.9s
H42A LR LR
comp=Z,3μm,20.0s
PV02 Paradox Valley 81.78 331 *e*P **P** 04 17 24.8 +0.9
comp=Z,143nm,1.3s
PV15 Paradox Valley 81.80 331 *e*P **P** 04 17 25.3 +1.3
comp=Z,245nm,1.7s
OGNE Ogallala 81.80 337 P **P** 04 17 23.8 +0.1
baz=155
OGNE Ogallala 81.80 337 *e*P **P** 04 17 24.0 +0.2
comp=Z,400nm,1.7s
PV05 Paradox Valley 81.81 330 *e*P **P** 04 17 24.5 +0.4
comp=Z,83nm,1.0s
J36A Seneca 1, Swea 81.85 343 P **P** 04 17 23.3 -0.6
baz=161,SNR=20
PV03 Paradox Valley 81.86 331 *e*P **P** 04 17 25.0 +0.6
comp=Z,118nm,1.3s
MQZ McQueen's Vall 81.88 221 PFAKE 04 17 40.0 +16
MQZ LR LR
comp=Z,4μm,20.0s
LDFC Landfair 81.90 325 *e*P **P** 04 17 27.2 +2.7
comp=Z,167nm,1.4s
LDFC LR LR
comp=Z,3μm,20.0s
GMRC Granite Mounta 81.92 324 P **P** 04 17 25.4 +0.8
baz=145,SNR=26
PV07 Paradox Valley 81.94 331 *e*P **P** 04 17 26.4 +1.7
comp=Z,40nm,1.1s
SMCO Snowmass 81.94 332 *e*P **P** 04 17 26.2 +1.3
comp=Z,112nm,1.1s
SMCO LR LR
comp=Z,900nm,20.0s
TRQ Mont Tremblant 81.97 357 *e*P **P** 04 17 24.1 -0.4
ISCO Idaho Springs 81.99 334 P **P** 04 17 25.3 +0.3
baz=152,SNR=40
ISCO Idaho Springs 81.99 334 *e*P **P** 04 17 25.6 +0.5
comp=Z,58nm,1.1s
ISCO LR LR
comp=Z,2μm,20.0s
ISCO Idaho Springs 81.99 334 *e*P **P** 04 17 25.6 +0.5
ISCO pmax pmax
comp=Z,58nm,1.1s
ODZ Otahua Downs 82.00 219 *e*P **P** 04 17 27.7 +2.7
comp=Z,110nm,1.4s
PV04 Paradox Valley 82.01 331 *e*P **P** 04 17 26.2 +1.2
comp=Z,261nm,1.7s
PV10 Paradox Valley 82.05 331 *e*P **P** 04 17 26.4 +1.1
comp=Z,111nm,1.1s
I38A Scanlan Farm, 82.07 345 P **P** 04 17 24.0 -1.0
baz=162,SNR=58
H41A Junction City 82.08 347 P **P** 04 17 24.4 -0.6
baz=164
H41A Junction City 82.08 347 *e*P **P** 04 17 24.5 -0.6
comp=Z,129nm,1.8s
H41A LR LR
comp=Z,3μm,18.0s
BBRC Big Bear Solar 82.11 323 P **P** 04 17 26.2 +0.4
baz=144
CIS Catalina Islan 82.16 321 P **P** 04 17 26.6 +0.8
baz=143
PV09 Paradox Valley 82.19 331 *e*P **P** 04 17 27.0 +0.9
H40A Chili 82.23 346 P **P** 04 17 24.9 -0.9
baz=164,SNR=20
KHZ Kahutara 82.28 222 *e*P **P** 04 17 28.0 +1.6
comp=Z,226nm,1.6s
HEC Hector,Ludlow 82.28 324 P **P** 04 17 27.2 +0.8
baz=144,SNR=9.7
I37A Lemond, Waseca 82.28 344 P **P** 04 17 24.7 -1.4
baz=162,SNR=25
FMP Fort Macarthur 82.35 322 P **P** 04 17 27.7 +1.1
baz=143
G43A Wallace 82.35 348 P **P** 04 17 25.2 -1.2
baz=166,SNR=27
G43A Wallace 82.35 348 *e*P **P** 04 17 26.2 -0.2
comp=Z,226nm,1.8s
G43A LR LR
comp=Z,3μm,22.0s
PQI Presque Isle 82.39 2 *e*P **P** 04 17 27.2 +0.7
comp=Z,288nm,1.9s
F46A Macinaw City C 82.41 350 P **P** 04 17 25.6 -1.1
baz=168
I36A Fitzsimmons Fa 82.43 343 P **P** 04 17 25.8 -1.0
baz=161,SNR=13
F45A CMU Biological 82.43 350 P **P** 04 17 25.6 -1.2
baz=168,SNR=12
BFSC Mount Baldy Ra 82.45 322 P **P** 04 17 27.9 +0.5

baz=143,SNR=14
H39A Augusta 82.46 345 P P 04 17 25.3 -1.7
baz=163
OXZ Oxford 82.46 221 eP P 04 17 29.2 +1.8
comp=Z,57nm,1.1s
G42A Mountain 82.47 348 P P 04 17 26.6 -0.4
baz=166,SNR=44
G42A Mountain 82.47 348 eP P 04 17 26.6 -0.4
comp=Z,94nm,1.1s
G42A LR LR
comp=Z,4µm,19.0s
KNB Kanab 82.47 327 eP P 04 17 28.6 +1.1
comp=Z,193nm,1.2s
KNB LR LR
comp=Z,2µm,18.0s
KNB Kanab 82.47 327 eP P 04 17 28.6 +1.1
KNB pmax pmax
comp=Z,190nm,1.2s
G41A Antigo 82.57 347 P P 04 17 26.6 -1.0
baz=165,SNR=14
TUQ Turquoise Moun 82.58 324 P P 04 17 28.9 +0.8
baz=145,SNR=23
PKCU Pink Cliffs 82.61 328 eP P 04 17 30.5 +2.1
comp=Z,141nm,1.6s
PKCU LR LR
comp=Z,4µm,22.0s
MWC Mount Wilson 82.64 322 eP P 04 17 30.5 +2.1
comp=Z,72nm,1.2s
MWC LR LR
comp=Z,2µm,19.0s
MWC Mount Wilson 82.64 322 eP P 04 17 30.5 +2.1
MWC pmax pmax
comp=Z,72nm,1.2s
RRX Edison Barstow 82.64 323 P P 04 17 28.2 0.0
baz=144
LCMT Little Creek M 82.65 327 eP P 04 17 29.5 +1.1
PASC Pasadena Art C 82.66 322 eP P 04 17 30.0 +1.7
comp=Z,93nm,1.3s
PASC LR LR
comp=Z,2µm,18.0s
H38A Maiden Rock 82.67 345 P P 04 17 26.4 -1.7
baz=162
LTZ Lake Taylor 82.71 221 eP P 04 17 30.6 +1.8
comp=Z,138nm,1.2s
H37A Dierke Farm, C 82.72 344 P P 04 17 27.1 -1.2
baz=162,SNR=21
RPZ Rata Peaks 82.72 220 P P 04 17 29.1 +0.4
comp=Z,61nm,1.0s,baz=104,slow=5.9,SNR=7.7
WHZ Wether Hill Ro 82.75 217 eP P 04 17 30.7 +1.8
comp=Z,311nm,1.9s
BKZ Black Stump Fm 82.77 226 eP P 04 17 31.8 +2.7
comp=Z,211nm,1.6s
ECSD EROS Data Cent 82.80 341 P P 04 17 28.2 -0.6
baz=159,SNR=68
ECSD EROS Data Cent 82.80 341 eP P 04 17 28.5 -0.3
comp=Z,158nm,1.1s
ECSD LR LR
comp=Z,2µm,22.0s
DECC Green Verdugo 82.80 322 P P 04 17 29.5 +0.4
baz=143
G40A Rib Lake 82.81 346 P P 04 17 27.9 -1.0
baz=164,SNR=22
F43A Flat Rock, Esc 82.83 349 P P 04 17 28.2 -0.6
baz=167,SNR=15
F44A Big Bay de Noc 82.85 349 P P 04 17 28.2 -0.7
baz=167,SNR=33
GSC Goldstone, Bar 82.89 324 P P 04 17 30.1 +0.5
baz=144,SNR=14
GSC Goldstone, Bar 82.89 324 eP P 04 17 31.1 +1.5
comp=Z,195nm,1.8s
GSC LR LR
comp=Z,2µm,21.0s
GSC Goldstone, Bar 82.89 324 eP P 04 17 31.1 +1.5
GSC pmax pmax
comp=Z,190nm,1.8s
F42A Maple Grove Fa 82.92 348 P P 04 17 28.7 -0.6
baz=166
H36A Jessenland, He 82.94 344 P P 04 17 28.2 -1.2
baz=161,SNR=16
URZ Urewera 82.99 227 P P 04 17 31.3 +1.1
comp=Z,27nm,1.0s,baz=107,slow=9.0,SNR=3.7
G39A Holcombe 83.02 346 P P 04 17 29.2 -0.8
baz=163,SNR=20
E45A Wooded Hills, 83.04 350 P P 04 17 29.1 -0.9
baz=168,SNR=20
MLZ Mavora Lakes 83.04 217 eP P 04 17 31.9 +1.4
comp=Z,208nm,1.8s
G38A Ridgeland 83.05 345 P P 04 17 28.8 -1.2
baz=163,SNR=16
BLG Laguna Peak, P 83.05 321 P P 04 17 30.5 +0.1
baz=142
MTPU Mount Pierson 83.06 328 eP P 04 17 31.4 +0.6
comp=Z,58nm,1.0s
MTPU LR LR
comp=Z,4µm,20.0s
F41A Three Lakes 83.07 347 P P 04 17 29.4 -0.7
baz=165,SNR=19
SZCU Shurtz Canyon 83.07 327 eP P 04 17 32.1 +1.5
comp=Z,96nm,1.2s
SZCU LR LR
comp=Z,3µm,21.0s
N23A Red Feather La 83.08 334 P P 04 17 30.9 +0.2
baz=152,SNR=18
N23A Red Feather La 83.08 334 eP P 04 17 31.6 +0.9
comp=Z,105nm,1.3s
N23A LR LR
comp=Z,2µm,22.0s
SHPR Sheep Range 83.10 325 eP P 04 17 32.3 +1.6
comp=Z,128nm,1.6s
SHPR LR LR
comp=Z,2µm,20.0s
SHOC Shoshone, Teco 83.12 324 P P 04 17 30.8 +0.1
baz=144
EDW2 Edwards Air Fo 83.13 323 P P 04 17 31.1 +0.3
baz=143,SNR=12
CCUT Cedar City 83.15 327 eP P 04 17 32.9 +1.8
comp=Z,126nm,1.2s
CCUT LR LR
comp=Z,3µm,18.0s
SCZ2 Santa Cruz Isl 83.25 321 P P 04 17 31.6 +0.1
baz=142
O20A White River Ci 83.26 332 P P 04 17 31.4 -0.1
baz=150,SNR=17
O20A White River Ci 83.26 332 eP P 04 17 32.2 +0.7
comp=Z,93nm,1.3s
O20A LR LR
comp=Z,3µm,21.0s
H35A Sunnyside Ranc 83.26 343 P P 04 17 30.4 -0.8
baz=160,SNR=57
PHWY Pilot Hill 83.26 334 eP P 04 17 31.9 +0.3
comp=Z,145nm,1.4s
PHWY LR LR
comp=Z,2µm,22.0s
SRU San Rafael Swe 83.27 330 eP P 04 17 31.9 +0.3
comp=Z,75nm,1.1s
SRU LR LR
comp=Z,4µm,20.0s
SRU San Rafael Swe 83.27 330 eP P 04 17 31.9 +0.3
SRU pmax pmax
comp=Z,75nm,1.0s
OSI Osito Audit: C 83.28 322 P P 04 17 31.7 +0.1
baz=143
OSI Osito Audit: C 83.28 322 PFAKE 04 17 40.0 +8.4
OSI LR LR
comp=Z,2µm,19.0s
SPMN Marine on St. 83.30 345 P P 04 17 30.4 -0.9
baz=162,SNR=22
SPMN Marine on St. 83.30 345 eP P 04 17 30.7 -0.7
comp=Z,54nm,1.0s
SPMN LR LR
comp=Z,4µm,18.0s
E43A Lone Tree Farm 83.33 349 P P 04 17 30.8 -0.7
baz=167,SNR=49
E44A Grand Marais A 83.41 350 P P 04 17 31.3 -0.5
baz=168,SNR=20
COWI Conover 83.42 347 eP P 04 17 31.2 -0.8
comp=Z,60nm,1.1s
COWI LR LR
comp=Z,3µm,22.0s
F40A Park Falls 83.43 347 P P 04 17 31.0 -1.0
baz=164
MSU Marysvale 83.45 329 eP P 04 17 33.4 +0.8
MSU Marysvale 83.45 329 eP P 04 17 33.4 +0.8
LRMC Laurel Mtn Rad 83.46 323 P P 04 17 33.4 +0.8
baz=143,SNR=16
G36A St. Michael 83.52 344 P P 04 17 31.6 -0.9
baz=161
E42A Champion 83.53 348 P P 04 17 32.1 -0.4
baz=166,SNR=21
F39A Loretta 83.58 346 P P 04 17 32.1 -0.7
baz=164,SNR=44
I31A Royce, Wessing 83.58 340 P P 04 17 32.0 -0.8
baz=158
P18A Preston Nutter 83.60 330 eP P 04 17 34.1 +0.6
comp=Z,138nm,1.1s
P18A LR LR
comp=Z,5µm,20.0s
TCRU Three Creeks R 83.64 328 PFAKE 04 17 50.0 +16
TCRU LR LR
comp=Z,5µm,19.0s
P17A Butcher Ranch, 83.67 330 eP P 04 17 34.2 +0.6
comp=Z,89nm,1.1s
P17A LR LR
comp=Z,4µm,20.0s
G35A Watkins 83.67 343 P P 04 17 32.2 -1.0
baz=161,SNR=10
TMUT Trail Mountain 83.71 330 eP P 04 17 34.6 +0.6
comp=Z,63nm,1.0s
TMUT LR LR
comp=Z,4µm,20.0s
H33A Prehn Over Nor 83.71 342 P P 04 17 33.1 -0.5
baz=159,SNR=29
H32A Carlson Farm, 83.73 341 P P 04 17 32.7 -0.9
baz=158,SNR=26
ARVC Arvin 83.74 322 P P 04 17 34.6 +0.8
baz=143
F37A Hinrichs Farm, 83.74 345 P P 04 17 32.8 -0.8
baz=162,SNR=34
E41A Kenton 83.74 348 P P 04 17 32.4 -1.2
baz=165,SNR=6.1
F38A Pierce - Schro 83.81 345 P P 04 17 32.9 -1.0
baz=163,SNR=36
MPMC Manual Prospec 83.83 324 P P 04 17 35.0 +0.4
baz=144,SNR=7.1
FURC Furnace Creek, 83.86 324 P P 04 17 35.3 +0.9
baz=144,SNR=16
E40A Wakefield 83.89 347 P P 04 17 33.9 -0.5
baz=164,SNR=76
E39A Mellen 83.95 346 P P 04 17 34.2 -0.4
baz=164,SNR=39
TPNV Topopah Spring 83.96 325 P P 04 17 35.6 +0.4
baz=144,SNR=28
TPNV Topopah Spring 83.96 325 eP P 04 17 36.3 +1.1
comp=Z,96nm,1.4s
TPNV LR LR
comp=Z,3µm,20.0s
TPNV Topopah Spring 83.96 325 eP P 04 17 36.3 +1.1
TPNV pmax pmax
comp=Z,96nm,1.3s
G34A Benson 83.97 343 P P 04 17 33.8 -1.0
baz=160,SNR=20
H31A Wolsey 83.98 341 P P 04 17 34.3 -0.6
baz=158
ISA Isabella, Lake 83.99 323 P P 04 17 36.3 +1.1
baz=143,SNR=12
ISA Isabella, Lake 83.99 323 eP P 04 17 36.2 +1.0
comp=Z,202nm,1.8s
ISA LR LR
comp=Z,2µm,20.0s
ISA Isabella, Lake 83.99 323 eP P 04 17 36.2 +1.0
ISA pmax pmax
comp=Z,200nm,1.8s
TORD Torodi Ar. Bea 84.01 69 P P 04 17 34.8 -1.0
comp=Z,42nm,1.0s,baz=232,slow=3.4,SNR=81
TORD PP PP 04 20 49.1 -0.7
comp=Z,4.4nm,1.0s,baz=239,slow=5.0,SNR=4.3
TORD S S 04 27 59.5 -1.3
comp=Z,1.5nm,1.0s,baz=227,slow=9.3,SNR=4.4
TORD PKKPbc PKKPbc 04 35 49.5 0.0
comp=Z,0.7nm,1.0s,baz=43,slow=2.3,SNR=3.6
TORD LR LR 04 53 45.1
comp=Z,5µm,18.3s,baz=250,slow=35
TOA1 Torodi Ar. Sit 84.02 69 eP P 04 17 34.8 -1.0
TOA1 ePP PP 04 20 49.1 -0.7
TOA1 eS S 04 27 59.5 -1.3
TOA1 ePKKPbc PKKPbc 04 35 49.5 0.0
PKM Mcpherson Peak 84.04 321 P P 04 17 36.3 +0.7
baz=142
DAC Darwin (Calif) 84.05 324 eP P 04 17 36.6 +0.9
comp=Z,103nm,1.3s
DAC LR LR
comp=Z,2µm,20.0s
DAC Darwin (Calif) 84.05 324 eP P 04 17 36.6 +0.9
DAC pmax pmax
comp=Z,100nm,1.2s
F36A Milaca 84.06 344 P P 04 17 34.4 -0.9
baz=162,SNR=21
SUSD Miller 84.08 340 P P 04 17 34.7 -0.7
baz=157
G33A Ortonville 84.12 342 P P 04 17 34.8 -0.8
baz=159
ROSA Rosais 84.17 32 eP P 04 17 39.0 +3.0
comp=Z,196nm,1.1s
ROSA Rosais 84.17 32 eLQ LQ 04 40 04.0
ROSA eLR LR 04 45 14.1
comp=Z,2µm,21.2s
ROSA Rosais 84.17 32 PFAKE 04 17 50.0 +14
ROSA LR LR
comp=Z,8µm,20.0s
PSUT Pine Spring 84.19 327 eP P 04 17 37.2 +0.9
comp=Z,112nm,1.3s
PSUT LR LR
comp=Z,3µm,20.0s
PSMN Pico do Norte, 84.19 35 eP P 04 17 35.1 -1.0
comp=Z,36nm,0.9s
PSMN Pico do Norte, 84.19 35 eLQ LQ 04 39 47.5
PSMN eLR LR 04 45 08.6
comp=Z,796nm,20.2s
RWWY Rawlins 84.23 333 eP P 04 17 35.9 -0.7
comp=Z,148nm,1.1s
RWWY LR LR
comp=Z,3µm,22.0s
D41A Chassel 84.25 348 P P 04 17 35.7 -0.5
baz=166,SNR=34
F35A Swanville 84.30 344 P P 04 17 35.6 -0.8
baz=161,SNR=12
E38A The Farm, Brul 84.36 346 P P 04 17 35.7 -1.1
baz=163,SNR=18
F34A Alexandria 84.40 343 P P 04 17 36.4 -0.5
baz=160,SNR=11
CWC Cottonwood Cre 84.42 324 P P 04 17 37.9 +0.4
baz=143
VES Vestal, Richgr 84.43 322 P P 04 17 38.3 +0.9
baz=143,SNR=18
G32A Webster 84.44 341 P P 04 17 36.4 -0.8
baz=158
SMMC Simmler 84.47 322 P P 04 17 38.5 +0.9
baz=142
MPU Maple Canyon 84.49 330 eP P 04 17 38.6 +0.7
comp=Z,82nm,1.3s
MPU LR LR
comp=Z,5µm,21.0s
E37A Wrenshall 84.50 345 P P 04 17 36.5 -0.9
baz=162
GRAC Grapevine Rang 84.52 324 P P 04 17 38.9 +1.0
baz=144,SNR=26
PGRA Graciosa 84.54 32 eP P 04 17 41.3 +3.4
comp=Z,108nm,1.0s
PGRA Graciosa 84.54 32 eLQ LQ 04 40 08.1
PGRA eLR LR 04 45 11.3
comp=Z,1µm,19.2s
PSET Sete Cidades 84.55 34 eP P 04 17 41.0 +3.0
comp=Z,233nm,1.0s
PSET Sete Cidades 84.55 34 eLQ LQ 04 39 47.5
PSET eLR LR 04 44 56.2
comp=Z,912nm,20.2s
CMLA Cha da Macela 84.60 34 eP P 04 17 38.7 +0.5
comp=Z,126nm,0.7s
CMLA Cha da Macela 84.60 34 eLQ LQ 04 39 29.7
CMLA eLR LR 04 45 05.8
comp=Z,749nm,18.2s
CMLA Cha da Macela 84.60 34 PFAKE 04 17 50.0 +12
CMLA LR LR
comp=Z,7µm,20.0s
G31A Conde 84.60 341 P P 04 17 37.1 -0.9
baz=158
NLU North Lily Min 84.62 329 eP P 04 17 39.5 +1.0
comp=Z,114nm,1.3s
E36A McGregor 84.63 345 P P 04 17 37.3 -0.8
baz=162,SNR=24
F33A 5 Mile Ranch, 84.69 342 P P 04 17 37.4 -1.0
baz=159,SNR=19
R11A Troy Canyon, C 84.80 326 P P 04 17 40.0 +0.6
baz=145,SNR=38
R11A Troy Canyon, C 84.80 326 eP P 04 17 40.5 +1.0
comp=Z,176nm,1.8s
R11A LR LR
comp=Z,3µm,18.0s
K22A Casper 84.83 334 P P 04 17 39.5 0.0
baz=152,SNR=47
K22A Casper 84.83 334 eP P 04 17 40.1 +0.7
comp=Z,194nm,1.1s
K22A LR LR
comp=Z,2µm,21.0s
JLU Jordanelle 84.91 330 eP P 04 17 40.7 +0.7
comp=Z,49nm,1.2s
JLU LR LR
comp=Z,4µm,20.0s
E35A Pequot Lakes 84.92 344 P P 04 17 38.8 -0.8
baz=161
F32A Veblen 84.92 342 P P 04 17 38.8 -0.8
baz=159
PAGB Antelope Grade 84.92 322 eP P 04 17 42.5 +2.6
comp=Z,127nm,1.3s
PAGB LR LR
comp=Z,2µm,20.0s
PMOZ Porto Moniz, M 84.94 43 eSKS S 04 28 17.9 +8.5
PMOZ Porto Moniz, M 84.94 43 eLR LR 04 45 17.2
comp=Z,5µm,22.0s
TIN Tinemaha, Big 84.98 324 P P 04 17 40.9 +0.7
baz=143
PMAR Madeira 85.02 43 eP P 04 17 43.9 +3.3
comp=Z,272nm,1.8s
E34A Wadena 85.05 343 P P 04 17 39.6 -0.7
baz=160
D37A Cotton 85.07 345 P P 04 17 39.3 -1.0
baz=162
CTU Camp Tracy 85.11 330 eP P 04 17 41.4 +0.4
comp=Z,20nm,0.9s
CTU LR LR
comp=Z,3µm,21.0s
DUG Dugway, Tooele 85.13 329 P P 04 17 41.1 +0.1
baz=147,SNR=46
DUG Dugway, Tooele 85.13 329 eP P 04 17 41.5 +0.5
comp=Z,105nm,1.3s
DUG LR LR
comp=Z,4µm,20.0s
DUG Dugway, Tooele 85.13 329 eP P 04 17 41.5 +0.5
DUG pmax pmax
comp=Z,100nm,1.2s
C40A Isle Royale Na 85.18 348 P P 04 17 39.7 -1.1
baz=165,SNR=12
F31A Hecla 85.20 341 P P 04 17 40.2 -0.8
baz=158,SNR=14
D36A Goodland 85.24 345 P P 04 17 40.1 -1.1
baz=162,SNR=6.0
E33A Westby DABS, E 85.24 343 P P 04 17 39.6 -1.6
baz=160
C39A Grand Marais 85.26 347 P P 04 17 40.1 -1.1
baz=164,SNR=32
RSSD Black Hills 85.30 337 P P 04 17 41.1 -0.7
baz=153
RSSD Black Hills 85.30 337 eP P 04 17 41.4 -0.4
comp=Z,92nm,1.3s
RSSD LR LR
comp=Z,2µm,22.0s
RSSD Black Hills 85.30 337 eP P 04 17 41.4 -0.4
RSSD pmax pmax
comp=Z,91nm,1.2s
TCUT Toone Canyon 85.33 330 eP P 04 17 42.8 +0.7
comp=Z,147nm,1.2s
TCUT LR LR
comp=Z,7µm,20.0s
D35A Remer 85.34 344 P P 04 17 40.5 -1.2
baz=161,SNR=55
C38A Sawbill Land. 85.37 346 P P 04 17 40.1 -1.8
baz=163,SNR=37
MATP Matopo 85.43 112 LR LR 04 52 30.2
comp=Z,3µm,20.1s,baz=232,slow=33
C37A Embarrass 85.56 346 P P 04 17 41.9 -0.9
baz=163,SNR=21
E32A Braaten, Kindr 85.58 342 P P 04 17 42.3 -0.5
baz=159
PMPB Monarch Peak 85.58 322 eP P 04 17 48.3 +5.1
comp=Z,501nm,2.0s
PMPB LR LR
comp=Z,3µm,19.0s
D34A Park Rapids 85.60 344 P P 04 17 41.9 -1.0
baz=160,SNR=16
EYMN Ely 85.64 346 P P 04 17 42.2 -0.9
baz=163,SNR=40
EYMN Ely 85.64 346 eP P 04 17 42.8 -0.4
comp=Z,146nm,1.5s
EYMN LR LR
comp=Z,3µm,19.0s
C36A Pine Crest Far 85.72 345 P P 04 17 42.7 -0.9
baz=162,SNR=21
MLAC Mammoth, Mammo 85.73 324 P P 04 17 45.1 +0.9
baz=143,SNR=18
E31A Nome 85.75 342 P P 04 17 43.0 -0.7
baz=158,SNR=21
OMMB Old Mammoth Mi 85.80 324 eP P 04 17 46.0 +1.4
comp=Z,68nm,1.2s
OMMB LR LR
comp=Z,4µm,20.0s
D33A AnnSam, Waubun 85.80 343 P P 04 17 42.6 -1.4
baz=160
HWUT Hardware Ranch 85.81 331 eP P 04 17 44.5 +0.1
comp=Z,124nm,1.0s
HWUT LR LR
comp=Z,5µm,20.0s
BGU Big Grassy Mou 85.83 329 eP P 04 17 44.8 +0.3
comp=Z,113nm,1.4s
BGU LR LR
comp=Z,3µm,21.0s
MDPB Devils Postpil 85.85 324 eP P 04 17 45.9 +1.1
comp=Z,84nm,1.4s
MDPB LR LR
comp=Z,3µm,20.0s
C35A Jirik Farms, M 85.91 345 P P 04 17 43.5 -1.0
baz=161,SNR=54
SPUT South Promonto 85.91 330 eP P 04 17 45.2 +0.3
comp=Z,102nm,1.0s
SPUT LR LR
comp=Z,3µm,21.0s
BW06 Boulder Array 86.03 333 P P 04 17 44.7 -0.8
baz=149,SNR=35
BW06 Boulder Array 86.03 333 eP P 04 17 45.0 -0.5
comp=Z,54nm,1.3s
BW06 LR LR
comp=Z,5µm,20.0s
PD31 Pinedale Array 86.03 333 eP P 04 17 45.4 -0.2
PD31 ePKKPbc PKKPbc 04 35 44.4 -2.3
PD31 eP P'P'df P'P'df 04 43 58.3 +12
PDAR Pinedale Array 86.03 333 P P 04 17 45.4 -0.2
comp=Z,14nm,1.1s,baz=130,slow=6.0,SNR=43
PDAR PKKPbc PKKPbc 04 35 44.4 -2.3
comp=Z,0.5nm,0.6s,baz=259,slow=0.9,SNR=6.4
PDAR PKPPKP P'P'df 04 43 58.3 +12
comp=Z,0.2nm,0.4s,baz=298,slow=1.9,SNR=4.6
PDAR LR LR 04 52 14.7
comp=Z,5µm,20.6s,baz=142,slow=33
C34A RKJ Ranch, Bem 86.07 344 P P 04 17 44.0 -1.3
baz=160
D32A Dogwood Acres, 86.08 342 P P 04 17 44.5 -0.8
baz=159
NV01 Mina Array Sit 86.12 325 eP P 04 17 46.4 +0.3
NV01 ePKKPbc PKKPbc 04 35 45.3 -0.8
NV01 eP P'P'df P'P'df 04 43 55.0 +8.2
NVAR Mina Array Bea 86.12 325 P P 04 17 46.4 +0.3
comp=Z,9.7nm,1.0s,baz=150,slow=5.3,SNR=35
NVAR PKKPbc PKKPbc 04 35 45.3 -0.8
comp=Z,0.7nm,0.8s,baz=340,slow=4.0,SNR=4.3
NVAR PKPPKP P'P'df 04 43 55.0 +8.2
comp=Z,1.1nm,1.0s,baz=20,slow=4.7,SNR=3.6
NVAR LR LR 04 52 49.7
comp=Z,1µm,18.2s,baz=238,slow=33
D31A Mcclaflin, Tow 86.17 342 P P 04 17 45.0 -0.8
baz=158
SAO San Andreas Ge 86.33 322 PFAKE 04 18 00.0 +13
SAO LR LR
comp=Z,2µm,20.0s
C33A Trail 86.36 343 P P 04 17 45.8 -0.9
baz=160,SNR=12
RYN Ryan 86.38 325 eP P 04 17 48.5 +1.3
comp=Z,138nm,1.5s
RYN LR LR
comp=Z,2µm,18.0s
HVU Hansel Valley 86.44 330 eP P 04 17 47.7 +0.2
comp=Z,61nm,1.0s
HVU LR LR
comp=Z,3µm,22.0s
HVU Hansel Valley 86.44 330 eP P 04 17 47.7 +0.2
HVU pmax pmax

comp=Z,61nm,1.0s
SLD San Luis Dam 86.46 322 *e*P **P 04 17 47.1 -0.4**
B35A Bob, Littlefor 86.48 345 P **P 04 17 46.5 -0.8**
baz=161,SNR=30
KVN Kaiserville 86.52 325 *e*P **P 04 17 48.8 +0.8**
KVN LR LR
comp=Z,54nm,1.1s
comp=Z,2μm,19.0s
KVN Kaiserville 86.52 325 *e*P **P 04 17 48.8 +0.8**
KVN pmax pmax
comp=Z,54nm,1.1s
C32A Crookston 86.60 343 P **P 04 17 46.8 -1.1**
baz=159
AHID Auburn Hatcher 86.61 332 *e*P **P 04 17 48.5 +0.1**
AHID LR LR
comp=Z,106nm,1.3s
comp=Z,4μm,20.0s
ELK Elko 86.61 328 P **P 04 17 51.1 +2.7**
comp=Z,6.5nm,0.8s,baz=200,slow=5.3,SNR=20
WAKR Walker 86.71 324 *e*P **P 04 17 50.7 +1.8**
WAKR LR LR
comp=Z,297nm,1.8s
comp=Z,4μm,20.0s
B34A Aery, Baudette 86.80 344 P **P 04 17 47.8 -1.0**
baz=161,SNR=20
CMB Columbia Colle 86.80 323 *e*P **P 04 17 49.4 +0.2**
CMB LR LR
comp=Z,94nm,1.5s
comp=Z,2μm,21.0s
CMB Columbia Colle 86.80 323 *e*P **P 04 17 49.4 +0.2**
CMB pmax pmax
comp=Z,94nm,1.5s
B33A Robert and Kas 86.81 344 P **P 04 17 48.3 -0.6**
baz=160,SNR=13
C31A Landman Farms, 86.86 342 P **P 04 17 48.6 -0.6**
baz=158,SNR=17
AGMN Agassiz Nation 86.89 344 P **P 04 17 48.6 -0.7**
baz=160,SNR=38
AGMN Agassiz Nation 86.89 344 *e*P **P 04 17 48.9 -0.4**
AGMN LR LR
comp=Z,261nm,1.8s
comp=Z,3μm,18.0s
YERR Yerington 87.00 324 *e*P **P 04 17 51.7 +1.4**
YERR LR LR
comp=Z,62nm,1.1s
comp=Z,3μm,21.0s
REDW Red Top Meadow 87.03 332 *e*P **P 04 17 50.5 +0.1**
REDW LR LR
comp=Z,99nm,1.3s
comp=Z,5μm,21.0s
SNOW Snow King Moun 87.07 332 *e*P **P 04 17 50.6 0.0**
SNOW LR LR
comp=Z,47nm,1.1s
comp=Z,5μm,21.0s
B32A Ashes, Strandq 87.14 343 P **P 04 17 49.9 -0.5**
baz=159,SNR=18
LOHW Long Hollow 87.14 332 *e*P **P 04 17 50.8 -0.1**
LOHW LR LR
comp=Z,52nm,1.4s
comp=Z,6μm,20.0s
TPAW Teton Pass 87.17 332 *e*P **P 04 17 51.0 -0.1**
TPAW LR LR
comp=Z,52nm,1.0s
comp=Z,4μm,21.0s
BMN Battle Mountai 87.23 326 *e*P **P 04 17 54.5 +3.2**
BMN LR LR
comp=Z,19nm,1.4s
comp=Z,2μm,19.0s
BMN Battle Mountai 87.23 326 *e*P **P 04 17 54.6 +3.2**
BMN pmax pmax
comp=Z,19nm,1.3s
PNTR Pine Nut 87.25 324 *e*P **P 04 17 53.1 +1.6**
PNTR LR LR
comp=Z,79nm,1.1s
comp=Z,3μm,21.0s
MOOW Moose Ponds 87.31 332 *e*P **P 04 17 51.8 0.0**
MOOW LR LR
comp=Z,57nm,1.8s
comp=Z,6μm,21.0s
FXWY Fox Creek 87.33 332 *e*P **P 04 17 51.6 -0.3**
comp=Z,55nm,1.5s
A33A Warroad 87.39 344 P **P 04 17 51.2 -0.5**
baz=160,SNR=47
MDND Maddock 87.39 341 P **P 04 17 50.7 -1.1**
baz=157,SNR=14
MDND Maddock 87.39 341 *e*P **P 04 17 51.5 -0.3**
MDND LR LR
comp=Z,543nm,1.2s
comp=Z,2μm,20.0s
B31A Greenbush Farm 87.43 343 P **P 04 17 51.0 -0.9**
baz=158,SNR=33
VCNR Virginia City 87.44 324 *e*P **P 04 17 54.6 +2.2**
VCNR LR LR
comp=Z,150nm,1.8s
comp=Z,3μm,20.0s
RUBR Rubicon Trail 87.49 324 *e*P **P 04 17 54.9 +2.2**
RUBR LR LR
comp=Z,135nm,1.0s
comp=Z,2μm,22.0s
IMW Indian Meadow 87.52 332 *e*P **P 04 17 52.9 +0.1**
IMW LR LR
comp=Z,60nm,1.2s
comp=Z,4μm,21.0s
A32A Rocking H Ranc 87.62 343 P **P 04 17 51.8 -1.0**
baz=159,SNR=14
PAHR Pah Rah Range 87.64 325 *e*P **P 04 17 54.4 +1.0**
PAHR LR LR
comp=Z,196nm,1.8s
comp=Z,3μm,21.0s
YPP Pitchstone Pla 87.78 333 *e*P **P 04 17 55.1 +1.0**
YPP LR LR
comp=Z,58nm,1.6s
comp=Z,7μm,20.0s
A31A Linda, St. Vin 87.80 343 P **P 04 17 52.6 -1.0**
baz=159
AFDM Forest Hills D 87.80 323 *e*P **P 04 17 54.5 +0.5**
AFDM LR LR
comp=Z,60nm,1.3s
comp=Z,2μm,22.0s
H17A Grant Village 87.80 333 P **P 04 17 55.2 +1.1**
baz=149
H17A Grant Village 87.80 333 *e*P **P 04 17 56.4 +2.2**
H17A LR LR
comp=Z,35nm,1.4s
comp=Z,9μm,20.0s
YFT Old Faithful 87.95 333 *e*P **P 04 17 57.3 +2.4**
YFT LR LR
comp=Z,26nm,1.0s
comp=Z,8μm,21.0s
RLMT Red Lodge 87.95 334 P **P 04 17 54.3 -0.5**
baz=150,SNR=11
RLMT Red Lodge 87.95 334 *e*P **P 04 17 54.7 -0.1**
RLMT LR LR
comp=Z,79nm,1.4s
comp=Z,2μm,18.0s
YNR Norris Junctio 88.12 333 PFAKE 04 18 10.0 +14
YNR LR LR
comp=Z,5μm,20.0s
MCCM Marconi Confer 88.12 322 PFAKE 04 18 10.0 +15
MCCM LR LR
comp=Z,2μm,22.0s
YMR Madison River 88.18 333 *e*P **P 04 17 57.0 +1.1**
YMR LR LR
comp=Z,116nm,1.3s
comp=Z,5μm,21.0s
BEKR Beckworth 88.23 324 PFAKE 04 18 10.0 +14
BEKR LR LR
comp=Z,2μm,20.0s
YHH Holmes Hill 88.24 333 *e*P **P 04 17 57.0 +0.7**
YHH LR LR
comp=Z,57nm,1.2s
comp=Z,5μm,21.0s
LSZ Lusaka 88.25 108 *e*P **P 04 17 57.1 +0.2**
LSZ LR LR
comp=Z,132nm,1.6s
comp=Z,6μm,18.0s
LSZ Lusaka 88.25 108 P **P 04 18 01.5 +4.6**
SNR=21
LSZ Lusaka 88.25 108 P **P 04 18 01.5 +4.6**
SNR=21
LSZ Lusaka 88.25 108 *e*P **P 04 17 57.1 +0.2**
LSZ pmax pmax
comp=Z,130nm,1.6s
LAO LASA Array 88.29 337 P **P 04 17 55.5 -0.7**
baz=152,SNR=25
LAO LASA Array 88.29 337 *e*P **P 04 17 55.8 -0.3**
LAO *e*S **S 04 28 45.2 +4.0**
comp=Z,107nm,1.2s
LAO LR LR
comp=Z,2μm,18.0s
YHB Horse Butte 88.34 333 *e*P **P 04 17 58.2 +1.6**
comp=Z,97nm,1.8s
YHB LR LR
comp=Z,4μm,21.0s
XMAS Kiritimati 88.43 274 PFAKE 04 18 10.0 +12
XMAS LR LR
comp=Z,3μm,20.0s
QLMT Earthquake Lak 88.49 332 *e*P **P 04 17 55.9 -1.5**
ORV Oroville 88.53 323 *e*P **P 04 17 58.8 +1.4**
comp=Z,213nm,1.8s
ORV LR LR
comp=Z,2μm,20.0s
ORV Oroville 88.53 323 *e*P **P 04 17 58.8 +1.4**
ORV pmax pmax
comp=Z,210nm,1.7s
HLID Hailey 88.59 330 P **P 04 17 57.7 -0.1**
baz=146,SNR=25
HLID Hailey 88.59 330 *e*P **P 04 17 56.6 -1.2**
comp=Z,59nm,1.4s
HLID LR LR
comp=Z,3μm,20.0s
GCMT Greycliff 88.67 334 *e*P **P 04 17 58.3 +0.2**
ULM Lac du Bonnet 88.73 344 P **P 04 17 57.4 -0.6**
comp=Z,34nm,0.9s,baz=167,slow=3.4,SNR=49
ULM PKKPbc **PKKPdf 04 35 37.5 +1.5**
comp=Z,2.4nm,1.0s,baz=14,slow=4.2,SNR=2.8
HOPS Hopland Field 88.87 322 PFAKE 04 18 10.0 +11
HOPS LR LR
comp=Z,2μm,20.0s
MCMT McKenzie Canyo 89.03 332 *e*P **P 04 18 00.8 +0.9**
MFID Camas Ranch 89.06 329 *e*P **P 04 18 00.7 +0.8**
comp=Z,48nm,1.4s
MFID LR LR
comp=Z,2μm,22.0s
BOZ Bozeman (W) 89.22 333 P **P 04 18 00.4 -0.3**
baz=148,SNR=8.1
BOZ Bozeman (W) 89.22 333 *e*P **P 04 18 00.8 +0.1**
comp=Z,50nm,1.7s
BOZ LR LR
comp=Z,3μm,20.0s
BOZ Bozeman (W) 89.22 333 *e*P **P 04 18 00.8 +0.1**
BOZ pmax pmax
comp=Z,50nm,1.7s
DGMT Dagmar 89.24 339 P **P 04 18 00.3 -0.2**
baz=153,SNR=17
DGMT Dagmar 89.24 339 *e*P **P 04 18 01.1 +0.5**
comp=Z,212nm,1.1s
DGMT LR LR
comp=Z,2μm,20.0s
O03D Paynes Creek 89.25 324 P **P 04 18 00.4 -0.5**
baz=141,SNR=15
DLMT Dillon 89.39 332 *e*P **P 04 18 00.9 -0.6**
comp=Z,92nm,1.6s
DLMT LR LR
comp=Z,4μm,21.0s
WVOR Wild Horse Val 89.47 327 *e*P **P 04 18 02.8 +0.9**
comp=Z,147nm,1.6s
WVOR LR LR
comp=Z,2μm,20.0s
WVOR Wild Horse Val 89.47 327 *e*P **P 04 18 02.8 +0.9**
WVOR pmax pmax
comp=Z,150nm,1.6s
KCPM Cahto Peak 89.66 322 *e*P **P 04 18 05.0 +2.2**
comp=Z,164nm,1.7s
KCPM LR LR
comp=Z,2μm,20.0s
LRM Limekiln Ridge 89.72 332 *e*P **P 04 18 03.7 +0.6**
MOD Modoc Plateau 89.80 325 *e*P **P 04 18 04.0 +0.5**
comp=Z,49nm,1.1s
MOD LR LR
comp=Z,2μm,21.0s
WDC Whiskeytown Da 89.83 323 *e*P **P 04 18 03.5 0.0**
comp=Z,42nm,1.2s
WDC LR LR
comp=Z,2μm,22.0s
WDC Whiskeytown Da 89.83 323 *e*P **P 04 18 03.5 0.0**
WDC pmax pmax
comp=Z,42nm,1.2s
KMRM Mail Ridge 90.13 322 *e*P **P 04 18 07.7 +2.7**
comp=Z,77nm,1.2s
KMRM LR LR
comp=Z,2μm,22.0s
N02D Trinity Center 90.21 323 P **P 04 18 05.4 +0.1**
baz=140
M04C Macdoel 90.42 324 P **P 04 18 06.3 0.0**
baz=141,SNR=19
AFI Afiamalu 90.52 252 LR LR 04 49 56.4
comp=Z,3μm,19.1s,baz=138,slow=30
SCHQ Schefferville 90.58 2 P **P 04 18 05.9 -0.7**
comp=Z,42nm,1.2s,baz=111,slow=2.1,SNR=7.3
SCHQ LR LR 05 00 12.9
comp=Z,3μm,20.3s,baz=188,slow=36
M02C Callahan 90.61 324 P **P 04 18 07.1 0.0**
baz=140,SNR=11
EGMT Eagleton 90.63 335 P **P 04 18 05.9 -1.2**
baz=149,SNR=8.8
EGMT Eagleton 90.63 335 *e*P **P 04 18 06.5 -0.6**
comp=Z,67nm,1.5s
KHMM Horse Mountain 90.64 323 *e*P **P 04 18 09.8 +2.4**
comp=Z,68nm,1.5s
KHMM LR LR
comp=Z,2μm,22.0s
K05A Summer Lake 90.72 326 *e*P **P 04 18 09.2 +1.4**
comp=Z,106nm,1.1s
K05A LR LR
comp=Z,2μm,22.0s
JCC Jacoby Creek, 90.74 323 PFAKE 04 18 20.0 +12
JCC LR LR
comp=Z,2μm,20.0s
YBH Yreka Blue Hor 90.80 324 P **P 04 18 07.8 -0.3**
comp=Z,1.4nm,0.4s,baz=124,slow=4.6,SNR=6.3
YBH LR LR 04 53 17.3
comp=Z,1μm,21.9s,baz=138,slow=32
YBH Yreka Blue Hor 90.80 324 *e*P **P 04 18 08.5 +0.4**
comp=Z,38nm,1.4s
YBH LR LR
comp=Z,2μm,19.0s
YBH Yreka Blue Hor 90.80 324 *e*P **P 04 18 08.5 +0.4**
YBH pmax pmax
comp=Z,38nm,1.4s
BMO Blue Mountains 90.84 329 *e*P **P 04 18 08.8 +0.6**
comp=Z,35nm,1.3s
BMO LR LR
comp=Z,3μm,22.0s
BMO Blue Mountains 90.84 329 *e*P **P 04 18 08.8 +0.6**
BMO pmax pmax
comp=Z,35nm,1.3s
K04D Chiloquin, OR 91.04 325 P **P 04 18 09.4 +0.2**
baz=141
MSO Missoula 91.12 332 P **P 04 18 09.4 0.0**
baz=146
MSO Missoula 91.12 332 *e*P **P 04 18 11.0 +1.5**
comp=Z,64nm,1.9s
MSO LR LR
comp=Z,3μm,20.0s
I07A Izee 91.17 327 *e*P **P 04 18 10.8 +1.1**
comp=Z,45nm,1.4s
I07A LR LR
comp=Z,2μm,22.0s
J05D Fort Rock, OR 91.31 326 P **P 04 18 11.0 +0.5**
baz=141,SNR=18
L02D Cave Junction, 91.55 324 P **P 04 18 12.2 +0.8**
baz=140
PINE Pine Mountain 91.58 326 *e*P **P 04 18 13.1 +1.3**
comp=Z,68nm,1.0s
HUMO Hull Mountain 91.59 324 *e*P **P 04 18 14.8 +3.2**
comp=Z,32nm,1.5s
HUMO LR LR
comp=Z,2μm,22.0s
J04D Umpqua Nationa 91.68 325 P **P 04 18 12.3 0.0**
baz=141
F10A Beach Ranch, E 91.72 330 *e*P **P 04 18 12.4 +0.2**
comp=Z,41nm,1.1s
F10A LR LR
comp=Z,3μm,22.0s
RTC Rabat Centre 91.77 48 PFAKE 04 18 20.0 +7.4
RTC LR LR
comp=Z,32μm,18.0s
G08A Pilot Rock 91.89 328 *e*P **P 04 18 14.0 +0.9**
comp=Z,20nm,1.0s
G08A LR LR
comp=Z,4μm,20.0s
JTMT Jette 92.02 332 *e*P **P 04 18 14.8 +1.2**
comp=Z,35nm,1.3s
JTMT LR LR
comp=Z,3μm,20.0s
I05D Terrebonne, OR 92.18 326 P **P 04 18 14.0 -0.4**
baz=141
I04A Tendick Farm, 92.25 325 P **P 04 18 14.0 -0.7**
baz=140
MDT Midelt 92.36 50 P **P 04 18 15.6 0.0**
comp=Z,7.3nm,1.1s,baz=212,slow=3.7,SNR=4.7
MDT LR LR 05 00 01.6
comp=Z,7μm,18.0s,baz=238,slow=36
KEBM Edson Butte 92.45 324 PFAKE 04 18 30.0 +14
KEBM LR LR
comp=Z,3μm,22.0s
E09A Wood Farm, Sta 92.53 329 PFAKE 04 18 30.0 +14
E09A LR LR
comp=Z,3μm,19.0s
G06A Carlson Farm, 92.57 327 *e*P **P 04 18 18.1 +1.9**
comp=Z,53nm,1.3s
G06A LR LR
comp=Z,3μm,19.0s
I03D Drain, OR 92.61 325 P **P 04 18 15.6 -0.7**
baz=140
PFVI Vila Bisbo 92.78 45 PFAKE 04 18 30.0 +13
PFVI LR LR
comp=Z,6μm,20.0s
F07A Phinny Hill Vi 92.79 328 PFAKE 04 18 30.0 +13
F07A LR LR
comp=Z,3μm,20.0s
H04A Detroit Lake 92.83 326 *e*P **P 04 18 18.4 +1.0**
comp=Z,45nm,1.3s
H04A LR LR
comp=Z,3μm,18.0s
TAM Tamanrasset 92.84 64 PFAKE 04 18 30.0 +12
TAM LR LR
comp=Z,8μm,18.0s
G05D Wamic, OR 92.88 327 P **P 04 18 17.1 -0.4**
baz=141
E08A Dider Farm, El 92.89 329 *e*P **P 04 18 21.1 +3.6**
comp=Z,27nm,1.0s
E08A LR LR
comp=Z,2μm,20.0s
WALA Waterton Lakes 92.97 333 *e*P **P 04 18 21.4 +3.4**
comp=Z,46nm,1.2s
WALA LR LR
comp=Z,4μm,21.0s
MORF Marmelete 93.00 45 *e*SKS **SKSac 04 28 52.6 -0.2**
MORF AMS AMS 04 58 53.1
comp=Z,5μm,21.8s
MORF Marmelete 93.00 45 *e*P P 04 18 23.7 +5.4
comp=Z,36nm,1.9s
HAWA Hanford 93.01 329 *e*P **P 04 18 19.8 +1.7**
comp=Z,74nm,1.4s
HAWA LR LR
comp=Z,3μm,21.0s
COR Corvallis 93.27 325 PFAKE 04 18 30.0 +11
COR LR LR
comp=Z,2μm,19.0s
E07A Sunnyside 93.28 329 PFAKE 04 18 30.0 +11
E07A LR LR
comp=Z,3μm,20.0s
D08A Wollman Farm, 93.29 329 *e*P **P 04 18 20.6 +1.2**
comp=Z,68nm,1.6s
D08A LR LR
comp=Z,2μm,22.0s
NEW Newport 93.53 331 P **P 04 18 19.4 -1.1**
comp=Z,3.9nm,0.9s,baz=230,slow=1.9,SNR=4.2
NEW Newport 93.53 331 P **P 04 18 19.3 -1.1**
baz=144
NEW Newport 93.53 331 *e*P **P 04 18 20.7 +0.2**
comp=Z,25nm,1.4s
NEW LR LR
comp=Z,2μm,20.0s
NEW Newport 93.53 331 *e*P **P 04 18 20.7 +0.2**
NEW pmax pmax
comp=Z,25nm,1.4s
PCVE Castro Verde 93.57 45 *e*P **P 04 18 25.2 +4.3**
comp=Z,36nm,1.7s
PVAQ Vaqueiros 93.60 45 *e*SKS **SKSac 04 29 02.9 +7.0**
PVAQ Vaqueiros 93.60 45 *e*LR LR 04 50 09.7
comp=Z,5μm,20.0s
MESJ Messejana 93.61 45 *e*P **P 04 18 21.4 +0.4**
MESJ *e*SKS **SKSac 04 28 56.0 0.0**
MESJ AMS AMS 04 59 59.0
comp=Z,5μm,21.7s
MESJ Messejana 93.61 45 *e*P **P 04 18 23.3 +2.2**
comp=Z,64nm,1.5s
MESJ Messejana 93.61 45 *e*P **P 04 18 21.4 +0.4**
MESJ *e* 04 28 55.9
C09A Chrisman Ranch 93.62 330 *e*P **P 04 18 20.3 -0.6**
comp=Z,44nm,1.4s
C09A LR LR
comp=Z,3μm,19.0s
LIS Lisbon 93.70 44 *e*SKS **SKSac 04 28 56.5 +0.1**
LIS AMS AMS 04 59 55.3
comp=Z,4μm,20.4s
G03D McMinnville, O 93.73 326 P **P 04 18 21.2 -0.2**
baz=140
SFS San Fernando 93.84 47 PFAKE 04 18 30.0 +7.9
SFS LR LR
comp=Z,4μm,18.0s
PBEJ Beja 93.94 45 *e*P **P 04 18 23.3 +0.7**
comp=Z,50nm,1.8s
LTY Liberty 94.18 329 *e*P **P 04 18 24.3 +0.8**
comp=Z,22nm,1.3s
LTY LR LR
comp=Z,3μm,20.0s
LON Longmire 94.27 328 *e*P **P 04 18 24.6 +0.7**
comp=Z,25nm,1.5s
LON Longmire 94.27 328 *e*P **P 04 18 24.6 +0.7**
LON pmax pmax
comp=Z,25nm,1.5s
F04D Rainier, OR 94.28 327 P **P 04 18 23.2 -0.7**
baz=140
FFC Flin Flon 94.29 343 *e*P **P 04 18 23.7 -0.1**
comp=Z,10.0nm,1.0s
FFC LR LR
comp=Z,4μm,18.0s
FFC Flin Flon 94.29 343 *e*P **P 04 18 23.7 -0.1**
FFC pmax pmax
comp=Z,10.0nm,1.0s
F03A Seaside 94.41 326 PFAKE 04 18 40.0 +15
F03A LR LR
comp=Z,2μm,19.0s
PMTG Montargil 94.46 44 *e*P **P 04 18 25.6 +0.7**
comp=Z,48nm,1.5s
B08A Colville Reser 94.49 330 *e*P **P 04 18 26.1 +1.2**
comp=Z,63nm,1.9s
B08A LR LR
comp=Z,3μm,21.0s
PESTR Estremoz 94.68 44 *e*P **P 04 18 28.1 +2.1**
comp=Z,38nm,1.5s
PESTR Estremoz 94.68 44 PFAKE 04 18 40.0 +14
PESTR LR LR
comp=Z,3μm,19.0s
D05A Enumclaw 94.69 328 *e*P **P 04 18 29.2 +3.5**
comp=Z,44nm,1.4s
D05A LR LR
comp=Z,3μm,21.0s
E03A Lebam 94.88 327 PFAKE 04 18 40.0 +13
E03A LR LR
comp=Z,3μm,22.0s
PMRV Marv??o 95.18 44 *e*SKS **SKSac 04 28 59.9 -4.5**
PMRV Marv??o 95.18 44 *e*LR LR 04 50 47.1
comp=Z,5μm,20.0s
B06A Marblemount 95.50 329 PFAKE 04 18 40.0 +11
B06A LR LR
comp=Z,2μm,20.0s
B05A Bryant 95.56 328 P **P 04 18 29.7 0.0**
baz=140
MTE Manteigas 95.76 43 *e*SKS **SKSac 04 29 12.8 +5.2**
MTE Manteigas 95.76 43 *e*LR LR 04 50 09.6
comp=Z,4μm,18.0s
MTE Manteigas 95.76 43 PFAKE 04 18 40.0 +9.1
MTE LR LR
comp=Z,4μm,19.0s
A04D Lummi Island 96.17 328 P **P 04 18 32.9 +0.4**
baz=140
FCC Fort Churchill 96.43 348 *e*P **P 04 18 32.6 -0.8**
comp=Z,24nm,1.1s
FCC LR LR
comp=Z,4μm,21.0s
FCC Fort Churchill 96.43 348 *e*P **P 04 18 32.6 -0.8**
PGAV Gavieira, Arco 96.44 42 *e*SKS **SKSac 04 29 20.7 +10**
PGAV Gavieira, Arco 96.44 42 *e*LR LR 04 50 43.0
comp=Z,5μm,20.0s
PGC Sidney 96.44 328 PFAKE 04 18 50.0 +16
PGC LR LR
comp=Z,2μm,21.0s
MVO Moncorvo 96.56 43 *e*SKS **SKSac 04 29 18.4 +6.6**

MVO	Moncorvo	96.56	43	eLR	LR		04 51 06.6	
	comp=Z,5μm,20.0s							
JCUZ	Jacuzzi	96.70	289		PFAKE		04 18 50.0	+14
JCUZ					LR	LR		
	comp=Z,1μm,19.0s							
HLP	Hilina Pali	96.81	289		PFAKE		04 18 50.0	+14
HLP					LR	LR		
	comp=Z,2μm,18.0s							
RIM	Rim	96.84	289		PFAKE		04 18 50.0	+14
RIM					LR	LR		
	comp=Z,2μm,22.0s							
PAB	San Pablo	97.00	46		PFAKE		04 18 50.0	+13
PAB					LR	LR		
	comp=Z,5μm,18.0s							
LLLB	Lillooet	97.29	330		PFAKE		04 18 50.0	+12
LLLB					LR	LR		
	comp=Z,2μm,20.0s							
ESDC	Sonseca Array	97.30	46		P	P	04 18 37.7	-0.3
	comp=Z,4.0nm,1.0s,baz=245,slow=4.4,SNR=7.4							
ESDC					PP	PP	04 22 36.0	+0.9
	comp=Z,0.3nm,0.6s,baz=267,slow=3.5,SNR=3.3							
ESDC					PKiKP	PKiKP	04 23 10.6	-2.6
	comp=Z,1.6nm,1.0s,baz=214,slow=7.2,SNR=4.2							
ESDC					LR	LR	05 01 21.1	
	comp=Z,3μm,19.5s,baz=245,slow=35							
HPAH	Hawaii Prepara	97.53	289		PFAKE		04 18 50.0	+10
HPAH					LR	LR		
	comp=Z,2μm,18.0s							
CART	Cartagena	97.71	49		PFAKE		04 18 50.0	+10
CART					LR	LR		
	comp=Z,4μm,22.0s							
IVI	Ivigtut	98.67	11	eP		Pdif	04 18 44.2	+0.8
	comp=Z,20nm,1.2s							
IVI					LR	LR		
	comp=Z,3μm,18.0s							
MBAR	Mbarara	99.02	97		PFAKE		04 19 00.0	+13
MBAR					LR	LR		
	comp=Z,4μm,19.0s							
NRS	Narsarsuaq	99.07	12		PFAKE		04 19 00.0	+15
NRS					LR	LR		
	comp=Z,4μm,20.0s							
ABPO	Ambohimpanom	99.85	122		PFAKE		04 19 00.0	+10
ABPO					LR	LR		
	comp=Z,4μm,20.0s							
CAN	Canberra	99.87	212		PFAKE		04 19 00.0	+10
CAN					LR	LR		
	comp=Z,2μm,22.0s							
DZM	Mont Dzumac	100.79	233	eSS		SS	04 37 26.6	-2.4
	comp=Z,3μm,26.4s							
DZM	Mont Dzumac	100.79	233	eLQ		LQ	04 47 30.6	
	comp=Z,4μm,31.7s							
DZM				eLR		LR	04 51 44.9	
	comp=Z,5μm,23.6s							
BBB	Bella Bella	101.06	328		PFAKE		04 19 10.0	+16
BBB					LR	LR		
	comp=Z,1μm,20.0s							
THTN	Thala	102.67	55		PFAKE		04 19 10.0	+7.9
THTN					LR	LR		
	comp=Z,12μm,22.0s							
ARMA	Armidale	102.77	217		PFAKE		04 19 10.0	+7.1
ARMA					LR	LR		
	comp=Z,2μm,20.0s							
DIB	Dawson Inlet,	103.67	327		PFAKE		04 19 20.0	+14
DIB					LR	LR		
	comp=Z,2μm,18.0s							
TAMR	Tamra	103.80	54		PFAKE		04 19 20.0	+13
TAMR					LR	LR		
	comp=Z,5μm,20.0s							
SFJD	Kangerlussuaq	103.88	8		PFAKE		04 19 20.0	+13
SFJD					LR	LR		
	comp=Z,3μm,20.0s							
YKA	Yellowknife Ar	104.31	341		Pdiff	Pdif	04 19 07.4	-1.1
	comp=Z,1.6nm,0.7s,baz=142,slow=4.5,SNR=6.4							
YKA					PP	PP	04 23 27.4	-0.1
	comp=Z,1.7nm,1.0s,baz=136,slow=7.6,SNR=5.4							
YKA					PKKPbc	PKKPbc	04 34 54.3	-2.9
	comp=Z,0.4nm,0.6s,baz=337,slow=3.4,SNR=5.4							
YKB5	Yellowknife Ar	104.31	341	ePdif		Pdif	04 19 07.4	-1.1
YKB5				ePP		PP	04 23 27.4	-0.1
YKB5				ePKKPbc		PKKPbc	04 34 54.4	-2.9
ANGG	Ammassalik, Gr	104.57	14		PFAKE		04 19 20.0	+10
ANGG					LR	LR		
	comp=Z,4μm,20.0s							
DSB	Dublin	104.98	34		PFAKE		04 19 20.0	+8.3
DSB					LR	LR		
	comp=Z,6μm,21.0s							
VSL	Villasalto	105.36	52		PFAKE		04 23 40.0	
VSL					LR	LR		
	comp=Z,5μm,19.0s							
CRAG	Craig	105.48	328		PFAKE		04 23 40.0	
CRAG					LR	LR		
	comp=Z,2μm,20.0s							
SSB	Saint Sauveur	105.70	45		PFAKE		04 23 40.0	
SSB					LR	LR		
	comp=Z,4μm,19.0s							
WRAK	Wrangell Islan	105.80	330		PFAKE		04 23 40.0	
WRAK					LR	LR		
	comp=Z,2μm,21.0s							
ILULI	Ilulissat	105.96	7		PFAKE		04 23 40.0	
ILULI					LR	LR		
	comp=Z,3μm,19.0s							
WDD	Wied Dalam	106.77	58		PFAKE		04 23 40.0	
WDD					LR	LR		
	comp=Z,13μm,19.0s							
BNI	Bardonecchia	106.82	46		PFAKE		04 23 40.0	
BNI					LR	LR		
	comp=Z,6μm,22.0s							
CLTB	Caltabellotta	106.82	56		PFAKE		04 23 40.0	
CLTB					LR	LR		
	comp=Z,12μm,20.0s							
BBOO	Buckleboo	107.01	203		PFAKE		04 23 40.0	
BBOO					LR	LR		
	comp=Z,2μm,19.0s							
EIDS	Eidsvold	107.20	219		PFAKE		04 23 40.0	
EIDS					LR	LR		
	comp=Z,2μm,20.0s							
BORG	Borgarnes	107.68	20		PFAKE		04 23 40.0	
BORG					LR	LR		
	comp=Z,4μm,19.0s							
ESK	Eskdalemuir	107.73	34		PFAKE		04 23 40.0	
ESK					LR	LR		
	comp=Z,4μm,18.0s							
JIS	Juneau Island	107.85	330		PFAKE		04 23 40.0	
JIS					LR	LR		
	comp=Z,2μm,20.0s							
SENIN	Lac Senin/Sane	107.91	45		PFAKE		04 23 40.0	
SENIN					LR	LR		
	comp=Z,4μm,19.0s							
BESE	Bessie Mountai	108.24	330		PFAKE		04 23 40.0	
BESE					LR	LR		
	comp=Z,2μm,20.0s							
VLC	Villacollemand	108.54	49		PFAKE		04 23 40.0	
VLC					LR	LR		
	comp=Z,4μm,19.0s							
UCC	Uccle	108.76	40		PFAKE		04 23 50.0	
UCC					LR	LR		
	comp=Z,5μm,22.0s							
ECH	Echery	108.85	44		PFAKE		04 23 50.0	
ECH					LR	LR		
	comp=Z,3μm,18.0s							
CEL	Celeste	108.97	56		PFAKE		04 23 50.0	
CEL					LR	LR		
	comp=Z,9μm,20.0s							
SKAG	Skagway	108.99	331		PFAKE		04 23 50.0	
SKAG					LR	LR		
	comp=Z,2μm,21.0s							
WLF	Walferdange	109.09	42		PFAKE		04 23 50.0	
WLF					LR	LR		
	comp=Z,7μm,22.0s							
TUE	Stuetta	109.16	46		PFAKE		04 23 50.0	
TUE					LR	LR		
	comp=Z,4μm,19.0s							
AQU	L'Aquila	109.46	51		PFAKE		04 23 50.0	
AQU					LR	LR		
	comp=Z,5μm,19.0s							
BFO	Black Forest	109.57	44		PFAKE		04 23 50.0	
BFO					LR	LR		
	comp=Z,3μm,18.0s							
FUORN	Ofenpass-Fuorn	109.77	46		PFAKE		04 23 50.0	
FUORN					LR	LR		
	comp=Z,6μm,20.0s							
CUC	Castrocucco	109.81	55		PFAKE		04 23 50.0	
CUC					LR	LR		
	comp=Z,8μm,22.0s							
DAVA	Damuels	109.90	46	i sPKiKP		PKiKP	04 23 41.8	+5.8
	comp=Z,11nm,1.1s							
TIP	Timpagrande	110.03	56		PFAKE		04 23 50.0	
TIP					LR	LR		
	comp=Z,8μm,22.0s							
FETA	Feichten	110.25	46	i PKiKP		PKiKP	04 23 37.4	+0.6
	comp=Z,12nm,1.7s							
STU	Stuttgart	110.29	44		PFAKE		04 23 50.0	
STU					LR	LR		
	comp=Z,3μm,21.0s							
RETA	Reutte	110.52	46	i sPKiKP		PKiKP	04 23 42.8	+5.7
	comp=Z,9.0nm,1.2s							
MOTA	Moosalm	110.64	46	i PKiKP		PKiKP	04 23 37.5	0.0
	comp=Z,7.2nm,0.9s							
SUMG	Summit	110.64	10		PFAKE		04 23 50.0	
SUMG					LR	LR		
	comp=Z,4μm,21.0s							
YKU2	Yakutat	110.78	329		PFAKE		04 23 50.0	
YKU2					LR	LR		
	comp=Z,2μm,18.0s							
WTTA	Wattenberg	110.91	46	i PKiKP		PKiKP	04 23 38.0	0.0
	comp=Z,2.7nm,0.5s							
ABTA	Abfaltersbach	111.16	47	i pPKiKP		PKiKP	04 23 40.9	+2.5
	comp=Z,7.6nm,1.2s							
FORT	Forrest	111.19	197		PFAKE		04 23 50.0	
FORT					LR	LR		
	comp=Z,3μm,18.0s							
RES	Resolute Bay	111.60	353		PFAKE		04 23 50.0	
RES					LR	LR		
	comp=Z,5μm,20.0s							
KNDS	Knezji Dol	111.68	49	ePP		PP	04 24 24.5	+2.5
MYKA	Terra Mystica	111.78	48	i pPKiKP		PKiKP	04 23 42.6	+3.0
CEY	Cerknica	111.81	49	i PP		PP	04 24 25.1	+2.3
CEY				eSKSac		SKSac	04 30 24.9	+3.3
CEY				eSKKSac		SKKSac	04 31 32.4	+7.1
CEY				eSP		SP	04 34 14.3	+20
CEY				e			04 35 02.5	
CEY				eSS		SS	04 40 37.9	+38
CEY				e			04 48 22.8	
CRNS	Crni Vrh	111.88	48	ePKiKP		PKiKP	04 23 41.8	+2.1
CRNS				i PP		PP	04 24 23.2	-0.1
CRNS				e			04 33 53.5	
CRNS				eSP		SP	04 34 13.2	+18
SCO	Scoresbysund	111.89	16		PFAKE		04 23 50.0	
SCO					LR	LR		
	comp=Z,4μm,21.0s							
GRFO	Grafenberg	111.90	44		PFAKE		04 23 50.0	
GRFO					LR	LR		
	comp=Z,3μm,21.0s							
BOJS	Bojanci	112.20	49	ePP		PP	04 24 26.8	+1.3
BOJS				eSP		SP	04 34 17.6	+20
OBKA	Obir	112.26	48	i PKiKP		PKiKP	04 23 41.2	+0.8
	comp=Z,8.4nm,1.9s							
TULEG	Thule	112.33	1		PFAKE		04 23 50.0	
TULEG					LR	LR		
	comp=Z,4μm,22.0s							
ITM	Ithomi	112.58	60		PFAKE		04 23 50.0	
ITM					LR	LR		
	comp=Z,7μm,19.0s							
SOKA	Soboth	112.64	48	i PKiKP		PKiKP	04 23 40.1	-1.1
	comp=Z,7.6nm,1.3s							
MOA	Molln	112.75	47	i PKiKP		PKiKP	04 23 42.1	+0.8
	comp=Z,7.3nm,1.4s							
TGL	Tana Glacier	112.79	330		PFAKE		04 23 50.0	
TGL					LR	LR		
	comp=Z,2μm,21.0s							
NKC	Novy Kostel	112.86	44	ePKP		PKiKP	04 23 41.6	+0.2
NKC				eSKS		SKSac	04 30 29.4	+3.8
NKC				eSP		SP	04 33 59.9	-3.6
NKC				AMS		AMS	05 09 40.0	
	comp=Z,4μm,21.0s							
NKC	Novy Kostel	112.86	44	ePKIKP		PKiKP	04 23 41.6	+0.2
NKC				e			04 30 29.4	
NKC				eSP		SP	04 33 59.9	-3.6
NKC				MLR		MLR		
	comp=Z,4μm,21.0s							
GEC2	GERESS Array S	112.90	46	ePKiKP		PKiKP	04 23 40.7	-0.9
GEC2				ePKKPbc		PKKPbc	04 34 31.7	+2.3
GEC2	GERESS Array S	112.90	46	ePKIKP		PKiKP	04 23 40.7	-0.9
GERES	GERESS Array B	112.90	46	PKiKP		PKiKP	04 23 40.7	-0.9
	comp=Z,7.8nm,1.0s,baz=183,slow=1.8,SNR=14							
GERES				PKKPbc		PKKPbc	04 34 31.7	+2.3
	comp=Z,0.3nm,0.7s,baz=44,slow=5.8,SNR=3.5							
CRQM	Cirque	112.91	329		PFAKE		04 23 50.0	
CRQM					LR	LR		
	comp=Z,2μm,21.0s							
KHC	Kasperske Hory	112.97	45	ePKP		PKiKP	04 23 44.9	+3.2
KHC				eSKS		SKSac	04 30 26.6	+0.5
KHC				eSKKS		SKKSac	04 31 32.6	-0.4
KHC				ex		x	04 32 22.8	
KHC				eSP		SP	04 34 00.8	-3.8
KHC				ePKKP		PKKPab	04 34 33.4	-0.8
KHC				eSS		SS	04 40 15.5	+0.4
KHC				AMS		AMS	05 10 20.0	
	comp=Z,4μm,20.3s							
KHC	Kasperske Hory	112.97	45	ePKIKP		PKiKP	04 23 44.9	+3.2
KHC				e			04 30 26.6	
KHC				eSP		SP	04 34 00.8	-3.8
KHC				eSS		SS	04 40 15.5	+0.4
KHC				MLR		MLR		
	comp=Z,4μm,20.3s							
BLY	Banja Luka	113.04	51		PFAKE		04 23 50.0	
BLY					LR	LR		
	comp=Z,5μm,20.0s							
TIR	Tirane	113.16	55		PFAKE		04 23 50.0	
TIR					LR	LR		
	comp=Z,8μm,22.0s							
ARSA	Arzberg	113.21	48	i PKiKP		PKiKP	04 23 42.2	0.0
	comp=Z,8.4nm,1.1s							
PDG	Podgorica	113.27	54	‖ iP		PKiKP	04 23 43.5	+1.1
TTG	Podgorica	113.27	54		PFAKE		04 23 50.0	
TTG					LR	LR		
	comp=Z,4μm,19.0s							
DAWY	Dawson	113.32	334		PFAKE		04 23 50.0	
DAWY					LR	LR		
	comp=Z,3μm,20.0s							
RAGM	Ragged Mountai	113.35	329		PFAKE		04 23 50.0	
RAGM					LR	LR		
	comp=Z,3μm,19.0s							
BMRM	Bremner River	113.63	329		PFAKE		04 23 50.0	
BMRM					LR	LR		
	comp=Z,2μm,22.0s							
CLL	Collm	113.68	43	ePdif		Pdif	04 19 54.0	+3.5
CLL				i PKiKP		PKiKP	04 23 43.1	+0.2
	comp=Z,13nm,1.1s							
CLL				i			04 23 53.9	
CLL				ePP		PP	04 24 35.0	-1.0
CLL				e			04 25 56.0	
CLL				eSKSac		SKSac	04 30 28.0	-0.7
CLL				eSKKSac		SKKSac	04 31 34.0	-3.6
CLL				eSdif		Sdif	04 32 27.0	+8.4
CLL				ePS		PS	04 34 09.0	-3.1
CLL				ePPS		PPS	04 35 22.0	
CLL				eSS		SS	04 40 27.0	+2.6
CLL				eSSS		SSS	04 44 06.0	
CLL				eSSSS			04 48 00.0	
CLL				Lm		MLR	05 15 00.0	
	comp=Z,4μm,18.5s							
CLL	Collm	113.68	43		PFAKE		04 23 50.0	
CLL					LR	LR		
	comp=Z,4μm,19.0s							
CLL	Collm	113.68	43	eP		Pdif	04 19 54.0	+3.5
CLL				i			04 23 43.1	
CLL				e			04 30 28.0	
CLL				pmax		pmax		
	comp=Z,13nm,1.1s							
CLL				MLR		MLR		
	comp=Z,4μm,18.5s							
CONA	Conrad Observa	113.73	47	i PKPdf		PKiKP	04 23 42.6	-0.6
	comp=Z,6.6nm,0.9s							
IDI	Anoyia	113.79	63	PKiKP		PKiKP	04 23 41.7	-2.0
	comp=Z,2.9nm,0.8s,baz=211,slow=12,SNR=2.1							
IDI	Anoyia	113.79	63	ePKiKP		PKiKP	04 23 41.7	-2.0
IDI					LR	LR		
	comp=Z,5μm,20.0s							
FNA	Florina	113.90	56		PFAKE		04 24 00.0	
FNA					LR	LR		
	comp=Z,5μm,22.0s							
PRU	Pruhonice	113.92	45	eSKS		SKSac	04 30 29.5	-0.2
PRU				eSKKS		SKKSac	04 31 38.7	-0.6
PRU				ex		x	04 32 29.1	
PRU				eSS		SS	04 40 29.5	+1.8
PRU				AMS		AMS	05 14 10.0	
	comp=Z,3μm,18.5s							
INK	Inuvik	113.93	339	PKKPbc		PKKPbc	04 34 24.4	-1.8
	comp=Z,1.0nm,0.7s,baz=314,slow=5.1,SNR=2.3							
INK	Inuvik	113.93	339	ePKKPbc		PKKPbc	04 34 24.4	-1.8
INK					LR	LR		
	comp=Z,5μm,20.0s							
BRG	Berggiesshubel	114.00	44	ePKP		PKiKP	04 23 43.5	0.0
	comp=Z,22nm,1.6s							
BRG				PP		PP	04 24 36.0	-2.2
BRG				SKS		SKSac	04 30 32.0	+2.0
BRG				SDIFF		Sdif	04 32 32.0	+11
BRG				SS		SS	04 40 44.0	+15
	comp=N,1μm,17.6s							
	comp=E,3μm,21.4s							
	comp=Z,5μm,21.0s							
BRG	Berggiesshubel	114.00	44	ePKIKP		PKiKP	04 23 43.5	0.0
BRG							04 24 36.0	
BRG							04 30 32.0	
BRG				SS		SS	04 40 44.0	+15
BRG				pmax		pmax		
	comp=Z,22nm,1.6s							
BRG				MLR		MLR		
	comp=N,1μm,17.6s							
BRG				MLR		MLR		
	comp=E,3μm,21.4s							
BRG				MLR		MLR		
	comp=Z,5μm,21.0s							
GOPC	GO Pecny, Ondr	114.03	45	eSKS		SKSac	04 30 31.8	+1.6
GOPC				eSP		SP	04 34 12.6	-1.7
GOPC				eSS		SS	04 40 29.7	+0.6
GOPC				AMS		AMS	05 14 10.0	
	comp=Z,3μm,17.9s							
CTA	Charters Tower	114.04	218	PKKPbc		PKKPbc	04 34 23.6	-1.2
	comp=Z,0.9nm,0.3s,baz=333,slow=2.3,SNR=2.0							
PVCC	Panska Ves	114.19	44	ePKP		PKPdf	04 23 48.8	+4.9
PVCC				eSP		SP	04 34 07.8	-7.9
PVCC				eSS		SS	04 40 19.6	-12
PVCC				AMS		AMS	05 12 30.0	
	comp=Z,4μm,19.5s							
PVCC	Panska Ves	114.19	44	ePKIKP		PKPdf	04 23 48.8	+4.9
PVCC				eSP		SP	04 34 07.8	-7.9
PVCC				MLR		MLR		
	comp=Z,4μm,19.5s							
HNR	Honiara	114.20	237		PFAKE		04 24 00.0	+15
HNR					LR	LR		
	comp=Z,900nm,20.0s							
DIV	Divide	114.20	329		PFAKE		04 24 00.0	+16
DIV					LR	LR		
	comp=Z,2μm,19.0s							
LIT	Litokhoron	114.34	57		PFAKE		04 24 00.0	+15
LIT					LR	LR		
	comp=Z,5μm,20.0s							
EGAK	Eagle	114.36	334		PFAKE		04 24 00.0	+16
EGAK					LR	LR		
	comp=Z,3μm,20.0s							
KLU	Klutina	114.45	329		PFAKE		04 24 00.0	+16
KLU					LR	LR		
	comp=Z,2μm,19.0s							
KRUC	Moravsky	114.57	46	ePKP		PKPdf	04 23 44.5	-0.2
KRUC				ePP		PP	04 24 41.6	-0.7
KRUC				eSKS		SKSac	04 30 32.9	+0.6
SANT	Santorini	114.70	62		PFAKE		04 24 00.0	+15
SANT					LR	LR		
	comp=Z,4μm,20.0s							
MODS	Modra-Piesok	114.78	47	ePKIKP		PKPdf	04 23 44.1	-1.0
MODS				e			04 23 48.3	
MODS	Modra-Piesok	114.78	47	ePKP		PKPdf	04 23 44.1	-1.0
MODS				e			04 23 48.3	
VRAC	Vranov	114.80	46	ePKP		PKPdf	04 23 45.2	+0.1
VRAC				ePP		PP	04 24 43.5	-0.4
VRAC				eSKS		SKSac	04 30 34.4	+1.2
DOT	Dot Lake	114.83	332		PFAKE		04 24 00.0	+15
DOT					LR	LR		
	comp=Z,3μm,20.0s							
SCRK	Sand Creek	114.97	332		PFAKE		04 24 00.0	+15
SCRK					LR	LR		
	comp=Z,3μm,21.0s							
UPC	Upice	115.00	45	eSKS		SKSac	04 30 35.3	+1.4
UPC				eSKKS		SKKSac	04 31 46.1	-0.5
UPC				eSP		SP	04 34 22.2	-0.9
UPC				eSS		SS	04 40 41.3	-0.6
UPC				AMS		AMS	05 13 30.0	
	comp=Z,3μm,18.2s							
PAX	Paxson	115.02	331		PFAKE		04 24 00.0	+15
PAX					LR	LR		
	comp=Z,3μm,20.0s							
DPC	Dobruska-Polom	115.11	45	ePKP		PKPdf	04 23 46.7	+1.0
DPC				ex		x	04 24 09.2	
DPC				ePP		PP	04 24 43.7	-2.5
DPC				ex		x	04 25 00.9	
DPC				eSKS		SKSac	04 30 36.1	+1.7
DPC				eSKKS		SKKSac	04 31 49.2	+1.8
DPC				eSP		SP	04 34 23.2	-0.9
DPC				ePKKP		PKKPab	04 34 34.6	+10
DPC				eSS		SS	04 40 42.9	-0.5
DPC				AMS		AMS	05 14 40.0	
	comp=Z,3μm,19.1s							
DPC	Dobruska-Polom	115.11	45	ePKIKP		PKPdf	04 23 46.7	+1.0
DPC				e			04 24 43.7	
DPC				e			04 30 36.1	
DPC				eSP		SP	04 34 23.2	-0.9
DPC				eSS		SS	04 40 42.9	-0.5
DPC				MLR		MLR		
	comp=Z,3μm,19.1s							
RIDG	Independ'e Rid	115.17	332		PFAKE		04 24 00.0	+15
RIDG					LR	LR		
	comp=Z,3μm,21.0s							
SCM	Sheep Creek Mo	115.20	329		PFAKE		04 24 00.0	+14
SCM					LR	LR		
	comp=Z,3μm,21.0s							
JAVC	Velka Javorina	115.23	47	ePKP		PKPdf	04 23 46.9	+0.9
JAVC				eSKS		SKSac	04 30 36.5	+1.5
SEW	Seward	115.27	327		PFAKE		04 24 00.0	+14
SEW					LR	LR		
	comp=Z,2μm,20.0s							
KSP	Ksiaz	115.31	44	ePKP		PKPdf	04 23 46.9	+0.9
KSP	Ksiaz	115.31	44	ePKIKP		PKPdf	04 23 46.9	+0.9
RGN	Rugen	115.36	40		PFAKE		04 24 00.0	+14
RGN					LR	LR		
	comp=Z,6μm,21.0s							
KKB	Krupnik	115.54	56		P	PP	04 24 49.9	+0.5
KARP	Karpathos	115.55	64		PFAKE		04 24 00.0	+13
KARP					LR	LR		
	comp=Z,4μm,20.0s							
MORC	Moravsky Berou	115.56	46	‖ iP		PKPdf	04 23 45.8	-0.8
MORC	Moravsky Berou	115.56	46	ePKPdf		PKPdf	04 23 47.5	+0.9
MORC	Moravsky Berou	115.56	46	‖ PKIKP		PKPdf	04 23 45.8	-0.8
MORC	Moravsky Berou	115.56	46	ePKP		PKPdf	04 23 45.6	-1.0
MORC				eSKS		SKSac	04 30 37.9	+1.8
SML	Sawmill	115.61	329		PFAKE		04 24 00.0	+14
SML					LR	LR		
	comp=Z,3μm,21.0s							
KDAK	Kodiak Island	115.61	324		PFAKE		04 24 00.0	+14
KDAK					LR	LR		
	comp=Z,2μm,21.0s							
BRLK	Bradley Lake	115.75	326		PFAKE		04 24 00.0	+13
BRLK					LR	LR		
	comp=Z,2μm,22.0s							
VYHS	Vyhne	115.76	48	ePKP		PKPdf	04 23 47.0	0.0
VYHS				e			04 23 50.4	
CNPM	China Poot	115.79	326		PFAKE		04 24 00.0	+13
CNPM					LR	LR		
	comp=Z,2μm,21.0s							
ATD	Arta Tunnel	115.83	94		PFAKE		04 24 00.0	+12
ATD					LR	LR		
	comp=Z,4μm,20.0s							
DHY	Denali Highway	115.83	331		PFAKE		04 24 00.0	+13
DHY					LR	LR		
	comp=Z,3μm,21.0s							
SII	Sitkinak Islan	115.84	322		PFAKE		04 24 00.0	+13
SII					LR	LR		
	comp=Z,2μm,21.0s							
GHO	Glory Hole Cre	115.84	329		PFAKE		04 24 00.0	+13
GHO					LR	LR		
	comp=Z,3μm,18.0s							
PMR	Palmer	115.84	329		PFAKE		04 24 00.0	+13
PMR					LR	LR		
	comp=Z,3μm,22.0s							
RC01	Rabbit Creek A	115.86	328		PFAKE		04 24 00.0	+13
RC01					LR	LR		
	comp=Z,2μm,20.0s							
KONO	Kongsberg	115.88	34		PFAKE		04 24 00.0	+13
KONO					LR	LR		
	comp=Z,4μm,20.0s							
MDVR	Moldovita	115.92	52	⇑ iP		PKPdf	04 23 46.7	-0.8
OKC	Ostrava-Krasne	115.94	46	ePKP		PKPdf	04 23

OKC eSKKS **SKKSac** **04 31 55.7 +2.8**
OKC eSP **SP** **04 34 37.0 +5.4**
OKC AMS AMS 05 17 20.0
comp=Z,3μm,17.8s
OKC Ostrava-Krasne 115.94 46 ePKIKP **PKPdf** **04 23 51.0 +3.7**
OKC e 04 30 38.7
OKC eSP SP 04 34 37.0 +5.4
OKC MLR MLR
comp=Z,3μm,17.8s
VTS Vitosha 115.94 55 PFAKE 04 24 00.0 +12
VTS LR LR
comp=Z,5μm,22.0s
VTS Vitosha 115.94 55 P **PP** **04 24 53.3 +0.9**
HOM Homer 116.04 326 PFAKE 04 24 00.0 +13
HOM LR LR
comp=Z,2μm,22.0s
PSZ Piszkesteto 116.15 49 PFAKE 04 24 00.0 +12
PSZ LR LR
comp=Z,3μm,20.0s
ASAR Alice Springs 116.16 205 PKP **PKPdf** **04 23 47.1 -1.7**
comp=Z,1.5nm,0.7s,baz=146,slow=2.6,SNR=9.4
ASAR PP **PP** **04 24 51.7 -0.8**
comp=Z,0.7nm,0.8s,baz=145,slow=2.3,SNR=3.2
ASAR PKKPbc **PKKPbc** **04 34 17.9 +0.2**
comp=Z,2.1nm,0.8s,baz=343,slow=3.8,SNR=6.9
ASAR PKKPab **PKKPab** **04 34 23.6 -2.2**
comp=Z,2.1nm,0.8s,baz=341,slow=3.4,SNR=9.3
AS31 Alice Springs 116.16 205 ePKPdf **PKPdf** **04 23 47.1 -1.7**
AS31 ePP **PP** **04 24 51.7 -0.8**
AS31 ePKKPbc **PKKPbc** **04 34 17.9 +0.2**
AS31 eSP SP 04 34 23.6 -10
BZS Buzias 116.22 51 ⇓iP **PKPdf** **04 23 47.9 -0.1**
BZS Buzias 116.22 51 ⇓PKIKP **PKPdf** **04 23 47.9 -0.1**
HDA Harding Lake 116.31 332 PFAKE 04 24 00.0 +12
HDA LR LR
comp=Z,3μm,22.0s
LANS Liptovska Anna 116.42 47 ePKIKP **PKPdf** **04 23 49.0 +0.7**
LANS e 04 23 52.5
LANS Liptovska Anna 116.42 47 ePKP **PKPdf** **04 23 49.0 +0.7**
LANS e 04 23 52.5
ILAR Eielson Array 116.46 332 PKP **PKPdf** **04 23 46.6 -1.2**
comp=Z,2.0nm,0.9s,baz=206,slow=0.9,SNR=8.8
ILAR PP **PP** **04 24 56.3 +1.1**
comp=Z,4.4nm,1.1s,baz=121,slow=3.4,SNR=4.7
ILAR PKKPbc **PKKPbc** **04 34 16.5 -0.9**
comp=Z,0.8nm,0.9s,baz=262,slow=1.8,SNR=3.7
ILB Eielson Array 116.46 332 ePKPdf **PKPdf** **04 23 46.6 -1.2**
ILB ePP **PP** **04 24 56.3 +1.1**
ILB ePKKPbc **PKKPbc** **04 34 16.5 -0.9**
SUA Susitna One 116.46 328 PFAKE 04 24 00.0 +12
SUA LR LR
comp=Z,3μm,21.0s
SIRR Siria 116.53 51 ⇓iP **PKPdf** **04 23 49.0 +0.4**
RZN Rozhen 116.56 56 P **PP** **04 24 57.4 +0.7**
RND Reindeer 116.58 331 PFAKE 04 24 00.0 +12
RND LR LR
comp=Z,4μm,20.0s
MPEP Malo Peshtene 116.63 54 P **PP** **04 24 57.1 +0.2**
FYU Fort Yukon 116.73 334 PFAKE 04 24 00.0 +12
FYU LR LR
comp=Z,3μm,19.0s
CCB Clear Creek Bu 116.75 332 ePKPdf **PKPdf** **04 23 48.5 +0.1**
CCB LR LR
comp=Z,2μm,21.0s
MCK McKinley 116.76 331 PFAKE 04 24 00.0 +12
MCK LR LR
comp=Z,3μm,19.0s
WRH Wood River Hil 116.77 332 ePKPdf **PKPdf** **04 23 48.7 +0.2**
WRH LR LR
comp=Z,2μm,21.0s
COLA College 116.87 332 PFAKE 04 24 00.0 +11
COLA LR LR
comp=Z,2μm,21.0s
COLA College 116.87 332 i PKIKP **PKPdf** **04 23 49.3 +0.7**
GKP Gorka Klasztor 116.89 42 ePKP **PKPdf** **04 23 49.7 +0.8**
GKP Gorka Klasztor 116.89 42 ePKIKP **PKPdf** **04 23 49.7 +0.8**
NIE Niedzica 117.03 47 ePKP **PKPdf** **04 23 49.6 +0.1**
NIE Niedzica 117.03 47 ePKIKP **PKPdf** **04 23 49.6 +0.1**
SKT Skwentna 117.03 328 PFAKE 04 24 00.0 +11
SKT LR LR
comp=Z,2μm,19.0s
MDM Murphy Dome 117.05 332 PFAKE 04 24 00.0 +11
MDM LR LR
comp=Z,2μm,21.0s
OJC Ojcow 117.06 46 ePKP **PKPdf** **04 23 48.9 -0.6**
OJC Ojcow 117.06 46 ePKPdf **PKPdf** **04 23 50.1 +0.7**
OJC Ojcow 117.06 46 ePKIKP **PKPdf** **04 23 48.8 -0.6**
ALN Alexandroupoli 117.12 58 PFAKE 04 24 00.0 +10
ALN LR LR
comp=Z,2μm,22.0s
BWN Browne 117.17 331 PFAKE 04 24 00.0 +11
BWN LR LR
comp=Z,3μm,21.0s
TRF Thorofare Moun 117.17 330 PFAKE 04 24 00.0 +11
TRF LR LR
comp=Z,3μm,20.0s
NB2 NORSAR Subarra117.22 33 PKPdf **PKPdf** **04 23 49.0 -0.5**
comp=Z,9.7nm,1.2s,baz=248,slow=1.9
NB2 NORSAR Subarra117.22 33 PKPdf **PKPdf** **04 23 49.0 -0.5**
baz=248,slow=1.9
NB200 NORSAR Array S 117.22 33 ePKPdf **PKPdf** **04 23 49.0 -0.5**
NB200 ePKKPbc **PKKPab** **04 34 15.3 +0.4**
NOA NORSAR Array B 117.22 33 PKP **PKPdf** **04 23 49.0 -0.5**
comp=Z,2.7nm,0.9s,baz=252,slow=2.1,SNR=5.4
NOA PKKPbc **PKKPab** **04 34 15.3 +0.4**
comp=Z,1.3nm,0.8s,baz=78,slow=4.2,SNR=3.5
NOA NORSAR Array B 117.22 33 PKIKP **PKPdf** **04 23 49.0 -0.5**
DRGR 117.41 51 ⇑iP **PKPdf** **04 23 53.7 +3.4**
DRGR 117.41 51 ⇑PKIKP **PKPdf** **04 23 53.7 +3.4**
KTH Kantishna Hill 117.47 330 PFAKE 04 24 00.0 +10
KTH LR LR
comp=Z,3μm,21.0s
PPLA Purkeypile 117.70 329 ePKPdf **PKPdf** **04 23 51.5 +1.0**
PPLA LR LR
comp=Z,3μm,21.0s
BPAW Bear Paw Mtn. 117.74 331 ePKPdf **PKPdf** **04 23 50.3 0.0**
BPAW LR LR
comp=Z,2μm,22.0s
TRPA Tarpa 117.85 49 ⇓iP **PKPdf** **04 23 50.9 -0.1**
MANT Manisa 117.85 61 PFAKE 04 24 00.0 +8.4
MANT LR LR
comp=Z,11μm,20.0s
CHGN Chignik 117.85 321 PFAKE 04 24 00.0 +9.3
CHGN LR LR
comp=Z,1μm,22.0s
CAST Castle Rocks 117.89 330 ePKPdf **PKPdf** **04 23 50.6 -0.1**
CAST LR LR
comp=Z,3μm,22.0s
UZH Uzhgorod 117.90 49 ePKIKP **PKPdf** **04 23 49.5 -1.6**
UZH i 04 23 54.1
UZH e 04 23 59.9
HUMR Humele 117.93 54 ⇑iP **PKPdf** **04 23 55.8 +4.5**
HFS Hagfors 117.95 34 PKP **PKPdf** **04 23 49.5 -1.3**
comp=Z,7.8nm,1.0s,baz=299,slow=3.0,SNR=6.0
HFS PP **PP** **04 25 06.1 +0.4**
comp=Z,2.2nm,0.9s,baz=224,slow=9.5,SNR=2.0
HFS PKKPbc **PKKPbc** **04 34 14.0 +2.1**
comp=Z,2.6nm,0.7s,baz=101,slow=7.7,SNR=9.3
BEL Belsk 118.29 45 ePKP **PKPdf** **04 23 52.4 +0.7**
BEL Belsk 118.29 45 ePKIKP **PKPdf** **04 23 52.4 +0.7**
KWP Kalwaria Pacla 118.55 48 ePKP **PKPdf** **04 23 52.8 +0.5**
KWP Kalwaria Pacla 118.55 48 ePKPdf **PKPdf** **04 23 52.1 -0.2**
KWP LR LR
comp=Z,32μm,22.0s
KWP Kalwaria Pacla 118.55 48 ePKIKP **PKPdf** **04 23 52.2 -0.2**
KWP MLR MLR
comp=Z,32μm,22.0s
SDPT Sand Point 118.55 319 PFAKE 04 24 00.0 +7.9
SDPT LR LR
comp=Z,1μm,19.0s
ARCR ARCALIA 118.56 51 ⇑iP **PKPdf** **04 23 56.3 +3.9**
EIL Elat 118.73 73 PKP **PKPdf** **04 23 53.2 -0.1**
comp=Z,3.3nm,0.8s,baz=270,slow=6.1,SNR=2.5
EIL PP **PP** **04 25 12.8 +1.0**
comp=Z,3.7nm,0.7s,baz=224,slow=4.1,SNR=5.3
DAMY Dhamar 118.76 93 PFAKE 04 24 10.0 +16
DAMY LR LR
comp=Z,5μm,20.0s
DOPR Dopca 118.77 52 ⇑iP **PKPdf** **04 23 52.9 0.0**
COLD Coldfoot 118.78 334 PFAKE 04 24 00.0 +7.8
COLD LR LR
comp=Z,4μm,20.0s
MLR Muntele Rosu 118.94 53 PKP **PKPdf** **04 23 52.7 -0.7**
comp=Z,3.9nm,1.0s,baz=315,slow=5.7,SNR=6.5
MLR PP **PP** **04 25 14.2 +1.1**
comp=Z,1.7nm,1.1s,baz=275,slow=4.9,SNR=3.7
MLR Muntele Rosu 118.94 53 ⇓iP **PKPdf** **04 23 52.9 -0.5**
MLR Muntele Rosu 118.94 53 ePKPdf **PKPdf** **04 23 52.7 -0.7**
MLR ePKPdf **PKPdf** **04 23 52.8 -0.5**
MLR ePP **PP** **04 25 14.2 +1.1**
MLR LR LR
comp=Z,6μm,21.0s
MLR Muntele Rosu 118.94 53 ⇓PKIKP **PKPdf** **04 23 52.9 -0.5**
ISP Isparta 118.97 63 PFAKE 04 24 00.0 +6.3
ISP LR LR
comp=Z,3μm,19.0s
KLNR Kaliningrad 119.03 42 i PKIKP **PKPdf** **04 23 54.4 +1.4**
TOLK Toolik Lake Re 119.15 336 P **PKPdf** **04 23 53.2 +0.2**
baz=114
TOLK Toolik Lake Re 119.15 336 ePKPdf **PKPdf** **04 23 53.0 +0.1**
TOLK LR LR
comp=Z,3μm,22.0s
BURAR Bucovina Array 119.31 50 ⇑iP **PKPdf** **04 23 54.3 +0.3**
BURAR Bucovina Array 119.31 50 ⇑PKIKP **PKPdf** **04 23 54.3 +0.3**
LVV L'vov 119.41 48 ePKIKP **PKPdf** **04 23 54.2 +0.2**
WR1 Warramunga Arr 119.42 207 ePKPdf **PKPdf** **04 23 52.4 -2.6**
WR1 ePKKPbc **PKKPbc** **04 34 04.9 -1.1**
WR1 ePKKPab **PKKPab** **04 34 10.1 -1.3**
WR1 ePKKSdf **SKKPbc** **04 37 43.2 -7.8**
WRA Warramunga Arr 119.42 207 PKP **PKPdf** **04 23 52.4 -2.6**
comp=Z,20nm,1.3s,baz=162,slow=1.4,SNR=20
WRA PKKPbc **PKKPbc** **04 34 04.9 -1.2**
comp=Z,1.0nm,0.8s,baz=344,slow=4.6,SNR=4.2
WRA PKKPab **PKKPab** **04 34 10.1 -1.3**
comp=Z,3.0nm,1.0s,baz=340,slow=4.4,SNR=6.5
WRA SKKPbc SKKPbc 04 37 43.2 -7.8
comp=Z,3.4nm,1.1s,baz=341,slow=5.1,SNR=5.0
WRAB Tennant Creek 119.42 207 ePKPdf **PKPdf** **04 23 53.9 -1.2**
WRAB LR LR
comp=Z,3μm,22.0s
WRAB Tennant Creek 119.42 207 ePKIKP **PKPdf** **04 23 53.9 -1.2**
WRAB MLR MLR
comp=Z,3μm,22.0s
PLOR Plostina 119.54 53 ⇑iP **PKPdf** **04 23 54.3 -0.1**
PLOR Plostina 119.54 53 ⇑PKIKP **PKPdf** **04 23 54.3 -0.1**
VRI Vrincioaia 119.60 53 ⇑iP **PKPdf** **04 23 53.5 -1.0**
VRI Vrincioaia 119.60 53 ⇑PKIKP **PKPdf** **04 23 53.5 -1.0**
TESR Tescani 119.79 52 ⇓iP **PKPdf** **04 23 53.3 -1.5**
CSS Mathiatis 119.83 67 PFAKE 04 24 10.0 +15
CSS LR LR
comp=Z,2μm,22.0s
FALS False Pass 119.93 318 PFAKE 04 24 10.0 +15
FALS LR LR
comp=Z,1μm,19.0s
TIRR Tirgusor 120.16 55 ⇑iP **PKPdf** **04 23 53.8 -1.8**
TIRR Tirgusor 120.16 55 PFAKE 04 24 10.0 +14
TIRR LR LR
comp=Z,4μm,20.0s
TIRR Tirgusor 120.16 55 ⇑PKIKP **PKPdf** **04 23 53.8 -1.8**
SUW Suwalki 120.44 43 ePKP **PKPdf** **04 23 54.4 -1.4**
SUW Suwalki 120.44 43 ePKPdf **PKPdf** **04 23 54.4 -1.4**
SUW LR LR
comp=Z,4μm,21.0s
SUW Suwalki 120.44 43 ePKIKP **PKPdf** **04 23 54.4 -1.4**
MMAI Mount Meron Ar 120.55 69 PKP **PKPdf** **04 23 57.2 +0.4**
comp=Z,3.2nm,0.6s,baz=202,slow=3.1,SNR=5.7
COEN Coen 120.77 219 PFAKE 04 24 10.0 +12
COEN LR LR
comp=Z,2μm,18.0s
AKUT Akutan 120.97 317 PFAKE 04 24 10.0 +13
AKUT LR LR
comp=Z,1μm,21.0s
UNV Unalaska Valle 121.28 316 PFAKE 04 24 10.0 +13
UNV LR LR
comp=Z,1μm,20.0s
ASF Jabal al Asfar 121.33 71 PKP **PKPdf** **04 23 57.6 -0.7**
comp=Z,0.9nm,0.3s,baz=194,slow=3.6,SNR=3.6
ASF PP **PP** **04 25 29.3 -0.5**
comp=Z,4.0nm,1.2s,baz=245,slow=3.9,SNR=3.7
KIS Kishinev 121.36 52 ePKP **PKPdf** **04 23 57.0 -0.8**
KIS Kishinev 121.36 52 i PP PP 04 25 26.0 -3.5
comp=Z,400nm,3.0s
KIS eSKP 04 27 03.0
KIS Kishinev 121.36 52 ePS PS 04 35 00.0 -22
KIS LRM MLR 05 12 48.0
comp=Z,4μm,22.0s
KIS Kishinev 121.36 52 ePKIKP **PKPdf** **04 23 57.0 -0.8**
KIS i 04 25 26.0
KIS pmax pmax
comp=Z,400nm,3.0s
KIS MLR MLR
comp=Z,4μm,22.0s
ANTO Ankara 121.42 61 PFAKE 04 24 10.0 +12
ANTO LR LR
comp=Z,3μm,20.0s
SORM Soroca 121.46 51 ⇓iP **PKPdf** **04 23 58.1 +0.2**
SORM Soroca 121.46 51 ⇓PKIKP **PKPdf** **04 23 58.1 +0.2**
BR101 Keskin Array S 121.97 62 ePKPdf **PKPdf** **04 23 59.0 -0.4**
BR101 ePP **PP** **04 25 32.7 -1.3**
BRTR Keskin Array B 121.97 62 PKP **PKPdf** **04 23 59.0 -0.4**
comp=Z,6.1nm,0.9s,baz=191,slow=3.8,SNR=15
BRTR PP **PP** **04 25 32.7 -1.3**
comp=Z,2.5nm,1.0s,baz=224,slow=5.2,SNR=3.5
MBWA Marble Bar 122.22 192 PFAKE 04 24 10.0 +10
MBWA LR LR
comp=Z,3μm,20.0s
NIKH Nikolski High 122.33 315 PFAKE 04 24 10.0 +11
NIKH LR LR
comp=Z,1μm,20.0s
PMG Port Moresby 122.33 226 PFAKE 04 24 10.0 +9.3
PMG LR LR
comp=Z,1μm,20.0s
ILGA Ilgaz 122.52 60 ePKPdf **PKPdf** **04 24 01.5 +1.0**
ILGA LR LR
comp=Z,5μm,19.0s
IIGN Ignalina 122.55 42 eP **PKPdf** **04 24 00.9 +1.1**
IIGN IAmb IAmb 04 24 06.7
comp=Z,9.2nm,0.8s
ISAL Salakas 122.56 42 eP **PKPdf** **04 24 01.0 +1.2**
ISAL IAmb IAmb 04 24 05.8
comp=Z,17nm,1.1s
IZAR Zarasai 122.68 42 eP **PKPdf** **04 24 01.2 +1.2**
IZAR IAmb IAmb 04 24 06.1
comp=Z,16nm,0.9s
NACGM Naroch 122.72 43 e **PKPdf** **04 24 01.0 +0.9**
NACGM eLQ LQ 05 03 40.0
NACGM eLR LR 05 10 12.0
IDID Didziasalis 122.82 42 eP **PKPdf** **04 24 01.2 +0.9**
IDID IAmb IAmb 04 24 06.1
comp=Z,19nm,1.0s
AKASG Malin Array Be 122.85 48 PKP **PKPdf** **04 23 59.1 -1.4**
comp=Z,12nm,0.9s,baz=267,slow=2.3,SNR=20
AKASG PP **PP** **04 25 38.3 -1.2**
comp=Z,2.0nm,0.8s,baz=248,slow=6.6,SNR=10.0
AKBB Malin Array Si 122.85 48 ePKPdf **PKPdf** **04 23 59.1 -1.3**
AKBB ePP **PP** **04 25 38.3 -1.2**
AKBB Malin Array Si 122.85 48 ePKIKP **PKPdf** **04 23 59.2 -1.3**
AKBB e 04 25 38.3
RABL Rabaul 123.26 234 PFAKE 04 24 10.0 +7.4
RABL LR LR
comp=Z,900nm,19.0s
RDOG Red Dog Mine 123.63 333 PFAKE 04 24 10.0 +8.4
RDOG LR LR
comp=Z,3μm,20.0s
VSU Vasula 123.69 39 c iPKIKP **PKPdf** **04 24 01.3 -0.6**
VSU pmax pmax
comp=Z,112nm,1.0s
KBS Kingsbay 123.73 13 PFAKE 04 24 10.0 +8.5
KBS LR LR
comp=Z,2μm,21.0s
ANM Nome 123.78 329 PFAKE 04 24 10.0 +8.1
ANM LR LR
comp=Z,3μm,19.0s
FITZ Fitzroy Crossi 123.93 199 PKP **PKPdf** **04 24 01.5 -2.2**
comp=Z,3.1nm,0.7s,baz=183,slow=6.5,SNR=4.1
FIA0 FINESS Array S 124.11 35 ePKPdf **PKPdf** **04 24 00.8 -1.8**
FIA0 FINESS Array S 124.11 35 ePKIKP **PKPdf** **04 24 00.8 -1.8**
FINES FINESS Array B 124.11 35 PKP **PKPdf** **04 24 00.8 -1.8**
comp=Z,7.0nm,1.0s,baz=260,slow=4.2,SNR=9.4
SIM Simferopol' 124.14 56 i PKIKP **PKPdf** **04 24 03.6 +0.4**
SIM e 04 25 48.0
SIM e 04 31 07.0
SIM ePS **PS** **04 35 48.0 +1.5**
SIM ePPS PPS 04 37 17.0
SIM pmax pmax
comp=Z,15nm,1.0s
SIM pmax pmax
comp=Z,60nm,9.2s
RAYN Ar Rayn 124.25 84 PFAKE 04 24 20.0 +16
RAYN LR LR
comp=Z,4μm,18.0s
SPIA Saint Paul Isl 124.29 319 PFAKE 04 24 20.0 +17
SPIA LR LR
comp=Z,2μm,20.0s
SPA0 Spitsbergen Ar 124.42 14 ePKPdf **PKPdf** **04 24 03.0 +0.1**
SPA0 ePP **PP** **04 25 48.9 -0.5**
SPITS Spitsbergen Ar 124.42 14 PKP **PKPdf** **04 24 03.0 +0.1**
comp=Z,15nm,1.1s,baz=201,slow=2.8,SNR=3.9
SPITS PP **PP** **04 25 48.9 -0.5**
comp=Z,0.6nm,0.2s,baz=316,slow=12,SNR=20
SPITS Spitsbergen Ar 124.42 14 PKIKP **PKPdf** **04 24 03.0 +0.1**
ATKA Atka Island 125.23 313 PFAKE 04 24 20.0 +15
ATKA LR LR
comp=Z,1μm,20.0s
ARA0 ARCESS Array S 125.45 25 ePKPdf **PKPdf** **04 24 03.8 -1.2**
ARCES ARCESS Array B 125.45 25 PKP **PKPdf** **04 24 03.8 -1.2**
comp=Z,3.4nm,0.6s,baz=253,slow=3.7,SNR=9.6
KEV Kevo 126.01 25 PFAKE 04 24 20.0 +14
KEV LR LR
comp=Z,3μm,22.0s
ANN Anapa 126.33 57 i PKIKP **PKPdf** **04 24 07.5 +0.1**
ANN e 04 26 03.0
ANN eSS SS 04 43 02.4 -5.1
ANN pmax pmax
comp=Z,44nm,1.3s
MTN Manton Dam 127.12 207 PFAKE 04 24 20.0 +10
MTN LR LR
comp=Z,3μm,19.0s
SOC Sochi 127.55 59 ePKIKP **PKPdf** **04 24 10.5 +0.7**
SOC e 04 26 08.4
SOC ePS **PS** **04 36 20.8 +4.3**
SOC pmax pmax
comp=Z,59nm,0.9s
SOC MLR MLR
comp=Z,1μm,19.0s
MANU Manus Island 127.99 232 PFAKE 04 24 20.0 +8.4
MANU LR LR
comp=Z,1μm,18.0s
OBN Obninsk 128.24 44 PKP **PKPdf** **04 24 11.3 +0.6**
comp=Z,23nm,0.4s,baz=320,slow=4.7
LVZ Lovozero 128.63 28 ePKPdf **PKPdf** **04 24 09.7 -1.5**
LVZ LR LR
comp=Z,3μm,20.0s
LVZ Lovozero 128.63 28 i PKIKP **PKPdf** **04 24 11.0 -0.2**
MOS Moscow 128.94 44 i PKIKP **PKPdf** **04 24 11.5 -0.5**
MOS e 04 26 21.1
MOS pmax pmax
comp=Z,134nm,1.4s
MOS MLR MLR
comp=Z,3μm,19.0s
VSR Storozhevoye 129.05 50 ePKIKP **PKPdf** **04 24 11.7 -0.7**
VSR pmax pmax
comp=Z,200nm,2.2s
VSR pmax pmax
comp=Z,60nm,1.4s
VORD Divnogorie 129.08 50 ePKIKP **PKPdf** **04 24 11.9 -0.5**
VORD pmax pmax
comp=Z,30nm,1.1s
NEY Neytrino 129.56 60 i PKIKP **PKPdf** **04 24 14.3 +0.4**
AKH Akhalkalaki 129.60 63 ⇓iP **PKPdf** **04 24 18.5 +4.5**
AKH Akhalkalaki 129.60 63 PFAKE 04 24 30.0 +16
AKH LR LR
comp=Z,2μm,21.0s
KIV Kislovodsk 129.72 59 ePKPdf **PKPdf** **04 24 14.3 +0.2**
KIV LR LR
comp=Z,1μm,20.0s
KIV Kislovodsk 129.72 59 i PKIKP **PKPdf** **04 24 14.3 +0.2**
KIV e 04 26 23.5
KIV ePS **PS** **04 36 33.2 -2.5**
KIV eSS SS 04 43 47.2 -2.6
KIV pmax pmax
comp=Z,87nm,1.1s
KIV MLR MLR
comp=Z,1μm,23.0s
KBZ Khabaz 129.81 60 PKP **PKPdf** **04 24 12.2 -1.9**
comp=Z,14nm,1.0s,baz=259,slow=3.4,SNR=14
KBZ SKPbc SKPbc 04 27 37.4 +0.5
comp=Z,4.5nm,1.0s,baz=277,slow=6.9,SNR=4.2
KBZ SKP 04 27 44.2
comp=Z,5.6nm,1.1s,baz=130,slow=3.6,SNR=8.1
TMCR Tamitsa 129.91 33 ePKIKP **PKPdf** **04 24 14.0 +0.4**
TMCR pmax pmax
comp=Z,135nm,0.5s
GNI Garni 130.14 65 PKP **PKPdf** **04 24 16.1 +1.0**
comp=Z,18nm,1.0s,baz=120,slow=0.2,SNR=13
GNI SKPbc **SKPbc** **04 27 39.3 +0.8**
comp=Z,3.2nm,0.3s,baz=213,slow=7.2,SNR=3.3
GNI Garni 130.14 65 ePKPdf **PKPdf** **04 24 16.1 +1.0**
GNI eSKPdf **SKPbc** **04 27 39.3 +0.8**
GNI LR LR
comp=Z,3μm,21.0s
GNI Garni 130.14 65 i P **PKPdf** **04 24 16.6 +1.6**
SNR=5.8
GNI Garni 130.14 65 d iPKIKP **PKPdf** **04 24 14.8 -0.3**
NCK Nalchik 130.24 60 i PKIKP **PKPdf** **04 24 14.9 -0.1**
GOF Gofitskoye 130.24 58 ⇑ePKIKP **PKPdf** **04 24 13.2 -1.7**
GOF pmax pmax
comp=Z,98nm,1.0s
ZEI Tsey 130.27 61 i PKIKP **PKPdf** **04 24 14.5 -0.8**
ZEI pmax pmax
comp=Z,86nm,2.0s
MZR Muzera 130.45 89 i P **PKPdf** **04 24 15.5 -0.4**
SNR=5.8
KLMR Klimovskoe 130.47 37 d iPKIKP **PKPdf** **04 24 13.9 -0.9**
KLMR MLR MLR
comp=Z,4μm,19.0s
KLMR Klimovskoe 130.47 37 ⇓iPKPdf **PKPdf** **04 24 13.9 -0.9**
KLMR ePKPdf **PKPdf** **04 24 13.9 -0.9**
KLMR ePKPdf **PKPdf** **04 24 13.9 -0.9**
KLMR AMP 04 24 22.2
comp=Z,189nm,1.6s
KLMR eSKPab **SKPab** **04 27 35.6 -3.0**
KLMR eSKP 04 27 43.9
KLMR LQ LQ 05 02 11.1
KLMR LQ LQ 05 02 11.1
KLMR LR LR 05 08 47.5
KLMR AMP 05 22 55.8
comp=Z,4μm,18.7s
TBLG Delisi 130.58 63 ePKPdf **PKPdf** **04 24 17.3 +1.6**
TBLG Delisi 130.58 63 ePKIKP **PKPdf** **04 24 17.3 +1.6**
JAY Jayapura 131.63 224 PKP **PKPdf** **04 24 18.1 -0.5**
comp=Z,6.8nm,1.0s,baz=245,slow=4.3,SNR=6.7
JAY Jayapura 131.63 224 PKP **PKPdf** **04 24 21.1 +2.5**
GROC Groznyy 131.72 61 ePKIKP **PKPdf** **04 24 16.9 -0.8**
GROC e 04 26 36.7
GROC pmax pmax
comp=Z,120nm,1.4s
GENI Genyem 131.87 224 PKP **PKPdf** **04 24 21.0 +2.0**
SOEI Soe 132.26 200 PFAKE 04 24 30.0 +10
SOEI LR LR
comp=Z,4μm,18.0s
SMY Shemya 132.36 312 PFAKE 04 24 30.0 +11
SMY LR LR
comp=Z,2μm,22.0s
AJN Ajban 132.40 88 i P **PKPdf** **04 24 20.0 +0.4**
SNR=6.0
ASUD Al Ashush, Dub 132.70 88 i P **PKPdf** **04 24 20.9 +0.8**
SNR=5.6
ALNE Al Ain 132.78 89 P **PKPdf** **04 24 19.7 -0.7**
NAZ Nazwa, Dubai 133.14 88 P **PKPdf** **04 24 19.8 -1.2**
UMQ Umm Al-Quwin 133.38 87 P **PKPdf** **04 24 23.4 +2.0**
PRGR Permogore 133.42 36 ⇑iPKIKP **PKPdf** **04 24 20.4 +0.1**
PRGR pmax pmax
comp=Z,81nm,1.1s
HATD Hatta, Dubai 133.44 89 i P **PKPdf** **04 24 20.8 -0.7**
SNR=6.6
SOHO SOHO 133.46 90 i P **PKPdf** **04 24 20.1 -1.4**
SNR=8.0
UOSS Minazif 133.56 88 PFAKE 04 24 30.0 +8.2
UOSS LR LR
comp=Z,4μm,20.0s
MSFE Esma-Masafi 133.71 88 i P **PKPdf** **04 24 20.8 -1.3**
SNR=6.7
MDH Madha 133.79 88 i P **PKPdf** **04 24 22.7 +0.5**
SNR=5.0
MMRI Maumere 133.87 198 PFAKE 04 24 30.0 +7.3
MMRI LR LR
comp=Z,2μm,20.0s
SHME Shamm 133.99 87 i P **PKPdf** **04 24 22.2 -0.4**
SNR=6.8
BANOM Banah 134.07 87 i P **PKPdf** **04 24 22.3 -0.5**
SNR=5.8
WSAR Wadi Sarin 134.74 92 PKP **PKPdf** **04 24 24.3 +0.3**

comp=Z,10nm,0.8s,baz=194,slow=2.9,SNR=6.3
WSAR PP **PP** **04 26 59.0 +1.0**
comp=Z,4.8nm,0.9s,baz=240,slow=7.5,SNR=4.2
BILL Biiibino 135.10 333 *e*PKPdf **PKPdf** **04 24 22.7 -0.6**
BILL Biiibino 135.10 333 *e*PKIKP **PKPdf** **04 24 23.2 -0.1**
BILL *e* 04 26 56.6
BILL pmax pmax
comp=Z,15nm,1.1s
BILL MLR MLR
comp=Z,2μm,23.0s
JAGI Jajag, Banyuwa 135.47 187 PFAKE 04 24 40.0 +14
JAGI LR LR
comp=Z,1μm,21.0s
FAKI Fak Fak 135.62 214 PFAKE 04 24 40.0 +14
FAKI LR LR
comp=Z,1μm,19.0s
KPJI Karang Pucung 136.85 180 PKP PKPdf 04 24 36.5 +8.2
SMRI Semarang 137.11 182 PFAKE 04 24 40.0 +11
SMRI LR LR
comp=Z,3μm,22.0s
LEM Lembang 137.33 178 PKP **PKPdf** **04 24 29.5 +0.1**
comp=Z,24nm,0.5s,baz=150,slow=20,SNR=3.3
KAPI Kappang 137.96 196 PFAKE 04 24 40.0 +10
KAPI LR LR
comp=Z,2μm,22.0s
KASI Kota Agung 138.41 173 PKP PKPdf 04 24 46.7 +16
SPSI Sidrap Palu 138.97 196 PKP **PKPdf** **04 24 36.0 +3.8**
MNAI Manna 139.38 170 PFAKE 04 24 40.0 +7.0
MNAI LR LR
comp=Z,3μm,20.0s
MDSI Maura Dua 139.41 172 PKP **PKPdf** **04 24 33.3 +0.3**
GEYT Alibeck 139.61 72 PKhKP PKPpre 04 24 26.3
comp=Z,2.4nm,0.5s,baz=325,slow=2.3,SNR=3.7
GEYT PKP **PKPdf** **04 24 33.7 +1.0**
comp=Z,1.9nm,0.3s,baz=225,slow=6.1,SNR=3.7
GEYT PP **PP** **04 27 27.1 -1.3**
comp=Z,1.5nm,0.4s,baz=294,slow=11,SNR=3.0
GYA0B ALIBECK ARRAY 139.61 72 PFAKE 04 24 40.0 +7.3
GYA0B LR LR
comp=Z,3μm,20.0s
MASI Maura Aman, Be 140.48 169 PKP PKPdf 04 24 47.7 +13
ARU Arti 140.63 43 PKhKP PKPpre 04 24 28.2
comp=Z,7.6nm,0.2s,baz=288,slow=7.1,SNR=6.9
ARU Arti 140.63 43 *e*PKPpre PKPpre 04 24 30.5
ARU LR LR
comp=Z,5μm,20.0s
ARU Arti 140.63 43 *i* PKIKP **PKPdf** **04 24 34.2 +0.4**
ARU SS SS 04 45 51.2 -8.5
ARU MLR MLR
comp=Z,6μm,22.0s
AKTO Aktyubinsk 140.87 52 PKhKP PKPpre 04 24 26.5
comp=Z,3.5nm,0.7s,baz=336,slow=1.9,SNR=7.5
LUWI Luwuk 140.97 202 PFAKE 04 24 50.0 +14
LUWI LR LR
comp=Z,2μm,20.0s
TNTI Ternate 141.03 210 PFAKE 04 24 50.0 +14
TNTI LR LR
comp=Z,600nm,19.0s
PALK Pallekele 141.31 131 PFAKE 04 24 50.0 +14
PALK LR LR
comp=Z,2μm,20.0s
APSI Ampana 141.43 200 PKP PKPdf 04 24 45.7 +9.0
SVE Sverdlovsk 141.68 42 *i* PKIKP **PKPdf** **04 24 36.6 +0.9**
SVE pmax pmax
comp=Z,51nm,1.8s
SVE MLR MLR
comp=E,4μm,22.0s
SVE MLR MLR
comp=Z,5μm,21.0s
PET Petropavlovsk 141.70 312 PFAKE 04 24 50.0 +14
PET LR LR
comp=Z,1μm,21.0s
PET Petropavlovsk 141.70 312 *i* PKHKP PKPpre 04 24 26.3
PET *e* 04 27 32.8
PET *e*SS SS 04 45 56.6 -16
PET *e*SSS SSS 04 51 10.3
PET MLR MLR
comp=Z,1μm,20.0s
AB31 Akbulak array 142.15 54 *i* PKHKP PKPpre 04 24 30.2
AB31 pmax pmax
comp=Z,103nm,1.2s
ABKAR Akbulak array 142.15 54 *e*PKPpre PKPpre 04 24 30.3
BKB Balikpapan 142.18 193 PKP PKPdf 04 24 46.1 +8.1
PEA0B Petropavlovsk- 142.26 312 PFAKE 04 24 50.0 +13
PEA0B LR LR
comp=Z,1μm,21.0s
PEA1 Petropavlovsk- 142.26 312 *e*PKPpre PKPpre 04 24 33.0
PEA1 *e*PKPdf **PKPdf** **04 24 35.8 -1.1**
PETK Petropavlovsk- 142.26 312 PKhKP PKPpre 04 24 33.0
comp=Z,3.1nm,0.5s,baz=46,slow=6.2,SNR=5.8
PETK PKP **PKPdf** **04 24 35.8 -1.1**
comp=Z,25nm,1.2s,baz=92,slow=7.4,SNR=14
PETK Petropavlovsk- 142.26 312 PKIKP **PKPdf** **04 24 35.8 -1.1**
PETK pmax pmax
comp=Z,29nm,1.2s
PDSI Padang 142.35 166 PKP **PKPdf** **04 24 41.0 +2.7**
TIXI Tiksi 142.88 350 PKhKP PKPpre 04 24 31.7
comp=Z,6.8nm,0.9s,baz=34,slow=5.5,SNR=9.7
TIXI PKP **PKPdf** **04 24 35.7 -1.7**
comp=Z,12nm,0.8s,baz=62,slow=3.4,SNR=12
TIXI Tiksi 142.88 350 *e*PKPpre PKPpre 04 24 31.7
TIXI *e*PKPpre PKPpre 04 24 31.8
TIXI *e*PKPdf **PKPdf** **04 24 35.7 -1.7**
TIXI LR LR
comp=Z,2μm,21.0s
TIXI Tiksi 142.88 350 *e*PKHKP PKPpre 04 24 31.7
TIXI *e* 04 24 35.7
TIXI MLR MLR
comp=Z,2μm,21.0s
MPSI Mapaga 143.09 198 PKP PKPdf 04 24 50.0 +10
SKR Severo-Kuril's 143.50 309 *e*PKHKP PKPpre 04 24 32.4
SKR *e* 04 31 11.1
SKR *e*SSS SSS 04 51 57.4
BHJ Bhuj 143.63 99 *e*P PKPbc 04 24 37.4 -0.2
BKNI Bangkinang 143.66 166 PFAKE 04 24 50.0 +9.4
BKNI LR LR
comp=Z,1μm,20.0s
BOM Bombay 143.77 108 IAMs_20 IAMs_20 05 19 14.3
comp=Z,2μm,18.8s
GSI Gunungsitoli 143.80 160 PKP **PKPdf** **04 24 43.6 +2.7**
GSI Gunungsitoli 143.80 160 *e*PKPdf **PKPdf** **04 24 39.6 -1.3**
GSI LR LR
comp=Z,3μm,22.0s
MNSI Mandailing Nat 143.81 164 PKP PKPbc 04 24 38.2 -0.2
STKI Sintang 144.13 184 PKP **PKPdf** **04 24 40.5 -1.0**
POO Poona 144.35 110 *e*P **PKPab** **04 24 37.5 -2.2**
MA2 Magadan 144.36 325 PKP **PKPab** **04 24 38.1 -0.4**
comp=Z,22nm,0.8s,baz=86,slow=3.9
MA2 Magadan 144.36 325 *e*PKPdf **PKPab** **04 24 37.8 -0.7**
MA2 LR LR
comp=Z,3μm,22.0s
MA2 Magadan 144.36 325 *i* PKIKP **PKPab** **04 24 38.2 -0.3**
SBSI Sibolga 144.38 162 PKP **PKPdf** **04 24 41.2 -0.7**
NRIK Noril'sk 144.61 13 PKP **PKPab** **04 24 39.1 0.0**
comp=Z,17nm,0.9s,baz=34,slow=1.1,SNR=28
URV Uravakonda 144.62 118 *e*PKPdf **PKPab** **04 24 40.3 -0.4**
TPRI Tanjung Pinang 144.78 172 PKP **PKPdf** **04 24 42.8 +0.2**
SKHT Srikalahasti 145.50 123 *e*PKPdf **PKPdf** **04 24 42.2 -1.5**
TPTI 145.55 159 PKP **PKPdf** **04 24 43.5 -0.4**
TPTI PKP **PKPab** **04 24 44.1 0.0**
MYKOM Kota Tinggi 145.56 171 *e*PKPdf **PKPdf** **04 24 43.1 -0.8**
MYKOM LR LR
comp=Z,2μm,21.0s
KSM Kuching 145.58 182 *e*PKPdf **PKPdf** **04 24 43.2 -0.8**
KSM LR LR
comp=Z,2μm,20.0s
PSI Prapat 145.59 162 PKPbc **PKPdf** **04 24 42.8 -1.3**
comp=Z,65nm,0.7s,baz=180,slow=7.3,SNR=39
PSI Prapat 145.59 162 *e*PKPdf **PKPdf** **04 24 42.6 -1.5**
PSI LR LR
comp=Z,3μm,21.0s
KCSI Kotacane, Aceh 145.97 159 PKP **PKPdf** **04 24 44.5 -0.1**
KLRI Killari 146.15 113 *e*PKPab **PKPdf** **04 24 44.3 -0.5**
TSI Tuntungan 146.17 161 PKP **PKPab** **04 24 49.1 +2.6**
MLSI Meulaboh, Aceh 146.26 157 PKP **PKPab** **04 24 46.5 -0.3**
SBUM Sibu 146.44 186 *e*PKPdf **PKPdf** **04 24 45.6 +0.2**
SBUM LR LR
comp=Z,2μm,22.0s
SRLM Srisailam 146.55 119 *e*PKPab **PKPdf** **04 24 46.0 +0.5**
ADKI Addanki 147.14 120 *e*PKPdf **PKPdf** **04 24 44.8 -1.7**
NJS Nagarjunasagar 147.15 118 *e*PKPbc **PKPdf** **04 24 46.7 +0.2**
HYB Hyderabad 147.17 116 *i* PKP **PKPbc** **04 24 49.0 +0.3**
HYB Hyderabad 147.17 116 *e*P **PKPdf** **04 24 45.0 -1.5**
HYB IAMs_20 IAMs_20 04 53 26.7
comp=Z,868nm,3.1s
HYBB Hyderabad (bro 147.17 116 *e*PKPab **PKPbc** **04 24 48.7 0.0**
LHMI Lhok Sumawe 147.34 157 PFAKE 04 25 00.0 +9.0
LHMI LR LR
comp=Z,2μm,20.0s
DAV Davao City (W) 147.47 211 PKPbc **PKPbc** **04 24 49.0 -0.6**
comp=Z,240nm,0.4s,baz=49,slow=11,SNR=2.1
DAV Davao City (W) 147.47 211 ‖ *i*P **PKPbc** **04 24 49.0 -0.6**
IPM Ipoh 147.70 165 *e*PKPdf **PKPdf** **04 24 47.8 +0.2**
IPM LR LR
comp=Z,2μm,20.0s
SRSP Sriramsagar 147.97 114 *e*PKPbc **PKPbc** **04 24 49.4 -1.4**
BRVK Borovoye 148.00 46 *e*PKPdf **PKPdf** **04 24 47.6 +0.8**
BRVK LR LR
comp=Z,5μm,22.0s
BRVK Borovoye 148.00 46 *d i* PKIKP **PKPdf** **04 24 47.0 +0.3**
BVA0 Borovoye Array 148.07 46 PKIKP **PKPdf** **04 24 46.8 -0.1**
BVA0 pmax pmax
comp=Z,218nm,1.6s
BVAR Borovoye Array 148.07 46 PKPbc **PKPdf** **04 24 47.3 +0.4**
comp=Z,9.7nm,0.7s,baz=270,slow=2.2,SNR=26
MYLDM Lahad Datu 148.09 198 *e*PKPbc **PKPbc** **04 24 52.4 +1.1**
KULM Kulim 148.40 164 *e*PKPdf **PKPbc** **04 24 51.2 -0.9**
KULM LR LR
comp=Z,2μm,20.0s
CHM Chimkent 148.93 66 *e*PKP **PKPdf** **04 24 48.6 0.0**
comp=Z,76nm,1.8s
CHM *e*PKPab **sPKPbc** **04 24 56.1 +0.8**
CHM *e*PP **PP** **04 28 22.9 -1.1**
CHM *i* LR LR 05 36 03.7
comp=Z,435nm,17.3s
IUG Iuzhnay 149.24 67 *e*PKP **PKPdf** **04 24 49.3 0.0**
comp=Z,29nm,1.7s
IUG *i* PKPab **PKPab** **04 24 57.7 -0.5**
PVM Polavaram 149.25 120 *e*PKiKP **PKPbc** **04 24 54.0 -0.2**
KKM Kota Kinabalu 149.44 194 *e*PKPbc **PKPbc** **04 24 54.1 -0.7**
KKM LR LR
comp=Z,1μm,19.0s
KUR Kuril'sk 149.47 300 *i* PKP2 **PKPbc** **04 24 53.4 -0.4**
KUR *i* 04 28 24.8
KKAR Karatay Array 149.61 65 *e*PKPdf **PKPdf** **04 24 50.8 +1.1**
BHPL Bhopal 149.76 106 *e*P **PKPdf** **04 24 49.7 -0.9**
BHPL IAMs_20 IAMs_20 04 55 31.8
comp=Z,484nm,9.8s
NGP Nagpur 149.84 111 *e*P **PKPdf** **04 24 49.5 -1.2**
NGP IAMs_20 IAMs_20 05 25 26.7
comp=Z,3μm,30.2s
DZA Taraz 150.21 65 *e*PKP **PKPdf** **04 24 51.6 +0.9**
comp=Z,22nm,1.2s
DZA *e*PP **PP** **04 28 31.1 -0.3**
SKLT Songkhla 150.21 163 PKP **PKPbc** **04 24 55.6 -1.0**
BRZS Berezniki 150.25 51 *e*PKP **PKPdf** **04 24 50.8 +0.3**
comp=Z,14nm,1.7s
BRZS *i* PKPab **PKPab** **04 25 01.7 -0.2**
BRZS *e*PP **PP** **04 28 30.8 -0.4**
BRZS *i* LR LR 05 34 11.0
comp=Z,1μm,18.1s
OTUK Ortayu 150.40 54 PKIKP **PKPdf** **04 24 50.4 -0.4**
OTUK pmax pmax
comp=Z,285nm,1.3s
NIL Nilore 150.55 84 *e*PKPdf **PKPdf** **04 24 51.8 +0.2**
NIL LR LR
comp=Z,2μm,22.0s
NIL Nilore 150.55 84 *e*PKIKP **PKPdf** **04 24 51.8 +0.2**
NIL MLR MLR
comp=Z,2μm,22.0s
TRTT Trang 150.62 161 PKP **PKPbc** **04 24 56.5 -1.1**
YUK Yuzh-Kuril'sk 150.97 297 *d i* PKIKP **PKPbc** **04 24 56.7 -0.8**
YUK PPP PPP 04 31 59.0
YUK pmax pmax
comp=N,225nm,1.4s
YUK pmax pmax
comp=Z,540nm,1.4s
YUK pmax pmax
comp=E,99nm,0.6s
YAK Yakutsk 150.99 340 *e*PKPbc **PKPbc** **04 24 55.9 -1.0**
YAK LR LR
comp=Z,3μm,21.0s
YAK Yakutsk 150.99 340 *e*PKIKP **PKPdf** **04 24 50.1 -1.1**
YAK *e* 04 28 33.4
YAK pmax pmax
comp=Z,212nm,1.5s
YAK pmax pmax
comp=N,13nm,1.7s
YAK pmax pmax
comp=E,35nm,1.7s
YAK pmax pmax
comp=Z,116nm,2.2s
YAK pmax pmax
comp=N,88nm,3.0s
YAK pmax pmax
comp=E,113nm,2.3s
MNAS Manas 151.08 66 PKIKP **PKPdf** **04 24 52.2 0.0**
MNAS pmax pmax
comp=Z,153nm,1.5s
SURT Suratani 151.43 158 PKP **PKPbc** **04 25 02.0 +2.5**
SFK Sufi-Kurgan 151.77 71 PKIKP **PKPdf** **04 24 53.5 0.0**
SFK pmax pmax
comp=Z,165nm,1.0s
CHLP Challavanipeta 151.80 122 *e*PKPbc **PKPbc** **04 25 00.4 +0.2**
TYV Tymovskoe 151.82 312 *e*PKIKP **PKPdf** **04 24 49.1 -3.7**
TYV pmax pmax
comp=Z,700nm,6.4s
TYV pmax pmax
comp=Z,47nm,1.6s
AML Almayashu 151.96 67 P **PKPdf** **04 24 54.1 +0.2**
SNR=13
EKS2 Erkin-Say 152.01 65 P **PKPdf** **04 24 54.8 +1.2**
SNR=14
NKL Nikolayevsk 152.10 318 *e*PKIKP **PKPbc** **04 25 00.5 +0.7**
NKL pmax pmax
comp=Z,51nm,1.0s
NKL pmax pmax
comp=Z,500nm,10.0s
USP Ospenovka 152.52 64 P **PKPbc** **04 25 00.5 -0.6**
SNR=9.8
AAK Ala-Archa 152.54 65 PKP **PKPdf** **04 24 54.9 +0.5**
comp=Z,8.7nm,0.9s,baz=202,slow=2.2,SNR=15
AAK PKPbc **PKPbc** **04 25 01.5 +0.1**
comp=Z,126nm,1.0s,baz=200,slow=4.2,SNR=53
AAK Ala-Archa 152.54 65 P **PKPdf** **04 24 55.5 +1.0**
SNR=8.3
AAK Ala-Archa 152.54 65 *e*PKPdf **PKPdf** **04 24 54.9 +0.5**
AAK *e*PKPbc **PKPbc** **04 25 01.5 +0.1**
AAK LR LR
comp=Z,2μm,21.0s
AAK Ala-Archa 152.54 65 *e*PKIKP **PKPdf** **04 24 54.9 +0.5**
AAK *e* 04 25 01.5
AAK MLR MLR
comp=Z,2μm,21.0s
UCH Uchtor 152.57 66 P **PKPdf** **04 24 56.1 +1.2**
SNR=16
FRU Bishkek 152.62 65 *i* PKIKP **PKPdf** **04 24 53.0 -1.4**
FRU *e* 04 28 43.0
FRU pmax pmax
comp=Z,100nm,2.0s
DHRM DHARAMSHALA 152.63 88 *e*P **PKPdf** **04 24 55.2 +0.2**
DHRM IAMs_20 IAMs_20 04 54 31.7
comp=Z,318nm,6.1s
CHMS Chumysh 152.72 65 P **PKPbc** **04 25 00.7 -0.9**
SNR=12
YSS Yuzh-Sakhalins 152.77 304 *e*pPKPdf **PKPbc** **04 25 01.0 -0.5**
YSS LR LR
comp=Z,900nm,21.0s
YSS Yuzh-Sakhalins 152.77 304 *i* PKIKP **PKPdf** **04 24 54.0 -0.4**
YSS *e* 04 25 06.0
YSS *e* 04 32 17.0
YSS *e*SS SS 04 48 10.7 -7.2
YSS pmax pmax
comp=Z,10.0nm,1.2s
KBK Karagaybulak 152.88 65 P **PKPbc** **04 24 59.3 -2.8**
SNR=6.5
SMLA Simla 152.98 91 *e*P **PKPdf** **04 24 54.8 -0.4**
ERM Erimo 153.04 293 *e*PKPbc **PKPbc** **04 25 03.6 +1.3**
ERM Erimo 153.04 293 *e*PKIKP **PKPbc** **04 25 03.6 +1.3**
KZA Kyzart 153.12 67 P **PKPdf** **04 24 56.8 +1.1**
SNR=16
ASAJ Asahikawa 153.31 298 PKP **PKPdf** **04 24 54.6 -0.7**
comp=Z,4.1nm,0.4s,baz=272,slow=12,SNR=3.8
ASAJ Asahikawa 153.31 298 *e*PKPdf **PKPdf** **04 24 54.5 -0.8**
TKM2 Tokmak 2 153.34 65 P **PKPdf** **04 24 55.7 0.0**
SNR=21
TKM2 Tokmak 2 153.34 65 PKIKP **PKPdf** **04 24 55.3 -0.4**
TKM2 pmax pmax
comp=Z,99nm,1.4s
DDI Dehra Dun 153.43 93 *e*P **PKPdf** **04 24 56.4 +0.4**
DDI IAMs_20 IAMs_20 04 57 14.8
comp=Z,612nm,5.2s
KURBB Kurchatov Arra 153.63 47 PKP **PKPdf** **04 24 55.8 +0.3**
comp=Z,7.7nm,1.0s,baz=282,slow=2.0,SNR=33
KURBB PKPbc **PKPbc** **04 25 02.8 -0.5**
comp=Z,37nm,1.1s,baz=288,slow=2.4,SNR=32
KURBB PP **PP** **04 28 53.0 +2.7**
comp=Z,9.3nm,1.2s,baz=283,slow=6.0,SNR=6.5
KSH Kashi 153.64 72 PKPbc **PKPdf** **04 24 56.1 0.0**
KSH PKS **PKSdf** **04 28 32.7 +2.2**
KSH PP **PP** **04 28 51.4 +0.2**
KSH SKS **SKSdf** **04 31 59.5 -4.1**
KSH SKKS **SKKSac** **04 35 39.5 -2.1**
KSH SS **SS** **04 48 27.7 -0.7**
KSH LR LR
comp=Z,730nm,8.3s
KSH LR LR
comp=Z,1μm,13.0s
KSH LR LR
comp=Z,2μm,13.9s
KURK Kurchatov 153.64 47 *e*PKPdf **PKPdf** **04 24 55.8 +0.3**
KURK *e*PKPbc **PKPbc** **04 25 02.8 -0.5**
KURK *e*PP **PP** **04 28 53.0 +2.6**
KURK LR LR
comp=Z,3μm,20.0s
KURK Kurchatov 153.64 47 PKIKP **PKPdf** **04 24 55.0 -0.5**
KURK pmax pmax
comp=Z,57nm,1.0s
NRN Naryn 153.70 68 *e*PKPdf **PKPdf** **04 24 56.5 +0.2**
NRN LR LR
comp=Z,3μm,19.0s
NRN Naryn 153.70 68 *e*PKIKP **PKPdf** **04 24 56.6 +0.2**
NRN MLR MLR
comp=Z,3μm,19.0s
KUU Kurty 153.80 63 *i* PKP **PKPdf** **04 24 55.8 -0.3**
comp=Z,8.3nm,1.5s
KUU *e*PKPab **PKPab** **04 25 16.2 -0.8**
KUU *e*PP **PP** **04 28 50.3 -1.5**
KUU *i* LR LR 05 37 36.3
comp=Z,1μm,19.2s
ULHL Ulahol 153.85 66 P **PKPdf** **04 24 57.0 +0.6**
SNR=20
NVS Novosibirsk 154.10 35 *e*PKIKP **PKPdf** **04 24 56.2 +0.2**
NVS *e* 04 28 52.4
NVS pmax pmax
comp=Z,205nm,1.9s
NVS pmax pmax
comp=E,42nm,2.0s
BWNR Bhubaneshwar 154.22 121 *e*P **PKPdf** **04 24 56.4 -0.9**
BWNR IAMs_20 IAMs_20 05 23 02.2
comp=Z,1μm,14.3s
AAA Alma-Ata 154.28 64 *e*PKIKP **PKPdf** **04 24 59.9 +3.1**
AAA pmax pmax
comp=Z,300nm,2.1s
MDOK Medeo 154.38 64 *i* PKP **PKPdf** **04 24 57.3 +0.2**
comp=Z,250nm,1.6s
MDOK *e*PKPab **PKPab** **04 25 19.4 -0.3**
MDOK *i* LR LR 05 38 08.9
comp=Z,1μm,20.8s
KDJ Kajisay 154.55 66 *e*PKPdf **PKPdf** **04 24 57.5 +0.1**
KDJ LR LR
comp=Z,3μm,21.0s
TARG Taragay, Kyrgy 155.04 67 *e*PKPdf **PKPdf** **04 24 59.0 +0.6**
TARG LR LR
comp=Z,3μm,21.0s
ZAA1 Zalesovo Array 155.38 36 *e*PKPdf **PKPdf** **04 24 56.7 -1.1**
ZAA1 *e*PKPab **PKPab** **04 25 23.8 +0.6**
ZAA1 *e*PP **PP** **04 29 07.2 +7.3**
ZALV Zalesovo Beam 155.38 36 PKP **PKPdf** **04 24 56.7 -1.1**
comp=Z,14nm,1.0s,baz=298,slow=3.2,SNR=18
ZALV PKPab **PKPab** **04 25 23.8 +0.6**
comp=Z,29nm,1.1s,baz=303,slow=4.7,SNR=3.6
ZALV PP **PP** **04 29 07.2 +7.3**
comp=Z,0.9nm,0.5s,baz=257,slow=5.8,SNR=3.0
SATY Saty 155.38 64 *e*PKP **PKPdf** **04 24 58.8 +0.4**
comp=Z,17nm,1.5s
SATY *i* LR LR 05 39 33.7
comp=Z,694nm,17.5s
ZHN Zhinishke 155.39 64 *e*PKP **PKPdf** **04 24 58.2 -0.2**
comp=Z,4.5nm,1.5s
ZHN *i* LR LR 05 38 56.9
comp=Z,415nm,18.5s
PRZ Przheval'sk 155.43 65 PFAKE 04 25 10.0 +11
PRZ LR LR
comp=Z,3μm,20.0s
GRNR Gornyy 155.50 315 *e*PKIKP **PKPdf** **04 24 56.5 -1.6**
GRNR pmax pmax
comp=Z,140nm,1.6s
KPKS Kokpek 155.54 63 ‖ *i*PKP **PKPdf** **04 24 58.5 -0.1**
comp=Z,36nm,2.5s
KPKS *e*PKPab **PKPab** **04 25 24.1 -0.4**
KPKS *i* LR LR 05 37 46.6
comp=Z,810nm,18.2s
UZB Uzynbulak 155.82 64 *e*PKP **PKPdf** **04 24 59.1 +0.1**
comp=Z,10nm,1.7s
UZB *e*PKPab **PKPab** **04 25 25.4 -0.4**
UZB *i* LR LR 05 39 45.7
comp=Z,443nm,18.5s
PDGK Podgornoye 156.14 63 PKIKP **PKPdf** **04 24 56.6 -2.8**
PDGK pmax pmax
comp=Z,102nm,1.7s
SHLS Shalkode 156.14 64 *i* PKP **PKPdf** **04 25 00.2 +0.8**
comp=Z,20nm,2.0s
SHLS *e*PKPab **pPKPab** **04 25 28.6 -0.5**
SHLS *i* LR LR 05 39 56.9
comp=Z,415nm,17.0s
BOK Bokaro 156.50 115 *e*P **PKPdf** **04 24 60.0 -0.3**
BOK IAMs_20 IAMs_20 04 57 33.2
comp=Z,313nm,5.0s
PYUN Piuthan 156.51 102 *e*P **PKPdf** **04 24 59.8 -0.7**
MJAR Matsushiro Arr 156.60 280 PKP **PKPdf** **04 24 59.2 -0.9**
comp=Z,0.9nm,0.3s,baz=66,slow=3.7,SNR=2.8
MJAR PKPab **PKPab** **04 25 29.1 -0.1**
comp=Z,0.8nm,0.3s,baz=140,slow=1.8,SNR=5.7
MJAR PP **PP** **04 29 10.8 +3.0**
comp=Z,3.8nm,1.0s,baz=168,slow=4.2,SNR=3.5
MAJO Matsushiro 156.61 280 *e*PKPdf **PKPdf** **04 24 59.2 -0.9**
MAJO *e*PKPab **PKPab** **04 25 29.1 -0.1**
MAJO *e*PP **PP** **04 29 10.8 +3.0**
MAJO Matsushiro 156.61 280 *e*PKIKP **PKPdf** **04 24 59.2 -0.9**
MAJO *e* 04 29 10.8
KOLN Koldanda 156.84 104 *e*P **PKPdf** **04 25 00.3 -0.6**
MAKZ Makanchi 157.08 54 *e*PKPdf **PKPdf** **04 24 59.8 -0.6**
MAKZ LR LR
comp=Z,3μm,20.0s
MAKZ Makanchi 157.08 54 *e*PKIKP **PKPdf** **04 24 59.8 -0.6**
MAKZ MLR MLR
comp=Z,3μm,20.0s
DANN Dangsing 157.23 102 *e*P **PKPdf** **04 25 02.0 +0.5**
MK31 Makanchi Array 157.29 54 *i* PKIKP **PKPdf** **04 24 58.7 -1.9**
MK31 pmax pmax
comp=Z,26nm,1.1s
MK32 Makanchi Array 157.29 54 *e*PKPdf **PKPdf** **04 25 00.1 -0.5**
MK32 *e*PKPab **PKPab** **04 25 30.9 -0.9**
MK32 *e*PP **PP** **04 29 10.2 -0.8**
MKAR Makanchi Array 157.29 54 PKP **PKPdf** **04 25 00.1 -0.6**
comp=Z,7.7nm,0.9s,baz=325,slow=1.5,SNR=27
MKAR PKPab **PKPab** **04 25 30.9 -0.9**
comp=Z,11nm,0.7s,baz=287,slow=4.2,SNR=14
MKAR PP **PP** **04 29 10.2 -0.8**
comp=Z,14nm,1.2s,baz=256,slow=7.4,SNR=4.6
MKAR Makanchi Array 157.29 54 *e*PKPdf **PKPdf** **04 25 00.1 -0.6**
MKAR LR LR
comp=Z,500nm,20.0s
MKAR Makanchi Array 157.29 54 *e*PKIKP **PKPdf** **04 25 00.1 -0.6**
MKAR MLR MLR
comp=Z,500nm,20.0s
TEY Ternei 157.37 302 *e*PKIKP PKPpre 04 24 55.0
INU Inuyama 157.38 276 PFAKE 04 25 10.0 +8.9
INU LR LR
comp=Z,2μm,20.0s
GKN Gorkha 157.77 104 *e*P **PKPdf** **04 25 01.2 -0.8**
DMN Daman 157.95 106 *e*P **PKPdf** **04 25 01.7 -0.7**
BOD Bodaibo 157.98 353 *e*PKP2 **PKPab** **04 25 33.5 -0.8**
BOD pmax pmax
comp=Z,74nm,1.5s
KKN Kakani 158.17 105 *e*P **PKPdf** **04 25 01.9 -0.7**
ZEA Zeya 158.26 330 *i* PKIKP **PKPdf** **04 25 00.5 -1.1**
ZEA *e* 04 25 36.7
ZEA *e* 04 29 18.5
ZEA pmax pmax
comp=Z,120nm,2.5s
ZEA pmax pmax
comp=Z,500nm,8.0s

ZSN	**Zaisan**	**158.69**	**50**	*i* PKP	**PKPdf**	**04 25 03.1**	**+0.8**
	comp=Z,5.3nm,1.5s						
ZSN				*e*PKPab	**PKPab**	**04 25 38.2**	**+0.3**
ZSN				*i* PP	**PP**	**04 29 17.3**	**-1.3**
ZSN				*i* LR	LR	05 38 34.6	
	comp=Z,173nm,17.0s						
GUN	**Gumba**	**158.70**	**106**	*e*P	**PKPdf**	**04 25 02.7**	**-0.7**
RAMN	**Ramite**	**158.78**	**109**	*e*P	**PKPdf**	**04 25 03.2**	**-0.2**
JIRN	**Jiri**	**158.82**	**107**	*e*P	**PKPdf**	**04 25 02.9**	**-0.7**
UBPT	**Khong Chiam**	**159.05**	**170**	PKP	PKPdf	04 25 15.4	+12
PBKT	**Sadao Pong**	**159.28**	**157**	PKP	**PKPdf**	**04 25 03.5**	**-0.4**
PBKT	**Sadao Pong**	**159.28**	**157**	*e*PKPdf	**PKPdf**	**04 25 03.2**	**-0.7**
ODAN	**Odare**	**159.34**	**110**	*e*P	**PKPdf**	**04 25 03.5**	**-0.5**
CM31	**Chiang Mai Arr**	**160.29**	**150**	*e*PKPdf	**PKPdf**	**04 25 05.0**	**0.0**
CM31				*e*PKPab	**PKPab**	**04 25 43.8**	**-1.6**
CM31				*e*PP	**PP**	**04 29 25.9**	**-0.8**
CMAR	**Chiang Mai Arr**	**160.29**	**150**	PKP	**PKPdf**	**04 25 05.0**	**0.0**
	comp=Z,5.1nm,1.0s,baz=230,slow=2.9,SNR=11						
CMAR				PKPab	**PKPab**	**04 25 43.8**	**-1.6**
	comp=Z,12nm,1.2s,baz=220,slow=5.7,SNR=6.4						
CMAR				PP	**PP**	**04 29 25.9**	**-0.8**
	comp=Z,0.6nm,0.5s,baz=231,slow=4.2,SNR=3.3						
AGT	**Agartala**	**160.35**	**123**	*e*P	**PKPdf**	**04 25 04.3**	**-0.6**
SKNT	**Sakolnakorn**	**160.45**	**165**	PKP	**PKPdf**	**04 25 05.3**	**+0.1**
GTK	**Tadong**	**160.50**	**111**	*e*P	**PKPdf**	**04 25 04.3**	**-0.9**
CHTO	**Chiang Mai**	**160.61**	**150**	PKP	**PKPdf**	**04 25 06.4**	**+1.0**
CHTO	**Chiang Mai**	**160.61**	**150**	*e*PKPdf	**PKPdf**	**04 25 05.9**	**+0.5**
CHTO				*e*PKPab	**PKPab**	**04 25 45.7**	**-1.1**
CHTO	**Chiang Mai**	**160.61**	**150**	*e*PKIKP	**PKPdf**	**04 25 05.9**	**+0.5**
CHTO				*e*		04 25 45.7	
USRK	**Ussuriysk Ar.**	**160.77**	**302**	PKP	**PKPdf**	**04 25 04.2**	**-0.5**
	comp=Z,1.9nm,0.7s,baz=60,slow=8.5,SNR=3.7						
USRK				PKPab	**PKPab**	**04 25 45.5**	**-1.5**
	comp=Z,3.6nm,0.9s,baz=71,slow=6.2,SNR=4.0						
TURI	**Tura**	**160.78**	**118**	*e*P	**PKPdf**	**04 25 04.8**	**-0.6**
JOW	**Kunigami**	**161.29**	**246**	PKP	**PKPdf**	**04 25 04.6**	**-1.3**
	comp=Z,5.8nm,0.5s,baz=126,slow=8.7,SNR=3.5						
JOW				PKPab	**pPKPab**	**04 25 50.9**	**-0.8**
	comp=Z,19nm,1.1s,baz=230,slow=5.5,SNR=2.9						
WMQ	**Urumqi**	**161.84**	**58**	PKP	**PKPdf**	**04 25 06.5**	**+0.5**
WMQ				PKPab	**PKPab**	**04 25 52.0**	**+0.2**
WMQ				PP	**PP**	**04 29 39.5**	**+3.6**
WMQ				SKKS		04 36 25.1	
WMQ				SS	**SS**	**04 49 54.9**	**-0.4**
WMQ				AMB	AMB		
	comp=Z,710nm,8.3s						
WMQ				LR	LR		
	comp=Z,4μm,24.1s						
WMQ				LR	LR		
	comp=Z,4μm,22.5s						
WMQ				LR	LR		
	comp=Z,4μm,24.1s						
SHL	**Shillong**	**161.89**	**120**	*e*P	**PKPdf**	**04 25 05.4**	**-1.4**
SHL	**Shillong**	**161.89**	**120**	*e*PKPdf	**PKPdf**	**04 25 06.8**	**0.0**
SHL				*e*PKPab	**PKPab**	**04 25 52.8**	**+0.2**
SHL	**Shillong**	**161.89**	**120**	*e*PKIKP	**PKPdf**	**04 25 06.8**	**0.0**
SHL				*e*		04 25 52.8	
GUWA	**GUWAHATI**	**162.14**	**119**	*e*P	**PKPdf**	**04 25 06.2**	**-0.6**
MDJ	**Mudanjiang**	**162.25**	**305**	PKP	**PKPdf**	**04 25 01.8**	**-4.5**
MDJ				AMB	AMB		
	comp=Z,300nm,3.8s						
IMP	**Imphal**	**162.80**	**126**	*e*P	**PKPdf**	**04 25 06.2**	**-1.3**
QIZ	**Qiongzhong**	**163.03**	**182**	PKP	**PKPdf**	**04 25 08.7**	**+0.9**
QIZ				SS	SS	04 50 05.8	+0.6
QIZ				AMB	AMB		
	comp=Z,390nm,6.1s						
QIZ				LR	LR		
	comp=Z,1μm,21.1s						
QIZ				LR	LR		
	comp=Z,1μm,19.1s						
QIZ				LR	LR		
	comp=Z,2μm,21.6s						
TEZP	**TEZPUR**	**163.18**	**119**	*e*P	**PKPdf**	**04 25 06.5**	**-1.3**
MOY	**Mondy**	**163.34**	**18**	*e*PKIKP	**PKPdf**	**04 25 07.7**	**+0.4**
MOY				pmax	pmax		
	comp=Z,95nm,2.6s						
LSA	**Lhasa**	**163.62**	**108**	*e*PKPdf	**PKPdf**	**04 25 09.5**	**+0.8**
LSA	**Lhasa**	**163.62**	**108**	P	**PKPdf**	**04 25 08.2**	**-0.5**
LSA	**Lhasa**	**163.62**	**108**	*e*PKIKP	**PKPdf**	**04 25 09.5**	**+0.8**
TLY	**Talaya**	**163.89**	**12**	PKP	**PKPdf**	**04 25 08.5**	**+0.8**
	comp=Z,2.8nm,0.3s,baz=250,slow=16,SNR=2.6						
TLY				PKPab	**PKPab**	**04 26 01.3**	**+1.0**
	comp=Z,6.0nm,0.6s,baz=92,slow=1.1,SNR=3.2						
TLY	**Talaya**	**163.89**	**12**	PKPdf	**PKPdf**	**04 25 12.3**	**+4.6**
	SNR=6.7						
TLY	**Talaya**	**163.89**	**12**	P	**PKPdf**	**04 25 12.3**	**+4.6**
	SNR=6.7						
TLY	**Talaya**	**163.89**	**12**	*i* PKIKP	**PKPdf**	**04 25 09.7**	**+2.0**
TLY				pmax	pmax		
	comp=Z,28nm,1.9s						
ITAN	**ITANAGAR**	**164.16**	**120**	*e*P	**PKPdf**	**04 25 05.9**	**-2.7**
ITAN				IAmb	IAmb	04 25 12.8	
	comp=Z,47nm,1.0s						
MOKO	**MOKOCHONG**	**164.18**	**124**	*e*P	**PKPdf**	**04 25 08.7**	**-0.2**
MOKO				IAmb	IAmb	04 25 16.3	
	comp=Z,224nm,1.8s						
JORH	**JORHAT**	**164.27**	**122**	*e*P	**PKPdf**	**04 25 08.4**	**-0.4**
KSRS	**Korea Array**	**164.88**	**281**	PKP	**PKPdf**	**04 25 08.1**	**-0.8**
	comp=Z,6.9nm,1.2s,baz=102,slow=0.5,SNR=10						
KSRS				PKPab	**pPKPab**	**04 26 06.5**	**-0.7**
	comp=Z,7.5nm,1.0s,baz=104,slow=4.5,SNR=9.3						
KSRS				PP	**PP**	**04 29 53.9**	**+1.7**
	comp=Z,0.4nm,0.3s,baz=110,slow=3.2,SNR=3.0						
KS15	**Wonju Array Si**	**164.91**	**281**	*e*PKPdf	**PKPdf**	**04 25 08.1**	**-0.9**
KS15				*e*PKPab	**PKPab**	**04 26 06.5**	**+1.1**
KS15				*e*PP	**PP**	**04 29 53.9**	**+1.5**
KSAR	**Wonju Array Be**	**164.91**	**281**	PKP	**PKPdf**	**04 25 08.1**	**-0.9**
KSAR	**Wonju Array Be**	**164.91**	**281**	*e*PKIKP	**PKPdf**	**04 25 08.1**	**-0.9**
ZAK	**Zakamensk**	**165.06**	**15**	*e*PKIKP	**PKPdf**	**04 25 06.4**	**-2.5**
ZAK				pmax	pmax		
	comp=Z,11nm,1.6s						
CN2	**Changchun**	**165.31**	**307**	*e*PKP	**PKPdf**	**04 25 06.7**	**-2.4**
CN2				*e*PP	**PP**	**04 29 54.5**	**+0.6**
CN2				SS	SS	04 50 28.1	-2.5
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=Z,770nm,21.0s						
CN2				LR	LR		
	comp=Z,1μm,21.0s						
CN2				LR	LR		
	comp=Z,2μm,21.0s						
QZH	**Quanzhou**	**166.27**	**219**	PKP	**PKPdf**	**04 25 09.8**	**-0.7**
QZH				PKPab	**PKPab**	**04 26 12.3**	**+0.8**
QZH				PP	**PP**	**04 29 56.7**	**-1.7**
QZH				SS	SS	04 50 42.6	+3.0
QZH				AMB	AMB		
	comp=Z,660nm,8.1s						
QZH				LR	LR		
	comp=Z,1μm,19.7s						
QZH				LR	LR		
	comp=Z,1μm,18.7s						
QZH				LR	LR		
	comp=Z,1μm,19.4s						
GZH	**Guangzhou**	**166.58**	**197**	PKP	**PKPdf**	**04 25 10.8**	**0.0**
GZH				PKPab	**pPKPab**	**04 26 14.6**	**-0.1**
GZH				PP	**PP**	**04 30 00.5**	**+1.0**
GZH				SS	SS	04 50 46.9	+5.2
GZH				LR	LR		
	comp=Z,1μm,19.0s						
GZH				LR	LR		
	comp=Z,1μm,19.2s						
SNY	**Shenyang**	**167.38**	**302**	⇑PKP	**PKPdf**	**04 25 11.7**	**+0.9**
SNY				PP	**PP**	**04 30 03.1**	**-1.6**
SNY				SKKS		04 36 47.0	
SNY				SS	**SS**	**04 50 46.9**	**-5.0**
SNY				AMB	AMB		
	comp=Z,680nm,9.7s						
SNY				LR	LR		
	comp=Z,1μm,21.4s						
SNY				LR	LR		
	comp=Z,2μm,18.5s						
SNY				LR	LR		
	comp=Z,4μm,20.6s						
KMI	**Kunming**	**167.79**	**151**	PKP	**PKPdf**	**04 25 11.5**	**-0.4**
SONA0	**Songino Array**	**168.05**	**9**	*e*PKPdf	**PKPdf**	**04 25 09.6**	**-1.7**
SONA0				*e*PKPab	**PKPab**	**04 26 18.8**	**-0.1**
SONA0				*e*PP	**PP**	**04 30 08.6**	**+1.4**
SONM	**Songino Array**	**168.05**	**9**	PKP	**PKPdf**	**04 25 09.6**	**-1.7**
	comp=Z,1.7nm,0.9s,baz=335,slow=1.3,SNR=11						
SONM				PKPab	**PKPab**	**04 26 18.8**	**-0.1**
	comp=Z,7.5nm,1.0s,baz=322,slow=3.0,SNR=8.5						
SONM				PP	**PP**	**04 30 08.6**	**+1.4**
	comp=Z,1.8nm,0.9s,baz=343,slow=4.6,SNR=4.0						
ULN	**Ulaanbaatar**	**168.09**	**7**	*e*PKPdf	**PKPdf**	**04 25 10.6**	**-0.7**
ULN				*e*PKPab	**PKPab**	**04 26 19.9**	**+0.8**
ULN	**Ulaanbaatar**	**168.09**	**7**	PKPdf	**PKPdf**	**04 25 11.0**	**-0.4**
	SNR=12						
ULN	**Ulaanbaatar**	**168.09**	**7**	*e*PKIKP	**PKPdf**	**04 25 10.6**	**-0.7**
SSE	**Sheshan**	**168.81**	**247**	PKP	**PKPdf**	**04 25 09.2**	**-2.9**
SSE				PP	**PP**	**04 30 10.7**	**-1.6**
SSE				SS	SS	04 51 09.6	+3.0
SSE				AMB	AMB		
	comp=Z,350nm,5.9s						
SSE				LR	LR		
	comp=Z,610nm,21.0s						
SSE				LR	LR		
	comp=Z,880nm,20.2s						
DL2	**Dalian**	**169.68**	**290**	PKPbc	PKPbc	04 25 03.2	
DL2				PKPab	**PKPab**	**04 26 24.5**	**-1.9**
DL2				PP	**PP**	**04 30 19.0**	**+2.3**
GYA	**Guiyang**	**170.21**	**167**	*i* PKP	**PKPdf**	**04 25 12.9**	**-0.4**
GYA				PKPab	**pPKPab**	**04 26 31.4**	**+0.6**
GYA				PKS	**PKSdf**	**04 28 45.2**	**-0.7**
GYA				PP	**PP**	**04 30 21.8**	**+3.7**
GYA				SKKS		04 37 07.4	
GYA				SS	**SS**	**04 51 19.0**	**+0.7**
GYA				AMB	AMB		
	comp=Z,160nm,8.5s						
GYA				LR	LR		
	comp=Z,210nm,21.6s						
GYA				LR	LR		
	comp=Z,180nm,22.0s						
NJ2	**Nanjing**	**171.01**	**246**	*e*PKP	**PKPdf**	**04 25 15.2**	**+1.8**
NJ2				PKPab	**PKPab**	**04 26 32.1**	**-0.4**
NJ2				PP	**PP**	**04 30 20.9**	**-2.4**
NJ2				SS	SS	04 51 27.4	-1.1
NJ2				AMB	AMB		
	comp=Z,790nm,5.4s						
NJ2				LR	LR		
	comp=Z,430nm,18.4s						
NJ2				LR	LR		
	comp=Z,1μm,21.1s						
NJ2				LR	LR		
	comp=Z,1μm,24.9s						
GTA	**Gaotai**	**171.88**	**63**	⇓PKP	**PKPdf**	**04 25 13.5**	**-0.3**
GTA				PKPab	**pPKPab**	**04 26 38.9**	**+0.6**
GTA				PP	**PP**	**04 30 30.0**	**+2.2**
GTA				SKS	**SKSdf**	**04 32 14.7**	**-3.0**
GTA				SKKS	**SKKSac**	**04 37 14.5**	**-0.4**
GTA				SS	**SS**	**04 51 35.4**	**-1.9**
GTA				AMB	AMB		
	comp=Z,550nm,7.0s						
GTA				LR	LR		
	comp=Z,3μm,22.8s						
GTA				LR	LR		
	comp=Z,1μm,20.0s						
GTA				LR	LR		
	comp=Z,5μm,23.5s						
WHN	**Wuhan**	**172.99**	**220**	*i* PKP	**PKPdf**	**04 25 14.6**	**+0.3**
WHN				PKPab	**PKPab**	**04 26 41.3**	**+0.2**
WHN				SKKS		04 37 21.7	
WHN				LR	LR		
	comp=Z,2μm,14.7s						
WHN				LR	LR		
	comp=Z,2μm,16.2s						
WHN				LR	LR		
	comp=Z,5μm,19.6s						
BJI	**Beijing**	**173.17**	**308**	PKP	**PKPdf**	**04 25 14.1**	**0.0**
BJI				PP	**PP**	**04 30 30.9**	**-2.7**
BJI				SS	SS	04 51 52.4	+3.5
BJI				LR	LR		
	comp=Z,3μm,26.0s						
BJI				LR	LR		
	comp=Z,2μm,18.6s						
BJI				LR	LR		
	comp=Z,5μm,20.8s						
CD2	**Chengdu**	**173.18**	**137**	PKP	**PKPdf**	**04 25 14.5**	**0.0**
CD2				sPKP		04 25 18.7	
CD2				PP	**PP**	**04 30 34.1**	**+0.6**
CD2				SKS	**SKSdf**	**04 32 18.2**	**-0.1**
CD2				SKKS	**SKKSac**	**04 37 20.8**	**-0.2**
CD2				SS	**SS**	**04 51 50.1**	**+1.5**
CD2				AMB	AMB		
	comp=Z,610nm,11.0s						
CD2				LR	LR		
	comp=Z,3μm,20.6s						
CD2				LR	LR		
	comp=Z,3μm,24.5s						
TIA	**Tai'an**	**173.54**	**274**	P	**PKPdf**	**04 25 07.6**	**-6.8**
TIA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ENH	**Enshi**	**174.23**	**183**	*e*PKPdf	**PKPdf**	**04 25 14.6**	**-0.3**
ENH				*e*PKPab	**PKPab**	**04 26 45.8**	**-0.7**
HHC	**Hu-ho-hao-te**	**174.85**	**339**	*e*PKP	**PKPdf**	**04 25 14.2**	**-0.6**
HHC				PP	**PP**	**04 30 41.4**	**+0.3**
HHC				SKKS		04 37 22.1	
HHC				SS	**SS**	**04 52 07.3**	**+3.5**
HHC				AMB	AMB		
	comp=Z,250nm,9.6s						
HHC				LR	LR		
	comp=Z,1μm,20.8s						
HHC				LR	LR		
	comp=Z,670nm,19.4s						
HHC				LR	LR		
	comp=Z,2μm,22.2s						
BTO	**Baotou**	**175.40**	**352**	*e*PKP	**PKPdf**	**04 25 12.1**	**-2.9**
LZH	**Lanzhou**	**175.71**	**88**	*e*PKP	**PKPdf**	**04 25 16.3**	**+1.0**
LZH				pPKP	sPKPdf	04 25 22.8	+4.8
LZH				PKPab	**PKPab**	**04 26 54.4**	**+0.9**
LZH				PKS	**PKSdf**	**04 28 49.7**	**+2.1**
LZH				PP	**PP**	**04 30 46.3**	**-0.5**
LZH				SKKS		04 37 31.8	
LZH				SS	**SS**	**04 52 09.9**	**-5.1**
LZH				AMB	AMB		
	comp=Z,1μm,6.5s						
LZH				LR	LR		
	comp=Z,4μm,19.5s						
LZH				LR	LR		
	comp=Z,1μm,17.3s						
LZH				LR	LR		
	comp=Z,6μm,20.1s						
TIY	**Taiyuan**	**176.88**	**303**	*e*PKP	**PKPdf**	**04 25 15.8**	**+0.4**
TIY				PKPab	**sPKPab**	**04 27 03.0**	**+1.9**
TIY				SKKS		04 37 39.4	
TIY				AMB	AMB		
	comp=Z,430nm,7.2s						
TIY				LR	LR		
	comp=Z,1μm,16.3s						
TIY				LR	LR		
	comp=Z,970nm,15.8s						
TIY				LR	LR		
	comp=Z,2μm,17.4s						
XAN	**Xi'an**	**177.98**	**175**	PKP	**PKPdf**	**04 25 15.4**	**-0.2**
XAN				sPKP		04 25 21.2	
XAN				SKS	**SKSdf**	**04 32 17.2**	**-2.0**
XAN				AMB	AMB		
	comp=Z,640nm,7.4s						
XAN				LR	LR		
	comp=Z,2μm,22.6s						
XAN				LR	LR		
	comp=Z,1μm,22.4s						
XAN				LR	LR		
	comp=Z,3μm,20.6s						

GUC 07 04:13:03.7±0.5, 36°.12S×70°.83W, h8km±9km, ML4.0, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCHI	**Chillan**	**1.11**	**244**	*e*P	Pg	04 13 23.3	-1.8
CCHI				*e*S	Sg	04 13 37.7	-1.9
CCHI				IAML		04 13 40.1	
	comp=N,4μm,0.5s						
NICH	**Los Niches**	**1.16**	**344**	*e*P	Pg	04 13 24.0	-1.9
NICH				*e*S	Sg	04 13 39.2	-1.8
GO05	**HualaæØ**	**1.42**	**321**	*e*P	Pn	04 13 28.1	-1.8
GO05				*e*S	Sb	04 13 46.5	-2.3
GO05				IAML		04 13 47.7	
	comp=N,12μm,0.3s						
COCH	**Cobquecura**	**1.58**	**269**	*e*P	Pn	04 13 30.5	-1.6
COCH				*e*S	Sn	04 13 51.1	-1.6
COCH				IAML		04 13 53.1	
	comp=N,2μm,0.3s						
CCSP	**San Pedro de C**	**1.97**	**248**	*e*P	Pn	04 13 36.5	-0.9
CCSP				*e*S	Sn	04 14 01.8	-0.5
CCSP				IAML		04 14 05.8	
	comp=N,2μm,0.6s						
CHPI	**Pichilemu**	**1.97**	**331**	*e*P	Pn	04 13 36.4	-1.0
CHPI				*e*S	Sn	04 14 01.7	-0.6
ROCH	**El Roble**	**3.14**	**357**	*e*P	Pn	04 13 55.5	+1.7
ROCH				*e*S	Sb	04 14 36.8	-1.7

MEX 07 04:13:57.0±0.4, 15°.24N×93°.59W, h66km±9km, MD3.6, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.58**	**38**	*e*P	Pn	04 14 08.8	-1.5
PCIG				*e*S	Sn	04 14 18.5	-1.6
TGIG		**1.59**	**16**	*e*P	Pn	04 14 23.9	+0.8
TGIG				*e*S	Sn	04 14 41.4	-1.5
CCIG	**Comitan**	**1.74**	**53**	*e*P	Pn	04 14 26.3	+1.1
CCIG				*e*S	Sn	04 14 44.5	-2.1

*ISK **07** 04:36:10.7, 35°.15N×34°.11E, h5km, ML2.3/6*
*CSEM **07** 04:36:13.1±0.5, 35°.17N×33°.94E, h20km, ML2.5, Error ellipse: s-maj=15.1km s-min=8.8km az=146.0*
*NIC **07** 04:36:13.8±0.3, 35°.19N×33°.81E, h40km, ML2.5*
ISC 07 04:36:13.7±1.0, 35°.24N±0°.03×33°.85E±0°.03, h13km±9km, n25, σ1§92/38, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHNC	**Paralimni**	**0.28**	**148**	P	**Pb**	**04 36 21.8**	**+1.3**
	baz=315						
PHNC				S	**Sb**	**04 36 27.8**	**+2.7**
PHNC	**Paralimni**	**0.28**	**148**	P	**Pb**	**04 36 21.8**	**+1.3**
PHNC				S	**Sb**	**04 36 27.8**	**+2.7**
EREN	**Erenkoy**	**0.39**	**42**	PG	**Pg**	**04 36 18.2**	**-3.3**
AKIN	**Ak¨–nc¨–lar- K**	**0.39**	**235**	PG	**Pg**	**04 36 21.8**	**+0.3**
AKIN				SG	**Sb**	**04 36 30.1**	**+1.8**
AKIN	**Ak¨–nc¨–lar- K**	**0.39**	**235**	*e*Pg	**Pg**	**04 36 21.8**	**+0.3**
AKIN				*e*Sg	**Sb**	**04 36 30.1**	**+1.8**
CSS	**Mathiatis**	**0.51**	**237**	PG	**Pg**	**04 36 23.9**	**+0.1**
CSS				SG	**Sb**	**04 36 33.4**	**+1.6**
CSS	**Mathiatis**	**0.51**	**237**	P	**Pg**	**04 36 24.1**	**+0.3**
	baz=59						
CSS				S	**Sg**	**04 36 31.3**	**+0.7**
CSS	**Mathiatis**	**0.51**	**237**	*e*Pg	**Pg**	**04 36 23.9**	**+0.1**
CSS	**Mathiatis**	**0.51**	**237**	P	**Pg**	**04 36 24.1**	**+0.3**
CSS				S	**Sg**	**04 36 31.3**	**+0.7**
AKDN	**Akdeniz- K¨–br**	**0.73**	**275**	PG	**Pb**	**04 36 29.1**	**+0.9**
AKDN	**Akdeniz- K¨–br**	**0.73**	**275**	*e*Pg	**Pb**	**04 36 29.1**	**+0.9**
SZAC	**Souni**	**0.93**	**239**	P	**Pb**	**04 36 29.5**	**-2.2**
	baz=60						
SZAC	**Souni**	**0.93**	**239**	P	**Pb**	**04 36 29.5**	**-2.2**
AKKU	**Akkuyu-Mersin**	**0.95**	**345**	PN	**Pb**	**04 36 32.7**	**+0.8**
AKKU				SN	**Sn**	**04 36 47.9**	**+1.9**
AKKU	**Akkuyu-Mersin**	**0.95**	**345**	*e*Pn	**Pb**	**04 36 32.7**	**+0.8**
AKKU				*e*Sn	**Sn**	**04 36 47.9**	**+1.9**
IKL	**Isikli**	**1.00**	**352**	PN	**Pb**	**04 36 33.2**	**+0.3**
IKL				SN	**Sg**	**04 36 48.7**	**+2.5**
IKL	**Isikli**	**1.00**	**352**	*e*Pn	**Pb**	**04 36 33.2**	**+0.3**
IKL				*e*Sn	**Sg**	**04 36 48.7**	**+2.5**
ALFC	**Alefka**	**1.03**	**266**	P	**Pb**	**04 36 31.7**	**-1.7**
	baz=87						
ALFC				S	**Sb**	**04 36 44.9**	**-1.9**
ALFC	**Alefka**	**1.03**	**266**	P	**Pb**	**04 36 31.7**	**-1.7**
ALFC				S	**Sb**	**04 36 44.9**	**-1.9**
BOZY	**Bozyazi-Mersin**	**1.12**	**321**	PN	**Pg**	**04 36 36.7**	**+1.4**
BOZY	**Bozyazi-Mersin**	**1.12**	**321**	*e*Pn	**Pg**	**04 36 36.7**	**+1.4**
YAYL	**Yayladag**	**2.00**	**66**	PN	**Pn**	**04 36 43.8**	**-3.4**
YAYL	**Yayladag**	**2.00**	**66**	*e*Pn	**Pn**	**04 36 43.8**	**-3.4**
TAHT	**Tahtakopru-Hat**	**2.21**	**58**	PN	**Pn**	**04 36 47.4**	**-2.6**
TAHT	**Tahtakopru-Hat**	**2.21**	**58**	*e*Pn	**Pn**	**04 36 47.4**	**-2.6**

MEX 07 05:09:24.0±0.3, 17°.14N×100°.80W, h10km±5km, MD3.8, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.51**	**100**	*e*P	Pg	05 09 33.0	-1.0
CAIG				*e*S	Sg	05 09 40.3	-0.5
ZIIG	**Zihuatanejo**	**0.79**	**306**	*e*P	Pg	05 09 37.4	-1.9
ZIIG				*e*S	Sg	05 09 47.3	-2.3
ARIG	**Puente Sto Nin**	**1.21**	**21**	*e*P	Pn	05 09 43.5	-3.6
ARIG				*e*S	Sb	05 09 58.1	-4.7
MEIG	**Mezcala**	**1.37**	**55**	*e*P	Pn	05 09 45.6	-3.6
MEIG				*e*S	Sb	05 10 02.5	-4.9
PLIG	**Platanillo**	**1.75**	**44**	*e*P	Pn	05 09 50.9	-3.6
PLIG				*e*S	Sn	05 10 12.1	-4.9

*BJI **07** 05:17:03.2, 1°.45S×134°.05E, h45km, mb4.7/21, mB5.2/10, Ms5.3/6, Ms7 5.2/6*
*IDC **07** 05:17:04.9±0.5, 0°.74S×133°.55E, h0km, mb4.4/18, mb1 4.5/23, mb1mx4.4/53, mbtmp4.5/23, ML4.7/2, MS4.5/5, Ms1 4.5/5, ms1mx3.7/58, Error ellipse: s-maj=21.3km s-min=11.2km az=83.0*
*ISCJB **07** 05:17:08.2±0.2, 0°.80S±0°.03×133°.33E±0°.03, h28km, mb4.6/45, MS4.8/8, Error ellipse: s-maj=4.5km s-min=4.2km az=11.4*
*DJA **07** 05:17:09.9±1.1, 1°.5S±6°.×13°.3E±°, h16km±11km, M5.3/10, mb5.3/8, mB5.6/6, MLv5.3/10, Mw(mB)5.1/6*
*NEIC **07** 05:17:11.2±0.7, 0°.86S×133°.33E, h42km±7km, mb4.7/25, Error ellipse: s-maj=7.0km s-min=4.7km az=61.0*
NEIC Felt [III] at Manokwari.
ISC 07 05:17:09.3±0.3, 0°.77S±0°.04×133°.41E±0°.05, h28km, n105, σ1§59/110, mb4.7/45, MS4.7/8, 1C, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**1.06**	**134**	P	**Pb**	**05 17 31.8**	**+2.7**
RKPI				S	**Sb**	**05 17 48.5**	**+5.9**
SIJI	**Sorong**	**2.15**	**267**	Pn	**Pn**	**05 17 43.5**	**+0.2**
	baz=76,slow=14						
SIJI				Sn	**Sn**	**05 18 09.2**	**+0.2**
	baz=270,slow=20						
FAKI	**Fak Fak**	**2.43**	**209**	P	**Pn**	**05 17 48.3**	**+1.1**
FAKI	**Fak Fak**	**2.43**	**209**	*e*Pn	**Pn**	**05 17 48.2**	**+1.0**
BAKI	**Biak**	**2.73**	**99**	P	**Pb**	**05 17 54.4**	**-3.0**
KMPI	**Kaimana, Papua**	**2.89**	**174**	P	**Pb**	**05 17 56.7**	**-3.5**
SRPI	**Serui, Papua**	**3.03**	**111**	P	**Pb**	**05 18 00.9**	**-1.7**
BNDI	**Bandanaira**	**5.12**	**223**	P	**Pn**	**05 18 24.6**	**+0.5**
MSAI	**Masohi**	**5.16**	**240**	P	**Pn**	**05 18 27.2**	**+2.4**
LBMI	**Labuha**	**5.91**	**271**	P	**Pn**	**05 18 33.4**	**-1.7**
AAI	**Ambon**	**5.96**	**241**	P	**Pn**	**05 18 36.6**	**+0.8**
TNTI	**Ternate**	**6.24**	**284**	*e*Pn	**Pn**	**05 18 40.9**	**+1.3**

72nm,1.3s
WRA Warramunga Arr 19.08 177 P P 05 21 29.3 -0.5
1.5nm,0.3s,baz=356,slow=12,SNR=53
WRA S Sn 05 24 52.0 -12
1.4nm,0.3s,baz=360,slow=23,SNR=6.2
WC3 Warramunga Arr 19.09 177 *eP* **P 05 21 29.3 -0.7**
88nm,1.3s
JAGI Jajag, Banyuwa 20.65 248 *eP* **P 05 21 43.3 -3.8**
113nm,1.3s
SBUM Sibu 21.43 279 *eP* **P 05 21 56.5 +1.1**
57nm,1.6s
AS31 Alice Springs 22.76 179 *eP* **P 05 22 09.7 0.0**
13nm,0.9s
AS31 *e*Sn **S 05 26 21.4 +4.4**
AS01 Alice Springs 22.77 179 *eP* **P 05 22 09.5 -0.1**
AS01 *e*Sn **S 05 26 21.8 +4.8**
ASAR Alice Springs 22.77 179 P **P 05 22 10.1 +0.4**
20nm,0.8s,baz=7.4,slow=12,SNR=60
ASAR S **S 05 26 13.8 -3.2**
3.3nm,1.0s,baz=356,slow=24,SNR=4.5
CTA Charters Tower 22.95 148 P **P 05 22 13.2 +1.6**
8.2nm,0.9s,baz=318,slow=15,SNR=5.5
CTAO Charters Tower 22.95 148 *eP* **P 05 22 11.7 +0.1**
22nm,1.1s
KSM Kuching 23.21 276 *eP* **P 05 22 13.9 -0.4**
20nm,1.1s
SMRI Semarang 23.74 254 *eP* **P 05 22 21.1 +1.6**
84nm,1.0s
MBWA Marble Bar 24.27 212 *eP* **P 05 22 23.5 -0.8**
42nm,1.0s
STKA Stephens Creek 31.89 167 P **P 05 23 33.0 +0.6**
5.7nm,0.7s,baz=336,slow=6.7,SNR=13
STKA LR LR 05 36 34.4
comp=Z,694nm,18.3s,baz=334,slow=37
STKA Stephens Creek 31.89 167 *eP* **P 05 23 32.9 +0.6**
1.6nm,0.8s
BBOO Buckleboo 31.97 176 *eP* **P 05 23 30.9 -2.1**
22nm,1.2s
NWAO Narrogin (SRO) 35.43 204 P **P 05 24 03.1 0.0**
9.6nm,0.7s,baz=27,slow=9.5,SNR=4.5
NWAO LR LR 05 40 17.5
comp=Z,648nm,18.1s,baz=157,slow=39
NWAO Narrogin (SRO) 35.43 204 *eP* **P 05 24 01.9 -1.2**
175nm,1.8s
NJ2 Nanjing 35.44 338 *eP* **P 05 24 03.5 +0.3**
NJ2 S **S 05 29 37.5 +1.0**
NJ2 pmax pmax
comp=Z,8.0nm,0.8s
NJ2 LR LR
comp=N,2μm,20.1s
NJ2 LR LR
comp=E,2μm,17.9s
NJ2 LR LR
comp=Z,3μm,19.0s
MJAR Matsushiro Arr 37.39 6 P **P 05 24 18.9 -0.9**
1.3nm,0.5s,baz=184,slow=9.1,SNR=3.5
KSAR Wonju Array Be 38.36 353 P **P 05 24 26.7 -1.3**
KSRS Korea Array 38.37 353 P **P 05 24 26.7 -1.3**
0.3nm,0.3s,baz=165,slow=10,SNR=4.7
CMAR Chiang Mai Arr 38.90 301 P **P 05 24 34.9 +2.0**
0.8nm,0.3s,baz=117,slow=11,SNR=3.4
CD2 Chengdu 42.27 321 P **P 05 25 01.5 +0.9**
CD2 pmax pmax
comp=Z,10.0nm,0.6s
BJT Baijiatuau 43.55 341 *eP* **P 05 25 12.0 +1.3**
27nm,1.0s
LZH Lanzhou 45.84 326 *eP* **P 05 25 30.4 +1.1**
LZH pP sP 05 25 43.4 +2.2
LZH sP pP 05 25 47.5 +10
LZH pmax pmax
comp=Z,14nm,1.0s
KLR Kul'dur 49.83 359 P **P 05 25 59.4 -0.3**
0.1nm,0.5s,baz=160,slow=4.1,SNR=4.7
KLR LR LR 05 45 00.6
comp=Z,271nm,21.5s,baz=12,slow=34
GTA Gaotai 50.45 326 ⇑P **P 05 26 06.3 +1.5**
GTA pP sP 05 26 16.3 -0.4
GTA sP pP 05 26 20.5 +7.1
GTA S **S 05 33 16.7 -0.2**
GTA pmax pmax
comp=Z,6.0nm,0.9s
GTA pmax pmax
comp=Z,140nm,5.4s
GTA LR LR
comp=N,3μm,22.5s
GTA LR LR
comp=E,1μm,19.7s
GTA LR LR
comp=Z,5μm,22.9s
ULN Ulaanbaatar 53.60 338 *eP* **P 05 26 27.9 -0.2**
4.5nm,1.0s
SONM Songino Array 53.82 338 P **P 05 26 30.9 +1.2**
0.7nm,0.6s,baz=128,slow=4.9,SNR=8.7
SONA1 Songino Array 53.83 338 *eP* **P 05 26 30.9 +1.1**
PETK Petropavlovsk- 57.40 17 P **P 05 26 54.2 -1.0**
4.3nm,0.9s,baz=185,slow=4.5,SNR=6.6
PETK Petropavlovsk- 57.40 17 *eP* **P 05 26 56.7 +1.5**
WMQ Urumqi 60.26 323 P **P 05 27 17.0 +1.7**
WMQ pP sP 05 27 29.4 +2.0
WMQ pmax pmax
comp=Z,32nm,1.3s
WMQ pmax pmax
comp=Z,610nm,11.9s
WMQ LR LR
comp=N,2μm,18.1s
WMQ LR LR
comp=E,3μm,19.5s
WMQ LR LR
comp=Z,2μm,21.1s
MK01 Makanchi Array 65.05 324 *eP* **P 05 27 47.9 +0.6**
MK31 Makanchi Array 65.07 324 *eP* **P 05 27 48.4 +1.1**
MKAR Makanchi Array 65.07 324 P **P 05 27 48.2 +0.9**
4.9nm,0.6s,baz=113,slow=8.2,SNR=43
MKAR Makanchi Array 65.07 324 *eP* **P 05 27 48.6 +1.2**
32nm,0.8s
KSH Kashi 65.93 314 P **P 05 27 52.9 -0.3**
KSH pP sP 05 28 10.8 +5.5
KSH PP PP 05 30 24.5 +5.9
KSH pmax pmax
comp=Z,450nm,5.8s
ZAA0 Zalesovo Array 67.66 331 *eP* **P 05 28 03.8 +0.1**
97nm,1.9s
ZALV Zalesovo Beam 67.66 331 P **P 05 28 03.9 +0.2**
4.6nm,1.1s,baz=97,slow=6.1,SNR=7.7
ZALV Zalesovo Beam 67.66 331 *eP* **P 05 28 03.7 0.0**
KURK Kurchatov 69.13 326 *eP* **P 05 28 14.0 +1.0**
10nm,0.9s
KURBB Kurchatov Arra 69.14 326 P **P 05 28 13.0 0.0**
6.7nm,0.8s,baz=121,slow=5.7,SNR=24
KKAR Karatay Array 71.06 316 *eP* **P 05 28 25.9 +0.8**
TIXI Tiksi 72.36 358 *eP* **P 05 28 32.0 -0.2**
3.7nm,0.9s
BVAR Borovoye Array 74.73 326 P **P 05 28 47.3 +0.7**
2.4nm,0.7s,baz=116,slow=6.8,SNR=13
NRIK Noril'sk 76.43 345 P **P 05 28 56.1 +0.2**
4.3nm,0.5s,baz=130,slow=4.7,SNR=7.0
VNDA Vanda 78.21 174 P **P 05 29 06.6 +0.7**
1.2nm,0.7s,baz=302,slow=6.6,SNR=5.3
ABKAR Akbulak array 79.84 320 *eP* **P 05 29 15.5 +0.2**
MAW Mawson 81.95 201 P **P 05 29 26.4 +0.3**
1.4nm,0.8s,baz=56,slow=3.6,SNR=2.1
KDAK Kodiak Island 82.16 31 *eP* **P 05 29 29.2 +1.7**
33nm,1.5s
ARU Arti 82.30 327 LR LR 06 09 45.0
comp=Z,408nm,18.8s,baz=84,slow=38
BPAW Bear Paw Mtn. 84.42 25 *eP* **P 05 29 40.5 +1.5**
25nm,1.9s
MLY Manley 84.74 24 *eP* **P 05 29 42.1 +1.4**
5.8nm,0.8s
RND Reindeer 85.20 26 *eP* **P 05 29 43.6 +0.6**
18nm,1.0s
MCK McKinley 85.23 26 *eP* **P 05 29 43.7 +0.6**
21nm,1.2s
CCB Clear Creek Bu 85.89 25 *eP* **P 05 29 46.8 +0.4**
9.4nm,0.9s
ILAR Eielson Array 86.30 25 P **P 05 29 48.1 -0.3**
3.2nm,0.8s,baz=261,slow=4.8,SNR=35
IL1 Eielson Array 86.30 25 *eP* **P 05 29 48.5 +0.1**
BMRM Bremner River 86.77 29 *eP* **P 05 29 52.0 +1.2**
14nm,1.0s
DOT Dot Lake 87.36 26 *eP* **P 05 29 54.7 +1.1**
8.8nm,0.8s
TGL Tana Glacier 87.61 29 *eP* **P 05 29 55.9 +1.0**
11nm,0.9s
QSPA South Pole Qui 89.16 180 P **P 05 30 02.5 +0.3**
1.3nm,0.7s,baz=329,slow=4.4,SNR=4.0
QSPA South Pole Qui 89.16 180 *eP* **P 05 30 02.2 -0.1**
10nm,1.0s
SPITS Spitsbergen Ar 96.13 349 LR LR 06 17 24.4
comp=Z,247nm,20.9s,baz=45,slow=38
ARCES ARCESS Array B 96.93 340 P **P 05 30 37.1 -0.7**
1.7nm,0.8s,baz=76,slow=7.5,SNR=3.8
YKA Yellowknife Ar 100.70 26 P **Pdif 05 30 55.8 +1.0**
0.4nm,0.6s,baz=302,slow=5.5,SNR=3.0
TXAR Lajitas Array 118.75 57 PKP **PKPdf 05 35 56.8 +1.0**
0.4nm,1.0s,baz=202,slow=4.6,SNR=2.7
TORD Torodi Ar. Bea 130.63 287 PKP **PKPdf 05 36 17.5 -1.3**
0.5nm,0.9s,baz=84,slow=1.7,SNR=3.2
JTS JuntasAbangare 140.71 75 PKP **PKPdf 05 36 36.0 -1.6**
3.2nm,0.8s,baz=13,slow=14,SNR=3.0
CPUP Villa Florida 151.13 160 PKPbc **PKPbc 05 37 00.3 -0.4**
2.3nm,1.0s,baz=82,slow=7.9,SNR=3.9
LPAZ La Paz 152.81 129 PKPab **PKPab 05 37 13.9 -2.5**
1.9nm,1.0s,baz=354,slow=9.2,SNR=3.7

NNC 07 05:17:58.7±1.8, 36°.38N×70°.42E, h121km±57km, mb2.9, mpv3.6, 4C-4D, Error ellipse: s-maj=27.8km s-min=15.5km az=104.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**4.37**	**33**	⇑P	Pn	05 19 03.6	+0.3
	3.8nm,0.3s						
SFK				⇓S	Sn	05 19 54.2	+0.7
	4.0nm,0.2s						
MNAS	**Manas**	**6.31**	**14**	⇑P	Pn	05 19 29.6	+0.3
	1.8nm,0.5s						
MNAS				⇓S	Sn	05 20 41.6	+1.5
	1.9nm,0.3s						
KK31	**Karatay Array**	**6.72**	**1**	⇓P	Pn	05 19 34.6	-0.2
	1.8nm,0.3s,baz=176,slow=12,SNR=29						
KK31				⇑S	Sn	05 20 48.8	-1.1
	1.8nm,0.3s,baz=192,slow=24,SNR=4.4						
AAK	**Ala-Archa**	**7.00**	**26**	⇑P	Pn	05 19 38.1	-0.6
	1.0nm,0.3s						
AAK				⇓S	Sn	05 20 57.1	+0.2
	3.7nm,0.6s						
AB31	**Akbulak array**	**14.97**	**333**	P	Pn	05 21 24.4	+0.5
	0.4nm,0.3s,baz=165,slow=11,SNR=17						

*KRNET **07** 05:29:46.5±0.1, 41°.59N×69°.97E, h13km, mb2.3*
*SOME **07** 05:29:47.7, 41°.62N×70°.07E, h0km*
*NNC **07** 05:29:49.2±2.2, 41°.66N×70°.06E, h0km, mb2.7, mpv2.4, Error ellipse: s-maj=15.9km s-min=7.1km az=24.0*
ISC 07 05:29:48.1±1.1, 41°.66N±0°.04×69.73E±0°.06, h17km±10km, n15, σ1§81/20, 9C-13D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAS	**Tashkent**	**0.47**	**225**	⇓*i*P	Pg	05 29 57.7	+0.1
	baz=43						
TAS				⇓*i*S	Sg	05 30 05.9	+1.8
	baz=43						
IUG	**luzhnay**	**0.53**	**25**	*e*P	Pg	05 29 58.1	-0.7
	20nm,0.2s						
IUG				*e*S	Sg	05 30 05.6	-0.5
	77nm,0.2s						
BRLS	**Borolday**	**1.37**	**3**	*e*P	Pn	05 30 10.1	-2.3
	0.5nm,0.2s						
BRLS				*e*S	Sb	05 30 26.1	-4.4
	5.0nm,0.3s						
KK31	**Karatay Array**	**1.55**	**22**	⇑P	Pn	05 30 16.2	+1.3
	1.6nm,0.2s,baz=195,slow=17,SNR=58						
KK31				⇓S	Sn	05 30 36.7	+2.0
	2.6nm,0.2s,baz=194,slow=29,SNR=16						
ARK	**Arkit**	**1.68**	**85**	⇓*i*P	Pn	05 30 15.4	-1.4
	baz=82						
ARK				⇓*i*S	Sn	05 30 36.3	-1.6
	baz=82						
BTK	**Batken**	**1.80**	**152**	⇑*i*P	Pn	05 30 17.7	-0.8
	baz=57						
BTK				⇑*i*S	Sn	05 30 40.3	-0.7
	baz=57						
MNAS	**Manas**	**2.22**	**67**	⇑Pg	Pn	05 30 27.0	+2.7
	0.6nm,0.3s						
MNAS				⇑Lg	Lg	05 30 52.8	
	7.3nm,0.4s						
MNAS	**Manas**	**2.22**	**67**	⇓*i*P	Pn	05 30 24.8	+0.5
	baz=64						
MNAS				⇓*i*S	Sn	05 30 52.9	+1.5
	baz=64						
ARSB	**Arslanbob**	**2.47**	**97**	⇓*i*P	Pn	05 30 27.2	-0.4
	baz=96						
ARSB				⇓*i*S	Sn	05 30 57.5	+0.1
	baz=96						
MRKS	**Merke**	**2.81**	**66**	*e*P	Pn	05 30 34.9	+2.5
	2.4nm,0.4s						
MRKS				*e*S	Sn	05 31 09.0	+3.1
	14nm,0.3s						
AML	**Almayashu**	**3.00**	**80**	⇑*i*P	Pn	05 30 35.4	+0.2
	baz=78						
AML				⇑*i*S	Sn	05 31 11.1	+0.3
	baz=78						
SFK	**Sufi-Kurgan**	**3.30**	**119**	⇓*e*P	Pn	05 30 39.3	+0.1
	baz=19						
SFK				⇓*i*S	Sn	05 31 17.7	-0.5
	baz=19						
AAK	**Ala-Archa**	**3.67**	**73**	⇑Pg	Pn	05 30 51.0	+6.7
	0.5nm,0.4s						
AAK				⇓Lg	Lg	05 31 37.7	
	2.0nm,0.6s						
TKM2	**Tokmak 2**	**4.53**	**72**	⇑Pg	Pb	05 31 06.7	-0.5
	0.6nm,0.6s						
TKM2				⇓Lg	Lg	05 32 03.2	
	0.8nm,0.3s						
KST	**Kastek**	**4.82**	**71**	*e*P	Pb	05 31 12.2	0.0
	1.7nm,0.3s						
KST				*e*S	Sb	05 32 12.4	+2.5
	2.7nm,0.4s						

*IDC **07** 05:35:13.0±1.2, 37°.99S×73°.21W, h0km, mb3.9/7, mb1 4.0/9, mb1mx3.8/33, mbtmp3.8/9, ML3.9/2, Error ellipse: s-maj=38.3km s-min=16.3km az=64.0*
*GUC **07** 05:35:14.4±0.4, 38°.05S×73°.68W, h36km±2km, ML3.8*
ISC 07 05:35:16.1±0.9, 38°.00S±0°.04×73°.4W±0°.1, h22km, n18, σ1§87/25, mb3.8/8, 1C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TMU	**Temuco**	**0.95**	**141**	⇑*e*P	Pn	05 35 33.5	-0.7
TMU				*e*S	Sn	05 35 48.1	+1.1
TMU				IAML		05 35 51.6	
	comp=N,3μm,0.5s						
CCSP	**San Pedro de C**	**1.17**	**10**	*e*P	Pb	05 35 36.0	-1.6
CCSP				*e*S	Sn	05 35 52.8	+0.4
CCSP				IAML		05 35 59.5	
	comp=N,5μm,0.4s						
CCHI	**Chillan**	**1.73**	**37**	*e*P	Pb	05 35 45.4	-1.7
CCHI				*e*S	Sb	05 36 09.0	+0.6
CCHI				IAML		05 36 17.7	
	comp=E,3μm,0.5s						
COCH	**Cobquecura**	**1.92**	**14**	*e*P	Pb	05 35 46.7	-3.6
COCH				*e*S	Sb	05 36 11.8	-2.0
COCH				IAML		05 36 22.3	
	comp=E,666nm,0.8s						
GO05	**HualaæØ**	**3.20**	**22**	*e*P	Pn	05 36 05.3	+0.2
GO05				*e*S	Sb	05 36 55.1	+4.3
PLCA	**Paso Flores**	**3.50**	**142**	Pn	Pn	05 36 09.6	+0.4
	comp=E,2.1nm,0.3s,baz=333,slow=9.0,SNR=48						
PLCA				Pg	Pb	05 36 15.4	-2.0
	comp=E,12nm,0.3s,baz=337,slow=15,SNR=53						
PLCA				Lg	Lg	05 37 01.0	
	comp=E,5.7nm,0.3s,baz=251,slow=22,SNR=5.0						
PLCA	**Paso Flores**	**3.50**	**142**	*e*P	Pn	05 36 09.5	+0.3
FCH	**Farellones**	**5.29**	**29**	*e*P	Pn	05 36 32.8	-1.4
FCH				*e*S	Sn	05 37 36.7	+2.2
CPUP	**Villa Florida**	**17.85**	**54**	P	P	05 39 21.9	-1.8
	comp=E,0.1nm,0.3s,baz=223,slow=13,SNR=3.2						
LPAZ	**La Paz**	**22.11**	**13**	P	P	05 40 14.2	+3.5
	comp=E,1.5nm,0.7s,baz=189,slow=8.3,SNR=6.9						
SIV	**San Ignacio**	**24.46**	**30**	P	P	05 40 32.8	-0.7
	comp=E,0.6nm,0.4s,baz=224,slow=15,SNR=4.7						
SNAA	**Sanae**	**48.33**	**156**	P	P	05 43 55.0	-0.5
	comp=E,1.4nm,0.8s,baz=266,slow=15,SNR=4.5						
TXAR	**Lajitas Array**	**72.73**	**333**	P	P	05 46 42.0	-0.5
	comp=E,0.1nm,0.6s,baz=145,slow=8.4,SNR=2.8						
DBIC	**Dimbokro**	**77.48**	**71**	P	P	05 47 10.7	+0.5
	comp=E,5.3nm,0.8s,baz=212,slow=13,SNR=4.0						
KOWA	**Kowa**	**83.26**	**66**	P	P	05 47 41.6	+0.4
	comp=E,1.5nm,0.6s,baz=235,slow=5.1,SNR=3.7						
TORD	**Torodi Ar. Bea**	**86.57**	**71**	P	P	05 47 56.8	-1.1
	comp=E,0.8nm,0.7s,baz=222,slow=4.2,SNR=7.2						
NVAR	**Mina Array Bea**	**86.57**	**326**	P	P	05 47 59.7	+2.1
	comp=E,0.1nm,0.3s,baz=134,slow=3.9,SNR=3.4						
BVAR	**Borovoye Array**	**150.86**	**47**	PKPbc	PKPbc	05 55 06.8	+0.6
	comp=E,2.4nm,0.7s,baz=323,slow=2.2,SNR=8.3						

*STR **07** 05:40:07.1±5.5, 45°.N±22°.×1°.2E±4°.6, h5km, M3.8/6, MLv3.8/6*
*ROM **07** 05:40:11.7±0.0, 44°.848N±0°.001×10°.983E±0°.001, h10km, ML2.8/45*
*LDG **07** 05:40:12.1±0.2, 44°.91N×11°.12E, h2km, Ml3.3/10, Error ellipse: s-maj=4.3km s-min=3.3km az=92.0*
*ISCJB **07** 05:40:12.0±0.2, 44°.83N±0°.02×10°.99E±0°.02, h20km±1km, Error ellipse: s-maj=2.9km s-min=2.4km az=162.3*
*IASPEI **07** 05:40:12.2±0.8, 44°.86N±0°.02×11°.01E±0°.02, h14km±4km, Error ellipse: s-maj=2.6km s-min=2.3km az=69.1, GT5 selection from ISC bulletin GT5 identified by Bond˙jr and McLaughlin (2009) selection criteria Bond˙jr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
*CSEM **07** 05:40:12.1±0.1, 44°.88N×11°.00E, h10km, ML3.2/13, Error ellipse: s-maj=2.8km s-min=2.4km az=131.0*
ISC 07 05:40:12.4±0.7, 44°.88N±0°.01×11°.02E±0°.01, h17km±3km, n207, σ1§21/255, 11C-9D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0818	**Loc. Fossa, Co**	**0.06**	**6**	⇑*e*P	Pg	05 40 14.0	-1.6
T0818				*e*S	Sg	05 40 18.6	+0.8
T0818	**Loc. Fossa, Co**	**0.06**	**6**	*e*P	Pg	05 40 15.0	-0.7
T0818				*e*S	Sg	05 40 18.6	+0.8
NDIM	**Novi di Modena**	**0.09**	**278**	*e*P	Pg	05 40 14.2	-1.6
NDIM				AML	AML		
	comp=E,28900μm,0.2s						
NDIM				AML	AML		
	comp=N,27250μm,0.1s						
NDIM				AML	AML		
	comp=E,28600μm,0.4s						
NDIM				AML	AML		
	comp=N,27200μm,0.1s						
T0827	**Moglia (MN)**	**0.09**	**314**	⇓*e*P	Pg	05 40 15.8	-0.1
T0827				*e*S	Sg	05 40 18.7	+0.5
T0827	**Moglia (MN)**	**0.09**	**314**	*e*P	Pg	05 40 15.8	-0.1
T0827				*e*S	Sg	05 40 18.7	+0.5
T0828	**Loc. Fossoli,**	**0.09**	**240**	⇑*i*P	Pg	05 40 14.2	-1.6
T0828				*i*S	Sg	05 40 17.1	-1.0
T0828	**Loc. Fossoli,**	**0.09**	**240**	*i*P	Pg	05 40 14.2	-1.6
T0828				*i*S	Sg	05 40 17.1	-1.0
T0814	**Loc. Cortile,**	**0.09**	**205**	⇓*i*P	Pg	05 40 14.2	-1.6
T0814				*i*S	Sg	05 40 17.1	-1.0
T0814	**Loc. Cortile,**	**0.09**	**205**	*i*P	Pg	05 40 14.2	-1.6
T0814				*i*S	Sg	05 40 17.1	-1.0
T0802	**SanFelice sul**	**0.11**	**90**	*i*P	Pg	05 40 15.5	-0.6
T0802	**SanFelice sul**	**0.11**	**90**	*i*P	Pg	05 40 15.5	-0.6
T0813	**Massa Finalese**	**0.13**	**89**	⇑*e*P	Pg	05 40 15.6	-0.6
T0813	**Massa Finalese**	**0.13**	**89**	*e*P	Pg	05 40 15.6	-0.6
T0824	**Loc. Limidi di**	**0.13**	**210**	⇓*i*P	Pg	05 40 14.9	-1.4
T0824				*i*S	Sg	05 40 18.4	-0.6
T0824	**Loc. Limidi di**	**0.13**	**210**	*i*P	Pg	05 40 14.9	-1.4
T0824				*i*S	Sg	05 40 18.4	-0.6
RAVA	**Ravarino**	**0.14**	**150**	⇑*i*P	Pg	05 40 15.6	-0.8
RAVA				*i*S	Sg	05 40 19.5	+0.5
RAVA	**Ravarino**	**0.14**	**150**	*i*P	Pg	05 40 15.6	-0.8
RAVA				*i*S	Sg	05 40 19.6	+0.5
RAVA				AML	AML		
	comp=E,58150μm,0.2s						
RAVA				AML	AML		
RAVA				AML	AML		
	comp=E,58150μm,0.2s						
RAVA				AML	AML		
RAVA				AML	AML		
	comp=E,58100μm,0.2s						
RAVA				AML	AML		
T0812	**Loc. Stoppiaro**	**0.14**	**55**	⇑*e*P	Pg	05 40 15.0	-1.4
T0812	**Loc. Stoppiaro**	**0.14**	**55**	*e*P	Pg	05 40 16.0	-0.4
T0826	**Rio Saliceto (**	**0.15**	**257**	⇑*e*P	Pg	05 40 15.2	-1.4
T0826	**Rio Saliceto (**	**0.15**	**257**	*e*P	Pg	05 40 15.2	-1.4
T0826				AML	AML		
	comp=E,18000μm,0.2s						
T0826				AML	AML		
	comp=N,17600μm,0.5s						
T0826				AML	AML		
	comp=E,17950μm,0.2s						
T0826				AML	AML		
	comp=N,17600μm,0.5s						
T0826				AML	AML		
	comp=E,18000μm,0.2s						
T0826				AML	AML		
	comp=N,17600μm,0.5s						
T0826				AML	AML		
	comp=N,17600μm,0.5s						
T0826				AML	AML		
	comp=E,18000μm,0.2s						
T0825	**Gonzaga (MN)**	**0.16**	**308**	⇓*e*P	Pg	05 40 16.5	-0.2
T0825				*e*S	Sg	05 40 21.5	+2.0
T0825	**Gonzaga (MN)**	**0.16**	**308**	*e*P	Pg	05 40 16.4	-0.2
T0825				*e*S	Sg	05 40 21.5	+2.0
T0800	**Massa Finalese**	**0.16**	**99**	⇑*e*P	Pg	05 40 16.2	-0.5
T0800				*i*S	Sg	05 40 20.8	+1.2
T0800	**Massa Finalese**	**0.16**	**99**	*e*P	Pg	05 40 16.2	-0.5
T0800				*i*S	Sg	05 40 20.8	+1.2
T0800				AML	AML		
	comp=E,31700μm,0.2s						
T0800				AML	AML		
	comp=N,48600μm,0.2s						
T0800				AML	AML		
	comp=E,26950μm,0.2s						
T0800				AML	AML		
	comp=N,45850μm,0.2s						
T0800				AML	AML		
	comp=E,31750μm,0.2s						
T0800				AML	AML		
	comp=N,48600μm,0.2s						
T0800				AML	AML		
	comp=E,26950μm,0.2s						
T0800				AML	AML		
	comp=N,45800μm,0.2s						
T0800				AML	AML		
	comp=E,31700μm,0.2s						
T0800				AML	AML		
	comp=N,48650μm,0.2s						
T0800				AML	AML		
	comp=E,26950μm,0.2s						
T0800				AML	AML		
	comp=N,45850μm,0.2s						
T0811	**Palata Pepoli**	**0.17**	**122**	⇑*e*P	Pg	05 40 16.2	-0.7
T0811				*i*S	Sg	05 40 20.8	+1.0
T0811	**Palata Pepoli**	**0.17**	**122**	*e*P	Pg	05 40 16.2	-0.7
T0811				*i*S	Sg	05 40 20.8	+1.0
SBPO	**S.Benedetto Po**	**0.19**	**338**	*e*P	Pg	05 40 17.2	+0.1
SBPO	**S.Benedetto Po**	**0.19**	**338**	*e*P	Pg	05 40 17.2	+0.1
T0805	**Bondeno (FE)**	**0.22**	**78**	*i*P	Pg	05 40 17.1	-0.4
T0805	**Bondeno (FE)**	**0.22**	**78**	*i*P	Pg	05 40 17.1	-0.4
NOVE	**Novellara**	**0.23**	**251**	⇑*e*P	Pg	05 40 16.5	-1.2
NOVE				*e*S	Sg	05 40 21.5	+0.1
NOVE	**Novellara**	**0.23**	**251**	*e*P	Pg	05 40 16.5	-1.2
NOVE				*e*S	Sg	05 40 21.5	+0.1
NOVE				AML	AML		
	comp=E,7825μm,0.7s						
NOVE				AML	AML		
	comp=N,6155μm,1.2s						
NOVE				AML	AML		
	comp=E,7825μm,0.7s						
NOVE				AML	AML		
	comp=N,6155μm,1.2s						
NOVE				AML	AML		
	comp=E,7825μm,0.7s						
NOVE				AML	AML		
	comp=N,6155μm,1.2s						
NOVE				AML	AML		
	comp=E,7825μm,0.7s						
NOVE				AML	AML		
	comp=N,6155μm,1.2s						
NOVE				AML	AML		
	comp=E,7825μm,0.7s						
T0822	**Casumaru (Bond**	**0.23**	**100**	*i*P	Pg	05 40 17.4	-0.4
T0822				*i*S	Sg	05 40 22.7	+1.3
T0822	**Casumaru (Bond**	**0.23**	**100**	*i*P	Pg	05 40 17.4	-0.4
T0822				*i*S	Sg	05 40 22.7	+1.3
T0822				AML	AML		
	comp=E,6695μm,0.4s						
T0822				AML	AML		

comp=N,8040µm,0.4s
T0822 AML AML
comp=E,6690µm,0.4s
T0822 AML AML
comp=N,8045µm,0.4s
T0822 AML AML
comp=E,6690µm,0.4s
T0822 AML AML
comp=N,8045µm,0.4s
SERM Sermide 0.24 55 *i* P **Pg 05 40 17.9 +0.1**
SERM Sermide 0.24 55 *i* P **Pg 05 40 17.9 +0.1**
SERM AML AML
comp=E,1480µm,0.5s
SERM AML AML
comp=N,1715µm,0.5s
SERM AML AML
comp=E,2755µm,0.5s
SERM AML AML
comp=N,2170µm,0.4s
SERM AML AML
comp=E,1475µm,0.5s
SERM AML AML
comp=N,1715µm,0.5s
SERM AML AML
comp=E,2755µm,0.5s
SERM AML AML
comp=N,2170µm,0.4s
SERM AML AML
comp=N,2170µm,0.4s
SERM AML AML
comp=N,1715µm,0.5s
SERM AML AML
comp=E,2755µm,0.5s
SERM AML AML
comp=E,1475µm,0.5s
MODE Modena 0.25 192 *e*P **Pg 05 40 17.3 -0.7**
MODE Modena 0.25 192 *e*P **Pg 05 40 17.3 -0.7**
MODE AML AML
comp=E,8600µm,0.8s
MODE AML AML
comp=N,7745µm,0.5s
MODE AML AML
comp=E,8600µm,0.8s
MODE AML AML
comp=N,7740µm,0.5s
MODE AML AML
comp=E,8605µm,0.8s
MODE AML AML
comp=N,7745µm,0.5s
MODE AML AML
comp=N,7745µm,0.5s
MODE AML AML
comp=E,8605µm,0.8s
T0803 Dosso, Cento (0.26 115 *i* P **Pg 05 40 17.7 -0.4**
T0803 *i* S **Sg 05 40 20.9 -1.2**
T0803 Dosso, Cento (0.26 115 *i* P **Pg 05 40 17.7 -0.4**
T0803 *i* S **Sg 05 40 20.9 -1.2**
T0823 Castello D'Arg 0.26 136⇑ *e*P **Pg 05 40 18.6 +0.4**
T0823 Castello D'Arg 0.26 136 *e*P **Pg 05 40 18.6 +0.4**
T0823 *e*S **Sg 05 40 24.1 +1.9**
T0817 Loc. Veratica, 0.33 69 *i* P **Pb 05 40 19.6 -0.2**
T0817 Loc. Veratica, 0.33 69 *i* P **Pb 05 40 19.6 -0.2**
T0817 *i* S **Sb 05 40 27.3 +2.5**
T0821 Loc. Casaglia 0.37 85 *i* P **Pb 05 40 19.7 -0.8**
T0821 Loc. Casaglia 0.37 85 *i* P **Pb 05 40 19.7 -0.8**
T0821 AML AML
comp=E,1625µm,0.4s
T0821 AML AML
comp=N,1800µm,1.3s
T0821 AML AML
comp=E,1655µm,0.4s
T0821 AML AML
comp=N,1795µm,1.2s
T0821 AML AML
comp=E,1630µm,0.4s
T0821 AML AML
comp=N,1800µm,1.3s
T0821 AML AML
comp=E,1655µm,0.4s
T0821 AML AML
comp=N,1795µm,1.2s
T0821 AML AML
comp=N,1800µm,1.3s
T0821 AML AML
comp=N,1795µm,1.2s
T0821 AML AML
comp=E,1630µm,0.4s
T0821 AML AML
comp=E,1655µm,0.4s
T0816 San Bartolomeo 0.44 110 *i* P **Pb 05 40 21.0 -0.6**
T0816 San Bartolomeo 0.44 110 *i* P **Pb 05 40 22.0 +0.4**
T0815 Correggio (RE) 0.50 90 *i* P **Pn 05 40 23.6 -1.0**
T0815 Correggio (RE) 0.50 90 *i* P **Pn 05 40 23.6 -1.0**
ZCCA Zocca 0.53 184 *e*P **Pb 05 40 23.2 +0.1**
ZCCA Zocca 0.53 184 *e*P **Pb 05 40 23.2 +0.1**
ZCCA AML AML
comp=E,610µm,0.4s
ZCCA AML AML
comp=N,760µm,0.5s
ZCCA AML AML
comp=E,630µm,0.8s
ZCCA AML AML
comp=N,656µm,0.4s
ZCCA AML AML
comp=E,611µm,0.4s
ZCCA AML AML
comp=N,760µm,0.5s
ZCCA AML AML
comp=E,630µm,0.8s
ZCCA AML AML
comp=N,656µm,0.4s
ZCCA AML AML
comp=E,610µm,0.4s
ZCCA AML AML
comp=N,760µm,0.5s
ZCCA AML AML
comp=E,630µm,0.8s
ZCCA AML AML
comp=N,656µm,0.4s
ZCCA AML AML
comp=E,610µm,0.4s
ZCCA AML AML
comp=E,630µm,0.8s
ZCCA AML AML
comp=N,656µm,0.4s
ZCCA AML AML
comp=N,760µm,0.5s
MTRZ Monterenzio 0.59 147 *e*P **Pn 05 40 26.5 +0.5**
MTRZ AML AML
comp=E,1465µm,0.5s
MTRZ AML AML
comp=N,1095µm,0.7s
MTRZ AML AML
comp=E,1525µm,0.5s
MTRZ AML AML
comp=N,1130µm,0.8s
MTRZ AML AML
comp=E,1465µm,0.5s
MTRZ AML AML
comp=N,1093µm,0.7s
MTRZ AML AML
comp=E,1525µm,0.5s
MTRZ AML AML
comp=N,1130µm,0.8s
MTRZ AML AML
comp=N,1093µm,0.7s
MTRZ AML AML
comp=N,1130µm,0.8s
MTRZ AML AML
comp=E,1525µm,0.5s
MTRZ AML AML
comp=E,1465µm,0.5s
CMPO Campotto Po 0.63 118 *e*P **Pn 05 40 27.4 +0.9**
CMPO AML AML
comp=E,2590µm,0.2s
CMPO AML AML
comp=N,1435µm,0.9s
CMPO AML AML
comp=E,2590µm,0.2s
CMPO AML AML
comp=N,1435µm,0.9s
CMPO AML AML
comp=N,1435µm,0.9s
CMPO AML AML
comp=E,2590µm,0.2s
TREG Tregnago 0.66 9 AML AML
comp=N,1935µm,0.2s
TREG AML AML
comp=E,1029µm,0.2s
TREG AML AML
comp=N,1935µm,0.2s
TREG AML AML
comp=E,1026µm,0.2s
TREG AML AML
comp=N,1935µm,0.2s
TREG AML AML
comp=E,1026µm,0.2s
TEOL Teolo 0.67 43⇓ *e*Pg **Pb 05 40 25.8 +0.2**
TEOL *e*Sg **Sn 05 40 36.5 -0.6**
TEOL Teolo 0.67 43 *e*P **Pb 05 40 25.8 +0.2**
TEOL *e*Sg **Sn 05 40 36.5 -0.6**
TEOL Teolo 0.67 43 *e*P **Pb 05 40 25.8 +0.2**
TEOL AML AML
comp=E,3175µm,0.2s
TEOL AML AML
comp=N,2865µm,1.0s
TEOL AML AML
comp=E,3175µm,0.2s
TEOL AML AML
comp=N,2865µm,1.0s
TEOL AML AML
comp=N,2865µm,1.0s
TEOL AML AML
comp=E,3175µm,0.2s
ROVR Rover¨¤ Verone 0.77 3 *e*P **Pg 05 40 27.2 -0.3**
ROVR Rover¨¤ Verone 0.77 3 *e*P **Pg 05 40 27.2 -0.3**
ROVR AML AML
comp=E,1365µm,0.3s
ROVR AML AML
comp=N,2265µm,0.2s
ROVR AML AML
comp=E,1365µm,0.3s
ROVR AML AML
comp=N,2265µm,0.2s
ROVR AML AML
comp=N,2265µm,0.2s
ROVR AML AML
comp=E,1365µm,0.3s
MARN Marana (Italy) 0.77 10⇓ *e*Pg **Pb 05 40 27.7 +0.3**
MARN *e*Sg **Sn 05 40 40.1 +0.3**
MARN Marana (Italy) 0.77 10 *e*Pg **Pb 05 40 27.7 +0.3**
MARN *e*Sg **Sn 05 40 40.1 +0.3**
BALD Monte Baldo 0.82 350⇓ *e*Pg **Pb 05 40 28.6 +0.3**
BALD *e*Sg **Sn 05 40 41.4 +0.2**
BALD Monte Baldo 0.82 350 *e*Pg **Pb 05 40 28.6 +0.3**
BALD *e*Sg **Sn 05 40 41.4 +0.2**
SALO Salr 0.82 335 *e*P **Pg 05 40 28.3 -0.2**
SALO Salr 0.82 335 *e*P **Pg 05 40 28.3 -0.2**
SALO AML AML
comp=E,1350µm,0.7s
SALO AML AML
comp=N,1545µm,0.7s
SALO AML AML
comp=E,1350µm,0.7s
SALO AML AML
comp=N,1545µm,0.7s
SALO AML AML
comp=E,1350µm,0.7s
SALO AML AML
comp=N,1545µm,0.7s
VLC Villacollemand 0.85 213 *e*P **Pg 05 40 28.5 -0.4**
VLC Villacollemand 0.85 213 *e*P **Pg 05 40 28.5 -0.4**
VLC AML AML
comp=E,388µm,1.3s
VLC AML AML
comp=N,290µm,0.8s
VLC AML AML
comp=E,388µm,1.3s
VLC AML AML
comp=N,290µm,0.8s
VLC AML AML
comp=E,388µm,1.3s
VLC AML AML
comp=N,290µm,0.8s
POPM Popiglio 0.85 193 *e*P **Pb 05 40 29.6 +0.9**
POPM Popiglio 0.85 193 *e*P **Pb 05 40 29.6 +0.9**
POPM AML AML
comp=E,551µm,0.9s
POPM AML AML
comp=N,1625µm,0.3s
POPM AML AML
comp=E,550µm,0.9s
POPM AML AML
comp=N,1625µm,0.3s
POPM AML AML
comp=E,550µm,0.9s
POPM AML AML
comp=N,1625µm,0.3s
BDI Bagni Di Lucca 0.87 201 *e*P **Pg 05 40 28.0 -1.3**
BDI Bagni Di Lucca 0.87 201 *e*P **Pg 05 40 29.0 -0.3**
MAGA Magasa 0.94 343 *e*P **Pg 05 40 29.9 -0.8**
MAGA Magasa 0.94 343 *e*P **Pg 05 40 29.9 -0.8**
MAGA AML AML
comp=E,4290µm,0.2s
MAGA AML AML
comp=N,3625µm,0.3s
MAGA AML AML
comp=E,4290µm,0.2s
MAGA AML AML
comp=N,3625µm,0.3s
MAGA AML AML
comp=E,4290µm,0.2s
MAGA AML AML
comp=N,3625µm,0.3s
CTL8 Castelleone 0.98 295 AML AML
comp=E,416µm,0.4s
CTL8 AML AML
comp=E,1385µm,0.3s
CTL8 AML AML
comp=N,1365µm,0.4s
CTL8 AML AML
comp=E,416µm,0.4s
CTL8 AML AML
comp=N,403µm,0.9s
CTL8 AML AML
comp=E,1385µm,0.3s
CTL8 AML AML
comp=N,1365µm,0.4s
CTL8 AML AML
comp=N,403µm,0.9s
CTL8 AML AML
comp=N,403µm,0.9s
CTL8 AML AML
comp=E,1385µm,0.3s
CTL8 AML AML
comp=E,416µm,0.4s
CTL8 AML AML
comp=N,1365µm,0.4s
DOSS Dosso del Somm 1.01 7⇓ *e*Pg **Pg 05 40 31.4 -0.7**
DOSS *e*Sg **Sn 05 40 46.7 +0.8**
DOSS Dosso del Somm 1.01 7 *e*Pg **Pg 05 40 31.4 -0.7**
DOSS *e*Sg **Sn 05 40 46.7 +0.8**
MAIM Mastiano 1.03 202 AML AML
comp=E,389µm,0.8s
MAIM AML AML
comp=N,417µm,0.6s
MAIM AML AML
comp=E,389µm,0.8s
MAIM AML AML
comp=N,417µm,0.6s
MAIM AML AML
comp=E,389µm,0.8s
MAIM AML AML
comp=N,417µm,0.6s
CRMI Carmignano 1.09 182 AML AML
comp=N,138µm,0.6s
CRMI AML AML
comp=E,136µm,0.4s
CRMI AML AML
comp=N,138µm,0.6s
CRMI AML AML
comp=E,136µm,0.4s
CRMI AML AML
comp=N,138µm,0.6s
CRMI AML AML
comp=E,136µm,0.4s
BOB Bobbio (Coli) 1.13 265 AML AML
comp=N,404µm,0.4s
BOB AML AML
comp=E,268µm,0.7s
BOB AML AML
comp=N,402µm,0.4s
BOB AML AML
comp=E,360µm,0.7s
BOB AML AML
comp=E,268µm,0.7s
BOB AML AML
comp=N,402µm,0.4s
BOB AML AML
comp=N,402µm,0.4s
BOB AML AML
comp=E,268µm,0.7s
RNI Roncone 1.14 346 *e*Pg **Pb 05 40 33.1 -0.7**
RNI *e*Sg **Sb 05 40 49.9 +1.5**
RNI Roncone 1.14 346 *e*Pg **Pb 05 40 33.1 -0.7**
RNI *e*Sg **Sb 05 40 49.9 +1.5**
CGRP Cima Grappa 1.15 28⇑ *e*Pg **Pn 05 40 33.9 +0.1**
CGRP *e*Sg **Sn 05 40 50.2 +1.0**
CGRP Cima Grappa 1.15 28 *e*P **Pb 05 40 33.6 -0.2**
CGRP Cima Grappa 1.15 28 *e*Pg **Pn 05 40 33.9 +0.1**
CGRP *e*Sg **Sn 05 40 50.2 +1.0**
CGRP Cima Grappa 1.15 28 *e*P **Pb 05 40 33.6 -0.2**
CGRP AML AML
comp=E,525µm,0.3s
CGRP AML AML
comp=N,504µm,0.6s
CGRP AML AML
comp=E,525µm,0.3s
CGRP AML AML
comp=N,504µm,0.6s
CGRP AML AML
comp=E,525µm,0.3s
CGRP AML AML
comp=N,504µm,0.6s
PLMA Palmaria, Port 1.18 226 AML AML
comp=E,275µm,0.9s
PLMA AML AML
comp=E,275µm,0.9s
PLMA AML AML
comp=N,366µm,0.6s
PLMA AML AML
comp=N,366µm,0.6s
PLMA AML AML
comp=N,366µm,0.6s
PLMA AML AML
comp=E,275µm,0.9s
PANI Panarotta 1.20 10 *e*Pg **Pb 05 40 34.2 -0.5**
PANI *e*Sg **Sn 05 40 51.9 +1.4**
PANI Panarotta 1.20 10 *e*Pg **Pb 05 40 34.2 -0.5**
PANI *e*Sg **Sn 05 40 51.9 +1.4**
MTLO Montello 1.21 39⇓ *e*Pg **Pn 05 40 34.8 +0.4**
MTLO Montello 1.21 39 *e*Pg **Pn 05 40 34.8 +0.4**
ASQU Asqua 1.21 153 AML AML
comp=N,202µm,1.0s
ASQU AML AML
comp=E,140µm,0.3s
ASQU AML AML
comp=N,202µm,1.0s
ASQU AML AML
comp=E,140µm,0.3s
MSSA Maissana 1.21 243 AML AML
comp=N,318µm,0.3s
MSSA AML AML
comp=E,252µm,0.5s
MSSA AML AML
comp=N,318µm,0.3s
MSSA AML AML
comp=E,252µm,0.5s
MSSA AML AML
comp=E,252µm,0.5s
MSSA AML AML
comp=N,318µm,0.3s
MABI Malga Bissina 1.23 343 AML AML
comp=E,310µm,0.9s
MABI AML AML
comp=N,203µm,1.1s
MABI AML AML
comp=E,310µm,0.9s
MABI AML AML
comp=N,203µm,1.1s
MABI AML AML
comp=E,310µm,0.9s
MABI AML AML
comp=N,203µm,1.1s
VARN Col Varnada, M 1.35 34 *e*Pg **Pb 05 40 37.1 -0.2**
VARN Col Varnada, M 1.35 34 *e*Pg **Pb 05 40 37.1 -0.2**
CRE Caprese Michel 1.42 152 AML AML
comp=N,282µm,0.3s
CRE AML AML
comp=E,208µm,0.4s
CRE AML AML
comp=N,282µm,0.3s
CRE AML AML
comp=E,208µm,0.4s
CRE AML AML
comp=E,208µm,0.4s
CRE AML AML
comp=N,282µm,0.3s
PARC Parchiule 1.51 144 AML AML
comp=E,99µm,0.5s
PARC AML AML
comp=E,99µm,0.5s
PARC AML AML
comp=N,93µm,0.4s
PARC AML AML
comp=N,93µm,0.4s
OZOL Ozolo 1.53 1 *e*Pg **Pn 05 40 39.0 0.0**
OZOL Ozolo 1.53 1 *e*Pg **Pn 05 40 39.0 0.0**
CARE Lago del Cares 1.57 352 *e*Pg **Pn 05 40 40.0 +0.3**
CARE Lago del Cares 1.57 352 *e*Pg **Pn 05 40 40.0 +0.3**
AGOR Agordo 1.58 27 AML AML
comp=N,200µm,0.6s
AGOR AML AML
comp=E,288µm,0.4s
AGOR AML AML
comp=N,200µm,0.6s
AGOR AML AML
comp=E,288µm,0.4s
KOSI Kohlern 1.61 9 AML AML
comp=N,216µm,1.0s
KOSI AML AML
comp=E,196µm,0.3s
KOSI AML AML
comp=N,216µm,1.0s
KOSI AML AML
comp=E,196µm,0.3s
APPI Appiano 1.61 5 AML AML
comp=E,524µm,1.0s
APPI AML AML
comp=E,524µm,1.0s
APPI AML AML
comp=N,363µm,0.3s
APPI AML AML
comp=N,363µm,0.3s
ATMC Monte Cedrone 1.66 149 AML AML
comp=E,262µm,0.5s
ATMC AML AML
comp=N,154µm,1.6s
ATMC AML AML
comp=E,262µm,0.5s
ATMC AML AML
comp=N,154µm,1.6s
GROG Isola di Gorgo 1.66 210 AML AML
comp=N,105µm,0.2s
GROG AML AML
comp=E,144µm,0.5s
GROG AML AML
comp=N,105µm,0.2s
GROG AML AML
comp=E,144µm,0.5s
BRMO Bormio 1.67 344 AML AML
comp=N,105µm,0.7s
BRMO AML AML
comp=E,86µm,0.7s
BRMO AML AML
comp=N,105µm,0.7s
BRMO AML AML
comp=E,86µm,0.7s
CAFI Castiglion Fio 1.69 156 AML AML
comp=N,62µm,0.4s
CAFI AML AML
comp=E,70µm,0.5s
CAFI AML AML
comp=N,62µm,0.4s
CAFI AML AML
comp=E,70µm,0.5s
ATPC Poggio Castell 1.73 143 AML AML
comp=N,132µm,0.5s
ATPC AML AML
comp=E,127µm,1.5s
ATPC AML AML

comp=N,132µm,0.5s
ATPC AML AML
CIMO Cimolais 1.75 34 *e*Pg **Pb 05 40 42.8 -1.2**
comp=E,127µm,1.5s
CIMO Cimolais 1.75 34 *e*Pg **Pb 05 40 42.8 -1.2**
MOSI Grossmontoni 1.77 349 AML AML
comp=E,224µm,0.7s
MOSI AML AML
comp=N,300µm,0.3s
MOSI AML AML
comp=E,224µm,0.7s
MOSI AML AML
comp=N,300µm,0.3s
PCP Piancastagn 1.80 260 AML AML
comp=N,99µm,1.6s
PCP AML AML
comp=E,91µm,0.6s
PCP AML AML
comp=N,99µm,1.6s
PCP AML AML
comp=E,91µm,0.6s
STAL STALIGIAL 1.82 40 AML AML
comp=E,284µm,1.4s
STAL AML AML
comp=N,259µm,0.3s
STAL AML AML
comp=N,259µm,0.3s
STAL AML AML
comp=E,284µm,1.4s
ABSI Aberstueckl 1.86 6 AML AML
comp=N,408µm,0.4s
ABSI AML AML
comp=E,561µm,0.7s
ABSI AML AML
comp=E,561µm,0.7s
ABSI AML AML
comp=N,408µm,0.4s
ROSI Rosskopf 2.07 7 AML AML
comp=E,217µm,0.3s
ROSI AML AML
comp=N,256µm,1.5s
ROSI AML AML
comp=N,256µm,1.5s
ROSI AML AML
comp=E,217µm,0.3s
CASP Castiglione de 2.09 183 AML AML
comp=E,42µm,1.6s
CASP AML AML
comp=N,61µm,0.3s
CASP AML AML
comp=E,42µm,1.6s
CASP AML AML
comp=N,61µm,0.3s
ABTA Abfaltersbach 2.14 29 *i* Pn **Pb 05 40 49.1 -1.7**
comp=N,3.2nm,0.2s
ABTA Abfaltersbach 2.14 29 Pn **Pb 05 40 49.1 -1.7**
comp=N,3.2nm,0.2s
FETA Feichten 2.16 355 *i* Pn **Pb 05 40 50.9 -0.2**
comp=N,7.2nm,0.4s
FETA *i* Sg **Sb 05 41 19.3 +1.7**
comp=N,5.3nm,0.4s
FETA Feichten 2.16 355 Pn **Pb 05 40 50.9 -0.2**
comp=N,7.2nm,0.4s
FETA Sg **Sb 05 41 19.3 +1.7**
comp=N,5.3nm,0.4s
RISI Rein 2.20 19 AML AML
comp=E,329µm,0.5s
RISI AML AML
comp=N,355µm,0.3s
RISI AML AML
comp=N,355µm,0.3s
RISI AML AML
comp=E,329µm,0.5s
SKDS Skadanscina 2.22 71 *i* Pn **Pn 05 40 48.2 -0.2**
SKDS *i* Sn **Sn 05 41 15.2 -0.2**
comp=Z,22nm,0.2s
SKDS Skadanscina 2.22 71 Pn **Pn 05 40 48.2 -0.2**
SKDS *i* Sn **Sn 05 41 15.2 -0.2**
comp=Z,22nm,0.2s
RORO Rocca Rossa 2.25 251 AML AML
comp=E,57µm,1.0s
RORO AML AML
comp=N,78µm,1.4s
RORO AML AML
comp=N,78µm,1.4s
RORO AML AML
comp=E,57µm,1.0s
JAVS Javornik 2.37 64 *i* Pn **Pn 05 40 50.8 +0.2**
JAVS *i* Sn **Sn 05 41 20.2 +0.9**
comp=Z,24nm,0.5s
JAVS Javornik 2.37 64 *i* Pn **Pn 05 40 50.8 +0.2**
JAVS *i* Sn **Sn 05 41 20.2 +0.9**
comp=Z,24nm,0.5s
WTTA Wattenberg 2.43 10 *i* Pn **Pb 05 40 55.6 -0.1**
comp=Z,1.8nm,0.2s
WTTA Wattenberg 2.43 10 Pn **Pb 05 40 55.6 -0.1**
comp=Z,1.8nm,0.2s
MOTA Moosalm 2.47 1 *e*Pn **Pn 05 40 53.6 +1.6**
comp=Z,4.2nm,0.2s,SNR=8.7
MOTA Moosalm 2.47 1 Pn **Pn 05 40 53.6 +1.6**
comp=Z,4.2nm,0.2s,SNR=8.7
MYKA Terra Mystica 2.54 45 *i* Pn **Pg 05 41 00.1 -1.0**
comp=Z,5.6nm,0.3s
DAVA Damuels 2.54 342 *e*Pn **Pn 05 40 55.9 +2.9**
comp=Z,2.6nm,0.3s,SNR=5.8
DAVA Damuels 2.54 342 Pn **Pn 05 40 55.9 +2.9**
comp=Z,2.6nm,0.3s,SNR=5.8
NEGI Seborga 2.59 248 AML AML
comp=E,55µm,1.1s
NEGI AML AML
comp=E,55µm,1.1s
NEGI AML AML
comp=N,95µm,0.2s
NEGI AML AML
comp=N,95µm,0.2s
RETA Reutte 2.62 356 *i* Pn **Pb 05 40 57.3 -1.6**
comp=N,2.3nm,0.2s
RETA Reutte 2.62 356 Pn **Pb 05 40 57.3 -1.6**
comp=N,2.3nm,0.2s
SAOF Saorge 2.64 252 AML AML
comp=N,68µm,1.6s
SAOF AML AML
comp=E,45µm,1.6s
SAOF AML AML
comp=N,68µm,1.6s
SAOF AML AML
comp=E,45µm,1.6s
KBA Koelnbreinsper 2.73 35 *i* Pn **Pn 05 40 57.7 +2.1**
comp=E,0.6nm,0.3s
KBA *i* Sg **Sg 05 41 40.7 +0.4**
comp=E,16nm,0.5s
KBA Koelnbreinsper 2.73 35 Pn **Pn 05 40 57.7 +2.1**
comp=E,0.6nm,0.3s
KBA Sg **Sg 05 41 40.7 +0.4**
comp=E,16nm,0.5s
PGF Pioggiola 2.75 213 *e*Pn **Pn 05 40 56.2 +0.4**
PGF *e*Sn **Sn 05 41 29.0 +0.4**
comp=E,16nm,0.3s
PGF Pioggiola 2.75 213 *e*Pn **Pn 05 40 56.2 +0.4**
PGF *e*Sn **Sn 05 41 29.0 +0.4**
comp=E,7.9nm,0.3s
NVLJ Novalja 2.76 95 *e*Pn **Pn 05 40 56.1 +0.2**
NVLJ Sn **Sn 05 41 29.1 +0.4**
NVLJ Novalja 2.76 95 *e*Pn **Pn 05 40 56.0 +0.2**
NVLJ Sn **Sn 05 41 29.1 +0.4**
SBF Sospel 2.76 250 *e*Pn **Pn 05 40 56.4 +0.5**
SBF *e*Sn **Sn 05 41 31.2 +2.3**
comp=E,34nm,0.3s
SBF Sospel 2.76 250 *e*Pn **Pn 05 40 56.4 +0.5**
SBF *e*Sn **Sn 05 41 31.2 +2.3**
comp=E,17nm,0.3s
OBKA Obir 2.96 55 *i* Pn **Pn 05 40 59.8 +1.1**
comp=E,0.5nm,0.1s
OBKA Obir 2.96 55 Pn **Pn 05 40 59.8 +1.1**
comp=E,0.5nm,0.1s
MBDF Montbardon 3.03 269 *e*Pn **Pn 05 40 59.3 -0.4**
MBDF Montbardon 3.03 269 *e*Pn **Pn 05 40 59.3 -0.4**
LPL La Plagne 3.10 283 *e*Pn **Pn 05 41 01.6 +0.9**
LPL La Plagne 3.10 283 *e*Pn **Pn 05 41 01.6 +0.9**
CALF Calern 3.15 251 P **Pn 05 41 02.1 +0.8**
CALF Calern 3.15 251 P **Pn 05 41 02.1 +0.8**
RSL Roselend 3.21 286 P **Pn 05 41 04.9 +2.8**
RSL Roselend 3.21 286 P **Pn 05 41 04.9 +2.8**
OZLJ Ozalj 3.23 75 *e*Pn **Pn 05 41 02.9 +0.7**
OZLJ Ozalj 3.23 75 *e*Pn **Pn 05 41 02.9 +0.7**
SOKA Soboth 3.34 56 *i* Pn **Pn 05 41 04.9 +1.1**
comp=E,0.4nm,0.2s
SOKA Soboth 3.34 56 Pn **Pn 05 41 04.9 +1.1**
comp=E,0.4nm,0.2s
UDBI Udbina 3.40 94 *i* Pn **Pn 05 41 05.2 +0.6**
UDBI Sn **Sn 05 41 43.1 -1.5**
UDBI Udbina 3.40 94 *i* Pn **Pn 05 41 05.2 +0.6**
UDBI Sn **Sn 05 41 43.0 -1.5**
FRF La Foret Royal 3.41 249 *e*Pn **Pn 05 41 05.3 +0.6**
FRF *e*Sn **Sn 05 41 45.3 +0.6**
comp=E,10nm,0.3s
FRF La Foret Royal 3.41 249 *e*Pn **Pn 05 41 05.3 +0.6**
FRF *e*Sn **Sn 05 41 45.3 +0.6**
comp=E,5.2nm,0.3s
LMR La Mourre 3.60 246 *e*Pn **Pn 05 41 07.7 +0.4**
LMR *e*Sn **Sn 05 41 48.8 -0.6**
comp=E,18nm,0.4s
LMR La Mourre 3.60 246 *e*Pn **Pn 05 41 07.7 +0.4**
LMR *e*Sn **Sn 05 41 48.8 -0.6**
comp=E,9.2nm,0.4s
ORIF Oris-en-Rattie 3.65 272 *e*Pn **Pn 05 41 08.5 +0.3**
ORIF Oris-en-Rattie 3.65 272 P **Pn 05 41 09.6 +1.4**
ORIF Oris-en-Rattie 3.65 272 *e*Pn **Pn 05 41 08.5 +0.3**
MOA Molln 3.73 36 *i* Pn **Pn 05 41 10.3 +1.2**
comp=E,0.9nm,0.2s,SNR=4.3
MOA Molln 3.73 36 Pn **Pn 05 41 10.3 +1.2**
comp=E,0.9nm,0.2s,SNR=4.3
KIZ Kirchzarten 3.76 326 P **Pn 05 41 10.2 +0.7**
KIZ Kirchzarten 3.76 326 P **Pn 05 41 10.2 +0.7**
SMRF Simiane la Rot 4.00 259 *e*Pn **Pn 05 41 14.0 +1.0**
SMRF Simiane la Rot 4.00 259 *e*Pn **Pn 05 41 14.0 +1.0**
OPP Oppenau 4.12 333 P **Pn 05 41 15.0 +0.5**
OPP Oppenau 4.12 333 P **Pn 05 41 14.0 -0.4**
HINF Hinteralfeld 4.12 317 *e*Pn **Pn 05 41 14.2 -0.4**
HINF *e*Sn **Sn 05 42 02.3 -0.1**
comp=E,9.0nm,0.3s
HINF Hinteralfeld 4.12 317 *e*Pn **Pn 05 41 14.2 -0.4**
HINF *e*Sn **Sn 05 42 02.3 -0.1**
comp=E,4.5nm,0.3s
ECH Echery 4.27 323 P **Pn 05 41 17.4 +0.8**
ECH Echery 4.27 323 P **Pn 05 41 17.4 +0.8**
CDF Champ du Feu 4.38 325 *e*Pn **Pn 05 41 18.9 +0.8**
CDF *e*Sn **Sn 05 42 07.2 -1.5**
comp=E,6.3nm,0.3s
CDF Champ du Feu 4.38 325 *e*Pn **Pn 05 41 18.9 +0.8**
CDF *e*Sn **Sn 05 42 07.2 -1.5**
comp=E,3.2nm,0.3s
HAU Haudompre 4.50 316 *e*Pn **Pn 05 41 18.0 -1.7**
HAU *e*Sn **Sn 05 42 08.3 -3.3**
comp=E,18nm,0.3s
HAU Haudompre 4.50 316 *e*Pn **Pn 05 41 18.0 -1.7**
HAU *e*Sn **Sn 05 42 08.3 -3.3**
comp=E,8.8nm,0.3s
VIVF Saint-Julien-l 4.51 272 *e*Pn **Pn 05 41 20.0 0.0**
VIVF *e*Sn **Sn 05 42 09.6 -2.4**
comp=E,2.8nm,0.3s
VIVF Saint-Julien-l 4.51 272 *e*Pn **Pn 05 41 20.0 0.0**
VIVF *e*Sn **Sn 05 42 09.6 -2.4**
comp=E,1.4nm,0.3s
CONA Conrad Observa 4.53 46 *i* Pn **Pn 05 41 21.7 +1.5**
comp=E,0.5nm,0.2s
CONA Conrad Observa 4.53 46 Pn **Pn 05 41 21.7 +1.5**
comp=E,0.5nm,0.2s
KHC Kasperske Hory 4.60 21 *e*PN **Pn 05 41 21.9 +0.7**
KHC *e*PG **Pg 05 41 39.5 -1.0**
KHC *e*SN **Sn 05 42 14.2 0.0**
KHC *e*SG **Sg 05 42 38.3 -1.8**
comp=E,11nm,1.1s
KHC Kasperske Hory 4.60 21 Pn **Pn 05 41 21.9 +0.7**
STON Ston 5.23 110 *i* Pn **Pn 05 41 29.3 -0.4**
STON Sn **Sn 05 42 25.1 -4.3**
SMF Signal de Mont 5.33 292 *e*Pn **Pn 05 41 31.5 +0.4**
SMF *e*Sn **Sn 05 42 30.1 -1.9**
comp=E,102nm,1.8s
SMF Signal de Mont 5.33 292 *e*Pn **Pn 05 41 31.5 +0.4**
SMF *e*Sn **Sn 05 42 30.1 -1.9**
comp=E,51nm,1.8s
LOR Lormes 5.53 298 *e*Pn **Pn 05 41 33.4 -0.5**
LOR *e*Sn **Sn 05 42 34.8 -2.2**
LOR Lormes 5.53 298 *e*Pn **Pn 05 41 33.4 -0.5**
SSF Saint Saulge 5.68 295 *e*Pn **Pn 05 41 36.1 +0.2**
SSF Saint Saulge 5.68 295 *e*Pn **Pn 05 41 36.1 +0.2**
AVF Avril sur Loir 5.69 292 *e*Pn **Pn 05 41 36.8 +0.7**
AVF *e*Sn **Sn 05 42 42.1 +1.2**
comp=E,51nm,1.8s
AVF Avril sur Loir 5.69 292 *e*Pn **Pn 05 41 36.8 +0.7**
AVF *e*Sn **Sn 05 42 42.1 +1.2**
comp=E,26nm,1.8s
BGF Bois d'Agland 5.97 289 *e*Pn **Pn 05 41 40.8 +0.9**
BGF Bois d'Agland 5.97 289 *e*Pn **Pn 05 41 40.8 +0.9**
DPC Dobruska-Polom 6.54 31 *e*SG **Sg 05 43 41.2 -1.1**
DPC Dobruska-Polom 6.54 31 Sg **Sg 05 43 41.2 -1.1**
CLL Collm 6.57 11 *e*Sg **Sg 05 43 35.0 -8.1**

BJI ***07*** *06:04:01.1,25.°11S×177.°13W,h105km,mb4.9/12, mB5.3/2*
ISCJB ***07*** *06:04:04.6±0.3,26.°07S±0.°03×177.°57W±0.°08,h161km, mb4.5/42,Error ellipse: s-maj=10.2km s-min=3.8km az=12.5*
IDC ***07*** *06:04:06.9±0.7,25.°89S×177.°54W,h169km±6km,mb4.1/22, mb1 4.2/24,mb1mx4.1/44,mbtmp4.6/24,Error ellipse: s-maj=13.1km s-min=8.5km az=102.0*
NEIC ***07*** *06:04:06.2±1.4,26.°01S×177.°45W,h169km±13km, mb4.8/19,Error ellipse: s-maj=11.6km s-min=8.8km az=124.0*
WEL ***07*** *06:04:06.0,26.°01S×177.°45W,h169km*
ISC 07 06:04:06.1±0.4,26.°07S±0.°05×177.°60W±0.°08,h161km, n166,σ2°42/182,mb4.7/43,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**3.18**	**185**	P	**Pn**	**06 04 58.9**	**+2.8**
RIZ				S	**Sn**	**06 05 41.1**	**+6.0**
RAO	**Raoul Island**	**3.18**	**185**	P	**Pn**	**06 04 59.1**	**+2.9**
	241nm,0.3s,baz=174,slow=21,SNR=5.4						
RAO				S	**Sn**	**06 05 40.3**	**+5.2**
	1µm,0.3s,baz=358,slow=23,SNR=15						
RAO	**Raoul Island**	**3.18**	**185**	P	**Pn**	**06 04 59.1**	**+2.9**
RAO				*e*Sn	**Sn**	**06 05 31.8**	**-3.4**
RAO				S		06 05 40.4	
GLKZ	**Green Lake**	**3.19**	**185**	P	**Pn**	**06 04 59.2**	**+2.9**
GLKZ				S	**Sn**	**06 05 40.9**	**+5.6**
MXZ	**Matakaoa Point**	**11.97**	**196**	S	**Sn**	**06 08 58.5**	**-5.7**
WMGZ	**Waiomatatini S**	**12.19**	**195**	S	**Sn**	**06 09 03.9**	**-5.5**
HAZ	**Te Kaha**	**12.29**	**197**	P	**P**	**06 07 02.4**	**+1.1**
HAZ	**Te Kaha**	**12.29**	**197**	P	**P**	**06 07 02.4**	**+1.1**
HAZ				S	**Sn**	**06 09 06.2**	**-5.6**
PKGZ	**Pakihiroa**	**12.34**	**196**	S	Sn	06 09 03.6	-9.4
PUZ	**Puketiti**	**12.47**	**195**	P	**P**	**06 07 04.0**	**+0.7**
PUZ	**Puketiti**	**12.47**	**195**	P	**P**	**06 07 04.0**	**+0.7**
PUZ				S	Sn	06 09 05.5	-11
RUGZ	**Raukumara Rang**	**12.52**	**197**	P	**Pn**	**06 06 58.3**	**-0.4**
TWGZ	**Tauwhareparae**	**12.64**	**196**	P	**P**	**06 07 05.6**	**+0.3**
CNGZ	**Carnagh Statio**	**12.88**	**195**	P	**Pn**	**06 07 03.5**	**+0.3**
MWZ	**Matawai**	**12.90**	**197**	P	**Pn**	**06 07 03.9**	**+0.3**
MWZ	**Matawai**	**12.90**	**197**	P	**Pn**	**06 07 03.9**	**+0.3**
MWZ				S	Sn	06 09 17.4	-9.2
TKGZ	**Te Karaka**	**12.92**	**196**	P	**Pn**	**06 07 03.9**	**+0.1**
URZ	**Urewera**	**12.95**	**199**	P	**P**	**06 07 07.3**	**-1.4**
	8.0nm,0.3s,baz=261,slow=2.9,SNR=24						
URZ				S	**Sn**	**06 09 20.5**	**-7.1**
	5.4nm,0.3s,baz=133,slow=23,SNR=13						
URZ	**Urewera**	**12.95**	**199**	*e*Pn	**Pn**	**06 07 04.7**	**+0.6**
URZ				*e*Sn	**Sn**	**06 09 21.8**	**-5.8**
URZ	**Urewera**	**12.95**	**199**	P	**Pn**	**06 07 05.8**	**+1.6**
URZ	**Urewera**	**12.95**	**199**	P	**Pn**	**06 07 05.8**	**+1.6**
URZ				S	Sn	06 09 19.3	-8.3
RAGZ	**Rawiri**	**13.09**	**198**	P	**P**	**06 07 10.9**	**+0.6**
RIGZ	**Rimuhau**	**13.19**	**196**	P	**P**	**06 07 10.8**	**-0.6**
MUGZ	**Murupara**	**13.25**	**200**	P	**P**	**06 07 13.3**	**+1.2**
AFI	**Afiamalu**	**13.27**	**25**	P	Pn	06 07 00.4	-8.2
	16nm,0.3s,baz=278,slow=4.0,SNR=14						
AFI				S	Sn	06 09 10.4	-25
	42nm,0.3s,baz=183,slow=18,SNR=11						
AFI	**Afiamalu**	**13.27**	**25**	*e*Pn	Pn	06 07 00.5	-8.0
AFI				*e*Sn	Sn	06 09 12.7	-23
SNGZ	**Shannon Statio**	**13.37**	**197**	P	**P**	**06 07 13.3**	**-0.1**
RAHZ	**Arahi**	**13.57**	**198**	P	**P**	**06 07 15.5**	**-0.1**
NMHZ	**Naumai**	**13.82**	**199**	P	**Pn**	**06 07 16.6**	**+1.4**
HIZ	**Hauiti**	**13.95**	**205**	*e*Pn	**P**	**06 07 23.4**	**+3.6**
HIZ	**Hauiti**	**13.95**	**205**	P	**P**	**06 07 22.1**	**+2.3**
BKZ	**Black Stump Fm**	**13.97**	**199**	*e*Pn	**Pn**	**06 07 18.9**	**+1.8**
BKZ	**Black Stump Fm**	**13.97**	**199**	P	**Pn**	**06 07 17.0**	**-0.2**
KATZ	**Kakaramea**	**14.05**	**202**	P	**P**	**06 07 22.7**	**+1.6**
MCHZ	**McNeill Hill**	**14.17**	**198**	P	**Pn**	**06 07 21.3**	**+1.7**
WTVZ	**West Tongariro**	**14.21**	**202**	P	**P**	**06 07 23.5**	**+0.7**
WTVZ	**West Tongariro**	**14.21**	**202**	P	**P**	**06 07 23.5**	**+0.7**
TWVZ	**Taurewa**	**14.22**	**203**	P	**P**	**06 07 23.3**	**+0.3**
KWHZ	**Kaweka Forest**	**14.23**	**199**	P	**Pn**	**06 07 20.2**	**-0.2**
NGZ	**Ngauruhoe**	**14.26**	**202**	P	**P**	**06 07 24.3**	**+0.9**
TUVZ	**Tukino**	**14.33**	**202**	P	**Pn**	**06 07 23.0**	**+1.2**
FWVZ	**Far West T-bar**	**14.35**	**202**	P	**P**	**06 07 24.0**	**-0.5**
WHVZ	**Whangaehu Hut**	**14.36**	**202**	P	**P**	**06 07 24.7**	**+0.1**
TRVZ	**Turoa**	**14.39**	**202**	P	**P**	**06 07 25.0**	**+0.1**
BHHZ	**Black Hill Sta**	**14.40**	**200**	P	**Pn**	**06 07 20.5**	**-2.0**
MOVZ	**Moawhango**	**14.42**	**201**	P	**Pn**	**06 07 23.8**	**+0.9**
KAHZ	**Kahuranaki**	**14.45**	**197**	P	**Pn**	**06 07 24.0**	**+0.9**
PKVZ	**Pokaka**	**14.45**	**202**	P	**P**	**06 07 25.8**	**+0.3**
MTVZ	**Mangateitei**	**14.49**	**202**	P	**P**	**06 07 26.1**	**+0.1**
VRZ	**Vera Road**	**14.52**	**204**	P	**P**	**06 07 27.3**	**+1.2**
PXZ	**Pawanui**	**14.67**	**197**	P	**Pn**	**06 07 26.2**	**+0.4**
PNHZ	**Pukenui**	**14.75**	**199**	P	**Pn**	**06 07 24.6**	**-2.2**
PKE	**Pukeiti**	**14.87**	**206**	P	**P**	**06 07 31.5**	**+1.4**
TSZ	**Takapari Road**	**14.95**	**199**	P	**Pn**	**06 07 29.4**	**0.0**
PRHZ	**Porangahau**	**14.95**	**197**	P	**P**	**06 07 30.7**	**-0.2**
WAZ	**Wanganui**	**14.99**	**203**	P	**Pn**	**06 07 31.0**	**+1.2**
WAZ	**Wanganui**	**14.99**	**203**	P	**Pn**	**06 07 31.0**	**+1.2**
WAZ				S	**Sn**	**06 10 08.5**	**-8.1**
DVHZ	**Dannevirke**	**15.11**	**199**	P	**Pn**	**06 07 31.0**	**-0.4**
ANWZ	**Angora Road**	**15.18**	**198**	P	**Pn**	**06 07 31.8**	**-0.3**
POWZ	**Post Office Ro**	**15.32**	**200**	P	**Pn**	**06 07 34.3**	**+0.5**
PRWZ	**Pori Road**	**15.41**	**199**	P	**Pn**	**06 07 35.4**	**+0.4**
BFZ	**Birch Farm**	**15.45**	**198**	*e*Pn	**Pn**	**06 07 36.0**	**+0.5**
	159nm,1.5s						
BFZ				*e*Sn	Sn	06 10 15.4	-12
BFZ	**Birch Farm**	**15.45**	**198**	P	**Pn**	**06 07 33.0**	**-2.4**
BFZ				S	Sn	06 10 12.7	-15
MRZ	**Mangatainoka R**	**15.62**	**200**	P	**Pn**	**06 07 33.7**	**-3.9**
MRZ				S	Sn	06 10 14.6	-17
TIWZ	**Tintock**	**15.64**	**199**	P	**Pn**	**06 07 36.7**	**-1.1**
HOWZ	**Holdsworth Sta**	**15.86**	**199**	P	**Pn**	**06 07 38.9**	**-1.5**
HOWZ				S	S	06 10 21.0	-16
OGWZ	**Otaki Gorge**	**15.89**	**200**	P	**Pn**	**06 07 37.1**	**-3.7**
OGWZ				S	S	06 10 24.1	-14
TMWZ	**Te Maipa**	**15.94**	**198**	P	**Pn**	**06 07 40.8**	**-0.7**
KIW	**Kapiti Island**	**16.01**	**201**	P	**Pn**	**06 07 40.8**	**-1.6**
KIW				P	S	06 10 26.2	-14
MTW	**Mount Morrison**	**16.10**	**199**	P	**Pn**	**06 07 42.9**	**-0.5**
CAW	**Cannon Point**	**16.19**	**200**	P	**Pn**	**06 07 43.6**	**-0.8**
CAW				P	S	06 10 29.8	-14
TRWZ	**Traveller**	**16.27**	**198**	P	**Pn**	**06 07 43.9**	**-1.6**
TRWZ				S	S	06 10 31.4	-14
DUWZ	**D'Urville Isla**	**16.30**	**204**	P	**P**	**06 07 42.5**	**-3.3**
DUWZ				P	S	06 10 35.6	-11
PAWZ	**Paruwai Farm**	**16.33**	**199**	P	**P**	**06 07 44.8**	**-1.3**
PAWZ				P	S	06 10 31.0	-16
MSWZ	**Moikau Station**	**16.41**	**199**	P	**P**	**06 07 44.4**	**-2.7**
SNZO	**South Karori**	**16.48**	**201**	*e*Pn	**P**	**06 07 46.4**	**-1.4**
	126nm,1.4s						
TCW	**Tory Channel**	**16.54**	**202**	P	**P**	**06 07 46.0**	**-2.4**
PLWZ	**Palliser**	**16.55**	**199**	P	**P**	**06 07 47.1**	**-1.5**
TUWZ	**Tuamarina**	**16.84**	**202**	P	**P**	**06 07 47.1**	**-4.6**
QRZ	**Quartz Range**	**16.85**	**207**	P	**P**	**06 07 50.0**	**-1.8**
NNZ	**Nelson**	**16.86**	**204**	P	**P**	**06 07 49.2**	**-2.7**
RAR	**Rarotonga**	**17.03**	**77**	*e*Pn	P	06 07 44.8	-9.2
	46nm,1.1s						
CMWZ	**Cape Campbell**	**17.04**	**201**	P	**P**	**06 07 53.5**	**-0.4**
BSWZ	**Blackbirch Sta**	**17.12**	**202**	P	**P**	**06 07 53.4**	**-1.4**
THZ	**Tophouse**	**17.51**	**204**	*e*P	**P**	**06 07 57.7**	**-1.4**
	136nm,1.7s						
THZ	**Tophouse**	**17.51**	**204**	P	**P**	**06 07 57.7**	**-1.4**
KHZ	**Kahutara**	**17.86**	**202**	*e*P	**P**	**06 08 01.9**	**-1.0**
	80nm,0.5s						
KHZ	**Kahutara**	**17.86**	**202**	P	**P**	**06 07 60.0**	**-2.9**
LTZ	**Lake Taylor**	**18.62**	**204**	*e*P	**P**	**06 08 10.6**	**-0.7**
	104nm,1.9s						
OXZ	**Oxford**	**19.18**	**204**	*e*P	**P**	**06 08 14.9**	**-2.4**
	109nm,1.8s						
MQZ	**McQueen's Vall**	**19.30**	**202**	*e*P	**P**	**06 08 17.8**	**-0.8**
	198nm,1.9s						
RPZ	**Rata Peaks**	**19.88**	**205**	P	**P**	**06 08 26.9**	**+2.1**
	13nm,0.6s,baz=359,slow=1.4,SNR=7.6						
RPZ				S	**S**	**06 11 50.2**	**-9.5**
	6.8nm,0.6s,baz=288,slow=20,SNR=5.3						
RPZ	**Rata Peaks**	**19.88**	**205**	*e*P	**P**	**06 08 22.8**	**-2.0**
	105nm,1.6s						
RPZ				S	**S**	**06 11 50.2**	**-9.5**
FOZ	**Fox Glacier**	**20.21**	**207**	*e*P	**P**	**06 08 30.0**	**+1.6**
	152nm,1.5s						
ODZ	**Otahua Downs**	**21.17**	**204**	*e*P	**P**	**06 08 40.4**	**+1.8**
	158nm,1.6s						
WKZ	**Wanaka**	**21.61**	**207**	*e*P	**P**	**06 08 43.3**	**0.0**
	168nm,1.6s						
MLZ	**Mavora Lakes**	**22.41**	**207**	*e*P	**P**	**06 08 52.4**	**+1.0**
	131nm,1.8s						
WHZ	**Wether Hill Ro**	**22.91**	**207**	*e*P	**P**	**06 08 56.6**	**+0.7**
	201nm,1.9s						
KNTN	**Kanton**	**23.84**	**15**	*e*P	**P**	**06 09 01.8**	**-2.8**
	504nm,1.5s						
EIDS	**Eidsvold**	**28.19**	**264**	*e*P	**P**	**06 09 46.4**	**+2.7**
	26nm,1.4s						
CTA	**Charters Tower**	**33.71**	**273**	P	**P**	**06 10 33.6**	**+1.5**
	8.7nm,0.6s,baz=105,slow=11,SNR=16						
CTAO	**Charters Tower**	**33.71**	**273**	*e*P	**P**	**06 10 34.6**	**+2.4**
	10nm,0.7s						
STKA	**Stephens Creek**	**36.01**	**251**	P	**P**	**06 10 53.0**	**+1.2**
	4.1nm,0.6s,baz=85,slow=10,SNR=8.5						
STKA	**Stephens Creek**	**36.01**	**251**	*e*P	**P**	**06 10 53.4**	**+1.5**
	1.6nm,0.9s						
STKA				*e*S	**S**	**06 16 27.6**	**+8.9**
AS01	**Alice Springs**	**43.83**	**262**	*e*P	**P**	**06 11 57.1**	**+0.7**
AS31	**Alice Springs**	**43.87**	**262**	*e*P	**P**	**06 11 57.5**	**+0.7**
	5.4nm,1.2s						
ASAR	**Alice Springs**	**43.87**	**262**	P	**P**	**06 11 57.1**	**+0.4**
	4.4nm,0.5s,baz=91,slow=6.8,SNR=67						
ASAR				S	**S**	**06 18 13.2**	**-2.7**
	0.8nm,0.8s,baz=99,slow=17,SNR=5.7						
WRAB	**Tennant Creek**	**44.45**	**268**	*e*P	**P**	**06 12 01.1**	**-0.3**
	9.9nm,0.6s						
WRA	**Warramunga Arr**	**44.46**	**268**	P	**P**	**06 12 00.8**	**-0.7**
	11nm,0.5s,baz=104,slow=8.0,SNR=85						
WRA				PcP	**PcP**	**06 13 41.6**	**-0.6**
	1.3nm,0.8s,baz=103,slow=3.7,SNR=4.9						
WRA				S	**S**	**06 18 20.0**	**-4.6**
	1.3nm,0.9s,baz=98,slow=16,SNR=3.8						
SBA	**Scott Base**	**52.37**	**184**	*e*P	**P**	**06 13 04.9**	**+3.9**
	12nm,0.8s						
VNDA	**Vanda**	**52.42**	**186**	P	**P**	**06 13 04.5**	**+3.0**
	5.6nm,0.7s,baz=13,slow=8.8,SNR=20						
FITZ	**Fitzroy Crossi**	**52.85**	**266**	P	**P**	**06 13 06.1**	**+0.6**
	11nm,0.8s,baz=136,slow=6.9,SNR=12						
FITZ	**Fitzroy Crossi**	**52.85**	**266**	*e*P	**P**	**06 13 06.4**	**+0.9**
	10nm,0.8s						
NWAO	**Narrogin (SRO)**	**56.35**	**246**	PcP	**PcP**	**06 14 25.1**	**-0.8**
	15nm,1.0s,baz=108,slow=3.2,SNR=2.2						
QSPA	**South Pole Qui**	**64.03**	**180**	P	**P**	**06 14 24.2**	**+1.8**
	16nm,0.9s,baz=41,slow=3.3,SNR=43						
QSPA	**South Pole Qui**	**64.03**	**180**	*e*P	**P**	**06 14 24.1**	**+1.8**
	23nm,1.0s						
MJAR	**Matsushiro Arr**	**74.91**	**324**	P	**P**	**06 15 27.6**	**-1.7**
	0.8nm,0.3s,baz=177,slow=6.7,SNR=4.4						
MAW	**Mawson**	**76.48**	**200**	P	**P**	**06 15 39.3**	**+1.6**
	12nm,0.5s,baz=140,slow=9.4,SNR=57						
MAW	**Mawson**	**76.48**	**200**	*e*P	**P**	**06 15 39.4**	**+1.6**
	2.8nm,0.6s						
ASAJ	**Asahikawa**	**78.78**	**332**	P	**P**	**06 15 49.9**	**-0.8**
	11nm,0.7s,baz=219,slow=9.3,SNR=8.0						
KSRS	**Korea Array**	**81.30**	**319**	P	**P**	**06 16 04.6**	**+0.2**
	0.4nm,0.3s,baz=105,slow=4.2,SNR=3.1						
KSAR	**Wonju Array Be**	**81.32**	**319**	P	**P**	**06 16 04.6**	**+0.1**
PETK	**Petropavlovsk-**	**81.72**	**345**	P	**P**	**06 16 05.5**	**-0.7**
	3.6nm,0.6s,baz=108,slow=5.0,SNR=7.5						
SNAA	**Sanae**	**82.46**	**178**	P	**P**	**06 16 10.4**	**+0.3**
SNAA	**Sanae**	**82.46**	**178**	P	**P**	**06 16 10.3**	**

NV01	Mina Array Sit	84.83	43	eP	P	06 16 21.9	-0.8
NVAR	Mina Array Bea	84.83	43	P	P	06 16 22.3	-0.5
	2.2nm,0.8s,baz=223,slow=8.9,SNR=14						
NVAR				pP	pP	06 17 04.5	+1.6
	0.8nm,0.6s,baz=223,slow=8.4,SNR=3.8						
NV11	Mina Array Sit	84.92	43	eP	P	06 16 22.6	-0.5
	1.5nm,2.0s						
PLCA	Paso Flores	85.20	133	P	P	06 16 25.1	+0.4
	1.1nm,0.8s,baz=257,slow=5.4,SNR=4.2						
KLR	Kul'dur	87.49	330	P	P	06 16 35.0	-0.2
	0.4nm,0.8s,baz=115,slow=4.3,SNR=13						
GYA	Guiyang	89.71	300	eP	P	06 16 48.2	+1.8
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TXAR	Lajitas Array	89.75	57	P	P	06 16 46.2	-0.3
	0.2nm,0.8s,baz=208,slow=5.1,SNR=2.7						
TXAR				pP	pP	06 17 28.6	+1.7
	0.7nm,1.0s,baz=216,slow=4.5,SNR=3.1						
SUA	Susitna One	89.89	13	eP	P	06 16 45.2	-1.1
	8.6nm,0.8s						
ANMO	Albuquerque	90.60	51	pP	pP	06 17 32.6	+1.6
	3.0nm,1.1s,baz=198,slow=6.1,SNR=5.4						
CAST	Castle Rocks	91.44	11	eP	P	06 16 51.1	-2.3
	4.9nm,0.7s						
TRF	Thorofare Moun	91.80	12	eP	P	06 16 53.6	-1.6
	5.5nm,0.8s						
SEY	Seymchan	91.86	347	P	P	06 16 54.6	-0.6
	2.2nm,0.8s,baz=163,slow=11						
KMI	Kunming	92.19	297	P	P	06 17 04.8	+6.7
KMI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PDAR	Pinedale Array	92.75	43	P	P	06 16 59.0	-1.3
	0.6nm,0.7s,baz=222,slow=2.0,SNR=6.0						
PDAR				pP	pP	06 17 41.0	+0.2
	0.5nm,0.8s,baz=173,slow=2.5,SNR=2.7						
DOT	Dot Lake	93.24	14	eP	P	06 17 00.8	-1.0
	5.8nm,0.8s						
SCRK	Sand Creek	93.54	14	eP	P	06 17 02.1	-1.1
	10nm,1.8s						
ILAR	Eielson Array	93.64	13	P	P	06 17 01.5	-2.0
	0.7nm,0.8s,baz=214,slow=5.9,SNR=9.6						
ILAR				pP	pP	06 17 45.2	+1.1
	0.8nm,1.0s,baz=231,slow=4.6,SNR=2.1						
ILAR				PP	PP	06 20 47.8	-3.2
	0.5nm,1.0s,baz=222,slow=6.8,SNR=4.5						
CD2	Chengdu	94.08	302	P	P	06 17 06.7	+0.3
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
LZH	Lanzhou	96.42	307	eP	P	06 17 26.0	+8.9
LZH				pP	pP	06 17 54.7	-3.0
LZH				sP	sP	06 18 07.5	-7.0
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
WMQ	Urumqi	110.79	309	PKP	PKiKP	06 22 20.4	+0.5
MKAR	Makanchi Array	115.22	312	PKP	PKPdf	06 22 26.6	-1.5
	comp=Z,0.3nm,0.5s,baz=90,slow=2.9,SNR=3.5						
MKAR				PKKPbc	PKKPbc	06 33 02.6	-1.9
	comp=Z,1.1nm,1.1s,baz=274,slow=5.5,SNR=3.6						
KSH	Kashi	118.28	303	PKP	PKPdf	06 22 38.6	+4.2
KSH				sPKP		06 23 13.7	
KSH				PP	PP	06 24 03.4	+10
ARCES	ARCESS Array B	134.43	349	PKP	PKPdf	06 23 03.5	-0.7
	comp=Z,2.7nm,1.0s,baz=328,slow=4.3,SNR=5.2						
FINES	FINESS Array B	141.18	342	PKhKP	PKPpre	06 23 08.2	
	comp=Z,0.5nm,0.5s,baz=46,slow=5.5,SNR=4.2						
FINES				PKP	PKPdf	06 23 15.8	-0.9
	comp=Z,0.7nm,0.6s,baz=131,slow=4.2,SNR=3.2						
NB2	NORSAR Subarra	144.53	353	PKP	PKPab	06 23 20.2	-1.4
	comp=Z,6.8nm,0.9s,baz=12,slow=3.4						
NOA	NORSAR Array B	144.53	353	PKP	PKPab	06 23 19.9	-1.7
	comp=Z,5.9nm,0.7s,baz=0.9,slow=3.7,SNR=19						
HFS	Hagfors	145.07	350	PKP	PKPbc	06 23 21.8	-1.6
	comp=Z,4.0nm,0.6s,baz=35,slow=5.3,SNR=15						
AKASG	Malin Array Be	147.96	327	PKPbc	PKPdf	06 23 30.2	+1.4
	comp=Z,1.1nm,0.4s,baz=42,slow=4.4,SNR=2.8						
EKA	Eskdalemuir Ar	150.48	6	PKPab	PKPab	06 23 43.3	-1.9
	comp=Z,2.0nm,0.7s,baz=354,slow=2.2,SNR=5.2						
MMAI	Mount Meron Ar	150.55	291	PKPbc	PKPbc	06 23 39.7	+0.5
	comp=Z,3.5nm,0.5s,baz=72,slow=6.2,SNR=5.5						
BR131	Keskin Array S	150.61	305	ePKPbc	PKPbc	06 23 38.1	-1.2
BRTR	Keskin Array B	150.61	305	PKPbc	PKPbc	06 23 38.4	-0.8
	comp=Z,1.2nm,0.6s,baz=130,slow=4.1,SNR=5.1						
BRTR				PKPab	PKPab	06 23 47.3	+0.7
	comp=Z,1.9nm,0.7s,baz=106,slow=3.6,SNR=8.0						
KHC	Kasperske Hory	155.38	342	ePKPAB	PKPab	06 24 06.0	-0.3
GERES	GERESS Array B	155.61	342	PKPab	PKPab	06 24 06.3	-1.0
	comp=Z,0.3nm,0.6s,baz=19,slow=4.5,SNR=3.8						
GERES				pPKPab	sPKPbc	06 24 51.0	+2.4
	comp=Z,0.2nm,0.4s,baz=297,slow=0.3,SNR=2.0						
TORD	Torodi Ar. Bea	167.13	177	PKP	PKPdf	06 23 51.8	-1.6
	comp=Z,0.9nm,0.7s,baz=312,slow=1.9,SNR=4.5						
TORD				PKPab	PKPab	06 24 57.4	-0.8
	comp=Z,2.2nm,0.8s,baz=176,slow=3.5,SNR=11						
TORD				pPKPab	pPKPab	06 25 42.2	+3.3
	comp=Z,1.5nm,1.1s,baz=225,slow=4.5,SNR=2.4						

IDC 07 06:06:53.0±2.4, 54°.14N×86°.32E, h0km, mb1 3.0/2, mb1mx2.8/69, mbtmp3.0/2, ML2.6/2, Error ellipse: s-maj=18.9km s-min=11.2km az=62.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.91	259	i		06 12 12.8	
	baz=79,slow=335,SNR=1.7						
ZALV	Zalesovo Beam	0.91	259	Pg	Pg	06 07 09.0	-1.4
	1.9nm,0.3s,baz=74,slow=17,SNR=9.3						
ZALV				Lg	Lg	06 07 23.6	
	5.3nm,0.3s,baz=78,slow=30,SNR=23						
ZALV				Rg	Rg	06 07 26.5	
	9.6nm,0.4s,baz=78,slow=30,SNR=16						
KURBB	Kurchatov Arra	5.93	237	Pn	Pn	06 08 23.2	+1.2
	0.1nm,0.3s,baz=54,slow=14,SNR=8.7						
KURBB				Sn	Sn	06 09 35.3	+4.7
	0.0nm,0.3s,baz=52,slow=20,SNR=1.7						
KURBB				Lg	Lg	06 10 01.9	
	0.0nm,0.3s,baz=52,slow=32,SNR=2.0						
MKAR	Makanchi Array	7.79	201	Pn	Pn	06 08 48.5	+0.9
	0.2nm,0.3s,baz=24,slow=14,SNR=7.4						
MKAR				Sn	Sn	06 10 15.7	-0.8
	0.1nm,0.3s,baz=27,slow=24,SNR=2.3						
MKAR				Lg	Lg	06 11 01.2	
	0.1nm,0.3s,baz=32,slow=30,SNR=6.9						

GUC 07 06:30:42.7±0.4, 36°.06S×70°.92W, h4km±8km, ML3.6, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCHI	Chillan	1.08	240	eP	Pg	06 31 01.9	-1.4
CCHI				eS	Sg	06 31 16.4	-0.9
CCHI				IAML		06 31 17.9	
	comp=E,2μm,0.3s						
NICH	Los Niches	1.09	347	eP	Pg	06 31 02.2	-1.4
NICH				eS	Sg	06 31 16.6	-1.1
GO05	HualaæØ	1.33	322	eP	Pn	06 31 05.8	-2.4
GO05				eS	Sg	06 31 23.6	-1.9
GO05				IAML		06 31 24.5	
	comp=E,3μm,0.4s						
COCH	Cobquecura	1.51	267	eP	Pn	06 31 08.6	-1.9
COCH				eS	Sn	06 31 28.6	-2.2
COCH				IAML		06 31 30.6	
	comp=N,1μm,0.6s						
CCSP	San Pedro de C	1.93	246	eP	Pn	06 31 15.0	-1.3
CCSP				eS	Sn	06 31 39.8	-1.1
CCSP				IAML		06 31 42.2	
	comp=N,1μm,0.4s						
LMEL	Las Melosas	2.29	15	eP	Pb	06 31 24.1	-0.6
LMEL				eS	Sb	06 31 54.0	+0.5

IDC 07 06:42:35.7±10.0, 12°.21S×166°.41E, h380km±130km, mb3.2/6, mb1 3.4/7, mb1mx3.0/52, mbtmp4.0/7, Error ellipse: s-maj=99.0km s-min=28.4km az=162.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	9.80	180	P	Pn	06 44 51.1	-0.3
	1.1nm,0.3s,baz=180,slow=20,SNR=1.7						
DZM				S	S	06 46 43.4	+0.6
	0.3nm,0.3s,baz=288,slow=20,SNR=1.6						
CTA	Charters Tower	20.86	245	P	P	06 46 49.7	+0.1
	2.3nm,0.6s,baz=67,slow=12,SNR=4.6						
WRA	Warramunga Arr	31.71	252	P	P	06 48 26.2	+0.2
	1.5nm,0.6s,baz=82,slow=9.0,SNR=11						
ASAR	Alice Springs	32.87	245	P	P	06 48 35.0	-1.0
	1.1nm,0.9s,baz=76,slow=9.0,SNR=7.1						
FITZ	Fitzroy Crossi	39.72	256	P	P	06 49 33.5	+0.2
	3.3nm,1.0s,baz=90,slow=9.6,SNR=5.7						
ILAR	Eielson Array	84.41	18	P	P	06 54 26.0	-0.1
	0.5nm,0.5s,baz=236,slow=4.7,SNR=5.1						
MKAR	Makanchi Array	94.81	317	P	P	06 55 15.2	-0.1
	0.2nm,0.6s,baz=111,slow=6.3,SNR=2.0						

ISK 07 06:46:23.9, 38°.78N×38°.06E, h16km, ML2.1/6
ISCJB 07 06:46:25.2±0.5, 38°.78N±0°.03×38°.05E±0°.04, h18km±9km, Error ellipse: s-maj=5.2km s-min=4.9km az=9.3
DDA 07 06:46:25.3, 38°.77N×38°.10E, h7km, Ml2.9
CSEM 07 06:46:25.0±0.2, 38°.78N×38°.10E, h5km, ML2.9, Error ellipse: s-maj=4.2km s-min=4.1km az=163.0
ISC 07 06:46:24.9±0.9, 38°.77N±0°.02×38°.09E±0°.03, h15km±7km, n21, σ0s64/37, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HEKM	Malatya_Hekimh	0.14	317	iP	Pg	06 46 28.9	0.0
HEKM				iS	Sg	06 46 31.5	-0.1
HEKM	Malatya_Hekimh	0.14	317	P	Pg	06 46 28.9	0.0
HEKM				S	Sg	06 46 31.5	-0.1
AKCD	Akcadag	0.49	195	iP	Pg	06 46 34.7	0.0
AKCD				iS	Sb	06 46 42.9	+0.5
AKCD	Akcadag	0.49	195	P	Pg	06 46 34.7	0.0
AKCD				S	Sb	06 46 42.9	+0.5
DARE	Darende-Malaty	0.51	247	PG	Pg	06 46 33.8	-1.2
DARE				SG	Sg	06 46 42.6	+0.7
DARE	Darende-Malaty	0.51	247	ePg	Pg	06 46 33.8	-1.2
DARE				eSg	Sg	06 46 42.6	+0.7
MALT	Malatya	0.53	150	PG	Pg	06 46 34.8	-0.6
MALT				SG	Sb	06 46 43.7	+0.3
MALT	Malatya	0.53	150	ePg	Pg	06 46 34.8	-0.6
MALT				eSg	Sb	06 46 43.7	+0.3
KEMA	Kemaliye	0.59	33	iP	Pg	06 46 35.5	-1.0
KEMA				iS	Sb	06 46 45.6	+0.5
KEMA	Kemaliye	0.59	33	P	Pg	06 46 35.5	-1.0
KEMA				S	Sb	06 46 45.6	+0.5
CUKAN	kangal_SIVAS	0.73	319	iP	Pg	06 46 39.5	+0.4
CUKAN				iS	Sg	06 46 48.6	-0.1
CUKAN	kangal_SIVAS	0.73	319	P	Pg	06 46 39.5	+0.4
CUKAN				S	Sg	06 46 48.6	-0.1
ELZG	Elazig	0.76	111	iP	Pg	06 46 39.6	0.0
ELZG				iS	Sb	06 46 50.7	+0.7
ELZG	Elazig	0.76	111	P	Pg	06 46 39.6	0.0
ELZG				S	Sb	06 46 50.7	+0.7
ILIC	ilic-Erzincan	0.78	29	PG	Pg	06 46 39.2	-0.8
ILIC				SG	Sb	06 46 51.1	+0.6
ILIC	ilic-Erzincan	0.78	29	ePg	Pg	06 46 39.2	-0.8
ILIC				eSg	Sb	06 46 51.1	+0.6
PTK	Pertek	1.03	83	PG	Pb	06 46 45.1	+0.6
PTK	Pertek	1.03	83	ePg	Pb	06 46 45.1	+0.6
SVRC	Sivrice-ELAZID	1.03	112	PG	Pg	06 46 44.3	-0.6
SVRC	Sivrice-ELAZID	1.03	112	ePg	Pg	06 46 44.3	-0.6
SARI	SarD1z-Kayseri	1.36	255	PN	Pn	06 46 48.4	-1.0

CSEM 07 07:02:35.2, 38°.00N×26°.29W, h4km, ML2.4
PDA 07 07:02:35.2±1.5, 38°.00N×26°.29W, h4km±8km, MD3.6, ML2.4, Error ellipse: s-maj=6.0km s-min=5.5km az=38.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSET	Sete Cidades	0.48	111	eP	Pg	07 02 43.3	-1.2
PSET				eS	Sg	07 02 50.5	-0.2
PSET				A	A	07 02 51.9	
	124nm,0.4s						
PSET	Sete Cidades	0.48	111	eP	Pg	07 02 43.3	-1.2
PSET				eS	Sg	07 02 50.5	-0.2
PDA	Ponta Delgada	0.56	117	eP	Pg	07 02 44.8	-1.1
PDA				eS	Sg	07 02 52.6	-0.5
PDA				A	A	07 02 52.9	
	88nm,0.4s						
PDA	Ponta Delgada	0.56	117	eP	Pg	07 02 44.8	-1.1
PDA				eS	Sg	07 02 52.6	-0.5
GRON	Grota Negra	0.64	111	eP	Pg	07 02 47.4	-0.1
GRON				eS	Sb	07 02 57.4	-1.0
GRON				A	A	07 02 59.9	
	31nm,0.2s						
CMLA	Cha da Macela	0.65	111	eP	Pg	07 02 46.1	-1.6
CMLA				eS	Sg	07 02 54.9	-1.2
CMLA				A	A	07 02 57.6	
	108nm,0.2s						
CMLA	Cha da Macela	0.65	111	eP	Pg	07 02 46.1	-1.6
CMLA				eS	Sg	07 02 54.9	-1.2
BART	Pico Bartolome	0.91	104	eP	Pg	07 02 49.5	-3.2
BART				eS	Sg	07 03 01.1	-3.5
BART				A	A	07 03 01.9	
	23nm,0.1s						
BART	Pico Bartolome	0.91	104	eP	Pg	07 02 49.5	-3.2
BART				eS	Sg	07 03 01.1	-3.5
PSCM	Serra do Cume	0.96	317	eP	Pg	07 02 50.5	-3.1
PSCM				eS	Sg	07 03 01.4	-4.6
PSCM				A	A	07 03 04.1	
	80nm,0.3s						
PSCM	Serra do Cume	0.96	317	eP	Pg	07 02 50.5	-3.1
PSCM				eS	Sg	07 03 01.4	-4.6
ADH	Angra Heroismo	0.99	312	eP	Pg	07 02 50.8	-3.4
ADH				eS	Sg	07 03 02.8	-4.3
ADH				A	A	07 03 04.2	
	26nm,0.2s						
ADH	Angra Heroismo	0.99	312	eP	Pg	07 02 50.8	-3.4
ADH				eS	Sg	07 03 02.8	-4.3
PSMA	Santa Maria	1.36	137	eP	Pn	07 02 56.5	-4.5
PSMA				eS	Sg	07 03 11.3	-7.7
PSMA				A	A	07 03 16.1	
	35nm,0.6s						
PSMN	Pico do Norte,	1.39	135	eP	Pn	07 02 56.7	-4.7
PSMN				eS	Sg	07 03 12.0	-7.9
PSMN				A	A	07 03 15.1	
	22nm,0.3s						
PSMN	Pico do Norte,	1.39	135	eP	Pn	07 02 56.7	-4.7
PSMN				eS	Sg	07 03 12.0	-7.9
PMAN	Manadas	1.55	295	eP	Pn	07 02 58.9	-4.7
PMAN				eS	Sn	07 03 16.4	-7.8
PMAN				A	A	07 03 17.2	
	16nm,0.1s						
PMAN	Manadas	1.55	295	eP	Pn	07 02 58.9	-4.7
PMAN				eS	Sn	07 03 16.4	-7.8
PGRA	Graciosa	1.68	308	eS	Sn	07 03 19.9	-7.5
PGRA	Graciosa	1.68	308	eS	Sn	07 03 19.9	-7.5
ROSA	Rosais	1.69	296	eP	Pn	07 03 00.8	-4.8
ROSA				eS	Sn	07 03 20.0	-7.8
ROSA				A	A	07 03 21.3	
	8.6nm,0.1s						
ROSA	Rosais	1.69	296	eP	Pn	07 03 00.8	-4.8
ROSA				eS	Sn	07 03 20.0	-7.8
PICO	Pico	1.75	287	eP	Pn	07 03 02.2	-4.3
PICO				eS	Sn	07 03 21.5	-7.9
PICO				A	A	07 03 22.5	
	31nm,0.4s						
PICO	Pico	1.75	287	eP	Pn	07 03 02.2	-4.3
PICO				eS	Sn	07 03 21.5	-7.9
PCAN	Candelaria	1.79	286	eS	Sn	07 03 22.5	-7.7
PCAN				A	A	07 03 24.4	
	14nm,0.1s						
PCAN	Candelaria	1.79	286	eS	Sn	07 03 22.5	-7.7

ISCJB 07 07:18:25.1±0.6, 37°.82N±0°.03×30°.51E±0°.05, h9km±4km, Error ellipse: s-maj=6.2km s-min=5.9km az=176.9
DDA 07 07:18:25.1, 37°.83N×30°.49E, h7km, Ml2.5
CSEM 07 07:18:25.1, 37°.83N×30°.49E, h7km, ML2.5
ISC 07 07:18:25.1±1.1, 37°.83N±0°.03×30°.46E±0°.04, h6km±9km, n13, σ0s71/25, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISP	Isparta	0.05	94	PG	Pg	07 18 25.8	-0.8
ISP				SG	Sg	07 18 28.5	+0.8
BAGO	Egridir - ISPA	0.31	58	iP	Pg	07 18 30.8	-0.3
BAGO				iS	Sg	07 18 35.5	+0.3
BRDR	BURDUR-Merkez	0.34	248	iP	Pg	07 18 32.5	+0.8
BRDR				iS	Sb	07 18 38.5	-0.8
BRDR	BURDUR-Merkez	0.34	248	P	Pg	07 18 32.5	+0.8
BRDR				S	Sb	07 18 38.5	-0.8
KZIL	AFYON_Kizioren	0.50	330	iP	Pg	07 18 34.6	-0.1
KZIL				iS	Sb	07 18 43.7	-0.2
KZIL	AFYON_Kizioren	0.50	330	P	Pg	07 18 34.6	-0.1
KZIL				S	Sb	07 18 43.7	-0.2
SUTC	Sutluce-Ispart	0.55	129	PG	Pg	07 18 35.9	+0.1
KORT	Korkueli	0.83	186	iP	Pg	07 18 40.7	-0.3
KORT				iS	Sb	07 18 53.6	+0.2
KORT	Korkueli	0.83	186	P	Pg	07 18 40.7	-0.3
KORT				S	Sb	07 18 53.6	+0.2
GOLH	Golhisar	0.92	231	iP	Pg	07 18 41.8	-1.0
GOLH				iS	Sb	07 18 56.3	+0.1
GOLH	Golhisar	0.92	231	P	Pg	07 18 41.8	-1.0
GOLH				S	Sb	07 18 56.3	+0.1
KHAL	Karahalli	0.94	306	iP	Pg	07 18 42.1	-0.9
KHAL				iS	Sb	07 18 57.6	+1.1
KHAL	Karahalli	0.94	306	P	Pg	07 18 42.1	-0.9
KHAL				S	Sb	07 18 57.6	+1.1

CSEM 07 07:18:38.3, 38°.99N×29°.59E, h19km, ML2.7
ISK 07 07:18:38.3, 38°.99N×29°.59E, h19km, ML2.7/13, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVSB	Tavsanli	0.47	348	PG	Pn	07 18 49.5	-0.6
TVSB				SG	Sb	07 18 54.7	0.0
TVSB	Tavsanli	0.47	348	PG	Pn	07 18 49.6	-0.5
TVSB				SG	Sg	07 18 53.6	-0.8
TVSB	Tavsanli	0.47	348	ePg	Pn	07 18 49.6	-0.5
TVSB				eSg	Sg	07 18 53.6	-0.8
TVSB	Tavsanli	0.47	348	iPg	Pn	07 18 49.5	-0.6
TVSB				iSg	Sb	07 18 54.7	0.0
KULA	Kula-Manisa	0.87	237	PG	Pg	07 18 55.1	-0.2
KULA				SG	Sn	07 19 08.4	+0.6
KULA	Kula-Manisa	0.87	237	iPg	Pg	07 18 55.1	-0.2
KULA				iSg	Sn	07 19 08.4	+0.6
AUBOZ	BOZOYUK	0.98	20	PG	Pg	07 18 57.3	-0.1
AUBOZ	BOZOYUK	0.98	20	PG	Pb	07 18 56.8	+0.1
AUBOZ				SG	Sb	07 19 04.5	-4.8
AUBOZ	BOZOYUK	0.98	20	ePg	Pb	07 18 56.8	+0.1
AUBOZ				eSg	Sb	07 19 04.5	-4.8
AUBOZ	BOZOYUK	0.98	20	ePg	Pg	07 18 57.3	-0.1
BORA	Eskisehir	1.11	37	PN	Pg	07 19 00.1	+0.2
BORA	Eskisehir	1.11	37	PG	Pg	07 19 02.0	+2.1
BORA	Eskisehir	1.11	37	ePg	Pg	07 19 02.0	+2.1
BORA	Eskisehir	1.11	37	ePn	Pg	07 19 00.1	+0.2
CAVI	Cavuskoy	1.22	9	PN	Pn	07 18 58.5	-1.9
CAVI	Cavuskoy	1.22	9	PG	Pn	07 18 58.5	-1.9
CAVI				SG	Sb	07 19 08.4	-7.9
CAVI	Cavuskoy	1.22	9	ePg	Pn	07 18 58.5	-1.9
CAVI				eSg	Sb	07 19 08.4	-7.9
CAVI	Cavuskoy	1.22	9	ePn	Pn	07 18 58.5	-1.9
ADVT	Abdulvahap	1.44	5	PN	Pn	07 19 03.9	+0.5
ADVT	Abdulvahap	1.44	5	PG	Pn	07 19 02.4	-1.0
ADVT	Abdulvahap	1.44	5	ePg	Pn	07 19 02.4	-1.0
ADVT	Abdulvahap	1.44	5	ePn	Pn	07 19 03.9	+0.5
BALB	Balikesir	1.48	297	PN	Pb	07 19 05.2	+0.1
BALB	Balikesir	1.48	297	ePn	Pb	07 19 05.2	+0.1
MDNY	Mudanya-Bursa	1.48	339	PN	Pb	07 19 04.6	-0.6
MDNY	Mudanya-Bursa	1.48	339	ePn	Pb	07 19 04.6	-0.6
YLV	Yalova	1.58	354	PN	Pn	07 19 05.3	-0.1
YLV	Yalova	1.58	354	PG	Pn	07 19 04.5	-0.9
YLV	Yalova	1.58	354	ePg	Pn	07 19 04.5	-0.9
YLV	Yalova	1.58	354	ePn	Pn	07 19 05.3	-0.1
GULT	Gulveren	1.61	26	PN	Pn	07 19 06.4	+0.7
GULT	Gulveren	1.61	26	PN	Pb	07 19 08.1	+0.7
GULT	Gulveren	1.61	26	ePn	Pb	07 19 08.1	+0.7
GULT	Gulveren	1.61	26	ePn	Pn	07 19 06.4	+0.7
ARMT	Armutlu	1.67	341	PN	Pn	07 19 06.7	+0.2
ARMT	Armutlu	1.67	341	PG	Pn	07 19 05.9	-0.6
ARMT	Armutlu	1.67	341	ePg	Pn	07 19 05.9	-0.6
ARMT	Armutlu	1.67	341	ePn	Pn	07 19 06.7	+0.2
GONE	Gonen-Balikesi	1.81	306	PN	Pb	07 19 09.9	-0.9
GONE	Gonen-Balikesi	1.81	306	ePn	Pb	07 19 09.9	-0.9
HRT	Hereke	1.83	2	PN	Pn	07 19 09.0	+0.2
HRT	Hereke	1.83	2	PN	Pn	07 19 09.2	+0.4
HRT	Hereke	1.83	2	ePn	Pn	07 19 09.2	+0.4
HRT	Hereke	1.83	2	ePn	Pn	07 19 09.0	+0.2
ISK	Istanbul-Kandi	2.11	349	PN	Pn	07 19 13.7	+1.1
ISK	Istanbul-Kandi	2.11	349	PN	Pn	07 19 13.4	+0.8
ISK	Istanbul-Kandi	2.11	349	ePn	Pn	07 19 13.4	+0.8
ISK	Istanbul-Kandi	2.11	349	ePn	Pn	07 19 13.7	+1.1
RKY	Sarkoy-Tekirda	2.51	313	PN	Pn	07 19 19.6	+1.4
RKY	Sarkoy-Tekirda	2.51	313	ePn	Pn	07 19 19.6	+1.4

IDC 07 07:23:07.0±3.1, 4°.56S×152°.85E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.6/53, mbtmp3.8/6, Error ellipse: s-maj=106.6km s-min=26.4km az=112.0
NEIC 07 07:23:15.9±5.0, 4°.77S×152°.95E, h72km±26km, mb4.1/3, Error ellipse: s-maj=78.3km s-min=11.6km az=106.0
ISC 07 07:23:09.6±1.9, 4°.9S±0°.2×153°.5E±0°.3, h35km, n15, σ0s64/15, mb3.9/8, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	1.49	298	ePn	Pn	07 23 34.1	+0.3
WB2	Warramunga Arr	23.88	230	eP	P	07 28 20.5	+0.4
	9.6nm,1.3s						
WR1	Warramunga Arr	23.89	230	eP	P	07 28 20.1	-0.1
	8.4nm,1.3s						
WRA	Warramunga Arr	23.89	230	P	P	07 28 20.1	-0.1
	0.8nm,0.6s,baz=52,slow=9.9,SNR=4.6						
ASAR	Alice Springs	26.53	223	P	P	07 28 45.4	+1.1
	0.3nm,0.7s,baz=56,slow=9.1,SNR=3.4						
FITZ	Fitzroy Crossi	30.20	242	P	P	07 29 16.4	-0.5
	2.6nm,0.9s,baz=53,slow=12,SNR=4.

CLCH	Cerro Calan	1.99	153	eP	Pn	07 41 26.1 +1.5
RTLS	Leoncito	1.99	96	eP	Pn	07 41 26.1 +1.3
RTLS				eS	Sn	07 41 51.0 +2.2
AUSP	Uspallata	2.00	108	eP	Pn	07 41 25.3 +0.4
FCH	Farellones	2.04	147	eP	Pn	07 41 26.8 +1.3
ANTU	Antumapu	2.11	157	eP	Pn	07 41 28.0 +1.7
ANTU				eS	Sn	07 41 53.4 +1.9
ANTU				IAML		07 41 58.6
	comp=E,7µm,0.5s					
AROD	Rodeo	2.35	52	eP	Pb	07 41 32.8 -2.3
AROD				eS	Sb	07 42 02.7 -1.0
LMEL	Las Melosas	2.52	152	eP	Pn	07 41 33.6 +1.6
LMEL				eS	Sn	07 42 03.8 +2.2
ASAL	Salagasta	2.56	113	eP	Pn	07 41 33.0 +0.6
ARCO	CERRO ARCO	2.58	119	eP	Pn	07 41 32.9 +0.1
ARCO				IAML		07 41 53.9
	comp=Z,2µm,0.4s					
ACDV	Cuesta del Vie	2.60	57	eP	Pn	07 41 35.7 +2.7
RTCV	Cerro Valdivia	2.64	96	eP	Pn	07 41 34.4 +0.9
RTLL	Cerro Villicun	2.71	85	eP	Pn	07 41 35.7 +1.3
LCO	Las Campanas	2.73	17	ePn	Pn	07 41 37.3 +2.4
LCO				eSn	Sn	07 42 09.8 +2.9
LCO	Las Campanas	2.73	17	eP	Pn	07 41 37.4 +2.4
LCO				eS	Sn	07 42 09.9 +2.9
AMOG	MOGNA	2.77	76	eP	Pn	07 41 36.9 +1.6
AAGR	Agrelo	2.78	122	eP	Pn	07 41 35.7 +0.2
AVIZ	Vizcacheras	3.21	126	eP	Pn	07 41 41.6 +0.2
GO05	HualaæØ	3.38	184	ePn	Pn	07 41 44.8 +1.1
GO05				eSn	Sn	07 42 21.6 -1.2
AGUA	GUANDACOL	3.44	53	eP	Pn	07 41 47.6 +3.0
AGUA				ePn	Sn	07 42 29.1 +4.7
AGUA				eS	Sn	07 42 29.1 +4.7
ACAN	Cantantal	3.83	101	eP	Pn	07 41 51.3 +1.4
VCA	Vinchina	4.13	47	eP	Pn	07 41 57.5 +3.4
VCA				eS	Sn	07 42 46.0 +4.5
VCA				IAML		07 42 55.8
	comp=Z,2µm,0.7s					
GO03	Copiap	4.20	17	ePn	Pn	07 41 57.0 +2.0
GO03				eSn	Sn	07 42 43.3 +0.4
APLL	PUNTA DE LOS L	4.54	76	eP	Pn	07 42 02.2 +2.5
APLL				eS	Sn	07 42 54.0 +2.5
MRA	San Martin	5.08	101	eP	Pn	07 42 08.5 +1.4
MRA				IAML		07 43 34.6
	comp=Z,534nm,0.6s					
GO02	Mina Guanaco	6.68	16	ePn	Pn	07 42 29.2 -0.2
PB10	IPOC Station P	8.14	7	ePn	Pn	07 42 50.5 +1.4
PLCA	Paso Flores	9.13	175	P	Pn	07 43 04.1 +1.5
	comp=Z,1.2nm,0.3s,baz=4.2,slow=12,SNR=20					
PLCA				LR	LR	07 46 26.8
	comp=Z,259nm,18.7s,baz=197,slow=36					
PLCA	Paso Flores	9.13	175	ePn	Pn	07 43 04.3 +1.6
PB04	IPOC Station P	9.35	8	ePn	Pn	07 43 05.7 -0.1
TRQA	Tornquist	10.19	132	ePn	Pn	07 43 16.9 -0.3
PB01	IPOC Station P	10.71	11	ePn	Pn	07 43 22.5 -1.9
MNMC	Minye Minye	12.58	9	ePn	Pn	07 43 49.0 -1.1
CPUP	Villa Florida	13.58	71	P	Pn	07 44 01.3 -2.2
	comp=Z,0.5nm,0.3s,baz=243,slow=12,SNR=12					
CPUP				S	Sn	07 46 34.1 +0.9
	comp=Z,0.9nm,0.3s,baz=312,slow=18,SNR=2.2					
CPUP	Villa Florida	13.58	71	ePn	Pn	07 44 01.3 -2.2
CPUP				eSn	Sn	07 46 33.3 +0.1
LPAZ	La Paz	15.60	13	P	P	07 44 33.1 -2.1
	comp=Z,0.2nm,0.3s,baz=161,slow=8.9,SNR=16					
LPAZ	La Paz	15.60	13	ePn	Pn	07 44 32.1 +0.9
	comp=Z,9.2nm,1.0s					
CHRN	Cochrane	15.62	182	ePn	Pn	07 44 30.0 -0.8
	comp=Z,9.2nm,0.9s					
CHRN				eSn	Sn	07 47 25.9 +3.1
SIV	San Ignacio	18.30	34	P	P	07 45 04.1 -0.4
	comp=Z,0.6nm,0.3s,baz=208,slow=9.5,SNR=30					
SIV				LR	LR	07 53 03.9
	comp=Z,146nm,20.8s,baz=170,slow=40					
NNA	Nana	20.13	345	LR	LR	07 51 19.4
	comp=Z,89nm,20.9s,baz=166,slow=31					
SAML	Samuel	23.89	21	eP	P	07 46 02.3 -1.7
	comp=Z,3.6nm,0.8s					
SNAA	Sanae	53.65	159	P	P	07 50 11.2 0.0
	comp=Z,4.4nm,0.7s,baz=265,slow=5.4,SNR=23					
SNAA				pP	sP	07 50 25.1 +0.4
	comp=Z,9.0nm,0.8s,baz=274,slow=7.2,SNR=14					
SNAA	Sanae	53.65	159	eP	P	07 50 11.1 -0.1
SNAA				epP	sP	07 50 24.9 +0.2
QSPA	South Pole Qui	58.60	180	eP	P	07 50 47.4 +0.7
	comp=Z,12nm,1.1s					
ZAIG	Zacatecas	61.67	327	eP	P	07 51 06.1 -2.3
	comp=Z,8.8nm,1.7s					
557A	Orange Park	62.05	350	P	P	07 51 09.9 -0.5
	baz=170					
446A	Poplarville	64.32	343	P	P	07 51 26.1 +0.6
	baz=163					
251A	Midway	64.70	347	P	P	07 51 27.8 -0.2
	baz=167					
346A	Big Creek Wild	64.91	343	P	P	07 51 30.0 +0.7
	baz=163					
151A	Opelika	65.11	347	P	P	07 51 30.2 -0.4
	baz=167					
152A	Waverly Hall	65.14	348	P	P	07 51 30.7 -0.1
	baz=167					
833A	Chaparral WMA,	65.22	333	P	P	07 51 33.0 +1.6
	baz=154					
833A	Chaparral WMA,	65.22	333	eP	P	07 51 33.3 +1.9
	comp=Z,12nm,0.8s					
149A	Jones	65.47	346	P	P	07 51 33.2 +0.3
	baz=166					
Z52A	Williamson	65.59	348	P	P	07 51 33.9 +0.2
	baz=168					
245A	Little AP, Sta	65.63	343	P	P	07 51 34.8 +0.8
	baz=163					
GOGA	Godfrey	65.65	349	P	P	07 51 34.9 +0.9
	baz=169					
342A	Flagon Creek P	65.66	341	P	P	07 51 35.2 +1.1
	baz=160					
244A	Avery, Jackson	65.84	342	P	P	07 51 36.2 +0.9
	baz=162					
Z50A	Ashland	65.93	347	P	P	07 51 36.5 +0.6
	baz=166					
Z49A	Columbiana	65.99	346	P	P	07 51 35.9 -0.3
	baz=166					
145A	Houston Renfro	66.19	343	P	P	07 51 36.8 -0.7
	baz=163					
Y52A	Lilburn	66.19	349	P	P	07 51 37.6 +0.1
	baz=168					
Z47A	Carrollton	66.32	345	P	P	07 51 38.8 +0.4
	baz=164					
Z48A	Northport	66.38	345	P	P	07 51 38.9 +0.2
	baz=165					
Y51A	Rockmart	66.40	348	P	P	07 51 38.7 -0.2
	baz=167					
VNDA	Vanda	66.49	191	P	P	07 51 40.7 +1.7
	comp=Z,0.7nm,0.7s,baz=134,slow=6.1,SNR=3.1					
Z46A	Louisville	66.51	344	P	P	07 51 40.2 +0.6
	baz=164					
Z45A	Winona	66.86	344	P	P	07 51 42.7 +0.9
	baz=163					
X52A	Dahlonega	66.88	349	P	P	07 51 42.2 +0.2
	baz=168					
Y47A	UCPARC, Winfie	66.95	345	P	P	07 51 42.7 +0.3
	baz=165					
X51A	Calhoun	67.01	348	P	P	07 51 43.4 +0.7
	baz=167					
X50B	Fort Payne	67.05	347	P	P	07 51 43.5 +0.5
	baz=167					
Y46A	Houston	67.16	344	P	P	07 51 44.0 +0.3
	baz=164					
Y45A	Yeager Farm, C	67.30	344	P	P	07 51 45.4 +0.8
	baz=163					
JCT	Junction City	67.31	334	P	P	07 51 45.5 +0.7
	baz=154					
JCT	Junction City	67.31	334	eP	P	07 51 46.6 +1.8
	comp=Z,7.3nm,0.8s					
X48A	Hartselle	67.31	346	P	P	07 51 45.3 +0.7
	baz=166					
W53A	Cullowhee	67.32	350	P	P	07 51 44.4 -0.5
	baz=169					
X47A	Russelville	67.55	346	P	P	07 51 46.2 0.0
	baz=165					
W50A	Signal Mountai	67.71	348	P	P	07 51 47.7 +0.4
	baz=167					
V53A	Saluda	67.76	350	P	P	07 51 47.4 -0.1
	baz=169					
X45A	UM Field Stati	67.80	344	P	P	07 51 47.7 0.0
	baz=163					
WHTX	Lake Whitney,	67.83	336	eP	P	07 51 49.7 +1.7
TX31	Lajitas Ar. Sí	67.85	330	eP	P	07 51 49.8 +1.5
TXAR	Lajitas Array	67.85	330	P	P	07 51 49.7 +1.4
	comp=Z,1.5nm,0.7s,baz=151,slow=8.5,SNR=20					
OXF	Oxford	67.88	344	P	P	07 51 48.2 0.0
	baz=163					
OXF	Oxford	67.88	344	eP	P	07 51 48.6 +0.3
	comp=Z,19nm,0.8s					
CCAR	Cane Creek	67.90	342	eP	P	07 51 49.6 +1.3
	comp=Z,77nm,1.9s					
SYO	Syowa Base	67.94	159	eP	P	07 51 46.1 -2.2
W48A	Pulaski	67.95	347	P	P	07 51 48.9 +0.2
	baz=166					
X44A	Crenshaw	68.05	344	P	P	07 51 49.1 -0.2
	baz=163					
V52A	Sevierville	68.05	350	P	P	07 51 49.1 -0.2
	baz=169					
V50A	Pikevile	68.13	348	P	P	07 51 49.8 0.0
	baz=167					
W47A	Westpoint	68.20	346	P	P	07 51 50.1 -0.1
	baz=165					
V49A	McMinnville	68.36	348	P	P	07 51 51.4 +0.1
	baz=167					
V48A	Smith Brothers	68.51	347	P	P	07 51 52.5 +0.2
	baz=166					
V47A	Nunnelly	68.74	346	P	P	07 51 53.8 +0.2
	baz=165					
V46A	Holladay	68.84	346	P	P	07 51 53.7 -0.5
	baz=165					
V45A	Humboldt	68.96	345	P	P	07 51 55.1 +0.2
	baz=164					
MIAR	Mount Ida	68.99	341	P	P	07 51 56.1 +0.9
	baz=160					
U49A	Red Boiling Sp	69.07	348	P	P	07 51 55.6 -0.1
	baz=167					
WVT	Waverly	69.09	346	P	P	07 51 56.0 +0.2
	baz=165					
WVT	Waverly	69.09	346	eP	P	07 51 56.1 +0.3
	comp=Z,12nm,0.8s					
X39A	Fountain Ranch	69.11	340	P	P	07 51 56.7 +0.7
	baz=159					
ABTX	Abilene, Hawle	69.17	335	P	P	07 51 57.3 +0.9
	baz=154					
ABTX	Abilene, Hawle	69.17	335	eP	P	07 51 57.5 +1.1
	comp=Z,6.6nm,0.9s					
U48A	Cassie Pea, Po	69.21	347	P	P	07 51 56.7 +0.2
	baz=166					
W41B	Gary Mavity, V	69.22	342	P	P	07 51 57.1 +0.6
	baz=161					
U47A	Clarksville	69.28	347	P	P	07 51 57.3 +0.3
	baz=165					
U46A	Springville	69.39	346	P	P	07 51 57.9 +0.3
	baz=165					
W40A	Ferguson Farm,	69.45	341	P	P	07 51 58.9 +0.8
	baz=160					
U45A	Rockin P Farm,	69.50	345	P	P	07 51 58.9 +0.6
	baz=164					
IP04	Greensprings	69.62	355	eP	P	07 52 00.7 +1.7
	comp=Z,46nm,1.8s					
W39A	Magazine	69.66	341	P	P	07 52 00.4 +1.1
	baz=160,SNR=5.7					
W39A	Magazine	69.66	341	eP	P	07 52 00.7 +1.4
	comp=Z,10nm,0.9s					
T48A	Bowling Green	69.76	347	P	P	07 51 59.8 -0.1
	baz=166					
V41A	Mountainview	69.77	342	P	P	07 52 00.3 +0.3
	baz=161					
S52A	Salyersville	69.77	350	P	P	07 51 59.7 -0.3
	baz=169					
T47A	Sharon Grove	69.78	347	P	P	07 52 00.3 +0.3
	baz=166					
V40A	Witts Springs	69.97	342	P	P	07 52 01.7 +0.4
	baz=161					
T46A	Princeton	69.99	346	P	P	07 52 01.7 +0.4
	baz=165					
U42A	Revenden	70.08	343	P	P	07 52 01.7 -0.1
	baz=162					
V39A	Pettigrew	70.22	341	P	P	07 52 03.4 +0.5
	baz=160,SNR=5.3					
S48A	Wiedeman Farm,	70.23	348	P	P	07 52 03.1 +0.3
	baz=167					
U41A	Viola	70.24	343	P	P	07 52 03.2 +0.4
	baz=161					
PBMO	Poplar Bluff	70.29	344	eP	P	07 52 03.7 +0.6
	comp=Z,42nm,1.9s					
T44A	Benton	70.39	345	P	P	07 52 04.2 +0.4
	baz=164					
U40A	Yellville	70.49	342	P	P	07 52 04.9 +0.4
	baz=161					
T43A	Greenville	70.55	344	P	P	07 52 04.7 0.0
	baz=163					
S46A	Don Dixon Farm	70.57	347	P	P	07 52 04.6 -0.2
	baz=165					
MNTX	Cornudas Mount	70.63	330	P	P	07 52 05.6 +0.2
	baz=150					
MNTX	Cornudas Mount	70.63	330	eP	P	07 52 05.9 +0.5
	comp=Z,4.3nm,0.9s					
U39A	Green Forest	70.69	341	P	P	07 52 05.7 0.0
	baz=160,SNR=5.0					
T42A	Van Buren	70.69	344	P	P	07 52 05.9 +0.3
	baz=162					
HHAR	Hobbs	70.72	341	eP	P	07 52 06.6 +0.8
	comp=Z,8.2nm,1.1s					
WMOK	Wichita Mounta	70.79	337	P	P	07 52 07.1 +0.9
	baz=155					
T41A	Mountain View	70.86	343	P	P	07 52 06.8 +0.1
	baz=162					
TUL1	Leonard	70.91	339	P	P	07 52 06.7 -0.3
	baz=158					
S43A	Fulton Ridge,	70.97	345	P	P	07 52 06.9 -0.4
	baz=163					
R45A	Skylar, Fairfi	71.27	346	P	P	07 52 08.7 -0.4
	baz=165					
S42A	Caledonia	71.32	344	P	P	07 52 09.4 0.0
	baz=162					
S41A	Jillco Farms,	71.38	343	P	P	07 52 10.2 +0.5
	baz=162					
T38A	Diamond	71.52	341	P	P	07 52 11.0 +0.4
	baz=160					
MSTX	Muleshoe	71.55	333	P	P	07 52 11.9 +0.9
	baz=152					
MSTX	Muleshoe	71.55	333	eP	P	07 52 12.2 +1.1
	comp=Z,8.9nm,0.8s					
S40A	Lebanon	71.58	343	P	P	07 52 11.5 +0.6
	baz=161					
R43A	Red Bud	71.61	345	P	P	07 52 11.3 +0.2
	baz=163					
CCM	Cathedral Cave	71.70	344	P	P	07 52 12.3 +0.5
	baz=162					
CCM	Cathedral Cave	71.70	344	eP	P	07 52 12.2 +0.5
	comp=Z,13nm,0.9s					
R42A	Luebbering	71.81	344	P	P	07 52 12.4 0.0
	baz=163					
S39A	Bolivar	71.88	342	P	P	07 52 13.2 +0.4
	baz=160,SNR=5.9					
R41A	Rosebud	71.96	344	P	P	07 52 13.3 +0.1
	baz=162,SNR=7.0					
S38A	Stockton	71.97	342	P	P	07 52 13.7 +0.3
	baz=160,SNR=6.0					
R40A	Maddies Statio	72.17	343	P	P	07 52 14.9 +0.4
	baz=161,SNR=6.7					
ACSO	Alum Creek Sta	72.27	351	P	P	07 52 14.3 -0.7
	baz=170					
P46A	Rosedale	72.34	347	P	P	07 52 15.3 -0.2
	baz=166					
Q42A	Golden Eagle	72.35	345	P	P	07 52 15.2 -0.3
	baz=163					
R39A	Chumby, Stover	72.39	342	P	P	07 52 16.1 +0.2
	baz=161					
121A	Cookes Peak, D	72.39	328	P	P	07 52 18.0 +1.8
	baz=148					
P44A	Sand Creek, Wi	72.47	346	P	P	07 52 15.8 -0.5
	baz=165					
R38A	Fenwick Farm,	72.50	342	P	P	07 52 16.5 +0.1
	baz=160					
Q41A	Truxton	72.55	344	P	P	07 52 16.5 -0.3
	baz=162,SNR=5.4					
N54A	Moraine State	72.64	353	P	P	07 52 16.4 -0.8
	baz=172					
O47A	Sheridan	72.76	348	P	P	07 52 17.2 -0.7
	baz=167					
Q40A	Laux Farm, Aux	72.79	343	P	P	07 52 18.9 +0.8
	baz=162					
P42A	Winchester	72.95	345	P	P	07 52 19.7 +0.6
	baz=163					
O45A	Potomac	73.05	347	P	P	07 52 19.5 -0.2
	baz=165					
Q39A	Willow Grove F	73.06	343	P	P	07 52 20.3 +0.6
	baz=161					
Q38A	Cooks Store, C	73.15	342	P	P	07 52 20.6 +0.3
	baz=160					
M54A	Oil Creek Stat	73.15	354	P	P	07 52 19.8 -0.5
	baz=172					
P41A	Barry, Barry	73.20	344	P	P	07 52 20.6 0.0
	baz=162					
P40A	Paris	73.29	344	P	P	07 52 21.6 +0.5
	baz=162					
O43A	Sugar Creek Fa	73.40	346	P	P	07 52 21.5 -0.3
	baz=164					
P39B	Salisbury	73.42	343	P	P	07 52 22.1 +0.2
	baz=161					
O42A	Bath	73.48	345	P	P	07 52 22.3 +0.1
	baz=163					
N46A	Monticello	73.50	348	P	P	07 52 21.8 -0.5
	baz=166					
O41A	Passleys Farm,	73.58	345	P	P	07 52 22.4 -0.4
	baz=163					
TUC	Tucson	73.59	326	P	P	07 52 24.5 +1.4
	baz=146					
N45A	Kentland	73.59	347	P	P	07 52 22.4 -0.4
	baz=166					
HDIL	Hopedale	73.66	346	P	P	07 52 23.5 +0.3
	baz=164					
N44A	Piper City	73.66	347	P	P	07 52 22.7 -0.6
	baz=165					
P38A	Dawn	73.75	343	P	P	07 52 24.2 +0.4
	baz=160					
HRV	Adam Dziewonsk	73.77	0	P	P	07 52 23.4 -0.5
	baz=180					
O40A	La Belle	73.81	344	P	P	07 52 24.5 +0.3
	baz=162					
ANMO	Albuquerque	73.88	331	P	P	07 52 26.8 +1.8
	baz=149					
TASL	Snake Pit, Alb	73.88	331	P	P	07 52 26.4 +1.4
	baz=149					
TASM	ASL Pad, Albuq	73.88	331	P	P	07 52 26.6 +1.6
	baz=149					
M46A	Old House Fiel	73.93	349	P	P	07 52 24.7 -0.2
	baz=167					
DBIC	Dimbokro	74.10	72	P	P	07 52 25.4 -1.0
	comp=Z,6.0nm,1.0s,baz=190,slow=8.4,SNR=2.9					
DBIC				pP	sP	07 52 39.4 -0.8
	comp=Z,5.9nm,0.8s,baz=217,slow=5.1,SNR=2.8					
DBIC				LR	LR	08 22 58.8
	comp=Z,30nm,18.0s,baz=206,slow=34					
214A	Organ Pipe Nat	74.28	324	P	P	07 52 29.3 +2.1
	baz=144					
O37A	Wolven Farm, M	74.42	342	P	P	07 52 27.7 0.0
	baz=160					
M43A	Waltham Townsh	74.44	347	P	P	07 52 27.3 -0.5
	baz=164					
N40A	Mertquake, Sal	74.47	344	P	P	07 52 27.8 -0.2
	baz=162					
N39A	Derby Farms, D	74.68	344	P	P	07 52 29.4 +0.2
	baz=161					
M41A	Milan	74.71	345	P	P	07 52 29.9 +0.5
	baz=163					
N38A	Joes South For	74.78	343	P	P	07 52 30.1 +0.3
	baz=161					
CBKS	Cedar Bluff	74.81	338	P	P	07 52 30.0 0.0
	baz=155					
T25A	Trinidad	74.97	333	P	P	07 52 32.3 +1.0
	baz=151					
T25A	Trinidad	74.97	333	eP	P	07 52 33.4 +2.1
	comp=Z,7.6nm,0.9s					
N37A	Lee Faris, Mou	74.99	342	P	P	07 52 31.1 0.0
	baz=160					
L43A	Garden Prairie	75.12	347	P	P	07 52 31.6 -0.1
	baz=165					
L42A	Oliver, Polo	75.13	346	P	P	07 52 31.6 -0.2
	baz=164					
M39A	Webster	75.17	344	P	P	07 52 31.7 -0.3
	baz=162					
MAW	Mawson	75.35	164	P	P	07 52 32.8 -0.1
	comp=Z,0.8nm,0.4s,baz=215,slow=10.0,SNR=4.3					
MAW				LR	LR	08 27 46.0
	comp=Z,89nm,18.0s,baz=234,slow=37					
MAW	Mawson	75.35	164	eP	P	07 52 32.6 -0.2
	comp=Z,3.6nm,1.5s					
M38A	Pleasantville	75.36	343	P	P	07 52 33.1 0.0
	baz=161					
L41A	Preston	75.37	346	P	P	07 52 32.9 -0.3
	baz=163					
L40A	Anamosa	75.51	345	P	P	07 52 33.9 -0.1
	baz=162,SNR=5.4					
M37A	Trindle Farm,	75.56	343	P	P	07 52 34.9 +0.6
	baz=160					
X16A	Lo Mia Camp, P	75.64	327	eP	P	07 52 37.5 +2.4
	comp=Z,4.4nm,1.2s					
L39A	Vinton	75.75	344	P	P	07 52 35.3 0.0
	baz=162					
M36A	Felix, Anita	75.80	342	P	P	07 52 36.0 +0.3
	baz=160					
K42A	Prairie Point,	75.81	347	P	P	07 52 35.6 -0.1
	baz=164					
K41A	Shullsburg	75.84	346	P	P	07 52 35.8 0.0
	baz=163					
SDCO	Great Sand Dun	75.92	333	P	P	07 52 38.4 +1.6
	baz=150					
LONY	Lake Ozonia	75.93	358	P	P	07 52 36.4 +0.1
	baz=177					
L38A	Oak Wood Farm,	75.99	344	P	P	07 52 36.9 +0.2
	baz=161					
K40A	Colesburg	76.10	345	P	P	07 52 37.3 0.0
	baz=163,SNR=6.2					
JFWS	Jewell Farm	76.12	346	P	P	07 52 37.2 -0.3
	baz=163					
J43A	Natural Harves	76.21	347	P	P	07 52 37.9 -0.1
	baz=165					
K39A	Oelwein	76.27	345	P	P	07 52 38.3 0.0
	baz=162					
J42A	Columbus	76.29	347	P	P	07 52 38.0 -0.4
	baz=164					
L36A	Harm Buss Farm	76.37	343	P	P	07 52 38.9 0.0
	baz=160					
S22A	4UR Ranch, Cre	76.44	332	P	P	07 52 40.9 +1.1
	baz=149					
J41A	Loganville	76.51	346	P	P	07 52 39.9 +0.3
	baz=164					
WUAZ	Wupatki	76.51	328	P	P	07 52 42.1 +2.0
	baz=146					
PKME	Peaks-Kenny Pk	76.56	2	P	P	07 52 37.6 -2.3
	baz=182					
I43A	Langenfeld Bro	76.65	348	P	P	07 52 39.7 -0.7
	baz=165					
MVCO	Mesa Verde	76.67	331	P	P	07 52 42.6 +1.5
	baz=148					
J40A	Soldiers Grove	76.69	346	P	P	07 52 40.6 -0.1
	baz=163,SNR=6.2					
I42A	Draeger Farm,	76.80	347	P	P	07 52 41.2 -0.1
	baz=165					
I42A	Draeger Farm,	76.80	347	eP	P	07 52 41.8 +0.5
	comp=Z,7.1nm,0.9s					
K36A	Gilmore City	76.82	343	P	P	07 52 41.8 +0.3
	baz=160					
J39A	Decorah	76.83	345	P	P	07 52 41.4 -0.1
	baz=162,SNR=5.0					
Q24A	Divide	76.84	334	P	P	07 52 43.2 +1.1
	baz=151					
I41A	Arkdale	77.14	347	P	P	07 52 43.1 -0.1
	baz=164					
H43A	Windswept, Lux	77.15	348	P	P	07 52 43.1 -0.1
	baz=166					
H43A	Windswept, Lux	77.15	348	eP	P	07 52 43.4 +0.1
	comp=Z,5.8nm,0.9s					
IRM	Iron Mountain	77.21	324	P	P	07 52 46.0 +2.1
	baz=143					
I39A	Houston	77.29	345	P	P	07 52 44.1 0.0
	baz=162					
H42A	Shiocton	77.33	348	P	P	07 52 44.5 +0.3
	baz=165					
J36A	Seneca 1, Swea	77.44	343	P	P	07 52 45.2 +0.3
	baz=160					
PFO	Pinyon Flats O	77.45	323	P	P	07 52 46.4 +1.1
	baz=142					
H41A	Junction City	77.64	347	P	P	07 52 45.6 -0.4
	baz=164					
I38A	Scanlan Farm,	77.64	345	P	P	07 52 45.6 -0.4
	baz=162,SNR=5.3					
SMCO	Snowmass	77.73	333	eP	P	07 52 49.1 +2.0
	comp=Z,6.7nm,1.0s					
ISCO	Idaho Springs	77.75	334	P	P	07 52 48.3 +1.2
	baz=151					
ISCO	Idaho Springs	77.75	334	eP	P	07 52 49.1 +2.0
	comp=Z,4.3nm,1.2s					
H40A	Chili	77.79	346	P	P	07 52 47.1 +0.3
	baz=163					
MURC	Murrieta	77.82	322	P	P	07 52 49.5 +2.2
	baz=141					
I37A	Lemond, Waseca	77.86	344	P	P	07 52 47.1 -0.1
	baz=161					

G43A	Wallace	77.90 348	P	P	07 52 47.3	-0.1
	baz=166					
GMRC	Granite Mounta	77.97 324	P	P	07 52 50.2	+1.9
	baz=142					
G42A	Mountain	78.02 348	P	P	07 52 48.3	+0.3
	baz=165,SNR=5.7					
G42A	Mountain	78.02 348	eP	P	07 52 48.4	+0.4
	comp=Z,7.2nm,0.9s					
G41A	Antigo	78.12 347	P	P	07 52 48.8	+0.2
	baz=164					
BBRC	Big Bear Solar	78.19 323	P	P	07 52 51.8	+2.2
	baz=142					
F43A	Flat Rock, Esc	78.37 349	P	P	07 52 49.3	-0.7
	baz=166					
G40A	Rib Lake	78.37 347	P	P	07 52 50.3	+0.2
	baz=164					
F44A	Big Bay de Noc	78.39 350	P	P	07 52 50.0	-0.1
	baz=167					
ECSD	EROS Data Cent	78.40 342	P	P	07 52 50.0	-0.2
	baz=158					
ECSD	EROS Data Cent	78.40 342	eP	P	07 52 50.9	+0.7
	comp=Z,8.1nm,0.8s					
KNB	Kanab	78.41 327	eP	P	07 52 53.6	+2.9
	comp=Z,10.0nm,1.3s					
H36A	Jessenland, He	78.52 344	P	P	07 52 51.2	+0.3
	baz=160					
BFSC	Mount Baldy Ra	78.56 323	P	P	07 52 51.8	+0.3
	baz=141					
G39A	Holcombe	78.58 346	P	P	07 52 50.9	-0.3
	baz=163					
G38A	Ridgeland	78.61 346	P	P	07 52 51.3	-0.1
	baz=162					
TUQ	Turquoise Moun	78.62 324	P	P	07 52 53.7	+1.9
	baz=142					
F41A	Three Lakes	78.62 348	P	P	07 52 50.6	-0.8
	baz=165					
N23A	Red Feather La	78.83 334	P	P	07 52 54.1	+1.1
	baz=150					
H35A	Sunnyside Ranc	78.85 343	P	P	07 52 52.6	-0.1
	baz=160					
E43A	Lone Tree Farm	78.87 349	P	P	07 52 52.5	-0.2
	baz=166					
SPMN	Marine on St.	78.87 345	P	P	07 52 52.6	-0.2
	baz=161					
GSC	Goldstone, Bar	78.95 324	P	P	07 52 55.8	+2.2
	baz=142					
F40A	Park Falls	78.98 347	P	P	07 52 53.5	+0.1
	baz=164					
O20A	White River Ci	79.05 332	P	P	07 52 55.4	+1.2
	baz=149					
E42A	Champion	79.08 349	P	P	07 52 53.6	-0.3
	baz=166					
F39A	Loretta	79.14 346	P	P	07 52 54.3	+0.1
	baz=163					
SHOC	Shoshone, Teco	79.16 324	P	P	07 52 56.6	+2.0
	baz=142					
E41A	Kenton	79.29 348	P	P	07 52 54.8	-0.2
	baz=165					
F37A	Hinrichs Farm,	79.31 345	P	P	07 52 55.4	+0.2
	baz=162					
H33A	Prehn Over Nor	79.32 342	P	P	07 52 55.9	+0.6
	baz=158					
H32A	Carlson Farm,	79.34 342	P	P	07 52 55.6	+0.2
	baz=158					
KOWA	Kowa	79.34 66	P	P	07 52 55.0	-1.1
	comp=Z,2.7nm,0.6s,baz=240,slow=9.4,SNR=6.3					
KOWA			pP	sP	07 53 09.3	-0.6
	comp=Z,3.6nm,0.6s,baz=219,slow=6.4,SNR=4.9					
F38A	Pierce - Schro	79.37 346	P	P	07 52 55.4	-0.1
	baz=162					
P18A	Preston Nutter	79.44 331	eP	P	07 52 58.2	+1.7
	comp=Z,8.5nm,1.1s					
E40A	Wakefield	79.44 347	P	P	07 52 56.0	+0.1
	baz=164					
E39A	Mellen	79.51 347	P	P	07 52 56.3	+0.1
	baz=163					
P17A	Butcher Ranch,	79.52 330	eP	P	07 52 58.5	+1.8
	comp=Z,11nm,1.3s					
LRMC	Laurel Mtn Rad	79.53 323	P	P	07 52 58.0	+1.2
	baz=141					
D41A	Chassel	79.80 348	P	P	07 52 57.9	+0.1
	baz=165,SNR=6.0					
F35A	Swanville	79.88 344	P	P	07 52 59.1	+0.9
	baz=160					
FURC	Furnace Creek,	79.90 324	P	P	07 53 00.7	+2.1
	baz=142					
TPNV	Topopah Spring	79.97 325	P	P	07 53 00.9	+1.7
	baz=142					
ISA	Isabella, Lake	80.08 323	P	P	07 53 01.8	+2.1
	baz=141					
DAC	Darwin (Calif)	80.11 324	eP	P	07 52 60.0	-0.1
	comp=Z,7.6nm,1.1s					
E36A	McGregor	80.20 345	P	P	07 53 00.0	0.0
	baz=161					
F33A	5 Mile Ranch,	80.28 343	P	P	07 53 00.8	+0.4
	baz=159					
VES	Vestal, Richgr	80.54 323	P	P	07 53 03.8	+1.8
	baz=140					
GRAC	Grapevine Rang	80.56 324	P	P	07 53 04.3	+2.1
	baz=142					
K22A	Casper	80.57 335	P	P	07 53 03.2	+1.0
	baz=150					
R11A	Troy Canyon, C	80.77 326	P	P	07 53 05.0	+1.5
	baz=143					
C39A	Grand Marais	80.81 347	P	P	07 53 03.0	-0.2
	baz=164					
F31A	Hecla	80.81 342	P	P	07 53 03.6	+0.3
	baz=157					
E33A	Westby DABS, E	80.83 343	P	P	07 53 03.5	+0.2
	baz=159					
D35A	Remer	80.91 345	P	P	07 53 03.8	0.0
	baz=160					
C38A	Sawbill Land.	80.93 347	P	P	07 53 03.4	-0.5
	baz=163,SNR=5.2					
RSSD	Black Hills	80.99 337	P	P	07 53 04.9	+0.4
	baz=152					
DUG	Dugway, Tooele	81.01 329	P	P	07 53 06.0	+1.3
	baz=145					
C37A	Embarrass	81.12 346	P	P	07 53 04.5	-0.4
	baz=162					
D34A	Park Rapids	81.18 344	P	P	07 53 05.2	0.0
	baz=160					
EYMN	Ely	81.19 347	P	P	07 53 04.3	-1.0
	baz=163					
E31A	Nome	81.36 342	P	P	07 53 06.1	-0.1
	baz=157					
D33A	AnnSam, Waubun	81.39 344	P	P	07 53 06.4	+0.1
	baz=159					
C35A	Jirik Farms, M	81.48 345	P	P	07 53 06.8	0.0
	baz=161					
C34A	RKJ Ranch, Bem	81.64 344	P	P	07 53 07.2	-0.5
	baz=160					
PDAR	Pinedale Array	81.81 333	P	P	07 53 09.4	+0.5
	comp=Z,0.6nm,0.8s,baz=146,slow=2.9,SNR=4.5					
C33A	Trail	81.95 344	P	P	07 53 09.1	-0.1
	baz=159					
B35A	Bob, Littlefor	82.05 345	P	P	07 53 09.4	-0.4
	baz=161					
NV01	Mina Array Sit	82.14 325	eP	P	07 53 12.5	+1.7
NVAR	Mina Array Bea	82.14 325	P	P	07 53 12.2	+1.4
	comp=Z,2.2nm,0.8s,baz=156,slow=5.9,SNR=16					
HVU	Hansel Valley	82.30 330	eP	P	07 53 11.9	+0.4
	comp=Z,4.9nm,1.0s					
B34A	Aery, Baudette	82.37 345	P	P	07 53 11.2	-0.2
	baz=160					
C31A	Landman Farms,	82.46 343	P	P	07 53 11.8	-0.1
	baz=158					
AGMN	Agassiz Nation	82.47 344	P	P	07 53 11.8	-0.1
	baz=159					
KVN	Kaiserville	82.53 325	eP	P	07 53 14.3	+1.6
	comp=Z,3.9nm,1.0s					
B32A	Ashes, Strandq	82.72 344	P	P	07 53 13.0	-0.3
	baz=158					
A33A	Warroad	82.96 344	P	P	07 53 14.6	+0.1
	baz=160					
B31A	Greenbush Farm	83.03 343	P	P	07 53 14.5	-0.4
	baz=158					
TOA0	Torodi Ar. Sit	83.08 70	eP	P	07 53 14.9	-1.0
TORD	Torodi Ar. Bea	83.08 70	P	P	07 53 15.0	-0.9
	comp=Z,3.1nm,0.7s,baz=259,slow=4.9,SNR=15					
TORD			pP	sP	07 53 29.2	-0.5
	comp=Z,3.5nm,0.6s,baz=274,slow=6.2,SNR=12					
TOA1	Torodi Ar. Sit	83.08 70	eP	P	07 53 15.0	-0.9
TOA1			epP	sP	07 53 29.2	-0.5
PAHR	Pah Rah Range	83.66 325	eP	P	07 53 20.6	+2.1
	comp=Z,3.4nm,0.8s					
RLMT	Red Lodge	83.70 334	P	P	07 53 19.0	+0.3
	baz=148					
LAO	LASA Array	83.98 337	P	P	07 53 20.2	+0.3
	baz=151					
YHH	Holmes Hill	84.02 333	eP	P	07 53 20.2	-0.3
	comp=Z,3.7nm,1.0s					
ULM	Lac du Bonnet	84.31 345	P	P	07 53 21.3	0.0
	comp=Z,3.4nm,0.9s,baz=159,slow=2.8,SNR=8.4					
ULM			pP	sP	07 53 34.9	-0.3
	comp=Z,2.2nm,0.8s,baz=135,slow=4.4,SNR=3.4					
ULM	Lac du Bonnet	84.31 345	eP	P	07 53 21.8	+0.4
	comp=Z,7.7nm,1.1s					
HLID	Hailey	84.45 330	P	P	07 53 22.5	0.0
	baz=144					
HLID	Hailey	84.45 330	eP	P	07 53 22.3	-0.2
	comp=Z,3.0nm,1.0s					
MCMT	McKenzie Canyo	84.84 332	eP	P	07 53 26.0	+1.5
DGMT	Dagmar	84.90 339	P	P	07 53 24.8	+0.3
	baz=152					
BOZ	Bozeman (W)	85.00 333	P	P	07 53 26.1	+0.9
	baz=146					
DLMT	Dillon	85.18 332	eP	P	07 53 26.5	+0.4
	comp=Z,7.1nm,1.5s					
O03D	Paynes Creek	85.31 324	P	P	07 53 27.9	+1.1
	baz=139					
N02D	Trinity Center	86.28 324	P	P	07 53 32.8	+1.3
	baz=138					
EGMT	Eagleton	86.35 335	P	P	07 53 32.0	+0.3
	baz=148					
M04C	Macdoel	86.45 325	P	P	07 53 33.1	+0.6
	baz=139					
YBH	Yreka Blue Hor	86.84 324	P	P	07 53 34.9	+0.6
	comp=Z,1.2nm,0.7s,baz=110,slow=12,SNR=4.3					
MSO	Missoula	86.92 332	P	P	07 53 35.4	+0.8
	baz=145					
J05D	Fort Rock, OR	87.30 326	P	P	07 53 37.9	+1.3
	baz=139					
PINE	Pine Mountain	87.54 327	eP	P	07 53 39.6	+1.8
	comp=Z,7.6nm,0.9s					
I05D	Terrebonne, OR	88.14 327	P	P	07 53 41.9	+1.4
	baz=139					
ASAR	Alice Springs	119.83 207	PKP	PKPdf	07 59 39.5	-1.2
	comp=Z,0.8nm,0.8s,baz=141,slow=2.8,SNR=5.7					
BR101	Keskin Array S	120.36 60	ePKPdf	PKPdf	07 59 40.4	-0.8
BRTR	Keskin Array B	120.36 60	PKP	PKPdf	07 59 40.4	-0.8
	comp=Z,0.7nm,0.7s,baz=197,slow=4.5,SNR=3.2					
WR1	Warramunga Arr	123.00 209	ePKPdf	PKPdf	07 59 46.1	-0.7
WR1			epPKPdf	sPKPdf	08 00 00.6	-0.3
WRA	Warramunga Arr	123.00 209	PKP	PKPdf	07 59 46.1	-0.7
	comp=Z,1.6nm,0.6s,baz=154,slow=1.6,SNR=22					
WRA			pPKP	sPKPdf	08 00 00.6	-0.3
	comp=Z,0.6nm,0.6s,baz=152,slow=1.9,SNR=4.6					
BRVK	Borovoye	145.21 41	ePKPbc	PKPab	08 00 26.8	0.0
BVAR	Borovoye Array	145.28 41	PKPbc	PKPdf	08 00 27.1	0.0
	comp=Z,4.3nm,0.5s,baz=300,slow=3.4,SNR=27					
BVAR			pPKPbc	sPKPdf	08 00 42.3	+1.1
	comp=Z,3.8nm,0.6s,baz=306,slow=3.5,SNR=7.9					
KK31	Karatay Array	148.05 58	ePKPbc	PKPbc	08 00 34.5	-0.8
KK31			epPKPdf	sPKPbc	08 00 49.3	-0.1
KKAR	Karatay Array	148.05 58	ePKPbc	PKPbc	08 00 34.5	-0.8
KKAR			epPKPdf	sPKPbc	08 00 49.3	-0.1
KURBB	Kurchatov Arra	150.88 41	PKPbc	PKPbc	08 00 41.4	-0.5
	comp=Z,2.7nm,0.6s,baz=301,slow=3.1,SNR=16					
KURBB			pPKPbc	sPKPbc	08 00 56.2	+0.1
	comp=Z,2.0nm,0.7s,baz=298,slow=2.9,SNR=8.6					
KURK	Kurchatov	150.88 40	ePKPbc	PKPbc	08 00 41.4	-0.5
KURK			epPKPab	sPKPbc	08 00 56.2	+0.1
AAK	Ala-Archa	151.02 58	PKPbc	PKPbc	08 00 43.1	+0.3
	comp=Z,3.5nm,0.7s,baz=230,slow=7.9,SNR=8.6					
AAK	Ala-Archa	151.02 58	ePKPbc	PKPbc	08 00 43.2	+0.4
AAK			epPKPab	sPKPbc	08 00 58.2	+1.3
ZAA1	Zalesovo Array	152.02 30	ePKPbc	PKPbc	08 00 44.2	-0.3
ZAA1			epPKPdf	sPKPbc	08 00 59.4	+0.8
ZALV	Zalesovo Beam	152.02 30	PKPbc	PKPbc	08 00 44.2	-0.3
	comp=Z,8.7nm,0.7s,baz=296,slow=4.2,SNR=12					
ZALV			pPKPbc	sPKPbc	08 00 59.4	+0.8
	comp=Z,7.1nm,0.5s,baz=302,slow=3.5,SNR=8.4					
ZALV	Zalesovo Beam	152.02 30	ePKPbc	PKPbc	08 00 44.0	-0.5
ZALV			epPKPdf	sPKPbc	08 00 59.3	+0.7
KSH	Kashi	152.60 64	PKPbc	PKPbc	08 00 45.9	-0.6
KSH			pPKP	sPKPdf	08 00 54.3	+0.7
KSH			PKS	PKSdf	08 04 14.8	+0.8
KSH			PP	PP	08 04 32.5	+2.2
KSH			SKS	SKSdf	08 07 43.2	-1.2
KSH			SKKS	SKKSac	08 11 14.6	-3.5
KSH			SS	SS	08 23 56.1	-3.2
MK32	Makanchi Array	154.90 45	ePKPbc	PKPbc	08 00 50.6	-0.4
MK32			ePKPab	sPKPbc	08 01 05.2	0.0
MKAR	Makanchi Array	154.90 45	PKPbc	PKPbc	08 00 50.7	-0.4
	comp=Z,0.7nm,0.8s,baz=277,slow=4.9,SNR=2.7					
MKAR			pPKPbc	sPKPbc	08 01 05.2	0.0
	comp=Z,1.6nm,0.7s,baz=290,slow=3.6,SNR=7.8					
WMQ	Urumqi	159.67 47	ePKP	PKPdf	08 00 48.4	-0.1
GTA	Gaotai	169.57 40	ePKP	PKPdf	08 01 04.8	+7.4
HHC	Hu-ho-hao-te	170.44 345	ePKP	PKPdf	08 00 57.0	-0.8
NJ2	Nanjing	171.07 275	ePKP	PKPdf	08 00 58.3	0.0
LZH	Lanzhou	174.17 39	ePKP	PKPdf	08 01 01.8	+2.1
CD2	Chengdu	175.98 99	PKP	PKPdf	08 00 58.7	-1.5

ISK ***07*** *07:44:13.1, 38.°66N×43.°13E, h3km, ML2.5/2*
CSEM ***07*** *07:44:14.4±0.3, 38.°69N×43.°15E, h5km, ML2.5, Error ellipse: s-maj=6.8km s-min=5.6km az=20.0*
DDA ***07*** *07:44:14.2, 38.°72N×43.°23E, h7km, Ml3.0*
ISC 07 07:44:14.3±1.0, 38.°69N±0.°03×43.°14E±0.°03, h14km±10km, n14, σ0s72/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	Van	0.21	116	PG	Pg	07 44 19.1	-0.1
VANB				SG	Sg	07 44 23.5	+1.0
VANB	Van	0.21	116	*i* Pg	Pg	07 44 19.1	-0.1
VANB				*i* Sg	Sg	07 44 23.5	+1.0
TVAN	Van	0.26	128	*i* P	Pg	07 44 19.0	-1.0
TVAN				*i* S	Sg	07 44 23.4	-0.5
TVAN	Van	0.26	128	P	Pg	07 44 19.0	-1.0
TVAN				S	Sg	07 44 23.4	-0.5
ADCV	BITLIS_Adilcev	0.35	290	*i* P	Pb	07 44 22.2	-0.2
ADCV				*i* S	Sb	07 44 28.8	+0.9
ADCV	BITLIS_Adilcev	0.35	290	P	Pb	07 44 22.2	-0.2
ADCV				S	Sb	07 44 28.8	+0.9
GEVA	Gevas	0.38	190	*i* P	Pg	07 44 21.9	-0.2
GEVA				*i* S	Sb	07 44 29.3	+0.5
GEVA	Gevas	0.38	190	P	Pg	07 44 21.9	-0.2
GEVA				S	Sb	07 44 29.3	+0.5
CLDR	Caldiran	0.76	53	PG	Pg	07 44 28.1	-1.0
CLDR				SG	Sb	07 44 40.6	+1.0
CLDR	Caldiran	0.76	53	*e*Pg	Pg	07 44 28.1	-1.0
CLDR				*e*Sg	Sb	07 44 40.6	+1.0
TUTA	Tutak	0.76	340	*i* P	Pg	07 44 29.0	-0.1
TUTA				*i* S	Sb	07 44 39.9	+0.2
TUTA	Tutak	0.76	340	P	Pg	07 44 29.0	-0.1
TUTA				S	Sb	07 44 39.9	+0.2
GURO	Guroymak-BITLI	0.88	261	PG	Pg	07 44 30.6	-0.8
GURO				SG	Sg	07 44 43.2	+0.2
GURO	Guroymak-BITLI	0.88	261	*e*Pg	Pg	07 44 30.6	-0.8
GURO				*e*Sg	Sg	07 44 43.2	+0.2

IDC ***07*** *07:47:38.7±2.2, 40.°10N×22.°02E, h0km, mb3.5/5, mb1 3.5/7, mb1mx3.3/58, mbtmp3.5/7, ML3.2/2, Error ellipse: s-maj=43.5km s-min=22.6km az=37.0*
ISCJB ***07*** *07:47:40.7±0.4, 40.°06N±0.°01×22.°37E±0.°02, h1km±3km, mb3.4/5, Error ellipse: s-maj=2.3km s-min=2.0km az=33.4*
ATH ***07*** *07:47:40.8, 40.°05N×22.°38E, h15km±1km, ML3.1/33, Error ellipse: s-maj=1.4km s-min=0.6km az=350.0*
THE ***07*** *07:47:41.1, 40.°05N×22.°34E, h0km, ML3.1/13, Error ellipse: s-maj=0.9km s-min=0.2km az=321.0*
CSEM ***07*** *07:47:41.2±0.1, 40.°04N×22.°37E, h2km, ML3.1, Error ellipse: s-maj=2.5km s-min=2.0km az=117.0*
BEO ***07*** *07:47:41.4±1.0, 40.°02N×22.°44E, h0km±6km*
ISC 07 07:47:41.0±0.8, 40.°05N±0.°01×22.°37E±0.°01, h8km±5km, n163, σ0s98/237, mb3.3/5, 5C-7D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIT	Litokhoron	0.11	61	P	Pg	07 47 42.7	-0.8
LIT				S	Sg	07 47 45.2	-0.1
LIT				AML	AML	07 47 47.0	
	comp=E,30241μm,0.3s						
LIT				AML	AML	07 47 47.8	
	comp=N,39343μm,0.3s						
LIT	Litokhoron	0.11	61	P	Pg	07 47 43.4	-0.1
LIT				S	Sg	07 47 46.0	+0.7
LIT	Litokhoron	0.11	61	P	Pg	07 47 43.4	-0.1
LIT				S	Sg	07 47 45.8	+0.5
KZN	Kozani	0.52	300	P	Pg	07 47 50.1	-1.0
KZN				S	Sg	07 47 57.8	-0.2
KZN				AML	AML	07 47 60.0	
	comp=E,12576μm,0.4s						
KZN				AML	AML	07 48 03.5	
	comp=N,5388μm,0.7s						
KZN	Kozani	0.52	300	P	Pg	07 47 50.4	-0.8
KZN				S	Sg	07 47 58.2	+0.2
KZN	Kozani	0.52	300	P	Pg	07 47 50.6	-0.6
KZN				S	Sg	07 47 58.2	+0.2
THL	Klokotos Trika	0.55	209	P	Pg	07 47 50.2	-1.5
THL				S	Sb	07 48 01.3	+0.3
THL				AML	AML	07 48 02.5	
	comp=N,2325μm,0.5s						
THL				AML	AML	07 48 02.9	
	comp=E,4751μm,0.6s						
THL	Klokotos Trika	0.55	209	P	Pg	07 47 51.1	-0.6
THL				S	Sg	07 47 59.8	+0.9
THL	Klokotos Trika	0.55	209	P	Pg	07 47 51.0	-0.6
THL				S	Sg	07 47 59.8	+0.9
THE	Thessaloniki	0.74	38	P	Pb	07 47 56.4	+0.2
THE				S	Sg	07 48 03.8	-1.1
THE				AML	AML	07 48 10.8	
	comp=E,879μm,0.9s						
THE				AML	AML	07 48 12.8	
	comp=N,529μm,0.6s						
THE	Thessaloniki	0.74	38	P	Pg	07 47 55.5	+0.3
THE	Thessaloniki	0.74	38	P	Pg	07 47 55.6	+0.3
THE				S	Sg	07 48 04.5	-0.4
KPRO	Kipourio	0.78	263	P	Pg	07 47 54.6	-1.3
KPRO				S	Sb	07 48 07.8	+0.2
KPRO				AML	AML	07 48 14.1	
	comp=N,5253μm,0.6s						
KPRO				AML	AML	07 48 21.4	
	comp=E,4831μm,0.7s						
KPRO	Kipourio	0.78	263	P	Pg	07 47 55.0	-0.9
KPRO				S	Sg	07 48 06.9	+0.9
KPRO	Kipourio	0.78	263	P	Pg	07 47 55.3	-0.6
KPRO				S	Sg	07 48 06.9	+0.9
FYTO	Fytoko, Volos	0.78	145	P	Pg	07 47 55.8	-0.1
FYTO				S	Sb	07 48 07.9	+0.4
HORT	Hortiatis	0.79	45	P	Pb	07 47 56.8	-0.2
HORT				S	Sb	07 48 08.1	+0.2
HORT				AML	AML	07 48 12.6	
	comp=N,829μm,0.7s						
HORT				AML	AML	07 48 13.0	
	comp=E,929μm,0.8s						
HORT	Hortiatis	0.79	45	P	Pg	07 47 56.3	+0.1
HORT	Hortiatis	0.79	45	P	Pg	07 47 56.2	+0.1
HORT				S	Sb	07 48 07.3	-0.6
PLG	Polygyros	0.89	68	P	Pb	07 47 58.8	0.0
PLG				S	Sg	07 48 09.4	-0.2
PLG				AML	AML	07 48 14.2	
	comp=N,1202μm,0.5s						
PLG				AML	AML	07 48 18.5	
	comp=E,1222μm,0.6s						
PLG	Polygyros	0.89	68	P	Pg	07 47 58.1	0.0
PLG				S	Sb	07 48 11.7	+0.9
PLG	Polygyros	0.89	68	P	Pg	07 47 58.1	0.0
PLG				S	Sg	07 48 09.6	0.0
GRG	Griva	0.91	2	P	Pg	07 47 58.5	0.0
GRG				S	Sb	07 48 11.8	+0.5
GRG				AML	AML	07 48 17.0	
	comp=N,2809μm,0.7s						
GRG				AML	AML	07 48 17.4	
	comp=E,1510μm,1.0s						
GRG	Griva	0.91	2	P	Pg	07 47 58.3	-0.2
GRG	Griva	0.91	2	P	Pg	07 47 58.3	-0.2
GRG				S	Sb	07 48 11.2	-0.2
XOR	Xorichti	0.93	137	P	Pg	07 47 58.6	-0.3
XOR				S	Sg	07 48 11.6	+0.5
XOR				AML	AML	07 48 14.2	
	comp=N,3832μm,0.7s						
XOR				AML	AML	07 48 14.8	
	comp=E,2338μm,0.4s						
XOR	Xorichti	0.93	137	P	Pg	07 47 59.2	+0.3
XOR				S	Sb	07 48 12.9	+0.9
XOR	Xorichti	0.93	137	P	Pg	07 47 59.2	+0.3
XOR				S	Sg	07 48 11.5	+0.5
PENT	Pentalofos	0.95	279	P	Pg	07 47 57.5	-1.8
PENT				S	Sb	07 48 13.0	+0.3
PENT				AML	AML	07 48 18.1	
	comp=E,1983μm,0.7s						
PENT				AML	AML	07 48 18.9	
	comp=N,3051μm,1.0s						
PENT	Pentalofos	0.95	279	P	Pg	07 47 58.4	-0.9
PENT	Pentalofos	0.95	279	P	Pg	07 47 58.4	-0.9
PENT				S	Sb	07 48 12.7	0.0
NEO	Neokhori	0.99	138	P	Pg	07 47 60.0	-0.1
NEO				S	Sg	07 48 11.9	-1.1
NEO				AML	AML	07 48 17.8	
	comp=N,4356μm,0.6s						
NEO				AML	AML	07 48 19.2	
	comp=E,4129μm,0.6s						
NEO	Neokhori	0.99	138	P	Pg	07 48 00.3	+0.2
NEO				S	Sn	07 48 15.1	-0.5
NEO	Neokhori	0.99	138	P	Pg	07 48 00.3	+0.2
NEO				S	Sg	07 48 12.6	-0.4
PAIG	Paliouri	1.02	96	P	Pb	07 48 01.1	+0.2
PAIG				S	Sb	07 48 14.8	+0.4
PAIG				AML	AML	07 48 16.5	
	comp=E,804μm,0.7s						
PAIG				AML	AML	07 48 16.8	
	comp=N,1257μm,0.7s						
PAIG	Paliouri	1.02	96	P	Pg	07 48 00.5	0.0
PAIG				S	Sn	07 48 15.8	-0.3
PAIG	Paliouri	1.02	96	P	Pg	07 48 00.5	0.0
PAIG				S	Sb	07 48 14.3	-0.1
AGG	Agios Georgios	1.02	182	P	Pg	07 47 60.0	-0.7
AGG				S	Sg	07 48 14.6	+0.6
AGG				AML	AML	07 48 19.3	
	comp=E,6909μm,0.4s						
AGG				AML	AML	07 48 21.0	
	comp=N,9361μm,0.5s						
AGG	Agios Georgios	1.02	182	P	Pg	07 48 00.1	-0.6
AGG				S	Sb	07 48 15.4	+0.7
AGG	Agios Georgios	1.02	182	P	Pg	07 48 00.1	-0.6
AGG				S	Sg	07 48 14.6	+0.6
FNA	Florina	1.05	315	*e*Pg	Pg	07 48 00.5	-0.7
FNA				*e*Sg	Sb	07 48 16.6	+1.0
FNA	Florina	1.05	315	P	Pg	07 48 00.3	-0.9
FNA				S	Sb	07 48 15.7	+0.1
FNA				AML	AML	07 48 20.8	
	comp=E,2454μm,0.5s						
FNA				AML	AML	07 48 21.8	
	comp=N,2196μm,0.6s						
FNA	Florina	1.05	315	P	Pg	07 48 00.5	-0.7
FNA	Florina	1.05	315	*e*Pg	Pg	07 48 00.5	-0.7
FNA				S	Sg	07 48 15.5	+0.6
FNA				*e*Sg	Sb	07 48 16.6	+1.0
	baz=1.0						
NEST	Nestorio	1.07	290	P	Pg	07 48 00.2	-1.4
NEST				AML	AML	07 48 24.8	
	comp=E,2327μm,0.7s						
NEST				AML	AML	07 48 26.6	
	comp=N,1502μm,0.9s						
NEST	Nestorio	1.07	290	P	Pg	07 48 00.8	-0.8
NEST	Nestorio	1.07	290	P	Pg	07 48 00.8	-0.8
SOH	Sokhos	1.08	44	P	Pg	07 48 01.3	-0.5
SOH				S	Sn	07 48 17.6	-0.2
SOH				AML	AML	07 48 21.3	
	comp=N,1844μm,0.5s						
SOH				AML	AML	07

comp=E,2337μm,0.7s
EVR AML AML 07 48 30.0
comp=N,2506μm,0.7s
EVR Evrytania 1.21 201 P **Pg 07 48 03.5 -0.7**
EVR S **Sn 07 48 21.4 +0.4**
EVR Evrytania 1.21 201 P **Pg 07 48 03.5 -0.7**
EVR S **Sn 07 48 20.9 -0.1**
SKIA Skiathos 1.22 136 P **Pb 07 48 04.5 +0.1**
SKIA S **Sn 07 48 22.6 +1.4**
SKIA Skiathos 1.22 136 P **Pb 07 48 04.5 +0.1**
SKIA S **Sn 07 48 22.6 +1.4**
JAN Janina 1.23 252 P **Pn 07 48 05.1 +0.5**
JAN S **Sn 07 48 22.3 +0.9**
JAN AML AML 07 48 35.2
comp=N,1352μm,0.5s
JAN AML AML 07 48 45.7
comp=E,1273μm,0.7s
JAN Janina 1.23 252 P **Pb 07 48 04.7 +0.2**
JAN S **Sn 07 48 21.9 +0.5**
OUR Ouranopolis 1.27 76 P **Pg 07 48 06.6 +1.2**
OUR S **Sb 07 48 20.6 -1.1**
OUR AML AML 07 48 26.3
comp=E,1346μm,0.5s
OUR AML AML 07 48 26.8
comp=N,963μm,0.4s
OUR Ouranopolis 1.27 76 P **Pb 07 48 05.4 +0.2**
OUR S **Sn 07 48 24.0 +1.7**
OUR Ouranopolis 1.27 76 P **Pb 07 48 05.4 +0.2**
OUR S **Sb 07 48 21.3 -0.4**
VAY Valandovo 1.28 7 *e*Pg **Pn 07 48 05.2 0.0**
VAY *e*Sg **Sn 07 48 22.9 +0.3**
VAY Valandovo 1.28 7 P **Pn 07 48 04.9 -0.3**
VAY S **Sn 07 48 24.0 +1.4**
VAY Valandovo 1.28 7 *i* Pg **Pn 07 48 04.7 -0.5**
VAY *i* Sg **Sn 07 48 23.8 +1.1**
VAY Valandovo 1.28 7 *e*Pg **Pn 07 48 05.2 0.0**
VAY *e*Sg **Sn 07 48 22.9 +0.3**
baz=1.0
VAY S **Sn 07 48 24.0 +1.4**
DSL Palaion Diasel 1.34 227 P **Pn 07 48 05.7 -0.4**
DSL S **Sb 07 48 23.8 0.0**
DSL AML AML 07 48 29.6
comp=N,1519μm,0.5s
DSL AML AML 07 48 36.0
comp=E,1991μm,0.6s
DSL Palaion Diasel 1.34 227 P **Pn 07 48 05.9 -0.2**
DSL Palaion Diasel 1.34 227 P **Pn 07 48 05.9 -0.2**
DSL S **Sg 07 48 24.3 +0.2**
SRS Serrai 1.42 41 *e*Pn **Pn 07 48 07.0 -0.2**
SRS Serrai 1.42 41 P **Pb 07 48 07.9 +0.1**
SRS S **Sb 07 48 25.4 -0.6**
SRS AML AML 07 48 30.5
comp=E,352μm,0.7s
SRS AML AML 07 48 34.7
comp=N,354μm,0.5s
SRS Serrai 1.42 41 *e*Pn **Pn 07 48 07.0 -0.2**
SRS Serrai 1.42 41 P **Pn 07 48 07.6 +0.4**
SRS S **Sb 07 48 25.9 -0.1**
LKR Lokris 1.48 160 P **Pn 07 48 07.3 -0.7**
LKR Lokris 1.48 160 P **Pn 07 48 08.0 0.0**
ANX Ano Chora 1.49 194 P **Pb 07 48 09.1 0.0**
ANX S **Sg 07 48 31.1 +2.1**
ANX AML AML 07 48 34.5
comp=E,3017μm,0.5s
ANX AML AML 07 48 36.1
comp=N,2588μm,0.4s
ANX Ano Chora 1.49 194 P **Pb 07 48 09.1 0.0**
ANX S **Sg 07 48 30.3 +1.3**
PVO Paravola 1.57 205 P **Pb 07 48 10.9 +0.5**
PVO AML AML 07 48 38.9
comp=E,894μm,0.6s
PVO AML AML 07 48 40.2
comp=N,782μm,0.5s
PVO Paravola 1.57 205 P **Pn 07 48 09.6 +0.4**
PVO Paravola 1.57 205 P **Pb 07 48 10.6 +0.3**
OHR Ohrid 1.60 312 *i* Pn **Pb 07 48 11.0 +0.2**
IGT Igoumenitsa 1.65 252 *e*Pn **Pb 07 48 12.2 +0.5**
IGT *e*Sg **Sg 07 48 35.3 +1.3**
IGT Igoumenitsa 1.65 252 P **Pg 07 48 13.3 +0.7**
IGT AML AML 07 48 39.9
comp=N,1013μm,0.6s
IGT AML AML 07 48 49.1
comp=E,815μm,0.7s
IGT Igoumenitsa 1.65 252 *e*Pn **Pb 07 48 12.2 +0.5**
baz=2.0
IGT *e*Sg **Sg 07 48 35.3 +1.3**
baz=1.0
SERG Sergoula 1.65 188 P **Pn 07 48 10.1 -0.3**
SERG S **Sg 07 48 34.1 +0.1**
SERG AML AML 07 48 43.5
comp=N,1067μm,0.7s
SERG AML AML 07 48 44.3
comp=E,1547μm,0.6s
SERG Sergoula 1.65 188 P **Pn 07 48 10.7 +0.4**
SERG S **Sg 07 48 33.8 -0.2**
SERG Sergoula 1.65 188 P **Pn 07 48 10.7 +0.4**
SERG S **Sg 07 48 33.8 -0.2**
STIP Stip 1.65 355 *i* Pn **Pn 07 48 11.0 +0.6**
EFP Efpalio 1.66 193 P **Pn 07 48 10.4 0.0**
EFP AML AML 07 48 42.1
comp=N,2315μm,0.7s
EFP AML AML 07 48 43.4
comp=E,1815μm,0.7s
EFP Efpalio 1.66 193 P **Pn 07 48 10.9 +0.5**
EFP Efpalio 1.66 193 P **Pn 07 48 10.9 +0.5**
KALE Kalithea 1.66 186 P **Pn 07 48 10.9 +0.3**
KALE Kalithea 1.66 186 P **Pn 07 48 10.9 +0.3**
TRIZ Trizonia 1.70 188 P **Pn 07 48 11.2 +0.3**
TRIZ Trizonia 1.70 188 P **Pn 07 48 11.2 +0.3**
SGD Sagiada 1.70 256 P **Pg 07 48 14.2 +0.6**
SGD Sagiada 1.70 256 P **Pb 07 48 13.2 +0.7**
PDO Prodromos 1.71 213 P **Pg 07 48 14.0 +0.1**
PDO Prodromos 1.71 213 P **Pb 07 48 13.2 +0.4**
NVR Nevrokopi 1.73 41 P **Pn 07 48 10.3 -1.1**
NVR S **Sb 07 48 35.8 +0.9**
NVR AML AML 07 48 40.5
comp=N,332μm,1.0s
NVR AML AML 07 48 41.1
comp=E,280μm,0.6s
NVR Nevrokopi 1.73 41 P **Pn 07 48 11.4 0.0**
NVR S **Sb 07 48 35.6 +0.7**
KAVA Kavala 1.89 59 P **Pn 07 48 13.1 -0.5**
KAVA AML AML 07 48 46.4
comp=E,440μm,0.8s
KAVA AML AML 07 48 51.1
comp=N,296μm,0.7s
KAVA Kavala 1.89 59 P **Pn 07 48 13.9 +0.3**
KEK Kerkira 2.00 261 P **Pn 07 48 16.6 +1.4**
KEK AML AML 07 48 52.7
comp=N,748μm,1.0s
KEK AML AML 07 48 55.7
comp=E,806μm,0.7s
KEK Kerkira 2.00 261 P **Pn 07 48 16.6 +1.4**
KLV Kalavryta, Ach 2.01 185 P **Pn 07 48 14.4 -0.9**
KLV AML AML 07 48 53.9
comp=N,272μm,0.6s
KLV AML AML 07 48 55.4
comp=E,318μm,0.6s
KLV Kalavryta, Ach 2.01 185 P **Pn 07 48 15.4 +0.1**
SKO Skopje 2.05 340 *e*Pn **Pb 07 48 19.0 +0.6**
SKO Skopje 2.05 340 *e*Pn **Pb 07 48 19.0 +0.6**
RLS Riolos of Patr 2.11 200 P **Pb 07 48 18.9 -0.5**
RLS AML AML 07 48 53.5
comp=N,310μm,0.6s
RLS AML AML 07 48 54.3
comp=E,486μm,0.7s
RLS Riolos of Patr 2.11 200 P **Pb 07 48 18.4 -1.1**
DRO Drossia 2.15 194 P **Pn 07 48 18.9 +1.6**
DRO Drossia 2.15 194 P **Pn 07 48 18.7 +1.4**
LIA Limnos Island 2.17 93 P **Pn 07 48 17.0 -0.4**
LIA AML AML 07 48 45.1
comp=N,239μm,0.6s
LIA AML AML 07 48 46.5
comp=E,177μm,0.5s
LIA Limnos Island 2.17 93 P **Pn 07 48 17.8 +0.4**
KFL Anninata 2.29 213 P **Pb 07 48 21.7 -0.9**
KFL Anninata 2.29 213 P **Pn 07 48 21.1 +1.9**
TIR Tirane 2.30 305 ⇑ *i* P **Pb 07 48 21.5 -1.3**
SMTH Samothraki Isl 2.46 79 P **Pn 07 48 20.9 -0.6**
SMTH Samothraki Isl 2.46 79 P **Pn 07 48 21.8 +0.4**
VTS Vitosha 2.62 14 *e*Pn **Pn 07 48 25.1 +1.3**
VTS Vitosha 2.62 14 ⇓ *i* P **Pn 07 48 25.5 +1.7**
VTS Vitosha 2.62 14 *e*Pn **Pn 07 48 25.1 +1.3**

RDO Rodhopi 2.65 65 P **Pn 07 48 22.8 -1.3**
RDO Rodhopi 2.65 65 P **Pn 07 48 24.1 0.0**
PLD Plovdiv 2.71 40 *e*Pn **Pn 07 48 26.8 +1.9**
PLD Plovdiv 2.71 40 *e*Pn **Pn 07 48 26.8 +1.9**
baz=8.0
BARS Barje 2.80 352 *e*Pn **Pn 07 48 27.2 +1.1**
BARS Barje 2.80 352 *e*Pn **Pn 07 48 27.2 +1.1**
ALN Alexandroupoli 2.93 72 P **Pn 07 48 27.9 0.0**
ALN Alexandroupoli 2.93 72 P **Pn 07 48 28.6 +0.7**
ZAPS Zavoj 3.23 3 *e*Pn **Pn 07 48 34.2 +2.1**
SELS Selova 3.30 344 *e*Pn **Pn 07 48 33.5 +0.4**
SJES Sjenica 3.68 332 *e*Pn **Pn 07 48 40.3 +2.0**
ZAGS Zajecar 3.76 359 *e*Pn **Pn 07 48 40.3 +0.9**
ZAGS Zajecar 3.76 359 *e*Pn **Pn 07 48 40.3 +0.9**
APE Apeiranthos 3.87 139 ⇑ *i* P **Pn 07 48 41.4 +0.5**
APE Apeiranthos 3.87 139 ⇑ *i* P **Pn 07 48 41.4 +0.5**
IVAS Ivanjica 3.89 336 *e*Pn **Pn 07 48 42.9 +1.7**
IVAS Ivanjica 3.89 336 *e*Pn **Pn 07 48 42.9 +1.7**
GRUS Gruza 4.03 343 *e*Pn **Pn 07 48 44.5 +1.5**
GRUS Gruza 4.03 343 *e*Pn **Pn 07 48 44.5 +1.5**
MATE Matera 4.37 280 ⇑ *i* P **Pn 07 48 48.9 +1.3**
DIVS Divibare 4.42 337 *e*Pn **Pn 07 48 49.3 +0.9**
DIVS Divibare 4.42 337 *e*Pn **Pn 07 48 49.3 +0.9**
HERR Herculane 4.83 0 ⇓ *i* P **Pn 07 48 55.8 +1.8**
TEKS Tekeris 4.96 336 *e*Pn **Pn 07 48 57.4 +1.5**
TEKS Tekeris 4.96 336 *e*Pn **Pn 07 48 57.4 +1.5**
IDI Anoyia 5.16 156 Pn **Pn 07 48 59.9 +1.4**
comp=E,0.7nm,0.3s,baz=306,slow=17,SNR=4.2
VOIR 5.74 19 ⇓ *i* P **Pn 07 49 08.0 +1.4**
MLR Muntele Rosu 6.04 25 Pn **Pn 07 49 13.8 +2.9**
comp=E,0.2nm,0.3s,baz=220,slow=11,SNR=7.1
MLR Muntele Rosu 6.04 25 ⇑ *i* P **Pn 07 49 13.7 +2.9**
PLOR Plostina 6.60 27 ⇓ *i* P **Pn 07 49 20.6 +2.3**
PLOR Plostina 6.60 27 ⇓ *i* P **Pn 07 49 20.6 +2.3**
VRI Vrincioaia 6.64 27 ⇓ *i* P **Pn 07 49 21.6 +2.8**
VRI Vrincioaia 6.64 27 ⇓ *i* P **Pn 07 49 21.6 +2.8**
BRTR Keskin Array B 8.67 89 Pn **Pn 07 49 48.5 +1.5**
comp=E,0.3nm,0.3s,baz=263,slow=13,SNR=6.8
NOA NORSAR Array B 22.12 346 P **P 07 52 33.1 -3.6**
comp=E,0.7nm,0.6s,baz=175,slow=12,SNR=2.2
EKA Eskdalemuir Ar 22.81 321 P **P 07 52 40.5 -3.6**
comp=E,1.1nm,0.7s,baz=116,slow=9.6,SNR=3.7
KURBB Kurchatov Arra 39.98 55 P **P 07 55 17.4 +1.6**
comp=E,0.2nm,0.5s,baz=277,slow=8.6,SNR=3.4
MKAR Makanchi Array 43.12 60 P **P 07 55 41.0 -0.8**
comp=E,0.4nm,0.6s,baz=272,slow=5.9,SNR=4.2
ZALV Zalesovo Beam 43.38 50 P **P 07 55 45.2 +1.5**
comp=E,0.7nm,0.4s,baz=286,slow=10,SNR=3.2

*SJA **07** 07:49:04.2±0.6, 36°.48S×72°.23W, h33km, ML3.5, MW3.2*
*GUC **07** 07:49:10.7±0.5, 36°.11S×70°.91W, h6km±10km, ML3.6*
*ISCJB **07** 07:49:14.8±0.6, 35°.95S±0°.05×71°.36W±0°.07, h10km, Error ellipse: s-maj=10.7km s-min=4.4km az=40.9*
ISC 07 07:49:14.3±1.0, 35°.98S±0°.05×71°.32W±0°.06, h10km, n13, σ1§98/19, 1C, Central Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CCHI	**Chillan**	**0.87**	**224**	*e*P		**Pg**	**07 49 29.4**	**-1.8**
CCHI				*e*S		**Sb**	**07 49 43.5**	**+0.1**
CCHI				IAML			07 49 45.9	
comp=E,690nm,0.4s								
NICH	**Los Niches**	**0.98**	**4**	*e*P		**Pg**	**07 49 30.8**	**-2.4**
NICH				*e*S		**Sb**	**07 49 45.7**	**-0.6**
GO05	**HualaæØ**	**1.09**	**333** ⇑	*e*P		**Pb**	**07 49 34.1**	**-1.2**
GO05				*e*S		**Sn**	**07 49 52.5**	**+1.7**
GO05				IAML			07 49 53.3	
comp=E,5μm,0.3s								
COCH	**Cobquecura**	**1.20**	**262**	*e*P		**Pb**	**07 49 36.8**	**-0.4**
COCH				*e*S		**Sn**	**07 49 56.5**	**+3.0**
COCH				IAML			07 49 58.1	
comp=N,1μm,0.4s								
CCSP	**San Pedro de C**	**1.68**	**239**	*e*P		**Pn**	**07 49 43.0**	**-0.8**
CCSP				*e*S		**Sg**	**07 50 07.5**	**-1.0**
CCSP				IAML			07 50 11.2	
comp=N,1μm,0.5s								
RFA	**San Rafael**	**2.62**	**63**	*e*P		**Pb**	**07 49 59.9**	**-1.6**
AAGR	**Agrelo**	**3.54**	**36**	*e*P		**Pn**	**07 50 12.4**	**+2.9**
ARCO	**CERRO ARCO**	**3.70**	**33**	*e*P		**Pn**	**07 50 14.1**	**+2.4**
ARCO				IAML			07 50 23.3	
comp=Z,56nm,0.5s								
ASAL	**Salagasta**	**3.96**	**32**	*e*P		**Pn**	**07 50 17.5**	**+2.3**
ASAL				*e*S		**Sb**	**07 51 12.1**	**-0.1**
ACAN	**Cantantal**	**5.04**	**44**	*e*P		**Pn**	**07 50 32.9**	**+2.9**
MRA	**San Martin**	**5.84**	**54**	*e*P		**Pn**	**07 50 43.1**	**+1.9**
MRA				IAML			07 50 55.2	
comp=Z,8.9nm,0.5s								
ACDV	**Cuesta del Vie**	**6.08**	**18**	*e*P		**Pn**	**07 50 45.5**	**+1.0**
ACLC	**CERRO LA CRUZ**	**7.50**	**31**	*e*P		**Pn**	**07 51 05.7**	**+1.8**

*NEIC **07** 08:02:13.0±0.0, 16°.37N×98°.52W, h12km, MD4.0(MEX), After MEX.*
MEX 07 08:02:13.6±0.5, 16°.38N×98°.52W, h27km±28km, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.18**	**358**	*i* P		Pn	08 02 31.5	-3.0
TLIG				*e*S		Sn	08 02 46.5	-3.2
TLIG	**Tlapa**	**1.18**	**358**	*i* P		Pn	08 02 31.5	-3.0
TLIG				*e*S		Sn	08 02 46.5	-3.2
ACX	**Acapulco**	**1.37**	**291**	*e*P		Pn	08 02 35.4	-1.6
ACX				*e*S		Sn	08 02 52.0	-2.4
ACX	**Acapulco**	**1.37**	**291**	*e*P		Pn	08 02 35.4	-1.6
ACX				*e*S		Sn	08 02 52.0	-2.4
CAIG	**El Cayaco**	**1.80**	**292**	*e*P		Pn	08 02 41.0	-1.9
CAIG				*e*S		Sn	08 03 02.1	-2.7
CAIG	**El Cayaco**	**1.80**	**292**	*e*P		Pn	08 02 41.0	-1.9
CAIG				*e*S		Sn	08 03 02.1	-2.7
VHO	**Vista Hermosa**	**1.85**	**68**	*e*P		Pn	08 02 41.5	-2.2
VHO				*e*S		Sn	08 03 03.8	-2.4
VHO	**Vista Hermosa**	**1.85**	**68**	*e*P		Pn	08 02 41.5	-2.2
VHO				*e*S		Sn	08 03 03.8	-2.4
HUIG	**Huatulco**	**2.40**	**104**	*e*P		Pn	08 02 49.0	-2.1
HUIG	**Huatulco**	**2.40**	**104**	*e*P		Pn	08 02 49.0	-2.1

GUC 07 08:04:40.2±0.6, 21°.30S×70°.19W, h62km±4km, ML3.8, 4C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PB02	**IPOC Station P**	**0.28**	**95**	⇓ *i* P		Pn	08 04 50.6	+0.2
PB02				*e*S		Sn	08 04 58.3	+0.4
PB02				IAML			08 05 00.5	
comp=E,9μm,0.1s								
PB07	**IPOC Station P**	**0.52**	**146**	⇓ *i* P		Pn	08 04 53.1	+0.5
PB07				*e*S		Sn	08 05 02.7	+1.0
PB07				IAML			08 05 03.1	
comp=E,6μm,0.3s								
PB01	**IPOC Station P**	**0.71**	**69**	⇓ *i* P		Pn	08 04 54.1	-0.6
PB01				*e*S		Sn	08 05 04.1	-1.2
PB01				IAML			08 05 05.0	
comp=E,8μm,0.3s								
PB09	**IPOC Station P**	**1.02**	**119**	⇑ *i* P		Pn	08 04 59.3	+0.6
PB09				*e*S		Sn	08 05 13.5	+1.1
PB09				IAML			08 05 14.2	
comp=E,2μm,0.4s								
PB04	**IPOC Station P**	**1.03**	**178**	⇓ *i* P		Pn	08 04 59.2	+0.3
PB04				*e*S		Sn	08 05 13.8	+1.1
PB08	**IPOC Station P**	**1.51**	**40**	*e*P		Pn	08 05 04.5	-0.9
PB08				*e*S		Sn	08 05 23.2	-1.1
PB06	**IPOC Station P**	**1.52**	**158**	⇑ *i* P		Pn	08 05 05.3	0.0
PB06				*e*S		Sn	08 05 24.6	+0.5
PSGC	**Pisagua**	**1.69**	**2**	⇑ *i* P		Pn	08 05 05.7	-1.9
PSGC				*e*S		Sn	08 05 24.6	-3.7
PB15	**IPOC Station P**	**2.02**	**161**	⇑ *i* P		Pn	08 05 12.1	-0.1
PB15				*e*S		Sn	08 05 37.6	+1.2
PB15				IAML			08 05 46.0	
comp=N,2μm,0.3s								

*ISCJB **07** 08:06:58.5±2.5, 31°.65S±0°.03×71°.5W±0°.1, h28km±24km, Error ellipse: s-maj=20.0km s-min=5.7km az=2.1*
*GUC **07** 08:06:58.2±0.5, 31°.65S×71°.14W, h45km±8km, ML3.5*
*SJA **07** 08:07:10.6±0.6, 31°.57S×70°.32W, h63km±8km, ML2.9, MW3.3*
ISC 07 08:06:55.3±2.2, 31°.67S±0°.04×71°.7W±0°.1, h9km±13km, n19, σ1§50/20, 1C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ROCH	**El Roble**	**1.43**	**156** ⇑	*i* P		**Pg**	**08 07 22.4**	**-0.4**
ROCH				*e*S		**Sg**	**08 07 40.9**	**-0.5**
ROCH				IAML			08 07 42.9	
comp=E,1μm,0.4s								
TLL	**Tololo Astrono**	**1.68**	**28**	*e*P		**Pn**	**08 07 25.2**	**0.0**
TLL				*e*S		**Sn**	**08 07 45.4**	**-1.7**
TLL				IAML			08 07 48.0	
comp=N,1μm,0.2s								
PEL	**Peldehue**	**1.71**	**150**	*e*P		Pn	08 07 25.3	0.0
PEL				*e*S		**Sn**	**08 07 45.7**	**-1.6**
CLCH	**Cerro Calan**	**1.99**	**150**	*e*P		**Pn**	**08 07 29.9**	**+0.7**
FCH	**Farellones**	**2.04**	**145**	*e*P		Pn	08 07 30.2	0.0
FCH				*e*S		**Sn**	**08 07 54.0**	**-2.0**
FCH				IAML			08 08 07.3	
comp=E,378nm,0.4s								
AUSP	**Uspallata**	**2.05**	**106**	*e*P		**Pn**	**08 07 30.7**	**+0.4**
RTLS	**Leoncito**	**2.06**	**94**	*e*P		Pn	08 07 29.5	-0.8
RTLS				IAML			08 07 30.6	
comp=Z,192nm,0.2s								
RTLS				*e*S		Sn	08 07 43.1	-13
ANTU	**Antumapu**	**2.10**	**155**	*e*P		**Pn**	**08 07 31.3**	**+0.5**
ANTU				*e*S		**Sn**	**08 07 57.1**	**+0.1**
LMEL	**Las Melosas**	**2.52**	**150**	*e*P		**Pn**	**08 07 37.7**	**+1.1**
LMEL				*e*S		**Sn**	**08 08 07.8**	**+0.3**
LMEL				IAML			08 08 13.3	
comp=N,674nm,0.2s								
ASAL	**Salagasta**	**2.60**	**111**	*e*P		**Pn**	**08 07 38.6**	**+0.9**
ARCO	**CERRO ARCO**	**2.63**	**117**	*e*P		**Pn**	**08 07 40.3**	**+2.2**
ARCO				IAML			08 08 19.7	
comp=Z,158nm,0.2s								
ACDV	**Cuesta del Vie**	**2.68**	**57**	*e*P		**Pn**	**08 07 40.3**	**+1.5**
RTCV	**Cerro Valdivia**	**2.70**	**95**	*e*P		Pn	08 07 37.2	-1.9
LCO	**Las Campanas**	**2.79**	**18**	*e*P		**Pn**	**08 07 41.6**	**+1.2**
AAGR	**Agrelo**	**2.82**	**121**	*e*P		**Pn**	**08 07 43.5**	**+2.9**
AGUA	**GUANDACOL**	**3.52**	**53**	*e*P		**Pn**	**08 07 52.9**	**+2.5**
ACAN	**Cantantal**	**3.89**	**100**	*e*P		**Pn**	**08 07 55.0**	**-0.3**
APLL	**PUNTA DE LOS L**	**4.62**	**75**	*e*P		Pn	08 08 04.5	-0.9
ACLC	**CERRO LA CRUZ**	**4.67**	**63**	*e*P		**Pn**	**08 08 06.4**	**+0.2**

AUST 07 08:12:57.3±1.6, 33°.84S×116°.38E, h0km, Error ellipse: s-maj=20.3km s-min=7.3km az=74.0, Western Australia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RKGY	**Rocky Gully**	**0.91**	**147**	S		Sg	08 13 26.6	0.0
baz=0.9,SNR=29								
NWAO	**Narrogin (SRO)**	**1.16**	**38**	P		Pb	08 13 20.4	+0.2
baz=1.2,SNR=8.2								
MUN	**Mundaring**	**1.86**	**355**	P		Pn	08 13 30.2	-0.2
baz=1.9,SNR=7.8								
KLBR	**Kellerberrin**	**2.52**	**28**	P		Pn	08 13 40.9	+1.4
baz=2.5,SNR=12								
KLBR				S		Sn	08 14 09.7	-1.3
baz=2.5,SNR=6.2								
BLDU	**Ballidu**	**3.23**	**5**	S		Sn	08 14 28.7	+0.3
baz=3.2,SNR=19								

IDC 07 08:30:16.7±9.9, 6°.82N×126°.46E, h375km±99km, mb3.1/4, mb1 3.2/4, mb1mx2.8/61, mbtmp3.9/4, Error ellipse: s-maj=224.6km s-min=17.8km az=65.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**27.70**	**164**	P		P	08 35 32.2	-0.1
0.4nm,0.3s,baz=344,slow=9.5,SNR=4.0								
ASAR	**Alice Springs**	**31.16**	**167**	P		P	08 36 02.5	0.0
0.5nm,0.5s,baz=346,slow=7.8,SNR=13								
ASAR				PcP		PcP	08 38 46.9	-0.4
0.3nm,0.4s,baz=343,slow=3.1,SNR=4.6								
MKAR	**Makanchi Array**	**54.90**	**324**	P		P	08 39 09.7	-0.4
0.8nm,0.5s,baz=119,slow=8.9,SNR=8.9								
KURBB	**Kurchatov Arra**	**59.02**	**327**	P		P	08 39 38.7	+0.2
1.7nm,0.6s,baz=131,slow=6.3,SNR=11								

*NEIC **07** 08:53:45.4±0.0, 15°.13N×95°.14W, h16km, MD4.0(MEX), After MEX.*
MEX 07 08:53:45.4±0.4, 15°.13N×95°.14W, h16km±8km, MD4.0, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.13**	**304**	*e*P		Pb	08 54 02.9	-3.6
HUIG				*e*S		Sb	08 54 15.9	-5.1
HUIG	**Huatulco**	**1.13**	**304**	*e*P		Pb	08 54 02.9	-3.6
HUIG				*e*S		Sb	08 54 15.9	-5.1
PCIG		**1.94**	**73**	*e*P		Pn	08 54 14.1	-3.6
PCIG				*e*S		Sn	08 54 36.7	-5.1
PCIG		**1.94**	**73**	*e*P		Pn	08 54 14.1	-3.6
PCIG				*e*S		Sn	08 54 36.7	-5.1
VHO	**Vista Hermosa**	**2.46**	**322**	*e*P		Pn	08 54 22.1	-3.1
VHO				*e*S		Sn	08 54 50.4	-4.6
VHO	**Vista Hermosa**	**2.46**	**322**	*e*P		Pn	08 54 22.1	-3.1
VHO				*e*S		Sn	08 54 50.4	-4.6
TGIG		**2.54**	**50**	*e*P		Pn	08 54 23.2	-2.9
TGIG				*e*S		Sn	08 54 52.6	-4.2
TGIG		**2.54**	**50**	*e*P		Pn	08 54 23.2	-2.9
TGIG				*e*S		Sn	08 54 52.6	-4.2
CCIG	**Comitan**	**3.11**	**68**	*e*P		Pn	08 54 32.8	-1.2
CCIG				*e*S		Sn	08 55 07.2	-3.8
CCIG	**Comitan**	**3.11**	**68**	*e*P		Pn	08 54 32.8	-1.2
CCIG				*e*S		Sn	08 55 07.2	-3.8

*IDC **07** 08:54:05.6±7.8, 51°.33N×179°.33E, h0km, mb3.4/4, mb1 3.9/5, mb1mx3.4/86, mbtmp3.5/5, ML3.8/1, Error ellipse: s-maj=148.9km s-min=75.6km az=87.0*
*ISCJB **07** 08:54:12.0±1.0, 51°.4N±0°.1×178°.92E±0°.09, h81km±4km, mb3.3/7, Error ellipse: s-maj=20.8km s-min=7.5km az=15.5*
*NEIC **07** 08:54:14.1±0.0, 51°.48N×179°.04E, h65km, mb3.5/4, ML2.9(AEIC), After AEIC.*
ISC 07 08:54:13.4±1.2, 51°.5N±0°.1×178°.96E±0°.08, h73km±7km, n35, σ0§91/38, mb3.4/7, Rat Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.24**	**114**	*e*Pn		**Pn**	**08 54 24.6**	**+0.1**
AMKA				*e*Sn		**Sn**	**08 54 32.4**	**-0.1**
LSSE	**Little Sitkin**	**0.52**	**332**	P		**Pn**	**08 54 27.4**	**+0.8**
LSPA	**Little Sitkin**	**0.54**	**334**	P		**Pn**	**08 54 27.4**	**+0.6**
LSPA				S		**Sn**	**08 54 38.1**	**+1.4**
LSSA	**Little Sitkin**	**0.55**	**330**	P		**Pn**	**08 54 27.5**	**+0.5**
LSNW	**Little Sitkin**	**0.57**	**331**	P		**Pn**	**08 54 27.6**	**+0.5**
CESW	**Semis' Southwe**	**0.57**	**41**	P		**Pn**	**08 54 27.2**	**+0.1**
CETU	**Semis' Tuman**	**0.60**	**34**	P		**Pn**	**08 54 27.7**	**+0.3**
CERAA	**Semis' Rag'd T**	**0.63**	**46**	P		**Pn**	**08 54 27.7**	**0.0**
CEAP	**Semis' Anvil P**	**0.66**	**36**	P		**Pn**	**08 54 28.3**	**+0.3**
GALAA	**Gareloi Lava P**	**1.45**	**78**	*e*Pn		**Pn**	**08 54 38.2**	**+0.5**
TAPA	**Tanaga Point A**	**2.04**	**79**	*e*Pn		**Pn**	**08 54 46.2**	**+0.6**
TAPA				*e*Sn		**Sn**	**08 55 10.6**	**+0.4**
KICM	**Kanaga Island**	**2.44**	**78**	*e*Pn		**Pn**	**08 54 52.0**	**+1.1**
KIKV	**Kanaga Island**	**2.44**	**79**	*e*Pn		**Pn**	**08 54 51.9**	**+0.9**
KINC	**Kanaga Island**	**2.48**	**78**	*e*Pn		**Pn**	**08 54 52.3**	**+0.8**
ADAG	**Mount Adagdak**	**2.81**	**78**	*e*Pn		**Pn**	**08 54 56.3**	**+0.3**
GSMY	**Great Sitkin M**	**3.15**	**78**	*e*Pn		**Pn**	**08 55 01.1**	**+0.5**
SMY	**Shemya**	**3.25**	**295**	*e*Pn		Pn	08 55 00.1	-1.8
ATKA	**Atka Island**	**4.31**	**78**	*e*Pn		**Pn**	**08 55 16.8**	**+0.5**
ATKA				*e*Sn		**Sn**	**08 56 04.0**	**-1.3**
KOKL	**Mount Kliuchef**	**4.32**	**76**	*e*Pn		**Pn**	**08 55 17.3**	**+0.7**
KOFP	**Korovin Flat P**	**4.38**	**77**	*e*Pn		**Pn**	**08 55 18.5**	**+1.2**
NIKH	**Nikolski High**	**7.64**

PD31	Pinedale Array	47.61	71	eP	P	09 02 41.4	-0.7
PDAR	Pinedale Array	47.61	71	P	P	09 02 41.4	-0.7
	0.4nm,0.5s,baz=285,slow=3.5,SNR=4.8						
PDAR	Pinedale Array	47.61	71	eP	P	09 02 41.6	-0.5
TXAR	Lajitas Array	60.02	80	P	P	09 04 12.9	+0.4
	0.4nm,0.6s,baz=302,slow=5.8,SNR=8.0						

SJA 07 08:56:30.3±0.4, 35.55S×70.16W, h33km, ML3.4, MW3.5, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
RFA	San Rafael	1.59	61	eP		Pb	08 56 58.1	-1.0
RFA				eS		Sb	08 57 18.9	-0.1
RFA				IAML			08 57 21.4	
	comp=Z,688nm,0.3s							
CANA	Caviahue	2.44	197	eP		Pn	08 57 09.7	+1.7
CANA				eP		Pb	08 57 10.6	-3.0
AVIZ	Vizcacheras	2.48	34	eP		Pn	08 57 10.9	+2.5
AVIZ				eS		Sb	08 57 41.5	-2.9
AAGR	Agrelo	2.70	24	eP		Pn	08 57 14.1	+2.6
ARCO	CERRO ARCO	2.89	21	eP		Pn	08 57 17.0	+2.8
ARCO				IAML			08 57 59.8	
	comp=Z,95nm,0.2s							
ASAL	Salagasta	3.15	21	eP		Pn	08 57 20.3	+2.6
AUSP	Uspallata	3.38	11	eP		Pn	08 57 24.3	+3.3
RTLS	Leoncito	3.81	11	eP		Pn	08 57 30.5	+3.6

*MOS **07** 09:01:47.3±0.7,20.1S×176.30W,h239km,mb5.6/63, Error ellipse: s-maj=7.9km s-min=5.8km az=61.3*
*ISCJB **07** 09:01:47.6±0.6,20.22S±0.02×176.28W±0.02, h245km±5km,mb5.5/416,Error ellipse: s-maj=3.6km s-min=2.4km az=141.3*
*IDC **07** 09:01:49.6±0.8,20.19S×176.29W,h250km±7km,mb5.3/51, mb1 5.3/54,mb1mx5.2/58,mbtmp5.8/54,Error ellipse: s-maj=7.0km s-min=6.1km az=158.0*
*WEL **07** 09:01:51.0,20.19S×176.34W,h266km*
*NEIC **07** 09:01:51.1±0.5,20.19S×176.34W,h266km±5km, mb5.6/297,MW5.9,MW5.8,Error ellipse: s-maj=3.3km s-min=2.1km az=140.0,Moment Tensor Solution. s66 Moment tensor: Scale 10^{17}Nm; M_{rr}3.95; $M_{\theta\theta}$-2.03; $M_{\phi\phi}$-1.91; $M_{r\theta}$5.78; $M_{r\phi}$-1.61; $M_{\theta\phi}$4.50; Best double couple: $M_0$8.20000×10^{17} NP1:ϕ=222.00000°,δ14.00000°, λ81.00000°. NP2:ϕ=51.00000°,δ76.00000°,λ92.00000°. Principal axes: T 8.4300, Plg58.0000°, Azm324.0000°; N -0.3900, Plg2.0000°, Azm231.0000°; P -8.0400, Plg31.0000°, Azm140.0000°;*
NEIC Felt at Neiafu and 'Ohonua, Tonga.
*GCMT **07** 09:01:51.1±0.1,20.37S×175.96W,h277km,MW5.9/137, Moment Tensor Solution. s129,c262; s137,c402; Duration: 2±1 Moment tensor: Scale 10^{17}Nm; M_{rr}2.19±.05; $M_{\theta\theta}$0.80±.06; $M_{\phi\phi}$-2.98±.05; $M_{r\theta}$5.35±.05; $M_{\theta\phi}$-1.63±.05; $M_{r\phi}$4.52±.05; Best double couple: $M_0$7.66600×10^{17} NP1:ϕ=48.00000°,δ81.00000°, λ106.00000°. NP2:ϕ=168.00000°,δ18.00000°,λ31.00000°. Principal axes: T 7.4920, Plg52.0000°, Azm336.0000°; N 0.3540, Plg15.0000°, Azm226.0000°; P -7.8410, Plg34.0000°, Azm125.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **07** 09:01:52.0±0.0,20.33S×176.41W,h280km,Moment Tensor Solution. s16 Moment tensor: Scale 10^{17}Nm; M_{rr}2.17; $M_{\theta\theta}$1.10; $M_{\phi\phi}$-3.27; $M_{r\theta}$4.57; $M_{\theta\phi}$-2.23; $M_{r\phi}$3.88; Best double couple: $M_0$7.00000×10^{17} NP1:ϕ=49.00000°, δ79.00000°,λ111.00000°. NP2:ϕ=167.00000°,δ23.00000°, λ29.00000°. Principal axes: T 6.4900, Plg51.0000°, Azm343.0000°; N 0.9500, Plg20.0000°, Azm225.0000°; P -7.4500, Plg30.0000°, Azm122.0000°;*
*BJI **07** 09:01:52.2,19.79S×176.25W,h277km,mb5.4/70, mB5.5/56*

ISC 07 09:01:50.3±0.3, 20.18S±0.03×176.22W±0.03, h263km±2km, h263km:pP-P,n1854,σ1953/2090, mb5.6/413, 112C-68D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
AFI	Afiamalu	7.54	35	P		Pn	09 03 32.6	-5.4
	232nm,0.3s,baz=174,slow=1.2,SNR=232							
AFI				S		S	09 04 49.3	-16
	484nm,0.3s,baz=48,slow=24,SNR=8.7							
RIZ	Raoul Island	9.16	189	P		Pn	09 03 55.2	-3.0
RIZ				S		S	09 05 35.3	-6.5
RAO	Raoul Island	9.16	189	P		Pn	09 03 56.0	-2.1
	244nm,0.3s,baz=276,slow=19,SNR=4.6							
RAO				S		S	09 05 34.1	-7.8
	2μm,0.3s,baz=250,slow=23,SNR=16							
RAO	Raoul Island	9.16	189	ePn		Pn	09 03 56.0	-2.1
RAO				ePn		P	09 03 56.4	-8.2
RAO				eS		S	09 05 34.1	-7.8
RAO	Raoul Island	9.16	189	eP		Pn	09 03 56.4	-1.8
GLKZ	Green Lake	9.18	189	P		Pn	09 03 55.5	-2.8
GLKZ				S		S	09 05 35.5	-6.6
FUNA	Funafuti	12.40	338	ePn		Pn	09 04 39.6	+0.9
RAR	Rarotonga	15.43	97	P		P	09 05 13.8	-0.3
	7.7nm,0.3s,baz=247,slow=7.1,SNR=29							
RAR				S		S	09 08 06.9	+3.3
	4.4nm,0.3s,baz=104,slow=19,SNR=3.1							
RAR	Rarotonga	15.43	97	eP		P	09 05 13.7	-0.4
	1μm,1.4s							
RAR				eS		S	09 08 06.9	+3.3
DZM	Mont Dzumac	16.29	260	eP		Pn	09 05 27.2	+1.8
	881nm,0.9s							
DZM	Mont Dzumac	16.29	260	P		Pn	09 05 26.4	+1.0
	18nm,0.3s,baz=79,slow=19,SNR=44							
DZM				S		S	09 08 23.5	+2.6
	4.3nm,0.3s,baz=122,slow=20,SNR=17							
DZM	Mont Dzumac	16.29	260	eP		Pn	09 05 26.4	+1.0
	374nm,0.8s							
DZM				eS		S	09 08 27.3	+6.4
OUZ	Omahuta	17.47	209	eP		P	09 05 37.3	+1.0
	88nm,1.0s							
OUZ	Omahuta	17.47	209	P		Pn	09 05 37.8	-1.2
WCZ	Waipu Caves	17.75	206	P		Pn	09 05 41.0	-1.4
KNTN	Kanton	17.85	15	eP		P	09 05 40.7	+0.1
	2μm,1.4s							
KUZ	Kuaotunu	17.95	201	P		Pn	09 05 43.0	-1.6
MXZ	Matakaoa Point	17.97	194	eP		P	09 05 42.6	+1.0
	254nm,0.4s							
MXZ	Matakaoa Point	17.97	194	P		P	09 05 43.0	+1.3
MXZ				S		S	09 08 47.7	-6.2
WMGZ	Waiomatatini S	18.19	194	P		P	09 05 41.7	-2.3
WMGZ				P		S	09 08 52.6	-5.6
HAZ	Te Kaha	18.28	195	P		P	09 05 45.1	+0.1
HAZ				P		S	09 08 57.9	-2.1
PKGZ	Pakihiroa	18.33	194	P		P	09 05 42.7	-3.0
PKGZ				P		S	09 08 56.6	-4.5
PUZ	Puketiti	18.46	194	P		P	09 05 44.4	-2.7
RUGZ	Raukumara Rang	18.50	195	P		P	09 05 45.8	-1.7
RUGZ				P		S	09 09 00.1	-4.5
TWGZ	Tauwhareparae	18.63	194	P		P	09 05 46.7	-2.2
TGRZ	Tauranga	18.67	199	P		P	09 05 50.6	+1.4
OPRZ	Ohinepanea	18.69	198	P		P	09 05 49.3	-0.1
MARZ	Manawahe	18.79	198	P		P	09 05 50.3	-0.2
CNGZ	Carnagh Statio	18.87	194	P		P	09 05 50.0	-1.4
KMRZ	Kaimai	18.88	199	P		Pn	09 05 53.4	-2.1
EDRZ	Edgecumbe	18.88	197	P		P	09 05 52.1	+0.6
MWZ	Matawai	18.89	195	P		P	09 05 48.9	-2.7
TKGZ	Te Karaka	18.91	195	P		P	09 05 49.0	-2.7
URZ	Urewera	18.92	196	P		P	09 05 50.0	-1.9
	110nm,0.3s,baz=7.3,slow=0.9,SNR=219							
URZ				S		S	09 09 10.5	-2.1
	26nm,0.3s,baz=207,slow=17,SNR=11							
URZ	Urewera	18.92	196	eP		P	09 05 50.0	-1.9
URZ				eP		Pn	09 05 50.2	-5.8
URZ				eS		S	09 09 10.5	-2.1
URZ	Urewera	18.92	196	P		P	09 05 49.3	-2.6
KARZ	Kaharoa	18.95	199	P		P	09 05 52.2	0.0
OMRZ	Omania	18.99	198	P		P	09 05 53.3	+0.6
MKRZ	Makatiti	18.99	198	P		Pn	09 05 54.8	-2.1
NGRZ	Ngongotaha	19.04	199	P		Pn	09 05 55.4	-2.1
RAGZ	Rawiri	19.07	195	P		P	09 05 51.4	-2.1
TARZ	Mount Tarawera	19.07	198	P		P	09 05 49.2	-4.4
UTU	Utuhina	19.10	199	P		Pn	09 05 56.2	-2.0
HLRZ	Highlands Stat	19.13	198	P		P	09 05 55.7	+1.5
RRRZ	Republican Roa	19.16	198	P		P	09 05 55.0	+0.5
RIGZ	Rimuhau	19.18	194	P		P	09 05 52.6	-2.2
HSRZ	Hossack Road	19.21	198	P		P	09 05 57.0	+1.9
MUGZ	Murupara	19.22	197	P		P	09 05 53.5	-1.6
HRRZ	Handcock Road	19.28	198	P		P	09 05 55.5	-0.2
GRRZ	Galatos Road	19.29	199	P		P	09 05 56.9	+1.0
RTZ	Ruatahuna	19.29	196	P		P	09 05 53.4	-2.6
PRRZ	Plateau Road	19.34	198	P		P	09 05 55.4	-1.0
SNGZ	Shannon Statio	19.36	195	P		P	09 05 55.0	-1.6
PRGZ	Paritu Road	19.36	194	P		P	09 05 56.6	-0.1
ALRZ	Allen Road	19.42	198	P		P	09 05 56.1	-1.2
WPRZ	Whakapapatarin	19.43	198	P		P	09 05 58.1	+0.7
TLZ	Tolley Road	19.45	200	P		P	09 05 59.1	+1.5
KUTZ	Kaahu Road	19.50	199	P		Pn	09 06 00.5	-2.3
KNZ	Kokohu	19.50	194	P		P	09 05 58.4	+0.3
RAHZ	Arahi	19.55	196	P		P	09 05 56.4	-2.3
MTHZ	Maungataniwha	19.55	196	P		P	09 05 57.1	-1.6
MHGZ	Mahia Peninsul	19.58	194	P		P	09 05 59.2	+0.3
MRHZ	Matea Rd	19.65	197	P		P	09 05 58.2	-1.5
WHHZ	Waihua	19.66	195	P		P	09 05 59.0	-0.8
WATZ	Wairara	19.73	199	P		P	09 06 00.7	+0.1
NMHZ	Naumai	19.79	196	P		P	09 05 59.3	-2.0
NMHZ	Naumai	19.79	196	P		S	09 09 30.6	+0.9
NMHZ	Naumai	19.79	196	P		S	09 09 30.6	+0.9
HIZ	Hauiti	19.84	201	eP		P	09 06 02.6	+0.9
	266nm,0.6s							
ARHZ	Aropaoanui	19.90	196	P		P	09 06 02.1	-0.2
ARHZ	Aropaoanui	19.90	196	P		S	09 09 31.2	-0.3
ARHZ	Aropaoanui	19.90	196	P		S	09 09 31.2	-0.3
BKZ	Black Stump Fm	19.94	197	eP		P	09 06 00.3	-2.5
	88nm,0.4s							
BKZ	Black Stump Fm	19.94	197	P		S	09 09 33.0	+0.6
BKZ	Black Stump Fm	19.94	197	P		S	09 09 33.0	+0.6
RITZ	Rihia Road	19.94	198	P		P	09 06 01.9	-1.0
KRVZ	Karewarewa	20.12	199	P		S	09 09 40.2	+4.5
KRVZ	Karewarewa	20.12	199	P		S	09 09 40.2	+4.5
MCHZ	McNeill Hill	20.15	196	P		S	09 09 35.5	-0.5
MCHZ	McNeill Hill	20.15	196	P		S	09 09 35.5	-0.5
COVZ	Chateau Observ	20.24	199	P		S	09 09 44.3	+6.4
COVZ	Chateau Observ	20.24	199	P		S	09 09 44.3	+6.4
CKHZ	Cape Kidnapper	20.25	195	P		S	09 09 36.8	-1.1
CKHZ	Cape Kidnapper	20.25	195	P		S	09 09 36.8	-1.1
TUVZ	Tukino	20.27	198	P		S	09 09 41.1	+2.6
TUVZ	Tukino	20.27	198	P		S	09 09 41.1	+2.6
TRVZ	Turoa	20.33	199	P		S	09 09 41.0	+1.3
TRVZ	Turoa	20.33	199	P		S	09 09 41.0	+1.3
PKVZ	Pokaka	20.39	199	P		S	09 09 44.5	+4.2
PKVZ	Pokaka	20.39	199	P		S	09 09 44.5	+4.2
KRHZ	Kereru	20.42	197	P		S	09 09 38.7	-2.1
KRHZ	Kereru	20.42	197	P		S	09 09 38.7	-2.1
KAHZ	Kahuranaki	20.43	195	P		S	09 09 39.8	-1.2
KAHZ	Kahuranaki	20.43	195	P		S	09 09 39.8	-1.2
MTVZ	Mangateitei	20.43	199	P		S	09 09 45.6	+4.5
MTVZ	Mangateitei	20.43	199	P		S	09 09 45.6	+4.5
PXZ	Pawanui	20.66	195	P		S	09 09 44.9	+0.3
PXZ	Pawanui	20.66	195	P		S	09 09 44.9	+0.3
PNHZ	Pukenui	20.72	197	P		S	09 09 44.4	-1.4
PNHZ	Pukenui	20.72	197	P		S	09 09 44.4	-1.4
WPHZ	Waipukurau	20.80	196	P		S	09 09 45.6	-1.4
WPHZ	Waipukurau	20.80	196	P		S	09 09 45.6	-1.4
TSZ	Takapari Road	20.92	197	P		S	09 09 50.8	+1.8
TSZ	Takapari Road	20.92	197	P		S	09 09 50.8	+1.8
WAZ	Wanganui	20.92	199	P		S	09 09 52.5	+3.4
WAZ	Wanganui	20.92	199	P		S	09 09 52.5	+3.4
PRHZ	Porangahau	20.94	195	P		S	09 09 45.7	-3.6
PRHZ	Porangahau	20.94	195	P		S	09 09 45.7	-3.6
DVHZ	Dannevirke	21.09	196	P		S	09 09 55.5	+3.7
DVHZ	Dannevirke	21.09	196	P		S	09 09 55.5	+3.7
ANWZ	Angora Road	21.16	196	P		S	09 09 55.5	+2.6
ANWZ	Angora Road	21.16	196	P		S	09 09 55.5	+2.6
PRWZ	Pori Road	21.38	196	P		S	09 09 60.0	+3.5
PRWZ	Pori Road	21.38	196	P		S	09 09 60.0	+3.5
BFZ	Birch Farm	21.43	196	eP		P	09 06 16.9	-1.0
	139nm,0.5s							
BFZ				eS		S	09 09 58.5	+1.2
TIWZ	Tintock	21.61	196	P		S	09 10 05.0	+4.7
CPWZ	Castlepoint	21.65	196	P		S	09 10 08.6	+7.7
HOWZ	Holdsworth Sta	21.82	197	P		S	09 10 06.8	+3.1
TMWZ	Te Maipa	21.92	196	P		S	09 10 11.4	+6.1
KIW	Kapiti Island	21.96	198	P		S	09 10 12.3	+6.3
MTW	Mount Morrison	22.07	197	P		S	09 10 12.6	+4.9
DUWZ	D'Urville Isla	22.21	200	P		S	09 10 17.3	+7.3
TRWZ	Traveller	22.24	196	P		S	09 10 17.1	+6.6
PAWZ	Paruwai Farm	22.30	197	P		S	09 10 17.8	+6.4
MSWZ	Moikau Station	22.38	197	P		S	09 10 15.0	+2.3
SNZO	South Karori	22.43	198	eP		P	09 06 26.1	-1.0
	116nm,0.6s							
BHW	Baring Head	22.48	198	P		S	09 10 18.5	+4.3
PLWZ	Palliser	22.52	197	P		S	09 10 22.8	+7.8
QRZ	Quartz Range	22.71	203	P		S	09 10 36.2	+18
NNZ	Nelson	22.76	201	P		S	09 10 24.7	+5.9
TUWZ	Tuamarina	22.77	199	P		S	09 10 22.9	+3.9
CMWZ	Cape Campbell	22.98	199	P		S	09 10 29.2	+6.8
THZ	Tophouse	23.41	201	eP		P	09 06 36.7	+0.6
	96nm,0.7s							
THZ	Tophouse	23.41	201	P		S	09 10 36.7	+7.4
KHZ	Kahutara	23.80	199	eP		P	09 06 39.3	-0.1
	87nm,0.7s							
TARA	Tarawa	23.90	332	eP		P	09 06 40.0	-0.7
	2μm,1.4s							
LTZ	Lake Taylor	24.53	201	eP		P	09 06 45.6	-0.6
	323nm,0.6s							
TBI	Tubuai	25.04	102	eP		P	09 06 50.0	-0.9
	467nm,1.2s							
OXZ	Oxford	25.09	200	eP		P	09 06 50.5	-0.7
	246nm,0.7s							
CRLZ	Canterbury Las	25.13	199	eP		P	09 06 52.8	+1.4
	253nm,1.4s							
MQZ	McQueen's Vall	25.24	199	eP		P	09 06 52.8	+0.4
	53nm,0.5s							
PAE	Paea	25.32	89	eP		P	09 06 52.5	-1.0
	67nm,1.2s							
PPT2	Papeete2	25.33	89	eP		P	09 06 53.0	-0.7
	400nm,1.2s							
PPT	Papeete	25.34	89	P		P	09 06 53.4	-0.3
	266nm,0.8s,baz=101,slow=2.5,SNR=20							
PPT	Papeete	25.34	89	eP		P	09 06 53.4	-0.3
PPT				eP		P	09 06 53.6	-0.1
PPT	Papeete	25.34	89	eP		P	09 06 53.6	-0.1
PPTF	Pamatai, Papee	25.34	89	eP		P	09 06 53.6	-0.2
	1μm,1.6s							
HNR	Honiara	25.36	291	P		P	09 06 52.9	-1.0
	481nm,0.6s,baz=167,slow=7.7,SNR=7.5							
HNR	Honiara	25.36	291	eP		P	09 06 52.9	-1.0
HNR				eP		P	09 06 53.3	-0.6
HNR	Honiara	25.36	291	eP		P	09 06 57.0	+3.1
HNR				pmax		pmax		
	comp=Z,640nm,0.8s							
TIAR	Tiarei	25.55	89	eP		P	09 06 55.0	-0.6
	comp=Z,73nm,1.0s							
TVO	Taravao	25.60	89	eP		P	09 06 55.4	-0.7
	comp=Z,78nm,1.2s							
RPZ	Rata Peaks	25.77	202	P		P	09 06 57.9	+0.6
	comp=Z,162nm,0.6s,baz=332,slow=2.5,SNR=55							
RPZ	Rata Peaks	25.77	202	eP		P	09 06 57.9	+0.6
RPZ				eP		P	09 06 58.4	+1.1
FOZ	Fox Glacier	26.06	204	eP		P	09 07 01.4	+1.6
	comp=Z,169nm,0.6s							
LBZ	Lake Benmore	26.66	202	eP		P	09 07 06.2	+1.0
	comp=Z,37nm,0.7s							
ODZ	Otahua Downs	27.08	201	eP		P	09 07 10.4	+1.5
	comp=Z,280nm,1.9s							
WKZ	Wanaka	27.46	203	eP		P	09 07 13.1	+0.8
	comp=Z,175nm,1.4s							
PMOR	Pomariorio Ree	27.47	84	eP		P	09 07 11.6	-1.1
	comp=Z,263nm,1.1s							
VAH	Vaihoa	27.66	84	eP		P	09 07 12.9	-1.4
	comp=Z,230nm,1.2s							
MLZ	Mavora Lakes	28.26	204	eP		P	09 07 20.9	+1.5
	comp=Z,72nm,0.6s							
DCZ	Deep Cove	28.71	205	eP		P	09 07 24.2	+0.9
	comp=Z,54nm,0.6s							
XMAS	Kiritimati	28.76	42	eP		P	09 07 24.5	+0.4
	comp=Z,288nm,1.0s							
WHZ	Wether Hill Ro	28.77	203	eP		P	09 07 25.3	+1.4
	comp=Z,211nm,0.6s							
EIDS	Eidsvold	30.54	254	eP		P	09 07 40.2	+0.5
	comp=Z,420nm,1.8s							
ARMA	Armidale	30.71	244	eP		P	09 07 41.9	+0.6
	comp=Z,58nm,1.0s							
CNB	Canberra Magne	33.79	236	S		S	09 13 12.5	+0.6
	baz=34,SNR=4.9							
CAN	Canberra	34.08	236	eP		P	09 08 10.4	0.0
	comp=Z,62nm,0.9s							
CAN	Canberra	34.08	236	eP		P	09 08 10.4	0.0
CAN				pmax		pmax		
	comp=Z,62nm,0.9s							
RABL	Rabaul	34.64	293	eP		P	09 08 15.5	+0.2
	comp=Z,262nm,0.6s							
CTA	Charters Tower	35.19	264	P		P	09 08 20.4	+0.5
	comp=Z,274nm,0.5s,baz=94,slow=11,SNR=463							
CTA				PcP		PcP	09 10 45.0	+0.1
	comp=Z,14nm,0.6s,baz=56,slow=3.7,SNR=3.7							
CTA				S		S	09 13 32.1	-1.4
	comp=Z,16nm,1.1s,baz=334,slow=21,SNR=15							
CTA				ScP		ScP	09 14 09.3	+4.0
	comp=Z,40nm,1.1s,baz=55,slow=1.8,SNR=11							
CTAO	Charters Tower	35.19	264	eP		P	09 08 20.5	+0.5
	comp=Z,318nm,0.6s							
CTAO				eS		S	09 13 35.6	+2.1
CTAO	Charters Tower	35.19	264	eP		P	09 08 20.5	+0.5
CTAO				eS		S	09 13 35.6	+2.1
CTAO				pmax		pmax		
	comp=Z,320nm,0.6s							
TAOE	Nuku Hiva Isla	36.60	77	eP		P	09 08 31.0	-1.1
	comp=Z,261nm,1.0s							
TAOE	Nuku Hiva Isla	36.60	77	eP		P	09 08 32.1	0.0
	comp=Z,139nm,1.0s							
PATS	Pohnpei	36.72	314	eP		P	09 08 33.4	+0.5
	comp=Z,872nm,1.6s							
PMG	Port Moresby	36.91	281	P		P	09 08 34.9	+0.4
	comp=Z,456nm,1.0s,baz=117,slow=3.1,SNR=46							
PMG				S		S	09 13 58.6	-1.1
	comp=Z,8.1nm,0.8s,baz=197,slow=19,SNR=4.4							
PMG	Port Moresby	36.91	281	eP		P	09 08 35.2	+0.7
	comp=Z,523nm,1.0s							
PMG				eS		S	09 13 58.6	-1.1
JOHN	Johnston Islan	37.27	11	eP		P	09 08 38.1	+0.8
	comp=Z,658nm,0.8s							
MTSU	Mount Surprise	37.28	266	S		S	09 14 04.2	-1.0
	baz=37,SNR=7.1							
TOO	Toolangi	37.44	234	P		P	09 08 38.7	0.0
TOO				pmax		pmax		
	comp=Z,83nm,0.8s							
MOO	Moorlands	37.92	226	S		S	09 14 18.7	+4.4
	baz=38,SNR=3.3							
RKT	Rikitea	38.36	102	eP		P	09 08 46.2	-0.4
	comp=Z,270nm,1.0s							
COEN	Coen	39.23	273	S		S	09 14 33.0	-1.5
	baz=39,SNR=5.6							
COEN	Coen	39.23	273	eP		P	09 08 54.1	+0.2
	comp=Z,164nm,0.8s							
STKA	Stephens Creek	39.43	244	P		P	09 08 55.3	0.0
	comp=Z,27nm,0.7s,baz=91,slow=10.0,SNR=54							
STKA				PcP		PcP	09 10 58.1	+0.3
	comp=Z,43nm,0.7s,baz=49,slow=7.1,SNR=6.8							
STKA				ScP		ScP	09 14 24.8	+3.7
	comp=Z,18nm,0.7s,baz=74,slow=2.8,SNR=9.6							
STKA	Stephens Creek	39.43	244	S		ScP	09 14 25.0	+3.9
	baz=40,SNR=8.7							
STKA	Stephens Creek	39.43	244	eP		P	09 08 55.4	0.0
	comp=Z,13nm,1.0s							
STKA				ePcP		PcP	09 10 58.1	+0.3
STKA	Stephens Creek	39.43	244	eP		P	09 08 55.4	+0.1
MANU	Manus Island	39.86	292	eP		P	09 09 00.2	+1.1
	comp=Z,2μm,1.7s							
WAKE	Wake Island	42.66	336	eP		P	09 09 21.4	-0.2
	comp=Z,1μm,1.6s							
BBOO	Buckleboo	44.18	243	S		S	09 15 44.6	-2.1
	baz=44,SNR=5.7							
BBOO	Buckleboo	44.18	243	eP		P	09 09 32.8	-0.8
	comp=Z,56nm,0.9s							
KHLU	Kahalu'u	44.26	28	eP		P	09 09 34.9	+0.5
	comp=Z,399nm,0.9s							
KKH	Kailua Kona	44.26	28	eP		P	09 09 34.4	+0.2
KKH	Kailua Kona	44.26	28	eP		P	09 09 35.9	+1.6
HUH	Hualalai	44.37	28	eP		P	09 09 36.1	+0.7
	comp=Z,290nm,0.9s							
STCH	Steam Cracks	44.42	29	eP		P	09 09 36.2	+0.6
	comp=Z,341nm,0.8s							
HMH	Humu'ula Sheep	44.45	28	eP		P	09 09 37.2	+1.1
	comp=Z,605nm,1.0s							
HULD	Heiheiahulu Di	44.52	29	eP		P	09 09 36.9	+0.6
	comp=Z,296nm,1.0s							
POHA	Pohakuloa	44.56	28	eP		P	09 09 37.2	+0.2
	comp=Z,232nm,0.9s							
HPAH	Hawaii Prepara	44.73	28	eP		P	09 09 38.6	+0.5
	comp=Z,399nm,0.9s							
MHA	Mahukona	44.78	28	eP		P	09 09 39.4	+1.0
MHA	Mahukona	44.78	28	eP		P	09 09 39.6	+1.3
KEKH	Kekaha	44.90	22	eP		P	09 09 40.3	+1.0
	comp=Z,583nm,0.9s							
HON	Honolulu	44.93	24	eP		P	09 09 40.5	+1.0
	comp=Z,602nm,0.9s							
HON	Honolulu	44.93	24	eP		P	09 09 40.8	+1.3
HON				pmax		pmax		
	comp=Z,600nm,0.9s							
KIP	Kipapa	45.02	24	eP		P	09 09 41.3	+1.1
	comp=Z,691nm,1.0s							
KIP	Kipapa	45.02	24	eP		P	09 09 41.3	+1.1
KIP				pmax		pmax		

FAKI Fak Fak 53.06 282 P **P** **09 10 41.6 +0.4**
FAKI Fak Fak 53.06 282 *e*P **P** **09 10 40.7 -0.6**
comp=Z,137nm,0.9s
FITZ Fitzroy Crossi 54.73 262 P **P** **09 10 52.9 -0.3**
comp=Z,53nm,0.8s,baz=100,slow=8.8,SNR=57
FITZ S **S** **09 18 11.5 -1.5**
comp=Z,7.7nm,1.2s,baz=310,slow=21,SNR=8.8
FITZ Fitzroy Crossi 54.73 262 S **S** **09 18 12.0 -1.1**
baz=55,SNR=9.1
FITZ Fitzroy Crossi 54.73 262 *e*P **P** **09 10 53.6 +0.4**
comp=Z,124nm,1.0s
FITZ *e*S **S** **09 18 11.5 -1.5**
SIJI Sorong 54.78 284 ScP **ScP** **09 15 28.1 +2.4**
comp=Z,20nm,0.7s,baz=70,slow=2.3,SNR=7.6
SIJI S **S** **09 18 14.2 +0.4**
comp=Z,6.1nm,0.9s,baz=287,slow=19,SNR=5.3
MSAI Masohi 55.96 280 P **P** **09 11 02.6 +0.6**
SOEI Soe 58.16 271 *e*P **P** **09 11 19.1 +1.5**
comp=Z,455nm,0.9s
SBA Scott Base 58.31 184 *e*P **P** **09 11 20.0 +2.7**
comp=Z,77nm,0.8s
SBA Scott Base 58.31 184 *e*P **P** **09 11 20.0 +2.7**
SBA pmax pmax
comp=Z,77nm,0.9s
VNDA Vanda 58.38 185 P **P** **09 11 19.8 +1.9**
comp=Z,44nm,1.0s,baz=11,slow=7.1,SNR=140
VNDA ScP **ScP** **09 15 44.0 +3.7**
comp=Z,4.9nm,0.8s,baz=358,slow=5.4,SNR=5.2
VNDA Vanda 58.38 185 *e*P **P** **09 11 19.8 +1.9**
comp=Z,49nm,1.0s
VNDA Vanda 58.38 185 *e*P **P** **09 11 19.9 +2.0**
VNDA pmax pmax
comp=Z,49nm,1.0s
BATI Baumata 58.59 270 P **P** **09 11 22.4 +1.9**
comp=Z,140nm,0.8s,baz=273,slow=3.2,SNR=12
BATI S **S** **09 19 07.0 +3.2**
comp=Z,12nm,0.3s,baz=341,slow=18,SNR=2.3
TNTI Ternate 59.00 284 *e*P **P** **09 11 22.8 -0.4**
comp=Z,194nm,0.9s
MBWA Marble Bar 59.55 257 *e*P **P** **09 11 26.0 -0.8**
comp=Z,235nm,1.3s
NWAO Narrogin (SRO) 60.00 243 P **P** **09 11 28.8 -0.9**
comp=Z,20nm,0.8s,baz=4.0,slow=7.0,SNR=8.3
NWAO S **S** **09 19 25.5 +4.2**
comp=Z,16nm,1.2s,baz=13,slow=18,SNR=3.2
MMRI Maumere 60.41 271 P **P** **09 11 33.3 +0.5**
MMRI Maumere 60.41 271 *e*P **P** **09 11 32.3 -0.5**
comp=Z,150nm,0.7s
EDFI Ende, Flores 60.89 271 P **P** **09 11 36.3 +0.2**
KDI Kendari 61.60 277 P **P** **09 11 41.3 +0.5**
SGSI Sangihe 61.88 286 P **P** **09 11 43.1 +0.6**
JCJ Chichijima 61.91 318 P **P** **09 11 42.6 +0.1**
comp=Z,161nm,0.8s,baz=266,slow=16,SNR=4.9
CBIJ Chichi jima 61.91 318 *e*P **P** **09 11 42.6 +0.1**
comp=Z,412nm,1.3s
LUWI Luwuk 62.52 280 P **P** **09 11 48.0 +1.2**
LUWI Luwuk 62.52 280 *e*P **P** **09 11 47.4 +0.5**
comp=Z,736nm,1.4s
DAV Davao City (W) 63.30 289⇑ *i*P **P** **09 11 50.9 -1.0**
BKSI Bulukumba 63.47 274 P **P** **09 11 53.0 -0.1**
MRSI Marisa 63.87 281 P **P** **09 11 56.3 +0.7**
KAPI Kappang 63.92 274 *e*P **P** **09 11 55.6 -0.4**
comp=Z,49nm,0.9s
BUKP Musuan 64.12 290 *e*P **P** **09 11 57.8 +0.5**
TTSI Tana Toraja 64.54 276 P **P** **09 12 00.7 +0.7**
PLAI Plampang 64.54 270 P **P** **09 12 00.1 +0.1**
CASY Casey 64.97 205 *e*P **P** **09 12 02.8 +1.0**
comp=Z,386nm,2.0s
MSLP Maasin 65.32 292 *e*P **P** **09 12 04.7 -0.2**
BESP Borongan 65.51 294 *e*P **P** **09 12 06.2 +0.1**
MPSI Mapaga 65.70 280 P **P** **09 12 07.5 +0.1**
IGBI Denpasar 67.02 269 P **P** **09 12 15.9 +0.1**
SRBI Singaraja 67.18 270 P **P** **09 12 16.8 0.0**
SGKI Sangatta, Kali 67.51 278 P **P** **09 12 20.3 +1.4**
PVCP Virac 67.56 295 *e*P **P** **09 12 18.4 -0.6**
JHJ2 Mitsune 67.60 321 *e*P **P** **09 12 19.4 +0.5**
comp=Z,958nm,1.0s
JHJ Hachijo jima 2 67.63 321 P **P** **09 12 19.3 +0.2**
comp=Z,898nm,0.9s,baz=86,slow=14,SNR=9.2
RCP Roxas 67.82 292⇓ *e*P **P** **09 12 21.1 +0.4**
KBKI Kotabaru 67.87 275 P **P** **09 12 21.9 +0.8**
SMKI Samarinda 67.91 278 P **P** **09 12 22.4 +1.1**
JAGI Jajag, Banyuwa 68.06 269 P **P** **09 12 21.3 -1.0**
ABJI Asem Bagus 68.19 270 P **P** **09 12 23.7 +0.6**
GMJI Gumukmas 68.78 269 P **P** **09 12 26.8 +0.1**
BLJI Banyuglugur 68.81 269 P **P** **09 12 27.5 +0.6**
MTKI Muara Teweh, K 69.88 277 P **P** **09 12 34.2 +0.7**
QSPA South Pole Qui 69.89 180 P **P** **09 12 33.7 +1.0**
comp=Z,106nm,0.8s,baz=133,slow=0.2,SNR=199
QSPA S **S** **09 21 21.5 +1.0**
comp=Z,2.5nm,1.1s,baz=159,slow=17,SNR=12
QSPA South Pole Qui 69.89 180 *e*P **P** **09 12 33.7 +1.0**
QSPA *e*P **P** **09 12 33.9 +1.2**
QSPA *e*S **S** **09 21 21.6 +1.0**
GRJI Gresik 70.12 270 P **P** **09 12 35.7 +0.8**
PWJI Pagerwojo 70.40 268 P **P** **09 12 36.8 +0.2**
TGY Tagaytay City 70.55 294 P **P** **09 12 39.0 +1.5**
comp=Z,198nm,0.4s,baz=209,slow=10,SNR=4.6
INU Inuyama 70.82 321 *e*P **P** **09 12 38.8 +0.1**
comp=Z,104nm,1.1s
NGJI Ngawi 70.93 269 P **P** **09 12 41.8 +2.0**
PCJI Pacitan 70.94 268 P **P** **09 12 39.9 +0.1**
MJAR Matsushiro Arr 70.96 323 P **P** **09 12 39.3 -0.2**
comp=Z,101nm,0.7s,baz=166,slow=6.1,SNR=213
MAJO Matsushiro 70.96 323 *e*P **P** **09 12 39.6 +0.1**
comp=Z,157nm,0.8s
MAJO Matsushiro 70.96 323*c i*P **P** **09 12 40.0 +0.5**
MAJO *i* 09 12 57.1
MAJO pmax pmax
comp=Z,190nm,0.9s
MAT Matsushiro 70.96 323 P **P** **09 12 39.4 -0.1**
MJB9 Matsu-Tunnel 70.96 323 *e*P **P** **09 12 39.6 +0.1**
comp=Z,159nm,0.8s
JOW Kunigami 71.25 309 P **P** **09 12 42.1 +0.7**
comp=Z,138nm,0.9s,baz=358,slow=4.8,SNR=27
JOW Kunigami 71.25 309 *e*P **P** **09 12 40.9 -0.5**
comp=Z,273nm,1.1s
KKM Kota Kinabalu 71.30 284 *e*P **P** **09 12 41.7 -0.4**
comp=Z,165nm,0.8s
UGM Wanagama 71.64 268 P **P** **09 12 43.9 -0.2**
UGM Wanagama 71.64 268 *e*P **P** **09 12 43.6 -0.5**
comp=Z,201nm,0.7s
MIR Mirnyy 71.99 205⇓ *i*P **P** **09 12 48.0 +2.9**
MIR pmax pmax
comp=Z,81nm,1.5s
APYP Conner 72.06 297 *e*P **P** **09 12 46.1 -0.3**
PBKI Pangkalan Bun 72.28 274 P **P** **09 12 48.5 +0.7**
ERM Erimo 72.38 329 *e*P **P** **09 12 48.8 +1.1**
comp=Z,63nm,1.1s
ERM Erimo 72.38 329⇑ *i*P **P** **09 12 50.1 +2.4**
ERM pmax pmax
comp=Z,68nm,1.1s
YUK Yuzh-Kuril'sk 72.72 332*d i*P **P** **09 12 50.1 +0.4**
YUK *i* 09 13 03.1
YUK *e**PP **pP** **09 13 47.4 -3.1**
YUK *e* 09 15 31.7
YUK *e*S **S** **09 21 47.2 -5.9**
YUK pmax pmax
comp=Z,242nm,1.6s
KUR Kuril'sk 72.85 334⇑ *i*P **P** **09 12 51.5 +1.1**
SMY Shemya 73.09 354 *e*P **P** **09 12 51.2 -0.4**
comp=Z,488nm,1.1s
SMY Shemya 73.09 354 *e*P **P** **09 12 51.2 -0.4**
SMY pmax pmax
comp=Z,490nm,1.1s
NIKH Nikolski High 73.12 5 *e*P **P** **09 12 51.8 0.0**
comp=Z,727nm,1.0s
JNU Nakatsue 73.20 316 P **P** **09 12 52.9 +0.1**
comp=Z,79nm,0.9s,baz=79,slow=3.3,SNR=40
JNU Nakatsue 73.20 316 *e*P **P** **09 12 52.7 -0.1**
comp=Z,153nm,1.1s
KPJI Karang Pucung 73.32 268 P **P** **09 12 53.7 -0.2**
STKI Sintang 73.43 276 P **P** **09 12 55.3 +0.7**
SBUM Sibu 73.60 279 *e*P **P** **09 12 56.3 +0.7**
comp=Z,105nm,1.0s
YOJ Yonaguni jima 73.93 304 *e*P **P** **09 12 56.5 -0.6**
comp=Z,408nm,0.8s
YOJ Yonaguni jima 73.93 304 *e*P **P** **09 12 56.5 -0.6**
YOJ pmax pmax
comp=Z,410nm,0.8s
UNV Unalaska Valle 74.19 6 *e*P **P** **09 12 57.6 -0.4**
comp=Z,448nm,1.1s
JCJI Jatiwangi 74.21 269 P **P** **09 12 59.7 +0.6**
ASAJ Asahikawa 74.26 330 P **P** **09 13 00.3 +1.7**
comp=Z,50nm,0.6s,baz=237,slow=5.3,SNR=63
ASAJ Asahikawa 74.26 330 *e*P **P** **09 12 59.5 +0.9**
comp=Z,351nm,1.4s
AKUT Akutan 74.55 6 *e*P **P** **09 12 59.5 -0.5**
comp=Z,527nm,1.4s
TWG Pinlang 74.62 302 *e*P **P** **09 12 59.6 -1.6**
comp=Z,453nm,0.6s
SKR Severo-Kuril's 74.65 342⇑ *i*P **P** **09 13 00.9 +0.2**
SKR *e**PP **sP** **09 14 23.7 -6.0**
SKR *e*S **SKSac** **09 22 48.3 +5.0**
SKR *e* 09 23 12.2
SKR pmax pmax
comp=Z,2μm,5.3s
SKR pmax pmax
comp=Z,388nm,1.0s
SKR pmax pmax
comp=Z,600nm,9.2s
SKR pmax pmax
comp=Z,500nm,14.0s
SKR MLR MLR
comp=Z,200nm,18.0s
LEM Lembang 74.72 268 P **P** **09 13 02.4 +0.2**
comp=Z,425nm,0.9s,baz=315,slow=20,SNR=36
KSM Kuching 75.03 277 *e*P **P** **09 13 03.8 0.0**
comp=Z,236nm,0.8s
SSLB Suanglung 75.20 303 *e*P **P** **09 13 02.4 -2.1**
comp=Z,108nm,0.6s
TPUB Ta-pu 75.22 302 *e*P **P** **09 13 03.6 -1.0**
comp=Z,418nm,0.9s
TATO Taipei 75.38 304 *e*P **P** **09 13 04.0 -1.5**
comp=Z,239nm,0.8s
TATO Taipei 75.38 304 P **P** **09 13 05.6 +0.2**
SNR=6.8
TATO Taipei 75.38 304 P **P** **09 13 05.6 +0.2**
SNR=6.8
FALS False Pass 75.53 8 *e*P **P** **09 13 05.7 +0.1**
comp=Z,260nm,1.1s
DBJI Dramaga 75.62 268 P **P** **09 13 07.3 +0.2**
SKJI Sukabumi 75.66 268 P **P** **09 13 07.7 +0.4**
SNCC San Nicolas Is 75.81 46 P **P** **09 13 07.6 -0.2**
baz=234
GATR Gnd/Air Tx Cnt 75.93 45 *e*P **P** **09 13 09.5 +1.1**
PET Petropavlovsk 76.09 345 *e*P **P** **09 13 09.0 +0.2**
comp=Z,540nm,1.4s
PET Petropavlovsk 76.09 345α *i*P **P** **09 13 08.9 +0.2**
PET *e**PP **pP** **09 14 08.3 -1.8**
PET *e**SP **sP** **09 14 35.2 -2.8**
PET *e* 09 16 05.3
PET *e*S **S** **09 22 29.1 -0.8**
PET *e*SP **SPn** **09 23 07.5 -0.6**
PET pmax pmax
comp=Z,1μm,5.5s
PET pmax pmax
comp=Z,305nm,1.5s
PET pmax pmax
comp=Z,800nm,14.8s
SCZ2 Santa Cruz Isl 76.17 46 P **P** **09 13 11.3 +1.5**
baz=234
YSS Yuzh-Sakhalins 76.37 332 *e*P **P** **09 13 11.0 +0.5**
comp=Z,453nm,1.3s
YSS Yuzh-Sakhalins 76.37 332⇑ *i*P **P** **09 13 11.9 +1.4**
YSS *e* 09 13 18.5
YSS *e*S **S** **09 22 34.4 +1.1**
YSS *e* 09 23 00.0
YSS pmax pmax
comp=Z,220nm,1.2s
YSS pmax pmax
comp=N,80nm,1.4s
YSS pmax pmax
comp=E,110nm,1.4s
YSS pmax pmax
comp=Z,2μm,3.0s
YSS smax smax
comp=E,500nm,9.5s
SBC Santa Barbara 76.39 45 P **P** **09 13 12.3 +1.4**
baz=234
PEA0B Petropavlovsk- 76.40 344 *e*P **P** **09 13 11.3 +0.7**
comp=E,729nm,1.0s
PETK Petropavlovsk- 76.40 344 P **P** **09 13 11.2 +0.5**
comp=E,500nm,0.9s,baz=117,slow=8.0,SNR=331
PETK PKPPKP **P'P'df** **09 40 23.4 -0.2**
comp=E,1.7nm,0.5s,baz=292,slow=7.8,SNR=6.8
PEA1 Petropavlovsk- 76.41 344 *e*P **P** **09 13 11.2 +0.5**
SDPT Sand Point 76.41 9 *e*P **P** **09 13 10.2 -0.3**
comp=E,388nm,0.8s
PKM Mcpherson Peak 76.58 45 P **P** **09 13 13.8 +1.5**
baz=234
CGJI Cibinong 76.59 268 P **P** **09 13 11.8 -0.8**
BLG Laguna Peak, P 76.62 46 P **P** **09 13 13.1 +0.8**
baz=234
CIS Catalina Islan 76.66 47 P **P** **09 13 13.5 +1.0**
baz=235
SAO San Andreas Ge 76.66 42 *e*P **P** **09 13 13.9 +1.5**
comp=E,120nm,1.0s
SAO San Andreas Ge 76.66 42 *e*P **P** **09 13 13.9 +1.5**
SAO pmax pmax
comp=Z,120nm,1.0s
SMMC Simmler 76.72 44 P **P** **09 13 14.5 +1.7**
baz=233
PMPB Monarch Peak 76.73 43 *e*P **P** **09 13 14.5 +1.6**
comp=Z,114nm,1.0s
PAGB Antelope Grade 76.80 44 *e*P **P** **09 13 15.0 +1.8**
comp=Z,80nm,1.0s
FMP Fort Macarthur 76.92 46 P **P** **09 13 14.9 +1.0**
baz=235
HOPS Hopland Field 77.05 40 *e*P **P** **09 13 16.0 +1.5**
comp=Z,114nm,1.0s
GDXM Geysers 77.10 40 *e*P **P** **09 13 16.4 +1.4**
comp=Z,58nm,1.1s
OSI Osito Audit: C 77.15 46 P **P** **09 13 16.5 +1.2**
baz=234
OSI Osito Audit: C 77.15 46 *e*P **P** **09 13 16.9 +1.6**
comp=Z,121nm,1.2s
KCPM Cahto Peak 77.19 39 *e*P **P** **09 13 16.8 +1.4**
comp=Z,151nm,1.2s
DECC Green Verdugo 77.20 46 P **P** **09 13 16.3 +0.8**
baz=235,SNR=5.7
SPIA Saint Paul Isl 77.22 3 *e*P **P** **09 13 15.5 +0.5**
comp=Z,680nm,1.1s
PASC Pasadena Art C 77.25 46 *e*P **P** **09 13 16.8 +1.0**
comp=Z,89nm,1.1s
109C Camp Elliot, M 77.27 48 P **P** **09 13 17.0 +1.1**
baz=236
CPE Camp Elliot 77.27 48 *e*P **P** **09 13 17.5 +1.6**
comp=Z,44nm,1.2s
MWC Mount Wilson 77.37 46 *e*P **P** **09 13 17.7 +1.0**
comp=Z,99nm,1.1s
MWC Mount Wilson 77.37 46 *e*P **P** **09 13 17.7 +1.0**
MWC pmax pmax
comp=Z,99nm,1.1s
ARVC Arvin 77.38 45 P **P** **09 13 17.6 +1.1**
baz=234,SNR=15
BAR Barrett 77.45 48 *e*P **P** **09 13 18.5 +1.5**
comp=Z,20nm,0.9s
KMRM Mail Ridge 77.46 38 *e*P **P** **09 13 18.8 +1.9**
comp=Z,300nm,0.9s
TJN Taejon 77.48 316*c i*P **P** **09 13 17.7 +0.8**
FOXC Fox Airport 77.55 46 *e*P **P** **09 13 19.6 +2.1**
LRRC Littlerock Res 77.56 46 *e*P **P** **09 13 19.3 +1.8**
MURC Murrieta 77.61 47 P **P** **09 13 18.9 +1.1**
baz=236,SNR=23
VES Vestal, Richgr 77.63 44 P **P** **09 13 18.9 +1.1**
baz=234,SNR=60
QZH Quanzhou 77.64 302⇑ *i*P **P** **09 13 18.8 +0.7**
QZH sP **sP** **09 14 48.3 +0.8**
QZH S **S** **09 22 47.3 -0.6**
QZH pmax pmax
comp=Z,110nm,0.9s
QZH pmax pmax
comp=Z,1μm,3.6s
QZH LR LR
comp=Z,300nm,19.1s
QZH LR LR
comp=Z,470nm,20.8s
QZH LR LR
comp=Z,540nm,35.5s
BFSC Mount Baldy Ra 77.65 46 P **P** **09 13 19.1 +0.9**
baz=235,SNR=11
CHGN Chignik 77.65 10 *e*P **P** **09 13 17.4 0.0**
comp=Z,293nm,1.0s
JCC Jacoby Creek, 77.66 38 *e*P **P** **09 13 19.6 +1.7**
comp=Z,88nm,1.0s
MONP2 Monument Peak 77.75 48 P **P** **09 13 20.1 +1.3**
baz=236,SNR=30
KSRS Korea Array 77.77 318 P **P** **09 13 19.6 +1.2**
comp=Z,43nm,1.0s,baz=140,slow=6.1,SNR=140
KS15 Wonju Array Si 77.78 318 *e*P **P** **09 13 19.8 +1.2**
KSAR Wonju Array Be 77.78 318 P **P** **09 13 19.6 +1.1**
KSAR Wonju Array Be 77.78 318 P **P** **09 13 19.7 +1.1**
EDW2 Edwards Air Fo 77.79 46 P **P** **09 13 20.0 +1.2**
baz=235,SNR=53
KS01 Wonju Array Si 77.80 318 *e*P **P** **09 13 19.5 +0.8**
LPIG La Paz 77.81 59 P **P** **09 13 20.5 +1.4**
comp=Z,16nm,0.6s,baz=145,slow=1.5,SNR=3.6
TEY Ternei 77.82 328 *e*P **P** **09 13 20.2 +1.6**
TEY pmax pmax
comp=Z,1μm,4.0s
TEY pmax pmax
comp=Z,52nm,1.0s
IKP In-Ko-Pah, Jac 77.83 48 P **P** **09 13 20.4 +1.3**
baz=236,SNR=19
KHMM Horse Mountain 77.86 38 *e*P **P** **09 13 21.1 +1.9**
comp=Z,117nm,1.0s
SRIG Santa Rosalia 77.87 55 *e*P **P** **09 13 20.3 +1.0**
comp=Z,72nm,1.0s
SLBS Sierra La Lagu 77.91 59 *e*P **P** **09 13 21.2 +1.5**
comp=Z,36nm,1.0s
ISA Isabella, Lake 77.92 45 P **P** **09 13 21.1 +1.5**
baz=234,SNR=85
ISA S **S** **09 22 53.8 +3.1**
baz=234
ISA Isabella, Lake 77.92 45 *e*P **P** **09 13 21.0 +1.5**
comp=Z,160nm,1.0s
ISA Isabella, Lake 77.92 45 *e*P **P** **09 13 21.0 +1.5**
ISA pmax pmax
comp=Z,160nm,1.0s
CMB Columbia Colle 78.10 42 *e*P **P** **09 13 21.4 +1.0**
comp=Z,95nm,1.0s
CMB Columbia Colle 78.10 42 *e*P **P** **09 13 21.4 +1.0**
CMB pmax pmax
comp=Z,95nm,1.0s
PFO Pinyon Flats O 78.12 47 P **P** **09 13 21.9 +1.1**
baz=236,SNR=21
PFO Pinyon Flats O 78.12 47 *e*P **P** **09 13 21.9 +1.1**
comp=Z,70nm,1.1s
PFO Pinyon Flats O 78.12 47 *e*P **P** **09 13 21.9 +1.1**
PFO pmax pmax
comp=Z,70nm,1.1s
BBRC Big Bear Solar 78.17 47 P **P** **09 13 22.2 +1.0**
baz=236,SNR=6.4
SWSC Sam W. Stewart 78.21 48 P **P** **09 13 22.3 +1.2**
baz=236,SNR=12
AFDM Forest Hills D 78.30 41 *e*P **P** **09 13 22.5 +1.0**
comp=Z,78nm,1.0s
LRMC Laurel Mtn Rad 78.34 45 P **P** **09 13 23.1 +1.2**
baz=235,SNR=66
ORV Oroville 78.35 40 *e*P **P** **09 13 22.7 +1.0**
comp=Z,84nm,1.1s
ORV Oroville 78.35 40 *e*P **P** **09 13 22.7 +1.0**
ORV pmax pmax
comp=Z,85nm,1.1s
WDC Whiskeytown Da 78.37 39 *e*P **P** **09 13 23.0 +1.2**
comp=Z,162nm,1.2s
WDC Whiskeytown Da 78.37 39 *e*P **P** **09 13 23.0 +1.2**
WDC pmax pmax
comp=Z,160nm,1.2s
KBO Bosley Butte 78.45 37 *e*P **P** **09 13 24.3 +2.0**
comp=Z,190nm,1.5s
RRX Edison Barstow 78.46 46 P **P** **09 13 23.6 +1.1**
baz=235,SNR=6.2
N02D Trinity Center 78.53 38 P **P** **09 13 24.5 +1.8**
baz=230,SNR=68
INCN Inchon 78.60 317 *e*P **P** **09 13 24.3 +1.2**
comp=Z,175nm,1.1s
INCN Inchon 78.60 317 P **P** **09 13 24.6 +1.4**
SNR=18
INCN Inchon 78.60 317 P **P** **09 13 24.6 +1.4**
SNR=18
O03D Paynes Creek 78.63 39 P **P** **09 13 24.2 +0.9**
baz=231,SNR=62
O03D Paynes Creek 78.63 39 *e*P **P** **09 13 24.2 +0.9**
CWC Cottonwood Cre 78.64 44 P **P** **09 13 24.9 +1.3**
baz=234
BELC Belle Mtn. Jos 78.66 47 P **P** **09 13 25.0 +1.4**
baz=236,SNR=35
SII Sitkinak Islan 78.67 12 *e*P **P** **09 13 23.8 +0.8**
comp=Z,684nm,1.0s
MDPB Devils Postpil 78.69 43 *e*P **P** **09 13 25.1 +1.1**
comp=Z,132nm,1.0s
M02C Callahan 78.70 38 P **P** **09 13 25.6 +1.9**
baz=230,SNR=85
OMMB Old Mammoth Mi 78.73 43 *e*P **P** **09 13 25.5 +1.3**
comp=Z,86nm,1.1s
L02D Cave Junction, 78.77 37 P **P** **09 13 25.6 +1.7**
baz=230,SNR=13
SSE Sheshan 78.77 309 P **P** **09 13 24.5 +0.3**
SSE S **S** **09 23 00.6 +0.9**
SSE pmax pmax
comp=Z,29nm,0.9s
SSE pmax pmax
comp=Z,340nm,5.3s
SSE LR LR
comp=Z,200nm,22.2s
SSE LR LR
comp=Z,230nm,22.7s
MPMC Manual Prospec 78.81 45 P **P** **09 13 25.8 +1.3**
baz=235,SNR=91
KEBM Edson Butte 78.83 36 *e*P **P** **09 13 26.2 +2.0**
comp=Z,132nm,1.3s
GSC Goldstone, Bar 78.83 46 P **P** **09 13 25.8 +1.3**
baz=236,SNR=38
GSC Goldstone, Bar 78.83 46 *e*P **P** **09 13 25.8 +1.3**
comp=Z,92nm,1.0s
GSC Goldstone, Bar 78.83 46 *e*P **P** **09 13 25.8 +1.3**
GSC pmax pmax
comp=Z,92nm,1.0s
MLAC Mammoth, Mammo 78.84 43 P **P** **09 13 26.4 +1.6**
baz=234,SNR=25
DAC Darwin (Calif) 78.86 45 *e*P **P** **09 13 25.9 +1.1**
comp=Z,54nm,1.2s
DAC Darwin (Calif) 78.86 45 *e*P **P** **09 13 25.9 +1.1**
DAC pmax pmax
comp=Z,53nm,1.2s
RUBR Rubicon Trail 78.86 41 *e*P **P** **09 13 25.9 +1.2**
comp=Z,63nm,0.9s
HEC Hector,Ludlow 78.89 46 P **P** **09 13 26.0 +1.2**
baz=236,SNR=32
TIN Tinemaha, Big 78.89 44 P **P** **09 13 26.4 +1.5**
baz=234,SNR=10
GLA Glamis 78.95 49 P **P** **09 13 26.9 +1.7**
baz=237,SNR=17
GLA Glamis 78.95 49 *e*P **P** **09 13 27.0 +1.8**
comp=Z,115nm,1.1s
GLA Glamis 78.95 49 *e*P **P** **09 13 27.0 +1.8**
GLA pmax pmax
comp=Z,110nm,1.1s
WAKR Walker 78.98 42 *e*P **P** **09 13 27.0 +1.6**
comp=Z,159nm,1.0s
YBH Yreka Blue Hor 79.00 38 P **P** **09 13 27.0 +1.7**
comp=Z,93nm,1.0s,baz=189,slow=2.7,SNR=184
YBH Yreka Blue Hor 79.00 38 *e*P **P** **09 13 27.0 +1.7**
comp=Z,118nm,1.0s
YBH Yreka Blue Hor 79.00 38 *e*P **P** **09 13 27.0 +1.7**
YBH pmax pmax
comp=Z,120nm,1.0s
MSHR Mys Shultsa 79.05 323*c i*P **P** **09 13 27.3 +1.9**
LGBM Gray Butte 79.06 38 *e*P **P** **09 13 27.3 +1.5**
BENR Benton 79.06 43 *e*P **P** **09 13 27.3 +1.3**
MLNR Milner Canyon 79.14 43 *e*P **P** **09 13 27.9 +1.7**
PNTR Pine Nut 79.23 41 *e*P **P** **09 13 28.3 +1.5**
comp=Z,257nm,0.9s
BEKR Beckworth 79.23 40 *e*P **P** **09 13 27.9 +1.2**
comp=Z,89nm,1.0s
LBCM Butte Creek Ri 79.24 39 *e*P **P** **09 13 28.0 +1.3**
GMRC Granite Mounta 79.32 47 P **P** **09 13 28.5 +1.2**
baz=236,SNR=32
VCNR Virginia City 79.32 41 *e*P **P** **09 13 28.5 +1.3**
comp=Z,110nm,1.0s
IRM Iron Mountain 79.33 48 P **P** **09 13 28.8 +1.6**
baz=237,SNR=68
BONR Boundary Peak 79.38 43 *e*P **P** **09 13 29.7 +2.0**
BONR Boundary Peak 79.38 43 *e*P **P** **09 13 29.7 +2.0**
YERR Yerington 79.39 42 *e*P **P** **09 13 28.9 +1.3**
comp=Z,131nm,0.8s
GRAC Grapevine Rang 79.42 44 P **P** **09 13 29.3 +1.7**
baz=235,SNR=40
HUMO Hull Mountain 79.42 37 *e*P **P** **09 13 29.0 +1.5**
comp=Z,88nm,1.0s
TYV Tymovskoe 79.45 335 *e*P **P** **09 13 28.1 +0.8**
TYV *e*S **S** **09 23 05.5 -0.4**
TYV pmax pmax
comp=Z,293nm,1.2s
TYV pmax pmax
comp=Z,2μm,3.6s
TYV smax smax

comp=N,1μm,5.2s
FURC Furnace Creek, 79.45 45 P **P 09 13 29.0 +1.3**
baz=235,SNR=44
OHAK Old Harbor 79.47 12 *e*P **P 09 13 28.1 +0.8**
comp=N,346nm,0.9s
TUQ Turquoise Moun 79.50 46 P **P 09 13 29.5 +1.2**
baz=236,SNR=41
SHOC Shoshone, Teco 79.53 46 P **P 09 13 29.4 +1.2**
baz=236,SNR=36
M04C Macdoel 79.54 38 P **P 09 13 29.7 +1.4**
baz=231,SNR=62
Y12C Blythe 79.54 48 P **P 09 13 29.9 +1.6**
baz=237,SNR=22
Y12C Blythe 79.54 48 *e*P **P 09 13 29.9 +1.6**
comp=N,102nm,1.0s
113A Mohawk Valley, 79.55 49 *e*P **P 09 13 29.8 +1.4**
comp=N,66nm,1.0s
RYN Ryan 79.63 42 *e*P **P 09 13 30.0 +1.2**
comp=N,72nm,1.1s
USRK Ussuriysk Ar. 79.65 325 P **P 09 13 29.6 +1.1**
comp=N,80nm,1.0s,baz=113,slow=4.4,SNR=87
NV01 Mina Array Sit 79.65 43 *e*P **P 09 13 30.3 +1.3**
NVAR Mina Array Bea 79.65 43 P **P 09 13 30.2 +1.2**
comp=N,102nm,1.0s,baz=224,slow=8.7,SNR=266
NVAR PKKPbc **PKKPbc 09 32 14.7 -1.8**
comp=N,0.4nm,0.6s,baz=71,slow=5.5,SNR=4.5
NVAR PKPPKP **P'P'df 09 40 17.9 -0.4**
comp=N,1.1nm,0.8s,baz=80,slow=6.5,SNR=4.4
HSIG 79.71 54 *e*P **P 09 13 29.9 +0.7**
comp=N,43nm,1.1s
PAHR Pah Rah Range 79.73 41 *e*P **P 09 13 30.6 +1.3**
comp=N,105nm,1.0s
NV11 Mina Array Sit 79.75 43 *e*P **P 09 13 30.8 +1.3**
comp=N,8.8nm,1.1s
214A Organ Pipe Nat 79.81 51 P **P 09 13 31.3 +1.5**
baz=238
LDFC Landfair 79.86 47 *e*P **P 09 13 32.1 +2.0**
comp=N,234nm,1.0s
I03D Drain, OR 79.91 36 P **P 09 13 31.3 +1.3**
baz=230,SNR=15
HKC Hong Kong Obse 79.99 298 ⇑P **P 09 13 33.0 +2.1**
NEE2 Needles Airpor 80.03 47 P **P 09 13 32.4 +1.5**
baz=237,SNR=14
PDMCI Parker Dam,Lak 80.11 48 P **P 09 13 32.9 +1.6**
baz=237,SNR=48
K04D Chiloquin, OR 80.12 38 P **P 09 13 32.6 +1.2**
baz=231
KDAK Kodiak Island 80.13 13 P **P 09 13 31.6 +0.8**
comp=N,366nm,1.1s,baz=195,slow=3.1,SNR=189
KDAK S **S 09 23 13.3 +0.6**
comp=N,5.4nm,1.1s,baz=337,slow=15,SNR=2.5
KDAK Kodiak Island 80.13 13 *e*P **P 09 13 31.6 +0.8**
KDAK *e*PcP **PcP 09 13 31.8 -5.4**
KDAK *e*S **S 09 23 13.3 +0.6**
KDAK Kodiak Island 80.13 13 *e*P **P 09 13 31.6 +0.8**
KDAK pmax pmax
comp=Z,390nm,1.0s
TPNV Topopah Spring 80.13 45 P **P 09 13 32.9 +1.3**
baz=236,SNR=81
TPNV Topopah Spring 80.13 45 *e*P **P 09 13 32.9 +1.3**
comp=Z,66nm,0.9s
TPNV Topopah Spring 80.13 45 *e*P **P 09 13 32.9 +1.3**
TPNV pmax pmax
comp=Z,66nm,1.0s
KVN Kaiserville 80.14 42 *e*P **P 09 13 32.7 +1.0**
comp=Z,67nm,1.0s
KVN Kaiserville 80.14 42 *e*P **P 09 13 32.7 +1.0**
KVN pmax pmax
comp=Z,67nm,1.0s
J04D Umpqua Nationa 80.31 37 P **P 09 13 33.9 +1.5**
baz=230,SNR=33
MCO Taipa Grande 80.42 298 P **P 09 13 35.0 +1.8**
I04A Tendick Farm, 80.49 36 P **P 09 13 34.2 +1.0**
baz=230,SNR=18
COR Corvallis 80.51 35 *e*P **P 09 13 34.8 +1.6**
comp=Z,114nm,1.1s
COR Corvallis 80.51 35 *e*P **P 09 13 35.2 +2.0**
COR pmax pmax
comp=Z,110nm,1.1s
MOD Modoc Plateau 80.51 39 *e*P **P 09 13 34.6 +1.1**
comp=Z,109nm,0.9s
SHPR Sheep Range 80.61 46 *e*P **P 09 13 35.7 +1.5**
comp=Z,76nm,1.2s
K05A Summer Lake 80.68 38 *e*P **P 09 13 36.1 +1.7**
comp=Z,271nm,1.0s
Y14A Wickenburg 80.71 49 *e*P **P 09 13 36.1 +1.5**
comp=Z,82nm,1.0s
IRO Indian Ridge 80.71 36 *e*P **P 09 13 34.8 +0.3**
W13A Hualapai Mount 80.71 47 *e*P **P 09 13 36.2 +1.5**
comp=Z,67nm,1.1s
J05D Fort Rock, OR 80.83 37 P **P 09 13 36.8 +1.6**
baz=231,SNR=173
PMSA Palmer Station 80.91 156 P **P 09 13 36.0 +1.0**
comp=Z,52nm,0.8s,baz=354,slow=4.7,SNR=3.6
G03D McMinnville, O 80.94 35 P **P 09 13 36.7 +1.3**
baz=229,SNR=17
NJ2 Nanjing 80.97 309 *e*P **P 09 13 36.8 +0.9**
NJ2 sP **sP 09 15 07.7 +2.0**
NJ2 S **S 09 23 25.2 +2.6**
NJ2 pmax pmax
comp=Z,140nm,0.8s
NJ2 pmax pmax
comp=Z,860nm,5.7s
GZH Guangzhou 81.03 299 P **P 09 13 37.5 +1.1**
GZH sP **sP 09 15 12.6 +6.4**
GZH PP **PP 09 16 50.1 +4.6**
GZH S **S 09 23 24.3 +0.8**
GZH pmax pmax
comp=Z,910nm,6.7s
MYKOM Kota Tinggi 81.17 275 *e*P **P 09 13 37.8 +0.4**
comp=Z,173nm,1.0s
H04A Detroit Lake 81.19 36 *e*P **P 09 13 37.8 +1.0**
comp=Z,120nm,0.9s
MDJ Mudanjiang 81.23 324 P **P 09 13 35.5 -1.5**
MDJ pP pP 09 14 40.0 +0.9
MDJ sP sP 09 15 08.4 +1.6
MDJ S **S 09 23 27.5 +2.8**
MDJ pmax pmax
comp=Z,320nm,1.1s
MDJ pmax pmax
comp=Z,2μm,5.6s
MDJ Mudanjiang 81.23 324 *e*P **P 09 13 38.5 +1.6**
comp=Z,238nm,0.9s
F03A Seaside 81.25 34 *e*P **P 09 13 38.7 +1.6**
comp=Z,119nm,0.9s
PINE Pine Mountain 81.32 37 *e*P **P 09 13 39.4 +1.7**
comp=Z,269nm,0.9s
R11A Troy Canyon, C 81.36 44 P **P 09 13 39.1 +1.0**
baz=236,SNR=57
R11A Troy Canyon, C 81.36 44 *e*P **P 09 13 38.9 +0.9**
comp=Z,40nm,1.3s
I05D Terrebonne, OR 81.43 36 P **P 09 13 39.5 +1.4**
baz=231,SNR=55
TUC Tucson 81.47 51 P **P 09 13 40.4 +1.8**
baz=240
TUC Tucson 81.47 51 *e*P **P 09 13 40.6 +2.0**
comp=Z,93nm,1.0s
TUC Tucson 81.47 51 *e*P **P 09 13 40.6 +2.0**
TUC pmax pmax
comp=Z,93nm,1.0s
BMN Battle Mountai 81.50 41 *e*P **P 09 13 40.0 +1.3**
comp=Z,121nm,1.1s
BMN Battle Mountai 81.50 41 *e*P **P 09 13 40.0 +1.3**
BMN pmax pmax
comp=Z,120nm,1.1s
F04D Rainier, OR 81.64 34 P **P 09 13 40.9 +1.9**
baz=230
E03A Lebam 81.65 34 *e*P **P 09 13 40.7 +1.6**
comp=Z,200nm,1.0s
WVOR Wild Horse Val 81.82 39 *e*P **P 09 13 41.6 +1.3**
comp=Z,116nm,1.0s
WVOR Wild Horse Val 81.82 39 *e*P **P 09 13 41.6 +1.3**
WVOR pmax pmax
comp=Z,120nm,1.0s
NKL Nikolayevsk 81.99 335 *i* P **P 09 13 41.0 +0.3**
NKL *e* 09 23 31.0
NKL pmax pmax
comp=N,69nm,1.0s
NKL pmax pmax
comp=E,43nm,1.0s
NKL pmax pmax
comp=Z,300nm,1.0s
NKL pmax pmax
comp=N,700nm,8.0s
NKL pmax pmax
comp=Z,2μm,8.0s
GRNR Gornyy 82.00 332 ⇑*i*P **P 09 13 42.8 +1.9**
GRNR pmax pmax
comp=N,130nm,1.0s
GRNR pmax pmax
comp=E,84nm,1.0s
GRNR pmax pmax
comp=Z,360nm,1.0s
G05D Wamic, OR 82.02 36 P **P 09 13 42.4 +1.3**
baz=231,SNR=20
HOM Homer 82.05 12 *e*P **P 09 13 41.9 +1.0**
comp=Z,732nm,1.1s
X16A Lo Mia Camp, P 82.07 49 *e*P **P 09 13 43.8 +1.9**
comp=Z,144nm,1.0s
319A Douglas 82.12 53 *e*P **P 09 13 44.0 +1.9**
comp=Z,87nm,1.0s
LCMT Little Creek M 82.18 46 *e*P **P 09 13 43.8 +1.5**
comp=Z,85nm,1.1s
QIZ Qiongzhong 82.26 293 P **P 09 13 43.2 +0.3**
QIZ pP **pP 09 14 49.2 +4.0**
QIZ sP **sP 09 15 15.7 +2.8**
QIZ S **S 09 23 34.2 -2.1**
QIZ sS **sS 09 25 28.8 +3.0**
QIZ pmax pmax
comp=Z,27nm,1.0s
QIZ pmax pmax
comp=Z,490nm,6.7s
DIB Dawson Inlet, 82.28 25 *e*P **P 09 13 43.4 +1.2**
comp=Z,227nm,1.1s
H02S1 DAWSON INLET T 82.28 25 P **P 09 13 43.1 +0.9**
BRLK Bradley Lake 82.30 13 *e*P **P 09 13 42.7 +0.4**
comp=Z,381nm,1.0s
I07A Izee 82.31 37 *e*P **P 09 13 44.3 +1.5**
comp=Z,90nm,1.0s
CCUT Cedar City 82.39 46 *e*P **P 09 13 45.2 +1.7**
comp=Z,95nm,1.1s
G06A Carlson Farm, 82.39 36 *e*P **P 09 13 44.2 +1.2**
comp=Z,188nm,1.1s
MAW Mawson 82.42 199 P **P 09 13 43.7 +0.8**
comp=Z,25nm,0.8s,baz=133,slow=5.2,SNR=52
MAW pP **pP 09 14 48.5 +3.3**
comp=Z,37nm,0.7s,baz=132,slow=6.7,SNR=15
MAW Mawson 82.42 199 P **P 09 13 43.7 +0.8**
baz=82,SNR=38
MAW S **S 09 23 37.0 +0.6**
baz=82,SNR=5.2
MAW Mawson 82.42 199 *e*P **P 09 13 43.7 +0.8**
comp=Z,8.2nm,0.7s
MAW pP **pP 09 14 48.5 +3.3**
MAW Mawson 82.42 199 *e*P **P 09 13 43.7 +0.8**
MAW pmax pmax
comp=Z,8.0nm,0.7s
KNB Kanab 82.47 46 *e*P **P 09 13 45.5 +1.7**
comp=Z,123nm,1.1s
KNB Kanab 82.47 46 *e*P **P 09 13 45.5 +1.7**
KNB pmax pmax
comp=Z,120nm,1.0s
U15A North Rim 82.52 47 *e*P **P 09 13 46.0 +1.8**
comp=Z,191nm,1.0s
RSO Redoubt South 82.58 11 *e*P **P 09 13 43.7 -0.2**
PSUT Pine Spring 82.59 44 *e*P **P 09 13 45.7 +1.2**
comp=Z,49nm,1.2s
SZCU Shurtz Canyon 82.59 46 *e*P **P 09 13 46.2 +1.7**
comp=Z,101nm,1.1s
HDW Hoodsport 82.64 33 *e*P **P 09 13 46.1 +1.8**
DL2 Dalian 82.65 316 ⇑*i*P **P 09 13 45.2 +0.7**
DL2 S **S 09 23 38.6 -0.8**
DL2 pmax pmax
comp=Z,100nm,1.1s
DL2 pmax pmax
comp=Z,690nm,6.1s
WUAZ Wupatki 82.68 48 P **P 09 13 46.8 +1.8**
baz=239
WUAZ Wupatki 82.68 48 *e*P **P 09 13 46.7 +1.8**
comp=Z,144nm,1.0s
SVW2 Sparrevohn 82.68 10 *e*P **P 09 13 44.9 +0.8**
comp=Z,38nm,1.0s
LON Longmire 82.71 34 *e*P **P 09 13 45.5 +0.8**
comp=Z,67nm,1.0s
LON Longmire 82.71 34 *e*P **P 09 13 45.5 +0.8**
LON pmax pmax
comp=Z,67nm,1.0s
HPIG 82.84 58 *e*P **P 09 13 46.6 +0.6**
comp=Z,20nm,0.9s
D05A Enumclaw 82.89 34 *e*P **P 09 13 47.2 +1.7**
comp=Z,506nm,1.3s
SEW Seward 82.91 13 *e*P **P 09 13 45.5 +0.2**
comp=Z,279nm,1.0s
SEW *e*S **S 09 23 41.8 +0.7**
ELK Elko 82.92 42 P **P 09 13 49.6 +3.5**
comp=Z,66nm,1.0s,baz=281,slow=5.0,SNR=163
MID Middleton Isla 83.02 15 *e*P **P 09 13 45.9 +0.1**
comp=Z,395nm,0.7s
MID Middleton Isla 83.02 15 *e*P **P 09 13 45.9 +0.1**
MID pmax pmax
comp=Z,400nm,0.7s
PKCU Pink Cliffs 83.04 46 *e*P **P 09 13 49.0 +2.0**
comp=Z,160nm,1.2s
SNY Shenyang 83.05 319 ⇑P **P 09 13 47.1 +0.7**
SNY sP **sP 09 15 17.7 +1.2**
SNY S **S 09 23 44.3 +1.0**
SNY pmax pmax
comp=Z,62nm,1.1s
SNY LR LR
comp=Z,330nm,17.1s
SNY LR LR
comp=Z,290nm,14.2s
SNY LR LR
comp=Z,370nm,13.9s
CN2 Changchun 83.08 322 ⇑*i*P **P 09 13 47.4 +0.9**
CN2 *e*pP pP 09 14 53.0 +4.0
CN2 *e*sP sP 09 15 21.2 +4.6
CN2 *e*S **S 09 23 41.8 -1.7**
CN2 pmax pmax
comp=Z,240nm,1.0s
CN2 pmax pmax
comp=Z,200nm,4.0s
PGC Sidney 83.09 32 *e*P **P 09 13 47.8 +1.4**
comp=Z,184nm,1.0s
KLR Kul'dur 83.11 329 P **P 09 13 47.6 +1.0**
comp=Z,4.3nm,1.1s,baz=107,slow=4.0,SNR=62
F07A Phinny Hill Vi 83.19 36 *e*P **P 09 13 48.2 +1.1**
comp=Z,125nm,0.9s
X18A Snowflake 83.19 50 *e*P **P 09 13 49.4 +1.8**
comp=Z,91nm,0.9s
BBB Bella Bella 83.34 27 P **P 09 13 49.0 +1.3**
comp=Z,112nm,1.0s,baz=264,slow=4.9,SNR=18
BBB Bella Bella 83.34 27 *e*P **P 09 13 48.9 +1.3**
comp=Z,175nm,1.1s
G08A Pilot Rock 83.35 37 *e*P **P 09 13 49.4 +1.3**
comp=Z,224nm,1.0s
MTPU Mount Pierson 83.44 46 *e*P **P 09 13 50.1 +1.1**
comp=Z,127nm,1.0s
A04D Lummi Island 83.51 32 P **P 09 13 50.3 +1.7**
baz=230,SNR=41
B05A Bryant 83.53 33 P **P 09 13 50.0 +1.3**
baz=230,SNR=68
ZAIG Zacatecas 83.56 63 *e*P **P 09 13 50.8 +0.9**
comp=Z,43nm,1.4s
WHN Wuhan 83.61 306 ⇑*i*P **P 09 13 50.3 +0.8**
WHN sP **sP 09 15 21.1 +1.4**
WHN S **S 09 23 49.9 +0.5**
WHN pmax pmax
comp=Z,290nm,1.2s
WHN pmax pmax
comp=Z,2μm,4.0s
TBM Table Mountain 83.61 35 *e*P **P 09 13 50.6 +1.3**
LTY Liberty 83.63 34 *e*P **P 09 13 50.3 +0.9**
comp=Z,142nm,1.1s
W18A Petrified Fore 83.63 49 P **P 09 13 51.4 +1.6**
baz=240
W18A Petrified Fore 83.63 49 *e*P **P 09 13 51.4 +1.6**
comp=Z,118nm,1.1s
E07A Sunnyside 83.64 35 *e*P **P 09 13 51.1 +1.7**
comp=Z,248nm,0.9s
MSU Marysvale 83.69 45 *e*P **P 09 13 52.0 +1.9**
MSU Marysvale 83.69 45 *e*P **P 09 13 52.0 +1.9**
HAWA Hanford 83.71 36 *e*P **P 09 13 51.1 +1.4**
comp=Z,266nm,1.1s
RC01 Rabbit Creek A 83.75 13 *e*P **P 09 13 50.0 +0.4**
comp=Z,390nm,1.1s
CRAG Craig 83.76 23 *e*P **P 09 13 51.2 +1.5**
comp=Z,159nm,1.0s
121A Cookes Peak, D 83.79 52 P **P 09 13 52.6 +1.9**
baz=241
SUA Susitna One 83.89 12 *e*P **P 09 13 50.4 0.0**
comp=Z,322nm,0.9s
C06D Leavenworth 83.93 34 P **P 09 13 51.7 +0.9**
baz=231
MA2 Magadan 83.93 344 P **P 09 13 50.5 0.0**
comp=Z,172nm,0.8s,baz=142,slow=5.9,SNR=61
MA2 Magadan 83.93 344 *e*P **P 09 13 50.4 -0.1**
comp=Z,191nm,0.8s
MA2 Magadan 83.93 344 *i* P **P 09 13 50.4 -0.1**
MA2 pmax pmax
comp=Z,444nm,1.7s
B06A Marblemount 84.00 33 *e*P **P 09 13 52.0 +1.0**
comp=Z,93nm,1.0s
E08A Dider Farm, El 84.03 36 *e*P **P 09 13 52.7 +1.4**
comp=Z,134nm,1.0s
BMO Blue Mountains 84.03 38 *e*P **P 09 13 52.3 +0.8**
comp=Z,83nm,1.2s
BMO Blue Mountains 84.03 38 *e*P **P 09 13 52.3 +0.8**
BMO pmax pmax
comp=Z,83nm,1.2s
MFID Camas Ranch 84.07 40 *e*P **P 09 13 52.8 +1.0**
comp=Z,90nm,1.0s
DUG Dugway, Tooele 84.17 44 P **P 09 13 53.2 +0.8**
baz=238
DUG Dugway, Tooele 84.17 44 *e*P **P 09 13 53.2 +0.8**
comp=Z,40nm,1.1s
DUG Dugway, Tooele 84.17 44 *e*P **P 09 13 53.2 +0.8**
DUG pmax pmax
comp=Z,40nm,1.1s
SKT Skwentna 84.22 11 *e*P **P 09 13 51.0 -0.9**
comp=Z,114nm,1.0s
RAGM Ragged Mountai 84.26 15 *e*P **P 09 13 53.1 +0.9**
comp=Z,323nm,1.0s
WTV Waterville 84.29 34 *e*P **P 09 13 53.6 +1.0**
TIA Tai'an 84.30 312 P **P 09 13 53.5 +0.6**
TIA pmax pmax
comp=Z,35nm,1.1s
PMR Palmer 84.33 13 *e*P **P 09 13 52.5 +0.1**
comp=Z,423nm,1.3s
PMR Palmer 84.33 13 *e*P **P 09 13 52.5 +0.1**
PMR pmax pmax
comp=Z,420nm,1.2s
EPT El Paso 84.39 53 *e*P **P 09 13 55.2 +1.5**
comp=Z,103nm,1.1s
BGU Big Grassy Mou 84.42 43 *e*P **P 09 13 54.4 +0.8**
comp=Z,32nm,1.3s
D08A Wollman Farm, 84.45 35 *e*P **P 09 13 54.8 +1.3**
comp=Z,182nm,1.0s
JRQG Juriquilla Cam 84.51 66 *e*P **P 09 13 55.2 +0.6**
comp=Z,117nm,1.2s
NLU North Lily Min 84.52 44 *e*P **P 09 13 55.2 +1.0**
comp=Z,36nm,1.3s
GHO Glory Hole Cre 84.54 13 *e*P **P 09 13 54.1 +0.5**
comp=Z,413nm,0.8s
E09A Wood Farm, Sta 84.55 36 *e*P **P 09 13 54.9 +1.0**
comp=Z,123nm,1.0s
UBPT Khong Chiam 84.61 288 P **P 09 13 54.8 -0.1**
comp=Z,116nm,1.2s
DIV Divide 84.65 14 *e*P **P 09 13 54.7 +0.6**
comp=Z,455nm,0.9s
SML Sawmill 84.69 13 *e*P **P 09 13 54.6 +0.3**
comp=Z,204nm,1.1s
SML Sawmill 84.69 13 *e*P **P 09 13 54.6 +0.3**
SML pmax pmax
comp=Z,200nm,1.1s
F10A Beach Ranch, E 84.74 37 *e*P **P 09 13 55.7 +0.7**
comp=Z,198nm,1.0s
TMUT Trail Mountain 84.74 45 *e*P **P 09 13 57.2 +1.7**
comp=Z,131nm,1.0s
IPM Ipoh 84.75 277 *e*P **P 09 13 56.0 +0.2**
comp=Z,178nm,0.7s
WRAK Wrangell Islan 84.77 23 *e*P **P 09 13 55.9 +1.2**
comp=Z,181nm,1.0s
BMRM Bremner River 84.79 15 *e*P **P 09 13 55.4 +0.6**
comp=Z,438nm,0.9s
MPU Maple Canyon 84.84 44 *e*P **P 09 13 57.0 +1.2**
comp=Z,40nm,1.1s
ANM Nome 84.89 5 *e*P **P 09 13 56.2 +1.1**
comp=Z,44nm,0.9s
ANM Nome 84.89 5 *e*P **P 09 13 56.2 +1.1**
ANM pmax pmax
comp=Z,44nm,0.9s
TLIG Tlapa 84.91 69 *e*P **P 09 13 58.0 +1.5**
comp=Z,14nm,0.8s
SCM Sheep Creek Mo 84.93 13 *e*P **P 09 13 56.2 +0.7**
comp=Z,399nm,0.8s
SCM Sheep Creek Mo 84.93 13 *e*P **P 09 13 56.2 +0.7**
SCM pmax pmax
comp=Z,400nm,0.8s
KLU Klutina 84.94 14 *e*P **P 09 13 56.0 +0.4**
comp=Z,188nm,1.0s
PPLA Purkeypile 84.94 11 *e*P **P 09 13 54.4 -1.3**
comp=Z,82nm,1.1s
CRQM Cirque 84.97 16 *e*P **P 09 13 56.7 +0.8**
comp=Z,444nm,1.0s
HLID Hailey 85.00 40 P **P 09 13 57.8 +1.3**
baz=236
HLID Hailey 85.00 40 *e*P **P 09 13 57.8 +1.3**
comp=Z,71nm,1.1s
B08A Colville Reser 85.02 34 *e*P **P 09 13 56.8 +0.5**
comp=Z,118nm,1.0s
HVU Hansel Valley 85.04 42 *e*P **P 09 13 57.7 +1.0**
comp=Z,56nm,1.1s
HVU Hansel Valley 85.04 42 *e*P **P 09 13 57.7 +1.0**
HVU pmax pmax
comp=Z,56nm,1.1s
TGL Tana Glacier 85.04 16 *e*P **P 09 13 57.0 +0.9**
comp=Z,498nm,1.1s
SRU San Rafael Swe 85.10 45 *e*P **P 09 13 58.3 +1.2**
comp=Z,97nm,1.0s
SRU San Rafael Swe 85.10 45 *e*P **P 09 13 58.3 +1.2**
SRU pmax pmax
comp=Z,97nm,1.0s
CTU Camp Tracy 85.12 44 *e*P **P 09 13 58.0 +0.9**
comp=Z,39nm,1.0s
LLLB Lilloet 85.14 31 *e*P **P 09 13 57.8 +0.9**
comp=Z,163nm,1.2s
P17A Butcher Ranch, 85.14 45 *e*P **P 09 13 58.6 +1.3**
comp=Z,96nm,1.3s
LAZ Ladron 85.15 51 *e*P **P 09 13 59.1 +1.6**
Y22D IRIS PASSCAL I 85.16 51 P **P 09 13 59.2 +1.8**
baz=242,SNR=18
Y22D IRIS PASSCAL I 85.16 51 *e*P **P 09 13 59.9 +2.5**
comp=Z,168nm,1.0s
Y22E IRIS PASSCAL I 85.16 51 P **P 09 13 59.5 +2.0**
baz=242
MNTX Cornudas Mount 85.21 54 P **P 09 13 59.1 +1.5**
baz=243,SNR=123
MNTX Cornudas Mount 85.21 54 *e*P **P 09 13 59.1 +1.5**
comp=Z,85nm,1.0s
C09A Chrisman Ranch 85.25 35 *e*P **P 09 13 58.2 +0.9**
comp=Z,140nm,1.1s
JLU Jordanelle 85.26 44 *e*P **P 09 13 59.0 +1.1**
comp=Z,71nm,1.5s
KULM Kulim 85.38 277 *e*P **P 09 13 59.7 +0.8**
comp=Z,101nm,0.8s
BNM Barren Site 85.41 51 *e*P **P 09 14 00.2 +1.4**
CAST Castle Rocks 85.45 11 *e*P **P 09 13 57.1 -0.9**
comp=Z,331nm,1.0s
TX31 Lajitas Ar. Si 85.48 57 *e*P **P 09 13 59.5 +0.4**
TX31 *e*P **PcP 09 14 00.4 -1.2**
TXAR Lajitas Array 85.48 57 P **P 09 14 00.4 +1.3**
comp=Z,58nm,0.9s,baz=216,slow=5.9,SNR=313
TXAR PKKPbc **PKKPbc 09 32 01.8 -0.3**
comp=Z,0.5nm,0.6s,baz=178,slow=2.5,SNR=8.6
TXAR PKPPKP **P'P'df 09 40 10.6 +2.8**
comp=Z,0.9nm,0.9s,baz=126,slow=1.7,SNR=6.4
LPM Los Pinos Moun 85.48 51 *e*P **P 09 14 00.3 +1.2**
JIS Juneau Island 85.49 21 *e*P **P 09 13 59.5 +1.2**
comp=Z,142nm,1.0s
MVCO Mesa Verde 85.54 48 P **P 09 14 00.1 +0.8**
baz=241
MVCO Mesa Verde 85.54 48 *e*P **P 09 13 58.4 -0.9**
comp=Z,22nm,1.0s
P18A Preston Nutter 85.55 45 *e*P **P 09 14 00.5 +1.0**
comp=Z,30nm,0.9s
TCUT Toone Canyon 85.56 43 *e*P **P 09 14 00.5 +1.1**
comp=Z,158nm,1.1s
BESE Bessie Mountai 85.57 20 *e*P **P 09 13 59.9 +1.1**
comp=Z,241nm,1.1s
HWUT Hardware Ranch 85.72 43 *e*P **P 09 14 00.5 +0.4**
comp=Z,15nm,1.0s
PV09 Paradox Valley 85.73 46 *e*P **P 09 14 01.4 +1.1**
TRF Thorofare Moun 85.80 11 *e*P **P 09 14 00.0 +0.1**
comp=Z,453nm,0.9s
PV02 Paradox Valley 85.86 47 *e*P **P 09 14 01.6 +0.7**
comp=Z,40nm,1.0s
TASM ASL Pad, Albuq 85.90 51 P **P 09 14 02.3 +1.1**
baz=242
ANMO Albuquerque 85.91 51 P **P 09 14 02.3 +1.1**
comp=Z,41nm,1.0s,baz=218,slow=5.6,SNR=98

ANMO	Albuquerque	85.91	51	P	P	09 14 02.4	+1.1
	baz=242						
ANMO	Albuquerque	85.91	51	eP	P	09 14 02.3	+1.1
	comp=Z,55nm,1.0s						
ANMO	Albuquerque	85.91	51	c iP	P	09 14 02.2	+1.1
ANMO				pmax	pmax		
	comp=Z,63nm,1.1s						
TASL	Snake Pit, Alb	85.91	51	P	P	09 14 02.3	+1.1
	baz=242						
HARP	HAARP	85.92	14	eP	P	09 14 01.1	+0.8
	comp=Z,333nm,1.0s						
RND	Reindeer	86.03	12	eP	P	09 14 01.2	+0.3
	comp=Z,664nm,1.0s						
RND	Reindeer	86.03	12	eP	P	09 14 01.2	+0.3
RND				pmax	pmax		
	comp=Z,660nm,1.0s						
DHY	Denali Highway	86.03	13	eP	P	09 14 00.9	-0.2
	comp=Z,201nm,1.1s						
SKLT	Songkhla	86.07	279	P	P	09 14 03.1	+0.9
	comp=Z,196nm,1.2s,comp=Z,3μm						
SKAG	Skagway	86.11	20	eP	P	09 14 02.4	+1.2
	comp=Z,292nm,1.2s						
PSI	Prapat	86.13	274	P	P	09 14 01.6	-1.1
	comp=Z,63nm,0.9s,baz=0.8,slow=0.4,SNR=21						
PSI	Prapat	86.13	274	eP	P	09 14 01.5	-1.1
	comp=Z,122nm,1.1s						
NEW	Newport	86.14	35	P	P	09 14 02.4	+0.6
	comp=Z,34nm,1.0s,baz=229,slow=3.6,SNR=26						
NEW	Newport	86.14	35	P	P	09 14 02.4	+0.6
	baz=234,SNR=22						
NEW	Newport	86.14	35	eP	P	09 14 02.5	+0.6
	comp=Z,49nm,1.0s						
NEW	Newport	86.14	35	eP	P	09 14 02.5	+0.6
NEW				pmax	pmax		
	comp=Z,49nm,1.0s						
GDL2	Guadalupe Moun	86.21	54	eP	P	09 14 04.1	+1.5
BPAW	Bear Paw Mtn.	86.27	11	eP	P	09 14 01.2	-0.8
	comp=Z,111nm,1.1s						
MCK	McKinley	86.31	12	eP	P	09 14 02.5	+0.3
	comp=Z,529nm,1.0s						
MCK	McKinley	86.31	12	eP	P	09 14 02.5	+0.3
MCK				pmax	pmax		
	comp=Z,530nm,1.0s						
PAX	Paxson	86.34	14	eP	P	09 14 02.5	0.0
	comp=Z,166nm,1.0s						
PAX	Paxson	86.34	14	eP	P	09 14 02.5	0.0
PAX				pmax	pmax		
	comp=Z,170nm,1.0s						
SEY	Seymchan	86.45	346	P	P	09 14 03.4	+0.5
	comp=Z,435nm,1.0s,baz=147,slow=5.2,SNR=505						
SEY	Seymchan	86.45	346	c iP	P	09 14 03.2	+0.3
CHBT	CHBT	86.50	285	P	P	09 14 06.7	+2.5
	comp=Z,471nm,1.1s						
SKNT	Sakolnakorn	86.58	289	P	P	09 14 04.0	-0.5
	comp=Z,63nm,1.2s						
BWN	Browne	86.61	11	eP	P	09 14 03.8	+0.2
	comp=Z,685nm,1.2s						
AHID	Auburn Hatcher	86.61	42	eP	P	09 14 04.3	-0.1
	comp=Z,56nm,1.3s						
MCMT	McKenzie Canyo	86.64	40	eP	P	09 14 05.5	+1.0
BJT	Baijiatuau	86.84	315	eP	P	09 14 05.6	+0.3
	comp=Z,91nm,1.1s						
BJT	Baijiatuau	86.84	315	eP	P	09 14 05.6	+0.3
BJT				pmax	pmax		
	comp=Z,91nm,1.1s						
BJI	Beijing	86.85	315	P	P	09 14 06.0	+0.7
BJI				pmax	pmax		
	comp=Z,120nm,1.8s						
GSI	Gunungsitoli	86.88	273	eP	P	09 14 06.7	+0.5
	comp=Z,262nm,1.1s						
S22A	4UR Ranch, Cre	86.96	48	P	P	09 14 07.5	+1.2
	baz=242,SNR=111						
S22A	4UR Ranch, Cre	86.96	48	eP	P	09 14 07.1	+0.8
	comp=Z,60nm,1.0s						
LNIG	Linares	87.03	62	eP	P	09 14 06.5	0.0
	comp=Z,71nm,0.9s						
DLMT	Dillon	87.08	39	eP	P	09 14 07.7	+1.2
	comp=Z,80nm,1.4s						
REDW	Red Top Meadow	87.08	42	eP	P	09 14 07.5	+0.8
	comp=Z,42nm,1.3s						
TPAW	Teton Pass	87.08	41	eP	P	09 14 07.6	+0.9
	comp=Z,30nm,1.0s						
MSO	Missoula	87.09	37	P	P	09 14 06.7	+0.2
	baz=236,SNR=27						
DLBC	Dease Lake	87.11	22	P	P	09 14 07.5	+1.3
	comp=Z,57nm,0.9s,baz=228,slow=5.1,SNR=86						
DLBC	Dease Lake	87.11	22	eP	P	09 14 07.6	+1.3
	comp=Z,85nm,0.9s						
FXWY	Fox Creek	87.11	41	eP	P	09 14 07.7	+0.9
	comp=Z,34nm,1.4s						
WRH	Wood River Hil	87.14	12	eP	P	09 14 06.3	+0.2
	comp=Z,459nm,1.0s						
O20A	White River Ci	87.14	45	P	P	09 14 07.7	+0.7
	baz=241,SNR=30						
O20A	White River Ci	87.14	45	eP	P	09 14 07.8	+0.8
	comp=Z,44nm,0.8s						
RIDG	Independ'e Rid	87.16	13	eP	P	09 14 06.9	+0.6
	comp=Z,269nm,1.1s						
MLY	Manley	87.17	11	eP	P	09 14 05.9	-0.4
	comp=Z,193nm,1.1s						
TRTT	Trang	87.17	279	P	P	09 14 08.3	+0.8
	comp=Z,159nm,1.0s						
SNOW	Snow King Moun	87.19	42	eP	P	09 14 08.3	+1.1
	comp=Z,36nm,0.9s						
SRAK	Srakaew	87.22	286	P	P	09 14 06.8	-0.8
	comp=Z,124nm,1.4s,comp=Z,2μm						
DOT	Dot Lake	87.25	14	eP	P	09 14 07.3	+0.6
	comp=Z,557nm,0.9s						
ENH	Enshi	87.25	304	eP	P	09 14 08.5	+0.9
	comp=Z,298nm,1.0s						
IMW	Indian Meadow	87.30	41	eP	P	09 14 08.9	+1.1
	comp=Z,34nm,1.2s						
HDA	Harding Lake	87.31	12	eP	P	09 14 07.2	+0.2
	comp=Z,143nm,0.8s						
MOOW	Moose Ponds	87.35	41	eP	P	09 14 08.7	+0.8
	comp=Z,19nm,1.3s						
CCB	Clear Creek Bu	87.35	12	eP	P	09 14 07.1	0.0
	comp=Z,327nm,1.1s						
CCB				eS	S	09 24 25.8	+1.5
LOHW	Long Hollow	87.36	41	eP	P	09 14 08.9	+0.9
	comp=Z,23nm,1.2s						
SYO	Syowa Base	87.40	192⇓	eP	P	09 14 06.2	-1.3
SYO	Syowa Base	87.40	192⇑	iP	P	09 14 11.0	+3.5
JTMT	Jette	87.41	37	eP	P	09 14 08.6	+0.6
	comp=Z,44nm,1.1s						
QLMT	Earthquake Lak	87.49	40	eP	P	09 14 10.2	+1.7
SMCO	Snowmass	87.54	47	eP	P	09 14 09.9	+0.8
	comp=Z,56nm,1.0s						
COLA	College	87.55	12	eP	P	09 14 08.1	+0.1
	comp=Z,294nm,0.8s						
COLA	College	87.55	12	eP	P	09 14 08.1	+0.1
COLA				pmax	pmax		
	comp=Z,290nm,0.9s						
SCRK	Sand Creek	87.55	14	eP	P	09 14 08.8	+0.6
	comp=Z,115nm,0.9s						
MDM	Murphy Dome	87.55	12	eP	P	09 14 08.0	-0.1
	comp=Z,352nm,1.1s						
MDM				eS	S	09 24 27.0	+0.7
BW06	Boulder Array	87.59	43	P	P	09 14 09.4	+0.3
	baz=240,SNR=12						
BW06	Boulder Array	87.59	43	eP	P	09 14 05.6	-3.6
	comp=Z,20nm,1.1s						
PD31	Pinedale Array	87.59	43	eP	P	09 14 09.3	+0.2
PDAR	Pinedale Array	87.59	43	P	P	09 14 09.3	+0.2
	comp=Z,12nm,0.9s,baz=217,slow=3.7,SNR=62						
PDAR				PKKPbc	PKKPbc	09 31 55.7	-2.3
	comp=Z,0.9nm,0.7s,baz=117,slow=5.5,SNR=6.1						
YHB	Horse Butte	87.59	40	eP	P	09 14 10.8	+1.7
	comp=Z,54nm,1.2s						
ILAR	Eielson Array	87.64	12	P	P	09 14 08.4	0.0
	comp=Z,103nm,1.0s,baz=221,slow=4.6,SNR=294						
ILAR				PP	PP	09 17 35.0	-3.3
	comp=Z,13nm,1.1s,baz=222,slow=7.3,SNR=4.4						
ILAR				PKiKP	PKiKP	09 19 10.3	+0.2
	comp=Z,1.0nm,0.5s,baz=260,slow=2.9,SNR=4.2						
ILAR				SKKS		09 38 48.3	
	comp=Z,0.2nm,0.6s,baz=90,slow=0.9,SNR=4.1						
ILAR				PKPPKP	P'P'df	09 39 55.0	-8.0
	comp=Z,0.2nm,0.7s,baz=14,slow=4.2,SNR=4.2						
ILB	Eielson Array	87.64	12	eP	P	09 14 08.5	0.0
NONG	Nongkai	87.72	290	P	P	09 14 10.9	+0.9
	comp=Z,88nm,1.0s,comp=Z,2μm						
BOZ	Bozeman (W)	87.78	39	P	P	09 14 11.0	+1.2
	baz=238,SNR=88						
BOZ	Bozeman (W)	87.78	39	eP	P	09 14 10.8	+1.0
BOZ				pmax	pmax		
	comp=Z,86nm,1.2s						
H17A	Grant Village	87.78	41	P	P	09 14 12.1	+2.1
	baz=239,SNR=16						
H17A	Grant Village	87.78	41	eP	P	09 14 12.2	+2.2
	comp=Z,30nm,1.3s						
SDCO	Great Sand Dun	87.89	48	P	P	09 14 11.3	+0.6
	baz=242,SNR=56						
GYA	Guiyang	87.95	299⇑	iP	P	09 14 11.5	+0.5
GYA				pP	pP	09 15 17.4	+3.2
GYA				sP	sP	09 15 46.0	+4.3
GYA				PP	PP	09 17 44.8	+3.1
GYA				SKS	SKSac	09 24 12.2	-2.2
GYA				S	S	09 24 30.8	-1.1
GYA				pmax	pmax		
	comp=Z,40nm,1.0s						
GYA				pmax	pmax		
	comp=Z,160nm,5.4s						
ZEA	Zeya	88.17	330	cePP	P	09 14 12.7	+1.4
ZEA				e		09 24 12.0	
ZEA				pmax	pmax		
	comp=N,140nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,290nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,1μm,6.0s						
ZEA				pmax	pmax		
	comp=N,700nm,5.0s						
MSTX	Muleshoe	88.18	53	P	P	09 14 12.6	+0.6
	baz=244						
MSTX	Muleshoe	88.18	53	eP	P	09 14 12.8	+0.8
	comp=N,75nm,1.0s						
PLCA	Paso Flores	88.28	133	P	P	09 14 13.7	+1.3
	comp=N,24nm,0.9s,baz=259,slow=4.0,SNR=25						
PLCA				pP	pP	09 15 18.4	+2.8
	comp=N,6.5nm,0.9s,baz=292,slow=6.7,SNR=3.9						
PLCA				PKKPbc	PKKPbc	09 31 55.0	0.0
	comp=N,8.0nm,0.8s,baz=119,slow=1.4,SNR=11						
PLCA				PKPPKP	P'P'df	09 40 01.0	-5.1
	comp=N,4.2nm,1.0s,baz=78,slow=8.7,SNR=4.2						
PLCA	Paso Flores	88.28	133	eP	P	09 14 13.3	+0.9
	comp=N,47nm,1.1s						
PLCA				pP	pP	09 15 18.4	+2.8
PLCA	Paso Flores	88.28	133	eP	P	09 14 13.7	+1.3
PLCA				pmax	pmax		
	comp=Z,47nm,1.1s						
SNAA	Sanae	88.28	178	P	P	09 14 11.5	-0.2
SNAA				SKS	SKSac	09 24 13.9	-0.9
SNAA				S	S	09 24 32.9	-0.6
SNAA	Sanae	88.28	178	P	P	09 14 12.0	+0.3
	comp=Z,32nm,0.9s,baz=193,slow=9.0,SNR=94						
SNAA				pP	pP	09 15 16.1	+1.2
	comp=Z,8.5nm,0.8s,baz=231,slow=6.5,SNR=4.1						
SNAA				S	SKSac	09 24 14.9	+0.1
	comp=Z,1.5nm,1.0s,baz=1.0,slow=22,SNR=18						
SNAA				PKKPbc	PKKPbc	09 31 53.1	-3.0
	comp=Z,8.4nm,1.0s,baz=0.2,slow=2.3,SNR=19						
SNAA	Sanae	88.28	178	eP	P	09 14 11.3	-0.5
	comp=Z,34nm,0.9s						
SNAA				pP	pP	09 15 16.1	+1.2
SNAA				S	SKSac	09 24 14.9	+0.1
SNAA	Sanae	88.28	178	diP	P	09 14 09.7	-2.0
TIY	Taiyuan	88.31	311	eP	P	09 14 13.6	+1.2
TIY				SKS	SKSac	09 24 14.5	-1.5
TIY				S	ScS	09 24 38.0	-1.7
TIY				pmax	pmax		
	comp=Z,83nm,0.5s						
TIY				pmax	pmax		
	comp=Z,560nm,8.2s						
TIY				LR	LR		
	comp=Z,160nm,5.4s						
TIY				LR	LR		
	comp=Z,180nm,5.8s						
TIY				LR	LR		
	comp=Z,400nm,21.1s						
VNA3	Neumayer Olymp	88.34	176	P	P	09 14 12.1	+0.1
VNA3				SKS	SKSac	09 24 13.2	-1.9
VNA3				S	S	09 24 34.2	+0.3
WALA	Waterton Lakes	88.34	36	eP	P	09 14 12.8	+0.4
	comp=Z,95nm,1.0s						
T25A	Trinidad	88.38	49	P	P	09 14 13.4	+0.4
	baz=243,SNR=14						
T25A	Trinidad	88.38	49	eP	P	09 14 13.9	+0.9
	comp=Z,22nm,1.0s						
SURT	Suratani	88.39	280	P	P	09 14 15.0	+1.8
	comp=Z,67nm,1.1s						
833A	Chaparral WMA,	88.46	59	P	P	09 14 13.6	+0.4
	baz=246,SNR=7.2						
833A	Chaparral WMA,	88.46	59	eP	P	09 14 14.4	+1.1
	comp=Z,45nm,1.4s						
RDOG	Red Dog Mine	88.52	5	eP	P	09 14 13.4	+0.8
	comp=Z,39nm,0.8s						
RWWY	Rawlins	88.58	44	eP	P	09 14 13.3	-0.5
	comp=Z,47nm,1.0s						
Q24A	Divide	88.69	48	P	P	09 14 15.4	+0.9
	baz=243,SNR=21						
DAWY	Dawson	88.70	15	eP	P	09 14 14.8	+1.2
	comp=Z,300nm,0.9s						
ISCO	Idaho Springs	88.76	47	P	P	09 14 15.4	+0.6
	baz=242,SNR=13						
ISCO	Idaho Springs	88.76	47	eP	P	09 14 15.6	+0.8
ISCO				pmax	pmax		
	comp=Z,14nm,1.0s						
BILL	Bilibino	88.90	354	eP	P	09 14 14.9	+0.5
	comp=Z,87nm,1.3s						
BILL	Bilibino	88.90	354	c iP	P	09 14 14.6	+0.3
BILL				e		09 17 45.1	
BILL				pmax	pmax		
	comp=Z,193nm,2.4s						
RLMT	Red Lodge	88.96	41	P	P	09 14 16.8	+1.3
	baz=240,SNR=29						
JCT	Junction City	89.00	57	P	P	09 14 16.0	+0.2
	baz=246						
JCT	Junction City	89.00	57	eP	P	09 14 16.3	+0.5
JCT				pmax	pmax		
	comp=Z,12nm,0.7s						
PHET	Kaeng Krachan	89.01	284	P	P	09 14 18.5	+2.4
	comp=Z,61nm,0.9s,comp=Z,534nm						
VNA1	Neumayer--Stat	89.02	176	P	P	09 14 15.6	+0.5
N23A	Red Feather La	89.04	46	P	P	09 14 17.0	+0.9
	baz=242,SNR=26						
N23A	Red Feather La	89.04	46	eP	P	09 14 17.0	+0.9
	comp=Z,38nm,1.0s						
PBKT	Sadao Pong	89.11	288	P	P	09 14 17.1	+0.6
	comp=Z,108nm,1.3s,comp=Z,2μm						
PBKT	Sadao Pong	89.11	288	eP	P	09 14 17.1	+0.6
	comp=Z,145nm,1.2s						
NVL	N'lazarevskaya	89.12	183⇓	iP	P	09 14 15.0	-0.6
NVL				e*PP	sP	09 15 33.7	-13
NVL				e		09 24 27.3	
NVL				pmax	pmax		
	comp=Z,23nm,0.8s						
XAN	Xi'an	89.27	307	P	P	09 14 17.8	+0.8
XAN				SKS	SKSac	09 24 15.0	-6.7
XAN				pmax	pmax		
	comp=Z,230nm,1.1s						
XAN				pmax	pmax		
	comp=Z,940nm,4.3s						
AMTX	Amarillo	89.39	52	P	P	09 14 18.0	+0.4
	baz=245						
HIA	Hailar	89.41	324	eP	P	09 14 18.0	+0.8
	comp=Z,73nm,1.2s						
HIA	Hailar	89.41	324	eP	P	09 14 18.0	+0.8
HIA				pmax	pmax		
	comp=Z,73nm,1.2s						
K22A	Casper	89.48	44	P	P	09 14 18.4	+0.5
	baz=242,SNR=20						
K22A	Casper	89.48	44	eP	P	09 14 18.6	+0.6
	comp=Z,56nm,1.2s						
PHWY	Pilot Hill	89.56	45	eP	P	09 14 19.3	+0.8
	comp=Z,14nm,1.0s						
PHIT	Phitsanulok	89.83	288	P	P	09 14 21.6	+1.8
	comp=Z,87nm,1.1s,comp=Z,712nm						
SRDT	SRDT	89.98	285	P	P	09 14 22.0	+1.4
	comp=Z,120nm,1.3s,comp=Z,5μm						
ABTX	Abilene, Hawle	90.00	55	P	P	09 14 21.0	+0.6
	baz=246,SNR=36						
ABTX	Abilene, Hawle	90.00	55	eP	P	09 14 21.1	+0.6
	comp=Z,74nm,0.9s						
EGMT	Eagleton	90.14	38	P	P	09 14 21.7	+1.0
	baz=240						
NANT	Nan	90.15	290	P	P	09 14 22.3	+1.0
	comp=Z,29nm,1.1s,comp=Z,265nm						
HHC	Hu-ho-hao-te	90.33	314	eP	P	09 14 22.8	+1.0
HHC				pP	pP	09 15 33.7	+8.5
HHC				sP	sP	09 15 57.0	+4.4
HHC				PP	PP	09 17 55.9	-4.4
HHC				SKS	SKSac	09 24 27.9	+0.2
HHC				S	S	09 24 51.6	-1.8
HHC				pmax	pmax		
	comp=Z,48nm,1.3s						
HHC				pmax	pmax		
	comp=Z,280nm,7.0s						
KSCO	Kaye Shedlock'	90.47	48	P	P	09 14 23.3	+0.7
	baz=244,SNR=13						
KSCO	Kaye Shedlock'	90.47	48	eP	P	09 14 23.8	+1.3
	comp=Z,67nm,1.2s						
TOLK	Toolik Lake Re	90.66	9	P	P	09 14 23.4	+0.8
	baz=205						
TOLK	Toolik Lake Re	90.66	9	eP	P	09 14 23.4	+0.8
	comp=Z,133nm,1.1s						
KMI	Kunming	90.70	296	P	P	09 14 25.6	+1.6
KMI				pP	pP	09 15 33.1	+5.7
KMI				sP	sP	09 15 58.5	+3.7
KMI				PP	PP	09 18 02.5	-1.1
KMI				SKS	SKSac	09 24 29.0	-1.7
KMI				S	S	09 24 55.9	-1.7
KMI				sS	sS	09 26 54.2	+4.8
KMI				SS	SS	09 31 07.6	+0.9
KMI				pmax	pmax		
	comp=Z,120nm,1.2s						
KMI				pmax	pmax		
	comp=Z,700nm,6.9s						
KMI				LR	LR		
	comp=Z,330nm,19.9s						
KMI				LR	LR		
	comp=Z,260nm,19.9s						
KMI				LR	LR		
	comp=Z,480nm,32.8s						
435B	Jarrell	90.88	58	P	P	09 14 24.9	+0.4
	baz=247,SNR=12						
435B	Jarrell	90.88	58	eP	P	09 14 25.0	+0.6
	comp=Z,62nm,0.9s						
CLNS	Chul'man	91.13	332	eP	P	09 14 25.7	+0.7
CLNS				e*PP	pP	09 15 24.2	-4.3
CLNS				e		09 18 07.0	
CLNS				ePPP	PPP	09 20 08.8	
CLNS				eS	SKSac	09 24 34.0	+2.7
CLNS				e		09 25 03.9	
CLNS				pmax	pmax		
	comp=Z,42nm,1.0s						
CLNS				pmax	pmax		
	comp=N,14nm,0.9s						
CLNS				pmax	pmax		
	comp=E,11nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CLNS				pmax	pmax		
	comp=N,16nm,1.0s						
CLNS				pmax	pmax		
	comp=E,10.0nm,0.9s						
CLNS				smax	smax		
	comp=E,189nm,12.6s						
CLNS				smax	smax		
	comp=N,307nm,12.6s						
APG	El Apazote	91.20	75	P	P	09 14 27.3	+0.8
	comp=N,11nm,0.7s,baz=303,slow=6.2,SNR=8.5						
ROC1	El Roble	91.22	126	eP	P	09 14 26.9	+0.4
	comp=N,26nm,0.9s						
BTO	Baotou	91.28	313	eP	P	09 14 25.7	-0.5
WHTX	Lake Whitney,	91.45	56	P	P	09 14 27.3	+0.2
	baz=247,SNR=5.2						
WHTX	Lake Whitney,	91.45	56	eP	P	09 14 27.7	+0.6
	comp=N,29nm,0.8s						
WMOK	Wichita Mounta	91.50	54	P	P	09 14 27.0	-0.3
	baz=246,SNR=17						
WMOK	Wichita Mounta	91.50	54	eP	P	09 14 27.2	-0.1
WMOK				pmax	pmax		
	comp=Z,16nm,1.1s						
CM01	Chiang Mai Arr	91.56	289	eP	P	09 14 28.7	+0.9
LAO	LASA Array	91.58	40	P	P	09 14 29.1	+1.7
	baz=242						
CM31	Chiang Mai Arr	91.59	289	eP	P	09 14 29.2	+1.2
CM31				ePP	PP	09 18 10.8	+0.3
CMAR	Chiang Mai Arr	91.59	289	P	P	09 14 29.4	+1.4
	comp=Z,55nm,0.9s,baz=117,slow=2.9,SNR=159						
CMAR				PP	PP	09 18 10.8	+0.3
	comp=Z,8.9nm,1.0s,baz=120,slow=5.6,SNR=8.2						
CHTO	Chiang Mai	91.71	289	P	P	09 14 29.6	+1.0
	comp=Z,466nm,1.2s,comp=Z,6μm						
CHTO	Chiang Mai	91.71	289	eP	P	09 14 28.6	+0.1
	comp=Z,76nm,0.9s						
CHTO	Chiang Mai	91.71	289	P	P	09 14 30.1	+1.5
	SNR=15						
CHTO	Chiang Mai	91.71	289	P	P	09 14 30.1	+1.5
	SNR=15						
CHTO	Chiang Mai	91.71	289	eP	P	09 14 29.8	+1.2
CHTO				pmax	pmax		
	comp=Z,76nm,0.9s						
OGNE	Ogallala	91.72	47	P	P	09 14 28.7	+0.5
	baz=245						
OGNE	Ogallala	91.72	47	eP	P	09 14 28.3	+0.1
	comp=Z,25nm,0.8s						
RSSD	Black Hills	91.77	43	P	P	09 14 29.0	+0.4
	baz=244						
RSSD	Black Hills	91.77	43	eP	P	09 14 29.0	+0.4
	comp=Z,133nm,1.0s						
RSSD	Black Hills	91.77	43	eP	P	09 14 29.0	+0.4
RSSD				pmax	pmax		
	comp=Z,130nm,1.0s						
HKT	Hockley	91.96	59	eP	P	09 14 30.7	+1.3
	comp=Z,31nm,1.2s						
HKT	Hockley	91.96	59	eP	P	09 14 30.7	+1.3
HKT				pmax	pmax		
	comp=Z,31nm,1.2s						
CMAI	Chiengmai2	92.01	290	P	P	09 14 31.4	+1.3
CD2	Chengdu	92.03	302	P	P	09 14 30.3	+0.5
CD2				pP	pP	09 15 35.6	+2.3
CD2				sP	sP	09 16 04.2	+3.5
CD2				PP	PP	09 18 13.9	+0.1
CD2				SKS	SKSac	09 24 36.2	-1.4
CD2				S	S	09 25 08.3	-0.6
CD2				sS	sS	09 27 04.6	+3.5
CD2				SS	SS	09 31 25.8	+0.5
CD2				pmax	pmax		
	comp=Z,50nm,1.2s						
CD2				pmax	pmax		
	comp=Z,670nm,8.0s						
CBKS	Cedar Bluff	92.44	49	P	P	09 14 32.0	+0.4
	baz=246						
CBKS	Cedar Bluff	92.44	49	eP	P	09 14 32.1	+0.6
CBKS				pmax	pmax		
	comp=Z,51nm,1.0s						
YAK	Yakutsk	92.45	338	eP	P	09 14 30.7	-0.2
	comp=Z,237nm,0.8s						
YAK	Yakutsk	92.45	338	eP	P	09 14 28.1	-2.8
YAK				e		09 18 11.4	
YAK				eS	SKSac	09 24 40.9	+2.6
YAK				e		09 25 09.2	
YAK				eSS	SS	09 31 31.6	+1.8
YAK				pmax	pmax		
	comp=Z,243nm,1.1s						
YAK				pmax	pmax		
	comp=N,28nm,1.3s						
YAK				pmax	pmax		
	comp=E,42nm,1.2s						
YAK				pmax	pmax		
	comp=Z,79nm,1.4s						
YAK				pmax	pmax		
	comp=E,33nm,1.9s						
YAK				pmax	pmax		
	comp=N,59nm,1.9s						
YAK				smax	smax		
	comp=N,275nm,3.5s						
YAK				smax	smax		
	comp=E,63nm,3.0s						
AUSP	Uspallata	92.78	126	eP	P	09 14 33.6	-0.2
AAGR	Agrelo	92.83	127	eP	P	09 14 33.3	-0.4
RTLS	Leoncito	93.04	125	eP	P	09 14 34.8	-0.2
ASAL	Salagasta	93.04	126	eP	P	09 14 34.4	-0.3
INK	Inuvik	93.54	15	P	P	09 14 36.1	+0.3
	comp=E,166nm,1.0s,baz=216,slow=5.6,SNR=152						
INK	Inuvik	93.54	15	eP	P	09 14 36.0	+0.3
	comp=E,170nm,0.9s						
NATX	Nacogdoches	93.56	58	P	P	09 14 37.2	+0.3
	baz=248						
RTCV	Cerro Valdivia	93.59	126	eP	P	09 14 36.7	-0.5

LZH				SKS	SKSac	09 24 46.1	-1.8
LZH				eS	S	09 25 20.5	-4.9
LZH				sS	sS	09 27 21.6	+3.5
LZH				pmax	pmax		
	comp=E,140nnm,1.0s						
LZH				pmax	pmax		
	comp=E,800nnm,4.1s						
AMOG	MOGNA	94.03	125	eP	P	09 14 38.8	-0.5
TUL1	Leonard	94.21	53	P	P	09 14 40.0	+0.3
	baz=248						
TUL1	Leonard	94.21	53	eP	P	09 14 40.7	+1.0
	comp=E,17nm,1.0s						
BGNE	Belgrade	94.58	48	P	P	09 14 42.2	+0.9
	baz=247						
BGNE	Belgrade	94.58	48	eP	P	09 14 42.6	+1.3
	comp=E,249nnm,0.9s						
341A	Kurthwood	94.60	58	P	P	09 14 42.3	+0.7
	baz=249						
341A	Kurthwood	94.60	58	eP	P	09 14 42.9	+1.4
	comp=E,23nm,1.0s						
JTS	JuntasAbangare	94.66	81	P	P	09 14 44.6	+2.4
	comp=E,6.3nm,0.9s,baz=293,slow=8.1,SNR=4.9						
AGUA	GUANDACOL	94.67	124	eP	P	09 14 41.3	-0.9
542A	Morse	94.67	60	P	P	09 14 42.2	+0.3
	baz=250						
140A	Cam and Jess,	94.74	57	P	P	09 14 42.9	+0.8
	baz=249						
KSU1	Kansas State U	94.79	50	P	P	09 14 42.9	+0.6
	baz=248						
X39A	Fountain Ranch	94.98	55	P	P	09 14 43.8	+0.5
	baz=249						
241A	Mo Tay, Goldon	95.04	58	P	P	09 14 44.0	+0.5
	baz=249						
Z40A	Long Farm, Mag	95.09	57	P	P	09 14 44.1	+0.3
	baz=249						
SUSD	Miller	95.22	45	P	P	09 14 44.2	+0.1
	baz=247						
342A	Flagon Creek P	95.29	59	P	P	09 14 44.2	-0.5
	baz=250						
I31A	Royce, Wessing	95.33	45	P	P	09 14 44.9	+0.2
	baz=247						
MIAR	Mount Ida	95.41	55	P	P	09 14 45.5	+0.3
	baz=249						
MIAR	Mount Ida	95.41	55	eP	P	09 14 45.6	+0.4
MIAR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
Y40A	Okolona	95.45	56	P	P	09 14 45.8	+0.4
	baz=249						
MRA	San Martin	95.47	127	eP	P	09 14 45.2	-0.6
W39A	Magazine	95.48	55	P	P	09 14 45.8	+0.3
	baz=249						
YKA	Yellowknife Ar	95.53	24	P	P	09 14 45.3	+0.3
	comp=Z,35nm,0.9s,baz=235,slow=4.2,SNR=103						
YKA				PP	PP	09 18 33.4	-6.7
	comp=Z,3.5nm,1.0s,baz=239,slow=7.6,SNR=5.4						
YKA				PKIKP	PKiKP	09 19 22.7	-0.8
	comp=Z,0.8nm,0.8s,baz=247,slow=1.8,SNR=4.2						
YKA				PKKP	PKKPdf	09 31 34.6	-3.6
	comp=Z,0.7nm,0.5s,baz=39,slow=2.4,SNR=12						
H31A	Wolsey	95.55	45	P	P	09 14 45.7	+0.1
	baz=247						
YKW3	Yellowknife Ar	95.56	24	eP	P	09 14 45.1	0.0
	comp=Z,32nm,0.9s						
HHAR	Hobbs	95.74	54	eP	P	09 14 46.9	+0.2
	comp=Z,12nm,1.3s						
T38A	Diamond	95.74	53	P	P	09 14 46.9	+0.2
	baz=249,SNR=10						
APLL	PUNTA DE LOS L	95.79	125	eP	P	09 14 46.6	-0.6
V39A	Pettigrew	95.81	54	P	P	09 14 46.9	-0.1
	baz=249,SNR=10						
ACLC	CERRO LA CRUZ	95.90	124	eP	P	09 14 47.3	-0.6
G31A	Conde	96.01	44	P	P	09 14 47.7	0.0
	baz=248,SNR=5.3						
W40A	Ferguson Farm,	96.03	55	P	P	09 14 48.3	+0.3
	baz=250						
W40A	Ferguson Farm,	96.03	55	eP	P	09 14 48.8	+0.8
	comp=Z,17nm,1.0s						
U39A	Green Forest	96.13	54	P	P	09 14 48.4	0.0
	baz=250						
MDND	Maddock	96.14	41	P	P	09 14 48.4	+0.1
	baz=247,SNR=5.7						
MDND	Maddock	96.14	41	eP	P	09 14 49.0	+0.8
	comp=Z,61nm,0.9s						
F31A	Hecla	96.22	43	P	P	09 14 48.5	-0.1
	baz=248,SNR=14						
S38A	Stockton	96.24	52	P	P	09 14 49.0	+0.1
	baz=249						
H32A	Carlson Farm,	96.25	45	P	P	09 14 48.8	0.0
	baz=248,SNR=34						
V40A	Witts Springs	96.42	54	P	P	09 14 49.8	0.0
	baz=250,SNR=7.6						
V40A	Witts Springs	96.42	54	eP	P	09 14 49.9	0.0
	comp=Z,13nm,1.0s						
T39A	Clever	96.43	53	P	P	09 14 49.6	-0.1
	baz=250,SNR=8.0						
R38A	Fenwick Farm,	96.44	52	P	P	09 14 49.8	0.0
	baz=250						
143A	Socs Landing,	96.48	58	P	P	09 14 50.6	+0.5
	baz=250						
G32A	Webster	96.49	44	P	P	09 14 49.8	-0.1
	baz=248						
ECSD	EROS Data Cent	96.51	46	P	P	09 14 50.1	+0.1
	baz=248,SNR=54						
ECSD	EROS Data Cent	96.51	46	eP	P	09 14 49.6	-0.4
	comp=Z,56nm,1.0s						
U40A	Yellville	96.59	54	P	P	09 14 50.2	-0.3
	baz=250,SNR=9.2						
N36A	Muff Farm, Cla	96.60	49	P	P	09 14 50.9	+0.4
	baz=249,SNR=8.6						
P37A	Lathrop	96.60	50	P	P	09 14 50.4	-0.1
	baz=249						
SONA0	Songino Array	96.61	319	eP	P	09 14 50.4	-0.1
SONA0				ePP	PP	09 18 34.5	-14
SONA1	Songino Array	96.61	319	eP	P	09 14 49.6	-0.9
SONM	Songino Array	96.61	319	P	P	09 14 50.4	-0.1
	comp=Z,3.5nm,0.8s,baz=135,slow=4.1,SNR=22						
SONM				PP	PP	09 18 34.5	-14
	comp=Z,1.6nm,0.8s,baz=127,slow=9.3,SNR=2.8						
W41B	Gary Mavity, V	96.65	55	P	P	09 14 50.6	-0.2
	baz=250						
WHAR	Wooly Hollow	96.66	55	eP	P	09 14 52.1	+1.3
	comp=Z,17nm,1.1s						
S39A	Bolivar	96.70	52	P	P	09 14 50.7	-0.3
	baz=250						
E31A	Nome	96.72	43	P	P	09 14 50.6	-0.3
	baz=248,SNR=9.3						
H33A	Prehn Over Nor	96.77	45	P	P	09 14 51.3	+0.1
	baz=248,SNR=20						
Q38A	Cooks Store, C	96.92	51	P	P	09 14 51.9	0.0
	baz=250						
V41A	Mountainview	96.93	55	P	P	09 14 52.0	-0.1
	baz=250						
M36A	Felix, Anita	96.94	48	P	P	09 14 52.5	+0.5
	baz=249						
O37A	Wolven Farm, M	96.95	50	P	P	09 14 51.9	-0.1
	baz=250,SNR=5.6						
F32A	Veblen	96.96	44	P	P	09 14 51.7	-0.3
	baz=248						
D31A	Mcclaflin, Tow	97.01	42	P	P	09 14 51.7	-0.4
	baz=248						
N37A	Lee Faris, Mou	97.11	49	P	Pdif	09 14 53.0	+0.2
	baz=250						
T40A	Mansfield	97.11	53	P	P	09 14 52.9	0.0
	baz=250						
R39A	Chumby, Stover	97.12	52	P	Pdif	09 14 52.9	0.0
	baz=250						
G33A	Ortonville	97.16	45	P	P	09 14 52.8	0.0
	baz=249						
P38A	Dawn	97.21	51	P	P	09 14 52.9	-0.3
	baz=250						
L36A	Harm Buss Farm	97.26	48	P	Pdif	09 14 53.6	+0.2
	baz=250,SNR=12						
S40A	Lebanon	97.28	53	P	Pdif	09 14 53.7	0.0
	baz=250						
C31A	Landman Farms,	97.28	42	P	P	09 14 53.2	-0.1
	baz=248,SNR=17						
U41A	Viola	97.30	54	P	P	09 14 53.7	0.0
	baz=250						
Q39A	Willow Grove F	97.42	51	P	P	09 14 53.7	-0.5
	baz=250						
O38A	Galt	97.42	50	P	P	09 14 54.0	-0.1
	baz=250						
M37A	Trindle Farm,	97.44	49	P	Pdif	09 14 54.6	+0.3
	baz=250						
245A	Little AP, Sta	97.46	59	P	P	09 14 54.4	-0.1
	baz=251						
F33A	5 Mile Ranch,	97.49	44	P	P	09 14 54.3	0.0
	baz=249						
D32A	Dogwood Acres,	97.49	43	P	P	09 14 54.0	-0.3
	baz=249						
FFC	Flin Flon	97.55	34	eP	Pdif	09 14 54.7	+0.4
	comp=Z,16nm,1.4s						
FFC	Flin Flon	97.55	34	eP	Pdif	09 14 54.7	+0.3
FFC				pmax	pmax		
	comp=Z,16nm,1.3s						
B31A	Greenbush Farm	97.57	41	P	P	09 14 54.4	-0.2
	baz=248						
K36A	Gilmore City	97.60	47	P	Pdif	09 14 55.3	+0.4
	baz=250,SNR=7.3						
T41A	Mountain View	97.65	53	P	P	09 14 55.0	-0.2
	baz=251						
R40A	Maddes Statio	97.68	52	P	P	09 14 55.2	-0.2
	baz=250						
P39B	Salisbury	97.73	51	P	P	09 14 55.2	-0.3
	baz=250						
U42A	Revenden	97.82	54	P	P	09 14 56.0	0.0
	baz=251						
N38A	Joes South For	97.82	50	P	P	09 14 55.9	0.0
	baz=250						
S41A	Jillco Farms,	97.84	53	P	P	09 14 55.8	-0.4
	baz=251						
L37A	Phoenix Point,	97.90	48	P	Pdif	09 14 56.4	+0.1
	baz=250						
J36A	Seneca 1, Swea	97.91	47	P	Pdif	09 14 56.7	+0.4
	baz=250						
E33A	Westby DABS, E	97.91	43	P	P	09 14 55.9	-0.3
	baz=249						
H35A	Sunnyside Ranc	98.05	45	P	Pdif	09 14 57.0	+0.2
	baz=250						
M38A	Pleasantville	98.06	49	P	Pdif	09 14 57.4	+0.4
	baz=250						
Q40A	Laux Farm, Aux	98.06	52	P	Pdif	09 14 57.1	+0.1
	baz=251						
GTA	Gaotai	98.07	309	⇑P	Pdif	09 14 57.4	+0.1
GTA				pP	pP	09 16 03.1	+2.2
GTA				sP	sP	09 16 30.8	+2.6
GTA				PP	PP	09 19 02.0	+1.7
GTA				SKS	SKSac	09 25 06.1	-3.3
GTA				S	S	09 25 56.2	-4.8
GTA				SS	SS	09 32 50.2	-0.3
GTA				pmax	pmax		
	comp=Z,14nm,1.5s						
GTA				pmax	pmax		
	comp=Z,220nm,5.7s						
GTA				LR	LR		
	comp=Z,250nm,22.5s						
GTA				LR	LR		
	comp=Z,210nm,20.6s						
GTA				LR	LR		
	comp=Z,320nm,20.0s						
F34A	Alexandria	98.15	44	P	Pdif	09 14 57.4	+0.1
	baz=250						
T42A	Van Buren	98.15	54	P	P	09 14 57.0	-0.5
	baz=251						
MNMC	Minye Minye	98.19	114	eP	Pdif	09 15 00.5	+2.0
	comp=Z,14nm,0.7s						
K37A	Belmond	98.20	48	P	P	09 14 57.5	-0.1
	baz=250,SNR=13						
SCIA	State Center	98.21	48	P	Pdif	09 14 58.1	+0.5
	baz=250						
D33A	AnnSam, Waubun	98.24	43	P	P	09 14 57.3	-0.4
	baz=249						
B32A	Ashes, Strandq	98.25	41	P	P	09 14 57.3	-0.4
	baz=249,SNR=32						
R41A	Rosebud	98.35	52	P	Pdif	09 14 58.0	-0.4
	baz=251						
CCM	Cathedral Cave	98.37	53	P	Pdif	09 14 58.0	-0.4
	baz=251						
I36A	Fitzsimmons Fa	98.37	46	P	Pdif	09 14 58.0	-0.3
	baz=250						
N39A	Derby Farms, D	98.37	50	P	P	09 14 58.5	+0.1
	baz=251,SNR=9.3						
J37A	Redenius Farm,	98.44	47	P	Pdif	09 14 58.7	0.0
	baz=250,SNR=8.1						
E34A	Wawna	98.46	44	P	P	09 14 58.7	+0.1
	baz=250						
U43A	Rector	98.46	54	P	Pdif	09 14 58.8	-0.1
	baz=251						
G35A	Watkins	98.46	45	P	P	09 14 59.4	+0.7
	baz=250						
A32A	Rocking H Ranc	98.47	41	P	Pdif	09 14 58.3	-0.3
	baz=249,SNR=21						
L38A	Oak Wood Farm,	98.47	48	P	P	09 14 59.5	+0.7
	baz=251,SNR=15						
C33A	Trail	98.50	42	P	Pdif	09 14 58.4	-0.4
	baz=250,SNR=6.0						
O40A	La Belle	98.58	51	P	Pdif	09 14 58.8	-0.5
	baz=251						
F35A	Swanville	98.62	44	P	P	09 14 59.7	+0.3
	baz=250,SNR=9.9						
AGMN	Agassiz Nation	98.64	42	P	Pdif	09 14 58.8	-0.6
	baz=250,SNR=14						
D34A	Park Rapids	98.64	43	P	Pdif	09 14 59.0	-0.4
	baz=250						
448A	Bay Minette	98.76	60	P	Pdif	09 14 60.0	-0.4
	baz=252						
K38A	Parkersburg	98.77	48	P	P	09 15 00.5	+0.3
	baz=251						
T43A	Greenville	98.78	54	P	Pdif	09 15 00.1	-0.2
	baz=251						
I37A	Lemond, Waseca	98.78	46	P	P	09 15 00.5	+0.3
	baz=251						
B33A	Robert and Kas	98.80	42	P	Pdif	09 14 59.9	-0.2
	baz=250,SNR=7.2						
M39A	Webster	98.80	49	P	P	09 15 00.8	+0.4
	baz=251,SNR=9.6						
TIXI	Tiksi	98.87	345	P	Pdif	09 14 59.6	-0.3
	comp=Z,25nm,1.0s,baz=126,slow=6.3,SNR=48						
TIXI				PP	PP	09 18 58.4	-7.1
	comp=Z,29nm,1.0s,baz=126,slow=8.9,SNR=14						
TIXI	Tiksi	98.87	345	eP	Pdif	09 14 59.4	-0.5
TIXI				pmax	pmax		
	comp=Z,36nm,1.0s						
Y46A	Houston	98.88	57	P	Pdif	09 15 00.6	-0.2
	baz=252						
G36A	St. Michael	98.95	45	P	P	09 15 01.5	+0.6
	baz=250						
FVM	French Village	98.96	53	ePdif	P	09 15 02.3	+1.2
	comp=Z,17nm,1.3s						
FVM	French Village	98.96	53	eP	P	09 15 02.3	+1.2
FVM				pmax	pmax		
	comp=Z,17nm,1.2s						
E35A	Pequot Lakes	98.97	44	P	P	09 15 01.2	+0.2
	baz=250						
C34A	RKJ Ranch, Bem	99.01	43	P	Pdif	09 15 00.8	-0.3
	baz=250						
L39A	Vinton	99.14	49	P	Pdif	09 15 02.5	+0.8
	baz=251,SNR=14						
A33A	Warroad	99.15	41	P	Pdif	09 15 01.4	-0.2
	baz=250						
J38A	Wedel Dairy, R	99.19	47	P	Pdif	09 15 02.1	+0.2
	baz=251						
M40A	Post Highland	99.25	49	P	Pdif	09 15 03.1	+0.9
	baz=251						
O41A	Passleys Farm,	99.30	51	P	Pdif	09 15 02.8	+0.3
	baz=252						
H37A	Dierke Farm, C	99.30	46	P	Pdif	09 15 02.9	+0.5
	baz=251						
ULM	Lac du Bonnet	99.31	40	P	Pdif	09 15 01.8	-0.5
	comp=Z,5.0nm,0.9s,baz=256,slow=4.1,SNR=12						
ULM				PP	PP	09 19 02.5	-6.8
	comp=Z,5.6nm,1.1s,baz=255,slow=9.4,SNR=5.3						
ULM	Lac du Bonnet	99.31	40	ePdif	Pdif	09 15 02.3	0.0
	comp=Z,21nm,1.4s						
ULM				PP	PP	09 19 02.5	-6.8
ULM	Lac du Bonnet	99.31	40	eP	Pdif	09 15 02.3	0.0
ULM				pmax	pmax		
	comp=Z,21nm,1.4s						
F36A	Milaca	99.31	45	P	Pdif	09 15 02.9	+0.4
	baz=251,SNR=7.5						
D35A	Remer	99.37	43	P	Pdif	09 15 02.5	-0.2
	baz=251						
K39A	Oelwein	99.40	48	P	Pdif	09 15 02.7	-0.2
	baz=251,SNR=9.7						
ZAK	Zakamensk	99.45	320	eP	Pdif	09 15 02.2	-0.9
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
B34A	Aery, Baudette	99.46	42	P	Pdif	09 15 02.3	-0.7
	baz=250,SNR=12						
N41A	Harden Midland	99.50	50	P	Pdif	09 15 04.1	+0.7
	baz=252						
148A	Greensboro	99.52	59	P	Pdif	09 15 04.0	+0.3
	baz=252						
I38A	Scanlan Farm,	99.52	47	P	Pdif	09 15 03.3	-0.2
	baz=251,SNR=24						
SPMN	Marine on St.	99.58	45	P	Pdif	09 15 04.2	+0.5
	baz=251						
SPMN	Marine on St.	99.58	45	ePdif	Pdif	09 15 05.8	+2.1
	comp=Z,11nm,0.9s						
C35A	Jirik Farms, M	99.63	43	P	Pdif	09 15 03.2	-0.6
	baz=251						
L40A	Anamosa	99.67	49	P	Pdif	09 15 04.0	-0.2
	baz=252,SNR=8.2						
TLY	Talaya	99.68	322	PP	PP	09 19 06.1	-6.0
	comp=Z,1.8nm,0.5s,baz=24,slow=12,SNR=3.8						
TLY	Talaya	99.68	322	eP	Pdif	09 15 04.6	+0.6
TLY				pmax	pmax		
	comp=Z,10.0nm,1.3s						
E36A	McGregor	99.70	44	P	Pdif	09 15 04.2	0.0
	baz=251						
J39A	Decorah	99.73	47	P	Pdif	09 15 04.6	+0.3
	baz=252						
H38A	Maiden Rock	99.76	46	P	Pdif	09 15 04.8	+0.3
	baz=251						
X47A	Russelville	99.86	57	P	Pdif	09 15 04.8	-0.4
	baz=252						
F37A	Hinrichs Farm,	99.86	45	P	Pdif	09 15 05.6	+0.7
	baz=251						
K40A	Colesburg	99.92	48	P	Pdif	09 15 05.4	+0.2
	baz=252						
M41A	Milan	99.93	50	P	Pdif	09 15 06.2	+0.8
	baz=252						
D36A	Goodland	99.98	43	P	Pdif	09 15 05.4	0.0
	baz=251,SNR=11						
B35A	Bob, Littlefor	100.00	42	P	Pdif	09 15 05.3	-0.2
	baz=251						
I39A	Houston	100.02	47	P	Pdif	09 15 05.8	+0.2
	baz=252						
SHL	Shillong	100.09	294	eP	Pdif	09 15 07.5	+0.8
SHL				ex	x	09 19 14.0	
N42A	Yates City	100.13	50	P	Pdif	09 15 07.2	+0.9
	baz=252						
L41A	Preston	100.18	49	P	Pdif	09 15 07.1	+0.7
	baz=252						
G38A	Ridgeland	100.20	46	P	Pdif	09 15 06.9	+0.4
	baz=252						
C36A	Pine Crest Far	100.37	43	P	Pdif	09 15 07.1	-0.1
	baz=252						
250A	Grady	100.37	60	P	Pdif	09 15 07.0	-0.5
	baz=253						
J40A	Soldiers Grove	100.42	48	P	Pdif	09 15 07.7	+0.2
	baz=252,SNR=19						
F38A	Pierce - Schro	100.43	45	P	Pdif	09 15 08.2	+0.8
	baz=252						
H39A	Augusta	100.44	46	P	Pdif	09 15 08.3	+0.8
	baz=252						
D37A	Cotton	100.45	44	P	Pdif	09 15 07.7	+0.3
	baz=252,SNR=22						
K41A	Shullsburg	100.48	48	P	Pdif	09 15 08.2	+0.4
	baz=252						
X48A	Hartselle	100.48	57	P	Pdif	09 15 07.9	0.0
	baz=253						
JFWS	Jewell Farm	100.61	48	P	Pdif	09 15 08.9	+0.6
	baz=252						
JFWS	Jewell Farm	100.61	48	eP	Pdif	09 15 09.8	+1.5
LPAZ	La Paz	100.63	112	P	Pdif	09 15 11.4	+1.6
	comp=Z,4.0nm,0.9s,baz=244,slow=4.7,SNR=14						
LPAZ				PP	PP	09 19 19.9	-0.4
	comp=Z,6.1nm,1.1s,baz=256,slow=4.1,SNR=7.0						
LPAZ				PKKPbc	PKKPbc	09 31 23.0	+0.3
	comp=Z,2.0nm,0.5s,baz=73,slow=4.0,SNR=13						
LPAZ	La Paz	100.63	112	eP	Pdif	09 15 11.7	+1.9
I40A	Norwalk	100.65	47	P	Pdif	09 15 09.0	+0.5
	baz=252						
G39A	Holcombe	100.70	46	P	Pdif	09 15 09.3	+0.7
	baz=252						
150A	Eclectic	100.76	59	P	Pdif	09 15 09.3	+0.2
	baz=253						
C37A	Embarrass	100.78	43	P	Pdif	09 15 09.0	0.0
	baz=252						
U47A	Clarksville	100.88	55	P	Pdif	09 15 09.4	-0.2
	baz=253						
J41A	Loganville	100.91	48	P	Pdif	09 15 10.5	+0.8
	baz=253,SNR=10						
Q45A	Warren Harvey,	100.93	53	P	Pdif	09 15 09.2	-0.6
	baz=253						
H40A	Chili	101.03	47	P	Pdif	09 15 10.4	+0.3
	baz=253						
F39A	Loretta	101.06	45	P	Pdif	09 15 10.6	+0.3
	baz=253						
T47A	Sharon Grove	101.17	55	P	Pdif	09 15 11.1	+0.1
	baz=253						
K42A	Prairie Point,	101.21	49	P	Pdif	09 15 11.4	+0.4
	baz=253						
I41A	Arkdale	101.22	47	P	Pdif	09 15 11.4	+0.5
	baz=253						
EYMN	Ely	101.29	43	P	Pdif	09 15 11.1	-0.1
	baz=253						
G40A	Rib Lake	101.35	46	P	Pdif	09 15 11.5	0.0
	baz=253						
C38A	Sawbill Land.	101.36	43	P	Pdif	09 15 11.3	-0.3
	baz=253						
E39A	Mellen	101.44	45	P	Pdif	09 15 12.0	+0.1
	baz=253						
J42A	Columbus	101.52	48	P	Pdif	09 15 12.6	+0.3
	baz=253						
H41A	Junction City	101.53	47	P	Pdif	09 15 12.5	+0.2
	baz=253						
H41A	Junction City	101.53	47	ePdif	Pdif	09 15 13.3	+0.9
F40A	Park Falls	101.59	45	P	Pdif	09 15 13.5	+0.8
	baz=253						
I42A	Draeger Farm,	101.83	48	P	Pdif	09 15 14.0	+0.3
	baz=254						
I42A	Draeger Farm,	101.83	48	ePdif	Pdif	09 15 14.2	+0.5
E40A	Wakefield	101.89	45	P	Pdif	09 15 14.3	+0.4
	baz=253						
G41A	Antigo	102.02	46	P	Pdif	09 15 14.8	+0.3
	baz=254						
J43A	Natural Harves	102.03	48	P	Pdif	09 15 15.0	+0.4
	baz=254						
C39A	Grand Marais	102.13	43	P	Pdif	09 15 15.6	+0.6
	baz=254						
655A	Horseshoe Beac	102.15	63	P	Pdif	09 15 15.4	0.0
	baz=254						
F41A	Three Lakes	102.22	46	P	Pdif	09 15 16.3	+0.9
	baz=254						
I43A	Langenfeld Bro	102.36	48	P	Pdif	09 15 16.6	+0.5
	baz=254						
E41A	Kenton	102.52	45	P	Pdif	09 15 17.6	+0.9
	baz=254						
H43A	Windswept, Lux	102.78	47	P	Pdif	09 15 18.5	+0.6
	baz=254						
C40A	Isle Royale Na	102.79	44	P	Pdif	09 15 18.9	+1.0
	baz=254						
D41A	Chassel	102.94	44	P	Pdif	09 15 19.9	+1.3
	baz=254						
FCC	Fort Churchill	103.04	32	ePdif	Pdif	09 15 19.2	+0.5
FCC	Fort Churchill	103.04	32	eP	Pdif	09 15 19.2	+0.5
E42A	Champion	103.20	45	P	Pdif	09 15 21.0	+1.2
	baz=255						
E43A	Lone Tree Farm	103.81	45	P	Pdif	09 15 23.4	+1.0
	baz=255						
ODAN	Odare	104.33	294	eP	PKiKP	09 19 41.2	+0.4
U53A	Fall Branch	104.51	56	P	Pdif	09 15 26.4	+0.6
	baz=256						
CPUP	Villa Florida	104.83	126	PKKP	PKKPdf	09 31 18.6	-0.3
	comp=Z,3.5nm,0.7s,baz=53,slow=5.1,SNR=7.6						
RAMN	Ramnite	105.03	294	eP	PKiKP	09 19 42.5	+0.4
JIRN	Jiri	105.57	294	eP	PKiKP	09 19 43.1	-0.1
	comp=Z,41nm,0.6s						
GUN	Gumba	105.90	294	eP	PKiKP	09 19 43.6	-0.2
PKIN	Phulchoki	106.23	294	eP	PKiKP	09 19 44.9	+0.6
KKN	Kakani	106.38	294	eP	PKiKP	09 19 44.1	-0.4
DMN	Daman	106.49	294	eP	PKiKP	09 19 44.7	-0.1
SIV	San Ignacio	106.86	115	PKKPbc	PKKPbc	09 31 04.2	+0.7
	comp=Z,4.3nm,0.9s,baz=85,slow=3.5,SNR=12						
GKN	Gorkha	106.99	294	eP	PKiKP	09 19 44.5	-1.1
RES	Resolute Bay	107.03	16	Pdiff	Pdif	09 15 36.8	+0.6
	comp=Z,4.7nm,1.0s,baz=227,slow=7.5,SNR=7.4						
RES				PKiKP	PKiKP	09 19 44.0	0.0
	comp=Z,4.3nm,0.9s,baz=232,slow=5.0,SNR=5.9						
RES	Resolute

WMQ LR LR
comp=Z,380nm,24.9s
WMQ LR LR
comp=Z,410nm,22.7s
PYUN Piuthan 108.42 294 *e*P **PKiKP 09 19 47.6 -0.7**
NRIK Noril'sk 110.90 338 Pdiff **Pdif 09 15 53.9 +0.4**
comp=Z,3.6nm,0.7s,baz=103,slow=3.4,SNR=6.8
NRIK PKiKP **PKiKP 09 19 52.0 +0.6**
comp=Z,4.9nm,0.7s,baz=76,slow=3.8,SNR=5.4
ZAA1 Zalesovo Array 111.29 321 *e*PKiKP **PKiKP 09 19 51.7 -0.9**
ZAA1 *e*PP **PP 09 20 38.0 +0.8**
ZALV Zalesovo Beam 111.29 321 PKiKP **PKiKP 09 19 51.7 -0.9**
comp=Z,20nm,0.8s,baz=167,slow=1.1,SNR=43
ZALV PP **PP 09 20 38.0 +0.8**
comp=Z,7.6nm,0.9s,baz=94,slow=6.1,SNR=6.3
LONY Lake Ozonia 112.05 49 P **PKiKP 09 19 53.9 -0.5**
baz=263
MK01 Makanchi Array 112.18 313 *e*Pdif **Pdif 09 15 59.8 0.0**
MK31 Makanchi Array 112.19 313 *i* PKIKP **PKiKP 09 19 53.7 -0.9**
MK31 pmax pmax
comp=Z,14nm,0.5s
MK32 Makanchi Array 112.19 313 *e*Pdif **Pdif 09 16 00.6 +0.8**
MK32 *e*PKiKP **PKiKP 09 19 54.3 -0.3**
MK32 *e*PP **PP 09 20 40.1 -3.8**
MKAR Makanchi Array 112.19 313 Pdiff **Pdif 09 16 00.6 +0.8**
comp=Z,2.0nm,0.8s,baz=83,slow=5.3,SNR=13
MKAR PKiKP **PKiKP 09 19 54.3 -0.3**
comp=Z,17nm,0.5s,baz=155,slow=0.8,SNR=131
MKAR PP **PP 09 20 40.1 -3.8**
comp=Z,8.0nm,1.0s,baz=108,slow=7.6,SNR=5.1
MKAR PKKPbc **PKKPbc 09 30 44.6 -3.0**
comp=Z,2.0nm,0.9s,baz=274,slow=2.7,SNR=6.6
MKAR Makanchi Array 112.19 313 *c i* PKIKP **PKiKP 09 19 53.9 -0.7**
MKAR pmax pmax
comp=Z,17nm,0.5s
NVS Novosibirsk 112.28 322 *e*PKIKP **PKiKP 09 19 54.0 -0.4**
NVS *e* 09 20 41.1
NVS *e* 09 26 13.3
NVS pmax pmax
comp=Z,34nm,1.0s
NVS pmax pmax
comp=N,6.0nm,0.8s
NVS pmax pmax
comp=E,10.0nm,0.8s
NVS pmax pmax
comp=Z,32nm,1.8s
NVS pmax pmax
comp=E,37nm,1.9s
NDI New Delhi 113.52 293 *e*P **PP 09 20 53.0 -0.8**
PDGK Podgornoye 113.81 309 PKIKP **PKiKP 09 19 56.7 -1.3**
PDGK pmax pmax
comp=Z,46nm,1.1s
LBNH Lisbon 113.90 50 P **PKiKP 09 19 57.7 -0.3**
baz=265
KURK Kurchatov 114.89 317 *e*PKiKP PKPdf 09 19 59.0 -0.6
KURK *e*PP **PP 09 20 55.0 -7.8**
KURK Kurchatov 114.89 317 P PKPdf 09 19 59.2 -0.4
SNR=20
KURK Kurchatov 114.89 317 PKPdf PKPdf 09 19 59.2 -0.4
SNR=20
KURK Kurchatov 114.89 317 PKIKP PKPdf 09 19 58.4 -1.2
KURK pmax pmax
comp=Z,53nm,0.9s
KURBB Kurchatov Arra 114.94 317 PKP PKPdf 09 19 59.0 -0.7
comp=Z,33nm,0.8s,baz=98,slow=1.9,SNR=149
KURBB PP PP 09 20 55.0 -8.2
comp=Z,5.1nm,0.9s,baz=96,slow=6.3,SNR=9.1
KDJ Kajisay 115.39 308 *e*PKPdf **PKPdf 09 20 00.9 -0.2**
KDJ Kajisay 115.39 308 PKIKP **PKPdf 09 20 00.9 -0.2**
PKME Peaks-Kenny Pk 115.84 49 P **PKPdf 09 20 01.3 -0.3**
baz=267
PKME Peaks-Kenny Pk 115.84 49 *e*PKPdf **PKPdf 09 20 01.6 0.0**
KSH Kashi 116.08 305 PKP **PKPdf 09 20 03.8 +1.4**
KSH PP **PP 09 21 12.8 +1.2**
KSH sPKP 09 21 43.7
KSH PKS **PKSdf 09 23 37.9 -1.3**
KSH SKS **SKSdf 09 26 43.5 -5.9**
KSH SKKS **SKKSac 09 27 40.8 -4.4**
KSH SS **SS 09 36 53.8 +0.3**
KSH AMB AMB
comp=Z,910nm,5.9s
KSH LR LR
comp=Z,290nm,6.4s
KSH LR LR
comp=Z,270nm,5.1s
KSH LR LR
comp=Z,400nm,5.7s
ULHL Ulahol 116.10 308 P **PKPdf 09 20 02.9 +0.4**
SNR=6.8
NRN Naryn 116.22 307 *e*PKPdf **PKPdf 09 20 02.7 -0.2**
NRN Naryn 116.22 307 *e*PKIKP **PKPdf 09 20 02.7 -0.2**
TKM2 Tokmak 2 116.62 309 P **PKPdf 09 20 03.0 -0.5**
SNR=59
TKM2 Tokmak 2 116.62 309 PKIKP **PKPdf 09 20 02.8 -0.7**
TKM2 pmax pmax
comp=Z,45nm,0.8s
PQI Presque Isle 116.79 47 *e*PKPdf **PKPdf 09 20 02.8 -0.6**
KZA Kyzart 116.82 308 P **PKPdf 09 20 04.4 +0.3**
SNR=20
KULLO Kullorsuaq 116.89 15 *i* P **PKPdf 09 20 01.9 -0.9**
comp=Z,15nm,0.7s
KULLO Kullorsuaq 116.89 15 *i* PKIKP **PKPdf 09 20 01.9 -0.9**
KULLO pmax pmax
comp=Z,15nm,0.7s
KBK Karagaybulak 117.08 308 P **PKPdf 09 20 04.2 -0.1**
SNR=12
CHMS Chumysh 117.24 309 P **PKPdf 09 20 04.2 -0.3**
SNR=22
FRU Bishkek 117.33 309 *e*PKIKP **PKPdf 09 20 03.5 -1.1**
FRU pmax pmax
comp=Z,100nm,1.6s
UCH Uchtor 117.38 308 P **PKPdf 09 20 05.6 +0.3**
SNR=52
AAK Ala-Archa 117.41 308 PKP **PKPdf 09 20 05.2 +0.3**
comp=Z,25nm,0.9s,baz=117,slow=2.6,SNR=42
AAK Ala-Archa 117.41 308 P **PKPdf 09 20 04.8 -0.1**
SNR=25
AAK Ala-Archa 117.41 308 *e*PKPdf **PKPdf 09 20 04.4 -0.5**
AAK *e*PKPdf **PKPdf 09 20 05.2 +0.3**
AAK Ala-Archa 117.41 308 P **PKPdf 09 20 04.2 -0.8**
SNR=13
AAK Ala-Archa 117.41 308 PKPdf **PKPdf 09 20 04.2 -0.8**
SNR=13
AAK Ala-Archa 117.41 308 *i* P **PKPdf 09 20 04.7 -0.3**
SNR=27
AAK Ala-Archa 117.41 308⇑ *i* PKIKP **PKPdf 09 20 03.9 -1.1**
USP Ospenovka 117.44 309 P **PKPdf 09 20 04.5 -0.3**
SNR=37
NIL Nilore 117.64 298 *e*PKPdf **PKPdf 09 20 05.4 -0.1**
NIL Nilore 117.64 298 *e*PKIKP **PKPdf 09 20 05.4 -0.1**
EKS2 Erkin-Say 117.94 308 P **PKPdf 09 20 05.8 -0.1**
SNR=32
AML Almayashu 117.98 308 P **PKPdf 09 20 06.0 -0.4**
SNR=56
SFK Sufi-Kurgan 118.01 305 PKIKP **PKPdf 09 20 05.7 -0.6**
SFK pmax pmax
comp=Z,105nm,1.1s
MNAS Manas 118.88 308 PKIKP **PKPdf 09 20 07.5 -0.3**
MNAS pmax pmax
comp=Z,81nm,0.8s
OTUK Ortayu 118.99 315 PKIKP **PKPdf 09 20 07.1 -0.5**
OTUK pmax pmax
comp=Z,74nm,1.0s
BVA0 Borovoye Array 119.91 320 PKIKP **PKPdf 09 20 08.7 -0.5**
BVA0 pmax pmax
comp=Z,88nm,0.9s
BVAR Borovoye Array 119.91 320 PKP **PKPdf 09 20 08.8 -0.4**
comp=Z,47nm,0.8s,baz=86,slow=2.1,SNR=159
BRVK Borovoye 119.97 320 *e*PKPdf **PKPdf 09 20 08.9 -0.4**
BRVK Borovoye 119.97 320 P **PKPdf 09 20 09.2 -0.1**
SNR=38
BRVK Borovoye 119.97 320 PKPdf **PKPdf 09 20 09.2 -0.1**
SNR=38
BRVK Borovoye 119.97 320 *e*PKIKP **PKPdf 09 20 08.9 -0.4**
KK31 Karatay Array 120.35 309 *e*PKPdf **PKPdf 09 20 10.0 -0.4**
KK31 Karatay Array 120.35 309 *e*PKIKP **PKPdf 09 20 10.0 -0.4**
KKAR Karatay Array 120.35 309 *e*PKPdf **PKPdf 09 20 10.0 -0.4**
KKAR Karatay Array 120.35 309 *e*PKIKP **PKPdf 09 20 10.0 -0.4**
ILULI Ilulissat 120.88 20 *i* P **PKPdf 09 20 10.0 -0.6**
comp=Z,52nm,0.7s
ILULI Ilulissat 120.88 20 *i* PKIKP **PKPdf 09 20 10.0 -0.6**
ILULI pmax pmax
comp=Z,53nm,0.7s
KBS Kingsbay 121.08 358 *e*PKPdf **PKPdf 09 20 11.4 +0.6**
KBS Kingsbay 121.08 358 *e*PKIKP **PKPdf 09 20 11.4 +0.6**
KBS Kingsbay 121.08 358 *e*P **PKPdf 09 20 11.1 +0.4**
KBL Kabul 121.20 299 *e*PKPdf **PKPdf 09 20 12.9 +0.3**
KBL Kabul 121.20 299 *e*PKIKP **PKPdf 09 20 12.9 +0.3**
SPA0 Spitsbergen Ar 121.64 357 *e*PKPdf **PKPdf 09 20 12.1 +0.2**
SPA0 Spitsbergen Ar 121.64 357 *e*P **PKPdf 09 20 12.1 +0.2**
SPITS Spitsbergen Ar 121.64 357 PKP **PKPdf 09 20 11.7 -0.2**
comp=Z,65nm,0.8s,baz=352,slow=4.4,SNR=69
SFJD Kangerlussuaq 122.02 22 PKP **PKPdf 09 20 12.4 -0.4**
comp=Z,19nm,0.5s,baz=189,slow=2.0,SNR=13
SFJD Kangerlussuaq 122.02 22 *i* P **PKPdf 09 20 12.0 -0.8**
DAG Danmarks Havn 122.25 6⇑ *i* P **PKPdf 09 20 12.0 -1.1**
comp=Z,26nm,0.9s
DAG *i* 09 21 47.5
DAG Danmarks Havn 122.25 6⇑ *i* PKIKP **PKPdf 09 20 12.0 -1.1**
DAG pmax pmax
comp=Z,26nm,0.9s
SUMG Summit 122.45 14 *i* P **PKPdf 09 20 14.5 +0.4**
comp=Z,60nm,1.1s
SUMG Summit 122.45 14 *e*PKPdf **PKPdf 09 20 13.6 -0.4**
SUMG Summit 122.45 14 *i* PKIKP **PKPdf 09 20 14.5 +0.4**
SUMG pmax pmax
comp=Z,60nm,1.1s
OPO Ambohidratompo 122.60 231 PKP **PKPdf 09 20 16.0 +0.4**
comp=Z,17nm,0.9s,baz=107,slow=2.4
SVE Sverdlovsk 124.67 326 *e*PKIKP **PKPdf 09 20 19.2 +1.0**
SVE pmax pmax
comp=Z,140nm,1.1s
SUR Sutherland 125.25 198 PKP **PKPdf 09 20 21.2 +0.7**
comp=Z,2.5nm,1.0s,baz=118,slow=0.4,SNR=12
IVI Ivigtut 125.47 28 *e*PKPdf **PKPdf 09 20 19.1 -0.4**
ARU Arti 125.88 326 PKP **PKPdf 09 20 20.5 -0.1**
comp=Z,80nm,0.8s,baz=89,slow=1.2,SNR=96
ARU PP **PP 09 22 12.7 -4.5**
comp=Z,5.6nm,0.5s,baz=69,slow=4.8,SNR=4.9
ARU Arti 125.88 326 *e*PKPdf **PKPdf 09 20 20.0 -0.5**
ARU *e*PP **PP 09 22 14.2 -3.0**
ARU Arti 125.88 326 *i* PKIKP **PKPdf 09 20 18.8 -1.7**
ARU 09 27 02.1
NRS Narsarsuaq 126.69 27 *i* P **PKPdf 09 20 21.2 -0.7**
comp=Z,76nm,0.9s
NRS Narsarsuaq 126.69 27 *i* PKIKP **PKPdf 09 20 21.2 -0.7**
NRS pmax pmax
comp=Z,76nm,0.9s
AB31 Akbulak array 127.00 317 *i* PKIKP **PKPdf 09 20 22.8 -0.1**
AB31 pmax pmax
comp=Z,63nm,1.1s
ABKAR Akbulak array 127.00 317 *e*PKPdf **PKPdf 09 20 22.9 0.0**
ANGG Ammassalik, Gr 127.19 20 *e*PKPdf **PKPdf 09 20 22.2 -0.5**
BOSA Boshof 127.24 204 PKP **PKPdf 09 20 25.1 +0.8**
comp=Z,11nm,0.8s,baz=155,slow=5.2,SNR=14
BOSA Boshof 127.24 204 *e*PKPdf **PKPdf 09 20 24.3 0.0**
BOSA *e*PKPdf **PKPdf 09 20 25.1 +0.8**
SCO Scoresbysund 127.40 11⇑ *i* P **PKPdf 09 20 23.7 +0.7**
SCO *i* 09 22 22.1
SCO Scoresbysund 127.40 11⇑ *i* PKIKP **PKPdf 09 20 23.7 +0.7**
AKTO Aktyubinsk 127.93 319 PKP **PKPdf 09 20 24.5 -0.2**
comp=Z,49nm,1.0s,baz=80,slow=2.8,SNR=74
AKTO SKPbc SKPbc 09 23 20.4
comp=Z,6.4nm,1.0s,baz=57,slow=6.7,SNR=3.5
HAMF Hammerfest 128.16 352 *e*P **PKPdf 09 20 23.7 -0.8**
KEV Kevo 128.46 350 *e*PKPdf **PKPdf 09 20 24.6 -0.5**
KEV Kevo 128.46 350 *e*PKIKP **PKPdf 09 20 24.6 -0.5**
LVZ Lovozero 128.50 346 *e*PKPdf **PKPdf 09 20 24.7 -0.6**
LVZ Lovozero 128.50 346 *e*PKIKP **PKPdf 09 20 24.7 -0.6**
ARA0 ARCESS Array S 128.90 350 *e*PKPdf **PKPdf 09 20 25.5 -0.5**
ARCES ARCESS Array B 128.90 350 PKhKP **PKPre** 09 20 13.2
comp=Z,1.6nm,0.5s,baz=313,slow=0.6,SNR=8.5
ARCES PKP **PKPdf 09 20 25.5 -0.5**
comp=Z,21nm,0.5s,baz=12,slow=1.5,SNR=104
ARCES SKPbc SKPbc 09 23 24.3
comp=Z,6.0nm,0.9s,baz=343,slow=3.8,SNR=4.6
ARCES ARCESS Array B 128.90 350 *e*PKPdf **PKPdf 09 20 25.7 -0.3**
ARCES ARCESS Array B 128.90 350 *e*PKIKP **PKPdf 09 20 25.7 -0.3**
ARE0 ARCESS Array S 128.90 350 *e*PKPdf **PKPdf 09 20 26.2 +0.2**
ARE0 ARCESS Array S 128.90 350 *e*P **PKPdf 09 20 26.3 +0.2**
APA Apatity 129.05 346⇑ *i* PKIKP **PKPdf 09 20 25.2 -1.1**
APA *i* 09 21 22.0
APA *i* 09 27 05.0
APA *i* PS **PS 09 32 44.0 -6.0**
APA pmax pmax
comp=Z,20nm,0.7s
WSAR Wadi Sarin 129.20 284 PKP **PKPdf 09 20 28.6 +0.7**
comp=Z,50nm,1.2s,baz=130,slow=1.5,SNR=11
PRGR Permogore 129.45 336 *e*PKIKP PKPpre 09 20 21.5
PRGR pmax pmax
comp=Z,45nm,0.6s
BIDO Bidbid 129.69 284 P **PKPdf 09 20 30.0 +1.2**
SNR=8.2
BIDO Bidbid 129.69 284 PKPdf **PKPdf 09 20 30.0 +1.2**
SNR=8.2
TRO Tromso 129.69 353 *e*P **PKPdf 09 20 27.4 0.0**
KTK1 Kautokeino 129.72 351 *e*P **PKPdf 09 20 27.7 +0.2**
GEYT Alibeck 130.01 303 PKP **PKPdf 09 20 29.5 +0.4**
comp=Z,32nm,0.8s,baz=234,slow=1.3,SNR=13
GEYT PP **PP 09 22 46.0 +1.0**
comp=Z,20nm,0.8s,baz=90,slow=7.4,SNR=6.9
GEYT SKPbc **SKPab 09 23 28.1 +1.2**
comp=Z,15nm,0.7s,baz=46,slow=4.3,SNR=8.0
GYA0B ALIBECK ARRAY 130.01 303 *e*PKPdf **PKPdf 09 20 29.8 +0.7**
KIF Kilpisjarvi 130.06 352 *e*P **PKPdf 09 20 28.1 0.0**
LBTB Lobatse 130.32 206 *e*PKPdf **PKPdf 09 20 30.6 +0.4**
LBTB Lobatse 130.32 206 *e*PKIKP **PKPdf 09 20 30.6 +0.4**
TMCR Tamitsa 130.43 341 *e*PKIKP **PKPdf 09 20 27.9 -1.0**
TMCR pmax pmax
comp=Z,60nm,1.3s
BSY Bisya 130.44 283 PKPdf **PKPdf 09 20 36.0 +5.7**
SNR=5.3
SOHO SOHO 131.21 285 *i* P **PKPdf 09 20 30.8 -0.9**
SNR=26
MDH Madha 131.54 286 *i* P **PKPdf 09 20 32.3 0.0**
SNR=5.9
BANOM Banah 131.59 287 P **PKPdf 09 20 35.7 +3.3**
SNR=6.4
BANOM Banah 131.59 287 PKPdf **PKPdf 09 20 35.7 +3.3**
SNR=6.4
BANOM Banah 131.59 287 *i* P **PKPdf 09 20 33.2 +0.8**
SNR=13
UOSS Minazif 131.59 286 *e*PKPdf **PKPdf 09 20 31.8 -0.6**
UOSS Minazif 131.59 286 *i* P **PKPdf 09 20 31.3 -1.1**
SNR=24
HATD Hatta, Dubai 131.65 286 P **PKPdf 09 20 34.0 +1.4**
SNR=24
HATD Hatta, Dubai 131.65 286 PKPdf **PKPdf 09 20 34.0 +1.4**
SNR=24
HATD Hatta, Dubai 131.65 286 *i* P **PKPdf 09 20 33.0 +0.4**
SNR=42
MSFE Esma-Masafi 131.67 286 *i* P **PKPdf 09 20 32.1 -0.5**
SNR=26
STEI Steigen 131.71 354 *e*P **PKPdf 09 20 31.8 +0.5**
SHME Shamm 131.75 287 *i* P **PKPdf 09 20 33.2 +0.5**
SNR=10
ALNE Al Ain 131.92 285 *i* P **PKPdf 09 20 33.5 +0.5**
SNR=23
NAZ Nazwa, Dubai 132.09 286 P **PKPdf 09 20 35.0 +1.6**
SNR=13
NAZ Nazwa, Dubai 132.09 286 PKPdf **PKPdf 09 20 35.0 +1.6**
SNR=13
NAZ Nazwa, Dubai 132.09 286 *i* P **PKPdf 09 20 34.0 +0.7**
SNR=15
KLMR Klimovskoe 132.24 337 *de*PKHKP PKPpre 09 20 22.5
KLMR pmax pmax
comp=Z,59nm,1.3s
KLMR Klimovskoe 132.24 337 *e*PKPdf PKPpre 09 20 22.6
KLMR AMP 09 20 34.5
comp=Z,59nm,1.3s
KLMR *e*PP sPKPdf 09 22 27.1 +21
KLMR ⇓ *i* SKP 09 23 34.9
KLMR ⇑ *i* PKS PKSdf 09 23 59.6 -9.0
KLMR ⇑ *i* PKS PKSdf 09 23 59.6 -9.0
ASUD Al Ashush, Dub 132.36 285 P **PKPdf 09 20 36.0 +2.1**
SNR=7.2
ASUD Al Ashush, Dub 132.36 285 PKPdf **PKPdf 09 20 36.0 +2.1**
SNR=7.2
ASUD Al Ashush, Dub 132.36 285 *i* P **PKPdf 09 20 34.6 +0.8**
SNR=12
AJN Ajban 132.66 285 *i* P **PKPdf 09 20 34.7 +0.3**
SNR=5.1
KONS Konsvik 133.30 355 *e*P **PKPdf 09 20 34.8 +0.5**
MOR8 Moi Rana 133.50 354 *e*P **PKPdf 09 20 34.2 -0.5**
MZR Muzera 133.88 283 *i* P **PKPdf 09 20 38.2 +1.5**
SNR=9.6
FIA1 FINESS Array S 135.92 345 *e*PKPdf **PKPdf 09 20 39.1 -0.3**
FIA0 FINESS Array S 135.92 345 *e*PKPdf **PKPdf 09 20 39.2 -0.1**
FIA0 *e*PP **PP 09 23 17.6 -3.5**
FIA0 FINESS Array S 135.92 345 *e*PKIKP **PKPdf 09 20 39.3 -0.1**
FIA0 *e* 09 23 17.6
FINES FINESS Array B 135.92 345 PKhKP PKPpre 09 20 27.4
comp=Z,4.9nm,0.5s,baz=292,slow=3.5,SNR=24
FINES PKP **PKPdf 09 20 39.2 -0.1**
comp=Z,19nm,0.6s,baz=85,slow=1.5,SNR=18
FINES PP **PP 09 23 17.6 -3.5**
comp=Z,6.3nm,0.8s,baz=69,slow=7.9,SNR=4.9
MOS Moscow 136.39 333 *i* PKIKP **PKPdf 09 20 39.7 -0.7**
MOS *e* 09 23 26.6
MOS pmax pmax
comp=Z,64nm,0.9s
MAK Makhachkala 136.99 312 *e*P **Pdif 09 17 47.2 -2.8**
MAK *i* 09 20 41.7
MAK *e* 09 27 31.0
MAK pmax pmax
comp=Z,88nm,0.5s
OBN Obninsk 137.25 333 PKhKP PKPpre 09 20 32.6
comp=Z,19nm,0.4s,baz=292,slow=7.0,SNR=5.6
OBN PKP **PKPdf 09 20 42.9 +0.9**
comp=Z,28nm,0.5s,baz=50,slow=3.3,SNR=14
OBN SKPbc **SKiKP 09 23 52.5 -2.2**
comp=Z,20nm,0.4s,baz=49,slow=4.6,SNR=14
AKT Akhty 137.26 310 *i* P **Pdif 09 17 51.7 +0.2**
AKT *i* 09 20 43.4
AKT *e* 09 23 25.6
AKT pmax pmax
comp=Z,106nm,0.9s
LSZ Lusaka 137.37 216 PKhKP PKPpre 09 20 38.3
comp=Z,2.0nm,0.4s,baz=138,slow=6.3,SNR=3.9
LSZ PKP **PKiKP 09 20 44.6 -1.0**
comp=Z,12nm,0.6s,baz=46,slow=1.4,SNR=17
LSZ PP **PP 09 23 29.2 -1.6**
comp=Z,1.2nm,0.4s,baz=168,slow=4.2,SNR=5.8
LSZ SKPbc **SKPbc 09 23 51.7 -0.3**
comp=Z,6.6nm,0.8s,baz=191,slow=4.8,SNR=5.1
LSZ Lusaka 137.37 216 PKPpre PKPpre 09 20 38.3
LSZ *e*PKPpre PKPpre 09 20 43.8
LSZ *e*PKPdf **PKiKP 09 20 44.6 -1.0**
LSZ *e*PP **PP 09 23 29.8 -0.9**
LSZ Lusaka 137.37 216 PKIKP PKPpre 09 20 38.3
LSZ *e* 09 23 29.8
MOL Molde 137.56 357 *e*P PKPpre 09 20 32.8
AKN Aaknes 137.98 356 *e*P PKPpre 09 20 34.7
DOMB Dombas 138.01 356 *e*P PKPpre 09 20 33.4
GROC Groznyy 138.09 313 *e*PKIKP **PKPdf 09 20 42.0 -2.0**
GROC *e* 09 21 41.5
GROC *e* 09 23 34.7
GROC *e* 09 27 32.4
GROC pmax pmax
comp=Z,97nm,1.0s
VSR Storozhevoye 138.44 327 *e*PKIKP **PKPdf 09 20 43.3 -1.0**
VSR pmax pmax
comp=Z,120nm,1.5s
VORD Divnogorie 138.52 326 *e*PKIKP **PKPdf 09 20 42.9 -1.6**
VORD pmax pmax
comp=Z,110nm,1.6s
TSUM Tsumeb 138.59 200 PKP **PKPdf 09 20 45.6 -0.2**
comp=Z,10nm,0.9s,baz=199,slow=6.1,SNR=7.1
TSUM Tsumeb 138.59 200 *e*PKPdf **PKPdf 09 20 45.1 -0.7**
TSUM *e*PKPdf **PKPdf 09 20 45.6 -0.2**
NC303 NORSAR Array S 138.65 354 *e*P PKPpre 09 20 34.9
NC204 NORSAR Array S 138.65 355 *e*PKPpre PKPpre 09 20 40.5
NC204 NORSAR Array S 138.65 355 *e*P PKPpre 09 20 34.6
NB201 NORSAR Array S 138.82 354 *e*P PKPpre 09 20 33.6
NB2 NORSAR Subarra 138.84 355 PKP PKPpre 09 20 34.4
comp=Z,10nm,0.7s,baz=16,slow=3.2
NB2 NORSAR Subarra 138.84 355 PKP PKPpre 09 20 34.4
baz=16,slow=3.2
NB200 NORSAR Array S 138.84 355 *e*PKPdf **PKPdf 09 20 46.9 +2.1**
NOA NORSAR Array B 138.84 355 PKhKP PKPpre 09 20 34.5
comp=Z,11nm,0.7s,baz=15,slow=4.2,SNR=31
NOA PKP **PKPdf 09 20 46.9 +2.1**
comp=Z,19nm,0.7s,baz=43,slow=2.3,SNR=12
NOA SKPab **SKiKP 09 23 56.8 -1.1**
comp=Z,5.4nm,0.7s,baz=16,slow=4.5,SNR=4.4
NBO00 NORSAR Array S 138.89 355 *e*P PKPpre 09 20 35.7
NAO01 NORSAR Array S 139.06 355 *e*P PKPpre 09 20 36.2
NC602 NORSAR Array S 139.11 354 *e*P PKPpre 09 20 35.9
SUE Sulen 139.16 359 *e*P PKPpre 09 20 36.5
GOF Gofitskoye 139.24 317‖ *e*PKHKP PKPpre 09 20 40.3
GOF pmax pmax
comp=Z,87nm,0.9s
TBLG Delisi 139.32 311 *e*PKPdf **PKPdf 09 20 43.5 -2.8**
TBLG Delisi 139.32 311 *e*PKIKP **PKPdf 09 20 43.5 -2.8**
HFS Hagfors 139.46 352 PKhKP PKPpre 09 20 37.1
comp=Z,8.2nm,0.4s,baz=64,slow=3.4,SNR=34
ZEI Tsey 139.54 313 *e*PKHKP PKPpre 09 20 38.7
ZEI pmax pmax
comp=Z,58nm,1.0s
ASK Askoy 139.72 359 *e*P PKPpre 09 20 39.4
GNI Garni 139.81 309 PKP **PKPdf 09 20 48.1 +0.7**
comp=Z,28nm,0.7s,baz=157,slow=3.1,SNR=15
GNI SKPbc **SKiKP 09 24 01.8 +1.1**
comp=Z,3.8nm,0.4s,baz=18,slow=6.4,SNR=4.4
GNI Garni 139.81 309 *e*PKPdf **PKPdf 09 20 47.6 +0.2**
GNI *e*PKPdf **PKPdf 09 20 48.1 +0.7**
GNI Garni 139.81 309 P **PKPdf 09 20 48.4 +1.0**
SNR=10
GNI Garni 139.81 309 PKPdf **PKPdf 09 20 48.4 +1.0**
SNR=10
GNI Garni 139.81 309 P **PKPdf 09 20 43.9 -3.5**
GNI Garni 139.81 309 *e*PKIKP **PKPdf 09 20 45.9 -1.5**
BER Bergen 139.82 359 *e*P PKPpre 09 20 39.2
KBZ Khabaz 139.87 315 PKhKP PKPpre 09 20 39.8
comp=Z,4.0nm,0.7s,baz=182,slow=5.3,SNR=7.8
KBZ PKP **PKPdf 09 20 47.4 +0.3**
comp=Z,28nm,0.9s,baz=28,slow=4.2,SNR=9.8
KBZ PP **PP 09 23 42.9 -3.5**
comp=Z,7.9nm,1.0s,baz=60,slow=4.8,SNR=3.1
KVAR Kislovodsk Arr 139.91 315 PKhKP PKPpre 09 20 41.5
comp=Z,4.4nm,0.4s,baz=304,slow=6.0,SNR=3.6
KVAR PKP **PKiKP 09 20 48.7 -1.3**
comp=Z,29nm,0.9s,baz=12,slow=1.1,SNR=10
KIV Kislovodsk 139.92 315 *e*PKPdf **PKPdf 09 20 47.0 -0.4**
KIV Kislovodsk 139.92 315 P **PKPdf 09 20 47.6 +0.2**
SNR=7.7
KIV Kislovodsk 139.92 315 PKPdf **PKPdf 09 20 47.6 +0.2**
SNR=7.7
KIV Kislovodsk 139.92 315 *i* P **PKPdf 09 20 47.4 0.0**
SNR=5.6
KIV Kislovodsk 139.92 315 *i* PKIKP PKPpre 09 20 43.5
KIV pmax pmax
comp=Z,38nm,1.0s
NEY Neytrino 140.17 314‖ *e*PKIKP PKPpre 09 20 44.4
ODD1 Odda 140.26 358 *e*P PKPpre 09 20 41.5
AKH Akhalkalaki 140.31 311‖ *i* P PKPpre 09 20 43.6
AKH Akhalkalaki 140.31 311 *e*PKPpre PKPpre 09 20 44.0
AKH Akhalkalaki 140.31 311 *e*PKIKP PKPpre 09 20 44.0
KONO Kongsberg 140.35 355 *e*PKPpre PKPpre 09 20 41.0
KONO Kongsberg 140.35 355 *e*PKHKP PKPpre 09 20 41.0
KONO Kongsberg 140.35 355 *e*P PKPpre 09 20 40.6
IZAR Zarasai 140.68 340 *e*P PKPpre 09 20 42.6
IZAR IAmb IAmb 09 20 44.4
comp=Z,39nm,1.1s
BLS5 Blasjo 140.75 358 *e*P PKPpre 09 20 42.8
ISAL Salakas 140.87 340 *e*P PKPpre 09 20 43.5
ISAL IAmb IAmb 09 20 47.3
comp=Z,23nm,0.6s
IDID Didziasalis 140.88 339 *e*P PKPpre 09 20 42.8
IDID IAmb IAmb 09 20 44.9
comp=Z,18nm,0.8s
DAMY Dhamar 140.91 268 *e*PKPdf **PKPdf 09 20 48.1 -2.2**
KMY Karmoy 141.00 359 *e*P PKPpre 09 20 43.4
IIGN Ignalina 141.02 340 *e*P PKPpre 09 20 44.1
IIGN IAmb IAmb 09 20 46.9
comp=Z,27nm,0.5s
MICGM Minsk 141.14 338 *e*PKP1 PKPpre 09 20 43.0
MICGM *e*PPK1 09 22 00.0
MICGM *e*PP **PP 09 23 52.0 -1.4**
MICGM *e*PKS PKSdf 09 24 03.0 -22
MICGM *e*SKS **SKSdf 09 27 27.0 -6.7**
MICGM *e*SKKS **SKKSac 09 30 18.0 -2.2**
MNK Minsk 141.14 338 *e*PKHKP PKPpre 09 20 43.0
MNK *e* 09 23 52.0
MNK *e* 09 27 27.0
NACGM Naroch 141.20 339 *e*P PKPpre 09 20 43.0
NACGM PM 09 20 46.0
RAYN Ar Rayn 141.23 283 *e*PKPpre PKPpre 09 20 44.7
RAYN Ar Rayn 141.23 283 *i* P **PKPdf 09 20 50.5 +0.1**
SNR=10
STAV Stavanger 141.26 358 *e*P PKPpre 09 20 43.2
ATD Arta Tunnel 141.53 263 PKhKP PKPpre 09 20 47.3
comp=Z,6.2nm,0.6s,baz=289,slow=3.0,SNR=2.8
HOMB Homborsund 141.80 356 *e*P PKPpre 09 20 45.0

SNART	Snartemo	141.81	357	eP	PKPpre	09 20 45.3	
SOC	Sochi	142.02	316	i PKHKP	PKPpre	09 20 41.5	
ANN	Anapa	142.89	319	i PKHKP	PKPpre	09 20 48.3	
ANN				e		09 24 02.3	
ANN				pmax	pmax		
comp=Z,82nm,1.0s							
SUW	Suwalki	143.11	341	ePKP	PKPbc	09 20 49.6	-0.7
SUW				ePP	PP	09 24 07.7	+2.5
SUW				ePKS	PKSdf	09 24 33.0	+4.9
SUW				eSKKSac	SKKSac	09 30 32.4	+0.9
SUW	Suwalki	143.11	341	ePKPpre	PKPpre	09 20 50.3	
SUW	Suwalki	143.11	341	ePKIKP	PKPbc	09 20 49.6	-0.7
SUW				e		09 24 07.7	
KLNR	Kaliningrad	143.43	344	⇓i PKIKP	PKPbc	09 20 50.7	-0.5
AKASG	Malin Array Be	143.52	333	PKhKP	PKPpre	09 20 50.4	
comp=Z,114nm,0.5s,baz=41,slow=4.6,SNR=473							
AKASG				SKPbc	SKiKP	09 24 08.6	+0.8
comp=Z,8.2nm,0.7s,baz=41,slow=3.7,SNR=8.6							
AKBB	Malin Array Si	143.52	333	ePKPpre	PKPpre	09 20 50.6	
EAB	Aberfoyle	143.53	8⇑	eP	PKPbc	09 20 51.1	-0.3
MUD	Monsted U'grnd	143.55	355	⇑i P	PKPbc	09 20 51.4	-0.1
comp=Z,238nm,0.8s							
MUD	Monsted U'grnd	143.55	355	⇑i PKIKP	PKPbc	09 20 51.4	-0.1
MUD				pmax	pmax		
comp=Z,240nm,0.8s							
AK11	Malin Array Si	143.56	333	ePKPpre	PKPpre	09 20 50.7	
PGBU	Glenifferbraes	143.88	8⇑	eP	PKPab	09 20 51.9	+0.1
EDI	Edinburgh	143.93	7⇑	eP	PKPab	09 20 52.0	+0.1
COP	Copenhagen	143.96	352	⇑i P	PKPbc	09 20 52.4	-0.2
comp=Z,179nm,1.0s							
COP	Copenhagen	143.96	352	⇑i PKIKP	PKPbc	09 20 52.4	-0.2
COP				pmax	pmax		
comp=Z,180nm,1.0s							
ESY	Stoneypath	143.99	6⇑	eP	PKPbc	09 20 52.6	-0.2
BSD	Bornholm Skovb	144.12	349	⇑i P	PKPab	09 20 52.6	-0.1
comp=Z,354nm,0.7s							
BSD	Bornholm Skovb	144.12	349	⇑i PKIKP	PKPab	09 20 52.6	-0.1
BSD				pmax	pmax		
comp=Z,350nm,0.7s							
IDGL	Inch Island, C	144.13	11	eP	PKPab	09 20 52.6	-0.2
GMK	Mull of Kintyr	144.18	9⇑	eP	PKPbc	09 20 53.5	+0.1
LLD	Lille Linde	144.33	352	i P	PKPbc	09 20 54.1	+0.3
comp=Z,402nm,1.0s							
LLD	Lille Linde	144.33	352	i PKIKP	PKPbc	09 20 54.1	+0.3
LLD				pmax	pmax		
comp=Z,400nm,1.0s							
H07N1	FLORES T-PHASB	144.35	49	PKP	PKPdf	09 20 55.2	-0.2
H07N1	FLORES T-PHASB	144.35	49	ePKP	PKPdf	09 20 55.5	+0.2
H07S1	FLORES T-PHASB	144.41	50	PKP	PKPab	09 20 53.9	-0.5
H07S1	FLORES T-PHASB	144.41	50	ePKP	PKPdf	09 20 55.3	-0.1
EKA	Eskdalemuir Ar	144.51	7	PKP	PKPab	09 20 54.1	-0.1
comp=Z,426nm,0.9s,baz=331,slow=2.9,SNR=323							
EKA				PP	PP	09 24 18.1	+4.7
comp=Z,20nm,1.1s,baz=355,slow=5.3,SNR=5.6							
ESK	Eskdalemuir	144.52	7	ePKPbc	PKPab	09 20 54.3	0.0
ESK	Eskdalemuir	144.52	7	ePKIKP	PKPab	09 20 54.3	0.0
BHH	Howats Hill	144.74	7⇑	eP	PKPbc	09 20 55.1	0.0
GAL1	Galloway	144.77	9⇑	eP	PKPbc	09 20 55.1	0.0
SIM	Simferopol'	144.80	322	ePKIKP	PKPdf	09 20 56.2	+0.3
RGN	Rugen	144.93	350	ePKPbc	PKPab	09 20 56.3	+0.5
BBO1	Bothel	145.09	7⇑	eP	PKPab	09 20 56.3	-0.1
GMM	Mts of Mourne	145.19	10⇑	eP	PKPbc	09 20 56.7	0.0
KESW	Keswick, Cumbr	145.25	7⇑	eP	PKPab	09 20 57.0	-0.1
GKP	Gorka Klasztor	145.38	346	ePKP	PKPbc	09 20 57.1	+0.1
GKP				ePP	PP	09 24 13.8	-4.8
GKP				eSKKSac	SKKSac	09 30 46.2	+1.8
GKP	Gorka Klasztor	145.38	346	ePKP2	PKPbc	09 20 57.1	+0.1
WIM	Isle of Man	145.48	9⇑	eP	PKPbc	09 20 57.5	+0.1
BEL	Belsk	145.72	341	ePKP	PKPbc	09 20 57.8	-0.4
BEL				ePP	PP	09 24 14.6	-6.1
BEL	Belsk	145.72	341	ePKIKP	PKPbc	09 20 57.8	-0.4
SORM	Soroca	145.78	330	⇓i P	PKPbc	09 20 58.5	+0.1
SORM	Soroca	145.78	330	PKP2	PKPbc	09 20 58.5	+0.1
HPK	Haverah Park	146.03	6⇑	eP	PKPbc	09 20 59.5	+0.5
DSB	Dublin	146.07	11	ePKPdf	PKPbc	09 20 59.7	+0.5
WPS	Cemaes, Angles	146.23	9⇑	eP	PKPbc	09 20 59.6	+0.1
WME	Myndd Eilian	146.26	9⇑	eP	PKPbc	09 20 59.3	-0.4
LVV	L'vov	146.31	336	i PKP2	PKPab	09 21 01.1	-0.2
LVV				e		09 24 27.4	
WLF1	Llynfaes	146.35	9	eP	PKPbc	09 21 00.0	+0.1
KIS	Kishinev	146.36	328	⇑i PKP	PKPbc	09 20 59.5	-0.7
KIS				M	M	09 21 00.0	
comp=Z,2μm,2.0s							
KIS				epPKP	sPKPab	09 22 40.0	+6.6
KIS	Kishinev	146.36	328	ePP	PP	09 24 15.0	-10
KIS				eSKKS		09 30 42.0	
KIS	Kishinev	146.36	328	ei PKIKP	PKPbc	09 20 59.5	-0.7
KIS				pmax	pmax		
comp=Z,2μm,2.0s							
KIS				pmax	pmax		
comp=Z,2μm,6.0s							
YRC	Rhoscolyn	146.36	9⇑	eP	PKPbc	09 20 59.9	-0.1
WPM1	Penmaenmawr	146.45	8⇑	eP	PKPbc	09 21 00.4	+0.1
VAL	Valentia	146.46	16⇑	i P	PKPbc	09 21 00.6	+0.3
MBAR	Mbarara	146.48	235	ePKPdf	PKPbc	09 21 00.9	-0.9
MBAR	Mbarara	146.48	235	ePKIKP	PKPbc	09 21 00.9	-0.9
PCAN	Candelaria	146.72	50	ePKP	PKPab	09 21 02.6	-0.8
PICO	Pico	146.75	50	ePKP	PKPbc	09 21 02.6	+0.9
ROSA	Rosais	146.79	49	ePKP	PKPab	09 21 02.9	-0.7
ROSA	Rosais	146.79	49	ePKPdf	PKPbc	09 21 01.4	-0.3
STNC	Stoke	146.82	7	eP	PKPbc	09 21 02.0	+0.7
IAS	Iasi	146.83	330	⇓i P	PKPbc	09 21 02.2	+0.7
IAS	Iasi	146.83	330	PKP2	PKPbc	09 21 02.2	+0.7
LLW	Llanuwychllyn	146.88	8⇑	eP	PKPbc	09 21 01.2	-0.3
FOEL	Foel Wylfa	146.90	8⇑	eP	PKPbc	09 21 00.9	-0.7
PMAN	Manadas	146.93	49	ePKP	PKPab	09 21 03.2	-1.0
KWP	Kalwaria Pacla	146.96	337	ePKP	PKPbc	09 21 02.7	+0.8
KWP	Kalwaria Pacla	146.96	337	ePKPdf	PKPdf	09 20 59.9	+0.4
KWP	Kalwaria Pacla	146.96	337	ePKP2	PKPbc	09 21 02.7	+0.8
LEOM	Leova	147.01	328	⇓i P	PKPbc	09 21 03.0	+1.0
LEOM	Leova	147.01	328	PKP2	PKPbc	09 21 03.0	+1.0
ILGA	Ilgaz	147.14	316	ePKPdf	PKPdf	09 21 01.4	+1.1
HLM1	Long Mynd	147.31	8	eP	PKPbc	09 21 02.7	0.0
WACR	West Acre	147.42	4	eP	PKPbc	09 21 03.1	+0.2
OJC	Ojcow	147.44	341	ePKPdf	PKPdf	09 21 00.3	+0.1
OJC				ePKPab	PKPbc	09 21 03.6	+0.5
OJC				ePP	PP	09 24 18.1	-13
OJC	Ojcow	147.44	341	ePKPdf	PKPdf	09 21 00.3	+0.1
OJC	Ojcow	147.44	341	ePKIKP	PKPdf	09 21 00.3	+0.1
BUR08	Bucovina Ar. S	147.56	333	ePKPdf	PKPdf	09 21 01.6	+0.9
BUR04	Bucovina Ar. S	147.57	333	ePKPdf	PKPdf	09 21 01.5	+0.8
BURAR	Bucovina Array	147.58	333	⇓i P	PKPdf	09 21 02.0	+1.3
BURAR	Bucovina Array	147.58	333	PKIKP	PKPdf	09 21 02.0	+1.3
PSCM	Serra do Cume	147.59	49	ePKP	PKPbc	09 21 05.3	+1.4
TLCR		147.60	326	⇓i P	PKPbc	09 21 04.4	+0.7
TLCR		147.60	326	PKP2	PKPbc	09 21 04.4	+0.7
GIUM	Giurgiulesti	147.71	327	⇓i P	PKPbc	09 21 05.1	+1.1
TESR	Tescani	147.75	330	⇓i P	PKPbc	09 21 04.0	-0.1
MCH1	Michaelchurch	147.81	8⇑	eP	PKPbc	09 21 03.9	-0.1
BR101	Keskin Array S	147.84	314	ePKPdf	PKPdf	09 21 00.8	-0.7
BR101				ePKPbc	PKPbc	09 21 04.7	0.0
BRTR	Keskin Array B	147.84	314	PKP	PKPdf	09 21 00.8	-0.7
comp=Z,215nm,0.9s,baz=94,slow=1.4,SNR=45							
BRTR				PKPbc	PKPbc	09 21 04.7	0.0
comp=Z,180nm,0.7s,baz=138,slow=3.8,SNR=282							
KSP	Ksiaz	147.84	345	ePKPdf	PKPdf	09 21 01.4	+0.5
KSP				ePKPab	PKiKP	09 21 05.2	-0.6
KSP	Ksiaz	147.84	345	ePKIKP	PKPdf	09 21 01.4	+0.5
UZH	Uzhgorod	147.94	337	ePKIKP	PKPdf	09 21 01.7	+0.6
UZH				e		09 21 02.9	
UZH				e		09 21 08.3	
SSW	Stow on the Wo	147.97	7⇑	eP	PKPbc	09 21 05.0	+0.6
NIE	Niedzica	147.98	340	ePKPdf	PKPdf	09 21 01.9	+0.7
NIE				ePKPab	PKiKP	09 21 05.8	-0.4
NIE	Niedzica	147.98	340	ePKIKP	PKPdf	09 21 01.9	+0.7
MONM	Monmouth	147.98	8⇑	eP	PKPbc	09 21 04.3	-0.1
CRVS	Cervenica-Dubn	148.02	338	ePKIKP	PKPdf	09 21 01.8	+0.6
CRVS				e		09 21 05.7	
CRVS	Cervenica-Dubn	148.02	338	ePKP	PKPdf	09 21 01.8	+0.6
CRVS				e		09 21 05.7	
CRVS				e		09 21 09.9	
RAC	Raciborz	148.03	342	ePKIKP	PKPdf	09 21 02.2	+1.0
PETR	Petresti	148.04	328	⇓i P	PKPab	09 21 07.1	-1.2
ASF	Jabal al Asfar	148.10	299	PKP	PKPdf	09 21 02.3	+0.3
comp=Z,129nm,0.9s,baz=320,slow=0.3,SNR=18							
ASF				PKPbc	PKPbc	09 21 06.2	+0.6
comp=Z,118nm,0.9s,baz=74,slow=1.0,SNR=101							
CLL	Collm	148.10	349	ePKPdf	PKPdf	09 21 01.0	-0.2
CLL				⇑i PKPbc	PKPbc	09 21 05.5	+0.7
comp=Z,407nm,1.0s							
CLL				⇑i PKPab	PKPab	09 21 08.4	0.0
comp=Z,398nm,0.9s							
CLL				epPKPbc	pPKPdf	09 22 08.0	-0.1
CLL				esPKPbc	sPKPbc	09 22 37.0	-0.6
CLL				ePP	PP	09 24 32.0	-2.4
CLL				e(PKSdf)		09 24 39.0	
CLL				esPP		09 25 59.0	
CLL				ePPP	PPP	09 27 48.0	
CLL				eSKKSac	SKKSac	09 31 06.0	+6.2
CLL				eSdif		09 33 00.0	
CLL				ePSKS		09 34 46.0	
CLL				epPSKS		09 36 06.0	
CLL				ePPS	PPS	09 37 22.0	
CLL				e(PSS)		09 44 30.0	
CLL				e		09 46 06.0	
CLL				eSSSS		09 54 42.0	
CLL	Collm	148.10	349	ePKPdf	PKPdf	09 21 01.5	+0.3
CLL	Collm	148.10	349	ePKIKP	PKPdf	09 21 01.5	+0.3
GULE	Gulek	148.11	309	i P	PKPbc	09 21 05.4	-0.1
HGH	Gray Hill	148.18	8	eP	PKPbc	09 21 04.9	-0.1
VRI	Vrincioaia	148.18	329	⇓i P	PKPdf	09 21 01.8	+0.2
VRI	Vrincioaia	148.18	329	PKIKP	PKPdf	09 21 01.8	+0.2
UPC	Upice	148.22	345	ePKPDF	PKPdf	09 21 02.0	+0.5
UPC				⇑ePKP	PKiKP	09 21 06.2	-0.5
UPC				ePKPAB	PKPab	09 21 10.7	+1.8
UPC				epPKP	pPKPab	09 22 14.2	+0.8
UPC				esPKP		09 22 40.4	
UPC				ePP	PP	09 24 34.1	-1.2
UPC				eSKKS		09 31 05.8	
UPC				ex	x	09 34 47.9	
UPC	Upice	148.22	345	ePKIKP	PKPdf	09 21 02.0	+0.5
UPC				e		09 21 06.2	
UPC				e		09 24 34.1	
PLOR	Plostina	148.23	329	⇓i P	PKPbc	09 21 06.0	+0.6
PLOR	Plostina	148.23	329	PKP2	PKPbc	09 21 06.0	+0.6
TRPA	Tarpa	148.26	336	⇓i P	PKPbc	09 21 06.5	+1.2
TRPA	Tarpa	148.26	336	⇑ePKPdf	PKPbc	09 21 06.0	+0.7
OKC	Ostrava-Krasne	148.27	342	ePKPDF	PKPdf	09 21 02.0	+0.4
OKC				⇑ePKP	PKPbc	09 21 05.7	+0.4
OKC				ePKPAB	PKPab	09 21 09.9	+0.8
OKC				epPKP	pPKPab	09 22 14.4	+0.8
OKC				ex	x	09 22 39.0	
OKC				ePP	PP	09 24 27.6	-8.0
OKC	Ostrava-Krasne	148.27	342	ePKIKP	PKPdf	09 21 02.0	+0.4
OKC				e		09 21 09.9	
HWQ	Hawqa	148.29	303	eP	PKPbc	09 21 06.2	+0.2
DPC	Dobruska-Polom	148.29	345	ePKPDF	PKPdf	09 21 02.4	+0.7
DPC				⇑ePKP	PKiKP	09 21 06.6	-0.3
DPC				ePKPAB	PKPab	09 21 10.6	+1.3
DPC				epPKP	pPKPab	09 22 14.4	+0.7
DPC				ex	x	09 22 40.4	
DPC				ePP	PP	09 24 34.9	-0.8
DPC				eSKKS		09 31 03.0	
DPC				ex	x	09 34 53.2	
DPC	Dobruska-Polom	148.29	345	ePKIKP	PKPdf	09 21 02.4	+0.7
DPC				e		09 21 06.6	
DPC				e		09 24 34.9	
TIRR	Tirgusor	148.30	325	⇓i P	PKPbc	09 21 06.4	+0.9
TIRR	Tirgusor	148.30	325	ePKPdf	PKPdf	09 21 01.6	-0.1
TIRR	Tirgusor	148.30	325	ePKP2	PKPbc	09 21 05.3	-0.2
BRG	Berggiesshubel	148.34	348	i PKP	PKPdf	09 21 02.1	+0.4
comp=Z,59nm,1.2s							
BRG	Berggiesshubel	148.34	348	i PKP	PKPbc	09 21 06.2	+0.8
comp=Z,340nm,1.3s							
BRG	Berggiesshubel	148.34	348	i PKP	PKPab	09 21 10.3	+1.0
comp=Z,260nm,1.0s							
BRG				pPKP	pPKPab	09 22 15.0	+1.2
BRG				e		09 24 37.0	
BRG	Berggiesshubel	148.34	348	i PKIKP	PKPdf	09 21 02.1	+0.4
BRG				i		09 21 10.3	
BRG				e		09 24 37.0	
BRG				pmax	pmax		
comp=Z,59nm,1.2s							
ANTO	Ankara	148.34	315	⇓i P	PKPdf	09 21 02.4	+0.3
ANTO	Ankara	148.34	315	ePKPdf	PKPdf	09 21 02.6	+0.5
ANTO	Ankara	148.34	315	P	PKPdf	09 21 02.5	+0.3
SNR=74							
ANTO	Ankara	148.34	315	PKPdf	PKPdf	09 21 02.5	+0.3
SNR=74							
ANTO	Ankara	148.34	315	ePKIKP	PKPdf	09 21 02.6	+0.5
ARCR	ARCALIA	148.36	333	⇓i P	PKPbc	09 21 07.2	+1.6
BR231	Keskin MP Arra	148.37	315	ePKPdf	PKPdf	09 21 03.2	+1.0
GRER		148.41	328	⇓i P	PKPab	09 21 07.9	-2.0
TLB	Topalu	148.41	326	⇓i P	PKPbc	09 21 07.1	+1.3
TLB	Topalu	148.41	326	PKP2	PKPbc	09 21 07.1	+1.3
SWN1	Swindon	148.42	7	eP	PKPbc	09 21 05.8	+0.2
BATH	Bath	148.43	7	eP	PKPbc	09 21 05.5	-0.1
EFOR	EFORIE	148.43	325	⇓i P	PKPbc	09 21 07.4	+1.6
LANS	Liptovska Anna	148.48	340	ePKIKP	PKPdf	09 21 03.5	+1.5
LANS				e		09 21 07.5	
LANS	Liptovska Anna	148.48	340	ePKP	PKPdf	09 21 03.5	+1.5
LANS				e		09 21 07.5	
LANS				e		09 21 12.6	
MORC	Moravsky Berou	148.50	343	⇓i P	PKPbc	09 21 07.6	+1.7
MORC	Moravsky Berou	148.50	343	ePKPdf	PKPdf	09 21 02.3	+0.3
MORC	Moravsky Berou	148.50	343	ePKIKP	PKPdf	09 21 02.3	+0.3
MORC	Moravsky Berou	148.50	343	ePKP	PKPdf	09 21 02.2	+0.2
MORC				e		09 21 06.6	
PVCC	Panska Ves	148.53	347	ePKPDF	PKPdf	09 21 02.6	+0.6
PVCC				⇑ePKP	PKiKP	09 21 07.1	-0.2
PVCC				ePKPAB	PKPab	09 21 10.8	+0.6
PVCC				epPKP	pPKPab	09 22 14.6	0.0
PVCC				ex	x	09 22 43.3	
PVCC				ex	x	09 24 14.8	
PVCC				ePP	PP	09 24 35.9	-1.1
PVCC	Panska Ves	148.53	347	ePKIKP	PKPdf	09 21 02.6	+0.6
PVCC				e		09 21 10.8	
PVCC				e		09 24 35.9	
KERG	Konya-Eregli	148.53	310	i P	PKPbc	09 21 06.3	-0.3
KKUL	Konya-Kulu	148.60	313	i P	PKPbc	09 21 07.0	+0.3
RCY	Rachaya	148.61	302	eP	PKPbc	09 21 07.5	+0.7
BHL	Bhannes	148.63	302	eP	PKPbc	09 21 07.4	+0.5
WOL	Wolverton	148.68	6	eP	PKPbc	09 21 06.0	-0.3
KECS	Kecovo	148.72	338	ePKP2	PKPbc	09 21 07.4	+0.9
KECS	Kecovo	148.72	338	ePKP	PKPbc	09 21 07.4	+0.9
KECS				e		09 21 07.9	
KECS				e		09 21 13.0	
SHBL	Chebaa	148.73	301	eP	PKPbc	09 21 07.9	+0.7
PGOR	Pogoanele	148.74	327	⇓i P	PKPbc	09 21 08.7	+2.1
DOPR	Dopca	148.75	330	⇓i P	PKPdf	09 21 03.8	+1.3
DQRL	Deir Qamar	148.76	302	eP	PKPbc	09 21 08.0	+0.8
AMRR	Amara	148.76	327	⇓i P	PKPbc	09 21 08.5	+1.8
AMRR	Amara	148.76	327	PKP2	PKPbc	09 21 08.5	+1.8
ISR	Istrita	148.81	328	⇓i P	PKPbc	09 21 08.0	+1.1
ISR	Istrita	148.81	328	PKP2	PKPbc	09 21 08.0	+1.1
MLR	Muntele Rosu	148.83	329	PKP	PKPdf	09 21 02.3	-0.5
comp=Z,8.5nm,1.0s,baz=342,slow=3.4,SNR=16							
MLR				PKPbc	PKPbc	09 21 07.3	+0.3
comp=Z,64nm,0.9s,baz=67,slow=4.1,SNR=107							
MLR	Muntele Rosu	148.83	329	⇓i P	PKPdf	09 21 03.5	+0.7
MLR	Muntele Rosu	148.83	329	ePKPdf	PKPdf	09 21 02.3	-0.5
MLR				ePKPdf	PKPbc	09 21 02.7	-4.4
MLR				ePKPbc	PKPbc	09 21 07.3	+0.3
ICOR	Ion Corvin	148.86	325	⇓i P	PKPbc	09 21 08.8	+1.9
KIZK	Mersin	148.90	308	i P	PKPbc	09 21 07.0	-0.2
PSET	Sete Cidades	148.96	49	ePKP	PKPbc	09 21 07.7	+0.2
CJR	Cluj-Napoca	148.97	333	⇓i P	PKPdf	09 21 04.2	+1.3
MOX	Moxa	148.97	350	PKHKP	PKPpre	09 21 03.4	
ELSH	Elham, Standar	149.02	3⇑	eP	PKPbc	09 21 07.8	+0.7
PRU	Pruhonice	149.05	346	ePKPDF	PKPdf	09 21 03.1	+0.3
PRU				⇑ePKP	PKiKP	09 21 08.1	-0.3
PRU				ePKPAB	PKPab	09 21 13.8	+1.5
PRU				epPKP	pPKPab	09 22 15.6	-1.0
PRU				ex	x	09 22 45.6	
PRU				ex	x	09 24 02.2	
PRU				ePP	PP	09 24 39.3	-0.7
PRU				eSKKS		09 31 06.6	
PRU				ex	x	09 34 58.2	
GOPC	GO Pecny, Ondr	149.06	346	ePKPDF	PKPdf	09 21 02.8	-0.1
GOPC				⇑ePKP	PKiKP	09 21 08.2	-0.2
GOPC				ePKPAB	PKPab	09 21 13.7	+1.3
GOPC				epPKP	pPKPdf	09 22 09.0	-0.7
GOPC				ex	x	09 22 45.3	
GOPC				ex	x	09 24 18.2	
GOPC				ePP	PP	09 24 39.1	-1.0
GOPC				eSKKS		09 31 07.6	
MDB	Medias	149.07	332	⇓i P	PKPbc	09 21 08.7	+1.3
MDB	Medias	149.07	332	PKP2	PKPbc	09 21 08.7	+1.3
MMAI	Mount Meron Ar	149.09	301	PKP	PKPdf	09 21 04.3	+0.8
comp=Z,74nm,0.8s,baz=84,slow=11,SNR=11							
MMAI				PKPbc	PKiKP	09 21 08.8	-0.3
comp=Z,208nm,0.7s,baz=61,slow=4.2,SNR=165							
SECR		149.10	328	⇓i P	PKPbc	09 21 08.6	+1.0
LTVH	L`tav`rtes,	149.12	336	⇑ePKPdf	PKPbc	09 21 08.5	+1.0
CMLA	Cha da Macela	149.13	49	ePKPdf	PKPdf	09 21 03.4	0.0
CMLA	Cha da Macela	149.13	49	ePKP2	PKPbc	09 21 08.0	+0.1
VRAC	Vranov	149.18	344	⇓i P	PKPdf	09 21 04.4	+1.3
VRAC	Vranov	149.18	344	ePKP	PKPdf	09 21 03.2	+0.1
VRAC				e		09 21 08.4	
AUMIH	MIHALICIK	149.21	316	i P	PKPbc	09 21 07.9	-0.3
PLAR	PLOIESTI	149.21	328	⇓i P	PKPbc	09 21 09.0	+1.2
NKC	Novy Kostel	149.23	349	ePKPDF	PKPdf	09 21 03.6	+0.4
NKC				⇑ePKP	PKiKP	09 21 08.7	-0.1
NKC				ex	x	09 21 13.0	
NKC				ePKPAB	PKPab	09 21 14.0	+0.9
NKC				epPKP	pPKPdf	09 22 08.7	-1.3
NKC				ePP	PP	09 24 37.9	-3.1
VYHS	Vyhne	149.25	340	ePKP	PKPdf	09 21 04.3	+1.1
VYHS				e		09 21 08.8	
VYHS				e		09 21 14.5	
SULR		149.27	328	⇓i P	PKPbc	09 21 09.2	+1.3
DRGR		149.28	334	⇓i P	PKPdf	09 21 04.0	+0.6
JAVC	Velka Javorina	149.29	342	ePKP	PKPdf	09 21 04.1	+0.8
JAVC				e		09 21 09.8	
VOIR		149.30	330	⇓i P	PKPdf	09 21 05.3	+1.8
PSZ	Piszkesteto	149.41	338	⇓i P	PKPbc	09 21 09.9	+1.6
PSZ	Piszkesteto	149.41	338	⇑ePKPdf	PKPbc	09 21 08.7	+0.4
PSZ	Piszkesteto	149.41	338	ePKPdf	PKPdf	09 21 04.0	+0.4
BEBN	Eben Emael	149.41	358	⇑PKPbc	PKPbc	09 21 08.4	+0.4
BEBN				⇓PKPab	PKPab	09 21 14.0	+0.4
UCC	Uccle	149.44	359	⇑PKPbc	PKPbc	09 21 08.5	+0.4
UCC				⇑PKPab	PKPab	09 21 13.8	0.0
UCC	Uccle	149.44	359	ePKPdf	PKPdf	09 21 03.8	+0.4
MTUR	Matau	149.45	330	⇓i P	PKPbc	09 21 09.5	+1.0
MTUR	Matau	149.45	330	PKP2	PKPbc	09 21 09.5	+1.0
KDHN	Kadinhani	149.46	313	i P	PKPbc	09 21 08.9	+0.1
KRUC	Moravsky	149.46	344	ePKP	PKPdf	09 21 03.6	+0.1
KRUC				e		09 21 08.8	
ARR	Arges	149.55	330	⇓i P	PKPdf	09 21 05.1	+1.2
KONT	Konya--Tatoy	149.56	312	i P	PKPdf	09 21 05.7	+1.6
MEM	Membach	149.58	357	⇑PKPbc	PKPbc	09 21 09.0	+0.5
KMER	Konya-Meram	149.63	311	i P	PKPbc	09 21 08.3	-0.9
GEYV	SAKARYA_Geyve	149.64	318	i P	PKPbc	09 21 09.3	+0.4
SMOL	Smolenice	149.67	342	ePKP2	PKPbc	09 21 10.1	+1.3
SMOL	Smolenice	149.67	342	ePKP	PKPbc	09 21 10.1	+1.3
SMOL				e		09 21 17.4	
SGRR	Singureni	149.73	327	⇓i P	PKPbc	09 21 09.9	+0.8
SNF	Seneffe	149.73	359	⇑PKPbc	PKPbc	09 21 07.6	-1.2
SNF				⇑PKPab	PKPab	09 21 15.3	+0.3
ERMK	Ermenek	149.74	309	i P	PKPbc	09 21 09.6	0.0
GOLR		149.78	329	⇓i P	PKPbc	09 21 10.2	+1.0
PSMN	Pico do Norte,	149.79	50	ePKP	PKPbc	09 21 09.2	-0.3
BCLA	Clavier	149.80	358	⇑PKPbc	PKPbc	09 21 09.2	+0.1
BCLA				⇓PKPab	PKPab	09 21 15.8	+0.4
ESKT	Eskisehir	149.81	316	i P	PKPbc	09 21 08.6	-1.0
MODS	Modra-Piesok	149.84

STU *e*PKPab **PKPab** 09 21 21.7 +0.7
STU Stuttgart 151.14 353 *e*PKIKP **PKPdf** 09 21 06.6 +0.5
DURS Dursunbey 151.29 318 *i* P **PKPbc** 09 21 12.8 -0.3
MDVR Moldovita 151.31 333 ‖ *i*P **PKPdf** 09 21 06.6 0.0
MORH M¨‡r¨gy, Hung 151.31 338 ‖ *e*PKPdf **PKPdf** 09 21 06.3 -0.2
KHAL Karahalli 151.31 315 *i* P **PKPbc** 09 21 10.9 -2.3
ARSA Arzberg 151.35 343 *i* PKPdf **PKPdf** 09 21 06.1 -0.5
comp=Z,16nm,1.1s,SNR=9.5
ARSA *i* PKiKP **PKiKP** 09 21 13.7 +0.4
comp=Z,46nm,0.7s
ARSA *i* PKPab **PKPab** 09 21 23.8 +1.8
comp=Z,157nm,0.9s
KORT Korkueli 151.41 312 *i* P **PKPbc** 09 21 13.5 0.0
DEMI Demirci 151.46 317 *i* P **PKPdf** 09 21 09.6 +2.5
BFO Black Forest 151.68 354 *e*PKPdf **PKPdf** 09 21 07.0 0.0
BFO *e*PKPbc **PKiKP** 09 21 14.0 +0.2
BFO *e*PKPab **PKPab** 09 21 23.4 +0.1
BFO Black Forest 151.68 354 *e*PKIKP **PKPdf** 09 21 07.0 0.0
BALY Balya 151.75 319 *i* P **PKPbc** 09 21 12.6 -1.4
GOLH Golhisar 151.85 313 *i* P **PKPdf** 09 21 10.9 +3.2
MANT Manisa 151.87 316 *i* P **PKPbc** 09 21 13.5 -1.1
MANT Manisa 151.87 316 *e*PKPdf **PKPdf** 09 21 08.0 +0.2
MANT *e*PKPbc **PKPbc** 09 21 14.7 +0.1
MANT *e*PKPab **PKPab** 09 21 24.3 -0.4
ECH Echery 151.90 355 *e*PKPdf **PKPdf** 09 21 09.5 +2.1
ECH *e*PKPbc **PKiKP** 09 21 14.2 -0.1
ECH *e*PKPab **PKPab** 09 21 24.2 +0.1
ECH Echery 151.90 355 *e*PKIKP **PKPdf** 09 21 09.5 +2.1
ALN Alexandroupoli 151.96 322 *e*PKPdf **PKPdf** 09 21 07.2 -0.4
ALN *e*PKPbc **PKPbc** 09 21 14.0 -0.4
ALN *e*PKPab **PKPab** 09 21 25.2 +0.5
ALN Alexandroupoli 151.96 322 P **PKPbc** 09 21 13.0 -1.4
ALN Alexandroupoli 151.96 322 *e*PKIKP **PKPdf** 09 21 07.2 -0.4
DNZL Cakiroluk 151.97 314 *i* P **PKPbc** 09 21 13.5 -1.3
SOKA Soboth 152.01 343 *i* PKPdf **PKPdf** 09 21 07.0 -0.6
comp=Z,36nm,1.2s,SNR=19
SOKA *i* PKPbc **PKPbc** 09 21 14.5 +0.1
comp=Z,142nm,1.1s
SOKA *i* PKPab **PKPab** 09 21 26.4 +1.6
comp=Z,298nm,1.0s
SOKA *i* PP **PP** 09 24 55.2 -1.9
comp=Z,25nm,2.0s
KBA Koelnbreinsper 152.06 346 *i* PKPdf **PKPdf** 09 21 07.2 -0.7
comp=Z,27nm,1.1s,SNR=10
KBA *i* PKiKP **PKiKP** 09 21 14.9 0.0
comp=Z,88nm,0.8s
KBA *i* PKPab **PKPab** 09 21 26.5 +1.4
comp=Z,139nm,0.9s
KBA *i* PP **PP** 09 24 54.4 -3.0
comp=Z,54nm,1.1s
KBA Koelnbreinsper 152.06 346 PKIKP **PKPdf** 09 21 07.1 -0.7
RDO Rodhopi 152.09 323 P **PKPbc** 09 21 14.4 -0.2
RDO Rodhopi 152.09 323 P **PKPbc** 09 21 14.4 -0.2
RETA Reutte 152.17 350 *i* PKPdf **PKPdf** 09 21 08.4 +0.5
comp=Z,17nm,1.0s,SNR=5.4
RETA *i* PKiKP **PKiKP** 09 21 15.5 +0.5
comp=Z,151nm,1.2s,SNR=9.4
RETA *i* PKPab **PKPab** 09 21 26.8 +1.4
comp=Z,137nm,1.2s
WTTA Wattenberg 152.24 348 *i* PKPdf **PKPdf** 09 21 08.5 +0.4
comp=Z,28nm,1.3s,SNR=8.9
WTTA *i* PKiKP **PKiKP** 09 21 15.5 +0.2
comp=Z,139nm,0.8s,SNR=27
MOTA Moosalm 152.25 349 *i* PKPdf **PKPdf** 09 21 07.4 -0.7
comp=Z,43nm,1.1s,SNR=14
MOTA *i* PKPbc **PKPbc** 09 21 14.8 -0.3
comp=Z,143nm,1.0s
MOTA *i* PKPab **PKPab** 09 21 25.8 -0.1
comp=Z,212nm,1.1s
OBKA Obir 152.29 344 *i* PKPdf **PKPdf** 09 21 07.8 -0.2
comp=Z,14nm,1.1s
OBKA *i* PKPbc **PKiKP** 09 21 15.2 -0.1
comp=Z,39nm,0.8s
OBKA *i* PKPab **PKPab** 09 21 27.2 +1.2
comp=Z,173nm,0.8s
OBKA *i* PP **PP** 09 24 57.1 -1.6
comp=Z,19nm,1.3s
VTS Vitosha 152.30 328 ‖ *i*P **PKPdf** 09 21 09.1 +0.8
VTS Vitosha 152.30 328 *e*PKPdf **PKPdf** 09 21 07.6 -0.7
VTS *e*PKPbc **PKPbc** 09 21 14.9 -0.4
VTS *e*PKPab **PKPab** 09 21 26.3 +0.1
VTS Vitosha 152.30 328 P **PKPbc** 09 21 15.4 +0.1
VTS Vitosha 152.30 328 PKIKP **PKPdf** 09 21 09.1 +0.8
AKAS Kas 152.31 311 *i* P **PKPbc** 09 21 13.5 -2.0
KSL Kastellorizon 152.36 311 P **PKPbc** 09 21 14.9 -0.5
KSL Kastellorizon 152.36 311 P **PKPbc** 09 21 14.9 -0.5
MYKA Terra Mystica 152.41 345 *i* PKPdf **PKPdf** 09 21 07.3 -0.9
comp=Z,21nm,1.0s,SNR=8.3
MYKA *i* PKPbc **PKPbc** 09 21 14.8 -0.5
comp=Z,68nm,0.7s
MYKA *i* PKPab **PKPab** 09 21 27.2 +0.8
comp=Z,234nm,1.3s
FETY Fethiye 152.48 312 P **PKPbc** 09 21 14.8 -0.9
FETY Fethiye 152.48 312 P **PKPbc** 09 21 14.8 -0.9
GADA Gvkgeada 152.50 321 P **PKPbc** 09 21 15.8 +0.2
DAVA Damuels 152.51 351 *i* PKPdf **PKPdf** 09 21 08.4 -0.1
comp=Z,18nm,1.0s
DAVA *i* PKiKP **PKiKP** 09 21 16.4 +0.6
comp=Z,249nm,1.1s
DAVA *i* PKPab **PKPab** 09 21 28.2 +1.3
comp=Z,166nm,1.2s
SMTH Samothraki Isl 152.54 322 P **PKPbc** 09 21 15.4 -0.3
ABTA Abfaltersbach 152.55 347 *i* PKPdf **PKPdf** 09 21 07.7 -0.7
comp=Z,69nm,0.9s,SNR=35
ABTA *i* PKPbc **PKPbc** 09 21 15.6 -0.1
comp=Z,240nm,1.1s
ABTA *i* PKPab **PKPab** 09 21 28.0 +1.0
comp=Z,127nm,0.9s
DIVS Divibare 152.58 334 *e*PKPdf **PKPdf** 09 21 08.2 -0.3
DIVS *e*PKPbc **PKiKP** 09 21 16.0 +0.1
DIVS *e*PKPab **PKPab** 09 21 27.2 -0.1
FETA Feichten 152.63 350 *i* PKPdf **PKPdf** 09 21 08.8 +0.1
comp=Z,57nm,1.0s,SNR=28
FETA *i* PKiKP **PKiKP** 09 21 17.0 +0.9
comp=Z,145nm,1.0s
FETA *i* PKPab **PKPab** 09 21 29.2 +1.7
comp=Z,97nm,1.0s
DALY Dalyan (Mu¨la 152.69 313 *i* P **PKPbc** 09 21 16.1 0.0
TURN Turunc 152.69 313 *i* P **PKPbc** 09 21 16.5 +0.4
LJU Ljubljana 152.73 344 *i* PKPdf **PKPdf** 09 21 08.6 0.0
LJU *i* PKPbc **PKiKP** 09 21 16.1 0.0
LJU *i* PKPab **PKPab** 09 21 27.9 +0.2
KAVA Kavala 152.76 324 P **PKPbc** 09 21 16.1 0.0
AYDN Tasoluk 152.77 315 *i* P **PKPbc** 09 21 17.4 +1.0
YER Yerkesik 152.78 314 P **PKPbc** 09 21 17.1 +0.7
OZLJ Ozalj 152.86 342 P **PKPdf** 09 21 08.9 +0.2
NVR Nevrokopi 152.86 325 P **PKPbc** 09 21 16.2 -0.2
PRK Paraskevi 152.88 319 P **PKPbc** 09 21 16.5 +0.1
BOJS Bojanci 153.03 342 *i* PKPdf **PKPdf** 09 21 09.1 +0.1
BOJS *i* PKPbc **PKiKP** 09 21 17.1 +0.4
BOJS *i* PKPab **PKPab** 09 21 29.4 +0.4
BOJS *e*PP **PP** 09 24 59.1 -3.6
BOJS *e*SKKSac SKKSac 09 31 26.1 -1.0
BOJS *e* 09 35 19.9
CEY Cerknica 153.04 343 *i* PKPdf **PKPdf** 09 21 08.9 -0.2
CEY *i* PKPbc **PKiKP** 09 21 16.8 0.0
CEY *i* PKPab **PKPab** 09 21 29.3 +0.2
CEY *e*SKKSac SKKSac 09 31 26.6 -0.6
BLY Banja Luka 153.09 339 ‖ *i*P **PKPbc** 09 21 17.9 +1.2
BLY Banja Luka 153.09 339 *e*PKPdf **PKPdf** 09 21 09.2 0.0
BLY *e*PKPbc **PKiKP** 09 21 17.7 +0.8
BLY *e*PKPab **PKPab** 09 21 29.6 +0.3
FUORN Ofenpass-Fuorn 153.10 350 *e*PKPdf **PKPdf** 09 21 10.0 +0.5
FUORN *e*PKPbc **PKiKP** 09 21 17.6 +0.4
FUORN *e*PKPab **PKPab** 09 21 30.4 +0.8
LIA Limnos Island 153.11 322 P **PKPbc** 09 21 16.6 -0.3
SIGR SIGRI 153.15 320 P **PKPbc** 09 21 17.3 +0.3
SRS Serrai 153.17 325 P **PKPab** 09 21 30.0 +0.2
URLA Izmir 153.21 317 *i* P **PKPbc** 09 21 16.4 -0.8
TRI Trieste 153.24 344 *e*PKPdf **PKPdf** 09 21 09.3 0.0
TRI *e*PKPbc **PKPbc** 09 21 16.9 -0.1
TRI *e*PKPab **PKPab** 09 21 29.7 -0.1
TRI Trieste 153.24 344 *e*PKIKP **PKPdf** 09 21 09.3 0.0
TRI *e* 09 21 16.9
ZEY ¨zmir 153.34 317 *i* P **PKPbc** 09 21 17.4 -0.1
ARG Arkhangelos 153.36 312 P **PKPbc** 09 21 17.8 +0.2
TUE Stuetta 153.38 351 *e*PKPdf **PKPdf** 09 21 10.2 +0.4
TUE *e*PKPbc **PKiKP** 09 21 18.1 +0.5
TUE *e*PKPab **PKPab** 09 21 30.4 -0.4
SMG Samos 153.43 316 P **PKPbc** 09 21 17.5 -0.2
AVF Avril sur Loir 153.45 1 *e*PKIKP **PKPdf** 09 21 09.3 -0.3
PLE Pljevlja 153.46 334 ‖ *i*PKP **PKPdf** 09 21 09.1 -0.8
DAT Datca 153.47 313 *i* P **PKPbc** 09 21 17.4 -0.6

BODT Bodrum 153.47 314 P **PKPbc** 09 21 16.7 -1.2
BODT Bodrum 153.47 314 P **PKPbc** 09 21 16.7 -1.2
STIP Stip 153.48 328 *i* PKP **PKPdf** 09 21 07.7 -2.1
OUR Ouranopolis 153.51 324 P **PKPbc** 09 21 17.6 -0.2
CHOS Chios island 153.53 318 P **PKPbc** 09 21 17.9 -0.1
VAY Valandovo 153.56 327 P **PKPab** 09 21 31.9 +0.5
VAY Valandovo 153.56 327 ‖ *i*PKP **PKPdf** 09 21 08.7 -1.2
CABF La Chapelle 153.57 356 *e*PKIKP **PKPdf** 09 21 10.3 +0.4
CABF pmax pmax
comp=Z,148nm,1.2s
IVA Berane 153.63 333 *e*PKP **PKPdf** 09 21 09.3 -0.8
SKO Skopje 153.63 329 ‖ *i*PKP **PKPdf** 09 21 09.5 -0.5
SENIN Lac Senin/Sane 153.72 354 *e*PKPdf **PKPdf** 09 21 10.4 +0.1
SENIN *e*PKPbc **PKiKP** 09 21 19.0 +0.5
SENIN *e*PKPab **PKPab** 09 21 33.1 +0.9
UDBI Udbina 153.75 340 P **PKPdf** 09 21 10.0 -0.2
UPM Unac-Piva 153.77 334 ‖ *i*PKP **PKPdf** 09 21 09.3 -1.1
PLG Polygyros 153.77 324 P **PKPab** 09 21 32.3 -0.1
KOME Kolasin 153.81 333 ‖ *i*PKP **PKPdf** 09 21 09.6 -0.8
PVY Plav 153.82 332 *e*PKP **PKPdf** 09 21 09.6 -0.9
TCF Toulx Ste Croi 153.93 2 *e*PKIKP **PKPdf** 09 21 10.2 -0.2
TCF pmax pmax
comp=Z,124nm,1.3s
PAIG Paliouri 153.95 323 P **PKPab** 09 21 33.3 +0.1
NVLJ Novalja 153.99 342 P **PKPdf** 09 21 10.0 -0.4
NKY Niksic 154.05 334 ‖ *i*PKP **PKPdf** 09 21 09.8 -0.9
NKME Niksic 154.11 334 ‖ *i*PKP **PKPdf** 09 21 09.9 -0.8
PDG Podgorica 154.26 333 ‖ *i*P **PKPbc** 09 21 19.8 +0.5
TTG Podgorica 154.26 333 ‖ *i*PKP **PKPdf** 09 21 10.3 -0.5
TTG Podgorica 154.26 333 *e*PKPdf **PKPdf** 09 21 10.4 -0.5
TTG *e*PKPbc **PKiKP** 09 21 19.6 +0.2
TTG *e*PKPab **PKPab** 09 21 34.4 +0.1
TTG Podgorica 154.26 333 *e*PKIKP **PKPdf** 09 21 10.4 -0.5
CEME Cevo 154.31 334 ‖ *i*PKP **PKPdf** 09 21 10.2 -0.9
PHP Peshkopia 154.32 330 P **PKPbc** 09 21 19.1 -0.5
KARP Karpathos 154.37 312 *e*PKPdf **PKPdf** 09 21 10.9 -0.4
KARP *e*PKPbc **PKiKP** 09 21 20.1 +0.2
KARP *e*PKPab **PKPab** 09 21 35.3 +0.1
KARP Karpathos 154.37 312 P **PKPbc** 09 21 19.8 0.0
LIT Litokhoron 154.48 325 *e*PKPdf **PKPdf** 09 21 10.8 -0.5
LIT *e*PKPbc **PKPbc** 09 21 19.3 -0.6
LIT *e*PKPab **PKPab** 09 21 35.6 +0.2
LIT Litokhoron 154.48 325 P **PKPbc** 09 21 19.6 -0.3
LIT Litokhoron 154.48 325 *e*PKIKP **PKPdf** 09 21 10.8 -0.5
DRME Dracevica, Mon 154.49 333 ‖ *i*PKP **PKPdf** 09 21 10.9 -0.3
STON Ston 154.52 336 P **PKPdf** 09 21 09.5 -1.7
FNA Florina 154.56 328 *e*PKPdf **PKPdf** 09 21 10.8 -0.6
FNA *e*PKPbc **PKPbc** 09 21 19.7 -0.4
FNA *e*PKPab **PKPab** 09 21 35.5 -0.3
FNA Florina 154.56 328 P **PKPbc** 09 21 19.9 -0.2
FNA Florina 154.56 328 *e*PKIKP **PKPdf** 09 21 10.8 -0.6
HCY Herceg Novi 154.56 334 ‖ *i*PKP **PKPdf** 09 21 10.4 -0.9
OHR Ohrid 154.60 329 ‖ *i*PKP **PKPdf** 09 21 11.0 -0.5
XOR Xorichti 154.61 323 P **PKPab** 09 21 34.7 -1.3
LPL La Plagne 154.61 355 *e*PKIKP **PKPdf** 09 21 11.8 +0.2
LPL pmax pmax
comp=Z,27nm,1.4s
LPG La Plagne 154.63 355 *e*PKIKP **PKPdf** 09 21 12.7 +1.0
LPG pmax pmax
comp=Z,22nm,1.0s
ULC Ulcinj 154.64 332 ‖ *i*PKP **PKPdf** 09 21 10.6 -0.9
APE Apeiranthos 154.65 316 ‖ *i*P **PKPbc** 09 21 19.7 -0.7
APE Apeiranthos 154.65 316 PKIKP **PKPbc** 09 21 19.7 -0.7
FYTO Fytoko, Volos 154.72 323 P **PKPab** 09 21 36.5 0.0
TIR Tirane 154.86 331 ‖ *i*P **PKPbc** 09 21 21.8 +1.2
TIR Tirane 154.86 331 *e*PKPdf **PKPdf** 09 21 12.0 +0.3
TIR *e*PKPbc **PKPbc** 09 21 20.6 0.0
TIR *e*PKPab **PKPab** 09 21 37.5 +0.5
TIR Tirane 154.86 331 *e*PKIKP **PKPdf** 09 21 12.0 +0.3
TIR *e* 09 21 20.6
TIR *e* 09 21 37.5
RJF Les Rejaudoux 154.87 4 *e*PKIKP **PKPdf** 09 21 11.6 -0.1
ANAF Anafi Island 154.89 315 P **PKPbc** 09 21 19.8 -1.1
SSB Saint Sauveur 154.96 359 *e*PKPdf **PKPdf** 09 21 11.8 0.0
SSB *e*PKPbc **PKPbc** 09 21 21.3 +0.5
SSB *e*PKPab **PKPab** 09 21 37.5 +0.2
SSB Saint Sauveur 154.96 359 *e*PKIKP **PKPdf** 09 21 11.8 0.0
SSB *e* 09 21 21.3
NEST Nestorio 155.00 328 P **PKPab** 09 21 37.9 +0.1
BNI Bardonecchia 155.08 355 *e*PKPdf **PKPdf** 09 21 12.7 +0.6
BNI *e*PKPbc PKPbc 09 21 22.7
BNI *e*PKPab **PKPab** 09 21 38.2 +0.3
BNI Bardonecchia 155.08 355 *e*PKIKP **PKPdf** 09 21 12.7 +0.6
SANT Santorini 155.09 315 ‖ *i*P PKPdf 09 21 21.3 +9.0
SANT Santorini 155.09 315 *e*PKPdf **PKPdf** 09 21 11.8 -0.5
SANT *e*PKPbc PKPbc 09 21 20.9
SANT *e*PKPab **PKPab** 09 21 36.7 -1.6
LKR Lokris 155.21 322 P PKPdf 09 21 21.4 +9.1
VLY Voula,Athens 155.26 320 P PKPdf 09 21 21.2 +8.8
AGG Agios Georgios 155.33 324 *e*PKPdf **PKPdf** 09 21 12.0 -0.5
AGG *e*PKPdif PKPbc 09 21 21.5
AGG *e*PKPab **PKPab** 09 21 38.4 -0.7
AGG Agios Georgios 155.33 324 P PKPdf 09 21 21.2 +8.7
AGG Agios Georgios 155.33 324 *e*PKIKP **PKPdf** 09 21 12.0 -0.5
VIVF Saint-Julien-I 155.38 358 *e*PKIKP **PKPdf** 09 21 12.8 +0.4
DSF Desfina 155.64 322 P PKPdf 09 21 21.9 +8.9
LTK Loutraki 155.65 321 P PKPdf 09 21 21.9 +8.9
LAST Lasithi 155.75 312 P PKPdf 09 21 23.7 +10
DID Didima 155.82 320 P PKPdf 09 21 22.3 +9.1
ANX Ano Chora 155.86 323 P **PKPdf** 09 21 13.8 +0.5
KALE Kalithea 155.88 323 P PKPdf 09 21 23.7 +10
DSL Palaion Diasel 155.93 325 P **PKPab** 09 21 41.4 -0.3
SRN Sarande 155.93 328 P **PKPab** 09 21 41.6 0.0
TRIZ Trizonia 155.93 323 P PKPdf 09 21 23.4 +10
EFP Efpalio 155.99 323 P PKPdf 09 21 24.4 +11
PGAV Gavieira, Arco 156.00 23 *e*PKPdf **PKPdf** 09 21 14.0 +0.6
PGAV Gavieira, Arco 156.00 23 *e*PKPab **PKPab** 09 21 42.9 +0.9
SGD Sagiada 156.02 327 P **PKPab** 09 21 42.1 +0.1
GUR Goura 156.07 322 P PKPdf 09 21 23.7 +10
LAKA Lakka 156.07 323 P PKPdf 09 21 24.0 +10
IDI Anoyia 156.08 313 PKP **PKPdf** 09 21 14.4 +0.7
comp=Z,11nm,0.9s,baz=133,slow=4.5,SNR=6.0
IDI PKPab **PKPab** 09 21 42.8 +0.3
comp=Z,28nm,1.0s,baz=57,slow=10,SNR=5.7
IDI Anoyia 156.08 313 ‖ *i*P **PKPdf** 09 21 14.7 +1.0
IDI Anoyia 156.08 313 *e*PKPdf **PKPdf** 09 21 14.3 +0.7
IDI *e*PKPdif PKPbc 09 21 23.5
IDI *e*PKPab **PKPab** 09 21 42.8 +0.3
KLV Kalavryta, Ach 156.11 322 P PKPdf 09 21 24.0 +10
KEK Kerkira 156.16 328 P **PKPab** 09 21 42.1 -0.5
SBF Sospel 156.19 353 *e*PKIKP **PKPdf** 09 21 13.9 +0.4
SBF pmax pmax
comp=Z,32nm,1.0s
PCAB Cabril 156.31 22 *e*PKPab **PKPab** 09 21 44.6 +1.4
LKD2 Lefkada island 156.41 325 P **PKPab** 09 21 44.2 +0.4
DRO Drossia 156.43 323 P **PKPab** 09 21 45.9 +2.0
AQU L'Aquila 156.45 342 *e*PKPdf **PKPdf** 09 21 15.4 +1.5
AQU L'Aquila 156.45 342 *e*PKIKP **PKPdf** 09 21 15.4 +1.5
VAM Vamos 156.48 314 P **PKPab** 09 21 46.5 +2.3
RLS Riolos of Patr 156.49 323 P **PKPab** 09 21 45.8 +1.7
IMMV Iera Moni Meta 156.60 315 P **PKPab** 09 21 46.8 +2.1
PBRG Braganca 156.67 20 *e*PKPdf **PKPdf** 09 21 14.4 +0.2
PBRG Braganca 156.67 20 *e*PKPab **PKPab** 09 21 45.7 +0.9
POLO Lamas de Olo 156.69 22 *e*PKPdf **PKPdf** 09 21 15.5 +1.2
POLO Lamas de Olo 156.69 22 *e*PKPab **PKPab** 09 21 45.7 +0.8
FSK Fiskardo 156.70 325 P **PKPab** 09 21 46.7 +1.7
AMT Artemida-Makis 156.71 322 P **PKPab** 09 21 48.1 +3.0
MATE Matera 156.80 334 ‖ *i*P **PKPab** 09 21 46.1 +0.8
ANKY Antikythira Is 156.80 316 P PKPdf 09 21 25.6 +11
PVRL Vila Real 156.81 22 *e*PKPdf **PKPdf** 09 21 15.8 +1.4
PVRL Vila Real 156.81 22 *e*PKPab **PKPab** 09 21 46.1 +0.7
ITM Ithomi 156.82 321 *e*PKPdf **PKPdf** 09 21 16.7 +2.2
ITM Ithomi 156.82 321 P **PKPab** 09 21 47.3 +1.7
KFL Anninata 156.83 324 P **PKPab** 09 21 47.2 +1.6
VLS Valsamata 156.89 324 P **PKPab** 09 21 48.0 +2.2
ETSF Etsaut 157.06 8 *e*PKIKP **PKPdf** 09 21 15.2 +0.5
ETSF pmax pmax
comp=Z,8.0nm,0.8s
MVO Moncorvo 157.15 21 *e*PKPdf **PKPdf** 09 21 15.8 +0.9
MVO Moncorvo 157.15 21 *e*PKPab **PKPab** 09 21 47.5 +0.6
PVIS Viseu 157.23 23 *e*PKPdf **PKPdf** 09 21 16.1 +1.1
PVIS Viseu 157.23 23 *e*PKPab **PKPab** 09 21 47.8 +0.6
PGF Pioggiola 157.27 350 *e*PKIKP **PKPdf** 09 21 14.5 -0.5
PGF pmax pmax
comp=Z,71nm,1.4s
PCAS Casmilo, Conde 157.57 25 *e*PKPdf **PKPdf** 09 21 16.2 +0.9
PCAS Casmilo, Conde 157.57 25 *e*PKPab **PKPab** 09 21 49.5 +0.8
MTE Manteigas 157.64 23 *e*PKPdf **PKPdf** 09 21 16.5 +1.0
MTE Manteigas 157.64 23 *e*PKPab **PKPab** 09 21 49.5 +0.5
MTE Manteigas 157.64 23 *e*PKPdf **PKPdf** 09 21 16.4 +1.0

MTE *e*PKPab **PKPab** 09 21 49.6 +0.6
CUC Castrocucco 157.72 335 *e*PKPdf **PKPdf** 09 21 15.6 +0.1
CUC *e*PKPab **PKPab** 09 21 48.6 -0.7
PTOM Tomar 157.97 26 *e*PKPdf **PKPdf** 09 21 17.0 +1.2
PTOM Tomar 157.97 26 *e*PKPab **PKPab** 09 21 51.0 +0.6
TIP Timpagrande 158.01 332 ‖ *i*P **PKPdf** 09 21 16.2 +0.2
TIP Timpagrande 158.01 332 *e*PKPdf **PKPdf** 09 21 15.8 -0.2
PCBR Castelo Branco 158.15 24 *e*PKPdf **PKPdf** 09 21 17.1 +1.1
PCBR Castelo Branco 158.15 24 *e*PKPab **PKPab** 09 21 51.6 +0.4
PMAFR Mafra 158.15 28 *e*PKPab **PKPab** 09 21 52.0 +0.8
ALMR Almeirim 158.29 27 *e*PKP **PKPdf** 09 21 15.8 -0.4
ALMR *e*PP **PP** 09 25 33.4 +1.3
ALMR Almeirim 158.29 27 *e*PKPdf **PKPdf** 09 21 16.7 +0.5
ALMR Almeirim 158.29 27 *e*PKPab **PKPab** 09 21 52.0 +0.2
LIS Lisbon 158.41 28 *e*PKP **PKPdf** 09 21 16.2 -0.1
LIS *e*PP **PP** 09 25 34.0 +1.2
PMTG Montargil 158.51 26 *e*PKPdf **PKPdf** 09 21 16.7 +0.2
PMTG Montargil 158.51 26 *e*PKPab **PKPab** 09 21 53.3 +0.5
PMRV Marv??o 158.54 24 *e*PKPdf **PKPdf** 09 21 17.6 +1.0
PMRV Marv??o 158.54 24 *e*PKPab **PKPab** 09 21 53.5 +0.6
PESTR Estremoz 158.94 25 *e*PKPdf **PKPdf** 09 21 17.9 +0.8
PESTR Estremoz 158.94 25 *e*PKPab **PKPab** 09 21 55.3 +0.6
PESTR Estremoz 158.94 25 *e*PKPdf **PKPdf** 09 21 17.7 +0.7
PESTR *e*PKPab **PKPab** 09 21 54.6 -0.1
EVO Evora 159.06 27 *e*PKPdf **PKPdf** 09 21 18.4 +1.2
EVO Evora 159.06 27 *e*PKPab **PKPab** 09 21 55.8 +0.7
PNCL Nicolau / Gran 159.18 28 *e*PKPdf **PKPdf** 09 21 18.7 +1.4
PNCL Nicolau / Gran 159.18 28 *e*PKPab **PKPab** 09 21 56.4 +0.7
ES19 SONSECA Array 159.45 17 *e*PKPdf **PKPdf** 09 21 18.1 +0.5
ESDC Sonseca Array 159.46 17 PKP **PKPdf** 09 21 17.7 0.0
comp=Z,7.9nm,0.9s,baz=347,slow=3.3,SNR=33
ESDC PKPab **PKPab** 09 21 58.0 +1.0
comp=Z,79nm,0.9s,baz=330,slow=3.9,SNR=66
ESDC PP **PP** 09 25 42.4 +4.2
comp=Z,14nm,1.1s,baz=349,slow=5.3,SNR=10
ESLA Sonseca Array 159.46 17 *e*PKPdf **PKPdf** 09 21 18.8 +1.1
ESLA *e*PKPab **PKPab** 09 21 58.0 +1.0
PAB San Pablo 159.47 18 *e*PKPdf **PKPdf** 09 21 19.0 +1.3
PAB *e*PKPab **PKPab** 09 21 58.0 +1.0
PAB San Pablo 159.47 18 *e*PKIKP **PKPdf** 09 21 19.0 +1.3
PAB *e* 09 21 58.0
PBEJ Beja 159.54 27 *e*PKPdf **PKPdf** 09 21 19.4 +1.7
PBEJ Beja 159.54 27 *e*PKPab **PKPab** 09 21 58.0 +0.7
MESJ Messejana 159.54 28 *e*PKP **PKPdf** 09 21 17.3 -0.4
MESJ *e*PP **PP** 09 25 40.1 +1.2
MESJ *e*SS SS 09 45 24.7 +1.7
MESJ Messejana 159.54 28 *e*PKPdf **PKPdf** 09 21 19.2 +1.5
MESJ Messejana 159.54 28 *e*PKPab **PKPab** 09 21 57.9 +0.6
PTEO Sao Teotonio 159.56 30 *e*PKPdf **PKPdf** 09 21 19.3 +1.5
PTEO Sao Teotonio 159.56 30 *e*PKPab **PKPab** 09 21 58.0 +0.7
PTEO Sao Teotonio 159.56 30 *e*PP PP 09 25 41.3 +2.3
PBAR Barrancos 159.76 25 *e*PKPdf **PKPdf** 09 21 18.9 +0.9
PBAR Barrancos 159.76 25 *e*PKPab **PKPab** 09 21 59.3 +1.1
MORF Marmelete 159.78 30 *e*PKP **PKPdf** 09 21 17.7 -0.4
MORF *e*PP **PP** 09 25 41.3 +0.9
MORF *e*SS SS 09 45 27.3 +1.5
MORF Marmelete 159.78 30 *e*PKPdf **PKPdf** 09 21 19.8 +1.7
MORF Marmelete 159.78 30 *e*PKPab **PKPab** 09 21 59.3 +0.9
PCVE Castro Verde 159.80 28 *e*PKPdf **PKPdf** 09 21 19.1 +1.1
PCVE Castro Verde 159.80 28 *e*PKPab **PKPab** 09 21 59.0 +0.6
PFVI Vila Bisbo 159.84 30 *e*PKPdf **PKPdf** 09 21 19.6 +1.5
PFVI Vila Bisbo 159.84 30 *e*PKPab **PKPab** 09 21 59.4 +0.8
PFVI Vila Bisbo 159.84 30 *e*PKIKP **PKPdf** 09 21 16.7 -1.4
PVAQ Vaqueiros 160.13 28 *e*PKPdf **PKPdf** 09 21 20.1 +1.7
PVAQ Vaqueiros 160.13 28 *e*PKPab **PKPab** 09 22 00.8 +1.0
PVAQ Vaqueiros 160.13 28 *e*PP PP 09 25 43.1 +1.1
VSL Villasalto 160.15 347 *e*PKPdf **PKPdf** 09 21 18.3 -0.1
VSL *e*PKPab **PKPab** 09 21 59.9 +0.1
PBDV Barranco-do-Ve 160.17 29 *e*PKPdf **PKPdf** 09 21 20.1 +1.6
PBDV Barranco-do-Ve 160.17 29 *e*PKPab **PKPab** 09 22 01.4 +1.3
PBDV Barranco-do-Ve 160.17 29 *e*PP PP 09 25 43.8 +1.5
CLTB Caltabellotta 160.81 337 *e*PKPdf **PKPdf** 09 21 19.4 +0.2
CLTB *e*PKPab **PKPab** 09 22 04.3 +1.3
WDD Wied Dalam 161.76 331 *e*PKPab **PKPab** 09 22 07.2 +0.1
CMAH Djebel Manchou 163.31 350 P **PKPab** 09 22 13.8 0.0
DFRA Djebel Bou Aff 163.59 354 P **PKPab** 09 22 15.2 +0.1
CKFL Kef-Lekhel 163.63 352 P **PKPab** 09 22 15.5 +0.2
ABSA Djebel Ababsia 163.64 349 P **PKPab** 09 22 15.0 -0.3
LIC Lamto 163.70 147 *e*PKIKP **PKPdf** 09 21 22.0 -0.7
comp=Z,106nm,1.1s
KEST Kesra 163.75 344 PKP **PKPdf** 09 21 22.4 +0.2
comp=Z,11nm,0.9s,baz=304,slow=3.8,SNR=15
KEST PKPab **PKPab** 09 22 16.4 +0.5
comp=Z,132nm,1.0s,baz=292,slow=1.0,SNR=40
KEST Kesra 163.75 344 *e*PKPdf **PKPdf** 09 21 22.9 +0.6
KEST *e*PKPab **PKPab** 09 22 16.4 +0.5
EBNR Beni Rached 163.83 7 P **PKPab** 09 22 17.9 +1.8
KIC Kosan Boka 163.97 148 *e*PKIKP **PKPdf** 09 21 22.3 -0.7
comp=Z,62nm,1.0s
CTEI Djebel Teioual 164.01 352 P **PKPab** 09 22 17.7 +0.7
EMHD Djebel Mahouad 164.02 2 P **PKPab** 09 22 17.7 +0.7
TIC Toumodi 164.06 146 *e*PKIKP **PKPdf** 09 21 22.3 -0.8
THTN Thala 164.08 345 *e*PKPdf **PKPdf** 09 21 23.2 +0.7
THTN *e*PKPab **PKPab** 09 22 18.4 +1.1
EANR 'Ain N'Sour 164.11 8 P **PKPab** 09 22 18.3 +0.9
CKHR Kef el Ahmar 164.15 355 P **PKPab** 09 22 18.4 +0.8
DBIC Dimbokro 164.17 147 PKP **PKPdf** 09 21 22.6 -0.5
comp=Z,15nm,0.9s,baz=222,slow=0.4,SNR=9.0
DBIC PKPab **PKPab** 09 22 18.8 +0.7
comp=Z,4.7nm,0.6s,baz=184,slow=5.7,SNR=5.2
DBIC Dimbokro 164.17 147 *e*PKPdf **PKPdf** 09 21 23.1 -0.1
DBIC *e*PKPab **PKPab** 09 22 18.8 +0.7
DBIC Dimbokro 164.17 147 *e*PKIKP **PKPdf** 09 21 23.1 -0.1
MDT Midelt 165.35 29 PKP **PKPdf** 09 21 25.1 +1.3
comp=Z,15nm,1.0s,baz=329,slow=1.3,SNR=18
MDT PKPab **PKPab** 09 22 24.0 +0.9
comp=Z,54nm,1.0s,baz=341,slow=5.6,SNR=21
MDT PP **PP** 09 26 14.6 +4.8
comp=Z,13nm,1.1s,baz=17,slow=6.5,SNR=6.0
**KOWA Kowa

*CSEM **07** 09:23:55.6±0.4, 37°.23N×38°.57E, h5km, ML2.7, Error ellipse: s-maj=11.3km s-min=5.8km az=152.0*
*DDA **07** 09:23:57.6, 37°.30N×38°.56E, h29km, Ml2.8*
ISC 07 09:23:56.3±1.0, 37°.32N±0°.03×38°.57E±0°.02, h13km±9km, n34, σ1°.00/49, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URFA	**Urfa**	**0.24**	**58**	PG	**Pg**	**09 24 00.7**	**-0.7**
URFA				SG	**Sg**	**09 24 05.3**	**+0.4**
URFA	**Urfa**	**0.24**	**58**	*e*Pg	**Pg**	**09 24 00.7**	**-0.7**
URFA				*e*Sg	**Sg**	**09 24 05.3**	**+0.4**
ATAB	**Bozova**	**0.27**	**306**	*i* P	**Pg**	**09 24 02.0**	**+0.1**
ATAB	**Bozova**	**0.27**	**306**	P	**Pg**	**09 24 02.0**	**+0.1**
MALT	**Malatya**	**1.00**	**354**	PG	**Pb**	**09 24 13.9**	**-1.7**
GAZ	**Gaziantep**	**1.09**	**263**	PG	**Pb**	**09 24 16.6**	**-0.5**
GAZ	**Gaziantep**	**1.09**	**263**	*e*Pg	**Pb**	**09 24 16.6**	**-0.5**
SVRC	**Sivrice-ELAZID**	**1.21**	**29**	PN	**Pb**	**09 24 19.1**	**-0.1**
SVRC	**Sivrice-ELAZID**	**1.21**	**29**	*e*Pn	**Pb**	**09 24 19.1**	**-0.1**
ELZG	**Elazig**	**1.23**	**16**	*i* P	**Pg**	**09 24 20.8**	**+0.9**
ELZG				*i* S	**Sg**	**09 24 38.3**	**+2.4**
ELZG	**Elazig**	**1.23**	**16**	P	**Pg**	**09 24 20.8**	**+0.9**
ELZG				S	**Sg**	**09 24 38.3**	**+2.4**
KUZU	**Kuzuini**	**1.31**	**246**	*i* P	**Pg**	**09 24 21.7**	**+0.2**
KUZU				*i* S	**Sg**	**09 24 40.1**	**+1.6**
KUZU	**Kuzuini**	**1.31**	**246**	P	**Pg**	**09 24 21.7**	**+0.2**
KUZU				S	**Sg**	**09 24 40.1**	**+1.6**
KMRS	**Kahramanmaras**	**1.34**	**279**	PN	**Pn**	**09 24 20.2**	**-0.6**
KMRS	**Kahramanmaras**	**1.34**	**279**	*e*Pn	**Pn**	**09 24 20.2**	**-0.6**
DIYA	**Diyarbakir**	**1.38**	**63**	*i* P	**Pg**	**09 24 23.7**	**+1.0**
DIYA				*i* S	**Sg**	**09 24 42.5**	**+1.9**
DIYA	**Diyarbakir**	**1.38**	**63**	P	**Pg**	**09 24 23.7**	**+1.0**
DIYA				S	**Sg**	**09 24 42.5**	**+1.9**
MAZI	**Mazidag**	**1.50**	**84**	PN	**Pn**	**09 24 23.1**	**0.0**
MAZI	**Mazidag**	**1.50**	**84**	*e*Pn	**Pn**	**09 24 23.1**	**0.0**
DARE	**Darende-Malaty**	**1.52**	**326**	PN	**Pn**	**09 24 22.8**	**-0.5**
DARE	**Darende-Malaty**	**1.52**	**326**	*e*Pn	**Pn**	**09 24 22.8**	**-0.5**
ELBS	**KAHRAMANMARAS**	**1.52**	**312**	*i* P	**Pg**	**09 24 25.3**	**-0.1**
ELBS				*i* S	**Sg**	**09 24 45.9**	**+0.7**
ELBS	**KAHRAMANMARAS**	**1.52**	**312**	P	**Pg**	**09 24 25.3**	**-0.1**
ELBS				S	**Sg**	**09 24 45.9**	**+0.7**
HEKM	**Malatya_Hekimh**	**1.63**	**343**	*i* P	**Pg**	**09 24 27.5**	**-0.2**
HEKM				*i* S	**Sg**	**09 24 50.4**	**+1.5**
HEKM	**Malatya_Hekimh**	**1.63**	**343**	P	**Pg**	**09 24 27.5**	**-0.2**
HEKM				S	**Sg**	**09 24 50.4**	**+1.5**
PTK	**Pertek**	**1.70**	**22**	PN	**Pn**	**09 24 25.8**	**-0.2**
PTK	**Pertek**	**1.70**	**22**	*e*Pn	**Pn**	**09 24 25.8**	**-0.2**
MARD	**Mardin**	**1.76**	**89**	*i* P	**Pb**	**09 24 27.5**	**-1.1**
MARD				*i* S	**Sg**	**09 24 51.9**	**-1.2**
KEMA	**Kemaliye**	**1.95**	**358**	*i* P	**Pb**	**09 24 30.9**	**-0.9**
KEMA				*i* S	**Sg**	**09 24 58.2**	**-0.9**
KEMA	**Kemaliye**	**1.95**	**358**	P	**Pb**	**09 24 30.9**	**-0.9**
KEMA				S	**Sg**	**09 24 58.2**	**-0.9**
KOZT	**Kozan**	**2.19**	**275**	PN	**Pn**	**09 24 32.3**	**-0.1**
KOZT	**Kozan**	**2.19**	**275**	*e*Pn	**Pn**	**09 24 32.3**	**-0.1**
YAYL	**Yayladag**	**2.35**	**238**	PN	**Pn**	**09 24 34.5**	**-0.3**
YAYL	**Yayladag**	**2.35**	**238**	*e*Pn	**Pn**	**09 24 34.5**	**-0.3**

*ISCJB **07** 09:33:46.6±0.4, 39°.32N±0°.02×28°.26E±0°.03, h2km±5km, Error ellipse: s-maj=4.1km s-min=3.3km az=40.7*
*DDA **07** 09:33:46.2, 39°.34N×28°.28E, h7km, Ml2.7*
*ISK **07** 09:33:46.7, 39°.33N×28°.25E, h8km, ML2.4/16*
*CSEM **07** 09:33:47.0±0.1, 39°.32N×28°.25E, h5km, ML2.7, Error ellipse: s-maj=3.0km s-min=2.4km az=45.0*
ISC 07 09:33:46.7±0.9, 39°.33N±0°.02×28°.25E±0°.02, h11km±10km, n56, σ0°.68/73, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DURS	**Dursunbey**	**0.32**	**33**	*i* P	**Pg**	**09 33 52.9**	**-0.3**
DURS	**Dursunbey**	**0.32**	**33**	P	**Pg**	**09 33 52.9**	**-0.3**
DST	**Dursunbey**	**0.40**	**46**	PG	**Pg**	**09 33 54.6**	**0.0**
DST				SG	**Sg**	**09 34 00.3**	**+0.4**
DST	**Dursunbey**	**0.40**	**46**	*e*Pg	**Pg**	**09 33 54.6**	**0.0**
DST				*e*Sg	**Sg**	**09 34 00.3**	**+0.4**
STEP	**BALIKESIR_Sava**	**0.41**	**277**	*i* P	**Pg**	**09 33 54.8**	**-0.1**
STEP				*i* S	**Sb**	**09 34 02.1**	**-0.2**
STEP	**BALIKESIR_Sava**	**0.41**	**277**	P	**Pg**	**09 33 54.8**	**-0.1**
STEP				S	**Sb**	**09 34 02.1**	**-0.2**
BALB	**Balikesir**	**0.42**	**317**	PG	**Pb**	**09 33 56.1**	**0.0**
BALB				SG	**Sb**	**09 34 02.4**	**-0.1**
BALB	**Balikesir**	**0.42**	**317**	*e*Pg	**Pb**	**09 33 56.1**	**0.0**
BALB				*e*Sg	**Sb**	**09 34 02.4**	**-0.1**
DEMI	**Demirci**	**0.46**	**128**	*i* P	**Pg**	**09 33 55.9**	**+0.1**
DEMI				*i* S	**Sg**	**09 34 02.2**	**+0.3**
DEMI	**Demirci**	**0.46**	**128**	P	**Pg**	**09 33 55.9**	**+0.1**
DEMI				S	**Sg**	**09 34 02.2**	**+0.3**
AKHS	**Akhisar**	**0.56**	**217**	*i* P	**Pg**	**09 33 57.6**	**-0.1**
AKHS				*i* S	**Sg**	**09 34 05.7**	**+0.6**
AKHS	**Akhisar**	**0.56**	**217**	P	**Pg**	**09 33 57.6**	**-0.1**
AKHS				S	**Sg**	**09 34 05.7**	**+0.6**
SIMA	**Simav-Kutahya**	**0.62**	**113**	PG	**Pg**	**09 33 58.8**	**0.0**
SIMA	**Simav-Kutahya**	**0.62**	**113**	*e*Pg	**Pg**	**09 33 58.8**	**0.0**
BALY	**Balya**	**0.64**	**310**	*i* P	**Pg**	**09 33 57.9**	**-1.2**
BALY				*i* S	**Sg**	**09 34 06.8**	**-0.6**
BALY	**Balya**	**0.64**	**310**	P	**Pg**	**09 33 57.8**	**-1.2**
BALY				S	**Sg**	**09 34 06.8**	**-0.6**
SHAP	**Saphane-Kutahy**	**0.82**	**112**	PG	**Pb**	**09 34 03.7**	**+0.8**
SHAP	**Saphane-Kutahy**	**0.82**	**112**	*e*Pg	**Pb**	**09 34 03.7**	**+0.8**
GONE	**Gonen-Balikesi**	**0.84**	**329**	PG	**Pg**	**09 34 02.9**	**0.0**
GONE	**Gonen-Balikesi**	**0.84**	**329**	*e*Pg	**Pg**	**09 34 02.9**	**0.0**
MANT	**Manisa**	**0.87**	**164**	*i* P	**Pg**	**09 34 03.9**	**+0.4**
MANT				*i* S	**Sg**	**09 34 14.0**	**-1.0**
MANT	**Manisa**	**0.87**	**164**	P	**Pg**	**09 34 03.9**	**+0.4**
MANT				S	**Sg**	**09 34 14.0**	**-1.0**
ORLT	**Orhaneli**	**0.87**	**35**	PG	**Pb**	**09 34 04.2**	**+0.4**
ORLT	**Orhaneli**	**0.87**	**35**	*e*Pg	**Pb**	**09 34 04.2**	**+0.4**
KULA	**Kula-Manisa**	**0.88**	**158**	PG	**Pg**	**09 34 03.9**	**+0.3**
KULA	**Kula-Manisa**	**0.88**	**158**	*e*Pg	**Pg**	**09 34 03.9**	**+0.3**
KCTX	**Karacabey (Bur**	**0.94**	**5**	PG	**Pb**	**09 34 05.2**	**+0.2**
KCTX	**Karacabey (Bur**	**0.94**	**5**	*e*Pg	**Pb**	**09 34 05.2**	**+0.2**
GEDZ	**Gediz**	**0.95**	**107**	PG	**Pb**	**09 34 05.7**	**+0.6**
GEDZ	**Gediz**	**0.95**	**107**	*e*Pg	**Pb**	**09 34 05.7**	**+0.6**
TVSB	**Tavsanli**	**0.95**	**82**	PG	**Pg**	**09 34 05.1**	**+0.2**
TVSB	**Tavsanli**	**0.95**	**82**	*e*Pg	**Pg**	**09 34 05.1**	**+0.2**
EDC	**Edincik**	**1.06**	**344**	PG	**Pb**	**09 34 07.2**	**+0.2**
EDC	**Edincik**	**1.06**	**344**	*e*Pg	**Pb**	**09 34 07.2**	**+0.2**
KRBG	**Karabiga-Canak**	**1.29**	**326**	PN	**Pg**	**09 34 11.9**	**+0.4**
KRBG	**Karabiga-Canak**	**1.29**	**326**	*e*Pn	**Pg**	**09 34 11.9**	**+0.4**
ARMT	**Armutlu**	**1.32**	**21**	PN	**Pg**	**09 34 12.1**	**0.0**
ARMT	**Armutlu**	**1.32**	**21**	*e*Pn	**Pg**	**09 34 12.1**	**0.0**
KHAL	**Karahalli**	**1.36**	**134**	*i* P	**Pn**	**09 34 10.8**	**-0.9**
KHAL				*i* S	**Sb**	**09 34 25.8**	**-3.9**
KHAL	**Karahalli**	**1.36**	**134**	P	**Pn**	**09 34 10.8**	**-0.9**
BAYC	**CANAKKALE_Bayr**	**1.38**	**288**	*i* P	**Pg**	**09 34 13.6**	**+0.4**
BAYC				*i* S	**Sg**	**09 34 31.3**	**+0.2**
BAYC	**CANAKKALE_Bayr**	**1.38**	**288**	P	**Pg**	**09 34 13.6**	**+0.4**
BAYC				S	**Sg**	**09 34 31.3**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**1.41**	**192**	PN	**Pn**	**09 34 12.9**	**+0.6**
AYDB	**Zeytinkoy-Aydi**	**1.41**	**192**	*e*Pn	**Pn**	**09 34 12.9**	**+0.6**
CAVI	**Cavuskoy**	**1.51**	**54**	PN	**Pg**	**09 34 15.6**	**0.0**
CAVI	**Cavuskoy**	**1.51**	**54**	*e*Pn	**Pg**	**09 34 15.6**	**0.0**
YLV	**Yalova**	**1.51**	**35**	PN	**Pg**	**09 34 15.3**	**-0.3**
YLV	**Yalova**	**1.51**	**35**	*e*Pn	**Pg**	**09 34 15.3**	**-0.3**
LPK	**Lapseki**	**1.55**	**313**	PN	**Pn**	**09 34 14.7**	**+0.6**
LPK	**Lapseki**	**1.55**	**313**	*e*Pn	**Pn**	**09 34 14.7**	**+0.6**
RKY	**Sarkoy-Tekirda**	**1.59**	**329**	PN	**Pb**	**09 34 15.9**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.59**	**329**	*e*Pn	**Pb**	**09 34 15.9**	**-0.1**
AYDN	**Tasoluk**	**1.69**	**190**	*i* P	**Pb**	**09 34 18.3**	**+0.5**
AYDN	**Tasoluk**	**1.69**	**190**	P	**Pb**	**09 34 18.3**	**+0.5**
BORA	**Eskisehir**	**1.79**	**71**	PN	**Pn**	**09 34 18.6**	**+1.1**
BORA	**Eskisehir**	**1.79**	**71**	*e*Pn	**Pn**	**09 34 18.6**	**+1.1**

MEX 07 09:35:08.3±0.7, 16°.39N×99°.59W, h8km±27km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.54**	**332**	*e*P	Pg	09 35 18.1	-0.7
ACX				*e*S	Sg	09 35 25.5	-0.3
ACP2	**Acapulco**	**0.56**	**329**	*e*P	Pg	09 35 17.9	-1.2
ACP2				*e*S	Sg	09 35 26.5	+0.2
CAIG	**El Cayaco**	**0.92**	**315**	*e*P	Pg	09 35 23.4	-2.6
CAIG				*e*S	Sg	09 35 35.7	-2.2
TLIG	**Tlapa**	**1.52**	**40**	*e*P	Pn	09 35 32.5	-3.4
TLIG				*e*S	Sn	09 35 51.6	-4.4
PLIG	**Platanillo**	**1.99**	**2**	*e*P	Pn	09 35 39.7	-2.7
PLIG				*e*S	Sn	09 36 03.1	-4.4

IDC 07 09:47:28.2±1.6, 1°.68S×138°.45E, h0km, mb3.3/2, mb1 3.4/4, mb1mx3.1/53, mbtmp3.3/4, ML3.0/2, MS3.8/1, Ms1 3.7/1, ms1mx2.7/26, Error ellipse: s-maj=38.6km s-min=28.4km az=65.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**2.40**	**110**	Pn	Pn	09 48 09.2	+0.3
	8.8nm,0.3s,baz=182,slow=23,SNR=68						
JAY				Sn	Sn	09 48 23.4	-16
	9.2nm,0.3s,baz=214,slow=8.8,SNR=8.2						
WRA	**Warramunga Arr**	**18.59**	**192**	P	Pn	09 51 48.1	+0.9
	0.0nm,0.3s,baz=15,slow=13,SNR=3.4						
ASAR	**Alice Springs**	**22.30**	**191**	P	P	09 52 26.6	-0.7
	0.4nm,0.8s,baz=40,slow=7.4,SNR=4.1						
STKA	**Stephens Creek**	**30.18**	**175**	LR	LR	10 06 12.6	
	comp=Z,154nm,18.6s,baz=39,slow=37						
MKAR	**Makanchi Array**	**68.82**	**322**	P	P	09 58 34.4	-0.1
	0.8nm,0.9s,baz=107,slow=5.0,SNR=4.9						

*ISK **07** 10:06:00.7, 38°.89N×38°.56E, h29km, ML2.2/5*
*ISCJB **07** 10:06:02.1±0.5, 38°.89N±0°.03×38°.61E±0°.04, h32km±4km, Error ellipse: s-maj=5.5km s-min=5.2km az=26.3*
*DDA **07** 10:06:02.4, 38°.87N×38°.63E, h7km, Ml2.8*
*CSEM **07** 10:06:02.1±0.2, 38°.88N×38°.63E, h15km, ML2.8, Error ellipse: s-maj=3.5km s-min=3.3km az=107.0*
ISC 07 10:06:01.9±1.0, 38°.88N±0°.02×38°.62E±0°.03, h27km±10km, n23, σ1°.10/39, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEMA	**Kemaliye**	**0.40**	**346**	*i* P	**Pb**	**10 06 10.4**	**-0.3**
KEMA				*i* S	**Sb**	**10 06 17.3**	**+0.6**
KEMA	**Kemaliye**	**0.40**	**346**	P	**Pb**	**10 06 10.4**	**-0.3**
KEMA				S	**Sb**	**10 06 17.3**	**+0.6**
ELZG	**Elazig**	**0.47**	**143**	*i* P	**Pb**	**10 06 11.7**	**-0.2**
ELZG				*i* S	**Sb**	**10 06 19.1**	**+0.5**
ELZG	**Elazig**	**0.47**	**143**	P	**Pb**	**10 06 11.7**	**-0.2**
ELZG				S	**Sb**	**10 06 19.1**	**+0.5**
HEKM	**Malatya_Hekimh**	**0.52**	**270**	*i* P	**Pb**	**10 06 12.6**	**0.0**
HEKM				*i* S	**Sn**	**10 06 22.8**	**+1.0**
HEKM	**Malatya_Hekimh**	**0.52**	**270**	P	**Pb**	**10 06 12.6**	**0.0**
ILIC	**ilic-Erzincan**	**0.57**	**356**	PG	**Pb**	**10 06 12.6**	**-0.9**
ILIC				SG	**Sb**	**10 06 22.1**	**+0.7**
ILIC	**ilic-Erzincan**	**0.57**	**356**	*e*Pg	**Pb**	**10 06 12.6**	**-0.9**
ILIC				*e*Sg	**Sb**	**10 06 22.1**	**+0.7**
MALT	**Malatya**	**0.58**	**195**	PG	**Pb**	**10 06 13.5**	**-0.1**
MALT				SG	**Sb**	**10 06 22.8**	**+1.2**
MALT	**Malatya**	**0.58**	**195**	*e*Pg	**Pb**	**10 06 13.5**	**-0.1**
MALT				*e*Sg	**Sb**	**10 06 22.8**	**+1.2**
PTK	**Pertek**	**0.60**	**88**	PG	**Pb**	**10 06 13.7**	**-0.3**
PTK				SG	**Sn**	**10 06 23.9**	**+0.1**
PTK	**Pertek**	**0.60**	**88**	*e*Pg	**Pb**	**10 06 13.7**	**-0.3**
PTK				*e*Sg	**Sn**	**10 06 23.9**	**+0.1**
SVRC	**Sivrice-ELAZID**	**0.73**	**133**	PG	**Pb**	**10 06 16.1**	**0.0**
SVRC	**Sivrice-ELAZID**	**0.73**	**133**	*e*Pg	**Pb**	**10 06 16.1**	**0.0**
TNCL	**Tunceli-Merkez**	**0.76**	**71**	*i* P	**Pb**	**10 06 16.3**	**-0.2**
TNCL				*i* S	**Sn**	**10 06 27.9**	**+0.4**
TNCL	**Tunceli-Merkez**	**0.76**	**71**	P	**Pb**	**10 06 16.3**	**-0.2**
TNCL				S	**Sn**	**10 06 27.9**	**+0.4**
AKCD	**Akcadag**	**0.80**	**224**	*i* P	**Pb**	**10 06 17.6**	**+0.3**
AKCD				*i* S	**Sn**	**10 06 29.7**	**+1.1**
AKCD	**Akcadag**	**0.80**	**224**	P	**Pb**	**10 06 17.6**	**+0.3**
AKCD				S	**Sn**	**10 06 29.7**	**+1.1**
KELT	**Kelkit**	**1.36**	**21**	*i* P	**Pb**	**10 06 27.3**	**+0.5**
KELT				*i* S	**Sb**	**10 06 48.5**	**+4.7**
KELT	**Kelkit**	**1.36**	**21**	P	**Pb**	**10 06 27.3**	**+0.5**
SARI	**SarD1z-Kayseri**	**1.79**	**255**	PN	**Pn**	**10 06 29.3**	**-1.9**
YOZ	**Yozgat**	**2.67**	**288**	PN	**Pn**	**10 06 41.6**	**-1.7**
YOZ	**Yozgat**	**2.67**	**288**	*e*Pn	**Pn**	**10 06 41.6**	**-1.7**

*BJI **07** 10:17:11.1, 41°.30N×20°.90E, h10km, mb5.0/9, mB5.0/4, Ms4.5/1*
*IDC **07** 10:17:12.7±0.4, 41°.31N×20°.85E, h0km, mb4.3/27, mb1 4.3/37, mb1mx4.2/66, mbtmp4.2/37, ML3.8/9, MS3.5/15, Ms1 3.5/15, ms1mx3.2/72, Error ellipse: s-maj=9.1km s-min=8.2km az=149.0*
*TIR **07** 10:17:12.9, 41°.57N×19°.94E, h25km, Md4.6/6*
*SKO **07** 10:17:13.1, 41°.35N×20°.87E, h15km, M4.2, ML4.3*
*ATH **07** 10:17:13.3, 41°.40N×20°.95E, h15km±2km, ML4.3/14, Error ellipse: s-maj=3.1km s-min=1.1km az=134.0*
*MOS **07** 10:17:13.3±0.8, 41°.34N×20°.80E, h14km, mb4.7/18, MS4.0/9, Error ellipse: s-maj=4.1km s-min=2.8km az=113.2*
*PDG **07** 10:17:13.9±1.0, 41°.34N×20°.84E, h6km±1km, MD4.5/9, ML4.5/10, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*
*ISCJB **07** 10:17:13.9±0.2, 41°.377N±0°.009×20°.86E±0°.01, h13km±1km, mb4.5/57, MS3.6/9, Error ellipse: s-maj=1.7km s-min=1.3km az=42.0*
*NEIC **07** 10:17:14.6±0.0, 41°.30N×20°.90E, h5km, mb4.7/18, MW4.4, ML4.3(SKO), ML4.4(THE), ML4.6(ATH), Moment Tensor Solution. s22 Moment tensor: Scale 10^15Nm; M_{rr}=4.25; $M_{\theta\theta}$0.47; $M_{\phi\phi}$3.78; $M_{r\theta}$1.46; $M_{\theta\phi}$1.66; $M_{r\phi}$0.87; Best double couple: M_0=4.70000×10^15 NP1:φ=10.00000°, δ38.00000°, λ-110.00000°. NP2:φ=215.00000°, δ55.00000°, λ-75.00000°. Principal axes: T 4.6800, Plg9.0000°, Azm294.0000°; N 0.0000, Plg12.0000°, Azm26.0000°; P -4.6800, Plg75.0000°, Azm169.0000°; After SKO.*
NEIC Felt at Kicevo, Krusevo, Oslomej, Prilep, Skopje and Struga. Also felt at Tirana, Albania.
*LDG **07** 10:17:14.7±0.1, 41°.33N×20°.96E, h1km, Ml4.7/33 Error ellipse: s-maj=3.4km s-min=2.0km az=36.0*
*CSEM **07** 10:17:14.9±0.1, 41°.34N×20°.90E, h10km, mb4.8/20, ML4.6/5, Mw4.4, Error ellipse: s-maj=1.9km s-min=1.6km az=38.0*
*BEO **07** 10:17:14.7±0.3, 41°.38N×20°.91E, h3km±2km*
*THE **07** 10:17:14.2, 41°.38N×20°.91E, h0km, ML4.4/9, Error ellipse: s-maj=0.8km s-min=0.3km az=284.0*
*ROM **07** 10:17:15.4±0.3, 41°.35N±0°.02×20°.81E±0°.03, h10km, ML4.7/51*
*PRU **07** 10:17:17.6, 41°.49N×21°.08E, h0km, M4.5*
ISC 07 10:17:14.8±0.6, 41°.34N±0°.01×20°.88E±0°.01, h11km±3km, n837, σ1°.87/991, mb4.5/57, MS3.7/10, 75C-43D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHR	**Ohrid**	**0.23**	**195**	*i* Pg	**Pg**	**10 17 18.5**	**-1.3**
OHR				*i* Sg	**Sg**	**10 17 23.4**	**+0.3**
OHR				*e*Lg	Lg	10 17 23.5	
	comp=E,105μm,0.4s						
OHR				*e*Lg	Lg	10 17 23.6	
	comp=N,139μm,0.4s						
OHR	**Ohrid**	**0.23**	**195**	*i* P	**Pg**	**10 17 18.5**	**-1.3**
OHR				*i* S	**Sg**	**10 17 23.3**	**+0.3**
OHR	**Ohrid**	**0.23**	**195**	*i* P	**Pg**	**10 17 18.5**	**-1.3**
OHR				*i* S	**Sg**	**10 17 23.3**	**+0.3**
BIA	**Bitola**	**0.46**	**133**	*e*Pg	**Pg**	**10 17 23.5**	**-0.5**
BIA				*e*Sg	**Sg**	**10 17 30.3**	**+0.2**
BIA	**Bitola**	**0.46**	**133**	P	**Pg**	**10 17 23.5**	**-0.5**
BIA				S	**Sg**	**10 17 30.3**	**+0.2**
BIA	**Bitola**	**0.46**	**133**	⇑*i*Pg	**Pg**	**10 17 23.5**	**-0.5**
BIA				*i* Sg	**Sg**	**10 17 30.8**	**+0.7**
BIA	**Bitola**	**0.46**	**133**	P	**Pg**	**10 17 23.5**	**-0.5**
BIA				S	**Sg**	**10 17 30.3**	**+0.2**
PHP	**Peshkopia**	**0.48**	**317**	*e*Pg	**Pg**	**10 17 22.9**	**-1.3**
PHP	**Peshkopia**	**0.48**	**317**	P	**Pg**	**10 17 22.9**	**-1.3**
PHP	**Peshkopia**	**0.48**	**317**	*i* PG	**Pg**	**10 17 22.9**	**-1.3**
PHP				*i* SG	**Sg**	**10 17 29.1**	**-1.4**
PHP	**Peshkopia**	**0.48**	**317**	*e*P	**Pg**	**10 17 22.9**	**-1.3**
PHP	**Peshkopia**	**0.48**	**317**	*e*P	**Pg**	**10 17 22.9**	**-1.3**
PHP				*i* Sg	**Sg**	**10 17 29.1**	**-1.4**
FNA	**Florina**	**0.67**	**146**	*e*Pg	**Pg**	**10 17 26.5**	**-1.3**
FNA				*e*Sg	**Sb**	**10 17 37.1**	**-0.8**
FNA	**Florina**	**0.67**	**146**	P	**Pg**	**10 17 26.3**	**-1.6**
FNA				S	**Sg**	**10 17 35.6**	**-1.1**
FNA				AML	AML	10 17 41.3	
FNA				AML	AML	10 17 42.5	
FNA	**Florina**	**0.67**	**146**	*e*Pg	**Pg**	**10 17 26.5**	**-1.3**
FNA				*e*Pg	**Pg**	**10 17 26.8**	**-1.0**
FNA				*e*Sg	**Sg**	**10 17 36.6**	**0.0**
FNA				*e*Sg	**Sb**	**10 17 37.6**	**-0.3**
FNA	**Florina**	**0.67**	**146**	P	**Pg**	**10 17 26.8**	**-1.0**
FNA				S	**Sb**	**10 17 37.6**	**-0.3**
FNA	**Florina**	**0.67**	**146**	P	**Pg**	**10 17 26.5**	**-1.3**
FNA				*e*		10 17 37.6	
FNA	**Florina**	**0.67**	**146**	*e*Pg	**Pg**	**10 17 26.5**	**-1.3**
FNA				S	**Sg**	**10 17 36.1**	**-0.5**
FNA				*e*Sg	**Sb**	**10 17 37.1**	**-0.8**
KBN	**Korca**	**0.72**	**186**	*e*Pg	**Pg**	**10 17 28.2**	**-0.5**
KBN				*e*Sg	**Sb**	**10 17 39.5**	**+0.2**
KBN	**Korca**	**0.72**	**186**	P	**Pg**	**10 17 28.2**	**-0.5**
KBN				S	**Sb**	**10 17 39.5**	**+0.2**
KBN	**Korca**	**0.72**	**186**	*i* PG	**Pg**	**10 17 28.3**	**-0.5**
KBN				*i* SG	**Sb**	**10 17 39.3**	**0.0**
KBN	**Korca**	**0.72**	**186**	*e*P	**Pg**	**10 17 28.2**	**-0.5**
KBN				*e*		10 17 39.5	
KBN	**Korca**	**0.72**	**186**	P	**Pg**	**10 17 28.2**	**-0.5**
KBN				*i* Sg	**Sb**	**10 17 39.3**	**0.0**
SKO	**Skopje**	**0.76**	**33**	*e*Pg	**Pg**	**10 17 28.8**	**-0.7**
SKO				*e*Sg	**Sg**	**10 17 38.4**	**-1.1**
SKO	**Skopje**	**0.76**	**33**	*e*Pg	**Pg**	**10 17 28.6**	**-0.9**
SKO				*e*Sg	**Sg**	**10 17 39.5**	**0.0**
SKO	**Skopje**	**0.76**	**33**	P	**Pg**	**10 17 28.6**	**-0.9**
SKO				S	**Sg**	**10 17 39.5**	**0.0**
SKO	**Skopje**	**0.76**	**33**	*i* Pg	**Pg**	**10 17 28.8**	**-0.7**
SKO				*i* Sg	**Sg**	**10 17 38.6**	**-0.9**
SKO	**Skopje**	**0.76**	**33**	*e*P	**Pg**	**10 17 28.6**	**-0.9**
SKO				*e*		10 17 39.5	
SKO	**Skopje**	**0.76**	**33**	*e*Pg	**Pg**	**10 17 28.8**	**-0.7**
SKO				*e*Sg	**Sg**	**10 17 38.4**	**-1.1**
SKO				S	**Sg**	**10 17 39.5**	**0.0**
TIR	**Tirane**	**0.76**	**271**	*e*Pg	**Pg**	**10 17 28.4**	**-1.2**
TIR				*e*Sg	**Sg**	**10 17 39.6**	**+0.1**
TIR	**Tirane**	**0.76**	**271**	⇓*i*P	**Pg**	**10 17 28.9**	**-0.6**
TIR	**Tirane**	**0.76**	**271**	*e*Pg	**Pg**	**10 17 28.3**	**-1.2**
TIR				*e*Sn	**Sb**	**10 17 40.9**	**+0.4**
TIR	**Tirane**	**0.76**	**271**	P	**Pg**	**10 17 29.0**	**-0.6**
TIR				S	**Sb**	**10 17 40.9**	**+0.4**
TIR	**Tirane**	**0.76**	**271**	*i* PG	**Pg**	**10 17 28.7**	**-0.9**
TIR				*i* SG	**Sb**	**10 17 41.3**	**+0.8**
TIR	**Tirane**	**0.76**	**271**	*e*P	**Pg**	**10 17 28.3**	**-1.3**
TIR				*e*		10 17 40.9	
TIR	**Tirane**	**0.76**	**271**	*e*P	**Pg**	**10 17 28.3**	**-1.3**
TIR				*e*Sg	**Sg**	**10 17 39.6**	**+0.1**
TIR				S	**Sb**	**10 17 40.9**	**+0.4**
PRZK	**Prizren**	**0.88**	**354**	P	**Pg**	**10 17 30.5**	**-1.2**
NEST	**Nestorio**	**0.93**	**172**	P	**Pg**	**10 17 31.7**	**-1.1**
NEST				S	**Sb**	**10 17 46.1**	**+0.6**
NEST				AML	AML	10 17 51.1	
	comp=N,72483μm,0.7s						
NEST				AML	AML	10 17 51.4	
	comp=E,56825μm,0.7s						
NEST	**Nestorio**	**0.93**	**172**	P	**Pg**	**10 17 31.9**	**-0.9**
NEST				S	**Sn**	**10 17 46.7**	**-0.7**
NEST	**Nestorio**	**0.93**	**172**	P	**Pg**	**10 17 31.9**	**-0.9**
NEST				S	**Sb**	**10 17 45.9**	**+0.4**
PUK	**Puka**	**1.02**	**314**	*i* PN	**Pg**	**10 17 32.4**	**-2.1**
PUK	**Puka**	**1.02**	**314**	*i* Pn	**Pg**	**10 17 32.4**	**-2.1**
STIP	**Stip**	**1.04**	**70**	⇑*i*Pg	**Pn**	**10 17 36.5**	**+1.1**
ZATK	**Zatriq**	**1.12**	**350**	P	**Pg**	**10 17 36.1**	**-0.4**
PENT	**Pentalofos**	**1.16**	**

PDG	**Podgorica**	**1.63 313**	⇓*i*P	**Pb**	**10 17 44.3**	**-0.6**
PDG			S	**Sb**	**10 18 05.8**	**+0.3**
PDG			*e*Sg	**Sg**	**10 18 06.4**	**-0.9**
PDG			*e*Sn	**Sg**	**10 18 07.9**	**+0.6**
TTG	**Podgorica**	**1.63 313**	⇓*i*Pn	**Pn**	**10 17 42.8**	**-0.7**
TTG			*e*Sn	**Sg**	**10 18 07.9**	**+0.6**
TTG	**Podgorica**	**1.63 313**	*e*Pn	**Pn**	**10 17 43.5**	**0.0**
TTG			*e*Sn	**Sg**	**10 18 06.9**	**-0.4**
TTG	**Podgorica**	**1.63 313**	*e*P	**Pn**	**10 17 43.5**	**0.0**
TTG			*e*		10 18 06.9	
TTG	**Podgorica**	**1.63 313**	*e*Pn	**Pn**	**10 17 43.5**	**0.0**
TTG			*e*Sn	**Sg**	**10 18 06.9**	**-0.4**
BARS	**Barje**	**1.63 25**	*e*Pg	**Pn**	**10 17 43.7**	**+0.2**
BARS			*e*Sg	**Sb**	**10 18 05.2**	**-0.4**
BARS	**Barje**	**1.63 25**	*e*Pg	**Pn**	**10 17 43.7**	**+0.2**
BARS			*e*Sg	**Sb**	**10 18 05.2**	**-0.4**
JAN	**Janina**	**1.68 181**	P	**Pb**	**10 17 45.5**	**-0.4**
JAN			S	**Sg**	**10 18 09.1**	**+0.2**
JAN			AML	AML	10 18 14.6	
	comp=N,14073μm,1.0s					
JAN			AML	AML	10 18 16.9	
	comp=E,18734μm,1.0s					
JAN	**Janina**	**1.68 181**	P	**Pb**	**10 17 45.4**	**-0.4**
JAN			S	**Sg**	**10 18 08.8**	**-0.1**
BEY	**Berane**	**1.70 335**	⇓*i*Pn	**Pn**	**10 17 45.2**	**+0.7**
BEY	**Berane**	**1.70 335**	P	**Pb**	**10 17 45.9**	**-0.2**
BEY			*e*Sn	**Sg**	**10 18 09.9**	**+0.4**
IVA	**Berane**	**1.70 335**	⇓*i*Pn	**Pn**	**10 17 45.2**	**+0.7**
IVA			*e*Sn	**Sg**	**10 18 09.9**	**+0.4**
THE	**Thessaloniki**	**1.73 113**	P	**Pn**	**10 17 44.2**	**-0.6**
THE	**Thessaloniki**	**1.73 113**	*e*Pn	**Pn**	**10 17 44.5**	**-0.3**
THE	**Thessaloniki**	**1.73 113**	P	**Pn**	**10 17 44.5**	**-0.3**
THE	**Thessaloniki**	**1.73 113**	*e*P	**Pn**	**10 17 44.5**	**-0.3**
THE	**Thessaloniki**	**1.73 113**	*e*P	**Pn**	**10 17 44.5**	**-0.3**
LIT	**Litokhoron**	**1.74 135**	P	**Pn**	**10 17 44.4**	**-0.6**
LIT			AML	AML	10 18 18.3	
	comp=N,10838μm,0.8s					
LIT			AML	AML	10 18 19.3	
	comp=E,9012μm,0.7s					
LIT	**Litokhoron**	**1.74 135**	*e*Pn	**Pn**	**10 17 44.9**	**-0.1**
LIT			*e*Pn	**Pn**	**10 17 45.1**	**+0.1**
LIT			*e*Sn	**Sn**	**10 18 07.9**	**+0.7**
LIT	**Litokhoron**	**1.74 135**	P	**Pn**	**10 17 45.1**	**+0.1**
LIT	**Litokhoron**	**1.74 135**	*e*P	**Pn**	**10 17 44.9**	**-0.1**
LIT			*e*		10 18 07.9	
LIT	**Litokhoron**	**1.74 135**	P	**Pn**	**10 17 44.9**	**-0.1**
LIT			*e*S	**Sn**	**10 18 07.9**	**+0.7**
KOME	**Kolasin**	**1.82 327**	⇓*i*Pn	**Pn**	**10 17 46.2**	**0.0**
KOME			*e*Sn	**Sg**	**10 18 12.4**	**-0.9**
KOME	**Kolasin**	**1.82 327**	⇓*i*Pn	**Pn**	**10 17 46.2**	**0.0**
KOME			*e*Sn	**Sg**	**10 18 12.4**	**-0.9**
KEK	**Kerkira**	**1.82 207**	P	**Pb**	**10 17 47.4**	**-0.7**
KEK			S	**Sg**	**10 18 13.4**	**+0.1**
KEK			AML	AML	10 18 18.3	
	comp=N,8711μm,0.6s					
KEK			AML	AML	10 18 18.6	
	comp=E,12147μm,0.5s					
KEK	**Kerkira**	**1.82 207**	P	**Pb**	**10 17 47.4**	**-0.7**
KEK			S	**Sg**	**10 18 12.9**	**-0.5**
HORT	**Hortiatis**	**1.84 113**	P	**Pn**	**10 17 45.9**	**-0.6**
HORT			AML	AML	10 18 16.9	
	comp=E,2832μm,0.7s					
HORT			AML	AML	10 18 19.7	
	comp=N,3496μm,0.9s					
HORT	**Hortiatis**	**1.84 113**	*e*Pn	**Pn**	**10 17 46.0**	**-0.4**
HORT	**Hortiatis**	**1.84 113**	P	**Pn**	**10 17 46.0**	**-0.4**
HORT	**Hortiatis**	**1.84 113**	P	**Pn**	**10 17 46.0**	**-0.4**
IGT	**Igoumenitsa**	**1.85 193**	*e*Pn	**Pb**	**10 17 48.7**	**0.0**
IGT	**Igoumenitsa**	**1.85 193**	P	**Pb**	**10 17 48.8**	**+0.1**
IGT			AML	AML	10 18 20.8	
	comp=E,13034μm,0.7s					
IGT			AML	AML	10 18 26.1	
	comp=N,10133μm,0.9s					
IGT	**Igoumenitsa**	**1.85 193**	P	**Pb**	**10 17 48.3**	**-0.4**
IGT	**Igoumenitsa**	**1.85 193**	*e*Pn	**Pb**	**10 17 48.7**	**0.0**
SELS	**Selova**	**1.89 5**	*e*Pg	**Pn**	**10 17 46.5**	**-0.6**
SELS			*e*Sg	**Sb**	**10 18 12.3**	**-0.6**
CEME	**Cevo**	**1.90 310**	⇑*i*Pn	**Pn**	**10 17 47.6**	**+0.4**
CEME			*e*Sn	**Sb**	**10 18 14.2**	**+1.0**
CEME	**Cevo**	**1.90 310**	⇑*i*Pn	**Pn**	**10 17 47.6**	**+0.4**
CEME			*e*Sn	**Sb**	**10 18 14.2**	**+1.0**
SOH	**Sokhos**	**1.94 105**	P	**Pn**	**10 17 47.6**	**-0.2**
SOH			AML	AML	10 18 22.5	
	comp=N,5791μm,1.0s					
SOH			AML	AML	10 18 23.2	
	comp=E,7709μm,0.6s					
SOH	**Sokhos**	**1.94 105**	*e*Pn	**Pn**	**10 17 47.7**	**-0.1**
SOH	**Sokhos**	**1.94 105**	P	**Pn**	**10 17 47.7**	**-0.1**
SOH	**Sokhos**	**1.94 105**	*e*P	**Pn**	**10 17 47.7**	**-0.1**
SOH	**Sokhos**	**1.94 105**	P	**Pn**	**10 17 47.6**	**-0.2**
THL	**Klokotos Trika**	**1.97 154**	P	**Pn**	**10 17 47.7**	**-0.5**
THL			AML	AML	10 18 20.7	
	comp=N,8478μm,0.8s					
THL			AML	AML	10 18 20.9	
	comp=E,10931μm,1.3s					
THL	**Klokotos Trika**	**1.97 154**	P	**Pn**	**10 17 48.7**	**+0.5**
THL			S	**Sb**	**10 18 14.9**	**-0.4**
THL	**Klokotos Trika**	**1.97 154**	P	**Pn**	**10 17 48.3**	**+0.1**
THL			S	**Sb**	**10 18 14.9**	**-0.4**
NKME	**Niksic**	**2.02 316**	⇓*i*Pn	**Pb**	**10 17 50.4**	**-1.2**
NKME			*e*Sn	**Sb**	**10 18 17.4**	**+0.6**
NKME	**Niksic**	**2.02 316**	⇓*i*Pn	**Pb**	**10 17 50.4**	**-1.2**
NKME			*e*Sn	**Sb**	**10 18 17.4**	**+0.6**
NKY	**Niksic**	**2.03 317**	⇑*i*Pn	**Pb**	**10 17 50.5**	**-1.4**
NKY			*e*Sn	**Sb**	**10 18 17.2**	**0.0**
NKY	**Niksic**	**2.03 317**	⇑*i*Pn	**Pb**	**10 17 50.5**	**-1.4**
NKY			*e*Sn	**Sb**	**10 18 17.2**	**0.0**
SJES	**Sjenica**	**2.04 341**	*e*Pn	**Pn**	**10 17 50.2**	**+1.0**
SRS	**Serrai**	**2.06 95**	*e*Pn	**Pn**	**10 17 49.3**	**-0.1**
SRS	**Serrai**	**2.06 95**	P	**Pn**	**10 17 48.5**	**-0.8**
SRS	**Serrai**	**2.06 95**	*e*Pn	**Pn**	**10 17 49.0**	**-0.4**
SRS	**Serrai**	**2.06 95**	P	**Pn**	**10 17 49.0**	**-0.4**
SRS	**Serrai**	**2.06 95**	*e*P	**Pn**	**10 17 49.0**	**-0.4**
SRS	**Serrai**	**2.06 95**	P	**Pn**	**10 17 48.8**	**-0.6**
SRS	**Serrai**	**2.06 95**	*e*Pn	**Pn**	**10 17 49.3**	**-0.1**
HCY	**Herceg Novi**	**2.10 303**	⇑*i*Pn	**Pn**	**10 17 51.2**	**+1.3**
HCY			*e*Sn	**Sb**	**10 18 18.5**	**-0.4**
HCY	**Herceg Novi**	**2.10 303**	*e*Pn	**Pn**	**10 17 51.2**	**+1.3**
HCY			*e*Sn	**Sb**	**10 18 18.5**	**-0.4**
VTS	**Vitosha**	**2.14 53**	*e*Pg	**Pn**	**10 17 51.1**	**+0.4**
VTS	**Vitosha**	**2.14 53**	⇑*i*P	**Pn**	**10 17 51.4**	**+0.7**
VTS	**Vitosha**	**2.14 53**	*e*Pn	**Pn**	**10 17 51.0**	**+0.4**
VTS			*e*Sn	**Sn**	**10 18 16.6**	**-0.7**
VTS	**Vitosha**	**2.14 53**	*e*P	**Pn**	**10 17 51.1**	**+0.4**
VTS			*e*		10 18 16.6	
VTS	**Vitosha**	**2.14 53**	*e*Pn	**Pn**	**10 17 51.0**	**+0.4**
VTS	**Vitosha**	**2.14 53**	⇑*i*P	**Pn**	**10 17 51.4**	**+0.7**
VTS			*e*Sn	**Sn**	**10 18 16.6**	**-0.7**
PLG	**Polygyros**	**2.17 116**	P	**Pn**	**10 17 51.8**	**+0.8**
PLG	**Polygyros**	**2.17 116**	*e*Pn	**Pn**	**10 17 50.5**	**-0.5**
PLG	**Polygyros**	**2.17 116**	P	**Pn**	**10 17 50.5**	**-0.5**
PLG	**Polygyros**	**2.17 116**	*e*P	**Pn**	**10 17 50.5**	**-0.5**
PLG	**Polygyros**	**2.17 116**	P	**Pn**	**10 17 50.5**	**-0.5**
NVR	**Nevrokopi**	**2.25 89**	P	**Pn**	**10 17 51.9**	**-0.1**
NVR	**Nevrokopi**	**2.25 89**	*e*Pn	**Pn**	**10 17 52.1**	**+0.1**
NVR	**Nevrokopi**	**2.25 89**	P	**Pn**	**10 17 52.1**	**+0.1**
NVR	**Nevrokopi**	**2.25 89**	P	**Pn**	**10 17 51.8**	**-0.2**
PLE	**Pljevlja**	**2.27 331**	⇑*i*Pn	**Pn**	**10 17 53.4**	**+0.9**
PLE			*e*Sn	**Sb**	**10 18 23.4**	**-0.8**
PLE	**Pljevlja**	**2.27 331**	⇑*i*Pn	**Pn**	**10 17 53.4**	**+0.9**
PLE			*e*Sn	**Sb**	**10 18 23.4**	**-0.8**
ZAPS	**Zavoj**	**2.33 33**	*e*Pn	**Pn**	**10 17 54.1**	**+0.9**
TREB	**Trebinje**	**2.33 307**	⇑*i*Pn	**Pn**	**10 17 54.9**	**+1.7**
BRY	**Bratogost**	**2.34 313**	⇑*i*Pn	**Pb**	**10 17 55.6**	**-1.5**
UPM	**Unac-Piva**	**2.37 322**	⇓*i*Pn	**Pb**	**10 17 55.7**	**-1.9**
UPM			*e*Sn	**Sb**	**10 18 25.6**	**-1.4**
UPM	**Unac-Piva**	**2.37 322**	*e*Pn	**Pn**	**10 17 55.6**	**+1.8**
UPM	**Unac-Piva**	**2.37 322**	P	**Pg**	**10 17 59.0**	**-1.3**
UPM			*e*Sn	**Sb**	**10 18 25.6**	**-1.4**
BOVS	**Bovan**	**2.38 15**	*e*Pn	**Pn**	**10 17 53.7**	**0.0**
BOVS	**Bovan**	**2.38 15**	*e*Pn	**Pn**	**10 17 53.7**	**0.0**
MESG	**Mesagne**	**2.41 253**	P	**Pn**	**10 17 54.6**	**+0.4**
MESG			S	**Sn**	**10 18 23.4**	**-0.3**
MESG	**Mesagne**	**2.41 253**	P	**Pn**	**10 17 54.6**	**+0.4**
MESG			S	**Sn**	**10 18 23.4**	**-0.3**
MESG			AML	AML		
	comp=E,5935μm,0.8s					
MESG			AML	AML		
	comp=N,7655μm,0.8s					
MESG			AML	AML		
	comp=N,7655μm,0.8s					
MESG			AML	AML		
	comp=E,5935μm,0.8s					
FYTO	**Fytoko, Volos**	**2.49 140**	*e*Pn	**Pn**	**10 17 55.2**	**-0.1**
FYTO	**Fytoko, Volos**	**2.49 140**	P	**Pn**	**10 17 55.2**	**-0.1**
FYTO	**Fytoko, Volos**	**2.49 140**	P	**Pn**	**10 17 55.2**	**-0.1**
GRUS	**Gruza**	**2.55 357**	*e*Pn	**Pn**	**10 17 56.2**	**+0.1**
GRUS	**Gruza**	**2.55 357**	*e*Pn	**Pn**	**10 17 56.2**	**+0.1**
LKD2	**Lefkada island**	**2.55 184**	P	**Pn**	**10 17 57.1**	**+0.9**
LKD2	**Lefkada island**	**2.55 184**	P	**Pn**	**10 17 57.3**	**+1.1**
PAIG	**Paliouri**	**2.56 123**	P	**Pn**	**10 17 55.9**	**-0.3**
PAIG	**Paliouri**	**2.56 123**	*e*Pn	**Pn**	**10 17 55.9**	**-0.3**
PAIG	**Paliouri**	**2.56 123**	P	**Pn**	**10 17 55.9**	**-0.3**
PAIG	**Paliouri**	**2.56 123**	*e*P	**Pn**	**10 17 55.9**	**-0.3**
PAIG	**Paliouri**	**2.56 123**	P	**Pn**	**10 17 55.9**	**-0.3**
OUR	**Ouranopolis**	**2.56 112**	P	**Pn**	**10 17 55.7**	**-0.5**
OUR	**Ouranopolis**	**2.56 112**	*e*Pn	**Pn**	**10 17 56.5**	**+0.3**
OUR	**Ouranopolis**	**2.56 112**	P	**Pn**	**10 17 56.5**	**+0.3**
OUR	**Ouranopolis**	**2.56 112**	*e*P	**Pn**	**10 17 56.5**	**+0.3**
OUR	**Ouranopolis**	**2.56 112**	P	**Pn**	**10 17 56.1**	**-0.1**
AGG	**Agios Georgios**	**2.57 154**	*e*Pn	**Pn**	**10 17 56.9**	**+0.5**
AGG			*e*Pn	**Pb**	**10 17 57.1**	**-3.9**
AGG	**Agios Georgios**	**2.57 154**	P	**Pn**	**10 17 56.9**	**+0.5**
AGG	**Agios Georgios**	**2.57 154**	*e*P	**Pn**	**10 17 56.9**	**+0.5**
AGG	**Agios Georgios**	**2.57 154**	P	**Pn**	**10 17 56.9**	**+0.5**
XOR	**Xorichti**	**2.65 137**	*e*Pn	**Pn**	**10 17 57.5**	**0.0**
XOR	**Xorichti**	**2.65 137**	P	**Pn**	**10 17 57.5**	**0.0**
XOR	**Xorichti**	**2.65 137**	P	**Pn**	**10 17 57.5**	**0.0**
CGL1	**Ceglie Messapi**	**2.66 256**	*i* Pn	**Pn**	**10 17 57.9**	**+0.2**
ZAGS	**Zajecar**	**2.67 22**	*e*Pn	**Pn**	**10 17 58.0**	**+0.3**
ZAGS	**Zajecar**	**2.67 22**	*e*Pn	**Pn**	**10 17 58.0**	**+0.3**
FASA	**Fasano**	**2.71 260**	*i* Pn	**Pn**	**10 17 58.7**	**+0.3**
BBLS	**Lazići**	**2.75 337**	*e*Pn	**Pn**	**10 17 59.6**	**+0.7**
BBLS	**Lazići**	**2.75 337**	⇑*i*Pn	**Pn**	**10 17 59.1**	**+0.2**
KAVA	**Kavala**	**2.77 96**	P	**Pn**	**10 17 58.3**	**-0.7**
KAVA	**Kavala**	**2.77 96**	*e*Pn	**Pn**	**10 17 58.9**	**-0.2**
KAVA	**Kavala**	**2.77 96**	P	**Pn**	**10 17 58.9**	**-0.2**
KAVA	**Kavala**	**2.77 96**	P	**Pn**	**10 17 58.7**	**-0.4**
STON	**Ston**	**2.82 304**	*i* Pn	**Pn**	**10 18 00.2**	**+0.5**
STON			Sn	**Sn**	**10 18 35.8**	**+2.1**
STON	**Ston**	**2.82 304**	⇑*i*Pn	**Pn**	**10 17 59.9**	**+0.1**
STON			Sn	**Sn**	**10 18 35.8**	**+2.1**
DIVS	**Divibare**	**2.83 347**	*e*Pn	**Pn**	**10 18 00.2**	**+0.1**
DIVS	**Divibare**	**2.83 347**	*e*Pn	**Pn**	**10 18 00.1**	**-0.1**
DIVS	**Divibare**	**2.83 347**	⇑*i*Pn	**Pn**	**10 18 00.0**	**-0.1**
TAR1	**Taranto**	**2.84 255**	*i* Pn	**Pn**	**10 17 59.2**	**-0.9**
TAR1			Sn	**Sn**	**10 18 32.6**	**-1.7**
FSK	**Fiskardo**	**2.89 185**	P	**Pn**	**10 18 01.8**	**+1.1**
TRUS	**Trudelj**	**2.90 353**	*e*Pn	**Pn**	**10 18 01.4**	**+0.4**
TRUS	**Trudelj**	**2.90 353**	*e*Pn	**Pn**	**10 18 01.4**	**+0.4**
MASS	**Massafra**	**2.91 257**	*i* Pn	**Pn**	**10 18 01.2**	**+0.1**
NOCI	**Noci**	**2.94 260**	P	**Pn**	**10 18 01.6**	**+0.2**
NOCI			S	**Sn**	**10 18 36.2**	**-0.5**
NOCI	**Noci**	**2.94 260**	P	**Pn**	**10 18 01.6**	**+0.2**
NOCI			S	**Sn**	**10 18 36.2**	**-0.5**
NOCI			AML	AML		
	comp=E,1430μm,1.0s					
NOCI			AML	AML		
	comp=N,1355μm,0.3s					
NOCI			AML	AML		
	comp=E,2885μm,0.3s					
NOCI			AML	AML		
	comp=N,4060μm,0.4s					
NOCI			AML	AML		
	comp=E,2885μm,0.3s					
NOCI			AML	AML		
	comp=N,4060μm,0.4s					
SVIS	**Svilajnac**	**2.94 5**	*e*Pn	**Pn**	**10 18 00.6**	**-0.8**
PLD	**Plovdiv**	**2.96 74**	*e*Pn	**Pn**	**10 18 02.5**	**+0.7**
PLD	**Plovdiv**	**2.96 74**	*e*Pn	**Pn**	**10 18 02.5**	**+0.7**
BAI	**Bari**	**3.02 267**	*i* Pn	**Pn**	**10 18 03.0**	**+0.4**
SERG	**Sergoula**	**3.06 162**	P	**Pn**	**10 18 04.3**	**+1.1**
SERG	**Sergoula**	**3.06 162**	P	**Pn**	**10 18 04.3**	**+1.1**
HAPS	**Han Pijesak,BI**	**3.09 333**	*e*Pn	**Pn**	**10 18 03.1**	**-0.6**
KALE	**Kalithea**	**3.10 161**	*e*Pn	**Pn**	**10 18 04.8**	**+1.0**
KALE	**Kalithea**	**3.10 161**	P	**Pn**	**10 18 04.8**	**+1.0**
KALE	**Kalithea**	**3.10 161**	P	**Pn**	**10 18 04.8**	**+1.0**
TRIZ	**Trizonia**	**3.11 162**	P	**Pn**	**10 18 04.8**	**+1.0**
TRIZ	**Trizonia**	**3.11 162**	P	**Pn**	**10 18 04.8**	**+1.0**
KUBS	**Kucevo**	**3.13 11**	*e*Pn	**Pn**	**10 18 02.6**	**-1.5**
KUBS	**Kucevo**	**3.13 11**	*e*Pn	**Pn**	**10 18 02.6**	**-1.5**
LKR	**Lokris**	**3.14 148**	*e*Pn	**Pn**	**10 18 04.7**	**+0.5**
LKR	**Lokris**	**3.14 148**	P	**Pn**	**10 18 04.7**	**+0.5**
LKR	**Lokris**	**3.14 148**	P	**Pn**	**10 18 04.7**	**+0.5**
VLS	**Valsamata**	**3.17 184**	*e*Pn	**Pn**	**10 18 05.3**	**+0.7**
VLS	**Valsamata**	**3.17 184**	P	**Pn**	**10 18 05.3**	**+0.7**
VLS	**Valsamata**	**3.17 184**	*e*P	**Pn**	**10 18 05.3**	**+0.7**
VLS	**Valsamata**	**3.17 184**	P	**Pn**	**10 18 05.3**	**+0.7**
DSF	**Desfina**	**3.19 156**	*e*Pn	**Pn**	**10 18 05.6**	**+0.6**
DSF	**Desfina**	**3.19 156**	P	**Pn**	**10 18 05.6**	**+0.6**
DSF	**Desfina**	**3.19 156**	P	**Pn**	**10 18 05.6**	**+0.6**
SG1	**Sgolgore (BA)**	**3.21 262**	*i* Pn	**Pn**	**10 18 05.4**	**+0.1**
SG1			Sn	**Sn**	**10 18 44.1**	**+0.5**
MATE	**Matera**	**3.23 259**	⇓*i*P	**Pn**	**10 18 06.2**	**+0.7**
MATE	**Matera**	**3.23 259**	⇓*i*P	**Pn**	**10 18 06.2**	**+0.7**
AMUR	**Altamura**	**3.26 264**	⇑P	**Pn**	**10 18 06.2**	**+0.3**
AMUR			S	**Sn**	**10 18 43.3**	**-1.3**
AMUR	**Altamura**	**3.26 264**	P	**Pn**	**10 18 06.2**	**+0.3**
AMUR			S	**Sn**	**10 18 43.3**	**-1.3**
AMUR			AML	AML		
	comp=E,2125μm,0.6s					
AMUR			AML	AML		
	comp=N,1620μm,0.6s					
AMUR			AML	AML		
	comp=E,2110μm,0.6s					
AMUR			AML	AML		
	comp=N,1620μm,0.6s					
AMUR			AML	AML		
	comp=N,1620μm,0.6s					
AMUR			AML	AML		
	comp=E,2110μm,0.6s					
TEKS	**Tekeris**	**3.36 343**	*e*Pn	**Pn**	**10 18 07.9**	**+0.6**
TEKS	**Tekeris**	**3.36 343**	*e*Pn	**Pn**	**10 18 07.6**	**+0.3**
BEO	**Beograd**	**3.48 355**	*e*Pn	**Pn**	**10 18 09.3**	**+0.4**
BEO	**Beograd**	**3.48 355**	P	**Pn**	**10 18 07.1**	**-1.8**
MDVR	**Moldovita**	**3.50 10**	⇓*i*P	**Pn**	**10 18 08.8**	**-0.4**
MDVR	**Moldovita**	**3.50 10**	⇓*i*P	**Pn**	**10 18 08.8**	**-0.4**
CRAC	**Craco**	**3.51 255**	P	**Pn**	**10 18 09.7**	**+0.4**
CRAC	**Craco**	**3.51 255**	P	**Pn**	**10 18 09.7**	**+0.4**
CRAC			AML	AML		
	comp=E,4985μm,1.0s					
CRAC			AML	AML		
	comp=N,2575μm,1.6s					
CRAC			AML	AML		
	comp=E,4985μm,1.0s					
CRAC			AML	AML		
	comp=N,2575μm,1.6s					
DJES	**Djerdap**	**3.54 19**	*e*Pn	**Pn**	**10 18 10.2**	**+0.5**
MRVN	**Minervino Murg**	**3.54 267**	⇑P	**Pn**	**10 18 10.3**	**+0.5**
MRVN	**Minervino Murg**	**3.54 267**	P	**Pn**	**10 18 10.3**	**+0.5**
MRVN			AML	AML		
	comp=E,1090μm,1.0s					
MRVN			AML	AML		
	comp=N,1074μm,0.5s					
MRVN			AML	AML		
	comp=N,1074μm,0.5s					
MRVN			AML	AML		
	comp=E,1090μm,1.0s					
DIM	**Dimitrovgrad**	**3.56 77**	P	**Pn**	**10 18 10.9**	**+0.9**
DIM	**Dimitrovgrad**	**3.56 77**	P	**Pn**	**10 18 10.9**	**+0.9**
ORI	**Oriolo Calabro**	**3.60 251**	P	**Pn**	**10 18 11.0**	**+0.4**
ORI	**Oriolo Calabro**	**3.60 251**	P	**Pn**	**10 18 11.0**	**+0.4**
PIPA	**Pietrapaola**	**3.61 240**	P	**Pn**	**10 18 11.2**	**+0.5**
PIPA	**Pietrapaola**	**3.61 240**	P	**Pn**	**10 18 11.2**	**+0.5**
PIPA			AML	AML		
	comp=E,2140μm,1.3s					
PIPA			AML	AML		
	comp=N,2400μm,0.6s					
PIPA			AML	AML		
	comp=E,2100μm,1.3s					
PIPA			AML	AML		
	comp=N,2455μm,0.6s					
PIPA			AML	AML		
	comp=N,2455μm,0.6s					
PIPA			AML	AML		
	comp=E,2140μm,1.3s					
PIPA			AML	AML		
	comp=E,2100μm,1.3s					
PIPA			AML	AML		
	comp=N,2400μm,0.6s					
HERR	**Herculane**	**3.71 17**	⇓*i*P	**Pn**	**10 18 12.2**	**+0.1**
HERR	**Herculane**	**3.71 17**	⇓*i*P	**Pn**	**10 18 12.2**	**+0.1**
MS1	**Monte Sant'Ang**	**3.72 277**	*i* Pn	**Pn**	**10 18 12.6**	**+0.3**
SRE	**Strehaia**	**3.73 26**	⇑*i*P	**Pn**	**10 18 12.9**	**+0.5**
SRE	**Strehaia**	**3.73 26**	⇑*i*P	**Pn**	**10 18 12.9**	**+0.5**
PALZ	**Palazzo San Ge**	**3.73 266**	P	**Pn**	**10 18 12.9**	**+0.5**
PALZ	**Palazzo San Ge**	**3.73 266**	P	**Pn**	**10 18 12.9**	**+0.5**
PALZ			AML	AML		
	comp=E,6710μm,1.1s					
PALZ			AML	AML		
	comp=N,5810μm,1.0s					
PALZ			AML	AML		
	comp=N,5810μm,1.0s					
PALZ			AML	AML		
	comp=E,6710μm,1.1s					
SALB	**San Lorenzo Be**	**3.75 249**	⇑P	**Pn**	**10 18 12.6**	**-0.1**
SALB	**San Lorenzo Be**	**3.75 249**	P	**Pn**	**10 18 12.6**	**-0.1**
SALB			AML	AML		
	comp=E,2895μm,0.4s					
SALB			AML	AML		
	comp=N,2420μm,0.8s					
SALB			AML	AML		
	comp=E,2985μm,0.4s					
SALB			AML	AML		
	comp=N,2450μm,0.8s					
SALB			AML	AML		
	comp=N,2450μm,0.8s					
SALB			AML	AML		
	comp=E,2985μm,0.4s					
SALB			AML	AML		
	comp=E,2895μm,0.4s					
SALB			AML	AML		
	comp=N,2420μm,0.8s					
MSAG	**Monte S. Angel**	**3.75 277**	⇑P	**Pn**	**10 18 12.8**	**+0.1**
MSAG	**Monte S. Angel**	**3.75 277**	P	**Pn**	**10 18 12.8**	**+0.1**
MSAG			AML	AML		
	comp=E,2570μm,0.5s					
MSAG			AML	AML		
	comp=N,3395μm,0.7s					
MSAG			AML	AML		
	comp=E,2570μm,0.5s					
MSAG			AML	AML		
	comp=N,3395μm,0.7s					
ACER	**Acerenza**	**3.77 263**	P	**Pn**	**10 18 13.1**	**+0.1**
ACER	**Acerenza**	**3.77 263**	P	**Pn**	**10 18 13.1**	**+0.1**
ACER			AML	AML		
	comp=E,3185μm,0.8s					
ACER			AML	AML		
	comp=N,4685μm,0.7s					
ACER			AML	AML		
	comp=E,3270μm,0.7s					
ACER			AML	AML		
	comp=N,4870μm,0.7s					
ACER			AML	AML		
	comp=N,4870μm,0.7s					
ACER			AML	AML		
	comp=N,4685μm,0.7s					
ACER			AML	AML		
	comp=E,3270μm,0.7s					
ACER			AML	AML		
	comp=E,3185μm,0.8s					
PVL	**Pavlikeni**	**3.80 59**	P	**Pn**	**10 18 12.7**	**-0.6**
PVL	**Pavlikeni**	**3.80 59**	P	**Pn**	**10 18 12.7**	**-0.6**
SCHR	**S. Chirico Rap**	**3.82 254**	P	**Pn**	**10 18 14.0**	**+0.3**
SCHR			AML	AML		
	comp=E,2050μm,0.6s					
SCHR			AML	AML		
	comp=N,1530μm,0.7s					
SCHR			AML	AML		
	comp=E,2050μm,0.6s					
SCHR			AML	AML		
	comp=N,1530μm,0.7s					
TIP	**Timpagrande**	**3.82 237**	⇑*i*P	**Pn**	**10 18 14.1**	**+0.4**
TIP	**Timpagrande**	**3.82 237**	*e*Pn	**Pn**	**10 18 13.6**	**0.0**
TIP	**Timpagrande**	**3.82 237**	*e*Pn	**Pn**	**10 18 13.6**	**0.0**
TIP	**Timpagrande**	**3.82 237**	⇑*i*P	**Pn**	**10 18 14.1**	**+0.4**
CELI	**Celico**	**3.86 241**	P	**Pn**	**10 18 14.8**	**+0.6**
CELI	**Celico**	**3.86 241**	P	**Pn**	**10 18 14.8**	**+0.6**
CELI			AML	AML		
	comp=E,2470μm,0.9s					
CELI			AML	AML		
	comp=N,2435μm,1.1s					
CELI			AML	AML		
	comp=N,2435μm,1.1s					
CELI			AML	AML		
	comp=E,2470μm,0.9s					
SGRT	**San Giovanni R**	**3.88 278**	⇑*i*P	**Pn**	**10 18 14.5**	**+0.1**
SGRT	**San Giovanni R**	**3.88 278**	*i* P	**Pn**	**10 18 14.5**	**+0.1**
SGRT			AML	AML		
	comp=E,1685μm,0.5s					
SGRT			AML	AML		
	comp=N,1445μm,0.6s					
SGRT			AML	AML		
	comp=E,1685μm,0.5s					
SGRT			AML	AML		
	comp=N,1445μm,0.6s					
FGSL	**Fruska Gora**	**3.90 349**	*e*Pn	**Pn**	**10 18 14.7**	**+0.1**
FRGS	**Fruska Gora**	**3.90 349**

SLCN			AML	AML	
	comp=E,3595µm,0.5s				
SLCN			AML	AML	
	comp=E,3765µm,0.5s				
SLCN			AML	AML	
	comp=N,2985µm,1.0s				
SLCN			AML	AML	
	comp=N,2965µm,1.0s				
MRLC	**Muro Lucano**	**4.12 264**	P	**Pn**	**10 18 18.2 +0.5**
MRLC	**Muro Lucano**	**4.12 264**	P	**Pn**	**10 18 18.2 +0.5**
MRLC			AML	AML	
	comp=E,1039µm,1.3s				
MRLC			AML	AML	
	comp=N,1380µm,0.9s				
MRLC			AML	AML	
	comp=N,1380µm,0.9s				
MRLC			AML	AML	
	comp=E,1039µm,1.3s				
SGTA	**Sant Agata di**	**4.16 269**	P	**Pn**	**10 18 19.2 +0.8**
SGTA	**Sant Agata di**	**4.16 269**	P	**Pn**	**10 18 19.1 +0.8**
SGTA			AML	AML	
	comp=E,1680µm,0.9s				
SGTA			AML	AML	
	comp=N,1237µm,0.9s				
SGTA			AML	AML	
	comp=N,1237µm,0.9s				
SGTA			AML	AML	
	comp=E,1680µm,0.9s				
CET2	**Cetraro**	**4.17 246**	⇑P	**Pn**	**10 18 19.7 +1.3**
CET2	**Cetraro**	**4.17 246**	P	**Pn**	**10 18 19.7 +1.3**
CET2			AML	AML	
	comp=E,3695µm,0.9s				
CET2			AML	AML	
	comp=N,4045µm,1.0s				
CET2			AML	AML	
	comp=E,3695µm,0.9s				
CET2			AML	AML	
	comp=N,4045µm,1.0s				
MGR	**Morigerati**	**4.22 255**	P	**Pn**	**10 18 19.0 -0.1**
MGR	**Morigerati**	**4.22 255**	P	**Pn**	**10 18 19.9 +0.9**
MGR			AML	AML	
	comp=E,2795µm,0.7s				
MGR			AML	AML	
	comp=N,2360µm,0.4s				
MGR			AML	AML	
	comp=E,2345µm,0.8s				
MGR			AML	AML	
	comp=N,2920µm,0.4s				
MGR			AML	AML	
	comp=E,2795µm,0.7s				
MGR			AML	AML	
	comp=N,2360µm,0.4s				
MGR			AML	AML	
	comp=N,2920µm,0.4s				
MGR			AML	AML	
	comp=E,2345µm,0.8s				
ITM	**Ithomi**	**4.23 169**	*e*Pn	**Pn**	**10 18 20.5 +1.2**
ITM	**Ithomi**	**4.23 169**	*e*Pn	**Pn**	**10 18 20.5 +1.2**
CAFE	**Carife**	**4.27 268**	P	**Pn**	**10 18 20.5 +0.6**
CAFE	**Carife**	**4.27 268**	P	**Pn**	**10 18 20.5 +0.6**
CAFE			AML	AML	
	comp=E,1510µm,0.6s				
CAFE			AML	AML	
	comp=N,1357µm,0.9s				
CAFE			AML	AML	
	comp=E,1510µm,0.6s				
CAFE			AML	AML	
	comp=N,1357µm,0.9s				
SNAL	**S. Angelo Dei**	**4.30 266**	P	**Pn**	**10 18 20.5 +0.2**
SNAL	**S. Angelo Dei**	**4.30 266**	P	**Pn**	**10 18 20.5 +0.2**
SNAL			AML	AML	
	comp=E,1770µm,1.2s				
SNAL			AML	AML	
	comp=N,2420µm,0.9s				
SNAL			AML	AML	
	comp=N,2420µm,0.9s				
SNAL			AML	AML	
	comp=E,1770µm,1.2s				
MOCO	**Biccari - m.te**	**4.30 272**	*i* P	**Pn**	**10 18 21.5 +1.1**
MOCO			AML	AML	
	comp=E,669µm,0.8s				
MOCO			AML	AML	
	comp=N,376µm,0.8s				
MOCO			AML	AML	
	comp=E,684µm,0.8s				
MOCO			AML	AML	
	comp=N,429µm,0.8s				
MOCO			AML	AML	
	comp=N,376µm,0.8s				
MOCO			AML	AML	
	comp=N,429µm,0.8s				
MOCO			AML	AML	
	comp=E,669µm,0.8s				
MOCO			AML	AML	
	comp=E,684µm,0.8s				
CDRU	**Civita di Ruta**	**4.31 260**	AML	AML	
	comp=E,1480µm,0.4s				
CDRU			AML	AML	
	comp=N,1318µm,0.5s				
CDRU			AML	AML	
	comp=E,1480µm,0.4s				
CDRU			AML	AML	
	comp=N,1318µm,0.5s				
BZS	**Buzias**	**4.31 7**	*e*Pn	**Pn**	**10 18 19.3 -1.0**
BZS	**Buzias**	**4.31 7**	⇓*i*P	**Pn**	**10 18 19.4 -0.9**
BZS	**Buzias**	**4.31 7**	⇓*i*P	**Pn**	**10 18 19.4 -0.9**
MELA	**Melanico ??? S**	**4.33 277**	P	**Pn**	**10 18 21.2 +0.6**
MELA	**Melanico ??? S**	**4.33 277**	P	**Pn**	**10 18 21.2 +0.6**
MELA			AML	AML	
	comp=E,2660µm,1.6s				
MELA			AML	AML	
	comp=N,3485µm,1.0s				
MELA			AML	AML	
	comp=E,2705µm,1.6s				
MELA			AML	AML	
	comp=N,3625µm,0.9s				
MELA			AML	AML	
	comp=N,3485µm,1.0s				
MELA			AML	AML	
	comp=E,2660µm,1.6s				
MELA			AML	AML	
	comp=N,3625µm,0.9s				
MELA			AML	AML	
	comp=E,2705µm,1.6s				
CMPR	**Campora**	**4.35 258**	AML	AML	
	comp=N,1945µm,0.4s				
CMPR			AML	AML	
	comp=E,1725µm,0.6s				
CMPR			AML	AML	
	comp=N,1945µm,0.4s				
CMPR			AML	AML	
	comp=E,1725µm,0.6s				
BLY	**Banja Luka**	**4.35 323**	⇓*i*P	**Pn**	**10 18 22.4 +1.5**
BLY	**Banja Luka**	**4.35 323**	*e*Pn	**Pn**	**10 18 22.2 +1.4**
BLY	**Banja Luka**	**4.35 323**	*e*Pn	**Pn**	**10 18 22.1 +1.2**
BLY	**Banja Luka**	**4.35 323**	⇓*i*P	**Pn**	**10 18 22.4 +1.5**
MCRV	**Calabrutti - M**	**4.35 265**	P	**Pn**	**10 18 21.5 +0.5**
MCRV	**Calabrutti - M**	**4.35 265**	P	**Pn**	**10 18 21.5 +0.5**
MCRV			AML	AML	
	comp=E,928µm,0.3s				
MCRV			AML	AML	
	comp=N,884µm,0.7s				
MCRV			AML	AML	
	comp=N,884µm,0.7s				
MCRV			AML	AML	
	comp=E,928µm,0.3s				
BULG	**Bulgheria - Ca**	**4.37 255**	P	**Pn**	**10 18 21.8 +0.7**
BULG	**Bulgheria - Ca**	**4.37 255**	P	**Pn**	**10 18 21.8 +0.7**
BULG			AML	AML	
	comp=E,1870µm,0.5s				
BULG			AML	AML	
	comp=N,2775µm,1.0s				
BULG			AML	AML	
	comp=E,1880µm,0.5s				
BULG			AML	AML	
	comp=N,2865µm,1.0s				
BULG			AML	AML	
	comp=E,1880µm,0.5s				
BULG			AML	AML	
	comp=E,1870µm,0.5s				
BULG			AML	AML	
	comp=N,2775µm,1.0s				
BULG			AML	AML	
	comp=N,2865µm,1.0s				
MRB1	**Monte Rocchett**	**4.46 269**	AML	AML	
	comp=E,1750µm,0.5s				
MRB1			AML	AML	
	comp=N,1985µm,0.5s				
MRB1			AML	AML	
	comp=E,1835µm,0.5s				
MRB1			AML	AML	
	comp=N,2090µm,0.5s				
MRB1			AML	AML	
	comp=E,1750µm,0.5s				
MRB1			AML	AML	
	comp=N,2090µm,0.5s				
MRB1			AML	AML	
	comp=N,1985µm,0.5s				
MRB1			AML	AML	
	comp=E,1835µm,0.5s				
CIGN	**Sant'Elia a Pi**	**4.50 276**	AML	AML	
	comp=N,908µm,0.8s				
CIGN			AML	AML	
	comp=E,913µm,1.6s				
CIGN			AML	AML	
	comp=N,908µm,0.8s				
CIGN			AML	AML	
	comp=E,913µm,1.6s				
PSB1	**Pescosannita**	**4.57 271**	AML	AML	
	comp=N,816µm,1.1s				
PSB1			AML	AML	
	comp=E,998µm,1.1s				
PSB1			AML	AML	
	comp=N,816µm,1.1s				
PSB1			AML	AML	
	comp=E,998µm,1.1s				
LOT	**Lotru**	**4.62 26**	⇑*i*P	**Pn**	**10 18 25.3 +0.7**
LOT	**Lotru**	**4.62 26**	⇑*i*P	**Pn**	**10 18 25.3 +0.7**
SACR	**S. Croce Del S**	**4.64 273**	AML	AML	
	comp=E,937µm,0.7s				
SACR			AML	AML	
	comp=E,930µm,0.7s				
SACR			AML	AML	
	comp=N,641µm,1.5s				
SACR			AML	AML	
	comp=N,660µm,0.9s				
SACR			AML	AML	
	comp=N,660µm,0.9s				
SACR			AML	AML	
	comp=E,937µm,0.7s				
SACR			AML	AML	
	comp=N,641µm,1.5s				
SACR			AML	AML	
	comp=E,930µm,0.7s				
FRES	**Fresagrandinar**	**4.69 280**	AML	AML	
	comp=E,4340µm,0.7s				
FRES			AML	AML	
	comp=E,4340µm,0.7s				
FRES			AML	AML	
	comp=N,3185µm,0.6s				
FRES			AML	AML	
	comp=N,3185µm,0.6s				
BSSO	**Busso**	**4.73 275**	AML	AML	
	comp=N,1034µm,0.8s				
BSSO			AML	AML	
	comp=E,1003µm,0.7s				
BSSO			AML	AML	
	comp=N,1034µm,0.8s				
BSSO			AML	AML	
	comp=E,1003µm,0.7s				
SGRR	**Singureni**	**4.73 51**	⇑*i*P	**Pn**	**10 18 26.9 +0.8**
SGRR	**Singureni**	**4.73 51**	⇑*i*P	**Pn**	**10 18 26.9 +0.8**
TRIV	**Trivento**	**4.77 277**	AML	AML	
	comp=E,1520µm,0.7s				
TRIV			AML	AML	
	comp=N,1545µm,0.9s				
TRIV			AML	AML	
	comp=N,1545µm,0.9s				
TRIV			AML	AML	
	comp=E,1520µm,0.7s				
PAOL	**Paolisi**	**4.77 268**	AML	AML	
	comp=E,810µm,0.4s				
PAOL			AML	AML	
	comp=E,810µm,0.4s				
PAOL			AML	AML	
	comp=N,934µm,0.6s				
PAOL			AML	AML	
	comp=N,934µm,0.6s				
PTRJ	**Pietraroja**	**4.78 272**	AML	AML	
	comp=N,3470µm,0.6s				
PTRJ			AML	AML	
	comp=E,3385µm,0.8s				
PTRJ			AML	AML	
	comp=E,3385µm,0.8s				
PTRJ			AML	AML	
	comp=N,3470µm,0.6s				
ARR	**Arges**	**4.87 33**	⇑*i*P	**Pn**	**10 18 28.7 +0.6**
ARR	**Arges**	**4.87 33**	⇑*i*P	**Pn**	**10 18 28.7 +0.6**
SGG	**Gregorio Mates**	**4.89 273**	AML	AML	
	comp=E,1675µm,0.4s				
SGG			AML	AML	
	comp=N,1455µm,0.6s				
SGG			AML	AML	
	comp=E,1675µm,0.4s				
SGG			AML	AML	
	comp=N,1455µm,0.6s				
CEL	**Celeste**	**4.92 233**	*e*Pn	**Pn**	**10 18 29.2 +0.5**
CEL	**Celeste**	**4.92 233**	*e*Pn	**Pn**	**10 18 29.2 +0.5**
UDBI	**Udbina**	**4.92 312**	*i* Pn	**Pn**	**10 18 31.3 +2.4**
UDBI			Sn	**Sn**	**10 19 27.1 +1.3**
UDBI	**Udbina**	**4.92 312**	*i* Pn	**Pn**	**10 18 31.2 +2.4**
UDBI			Sn	**Sn**	**10 19 27.1 +1.3**
SIRR	**Siria**	**4.96 6**	⇑*i*P	**Pn**	**10 18 29.4 +0.1**
SIRR	**Siria**	**4.96 6**	⇑*i*P	**Pn**	**10 18 29.4 +0.1**
CAFR	**Castel Frentan**	**4.96 282**	AML	AML	
	comp=N,4340µm,0.5s				
CAFR			AML	AML	
	comp=E,4985µm,0.6s				
CAFR			AML	AML	
	comp=N,4340µm,0.5s				
CAFR			AML	AML	
	comp=E,4985µm,0.6s				
MIDA	**Miranda**	**4.98 276**	AML	AML	
	comp=E,1004µm,0.7s				
MIDA			AML	AML	
	comp=E,1004µm,0.7s				
MIDA			AML	AML	
	comp=N,1012µm,0.7s				
MIDA			AML	AML	
	comp=N,1012µm,0.7s				
LPEL	**Lama dei Pelig**	**5.06 280**	AML	AML	
	comp=E,1710µm,0.9s				
LPEL			AML	AML	
	comp=E,1710µm,0.9s				
LPEL			AML	AML	
	comp=N,1120µm,0.5s				
LPEL			AML	AML	
	comp=N,1120µm,0.5s				
RNI2	**Rionero Sannit**	**5.06 276**	AML	AML	
	comp=E,1470µm,1.0s				
RNI2			AML	AML	
	comp=N,1282µm,0.7s				
RNI2			AML	AML	
	comp=E,1470µm,1.0s				
RNI2			AML	AML	
	comp=N,1315µm,0.7s				
RNI2			AML	AML	
	comp=N,1315µm,0.7s				
RNI2			AML	AML	
	comp=N,1282µm,0.7s				
RNI2			AML	AML	
	comp=E,1470µm,1.0s				
RNI2			AML	AML	
	comp=E,1470µm,1.0s				
MORH	**M¯‡r^¡gy, Hung**	**5.13 342**	⇓*e*Pn	**Pn**	**10 18 31.5 -0.1**
MORH			*e*Sn	**Sn**	**10 19 28.3 -2.6**
MORH	**M¯‡r^¡gy, Hung**	**5.13 342**	⇓*e*Pn	**Pn**	**10 18 31.5 -0.1**
MORH			*e*Sn	**Sn**	**10 19 28.3 -2.6**
CERA	**Filignano**	**5.16 275**	AML	AML	
	comp=E,3450µm,1.0s				
CERA			AML	AML	
	comp=N,3305µm,0.8s				
CERA			AML	AML	
	comp=N,3305µm,0.8s				
CERA			AML	AML	
	comp=E,3450µm,1.0s				
INTR	**Introdacqua**	**5.27 280**	AML	AML	
	comp=E,2005µm,0.7s				
INTR			AML	AML	
	comp=E,2005µm,0.7s				
INTR			AML	AML	
	comp=N,2400µm,0.8s				
INTR			AML	AML	
	comp=N,2400µm,0.8s				
MODR	**Mondragone**	**5.28 270**	AML	AML	
	comp=E,478µm,0.6s				
MODR			AML	AML	
	comp=E,478µm,0.6s				
MODR			AML	AML	
	comp=N,477µm,0.9s				
MODR			AML	AML	
	comp=N,477µm,0.9s				
VCEL	**Villa Celiera**	**5.36 284**	AML	AML	
	comp=E,2735µm,0.5s				
VCEL			AML	AML	
	comp=E,2735µm,0.5s				
VCEL			AML	AML	
	comp=N,1920µm,0.6s				
VCEL			AML	AML	
	comp=N,1920µm,0.6s				
POFI	**Posta Fibreno**	**5.39 276**	AML	AML	
	comp=E,736µm,0.7s				
POFI			AML	AML	
	comp=N,414µm,1.0s				
POFI			AML	AML	
	comp=E,736µm,0.7s				
POFI			AML	AML	
	comp=N,414µm,1.0s				
NVLJ	**Novalja**	**5.46 308**	*e*Pn	**Pn**	**10 18 36.9 +0.8**
NVLJ			Sn	**Sn**	**10 19 39.4 +0.6**
VVLD	**Villa Vallelon**	**5.47 278**	AML	AML	
	comp=N,1430µm,0.8s				
VVLD			AML	AML	
	comp=E,1080µm,0.7s				
VVLD			AML	AML	
	comp=E,1080µm,0.7s				
VVLD			AML	AML	
	comp=N,1430µm,0.8s				
FAGN	**Fagnano**	**5.53 282**	AML	AML	
	comp=E,5285µm,0.5s				
FAGN			AML	AML	
	comp=E,5285µm,0.5s				
FAGN			AML	AML	
	comp=N,3700µm,0.5s				
FAGN			AML	AML	
	comp=N,3700µm,0.5s				
MLR	**Muntele Rosu**	**5.55 40**	Pn	**Pn**	**10 18 38.8 +1.3**
	comp=N,0.4nm,0.3s,baz=176,slow=5.3,SNR=18				
MLR			Sn	**Sn**	**10 19 42.0 +0.6**
	comp=N,0.8nm,0.3s,baz=239,slow=19,SNR=3.6				
MLR	**Muntele Rosu**	**5.55 40**	⇑*i*P	**Pn**	**10 18 38.8 +1.3**
TERO	**Teramo**	**5.57 286**	AML	AML	
	comp=E,797µm,0.5s				
TERO			AML	AML	
	comp=E,797µm,0.5s				
TERO			AML	AML	
	comp=N,1150µm,0.5s				
TERO			AML	AML	
	comp=N,1150µm,0.5s				
IFIL	**Filicudi i Eol**	**5.59 242**	AML	AML	
	comp=E,4165µm,0.4s				
IFIL			AML	AML	
	comp=E,4165µm,0.4s				
IFIL			AML	AML	
	comp=N,1280µm,1.3s				
IFIL			AML	AML	
	comp=N,1280µm,1.3s				
APE	**Apeiranthos**	**5.59 138**	⇑*i*P	**Pn**	**10 18 38.6 +0.7**
APE	**Apeiranthos**	**5.59 138**	⇑*i*P	**Pn**	**10 18 38.8 +0.9**
APE			pmax	pmax	
	comp=Z,13nm,0.8s				
APE	**Apeiranthos**	**5.59 138**	*i* P	**Pn**	**10 18 38.8 +0.9**
	comp=Z,13nm,0.8s				
ISR	**Istrita**	**5.60 46**	⇓*i*P	**Pn**	**10 18 39.8 +1.7**
ISR	**Istrita**	**5.60 46**	⇓*i*P	**Pn**	**10 18 39.8 +1.7**
DRGR		**5.61 13**	⇓*i*P	**Pn**	**10 18 39.0 +0.8**
DRGR		**5.61 13**	⇓*i*P	**Pn**	**10 18 39.0 +0.8**
DOPR	**Dopca**	**5.67 34**	⇑*i*P	**Pn**	**10 18 40.2 +1.2**
DOPR	**Dopca**	**5.67 34**	⇑*i*P	**Pn**	**10 18 40.2 +1.2**
AQU	**L'Aquila**	**5.67 283**	*e*Pn	**Pn**	**10 18 39.6 +0.5**
AQU	**L'Aquila**	**5.67 283**	*e*P	**Pn**	**10 18 39.6 +0.5**
AQU	**L'Aquila**	**5.67 283**	*e*P	**Pn**	**10 18 39.6 +0.5**
AQU	**L'Aquila**	**5.67 283**	⇑*i*Pn	**Pn**	**10 18 40.0 +0.9**
ZAG	**Zagreb**	**5.72 323**	*e*Pn	**Pn**	**10 18 41.1 +1.4**
GIUL	**Giuliano Di Ro**	**5.73 275**	AML	AML	
	comp=N,614µm,0.8s				
GIUL			AML	AML	
	comp=E,315µm,0.8s				
GIUL			AML	AML	
	comp=N,614µm,0.8s				
GIUL			AML	AML	
	comp=E,315µm,0.8s				
SMA1	**SAN MARTINO**	**5.77 285**	AML	AML	
	comp=N,2105µm,0.7s				
SMA1			AML	AML	
	comp=E,2270µm,0.5s				
SMA1			AML	AML	
	comp=N,2105µm,0.7s				
SMA1			AML	AML	
	comp=E,2270µm,0.5s				
OZLJ	**Ozalj**	**5.81 319**	*e*Pn	**Pn**	**10 18 41.9 +1.0**
OZLJ			Sn	**Sn**	**10 19 45.9 -1.6**
BOJS	**Bojanci**	**5.84 317**	*i* Pn	**Pn**	**10 18 43.1 +1.8**
BOJS			*i* Sn	**Sn**	**10 19 48.9 +0.7**
FIAM	**Fiamignano**	**5.87 282**	AML	AML	
	comp=N,1555µm,0.7s				
FIAM			AML	AML	
	comp=E,1385µm,0.7s				
FIAM			AML	AML	
	comp=N,1555µm,0.7s				
FIAM			AML	AML	
	comp=E,1385µm,0.7s				
BEHE	**Becsehely**	**5.92 331**	*e*Pn	**Pn**	**10 18 44.7 +2.2**
NRCA	**Norcia**	**5.97 287**	AML	AML	
	comp=N,1575µm,1.0s				
NRCA			AML	AML	
	comp=E,1710µm,0.8s				
NRCA			AML	AML	
	comp=E,1710µm,0.8s				
NRCA			AML	AML	
	comp=N,1575µm,1.0s				
CRES	**Cresnjev**	**5.97 321**	⇑*i*Pn	**Pn**	**10 18 44.3 +1.2**
GALF	**Gagliano Caste**	**6.08 235**	AML	AML	
	comp=N,418µm,0.7s				
GALF			AML	AML	
	comp=E,557µm,0.7s				
GALF			AML	AML	
	comp=N,418µm,0.7s				
GALF			AML	AML	
	comp=E,557µm,0.7s				
LTVH	**L¯tav¯rtes,**	**6.09 7**	⇓*ex*	Sn	10 19 45.4 -8.9
SANT	**Santorini**	**6.11 143**	*e*Pn	**Pn**	**10 18 46.1 +1.0**
PLOR	**Plostina**	**6.16 41**	⇓*i*P	**Pn**	**10 18 47.5 +1.8**
PLOR	**Plostina**	**6.16 41**	⇓*i*P	**Pn**	**10 18 47.5 +1.8**
HARR	**Harsova**	**6.16 55**	⇑*i*P	**Pn**	**10 18 46.7 +1.0**
HARR	**Harsova**	**6.16 55**	⇑*i*P	**Pn**	**10 18 46.7 +1.0**
TLB	**Topalu**	**6.18 56**	⇓*i*P	**Pn**	**10 18 47.2 +1.3**
TLB	**Topalu**	**6.18 56**	⇓*i*P	**Pn**	**10 18 47.2 +1.3**
VRI	**Vrincioaia**	**6.21 41**	⇑*i*P	**Pn**	**10 18 47.9 +1.5**
VRI	**Vrincioaia**	**6.21 41**	⇑*i*P	**Pn**	**10 18 47.9 +1.5**
BUD	**Budapest**	**6.29 348**	⇓*e*Pn	**Pn**	**10 18 48.6 +1.2**
BUD			*e*Sn	**Sn**	**10 20 00.8 +1.6**
CSKK	**Cs¯‡kako**	**6.31 344**	⇓*e*Pn	**Pn**	**10 18 49.2 +1.5**
CSKK			*e*Sn	**Sn**	**10 19 59.5 -0.3**
VAE	**Valguarnera**	**6.32 234**	Pn	**Pn**	**10 18 48.3 +0.3**
	comp=E,0.5nm,0.3s,baz=52,slow=17,SNR=1.8				
VAE			Sn	**Sn**	**10 19 59.1 -1.1**
	comp=E,2.1nm,0.3s,baz=350,slow=15,SNR=3.2				
VAE			LR	LR	10 21 44.4
	comp=E,302nm,18.6s,baz=158,slow=43				
TIRR	**Tirgusor**	**6.35 58**	*e*Pn	**Pn**	**10 18 48.5 +0.2**
TIRR	**Tirgusor**	**6.35 58**	*e*P	**Pn**	**10 18 48.5 +0.2**
TIRR	**Tirgusor**	**6.35 58**	*e*P	**Pn**	**10 18 48.5 +0.2**
CEY	**Cerknica**	**6.43 315**	⇑*i*Pn	**Pn**	**10 18 50.6 +1.2**
SKDS	**Skadanscina**	**6.53 312**	*i* Pn	**Pn**	**10 18 51.4 +0.6**
SKDS			*i* Sn	**Sn**	**10 20 05.7 +0.4**
MANT	**Manisa**	**6.55 113**	*e*Pn	**Pn**	**10 18 52.0 +0.7**
LJU	**Ljubljana**	**6.58 318**	⇑*i*Pn	**Pn**	**10 18 52.3 +0.8**
PSZ	**Piszkesteto**	**6.62 354**	⇓*i*P	**Pn**	**10 18 53.0 +1.0**
PSZ	**Piszkesteto**	**6.62 354**	⇓*e*Pn	**Pn**	**10 18 52.1 +0.1**
PSZ			*e*Sn	**Sn**	**10 20 08.7 +1.2**
PSZ	**Piszkesteto**	**6.62 354**	*e*Pn	**Pn**	**10 18 52.4 +0.3**
PSZ	**Piszkesteto**	**6.62 354**	*e*P	**Pn**	**10 18 52.4 +0.3**
PSZ	**Piszkesteto**	**6.62 354**	*e*P	**Pn**	**10 18 52.4 +0.3**
JAVS	**Javornik**	**6.72 315**	*i* Pn	**Pn**	**10 18 54.6 +1.1**
JAVS			*i* Sn	**Sn**	**10 20 10.5 +0.4**
PERS	**Pernice**	**6.73 324**	*i* Pn	**Pn**	**10 18 55.1 +1.5**
TRI	**Trieste**	**6.77 313**	*e*Pn	**Pn**	**10 18 54.4 +0.4**
TRI	**Trieste**	**6.77 313**	*e*P	**Pn**	**10 18 54.4 +0.4**

TRI	**Trieste**	**6.77**	**313**	*e*P	**Pn**	**10 18 54.4 +0.4**
SOKA	**Soboth**	**6.80**	**324**	*i* Pn	**Pn**	**10 18 56.1 +1.5**
	comp=E,35nm,0.4s,SNR=65					
SOKA	**Soboth**	**6.80**	**324**	Pn	**Pn**	**10 18 56.1 +1.5**
	comp=E,35nm,0.4s,SNR=65					
IDI	**Anoyia**	**6.81**	**151**	Pn	**Pn**	**10 18 54.7 -0.1**
	comp=E,4.2nm,0.3s,baz=312,slow=4.2,SNR=22					
IDI				Sn	**Sn**	**10 20 11.9 -0.5**
	comp=E,3.4nm,0.3s,baz=302,slow=19,SNR=2.6					
IDI	**Anoyia**	**6.81**	**151**	‖*i*P	**Pn**	**10 18 55.3 +0.5**
IDI	**Anoyia**	**6.81**	**151**	*e*Pn	**Pn**	**10 18 55.1 +0.3**
IDI				*e*Sn	**Sn**	**10 20 11.9 -0.5**
IDI	**Anoyia**	**6.81**	**151**	‖*i*P	**Pn**	**10 18 55.3 +0.5**
TRPA	**Tarpa**	**6.89**	**9**	⇑*i*P	**Pn**	**10 18 56.3 +0.5**
TRPA	**Tarpa**	**6.89**	**9**	⇑*e*Pn	**Pn**	**10 18 56.2 +0.5**
TRPA	**Tarpa**	**6.89**	**9**	⇑*i*P	**Pn**	**10 18 56.3 +0.5**
OBKA	**Obir**	**6.90**	**321**	*i* Pn	**Pn**	**10 18 57.3 +1.4**
	comp=E,35nm,0.4s,SNR=26					
OBKA				*i* Sn	**Sn**	**10 20 20.1 +5.7**
	comp=E,54nm,0.5s					
OBKA	**Obir**	**6.90**	**321**	Pn	**Pn**	**10 18 57.3 +1.4**
	comp=E,35nm,0.4s,SNR=26					
TLCR		**6.95**	**54**	⇑*i*P	**Pn**	**10 18 58.4 +1.8**
TLCR		**6.95**	**54**	⇑*i*P	**Pn**	**10 18 58.4 +1.8**
BURAR	**Bucovina Array**	**7.00**	**25**	‖*i*P	**Pn**	**10 18 59.2 +1.9**
BURAR	**Bucovina Array**	**7.00**	**25**	‖*i*P	**Pn**	**10 18 59.2 +1.9**
BUR04	**Bucovina Ar. S**	**7.00**	**25**	*e*Pn	**Pn**	**10 18 56.5 -0.9**
CLTB	**Caltabellotta**	**7.02**	**240**	*e*Pn	**Pn**	**10 18 58.9 +1.3**
BUR08	**Bucovina Ar. S**	**7.02**	**25**	*e*Pn	**Pn**	**10 18 58.3 +0.7**
ARSA	**Arzberg**	**7.05**	**329**	*i* Pn	**Pn**	**10 18 59.6 +1.7**
	SNR=43					
ARSA				*i* Sn	**Sn**	**10 20 16.9 -1.1**
ARSA	**Arzberg**	**7.05**	**329**	Pn	**Pn**	**10 18 59.6 +1.7**
	SNR=43					
ARSA				Sn	**Sn**	**10 20 16.9 -1.1**
SOP	**Sopron**	**7.05**	**336**	‖*e*P	Pn	10 19 02.8 +4.8
SOP	**Sopron**	**7.05**	**336**	P	**Pn**	**10 19 00.0 +2.0**
SOP				pmax	pmax	
	comp=Z,43nm,0.8s					
SOP	**Sopron**	**7.05**	**336**	P	**Pn**	**10 19 00.0 +2.0**
	comp=Z,43nm,0.8s					
KECS	**Kecovo**	**7.15**	**358**	*e*P	**Pn**	**10 19 00.3 +1.0**
KECS				*e*		10 20 17.9
KECS	**Kecovo**	**7.15**	**358**	*e*PN	**Pn**	**10 19 00.3 +1.0**
KECS				*e*		10 19 05.1
KECS	**Kecovo**	**7.15**	**358**	*e*SN	**Sn**	**10 20 17.9 -2.6**
KECS	**Kecovo**	**7.15**	**358**	*e*P	**Pn**	**10 19 00.3 +1.0**
VYHS	**Vyhne**	**7.30**	**349**	*e*P	**Pn**	**10 19 02.4 +1.0**
VYHS				*e*		10 20 22.1
VYHS	**Vyhne**	**7.30**	**349**	*e*PN	**Pn**	**10 19 02.4 +1.0**
VYHS				*e*SN	**Sn**	**10 20 22.1 -2.1**
VYHS	**Vyhne**	**7.30**	**349**	*e*P	**Pn**	**10 19 02.4 +1.0**
UZH	**Uzhgorod**	**7.36**	**7**	*e*P	**Pn**	**10 19 04.7 +2.5**
UZH				*e*S	**Sn**	**10 20 29.7 +4.1**
UZH				MLR	MLR	
	comp=Z,5.0nm,11.0s					
UZH	**Uzhgorod**	**7.36**	**7**	*e*P	**Pn**	**10 19 04.7 +2.5**
ZST	**Bratislava**	**7.36**	**340**	*e*P	**Pn**	**10 19 02.4 +0.2**
ZST				*e*		10 20 20.2
ZST	**Bratislava**	**7.36**	**340**	*e*PN	**Pn**	**10 19 02.4 +0.2**
ZST				*e*SN	**Sn**	**10 20 20.2 -5.5**
ZST	**Bratislava**	**7.36**	**340**	*e*P	**Pn**	**10 19 02.4 +0.2**
WDD	**Wied Dalam**	**7.41**	**224**	*e*Pn	**Pn**	**10 19 01.5 -1.4**
WDD				*e*Sn	**Sn**	**10 20 23.4 -3.5**
MYKA	**Terra Mystica**	**7.43**	**318**	*i* Pn	**Pn**	**10 19 04.3 +1.1**
	comp=Z,24nm,0.4s,SNR=19					
MYKA				*i* Sn	**Sn**	**10 20 29.5 +2.0**
	comp=Z,30nm,0.6s					
MYKA	**Terra Mystica**	**7.43**	**318**	Pn	**Pn**	**10 19 04.3 +1.1**
	comp=Z,24nm,0.4s,SNR=19					
MYKA				Sn	**Sn**	**10 20 29.5 +2.0**
	comp=Z,30nm,0.6s					
MODS	**Modra-Piesok**	**7.48**	**341**	*e*P	**Pn**	**10 19 04.6 +0.7**
MODS				*e*		10 20 23.8
MODS	**Modra-Piesok**	**7.48**	**341**	*e*PN	**Pn**	**10 19 04.6 +0.7**
MODS				*e*SN	**Sn**	**10 20 23.8 -4.9**
MODS	**Modra-Piesok**	**7.48**	**341**	*e*P	**Pn**	**10 19 04.6 +0.7**
CONA	**Conrad Observa**	**7.50**	**333**	*i* Pn	**Pn**	**10 19 05.3 +1.2**
	comp=Z,2.0nm,0.3s,SNR=9.7					
CONA				*i* Sn	**Sn**	**10 20 26.6 -2.5**
	comp=Z,19nm,0.6s					
CONA	**Conrad Observa**	**7.50**	**333**	Pn	**Pn**	**10 19 05.3 +1.2**
	comp=Z,2.0nm,0.3s,SNR=9.7					
CRVS	**Cervenica-Dubn**	**7.57**	**3**	*e*P	**Pn**	**10 19 05.8 +0.7**
CRVS	**Cervenica-Dubn**	**7.57**	**3**	*e*PN	**Pn**	**10 19 05.8 +0.7**
CRVS	**Cervenica-Dubn**	**7.57**	**3**	*e*P	**Pn**	**10 19 05.8 +0.7**
KARP	**Karpathos**	**7.60**	**138**	*e*Pn	**Pn**	**10 19 07.4 +1.9**
JAVC	**Velka Javorina**	**7.85**	**344**	*e*PN	**Pn**	**10 19 10.4 +1.4**
LANS	**Liptovska Anna**	**7.87**	**353**	*e*P	**Pn**	**10 19 12.5 +3.2**
LANS				*e*		10 20 42.2
LANS	**Liptovska Anna**	**7.87**	**353**	*e*PN	**Pn**	**10 19 12.5 +3.2**
LANS				*e*SN	**Sn**	**10 20 42.2 +3.8**
KBA	**Koelnbreinsper**	**7.88**	**319**	*i* Pn	**Pn**	**10 19 10.9 +1.3**
	comp=Z,27nm,0.4s,SNR=37					
KBA	**Koelnbreinsper**	**7.88**	**319**	P	**Pn**	**10 19 10.9 +1.3**
KBA	**Koelnbreinsper**	**7.88**	**319**	P	**Pn**	**10 19 10.9 +1.3**
KIS	**Kishinev**	**8.03**	**43**	*e*P	**Pn**	**10 19 13.0 +1.6**
KIS				LRM	MLR	10 23 00.0
	comp=Z,1μm,8.0s					
KIS	**Kishinev**	**8.03**	**43**	*e*P	**Pn**	**10 19 13.0 +1.6**
KIS				*e*		10 20 45.0
KIS				MLR	MLR	
	comp=Z,1μm,8.0s					
KIS				MLR	MLR	
	comp=Z,1μm,8.0s					
KIS	**Kishinev**	**8.03**	**43**	*e*P	**Pn**	**10 19 13.0 +1.6**
MOA	**Molln**	**8.04**	**326**	*i* Pn	**Pn**	**10 19 13.8 +2.3**
	comp=Z,42nm,0.7s,SNR=14					
MOA				*i* Sn	**Sn**	**10 20 41.6 -0.8**
	comp=Z,44nm,0.8s					
MOA	**Molln**	**8.04**	**326**	Pn	**Pn**	**10 19 13.8 +2.3**
	comp=Z,42nm,0.7s,SNR=14					
MOA				Sn	**Sn**	**10 20 41.6 -0.8**
	comp=Z,44nm,0.8s					
NIE	**Niedzica**	**8.09**	**357**	*e*Pn	**Pn**	**10 19 15.0 +2.8**
NIE				*e*Sn	**Sn**	**10 20 50.2 +6.6**
NIE	**Niedzica**	**8.09**	**357**	*e*P	**Pn**	**10 19 15.0 +2.8**
NIE				*e*		10 20 50.2
NIE	**Niedzica**	**8.09**	**357**	*e*P	**Pn**	**10 19 15.0 +2.8**
ABTA	**Abfaltersbach**	**8.09**	**315**	*i* Pn	**Pn**	**10 19 13.0 +0.7**
	comp=Z,51nm,0.6s,SNR=32					
ABTA				*i* Sn	**Sn**	**10 20 40.8 -3.1**
	comp=Z,68nm,0.8s					
ABTA	**Abfaltersbach**	**8.09**	**315**	Pn	**Pn**	**10 19 13.0 +0.7**
	comp=Z,51nm,0.6s,SNR=32					
VLC	**Villacollemand**	**8.22**	**294**	*e*Pn	**Pn**	**10 19 14.3 +0.2**
KRUC	**Moravsky**	**8.34**	**339**	*e*PN	**Pn**	**10 19 17.4 +1.7**
KWP	**Kalwaria Pacla**	**8.39**	**8**	*e*Pn	Pn	10 19 21.4 +5.0
KWP	**Kalwaria Pacla**	**8.39**	**8**	*e*Pn	**Pn**	**10 19 17.0 +0.7**
KWP	**Kalwaria Pacla**	**8.39**	**8**	*e*P	Pn	10 19 21.3 +5.0
VRAC	**Vranov**	**8.52**	**341**	⇑*i*P	**Pn**	**10 19 19.7 +1.6**
VRAC	**Vranov**	**8.52**	**341**	⇑*i*P	**Pn**	**10 19 19.7 +1.6**
VRAC	**Vranov**	**8.52**	**341**	*e*PN	**Pn**	**10 19 18.7 +0.6**
OKC	**Ostrava-Krasne**	**8.71**	**348**	*e*PN	**Pn**	**10 19 23.9 +3.2**
OKC				*e*SN	**Sn**	**10 20 56.1 -2.8**
OKC				AMS	AMS	10 23 10.0
	comp=Z,800nm,10.4s					
OKC	**Ostrava-Krasne**	**8.71**	**348**	*e*P	**Pn**	**10 19 23.9 +3.2**
OKC				*e*		10 20 56.1
OKC				MLR	MLR	
	comp=Z,800nm,10.4s					
OKC	**Ostrava-Krasne**	**8.71**	**348**	Pn	**Pn**	**10 19 23.9 +3.2**
	comp=Z,1.4nm,0.2s					
OKC				Sn	**Sn**	**10 20 56.1 -2.8**
MORC	**Moravsky Berou**	**8.76**	**346**	⇑*i*P	**Pn**	**10 19 22.8 +1.4**
MORC	**Moravsky Berou**	**8.76**	**346**	*e*Pn	**Pn**	**10 19 23.3 +1.9**
MORC	**Moravsky Berou**	**8.76**	**346**	*e*P	**Pn**	**10 19 23.3 +1.9**
MORC	**Moravsky Berou**	**8.76**	**346**	*e*P	**Pn**	**10 19 23.3 +1.9**
MORC	**Moravsky Berou**	**8.76**	**346**	*e*PN	**Pn**	**10 19 22.8 +1.4**
MORC				*e*SN	**Sn**	**10 21 01.2 +1.2**
WTTA	**Wattenberg**	**8.88**	**315**	*i* Pn	**Pn**	**10 19 25.4 +2.1**
	comp=Z,17nm,0.3s,SNR=15					
WTTA				*i* Sn	**Sn**	**10 21 02.9 -0.5**
	comp=Z,33nm,0.5s					
WTTA	**Wattenberg**	**8.88**	**315**	Pn	**Pn**	**10 19 24.9 +1.6**
WTTA				Sn	**Sn**	**10 21 02.9 -0.5**
	comp=Z,33nm,0.5s					
OJC	**Ojcow**	**8.91**	**356**	*e*Pn	**Pn**	**10 19 25.5 +2.0**
OJC				*e*Sn	**Sn**	**10 21 08.4 +4.6**
OJC	**Ojcow**	**8.91**	**356**	*e*Pn	**Pn**	**10 19 24.1 +0.6**
OJC	**Ojcow**	**8.91**	**356**	*e*P	**Pn**	**10 19 25.5 +2.0**
OJC				*e*		10 21 08.4
OJC	**Ojcow**	**8.91**	**356**	*e*P	**Pn**	**10 19 25.5 +2.0**
PGF	**Pioggiola**	**8.94**	**282**	*e*Pn	**Pn**	**10 19 25.6 +1.7**
	comp=Z,143nm,1.1s					
PGF	**Pioggiola**	**8.94**	**282**	*e*Pn	**Pn**	**10 19 25.6 +1.7**
PGF	**Pioggiola**	**8.94**	**282**	*e*P	**Pn**	**10 19 25.6 +1.7**
PGF	**Pioggiola**	**8.94**	**282**	*e*Pn	**Pn**	**10 19 25.6 +1.7**
	comp=Z,72nm,1.1s					
VSL	**Villasalto**	**8.96**	**262**	*e*Pn	**Pn**	**10 19 23.7 -0.5**
GEA0	**GERESS Array S**	**9.05**	**328**	*e*Pn	**Pn**	**10 19 27.0 +1.6**
GEC2	**GERESS Array S**	**9.06**	**328**	*e*Pn	**Pn**	**10 19 27.7 +2.2**
GEC2				*e*Sn	**Sn**	**10 21 06.9 -0.6**
GEC2	**GERESS Array S**	**9.06**	**328**	*e*P	**Pn**	**10 19 27.7 +2.2**
GEC2				*e*		10 21 06.9
GEC2	**GERESS Array S**	**9.06**	**328**	*e*P	**Pn**	**10 19 27.7 +2.2**
GEC2				*e*S	**Sn**	**10 21 06.9 -0.6**
GERES	**GERESS Array B**	**9.06**	**328**	Pn	**Pn**	**10 19 26.6 +1.0**
	comp=Z,1.3nm,0.3s,baz=149,slow=14,SNR=27					
GERES				Sn	**Sn**	**10 21 06.9 -0.6**
	comp=Z,0.5nm,0.3s,baz=154,slow=23,SNR=3.0					
GERES				LR	LR	10 23 30.9
	comp=Z,812nm,20.3s,baz=135,slow=42					
MOTA	**Moosalm**	**9.22**	**314**	*i* Pn	**Pn**	**10 19 28.6 +0.8**
	comp=Z,34nm,0.4s,SNR=54					
MOTA				*i* Sn	**Sn**	**10 21 12.6 +1.0**
	comp=Z,37nm,0.7s					
MOTA	**Moosalm**	**9.22**	**314**	Pn	**Pn**	**10 19 28.6 +0.8**
	comp=Z,34nm,0.4s,SNR=54					
MOTA				Sn	**Sn**	**10 21 12.6 +1.0**
	comp=Z,37nm,0.7s					
FETA	**Feichten**	**9.24**	**311**	*i* Pn	**Pn**	**10 19 29.9 +1.8**
	comp=Z,18nm,0.5s,SNR=15					
FETA				*i* Sn	**Sn**	**10 21 11.6 -0.5**
	comp=Z,34nm,0.7s					
FETA	**Feichten**	**9.24**	**311**	Pn	**Pn**	**10 19 29.9 +1.8**
	comp=Z,18nm,0.5s,SNR=15					
FETA				Sn	**Sn**	**10 21 11.6 -0.5**
	comp=Z,34nm,0.7s					
FUORN	**Ofenpass-Fuorn**	**9.29**	**308**	*e*Pn	**Pn**	**10 19 30.5 +1.5**
KHC	**Kasperske Hory**	**9.34**	**329**	*e*PN	**Pn**	**10 19 31.6 +2.3**
KHC				*ex*	x	10 19 44.8
KHC				*e*SN	**Sn**	**10 21 13.5 -0.7**
KHC				*ex*	x	10 21 19.3
KHC				AMS	AMS	10 23 30.0
	comp=Z,2μm,8.2s					
KHC	**Kasperske Hory**	**9.34**	**329**	*e*P	**Pn**	**10 19 31.6 +2.3**
KHC				*e*		10 21 13.5
KHC				MLR	MLR	
	comp=Z,2μm,8.2s					
KHC	**Kasperske Hory**	**9.34**	**329**	Pn	**Pn**	**10 19 31.6 +2.3**
KHC				Sn	**Sn**	**10 21 13.5 -0.7**
RETA	**Reutte**	**9.49**	**314**	*e*Pn	**Pn**	**10 19 33.3 +1.8**
	comp=Z,11nm,0.4s,SNR=11					
RETA				*i* Sn	**Sn**	**10 21 15.8 -2.3**
	comp=Z,25nm,0.5s					
RETA	**Reutte**	**9.49**	**314**	Pn	**Pn**	**10 19 33.3 +1.8**
	comp=Z,11nm,0.4s,SNR=11					
DPC	**Dobruska-Polom**	**9.55**	**342**	*e*PN	**Pn**	**10 19 34.8 +2.5**
DPC				*e*SN	**Sn**	**10 21 15.8 -3.8**
DPC				AMS	AMS	10 23 50.0
	comp=Z,800nm,10.7s					
DPC	**Dobruska-Polom**	**9.55**	**342**	*e*P	**Pn**	**10 19 34.8 +2.5**
DPC				*e*		10 21 15.8
DPC				MLR	MLR	
	comp=Z,800nm,10.7s					
DPC	**Dobruska-Polom**	**9.55**	**342**	Pn	**Pn**	**10 19 34.8 +2.5**
DPC				Sn	**Sn**	**10 21 15.8 -3.8**
GOPC	**GO Pecny, Ondr**	**9.57**	**336**	AMS	AMS	10 23 40.0
	comp=Z,2μm,8.9s					
PRU	**Pruhonice**	**9.72**	**335**	AMS	AMS	10 23 40.0
	comp=Z,2μm,8.1s					
TUE	**Stuetta**	**9.77**	**306**	*e*Pn	**Pn**	**10 19 36.6 +1.1**
UPC	**Upice**	**9.77**	**341**	*e*PN	**Pn**	**10 19 39.0 +3.7**
UPC				AMS	AMS	10 24 00.0
	comp=Z,1μm,8.9s					
UPC	**Upice**	**9.77**	**341**	*e*P	**Pn**	**10 19 39.0 +3.7**
UPC				MLR	MLR	
	comp=Z,1μm,8.9s					
UPC	**Upice**	**9.77**	**341**	Pn	**Pn**	**10 19 39.0 +3.7**
BR101	**Keskin Array S**	**9.85**	**95**	*e*Pn	**Pn**	**10 19 37.5 +1.0**
BR131	**Keskin Array S**	**9.85**	**95**	*e*Pn	**Pn**	**10 19 36.2 -0.3**
BRTR	**Keskin Array B**	**9.85**	**95**	Pn	**Pn**	**10 19 37.5 +1.0**
	comp=Z,0.1nm,0.3s,baz=284,slow=12,SNR=5.8					
BRTR				LR	LR	10 24 19.1
	comp=Z,104nm,20.3s,baz=0.5,slow=43					
BRTR	**Keskin Array B**	**9.85**	**95**	*ce*P	**Pn**	**10 19 38.5 +2.0**
BRTR				pmax	pmax	
	comp=Z,2.0nm,0.8s					
DAVA	**Damuels**	**9.87**	**311**	*e*Pn	**Pn**	**10 19 37.8 +1.1**
	comp=Z,16nm,0.6s,SNR=12					
DAVA				*i* Sn	**Sn**	**10 21 24.8 -2.7**
	comp=Z,44nm,0.7s					
DAVA	**Damuels**	**9.87**	**311**	Pn	**Pn**	**10 19 37.8 +1.1**
	comp=Z,16nm,0.6s,SNR=12					
KSP	**Ksiaz**	**10.02**	**343**	*e*Pn	**Pn**	**10 19 42.4 +3.7**
KSP	**Ksiaz**	**10.02**	**343**	*e*P	**Pn**	**10 19 42.4 +3.7**
PVCC	**Panska Ves**	**10.18**	**337**	AMS	AMS	10 24 00.0
	comp=Z,2μm,8.4s					
SBF	**Sospel**	**10.23**	**289**	*e*Pn	**Pn**	**10 19 42.5 +0.9**
	comp=Z,35nm,0.4s					
SBF				*e*Sn	**Sn**	**10 21 28.7 -7.5**
	comp=Z,71nm,0.9s					
SBF	**Sospel**	**10.23**	**289**	*e*Pn	**Pn**	**10 19 42.5 +0.9**
SBF				*e*Sn	**Sn**	**10 21 28.7 -7.5**
SBF	**Sospel**	**10.23**	**289**	*e*P	**Pn**	**10 19 42.5 +0.9**
SBF				*e*		10 21 28.7
SBF	**Sospel**	**10.23**	**289**	*e*Pn	**Pn**	**10 19 42.5 +0.9**
	comp=Z,17nm,0.4s					
SBF				*e*Sn	**Sn**	**10 21 28.7 -7.5**
	comp=Z,36nm,0.9s					
ISO	**Isola**	**10.56**	**290**	P	**Pn**	**10 19 45.9 -0.2**
ISO				pmax	pmax	
	comp=Z,14nm,1.1s					
ISO	**Isola**	**10.56**	**290**	P	**Pn**	**10 19 45.9 -0.2**
	comp=Z,14nm,1.1s					
KEST	**Kesra**	**10.62**	**242**	Pn	**Pn**	**10 19 50.7 +3.6**
	comp=Z,0.5nm,0.3s,baz=247,slow=2.4,SNR=11					
KEST	**Kesra**	**10.62**	**242**	*e*Pn	**Pn**	**10 19 48.6 +1.6**
NKC	**Novy Kostel**	**10.66**	**329**	*e*PN	Pn	10 19 52.2 +4.8
NKC				*ex*	x	10 20 01.2
NKC				AMS	AMS	10 24 20.0
	comp=Z,1μm,10.1s					
NKC	**Novy Kostel**	**10.66**	**329**	*e*P	Pn	10 19 52.2 +4.8
NKC				MLR	MLR	
	comp=Z,1μm,10.1s					
BRG	**Berggiesshubel**	**10.68**	**336**	*e*P	**Pn**	**10 19 52.3 +4.7**
	comp=Z,4.9nm,1.0s					
BRG				*e*		10 22 06.5
	comp=Z,15nm,1.5s					
BRG				*e*		10 23 17.2
	comp=Z,16nm,1.2s					
	comp=N,1μm,8.8s					
	comp=E,759nm,9.2s					
	comp=Z,2μm,9.2s					
BRG	**Berggiesshubel**	**10.68**	**336**	*e*P	**Pn**	**10 19 52.3 +4.7**
BRG				pmax	pmax	
	comp=Z,5.0nm,1.0s					
BRG				MLR	MLR	
	comp=N,1μm,8.8s					
BRG				MLR	MLR	
	comp=E,759nm,9.2s					
BRG				MLR	MLR	
	comp=Z,2μm,9.2s					
GRA1	**Grafenberg Arr**	**10.75**	**324**	P	**Pn**	**10 19 50.0 +1.4**
	comp=Z,37nm,1.0s					
GRF	**Grafenberg Arr**	**10.75**	**324**	P	**Pn**	**10 19 50.0 +1.4**
GRF				pmax	pmax	
	comp=Z,37nm,1.0s					
GRFO	**Grafenberg**	**10.75**	**324**	*e*Pn	**Pn**	**10 19 49.8 +1.2**
GRFO	**Grafenberg**	**10.75**	**324**	*e*P	**Pn**	**10 19 49.8 +1.2**
GRFO	**Grafenberg**	**10.75**	**324**	*e*P	**Pn**	**10 19 49.8 +1.2**
FRF	**La Foret Royal**	**10.75**	**287**	*e*Pn	**Pn**	**10 19 50.2 +1.5**
	comp=Z,29nm,0.5s					
FRF				*e*Sn	**Sn**	**10 21 42.6 -6.3**
	comp=Z,37nm,0.9s					
FRF	**La Foret Royal**	**10.75**	**287**	*e*Pn	**Pn**	**10 19 50.2 +1.5**
FRF				*e*Sn	**Sn**	**10 21 42.6 -6.3**
FRF	**La Foret Royal**	**10.75**	**287**	*e*P	**Pn**	**10 19 50.2 +1.5**
FRF				*e*		10 21 42.6
FRF	**La Foret Royal**	**10.75**	**287**	*e*Pn	**Pn**	**10 19 50.2 +1.5**
	comp=Z,14nm,0.5s					
FRF				*e*Sn	**Sn**	**10 21 42.6 -6.3**
	comp=Z,18nm,0.9s					
LMR	**La Mourre**	**10.82**	**285**	*e*Pn	**Pn**	**10 19 50.2 +0.5**
	comp=Z,32nm,0.9s					
LMR				*e*Sn	**Sn**	**10 21 44.0 -6.8**
	comp=Z,25nm,0.9s					
LMR	**La Mourre**	**10.82**	**285**	*e*Pn	**Pn**	**10 19 50.2 +0.5**
LMR				*e*Sn	**Sn**	**10 21 44.0 -6.8**
LMR	**La Mourre**	**10.82**	**285**	*e*P	**Pn**	**10 19 50.2 +0.5**
LMR				*e*		10 21 44.0
LMR	**La Mourre**	**10.82**	**285**	*e*Pn	**Pn**	**10 19 50.2 +0.5**
	comp=Z,16nm,0.9s					
LMR				*e*Sn	**Sn**	**10 21 44.0 -6.8**
	comp=Z,12nm,0.9s					
MBDF	**Montbardon**	**10.87**	**293**	*e*Pn	**Pn**	**10 19 49.9 -0.5**
	comp=Z,34nm,0.6s					
MBDF				*e*Sn	**Sn**	**10 21 45.4 -6.6**
	comp=Z,32nm,0.6s					
MBDF	**Montbardon**	**10.87**	**293**	*e*Pn	**Pn**	**10 19 49.9 -0.5**
MBDF				*e*Sn	**Sn**	**10 21 45.4 -6.6**
MBDF	**Montbardon**	**10.87**	**293**	*e*P	**Pn**	**10 19 49.9 -0.5**
MBDF				*e*		10 21 45.4
MBDF	**Montbardon**	**10.87**	**293**	*e*Pn	**Pn**	**10 19 49.9 -0.5**
	comp=Z,17nm,0.6s					
MBDF				*e*Sn	**Sn**	**10 21 45.4 -6.6**
	comp=Z,16nm,0.6s					
AKASG	**Malin Array Be**	**11.01**	**29**	Pn	**Pn**	**10 19 52.3 +0.2**
	comp=Z,0.2nm,0.3s,baz=218,slow=11,SNR=2.1					
AKBB	**Malin Array Si**	**11.01**	**29**	*e*Pn	**Pn**	**10 19 52.4 +0.3**
AKBB	**Malin Array Si**	**11.01**	**29**	*e*P	**Pn**	**10 19 52.4 +0.3**
AKBB	**Malin Array Si**	**11.01**	**29**	*e*P	**Pn**	**10 19 52.4 +0.3**
BNI	**Bardonecchia**	**11.01**	**294**	*e*Pn	**Pn**	**10 19 51.8 -0.6**
BNI	**Bardonecchia**	**11.01**	**294**	*e*P	**Pn**	**10 19 51.8 -0.6**
BNI	**Bardonecchia**	**11.01**	**294**	*e*P	**Pn**	**10 19 51.8 -0.6**
SENIN	**Lac Senin/Sane**	**11.01**	**302**	*e*Pn	**Pn**	**10 19 52.3 -0.2**
LPG	**La Plagne**	**11.08**	**297**	*e*Pn	**Pn**	**10 19 53.2 -0.3**
	comp=Z,70nm,0.5s					
LPG				*e*Sn	Sn	10 21 47.5 -10
	comp=Z,95nm,0.8s					
LPG	**La Plagne**	**11.08**	**297**	*e*Pn	**Pn**	**10 19 53.2 -0.3**
LPG				*e*Sn	Sn	10 21 47.5 -10
LPG	**La Plagne**	**11.08**	**297**	*e*P	**Pn**	**10 19 53.2 -0.3**
LPG	**La Plagne**	**11.08**	**297**	*e*Pn	**Pn**	**10 19 53.2 -0.3**
	comp=Z,35nm,0.5s					
LPG				*e*Sn	Sn	10 21 47.5 -10
	comp=Z,47nm,0.8s					
LPL	**La Plagne**	**11.10**	**297**	*e*Pn	**Pn**	**10 19 52.6 -1.1**
	comp=Z,48nm,0.5s					
LPL				*e*Sn	**Sn**	**10 21 49.3 -8.5**
	comp=Z,43nm,0.4s					
LPL	**La Plagne**	**11.10**	**297**	*e*Pn	**Pn**	**10 19 52.6 -1.1**
LPL				*e*Sn	**Sn**	**10 21 49.3 -8.5**
LPL	**La Plagne**	**11.10**	**297**	*e*P	**Pn**	**10 19 52.6 -1.1**
LPL				*e*		10 21 49.3
LPL	**La Plagne**	**11.10**	**297**	*e*Pn	**Pn**	**10 19 52.6 -1.1**
	comp=Z,24nm,0.5s					
LPL				*e*Sn	**Sn**	**10 21 49.3 -8.5**
	comp=Z,22nm,0.4s					
STU	**Stuttgart**	**11.11**	**316**	*e*Pn	**Pn**	**10 19 52.9 -0.6**
STU	**Stuttgart**	**11.11**	**316**	*e*P	**Pn**	**10 19 52.9 -0.6**
STU	**Stuttgart**	**11.11**	**316**	*e*P	**Pn**	**10 19 52.9 -0.6**
THTN	**Thala**	**11.16**	**243**	*e*Pn	**Pn**	**10 19 56.6 +2.2**
MOX	**Moxa**	**11.31**	**328**	P	**Pn**	**10 19 57.0 +0.7**
MOX				pmax	pmax	
	comp=Z,16nm,0.8s					
MOX	**Moxa**	**11.31**	**328**	P	**Pn**	**10 19 57.0 +0.7**
	comp=Z,16nm,0.8s					
BFO	**Black Forest**	**11.31**	**312**	*e*Pn	**Pn**	**10 19 56.3 -0.1**
BFO	**Black Forest**	**11.31**	**312**	*i* P	**Pn**	**10 19 56.7 +0.3**
CLL	**Collm**	**11.35**	**334**	*e*Pn	Pn	10 19 52.0 -4.8
CLL				*e*		10 20 05.0
CLL				*e*		10 21 15.0
CLL				*e*Sn	Sn	10 21 39.0 -25
CLL				*i*		10 22 31.7
CLL				*i*		10 22 44.2
CLL				*e*		10 22 59.0
CLL				*e*Sg		10 23 09.0
CLL				Lmax		10 24 00.0
CLL	**Collm**	**11.35**	**334**	*e*P	Pn	10 19 52.0 -4.8
ORIF	**Oris-en-Rattie**	**11.53**	**293**	*e*Pn	**Pn**	**10 19 59.3 -0.1**
	comp=Z,47nm,0.8s					
ORIF				*e*Sn	**Sn**	**10 22 01.0 -7.1**
	comp=

LOR *e*Sn **Sn** **10 22 49.5 -7.8**
SSF Saint Saulge 13.70 300 *e*Pn **Pn** **10 20 27.8 -1.2**
comp=Z,25nm,0.7s
SSF *e*Sn **Sn** **10 22 54.1 -7.0**
comp=Z,19nm,0.6s
SSF Saint Saulge 13.70 300 *e*Pn **Pn** **10 20 27.8 -1.2**
SSF *e*Sn **Sn** **10 22 54.1 -7.0**
SSF Saint Saulge 13.70 300 *e*P **Pn** **10 20 27.8 -1.2**
SSF *e* 10 22 54.1
SSF Saint Saulge 13.70 300 *e*Pn **Pn** **10 20 27.8 -1.2**
comp=Z,12nm,0.7s
SSF *e*Sn **Sn** **10 22 54.1 -7.0**
comp=Z,9.3nm,0.6s
AVF Avril sur Loir 13.72 299 *e*Pn **Pn** **10 20 28.7 -0.5**
comp=Z,9.8nm,0.4s
AVF Avril sur Loir 13.72 299 *e*Pn **Pn** **10 20 28.7 -0.5**
AVF Avril sur Loir 13.72 299 *e*P **Pn** **10 20 28.7 -0.5**
AVF Avril sur Loir 13.72 299 *e*Pn **Pn** **10 20 28.7 -0.5**
comp=Z,4.9nm,0.4s
MEM Membach 13.87 317 ⇑P **Pn** **10 20 31.4 +0.3**
MEM Membach 13.87 317 P **Pn** **10 20 31.4 +0.3**
BGF Bois d'Agland 13.99 298 *e*Pn **Pn** **10 20 32.3 -0.6**
comp=Z,13nm,0.3s
BGF *e*Sn Sn 10 22 58.4 -10
comp=Z,28nm,0.6s
BGF Bois d'Agland 13.99 298 *e*Pn **Pn** **10 20 32.3 -0.6**
BGF *e*Sn Sn 10 22 58.4 -10
BGF Bois d'Agland 13.99 298 *e*P **Pn** **10 20 32.3 -0.6**
BGF *e* 10 22 58.4
BGF Bois d'Agland 13.99 298 *e*Pn **Pn** **10 20 32.3 -0.6**
comp=Z,6.6nm,0.3s
BGF *e*Sn Sn 10 22 58.4 -10
comp=Z,14nm,0.6s
BCLA Clavier 14.12 315 ⇑P **Pn** **10 20 35.5 +0.8**
NACGM Naroch 14.13 14 *e* **P** **10 20 43.0 +0.6**
MMAI Mount Meron Ar 14.24 121 Pn **Pn** **10 20 37.1 +0.6**
baz=314,slow=16,SNR=2.4
MMAI LR LR 10 27 02.7
comp=Z,310nm,19.3s,baz=35,slow=41
TCF Toulx Ste Croi 14.35 296 *e*Pn **Pn** **10 20 37.1 -0.8**
comp=Z,30nm,1.1s
TCF Toulx Ste Croi 14.35 296 *e*Pn **Pn** **10 20 37.1 -0.8**
TCF Toulx Ste Croi 14.35 296 *e*P **Pn** **10 20 37.1 -0.8**
TCF Toulx Ste Croi 14.35 296 *e*Pn **Pn** **10 20 37.1 -0.8**
comp=Z,15nm,1.1s
ASF Jabal al Asfar 15.74 120 Pn **P** **10 20 58.6 -2.0**
comp=Z,0.2nm,0.3s,baz=338,slow=5.4,SNR=5.5
VORD Divnogorie 15.94 47 *e*P **P** **10 21 02.1 -0.5**
VORD pmax pmax
comp=Z,10.0nm,0.6s
VORD Divnogorie 15.94 47 *e*P **P** **10 21 02.1 -0.5**
comp=Z,10.0nm,0.6s
VSR Storozhevoye 16.00 46 *e*P **P** **10 21 03.4 +0.2**
VSR pmax pmax
comp=Z,7.0nm,0.7s
VSR MLR MLR
comp=Z,670nm,11.0s
KIV Kislovodsk 16.25 73 *e*P **Pn** **10 21 02.7 -0.4**
KIV pmax pmax
comp=Z,10.0nm,0.9s
KVAR Kislovodsk Arr 16.26 73 LR LR 10 27 59.2
comp=Z,136nm,19.3s,baz=8.0,slow=40
NEY Neytrino 16.27 76 ⇓*i*P **Pn** **10 21 03.7 +0.3**
NEY Neytrino 16.27 76 *i*P **Pn** **10 21 03.7 +0.3**
EIL Elat 16.31 131 Pn **P** **10 21 06.5 -0.3**
comp=Z,0.8nm,0.3s,baz=8.3,slow=6.7,SNR=8.4
KBZ Khabaz 16.40 74 Pn **P** **10 21 07.5 -0.2**
comp=Z,0.1nm,0.3s,baz=259,slow=5.7,SNR=5.3
GOF Gofitskoye 16.57 70 ⇑*e*P **P** **10 21 11.6 +2.0**
GOF Gofitskoye 16.57 70 *e*P **P** **10 21 11.6 +2.0**
OBN Obninsk 17.24 32 P **P** **10 21 16.6 -0.3**
comp=Z,5.8nm,0.3s,baz=35,slow=19,SNR=3.8
VSU Vasula 17.54 10 ⇑*i*P **P** **10 21 19.6 -0.6**
VSU Vasula 17.54 10 *i*P **P** **10 21 19.6 -0.6**
MOS Moscow 18.11 32 *e*P **P** **10 21 27.2 +0.7**
GNI Garni 18.11 86 P **P** **10 21 28.5 +1.7**
comp=Z,1.1nm,0.3s,baz=248,slow=1.5,SNR=5.5
GNI LR LR 10 29 19.7
comp=Z,83nm,21.2s,baz=14,slow=40
GNI Garni 18.11 86 *e*Pn **Pn** **10 21 26.4 -0.1**
comp=Z,28nm,0.9s
GNI *e*Pn P **10 21 28.6 +1.7**
GNI Garni 18.11 86 ⇓*i*P **P** **10 21 27.1 +0.2**
GNI pmax pmax
comp=Z,107nm,1.7s
GNI Garni 18.11 86 *i*P **P** **10 21 27.1 +0.2**
comp=Z,107nm,1.7s
ES19 SONSECA Array 18.89 273 *e*P **Pn** **10 21 37.5 +1.6**
ESDC Sonseca Array 18.95 273 P **Pn** **10 21 36.2 -0.4**
comp=Z,0.0nm,0.3s,baz=76,slow=10,SNR=4.1
HFS Hagfors 19.34 349 P **P** **10 21 39.7 -0.2**
comp=Z,0.9nm,0.3s,baz=158,slow=9.6,SNR=14
AKT Akhty 20.12 81 *e*P Pn 10 21 50.5 -0.1
AKT *e* 10 22 05.9
AKT pmax pmax
comp=Z,32nm,0.8s
FIA0 FINESS Array S 20.38 7 *e*P **P** **10 21 51.1 -0.2**
FIA0 *e*PcP **PcP** **10 26 01.8 -1.7**
FIA0 FINESS Array S 20.38 7 *e*P **P** **10 21 51.1 -0.2**
FIA0 *e* 10 26 01.8
FINES FINESS Array B 20.38 7 P **P** **10 21 51.1 -0.2**
comp=Z,7.6nm,0.8s,baz=164,slow=9.9,SNR=20
FINES PcP **PcP** **10 26 01.8 -1.7**
comp=Z,0.7nm,0.4s,baz=128,slow=3.1,SNR=5.3
FINES FINESS Array B 20.38 7 *i*P **P** **10 21 51.7 +0.4**
FINES pmax pmax
comp=Z,8.0nm,0.7s
FIA1 FINESS Array S 20.38 7 *e*P **P** **10 21 51.0 -0.3**
FIA1 *e*P Pn 10 21 51.8 -1.6
NB2 NORSAR Subarra 20.59 347 P **P** **10 21 53.5 -0.2**
comp=Z,6.9nm,0.9s,baz=159,slow=11
NB200 NORSAR Array S 20.59 347 *e*P **P** **10 21 53.3 -0.4**
NOA NORSAR Array B 20.59 347 P **P** **10 21 53.3 -0.4**
comp=Z,2.9nm,0.4s,baz=160,slow=10,SNR=17
NOA LR LR 10 30 07.2
comp=Z,52nm,18.9s,baz=45,slow=38
EKA Eskdalemuir Ar 21.10 320 P **P** **10 21 58.6 -0.5**
comp=Z,18nm,0.9s,baz=114,slow=10.0,SNR=20
ESK Eskdalemuir 21.11 320 *e*P **P** **10 21 59.3 0.0**
comp=Z,26nm,0.9s
ESK Eskdalemuir 21.11 320 *e*P **P** **10 21 59.3 0.0**
ESK pmax pmax
comp=Z,26nm,0.9s
MTE Manteigas 21.48 277 *e*LR LR 10 30 32.0
comp=Z,158nm,18.0s
PCBR Castelo Branco 21.55 275 *e*P **P** **10 22 09.1 +5.0**
PCBR Castelo Branco 21.55 275 *e*P **P** **10 22 09.1 +5.0**
PBAR Barrancos 21.66 271 *e*P **P** **10 22 07.7 +2.4**
comp=Z,68nm,1.5s
PBAR *e*pP sP 10 22 22.6 +13
PBAR Barrancos 21.66 271 *e*P **P** **10 22 07.7 +2.4**
PBAR *e*pP sP 10 22 22.6 +13
PVIS Viseu 21.68 278 *e*pP pP 10 22 21.1 +12
PVIS Viseu 21.68 278 *e*pP pP 10 22 21.1 +12
PGAV Gavieira, Arco 21.75 281 *e*P **P** **10 22 10.8 +4.5**
comp=Z,76nm,1.6s
PGAV Gavieira, Arco 21.75 281 *e*P **P** **10 22 10.8 +4.5**
PESTR Estremoz 21.88 273 *e*pP pP 10 22 26.9 +16
PESTR Estremoz 21.88 273 *e*pP pP 10 22 26.9 +16
MDT Midelt 21.99 255 P **P** **10 22 09.4 +0.4**
comp=Z,5.4nm,1.0s,baz=79,slow=13,SNR=4.1
PTOM Tomar 22.30 275 *e*P P 10 22 19.7 +7.5
comp=Z,55nm,1.6s
PTOM Tomar 22.30 275 *e*P P 10 22 19.7 +7.5
PVAQ Vaqueiros 22.41 269 *e*P **P** **10 22 17.8 +4.5**
comp=Z,34nm,2.0s
PVAQ Vaqueiros 22.41 269 *e*P **P** **10 22 17.8 +4.5**
TAM Tamanrasset 22.55 220 *e*P **P** **10 22 15.6 +0.5**
comp=Z,9.5nm,1.1s
TAM Tamanrasset 22.55 220 *e*P **P** **10 22 15.6 +0.5**
TAM pmax pmax
comp=Z,10.0nm,1.1s
TAM Tamanrasset 22.55 220 *e*P **P** **10 22 15.6 +0.5**
comp=Z,10.0nm,1.1s
PCVE Castro Verde 22.57 270 *e*P **P** **10 22 19.6 +4.5**
comp=Z,30nm,1.5s
PCVE Castro Verde 22.57 270 *e*P **P** **10 22 19.6 +4.5**
PBDV Barranco-do-Ve 22.62 269 *e*P **P** **10 22 20.8 +5.2**
comp=Z,50nm,1.8s
PBDV Barranco-do-Ve 22.62 269 *e*P **P** **10 22 20.8 +5.2**
KLMR Klimovskoe 22.62 24 *e*P **P** **10 22 13.6 -1.8**
KLMR pmax pmax
comp=Z,46nm,1.2s
KLMR Klimovskoe 22.62 24 *e*P **P** **10 22 13.6 -1.8**
KLMR AMP 10 22 19.0
comp=Z,46nm,1.2s
MESJ Messejana 22.65 271 *e*P **P** **10 22 19.5 +3.6**
comp=Z,23nm,1.1s
MESJ Messejana 22.65 271 *e*P **P** **10 22 19.5 +3.6**
PNCL Nicolau / Gran 22.80 272 *e*pP pP 10 22 25.0 +4.4
PNCL Nicolau / Gran 22.80 272 *e*pP pP 10 22 25.0 +4.4
TMCR Tamitsa 24.94 18 *e*P **P** **10 22 37.0 -0.8**
TMCR pmax pmax
comp=Z,38nm,0.5s
PRGR Permogore 25.22 28 *e*P **P** **10 22 40.2 -0.1**
PRGR pmax pmax
comp=Z,68nm,0.8s
AKTO Aktyubinsk 27.16 58 P **P** **10 22 57.6 -0.4**
comp=Z,3.6nm,0.8s,baz=264,slow=10,SNR=5.0
AKTO LR LR 10 34 42.0
comp=Z,120nm,18.6s,baz=232,slow=39
APA Apatity 27.16 11 ⇑*i*P **P** **10 23 02.2 +4.4**
APA pmax pmax
comp=Z,6.0nm,0.8s
APA MLR MLR
comp=Z,300nm,9.0s
ABKAR Akbulak array 28.34 60 *e*P **P** **10 23 08.6 +0.1**
ARA0 ARCESS Array S 28.36 3 *e*P **P** **10 23 07.1 -1.5**
ARCES ARCESS Array B 28.36 3 P **P** **10 23 07.1 -1.5**
comp=Z,1.2nm,0.5s,baz=187,slow=8.6,SNR=9.7
ARU Arti 28.57 45 P **P** **10 23 10.5 -0.1**
comp=Z,4.6nm,0.2s,baz=282,slow=14,SNR=2.7
ARU Arti 28.57 45 *e*P **P** **10 23 10.5 -0.1**
comp=Z,6.3nm,1.0s
ARU Arti 28.57 45*c i*P **P** **10 23 11.5 +0.9**
ARU 10 23 59.5
ARU S **S** **10 28 01.8 +3.4**
ARU SS **SnSn** **10 29 20.4 +2.8**
ARU pmax pmax
comp=Z,11nm,1.7s
TOA1 Torodi Ar. Sit 32.70 216 *e*P **P** **10 23 47.1 -0.2**
TOA0 Torodi Ar. Sit 32.70 216 *e*P **P** **10 23 47.4 +0.1**
TOA0 *e*P **P** **10 23 47.6 +0.2**
TORD Torodi Ar. Bea 32.70 216 P **P** **10 23 47.1 -0.3**
comp=Z,14nm,0.8s,baz=28,slow=8.9,SNR=71
UOSS Minazif 33.52 108 *e*P **P** **10 23 54.5 0.0**
comp=Z,11nm,1.1s
UOSS Minazif 33.52 108 *e*P **P** **10 23 54.5 0.0**
comp=Z,11nm,1.1s
KOWA Kowa 34.39 226 P **P** **10 24 01.9 -0.2**
comp=Z,1.3nm,0.3s,baz=13,slow=8.9,SNR=5.3
BRVK Borovoye 34.88 53 *e*P **P** **10 24 06.7 +0.7**
comp=Z,8.2nm,1.0s
BRVK Borovoye 34.88 53*ce*P **P** **10 24 06.4 +0.4**
BRVK pmax pmax
comp=Z,10.0nm,1.7s
BVAR Borovoye Array 34.94 53 P **P** **10 24 06.7 +0.2**
comp=Z,1.5nm,0.6s,baz=274,slow=6.6,SNR=11
SPA0 Spitsbergen Ar 37.00 358 *e*P **P** **10 24 24.1 +0.2**
SPITS Spitsbergen Ar 37.00 358 P **P** **10 24 24.1 +0.2**
comp=Z,3.0nm,0.8s,baz=184,slow=8.4,SNR=3.5
SPITS LR LR 10 41 35.0
comp=Z,119nm,18.6s,baz=80,slow=40
KURBB Kurchatov Arra 40.19 56 P **P** **10 24 50.6 -0.4**
comp=Z,0.5nm,0.4s,baz=289,slow=9.6,SNR=5.2
KURK Kurchatov 40.23 56 *e*P **P** **10 24 50.6 -0.7**
KURK Kurchatov 40.23 56 ⇑*i*P **P** **10 24 51.8 +0.5**
KURK *i* *PP **pP** **10 24 54.4 -0.3**
KURK *i* 10 26 25.1
KURK pmax pmax
comp=Z,2.0nm,1.0s
KSH Kashi 41.38 74 P **P** **10 24 58.9 -2.2**
KSH pP pP 10 25 04.0 -0.5
KSH pmax pmax
comp=Z,190nm,5.4s
DBIC Dimbokro 41.43 221 P **P** **10 25 01.1 -0.4**
comp=Z,4.6nm,0.7s,baz=58,slow=11,SNR=3.3
DBIC Dimbokro 41.43 221 *e*P **P** **10 25 01.1 -0.4**
comp=Z,29nm,1.4s
DBIC Dimbokro 41.43 221 *e*P **P** **10 25 01.1 -0.4**
DBIC pmax pmax
comp=Z,29nm,1.4s
NVS Novosibirsk 42.37 49 *e*P **P** **10 25 09.1 +0.3**
NVS pmax pmax
comp=Z,10.0nm,1.1s
NVS pmax pmax
comp=E,3.0nm,0.7s
ZAA0 Zalesovo Array 43.42 51 *e*P **P** **10 25 17.3 -0.1**
comp=E,5.5nm,0.8s
ZAA1 Zalesovo Array 43.42 51 *e*P **P** **10 25 17.3 -0.1**
ZALV Zalesovo Beam 43.42 51 P **P** **10 25 17.3 -0.1**
comp=E,5.1nm,0.6s,baz=282,slow=9.0,SNR=14
ZALV Zalesovo Beam 43.42 51 *e*P **P** **10 25 16.9 -0.4**
MK31 Makanchi Array 43.48 61 *e*P **P** **10 25 17.5 -0.4**
MK31 Makanchi Array 43.48 61 *e*P **P** **10 25 17.5 -0.4**
MK32 Makanchi Array 43.48 61 *e*P **P** **10 25 17.6 -0.4**
MK32 *e*PP **PcP** **10 27 04.5 -1.4**
MKAR Makanchi Array 43.48 61 P **P** **10 25 17.6 -0.4**
comp=E,1.9nm,0.7s,baz=282,slow=7.6,SNR=19
MKAR PcP **PcP** **10 27 04.5 -1.4**
comp=E,1.8nm,0.8s,baz=310,slow=3.7,SNR=4.0
MKAR ScP **ScP** **10 30 58.1 +0.9**
comp=E,0.7nm,0.9s,baz=276,slow=2.8,SNR=3.8
MKAR Makanchi Array 43.48 61 *e*P **P** **10 25 17.5 -0.4**
comp=E,14nm,0.6s
MKAR PcP **PcP** **10 27 04.5 -1.4**
MKAR Makanchi Array 43.48 61 *e*P **P** **10 25 17.5 -0.4**
MKAR 10 27 04.5
MKAR pmax pmax
comp=Z,14nm,0.6s
MK01 Makanchi Array 43.49 61 *e*P **P** **10 25 17.2 -0.8**
SFJD Kangerlussuaq 45.66 329 LR LR 10 45 03.9
comp=Z,68nm,18.1s,baz=84,slow=37
WMQ Urumqi 48.04 63 P **P** **10 25 56.1 +2.0**
WMQ pP sP 10 25 59.4 +0.5
WMQ LR LR
comp=Z,210nm,23.9s
WMQ LR LR
comp=Z,600nm,39.7s
TLY Talaya 54.97 49 LR LR 10 51 44.1
comp=Z,58nm,19.0s,baz=308,slow=38
TLY Talaya 54.97 49⇑*e*P **P** **10 26 46.8 +1.0**
TLY pmax pmax
comp=Z,2.0nm,0.6s
SCHQ Schefferville 56.35 316 P **P** **10 26 54.7 -0.9**
comp=Z,3.5nm,0.6s,baz=60,slow=5.1,SNR=5.1
SCHQ Schefferville 56.35 316 *e*P **P** **10 26 54.7 -0.9**
comp=Z,35nm,1.6s
SONA1 Songino Array 58.27 52 *e*P **P** **10 27 10.4 +1.0**
SONA0 Songino Array 58.27 52 *e*P **P** **10 27 09.1 -0.3**
SONM Songino Array 58.27 52 P **P** **10 27 09.1 -0.3**
comp=Z,1.0nm,0.7s,baz=282,slow=6.8,SNR=4.8
LZH Lanzhou 62.58 65 *e*P **P** **10 27 38.6 -0.5**
LZH pP sP 10 27 43.2 -0.8
LZH sP pP 10 27 46.2 +3.6
LZH pmax pmax
comp=Z,19nm,1.0s
HHC Hu-ho-hao-te 65.05 57 *e*P **P** **10 27 54.6 -0.6**
HHC pmax pmax
comp=Z,10.0nm,1.2s
HHC pmax pmax
comp=Z,59nm,6.9s
CD2 Chengdu 65.38 70 P **P** **10 27 56.5 -1.0**
CD2 pmax pmax
comp=Z,10.0nm,0.6s
FCC Fort Churchill 66.67 329 *e*P **P** **10 28 04.7 -0.5**
comp=Z,7.7nm,1.1s
FCC Fort Churchill 66.67 329 *e*P **P** **10 28 04.7 -0.5**
FCC pmax pmax
comp=Z,8.0nm,1.1s
BILL Bilibino 67.88 13 *e*P **P** **10 28 13.3 +0.5**
BILL pmax pmax
comp=Z,1.0nm,0.9s
KMI Kunming 68.01 75 P **P** **10 28 14.9 +0.4**
KMI pmax pmax
comp=Z,15nm,0.5s
KMI pmax pmax
comp=Z,69nm,4.0s
SEY Seymchan 69.09 22 ⇑*i*P **P** **10 28 21.4 +1.0**
SEY *i* *SP **sP** **10 28 26.3 +1.0**
SEY *i* 10 28 47.0
CMAR Chiang Mai Arr 69.21 83 P **P** **10 28 21.9 0.0**
comp=Z,0.6nm,0.3s,baz=297,slow=7.2,SNR=3.4
BOSA Boshof 69.72 176 P **P** **10 28 24.4 -0.3**
comp=Z,2.0nm,0.5s,baz=357,slow=7.1,SNR=6.4
BOSA LR LR 11 02 05.2
comp=Z,73nm,18.1s,baz=24,slow=39
YKA Yellowknife Ar 70.52 340 P **P** **10 28 28.4 -0.8**
comp=Z,1.0nm,0.5s,baz=34,slow=5.2,SNR=7.0
YKA LR LR 11 02 29.0
comp=Z,5.4nm,18.2s,baz=62,slow=38
KLR Kul'dur 71.27 40 ⇑*i*P **P** **10 28 34.3 +0.3**
IM3 Indian Mountai 72.93 358 *e*P **P** **10 28 43.6 -0.1**
COWI Conover 72.95 317 *e*P **P** **10 28 44.6 +0.5**
H43A Windswept, Lux 73.32 315 *e*P **P** **10 28 47.1 +0.8**
comp=Z,13nm,1.1s
ULM Lac du Bonnet 73.33 323 P **P** **10 28 45.4 -0.9**
comp=Z,6.7nm,0.9s,baz=50,slow=6.1,SNR=13
ULM Lac du Bonnet 73.33 323 *e*P **P** **10 28 46.1 -0.2**
comp=Z,8.8nm,0.9s
ULM Lac du Bonnet 73.33 323 *e*P **P** **10 28 46.1 -0.2**
ULM pmax pmax
comp=Z,9.0nm,0.9s
DAWY Dawson 73.78 351 *e*P **P** **10 28 48.8 0.0**
comp=Z,5.5nm,1.2s
ILAR Eielson Array 73.79 355 P **P** **10 28 48.2 -0.6**
comp=Z,0.8nm,0.8s,baz=1.4,slow=5.9,SNR=9.5
ILB Eielson Array 73.79 355 *e*P **P** **10 28 48.2 -0.6**
NJ2 Nanjing 75.00 61 *e*P **P** **10 28 58.8 +2.5**
NJ2 pmax pmax
comp=Z,16nm,0.6s
KS01 Wonju Array Si 77.09 51 *e*P **P** **10 29 07.2 -1.0**
KS15 Wonju Array Si 77.11 51 *e*P **P** **10 29 07.5 -0.8**
KSAR Wonju Array Be 77.11 51 P **P** **10 29 07.5 -0.8**
KSAR Wonju Array Be 77.11 51 P **P** **10 29 07.5 -0.8**
KSRS Korea Array 77.13 51 P **P** **10 29 07.5 -0.8**
comp=Z,2.2nm,0.8s,baz=314,slow=5.1,SNR=7.8
TJN Taejon 77.52 52 ⇑*e*P **P** **10 29 11.8 +1.2**
YSS Yuzh-Sakhalins 78.06 36 *i*P **P** **10 29 14.0 +0.6**
YSS pmax pmax
comp=Z,10.0nm,1.1s
CCM Cathedral Cave 79.63 312 *e*P **P** **10 29 22.8 +0.6**
comp=Z,6.0nm,1.0s
CCM Cathedral Cave 79.63 312 *e*P **P** **10 29 22.8 +0.6**
CCM pmax pmax
comp=Z,6.0nm,1.0s
EGMT Eagleton 80.88 329 *e*P **P** **10 29 29.9 +1.0**
comp=Z,8.1nm,1.0s
KDAK Kodiak Island 81.09 356 *i*P **P** **10 29 32.4 +2.7**
KSU1 Kansas State U 81.78 316 *e*P **P** **10 29 34.7 +1.0**
comp=Z,18nm,1.3s
MAJO Matsushiro 83.59 46 *e*P **P** **10 29 41.9 -1.3**
MAJO Matsushiro 83.59 46 *e*P **P** **10 29 41.9 -1.3**
MJAR Matsushiro Arr 83.59 46 P **P** **10 29 41.9 -1.3**
comp=Z,2.5nm,1.0s,baz=293,slow=7.3,SNR=5.1
PD31 Pinedale Array 85.09 326 *e*P **P** **10 29 49.8 -1.2**
PDAR Pinedale Array 85.09 326 P **P** **10 29 49.8 -1.2**
comp=Z,0.4nm,0.6s,baz=56,slow=6.7,SNR=3.5
PDAR LR LR 11 08 11.4
comp=Z,73nm,19.1s,baz=64,slow=36
SDV Santo Domingo 85.33 278 P **P** **10 29 53.0 +0.4**
comp=Z,8.0nm,0.9s,baz=321,slow=4.2,SNR=6.5
SDV Santo Domingo 85.33 278 *e*P **P** **10 29 52.0 -0.6**
comp=Z,8.2nm,0.9s
KDKW Coast Env Seat 85.63 336 *e*P **P** **10 29 55.0 +1.8**
NVAR Mina Array Bea 92.31 329 LR LR 11 13 41.4
comp=Z,75nm,19.4s,baz=286,slow=37
TXAR Lajitas Array 92.99 314 P **P** **10 30 28.1 -0.5**
comp=Z,1.0nm,0.9s,baz=58,slow=3.8,SNR=6.2
BBRC Big Bear Solar 95.35 326 *e*P **P** **10 30 40.5 +1.0**
FON Fontana 95.71 326 *e*P **P** **10 30 39.3 -1.5**
WR1 Warramunga Arr 120.34 91 *e*PKPdf **PKPdf** **10 36 06.1 -0.3**
WRA Warramunga Arr 120.34 91 PKP **PKPdf** **10 36 06.1 -0.3**
comp=Z,0.5nm,0.9s,baz=330,slow=1.9,SNR=3.2
ASAR Alice Springs 122.19 94 PKP **PKPdf** **10 36 07.8 -2.2**
comp=Z,1.2nm,0.9s,baz=314,slow=1.5,SNR=7.6
QSPA South Pole Qui 131.19 180 PKP **PKPdf** **10 36 24.2 -1.6**
comp=Z,2.1nm,1.0s,baz=253,slow=3.8,SNR=5.9

WBNET 07 10:19:39.5,50°.24N×12°.45E,h9km,MI0.3,5C-5D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NKC	**Novy Kostel**	**0.00**	**190**	⇓P	Pg	10 19 41.1	-0.1
NKC				S	Sg	10 19 42.2	-0.1
LBCW	**Luby**	**0.04**	**320**	⇓P	Pg	10 19 41.3	-0.1
LBCW				S	Sg	10 19 42.7	0.0
VAC	**Vackov**	**0.05**	**268**	⇓P	Pg	10 19 41.3	-0.1
VAC				S	Sg	10 19 42.6	-0.2
STCW	**Studenec**	**0.05**	**64**	⇑P	Pg	10 19 41.3	-0.2
STCW				S	Sg	10 19 42.5	-0.4
KVC	**Kvetna**	**0.05**	**126**	⇑P	Pg	10 19 41.2	-0.3
KVC				S	Sg	10 19 42.4	-0.5
POCW	**Po¯¡tky**	**0.08**	**350**	⇓P	Pg	10 19 41.9	0.0
POCW				S	Sg	10 19 43.6	-0.1
SKC	**Skalna**	**0.09**	**220**	⇑P	Pg	10 19 41.8	-0.1
SKC				S	Sg	10 19 43.4	-0.2
KRCW	**Kraslice**	**0.11**	**29**	⇑P	Pg	10 19 42.0	-0.2
KRCW				S	Sg	10 19 43.9	-0.3
KOCW	**Kopaniny**	**0.14**	**282**	⇓P	Pg	10 19 42.6	-0.1
KOCW				S	Sg	10 19 44.8	-0.1
ZHC	**Zelena Hora**	**0.19**	**208**	⇑P	Pg	10 19 43.4	-0.1
ZHC				S	Sg	10 19 46.0	-0.2
LACW	**Lazy**	**0.22**	**149**	S	Sg	10 19 46.9	-0.1

SKO ***07*** *10:21:31.8,41°.37N×20°.85E,h15km,M2.2,ML2.4*
ATH ***07*** *10:21:31.4,41°.46N×20°.88E,h18km±1km,ML2.4/8,Error*
ellipse: s-maj=3.2km s-min=1.5km az=148.0
PDG ***07*** *10:21:33.5±0.2,41°.36N×20°.92E,h6km,ML2.9/8,Error*
ellipse: s-maj=0.4km s-min=0.3km az=90.0
CSEM ***07*** *10:21:34.4±0.2,41°.33N×20°.99E,h10km,ML2.4,Error*
ellipse: s-maj=7.1km s-min=3.1km az=50.0
ISC 07 10:21:33.5±1.0,41°.35N±0°.02×20.91E±0.02,h7km±9km, n53,σ1°44/98,8C-8D,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHR	**Ohrid**	**0.26**	**199**	*i*Pg	**Pg**	**10 21 38.3**	**-0.2**
OHR				*i*Sg	**Sg**	**10 21 42.3**	**+0.4**
OHR				*e*Lg	Lg	10 21 42.5	
	comp=N,677nm,0.4s						
OHR				*e*Lg	Lg	10 21 42.6	
	comp=E,739nm,0.4s						
BIA	**Bitola**	**0.46**	**137**	*i*Pg	**Pg**	**10 21 42.5**	**+0.2**
BIA				*i*Sg	**Sb**	**10 21 50.2**	**-0.7**
FNA	**Florina**	**0.67**	**148**	P	**Pg**	**10 21 45.2**	**-1.1**
FNA				S	**Sb**	**10 21 56.6**	**-0.4**
FNA				AML	AML	10 21 59.1	
	comp=N,1793μm,0.2s						
FNA				AML	AML	10 22 00.7	
	comp=E,438μm,0.3s						
SKO	**Skopje**	**0.73**	**32**	*i*Pg	**Pb**	**10 21 47.8**	**-0.9**
SKO				*i*Sg	**Sb**	**10 21 57.6**	**-1.3**
NEST	**Nestorio**	**0.94**	**174**	P	**Pb**	**10 21 51.2**	**-1.0**
NEST				S	**Sn**	**10 22 06.7**	**-0.3**
NEST				AML	AML	10 22 09.9	
	comp=E,670μm,0.2s						
NEST				AML	AML	10 22 10.8	
	comp=N,395μm,0.3s						
STIP	**Stip**	**1.02**	**70**	*i*Pg	**Pn**	**10 21 55.5**	**+1.4**
STIP				*i*Sg	**Sn**	**10 22 12.3**	**+3.6**
PENT	**Pentalofos**	**1.17**	**171**	P	**Pn**	**10 21 55.2**	**-1.1**
PENT				S	**Sg**	**10 22 13.7**	**+2.7**
PENT				AML	AML	10 22 15.5	
	comp=E,411μm,1.0s						
PENT				AML	AML	10 22 16.0	
	comp=N,316μm,0.4s						
PENT	**Pentalofos**	**1.17**	**171**	P	**Pn**	**10 21 55.4**	**-0.9**
PENT				S	**Sg**	**10 22 13.4**	**+2.4**
GRG	**Griva**	**1.19**	**109**	P	**Pg**	**10 21 56.3**	**0.0**
GRG				S	**Sg**	**10 22 11.9**	**+0.1**
GRG				AML	AML	10 22 13.0	
	comp=N,252μm,0.4s						
GRG				AML	AML	10 22 17.9	
	comp=E,202μm,0.4s						
GRG	**Griva**	**1.19**	**109**	P	**Pn**	**10 21 55.7**	**-0.9**
GRG				S	**Sg**	**10 22 12.2**	**+0.4**
KZN	**Kozani**	**1.23**	**148**	P	**Pn**	**10 21 54.9**	**-2.3**
KZN				S	**Sg**	**10 22 16.2**	**+3.1**
KZN				AML	AML	10 22 16.9	
	comp=N,303μm,0.5s						
KZN				AML	AML	10 22 17.1	
	comp=E,343μm,0.4s						
KZN	**Kozani**	**1.23**	**148**	P	**Pn**	**10 21 55.8**	**-1.4**
KZN				S	**Sg**	**10 22 15.7**	**+2.7**
VAY	**Valandovo**	**1.25**	**91**	*i*Pg	**Pn**	**10 21 56.4**	**-1.0**
VAY				*i*Sg	**Sg**	**10 22 14.0**	**+0.4**
VAY				*e*Lg	Lg	10 22 14.6	
	comp=E,66nm,0.4s						
VAY				*e*Lg	Lg	10 22 15.6	
	comp=N,56nm,0.5s						
ULC	**Ulcinj**	**1.39**	**297**	⇓*i*Pg	**Pb**	**10 21 59.1**	**-0.7**

ULC				*e*Sg	**Sg**	**10 22 20.9**	**+2.7**
ULC	**Ulcinj**	**1.39 297**	⇓	*i*Pg	**Pb**	**10 21 59.1**	**-0.7**
ULC				*e*Sg	**Sg**	**10 22 20.9**	**+2.7**
PVY	**Plav**	**1.43 331**	⇓	*i*Pg	**Pb**	**10 22 00.0**	**-0.6**
PVY				*e*Sg	**Sg**	**10 22 22.2**	**+2.7**
PVY	**Plav**	**1.43 331**	⇓	*i*Pg	**Pb**	**10 22 00.0**	**-0.6**
PVY				*e*Sg	**Sg**	**10 22 22.2**	**+2.7**
KPRO	**Kipourio**	**1.44 166**		P	**Pg**	**10 22 01.1**	**+0.1**
KPRO				S	**Sg**	**10 22 20.9**	**+1.2**
KPRO				AML	AML	10 22 25.5	
	comp=E,284μm,0.3s						
KPRO				AML	AML	10 22 27.4	
	comp=N,234μm,0.3s						
KPRO	**Kipourio**	**1.44 166**		P	**Pb**	**10 22 00.6**	**0.0**
KPRO				S	**Sg**	**10 22 21.1**	**+1.4**
KNT	**Kendrikon**	**1.51 97**		P	**Pb**	**10 22 01.1**	**-0.8**
KNT				S	**Sg**	**10 22 21.1**	**-0.8**
KNT				AML	AML	10 22 25.2	
	comp=N,151μm,0.3s						
KNT				AML	AML	10 22 26.2	
	comp=E,82μm,0.4s						
KNT	**Kendrikon**	**1.51 97**		P	**Pb**	**10 22 00.7**	**-1.1**
KNT				S	**Sg**	**10 22 21.2**	**-0.8**
DRME	**Dracevica, Mon**	**1.54 303**	⇑	*i*Pg	**Pb**	**10 22 01.8**	**-0.5**
DRME				*e*Sg	**Sg**	**10 22 25.7**	**+2.8**
DRME	**Dracevica, Mon**	**1.54 303**	⇑	*i*Pg	**Pb**	**10 22 01.8**	**-0.5**
DRME				*e*Sg	**Sg**	**10 22 25.7**	**+2.8**
PDG	**Podgorica**	**1.64 312**	⇑	*i*Pn	**Pg**	**10 22 04.1**	**-0.8**
PDG				*e*Sn	**Sg**	**10 22 27.5**	**+1.3**
TTG	**Podgorica**	**1.64 312**	⇑	*i*Pn	**Pg**	**10 22 04.1**	**-0.8**
TTG				*e*Sn	**Sg**	**10 22 27.5**	**+1.3**
BEY	**Berane**	**1.70 334**	⇑	*i*Pn	**Pb**	**10 22 05.0**	**-0.1**
BEY				*e*Sn	**Sg**	**10 22 29.1**	**+1.1**
IVA	**Berane**	**1.70 334**	⇑	*i*Pn	**Pb**	**10 22 05.0**	**-0.1**
IVA				*e*Sn	**Sg**	**10 22 29.1**	**+1.1**
SGD	**Sagiada**	**1.81 197**		P	**Pn**	**10 22 03.5**	**-1.6**
SGD	**Sagiada**	**1.81 197**		P	**Pn**	**10 22 04.4**	**-0.7**
HORT	**Hortiatis**	**1.82 114**		P	**Pn**	**10 22 05.5**	**+0.2**
HORT	**Hortiatis**	**1.82 114**		P	**Pn**	**10 22 05.2**	**-0.1**
KOME	**Kolasin**	**1.82 326**		*e*Pn	**Pb**	**10 22 06.5**	**-0.7**
KOME				*e*Sn	**Sg**	**10 22 32.5**	**+0.5**
KOME	**Kolasin**	**1.82 326**		*e*Pn	**Pb**	**10 22 06.5**	**-0.7**
KOME				*e*Sn	**Sg**	**10 22 32.5**	**+0.5**
KEK	**Kerkira**	**1.84 208**		P	**Pb**	**10 22 07.3**	**-0.3**
KEK				S	**Sb**	**10 22 30.3**	**-0.5**
KEK				AML	AML	10 22 33.6	
	comp=N,87μm,0.6s						
KEK				AML	AML	10 22 37.4	
	comp=E,167μm,0.9s						
KEK	**Kerkira**	**1.84 208**		P	**Pb**	**10 22 06.4**	**-1.1**
KEK				S	**Sb**	**10 22 30.4**	**-0.4**
CEME	**Cevo**	**1.91 309**	⇓	*i*Pn	**Pb**	**10 22 08.2**	**-0.4**
CEME				*e*Sn	**Sg**	**10 22 34.6**	**-0.1**
CEME	**Cevo**	**1.91 309**	⇓	*i*Pn	**Pb**	**10 22 08.2**	**-0.4**
CEME				*e*Sn	**Sg**	**10 22 34.6**	**-0.1**
THL	**Klokotos Trika**	**1.97 154**		P	**Pn**	**10 22 07.1**	**-0.2**
THL	**Klokotos Trika**	**1.97 154**		P	**Pn**	**10 22 07.4**	**+0.1**
NKME	**Niksic**	**2.03 315**	⇓	*i*Pn	**Pb**	**10 22 09.4**	**-1.3**
NKME				*e*Sn	**Sg**	**10 22 37.4**	**-1.3**
NKME	**Niksic**	**2.03 315**	⇓	*i*Pn	**Pb**	**10 22 09.4**	**-1.3**
NKME				*e*Sn	**Sg**	**10 22 37.4**	**-1.3**
HCY	**Herceg Novi**	**2.11 302**		*e*Pn	**Pb**	**10 22 10.4**	**-1.7**
HCY				*e*Sn	**Sg**	**10 22 39.8**	**-1.5**
HCY	**Herceg Novi**	**2.11 302**		*e*Pn	**Pb**	**10 22 10.4**	**-1.7**
HCY				*e*Sn	**Sg**	**10 22 39.8**	**-1.5**
UPM	**Unac-Piva**	**2.37 322**	⇑	*i*Pn	**Pb**	**10 22 14.1**	**-2.6**
UPM				*e*Sn	**Sb**	**10 22 45.6**	**-0.7**
UPM	**Unac-Piva**	**2.37 322**	⇑	*i*Pn	**Pb**	**10 22 14.1**	**-2.6**
UPM				*e*Sn	**Sb**	**10 22 45.6**	**-0.7**
AGG	**Agios Georgios**	**2.57 154**		P	**Pn**	**10 22 15.9**	**+0.3**
AGG	**Agios Georgios**	**2.57 154**		P	**Pn**	**10 22 16.0**	**+0.5**
STON	**Ston**	**2.83 304**		*e*Pn	**Pn**	**10 22 20.0**	**+0.9**
STON				Sn	**Sb**	**10 22 56.7**	**-2.5**
STON	**Ston**	**2.83 304**		*e*Pn	**Pn**	**10 22 19.9**	**+0.9**
STON				Sn	**Sb**	**10 22 56.6**	**-2.5**
UDBI	**Udbina**	**4.93 312**		*e*Pn	**Pn**	**10 22 50.2**	**+2.1**
UDBI				Sn	**Sn**	**10 23 47.5**	**+2.0**
UDBI	**Udbina**	**4.93 312**		*e*Pn	**Pn**	**10 22 50.2**	**+2.1**
UDBI				Sn	**Sn**	**10 23 47.4**	**+2.0**
NVLJ	**Novalja**	**5.47 308**		*e*Pn	**Pn**	**10 22 56.4**	**+1.0**
NVLJ				Sn	**Sn**	**10 23 58.7**	**+0.2**
NVLJ	**Novalja**	**5.47 308**		*e*Pn	**Pn**	**10 22 56.3**	**+1.0**
NVLJ				Sn	**Sn**	**10 23 58.7**	**+0.2**

*LDG **07** 10:27:31.4±0.3,37°.35N×1°.97W,h2km, Error ellipse: s-maj=6.5km s-min=4.3km az=145.0*
*CSEM **07** 10:27:31.9±0.1,37°.39N×2°.18W,h2km,ML3.6/13,Error ellipse: s-maj=2.9km s-min=2.1km az=149.0*
*MDD **07** 10:27:32.3±0.3,37°.36N×2°.09W,h0km,mbLg3.5/32,Error ellipse: s-maj=3.1km s-min=2.2km az=117.0,PRXIMO*
MDD EMS: IV INTENSIDAD MAXIMA.
*INMG **07** 10:27:32.6±1.5,37°.30N×1°.99W,h18km±3km,ML3.3,Error ellipse: s-maj=2.7km s-min=2.0km az=118.0*
*IGIL **07** 10:27:32.1,37°.36N×2°.09W,h0km*
*SFS **07** 10:27:32.0,37°.30N×2°.70W,h0km,ML3.3*
*CNRM **07** 10:27:33.2,37°.37N×1°.97W,h50km,ML3.4*
ISC 07 10:27:30.7±1.1,37°.37N±0°.02×2°.11W±0°.02,h7km±9km, n150,σ1$46/291,6C-5D,Spain

Code	Station Name	Δ°	ΔZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENIJ	**Nijar**	**0.40**	**191**	⇓Pg	**Pg**	**10 27 39.7**	**+1.1**
	494nm,0.2s,SNR=18						
ENIJ				Lg	Lg	10 27 45.0	
	3μm,0.2s,SNR=7.9						
ENIJ	**Nijar**	**0.40**	**191**	Pg	**Pg**	**10 27 39.7**	**+1.1**
	494nm,0.2s,SNR=18						
ENIJ				Lg	Lg	10 27 45.0	
	3μm,0.2s,SNR=7.9						
GORA	**Gorafe**	**0.75**	**279**	Pg	**Pg**	**10 27 45.7**	**+0.6**
	47nm,0.2s,SNR=7.9						
GORA				Lg	Lg	10 27 57.1	
	2μm,0.5s,SNR=7.9						
GORA	**Gorafe**	**0.75**	**279**	Pg	**Pg**	**10 27 45.7**	**+0.6**
	47nm,0.2s,SNR=7.9						
GORA				Lg	Lg	10 27 57.1	
	2μm,0.5s,SNR=7.9						
SESP	**Santiago Espad**	**0.83**	**336**	⇓Pg	**Pg**	**10 27 47.1**	**+0.5**
	92nm,0.3s,SNR=18						
SESP				Lg	Lg	10 28 00.2	
	920nm,0.3s,SNR=7.9						
SESP	**Santiago Espad**	**0.83**	**336**	P	**Pb**	**10 27 47.3**	**-0.3**
SESP				S	**Sb**	**10 27 59.6**	**+0.6**
SESP				Lg	Lg	10 28 00.2	
	920nm,0.3s,SNR=7.9						
EMUR	**La Murta**	**0.84**	**55**	⇑Pg	**Pg**	**10 27 47.3**	**+0.4**
	932nm,0.4s,SNR=18						
EMUR				Lg	Lg	10 27 59.4	
	677nm,0.3s,SNR=13						
EQES	**Quesada**	**0.88**	**300**	Pg	**Pb**	**10 27 48.9**	**+0.5**
	97nm,0.3s,SNR=130						
EQES				Lg	Lg	10 28 01.2	
	183nm,0.1s,SNR=7.9						
EQES	**Quesada**	**0.88**	**300**	Pg	**Pb**	**10 27 48.9**	**+0.5**
	97nm,0.3s,SNR=130						
EQES				Lg	Lg	10 28 01.2	
	183nm,0.1s,SNR=7.9						
CART	**Cartagena**	**0.91**	**76**	*i*P	**Pg**	**10 27 48.3**	**+0.1**
CART				*e*S	**Sb**	**10 28 00.9**	**-0.3**
EQUE	**Quentar**	**1.07**	**262**	⇑Pg	**Pg**	**10 27 51.6**	**+0.3**
	153nm,0.4s,SNR=18						
EQUE				Lg	Lg	10 28 06.9	
	276nm,0.6s,SNR=8.2						
EQUE	**Quentar**	**1.07**	**262**	Pg	**Pg**	**10 27 51.6**	**+0.3**
	153nm,0.4s,SNR=18						
EQUE				Lg	Lg	10 28 06.9	
	276nm,0.6s,SNR=8.2						
ELGU	**Los Guajares,**	**1.31**	**248**	⇑Pg	**Pn**	**10 27 55.8**	**+0.2**
	116nm,0.3s,SNR=18						
ELGU				Lg	Lg	10 28 14.5	
	205nm,0.3s,SNR=7.9						
ELGU	**Los Guajares,**	**1.31**	**248**	Pg	**Pn**	**10 27 55.8**	**+0.2**
	116nm,0.3s,SNR=18						
ELGU				Lg	Lg	10 28 14.5	
	205nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**1.35**	**19**	⇑Pg	**Pg**	**10 27 57.1**	**+0.4**
	118nm,0.4s,SNR=18						
ETOB				Lg	Lg	10 28 16.3	
	1μm,0.5s,SNR=31						
ETOB	**Tobarra**	**1.35**	**19**	Pg	**Pg**	**10 27 57.1**	**+0.4**
	118nm,0.4s,SNR=18						
ETOB				Lg	Lg	10 28 16.3	
	1μm,0.5s,SNR=31						
EALB	**Alboran**	**1.61**	**208**	Pg	**Pb**	**10 28 00.8**	**0.0**
	48nm,0.4s,SNR=18						
EALB				Lg	Lg	10 28 19.7	
	160nm,0.3s,SNR=7.9						
EGOR	**Sierra Gorda,**	**1.61**	**261**	⇓Pn	**Pb**	**10 28 01.2**	**+0.2**
	4.1nm,0.2s,SNR=18						
EGOR				Lg	Lg	10 28 25.7	
	396nm,0.5s,SNR=7.9						
EGOR	**Sierra Gorda,**	**1.61**	**261**	Pn	**Pb**	**10 28 01.2**	**+0.2**
	4.1nm,0.2s,SNR=18						
EGOR				Lg	Lg	10 28 25.7	
	396nm,0.5s,SNR=7.9						
AFON	**Font Roja**	**1.79**	**43**	Pn	**Pn**	**10 28 03.3**	**+1.0**
	31nm,0.4s,SNR=16						
AFON				Sn	**Sb**	**10 28 27.4**	**+0.7**
	52nm,0.3s,SNR=7.9						
AFON	**Font Roja**	**1.79**	**43**	Pn	**Pn**	**10 28 03.3**	**+1.0**
	31nm,0.4s,SNR=16						
AFON				Sn	**Sb**	**10 28 27.4**	**+0.7**
	52nm,0.3s,SNR=7.9						
EMAL	**Malaga-Limoner**	**1.95**	**253**	*i*P	**Pb**	**10 28 06.4**	**-0.2**
EADA	**Adamuz**	**2.11**	**293**	⇑Pn	**Pn**	**10 28 07.8**	**+1.2**
	29nm,0.4s,SNR=18						
EADA				Sn	**Sn**	**10 28 34.1**	**+1.0**
	82nm,0.7s,SNR=6.2						
EADA				Lg	Lg	10 28 40.9	
	76nm,0.2s,SNR=5.0						
EADA	**Adamuz**	**2.11**	**293**	Pn	**Pn**	**10 28 07.8**	**+1.2**
	29nm,0.4s,SNR=18						
EADA				Sn	**Sn**	**10 28 34.1**	**+1.0**
	82nm,0.7s,SNR=6.2						
EADA				Lg	Lg	10 28 40.9	
	76nm,0.2s,SNR=5.0						
EMIJ	**Mijas**	**2.28**	**250**	Pn	**Pb**	**10 28 11.6**	**-0.6**
	22nm,0.6s,SNR=7.2						
EMIJ	**Mijas**	**2.28**	**250**	Pn	**Pb**	**10 28 11.6**	**-0.6**
	22nm,0.6s,SNR=7.2						
HORN	**Hornachuelos**	**2.54**	**282**	P	**Pn**	**10 28 13.5**	**+1.0**
HORN				S	**Sn**	**10 28 45.9**	**+2.2**
MPAL	**Palemas**	**2.60**	**215**	P	**Pn**	**10 28 13.1**	**-0.2**
MPAL				S	**Sn**	**10 28 44.0**	**-1.1**
ECAB	**El Cabril**	**2.72**	**286**	⇑Pn	**Pn**	**10 28 15.9**	**+1.0**
	66nm,0.3s,SNR=18						
ECAB				Sn	**Sn**	**10 28 48.6**	**+0.6**
	101nm,0.4s,SNR=16						
ECAB				Lg	Lg	10 28 58.5	
	187nm,0.5s,SNR=7.9						
ECAB	**El Cabril**	**2.72**	**286**	Pn	**Pn**	**10 28 15.9**	**+1.0**
	66nm,0.3s,SNR=18						
ECAB				Sn	**Sn**	**10 28 48.6**	**+0.6**
	101nm,0.4s,SNR=16						
ECAB				Lg	Lg	10 28 58.5	
	187nm,0.5s,SNR=7.9						
ESDC	**Sonseca Array**	**2.72**	**328**	Pn	**Pn**	**10 28 16.5**	**+1.5**
	2.1nm,0.3s,baz=145,slow=12,SNR=20						
ESDC				Pg	**Pg**	**10 28 22.8**	**-0.1**
	7.8nm,0.3s,baz=146,slow=17,SNR=32						
ESDC				Sn	**Sn**	**10 28 48.2**	**0.0**
	SNR=7.9						
ESDC				Lg	Lg	10 29 00.1	
	24nm,0.1s,SNR=7.9						
ESDC	**Sonseca Array**	**2.72**	**328**	Pn	**Pn**	**10 28 16.5**	**+1.5**
	2.1nm,0.3s,SNR=20						
ESDC	**Sonseca Array**	**2.72**	**328**	Pg	**Pg**	**10 28 22.8**	**-0.1**
	7.8nm,0.3s,SNR=32						
ESDC				Sn	**Sn**	**10 28 48.2**	**0.0**
	SNR=7.9						
ESDC				Lg	Lg	10 29 00.1	
	24nm,0.1s,SNR=7.9						
PAB	**San Pablo**	**2.79**	**322**	Pn	**Pn**	**10 28 17.1**	**+1.1**
	1.1nm,0.1s,SNR=7.9						
PAB				Sn	**Sn**	**10 28 49.5**	**-0.5**
	9.0nm,0.1s,SNR=7.9						
PAB				Lg	Lg	10 29 01.7	
	20nm,0.2s,SNR=7.9						
PAB	**San Pablo**	**2.79**	**322**	Pn	**Pn**	**10 28 17.1**	**+1.1**
	1.1nm,0.1s,SNR=7.9						
PAB				Sn	**Sn**	**10 28 49.5**	**-0.5**
	9.0nm,0.1s,SNR=7.9						
PAB				Lg	Lg	10 29 01.7	
	20nm,0.2s,SNR=7.9						
PVLZ	**Peæn de**	**2.82**	**220**	*e*P	**Pn**	**10 28 16.1**	**-0.1**
PVLZ				*e*S	**Sn**	**10 28 51.6**	**+1.2**
EJIF	**Jimena Fronter**	**2.84**	**252**	Pg	**Pg**	**10 28 25.7**	**+0.5**
	56nm,0.6s,SNR=7.9						
EJIF	**Jimena Fronter**	**2.84**	**252**	Pg	**Pg**	**10 28 25.7**	**+0.5**
	56nm,0.6s,SNR=7.9						
EIBI	**Ibiza**	**3.19**	**58**	Pn	**Pn**	**10 28 21.4**	**+0.1**
	24nm,0.7s,SNR=13						
EIBI				Sn	**Sn**	**10 28 56.2**	**-3.4**
	31nm,0.5s,SNR=7.4						
EMOS	**Mosqueruela**	**3.25**	**23**	Pn	**Pn**	**10 28 22.7**	**+0.3**
	3.0nm,0.4s,SNR=7.9						
EMOS				Pg	**Pg**	**10 28 32.0**	**-1.1**
	38nm,0.7s,SNR=7.9						
EMOS				Lg	Lg	10 29 10.9	
	200nm,1.2s,SNR=7.9						
EMOS	**Mosqueruela**	**3.25**	**23**	Pn	**Pn**	**10 28 22.7**	**+0.3**
	3.0nm,0.4s,SNR=7.9						
EMOS				Lg	Lg	10 29 10.9	
	200nm,1.2s,SNR=7.9						
ETOR	**Torete**	**3.45**	**1**	Pn	**Pn**	**10 28 25.0**	**0.0**
	4.3nm,0.4s,SNR=7.0						
ETOR				Pg	**Pg**	**10 28 36.0**	**-0.8**
	23nm,0.3s,SNR=7.9						
ETOR				Sn	**Sn**	**10 29 06.0**	**-0.1**
	20nm,0.3s,SNR=7.9						
ETOR				Lg	Lg	10 29 21.1	
	78nm,0.4s,SNR=5.9						
ETOR	**Torete**	**3.45**	**1**	Pn	**Pn**	**10 28 25.0**	**0.0**
	4.3nm,0.4s,SNR=7.0						
ETOR	**Torete**	**3.45**	**1**	Pg	**Pg**	**10 28 36.0**	**-0.8**
	23nm,0.3s,SNR=7.9						
ETOR				Sn	**Sn**	**10 29 06.0**	**-0.1**
	20nm,0.3s,SNR=7.9						
ETOR				Lg	Lg	10 29 21.1	
	78nm,0.4s,SNR=5.9						
GUD	**Guadarrama**	**3.64**	**335**	Pn	**Pn**	**10 28 29.2**	**+1.6**
	2.2nm,0.2s,SNR=6.0						
GUD				Pg	**Pg**	**10 28 39.0**	**-1.4**
	7.7nm,0.3s,SNR=7.9						
GUD				Sn	**Sn**	**10 29 10.0**	**-0.9**
	8.7nm,0.3s,SNR=7.9						
GUD				Lg	Lg	10 29 25.7	
	41nm,0.6s,SNR=6.7						
GUD	**Guadarrama**	**3.64**	**335**	Pn	**Pn**	**10 28 29.2**	**+1.6**
	2.2nm,0.2s,SNR=6.0						
GUD	**Guadarrama**	**3.64**	**335**	Pg	**Pg**	**10 28 39.0**	**-1.4**
	7.7nm,0.3s,SNR=7.9						
GUD				Sn	**Sn**	**10 29 10.0**	**-0.9**
	8.7nm,0.3s,SNR=7.9						
GUD				Lg	Lg	10 29 25.7	
	41nm,0.6s,SNR=6.7						
EMIN	**Mina Concepcio**	**3.65**	**278**	Pn	**Pn**	**10 28 28.4**	**+0.8**
	8.8nm,0.4s,SNR=39						
EMIN				Sn	**Sn**	**10 29 11.3**	**+0.4**
	23nm,0.4s,SNR=8.2						
EMIN	**Mina Concepcio**	**3.65**	**278**	Pn	**Pn**	**10 28 28.4**	**+0.8**
	8.8nm,0.4s,SNR=39						
EMIN				Sn	**Sn**	**10 29 11.3**	**+0.4**
	23nm,0.4s,SNR=8.2						
RSA	**Sarsar**	**3.90**	**232**	P	**Pb**	**10 28 36.0**	**-3.9**
RSA				S	**Sn**	**10 29 19.8**	**+2.5**
PBAR	**Barrancos**	**3.99**	**283**	*e*Pn	**Pn**	**10 28 33.3**	**+1.0**
PBAR				*e*Sn	**Sn**	**10 29 19.7**	**+0.4**
PBAR				A	A	10 29 51.9	
	78nm,0.5s						
PBAR	**Barrancos**	**3.99**	**283**	*e*Pn	**Pn**	**10 28 33.3**	**+1.0**
PBAR				*e*Sn	**Sn**	**10 29 19.7**	**+0.4**
ERTA	**Horta de San J**	**4.06**	**27**	Pn	**Pn**	**10 28 35.6**	**+2.3**
	1.3nm,0.2s,SNR=7.9						
ERTA				Sn	**Sn**	**10 29 21.3**	**+0.3**
	4.6nm,0.3s,SNR=7.9						
ERTA				Lg	Lg	10 29 38.2	
	78nm,1.0s,SNR=7.9						
ERTA	**Horta de San J**	**4.06**	**27**	Pn	**Pn**	**10 28 35.6**	**+2.3**
	1.3nm,0.2s,SNR=7.9						
ERTA				Lg	Lg	10 29 38.2	
	78nm,1.0s,SNR=7.9						
EBAD	**Badajoz**	**4.11**	**291**	Pn	**Pn**	**10 28 34.7**	**+0.7**
	3.4nm,0.3s,SNR=12						
EBAD				Sn	**Sn**	**10 29 22.9**	**+0.6**
	16nm,0.4s,SNR=8.9						
EBAD				Lg	Lg	10 29 43.8	
	74nm,0.4s,SNR=5.5						
EBAD	**Badajoz**	**4.11**	**291**	Pn	**Pn**	**10 28 34.7**	**+0.7**
	3.4nm,0.3s,SNR=12						
EBAD				Sn	**Sn**	**10 29 22.9**	**+0.6**
	16nm,0.4s,SNR=8.9						
EBAD				Lg	Lg	10 29 43.8	
	74nm,0.4s,SNR=5.5						
EPLA	**Plasencia**	**4.11**	**312**	Pn	**Pn**	**10 28 35.4**	**+1.4**
	1.5nm,0.1s,SNR=8.4						
EPLA				Pg	**Pg**	**10 28 47.9**	**-1.6**
	11nm,0.4s,SNR=7.9						
EPLA				Sn	**Sn**	**10 29 22.2**	**-0.2**
	7.5nm,0.2s,SNR=7.9						
EPLA				Lg	Lg	10 29 43.5	
	119nm,0.7s,SNR=12						
EPLA	**Plasencia**	**4.11**	**312**	Pn	**Pn**	**10 28 35.4**	**+1.4**
	1.5nm,0.1s,SNR=8.4						
EGRO	**El Granado**	**4.28**	**274**	Pn	**Pn**	**10 28 37.0**	**+0.7**
	4.6nm,0.3s,SNR=28						
EGRO				Sn	**Sn**	**10 29 26.5**	**+0.1**
	13nm,0.3s,SNR=6.1						
EGRO				Lg	Lg	10 29 48.6	
	53nm,0.7s,SNR=7.9						
EGRO	**El Granado**	**4.28**	**274**	Pn	**Pn**	**10 28 37.0**	**+0.7**
	4.6nm,0.3s,SNR=28						
EGRO				Sn	**Sn**	**10 29 26.5**	**+0.1**
	13nm,0.3s,SNR=6.1						
EGRO				Lg	Lg	10 29 48.6	
	53nm,0.7s,SNR=7.9						
PVAQ	**Vaqueiros**	**4.46**	**272**	*e*Pn	**Pn**	**10 28 39.6**	**+0.7**
PVAQ				*e*Sn	**Sn**	**10 29 30.7**	**-0.4**
PVAQ				A	A	10 30 13.8	
	25nm,0.6s						
PVAQ	**Vaqueiros**	**4.46**	**272**	P	**Pn**	**10 28 39.2**	**+0.3**
PVAQ	**Vaqueiros**	**4.46**	**272**	*e*Pn	**Pn**	**10 28 39.6**	**+0.7**
PVAQ				*e*Sn	**Sn**	**10 29 30.7**	**-0.4**
PVAQ				S	**Sn**	**10 29 31.0**	**-0.1**
ESAC	**San Caprasio**	**4.53**	**16**	Lg	Lg	10 29 52.2	
	311nm,0.9s,SNR=7.9						
ESAC	**San Caprasio**	**4.53**	**16**	Lg	Lg	10 29 52.2	
	311nm,0.9s,SNR=7.9						
ETOS	**Mallorca**	**4.54**	**57**	Pn	**Pn**	**10 28 40.5**	**+0.5**
	7.0nm,0.4s,SNR=22						
ETOS				Sn	**Sn**	**10 29 30.5**	**-2.6**
	7.9nm,0.5s,SNR=7.9						
PESTR	**Estremoz**	**4.57**	**291**	*e*Pn	**Pn**	**10 28 41.4**	**+1.0**
PESTR				*e*Sn	**Sn**	**10 29 33.9**	**+0.1**
PESTR				*e*Sg	**Sg**	**10 29 54.5**	**-3.1**
PESTR				A	A	10 30 08.8	
	56nm,0.6s						
PESTR	**Estremoz**	**4.57**	**291**	P	**Pn**	**10 28 40.9**	**+0.5**
PESTR	**Estremoz**	**4.57**	**291**	*e*Pn	**Pn**	**10 28 41.4**	**+1.0**
PESTR				*e*Sn	**Sn**	**10 29 33.9**	**+0.1**
PESTR				*e*Sg	**Sg**	**10 29 54.5**	**-3.1**
PBEJ	**Beja**	**4.61**	**280**	*e*Pn	**Pn**	**10 28 42.4**	**+1.5**
PBEJ				*e*Sn	**Sn**	**10 29 34.4**	**-0.3**
PBEJ				*e*Sg	**Sg**	**10 29 59.0**	**+0.2**
PBEJ				A	A	10 30 13.3	
	21nm,0.6s						
PBEJ	**Beja**	**4.61**	**280**	*e*Pn	**Pn**	**10 28 42.4**	**+1.5**
PBEJ				*e*Sn	**Sn**	**10 29 34.4**	**-0.3**
PBEJ				*e*Sg	**Sg**	**10 29 59.0**	**+0.2**
PMRV	**Marv??o**	**4.63**	**298**	*e*Pn	**Pn**	**10 28 42.0**	**+0.8**
PMRV				*e*Sn	**Sn**	**10 29 34.5**	**-0.7**
PMRV				*e*Sg	**Sg**	**10 29 58.2**	**-1.2**
PMRV				A	A	10 30 08.0	
	89nm,0.6s						
PMRV	**Marv??o**	**4.63**	**298**	*e*Pn	**Pn**	**10 28 42.0**	**+0.8**
PMRV				*e*Sn	**Sn**	**10 29 34.5**	**-0.7**
PMRV				*e*Sg	**Sg**	**10 29 58.2**	**-1.2**
PBDV	**Barranco-do-Ve**	**4.64**	**270**	*e*Pn	**Pn**	**10 28 42.6**	**+1.3**
PBDV				*e*Sn	**Sn**	**10 29 35.5**	**0.0**
PBDV				A	A	10 30 12.6	
	24nm,0.7s						
PBDV	**Barranco-do-Ve**	**4.64**	**270**	*e*Pn	**Pn**	**10 28 42.6**	**+1.3**
PBDV				*e*Sn	**Sn**	**10 29 35.5**	**0.0**
EPOB	**Poblet**	**4.69**	**31**	Pn	**Pn**	**10 28 43.6**	**+1.6**
	0.7nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**4.69**	**31**	Pn	**Pn**	**10 28 43.6**	**+1.6**
	0.7nm,0.2s,SNR=7.9						
PCVE	**Castro Verde**	**4.72**	**275**	*e*Pn	**Pn**	**10 28 43.2**	**+0.8**
PCVE				*e*Sn	**Sn**	**10 29 37.5**	**+0.1**
PCVE				A	A	10 30 06.3	
	28nm,0.5s						
PCVE	**Castro Verde**	**4.72**	**275**	*e*Pn	**Pn**	**10 28 43.2**	**+0.8**
PCVE				*e*Sn	**Sn**	**10 29 37.5**	**+0.1**
EVO	**Evora**	**4.81**	**286**	*e*Pn	**Pn**	**10 28 45.1**	**+1.5**
EVO				*e*Sn	**Sn**	**10 29 39.5**	**-0.1**
EVO				*e*Sg	**Sg**	**10 30 05.1**	**0.0**
EVO				A	A	10 30 16.2	
	40nm,0.7s						
EVO	**Evora**	**4.81**	**286**	*e*P	**Pn**	**10 28 45.0**	**+1.5**
EVO				*e*S	**Sn**	**10 29 39.4**	**-0.1**
EVO				*e*Sg	**Sg**	**10 30 05.1**	**0.0**
MESJ	**Messejana**	**4.

MVO Moncorvo 5.38 316 Pn **Pn 10 28 53.8 +2.3**
19nm,0.7s,SNR=13
MVO Sn **Sn 10 29 51.5 -2.3**
22nm,0.6s,SNR=7.9
MVO Lg Lg 10 30 24.0
194nm,1.0s,SNR=8.6
MVO Moncorvo 5.38 316 Pn **Pn 10 28 53.8 +2.3**
19nm,0.7s,SNR=13
MVO *e*Sn **Sn 10 29 52.6 -1.1**
MVO Lg Lg 10 30 24.0
194nm,1.0s,SNR=8.6
MVO *e*Sg **Sg 10 30 24.7 +1.3**
ALMR Almeirim 5.39 291 *e*P **Pn 10 28 51.6 0.0**
ALMR Almeirim 5.39 291 *e*Pn **Pn 10 28 53.4 +1.8**
ALMR *e*Sn **Sn 10 29 53.3 -0.6**
ALMR *e*Sg **Sg 10 30 24.1 +0.2**
ALMR A A 10 30 41.6
79nm,0.6s
ALMR Almeirim 5.39 291 *e*Pn **Pn 10 28 53.4 +1.8**
ALMR *e*Sn **Sn 10 29 53.3 -0.6**
ALMR *e*Sg **Sg 10 30 24.1 +0.2**
PTOM Tomar 5.43 296 *e*Pn **Pn 10 28 53.6 +1.5**
PTOM *e*Sn **Sn 10 29 53.9 -0.9**
PTOM *e*Sg **Sg 10 30 21.8 -3.2**
PTOM A A 10 30 25.4
28nm,0.5s
PTOM Tomar 5.43 296 *e*Pn **Pn 10 28 53.6 +1.5**
PTOM *e*Sn **Sn 10 29 53.9 -0.9**
PTOM *e*Sg **Sg 10 30 21.8 -3.2**
EORO Oroz-Betelu 5.55 6 Pn **Pn 10 28 55.8 +1.9**
4.7nm,0.5s,SNR=7.4
EORO Pg **Pg 10 29 15.8 -1.3**
11nm,0.5s,SNR=7.9
EORO Sn **Sn 10 29 56.5 -1.5**
11nm,0.5s,SNR=7.9
EORO Lg Lg 10 30 27.4
110nm,1.0s,SNR=7.9
EORO Oroz-Betelu 5.55 6 Pn **Pn 10 28 55.8 +1.9**
4.7nm,0.5s,SNR=7.4
EORO Lg Lg 10 30 27.4
110nm,1.0s,SNR=7.9
ECHI Chisagues Biel 5.58 18 Pg **Pg 10 29 17.6 0.0**
17nm,1.0s,SNR=7.9
ECHI Sn **Sn 10 29 58.5 -0.3**
2.1nm,0.4s,SNR=7.9
ECHI Lg Lg 10 30 27.0
14nm,0.9s,SNR=7.9
ECHI Chisagues Biel 5.58 18 Pg **Pg 10 29 17.6 0.0**
17nm,1.0s,SNR=7.9
ECHI Sn **Sn 10 29 58.5 -0.3**
2.1nm,0.4s,SNR=7.9
ECHI Lg Lg 10 30 27.0
14nm,0.9s,SNR=7.9
CSOR Sort 5.59 26 Pn **Pn 10 28 57.0 +2.5**
0.9nm,0.1s,SNR=7.9
CSOR Lg Lg 10 30 30.0
58nm,1.0s,SNR=7.9
CSOR Sort 5.59 26 Pn **Pn 10 28 57.0 +2.5**
0.9nm,0.1s,SNR=7.9
CSOR Lg Lg 10 30 30.0
58nm,1.0s,SNR=7.9
PVIS Viseu 5.61 308 *e*Pn **Pn 10 28 56.4 +1.8**
PVIS *e*Sn **Sn 10 29 58.3 -1.0**
PVIS *e*Sg **Sg 10 30 31.5 +0.7**
PVIS A A 10 30 45.7
27nm,0.7s
PVIS Viseu 5.61 308 *e*Pn **Pn 10 28 56.4 +1.8**
PVIS *e*Sn **Sn 10 29 58.3 -1.0**
ETSF Etsaut 5.65 12 *e*P **Pn 10 28 57.4 +2.2**
5.8nm,0.5s
ETSF *e*S **Sn 10 30 02.6 +2.2**
ETSF Etsaut 5.65 12 *e*P **Pn 10 28 57.4 +2.2**
2.9nm,0.5s
ETSF *e*S **Sn 10 30 02.6 +2.2**
PCAS Casmilo, Conde 5.67 300 *e*Pn **Pn 10 28 57.3 +1.9**
PCAS *e*Sn **Sn 10 30 00.2 -0.6**
PCAS *e*Sg **Sg 10 29 29.7 -3.0**
PCAS A A 10 30 37.7
76nm,0.7s
PCAS Casmilo, Conde 5.67 300 *e*Pn **Pn 10 28 57.3 +1.9**
PCAS *e*Sn **Sn 10 30 00.2 -0.6**
PCAS *e*Sg **Sg 10 29 29.7 -3.0**
COI Coimbra 5.68 302 *e*Pn **Pn 10 28 57.5 +1.9**
COI *e*Sn **Sn 10 29 59.9 -1.1**
COI *e*Sg **Sg 10 30 30.2 -2.9**
PBRG Braganca 5.69 323 *e*Pn **Pn 10 28 57.7 +1.9**
PBRG *e*Sn **Sn 10 30 00.4 -1.1**
PBRG *e*Sg **Sg 10 30 32.1 -1.4**
PBRG A A 10 30 45.6
25nm,0.6s
PBRG Braganca 5.69 323 *e*Pn **Pn 10 28 57.7 +1.9**
PBRG *e*Sn **Sn 10 30 00.4 -1.1**
PBRG *e*Sg **Sg 10 30 32.1 -1.4**
SJPF Ste Jean 5.78 6 *e*P **Pn 10 28 59.8 +2.9**
19nm,0.7s
SJPF *e*S **Sn 10 30 07.4 +3.9**
SJPF Ste Jean 5.78 6 *e*P **Pn 10 28 59.8 +2.9**
9.5nm,0.7s
SJPF *e*S **Sn 10 30 07.4 +3.9**
ECAL Calabor 5.80 323 Pn **Pn 10 28 59.0 +1.8**
3.9nm,0.3s,SNR=7.9
ECAL Sn **Sn 10 30 03.6 -0.4**
12nm,0.5s,SNR=7.9
ECAL Lg Lg 10 30 37.4
67nm,0.7s,SNR=7.9
ECAL Calabor 5.80 323 Pn **Pn 10 28 59.0 +1.8**
3.9nm,0.3s,SNR=7.9
ECAL Sn **Sn 10 30 03.6 -0.4**
12nm,0.5s,SNR=7.9
ECAL Lg Lg 10 30 37.4
67nm,0.7s,SNR=7.9
ATE Arette 5.81 10 Pn **Pn 10 29 00.0 +2.6**
0.6nm,0.1s,SNR=7.9
ATE Sn **Sn 10 30 02.8 -1.5**
5.6nm,0.7s,SNR=7.9
ATE Lg Lg 10 30 39.7
78nm,1.4s,SNR=7.9
ATE Arette 5.81 10 Pn **Pn 10 29 00.0 +2.6**
0.6nm,0.1s,SNR=7.9
ATE Lg Lg 10 30 39.7
78nm,1.4s,SNR=7.9
PVRL Vila Real 5.84 314 *e*Pn **Pn 10 28 58.8 +1.0**
PVRL *e*Sn **Sn 10 30 04.5 -0.6**
PVRL *e*Sg **Sg 10 30 39.6 +1.4**
PVRL A A 10 30 45.2
22nm,0.7s
PVRL Vila Real 5.84 314 *e*Pn **Pn 10 28 58.8 +1.0**
PVRL *e*Sn **Sn 10 30 04.5 -0.6**
PVRL *e*Sg **Sg 10 30 39.6 +1.4**
EALK Alkurruntz 5.86 4 Pn **Pn 10 29 00.9 +2.7**
16nm,0.6s,SNR=6.8
EALK Sn **Sn 10 30 03.8 -1.9**
27nm,0.5s,SNR=7.9
EALK Lg Lg 10 30 38.0
114nm,1.1s,SNR=7.9
EALK Alkurruntz 5.86 4 Pn **Pn 10 29 00.9 +2.7**
16nm,0.6s,SNR=6.8
EALK Lg Lg 10 30 38.0
114nm,1.1s,SNR=7.9
PMAFR Mafra 5.87 288 *e*Pn **Pn 10 28 59.7 +1.5**
PMAFR *e*Sn **Sn 10 30 04.7 -1.0**
PMAFR *e*Sg **Sg 10 30 41.0 +1.8**
PMAFR A A 10 30 58.4
46nm,0.8s
PMAFR Mafra 5.87 288 Pn **Pn 10 28 59.4 +1.2**
11nm,0.3s,SNR=6.7
PMAFR Sn **Sn 10 30 04.9 -0.8**
47nm,0.5s,SNR=7.9
PMAFR Lg Lg 10 30 41.4
240nm,1.1s,SNR=7.9
PMAFR Mafra 5.87 288 Pn **Pn 10 28 59.4 +1.2**
11nm,0.3s,SNR=6.7
PMAFR Sn **Sn 10 30 04.9 -0.8**
47nm,0.5s,SNR=7.9
PMAFR Lg Lg 10 30 41.4
240nm,1.1s,SNR=7.9
ELAN Lanestosa 5.94 351 Pn **Pn 10 29 01.8 +2.6**
6.4nm,0.7s,SNR=8.4
ELAN Sn **Sn 10 30 04.7 -2.9**
3.8nm,0.3s,SNR=7.9
ELAN Lg Lg 10 30 44.1
58nm,0.8s,SNR=7.9
ELAN Lanestosa 5.94 351 Pn **Pn 10 29 01.8 +2.6**
6.4nm,0.7s,SNR=8.4
ELAN Lg Lg 10 30 44.1
58nm,0.8s,SNR=7.9

POLO Lamas de Olo 5.95 314 *e*Pn **Pn 10 29 01.5 +2.2**
POLO *e*Sn **Sn 10 30 06.2 -1.6**
POLO *e*Sg **Sg 10 30 41.4 -0.3**
POLO A A 10 30 57.6
10nm,0.6s
POLO Lamas de Olo 5.95 314 *e*Pn **Pn 10 29 01.5 +2.2**
POLO *e*Sn **Sn 10 30 06.2 -1.6**
POLO *e*Sg **Sg 10 30 41.4 -0.3**
EPF Esparros 5.96 18 *e*P **Pn 10 29 01.8 +2.3**
3.3nm,0.2s
EPF *e*S **Sn 10 30 10.4 +2.4**
EPF Esparros 5.96 18 *e*P **Pn 10 29 01.8 +2.3**
1.6nm,0.2s
PCAB Cabril 6.30 315 *e*Sg **Sg 10 30 54.9 +1.9**
EARI Arriondas 6.38 339 Pn **Pn 10 29 07.5 +2.3**
6.6nm,0.6s,SNR=11
EARI Sn **Sn 10 30 15.7 -2.7**
8.4nm,0.5s,SNR=4.7
EARI Lg Lg 10 30 55.1
29nm,0.8s,SNR=7.9
EARI Arriondas 6.38 339 Pn **Pn 10 29 07.5 +2.3**
6.6nm,0.6s,SNR=11
EARI Lg Lg 10 30 55.1
29nm,0.8s,SNR=7.9
ELOB Lobios 6.42 316 Pn **Pn 10 29 07.4 +1.5**
1.6nm,0.3s,SNR=7.9
ELOB Sn **Sn 10 30 16.9 -2.6**
2.9nm,0.2s,SNR=7.9
ELOB Lg Lg 10 30 57.8
56nm,0.9s,SNR=7.9
ELOB Lobios 6.42 316 Pn **Pn 10 29 07.4 +1.5**
1.6nm,0.3s,SNR=7.9
ELOB Lg Lg 10 30 57.8
56nm,0.9s,SNR=7.9
PGAV Gavieira, Arco 6.61 316 *e*Pn **Pn 10 29 09.9 +1.5**
PGAV *e*Sn **Sn 10 30 22.2 -1.8**
PGAV *e*Sg **Sg 10 31 00.4 -2.4**
PGAV A A 10 31 08.0
25nm,0.7s
PGAV Gavieira, Arco 6.61 316 *e*Pn **Pn 10 29 09.9 +1.5**

*IDC **07** 10:32:25.5±1.4, 13°.68N×93°.61E, h0km, mb3.7/5, mb1 3.7/6, mb1mx3.4/66, mbtmp3.6/6, ML3.6/1, MS3.2/1, Ms1 3.2/1, ms1mx2.6/73, Error ellipse: s-maj=43.5km s-min=20.0km az=62.0*
*ISCJB **07** 10:32:28.4±1.1, 13°.7N±0°.1×93°.7E±0°.1, h33km, mb3.6/5, MS3.2/1, Error ellipse: s-maj=18.8km s-min=13.6km az=37.5*
ISC 07 10:32:30.5±1.5, **13°.7N**±0°.1×**93°.6E**±0°.2, **h35**km, **n7**, σ**0s55**/7, **mb3.4**/5, **Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**6.97**	**46**	Pn	**Pn**	**10 34 09.5**	**-0.7**
	0.3nm,0.3s,baz=238,slow=15,SNR=5.0						
CMAR				Sn	**Sn**	**10 35 29.0**	**+0.7**
	0.3nm,0.3s,baz=234,slow=32,SNR=3.7						
MKAR	**Makanchi Array**	**34.36**	**346**	P	**P**	**10 39 14.2**	**+0.2**
	0.3nm,0.6s,baz=158,slow=8.0,SNR=5.2						
KURBB	**Kurchatov Arra**	**38.84**	**345**	P	**P**	**10 39 52.4**	**+0.3**
	2.1nm,0.2s,baz=155,slow=9.0,SNR=3.4						
ZALV	**Zalesovo Beam**	**40.77**	**352**	P	**P**	**10 40 07.9**	**-0.2**
	0.5nm,0.3s,baz=184,slow=8.9,SNR=3.5						
GUMO	**Guam**	**49.71**	**84**	LR	LR	11 03 31.9	
	comp=Z,24nm,18.3s,baz=15,slow=38						
WRA	**Warramunga Arr**	**52.15**	**129**	P	**P**	**10 41 38.0**	**+0.1**
	0.5nm,1.0s,baz=312,slow=7.7,SNR=2.7						
ASAR	**Alice Springs**	**54.11**	**133**	P	**P**	**10 41 52.5**	**+0.2**
	0.3nm,0.9s,baz=307,slow=6.8,SNR=3.0						

*GUC **07** 10:38:41.3±0.6, 30°.82S×71°.19W, h65km±6km, ML4.6*
*ISCJB **07** 10:38:42.4±0.6, 30°.82S±0°.03×71°.30W±0°.08, h78km±6km, mb3.9/9, Error ellipse: s-maj=10.8km s-min=4.5km az=0.6*
*IDC **07** 10:38:42.9±0.5, 30°.81S×70°.99W, h66km±4km, mb3.7/9, mb1 3.9/13, mb1mx3.7/40, mbtmp4.0/13, Error ellipse: s-maj=21.4km s-min=13.7km az=89.0*
*SJA **07** 10:38:45.3±0.8, 30°.87S×70°.96W, h72km±9km, ML4.2, MW4.3*
ISC 07 10:38:42.9±0.5, **30°.81S**±0°.04×**71°.24W**±0°.06, **h67**km±4km, **n39**, σ**1s65**/55, **mb4.2**/9, **1C**, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLL	**Tololo Astrono**	**0.75**	**30**	*e*P	**Pn**	**10 38 58.1**	**-0.3**
TLL				*e*S	**Sn**	**10 39 10.0**	**+0.3**
TLL				IAML		10 39 12.1	
	comp=N,38μm,0.5s						
AROD	**Rodeo**	**1.66**	**68**	*e*P	**Pn**	**10 39 11.4**	**+1.3**
AROD				*e*S	**Sn**	**10 39 32.0**	**+1.3**
LCO	**Las Campanas**	**1.86**	**15**	⇑*i*P	**Pn**	**10 39 12.7**	**-0.1**
LCO				*e*S	**Sn**	**10 39 36.9**	**+1.4**
RTLS	**Leoncito**	**1.93**	**121**	*e*P	**Pn**	**10 39 15.3**	**+1.5**
RTLS				*e*S	**Sn**	**10 39 37.4**	**+0.1**
RTLS				IAML		10 39 45.3	
	comp=Z,3μm,0.4s						
ACDV	**Cuesta del Vie**	**1.94**	**71**	IAML		10 39 44.0	
	comp=Z,1μm,0.4s						
AUSP	**Uspallata**	**2.12**	**132**	*e*P	**Pn**	**10 39 17.7**	**+1.4**
AUSP				*e*S	**Sn**	**10 39 42.0**	**+0.2**
ROCH	**El Roble**	**2.16**	**175**	*e*P	**Pn**	**10 39 16.7**	**-0.1**
ROCH				*e*S	**Sn**	**10 39 44.0**	**+1.4**
ROCH				IAML		10 39 51.0	
	comp=N,5μm,0.3s						
ZON	**Zonda**	**2.31**	**109**	*e*P	**Pn**	**10 39 19.6**	**+0.9**
AMOG	**MOGNA**	**2.37**	**94**	*e*P	**Pn**	**10 39 20.5**	**+1.0**
PEL	**Peldehue**	**2.37**	**169**	*e*P	**Pn**	**10 39 19.3**	**-0.2**
RTLL	**Cerro Villicun**	**2.43**	**103**	*e*P	**Pn**	**10 39 20.6**	**+0.3**
FCH	**Farellones**	**2.63**	**162**	*e*P	**Pn**	**10 39 23.5**	**+0.2**
FCH				*e*S	**Sn**	**10 39 55.8**	**+1.5**
FCH				IAML		10 40 05.2	
	comp=E,3μm,0.6s						
CLCH	**Cerro Calan**	**2.64**	**167**	*e*P	**Pn**	**10 39 23.3**	**+0.1**
CLCH				*e*S	**Sn**	**10 39 54.3**	**+0.1**
ASAL	**Salagasta**	**2.71**	**131**	*e*P	**Pn**	**10 39 26.2**	**+2.0**
AGUA	**GUANDACOL**	**2.73**	**62**	*e*P	**Pn**	**10 39 26.9**	**+2.5**
ARCO	**CERRO ARCO**	**2.82**	**136**	*e*P	**Pn**	**10 39 27.7**	**+2.0**
ARCO				IAML		10 40 12.7	
	comp=Z,1μm,0.7s						
AAGR	**Agrelo**	**3.06**	**138**	*e*P	**Pn**	**10 39 31.0**	**+2.1**
GO03	**Copiap**	**3.33**	**16**	*e*P	**Pn**	**10 39 32.7**	**+0.1**
VCA	**Vinchina**	**3.35**	**53**	*e*P	**Pn**	**10 39 35.4**	**+2.4**
ACAN	**Cantantal**	**3.75**	**114**	*e*P	**Pn**	**10 39 39.3**	**+0.9**
PLCA	**Paso Flores**	**9.91**	**177**	P	**Pn**	**10 41 01.9**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=359,slow=14,SNR=9.3						
PLCA				S	**Sn**	**10 43 00.1**	**+7.9**
	baz=347,slow=14,SNR=1.4						
CPUP	**Villa Florida**	**13.02**	**73**	P	**Pn**	**10 41 41.6**	**-3.3**
	comp=Z,0.7nm,0.3s,baz=244,slow=12,SNR=10						
CPUP				S	Sn	10 43 53.6	-14
	comp=Z,0.6nm,0.3s,baz=292,slow=19,SNR=1.6						
LPAZ	**La Paz**	**14.74**	**12**	P	**Pn**	**10 42 09.1**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=185,slow=12,SNR=6.1						
SIV	**San Ignacio**	**17.44**	**35**	P	**Pn**	**10 42 40.7**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=216,slow=12,SNR=8.2						
SIV				pP	**pP**	**10 42 54.0**	**-2.0**
	comp=Z,0.7nm,0.3s,baz=227,slow=10,SNR=13						
VNA3	**Neumayer Olymp**	**52.06**	**159**	P	pP	10 48 03.2	+0.7
VNA2	**Neumayer--Watz**	**52.70**	**158**	P	pP	10 48 07.1	-0.2
	baz=285,slow=8.8						
SNAA	**Sanae**	**54.29**	**159**	P	pP	10 48 19.1	+0.1
SNAA	**Sanae**	**54.29**	**159**	P	**P**	**10 48 01.9**	**0.0**
	comp=Z,1.1nm,0.7s,baz=276,slow=9.5,SNR=7.8						
SNAA				pP	**pP**	**10 48 18.7**	**-0.4**
	comp=Z,5.1nm,0.6s,baz=277,slow=8.2,SNR=14						
QSPA	**South Pole Qui**	**59.41**	**180**	P	**P**	**10 48 38.3**	**0.0**
	comp=Z,1.7nm,0.8s,baz=162,slow=1.9,SNR=5.0						
QSPA				pP	**pP**	**10 48 56.3**	**+0.6**
	comp=Z,1.6nm,0.7s,baz=137,slow=18,SNR=3.5						
TXAR	**Lajitas Array**	**67.31**	**330**	P	**P**	**10 49 31.5**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=148,slow=8.6,SNR=8.1						
TXAR				pP	**pP**	**10 49 49.7**	**+1.1**
	comp=Z,0.5nm,0.8s,baz=154,slow=9.2,SNR=5.1						
TXAR				sP	**sP**	**10 49 56.5**	**+0.5**
	comp=Z,0.5nm,0.9s,baz=150,slow=9.3,SNR=3.3						
VNDA	**Vanda**	**67.35**	**191**	P	**P**	**10 49 30.6**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=128,slow=6.3,SNR=3.1						
VNDA				pP	**pP**	**10 49 48.7**	**+0.6**
	comp=Z,0.5nm,0.4s,baz=100,slow=5.6,SNR=2.8						
DBIC	**Dimbokro**	**73.53**	**72**	P	**P**	**10 50 08.0**	**-0.9**
	comp=Z,8.7nm,1.2s,baz=194,slow=7.8,SNR=3.5						
MAW	**Mawson**	**76.03**	**164**	P	**P**	**10 50 22.7**	**+0.1**
	comp=Z,1.8nm,1.0s,baz=305,slow=5.1,SNR=3.0						

KOWA Kowa 78.71 66 P **P 10 50 37.4 -0.9**
comp=Z,2.1nm,0.5s,baz=242,slow=4.5,SNR=5.3
NVAR Mina Array Bea 81.67 324 P **P 10 50 55.2 +1.1**
comp=Z,0.2nm,0.5s,baz=148,slow=5.3,SNR=3.8
NVAR pP **pP 10 51 14.1 +1.7**
comp=Z,0.4nm,0.8s,baz=109,slow=4.9,SNR=2.6
TORD Torodi Ar. Bea 82.49 70 P **P 10 50 57.7 -0.9**
comp=Z,1.8nm,0.6s,baz=235,slow=5.1,SNR=27
TORD pP **pP 10 51 15.9 -1.0**
comp=Z,0.9nm,0.8s,baz=216,slow=5.6,SNR=2.6
TORD sP **sP 10 51 22.6 -1.6**
comp=Z,1.3nm,0.6s,baz=262,slow=4.3,SNR=4.1
WRA Warramunga Arr 123.86 209 PKP **PKPdf 10 57 32.1 -1.8**
comp=Z,0.6nm,0.9s,baz=157,slow=1.8,SNR=7.7
WRA pPKP **pPKPdf 10 57 52.0 -1.1**
comp=Z,0.4nm,0.6s,baz=166,slow=1.6,SNR=2.0
ZALV Zalesovo Beam 151.16 30 PKPbc **PKPbc 10 58 27.4 -0.6**
comp=Z,0.9nm,0.3s,baz=294,slow=1.4,SNR=4.2
ZALV pPKPbc **pPKPbc 10 58 46.3 -0.8**
comp=Z,3.8nm,0.5s,baz=287,slow=3.3,SNR=5.8
MKAR Makanchi Array 154.09 44 PKPab **PKPab 10 58 47.7 -1.0**
comp=Z,0.4nm,0.8s,baz=305,slow=5.1,SNR=3.1

IDC 07 10:56:51.8±2.1, **4°.03N**×**126°.76E**, **h0**km, **mb3.4**/4, **mb1 3.7**/4, **mb1mx3.4**/57, **mbtmp3.5**/4, **Error ellipse: s-maj=121.5km s-min=27.7km az=69.0**, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**22.02**	**183**	P	P	11 01 47.8	-0.2
	1.1nm,0.4s,baz=11,slow=9.9,SNR=4.4						
WRA	**Warramunga Arr**	**24.96**	**163**	P	P	11 02 17.0	-0.2
	0.9nm,0.5s,baz=342,slow=9.9,SNR=16						
ASAR	**Alice Springs**	**28.39**	**166**	P	P	11 02 48.5	+0.3
	0.2nm,0.5s,baz=349,slow=8.9,SNR=3.1						
MKAR	**Makanchi Array**	**57.33**	**325**	P	P	11 06 41.8	0.0
	0.2nm,0.5s,baz=118,slow=8.5,SNR=2.7						

IDC 07 11:03:44.0±1.1, **21°.03S**×**115°.15W**, **h0**km, **mb3.6**/6, **mb1 3.9**/6, **mb1mx3.7**/40, **mbtmp3.6**/6, **MS3.9**/8, **Ms1 4.0**/8, **ms1mx3.6**/31, **Error ellipse: s-maj=41.0km s-min=27.9km az=57.0**, **Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**8.06**	**140**	LR	LR	11 07 56.2	
	comp=Z,1μm,18.6s,baz=302,slow=31						
PLCA	**Paso Flores**	**42.49**	**128**	LR	LR	11 24 15.4	
	comp=Z,321nm,18.8s,baz=282,slow=29						
APG	**El Apazote**	**43.24**	**36**	LR	LR	11 25 05.2	
	comp=Z,48nm,19.3s,baz=240,slow=30						
LPAZ	**La Paz**	**44.67**	**92**	P	P	11 11 59.6	0.0
	0.5nm,0.4s,baz=295,slow=7.9,SNR=4.0						
LPAZ				LR	LR	11 26 49.0	
	comp=Z,119nm,18.1s,baz=263,slow=31						
LPIG	**La Paz**	**45.10**	**6**	LR	LR	11 26 23.0	
	comp=Z,57nm,18.6s,baz=12,slow=30						
TXAR	**Lajitas Array**	**51.28**	**13**	P	P	11 12 51.8	+1.9
	0.2nm,0.7s,baz=193,slow=6.3,SNR=2.5						
SIV	**San Ignacio**	**51.33**	**94**	P	P	11 12 50.1	-0.5
	1.3nm,0.9s,baz=277,slow=8.1,SNR=5.1						
PMSA	**Palmer Station**	**54.99**	**156**	LR	LR	11 31 53.3	
	comp=Z,297nm,18.2s,baz=232,slow=31						
NVAR	**Mina Array Bea**	**59.22**	**357**	P	P	11 13 47.2	0.0
	1.1nm,0.9s,baz=189,slow=11,SNR=6.0						
YBH	**Yreka Blue Hor**	**62.83**	**354**	LR	LR	11 34 47.4	
	comp=Z,86nm,20.0s,baz=167,slow=30						
PDAR	**Pinedale Array**	**63.68**	**5**	P	P	11 14 15.4	-2.0
	0.2nm,0.4s,baz=172,slow=7.3,SNR=2.4						
SNAA	**Sanae**	**76.93**	**163**	P	P	11 15 38.2	+0.3
	0.5nm,0.7s,baz=243,slow=6.8,SNR=2.9						
SNAA				LR	LR	11 47 02.1	
	comp=Z,99nm,18.7s,baz=183,slow=34						
BVAR	**Borovoye Array**	**147.78**	**354**	PKPbc	PKPdf	11 23 28.8	+1.0
	0.4nm,0.5s,baz=247,slow=3.0,SNR=3.2						
CMAR	**Chiang Mai Arr**	**147.85**	**271**	PKPbc	PKPbc	11 23 30.5	-1.3
	0.7nm,0.3s,baz=96,slow=2.7,SNR=2.9						
MKAR	**Makanchi Array**	**150.64**	**335**	PKPbc	PKPbc	11 23 39.2	+1.1
	0.5nm,0.7s,baz=318,slow=1.9,SNR=4.9						

DDA 07 11:08:20.0, 38°.13N×41°.75E, h5km, Ml2.6, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRTM	**Siirt_Merkez**	**0.20**	**136**	*i* P	Pg	11 08 24.6	+0.7
SRTM				*i* S	Sg	11 08 34.5	+7.9
SVAN	**Silvan-Diyarba**	**0.43**	**272**	*i* P	Pn	11 08 35.8	+2.9
HANI	**Diyarbakir_Han**	**1.10**	**285**	*i* P	Pg	11 08 41.1	+0.1
HANI				*i* S	Sn	11 08 59.5	+1.8
MARD	**Mardin**	**1.12**	**224**	*i* P	Pg	11 08 40.1	-1.4
MARD				*i* S	Sn	11 08 57.8	-0.5

MEX 07 11:12:49.2±0.3, **16°.41N**×**98°.22W**, **h14**km±5km, **MD3.9**, **Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.19**	**344**	*i* P	Pn	11 13 07.8	-3.8
TLIG				*e*S	Sb	11 13 22.4	-4.7
VHO	**Vista Hermosa**	**1.57**	**65**	*e*P	Pn	11 13 13.2	-3.6
VHO				*e*S	Sn	11 13 32.2	-4.8
CAIG	**El Cayaco**	**2.06**	**288**	*e*P	Pn	11 13 20.1	-3.3
CAIG				*e*S	Sn	11 13 44.4	-4.6
HUIG	**Huatulco**	**2.13**	**107**	*e*P	Pn	11 13 21.6	-2.8
PLIG	**Platanillo**	**2.32**	**328**	*e*P	Pn	11 13 23.8	-3.2
PLIG				*e*S	Sn	11 13 51.4	-4.1

*CSEM **07** 11:13:42.4±0.6, 42°.91N×6°.34E, h1km, ML2.6, Error ellipse: s-maj=11.1km s-min=6.3km az=42.0, Mining explosion.*
*STR **07** 11:13:43.6±1.3, 43°.N±7°.×±°., h5km, M2.6/6, MLv2.6/6*
*ROM **07** 11:13:44.5±0.7, 42°.95N±0°.03×6°.55E±0°.07, h10km, ML2.1/4*
ISC 07 11:13:43.3±1.8, **42°.99N**±0°.06×**6°.43E**±0°.05, **h2**km±12km, **n28**, σ**0s39**/36, **Western Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CALF	**Calern**	**0.84**	**25**	Pg	**Pb**	**11 14 00.4**	**-0.3**
CALF	**Calern**	**0.84**	**25**	Pg	**Pb**	**11 14 00.4**	**-0.3**
REVF	**Revere**	**1.01**	**42**	Sg	**Sn**	**11 14 20.0**	**+0.6**
REVF	**Revere**	**1.01**	**42**	Sg	**Sn**	**11 14 20.0**	**+0.6**
MVIF	**Mont Vial**	**1.05**	**30**	Pg	**Pn**	**11 14 04.9**	**-0.2**
MVIF	**Mont Vial**	**1.05**	**30**	Pg	**Pn**	**11 14 04.9**	**-0.2**
LUCF	**Luceram**	**1.12**	**36**	Pg	**Pn**	**11 14 06.4**	**+0.3**
LUCF	**Luceram**	**1.12**	**36**	Pg	**Pn**	**11 14 06.4**	**+0.3**
OGDI	**Digne**	**1.12**	**355**	Pg	**Pb**	**11 14 05.3**	**-0.1**
OGDI	**Digne**	**1.12**	**355**	Pg	**Pb**	**11 14 05.3**	**-0.1**
OGDI				Sg	**Sn**	**11 14 21.7**	**-0.4**
RUSF	**Rustrel**	**1.17**	**324**	Pg	**Pg**	**11 14 05.8**	**+0.1**
RUSF	**Rustrel**	**1.17**	**324**	Pg	**Pg**	**11 14 05.8**	**+0.1**
RUSF				Sg	**Sn**	**11 14 22.6**	**-0.7**
NEGI	**Seborga**	**1.26**	**47**	P	**Pg**	**11 14 07.5**	**0.0**
NEGI	**Seborga**	**1.26**	**47**	P	**Pg**	**11 14 07.5**	**0.0**
NEGI				AML	AML		
	comp=E,63μm,0.3s						
NEGI				AML	AML		
	comp=N,71μm,0.7s						
NEGI				AML	AML		
	comp=E,63μm,0.3s						
NEGI				AML	AML		
	comp=N,71μm,0.7s						
ISO	**Isola**	**1.27**	**21**	Pg	**Pn**	**11 14 08.7**	**+0.5**
ISO	**Isola**	**1.27**	**21**	Pg	**Pn**	**11 14 08.7**	**+0.5**
SAOF	**Saorge**	**1.29**	**39**	P	**Pg**	**11 14 08.2**	**+0.3**
SAOF	**Saorge**	**1.29**	**39**	P	**Pg**	**11 14 08.2**	**+0.3**
SAOF				AML	AML		
	comp=E,79μm,0.8s						
SAOF				AML	AML		
	comp=N,54μm,0.6s						
SAOF				AML	AML		
	comp=E,79μm,0.8s						
SAOF				AML	AML		
	comp=N,54μm,0.6s						
SAOF				AML	AML		
	comp=E,79μm,0.8s						
SAOF				AML	AML		
	comp=N,54μm,0.6s						
IMI	**Imperia**	**1.41**	**49**	P	**Pg**	**11 14 09.4**	**-0.8**
IMI	**

STV				S	Sb	11 14 28.8	0.0
STV	**Sant Anna di V**	**1.41**	**27**	P	Pg	11 14 10.2	-0.1
STV				S	Sb	11 14 28.8	0.0
STV				AML	AML		
	comp=E,55μm,0.5s						
STV				AML	AML		
	comp=N,42μm,0.9s						
STV				AML	AML		
	comp=E,55μm,0.5s						
STV				AML	AML		
	comp=N,42μm,0.9s						
PZZ	**Stroppo**	**1.59**	**18**	P	Pg	11 14 13.7	-0.1
PZZ				S	Sg	11 14 34.7	+0.2
PZZ	**Stroppo**	**1.59**	**18**	P	Pg	11 14 13.7	-0.1
PZZ				S	Sg	11 14 34.7	+0.2
PZZ				AML	AML		
	comp=E,58μm,0.8s						
PZZ				AML	AML		
	comp=N,66μm,0.7s						
PZZ				AML	AML		
	comp=E,58μm,0.8s						
PZZ				AML	AML		
	comp=N,66μm,0.7s						
RORO	**Rocca Rossa**	**1.63**	**46**	P	Pn	11 14 12.9	-0.1
RORO	**Rocca Rossa**	**1.63**	**46**	P	Pn	11 14 12.9	-0.1
SMPL	**Sampolo**	**2.29**	**112**	P	Pn	11 14 22.0	-0.1
SMPL				S	Sn	11 14 50.8	-0.1
SMPL	**Sampolo**	**2.29**	**112**	P	Pn	11 14 23.0	+0.9
SMPL				S	Sn	11 14 50.8	-0.1
SMPL				AML	AML		
	comp=E,1295μm,1.1s						
SMPL				AML	AML		
	comp=N,1300μm,0.9s						
SMPL				AML	AML		
	comp=E,1295μm,1.1s						
SMPL				AML	AML		
	comp=N,1300μm,0.9s						

MOS ***07*** *11:17:12.8±1.0, 54°.09N×168°.91E, h10km, mb4.2/4, Error ellipse: s-maj=9.4km s-min=5.6km az=25.8*
IDC ***07*** *11:17:14.1±0.8, 54°.42N×168°.85E, h0km, mb3.8/20, mb1 4.0/22, mb1mx3.7/87, mbtmp3.8/22, ML3.0/2, MS2.9/1, Ms1 2.9/1, ms1mx2.3/73, Error ellipse: s-maj=19.6km s-min=14.0km az=174.0*
ISCJB ***07*** *11:17:15.7±0.4, 54°.14N±0°.05×168°.76E±0°.04, h30km, mb3.9/27, Error ellipse: s-maj=7.4km s-min=3.5km az=172.8*
NEIC ***07*** *11:17:15.7±0.3, 54°.42N×168°.81E, h10km, mb4.2/8, Error ellipse: s-maj=7.7km s-min=4.2km az=174.0*
KRSC ***07*** *11:17:17.4±1.8, 54°.00N×167°.99E, h8km±41km, ML4.5*

ISC 07 11:17:17.5±0.5, 54°.15N±0°.07×168°.74E±0°.05, h30km, n122, σ1§62/140, mb3.9/27, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**1.93**	**305**	*e*P	**Pn**	11 17 46.8	-1.4
BKI				*e*S	**Sn**	11 18 10.1	-1.2
BKI	**Bering**	**1.93**	**305**	PN	**Pn**	11 17 46.8	-1.4
SMY	**Shemya**	**3.50**	**112**	*e*Pn	**Pn**	11 18 11.1	+1.3
SMY	**Shemya**	**3.50**	**112**	*e*PN	**Pn**	11 18 11.1	+1.3
KBTR	**Krutoberegovo**	**3.98**	**304**	*e*P	**Pn**	11 18 16.6	+0.3
KBTR				*e*S	**Sn**	11 19 03.0	+1.2
KBTR	**Krutoberegovo**	**3.98**	**304**	PN	**Pn**	11 18 16.6	+0.3
MKZ	**Mys Kozlova**	**4.12**	**279**	*e*P	**Pn**	11 18 18.2	-0.1
MKZ				*e*S	**Sn**	11 19 03.1	-2.4
MKZ	**Mys Kozlova**	**4.12**	**279**	PN	**Pn**	11 18 18.2	-0.1
SMKR	**Semkarok**	**4.81**	**303**	*e*P	**Pn**	11 18 29.5	+1.6
SMKR	**Semkarok**	**4.81**	**303**	PN	**Pn**	11 18 29.5	+1.6
ZLN	**Zelenaya**	**4.93**	**296**	*e*P	**Pn**	11 18 32.8	+3.2
ZLN	**Zelenaya**	**4.93**	**296**	PN	**Pn**	11 18 32.8	+3.2
BDR	**Baidarnaya**	**4.94**	**302**	*e*P	**Pn**	11 18 30.5	+0.9
BDR	**Baidarnaya**	**4.94**	**302**	PN	**Pn**	11 18 30.5	+0.9
CIRR	**Tsirk**	**4.99**	**297**	*e*P	**Pn**	11 18 33.7	+3.3
CIRR	**Tsirk**	**4.99**	**297**	PN	**Pn**	11 18 33.7	+3.3
SRKR	**Sorokina**	**4.99**	**303**	*e*P	**Pn**	11 18 31.7	+1.3
SRKR	**Sorokina**	**4.99**	**303**	PN	**Pn**	11 18 31.7	+1.3
KZV	**Kizimen**	**5.00**	**285**	*e*P	**Pn**	11 18 31.4	+0.8
KZV				*e*S	**Sn**	11 19 25.7	-1.7
KZV	**Kizimen**	**5.00**	**285**	PN	**Pn**	11 18 31.4	+0.8
LGNR	**Loginova**	**5.01**	**296**	*e*P	**Pn**	11 18 33.9	+3.1
LGNR	**Loginova**	**5.01**	**296**	PN	**Pn**	11 18 33.9	+3.1
BZMR	**Bezymyannaya**	**5.07**	**294**	*e*P	**Pn**	11 18 34.3	+2.8
BZMR	**Bezymyannaya**	**5.07**	**294**	PN	**Pn**	11 18 34.3	+2.8
BZWR	**Bezymyannyi-We**	**5.08**	**294**	*e*P	**Pn**	11 18 33.9	+2.3
BZWR	**Bezymyannyi-We**	**5.08**	**294**	PN	**Pn**	11 18 33.9	+2.3
TUMR	**Tumrok**	**5.11**	**286**	*e*P	**Pn**	11 18 33.7	+1.6
TUMR	**Tumrok**	**5.11**	**286**	PN	**Pn**	11 18 33.7	+1.6
KLY	**Klyuchi**	**5.11**	**298**	*e*P	**Pn**	11 18 32.8	+0.9
KLY	**Klyuchi**	**5.11**	**298**	PN	**Pn**	11 18 32.8	+0.9
KIRR	**Kirishev**	**5.16**	**294**	*e*P	**Pn**	11 18 33.8	+1.1
KIRR	**Kirishev**	**5.16**	**294**	PN	**Pn**	11 18 33.8	+1.1
KMNR	**Kamenistaya**	**5.16**	**292**	*e*P	**Pn**	11 18 34.6	+1.9
KMNR	**Kamenistaya**	**5.16**	**292**	PN	**Pn**	11 18 34.6	+1.9
KPT	**Kopyto**	**5.23**	**294**	*e*P	**Pn**	11 18 36.3	+2.7
KPT	**Kopyto**	**5.23**	**294**	PN	**Pn**	11 18 36.3	+2.7
SPN	**Mys Shipunski**	**5.29**	**262**	*e*P	**Pn**	11 18 34.1	-0.3
SPN				*e*S	**Sn**	11 19 30.8	-3.6
SPN	**Mys Shipunski**	**5.29**	**262**	PN	**Pn**	11 18 34.1	-0.3
KOZ	**Kozyrevsk**	**5.44**	**294**	*e*P	**Pn**	11 18 39.4	+2.9
KOZ	**Kozyrevsk**	**5.44**	**294**	PN	**Pn**	11 18 39.4	+2.9
KII	**Karymskiy**	**5.47**	**273**	*e*P	**Pn**	11 18 37.7	+0.7
KII	**Karymskiy**	**5.47**	**273**	PN	**Pn**	11 18 37.7	+0.7
NLC	**Nalytchevo**	**5.67**	**264**	*e*P	**Pn**	11 18 39.3	-0.3
NLC				*e*S	**Sn**	11 19 40.6	-3.0
NLC	**Nalytchevo**	**5.67**	**264**	PN	**Pn**	11 18 39.3	-0.3
SDLR	**Sedlovina**	**5.92**	**266**	*e*P	**Pn**	11 18 43.4	+0.3
SDLR				*e*S	**Sn**	11 19 45.9	-4.0
SDLR	**Sedlovina**	**5.92**	**266**	PN	**Pn**	11 18 43.4	+0.3
UGLR	**Uglovaya**	**5.97**	**265**	*e*P	**Pn**	11 18 44.5	+0.7
UGLR	**Uglovaya**	**5.97**	**265**	PN	**Pn**	11 18 44.5	+0.7
KRER	**Koryakskii**	**5.99**	**266**	*e*P	**Pn**	11 18 45.1	+0.9
KRER	**Koryakskii**	**5.99**	**266**	PN	**Pn**	11 18 45.1	+0.9
AVH	**Avacha**	**6.01**	**266**	*e*P	**Pn**	11 18 44.3	0.0
AVH	**Avacha**	**6.01**	**266**	PN	**Pn**	11 18 44.3	0.0
KRX	**Arik**	**6.04**	**267**	*e*P	**Pn**	11 18 44.7	-0.1
KRX	**Arik**	**6.04**	**267**	PN	**Pn**	11 18 44.7	-0.1
ESO	**Esso**	**6.04**	**291**	*e*P	**Pn**	11 18 46.5	+1.8
ESO	**Esso**	**6.04**	**291**	PN	**Pn**	11 18 46.5	+1.8
PET	**Petropavlovsk**	**6.11**	**263**	*e*P	**Pn**	11 18 46.2	+0.5
PET				*e*S	**Sn**	11 19 52.5	-2.0
PET	**Petropavlovsk**	**6.11**	**263**	PN	**Pn**	11 18 46.2	+0.5
RUS	**Russkaya**	**6.37**	**259**	*e*P	**Pn**	11 18 50.3	+1.1
RUS				*e*S	**Sn**	11 19 58.2	-2.6
RUS	**Russkaya**	**6.37**	**259**	PN	**Pn**	11 18 50.3	+1.1
GNL	**Ganaly**	**6.40**	**270**	*e*P	**Pn**	11 18 51.0	+1.3
GNL	**Ganaly**	**6.40**	**270**	PN	**Pn**	11 18 51.0	+1.3
KRMR	**Karymshinskiy**	**6.47**	**263**	*e*P	**Pn**	11 18 52.8	+2.2
KRMR				*e*S	**Sn**	11 20 00.5	-2.8
KRMR	**Karymshinskiy**	**6.47**	**263**	PN	**Pn**	11 18 52.8	+2.2
MTVR	**Mutnovka**	**6.54**	**260**	*e*P	**Pn**	11 18 52.2	+0.5
MTVR				*e*S	**Sn**	11 20 02.2	-3.1
MTVR	**Mutnovka**	**6.54**	**260**	PN	**Pn**	11 18 52.2	+0.5
PEA1	**Petropavlovsk-**	**6.65**	**266**	*e*Pn	**Pn**	11 18 54.3	+1.2
PEA1				*e*Sn	**Sn**	11 20 09.4	+1.6
PEA0B	**Petropavlovsk-**	**6.65**	**265**	*e*Pn	**Pn**	11 18 54.5	+1.4
PETK	**Petropavlovsk-**	**6.65**	**265**	Pn	**Pn**	11 18 54.3	+1.2
	1.7nm,0.3s,baz=70,slow=16,SNR=27						
PETK				Sn	**Sn**	11 20 09.4	+1.6
	3.0nm,0.3s,baz=93,slow=20,SNR=7.2						
PETK				LR	LR	11 21 34.4	
	comp=Z,91nm,18.5s,baz=112,slow=39						
PETK	**Petropavlovsk-**	**6.65**	**265**	*e*Pn	**Pn**	11 18 54.7	+1.6
PETK				Sn	**Sn**	11 20 09.4	+1.6
ASAK	**Asacha**	**6.74**	**259**	*e*P	**Pn**	11 18 54.8	+0.4
ASAK	**Asacha**	**6.74**	**259**	PN	**Pn**	11 18 54.8	+0.4
KDTR	**Khodutka, Kamc**	**6.85**	**254**	*e*P	**Pn**	11 18 55.7	-0.1
KDTR				*e*S	**Sn**	11 20 09.1	-3.6
APC	**Apacha**	**7.01**	**265**	*e*P	**Pn**	11 18 59.1	+1.1
APC				*e*S	**Sn**	11 20 14.9	-1.7
APC	**Apacha**	**7.01**	**265**	PN	**Pn**	11 18 59.1	+1.1
SKR	**Severo-Kuril's**	**8.46**	**251**	*e*P	**Pn**	11 19 18.2	+0.4
SKR	**Severo-Kuril's**	**8.46**	**251**	PN	**Pn**	11 19 18.2	+0.4
ATKA	**Atka Island**	**10.43**	**94**	*e*Pn	**Pn**	11 19 42.8	-2.0
SEY	**Seymchan**	**12.23**	**323**	Pn	**Pn**	11 20 06.7	-2.7
	0.1nm,0.3s,baz=107,slow=19,SNR=1.9						
KDAK	**Kodiak Island**	**21.74**	**65**	P	**P**	**11 22 04.5**	**-1.5**
	0.6nm,0.5s,baz=239,slow=5.9,SNR=4.7						
IM3	**Indian Mountai**	**21.75**	**42**	*e*P	**P**	11 22 05.3	-0.8
BWN	**Browne**	**23.21**	**48**	*e*P	**P**	11 22 21.6	0.0
	23nm,1.1s						
COLA	**College**	**23.98**	**46**	*e*P	**P**	11 22 28.6	-0.3
	3.7nm,0.8s						
COLA	**College**	**23.98**	**46**	*e*P	**P**	11 22 28.6	-0.3
COLA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
IL1	**Eielson Array**	**24.38**	**47**	*e*P	**P**	11 22 31.5	-1.1
ILAR	**Eielson Array**	**24.38**	**47**	P	**P**	11 22 31.3	-1.3
	comp=Z,1.3nm,0.8s,baz=257,slow=9.0,SNR=13						
ILB	**Eielson Array**	**24.38**	**47**	*e*P	**P**	11 22 31.3	-1.3
TIXI	**Tiksi**	**24.49**	**331**	P	**P**	11 22 33.0	-0.5
	comp=Z,4.5nm,0.7s,baz=116,slow=11,SNR=14						
TIXI	**Tiksi**	**24.49**	**331**	*e*P	**P**	11 22 32.9	-0.7
	comp=Z,6.0nm,0.9s						
TIXI				*e*P	**P**	11 22 33.0	-0.5
TIXI	**Tiksi**	**24.49**	**331**	*e*P	**P**	11 22 32.9	-0.7
TIXI				*e*		11 22 33.0	
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
DOT	**Dot Lake**	**25.57**	**49**	*e*P	**P**	11 22 42.8	-0.7
	comp=Z,3.3nm,1.0s						
EGAK	**Eagle**	**26.83**	**47**	*e*P	**P**	11 22 53.7	-1.1
	comp=Z,2.8nm,0.8s						
SONA0	**Songino Array**	**38.60**	**287**	*e*P	**P**	11 24 38.5	+0.8
SONM	**Songino Array**	**38.60**	**287**	P	**P**	11 24 38.5	+0.8
	comp=Z,0.3nm,0.3s,baz=93,slow=8.7,SNR=2.9						
YKA	**Yellowknife Ar**	**38.81**	**46**	P	**P**	11 24 37.7	-1.3
	comp=Z,0.4nm,0.7s,baz=300,slow=8.6,SNR=2.9						
BEND	**Bend**	**45.09**	**73**	*e*P	**P**	11 25 33.4	+2.7
BEND				*e*pP	P	11 25 35.6	+4.9
SPITS	**Spitsbergen Ar**	**46.86**	**352**	P	**P**	11 25 43.3	-0.8
	comp=Z,0.3nm,0.3s,baz=29,slow=7.6,SNR=14						
KURK	**Kurchatov**	**51.43**	**306**	*e*P	**P**	11 26 19.1	-0.3
	comp=Z,4.4nm,0.9s						
KURK				*e*P	**P**	11 26 19.8	+0.5
KURK	**Kurchatov**	**51.43**	**306**	*e*P	**P**	11 26 19.1	-0.3
KURK				*e*		11 26 19.8	
KURK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KURBB	**Kurchatov Arra**	**51.54**	**306**	P	**P**	11 26 19.8	-0.3
	comp=Z,1.9nm,0.7s,baz=53,slow=7.5,SNR=12						
MK32	**Makanchi Array**	**52.22**	**300**	*e*P	**P**	11 26 24.6	-0.8
MKAR	**Makanchi Array**	**52.22**	**300**	P	**P**	11 26 24.6	-0.8
	comp=Z,0.8nm,0.6s,baz=48,slow=7.0,SNR=5.2						
PDAR	**Pinedale Array**	**52.44**	**67**	P	**P**	11 26 27.4	+0.2
	comp=Z,0.3nm,0.5s,baz=311,slow=8.2,SNR=3.0						
BVAR	**Borovoye Array**	**53.64**	**312**	P	**P**	11 26 35.5	-0.2
	comp=Z,3.9nm,0.5s,baz=48,slow=8.4,SNR=22						
BRVK	**Borovoye**	**53.67**	**312**	*e*P	**P**	11 26 35.9	+0.1
	comp=Z,9.4nm,0.5s						
BRVK	**Borovoye**	**53.67**	**312**	*e*P	**P**	11 26 35.9	+0.1
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.5s						
ARA0	**ARCESS Array S**	**53.76**	**345**	*e*P	**P**	11 26 35.4	-0.9
ARCES	**ARCESS Array B**	**53.76**	**345**	P	**P**	11 26 35.4	-0.9
	comp=Z,1.4nm,0.5s,baz=26,slow=8.0,SNR=11						
AKTO	**Aktyubinsk**	**60.76**	**317**	P	**P**	11 27 25.8	-0.2
	comp=Z,2.0nm,0.7s,baz=60,slow=6.9,SNR=5.8						
ABKAR	**Akbulak array**	**60.88**	**315**	*e*P	**P**	11 27 26.3	-0.5
CMAR	**Chiang Mai Arr**	**63.43**	**265**	P	**P**	11 27 46.6	+2.3
	comp=Z,0.5nm,0.3s,baz=104,slow=5.8,SNR=5.8						
NB2	**NORSAR Subarra**	**63.78**	**348**	P	**P**	11 27 45.4	-0.6
	comp=Z,0.6nm,0.5s,baz=15,slow=6.9						
NB200	**NORSAR Array S**	**63.78**	**348**	*e*P	**P**	11 27 45.5	-0.6
NOA	**NORSAR Array B**	**63.78**	**348**	P	**P**	11 27 45.5	-0.6
	comp=Z,1.9nm,0.5s,baz=0.5,slow=4.8,SNR=5.6						
HFS	**Hagfors**	**64.33**	**346**	P	**P**	11 27 48.7	-0.9
	comp=Z,0.8nm,0.4s,baz=52,slow=5.8,SNR=4.1						
TXAR	**Lajitas Array**	**65.44**	**74**	P	**P**	11 27 57.7	+0.2
	comp=Z,0.3nm,0.6s,baz=296,slow=4.8,SNR=8.5						
GERES	**GERESS Array B**	**75.24**	**343**	P	**P**	11 28 57.0	-0.1
	comp=Z,0.2nm,0.3s,baz=27,slow=6.6,SNR=3.7						
BR101	**Keskin Array S**	**78.85**	**326**	*e*P	**P**	11 29 18.5	+0.9
BRTR	**Keskin Array B**	**78.85**	**326**	P	**P**	11 29 18.5	+0.9
	comp=Z,0.5nm,0.4s,baz=52,slow=3.6,SNR=3.5						
WR1	**Warramunga Arr**	**79.49**	**213**	*e*P	**P**	11 29 23.2	+2.3
	comp=Z,2.1nm,1.0s						
WRA	**Warramunga Arr**	**79.49**	**213**	P	**P**	11 29 23.2	+2.3
	comp=Z,0.8nm,0.9s,baz=25,slow=6.2,SNR=6.1						
ASAR	**Alice Springs**	**83.11**	**212**	P	**P**	11 29 43.3	+3.2
	comp=Z,0.7nm,0.8s,baz=22,slow=5.9,SNR=6.0						

ATH ***07*** *11:34:10.9, 37°.96N×26°.74E, h12km±2km, ML2.5/4, Error ellipse: s-maj=5.0km s-min=1.2km az=67.0*
DDA ***07*** *11:34:10.4, 37°.97N×26°.72E, h5km, Ml2.9*
ISK ***07*** *11:34:10.1, 38°.01N×26°.78E, h5km, ML2.8/17*
CSEM ***07*** *11:34:11.1±0.1, 37°.98N×26°.78E, h2km, ML2.5, Error ellipse: s-maj=3.7km s-min=2.6km az=57.0*

ISC 07 11:34:11.0±1.0, 37°.99N±0°.02×26°.77E±0°.02, h4km±10km, n58, σ0§65/78, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.28**	**169**	P	**Pg**	**11 34 16.5**	**-0.1**
SMG				S	**Sg**	11 34 20.4	+0.2
SMG				AML	AML	11 34 21.0	
	comp=E,6228μm,0.2s						
SMG				AML	AML	11 34 21.0	
	comp=N,5528μm,0.2s						
SMG	**Samos**	**0.28**	**169**	P	**Pg**	**11 34 16.4**	**-0.1**
SMG				S	**Sg**	11 34 20.4	+0.2
ZEY	**¯zmir**	**0.33**	**321**	*i* P	**Pg**	11 34 17.0	-0.3
ZEY				*i* S	**Sg**	11 34 22.5	+0.9
URLA	**Izmir**	**0.40**	**340**	PG	**Pg**	11 34 17.9	-0.8
URLA				SG	**Sg**	11 34 24.2	+0.3
URLA	**Izmir**	**0.40**	**340**	*i* P	**Pg**	11 34 17.8	-0.8
URLA				*i* S	**Sg**	11 34 24.1	+0.2
URLA	**Izmir**	**0.40**	**340**	*e*Pg	**Pg**	11 34 17.9	-0.8
URLA				*e*Sg	**Sg**	11 34 24.2	+0.3
KRBN	**Karaburun**	**0.63**	**345**	PG	**Pg**	11 34 22.7	-0.4
KRBN				SG	**Sb**	11 34 32.8	-0.9
KRBN	**Karaburun**	**0.63**	**345**	*e*Pg	**Pg**	11 34 22.7	-0.4
KRBN				*e*Sg	**Sb**	11 34 32.8	-0.9
CHOS	**Chios island**	**0.69**	**306**	PG	**Pb**	11 34 25.1	-0.5
CHOS				SG	**Sb**	11 34 34.8	-0.7
CHOS	**Chios island**	**0.69**	**306**	P	**Pg**	11 34 23.6	-0.7
CHOS				S	**Sb**	11 34 34.6	-0.9
CHOS				AML	AML	11 34 35.1	
	comp=E,1480μm,0.2s						
CHOS				AML	AML	11 34 36.5	
	comp=N,891μm,0.2s						
CHOS	**Chios island**	**0.69**	**306**	P	**Pg**	**11 34 23.8**	**-0.5**
CHOS	**Chios island**	**0.69**	**306**	*e*Pg	**Pb**	11 34 25.1	-0.5
CHOS				S	**Sg**	11 34 34.2	+1.0
FOCM	**Fo¯§a**	**0.73**	**358**	PG	**Pg**	11 34 24.8	-0.2
FOCM	**Fo¯§a**	**0.73**	**358**	*e*Pg	**Pg**	11 34 24.8	-0.2
AYDB	**Zeytinkoy-Aydi**	**0.89**	**92**	PG	**Pg**	11 34 28.2	+0.1
AYDB	**Zeytinkoy-Aydi**	**0.89**	**92**	*e*Pg	**Pg**	11 34 28.2	+0.1
AYDN	**Tasoluk**	**0.94**	**110**	*i* P	**Pg**	11 34 29.0	-0.1
AYDN				*i* S	**Sb**	11 34 42.9	+0.2
AYDN	**Tasoluk**	**0.94**	**110**	P	**Pg**	11 34 29.0	-0.1
BODT	**Bodrum**	**1.02**	**155**	PG	**Pg**	11 34 30.1	-0.5
BODT	**Bodrum**	**1.02**	**155**	*e*Pg	**Pg**	11 34 30.1	-0.5
MLSB	**Milas**	**1.06**	**130**	PG	**Pg**	11 34 31.4	+0.1
MLSB	**Milas**	**1.06**	**130**	*e*Pg	**Pg**	11 34 31.4	+0.1
AKHS	**Akhisar**	**1.21**	**42**	*i* P	**Pg**	11 34 33.5	-0.8
AKHS				*i* S	**Sn**	11 34 52.0	+0.3
AKHS	**Akhisar**	**1.21**	**42**	P	**Pg**	11 34 33.5	-0.8
AKHS				S	**Sn**	11 34 52.0	+0.3
AKS	**Akhisar**	**1.21**	**42**	PN	**Pn**	11 34 34.6	-0.2
AKS	**Akhisar**	**1.21**	**42**	*e*Pn	**Pn**	11 34 34.6	-0.2
PRK	**Paraskevi**	**1.32**	**343**	P	**Pn**	11 34 36.0	-0.2
PRK				AML	AML	11 34 57.6	
	comp=E,308μm,0.4s						
PRK				AML	AML	11 34 59.7	
	comp=N,227μm,0.5s						
PRK	**Paraskevi**	**1.32**	**343**	P	**Pn**	11 34 36.0	-0.2
APE	**Apeiranthos**	**1.34**	**227**	PN	**Pg**	11 34 37.3	+0.5
APE	**Apeiranthos**	**1.34**	**227**	*e*Pn	**Pg**	11 34 37.3	+0.5
DAT	**Datca**	**1.41**	**152**	PN	**Pg**	11 34 38.3	+0.2
DAT	**Datca**	**1.41**	**152**	*e*Pn	**Pg**	11 34 38.3	+0.2
SIGR	**SIGRI**	**1.42**	**330**	P	**Pg**	11 34 38.7	+0.5
SIGR				AML	AML	11 34 59.5	
	comp=N,123μm,0.5s						
SIGR				AML	AML	11 35 04.5	
	comp=E,112μm,0.6s						
SIGR	**SIGRI**	**1.42**	**330**	P	**Pg**	**11 34 38.2**	**0.0**
YER	**Yerkesik**	**1.48**	**125**	PN	**Pg**	11 34 39.2	-0.1
YER	**Yerkesik**	**1.48**	**125**	*e*Pn	**Pg**	11 34 39.2	-0.1
MANT	**Manisa**	**1.50**	**70**	*i* P	**Pb**	11 34 39.4	-0.1
MANT				*i* S	**Sg**	11 34 59.0	-0.2
MANT	**Manisa**	**1.50**	**70**	P	**Pb**	11 34 39.4	-0.1
MANT				S	**Sg**	11 34 59.0	-0.2
STEP	**BALIKESIR_Sava**	**1.58**	**28**	*i* P	**Pb**	11 34 40.8	0.0
STEP				*i* S	**Sg**	11 35 03.3	+1.6
STEP	**BALIKESIR_Sava**	**1.58**	**28**	P	**Pb**	11 34 40.8	0.0
STEP				S	**Sg**	11 35 03.3	+1.6
KULA	**Kula-Manisa**	**1.58**	**70**	PN	**Pn**	11 34 40.2	+0.3
KULA	**Kula-Manisa**	**1.58**	**70**	*e*Pn	**Pn**	11 34 40.2	+0.3
ANAF	**Anafi Island**	**1.81**	**206**	P	**Pn**	11 34 43.5	+0.5
ANAF	**Anafi Island**	**1.81**	**206**	P	**Pn**	11 34 43.5	+0.5
TURN	**Turunc**	**1.84**	**127**	PN	**Pn**	11 34 41.5	-1.8
TURN	**Turunc**	**1.84**	**127**	*e*Pn	**Pn**	11 34 41.5	-1.8
DEMI	**Demirci**	**1.86**	**55**	*i* P	**Pg**	11 34 46.6	0.0
DEMI				*i* S	**Sg**	11 35 11.6	+0.8
DEMI	**Demirci**	**1.86**	**55**	P	**Pg**	11 34 46.7	0.0
DEMI				S	**Sg**	11 35 11.6	+0.8
BALB	**Balikesir**	**1.87**	**27**	PN	**Pn**	11 34 44.1	+0.4
BALB	**Balikesir**	**1.87**	**27**	*e*Pn	**Pn**	11 34 44.1	+0.4
GELI	**Tayfur-Gelibol**	**2.42**	**355**	PN	**Pn**	11 34 52.1	+0.8
GELI	**Tayfur-Gelibol**	**2.42**	**355**	*e*Pn	**Pn**	11 34 52.1	+0.8
TVSB	**Tavsanli**	**2.56**	**54**	PN	**Pn**	11 34 52.9	-0.6
TVSB	**Tavsanli**	**2.56**	**54**	*e*Pn	**Pn**	11 34 52.9	-0.6
RKY	**Sarkoy-Tekirda**	**2.72**	**7**	PN	**Pn**	11 34 56.1	+0.6
RKY	**Sarkoy-Tekirda**	**2.72**	**7**	*e*Pn	**Pn**	11 34 56.1	+0.6
ARMT	**Armutlu**	**3.05**	**32**	PN	**Pn**	11 35 01.1	+1.1
ARMT	**Armutlu**	**3.05**	**32**	*e*Pn	**Pn**	11 35 01.1	+1.1

IDC 07 11:46:15.5±1.6, 2°.39N×127°.00E, h0km, mb3.7/5, mb1 4.0/5, mb1mx3.5/59, mbtmp3.8/5, Error ellipse: s-maj=114.4km s-min=19.4km az=70.0, Northern Moluccа Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.40**	**184**	P	P	11 50 55.1	+0.9
	1.5nm,0.5s,baz=359,slow=11,SNR=10						
WRA	**Warramunga Arr**	**23.33**	**162**	P	P	11 51 25.3	-0.2
	2.3nm,0.3s,baz=340,slow=10,SNR=32						
ASAR	**Alice Springs**	**26.75**	**166**	P	P	11 51 56.7	-0.4
	0.6nm,0.4s,baz=345,slow=7.6,SNR=20						
MKAR	**Makanchi Array**	**58.81**	**326**	P	P	11 56 16.1	+0.3
	0.2nm,0.4s,baz=105,slow=6.9,SNR=4.5						
KURBB	**Kurchatov Arra**	**63.01**	**328**	P	P	11 56 44.1	-0.1
	0.3nm,0.5s,baz=127,slow=6.1,SNR=3.8						

IDC 07 11:49:19.4±1.9, 2°.78N×128°.79E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.5/62, mbtmp3.7/6, MS3.3/1, Ms1 3.3/1, ms1mx2.5/54, Error ellipse: s-maj=128.7km s-min=18.4km az=73.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.98**	**188**	P	P	11 54 04.3	-0.1
	3.3nm,0.9s,baz=20,slow=5.9,SNR=3.3						
WRA	**Warramunga Arr**	**23.23**	**167**	P	P	11 54 28.6	+0.2
	1.1nm,0.6s,baz=348,slow=10,SN

CFON S **Sn** **12 09 12.0 -3.1**
4.4nm,0.2s,SNR=7.9
CFON Fontmartina 5.09 351 P **Pn** **12 08 18.1 +1.2**
2.2nm,0.3s,SNR=7.8
CFON S **Sn** **12 09 12.0 -3.1**
4.4nm,0.2s,SNR=7.9
EQES Quesada 5.30 284 P **Pn** **12 08 21.8 +1.9**
5.3nm,0.4s,SNR=12
EQES S **Sn** **12 09 20.6 0.0**
1.3nm,0.2s,SNR=7.9
EQES Quesada 5.30 284 P **Pn** **12 08 21.8 +1.9**
5.3nm,0.4s,SNR=12
EMIR Miracle 5.39 345 ⇓P **Pn** **12 08 23.9 +2.9**
11nm,0.3s,SNR=18
EMIR S **Sn** **12 09 20.8 -1.7**
18nm,0.3s,SNR=7.9
EMIR Miracle 5.39 345 P **Pn** **12 08 23.9 +2.9**
11nm,0.3s,SNR=18
EMIR S **Sn** **12 09 20.8 -1.7**
18nm,0.3s,SNR=7.9
EJON La Jonquera 5.73 356 P **Pn** **12 08 27.7 +2.1**
3.1nm,0.2s,SNR=7.9
EJON S **Sn** **12 09 28.1 -2.7**
51nm,1.4s,SNR=7.9
EJON La Jonquera 5.73 356 P **Pn** **12 08 27.7 +2.1**
3.1nm,0.2s,SNR=7.9
EJON S **Sn** **12 09 28.1 -2.7**
51nm,1.4s,SNR=7.9
SJAF Saint Jean de 5.76 356 P **Pn** **12 08 28.4 +2.3**
2.7nm,0.2s,SNR=7.9
SJAF S **Sn** **12 09 28.2 -3.5**
4.8nm,0.5s,SNR=7.9
SJAF Saint Jean de 5.76 356 P **Pn** **12 08 28.4 +2.3**
2.7nm,0.2s,SNR=7.9
ESAC San Caprasio 5.84 330 S **Sn** **12 09 31.8 -1.8**
15nm,0.4s,SNR=7.9
ESAC San Caprasio 5.84 330 S **Sn** **12 09 31.8 -1.8**
15nm,0.4s,SNR=7.9
CLLI Llivia 5.85 349 S **Sn** **12 09 32.1 -2.0**
3.6nm,0.6s,SNR=7.9
CLLI Llivia 5.85 349 S **Sn** **12 09 32.1 -2.0**
3.6nm,0.6s,SNR=7.9
CSOR Sort 5.91 343 P **Pn** **12 08 30.5 +2.2**
0.6nm,0.2s,SNR=7.9
CSOR S **Sn** **12 09 33.5 -2.1**
0.8nm,0.2s,SNR=7.9
CSOR Sort 5.91 343 P **Pn** **12 08 30.5 +2.2**
0.6nm,0.2s,SNR=7.9
CSOR S **Sn** **12 09 33.5 -2.1**
0.8nm,0.2s,SNR=7.9
PAB San Pablo 6.75 297 P **Pn** **12 08 40.5 +0.7**
2.2nm,0.4s,SNR=7.9
PAB San Pablo 6.75 297 P **Pn** **12 08 40.5 +0.7**
2.2nm,0.4s,SNR=7.9

WEL 07 12:11:32.5,47°S±6°×16°6E±°,h5km,ML3.6/9,Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYZ	**Puysegur Point**	**0.46**	**42**	P	Pg	12 11 41.8	+0.4
PYZ				S	Sb	12 11 49.9	-0.3
DCZ	**Deep Cove**	**1.23**	**32**	P	Pg	12 11 50.5	-5.4
DCZ				S	Sg	12 12 05.1	-6.7
APZ	**The Paps**	**1.25**	**106**	P	Pn	12 11 56.7	+0.1
APZ				S	Sn	12 12 14.4	+0.6
WHZ	**Wether Hill Ro**	**1.34**	**63**	P	Pn	12 11 56.1	-1.7
WHZ				S	Sb	12 12 14.8	-0.6
MLZ	**Mavora Lakes**	**1.74**	**50**	P	Pn	12 12 01.8	-1.5
SYZ	**Scrubby Hill**	**2.00**	**92**	P	Pn	12 12 07.6	+0.7
MSZ	**Milford Sound**	**2.19**	**33**	P	Pn	12 12 07.1	-2.3
TUZ	**Tuapeka**	**2.42**	**78**	P	Pn	12 12 12.3	-0.3
EAZ	**Earnscleugh**	**2.50**	**60**	P	Pn	12 12 12.7	-1.0
WKZ	**Wanaka**	**2.58**	**50**	P	Pn	12 12 14.2	-0.6
JCZ	**Jackson Bay**	**3.03**	**37**	P	Pn	12 12 19.2	-1.9
ODZ	**Otahua Downs**	**3.41**	**66**	P	Pn	12 12 23.8	-2.5

*IDC **07** 12:15:38.9±0.8, 0°.84N×92°.40E, h0km, mb4.1/14, mb1 4.2/17, mb1mx3.9/70, mbtmp4.1/17, ML4.1/3, MS3.5/11, Ms1 3.5/11, ms1mx3.1/69, Error ellipse: s-maj=30.3km s-min=13.0km az=50.0*
*NEIC **07** 12:15:40.6±0.3, 0°.89N×92°.46E, h10km, mb4.5/8, Error ellipse: s-maj=6.2km s-min=3.6km az=211.0*
*ISCJB **07** 12:15:42.3±0.4, 0°.91N±0°.05×92°.57E±0°.04, h33km, mb4.2/18, MS3.5/10, Error ellipse: s-maj=8.8km s-min=4.4km az=34.0*
*DJA **07** 12:15:44.8±1.8, 1°N±6°×9°3E±1°6, h10km, M4.9/9, mb4.8/9, mB5.7/5, MLv4.8/8, Mw(mB)5.3/5*
ISC 07 12:15:44.5±0.6, 0°.96N±0°.08×92°.55E±0°.07, h35km, n90, σ1§13/83, mb4.4/25, MS3.5/10, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**5.04**	**86**	P	**Pn**	**12 16 57.4**	**-0.2**
GSI	**Gunungsitoli**	**5.04**	**86**	*e*Pn	**Pn**	**12 16 57.3**	**-0.4**
MLSI	**Meulaboh, Aceh**	**5.06**	**49**	P	**Pn**	**12 16 57.6**	**-0.3**
TPTI		**5.16**	**64**	P	**Pn**	**12 16 58.9**	**-0.4**
KCSI	**Kotacane, Aceh**	**5.80**	**64**	P	**Pn**	**12 17 08.9**	**+0.7**
155nm,1.0s,4μm0.6nm
LHMI Lhok Sumawe 6.10 46 *e*Pn **Pn** **12 17 12.8 +0.5**
PSI Prapat 6.63 74 Pn **Pn** **12 17 19.3 -0.3**
3.8nm,0.3s,baz=360,slow=5.7,SNR=15
PSI Sn **Sn** **12 18 28.9 -5.1**
2.8nm,0.3s,baz=360,slow=14,SNR=3.0
PSI LR LR 12 20 25.4
comp=Z,627nm,18.3s,baz=268,slow=42
SISI Saibi 6.92 109 P **Pn** **12 17 22.9 -0.7**
137nm,0.9s,0.5nm
MNSI Mandailing Nat 7.03 91 P **Pn** **12 17 25.2 +0.2**
PDSI Padang 8.13 103 P **Pn** **12 17 39.4 -0.7**
39nm,0.6s,8μm0.3nm
BKNI Bangkinang 8.51 94 P Pn 12 17 56.3 +11
IPM Ipoh 9.16 67 *e*Pn **Pn** **12 17 53.9 -0.4**
KULM Kulim 9.16 62 *e*Pn **Pn** **12 17 53.7 -0.6**
KRJI Kerinci 9.41 109 P **Pn** **12 17 58.0 +0.2**
339nm,0.7s,5μm
MYKOM Kota Tinggi 11.33 86 *e*Pn **Pn** **12 18 24.0 +0.1**
MNAI Manna 11.66 117 *e*Pn **Pn** **12 18 27.3 -1.3**
PALK Pallekele 13.37 298 Pn **Pn** **12 18 49.7 -2.3**
1.1nm,0.3s,baz=116,slow=14,SNR=4.0
PALK Sn Sn 12 21 04.0 -16
1.7nm,0.3s,baz=107,slow=1.1,SNR=4.5
KSM Kuching 17.76 88 *e*Pn **P** **12 19 50.4 +0.6**
KPJI Karang Pucung 18.30 117 P **Pn** **12 19 59.1 +3.3**
24nm,0.7s
CM01 Chiang Mai Arr 18.46 20 *e*P **P** **12 19 55.5 -1.9**
CM31 Chiang Mai Arr 18.48 19 *e*P **P** **12 19 57.9 +0.2**
CMAR Chiang Mai Arr 18.48 19 P **P** **12 19 57.9 +0.2**
0.2nm,0.3s,baz=216,slow=13,SNR=18
STKI Sintang 18.95 93 P **Pn** **12 20 05.8 +2.1**
48nm,1.0s
SBUM Sibu 19.72 85 *e*P **Pn** **12 20 12.7 -0.2**
16nm,0.9s
BWNR Bhubaneshwar 20.32 341 *e*P Pn 12 20 19.7 -0.1
BWNR IAmb IAmb 12 20 24.2
HYB Hyderabad 21.38 321 *e*P **P** **12 20 28.5 -0.7**
HYB IAmb IAmb 12 20 32.8
comp=Z,16nm,0.8s
H08S2 Diego Garcia H 21.75 247 T T 12 42 56.4
baz=66
H08S3 Diego Garcia H 21.76 247 T T 12 42 57.9
baz=66
H08S1 Diego Carcia H 21.77 247 T T 12 42 45.9
baz=66
BOK Bokaro 23.60 345 *e*P **P** **12 20 52.5 +0.1**
IMP Imphal 23.77 3 *e*P **P** **12 20 53.6 -0.4**
IMP IAmb IAmb 12 20 57.3
comp=Z,7.8nm,1.1s
NGP Nagpur 24.00 328 *e*P **P** **12 20 53.9 -2.3**
NGP IAmb IAmb 12 21 04.4
comp=Z,2μm,6.7s
TURI Tura 24.54 355 *e*P **P** **12 21 03.2 +2.2**
GUWA GUWAHATI 25.10 358 *e*P **P** **12 21 06.3 +0.2**
GUWA IAmb IAmb 12 21 07.5
comp=Z,12nm,1.1s
MOKO MOKOCHONG 25.28 4 *e*P **P** **12 21 08.5 +0.5**
POO Poona 25.33 315 *e*P **P** **12 21 08.1 -0.2**
POO IAmb IAmb 12 21 13.5
comp=Z,13nm,1.1s
TEZP TEZPUR 25.51 1 *e*P **P** **12 21 11.3 +1.5**
ITAN ITANAGAR 26.06 2 *e*P **P** **12 21 17.6 +2.8**

RAMN Ramite 26.46 348 *e*P **P** **12 21 20.3 +1.5**
comp=Z,18nm,0.8s
GTK Tadong 26.48 352 *e*P **P** **12 21 20.0 +1.2**
GTK IAmb IAmb 12 21 26.5
comp=Z,36nm,0.5s
JIRN Jiri 27.24 348 *e*P **P** **12 21 27.1 +1.2**
comp=Z,32nm,1.1s
GUN Gumba 27.55 347 *e*P **P** **12 21 29.7 +1.1**
PYUN Piuthan 28.50 342 *e*P **P** **12 21 38.1 +1.2**
DANN Dangsing 28.50 344 *e*P **P** **12 21 37.8 +0.7**
WSI Waingapu 29.58 112 P **P** **12 21 45.7 -0.7**
SMLA Simla 33.35 336 *e*P **P** **12 22 20.4 +0.9**
SMLA IAmb IAmb 12 22 21.3
comp=Z,6.7nm,0.5s
DHRM DHARAMSHALA 34.69 335 *e*P **P** **12 22 29.6 -1.8**
DHRM IAmb IAmb 12 22 31.7
comp=Z,6.0nm,0.6s
FITZ Fitzroy Crossi 37.66 122 P **P** **12 22 56.4 -0.3**
comp=Z,4.8nm,0.9s,baz=299,slow=9.2,SNR=6.2
FITZ Fitzroy Crossi 37.66 122 *e*P **P** **12 22 56.4 -0.3**
comp=Z,9.9nm,1.1s
WR1 Warramunga Arr 45.92 119 *e*P **P** **12 24 04.2 0.0**
comp=Z,6.6nm,0.8s
WR1 *e*PcP **PcP** **12 25 41.0 0.0**
WRA Warramunga Arr 45.92 119 P **P** **12 24 04.2 0.0**
comp=Z,6.5nm,0.7s,baz=297,slow=8.6,SNR=59
WRA PcP **PcP** **12 25 41.0 0.0**
comp=Z,0.5nm,0.8s,baz=310,slow=3.1,SNR=4.3
WRAB Tennant Creek 45.92 119 *e*P **P** **12 24 04.6 +0.3**
comp=Z,6.7nm,0.7s
WB2 Warramunga Arr 45.93 119 *e*P **P** **12 24 04.6 +0.3**
comp=Z,6.9nm,0.8s
MK01 Makanchi Array 46.49 350 *e*P **P** **12 24 08.4 0.0**
MK31 Makanchi Array 46.52 350 *e*P **P** **12 24 08.9 +0.3**
MK32 Makanchi Array 46.52 350 *e*P **P** **12 24 08.9 +0.3**
MKAR Makanchi Array 46.52 350 P **P** **12 24 08.9 +0.3**
comp=Z,1.3nm,0.7s,baz=167,slow=9.0,SNR=14
MKAR Makanchi Array 46.52 350 *e*P **P** **12 24 09.2 +0.6**
comp=Z,9.2nm,0.7s
ASAR Alice Springs 47.04 124 P **P** **12 24 12.8 -0.2**
comp=Z,1.9nm,0.8s,baz=296,slow=7.8,SNR=17
ASAR PcP **PcP** **12 25 45.1 +0.2**
comp=Z,0.8nm,0.7s,baz=305,slow=3.1,SNR=7.6
AS01 Alice Springs 47.08 124 *e*P **P** **12 24 12.8 -0.5**
SONA0 Songino Array 48.21 12 *e*P **P** **12 24 22.9 +1.1**
SONM Songino Array 48.21 12 P **P** **12 24 22.9 +1.1**
comp=Z,1.7nm,0.6s,baz=202,slow=8.2,SNR=6.6
SONM LR LR 12 47 11.9
comp=Z,40nm,19.1s,baz=247,slow=39
SONA1 Songino Array 48.22 12 *e*P **P** **12 24 23.1 +1.2**
KS15 Wonju Array Si 48.75 38 *e*P **P** **12 24 27.3 +1.3**
KSAR Wonju Array Be 48.75 38 P **P** **12 24 27.4 +1.5**
KSRS Korea Array 48.78 38 P **P** **12 24 27.4 +1.2**
comp=Z,1.2nm,0.6s,baz=231,slow=7.8,SNR=5.6
KURBB Kurchatov Arra 50.89 349 P **P** **12 24 42.1 +0.1**
comp=Z,1.6nm,0.8s,baz=171,slow=7.1,SNR=15
KURK Kurchatov 50.96 349 *e*P **P** **12 24 42.1 -0.5**
KURK *e*P **P** **12 24 43.0 +0.5**
ZALV Zalesovo Beam 53.20 354 P **P** **12 24 59.2 +0.1**
comp=Z,0.7nm,0.3s,baz=189,slow=8.6,SNR=4.7
ZALV LR LR 12 48 50.1
comp=Z,38nm,21.7s,baz=39,slow=37
ZAA1 Zalesovo Array 53.20 354 *e*P **P** **12 24 59.2 +0.1**
MJAR Matsushiro Ar 55.06 45 LR LR 12 50 52.4
comp=Z,36nm,18.6s,baz=345,slow=38
BVAR Borovoye Array 55.07 344 P **P** **12 25 12.3 -0.5**
comp=Z,0.7nm,0.7s,baz=147,slow=8.1,SNR=4.9
BVAR LR LR 12 50 12.5
comp=Z,56nm,18.1s,baz=147,slow=38
ABKAR Akbulak array 55.63 335 *e*P **P** **12 25 16.8 -0.1**
CTA Charters Tower 56.59 115 P **P** **12 25 24.4 +0.1**
comp=Z,4.1nm,0.8s,baz=276,slow=7.3,SNR=4.4
STKA Stephens Creek 56.72 130 P **P** **12 25 24.9 -0.1**
comp=Z,1.3nm,0.6s,baz=315,slow=7.1,SNR=5.9
AKTO Aktyubinsk 57.35 334 LR LR 12 50 48.1
comp=Z,29nm,19.6s,baz=118,slow=37
BR101 Keskin Array S 65.87 314 *e*P **P** **12 26 27.0 0.0**
BRTR Keskin Array B 65.87 314 P **P** **12 26 27.0 0.0**
comp=Z,0.8nm,0.6s,baz=120,slow=7.5,SNR=4.8
BOSA Boshof 70.65 239 LR LR 12 54 21.9
comp=Z,38nm,18.6s,baz=205,slow=33
IDI Anoyia 71.31 307 LR LR 13 01 06.6
comp=Z,14nm,18.2s,baz=81,slow=38
TIXI Tiksi 74.28 11 LR LR 13 04 59.9
comp=Z,33nm,18.1s,baz=36,slow=40
TIXI Tiksi 74.28 11 *e*P **P** **12 27 18.6 +0.9**
comp=Z,2.7nm,0.8s
FIA0 FINESS Array S 78.09 333 *e*P **P** **12 27 39.3 -0.3**
FINES FINESS Array B 78.09 333 P **P** **12 27 39.3 -0.3**
comp=Z,1.4nm,0.8s,baz=140,slow=6.7,SNR=3.0
GEA0 GERESS Array S 81.94 319 *e*P **P** **12 28 00.7 -0.1**
GEC2 GERESS Array S 81.94 319 *e*P **P** **12 28 00.5 -0.3**
comp=Z,3.1nm,1.1s
GERES GERESS Array B 81.94 319 P **P** **12 28 00.5 -0.3**
comp=Z,0.7nm,0.7s,baz=103,slow=5.9,SNR=5.9
NOA NORSAR Array B 84.96 331 LR LR 13 07 33.6
comp=Z,13nm,20.0s,baz=280,slow=37
SPITS Spitsbergen Ar 86.24 348 LR LR 13 10 53.9
comp=Z,22nm,21.8s,baz=145,slow=38
TXAR Lajitas Array 146.12 26 PKPbc **PKPab** **12 35 22.2 -0.2**
comp=Z,0.6nm,0.5s,baz=101,slow=1.3,SNR=19

MEX 07 12:16:03.5±0.4, 16°.43N×98°.12W, h5km±7km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.20**	**339**	*e*P	Pg	12 16 23.0	-3.5
TLIG				*e*S	Sg	12 16 39.0	-3.1
VHO	**Vista Hermosa**	**1.48**	**64**	*e*P	Pn	12 16 27.6	-3.4
VHO				*e*S	Sb	12 16 45.6	-5.1
HUIG	**Huatulco**	**2.04**	**109**	*e*P	Pn	12 16 35.3	-3.4
CAIG	**El Cayaco**	**2.15**	**287**	*e*P	Pn	12 16 36.6	-3.4
CAIG				*e*S	Sn	12 17 02.8	-4.2
PLIG	**Platanillo**	**2.35**	**326**	*e*P	Pn	12 16 39.9	-3.1
PLIG				*e*S	Sn	12 17 08.3	-4.0

MAN 07 12:30:01.2, 6°.10N×126°.27E, h152km, mb4.6, ML3.5, MS3.4, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.84**	**359**	*e*P	Pn	12 30 24.9	-0.1
MATI				*e*S	Sn	12 30 44.8	+1.7
DMPH	**Davao City--Mi**	**1.23**	**322⇑**	*e*P	Pn	12 30 29.3	+1.0
DMPH				*i* S	Sn	12 30 50.2	+1.2
SKMP	**Bagumbayan, Su**	**1.76**	**284**	*e*P	Pn	12 30 30.2	-3.6
SKMP				*e*S	Sn	12 30 54.4	-4.4
BUKP	**Musuan**	**2.13**	**326**	*e*P	Pn	12 30 38.8	+0.8
BUKP				*e*S	Sn	12 31 06.7	+0.2

*IDC **07** 12:31:44.5±3.2, 7°.94S×119°.88E, h148km±31km, mb3.5/7, mb1 3.6/10, mb1mx3.3/59, mbtmp4.0/10, Error ellipse: s-maj=41.2km s-min=19.2km az=63.0*
*ISCJB **07** 12:31:47.5±0.5, 8°.24S±0°.06×119°.90E±0°.05, h200km, mb3.7/6, Error ellipse: s-maj=8.8km s-min=5.6km az=29.0*
*DJA **07** 12:31:50.1±0.4, 8°S±5°×12°0E±°, h176km±4km, M4.2/10, mB5.2/1, mb4.2/3, MLv4.1/10, Mw(mB)4.6/1*
ISC 07 12:31:48.7±0.7, 8°.29S±0°.06×119°.91E±0°.05, h200km, n20, σ1§68/27, mb3.8/6, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**1.42**	**164**	P	**Pn**	**12 32 21.4**	**-0.3**
WSI				S	**Sn**	**12 32 45.8**	**-1.7**
EDFI	**Ende, Flores**	**1.82**	**105**	P	**Pn**	**12 32 25.6**	**+0.1**
EDFI				S	**Sn**	**12 32 52.7**	**-1.3**
BASI	**Baing, Sumba**	**2.02**	**161**	P	**Pn**	**12 32 27.6**	**+0.1**
PLAI	**Plampang**	**2.17**	**256**	P	**Pn**	**12 32 28.5**	**-0.5**
PLAI				S	**Sn**	**12 32 58.6**	**-1.8**
MMRI	**Maumere**	**2.33**	**99**	P	**Pn**	**12 32 31.4**	**+0.7**
BKSI	**Bulukumba**	**2.96**	**4**	P	**Pn**	**12 32 37.8**	**-0.1**
BATI	**Baumata**	**4.17**	**117**	P	**Pn**	**12 32 49.0**	**-3.6**
6.0nm,0.3s,baz=58,slow=6.0,SNR=4.7
BATI S **Sn** **12 33 40.7 -2.1**
4.3nm,0.3s,baz=68,slow=5.4,SNR=2.3
BATI Baumata 4.17 117 P **Pn** **12 32 49.2 -3.4**
SOEI Soe 4.54 109 P **Pn** **12 32 58.4 +1.0**
IGBI Denpasar 4.74 263 P **Pn** **12 33 00.7 +0.9**
JAGI Jajag, Banyuwa 5.70 268 P **Pn** **12 33 12.4 +0.3**
23nm,1.2s
FITZ Fitzroy Crossi 11.23 151 P **Pn** **12 34 24.9 +1.1**
0.4nm,0.3s,baz=333,slow=8.8,SNR=25
FITZ S **Sn** **12 36 26.0 -3.0**
1.1nm,0.3s,baz=11,slow=23,SNR=8.5
WRA Warramunga Arr 18.14 131 P **Pn** **12 35 48.2 -0.3**
1.5nm,0.3s,baz=306,slow=12,SNR=98
WRA S **S** **12 39 04.3 +0.6**
0.2nm,0.3s,baz=318,slow=25,SNR=4.2
ASAR Alice Springs 20.33 140 P **P** **12 36 12.1 +2.4**
1.6nm,0.5s,baz=318,slow=10,SNR=26
ASAR S **S** **12 39 47.0 +0.3**
1.2nm,0.6s,baz=319,slow=22,SNR=7.2
STKA Stephens Creek 30.94 142 P **P** **12 37 50.1 +3.1**
1.2nm,0.5s,baz=320,slow=8.7,SNR=7.4
MKAR Makanchi Array 64.25 332 P **P** **12 42 02.0 -0.4**
1.3nm,0.5s,baz=147,slow=7.2,SNR=17
ZALV Zalesovo Beam 68.71 339 P **P** **12 42 29.5 -1.0**
2.0nm,0.5s,baz=144,slow=5.8,SNR=8.9
KURBB Kurchatov Arra 68.74 333 P **P** **12 42 29.9 -0.8**
0.5nm,0.5s,baz=144,slow=5.5,SNR=5.7
PETK Petropavlovsk- 69.07 23 P **P** **12 42 32.2 -0.5**
0.7nm,0.5s,baz=182,slow=4.3,SNR=2.8
SEY Seymchan 75.25 15 P **P** **12 43 08.8 -0.4**
0.5nm,0.4s,baz=181,slow=6.0,SNR=7.4

*ISCJB **07** 12:31:48.0±0.7, 50°.21N±0°.04×19°.19E±0°.04, h0km, Error ellipse: s-maj=6.5km s-min=3.1km az=10.0*
*CSEM **07** 12:31:48.7±0.4, 50°.23N×19°.26E, h1km, ML2.5/4, Error ellipse: s-maj=8.0km s-min=3.7km az=9.0*
*PRU **07** 12:31:49.7, 50°.22N×19°.26E, h0km*
ISC 07 12:31:49.5±0.9, 50°.15N±0°.04×19°.26E±0°.02, h0km, n23, σ0§52/35, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.35**	**78**	*e*Pg	**Pg**	**12 31 55.9**	**-0.3**
OJC				*e*Sg	**Sg**	**12 32 00.3**	**-0.4**
OJC	**Ojcow**	**0.35**	**78**	*e*Pg	**Pg**	**12 31 55.9**	**-0.3**
OJC				*e*Sg	**Sg**	**12 32 00.3**	**-0.4**
OKC	**Ostrava-Krasne**	**0.79**	**247**	*e*SG	**Sb**	**12 32 17.6**	**+0.4**
comp=Z,12nm,0.5s
OKC Ostrava-Krasne 0.79 247 Sg **Sb** **12 32 17.6 +0.4**
12nm,0.5s
NIE Niedzica 0.99 137 *e*Pg **Pg** **12 32 08.9 +0.4**
NIE *e*Sg **Sb** **12 32 23.8 +0.6**
NIE Niedzica 0.99 137 *e*Pg **Pg** **12 32 08.9 +0.4**
NIE *e*Sg **Sb** **12 32 23.8 +0.6**
LANS Liptovska Anna 1.01 172 *e*PG **Pb** **12 32 10.0 +0.2**
LANS *e*SG **Sb** **12 32 23.5 -0.1**
LANS Liptovska Anna 1.01 172 *e*Pg **Pb** **12 32 10.0 +0.2**
LANS *e*Sg **Sb** **12 32 23.5 -0.1**
MORC Moravsky Berou 1.17 252 *e*Pg **Pb** **12 32 12.5 -0.1**
MORC *e*Sg **Sb** **12 32 28.4 0.0**
MORC Moravsky Berou 1.17 252 *e*PG **Pb** **12 32 12.5 -0.1**
MORC *e*SG **Sb** **12 32 28.4 0.0**
VYHS Vyhne 1.68 190 *e*PN **Pn** **12 32 20.0 -0.1**
VYHS *e*SN **Sn** **12 32 42.1 -0.2**
VYHS *e*LG Lg 12 32 43.8
VYHS Vyhne 1.68 190 *e*Pn **Pn** **12 32 20.0 -0.1**
VYHS *e*Sn **Sn** **12 32 42.1 -0.2**
DPC Dobruska-Polom 1.90 277 *e*PG **Pn** **12 32 23.7 +0.5**
DPC *e*SG **Sb** **12 32 49.7 +0.4**
comp=Z,11nm,0.7s
DPC Dobruska-Polom 1.90 277 Pg **Pn** **12 32 23.7 +0.5**
DPC Sg **Sb** **12 32 49.7 +0.4**
11nm,0.7s
VRAC Vranov 1.93 245 *e*Sg **Sg** **12 32 51.3 0.0**
VRAC Vranov 1.93 245 *e*SG **Sg** **12 32 51.3 0.0**
UPC Upice 2.12 281 *e*SG **Sg** **12 32 57.9 +0.5**
comp=Z,6.8nm,0.6s
UPC Upice 2.12 281 Sg **Sg** **12 32 57.9 +0.5**
6.8nm,0.6s
KRUC Moravsky 2.16 241 *e*SG **Sg** **12 32 58.3 -0.5**
PRU Pruhonice 3.05 269 *e*SG **Sg** **12 33 26.2 -1.1**
PRU Pruhonice 3.05 269 Sg **Sg** **12 33 26.2 -1.1**
KHC Kasperske Hory 3.83 257 *e*SG **Sg** **12 33 51.5 -1.0**
comp=Z,3.2nm,0.5s
KHC Kasperske Hory 3.83 257 Sg **Sg** **12 33 51.5 -1.0**
3.2nm,0.5s

MAN 07 12:43:40.0, 9°.33N×125°.79E, h6km, mb4.4, ML3.3, MS3.1, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.40**	**205**	*e*P	Pg	12 43 48.2	+0.6
BUTP				*e*S	Sb	12 43 55.0	-0.8
SCPH	**Surigao**	**0.54**	**327⇑**	*e*P	Pg	12 43 50.8	+0.4
SCPH				*e*S	Sg	12 43 58.5	+1.1
CGP	**Cagayan de Oro**	**1.39**	**231⇑**	*e*P	Pn	12 44 03.0	-2.9
CGP				*e*S	Sb	12 44 20.6	-3.8
BUKP	**Musuan**	**1.61**	**207**	*e*P	Pn	12 44 08.5	-0.5
BUKP				*e*S	Sb	12 44 30.5	-0.3

DJA 07 13:15:40.9±0.6, 6°S±3°×13°1E±°, h144km±15km, M3.9/8, mB4.6/1, mb4.0/3, MLv3.9/8, Mw(mB)3.9/1, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.56**	**331**	P	Pn	13 16 11.3	+0.7
SAUI	**Saumlaki**	**2.17**	**163**	P	Pn	13 16 17.7	0.0
MSAI	**Masohi**	**3.06**	**326**	P	Pn	13 16 28.6	-0.3
AAI	**Ambon**	**3.29**	**312**	P	Pn	13 16 32.1	+0.3
FAKI	**Fak Fak**	**3.36**	**28**	P	Pn	13 16 33.4	+0.7
FAKI				S	Sn	13 17 12.5	-0.4
RKPI	**Ransiki, Papua**	**5.60**	**39**	P	Pn	13 17 02.8	+0.5
RKPI				S	Sn	13 18 06.3	+0.4

*NNC **07** 13:18:33.6±1.9, 46°.36N×79°.93E, h0km, mb2.5, mpv2.5, Error ellipse: s-maj=15.5km s-min=8.2km az=26.0*
*SOME **07** 13:18:36.2, 46°.30N×79°.75E, h15km*
ISC 07 13:18:34.2±2.6, 46°.33N±0°.09×79°.99E±0°.07, h11km±27km, n12, σ1§03/20, 2C-4D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPS	**Kapalarasan**	**1.14**	**203**	*e*P	**Pb**	**13 18 54.5**	**-1.4**
1.8nm,0.1s
KAPS *e*S **Sb** **13 19 07.9 -2.7**
20nm,0.1s
MAKZ Makanchi 1.45 70 ⇓P **Pb** **13 19 00.8 -0.4**
2.2nm,0.3s
MAKZ ⇓S **Sg** **13 19 21.1 +0.1**
1.3nm,0.2s
MK31 Makanchi Array 1.65 73 ⇓P **Pb** **13 19 04.0 -0.7**
0.9nm,0.3s,baz=252,slow=15,SNR=4.5
MK31 ⇓S **Sb** **13 19 26.4 +0.8**
0.6nm,0.2s,baz=284,slow=52,SNR=4.6
TDK Taldyqorghan 1.73 220 *e*P **Pb** **13 19 05.8 -0.1**
37nm,0.3s
TDK *e*S **Sb** **13 19 27.0 -0.8**
46nm,0.2s
DJR Jarkent 2.00 184 *e*P **Pb** **13 19 11.5 +0.8**
4.3nm,0.2s
DJR *e*S **Sb** **13 19 36.5 +0.9**
13nm,0.2s
MNBS Baschi 2.52 207 *e*P **Pb** **13 19 19.5 0.0**
1.5nm,0.2s
MNBS *e*S **Sb** **13 19 50.0 -0.4**
8.9nm,0.3s
KPKS Kokpek 3.01 198 *e*P **Pb** **13 19 27.9 +0.1**
2.3nm,0.2s
KPKS *e*S **Sb** **13 20 05.4 +0.7**
9.0nm,0.3s
CHKK Chushkaly 3.26 222 *e*P **Pb** **13 19 31.8 -0.3**
0.9nm,0.2s
CHKK *e*S **Sb** **13 20 11.8 0.0**
8.3nm,0.3s
KTBS Karatobe 3.52 223 *e*P **Pb** **13 19 37.2 +0.8**
0.6nm,0.3s
KTBS *e*S **Sb** **13 20 20.6 +1.5**
4.3nm,0.4s
KUU Kurty 3.55 228 *e*P **Pb** **13 19 37.3 +0.3**
1.7nm,0.1s
KUU *e*S **Sb** **13 20 20.8 +0.7**
7.1nm,0.3s
KURBB Kurchatov Arra 4.40 348 ⇑Lg Lg 13 20 53.2
3.6nm,0.6s
KURK Kurchatov 4.48 349 ⇑Lg Lg 13 20 53.2
3.5nm,1.0s

MAN 07 13:31:02.0, 13°.85N×120°.62E, h173km, mb4.1, ML2.9, MS2.5, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.38**	**253**	*e*P	Pn	13 31 27.3	+1.8
LUBP				*e*S	Sn	13 31 45.7	+2.2
BOAC	**Boac**	**1.25**	**108**	*e*P	Pn	13 31 32.0	+1.0
BOAC				*e*S	Sn	13 31 55.3	+1.9
SJMP	**San Jose**	**1.46**	**160**	*e*P	Pn	13 31 33.6	+0.6
SJMP				*e*S	Sn	13 31 57.7	+0.6
BUSP	**Coron**	**1.88**	**193**	*e*P	Pn	13 31 37.5	+0.2
BUSP				*e*S	Sn	13 32 08.0	+3.3
SCZP	**Santa Cruz**	**2.03**	**340**	*e*P	Pn	13 31 40.1	+1.2
SCZP				*e*S	Sn	13 32 07.9	+0.2
BOLP	**Bolinao**	**2.61**	**345**	*e*P	Pn	13 31 46.2	+0.7
BOLP				*e*S	Sn	13 32 20.0	+0.5

MEX 07 13:31:10.1±0.3, 15°.49N×94°.05W, h89km±10km, MD3.9, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.83**	**75**	*e*P	Pn	13 31 26.6	-1.3
PCIG				*e*S	Sn	13 31 39.7	-1.5
TGIG		**1.56**	**35**	*e*S	Sn	13 31 55.3	-1.6
CCIG	**Comitan**	**2.01**	**67**	*e*P	Pn	13 31 35.5	-7.1

MEX 07 13:42:09.9±0.3, 16°.50N×97°.42W, h29km±6km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**0.86**	**49**	*e*P	Pn	13 42 23.8	-2.6
VHO				*e*S	Sb	13 42 34.9	-3.0
HUIG	**Huatulco**	**1.46**	**120**	*e*P	Pn	13 42 32.1	-2.2
TLIG	**Tlapa**	**1.52**	**314**	*e*P	Pn	13 42 33.1	-2.2
TLIG				*e*S	Sn	13 42 51.2	-3.0
TPIG	**Tehuac#an**	**1.91**	**2**	*e*P	Pn	13 42 38.7	-2.0
TPIG				*e*S	Sn	13 43 00.9	-2.8

*IDC **07** 13:59:31.5±1.9, 24°.15S×176°.73W, h0km, mb4.0/5, mb1 4.2/5, mb1mx3.7/52, mbtmp4.0/5, Error ellipse: s-maj=112.3km s-min=28.9km az=156.0*
ISC 07 13:59:41.3±1.5, 24°.25S±0°.1×176°.7W±0°.3, h82km, n13, σ2s28/14, mb4.2/5, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.99**	**199**	Pn	**P**	**14 03 16.2**	**+4.1**
	0.3nm,0.3s,baz=304,slow=7.5,SNR=3.4						
URZ				Sn	**Sn**	**14 05 49.3**	**-4.3**
	0.2nm,0.3s,baz=323,slow=20,SNR=3.5						
CTA	**Charters Tower**	**34.46**	**269**	P	**P**	**14 06 21.9**	**+0.5**
	4.2nm,0.5s,baz=107,slow=11,SNR=11						
STKA	**Stephens Creek**	**37.40**	**249**	P	**P**	**14 06 47.0**	**+0.6**
	1.4nm,0.4s,baz=92,slow=14,SNR=7.3						
ASAR	**Alice Springs**	**44.93**	**260**	P	**P**	**14 07 48.3**	**0.0**
	0.3nm,0.3s,baz=92,slow=7.2,SNR=22						
ASAR				PcP	**PcP**	**14 09 29.6**	**+1.0**
	0.6nm,0.7s,baz=114,slow=3.7,SNR=5.5						
WRA	**Warramunga Arr**	**45.36**	**265**	P	**P**	**14 07 51.1**	**-0.7**
	0.7nm,0.4s,baz=105,slow=8.6,SNR=46						
WRA				PcP	**PcP**	**14 09 30.9**	**+0.8**
	1.1nm,1.0s,baz=106,slow=3.4,SNR=3.7						
FITZ	**Fitzroy Crossi**	**53.78**	**265**	P	**P**	**14 08 56.2**	**+0.5**
	2.1nm,0.9s,baz=117,slow=9.0,SNR=3.5						
MKAR	**Makanchi Array**	**114.54**	**312**	PKP	PKPdf	14 18 12.1	+0.3
	0.1nm,0.4s,baz=77,slow=0.4,SNR=2.8						
KURBB	**Kurchatov Arra**	**117.51**	**316**	PKP	**PKPdf**	**14 18 17.8**	**+0.5**
	0.3nm,0.5s,baz=93,slow=1.9,SNR=2.9						
BVAR	**Borovoye Array**	**122.62**	**319**	PKP	**PKPdf**	**14 18 27.7**	**+0.6**
	0.4nm,0.4s,baz=113,slow=3.3,SNR=3.0						
HFS	**Hagfors**	**143.33**	**351**	PKhKP	PKPpre	14 19 03.7	
	0.5nm,0.3s,baz=22,slow=4.8,SNR=5.9						
AKASG	**Malin Array Be**	**146.77**	**329**	PKPbc	**PKPab**	**14 19 14.3**	**-0.7**
	2.7nm,0.4s,baz=43,slow=4.4,SNR=11						
EKA	**Eskdalemuir Ar**	**148.52**	**7**	PKPbc	**PKPab**	**14 19 20.6**	**-1.2**
	0.6nm,0.6s,baz=336,slow=1.6,SNR=3.6						
MMAI	**Mount Meron Ar**	**150.53**	**295**	PKPbc	**PKPab**	**14 19 26.9**	**-4.0**
	2.2nm,0.6s,baz=75,slow=6.1,SNR=4.2						

*JMA **07** 14:03:03.4±0.2, 43°.23N×146°.68E, h58km±2km, M3.5*
*MOS **07** 14:03:03.0±1.1, 43°.20N×146°.80E, h41km, mb4.2/1, Error ellipse: s-maj=41.2km s-min=17.1km az=111.7*
*SKHL **07** 14:03:03.0±0.6, 43°.24N×146°.84E, h47km±6km, mb4.4/6*
ISC 07 14:03:02.4±1.8, 43°.24N±0°.07×146°.78E±0°.06, h32km±12km, n22, σ0s65/41, 2C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.64**	**3**	*i* P	**Pb**	**14 03 15.0**	**-0.1**
SHO				AMB	AMB	14 03 15.7	
	73nm,0.2s						
SHO				AMB	AMB	14 03 15.7	
	110nm,0.2s						
SHO				AMB	AMB	14 03 15.7	
	113nm,0.2s						
SHO				*i* S	**Sb**	**14 03 24.0**	**+0.2**
SHO				A	A	14 03 24.0	
	144nm,0.3s						
SHO				A	A	14 03 24.0	
	1μm,0.3s						
SHO	**Shikotan**	**0.64**	**3**	*d i*PN	**Pn**	**14 03 15.3**	**+0.1**
SHO				*i* S	**Sn**	**14 03 24.5**	**+0.3**
SHO				pmax	pmax		
	comp=Z,113nm,0.1s						
SHO				pmax	pmax		
	comp=N,73nm,0.2s						
SHO				pmax	pmax		
	comp=E,110nm,0.2s						
SHO				smax	smax		
	comp=N,1μm,0.2s						
SHO				smax	smax		
	comp=E,1μm,0.4s						
NEM2	**Nemuro 2**	**0.77**	**280**	P	**Pb**	**14 03 17.6**	**+0.3**
NEM2				*e*S	**Sn**	**14 03 28.2**	**+0.7**
YUK	**Yuzh-Kuril'sk**	**1.04**	**320**	*i* P	**Pn**	**14 03 21.0**	**+0.2**
YUK				AMB	AMB	14 03 21.9	
	comp=E,125nm,0.2s						
YUK				*e*S	**Sn**	**14 03 34.0**	**-0.2**
YUK				A	A	14 03 35.0	
	comp=E,1μm,0.3s						
YUK				A	A	14 03 35.0	
	comp=E,2μm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.04**	**320**	*c i*PN	**Pb**	**14 03 21.3**	**-0.6**
YUK				*e*S	**Sn**	**14 03 34.4**	**+0.2**
YUK				pmax	pmax		
	comp=E,256nm,0.2s						
YUK				pmax	pmax		
	comp=Z,1μm,0.2s						
YUK				pmax	pmax		
	comp=N,272nm,0.1s						
YUK				smax	smax		
	comp=E,1μm,0.4s						
YUK				smax	smax		
	comp=N,1μm,0.5s						
GLVR	**Golovnino**	**1.05**	**299**	*i* P	**Pn**	**14 03 21.0**	**+0.2**
GLVR				AMB	AMB	14 03 21.0	
	comp=N,67nm,0.1s						
GLVR				AMB	AMB	14 03 21.0	
	comp=N,90nm,0.1s						
GLVR				AMB	AMB	14 03 21.0	
	comp=N,58nm,0.1s						
GLVR				*e*S	**Sb**	**14 03 35.0**	**-0.4**
GLVR				A	A	14 03 35.0	
	comp=N,264nm,0.3s						
GLVR				A	A	14 03 35.0	
	comp=N,213nm,0.3s						
GLVR	**Golovnino**	**1.05**	**299**	*c i*PN	**Pb**	**14 03 21.5**	**-0.5**
GLVR				*e*S	**Sb**	**14 03 35.4**	**0.0**
GLVR				pmax	pmax		
	comp=N,67nm,0.1s						
GLVR				pmax	pmax		
	comp=E,90nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,582nm,0.1s						
GLVR				smax	smax		
	comp=N,3μm,0.3s						
GLVR				smax	smax		
	comp=E,2μm,0.3s						
GRPR	**Tuman**	**1.05**	**316**	*e*P	**Pn**	**14 03 21.0**	**+0.1**
GRPR				AMB	AMB	14 03 21.0	
	comp=E,29nm,0.1s						
GRPR				AMB	AMB	14 03 21.0	
	comp=E,18nm,0.1s						
GRPR				AMB	AMB	14 03 21.0	
	comp=E,23nm,0.1s						
GRPR				*e*S	**Sn**	**14 03 34.0**	**-0.5**
GRPR				A	A	14 03 34.0	
	comp=E,991nm,0.3s						
GRPR				A	A	14 03 34.0	
	comp=E,1μm,0.3s						
GRPR	**Tuman**	**1.05**	**316**	*e*PN	**Pn**	**14 03 21.1**	**+0.1**
GRPR				*e*S	**Sn**	**14 03 34.0**	**-0.5**
GRPR				pmax	pmax		
	comp=N,29nm,0.1s						
GRPR				pmax	pmax		
	comp=E,18nm,0.1s						
GRPR				pmax	pmax		
	comp=Z,230nm,0.1s						
GRPR				smax	smax		
	comp=E,1μm,0.4s						
GRPR				smax	smax		
	comp=N,991nm,0.3s						
LAGR	**Lagunnoye**	**1.09**	**319**	*e*P	**Pn**	**14 03 21.0**	**-0.5**
LAGR				AMB	AMB	14 03 22.0	
	comp=N,34nm,0.2s						
LAGR				*e*S	**Sn**	**14 03 35.0**	**-0.5**
LAGR				A	A	14 03 36.0	
	comp=N,873nm,0.2s						
LAGR				A	A	14 03 36.0	
	comp=N,607nm,0.2s						
LAGR	**Lagunnoye**	**1.09**	**319**	*e*PN	**Pn**	**14 03 21.8**	**+0.3**
LAGR				*e*S	**Sn**	**14 03 35.3**	**-0.2**
LAGR				pmax	pmax		
	comp=N,101nm,0.1s						
LAGR				pmax	pmax		
	comp=Z,339nm,0.1s						
LAGR				pmax	pmax		
	comp=E,80nm,0.2s						
LAGR				smax	smax		
	comp=N,873nm,0.1s						
LAGR				smax	smax		
	comp=E,607nm,0.3s						
JRA	**Rausu**	**1.40**	**301**	P	**Pn**	**14 03 26.3**	**+0.7**
JRA				*e*S	**Sn**	**14 03 43.2**	**+0.3**
JNK	**Nakash**	**1.54**	**284**	P	**Pn**	**14 03 27.6**	**-0.1**
JNK				*e*S	**Sn**	**14 03 45.8**	**-0.8**
JAK	**Akkeshi**	**1.55**	**262**	P	**Pn**	**14 03 28.1**	**+0.4**
JAK				*e*S	**Sn**	**14 03 46.0**	**-0.6**
KUR	**Kuril'sk**	**2.14**	**21**	*i* P	**Pn**	**14 03 36.0**	**+0.1**
KUR				AMB	AMB	14 03 38.0	
	comp=E,9.0nm,0.1s						
KUR				AMB	AMB	14 03 38.0	
	comp=E,23nm,0.1s						
KUR				*i* S	**Sn**	**14 04 00.6**	**-0.8**
KUR				A	A	14 04 03.4	
	comp=E,123nm,0.2s						
KUR				A	A	14 04 03.4	
	comp=E,174nm,0.2s						
KUR	**Kuril'sk**	**2.14**	**21**	*d i*PN	**Pn**	**14 03 36.8**	**+0.9**
KUR				*i* S	**Sn**	**14 04 01.2**	**-0.2**
KUR				pmax	pmax		
	comp=E,9.0nm,0.1s						
KUR				pmax	pmax		
	comp=Z,23nm,0.1s						
KUR				pmax	pmax		
	comp=N,15nm,0.2s						
KUR				smax	smax		
	comp=N,123nm,0.2s						
KUR				smax	smax		
	comp=E,105nm,0.2s						
JOB	**Onbets**	**2.19**	**262**	*e*S	**Sn**	**14 04 01.4**	**-1.0**
JAR	**Ashorobuto**	**2.20**	**273**	P	**Pn**	**14 03 37.4**	**+0.7**
JAR				*e*S	**Sn**	**14 04 02.1**	**-0.8**
JTKR	**Abashiri--Toko**	**2.21**	**290**	P	**Pn**	**14 03 37.9**	**+1.0**
JTKR				*e*S	**Sn**	**14 04 04.0**	**+0.9**
JCH	**Churui**	**2.59**	**257**	P	**Pn**	**14 03 42.3**	**+0.3**
JCH				*e*S	**Sn**	**14 04 10.9**	**-1.5**
JMP	**Maruseppu**	**2.60**	**288**	P	**Pn**	**14 03 43.4**	**+1.1**
HRK	**Horoka**	**2.67**	**276**	*i* P	**Pn**	**14 03 44.8**	**+1.5**

IDC 07 14:08:59.8±461.0, 47°.05N×46°.77E, h0km, Error ellipse: s-maj=196.1km s-min=142.5km az=175.0, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	**8.17**	**62**	*i*		15 03 00.0	
	baz=249,slow=305,SNR=1.7						
I43RU	**DUBNA INFRASONI**	**1.33**	**332**	*i*		15 19 45.0	
	baz=142,slow=367,SNR=0.6						
I26DE	**FREYUNG INFRAS**	**22.12**	**287**	*i*		16 23 20.0	
	baz=82,slow=315,SNR=0.8						

GUC 07 14:32:14.6±0.6, 36°.01S×71°.12W, h6km±3km, ML3.6, 2C, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCHI	**Chillan**	**0.97**	**233**	*e*P	Pb	14 32 33.8	-0.1
CCHI				*e*S	Sn	14 32 48.5	-0.5
GO05	**HualaæØ**	**1.20**	**326**	*e*P	Pb	14 32 37.8	0.0
GO05				*e*S	Sn	14 32 55.8	+1.2
COCH	**Cobquecura**	**1.36**	**265**	∩ *i*P	Pg	14 32 40.8	+0.1
COCH				*i* S	Sn	14 32 59.9	+1.4
CHPI	**Pichilemu**	**1.77**	**336**	*e*S	Sg	14 33 11.8	+0.2
LMEL	**Las Melosas**	**2.29**	**19**	*e*P	Pb	14 32 55.3	-1.1
LMEL				*e*S	Sb	14 33 26.1	+1.1
LMEL				IAML		14 33 34.3	
	comp=N,232nm,0.6s						
CLCH	**Cerro Calan**	**2.65**	**11**	*i* S	Sb	14 33 35.7	+0.2
CLCH				IAML		14 33 42.0	
	comp=E,374nm,0.8s						
FCH	**Farellones**	**2.76**	**14**	*e*P	Pb	14 33 03.2	-1.4
FCH				IAML		14 33 43.0	
	comp=N,329nm,0.4s						
PEL	**Peldehue**	**2.88**	**7**	∩ *i*P	Pn	14 33 03.8	+2.6
PEL				*e*S	Sb	14 33 41.8	-0.3
PEL				IAML		14 33 45.2	
	comp=N,310nm,0.5s						

*ISCJB **07** 14:37:29.8±0.6, 44°.21S±0°.02×169°.74E±0°.03, h12km±4km, mb3.5/2, Error ellipse: s-maj=4.3km s-min=3.2km az=31.6*
*WEL **07** 14:37:29.7±0.4, 44°.5±3°.×17°.0E±°, h5km, ML4.0/7*
*NEIC **07** 14:37:29.8±0.0, 44°.22S×169°.74E, h5km, ML4.0(WEL), After WEL.*
NEIC Felt in the Lake Ohau area.
*IDC **07** 14:37:34.0±3.8, 44°.02S×169°.78E, h35km±27km, mb3.4/2, mb1 3.6/2, mb1mx3.3/39, mbtmp3.5/2, Error ellipse: s-maj=69.9km s-min=23.2km az=3.0*
ISC 07 14:37:30.2±1.0, 44°.23S±0°.02×169°.76E±0°.02, h13km±7km, n66, σ1s18/81, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBZ	**Lake Benmore**	**0.35**	**117**	*e*Pg	**Pg**	**14 37 37.3**	**+0.1**
LBZ				*e*Sg	**Sg**	**14 37 42.2**	**+0.3**
LBZ	**Lake Benmore**	**0.35**	**117**	P	**Pg**	**14 37 37.4**	**+0.2**
LBZ				S	**Sg**	**14 37 42.3**	**+0.4**
FOZ	**Fox Glacier**	**0.70**	**4**	*e*Pg	**Pg**	**14 37 43.4**	**-0.3**
FOZ				*e*Pn	Pn	14 37 51.5	+5.7
FOZ	**Fox Glacier**	**0.70**	**4**	P*	**Pg**	**14 37 43.2**	**-0.5**
FOZ				S	**Sg**	**14 37 51.4**	**-1.5**
JCZ	**Jackson Bay**	**0.71**	**282**	P*	**Pg**	**14 37 43.9**	**-0.2**
JCZ				S*	**Sg**	**14 37 53.2**	**-0.3**
JCZ	**Jackson Bay**	**0.71**	**282**	P	**Pg**	**14 37 43.9**	**-0.2**
JCZ				S	**Sg**	**14 37 53.4**	**-0.1**
WKZ	**Wanaka**	**0.80**	**221**	*e*Pg	**Pg**	**14 37 44.8**	**-0.9**
WKZ	**Wanaka**	**0.80**	**221**	P	**Pg**	**14 37 45.2**	**-0.5**
ODZ	**Otahua Downs**	**1.03**	**142**	*e*Pg	**Pg**	**14 37 49.4**	**-0.8**
ODZ				*e*Sn	**Sb**	**14 38 04.4**	**+0.8**
ODZ	**Otahua Downs**	**1.03**	**142**	P	**Pg**	**14 37 49.3**	**-0.8**
ODZ				S	**Sg**	**14 38 03.4**	**-0.3**
EAZ	**Earnscleugh**	**1.05**	**197**	P*	**Pg**	**14 37 49.5**	**-1.0**
EAZ	**Earnscleugh**	**1.05**	**197**	P	**Pg**	**14 37 49.5**	**-1.0**
EAZ				S	**Sg**	**14 38 04.0**	**-0.2**
RPZ	**Rata Peaks**	**1.07**	**62**	Pn	**Pg**	**14 37 50.2**	**-0.5**
	263nm,0.3s,baz=261,slow=7.2,SNR=122						
RPZ				Pg	**Pn**	**14 37 52.6**	**+1.7**
	263nm,0.3s,baz=270,slow=5.1,SNR=159						
RPZ				Sn	**Sg**	**14 38 03.6**	**-1.1**
	190nm,0.3s,baz=61,slow=19,SNR=42						
RPZ				Lg	Lg	14 38 07.2	
	1μm,0.3s,baz=29,slow=19,SNR=38						
RPZ	**Rata Peaks**	**1.07**	**62**	P	**Pg**	**14 37 50.3**	**-0.5**
WVZ	**Waitaha Valley**	**1.35**	**32**	Pn	**Pn**	**14 37 55.2**	**+0.4**
WVZ	**Waitaha Valley**	**1.35**	**32**	P	**Pn**	**14 37 55.2**	**+0.4**
MSZ	**Milford Sound**	**1.38**	**251**	Pn	**Pn**	**14 37 55.5**	**+0.3**
MSZ	**Milford Sound**	**1.38**	**251**	P	**Pn**	**14 37 55.6**	**+0.3**
MLZ	**Mavora Lakes**	**1.63**	**225**	*e*Pn	**Pn**	**14 37 58.0**	**-0.7**
MLZ				*e*Sn	**Sn**	**14 38 18.5**	**-1.1**
MLZ	**Mavora Lakes**	**1.63**	**225**	P	**Pn**	**14 37 59.2**	**+0.5**
MLZ				S	**Sb**	**14 38 21.0**	**+0.3**
TUZ	**Tuapeka**	**1.73**	**183**	Pn	**Pn**	**14 37 59.7**	**-0.3**
TUZ	**Tuapeka**	**1.73**	**183**	P	**Pn**	**14 37 59.8**	**-0.2**
TUZ				S	**Sb**	**14 38 24.8**	**+1.3**
HHSZ	**Highcliff Hill**	**1.76**	**160**	Pn	**Pb**	**14 38 02.7**	**+0.3**
HHSZ	**Highcliff Hill**	**1.76**	**160**	P	**Pb**	**14 38 03.1**	**+0.6**
HHSZ				S	**Sn**	**14 38 22.6**	**-0.2**
OXZ	**Oxford**	**1.88**	**62**	*e*Pn	**Pn**	**14 38 03.2**	**+1.1**
OXZ				*e*Sn	**Sn**	**14 38 25.2**	**-0.6**
OXZ	**Oxford**	**1.88**	**62**	P	**Pb**	**14 38 05.0**	**+0.5**
INZ	**Inchbonnie**	**1.94**	**40**	P	**Pn**	**14 38 04.6**	**+1.7**
EYCZ	**Eyrewell**	**2.05**	**68**	P	**Pg**	**14 38 09.2**	**-0.3**
WHZ	**Wether Hill Ro**	**2.10**	**217**	*e*Pn	**Pn**	**14 38 05.1**	**0.0**
WHZ	**Wether Hill Ro**	**2.10**	**217**	P	**Pn**	**14 38 04.9**	**-0.3**
MQZ	**McQueen's Vall**	**2.16**	**77**	*e*Pn	**Pn**	**14 38 05.2**	**-0.7**
MQZ	**McQueen's Vall**	**2.16**	**77**	P	**Pn**	**14 38 05.9**	**0.0**
CRLZ	**Canterbury Las**	**2.17**	**74**	*e*Pn	**Pb**	**14 38 08.6**	**-0.8**
CRLZ	**Canterbury Las**	**2.17**	**74**	P	**Pn**	**14 38 07.5**	**+1.4**
DCZ	**Deep Cove**	**2.23**	**235**	*e*Pn	**Pn**	**14 38 07.1**	**+0.3**
DCZ	**Deep Cove**	**2.23**	**235**	P	**Pn**	**14 38 07.5**	**+0.7**
AKCZ	**Akaroa Harbour**	**2.30**	**82**	P	**Pn**	**14 38 08.0**	**+0.1**
LTZ	**Lake Taylor**	**2.33**	**53**	*e*Pn	**Pn**	**14 38 09.2**	**+0.9**
LTZ	**Lake Taylor**	**2.33**	**53**	P	**Pn**	**14 38 09.2**	**+0.9**
SYZ	**Scrubby Hill**	**2.35**	**190**	Pn	**Pn**	**14 38 08.1**	**-0.4**
SYZ	**Scrubby Hill**	**2.35**	**190**	P	**Pn**	**14 38 08.1**	**-0.4**
OKCZ	**Okains Bay**	**2.44**	**79**	P	**Pn**	**14 38 10.5**	**+0.7**
APZ	**The Paps**	**2.89**	**205**	Pn	**Pn**	**14 38 16.0**	**0.0**
APZ	**The Paps**	**2.89**	**205**	P	**Pn**	**14 38 16.0**	**0.0**
DSZ	**Denniston Nort**	**2.90**	**32**	Pn	**Pn**	**14 38 17.2**	**+1.0**
DSZ	**Denniston Nort**	**2.90**	**32**	P	**Pn**	**14 38 17.4**	**+1.2**
KHZ	**Kahutara**	**3.30**	**58**	*e*Pn	**Pn**	**14 38 22.6**	**+1.0**
THZ	**Tophouse**	**3.38**	**44**	*e*Pn	**Pn**	**14 38 22.0**	**-0.7**
THZ	**Tophouse**	**3.38**	**44**	P	**Pn**	**14 38 23.5**	**+0.7**
QRZ	**Quartz Range**	**3.97**	**32**	Pn	**Pn**	**14 38 31.9**	**+1.1**
QRZ	**Quartz Range**	**3.97**	**32**	P	**Pn**	**14 38 31.9**	**+1.1**
NNZ	**Nelson**	**4.02**	**43**	Pn	**Pn**	**14 38 33.4**	**+1.8**
NNZ	**Nelson**	**4.02**	**43**	P	**Pn**	**14 38 32.4**	**+0.8**
TUWZ	**Tuamarina**	**4.16**	**49**	P	**Pn**	**14 38 34.9**	**+1.5**
TCW	**Tory Channel**	**4.49**	**49**	P	**Pn**	**14 38 42.0**	**+4.0**
DUWZ	**D'Urville Isla**	**4.60**	**43**	P	**Pn**	**14 38 43.5**	**+3.9**
MRZ	**Mangatainoka R**	**5.59**	**52**	P	**Pn**	**14 38 53.0**	**-0.1**
BFZ	**Birch Farm**	**5.97**	**56**	*e*Pn	**Pn**	**14 38 59.4**	**+1.1**
HIZ	**Hauiti**	**6.88**	**36**	*e*Pn	**Pn**	**14 39 10.6**	**-0.2**
URZ	**Urewera**	**8.14**	**45**	Pn	Pn	14 39 33.5	+5.5
	0.3nm,0.3s,baz=225,slow=10.0,SNR=2.2						
URZ				Sn	**Sn**	**14 40 54.6**	**-5.2**
	0.5nm,0.3s,baz=317,slow=5.3,SNR=4.9						
OUZ	**Omahuta**	**9.47**	**19**	*e*Pn	**Pn**	**14 39 46.1**	**-0.2**
ASAR	**Alice Springs**	**35.73**	**293**	P	**P**	**14 44 28.9**	**+0.1**
	0.4nm,0.8s,baz=125,slow=8.0,SNR=7.0						
WRA	**Warramunga Arr**	**38.11**	**298**	P	**P**	**14 44 49.0**	**0.0**
	0.8nm,0.6s,baz=136,slow=7.8,SNR=15						
TORD	**Torodi Ar. Bea**	**147.38**	**202**	PKPbc	**PKPbc**	**14 57 14.7**	**+0.7**
	0.5nm,0.6s,baz=142,slow=1.9,SNR=2.8						
ARCES	**ARCESS Array B**	**148.86**	**337**	PKPbc	**PKPdf**	**14 57 14.5**	**+2.1**
	1.1nm,0.6s,baz=50,slow=2.9,SNR=7.2						
FINES	**FINESS Array B**	**152.61**	**322**	PKPbc	**PKPbc**	**14 57 25.7**	**+0.3**
	1.0nm,0.6s,baz=81,slow=1.8,SNR=5.4						

*TIR **07** 14:54:33.5, 41°.34N×20°.87E, h7km, Md2.6/3*
*ISCJB **07** 14:54:34.0±0.7, 41°.36N±0°.04×20°.73E±0°.06, h6km, Error ellipse: s-maj=7.4km s-min=4.7km az=144.6*
*SKO **07** 14:54:34.4, 41°.28N×21°.04E, h10km, M1.1, ML1.4*
ISC 07 14:54:34.3±1.0, 41°.36N±0°.04×20°.91E±0°.05, h6km, n6, σ2s75/10, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHR	**Ohrid**	**0.26**	**200**	*i* Pg	**Pg**	**14 54 39.4**	**0.0**
OHR				*i* Sg	**Sg**	**14 54 43.4**	**+0.5**
OHR				*e*Lg	Lg	14 54 43.5	
	comp=N,107nm,0.4s						
OHR				*e*Lg	Lg	14 54 43.7	
	comp=E,117nm,0.4s						
BIA	**Bitola**	**0.46**	**137**	*i* Pg	**Pg**	**14 54 39.4**	**-3.7**
BIA				*i* Sg	**Sb**	**14 54 51.3**	**-0.5**
PHP	**Peshkopia**	**0.48**	**313**	*i* PG	**Pg**	**14 54 43.2**	**-0.4**
PHP				*i* SG	**Sg**	**14 54 45.7**	**-4.2**
SKO	**Skopje**	**0.73**	**32**	*i* Pg	**Pb**	**14 54 49.1**	**-0.3**
STIP	**Stip**	**1.01**	**70**	*i* Pg	**Pn**	**14 54 56.8**	**+1.8**
STIP				*i* Sg	**Sn**	**14 55 13.7**	**+4.1**
PUK	**Puka**	**1.03**	**312**	*i* PG	**Pg**	**14 54 53.1**	**-0.8**

*NEIC **07** 15:20:03.7±0.0, 19°.36N×66°.03W, h90km, MD3.1(RSPR), After RSPR.*
RSPR 07 15:20:03.7, 19°.36N×66°.03W, h90km±10km, MD3.1/5, 3C-7D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMPR	**Esperanza - Ma**	**0.99**	**208**	‖ *e*P	Pn	15 20 22.6	-0.7
EMPR	**Esperanza - Ma**	**0.99**	**208**	*e*S	Sn	15 20 37.4	-0.6
EMPR	**Esperanza - Ma**	**0.99**	**208**	‖ *e*P	Pn	15 20 22.6	-0.7
EMPR				*e*S	Sn	15 20 37.4	-0.6
CBYP	**Canovanas**	**1.09**	**171**	‖ *e*P	Pn	15 20 23.2	-1.4
CBYP	**Canovanas**	**1.09**	**171**	*e*S	Sn	15 20 40.1	0.0
CBYP	**Canovanas**	**1.09**	**171**	*e*Pn	Pn	15 20 23.0	-1.6
CBYP				*e*Sn	Sn	15 20 40.1	0.0
AOPR	**Arecibo Observ**	**1.22**	**214**	‖ *e*P	Pn	15 20 25.9	-0.1
AOPR	**Arecibo Observ**	**1.22**	**214**	*e*S	Sn	15 20 42.8	+0.1
AOPR	**Arecibo Observ**	**1.22**	**214**	*e*Pn	Pn	15 20 25.6	-0.3
AOPR				*e*S	Sn

MXZ	Matakaoa Point	6.70 210	ePn		Pn	15 27 13.4	-0.7
URZ	Urewera	7.80 213	Pn		Pn	15 27 29.7	+0.5
	2.0nm,0.3s,baz=275,slow=2.9,SNR=14						
URZ			Sn		Sn	15 28 54.7	-2.0
	5.4nm,0.3s,baz=231,slow=22,SNR=14						
URZ	Urewera	7.80 213	ePn		Pn	15 27 29.1	-0.2
URZ			eSn		Sn	15 28 51.3	-5.5
OUZ	Omahuta	8.15 243	ePn		Pn	15 27 38.0	+3.9
BKZ	Black Stump Fm	8.82 212	ePn		Pn	15 27 41.1	-2.2
BKZ			eSn		Sn	15 29 17.7	-4.2
HIZ	Hauiti	9.15 221	ePn		Pn	15 27 51.9	+4.2
BFZ	Birch Farm	10.19 208	eSn		Sn	15 29 47.6	-7.8
THZ	Tophouse	12.55 215	ePn		Pn	15 28 36.1	+1.7
THZ			eSn		Sn	15 30 43.6	-10
KHZ	Kahutara	12.77 211	ePn		Pn	15 28 34.3	-2.9
KHZ			eSn		Sn	15 30 42.5	-16
CTA	Charters Tower	34.43 281	P		P	15 32 23.8	+0.8
	6.4nm,0.9s,baz=101,slow=8.6,SNR=6.9						
CTAO	Charters Tower	34.43 281	eP		P	15 32 23.6	+0.7
	14nm,1.2s						
STKA	Stephens Creek	34.57 259	P		P	15 32 25.4	+1.3
	1.4nm,0.6s,baz=74,slow=9.7,SNR=5.7						
STKA	Stephens Creek	34.57 259	eP		P	15 32 25.3	+1.2
	5.2nm,1.8s						
BBOO	Buckleboo	38.99 256	eP		P	15 33 01.6	-0.1
	87nm,1.9s						
AS01	Alice Springs	43.40 268	eP		P	15 33 37.2	-1.0
AS31	Alice Springs	43.44 268	eP		P	15 33 37.8	-0.6
	1.7nm,1.1s						
ASAR	Alice Springs	43.44 268	P		P	15 33 37.8	-0.7
	1.0nm,0.3s,baz=108,slow=7.5,SNR=34						
MANU	Manus Island	44.36 305	eP		P	15 33 46.6	+0.7
	46nm,1.2s						
WB2	Warramunga Arr	44.55 273	eP		P	15 33 46.6	-0.7
	32nm,1.6s						
WR1	Warramunga Arr	44.56 273	eP		P	15 33 47.0	-0.4
	6.1nm,0.7s						
WRA	Warramunga Arr	44.56 273	P		P	15 33 47.0	-0.5
	3.1nm,0.4s,baz=112,slow=8.0,SNR=52						
FORT	Forrest	46.09 256	eP		P	15 33 59.6	+0.3
	28nm,0.9s						
MTN	Manton Dam	50.60 280	eP		P	15 34 33.8	-0.6
	44nm,1.4s						
FITZ	Fitzroy Crossi	52.76 271	P		P	15 34 50.9	+0.4
	1.4nm,0.8s,baz=117,slow=4.5,SNR=3.3						
FITZ	Fitzroy Crossi	52.76 271	eP		P	15 34 50.9	+0.4
	40nm,1.9s						
CASY	Casey	54.10 208	eP		P	15 35 00.8	+1.1
	45nm,1.9s						
SNAA	Sanae	76.76 178	P		P	15 37 38.3	+12
VNA3	Neumayer Olymp	76.90 176	P		P	15 37 39.7	+13
VNA2	Neumayer--Watz	77.34 177	P		P	15 37 42.3	+13
	slow=5.4						
VNA1	Neumayer--Stat	77.56 176	P		P	15 37 43.3	+13
MKAR	Makanchi Array	118.96 309	PKP		PKPdf	15 44 25.0	+1.6
	0.2nm,0.6s,baz=129,slow=1.7,SNR=3.7						
KURK	Kurchatov	122.29 313	PKP		PKPdf	15 44 31.1	+1.5
KURBB	Kurchatov Arra	122.32 313	PKP		PKPdf	15 44 31.1	+1.5
	0.6nm,0.5s,baz=111,slow=1.8,SNR=5.6						
FINES	FINESS Array B	146.58 340	PKPbc		PKPab	15 45 17.5	+0.6
	2.3nm,0.4s,baz=46,slow=3.7,SNR=24						
NB2	NORSAR Subarra	150.18 351	PKP		PKPbc	15 45 28.3	+3.0
	comp=Z,1.1nm,0.6s,baz=12,slow=4.1						
HFS	Hagfors	150.68 349	PKPbc		PKPbc	15 45 27.7	+1.3
	comp=Z,0.9nm,0.7s,baz=343,slow=4.5,SNR=3.2						
MMAI	Mount Meron Ar	152.22 281	PKPbc		PKPbc	15 45 33.6	+2.6
	comp=Z,1.5nm,0.4s,baz=72,slow=5.4,SNR=6.4						
AKASG	Malin Array Be	152.63 321	PKPbc		PKPbc	15 45 32.7	+1.5
	comp=Z,0.6nm,0.4s,baz=51,slow=2.5,SNR=3.2						
BRTR	Keskin Array B	153.59 296	PKPbc		PKPbc	15 45 35.7	+1.8
	comp=Z,0.5nm,0.5s,baz=132,slow=5.7,SNR=4.2						

MEX 07 15:42:27.1±0.3, 16°.61N×96°.88W, h45km±17km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	Vista Hermosa	0.48	17	*i* P	Pn	15 42 36.6	-1.4
VHO				eS	Sn	15 42 43.9	-1.9
TLIG	Tlapa	1.87	301	eP	Pn	15 42 55.1	-1.7
TLIG				eS	Sn	15 43 17.4	-1.9

MOS ***07*** *16:03:17.6±1.0, 15°.84S×72°.56W, h108km, mb6.1/45, MS5.2/15, Error ellipse: s-maj=7.5km s-min=4.3km az=105.7*

BJI ***07*** *16:03:17.0, 15°.91S×72°.49W, h99km, mB5.7/56*

ISCJB ***07*** *16:03:17.6±0.1, 15°.76S±0°.02×72°.50W±0°.02, h111km, mb5.9/401, Error ellipse: s-maj=3.5km s-min=2.1km az=139.6*

GCMT ***07*** *16:03:18.9±0.1, 15°.98S×72°.70W, h120km, MW6.2/138, Moment Tensor Solution. s138,c303; s132,c422; Duration: 29 Moment tensor: Scale 1018Nm; Mrr0.20±.01; Mθθ-1.35±.01; Mφφ 1.16±.02; Mrθ-0.24±.01; Mθφ-1.27±.01; Mφr-1.21±.01; Best double couple: M0 2.17500×1018 NP1:φs204.00000°, δ84.00000°, λ34.00000°. NP2:φs110.00000°, δ56.00000°, λ173.00000°. Principal axes: T 2.2340, Plg28.0000°, Azm72.0000°; N -0.1140, Plg55.0000°, Azm213.0000°; P -2.1150, Plg19.0000°, Azm332.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

NEIC ***07*** *16:03:18.0±0.0, 15°.92S×72°.52W, h110km, Moment Tensor Solution. s32 Moment tensor: Scale 1018Nm; Mrr0.34; Mθθ-0.83; Mφφ0.49; Mrθ0.02; Mθφ-0.91; Mφr-1.08; Best double couple: M0 1.60000×1018 NP1:φs201.00000°, δ78.00000°, λ41.00000°. NP2:φs101.00000°, δ50.00000°, λ164.00000°. Principal axes: T 1.6900, Plg37.0000°, Azm69.0000°; N -0.2400, Plg47.0000°, Azm214.0000°; P -1.4500, Plg18.0000°, Azm325.0000°;*

NEIC ***07*** *16:03:18.9±0.1, 15°.88S×72°.41W, h110km, mb6.1/295, ME5.7, MW6.1, MW6.1, ML6.1(ARE) Error ellipse: s-maj=3.8km s-min=2.4km az=64.0, Moment Tensor Solution. s14 Moment tensor: Scale 1018Nm; Mrr0.30; Mθθ-0.81; Mφφ0.51; Mrθ-0.50; Mθφ-0.19; Mφr-1.20; Best double couple: M0 1.50000×1018 NP1:φs114.00000°, δ29.00000°, λ168.00000°. NP2:φs214.00000°, δ84.00000°, λ61.00000°. Principal axes: T 1.6200, Plg43.0000°, Azm97.0000°; N -0.3200, Plg29.0000°, Azm218.0000°; P -1.3100, Plg33.0000°, Azm328.0000°; Broadband fault plane solution: P waves. NP1:φs121.00000°, δ50.00000°, λ173.00000°. NP2:φs215.00000°, δ85.00000°, λ40.00000°. Principal axes: T Plg31.0000°, Azm86.0000°; N Plg0.0000°, Azm0.0000°; P Plg23.0000°, Azm341.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt [IV] at Arequipa. Felt [III] at Alto Hospicio, Arica, Huara and Iquique; [II] at Camina, Codpa, Cuya, Pica and Putre, Chile.

IDC ***07*** *16:03:18.9±0.2, 15°.88S×72°.46W, h105km±2km, mb5.2/39, mb1 5.3/42, mb1mx5.3/50, mbtmp5.6/42, MS5.0/31, Ms1 5.0/31, ms1mx4.9/42 Error ellipse: s-maj=10.8km s-min=7.0km az=70.0*

GUC ***07*** *16:03:21.5±0.5, 16°.46S×72°.31W, h153km±30km, ML6.1*

ISC 07 16:03:18.5±0.2, 15°.91S±0°.03×72°.47W±0°.03, h107km±1km, h107km:pP-P, n1777, σ1956/2345, mb6.0/392, 54C-34D, Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARE	Arequipa	1.09	120	⇓*i* P	Pn	16 03 41.3	+0.5
ARE				eS	Sn	16 04 00.0	+2.5
ARE	Arequipa	1.09	120	⇓*i* P	Pn	16 03 41.3	+0.5
ARE				eS	Sn	16 04 00.0	+2.5
ARCH	Arica	3.30	141	eP	Pn	16 04 07.8	-0.6
ARCH				*i* S	Sn	16 04 42.2	-4.8
PB12	IPOC Station P	3.38	143	⇓*i* P	Pn	16 04 08.7	-1.0
PB12				*i* S	Sn	16 04 44.6	-4.4
PB12				IAML		16 04 50.5	
	comp=N,43μm,0.7s						
PB16	IPOC Station P	3.72	131	⇓*i* P	Pn	16 04 15.8	+1.2
PB16				*i* S	Sn	16 04 58.1	+0.2
LPAZ	La Paz	4.19	96	P	Pn	16 04 25.3	+4.3
	comp=N,201nm,0.3s,baz=279,slow=12,SNR=2216						
LPAZ				S	Sn	16 05 06.6	-2.7
	comp=N,70nm,0.3s,baz=199,slow=9.9,SNR=4.0						
LPAZ				LR	LR	16 05 36.0	
	comp=N,45μm,19.6s,baz=279,slow=33						
LPAZ	La Paz	4.19	96	*e*Pn	Pn	16 04 24.7	+3.8
LPAZ				*e*Sn	Sn	16 05 07.0	-2.3
LPAZ	La Paz	4.19	96	⇑*i* P	Pn	16 04 25.0	+4.0
LPAZ				*i* S	Sn	16 05 12.2	+2.9
LPAZ	La Paz	4.19	96	eP	Pn	16 04 20.1	-0.9
MNMC	Minye Minye	4.22	140	*e*Pn	Pn	16 04 20.0	-1.1
MNMC				*e*Sn	Sn	16 05 05.7	-3.8
MNMC	Minye Minye	4.22	140	⇓*i* P	Pn	16 04 20.3	-0.7
MNMC				*i* S	Sn	16 05 04.9	-4.5
PSGC	Pisagua	4.29	149	⇓*i* P	Pn	16 04 20.1	-1.8
PSGC				*i* S	Sn	16 05 05.0	-6.0
PB08	IPOC Station P	5.26	144	⇓*i* P	Pn	16 04 34.3	-0.9
PB08				*i* S	Sn	16 05 30.5	-4.3
NNA	Nana	5.76	312	P	Pn	16 04 38.9	-2.8
	comp=N,68nm,0.3s,baz=131,slow=11,SNR=86						
NNA				S	Sn	16 05 42.2	-4.4
	comp=N,372nm,0.3s,baz=217,slow=20,SNR=4.9						
NNA	Nana	5.76	312	*e*Pn	Pn	16 04 38.0	-3.8
NNA				*e*Sn	Sn	16 05 40.5	-6.1
PB01	IPOC Station P	5.84	151	*e*Pn	Pn	16 04 40.4	-2.3
PB01				*e*Sn	Sn	16 05 41.6	-6.8
PB01	IPOC Station P	5.84	151	⇓*i* P	Pn	16 04 40.5	-2.3
PB01				*i* S	Sn	16 05 41.2	-7.2
PB02	IPOC Station P	5.91	156	⇓*i* P	Pn	16 04 41.5	-2.2
PB02				*i* S	Sn	16 05 41.4	-8.8
PB04	IPOC Station P	6.75	161	*e*Pn	Pn	16 04 51.7	-3.6
PB04				*e*Sn	Sn	16 06 01.1	-10
PB10	IPOC Station P	7.78	167	*e*Pn	Pn	16 05 05.1	-3.9
PB10				*e*Sn	Sn	16 06 25.3	-10
GO02	Mina Guanaco	9.59	164	*e*Pn	Pn	16 05 30.9	-3.0
GO02				*e*Sn	Sn	16 07 10.9	-9.1
ATAH	Atahualpa	10.47	326	P	Pn	16 05 43.4	-2.7
	comp=N,4.0nm,0.3s,baz=160,slow=6.6,SNR=46						
ATAH				S	Sn	16 07 37.3	-4.4
	baz=115,slow=19,SNR=1.8						
SLA	San Lorenzo	10.93	144	eP	Pn	16 05 49.8	-2.2
SLA				eS	Sn	16 07 57.5	+5.2
SIV	San Ignacio	10.97	92	P	Pn	16 05 51.4	-1.0
	comp=N,6.8nm,0.3s,baz=277,slow=12,SNR=192						
SIV				S	Sn	16 07 49.2	-3.9
	baz=195,slow=15,SNR=3.8						
SIV				LR	LR	16 10 45.4	
	comp=N,56μm,19.7s,baz=282,slow=41						
SAML	Samuel	11.41	54	*e*Pn	Pn	16 05 55.5	-2.8
GO03	Copiap	11.81	170	*e*Pn	Pn	16 06 00.8	-2.8
AHML	Horco Molle	12.69	150	eP	Pn	16 06 13.3	-2.0
LCO	Las Campanas	13.14	173	*e*Pn	Pn	16 06 19.8	-1.5
LCO	Las Campanas	13.14	173	eP	Pn	16 06 20.6	-0.7
VCA	Vinchina	13.36	164	eP	Pn	16 06 22.9	-1.1
CYA	Choya	13.91	155	eP	Pn	16 06 30.9	-0.2
GO04	Tololo Observa	14.28	174	*e*Pn	Pn	16 06 34.4	-1.6
ACDV	Cuesta del Vie	14.52	168	eP	Pn	16 06 39.7	+0.6
APLL	PUNTA DE LOS L	15.41	166	eP	Pn	16 06 48.9	-1.3
ROC1	El Roble	17.04	176	*e*Pn	Pn	16 07 08.5	-2.0
	comp=N,1μm,1.1s						
OTAV	Otavalo	17.10	339	*e*Pn	Pn	16 07 11.2	-0.3
	comp=N,2μm,1.4s						
OTAV	Otavalo	17.10	339	eP	P	16 07 12.1	+0.4
OTAV	Otavalo	17.10	339	eP	P	16 07 12.2	+0.6
CPUP	Villa Florida	17.50	129	P	P	16 07 15.3	-0.2
	comp=N,2.6nm,0.3s,baz=308,slow=11,SNR=43						
CPUP				S	S	16 10 32.3	+0.2
	comp=N,0.2nm,0.3s,baz=336,slow=19,SNR=2.8						
CPUP				LR	LR	16 14 18.9	
	comp=N,6μm,19.5s,baz=320,slow=38						
CPUP	Villa Florida	17.50	129	eP	P	16 07 14.3	-1.2
	comp=N,694nm,1.7s						
CPUP				eS	S	16 10 32.3	+0.2
CPUP				*e*		16 14 18.9	
I41PY	VILLA FLORIDA	17.52	129	*i*		17 40 50.0	
	baz=304,slow=330,SNR=0.6						
MRA	San Martin	17.54	161	eP	P	16 07 14.8	-1.2
FLOC	Florencia	17.66	349	eP	P	16 07 12.6	-4.8
GCUF	Volcan Galeras	17.70	344	eP	Pn	16 07 20.5	+1.7
CRUC	La Cruz	17.92	345	eP	Pn	16 07 22.9	+1.5
SOTA	Rioblanco	18.39	347	eP	Pn	16 07 28.1	+0.9
TUMC	Tumaco	18.68	340	eP	P	16 07 29.2	+0.7
	comp=N,3μm,1.6s						
TUMC	Tumaco	18.68	340	eP	P	16 07 28.2	-0.2
BETC	Betania	18.71	351	eP	Pn	16 07 31.7	+1.3
POPC	Popayan, Colom	18.80	347	eP	Pn	16 07 31.3	-0.5
MARP	Paez Belalcaza	18.95	349	eP	P	16 07 32.1	+0.4
GO05	HualaæØ	19.02	179	eP	P	16 07 32.0	-0.1
	comp=N,434nm,1.1s						
PTGA	Pitinga	19.49	40	P	P	16 07 37.5	+0.2
	comp=N,99nm,0.3s,baz=218,slow=12,SNR=520						
PTGA				S	S	16 11 08.6	-3.3
	comp=N,2.3nm,0.3s,baz=301,slow=19,SNR=2.8						
PTGA	Pitinga	19.49	40	eP	P	16 07 36.8	-0.5
	comp=N,1μm,0.9s						
PTGA				eS	S	16 11 08.6	-3.3
GRGC	Isla de Gorgon	19.62	343	eP	P	16 07 38.1	-0.6
PRAC	Prado	19.64	353	eP	P	16 07 39.8	+0.8
	comp=N,8μm,1.7s						
PRAC	Prado	19.64	353	eP	Pn	16 07 40.6	-0.9
VILC	Villavicencio,	19.93	356	eP	P	16 07 42.2	0.0
YOTC	Yotoco, Valle	20.14	349	eP	P	16 07 43.7	-0.8
MALC	Bahia Malaga	20.37	346	eP	P	16 07 47.5	+0.6
CHIC	Chingaza	20.45	356	eP	P	16 07 47.4	-0.7
ANIL	Santa Ana	20.48	352	eP	P	16 07 48.3	0.0
ROSC	El Rosal	20.70	355	P	P	16 07 51.1	+0.4
	comp=N,138nm,0.6s,baz=180,slow=5.3,SNR=149						
ROSC				S	Sn	16 11 48.5	+0.2
	comp=N,9.4nm,0.4s,baz=114,slow=20,SNR=2.2						
ROSC	El Rosal	20.70	355	eP	P	16 07 51.9	+1.1
	comp=N,2μm,1.8s						
ROSC	El Rosal	20.70	355	eP	P	16 07 52.3	+1.6
PLMC	San Jos¨ del	21.02	349	eP	P	16 07 54.2	+0.2
RUSC	La Rusia	21.67	358	eP	P	16 07 59.5	-1.8
	comp=N,1μm,1.7s						
RUSC	La Rusia	21.67	358	eP	P	16 07 59.3	-1.9
MAPC	Malpelo	21.75	335	eP	P	16 08 02.7	+1.0
HELC	Santa Helena	22.17	352	eP	P	16 08 05.3	-1.1
	comp=N,2μm,1.3s						
HELC	Santa Helena	22.17	352	eP	P	16 08 05.5	-0.9
BARC	Barichara	22.37	358	eP	P	16 08 05.4	-3.0
PTBC	PUERTO BERRIO,	22.39	355	eP	P	16 08 05.9	-2.4
DBBC	Dabeiba	23.08	350	eP	P	16 08 16.5	+1.3
PAMC	Pamplona, Colo	23.10	359	eP	P	16 08 12.6	-3.3
PAYG	Puerto Ayora	23.20	309	eP	P	16 08 15.9	-0.4
	comp=N,639nm,1.3s						
PAYG	Puerto Ayora	23.20	309	eP	P	16 08 16.4	+0.1
ZARC	Zaragoza, Cauc	23.37	354	eP	P	16 08 16.0	-1.9
TRQA	Tornquist	23.92	159	eP	P	16 08 22.6	0.0
	comp=N,2μm,1.8s						
TRQA	Tornquist	23.92	159	eP	P	16 08 23.4	+0.7
OCAC	Ocana	24.01	358	eP	P	16 08 20.8	-3.0
SDV	Santo Domingo	24.70	4	P	P	16 08 29.7	-0.4
	comp=N,75nm,0.7s,baz=193,slow=8.6,SNR=94						
SDV				S	S	16 12 47.5	+3.0
	comp=N,27nm,1.0s,baz=240,slow=20,SNR=2.7						
SDV	Santo Domingo	24.70	4	eP	P	16 08 28.8	-1.3
	comp=N,428nm,0.9s						
SDV				eS	S	16 12 47.5	+3.0
SDV	Santo Domingo	24.70	4	eP	P	16 08 28.0	-2.2
MOTC	Monteria, Cord	24.73	352	eP	P	16 08 30.1	0.0
MOTC				eP	P	16 08 30.1	0.0
SPB	Sao Paulo	24.75	112	eP	P	16 08 29.9	-0.3
	comp=N,872nm,0.9s						
PLCA	Paso Flores	24.79	177	P	P	16 08 31.6	+1.0
	comp=N,92nm,1.0s,baz=8.8,slow=10,SNR=54						
PLCA				PcP	PcP	16 12 04.8	+0.4
	comp=N,10nm,0.7s,baz=4.1,slow=14,SNR=4.1						
PLCA				S	S	16 12 52.1	+6.8
	comp=N,13nm,1.0s,baz=45,slow=4.3,SNR=1.9						
PLCA				LR	LR	16 16 59.5	
	comp=N,2μm,21.5s,baz=6.5,slow=33						
PLCA	Paso Flores	24.79	177	eP	P	16 08 30.9	+0.3
	comp=N,2μm,1.8s						
PLCA				*e*PcP	PcP	16 12 04.8	+0.4
PLCA				eS	S	16 12 52.1	+6.8
PLCA				*e*		16 16 59.5	
PLCA	Paso Flores	24.79	177	eP	P	16 08 31.7	+1.2
CAPC	Capurgana	24.86	348	eP	P	16 08 32.7	+1.4
PMNB	Patos De Minas	25.00	100	⇑*i* P	P	16 08 32.5	-0.2
PMNB				*i*		16 08 35.7	
PMNB				*i*		16 08 56.1	
PMNB				*i*		16 09 03.6	
PMNB				*i* S	S	16 12 48.2	-0.9
VAO	Valinhos	25.04	110	⇑*i* P	P	16 08 32.4	-0.7
VAO				*i*		16 08 38.2	
VAO				*i*		16 08 55.2	
VAO				*i*		16 09 05.0	
VAO				*i*		16 09 23.7	
VAO				*i* S	S	16 12 49.6	-0.1
VAO				*i*		16 12 52.9	
VAO				*i*		16 13 43.3	
CODC	Agust¨n Codaz	25.70	358	eP	P	16 08 36.9	-2.0
CODC				eP	P	16 08 37.3	-1.6
SJCC	San Jacinto, C	25.78	354	eP	P	16 08 39.7	0.0
BCIP	Isla Barro Col	25.96	343	eP	P	16 08 42.2	+0.9
	comp=N,1μm,1.4s						
BCIP	Isla Barro Col	25.96	343	eP	P	16 08 42.5	+1.2
BSCB	Bom Sucesso	26.74	105	⇑*i* P	P	16 08 48.6	+0.2
BSCB				*i*		16 08 51.2	
BSCB				*i*		16 09 12.4	
BSCB				*i*		16 09 26.8	
BSCB				*i*		16 10 02.9	
BSCB				*i* S	S	16 13 15.5	-1.1
BSCB				*i*		16 13 24.8	
HDC	Heredia	28.21	335	eP	P	16 09 03.6	+2.1
	comp=N,1μm,1.3s						
JTS	JuntasAbangare	28.82	334	P	P	16 09 08.5	+1.6
	comp=N,105nm,0.9s,baz=230,slow=5.4,SNR=61						
JTS				LR	LR	16 21 18.0	
	comp=N,6μm,20.8s,baz=218,slow=38						
TOSP	Speyside	29.50	24	eP	P	16 09 13.3	+0.4
GRGR	Grenville	29.85	22	eP	P	16 09 15.3	-0.6
	comp=N,713nm,0.9s						
GRGR	Grenville	29.85	22	eP	P	16 09 14.9	-1.0
GRGR	Grenville	29.85	22	eP	P	16 09 15.4	-0.5
ESPN	Las Esperanzas	30.28	337	eP	P	16 09 20.2	+0.5
	comp=N,295nm,1.5s						
SVB	Belmont	31.05	22	eP	P	16 09 24.8	-1.7
	comp=N,421nm,0.6s						
SVB	Belmont	31.05	22	eP	P	16 09 25.5	-1.0
CHRN	Cochrane	31.25	180	eP	P	16 09 29.3	+1.4
CHRN				epP	pP	16 09 49.6	-2.1
CHRN				esP	sP	16 10 02.5	-1.6
ESTN	Estel	31.94	334	eP	P	16 09 34.1	-0.4
	comp=N,742nm,1.6s						
TRMF	Trois Ilets	32.29	21	eP	P	16 09 33.8	-3.6
MVM	Montagne Vaucl	32.36	21	eP	P	16 09 36.3	-1.8
FDF	Fort de France	32.44	21	eP	P	16 09 36.7	-2.0
FDF				epP	pP	16 10 02.2	-0.3
FDF	Fort de France	32.44	21	eP	P	16 09 37.0	-1.8
FDF	Fort de France	32.44	21	eP	P	16 09 37.2	-1.6
PCM	Pelee Case Pet	32.49	21	eP	P	16 09 35.9	-3.3
CXM	Morne La Croix	32.51	21	eP	P	16 09 40.4	+1.0
BBL	Barber's Block	33.07	20	eP	P	16 09 41.3	-2.9
MDPO	Dominica; Chan	33.13	20	eP	P	16 09 44.5	-0.1
MDVC	Dominica, Viel	33.18	20	eP	P	16 09 43.6	-1.5
TGUH	Tegucigalpa,Un	33.18	333	eP	P	16 09 45.2	0.0
	comp=N,716nm,1.2s						
DEG	La Desirade	33.94	20	eP	P	16 09 48.9	-3.0
CRPR	Cabo Rojo, PR	34.12	9	eP	P	16 09 52.4	-0.8
	comp=N,1μm,1.6s						
LGNH	LÕogne	34.21	360	eP	P	16 09 53.5	-0.5
LGNH				epP	pP	16 10 21.3	+3.4
OBIP	Obispado Ponce	34.23	10	eP	P	16 09 53.2	-1.0
OBIP				epP	pP	16 10 18.2	0.0
SDD	Santo Domingo	34.25	4	eP	P	16 09 54.2	-0.1
	comp=N,2μm,1.9s						
MTDJ	Mount Denham	34.29	351	eP	P	16 09 55.8	+0.9
MTDJ				epP	pP	16 10 22.4	+3.6
CDVI	St. Croix	34.30	13	eP	P	16 09 53.8	-1.0
	comp=N,200nm,0.9s						
MPR	Mayaguez	34.31	9	eP	P	16 09 54.1	-0.8
MPR				epP	pP	16 10 20.6	+1.7
SJG	San Juan	34.38	11	P	P	16 09 55.0	-0.5
	comp=N,20nm,0.5s,baz=220,slow=5.5,SNR=6.5						
SJG				S	S	16 15 08.7	-6.8
	comp=N,5.6nm,0.3s,baz=99,slow=19,SNR=3.3						
SJG	San Juan	34.38	11	eP	P	16 09 54.8	-0.7
SJG				epP	pP	16 10 20.8	+1.4
SJG				eS	S	16 15 08.7	-6.8
SJG	San Juan	34.38	11	eP	P	16 09 55.0	-0.5
HUMP	Col San Antoni	34.46	11	eP	P	16 09 55.3	-1.0
HUMP				epP	pP	16 10 21.9	+1.7
MTP	Monte Pirata	34.48	12	eP	P	16 09 55.6	-0.7
MTP				epP	pP	16 10 21.9	+1.5
SEUS	St. Eustatius	34.49	16	eP	P	16 09 54.0	-2.4
SEUS				epP	pP	16 10 20.1	-0.3
AGP	Aguadilla	34.51	9	eP	P	16 09 56.3	-0.3
	comp=N,285nm,1.2s						
AOPR	Arecibo Observ	34.51	10	eP	P	16 09 55.8	-0.9
AOPR				epP	pP	16 10 19.5	-1.1
SABA	Saba	34.54	16	eP	P	16 09 55.4	-1.5
SABA				epP	pP	16 10 19.6	-1.3
SABA				esP	sP	16 10 33.4	+0.3
CBYP	Canovanas	34.59	11	eP	P	16 09 55.4	-2.0
CBYP				epP	pP	16 10 21.9	+0.5
SDDR	Presa de Saban	34.69	2	eP	P	16 09 57.6	-0.7
	comp=N,369nm,1.5s						
STVI	Saint Thomas	34.84	13	eP	P	16 09 58.7	-0.8
	comp=N,101nm,1.2s						
ANWB	Willy Bob	34.99	18	eP	P	16 09 57.8	-3.0
ANWB				epP	pP	16 10 24.1	-0.6
ANWB	Willy Bob	34.99	18	eP	P	16 09 57.4	-3.4
SMRT	St. Maarten	34.99	16	eP	P	16 09 58.4	-2.5
	comp=N,249nm,0.6s						
SMRT				epP	pP	16 10 23.5	-1.4
ABVI	Anegada Island	35.34	13	eP	P	16 10 03.2	-0.6
ABVI				epP	pP	16 10 27.6	-0.3
APG	El Apazote	35.49	329	P	P	16 10 05.6	+0.2
	comp=N,199nm,1.1s,baz=161,slow=9.4,SNR=142						
RPN	Rapa Nui

959A Okeechobee 43.94 349 P P 16 11 14.4 -0.6
baz=168
958A Wauchula 44.17 348 P P 16 11 16.0 -0.7
baz=167
957A Wimauma 44.34 348 P P 16 11 17.8 -0.4
baz=166,SNR=5.2
859A Kempfer Cattle 44.47 349 P P 16 11 18.2 -0.9
baz=168
DWPF Disney Wildern 44.61 349 P P 16 11 19.7 -0.7
baz=168
DWPF Disney Wildern 44.61 349 eP P 16 11 20.4 0.0
comp=Z,374nm,1.5s
858A St. Cloud 44.70 349 P P 16 11 20.3 -0.7
baz=168
857A Zephyrhills 44.92 348 P P 16 11 21.9 -0.8
baz=167
MOIG Morelia 45.26 320 eP P 16 11 26.9 +1.1
comp=Z,800nm,1.4s
758A Lake Helen 45.40 349 P P 16 11 26.2 -0.3
baz=168
757A Oxford 45.54 348 P P 16 11 27.1 -0.5
baz=167
JRQG Juriquilla Cam 45.59 322 eP P 16 11 29.3 +0.8
comp=Z,1µm,1.3s
658A Bunnell 45.86 349 P P 16 11 28.8 -1.3
baz=168
656A Willston 46.05 348 P P 16 11 31.1 -0.5
baz=166,SNR=7.9
657A Interlachen 46.13 349 P P 16 11 32.1 -0.2
baz=167,SNR=5.8
655A Horseshoe Beac 46.34 347 P P 16 11 33.4 -0.5
baz=166
557A Orange Park 46.52 349 P P 16 11 34.8 -0.5
baz=168
556A Lake Butler 46.64 348 P P 16 11 35.8 -0.4
baz=167,SNR=8.1
555A McAlpin 46.87 348 P P 16 11 37.4 -0.6
baz=166
554A Perry 46.99 347 P P 16 11 38.4 -0.5
baz=165
457A Yulee 47.08 349 P P 16 11 39.3 -0.4
baz=168
553A Crawfordville 47.26 346 P P 16 11 41.4 +0.4
baz=164,SNR=9.0
456A Hilliard 47.27 349 P P 16 11 41.3 +0.2
baz=167
HOPE Hope Point 47.37 152 eP P 16 11 42.9 +1.2
HOPE epP pP 16 12 06.2 -0.6
552A Lynn Haven 47.42 345 P P 16 11 41.5 -0.8
baz=163
455A Stateville 47.48 348 P P 16 11 42.3 -0.5
baz=166,SNR=7.2
454A Quitman 47.58 347 P P 16 11 43.1 -0.4
baz=165,SNR=5.2
357A Townsend 47.85 350 P P 16 11 45.5 -0.1
baz=168
356A Blackshear 47.87 349 P P 16 11 45.8 0.0
baz=167
453A Whigham 47.87 346 P P 16 11 45.6 -0.2
baz=164,SNR=13
451A Vernon 47.99 345 P P 16 11 45.6 -1.1
baz=163
355A Pearson 48.03 348 P P 16 11 46.7 -0.3
baz=166,SNR=10
452A Marianna 48.07 345 P P 16 11 47.0 -0.4
baz=164,SNR=7.9
646A Port Sulphur 48.23 340 P P 16 11 49.2 +0.7
baz=157
TIGA Tifton 48.27 347 P P 16 11 48.6 -0.3
baz=166,SNR=5.9
TIGA Tifton 48.27 347 eP P 16 11 48.3 -0.6
TIGA epP pP 16 12 15.3 +1.2
TIGA esP sP 16 12 27.5 +1.5
257A Skidaway Islan 48.31 350 P P 16 11 48.9 -0.3
baz=169
353A Camilla 48.32 347 P P 16 11 48.4 -0.9
baz=165,SNR=15
LNIG Linares 48.35 327 eP P 16 11 49.0 -0.6
comp=Z,620nm,1.2s
450A Crestview 48.39 344 P P 16 11 49.4 -0.4
baz=162
ZAIG Zacatecas 48.43 322 eP P 16 11 51.5 +0.9
comp=Z,380nm,1.2s
256A Glennville 48.47 349 P P 16 11 49.6 -0.8
baz=168,SNR=14
449A Pace 48.52 343 P P 16 11 50.1 -0.7
baz=161
255A Hazlehurst 48.52 349 P P 16 11 50.6 -0.2
baz=167,SNR=16
351A Pinckard 48.58 345 P P 16 11 50.5 -0.8
baz=163,SNR=7.6
BBSR BB Station 48.58 9 epP pP 16 12 18.0 +1.6
352A Blakely 48.61 346 P P 16 11 50.8 -0.7
baz=164,SNR=17
546A Slidell 48.79 340 P P 16 11 53.5 +0.6
baz=158
BRAL Brewton 48.86 343 P P 16 11 53.0 -0.3
baz=161,SNR=10
BRAL Brewton 48.86 343 eP P 16 11 53.1 -0.2
comp=Z,1µm,1.4s
BRAL epP pP 16 12 20.0 +1.4
BRAL esP sP 16 12 32.2 +1.7
448A Bay Minette 48.87 342 P P 16 11 52.7 -0.7
baz=160
545A Edgard 48.88 339 P P 16 11 55.3 +1.7
baz=157
350A Dozier 48.91 344 P P 16 11 52.9 -0.9
baz=162
447A Lucedale 48.98 341 P P 16 11 54.0 -0.3
baz=159,SNR=6.7
253A Americus 48.99 347 P P 16 11 53.7 -0.6
baz=165,SNR=20
156A Sylvania 49.06 350 P P 16 11 55.2 +0.4
baz=168,SNR=33
252A Lumpkin 49.06 346 P P 16 11 54.2 -0.7
baz=164,SNR=12
349A Repton 49.07 343 P P 16 11 54.7 -0.3
baz=161,SNR=13
RGRS Roger Stewart 49.10 351 eP P 16 11 55.6 +0.4
RGRS epP pP 16 12 22.9 +2.5
PMSA Palmer Station 49.15 175 P P 16 11 54.8 -0.3
comp=Z,42nm,1.0s,baz=305,slow=12,SNR=4.5
PMSA Palmer Station 49.15 175 eP P 16 11 54.9 -0.3
PMSA epP pP 16 12 20.5 +0.1
CSU Charleston Sou 49.16 352 eP P 16 11 55.8 +0.2
CSU epP pP 16 12 23.2 +2.3
544A White Castle 49.17 338 P P 16 11 57.2 +1.5
baz=156,SNR=5.5
446A Poplarville 49.20 341 P P 16 11 56.0 +0.1
baz=158,SNR=12
155A Kite 49.20 349 P P 16 11 55.9 -0.1
baz=167,SNR=35
NHSC New Hope 49.30 351 P P 16 11 57.2 +0.6
baz=170,SNR=29
NHSC New Hope 49.30 351 eP P 16 11 56.8 +0.1
NHSC epP pP 16 12 24.2 +2.3
154A Montrose 49.31 348 P P 16 11 56.6 -0.2
baz=166,SNR=37
251A Midway 49.32 345 P P 16 11 56.1 -0.7
baz=164,SNR=71
348A Jackson 49.33 343 P P 16 11 56.5 -0.5
baz=160
543A St. Martinvill 49.40 338 P P 16 11 59.3 +1.8
baz=155
250A Grady 49.42 345 P P 16 11 57.0 -0.6
baz=162,SNR=18
445A Amite 49.46 340 P P 16 11 58.5 +0.5
baz=157
153A Fort Valley 49.49 347 P P 16 11 57.9 -0.3
baz=166,SNR=12
347A Saraland 49.51 342 P P 16 11 58.0 -0.3
baz=160,SNR=18
444A Pine Grove 49.58 339 P P 16 11 59.4 +0.6
baz=157,SNR=6.1
249A Camden 49.64 344 P P 16 11 58.8 -0.5
baz=161,SNR=32
542A Morse 49.69 337 P P 16 12 01.3 +1.6
baz=154,SNR=7.4
152A Waverly Hall 49.71 346 P P 16 11 59.1 -0.7
baz=164,SNR=99
151A Opelika 49.71 346 P P 16 11 59.0 -0.9
baz=164,SNR=31
Z55A Blythe 49.72 349 P P 16 11 59.9 0.0
baz=168,SNR=6.4
KVTX Kingsville 49.74 330 eP P 16 12 01.2 +1.1
comp=Z,2µm,1.3s
KVTX epP pP 16 12 27.6 +2.1

346A Big Creek Wild 49.78 341 P P 16 12 00.1 -0.3
baz=158,SNR=10
Z54A Sparta 49.87 349 P P 16 12 00.5 -0.5
baz=167,SNR=44
541A Lake Charles 49.88 336 P P 16 12 02.7 +1.6
baz=154,SNR=9.8
345A Thompson Farm, 49.89 340 P P 16 12 00.9 -0.3
baz=158,SNR=8.6
248A Dixon Mills 49.92 343 P P 16 12 01.0 -0.5
baz=161,SNR=22
150A Eclectic 49.96 345 P P 16 12 01.0 -0.7
baz=163,SNR=63
443A Delano Plantat 49.99 338 P P 16 12 02.6 +0.6
baz=156,SNR=5.6
Z53A Monticello 50.05 348 P P 16 12 01.5 -0.9
baz=166,SNR=49
247A Quitman 50.14 342 P P 16 12 02.5 -0.6
baz=160,SNR=7.0
Z52A Williamson 50.14 347 P P 16 12 02.6 -0.5
baz=165,SNR=87
149A Jones 50.15 344 P P 16 12 02.2 -0.9
baz=162,SNR=32
GOGA Godfrey 50.16 348 P P 16 12 02.5 -0.6
baz=166,SNR=46
GOGA Godfrey 50.16 348 eP P 16 12 02.2 -1.0
comp=Z,316nm,1.3s
GOGA epP pP 16 12 29.7 +1.2
GOGA Godfrey 50.16 348 eP P 16 12 02.4 -0.8
GOGA e*PP pP 16 12 29.7 +1.2
442A Mamou 50.18 337 P P 16 12 04.3 +1.0
baz=155,SNR=7.2
344A Westbrook Farm 50.25 340 P P 16 12 03.9 0.0
baz=157,SNR=15
246A Jackson Lee, B 50.26 342 P P 16 12 03.3 -0.7
baz=159
148A Greensboro 50.40 343 P P 16 12 04.1 -0.9
baz=161,SNR=21
343A Vidalia 50.40 339 P P 16 12 05.2 +0.1
baz=156
Z51A Franklin 50.43 346 P P 16 12 04.6 -0.7
baz=164,SNR=20
Y54A Tignall 50.45 349 P P 16 12 04.7 -0.7
baz=167
441A DeRidder 50.49 337 P P 16 12 07.0 +1.3
baz=154,SNR=7.5
245A Little AP, Sta 50.51 341 P P 16 12 05.5 -0.4
baz=158,SNR=29
Z50A Ashland 50.55 345 P P 16 12 05.4 -0.7
baz=163,SNR=101
JSC Jenkinsville 50.61 351 eP P 16 12 06.3 -0.2
comp=Z,369nm,1.4s
JSC epP pP 16 12 33.8 +1.8
JSC Jenkinsville 50.61 351 eP P 16 12 06.5 -0.1
JSC e*PP pP 16 12 33.8 +1.8
Y53A Monroe 50.61 348 P P 16 12 06.2 -0.4
baz=166
LRAL Lakeview Retre 50.61 344 P P 16 12 05.8 -0.8
baz=162,SNR=37
LRAL Lakeview Retre 50.61 344 eP P 16 12 05.6 -1.0
LRAL epP pP 16 12 33.0 +1.0
147A Livingston 50.62 343 P P 16 12 05.8 -0.9
baz=160,SNR=18
Z49A Columbiana 50.64 345 P P 16 12 05.9 -1.0
baz=162,SNR=56
Y52A Lilburn 50.72 348 P P 16 12 06.6 -0.8
baz=166,SNR=30
HODGE Hodges 50.73 350 eP P 16 12 07.5 0.0
comp=Z,55nm,1.1s
342A Flagon Creek P 50.73 338 P P 16 12 08.3 +0.7
baz=155,SNR=27
244A Avery, Jackson 50.78 340 P P 16 12 07.5 -0.4
baz=157,SNR=5.6
146A Union 50.82 342 P P 16 12 07.7 -0.5
baz=159,SNR=9.0
HKT Hockley 50.85 334 eP P 16 12 08.5 0.0
comp=Z,1µm,1.8s
HKT Hockley 50.85 334 eP P 16 12 08.9 +0.5
VBMS Vicksburg 50.88 340 P P 16 12 08.2 -0.4
baz=157,SNR=5.5
VBMS Vicksburg 50.88 340 eP P 16 12 07.8 -0.9
comp=Z,1µm,1.8s
VBMS epP pP 16 12 34.6 +0.5
243A Waterproof 50.90 339 P P 16 12 08.9 +0.1
baz=156,SNR=17
Y51A Rockmart 50.97 347 P P 16 12 08.4 -0.9
baz=164,SNR=108
341A Kurthwood 51.01 337 P P 16 12 10.0 +0.3
baz=154,SNR=9.9
341A Kurthwood 51.01 337 eP P 16 12 09.6 -0.1
comp=Z,432nm,1.4s
145A Houston Renfro 51.05 341 P P 16 12 09.6 -0.3
baz=158,SNR=16
Z47A Carrollton 51.06 343 P P 16 12 09.1 -0.8
baz=161,SNR=14
Z48A Northport 51.08 344 P P 16 12 09.1 -1.0
baz=161,SNR=62
Y50A Piedmont 51.11 346 P P 16 12 09.5 -0.9
baz=164,SNR=36
833A Chaparral WMA, 51.12 329 P P 16 12 10.9 +0.4
baz=146,SNR=47
833A Chaparral WMA, 51.12 329 eP P 16 12 10.5 0.0
comp=Z,728nm,1.1s
833A epP pP 16 12 37.6 +1.7
CNNC Cliffs of the 51.13 354 P P 16 12 10.6 +0.2
baz=173
CNNC Cliffs of the 51.13 354 eP P 16 12 10.7 +0.2
CNNC epP pP 16 12 38.5 +2.6
X53A Estanollee 51.18 349 P P 16 12 10.3 -0.6
baz=167
PAULI Pauline 51.23 350 eP P 16 12 11.0 -0.2
PAULI epP pP 16 12 37.2 +0.5
144A Alexander Plac 51.23 341 P P 16 12 10.9 -0.4
baz=158
Y49A Blount Mountai 51.24 345 P P 16 12 10.2 -1.2
baz=163,SNR=30
242A Grayson 51.30 339 P P 16 12 12.0 +0.2
baz=156,SNR=8.5
Z46A Louisville 51.30 342 P P 16 12 11.5 -0.3
baz=160,SNR=18
X52A Dahlonega 51.40 348 P P 16 12 11.7 -0.8
baz=166,SNR=27
KMSC Kings Mountain 51.46 351 P P 16 12 12.8 -0.2
baz=169,SNR=37
KMSC Kings Mountain 51.46 351 eP P 16 12 12.6 -0.4
comp=Z,562nm,1.5s
KMSC epP pP 16 12 40.1 +1.7
Y48A Jasper 51.49 344 P P 16 12 11.8 -1.4
baz=162,SNR=25
241A Mo Tay, Goldon 51.53 338 P P 16 12 14.1 +0.6
baz=155,SNR=14
X51A Calhoun 51.56 347 P P 16 12 12.9 -0.8
baz=165,SNR=27
BG3 Lake Jocassee 51.59 349 eP P 16 12 13.8 -0.1
BG3 epP pP 16 12 40.8 +1.3
143A Socs Landing, 51.62 340 P P 16 12 13.6 -0.6
baz=157
X50B Fort Payne 51.64 346 P P 16 12 13.2 -1.1
baz=164,SNR=56
Y47A UCPARC, Winfie 51.66 344 P P 16 12 13.6 -0.9
baz=161,SNR=64
142A Monroe 51.67 339 P P 16 12 14.4 -0.1
baz=156,SNR=7.7
Z45A Winona 51.69 342 P P 16 12 14.3 -0.4
baz=159,SNR=15
W53A Cullowhee 51.80 349 P P 16 12 15.3 -0.3
baz=167,SNR=64
Z44A Pea Ridge, Bel 51.83 341 P P 16 12 15.5 -0.3
baz=158,SNR=38
X49A Woodville 51.85 345 P P 16 12 14.8 -1.0
baz=163,SNR=48
240A Hunter Patters 51.86 337 P P 16 12 16.7 +0.7
baz=154,SNR=18
240A Hunter Patters 51.86 337 eP P 16 12 16.5 +0.5
comp=Z,1µm,1.4s
240A epP pP 16 12 43.6 +2.2
W52A Murphy 51.88 348 P P 16 12 15.5 -0.6
baz=166
Y46A Houston 51.92 343 P P 16 12 15.3 -1.1
baz=160,SNR=6.8
NATX Nacogdoches 51.96 336 P P 16 12 17.5 +0.8
baz=153,SNR=19
NATX Nacogdoches 51.96 336 eP P 16 12 17.0 +0.3
comp=Z,638nm,1.3s
NATX epP pP 16 12 43.7 +1.5
X48A Hartselle 51.97 345 P P 16 12 15.8 -0.9
baz=162,SNR=50
Z43A Armstrong Fami 52.03 340 P P 16 12 16.6 -0.7

baz=157
141A Papa Simpson, 52.05 338 P P 16 12 17.9 +0.5
baz=155,SNR=29
Y45A Yeager Farm, C 52.11 342 P P 16 12 17.3 -0.5
baz=159,SNR=16
NCAT North Carolina 52.17 353 eP P 16 12 17.3 -0.9
comp=Z,240nm,1.4s
NCAT epP pP 16 12 44.3 +0.6
V53A Saluda 52.23 349 P P 16 12 18.1 -0.6
baz=167
X47A Russelville 52.24 344 P P 16 12 17.2 -1.6
baz=161,SNR=21
W50A Signal Mountai 52.27 347 P P 16 12 18.1 -0.9
baz=164
Z42A Norrel Spur, H 52.33 339 P P 16 12 18.8 -0.6
baz=156
140A Cam and Jess, 52.33 337 P P 16 12 20.3 +0.8
baz=154,SNR=28
140A Cam and Jess, 52.33 337 eP P 16 12 20.1 +0.6
comp=Z,1µm,1.3s
140A epP pP 16 12 46.6 +1.6
435B Jarrell 52.34 333 P P 16 12 19.4 -0.1
baz=149,SNR=19
435B Jarrell 52.34 333 eP P 16 12 19.1 -0.4
comp=Z,556nm,1.4s
435B epP pP 16 12 45.9 +0.8
CPCT Cooper Cave 52.34 348 eP P 16 12 18.6 -0.9
CPCT epP pP 16 12 45.9 +0.9
Y44A Strider, Charl 52.40 341 P P 16 12 19.0 -0.9
baz=158
W49A Belvidere 52.41 346 P P 16 12 18.9 -1.1
baz=163
SWET Sewanee 52.43 346 eP P 16 12 18.9 -1.3
SWET epP pP 16 12 45.9 +0.1
X46A Booneville 52.48 343 P P 16 12 18.8 -1.6
baz=160,SNR=8.1
V52A Sevierville 52.54 349 P P 16 12 20.3 -0.6
baz=166
Y43A Makayla and Ka 52.58 341 P P 16 12 20.5 -0.7
baz=158
X45A UM Field Stati 52.58 342 P P 16 12 19.8 -1.5
baz=159,SNR=10
W48A Pulaski 52.59 345 P P 16 12 20.3 -1.1
baz=162,SNR=44
V51A Loudon 52.65 348 P P 16 12 20.9 -0.8
baz=166
OXF Oxford 52.67 342 P P 16 12 20.1 -1.8
baz=159,SNR=26
OXF Oxford 52.67 342 eP P 16 12 20.4 -1.5
OXF epP pP 16 12 47.3 -0.2
OXF esP sP 16 12 59.1 -0.3
OXF Oxford 52.67 342 eP P 16 12 20.9 -1.0
OXF e*PP pP 16 12 47.3 -0.2
V50A Pikevile 52.68 347 P P 16 12 21.0 -1.0
baz=165
PLAL Pickwick Lake 52.74 344 eP P 16 12 20.5 -1.9
PLAL epP pP 16 12 47.9 -0.1
PLAL esP sP 16 12 59.6 -0.2
Y42A Garnett, Star 52.79 340 P P 16 12 22.4 -0.4
baz=156,SNR=10
Z40A Long Farm, Mag 52.82 338 P P 16 12 23.8 +0.8
baz=154,SNR=29
CCAR Cane Creek 52.86 340 eP P 16 12 23.1 -0.1
comp=Z,1µm,1.7s
CCAR epP pP 16 12 49.2 +0.3
CCAR esP sP 16 13 02.4 +1.6
W47A Westpoint 52.87 344 P P 16 12 21.9 -1.5
baz=162,SNR=19
X44A Crenshaw 52.88 342 P P 16 12 21.7 -1.8
baz=158
V49A McMinnville 52.95 346 P P 16 12 22.6 -1.4
baz=164
W46A Michie 52.96 344 P P 16 12 22.0 -2.1
baz=161
JCT Junction City 53.10 330 P P 16 12 24.8 -0.4
baz=146,SNR=60
JCT Junction City 53.10 330 eP P 16 12 24.5 -0.7
comp=Z,431nm,1.3s
JCT Junction City 53.10 330 eP P 16 12 24.9 -0.4
WLAR White Oak Lake 53.11 338 eP P 16 12 25.7 +0.5
WLAR epP pP 16 12 52.5 +1.8
WLAR esP sP 16 13 03.9 +1.4
Y41A Eaglette Beard 53.11 339 P P 16 12 25.1 0.0
baz=156,SNR=12
X43A Marvell 53.12 341 P P 16 12 24.8 -0.4
baz=158
X43A Marvell 53.12 341 eP P 16 12 25.1 -0.1
X43A epP pP 16 12 51.7 +0.9
X43A esP sP 16 13 04.5 +1.8
V48A Smith Brothers 53.14 345 P P 16 12 24.2 -1.1
baz=163,SNR=65
W45A Hickory Valley 53.21 343 P P 16 12 23.8 -2.1
baz=160
TZTN Tazewell 53.21 349 P P 16 12 24.9 -1.0
baz=167,SNR=13
TZTN Tazewell 53.21 349 eP P 16 12 25.1 -0.8
comp=Z,138nm,1.2s
WHTX Lake Whitney, 53.31 333 P P 16 12 26.7 0.0
baz=150,SNR=123
WHTX Lake Whitney, 53.31 333 eP P 16 12 26.4 -0.4
comp=Z,1µm,1.4s
WHTX epP pP 16 12 53.6 +1.3
BLA Blacksburg 53.37 352 P P 16 12 26.9 -0.2
baz=170,SNR=20
BLA Blacksburg 53.37 352 eP P 16 12 26.6 -0.4
comp=Z,495nm,1.6s
BLA epP pP 16 12 54.1 +1.4
BLA Blacksburg 53.37 352 eP P 16 12 26.6 -0.4
BLA e*PP pP 16 12 54.1 +1.4
BLA pmax pmax
comp=Z,495nm,1.6s
W44A Shelby Farms P 53.37 342 P P 16 12 25.7 -1.4
baz=159
X42A Stuttgart 53.39 340 P P 16 12 26.6 -0.6
baz=157,SNR=6.1
MET Memphis--Engin 53.39 342 eP P 16 12 25.7 -1.5
MET epP pP 16 12 52.9 +0.1
V47A Nunnelly 53.39 345 P P 16 12 25.4 -1.8
baz=162,SNR=20
URVA University of 53.41 355 eP P 16 12 27.2 0.0
URVA epP pP 16 12 55.2 +2.3
HPIG 53.41 323 eP P 16 12 27.6 -0.2
comp=Z,441nm,1.4s
Y40A Okolona 53.46 338 P P 16 12 27.4 -0.3
baz=155,SNR=45
V46A Holladay 53.52 344 P P 16 12 25.7 -2.5
baz=161,SNR=13
JSRW J. Sargeant Re 53.56 355 eP P 16 12 28.2 -0.2
JSRW epP pP 16 12 55.9 +1.9
W43A Forest City 53.59 341 P P 16 12 27.8 -0.8
baz=158
X41A Kaden, Bauxite 53.63 339 P P 16 12 28.1 -0.9
baz=156,SNR=12
U49A Red Boiling Sp 53.63 347 P P 16 12 27.5 -1.4
baz=164
T52A Hallie 53.66 350 P P 16 12 27.7 -1.4
baz=167
IP05 Hopewell Churc 53.69 355 eP P 16 12 29.4 +0.1
IP05 epP pP 16 12 57.3 +2.4
V45A Humboldt 53.69 343 P P 16 12 27.5 -1.9
baz=160,SNR=6.0
X40A Basin Creek Fa 53.73 339 P P 16 12 28.9 -0.8
baz=156,SNR=13
X40A Basin Creek Fa 53.73 339 eP P 16 12 28.9 -0.8
comp=Z,185nm,1.5s
SLBS Sierra La Lagu 53.76 316 eP P 16 12 30.5 +0.3
WVT Waverly 53.76 345 P P 16 12 28.1 -1.8
baz=162
WVT Waverly 53.76 345 eP P 16 12 28.0 -1.8
WVT epP pP 16 12 55.3 -0.2
WVT Waverly 53.76 345 eP P 16 12 28.1 -1.8
WVT e*PP pP 16 12 55.3 -0.2
IP07 Quail 53.80 355 eP P 16 12 30.5 +0.4
IP07 epP pP 16 12 58.3 +2.5
U48A Cassie Pea, Po 53.81 346 P P 16 12 28.9 -1.3
baz=163,SNR=40
IP06 Yanceyville 53.81 355 eP P 16 12 30.4 +0.3
IP06 epP pP 16 12 58.4 +2.6
IP01 Cuckoo 53.83 355 eP P 16 12 30.7 +0.4
IP01 epP pP 16 12 58.3 +2.3
SPRD Spring Road, M 53.89 355 eP P 16 12 31.1 +0.4
SPRD epP pP 16 12 58.9 +2.4
IP03 Louisa 53.90 355 eP P 16 12 31.1 +0.2
IP03 epP pP 16 12 59.1 +2.6
U47A Clarksville 53.92 345 P P 16 12 29.2 -1.8
baz=162,SNR=26

T50A	Nancy	53.92 348	P	P	16 12 29.8 -1.2
	baz=165				
CVRD	Centerville Ro	53.93 355	eP	P	16 12 31.4 +0.4
CVRD			epP	pP	16 12 58.5 +1.8
HALT	Halls	53.96 343	eP	P	16 12 30.2 -1.1
HALT			epP	pP	16 12 56.5 -0.5
PTRD	Partlow Road	53.96 355	eP	P	16 12 31.7 +0.4
PTRD			epP	pP	16 12 58.7 +1.8
IP04	Greensprings	53.98 355	eP	P	16 12 31.9 +0.5
IP04			epP	pP	16 12 59.5 +2.4
HBAR	Harrisburg	54.01 342	eP	P	16 12 31.2 -0.5
	comp=Z,513nm,1.3s				
HBAR			epP	pP	16 12 57.8 +0.4
W42A	Bald Knob	54.02 341	P	P	16 12 30.7 -1.1
	baz=157,SNR=5.5				
CBN	Corbin Frederi	54.02 355	P	P	16 12 32.1 +0.3
	baz=174				
CBN	Corbin Frederi	54.02 355	eP	P	16 12 31.9 +0.1
CBN			epP	pP	16 12 59.8 +2.4
V44A	Blytheville	54.04 343	P	P	16 12 30.3 -1.6
	baz=159				
MIAR	Mount Ida	54.05 338	P	P	16 12 31.7 -0.3
	baz=155,SNR=162				
MIAR	Mount Ida	54.05 338	eP	P	16 12 31.3 -0.7
	comp=Z,612nm,1.3s				
MIAR			epP	pP	16 12 58.7 +1.0
MIAR	Mount Ida	54.05 338	eP	P	16 12 31.5 -0.5
MIAR			e*PP	pP	16 12 58.7 +1.0
U46A	Springville	54.07 344	P	P	16 12 29.9 -2.2
	baz=161				
TXAR	Lajitas Array	54.13 326	P	P	16 12 32.6 -0.3
	comp=Z,125nm,1.1s,baz=142,slow=6.3,SNR=334				
TXAR			LR	LR	16 35 25.1
	comp=Z,902nm,20.7s,baz=0.0,slow=36				
TXAR			PKP2bc		16 42 55.0
	comp=Z,0.2nm,0.6s,baz=298,slow=2.7,SNR=4.0				
TX31	Lajitas Ar. Si	54.14 326	eP	P	16 12 32.4 -0.5
T49A	Edmonton	54.15 347	P	P	16 12 31.4 -1.3
	baz=164				
W41B	Gary Mavity, V	54.16 340	P	P	16 12 32.0 -0.8
	baz=156,SNR=74				
W41B	Gary Mavity, V	54.16 340	eP	P	16 12 31.9 -1.0
	comp=Z,552nm,1.5s				
W41B			epP	pP	16 12 59.1 +0.6
W41B			esP	sP	16 13 10.1 -0.2
V43A	Jonesboro	54.19 342	P	P	16 12 31.8 -1.2
	baz=158				
GNAR	Gosnell	54.20 342	eP	P	16 12 32.3 -0.8
GNAR			epP	pP	16 12 58.8 0.0
GNAR			esP	sP	16 13 11.1 +0.5
X39A	Fountain Ranch	54.20 338	P	P	16 12 33.5 +0.3
	baz=154,SNR=129				
U45A	Rockin P Farm,	54.21 344	P	P	16 12 31.4 -1.7
	baz=161				
S52A	Salyersville	54.23 350	P	P	16 12 32.0 -1.3
	baz=167				
UTMT	University of	54.23 344	eP	P	16 12 32.0 -1.3
UTMT			epP	pP	16 12 59.6 +0.6
GLAT	Glass	54.28 343	eP	P	16 12 33.0 -0.6
GLAT			epP	pP	16 12 59.9 +0.5
GLAT			esP	sP	16 13 11.8 +0.7
WHAR	Wooly Hollow	54.28 340	eP	P	16 12 32.5 -1.2
WHAR			epP	pP	16 12 59.7 +0.3
WHAR			esP	sP	16 13 12.7 +1.4
LPIG	La Paz	54.28 316	P	P	16 12 33.9 0.0
	comp=Z,34nm,0.5s,baz=175,slow=2.3,SNR=16				
LPIG			LR	LR	16 30 53.5
	comp=Z,894nm,20.6s,baz=126,slow=30				
S51A	Beattyville	54.28 349	P	P	16 12 32.5 -1.1
	baz=167				
T48A	Bowling Green	54.34 346	P	P	16 12 32.9 -1.3
	baz=163,SNR=61				
U44B	Burton Farm, H	54.36 343	P	P	16 12 32.9 -1.4
	baz=160				
T47A	Sharon Grove	54.40 346	P	P	16 12 33.2 -1.3
	baz=163,SNR=33				
W40A	Ferguson Farm,	54.45 339	P	P	16 12 34.9 0.0
	baz=155,SNR=94				
W40A	Ferguson Farm,	54.45 339	eP	P	16 12 34.7 -0.3
	comp=Z,1μm,1.4s				
W40A			epP	pP	16 13 01.9 +1.3
V42A	Cord	54.47 341	P	P	16 12 33.6 -1.4
	baz=158,SNR=30				
PVMO	Portageville	54.53 343	eP	P	16 12 34.8 -0.6
PVMO			epP	pP	16 13 01.8 +0.7
U44A	Portageville	54.61 343	P	P	16 12 35.0 -1.1
	baz=160				
T46A	Princeton	54.64 345	P	P	16 12 34.6 -1.6
	baz=162,SNR=24				
U43A	Rector	54.69 342	P	P	16 12 35.4 -1.3
	baz=159				
V41A	Mountainview	54.69 340	P	P	16 12 35.6 -1.1
	baz=157,SNR=46				
W39A	Magazine	54.70 339	P	P	16 12 36.6 -0.1
	baz=155,SNR=137				
W39A	Magazine	54.70 339	eP	P	16 12 36.6 -0.1
	comp=Z,809nm,1.4s				
W39A			epP	pP	16 13 03.9 +1.5
W39A			esP	sP	16 13 16.8 +2.5
PARMO	Parma	54.78 343	eP	P	16 12 36.7 -0.5
PARMO			epP	pP	16 13 03.5 +0.5
S48A	Wiedeman Farm,	54.79 347	P	P	16 12 35.6 -1.8
	baz=164,SNR=77				
T45A	Paducah	54.81 344	P	P	16 12 35.9 -1.6
	baz=161				
ABTX	Abilene, Hawle	54.82 332	P	P	16 12 37.9 +0.2
	baz=148,SNR=304				
ABTX	Abilene, Hawle	54.82 332	eP	P	16 12 37.6 -0.1
	comp=Z,2μm,1.4s				
ABTX			epP	pP	16 13 05.6 +2.2
U42A	Revenden	54.92 341	P	P	16 12 36.8 -1.5
	baz=158,SNR=68				
V40A	Witts Springs	54.93 340	P	P	16 12 37.5 -1.0
	baz=156,SNR=52				
V40A	Witts Springs	54.93 340	eP	P	16 12 37.4 -1.0
V40A			epP	pP	16 13 04.9 +0.7
PBMO	Poplar Bluff	55.08 342	eP	P	16 12 38.0 -1.5
	comp=Z,500nm,1.4s				
PBMO			epP	pP	16 13 05.7 +0.5
PBMO			esP	sP	16 13 17.5 +0.6
T44A	Benton	55.13 343	P	P	16 12 38.1 -1.7
	baz=160				
U41A	Viola	55.13 341	P	P	16 12 38.5 -1.3
	baz=157,SNR=33				
SDMD	Soldier's Deli	55.18 356	eP	P	16 12 40.3 +0.1
SDMD			epP	pP	16 13 07.3 +1.5
S46A	Don Dixon Farm	55.20 345	P	P	16 12 39.1 -1.2
	baz=162,SNR=64				
V39A	Pettigrew	55.24 339	P	P	16 12 40.2 -0.5
	baz=155,SNR=148				
T43A	Greenville	55.32 343	P	P	16 12 40.1 -1.1
	baz=159,SNR=96				
WCI	Wyandotte Cave	55.39 347	P	P	16 12 40.3 -1.4
	baz=164				
WCI	Wyandotte Cave	55.39 347	eP	P	16 12 40.2 -1.4
WCI			epP	pP	16 13 07.8 +0.3
WCI	Wyandotte Cave	55.39 347	eP	P	16 12 40.4 -1.3
WCI			e*PP	pP	16 13 07.8 +0.3
S45A	Carrier Mills	55.41 344	P	P	16 12 40.7 -1.1
	baz=161,SNR=46				
U40A	Yellville	55.44 340	P	P	16 12 41.3 -0.8
	baz=156,SNR=69				
USIN	University of	55.46 345	eP	P	16 12 40.8 -1.3
USIN			epP	pP	16 13 08.4 +0.5
R48A	Northridge Ran	55.47 347	P	P	16 12 40.8 -1.4
	baz=164,SNR=23				
T42A	Van Buren	55.51 342	P	P	16 12 40.9 -1.6
	baz=158,SNR=50				
R47A	Wooly Knot Far	55.51 347	P	P	16 12 41.0 -1.5
	baz=164,SNR=44				
S44A	Carbondale	55.61 344	P	P	16 12 42.4 -0.8
	baz=160,SNR=82				
PSUB	Penn St. - Bra	55.62 357	eP	P	16 12 43.4 +0.2
PSUB			epP	pP	16 13 11.0 +2.0
R46A	Gibon Southern	55.66 346	P	P	16 12 42.0 -1.6
	baz=162,SNR=20				
U39A	Green Forest	55.67 339	P	P	16 12 42.6 -1.1
	baz=155,SNR=71				
MCWV	Mont Chateau	55.71 353	P	P	16 12 43.7 -0.2
	baz=171,SNR=12				
MCWV	Mont Chateau	55.71 353	eP	P	16 12 43.7 -0.2
MCWV			epP	pP	16 13 09.8 +0.1
S43A	Fulton Ridge,	55.72 343	P	P	16 12 42.5 -1.4
	baz=159,SNR=40				
T41A	Mountain View	55.72 341	P	P	16 12 42.7 -1.3
	baz=157,SNR=58				
HHAR	Hobbs	55.74 339	eP	P	16 12 43.4 -0.8
	comp=Z,663nm,1.4s				
HHAR			epP	pP	16 13 10.5 +0.5
MVL	Millersville	55.74 356	eP	P	16 12 44.4 +0.3
MVL			epP	pP	16 13 12.3 +2.4
R45A	Skylar, Fairfi	55.92 345	P	P	16 12 44.2 -1.2
	baz=162,SNR=72				
PAGS	Pennsylvania G	55.99 356	eP	P	16 12 45.9 0.0
PAGS			epP	pP	16 13 13.2 +1.5
T40A	Mansfield	56.06 341	P	P	16 12 45.4 -1.1
	baz=157,SNR=37				
TUL1	Leonard	56.07 337	P	P	16 12 46.1 -0.4
	baz=153,SNR=55				
TUL1	Leonard	56.07 337	eP	P	16 12 45.9 -0.7
	comp=Z,796nm,1.3s				
TUL1			epP	pP	16 13 12.3 0.0
R44A	Waltonville	56.08 344	P	P	16 12 45.5 -1.1
	baz=161,SNR=26				
Q47A	Bedord North L	56.10 347	P	P	16 12 45.2 -1.4
	baz=164,SNR=24				
S42A	Caledonia	56.11 343	P	P	16 12 45.0 -1.7
	baz=159,SNR=28				
O56A	Blue Knob Stat	56.18 354	P	P	16 12 47.8 +0.6
	baz=173,SNR=44				
O56A	Blue Knob Stat	56.18 354	eP	P	16 12 47.5 +0.2
O56A			epP	pP	16 13 14.9 +1.8
FVM	French Village	56.20 343	eP	P	16 12 46.0 -1.5
	comp=Z,555nm,1.4s				
FVM			epP	pP	16 13 13.7 +0.4
FVM	French Village	56.20 343	eP	P	16 12 46.4 -1.0
S41A	Jillco Farms,	56.22 342	P	P	16 12 46.3 -1.3
	baz=158,SNR=66				
T39A	Clever	56.22 340	P	P	16 12 46.5 -1.1
	baz=156,SNR=42				
WMOK	Wichita Mounta	56.24 334	P	P	16 12 46.7 -1.0
	baz=149,SNR=100				
WMOK	Wichita Mounta	56.24 334	eP	P	16 12 46.6 -1.2
	comp=Z,670nm,1.8s				
WMOK	Wichita Mounta	56.24 334	eP	P	16 12 46.8 -1.0
LUPA	Lehigh Univers	56.28 357	eP	P	16 12 48.3 +0.3
LUPA			epP	pP	16 13 15.6 +1.8
OLIL	Olney	56.30 345	eP	P	16 12 46.4 -1.7
OLIL			epP	pP	16 13 13.9 0.0
R43A	Red Bud	56.34 344	P	P	16 12 47.3 -1.0
	baz=160,SNR=52				
BRNJ	Basking Ridge	56.34 358	eP	P	16 12 48.6 +0.3
BRNJ			epP	pP	16 13 15.5 +1.4
BLO	Bloomington	56.35 347	eP	P	16 12 47.3 -1.1
	comp=Z,451nm,1.5s				
BLO			epP	pP	16 13 14.5 +0.2
BLO	Bloomington	56.35 347	eP	P	16 12 47.6 -0.9
BLO			e*PP	pP	16 13 14.8 +0.5
Q46A	CEJHS Indians,	56.39 346	P	P	16 12 46.3 -2.5
	baz=163				
CPNY	Central Park	56.43 359	eP	P	16 12 49.1 +0.2
CPNY			epP	pP	16 13 16.6 +1.8
Q45A	Warren Harvey,	56.46 345	P	P	16 12 47.9 -1.3
	baz=162,SNR=40				
S40A	Lebanon	56.46 341	P	P	16 12 48.1 -1.2
	baz=157,SNR=52				
SSPA	Standing Stone	56.48 355	P	P	16 12 49.7 +0.4
	baz=174				
SSPA	Standing Stone	56.48 355	eP	P	16 12 49.4 0.0
SSPA			epP	pP	16 13 16.8 +1.6
CCM	Cathedral Cave	56.50 342	P	P	16 12 48.0 -1.5
	baz=158				
CCM	Cathedral Cave	56.50 342	eP	P	16 12 47.9 -1.7
CCM			epP	pP	16 13 14.9 -0.5
CCM	Cathedral Cave	56.50 342	eP	P	16 12 48.2 -1.4
T38A	Diamond	56.54 339	P	P	16 12 49.3 -0.5
	baz=155,SNR=90				
CLNB	Carlsbad	56.57 328	eP	P	16 12 50.3 0.0
CLNB			epP	pP	16 13 15.8 -0.3
R42A	Luebbering	56.58 343	P	P	16 12 49.0 -1.1
	baz=159,SNR=34				
P47A	Martinsville	56.60 347	P	P	16 12 48.7 -1.5
	baz=164,SNR=16				
N59A	State Game Lan	56.62 357	P	P	16 12 51.1 +0.7
	baz=176,SNR=12				
N59A	State Game Lan	56.62 357	eP	P	16 12 50.5 +0.1
N59A			epP	pP	16 13 17.9 +1.7
PAL	Palisades	56.64 359	P	P	16 12 50.5 +0.1
	baz=178,SNR=7.4				
PAL	Palisades	56.64 359	eP	P	16 12 50.2 -0.2
PAL			epP	pP	16 13 17.7 +1.4
PAL	Palisades	56.64 359	eP	P	16 12 50.9 +0.4
PAL			e*PP	pP	16 13 18.3 +2.0
Q44A	Meyer Farm, Va	56.68 345	P	P	16 12 49.4 -1.4
	baz=161,SNR=44				
ACSO	Alum Creek Sta	56.70 350	P	P	16 12 49.8 -1.2
	baz=168,SNR=34				
ACSO	Alum Creek Sta	56.70 350	eP	P	16 12 49.5 -1.4
ACSO			epP	pP	16 13 17.1 +0.3
SLM	Saint Louis	56.76 343	eP	P	16 12 50.1 -1.2
SLM			epP	pP	16 13 17.4 +0.2
SLM	Saint Louis	56.76 343	eP	P	16 12 50.9 -0.4
SLM			e*PP	pP	16 13 18.4 +1.2
GDL2	Guadalupe Moun	56.76 328	eP	P	16 12 52.0 +0.3
R41A	Rosebud	56.77 342	P	P	16 12 50.6 -0.9
	baz=158,SNR=74				
S39A	Bolivar	56.81 340	P	P	16 12 50.9 -0.9
	baz=156,SNR=76				
Q43A	New Douglas	56.90 344	P	P	16 12 51.2 -1.2
	baz=160,SNR=28				
MNTX	Cornudas Mount	56.90 326	P	P	16 12 51.7 -0.9
	baz=141,SNR=341				
MNTX	Cornudas Mount	56.90 326	eP	P	16 12 51.6 -1.0
	comp=Z,389nm,1.3s				
P46A	Rosedale	56.93 346	P	P	16 12 50.8 -1.7
	baz=163,SNR=18				
YLE	Yale	56.94 360	eP	P	16 12 53.2 +0.6
YLE			epP	pP	16 13 19.8 +1.4
S38A	Stockton	56.95 340	P	P	16 12 51.5 -1.2
	baz=155,SNR=31				
P45A	Graceland, Par	56.96 346	P	P	16 12 50.9 -1.9
	baz=162,SNR=38				
N54A	Moraine State	57.01 353	P	P	16 12 53.4 +0.3
	baz=171,SNR=46				
N54A	Moraine State	57.01 353	eP	P	16 12 52.8 -0.3
	comp=Z,538nm,1.5s				
N54A			epP	pP	16 13 20.2 +1.2
R40A	Maddies Statio	57.03 341	P	P	16 12 52.1 -1.2
	baz=157,SNR=56				
Q42A	Golden Eagle	57.10 343	P	P	16 12 52.7 -1.0
	baz=159,SNR=47				
P44A	Sand Creek, Wi	57.12 345	P	P	16 12 52.3 -1.5
	baz=161,SNR=24				
SACV	Santiago Islan	57.19 60	eP	P	16 12 53.6 -1.3
	comp=Z,109nm,0.9s				
M65A	Busby, Falmout	57.21 2	P	P	16 12 53.9 -0.5
	baz=182				
KSPA	Keystone Colle	57.26 357	eP	P	16 12 55.0 +0.2
KSPA			epP	pP	16 13 22.3 +1.5
ASCN	Ascension	57.26 89	eP	P	16 12 56.2 +0.7
	comp=Z,2μm,1.3s				
R39A	Chumby, Stover	57.29 341	P	P	16 12 54.0 -1.1
	baz=156,SNR=62				
O47A	Sheridan	57.30 348	P	P	16 12 53.4 -1.8
	baz=164,SNR=30				
Q41A	Truxton	57.33 343	P	P	16 12 54.3 -1.1
	baz=158,SNR=54				
MSTX	Muleshoe	57.39 330	P	P	16 12 55.3 -0.8
	baz=145,SNR=102				
MSTX	Muleshoe	57.39 330	eP	P	16 12 55.2 -0.9
	comp=Z,1μm,1.3s				
MSTX			epP	pP	16 13 23.7 +1.7
R38A	Fenwick Farm,	57.45 340	P	P	16 12 55.3 -1.0
	baz=155,SNR=68				
P43A	Skaggs, Pawnee	57.51 344	P	P	16 12 55.2 -1.5
	baz=160,SNR=34				
M54A	Oil Creek Stat	57.52 354	P	P	16 12 56.4 -0.3
	baz=172,SNR=44				
M54A	Oil Creek Stat	57.52 354	eP	P	16 12 56.2 -0.4
	comp=Z,499nm,1.4s				
M54A			epP	pP	16 13 24.2 +1.6
BRYW	Bryant College	57.54 1	eP	P	16 12 56.5 -0.4
BRYW			epP	pP	16 13 24.9 +2.1
EPT	El Paso	57.56 326	eP	P	16 12 56.2 -1.1
	comp=Z,466nm,1.4s				
EPT			epP	pP	16 13 22.7 -0.6
Q40A	Laux Farm, Aux	57.62 342	P	P	16 12 56.2 -1.2
	baz=158,SNR=20				
SFIN	Lafayette	57.63 347	P	P	16 12 55.3 -2.2
	baz=163,SNR=32				
SFIN	Lafayette	57.63 347	eP	P	16 12 55.1 -2.4
	comp=Z,300nm,1.4s				
SFIN			epP	pP	16 13 22.9 -0.5
AMTX	Amarillo	57.63 332	P	P	16 12 56.9 -0.8
	baz=146				
AMTX	Amarillo	57.63 332	eP	P	16 12 56.8 -1.0
	comp=Z,738nm,1.6s				
AMTX			epP	pP	16 13 24.6 +0.9
O45A	Potomac	57.65 346	P	P	16 12 55.6 -2.0
	baz=163,SNR=28				
P42A	Winchester	57.67 344	P	P	16 12 56.2 -1.6
	baz=160,SNR=32				
ALLY	Alegheny Colle	57.71 353	eP	P	16 12 57.3 -0.7
ALLY			epP	pP	16 13 25.1 +1.2
O44A	Mansfield	57.73 346	P	P	16 12 55.7 -2.5
	baz=162,SNR=8.8				
SRIG	Santa Rosalia	57.75 318	eP	P	16 12 58.6 0.0
	comp=Z,642nm,2.0s				
QUA2	Belchertown	57.90 0	eP	P	16 12 59.1 -0.2
QUA2			epP	pP	16 13 26.9 +1.7
BINY	Binghamton	57.91 357	P	P	16 12 59.7 +0.3
	baz=176,SNR=35				
BINY	Binghamton	57.91 357	eP	P	16 12 59.7 +0.3
BINY			epP	pP	16 13 26.9 +1.5
Q39A	Willow Grove F	57.94 341	P	P	16 12 58.7 -1.0
	baz=157,SNR=80				
P41A	Barry, Barry	57.95 343	P	P	16 12 58.2 -1.5
	baz=159,SNR=43				
BCX	Boston College	57.97 1	eP	P	16 13 00.3 +0.5
BCX			epP	pP	16 13 27.6 +1.8
WES	Weston	58.01 1	eP	P	16 13 00.1 0.0
WES			epP	pP	16 13 28.2 +2.1
WES	Weston	58.01 1	eP	P	16 13 00.6 +0.5
N46A	Monticello	58.05 347	P	P	16 12 58.2 -2.2
	baz=164,SNR=27				
Q38A	Cooks Store, C	58.06 341	P	P	16 12 59.8 -0.7
	baz=156,SNR=66				
O43A	Sugar Creek Fa	58.06 345	P	P	16 12 58.5 -1.9
	baz=161,SNR=12				
P40A	Paris	58.10 342	P	P	16 12 59.5 -1.3
	baz=158,SNR=36				
HSIG		58.12 320	eP	P	16 13 01.0 -0.1
	comp=Z,442nm,1.7s				
HRV	Adam Dziewonsk	58.13 1	P	P	16 13 01.0 +0.1
	baz=181				
HRV	Adam Dziewonsk	58.13 1	eP	P	16 13 01.1 +0.2
HRV			epP	pP	16 13 29.0 +2.1
HRV	Adam Dziewonsk	58.13 1	eP	P	16 13 01.7 +0.8
ERPA	Erie	58.15 353	P	P	16 13 00.6 -0.5
	baz=171,SNR=16				
ERPA	Erie	58.15 353	eP	P	16 13 00.6 -0.5
ERPA			epP	pP	16 13 28.4 +1.3
N45A	Kentland	58.17 347	P	P	16 12 59.0 -2.2
	baz=163,SNR=29				
O42A	Bath	58.18 344	P	P	16 12 59.6 -1.6
	baz=160,SNR=17				
Q37A	Longview Farm,	58.26 340	P	P	16 13 00.9 -0.9
	baz=155,SNR=8.8				
N44A	Piper City	58.26 346	P	P	16 12 59.7 -2.2
	baz=162,SNR=32				
P39B	Salisbury	58.27 342	P	P	16 13 00.7 -1.3
	baz=157,SNR=40				
HDIL	Hopedale	58.31 345	P	P	16 13 00.3 -1.9
	baz=161,SNR=8.4				
HDIL	Hopedale	58.31 345	eP	P	16 13 01.2 -1.0
	comp=Z,456nm,1.4s				
HDIL			epP	pP	16 13 28.1 -0.2
O41A	Passleys Farm,	58.32 343	P	P	16 13 00.5 -1.8
	baz=159,SNR=21				
TRY	Troy	58.36 359	eP	P	16 13 02.7 +0.2
TRY			epP	pP	16 13 30.9 +2.3
M46A	Old House Fiel	58.46 348	P	P	16 13 01.5 -1.7
	baz=164,SNR=7.3				
MMNY	Mt. Morris Dam	58.56 355	eP	P	16 13 03.8 -0.1
MMNY			epP	pP	16 13 31.6 +1.6
O40A	La Belle	58.60 343	P	P	16 13 02.8 -1.4
	baz=158,SNR=28				
M45A	Boilermakers S	58.63 347	P	P	16 13 02.2 -2.2
	baz=163				
P38A	Dawn	58.64 341	P	P	16 13 03.4 -1.1
	baz=156,SNR=9.8				
N43A	Stutzman Famil	58.65 345	P	P	16 13 03.2 -1.4
	baz=161,SNR=14				
N42A	Yates City	58.76 344	P	P	16 13 03.6 -1.7
	baz=160,SNR=15				
M44A	Midewin, Midew	58.80 346	P	P	16 13 03.3 -2.3
	baz=162,SNR=15				
319A	Douglas	58.82 323	eP	P	16 13 06.3 +0.2
	comp=Z,483nm,1.1s				
AAM	Ann Arbor	58.83 350	P	P	16 13 04.4 -1.4
	baz=167				
AAM	Ann Arbor	58.83 350	eP	P	16 13 04.7 -1.1
AAM			epP	pP	16 13 31.7 -0.1
AAM	Ann Arbor	58.83 350	eP	P	16 13 05.3 -0.5
AAM			e*PP	pP	16 13 32.4 +0.6
121A	Cookes Peak, D	58.84 325	P	P	16 13 07.1 +0.8
	baz=140,SNR=140				
N41A	Harden Midland	58.86 344	P	P	16 13 04.5 -1.6
	baz=159,SNR=17				
P37A	Lathrop	58.87 340	P	P	16 13 04.8 -1.3
	baz=155,SNR=30				
O39A	Kirksville	58.92 342	P	P	16 13 05.2 -1.2
	baz=157,SNR=8.6				
RKT	Rikitea	58.98 252	eP	P	16 13 08.4 +1.1
	comp=Z,184nm,1.3s				
RKT			epP	pP	16 13 31.5 -1.8
	comp=Z,250nm,1.3s				
RKT			eS	S	16 21 04.0 -1.8
	comp=Z,2μm,28.5s				
RKT			eLQ	LQ	16 28 02.7
	comp=Z,3μm,31.0s				
RKT			eLR	LR	16 30 30.6
	comp=Z,8μm,31.5s				
ACCN	Adirondack Com	59.01 359	eP	P	16 13 07.2 +0.2
ACCN			epP	pP	16 13 35.5 +2.4
M43A	Waltham Townsh	59.06 346	P	P	16 13 05.6 -1.8
	baz=161,SNR=42				
O38A	Galt	59.08 341	P	P	16 13 06.1 -1.4
	baz=156,SNR=9.1				
FFD	Franklin Falls	59.09 1	eP	P	16 13 08.1 +0.5
FFD			epP	pP	16 13 35.8 +2.2
KSU1	Kansas State U	59.20 338	P	P	16 13 07.4 -1.0
	baz=153,SNR=17				
KSU1	Kansas State U	59.20 338	eP	P	16 13 07.4 -1.0
	comp=Z,365nm,1.2s				
KSU1			epP	pP	16 13 34.3 -0.2
N40A	Mertquake, Sal	59.23 343	P	P	16 13 06.9 -1.7
	baz=158,SNR=14				
M42A	Sheffield	59.28 345	P	P	16 13 06.8 -2.1
	baz=161				
HNH	Hanover	59.32 0	eP	P	16 13 10.2 +1.1
HNH			epP	pP	16 13 37.0 +1.8
O37A	Wolven Farm, M	59.33 341	P	P	16 13 08.2 -1.1
	baz=156,SNR=20				
M41A	Milan	59.40 344	P	P	16 13 07.9 -1.9
	baz=160,SNR=12				
BNM	Barren Site	59.47 327	eP	P	16 13 10.4 -0.3
N39A	Derby Farms, D	59.48 342	P	P	16 13 08.9 -1.4
	baz=158,SNR=12				
L44A	Lake County Fo	59.53 347	P	P	16 13 08.5 -2.1
	baz=163,SNR=6.6				
Y22D	IRIS PASSCAL I	59.56 327	P	P	16 13 11.8 +0.6
	baz=141				
Y22D	IRIS PASSCAL I	59.56 327	eP	P	16 13 11.9 +0.7
	comp=Z,421nm,1.4s				
Y22E	IRIS PASSCAL I	59.56 327	P	P	16 13 11.8 +0.6
	baz=141				
LPM	Los Pinos Moun	59.59 327	eP	P	16 13 11.6 +0.1
LPM			epP	pP	16 13 40.0 +2.4
NCB	Newcomb	59.61 359	eP	P	16 13 10.8 -0.3
NCB			epP	pP	16 13 39.4 +2.1
N38A	Joes South For	59.62 342	P	P	16 13 10.0 -1.3
	baz=157,SNR=12				
LENM	Lemitar	59.66 327	eP	P	16 13 12.6 +0.6
M40A	Post Highland	59.69 343	P	P	16 13 09.8 -2.0
	baz=159				
L43A	Garden Prairie	59.72 346	P	P	16 13 10.5 -1.5
	baz=162,SNR=59				
L42A	Oliver, Polo	59.77 345	P	P	16 13 10.5 -1.8
	baz=161,SNR=17				
LBNH	Lisbon	59.86 0	P	P	16 13 13.5 +0.6
	baz=180,SNR=17				
LBNH	Lisbon	59.86 0	eP	P	16 13 13.6 +0.8
LBNH			epP	pP	16 13 41.2 +2.2
LBNH	Lisbon	59.86 0	eP	P	16 13 13.6 +0.8
N37A	Lee Faris, Mou	59.88 341	P	P	16 13 12.0 -1.1

baz=156,SNR=19
LAZ Ladron 59.93 327 *e*P P 16 13 14.1 +0.3
LAZ *ep*P **pP** 16 13 42.6 +2.7
LAZ *es*P **sP** 16 13 51.8 +0.2
M39A Webster 59.94 343 P P 16 13 11.6 -1.8
baz=158,SNR=9.5
VT1 Waterbury 59.95 360 *e*P P 16 13 14.3 +0.8
VT1 *ep*P **pP** 16 13 41.3 +1.7
ANMO Albuquerque 60.00 328 P P 16 13 14.3 +0.1
comp=Z,65nm,1.0s,baz=144,slow=8.8,SNR=165
ANMO S **S** 16 21 18.0 -0.7
comp=Z,0.9nm,0.6s,baz=66,slow=14,SNR=2.6
ANMO LR LR 16 39 33.0
comp=Z,961nm,21.7s,baz=138,slow=36
ANMO PKP2bc 16 42 42.4
comp=Z,0.5nm,0.4s,baz=153,slow=3.6,SNR=3.6
ANMO Albuquerque 60.00 328 P P 16 13 14.3 +0.1
baz=142
ANMO Albuquerque 60.00 328 *e*P P 16 13 13.9 -0.3
comp=Z,341nm,1.4s
ANMO S **S** 16 21 18.0 -0.7
ANMO ⇑*e* 16 42 42.4
TASL Snake Pit, Alb 60.00 328 P P 16 13 14.3 +0.1
baz=142
TASM ASL Pad, Albuq 60.00 328 P P 16 13 14.4 +0.2
baz=142
L41A Preston 60.05 345 P P 16 13 12.2 -2.0
baz=160,SNR=28
K43A Burlington 60.12 347 P P 16 13 13.1 -1.5
baz=162,SNR=57
CBKS Cedar Bluff 60.13 336 P P 16 13 14.7 -0.1
baz=150,SNR=35
CBKS Cedar Bluff 60.13 336 *e*P P 16 13 14.7 -0.1
comp=Z,646nm,1.2s
CBKS *ep*P **pP** 16 13 41.7 +0.8
CBKS Cedar Bluff 60.13 336 *e*P P 16 13 14.9 +0.1
CBKS *e**PP **pP** 16 13 42.8 +1.8
N36A Muff Farm, Cla 60.18 340 P P 16 13 14.3 -0.8
baz=155,SNR=18
M38A Pleasantville 60.18 342 P P 16 13 13.4 -1.7
baz=157,SNR=14
L40A Anamosa 60.23 344 P P 16 13 13.8 -1.6
baz=159,SNR=39
WVL Waterville 60.24 2 *e*P P 16 13 16.2 +0.8
WVL *ep*P **pP** 16 13 44.4 +2.8
LONY Lake Ozonia 60.27 358 P P 16 13 15.6 0.0
baz=178,SNR=22
LONY Lake Ozonia 60.27 358 *e*P P 16 13 15.7 0.0
LONY *ep*P **pP** 16 13 43.3 +1.5
TUC Tucson 60.37 323 P P 16 13 16.6 -0.1
baz=137
TUC Tucson 60.37 323 *e*P P 16 13 16.3 -0.4
comp=Z,188nm,1.4s
TUC Tucson 60.37 323 *e*P P 16 13 16.3 -0.4
TUC pmax pmax
comp=Z,189nm,1.4s
M37A Trindle Farm, 60.43 341 P P 16 13 16.1 -0.7
baz=156,SNR=13
K42A Prairie Point, 60.43 346 P P 16 13 15.4 -1.3
baz=161,SNR=31
FRNY Flat Rock 60.46 359 *e*P P 16 13 16.9 0.0
FRNY *ep*P **pP** 16 13 44.9 +1.8
L39A Vinton 60.49 343 P P 16 13 15.5 -1.7
baz=158,SNR=33
K41A Shullsburg 60.50 345 P P 16 13 15.6 -1.6
baz=160,SNR=11
EMMW East Machias 60.50 4 *e*P P 16 13 17.4 +0.2
EMMW *ep*P **pP** 16 13 44.1 +0.8
SCIA State Center 60.64 342 P P 16 13 16.9 -1.3
baz=157
SCIA State Center 60.64 342 *e*P P 16 13 17.3 -0.9
SCIA *ep*P **pP** 16 13 43.3 -1.0
SADO Sadowa 60.69 355 P P 16 13 17.9 -0.6
comp=Z,64nm,0.8s,baz=197,slow=6.3,SNR=64
SADO pP **pP** 16 13 45.2 +0.5
comp=Z,139nm,1.1s,baz=195,slow=5.9,SNR=8.9
SADO PKP2bc 16 42 45.4
comp=Z,2.5nm,0.7s,baz=303,slow=21,SNR=3.9
SADO Sadowa 60.69 355 *e*P P 16 13 17.6 -0.9
SADO *ep*P **pP** 16 13 45.7 +1.1
SADO ⇑*e* 16 42 45.4
M36A Felix, Anita 60.70 341 P P 16 13 17.7 -1.0
baz=155,SNR=21
T25A Trinidad 60.74 331 P P 16 13 19.8 +0.5
baz=144,SNR=155
T25A Trinidad 60.74 331 *e*P P 16 13 19.3 0.0
comp=Z,650nm,1.4s
T25A *ep*P **pP** 16 13 46.7 +1.2
JFWS Jewell Farm 60.77 345 P P 16 13 17.7 -1.4
baz=160,SNR=19
JFWS Jewell Farm 60.77 345 *e*P P 16 13 17.5 -1.6
JFWS *ep*P **pP** 16 13 45.7 +0.4
JFWS Jewell Farm 60.77 345 *e*P P 16 13 17.5 -1.6
JFWS *e**PP **pP** 16 13 45.7 +0.4
L38A Oak Wood Farm, 60.78 343 P P 16 13 17.7 -1.5
baz=157,SNR=22
J43A Natural Harves 60.79 347 P P 16 13 17.8 -1.4
baz=162,SNR=27
K40A Colesburg 60.80 344 P P 16 13 17.6 -1.6
baz=159,SNR=21
PLVO Plevna 60.80 356 *e*P P 16 13 18.9 -0.3
PLVO *ep*P **pP** 16 13 46.8 +1.3
J42A Columbus 60.89 346 P P 16 13 18.5 -1.3
baz=162,SNR=22
PKME Peaks-Kenny Pk 60.95 3 P P 16 13 20.8 +0.6
baz=183,SNR=16
PKME Peaks-Kenny Pk 60.95 3 *e*P P 16 13 20.2 0.0
PKME *ep*P **pP** 16 13 48.6 +2.2
L37A Phoenix Point, 60.99 342 P P 16 13 19.3 -1.3
baz=156,SNR=14
K39A Oelwein 61.00 344 P P 16 13 19.0 -1.7
baz=159,SNR=9.2
J41A Loganville 61.14 345 P P 16 13 20.4 -1.2
baz=161,SNR=46
K38A Parkersburg 61.19 343 P P 16 13 20.6 -1.3
baz=158,SNR=9.0
I43A Langenfeld Bro 61.21 347 P P 16 13 20.8 -1.2
baz=163,SNR=46
L36A Harm Buss Farm 61.25 341 P P 16 13 21.4 -0.9
baz=156,SNR=10.0
214A Organ Pipe Nat 61.32 321 P P 16 13 23.4 +0.3
baz=135,SNR=76
J40A Soldiers Grove 61.35 345 P P 16 13 21.6 -1.4
baz=160,SNR=38
I42A Draeger Farm, 61.38 347 P P 16 13 22.0 -1.2
baz=162,SNR=32
I42A Draeger Farm, 61.38 347 *e*P P 16 13 21.9 -1.2
I42A *ep*P **pP** 16 13 49.8 +0.4
KSCO Kaye Shedlock' 61.49 334 P P 16 13 24.3 +0.2
baz=147,SNR=26
KSCO Kaye Shedlock' 61.49 334 *e*P P 16 13 24.2 0.0
comp=Z,1μm,1.4s
KSCO *ep*P **pP** 16 13 49.9 -0.6
X18A Snowflake 61.53 325 *e*P P 16 13 25.0 +0.3
comp=Z,474nm,1.4s
J39A Decorah 61.54 344 P P 16 13 22.6 -1.6
baz=159,SNR=30
K37A Belmond 61.55 342 P P 16 13 23.0 -1.4
baz=157,SNR=10
K36A Gilmore City 61.67 342 P P 16 13 24.4 -0.8
baz=156,SNR=12
H43A Windswept, Lux 61.69 348 P P 16 13 23.9 -1.4
baz=163,SNR=29
H43A Windswept, Lux 61.69 348 *e*P P 16 13 23.6 -1.7
comp=Z,434nm,1.4s
H43A *ep*P **pP** 16 13 51.3 -0.2
J38A Wedel Dairy, R 61.73 344 P P 16 13 23.8 -1.8
baz=158,SNR=18
SDCO Great Sand Dun 61.75 331 P P 16 13 26.5 +0.3
baz=144,SNR=408
SDCO Great Sand Dun 61.75 331 *e*P P 16 13 25.9 -0.2
comp=Z,649nm,1.4s
I41A Arkdale 61.76 346 P P 16 13 24.6 -1.2
baz=161,SNR=11
I40A Norwalk 61.78 345 P P 16 13 24.9 -1.0
baz=160,SNR=15
BGNE Belgrade 61.79 338 P P 16 13 25.4 -0.7
baz=152,SNR=11
BGNE Belgrade 61.79 338 *e*P P 16 13 25.7 -0.3
comp=Z,1μm,1.1s
BGNE *ep*P **pP** 16 13 53.4 +1.1
W18A Petrified Fore 61.85 326 P P 16 13 27.2 +0.4
baz=139,SNR=193
W18A Petrified Fore 61.85 326 *e*P P 16 13 27.2 +0.4
comp=Z,987nm,1.5s
TRQ Mont Tremblant 61.87 358 *e*P P 16 13 25.9 -0.6
TRQ *ep*P **pP** 16 13 53.8 +1.0
H42A Shiocton 61.89 347 P P 16 13 25.5 -1.1
baz=162,SNR=16
H42A Shiocton 61.89 347 *e*P P 16 13 25.3 -1.2
H42A *ep*P **pP** 16 13 53.0 +0.2
I39A Houston 61.98 344 P P 16 13 26.1 -1.1
baz=159,SNR=24
J37A Redenius Farm, 62.02 343 P P 16 13 26.5 -1.0
baz=157,SNR=25
H41A Junction City 62.24 346 P P 16 13 27.8 -1.2
baz=161,SNR=20
H41A Junction City 62.24 346 *e*P P 16 13 27.4 -1.5
comp=Z,160nm,1.3s
J36A Seneca 1, Swea 62.27 342 P P 16 13 28.1 -1.1
baz=156,SNR=21
X16A Lo Mia Camp, P 62.28 324 *e*P P 16 13 30.3 +0.6
comp=Z,362nm,1.3s
I38A Scanlan Farm, 62.36 344 P P 16 13 28.7 -1.0
baz=158,SNR=59
S22A 4UR Ranch, Cre 62.38 330 P P 16 13 30.7 +0.3
baz=142,SNR=143
S22A 4UR Ranch, Cre 62.38 330 *e*P P 16 13 30.2 -0.2
comp=Z,599nm,1.8s
F46A Macinaw City C 62.39 350 P P 16 13 28.6 -1.3
baz=167,SNR=6.6
H40A Chili 62.42 346 P P 16 13 28.8 -1.4
baz=160,SNR=31
PQI Presque Isle 62.42 3 *e*P P 16 13 30.4 +0.3
PQI *ep*P **pP** 16 13 58.2 +1.8
G43A Wallace 62.43 348 P P 16 13 29.0 -1.1
baz=163,SNR=54
G43A Wallace 62.43 348 *e*P P 16 13 28.0 -2.2
comp=Z,345nm,1.5s
G43A *ep*P **pP** 16 13 56.8 +0.3
F45A CMU Biological 62.43 350 P P 16 13 28.6 -1.6
baz=166,SNR=7.7
113A Mohawk Valley, 62.47 321 *e*P P 16 13 30.8 +0.1
comp=Z,247nm,1.4s
G42A Mountain 62.56 347 P P 16 13 29.9 -1.1
baz=163,SNR=68
G42A Mountain 62.56 347 *e*P P 16 13 29.7 -1.4
G42A *ep*P **pP** 16 13 58.1 +0.7
Q24A Divide 62.56 332 P P 16 13 31.8 +0.2
baz=144,SNR=93
Q24A Divide 62.56 332 *e*P P 16 13 31.4 -0.2
comp=Z,438nm,1.4s
I37A Lemond, Waseca 62.63 343 P P 16 13 30.5 -1.1
baz=157,SNR=9.8
H39A Augusta 62.69 345 P P 16 13 30.6 -1.4
baz=160,SNR=15
G41A Antigo 62.70 347 P P 16 13 30.9 -1.1
baz=162,SNR=5.7
MVCO Mesa Verde 62.79 328 P P 16 13 33.3 +0.2
baz=140,SNR=59
MVCO Mesa Verde 62.79 328 *e*P P 16 13 32.6 -0.5
comp=Z,721nm,1.6s
MVCO *ep*P **pP** 16 14 00.7 +1.3
I36A Fitzsimmons Fa 62.81 343 P P 16 13 31.6 -1.2
baz=157,SNR=5.7
Y14A Wickenburg 62.84 323 *e*P P 16 13 33.4 +0.2
comp=Z,359nm,1.4s
OGNE Ogallala 62.86 335 P P 16 13 33.2 -0.1
baz=148,SNR=46
OGNE Ogallala 62.86 335 *e*P P 16 13 33.1 -0.2
comp=Z,696nm,1.3s
OGNE *ep*P **pP** 16 14 00.1 +0.5
OGNE *es*P **sP** 16 14 11.9 +0.6
F44A Big Bay de Noc 62.87 349 P P 16 13 31.7 -1.4
baz=165,SNR=40
F43A Flat Rock, Esc 62.88 349 P P 16 13 31.6 -1.5
baz=164,SNR=39
H38A Maiden Rock 62.94 344 P P 16 13 32.7 -0.9
baz=158,SNR=22
G40A Rib Lake 62.98 346 P P 16 13 32.9 -1.0
baz=161,SNR=16
F42A Maple Grove Fa 63.00 348 P P 16 13 32.6 -1.3
baz=163
H37A Dierke Farm, C 63.02 344 P P 16 13 33.2 -0.9
baz=158,SNR=13
E45A Wooded Hills, 63.03 350 P P 16 13 33.1 -1.0
baz=166,SNR=17
WUAZ Wupatki 63.05 325 P P 16 13 35.5 +0.8
baz=137,SNR=119
WUAZ Wupatki 63.05 325 *e*P P 16 13 35.2 +0.5
comp=Z,466nm,1.3s
F41A Three Lakes 63.18 347 P P 16 13 34.1 -1.1
baz=162,SNR=55
G39A Hocombe 63.23 345 P P 16 13 34.3 -1.1
baz=160,SNR=21
G38A Ridgeland 63.29 345 P P 16 13 34.5 -1.4
baz=159,SNR=31
H36A Jessenland, He 63.30 343 P P 16 13 35.4 -0.5
baz=157,SNR=19
GLA Glamis 63.30 321 P P 16 13 36.9 +0.6
baz=134,SNR=20
GLA Glamis 63.30 321 *e*P P 16 13 36.3 0.0
comp=Z,336nm,1.8s
GLA Glamis 63.30 321 *e*P P 16 13 36.8 +0.5
ECSD EROS Data Cent 63.34 341 P P 16 13 35.6 -0.6
baz=154,SNR=218
ECSD EROS Data Cent 63.34 341 *e*P P 16 13 35.1 -1.1
comp=Z,747nm,1.4s
ECSD *ep*P **pP** 16 14 03.1 +0.5
E43A Lone Tree Farm 63.37 349 P P 16 13 35.1 -1.3
baz=164,SNR=51
E44A Grand Marais A 63.41 350 P P 16 13 36.2 -0.4
baz=166,SNR=5.9
ISCO Idaho Springs 63.45 332 P P 16 13 37.6 +0.1
baz=144,SNR=72
ISCO Idaho Springs 63.45 332 *e*P P 16 13 37.5 +0.1
ISCO *ep*P **pP** 16 14 05.9 +2.1
ISCO Idaho Springs 63.45 332 *e*P P 16 13 37.7 +0.2
COWI Conover 63.53 347 *e*P P 16 13 36.2 -1.3
COWI *ep*P **pP** 16 14 04.5 +0.6
F40A Park Falls 63.58 346 P P 16 13 37.0 -0.7
baz=161,SNR=80
SMCO Snowmass 63.58 331 *e*P P 16 13 38.2 -0.2
comp=Z,327nm,1.3s
SPMN Marine on St. 63.59 344 P P 16 13 36.9 -0.9
baz=158,SNR=26
SPMN Marine on St. 63.59 344 *e*P P 16 13 36.7 -1.1
SPMN *ep*P **pP** 16 14 04.4 +0.2
E42A Champion 63.60 348 P P 16 13 36.7 -1.2
baz=163,SNR=48
Y12C Blythe 63.60 321 P P 16 13 38.9 +0.7
baz=134,SNR=19
Y12C Blythe 63.60 321 *e*P P 16 13 38.5 +0.3
comp=Z,422nm,1.6s
H35A Sunnyside Ranc 63.66 342 P P 16 13 37.6 -0.7
baz=156,SNR=47
PV02 Paradox Valley 63.68 329 *e*P P 16 13 39.0 +0.1
comp=Z,746nm,1.8s
F39A Loretta 63.76 346 P P 16 13 37.7 -1.3
baz=160,SNR=36
PDMCI Parker Dam,Lak 63.76 322 P P 16 13 39.4 +0.2
baz=135,SNR=11
IKP In-Ko-Pah, Jac 63.82 320 P P 16 13 40.6 +0.9
baz=132,SNR=29
SWSC Sam W. Stewart 63.83 320 P P 16 13 40.3 +0.6
baz=133,SNR=8.4
E41A Kenton 63.84 347 P P 16 13 38.1 -1.4
baz=162,SNR=27
G36A St. Michael 63.85 343 P P 16 13 39.0 -0.6
baz=157,SNR=14
SHEL Horse Pasture 63.89 100 *e*P P 16 13 42.1 +1.6
comp=Z,722nm,1.5s
SHEL Horse Pasture 63.89 100 *e*P P 16 13 42.1 +1.6
SHEL pmax pmax
comp=Z,722nm,1.5s
F37A Hinrichs Farm, 64.00 344 P P 16 13 39.9 -0.6
baz=158,SNR=19
E40A Wakefield 64.03 347 P P 16 13 40.3 -0.4
baz=161,SNR=124
F38A Pierce - Schro 64.03 345 P P 16 13 40.1 -0.7
baz=159,SNR=34
G35A Watkins 64.04 343 P P 16 13 40.4 -0.4
baz=156,SNR=26
PV09 Paradox Valley 64.11 329 *e*P P 16 13 42.4 +0.6
E39A Mellen 64.11 346 P P 16 13 40.7 -0.6
baz=161,SNR=87
W13A Hualapai Mount 64.17 323 *e*P P 16 13 42.3 +0.2
comp=Z,155nm,1.4s
MONP2 Monument Peak 64.18 320 P P 16 13 42.7 +0.4
baz=132,SNR=47
BAR Barrett 64.19 319 *e*P P 16 13 42.3 +0.2
comp=Z,311nm,1.3s
U15A North Rim 64.22 325 *e*P P 16 13 42.8 +0.3
comp=Z,307nm,1.4s
H33A Prehn Over Nor 64.23 341 P P 16 13 41.8 -0.3
baz=154,SNR=44
I31A Royce, Wessing 64.23 339 P P 16 13 41.7 -0.4
baz=152,SNR=14
IRM Iron Mountain 64.26 321 P P 16 13 43.2 +0.7
baz=134,SNR=75
H32A Carlson Farm, 64.29 340 P P 16 13 42.1 -0.4
baz=153,SNR=38
D41A Chassel 64.33 348 P P 16 13 42.0 -0.7
baz=163,SNR=41
NEE2 Needles Airpor 64.36 322 P P 16 13 43.4 +0.2
baz=134
F36A Milaca 64.37 344 P P 16 13 42.2 -0.8
baz=157,SNR=123
G34A Benson 64.40 342 P P 16 13 42.4 -0.7
baz=155,SNR=13
N23A Red Feather La 64.48 332 P P 16 13 44.3 +0.2
baz=144,SNR=63
N23A Red Feather La 64.48 332 *e*P P 16 13 43.8 -0.4
comp=Z,205nm,1.3s
E38A The Farm, Brul 64.56 346 P P 16 13 43.3 -0.9
baz=160,SNR=32
G33A Ortonville 64.59 341 P P 16 13 43.9 -0.6
baz=154,SNR=45
PHWY Pilot Hill 64.60 333 *e*P P 16 13 44.8 -0.2
comp=Z,362nm,1.5s
PHWY *ep*P **pP** 16 14 11.4 0.0
109C Camp Elliot, M 64.61 319 P P 16 13 45.2 +0.4
baz=132,SNR=9.7
CPE Camp Elliot 64.61 319 *e*P P 16 13 45.3 +0.5
comp=Z,375nm,1.4s
H31A Wolsey 64.61 340 P P 16 13 43.7 -0.9
baz=152
F35A Swanville 64.65 343 P P 16 13 44.2 -0.6
baz=156,SNR=30
BELC Belle Mtn. Jos 64.67 321 P P 16 13 45.8 +0.5
baz=133,SNR=50
PFO Pinyon Flats O 64.69 320 P P 16 13 46.2 +0.8
baz=132,SNR=51
PFO Pinyon Flats O 64.69 320 *e*P P 16 13 45.6 +0.2
comp=Z,292nm,1.4s
PFO Pinyon Flats O 64.69 320 *e*P P 16 13 45.7 +0.2
PFO pmax pmax
comp=Z,293nm,1.4s
E37A Wrenshall 64.73 345 P P 16 13 44.7 -0.6
baz=159
SUSD Miller 64.74 339 P P 16 13 44.8 -0.6
baz=152,SNR=30
F34A Alexandria 64.79 343 P P 16 13 45.3 -0.4
baz=156,SNR=30
LDFC Landfair 64.87 322 *e*P P 16 13 47.4 +0.8
comp=Z,247nm,1.3s
E36A McGregor 64.90 344 P P 16 13 45.8 -0.6
baz=158,SNR=106
KNB Kanab 64.94 325 *e*P P 16 13 47.6 +0.5
comp=Z,870nm,1.5s
KNB Kanab 64.94 325 *e*P P 16 13 48.3 +1.2
O20A White River Ci 64.94 330 P P 16 13 47.5 +0.4
baz=142,SNR=64
O20A White River Ci 64.94 330 *e*P P 16 13 47.0 -0.1
comp=Z,344nm,1.3s
PKCU Pink Cliffs 64.97 326 *e*P P 16 13 48.5 +1.1
comp=Z,2μm,0.8s
G32A Webster 64.98 341 P P 16 13 46.1 -0.9
baz=153,SNR=7.1
GMRC Granite Mounta 65.00 322 P P 16 13 48.2 +0.8
baz=133,SNR=62
MURC Murrieta 65.13 320 P P 16 13 49.1 +0.8
baz=132,SNR=21
LCMT Little Creek M 65.17 325 *e*P P 16 13 49.0 +0.4
comp=Z,435nm,1.7s
G31A Conde 65.18 340 P P 16 13 47.3 -1.0
baz=153,SNR=10
E35A Pequot Lakes 65.25 344 P P 16 13 48.1 -0.6
baz=157,SNR=20
C40A Isle Royale Na 65.27 348 P P 16 13 47.7 -1.0
baz=162,SNR=83
SRU San Rafael Swe 65.27 328 *e*P P 16 13 48.9 -0.4
comp=Z,427nm,1.5s
SRU San Rafael Swe 65.27 328 *e*P P 16 13 49.4 +0.2
D37A Cotton 65.29 345 P P 16 13 48.3 -0.6
baz=159,SNR=49
MTPU Mount Pierson 65.34 326 *e*P P 16 13 50.1 +0.2
comp=Z,551nm,1.9s
C39A Grand Marais 65.38 347 P P 16 13 48.5 -0.9
baz=161,SNR=170
BBRC Big Bear Solar 65.41 320 P P 16 13 51.1 +0.9
baz=132,SNR=5.8
F32A Veblen 65.41 341 P P 16 13 49.0 -0.8
baz=154
E34A Wadena 65.42 343 P P 16 13 49.5 -0.2
baz=156,SNR=16
HEC Hector,Ludlow 65.43 321 P P 16 13 51.1 +0.9
baz=133,SNR=57
D36A Goodland 65.49 345 P P 16 13 49.3 -0.9
baz=158,SNR=25
SZCU Shurtz Canyon 65.50 325 *e*P P 16 13 51.5 +0.8
comp=Z,587nm,1.7s
P18A Preston Nutter 65.53 329 *e*P P 16 13 50.6 -0.4
comp=Z,443nm,1.5s
C38A Sawbill Land. 65.54 346 P P 16 13 49.3 -1.2
baz=160,SNR=93
SCI2 San Clemente I 65.58 318 P P 16 13 51.8 +0.7
baz=130,SNR=8.0
TUQ Turquoise Moun 65.60 322 P P 16 13 51.7 +0.3
baz=133,SNR=38
CCUT Cedar City 65.62 325 *e*P P 16 13 52.5 +0.9
comp=Z,499nm,1.5s
D35A Remer 65.63 344 P P 16 13 50.1 -1.0
baz=157,SNR=7.0
E33A Westby DABS, E 65.65 342 P P 16 13 50.7 -0.5
baz=155,SNR=16
P17A Butcher Ranch, 65.66 328 *e*P P 16 13 51.2 -0.5
comp=Z,479nm,1.4s
MSU Marysvale 65.68 327 *e*P P 16 13 52.2 +0.2
MSU Marysvale 65.68 327 *e*P P 16 13 52.7 +0.8
RWWY Rawlins 65.69 332 *e*P P 16 13 50.7 -1.2
comp=Z,934nm,1.8s
F31A Hecla 65.76 341 P P 16 13 51.6 -0.3
baz=153,SNR=32
C37A Embarrass 65.76 346 P P 16 13 51.1 -0.9
baz=159,SNR=67
TMUT Trail Mountain 65.76 328 *e*P P 16 13 52.4 -0.1
comp=Z,65nm,0.9s
CIS Catalina Islan 65.77 319 P P 16 13 52.8 +0.5
baz=131,SNR=9.2
EYMN Ely 65.80 346 P P 16 13 51.0 -1.2
baz=160,SNR=89
EYMN Ely 65.80 346 *e*P P 16 13 50.7 -1.5
comp=Z,224nm,1.3s
BFSC Mount Baldy Ra 65.84 320 P P 16 13 53.6 +0.7
baz=132,SNR=24
RRX Edison Barstow 65.86 321 P P 16 13 53.9 +1.0
baz=132
SHPR Sheep Range 65.89 323 *e*P P 16 13 53.8 +0.5
comp=Z,362nm,1.5s
FMP Fort Macarthur 65.90 319 P P 16 13 53.1 +0.1
baz=131
TCRU Three Creeks R 65.90 327 *e*P P 16 13 54.0 +0.6
comp=Z,474nm,1.5s
D34A Park Rapids 65.95 343 P P 16 13 52.2 -0.9
baz=156,SNR=24
C36A Pine Crest Far 65.95 345 P P 16 13 52.3 -0.8
baz=158,SNR=55
GSC Goldstone, Bar 66.03 321 P P 16 13 54.9 +0.8
baz=133,SNR=14
GSC Goldstone, Bar 66.03 321 *e*P P 16 13 54.5 +0.4
comp=Z,283nm,1.4s
GSC *ep*P **PcP** 16 14 23.1 -0.8
GSC Goldstone, Bar 66.03 321 *e*P P 16 13 54.5 +0.4
GSC *e**PP **PcP** 16 14 23.1 -0.8
GSC pmax pmax
comp=Z,283nm,1.4s
E32A Braaten, Kindr 66.05 342 P P 16 13 53.2 -0.5
baz=154,SNR=12
MWC Mount Wilson 66.08 320 *e*P P 16 13 54.7 +0.2
comp=Z,314nm,1.4s
MWC Mount Wilson 66.08 320 *e*P P 16 13 55.3 +0.8
SHOC Shoshone, Teco 66.12 322 P P 16 13 54.4 -0.1
baz=133,SNR=14
PASC Pasadena Art C 66.13 320 *e*P P 16 13 55.2 +0.7
comp=Z,315nm,1.4s
K22A Casper 66.16 333 P P 16 13 55.1 +0.3
baz=144,SNR=58
K22A Casper 66.16 333 *e*P P 16 13 54.4 -0.4
comp=Z,334nm,1.3s
K22A *ep*P **pP** 16 14 21.9 +0.5

D33A	AnnSam, Waubun	66.18	343	P	P	16 13 54.0 -0.7
	baz=155,SNR=7.5					
C35A	Jirik Farms, M	66.19	344	P	P	16 13 53.8 -0.8
	baz=157,SNR=58					
TAOE	Nuku Hiva Isla	66.24	267	eS	S	16 22 36.8 -0.4
	comp=Z,4µm,24.0s					
TAOE				eLQ	LQ	16 31 01.6
	comp=Z,6µm,28.5s					
TAOE				eLR	LR	16 33 49.4
	comp=Z,8µm,28.4s					
E31A	Nome	66.27	341	P	P	16 13 55.0 -0.2
	baz=153,SNR=46					
DECC	Green Verdugo	66.27	320	P	P	16 13 56.4 +0.9
	baz=131,SNR=6.0					
RSSD	Black Hills	66.33	336	P	P	16 13 56.2 +0.2
	baz=147					
RSSD	Black Hills	66.33	336	eP	P	16 13 55.7 -0.3
	comp=Z,417nm,1.5s					
RSSD	Black Hills	66.33	336	eP	P	16 13 56.2 +0.2
SNCC	San Nicolas Is	66.38	318	P	P	16 13 56.5 +0.3
	baz=130					
SNCC	San Nicolas Is	66.38	318	eP	P	16 13 56.9 +0.6
	comp=Z,320nm,1.3s					
C34A	RKJ Ranch, Bem	66.39	344	P	P	16 13 55.2 -0.7
	baz=156					
VNA3	Neumayer Olymp	66.42	162	P	P	16 13 56.7 +0.8
EDW2	Edwards Air Fo	66.48	320	P	P	16 13 57.3 +0.5
	baz=132,SNR=39					
D32A	Dogwood Acres,	66.52	342	P	P	16 13 56.4 -0.3
	baz=154,SNR=27					
MPU	Maple Canyon	66.52	328	eP	P	16 13 57.0 -0.2
	comp=Z,304nm,1.4s					
PSUT	Pine Spring	66.60	326	eP	P	16 13 58.2 +0.4
	comp=Z,219nm,1.4s					
BLG	Laguna Peak, P	66.64	319	P	P	16 13 58.5 +0.6
	baz=130,SNR=11					
VNA1	Neumayer--Stat	66.65	161	P	P	16 13 58.5 +1.2
D31A	Mcclaflin, Tow	66.65	341	P	P	16 13 57.3 -0.3
	baz=153,SNR=16					
LRMC	Laurel Mtn Rad	66.68	321	P	P	16 13 59.0 +0.7
	baz=132,SNR=58					
NLU	North Lily Min	66.70	328	eP	P	16 13 58.5 +0.2
	comp=Z,343nm,1.5s					
C33A	Trail	66.72	343	P	P	16 13 57.4 -0.6
	baz=156,SNR=7.4					
B35A	Bob, Littlefor	66.73	345	P	P	16 13 57.4 -0.7
	baz=158,SNR=125					
OSI	Osito Audit: C	66.75	320	P	P	16 13 58.5 -0.1
	baz=131					
OSI	Osito Audit: C	66.75	320	eP	P	16 13 59.6 +1.0
	comp=Z,128nm,1.1s					
TPNV	Topopah Spring	66.83	323	P	P	16 14 00.2 +1.0
	baz=134,SNR=81					
TPNV	Topopah Spring	66.83	323	eP	P	16 13 59.2 0.0
	comp=Z,242nm,1.4s					
TPNV	Topopah Spring	66.83	323	eP	P	16 14 00.4 +1.2
FURC	Furnace Creek,	66.86	322	P	P	16 14 00.1 +0.9
	baz=133,SNR=6.0					
JLU	Jordanelle	66.87	329	eP	P	16 13 59.9 +0.4
	comp=Z,417nm,1.4s					
SCZ2	Santa Cruz Isl	66.93	319	P	P	16 14 00.1 +0.4
	baz=130,SNR=7.2					
MPMC	Manual Prospec	66.95	321	P	P	16 14 00.5 +0.5
	baz=132,SNR=50					
C32A	Crookston	67.00	343	P	P	16 13 59.4 -0.4
	baz=155,SNR=7.3					
VNA2	Neumayer--Watz	67.01	161	P	P	16 14 00.4 +0.8
	baz=294,slow=8.4					
CTU	Camp Tracy	67.08	328	eP	P	16 14 00.7 0.0
	comp=Z,195nm,1.6s					
B34A	Aery, Baudette	67.08	344	P	P	16 13 59.8 -0.6
	baz=157,SNR=24					
B33A	Robert and Kas	67.14	343	P	P	16 13 60.0 -0.7
	baz=156,SNR=7.8					
ARVC	Arvin	67.16	320	P	P	16 14 02.0 +0.9
	baz=131,SNR=8.9					
DAC	Darwin (Calif)	67.16	322	eP	P	16 14 01.6 +0.2
	comp=Z,195nm,1.3s					
DAC				epP	PcP	16 14 29.6 +0.9
DAC	Darwin (Calif)	67.16	322	eP	P	16 14 01.6 +0.2
DAC				e*PP	PcP	16 14 29.6 +0.9
DAC				pmax	pmax	
	comp=Z,195nm,1.3s					
TCUT	Toone Canyon	67.23	329	eP	P	16 14 01.5 -0.3
	comp=Z,926nm,1.7s					
TCUT				epP	PcP	16 14 31.5 +2.6
AGMN	Agassiz Nation	67.24	343	P	P	16 14 00.9 -0.4
	baz=156,SNR=81					
AGMN	Agassiz Nation	67.24	343	eP	P	16 14 00.1 -1.2
	comp=Z,334nm,1.4s					
AGMN				epP	PcP	16 14 28.6 +0.2
DUG	Dugway, Tooele	67.26	327	P	P	16 14 02.6 +0.8
	baz=138,SNR=112					
DUG	Dugway, Tooele	67.26	327	eP	P	16 14 02.0 +0.2
	comp=Z,408nm,1.3s					
DUG				epP	PcP	16 14 31.4 +2.5
DUG	Dugway, Tooele	67.26	327	eP	P	16 14 02.7 +0.8
SBC	Santa Barbara	67.26	319	P	P	16 14 01.7 0.0
	baz=130					
ISA	Isabella, Lake	67.29	321	P	P	16 14 02.7 +0.7
	baz=131,SNR=74					
ISA	Isabella, Lake	67.29	321	eP	P	16 14 02.2 +0.2
	comp=Z,239nm,1.3s					
ISA	Isabella, Lake	67.29	321	eP	P	16 14 02.9 +0.9
C31A	Landman Farms,	67.32	342	P	P	16 14 01.4 -0.4
	baz=154,SNR=25					
R11A	Troy Canyon, C	67.42	324	P	P	16 14 04.1 +1.1
	baz=135,SNR=155					
R11A	Troy Canyon, C	67.42	324	eP	P	16 14 03.4 +0.5
	comp=Z,371nm,1.7s					
GRAC	Grapevine Rang	67.51	322	P	P	16 14 04.3 +0.9
	baz=133,SNR=28					
B32A	Ashes, Strandq	67.52	343	P	P	16 14 02.4 -0.6
	baz=155,SNR=33					
CWC	Cottonwood Cre	67.56	321	P	P	16 14 04.8 +1.0
	baz=132					
BW06	Boulder Array	67.61	331	P	P	16 14 03.4 -0.7
	baz=141,SNR=72					
BW06	Boulder Array	67.61	331	eP	P	16 14 03.2 -0.9
	comp=Z,210nm,1.4s					
PD31	Pinedale Array	67.61	331	eP	P	16 14 02.9 -1.2
PD31				epP	pP	16 14 32.4 +1.7
PDAR	Pinedale Array	67.61	331	P	P	16 14 03.6 -0.5
	comp=Z,66nm,1.2s,baz=141,slow=5.7,SNR=124					
PDAR				S	S	16 22 51.4 -1.4
	comp=Z,0.2nm,0.5s,baz=165,slow=35,SNR=2.1					
PDAR	Pinedale Array	67.61	331	eP	P	16 14 02.8 -1.3
PDAR				epP	pP	16 14 32.2 +1.4
PDAR				S	S	16 22 51.4 -1.4
PKM	Mcpherson Peak	67.61	319	P	P	16 14 05.0 +0.8
	baz=130,SNR=27					
HWUT	Hardware Ranch	67.68	329	eP	P	16 14 03.9 -0.6
	comp=Z,228nm,1.3s					
HWUT				epP	pP	16 14 32.4 +1.3
A33A	Warroad	67.69	344	P	P	16 14 03.6 -0.6
	baz=156,SNR=25					
VES	Vestal, Richgr	67.78	320	P	P	16 14 05.7 +0.7
	baz=131,SNR=48					
B31A	Greenbush Farm	67.86	342	P	P	16 14 04.5 -0.8
	baz=154					
SPUT	South Promonto	67.90	329	eP	P	16 14 05.7 -0.2
	comp=Z,277nm,1.3s					
SPUT				epP	pP	16 14 34.9 +2.4
BGU	Big Grassy Mou	67.91	328	eP	P	16 14 05.8 0.0
	comp=Z,216nm,1.4s					
BGU				epP	pP	16 14 33.1 +0.6
MDND	Maddock	67.95	341	P	P	16 14 06.3 +0.5
	baz=152,SNR=62					
MDND	Maddock	67.95	341	eP	P	16 14 06.1 +0.3
	comp=Z,1µm,1.2s					
MDND				epP	pP	16 14 33.7 +1.1
A32A	Rocking H Ranc	67.98	343	P	P	16 14 05.0 -1.0
	baz=155,SNR=20					
PCED	Cedros	67.99	36	eP	P	16 14 06.0 -0.2
	comp=Z,410nm,1.5s					
PCAN	Candelaria	68.00	36	eP	P	16 14 06.3 0.0
	comp=Z,247nm,1.2s					
SMMC	Simmler	68.00	319	P	P	16 14 07.1 +0.7
	baz=130,SNR=13					
PICO	Pico	68.06	36	eP	P	16 14 07.9 +1.2
	comp=Z,356nm,1.3s					
TIN	Tinemaha, Big	68.06	322	P	P	16 14 07.9 +1.0
	baz=132,SNR=6.5					
A31A	Linda, St. Vin	68.19	343	P	P	16 14 06.5 -0.7
	baz=154					
ROSA	Rosais	68.31	36	eP	P	16 14 09.8 +1.5
	comp=Z,327nm,1.0s					
ROSA	Rosais	68.31	36	eP	P	16 14 09.3 +1.1
	comp=Z,334nm,1.2s					
AHID	Auburn Hatcher	68.33	330	eP	P	16 14 08.8 +0.2
AHID				epP	pP	16 14 37.5 +2.2
PMAN	Manadas	68.34	36	eP	P	16 14 09.6 +1.2
	comp=Z,484nm,1.1s					
HVU	Hansel Valley	68.41	329	eP	P	16 14 08.6 -0.4
	comp=Z,234nm,1.4s					
HVU	Hansel Valley	68.41	329	eP	P	16 14 08.6 -0.4
HVU				pmax	pmax	
	comp=Z,234nm,1.4s					
PAGB	Antelope Grade	68.43	320	eP	P	16 14 09.9 +0.8
SNAA	Sanae	68.63	161	P	P	16 14 10.6 +0.7
SNAA	Sanae	68.63	161	P	P	16 14 10.6 +0.7
	comp=Z,120nm,0.6s,baz=301,slow=6.8					
SNAA				pP	pP	16 14 35.9 -0.7
	comp=Z,150nm,1.0s,baz=259,slow=7.7,SNR=9.2					
SNAA				S	S	16 23 04.1 +0.2
	comp=Z,1.1nm,1.0s,baz=229,slow=19,SNR=5.1					
SNAA				PKP2bc		16 42 22.4
	comp=Z,3.0nm,1.1s,baz=209,slow=0.5,SNR=7.6					
SNAA				LR	LR	16 42 24.5
	comp=Z,1µm,20.6s,baz=294,slow=34					
SNAA	Sanae	68.63	161	eP	P	16 14 09.8 -0.1
SNAA				epP	PcP	16 14 35.3 +1.2
SNAA				esP	sP	16 14 46.4 -1.8
SNAA				S	S	16 23 04.1 +0.2
SNAA				⇑e		16 42 22.4
SNAA	Sanae	68.63	161	c iP	P	16 14 10.3 +0.4
PGRA	Graciosa	68.67	36	eP	P	16 14 11.4 +0.9
	comp=Z,618nm,1.4s					
REDW	Red Top Meadow	68.67	331	eP	P	16 14 10.4 -0.3
	comp=Z,370nm,1.4s					
REDW				epP	pP	16 14 39.9 +2.4
SNOW	Snow King Moun	68.70	331	eP	P	16 14 10.5 -0.5
SNOW				epP	pP	16 14 38.7 +1.0
LOHW	Long Hollow	68.75	331	eP	P	16 14 10.6 -0.6
LOHW				epP	pP	16 14 39.0 +1.1
MLAC	Mammoth, Mammo	68.81	322	P	P	16 14 12.6 +0.9
	baz=132,SNR=11					
TPAW	Teton Pass	68.82	331	eP	P	16 14 11.3 -0.4
TPAW				epP	pP	16 14 40.2 +1.8
ADH	Angra Heroismo	68.84	37	eP	P	16 14 13.2 +1.7
	comp=Z,399nm,1.4s					
OMMB	Old Mammoth Mi	68.89	322	eP	P	16 14 12.4 +0.1
	comp=Z,262nm,1.3s					
OMMB				epP	pP	16 14 40.4 +1.3
MOOW	Moose Ponds	68.92	331	eP	P	16 14 11.8 -0.4
	comp=Z,183nm,1.4s					
MOOW				epP	pP	16 14 40.5 +1.5
ELK	Elko	68.93	326	P	P	16 14 14.6 +2.2
	comp=Z,41nm,1.1s,baz=179,slow=5.0,SNR=97					
ELK				S	S	16 23 08.6 +0.1
	comp=Z,0.3nm,0.3s,baz=214,slow=18,SNR=2.2					
ELK				PKPPKP	P'P'df	16 42 24.3 +1.0
	comp=Z,0.2nm,0.3s,baz=337,slow=1.8,SNR=7.5					
ELK				LR	LR	16 46 01.4
	comp=Z,1µm,18.7s,baz=173,slow=37					
PSCM	Serra do Cume	68.94	37	eP	P	16 14 12.7 +0.5
	comp=Z,351nm,1.2s					
NV11	Mina Array Sit	68.94	323	eP	P	16 14 12.5 0.0
	comp=Z,15nm,1.5s					
MDPB	Devils Postpil	68.95	322	eP	P	16 14 12.9 +0.3
FXWY	Fox Creek	68.97	331	eP	P	16 14 12.1 -0.5
	comp=Z,151nm,1.3s					
FXWY				epP	pP	16 14 40.6 +1.3
PSMA	Santa Maria	68.98	39	eP	P	16 14 12.5 +0.1
	comp=Z,199nm,1.5s					
PSMN	Pico do Norte,	69.02	39	eP	P	16 14 12.7 0.0
	comp=Z,256nm,1.6s					
ULM	Lac du Bonnet	69.02	344	P	P	16 14 11.6 -0.9
	comp=Z,40nm,0.5s,baz=154,slow=6.1,SNR=136					
ULM				pP	pP	16 14 38.8 -0.4
	comp=Z,52nm,0.7s,baz=152,slow=5.5,SNR=6.1					
ULM				S	S	16 23 03.2 -5.6
	comp=Z,2.0nm,0.8s,baz=219,slow=20,SNR=2.8					
ULM				PKP2bc		16 42 22.0
	comp=Z,2.7nm,0.7s,baz=358,slow=2.7,SNR=7.2					
ULM				LR	LR	16 47 50.0
	comp=Z,1µm,18.4s,baz=157,slow=39					
ULM	Lac du Bonnet	69.02	344	eP	P	16 14 11.4 -1.0
	comp=Z,483nm,1.4s					
ULM				epP	pP	16 14 39.4 +0.2
ULM				S	S	16 23 03.2 -5.6
ULM				⇑e		16 42 22.0
LHV	Little Huntoon	69.03	323	eP	P	16 14 13.9 +1.2
NV01	Mina Array Sit	69.03	323	eP	P	16 14 12.3 -0.7
NV01				⇑e		16 42 21.6
NVAR	Mina Array Bea	69.03	323	P	P	16 14 14.0 +1.0
	comp=Z,25nm,1.0s,baz=143,slow=5.6,SNR=144					
NVAR				PKP2bc		16 42 22.2
	comp=Z,2.2nm,1.1s,baz=253,slow=3.8,SNR=9.1					
NVAR				LR	LR	16 45 12.4
	comp=Z,1µm,20.0s,baz=242,slow=36					
PMPB	Monarch Peak	69.08	320	eP	P	16 14 13.9 +0.7
IMW	Indian Meadow	69.12	331	eP	P	16 14 13.5 -0.1
	comp=Z,293nm,1.4s					
IMW				epP	pP	16 14 41.1 +0.7
PDA	Ponta Delgada	69.15	38	eP	P	16 14 15.2 +1.7
	comp=Z,474nm,1.6s					
PSET	Sete Cidades	69.17	38	eP	P	16 14 14.3 +0.7
	comp=Z,375nm,1.9s					
CMLA	Cha da Macela	69.24	38	eP	P	16 14 14.5 +0.4
	comp=Z,450nm,0.9s					
CMLA	Cha da Macela	69.24	38	eP	P	16 14 15.0 +0.9
	comp=Z,303nm,0.9s					
CMLA	Cha da Macela	69.24	38	eP	P	16 14 15.0 +0.9
CMLA				pmax	pmax	
	comp=Z,303nm,0.9s					
RYN	Ryan	69.29	323	eP	P	16 14 14.3 -0.2
	comp=Z,164nm,1.4s					
LAO	LASA Array	69.32	336	P	P	16 14 14.6 +0.1
	baz=145,SNR=72					
LAO	LASA Array	69.32	336	eP	P	16 14 14.2 -0.3
	comp=Z,393nm,1.3s					
LAO				epP	pP	16 14 41.9 +0.7
RLMT	Red Lodge	69.33	333	P	P	16 14 15.1 +0.4
	baz=142,SNR=81					
RLMT	Red Lodge	69.33	333	eP	P	16 14 14.5 -0.2
	comp=Z,368nm,1.4s					
RLMT				epP	pP	16 14 42.0 +0.5
KVN	Kaiserville	69.33	323	eP	P	16 14 14.6 -0.2
	comp=Z,140nm,1.3s					
KVN	Kaiserville	69.33	323	eP	P	16 14 15.3 +0.5
H17A	Grant Village	69.34	332	P	P	16 14 15.5 +0.7
	baz=141,SNR=14					
H17A	Grant Village	69.34	332	eP	P	16 14 15.5 +0.7
	comp=Z,256nm,1.5s					
YPP	Pitchstone Pla	69.35	332	eP	P	16 14 15.0 +0.1
YPP				epP	pP	16 14 43.9 +2.2
BART	Pico Bartolome	69.46	38	eP	P	16 14 16.3 +0.8
	comp=Z,907nm,1.4s					
YFT	Old Faithful	69.50	332	eP	P	16 14 17.8 +1.9
YFT				epP	pP	16 14 45.5 +2.9
YNR	Norris Junctio	69.64	332	eP	P	16 14 17.8 +1.1
	comp=Z,125nm,1.2s					
MACI	Morro de la Ar	69.71	51	eP	P	16 14 17.1 -0.3
	comp=Z,415nm,1.1s					
YMR	Madison River	69.73	332	eP	P	16 14 17.9 +0.7
	comp=Z,399nm,1.3s					
YMR				epP	pP	16 14 46.8 +2.8
WAKR	Walker	69.74	322	eP	P	16 14 18.5 +1.1
	comp=Z,276nm,1.5s					
YHH	Holmes Hill	69.77	332	eP	P	16 14 18.2 +0.6
	comp=Z,361nm,1.4s					
YHH				epP	pP	16 14 45.9 +1.5
BMN	Battle Mountai	69.78	325	eP	P	16 14 17.2 -0.3
	comp=Z,286nm,2.0s					
BMN	Battle Mountai	69.78	325	eP	P	16 14 17.6 +0.1
SAO	San Andreas Ge	69.83	320	eP	P	16 14 17.9 +0.2
	comp=Z,156nm,1.5s					
SAO	San Andreas Ge	69.83	320	eP	P	16 14 18.9 +1.2
YHB	Horse Butte	69.90	332	eP	P	16 14 18.9 +0.7
	comp=Z,222nm,1.2s					
YERR	Yerington	69.94	323	eP	P	16 14 19.1 +0.5
	comp=Z,370nm,1.5s					
CMB	Columbia Colle	70.00	321	eP	P	16 14 18.7 -0.1
	comp=Z,130nm,1.5s					
CMB	Columbia Colle	70.00	321	eP	P	16 14 19.2 +0.4
GCMT	Greycliff	70.03	333	eP	P	16 14 18.8 -0.1
GCMT				epP	pP	16 14 47.0 +1.3
DGMT	Dagmar	70.04	338	P	P	16 14 19.6 +0.8
	baz=147,SNR=45					
DGMT	Dagmar	70.04	338	eP	P	16 14 19.0 +0.2
	comp=Z,702nm,1.3s					
DGMT				epP	pP	16 14 46.5 +0.9
QLMT	Earthquake Lak	70.07	332	eP	P	16 14 19.9 +0.6
PNTR	Pine Nut	70.22	323	eP	P	16 14 21.3 +1.0
	comp=Z,113nm,0.9s					
LIC	Lamto	70.27	77	ePKIKP	P	16 14 19.2 -1.7
	comp=Z,1µm,1.6s					
VCNR	Virginia City	70.39	323	eP	P	16 14 22.3 +1.0
	comp=Z,191nm,1.3s					
VCNR				epP	pP	16 14 47.2 -1.0
TIC	Toumodi	70.42	77	ePKP1	P	16 14 20.1 -1.7
PAHR	Pah Rah Range	70.51	323	eP	P	16 14 22.7 +0.7
	comp=Z,220nm,1.0s					
RUBR	Rubicon Trail	70.52	322	eP	P	16 14 23.3 +1.1
RUBR				epP	pP	16 14 47.7 -1.3
RUBR				esP	sP	16 14 59.2 -1.3
HLID	Hailey	70.54	329	P	P	16 14 22.9 +0.8
	baz=137,SNR=107					
HLID	Hailey	70.54	329	eP	P	16 14 22.3 +0.2
	comp=Z,187nm,1.4s					
HLID				epP	pP	16 14 50.4 +1.5
DBIC	Dimbokro	70.58	77	P	P	16 14 22.6 -0.1
	comp=Z,144nm,0.8s,baz=228,slow=6.0,SNR=99					
DBIC				S	S	16 23 24.2 -4.2
	comp=Z,3.4nm,0.9s,baz=281,slow=10,SNR=4.2					
DBIC				LR	LR	16 43 24.0
	comp=Z,4µm,21.9s,baz=227,slow=34					
DBIC	Dimbokro	70.58	77	eP	P	16 14 21.8 -0.9
	comp=Z,1µm,1.7s					
DBIC				epP	pP	16 14 50.5 +0.9
DBIC				S	S	16 23 24.2 -4.2
DBIC	Dimbokro	70.58	77	eP	P	16 14 22.7 0.0
KIC	Kosan Boka	70.58	77	ePKP1	P	16 14 20.1 -2.7
	comp=Z,2µm,1.4s					
SCHQ	Schefferville	70.62	3	P	P	16 14 21.9 -0.3
	comp=Z,29nm,0.7s,baz=172,slow=4.4,SNR=25					
SCHQ				S	S	16 23 24.5 -2.9
	comp=Z,1.3nm,0.5s,baz=229,slow=20,SNR=4.7					
SCHQ				LR	LR	16 47 45.6
	comp=Z,2µm,20.0s,baz=190,slow=38					
SCHQ	Schefferville	70.62	3	eP	P	16 14 22.3 +0.1
SCHQ				epP	pP	16 14 49.7 +0.7
SCHQ				S	S	16 23 24.5 -2.9
MCMT	McKenzie Canyo	70.72	331	eP	P	16 14 23.7 +0.4
MCMT				epP	pP	16 14 51.8 +1.7
BOZ	Bozeman (W)	70.74	332	P	P	16 14 23.5 +0.2
	baz=140,SNR=69					
BOZ	Bozeman (W)	70.74	332	eP	P	16 14 23.0 -0.3
	comp=Z,244nm,1.4s					
BOZ				epP	pP	16 14 51.5 +1.4
BOZ	Bozeman (W)	70.74	332	eP	P	16 14 23.5 +0.2
AFDM	Forest Hills D	70.94	322	eP	P	16 14 24.7 +0.2
AFDM				epP	pP	16 14 52.7 +1.3
DLMT	Dillon	71.01	331	eP	P	16 14 25.1 +0.3
	comp=Z,225nm,1.4s					
DLMT				epP	pP	16 14 52.7 +1.0
MFID	Camas Ranch	71.14	328	eP	P	16 14 26.3 +0.6
	comp=Z,506nm,1.3s					
MFID				epP	pP	16 14 55.0 +2.4
BEKR	Beckworth	71.18	323	eP	P	16 14 26.3 +0.2
BEKR				epP	pP	16 14 55.4 +2.4
LRM	Limekiln Ridge	71.29	332	eP	P	16 14 26.8 +0.1
LRM				epP	pP	16 14 55.2 +1.7
MCCM	Marconi Confer	71.58	320	eP	P	16 14 28.8 +0.5
	comp=Z,258nm,1.2s					
ORV	Oroville	71.64	322	eP	P	16 14 29.4 +0.7
	comp=Z,535nm,1.4s					
ORV				epP	pP	16 14 57.5 +1.9
ORV	Oroville	71.64	322	eP	P	16 14 29.4 +0.7
ORV				e*PP	pP	16 14 57.5 +1.9
ORV				pmax	pmax	
	comp=Z,535nm,1.4s					
PMOZ	Porto Moniz, M	71.67	47	eP	P	16 14 29.7 +0.6
	comp=Z,268nm,1.4s					
PMOZ				eS	S	16 23 47.1 +6.6
PMOZ	Porto Moniz, M	71.67	47	eLR	LR	16 36 58.1
	comp=Z,615nm,20.0s					
FUL	Funchal	71.79	47	eP	P	16 14 36.0 +6.4
	comp=Z,102nm,1.9s					
PMAR	Madeira	71.81	47	eP	P	16 14 30.7 +0.7
	comp=Z,211nm,1.7s					
EGMT	Eagleton	71.82	335	P	P	16 14 29.7 +0.1
	baz=142,SNR=74					
EGMT	Eagleton	71.82	335	eP	P	16 14 29.1 -0.5
	comp=Z,384nm,1.4s					
WVOR	Wild Horse Val	71.93	326	eP	P	16 14 30.4 0.0
WVOR				epP	pP	16 14 58.6 +1.2
WVOR	Wild Horse Val	71.93	326	eP	P	16 14 30.7 +0.2
GDXM	Geysers	71.95	321	eP	P	16 14 31.5 +0.9
GDXM				epP	pP	16 15 01.3 +3.8
VAH	Vaihoa	71.99	259	eP	P	16 14 32.5 +1.3
	comp=Z,254nm,1.2s					
VAH				epP	pP	16 14 58.4 +0.2
	comp=Z,392nm,1.3s					
TBI	Tubuai	72.15	250	eS	S	16 23 45.0 -1.3
	comp=Z,2µm,29.8s					
TBI				eLQ	LQ	16 33 36.2
	comp=Z,2µm,34.8s					
TBI				eLR	LR	16 36 36.5
	comp=Z,5µm,36.8s					
HOPS	Hopland Field	72.23	321	eP	P	16 14 33.3 +1.1
	comp=Z,232nm,1.5s					
PMOR	Pomariorio Ree	72.30	259	eP	P	16 14 34.3 +1.3
	comp=Z,424nm,1.3s					
PMOR				epP	pP	16 15 00.4 +0.4
	comp=Z,612nm,1.4s					
O03D	Paynes Creek	72.30	322	P	P	16 14 32.2 -0.4
	baz=130,SNR=19					
PMPS	Porto Santo	72.41	47	eP	P	16 14 34.8 +1.5
	comp=Z,430nm,1.6s					
MOD	Modoc Plateau	72.49	325	eP	P	16 14 34.3 +0.5
	comp=Z,374nm,1.4s					
MOD				epP	pP	16 15 02.4 +1.6
MSO	Missoula	72.72	332	P	P	16 14 35.9 +0.8
	baz=138,SNR=81					
MSO	Missoula	72.72	332	eP	P	16 14 35.5 +0.4
	comp=Z,370nm,1.4s					
MSO				epP	pP	16 15 03.8 +1.8
WDC	Whiskeytown Da	72.91	322	eP	P	16 14 34.9 -1.3
	comp=Z,63nm,1.2s					
WDC	Whiskeytown Da	72.91	322	eP	P	16 14 35.3 -0.9
BMO	Blue Mountains	72.91	328	eP	P	16 14 36.1 -0.1
	comp=Z,177nm,1.4s					
BMO	Blue Mountains	72.91	328	eP	P	16 14 36.3 +0.1
KCPM	Cahto Peak	72.97	321	eP	P	16 14 38.1 +1.4
TVO	Taravao	73.00	256	eP	P	16 14 38.6 +1.3
	comp=Z,42nm,1.3s					
TVO				epP	pP	16 15 04.8 +0.5
	comp=Z,85nm,1.6s					
TIAR	Tiarei	73.13	256	eP	P	16 14 39.2 +1.2
	comp=Z,24nm,1.1s					
NVL	N'lazarevskaya	73.22	160	c iP	P	16 14 38.3 +0.8
NVL				e		16 15 02.8
NVL				e*PP	sP	16 15 17.5 +1.4
NVL				pmax	pmax	
	comp=Z,446nm,1.5s					
N02D	Trinity Center	73.26	323	P	P	16 14 37.5 -0.8
	baz=130,SNR=17					
M04C	Macdoel	73.28	324	P	P	16 14 38.8 +0.3
	baz=130,SNR=33					
PAE	Paea	73.33	256	eP	P	16 14 40.5 +1.4
	comp=Z,16nm,1.0s					
PAE				epP	pP	16 15 06.3 +0.1
	comp=

baz=129,SNR=22
F10A Beach Ranch, E 73.67 329 *e*P **P 16 14 41.1 +0.5**
F10A *e*pP **pP 16 15 08.9 +1.3**
YBH Yreka Blue Hor 73.74 323 P **P 16 14 40.3 -0.9**
comp=Z,28nm,0.9s,baz=96,slow=3.0,SNR=35
YBH pP **pP 16 15 08.3 +0.1**
comp=Z,37nm,0.9s,baz=101,slow=5.0,SNR=8.3
YBH LR LR 16 45 12.9
comp=Z,1µm,21.9s,baz=128,slow=34
YBH Yreka Blue Hor 73.74 323 *e*P **P 16 14 40.6 -0.5**
K04D Chiloquin, OR 73.77 324 P **P 16 14 41.9 +0.6**
baz=131,SNR=12
KHMM Horse Mountain 73.80 322 *e*P **P 16 14 42.4 +0.9**
J05D Fort Rock, OR 73.92 325 P **P 16 14 43.0 +0.8**
baz=131,SNR=32
JCC Jacoby Creek, 73.94 322 *e*P **P 16 14 43.0 +0.8**
JCC *e*pP **pP 16 15 11.8 +2.6**
G08A Pilot Rock 74.06 328 *e*P **P 16 14 43.3 +0.3**
comp=Z,145nm,1.4s
G08A *e*pP **pP 16 15 11.7 +1.7**
KOWA Kowa 74.07 70 P **P 16 14 43.8 +0.3**
comp=Z,213nm,0.8s,baz=240,slow=5.6,SNR=250
KOWA S **SKiKP 16 24 02.8 +1.4**
comp=Z,3.0nm,0.9s,baz=333,slow=4.5,SNR=3.9
KOWA LR LR 16 47 06.7
comp=Z,2µm,20.1s,baz=247,slow=36
KOWA Kowa 74.07 70 *e*P **P 16 14 43.1 -0.3**
comp=Z,319nm,0.8s
KOWA *e* 16 47 06.7
PINE Pine Mountain 74.09 326 *e*P **P 16 14 43.3 +0.1**
comp=Z,288nm,1.3s
PINE *e*pP **pP 16 15 12.1 +1.7**
QSPA South Pole Qui 74.25 180 P **P 16 14 45.0 +1.2**
comp=Z,72nm,0.8s,baz=167,slow=2.1,SNR=141
QSPA pP **pP 16 15 10.3 -0.6**
comp=Z,182nm,1.1s,baz=171,slow=4.0,SNR=14
QSPA South Pole Qui 74.25 180 *e*P **P 16 14 44.4 +0.6**
QSPA *e*pP **pP 16 15 09.5 -1.4**
J04D Umpqua Nationa 74.37 325 P **P 16 14 45.4 +0.5**
baz=130,SNR=13
WALA Waterton Lakes 74.38 333 *e*P **P 16 14 44.6 -0.1**
comp=Z,238nm,1.3s
WALA *e*pP **pP 16 15 13.1 +1.3**
HUMO Hull Mountain 74.44 324 *e*P **P 16 14 44.9 -0.2**
comp=Z,58nm,1.4s
E09A Wood Farm, Sta 74.50 329 *e*P **P 16 14 45.7 +0.4**
comp=Z,171nm,1.2s
E09A *e*pP **pP 16 15 13.8 +1.4**
L02D Cave Junction, 74.53 323 P **P 16 14 46.4 +0.8**
baz=129,SNR=20
I05D Terrebonne, OR 74.67 326 P **P 16 14 47.6 +1.1**
baz=131,SNR=27
FFC Flin Flon 74.70 343 *e*P **P 16 14 45.5 -0.8**
FFC *e*pP **pP 16 15 14.4 +1.0**
FFC Flin Flon 74.70 343 *e*P **P 16 14 45.8 -0.5**
G06A Carlson Farm, 74.89 327 *e*P **P 16 14 48.6 +1.0**
G06A *e*pP **pP 16 15 17.1 +2.3**
I04A Tendick Farm, 74.90 325 P **P 16 14 47.7 -0.1**
baz=130,SNR=9.5
KBO Bosley Butte 74.92 323 *e*P **P 16 14 49.5 +1.5**
KBO *e*pP **pP 16 15 16.0 +0.9**
E08A Dider Farm, El 74.94 329 *e*P **P 16 14 48.0 +0.1**
comp=Z,73nm,1.1s
E08A *e*pP **pP 16 15 15.9 +1.0**
F07A Phinny Hill Vi 74.97 328 *e*P **P 16 14 49.6 +1.6**
comp=Z,351nm,1.4s
F07A *e*pP **pP 16 15 16.0 +0.8**
HAWA Hanford 75.11 328 *e*P **P 16 14 49.8 +0.9**
comp=Z,303nm,1.3s
HAWA *e*pP **pP 16 15 17.9 +2.0**
NEW Newport 75.25 331 P **P 16 14 50.0 +0.3**
comp=Z,23nm,1.1s,baz=104,slow=8.3,SNR=33
NEW S **S 16 24 18.2 -1.9**
comp=Z,1.6nm,0.6s,baz=107,slow=19,SNR=1.7
NEW Newport 75.25 331 P **P 16 14 49.6 0.0**
baz=136,SNR=19
NEW Newport 75.25 331 *e*P **P 16 14 49.3 -0.3**
comp=Z,171nm,1.6s
NEW S **S 16 24 18.2 -1.9**
G05D Wamic, OR 75.25 327 P **P 16 14 51.2 +1.4**
baz=132,SNR=16
D08A Wollman Farm, 75.26 329 *e*P **P 16 14 50.0 +0.3**
comp=Z,601nm,1.9s
D08A *e*pP **pP 16 15 18.1 +1.3**
H04A Detroit Lake 75.35 326 *e*P **P 16 14 50.3 0.0**
comp=Z,179nm,1.3s
H04A *e*pP **pP 16 15 18.4 +0.9**
I03D Drain, OR 75.36 324 P **P 16 14 51.0 +0.7**
baz=130,SNR=10.0
E07A Sunnyside 75.38 328 *e*P **P 16 14 52.0 +1.6**
comp=Z,303nm,1.3s
E07A *e*pP **pP 16 15 19.3 +1.8**
KEBM Edson Butte 75.40 323 *e*P **P 16 14 52.5 +1.8**
KEBM *e*pP **pP 16 15 19.3 +1.5**
C09A Chrisman Ranch 75.46 330 *e*P **P 16 14 51.4 +0.6**
comp=Z,286nm,1.4s
C09A *e*pP **pP 16 15 19.7 +1.7**
COR Corvallis 75.90 325 *e*P **P 16 14 55.0 +1.6**
COR *e*pP **pP 16 15 22.9 +2.4**
COR Corvallis 75.90 325 *e*P **P 16 14 55.0 +1.6**
COR *e**PP **pP 16 15 22.9 +2.4**
LTY Liberty 76.27 328 *e*P **P 16 14 56.2 +0.7**
comp=Z,360nm,1.4s
LTY *e*pP **pP 16 15 24.8 +2.1**
G03D McMinnville, O 76.28 326 P **P 16 14 56.7 +1.2**
baz=130,SNR=5.2
B08A Colville Reser 76.36 330 *e*P **P 16 14 56.2 +0.3**
comp=Z,184nm,1.4s
B08A *e*pP **pP 16 15 24.3 +1.1**
FCC Fort Churchill 76.49 349 *e*P **P 16 14 56.0 -0.4**
FCC *e*pP **pP 16 15 24.2 +0.7**
FCC Fort Churchill 76.49 349 *e*P **P 16 14 56.2 -0.1**
LON Longmire 76.51 328 *e*P **P 16 14 56.8 -0.1**
comp=Z,96nm,1.4s
LON *e*pP **pP 16 15 24.6 +0.5**
LON Longmire 76.51 328 *e*P **P 16 14 57.4 +0.5**
F04D Rainier, OR 76.70 326 P **P 16 14 59.5 +1.6**
baz=130
C06D Leavenworth 76.83 329 P **P 16 14 59.0 +0.4**
baz=132
D05A Enumclaw 76.89 328 *e*P **P 16 14 59.9 +1.0**
comp=Z,310nm,1.1s
D05A *e*pP **pP 16 15 27.3 +1.1**
E03A Lebam 77.29 327 *e*P **P 16 15 01.6 +0.4**
E03A *e*pP **pP 16 15 31.2 +2.8**
B06A Marblemount 77.52 329 *e*P **P 16 15 02.7 +0.4**
comp=Z,176nm,1.1s
B06A *e*pP **pP 16 15 30.0 +0.3**
B05A Bryant 77.66 329 P **P 16 15 03.4 +0.2**
baz=131,SNR=19
A04D Lummi Island 78.26 329 P **P 16 15 07.6 +1.1**
baz=131,SNR=6.2
PGC Sidney 78.59 328 *e*P **P 16 15 09.6 +1.3**
comp=Z,423nm,1.4s
PGC *e*pP **pP 16 15 38.0 +2.4**
TOA1 Torodi Ar. Sit 78.81 73 *e*P **P 16 15 10.3 +0.1**
TOA1 *e*pP **pP 16 15 38.6 +1.0**
TOA1 *e*S **S 16 24 54.5 -5.4**
TOA1 *e* 16 49 18.2
TOA0 Torodi Ar. Sit 78.81 73 *e*P **P 16 15 09.6 -0.7**
TOA0 *e*pP **pP 16 15 37.3 -0.3**
TOA0 *e*pP **pP 16 15 37.4 -0.2**
TORD Torodi Ar. Bea 78.81 73 P **P 16 15 10.3 +0.1**
comp=Z,329nm,0.9s,baz=260,slow=3.9,SNR=485
TORD pP **pP 16 15 38.6 +1.0**
comp=Z,127nm,1.0s,baz=264,slow=4.3,SNR=3.9
TORD S **S 16 24 54.5 -5.5**
comp=Z,5.2nm,1.3s,baz=301,slow=1.9,SNR=6.9
TORD LR LR 16 49 18.2
comp=Z,2µm,19.2s,baz=245,slow=35
LLLB Lillooet 79.11 330 *e*P **P 16 15 11.2 0.0**
comp=Z,355nm,1.4s
LLLB *e*pP **pP 16 15 39.7 +1.1**
IVI Ivigtut 79.27 12 *e*P **P 16 15 11.8 +0.1**
IVI *e*pP **pP 16 15 40.5 +1.4**
FRB Frobisher Bay 79.46 2 LR LR 16 52 32.6
comp=Z,1µm,20.2s,baz=183,slow=37
FRB Frobisher Bay 79.46 2 P **P 16 15 13.0 +0.3**
FRB pmax pmax
comp=Z,79nm,1.9s
RTC Rabat Centre 79.72 50 *e*P **P 16 15 16.1 +1.3**
comp=Z,2µm,1.3s
PFVI Vila Bisbo 79.77 47⇑ *i*P **P 16 15 16.5 +1.5**
comp=Z,436nm,1.8s
PFVI *e*pP **pP 16 15 42.9 +0.5**
PFVI *e*S **S 16 25 11.6 +2.3**
PFVI Vila Bisbo 79.77 47 *e*P **P 16 15 16.4 +1.3**
comp=Z,522nm,1.6s
NRS Narsarsuaq 79.79 13 *e*P **P 16 15 15.2 +0.7**
NRS *e*pP **pP 16 15 42.8 +0.8**
NRS Narsarsuaq 79.79 13 *e*P **P 16 15 15.2 +0.7**
NRS *e**PP **pP 16 15 42.8 +0.8**
MORF Marmelete 79.98 47 *e*P **P 16 15 16.5 +0.3**
MORF *e*S **S 16 25 13.1 +1.4**
MORF AMS AMS 16 48 12.1
comp=Z,1µm,20.1s
MORF Marmelete 79.98 47⇑ *i*P **P 16 15 18.0 +1.8**
comp=Z,618nm,1.7s
MORF *e*pP **sP 16 15 55.3 +0.3**
MORF *e*S **S 16 25 15.3 +3.7**
MORF Marmelete 79.98 47 *e*P **P 16 15 16.5 +0.3**
MORF *e*S **S 16 25 13.0 +1.4**
PTEO Sao Teotonio 80.04 46⇑ *i*P **P 16 15 18.4 +1.9**
comp=Z,867nm,1.6s
PTEO *e*pP **sP 16 15 49.9 -5.4**
PMST Lisbon--Monsan 80.30 45 *e*P **P 16 15 19.0 +1.2**
comp=Z,216nm,1.5s
LIS Lisbon 80.32 45 *e*P **P 16 15 18.2 +0.3**
LIS *e*S **S 16 25 16.5 +1.6**
LIS AMS AMS 16 55 14.6
comp=E,1µm,19.9s
LIS Lisbon 80.32 45 *e*P **P 16 15 18.2 +0.3**
LIS *e*S **S 16 25 16.5 +1.6**
PMAFR Mafra 80.34 45⇑ *i*P **P 16 15 19.3 +1.2**
comp=E,214nm,1.6s
PMAFR *e*S **S 16 25 16.9 +1.6**
PNCL Nicolau / Gran 80.45 46⇑ *i*P **P 16 15 20.4 +1.8**
comp=E,266nm,1.4s
PNCL *e*S **S 16 25 18.9 +2.5**
PBDV Barranco-do-Ve 80.45 47⇑ *i*P **P 16 15 20.5 +1.8**
comp=E,413nm,1.7s
PBDV *e*pP **pP 16 15 46.8 +0.6**
PBDV *e*S **S 16 25 20.4 +3.9**
MESJ Messejana 80.53 46 *e*P **P 16 15 19.4 +0.3**
MESJ *e*PP **PP 16 18 23.8 -0.3**
MESJ *e*S **S 16 25 18.7 +1.4**
MESJ AMS AMS 16 37 08.3
comp=N,1µm,20.1s
MESJ Messejana 80.53 46⇑ *i*P **P 16 15 20.9 +1.8**
comp=N,286nm,1.4s
MESJ *e*pP **pP 16 15 49.7 +3.2**
MESJ Messejana 80.53 46 *e*PP PP 16 18 20.4 -3.8
MESJ Messejana 80.53 46 *e*P **P 16 15 19.4 +0.3**
MESJ *e* 16 18 23.8
MESJ *e*S **S 16 25 18.7 +1.4**
PCVE Castro Verde 80.56 47⇑ *i*P **P 16 15 20.9 +1.6**
comp=N,325nm,1.7s
PCVE *e*S **S 16 25 18.9 +1.3**
SBA Scott Base 80.68 191 *e*P **P 16 15 20.7 +1.4**
SBA *e*pP **pP 16 15 46.2 -0.5**
SBA Scott Base 80.68 191 *e*P **P 16 15 20.9 +1.7**
PVAQ Vaqueiros 80.68 47⇑ *i*P **P 16 15 21.4 +1.5**
comp=N,235nm,2.0s
PVAQ *e*pP **pP 16 15 47.5 +0.2**
PVAQ *e*S **S 16 25 24.2 +5.4**
PVAQ Vaqueiros 80.68 47 *e*LR LR 16 39 21.0
comp=N,996nm,20.0s
PBEJ Beja 80.87 46⇑ *i*P **P 16 15 22.4 +1.5**
comp=N,258nm,1.6s
PBEJ Beja 80.87 46 *e*PP PP 16 18 32.0 +5.1
MDT Midelt 80.89 52 P **P 16 15 22.9 +1.6**
comp=N,93nm,1.1s,baz=254,slow=6.4,SNR=75
MDT S **S 16 25 24.6 +3.2**
comp=N,1.6nm,0.6s,baz=305,slow=1.6,SNR=6.4
MDT LR LR 16 50 40.5
comp=N,432nm,19.3s,baz=265,slow=35
ALMR Almeirim 80.92 45 *e*P **P 16 15 21.5 +0.4**
ALMR *e*S **S 16 25 22.6 +1.4**
ALMR AMS AMS 16 48 28.1
comp=E,2µm,19.4s
ALMR Almeirim 80.92 45⇑ *i*P **P 16 15 22.5 +1.4**
comp=E,450nm,1.3s
ALMR Almeirim 80.92 45 *e*P **P 16 15 21.5 +0.4**
ALMR *e*S **S 16 25 22.6 +1.4**
EVO Evora 81.01 46⇑ *i*P **P 16 15 22.8 +1.2**
comp=E,176nm,2.0s
EVO Evora 81.01 46 *e*PP PP 16 18 32.3 +4.2
PMTG Montargil 81.12 45⇑ *i*P **P 16 15 23.4 +1.2**
comp=E,284nm,1.9s
PMTG Montargil 81.12 45 *e*S **S 16 25 25.2 +1.9**
PTOM Tomar 81.25 45⇑ *i*P **P 16 15 24.0 +1.1**
comp=E,269nm,1.3s
PTOM *e*pP **pP 16 15 51.0 +0.6**
SFS San Fernando 81.32 48 *e*P **P 16 15 25.9 +2.6**
comp=E,225nm,1.0s
SFS San Fernando 81.32 48 *e*P **P 16 15 25.9 +2.6**
SFS pmax pmax
comp=Z,225nm,1.0s
PCAS Casmilo, Conde 81.41 44⇑ *i*P **P 16 15 24.9 +1.2**
comp=Z,156nm,1.5s
PCAS *e*pP **pP 16 15 52.5 +1.3**
PCAS *e*S **S 16 25 29.1 +2.8**
PESTR Estremoz 81.46 46⇑ *i*P **P 16 15 25.4 +1.4**
comp=Z,260nm,1.7s
PESTR Estremoz 81.46 46 *e*S **S 16 25 30.6 +3.7**
PESTR Estremoz 81.46 46 *e*P **P 16 15 24.8 +0.8**
comp=Z,102nm,1.2s
PBAR Barrancos 81.51 46⇑ *i*P **P 16 15 25.8 +1.5**
comp=Z,360nm,1.8s
PBAR *e*pP **pP 16 15 46.0 -5.8**
PBAR *e*S **S 16 25 29.3 +1.9**
VNDA Vanda 81.73 190 P **P 16 15 26.2 +1.4**
comp=Z,11nm,0.8s,baz=131,slow=4.8,SNR=47
VNDA pP **pP 16 15 51.9 -0.4**
comp=Z,82nm,1.1s,baz=139,slow=4.6,SNR=27
VNDA S **S 16 25 32.1 +3.6**
comp=Z,0.6nm,0.8s,baz=193,slow=18,SNR=3.5
VNDA LR LR 16 45 48.6
comp=Z,1µm,18.8s,baz=124,slow=31
VNDA Vanda 81.73 190 *e*P **P 16 15 25.8 +1.0**
VNDA *e*pP **pP 16 15 52.0 -0.4**
VNDA *e*sP **pP 16 15 52.1 -0.2**
VNDA S **S 16 25 32.1 +3.6**
PMRV Marv??o 81.86 45⇑ *i*P **P 16 15 26.9 +0.8**
comp=Z,75nm,2.0s
PMRV Marv??o 81.86 45 *e*S **S 16 25 34.0 +3.0**
PMRV Marv??o 81.86 45 *e*LR LR 16 42 24.1
comp=Z,1µm,18.0s
RAR Rarotonga 81.94 250 LR LR 16 42 53.0
comp=Z,726nm,20.3s,baz=102,slow=29
RAR Rarotonga 81.94 250 *e*pP pP 16 15 52.5 -2.0
PCBR Castelo Branco 81.99 45⇑ *i*P **P 16 15 27.6 +0.8**
comp=Z,146nm,1.4s
PCBR *e*pP **pP 16 15 59.5 +5.2**
PVIS Viseu 82.13 44⇑ *i*P **P 16 15 28.4 +0.8**
comp=Z,284nm,1.7s
PVIS *e*pP **pP 16 15 55.0 -0.1**
MTE Manteigas 82.21 44⇑ *i*P **P 16 15 28.9 +0.9**
comp=Z,225nm,1.6s
MTE Manteigas 82.21 44 *e*S **S 16 25 39.2 +4.5**
MTE Manteigas 82.21 44 *e*LR LR 16 42 42.1
comp=Z,2µm,20.0s
MTE Manteigas 82.21 44 *e*P **P 16 15 28.3 +0.3**
comp=Z,172nm,1.2s
PGAV Gavieira, Arco 82.49 43 *e*P **P 16 15 30.4 +1.0**
comp=Z,395nm,1.8s
PGAV Gavieira, Arco 82.49 43 *e*S **S 16 25 40.2 +2.7**
PGAV Gavieira, Arco 82.49 43 *e*LR LR 16 38 38.3
comp=Z,1µm,22.0s
POLO Lamas de Olo 82.51 43 *e*P **P 16 15 30.5 +0.9**
comp=Z,116nm,1.8s
POLO Lamas de Olo 82.51 43 *e*S **S 16 25 38.7 +0.9**
PVRL Vila Real 82.52 43 *e*P **P 16 15 30.6 +1.1**
comp=Z,282nm,1.8s
PCAB Cabril 82.52 43 *e*P **P 16 15 30.7 +1.2**
comp=Z,332nm,1.6s
SYO Syowa Base 82.88 160⇓ *i*P **P 16 15 30.2 -0.7**
MVO Moncorvo 82.92 44⇑ *i*P **P 16 15 32.7 +1.0**
comp=Z,310nm,1.8s
MVO Moncorvo 82.92 44 *e*S **S 16 25 43.2 +1.3**
MVO Moncorvo 82.92 44 *e*LR LR 16 42 56.3
comp=Z,2µm,20.0s
BBB Bella Bella 83.13 329 P **P 16 15 32.5 +0.2**
comp=Z,71nm,1.1s,baz=119,slow=6.2,SNR=8.1
BBB pP **pP 16 16 01.2 +1.3**
comp=Z,91nm,1.1s,baz=166,slow=4.6,SNR=4.1
PBRG Braganca 83.41 43⇑ *i*P **P 16 15 35.3 +1.1**
comp=Z,482nm,1.6s
WIN Windhoek 83.65 112 P **P 16 15 37.2 +1.1**
WIN pmax pmax
comp=Z,257nm,1.9s
PAB San Pablo 84.01 46 *e*P **P 16 15 38.2 +0.9**
comp=Z,378nm,1.2s
PAB San Pablo 84.01 46 *e*P **P 16 15 38.2 +0.9**
PAB pmax pmax
comp=Z,379nm,1.2s
SFJD Kangerlussuaq 84.23 8 P **P 16 15 37.8 +0.1**
comp=Z,28nm,1.0s,baz=217,slow=5.1,SNR=7.7
SFJD pP **pP 16 16 05.6 +0.3**
comp=Z,34nm,1.0s,baz=201,slow=5.1,SNR=5.0
SFJD S **S 16 25 50.6 -3.2**
comp=Z,3.4nm,0.5s,baz=284,slow=4.2,SNR=3.4
SFJD Kangerlussuaq 84.23 8 *i* P **P 16 15 37.9 +0.3**
comp=Z,35nm,1.1s
SFJD Kangerlussuaq 84.23 8 *e*P **P 16 15 37.5 -0.1**
SFJD *e*pP **pP 16 16 05.7 +0.3**
SFJD *e*pP **pP 16 16 05.8 +0.5**
SFJD Kangerlussuaq 84.23 8 *i* P **P 16 15 37.9 +0.3**
SFJD pmax pmax
comp=Z,35nm,1.1s
ESDC Sonseca Array 84.33 46 P **P 16 15 40.2 +1.3**
comp=Z,126nm,1.1s,baz=248,slow=5.4,SNR=228
ESDC S **S 16 25 59.3 +3.3**
comp=Z,0.1nm,0.3s,baz=290,slow=23,SNR=2.6
ESDC LR LR 16 50 45.4
comp=Z,417nm,20.7s,baz=245,slow=34
ESLA Sonseca Array 84.33 46 *e*P **P 16 15 39.9 +1.0**
comp=Z,438nm,1.4s
SUR Sutherland 84.34 122 *e*P **P 16 15 40.8 +1.4**
comp=Z,347nm,1.5s
SUR *e*pP **pP 16 16 08.1 +1.0**
ES19 SONSECA Array 84.39 46 *e*P **P 16 15 39.9 +0.7**
YKA Yellowknife Ar 84.84 342 P **P 16 15 41.4 +0.7**
comp=Z,50nm,0.9s,baz=136,slow=5.2,SNR=127
YKA pP **pP 16 16 09.1 +0.6**
comp=Z,39nm,0.8s,baz=136,slow=4.9,SNR=8.1
YKA LR LR 16 57 13.5
comp=Z,94nm,19.4s,baz=140,slow=38
YKW3 Yellowknife Ar 84.89 342 *e*P **P 16 15 40.8 -0.3**
comp=Z,192nm,1.3s
YKW3 *e*pP **pP 16 16 09.8 +1.0**
TSUM Tsumeb 84.94 108 *e*P **P 16 15 43.0 +0.4**
comp=Z,436nm,1.3s
TSUM *e*pP **pP 16 16 10.3 +0.1**
ANGG Ammassalik, Gr 85.41 14 *e*P **P 16 15 43.9 +0.3**
ANGG *e*pP **pP 16 16 12.4 +1.1**
TAM Tamanrasset 85.43 65 *e*P **P 16 15 46.3 +1.4**
comp=Z,630nm,1.4s
TAM Tamanrasset 85.43 65 *e*P **P 16 15 46.6 +1.7**
CART Cartagena 85.56 49 *e*P **P 16 15 44.9 0.0**
comp=Z,272nm,1.7s
DIB Dawson Inlet, 85.89 329 *e*P **P 16 15 46.8 +0.6**
comp=Z,89nm,1.3s
DIB *e*pP **pP 16 16 12.6 -1.4**
ILULI Ilulissat 86.25 7 *i* P **P 16 15 47.7 0.0**
comp=Z,51nm,0.9s
ILULI *i* 16 16 15.6
ILULI Ilulissat 86.25 7 *e*P **P 16 15 48.1 +0.4**
ILULI *e*pP **pP 16 16 15.5 +0.1**
ILULI Ilulissat 86.25 7 *e*P **P 16 15 48.1 +0.4**
ILULI *e**PP **pP 16 16 15.5 +0.1**
VAL Valentia 86.36 33⇓ *i*P **P 16 15 48.4 -0.1**
VAL Valentia 86.36 33 *e*S **S 16 26 18.0 +2.8**
ETRT Tiaret 86.41 52 P **P 16 15 51.0 +1.6**
EANR 'Ain N'Sour 86.47 51 P **P 16 15 50.0 +0.4**
ECHA Ech Chlef 86.75 51 P **P 16 15 51.5 +0.7**
EBNR Beni Rached 86.92 51 P **P 16 15 52.0 +0.2**
CRAG Craig 87.44 330 *e*P **P 16 15 53.0 -0.7**
comp=Z,161nm,1.4s
CRAG *e*pP **pP 16 16 21.5 -0.1**
WRAK Wrangell Islan 87.60 331 *e*P **P 16 15 55.0 +0.5**
comp=Z,243nm,1.3s
DLBC Dease Lake 87.72 334 P **P 16 15 56.0 +0.9**
comp=Z,120nm,1.1s,baz=117,slow=3.3,SNR=86
DLBC pP **pP 16 16 23.9 +1.0**
comp=Z,66nm,0.8s,baz=135,slow=3.8,SNR=6.4
DLBC Dease Lake 87.72 334 *e*P **P 16 15 55.8 +0.7**
comp=Z,318nm,1.3s
DLBC *e*pP **pP 16 16 23.2 +0.3**
EMHD Djebel Mahouad 87.96 52 P **P 16 15 57.0 +0.1**
ABA Alger-Bouzarea 88.24 51 P **P 16 16 02.0 +4.0**
QUIF Quistinic 88.45 39 *e*P **P 16 16 01.0 +2.3**
QUIF pmax pmax
comp=Z,393nm,2.0s
EPF Esparros 88.67 44 *e*P **P 16 16 00.1 +0.1**
EPF pmax pmax
comp=Z,161nm,1.5s
BOSA Boshof 89.08 119 P **P 16 16 02.8 +0.4**
comp=Z,8.8nm,0.4s,baz=249,slow=3.2,SNR=17
BOSA pP **pP 16 16 29.9 -0.4**
comp=Z,30nm,0.9s,baz=239,slow=4.1,SNR=8.0
BOSA LR LR 16 53 25.7
comp=Z,1µm,18.8s,baz=249,slow=34
BOSA Boshof 89.08 119 *e*P **P 16 16 01.9 -0.6**
comp=Z,71nm,1.3s
BOSA *e*pP **pP 16 16 29.3 -1.0**
BOSA *e* 16 53 25.7
BOSA Boshof 89.08 119 *e*P **P 16 16 03.1 +0.7**
BOSA *e**PP **pP 16 16 30.2 -0.1**
KHLU Kahalu'u 89.25 290 *e*P **P 16 16 03.2 0.0**
KHLU *e*pP **pP 16 16 29.4 -1.8**
BORG Borgarnes 89.27 20 *e*P **P 16 16 03.4 +1.3**
comp=Z,166nm,1.3s
BORG Borgarnes 89.27 20 *e*P **P 16 16 03.4 +1.3**
BORG pmax pmax
comp=Z,166nm,1.3s
JIS Juneau Island 89.54 332 *e*P **P 16 16 04.4 +0.9**
comp=Z,229nm,1.4s
JIS *e*pP **pP 16 16 31.7 +0.2**
LFF La Frestale 89.68 43 *e*P **P 16 16 04.2 -0.4**
LFF pmax pmax
comp=Z,94nm,1.0s
MFF Saint Martin d 89.77 41 *e*P **P 16 16 04.4 -0.5**
MFF pmax pmax
comp=Z,132nm,1.2s
CKHR Kef el Ahmar 89.83 52 P **P 16 16 07.0 +1.3**
BESE Bessie Mountai 89.91 332 *e*P **P 16 16 06.3 +0.9**
comp=Z,263nm,1.3s
BESE *e*pP **pP 16 16 33.4 +0.1**
GRR Gorron 90.05 39 *e*P **P 16 16 05.4 -0.8**
GRR pmax pmax
comp=Z,21nm,0.8s
MTLF Montolieu 90.06 45 *e*P **P 16 16 06.0 -0.4**
MTLF pmax pmax
comp=Z,116nm,1.4s
DFRA Djebel Bou Aff 90.29 52 P **P 16 16 09.6 +1.8**
RJF Les Rejaudoux 90.33 43 *e*P **P 16 16 07.0 -0.6**
RJF pmax pmax
comp=Z,146nm,1.4s
FLN La Foliniere 90.43 39 *e*P **P 16 16 07.3 -0.6**
FLN pmax pmax
comp=Z,75nm,1.4s
LBTB Lobatse 90.46 116 *e*P **P 16 16 09.2 +0.4**
comp=Z,164nm,1.4s
LBTB *e*pP **pP 16 16 35.8 -1.0**
LBTB Lobatse 90.46 116 *e*P **P 16 16 09.6 +0.7**
CTEI Djebel Teioual 90.53 53 P **P 16 16 09.8 +0.9**
CAF Calviac 90.55 43 *e*P **P 16 16 08.2 -0.5**
CAF pmax pmax
comp=Z,184nm,1.8s
SKAG Skagway 90.58 333 *e*P **P 16 16 09.4 +1.0**
SKAG *e*pP **pP 16 16 36.5 +0.2**
MAW Mawson 90.61 164 P **P 16 16 09.2 +0.7**
comp=Z,41nm,0.8s,baz=213,slow=5.8,SNR=60
MAW pP **pP 16 16 35.1 -1.3**
comp=Z,151nm,1.2s,baz=235,slow=5.4,SNR=12
MAW LR LR 16 57 55.1
comp=Z,591nm,18.6s,baz=226,slow=36
MAW Mawson 90.61 164 *e*P **P 16 16 09.0 +0.5**
MAW *e*pP **pP 16 16 35.3 -1.1**
CASM Ain Smara 90.66 52 P **P 16 16 10.1 +0.7**
KULLO Kullorsuaq 90.81 4⇓ *i*P **P 16 16 09.9 +0.7**
comp=Z,32nm,1.0s
KULLO *i* 16 16 37.7
comp=Z,2µm,20.0s
KULLO Kullorsuaq 90.81 4⇓ *i*P **P 16 16 09.9 +0.7**
KULLO *i* 16 16 37.7
KULLO pmax pmax
comp=Z,32nm,1.0s
KULLO MLR MLR
comp=Z,2µm,20.0s
CKFL Kef-Lekhel 90.88 52 P **P 16 16 11.4 +0.8**
CAEH 'Ain El Ouahch 91.11 52 P **P 16 16 12.6 +1.2**
SUMG Summit 91.12 10 *i* P **P 16 16 13.0 +1.8**
comp=Z,131nm,0.9s

SUMG				*i*			16 16 40.9	
SUMG	**Summit**	**91.12**	**10**	*e*P	**P**		**16 16 12.5**	**+1.3**
SUMG				*ep*P	**pP**		**16 16 40.2**	**+1.1**
SUMG	**Summit**	**91.12**	**10**	*i* P	**P**		**16 16 13.0**	**+1.8**
SUMG				*i*			16 16 40.9	
SUMG				pmax	pmax			
	comp=Z,130nm,0.9s							
TCF	**Toulx Ste Croi**	**91.15**	**42**	*e*P	**P**		**16 16 10.6**	**-0.8**
TCF				pmax	pmax			
	comp=Z,56nm,1.3s							
ABSA	**Djebel Ababsia**	**91.42**	**53**	P	**P**		**16 16 13.5**	**+0.5**
CMAH	**Djebel Manchou**	**91.49**	**52**	P	**P**		**16 16 13.5**	**+0.2**
RES	**Resolute Bay**	**91.51**	**354**	*e*P	**P**		**16 16 12.8**	**+0.4**
RES				*ep*P	**pP**		**16 16 41.1**	**+0.8**
RES	**Resolute Bay**	**91.51**	**354**	*e*P	**P**		**16 16 12.8**	**+0.4**
RES				*e**PP	**pP**		**16 16 41.1**	**+0.8**
KIP	**Kipapa**	**91.68**	**292**	*e*P	**P**		**16 16 14.0**	**-0.4**
KIP				pmax	pmax			
	comp=Z,740nm,1.6s							
EKA	**Eskdalemuir Ar**	**91.68**	**32**	P	**P**		**16 16 13.4**	**-0.2**
	comp=Z,8.0nm,0.9s,baz=247,slow=5.3,SNR=11							
TULEG	**Thule**	**92.29**	**1**	*e*P	**P**		**16 16 16.9**	**+0.9**
TULEG				*ep*P	**pP**		**16 16 43.5**	**-0.4**
SSB	**Saint Sauveur**	**92.31**	**44**	*e*P	**P**		**16 16 17.5**	**+0.7**
	comp=Z,153nm,1.8s							
SSB	**Saint Sauveur**	**92.31**	**44**	*e*P	**P**		**16 16 17.5**	**+0.7**
SSB				pmax	pmax			
	comp=Z,153nm,1.8s							
KEST	**Kesra**	**92.69**	**54**	P	**P**		**16 16 19.0**	**+0.1**
	comp=Z,16nm,1.1s,baz=168,slow=5.2,SNR=11							
KEST				PP	**PP**		**16 19 57.4**	**-5.0**
	comp=Z,8.8nm,0.9s,baz=211,slow=14,SNR=5.3							
KEST				LR	LR		16 57 17.9	
	comp=Z,959nm,21.4s,baz=204,slow=35							
KEST	**Kesra**	**92.69**	**54**	*e*P	**P**		**16 16 19.3**	**+0.4**
KEST				*e*PP	**PP**		**16 19 57.0**	**-5.4**
TAMR	**Tamra**	**92.91**	**52**	*e*P	**P**		**16 16 18.3**	**-1.5**
	comp=Z,167nm,1.4s							
SCO	**Scoresbysund**	**92.92**	**15**	*i* P	**P**		**16 16 19.8**	**+0.8**
	comp=Z,14nm,1.1s							
SCO	**Scoresbysund**	**92.92**	**15**	*e*P	**P**		**16 16 20.2**	**+1.2**
SCO				*ep*P	**pP**		**16 16 48.3**	**+1.3**
SCO	**Scoresbysund**	**92.92**	**15**	*e*P	**P**		**16 16 20.7**	**+1.7**
BNI	**Bardonecchia**	**93.66**	**44**	*e*P	**P**		**16 16 23.6**	**+0.4**
	comp=Z,33nm,1.4s							
BNI	**Bardonecchia**	**93.66**	**44**	*e*P	**P**		**16 16 24.1**	**+0.9**
LPL	**La Plagne**	**93.84**	**44**	*e*P	**P**		**16 16 24.4**	**+0.3**
LPL				pmax	pmax			
	comp=Z,69nm,1.4s							
LPG	**La Plagne**	**93.85**	**44**	*e*P	**P**		**16 16 24.6**	**+0.3**
LPG				pmax	pmax			
	comp=Z,69nm,1.4s							
DOU	**Dourbes**	**94.00**	**39**	⇓P	**P**		**16 16 25.2**	**+0.8**
	comp=Z,42nm,2.1s							
DOU	**Dourbes**	**94.00**	**39**	P	**P**		**16 16 26.3**	**+1.9**
UCC	**Uccle**	**94.10**	**38**	⇑P	**P**		**16 16 25.2**	**+0.3**
HAU	**Haudompre**	**94.39**	**41**	*e*P	**P**		**16 16 25.6**	**-0.7**
HAU				pmax	pmax			
	comp=Z,137nm,2.0s							
SENIN	**Lac Senin/Sane**	**94.49**	**43**	*e*P	**P**		**16 16 27.7**	**+0.6**
	comp=Z,98nm,1.9s							
TGL	**Tana Glacier**	**94.50**	**332**	*e*P	**P**		**16 16 26.8**	**+0.2**
	comp=Z,44nm,1.2s							
DAWY	**Dawson**	**94.52**	**336**	*e*P	**P**		**16 16 25.8**	**-0.8**
	comp=Z,54nm,1.3s							
BCLA	**Clavier**	**94.54**	**39**	⇓P	**P**		**16 16 27.5**	**+0.6**
	comp=Z,33nm,2.2s							
BCLA				⇓AP	**pP**		**16 16 58.4**	**+3.6**
INK	**Inuvik**	**94.58**	**341**	P	**P**		**16 16 26.5**	**-0.1**
	comp=Z,20nm,1.0s,baz=113,slow=5.3,SNR=24							
INK				pP	**pP**		**16 16 55.1**	**+0.5**
	comp=Z,26nm,0.9s,baz=99,slow=5.6,SNR=8.7							
INK	**Inuvik**	**94.58**	**341**	*e*P	**P**		**16 16 25.9**	**-0.7**
	comp=Z,53nm,1.2s							
INK				*ep*P	**pP**		**16 16 54.5**	**-0.1**
CRQM	**Cirque**	**94.64**	**332**	*e*P	**P**		**16 16 27.5**	**+0.1**
	comp=Z,46nm,1.2s							
HINF	**Hinteralfeld**	**94.66**	**42**	*e*P	**P**		**16 16 26.6**	**-1.0**
HINF				pmax	pmax			
	comp=Z,117nm,1.9s							
WLF	**Walferdange**	**94.81**	**40**	⇓P	**P**		**16 16 28.5**	**+0.4**
	comp=Z,66nm,2.0s							
WLF	**Walferdange**	**94.81**	**40**	*e*P	**P**		**16 16 28.3**	**+0.1**
	comp=Z,270nm,1.9s							
WLF				*ep*P	**pP**		**16 16 55.0**	**-1.1**
WLF	**Walferdange**	**94.81**	**40**	*e*P	**P**		**16 16 29.0**	**+0.9**
BEBN	**Eben Emael**	**94.89**	**39**	⇑P	**P**		**16 16 29.0**	**+0.6**
AFI	**Afiamalu**	**94.93**	**254**	LR	LR		16 49 55.6	
	comp=Z,702nm,21.8s,baz=118,slow=30							
ECH	**Echery**	**94.97**	**41**	*e*P	**P**		**16 16 28.6**	**-0.4**
	comp=Z,121nm,1.7s							
ECH	**Echery**	**94.97**	**41**	*e*P	**P**		**16 16 29.1**	**+0.1**
BMRM	**Bremner River**	**95.38**	**332**	*e*P	**P**		**16 16 30.0**	**-0.6**
	comp=Z,32nm,1.4s							
EGAK	**Eagle**	**95.53**	**336**	*e*P	**P**		**16 16 30.8**	**-0.3**
	comp=Z,51nm,1.3s							
BKZ	**Black Stump Fm**	**95.57**	**227**	*e*P	**P**		**16 16 32.0**	**-0.1**
BKZ				*ep*P	**pP**		**16 16 59.6**	**-0.5**
SLE	**Schleitheim**	**95.69**	**42**	P	**P**		**16 16 33.2**	**+0.9**
LSZ	**Lusaka**	**95.77**	**108**	*e*P	**P**		**16 16 35.2**	**+1.7**
	comp=Z,26nm,1.3s							
LSZ	**Lusaka**	**95.77**	**108**	*e*P	**P**		**16 16 35.6**	**+2.1**
TUE	**Stuetta**	**95.87**	**43**	*e*P	**P**		**16 16 33.0**	**-0.3**
	comp=Z,198nm,2.0s							
DIV	**Divide**	**95.97**	**332**	*e*P	**P**		**16 16 32.4**	**-0.9**
	comp=Z,40nm,1.4s							
KLU	**Klutina**	**96.17**	**332**	*e*P	**P**		**16 16 34.0**	**-0.2**
	comp=Z,30nm,1.1s							
KLU				*ep*P	**pP**		**16 17 01.6**	**-0.6**
CLTB	**Caltabellotta**	**96.20**	**53**	*e*P	**P**		**16 16 35.5**	**+0.6**
	comp=Z,97nm,1.9s							
DOT	**Dot Lake**	**96.21**	**335**	*e*P	**P**		**16 16 34.0**	**-0.3**
	comp=Z,79nm,1.3s							
SCRK	**Sand Creek**	**96.31**	**335**	*e*P	**P**		**16 16 34.5**	**-0.3**
	comp=Z,28nm,1.3s							
STU	**Stuttgart**	**96.43**	**41**	*e*P	**P**		**16 16 36.0**	**+0.4**
STU				*ep*P	**pP**		**16 17 03.0**	**-0.6**
STU	**Stuttgart**	**96.43**	**41**	*e*P	**P**		**16 16 36.4**	**+0.8**
DAVA	**Damuels**	**96.45**	**43**	*i* PcP	**PcP**		**16 16 36.5**	**+0.4**
	comp=Z,57nm,1.7s,SNR=12							
DAVA				*i* pP	**pP**		**16 17 04.6**	**+0.6**
	comp=Z,34nm,1.1s							
FUORN	**Ofenpass-Fuorn**	**96.52**	**43**	*e*P	**P**		**16 16 36.9**	**+0.6**
	comp=Z,51nm,1.4s							
PAX	**Paxson**	**96.53**	**334**	*e*P	**P**		**16 16 35.0**	**-0.8**
	comp=Z,36nm,1.2s							
PAX				*ep*P	**pP**		**16 17 03.7**	**-0.2**
PAX	**Paxson**	**96.53**	**334**	*e*P	**P**		**16 16 35.0**	**-0.8**
PAX				*e**PP	**pP**		**16 17 03.7**	**-0.2**
PAX				pmax	pmax			
	comp=Z,36nm,1.2s							
RIDG	**Independ'e Rid**	**96.57**	**335**	*e*P	**P**		**16 16 35.0**	**-0.9**
	comp=Z,45nm,1.3s							
SCM	**Sheep Creek Mo**	**96.92**	**333**	*e*P	**P**		**16 16 37.2**	**-0.4**
	comp=Z,31nm,1.2s							
SCM	**Sheep Creek Mo**	**96.92**	**333**	*e*P	**P**		**16 16 37.2**	**-0.4**
SCM				pmax	pmax			
	comp=Z,31nm,1.2s							
FETA	**Feichten**	**96.94**	**43**	*i* PcP	**P**		**16 16 38.6**	**+0.5**
	comp=Z,59nm,1.8s,SNR=12							
FETA				*i* PP	**PP**		**16 20 28.6**	**-6.5**
	comp=Z,19nm,1.3s							
RETA	**Reutte**	**97.08**	**43**	*i* PcP	Pdif		16 16 39.1	+0.4
	comp=Z,50nm,1.6s,SNR=16							
RETA				*i* PP	**PP**		**16 20 30.9**	**-5.3**
	comp=Z,22nm,1.4s							
VAE	**Valguarnera**	**97.09**	**53**	LR	LR		16 58 53.8	
	comp=Z,481nm,21.8s,baz=260,slow=34							
MOTA	**Moosalm**	**97.27**	**43**	*i* P	**P**		**16 16 38.7**	**-1.0**
	comp=Z,19nm,0.9s,SNR=12							
SML	**Sawmill**	**97.36**	**332**	*e*P	**P**		**16 16 38.6**	**-1.0**
	comp=Z,38nm,1.2s							
SML	**Sawmill**	**97.36**	**332**	*e*P	**P**		**16 16 38.6**	**-1.0**
SML				pmax	pmax			
	comp=Z,38nm,1.2s							
DHY	**Denali Highway**	**97.38**	**334**	*e*P	**P**		**16 16 38.4**	**-1.3**
	comp=Z,17nm,1.2s							
AQU	**L'Aquila**	**97.56**	**48**	*e*P	Pdif		16 16 41.4	+0.4
	comp=Z,221nm,1.9s							
AQU	**L'Aquila**	**97.56**	**48**	*e*P	Pdif		16 16 41.6	+0.6
WTTA	**Wattenberg**	**97.60**	**43**	*i* PcP	Pdif		16 16 41.9	+0.7
	comp=Z,51nm,1.3s,SNR=13							
FUR	**Furstenfeldbru**	**97.60**	**42**	P	Pdif		16 16 42.2	+1.2
FUR				pmax	pmax			
	comp=Z,72nm,1.5s							
GHO	**Glory Hole Cre**	**97.62**	**332**	*e*P	**P**		**16 16 39.9**	**-0.9**
	comp=Z,13nm,0.8s							
HDA	**Harding Lake**	**97.68**	**335**	*e*P	**P**		**16 16 39.4**	**-1.4**
	comp=Z,46nm,1.6s							
DAG	**Danmarks Havn**	**97.72**	**11**	*i* P	Pdif		16 16 41.3	+0.5
	comp=Z,5.0nm,0.9s							
	comp=Z,2μm,27.0s							
DAG	**Danmarks Havn**	**97.72**	**11**	*i* P	Pdif		16 16 41.3	+0.5
DAG				pmax	pmax			
	comp=Z,5.0nm,0.9s							
DAG				MLR	MLR			
	comp=Z,2μm,27.0s							
RC01	**Rabbit Creek A**	**97.76**	**331**	*e*P	**P**		**16 16 40.8**	**-0.5**
	comp=Z,15nm,1.0s							
IL1	**Eielson Array**	**97.78**	**335**	*e*P	**P**		**16 16 40.3**	**-1.0**
ILAR	**Eielson Array**	**97.78**	**335**	P	**P**		**16 16 40.5**	**-0.9**
	comp=Z,4.0nm,0.9s,baz=142,slow=3.4,SNR=28							
ILAR				pP	**pP**		**16 17 09.7**	**+0.3**
	comp=Z,2.1nm,0.7s,baz=154,slow=3.0,SNR=4.2							
ILAR				PP	PP		16 20 29.6	-11
	comp=Z,3.4nm,1.0s,baz=120,slow=5.8,SNR=4.8							
ILAR				LR	LR		17 06 05.7	
	comp=Z,525nm,18.5s,baz=120,slow=38							
ILB	**Eielson Array**	**97.78**	**335**	*e*P	**P**		**16 16 40.2**	**-1.1**
ILB				*ep*P	**pP**		**16 17 07.3**	**-2.0**
BRLK	**Bradley Lake**	**97.89**	**330**	*e*P	**P**		**16 16 41.0**	**-1.0**
	comp=Z,24nm,1.0s							
GRFO	**Grafenberg**	**97.96**	**41**	*e*P	Pdif		16 16 43.1	+0.6
	comp=Z,40nm,1.3s							
GRFO	**Grafenberg**	**97.96**	**41**	*e*P	Pdif		16 16 43.1	+0.6
CASY	**Casey**	**98.02**	**181**	*e*P	Pdif		16 16 43.2	+0.7
	comp=Z,15nm,1.0s							
ABTA	**Abfaltersbach**	**98.05**	**44**	*i* Pdiff	Pdif		16 16 43.5	+0.4
	comp=Z,54nm,1.5s,SNR=18							
ABTA				*i* pP	pP		16 17 13.8	+2.7
	comp=Z,39nm,1.2s							
ABTA				*i* PP	**PP**		**16 20 38.4**	**-5.2**
	comp=Z,24nm,1.5s							
CCB	**Clear Creek Bu**	**98.11**	**335**	*e*P	**P**		**16 16 41.9**	**-0.8**
	comp=Z,29nm,1.4s							
RND	**Reindeer**	**98.12**	**334**	*e*P	**P**		**16 16 42.9**	**-0.1**
	comp=Z,63nm,1.3s							
RND				*ep*P	**pP**		**16 17 10.2**	**-0.8**
RND	**Reindeer**	**98.12**	**334**	*e*P	**P**		**16 16 42.9**	**-0.1**
RND				*e**PP	**pP**		**16 17 10.2**	**-0.8**
RND				pmax	pmax			
	comp=Z,63nm,1.3s							
KDAK	**Kodiak Island**	**98.14**	**328**	*e*P	**P**		**16 16 42.7**	**-0.3**
	comp=Z,17nm,1.1s							
KDAK	**Kodiak Island**	**98.14**	**328**	*e*P	**P**		**16 16 42.7**	**-0.3**
KDAK				pmax	pmax			
	comp=Z,17nm,1.1s							
WRH	**Wood River Hil**	**98.16**	**335**	*e*P	**P**		**16 16 42.5**	**-0.5**
	comp=Z,24nm,1.2s							
COLA	**College**	**98.20**	**335**	*e*P	**P**		**16 16 43.1**	**-0.1**
	comp=Z,56nm,1.2s							
COLA	**College**	**98.20**	**335**	*e*P	Pdif		16 16 43.4	+0.2
MCK	**McKinley**	**98.27**	**334**	*e*P	**P**		**16 16 43.2**	**-0.3**
	comp=Z,27nm,1.1s							
MCK	**McKinley**	**98.27**	**334**	*e*P	**P**		**16 16 43.2**	**-0.3**
MCK				pmax	pmax			
	comp=Z,27nm,1.1s							
SUA	**Susitna One**	**98.34**	**332**	*e*P	**P**		**16 16 42.2**	**-1.9**
SUA				*ep*P	**pP**		**16 17 10.5**	**-1.6**
OHAK	**Old Harbor**	**98.34**	**327**	*e*P	**P**		**16 16 42.8**	**-1.1**
OHAK				*ep*P	**pP**		**16 17 10.4**	**-1.6**
MDM	**Murphy Dome**	**98.38**	**335**	*e*P	**P**		**16 16 42.9**	**-1.1**
	comp=Z,80nm,1.2s							
MUD	**Monsted U'grnd**	**98.57**	**34**	⇑*i* P	Pdif		16 16 46.2	+1.2
	comp=Z,47nm,1.0s							
MUD	**Monsted U'grnd**	**98.57**	**34**	⇑*i* P	Pdif		16 16 46.2	+1.2
MUD				pmax	pmax			
	comp=Z,47nm,1.0s							
BWN	**Browne**	**98.63**	**334**	*e*P	**P**		**16 16 44.8**	**-0.3**
	comp=Z,52nm,1.0s							
KBA	**Koelnbreinsper**	**98.68**	**44**	*i* Pdiff	Pdif		16 16 46.0	0.0
	comp=Z,9.7nm,0.9s,SNR=6.7							
TRF	**Thorofare Moun**	**98.75**	**334**	*e*P	**P**		**16 16 45.1**	**-0.8**
	comp=Z,11nm,0.9s							
CUC	**Castrocucco**	**98.76**	**51**	*e*P	**P**		**16 16 46.0**	**-0.4**
	comp=Z,56nm,1.7s							
MYKA	**Terra Mystica**	**98.77**	**44**	*i* Pdiff	Pdif		16 16 47.2	+0.9
	comp=Z,19nm,1.0s,SNR=8.8							
MYKA				*i* PP	**PP**		**16 20 44.9**	**-4.2**
	comp=Z,52nm,1.6s							
SKT	**Skwentna**	**98.85**	**332**	*e*P	**P**		**16 16 45.4**	**-0.8**
	comp=Z,20nm,0.8s							
SKT				*ep*P	**pP**		**16 17 12.8**	**-1.5**
NKC	**Novy Kostel**	**98.87**	**40**	*e*PDIFF	Pdif		16 16 47.7	+1.2
NKC				*ep*P	pP		16 17 15.5	+0.9
NKC				*es*P	sP		16 17 27.4	+1.5
NKC				*e*PP	PP		16 20 40.0	-10
NKC				*e*SP	SP		16 29 37.4	+3.7
NKC				AMS	AMS		16 57 20.0	
	comp=Z,2μm,22.6s							
NKC	**Novy Kostel**	**98.87**	**40**	*e*P	Pdif		16 16 47.7	+1.2
NKC				*e**PP	pP		16 17 15.5	+0.9
NKC				*e*			16 17 27.4	
NKC				*e*SP	SP		16 29 37.4	+3.7
NKC				MLR	MLR			
	comp=Z,2μm,22.6s							
CRNS	**Crni Vrh**	**99.06**	**45**	*i* Pdiff	**Pdif**		**16 16 47.9**	**+0.4**
CRNS				*e*PP	**PP**		**16 20 46.8**	**-4.5**
LJU	**Ljubljana**	**99.23**	**45**	*i* Pdiff	**Pdif**		**16 16 49.2**	**+0.9**
LJU				*e*PP	**PP**		**16 20 47.7**	**-4.8**
LJU				*e*			16 21 30.4	
LJU				*e*SKSac	**SKSac**		**16 27 19.9**	**+3.2**
LJU				*e*Sdiff	**ScS**		**16 28 10.0**	**-0.8**
LJU				*e*			16 29 38.1	
LJU							16 35 00.7	
LJU				*e*SS	**SS**		**16 35 10.9**	**+8.6**
LJU				*e*			16 38 42.0	
BPAW	**Bear Paw Mtn.**	**99.24**	**334**	*e*P	**Pdif**		**16 16 47.0**	**-0.9**
	comp=Z,38nm,1.3s							
BPAW				*ep*P	**pP**		**16 17 14.5**	**-1.4**
TIP	**Timpagrande**	**99.29**	**52**	*e*P	**Pdif**		**16 16 47.2**	**-1.6**
	comp=Z,62nm,1.7s							
TIP	**Timpagrande**	**99.29**	**52**	P	**PP**		**16 20 49.1**	**-4.1**
KHC	**Kasperske Hory**	**99.32**	**42**	*e*PDIFF	**Pdif**		**16 16 49.0**	**+0.4**
KHC				*ep*P	**pP**		**16 17 16.3**	**-0.4**
KHC				*ex*	x		16 17 35.8	
KHC				*ex*	x		16 20 28.1	
KHC				*e*SKS	**SKSac**		**16 27 21.2**	**+4.1**
KHC				*e*SDIF	**ScS**		**16 28 04.2**	**-7.2**
KHC				*e*SP	**SP**		**16 29 43.3**	**+4.7**
KHC				AMS	AMS		16 58 30.0	
	comp=Z,1μm,24.5s							
KHC	**Kasperske Hory**	**99.32**	**42**	*e*P	**Pdif**		**16 16 49.0**	**+0.4**
KHC				*e**PP	**pP**		**16 17 16.3**	**-0.4**
KHC				*e*			16 27 21.2	
KHC				*e*			16 28 04.2	
KHC				*e*SP	SP		16 29 43.3	+4.7
KHC				MLR	MLR			
	comp=Z,1μm,24.5s							
GEA0	**GERESS Array S**	**99.33**	**42**	*e*Pdif	**Pdif**		**16 16 48.1**	**-0.6**
GEA0				*ep*P	**pP**		**16 17 15.3**	**-1.5**
GEC2	**GERESS Array S**	**99.33**	**42**	*e*Pdif	**Pdif**		**16 16 47.5**	**-1.2**
	comp=Z,18nm,1.2s							
GEC2				*ep*P	**pP**		**16 17 15.8**	**-1.0**
GEC2	**GERESS Array S**	**99.33**	**42**	*e*P	**Pdif**		**16 16 47.5**	**-1.2**
GEC2				*e**PP	**pP**		**16 17 15.8**	**-1.0**
GEC2				pmax	pmax			
	comp=Z,18nm,1.2s							
GERES	**GERESS Array B**	**99.33**	**42**	P	**Pdif**		**16 16 49.3**	**+0.6**
	comp=Z,3.5nm,0.7s,baz=242,slow=2.9,SNR=25							
GERES				pP	**pP**		**16 17 18.5**	**+1.7**
	comp=Z,4.9nm,0.9s,baz=252,slow=2.7,SNR=5.8							
GERES				PKKPab	PKKPdf		16 33 40.7	+23
	comp=Z,0.6nm,0.7s,baz=39,slow=0.9,SNR=4.3							
GERES				LR	LR		16 59 03.2	
	comp=Z,353nm,19.8s,baz=252,slow=34							
OBKA	**Obir**	**99.35**	**44**	*i* Pdiff	**Pdif**		**16 16 49.5**	**+0.6**
	comp=Z,18nm,0.9s,SNR=9.1							
OBKA				*i* PP	**PP**		**16 20 50.1**	**-3.5**
	comp=Z,38nm,1.7s							
PPLA	**Purkeypile**	**99.41**	**333**	*e*Pdif	**Pdif**		**16 16 48.5**	**-0.3**
	comp=Z,52nm,1.4s							
MLY	**Manley**	**99.42**	**335**	*e*Pdif	**Pdif**		**16 16 48.0**	**-0.7**
	comp=Z,39nm,1.6s							
CLL	**Collm**	**99.47**	**39**	⇑*i* Pdif	**Pdif**		**16 16 49.5**	**+0.4**
	comp=Z,110nm,2.1s							
CLL				*ep*Pdif	**pP**		**16 17 16.0**	**-1.2**
CLL				*i* SPdif	**sP**		**16 17 29.7**	**+1.2**
CLL				*i* PP	**PP**		**16 20 51.8**	**-2.3**
CLL				*e*			16 21 23.0	
CLL				*es*PP			16 21 32.0	
CLL				*e*(SKSac)			16 27 24.0	
CLL				*e*Sdif	**S**		**16 28 12.0**	**-0.5**
CLL				*e*			16 29 07.0	
CLL				*e*SPP	SPP		16 30 25.0	
CLL				*e*			16 33 06.0	
CLL				*e*SS	**SS**		**16 34 58.0**	**-7.3**
CLL				*es*SS			16 35 48.0	
CLL				*e*SSS	SSS		16 38 52.0	
CLL				*e*SSSS			16 42 42.0	
CLL	**Collm**	**99.47**	**39**	*e*Pdif	**Pdif**		**16 16 49.6**	**+0.4**
	comp=Z,34nm,1.4s							
CLL	**Collm**	**99.47**	**39**	⇑*i* P	**Pdif**		**16 16 49.5**	**+0.4**
CLL				*e*			16 17 16.0	
CLL				*i*			16 17 29.7	
CLL				*e*S	**S**		**16 28 12.0**	**-0.5**
CLL				pmax	pmax			
	comp=Z,110nm,2.1s							
MOA	**Molln**	**99.47**	**43**	*i* Pdiff	**Pdif**		**16 16 49.8**	**+0.5**
	comp=Z,16nm,1.0s,SNR=9.4							
SOKA	**Soboth**	**99.72**	**44**	*i* Pdiff	**Pdif**		**16 16 50.5**	**0.0**
	comp=Z,12nm,1.6s,SNR=6.5							
SOKA				*i* pPdiff	**pP**		**16 17 18.7**	**+0.1**
	comp=Z,7.5nm,1.3s							
BRG	**Berggiesshubel**	**99.94**	**40**	*i* PDIFF	**Pdif**		**16 16 52.3**	**+1.0**
	comp=Z,83nm,1.8s							
BRG				*i* pPDIFF			16 17 21.1	
	comp=Z,19nm,1.4s							
BRG				*i* sPDIFF			16 17 33.8	
	comp=Z,20nm,1.3s							
BRG				PP	**PP**		**16 20 57.0**	**-0.8**
BRG				SKS	**SKSac**		**16 27 22.0**	**+2.0**
BRG				SDIFF	**S**		**16 28 17.0**	**+0.4**
BRG				SS	**SS**		**16 35 09.0**	**-3.0**
	comp=N,481nm,20.4s							
	comp=E,1μm,22.1s							
	comp=Z,1μm,23.1s							
BRG	**Berggiesshubel**	**99.94**	**40**	*i* P	**Pdif**		**16 16 52.3**	**+1.0**
BRG				*i **PP	**pP**		**16 17 21.1**	**+1.7**
BRG				*i **SP	**sP**		**16 17 33.8**	**+3.1**
BRG							16 20 57.0	
BRG							16 27 22.0	
BRG				S	**S**		**16 28 17.0**	**+0.4**
BRG				SS	**SS**		**16 35 09.0**	**-3.0**
BRG				pmax	pmax			
	comp=Z,83nm,1.8s							
BRG				MLR	MLR			
	comp=N,481nm,20.4s							
BRG				MLR	MLR			
	comp=E,1μm,22.1s							
BRG				MLR	MLR			
	comp=Z,1μm,23.1s							
GROS	**Grobnik**	**99.98**	**45**	*i* Pdiff	**Pdif**		**16 16 52.2**	**+0.5**
GROS				*ep*P	**pP**		**16 20 52.3**	**-6.0**
GROS				*e*SKSac	**SKSac**		**16 27 23.5**	**+2.9**
TOLK	**Toolik Lake Re**	**100.07**	**339**	Pdiff	**Pdif**		**16 16 51.0**	**-0.5**
	baz=108							
TOLK	**Toolik Lake Re**	**100.07**	**339**	*e*Pdif	**Pdif**		**16 16 51.0**	**-0.5**
PRU	**Pruhonice**	**100.12**	**41**	*e*PDIFF	**Pdif**		**16 16 52.8**	**+0.7**
PRU				*ep*P	**pPdif**		**16 17 18.5**	**-1.6**
PRU				*es*P	sP		16 17 32.9	+1.4
PRU				*e*PP	PP		16 20 49.4	-10
PRU				*e*SKS			16 27 26.3	
PRU				*ex*	x		16 28 13.3	
PRU				*e*SP	**SP**		**16 29 43.7**	**-3.4**
PRU				*ex*	x		16 34 49.6	
PRU				AMS	AMS		16 58 10.0	
	comp=Z,900nm,19.1s							
PRU	**Pruhonice**	**100.12**	**41**	*e*P	**Pdif**		**16 16 52.8**	**+0.7**
PRU				*e*			16 27 26.3	
PRU				*e*			16 28 13.3	
PRU				*e*SP	SP		16 29 43.7	-3.4
PRU				MLR	MLR			
	comp=Z,900nm,19.1s							
ARSA	**Arzberg**	**100.17**	**44**	*i* Pdiff	**Pdif**		**16 16 52.8**	**+0.4**
	comp=Z,24nm,2.0s,SNR=8.6							
ARSA				*i* PP	**PP**		**16 20 57.0**	**-2.6**
	comp=Z,15nm,1.6s							
PVCC	**Panska Ves**	**100.26**	**40**	*e*PDIFF	**Pdif**		**16 16 53.8**	**+1.1**
PVCC				*ex*	x		16 20 40.3	
PVCC				*e*SKS			16 27 25.3	
PVCC				*ex*	x		16 28 10.9	
PVCC				*e*SP	**SP**		**16 29 44.7**	**-3.8**
PVCC				AMS	AMS		16 58 10.0	
	comp=Z,1μm,20.0s							
PVCC	**Panska Ves**	**100.26**	**40**	*e*P	**Pdif**		**16

KEK	**Kerkira**	**101.70**	**52**	P	**PP**	**16 21 09.0**	**-2.4**
HFS	**Hagfors**	**101.75**	**31**	P	**Pdif**	**16 16 59.9**	**+0.8**
	comp=Z,1.8nm,0.8s,baz=203,slow=6.4,SNR=4.6						
TTG	**Podgorica**	**101.81**	**49**	*e*Pdif	**Pdif**	**16 17 00.3**	**+0.6**
TTG	**Podgorica**	**101.81**	**49**	*e*P	**Pdif**	**16 17 00.3**	**+0.6**
SRN	**Sarande**	**101.89**	**52**	P	**PP**	**16 21 11.1**	**-1.6**
SRN	**Sarande**	**101.89**	**52**	*i* P	**PP**	**16 21 11.7**	**-1.0**
JAVC	**Velka Javorina**	**101.90**	**42⇑**	*i*PDIFF	**Pdif**	**16 17 01.6**	**+1.5**
JAVC				*e*SKS		16 27 34.8	
MORC	**Moravsky Berou**	**101.98**	**42⇑**	*i*PDIFF	**Pdif**	**16 17 01.5**	**+1.1**
MORC				*e*PP	**PP**	**16 21 10.0**	**-3.2**
MORC				*e*SKS		16 27 33.2	
MORC				*e*		16 28 35.0	
SGD	**Sagiada**	**102.01**	**52**	P	**PP**	**16 21 11.2**	**-2.5**
FSK	**Fiskardo**	**102.05**	**53**	P	**PP**	**16 21 11.8**	**-2.2**
TIR	**Tirane**	**102.06**	**50⇓**	*i*P	**PP**	**16 21 11.6**	**-2.4**
TIR	**Tirane**	**102.06**	**50**	*i* P	**PP**	**16 21 12.1**	**-1.8**
IGT	**Igoumenitsa**	**102.07**	**52**	P	**PP**	**16 21 11.1**	**-3.1**
PUK	**Puka**	**102.20**	**50**	*i* P	**PP**	**16 21 13.2**	**-1.9**
OKC	**Ostrava-Krasne**	**102.38**	**42**	*e*PP	PP	16 21 08.4	-7.7
OKC				*e*SKS		16 27 36.2	
OKC				*ex*	x	16 28 15.5	
OKC				*e*SP	**SP**	**16 30 11.8**	**+0.7**
OKC				AMS	AMS	17 00 00.0	
	comp=Z,700nm,21.8s						
JAN	**Janina**	**102.49**	**52**	P	**PP**	**16 21 16.2**	**-1.1**
PHP	**Peshkopia**	**102.54**	**50**	P	**PP**	**16 21 17.1**	**-0.6**
PHP	**Peshkopia**	**102.54**	**50**	*i* P	PP	16 21 05.6	-12
PDO	**Prodromos**	**102.55**	**53**	P	**PP**	**16 21 16.5**	**-1.3**
VYHS	**Vyhne**	**102.59**	**43**	*e*P	**Pdif**	**16 17 03.9**	**+0.7**
VYHS	**Vyhne**	**102.59**	**43**	*e*PDIFF	**Pdif**	**16 17 03.8**	**+0.6**
KBN	**Korca**	**102.61**	**51**	P	**PP**	**16 21 17.4**	**-0.9**
KBN	**Korca**	**102.61**	**51**	*i* P	**PP**	**16 21 19.2**	**+0.9**
KPRO	**Kipourio**	**102.93**	**52**	P	**PP**	**16 21 15.7**	**-5.0**
EVR	**Evrytania**	**103.09**	**53**	P	**PP**	**16 21 21.0**	**-0.9**
LANS	**Liptovska Anna**	**103.11**	**42**	*e*P	**Pdif**	**16 17 07.4**	**+1.9**
LANS	**Liptovska Anna**	**103.11**	**42**	*e*PDIFF	**Pdif**	**16 17 07.4**	**+1.9**
OJC	**Ojcow**	**103.49**	**41**	*e*P	**Pdif**	**16 17 09.0**	**+1.9**
OJC				*e*PP	**PP**	**16 21 19.7**	**-4.8**
OJC				*e*SKSac	**SKSac**	**16 27 40.6**	**+3.6**
OJC				*e*SKKSac	**SKKSac**	**16 28 28.3**	**+9.3**
OJC				*e*SS	**SS**	**16 35 58.0**	**-3.1**
OJC	**Ojcow**	**103.49**	**41**	*e*P	**Pdif**	**16 17 09.0**	**+1.9**
OJC				*e*		16 21 19.7	
OJC				*e*		16 27 40.6	
OJC				*e*		16 28 28.3	
OJC				*e*SS	SS	16 35 58.1	-3.0
AGG	**Agios Georgios**	**103.51**	**53**	P	**PP**	**16 21 17.4**	**-7.6**
NIE	**Niedzica**	**103.69**	**42**	*e*P	**Pdif**	**16 17 09.9**	**+1.8**
NIE				*e*PP	**PKiKP**	**16 21 23.7**	**-2.0**
NIE				*e*SKSac	**SKSac**	**16 27 42.2**	**+4.2**
NIE	**Niedzica**	**103.69**	**42**	*e*P	**Pdif**	**16 17 09.9**	**+1.8**
NIE				*e*		16 21 23.7	
NIE				*e*		16 27 42.2	
MDVR	**Moldovita**	**103.96**	**47⇓**	*i*P	PKiKP	16 21 16.3	-10
BZS	**Buzias**	**104.02**	**46⇓**	*i*P	**PKiKP**	**16 21 30.5**	**+4.1**
CRVS	**Cervenica-Dubn**	**104.38**	**43**	*e*P	**Pdif**	**16 17 12.1**	**+1.0**
CRVS	**Cervenica-Dubn**	**104.38**	**43**	*e*PDIFF	**Pdif**	**16 17 12.1**	**+1.0**
VTS	**Vitosha**	**104.72**	**49⇓**	*i*P	**PKiKP**	**16 21 25.9**	**-2.1**
IDI	**Anoyia**	**104.92**	**57⇓**	*i*P	**PKiKP**	**16 21 30.9**	**+2.4**
ARR	**Arges**	**106.09**	**47⇓**	*i*P	PKiKP	16 21 07.6	-23
VOIR		**106.39**	**47⇓**	*i*P	PKiKP	16 21 07.9	-23
MLR	**Muntele Rosu**	**107.02**	**47**	PP	PP	16 21 41.5	-9.3
	comp=Z,2.8nm,1.1s,baz=246,slow=5.2,SNR=5.0						
MLR	**Muntele Rosu**	**107.02**	**47⇓**	*i*P	PKiKP	16 21 16.6	-16
ARA0	**ARCESS Array S**	**107.58**	**21**	*e*PKKPbc	PKKPbc	16 32 48.1	-1.9
ARA0				*e*PKKPdf	PKKPdf	16 33 13.7	+11
ARCES	**ARCESS Array B**	**107.58**	**21**	PKKPbc	PKKPbc	16 32 48.1	-1.9
	comp=Z,3.7nm,0.9s,baz=76,slow=5.1,SNR=4.7						
ARCES				PKKP	PKKPdf	16 33 13.7	+11
	comp=Z,6.0nm,1.0s,baz=28,slow=8.2,SNR=4.9						
VRI	**Vrincioaia**	**107.60**	**46⇓**	*i*P	PKiKP	16 21 11.0	-22
FIA0	**FINESS Array S**	**107.92**	**30**	*e*PP	PP	16 21 53.7	-3.0
FIA0				*e*PKKPbc	**PKKPbc**	**16 32 47.9**	**-0.7**
FIA0				*e*PKKPdf	PKKPdf	16 33 13.7	+12
FINES	**FINESS Array B**	**107.92**	**30**	PP	PP	16 21 53.7	-3.0
	comp=Z,3.6nm,1.1s,baz=315,slow=6.7,SNR=4.8						
FINES				PKKPbc	**PKKPbc**	**16 32 47.9**	**-0.7**
	comp=Z,1.2nm,0.7s,baz=354,slow=5.9,SNR=4.3						
FINES				PKKP	PKKPdf	16 33 13.7	+12
	comp=Z,2.2nm,0.7s,baz=64,slow=6.6,SNR=7.3						
KIS	**Kishinev**	**109.12**	**45**	*e*PKP	**PKiKP**	**16 21 41.0**	**+5.2**
KIS	**Kishinev**	**109.12**	**45**	*e*PP	PP	16 22 30.0	+24
KIS	**Kishinev**	**109.12**	**45**	*e*PS	PS	16 31 36.0	+1.6
KIS	**Kishinev**	**109.12**	**45**	*e*PPS	PPS	16 32 48.0	
KIS				LRM	MLR	17 04 20.0	
	comp=Z,400nm,24.0s						
AKASG	**Malin Array Be**	**109.53**	**41**	PKiKP	**PKiKP**	**16 21 35.6**	**-0.8**
	comp=Z,0.7nm,0.5s,baz=272,slow=2.7,SNR=5.5						
AKASG				pPKiKP	**pPKiKP**	**16 22 04.4**	**-1.3**
	comp=Z,3.2nm,0.8s,baz=262,slow=3.6,SNR=4.1						
AKASG				PKKPbc	**PKKPbc**	**16 32 40.4**	**-2.7**
	comp=Z,0.7nm,0.4s,baz=266,slow=8.5,SNR=5.3						
DZM	**Mont Dzumac**	**111.04**	**238**	*e*SS	SS	16 37 45.2	+1.3
	comp=Z,1μm,24.9s						
DZM	**Mont Dzumac**	**111.04**	**238**	*e*LR	LR	16 54 41.1	
	comp=Z,5μm,29.9s						
BR101	**Keskin Array S**	**112.29**	**53**	*e*PKiKP	**PKiKP**	**16 21 41.5**	**-0.8**
BR101				*e*		16 22 11.4	
BR101				*e*PKKPab	**PKKPab**	**16 32 43.3**	**+2.4**
BRTR	**Keskin Array B**	**112.29**	**53**	PKiKP	**PKiKP**	**16 21 41.5**	**-0.8**
	comp=Z,3.1nm,0.8s,baz=211,slow=2.2,SNR=11						
BRTR				pPKiKP	**pPKiKP**	**16 22 11.4**	**0.0**
	comp=Z,6.1nm,1.0s,baz=238,slow=2.3,SNR=7.4						
BRTR				PKKPbc	**PKKPab**	**16 32 43.3**	**+2.4**
	comp=Z,1.3nm,0.8s,baz=104,slow=3.3,SNR=5.8						
MMAI	**Mount Meron Ar**	**113.32**	**61**	PKiKP	**PKiKP**	**16 21 45.4**	**+1.1**
	comp=Z,2.0nm,0.5s,baz=284,slow=5.8,SNR=8.2						
MMAI				pPKiKP	**pPKiKP**	**16 22 14.3**	**+0.9**
	comp=Z,4.7nm,0.8s,baz=243,slow=31,SNR=4.2						
OBN	**Obninsk**	**113.79**	**36⇓**	*i*PKIKP	**PKiKP**	**16 21 45.0**	**+0.6**
OBN				*e*		16 22 35.4	
OBN				*e*PPP	PPP	16 25 01.8	
KLMR	**Klimovskoe**	**114.45**	**30**	*e*PKIKP	PKPdf	16 21 45.3	-0.2
KLMR				*e*		16 22 10.0	
KLMR				*e*		16 22 25.4	
KLMR				*e*		16 22 42.7	
KLMR				pmax	pmax		
	comp=Z,20nm,1.4s						
KLMR	**Klimovskoe**	**114.45**	**30**	*e*PKPdf	PKPdf	16 21 45.3	-0.2
KLMR				AMP		16 21 47.9	
	comp=Z,20nm,1.4s						
KLMR				*ep*PKPdf	PKiKP	16 22 10.0	+24
KLMR				*es*PKPdf	PP	16 22 25.4	-18
KLMR				*e*PP	PP	16 22 42.7	-0.8
KLMR				*e*PKKP	**PKKPdf**	**16 32 48.4**	**-1.3**
KLMR				SS	SS	16 38 12.1	-16
KLMR				SS	SS	16 38 12.1	-16
ASF	**Jabal al Asfar**	**114.52**	**62**	PKP	PKPdf	16 21 48.1	+1.5
	comp=Z,5.4nm,0.8s,baz=282,slow=0.7,SNR=7.2						
ANN	**Anapa**	**115.12**	**48**	*i* PKIKP	**PKPdf**	**16 21 45.9**	**-1.4**
ANN				*e*		16 22 45.4	
ANN				*e*SS	SS	16 38 32.3	-5.1
ANN				pmax	pmax		
	comp=Z,37nm,1.5s						
VSR	**Storozhevoye**	**115.78**	**40**	*e*PKIKP	**PKPdf**	**16 21 49.1**	**+0.7**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VORD	**Divnogorie**	**115.89**	**41**	*e*PKIKP	**PKPdf**	**16 21 49.0**	**+0.4**
VORD				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BILL	**Bilibino**	**116.12**	**339**	*e*PKIKP	**PKPdf**	**16 21 48.7**	**+0.1**
BILL				*e*		16 22 53.7	
BILL				*e*PPP	PPP	16 25 22.7	
BILL				*e*		16 28 33.2	
BILL				*e*SS	SS	16 38 43.4	-5.6
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SOC	**Sochi**	**116.82**	**49**	*i* PKIKP	**PKPdf**	**16 21 50.7**	**+0.1**
SOC				*e*		16 23 08.4	
SOC				*e*PPP	PPP	16 25 31.3	
PRGR	**Permogore**	**117.12**	**28**	*e*PKIKP	**PKPdf**	**16 21 51.4**	**+0.8**
PRGR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KIV	**Kislovodsk**	**118.94**	**48**	*e*PKPdf	**PKPdf**	**16 21 54.8**	**0.0**
KIV				*ep*PKPdf	**pPKPdf**	**16 22 22.6**	**-1.4**
KIV	**Kislovodsk**	**118.94**	**48**	P	**PKPdf**	**16 21 55.6**	**+0.8**
KIV	**Kislovodsk**	**118.94**	**48**	*i* PKIKP	**PKPdf**	**16 21 54.7**	**-0.1**
KIV				*e*		16 23 13.4	
KIV				*e*PS	**PS**	**16 33 04.1**	**-0.5**
KIV				*e*SS	SS	16 39 28.8	+1.5
KIV				*e*SSS	SSS	16 43 53.7	
KIV				pmax	pmax		
	comp=Z,16nm,1.1s						
KIV				MLR	MLR		
	comp=Z,386nm,21.0s						
KVAR	**Kislovodsk Arr**	**118.94**	**48**	PKP	**PKPdf**	**16 21 55.7**	**+0.8**
	comp=Z,7.3nm,0.7s,baz=260,slow=4.5,SNR=5.1						
NEY	**Neytrino**	**119.03**	**49⇑**	*i*PKIKP	**PKPdf**	**16 21 55.5**	**+0.4**
KBZ	**Khabaz**	**119.11**	**49**	PKP	**PKPdf**	**16 21 56.0**	**+1.0**
	comp=Z,14nm,0.8s,baz=251,slow=1.4,SNR=28						
KBZ				pPKP	**pPKPdf**	**16 22 24.5**	**+0.4**
	comp=Z,23nm,0.9s,baz=27,slow=0.8,SNR=9.5						
KBZ				PKKPbc	**PKKPab**	**16 32 10.5**	**-0.1**
	comp=Z,2.8nm,1.0s,baz=130,slow=14,SNR=4.6						
NCK	**Nalchik**	**119.64**	**49⇑**	*i*PKIKP	**PKPdf**	**16 21 56.5**	**+0.4**
GNI	**Garni**	**120.81**	**53**	PKP	**PKPdf**	**16 21 59.3**	**+0.7**
	comp=Z,8.7nm,0.6s,baz=181,slow=8.5,SNR=6.1						
GNI	**Garni**	**120.81**	**53**	*e*PKPdf	**PKPdf**	**16 21 57.9**	**-0.8**
GNI				*e*PKPdf	**PKPdf**	**16 21 59.3**	**+0.7**
GNI	**Garni**	**120.81**	**53**	P	**PKPdf**	**16 21 59.8**	**+1.2**
GROC	**Groznyy**	**121.27**	**49**	*i* PKIKP	**PKPdf**	**16 21 59.4**	**+0.2**
GROC				*e*		16 23 31.8	
GROC				pmax	pmax		
	comp=Z,29nm,1.2s						
RAYN	**Ar Rayn**	**121.49**	**72**	*e*PKPdf	**PKPdf**	**16 22 00.3**	**+0.1**
RAYN	**Ar Rayn**	**121.49**	**72**	*i* P	**PKPdf**	**16 22 00.5**	**+0.2**
	SNR=8.7						
STKA	**Stephens Creek**	**122.34**	**214**	PKP	**PKPdf**	**16 22 01.9**	**+0.2**
	comp=Z,4.3nm,0.9s,baz=12,slow=2.5,SNR=5.9						
STKA				pPKP	**pPKPdf**	**16 22 30.1**	**-0.8**
	comp=Z,7.7nm,0.7s,baz=91,slow=1.9,SNR=8.3						
STKA	**Stephens Creek**	**122.34**	**214**	*e*PKPdf	**PKPdf**	**16 22 02.2**	**+0.5**
STKA				*ep*PKPdf	**pPKPdf**	**16 22 29.9**	**-1.0**
MAK	**Makhachkala**	**122.54**	**49**	*e*P	**Pdif**	**16 18 29.2**	**-2.7**
MAK				*i*		16 22 01.3	
MAK				*e*		16 23 42.7	
MAK				*e*		16 28 50.5	
MAK				*e*SS	SS	16 40 26.6	+13
MAK				pmax	pmax		
	comp=Z,64nm,0.3s						
TIXI	**Tiksi**	**122.84**	**352**	*e*PKPdf	**PKPdf**	**16 22 01.0**	**-0.4**
TIXI				*ep*PKPdf	**pPKPdf**	**16 22 29.2**	**-1.3**
TIXI	**Tiksi**	**122.84**	**352**	*d i*PKIKP	**PKPdf**	**16 22 01.3**	**-0.1**
AKT	**Akhty**	**122.92**	**51**	*i* PKIKP	**PKPdf**	**16 22 03.8**	**+1.2**
AKT				*e*		16 22 32.3	
AKT				*e*		16 23 44.6	
AKT				pmax	pmax		
	comp=Z,19nm,1.0s						
H11N3	**WAKE ISLAND Hyl**	**123.58**	**283**	T	T	18 38 04.8	
	baz=105						
H11N2	**WAKE ISLAND Hyl**	**123.59**	**283**	T	T	18 38 06.2	
	baz=105						
H11N1	**WAKE ISLAND Hyl**	**123.59**	**283**	T	T	18 38 05.9	
	baz=105						
H11S2	**WAKE ISLAND Hyl**	**123.62**	**282**	T	T	18 38 04.8	
	baz=95						
H11S1	**WAKE ISLAND Hyl**	**123.63**	**282**	T	T	18 38 04.7	
	baz=95						
H11S3	**WAKE ISLAND Hyl**	**123.64**	**282**	T	T	18 38 06.8	
	baz=95						
SEY	**Seymchan**	**123.66**	**337**	PKP	**PKPdf**	**16 22 04.2**	**+1.0**
	comp=Z,12nm,0.9s,baz=91,slow=2.7,SNR=27						
SEY				pPKP	**pPKPdf**	**16 22 32.5**	**+0.1**
	comp=Z,20nm,1.0s,baz=111,slow=2.5,SNR=10						
SEY	**Seymchan**	**123.66**	**337⇑**	*i*PKIKP	**PKPdf**	**16 22 04.7**	**+1.5**
NRIK	**Noril'sk**	**125.15**	**9**	PKP	**PKPdf**	**16 22 07.2**	**+1.3**
	comp=Z,1.9nm,0.7s,baz=359,slow=5.9,SNR=4.9						
NRIK				SKKP		16 35 57.5	
	comp=Z,3.1nm,0.4s,baz=168,slow=4.8,SNR=7.9						
ARU	**Arti**	**125.27**	**31**	*e*PKPdf	**PKPdf**	**16 22 06.8**	**+0.4**
ARU				*ep*PKPdf	**pPKPdf**	**16 22 36.8**	**+1.2**
ARU	**Arti**	**125.27**	**31**	*i* PKIKP	**PKPdf**	**16 22 07.3**	**+0.8**
ARU						16 24 00.9	
ARU						16 29 09.2	
ARU				SP	SP	16 33 50.9	+4.5
PEA1	**Petropavlovsk-**	**126.08**	**325**	*e*PKPdf	**PKPdf**	**16 22 09.1**	**+0.9**
PEA1				*ep*PKPdf	**pPKPdf**	**16 22 37.1**	**-0.1**
PETK	**Petropavlovsk-**	**126.08**	**325**	PKP	**PKPdf**	**16 22 09.1**	**+0.9**
	comp=Z,7.5nm,0.8s,baz=79,slow=3.0,SNR=23						
PETK				pPKP	**pPKPdf**	**16 22 37.1**	**-0.1**
	comp=Z,21nm,1.0s,baz=97,slow=6.1,SNR=9.5						
PETK	**Petropavlovsk-**	**126.08**	**325**	*e*PKPdf	**PKPdf**	**16 22 08.5**	**+0.4**
PETK				*ep*PKPdf	**pPKPdf**	**16 22 37.2**	**-0.1**
PETK	**Petropavlovsk-**	**126.08**	**325**	*e*PKIKP	**PKPdf**	**16 22 08.5**	**+0.4**
PETK				*e*		16 22 37.2	
SVE	**Sverdlovsk**	**126.09**	**30**	*e*PKIKP	**PKPdf**	**16 22 10.6**	**+2.6**
SVE				pmax	pmax		
	comp=Z,30nm,1.6s						
AKTO	**Aktyubinsk**	**127.52**	**38**	PKP	**PKPdf**	**16 22 12.5**	**+1.5**
	comp=Z,16nm,0.8s,baz=331,slow=4.3,SNR=44						
AKTO				pPKP	**pPKPdf**	**16 22 41.5**	**+1.3**
	comp=Z,22nm,0.8s,baz=316,slow=4.4,SNR=8.9						
AKTO	**Aktyubinsk**	**127.52**	**38**	PKIKP	**PKPdf**	**16 22 11.5**	**+0.5**
AKTO				pmax	pmax		
	comp=Z,56nm,1.2s						
CTA	**Charters Tower**	**127.77**	**228**	PKP	**PKPdf**	**16 22 12.9**	**+0.5**
	comp=Z,9.4nm,0.9s,baz=102,slow=2.4,SNR=6.9						
CTA				pPKP	**pPKPdf**	**16 22 41.4**	**-0.2**
	comp=Z,11nm,0.6s,baz=100,slow=5.6,SNR=9.8						
CTAO	**Charters Tower**	**127.77**	**228**	*e*PKPdf	**PKPdf**	**16 22 12.7**	**+0.3**
CTAO				*ep*PKPdf	**pPKPdf**	**16 22 41.2**	**-0.4**
CTAO	**Charters Tower**	**127.77**	**228**	*e*PKIKP	**PKPdf**	**16 22 12.7**	**+0.3**
CTAO				*e*		16 22 41.2	
SKR	**Severo-Kuril's**	**127.96**	**323**	*i* PKIKP	**PKPdf**	**16 22 12.3**	**+0.6**
SKR				*e*		16 22 40.5	
SKR				*e*		16 24 14.8	
SKR				*e*		16 29 04.4	
SKR				pmax	pmax		
	comp=Z,34nm,1.1s						
SKR				pmax	pmax		
	comp=Z,900nm,10.6s						
SKR				pmax	pmax		
	comp=Z,400nm,9.9s						
AB31	**Akbulak array**	**129.13**	**39**	*i* PKIKP	**PKPdf**	**16 22 15.1**	**+1.1**
AB31				pmax	pmax		
	comp=Z,66nm,1.0s						
ABKAR	**Akbulak array**	**129.13**	**39**	*e*PKPdf	**PKPdf**	**16 22 14.9**	**+0.8**
ABKAR				*ep*PKPdf	**pPKPdf**	**16 22 44.9**	**+1.7**
AJN	**Ajban**	**130.20**	**71**	*i* P	**PKPdf**	**16 22 17.6**	**+0.8**
	SNR=5.4						
ASUD	**Al Ashush, Dub**	**130.51**	**71**	*i* P	**PKPdf**	**16 22 18.2**	**+0.8**
	SNR=6.1						
NWAO	**Narrogin (SRO)**	**130.56**	**191**	PKP	**PKPdf**	**16 22 17.3**	**-0.1**
	comp=Z,12nm,0.8s,baz=261,slow=5.1,SNR=4.2						
NWAO				pPKP	**pPKPdf**	**16 22 46.0**	**-0.5**
	comp=Z,44nm,1.1s,baz=86,slow=13,SNR=6.7						
NAZ	**Nazwa, Dubai**	**130.82**	**71**	P	**PKPdf**	**16 22 19.1**	**+1.1**
ALNE	**Al Ain**	**130.89**	**72**	*i* P	**PKPdf**	**16 22 18.7**	**+0.5**
	SNR=6.2						
SHME	**Shamm**	**131.24**	**69**	*i* P	**PKPdf**	**16 22 19.3**	**+0.5**
	SNR=11						
HATD	**Hatta, Dubai**	**131.24**	**71**	P	**PKPdf**	**16 22 21.0**	**+2.1**
	SNR=9.2						
HATD	**Hatta, Dubai**	**131.24**	**71**	PKPdf	**PKPdf**	**16 22 21.0**	**+2.1**
	SNR=9.2						
HATD	**Hatta, Dubai**	**131.24**	**71**	P	**PKPdf**	**16 22 21.0**	**+2.1**
	SNR=9.2						
HATD	**Hatta, Dubai**	**131.24**	**71**	*i* P	**PKPdf**	**16 22 19.2**	**+0.3**
	SNR=7.2						
MSFE	**Esma-Masafi**	**131.26**	**70**	*i* P	**PKPdf**	**16 22 19.0**	**+0.1**
	SNR=5.9						
UOSS	**Minazif**	**131.31**	**71**	*e*PKPdf	**PKPdf**	**16 22 17.9**	**-1.1**
UOSS				*ep*PKPdf	**pPKPdf**	**16 22 48.0**	**-0.1**
UOSS	**Minazif**	**131.31**	**71**	*i* P	**PKPdf**	**16 22 18.6**	**-0.4**
	SNR=6.2						
YAK	**Yakutsk**	**131.33**	**346**	*e*PKPdf	**PKPdf**	**16 22 18.1**	**+0.3**
YAK				*ep*PKPdf	**pPKPdf**	**16 22 47.1**	**+0.1**
YAK	**Yakutsk**	**131.33**	**346**	*i* PKIKP	**PKPdf**	**16 22 18.6**	**+0.8**
BANOM	**Banah**	**131.38**	**69**	P	**PKPdf**	**16 22 20.0**	**+0.9**
MDH	**Madha**	**131.39**	**70**	*i* P	**PKPdf**	**16 22 20.2**	**+1.1**
	SNR=8.5						
GEYT	**Alibeck**	**131.44**	**53**	PKP	**PKPdf**	**16 22 17.9**	**-0.9**
	comp=Z,3.7nm,0.8s,baz=270,slow=4.0,SNR=12						
GEYT				pPKP	**pPKPdf**	**16 22 48.8**	**+0.8**
	comp=Z,7.3nm,1.0s,baz=289,slow=4.5,SNR=3.5						
GEYT				SKKP		16 35 26.6	
	comp=Z,2.0nm,0.8s,baz=207,slow=1.7,SNR=3.9						
GYA0B	**ALIBECK ARRAY**	**131.44**	**53**	*e*PKPdf	**PKPdf**	**16 22 19.4**	**+0.6**
GYA0B				*ep*PKPdf	**pPKPdf**	**16 22 49.9**	**+1.9**
SOHO	**SOHO**	**131.61**	**72**	*i* P	**PKPdf**	**16 22 20.2**	**+0.7**
	SNR=10						
BRVK	**Borovoye**	**132.81**	**30**	*e*PKPpre	PKPpre	16 22 22.0	
BRVK				*ep*PKPdf	pPKPdf	16 22 52.4	+2.3
BRVK				*e*		16 23 00.9	
BRVK	**Borovoye**	**132.81**	**30⇑**	*i*PKIKP	**PKPdf**	**16 22 20.1**	**-0.8**
BVA0	**Borovoye Array**	**132.88**	**30**	*i* PKIKP	**PKPdf**	**16 22 21.9**	**+0.8**
BVA0				pmax	pmax		
	comp=Z,31nm,1.1s						
BVAR	**Borovoye Array**	**132.88**	**30**	PKP	**PKPdf**	**16 22 22.7**	**+1.7**
	comp=Z,3.2nm,0.6s,baz=317,slow=3.9,SNR=29						
BVAR				pPKP	**pPKPdf**	**16 22 50.6**	**+0.4**
	comp=Z,7.1nm,0.6s,baz=301,slow=0.8,SNR=7.9						
AS01	**Alice Springs**	**132.94**	**214**	*e*PKPpre	PKPpre	16 22 12.0	
AS01				*e*PKPdf	**PKPdf**	**16 22 21.4**	**-0.8**
AS01				*ep*PKPdf	pPKPdf	16 22 50.4	-0.9
AS31	**Alice Springs**	**132.97**	**214**	*e*PKPdf	**PKPdf**	**16 22 22.4**	**+0.1**
AS31				*ep*PKPdf	**pPKPdf**	**16 22 49.6**	**-1.8**
ASAR	**Alice Springs**	**132.97**	**214**	PKhKP	PKPpre	16 22 05.6	
	comp=Z,0.5nm,0.8s,baz=150,slow=3.2,SNR=5.3						
ASAR				PKP	**PKiKP**	**16 22 22.9**	**-0.5**
	comp=Z,6.7nm,0.9s,baz=138,slow=2.5,SNR=24						
ASAR				pPKP	pPKPdf	16 22 50.5	-0.9
	comp=Z,42nm,1.1s,baz=144,slow=2.2,SNR=17						
ASAR				PKKP	**PKKPdf**	**16 32 10.8**	**-2.5**
	comp=Z,0.6nm,0.8s,baz=335,slow=1.1,SNR=7.6						
ASAR				SKKPbc	SKKPbc	16 34 51.5	-7.8
	comp=Z,1.6nm,1.0s,baz=336,slow=5.2,SNR=4.7						
BIDO	**Bidbid**	**133.07**	**73**	P	**PKPdf**	**16 22 26.0**	**+3.7**
	SNR=5.1						
BIDO	**Bidbid**	**133.07**	**73**	PKPdf	**PKPdf**	**16 22 26.0**	**+3.7**
	SNR=5.1						
BIDO	**Bidbid**	**133.07**	**73**	P	**PKPdf**	**16 22 26.0**	**+3.7**
	SNR=5.1						
WSAR	**Wadi Sarin**	**133.53**	**73**	PKP	**PKPdf**	**16 22 23.5**	**+0.3**
	comp=Z,9.1nm,0.8s,baz=195,slow=1.7,SNR=8.6						
COEN	**Coen**	**133.93**	**232**	*e*PKPdf	**PKPdf**	**16 22 23.7**	**-0.5**
WB2	**Warramunga Arr**	**135.68**	**217**	*e*PKPdf	**PKPdf**	**16 22 27.7**	**+0.3**
WB2				*ep*PKPdf	**pPKPdf**	**16 22 56.0**	**-0.6**
WR1	**Warramunga Arr**	**135.68**	**217**	*e*PKPpre	PKPpre	16 22 15.1	
WR1				*e*PKPdf	**PKPdf**	**16 22 27.4**	**+0.1**
WR1				*ep*PKPdf	pPKPdf	16 22 56.0	-0.5
WR1				*e*		16 34 49.8	
WRA	**Warramunga Arr**	**135.68**	**217**	PKhKP	PKPpre	16 22 15.1	
	comp=Z,0.7nm,0.6s,baz=128,slow=2.2,SNR=11						
WRA				PKP	**PKPdf**	**16 22 27.4**	**+0.1**
	comp=Z,15nm,0.8s,baz=142,slow=1.6,SNR=40						
WRA				pPKP	pPKPdf	16 22 56.0	-0.5
	comp=Z,34nm,0.7s,baz=145,slow=1.8,SNR=14						
WRA				SKKPbc	SKKPbc	16 34 49.8	+0.6
	comp=Z,4.1nm,1.0s,baz=323,slow=5.4,SNR=6.3						
WRAB	**Tennant Creek**	**135.68**	**217**	*e*PKPdf	**PKPdf**	**16 22 27.5**	**+0.2**
WRAB				*ep*PKPdf	**pPKPdf**	**16 22 56.0**	**-0.5**
WRAB	**Tennant Creek**	**135.68**	**217**	*d

MDOK	**Medeo**	**142.41**	**37**	*i* PKP	**PKPdf**	**16 22 40.7**	**+1.6**
MDOK				*i* pPKP	**pPKPdf**	**16 23 08.3**	**0.0**
JAY	**Jayapura**	**142.44**	**244**	PKP	PKPpre	16 22 31.0	
MAKZ	**Makanchi**	**142.59**	**29**	PKIKP	**PKPdf**	**16 22 35.5**	**-3.6**
MAKZ				pmax	pmax		
	comp=Z,47nm,1.3s						
MK31	**Makanchi Array**	**142.74**	**29**	*i* PKIKP	**PKPdf**	**16 22 35.9**	**-3.5**
MK31				pmax	pmax		
	comp=Z,16nm,0.9s						
MK32	**Makanchi Array**	**142.74**	**29**	*e*PKPpre	PKPpre	16 22 36.1	
MK32				*e*		16 34 28.4	
MKAR	**Makanchi Array**	**142.74**	**29**	PKhKP	PKPpre	16 22 36.1	
	comp=Z,9.4nm,0.8s,baz=326,slow=3.5,SNR=69						
MKAR				SKKPbc	SKKPbc	16 34 28.4	+4.3
	comp=Z,1.3nm,0.8s,baz=134,slow=6.9,SNR=3.8						
MK01	**Makanchi Array**	**142.77**	**29**	*e*PKPpre	PKPpre	16 22 36.2	
MK01				*e*pPKPdf	pPKPdf	16 23 08.5	-0.2
NRN	**Naryn**	**142.78**	**41**	*e*PKPdf	**PKPdf**	**16 22 37.6**	**-2.4**
NRN	**Naryn**	**142.78**	**41**	*e*PKIKP	**PKPdf**	**16 22 37.6**	**-2.4**
GENI	**Genyem**	**142.86**	**243**	PKP	**PKPdf**	**16 22 37.7**	**-2.9**
GENI				PKP	**PKiKP**	**16 22 40.0**	**-3.8**
KDJ	**Kajisay**	**143.10**	**39**	*e*PKPdf	PKPbc	16 22 38.6	+1.0
KDJ				*e*pPKPdf	pPKPdf	16 23 11.1	+1.5
HVS	**Khovu-Aksy**	**143.15**	**15**	⇓*i*PKIKP	PKPbc	16 22 38.3	+1.0
KPKS	**Kokpek**	**143.17**	**36**	*i* PKP	PKPbc	16 22 38.1	+0.5
ZHN	**Zhinishke**	**143.21**	**36**	*i* PKP	PKPbc	16 22 38.6	+0.8
SATY	**Saty**	**143.26**	**37**	*i* PKP	PKPbc	16 22 38.7	+0.8
ZSN	**Zaisan**	**143.39**	**26**	*i* PKP	PKPbc	16 22 38.6	+0.7
ZSN				*i* pPKP	pPKPdf	16 23 06.4	-3.4
UZB	**Uzynbulak**	**143.56**	**36**	*i* PKP	PKPbc	16 22 39.1	+0.4
PRZ	**Przheval'sk**	**143.62**	**37**	*e*PKPdf	**PKPdf**	**16 22 40.5**	**-0.8**
PRZ				*e*pPKPdf	**pPKPdf**	**16 23 11.2**	**+0.7**
PRZ	**Przheval'sk**	**143.62**	**37**	*e*PKIKP	**PKPdf**	**16 22 40.5**	**-0.8**
PRZ				*e*		16 23 11.2	
BHJ	**Bhuj**	**143.66**	**72**	*e*P	PKPbc	16 22 39.9	+0.4
CIT	**Chita**	**143.66**	**354**	*e*PKIKP	**PKPdf**	**16 22 40.6**	**-0.3**
CIT				*e*		16 23 09.0	
CIT				*e*		16 23 22.4	
IRK	**Irkutsk**	**143.66**	**3**	*e*PKIKP	PKPbc	16 22 39.4	+0.8
IRK				*e*		16 23 07.7	
IRK				*e*		16 25 50.1	
IRK				pmax	pmax		
	comp=N,83nm,2.2s						
PDGK	**Podgornoye**	**143.71**	**35**	PKIKP	PKPbc	16 22 39.7	+0.5
PDGK				pmax	pmax		
	comp=Z,68nm,1.0s						
TARG	**Taragay, Kyrgy**	**143.72**	**39**	*e*PKPdf	**PKPdf**	**16 22 40.8**	**-1.0**
KSH	**Kashi**	**143.79**	**43**	⇑*i*PKP	**PKPdf**	**16 22 41.1**	**-0.5**
KSH				pPKP	pPKPdf	16 23 06.6	-4.2
KSH				sPKP		16 23 14.2	
KSH				PP	**PP**	**16 25 53.1**	**-2.3**
KSH				PKS	**PKSdf**	**16 26 18.3**	**+0.9**
KSH				SKS	**SKSdf**	**16 29 37.6**	**-4.1**
KSH				SKKS	**SKKSac**	**16 32 40.6**	**+2.2**
KSH				SS	**SS**	**16 44 32.5**	**+2.4**
KSH				AMB	AMB		
	comp=Z,2μm,5.1s						
KSH				LR	LR		
	comp=Z,350nm,4.8s						
KSH				LR	LR		
	comp=Z,350nm,4.2s						
KSH				LR	LR		
	comp=Z,2μm,22.9s						
SHLS	**Shalkode**	**143.80**	**36**	⇑*e*PKP	**PKPdf**	**16 22 41.5**	**0.0**
GUMO	**Guam**	**143.85**	**271**	PKP	PKPbc	16 22 40.5	+0.3
	comp=Z,87nm,0.7s,baz=158,slow=4.4,SNR=7.4						
MOY	**Mondy**	**143.95**	**7**	*e*PKIKP	**PKPdf**	**16 22 41.2**	**-0.3**
MOY				*e*		16 23 09.5	
MOY				pmax	pmax		
	comp=Z,76nm,3.0s						
TLY	**Talaya**	**144.18**	**4**	PKP	**PKPdf**	**16 22 41.9**	**+0.1**
	comp=Z,15nm,0.8s,baz=318,slow=2.8,SNR=26						
TLY				pPKP	**pPKPdf**	**16 23 10.6**	**-0.4**
	comp=Z,28nm,0.8s,baz=309,slow=0.8,SNR=9.2						
TLY	**Talaya**	**144.18**	**4**	*i* PKIKP	**PKPdf**	**16 22 41.5**	**-0.3**
TLY				*e*		16 25 56.6	
TLY				*e*SS	SS	16 44 28.8	-3.5
TLY				pmax	pmax		
	comp=Z,24nm,1.0s						
NIL	**Nilore**	**144.44**	**54**	*e*PKPdf	PKPbc	16 22 41.9	+0.4
NIL	**Nilore**	**144.44**	**54**	*e*PKIKP	PKPbc	16 22 41.9	+0.3
USRK	**Ussuriysk Ar.**	**145.01**	**329**	PKP	**PKPdf**	**16 22 43.4**	**0.0**
	comp=Z,52nm,1.0s,baz=48,slow=2.8,SNR=91						
USRK				pPKP	pPKPab	16 23 11.2	-0.1
	comp=Z,50nm,0.8s,baz=40,slow=3.9,SNR=9.7						
HIA	**Hailar**	**145.27**	**346**	*e*PKPbc	**PKPab**	**16 22 44.1**	**+0.2**
HIA				*e*pPKPab	pPKPbc	16 23 12.6	0.0
HIA	**Hailar**	**145.27**	**346**	*e*PKIKP	**PKPab**	**16 22 44.1**	**+0.2**
HIA				*e*		16 23 12.6	
ZAK	**Zakamensk**	**145.45**	**5**	*e*PKP2	**PKPab**	**16 22 45.2**	**+0.6**
ZAK				pmax	pmax		
	comp=Z,73nm,1.2s						
MDJ	**Mudanjiang**	**145.85**	**331**	PKPbc	**PKPdf**	**16 22 42.2**	**-2.6**
MDJ				pPKP	pPKPdf	16 23 10.6	-3.4
MDJ				sPKP		16 23 22.2	
MDJ				PP	**PP**	**16 26 08.8**	**+1.9**
MDJ				SS	SS	16 44 54.4	+2.2
MDJ				AMB	AMB		
	comp=Z,700nm,7.6s						
MDJ				LR	LR		
	comp=Z,770nm,22.3s						
MDJ				LR	LR		
	comp=Z,380nm,19.9s						
MDJ				LR	LR		
	comp=Z,1μm,23.2s						
MDJ	**Mudanjiang**	**145.85**	**331**	*e*PKPdf	**PKPbc**	**16 22 45.3**	**-0.3**
MJAR	**Matsushiro Arr**	**145.88**	**313**	PKPbc	**PKPbc**	**16 22 46.0**	**0.0**
	comp=Z,116nm,1.1s,baz=63,slow=0.2,SNR=177						
MJAR				pPKPbc	**pPKPdf**	**16 23 13.7**	**-0.7**
	comp=Z,76nm,0.8s,baz=63,slow=1.7,SNR=12						
MJAR	**Matsushiro Arr**	**145.88**	**313**	PKP2	**PKPbc**	**16 22 46.0**	**0.0**
MAJO	**Matsushiro**	**145.89**	**313**	*e*PKPdf	**PKPdf**	**16 22 45.3**	**+0.1**
MAJO				*e*pPKPdf	**pPKPdf**	**16 23 13.5**	**-0.9**
MAJO	**Matsushiro**	**145.89**	**313**	*e*PKP2	**PKPdf**	**16 22 45.3**	**+0.1**
MAT	**Matsushiro**	**145.89**	**313**	PKP	**PKPbc**	**16 22 45.6**	**-0.4**
MJB9	**Matsu-Tunnel**	**145.89**	**313**	*e*PKPdf	**PKPdf**	**16 22 45.5**	**+0.3**
MJB9				*e*pPKPdf	**pPKPdf**	**16 23 13.9**	**-0.5**
CBIJ	**Chichi jima**	**146.00**	**295**	*e*PKPdf	**PKPbc**	**16 22 46.6**	**+0.1**
CBIJ				*e*pPKPdf	**pPKPdf**	**16 23 13.9**	**-0.9**
JCJ	**Chichijima**	**146.00**	**295**	PKPbc	**PKPbc**	**16 22 46.4**	**-0.2**
	comp=Z,806nm,1.2s,baz=134,slow=2.3,SNR=12						
JCJ				pPKPbc	**pPKPdf**	**16 23 14.1**	**-0.7**
	comp=Z,553nm,0.7s,baz=38,slow=0.6,SNR=12						
SRPI	**Serui, Papua**	**146.57**	**241**	PKP	**PKPab**	**16 22 49.4**	**-0.4**
SRPI				PKP	**PKiKP**	**16 22 52.7**	**+1.3**
MSHR	**Mys Shultsa**	**146.59**	**327**	*d*iPKP2	**PKPdf**	**16 22 46.7**	**+0.6**
BAKI	**Biak**	**147.05**	**242**	PKP	**PKPab**	**16 22 51.3**	**-0.4**
BAKI				PKP	**PKiKP**	**16 22 52.0**	**-0.4**
INU	**Inuyama**	**147.31**	**312**	*e*PKPdf	**PKPbc**	**16 22 49.2**	**-0.8**
INU				*e*pPKPdf	**pPKPbc**	**16 23 17.9**	**-1.0**
DHRM	**DHARAMSHALA**	**147.34**	**54**	*e*P	**PKPdf**	**16 22 47.2**	**-0.8**
DHRM				IAmb	IAmb	16 22 51.9	
	comp=Z,277nm,0.4s						
DHRM				IAMs_20	IAMs_20	16 53 54.0	
	comp=Z,635nm,2.0s						
WMQ	**Urumqi**	**147.47**	**27**	PKPbc	**PKPdf**	**16 22 48.9**	**+1.2**
WMQ				PKPab	**PKiKP**	**16 22 52.0**	**-0.5**
WMQ				PP	**PP**	**16 26 22.2**	**+5.7**
WMQ				AMB	AMB		
	comp=Z,280nm,11.6s						
WMQ				LR	LR		
	comp=Z,2μm,25.7s						
WMQ				LR	LR		
	comp=Z,2μm,27.9s						
WMQ				LR	LR		
	comp=Z,2μm,27.9s						
POO	**Poona**	**147.75**	**80**	*e*P	**PKPdf**	**16 22 47.3**	**-1.5**
POO				IAMs_20	IAMs_20	16 50 13.7	
	comp=Z,935nm,10.4s						
SONA1	**Songino Array**	**148.14**	**1**	*e*PKPdf	**PKPdf**	**16 22 49.5**	**+0.7**
SONA1				*e*PKPbc	**PKiKP**	**16 22 53.9**	**0.0**
SONA1				*e*pPKPab	**pPKPab**	**16 23 22.5**	**-1.0**
SONA0	**Songino Array**	**148.15**	**1**	*e*PKPbc	**PKPbc**	**16 22 51.9**	**-0.3**
SONA0				*e*pPKPdf	**pPKPbc**	**16 23 21.8**	**+0.7**
SONM	**Songino Array**	**148.15**	**1**	PKPbc	**PKPbc**	**16 22 51.9**	**-0.3**
	comp=Z,33nm,0.8s,baz=290,slow=0.8,SNR=43						
SONM				pPKPbc	**pPKPbc**	**16 23 21.8**	**+0.7**
	comp=Z,94nm,0.8s,baz=310,slow=1.3,SNR=14						
CN2	**Changchun**	**148.30**	**335**	*e*PKPbc	**PKPdf**	**16 22 44.3**	**-4.7**
CN2				*e*PP	**PP**	**16 26 24.3**	**+3.2**
CN2				SS	SS	16 45 21.2	+1.6
CN2				AMB	AMB		
	comp=Z,200nm,8.0s						
SMLA	**Simla**	**148.44**	**56**	*e*P	**PKPdf**	**16 22 50.6**	**+1.0**
RKPI	**Ransiki, Papua**	**148.49**	**239**	PKP	**PKPdf**	**16 22 50.4**	**+0.2**
RKPI				PKP	**PKiKP**	**16 22 55.5**	**+0.1**
FAKI	**Fak Fak**	**149.21**	**235**	PKP	**PKPbc**	**16 22 57.0**	**+1.3**
FAKI				PKP	**PKiKP**	**16 22 57.7**	**+0.8**
FAKI	**Fak Fak**	**149.21**	**235**	*e*PKPbc	**PKPbc**	**16 22 54.7**	**-1.0**
DDI	**Dehra Dun**	**149.45**	**57**	*e*P	**PKPdf**	**16 22 49.6**	**-1.7**
DDI				IAMs_20	IAMs_20	16 45 44.6	
	comp=Z,370nm,9.0s						
BATI	**Baumata**	**149.53**	**213**	PKPbc	**PKPbc**	**16 22 57.5**	**+1.1**
	comp=Z,37nm,0.4s,baz=236,slow=19,SNR=3.8						
BATI				pPKPbc	**pPKPbc**	**16 23 24.7**	**-0.7**
	comp=Z,146nm,0.8s,baz=205,slow=4.7,SNR=4.9						
SOEI	**Soe**	**149.59**	**214**	PKP	**PKPdf**	**16 22 51.3**	**-0.8**
SOEI				PKP	**PKiKP**	**16 22 58.8**	**+1.1**
SOEI	**Soe**	**149.59**	**214**	*e*PKPbc	**PKPbc**	**16 22 57.6**	**+0.9**
SOEI				*e*pPKPab	**pPKPbc**	**16 23 25.9**	**+0.2**
SNY	**Shenyang**	**150.70**	**335**	⇓PKPbc	**PKPbc**	**16 22 59.2**	**+0.8**
SNY				pPKP	**pPKPbc**	**16 23 27.3**	**-0.1**
SNY				sPKP		16 23 39.4	
SNY				PP	**PP**	**16 26 35.9**	**+0.9**
SNY				SKS	SKSdf	16 30 03.4	+13
BHPL	**Bhopal**	**150.76**	**71**	*e*P	**PKPdf**	**16 22 51.5**	**-2.0**
BHPL				IAMs_20	IAMs_20	16 55 19.0	
	comp=Z,513nm,3.9s						
SIJI	**Sorong**	**151.23**	**237**	PKP	**PKPdf**	**16 22 55.1**	**+0.6**
	comp=Z,7.3nm,0.6s,baz=204,slow=20,SNR=3.8						
SIJI				PKPbc	**PKiKP**	**16 23 00.9**	**-0.2**
	comp=Z,28nm,0.7s,baz=94,slow=1.1,SNR=17						
SIJI				pPKPbc	**pPKPbc**	**16 23 29.2**	**-0.4**
	comp=Z,27nm,0.6s,baz=241,slow=3.1,SNR=5.5						
KSRS	**Korea Array**	**151.97**	**324**	PKP	**PKPdf**	**16 22 56.1**	**+1.2**
	comp=Z,6.4nm,1.0s,baz=46,slow=1.2,SNR=24						
KSRS				PKPbc	**PKiKP**	**16 23 02.6**	**+0.9**
	comp=Z,58nm,0.9s,baz=21,slow=1.4,SNR=67						
KSRS				pPKPbc	**pPKPbc**	**16 23 30.8**	**+0.2**
	comp=Z,134nm,1.0s,baz=1.8,slow=1.7,SNR=12						
KS01	**Wonju Array Si**	**151.97**	**324**	*e*PKPdf	**PKPdf**	**16 22 55.1**	**+0.2**
KS01				*e*PKPbc	**PKiKP**	**16 23 02.7**	**+0.9**
KS01				*e*PKPab	**PKPab**	**16 23 11.8**	**+0.7**
KS01				*e*		16 23 30.4	
KS15	**Wonju Array Si**	**152.00**	**324**	*e*PKPbc	**PKPbc**	**16 22 59.2**	**-2.3**
KS15				*e*		16 23 30.3	
KSAR	**Wonju Array Be**	**152.00**	**324**	PKP	**PKPdf**	**16 22 56.1**	**+1.2**
KSAR				PKPbc	**PKiKP**	**16 23 02.6**	**+0.8**
KSAR				pPKPbc	**pPKPbc**	**16 23 30.8**	**+0.1**
KSAR	**Wonju Array Be**	**152.00**	**324**	PKIKP	**PKPdf**	**16 22 56.1**	**+1.2**
KSAR						16 23 30.8	
HYB	**Hyderabad**	**152.21**	**83**	*i* PKP	**PKPdf**	**16 22 55.0**	**-0.9**
HYB				*e*		16 23 12.0	
HYB	**Hyderabad**	**152.21**	**83**	*e*P	**PKPdf**	**16 22 54.8**	**-1.1**
PALK	**Pallekele**	**152.38**	**105**	PKPbc	**PKPbc**	**16 23 03.6**	**+0.4**
	comp=Z,4.7nm,0.5s,baz=256,slow=0.9,SNR=4.1						
PALK	**Pallekele**	**152.38**	**105**	*e*PKPdf	**PKPdf**	**16 22 55.2**	**-1.1**
PALK				*e*PKPbc	**PKiKP**	**16 23 05.0**	**+1.5**
PALK				*e*PKPab	**PKPab**	**16 23 14.7**	**+1.1**
PALK	**Pallekele**	**152.38**	**105**	P	**PKPdf**	**16 22 54.9**	**-1.3**
PALK	**Pallekele**	**152.38**	**105**	*e*PKIKP	**PKPdf**	**16 22 55.2**	**-1.1**
PALK				*e*		16 23 14.7	
NGP	**Nagpur**	**152.52**	**75**	*e*P	**PKPdf**	**16 22 54.2**	**-2.0**
JNU	**Nakatsue**	**152.81**	**313**	PKPbc	**PKPbc**	**16 23 03.4**	**-0.2**
	comp=Z,41nm,1.0s,baz=72,slow=5.2,SNR=18						
JNU				pPKPbc	**pPKPbc**	**16 23 32.1**	**-0.5**
	comp=Z,85nm,0.9s,baz=60,slow=4.8,SNR=13						
JNU	**Nakatsue**	**152.81**	**313**	*e*PKPdf	**PKPdf**	**16 22 59.7**	**+3.3**
JNU				*e*		16 23 31.8	
NLAI	**Namlea**	**152.85**	**227**	PKP	**PKPdf**	**16 22 58.9**	**+2.0**
NLAI				PKP	**PKPab**	**16 23 16.6**	**+1.2**
PLAI	**Plampang**	**153.41**	**203**	PKP	**PKPdf**	**16 22 57.0**	**-0.7**
PLAI				PKP	**PKiKP**	**16 23 08.8**	**+3.3**
DL2	**Dalian**	**153.96**	**334**	PKPbc	**PKPbc**	**16 23 02.7**	**-3.1**
DL2				PKPab	**pPKPdf**	**16 23 24.1**	**-2.9**
DL2				pPKP	**sPKPdf**	**16 23 39.7**	**+1.7**
DL2				PP	**PP**	**16 26 53.9**	**+0.4**
PYUN	**Piuthan**	**154.28**	**58**	*e*P	**PKPdf**	**16 22 59.1**	**+0.3**
DANN	**Dangsing**	**154.80**	**57**	*e*P	**PKPdf**	**16 23 00.3**	**+0.6**
BJI	**Beijing**	**154.81**	**344**	PKPbc	**PKPbc**	**16 23 08.1**	**+0.5**
BJI				PP	PP	16 26 49.0	-9.0
BJT	**Baijiatuau**	**154.83**	**344**	*e*PKPdf	**PKPdf**	**16 22 59.7**	**+0.8**
BJT				*e*PKPbc	**PKiKP**	**16 23 08.1**	**+0.4**
BJT	**Baijiatuau**	**154.83**	**344**	*e*PKIKP	**PKPdf**	**16 22 59.7**	**+0.8**
KOLN	**Koldanda**	**154.90**	**58**	*e*P	**PKPdf**	**16 22 59.8**	**+0.1**
HHC	**Hu-ho-hao-te**	**154.91**	**353**	*e*PKPbc	**PKPdf**	**16 22 53.3**	**-5.9**
HHC				PP	**PP**	**16 26 58.4**	**-0.2**
HHC				SKS	**SKSdf**	**16 29 47.6**	**-8.7**
HHC				SS	**SS**	**16 46 30.2**	**-1.8**
HHC				AMB	AMB		
	comp=Z,250nm,9.4s						
HHC				LR	LR		
	comp=Z,1μm,19.4s						
HHC				LR	LR		
	comp=Z,1μm,21.7s						
HHC				LR	LR		
	comp=Z,2μm,21.6s						
BTO	**Baotou**	**155.30**	**355**	*e*PKP	**PKPdf**	**16 23 00.4**	**+0.7**
GTA	**Gaotai**	**155.63**	**15**	⇑PKP	**PKPdf**	**16 23 01.2**	**+1.0**
GTA				pPKP	PKPab	16 23 27.4	+0.7
GTA				PKPab	**pPKPdf**	**16 23 31.3**	**+1.8**
GTA				sPKP		16 23 39.4	
GTA				PP	**PP**	**16 27 07.9**	**+5.1**
GTA				SKS	**SKSdf**	**16 29 56.0**	**-1.2**
GTA				SKKS	**SKKSac**	**16 33 46.6**	**+3.1**
GTA				SS	**SS**	**16 46 45.4**	**+5.3**
GTA				AMB	AMB		
	comp=Z,120nm,6.0s						
GTA				LR	LR		
	comp=Z,580nm,21.6s						
GTA				LR	LR		
	comp=Z,570nm,20.6s						
GTA				LR	LR		
	comp=Z,1μm,23.8s						
GKN	**Gorkha**	**155.65**	**57**	*e*P	**PKPdf**	**16 23 00.7**	**+0.1**
DMN	**Daman**	**156.19**	**57**	*e*P	**PKPdf**	**16 23 01.9**	**+0.4**
KKN	**Kakani**	**156.25**	**56**	*e*P	**PKPdf**	**16 23 01.7**	**+0.2**
GUN	**Gumba**	**156.68**	**56**	*e*P	**PKPdf**	**16 23 02.4**	**+0.2**
JIRN	**Jiri**	**157.04**	**56**	*e*P	**PKPdf**	**16 23 02.7**	**0.0**
LEM	**Lembang**	**157.41**	**180**	PKP	**PKPdf**	**16 23 04.2**	**+0.9**
	comp=Z,14nm,0.9s,baz=100,slow=2.8,SNR=5.5						
LEM				PKPab	**PKPab**	**16 23 35.9**	**+1.0**
	comp=Z,56nm,0.7s,baz=164,slow=6.8,SNR=10						
LEM				PP	**PP**	**16 27 13.3**	**+1.0**
	comp=Z,7.3nm,0.3s,baz=180,slow=20,SNR=2.3						
RAMN	**Ramite**	**157.67**	**57**	*e*P	**PKPdf**	**16 23 03.8**	**+0.4**
TIY	**Taiyuan**	**157.85**	**350**	PKP	**PKPab**	**16 23 33.4**	**-2.8**
TIY				PKPab	**pPKPab**	**16 23 55.9**	**-8.4**
TIY				PP	**PP**	**16 27 13.7**	**-1.2**
JOW	**Kunigami**	**157.87**	**303**	PKPab	**PKPab**	**16 23 37.4**	**+0.7**
	comp=Z,31nm,1.0s,baz=32,slow=1.4,SNR=7.5						
JOW	**Kunigami**	**157.87**	**303**	*e*PKPdf	**PKPdf**	**16 23 01.8**	**-1.5**
JOW				*e*PKPab	**PKPab**	**16 23 37.1**	**+0.4**
TIA	**Tai'an**	**158.05**	**339**	PKP	**PKPab**	**16 23 33.0**	**-4.0**
TIA				PP	**PP**	**16 27 15.7**	**-0.4**
BOK	**Bokaro**	**158.21**	**65**	*e*P	**PKPdf**	**16 23 03.0**	**-0.8**
BOK				IAMs_20	IAMs_20	16 51 42.0	
	comp=Z,438nm,8.2s						
ODAN	**Odare**	**158.35**	**56**	*e*P	**PKPdf**	**16 23 04.7**	**+0.5**
BWNR	**Bhubaneshwar**	**158.90**	**75**	*ex*	PKPab	16 23 29.0	-12
GTK	**Tadong**	**159.09**	**54**	*e*P	**PKPdf**	**16 23 03.7**	**-1.3**
GTK				IAMs_20	IAMs_20	16 28 02.5	
	comp=Z,517nm,8.9s						
LSA	**Lhasa**	**159.63**	**45**	*e*PKPdf	**PKPdf**	**16 23 07.0**	**+1.1**
LSA	**Lhasa**	**159.63**	**45**	P	**PKPdf**	**16 23 07.4**	**+1.5**
LSA	**Lhasa**	**159.63**	**45**	*e*PKIKP	**PKPdf**	**16 23 07.0**	**+1.1**
LZH	**Lanzhou**	**159.64**	**9**	*e*PKP	**PKPdf**	**16 23 07.1**	**+1.7**
LZH				pPKP	pPKPdf	16 23 34.2	-0.5
LZH				sPKP		16 23 45.7	
LZH				PP	**PP**	**16 27 22.2**	**-2.5**
LZH				SKKS		16 34 08.6	
LZH				SS	**SS**	**16 47 24.6**	**+1.9**
LZH				AMB	AMB		
	comp=Z,440nm,6.8s						
LZH				LR	LR		
	comp=Z,1μm,17.6s						
LZH				LR	LR		
	comp=Z,970nm,15.7s						
LZH				LR	LR		
	comp=Z,2μm,20.6s						
SSE	**Sheshan**	**160.40**	**323**	PKP	**PKPdf**	**16 23 04.0**	**-2.1**
SSE				PP	**PP**	**16 27 29.3**	**-0.1**
SSE				SS	SS	16 47 27.4	-4.4
SSE				AMB	AMB		
	comp=Z,360nm,7.5s						
SSE				LR	LR		
	comp=Z,350nm,24.4s						
SSE				LR	LR		
	comp=Z,220nm,19.0s						
NJ2	**Nanjing**	**160.91**	**329**	*e*PKP	**PKPdf**	**16 23 07.5**	**+0.9**
NJ2				pPKP	**pPKPdf**	**16 23 35.7**	**-0.2**
NJ2				PKPab	**sPKPdf**	**16 23 47.5**	**+0.5**
NJ2				PP	**PP**	**16 27 29.4**	**-2.5**
NJ2				SS	SS	16 47 41.1	+4.4
NJ2				AMB	AMB		
	comp=Z,1μm,8.7s						
NJ2				LR	LR		
	comp=Z,730nm,21.7s						
NJ2				LR	LR		
	comp=Z,290nm,19.5s						
NJ2				LR	LR		
	comp=Z,1μm,19.0s						
TURI	**Tura**	**161.29**	**56**	*e*P	**PKPdf**	**16 23 03.6**	**-3.6**
XAN	**Xi'an**	**161.91**	**356**	PKP	**PKPdf**	**16 23 09.0**	**+1.3**
XAN				PP	**PP**	**16 27 36.2**	**-0.4**
XAN				SKS	**SKSdf**	**16 29 55.5**	**-7.6**
XAN				SS	**SS**	**16 47 43.7**	**-2.4**
XAN				AMB	AMB		
	comp=Z,510nm,7.6s						
XAN				LR	LR		
	comp=Z,710nm,22.8s						
XAN				LR	LR		
	comp=Z,430nm,21.6s						
XAN				LR	LR		
	comp=Z,740nm,22.6s						
GUWA	**GUWAHATI**	**162.04**	**53**	*e*P	**PKPdf**	**16 23 09.5**	**+1.6**
SHL	**Shillong**	**162.51**	**54**	*ex*	**PKPdf**	**16 23 03.8**	**-4.9**
TEZP	**TEZPUR**	**162.64**	**50**	*e*P	**PKPdf**	**16 23 06.5**	**-2.1**
ITAN	**ITANAGAR**	**162.99**	**47**	*e*P	**PKPdf**	**16 23 08.0**	**-0.9**
BELO	**BELONIA**	**163.19**	**62**	*e*P	**PKPdf**	**16 23 09.6**	**+0.4**
BELO				IAMs_20	IAMs_20	16 50 18.2	
	comp=Z,11μm,2.7s						
MOKO	**MOKOCHONG**	**164.06**	**47**	*e*P	**PKPdf**	**16 23 10.6**	**+0.5**
MOKO				IAmb	IAmb	16 23 41.7	
	comp=Z,188nm,1.4s						
WHN	**Wuhan**	**164.15**	**338**	*i* PKP	**PKPdf**	**16 23 11.1**	**+1.2**
WHN				pPKP	**pPKPdf**	**16 23 39.3**	**+0.1**
WHN				PKPab	**PKPab**	**16 24 02.8**	**-1.0**
WHN				PP	**PP**	**16 27 49.2**	**+0.5**
WHN				SKKS		16 34 29.4	
WHN				LR	LR		
	comp=Z,1μm,18.2s						
WHN				LR	LR		
	comp=Z,1μm,21.6s						
WHN				LR	LR		
	comp=Z,2μm,21.4s						
KCSI	**Kotacane, Aceh**	**164.39**	**141**	PKP	**PKPdf**	**16 23 09.3**	**-1.3**
KCSI				PKP	**PKPdf**	**16 23 11.8**	**+1.2**
PSI	**Prapat**	**164.46**	**146**	PKP	**PKPdf**	**16 23 09.0**	**-1.8**
	comp=Z,8.7nm,0.9s,baz=180,slow=5.4,SNR=7.5						
PSI				pPKP	**pPKPdf**	**16 23 38.5**	**-1.6**
	comp=Z,47nm,1.2s,baz=180,slow=4.1,SNR=6.4						
PSI				PKPab	**PKPab**	**16 24 06.3**	**+0.6**
	comp=Z,16nm,0.8s,baz=180,slow=7.0,SNR=4.4						
PSI				pPKPab	**pPKPab**	**16 24 33.0**	**-0.9**
	comp=Z,15nm,0.9s,baz=180,slow=5.8,SNR=2.7						
PSI	**Prapat**	**164.46**	**146**	*e*PKPdf	**PKPdf**	**16 23 08.8**	**-2.0**
PSI				*e*pPKPdf	**pPKPdf**	**16 23 38.7**	**-1.5**
PSI				*e*PKPab	**PKPab**	**16 24 05.8**	**+0.1**
PSI				*e*pPKPab	**pPKPab**	**16 24 32.5**	**-1.3**
IMP	**Imphal**	**164.49**	**53**	*e*P	**PKPdf**	**16 23 09.8**	**-0.6**
IMP				IAmb	IAmb	16 23 41.0	
	comp=Z,1μm,3.9s						
CD2	**Chengdu**	**164.68**	**12**	PKP	**PKPdf**	**16 23 12.2**	**+1.8**
CD2				pPKP	pPKPdf	16 23 39.7	-0.1
CD2				sPKP		16 23 50.3	
CD2				PP	**PP**	**16 27 53.9**	**+2.6**

QIZ LR LR
comp=Z,1μm,58.8s

IDC 07 16:14:06.1±9.7,6°.02S×154°.46E,h108km±69km,mb3.3/2, mb1 3.7/3,mb1mx3.3/52,mbtmp3.9/3,ML2.4/1,Error ellipse: s-maj=99.9km s-min=55.8km az=122.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.98**	**245**	P	Pn	16 15 59.4	0.0
	3.2nm,0.3s,baz=50,slow=8.5,SNR=12						
PMG				S	Sn	16 17 28.9	+1.0
	1.7nm,0.3s,baz=143,slow=20,SNR=5.3						
WRA	**Warramunga Arr**	**23.95**	**233**	P	P	16 19 11.2	+0.6
	0.8nm,0.6s,baz=59,slow=9.2,SNR=8.3						
ASAR	**Alice Springs**	**26.44**	**226**	P	P	16 19 32.5	-0.6
	0.7nm,0.6s,baz=56,slow=9.3,SNR=24						
TORD	**Torodi Ar. Bea**	**152.25**	**287**	PKPbc	PKPbc	16 33 50.3	-0.1
	0.5nm,0.7s,baz=64,slow=4.6,SNR=3.2						

*IDC **07** 16:16:20.2±2.6, 14°.33N×146°.31E, h0km, mb4.0/5, mb1 4.1/5, mb1mx3.7/64, mbtmp4.0/5, MS4.2/5, Ms1 4.2/5, ms1mx3.5/62, Error ellipse: s-maj=63.6km s-min=22.0km az=140.0*

*ISCJB **07** 16:16:24.0±2.1, 14°.4N±0°.3×146°.3E±0°.3, h35km, mb4.0/5, MS4.1/4, Error ellipse: s-maj=52.9km s-min=10.7km az=135.0*

ISC 07 16:16:25.0±2.5,14°.3N±0°.3×146°.3E±0°.3,h35km,n11, σ0°.88/7,mb4.3/5,MS4.1/4,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.57**	**244**	Pn	**Pn**	**16 16 50.3**	**-0.1**
	58nm,0.3s,baz=80,slow=2.7,SNR=34						
GUMO				Sn	**Sn**	**16 17 09.7**	**+0.2**
	45nm,0.3s,baz=355,slow=22,SNR=7.1						
JCJ	**Chichijima**	**13.32**	**344**	LR	LR	16 23 47.4	
	comp=Z,1μm,19.9s,baz=1.5,slow=34						
JNU	**Nakatsue**	**23.43**	**326**	LR	LR	16 30 04.6	
	comp=Z,204nm,18.7s,baz=134,slow=35						
TGY	**Tagaytay City**	**24.61**	**273**	LR	LR	16 29 55.8	
	comp=Z,174nm,21.1s,baz=310,slow=33						
KSRS	**Korea Array**	**28.30**	**328**	P	**P**	**16 22 14.9**	**-0.3**
	1.1nm,0.7s,baz=146,slow=9.8,SNR=3.4						
MKAR	**Makanchi Array**	**61.98**	**316**	P	**P**	**16 26 42.5**	**+0.9**
	3.6nm,1.0s,baz=94,slow=7.9,SNR=8.1						
KURBB	**Kurchatov Arra**	**65.02**	**319**	P	**P**	**16 27 02.1**	**+0.5**
	1.8nm,0.7s,baz=98,slow=7.0,SNR=4.7						
ILAR	**Eielson Array**	**67.34**	**25**	P	**P**	**16 27 16.9**	**+0.6**
	0.3nm,0.6s,baz=247,slow=6.7,SNR=2.6						
SPITS	**Spitsbergen Ar**	**83.60**	**351**	LR	LR	17 09 34.7	
	comp=Z,379nm,20.5s,baz=265,slow=38						
KBZ	**Khabaz**	**89.68**	**315**	LR	LR	17 13 52.0	
	comp=Z,244nm,19.4s,baz=292,slow=38						
FINES	**FINESS Array B**	**91.13**	**335**	P	**P**	**16 29 24.7**	**-1.3**
	2.2nm,1.1s,baz=66,slow=4.7,SNR=3.7						

*CSEM **07** 16:30:41.5±0.3, 40°.76N×27°.67E, h8km, ML2.0, Error ellipse: s-maj=7.2km s-min=7.0km az=101.0*

ISK 07 16:30:41.5,40°.80N×27°.64E,h10km,ML2.0/4,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKR	**Tekirdag**	**0.20**	**338**	PG	Pg	16 30 45.9	+0.2
TKR				SG	Sg	16 30 49.7	+1.1
TKR	**Tekirdag**	**0.20**	**338**	*e*Pg	Pg	16 30 45.9	+0.2
TKR				*e*Sg	Sg	16 30 49.7	+1.1
RKY	**Sarkoy-Tekirda**	**0.36**	**252**	PG	Pg	16 30 49.2	+0.5
RKY				SG	Sb	16 30 54.9	-1.1
RKY	**Sarkoy-Tekirda**	**0.36**	**252**	*e*Pg	Pg	16 30 49.2	+0.5
RKY				*e*Sg	Sb	16 30 54.9	-1.1
CTKS	**Kestanelik-??a**	**0.79**	**56**	PG	Pb	16 30 57.3	0.0
CTKS	**Kestanelik-??a**	**0.79**	**56**	*e*Pg	Pb	16 30 57.3	0.0
GELI	**Tayfur-Gelibol**	**0.97**	**246**	PG	Pb	16 31 00.5	+0.1
GELI	**Tayfur-Gelibol**	**0.97**	**246**	*e*Pg	Pb	16 31 00.5	+0.1
ALN	**Alexandroupoli**	**1.21**	**275**	PN	Pg	16 31 05.1	+0.4
ALN	**Alexandroupoli**	**1.21**	**275**	*e*Pn	Pg	16 31 05.1	+0.4

*ISCJB **07** 16:30:53.8±0.4, 40°.02N±0°.02×27°.71E±0°.03, h5km±5km, Error ellipse: s-maj=4.5km s-min=3.7km az=14.0*

*DDA **07** 16:30:54.0, 40°.02N×27°.75E, h8km, Ml2.8*

*ISK **07** 16:30:53.8, 40°.02N×27°.71E, h8km, ML2.4/18*

*CSEM **07** 16:30:54.2±0.1, 40°.02N×27°.70E, h8km, ML2.4, Error ellipse: s-maj=2.3km s-min=2.0km az=3.0*

ISC 07 16:30:53.9±1.0,40°.03N±0°.02×27°.72E±0°.02,h10km±11km, n58,σ0°.51/66,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALY	**Balya**	**0.30**	**194**	*i* P	**Pg**	**16 30 59.6**	**-0.3**
BALY				*i* S	**Sg**	**16 31 04.2**	**+0.3**
BALY	**Balya**	**0.30**	**194**	P	**Pg**	**16 30 59.6**	**-0.3**
EDC	**Edincik**	**0.34**	**20**	PG	**Pb**	**16 31 01.6**	**-0.5**
EDC				SG	**Sb**	**16 31 06.8**	**-0.8**
EDC	**Edincik**	**0.34**	**20**	*e*Pg	**Pb**	**16 31 01.6**	**-0.5**
EDC				*e*Sg	**Sb**	**16 31 06.8**	**-0.8**
BALB	**Balikesir**	**0.41**	**162**	PG	**Pg**	**16 31 02.2**	**+0.3**
BALB				SG	**Sg**	**16 31 07.6**	**+0.3**
BALB	**Balikesir**	**0.41**	**162**	*e*Pg	**Pg**	**16 31 02.2**	**+0.3**
BALB				*e*Sg	**Sg**	**16 31 07.6**	**+0.3**
KRBG	**Karabiga-Canak**	**0.48**	**319**	PG	**Pg**	**16 31 03.3**	**-0.1**
KRBG	**Karabiga-Canak**	**0.48**	**319**	*e*Pg	**Pg**	**16 31 03.3**	**-0.1**
KCTX	**Karacabey (Bur**	**0.55**	**64**	PG	**Pg**	**16 31 04.5**	**-0.1**
KCTX				SG	**Sg**	**16 31 11.5**	**-0.3**
KCTX	**Karacabey (Bur**	**0.55**	**64**	*e*Pg	**Pg**	**16 31 04.5**	**-0.1**
KCTX				*e*Sg	**Sg**	**16 31 11.5**	**-0.3**
STEP	**BALIKESIR_Sava**	**0.65**	**180**	*i* P	**Pg**	**16 31 06.9**	**+0.4**
STEP				*i* S	**Sb**	**16 31 15.9**	**-0.7**
STEP	**BALIKESIR_Sava**	**0.65**	**180**	P	**Pb**	**16 31 06.9**	**-0.5**
DURS	**Dursunbey**	**0.72**	**126**	*i* P	**Pg**	**16 31 07.5**	**-0.4**
DURS	**Dursunbey**	**0.72**	**126**	P	**Pg**	**16 31 07.5**	**-0.4**
RKY	**Sarkoy-Tekirda**	**0.78**	**328**	PG	**Pb**	**16 31 09.5**	**-0.1**
RKY	**Sarkoy-Tekirda**	**0.78**	**328**	*e*Pg	**Pb**	**16 31 09.5**	**-0.1**
SART	**Tekirdag**	**0.78**	**328**	*i* P	**Pg**	**16 31 08.9**	**-0.1**
SART	**Tekirdag**	**0.78**	**328**	P	**Pg**	**16 31 08.9**	**-0.1**
LPK	**Lapseki**	**0.81**	**296**	PG	**Pg**	**16 31 09.5**	**0.0**
LPK	**Lapseki**	**0.81**	**296**	*e*Pg	**Pg**	**16 31 09.5**	**0.0**
BAYC	**CANAKKALE_Bayr**	**0.94**	**253**	*i* P	**Pb**	**16 31 12.5**	**+0.1**
BAYC	**CANAKKALE_Bayr**	**0.94**	**253**	P	**Pb**	**16 31 12.5**	**+0.1**
MDNY	**Mudanya-Bursa**	**0.96**	**69**	PG	**Pb**	**16 31 13.0**	**+0.3**
MDNY	**Mudanya-Bursa**	**0.96**	**69**	*e*Pg	**Pb**	**16 31 13.0**	**+0.3**
GELI	**Tayfur-Gelibol**	**1.02**	**292**	PG	**Pb**	**16 31 14.1**	**+0.4**
GELI	**Tayfur-Gelibol**	**1.02**	**292**	*e*Pg	**Pb**	**16 31 14.1**	**+0.4**
ARMT	**Armutlu**	**1.03**	**58**	PG	**Pg**	**16 31 13.7**	**0.0**
ARMT	**Armutlu**	**1.03**	**58**	*e*Pg	**Pg**	**16 31 13.7**	**0.0**
ERIK	**Erikli-Kesan**	**1.12**	**305**	PN	**Pn**	**16 31 15.9**	**+0.2**
ERIK	**Erikli-Kesan**	**1.12**	**305**	*e*Pn	**Pn**	**16 31 15.9**	**+0.2**
DKL	**Dikili**	**1.14**	**213**	PN	**Pn**	**16 31 16.1**	**+0.1**
DKL	**Dikili**	**1.14**	**213**	*e*Pn	**Pn**	**16 31 16.1**	**+0.1**
YLV	**Yalova**	**1.38**	**66**	PN	**Pn**	**16 31 19.8**	**+0.4**
YLV	**Yalova**	**1.38**	**66**	*e*Pn	**Pn**	**16 31 19.8**	**+0.4**
ENEZ	**Enez**	**1.39**	**301**	PN	**Pn**	**16 31 19.7**	**+0.3**
ENEZ	**Enez**	**1.39**	**301**	*e*Pn	**Pn**	**16 31 19.7**	**+0.3**
GADA	**Gvkgeada**	**1.40**	**277**	PN	**Pb**	**16 31 20.5**	**+0.3**
GADA	**Gvkgeada**	**1.40**	**277**	*e*Pn	**Pb**	**16 31 20.5**	**+0.3**
BGKT	**Bogazkoy**	**1.41**	**35**	PN	**Pb**	**16 31 20.4**	**+0.1**
BGKT	**Bogazkoy**	**1.41**	**35**	*e*Pn	**Pb**	**16 31 20.4**	**+0.1**
KAVV	**Kandilli-Istan**	**1.46**	**44**	PN	**Pb**	**16 31 21.3**	**+0.1**
KAVV	**Kandilli-Istan**	**1.46**	**44**	*e*Pn	**Pb**	**16 31 21.3**	**+0.1**
ISK	**Istanbul-Kandi**	**1.46**	**44**	PN	**Pn**	**16 31 21.0**	**+0.6**
ISK	**Istanbul-Kandi**	**1.46**	**44**	*e*Pn	**Pn**	**16 31 21.0**	**+0.6**
TVSB	**Tavsanli**	**1.47**	**113**	PN	**Pn**	**16 31 20.0**	**-0.6**
TVSB	**Tavsanli**	**1.47**	**113**	*e*Pn	**Pn**	**16 31 20.0**	**-0.6**
ALN	**Alexandroupoli**	**1.54**	**305**	PN	**Pn**	**16 31 21.7**	**+0.2**
ALN	**Alexandroupoli**	**1.54**	**305**	*e*Pn	**Pn**	**16 31 21.7**	**+0.2**
CAVI	**Cavuskoy**	**1.64**	**83**	PN	**Pb**	**16 31 23.9**	**-0.4**
CAVI	**Cavuskoy**	**1.64**	**83**	*e*Pn	**Pb**	**16 31 23.9**	**-0.4**
SIGR	**SIGRI**	**1.65**	**241**	PN	**Pn**	**16 31 23.1**	**+0.1**
SIGR	**SIGRI**	**1.65**	**241**	*e*Pn	**Pn**	**16 31 23.1**	**+0.1**
KULA	**Kula-Manisa**	**1.68**	**154**	PN	**Pn**	**16 31 23.9**	**+0.4**
KULA	**Kula-Manisa**	**1.68**	**154**	*e*Pn	**Pn**	**16 31 23.9**	**+0.4**
BORA	**Eskisehir**	**2.11**	**93**	PN	**Pn**	**16 31 30.9**	**+1.5**
BORA	**Eskisehir**	**2.11**	**93**	*e*Pn	**Pn**	**16 31 30.9**	**+1.5**
GULT	**Gulveren**	**2.18**	**78**	PN	**Pn**	**16 31 31.9**	**+1.5**
GULT	**Gulveren**	**2.18**	**78**	*e*Pn	**Pn**	**16 31 31.9**	**+1.5**

WEL 07 16:32:57.3±1.3,46°.5S±5°.5×16°.6E±°,h12km,ML3.8/8,Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYZ	**Puysegur Point**	**0.34**	**51**	P	Pb	16 33 05.1	-0.1
PYZ				S	Sb	16 33 10.3	-0.3
DCZ	**Deep Cove**	**1.09**	**33**	P	Pb	16 33 14.1	-4.0
DCZ				S	Sb	16 33 26.2	-6.1
WHZ	**Wether Hill Ro**	**1.24**	**67**	P	Pn	16 33 19.3	-1.2
WHZ				S	Sb	16 33 36.0	-0.6
APZ	**The Paps**	**1.25**	**112**	P	Pn	16 33 20.0	-0.6
APZ				S	Sn	16 33 37.4	+0.1
MLZ	**Mavora Lakes**	**1.62**	**52**	P	Pn	16 33 25.3	-0.4
MLZ				S	Sb	16 33 47.3	-0.3
SYZ	**Scrubby Hill**	**1.96**	**96**	P	Pn	16 33 30.4	0.0
SYZ				S	Sn	16 33 55.9	+1.0
MSZ	**Milford Sound**	**2.05**	**34**	P	Pn	16 33 31.2	-0.4
TUZ	**Tuapeka**	**2.35**	**81**	P	Pn	16 33 35.5	-0.2
TUZ				S	Sn	16 34 04.7	+0.3
EAZ	**Earnscleugh**	**2.39**	**62**	P	Pn	16 33 36.3	-0.1
EAZ				S	Sn	16 34 06.9	+1.3
WKZ	**Wanaka**	**2.46**	**52**	P	Pn	16 33 37.4	+0.2
WKZ				S	Sn	16 34 09.0	+1.9
JCZ	**Jackson Bay**	**2.90**	**38**	P	Pn	16 33 43.8	+0.5
JCZ				S	Sn	16 34 18.6	+0.4
ODZ	**Otahua Downs**	**3.32**	**68**	P	Pn	16 33 47.3	-1.8
LBZ	**Lake Benmore**	**3.38**	**55**	P	Pn	16 33 48.9	-1.1
FOZ	**Fox Glacier**	**3.78**	**42**	P	Pn	16 33 55.5	+0.1
FOZ				P	Pb	16 33 56.2	-7.8
RPZ	**Rata Peaks**	**4.29**	**53**	P	Pn	16 34 00.3	-2.1
WVZ	**Waitaha Valley**	**4.57**	**45**	P	Pn	16 34 06.5	+0.3
OXZ	**Oxford**	**5.09**	**55**	P	Pn	16 34 12.7	-0.8
INZ	**Inchbonnie**	**5.18**	**47**	P	Pn	16 34 12.3	-2.3
LTZ	**Lake Taylor**	**5.58**	**52**	P	Pn	16 34 19.8	-0.3
DSZ	**Denniston Nort**	**6.09**	**42**	P	Pn	16 34 27.6	+0.3

IDC 07 16:37:50.7±437.0,47°.33N×47°.42E,h0km,Error ellipse: s-maj=184.7km s-min=145.7km az=1.0, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	**7.65**	**62**	*i*		17 27 25.0	
	baz=249,slow=306,SNR=7.6						
I43RU	**DUBNA INFRASONI**	**1.30**	**330**	*i*		17 46 40.0	
	baz=141,slow=320,SNR=0.4						
I26DE	**FREYUNG INFRAS**	**22.47**	**286**	*i*		18 55 20.0	
	baz=82,slow=322,SNR=0.6						

KRSC 07 16:58:47.7±0.7,49°.11N×156°.31E,h40km±13km,ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.58**	**355**	*e*P	Pn	16 59 14.0	+0.9
SKR				*e*S	Sn	16 59 34.0	+1.7
KDTR	**Khodutka, Kamc**	**2.93**	**22**	*e*P	Pn	16 59 35.6	+4.0
KDTR				*e*S	Sn	17 00 09.7	+4.2
ASAK	**Asacha**	**3.43**	**16**	*e*P	Pn	16 59 42.7	+4.1
MTVR	**Mutnovka**	**3.58**	**19**	*e*S	Sn	17 00 26.7	+4.9
RUS	**Russkaya**	**3.61**	**22**	*e*P	Pn	16 59 44.7	+3.7
RUS				*e*S	Sn	17 00 27.2	+5.0
PET	**Petropavlovsk**	**4.19**	**20**	*e*P	Pn	16 59 53.0	+4.1
PET				*e*S	Sn	17 00 41.8	+5.3
UGLR	**Uglovaya**	**4.40**	**20**	*e*P	Pn	16 59 56.7	+4.8
SDLR	**Sedlovina**	**4.47**	**20**	*e*P	Pn	16 59 57.3	+4.3
SPN	**Mys Shipunski**	**4.62**	**29**	*e*P	Pn	16 59 59.3	+4.3
SPN				*e*S	Sn	17 00 52.4	+5.1
GNL	**Ganaly**	**4.70**	**12**	*e*P	Pn	17 00 00.6	+4.5

*ISCJB **07** 17:02:22.4±0.8, 16°.2S±0°.2×173°.9W±0°.2, h35km, mb4.0/7, Error ellipse: s-maj=40.6km s-min=9.3km az=135.5*

*IDC **07** 17:02:26.1±3.2, 16°.33S×173°.74W, h56km±30km, mb3.7/7, mb1 4.0/8, mb1mx3.6/55, mbtmp4.0/8, ML4.8/1, Error ellipse: s-maj=46.7km s-min=16.6km az=140.0*

ISC 07 17:02:24.2±0.9,16°.3S±0°.3×173°.8W±0°.3,h35km,n9, σ1°.20/10,mb4.0/7,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.06**	**39**	P	**Pn**	**17 03 12.3**	**+2.1**
	107nm,0.3s,baz=204,slow=2.8,SNR=232						
AFI				S	**Sn**	**17 03 43.6**	**-2.0**
	179nm,0.3s,baz=38,slow=20,SNR=14						
URZ	**Urewera**	**23.30**	**198**	P	**P**	**17 07 28.7**	**-0.2**
	12nm,0.6s,baz=70,slow=1.2,SNR=13						
STKA	**Stephens Creek**	**43.28**	**241**	P	**P**	**17 10 22.9**	**+0.3**
	2.3nm,0.7s,baz=34,slow=12,SNR=4.6						
WRA	**Warramunga Arr**	**49.30**	**258**	P	**P**	**17 11 09.6**	**-0.6**
	0.3nm,0.5s,baz=96,slow=7.0,SNR=9.8						
ASAR	**Alice Springs**	**49.50**	**253**	P	**P**	**17 11 11.5**	**-0.2**
	2.4nm,0.6s,baz=88,slow=8.4,SNR=55						
NVAR	**Mina Array Bea**	**75.23**	**42**	P	**P**	**17 14 03.3**	**-0.5**
	0.8nm,0.8s,baz=246,slow=7.8,SNR=4.3						
TXAR	**Lajitas Array**	**81.41**	**56**	P	**P**	**17 14 37.8**	**-0.2**
	0.3nm,0.7s,baz=282,slow=5.9,SNR=3.6						
PDAR	**Pinedale Array**	**83.17**	**42**	P	**P**	**17 14 46.4**	**-0.7**
	1.4nm,0.8s,baz=204,slow=3.3,SNR=10						
GERES	**GERESS Array B**	**146.97**	**351**	PKPbc	**PKPdf**	**17 22 02.0**	**+0.7**
	0.4nm,0.4s,baz=64,slow=2.3,SNR=4.3						

*SCB **07** 17:06:45.7±0.6, 22°.14S×66°.00W, h270km, Ml4.8/2, Error ellipse: s-maj=20.2km s-min=8.3km az=40.0*

*MOS **07** 17:06:45.7±1.1, 22°.43S×65°.95W, h264km, mb4.9/30, Error ellipse: s-maj=11.7km s-min=6.5km az=108.0*

*SJA **07** 17:06:45.3±0.3, 22°.41S×66°.05W, h292km±4km, ML4.7, MW4.8*

*ISCJB **07** 17:06:46.1±0.3, 22°.31S±0°.02×65°.97W±0°.03, h267km±2km, mb4.8/234, Error ellipse: s-maj=4.6km s-min=3.5km az=137.5*

*IDC **07** 17:06:46.8±0.8, 22°.34S×65°.86W, h257km±6km, mb4.6/30, mb1 4.6/36, mb1mx4.6/47, mbtmp5.2/36, Error ellipse: s-maj=9.5km s-min=6.9km az=61.0*

*GUC **07** 17:06:48.0±0.4, 22°.44S×66°.31W, h250km, ML5.3*

*BJI **07** 17:06:48.3, 22°.40S×65°.90W, h252km, mB5.1/18*

*NEIC **07** 17:06:49.7±0.1, 22°.26S×65°.80W, mb4.8/184, Error ellipse: s-maj=5.8km s-min=3.8km az=223.0*

ISC 07 17:06:47.7±0.4,22°.41S±0°.03×66°.02W±0°.04,h269km±3km, h270km;pP-P,n905,σ1°.39/965,mb4.8/229,29C-8D,Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YJA	**Yavi**	**0.52**	**64**	*e*P	**Pn**	**17 07 24.1**	**+0.7**
YJA				IAML		17 07 53.8	
	comp=Z,3μm,0.8s						
HJA	**Humahuaca**	**0.97**	**145**	*e*P	**Pn**	**17 07 25.6**	**+0.5**
HJA				IAML		17 07 26.0	
	comp=Z,3μm,0.7s						
HJA				*e*S	**S**	**17 07 55.5**	**+0.9**
MOCB	**Mochara**	**1.21**	**17**	⇑*i*Pn	**Pn**	**17 07 25.7**	**-0.9**
SLA	**San Lorenzo**	**2.35**	**168**	IAML		17 07 36.6	
	comp=Z,435nm,0.6s						
PB09	**IPOC Station P**	**3.05**	**281**	⇑*i*P	**Pn**	**17 07 41.8**	**-0.3**
PB09				*e*S	**S**	**17 08 21.6**	**-3.7**
PB09				IAML		17 08 25.9	
	comp=N,3μm,0.3s						
PB15	**IPOC Station P**	**3.28**	**255**	⇑*i*P	**Pn**	**17 07 43.5**	**-1.1**
PB06	**IPOC Station P**	**3.30**	**264**	⇑*i*P	**Pn**	**17 07 43.5**	**-1.2**
PB06				*e*S	**S**	**17 08 25.9**	**-4.2**
PB01	**IPOC Station P**	**3.50**	**292**	*e*Pn	**Pn**	**17 07 46.0**	**-0.9**
PB01	**IPOC Station P**	**3.50**	**292**	⇑*i*P	**Pn**	**17 07 45.9**	**-0.9**
PB01				*i* S	**S**	**17 08 30.5**	**-3.5**
PB07	**IPOC Station P**	**3.65**	**280**	⇑*i*P	**Pn**	**17 07 47.5**	**-1.1**
PB07				*i* S	**S**	**17 08 32.8**	**-4.4**
PB08	**IPOC Station P**	**3.69**	**307**	⇑*i*P	**Pn**	**17 07 49.3**	**0.0**
PB08				*i* S	**S**	**17 08 36.3**	**-2.1**
PB02	**IPOC Station P**	**3.76**	**286**	⇑*i*P	**Pn**	**17 07 48.5**	**-1.2**
PB02				*i* S	**S**	**17 08 35.0**	**-4.2**
PB04	**IPOC Station P**	**3.82**	**270**	*e*Pn	**Pn**	**17 07 49.2**	**-1.3**
PB04	**IPOC Station P**	**3.82**	**270**	⇑*i*P	**Pn**	**17 07 49.3**	**-1.3**
PB04				*i* S	**S**	**17 08 36.0**	**-4.6**
GO02	**Mina Guanaco**	**4.27**	**229**	*e*Pn	**Pn**	**17 07 54.5**	**-1.3**
GO02	**Mina Guanaco**	**4.27**	**229**	⇑*i*P	**Pn**	**17 07 54.4**	**-1.3**
GO02				*i* S	**S**	**17 08 45.9**	**-4.1**
PB10	**IPOC Station P**	**4.32**	**254**	*e*Pn	**Pn**	**17 07 54.0**	**-2.1**
PB10	**IPOC Station P**	**4.32**	**254**	*e*P	**Pn**	**17 07 54.8**	**-1.3**
PB10	**IPOC Station P**	**4.32**	**254**	⇑*i*P	**Pn**	**17 07 54.0**	**-2.1**
PB10				*i* S	**S**	**17 08 44.3**	**-6.4**
AHML	**Horco Molle**	**4.40**	**172**	*e*P	**Pn**	**17 07 56.1**	**-0.9**
AHML				IAML		17 07 57.2	
	comp=Z,75nm,0.4s						
PB14	**IPOC Station P**	**4.59**	**240**	*e*P	**Pn**	**17 07 58.1**	**-1.4**
PB14	**IPOC Station P**	**4.59**	**240**	*e*P	**Pn**	**17 07 57.5**	**-2.1**
MNMC	**Minye Minye**	**4.67**	**314**	*e*Pn	**Pn**	**17 07 59.6**	**-1.0**
MNMC	**Minye Minye**	**4.67**	**314**	⇑*i*P	**Pn**	**17 07 59.7**	**-0.8**
MNMC				*i* S	**S**	**17 08 55.7**	**-3.0**
PSGC	**Pisagua**	**4.75**	**305**	⇑*i*P	**Pn**	**17 07 58.8**	**-2.5**
PSGC				*i* S	**S**	**17 08 54.5**	**-5.4**
PB16	**IPOC Station P**	**5.21**	**320**	⇑*i*P	**Pn**	**17 08 07.2**	**-0.1**
PB16				*i* S	**S**	**17 09 08.0**	**-2.9**
BBOJ	**La Paz, Jacaqu**	**5.78**	**339**	⇑*i*Pn	**Pn**	**17 08 14.9**	**+0.8**
BBOD	**La Paz, Gloria**	**6.23**	**337**	⇑*i*Pn	**Pn**	**17 08 20.0**	**+0.3**
BBOD				⇑*i*Sn	**S**	**17 09 30.7**	**-2.9**
	comp=Z,179nm,0.8s						
LPAZ	**La Paz**	**6.41**	**342**	P	**Pn**	**17 08 21.8**	**-0.1**
	comp=Z,25nm,0.3s,baz=145,slow=6.3,SNR=251						
LPAZ				S	**S**	**17 09 34.3**	**-3.2**
	comp=Z,5.7nm,0.3s,baz=294,slow=19,SNR=10						
LPAZ				ScP	**ScP**	**17 17 54.9**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=76,slow=4.2,SNR=5.7						
LPAZ	**La Paz**	**6.41**	**342**	⇑*i*Pn	**Pn**	**17 08 21.7**	**-0.2**
LPAZ				*e*Sn	**S**	**17 09 35.0**	**-2.5**
GO03	**Copiap**	**6.42**	**216**	*e*Pn	**Pn**	**17 08 18.3**	**-3.2**
BBOB	**La Paz, Bander**	**6.54**	**342**	⇓*i*Pn	**Pn**	**17 08 23.1**	**-0.5**
BBOB				⇑*i*Sn	**S**	**17 09 36.4**	**-4.1**
	comp=Z,1μm,1.3s						
VCA	**Vinchina**	**6.60**	**197**	IAML		17 08 24.1	
	comp=Z,500nm,0.4s						
LCO	**Las Campanas**	**7.81**	**212**	*e*Pn	**Pn**	**17 08 35.5**	**-3.5**
LCO	**Las Campanas**	**7.81**	**212**	*e*P	**Pn**	**17 08 35.5**	**-3.5**
SIV	**San Ignacio**	**7.91**	**37**	P	**Pn**	**17 08 39.2**	**-0.9**
	comp=Z,48nm,0.3s,baz=230,slow=13,SNR=862						
SIV				S	**S**	**17 10 05.2**	**-5.6**
	comp=Z,0.4nm,0.3s,baz=254,slow=14,SNR=3.8						
SIV				ScP	**ScP**	**17 17 55.0**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=279,slow=8.5,SNR=3.6						
SIV	**San Ignacio**	**7.91**	**37**	*e*P	**Pn**	**17 08 35.9**	**-4.2**
APLL	**PUNTA DE LOS L**	**7.97**	**183**	IAML		17 10 06.4	
	comp=Z,339nm,0.6s						
CPUP	**Villa Florida**	**8.83**	**118**	P	**Pn**	**17 08 50.0**	**-1.5**
	comp=Z,1.1nm,0.3s,baz=304,slow=11,SNR=28						
CPUP	**Villa Florida**	**8.83**	**118**	*e*Pn	**Pn**	**17 08 48.5**	**-3.0**
CPUP	**Villa Florida**	**8.83**	**118**	P	**Pn**	**17 08 50.0**	**-1.5**
CPUP				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GO04	**Tololo Observa**	**8.84**	**208**	*e*Pn	**Pn**	**17 08 48.6**	**-3.2**
ROC1	**El Roble**	**11.42**	**202**	*e*Pn	**Pn**	**17 09 21.4**	**-2.5**
GO05	**HualaæØ**	**13.58**	**201**	*e*Pn	**Pn**	**17 09 47.3**	**-2.8**
SAML	**Samuel**	**13.66**	**12**	*e*Pn	**Pn**	**17 09 50.6**	**-0.6**
SAML	**Samuel**	**13.66**	**12**	*e*P	**Pn**	**17 09 50.6**	**-0.6**
CPSB	**Cacapava Do Su**	**13.79**	**128**	*e*P	**Pn**	**17 09 51.4**	**-1.3**
CPSB				*i*		17 09 53.6	
CPSB				*i*		17 09 55.3	
NNA	**Nana**	**14.63**	**313**	P	**Pn**	**17 10 04.0**	**+1.1**
	comp=Z,6.1nm,0.3s,baz=149,slow=9.5,SNR=37						
NNA				S	**S**	**17 12 40.0**	**-4.1**
	comp=Z,2.7nm,0.3s,baz=193,slow=18,SNR=3.9						
NNA				ScP	**ScP**	**17 18 04.8**	**+0.9**
	comp=Z,1.6nm,0.3s,baz=207,slow=16,SNR=3.8						
NNA	**Nana**	**14.63**	**313**	*i* P	**Pn**	**17 10 04.

FDF	Fort de France	37.22	8	eP	P	17 13 33.2	-0.6
FDF	Fort de France	37.22	8	eP	P	17 13 32.7	-1.2
PCM	Pelee Case Pet	37.29	8	eP	P	17 13 33.9	-0.6
PCM	Pelee Case Pet	37.29	8	eP	P	17 13 34.0	-0.5
CXM	Morne La Croix	37.29	8	eP	P	17 13 34.2	-0.4
BAMF	Morne Balai	37.30	8	eP	P	17 13 34.2	-0.4
JTS	JuntasAbangare	37.42	328	P	P	17 13 37.0	+1.4
	comp=Z,23nm,0.8s,baz=246,slow=3.6,SNR=22						
JTS	JuntasAbangare	37.42	328	eP	P	17 13 37.4	+1.8
JTS	JuntasAbangare	37.42	328	eP	P	17 13 37.4	+1.8
RPN	Rapa Nui	39.47	254	P	P	17 13 54.2	+1.8
	comp=Z,62nm,1.0s,baz=266,slow=6.0,SNR=3.6						
ANWB	Willy Bob	40.05	6	eP	P	17 13 54.2	-2.9
	comp=Z,238nm,0.6s						
SJG	San Juan	40.27	360	P	P	17 13 57.1	-1.9
	comp=Z,9.0nm,0.4s,baz=230,slow=8.9,SNR=5.4						
SJG	San Juan	40.27	360	eP	P	17 13 57.1	-1.9
	comp=Z,31nm,1.1s						
SJG	San Juan	40.27	360	eP	P	17 13 57.1	-1.9
SJG				pmax	pmax		
	comp=Z,31nm,1.1s						
SMRT	St. Maarten	40.31	4	eP	P	17 13 55.9	-3.5
	comp=Z,148nm,1.1s						
TGUH	Tegucigalpa,Un	41.80	328	eP	P	17 14 11.8	+0.3
	comp=Z,100nm,1.2s						
APG	El Apazote	44.23	325	P	P	17 14 31.7	+0.5
	comp=Z,27nm,0.8s,baz=90,slow=23,SNR=12						
CCIG	Comitan	46.18	324	eP	P	17 14 46.5	+0.1
	comp=Z,28nm,0.8s						
CMIG	Matias Romero	48.37	322	P	P	17 15 03.4	+0.5
	comp=Z,15nm,0.7s,baz=115,slow=5.5,SNR=16						
BRAL	Brewton	56.96	338	P	P	17 16 04.8	-0.5
	baz=156						
154A	Montrose	57.10	343	P	P	17 16 05.9	-0.4
	baz=161						
LNIG	Linares	57.14	323	eP	P	17 16 06.2	-0.6
	comp=Z,26nm,1.2s						
349A	Repton	57.18	338	P	P	17 16 06.5	-0.4
	baz=156						
447A	Lucedale	57.19	337	P	P	17 16 06.7	-0.3
	baz=155						
251A	Midway	57.28	340	P	P	17 16 06.7	-0.9
	baz=158						
ZAIG	Zacatecas	57.29	319	eP	P	17 16 09.0	+0.8
	comp=Z,30nm,1.1s						
152A	Waverly Hall	57.61	341	P	P	17 16 09.1	-0.7
	baz=159						
Z54A	Sparta	57.61	343	P	P	17 16 08.8	-1.0
	baz=161						
151A	Opelika	57.66	341	P	P	17 16 09.2	-1.0
	baz=159						
347A	Saraland	57.70	337	P	P	17 16 09.8	-0.6
	baz=155						
Z53A	Monticello	57.85	343	P	P	17 16 10.8	-0.7
	baz=161						
GOGA	Godfrey	57.95	343	P	P	17 16 11.5	-0.7
	baz=161						
150A	Eclectic	57.95	340	P	P	17 16 11.2	-1.0
	baz=158,SNR=7.4						
Z52A	Williamson	58.01	342	P	P	17 16 12.0	-0.6
	baz=160						
346A	Big Creek Wild	58.02	336	P	P	17 16 12.3	-0.4
	baz=154						
248A	Dixon Mills	58.04	338	P	P	17 16 12.1	-0.7
	baz=156						
Y54A	Tignall	58.17	344	P	P	17 16 12.9	-0.8
	baz=162						
149A	Jones	58.19	339	P	P	17 16 12.8	-1.1
	baz=157,SNR=5.7						
VNA3	Neumayer Olymp	58.37	162	P	P	17 16 15.2	+0.6
Y53A	Monroe	58.40	343	P	P	17 16 14.3	-1.0
	baz=161						
148A	Greensboro	58.49	339	P	P	17 16 15.1	-0.9
	baz=156						
Z50A	Ashland	58.52	340	P	P	17 16 15.5	-0.7
	baz=158,SNR=9.9						
Y52A	Lilburn	58.54	342	P	P	17 16 15.1	-1.1
	baz=160						
VNA1	Neumayer--Stat	58.54	161	P	P	17 16 16.9	+1.1
344A	Westbrook Farm	58.56	335	P	P	17 16 16.1	-0.3
	baz=153						
Z49A	Columbiana	58.65	340	P	P	17 16 16.0	-1.1
	baz=158,SNR=7.5						
LRAL	Lakeview Retre	58.66	339	P	P	17 16 16.2	-0.9
	baz=157						
LRAL	Lakeview Retre	58.66	339	eP	P	17 16 15.8	-1.3
	comp=Z,17nm,0.8s						
147A	Livingston	58.75	338	P	P	17 16 16.8	-0.9
	baz=156						
245A	Little AP, Sta	58.76	336	P	P	17 16 17.4	-0.4
	baz=154,SNR=5.3						
Y51A	Rockmart	58.86	342	P	P	17 16 17.6	-0.9
	baz=159,SNR=10.0						
VNA2	Neumayer--Watz	58.91	161	P	P	17 16 19.1	+0.7
	baz=299,slow=8.3						
X53A	Estanollee	58.93	343	P	P	17 16 18.1	-0.8
	baz=161						
KMSC	Kings Mountain	59.05	345	P	P	17 16 19.5	-0.3
	baz=163						
Y50A	Piedmont	59.05	341	P	P	17 16 19.0	-0.8
	baz=158,SNR=6.6						
244A	Avery, Jackson	59.06	336	P	P	17 16 19.6	-0.3
	baz=153						
342A	Flagon Creek P	59.12	334	P	P	17 16 20.5	+0.2
	baz=151						
Z48A	Northport	59.15	339	P	P	17 16 19.5	-0.9
	baz=156,SNR=9.8						
Z47A	Carrollton	59.16	338	P	P	17 16 19.7	-0.8
	baz=156						
X52A	Dahlonega	59.19	343	P	P	17 16 20.1	-0.6
	baz=160						
Y49A	Blount Mountai	59.23	340	P	P	17 16 20.0	-1.0
	baz=158,SNR=7.0						
243A	Waterproof	59.23	335	P	P	17 16 20.9	-0.1
	baz=152						
145A	Houston Renfro	59.28	337	P	P	17 16 21.1	-0.3
	baz=154						
BG3	Lake Jocassee	59.30	344	eP	P	17 16 21.5	0.0
	comp=Z,16nm,0.8s						
X51A	Calhoun	59.42	342	P	P	17 16 21.8	-0.5
	baz=160,SNR=6.6						
HKT	Hockley	59.43	330	eP	P	17 16 22.4	+0.1
	comp=Z,48nm,1.8s						
HKT	Hockley	59.43	330	eP	P	17 16 22.5	+0.1
HKT				pmax	pmax		
	comp=Z,48nm,1.8s						
Z46A	Louisville	59.46	338	P	P	17 16 22.1	-0.4
	baz=155						
Y48A	Jasper	59.52	340	P	P	17 16 22.0	-1.0
	baz=157						
W53A	Cullowhee	59.53	344	P	P	17 16 22.9	-0.2
	baz=161,SNR=7.6						
X50B	Fort Payne	59.55	341	P	P	17 16 22.4	-0.8
	baz=159,SNR=5.1						
W52A	Murphy	59.66	343	P	P	17 16 23.3	-0.6
	baz=161						
Y47A	UCPARC, Winfie	59.73	339	P	P	17 16 23.7	-0.7
	baz=156,SNR=13						
X49A	Woodville	59.81	341	P	P	17 16 24.2	-0.7
	baz=158,SNR=12						
833A	Chaparral WMA,	59.84	326	P	P	17 16 25.5	+0.2
	baz=144,SNR=13						
Z45A	Winona	59.88	337	P	P	17 16 25.2	-0.2
	baz=154						
V53A	Saluda	59.91	344	P	P	17 16 25.2	-0.4
	baz=162						
143A	Socs Landing,	59.93	335	P	P	17 16 25.3	-0.4
	baz=152						
241A	Mo Tay, Goldon	59.93	334	P	P	17 16 26.2	+0.4
	baz=151						
X48A	Hartselle	59.98	340	P	P	17 16 25.4	-0.6
	baz=157,SNR=16						
Y46A	Houston	60.05	338	P	P	17 16 25.5	-1.1
	baz=155						
W50A	Signal Mountai	60.15	342	P	P	17 16 26.7	-0.6
	baz=159						
CPCT	Cooper Cave	60.16	343	eP	P	17 16 26.4	-0.8
	comp=Z,12nm,0.8s						
V52A	Sevierville	60.28	344	P	P	17 16 27.4	-0.7
	baz=161						
Y45A	Yeager Farm, C	60.28	338	P	P	17 16 27.6	-0.5
	baz=155,SNR=5.8						
X47A	Russelville	60.30	339	P	P	17 16 27.3	-0.9
	baz=156,SNR=9.7						
SWET	Sewanee	60.34	341	eP	P	17 16 27.6	-0.9
	comp=Z,35nm,0.8s						
W49A	Belvidere	60.35	341	P	P	17 16 27.9	-0.7
	baz=158						
141A	Papa Simpson,	60.44	334	P	P	17 16 29.5	+0.4
	baz=151						
V51A	Loudon	60.44	343	P	P	17 16 28.6	-0.5
	baz=160						
NATX	Nacogdoches	60.44	332	P	P	17 16 29.7	+0.5
	baz=149						
V50A	Pikevile	60.52	342	P	P	17 16 29.1	-0.7
	baz=160						
SNAA	Sanae	60.55	161	P	P	17 16 30.0	+0.4
SNAA	Sanae	60.55	161	P	P	17 16 29.9	+0.4
	comp=Z,87nm,1.0s,baz=290,slow=6.1,SNR=239						
SNAA	Sanae	60.55	161	eP	P	17 16 29.7	+0.1
	comp=Z,118nm,1.0s						
W48A	Pulaski	60.57	340	P	P	17 16 29.5	-0.6
	baz=158,SNR=16						
X46A	Booneville	60.57	339	P	P	17 16 28.9	-1.1
	baz=156						
X45A	UM Field Stati	60.73	338	P	P	17 16 30.2	-0.9
	baz=155						
140A	Cam and Jess,	60.74	333	P	P	17 16 31.8	+0.6
	baz=150						
140A	Cam and Jess,	60.74	333	eP	P	17 16 31.7	+0.5
	comp=Z,76nm,0.9s						
PLAL	Pickwick Lake	60.80	339	eP	P	17 16 30.2	-1.4
	comp=Z,26nm,0.9s						
OXF	Oxford	60.82	338	P	P	17 16 30.5	-1.2
	baz=155,SNR=9.7						
OXF	Oxford	60.82	338	eP	P	17 16 30.6	-1.2
	comp=Z,69nm,0.9s						
OXF				epP	pP	17 17 34.2	+2.6
OXF	Oxford	60.82	338	eP	P	17 16 30.6	-1.1
OXF				e*PP	pP	17 17 34.2	+2.6
OXF				pmax	pmax		
	comp=Z,69nm,0.9s						
Y43A	Makayla and Ka	60.82	336	P	P	17 16 31.6	-0.1
	baz=153						
V49A	McMinnville	60.84	342	P	P	17 16 30.9	-1.0
	baz=159						
W47A	Westpoint	60.89	340	P	P	17 16 31.3	-0.9
	baz=157,SNR=6.9						
435B	Jarrell	60.95	329	P	P	17 16 32.4	-0.3
	baz=146						
435B	Jarrell	60.95	329	eP	P	17 16 32.4	-0.3
	comp=Z,18nm,0.5s						
V48A	Smith Brothers	61.09	341	P	P	17 16 32.7	-0.8
	baz=158,SNR=7.7						
Z40A	Long Farm, Mag	61.21	334	P	P	17 16 34.8	+0.5
	baz=151,SNR=7.3						
T52A	Hallie	61.32	345	P	P	17 16 34.5	-0.5
	baz=162						
W45A	Hickory Valley	61.32	338	P	P	17 16 34.0	-1.1
	baz=155,SNR=6.0						
X43A	Marvell	61.35	337	P	P	17 16 35.0	-0.2
	baz=154						
V47A	Nunnelly	61.39	340	P	P	17 16 34.4	-1.2
	baz=157,SNR=9.8						
Y41A	Eaglette Beard	61.44	335	P	P	17 16 35.7	-0.1
	baz=152						
U49A	Red Boiling Sp	61.51	342	P	P	17 16 35.3	-1.0
	baz=159						
V46A	Holladay	61.56	340	P	P	17 16 35.1	-1.5
	baz=156,SNR=5.6						
T50A	Nancy	61.72	343	P	P	17 16 36.6	-1.1
	baz=160						
U48A	Cassie Pea, Po	61.73	341	P	P	17 16 36.7	-1.0
	baz=158						
WVT	Waverly	61.77	340	P	P	17 16 36.9	-1.1
	baz=157						
WVT	Waverly	61.77	340	eP	P	17 16 36.9	-1.1
	comp=Z,41nm,0.8s						
WVT	Waverly	61.77	340	eP	P	17 16 36.9	-1.1
WVT				pmax	pmax		
	comp=Z,41nm,0.8s						
V45A	Humboldt	61.78	339	P	P	17 16 37.1	-1.0
	baz=156						
JCT	Junction City	61.79	327	P	P	17 16 38.0	-0.4
	baz=144,SNR=9.9						
JCT	Junction City	61.79	327	eP	P	17 16 38.1	-0.2
	comp=Z,26nm,0.8s						
JCT	Junction City	61.79	327	eP	P	17 16 38.2	-0.2
JCT				pmax	pmax		
	comp=Z,26nm,0.8s						
Y40A	Okolona	61.82	334	P	P	17 16 38.3	-0.1
	baz=151						
U47A	Clarksville	61.89	341	P	P	17 16 37.6	-1.2
	baz=157,SNR=8.7						
WHTX	Lake Whitney,	61.90	330	P	P	17 16 38.8	-0.2
	baz=147						
WHTX	Lake Whitney,	61.90	330	eP	P	17 16 39.3	+0.4
	comp=Z,22nm,0.8s						
T49A	Edmonton	61.99	342	P	P	17 16 38.4	-1.0
	baz=159						
X40A	Basin Creek Fa	62.06	335	P	P	17 16 38.9	-1.1
	baz=152						
U46A	Springville	62.09	340	P	P	17 16 39.0	-1.2
	baz=157						
HPIG		62.27	320	eP	P	17 16 41.6	-0.2
	comp=Z,13nm,0.9s						
U45A	Rockin P Farm,	62.27	339	P	P	17 16 40.2	-1.1
	baz=156						
T47A	Sharon Grove	62.34	341	P	P	17 16 40.7	-1.1
	baz=158,SNR=6.9						
MIAR	Mount Ida	62.40	334	P	P	17 16 41.8	-0.5
	baz=151,SNR=12						
MIAR	Mount Ida	62.40	334	eP	P	17 16 41.7	-0.6
	comp=Z,21nm,1.0s						
MIAR				epP	pP	17 17 48.3	+5.8
MIAR	Mount Ida	62.40	334	eP	P	17 16 41.7	-0.6
MIAR				pmax	pmax		
	comp=Z,21nm,1.0s						
W41B	Gary Mavity, V	62.44	336	P	P	17 16 41.6	-0.9
	baz=152,SNR=6.2						
W41B	Gary Mavity, V	62.44	336	eP	P	17 16 42.2	-0.3
	comp=Z,17nm,1.1s						
WHAR	Wooly Hollow	62.56	336	eP	P	17 16 42.2	-1.0
	comp=Z,11nm,0.9s						
X39A	Fountain Ranch	62.59	334	P	P	17 16 43.5	0.0
	baz=150,SNR=15						
T46A	Princeton	62.63	340	P	P	17 16 42.4	-1.3
	baz=157,SNR=5.8						
S48A	Wiedeman Farm,	62.65	342	P	P	17 16 42.3	-1.5
	baz=159						
V42A	Cord	62.68	337	P	P	17 16 43.9	-0.2
	baz=153						
W40A	Ferguson Farm,	62.77	335	P	P	17 16 44.7	0.0
	baz=152,SNR=10						
W40A	Ferguson Farm,	62.77	335	eP	P	17 16 44.3	-0.4
	comp=Z,45nm,1.0s						
TXAR	Lajitas Array	62.93	323	P	P	17 16 45.9	-0.1
	comp=Z,3.6nm,0.7s,baz=150,slow=8.3,SNR=48						
TXAR				PKP2bc		17 45 46.6	
	comp=Z,0.5nm,0.9s,baz=236,slow=0.5,SNR=3.9						
TX31	Lajitas Ar. Si	62.93	323	eP	P	17 16 45.9	-0.1
V41A	Mountainview	62.95	336	P	P	17 16 44.9	-1.0
	baz=153,SNR=14						
W39A	Magazine	63.05	335	P	P	17 16 46.3	-0.2
	baz=151,SNR=13						
W39A	Magazine	63.05	335	eP	P	17 16 46.8	+0.2
	comp=Z,25nm,0.9s						
U42A	Revenden	63.12	337	P	P	17 16 46.2	-0.7
	baz=154,SNR=6.4						
S46A	Don Dixon Farm	63.16	341	P	P	17 16 45.9	-1.3
	baz=157						
V40A	Witts Springs	63.21	336	P	P	17 16 46.7	-0.9
	baz=152,SNR=7.5						
V40A	Witts Springs	63.21	336	eP	P	17 16 46.9	-0.7
	comp=Z,14nm,0.8s						
PBMO	Poplar Bluff	63.22	338	eP	P	17 16 47.0	-0.5
	comp=Z,60nm,0.8s						
WCI	Wyandotte Cave	63.25	342	P	P	17 16 46.4	-1.3
	baz=159						
WCI	Wyandotte Cave	63.25	342	eP	P	17 16 45.6	-2.2
	comp=Z,15nm,0.8s						
WCI	Wyandotte Cave	63.25	342	eP	P	17 16 45.6	-2.2
WCI				pmax	pmax		
	comp=Z,15nm,0.8s						
U41A	Viola	63.36	337	P	P	17 16 47.5	-1.0
	baz=153,SNR=10						
R47A	Wooly Knot Far	63.38	342	P	P	17 16 47.0	-1.6
	baz=159						
S45A	Carrier Mills	63.42	340	P	P	17 16 47.7	-1.2
	baz=156						
T43A	Greenville	63.44	338	P	P	17 16 47.8	-1.3
	baz=155						
ABTX	Abilene, Hawle	63.45	329	P	P	17 16 49.0	-0.2
	baz=145,SNR=6.8						
ABTX	Abilene, Hawle	63.45	329	eP	P	17 16 48.7	-0.6
	comp=Z,15nm,0.9s						
ABTX				epP	pP	17 17 53.4	+3.7
V39A	Pettigrew	63.56	335	P	P	17 16 49.5	-0.5
	baz=151,SNR=16						
S44A	Carbondale	63.66	340	P	P	17 16 49.1	-1.3
	baz=156						
T42A	Van Buren	63.67	338	P	P	17 16 49.5	-1.1
	baz=154,SNR=7.6						
U40A	Yellville	63.71	336	P	P	17 16 49.9	-0.9
	baz=152,SNR=9.1						
S43A	Fulton Ridge,	63.81	339	P	P	17 16 50.4	-1.1
	baz=155,SNR=7.9						
R45A	Skylar, Fairfi	63.90	341	P	P	17 16 50.6	-1.4
	baz=157						
T41A	Mountain View	63.92	337	P	P	17 16 51.3	-0.9
	baz=153,SNR=14						
Q47A	Bedord North L	63.95	342	P	P	17 16 51.2	-1.1
	baz=159						
U39A	Green Forest	63.97	336	P	P	17 16 51.7	-0.9
	baz=152,SNR=14						
HHAR	Hobbs	64.06	335	eP	P	17 16 52.5	-0.6
	comp=Z,21nm,0.8s						
R44A	Waltonville	64.11	340	P	P	17 16 52.0	-1.3
	baz=156						
S42A	Caledonia	64.23	338	P	P	17 16 53.0	-1.2
	baz=154,SNR=14						
ACSO	Alum Creek Sta	64.29	346	P	P	17 16 53.3	-1.2
	baz=162						
T40A	Mansfield	64.29	337	P	P	17 16 53.9	-0.7
	baz=153,SNR=8.0						
FVM	French Village	64.30	339	eP	P	17 16 53.8	-0.8
FVM				epP	pP	17 17 58.4	+3.1
FVM				eS	S	17 25 10.3	-0.3
FVM	French Village	64.30	339	eP	P	17 16 53.8	-0.8
FVM				e*PP	pP	17 17 58.4	+3.1
FVM				eS	S	17 25 10.3	-0.3
S41A	Jillco Farms,	64.40	338	P	P	17 16 54.7	-0.6
	baz=153,SNR=52						
R43A	Red Bud	64.40	339	P	P	17 16 54.0	-1.2
	baz=155						
Q45A	Warren Harvey,	64.41	341	P	P	17 16 53.8	-1.5
	baz=157						
P47A	Martinsville	64.42	343	P	P	17 16 53.9	-1.4
	baz=159						
TUL1	Leonard	64.48	333	P	P	17 16 55.5	-0.3
	baz=149						
TUL1	Leonard	64.48	333	eP	P	17 16 56.0	+0.2
	comp=Z,20nm,0.9s						
T39A	Clever	64.50	336	P	P	17 16 55.2	-0.7
	baz=152,SNR=7.6						
CCM	Cathedral Cave	64.65	338	eP	P	17 16 55.8	-1.0
	comp=Z,34nm,0.7s						
CCM				epP	pP	17 18 00.0	+2.5
CCM	Cathedral Cave	64.65	338	eP	P	17 16 55.8	-1.0
CCM				e*PP	pP	17 18 00.0	+2.5
CCM				pmax	pmax		
	comp=Z,34nm,0.7s						
S40A	Lebanon	64.68	337	P	P	17 16 56.5	-0.6
	baz=153,SNR=18						
R42A	Luebbering	64.70	339	P	P	17 16 56.1	-1.0
	baz=154,SNR=5.8						
HRV	Adam Dziewonsk	64.79	355	P	P	17 16 56.0	-1.6
	baz=174						
WMOK	Wichita Mounta	64.79	330	P	P	17 16 57.2	-0.7
	baz=146						
WMOK	Wichita Mounta	64.79	330	eP	P	17 16 56.9	-1.0
	comp=Z,12nm,1.4s						
WMOK	Wichita Mounta	64.79	330	eP	P	17 16 56.9	-1.0
WMOK				pmax	pmax		
	comp=Z,12nm,1.4s						
P46A	Rosedale	64.80	342	P	P	17 16 56.9	-0.9
	baz=158						
M54A	Oil Creek Stat	64.84	349	P	P	17 16 56.7	-1.3
	baz=166						
T38A	Diamond	64.86	335	P	P	17 16 57.9	-0.3
	baz=151,SNR=18						
P45A	Graceland, Par	64.87	342	P	P	17 16 56.5	-1.7
	baz=158,SNR=5.3						
R41A	Rosebud	64.91	338	P	P	17 16 57.7	-0.8
	baz=154,SNR=20						
Q43A	New Douglas	64.93	340	P	P	17 16 57.2	-1.4
	baz=156						
NVL	N'lazarevskaya	65.03	159⇑	iP	P	17 16 58.5	-0.4
NVL				pmax	pmax		
	comp=Z,188nm,1.0s						
S39A	Bolivar	65.07	336	P	P	17 16 59.2	-0.4
	baz=152,SNR=34						
O47A	Sheridan	65.09	343	P	P	17 16 58.4	-1.3
	baz=159						
Q42A	Golden Eagle	65.18	339	P	P	17 16 58.9	-1.3
	baz=155						
R40A	Maddies Statio	65.22	337	P	P	17 16 59.6	-0.9
	baz=153,SNR=14						
S38A	Stockton	65.23	336	P	P	17 17 00.0	-0.6
	baz=151,SNR=12						
Q41A	Truxton	65.45	339	P	P	17 17 01.0	-0.9
	baz=154,SNR=8.3						
SFIN	Lafayette	65.48	342	P	P	17 17 00.5	-1.6
	baz=158						
R39A	Chumby, Stover	65.51	337	P	P	17 17 01.9	-0.5
	baz=152,SNR=16						
P43A	Skaggs, Pawnee	65.52	340	P	P	17 17 00.8	-1.5
	baz=156						
O45A	Potomac	65.53	342	P	P	17 17 00.7	-1.7
	baz=158						
MNTX	Cornudas Mount	65.69	324	P	P	17 17 03.0	-0.7
	baz=140,SNR=27						
MNTX	Cornudas Mount	65.69	324	eP	P	17 17 02.6	-1.1
	comp=Z,12nm,0.9s						
R38A	Fenwick Farm,	65.72	336	P	P	17 17 03.3	-0.4
	baz=152,SNR=18						
P42A	Winchester	65.73	340	P	P	17 17 02.2	-1.5
	baz=155						
MMNY	Mt. Morris Dam	65.73	350	eP	P	17 17 04.2	+0.5
	comp=Z,38nm,1.3s						
Q40A	Laux Farm, Aux	65.78	338	P	P	17 17 03.1	-0.9
	baz=153						
N45A	Kentland	66.03	342	P	P	17 17 04.0	-1.6
	baz=158						
O43A	Sugar Creek Fa	66.04	341	P	P	17 17 04.3	-1.4
	baz=156						
P41A	Barry, Barry	66.04	339	P	P	17 17 04.6	-1.1
	baz=154						
MSTX	Muleshoe	66.08	327	P	P	17 17 06.0	-0.3
	baz=143,SNR=29						
MSTX	Muleshoe	66.08	327	eP	P	17 17 06.0	-0.3
	comp=Z,59nm,0.8s						
MSTX				epP	pP	17 18 10.6	+3.4
LIC	Lamto	66.09	72	eP	P	17 17 04.8	-1.8
	comp=Z,96nm,0.8s						
Q39A	Willow Grove F	66.14	337	P	P	17 17 05.7	-0.6
	baz=152,SNR=14						
N44A	Piper City	66.16	342	P	P	17 17 04.9	-1.5
	baz=157						
O42A	Bath	66.20	340	P	P	17 17 05.4	-1.2
	baz=156						
P40A	Paris	66.25	338	P	P	17 17 06.1	-0.9
	baz=154,SNR=6.6						
AMTX	Amarillo	66.28	328	P	P	17 17 07.1	-0.3
	baz=144						
AMTX	Amarillo	66.28	328	eP	P	17 17 06.9	-0.5
	comp=Z,26nm,1.1s						
HDIL	Hopedale	66.28	341	P	P	17 17 05.7	-1.5
	baz=156						
TIC	Toumodi	66.29	72	eP	P	17 17 06.2	-1.7
Q38A	Cooks Store, C	66.30	337	P	P	17 17 07.0	-0.3
	baz=152,SNR=13						
O41A	Passleys Farm,	66.38	339	P	P	17 17 06.5	-1.4
	baz=155						
KIC	Kosan Boka	66.40	72	eP	P	17 17 07.1	-1.5
	comp=Z,188nm,0.8s						
DBIC	Dimbokro	66.45	72	P	P	17 17 07.5	-1.2
	comp=Z,75nm,0.8s,baz=212,slow=6.5,SNR=44						
DBIC	Dimbokro	66.45	72	eP	P	17 17 07.6	-1.2
	comp=Z,84nm,0.9s						
DBIC	Dimbokro	66.45	72	eP	P	17 17 07.6	-1.2
DBIC				pmax	pmax		
	comp=Z,84nm,0.9s						
P39B	Salisbury	66.45	338	P	P	17 17 07.5	-0.8
	baz=153,SNR=7.9						
NCB	Newcomb	66.48	354	eP	P	17 17 08.4	0.0
	comp=Z,37nm,1.9s						
Q37

	baz=158					
O40A	La Belle	66.72 339	P	P	17 17 09.0	-1.0
	baz=154,SNR=8.2					
N42A	Yates City	66.76 340	P	P	17 17 08.9	-1.3
	baz=156					
P38A	Dawn	66.85 337	P	P	17 17 10.2	-0.6
	baz=152,SNR=8.2					
N41A	Harden Midland	66.91 340	P	P	17 17 09.8	-1.3
	baz=155					
M43A	Waltham Townsh	66.99 341	P	P	17 17 10.3	-1.3
	baz=157,SNR=6.5					
O39A	Kirksville	67.06 338	P	P	17 17 11.2	-0.9
	baz=153					
P37A	Lathrop	67.11 337	P	P	17 17 11.8	-0.7
	baz=151,SNR=14					
LONY	Lake Ozonia	67.16 353	eP	P	17 17 12.5	-0.1
	comp=Z,9.5nm,0.8s					
O38A	Galt	67.27 337	P	P	17 17 12.8	-0.6
	baz=152,SNR=5.2					
N40A	Mertquake, Sal	67.31 339	P	P	17 17 12.6	-1.1
	baz=154					
PKME	Peaks-Kenny Pk	67.41 357	P	P	17 17 14.3	+0.1
	baz=176					
M41A	Milan	67.42 340	P	P	17 17 13.0	-1.3
	baz=155					
O37A	Wolven Farm, M	67.55 337	P	P	17 17 14.5	-0.7
	baz=152,SNR=6.3					
KSU1	Kansas State U	67.56 335	P	P	17 17 14.5	-0.7
	baz=149					
KSU1	Kansas State U	67.56 335	eP	P	17 17 15.2	-0.1
	comp=Z,24nm,0.9s					
N39A	Derby Farms, D	67.61 339	P	P	17 17 14.5	-1.0
	baz=153					
L43A	Garden Prairie	67.61 342	P	P	17 17 14.6	-1.0
	baz=157					
121A	Cookes Peak, D	67.65 323	P	P	17 17 17.5	+1.2
	baz=138,SNR=15					
M40A	Post Highland	67.75 340	P	P	17 17 15.4	-1.0
	baz=154					
N38A	Joes South For	67.78 338	P	P	17 17 16.0	-0.6
	baz=153					
QSPA	South Pole Qui	67.79 180	P	P	17 17 17.5	+0.9
	comp=Z,17nm,0.7s,baz=154,slow=1.0,SNR=58					
QSPA		S		S	17 25 51.5	-0.6
	comp=Z,1.5nm,1.1s,baz=105,slow=17,SNR=5.9					
PLVO	Plevna	67.88 352	eP	P	17 17 17.4	+0.4
	comp=Z,32nm,1.6s					
SADO	Sadowa	67.92 350	eP	P	17 17 16.5	-0.9
	comp=Z,14nm,0.6s					
K43A	Burlington	67.98 342	P	P	17 17 16.8	-1.0
	baz=158					
M39A	Webster	68.03 339	P	P	17 17 17.1	-1.1
	baz=154					
L41A	Preston	68.04 341	P	P	17 17 16.9	-1.2
	baz=155,SNR=8.0					
N37A	Lee Faris, Mou	68.09 337	P	P	17 17 17.9	-0.6
	baz=152					
BNM	Barren Site	68.23 324	eP	P	17 17 20.8	+0.9
L40A	Anamosa	68.25 340	P	P	17 17 18.6	-0.9
	baz=155,SNR=7.5					
M38A	Pleasantville	68.32 338	P	P	17 17 19.1	-0.9
	baz=153,SNR=15					
K42A	Prairie Point,	68.34 342	P	P	17 17 19.1	-0.9
	baz=157					
LPM	Los Pinos Moun	68.36 325	eP	P	17 17 21.9	+1.3
N36A	Muff Farm, Cla	68.42 337	P	P	17 17 20.0	-0.5
	baz=151					
K41A	Shullsburg	68.46 341	P	P	17 17 19.8	-1.0
	baz=156					
L39A	Vinton	68.56 340	P	P	17 17 20.4	-0.9
	baz=154,SNR=11					
CBKS	Cedar Bluff	68.61 332	P	P	17 17 22.2	+0.4
	baz=146,SNR=5.3					
CBKS	Cedar Bluff	68.61 332	eP	P	17 17 22.8	+0.9
	comp=Z,60nm,0.8s					
M37A	Trindle Farm,	68.61 338	P	P	17 17 21.4	-0.3
	baz=152					
J43A	Natural Harves	68.63 343	P	P	17 17 20.8	-1.0
	baz=158					
LAZ	Ladron	68.70 324	eP	P	17 17 23.8	+1.1
JFWS	Jewell Farm	68.73 341	P	P	17 17 21.7	-0.7
	baz=156					
JFWS	Jewell Farm	68.73 341	eP	P	17 17 22.2	-0.2
	comp=Z,17nm,0.9s					
JFWS	Jewell Farm	68.73 341	eP	P	17 17 22.2	-0.2
JFWS			pmax	pmax		
	comp=Z,17nm,0.9s					
TRQ	Mont Tremblant	68.74 354	eP	P	17 17 22.5	0.0
ANMO	Albuquerque	68.75 325	P	P	17 17 23.7	+0.8
	comp=Z,12nm,0.8s,baz=147,slow=9.1,SNR=33					
ANMO	Albuquerque	68.75 325	P	P	17 17 23.8	+0.8
	baz=140					
ANMO	Albuquerque	68.75 325	eP	P	17 17 23.9	+0.9
	comp=Z,16nm,0.9s					
ANMO	Albuquerque	68.75 325	⇓iP	P	17 17 24.0	+1.0
ANMO			i *PP	pP	17 18 27.3	+2.9
ANMO			pmax	pmax		
	comp=Z,16nm,1.0s					
TASL	Snake Pit, Alb	68.75 325	P	P	17 17 23.7	+0.7
	baz=140					
TASM	ASL Pad, Albuq	68.75 325	P	P	17 17 23.8	+0.8
	baz=140					
J42A	Columbus	68.77 342	P	P	17 17 21.6	-1.1
	baz=157					
K40A	Colesburg	68.80 340	P	P	17 17 21.9	-1.0
	baz=155					
L38A	Oak Wood Farm,	68.89 339	P	P	17 17 22.5	-0.9
	baz=153,SNR=5.0					
M36A	Felix, Anita	68.92 337	P	P	17 17 23.0	-0.6
	baz=151,SNR=6.3					
I43A	Langenfeld Bro	69.02 343	P	P	17 17 23.2	-1.0
	baz=158					
K39A	Oelwein	69.04 340	P	P	17 17 23.3	-1.1
	baz=154,SNR=8.0					
J41A	Loganville	69.07 341	P	P	17 17 23.7	-0.8
	baz=156					
L37A	Phoenix Point,	69.14 338	P	P	17 17 24.1	-0.9
	baz=152					
TUC	Tucson	69.22 320	P	P	17 17 26.7	+0.9
	baz=136					
TUC	Tucson	69.22 320	eP	P	17 17 27.1	+1.3
	comp=Z,9.1nm,1.0s					
TUC	Tucson	69.22 320	eP	P	17 17 27.1	+1.3
TUC			pmax	pmax		
	comp=Z,9.0nm,1.0s					
I42A	Draeger Farm,	69.24 342	P	P	17 17 24.9	-0.6
	baz=157,SNR=6.7					
I42A	Draeger Farm,	69.24 342	eP	P	17 17 25.1	-0.4
	comp=Z,18nm,1.1s					
K38A	Parkersburg	69.28 339	P	P	17 17 25.2	-0.5
	baz=153					
J40A	Soldiers Grove	69.31 341	P	P	17 17 25.1	-0.9
	baz=155					
T25A	Trinidad	69.41 328	P	P	17 17 27.8	+0.8
	baz=142,SNR=16					
T25A	Trinidad	69.41 328	eP	P	17 17 27.4	+0.4
	comp=Z,19nm,0.8s					
L36A	Harm Buss Farm	69.44 338	P	P	17 17 26.2	-0.6
	baz=152,SNR=6.5					
H43A	Windswept, Lux	69.47 344	P	P	17 17 25.8	-1.0
	baz=158					
H43A	Windswept, Lux	69.47 344	eP	P	17 17 26.5	-0.4
	comp=Z,13nm,1.0s					
J39A	Decorah	69.56 340	P	P	17 17 26.7	-0.8
	baz=154,SNR=8.1					
K37A	Belmond	69.67 339	P	P	17 17 27.3	-1.0
	baz=153					
I40A	Norwalk	69.73 341	P	P	17 17 27.6	-0.9
	baz=156					
J38A	Wedel Dairy, R	69.78 340	P	P	17 17 28.1	-0.7
	baz=154					
K36A	Gilmore City	69.84 338	P	P	17 17 28.7	-0.5
	baz=152					
I39A	Houston	69.97 341	P	P	17 17 29.3	-0.7
	baz=155					
F45A	CMU Biological	70.05 346	P	P	17 17 29.1	-1.2
	baz=161					
H41A	Junction City	70.11 342	P	P	17 17 30.0	-0.9
	baz=157					
H41A	Junction City	70.11 342	eP	P	17 17 30.5	-0.3
	comp=Z,8.1nm,0.8s					
J37A	Redenius Farm,	70.13 339	P	P	17 17 30.2	-0.8
	baz=153					
BGNE	Belgrade	70.14 335	P	P	17 17 31.0	-0.1
	baz=148					
BGNE	Belgrade	70.14 335	eP	P	17 17 31.5	+0.4
	comp=Z,102nm,0.6s					
G43A	Wallace	70.18 344	P	P	17 17 30.2	-0.9
	baz=158					
214A	Organ Pipe Nat	70.19 319	P	P	17 17 32.9	+1.2
	baz=134					
H40A	Chili	70.33 342	P	P	17 17 31.4	-0.7
	baz=156,SNR=5.7					
G42A	Mountain	70.36 343	P	P	17 17 31.4	-0.9
	baz=158					
G42A	Mountain	70.36 343	eP	P	17 17 32.0	-0.3
	comp=Z,14nm,1.4s					
I38A	Scanlan Farm,	70.39 340	P	P	17 17 31.7	-0.8
	baz=154					
J36A	Seneca 1, Swea	70.41 338	P	P	17 17 31.9	-0.7
	baz=152					
SDCO	Great Sand Dun	70.42 328	P	P	17 17 34.1	+0.9
	baz=141,SNR=26					
SDCO	Great Sand Dun	70.42 328	eP	P	17 17 34.2	+1.0
	comp=Z,21nm,0.8s					
SDCO			epP	pP	17 18 38.9	+3.9
F44A	Big Bay de Noc	70.53 345	P	P	17 17 32.5	-0.8
	baz=160					
F43A	Flat Rock, Esc	70.58 344	P	P	17 17 33.0	-0.7
	baz=159					
E45A	Wooded Hills,	70.61 346	P	P	17 17 33.2	-0.5
	baz=161					
H39A	Augusta	70.64 341	P	P	17 17 33.3	-0.8
	baz=155					
W18A	Petrified Fore	70.66 323	P	P	17 17 35.5	+1.0
	baz=137					
I37A	Lemond, Waseca	70.71 339	P	P	17 17 33.8	-0.6
	baz=153					
G40A	Rib Lake	70.87 342	P	P	17 17 34.6	-0.7
	baz=156					
I36A	Fitzsimmons Fa	70.91 339	P	P	17 17 34.9	-0.8
	baz=152					
H38A	Maiden Rock	70.94 340	P	P	17 17 35.1	-0.7
	baz=154					
KOWA	Kowa	70.95 65	P	P	17 17 35.3	-1.2
	comp=Z,34nm,0.7s,baz=241,slow=6.4,SNR=66					
KOWA			S	S	17 26 25.3	-4.8
	comp=Z,1.9nm,0.9s,baz=270,slow=1.0,SNR=5.7					
KOWA	Kowa	70.95 65	eP	P	17 17 35.2	-1.2
	comp=Z,36nm,0.8s					
KOWA			S	S	17 26 25.3	-4.8
F41A	Three Lakes	71.00 343	P	P	17 17 35.5	-0.7
	baz=157,SNR=7.2					
E43A	Lone Tree Farm	71.05 345	P	P	17 17 35.3	-1.1
	baz=159,SNR=7.7					
H37A	Dierke Farm, C	71.06 340	P	P	17 17 35.9	-0.6
	baz=154					
S22A	4UR Ranch, Cre	71.08 327	P	P	17 17 37.9	+0.6
	baz=140,SNR=15					
S22A	4UR Ranch, Cre	71.08 327	eP	P	17 17 38.1	+0.9
	comp=Z,8.4nm,0.8s					
X16A	Lo Mia Camp, P	71.11 322	eP	P	17 17 38.7	+1.4
	comp=Z,11nm,0.9s					
G39A	Holcombe	71.16 342	P	P	17 17 36.6	-0.5
	baz=155					
Q24A	Divide	71.20 329	P	P	17 17 38.9	+0.9
	baz=142,SNR=15					
Q24A	Divide	71.20 329	eP	P	17 17 39.0	+1.1
	comp=Z,28nm,0.9s					
E42A	Champion	71.33 344	P	P	17 17 37.6	-0.6
	baz=158					
113A	Mohawk Valley,	71.33 319	eP	P	17 17 39.8	+1.4
	comp=Z,4.7nm,0.7s					
OGNE	Ogallala	71.36 332	P	P	17 17 38.9	+0.4
	baz=145					
H36A	Jessenland, He	71.38 339	P	P	17 17 38.1	-0.3
	baz=153					
F40A	Park Falls	71.44 342	P	P	17 17 38.7	-0.1
	baz=156,SNR=19					
MVCO	Mesa Verde	71.54 325	P	P	17 17 40.8	+0.9
	baz=139,SNR=12					
MVCO	Mesa Verde	71.54 325	eP	P	17 17 40.9	+1.0
	comp=Z,31nm,1.1s					
ECSD	EROS Data Cent	71.56 337	P	P	17 17 39.0	-0.5
	baz=150,SNR=9.6					
ECSD	EROS Data Cent	71.56 337	eP	P	17 17 39.2	-0.4
	comp=Z,18nm,1.3s					
ECSD			eS	S	17 26 35.9	-0.2
SPMN	Marine on St.	71.60 340	P	P	17 17 39.4	-0.3
	baz=154					
E41A	Kenton	71.63 344	P	P	17 17 39.4	-0.5
	baz=158					
F39A	Loretta	71.66 342	P	P	17 17 39.7	-0.4
	baz=156					
H35A	Sunnyside Ranc	71.78 339	P	P	17 17 40.0	-0.8
	baz=152,SNR=7.5					
E40A	Wakefield	71.86 343	P	P	17 17 41.2	0.0
	baz=157,SNR=14					
WUAZ	Wupatki	71.86 322	P	P	17 17 43.2	+1.5
	baz=136,SNR=12					
WUAZ	Wupatki	71.86 322	eP	P	17 17 43.6	+1.9
	comp=Z,24nm,0.9s					
G36A	St. Michael	71.91 340	P	P	17 17 40.9	-0.7
	baz=153					
F38A	Pierce - Schro	71.98 341	P	P	17 17 41.4	-0.5
	baz=155					
E39A	Mellen	71.98 342	P	P	17 17 41.4	-0.5
	baz=156,SNR=7.6					
F37A	Hinrichs Farm,	71.99 341	P	P	17 17 41.7	-0.3
	baz=154					
D41A	Chassel	72.08 344	P	P	17 17 42.4	-0.1
	baz=158,SNR=7.6					
ISCO	Idaho Springs	72.08 329	P	P	17 17 43.8	+0.7
	baz=142,SNR=14					
ISCO	Idaho Springs	72.08 329	eP	P	17 17 44.1	+1.0
	comp=Z,12nm,0.9s					
ISCO			epP	pP	17 18 49.0	+3.8
ISCO	Idaho Springs	72.08 329	eP	P	17 17 44.1	+1.0
ISCO			e*PP	pP	17 18 49.0	+3.8
ISCO			pmax	pmax		
	comp=Z,13nm,0.9s					
GLA	Glamis	72.17 318	P	P	17 17 44.7	+1.2
	baz=133					
SMCO	Snowmass	72.26 328	eP	P	17 17 45.7	+1.4
	comp=Z,15nm,0.8s					
PV01	Paradox Valley	72.27 326	eP	P	17 17 44.6	+0.5
	comp=Z,15nm,0.8s					
PV15	Paradox Valley	72.38 326	eP	P	17 17 46.6	+1.8
	comp=Z,30nm,1.0s					
F36A	Milaca	72.39 340	P	P	17 17 43.7	-0.7
	baz=153,SNR=12					
PV02	Paradox Valley	72.41 326	eP	P	17 17 46.5	+1.5
	comp=Z,15nm,1.2s					
H33A	Prehn Over Nor	72.43 338	P	P	17 17 44.4	-0.3
	baz=150,SNR=7.1					
Y12C	Blythe	72.47 319	P	P	17 17 46.3	+1.2
	baz=133					
E38A	The Farm, Brul	72.47 342	P	P	17 17 44.3	-0.6
	baz=155					
PV05	Paradox Valley	72.50 326	eP	P	17 17 46.9	+1.3
	comp=Z,23nm,1.1s					
PV03	Paradox Valley	72.50 326	eP	P	17 17 46.7	+1.2
	comp=Z,8.1nm,1.0s					
H32A	Carlson Farm,	72.52 337	P	P	17 17 44.9	-0.4
	baz=149,SNR=5.2					
G34A	Benson	72.53 339	P	P	17 17 45.1	-0.2
	baz=151					
PV07	Paradox Valley	72.54 326	eP	P	17 17 47.3	+1.6
	comp=Z,16nm,0.9s					
PDMCI	Parker Dam,Lak	72.62 320	P	P	17 17 47.2	+1.2
	baz=134					
PV04	Paradox Valley	72.64 326	eP	P	17 17 47.7	+1.4
	comp=Z,11nm,0.9s					
IKP	In-Ko-Pah, Jac	72.70 317	P	P	17 17 47.9	+1.2
	baz=132					
F35A	Swanville	72.73 340	P	P	17 17 45.5	-0.8
	baz=152					
G33A	Ortonville	72.77 338	P	P	17 17 46.1	-0.6
	baz=150					
PV09	Paradox Valley	72.84 326	eP	P	17 17 48.6	+1.1
H31A	Wolsey	72.88 336	P	P	17 17 46.9	-0.4
	baz=148					
F34A	Alexandria	72.89 339	P	P	17 17 46.8	-0.6
	baz=152					
E36A	McGregor	72.90 341	P	P	17 17 46.9	-0.4
	baz=154,SNR=8.9					
W13A	Hualapai Mount	73.02 321	eP	P	17 17 50.0	+1.4
	comp=Z,7.4nm,0.8s					
C40A	Isle Royale Na	73.02 344	P	P	17 17 48.5	+0.5
	baz=158					
SUSD	Miller	73.03 336	P	P	17 17 47.8	-0.4
	baz=148					
U15A	North Rim	73.03 322	eP	P	17 17 50.5	+1.8
	comp=Z,19nm,0.8s					
MONP2	Monument Peak	73.06 317	P	P	17 17 49.1	+0.2
	baz=132					
N23A	Red Feather La	73.09 329	P	P	17 17 49.9	+0.9
	baz=142,SNR=12					
N23A	Red Feather La	73.09 329	eP	P	17 17 50.5	+1.5
	comp=Z,17nm,0.8s					
IRM	Iron Mountain	73.12 319	P	P	17 17 50.1	+1.1
	baz=133,SNR=6.1					
C39A	Grand Marais	73.19 343	P	P	17 17 48.3	-0.7
	baz=157,SNR=7.9					
PHWY	Pilot Hill	73.19 330	eP	P	17 17 50.9	+1.3
	comp=Z,25nm,1.3s					
D37A	Cotton	73.23 342	P	P	17 17 48.9	-0.3
	baz=154					
E35A	Pequot Lakes	73.29 340	P	P	17 17 49.0	-0.6
	baz=152					
C38A	Sawbill Land.	73.41 343	P	P	17 17 49.2	-1.1
	baz=156					
BELC	Belle Mtn. Jos	73.53 318	P	P	17 17 52.6	+1.0
	baz=132					
PFO	Pinyon Flats O	73.56 318	P	P	17 17 52.7	+1.0
	baz=132					
O20A	White River Ci	73.62 328	P	P	17 17 53.1	+1.2
	baz=139,SNR=15					
O20A	White River Ci	73.62 328	eP	P	17 17 53.2	+1.2
	comp=Z,34nm,0.9s					
C37A	Embarrass	73.67 342	P	P	17 17 51.2	-0.6
	baz=155					
EYMN	Ely	73.67 342	P	P	17 17 51.0	-0.9
	baz=155					
EYMN	Ely	73.67 342	eP	P	17 17 51.5	-0.4
	comp=Z,16nm,1.4s					
KNB	Kanab	73.75 323	eP	P	17 17 54.6	+1.8
	comp=Z,43nm,1.0s					
KNB	Kanab	73.75 323	eP	P	17 17 54.6	+1.8
KNB			pmax	pmax		
	comp=Z,43nm,1.0s					
GMRC	Granite Mounta	73.86 319	P	P	17 17 54.8	+1.4
	baz=133,SNR=19					
C36A	Pine Crest Far	73.89 342	P	P	17 17 52.5	-0.6
	baz=154,SNR=6.3					
LCMT	Little Creek M	73.99 322	eP	P	17 17 55.5	+1.5
	comp=Z,11nm,0.8s					
SRU	San Rafael Swe	74.02 325	eP	P	17 17 55.4	+1.1
	comp=Z,27nm,0.8s					
SRU	San Rafael Swe	74.02 325	eP	P	17 17 55.4	+1.1
SRU			pmax	pmax		
	comp=Z,27nm,0.8s					
MTPU	Mount Pierson	74.13 324	eP	P	17 17 56.5	+1.3
	comp=Z,11nm,0.8s					
C35A	Jirik Farms, M	74.18 341	P	P	17 17 54.1	-0.6
	baz=153,SNR=6.8					
P18A	Preston Nutter	74.25 326	eP	P	17 17 57.2	+1.4
	comp=Z,26nm,0.8s					
D33A	AnnSam, Waubun	74.27 339	P	P	17 17 54.7	-0.6
	baz=151					
HEC	Hector,Ludlow	74.30 319	P	P	17 17 57.3	+1.5
	baz=132,SNR=6.6					
RWWY	Rawlins	74.31 329	eP	P	17 17 56.4	+0.4
	comp=Z,26nm,0.9s					
SZCU	Shurtz Canyon	74.31 323	eP	P	17 17 57.9	+1.8
	comp=Z,38nm,1.9s					
P17A	Butcher Ranch,	74.40 326	eP	P	17 17 57.7	+1.2
	comp=Z,28nm,0.9s					
CCUT	Cedar City	74.43 323	eP	P	17 17 58.8	+2.0
	comp=Z,22nm,0.8s					
TUQ	Turquoise Moun	74.46 320	P	P	17 17 58.1	+1.2
	baz=133					
MSU	Marysvale	74.47 324	eP	P	17 17 58.5	+1.6
MSU	Marysvale	74.47 324	eP	P	17 17 58.5	+1.6
TMUT	Trail Mountain	74.51 325	eP	P	17 17 58.8	+1.5
	comp=Z,6.2nm,0.7s					
B35A	Bob, Littlefor	74.69 341	P	P	17 17 57.2	-0.5
	baz=153,SNR=11					
SYO	Syowa Base	74.70 159	⇓iP	P	17 17 59.0	+1.5
K22A	Casper	74.74 330	P	P	17 17 59.2	+0.9
	baz=141,SNR=7.5					
K22A	Casper	74.74 330	eP	P	17 17 59.8	+1.5
	comp=Z,17nm,0.9s					
K22A			ePcP	PcP	17 18 07.2	-3.8
C33A	Trail	74.79 340	P	P	17 17 57.6	-0.7
	baz=151					
RSSD	Black Hills	74.80 333	P	P	17 17 59.2	+0.5
	baz=144					
RSSD	Black Hills	74.80 333	eP	P	17 17 59.6	+0.9
	comp=Z,9.6nm,0.9s					
RSSD			epP	pP	17 19 04.7	+3.4
RSSD	Black Hills	74.80 333	eP	P	17 17 59.6	+0.9
RSSD			e*PP	pP	17 19 04.7	+3.4
RSSD			pmax	pmax		
	comp=Z,10.0nm,0.9s					
D31A	Mcclaflin, Tow	74.82 338	P	P	17 17 58.2	-0.3
	baz=150					
GSC	Goldstone, Bar	74.90 319	P	P	17 18 00.5	+1.2
	baz=132,SNR=5.5					
GSC	Goldstone, Bar	74.90 319	eP	P	17 18 01.0	+1.7
	comp=Z,8.9nm,0.8s					
GSC	Goldstone, Bar	74.90 319	eP	P	17 18 01.0	+1.7
GSC			pmax	pmax		
	comp=Z,9.0nm,0.8s					
TOA0	Torodi Ar. Sit	75.16 69	eP	P	17 17 59.5	-1.6
TORD	Torodi Ar. Bea	75.16 69	P	P	17 17 59.9	-1.2
	comp=Z,78nm,0.5s,baz=254,slow=5.5,SNR=742					
TORD			PP	PP	17 20 40.5	-13
	comp=Z,11nm,0.7s,baz=243,slow=7.8,SNR=6.0					
TORD			S	S	17 27 10.9	-6.5
	comp=Z,1.8nm,0.9s,baz=251,slow=13,SNR=5.4					
MPU	Maple Canyon	75.26 325	eP	P	17 18 03.0	+1.6
	comp=Z,17nm,0.9s					
AGMN	Agassiz Nation	75.29 340	P	P	17 18 00.7	-0.4
	baz=151,SNR=9.4					
AGMN	Agassiz Nation	75.29 340	eP	P	17 18 00.9	-0.3
	comp=Z,14nm,0.8s					
AGMN			epP	pP	17 19 06.1	+2.4
EDW2	Edwards Air Fo	75.35 318	P	P	17 18 02.5	+0.7
	baz=131					
PSUT	Pine Spring	75.40 323	eP	P	17 18 03.8	+1.6
	comp=Z,14nm,0.8s					
NLU	North Lily Min	75.45 325	eP	P	17 18 04.1	+1.6
	comp=Z,14nm,1.2s					
BLG	Laguna Peak, P	75.52 317	P	P	17 18 03.8	+1.1
	baz=130					
LRMC	Laurel Mtn Rad	75.55 319	P	P	17 18 04.0	+1.0
	baz=131,SNR=6.0					
B32A	Ashes, Strandq	75.60 340	P	P	17 18 02.5	-0.3
	baz=151,SNR=9.4					
JLU	Jordanelle	75.60 326	eP	P	17 18 05.0	+1.6
	comp=Z,16nm,0.8s					
TPNV	Topopah Spring	75.68 321	P	P	17 18 05.3	+1.5
	baz=133,SNR=16					
TPNV	Topopah Spring	75.68 321	eP	P	17 18 01.8	-2.0
	comp=Z,18nm,0.9s					
TPNV	Topopah Spring	75.68 321	eP	P	17 18 01.8	-2.0
TPNV			pmax	pmax		
	comp=Z,18nm,0.9s					
A33A	Warroad	75.71 341	P	P	17 18 03.2	-0.2
	baz=152,SNR=7.3					
FURC	Furnace Creek,	75.72 320	P	P	17 18 05.1	+1.3
	baz=132,SNR=5.9					
CTU	Camp Tracy	75.82 326	eP	P	17 18 06.3	+1.8
	comp=Z,5.4nm,0.8s					
MPMC	Manual Prospec	75.82 319	P	P	17 18 05.5	+0.9
	baz=132,SNR=7.8					
TCUT	Toone Canyon	75.95 326	eP	P	17 18 06.8	+1.5
	comp=Z,17nm,0.8s					
DUG	Dugway, Tooele	76.02 325	P	P	17 18 06.8	+1.2
	baz=136,SNR=13					
DUG	Dugway, Tooele	76.02 325	eP	P	17 18 07.0	+1.4
	comp=Z,15nm,1.0s					
DUG	Dugway, Tooele	76.02 325	eP	P	17 18 07.0	+1.4
DUG			pmax	pmax		
	comp=Z,15nm,1.0s					
A32A	Rocking H Ranc	76.04 340	P	P	17 18 04.7	-0.7
	baz=151					
ISA	Isabella, Lake	76.16 318	P	P	17 18 07.7	+1.3
	baz=131,SNR=12					
ISA	Isabella, Lake	76.16 318	eP	P	17 18 07.1	+0.7
	comp=Z,13nm,0.8s					
ISA	Isabella, Lake	76.16 318	eP	P	17 18 07.1	+0.7
ISA			pmax	pmax		
	comp=Z,13nm,0.8s					
MDND	Maddock	76.16 337	P	P	17 18 06.5	+0.4
	baz=148,SNR=6.7					
MDND	Maddock	76.16 337	eP	P	17 18 06.7	+0.6
	comp=Z,50nm,0.8s					
R11A	Troy Canyon, C	76.25 322	P	P	17 18 08.5	+1.5
	baz=133,SNR=14					
R11A	Troy Canyon, C	76.25 322	eP	P	17 18 08.5	+1.5
	comp=Z,8.7nm,0.9s					
BW06	Boulder Array	76.26 329	P	P	17 18 07.3	+0.3

baz=139,SNR=7.5
BW06 Boulder Array 76.26 329 *e*P **P 17 18 07.8 +0.8**
comp=Z,5.1nm,0.8s
PD31 Pinedale Array 76.26 329 *e*P **P 17 18 07.7 +0.7**
PDAR Pinedale Array 76.26 329 P **P 17 18 07.5 +0.5**
comp=Z,3.9nm,0.7s,baz=131,slow=8.1,SNR=23
PDAR Pinedale Array 76.26 329 *e*P **P 17 18 07.4 +0.4**
GRAC Grapevine Rang 76.37 320 P **P 17 18 08.8 +1.3**
baz=132
HWUT Hardware Ranch 76.39 327 *e*P **P 17 18 08.7 +0.9**
comp=Z,14nm,0.8s
VNDA Vanda 76.41 190 P **P 17 18 08.8 +1.7**
comp=Z,2.3nm,0.9s,baz=140,slow=4.4,SNR=9.4
VNDA Vanda 76.41 190 *e*P **P 17 18 09.3 +2.2**
comp=Z,3.9nm,0.8s
VNDA Vanda 76.41 190 *e*P **P 17 18 09.4 +2.2**
VNDA pmax pmax
comp=Z,4.0nm,0.8s
CWC Cottonwood Cre 76.43 319 P **P 17 18 09.2 +1.1**
baz=131
PKM Mcpherson Peak 76.49 317 P **P 17 18 09.6 +1.2**
baz=130
VES Vestal, Richgr 76.65 318 P **P 17 18 10.0 +1.0**
baz=130
BGU Big Grassy Mou 76.66 325 *e*P **P 17 18 10.2 +1.0**
comp=Z,17nm,1.0s
SMMC Simmler 76.88 317 P **P 17 18 11.8 +1.4**
baz=130
SCHQ Schefferville 76.93 360 P **P 17 18 09.9 -0.2**
comp=Z,9.0nm,0.6s,baz=183,slow=5.5,SNR=8.9
SCHQ Schefferville 76.93 360 *e*P **P 17 18 10.2 0.0**
comp=Z,26nm,1.3s
AHID Auburn Hatcher 77.01 328 *e*P **P 17 18 12.4 +1.3**
comp=Z,31nm,0.8s
ULM Lac du Bonnet 77.02 341 P **P 17 18 10.4 -0.4**
comp=Z,7.8nm,0.7s,baz=150,slow=5.9,SNR=14
ULM Lac du Bonnet 77.02 341 *e*P **P 17 18 10.4 -0.4**
comp=Z,13nm,0.9s
ULM Lac du Bonnet 77.02 341 *e*P **P 17 18 10.4 -0.4**
ULM pmax pmax
comp=Z,13nm,0.9s
HVU Hansel Valley 77.14 326 *e*P **P 17 18 13.0 +1.1**
comp=Z,15nm,0.9s
HVU Hansel Valley 77.14 326 *e*P **P 17 18 13.0 +1.1**
HVU pmax pmax
comp=Z,15nm,0.9s
REDW Red Top Meadow 77.33 328 *e*P **P 17 18 13.9 +1.0**
comp=Z,18nm,0.9s
SNOW Snow King Moun 77.36 328 *e*P **P 17 18 14.7 +1.6**
comp=Z,18nm,0.9s
LOHW Long Hollow 77.40 329 *e*P **P 17 18 14.7 +1.4**
comp=Z,12nm,0.8s
TPAW Teton Pass 77.47 328 *e*P **P 17 18 15.2 +1.4**
comp=Z,15nm,1.0s
MOOW Moose Ponds 77.57 329 *e*P **P 17 18 15.1 +0.9**
comp=Z,8.0nm,0.9s
FXWY Fox Creek 77.62 328 *e*P **P 17 18 15.5 +1.0**
comp=Z,6.1nm,0.8s
MLAC Mammoth, Mammo 77.67 320 P **P 17 18 16.3 +1.3**
baz=131
OMMB Old Mammoth Mi 77.75 320 *e*P **P 17 18 16.9 +1.4**
comp=Z,16nm,0.8s
IMW Indian Meadow 77.77 329 *e*P **P 17 18 16.6 +1.1**
comp=Z,23nm,0.9s
LAO LASA Array 77.78 333 P **P 17 18 15.6 +0.4**
baz=142,SNR=6.3
LAO LASA Array 77.78 333 *e*P **P 17 18 16.0 +0.8**
comp=Z,21nm,1.2s
LAO *e*pP **pP 17 19 22.6 +4.5**
NV11 Mina Array Sit 77.79 321 *e*P **P 17 18 16.9 +1.4**
comp=Z,0.5nm,1.0s
NV01 Mina Array Sit 77.88 321 *e*P **P 17 18 17.0 +0.9**
NVAR Mina Array Bea 77.88 321 P **P 17 18 17.1 +1.0**
comp=Z,6.2nm,0.9s,baz=156,slow=6.3,SNR=35
RLMT Red Lodge 77.91 330 P **P 17 18 16.8 +0.7**
baz=139,SNR=9.6
RLMT Red Lodge 77.91 330 *e*pP pP 17 19 22.8 +3.8
comp=Z,9.3nm,1.0s
YPP Pitchstone Pla 77.98 329 *e*P **P 17 18 18.5 +1.9**
comp=Z,6.7nm,1.2s
YFT Old Faithful 78.13 329 *e*P **P 17 18 20.1 +2.7**
comp=Z,13nm,0.9s
RYN Ryan 78.14 321 *e*P **P 17 18 18.5 +1.1**
comp=Z,10nm,0.8s
KVN Kaiserville 78.17 321 *e*P **P 17 18 18.5 +0.9**
comp=Z,21nm,0.8s
KVN Kaiserville 78.17 321 *e*P **P 17 18 18.5 +0.9**
KVN pmax pmax
comp=Z,21nm,0.8s
YMR Madison River 78.36 329 *e*P **P 17 18 20.8 +2.2**
comp=Z,24nm,0.9s
DGMT Dagmar 78.39 335 P **P 17 18 19.4 +1.0**
baz=144
DGMT Dagmar 78.39 335 *e*P **P 17 18 19.6 +1.2**
comp=Z,27nm,0.9s
YHH Holmes Hill 78.39 329 *e*P **P 17 18 20.8 +2.0**
comp=Z,22nm,0.9s
YHB Horse Butte 78.53 329 *e*P **P 17 18 21.4 +1.9**
comp=Z,16nm,0.8s
GCMT Greycliff 78.60 330 *e*P **P 17 18 20.3 +0.6**
WAKR Walker 78.60 320 *e*P **P 17 18 21.9 +1.9**
comp=Z,11nm,0.9s
YERR Yerington 78.79 320 *e*P **P 17 18 22.7 +1.7**
comp=Z,14nm,0.8s
CMB Columbia Colle 78.86 319 *e*PcP **PcP 17 18 28.2 -0.7**
PNTR Pine Nut 79.07 320 *e*P **P 17 18 24.2 +1.6**
comp=Z,30nm,0.8s
VCNR Virginia City 79.24 321 *e*P **P 17 18 25.4 +1.9**
comp=Z,11nm,0.9s
HLID Hailey 79.26 326 P **P 17 18 24.9 +1.5**
baz=135,SNR=48
HLID Hailey 79.26 326 *e*pP pP 17 19 31.0 +4.3
PAHR Pah Rah Range 79.35 321 *e*P **P 17 18 25.4 +1.5**
comp=Z,32nm,0.9s
BOZ Bozeman (W) 79.36 329 P **P 17 18 24.6 +0.7**
baz=138,SNR=5.6
BOZ Bozeman (W) 79.36 329 *e*P **P 17 18 24.8 +0.9**
comp=Z,9.8nm,1.3s
BOZ Bozeman (W) 79.36 329 *e*P **P 17 18 24.8 +0.9**
BOZ pmax pmax
comp=Z,10.0nm,1.3s
MCMT McKenzie Canyo 79.38 328 *e*P **P 17 18 25.6 +1.5**
DLMT Dillon 79.65 329 *e*P **P 17 18 26.9 +1.5**
comp=Z,14nm,1.0s
AFDM Forest Hills D 79.80 320 *e*P **P 17 18 27.2 +1.0**
comp=Z,8.4nm,0.9s
MFID Camas Ranch 79.89 326 *e*P **P 17 18 28.4 +1.7**
comp=Z,8.9nm,0.9s
LRM Limekiln Ridge 79.92 329 *e*P **P 17 18 28.3 +1.3**
PFVI Vila Bisbo 80.05 43 *e*P **P 17 18 28.0 +0.5**
comp=Z,68nm,1.4s
MORF Marmelete 80.26 43 *e*P **P 17 18 28.6 -0.2**
MORF AMb AMB 17 18 34.7
comp=Z,50nm,1.9s
MORF Marmelete 80.26 43 *e*P **P 17 18 29.3 +0.5**
comp=Z,51nm,1.7s
MORF Marmelete 80.26 43 *e*P **P 17 18 28.5 -0.2**
MDT Midelt 80.30 49 P **P 17 18 28.5 -0.7**
comp=Z,16nm,0.9s,baz=244,slow=4.8,SNR=12
EGMT Eagleton 80.33 332 P **P 17 18 29.0 +0.1**
baz=139,SNR=12
EGMT Eagleton 80.33 332 *e*P **P 17 18 29.5 +0.6**
comp=Z,25nm,1.1s
PTEO Sao Teotonio 80.36 43 *e*P **P 17 18 30.2 +1.0**
comp=Z,81nm,1.5s
ORV Oroville 80.50 320 *e*P **P 17 18 31.3 +1.4**
comp=Z,20nm,1.1s
BOSA Boshof 80.65 117 P **P 17 18 30.3 -1.0**
comp=Z,19nm,0.5s,baz=256,slow=3.7,SNR=60
BOSA Boshof 80.65 117 *e*P **P 17 18 30.1 -1.2**
comp=Z,79nm,1.3s
PBDV Barranco-do-Ve 80.68 43 *e*P **P 17 18 31.5 +0.6**
comp=Z,66nm,1.5s
WVOR Wild Horse Val 80.73 323 *e*P **P 17 18 32.1 +0.9**
comp=Z,11nm,1.4s
WVOR Wild Horse Val 80.73 323 *e*P **P 17 18 32.1 +0.9**
WVOR pmax pmax
comp=Z,11nm,1.4s
PNCL Nicolau / Gran 80.83 42 *e*P **P 17 18 32.1 +0.4**
comp=Z,34nm,1.7s
PCVE Castro Verde 80.85 43 *e*P **P 17 18 32.3 +0.5**
comp=Z,50nm,0.9s
MESJ Messejana 80.86 43 *e*P **P 17 18 31.7 -0.2**
MESJ AMb AMB 17 18 33.2
comp=Z,53nm,0.7s
MESJ Messejana 80.86 43 *e*P **P 17 18 32.3 +0.5**
comp=Z,52nm,1.0s

MESJ Messejana 80.86 43 *e*P **P 17 18 31.6 -0.2**
PVAQ Vaqueiros 80.91 43 *e*P **P 17 18 32.5 +0.4**
comp=Z,43nm,1.7s
O03D Paynes Creek 81.15 320 P **P 17 18 33.1 -0.4**
baz=129
PBEJ Beja 81.19 43 *e*P **P 17 18 34.1 +0.5**
comp=Z,34nm,1.6s
MSO Missoula 81.36 329 P **P 17 18 34.5 +0.1**
baz=136
MSO Missoula 81.36 329 *e*P **P 17 18 35.7 +1.3**
comp=Z,8.8nm,1.2s
EVO Evora 81.41 42 *e*P **P 17 18 34.9 +0.2**
comp=Z,40nm,2.0s
ALMR Almeirim 81.44 42 *e*P **P 17 18 34.8 0.0**
ALMR AMb AMB 17 18 37.7
comp=Z,159nm,1.2s
ALMR Almeirim 81.44 42 *e*P **P 17 18 35.7 +0.9**
comp=Z,164nm,1.3s
ALMR Almeirim 81.44 42 *e*P **P 17 18 34.8 0.0**
PMTG Montargil 81.60 42 *e*P **P 17 18 36.0 +0.3**
comp=Z,69nm,1.3s
BMO Blue Mountains 81.65 326 *e*P **P 17 18 36.8 +0.8**
comp=Z,21nm,1.3s
BMO *e*pP **pP 17 19 41.0 +1.4**
WDC Whiskeytown Da 81.77 320 *e*P **P 17 18 36.1 -0.4**
comp=Z,8.7nm,0.8s
WDC Whiskeytown Da 81.77 320 *e*P **P 17 18 36.1 -0.4**
WDC pmax pmax
comp=Z,9.0nm,0.8s
PBAR Barrancos 81.80 43 *e*P **P 17 18 36.9 +0.1**
comp=Z,70nm,1.1s
PTOM Tomar 81.83 41 *e*P **P 17 18 37.1 +0.2**
comp=Z,125nm,1.1s
PESTR Estremoz 81.87 42 *e*P **P 17 18 37.5 +0.3**
comp=Z,61nm,1.2s
PESTR Estremoz 81.87 42 *e*P **P 17 18 37.7 +0.5**
comp=Z,28nm,1.2s
PCAS Casmilo, Conde 82.04 41 *e*P **P 17 18 38.3 +0.3**
comp=Z,75nm,1.0s
N02D Trinity Center 82.11 320 P **P 17 18 38.3 -0.1**
baz=128
M04C Macdoel 82.11 321 P **P 17 18 39.2 +0.7**
baz=129
K05A Summer Lake 82.18 323 *e*P **P 17 18 40.5 +1.6**
comp=Z,22nm,0.8s
JTMT Jette 82.18 329 *e*P **P 17 18 39.9 +1.2**
comp=Z,8.1nm,0.9s
LBTB Lobatse 82.20 114 *e*P **P 17 18 38.5 -0.9**
comp=Z,84nm,1.4s
LBTB Lobatse 82.20 114 *e*P **P 17 18 38.5 -0.9**
LBTB pmax pmax
comp=Z,84nm,1.4s
KMRM Mail Ridge 82.24 319 *e*P **P 17 18 40.7 +1.6**
comp=Z,15nm,1.0s
PMRV Marv??o 82.34 42 *e*P **P 17 18 39.4 -0.1**
comp=Z,30nm,1.4s
F10A Beach Ranch, E 82.38 327 *e*P **P 17 18 40.8 +1.1**
comp=Z,11nm,0.8s
M02C Callahan 82.46 321 P **P 17 18 40.6 +0.4**
baz=128
PCBR Castelo Branco 82.53 41 *e*P **P 17 18 40.5 0.0**
comp=Z,41nm,0.9s
YBH Yreka Blue Hor 82.59 321 P **P 17 18 40.5 -0.4**
comp=Z,3.8nm,0.7s,baz=75,slow=8.6,SNR=7.8
PTO Porto 82.65 40 *e*P **P 17 18 41.6 +0.6**
MAW Mawson 82.68 162 P **P 17 18 41.5 +0.7**
comp=Z,33nm,0.9s,baz=214,slow=5.7,SNR=55
MAW Mawson 82.68 162 *e*P **P 17 18 41.5 +0.7**
comp=Z,9.5nm,1.0s
MAW Mawson 82.68 162 *e*P **P 17 18 41.5 +0.7**
MAW pmax pmax
comp=Z,10.0nm,1.0s
J05D Fort Rock, OR 82.73 323 P **P 17 18 42.5 +0.9**
baz=130
FFC Flin Flon 82.77 340 *e*P **P 17 18 41.7 +0.3**
comp=Z,6.1nm,1.0s
PVIS Viseu 82.81 41 *e*P **P 17 18 41.8 -0.2**
comp=Z,39nm,1.6s
MTE Manteigas 82.83 41 *e*P **P 17 18 42.2 +0.1**
comp=Z,33nm,2.6s
MTE Manteigas 82.83 41 *e*P **P 17 18 42.1 +0.1**
comp=Z,29nm,0.8s
TAM Tamanrasset 82.86 62 *e*P **P 17 18 42.6 -0.1**
comp=Z,61nm,1.4s
J04D Umpqua Nationa 83.19 322 P **P 17 18 44.6 +0.5**
baz=129
PVRL Vila Real 83.26 40 *e*P **P 17 18 44.5 +0.2**
comp=Z,98nm,1.3s
POLO Lamas de Olo 83.27 40 *e*P **P 17 18 44.4 0.0**
comp=Z,53nm,1.6s
PCAB Cabril 83.34 40 *e*P **P 17 18 44.8 +0.2**
PGAV Gavieira, Arco 83.35 39 *e*P **P 17 18 45.0 +0.2**
comp=Z,93nm,1.4s
I05D Terrebonne, OR 83.46 324 P **P 17 18 45.8 +0.6**
baz=130
MVO Moncorvo 83.60 41 *e*P **P 17 18 46.4 +0.4**
comp=Z,88nm,1.4s
I04A Tendick Farm, 83.71 323 P **P 17 18 47.1 +0.6**
baz=129
FCC Fort Churchill 84.14 346 *e*P **P 17 18 48.5 +0.3**
comp=Z,10nm,0.8s
FCC Fort Churchill 84.14 346 *e*P **P 17 18 48.5 +0.3**
FCC pmax pmax
comp=Z,10.0nm,0.8s
C09A Chrisman Ranch 84.15 328 *e*P **P 17 18 49.4 +0.9**
comp=Z,14nm,0.8s
PBRG Braganca 84.16 40 *e*P **P 17 18 49.1 +0.3**
comp=Z,76nm,1.7s
I03D Drain, OR 84.18 322 P **P 17 18 49.0 +0.3**
baz=128
PAB San Pablo 84.31 43 *e*P **P 17 18 49.9 +0.2**
comp=Z,75nm,1.1s
PAB San Pablo 84.31 43 *e*P **P 17 18 49.9 +0.2**
PAB pmax pmax
comp=Z,75nm,1.1s
ESLA Sonseca Array 84.62 43 *e*P **P 17 18 51.3 +0.1**
comp=Z,56nm,1.0s
ESDC Sonseca Array 84.63 43 P **P 17 18 51.4 +0.2**
comp=Z,41nm,1.0s,baz=241,slow=4.6,SNR=94
ES19 SONSECA Array 84.68 43 *e*P **P 17 18 51.2 -0.2**
FRB Frobisher Bay 85.89 359 P **P 17 19 00.1 +3.4**
B05A Bryant 86.38 326 P **P 17 18 59.4 -0.1**
baz=130
LLLB Lillooet 87.78 328 *e*P **P 17 19 07.0 +0.8**
comp=Z,16nm,1.1s
LSZ Lusaka 88.07 106 *e*P **P 17 19 09.6 +1.1**
comp=Z,71nm,1.3s
LSZ Lusaka 88.07 106 *e*P **P 17 19 09.6 +1.1**
LSZ pmax pmax
comp=Z,71nm,1.3s
KEST Kesra 91.73 52 P **P 17 19 25.5 +0.5**
comp=Z,24nm,0.8s,baz=160,slow=1.6,SNR=21
KEST Kesra 91.73 52 *e*P **P 17 19 25.8 +0.8**
comp=Z,26nm,0.8s
SSB Saint Sauveur 92.92 42 *e*P **P 17 19 30.3 +0.1**
comp=Z,20nm,0.8s
YKA Yellowknife Ar 92.95 340 P **P 17 19 30.1 +0.2**
comp=Z,6.1nm,0.7s,baz=129,slow=4.5,SNR=25
ISO Isola 93.98 44 P **P 17 19 35.9 +0.8**
EKA Eskdalemuir Ar 94.01 31 P **P 17 19 33.8 -1.0**
comp=Z,4.1nm,0.9s,baz=220,slow=1.9,SNR=6.0
BNI Bardonecchia 94.14 43 *e*P **P 17 19 36.3 +0.3**
comp=Z,9.8nm,0.9s
BNI Bardonecchia 94.14 43 *e*P **P 17 19 36.3 +0.3**
BNI pmax pmax
comp=Z,10.0nm,0.9s
SENIN Lac Senin/Sane 95.13 42 *e*P **P 17 19 40.8 +0.3**
comp=Z,28nm,1.4s
ECH Echery 95.89 40 *e*P **P 17 19 43.1 -0.6**
comp=Z,18nm,1.1s
ECH Echery 95.89 40 *e*P **P 17 19 43.1 -0.6**
ECH pmax pmax
comp=Z,18nm,1.1s
WLF Walferdange 95.97 38 *e*P **P 17 19 44.3 +0.3**
comp=Z,48nm,1.2s
WLF Walferdange 95.97 38 *e*P **P 17 19 44.3 +0.3**
WLF pmax pmax
comp=Z,48nm,1.2s
TUE Stuetta 96.45 42 *e*P **P 17 19 45.7 -0.8**
comp=Z,20nm,0.8s
SLE Schleitheim 96.49 41 P **P 17 19 46.6 +0.1**
SLE pmax pmax
comp=Z,26nm,0.9s
FUORN Ofenpass-Fuorn 97.09 42 *e*P Pdif 17 19 49.7 +0.2
comp=Z,24nm,0.9s
DAVA Damuels 97.13 42 *i* P **P 17 19 49.4 -0.1**
comp=Z,24nm,0.8s,SNR=8.2

STU Stuttgart 97.35 40 *e*P **P 17 19 50.2 -0.1**
comp=Z,30nm,1.1s
STU Stuttgart 97.35 40 *e*P **P 17 19 50.2 -0.1**
STU pmax pmax
comp=Z,30nm,1.1s
AQU L'Aquila 97.38 47 *e*P Pdif 17 19 50.8 +0.1
comp=Z,34nm,1.3s
AQU L'Aquila 97.38 47 *e*P Pdif 17 19 50.8 +0.1
AQU pmax pmax
comp=Z,34nm,1.3s
FETA Feichten 97.55 42 *i* PcP **P 17 19 51.1 -0.3**
comp=Z,30nm,1.1s,SNR=11
RETA Reutte 97.76 42 *i* Pdiff **P 17 19 52.0 -0.2**
comp=Z,21nm,0.8s,SNR=7.9
MOTA Moosalm 97.91 42 *i* Pdiff **P 17 19 51.7 -1.3**
comp=Z,16nm,0.7s,SNR=16
CUC Castrocucco 98.14 50 *e*P **P 17 19 53.2 -0.9**
comp=Z,9.4nm,0.5s
WTTA Wattenberg 98.21 42 *i* Pdiff Pdif 17 19 54.4 0.0
comp=Z,22nm,0.8s,SNR=7.7
ABTA Abfaltersbach 98.55 43 *i* Pdiff **P 17 19 55.8 0.0**
comp=Z,11nm,0.8s,SNR=6.5
CADS Cadrg 99.12 44 *i* Pdiff **Pdif 17 19 58.1 -0.2**
KBA Koelnbreinsper 99.20 43 *i* Pdiff **Pdif 17 19 58.3 -0.5**
comp=Z,6.3nm,0.7s
MYKA Terra Mystica 99.22 43 *i* Pdiff **Pdif 17 19 58.7 0.0**
comp=Z,10nm,0.8s
WET Wettzell 99.72 41 P **Pdif 17 20 01.0 +0.1**
NKC Novy Kostel 99.89 40 *e*PDIFF **Pdif 17 20 02.2 +0.6**
NKC Novy Kostel 99.89 40 *e*P **Pdif 17 20 02.2 +0.6**
LEGS Legarje 100.04 44 *i* Pdiff **Pdif 17 20 02.3 0.0**
MOA Molln 100.08 42 *i* Pdiff **Pdif 17 20 02.1 -0.4**
comp=Z,9.8nm,0.8s
CRES Cresnjev 100.08 45 *i* Pdiff **Pdif 17 20 02.6 +0.1**
GEA0 GERESS Array S 100.10 41 *e*Pdif **Pdif 17 20 02.0 -0.6**
GEC2 GERESS Array S 100.11 41 *e*Pdif **Pdif 17 20 02.6 -0.1**
GEC2 GERESS Array S 100.11 41 *e*P **Pdif 17 20 02.6 -0.1**
GERES GERESS Array B 100.11 41 P **Pdif 17 20 02.4 -0.3**
comp=Z,2.8nm,0.8s,baz=224,slow=3.7,SNR=15
SOKA Soboth 100.12 44 *i* Pdiff **Pdif 17 20 02.6 -0.2**
comp=Z,3.6nm,1.0s
KHC Kasperske Hory 100.14 41 *e*PDIFF **Pdif 17 20 02.0 -0.7**
KHC *ex* x 17 20 07.3
KHC Kasperske Hory 100.14 41 *e*P **Pdif 17 20 02.0 -0.7**
CLL Collm 100.63 39 *i* Pdif **Pdif 17 20 05.0 +0.2**
CLL Collm 100.63 39 *i* P **Pdif 17 20 05.0 +0.2**
ARSA Arzberg 100.65 43 *i* Pdiff **Pdif 17 20 04.9 -0.1**
comp=Z,4.5nm,1.1s
BRG Berggiesshubel 101.01 39 *e*P **Pdif 17 20 06.5 0.0**
BRG pmax pmax
comp=Z,5.0nm,1.1s
PRU Pruhonice 101.04 40 *e*PDIFF **Pdif 17 20 07.1 +0.4**
PRU Pruhonice 101.04 40 *e*P **Pdif 17 20 07.1 +0.4**
CONA Conrad Observa 101.11 43 *i* Pdiff **Pdif 17 20 07.3 +0.2**
comp=Z,6.6nm,1.2s
UPC Upice 102.11 40 *e*PDIFF **Pdif 17 20 12.1 +0.7**
UPC Upice 102.11 40 *e*P **Pdif 17 20 12.1 +0.7**
DPC Dobruska-Polom 102.24 41 *e*PDIFF **Pdif 17 20 12.6 +0.5**
DPC *ex* x 17 20 20.3
DPC Dobruska-Polom 102.24 41 *e*P **Pdif 17 20 12.6 +0.5**
DIVS Divibare 102.50 47 *e*Pdif **Pdif 17 20 14.8 +1.4**
MORC Moravsky Berou 102.79 41 *e*Pdif **Pdif 17 20 15.3 +0.8**
MORC Moravsky Berou 102.79 41 *e*P **Pdif 17 20 15.3 +0.8**
VYHS Vyhne 103.17 43 *e*P **Pdif 17 20 15.2 -1.0**
VYHS Vyhne 103.17 43 *e*PDIFF **Pdif 17 20 15.2 -1.0**
IDI Anoyia 103.30 57 Pdiff **Pdif 17 20 16.8 -0.3**
comp=Z,2.4nm,0.6s,baz=300,slow=20,SNR=3.7
HFS Hagfors 104.21 31 Pdiff **Pdif 17 20 20.3 -0.2**
comp=Z,1.1nm,0.7s,baz=202,slow=6.2,SNR=1.9
ILAR Eielson Array 106.23 334 PP PP 17 24 53.4 -3.8
comp=Z,0.2nm,0.4s,baz=126,slow=6.0,SNR=4.6
ILAR PKKPbc **PKKPbc 17 36 00.8 -3.0**
comp=Z,0.6nm,0.6s,baz=292,slow=3.7,SNR=4.4
KDAK Kodiak Island 106.88 326 PKKPbc PKKPbc 17 36 00.2 -1.3
comp=Z,1.3nm,0.6s,baz=255,slow=5.1,SNR=4.4
BUR04 Bucovina Ar. S 107.01 45 *e*Pdif **Pdif 17 20 34.3 +0.9**
BRTR Keskin Array B 111.16 55 PP PP 17 25 27.1 -6.6
comp=Z,0.9nm,0.9s,baz=234,slow=4.0,SNR=3.9
BRTR PKKPbc **PKKPab 17 35 56.0 +0.1**
comp=Z,1.0nm,0.8s,baz=71,slow=4.8,SNR=5.8
OBN Obninsk 115.22 38 *i* PKIKP **PKPdf 17 24 55.3 -1.3**
OBN *e* 17 26 03.1
OBN *e*PPP PPP 17 28 30.3
KLMR Klimovskoe 116.86 32 *e*PKIKP **PKPdf 17 24 59.0 -0.6**
KLMR *e* 17 26 04.5
KLMR pmax pmax
comp=Z,12nm,1.3s
KLMR Klimovskoe 116.86 32 *e*PKPdf **PKPdf 17 24 59.0 -0.6**
KLMR AMP 17 25 00.6
comp=Z,12nm,1.3s
KLMR *ep*PKPdf pPKPdf 17 26 04.5 -3.3
KIV Kislovodsk 118.46 51 *e*PKIKP **PKPdf 17 25 04.4 +1.0**
KIV pmax pmax
comp=Z,11nm,1.1s
KBZ Khabaz 118.59 51 PKP **PKPdf 17 25 02.6 -0.9**
comp=Z,6.4nm,0.9s,baz=194,slow=1.8,SNR=12
NCK Nalchik 119.08 52 ‖ *i* PKIKP **PKPdf 17 25 05.4 +0.9**
PRGR Permogore 119.74 31 *e*PKIKP **PKPdf 17 25 05.3 +0.2**
PRGR pmax pmax
comp=Z,8.0nm,0.6s
STKA Stephens Creek 119.89 207 PKP **PKPdf 17 25 05.5 -1.1**
comp=Z,1.0nm,0.5s,baz=150,slow=20,SNR=2.9
BILL Bilibino 124.34 339 *e*PKIKP **PKPdf 17 25 13.6 -0.2**
BILL *e* 17 27 02.8
BILL *e*PPP PPP 17 29 42.8
BILL pmax pmax
comp=Z,1.0nm,0.9s
NWAO Narrogin (SRO) 124.89 183 PKP **PKPdf 17 25 16.3 +0.2**
comp=Z,12nm,1.0s,baz=195,slow=16,SNR=3.2
ARU Arti 127.37 35 *e*PKPdf **PKPdf 17 25 20.2 +0.2**
ARU Arti 127.37 35 *i* PKIKP **PKPdf 17 25 21.0 +1.0**
ARU 17 27 25.3
ARU PPP PPP 17 30 15.6
ARU SS SS 17 44 07.5 -3.9
AKTO Aktyubinsk 128.51 43 PKP **PKPdf 17 25 22.9 +0.5**
comp=Z,5.1nm,0.8s,baz=288,slow=4.3,SNR=14
AKTO SKPab SKPab 17 28 17.9
comp=Z,2.6nm,0.8s,baz=337,slow=16,SNR=7.7
WSAR Wadi Sarin 129.25 78 PKP **PKPdf 17 25 25.0 +0.4**
comp=Z,14nm,0.8s,baz=257,slow=2.2,SNR=9.3
AB31 Akbulak array 129.97 44 *i* PKIKP **PKPdf 17 25 25.6 +0.5**
AB31 pmax pmax
comp=Z,10.0nm,0.9s
ABKAR Akbulak array 129.97 44 *e*PKPdf **PKPdf 17 25 24.5 -0.6**
GEYT Alibeck 129.99 59 PKP **PKPdf 17 25 25.7 +0.1**
comp=Z,5.2nm,0.9s,baz=265,slow=7.0,SNR=10
GEYT SKPab SKPab 17 28 24.4 +1.7
comp=Z,4.3nm,0.8s,baz=266,slow=5.9,SNR=9.0
TIXI Tiksi 130.00 354 SKPbc SKPab 17 28 21.6 0.0
comp=Z,21nm,1.0s,baz=56,slow=4.8,SNR=40
TIXI Tiksi 130.00 354 *e*PKPdf **PKPdf 17 25 24.2 -0.3**
TIXI SKPbc SKPab 17 28 21.6 0.0
TIXI Tiksi 130.00 354 ‖ *i* PKIKP **PKPdf 17 25 24.9 +0.4**
AS01 Alice Springs 130.25 204 *e*PKPdf **PKPdf 17 25 26.4 -0.2**
ASAR Alice Springs 130.27 204 PKhKP PKPpre 17 25 08.9
comp=Z,0.3nm,0.7s,baz=150,slow=2.7,SNR=4.4
ASAR PKP **PKPdf 17 25 26.4 -0.3**
comp=Z,5.4nm,0.9s,baz=138,slow=1.5,SNR=5.8
ASAR SKPbc **SKPbc 17 28 24.1 -0.1**
comp=Z,21nm,0.9s,baz=147,slow=4.7,SNR=51
AS31 Alice Springs 130.27 204 *e*PKPdf **PKPdf 17 25 26.6 0.0**
NRIK Noril'sk 130.43 12 SKPbc **SKPab 17 28 24.6 +1.2**
comp=Z,4.9nm,0.7s,baz=36,slow=4.0,SNR=4.7
SEY Seymchan 131.97 338 PKhKP PKPpre 17 25 17.7
comp=Z,0.3nm,0.3s,baz=98,slow=15,SNR=3.9
SEY PKP **PKiKP 17 25 29.4 -0.2**
comp=Z,5.1nm,1.0s,baz=20,slow=0.7,SNR=10
SEY SKPbc **SKPab 17 28 30.3 +0.2**
comp=Z,5.3nm,0.7s,baz=75,slow=2.2,SNR=20
SEY Seymchan 131.97 338 ‖ *i* PKIKP **PKPdf 17 25 30.8 +2.3**
WB2 Warramunga Arr 133.44 207 *e*PKPdf **PKPdf 17 25 33.0 +0.4**
WRA Warramunga Arr 133.45 207 PKhKP PKPpre 17 25 19.4
comp=Z,0.4nm,0.6s,baz=163,slow=1.6,SNR=5.6
WRA PKP **PKPdf 17 25 32.9 +0.2**
comp=Z,2.8nm,0.6s,baz=167,slow=1.8,SNR=33
WRA SKPbc **SKPbc 17 28 35.8 +0.3**
comp=Z,23nm,0.8s,baz=151,slow=3.3,SNR=52
WRAB Tennant Creek 133.45 207 ‖ *i* PKIKP **PKPdf 17 25 33.6 +0.9**
PETK Petropavlovsk- 134.88 324 PKhKP PKPpre 17 25 26.7
comp=Z,0.7nm,0.7s,baz=106,slow=14,SNR=3.0
PETK PKP **PKiKP 17 25 35.1 -0.7**
comp=Z,1.2nm,0.6s,baz=92,slow=4.0,SNR=4.8
PETK SKPbc **SKPbc 17 28 39.9 +0.9**
comp=Z,16nm,0.8s,baz=82,slow=6.2,SNR=32
BRVK Borovoye 134.91 36 *e*PKPdf **PKPdf 17 25 35.7 +1.4**

BRVK	**Borovoye**	**134.91**	**36**	⇑*i*PKIKP	**PKPdf**	**17 25 35.4**	**+1.1**
BVA0	**Borovoye Array**	**134.98**	**36**	PKIKP	**PKPdf**	**17 25 35.6**	**+1.1**
BVA0				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BVAR	**Borovoye Array**	**134.98**	**36**	PKP	**PKPdf**	**17 25 33.8**	**-0.7**
	comp=Z,4.1nm,0.7s,baz=279,slow=2.1,SNR=23						
BVAR				SKPbc	**SKPbc**	**17 28 39.9**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=332,slow=4.9,SNR=2.5						
OTUK	**Ortayu**	**138.09**	**42**	PKIKP	**PKPdf**	**17 25 41.1**	**+0.7**
OTUK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
FITZ	**Fitzroy Crossi**	**138.16**	**197**	PKhKP	PKPpre	17 25 32.5	
	baz=94,slow=15						
FITZ				SKPbc	**SKPbc**	**17 28 50.6**	**+0.7**
	baz=212,slow=3.3						
KK31	**Karatay Array**	**138.59**	**50**	*i* PKIKP	**PKPdf**	**17 25 38.1**	**-3.4**
KK31				pmax	pmax		
	comp=Z,1.0nm,0.9s						
YAK	**Yakutsk**	**138.96**	**349**⇑	*e*PKIKP	**PKPdf**	**17 25 44.7**	**+3.2**
YAK				pmax	pmax		
	comp=Z,15nm,2.5s						
MNAS	**Manas**	**140.17**	**50**	PKHKP	PKPpre	17 25 38.4	
MNAS				pmax	pmax		
	comp=Z,9.0nm,1.1s						
NVS	**Novosibirsk**	**140.28**	**28**	*e*PKIKP	**PKPdf**	**17 25 44.0**	**-0.1**
NVS				*e*		17 26 54.6	
NVS				*e*		17 28 54.8	
NVS				pmax	pmax		
	comp=Z,16nm,1.4s						
NVS				pmax	pmax		
	comp=E,7.0nm,1.5s						
KURK	**Kurchatov**	**140.56**	**35**	*e*PKPpre	PKPpre	17 25 40.3	
KURK				SKPbc	**SKiKP**	**17 28 57.5**	**-0.2**
KURK				SKKPbc	**SKKPab**	**17 37 24.6**	**-1.6**
KURK	**Kurchatov**	**140.56**	**35**	PKIKP	**PKPdf**	**17 25 42.0**	**-2.8**
KURK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KURBB	**Kurchatov Arra**	**140.57**	**36**	PKhKP	PKPpre	17 25 39.2	
	comp=Z,2.4nm,0.8s,baz=296,slow=3.0,SNR=13						
KURBB				SKPbc	**SKiKP**	**17 28 57.5**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=293,slow=4.1,SNR=5.1						
KURBB				SKKPbc	**SKKPab**	**17 37 24.6**	**-1.5**
	comp=Z,0.8nm,0.9s,baz=143,slow=2.7,SNR=5.1						
AAK	**Ala-Archa**	**141.52**	**49**	*e*PKPpre	PKPpre	17 25 42.9	
AAK	**Ala-Archa**	**141.52**	**49**⇑	*i*PKIKP	PKPpre	17 25 43.1	
SFK	**Sufi-Kurgan**	**141.57**	**53**	PKHKP	PKPpre	17 25 39.2	
SFK				pmax	pmax		
	comp=Z,7.0nm,0.5s						
ZAA0	**Zalesovo Array**	**141.57**	**28**	*e*PKPpre	PKPpre	17 25 41.4	
ZALV	**Zalesovo Beam**	**141.57**	**28**	PKhKP	PKPpre	17 25 40.9	
	comp=Z,4.7nm,0.6s,baz=302,slow=4.8,SNR=18						
ZALV				SKPbc	**SKiKP**	**17 28 59.6**	**+0.1**
	comp=Z,2.1nm,0.5s,baz=314,slow=3.9,SNR=6.4						
TKM2	**Tokmak 2**	**142.19**	**48**	PKIKP	PKPpre	17 25 43.7	
TKM2				pmax	pmax		
	comp=Z,11nm,1.0s						
NIL	**Nilore**	**142.56**	**64**	*e*PKPpre	PKPpre	17 25 44.1	
NIL	**Nilore**	**142.56**	**64**	*e*PKHKP	PKPpre	17 25 44.2	
KSH	**Kashi**	**143.53**	**53**	PKP	PKPab	17 25 47.9	+0.1
KSH				PP	**PP**	**17 29 11.4**	**+5.6**
KSH				SKS	**SKSdf**	**17 32 39.5**	**+5.1**
KSH				SKKS	**SKKSac**	**17 35 37.2**	**+6.0**
KSH				SS	**SS**	**17 47 29.4**	**+4.0**
KSH				AMB	AMB		
	comp=Z,270nm,5.0s						
KUR	**Kuril'sk**	**144.19**	**318**⇑	*e*PKIKP	**PKPdf**	**17 25 50.9**	**-0.5**
PRZ	**Przheval'sk**	**144.27**	**47**	*e*PKPdf	**PKPdf**	**17 25 51.8**	**-0.2**
PRZ	**Przheval'sk**	**144.27**	**47**	PKIKP	**PKPdf**	**17 25 51.7**	**-0.2**
GENI	**Genyem**	**144.34**	**229**	PKP	**PKPdf**	**17 25 53.4**	**+0.7**
MAKZ	**Makanchi**	**144.54**	**39**	*e*PKPbc	**PKPdf**	**17 25 51.7**	**-0.3**
MAKZ	**Makanchi**	**144.54**	**39**	*e*PKIKP	**PKPdf**	**17 25 51.7**	**-0.3**
PALK	**Pallekele**	**144.60**	**110**	PKP	**PKPdf**	**17 25 53.0**	**-0.1**
	comp=Z,65nm,0.8s,baz=289,slow=0.5,SNR=23						
PALK	**Pallekele**	**144.60**	**110**	*e*PKPbc	**PKPdf**	**17 25 53.2**	**0.0**
BOD	**Bodaibo**	**144.63**	**360**	*e*PKHKP	PKPpre	17 25 47.3	
BOD				pmax	pmax		
	comp=Z,42nm,1.3s						
PDGK	**Podgornoye**	**144.66**	**46**	PKIKP	**PKPdf**	**17 25 52.4**	**-0.1**
PDGK				pmax	pmax		
	comp=Z,154nm,0.9s						
MK31	**Makanchi Array**	**144.73**	**39**	*e*PKPbc	**PKPdf**	**17 25 52.4**	**0.0**
MK31	**Makanchi Array**	**144.73**	**39**	*e*PKIKP	**PKPdf**	**17 25 52.4**	**0.0**
MKAR	**Makanchi Array**	**144.73**	**39**	PKP	**PKPdf**	**17 25 52.6**	**+0.3**
	comp=Z,81nm,0.7s,baz=310,slow=3.8,SNR=821						
MKAR				SKPbc	**SKiKP**	**17 29 07.6**	**+1.2**
	comp=Z,5.4nm,0.8s,baz=321,slow=1.7,SNR=5.9						
MKAR				SKKPbc	**SKKPab**	**17 37 07.8**	**0.0**
	comp=Z,1.8nm,0.9s,baz=104,slow=4.4,SNR=12						
MKAR	**Makanchi Array**	**144.73**	**39**	PKIKP	**PKPdf**	**17 25 52.7**	**+0.3**
MKAR						17 29 07.6	
MKAR				pmax	pmax		
	comp=Z,82nm,0.7s						
MKAR				pmax	pmax		
	comp=N,2.0nm,0.9s						
MK01	**Makanchi Array**	**144.75**	**39**	*e*PKPbc	PKPbc	17 25 51.5	-0.6
YSS	**Yuzh-Sakhalins**	**146.28**	**324**	*e*PKPdf	**PKPbc**	**17 25 55.9**	**-0.7**
YSS	**Yuzh-Sakhalins**	**146.28**	**324**	*e*PKP2	**PKPbc**	**17 25 57.0**	**+0.4**
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
HYB	**Hyderabad**	**146.37**	**92**	*i* PKP	**PKPbc**	**17 25 57.0**	**-0.8**
GRNR	**Gornyy**	**146.71**	**334**	*e*PKP2	**PKPbc**	**17 25 57.4**	**-0.3**
ZEA	**Zeya**	**147.13**	**345**	*e*PKP2	**PKPab**	**17 26 00.5**	**-0.6**
ZEA				pmax	pmax		
	comp=Z,23nm,1.0s						
ASAJ	**Asahikawa**	**148.00**	**319**	PKPbc	**PKPbc**	**17 26 01.7**	**+0.4**
	comp=Z,13nm,0.9s,baz=76,slow=8.3,SNR=9.9						
ASAJ	**Asahikawa**	**148.00**	**319**	*e*PKPbc	**PKPbc**	**17 26 02.0**	**+0.6**
ERM	**Erimo**	**148.74**	**316**	*ce*PKP2	**PKPbc**	**17 26 05.5**	**+2.2**
ERM				pmax	pmax		
	comp=Z,58nm,1.7s						
MOY	**Mondy**	**149.11**	**16**	*e*PKP2	**PKPbc**	**17 26 05.3**	**+1.2**
MOY				pmax	pmax		
	comp=Z,40nm,1.6s						
JAGI	**Jajag, Banyuwa**	**149.31**	**180**	*e*PKPbc	**PKPbc**	**17 26 05.9**	**+0.4**
GUMO	**Guam**	**149.39**	**259**	PKPbc	**PKPbc**	**17 26 05.1**	**-0.6**
	comp=Z,41nm,0.7s,baz=86,slow=19,SNR=3.2						
WMQ	**Urumqi**	**149.55**	**39**	PKPbc	**PKPdf**	**17 26 00.3**	**-0.2**
TLY	**Talaya**	**149.70**	**13**	PKPbc	**PKPbc**	**17 26 06.4**	**+1.0**
	comp=Z,2.8nm,0.5s,baz=284,slow=2.4,SNR=7.2						
TLY				PKPab	**PKPab**	**17 26 11.9**	**+0.3**
	comp=Z,9.8nm,0.7s,baz=318,slow=2.9,SNR=13						
TLY	**Talaya**	**149.70**	**13**	*e*PKPbc	**PKPbc**	**17 26 06.0**	**+0.6**
TLY				PKPab	**PKPab**	**17 26 11.9**	**+0.3**
TLY	**Talaya**	**149.70**	**13**	*e*PKP2	**PKPbc**	**17 26 06.2**	**+0.8**
TLY				pmax	pmax		
	comp=Z,16nm,0.8s						
KLR	**Kul'dur**	**149.76**	**337**	PKPbc	**PKPbc**	**17 26 05.7**	**+0.1**
	comp=Z,0.8nm,1.0s,baz=359,slow=2.6,SNR=16						
KLR	**Kul'dur**	**149.76**	**337**⇓	*e*PKHKP	PKPpre	17 26 01.5	
LEM	**Lembang**	**150.28**	**167**	PKPbc	**PKPbc**	**17 26 09.5**	**+1.4**
	comp=Z,99nm,0.7s,baz=116,slow=7.5,SNR=33						
ZAK	**Zakamensk**	**150.84**	**14**	*e*PKIKP	**PKPbc**	**17 26 07.5**	**-0.8**
ZAK				*e*		17 27 17.3	
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KAPI	**Kappang**	**152.17**	**192**	*e*PKPbc	**PKPbc**	**17 26 13.1**	**+0.9**
USRK	**Ussuriysk Ar.**	**153.68**	**330**	PKPbc	**PKPbc**	**17 26 15.3**	**+0.7**
	comp=Z,3.0nm,0.8s,baz=336,slow=3.2,SNR=3.5						
SONA1	**Songino Array**	**153.90**	**12**	*e*PKPdf	**PKPdf**	**17 26 07.9**	**+0.9**
SONM	**Songino Array**	**153.91**	**12**	PKP	**PKPdf**	**17 26 08.2**	**+1.2**
	comp=Z,3.4nm,0.8s,baz=296,slow=0.8,SNR=18						
SONM				PKPbc	**PKiKP**	**17 26 15.6**	**+0.3**
	comp=Z,5.8nm,0.7s,baz=313,slow=1.5,SNR=14						
SONM				PKPab	**PKPab**	**17 26 29.2**	**-0.2**
	comp=Z,3.7nm,0.6s,baz=316,slow=4.2,SNR=7.3						
MJAR	**Matsushiro Arr**	**154.73**	**309**	PKPbc	**PKPbc**	**17 26 17.3**	**+0.2**
	comp=Z,2.4nm,0.8s,baz=128,slow=1.1,SNR=7.4						
MJAR				PKPab	**PKPab**	**17 26 31.8**	**-1.5**
	comp=Z,3.0nm,0.8s,baz=65,slow=2.4,SNR=7.2						
PSI	**Prapat**	**155.64**	**141**	PKPab	**PKPab**	**17 26 38.0**	**+0.2**
	comp=Z,17nm,0.8s,baz=180,slow=14,SNR=8.6						
MYKOM	**Kota Tinggi**	**157.26**	**153**	*e*PKPab	**PKPab**	**17 26 45.0**	**+0.4**
LSA	**Lhasa**	**158.26**	**66**	*e*PKPdf	**PKPdf**	**17 26 15.6**	**+1.9**
LSA				*e*PKPab	**PKPab**	**17 26 49.8**	**+0.5**
LSA	**Lhasa**	**158.26**	**66**	*e*PKIKP	**PKPdf**	**17 26 15.6**	**+1.9**
LSA				*e*		17 26 49.8	
GTA	**Gaotai**	**159.19**	**32**	⇑PKP	**PKPdf**	**17 26 14.7**	**+0.6**
GTA				PKPab	**PKPab**	**17 26 52.4**	**-0.2**
SBUM	**Sibu**	**160.09**	**175**	*e*PKPab	**PKPab**	**17 26 58.1**	**+1.3**
KS01	**Wonju Array Si**	**160.78**	**324**	*e*PKPdf	**PKPdf**	**17 26 16.9**	**+1.2**
KS01				*e*PKPab	**PKPab**	**17 26 59.6**	**+0.3**
KSRS	**Korea Array**	**160.78**	**324**	PKP	**PKPdf**	**17 26 16.5**	**+0.8**
	comp=Z,0.3nm,0.4s,baz=50,slow=2.1,SNR=5.4						
KSRS				PKPab	**PKPab**	**17 26 58.7**	**-0.7**
	comp=Z,2.8nm,0.9s,baz=49,slow=4.2,SNR=7.7						
KSAR	**Wonju Array Be**	**160.81**	**324**	PKP	**PKPdf**	**17 26 16.5**	**+0.8**
KSAR				PKPab	**PKPab**	**17 26 58.7**	**-0.8**
KSAR	**Wonju Array Be**	**160.81**	**324**	PKIKP	**PKPdf**	**17 26 16.5**	**+0.8**
KSAR						17 26 58.7	
HHC	**Hu-ho-hao-te**	**161.50**	**6**	*e*PKP	**PKPdf**	**17 26 15.4**	**-1.1**
LZH	**Lanzhou**	**163.77**	**31**	*e*PKP	**PKPdf**	**17 26 20.6**	**+1.7**
CMAR	**Chiang Mai Arr**	**165.37**	**103**	PKP	**PKPdf**	**17 26 21.2**	**+0.6**
	comp=Z,3.2nm,1.0s,baz=304,slow=1.8,SNR=12						
CMAR				PKPab	**PKPab**	**17 27 19.4**	**-0.9**
	comp=Z,5.5nm,0.7s,baz=251,slow=6.5,SNR=42						
CMAR				PP	**PP**	**17 31 09.0**	**+1.0**
	comp=Z,2.5nm,1.1s,baz=271,slow=5.1,SNR=4.2						
CM01	**Chiang Mai Arr**	**165.37**	**103**	*e*PKPdf	**PKPdf**	**17 26 20.9**	**+0.3**
CHTO	**Chiang Mai**	**165.48**	**102**	*e*PKPab	**PKPab**	**17 27 19.9**	**-0.8**
CHTO	**Chiang Mai**	**165.48**	**102**	*e*PKP2	**PKPab**	**17 27 19.9**	**-0.8**
CD2	**Chengdu**	**167.55**	**45**	PKP	**PKPdf**	**17 26 21.2**	**-0.8**
XAN	**Xi'an**	**167.59**	**20**	PKP	**PKPdf**	**17 26 22.6**	**+0.7**
XAN				AMB	AMB		
	comp=Z,120nm,6.6s						
NJ2	**Nanjing**	**169.46**	**337**	*e*PKP	**PKPdf**	**17 26 23.2**	**+0.1**
ENH	**Enshi**	**171.19**	**26**	*e*PKPdf	**PKPdf**	**17 26 25.0**	**+0.8**

*TIR **07** 17:29:08.5, 40.°10N×20.°51E, h1km, Md2.9/6*
*ISCJB **07** 17:29:09.5±0.5, 40.°09N±0.°02×20.°53E±0.°03, h3km±4km, Error ellipse: s-maj=3.8km s-min=3.0km az=32.4*
*CSEM **07** 17:29:09.8±0.1, 40.°08N×20.°54E, h2km, ML2.5, Error ellipse: s-maj=3.4km s-min=2.9km az=123.0*
*ATH **07** 17:29:09.3, 40.°08N×20.°53E, h10km±2km, ML2.5/9, Error ellipse: s-maj=2.2km s-min=1.1km az=338.0*
*THE **07** 17:29:10.1, 40.°05N×20.°56E, h0km±2km, ML2.5/7, Error ellipse: s-maj=2.4km s-min=0.6km az=350.0*

ISC 07 17:29:10.0±1.0, **40.°07N**±0.°02×**20.°55E**±0.°02, **h6**km±9km, **n95**, σ**0.°73**/123, **Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRN	**Sarande**	**0.46**	**246**	P	**Pg**	**17 29 18.6**	**-0.3**
SRN				S	**Sg**	**17 29 26.2**	**+1.3**
SRN	**Sarande**	**0.46**	**246**	*i* PG	**Pg**	**17 29 18.6**	**-0.3**
SRN				*i* SG	**Sb**	**17 29 26.9**	**-0.7**
SRN	**Sarande**	**0.46**	**246**	P	**Pg**	**17 29 18.6**	**-0.3**
SRN				S	**Sg**	**17 29 26.2**	**+1.3**
PENT	**Pentalofos**	**0.47**	**74**	P	**Pg**	**17 29 19.2**	**+0.1**
PENT				S	**Sg**	**17 29 25.5**	**+0.3**
PENT				AML	AML	17 29 28.9	
	comp=N,1286μm,0.4s						
PENT				AML	AML	17 29 29.3	
	comp=E,596μm,0.4s						
PENT	**Pentalofos**	**0.47**	**74**	P	**Pg**	**17 29 18.9**	**-0.1**
PENT	**Pentalofos**	**0.47**	**74**	P	**Pg**	**17 29 18.9**	**-0.1**
PENT				S	**Sg**	**17 29 25.5**	**+0.3**
JAN	**Janina**	**0.47**	**150**	P	**Pg**	**17 29 18.2**	**-0.8**
JAN				S	**Sg**	**17 29 25.4**	**+0.2**
JAN				AML	AML	17 29 29.2	
	comp=N,4698μm,0.2s						
JAN				AML	AML	17 29 29.8	
	comp=E,5359μm,0.3s						
JAN	**Janina**	**0.47**	**150**	P	**Pg**	**17 29 18.4**	**-0.6**
JAN				S	**Sg**	**17 29 25.7**	**+0.5**
JAN	**Janina**	**0.47**	**150**	P	**Pg**	**17 29 18.5**	**-0.6**
JAN				S	**Sg**	**17 29 25.6**	**+0.4**
SGD	**Sagiada**	**0.51**	**208**	P	**Pg**	**17 29 19.0**	**-0.9**
SGD	**Sagiada**	**0.51**	**208**	P	**Pg**	**17 29 19.0**	**-0.9**
NEST	**Nestorio**	**0.52**	**48**	P	**Pg**	**17 29 19.5**	**-0.4**
NEST				S	**Sg**	**17 29 25.7**	**-1.0**
NEST				AML	AML	17 29 30.2	
	comp=N,857μm,0.3s						
NEST				AML	AML	17 29 30.9	
	comp=E,765μm,0.4s						
NEST	**Nestorio**	**0.52**	**48**	P	**Pg**	**17 29 19.5**	**-0.4**
NEST	**Nestorio**	**0.52**	**48**	P	**Pg**	**17 29 19.5**	**-0.4**
NEST				S	**Sg**	**17 29 26.2**	**-0.5**
IGT	**Igoumenitsa**	**0.56**	**197**	P	**Pg**	**17 29 18.8**	**-1.9**
IGT				S	**Sg**	**17 29 29.0**	**+1.0**
IGT				AML	AML	17 29 32.2	
	comp=E,2225μm,0.5s						
IGT				AML	AML	17 29 35.1	
	comp=N,1556μm,0.5s						
IGT	**Igoumenitsa**	**0.56**	**197**	P	**Pg**	**17 29 19.6**	**-1.1**
IGT				S	**Sg**	**17 29 29.4**	**+1.4**
IGT	**Igoumenitsa**	**0.56**	**197**	P	**Pg**	**17 29 19.6**	**-1.1**
IGT				S	**Sg**	**17 29 28.7**	**+0.7**
KBN	**Korca**	**0.58**	**18**	P	**Pg**	**17 29 21.6**	**+0.3**
KBN				S	**Sb**	**17 29 30.9**	**-0.4**
KBN	**Korca**	**0.58**	**18**	*i* PG	**Pg**	**17 29 21.1**	**-0.2**
KBN				*i* SG	**Sg**	**17 29 29.3**	**+0.4**
KBN	**Korca**	**0.58**	**18**	P	**Pg**	**17 29 21.6**	**+0.3**
KPRO	**Kipourio**	**0.64**	**100**	P	**Pg**	**17 29 20.3**	**-1.9**
KPRO				S	**Sg**	**17 29 31.5**	**+1.1**
KPRO				AML	AML	17 29 35.7	
	comp=N,796μm,0.5s						
KPRO				AML	AML	17 29 37.4	
	comp=E,932μm,0.7s						
KPRO	**Kipourio**	**0.64**	**100**	P	**Pg**	**17 29 21.1**	**-1.1**
KPRO				S	**Sg**	**17 29 31.1**	**+0.7**
KPRO	**Kipourio**	**0.64**	**100**	P	**Pg**	**17 29 21.1**	**-1.1**
KPRO				S	**Sg**	**17 29 31.1**	**+0.7**
KEK	**Kerkira**	**0.68**	**239**	P	**Pg**	**17 29 22.6**	**-0.4**
KEK				AML	AML	17 29 35.7	
	comp=N,826μm,0.4s						
KEK				AML	AML	17 29 36.4	
	comp=E,1146μm,0.5s						
KEK	**Kerkira**	**0.68**	**239**	P	**Pg**	**17 29 22.5**	**-0.4**
KEK				S	**Sb**	**17 29 33.5**	**-0.3**
KEK	**Kerkira**	**0.68**	**239**	P	**Pg**	**17 29 22.5**	**-0.4**
KEK				S	**Sb**	**17 29 33.5**	**-0.3**
FNA	**Florina**	**0.95**	**41**	P	**Pg**	**17 29 26.7**	**-1.6**
FNA				AML	AML	17 29 45.1	
	comp=N,415μm,0.5s						
FNA				AML	AML	17 29 46.5	
	comp=E,358μm,0.3s						
FNA	**Florina**	**0.95**	**41**	P	**Pg**	**17 29 27.7**	**-0.6**
FNA				S	**Sb**	**17 29 42.6**	**+0.7**
FNA	**Florina**	**0.95**	**41**	P	**Pg**	**17 29 27.7**	**-0.6**
FNA				S	**Sb**	**17 29 42.6**	**+0.7**
KZN	**Kozani**	**0.97**	**75**	P	**Pb**	**17 29 29.7**	**+0.5**
KZN				AML	AML	17 29 48.5	
	comp=E,288μm,0.4s						
KZN				AML	AML	17 29 48.8	
	comp=N,279μm,0.3s						
KZN	**Kozani**	**0.97**	**75**	P	**Pg**	**17 29 28.8**	**+0.3**
DSL	**Palaion Diasel**	**1.02**	**155**	P	**Pg**	**17 29 28.5**	**-1.1**
DSL				AML	AML	17 29 49.3	
	comp=N,837μm,0.7s						
DSL				AML	AML	17 29 53.7	
	comp=E,671μm,1.0s						
DSL	**Palaion Diasel**	**1.02**	**155**	P	**Pg**	**17 29 28.7**	**-0.8**
DSL				S	**Sg**	**17 29 43.7**	**+0.8**
DSL	**Palaion Diasel**	**1.02**	**155**	P	**Pg**	**17 29 28.8**	**-0.8**
DSL				S	**Sg**	**17 29 43.7**	**+0.8**
OHR	**Ohrid**	**1.06**	**10**	*e*Pn	**Pb**	**17 29 30.6**	**-0.1**
BIA	**Bitola**	**1.12**	**32**	*e*Pn	**Pg**	**17 29 30.7**	**-0.7**
THL	**Klokotos Trika**	**1.23**	**113**	P	**Pg**	**17 29 33.4**	**-0.2**
THL	**Klokotos Trika**	**1.23**	**113**	P	**Pg**	**17 29 33.0**	**-0.6**
THL	**Klokotos Trika**	**1.23**	**113**	P	**Pg**	**17 29 33.2**	**-0.4**
LKD2	**Lefkada island**	**1.28**	**176**	P	**Pn**	**17 29 35.2**	**+0.8**
LKD2	**Lefkada island**	**1.28**	**176**	P	**Pg**	**17 29 34.6**	**+0.1**
LKD2	**Lefkada island**	**1.28**	**176**	P	**Pg**	**17 29 34.5**	**+0.1**
LIT	**Litokhoron**	**1.49**	**88**	P	**Pg**	**17 29 38.8**	**+0.3**
LIT	**Litokhoron**	**1.49**	**88**	P	**Pn**	**17 29 37.0**	**-0.3**
LIT	**Litokhoron**	**1.49**	**88**	P	**Pn**	**17 29 37.0**	**-0.3**
EVR	**Evrytania**	**1.51**	**139**	P	**Pn**	**17 29 37.3**	**-0.3**
EVR	**Evrytania**	**1.51**	**139**	P	**Pn**	**17 29 37.6**	**0.0**
EVR	**Evrytania**	**1.51**	**139**	P	**Pn**	**17 29 37.7**	**+0.1**
PDO	**Prodromos**	**1.55**	**161**	P	**Pn**	**17 29 37.8**	**-0.3**
PDO	**Prodromos**	**1.55**	**161**	P	**Pn**	**17 29 37.8**	**-0.3**
SCTE	**Santa Cesarea**	**1.60**	**271**	P	**Pb**	**17 29 39.5**	**-0.4**
SCTE	**Santa Cesarea**	**1.60**	**271**	P	**Pn**	**17 29 39.3**	**+0.5**
FSK	**Fiskardo**	**1.60**	**180**	P	**Pn**	**17 29 39.4**	**+0.5**
PHP	**Peshkopia**	**1.62**	**357**	P	**Pn**	**17 29 39.3**	**+0.2**
PHP	**Peshkopia**	**1.62**	**357**	P	**Pn**	**17 29 39.3**	**+0.2**
PVO	**Paravola**	**1.63**	**152**	P	**Pn**	**17 29 39.3**	**0.0**
PVO	**Paravola**	**1.63**	**152**	P	**Pn**	**17 29 39.3**	**0.0**
GRG	**Griva**	**1.67**	**57**	P	**Pn**	**17 29 40.5**	**+0.7**
GRG	**Griva**	**1.67**	**57**	P	**Pn**	**17 29 40.5**	**+0.7**
GRG	**Griva**	**1.67**	**57**	P	**Pn**	**17 29 40.5**	**+0.7**
AGG	**Agios Georgios**	**1.73**	**127**	P	**Pn**	**17 29 41.0**	**+0.4**
AGG	**Agios Georgios**	**1.73**	**127**	P	**Pn**	**17 29 40.6**	**0.0**
AGG	**Agios Georgios**	**1.73**	**127**	P	**Pn**	**17 29 40.6**	**0.0**
ANX	**Ano Chora**	**1.82**	**144**	P	**Pn**	**17 29 42.3**	**+0.4**
ANX	**Ano Chora**	**1.82**	**144**	P	**Pn**	**17 29 42.3**	**+0.4**
VLS	**Valsamata**	**1.89**	**179**	P	**Pn**	**17 29 43.9**	**+1.1**
VLS	**Valsamata**	**1.89**	**179**	P	**Pn**	**17 29 44.0**	**+1.2**
EFP	**Efpalio**	**1.95**	**147**	P	**Pb**	**17 29 45.5**	**-0.3**
EFP	**Efpalio**	**1.95**	**147**	P	**Pn**	**17 29 43.1**	**-0.5**
EFP	**Efpalio**	**1.95**	**147**	P	**Pn**	**17 29 43.1**	**-0.5**
KFL	**Anninata**	**1.96**	**174**	P	**Pn**	**17 29 44.1**	**+0.3**
KFL	**Anninata**	**1.96**	**174**	P	**Pn**	**17 29 44.6**	**+0.8**
VAY	**Valandovo**	**1.98**	**50**	*e*Pn	**Pb**	**17 29 46.5**	**+0.1**
STIP	**Stip**	**2.04**	**37**	*e*Pn	**Pg**	**17 29 48.4**	**-0.8**
TRIZ	**Trizonia**	**2.07**	**145**	P	**Pb**	**17 29 47.9**	**0.0**
TRIZ	**Trizonia**	**2.07**	**145**	P	**Pb**	**17 29 47.3**	**-0.6**
KALE	**Kalithea**	**2.08**	**143**	P	**Pb**	**17 29 48.0**	**-0.1**
KALE	**Kalithea**	**2.08**	**143**	P	**Pn**	**17 29 46.0**	**+0.5**
KALE	**Kalithea**	**2.08**	**143**	P	**Pn**	**17 29 46.0**	**+0.5**
KNT	**Kendrikon**	**2.10**	**58**	P	**Pn**	**17 29 45.9**	**+0.2**
KNT	**Kendrikon**	**2.10**	**58**	P	**Pn**	**17 29 46.4**	**+0.7**
LAKA	**Lakka**	**2.14**	**148**	P	**Pb**	**17 29 49.3**	**+0.2**
LAKA	**Lakka**	**2.14**	**148**	P	**Pb**	**17 29 48.5**	**-0.6**
XOR	**Xorichti**	**2.15**	**108**	P	**Pn**	**17 29 46.6**	**+0.1**
XOR	**Xorichti**	**2.15**	**108**	P	**Pn**	**17 29 47.2**	**+0.7**
DSF	**Desfina**	**2.26**	**136**	P	**Pb**	**17 29 50.1**	**-1.1**
DSF	**Desfina**	**2.26**	**136**	P	**Pn**	**17 29 49.7**	**+1.8**
KLV	**Kalavryta, Ach**	**2.37**	**148**	P	**Pb**	**17 29 52.6**	**-0.5**
KLV	**Kalavryta, Ach**	**2.37**	**148**	P	**Pn**	**17 29 51.8**	**+2.3**
DID	**Didima**	**3.31**	**140**	P	**Pn**	**17 30 03.0**	**+0.6**
DID	**Didima**	**3.31**	**140**	P	**Pn**	**17 30 03.6**	**+1.3**
STON	**Ston**	**3.53**	**324**	*e*Pn	**Pn**	**17 30 04.5**	**-0.8**
STON				Sn	**Sn**	**17 30 47.4**	**+0.1**
STON	**Ston**	**3.53**	**324**	*e*Pn	**Pn**	**17 30 04.5**	**-0.8**
STON				Sn	**Sn**	**17 30 47.3**	**+0.1**
NVLJ	**Novalja**	**6.16**	**319**	*e*Pn	**Pn**	**17 30 41.0**	**-0.4**
NVLJ				Sn	**Sn**	**17 31 51.9**	**-0.2**
NVLJ	**Novalja**	**6.16**	**319**	*e*Pn	**Pn**	**17 30 40.9**	**-0.4**
NVLJ				Sn	**Sn**	**17 31 51.8**	**-0.2**

*IDC **07** 17:35:44.5±2.4, 3.°80S×132.°76E, h0km, mb3.2/1, mb1 3.5/5, mb1mx3.3/50, mbtmp3.3/5, ML3.3/4, Error ellipse: s-maj=97.8km s-min=21.6km az=76.0*
*ISCJB **07** 17:35:47.2±0.6, 3.°91S±0.°04×133.°23E±0.°05, h33km, mb3.0/1, Error ellipse: s-maj=7.3km s-min=5.7km az=25.7*
*DJA **07** 17:35:47.2±0.6, 4.°S±6.°×13.°3E±.°, h10km, M4.3/2, MLv4.3/2*

ISC 07 17:35:46.1±0.9, **4.°01S**±0.°06×**133.°14E**±0.°06, **h35**km, **n11**, σ**2.°95**/17, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMPI	**Kaimana, Papua**	**0.66**	**58**	P	**Pn**	**17 35 57.4**	**-1.6**
KMPI				S	**Sn**

comp=Z,0.1nm,0.3s,baz=26,slow=10,SNR=6.5
PTGA Pitinga 21.55 18 P P 17 45 02.9 -2.1
comp=Z,2.5nm,0.3s,baz=204,slow=14,SNR=6.2
SNAA Sanae 61.63 161 P P 17 50 28.5 +1.7
comp=Z,1.1nm,0.7s,baz=193,slow=19,SNR=6.6
TXAR Lajitas Array 61.86 323 P P 17 50 28.3 -0.6
comp=Z,0.6nm,0.8s,baz=152,slow=9.8,SNR=6.6
KOWA Kowa 70.98 65 P P 17 51 26.5 -0.4
comp=Z,1.7nm,0.7s,baz=247,slow=15,SNR=3.6
PDAR Pinedale Array 75.17 329 P P 17 51 51.4 +0.3
comp=Z,0.4nm,0.5s,baz=122,slow=7.0,SNR=4.0
TORD Torodi Ar. Bea 75.27 69 P P 17 51 52.1 +0.1
comp=Z,2.6nm,0.5s,baz=254,slow=5.1,SNR=32
ULM Lac du Bonnet 75.94 341 P P 17 51 54.4 -0.6
comp=Z,1.9nm,0.5s,baz=146,slow=5.6,SNR=4.6
NVAR Mina Array Bea 76.81 321 P P 17 52 00.7 +0.2
comp=Z,0.1nm,0.3s,baz=154,slow=6.8,SNR=3.2
MAW Mawson 83.75 163 P P 17 52 38.4 +1.7
comp=Z,1.8nm,0.8s,baz=246,slow=7.2,SNR=3.8
YKA Yellowknife Ar 91.87 340 P P 17 53 15.7 +0.4
comp=Z,1.3nm,0.7s,baz=132,slow=5.0,SNR=4.2
ASAR Alice Springs 130.95 205 PKP PKPdf 17 59 19.2 +0.5
comp=Z,0.6nm,0.8s,baz=126,slow=1.8,SNR=11
WRA Warramunga Arr 134.09 208 PKP PKPdf 17 59 26.4 +1.7
comp=Z,0.3nm,0.3s,baz=152,slow=2.0,SNR=18
ZALV Zalesovo Beam 140.93 27 PKP PKPdf 17 59 37.5 +1.4
comp=Z,0.8nm,0.6s,baz=302,slow=2.8,SNR=3.7
MKAR Makanchi Array 144.26 37 PKP PKPdf 17 59 42.2 -0.1
comp=Z,1.5nm,0.5s,baz=311,slow=3.8,SNR=24
LEM Lembang 151.34 168 PKPbc PKPbc 18 00 02.9 +1.5
comp=Z,9.0nm,0.6s,baz=197,slow=19,SNR=4.3
SONM Songino Array 153.05 11 PKPbc PKPbc 18 00 05.0 +0.9
comp=Z,0.7nm,0.5s,baz=0.0,slow=0.4,SNR=3.1

MAN 07 17:44:49.8, 17°.40N×120°.01E, h28km, mb4.2, ML3.0, MS2.7, Luzon

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
ABRA	**Dolores**	**0.72**	**70**	*e*P	Pb	17 45 03.7	0.0
ABRA				*e*S	Sn	17 45 14.8	+0.6
BOLP	**Bolinao**	**1.02**	**185**	*e*P	Pn	17 45 07.7	-0.5
BOLP				*e*S	Sb	17 45 21.7	0.0
APYP	**Conner**	**1.27**	**69**	*e*P	Pn	17 45 11.5	-0.1
APYP				*e*S	Sn	17 45 27.9	+0.2
CAUP	**Cauayan**	**1.79**	**104**	*e*P	Pn	17 45 20.2	+1.3
CAUP				*e*S	Sb	17 45 46.2	+2.1

IDC 07 17:53:14.2±2.2, 1°.06N×89°.77E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.4/69, mbtmp3.7/5, ML3.6/1, Error ellipse: s-maj=74.3km s-min=26.8km az=51.0, North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
PALK	**Pallekele**	**10.95**	**305**	Pn	Pn	17 55 51.1	-1.2
	0.4nm,0.3s,baz=118,slow=14,SNR=3.2						
PALK				Sn	Sn	17 57 48.4	-7.2
	0.5nm,0.3s,baz=113,slow=6.6,SNR=3.5						
H08S2	**Diego Garcia H**	**19.28**	**243**	T	T	18 18 22.9	
	baz=64,slow=75,SNR=5.3						
H08S3	**Diego Garcia H**	**19.28**	**243**	T	T	18 18 22.9	
	baz=64,slow=75,SNR=5.9						
H08S1	**Diego Carcia H**	**19.30**	**243**	T	T	18 18 24.6	
	baz=64,slow=75,SNR=6.0						
MKAR	**Makanchi Array**	**46.02**	**353**	P	P	18 01 40.1	+0.6
	0.6nm,0.7s,baz=171,slow=8.6,SNR=6.1						
SONM	**Songino Array**	**48.77**	**15**	P	P	18 01 59.6	-1.5
	0.9nm,0.5s,baz=201,slow=7.9,SNR=4.0						
ASAR	**Alice Springs**	**49.41**	**123**	P	P	18 02 06.2	-0.1
	0.3nm,0.7s,baz=288,slow=6.7,SNR=3.9						
KURBB	**Kurchatov Arra**	**50.30**	**351**	P	P	18 02 13.1	+0.6
	0.2nm,0.5s,baz=173,slow=7.3,SNR=4.4						

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*IDC **07** 18:00:41.4±1.2, 44°.72N×11°.31E, h0km, mb3.5/5, mb1 3.4/7, mb1mx3.3/62, mbtmp3.4/7, ML3.5/2, Error ellipse: s-maj=40.9km s-min=14.4km az=111.0*
*ISCJB **07** 18:00:42.6±0.2, 44°.81N±0°.02×11°.10E±0°.02, h22km±1km, mb3.5/5, Error ellipse: s-maj=2.8km s-min=2.0km az=160.3*
*LDG **07** 18:00:42.7±0.1, 44°.90N×11°.20E, h2km, Ml3.4/21, Error ellipse: s-maj=3.0km s-min=2.0km az=75.0*
*ROM **07** 18:00:42.9±0.0, 44°.859N±0°.001×11°.128E±0°.001, h7km, ML3.3/52*
*CSEM **07** 18:00:42.9±0.1, 44°.90N×11°.10E, h10km, ML3.6/33, Error ellipse: s-maj=2.7km s-min=2.2km az=153.0*
*STR **07** 18:00:43.5±4.2, 45°N±14°×1°1E±3°8, h5km, M3.9/7, MLv3.9/7*
*IASPEI **07** 18:00:43.3±0.8, 44°.87N±0°.02×11°.13E±0°.02, h13km±4km, mb3.7/5, Error ellipse: s-maj=2.7km s-min=2.4km az=23.3, GT5 selection from ISC bulletin GT5 identified by Bondár and McLaughlin (2009) selection criteria Bondár and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
*VIE **07** 18:00:44.0±0.5, 44°.98N×10°.99E, h7km±3km, mb3.1/14, ml3.5/15, Error ellipse: s-maj=4.2km s-min=3.5km az=118.0 60 km NNW of Bologna*
*PRU **07** 18:00:45.1, 45°.00N×11°.02E, h11km*

ISC 07 18:00:43.1±0.7, 44°.88N±0°.01×11°.14E±0°.01, h14km±3km, n267, σ1§54/353, mb3.7/5, 14C-23D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
T0802	**SanFelice sul**	**0.03**	**106**	⇑*e*P	**Pg**	**18 00 44.7**	**-1.0**
T0802				⇑*e*S	**Sg**	**18 00 46.0**	**-1.4**
T0802	**SanFelice sul**	**0.03**	**106**	*e*P	**Pg**	**18 00 44.7**	**-1.0**
T0802				*e*S	**Sg**	**18 00 47.0**	**-0.5**
T0802				AML	AML		
T0802				AML	AML		
T0813	**Massa Finalese**	**0.04**	**97**	⇑*i*P	**Pg**	**18 00 44.9**	**-0.8**
T0813				⇑*i*S	**Sg**	**18 00 47.3**	**-0.2**
T0813	**Massa Finalese**	**0.04**	**97**	*i* P	**Pg**	**18 00 44.9**	**-0.8**
T0813				*i* S	**Sg**	**18 00 47.3**	**-0.2**
T0812	**Loc. Stoppiaro**	**0.08**	**22**	⇓*i*P	**Pg**	**18 00 45.9**	**-0.2**
T0812				⇓*i*S	**Sg**	**18 00 49.5**	**+1.5**
T0812	**Loc. Stoppiaro**	**0.08**	**22**	*i* P	**Pg**	**18 00 45.9**	**-0.2**
T0812				*i* S	**Sg**	**18 00 49.5**	**+1.5**
T0800	**Massa Finalese**	**0.08**	**114**	⇑*e*P	**Pg**	**18 00 45.5**	**-0.6**
T0800				⇑*e*S	**Sg**	**18 00 48.5**	**+0.4**
T0800	**Massa Finalese**	**0.08**	**114**	*e*P	**Pg**	**18 00 45.5**	**-0.6**
T0800				*e*S	**Sg**	**18 00 48.5**	**+0.4**
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0818	**Loc. Fossa, Co**	**0.09**	**304**	⇓*e*P	**Pg**	**18 00 46.2**	**0.0**
T0818				⇓*e*S	**Sg**	**18 00 49.9**	**+1.6**
T0818	**Loc. Fossa, Co**	**0.09**	**304**	*e*P	**Pg**	**18 00 46.2**	**0.0**
T0818				*e*S	**Sg**	**18 00 49.9**	**+1.6**
T0811	**Palata Pepoli**	**0.12**	**148**	⇓*e*P	**Pg**	**18 00 45.6**	**-0.9**
T0811				⇓*e*S	**Sg**	**18 00 48.8**	**+0.1**
T0811	**Palata Pepoli**	**0.12**	**148**	*e*P	**Pg**	**18 00 45.6**	**-0.9**
T0811				*e*S	**Sg**	**18 00 48.8**	**+0.1**
RAVA	**Ravarino**	**0.13**	**187**	⇓*i*P	**Pg**	**18 00 45.0**	**-1.6**
RAVA				⇓*i*S	**Sg**	**18 00 49.5**	**+0.5**
RAVA	**Ravarino**	**0.13**	**187**	*i* P	**Pg**	**18 00 46.0**	**-0.7**
RAVA				*i* S	**Sg**	**18 00 49.5**	**+0.5**
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
T0805	**Bondeno (FE)**	**0.14**	**75**	*e*P	**Pg**	**18 00 46.6**	**-0.1**
T0805	**Bondeno (FE)**	**0.14**	**75**	*e*P	**Pg**	**18 00 46.6**	**-0.1**
T0814	**Loc. Cortile,**	**0.15**	**234**	⇓*i*P	**Pg**	**18 00 46.5**	**-0.4**
T0814				⇓*i*S	**Sg**	**18 00 50.4**	**+0.9**
T0814	**Loc. Cortile,**	**0.15**	**234**	*i* P	**Pg**	**18 00 46.5**	**-0.4**
T0814				*i* S	**Sg**	**18 00 50.4**	**+0.9**
T0822	**Casumaru (Bond**	**0.15**	**109**	⇑*e*P	**Pg**	**18 00 46.8**	**-0.2**
T0822				⇑*e*S	**Sb**	**18 00 50.9**	**+0.1**
T0822	**Casumaru (Bond**	**0.15**	**109**	*e*P	**Pg**	**18 00 46.8**	**-0.2**
T0822				*e*S	**Sb**	**18 00 50.9**	**+0.1**
T0822				AML	AML		
T0822				AML	AML		
	comp=N,72350μm,0.4s						
T0827	**Moglia (MN)**	**0.16**	**290**	*e*P	**Pg**	**18 00 47.2**	**+0.1**
T0827				*e*S	**Sb**	**18 00 51.9**	**+1.0**
T0827	**Moglia (MN)**	**0.16**	**290**	*e*P	**Pg**	**18 00 47.2**	**+0.1**
T0827				*e*S	**Sb**	**18 00 51.9**	**+1.0**
SERM	**Sermide**	**0.17**	**41**	*e*P	**Pg**	**18 00 47.6**	**+0.4**
SERM	**Sermide**	**0.17**	**41**	*e*P	**Pg**	**18 00 47.6**	**+0.4**
T0828	**Loc. Fossoli,**	**0.17**	**252**	⇓*e*P	**Pg**	**18 00 46.8**	**-0.4**
T0828				⇓*e*S	**Sb**	**18 00 51.3**	**+0.1**
T0828	**Loc. Fossoli,**	**0.17**	**252**	*e*P	**Pg**	**18 00 46.8**	**-0.4**
T0828				*e*S	**Sb**	**18 00 51.3**	**+0.1**
T0803	**Dosso, Cento (**	**0.19**	**128**	⇑*e*P	**Pg**	**18 00 47.3**	**-0.2**
T0803				⇑*e*S	**Sb**	**18 00 51.8**	**0.0**
T0803	**Dosso, Cento (**	**0.19**	**128**	*e*P	**Pg**	**18 00 47.3**	**-0.2**
T0803				*e*S	**Sb**	**18 00 51.8**	**0.0**
T0824	**Loc. Limidi di**	**0.20**	**231**	⇓*i*P	**Pg**	**18 00 47.4**	**-0.2**
T0824				⇓*i*S	**Sb**	**18 00 52.6**	**+0.6**
T0824	**Loc. Limidi di**	**0.20**	**231**	*i* P	**Pg**	**18 00 47.4**	**-0.2**
T0824				*i* S	**Sb**	**18 00 52.6**	**+0.6**
T0823	**Castello D'Arg**	**0.22**	**154**	⇓*i*P	**Pg**	**18 00 48.8**	**+0.8**
T0823				⇓*i*S	**Sb**	**18 00 53.4**	**+0.7**
T0823	**Castello D'Arg**	**0.22**	**154**	*i* P	**Pg**	**18 00 48.8**	**+0.8**
T0823				*i* S	**Sb**	**18 00 53.4**	**+0.7**
T0825	**Gonzaga (MN)**	**0.23**	**293**	AML	AML		
	comp=N,32750μm,0.9s						
T0825				AML	AML		
	comp=E,34800μm,1.6s						
T0825				AML	AML		
	comp=E,34750μm,1.6s						
T0825				AML	AML		
	comp=N,32800μm,0.9s						
SBPO	**S.Benedetto Po**	**0.23**	**317**	*e*P	**Pg**	**18 00 48.7**	**+0.5**
SBPO	**S.Benedetto Po**	**0.23**	**317**	*e*P	**Pg**	**18 00 48.7**	**+0.5**
SBPO				AML	AML		
	comp=E,16400μm,1.0s						
SBPO				AML	AML		
	comp=N,37050μm,0.6s						
SBPO				AML	AML		
	comp=E,16450μm,1.0s						
SBPO				AML	AML		
	comp=N,37050μm,0.6s						
SBPO				AML	AML		
	comp=E,16450μm,1.0s						
SBPO				AML	AML		
	comp=N,37050μm,0.6s						
GAZZ	**Gazzo Veronese**	**0.23**	**352**	⇓*e*Pg	**Pg**	**18 00 48.7**	**+0.4**
GAZZ	**Gazzo Veronese**	**0.23**	**352**	*e*Pg	**Pg**	**18 00 48.7**	**+0.4**
T0817	**Loc. Veratica,**	**0.25**	**64**	*e*P	**Pb**	**18 00 49.7**	**+0.3**
T0817	**Loc. Veratica,**	**0.25**	**64**	*e*P	**Pb**	**18 00 49.7**	**+0.3**
T0821	**Loc. Casaglia**	**0.28**	**86**	AML	AML		
	comp=N,8700μm,0.5s						
T0821				AML	AML		
	comp=E,10595μm,1.1s						
T0821				AML	AML		
	comp=N,8670μm,0.5s						
T0821				AML	AML		
	comp=E,10705μm,1.1s						
T0821				AML	AML		
	comp=N,8700μm,0.5s						
T0821				AML	AML		
	comp=E,10595μm,1.1s						
T0821				AML	AML		
	comp=E,10705μm,1.1s						
T0821				AML	AML		
	comp=N,8670μm,0.5s						
MODE	**Modena**	**0.29**	**208**	*e*P	**Pg**	**18 00 49.3**	**+0.1**
MODE	**Modena**	**0.29**	**208**	*e*P	**Pg**	**18 00 49.3**	**+0.1**
NOVE	**Novellara**	**0.31**	**254**	*e*P	**Pg**	**18 00 49.5**	**-0.1**
NOVE				*e*S	**Sb**	**18 00 55.8**	**+0.4**
NOVE	**Novellara**	**0.31**	**254**	*e*P	**Pg**	**18 00 49.5**	**-0.1**
NOVE				*e*S	**Sb**	**18 00 55.8**	**+0.4**
NOVE				AML	AML		
	comp=E,7230μm,0.9s						
NOVE				AML	AML		
	comp=N,7390μm,0.7s						
NOVE				AML	AML		
	comp=E,7230μm,0.9s						
NOVE				AML	AML		
	comp=N,7390μm,0.7s						
NOVE				AML	AML		
	comp=E,7225μm,0.9s						
NOVE				AML	AML		
	comp=N,7390μm,0.7s						
NOVE				AML	AML		
	comp=N,7390μm,0.7s						
NOVE				AML	AML		
	comp=E,7225μm,0.9s						
FIU	**Minerbio Fiu**	**0.35**	**134**	*e*P	**Pg**	**18 00 50.2**	**0.0**
FIU	**Minerbio Fiu**	**0.35**	**134**	*e*P	**Pg**	**18 00 50.2**	**0.0**
FIU				AML	AML		
	comp=E,13350μm,0.9s						
FIU				AML	AML		
	comp=N,11435μm,0.6s						
FIU				AML	AML		
	comp=E,13350μm,0.9s						
FIU				AML	AML		
	comp=N,11415μm,0.6s						
FIU				AML	AML		
	comp=E,13350μm,0.9s						
FIU				AML	AML		
	comp=N,11415μm,0.6s						
T0816	**San Bartolomeo**	**0.36**	**116**	*e*P	**Pg**	**18 00 50.7**	**+0.2**
T0816	**San Bartolomeo**	**0.36**	**116**	*e*P	**Pg**	**18 00 50.7**	**+0.2**
T0815	**Correggio (RE)**	**0.41**	**91**	*e*P	**Pb**	**18 00 52.9**	**+0.7**
T0815	**Correggio (RE)**	**0.41**	**91**	*e*P	**Pb**	**18 00 52.9**	**+0.7**
T0815				*e*S	**Sn**	**18 01 00.5**	**-1.6**
ZCCA	**Zocca**	**0.55**	**192**	AML	AML		
	comp=E,3630μm,0.6s						
ZCCA				AML	AML		
	comp=E,3730μm,1.3s						
ZCCA				AML	AML		
	comp=N,4165μm,0.9s						
ZCCA				AML	AML		
	comp=N,4315μm,0.9s						
ZCCA				AML	AML		
	comp=E,3735μm,1.3s						
ZCCA				AML	AML		
	comp=N,4165μm,0.8s						
ZCCA				AML	AML		
	comp=E,3630μm,0.6s						
ZCCA				AML	AML		
	comp=N,4315μm,0.9s						
ZCCA				AML	AML		
	comp=E,3630μm,0.6s						
ZCCA				AML	AML		
	comp=E,3735μm,1.3s						
ZCCA				AML	AML		
	comp=N,4315μm,0.9s						
ZCCA				AML	AML		
	comp=N,4165μm,0.8s						
PRMA	**PARMA**	**0.60**	**259**	AML	AML		
	comp=N,1595μm,1.4s						
PRMA				AML	AML		
	comp=E,1870μm,0.9s						
PRMA				AML	AML		
	comp=N,1595μm,1.4s						
PRMA				AML	AML		
	comp=E,1870μm,0.9s						
PRMA				AML	AML		
	comp=E,1870μm,0.9s						
PRMA				AML	AML		
	comp=N,1595μm,1.4s						
TEOL	**Teolo**	**0.61**	**38**	⇓*e*Pg	**Pg**	**18 00 55.4**	**+0.3**
TEOL				⇓*e*Sg	**Sb**	**18 01 05.2**	**+1.3**
TEOL	**Teolo**	**0.61**	**38**	⇓*e*P	**Pg**	**18 00 55.3**	**+0.3**
TEOL				⇓*e*Sg	**Sb**	**18 01 05.2**	**+1.3**
TEOL	**Teolo**	**0.61**	**38**	*e*P	**Pg**	**18 00 55.3**	**+0.3**
TEOL				AML	AML		
	comp=E,11600μm,0.7s						
TEOL				AML	AML		
	comp=N,10565μm,0.4s						
TEOL				AML	AML		
	comp=E,11600μm,0.7s						
TEOL				AML	AML		
	comp=N,10565μm,0.4s						
TEOL				AML	AML		
	comp=N,10565μm,0.4s						
TEOL				AML	AML		
	comp=E,11600μm,0.7s						
IMOL	**Imola, Italy**	**0.68**	**140**	AML	AML		
	comp=E,666μm,0.6s						
IMOL				AML	AML		
	comp=E,4430μm,0.5s						
IMOL				AML	AML		
	comp=N,6140μm,0.5s						
IMOL				AML	AML		
	comp=N,802μm,0.4s						
IMOL				AML	AML		
	comp=N,802μm,0.4s						
IMOL				AML	AML		
	comp=N,6140μm,0.5s						
IMOL				AML	AML		
	comp=E,666μm,0.6s						
IMOL				AML	AML		
	comp=E,4430μm,0.5s						
MARN	**Marana (Italy)**	**0.76**	**4**	⇓*e*Pg	**Pg**	**18 00 57.8**	**0.0**
MARN				*e*Sg	**Sn**	**18 01 10.5**	**-0.1**
MARN	**Marana (Italy)**	**0.76**	**4**	*e*Pg	**Pg**	**18 00 57.8**	**0.0**
MARN				*e*Sg	**Sn**	**18 01 10.5**	**-0.1**
ROVR	**Rover¤ Verone**	**0.77**	**356**	AML	AML		
	comp=E,4870μm,0.4s						
ROVR				AML	AML		
	comp=E,4870μm,0.4s						
ROVR				AML	AML		
	comp=N,11850μm,0.5s						
ROVR				AML	AML		
	comp=N,11850μm,0.5s						
ROVR				AML	AML		
	comp=N,11850μm,0.5s						
ROVR				AML	AML		
	comp=E,4870μm,0.4s						
BALD	**Monte Baldo**	**0.83**	**344**	⇑*e*Pg	**Pb**	**18 00 59.8**	**+0.3**
BALD				*e*Sg	**Sn**	**18 01 13.3**	**+0.6**
BALD	**Monte Baldo**	**0.83**	**344**	*e*Pg	**Pb**	**18 00 59.8**	**+0.3**
BALD				*e*Sg	**Sn**	**18 01 13.3**	**+0.6**
SALO	**Salr**	**0.85**	**330**	AML	AML		
	comp=N,7560μm,0.4s						
SALO				AML	AML		
	comp=E,6625μm,0.6s						
SALO				AML	AML		
	comp=N,7560μm,0.4s						
SALO				AML	AML		
	comp=E,6625μm,0.6s						
SALO				AML	AML		
	comp=E,6625μm,0.6s						
SALO				AML	AML		
	comp=N,7560μm,0.4s						
POPM	**Popiglio**	**0.88**	**198**	AML	AML		
	comp=N,3720μm,0.6s						
POPM				AML	AML		
	comp=E,1905μm,0.6s						
POPM				AML	AML		
	comp=N,3720μm,0.6s						
POPM				AML	AML		
	comp=E,1905μm,0.6s						
POPM				AML	AML		
	comp=N,3720μm,0.6s						
POPM				AML	AML		
	comp=E,1905μm,0.6s						
VLC	**Villacollemand**	**0.90**	**217**	AML	AML		
	comp=E,1095μm,0.7s						
VLC				AML	AML		
	comp=N,1160μm,0.8s						
VLC				AML	AML		
	comp=E,1095μm,0.7s						
VLC				AML	AML		
	comp=N,1160μm,0.8s						
VLC				AML	AML		
	comp=E,1095μm,0.7s						
VLC				AML	AML		
	comp=N,1160μm,0.8s						
BDI	**Bagni Di Lucca**	**0.91**	**206**	AML	AML		
	comp=E,2010μm,0.4s						
BDI				AML	AML		
	comp=E,2320μm,0.6s						
BDI				AML	AML		
	comp=N,1815μm,0.6s						
BDI				AML	AML		
	comp=E,2010μm,0.4s						
BDI				AML	AML		
	comp=N,1845μm,0.6s						
BDI				AML	AML		
	comp=E,2320μm,0.6s						
BDI				AML	AML		
	comp=N,1815μm,0.6s						
BDI				AML	AML		
	comp=E,2010μm,0.4s						
BDI				AML	AML		
	comp=N,1845μm,0.6s						
BDI				AML	AML		
	comp=N,1815μm,0.6s						
BDI				AML	AML		
	comp=E,2320μm,0.6s						
BDI				AML	AML		
	comp=N,1845μm,0.6s						
MAGA	**Magasa**	**0.96**	**338**	AML	AML		
	comp=N,15600μm,0.4s						
MAGA				AML	AML		
	comp=E,20850μm,0.6s						
MAGA				AML	AML		
	comp=N,15600μm,0.4s						
MAGA				AML	AML		
	comp=E,20850μm,0.6s						
MAGA				AML	AML		
	comp=N,15600μm,0.4s						
MAGA				AML	AML		
	comp=E,20850μm,0.6s						
DOSS	**Dosso del Somm**	**1.00**	**2**	⇓*e*Pg	**Pb**	**18 01 02.1**	**-0.2**
DOSS				*e*Sg	**Sn**	**18 01 18.3**	**+1.5**
DOSS	**Dosso del Somm**	**1.00**	**2**	*e*Pg	**Pb**	**18 01 02.1**	**-0.2**
DOSS				*e*Sg	**Sn**	**18 01 18.3**	**+1.5**
CTL8	**Castelleone**	**1.05**	**292**	AML	AML		
	comp=E,1450μm,1.1s						
CTL8				AML	AML		
	comp=E,4420μm,1.3s						
CTL8				AML	AML		
	comp=N,3775μm,0.4s						
CTL8				AML	AML		
	comp=E,1450μm,1.1s						
CTL8				AML	AML		
	comp=N,575μm,0.3s						
CTL8				AML	AML		
	comp=N,3775μm,0.4s						
CTL8				AML	AML		
	comp=E,4420μm,1.3s						
CTL8				AML	AML		
	comp=N,575μm,0.3s						
MAIM	**Mastiano**	**1.07**	**206**	AML	AML		
	comp=N,2485μm,0.6s						
MAIM				AML	AML		
	comp=E,1370μm,0.4s						
MAIM				AML	AML		
	comp=E,1370μm,0.4s						
MAIM				AML	AML		
	comp=N,2485μm,0.6s						
MAIM				AML	AML		
	comp=E,1370μm,0.4s						
MAIM				AML	AML		
	comp=N,2485μm,0.6s						
CGRP	**Cima Grappa**	**1.10**	**25**	⇑*e*Pg	**Pb**	**18 01 03.8**	**-0.2**
CGRP				*e*Sg	**Sn**	**18 01 20.9**	**+1.6**
CGRP	**Cima Grappa**	**1.10**	**25**	*e*Pg	**Pb**	**18 01 03.8**	**-0.2**
CGRP				*e*Sg	**Sn**	**18 01 20.9**	**+1.6**
CGRP	**Cima Grappa**	**1.10**	**25**	AML	AML		
	comp=N,3055μm,1.6s						
CGRP				AML	AML		
	comp=E,3745μm,1.3s						
CGRP				AML	AML		
	comp=N,3055μm,1.6s						
CGRP				AML	AML		
	comp=E,3740μm,1.3s						
CGRP				AML	AML		
	comp=N,3055μm,1.6s						
CGRP				AML	AML		
	comp=E,3740μm,1.3s						
CRMI	**Carmignano**	**1.10**	**186**	AML	AML		
	comp=E,1895μm,0.5s						
CRMI				AML	AML		
	comp=E,1895μm,0.5s						
CRMI				AML	AML		
	comp=N,688μm,0.6s						
CRMI				AML	AML		
	comp=N,688μm,0.6s						
CRMI				AML	AML		
	comp=E,1895μm,0.5s						
CRMI				AML	AML		
	comp=N,688μm,0.6s						
SFI	**Santa Sofia**	**1.10**	**152**	AML	AML		
	comp=N,1265μm,0.7s						
SFI				AML	AML		
	comp=E,973μm,0.6s						
SFI				AML	AML		
	comp=N,1260μm,0.7s						
SFI				AML	AML		

comp=E,1032µm,1.1s
SFI AML AML
comp=N,1295µm,0.5s
SFI AML AML
comp=E,976µm,0.6s
SFI AML AML
comp=N,1265µm,0.7s
SFI AML AML
comp=E,1032µm,1.1s
SFI AML AML
comp=N,1290µm,0.5s
SFI AML AML
comp=N,1290µm,0.5s
SFI AML AML
comp=E,1032µm,1.1s
SFI AML AML
comp=E,976µm,0.6s
MTLO Montello 1.15 36⇑ ePg Pg 18 01 05.4 +0.1
MTLO eSg **Sg 18 01 22.1 +1.8**
MTLO Montello 1.15 36 ePg Pg 18 01 05.4 +0.1
MTLO eSg **Sg 18 01 22.1 +1.8**
RNI Roncone 1.16 342⇑ ePg Pb 18 01 04.2 -0.8
RNI Roncone 1.16 342 ePg Pb 18 01 04.2 -0.8
PANI Panarotta 1.18 7⇓ ePg Pn 18 01 04.5 -0.8
PANI eSg **Sg 18 01 22.4 +1.2**
PANI Panarotta 1.18 7 ePg Pn 18 01 04.5 -0.8
PANI eSg **Sg 18 01 22.4 +1.2**
ASQU Asqua 1.18 157 AML AML
comp=E,1185µm,0.9s
ASQU AML AML
comp=N,1570µm,0.7s
ASQU AML AML
comp=E,1185µm,0.9s
ASQU AML AML
comp=N,1570µm,0.7s
ASQU AML AML
comp=E,1185µm,0.9s
ASQU AML AML
comp=N,1570µm,0.7s
BOB Bobbio (Coli) 1.21 265 AML AML
comp=E,1001µm,0.8s
BOB AML AML
comp=E,866µm,0.9s
BOB AML AML
comp=N,1635µm,1.0s
BOB AML AML
comp=E,1001µm,0.8s
BOB AML AML
comp=N,1620µm,1.1s
BOB AML AML
comp=E,865µm,0.9s
BOB AML AML
comp=N,1635µm,1.0s
BOB AML AML
comp=E,1001µm,0.8s
BOB AML AML
comp=N,1620µm,1.1s
BOB AML AML
comp=E,865µm,0.9s
BOB AML AML
comp=N,1635µm,1.0s
BOB AML AML
comp=N,1620µm,1.1s
PLMA Palmaria, Port 1.24 228 AML AML
comp=N,1285µm,1.1s
PLMA AML AML
comp=E,1290µm,0.9s
PLMA AML AML
comp=N,1285µm,1.1s
PLMA AML AML
comp=E,1290µm,0.9s
PLMA AML AML
comp=N,1285µm,1.1s
PLMA AML AML
comp=E,1290µm,0.9s
MABI Malga Bissina 1.25 340 AML AML
comp=N,812µm,1.0s
MABI AML AML
comp=E,778µm,1.2s
MABI AML AML
comp=N,812µm,1.0s
MABI AML AML
comp=E,778µm,1.2s
MABI AML AML
comp=N,812µm,1.0s
MABI AML AML
comp=E,778µm,1.2s
MSSA Maissana 1.29 245 AML AML
comp=E,1078µm,0.6s
MSSA AML AML
comp=N,1162µm,0.6s
MSSA AML AML
comp=E,1078µm,0.6s
MSSA AML AML
comp=N,1162µm,0.6s
MSSA AML AML
comp=E,1078µm,0.6s
MSSA AML AML
comp=N,1162µm,0.6s
VARN Col Varnada, M 1.30 31⇓ ePg Pn 18 01 06.9 0.0
VARN eSg **Sg 18 01 26.6 +1.4**
VARN Col Varnada, M 1.30 31 ePg Pn 18 01 06.9 0.0
VARN eSg **Sg 18 01 26.5 +1.4**
CRE Caprese Michel 1.39 155 AML AML
comp=E,970µm,0.5s
CRE AML AML
comp=E,970µm,0.5s
CRE AML AML
comp=N,1090µm,0.4s
CRE AML AML
comp=N,1090µm,0.4s
CRE AML AML
comp=E,970µm,0.5s
CRE AML AML
comp=N,1090µm,0.4s
CAE Caneva 1.45 39 ePg Pn 18 01 09.4 +0.5
CAE Caneva 1.45 39 ePg Pn 18 01 09.4 +0.5
PARC Parchiule 1.47 147 AML AML
comp=E,440µm,1.6s
PARC AML AML
comp=N,574µm,0.5s
PARC AML AML
comp=E,440µm,1.6s
PARC AML AML
comp=N,574µm,0.5s
FAU Forcella Aurin 1.47 23 ePg Pb 18 01 10.4 +0.1
FAU Forcella Aurin 1.47 23 ePg Pb 18 01 10.4 +0.1
OZOL Ozolo 1.52 358 ePg Pn 18 01 10.3 +0.4
OZOL Ozolo 1.52 358 ePg Pn 18 01 10.4 +0.4
AGOR Agordo 1.54 24 ePg Pb 18 01 10.9 -0.5
AGOR Agordo 1.54 24 AML AML
comp=E,1255µm,1.4s
AGOR AML AML
comp=E,1255µm,1.4s
AGOR AML AML
comp=N,1155µm,0.8s
AGOR AML AML
comp=N,1155µm,0.8s
ATCA Cantone 1.55 148 AML AML
comp=E,514µm,0.7s
ATCA AML AML
comp=E,514µm,0.7s
ATCA AML AML
comp=N,502µm,0.6s
ATCA AML AML
comp=N,502µm,0.6s
CARE Lago del Cares 1.57 349 ePg Pn 18 01 11.3 +0.4
CARE Lago del Cares 1.57 349 ePg Pn 18 01 11.3 +0.4
KOSI Kohlern 1.59 6 AML AML
comp=N,1330µm,0.6s
KOSI AML AML
comp=E,1895µm,0.6s
KOSI AML AML
comp=N,1330µm,0.6s
KOSI AML AML
comp=E,1895µm,0.6s
KOSI AML AML
comp=E,1895µm,0.6s
KOSI AML AML
comp=N,1330µm,0.6s
APPI Appiano 1.60 2 AML AML
comp=E,2605µm,0.6s
APPI AML AML
comp=N,2395µm,0.6s
APPI AML AML
comp=N,2395µm,0.6s
APPI AML AML
comp=E,2605µm,0.6s
MLNI Malnisio 1.64 39 ePg Pn 18 01 12.0 +0.5
MLNI Malnisio 1.64 39 ePg Pn 18 01 12.0 +0.5
NARO Abbazia di Nar 1.64 140 AML AML
comp=N,400µm,0.4s
NARO AML AML
comp=E,330µm,0.5s
NARO AML AML
comp=N,400µm,0.4s
NARO AML AML
comp=E,330µm,0.5s
CAFI Castiglion Fio 1.66 159 AML AML
comp=N,312µm,0.4s
CAFI AML AML
comp=E,366µm,0.5s
CAFI AML AML
comp=N,312µm,0.4s
CAFI AML AML
comp=E,366µm,0.5s
PIEI Pieia 1.68 143 AML AML
comp=E,478µm,0.3s
PIEI AML AML
comp=E,478µm,0.3s
PIEI AML AML
comp=N,408µm,0.5s
PIEI AML AML
comp=N,408µm,0.5s
BRMO Bormio 1.68 342 AML AML
comp=N,1270µm,0.7s
BRMO AML AML
comp=E,1182µm,0.7s
BRMO AML AML
comp=N,1270µm,0.7s
BRMO AML AML
comp=E,1182µm,0.7s
CIMO Cimolais 1.69 32 ePg Pn 18 01 12.3 0.0
CIMO Cimolais 1.69 32 ePg Pn 18 01 12.3 0.0
ATPI Pietralunga - 1.70 147 AML AML
comp=E,531µm,0.8s
ATPI AML AML
comp=E,531µm,0.8s
ATPI AML AML
comp=N,548µm,1.1s
ATPI AML AML
comp=N,548µm,1.1s
STAL STALIGIAL 1.76 38 AML AML
comp=E,1810µm,1.2s
STAL AML AML
comp=E,1340µm,0.5s
STAL AML AML
comp=N,1435µm,0.3s
STAL AML AML
comp=N,1201µm,0.3s
STAL AML AML
comp=E,1810µm,1.2s
STAL AML AML
comp=E,1340µm,0.5s
STAL AML AML
comp=N,1201µm,0.3s
STAL AML AML
comp=N,1435µm,0.3s
MOSI Grossmontoni 1.78 347 AML AML
comp=E,1545µm,1.4s
MOSI AML AML
comp=N,3930µm,0.8s
MOSI AML AML
comp=E,1545µm,1.4s
MOSI AML AML
comp=N,3930µm,0.8s
ABSI Aberstueckl 1.85 4 AML AML
comp=N,2255µm,0.6s
ABSI AML AML
comp=E,2035µm,0.8s
ABSI AML AML
comp=N,2255µm,0.6s
ABSI AML AML
comp=E,2035µm,0.8s
PCP Piancastagn 1.88 260 AML AML
comp=E,344µm,0.7s
PCP AML AML
comp=N,648µm,0.9s
PCP AML AML
comp=N,648µm,0.9s
PCP AML AML
comp=E,344µm,0.7s
TUE Stuetta 2.03 322 AML AML
comp=N,314µm,0.6s
TUE AML AML
comp=E,304µm,1.1s
TUE AML AML
comp=N,314µm,0.6s
TUE AML AML
comp=E,304µm,1.1s
SABO M.te Sabotino 2.05 57 AML AML
comp=N,1415µm,0.3s
SABO AML AML
comp=E,860µm,1.5s
SABO AML AML
comp=N,1415µm,0.3s
SABO AML AML
comp=E,860µm,1.5s
ROSI Rosskopf 2.05 5 AML AML
comp=N,1285µm,0.9s
ROSI AML AML
comp=E,1020µm,0.5s
ROSI AML AML
comp=N,1285µm,0.9s
ROSI AML AML
comp=E,1020µm,0.5s
QLNO Quiliano 2.07 255 AML AML
comp=E,226µm,0.6s
QLNO AML AML
comp=E,226µm,0.6s
QLNO AML AML
comp=N,226µm,0.6s
QLNO AML AML
comp=N,226µm,0.6s
MGAB Montegabbione 2.09 160 AML AML
comp=E,324µm,0.5s
MGAB AML AML
comp=N,340µm,0.6s
MGAB AML AML
comp=E,337µm,0.6s
MGAB AML AML
comp=N,364µm,0.4s
MGAB AML AML
comp=N,364µm,0.4s
MGAB AML AML
comp=E,337µm,0.6s
MGAB AML AML
comp=N,340µm,0.6s
MGAB AML AML
comp=E,324µm,0.5s
ABTA Abfaltersbach 2.10 27 ePn Pn 18 01 19.3 +1.4
comp=E,0.3nm,0.1s,SNR=37
ABTA Sn **Sb 18 01 46.3 -0.6**
comp=E,97nm,0.6s
ABTA Abfaltersbach 2.10 27 Pn **Pn 18 01 19.3 +1.4**
comp=E,0.3nm,0.1s,SNR=37
ABTA Sn **Sb 18 01 46.3 -0.6**
comp=E,97nm,0.6s
CASP Castiglione de 2.10 186 AML AML
comp=N,174µm,0.4s
CASP AML AML
comp=E,138µm,0.4s
CASP AML AML
comp=E,138µm,0.4s
CASP AML AML
comp=N,174µm,0.4s
SKDS Skadanscina 2.14 71 *i* Pn **Pn 18 01 17.9 -0.5**
SKDS *i* Sn **Sn 18 01 43.7 -1.0**
comp=Z,112nm,0.3s
SKDS Skadanscina 2.14 71 Pn **Pn 18 01 17.9 -0.5**
SKDS *i* Sn **Sn 18 01 43.7 -1.0**
comp=Z,112nm,0.3s
FETA Feichten 2.16 353 Pg **Pg 18 01 23.5 -1.0**
comp=Z,1.5nm,0.2s,SNR=15
FETA Sn **Sn 18 01 46.3 +0.9**
comp=Z,36nm,0.6s
FETA Feichten 2.16 353 Pg **Pg 18 01 23.5 -1.0**
comp=Z,1.5nm,0.2s,SNR=15
FETA Sn **Sn 18 01 46.3 +0.9**
comp=Z,36nm,0.6s
RISI Rein 2.17 17 AML AML
comp=N,1365µm,0.5s
RISI AML AML
comp=E,1305µm,0.4s
RISI AML AML
comp=N,1365µm,0.5s
RISI AML AML
comp=E,1305µm,0.4s
PTCC Patocco-Chiusa 2.17 45 AML AML
comp=E,465µm,0.5s
PTCC AML AML
comp=N,437µm,0.7s
PTCC AML AML
comp=E,465µm,0.5s
PTCC AML AML
comp=N,437µm,0.7s
CELB S.Piero in Cam 2.24 198 AML AML
comp=N,176µm,1.3s
CELB AML AML
comp=E,186µm,0.7s
CELB AML AML
comp=N,176µm,1.3s
CELB AML AML
comp=E,186µm,0.7s
JAVS Javornik 2.29 63 *i* Pn **Pn 18 01 20.5 -0.1**
JAVS *i* Sn **Sn 18 01 48.4 -0.3**
comp=Z,127nm,0.4s
JAVS Javornik 2.29 63 *i* Pn **Pn 18 01 20.5 -0.1**
JAVS *i* Sn **Sn 18 01 48.4 -0.3**
comp=Z,127nm,0.4s
FDMO Fiordimonte 2.32 142 AML AML
comp=E,230µm,0.6s
FDMO AML AML
comp=E,230µm,0.6s
FDMO AML AML
comp=N,252µm,0.8s
FDMO AML AML
comp=N,252µm,0.8s
MOMA Monte Martano 2.32 153 AML AML
comp=E,188µm,0.4s
MOMA AML AML
comp=N,188µm,0.7s
MOMA AML AML
comp=N,188µm,0.7s
MOMA AML AML
comp=E,188µm,0.4s
WTTA Wattenberg 2.41 8 ePn Pb 18 01 24.9 -1.4
comp=E,2.8nm,0.1s,SNR=16
WTTA Sg **Sg 18 01 59.9 -0.6**
comp=E,204nm,0.6s
WTTA Wattenberg 2.41 8 Pn **Pb 18 01 24.9 -1.4**
comp=E,2.8nm,0.1s,SNR=16
WTTA Sg **Sg 18 01 59.9 -0.6**
comp=E,204nm,0.6s
MOTA Moosalm 2.46 359 ePn Pn 18 01 24.2 +1.3
comp=E,2.9nm,0.3s,SNR=36
MOTA Sn **Sn 18 01 54.9 +2.0**
comp=E,15nm,0.3s
MOTA Moosalm 2.46 359 Pn **Pn 18 01 24.2 +1.3**
comp=E,2.9nm,0.3s,SNR=36
MOTA Sn **Sn 18 01 54.9 +2.0**
comp=E,15nm,0.3s
CEY Cerknica 2.47 69 ePn Pn 18 01 22.8 -0.2
MYKA Terra Mystica 2.47 44 *i* Pn **Pb 18 01 26.6 -0.8**
comp=E,1.1nm,0.1s
MYKA *e*Sn **Sb 18 01 55.7 -2.0**
comp=E,27nm,0.4s
MYKA Terra Mystica 2.47 44 Pn **Pb 18 01 26.6 -0.8**
comp=E,1.1nm,0.1s
MYKA Sn **Sb 18 01 55.7 -2.0**
comp=E,27nm,0.4s
DAVA Damuels 2.56 340 Pn **Pn 18 01 26.1 +1.8**
comp=E,14nm,0.4s,SNR=10
DAVA Sn **Sn 18 01 56.6 +1.3**
comp=E,89nm,0.5s
DAVA Damuels 2.56 340 Pn **Pn 18 01 26.1 +1.8**
comp=E,14nm,0.4s,SNR=10
DAVA Sn **Sn 18 01 56.6 +1.3**
comp=E,89nm,0.5s
RETA Reutte 2.62 354 ePn Pn 18 01 26.4 +1.4
comp=E,0.8nm,0.1s,SNR=5.6
RETA Sn **Sn 18 01 55.8 -0.8**
comp=E,40nm,0.3s
RETA Reutte 2.62 354 Pn **Pn 18 01 26.4 +1.4**
comp=E,0.8nm,0.1s,SNR=5.6
RETA Sn **Sn 18 01 55.8 -0.8**
comp=E,40nm,0.3s
LJU Ljubljana 2.65 63 ePn Pn 18 01 26.2 +0.8
LJU Ljubljana 2.65 63 AML AML
comp=N,1068µm,0.9s
LJU AML AML
comp=E,1058µm,0.6s
LJU AML AML
comp=E,1058µm,0.6s
LJU AML AML
comp=N,1068µm,0.9s
NVLJ Novalja 2.68 96 ePn Pn 18 01 25.7 0.0
NVLJ Sn **Sn 18 01 57.2 -0.7**
NVLJ Novalja 2.68 96 ePn Pn 18 01 25.7 0.0
NVLJ Sn **Sn 18 01 57.2 -0.7**
KBA Koelnbreinsper 2.68 34 ePn Pn 18 01 27.9 +1.9
comp=N,1.2nm,0.2s
KBA Sn **Sb 18 02 02.0 -1.7**
comp=N,21nm,0.3s
KBA Koelnbreinsper 2.68 34 Pn **Pn 18 01 27.9 +1.9**
comp=N,1.2nm,0.2s
KBA Sn **Sb 18 02 02.0 -1.7**
comp=N,21nm,0.3s
PGF Pioggiola 2.80 214 ePn Pn 18 01 27.7 +0.1
PGF *e*Sn **Sn 18 02 00.2 -1.0**
comp=N,129nm,0.8s
PGF Pioggiola 2.80 214 ePn Pn 18 01 27.7 +0.1
PGF *e*Sn **Sn 18 02 00.2 -1.0**
comp=N,64nm,0.8s
SBF Sospel 2.85 250 ePn Pn 18 01 28.3 +0.2
SBF *e*Sn **Sn 18 02 00.9 -1.3**
comp=N,83nm,0.4s
SBF Sospel 2.85 250 ePn Pn 18 01 28.3 +0.2
SBF *e*Sn **Sn 18 02 00.9 -1.3**
comp=N,42nm,0.4s
OBKA Obir 2.89 55 ePn Pn 18 01 29.8 +1.1
comp=N,1.6nm,0.2s,SNR=10
OBKA Sn **Sn 18 02 05.7 +2.4**
comp=N,43nm,0.3s
OBKA Obir 2.89 55 Pn **Pn 18 01 29.8 +1.1**
comp=N,1.6nm,0.2s,SNR=10
OBKA Sn **Sn 18 02 05.7 +2.4**
comp=N,43nm,0.3s
LUCF Luceram 2.89 251 P **Pn 18 01 30.9 +2.1**
LUCF Luceram 2.89 251 P **Pn 18 01 30.9 +2.1**
MVIF Mont Vial 3.02 252 P **Pn 18 01 32.3 +1.7**
MVIF Mont Vial 3.02 252 P **Pn 18 01 32.3 +1.7**
MBDF Montbardon 3.11 269 ePn Pn 18 01 31.7 -0.2
MBDF *e*Sn **Sn 18 02 07.5 -1.4**
comp=N,27nm,0.5s
MBDF Montbardon 3.11 269 ePn Pn 18 01 31.7 -0.2
MBDF *e*Sn **Sn 18 02 07.5 -1.4**
comp=N,13nm,0.5s
SURF Saint Ours 3.11 264 P **Pn 18 01 34.2 +2.3**
SURF Saint Ours 3.11 264 P **Pn 18 01 34.2 +2.3**
OZLJ Ozalj 3.14 75 ePn Pn 18 01 32.8 +0.7
OZLJ Ozalj 3.14 75 ePn Pn 18 01 32.8 +0.7
LPG La Plagne 3.16 283 ePn Pn 18 01 32.9 +0.2
LPG *e*Sn **Sn 18 02 08.5 -1.8**
comp=N,46nm,0.7s
LPG La Plagne 3.16 283 ePn Pn 18 01 32.9 +0.2
LPG *e*Sn **Sn 18 02 08.5 -1.8**
comp=N,23nm,0.7s
LPL La Plagne 3.18 283 ePn Pn 18 01 32.3 -0.6
LPL *e*Sn **Sn 18 02 08.4 -2.3**
comp=N,56nm,0.8s
LPL La Plagne 3.18 283 ePn Pn 18 01 32.3 -0.6
LPL *e*Sn **Sn 18 02 08.4 -2.3**
comp=N,28nm,0.8s
CRES Cresnjev 3.19 71 ePn Pn 18 01 32.9 +0.1
CALF Calern 3.23 251 P **Pn 18 01 34.9 +1.4**
CALF Calern 3.23 251 P **Pn 18 01 34.9 +1.4**
SOKA Soboth 3.26 55 ePn Pn 18 01 34.8 +0.9
comp=N,3.4nm,0.2s,SNR=5.8
SOKA *e*Sn **Sn 18 02 13.4 +0.9**
SOKA Soboth 3.26 55 Pn **Pn 18 01 34.8 +0.9**
comp=N,3.4nm,0.2s,SNR=5.8
SOKA Sn **Sn 18 02 13.4 +0.9**
UDBI Udbina 3.32 95 ePn Pn 18 01 36.6 +2.0
UDBI Udbina 3.32 95 ePn Pn 18 01 36.6 +2.0
FRF La Foret Royal 3.49 249 ePn Pn 18 01 36.9 0.0
FRF *e*Sn **Sn 18 02 16.6 -1.4**
comp=N,50nm,0.5s
FRF La Foret Royal 3.49 249 ePn Pn 18 01 36.9 0.0
FRF *e*Sn **Sn 18 02 16.6 -1.4**
comp=N,25nm,0.5s

MOA Molln 3.67 35 *e*Sn **Sn 18 02 25.7 +3.2**
comp=N,10nm,0.3s
MOA Molln 3.67 35 Sn **Sn 18 02 25.7 +3.2**
comp=N,10nm,0.3s
LMR La Mourre 3.68 247 *e*Pn **Pn 18 01 39.3 -0.2**
LMR *e*Sn **Sn 18 02 21.0 -1.6**
comp=N,32nm,0.4s
LMR La Mourre 3.68 247 *e*Pn **Pn 18 01 39.3 -0.2**
LMR *e*Sn **Sn 18 02 21.0 -1.6**
comp=N,16nm,0.4s
ORIF Oris-en-Rattie 3.74 272 *e*Pn **Pn 18 01 39.7 -0.7**
ORIF *e*Sn **Sn 18 02 22.7 -1.5**
comp=N,34nm,0.5s
ORIF Oris-en-Rattie 3.74 272 P **Pn 18 01 42.0 +1.6**
ORIF Oris-en-Rattie 3.74 272 *e*Pn **Pn 18 01 39.7 -0.7**
ORIF *e*Sn **Sn 18 02 22.7 -1.5**
comp=N,17nm,0.5s
KIZ Kirchzarten 3.80 325 P **Pn 18 01 42.4 +1.3**
KIZ Kirchzarten 3.80 325 P **Pn 18 01 42.4 +1.3**
ARSA Arzberg 3.86 51 *i* Pn **Pn 18 01 42.7 +0.6**
comp=N,1.9nm,0.2s
ARSA *i* Sn **Sn 18 02 28.1 +0.9**
comp=N,6.9nm,0.4s
ARSA Arzberg 3.86 51 Pn **Pn 18 01 42.7 +0.6**
comp=N,1.9nm,0.2s
ARSA Sn **Sn 18 02 28.1 +0.9**
comp=N,6.9nm,0.4s
CHMF Charmoille 3.92 309 P **Pn 18 01 44.1 +1.2**
CHMF Charmoille 3.92 309 P **Pn 18 01 44.1 +1.2**
CABF La Chapelle 3.94 298 *e*Pn **Pn 18 01 42.6 -0.5**
CABF *e*Sn **Sn 18 02 26.6 -2.5**
comp=N,38nm,0.7s
CABF La Chapelle 3.94 298 *e*Pn **Pn 18 01 42.6 -0.5**
CABF *e*Sn **Sn 18 02 26.6 -2.5**
comp=N,19nm,0.7s
SMRF Simiane la Rot 4.09 259 *e*Pn **Pn 18 01 45.0 -0.2**
SMRF Simiane la Rot 4.09 259 *e*Pn **Pn 18 01 45.0 -0.2**
OPP Oppenau 4.15 332 P **Pn 18 01 46.7 +0.7**
OPP Oppenau 4.15 332 P **Pn 18 01 46.7 +0.7**
HINF Hinteralfeld 4.17 316 *e*Pn **Pn 18 01 45.5 -0.9**
HINF *e*Sn **Sn 18 02 32.0 -2.9**
comp=N,14nm,0.3s
HINF Hinteralfeld 4.17 316 *e*Pn **Pn 18 01 45.5 -0.9**
HINF *e*Sn **Sn 18 02 32.0 -2.9**
comp=N,6.8nm,0.3s
BLY Banja Luka 4.30 90 *e*Pn **Pn 18 01 49.3 +1.2**
ECH Echery 4.32 322 P **Pn 18 01 48.9 +0.5**
ECH Echery 4.32 322 P **Pn 18 01 48.9 +0.5**
GERES GERESS Array B 4.33 23 Pn **Pn 18 01 49.0 +0.4**
comp=N,0.8nm,0.3s,baz=195,slow=13,SNR=22
GERES Pg **Pg 18 02 03.0 -3.1**
comp=N,2.4nm,0.3s,baz=209,slow=16,SNR=16
GERES Sn **Sn 18 02 38.5 -0.5**
comp=N,3.7nm,0.3s,baz=201,slow=18,SNR=4.2
GERES Lg Lg 18 03 02.6
comp=N,3.7nm,0.3s,baz=202,slow=30,SNR=7.6
CDF Champ du Feu 4.42 324 *e*Pn **Pn 18 01 50.5 +0.7**
CDF *e*Sn **Sn 18 02 38.3 -2.7**
comp=N,26nm,0.5s
CDF Champ du Feu 4.42 324 *e*Pn **Pn 18 01 50.5 +0.7**
CDF *e*Sn **Sn 18 02 38.3 -2.7**
comp=N,13nm,0.5s
CONA Conrad Observa 4.46 45 *i* Pn **Pn 18 01 52.2 +1.8**
comp=N,2.7nm,0.4s
CONA *e*Sn **Sn 18 02 44.2 +2.0**
comp=N,9.1nm,0.4s
CONA Conrad Observa 4.46 45 Pn **Pn 18 01 52.2 +1.8**
comp=N,2.7nm,0.4s
CONA Sn **Sn 18 02 44.2 +2.0**
comp=N,9.1nm,0.4s
HAU Haudompre 4.55 315 *e*Pn **Pn 18 01 52.0 +0.5**
HAU *e*Sn **Sn 18 02 41.1 -3.1**
comp=N,34nm,0.4s
HAU Haudompre 4.55 315 *e*Pn **Pn 18 01 52.0 +0.5**
HAU *e*Sn **Sn 18 02 41.1 -3.1**
comp=N,17nm,0.4s
KHC Kasperske Hory 4.56 21 *e*PN **Pn 18 01 52.3 +0.6**
KHC *ex* x 18 02 10.2
KHC *ex* x 18 02 24.8
KHC *e*SN **Sn 18 02 43.4 -1.1**
KHC *e*SG **Sg 18 03 10.2 +0.6**
comp=N,30nm,0.6s
KHC Kasperske Hory 4.56 21 Pn **Pn 18 01 52.3 +0.6**
KHC Sn **Sn 18 02 43.4 -1.1**
KHC Sg **Sg 18 03 10.2 +0.6**
comp=N,30nm,0.6s
VIVF Saint-Julien-l 4.60 272 *e*Pn **Pn 18 01 51.8 -0.4**
VIVF *e*Sn **Sn 18 02 42.8 -2.6**
comp=N,1.8nm,0.2s
VIVF Saint-Julien-l 4.60 272 *e*Pn **Pn 18 01 51.8 -0.4**
VIVF *e*Sn **Sn 18 02 42.8 -2.6**
comp=N,0.9nm,0.2s
STON Ston 5.15 111 *i* Pn **Pn 18 01 59.5 -0.2**
STON Sn **Sn 18 02 56.3 -2.6**
STON Ston 5.15 111 *i* Pn **Pn 18 01 59.5 -0.2**
STON Sn **Sn 18 02 56.2 -2.6**
PAGF Fort de Pagny 5.23 317 *e*Sn **Sn 18 02 57.4 -3.5**
comp=N,19nm,0.6s
PAGF Fort de Pagny 5.23 317 *e*Sn **Sn 18 02 57.4 -3.5**
comp=N,9.6nm,0.6s
ZST Bratislava 5.28 49 *e*SN **Sn 18 02 54.4 -7.7**
SFTF Sexfontaines 5.36 310 *e*Sn **Sn 18 03 00.2 -3.9**
comp=N,4.3nm,0.3s
SFTF Sexfontaines 5.36 310 *e*Sn **Sn 18 03 00.2 -3.9**
comp=N,2.2nm,0.3s
SMF Signal de Mont 5.40 292 *e*Pn **Pn 18 02 02.5 -0.7**
SMF *e*Sn **Sn 18 03 01.8 -3.3**
comp=N,23nm,0.6s
SMF Signal de Mont 5.40 292 *e*Pn **Pn 18 02 02.5 -0.7**
SMF *e*Sn **Sn 18 03 01.8 -3.3**
comp=N,12nm,0.6s
NKC Novy Kostel 5.42 9 *e*PN **Pn 18 02 06.2 +2.7**
NKC *ex* x 18 02 26.8
NKC *e*SN **Sn 18 03 04.0 -1.7**
NKC *e*SG **Sg 18 03 34.9 -2.3**
comp=N,29nm,0.7s
MODS Modra-Piesok 5.48 48 *e*PN **Pn 18 02 03.8 -0.5**
MODS *e*SN **Sn 18 03 04.2 -2.9**
MODS Modra-Piesok 5.48 48 *e*Pn **Pn 18 02 03.8 -0.5**
KRUC Moravsky 5.51 39 *e*PN **Pn 18 02 06.4 +1.7**
KRUC *e*SN **Sn 18 03 02.4 -5.4**
LOR Lormes 5.60 298 *e*Pn **Pn 18 02 06.7 +0.8**
LOR *e*Sn **Sn 18 03 06.4 -3.6**
comp=N,6.5nm,0.3s
LOR Lormes 5.60 298 *e*Pn **Pn 18 02 06.7 +0.8**
PRU Pruhonice 5.60 23 *e*SN **Sn 18 03 07.2 -2.9**
PRU *e*SG **Sg 18 03 41.5 -1.4**
comp=N,24nm,1.0s
PRU Pruhonice 5.60 23 Sg **Sg 18 03 41.5 -1.4**
comp=N,24nm,1.0s
GOPC GO Pecny, Ondr 5.61 25 *ex* **Pg 18 02 26.8 -3.7**
GOPC *e*SN **Sn 18 03 08.1 -2.1**
GOPC *e*SG **Sg 18 03 41.0 -2.0**
comp=N,29nm,0.8s
TREB Trebinje 5.65 110 *e*Pn **Pn 18 02 07.2 +0.6**
BRY Bratogost 5.70 108 *e*Pn **Pn 18 02 08.6 +1.2**
SSF Saint Saulge 5.75 295 *e*Pn **Pn 18 02 06.9 -1.1**
SSF *e*Sn **Sn 18 03 09.8 -3.9**
SSF Saint Saulge 5.75 295 *e*Pn **Pn 18 02 06.9 -1.1**
AVF Avril sur Loir 5.77 292 *e*Pn **Pn 18 02 08.4 +0.2**
AVF Avril sur Loir 5.77 292 *e*Pn **Pn 18 02 08.4 +0.2**
VRAC Vranov 5.78 38 *e*Sn **Sn 18 03 12.8 -1.7**
VRAC Vranov 5.78 38 *e*SN **Sn 18 03 12.8 -1.7**
UPM Unac-Piva 5.84 104 *e*Pn **Pn 18 02 11.6 +2.2**
HCY Herceg Novi 5.86 112 *e*Pn **Pn 18 02 09.5 0.0**
BGF Bois d'Agland 6.04 289 *e*Pn **Pn 18 02 11.1 -0.9**
BGF *e*Sn **Sn 18 03 17.1 -3.8**
comp=N,28nm,0.7s
BGF Bois d'Agland 6.04 289 *e*Pn **Pn 18 02 11.1 -0.9**
PVCC Panska Ves 6.10 21 *e*SN **Sn 18 03 19.6 -2.7**
PVCC *e*SG **Sg 18 03 57.1 -1.8**
comp=N,18nm,0.4s
BRG Berggiesshubel 6.28 16 PN **Pn 18 02 17.2 +2.0**
BRG PG **Pg 18 02 42.2 -1.2**
BRG SN **Sn 18 03 31.1 +4.3**
BRG SG **Sg 18 04 03.8 -0.8**
comp=N,30nm,1.1s
HYF Humbligny 6.38 295 *e*Pn **Pn 18 02 15.5 -1.1**
HYF Humbligny 6.38 295 *e*Pn **Pn 18 02 15.5 -1.1**
PDG Podgorica 6.38 110 *e*Pn **Pn 18 02 17.5 +0.9**
VYHS Vyhne 6.41 53 *e*PN **Pn 18 02 18.7 +1.7**
VYHS *e*SN **Sn 18 03 23.4 -6.5**
VYHS Vyhne 6.41 53 *e*Pn **Pn 18 02 18.7 +1.7**
DRME Dracevica, Mon 6.44 112 *e*Pn **Pn 18 02 18.0 +0.6**

CAF Calviac 6.45 274 *e*Pn **Pn 18 02 17.7 +0.1**
CAF Calviac 6.45 274 *e*Pn **Pn 18 02 17.7 +0.1**
DPC Dobruska-Polom 6.49 31 *e*PN **Pn 18 02 18.8 +0.6**
DPC *ex* x 18 02 48.6
DPC *e*SN **Sn 18 03 28.9 -3.1**
DPC *ex* x 18 03 54.5
DPC *e*SG **Sg 18 04 09.8 -1.6**
comp=N,20nm,0.9s
DPC Dobruska-Polom 6.49 31 Pn **Pn 18 02 18.8 +0.6**
DPC Sg **Sg 18 04 09.8 -1.6**
comp=N,20nm,0.9s
UPC Upice 6.52 29 *e*SN **Sn 18 03 29.5 -3.0**
UPC *e*SG **Sg 18 04 11.0 -1.1**
comp=N,24nm,0.7s
UPC Upice 6.52 29 Sg **Sg 18 04 11.0 -1.1**
comp=N,24nm,0.7s
CLL Collm 6.55 10 *e*Pn **Pn 18 02 19.0 +0.1**
CLL *e*Pg **Pg 18 02 52.0 +3.6**
CLL *e* 18 03 48.0
CLL *e*Sg **Sg 18 04 09.0 -4.1**
comp=Z,31nm,0.9s
ESDC Sonseca Array 12.33 250 Pn **Pn 18 03 40.3 +2.0**
comp=Z,0.1nm,0.3s,baz=61,slow=14,SNR=2.5
TORD Torodi Ar. Bea 32.64 197 P **P 18 07 13.3 -1.2**
comp=Z,0.7nm,0.5s,baz=12,slow=8.9,SNR=6.7
KURBB Kurchatov Arra 44.26 57 P **P 18 08 51.4 -0.4**
comp=Z,0.1nm,0.3s,baz=299,slow=9.5,SNR=3.3
ZALV Zalesovo Beam 46.74 51 P **P 18 09 11.4 0.0**
comp=Z,0.3nm,0.3s,baz=278,slow=20,SNR=2.4
MKAR Makanchi Array 48.02 61 P **P 18 09 22.0 +0.4**
comp=Z,0.3nm,0.7s,baz=288,slow=8.1,SNR=3.9
SONM Songino Array 61.59 50 P **P 18 11 02.5 +2.6**
comp=Z,0.3nm,0.5s,baz=270,slow=6.6,SNR=2.3

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*IDC **07** 18:02:37.3±0.5, 15°.17S×173°.60W, h0km, mb4.5/18, mb1 4.6/19, mb1mx4.4/50, mbtmp4.5/19, ML5.0/1, MS3.8/8, Ms1 3.8/8, ms1mx3.3/57, Error ellipse: s-maj=23.1km s-min=12.3km az=127.0*
*NEIC **07** 18:02:39.0±0.2, 15°.12S×173°.67W, h10km, mb4.8/33, Error ellipse: s-maj=8.3km s-min=4.1km az=123.0*
*ISCJB **07** 18:02:40.2±0.2, 15°.15S±0°.05×173°.75W±0°.07, h30km, mb4.7/55, MS4.1/9, Error ellipse: s-maj=11.0km s-min=5.6km az=32.6*
*BJI **07** 18:02:41.2, 15°.25S×173°.77W, h31km, mb5.0/12, mB5.3/7, Ms5.2/2, Ms7 4.9/2*
ISC 07 18:02:41.6±0.4, 15°.10S±0°.08×173°.57W±0°.09, h30km, n119, σ1§23/115, mb4.8/55, MS3.9/9, 1C-1D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.10**	**56**	Pn	**Pn**	**18 03 12.6**	**-2.3**
	441nm,0.3s,baz=62,slow=1.2,SNR=442						
AFI				Sn	Sn	18 03 33.0	-7.2
	221nm,0.3s,baz=349,slow=19,SNR=4.4						
AFI				LR	LR	18 03 54.3	
	comp=Z,1μm,19.5s,baz=162,slow=36						
FUNA	**Funafuti**	**9.63**	**312**	*e*Pn	**Pn**	**18 04 56.3**	**-2.0**
KNTN	**Kanton**	**12.38**	**9**	*e*Pn	**Pn**	**18 05 34.5**	**-1.5**
OUZ	**Omahuta**	**23.11**	**208**	*e*P	**P**	**18 07 46.0**	**+0.8**
	60nm,1.5s						
URZ	**Urewera**	**24.49**	**198**	P	**P**	**18 07 56.9**	**-1.3**
	14nm,0.3s,baz=4.5,slow=8.5,SNR=21						
URZ				LR	LR	18 16 08.9	
	comp=Z,382nm,19.9s,baz=350,slow=33						
URZ	**Urewera**	**24.49**	**198**	*e*P	**P**	**18 07 56.4**	**-1.9**
	157nm,1.9s						
BKZ	**Black Stump Fm**	**25.51**	**198**	*e*P	**P**	**18 08 06.9**	**-0.6**
	85nm,1.8s						
BFZ	**Birch Farm**	**26.99**	**197**	*e*P	**P**	**18 08 19.7**	**-1.1**
	112nm,1.7s						
THZ	**Tophouse**	**29.03**	**201**	*e*P	**P**	**18 08 38.0**	**-1.1**
	127nm,1.8s						
KHZ	**Kahutara**	**29.40**	**200**	*e*P	**P**	**18 08 42.1**	**-0.1**
	92nm,1.7s						
LTZ	**Lake Taylor**	**30.15**	**201**	*e*P	**P**	**18 08 47.4**	**-1.6**
	28nm,0.6s						
OXZ	**Oxford**	**30.71**	**201**	*e*P	**P**	**18 08 52.6**	**-1.2**
	26nm,0.7s						
RPZ	**Rata Peaks**	**31.39**	**202**	P	**P**	**18 08 58.4**	**-1.5**
	8.6nm,0.4s,baz=34,slow=15,SNR=4.0						
H11S2	**WAKE ISLAND Hy**	**38.62**	**329**	T	T	18 50 33.5	
	baz=146,slow=76,SNR=5.8						
H11S3	**WAKE ISLAND Hy**	**38.63**	**329**	T	T	18 50 28.8	
	baz=146,slow=76,SNR=5.2						
H11S1	**WAKE ISLAND Hy**	**38.64**	**329**	T	T	18 50 33.2	
	baz=146,slow=76,SNR=5.2						
H11N3	**WAKE ISLAND Hy**	**39.57**	**330**	T	T	18 51 37.1	
	baz=146,slow=76,SNR=4.6						
H11N1	**WAKE ISLAND Hy**	**39.58**	**330**	T	T	18 51 37.4	
	baz=146,slow=76,SNR=4.8						
H11N2	**WAKE ISLAND Hy**	**39.59**	**330**	T	T	18 51 42.1	
	baz=146,slow=76,SNR=3.9						
STKA	**Stephens Creek**	**44.04**	**240**	P	**P**	**18 10 45.4**	**-1.5**
	3.7nm,0.8s,baz=90,slow=10,SNR=6.9						
WRA	**Warramunga Arr**	**49.75**	**257**	P	**P**	**18 11 30.3**	**-1.4**
	1.6nm,0.5s,baz=91,slow=6.9,SNR=38						
WRA				PcP	**PcP**	**18 12 52.3**	**-0.2**
	0.3nm,0.6s,baz=94,slow=3.2,SNR=2.6						
AS01	**Alice Springs**	**50.00**	**252**	*e*P	**P**	**18 11 32.4**	**-1.2**
AS31	**Alice Springs**	**50.04**	**252**	*e*P	**P**	**18 11 33.2**	**-0.7**
	1.9nm,0.7s						
ASAR	**Alice Springs**	**50.04**	**252**	P	**P**	**18 11 33.0**	**-1.0**
	6.6nm,0.7s,baz=87,slow=8.2,SNR=104						
FITZ	**Fitzroy Crossi**	**58.11**	**258**	P	**P**	**18 12 33.6**	**+0.9**
	3.7nm,1.1s,baz=80,slow=18,SNR=2.5						
SBA	**Scott Base**	**63.53**	**185**	*e*P	**P**	**18 13 10.9**	**+2.2**
	31nm,1.2s						
VNDA	**Vanda**	**63.66**	**186**	P	**P**	**18 13 10.5**	**+0.9**
	3.3nm,0.9s,baz=9.4,slow=5.5,SNR=17						
VNDA	**Vanda**	**63.66**	**186**	*e*P	**P**	**18 13 10.7**	**+1.2**
	5.1nm,1.0s						
KMRM	**Mail Ridge**	**71.93**	**38**	*e*P	**P**	**18 14 04.1**	**+1.8**
	22nm,0.9s						
PETK	**Petropavlovsk-**	**72.30**	**342**	P	**P**	**18 14 05.3**	**+1.2**
	5.2nm,0.9s,baz=129,slow=9.2,SNR=7.4						
CMB	**Columbia Colle**	**72.65**	**41**	*e*P	**P**	**18 14 07.5**	**+0.8**
	5.8nm,0.9s						
AFDM	**Forest Hills D**	**72.82**	**40**	*e*P	**P**	**18 14 08.1**	**+0.5**
	5.3nm,0.9s						
WDC	**Whiskeytown Da**	**72.85**	**38**	*e*P	**P**	**18 14 09.1**	**+1.4**
	19nm,1.5s						
YBH	**Yreka Blue Hor**	**73.46**	**37**	P	**P**	**18 14 12.7**	**+1.3**
	7.4nm,0.8s,baz=320,slow=4.9,SNR=12						
YBH				LR	LR	18 38 12.4	
	comp=Z,88nm,21.6s,baz=311,slow=29						
YBH	**Yreka Blue Hor**	**73.46**	**37**	*e*P	**P**	**18 14 13.0**	**+1.6**
	7.7nm,0.8s						
WAKR	**Walker**	**73.53**	**42**	*e*P	**P**	**18 14 12.8**	**+0.8**
	18nm,1.6s						
YERR	**Yerington**	**73.94**	**41**	*e*P	**P**	**18 14 15.3**	**+1.0**
	5.2nm,0.8s						
RYN	**Ryan**	**74.19**	**42**	*e*P	**P**	**18 14 16.2**	**+0.4**
	7.8nm,1.1s						
NV01	**Mina Array Sit**	**74.22**	**42**	*e*P	**P**	**18 14 16.4**	**+0.3**
NVAR	**Mina Array Bea**	**74.22**	**42**	P	**P**	**18 14 16.8**	**+0.7**
	5.2nm,0.8s,baz=228,slow=9.8,SNR=31						
NV11	**Mina Array Sit**	**74.32**	**42**	*e*P	**P**	**18 14 17.6**	**+1.0**
	1.4nm,1.3s						
LDFC	**Landfair**	**74.56**	**46**	*e*P	**P**	**18 14 19.2**	**+1.2**
	37nm,1.6s						
KVN	**Kaiserville**	**74.70**	**42**	*e*P	**P**	**18 14 19.5**	**+0.7**
	9.7nm,1.1s						
QSPA	**South Pole Qui**	**74.94**	**180**	P	**P**	**18 14 20.2**	**+0.4**
	6.3nm,1.0s,baz=47,slow=2.5,SNR=15						
QSPA				LR	LR	18 44 13.1	
	comp=Z,42nm,20.0s,baz=333,slow=33						
MOD	**Modoc Plateau**	**74.99**	**38**	*e*P	**P**	**18 14 21.6**	**+1.2**
	9.8nm,1.0s						
SHPR	**Sheep Range**	**75.27**	**45**	*e*P	**P**	**18 14 23.4**	**+1.3**
	16nm,1.6s						
BMN	**Battle Mountai**	**76.04**	**41**	*e*P	**P**	**18 14 27.5**	**+1.1**
	7.6nm,1.0s						
WVOR	**Wild Horse Val**	**76.31**	**39**	*e*P	**P**	**18 14 29.0**	**+1.1**
	16nm,1.2s						
TUC	**Tucson**	**76.33**	**51**	*e*P	**P**	**18 14 29.4**	**+1.2**
	8.2nm,1.0s						
X16A	**Lo Mia Camp, P**	**76.84**	**49**	*e*P	**P**	**18 14 32.6**	**+1.5**
WUAZ	**Wupatki**	**77.42**	**48**	*e*P	**P**	**18 14 33.3**	**-1.1**
	7.3nm,0.7s						
BBB	**Bella Bella**	**77.69**	**27**	LR	LR	18 44 48.4	
	comp=Z,44nm,19.1s,baz=193,slow=32						
TMUT	**Trail Mountain**	**79.38**	**44**	*e*P	**P**	**18 14 47.1**	**+1.8**
	9.5nm,0.9s						
HLID	**Hailey**	**79.50**	**39**	*e*P	**P**	**18 14 46.4**	**+0.7**
	11nm,1.1s						
HVU	**Hansel Valley**	**79.59**	**42**	*e*P	**P**	**18 14 47.1**	**+0.8**
	9.5nm,1.1s						
NJ2	**Nanjing**	**79.85**	**307**	*e*P	**P**	**18 14 47.5**	**-0.1**
NJ2				S	**S**	**18 24 51.6**	**+2.5**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
NJ2				LR	LR		
	comp=N,640nm,19.2s						
NJ2				LR	LR		
	comp=E,410nm,22.5s						
NJ2				LR	LR		
	comp=Z,500nm,19.6s						
TCUT	**Toone Canyon**	**80.14**	**43**	*e*P	**P**	**18 14 50.5**	**+1.1**
	382nm,1.2s						
MNTX	**Cornudas Mount**	**80.18**	**53**	*e*P	**P**	**18 14 50.0**	**+0.6**
	7.9nm,1.2s						
TRF	**Thorofare Moun**	**80.36**	**10**	*e*P	**P**	**18 14 49.9**	**+0.1**
TXAR	**Lajitas Array**	**80.59**	**56**	P	**P**	**18 14 52.9**	**+1.1**
	2.5nm,0.9s,baz=226,slow=4.7,SNR=11						
ANMO	**Albuquerque**	**80.74**	**50**	P	**P**	**18 14 53.4**	**+0.8**
	2.0nm,0.9s,baz=245,slow=6.9,SNR=5.0						
CN2	**Changchun**	**80.75**	**320**	*e*P	**P**	**18 14 51.4**	**-0.8**
MCK	**McKinley**	**80.86**	**11**	*e*P	**P**	**18 14 52.9**	**+0.6**
MCMT	**McKenzie Canyo**	**81.13**	**39**	*e*P	**P**	**18 14 55.5**	**+1.0**
DLBC	**Dease Lake**	**81.48**	**21**	LR	LR	18 45 07.8	
	comp=Z,44nm,21.2s,baz=243,slow=31						
REDW	**Red Top Meadow**	**81.62**	**41**	*e*P	**P**	**18 14 58.1**	**+1.0**
FXWY	**Fox Creek**	**81.65**	**41**	*e*P	**P**	**18 14 58.2**	**+1.0**
	7.7nm,1.3s						
S22A	**4UR Ranch, Cre**	**81.69**	**47**	*e*P	**P**	**18 14 59.6**	**+1.9**
WRH	**Wood River Hil**	**81.69**	**11**	*e*P	**P**	**18 14 57.2**	**+0.5**
DOT	**Dot Lake**	**81.75**	**13**	*e*P	**P**	**18 14 57.5**	**+0.4**
IMW	**Indian Meadow**	**81.83**	**40**	*e*P	**P**	**18 14 59.4**	**+1.1**
HDA	**Harding Lake**	**81.85**	**11**	*e*P	**P**	**18 14 58.0**	**+0.5**
CCB	**Clear Creek Bu**	**81.90**	**11**	*e*P	**P**	**18 14 58.1**	**+0.3**
SCRK	**Sand Creek**	**82.06**	**13**	*e*P	**P**	**18 14 59.1**	**+0.3**
MDM	**Murphy Dome**	**82.11**	**11**	*e*P	**P**	**18 14 59.2**	**+0.3**
BW06	**Boulder Array**	**82.16**	**42**	*e*P	**P**	**18 15 00.4**	**+0.4**
PDAR	**Pinedale Array**	**82.16**	**42**	P	**P**	**18 14 59.8**	**-0.2**
	1.8nm,0.8s,baz=204,slow=3.3,SNR=10						
IL1	**Eielson Array**	**82.19**	**11**	*e*P	**P**	**18 14 58.9**	**-0.4**
ILAR	**Eielson Array**	**82.19**	**11**	P	**P**	**18 14 59.2**	**-0.1**
	1.3nm,0.8s,baz=221,slow=6.4,SNR=18						
ILAR				LR	LR	18 44 10.0	
	comp=Z,36nm,21.2s,baz=270,slow=30						
IM3	**Indian Mountai**	**82.20**	**8**	*e*P	**P**	**18 15 00.2**	**+0.9**
BOZ	**Bozeman (W)**	**82.26**	**39**	*e*P	**P**	**18 15 01.3**	**+0.9**
YHH	**Holmes Hill**	**82.33**	**40**	*e*P	**P**	**18 15 02.2**	**+1.3**
	4.6nm,1.1s						
MSTX	**Muleshoe**	**83.11**	**52**	*e*P	**P**	**18 15 05.7**	**+0.7**
DAWY	**Dawson**	**83.17**	**14**	*e*P	**P**	**18 15 05.5**	**+1.0**
ABTX	**Abilene, Hawle**	**85.03**	**54**	*e*P	**P**	**18 15 14.7**	**0.0**
GYA	**Guiyang**	**87.75**	**298**	*e*P	**P**	**18 15 29.0**	**+0.7**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MAW	**Mawson**	**88.02**	**199**	P	**P**	**18 15 28.9**	**+0.2**
	3.1nm,0.6s,baz=152,slow=7.7,SNR=7.7						
HHC	**Hu-ho-hao-te**	**88.70**	**313**	*e*P	**P**	**18 15 34.1**	**+1.6**
HHC				PP	**PP**	**18 19 03.4**	**+1.7**
HHC				S	**S**	**18 26 14.7**	**-2.9**
HHC				pmax	pmax		
	comp=Z,19nm,1.3s						
HHC				pmax	pmax		
	comp=Z,69nm,7.4s						
HHC				LR	LR		
	comp=N,170nm,15.9s						
HHC				LR	LR		
	comp=E,320nm,17.4s						
HHC				LR	LR		
	comp=Z,400nm,15.6s						
YKA	**Yellowknife Ar**	**89.89**	**23**	P	**P**	**18 15 37.1**	**-0.3**
	1.1nm,0.7s,baz=216,slow=4.4,SNR=3.8						
KMI	**Kunming**	**90.75**	**296**	P	**P**	**18 15 42.5**	**0.0**
KMI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KMI				pmax	pmax		
	comp=Z,76nm,4.2s						
CD2	**Chengdu**	**91.51**	**301**	P	**P**	**18 15 45.6**	**-0.2**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SYO	**Syowa Base**	**92.86**	**191⇑**	*e*X	**P**	**18 15 48.0**	**-3.2**
VNA3	**Neumayer Olymp**	**93.17**	**175**	P	**P**	**18 15 52.0**	**-0.6**
SNAA	**Sanae**	**93.21**	**177**	P	**P**	**18 15 52.8**	**-0.1**
	1.8nm,1.1s,baz=212,slow=7.2,SNR=4.8						
ULM	**Lac du Bonnet**	**93.81**	**39**	LR	LR	18 52 10.9	
	comp=Z,64nm,20.6s,baz=312,slow=32						
VNA1	**Neumayer--Stat**	**93.86**	**175**	P	**P**	**18 15 56.0**	**+0.3**
MKAR	**Makanchi Array**	**110.50**	**315**	PKiKP	**PKiKP**	**18 21 10.8**	**-0.4**
	0.1nm,0.5s,baz=98,slow=2.9,SNR=2.5						
KSH	**Kashi**	**115.16**	**307**	PKP	**PKPdf**	**18 21 22.2**	**+1.7**
KSH				PP	**PP**	**18 22 25.1**	**+4.2**
KSH				AMB	AMB		
	comp=Z,260nm,5.3s						
DPC	**Dobruska-Polom**	**143.94**	**349**	*e*PKP	**PKPdf**	**18 22 13.5**	**-0.7**
KECS	**Kecovo**	**144.75**	**344**	*e*PKP	**PKPdf**	**18 22 16.5**	**+0.9**
VYHS	**Vyhne**	**145.17**	**346**	*e*PKP	**PKPdf**	**18 22 16.9**	**+0.6**
MLR	**Muntele Rosu**	**145.53**	**335**	PKPbc	**PKPab**	**18 22 18.9**	**+1.4**
	0.9nm,0.9s,baz=162,slow=3.2,SNR=6.1						
WLF	**Walferdange**	**145.53**	**0**	‖PKP	**PKPab**	**18 22 18.2**	**+1.0**
KHC	**Kasperske Hory**	**145.56**	**352**	*e*PKP	**PKPab**	**18 22 18.1**	**+0.7**
KHC				*ex*	x	18 22 33.4	
BRTR	**Keskin Array B**	**145.82**	**321**	PKPbc	**PKPab**	**18 22 19.5**	**+0.7**
	2.9nm,0.9s,baz=119,slow=2.8,SNR=12						
GERES	**GERESS Array B**	**145.82**	**351**	PKPbc	**PKPab**	**18 22 18.7**	**+0.2**
	1.6nm,0.7s,baz=29,slow=3.0,SNR=16						
CONA	**Conrad Observa**	**146.35**	**349**	*e*PKPbc	**PKPbc**	**18 22 18.7**	**-0.9**
	8.9nm,1.7s						
MOA	**Molln**	**146.71**	**350**	*e*PKPab	**PKPab**	**18 22 21.3**	**-0.5**
	3.5nm,0.9s						
ARSA	**Arzberg**	**147.06**	**349**	*e*PKPdf	**PKPdf**	**18 22 19.4**	**-0.2**
	1.5nm,0.7s						
RETA	**Reutte**	**147.51**	**355**	*e*PKPab	**PKPab**	**18 22 24.2**	**-0.8**
	5.0nm,1.3s						
KBA	**Koelnbreinsper**	**147.60**	**351**	*e*PKPbc	**PKPbc**	**18 22 22.5**	**-0.8**
	2.9nm,0.7s						
MOTA	**Moosalm**	**147.62**	**354**	*e*PKPbc	**PKPbc**	**18 22 22.3**	**-1.1**
	1.7nm,0.5s						
WTTA	**Wattenberg**	**147.64**	**353**	*es*PKPdf	**PKPab**	**18 22 24.4**	**-1.3**
	1.9nm,0.4s						
SOKA	**Soboth**	**147.71**	**349**	*ep*PKPdf	**PKPab**	**18 22 24.2**	**

CRZ1 *e*S **Sn** **18 10 04.7 +0.4**
MATN Matagalpa 1.26 21 *e*P **Pn** **18 09 53.5 +0.9**
GBS3 Finca Las Im˜¡ 1.34 136⇑ *e*P **Pn** **18 09 54.1 +0.5**
ESTN Estel 1.34 1 *e*P **Pn** **18 09 54.7 +1.0**
ESTN *e*S **Sn** **18 10 13.6 +2.0**
BUEV Buena Vista 1.36 134 *e*P **Pn** **18 09 54.5 +0.6**
BUEV *e*S **Sn** **18 10 13.2 +1.3**
BUAI Buenos Aires 1.36 130⇓ *e*P **Pn** **18 09 54.3 +0.5**
GPS1 Guardaparques 1.41 133 *e*P **Pn** **18 09 55.4 +0.8**
GPS3 Bodega del ICE 1.42 134 *e*P **Pn** **18 09 54.9 +0.4**
GPS2 Hotel Rinc˜‡n 1.43 134 *e*P **Pn** **18 09 55.3 +0.6**
GPS2 *e*S **Sn** **18 10 13.8 +0.4**
LIM1 Limonal 1.54 133⇓ *e*P **Pn** **18 09 56.7 +0.6**
GUAB Guayabo de Bag 1.55 132 *e*P **Pn** **18 09 56.9 +0.7**
MESS Mesas 1.55 130⇓ *e*P **Pn** **18 09 56.8 +0.5**
MESS ⇓*e*P 18 09 56.9
MESS *e*S **Sn** **18 10 17.8 +1.6**
HORNC Hornillas 1.58 131⇓ *e*P **Pn** **18 09 57.2 +0.5**
COLC Colonia 1.59 133⇓ *i*P **Pn** **18 09 57.5 +0.7**
PTEN Parque Tenorio 1.73 127⇓ *i*P **Pn** **18 09 58.9 +0.4**
RCON San Juan de Ri 1.74 8 *e*P **Pn** **18 10 00.3 +1.5**
VCR Vista de Mar 1.78 155⇓ *i*P **Pn** **18 09 59.9 +0.6**
JTS JuntasAbangare 2.03 136 P **Pn** **18 10 02.9 +0.4**
comp=Z,56nm,0.3s,baz=0.0,slow=11,SNR=144
JTS S **Sn** **18 10 25.4 -1.9**
comp=Z,42nm,0.3s,baz=18,slow=22,SNR=5.7
JTS JuntasAbangare 2.03 136 *e*P **Pn** **18 10 02.9 +0.4**
CEDE Laguna Cede˜–o 2.08 127⇓ *e*P **Pn** **18 10 03.9 +0.6**
ESPN Las Esperanzas 2.10 78⇓ *e*P **Pn** **18 10 04.6 +1.3**
ESPN *e*S **Sn** **18 10 31.1 +2.2**
LCND La Ca˜–ada 2.13 317 IAML 18 10 28.3
comp=Z,819nm,0.3s
LCY Lacayo 2.49 312 *e*P **Pn** **18 10 09.7 +1.0**
SRA1 San Ram˜‡n 2.51 131 *e*P **Pn** **18 10 09.6 +0.7**
PACA Pacayal 2.54 312 *e*P **Pn** **18 10 10.7 +1.4**
PACA IAML 18 10 44.0
comp=Z,8μm,0.2s
CGA2 Cerro Gallo 2 2.56 132 *e*P **Pn** **18 10 10.7 +0.9**
CGA2 *e*S **Sn** **18 10 41.6 +1.4**
TECA Tecapa 2.69 310 *e*P **Pn** **18 10 12.4 +1.0**
HDC Heredia 2.84 128 *e*P **Pn** **18 10 14.4 +1.1**
QCR1 Quepos 3.19 136 *e*P **Pn** **18 10 19.3 +1.4**
LFRS El Faro 3.20 306⇑ *e*P **Pn** **18 10 19.4 +1.2**
URSC Urasca 3.20 126⇓ *e*P **Pn** **18 10 19.8 +1.4**
LFU La Fuente 3.31 307 *e*P **Pn** **18 10 21.4 +1.7**
BUS Buena Vista 3.39 130 *e*P **Pn** **18 10 21.9 +0.8**
BOQS Boqueron 3.43 305 *e*P **Pn** **18 10 23.1 +1.6**
BOQS *e*S **Sn** **18 11 02.4 +1.1**
APG El Apazote 5.11 310 P **Pn** **18 10 46.0 +1.8**
comp=Z,2.0nm,0.3s,baz=108,slow=13,SNR=15
CMIG Matias Romero 9.78 304 P **Pn** **18 11 48.4 +0.6**
comp=Z,2.6nm,0.3s,baz=135,slow=11,SNR=17
TXAR Lajitas Array 23.77 320 P **P** **18 14 34.4 -0.3**
comp=Z,6.8nm,0.6s,baz=138,slow=9.9,SNR=70
SIV San Ignacio 37.25 137 P **P** **18 16 31.9 -1.6**
comp=Z,2.8nm,0.5s,baz=317,slow=7.9,SNR=19
NVAR Mina Array Bea 38.90 319 P **P** **18 16 47.4 0.0**
comp=Z,0.4nm,0.5s,baz=133,slow=8.0,SNR=3.4
WRA Warramunga Arr 140.06 253 PKP **PKPdf** **18 28 48.1 -1.2**
comp=Z,0.2nm,0.5s,baz=92,slow=2.4,SNR=4.0

IDC 07 18:20:46.7±2.8, 6°.85S×129°.47E, h142km±38km, mb3.0/1, mb1 3.1/4, mb1mx2.8/51, mbtmp3.5/4, Error ellipse: s-maj=66.3km s-min=20.5km az=89.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.20**	**17**	P	Pn	18 22 16.2	+0.1
	0.8nm,0.3s,baz=192,slow=20,SNR=13						
SIJI				S	Sn	18 23 21.9	-4.1
	0.8nm,0.3s,baz=259,slow=23,SNR=10.0						
FITZ	**Fitzroy Crossi**	**11.79**	**198**	P	Pn	18 23 30.6	+0.1
	baz=0.0,slow=20						
WRA	**Warramunga Arr**	**13.85**	**161**	P	Pn	18 23 56.5	-0.6
	0.2nm,0.3s,baz=344,slow=12,SNR=10						
WRA				S	Sn	18 26 19.8	-11
	0.3nm,0.3s,baz=332,slow=24,SNR=9.2						
ASAR	**Alice Springs**	**17.26**	**166**	P	P	18 24 38.8	+0.2
	0.1nm,0.3s,baz=346,slow=9.8,SNR=23						
ASAR				S	S	18 27 40.8	-10
	0.0nm,0.3s,baz=352,slow=28,SNR=2.7						
MKAR	**Makanchi Array**	**67.81**	**327**	P	P	18 31 29.5	0.0
	0.2nm,0.3s,baz=115,slow=7.0,SNR=3.1						

NIED ***07*** *18:39:00, 39°.90N×143°.30E, h17km, Mw4.5 Best double couple: M₀7.37000×10¹⁵ NP1:ϕ₀190.00000°, δ20.00000°, λ72.00000°. NP2:ϕ₀29.00000°, δ71.00000°, λ97.00000°.*
ISCJB ***07*** *18:39:39.5±0.3, 39°.85N±0°.03×143°.41E±0°.04, h6km, mb4.4/63, MS4.1/37, Error ellipse: s-maj=5.9km s-min=3.1km az=43.1*
BJI ***07*** *18:39:40.8, 39°.78N×143°.46E, h29km, mb4.7/41, mB4.9/28, Ms4.4/28, Ms7 4.3/25*
IDC ***07*** *18:39:40.6±0.5, 39°.85N×143°.30E, h0km, mb4.3/32, mb1 4.3/39, mb1mx4.2/81, mbtmp4.3/39, ML3.6/7, MS3.9/35, Ms1 4.0/35, ms1mx3.7/75, Error ellipse: s-maj=14.1km s-min=11.2km az=113.0*
JMA ***07*** *18:39:42.3±0.3, 39°.92N×143°.34E, h21km±4km, M4.5*
NEIC ***07*** *18:39:45.6±1.8, 39°.88N×143°.30E, h35km±12km, mb5.0/9, Error ellipse: s-maj=8.8km s-min=5.1km az=121.0*
NEIC Recorded [1 JMA] in Aomori and Iwate.
MOS ***07*** *18:39:46.2±1.4, 40°.00N×143°.25E, h53km, mb4.8/26, MS4.0/8, Error ellipse: s-maj=8.0km s-min=4.7km az=95.7*

ISC 07 18:39:41.4±0.5, 39°.95N±0°.04×143°.32E±0°.05, h6km, n181, σ1§86/179, mb4.5/63, MS4.1/37, 13C-7D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**1.12**	**270**	P	**Pg**	**18 40 02.6**	**-0.2**
MIYJ	**Miyakonagasawa**	**1.22**	**253**	P	**Pg**	**18 40 04.3**	**-0.4**
MIYJ				*e*S	**Sg**	**18 40 20.0**	**-0.4**
JANG	**Nango**	**1.45**	**288**	P	**Pn**	**18 40 07.9**	**-0.2**
JOM	**Ohasama**	**1.64**	**254**	P	**Pn**	**18 40 11.1**	**+0.4**
JMK	**Ichinoseki**	**1.91**	**239**	P	**Pn**	**18 40 14.1**	**-0.3**
JMK				*e*S	**Sn**	**18 40 38.0**	**-0.7**
JTM	**Tenmabayashi**	**1.91**	**297**	P	**Pn**	**18 40 15.4**	**+0.9**
ERM	**Erimo**	**2.06**	**357**	*e*Pn	**Pn**	**18 40 17.3**	**+0.8**
ERM	**Erimo**	**2.06**	**357**	*e*eP	**Pb**	**18 40 19.1**	**-0.1**
ERM				pmax	pmax		
	comp=Z,264nm,1.2s						
JAH	**Hinai**	**2.07**	**277**	P	**Pn**	**18 40 17.9**	**+1.2**
JOT	**Ohata**	**2.24**	**310**	P	**Pn**	**18 40 20.3**	**+1.3**
JNBK	**Urakawa-nobuka**	**2.37**	**350**	P	**Pb**	**18 40 22.6**	**-1.8**
JYK	**Kaneyama**	**2.52**	**247**	P	**Pn**	**18 40 23.2**	**+0.4**
JYK				*e*S	**Sn**	**18 40 53.4**	**-0.3**
JCH	**Churui**	**2.66**	**1**	P	**Pn**	**18 40 26.1**	**+1.4**
JCH				S	**Sn**	**18 40 57.7**	**+0.4**
GLVR	**Golovnino**	**4.12**	**23⇑**	*i*P	**Pn**	**18 40 45.4**	**+0.5**
GLVR				*i* S	**Sn**	**18 41 30.4**	**-3.0**
GLVR				pmax	pmax		
	comp=Z,216nm,0.5s						
GLVR				pmax	pmax		
	comp=N,146nm,0.2s						
GLVR				pmax	pmax		
	comp=E,119nm,0.6s						
GLVR				smax	smax		
	comp=N,2μm,0.3s						
GLVR				smax	smax		
	comp=E,214nm,0.1s						
ASAJ	**Asahikawa**	**4.20**	**353**	Pn	**Pn**	**18 40 48.2**	**+2.4**
	comp=E,2.9nm,0.3s,baz=194,slow=12,SNR=47						
ASAJ				Sn	**Sb**	**18 41 42.3**	**-4.2**
	comp=E,2.2nm,0.3s,baz=207,slow=9.0,SNR=5.1						
GRPR	**Tuman**	**4.43**	**24⇓**	*i*P	**Pn**	**18 40 49.8**	**+0.7**
GRPR				*i* S	**Sn**	**18 41 37.6**	**-3.4**
GRPR				pmax	pmax		
	comp=N,120nm,0.2s						
GRPR				pmax	pmax		
	comp=E,80nm,0.2s						
GRPR				pmax	pmax		
	comp=Z,222nm,0.2s						
GRPR				smax	smax		
	comp=N,845nm,0.3s						
GRPR				smax	smax		
	comp=E,1μm,0.3s						
LAGR	**Lagunnoye**	**4.49**	**23**	*e*P	**Pn**	**18 40 50.6**	**+0.7**
LAGR				*i* S	**Sn**	**18 41 40.6**	**-1.9**
LAGR				pmax	pmax		
	comp=Z,247nm,0.2s						
LAGR				pmax	pmax		
	comp=E,241nm,0.5s						
LAGR				pmax	pmax		
	comp=N,106nm,0.1s						
LAGR				smax	smax		
	comp=E,1μm,0.4s						
LAGR				smax	smax		
	comp=N,2μm,0.6s						
YUK	**Yuzh-Kuril'sk**	**4.50**	**24***d*	*i*P	**Pn**	**18 40 50.8**	**+0.8**
YUK				*i* S	**Sn**	**18 41 39.4**	**-3.2**
YUK				pmax	pmax		
	comp=N,72nm,0.2s						
YUK				pmax	pmax		
	comp=Z,274nm,0.2s						
YUK				pmax	pmax		
	comp=E,67nm,0.3s						
YUK				smax	smax		
	comp=N,1μm,0.3s						
YUK				smax	smax		
	comp=E,555nm,0.3s						
YUK				MLR	MLR		
	comp=Z,817nm,16.0s						
YUK				MLR	MLR		
	comp=N,954nm,14.0s						
SHO	**Shikotan**	**4.71**	**33***c*	*i*P	**Pn**	**18 40 51.8**	**-1.1**
SHO				*i* S	**Sn**	**18 41 42.4**	**-5.4**
SHO				pmax	pmax		
	comp=N,39nm,0.3s						
SHO				pmax	pmax		
	comp=Z,80nm,0.3s						
SHO				pmax	pmax		
	comp=E,22nm,0.2s						
SHO				smax	smax		
	comp=N,555nm,0.2s						
SHO				smax	smax		
	comp=E,338nm,0.2s						
MJAR	**Matsushiro Arr**	**5.27**	**231**	Pn	**Pn**	**18 41 01.3**	**+0.6**
	comp=E,4.5nm,0.3s,baz=32,slow=12,SNR=113						
MJAR				LR	LR	18 43 14.9	
	comp=E,866nm,19.9s,baz=50,slow=41						
MAJO	**Matsushiro**	**5.27**	**231**	*e*Pn	**Pn**	**18 41 01.2**	**+0.5**
	comp=E,107nm,0.6s						
MAJO	**Matsushiro**	**5.27**	**231***c*	*i*P	**Pn**	**18 41 01.8**	**+1.1**
MAT	**Matsushiro**	**5.27**	**231**	P	**Pn**	**18 41 01.7**	**+1.0**
MAT				S	**Sn**	**18 41 56.5**	**-5.2**
KUR	**Kuril'sk**	**6.25**	**31***c*	*i*P	**Pn**	**18 41 14.8**	**+0.7**
KUR				*i* S	**Sn**	**18 42 21.1**	**-4.7**
KUR				pmax	pmax		
	comp=Z,88nm,0.5s						
KUR				pmax	pmax		
	comp=N,32nm,0.3s						
KUR				pmax	pmax		
	comp=E,31nm,0.2s						
KUR				smax	smax		
	comp=N,259nm,0.3s						
KUR				smax	smax		
	comp=E,123nm,0.2s						
YSS	**Yuzh-Sakhalins**	**7.01**	**357**	*e*Pn	**Pn**	**18 41 27.4**	**+2.9**
	comp=E,43nm,1.1s						
YSS	**Yuzh-Sakhalins**	**7.01**	**357⇓**	*i*P	**Pn**	**18 41 27.8**	**+3.3**
YSS				*e*S	**Sn**	**18 42 48.0**	**+3.5**
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS				MLR	MLR		
	comp=E,700nm,16.0s						
YSS				MLR	MLR		
	comp=Z,1μm,16.0s						
YSS				MLR	MLR		
	comp=N,900nm,15.0s						
TEY	**Ternei**	**7.10**	**318**	*e*P	Pn	18 41 31.0	+5.3
TEY				pmax	pmax		
	comp=Z,18nm,0.8s						
TEY				MLR	MLR		
	comp=N,1μm,14.0s						
TEY				MLR	MLR		
	comp=E,850nm,14.0s						
TEY				MLR	MLR		
	comp=Z,2μm,14.0s						
JHJ	**Hachijo jima 2**	**7.39**	**204**	Pn	**Pn**	**18 41 27.4**	**-2.3**
	comp=Z,17nm,0.3s,baz=14,slow=13,SNR=2.7						
JHJ				Sn	Sn	18 42 42.9	-11
	comp=Z,17nm,0.3s,baz=18,slow=20,SNR=3.5						
JHJ				LR	LR	18 44 35.4	
	comp=Z,498nm,18.8s,baz=96,slow=40						
USRK	**Ussuriysk Ar.**	**9.43**	**300**	Pn	**Pn**	**18 42 00.4**	**+2.7**
	comp=Z,1.3nm,0.3s,baz=118,slow=11,SNR=20						
USRK				LR	LR	18 45 31.0	
	comp=Z,937nm,19.8s,baz=89,slow=37						
TYV	**Tymovskoe**	**10.92**	**358**	*e*P	**Pn**	**18 42 15.0**	**-3.1**
TYV				pmax	pmax		
	comp=Z,200nm,3.9s						
TYV				pmax	pmax		
	comp=Z,9.0nm,1.4s						
TYV				MLR	MLR		
	comp=N,1μm,15.0s						
MDJ	**Mudanjiang**	**11.19**	**299**	*e*Pn	**Pn**	**18 42 24.8**	**+3.1**
	comp=N,26nm,1.3s						
GRNR	**Gornyy**	**11.85**	**338**	*e*P	**Pn**	**18 42 31.1**	**+0.3**
JNU	**Nakatsue**	**12.10**	**240**	Pn	**Pn**	**18 42 34.3**	**-0.1**
	comp=N,0.3nm,0.3s,baz=59,slow=6.0,SNR=4.5						
JNU				LR	LR	18 47 32.1	
	comp=N,908nm,19.2s,baz=54,slow=39						
KSRS	**Korea Array**	**12.29**	**263**	Pn	**Pn**	**18 42 39.0**	**+2.2**
	comp=N,0.7nm,0.3s,baz=80,slow=14,SNR=20						
KSRS				LR	LR	18 47 04.3	
	comp=N,828nm,18.5s,baz=74,slow=36						
KSAR	**Wonju Array Be**	**12.32**	**263**	Pn	**Pn**	**18 42 39.0**	**+1.7**
KSAR	**Wonju Array Be**	**12.32**	**263**	P	**Pn**	**18 42 39.0**	**+1.7**
KLR	**Kul'dur**	**12.40**	**322**	Pn	**Pn**	**18 42 39.9**	**+1.6**
	comp=N,0.0nm,0.3s,baz=148,slow=12,SNR=7.0						
KLR				LR	LR	18 47 40.2	
	comp=N,66nm,19.7s,baz=127,slow=38						
KLR	**Kul'dur**	**12.40**	**322⇓**	*i*P	**Pn**	**18 42 39.6**	**+1.3**
CN2	**Changchun**	**13.86**	**292**	*e*P	**Pn**	**18 43 01.5**	**+3.2**
CN2				pmax	pmax		
	comp=N,10.0nm,0.6s						
CN2				LR	LR		
	comp=N,490nm,16.0s						
CN2				LR	LR		
	comp=N,620nm,16.0s						
CN2				LR	LR		
	comp=N,790nm,17.0s						
PETK	**Petropavlovsk-**	**16.42**	**32**	Pn	**P**	**18 43 34.8**	**-0.3**
	comp=N,0.1nm,0.3s,baz=218,slow=9.0,SNR=3.5						
PETK				LR	LR	18 49 26.5	
	comp=N,251nm,20.9s,baz=208,slow=36						
ZEA	**Zeya**	**17.57**	**327**	*e*P	**Pn**	**18 43 45.7**	**-1.1**
ZEA				pmax	pmax		
	comp=N,27nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,29nm,1.0s						
ZEA				MLR	MLR		
	comp=E,600nm,15.0s						
ZEA				MLR	MLR		
	comp=Z,900nm,15.0s						
ZEA				MLR	MLR		
	comp=N,500nm,14.0s						
MA2	**Magadan**	**20.20**	**11**	P	**P**	**18 44 17.2**	**+0.7**
	comp=N,11nm,0.7s,baz=184,slow=6.9,SNR=6.5						
MA2	**Magadan**	**20.20**	**11**	*e*P	**P**	**18 44 17.4**	**+0.8**
MA2	**Magadan**	**20.20**	**11⇑**	*i*P	Pn	18 44 17.7	-0.8
MA2				pmax	pmax		
	comp=Z,12nm,1.0s						
TIA	**Tai'an**	**20.93**	**268**	P	**P**	**18 44 22.7**	**-2.0**
TIA				pmax	pmax		
	comp=Z,11nm,0.9s						
YAK	**Yakutsk**	**23.62**	**344**	*e*P	**P**	**18 44 51.8**	**-1.0**
	comp=Z,36nm,0.8s						
YAK	**Yakutsk**	**23.62**	**344**	*e*P	**P**	**18 44 49.7**	**-3.1**
YAK				*e*		18 45 19.9	
YAK				*e*S	**S**	**18 48 57.1**	**-10**
YAK				pmax	pmax		
	comp=Z,28nm,1.2s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.4s						
YAK				pmax	pmax		
	comp=Z,73nm,2.0s						
YAK				pmax	pmax		
	comp=N,70nm,2.3s						
YAK				pmax	pmax		
	comp=E,41nm,2.5s						
YAK				smax	smax		
	comp=N,44nm,2.2s						
YAK				smax	smax		
	comp=E,58nm,2.3s						
YAK				MLR	MLR		
	comp=Z,373nm,16.0s						
YAK				MLR	MLR		
	comp=N,183nm,14.0s						
YAK				MLR	MLR		
	comp=E,200nm,17.0s						
SEY	**Seymchan**	**23.65**	**10**	P	**P**	**18 44 53.8**	**+0.7**
	comp=E,13nm,0.9s,baz=181,slow=7.4,SNR=26						
SEY	**Seymchan**	**23.65**	**10***c*	*e*P	**P**	**18 44 54.4**	**+1.3**
BOD	**Bodaibo**	**25.97**	**323**	*e*P	**P**	**18 45 10.2**	**-4.3**
SONM	**Songino Array**	**27.54**	**299**	P	**P**	**18 45 29.7**	**+0.7**
	comp=E,6.5nm,0.9s,baz=92,slow=7.8,SNR=28						
SONM				LR	LR	18 57 06.0	
	comp=E,656nm,18.6s,baz=98,slow=38						
XAN	**Xi'an**	**27.98**	**269**	P	**P**	**18 45 31.3**	**-1.6**
XAN				S	**S**	**18 50 12.8**	**-4.7**
XAN				pmax	pmax		
	comp=E,10.0nm,1.2s						
XAN				pmax	pmax		
	comp=E,74nm,4.0s						
XAN				LR	LR		
	comp=E,200nm,13.7s						
XAN				LR	LR		
	comp=E,460nm,15.7s						
XAN				LR	LR		
	comp=E,480nm,14.5s						
H11N2	**WAKE ISLAND Hy**	**28.56**	**128**	T	T	19 15 31.0	
	baz=320						
H11N1	**WAKE ISLAND Hy**	**28.57**	**128**	T	T	19 15 33.5	
	baz=320						
H11N3	**WAKE ISLAND Hy**	**28.58**	**128**	T	T	19 15 33.8	
	baz=320						
ENH	**Enshi**	**29.17**	**261**	*e*P	**P**	**18 45 42.1**	**-1.3**
	comp=E,68nm,1.2s						
H11S1	**WAKE ISLAND Hy**	**29.38**	**130**	T	T	19 16 35.7	
	baz=322						
H11S3	**WAKE ISLAND Hy**	**29.39**	**130**	T	T	19 16 36.9	
	baz=322						
H11S2	**WAKE ISLAND Hy**	**29.40**	**130**	T	T	19 16 33.4	
	baz=322						
TLY	**Talaya**	**29.67**	**307**	LR	LR	18 58 24.9	
	comp=E,216nm,18.6s,baz=92,slow=38						
TLY	**Talaya**	**29.67**	**307**	*e*P	**P**	**18 45 49.3**	**+1.6**
TLY				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TLY				MLR	MLR		
	comp=Z,317nm,14.0s						
ZAK	**Zakamensk**	**29.76**	**304**	*e*P	**P**	**18 45 48.2**	**-0.4**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
BILL	**Bilibino**	**30.81**	**17⇓**	*i*P	**P**	**18 46 00.8**	**+3.3**
BILL				*i*		18 46 14.6	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
LZH	**Lanzhou**	**31.16**	**276**	*e*P	**P**	**18 46 01.2**	**0.0**
LZH				pmax	pmax		
	comp=Z,20nm,1.2s						
LZH				pmax	pmax		
	comp=Z,110nm,5.1s						
LZH				LR	LR		
	comp=Z,370nm,12.2s						
LZH				LR	LR		
	comp=Z,800nm,11.7s						
LZH				LR	LR		
	comp=Z,880nm,14.1s						
TIXI	**Tiksi**	**32.60**	**352**	P	**P**	**18 46 13.6**	**+0.5**
	comp=Z,1.0nm,0.9s,baz=173,slow=3.2,SNR=3.3						
TIXI				LR	LR	19 01 11.7	
	comp=Z,198nm,18.6s,baz=157,slow=40						
TIXI	**Tiksi**	**32.60**	**352⇑**	*i*P	**P**	**18 46 13.7**	**+0.5**
TIXI				*i* *PP	**sP**	**18 46 23.4**	**+7.6**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.7s						
GTA	**Gaotai**	**33.24**	**283**	⇓P	**P**	**18 46 20.2**	**+0.8**
GTA				pP	sP	18 46 24.8	+2.8
GTA				sP	pP	18 46 27.2	+6.0
GTA				PcP	**PcP**	**18 49 00.0**	**-1.8**
GTA				S	**S**	**18 51 43.1**	**+3.2**
GTA				pmax	pmax		
	comp=Z,13nm,1.0s						
GTA				pmax	pmax		
	comp=Z,81nm,4.3s						
GTA				LR	LR		
	comp=Z,180nm,18.4s						
GTA				LR	LR		
	comp=Z,600nm,16.5s						
GTA				LR	LR		
	comp=Z,810nm,17.1s						
DAV	**Davao City (W)**	**36.40**	**211**	LR	LR	19 02 15.4	
	comp=Z,82nm,18.8s,baz=37,slow=37						
KMI	**Kunming**	**36.94**	**259**	P	**P**	**18 46 51.2**	**-0.3**
KMI				pP	sP	18 47 02.8	+8.7
KMI				sP	pP	18 47 08.5	+15
KMI				pmax	pmax		
	comp=Z,20nm,1.4s						
KMI				pmax	pmax		
	comp=Z,57nm,3.8s						
KMI				LR	LR		
	comp=Z,260nm,16.6s						
KMI				LR	LR		
	comp=Z,380nm,17.2s						
KMI				LR	LR		
	comp=Z,470nm,15.5s						
ZALV	**Zalesovo Beam**	**41.12**	**310**	P	**P**	**18 47 26.6**	**+0.7**
	comp=Z,7.8nm,0.5s,baz=96,slow=8.2,SNR=45						
ZALV				PcP	**PcP**	**18 49 25.4**	**+0.2**
	comp=Z,2.3nm,0.6s,baz=110,slow=2.9,SNR=3.8						
ZALV				LR	LR	19 05 18.3	
	comp=Z,236nm,19.0s,baz=70,slow=37						
NRIK	**Noril'sk**	**41.28**	**334**	LR	LR	19 06 16.3	
	comp=Z,300nm,18.9s,baz=92,slow=39						
NVS	**Novosibirsk**	**41.97**	**311**	*e*P	**P**	**18 47 32.3**	**-0.5**
NVS				pmax	pmax		
	comp=Z,21nm,2.0s						
LSA	**Lhasa**	**43.49**	**273**	*e*P	**P**	**18 47 46.1**	**0.0**
	comp=Z,3.8nm,0.7s						
LSA	**Lhasa**	**43.49**	**273**	*e*P	**P**	**18 47 46.1**	**0.0**
LSA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CHTO	**Chiang Mai**	**43.49**	**254**	*e*P	**P**	**18 47 43.4**	**-2.2**
	comp=Z,12nm,1.3s						
CHTO	**Chiang Mai**	**43.49**	**254**	*e*P	**P**	**18 47 43.4**	**-2.2**
CHTO				pmax	pmax		
	comp=Z,11nm,1.3s						
CMAR	**Chiang Mai Arr**	**43.72**	**254**	P	**P**	**18 47 47.5**	**+0.1**
	comp=Z,1.8nm,0.8s,baz=43,slow=7.1,SNR=12						
CMAR				LR	LR	19 06 54.7	
	comp=Z,62nm,18.7s,baz=70,slow=37						
MKAR	**Makanchi Array**	**43.90**	**300**	P	**P**	**18 47 48.9**	**+0.2**
	comp=Z,4.7nm,0.8s,baz=84,slow=9.1,SNR=44						
MKAR				LR	LR	19 07 03.8	
	comp=Z,340nm,18.9s,baz=60,slow=37						
KDAK	**Kodiak Island**	**43.95**	**44**	P	**P**	**18 47 49.6**	**+0.8**
	comp=Z,2.4nm,0.7s,baz=144,slow=0.7,SNR=4.5						
KURK	**Kurchatov**	**45.37**	**306**	*e*P	**P**	**18 48 00.2**	**0.0**
	comp=Z,77nm,0.7s						
KURK	**Kurchatov**	**45.37**	**306***c*	*i*P	**P**	**18 48 00.4**	**+0.2**
KURK				pmax	pmax		
	comp=Z,23nm,1.2s						
KURBB	**Kurchatov Arra**	**45.44**	**306**	P	**P**	**18 48 01.4**	**+0.6**
	comp=Z,8.0nm,0.5s,baz=81,slow=8.7,SNR=79						
ILAR	**Eielson Array**	**46.24**	**34**	P	**P**	**18 48 08.1**	**+1.1**
	comp=Z,1.4nm,0.8s,baz=266,slow=6.2,SNR=11						
PDGK	**Podgornoye**	**46.79**	**296**	*e*P	**P**	**18 48 11.6**	**-0.1**
ODAN	**Odare**	**47.77**	**272**	*e*P	**P**	**18 48 19.8**	**+0.1**
	comp=Z,31nm,1.0s						
JIRN	**Jiri**	**48.29**	**274**	*e*P	**P**	**18 48 24.1**	**+0.2**
RAMN	**Ramite**	**48.33**	**273**	*e*P	**P**	**18 48 24.2**	**+0.1**
GUN	**Gumba**	**48.40**	**274**	*e*P	**P**	**18 48 24.9**	**+0.2**
	comp=Z,72nm,1.0s						
KKN	**Kakani**	**48.92**	**274**	*e*P	**P**	**18 48 28.6**	**0.0**
	comp=Z,28nm,0.7s						
PKIN	**Phulchoki**	**48.94**	**274**	*e*P	**P**	**18 48 28.9**	**+0.1**
	comp=Z,12nm,0.6s						
DMN	**Daman**	**49.14**	**274**	*e*P	**P**	**18 48 30.5**	**+0.2**
GKN	**Gorkha**	**49.31**	**275**	*e*P	**P**	**18 48 31.3**	**-0.1**
TKM2	**Tokmak 2**	**49.61**	**297**	P	**P**	**18 48 34.5**	**+0.9**
	SNR=31						
BVAR	**Borovoye Array**

comp=Z,7.0nm,0.8s
KBK Karagaybulak 50.15 297 P P 18 48 38.5 +0.8
SNR=17
KZA Kyzart 50.15 296 P P 18 48 39.2 +1.2
SNR=8.4
KOLN Koldanda 50.22 275 *e*P **P 18 48 38.6 +0.2**
comp=Z,11nm,0.7s
AAK Ala-Archa 50.47 297 *e*P **P 18 48 39.8 -0.3**
comp=Z,2.7nm,0.6s
AAK Ala-Archa 50.47 297 *e*P **P 18 48 39.8 -0.3**
AAK pmax pmax
comp=Z,3.0nm,0.6s
PYUN Piuthan 50.52 276 *e*P **P 18 48 40.1 -0.6**
comp=Z,45nm,1.0s
EKS2 Erkin-Say 50.95 297 P P 18 48 44.0 +0.3
SNR=11
INK Inuvik 51.11 28 P P 18 48 46.0 +1.7
comp=Z,0.8nm,0.6s,baz=287,slow=8.9,SNR=3.4
INK Inuvik 51.11 28 *e*P **P 18 48 43.8 -0.5**
AML Almayashu 51.20 297 P P 18 48 46.9 +0.9
SNR=9.9
MNAS Manas 51.88 297 *e*P **P 18 48 51.2 +0.5**
SFK Sufi-Kurgan 52.17 294 *e*P **P 18 48 53.2 +0.2**
SVE Sverdlovsk 53.98 318 *e*P **P 18 49 08.1 +2.3**
SVE pmax pmax
comp=Z,14nm,1.1s
SVE MLR MLR
comp=Z,599nm,15.0s
PSI Prapat 54.57 239 LR LR 19 14 15.7
comp=Z,58nm,18.4s,baz=66,slow=38
NIL Nilore 55.16 287 *e*P **P 18 49 15.7 +1.0**
comp=Z,41nm,0.9s
NIL Nilore 55.16 287 *e*P **P 18 49 15.7 +1.0**
NIL pmax pmax
comp=Z,41nm,0.9s
ARU Arti 55.19 318*d i*P **P 18 49 14.8 +0.2**
ARU 18 50 14.2
ARU 18 51 14.6
ARU S **S 18 56 57.3 -0.7**
ARU SS **SS 19 00 39.2 -2.2**
ARU pmax pmax
comp=Z,14nm,1.2s
ARU MLR MLR
comp=Z,486nm,16.0s
KBL Kabul 57.80 290 P P 18 49 34.0 +0.3
KBL pmax pmax
comp=Z,12nm,1.0s
AKTO Aktyubinsk 57.86 311 P P 18 49 34.1 +0.4
comp=Z,3.7nm,0.7s,baz=67,slow=13,SNR=12
AKTO LR LR 19 15 43.8
comp=Z,114nm,19.1s,baz=67,slow=37
SPITS Spitsbergen Ar 57.95 349 LR LR 19 16 51.9
comp=Z,107nm,20.4s,baz=20,slow=38
PRGR Permogore 59.15 327 *e*P **P 18 49 41.9 -0.5**
PRGR pmax pmax
comp=Z,7.0nm,0.6s
RES Resolute Bay 59.40 15 P P 18 49 44.4 +0.4
comp=Z,1.4nm,0.6s,baz=311,slow=8.4,SNR=4.3
RES Resolute Bay 59.40 15 *e*P **P 18 49 43.5 -0.5**
FITZ Fitzroy Crossi 60.06 199 P P 18 49 48.5 -0.7
comp=Z,3.3nm,0.9s,baz=15,slow=12,SNR=3.8
WRAB Tennant Creek 60.16 190 *e*P **P 18 49 48.8 -1.1**
WRAB Tennant Creek 60.16 190 *e*P **P 18 49 48.8 -1.1**
WRA Warramunga Arr 60.17 190 P P 18 49 48.5 -1.5
comp=Z,3.6nm,0.7s,baz=7.0,slow=7.0,SNR=17
ARCES ARCESS Array B 61.80 339 P P 18 50 01.4 +0.9
comp=Z,1.6nm,0.8s,baz=43,slow=13,SNR=3.6
KLMR Klimovskoe 62.10 327 *e*P **P 18 50 00.5 -2.1**
KLMR pmax pmax
comp=Z,16nm,1.6s
KLMR Klimovskoe 62.10 327 *e*P **P 18 50 00.5 -2.1**
KLMR AMP 18 50 04.1
comp=Z,16nm,1.6s
DAG Danmarks Havn 62.99 355 P P 18 50 09.6 +1.2
DAG pmax pmax
comp=Z,6.0nm,1.1s
GEYT Alibeck 63.75 299 P P 18 50 13.6 -0.5
comp=Z,4.2nm,0.8s,baz=42,slow=2.4,SNR=5.4
GEYT LR LR 19 20 05.0
comp=Z,100nm,18.8s,baz=10.0,slow=38
ASAR Alice Springs 63.90 190 P P 18 50 14.1 -0.9
comp=Z,1.3nm,0.7s,baz=2.8,slow=6.3,SNR=15
OBN Obninsk 66.66 323 *e*P **P 18 50 31.4 -1.1**
FINES FINESS Array B 66.93 332 P P 18 50 34.0 -0.2
comp=Z,4.0nm,0.8s,baz=47,slow=8.4,SNR=15
FINES LR LR 19 22 44.8
comp=Z,300nm,18.3s,baz=34,slow=39
FINES FINESS Array B 66.93 332 *i*P **P 18 50 34.7 +0.5**
FINES pmax pmax
comp=Z,4.0nm,0.8s
VSR Storozhevoye 67.73 319 *e*P **P 18 50 39.4 0.0**
VSR pmax pmax
comp=Z,5.0nm,0.7s
VORD Divnogorie 67.81 319 *e*P **P 18 50 39.4 -0.5**
VORD pmax pmax
comp=Z,4.0nm,0.9s
VSU Vasula 68.70 330⇑*i*P **P 18 50 46.8 +1.5**
VSU pmax pmax
comp=Z,11nm,0.9s
GOF Gofitskoye 69.27 312⇑*e*P **P 18 50 49.8 +0.6**
GOF pmax pmax
comp=Z,26nm,0.8s
NCK Nalchik 69.87 310⇑*i*P **P 18 50 54.4 +1.5**
KIV Kislovodsk 70.13 311 *e*P **P 18 50 56.0 +1.4**
comp=Z,27nm,1.0s
KIV Kislovodsk 70.13 311 *e*P **P 18 50 55.8 +1.2**
KIV pmax pmax
comp=Z,30nm,1.1s
KIV MLR MLR
comp=Z,191nm,17.0s
KBZ Khabaz 70.14 311 P P 18 50 55.7 +1.2
comp=Z,7.0nm,0.9s,baz=46,slow=5.3,SNR=12
GNI Garni 71.16 307 LR LR 19 25 21.7
comp=Z,83nm,18.8s,baz=62,slow=38
STKA Stephens Creek 71.48 182 P P 18 51 03.8 +1.1
comp=Z,1.4nm,0.8s,baz=358,slow=11,SNR=3.5
WSAR Wadi Sarin 71.56 285 LR LR 19 26 24.7
comp=Z,65nm,19.7s,baz=42,slow=39
HFS Hagfors 72.04 336 P P 18 51 06.4 +0.6
comp=Z,2.8nm,0.5s,baz=38,slow=5.4,SNR=15
HFS LR LR 19 26 00.9
comp=Z,126nm,18.6s,baz=33,slow=38
NVAR Mina Array Bea 72.06 55 P P 18 51 08.4 +1.8
comp=Z,1.0nm,0.7s,baz=286,slow=5.6,SNR=6.1
NB2 NORSAR Subarra 72.07 338 P P 18 51 05.7 -0.3
comp=Z,1.4nm,0.7s,baz=38,slow=6.2
NB2 NORSAR Subarra 72.07 338 P P 18 51 04.9 -1.1
NB2 pmax pmax
comp=Z,2.0nm,0.7s
NOA NORSAR Array B 72.07 338 P P 18 51 06.5 +0.5
comp=Z,7.1nm,0.9s,baz=34,slow=3.2,SNR=6.5
NOA LR LR 19 26 51.4
comp=Z,100nm,19.0s,baz=45,slow=39
AKASG Malin Array Be 72.90 323 P P 18 51 11.1 0.0
comp=Z,2.2nm,0.7s,baz=34,slow=5.8,SNR=7.0
AKASG LR LR 19 26 02.7
comp=Z,93nm,18.3s,baz=40,slow=38
FRB Frobisher Bay 73.59 14 P P 18 51 15.4 +0.5
comp=Z,3.2nm,0.6s,baz=358,slow=5.2,SNR=4.9
PDAR Pinedale Array 74.57 47 P P 18 51 22.2 +0.8
comp=Z,0.2nm,0.3s,baz=251,slow=5.6,SNR=2.7
BRTR Keskin Array B 78.03 312 P P 18 51 41.6 +0.7
comp=Z,1.1nm,1.0s,baz=112,slow=3.9,SNR=4.9
BRTR LR LR 19 31 58.6
comp=Z,51nm,18.8s,baz=36,slow=40
BRTR Keskin Array B 78.03 312 *i*P **P 18 51 42.7 +1.8**
BRTR pmax pmax
comp=Z,1.0nm,0.9s
MLR Muntele Rosu 78.11 320 LR LR 19 29 46.3
comp=Z,29nm,18.6s,baz=40,slow=38
MORC Moravsky Berou 78.72 328 P P 18 51 47.0 +2.6
MORC pmax pmax
comp=Z,6.0nm,1.2s
DPC Dobruska-Polom 78.77 329 *e*P **P 18 51 45.6 +0.9**
DPC Dobruska-Polom 78.77 329 *e*P **P 18 51 45.6 +0.9**
UPC Upice 78.77 329 AMS AMS 19 34 20.0
VYHS Vyhne 79.16 326 *e*P **P 18 51 48.1 +1.3**
VYHS pmax pmax
comp=Z,3.0nm,1.3s
VYHS Vyhne 79.16 326 *e*P **P 18 51 48.1 +1.3**
VYHS *e*PP **PP 18 54 42.8 -2.7**
CLL Collm 79.30 331 *i*P **P 18 51 48.0 +0.5**
comp=Z,4.0nm,1.0s
CLL Collm 79.30 331 *i*P **P 18 51 48.0 +0.5**
CLL pmax pmax
comp=Z,4.0nm,1.0s

PRU Pruhonice 79.76 329 *e*P **P 18 51 51.0 +0.9**
PRU AMS AMS 19 32 50.0
comp=Z,200nm,15.5s
PRU Pruhonice 79.76 329 *e*P **P 18 51 51.0 +0.9**
PRU MLR MLR
comp=Z,200nm,15.5s
MODS Modra-Piesok 79.92 327 *e*P **P 18 51 51.2 +0.2**
MODS Modra-Piesok 79.92 327 *e*P **P 18 51 51.2 +0.2**
KHC Kasperske Hory 80.82 329 *e*P **P 18 51 56.7 +0.8**
KHC Kasperske Hory 80.82 329 *e*P **P 18 51 56.7 +0.8**
EKA Eskdalemuir Ar 80.87 341 LR LR 19 32 34.8
comp=Z,74nm,18.3s,baz=45,slow=39
GERES GERESS Array B 81.00 329 P P 18 51 57.3 +0.4
comp=Z,0.8nm,0.6s,baz=38,slow=6.8,SNR=9.1
GERES LR LR 19 31 01.8
comp=Z,116nm,18.8s,baz=20,slow=38
MMAI Mount Meron Ar 81.48 306 P P 18 52 00.6 +0.9
comp=Z,3.9nm,0.9s,baz=342,slow=7.6,SNR=6.4
MMAI LR LR 19 32 13.6
comp=Z,96nm,18.9s,baz=90,slow=39
VTS Vitosha 81.58 320 P P 18 52 01.5 +1.4
VTS pmax pmax
comp=Z,7.0nm,1.0s
KBA Koelnbreinsper 82.57 328 P P 18 52 08.0 +2.7
KBA pmax pmax
comp=Z,6.0nm,2.6s
PPT Papeete 84.64 118 LR LR 19 24 27.1
comp=Z,71nm,20.7s,baz=356,slow=32
IDI Anoyia 86.08 314 LR LR 19 35 09.3
comp=Z,35nm,19.3s,baz=331,slow=39
TXAR Lajitas Array 87.17 54 P P 18 52 30.3 +1.6
comp=Z,0.6nm,0.8s,baz=297,slow=6.0,SNR=4.7
KEST Kesra 93.58 324 LR LR 19 38 48.1
comp=Z,123nm,18.9s,baz=306,slow=38
ESDC Sonseca Array 95.30 335 LR LR 19 41 29.0
comp=Z,98nm,18.5s,baz=110,slow=39
TORD Torodi Ar. Bea 116.26 318 PP PP 18 59 30.3 -0.5
comp=Z,1.0nm,1.0s,baz=19,slow=9.4,SNR=3.8
SNAA Sanae 143.97 197 PKP PKPab 18 59 13.8 -0.1
comp=Z,2.2nm,1.1s,baz=89,slow=5.6,SNR=3.9

JMA 07 18:40:37.1±0.1,39°.77N×142°.31E,h20km±1km,M3.8,
Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.38**	**296**	P	Pb	18 40 45.0	-0.2
JTH				S	Sb	18 40 50.6	-0.1
MIYJ	**Miyakonagasawa**	**0.42**	**243**	P	Pb	18 40 45.7	-0.2
MIYJ				S	Sb	18 40 51.6	-0.3
JKZ	**Kuzumaki**	**0.78**	**286**	P	Pb	18 40 52.2	+0.1
JKZ				*e*S	Sb	18 41 02.2	-0.1
JOM	**Ohasama**	**0.84**	**250**	P	Pb	18 40 53.0	0.0
JOM				S	Sb	18 41 03.7	-0.1
OFUJ	**Ofunato**	**0.85**	**216**	P	Pb	18 40 52.7	-0.4
OFUJ				S	Sb	18 41 03.6	-0.5
JANG	**Nango**	**0.86**	**315**	P	Pb	18 40 52.8	-0.5
JANG				S	Sb	18 41 03.2	-1.2
JMK	**Ichinoseki**	**1.18**	**226**	S	Sb	18 41 13.3	-0.2

NIED ***07*** *18:43:00, 39°.90N×143°.30E, h17km, Mw4.2 Best double couple: M₀1.91000×10¹⁵ NP1:φ₀s184.00000°, δ26.00000°, λ61.00000°. NP2:φ₀s35.00000°, δ67.00000°, λ103.00000°.*
ISCJB ***07*** *18:43:32.9±1.0, 39°.82N±0°.04×143°.45E±0°.05, h18km±6km, mb4.3/42, MS4.3/2, Error ellipse: s-maj=8.4km s-min=3.8km az=41.0*
IDC ***07*** *18:43:32.1±0.6, 39°.82N×143°.40E, h0km, mb4.1/28, mb1 4.2/34, mb1mx4.1/80, mbtmp4.2/34, ML3.7/6, Error ellipse: s-maj=16.3km s-min=12.7km az=122.0*
BJI ***07*** *18:43:33.6, 39°.59N×143°.32E, h30km, mb4.5/22, mB4.9/12, Ms4.3/3, Ms7 4.1/2*
MOS ***07*** *18:43:34.7±1.0, 39°.86N×143°.42E, h29km, mb4.5/14, Error ellipse: s-maj=9.5km s-min=5.3km az=85.7*
JMA ***07*** *18:43:35.3±0.3, 39°.92N×143°.28E, h23km±4km, M4.3*
JMA Felt I J1.
NEIC ***07*** *18:43:37.6±0.8, 39°.86N×143°.36E, h38km±6km, mb4.7/6, Error ellipse: s-maj=9.4km s-min=5.3km az=119.0*
NEIC Recorded [1 JMA] in Iwate.
ISC 07 18:43:37.1±0.8, 39°.90N±0°.04×143°.33E±0°.06, h32km±4km, n137, σ1§67/145, mb4.4/41, 9C-4D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**1.13**	**272**	P	**Pn**	**18 43 54.8**	**-1.8**
MIYJ	**Miyakonagasawa**	**1.21**	**255**	P	**Pn**	**18 43 56.5**	**-1.2**
MIYJ				*e*S	**Sn**	**18 44 11.7**	**-1.3**
JANG	**Nango**	**1.47**	**289**	P	**Pn**	**18 44 00.0**	**-1.3**
JOM	**Ohasama**	**1.63**	**255**	P	**Pn**	**18 44 03.2**	**-0.3**
JMK	**Ichinoseki**	**1.89**	**240**	P	**Pn**	**18 44 06.2**	**-0.9**
JMK				*e*S	**Sn**	**18 44 28.9**	**-0.9**
JTM	**Tenmabayashi**	**1.94**	**298**	P	**Pn**	**18 44 07.7**	**-0.1**
JAH	**Hinai**	**2.08**	**279**	P	**Pn**	**18 44 10.0**	**+0.2**
JIO	**Ouri**	**2.11**	**227**	P	**Pn**	**18 44 08.6**	**-1.6**
JIO				*e*S	**Sn**	**18 44 33.6**	**-1.7**
ERM	**Erimo**	**2.11**	**357**	*e*Pn	**Pn**	**18 44 10.9**	**+0.8**
ERM	**Erimo**	**2.11**	**357**	*d i*P	**Pb**	**18 44 12.8**	**-1.9**
JEM	**Erimo**	**2.11**	**357**	P	**Pn**	**18 44 10.4**	**+0.2**
JOT	**Ohata**	**2.28**	**311**	P	**Pn**	**18 44 12.5**	**+0.1**
JNBK	**Urakawa-nobuka**	**2.41**	**350**	P	**Pn**	**18 44 15.0**	**+0.7**
JNBK				*e*S	**Sn**	**18 44 43.2**	**+0.4**
JYK	**Kaneyama**	**2.50**	**248**	P	**Pn**	**18 44 15.5**	**0.0**
JYK				*e*S	**Sn**	**18 44 45.9**	**+1.0**
JKB	**Kayabe**	**2.64**	**319**	P	**Pn**	**18 44 18.8**	**+1.4**
GLVR	**Golovnino**	**4.17**	**22**	*e*P	**Pn**	**18 44 36.6**	**-1.8**
GLVR				*e*S	**Sn**	**18 45 22.6**	**-3.4**
GLVR	pmax pmax						
comp=Z,111nm,0.2s							
GLVR	pmax pmax						
comp=N,38nm,0.3s							
GLVR	smax smax						
comp=E,2μm,0.3s							
GLVR	smax smax						
comp=N,424nm,0.4s							
ASAJ	**Asahikawa**	**4.25**	**353**	Pn	**Pn**	**18 44 40.4**	**+0.9**
comp=N,6.6nm,0.3s,baz=206,slow=11,SNR=8.5							
ASAJ				Sn	**Sb**	**18 45 36.4**	**-5.4**
comp=N,9.2nm,0.3s,baz=168,slow=19,SNR=3.7							
GRPR	**Tuman**	**4.47**	**23**	*e*P	**Pn**	**18 44 41.5**	**-1.1**
GRPR				*e*S	**Sn**	**18 45 29.9**	**-3.7**
GRPR	pmax pmax						
comp=Z,168nm,0.3s							
GRPR	pmax pmax						
comp=N,52nm,0.2s							
GRPR	pmax pmax						
comp=E,86nm,0.2s							
GRPR	smax smax						
comp=N,1μm,0.3s							
GRPR	smax smax						
comp=E,2μm,0.4s							
LAGR	**Lagunnoye**	**4.54**	**23**	*e*P	**Pn**	**18 44 42.9**	**-0.6**
LAGR				*e*S	**Sn**	**18 45 32.6**	**-2.5**
LAGR	pmax pmax						
comp=Z,202nm,0.3s							
LAGR	pmax pmax						
comp=E,110nm,0.4s							
LAGR	smax smax						
comp=N,941nm,0.5s							
LAGR	smax smax						
comp=E,2μm,0.4s							
YUK	**Yuzh-Kuril'sk**	**4.54**	**24**	*e*P	**Pn**	**18 44 41.9**	**-1.6**
YUK				*e*S	**Sn**	**18 45 31.0**	**-4.2**
YUK	pmax pmax						
comp=E,77nm,0.3s							
YUK	pmax pmax						
comp=Z,177nm,0.3s							
YUK	pmax pmax						
comp=N,69nm,0.2s							
YUK	smax smax						
comp=N,413nm,0.5s							
YUK	smax smax						
comp=E,1μm,0.4s							
SHO	**Shikotan**	**4.75**	**32**	*d i*P	**Pn**	**18 44 43.8**	**-2.6**
SHO				*i* S	**Sn**	**18 45 34.5**	**-5.8**
SHO	pmax pmax						
comp=E,20nm,0.3s							
SHO	pmax pmax						
comp=Z,50nm,0.3s							
SHO	pmax pmax						
comp=N,8.0nm,0.2s							
SHO	smax smax						
comp=N,209nm,0.7s							
SHO	smax smax						
comp=E,342nm,0.4s							
MAJO Matsushiro 5.24 232 *e*Pn **Pn 18 44 53.5 +0.2**							
MAJO Matsushiro 5.24 232*c i*P **Pn 18 44 53.8 +0.5**							
MAJO pmax pmax							
comp=Z,41nm,0.6s							
MAT Matsushiro 5.24 232 P **Pn 18 44 53.7 +0.4**							
MAT S **Sn 18 45 51.7 -0.9**							
MJAR Matsushiro Arr 5.24 232 Pn **Pn 18 44 52.9 -0.4**							
comp=Z,3.4nm,0.3s,baz=35,slow=12,SNR=17							
KUR Kuril'sk 6.29 31*d i*P **Pn 18 45 07.8 +0.2**							
KUR *i* S **Sn 18 46 14.8 -3.5**							
KUR pmax pmax							
comp=Z,70nm,0.4s							
KUR pmax pmax							
comp=N,30nm,0.2s							
KUR pmax pmax							
comp=E,35nm,0.3s							
KUR smax smax							
comp=N,91nm,0.6s							
KUR smax smax							
comp=E,172nm,0.6s							
YSS Yuzh-Sakhalins 7.06 357 *e*P **Pn 18 45 18.1 0.0**							
YSS Yuzh-Sakhalins 7.06 357⇑*i*P **Pn 18 45 19.3 +1.2**							
YSS *e*S **Sn 18 46 36.0 -1.2**							
YSS pmax pmax							
comp=Z,10.0nm,0.9s							
JHJ Hachijo jima 2 7.35 204 Pn **Pn 18 45 19.1 -3.0**							
comp=Z,18nm,0.3s,baz=21,slow=19,SNR=3.3							
JHJ Sn **Sn 18 46 36.4 -8.0**							
comp=Z,20nm,0.3s,baz=334,slow=18,SNR=2.3							
USRK Ussuriysk Ar. 9.46 301 Pn **Pn 18 45 52.8 +1.7**							
comp=Z,1.8nm,0.3s,baz=90,slow=14,SNR=18							
JNU Nakatsue 12.08 240 Pn **Pn 18 46 27.3 +0.3**							
comp=Z,0.2nm,0.3s,baz=42,slow=16,SNR=2.8							
KSRS Korea Array 12.29 263 Pn **Pn 18 46 31.1 +1.3**							
comp=Z,0.7nm,0.3s,baz=81,slow=14,SNR=7.6							
KSAR Wonju Array Be 12.32 263 Pn **Pn 18 46 31.1 +0.9**							
KSAR Wonju Array Be 12.32 263 P **Pn 18 46 31.1 +0.9**							
KLR Kul'dur 12.44 322 Pn **Pn 18 46 34.2 +2.4**							
comp=Z,0.0nm,0.3s,baz=132,slow=15,SNR=3.5							
ZEA Zeya 17.62 327 *e*P **Pn 18 47 36.2 -3.7**							
ZEA pmax pmax							
comp=Z,19nm,0.9s							
HIA Hailar 19.16 307 *e*P **P 18 47 56.1 -1.7**							
HIA Hailar 19.16 307 *e*P **P 18 47 56.1 -1.7**							
MA2 Magadan 20.25 11 P Pn 18 48 10.6 -0.9							
comp=Z,9.8nm,0.6s,baz=206,slow=9.3,SNR=6.4							
MA2 Magadan 20.25 11⇑*i*P Pn 18 48 11.0 -0.5							
TIA Tai'an 20.93 268 P **P 18 48 15.3 -1.8**							
TIA pmax pmax							
comp=Z,4.0nm,1.0s							
YAK Yakutsk 23.66 344 *e*P **P 18 48 44.2 -1.1**							
comp=Z,17nm,0.7s							
YAK Yakutsk 23.66 344⇑*i*P **P 18 48 44.0 -1.4**							
YAK pmax pmax							
comp=Z,18nm,0.8s							
SEY Seymchan 23.70 10 P **P 18 48 45.9 +0.2**							
comp=Z,9.6nm,0.9s,baz=184,slow=6.7,SNR=13							
SEY Seymchan 23.70 10⇑*i*P **P 18 48 46.3 +0.6**							
SONM Songino Array 27.57 299 P **P 18 49 21.7 +0.5**							
comp=Z,5.5nm,0.9s,baz=96,slow=8.7,SNR=13							
SONM Songino Array 27.57 299 *e*P **P 18 49 21.9 +0.7**							
SONM pmax pmax							
comp=Z,6.0nm,0.9s							
XAN Xi'an 27.99 269 P **P 18 49 23.5 -1.5**							
XAN pmax pmax							
comp=Z,6.0nm,0.9s							
XAN pmax pmax							
comp=Z,99nm,4.3s							
H11N2 WAKE ISLAND Hy 28.52 128 T T 19 19 26.4							
baz=319,slow=75							
H11N1 WAKE ISLAND Hy 28.54 128 T T 19 19 27.9							
baz=319							
H11N3 WAKE ISLAND Hy 28.54 128 T T 19 19 31.7							
baz=319,slow=75							
ENH Enshi 29.16 261 *e*P **P 18 49 34.2 -1.2**							
comp=Z,19nm,0.8s							
H11S1 WAKE ISLAND Hy 29.35 130 T T 19 20 33.5							
baz=319							
H11S3 WAKE ISLAND Hy 29.35 130 T T 19 20 34.5							
baz=319							
H11S2 WAKE ISLAND Hy 29.37 130 T T 19 20 35.9							
baz=319							
BILL Bilibino 30.85 17 *e*P **P 18 49 49.9 0.0**							
BILL pmax pmax							
comp=Z,2.0nm,1.1s							
TIXI Tiksi 32.65 352 P **P 18 50 05.4 -0.2**							
comp=Z,0.9nm,0.8s,baz=161,slow=4.9,SNR=2.7							
GTA Gaotai 33.26 283⇓P **P 18 50 12.3 +0.8**							
GTA pP sP 18 50 22.6 -2.1							
GTA sP pP 18 50 27.1 +6.3							
GTA pmax pmax							
comp=Z,9.0nm,1.1s							
GTA pmax pmax							
comp=Z,70nm,4.8s							
GTA LR LR							
comp=Z,140nm,16.2s							
GTA LR LR							
comp=Z,320nm,15.9s							
GTA LR LR							
comp=Z,410nm,15.6s							
ZALV Zalesovo Beam 41.16 310 P **P 18 51 18.7 +0.5**							
comp=Z,8.7nm,0.4s,baz=96,slow=8.2,SNR=35							
ZALV PcP **PcP 18 53 17.5 +0.7**							
comp=Z,1.1nm,0.4s,baz=92,slow=2.9,SNR=3.2							
NVS Novosibirsk 42.01 311 *e*P **P 18 51 24.7 -0.4**							
NVS pmax pmax							
comp=Z,6.0nm,0.7s							
LSA Lhasa 43.50 273 *e*P **P 18 51 39.0 +0.9**							
comp=Z,2.9nm,0.7s							
LSA Lhasa 43.50 273 *e*P **P 18 51 39.0 +0.9**							
LSA pmax pmax							
comp=Z,3.0nm,0.7s							
CMAR Chiang Mai Arr 43.71 254 P **P 18 51 38.8 -0.4**							
comp=Z,0.8nm,0.8s,baz=49,slow=7.5,SNR=4.7							
CMAR Chiang Mai Arr 43.71 254 *e*P **P 18 51 39.7 +0.4**							
CMAR pmax pmax							
comp=Z,1.0nm,0.7s							
MKAR Makanchi Array 43.93 300 P **P 18 51 40.9 0.0**							
comp=Z,4.5nm,0.8s,baz=85,slow=10,SNR=17							
KDAK Kodiak Island 43.98 44 P **P 18 51 41.5 +0.6**							
comp=Z,1.8nm,1.0s,baz=262,slow=15,SNR=2.5							
KURK Kurchatov 45.40 306 *e*P **P 18 51 52.3 -0.1**							
KURK Kurchatov 45.40 306*c i*P **P 18 51 52.7 +0.3**							
KURK pmax pmax							
comp=Z,57nm,0.7s							
KURBB Kurchatov Arra 45.48 306 P **P 18 51 53.1 +0.1**							
comp=Z,8.9nm,0.5s,baz=80,slow=8.8,SNR=45							
ILAR Eielson Array 46.27 34 P **P 18 51 58.9 -0.2**							
comp=Z,1.0nm,0.8s,baz=262,slow=5.9,SNR=5.5							
ILAR Eielson Array 46.27 34 *e*P **P 18 51 59.4 +0.3**							
ILAR pmax pmax							
comp=Z,1.0nm,0.8s							
ODAN Odare 47.77 272 *e*P **P 18 52 11.7 +0.1**							
JIRN Jiri 48.29 274 *e*P **P 18 52 16.2 +0.4**							
RAMN Ramite 48.34 273 *e*P **P 18 52 16.3 +0.3**							
GUN Gumba 48.41 274 *e*P **P 18 52 16.9 +0.2**							
comp=Z,22nm,0.5s							
KKN Kakani 48.93 274 *e*P **P 18 52 20.8 +0.3**							
comp=Z,23nm,0.8s							
DMN Daman 49.15 274 *e*P **P 18 52 22.6 +0.3**							
GKN Gorkha 49.31 275 *e*P **P 18 52 23.5 +0.1**							
TKM2 Tokmak 2 49.63 297 P **P 18 52 26.6 +0.9**							
SNR=22							
BVAR Borovoye Array 49.79 311 P **P 18 52 27.2 +0.7**							
comp=Z,6.2nm,0.7s,baz=69,slow=9.0,SNR=22							
DANN Dangsing 49.81 276 *e*P **P 18 52 27.9 +0.5**							
comp=Z,42nm,0.7s							
BRVK Borovoye 49.84 311 *e*P **P 18 52 27.4 +0.5**							
BRVK Borovoye 49.84 311*c i*P **P 18 52 27.7 +0.8**							
BRVK pmax pmax							
comp=Z,10.0nm,0.6s							
KBK Karagaybulak 50.17 297 P **P 18 52 30.5 +0.7**							
SNR=11							
KZA Kyzart 50.18 296 P **P 18 52 31.4 +1.3**							
SNR=5.3							
KOLN Koldanda 50.23 275 *e*P **P 18 52 30.7 +0.3**							
comp=Z,8.7nm,0.5s							
AAK Ala-Archa 50.49 297 *e*P **P 18 52 31.6 -0.6**							
comp=Z,1.7nm,0.4s							
AAK Ala-Archa 50.49 297*c i*P **P 18 52 32.9 +0.7**							
AAK pmax pmax							
comp=Z,12nm,1.7s							

PYUN Piuthan 50.53 276 *eP* **P 18 52 33.0 +0.3**
comp=Z,41nm,1.1s
EKS2 Erkin-Say 50.97 297 P **P 18 52 36.1 +0.3**
SNR=7.0
INK Inuvik 51.15 28 P **P 18 52 37.9 +1.4**
comp=Z,1.2nm,0.6s,baz=274,slow=7.1,SNR=4.5
INK Inuvik 51.15 28 *eP* **P 18 52 36.8 +0.3**
AML Almayashu 51.23 297 P **P 18 52 38.9 +0.9**
SNR=5.7
SVE Sverdlovsk 54.02 318 *eP* **P 18 53 00.4 +2.5**
NIL Nilore 55.17 287 *eP* **P 18 53 07.2 +0.5**
comp=Z,25nm,0.8s
NIL Nilore 55.17 287 *eP* **P 18 53 07.2 +0.5**
NIL pmax pmax
comp=Z,25nm,0.8s
ARU Arti 55.23 318*c iP* **P 18 53 07.0 +0.3**
ARU *PP **sP** 18 53 19.4 -0.8
ARU 18 54 06.9
ARU 18 55 09.1
ARU S **S** 19 00 49.3 +1.5
ARU SS **SS** 19 04 29.6 -2.0
ARU pmax pmax
comp=Z,8.0nm,1.2s
ARU MLR MLR
comp=Z,257nm,16.0s
AKTO Aktyubinsk 57.90 311 P **P 18 53 26.1 +0.3**
comp=Z,2.7nm,0.8s,baz=67,slow=14,SNR=8.4
RES Resolute Bay 59.45 15 P **P 18 53 36.9 +0.7**
comp=Z,1.5nm,0.8s,baz=304,slow=9.8,SNR=3.0
RES Resolute Bay 59.45 15 *eP* **P 18 53 34.9 -1.3**
WRAB Tennant Creek 60.11 190 P **P 18 53 41.5 +0.2**
WRAB Tennant Creek 60.11 190 P **P 18 53 41.5 +0.2**
WRA Warramunga Arr 60.12 190 P **P 18 53 40.6 -0.8**
comp=Z,1.5nm,0.7s,baz=7.9,slow=7.1,SNR=12
WRA Warramunga Arr 60.12 190 *eP* **P 18 53 41.1 -0.3**
WRA pmax pmax
comp=Z,2.0nm,0.7s
ARCES ARCESS Array B 61.84 339 P **P 18 53 53.1 +0.5**
comp=Z,2.2nm,0.9s,baz=46,slow=8.8,SNR=3.9
ARCES ARCESS Array B 61.84 339 *eP* **P 18 53 54.1 +1.5**
ARCES pmax pmax
comp=Z,2.0nm,0.9s
GEYT Alibeck 63.77 299 P **P 18 54 06.4 +0.4**
comp=Z,1.7nm,0.5s,baz=29,slow=3.4,SNR=7.1
ASAR Alice Springs 63.85 190 P **P 18 54 06.3 -0.1**
comp=Z,0.5nm,0.6s,baz=14,slow=12,SNR=9.5
ASAR Alice Springs 63.85 190 *eP* **P 18 54 07.7 +1.3**
ASAR pmax pmax
comp=Z,1.0nm,0.6s
OBN Obninsk 66.70 323 *eP* **P 18 54 23.1 -1.4**
FINES FINESS Array B 66.97 332 P **P 18 54 26.6 +0.4**
comp=Z,2.9nm,0.7s,baz=55,slow=7.9,SNR=10.0
VSR Storozhevoye 67.77 319 *eP* **P 18 54 30.9 -0.5**
VSR pmax pmax
comp=Z,6.0nm,1.1s
KIV Kislovodsk 70.16 311 *eP* **P 18 54 48.2 +1.6**
comp=Z,8.3nm,0.8s
KIV Kislovodsk 70.16 311 *eP* **P 18 54 48.5 +1.9**
KIV pmax pmax
comp=Z,12nm,0.9s
KBZ Khabaz 70.17 311 P **P 18 54 47.8 +1.3**
comp=Z,5.2nm,0.9s,baz=59,slow=3.7,SNR=8.1
HFS Hagfors 72.08 336 P **P 18 54 58.4 +0.6**
comp=Z,3.9nm,0.6s,baz=47,slow=6.7,SNR=21
NVAR Mina Array Bea 72.09 55 P **P 18 54 57.8 -0.7**
comp=Z,0.2nm,0.3s,baz=291,slow=5.7,SNR=3.4
NB2 NORSAR Subarra 72.11 338 P **P 18 54 58.2 +0.2**
comp=Z,2.1nm,0.7s,baz=38,slow=6.2
NB2 NORSAR Subarra 72.11 338 P **P 18 54 58.0 0.0**
NB2 pmax pmax
comp=Z,5.0nm,1.0s
NOA NORSAR Array B 72.11 338 P **P 18 54 58.5 +0.4**
comp=Z,2.8nm,0.6s,baz=34,slow=3.8,SNR=6.4
AKASG Malin Array Be 72.94 323 P **P 18 55 03.2 +0.2**
comp=Z,0.7nm,0.4s,baz=40,slow=6.3,SNR=4.3
FRB Frobisher Bay 73.63 14 P **P 18 55 06.8 -0.1**
comp=Z,1.3nm,0.3s,baz=323,slow=8.7,SNR=3.3
BRTR Keskin Array B 78.06 312 P **P 18 55 31.7 -1.1**
comp=Z,0.6nm,0.7s,baz=60,slow=4.4,SNR=3.8
BRTR Keskin Array B 78.06 312 *eP* **P 18 55 36.1 +3.3**
DPC Dobruska-Polom 78.81 329 *eP* **P 18 55 38.3 +1.7**
DPC *eS* **sP** 18 55 54.5 +4.1
DPC Dobruska-Polom 78.81 329 *eP* **P 18 55 38.3 +1.7**
DPC *e* 18 55 54.5
CLL Collm 79.34 331 *i P* **P 18 55 39.8 +0.4**
CLL Collm 79.34 331 *i P* **P 18 55 39.8 +0.4**
KHC Kasperske Hory 80.87 329 *eP* **P 18 55 48.9 +1.1**
KHC Kasperske Hory 80.87 329 *eP* **P 18 55 48.9 +1.1**
GERES GERESS Array B 81.05 329 P **P 18 55 49.2 +0.4**
comp=Z,0.7nm,0.6s,baz=44,slow=6.1,SNR=7.0
PMOR Pomariorio Ree 83.99 115 *eT* T 20 26 33.7
comp=Z,22nm,0.3s
PPT2 Papeete2 84.63 118 *e*LR LR 19 20 33.9
comp=Z,140nm,22.2s
PPT2 Papeete2 84.63 118 *eT* T 20 27 18.8
comp=Z,11nm,0.3s
TXAR Lajitas Array 87.20 54 P **P 18 56 21.5 +1.1**
comp=Z,0.1nm,0.4s,baz=295,slow=4.9,SNR=3.3
TXAR pmax pmax
comp=Z,0.1nm,0.4s,baz=312,slow=6.0,SNR=3.4
TBI Tubuai 88.74 122 *eT* T 20 32 25.5
comp=Z,11nm,0.3s
SNAA Sanae 143.93 197 PKP PKPab 19 03 05.6 +0.2
comp=Z,0.8nm,0.8s,baz=210,slow=3.8,SNR=4.3

*ISCJB **07** 18:49:55.9±0.6, 39°.86N±0°.06×143°.48E±0°.09, h6km, mb4.1/27, MS4.1/1, Error ellipse: s-maj=11.6km s-min=5.1km az=35.7*
*IDC **07** 18:49:56.9±0.9, 39°.81N×143°.44E, h0km, mb4.0/18, mb1 4.1/23, mb1mx3.9/77, mbtmp4.0/23, ML3.4/5, MS3.2/6, Ms1 3.2/6, ms1mx2.9/75, Error ellipse: s-maj=22.3km s-min=15.0km az=103.0*
*MOS **07** 18:49:59.9±0.8, 39°.86N×143°.42E, h33km, mb4.2/11, Error ellipse: s-maj=10.1km s-min=6.4km az=86.7*
*NEIC **07** 18:50:02.4±1.0, 39°.84N×143°.36E, h39km±7km, mb4.5/2, Error ellipse: s-maj=12.7km s-min=6.1km az=113.0*
ISC 07 18:49:57.8±0.7, 39°.95N±0°.06×143°.52E±0°.08, h6km, n72, σ1§63/70, mb4.2/27, 5C-4D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
ERM	**Erimo**	**2.08**	**352**	*eP*		**Pb**	**18 50 36.8**	**+0.9**
ERM	**Erimo**	**2.08**	**352**	‖ *iP*		**Pb**	**18 50 35.7**	**-0.2**
ASAJ	**Asahikawa**	**4.22**	**351**		**Pn**	**Pn**	**18 51 04.9**	**+2.3**
	3.2nm,0.3s,baz=178,slow=9.7,SNR=20							
ASAJ					Sn	**Sb**	**18 52 00.0**	**-3.5**
	3.5nm,0.3s,baz=106,slow=26,SNR=4.6							
YUK	**Yuzh-Kuril'sk**	**4.43**	**22**	*eP*		**Pn**	**18 51 06.5**	**+1.0**
YUK				*eS*		**Sn**	**18 51 57.3**	**-0.1**
YUK					pmax	pmax		
	comp=E,50nm,0.3s							
YUK					pmax	pmax		
	comp=Z,101nm,0.3s							
YUK					pmax	pmax		
	comp=N,40nm,0.2s							
YUK					smax	smax		
	comp=N,244nm,0.5s							
YUK					smax	smax		
	comp=E,423nm,0.5s							
SHO	**Shikotan**	**4.62**	**31**	*eP*		**Pn**	**18 51 08.9**	**+0.7**
SHO				*eS*		**Sn**	**18 51 58.4**	**-3.8**
SHO					pmax	pmax		
	comp=Z,13nm,0.4s							
SHO					pmax	pmax		
	comp=E,9.0nm,0.2s							
SHO					pmax	pmax		
	comp=N,5.0nm,0.1s							
SHO					smax	smax		
	comp=N,126nm,0.3s							
SHO					smax	smax		
	comp=E,274nm,0.3s							
MJA0	**Matsu Arr-Jizo**	**5.37**	**232**	*eP*		**Pn**	**18 51 18.5**	**0.0**
MJA0					pmax	pmax		
	comp=Z,1.0nm,0.3s							
MAJO	**Matsushiro**	**5.39**	**233**	*e*Pn		**Pn**	**18 51 18.0**	**-0.8**
MAJO	**Matsushiro**	**5.39**	**233**	‖ *iP*		**Pn**	**18 51 18.4**	**-0.4**
MAT	**Matsushiro**	**5.39**	**233**	P		**Pn**	**18 51 18.6**	**-0.2**
MAT				S		**Sn**	**18 52 26.5**	**+5.3**
MJAR	**Matsushiro Arr**	**5.39**	**233**	Pn		**Pn**	**18 51 17.8**	**-1.0**
	comp=Z,0.8nm,0.3s,baz=30,slow=12,SNR=29							
MJAR				LR		LR	18 52 52.6	
	comp=Z,101nm,18.0s,baz=55,slow=34							
KUR	**Kuril'sk**	**6.17**	**30**	*eP*		**Pn**	**18 51 31.7**	**+2.3**
KUR				*eS*		**Sn**	**18 52 39.7**	**-0.6**
KUR					pmax	pmax		
	comp=N,6.0nm,0.4s							
KUR					pmax	pmax		
	comp=Z,13nm,0.4s							
KUR					pmax	pmax		
	comp=E,7.0nm,0.3s							
KUR					smax	smax		
	comp=E,108nm,0.3s							
KUR					smax	smax		
	comp=N,68nm,0.8s							
YSS	**Yuzh-Sakhalins**	**7.02**	**356**	*eP*		**Pn**	**18 51 44.3**	**+3.3**
YSS					pmax	pmax		
	comp=Z,10.0nm,1.1s							
YSS				MLR		MLR		
	comp=Z,400nm,10.0s							
JHJ	**Hachijo jima 2**	**7.46**	**205**	Pn		**Pn**	**18 51 43.2**	**-3.9**
	comp=Z,10nm,0.3s,baz=66,slow=20,SNR=3.9							
JHJ				LR		LR	18 54 33.2	
	comp=Z,219nm,18.9s,baz=14,slow=38							
USRK	**Ussuriysk Ar.**	**9.57**	**300**	Pn		**Pn**	**18 52 17.8**	**+1.8**
	comp=Z,0.5nm,0.3s,baz=98,slow=14,SNR=9.2							
USRK				LR		LR	18 55 36.9	
	comp=Z,317nm,19.4s,baz=86,slow=36							
JNU	**Nakatsue**	**12.24**	**240**	LR		LR	18 57 48.4	
	comp=Z,277nm,18.5s,baz=110,slow=39							
KSRS	**Korea Array**	**12.44**	**263**	Pn		**Pn**	**18 52 55.8**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=70,slow=13,SNR=7.4							
KSRS				LR		LR	18 57 00.1	
	comp=Z,194nm,18.0s,baz=82,slow=34							
KSAR	**Wonju Array Be**	**12.47**	**263**	Pn		**Pn**	**18 52 55.8**	**0.0**
KSAR	**Wonju Array Be**	**12.47**	**263**	P		**Pn**	**18 52 55.8**	**0.0**
KLR	**Kul'dur**	**12.49**	**322**	Pn		**Pn**	**18 52 57.9**	**+1.9**
	comp=Z,0.0nm,0.3s,baz=137,slow=16,SNR=3.3							
KLR				LR		LR	18 58 05.7	
	comp=Z,19nm,18.4s,baz=99,slow=39							
KLR	**Kul'dur**	**12.49**	**322**	‖ *iP*		**Pn**	**18 52 57.6**	**+1.6**
ZEA	**Zeya**	**17.66**	**327**	*eP*		**Pn**	**18 54 01.8**	**-2.4**
ZEA					pmax	pmax		
	comp=Z,15nm,1.0s							
MA2	**Magadan**	**20.17**	**11**	P		**P**	**18 54 34.1**	**+1.4**
	comp=Z,8.6nm,0.8s,baz=215,slow=11,SNR=4.7							
MA2	**Magadan**	**20.17**	**11**	‖ *iP*		Pn	18 54 35.2	+0.7
MA2					pmax	pmax		
	comp=Z,19nm,2.5s							
SEY	**Seymchan**	**23.62**	**10**	P		**P**	**18 55 10.8**	**+1.5**
	comp=Z,5.4nm,0.8s,baz=198,slow=6.7,SNR=15							
SEY	**Seymchan**	**23.62**	**10**	*d iP*		**P**	**18 55 12.4**	**+3.1**
YAK	**Yakutsk**	**23.66**	**344**	*eP*		**P**	**18 55 09.4**	**-0.2**
	comp=Z,10nm,0.8s							
YAK	**Yakutsk**	**23.66**	**344**	*i* P		**P**	**18 55 09.7**	**+0.1**
YAK					pmax	pmax		
	comp=Z,9.0nm,0.8s							
SONM	**Songino Array**	**27.68**	**299**	P		**P**	**18 55 46.8**	**+0.2**
	comp=Z,2.5nm,0.8s,baz=89,slow=8.1,SNR=12							
H11N2	**WAKE ISLAND Hy**	**28.44**	**128**	T		T	19 25 55.2	
	baz=320,slow=75,SNR=16							
H11N1	**WAKE ISLAND Hy**	**28.45**	**128**	T		T	19 25 51.1	
	baz=320,slow=75,SNR=19							
H11N3	**WAKE ISLAND Hy**	**28.45**	**128**	T		T	19 25 50.5	
	baz=320,slow=75,SNR=20							
H11S1	**WAKE ISLAND Hy**	**29.26**	**130**	T		T	19 26 53.7	
	baz=321							
H11S3	**WAKE ISLAND Hy**	**29.27**	**130**	T		T	19 26 54.2	
	baz=321							
H11S2	**WAKE ISLAND Hy**	**29.28**	**130**	T		T	19 26 55.2	
	baz=321							
ENH	**Enshi**	**29.32**	**261**	*eP*		**P**	**18 55 59.5**	**-1.8**
	comp=Z,12nm,0.8s							
ZAK	**Zakamensk**	**29.89**	**304**	*eP*		**P**	**18 56 05.9**	**-0.3**
ZAK					pmax	pmax		
	comp=Z,2.0nm,1.4s							
BILL	**Bilibino**	**30.76**	**17**	*eP*		**P**	**18 56 14.1**	**+0.6**
BILL					pmax	pmax		
	comp=Z,1.0nm,1.1s							
TIXI	**Tiksi**	**32.62**	**351**	P		**P**	**18 56 30.8**	**+0.9**
	comp=Z,0.9nm,0.3s,baz=94,slow=2.4,SNR=6.3							
ZALV	**Zalesovo Beam**	**41.24**	**310**	P		**P**	**18 57 43.4**	**+0.1**
	comp=Z,3.1nm,0.5s,baz=93,slow=8.0,SNR=14							
CMAR	**Chiang Mai Arr**	**43.87**	**254**	P		**P**	**18 58 04.4**	**-0.7**
	comp=Z,0.8nm,0.8s,baz=43,slow=8.0,SNR=5.7							
MKAR	**Makanchi Array**	**44.03**	**300**	P		**P**	**18 58 05.7**	**-0.5**
	comp=Z,3.4nm,1.0s,baz=85,slow=9.7,SNR=14							
KURK	**Kurchatov**	**45.49**	**306**	*eP*		**P**	**18 58 15.7**	**-2.0**
KURK	**Kurchatov**	**45.49**	**306**	*c iP*		**P**	**18 58 17.2**	**-0.5**
KURK					pmax	pmax		
	comp=Z,4.0nm,0.7s							
KURBB	**Kurchatov Arra**	**45.57**	**306**	P		**P**	**18 58 18.1**	**-0.2**
	comp=Z,3.7nm,0.6s,baz=80,slow=8.8,SNR=36							
ILAR	**Eielson Array**	**46.15**	**34**	P		**P**	**18 58 25.0**	**+2.4**
	comp=Z,0.4nm,0.8s,baz=268,slow=7.2,SNR=4.5							
ODAN	**Odare**	**47.92**	**272**	*eP*		**P**	**18 58 36.7**	**-0.6**
GUN	**Gumba**	**48.56**	**274**	*eP*		**P**	**18 58 41.7**	**-0.6**
	comp=Z,22nm,0.8s							
KKN	**Kakani**	**49.08**	**274**	*eP*		**P**	**18 58 45.6**	**-0.6**
	comp=Z,10nm,0.8s							
BVAR	**Borovoye Array**	**49.88**	**311**	P		**P**	**18 58 52.1**	**+0.4**
	comp=Z,1.7nm,0.6s,baz=74,slow=8.3,SNR=12							
BRVK	**Bovoye**	**49.93**	**311**	*eP*		**P**	**18 58 51.8**	**-0.3**
BRVK	**Borovoye**	**49.93**	**311**	‖ *iP*		**P**	**18 58 52.9**	**+0.8**
BRVK					pmax	pmax		
	comp=Z,2.0nm,0.7s							
DANN	**Dangsing**	**49.96**	**276**	*eP*		**P**	**18 58 52.7**	**-0.3**
	comp=Z,16nm,0.7s							
KOLN	**Koldanda**	**50.37**	**275**	*eP*		**P**	**18 58 55.6**	**-0.5**
AAK	**Ala-Archa**	**50.60**	**297**	‖ *iP*		**P**	**18 58 57.4**	**-0.2**
AAK					pmax	pmax		
	comp=Z,2.0nm,0.9s							
PYUN	**Piuthan**	**50.67**	**276**	*eP*		**P**	**18 58 57.8**	**-0.5**
	comp=Z,21nm,1.1s							
ARU	**Arti**	**55.30**	**318**	*d iP*		**P**	**18 59 32.2**	**+0.4**
ARU				*PP		sP	18 59 43.2	+8.8
ARU							19 01 33.6	
ARU				S		**S**	**19 07 16.1**	**+0.3**
ARU				SS		**SS**	**19 10 54.2**	**-5.3**
ARU					pmax	pmax		
	comp=Z,6.0nm,1.2s							
ARU				MLR		MLR		
	comp=Z,114nm,15.0s							
AKTO	**Aktyubinsk**	**57.98**	**311**	P		**P**	**18 59 51.0**	**0.0**
	comp=Z,2.0nm,0.8s,baz=67,slow=10,SNR=5.3							
AKTO	**Aktyubinsk**	**57.98**	**311**	P		**P**	**18 59 51.0**	**0.0**
WRA	**Warramunga Arr**	**60.20**	**190**	P		**P**	**19 00 05.1**	**-1.5**
	comp=Z,0.8nm,0.8s,baz=7.9,slow=6.9,SNR=4.7							
WRA	**Warramunga Arr**	**60.20**	**190**	*eP*		**P**	**19 00 06.5**	**-0.1**
WRA					pmax	pmax		
	comp=Z,1.0nm,0.8s							
GEYT	**Alibeck**	**63.88**	**299**	P		**P**	**19 00 31.2**	**-0.2**
	comp=Z,1.4nm,0.6s,baz=337,slow=3.4,SNR=5.3							
ASAR	**Alice Springs**	**63.92**	**190**	P		**P**	**19 00 31.3**	**-0.2**
	comp=Z,0.3nm,0.8s,baz=3.2,slow=5.4,SNR=4.1							
FINES	**FINESS Array B**	**67.00**	**332**	P		**P**	**19 00 51.3**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=49,slow=8.6,SNR=6.0							
FINES	**FINESS Array B**	**67.00**	**332**	*eP*		**P**	**19 00 50.3**	**-0.8**
FINES					pmax	pmax		
	comp=Z,1.0nm,0.7s							
KIV	**Kislovodsk**	**70.24**	**311**	*eP*		**P**	**19 01 12.4**	**+0.6**
KIV					pmax	pmax		
	comp=Z,8.0nm,1.1s							
KBZ	**Khabaz**	**70.25**	**311**	P		**P**	**19 01 12.8**	**+1.1**
	comp=Z,2.6nm,0.8s,baz=7.3,slow=5.0,SNR=5.0							
HFS	**Hagfors**	**72.10**	**336**	P		**P**	**19 01 23.2**	**+0.7**
	comp=Z,1.1nm,0.5s,baz=24,slow=8.5,SNR=5.2							
NB2	**NORSAR Subarra**	**72.12**	**338**	P		**P**	**19 01 23.1**	**+0.3**
	comp=Z,1.6nm,0.8s,baz=39,slow=6.2							
AKASG	**Malin Array Be**	**72.99**	**323**	P		**P**	**19 01 27.8**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=46,slow=6.6,SNR=3.8							
KHC	**Kasperske Hory**	**80.90**	**329**	*eP*		**P**	**19 02 14.1**	**+1.4**
KHC	**Kasperske Hory**	**80.90**	**329**	*eP*		**P**	**19 02 14.1**	**+1.4**
SNAA	**Sanae**	**144.02**	**197**	PKP		PKPbc	19 09 30.9	-0.1
	comp=Z,0.8nm,1.0s,baz=297,slow=2.3,SNR=3.0							

*ISCJB **07** 18:57:35.9±0.9, 12°.59N±0°.09×144°.4E±0°.2, h38km, mb3.6/10, MS3.0/1, Error ellipse: s-maj=24.8km s-min=9.4km az=24.0*
*IDC **07** 18:57:38.9±1.5, 12°.68N×144°.79E, h61km±14km, mb3.3/10, mb1 3.5/10, mb1mx3.3/61, mbtmp3.6/10, MS3.1/1, Ms1 3.1/1, ms1mx2.5/30, Error ellipse: s-maj=42.5km s-min=17.8km az=90.0*
ISC 07 18:57:37.0±1.2, 12°.6N±0°.1×144°.6E±0°.2, h38km, n11, σ0§93/12, mb3.6/10, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.02**	**14**	P		**Pn**	**18 57 55.7**	**+0.8**
	75nm,0.3s,baz=197,slow=1.7,SNR=45							
GUMO				S		**Sn**	**18 58 09.1**	**+1.1**
	230nm,0.3s,baz=167,slow=19,SNR=59							
GUMO				LR		LR	18 58 28.7	
	comp=Z,378nm,20.4s,baz=254,slow=55							
JNU	**Nakatsue**	**23.99**	**331**	P		**P**	**19 02 48.3**	**+0.1**
	7.2nm,0.8s,baz=135,slow=5.7,SNR=3.4							
MJAR	**Matsushiro Arr**	**24.54**	**347**	P		**P**	**19 02 52.7**	**-0.4**
	1.6nm,0.9s,baz=168,slow=9.0,SNR=5.2							
MJAR				LR		LR	19 11 15.2	
	comp=Z,47nm,20.6s,baz=220,slow=33							
WRA	**Warramunga Arr**	**33.88**	**198**	P		**P**	**19 04 17.3**	**+1.0**
	0.6nm,0.8s,baz=22,slow=9.6,SNR=4.6							
ASAR	**Alice Springs**	**37.53**	**196**	P		**P**	**19 04 48.3**	**+0.7**
	0.2nm,0.6s,baz=20,slow=11,SNR=4.3							
CMAR	**Chiang Mai Arr**	**44.30**	**284**	P		**P**	**19 05 44.3**	**+0.7**
	0.5nm,0.6s,baz=79,slow=5.9,SNR=4.9							
SONM	**Songino Array**	**47.41**	**326**	P		**P**	**19 06 07.7**	**-0.1**
	0.4nm,0.5s,baz=140,slow=7.5,SNR=3.1							
MKAR	**Makanchi Array**	**62.04**	**316**	P		**P**	**19 07 53.2**	**-0.6**
	0.3nm,0.6s,baz=83,slow=9.9,SNR=4.5							
KURBB	**Kurchatov Arra**	**65.23**	**320**	P		**P**	**19 08 13.9**	**-0.7**
	0.9nm,0.8s,baz=104,slow=6.9,SNR=7.6							
ILAR	**Eielson Array**	**69.57**	**25**	P		**P**	**19 08 40.3**	**-1.6**
	0.2nm,0.4s,baz=244,slow=6.0,SNR=3.1							
BVAR	**Borovoye Array**	**70.56**	**322**	P		**P**	**19 08 47.5**	**-0.6**
	0.5nm,0.6s,baz=85,slow=6.4,SNR=4.3							

*ISCJB **07** 19:08:22.9±0.5, 33°.17N±0°.07×136°.14E±0°.08, h431km±3km, mb3.2/14, Error ellipse: s-maj=12.5km s-min=7.6km az=135.8*
*IDC **07** 19:08:23.9±0.9, 33°.18N×136°.19E, h426km±10km, mb2.9/14, mb1 3.0/19, mb1mx2.9/77, mbtmp3.7/19, Error ellipse: s-maj=17.7km s-min=10.5km az=88.0*
*JMA **07** 19:08:24.5±0.2, 33°.23N×136°.10E, h421km±2km, M2.9*
ISC 07 19:08:23.8±0.8, 33°.19N±0°.09×136°.14E±0°.08, h423km±6km, n34, σ0§72/46, mb3.3/14, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
JWZ	**Kozaga**	**0.49**	**314**	P		**P**	**19 09 16.8**	**+0.8**
JWZ				*eS*		**S**	**19 09 58.0**	**-0.3**
JWY	**Kouya**	**1.12**	**336**	P		**P**	**19 09 18.4**	**+0.7**
JWY				S		**S**	**19 10 00.9**	**-0.5**
JIE	**Ise**	**1.29**	**21**	P		**P**	**19 09 18.8**	**+0.6**
JIE				S		**S**	**19 10 01.2**	**-1.2**
JAI	**Aioi**	**1.53**	**294**	P		**P**	**19 09 19.8**	**+0.5**
JAI				*eS*		**S**	**19 10 03.9**	**-0.4**
JMN	**Monobe**	**1.96**	**286**	P		**P**	**19 09 22.6**	**+0.9**
JWT	**Wachi**	**2.17**	**344**	P		**P**	**19 09 23.3**	**+0.5**
JWT				S		**S**	**19 10 09.6**	**-1.1**
JTO	**Tosashimizu**	**2.82**	**264**	P		**P**	**19 09 28.0**	**+0.7**
JTO				S		**S**	**19 10 18.7**	**-0.2**
JKG	**Kaga**	**3.08**	**3**	P		**P**	**19 09 30.1**	**+0.9**
JKG				S		**S**	**19 10 21.4**	**-1.1**
JHS	**Saijyo**	**3.09**	**307**	P		**P**	**19 09 30.2**	**+0.8**
JOD2	**Odawara 2**	**3.20**	**49**	P		**P**	**19 09 30.9**	**+0.7**
JOD2				*eS*		**S**	**19 10 24.4**	**+0.1**
JRY	**Ryogami san**	**3.62**	**38**	P		**P**	**19 09 34.9**	**+1.1**
JRY				*eS*		**S**	**19 10 31.5**	**+0.7**
MAT	**Matsushiro**	**3.75**	**26**	P		**P**	**19 09 36.1**	**+1.2**
MAT				*eS*		**S**	**19 10 32.3**	**-0.5**
MAT	**Matsushiro**	**3.75**	**26**	P		**P**	**19 09 34.6**	**-0.3**
MAT				S		**S**	**19 10 33.3**	**+0.5**
MJAR	**Matsushiro Arr**	**3.75**	**26**	P		**P**	**19 09 35.0**	**+0.1**
	5.1nm,0.3s,baz=195,slow=8.4,SNR=47							
MJAR				S		**S**	**19 10 33.8**	**+0.9**
	baz=208,slow=26,SNR=2.4							
JNU	**Nakatsue**	**4.41**	**271**	P		**P**	**19 09 41.9**	**+0.9**
	0.3nm,0.3s,baz=135,slow=5.7,SNR=3.6							
KSRS	**Korea Array**	**7.95**	**305**	P		**P**	**19 10 19.7**	**+1.3**
	0.2nm,0.3s,baz=122,slow=12,SNR=5.8							
JOW	**Kunigami**	**9.30**	**229**	P		**P**	**19 10 34.6**	**+1.2**
	1.1nm,0.3s,baz=51,slow=20,SNR=3.9							
USRK	**Ussuriysk Ar.**	**11.46**	**345**	P		**P**	**19 10 57.4**	**+0.5**
	0.3nm,0.3s,baz=149,slow=12,SNR=3.3							
KLR	**Kul'dur**	**16.36**	**350**	P		**P**	**19 11 49.4**	**-0.5**
	0.0nm,0.3s,baz=150,slow=7.1,SNR=4.3							
SONM	**Songino Array**	**26.73**	**312**	P		**P**	**19 13 27.5**	**+0.3**
	0.3nm,0.4s,baz=121,slow=5.6,SNR=3.0							
TIXI	**Tiksi**	**38.72**	**356**	P		**P**	**19 15 08.3**	**-0.8**
	0.7nm,0.3s,baz=146,slow=3.9,SNR=5.4							
MKAR	**Makanchi Array**	**42.63**	**305**	P		**P**	**19 15 40.6**	**-0.4**
	0.2nm,0.7s,baz=94,slow=9.1,SNR=3.1							
KURBB	**Kurchatov Arra**	**45.08**	**311**	P		**P**	**19 15 59.9**	**-0.1**
	0.3nm,0.3s,baz=95,slow=7.9,SNR=6.7							
BVAR	**Borovoye Array**	**50.04**	**314**	P		**P**	**19 16 37.0**	**-0.5**
	0.4nm,0.4s,baz=100,slow=8.8,SNR=4.1							
FITZ	**Fitzroy Crossi**	**51.98**	**193**	P		**P**	**19 16 51.1**	**-1.0**
	0.9nm,0.5s,baz=355,slow=12,SNR=7.1							
WRA	**Warramunga Arr**	**52.86**	**182**	P		**P**	**19 16 58.2**	**-0.3**
	1.3nm,0.3s,baz=0.7,slow=7.7,SNR=41							
ILAR	**Eielson Array**	**55.02**	**31**	P		**P**	**19 17 13.1**	**-0.2**
	0.2nm,0.4s,baz=262,slow=5.8,SNR=3.3							
ASAR	**Alice Springs**	**56.58**	**182**	P		**P**	**19 17 24.6**	**-0.2**
	0.2nm,0.3s,baz=11,slow=13,SNR=4.3							
ARCES	**ARCESS Array B**	**66.04**	**339**	P		**P**	**19 18 27.0**	**+0.4**
	1.6nm,0.8s,baz=57,slow=8.8,SNR=5.3							
FINES	**FINESS Array B**	**70.15**	**331**	P		**P**	**19 18 51.8**	**0.0**
	0.7nm,0.6s,baz=58,slow=5.0,SNR=8.2							
HFS	**Hagfors**	**75.73**	**334**	P		**P**	**19 19 24.0**	**-0.2**
	0.3nm,0.3s,baz=42,slow=6.6,SNR=5.2							
NB2	**NORSAR Subarra**	**75.

*GUC **07** 19:25:25.3±0.7,36.°04S×71.°08W,h6km±3km,ML4.5*
*NEIC **07** 19:25:25.0±0.0,36.°04S×71.°08W,h6km,mb5.0/3, ML4.5(GUC),After GUC.*
NEIC Felt [IV] at Longavi; [III] at Constitucion, Linares, Maule and San Clemente; [II] at Cauquenes, Chanco, Pelluhue and Talca.
*ISCJB **07** 19:25:28.9±0.5,36.°08S±0.°03×71.°05W±0.°04,h51km±3km, mb4.5/20,MS3.5/6,Error ellipse: s-maj=6.4km s-min=4.5km az=39.6*
*SJA **07** 19:25:29.0±0.3,35.°91S×71.°14W,h33km,ML4.2,MW4.0*
*IDC **07** 19:25:31.4±2.9,36.°01S×70.°79W,h53km±25km,mb4.1/17, mb1 4.2/20,mb1mx4.1/37,mbtmp4.4/20,ML4.4/3,MS3.6/8, Ms1 3.6/8,ms1mx3.3/34,Error ellipse: s-maj=21.1km s-min=12.2km az=79.0*

ISC 07 19:25:28.5±0.8,36.°03S±0.°03×71.°14W±0.°04,h31km±5km, n140,σ1§29/157,mb4.6/20,MS3.5/6,5C-4D,Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCHI	**Chillan**	**0.95**	**233**	⇓iP	**Pn**	**19 25 45.1**	**-0.6**
CCHI				*i* S	**Sn**	**19 25 59.2**	**+1.0**
NICH	**Los Niches**	**1.03**	**356**	⇑iP	**Pn**	**19 25 46.0**	**-0.9**
NICH				*e*S	**Sb**	**19 26 01.0**	**0.0**
GO05	**HualaæØ**	**1.21**	**328**	⇓iP	**Pn**	**19 25 49.0**	**-0.3**
GO05				*i* S	**Sb**	**19 26 07.5**	**+1.4**
COCH	**Cobquecura**	**1.34**	**265**	⇓iP	**Pn**	**19 25 51.8**	**+0.7**
COCH				*e*S	**Sb**	**19 26 11.4**	**+1.6**
COCH				IAML		19 26 13.3	
	comp=N,16μm,0.3s						
CHPI	**Pichilemu**	**1.78**	**336**	*e*P	**Pn**	**19 25 57.7**	**+0.5**
CHPI				*e*S	**Sb**	**19 26 23.1**	**+0.6**
LMEL	**Las Melosas**	**2.31**	**20**	⇑iP	**Pn**	**19 26 06.4**	**+1.7**
LMEL				*i* S	**Sb**	**19 26 37.7**	**-0.2**
LMEL				IAML		19 26 44.9	
	comp=E,3μm,0.5s						
ANTU	**Antumapu**	**2.49**	**10**	*e*P	**Pn**	**19 26 09.1**	**+2.0**
ANTU				*e*S	**Sb**	**19 26 42.1**	**-0.9**
RFA	**San Rafael**	**2.52**	**61**	*e*S	**Sn**	**19 26 39.3**	**+2.1**
CLCH	**Cerro Calan**	**2.68**	**11**	⇑iP	**Pn**	**19 26 11.8**	**+2.2**
CLCH				*e*S	**Sb**	**19 26 47.3**	**-1.0**
CLCH				IAML		19 26 51.9	
	comp=N,4μm,1.0s						
FCH	**Farellones**	**2.79**	**15**	⇓iP	**Pn**	**19 26 13.7**	**+2.3**
FCH				*e*S	**Sb**	**19 26 52.3**	**+0.6**
FCH				IAML		19 27 00.3	
	comp=N,2μm,0.6s						
PEL	**Peldehue**	**2.91**	**8**	⇑iP	**Pn**	**19 26 14.4**	**+1.6**
PEL				*e*S	**Sb**	**19 26 52.5**	**-2.4**
TMU	**Temuco**	**2.94**	**203**	⇑iP	**Pn**	**19 26 14.5**	**+1.4**
AVIZ	**Vizcacheras**	**3.34**	**41**	*e*P	**Pn**	**19 26 20.9**	**+2.1**
AAGR	**Agrelo**	**3.50**	**34**	*e*P	**Pn**	**19 26 23.0**	**+2.0**
ARCO	**CERRO ARCO**	**3.67**	**30**	*e*P	**Pn**	**19 26 25.0**	**+1.7**
ARCO				IAML		19 26 38.3	
	comp=Z,518nm,0.5s						
ASAL	**Salagasta**	**3.93**	**30**	*e*P	**Pn**	**19 26 28.9**	**+2.1**
ASAL				*e*S	**Sn**	**19 27 13.1**	**+1.2**
AUSP	**Uspallata**	**4.07**	**21**	*e*P	**Pn**	**19 26 31.1**	**+2.2**
RTLS	**Leoncito**	**4.49**	**20**	*e*P	**Pn**	**19 26 37.2**	**+2.4**
RTLS				IAML		19 26 49.0	
	comp=Z,228nm,0.5s						
RTCV	**Cerro Valdivia**	**4.69**	**28**	*e*P	**Pn**	**19 26 39.6**	**+2.4**
PLCA	**Paso Flores**	**4.72**	**175**	P	**Pn**	**19 26 41.7**	**+4.1**
	comp=Z,2.5nm,0.3s,baz=358,slow=12,SNR=38						
PLCA				S	**Sb**	**19 27 45.2**	**-1.7**
	comp=Z,23nm,0.3s,baz=122,slow=23,SNR=11						
PLCA				LR	LR	19 28 26.1	
	comp=Z,839nm,19.4s,baz=23,slow=37						
PLCA	**Paso Flores**	**4.72**	**175**	*e*P	Pn	19 26 43.1	+5.5
PLCA				*e*S	**Sn**	**19 27 38.4**	**+7.1**
ACAN	**Cantantal**	**4.98**	**42**	*e*P	**Pn**	**19 26 43.9**	**+2.7**
AMOG	**MOGNA**	**5.54**	**24**	*e*P	**Pn**	**19 26 51.3**	**+2.3**
AROD	**Rodeo**	**6.01**	**14**	*e*P	**Pn**	**19 26 58.1**	**+2.4**
AROD				*e*S	**Sn**	**19 28 04.2**	**+0.5**
ACDV	**Cuesta del Vie**	**6.09**	**17**	*e*P	**Pn**	**19 26 58.9**	**+2.3**
APLL	**PUNTA DE LOS L**	**6.82**	**36**	*e*P	**Pn**	**19 27 08.5**	**+1.9**
APLL				*e*S	**Sn**	**19 28 22.5**	**-0.7**
AGUA	**GUANDACOL**	**6.90**	**20**	*e*P	**Pn**	**19 27 09.6**	**+1.9**
LCO	**Las Campanas**	**7.01**	**3**	*e*Pn	**Pn**	**19 27 08.6**	**-0.8**
	comp=Z,30nm,0.6s						
ACLC	**CERRO LA CRUZ**	**7.47**	**29**	*e*P	**Pn**	**19 27 17.4**	**+1.8**
TRQA	**Tornquist**	**7.60**	**108**	*e*Pn	**Pn**	**19 27 13.6**	**-3.6**
	comp=Z,22nm,0.6s						
CPUP	**Villa Florida**	**15.26**	**55**	P	**Pn**	**19 29 00.6**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=195,slow=5.9,SNR=3.4						
CPUP				LR	LR	19 35 26.4	
	comp=Z,181nm,19.4s,baz=233,slow=40						
LPAZ	**La Paz**	**19.85**	**9**	P	**P**	**19 29 58.3**	**+0.7**
	comp=Z,0.9nm,0.3s,baz=161,slow=7.5,SNR=39						
SIV	**San Ignacio**	**21.89**	**27**	P	**P**	**19 30 17.7**	**-1.4**
	comp=Z,7.9nm,0.9s,baz=221,slow=9.6,SNR=22						
NNA	**Nana**	**24.49**	**346**	P	**P**	**19 30 45.7**	**+0.6**
	comp=Z,5.1nm,0.4s,baz=180,slow=16,SNR=2.6						
NNA				LR	LR	19 38 47.1	
	comp=Z,88nm,19.0s,baz=176,slow=32						
ATAH	**Atahualpa**	**29.52**	**345**	LR	LR	19 41 11.2	
	comp=Z,69nm,21.2s,baz=156,slow=32						
RPN	**Rapa Nui**	**33.55**	**274**	LR	LR	19 42 08.6	
	comp=Z,97nm,18.1s,baz=230,slow=30						
ROSC	**El Rosal**	**40.77**	**355**	LR	LR	19 50 06.0	
	comp=Z,77nm,21.1s,baz=116,slow=36						
SDV	**Santo Domingo**	**44.68**	**1**	P	**P**	**19 33 38.5**	**-0.4**
	comp=Z,7.2nm,0.7s,baz=278,slow=1.3,SNR=10						
VNA3	**Neumayer Olymp**	**47.20**	**157**	P	**P**	**19 33 57.5**	**-0.5**
VNA1	**Neumayer--Stat**	**47.52**	**156**	P	**P**	**19 34 01.2**	**+0.8**
VNA2	**Neumayer--Watz**	**47.86**	**157**	P	**P**	**19 34 02.6**	**-0.4**
	baz=290,slow=9.2						
SNAA	**Sanae**	**49.43**	**157**	P	**P**	**19 34 14.6**	**-0.6**
SNAA	**Sanae**	**49.43**	**157**	P	**P**	**19 34 14.2**	**-1.0**
	comp=Z,3.3nm,0.8s,baz=282,slow=7.3,SNR=22						
SNAA				LR	LR	19 54 56.4	
	comp=Z,70nm,18.4s,baz=198,slow=36						
APG	**El Apazote**	**53.95**	**337**	P	**P**	**19 34 50.2**	**+0.5**
	comp=Z,4.7nm,0.7s,baz=166,slow=4.5,SNR=4.9						
QSPA	**South Pole Qui**	**54.21**	**180**	P	**P**	**19 34 51.3**	**+0.3**
	comp=Z,6.6nm,0.8s,baz=145,slow=2.3,SNR=21						
QSPA	**South Pole Qui**	**54.21**	**180**	*e*P	**P**	**19 34 51.2**	**+0.2**
	comp=Z,9.6nm,0.4s						
Z50A	**Ashland**	**70.30**	**347**	P	**P**	**19 36 38.9**	**0.0**
	baz=167						
Z48A	**Northport**	**70.74**	**345**	P	**P**	**19 36 41.2**	**-0.2**
	baz=166						
Y50A	**Piedmont**	**70.89**	**347**	P	**P**	**19 36 42.6**	**+0.2**
	baz=168						
MAW	**Mawson**	**71.03**	**163**	P	**P**	**19 36 41.9**	**-1.0**
	comp=Z,4.3nm,0.9s,baz=212,slow=8.9,SNR=4.9						
X52A	**Dahlonega**	**71.27**	**349**	P	**P**	**19 36 45.3**	**+0.5**
	baz=169						
Y47A	**UCPARC, Winfie**	**71.31**	**345**	P	**P**	**19 36 45.4**	**+0.5**
	baz=166						
X51A	**Calhoun**	**71.39**	**348**	P	**P**	**19 36 45.9**	**+0.4**
	baz=168						
X50B	**Fort Payne**	**71.43**	**347**	P	**P**	**19 36 46.5**	**+0.8**
	baz=168						
W53A	**Cullowhee**	**71.72**	**350**	P	**P**	**19 36 48.0**	**+0.4**
	baz=170						
TXAR	**Lajitas Array**	**71.86**	**330**	P	**P**	**19 36 49.7**	**+1.2**
	comp=Z,2.3nm,1.0s,baz=151,slow=7.9,SNR=14						
TXAR				LR	LR	20 04 43.4	
	comp=Z,47nm,18.6s,baz=0.0,slow=33						
X47A	**Russelville**	**71.90**	**346**	P	**P**	**19 36 48.9**	**+0.4**
	baz=166						
W50A	**Signal Mountai**	**72.09**	**348**	P	**P**	**19 36 50.0**	**+0.3**
	baz=168						
V53A	**Saluda**	**72.16**	**350**	P	**P**	**19 36 50.1**	**0.0**
	baz=170						
OXF	**Oxford**	**72.22**	**344**	P	**P**	**19 36 50.7**	**+0.3**
	baz=164						
W48A	**Pulaski**	**72.32**	**346**	P	**P**	**19 36 51.7**	**+0.7**
	baz=167						
V50A	**Pikevile**	**72.51**	**348**	P	**P**	**19 36 52.2**	**0.0**
	baz=168						
W47A	**Westpoint**	**72.56**	**346**	P	**P**	**19 36 53.1**	**+0.6**
	baz=166						
V49A	**McMinnville**	**72.74**	**347**	P	**P**	**19 36 53.5**	**0.0**
	baz=168						
V48A	**Smith Brothers**	**72.89**	**347**	P	**P**	**19 36 54.5**	**+0.2**
	baz=167						
V47A	**Nunnelly**	**73.10**	**346**	P	**P**	**19 36 55.7**	**+0.1**
	baz=166						
V46A	**Holladay**	**73.19**	**346**	P	**P**	**19 36 56.0**	**-0.1**
	baz=166						
WVT	**Waverly**	**73.46**	**346**	P	**P**	**19 36 57.4**	**-0.2**
	baz=166						
W39A	**Magazine**	**73.94**	**341**	P	**P**	**19 37 01.3**	**+0.7**
	baz=161						
T49A	**Edmonton**	**73.99**	**348**	P	**P**	**19 37 00.5**	**-0.3**
	baz=168						
V41A	**Mountainview**	**74.08**	**342**	P	**P**	**19 37 01.5**	**+0.1**
	baz=162						
U42A	**Revenden**	**74.40**	**343**	P	**P**	**19 37 03.1**	**-0.1**
	baz=163						
V39A	**Pettigrew**	**74.51**	**341**	P	**P**	**19 37 04.7**	**+0.7**
	baz=161						
MNTX	**Cornudas Mount**	**74.64**	**330**	P	**P**	**19 37 04.7**	**-0.1**
	baz=152						
LIC	**Lamto**	**74.74**	**70**	*e*P	**P**	**19 37 04.0**	**-1.7**
	comp=Z,77nm,1.7s						
U40A	**Yellville**	**74.80**	**342**	P	**P**	**19 37 05.6**	**0.0**
	baz=162						
T43A	**Greenville**	**74.89**	**344**	P	**P**	**19 37 05.6**	**-0.4**
	baz=164						
TIC	**Toumodi**	**75.01**	**70**	*e*P	**P**	**19 37 05.4**	**-1.9**
KIC	**Kosan Boka**	**75.04**	**71**	*e*P	**P**	**19 37 05.7**	**-1.8**
	comp=Z,22nm,0.8s						
DBIC	**Dimbokro**	**75.15**	**70**	P	**P**	**19 37 06.8**	**-1.3**
	comp=Z,6.4nm,0.7s,baz=208,slow=4.6,SNR=11						
TUL1	**Leonard**	**75.16**	**339**	P	**P**	**19 37 07.6**	**0.0**
	baz=160						
T41A	**Mountain View**	**75.19**	**343**	P	**P**	**19 37 07.7**	**-0.1**
	baz=163						
S43A	**Fulton Ridge,**	**75.31**	**345**	P	**P**	**19 37 08.1**	**-0.4**
	baz=164						
S42A	**Caledonia**	**75.66**	**344**	P	**P**	**19 37 09.9**	**-0.5**
	baz=164						
S41A	**Jillco Farms,**	**75.70**	**343**	P	**P**	**19 37 10.9**	**+0.2**
	baz=163						
S40A	**Lebanon**	**75.89**	**343**	P	**P**	**19 37 11.9**	**+0.1**
	baz=162						
CCM	**Cathedral Cave**	**76.03**	**344**	P	**P**	**19 37 12.5**	**0.0**
	baz=163						
CCM	**Cathedral Cave**	**76.03**	**344**	*e*P	**P**	**19 37 12.8**	**+0.2**
	comp=Z,9.1nm,0.5s						
AMTX	**Amarillo**	**76.08**	**335**	P	**P**	**19 37 13.8**	**+0.7**
	baz=155						
Q45A	**Warren Harvey,**	**76.20**	**346**	P	**P**	**19 37 13.3**	**-0.1**
	baz=166						
S38A	**Stockton**	**76.27**	**342**	P	**P**	**19 37 13.8**	**-0.2**
	baz=161						
R41A	**Rosebud**	**76.30**	**344**	P	**P**	**19 37 14.0**	**-0.1**
	baz=163						
121A	**Cookes Peak, D**	**76.35**	**329**	P	**P**	**19 37 16.3**	**+1.6**
	baz=150						
R40A	**Maddies Statio**	**76.49**	**343**	P	**P**	**19 37 15.1**	**0.0**
	baz=162						
N59A	**State Game Lan**	**76.69**	**356**	P	**P**	**19 37 16.9**	**+0.6**
	baz=176						
R39A	**Chumby, Stover**	**76.70**	**342**	P	**P**	**19 37 16.6**	**+0.2**
	baz=162						
P46A	**Rosedale**	**76.72**	**347**	P	**P**	**19 37 16.4**	**0.0**
	baz=167						
Q41A	**Truxton**	**76.89**	**344**	P	**P**	**19 37 17.2**	**-0.2**
	baz=163						
N54A	**Moraine State**	**77.05**	**353**	P	**P**	**19 37 18.3**	**0.0**
	baz=173						
Q40A	**Laux Farm, Aux**	**77.12**	**343**	P	**P**	**19 37 18.4**	**-0.3**
	baz=163						
O47A	**Sheridan**	**77.15**	**348**	P	**P**	**19 37 19.0**	**+0.1**
	baz=168						
P40A	**Paris**	**77.62**	**344**	P	**P**	**19 37 21.6**	**+0.1**
	baz=163						
ANMO	**Albuquerque**	**77.91**	**331**	P	**P**	**19 37 24.7**	**+1.2**
	comp=Z,0.9nm,0.5s,baz=146,slow=12,SNR=4.2						
ANMO	**Albuquerque**	**77.91**	**331**	*e*P	**P**	**19 37 24.9**	**+1.4**
	comp=Z,4.5nm,1.2s						
BOSA	**Boshof**	**78.48**	**117**	P	**P**	**19 37 25.6**	**-1.3**
	comp=Z,9.9nm,0.8s,baz=249,slow=4.0,SNR=4.8						
LBNH	**Lisbon**	**79.90**	**359**	P	**P**	**19 37 34.9**	**+1.0**
	baz=179						
KOWA	**Kowa**	**80.82**	**65**	P	**P**	**19 37 38.4**	**-1.1**
	comp=Z,3.8nm,0.6s,baz=206,slow=3.6,SNR=11						
ECSD	**EROS Data Cent**	**82.70**	**342**	P	**P**	**19 37 49.0**	**+0.2**
	baz=159						
E43A	**Lone Tree Farm**	**83.27**	**349**	P	**P**	**19 37 51.8**	**+0.1**
	baz=167						
F40A	**Park Falls**	**83.35**	**347**	P	**P**	**19 37 52.3**	**+0.2**
	baz=165						
E42A	**Champion**	**83.47**	**348**	P	**P**	**19 37 53.4**	**+0.7**
	baz=166						
F39A	**Loretta**	**83.50**	**346**	P	**P**	**19 37 53.3**	**+0.4**
	baz=164						
E40A	**Wakefield**	**83.82**	**347**	P	**P**	**19 37 54.8**	**+0.3**
	baz=165						
TORD	**Torodi Ar. Bea**	**84.22**	**69**	P	**P**	**19 37 55.8**	**-1.5**
	comp=Z,4.9nm,0.8s,baz=257,slow=3.4,SNR=26						
R11A	**Troy Canyon, C**	**84.66**	**326**	P	**P**	**19 38 00.8**	**+1.6**
	baz=145						
K22A	**Casper**	**84.71**	**335**	P	**P**	**19 38 00.3**	**+0.9**
	baz=152						
C35A	**Jirik Farms, M**	**85.83**	**345**	P	**P**	**19 38 04.6**	**0.0**
	baz=162						
BW06	**Boulder Array**	**85.90**	**333**	P	**P**	**19 38 05.8**	**+0.4**
	baz=150						
PDAR	**Pinedale Array**	**85.90**	**333**	P	**P**	**19 38 05.8**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=113,slow=4.3,SNR=4.9						
NVAR	**Mina Array Bea**	**85.97**	**325**	P	**P**	**19 38 07.4**	**+1.6**
	comp=Z,0.5nm,0.6s,baz=143,slow=5.5,SNR=4.5						
B35A	**Bob, Littlefor**	**86.40**	**345**	P	**P**	**19 38 07.1**	**-0.3**
	baz=162						
ELK	**Elko**	**86.47**	**328**	P	**P**	**19 38 10.2**	**+2.0**
	comp=Z,0.4nm,0.3s,baz=122,slow=7.9,SNR=4.9						
A33A	**Warroad**	**87.31**	**344**	P	**P**	**19 38 11.9**	**+0.1**
	baz=160						
ULM	**Lac du Bonnet**	**88.65**	**344**	P	**P**	**19 38 17.9**	**-0.2**
	comp=Z,5.4nm,0.8s,baz=178,slow=4.2,SNR=11						
GERES	**GERESS Array B**	**113.05**	**46**	PKiKP	**PKiKP**	**19 44 01.7**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=241,slow=4.0,SNR=3.5						
ASAR	**Alice Springs**	**116.07**	**206**	PKP	**PKPdf**	**19 44 08.3**	**-0.6**
	comp=Z,0.5nm,0.9s,baz=101,slow=1.9,SNR=3.3						
WRA	**Warramunga Arr**	**119.33**	**208**	PKP	**PKPdf**	**19 44 14.4**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=164,slow=1.4,SNR=9.0						
TIXI	**Tiksi**	**142.82**	**350**	*e*PKPpre	PKPpre	19 44 52.3	
BRVK	**Borovoye**	**148.15**	**45**	*e*PKPbc	**PKPbc**	**19 45 10.4**	**-0.2**
BVAR	**Borovoye Array**	**148.22**	**46**	PKPbc	**PKPbc**	**19 45 11.2**	**+0.3**
	comp=Z,2.1nm,0.6s,baz=290,slow=3.4,SNR=16						
NIL	**Nilore**	**150.78**	**84**	*e*PKPbc	**PKPbc**	**19 45 17.2**	**-0.7**
YAK	**Yakutsk**	**150.89**	**340**	*e*PKPbc	**PKPbc**	**19 45 16.7**	**-0.4**
AAK	**Ala-Archa**	**152.75**	**65**	PKPbc	**PKPbc**	**19 45 22.5**	**+0.3**
	comp=Z,7.3nm,0.8s,baz=209,slow=3.8,SNR=21						
AAK				PKPab	**pPKPbc**	**19 45 32.0**	**-0.4**
	comp=Z,4.9nm,0.6s,baz=228,slow=6.5,SNR=7.6						
AAK	**Ala-Archa**	**152.75**	**65**	*e*PKPbc	**PKPbc**	**19 45 22.2**	**0.0**
AAK				PKPab	**pPKPbc**	**19 45 32.0**	**-0.4**
KURBB	**Kurchatov Arra**	**153.78**	**47**	PKPbc	**PKPbc**	**19 45 23.1**	**-0.8**
	comp=Z,2.2nm,0.9s,baz=292,slow=2.7,SNR=15						
KURBB				PKPab	**PKPab**	**19 45 36.4**	**-0.6**
	comp=Z,1.8nm,0.7s,baz=289,slow=4.5,SNR=11						
KURK	**Kurchatov**	**153.80**	**46**	PKPbc	**PKPbc**	**19 45 23.1**	**-0.9**
KURK				PKPab	**PKPab**	**19 45 36.4**	**-0.7**
ZALV	**Zalesovo Beam**	**155.50**	**35**	PKP	**PKPdf**	**19 45 16.7**	**-1.6**
	comp=Z,0.4nm,0.4s,baz=259,slow=3.8,SNR=3.9						
ZALV				PKPbc	**pPKPdf**	**19 45 27.2**	**-1.3**
	comp=Z,1.2nm,0.7s,baz=270,slow=4.3,SNR=6.4						
ZALV				PKPab	sPKPbc	19 45 42.4	+1.2
	comp=Z,0.4nm,0.4s,baz=298,slow=3.1,SNR=3.7						
MKAR	**Makanchi Array**	**157.46**	**53**	PKP	**PKPdf**	**19 45 20.3**	**-0.9**
	comp=Z,0.5nm,0.8s,baz=349,slow=1.2,SNR=4.4						
MKAR				PKPbc	**pPKPdf**	**19 45 31.7**	**+0.3**
	comp=Z,1.1nm,1.0s,baz=258,slow=2.4,SNR=4.9						
MKAR				PKPab	**PKPab**	**19 45 51.9**	**-1.1**
	comp=Z,1.5nm,0.5s,baz=262,slow=3.7,SNR=16						
CMAR	**Chiang Mai Arr**	**160.42**	**151**	PKPab	**PKPab**	**19 46 07.2**	**+0.8**
	comp=Z,0.5nm,0.9s,baz=224,slow=5.0,SNR=3.5						
SONM	**Songino Array**	**168.07**	**8**	PKPab	**PKPab**	**19 46 39.3**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=330,slow=5.6,SNR=4.0						

*NDI **07** 19:38:56.1±1.8,24.°96N×91.°17E,h14km±6km,ML3.3*

ISC 07 19:38:58.4±1.5,24.°94N±0.°07×91.°20E±0.°05,h35km,n7, σ1§19/12,India-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**0.88**	**44**	*e*P	**Pn**	**19 39 12.4**	**-2.1**
SHL				*e*S	**Sn**	**19 39 26.5**	**+0.3**
TURI	**Tura**	**0.99**	**308**	*e*P	**Pn**	**19 39 15.6**	**-0.2**
TURI				*e*S	**Sn**	**19 39 30.6**	**+2.0**
TURI				IAML		19 39 31.6	
	comp=E,1μm,0.2s						
TURI				IAML		19 39 31.8	
	comp=N,784nm,0.1s						
AGT	**Agartala**	**1.05**	**177**	*e*P	**Pn**	**19 39 15.9**	**-0.6**
AGT				IAML		19 39 33.7	
	comp=N,2μm,0.3s						
AGT				IAML		19 39 33.9	
	comp=E,2μm,0.3s						
GUWA	**GUWAHATI**	**1.33**	**19**	*e*P	**Pn**	**19 39 20.0**	**-0.4**
GUWA				*e*S	**Sn**	**19 39 37.5**	**+0.6**
GUWA				IAML		19 39 39.1	
	comp=E,204nm,0.2s						
GUWA				IAML		19 39 39.5	
	comp=N,219nm,0.1s						
TEZP	**TEZPUR**	**2.21**	**40**	*e*P	**Pn**	**19 39 32.4**	**-0.2**
TEZP				*e*S	**Sn**	**19 39 59.0**	**+0.3**
TEZP				IAML		19 40 02.0	
	comp=N,184nm,0.2s						
TEZP				IAML		19 40 02.3	
	comp=E,120nm,0.2s						
MOKO	**MOKOCHONG**	**3.30**	**65**	*e*P	**Pn**	**19 39 48.5**	**+0.8**
MOKO				*e*S	**Sn**	**19 40 26.8**	**+1.1**
MOKO				IAML		19 40 45.4	
	comp=N,192nm,0.8s						
MOKO				IAML		19 40 45.6	
	comp=E,118nm,0.6s						
GTK	**Tadong**	**3.33**	**316**	*e*S	**Sn**	**19 40 25.2**	**-1.3**
GTK				IAML		19 40 51.2	
	comp=N,65nm,0.8s						
GTK				IAML		19 40 51.2	
	comp=E,115nm,0.7s						

*NIED **07** 19:56:00,31.°50N×142.°00E,h5km,Mw4.5 Best double couple: M07.06000×10^15 NP1:φ158.00000°,δ29.00000°, λ72.00000°. NP2:φ359.00000°,δ62.00000°,λ100.00000°.*
*IDC **07** 19:56:16.5±0.4,31.°44N×141.°73E,h0km,mb4.4/38, mb1 4.5/44,mb1mx4.4/79,mbtmp4.3/44,ML3.2/6,MS3.7/22, Ms1 3.7/22,ms1mx3.4/71,Error ellipse: s-maj=13.7km s-min=9.8km az=84.0*
*JMA **07** 19:56:18.3±0.2,31.°50N×141.°99E,h50km,M4.4*
*ISCJB **07** 19:56:19.7±0.2,31.°41N±0.°02×141.°71E±0.°05,h35km, mb4.5/68,MS3.7/18,Error ellipse: s-maj=6.5km s-min=3.0km az=161.9*
*NEIC **07** 19:56:19.6±2.4,31.°43N×141.°68E,h20km±15km,mb4.6/13, Error ellipse: s-maj=7.2km s-min=4.9km az=79.0*
*MOS **07** 19:56:22.4±1.2,31.°42N×141.°62E,h58km,mb4.9/32,Error ellipse: s-maj=11.5km s-min=5.3km az=115.6*

ISC 07 19:56:21.5±0.4,31.°45N±0.°04×141.°76E±0.°06,h35km,n152, σ1§37/162,mb4.7/68,MS3.8/18,11C-3D,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**2.32**	**315**	P	**Pn**	**19 56 56.0**	**-1.3**
JHCJ				*e*S	**Sn**	**19 57 24.8**	**+0.2**
JHJ2	**Mitsune**	**2.34**	**316**	P	**Pn**	**19 56 56.9**	**-0.6**
JHJ2				S	**Sn**	**19 57 26.0**	**+1.0**
JHJ	**Hachijo jima 2**	**2.36**	**315**	Pn	**Pn**	**19 56 56.3**	**-1.5**
	68nm,0.3s,baz=242,slow=22,SNR=8.5						
JHJ				LR	LR	19 57 23.9	
	comp=Z,907nm,18.4s,baz=120,slow=29						
JHJ				Sn	**Sn**	**19 57 24.3**	**-1.3**
	148nm,0.3s,baz=57,slow=23,SNR=6.8						
BSO1	**Boso 1**	**3.27**	**349**	P	**Pn**	**19 57 08.4**	**-1.3**
BSO1				*e*S	**Sn**	**19 57 47.0**	**-0.1**
BSO2	**Boso 2**	**3.40**	**346**	S	**Sn**	**19 57 53.2**	**+2.4**
BSO3	**Boso 3**	**3.51**	**343**	P	**Pn**	**19 57 12.3**	**-1.0**
JKO	**Kozu shima**	**3.51**	**322**	P	**Pn**	**19 57 13.3**	**-0.3**
CBIJ	**Chichi jima**	**4.35**	**175**	Pn	**Pn**	**19 57 24.9**	**-0.2**
CBIJ				Sn	**Sn**	**19 58 12.9**	**-1.7**
CBIJ	**Chichi jima**	**4.35**	**175**	P	**Pn**	**19 57 24.2**	**-1.0**
CBIJ				S	**Sn**	**19 58 14.6**	**-0.1**
JCJ	**Chichijima**	**4.35**	**175**	Pn	**Pn**	**19 57 24.9**	**-0.2**
	baz=343,slow=19						
JCJ				Sn	**Sn**	**19 58 12.9**	**-1.7**
	23nm,0.3s,baz=270,slow=20,SNR=4.0						
JOD2	**Odawara 2**	**4.41**	**330**	P	**Pn**	**19 57 25.1**	**-0.9**
JOD2				*e*S	**Sn**	**19 58 17.4**	**+1.2**
JRY	**Ryogami san**	**5.14**	**333**	P	**Pn**	**19 57 36.5**	**+0.4**
JRY				*e*S	**Sn**	**19 58 35.9**	**+1.7**
JIE	**Ise**	**5.17**	**306**	P	**Pn**	**19 57 37.0**	**+0.7**
MJA0	**Matsu Arr-Jizo**	**5.86**	**331**	*e*P	**Pn**	**19 57 46.3**	**+0.4**
MJA0				pmax	pmax		
	comp=Z,4.0nm,0.3s						
MJAR	**Matsushiro Arr**	**5.88**	**331**	Pn	**Pn**	**19 57 46.3**	**+0.2**
	comp=Z,3.7nm,0.3s,baz=155,slow=10,SNR=64						
MJAR				Sn	**Sn**	**19 58 51.1**	**-1.1**
	baz=180,slow=30,SNR=2.5						
MJAR				LR	LR	20 00 01.2	
	comp=Z,444nm,19.6s,baz=165,

YAK	Yakutsk	31.59	349⇑	*i*P	P	20 02 40.4	-0.1
YAK				pmax	pmax		
comp=Z,6.0nm,0.9s							
SEY	Seymchan	32.23	9	P	P	20 02 46.4	+0.2
comp=Z,3.3nm,0.8s,baz=188,slow=8.5,SNR=13							
SEY	Seymchan	32.23	9	⇓*i*P	P	20 02 46.2	0.0
SIJI	Sorong	33.65	199	P	P	20 02 58.6	-0.4
comp=Z,1.8nm,0.2s,baz=55,slow=5.5,SNR=3.9							
ZAK	Zakamensk	34.19	315	*e*P	P	20 03 02.9	-0.7
ZAK				pmax	pmax		
comp=Z,6.0nm,1.4s							
TLY	Talaya	34.42	317	*e*P	P	20 03 06.2	+0.8
comp=Z,9.5nm,0.8s							
TLY	Talaya	34.42	317	*e*P	P	20 03 06.3	+0.8
TLY				pmax	pmax		
comp=Z,7.0nm,0.6s							
TLY				MLR	MLR		
comp=Z,214nm,19.0s							
BILL	Bilibino	39.33	14	*e*P	P	20 03 47.4	+0.5
BILL				*e*		20 03 58.1	
BILL				*e*		20 05 19.9	
BILL				pmax	pmax		
comp=Z,7.0nm,1.7s							
HVS	Khovu-Aksy	40.27	314*c*	*i*P	P	20 03 56.3	+1.2
HVS				pmax	pmax		
comp=Z,18nm,0.9s							
CHTO	Chiang Mai	40.51	262	*e*P	P	20 03 56.0	-1.4
comp=Z,5.1nm,0.9s							
CHTO	Chiang Mai	40.51	262	*e*P	P	20 03 56.0	-1.4
CHTO				pmax	pmax		
comp=Z,5.0nm,0.9s							
CMAR	Chiang Mai Arr	40.67	262	P	P	20 03 57.8	-0.9
comp=Z,2.2nm,0.7s,baz=63,slow=5.4,SNR=7.5							
CMAR				LR	LR	20 21 38.1	
comp=Z,115nm,18.4s,baz=73,slow=37							
TIXI	Tiksi	40.86	354	P	P	20 03 58.5	-1.1
comp=Z,0.8nm,0.5s,baz=158,slow=7.2,SNR=5.5							
TIXI	Tiksi	40.86	354⇑	*i*P	P	20 03 58.7	-0.8
TIXI				pmax	pmax		
comp=Z,1.0nm,1.0s							
LSA	Lhasa	43.30	281	*e*P	P	20 04 19.0	-1.6
LSA	Lhasa	43.30	281	*e*P	P	20 04 19.0	-1.6
ZALV	Zalesovo Beam	46.03	316	P	P	20 04 41.6	+0.1
comp=Z,6.3nm,0.7s,baz=102,slow=7.2,SNR=27							
ZALV				PcP	PcP	20 06 18.1	+0.6
comp=Z,2.2nm,0.8s,baz=104,slow=3.5,SNR=3.9							
ZALV				LR	LR	20 24 40.2	
comp=Z,84nm,18.2s,baz=70,slow=37							
NVS	Novosibirsk	47.03	318	*e*P	P	20 04 49.6	+0.3
NVS				*e*		20 11 47.6	
NVS				pmax	pmax		
comp=Z,13nm,0.8s							
NVS				pmax	pmax		
comp=E,14nm,0.9s							
ODAN	Odare	47.31	279	*e*P	P	20 04 51.1	-1.0
comp=E,12nm,0.6s							
MKAR	Makanchi Array	47.51	307	P	P	20 04 53.3	+0.1
comp=E,4.2nm,0.5s,baz=90,slow=9.8,SNR=51							
MKAR				LR	LR	20 24 08.1	
comp=E,82nm,19.2s,baz=63,slow=35							
RAMN	Ramite	47.94	279	*e*P	P	20 04 56.3	-0.8
comp=E,26nm,0.7s							
JIRN	Jiri	48.06	280	*e*P	P	20 04 57.9	-0.2
comp=E,44nm,0.7s							
GUN	Gumba	48.24	281	*e*P	P	20 04 59.1	-0.4
comp=E,42nm,0.8s							
NRIK	Noril'sk	48.49	337	P	P	20 05 00.8	+0.4
comp=E,3.9nm,0.5s,baz=119,slow=7.1,SNR=5.2							
PKIN	Phulchoki	48.75	281	*e*P	P	20 05 02.9	-0.5
comp=E,17nm,0.7s							
KKN	Kakani	48.78	281	*e*P	P	20 05 02.8	-0.7
comp=E,32nm,1.0s							
DMN	Daman	48.99	281	*e*P	P	20 05 04.3	-0.8
comp=E,11nm,0.7s							
GKN	Gorkha	49.25	281	*e*P	P	20 05 06.4	-0.7
comp=E,15nm,0.7s							
KURK	Kurchatov	49.74	312	*e*P	P	20 05 09.8	-0.5
comp=E,224nm,1.0s							
KURK	Kurchatov	49.74	312*c*	*i*P	P	20 05 10.4	+0.2
KURBB	Kurchatov Arra	49.80	312	P	P	20 05 10.8	+0.1
comp=E,14nm,0.8s,baz=88,slow=7.2,SNR=91							
DANN	Dangsing	49.88	282	*e*P	P	20 05 11.8	-0.2
comp=E,20nm,0.6s							
LEM	Lembang	50.12	227	P	P	20 05 13.8	0.0
comp=E,7.0nm,0.5s,baz=6.9,slow=16,SNR=3.0							
LEM				LR	LR	20 26 00.9	
comp=E,53nm,19.2s,baz=5.0,slow=36							
KOLN	Koldanda	50.20	282	*e*P	P	20 05 13.8	-0.5
comp=E,14nm,0.6s							
PYUN	Piuthan	50.60	282	*e*P	P	20 05 17.0	-0.4
comp=E,40nm,0.6s							
KDAK	Kodiak Island	51.16	39	P	P	20 05 21.2	+0.4
comp=E,7.5nm,0.8s,baz=253,slow=6.2,SNR=11							
CTA	Charters Tower	51.42	175	P	P	20 05 24.1	+1.0
comp=E,3.3nm,0.7s,baz=3.6,slow=19,SNR=2.8							
WRAB	Tennant Creek	51.58	189	*e*P	P	20 05 23.6	-0.8
comp=E,12nm,0.8s							
WRAB	Tennant Creek	51.58	189⇑	*i*P	P	20 05 24.0	-0.4
WRAB				pmax	pmax		
comp=Z,7.0nm,0.9s							
WRA	Warramunga Arr	51.59	189	P	P	20 05 23.8	-0.7
comp=Z,7.5nm,0.7s,baz=7.0,slow=7.7,SNR=27							
FITZ	Fitzroy Crossi	51.64	200	P	P	20 05 24.6	-0.1
comp=Z,2.6nm,0.8s,baz=14,slow=8.3,SNR=2.7							
AAK	Ala-Archa	53.55	302	*e*P	P	20 05 39.6	+0.6
comp=Z,2.6nm,0.6s							
AAK	Ala-Archa	53.55	302	⇓*i*P	P	20 05 39.8	+0.7
AAK				pmax	pmax		
comp=Z,34nm,2.5s							
ILAR	Eielson Array	54.11	30	P	P	20 05 42.5	-0.1
comp=Z,3.9nm,1.0s,baz=262,slow=6.4,SNR=19							
BVAR	Borovoye Array	54.64	315	P	P	20 05 47.1	+0.5
comp=Z,2.6nm,0.5s,baz=95,slow=7.3,SNR=20							
BRVK	Borovoye	54.70	315	*e*P	P	20 05 47.4	+0.3
comp=Z,17nm,0.9s							
BRVK	Borovoye	54.70	315	⇓*i*P	P	20 05 48.0	+0.9
BRVK				pmax	pmax		
comp=Z,7.0nm,1.0s							
ASAR	Alice Springs	55.31	189	P	P	20 05 51.5	-0.2
comp=Z,2.4nm,0.5s,baz=358,slow=5.1,SNR=31							
EGAK	Eagle	56.57	30	*e*P	P	20 05 59.9	-0.3
comp=Z,1.1nm,0.5s							
NIL	Nilore	56.80	292	*e*P	P	20 06 03.5	+1.1
comp=Z,19nm,0.6s							
NIL	Nilore	56.80	292	*e*P	P	20 06 03.6	+1.1
NIL				pmax	pmax		
comp=Z,19nm,0.6s							
INK	Inuvik	59.26	26	P	P	20 06 19.3	+0.3
comp=Z,1.7nm,0.5s,baz=244,slow=6.7,SNR=5.5							
INK	Inuvik	59.26	26	*e*P	P	20 06 19.3	+0.3
comp=Z,5.3nm,0.9s							
INK	Inuvik	59.26	26	*e*P	P	20 06 19.3	+0.3
INK				pmax	pmax		
comp=Z,5.0nm,0.9s							
SVE	Sverdlovsk	59.59	321⇑	*e*P	P	20 06 23.8	+2.3
SVE				pmax	pmax		
comp=Z,29nm,1.1s							
ARU	Arti	60.80	321*c*	*i*P	P	20 06 29.8	0.0
ARU				*PP	pP	20 06 40.8	+0.3
ARU						20 07 12.9	
ARU				S	S	20 14 46.9	+2.4
ARU				SS	SS	20 18 46.1	+2.9
ARU				pmax	pmax		
comp=Z,27nm,1.0s							
AKTO	Aktyubinsk	62.70	314	P	P	20 06 42.7	0.0
comp=Z,7.1nm,0.8s,baz=80,slow=12,SNR=18							
AKTO				LR	LR	20 33 43.6	
comp=Z,44nm,20.1s,baz=83,slow=36							
STKA	Stephens Creek	62.98	180	P	P	20 06 44.4	-0.2
comp=Z,1.3nm,0.9s,baz=329,slow=16,SNR=1.8							
PRGR	Permogore	65.64	329	*e*P	P	20 07 01.4	-0.3
PRGR				pmax	pmax		
comp=Z,10.0nm,0.9s							
GEYT	Alibeck	66.88	301	P	P	20 07 11.4	+1.1
comp=Z,7.1nm,0.9s,baz=41,slow=2.7,SNR=9.4							
GEYT				LR	LR	20 37 11.7	
comp=Z,63nm,19.0s,baz=85,slow=37							
NWAO	Narrogin (SRO)	68.09	202	P	P	20 07 17.7	+0.1
comp=Z,32nm,1.3s,baz=16,slow=7.4,SNR=2.6							
YKA	Yellowknife Ar	68.52	29	P	P	20 07 21.6	+1.5
comp=Z,0.7nm,0.7s,baz=293,slow=6.6,SNR=3.4							
KLMR	Klimovskoe	68.66	329	*e*P	P	20 07 16.6	-4.3
KLMR				pmax	pmax		
comp=Z,7.0nm,0.9s							
KLMR	Klimovskoe	68.66	329	*e*P	P	20 07 16.7	-4.2
KLMR				AMP		20 07 22.0	
comp=Z,7.0nm,0.9s							
ARCES	ARCESS Array B	69.33	340	P	P	20 07 25.2	+0.2
comp=Z,3.3nm,0.9s,baz=40,slow=9.6,SNR=4.1							
ARCES	ARCESS Array B	69.33	340	*e*P	P	20 07 26.8	+1.8
ARCES				pmax	pmax		
comp=Z,3.0nm,0.9s							
AKT	Akhty	72.70	308	*e*P	P	20 07 46.6	+0.5
AKT				*e*		20 08 05.2	
AKT				pmax	pmax		
comp=Z,19nm,1.1s							
OBN	Obninsk	72.77	325	*e*P	P	20 07 46.8	+0.8
OBN				*i*		20 08 00.3	
GROC	Groznyy	73.19	311	*e*P	P	20 07 45.9	-2.9
GROC				*e*		20 08 02.3	
GROC				pmax	pmax		
comp=Z,21nm,1.7s							
VSR	Storozhevoye	73.36	320	*e*P	P	20 07 49.0	-0.6
VSR				pmax	pmax		
comp=Z,10.0nm,1.3s							
VORD	Divnogorie	73.41	320	*e*P	P	20 07 44.5	-5.4
VORD				pmax	pmax		
comp=Z,10.0nm,0.5s							
YBH	Yreka Blue Hor	73.58	51	LR	LR	20 33 54.1	
comp=Z,49nm,20.7s,baz=271,slow=31							
FINES	FINESS Array B	73.90	333	P	P	20 07 52.9	+0.3
comp=Z,3.3nm,0.7s,baz=62,slow=5.9,SNR=20							
FINES	FINESS Array B	73.90	333	*e*P	P	20 07 52.5	-0.1
FINES				pmax	pmax		
comp=Z,3.0nm,0.7s							
KBZ	Khabaz	74.80	312	P	P	20 07 59.0	+0.8
comp=Z,4.6nm,0.9s,baz=63,slow=2.6,SNR=7.8							
KBZ	Khabaz	74.80	312	P	P	20 07 59.0	+0.8
KIV	Kislovodsk	74.83	312	*e*P	P	20 07 58.9	+0.4
comp=Z,4.6nm,0.8s							
KIV	Kislovodsk	74.83	312	*e*P	P	20 08 00.0	+1.5
KIV				pmax	pmax		
comp=Z,12nm,1.1s							
KIV				MLR	MLR		
comp=Z,66nm,18.0s							
VSU	Vasula	75.43	331⇑	*e*P	P	20 08 00.6	-0.9
VSU				pmax	pmax		
comp=Z,23nm,1.1s							
HLID	Hailey	77.99	46	*e*P	P	20 08 19.9	+3.4
NVAR	Mina Array Bea	78.14	52	P	P	20 08 18.5	+1.0
comp=Z,1.3nm,0.8s,baz=289,slow=5.0,SNR=8.3							
NVAR				LR	LR	20 40 38.9	
comp=Z,51nm,18.6s,baz=92,slow=34							
AKASG	Malin Array Be	78.91	323	P	P	20 08 21.1	0.0
comp=Z,3.2nm,0.7s,baz=48,slow=5.3,SNR=11							
HFS	Hagfors	79.30	336	P	P	20 08 22.9	-0.3
comp=Z,2.6nm,0.7s,baz=95,slow=8.0,SNR=8.8							
NB2	NORSAR Subarra	79.45	338	P	P	20 08 23.6	-0.4
comp=Z,1.5nm,0.7s,baz=41,slow=5.6							
NOA	NORSAR Array B	79.45	338	P	P	20 08 24.2	+0.1
comp=Z,2.8nm,0.7s,baz=9.6,slow=1.2,SNR=7.3							
PDAR	Pinedale Array	81.39	45	P	P	20 08 35.7	+0.6
comp=Z,0.9nm,0.7s,baz=346,slow=3.7,SNR=5.0							
PDAR				LR	LR	20 41 27.7	
comp=Z,24nm,20.3s,baz=282,slow=33							
BRTR	Keskin Array B	82.79	312	P	P	20 08 42.3	0.0
comp=Z,2.6nm,0.9s,baz=119,slow=4.4,SNR=11							
BRTR	Keskin Array B	82.79	312	*e*P	P	20 08 43.3	+0.9
BRTR				pmax	pmax		
comp=Z,3.0nm,0.9s							
RAYN	Ar Rayn	83.08	293	*e*P	P	20 08 44.8	+0.8
comp=Z,6.5nm,0.6s							
MLR	Muntele Rosu	83.85	320	P	P	20 08 47.4	-0.3
comp=Z,0.3nm,0.8s,baz=94,slow=14,SNR=2.6							
ASF	Jabal al Asfar	84.88	305	P	P	20 08 53.3	+0.2
comp=Z,3.5nm,0.8s,baz=338,slow=4.4,SNR=8.0							
DPC	Dobruska-Polom	85.34	328	*e*P	P	20 08 56.1	+1.1
DPC				*ex*	x	20 09 09.7	
DPC				*ex*	x	20 09 21.2	
DPC	Dobruska-Polom	85.34	328	*e*P	P	20 08 56.1	+1.1
DPC				*e*		20 09 09.7	
DPC				*e*		20 09 21.2	
MMAI	Mount Meron Ar	85.45	306	P	P	20 08 56.2	+0.3
comp=Z,2.3nm,0.7s,baz=68,slow=9.1,SNR=6.7							
VYHS	Vyhne	85.49	326	*e*P	P	20 08 56.3	+0.6
VYHS				pmax	pmax		
comp=Z,11nm,1.9s							
VYHS	Vyhne	85.49	326	*e*P	P	20 08 56.3	+0.6
CLL	Collm	86.08	331	*e*P	P	20 08 59.0	+0.4
comp=Z,7.0nm,1.3s							
CLL				*ep*P	PcP	20 09 04.0	+2.8
CLL	Collm	86.08	331	*e*P	P	20 08 59.0	+0.4
CLL				pmax	pmax		
comp=Z,7.0nm,1.3s							
KHC	Kasperske Hory	87.45	329	*e*P	P	20 09 06.4	+1.0
KHC	Kasperske Hory	87.45	329	*e*P	P	20 09 06.4	+1.0
GERES	GERESS Array B	87.61	329	P	P	20 09 06.2	-0.1
comp=Z,0.2nm,0.4s,baz=44,slow=5.8,SNR=3.7							
ANMO	Albuquerque	87.97	50	LR	LR	20 44 56.7	
comp=Z,74nm,18.6s,baz=294,slow=33							
LPIG	La Paz	91.70	60	LR	LR	20 46 27.5	
comp=Z,43nm,19.8s,baz=246,slow=33							
TXAR	Lajitas Array	93.28	53	P	P	20 09 34.1	+1.0
comp=Z,3.2nm,0.8s,baz=296,slow=2.8,SNR=21							
QSPA	South Pole Qui	121.20	180	PKP	PKPdf	20 15 10.5	+0.6
comp=Z,1.0nm,0.6s,baz=315,slow=5.7,SNR=3.6							
TORD	Torodi Ar. Bea	121.40	313	PKP	PKPdf	20 15 12.2	+0.4
comp=Z,0.6nm,0.7s,baz=48,slow=2.3,SNR=3.6							
KOWA	Kowa	123.73	319	PKP	PKPdf	20 15 17.5	+1.2
comp=Z,1.2nm,0.6s,baz=335,slow=3.5,SNR=2.2							
LPAZ	La Paz	148.91	68	PKPbc	PKPab	20 16 08.6	-2.4
comp=Z,1.5nm,0.6s,baz=306,slow=1.3,SNR=6.7							

*LDG **07** 19:56:26.8±0.1, 44°.88N×11°.07E, h2km, Ml2.9/19, Error ellipse: s-maj=2.1km s-min=1.7km az=159.0*
*CSEM **07** 19:56:27.4±0.1, 44°.92N×10°.84E, h5km, ML2.9/28, Error ellipse: s-maj=2.4km s-min=2.2km az=170.0*
*ISCJB **07** 19:56:27.5±0.2, 44°.86N±0°.01×10°.86E±0°.02, h24km±1km, Error ellipse: s-maj=2.5km s-min=1.9km az=163.8*
*ROM **07** 19:56:27.4±0.0, 44°.854N±0°.001×10°.881E±0°.001, h7km, ML3.1/54*
*PRU **07** 19:56:29.0, 45°.02N×10°.72E, h6km*
*STR **07** 19:56:32.2±2.3, 45°N±9°×1°1E±2°1, h5km, M3.5/7, mb3.5/1, MLv3.6/7*

ISC 07 19:56:28.0±0.8, 44°.90N±0°.01×10°.88E±0°.01, h18km±2km, n244, σ1°.31/360, 10C-13D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
NDIM	Novi di Modena	0.02	137	P	*i*	Pg	19 56 29.3	-1.8
NDIM				S	*i*	Sg	19 56 31.5	-1.8
NDIM				AML		AML		
NDIM				AML		AML		
NDIM				AML		AML		
NDIM				AML		AML		
T0827	Moglia (MN)	0.05	47⇑	P	*e*	Pg	19 56 30.4	-0.9
T0827	Moglia (MN)	0.05	47	P	*e*	Pg	19 56 30.4	-0.9
T0825	Gonzaga (MN)	0.07	342	P	*e*	Pg	19 56 31.3	-0.2
T0825				S	*e*	Sg	19 56 35.8	+2.0
T0825	Gonzaga (MN)	0.07	342	P	*e*	Pg	19 56 31.3	-0.2
T0825				S	*e*	Sg	19 56 35.8	+2.0
T0825				AML		AML		
comp=E,40100μm,0.9s								
T0825				AML		AML		
comp=N,84950μm,0.9s								
T0828	Loc. Fossoli,	0.08	161	⇓P	*i*	Pg	19 56 29.5	-1.9
T0828				S	*i*	Sg	19 56 32.1	-1.6
T0828	Loc. Fossoli,	0.08	161	P	*i*	Pg	19 56 29.5	-1.9
T0828				S	*i*	Sg	19 56 32.1	-1.6
T0826	Rio Saliceto (	0.08	218⇑	P	*e*	Pg	19 56 29.7	-1.8
T0826				S	*e*	Sg	19 56 32.4	-1.4
T0826	Rio Saliceto (	0.08	218	P	*e*	Pg	19 56 29.7	-1.8
T0826				S	*e*	Sg	19 56 32.4	-1.4
T0826				AML		AML		
T0826				AML		AML		
T0818	Loc. Fossa, Co	0.11	73⇑	P	*e*	Pg	19 56 31.1	-0.7
T0818				S	*e*	Sg	19 56 35.1	+0.8
T0818	Loc. Fossa, Co	0.11	73	P	*e*	Pg	19 56 31.1	-0.7
T0818				S	*e*	Sg	19 56 35.1	+0.8
T0814	Loc. Cortile,	0.13	150	⇓P	*i*	Pg	19 56 30.3	-1.6
T0814				S	*i*	Sg	19 56 33.6	-1.0
T0814	Loc. Cortile,	0.13	150	P	*i*	Pg	19 56 30.3	-1.6
T0814				S	*i*	Sg	19 56 33.6	-1.0
T0824	Loc. Limidi di	0.15	166	⇓P	*i*	Pg	19 56 30.5	-1.7
T0824				S	*i*	Sg	19 56 34.5	-0.5
T0824	Loc. Limidi di	0.15	166	P	*i*	Pg	19 56 30.5	-1.7
T0824				S	*i*	Sg	19 56 34.5	-0.5
SBPO	S.Benedetto Po	0.15	11	P	*e*	Pg	19 56 32.5	+0.2
SBPO				S	*e*	Sg	19 56 37.9	+2.8
SBPO	S.Benedetto Po	0.15	11	P	*e*	Pg	19 56 32.5	+0.2
SBPO				S	*e*	Sg	19 56 37.9	+2.8
SBPO				AML		AML		
comp=E,7915μm,0.5s								
SBPO				AML		AML		
comp=N,37250μm,0.5s								
SBPO				AML		AML		
comp=E,7915μm,0.5s								
SBPO				AML		AML		
comp=N,37250μm,0.5s								
SBPO				AML		AML		
comp=E,7915μm,0.5s								
SBPO				AML		AML		
comp=N,37250μm,0.5s								
NOVE	Novellara	0.16	228⇓	P	*e*	Pg	19 56 30.9	-1.4
NOVE				S	*e*	Sg	19 56 34.8	-0.4
NOVE	Novellara	0.16	228	P	*e*	Pg	19 56 30.9	-1.4
NOVE				S	*e*	Sg	19 56 34.8	-0.4
NOVE				AML		AML		
comp=E,24000μm,1.3s								
NOVE				AML		AML		
comp=N,12060μm,0.6s								
NOVE				AML		AML		
comp=E,24000μm,1.3s								
NOVE				AML		AML		
comp=N,12050μm,0.6s								
NOVE				AML		AML		
comp=E,24000μm,1.3s								
NOVE				AML		AML		
comp=N,12070μm,0.6s								
NOVE				AML		AML		
comp=E,24000μm,1.3s								
NOVE				AML		AML		
comp=N,12070μm,0.6s								
T0802	SanFelice sul	0.22	97	*e*P		Pg	19 56 32.3	-0.9
T0802				*e*S		Sg	19 56 37.6	+0.9
T0802	SanFelice sul	0.22	97	*e*P		Pg	19 56 32.3	-0.9
T0802				*e*S		Sg	19 56 37.6	+0.9
T0812	Loc. Stoppiaro	0.22	76	*e*P		Pg	19 56 32.8	-0.5
T0812	Loc. Stoppiaro	0.22	76	*e*P		Pg	19 56 32.8	-0.5
T0812				*e*S		Sg	19 56 39.3	+2.5
RAVA	Ravarino	0.23	131	*e*P		Pg	19 56 32.2	-1.1
RAVA				*e*S		Sg	19 56 37.3	+0.4
RAVA	Ravarino	0.23	131	*e*P		Pg	19 56 32.2	-1.1
RAVA				*e*S		Sg	19 56 37.3	+0.4
RAVA				AML		AML		
comp=E,29300μm,1.3s								
RAVA				AML		AML		
comp=N,16865μm,1.3s								
RAVA				AML		AML		
comp=E,29300μm,1.3s								
RAVA				AML		AML		
comp=N,16855μm,1.3s								
RAVA				AML		AML		
comp=E,29250μm,1.3s								
RAVA				AML		AML		
comp=N,16895μm,1.3s								
RAVA				AML		AML		
comp=E,29250μm,1.3s								
RAVA				AML		AML		
comp=N,16895μm,1.3s								
T0813	Massa Finalese	0.23	96	*e*P		Pg	19 56 32.5	-0.9
T0813				*e*S		Sb	19 56 37.8	+0.8
T0813	Massa Finalese	0.23	96	*e*P		Pg	19 56 32.5	-0.9
T0813				*e*S		Sb	19 56 37.8	+0.8
GAZZ	Gazzo Veronese	0.26	36⇑	*e*Pg		Pb	19 56 34.2	+0.1
GAZZ	Gazzo Veronese	0.26	36	*e*Pg		Pb	19 56 34.2	+0.1
T0800	Massa Finalese	0.27	101⇓	*e*P		Pg	19 56 32.9	-1.1
T0800				*e*S		Sg	19 56 37.9	-0.2
T0800	Massa Finalese	0.27	101	*e*P		Pg	19 56 32.9	-1.1
T0800				*e*S		Sg	19 56 37.9	-0.2
T0800				AML		AML		
comp=E,19050μm,0.3s								
T0800				AML		AML		
comp=N,18950μm,0.3s								
T0800				AML		AML		
comp=E,16550μm,0.3s								
T0800				AML		AML		
comp=N,22750μm,0.3s								
T0800				AML		AML		
comp=E,19100μm,0.3s								
T0800				AML		AML		
comp=N,18950μm,0.3s								
T0800				AML		AML		
comp=E,16550μm,0.3s								
T0800				AML		AML		
comp=N,22750μm,0.3s								
T0800				AML		AML		
comp=E,19100μm,0.3s								
T0800				AML		AML		
comp=N,18950μm,0.3s								
T0800				AML		AML		
comp=E,16550μm,0.3s								
T0800				AML		AML		
comp=N,22800μm,0.3s								
T0800				AML		AML		
comp=N,22800μm,0.3s								
T0800				AML		AML		
comp=N,18950μm,0.3s								
T0800				AML		AML		
comp=E,19100μm,0.3s								
T0800				AML		AML		
comp=E,16550μm,0.3s								
T0811	Palata Pepoli	0.27	115	*e*P		Pg	19 56 32.0	-2.1
T0811				*e*S		Sg	19 56 38.6	+0.3
T0811	Palata Pepoli	0.27	115	*e*P		Pg	19 56 33.0	-1.1
T0811				*e*S		Sg	19 56 38.6	+0.3
MODE	Modena	0.28	170⇑	*e*P		Pg	19 56 33.1	-1.0
MODE				*e*S		Sb	19 56 38.8	+0.2
MODE	Modena	0.28	170	*e*P		Pg	19 56 33.1	-1.0
MODE				*e*S		Sb	19 56 38.8	+0.2
SERM	Sermide	0.32	70	AML		AML		
comp=N,1490μm,1.4s								
SERM				AML		AML		
comp=E,1640μm,0.6s								
SERM				AML		AML		
comp=N,1490μm,1.4s								
SERM				AML		AML		
comp=E,2360μm,0.6s								
SERM				AML		AML		
comp=N,1835μm,0.8s								
SERM				AML		AML		
comp=E,1640μm,0.6s								
SERM				AML		AML		
comp=N,1490μm,1.4s								
SERM				AML		AML		
comp=E,1640μm,0.6s								
SERM				AML		AML		
comp=E,1640μm,0.6s								
SERM				AML		AML		
comp=N,1490μm,1.4s								
T0805	Bondeno (FE)	0.32	87	*e*P		Pg	19 56 34.0	-0.8
T0805				*e*S		Sb	19 56 40.5	+0.6
T0805	Bondeno (FE)	0.32	87	*e*P		Pg	19 56 34.0	-0.8
T0805				*e*S		Sb	19 56 40.5	+0.6
T0805				AML		AML		
comp=E,11740μm,0.3s								
T0805				AML		AML		
com

	comp=N,6325µm,1.0s						
T0823	**Castello D'Arg**	**0.36**	**127**	*e*P	**Pg**	**19 56 35.1**	**-0.4**
T0823	**Castello D'Arg**	**0.36**	**127**	*e*P	**Pg**	**19 56 35.1**	**-0.4**
T0823				*e*S	**Sb**	**19 56 42.8**	**+1.7**
T0803	**Dosso, Cento (**	**0.36**	**112**	*e*P	**Pg**	**19 56 34.8**	**-0.8**
T0803				*e*S	**Sg**	**19 56 41.1**	**+0.4**
T0803	**Dosso, Cento (**	**0.36**	**112**	*e*P	**Pg**	**19 56 34.8**	**-0.8**
T0803				*e*S	**Sg**	**19 56 41.1**	**+0.4**
T0803				AML	AML		
	comp=E,5725µm,0.4s						
T0803				AML	AML		
	comp=N,7055µm,0.3s						
T0803				AML	AML		
	comp=E,5725µm,0.4s						
T0803				AML	AML		
	comp=N,7055µm,0.4s						
T0803				AML	AML		
	comp=N,7055µm,0.4s						
T0803				AML	AML		
	comp=E,5725µm,0.4s						
T0817	**Loc. Veratica,**	**0.42**	**77**⇑	*e*P	**Pg**	**19 56 36.0**	**-0.6**
T0817	**Loc. Veratica,**	**0.42**	**77**	*e*P	**Pb**	**19 56 37.0**	**+0.1**
T0817				*e*S	**Sb**	**19 56 44.9**	**+2.0**
PRMA	**PARMA**	**0.43**	**251**⇓	*i*P	**Pb**	**19 56 36.9**	**-0.1**
PRMA	**PARMA**	**0.43**	**251**	*i* P	**Pb**	**19 56 36.9**	**-0.1**
PRMA				*i* S	**Sb**	**19 56 45.6**	**+2.5**
PRMA				AML	AML		
	comp=E,1148µm,0.8s						
PRMA				AML	AML		
	comp=N,1610µm,0.2s						
PRMA				AML	AML		
	comp=E,1148µm,0.8s						
PRMA				AML	AML		
	comp=N,1610µm,0.2s						
PRMA				AML	AML		
	comp=E,1148µm,0.8s						
PRMA				AML	AML		
	comp=N,1610µm,0.2s						
T0821	**Loc. Casaglia**	**0.47**	**90**	*e*P	**Pg**	**19 56 37.8**	**+0.3**
T0821	**Loc. Casaglia**	**0.47**	**90**	*e*P	**Pg**	**19 56 37.8**	**+0.3**
T0821				*e*S	**Sb**	**19 56 45.8**	**+1.5**
T0821				AML	AML		
	comp=E,2740µm,0.6s						
T0821				AML	AML		
	comp=N,2150µm,1.3s						
T0821				AML	AML		
	comp=E,2740µm,0.6s						
T0821				AML	AML		
	comp=N,2155µm,1.3s						
T0821				AML	AML		
	comp=N,2155µm,1.3s						
T0821				AML	AML		
	comp=E,2740µm,0.6s						
T0820	**Chiesuol del F**	**0.51**	**102**	*e*P	**Pb**	**19 56 39.2**	**+0.9**
T0820	**Chiesuol del F**	**0.51**	**102**	*e*P	**Pb**	**19 56 39.2**	**+0.9**
T0820				*e*S	**Sb**	**19 56 47.7**	**+2.4**
T0820				AML	AML		
	comp=E,5310µm,0.6s						
T0820				AML	AML		
	comp=N,5065µm,0.6s						
T0820				AML	AML		
	comp=E,5875µm,0.5s						
T0820				AML	AML		
	comp=N,3705µm,1.4s						
T0820				AML	AML		
	comp=E,5310µm,0.6s						
T0820				AML	AML		
	comp=N,5065µm,0.6s						
T0820				AML	AML		
	comp=E,5880µm,0.5s						
T0820				AML	AML		
	comp=N,3705µm,1.4s						
T0820				AML	AML		
	comp=E,5310µm,0.6s						
T0820				AML	AML		
	comp=E,5880µm,0.5s						
T0820				AML	AML		
	comp=N,5065µm,0.6s						
T0820				AML	AML		
	comp=N,3705µm,1.4s						
T0816	**San Bartolomeo**	**0.54**	**109**	*e*P	**Pg**	**19 56 38.7**	**-0.2**
T0816	**San Bartolomeo**	**0.54**	**109**	*e*P	**Pg**	**19 56 38.7**	**-0.2**
T0816				*e*S	**Sb**	**19 56 47.7**	**+1.3**
ZCCA	**Zocca**	**0.56**	**173**⇑	*e*P	**Pg**	**19 56 38.0**	**-1.1**
ZCCA	**Zocca**	**0.56**	**173**	*e*P	**Pg**	**19 56 39.0**	**-0.2**
ZCCA				AML	AML		
	comp=E,1895µm,1.3s						
ZCCA				AML	AML		
	comp=N,1925µm,0.7s						
ZCCA				AML	AML		
	comp=E,1815µm,1.5s						
ZCCA				AML	AML		
	comp=N,2210µm,0.7s						
ZCCA				AML	AML		
	comp=E,1900µm,1.3s						
ZCCA				AML	AML		
	comp=N,1925µm,0.7s						
ZCCA				AML	AML		
	comp=E,1815µm,1.5s						
ZCCA				AML	AML		
	comp=N,2210µm,0.7s						
ZCCA				AML	AML		
	comp=N,2210µm,0.7s						
ZCCA				AML	AML		
	comp=N,1925µm,0.7s						
ZCCA				AML	AML		
	comp=E,1900µm,1.3s						
ZCCA				AML	AML		
	comp=E,1815µm,1.5s						
T0815	**Correggio (RE)**	**0.60**	**92**	*e*P	**Pb**	**19 56 40.7**	**+0.8**
T0815	**Correggio (RE)**	**0.60**	**92**	*e*P	**Pb**	**19 56 40.7**	**+0.8**
T0815				*e*S	**Sb**	**19 56 49.8**	**+1.8**
MTRZ	**Monterenzio**	**0.67**	**141**	*e*P	**Pn**	**19 56 43.1**	**+0.4**
MTRZ				*e*S	**Sn**	**19 56 57.6**	**+4.9**
MTRZ				AML	AML		
	comp=E,3080µm,0.7s						
MTRZ				AML	AML		
	comp=N,2160µm,0.7s						
MTRZ				AML	AML		
	comp=E,3180µm,0.7s						
MTRZ				AML	AML		
	comp=N,2195µm,0.7s						
MTRZ				AML	AML		
	comp=E,3180µm,0.7s						
MTRZ				AML	AML		
	comp=N,2195µm,0.7s						
MTRZ				AML	AML		
	comp=E,3180µm,0.7s						
MTRZ				AML	AML		
	comp=N,2195µm,0.7s						
TEOL	**Teolo**	**0.72**	**50**⇑	*e*Pg	**Pb**	**19 56 42.2**	**+0.1**
TEOL				*e*Sg	**Sb**	**19 56 52.9**	**+1.2**
TEOL	**Teolo**	**0.72**	**50**	*e*Pg	**Pb**	**19 56 42.2**	**+0.1**
TEOL	**Teolo**	**0.72**	**50**⇓	*e*P	**Pb**	**19 56 42.6**	**+0.5**
TEOL				*e*S	**Sb**	**19 56 52.4**	**+0.7**
TEOL	**Teolo**	**0.72**	**50**	*e*P	**Pb**	**19 56 42.6**	**+0.5**
TEOL				*e*S	**Sb**	**19 56 52.4**	**+0.7**
TEOL				AML	AML		
	comp=E,3000µm,0.4s						
TEOL				AML	AML		
	comp=N,2975µm,0.6s						
TEOL				AML	AML		
	comp=E,3005µm,0.4s						
TEOL				AML	AML		
	comp=N,2975µm,0.6s						
TEOL				AML	AML		
	comp=E,3005µm,0.4s						
TEOL				AML	AML		
	comp=N,2975µm,0.6s						
CMPO	**Campotto Po**	**0.73**	**116**	*e*P	**Pb**	**19 56 43.5**	**+1.3**
CMPO	**Campotto Po**	**0.73**	**116**	*e*P	**Pb**	**19 56 43.5**	**+1.3**
CMPO				*e*S	**Sb**	**19 56 55.1**	**+3.2**
CMPO				AML	AML		
	comp=E,3165µm,1.2s						
CMPO				AML	AML		
	comp=N,9615µm,0.6s						
CMPO				AML	AML		
	comp=E,3165µm,1.2s						
CMPO				AML	AML		
	comp=N,9615µm,0.6s						
CMPO				AML	AML		
	comp=N,9615µm,0.6s						
CMPO				AML	AML		
	comp=E,3165µm,1.2s						
FNVD	**Fontana Vidola**	**0.76**	**167**	*e*P	**Pg**	**19 56 42.8**	**0.0**
FNVD	**Fontana Vidola**	**0.76**	**167**	*e*P	**Pg**	**19 56 42.8**	**0.0**
ROVR	**Rover~¤ Verone**	**0.76**	**10**	*e*P	**Pb**	**19 56 43.3**	**+0.6**
ROVR	**Rover~¤ Verone**	**0.76**	**10**	*e*P	**Pb**	**19 56 43.3**	**+0.6**
ROVR				*e*S	**Sn**	**19 56 56.7**	**+1.7**
ROVR				AML	AML		
	comp=E,1290µm,0.4s						
ROVR				AML	AML		
	comp=N,2965µm,0.2s						
ROVR				AML	AML		
	comp=E,1290µm,0.4s						
ROVR				AML	AML		
	comp=N,2965µm,0.2s						
ROVR				AML	AML		
	comp=E,1290µm,0.4s						
ROVR				AML	AML		
	comp=N,2965µm,0.2s						
SALO	**Salr**	**0.76**	**341**	*e*P	**Pb**	**19 56 43.2**	**+0.5**
SALO	**Salr**	**0.76**	**341**	*e*P	**Pb**	**19 56 43.1**	**+0.5**
SALO				*e*S	**Sn**	**19 56 56.8**	**+1.9**
SALO				AML	AML		
	comp=E,1285µm,0.5s						
SALO				AML	AML		
	comp=N,1645µm,0.5s						
SALO				AML	AML		
	comp=E,1285µm,0.5s						
SALO				AML	AML		
	comp=N,1645µm,0.5s						
SALO				AML	AML		
	comp=N,1645µm,0.5s						
SALO				AML	AML		
	comp=E,1285µm,0.5s						
MARN	**Marana (Italy)**	**0.77**	**18**⇑	*e*Pg	**Pb**	**19 56 43.3**	**+0.4**
MARN				*e*Sg	**Sn**	**19 56 55.8**	**+0.6**
MARN	**Marana (Italy)**	**0.77**	**18**	*e*Pg	**Pb**	**19 56 43.3**	**+0.4**
MARN				*e*Sg	**Sn**	**19 56 55.8**	**+0.6**
BALD	**Monte Baldo**	**0.78**	**357**	*e*Pg	**Pb**	**19 56 44.1**	**+0.9**
BALD				*e*Sg	**Sn**	**19 56 56.1**	**+0.4**
BALD	**Monte Baldo**	**0.78**	**357**	*e*Pg	**Pb**	**19 56 44.1**	**+0.9**
BALD				*e*Sg	**Sn**	**19 56 56.1**	**+0.4**
IMOL	**Imola, Italy**	**0.82**	**131**	AML	AML		
	comp=E,1915µm,0.5s						
IMOL				AML	AML		
	comp=N,1925µm,0.6s						
IMOL				AML	AML		
	comp=E,1915µm,0.5s						
IMOL				AML	AML		
	comp=N,1930µm,0.6s						
IMOL				AML	AML		
	comp=E,1915µm,0.5s						
IMOL				AML	AML		
	comp=N,1930µm,0.6s						
VLC	**Villacollemand**	**0.82**	**206**	*e*P	**Pg**	**19 56 43.4**	**-0.7**
VLC				*e*S	**Sb**	**19 56 55.7**	**+1.2**
VLC	**Villacollemand**	**0.82**	**206**	*e*P	**Pg**	**19 56 43.4**	**-0.7**
VLC				*e*S	**Sb**	**19 56 55.7**	**+1.2**
VLC				AML	AML		
	comp=E,434µm,0.6s						
VLC				AML	AML		
	comp=N,812µm,0.8s						
VLC				AML	AML		
	comp=E,434µm,0.6s						
VLC				AML	AML		
	comp=N,812µm,0.8s						
VLC				AML	AML		
	comp=N,812µm,0.8s						
VLC				AML	AML		
	comp=E,434µm,0.6s						
POPM	**Popiglio**	**0.86**	**186**	*e*P	**Pg**	**19 56 43.0**	**-1.8**
POPM	**Popiglio**	**0.86**	**186**	*e*P	**Pg**	**19 56 44.0**	**-0.9**
POPM				AML	AML		
	comp=E,631µm,0.7s						
POPM				AML	AML		
	comp=N,706µm,0.3s						
POPM				AML	AML		
	comp=E,632µm,0.7s						
POPM				AML	AML		
	comp=N,706µm,0.3s						
POPM				AML	AML		
	comp=N,706µm,0.3s						
POPM				AML	AML		
	comp=E,632µm,0.7s						
BDI	**Bagni Di Lucca**	**0.86**	**194**⇓	*e*P	**Pg**	**19 56 43.4**	**-1.5**
BDI	**Bagni Di Lucca**	**0.86**	**194**	*e*P	**Pg**	**19 56 43.4**	**-1.5**
BDI				*e*S	**Sn**	**19 57 06.0**	**+8.5**
BDI				AML	AML		
	comp=E,2270µm,0.8s						
BDI				AML	AML		
	comp=N,1420µm,0.5s						
BDI				AML	AML		
	comp=E,1850µm,0.8s						
BDI				AML	AML		
	comp=N,2005µm,0.5s						
BDI				AML	AML		
	comp=N,2005µm,0.5s						
BDI				AML	AML		
	comp=N,1420µm,0.5s						
BDI				AML	AML		
	comp=E,1850µm,0.8s						
BDI				AML	AML		
	comp=E,2270µm,0.8s						
CTL8	**Castelleone**	**0.88**	**296**	AML	AML		
	comp=N,286µm,0.7s						
CTL8				AML	AML		
	comp=E,910µm,0.7s						
CTL8				AML	AML		
	comp=N,956µm,1.1s						
CTL8				AML	AML		
	comp=E,252µm,0.4s						
CTL8				AML	AML		
	comp=E,911µm,0.7s						
CTL8				AML	AML		
	comp=N,956µm,1.1s						
CTL8				AML	AML		
	comp=E,252µm,0.4s						
CTL8				AML	AML		
	comp=N,286µm,0.7s						
CTL8				AML	AML		
	comp=N,286µm,0.7s						
CTL8				AML	AML		
	comp=E,252µm,0.4s						
CTL8				AML	AML		
	comp=E,911µm,0.7s						
CTL8				AML	AML		
	comp=N,956µm,1.1s						
MAGA	**Magasa**	**0.89**	**349**⇓	*e*P	**Pb**	**19 56 44.9**	**-0.1**
MAGA				⇓*e*S	**Sn**	**19 56 59.8**	**+1.5**
MAGA	**Magasa**	**0.89**	**349**	*e*P	**Pb**	**19 56 44.9**	**-0.1**
MAGA				*e*S	**Sn**	**19 56 59.8**	**+1.5**
MAGA				AML	AML		
	comp=E,2445µm,1.5s						
MAGA				AML	AML		
	comp=N,2280µm,1.4s						
MAGA				AML	AML		
	comp=E,2445µm,1.5s						
MAGA				AML	AML		
	comp=N,2280µm,1.4s						
MAGA				AML	AML		
	comp=N,2280µm,1.4s						
MAGA				AML	AML		
	comp=E,2445µm,1.5s						
DOSS	**Dosso del Somm**	**1.00**	**12**⇓	*e*Pg	**Pb**	**19 56 47.0**	**0.0**
DOSS				*e*Sg	**Sn**	**19 57 02.6**	**+1.5**
DOSS	**Dosso del Somm**	**1.00**	**12**	*e*Pg	**Pb**	**19 56 47.0**	**0.0**
DOSS				*e*Sg	**Sn**	**19 57 02.6**	**+1.5**
MAIM	**Mastiano**	**1.03**	**196**	AML	AML		
	comp=E,586µm,0.8s						
MAIM				AML	AML		
	comp=N,904µm,0.7s						
MAIM				AML	AML		
	comp=E,586µm,0.8s						
MAIM				AML	AML		
	comp=N,904µm,0.7s						
MAIM				AML	AML		
	comp=N,904µm,0.7s						
MAIM				AML	AML		
	comp=E,586µm,0.8s						
BOB	**Bobbio (Coli)**	**1.03**	**263**	AML	AML		
	comp=E,866µm,1.6s						
BOB				AML	AML		
	comp=E,866µm,1.6s						
BOB				AML	AML		
	comp=N,938µm,1.3s						
BOB				AML	AML		
	comp=N,938µm,1.3s						
BOB				AML	AML		
	comp=N,938µm,1.3s						
BOB				AML	AML		
	comp=E,866µm,1.6s						
RNI	**Roncone**	**1.09**	**351**	*e*Pg	**Pg**	**19 56 47.8**	**-1.4**
RNI				*e*Sg	**Sn**	**19 57 04.8**	**+1.4**
RNI	**Roncone**	**1.09**	**351**	*e*Pg	**Pg**	**19 56 47.8**	**-1.4**
RNI				*e*Sg	**Sn**	**19 57 04.8**	**+1.4**
CRMI	**Carmignano**	**1.11**	**177**	AML	AML		
	comp=E,284µm,0.5s						
CRMI				AML	AML		
	comp=N,162µm,0.3s						
CRMI				AML	AML		
	comp=N,162µm,0.3s						
CRMI				AML	AML		
	comp=E,284µm,0.5s						
PLMA	**Palmaria, Port**	**1.13**	**221**	AML	AML		
	comp=E,980µm,0.6s						
PLMA				AML	AML		
	comp=E,980µm,0.6s						
PLMA				AML	AML		
	comp=N,976µm,0.4s						
PLMA				AML	AML		
	comp=N,976µm,0.4s						
MSSA	**Maissana**	**1.14**	**239**	AML	AML		
	comp=E,510µm,0.5s						
MSSA				AML	AML		
	comp=N,528µm,0.7s						
MSSA				AML	AML		
	comp=E,510µm,0.5s						
MSSA				AML	AML		
	comp=N,528µm,0.7s						
MSSA				AML	AML		
	comp=N,528µm,0.7s						
MSSA				AML	AML		
	comp=E,510µm,0.5s						
CGRP	**Cima Grappa**	**1.17**	**33**⇑	*e*Pg	**Pg**	**19 56 49.4**	**-1.4**
CGRP				*e*Sg	**Sn**	**19 57 07.1**	**+1.8**
CGRP	**Cima Grappa**	**1.17**	**33**⇓	*e*P	**Pg**	**19 56 49.4**	**-1.4**
CGRP				*e*Sg	**Sn**	**19 57 07.1**	**+1.8**
CGRP	**Cima Grappa**	**1.17**	**33**	*e*P	**Pg**	**19 56 49.4**	**-1.4**
CGRP				*e*S	**Sn**	**19 57 07.3**	**+1.9**
CGRP				AML	AML		
	comp=E,1054µm,0.5s						
CGRP				AML	AML		
	comp=N,764µm,0.4s						
CGRP				AML	AML		
	comp=E,1054µm,0.5s						
CGRP				AML	AML		
	comp=N,764µm,0.4s						
CGRP				AML	AML		
	comp=E,1054µm,0.5s						
CGRP				AML	AML		
	comp=N,764µm,0.4s						
MABI	**Malga Bissina**	**1.18**	**348**	AML	AML		
	comp=E,404µm,0.8s						
MABI				AML	AML		
	comp=E,404µm,0.8s						
MABI				AML	AML		
	comp=N,321µm,0.6s						
MABI				AML	AML		
	comp=N,321µm,0.6s						
PANI	**Panarotta**	**1.19**	**15**	*e*Pg	**Pg**	**19 56 49.3**	**-1.8**
PANI				*e*Sg	**Sn**	**19 57 07.4**	**+1.6**
PANI	**Panarotta**	**1.19**	**15**	*e*Pg	**Pg**	**19 56 49.3**	**-1.8**
PANI				*e*Sg	**Sn**	**19 57 07.4**	**+1.6**
SFI	**Santa Sofia**	**1.22**	**145**	AML	AML		
	comp=N,680µm,1.0s						
SFI				AML	AML		
	comp=E,433µm,0.8s						
SFI				AML	AML		
	comp=N,680µm,1.0s						
SFI				AML	AML		
	comp=E,470µm,1.0s						
SFI				AML	AML		
	comp=N,730µm,1.0s						
SFI				AML	AML		
	comp=N,730µm,1.0s						
SFI				AML	AML		
	comp=E,433µm,0.8s						
SFI				AML	AML		
	comp=E,470µm,1.0s						
MTLO	**Montello**	**1.25**	**43**⇓	*e*Pg	**Pg**	**19 56 50.8**	**-1.4**
MTLO				*e*Sg	**Sn**	**19 57 08.9**	**+1.9**
MTLO	**Montello**	**1.25**	**43**	*e*Pg	**Pg**	**19 56 50.8**	**-1.4**
MTLO				*e*Sg	**Sn**	**19 57 08.9**	**+1.9**
CTI	**Castel Tesino**	**1.27**	**25**	AML	AML		
	comp=N,1490µm,1.1s						
CTI				AML	AML		
	comp=E,1500µm,0.5s						
CTI				AML	AML		
	comp=N,1490µm,1.1s						
CTI				AML	AML		
	comp=E,1500µm,0.5s						
CTI				AML	AML		
	comp=N,1490µm,1.1s						
CTI				AML	AML		
	comp=E,1500µm,0.5s						
ASQU	**Asqua**	**1.28**	**149**	AML	AML		
	comp=N,400µm,0.4s						
ASQU				AML	AML		
	comp=E,263µm,0.3s						
ASQU				AML	AML		
	comp=N,400µm,0.4s						
ASQU				AML	AML		
	comp=E,263µm,0.3s						
CRE	**Caprese Michel**	**1.50**	**149**	AML	AML		
	comp=E,241µm,0.5s						
CRE				AML	AML		
	comp=N,368µm,0.3s						
CRE				AML	AML		
	comp=N,368µm,0.3s						
CRE				AML	AML		
	comp=E,241µm,0.5s						
OZOL	**Ozolo**	**1.51**	**5**	*e*Pg	**Pn**	**19 56 54.3**	**+0.1**
OZOL	**Ozolo**	**1.51**	**5**	*e*Pg	**Pn**	**19 56 54.3**	**+0.1**
CARE	**Lago del Cares**	**1.53**	**355**	*e*Pg	**Pn**	**19 56 54.9**	**+0.2**
CARE				*e*Sg	**Sg**	**19 57 16.7**	**-0.8**
CARE	**Lago del Cares**	**1.53**	**355**	*e*Pg	**Pn**	**19 56 54.9**	**+0.2**
CARE				*e*Sg	**Sg**	**19 57 16.7**	**-0.8**
FAU	**Forcella Aurin**	**1.54**	**30**	*e*Pg	**Pn**	**19 56 55.0**	**+0.3**
FAU	**Forcella Aurin**	**1.54**	**30**	*e*Pg	**Pn**	**19 56 55.0**	**+0.3**
PARC	**Parchiule**	**1.59**	**142**	AML	AML		
	comp=E,156µm,1.6s						
PARC				AML	AML		
	comp=E,156µm,1.6s						
PARC				AML	AML		
	comp=N,186µm,0.5s						
PARC				AML	AML		
	comp=N,186µm,0.5s						
APPI	**Appiano**	**1.59**	**9**	AML	AML		
	comp=E,683µm,0.4s						
APPI				AML	AML		
	comp=E,683µm,0.4s						
APPI				AML	AML		
	comp=N,515µm,1.0s						
APPI				AML	AML		
	comp=N,515µm,1.0s						
KOSI	**Kohlern**	**1.60**	**12**	AML	AML		
	comp=E,472µm,0.4s						
KOSI				AML	AML		
	comp=E,472µm,0.4s						
KOSI				AML	AML		
	comp=N,388µm,0.8s						
KOSI				AML	AML		
	comp=N,388µm,0.8s						
AGOR	**Agordo**	**1.61**	**30**	AML	AML		
	comp=N,424µm,0.4s						
AGOR				AML	AML		
	comp=E,571µm,0.4s						
AGOR				AML	AML		
	comp=N,424µm,0.4s						
AGOR				AML	AML		
	comp=E,571µm,0.4s						
BRMO	**Bormio**	**1.61**	**347**	AML	AML		
	comp=E,175µm,0.6s						
BRMO				AML	AML		
	comp=E,175µm,0.6s						
BRMO				AML	AML		
	comp=N,223µm,0.5s						
BRMO				AML	AML		
	comp=N,223µm,0.5s						
PCP	**Piancastagn**	**1.70**	**259**	AML	AML		
	comp=N,178µm,1.2s						
PCP				AML	AML		
	comp=E,222µm,0.6s						
PCP				AML	AML		
	comp=N,178µm,1.2s						
PCP				AML	AML		
	comp=E,222µm,0.6s						
MOSI	**Grossmontoni**	**1.73**	**352**	AML	AML		

	comp=E,681μm,0.7s					
MOSI				AML	AML	
	comp=E,681μm,0.7s					
MOSI				AML	AML	
	comp=N,726μm,0.6s					
MOSI				AML	AML	
	comp=N,726μm,0.6s					
CAFI	**Castiglion Fio**	**1.76**	**153**	AML	AML	
	comp=E,140μm,0.6s					
CAFI				AML	AML	
	comp=E,140μm,0.6s					
CAFI				AML	AML	
	comp=N,116μm,1.2s					
CAFI				AML	AML	
	comp=N,116μm,1.2s					
VARE	**Varese**	**1.77**	**304**	AML	AML	
	comp=N,167μm,0.5s					
VARE				AML	AML	
	comp=E,180μm,1.5s					
VARE				AML	AML	
	comp=E,180μm,1.5s					
VARE				AML	AML	
	comp=N,167μm,0.5s					
ATPC	**Poggio Castell**	**1.82**	**141**	AML	AML	
	comp=N,164μm,0.5s					
ATPC				AML	AML	
	comp=E,253μm,0.6s					
ATPC				AML	AML	
	comp=N,164μm,0.5s					
ATPC				AML	AML	
	comp=E,253μm,0.6s					
ABSI	**Aberstueckl**	**1.85**	**9**	AML	AML	
	comp=E,688μm,0.6s					
ABSI				AML	AML	
	comp=E,688μm,0.6s					
ABSI				AML	AML	
	comp=N,668μm,0.7s					
ABSI				AML	AML	
	comp=N,668μm,0.7s					
STAL	**STALIGIAL**	**1.87**	**43**	AML	AML	
	comp=N,328μm,0.8s					
STAL				AML	AML	
	comp=E,383μm,0.3s					
STAL				AML	AML	
	comp=N,357μm,0.8s					
STAL				AML	AML	
	comp=E,426μm,0.4s					
STAL				AML	AML	
	comp=N,328μm,0.8s					
STAL				AML	AML	
	comp=E,426μm,0.4s					
STAL				AML	AML	
	comp=E,383μm,0.3s					
STAL				AML	AML	
	comp=N,357μm,0.8s					
ATVO	**AVT- Monte Val**	**1.88**	**144**	AML	AML	
	comp=E,202μm,0.4s					
ATVO				AML	AML	
	comp=N,134μm,0.6s					
ATVO				AML	AML	
	comp=E,202μm,0.4s					
ATVO				AML	AML	
	comp=N,134μm,0.6s					
FINB	**Finale Ligure**	**1.96**	**249**	AML	AML	
	comp=N,5μm,0.5s					
FINB				AML	AML	
	comp=E,421μm,0.5s					
FINB				AML	AML	
	comp=E,421μm,0.5s					
FINB				AML	AML	
	comp=N,5μm,0.5s					
SSFR	**Montelago di S**	**2.01**	**136**	AML	AML	
	comp=N,351μm,0.3s					
SSFR				AML	AML	
	comp=E,385μm,0.3s					
SSFR				AML	AML	
	comp=N,351μm,0.3s					
SSFR				AML	AML	
	comp=E,385μm,0.3s					
ATTE	**AVT- Monte Tez**	**2.01**	**148**	AML	AML	
	comp=N,111μm,0.6s					
ATTE				AML	AML	
	comp=E,137μm,0.5s					
ATTE				AML	AML	
	comp=N,111μm,0.6s					
ATTE				AML	AML	
	comp=E,137μm,0.5s					
ROSI	**Rosskopf**	**2.06**	**10**	AML	AML	
	comp=N,527μm,0.5s					
ROSI				AML	AML	
	comp=E,380μm,0.6s					
ROSI				AML	AML	
	comp=N,527μm,0.5s					
ROSI				AML	AML	
	comp=E,380μm,0.6s					
FETA	**Feichten**	**2.12**	**357**	*e*Pn	**Pb**	**19 57 05.4 -0.6**
	comp=E,1.4nm,0.3s,SNR=9.7					
FETA				*e*Sn	**Sb**	**19 57 33.8 +1.7**
	comp=E,30nm,0.7s					
FETA	**Feichten**	**2.12**	**357**	Pn	**Pb**	**19 57 05.4 -0.6**
	comp=E,1.4nm,0.3s,SNR=9.7					
FETA				Sn	**Sb**	**19 57 33.8 +1.7**
	comp=E,30nm,0.7s					
ABTA	**Abfaltersbach**	**2.17**	**31**	*e*Pn	**Pn**	**19 57 05.1 +1.8**
	comp=E,1.0nm,0.2s,SNR=7.8					
ABTA				Sg	**Sg**	**19 57 36.9 -1.0**
	comp=E,5.4nm,0.2s					
ABTA	**Abfaltersbach**	**2.17**	**31**	Pn	**Pn**	**19 57 05.1 +1.8**
	comp=E,1.0nm,0.2s,SNR=7.8					
ABTA				Sg	**Sg**	**19 57 36.9 -1.0**
	comp=E,5.4nm,0.2s					
RISI	**Rein**	**2.21**	**22**	AML	AML	
	comp=E,362μm,0.5s					
RISI				AML	AML	
	comp=N,459μm,0.4s					
RISI				AML	AML	
	comp=E,362μm,0.5s					
RISI				AML	AML	
	comp=N,459μm,0.4s					
SNTG	**Esanatoglia**	**2.22**	**137**	AML	AML	
	comp=N,119μm,0.8s					
SNTG				AML	AML	
	comp=E,106μm,1.2s					
SNTG				AML	AML	
	comp=E,106μm,1.2s					
SNTG				AML	AML	
	comp=N,119μm,0.8s					
PTCC	**Patocco-Chiusa**	**2.30**	**48**	AML	AML	
	comp=N,84μm,0.5s					
PTCC				AML	AML	
	comp=E,106μm,0.6s					
PTCC				AML	AML	
	comp=E,106μm,0.6s					
PTCC				AML	AML	
	comp=N,84μm,0.5s					
SKDS	**Skadanscina**	**2.31**	**73**	*i* Pn	**Pn**	**19 57 04.4 -0.7**
SKDS				*i* Sn	**Sn**	**19 57 32.2 -0.9**
	comp=Z,26nm,0.3s					
SKDS	**Skadanscina**	**2.31**	**73**	Pn	**Pn**	**19 57 04.4 -0.7**
SKDS				*i* Sn	**Sn**	**19 57 32.2 -0.9**
	comp=Z,26nm,0.3s					
WTTA	**Wattenberg**	**2.42**	**12**	*e*Pn	**Pb**	**19 57 10.4 -0.7**
	comp=Z,2.1nm,0.2s					
WTTA				Sn	**Sn**	**19 57 36.4 +0.3**
	comp=Z,16nm,0.3s					
WTTA	**Wattenberg**	**2.42**	**12**	Pn	**Pb**	**19 57 10.4 -0.7**
	comp=Z,2.1nm,0.2s					
WTTA				Sn	**Sn**	**19 57 36.4 +0.3**
	comp=Z,16nm,0.3s					
WTTA				Sg	**Sg**	**19 57 43.3 -2.6**
MOTA	**Moosalm**	**2.45**	**4**	*e*Pn	**Pn**	**19 57 08.4 +1.2**
	comp=Z,2.1nm,0.2s,SNR=12					
MOTA				Sn	**Sn**	**19 57 36.7 0.0**
	comp=Z,3.9nm,0.2s					
MOTA	**Moosalm**	**2.45**	**4**	Pn	**Pn**	**19 57 08.4 +1.2**
	comp=Z,2.1nm,0.2s,SNR=12					
MOTA				Sn	**Sn**	**19 57 36.7 0.0**
	comp=Z,3.9nm,0.2s					
JAVS	**Javornik**	**2.45**	**65**	*i* Pn	**Pn**	**19 57 06.8 -0.4**
JAVS				*i* Sn	**Sn**	**19 57 36.6 -0.1**
	comp=Z,42nm,0.4s					
JAVS	**Javornik**	**2.45**	**65**	*i* Pn	**Pn**	**19 57 06.8 -0.4**
JAVS				*i* Sn	**Sn**	**19 57 36.7 -0.1**
	comp=Z,42nm,0.4s					
DAVA	**Damuels**	**2.48**	**344**	*e*Pn	**Pn**	**19 57 10.3 +2.6**
	comp=Z,3.9nm,0.4s					
DAVA				Sn	**Sn**	**19 57 39.1 +1.5**
	comp=Z,3.0nm,0.3s					
DAVA	**Damuels**	**2.48**	**344**	Pn	**Pn**	**19 57 10.3 +2.6**
	comp=Z,3.9nm,0.4s					
DAVA				Sn	**Sn**	**19 57 39.1 +1.5**
	comp=Z,3.0nm,0.3s					
RETA	**Reutte**	**2.59**	**358**	*e*Pn	**Pn**	**19 57 10.8 +1.8**
	comp=Z,1.3nm,0.2s					
RETA				Sn	**Sn**	**19 57 41.7 +1.7**
RETA	**Reutte**	**2.59**	**358**	Pn	**Pn**	**19 57 10.8 +1.8**
	comp=Z,1.3nm,0.2s					
RETA				Sn	**Sn**	**19 57 41.7 +1.7**
MYKA	**Terra Mystica**	**2.59**	**47**	*e*Pn	**Pn**	**19 57 10.5 +1.4**
	comp=Z,0.6nm,0.2s					
MYKA				Sg	**Sg**	**19 57 51.7 +0.3**
	comp=Z,19nm,0.4s					
MYKA	**Terra Mystica**	**2.59**	**47**	Pn	**Pn**	**19 57 10.5 +1.4**
	comp=Z,0.6nm,0.2s					
MYKA				Sg	**Sg**	**19 57 51.7 +0.3**
	comp=Z,19nm,0.4s					
SBF	**Sospel**	**2.68**	**248**	*e*Pn	**Pn**	**19 57 11.8 +1.5**
SBF				*e*Sn	**Sn**	**19 57 43.6 +1.3**
	comp=Z,11nm,0.2s					
SBF	**Sospel**	**2.68**	**248**	*e*Pn	**Pn**	**19 57 11.8 +1.5**
SBF				*e*Sn	**Sn**	**19 57 43.6 +1.3**
	comp=Z,5.4nm,0.2s					
PGF	**Pioggiola**	**2.72**	**211**	*e*Pn	**Pn**	**19 57 10.7 -0.2**
PGF				*e*Sn	**Sn**	**19 57 42.8 -0.5**
	comp=Z,6.6nm,0.3s					
PGF	**Pioggiola**	**2.72**	**211**	*e*Pn	**Pn**	**19 57 10.7 -0.2**
PGF				*e*Sn	**Sn**	**19 57 42.8 -0.5**
	comp=Z,3.3nm,0.3s					
KBA	**Koelnbreinsper**	**2.77**	**37**	*e*Pn	**Pb**	**19 57 15.5 -1.6**
	comp=Z,0.4nm,0.1s					
KBA				Sg	**Sg**	**19 57 57.9 +0.7**
	comp=Z,31nm,0.7s					
KBA	**Koelnbreinsper**	**2.77**	**37**	Pn	**Pb**	**19 57 15.5 -1.6**
	comp=Z,0.4nm,0.1s					
KBA				Sg	**Sg**	**19 57 57.9 +0.7**
	comp=Z,31nm,0.7s					
MVIF	**Mont Vial**	**2.85**	**251**	P	**Pn**	**19 57 15.8 +3.0**
MVIF	**Mont Vial**	**2.85**	**251**	P	**Pn**	**19 57 15.8 +3.0**
NVLJ	**Novalja**	**2.87**	**95**	*e*Pn	**Pn**	**19 57 11.0 -1.8**
NVLJ				Sn	**Sn**	**19 57 45.2 -1.5**
NVLJ	**Novalja**	**2.87**	**95**	*e*Pn	**Pn**	**19 57 10.9 -1.8**
NVLJ				Sn	**Sn**	**19 57 45.2 -1.5**
MBDF	**Montbardon**	**2.93**	**268**	*e*Pn	**Pn**	**19 57 14.2 +0.4**
MBDF	**Montbardon**	**2.93**	**268**	*e*Pn	**Pn**	**19 57 14.2 +0.4**
SURF	**Saint Ours**	**2.93**	**263**	P	**Pn**	**19 57 15.0 +1.2**
SURF	**Saint Ours**	**2.93**	**263**	P	**Pn**	**19 57 15.0 +1.2**
LPG	**La Plagne**	**2.98**	**283**	*e*Pn	**Pn**	**19 57 15.1 +0.5**
LPG				*e*Sn	**Sn**	**19 57 50.6 +0.6**
	comp=Z,13nm,0.5s					
LPG	**La Plagne**	**2.98**	**283**	*e*Pn	**Pn**	**19 57 15.1 +0.5**
LPG				*e*Sn	**Sn**	**19 57 50.6 +0.6**
	comp=Z,6.7nm,0.5s					
LPL	**La Plagne**	**3.00**	**283**	*e*Pn	**Pn**	**19 57 15.6 +0.8**
LPL				*e*Sn	**Sn**	**19 57 51.2 +0.9**
	comp=Z,21nm,0.6s					
LPL	**La Plagne**	**3.00**	**283**	*e*Pn	**Pn**	**19 57 15.6 +0.8**
LPL				*e*Sn	**Sn**	**19 57 51.2 +0.9**
	comp=Z,11nm,0.6s					
OBKA	**Obir**	**3.03**	**57**	*e*Pn	**Pn**	**19 57 15.6 +0.4**
	comp=Z,0.3nm,0.1s					
OBKA				Sn	**Sn**	**19 57 50.8 -0.2**
	comp=Z,5.4nm,0.3s					
OBKA	**Obir**	**3.03**	**57**	Pn	**Pn**	**19 57 15.6 +0.4**
	comp=Z,0.3nm,0.1s					
OBKA				Sn	**Sn**	**19 57 50.8 -0.2**
	comp=Z,5.4nm,0.3s					
CALF	**Calern**	**3.06**	**249**	P	**Pn**	**19 57 17.9 +2.3**
CALF	**Calern**	**3.06**	**249**	P	**Pn**	**19 57 17.9 +2.3**
OZLJ	**Ozalj**	**3.32**	**76**	*e*Pn	**Pn**	**19 57 19.3 +0.4**
OZLJ				Sn	**Sn**	**19 57 55.9 -2.0**
OZLJ	**Ozalj**	**3.32**	**76**	*e*Pn	**Pn**	**19 57 19.3 +0.4**
OZLJ				Sn	**Sn**	**19 57 55.9 -2.0**
FRF	**La Foret Royal**	**3.32**	**248**	*e*Pn	**Pn**	**19 57 20.5 +1.4**
FRF				*e*Sn	**Sn**	**19 57 58.4 +0.3**
	comp=Z,6.4nm,0.2s					
FRF	**La Foret Royal**	**3.32**	**248**	*e*Pn	**Pn**	**19 57 20.5 +1.4**
FRF				*e*Sn	**Sn**	**19 57 58.4 +0.3**
	comp=Z,3.2nm,0.2s					
SOKA	**Soboth**	**3.41**	**57**	*e*Pn	**Pn**	**19 57 20.2 -0.1**
	comp=Z,1.5nm,0.5s					
SOKA				*e*Sn	**Sn**	**19 58 00.5 +0.3**
	comp=Z,4.1nm,0.5s					
SOKA	**Soboth**	**3.41**	**57**	Pn	**Pn**	**19 57 20.2 -0.1**
	comp=Z,1.5nm,0.5s					
SOKA				Sn	**Sn**	**19 58 00.5 +0.3**
	comp=Z,4.1nm,0.5s					
UDBI	**Udbina**	**3.50**	**94**	*e*Pn	**Pn**	**19 57 20.4 -1.2**
UDBI				Sn	**Sn**	**19 58 01.3 -1.4**
UDBI	**Udbina**	**3.50**	**94**	*e*Pn	**Pn**	**19 57 20.4 -1.2**
UDBI				Sn	**Sn**	**19 58 01.2 -1.4**
LMR	**La Mourre**	**3.52**	**245**	*e*Pn	**Pn**	**19 57 22.4 +0.7**
LMR				*e*Sn	**Sn**	**19 58 03.2 +0.4**
	comp=Z,6.0nm,0.2s					
LMR	**La Mourre**	**3.52**	**245**	*e*Pn	**Pn**	**19 57 22.4 +0.7**
LMR				*e*Sn	**Sn**	**19 58 03.2 +0.4**
	comp=Z,3.0nm,0.2s					
ORIF	**Oris-en-Rattie**	**3.55**	**272**	*e*Pn	**Pn**	**19 57 23.8 +1.5**
ORIF				*e*Sn	**Sn**	**19 58 04.3 +0.4**
	comp=Z,26nm,0.6s					
ORIF	**Oris-en-Rattie**	**3.55**	**272**	P	**Pn**	**19 57 23.9 +1.6**
ORIF	**Oris-en-Rattie**	**3.55**	**272**	*e*Pn	**Pn**	**19 57 23.8 +1.5**
ORIF				*e*Sn	**Sn**	**19 58 04.3 +0.4**
	comp=Z,13nm,0.6s					
KIZ	**Kirchzarten**	**3.68**	**327**	P	**Pn**	**19 57 25.1 +1.1**
KIZ	**Kirchzarten**	**3.68**	**327**	P	**Pn**	**19 57 25.1 +1.1**
CHMF	**Charmoille**	**3.76**	**310**	P	**Pn**	**19 57 25.7 +0.5**
CHMF	**Charmoille**	**3.76**	**310**	P	**Pn**	**19 57 25.7 +0.5**
CABF	**La Chapelle**	**3.76**	**299**	*e*Pn	**Pn**	**19 57 26.2 +1.0**
CABF				*e*Sn	**Sn**	**19 58 09.3 +0.2**
	comp=Z,2.6nm,0.2s					
CABF	**La Chapelle**	**3.76**	**299**	*e*Pn	**Pn**	**19 57 26.2 +1.0**
CABF				*e*Sn	**Sn**	**19 58 09.3 +0.2**
	comp=Z,1.3nm,0.2s					
MOA	**Molln**	**3.77**	**37**	*i* Pn	**Pn**	**19 57 26.2 +1.0**
	comp=Z,1.7nm,0.3s					
MOA				*e*Sn	**Sn**	**19 58 09.8 +0.7**
	comp=Z,3.3nm,0.5s					
MOA	**Molln**	**3.77**	**37**	Pn	**Pn**	**19 57 26.2 +1.0**
	comp=Z,1.7nm,0.3s					
MOA				Sn	**Sn**	**19 58 09.8 +0.7**
	comp=Z,3.3nm,0.5s					
OG35	**Corcelles**	**3.91**	**289**	P	**Pn**	**19 57 28.3 +1.2**
OG35	**Corcelles**	**3.91**	**289**	P	**Pn**	**19 57 28.3 +1.2**
ARSA	**Arzberg**	**4.00**	**52**	*e*Pn	**Pn**	**19 57 28.6 +0.3**
	comp=Z,0.2nm,0.3s					
ARSA				*e*Sn	**Sn**	**19 58 14.4 -0.3**
	comp=Z,2.9nm,0.6s					
ARSA	**Arzberg**	**4.00**	**52**	Pn	**Pn**	**19 57 28.6 +0.3**
	comp=Z,0.2nm,0.3s					
ARSA				Sn	**Sn**	**19 58 14.4 -0.3**
	comp=Z,2.9nm,0.6s					
HINF	**Hinteralfeld**	**4.03**	**318**	*e*Pn	**Pn**	**19 57 28.8 -0.1**
HINF				*e*Sn	**Sn**	**19 58 15.3 -0.3**
	comp=Z,1.8nm,0.2s					
HINF	**Hinteralfeld**	**4.03**	**318**	*e*Pn	**Pn**	**19 57 28.8 -0.1**
HINF				*e*Sn	**Sn**	**19 58 15.3 -0.3**
	comp=Z,0.9nm,0.2s					
OPP	**Oppenau**	**4.04**	**334**	P	**Pn**	**19 57 29.9 +0.9**
OPP	**Oppenau**	**4.04**	**334**	P	**Pn**	**19 57 29.9 +0.9**
ECH	**Echery**	**4.19**	**324**	P	**Pn**	**19 57 32.0 +1.0**
ECH	**Echery**	**4.19**	**324**	P	**Pn**	**19 57 31.0 0.0**
CDF	**Champ du Feu**	**4.30**	**326**	*e*Pn	**Pn**	**19 57 32.9 +0.3**
CDF				*e*Sn	**Sn**	**19 58 21.4 -0.9**
	comp=Z,0.7nm,0.1s					
CDF	**Champ du Feu**	**4.30**	**326**	*e*Pn	**Pn**	**19 57 32.9 +0.3**
CDF				*e*Sn	**Sn**	**19 58 21.4 -0.9**
	comp=Z,0.3nm,0.1s					
HAU	**Haudompre**	**4.41**	**316**	*e*Pn	**Pn**	**19 57 34.5 +0.5**
HAU				*e*Sn	**Sn**	**19 58 24.2 -0.7**
	comp=Z,12nm,0.2s					
HAU	**Haudompre**	**4.41**	**316**	*e*Pn	**Pn**	**19 57 34.5 +0.5**
HAU				*e*Sn	**Sn**	**19 58 24.2 -0.7**
	comp=Z,6.2nm,0.2s					
VIVF	**Saint-Julien-l**	**4.41**	**272**	*e*Pn	**Pn**	**19 57 34.2 +0.1**
VIVF				*e*Sn	**Sn**	**19 58 24.9 -0.1**
	comp=Z,1.3nm,0.2s					
VIVF	**Saint-Julien-l**	**4.41**	**272**	*e*Pn	**Pn**	**19 57 34.2 +0.1**
VIVF				*e*Sn	**Sn**	**19 58 24.9 -0.1**
	comp=Z,0.6nm,0.2s					
CONA	**Conrad Observa**	**4.59**	**47**	*i* Pn	**Pn**	**19 57 36.3 -0.2**
	comp=Z,1.1nm,0.4s					
CONA				*i* Sn	**Sn**	**19 58 31.4 +2.1**
	comp=Z,3.7nm,0.6s					
CONA	**Conrad Observa**	**4.59**	**47**	Pn	**Pn**	**19 57 36.3 -0.2**
	comp=Z,1.1nm,0.4s					
CONA				Sn	**Sn**	**19 58 31.4 +2.1**
	comp=Z,3.7nm,0.6s					
KHC	**Kasperske Hory**	**4.62**	**23**	*e*PN	**Pn**	**19 57 37.4 +0.5**
KHC				*ex*	x	19 57 55.5
KHC				*e*SN	**Sn**	**19 58 30.7 +0.7**
KHC				*e*SG	**Sg**	**19 58 54.8 -1.3**
	comp=Z,8.7nm,0.6s					
KHC	**Kasperske Hory**	**4.62**	**23**	Pn	**Pn**	**19 57 37.4 +0.5**
KHC				Sn	**Sn**	**19 58 30.7 +0.7**
KHC				Sg	**Sg**	**19 58 54.8 -1.3**
	comp=Z,8.7nm,0.6s					
LASF	**Ste Croix**	**5.09**	**263**	*e*Pn	**Pn**	**19 57 43.4 0.0**
LASF				*e*Sn	**Sn**	**19 58 39.3 -2.4**
	comp=Z,1.2nm,0.2s					
LASF	**Ste Croix**	**5.09**	**263**	*e*Pn	**Pn**	**19 57 43.4 0.0**
LASF				*e*Sn	**Sn**	**19 58 39.3 -2.4**
	comp=Z,0.6nm,0.2s					
SFTF	**Sexfontaines**	**5.21**	**311**	*e*Pn	**Pn**	**19 57 45.2 +0.2**
SFTF				*e*Sn	**Sn**	**19 58 43.5 -1.1**
	comp=Z,1.7nm,0.2s					
SFTF	**Sexfontaines**	**5.21**	**311**	*e*Pn	**Pn**	**19 57 45.2 +0.2**
SFTF				*e*Sn	**Sn**	**19 58 43.5 -1.1**
	comp=Z,0.9nm,0.2s					
SMF	**Signal de Mont**	**5.22**	**292**	*e*Pn	**Pn**	**19 57 46.0 +0.8**
SMF				*e*Sn	**Sn**	**19 58 44.1 -0.8**
	comp=Z,3.0nm,0.2s					
SMF	**Signal de Mont**	**5.22**	**292**	*e*Pn	**Pn**	**19 57 46.0 +0.8**
SMF				*e*Sn	**Sn**	**19 58 44.1 -0.8**
	comp=Z,1.5nm,0.2s					
STON	**Ston**	**5.33**	**110**	*e*Pn	**Pn**	**19 57 46.0 -0.7**
STON				Sn	**Sn**	**19 58 43.1 -4.4**
STON	**Ston**	**5.33**	**110**	*e*Pn	**Pn**	**19 57 45.9 -0.7**
STON				Sn	**Sn**	**19 58 43.1 -4.4**
MEZF	**Maizieres J'vi**	**5.39**	**314**	*e*Pn	**Pn**	**19 57 47.7 +0.3**
MEZF				*e*Sn	**Sn**	**19 58 47.8 -1.1**
MEZF	**Maizieres J'vi**	**5.39**	**314**	*e*Pn	**Pn**	**19 57 47.7 +0.3**
MEZF				*e*Sn	**Sn**	**19 58 47.8 -1.1**
LOR	**Lormes**	**5.43**	**298**	*e*Pn	**Pn**	**19 57 48.5 +0.5**
LOR				*e*Sn	**Sn**	**19 58 49.6 -0.3**
	comp=Z,2.3nm,0.3s					
LOR	**Lormes**	**5.43**	**298**	P	**Pn**	**19 57 48.7 +0.8**
LOR	**Lormes**	**5.43**	**298**	*e*Pn	**Pn**	**19 57 48.5 +0.5**
LOR				*e*Sn	**Sn**	**19 58 49.6 -0.3**
	comp=Z,1.1nm,0.3s					
SSF	**Saint Saulge**	**5.57**	**295**	*e*Pn	**Pn**	**19 57 50.4 +0.4**
SSF	**Saint Saulge**	**5.57**	**295**	*e*Pn	**Pn**	**19 57 50.4 +0.4**
AVF	**Avril sur Loir**	**5.59**	**292**	*e*Pn	**Pn**	**19 57 50.4 +0.2**
AVF	**Avril sur Loir**	**5.59**	**292**	*e*Pn	**Pn**	**19 57 50.4 +0.2**
PRU	**Pruhonice**	**5.66**	**25**	*e*SG	**Sg**	**19 59 26.9 -2.7**
GOPC	**GO Pecny, Ondr**	**5.67**	**26**	*e*SG	**Sg**	**19 59 27.0 -2.9**
	comp=Z,6.3nm,0.7s					
BGF	**Bois d'Agland**	**5.86**	**289**	*e*Pn	**Pn**	**19 57 54.2 +0.3**
BGF	**Bois d'Agland**	**5.86**	**289**	*e*Pn	**Pn**	**19 57 54.2 +0.3**
TCF	**Toulx Ste Croi**	**6.24**	**286**	*e*Pn	**Pn**	**19 57 59.4 +0.2**
TCF	**Toulx Ste Croi**	**6.24**	**286**	*e*Pn	**Pn**	**19 57 59.4 +0.2**
BRG	**Berggiesshubel**	**6.32**	**18**	SG	**Sg**	**19 59 48.7 -1.9**
	comp=Z,3.4nm,0.6s					
CLL	**Collm**	**6.56**	**12**	*e*Sg	**Sg**	**19 59 57.0 -1.5**
	comp=Z,7.0nm,0.9s					
DPC	**Dobruska-Polom**	**6.57**	**32**	*e*SG	**Sg**	**19 59 55.7 -3.1**
	comp=Z,4.1nm,0.6s					
UPC	**Upice**	**6.59**	**30**	*e*SG	**Sg**	**19 59 57.0 -2.3**
GIVF	**Givet**	**6.62**	**324**	*e*Pn	**Pn**	**19 58 04.4 0.0**
GIVF	**Givet**	**6.62**	**324**	*e*Pn	**Pn**	**19 58 04.4 0.0**
BAIF	**Baives**	**6.86**	**321**	*e*Pn	**Pn**	**19 58 07.5 -0.1**
BAIF	**Baives**	**6.86**	**321**	*e*Pn	**Pn**	**19 58 07.5 -0.1**

IDC ***07*** *19:58:37.7±1.4, 6°.18S×150°.93E, h0km, mb3.8/7, mb1 4.0/8, mb1mx3.6/53, mbtmp3.9/8, ML1.7/1, MS3.9/1, Ms1 3.9/1, ms1mx2.8/44, Error ellipse: s-maj=43.9km s-min=19.9km az=111.0*

ISCJB ***07*** *19:58:42.9±0.9, 6°.2S±0°.1×150°.7E±0°.2, h43km, mb4.0/7, MS3.9/1, Error ellipse: s-maj=24.4km s-min=9.5km az=29.1*

NEIC ***07*** *19:58:43.3±0.8, 6°.17S×150°.82E, h35km, mb4.2/1, Error ellipse: s-maj=22.6km s-min=11.1km az=112.0*

ISC 07 19:58:44.4±1.0, 6°.2S±0°.1×150°.8E±0°.2, h43km, n15, σ0s86/15, mb3.8/8, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.79**	**228**	Pn	**Pn**	**19 59 55.0**	**+0.9**
	2.0nm,0.3s,baz=40,slow=6.6,SNR=6.2						
PMG				Sn	**Sn**	**20 00 47.5**	**-0.8**
	5.1nm,0.3s,baz=183,slow=22,SNR=5.6						
WRAB	**Tennant Creek**	**21.00**	**228**	*e*P	**P**	**20 03 23.9**	**-0.5**
	7.8nm,0.7s						
WRA	**Warramunga Arr**	**21.01**	**228**	P	**P**	**20 03 24.9**	**+0.4**
	5.5nm,0.7s,baz=52,slow=11,SNR=26						
ASAR	**Alice Springs**	**23.77**	**221**	P	**P**	**20 03 53.6**	**+0.5**
	1.8nm,0.6s,baz=55,slow=9.0,SNR=38						
STKA	**Stephens Creek**	**26.96**	**197**	P	**P**	**20 04 20.4**	**-1.6**
	3.0nm,0.8s,baz=32,slow=13,SNR=5.6						
FITZ	**Fitzroy Crossi**	**27.21**	**242**	P	**P**	**20 04 24.2**	**-0.2**
	1.0nm,0.5s,baz=58,slow=8.2,SNR=8.1						
DAV	**Davao City (W)**	**28.35**	**297**	P	**P**	**20 04 34.0**	**-0.7**
	112nm,0.4s,baz=82,slow=7.1,SNR=3.1						
KSRS	**Korea Array**	**48.35**	**336**	P	**P**	**20 07 22.5**	**+0.6**
	0.6nm,0.6s,baz=156,slow=9.3,SNR=3.3						
KSAR	**Wonju Array Be**	**48.36**	**336**	P	**P**	**20 07 22.5**	**+0.6**
ASAJ	**Asahikawa**	**50.60**	**352**	LR	LR	20 25 35.7	
	comp=Z,131nm,21.1s,baz=162,slow=32						
SONM	**Songino Array**	**66.42**	**329**	P	**P**	**20 09 29.3**	**0.0**
	0.3nm,0.6s,baz=144,slow=5.2,SNR=3.1						
QSPA	**South Pole Qui**	**83.79**	**180**	*e*P	**P**	**20 11 09.8**	**+0.8**
ILAR	**Eielson Array**	**84.20**	**22**	P	**P**	**20 11 09.7**	**-1.2**
	0.5nm,0.9s,baz=242,slow=5.8,SNR=3.1						
GERES	**GERESS Array B**	**124.12**	**327**	PKP	**PKPdf**	**20 17 39.3**	**+0.8**
	0.3nm,0.4s,baz=58,slow=2.4,SNR=3.6						
TORD	**Torodi Ar. Bea**	**148.74**	**285**	PKPbc	**PKPbc**	**20 18 28.8**	**+0.6**
	1.1nm,0.3s,baz=89,slow=2.6,SNR=40						

IDC 07 20:04:47.7±11.0, 31°.47N×141°.87E, h0km, mb3.2/4, mb1 3.4/4, mb1mx3.2/64, mbtmp3.2/4, Error ellipse: s-maj=445.7km s-min=25.3km az=68.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**47.57**	**307**	P	P	20 13 25.1	+0.1
	0.2nm,0.6s,baz=79,slow=7.5,SNR=3.4						
KURBB	**Kurchatov Arra**	**49.86**	**312**	P	P	20 13 42.3	-0.3
	0.3nm,0.7s,baz=84,slow=6.7,SNR=2.9						
WRA	**Warramunga Arr**	**51.62**

ellipse: s-maj=12.3km s-min=5.4km az=116.3
*NEIC **07** 20:16:32.4±2.1,31°.41N×141°.82E,h31km±14km,mb4.6/3, Error ellipse: s-maj=8.9km s-min=7.0km az=80.0*

ISC 07 20:16:32.0±0.4,31°.52N±0°.04×141°.95E±0°.07,h29km,n129, σ1º59/134,mb4.4/58,MS3.6/10,11C-4D,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.41**	**312**	P	**Pn**	**20 17 07.9**	**-1.5**
JHJ2				*eS*	**Sn**	**20 17 35.8**	**-2.0**
JHJ	**Hachijo jima 2**	**2.43**	**312**	Pn	**Pn**	**20 17 07.3**	**-2.4**
	48nm,0.3s,baz=75,slow=22,SNR=7.3						
JHJ				Sn	**Sn**	**20 17 38.1**	**-0.4**
	106nm,0.3s,baz=248,slow=20,SNR=7.1						
JHJ				LR	LR	20 18 03.2	
	comp=Z,397nm,21.3s,baz=130,slow=40						
BSO1	**Boso 1**	**3.23**	**346**	P	**Pn**	**20 17 19.2**	**-1.0**
BSO3	**Boso 3**	**3.49**	**340**	P	**Pn**	**20 17 23.7**	**-0.3**
JKO	**Kozu shima**	**3.56**	**319**	P	**Pn**	**20 17 24.7**	**-0.6**
JKO				*eS*	**Sn**	**20 18 04.6**	**-1.8**
CBIJ	**Chichi jima**	**4.41**	**177**	Pn	**Pn**	**20 17 34.9**	**-2.1**
CBIJ				Sn	**Sn**	**20 18 26.4**	**-1.0**
CBIJ	**Chichi jima**	**4.41**	**177**	P	**Pn**	**20 17 36.6**	**-0.4**
CBIJ				*eS*	**Sn**	**20 18 26.2**	**-1.2**
JCJ	**Chichijima**	**4.41**	**177**	Pn	**Pn**	**20 17 34.9**	**-2.1**
	19nm,0.3s,baz=274,slow=20,SNR=11						
JCJ				Sn	**Sn**	**20 18 26.4**	**-1.0**
	11nm,0.3s,baz=287,slow=19,SNR=3.0						
JOD2	**Odawara 2**	**4.43**	**328**	P	**Pn**	**20 17 36.6**	**-0.7**
JOD2				*eS*	**Sn**	**20 18 25.1**	**-2.9**
JRY	**Ryogami san**	**5.15**	**331**	P	**Pn**	**20 17 47.3**	**+0.1**
MJAR	**Matsushiro Arr**	**5.89**	**329**	Pn	**Pn**	**20 17 58.3**	**+1.0**
	3.0nm,0.3s,baz=151,slow=10,SNR=43						
MAJO	**Matsushiro**	**5.89**	**329**	*eP*	**Pn**	**20 17 58.0**	**+0.7**
	23nm,0.6s						
MAJO	**Matsushiro**	**5.89**	**329**	‖*iP*	**Pn**	**20 17 58.1**	**+0.7**
MAT	**Matsushiro**	**5.89**	**329**	P	**Pn**	**20 17 58.5**	**+1.1**
MAT				S	**Sn**	**20 19 06.9**	**+2.9**
JMK	**Ichinoseki**	**7.44**	**356**	P	**Pn**	**20 18 18.1**	**-0.4**
JMK				*eS*	**Sn**	**20 19 37.6**	**-4.3**
JNU	**Nakatsue**	**9.51**	**283**	Pn	**Pn**	**20 18 48.1**	**+1.2**
	0.2nm,0.3s,baz=113,slow=6.4,SNR=3.8						
ERM	**Erimo**	**10.52**	**5**	⇑*iP*	**Pn**	**20 19 01.5**	**+0.8**
ASAJ	**Asahikawa**	**12.59**	**2**	Pn	**Pn**	**20 19 30.2**	**+1.2**
	1.0nm,0.3s,baz=233,slow=16,SNR=7.4						
ASAJ				Sn	**Sn**	**20 21 40.9**	**-7.3**
	0.3nm,0.3s,baz=252,slow=20,SNR=3.6						
JOW	**Kunigami**	**12.83**	**252**	LR	LR	20 24 24.6	
	comp=Z,261nm,18.5s,baz=158,slow=38						
KSRS	**Korea Array**	**12.99**	**301**	Pn	**Pn**	**20 19 36.6**	**+2.0**
	0.2nm,0.3s,baz=110,slow=13,SNR=11						
KSAR	**Wonju Array Be**	**13.02**	**301**	Pn	**Pn**	**20 19 36.6**	**+1.7**
KSAR	**Wonju Array Be**	**13.02**	**301**	P	**Pn**	**20 19 36.6**	**+1.7**
USRK	**Ussuriysk Ar.**	**14.89**	**331**	Pn	**Pn**	**20 19 59.5**	**-0.9**
	0.1nm,0.3s,baz=140,slow=17,SNR=2.7						
USRK				LR	LR	20 26 01.2	
	comp=Z,115nm,18.4s,baz=136,slow=38						
YSS	**Yuzh-Sakhalins**	**15.43**	**2**	*eP*	**Pn**	**20 20 05.8**	**-1.6**
MDJ	**Mudanjiang**	**16.27**	**327**	*eP*	**Pn**	**20 20 15.1**	**-3.3**
CN2	**Changchun**	**17.88**	**318**	*eP*	**Pn**	**20 20 37.3**	**-1.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				LR	LR		
	comp=N,290nm,12.0s						
CN2				LR	LR		
	comp=E,230nm,12.0s						
CN2				LR	LR		
	comp=Z,370nm,13.0s						
KLR	**Kul'dur**	**19.29**	**339**	P	**P**	**20 20 53.8**	**-0.6**
	0.1nm,0.3s,baz=152,slow=8.1,SNR=12						
KLR	**Kul'dur**	**19.29**	**339**	⇑*iP*	**P**	**20 20 53.0**	**-1.4**
GRNR	**Gornyy**	**19.67**	**350**	*eP*	**P**	**20 20 56.0**	**-2.5**
BJT	**Baijiatuau**	**22.52**	**299**	*eP*	**P**	**20 21 27.4**	**-1.9**
BJT	**Baijiatuau**	**22.52**	**299**	*eP*	**P**	**20 21 27.4**	**-1.9**
HIA	**Hailar**	**24.36**	**323**	P	**P**	**20 21 46.7**	**-0.6**
HIA	**Hailar**	**24.36**	**323**	*c iP*	**P**	**20 21 47.2**	**-0.1**
HIA				pmax	pmax		
	comp=Z,18nm,1.1s						
ZEA	**Zeya**	**24.60**	**339**	*eP*	**P**	**20 21 50.8**	**+1.3**
ZEA				pmax	pmax		
	comp=N,50nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,71nm,1.2s						
H11N2	**WAKE ISLAND Hy**	**25.31**	**112**	T	T	20 48 20.8	
	baz=304,slow=74,SNR=3.4						
H11N1	**WAKE ISLAND Hy**	**25.31**	**112**	T	T	20 48 19.1	
	baz=304,slow=74,SNR=3.6						
H11N3	**WAKE ISLAND Hy**	**25.32**	**112**	T	T	20 48 20.4	
	baz=304						
XAN	**Xi'an**	**27.82**	**284**	P	**P**	**20 22 15.7**	**-3.1**
XAN				pP	pP	20 22 22.9	-4.3
XAN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,92nm,7.5s						
MA2	**Magadan**	**28.68**	**9**	LR	LR	20 36 20.7	
	comp=Z,38nm,18.8s,baz=128,slow=41						
DAV	**Davao City (W)**	**28.73**	**216**	LR	LR	20 32 59.4	
	comp=Z,55nm,20.0s,baz=122,slow=35						
ULN	**Ulaanbaatar**	**31.10**	**312**	*eP*	**P**	**20 22 48.4**	**+0.5**
	comp=Z,19nm,1.4s						
ULN	**Ulaanbaatar**	**31.10**	**312**	*eP*	**P**	**20 22 48.4**	**+0.5**
ULN				pmax	pmax		
	comp=Z,19nm,1.4s						
SONM	**Songino Array**	**31.51**	**311**	P	**P**	**20 22 52.2**	**+0.8**
	comp=Z,6.8nm,1.0s,baz=119,slow=9.0,SNR=32						
SONM				LR	LR	20 35 46.1	
	comp=Z,58nm,19.0s,baz=99,slow=37						
YAK	**Yakutsk**	**31.55**	**349**	⇑*iP*	**P**	**20 22 52.1**	**+0.7**
YAK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SEY	**Seymchan**	**32.13**	**9**	P	**P**	**20 22 58.2**	**+1.6**
	comp=Z,2.4nm,0.7s,baz=198,slow=7.5,SNR=9.8						
SEY	**Seymchan**	**32.13**	**9**	⇑*iP*	**P**	**20 22 58.8**	**+2.3**
ZAK	**Zakamensk**	**34.26**	**315**	*eP*	**P**	**20 23 15.0**	**-0.4**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
TLY	**Talaya**	**34.48**	**317**	*eP*	**P**	**20 23 18.1**	**+0.9**
TLY				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TLY				MLR	MLR		
	comp=Z,151nm,16.0s						
GTA	**Gaotai**	**34.96**	**295**	⇑P	**P**	**20 23 19.1**	**-2.5**
GTA				pP	pP	20 23 23.9	-6.3
GTA				sP	sP	20 23 27.2	-6.5
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
BILL	**Bilibino**	**39.22**	**14**	*eP*	**P**	**20 23 56.7**	**-0.5**
BILL				*e*		20 25 32.3	
BILL				*e*PPP	PPP	20 25 51.1	
BILL				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HVS	**Khovu-Aksy**	**40.33**	**313**	⇑*iP*	**P**	**20 24 07.1**	**+0.2**
HVS				pmax	pmax		
	comp=Z,13nm,0.9s						
TIXI	**Tiksi**	**40.81**	**354**	P	**P**	**20 24 10.3**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=129,slow=3.7,SNR=3.9						
TIXI	**Tiksi**	**40.81**	**354**	‖*iP*	**P**	**20 24 10.9**	**+0.6**
TIXI				pmax	pmax		
	comp=Z,9.0nm,2.5s						
CMAR	**Chiang Mai Arr**	**40.84**	**262**	P	**P**	**20 24 08.8**	**-2.5**
	comp=Z,0.8nm,0.5s,baz=50,slow=4.8,SNR=6.3						
CMAR				LR	LR	20 40 34.9	
	comp=Z,44nm,19.5s,baz=93,slow=36						
CMAR	**Chiang Mai Arr**	**40.84**	**262**	*eP*	**P**	**20 24 15.2**	**+3.9**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
LSA	**Lhasa**	**43.44**	**281**	*eP*	**P**	**20 24 32.4**	**-0.6**
LSA	**Lhasa**	**43.44**	**281**	*eP*	**P**	**20 24 32.4**	**-0.6**
ZALV	**Zalesovo Beam**	**46.09**	**316**	P	**P**	**20 24 53.2**	**+0.1**
	comp=Z,1.9nm,0.5s,baz=98,slow=6.1,SNR=16						
ZALV				PcP	**PcP**	**20 26 29.6**	**+0.5**
	comp=Z,1.2nm,0.6s,baz=106,slow=3.1,SNR=3.6						
NVS	**Novosibirsk**	**47.09**	**318**	*eP*	**P**	**20 25 01.0**	**0.0**
NVS				pmax	pmax		
	comp=Z,7.0nm,0.9s						
NVS				pmax	pmax		
	comp=E,6.0nm,1.0s						
ODAN	**Odare**	**47.45**	**279**	*eP*	**P**	**20 25 02.5**	**-2.0**
	comp=E,8.6nm,0.6s						
MKAR	**Makanchi Array**	**47.59**	**307**	P	**P**	**20 25 05.1**	**0.0**
	comp=E,1.5nm,0.5s,baz=86,slow=10,SNR=33						
MKAR				PcP	**PcP**	**20 26 35.4**	**+0.8**
	comp=E,1.2nm,0.9s,baz=75,slow=5.1,SNR=2.5						
MKAR				LR	LR	20 44 17.6	
	comp=E,51nm,19.1s,baz=84,slow=35						
RAMN	**Ramite**	**48.09**	**279**	*eP*	**P**	**20 25 07.7**	**-1.8**
	comp=E,13nm,0.5s						
JIRN	**Jiri**	**48.21**	**280**	*eP*	**P**	**20 25 09.0**	**-1.5**
	comp=E,22nm,0.6s						
GUN	**Gumba**	**48.39**	**281**	*eP*	**P**	**20 25 10.1**	**-1.8**
	comp=E,19nm,0.7s						
NRIK	**Noril'sk**	**48.48**	**337**	P	**P**	**20 25 11.7**	**+0.1**
	comp=E,2.8nm,0.4s,baz=127,slow=5.4,SNR=5.0						
KKN	**Kakani**	**48.93**	**281**	*eP*	**P**	**20 25 14.8**	**-1.1**
DMN	**Daman**	**49.13**	**281**	*eP*	**P**	**20 25 15.5**	**-2.0**
GKN	**Gorkha**	**49.40**	**281**	*eP*	**P**	**20 25 18.5**	**-0.9**
	comp=E,14nm,0.9s						
KURK	**Kurchatov**	**49.81**	**312**	*eP*	**P**	**20 25 21.6**	**-0.5**
	comp=E,149nm,1.0s						
KURK	**Kurchatov**	**49.81**	**312**	*c iP*	**P**	**20 25 22.0**	**0.0**
KURK				pmax	pmax		
	comp=Z,27nm,1.2s						
KURBB	**Kurchatov Arra**	**49.88**	**312**	P	**P**	**20 25 22.4**	**-0.1**
	comp=Z,10nm,1.0s,baz=88,slow=7.5,SNR=44						
PDGK	**Podgornoye**	**49.92**	**302**	P	**P**	**20 25 22.3**	**-0.9**
PDGK				pmax	pmax		
	comp=Z,8.0nm,1.5s						
KOLN	**Koldanda**	**50.34**	**282**	*eP*	**P**	**20 25 25.9**	**-0.8**
	comp=Z,5.8nm,0.6s						
PYUN	**Piuthan**	**50.74**	**282**	*eP*	**P**	**20 25 28.9**	**-0.8**
	comp=Z,15nm,0.5s						
KDAK	**Kodiak Island**	**51.01**	**39**	P	**P**	**20 25 33.1**	**+2.2**
	comp=Z,5.3nm,0.6s,baz=234,slow=4.7,SNR=7.2						
CTA	**Charters Tower**	**51.48**	**175**	P	**P**	**20 25 34.3**	**-0.5**
	comp=Z,2.6nm,0.8s,baz=27,slow=9.0,SNR=2.8						
WRA	**Warramunga Arr**	**51.69**	**189**	P	**P**	**20 25 35.2**	**-1.2**
	comp=Z,6.1nm,1.0s,baz=12,slow=8.2,SNR=6.6						
AAK	**Ala-Archa**	**53.65**	**302**	‖*iP*	**P**	**20 25 51.3**	**+0.3**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ILAR	**Eielson Array**	**53.97**	**30**	P	**P**	**20 25 53.6**	**+0.8**
	comp=Z,3.7nm,1.1s,baz=268,slow=5.7,SNR=16						
OTUK	**Ortayu**	**54.14**	**309**	P	**P**	**20 25 53.9**	**-0.5**
OTUK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BVAR	**Borovoye Array**	**54.71**	**315**	P	**P**	**20 25 58.6**	**+0.2**
	comp=Z,1.3nm,0.5s,baz=87,slow=7.9,SNR=10						
BRVK	**Borovoye**	**54.77**	**315**	*eP*	**P**	**20 25 58.8**	**+0.1**
BRVK	**Borovoye**	**54.77**	**315**	‖*iP*	**P**	**20 25 59.2**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.7s						
SFK	**Sufi-Kurgan**	**54.96**	**299**	P	**P**	**20 26 00.5**	**-0.2**
SFK				pmax	pmax		
	comp=Z,5.0nm,1.5s						
MNAS	**Manas**	**55.12**	**302**	P	**P**	**20 26 02.0**	**+0.3**
MNAS				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ASAR	**Alice Springs**	**55.41**	**189**	P	**P**	**20 26 03.0**	**-0.7**
	comp=Z,1.7nm,0.5s,baz=5.7,slow=6.1,SNR=12						
EGAK	**Eagle**	**56.42**	**30**	*eP*	**P**	**20 26 12.2**	**+1.7**
	comp=Z,2.1nm,0.7s						
INK	**Inuvik**	**59.12**	**26**	P	**P**	**20 26 31.0**	**+1.6**
	comp=Z,2.0nm,0.7s,baz=305,slow=8.7,SNR=4.2						
SVE	**Sverdlovsk**	**59.64**	**321**	⇑*iP*	**P**	**20 26 35.5**	**+2.4**
SVE				pmax	pmax		
	comp=Z,17nm,1.2s						
ARU	**Arti**	**60.84**	**321**	*c iP*	**P**	**20 26 41.4**	**0.0**
ARU						20 27 23.4	
ARU						20 28 53.0	
ARU				S	**S**	**20 35 00.2**	**+3.3**
ARU				SS	**SS**	**20 38 57.3**	**+1.7**
ARU				pmax	pmax		
	comp=Z,18nm,1.2s						
AKTO	**Aktyubinsk**	**62.76**	**314**	P	**P**	**20 26 54.9**	**+0.5**
	comp=Z,4.1nm,0.8s,baz=71,slow=9.7,SNR=11						
PRGR	**Permogore**	**65.66**	**329**	*eP*	**P**	**20 27 12.9**	**-0.3**
PRGR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GEYT	**Alibeck**	**66.98**	**301**	P	**P**	**20 27 23.2**	**+1.0**
	comp=Z,5.4nm,1.0s,baz=50,slow=2.3,SNR=6.5						
KLMR	**Klimovskoe**	**68.68**	**329**	*eP*	P	20 27 23.1	-9.2
KLMR				pmax	pmax		
	comp=Z,15nm,1.5s						
KLMR	**Klimovskoe**	**68.68**	**329**	*eP*	P	20 27 23.1	-9.2
KLMR				AMP		20 27 35.6	
	comp=Z,15nm,1.5s						
ARCES	**ARCESS Array B**	**69.31**	**340**	P	**P**	**20 27 38.1**	**+1.9**
	comp=Z,1.9nm,0.8s,baz=49,slow=8.4,SNR=4.2						
ARCES	**ARCESS Array B**	**69.31**	**340**	*eP*	**P**	**20 27 40.7**	**+4.5**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
OBN	**Obninsk**	**72.80**	**325**	*eP*	**P**	**20 27 58.3**	**+0.8**
OBN				*e*		20 28 18.6	
VSR	**Storozhevoye**	**73.41**	**320**	*eP*	**P**	**20 27 59.7**	**-1.5**
VSR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
YBH	**Yreka Blue Hor**	**73.41**	**51**	LR	LR	20 56 17.8	
	comp=Z,38nm,20.7s,baz=294,slow=32						
VORD	**Divnogorie**	**73.46**	**320**	*eP*	**P**	**20 28 00.4**	**-1.1**
VORD				pmax	pmax		
	comp=Z,3.0nm,0.6s						
FINES	**FINESS Array B**	**73.91**	**333**	P	**P**	**20 28 03.9**	**0.0**
	comp=Z,1.5nm,0.7s,baz=54,slow=7.5,SNR=11						
FINES	**FINESS Array B**	**73.91**	**333**	*eP*	**P**	**20 28 04.3**	**+0.4**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KBZ	**Khabaz**	**74.87**	**312**	P	**P**	**20 28 09.3**	**-0.5**
	comp=Z,2.5nm,0.8s,baz=43,slow=8.1,SNR=4.8						
KBZ				LR	LR	21 03 05.9	
	comp=Z,530nm,18.2s,baz=257,slow=37						
KVAR	**Kislovodsk Arr**	**74.89**	**312**	LR	LR	21 05 17.5	
	comp=Z,860nm,19.3s,slow=39						
KIV	**Kislovodsk**	**74.90**	**312**	*eP*	**P**	**20 28 10.9**	**+0.7**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GNI	**Garni**	**75.41**	**308**	⇑*eP*	**P**	**20 28 15.4**	**+2.1**
NVAR	**Mina Array Bea**	**77.97**	**52**	P	**P**	**20 28 29.4**	**+1.5**
	comp=Z,1.6nm,0.8s,baz=287,slow=4.9,SNR=8.6						
NVAR				LR	LR	21 01 08.4	
	comp=Z,31nm,18.6s,baz=90,slow=34						
AKASG	**Malin Array Be**	**78.95**	**323**	P	**P**	**20 28 32.4**	**-0.3**
	comp=Z,0.8nm,0.4s,baz=52,slow=6.4,SNR=7.6						
HFS	**Hagfors**	**79.30**	**336**	P	**P**	**20 28 33.7**	**-0.7**
	comp=Z,1.4nm,0.5s,baz=93,slow=6.3,SNR=5.2						
NB2	**NORSAR Subarra**	**79.44**	**338**	P	**P**	**20 28 35.3**	**0.0**
	comp=Z,0.9nm,0.6s,baz=42,slow=5.9						
NOA	**NORSAR Array B**	**79.44**	**338**	P	**P**	**20 28 35.4**	**+0.1**
	comp=Z,3.0nm,0.8s,baz=36,slow=1.3,SNR=5.8						
DUG	**Dugway, Tooele**	**80.65**	**49**	P	**P**	**20 28 44.6**	**+2.2**
DUG				pmax	pmax		
	comp=Z,6.0nm,1.1s						
PDAR	**Pinedale Array**	**81.23**	**45**	P	**P**	**20 28 46.4**	**+0.9**
	comp=Z,0.3nm,0.6s,baz=294,slow=1.5,SNR=5.2						
BRTR	**Keskin Array B**	**82.86**	**312**	P	**P**	**20 28 54.9**	**+0.9**
	comp=Z,1.7nm,0.9s,baz=74,slow=1.8,SNR=7.7						
BRTR	**Keskin Array B**	**82.86**	**312**	*eP*	**P**	**20 28 55.2**	**+1.2**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
RAYN	**Ar Rayn**	**83.20**	**293**	*eP*	**P**	**20 28 56.2**	**+0.3**
	comp=Z,5.8nm,0.9s						
VRI	**Vrincioaia**	**83.23**	**320**	P	**P**	**20 28 56.7**	**+1.0**
VRI				pmax	pmax		
	comp=Z,30nm,1.2s						
ASF	**Jabal al Asfar**	**84.98**	**305**	P	**P**	**20 29 05.2**	**+0.3**
	comp=Z,2.0nm,0.8s,baz=74,slow=7.4,SNR=3.9						
KSP	**Ksiaz**	**85.03**	**329**	P	**P**	**20 29 05.4**	**+0.7**
KSP				pmax	pmax		
	comp=Z,5.0nm,1.0s						
DPC	**Dobruska-Polom**	**85.37**	**329**	*eP*	**P**	**20 29 07.7**	**+1.3**
DPC	**Dobruska-Polom**	**85.37**	**329**	*eP*	**P**	**20 29 07.7**	**+1.3**
VYHS	**Vyhne**	**85.52**	**326**	*eP*	**P**	**20 29 07.8**	**+0.6**
VYHS	**Vyhne**	**85.52**	**326**	*eP*	**P**	**20 29 07.8**	**+0.6**
MMAI	**Mount Meron Ar**	**85.54**	**306**	P	**P**	**20 29 08.4**	**+0.7**
	comp=Z,1.5nm,0.8s,baz=50,slow=12,SNR=5.5						
CLL	**Collm**	**86.10**	**331**	*eP*	**P**	**20 29 11.0**	**+1.0**
CLL				epP	**pP**	**20 29 18.0**	**-1.3**
CLL	**Collm**	**86.10**	**331**	*eP*	**P**	**20 29 11.0**	**+1.0**
CLL				*e*		20 29 18.0	
TXAR	**Lajitas Array**	**93.11**	**53**	P	**P**	**20 29 45.6**	**+2.0**
	comp=Z,3.1nm,0.9s,baz=284,slow=3.7,SNR=15						
LPAZ	**La Paz**	**148.73**	**68**	PKPbc	**PKPab**	**20 36 20.3**	**-1.3**
	comp=Z,2.4nm,0.7s,baz=251,slow=1.1,SNR=8.4						

JMA 07 20:16:49.7±0.2,35°.10N×138°.42E,h19km±1km,M0.1, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHZ3	**Shizuoka 3**	**0.18**	**259**	S	Sg	20 16 57.8	+0.1

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*IDC **07** 20:16:46.1±0.9,0°.77S×133°.44E,h0km,mb4.1/6, mb1 4.2/9,mb1mx3.8/57,mbtmp4.1/9,ML4.3/4,MS3.7/2, Ms1 3.7/2,ms1mx2.8/55,Error ellipse: s-maj=26.4km s-min=17.1km az=77.0*
*ISCJB **07** 20:16:50.8±0.6,0°.72S±0°.08×133°.12E±0°.05,h35km, mb4.0/6,MS4.3/1,Error ellipse: s-maj=11.4km s-min=6.8km az=22.9*
*NEIC **07** 20:16:51.2±0.6,0°.82S×133°.42E,h35km,mb4.2/1,Error ellipse: s-maj=18.2km s-min=8.8km az=90.0*
*DJA **07** 20:16:52.5±0.6,1°.S±7°.×13°.3E±°,h11km±5km,M4.6/6, mB4.8/2,mb4.8/3,MLv4.6/6,Mw(mB)4.0/2*

ISC 07 20:16:52.2±0.9,0°.73S±0°.10×133°.22E±0°.05,h35km,n19, σ1º95/19,mb4.1/6,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**1.23**	**129**	P	**Pn**	**20 17 14.8**	**+1.8**
RKPI				S	**Sn**	**20 17 30.5**	**+2.0**
SIJI	**Sorong**	**1.96**	**266**	Pn	**Pn**	**20 17 24.1**	**+1.1**
	68nm,0.3s,baz=290,slow=9.6,SNR=455						
SIJI				Sn	**Sn**	**20 17 50.5**	**+4.1**
	105nm,0.3s,baz=150,slow=24,SNR=12						
SIJI				LR	LR	20 18 21.3	
	comp=Z,498nm,18.9s,baz=261,slow=44						
FAKI	**Fak Fak**	**2.38**	**204**	P	**Pn**	**20 17 30.5**	**+1.7**
SRPI	**Serui, Papua**	**3.23**	**111**	P	**Pn**	**20 17 42.7**	**+2.2**
SRPI				S	**Sn**	**20 18 20.2**	**+2.5**
LBMI	**Labuha**	**5.72**	**271**	P	Pn	20 18 18.9	+4.2
NLAI	**Namlea**	**6.60**	**248**	P	Pn	20 18 33.2	+6.3
BATI	**Baumata**	**13.38**	**225**	Pn	**Pn**	**20 19 59.8**	**0.0**
	7.4nm,0.3s,baz=113,slow=2.4,SNR=12						
FITZ	**Fitzroy Crossi**	**18.80**	**203**	Pn	**P**	**20 21 07.5**	**-1.3**
	0.5nm,0.3s,baz=41,slow=12,SNR=17						
WRAB	**Tennant Creek**	**19.12**	**177**	*eP*	**P**	**20 21 10.5**	**-1.9**
	13nm,0.9s						
WRA	**Warramunga Arr**	**19.13**	**177**	P	**P**	**20 21 10.3**	**-2.2**
	0.7nm,0.3s,baz=356,slow=12,SNR=39						
WRA				S	Sn	20 24 33.8	-13
	0.4nm,0.3s,baz=357,slow=23,SNR=4.9						
ASAR	**Alice Springs**	**22.81**	**178**	P	**P**	**20 21 50.5**	**-1.8**
	4.5nm,0.6s,baz=2.2,slow=10.0,SNR=53						
MBWA	**Marble Bar**	**24.20**	**212**	P	**P**	**20 22 05.5**	**-0.2**
STKA	**Stephens Creek**	**31.98**	**166**	P	**P**	**20 23 13.3**	**-1.8**
	0.8nm,0.3s,baz=330,slow=8.9,SNR=8.6						
MKAR	**Makanchi Array**	**64.92**	**324**	P	**P**	**20 27 29.1**	**+0.7**
	1.5nm,0.4s,baz=110,slow=8.5,SNR=15						
KURK	**Kurchatov**	**68.99**	**326**	*eP*	**P**	**20 27 54.2**	**+0.2**
KURBB	**Kurchatov Arra**	**69.00**	**326**	P	**P**	**20 27 54.4**	**+0.2**
	1.5nm,0.7s,baz=121,slow=5.6,SNR=10						
BVAR	**Borovoye Array**	**74.59**	**326**	P	**P**	**20 28 28.0**	**+0.3**
	0.7nm,0.7s,baz=126,slow=9.1,SNR=3.0						
ILAR	**Eielson Array**	**86.34**	**25**	P	**P**	**20 29 28.6**	**-1.9**
	0.6nm,0.6s,baz=268,slow=4.6,SNR=4.5						
ARCES	**ARCESS Array B**	**96.83**	**340**	LR	LR	21 21 51.4	
	comp=Z,88nm,18.1s,baz=169,slow=40						

IDC 07 20:26:32.8±2.4,31°.10N×140°.70E,h0km,mb3.5/3, mb1 3.5/6,mb1mx3.3/65,mbtmp3.5/6,ML3.3/3,Error ellipse: s-maj=111.7km s-min=18.8km az=74.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**2.16**	**339**	Pn	Pn	20 27 09.8	-0.3
	8.9nm,0.3s,baz=47,slow=19,SNR=3.2						
JCJ	**Chichijima**	**4.19**	**162**	Pn	Pn	20 27 38.0	0.0
	7.9nm,0.3s,baz=200,slow=17,SNR=4.5						
MJAR	**Matsushiro Arr**	**5.81**	**340**	Pn	Pn	20 27 59.4	-0.9
	0.6nm,0.3s,baz=161,slow=11,SNR=4.9						
KURBB	**Kurchatov Arra**	**49.36**	**312**	P	P	20 35 24.1	+0.3
	0.7nm,0.8s,baz=90,slow=8.6,SNR=5.3						
WRA	**Warramunga Arr**	**51.11**	**188**	P	P	20 35 37.7	+0.3
	0.3nm,0.4s,baz=5.4,slow=7.6,SNR=8.0						
ASAR	**Alice Springs**	**54.84**	**188**	P	P	20 36 04.2	-0.7
	0.4nm,0.9s,baz=1.8,slow=4.9,SNR=3.7						

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*NIED **07** 20:27:00,31°.50N×141°.80E,h17km,Mw3.7 Best double couple: M0:4.58000×10^14 NP1:φs:152.00000°,δ:59.00000°, λ:6.00000°. NP2:φs:59.00000°,δ:85.00000°,λ:148.00000°.*
*IDC **07** 20:27:02.3±0.

MAN 07 20:35:07.1, 16°.38N×119°.71E, h29km, mb4.5, ML3.3, MS3.1, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.20**	**91**	*eP*	Pn	20 35 14.5	+0.4
BOLP				*eS*	Sb	20 35 20.1	+2.8
SCZP	**Santa Cruz**	**0.64**	**162**	*eP*	Pn	20 35 20.4	+0.2
SCZP				*eS*	Sn	20 35 29.9	+0.6
BALP	**Baler**	**1.91**	**109**	*eP*	Pn	20 35 38.9	+1.3
BALP				*eS*	Sn	20 36 02.2	+1.4
APYP	**Conner**	**2.08**	**45**	*eP*	Pn	20 35 40.6	+0.5
APYP				*eS*	Sn	20 36 05.3	+0.4

*SKO **07** 20:35:09.0, 41°.35N×20°.89E, h15km, M1.5, ML1.9*
*TIR **07** 20:35:08.3, 41°.34N×20°.89E, h7km, Md2.6/3*
*ISCJB **07** 20:35:09.7±0.6, 41°.37N±0°.03×20°.89E±0°.05, h7km±7km, Error ellipse: s-maj=6.0km s-min=5.5km az=42.5*
ISC 07 20:35:09.5±1.3, 41°.37N±0°.05×20°.82E±0°.04, h7km±13km, n8, σ1§52/16, 1C, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHR	**Ohrid**	**0.25**	**184**	⇑*iP*g	**Pg**	**20 35 14.9**	**+0.4**
OHR				*i* Sg	**Sg**	**20 35 19.1**	**+1.2**
OHR				*e*Lg	Lg	20 35 19.2	
	comp=E,365nm,0.4s						
OHR				*e*Lg	Lg	20 35 19.2	
	comp=N,341nm,0.4s						
PHP	**Peshkopia**	**0.43**	**318**	*i* PG	**Pb**	**20 35 18.5**	**-0.9**
PHP				*i* SG	**Sb**	**20 35 25.7**	**-0.4**
BIA	**Bitola**	**0.51**	**132**	*i* Pg	**Pb**	**20 35 19.3**	**-1.5**
BIA				*i* Sg	**Sb**	**20 35 26.7**	**-1.7**
SKO	**Skopje**	**0.76**	**37**	*i* Pg	**Pb**	**20 35 24.1**	**-1.0**
SKO				*i* Sg	**Sb**	**20 35 34.5**	**-1.1**
STIP	**Stip**	**1.07**	**72**	*i* Pg	**Pn**	**20 35 32.4**	**+1.5**
STIP				*i* Sg	**Sn**	**20 35 49.0**	**+2.9**
BCI	**Bajram Curri**	**1.15**	**331**	*i* PN	**Pb**	**20 35 30.2**	**-1.4**
BCI				*i* SN	**Sn**	**20 35 49.5**	**+1.5**
VAY	**Valandovo**	**1.31**	**91**	*i* Pg	**Pg**	**20 35 34.3**	**-0.4**
VAY				*e*Lg	Lg	20 35 51.1	
	comp=N,15nm,0.6s						
VAY				*i* Sg	**Sn**	**20 35 51.4**	**-0.6**
VAY				*e*Lg	Lg	20 35 51.5	
	comp=E,10nm,0.4s						
STON	**Ston**	**2.77**	**304**	*e*Pn	**Pn**	**20 35 54.5**	**+0.3**
STON				Sn	**Sb**	**20 36 31.9**	**-1.4**

*ISCJB **07** 20:38:57.5±0.8, 13°.6S±0°.2×66°.3E±0°.1, h10km, mb3.8/9, MS3.6/5, Error ellipse: s-maj=24.5km s-min=14.9km az=156.2*
*IDC **07** 20:38:58.1±0.8, 13°.62S×66°.27E, h0km, mb3.8/9, mb1 4.0/10, mb1mx3.6/69, mbtmp3.8/10, ML3.6/1, MS3.6/5, Ms1 3.6/5, ms1mx3.1/61, Error ellipse: s-maj=25.1km s-min=21.1km az=178.0*
ISC 07 20:38:59.7±1.0, 13°.7S±0°.2×66°.3E±0°.2, h10km, n25, σ0§78/11, mb3.9/9, MS3.6/5, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**8.55**	**46**	T	T	20 49 35.4	
	baz=226,slow=75,SNR=487						
H08S2	**Diego Garcia H**	**8.56**	**46**	T	T	20 49 37.0	
	baz=226,slow=75,SNR=420						
H08S3	**Diego Garcia H**	**8.57**	**46**	T	T	20 49 36.7	
	baz=226,slow=75,SNR=356						
H08N3	**Diego Garcia H**	**8.63**	**33**	T	T	20 49 42.5	
	baz=212,slow=76,SNR=1389						
H08N1	**Diego Garcia H**	**8.65**	**33**	T	T	20 49 40.2	
	baz=212,slow=76,SNR=1498						
H08N2	**Diego Garcia H**	**8.66**	**33**	T	T	20 49 39.1	
	baz=212,slow=76,SNR=1494						
OPO	**Ambohidratompo**	**18.95**	**253**	P	**P**	**20 43 21.2**	**-0.2**
	0.2nm,0.3s,baz=78,slow=18,SNR=1.9						
PALK	**Pallekele**	**25.26**	**35**	LR	LR	20 50 52.8	
	comp=Z,50nm,20.9s,baz=119,slow=28						
PSI	**Prapat**	**36.30**	**66**	LR	LR	20 57 47.3	
	comp=Z,96nm,19.0s,baz=268,slow=31						
LSZ	**Lusaka**	**36.86**	**263**	P	**P**	**20 46 09.2**	**+0.4**
	0.9nm,0.3s,baz=126,slow=8.7,SNR=3.0						
LEM	**Lembang**	**41.22**	**85**	LR	LR	21 02 16.4	
	comp=Z,81nm,18.6s,baz=196,slow=34						
CMAR	**Chiang Mai Arr**	**45.35**	**46**	P	**P**	**20 47 19.2**	**+0.7**
	0.7nm,0.8s,baz=239,slow=9.2,SNR=4.9						
H01W3	**Cape Leeuwin H**	**47.97**	**125**	T	T	21 39 02.9	
	baz=284,slow=75,SNR=8.2						
H01W2	**Cape Leeuwin H**	**47.97**	**125**	T	T	21 38 53.7	
	baz=284,slow=75,SNR=8.0						
H01W1	**Cape Leeuwin H**	**47.98**	**125**	T	T	21 38 59.3	
	baz=284,slow=75,SNR=7.8						
MAW	**Mawson**	**53.94**	**182**	LR	LR	21 07 29.7	
	comp=Z,67nm,18.1s,baz=50,slow=32						
FITZ	**Fitzroy Crossi**	**57.09**	**103**	LR	LR	21 09 49.5	
	comp=Z,90nm,20.9s,slow=32						
MKAR	**Makanchi Array**	**61.87**	**12**	P	**P**	**20 49 18.3**	**-1.0**
	0.4nm,0.7s,baz=205,slow=7.8,SNR=5.3						
ASAR	**Alice Springs**	**64.37**	**110**	P	**P**	**20 49 35.9**	**-0.5**
	1.6nm,0.8s,baz=275,slow=6.2,SNR=15						
KURBB	**Kurchatov Arra**	**64.90**	**9**	P	**P**	**20 49 38.2**	**-0.9**
	0.6nm,0.9s,baz=209,slow=6.6,SNR=3.7						
WRA	**Warramunga Arr**	**65.11**	**106**	P	**P**	**20 49 41.1**	**-0.1**
	2.7nm,0.8s,baz=271,slow=5.8,SNR=18						
BVAR	**Borovoye Array**	**66.50**	**3**	P	**P**	**20 49 48.7**	**-0.8**
	0.6nm,0.6s,baz=184,slow=6.8,SNR=5.9						
ZALV	**Zalesovo Beam**	**69.18**	**12**	P	**P**	**20 50 05.5**	**-0.8**
	0.7nm,0.6s,baz=203,slow=6.3,SNR=4.3						
SONM	**Songino Array**	**70.90**	**27**	P	**P**	**20 50 18.0**	**+0.8**
	0.4nm,0.5s,baz=212,slow=5.1,SNR=3.2						
PDAR	**Pinedale Array**	**150.77**	**354**	PKPbc	**PKPbc**	**20 58 53.3**	**+0.4**
	0.2nm,0.3s,baz=88,slow=4.6,SNR=2.3						

*NIED **07** 20:45:00, 31°.40N×142°.00E, h8km, Mw4.1 Best double couple: M0 1.58000×10^15 NP1:φs108.00000°, δ33.00000°, λ60.00000°. NP2:φs322.00000°, δ62.00000°, λ108.00000°.*
*IDC **07** 20:45:15.5±0.6, 31°.38N×141°.76E, h0km, mb4.2/23, mb1 4.3/26, mb1mx4.1/72, mbtmp4.2/26, ML3.7/4, MS3.2/5, Ms1 3.2/5, ms1mx2.9/64, Error ellipse: s-maj=16.3km s-min=14.1km az=70.0*
*JMA **07** 20:45:16.8±0.6, 31°.43N×141°.95E, h86km, M3.8*
*NEIC **07** 20:45:18.8±2.4, 31°.35N×141°.75E, h22km±17km, mb4.7/2, Error ellipse: s-maj=10.7km s-min=6.7km az=77.0*
ISC 07 20:45:19.5±0.5, 31°.50N±0°.05×141°.92E±0°.08, h29km, n60, σ1§99/66, mb4.3/25, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**2.38**	**312**	P	**Pn**	**20 45 54.6**	**-1.9**
JHJ2	**Mitsune**	**2.40**	**313**	P	**Pn**	**20 45 55.9**	**-0.8**
JHJ	**Hachijo jima 2**	**2.42**	**312**	Pn	**Pn**	**20 45 55.7**	**-1.4**
	26nm,0.3s,baz=340,slow=20,SNR=6.9						
JHJ				Sn	**Sn**	**20 46 22.1**	**-3.7**
	54nm,0.3s,baz=64,slow=22,SNR=5.0						
BSO1	**Boso 1**	**3.24**	**346**	P	**Pn**	**20 46 07.6**	**-0.3**
BSO3	**Boso 3**	**3.50**	**341**	P	**Pn**	**20 46 11.5**	**-0.1**
JKO	**Kozu shima**	**3.56**	**320**	P	**Pn**	**20 46 12.2**	**-0.5**
CBIJ	**Chichi jima**	**4.40**	**177**	Pn	**Pn**	**20 46 21.6**	**-2.7**
CBIJ				Sn	**Sn**	**20 47 12.8**	**-1.8**
CBIJ	**Chichi jima**	**4.40**	**177**	P	**Pn**	**20 46 21.3**	**-3.0**
JCJ	**Chichijima**	**4.40**	**177**	Pn	**Pn**	**20 46 21.6**	**-2.7**
	28nm,0.3s,baz=287,slow=16,SNR=9.5						
JCJ				Sn	**Sn**	**20 47 12.8**	**-1.8**
	28nm,0.3s,baz=315,slow=22,SNR=4.9						
JOD2	**Odawara 2**	**4.43**	**329**	P	**Pn**	**20 46 22.9**	**-1.9**
JOD2				eS	**Sn**	**20 47 14.4**	**-1.1**
JRY	**Ryogami san**	**5.16**	**332**	P	**Pn**	**20 46 35.0**	**+0.3**
MJAR	**Matsushiro Arr**	**5.89**	**330**	Pn	**Pn**	**20 46 46.0**	**+1.2**
	3.0nm,0.3s,baz=153,slow=11,SNR=32						
MJAR				Sn	**Sn**	**20 47 50.1**	**-1.4**
	0.7nm,0.3s,baz=231,slow=50,SNR=2.9						
MJAR				LR	LR	20 49 12.0	
	comp=Z,96nm,18.3s,baz=115,slow=40						
MAJO	**Matsushiro**	**5.89**	**330**	*e*P	**Pn**	**20 46 46.5**	**+1.6**
	26nm,0.8s						
MAT	**Matsushiro**	**5.89**	**330**	P	**Pn**	**20 46 46.8**	**+1.9**
MAT				S	**Sn**	**20 47 50.3**	**-1.2**
JMK	**Ichinoseki**	**7.46**	**356**	P	**Pn**	**20 47 04.6**	**-1.6**
JMK				S	**Sn**	**20 48 23.7**	**-6.1**
JNU	**Nakatsue**	**9.48**	**283**	LR	LR	20 51 19.6	
	comp=Z,199nm,18.4s,baz=117,slow=39						

ASAJ	**Asahikawa**	**12.61**	**2**	Pn	**Pn**	**20 48 14.9**	**-1.9**
	0.5nm,0.3s,baz=31,slow=19,SNR=7.0						
ASAJ				Sn	**Sn**	**20 50 27.8**	**-8.3**
	0.4nm,0.3s,baz=261,slow=19,SNR=3.4						
JOW	**Kunigami**	**12.79**	**252**	LR	LR	20 53 03.9	
	comp=Z,88nm,18.7s,baz=290,slow=37						
KSRS	**Korea Array**	**12.98**	**301**	Pn	**Pn**	**20 48 25.3**	**+3.5**
	0.2nm,0.3s,baz=107,slow=13,SNR=6.7						
KSRS				LR	LR	20 53 39.9	
	comp=Z,113nm,18.4s,baz=105,slow=39						
KSAR	**Wonju Array Be**	**13.00**	**301**	Pn	**Pn**	**20 48 25.3**	**+3.1**
KLR	**Kul'dur**	**19.30**	**340**	P	**P**	**20 49 41.8**	**-0.1**
	0.0nm,0.3s,baz=149,slow=12,SNR=9.8						
DAV	**Davao City (W)**	**28.70**	**216**	LR	LR	21 00 21.9	
	comp=Z,51nm,21.0s,baz=160,slow=32						
SONM	**Songino Array**	**31.50**	**311**	P	**P**	**20 51 39.6**	**+0.7**
	4.1nm,0.9s,baz=118,slow=8.7,SNR=19						
SEY	**Seymchan**	**32.15**	**9**	P	**P**	**20 51 45.7**	**+1.4**
	1.8nm,0.6s,baz=209,slow=10,SNR=6.5						
CMAR	**Chiang Mai Arr**	**40.81**	**262**	P	**P**	**20 52 57.0**	**-1.6**
	1.0nm,0.8s,baz=57,slow=5.7,SNR=9.0						
ZALV	**Zalesovo Beam**	**46.08**	**316**	P	**P**	**20 53 40.8**	**+0.2**
	2.4nm,0.7s,baz=98,slow=7.6,SNR=13						
ZALV				PcP	**PcP**	**20 55 17.4**	**+0.9**
	0.9nm,0.5s,baz=96,slow=3.2,SNR=2.9						
ODAN	**Odare**	**47.43**	**279**	*e*P	**P**	**20 53 50.3**	**-1.6**
MKAR	**Makanchi Array**	**47.58**	**307**	P	**P**	**20 53 52.5**	**-0.1**
	1.3nm,0.5s,baz=90,slow=9.5,SNR=17						
RAMN	**Ramite**	**48.06**	**279**	*e*P	**P**	**20 53 54.6**	**-2.2**
JIRN	**Jiri**	**48.18**	**280**	*e*P	**P**	**20 53 57.0**	**-0.8**
	11nm,0.3s						
GUN	**Gumba**	**48.36**	**281**	*e*P	**P**	**20 53 58.4**	**-0.8**
KKN	**Kakani**	**48.90**	**281**	*e*P	**P**	**20 54 02.2**	**-1.0**
GKN	**Gorkha**	**49.37**	**281**	*e*P	**P**	**20 54 05.5**	**-1.2**
	26nm,1.2s						
KURK	**Kurchatov**	**49.80**	**312**	*e*P	**P**	**20 54 09.0**	**-0.5**
KURBB	**Kurchatov Arra**	**49.87**	**312**	P	**P**	**20 54 09.8**	**-0.2**
	5.7nm,0.9s,baz=88,slow=7.4,SNR=46						
DANN	**Dangsing**	**49.99**	**282**	*e*P	**P**	**20 54 11.2**	**-0.4**
	9.4nm,0.7s						
KOLN	**Koldanda**	**50.32**	**282**	*e*P	**P**	**20 54 13.0**	**-1.0**
	5.5nm,0.6s						
PYUN	**Piuthan**	**50.72**	**282**	*e*P	**P**	**20 54 16.7**	**-0.3**
	12nm,0.6s						
KDAK	**Kodiak Island**	**51.04**	**39**	P	**P**	**20 54 20.2**	**+1.6**
	4.8nm,0.9s,baz=247,slow=3.0,SNR=4.7						
WRAB	**Tennant Creek**	**51.65**	**189**	*e*P	**P**	**20 54 22.8**	**-0.9**
WRA	**Warramunga Arr**	**51.66**	**189**	P	**P**	**20 54 23.0**	**-0.8**
	3.1nm,0.7s,baz=5.4,slow=7.6,SNR=60						
ILAR	**Eielson Array**	**54.00**	**30**	P	**P**	**20 54 41.7**	**+1.1**
	1.1nm,0.7s,baz=263,slow=6.0,SNR=14						
BVAR	**Borovoye Array**	**54.70**	**315**	P	**P**	**20 54 46.6**	**+0.8**
	2.0nm,0.7s,baz=94,slow=7.5,SNR=12						
BRVK	**Borovoye**	**54.76**	**315**	*e*P	**P**	**20 54 44.9**	**-1.3**
	9.5nm,1.0s						
ASAR	**Alice Springs**	**55.39**	**189**	P	**P**	**20 54 50.9**	**-0.2**
	1.7nm,0.5s,baz=16,slow=14,SNR=38						
INK	**Inuvik**	**59.15**	**26**	P	**P**	**20 55 19.1**	**+2.0**
	2.2nm,0.7s,baz=118,slow=1.4,SNR=4.5						
ARU	**Arti**	**60.84**	**321**	P	**P**	**20 55 29.2**	**+0.3**
	5.0nm,0.5s,baz=99,slow=4.5,SNR=11						
AKTO	**Aktyubinsk**	**62.75**	**314**	P	**P**	**20 55 42.0**	**+0.1**
	3.8nm,0.9s,baz=93,slow=3.9,SNR=8.9						
GEYT	**Alibeck**	**66.97**	**301**	P	**P**	**20 56 10.2**	**+0.6**
	4.0nm,0.9s,baz=34,slow=3.8,SNR=5.2						
ARCES	**ARCESS Array B**	**69.32**	**340**	P	**P**	**20 56 26.3**	**+2.6**
	1.0nm,0.8s,baz=58,slow=5.6,SNR=3.9						
FINES	**FINESS Array B**	**73.91**	**333**	P	**P**	**20 56 52.0**	**+0.6**
	2.0nm,0.6s,baz=64,slow=4.4,SNR=8.5						
KBZ	**Khabaz**	**74.86**	**312**	P	**P**	**20 56 58.6**	**+1.3**
	2.3nm,0.8s,baz=115,slow=2.4,SNR=4.3						
NVAR	**Mina Array Bea**	**78.00**	**52**	P	**P**	**20 57 17.7**	**+2.2**
	1.1nm,0.8s,baz=282,slow=6.1,SNR=7.4						
HFS	**Hagfors**	**79.30**	**336**	P	**P**	**20 57 22.0**	**0.0**
	1.2nm,0.5s,baz=101,slow=4.7,SNR=5.6						
NB2	**NORSAR Subarra**	**79.45**	**338**	P	**P**	**20 57 23.3**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=41,slow=5.3						
NOA	**NORSAR Array B**	**79.45**	**338**	P	**P**	**20 57 22.2**	**-0.6**
	comp=Z,1.4nm,0.7s,baz=34,slow=1.3,SNR=4.0						
PDAR	**Pinedale Array**	**81.26**	**45**	P	**P**	**20 57 34.3**	**+1.1**
	comp=Z,0.4nm,0.7s,baz=284,slow=4.4,SNR=2.9						
RAYN	**Ar Rayn**	**83.18**	**293**	*e*P	**P**	**20 57 43.9**	**+0.6**
	comp=Z,7.1nm,1.1s						
TXAR	**Lajitas Array**	**93.15**	**53**	P	**P**	**20 58 33.2**	**+1.9**
	comp=Z,0.9nm,0.8s,baz=290,slow=2.7,SNR=9.8						
LPAZ	**La Paz**	**148.76**	**68**	PKPbc	**PKPbc**	**21 05 05.8**	**+0.4**
	comp=Z,1.6nm,1.0s,baz=291,slow=5.5,SNR=2.6						

*THE **07** 20:54:21.7, 41°.02N×28°.24E, h0km±2km, ML5.3/16, Error ellipse: s-maj=5.0km s-min=0.8km az=60.0*
*ISCJB **07** 20:54:24.7±0.3, 40°.881N±0°.009×27°.91E±0°.01, h5km±2km, mb4.7/104, MS4.3/47, Error ellipse: s-maj=1.6km s-min=1.4km az=170.2*
*BJI **07** 20:54:24.3, 40°.80N×27°.90E, h6km, mb4.5/36, mB5.0/24, Ms4.7/23, Ms7 4.4/23*
*ATH **07** 20:54:24.9, 40°.92N×27°.93E, h22km±20km, ML5.4/5, Error ellipse: s-maj=27.1km s-min=3.0km az=68.0*
*GCMT **07** 20:54:25.8±0.2, 40°.90N×27°.95E, h12km, MW5.0/101, Moment Tensor Solution. s34,c43; s101,c164; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-1.12±.08; Mθθ 1.01±.09; Mφφ 0.10±.07; Mrθ-0.25±.22; Mrφ-3.18±.06; Mθφ-1.97±.21; Best double couple: M0 3.89200×10^16 NP1:φs351.00000°, δ77.00000°, λ-35.00000°. NP2: φs90.00000°, δ57.00000°, λ-164.00000°. Principal axes: T 4.0260, Plg13.0000°, Azm44.0000°; N -0.2720, Plg53.0000°, Azm152.0000°; P -3.7570, Plg34.0000°, Azm305.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **07** 20:54:25.8±0.0, 40°.85N×27°.92E, h15km, mb4.9/51, ML5.1(ISK), After ISK.*
NEIC Felt [It] at Istanbul. Also felt at Agva, Canakkale, Corlu, Edirne, Edremit, Esenyurt, Kavakli, Luleburgaz, Marmaraereglisi, Selimpasa, Sultanbey, Tekirdag, Uzunkopru and Yesilcay. Felt at Alexandroupoli, Amaxadhes, Komotini and Orestiada, Greece and at Burgas, Bulgaria.
*ISK **07** 20:54:25.8, 40°.85N×27°.92E, h15km, ML5.1/33*
*DDA **07** 20:54:25.7, 40°.86N×27°.90E, h27km, Ml5.1*
*IDC **07** 20:54:25.4±0.5, 40°.85N×27°.97E, h0km, mb4.1/30, mb1 4.3/40, mb1mx4.2/67, mbtmp4.2/40, ML3.9/9, MS4.3/46, Ms1 4.3/46, ms1mx4.2/57, Error ellipse: s-maj=9.1km s-min=7.5km az=18.0*
*PDG **07** 20:54:26.4±0.6, 40°.84N×27°.90E, h17km, ML4.9/13, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*
*CSEM **07** 20:54:26.6±0.1, 40°.83N×27°.92E, h10km, mb4.9/54, Mw5.1, Error ellipse: s-maj=1.5km s-min=1.4km az=2.0*
*MOS **07** 20:54:26.1±1.2, 40°.86N×27°.92E, h18km, mb4.8/25, MS4.5/15, Error ellipse: s-maj=3.4km s-min=2.6km az=111.3*
*CNRM **07** 20:54:27.0, 40°.83N×27°.91E, h10km*
*BEO **07** 20:54:29.4±0.7, 41°.03N×27°.90E, h15km*
*TIR **07** 20:55:06.9, 40°.84N×27°.93E, h7km, Md4.9/5*
ISC 07 20:54:26.9±0.7, 40°.85N±0°.01×27°.93E±0°.01, h8km±4km, n1199, σ1§70/1344, mb4.9/104, MS4.4/47, 96C-97D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRLT	**Corlu**	**0.32**	**332**	PG	**Pg**	**20 54 33.3**	**0.0**
CRLT				SG	**Sg**	**20 54 37.2**	**-0.3**
CRLT	**Corlu**	**0.32**	**332**	*e*Pg	**Pg**	**20 54 33.3**	**0.0**
CRLT				*e*Sg	**Sg**	**20 54 37.2**	**-0.3**
TKR	**Tekirdag**	**0.34**	**296**	PG	**Pg**	**20 54 33.2**	**-0.3**
TKR				SG	**Sb**	**20 54 39.1**	**-1.6**
TKR	**Tekirdag**	**0.34**	**296**	*e*Pg	**Pg**	**20 54 33.2**	**-0.3**
TKR				*e*Sg	**Sb**	**20 54 39.1**	**-1.6**
SLVT	**Silivri**	**0.44**	**28**	PG	**Pg**	**20 54 34.9**	**-0.5**
SLVT	**Silivri**	**0.44**	**28**	P	**Pg**	**20 54 32.1**	**-3.3**
SLVT	**Silivri**	**0.44**	**28**	*e*Pg	**Pg**	**20 54 34.9**	**-0.5**
SLVT				S	**Sg**	**20 54 36.9**	**-4.3**
EDC	**Edincik**	**0.50**	**186**	PG	**Pg**	**20 54 36.3**	**-0.3**
EDC				SG	**Sb**	**20 54 44.2**	**-1.3**
EDC	**Edincik**	**0.50**	**186**	P	**Pg**	**20 54 36.3**	**-0.3**
EDC	**Edincik**	**0.50**	**186**	*e*Pg	**Pg**	**20 54 36.3**	**-0.3**
EDC				*e*Sg	**Sb**	**20 54 44.2**	**-1.3**
CTKS	**Kestanelik-??a**	**0.58**	**48**	PG	**Pg**	**20 54 37.7**	**-0.5**
CTKS	**Kestanelik-??a**	**0.58**	**48**	*e*Pg	**Pg**	**20 54 37.7**	**-0.5**
SART	**Tekirdag**	**0.59**	**255**	⇑*iP*	**Pg**	**20 54 36.5**	**-1.9**
SART				*i* S	**Sg**	**20 54 44.9**	**-1.4**
SART	**Tekirdag**	**0.59**	**255**	P	**Pg**	**20 54 36.5**	**-1.9**
SART				S	**Sg**	**20 54 44.8**	**-1.4**
RKY	**Sarkoy-Tekirda**	**0.60**	**255**	PG	**Pg**	**20 54 37.8**	**-0.7**
RKY				SG	**Sg**	**20 54 46.2**	**0.0**
RKY	**Sarkoy-Tekirda**	**0.60**	**255**	*e*Pg	**Pg**	**20 54 37.8**	**-0.7**
RKY				*e*Sg	**Sg**	**20 54 46.2**	**0.0**
KNL	**Bal¨–kesir**	**0.65**	**209**	⇑*iP*	**Pg**	**20 54 39.1**	**-0.4**
KNL				*i* S	**Sg**	**20 54 48.2**	**+0.2**
KCTX	**Karacabey (Bur**	**0.66**	**151**	PG	**Pg**	**20 54 39.3**	**-0.4**
KCTX	**Karacabey (Bur**	**0.66**	**151**	*e*Pg	**Pg**	**20 54 39.3**	**-0.4**
KRBG	**Karabiga-Canak**	**0.66**	**227**	PG	**Pg**	**20 54 39.3**	**-0.4**
KRBG	**Karabiga-Canak**	**0.66**	**227**	*e*Pg	**Pg**	**20 54 39.3**	**-0.4**
CTYL	**Yalikoy Yolu**	**0.68**	**23**	PG	**Pg**	**20 54 39.8**	**-0.3**
CTYL	**Yalikoy Yolu**	**0.68**	**23**	*e*Pg	**Pg**	**20 54 39.8**	**-0.3**
BGKT	**Bogazkoy**	**0.72**	**62**	PG	**Pg**	**20 54 40.3**	**-0.5**
BGKT	**Bogazkoy**	**0.72**	**62**	*e*Pg	**Pg**	**20 54 40.3**	**-0.5**
ARMT	**Armutlu**	**0.76**	**111**	PG	**Pg**	**20 54 41.4**	**-0.1**
ARMT	**Armutlu**	**0.76**	**111**	*e*Pg	**Pg**	**20 54 41.4**	**-0.1**
GONE	**Gonen-Balikesi**	**0.82**	**193**	PG	**Pg**	**20 54 42.2**	**-0.5**
GONE	**Gonen-Balikesi**	**0.82**	**193**	*e*Pg	**Pg**	**20 54 42.2**	**-0.5**
PHSR	**Pinarhisar**	**0.84**	**339**	PG	**Pg**	**20 54 42.6**	**-0.6**
PHSR	**Pinarhisar**	**0.84**	**339**	*e*Pg	**Pg**	**20 54 42.6**	**-0.6**
MDNY	**Mudanya-Bursa**	**0.87**	**123**	PG	**Pg**	**20 54 43.2**	**-0.4**
MDNY	**Mudanya-Bursa**	**0.87**	**123**	*e*Pg	**Pg**	**20 54 43.2**	**-0.4**
ISK	**Istanbul-Kandi**	**0.88**	**75**	PG	**Pg**	**20 54 42.8**	**-1.0**
ISK	**Istanbul-Kandi**	**0.88**	**75**	P	**Pg**	**20 54 42.8**	**-1.0**
ISK	**Istanbul-Kandi**	**0.88**	**75**	*e*Pg	**Pg**	**20 54 42.8**	**-1.0**
KAVV	**Kandilli-Istan**	**0.88**	**75**	PG	**Pg**	**20 54 43.6**	**-0.2**
KAVV	**Kandilli-Istan**	**0.88**	**75**	*e*Pg	**Pg**	**20 54 43.6**	**-0.2**
BUY	**Buyukada**	**0.90**	**89**	PG	**Pg**	**20 54 43.6**	**-0.6**
BUY	**Buyukada**	**0.90**	**89**	⇑*iP*	**Pg**	**20 54 43.3**	**-0.9**
BUY				*i* S	**Sn**	**20 54 58.8**	**-0.8**
BUY	**Buyukada**	**0.90**	**89**	P	**Pg**	**20 54 43.3**	**-0.9**
BUY	**Buyukada**	**0.90**	**89**	*e*Pg	**Pg**	**20 54 43.6**	**-0.6**
BUY				S	**Sn**	**20 54 58.2**	**-0.8**
KLYT	**Kilyos**	**0.93**	**64**	PG	**Pg**	**20 54 44.1**	**-0.7**
KLYT	**Kilyos**	**0.93**	**64**	*e*Pg	**Pg**	**20 54 44.1**	**-0.7**
KESN	**Edirne-Kesan**	**0.95**	**269**	⇓*iP*	**Pg**	**20 54 44.2**	**-1.1**
KESN				*i* S	**Sg**	**20 54 56.9**	**-0.7**
KESN	**Edirne-Kesan**	**0.95**	**269**	P	**Pg**	**20 54 44.2**	**-1.1**
KESN				S	**Sg**	**20 54 56.9**	**-0.7**
LPK	**Lapseki**	**1.01**	**243**	PG	**Pg**	**20 54 44.6**	**-1.7**
LPK	**Lapseki**	**1.01**	**243**	*e*Pg	**Pg**	**20 54 44.6**	**-1.7**
GEMT	**Gemlik**	**1.04**	**113**	PG	**Pg**	**20 54 46.5**	**-0.4**
GEMT	**Gemlik**	**1.04**	**113**	*e*Pg	**Pg**	**20 54 46.5**	**-0.4**
ORLT	**Orhaneli**	**1.08**	**137**	PN	**Pg**	**20 54 47.4**	**-0.4**
ORLT	**Orhaneli**	**1.08**	**137**	*e*Pn	**Pg**	**20 54 47.4**	**-0.4**
ERIK	**Erikli-Kesan**	**1.09**	**261**	PN	**Pg**	**20 54 47.0**	**-0.9**
ERIK	**Erikli-Kesan**	**1.09**	**261**	*e*Pn	**Pg**	**20 54 47.0**	**-0.9**
YLV	**Yalova**	**1.13**	**104**	PN	**Pg**	**20 54 47.4**	**-1.2**
YLV	**Yalova**	**1.13**	**104**	*e*Pn	**Pg**	**20 54 47.4**	**-1.2**
BALY	**Balya**	**1.13**	**192**	⇑*iP*	**Pg**	**20 54 46.5**	**-2.2**
BALY				*i* S	**Sg**	**20 55 02.9**	**-0.4**
BALY	**Balya**	**1.13**	**192**	P	**Pg**	**20 54 46.5**	**-2.2**
BALY				S	**Sg**	**20 55 02.9**	**-0.4**
GELI	**Tayfur-Gelibol**	**1.20**	**249**	PN	**Pg**	**20 54 48.6**	**-1.3**
GELI	**Tayfur-Gelibol**	**1.20**	**249**	*e*Pn	**Pg**	**20 54 48.6**	**-1.3**
IZI	**Iznik**	**1.28**	**113**	PN	**Pn**	**20 54 49.9**	**-1.3**
IZI	**Iznik**	**1.28**	**113**	*e*Pn	**Pn**	**20 54 49.9**	**-1.3**
DURS	**Dursunbey**	**1.31**	**161**	⇑*iP*	**Pn**	**20 54 50.3**	**-1.3**
DURS

SMTH	**Samothraki Isl**	**1.87 259**	P		**Pn**	**20 54 57.2 -2.0**
SMTH			S		**Sg**	**20 55 25.9 -1.0**
SMTH	**Samothraki Isl**	**1.87 259**	P		**Pn**	**20 54 57.2 -2.0**
SMTH			S		**Sn**	**20 55 21.7 -1.3**
DEMI	**Demirci**	**1.90 161**	⇑*i*P		**Pn**	**20 54 58.7 -1.1**
DEMI			*i* S		**Sg**	**20 55 27.4 -0.5**
DEMI	**Demirci**	**1.90 161**	P		**Pn**	**20 54 58.7 -1.1**
DEMI			S		**Sg**	**20 55 27.4 -0.5**
JMB	**Yambol**	**1.91 328**	PN		**Pn**	**20 54 59.1 -0.7**
JMB	**Yambol**	**1.91 328**	*e*Pg		**Pb**	**20 55 01.2 -0.8**
JMB			*e*Sg		**Sn**	**20 55 23.2 -0.9**
JMB	**Yambol**	**1.91 328**	*e*Pn		**Pn**	**20 54 59.1 -0.7**
JMB	**Yambol**	**1.91 328**	*e*Pg		**Pb**	**20 55 01.2 -0.8**
JMB			*e*Sg		**Sn**	**20 55 23.2 -0.9**
SMAA	**Simav-Kutahya**	**1.92 155**	PN		**Pn**	**20 54 59.2 -0.8**
SMAA	**Simav-Kutahya**	**1.92 155**	*e*Pn		**Pn**	**20 54 59.2 -0.8**
SIMA	**Simav-Kutahya**	**1.94 155**	PN		**Pn**	**20 54 59.4 -0.9**
SIMA	**Simav-Kutahya**	**1.94 155**	*e*Pn		**Pn**	**20 54 59.4 -0.9**
AKHS	**Akhisar**	**1.97 183**	⇑*i*P		**Pn**	**20 54 59.4 -1.2**
AKHS			*i* S		**Sg**	**20 55 28.9 -1.2**
AKHS	**Akhisar**	**1.97 183**	P		**Pn**	**20 54 59.4 -1.2**
AKHS			S		**Sg**	**20 55 28.9 -1.2**
GULT	**Gulveren**	**2.01 101**	PN		**Pn**	**20 55 00.6 -0.6**
GULT	**Gulveren**	**2.01 101**	*e*Pn		**Pn**	**20 55 00.6 -0.6**
PRK	**Paraskevi**	**2.04 219**	P		**Pn**	**20 55 00.9 -0.7**
PRK	**Paraskevi**	**2.04 219**	P		**Pn**	**20 55 00.6 -1.1**
PRK			S		**Sg**	**20 55 31.4 -1.2**
PRK	**Paraskevi**	**2.04 219**	P		**Pn**	**20 55 00.5 -1.1**
PRK			S		**Sg**	**20 55 31.4 -1.2**
PRK	**Paraskevi**	**2.04 219**	P		**Pn**	**20 55 00.6 -1.1**
PRK			S		**Sg**	**20 55 31.4 -1.2**
PRK	**Paraskevi**	**2.04 219**	P		**Pn**	**20 55 00.5 -1.1**
KDZ	**Kurdzhali**	**2.06 294**	PN		**Pn**	**20 55 01.2 -0.7**
KDZ	**Kurdzhali**	**2.06 294**	*e*Pn		**Pn**	**20 55 01.2 -0.7**
BORA	**Eskisehir**	**2.15 116**	PN		**Pn**	**20 55 02.6 -0.6**
BORA	**Eskisehir**	**2.15 116**	*i* P		**Pn**	**20 55 02.6 -0.6**
BORA			*i* S		**Sg**	**20 55 37.0 +0.9**
BORA	**Eskisehir**	**2.15 116**	P		**Pn**	**20 55 02.6 -0.6**
SAHE	**Sakarya_HENDEK**	**2.21 89**	⇑*i*P		**Pn**	**20 55 03.1 -0.9**
SAHE			*i* S		**Sn**	**20 55 33.2 +1.6**
SAHE	**Sakarya_HENDEK**	**2.21 89**	P		**Pn**	**20 55 03.1 -0.9**
SAHE			S		**Sn**	**20 55 33.2 +1.6**
SIGR	**SIGRI**	**2.28 225**	P		**Pn**	**20 55 04.3 -0.7**
SIGR			S		**Sn**	**20 55 33.8 +0.6**
SIGR			AML		AML	20 55 41.3
SIGR			AML		AML	20 55 41.6
SIGR	**SIGRI**	**2.28 225**	P		**Pn**	**20 55 03.3 -1.6**
SIGR			S		**Sg**	**20 55 37.9 -2.4**
SIGR	**SIGRI**	**2.28 225**	P		**Pn**	**20 55 03.3 -1.6**
SIGR			S		**Sg**	**20 55 37.9 -2.4**
SIGR	**SIGRI**	**2.28 225**	P		**Pn**	**20 55 03.3 -1.6**
SIGR			S		**Sn**	**20 55 33.5 +0.3**
LIA	**Limnos Island**	**2.31 247**	P		**Pn**	**20 55 03.3 -1.9**
LIA			S		**Sb**	**20 55 35.2 -2.2**
LIA			AML		AML	20 55 46.7
	comp=N,57048µm,0.8s					
LIA			AML		AML	20 55 50.2
	comp=E,67687µm,0.8s					
LIA	**Limnos Island**	**2.31 247**	P		**Pn**	**20 55 03.7 -1.5**
LIA			S		**Sb**	**20 55 38.1 +0.7**
LIA	**Limnos Island**	**2.31 247**	P		**Pn**	**20 55 03.6 -1.6**
LIA			S		**Sb**	**20 55 38.1 +0.7**
LIA	**Limnos Island**	**2.31 247**	P		**Pn**	**20 55 03.6 -1.6**
LIA			S		**Sn**	**20 55 34.2 +0.4**
BTAS	**Taskesti**	**2.35 96**	⇑*i*P		**Pn**	**20 55 04.9 -1.0**
BTAS			*i* S		**Sg**	**20 55 42.8 +0.5**
BTAS	**Taskesti**	**2.35 96**	P		**Pn**	**20 55 04.9 -1.0**
MANT	**Manisa**	**2.40 168**	*i* P		**Pn**	**20 55 06.0 -0.7**
MANT			*i* S		**Sb**	**20 55 41.3 +0.9**
MANT	**Manisa**	**2.40 168**	*e*Pn		**Pn**	**20 55 06.6 -0.2**
MANT	**Manisa**	**2.40 168**	P		**Pn**	**20 55 06.1 -0.7**
MANT	**Manisa**	**2.40 168**	*e*Pn		**Pn**	**20 55 06.6 -0.2**
KAVA	**Kavala**	**2.60 274**	P		**Pn**	**20 55 07.8 -1.4**
KAVA			S		**Sn**	**20 55 42.4 +1.4**
KAVA	**Kavala**	**2.60 274**	P		**Pn**	**20 55 07.6 -1.6**
KAVA			S		**Sn**	**20 55 42.4 +1.4**
KAVA	**Kavala**	**2.60 274**	P		**Pn**	**20 55 07.6 -1.6**
KAVA			S		**Sn**	**20 55 42.4 +1.4**
ESKT	**Eskisehir**	**2.60 120**	⇑*i*P		**Pn**	**20 55 07.5 -1.9**
SEYT	**Eskypehyr**	**2.60 120**	P		**Pn**	**20 55 07.5 -1.9**
URLA	**Izmir**	**2.69 203**	⇑*i*P		**Pn**	**20 55 07.6 -3.0**
URLA			*i* S		**Sg**	**20 55 53.6 +0.3**
URLA	**Izmir**	**2.69 203**	P		**Pn**	**20 55 07.6 -3.0**
PLD	**Plovdiv**	**2.73 298**	*e*Pn		**Pn**	**20 55 12.3 +1.2**
PLD			*e*Sn		**Sn**	**20 55 44.2 -0.2**
PLD	**Plovdiv**	**2.73 298**	P		**Pn**	**20 55 09.2 -1.9**
PLD	**Plovdiv**	**2.73 298**	P		**Pn**	**20 55 09.2 -1.9**
PLD	**Plovdiv**	**2.73 298**	*e*Pn		**Pn**	**20 55 12.3 +1.2**
PLD			*e*Sn		**Sn**	**20 55 44.2 -0.2**
KHAL	**Karahalli**	**2.75 154**	⇓*i*P		**Pn**	**20 55 09.8 -1.6**
KHAL			*i* S		**Sg**	**20 55 54.3 -0.9**
KHAL	**Karahalli**	**2.75 154**	P		**Pn**	**20 55 09.8 -1.6**
ZEY	**¨zmir**	**2.83 203**	*i* P		**Pn**	**20 55 11.0 -1.5**
ZEY			*i* S		**Sg**	**20 55 56.2 -1.5**
CHOS	**Chios island**	**2.85 211**	P		**Pn**	**20 55 13.1 +0.3**
CHOS	**Chios island**	**2.85 211**	P		**Pn**	**20 55 11.9 -0.9**
CHOS			S		**Sb**	**20 55 51.7 -1.6**
CHOS	**Chios island**	**2.85 211**	P		**Pn**	**20 55 11.9 -0.9**
CHOS			S		**Sb**	**20 55 51.7 -1.6**
CHOS	**Chios island**	**2.85 211**	P		**Pn**	**20 55 11.9 -0.9**
AUMIH	**MIHALICIK**	**2.88 109**	*i* P		**Pn**	**20 55 12.8 -0.5**
AUMIH			*i* S		**Sg**	**20 56 01.8 +2.3**
AUMIH	**MIHALICIK**	**2.88 109**	P		**Pn**	**20 55 12.8 -0.5**
DGB	**¨zmir**	**2.91 197**	*i* P		**Pn**	**20 55 11.5 -2.0**
DGB			*i* S		**Sg**	**20 55 59.5 -0.8**
MANR	**Mangalia**	**3.01 9**	⇑*i*P		**Pn**	**20 55 14.8 -0.1**
MANR	**Mangalia**	**3.01 9**	⇑*i*P		**Pn**	**20 55 14.8 -0.1**
OUR	**Ouranopolis**	**3.05 262**	P		**Pn**	**20 55 13.2 -2.3**
OUR	**Ouranopolis**	**3.05 262**	P		**Pn**	**20 55 13.5 -2.0**
OUR	**Ouranopolis**	**3.05 262**	P		**Pn**	**20 55 13.5 -2.0**
OUR	**Ouranopolis**	**3.05 262**	P		**Pn**	**20 55 13.5 -2.0**
OUR	**Ouranopolis**	**3.05 262**	P		**Pn**	**20 55 13.5 -2.0**
KZIL	**AFYON_Kizioren**	**3.10 146**	*i* P		**Pb**	**20 55 23.9 +1.5**
KZIL			*i* S		Sg	20 56 18.3 +12
NVR	**Nevrokopi**	**3.12 281**	P		**Pn**	**20 55 16.6 +0.2**
NVR	**Nevrokopi**	**3.12 281**	P		**Pn**	**20 55 14.9 -1.6**
NVR			S		**Sn**	**20 55 55.3 +1.4**
NVR	**Nevrokopi**	**3.12 281**	P		**Pn**	**20 55 14.9 -1.6**
NVR	**Nevrokopi**	**3.12 281**	P		**Pn**	**20 55 14.9 -1.6**
NVR			S		**Sn**	**20 55 55.3 +1.4**
BCAM	**Yenicaga**	**3.13 89**	⇑*i*P		**Pn**	**20 55 16.0 -0.8**
BCAM			*i* S		**Sg**	**20 56 07.8 +0.2**
BCAM	**Yenicaga**	**3.13 89**	P		**Pn**	**20 55 16.0 -0.8**
AYDN	**Tasoluk**	**3.18 181**	*i* P		**Pn**	**20 55 16.0 -1.4**
AYDN			*i* S		**Sg**	**20 56 10.3 +1.2**
AYDN	**Tasoluk**	**3.18 181**	P		**Pn**	**20 55 16.0 -1.4**
SMG	**Samos**	**3.25 196**	P		**Pn**	**20 55 17.1 -1.1**
SMG	**Samos**	**3.25 196**	P		**Pn**	**20 55 17.1 -1.1**
SMG	**Samos**	**3.25 196**	P		**Pn**	**20 55 17.1 -1.1**
SKY	**Skiros Island**	**3.26 234**	P		**Pn**	**20 55 17.6 -0.8**
SKY	**Skiros Island**	**3.26 234**	P		**Pn**	**20 55 17.6 -0.8**
SKY	**Skiros Island**	**3.26 234**	P		**Pn**	**20 55 17.6 -0.8**
ICOR	**Ion Corvin**	**3.27 358**	⇓*i*P		**Pn**	**20 55 18.1 -0.4**
ICOR	**Ion Corvin**	**3.27 358**	S		**Sb**	**20 56 04.1 -1.1**
ICOR	**Ion Corvin**	**3.27 358**	⇓*i*P		**Pn**	**20 55 18.1 -0.4**
EFOR	**EFORIE**	**3.27 9**	⇑*i*P		**Pn**	**20 55 18.4 -0.1**
EFOR	**EFORIE**	**3.27 9**	S		**Sg**	**20 56 09.3 -2.7**
EFOR	**EFORIE**	**3.27 9**	⇑*i*P		**Pn**	**20 55 18.4 -0.1**
SRS	**Serrai**	**3.30 276**	*e*Pn		**Pn**	**20 55 17.9 -1.0**
SRS	**Serrai**	**3.30 276**	P		**Pn**	**20 55 17.6 -1.3**
SRS	**Serrai**	**3.30 276**	P		**Pn**	**20 55 17.5 -1.4**
SRS	**Serrai**	**3.30 276**	P		**Pn**	**20 55 17.5 -1.4**
SRS	**Serrai**	**3.30 276**	P		**Pn**	**20 55 17.5 -1.4**
SRS	**Serrai**	**3.30 276**	P		**Pn**	**20 55 17.5 -1.4**
SRS	**Serrai**	**3.30 276**	*e*Pn		**Pn**	**20 55 17.9 -1.0**
BTIN	**Bart¨–n**	**3.35 75**	⇑*i*P		**Pn**	**20 55 18.1 -1.6**
BTIN	**Bart¨–n**	**3.35 75**	P		**Pn**	**20 55 18.0 -1.6**
PAIG	**Paliouri**	**3.38 256**	P		**Pn**	**20 55 18.3 -1.7**
PAIG	**Paliouri**	**3.38 256**	P		**Pn**	**20 55 17.4 -2.6**
PAIG	**Paliouri**	**3.38 256**	P		**Pn**	**20 55 18.3 -1.7**
PAIG	**Paliouri**	**3.38 256**	P		**Pn**	**20 55 17.4 -2.6**
ZIMR		**3.40 327**	⇓*i*P		**Pn**	**20 55 20.4 +0.2**
ZIMR		**3.40 327**	S		**Sg**	**20 56 16.2 +0.2**
PLG	**Polygyros**	**3.45 264**	P		**Pn**	**20 55 19.5 -1.5**
PLG	**Polygyros**	**3.45 264**	P		**Pn**	**20 55 19.2 -1.8**
PLG	**Polygyros**	**3.45 264**	P		**Pn**	**20 55 19.2 -1.8**
PLG			S		**Sb**	**20 56 05.8 -4.6**
PLG	**Polygyros**	**3.45 264**	P		**Pn**	**20 55 19.2 -1.8**
PLG	**Polygyros**	**3.45 264**	P		**Pn**	**20 55 19.2 -1.8**

SOH	**Sokhos**	**3.48 271**	P		**Pn**	**20 55 19.7 -1.7**
SOH	**Sokhos**	**3.48 271**	P		**Pn**	**20 55 20.0 -1.4**
SOH	**Sokhos**	**3.48 271**	P		**Pn**	**20 55 20.0 -1.4**
SOH			S		**Sn**	**20 56 04.5 +1.7**
SOH	**Sokhos**	**3.48 271**	P		**Pn**	**20 55 20.0 -1.4**
SOH	**Sokhos**	**3.48 271**	P		**Pn**	**20 55 20.0 -1.4**
SOH			S		**Sn**	**20 56 04.5 +1.7**
CVDA	**Cernavoda**	**3.49 1**	⇑*i*P		**Pn**	**20 55 22.7 +1.2**
CVDA	**Cernavoda**	**3.49 1**	⇑*i*P		**Pn**	**20 55 22.7 +1.2**
BRDR	**BURDUR-Merkez**	**3.55 152**	*i* P		**Pn**	**20 55 22.9 +0.4**
BRDR	**BURDUR-Merkez**	**3.55 152**	P		**Pn**	**20 55 22.9 +0.4**
ISP	**Isparta**	**3.62 146**	⇑*i*P		**Pb**	**20 55 27.3 -4.0**
ISP	**Isparta**	**3.62 146**	P		Pn	20 55 18.2 -5.3
ISP	**Isparta**	**3.62 146**	*d*P		**Pn**	**20 55 23.2 -0.3**
ISP	**Isparta**	**3.62 146**	*i* P		**Pn**	**20 55 23.2 -0.3**
TIRR	**Tirgusor**	**3.63 5**	⇑*i*P		**Pn**	**20 55 22.7 -0.7**
TIRR	**Tirgusor**	**3.63 5**	*e*Pn		**Pn**	**20 55 22.3 -1.1**
TIRR	**Tirgusor**	**3.63 5**	*e*P		**Pn**	**20 55 22.3 -1.1**
TIRR	**Tirgusor**	**3.63 5**	*e*P		**Pn**	**20 55 22.3 -1.1**
SGRR	**Singureni**	**3.67 337**	⇑*i*P		**Pn**	**20 55 23.8 -0.2**
SGRR	**Singureni**	**3.67 337**	S		**Sg**	**20 56 29.4 +4.6**
SGRR	**Singureni**	**3.67 337**	⇑*i*P		**Pn**	**20 55 23.8 -0.2**
HORT	**Hortiatis**	**3.68 268**	P		**Pn**	**20 55 22.9 -1.4**
HORT			S		**Sn**	**20 56 10.0 +2.1**
HORT	**Hortiatis**	**3.68 268**	P		**Pn**	**20 55 22.9 -1.4**
HORT			S		**Sn**	**20 56 10.0 +2.1**
HORT	**Hortiatis**	**3.68 268**	P		**Pn**	**20 55 22.9 -1.4**
HORT			S		**Sn**	**20 56 10.0 +2.1**
YER	**Yerkesik**	**3.72 176**	P		**Pn**	**20 55 22.6 -2.1**
YER	**Yerkesik**	**3.72 176**	P		**Pn**	**20 55 23.3 -1.4**
YER	**Yerkesik**	**3.72 176**	P		**Pn**	**20 55 22.6 -2.1**
YER	**Yerkesik**	**3.72 176**	P		**Pn**	**20 55 22.6 -2.1**
TLB	**Topalu**	**3.74 1**	⇑*i*P		**Pn**	**20 55 25.3 +0.4**
TLB	**Topalu**	**3.74 1**	S		**Sg**	**20 56 26.8 -0.2**
TLB	**Topalu**	**3.74 1**	⇑*i*P		**Pn**	**20 55 25.3 +0.4**
BUC1	**Bucharest**	**3.77 339**	⇑*i*P		**Pn**	**20 55 24.8 -0.6**
BUC1	**Bucharest**	**3.77 339**	S		**Sg**	**20 56 28.7 +0.7**
BUC1	**Bucharest**	**3.77 339**	⇑*i*P		**Pn**	**20 55 24.8 -0.6**
THE	**Thessaloniki**	**3.78 268**	P		**Pn**	**20 55 25.1 -0.4**
THE	**Thessaloniki**	**3.78 268**	P		**Pn**	**20 55 25.1 -0.4**
THE	**Thessaloniki**	**3.78 268**	P		**Pn**	**20 55 25.1 -0.4**
THE	**Thessaloniki**	**3.78 268**	P		**Pn**	**20 55 25.1 -0.4**
AMRR	**Amara**	**3.79 354**	⇓*i*P		**Pn**	**20 55 26.3 +0.7**
AMRR	**Amara**	**3.79 354**	S		**Sg**	**20 56 30.2 +1.6**
AMRR	**Amara**	**3.79 354**	⇓*i*P		**Pn**	**20 55 26.3 +0.7**
BODT	**Bodrum**	**3.81 188**	P		**Pn**	**20 55 24.1 -1.9**
BODT	**Bodrum**	**3.81 188**	P		**Pn**	**20 55 24.1 -1.9**
BODT	**Bodrum**	**3.81 188**	P		**Pn**	**20 55 24.1 -1.9**
SKIA	**Skiathos**	**3.82 245**	P		**Pn**	**20 55 24.3 -1.8**
SKIA	**Skiathos**	**3.82 245**	P		**Pn**	**20 55 24.3 -1.8**
KNT	**Kendrikon**	**3.82 276**	P		**Pn**	**20 55 25.2 -0.9**
KNT			S		**Sn**	**20 56 13.7 +2.4**
KNT	**Kendrikon**	**3.82 276**	P		**Pn**	**20 55 24.8 -1.3**
KNT			S		**Sn**	**20 56 13.7 +2.4**
KNT	**Kendrikon**	**3.82 276**	P		**Pn**	**20 55 25.2 -0.9**
KNT			S		**Sn**	**20 56 13.7 +2.4**
KNT	**Kendrikon**	**3.82 276**	P		**Pn**	**20 55 24.8 -1.3**
KNT			S		**Sn**	**20 56 13.7 +2.4**
BR231	**Keskin MP Arra**	**3.83 104**	*e*Pn		**Pn**	**20 55 26.1 -0.3**
BR231	**Keskin MP Arra**	**3.83 104**	*e*Pn		**Pn**	**20 55 26.1 -0.3**
ANTO	**Ankara**	**3.84 103**	⇑*i*P		**Pg**	**20 55 41.0 +0.5**
ANTO	**Ankara**	**3.84 103**	*e*Pn		**Pn**	**20 55 26.4 0.0**
ANTO	**Ankara**	**3.84 103**	*e*P		**Pn**	**20 55 26.4 0.0**
ANTO	**Ankara**	**3.84 103**	*e*P		**Pn**	**20 55 26.4 0.0**
HARR	**Harsova**	**3.84 360**	⇓*i*P		**Pn**	**20 55 26.7 +0.3**
HARR	**Harsova**	**3.84 360**	⇓*i*P		**Pn**	**20 55 26.7 +0.3**
KARY	**Karystos**	**3.90 225**	P		**Pn**	**20 55 26.2 -1.0**
KARY	**Karystos**	**3.90 225**	P		**Pn**	**20 55 26.2 -1.0**
CIOR	**Ciorogarla**	**3.91 338**	S		**Sg**	**20 56 29.3 -3.1**
XOR	**Xorichti**	**3.92 249**	P		**Pn**	**20 55 25.6 -2.0**
XOR	**Xorichti**	**3.92 249**	P		**Pn**	**20 55 24.9 -2.7**
XOR	**Xorichti**	**3.92 249**	P		**Pn**	**20 55 24.9 -2.7**
VTS	**Vitosha**	**3.94 298**	*e*Pn		**Pn**	**20 55 27.9 0.0**
VTS			*e*Sn		**Sn**	**20 56 13.2 -1.3**
VTS	**Vitosha**	**3.94 298**	⇑*i*P		**Pn**	**20 55 27.9 0.0**
VTS	**Vitosha**	**3.94 298**	S		**Sg**	**20 56 31.5 -2.1**
VTS	**Vitosha**	**3.94 298**	*e*Pn		**Pn**	**20 55 26.7 -1.2**
VTS	**Vitosha**	**3.94 298**	*e*P		**Pn**	**20 55 26.7 -1.2**
VTS	**Vitosha**	**3.94 298**	*e*P		**Pn**	**20 55 26.7 -1.2**
VTS			*e*Sn		**Sn**	**20 56 13.2 -1.3**
SULR		**4.03 343**	⇑*i*P		**Pn**	**20 55 29.7 +0.8**
SULR		**4.03 343**	⇑*i*P		**Pn**	**20 55 29.7 +0.8**
VAY	**Valandovo**	**4.08 278**	*e*Pn		**Pn**	**20 55 29.5 -0.2**
VAY			*e*Sn		**Sn**	**20 56 16.2 -1.4**
VAY	**Valandovo**	**4.08 278**	P		**Pn**	**20 55 27.9 -1.8**
VAY	**Valandovo**	**4.08 278**	P		**Pn**	**20 55 29.3 -0.4**
VAY	**Valandovo**	**4.08 278**	⇓*i*P		**Pn**	**20 55 29.0 -0.7**
VAY			*i* S		**Sg**	**20 56 37.2 -0.7**
VAY	**Valandovo**	**4.08 278**	P		**Pn**	**20 55 27.9 -1.8**
VAY	**Valandovo**	**4.08 278**	P		**Pn**	**20 55 27.9 -1.8**
VAY	**Valandovo**	**4.08 278**	*e*Pn		**Pn**	**20 55 29.5 -0.2**
VAY			*e*Sn		**Sn**	**20 56 16.2 -1.4**
FYTO	**Fytoko, Volos**	**4.09 251**	P		**Pn**	**20 55 27.6 -2.2**
FYTO	**Fytoko, Volos**	**4.09 251**	P		**Pn**	**20 55 27.6 -2.2**
FYTO	**Fytoko, Volos**	**4.09 251**	P		**Pn**	**20 55 27.6 -2.2**
PGOR	**Pogoanele**	**4.12 351**	⇓*i*P		**Pn**	**20 55 30.9 +0.7**
PGOR	**Pogoanele**	**4.12 351**	⇓*i*P		**Pn**	**20 55 30.9 +0.7**
SMIA	**Simia**	**4.13 243**	P		**Pn**	**20 55 28.7 -1.7**
SMIA	**Simia**	**4.13 243**	P		**Pn**	**20 55 28.7 -1.7**
GRG	**Griva**	**4.20 273**	P		**Pn**	**20 55 29.9 -1.4**
GRG			S		**Sn**	**20 56 23.9 +3.4

DRO	Drossia	5.62	241	P	Pn	20 55 49.9	-0.9
DRO	Drossia	5.62	241	P	Pn	20 55 49.9	-0.9
LEOM	Leova	5.63	2	⇓iP	Pn	20 55 51.1	+0.1
LEOM	Leova	5.63	2	P	Pn	20 55 51.0	+0.1
LEOM	Leova	5.63	2	P	Pn	20 55 51.0	+0.1
PDO	Prodromos	5.67	249	P	Pn	20 55 51.8	+0.3
PDO	Prodromos	5.67	249	P	Pn	20 55 51.8	+0.3
VLI	Veliai	5.68	225	P	Pn	20 55 50.2	-1.4
VLI	Veliai	5.68	225	P	Pn	20 55 50.2	-1.4
VLI	Veliai	5.68	225	P	Pn	20 55 50.2	-1.4
AVNS	Nevsehir-Avano	5.70	109	*i* P	Pn	20 55 52.5	+0.5
AVNS	Nevsehir-Avano	5.70	109	P	Pn	20 55 52.5	+0.5
PHP	Peshkopia	5.71	281	P	Pn	20 55 50.5	-1.6
PHP	Peshkopia	5.71	281	*i* PN	Pn	20 55 50.4	-1.7
PHP				*i* SN	Sg	20 57 31.4	+1.2
PHP	Peshkopia	5.71	281	P	Pn	20 55 50.5	-1.6
PHP	Peshkopia	5.71	281	P	Pn	20 55 50.5	-1.6
RLS	Riolos of Patr	5.73	243	P	Pn	20 55 52.4	+0.1
RLS	Riolos of Patr	5.73	243	P	Pn	20 55 52.4	+0.1
RLS	Riolos of Patr	5.73	243	P	Pn	20 55 52.4	+0.1
TESR	Tescani	5.74	351	⇓*i*P	Pn	20 55 51.3	-1.1
TESR	Tescani	5.74	351	⇓*i*P	Pn	20 55 51.3	-1.1
KUBS	Kucevo	5.83	310	*e*Pn	Pn	20 55 51.5	-2.2
KUBS				*e*Sn	Sn	20 56 56.2	-4.6
KUBS	Kucevo	5.83	310	*e*Pn	Pn	20 55 51.5	-2.2
YAL	Yalta	5.85	50⇑	*e*P	Pn	20 55 51.6	-2.4
YAL				*e*S	Sn	20 56 58.0	-3.2
YAL				pmax	pmax		
	comp=Z,201nm,1.3s						
YAL				smax	smax		
	comp=N,106nm,0.9s						
YAL				smax	smax		
	comp=E,118nm,1.0s						
YAL	Yalta	5.85	50	*e*P	Pn	20 55 51.6	-2.4
	comp=E,201nm,1.3s						
AMT	Artemida-Makis	5.86	238	P	Pn	20 55 54.2	+0.1
AMT	Artemida-Makis	5.86	238	P	Pn	20 55 54.2	+0.1
NPS	Neapolis	5.87	199	P	Pn	20 55 54.1	-0.1
NPS	Neapolis	5.87	199	P	Pn	20 55 54.1	-0.1
ZKR	Zakros	5.88	194	P	Pn	20 55 54.2	-0.2
ZKR	Zakros	5.88	194	P	Pn	20 55 54.2	-0.2
ZKR	Zakros	5.88	194	P	Pn	20 55 54.2	-0.2
MDB	Medias	5.89	335	⇓*i*P	Pn	20 55 55.4	+0.9
MDB	Medias	5.89	335	⇓*i*P	Pn	20 55 55.4	+0.9
ITM	Ithomi	5.94	234	*e*Pn	Pn	20 55 56.4	+1.2
ITM	Ithomi	5.94	234	P	Pn	20 55 55.8	+0.6
ITM	Ithomi	5.94	234	P	Pn	20 55 55.8	+0.6
ITM	Ithomi	5.94	234	*e*Pn	Pn	20 55 56.4	+1.2
KYTH	Kithira	5.96	222	P	Pn	20 55 54.3	-1.3
KYTH	Kithira	5.96	222	P	Pn	20 55 54.3	-1.3
DYR	Agios Nikonas	5.98	229	P	Pn	20 55 55.9	+0.1
DYR	Agios Nikonas	5.98	229	P	Pn	20 55 55.9	+0.1
SGD	Sagiada	6.02	261	P	Pn	20 55 57.6	+1.3
SGD	Sagiada	6.02	261	P	Pn	20 55 57.6	+1.3
SVIS	Svilajnac	6.02	307	*e*Pn	Pn	20 55 55.0	-1.3
MDVR	Moldovita	6.03	313	⇓*i*P	Pn	20 55 55.0	-1.5
MDVR	Moldovita	6.03	313	S	Sg	20 57 45.6	+5.0
MDVR	Moldovita	6.03	313	⇓*i*P	Pn	20 55 55.0	-1.5
IDI	Anoyia	6.05	204	Pn	Pn	20 55 56.6	-0.2
	comp=E,2.6nm,0.3s,baz=22,slow=11,SNR=22						
IDI				Sn	Sn	20 57 03.7	-2.5
	comp=E,5.4nm,0.3s,baz=300,slow=20,SNR=3.8						
IDI				Lg	Lg	20 57 36.7	
	comp=E,2.4nm,0.3s,baz=60,slow=5.0,SNR=3.7						
IDI				LR	LR	20 58 31.2	
	comp=E,2μm,18.1s,baz=18,slow=41						
IDI	Anoyia	6.05	204	⇓*i*P	Pn	20 55 56.8	+0.1
IDI	Anoyia	6.05	204	*e*Pn	Pn	20 55 56.1	-0.6
IDI				Sn	Sn	20 57 03.7	-2.5
IDI				Lg	Lg	20 57 36.7	
IDI	Anoyia	6.05	204	*e*Pn	Pn	20 55 56.1	-0.6
BCI	Bajram Curri	6.09	287	*i* PN	Pn	20 55 57.5	+0.2
BCI				*i* SN	Sg	20 57 41.1	-1.3
MILM	Milestii Mici	6.10	6⇑	*i*P	Pn	20 55 56.9	-0.5
MILM	Milestii Mici	6.10	6	S	Sn	20 57 02.7	-4.7
MILM	Milestii Mici	6.10	6⇑	*i*P	Pn	20 55 56.9	-0.5
ALU	Alushta	6.11	49	*e*P	Pn	20 55 55.8	-1.7
ALU				*e*S	Sn	20 57 05.9	-1.7
ALU				pmax	pmax		
	comp=Z,80nm,0.3s						
ALU				smax	smax		
	comp=N,107nm,0.4s						
ALU				smax	smax		
	comp=E,445nm,0.8s						
ALU	Alushta	6.11	49	*e*P	Pn	20 55 55.8	-1.7
	comp=E,80nm,0.3s						
ALU				*e*S	Sn	20 57 05.9	-1.7
	comp=E,107nm,0.4s						
JOSR	Joseni	6.11	344	⇓*i*P	Pn	20 55 56.6	-1.0
JOSR	Joseni	6.11	344	⇓*i*P	Pn	20 55 56.6	-1.0
SIM	Simferopol'	6.12	46	*e*P	Pn	20 55 56.8	-0.8
SIM				*e*S	Sn	20 57 02.0	-5.8
SIM				pmax	pmax		
	comp=Z,424nm,0.3s						
SIM				smax	smax		
	comp=E,400nm,1.1s						
SIM	Simferopol'	6.12	46	*e*P	Pn	20 55 56.8	-0.8
	comp=E,424nm,0.3s						
TIR	Tirane	6.12	277	*e*Pn	Pn	20 55 59.3	+1.7
TIR	Tirane	6.12	277⇑	*i* PN	Pn	20 55 58.6	+1.0
TIR	Tirane	6.12	277	*e*Pn	Pn	20 55 58.0	+0.4
TIR	Tirane	6.12	277	*i* PN	Pn	20 55 51.3	-6.3
TIR				*i* SN	Sg	20 57 37.4	-5.8
TIR	Tirane	6.12	277	*e*P	Pn	20 55 58.0	+0.4
TIR	Tirane	6.12	277	*e*P	Pn	20 55 58.0	+0.4
SRN	Sarande	6.14	264	P	Pn	20 55 58.4	+0.5
SRN	Sarande	6.14	264	P	Pn	20 55 58.4	+0.5
SRN	Sarande	6.14	264	P	Pn	20 55 58.4	+0.5
GRUS	Gruza	6.15	302	*e*Pn	Pn	20 55 57.4	-0.7
GRUS	Gruza	6.15	302	*e*Pn	Pn	20 55 57.4	-0.7
PUK	Puka	6.16	284	*i* PN	Pn	20 55 52.7	-5.6
PUK				*i* SN	Sg	20 57 38.9	-5.8
ANKY	Antikythira Is	6.16	218	P	Pn	20 55 58.8	+0.6
ANKY	Antikythira Is	6.16	218	P	Pn	20 55 58.8	+0.6
ANKY	Antikythira Is	6.16	218	P	Pn	20 55 58.8	+0.6
KFL	Anninata	6.17	246	P	Pn	20 55 59.0	+0.7
KFL	Anninata	6.17	246	P	Pn	20 55 59.0	+0.7
FSK	Fiskardo	6.17	250	P	Pn	20 55 58.9	+0.6
VAM	Vamos	6.18	210	P	Pn	20 55 57.7	-0.8
VAM	Vamos	6.18	210	P	Pn	20 55 57.7	-0.8
VAM	Vamos	6.18	210	P	Pn	20 55 57.7	-0.8
VAM	Vamos	6.18	210	P	Pn	20 55 57.7	-0.8
KIS	Kishinev	6.18	6	*e*P	Pn	20 55 57.0	-1.5
KIS				*e*S	Sn	20 57 05.0	-4.4
KIS				LRM	MLR	20 58 22.0	
	comp=E,5μm,12.0s						
KIS	Kishinev	6.18	6	*e*P	Pn	20 55 57.0	-1.5
KIS				*e*S	Sn	20 57 05.0	-4.4
KIS				MLR	MLR		
	comp=Z,5μm,12.0s						
KIS				MLR	MLR		
	comp=N,7μm,13.0s						
KIS				MLR	MLR		
	comp=E,10μm,10.0s						
KIS				MLR	MLR		
	comp=Z,5μm,12.0s						
KIS	Kishinev	6.18	6	*e*P	Pn	20 55 57.0	-1.5
GIRR	Girov	6.19	351⇑	*i*P	Pn	20 55 58.2	-0.5
GIRR	Girov	6.19	351⇑	*i*P	Pn	20 55 58.2	-0.5
IMMV	Iera Moni Meta	6.21	211	P	Pn	20 55 58.8	-0.2
IMMV	Iera Moni Meta	6.21	211	P	Pn	20 55 58.8	-0.2
PVY	Plav	6.22	289	⇓*i*Pn	Pn	20 55 59.4	+0.3
PVY				*e*Sn	Sn	20 57 08.3	-2.2
DEV	Deva	6.23	326	⇓*i*P	Pn	20 55 59.1	0.0
DEV	Deva	6.23	326	P	Pn	20 55 58.8	-0.3
DEV				pmax	pmax		
	comp=Z,416nm,1.0s						
DEV	Deva	6.23	326	P	Pn	20 55 58.8	-0.3
	comp=Z,416nm,1.0s						
PYL	PYLOS	6.24	233	P	Pn	20 55 59.9	+0.6
PYL	PYLOS	6.24	233	P	Pn	20 55 59.9	+0.6
PYL	PYLOS	6.24	233	P	Pn	20 55 59.9	+0.6
VLS	Valsamata	6.27	247	P	Pn	20 55 59.9	+0.1
VLS	Valsamata	6.27	247	P	Pn	20 55 59.9	+0.1
VLS	Valsamata	6.27	247	P	Pn	20 55 59.9	+0.1
VLS	Valsamata	6.27	247	P	Pn	20 55 59.9	+0.1
SIVA	Sivas	6.32	204	P	Pn	20 55 59.4	-1.0
SIVA	Sivas	6.32	204	P	Pn	20 55 59.4	-1.0
SIVA	Sivas	6.32	204	P	Pn	20 55 59.4	-1.0
KEK	Kerkira	6.32	262	P	Pn	20 56 01.4	+0.9
KEK	Kerkira	6.32	262	P	Pn	20 56 01.4	+0.9
KEK	Kerkira	6.32	262	P	Pn	20 56 01.4	+0.9
BEY	Berane	6.34	291	⇓*i*Pn	Pn	20 56 01.3	+0.6
BEY				*e*Sn	Sn	20 57 11.6	-1.7
IVA	Berane	6.34	291	⇓*i*Pn	Pn	20 56 01.3	+0.6
IVA				*e*Sn	Sn	20 57 11.6	-1.7
IAS	Iasi	6.35	358	⇓*i*P	Pn	20 56 00.5	-0.3
IAS	Iasi	6.35	358	⇓*i*P	Pn	20 56 00.5	-0.3
IVAS	Ivanjica	6.39	298	*e*Pn	Pn	20 56 00.0	-1.4
IVAS	Ivanjica	6.39	298	*e*Pn	Pn	20 56 00.0	-1.4
SJES	Sjenica	6.40	295	*e*Pn	Pn	20 56 01.5	-0.1
TRUS	Trudelj	6.50	304	*e*Pn	Pn	20 56 02.7	-0.2
TRUS	Trudelj	6.50	304	*e*Pn	Pn	20 56 02.7	-0.2
SUDU	Sudak	6.58	50	*e*P	Pn	20 56 03.9	0.0
SUDU				*e*S	Sn	20 57 19.5	+0.4
SUDU				pmax	pmax		
	comp=Z,52nm,0.3s						
SUDU				smax	smax		
	comp=N,126nm,0.6s						
SUDU				smax	smax		
	comp=E,112nm,0.7s						
SUDU	Sudak	6.58	50	*e*P	Pn	20 56 03.9	0.0
	comp=E,52nm,0.3s						
SUDU				*e*S	Sn	20 57 19.5	+0.4
	comp=E,126nm,0.6s						
KOME	Kolasin	6.60	290⇑	*i*Pn	Pn	20 56 03.9	-0.4
KOME				*e*Sn	Sn	20 57 17.1	-2.7
KOME	Kolasin	6.60	290⇑	*i*Pn	Pn	20 56 03.9	-0.4
KOME				*e*Sn	Sn	20 57 17.1	-2.7
ULC	Ulcinj	6.63	283	*e*Pn	Pn	20 56 05.3	+0.6
ULC				*e*Sn	Sn	20 57 17.3	-3.1
BZS	Buzias	6.63	318	*e*Pn	Pn	20 56 03.4	-1.3
BZS	Buzias	6.63	318	⇓*i*P	Pn	20 56 02.9	-1.8
BZS	Buzias	6.63	318	⇓*i*P	Pn	20 56 02.9	-1.8
BZS	Buzias	6.63	318	*e*Pn	Pn	20 56 03.4	-1.3
CJR	Cluj-Napoca	6.65	333⇑	*i*P	Pn	20 56 05.8	+0.8
CJR	Cluj-Napoca	6.65	333	P	Pn	20 56 05.8	+0.8
CJR	Cluj-Napoca	6.65	333	P	Pn	20 56 05.8	+0.8
CJR				S	Sn	20 57 18.1	-2.9
PDG	Podgorica	6.69	287	*e*Pn	Pn	20 56 06.1	+0.6
PDG	Podgorica	6.69	287⇑	*i*P	Pn	20 56 06.6	+1.1
PDG	Podgorica	6.69	287	P	Pn	20 56 06.3	+0.8
PDG	Podgorica	6.69	287	⇓*i*Pn	Pn	20 56 05.9	+0.4
PDG	Podgorica	6.69	287⇑	*i*P	Pn	20 56 06.6	+1.1
PDG				*e*Sn	Sn	20 57 20.4	-1.5
TTG	Podgorica	6.69	287	⇓*i*Pn	Pn	20 56 06.0	+0.6
TTG				*e*Sn	Sn	20 57 20.4	-1.5
TTG	Podgorica	6.69	287	*e*Pn	Pn	20 56 06.1	+0.6
TTG	Podgorica	6.69	287	*e*P	Pn	20 56 06.1	+0.6
DRME	Dracevica, Mon	6.70	284⇑	*i*Pn	Pn	20 56 06.2	+0.5
DRME				*e*Sn	Sn	20 57 19.1	-3.1
DIVS	Divibare	6.71	302	*e*Pn	Pn	20 56 05.0	-0.9
DIVS	Divibare	6.71	302	*e*Pn	Pn	20 56 04.1	-1.7
DIVS	Divibare	6.71	302	⇓*i*Pn	Pn	20 56 04.0	-1.9
BANR	Banloc	6.73	315	⇓*i*P	Pn	20 56 04.2	-1.8
BANR	Banloc	6.73	315	S	Sg	20 58 04.8	+1.9
BANR	Banloc	6.73	315	⇓*i*P	Pn	20 56 04.2	-1.8
ARCR	ARCALIA	6.75	339	⇓*i*P	Pn	20 56 05.9	-0.4
ARCR	ARCALIA	6.75	339	⇓*i*P	Pn	20 56 05.9	-0.4
BEO	Beograd	6.76	308	P	Pn	20 56 03.9	-2.6
BEO				pmax	pmax		
	comp=Z,67nm,1.0s						
PLE	Pljevlja	6.82	294⇑	*i*Pn	Pn	20 56 06.8	-0.6
PLE				*e*Sn	Sn	20 57 22.7	-2.7
PLE	Pljevlja	6.82	294⇑	*i*Pn	Pn	20 56 06.8	-0.6
PLE				*e*Sn	Sn	20 57 22.7	-2.7
TIM	Timisoara	6.92	317	⇓*i*P	Pn	20 56 08.0	-0.6
TIM	Timisoara	6.92	317	⇓*i*P	Pn	20 56 08.0	-0.6
CEME	Cevo	6.96	287	⇓*i*Pn	Pn	20 56 09.8	+0.5
CEME				*e*Sn	Sn	20 57 26.1	-2.5
CEME	Cevo	6.96	287	⇓*i*Pn	Pn	20 56 09.8	+0.5
CEME				*e*Sn	Sn	20 57 26.1	-2.5
NKY	Niksic	6.96	289⇑	*i*Pn	Pn	20 56 09.9	+0.6
NKY				*e*Sn	Sn	20 57 26.1	-2.6
NKY	Niksic	6.96	289⇑	*i*Pn	Pn	20 56 09.9	+0.6
NKY				*e*Sn	Sn	20 57 26.1	-2.6
NKME	Niksic	6.98	289⇑	*i*Pn	Pn	20 56 10.1	+0.6
NKME				*e*Sn	Sn	20 57 25.9	-3.2
NKME	Niksic	6.98	289⇑	*i*Pn	Pn	20 56 10.1	+0.6
NKME				*e*Sn	Sn	20 57 25.9	-3.2
BBLS	Lazići	7.00	298	*e*Pn	Pn	20 56 10.3	+0.5
BBLS	Lazići	7.00	298	⇓*i*Pn	Pn	20 56 08.2	-1.6
DRGR		7.04	329⇑	*i*P	Pn	20 56 09.5	-0.9
DRGR		7.04	329⇑	*i*P	Pn	20 56 09.5	-0.9
BURAR	Bucovina Array	7.04	345⇑	*i*P	Pn	20 56 11.4	+1.0
BURAR	Bucovina Array	7.04	345	P	Pn	20 56 11.3	+0.9
BURAR	Bucovina Array	7.04	345⇑	*i*P	Pn	20 56 11.4	+1.0
BUR04	Bucovina Ar. S	7.05	345	*e*Pn	Pn	20 56 10.3	-0.2
BUR04	Bucovina Ar. S	7.05	345	*e*Pn	Pn	20 56 10.3	-0.2
BUR08	Bucovina Ar. S	7.07	345	*e*Pn	Pn	20 56 11.3	+0.4
BUR08	Bucovina Ar. S	7.07	345	*e*Pn	Pn	20 56 11.3	+0.4
SIRR	Siria	7.08	322	⇓*i*P	Pn	20 56 10.3	-0.5
SIRR	Siria	7.08	322	⇓*i*P	Pn	20 56 10.3	-0.5
UPM	Unac-Piva	7.12	292⇑	*i*Pn	Pn	20 56 11.4	-0.2
UPM				*e*Sn	Sn	20 57 30.0	-2.8
TEKS	Tekeris	7.21	304	*e*Pn	Pn	20 56 12.3	-0.4
TEKS	Tekeris	7.21	304	*e*Pn	Pn	20 56 11.0	-1.7
HCY	Herceg Novi	7.25	286	*e*Pn	Pn	20 56 13.3	+0.1
HCY				*e*Sn	Sn	20 57 33.0	-2.7
HCY	Herceg Novi	7.25	286	*e*Pn	Pn	20 56 13.3	+0.1
HCY				*e*Sn	Sn	20 57 33.0	-2.7
CSS	Mathiatis	7.26	142	*e*Pn	Pn	20 56 15.6	+2.3
SORM	Soroca	7.29	2⇑	*i*P	Pn	20 56 11.9	-1.8
SORM	Soroca	7.29	2⇑	*i*P	Pn	20 56 11.9	-1.8
BRY	Bratogost	7.31	289	⇓*i*Pn	Pn	20 56 14.4	+0.3
BRY				*e*Sn	Sn	20 57 34.1	-3.2
BRY	Bratogost	7.31	289	⇓*i*Pn	Pn	20 56 14.4	+0.3
BRY				*e*Sn	Sn	20 57 34.1	-3.2
FGSL	Fruska Gora	7.35	309	*e*Pn	Pn	20 56 13.7	-0.8
FRGS	Fruska Gora	7.35	309	*e*Pn	Pn	20 56 13.7	-0.9
HAPS	Han Pijesak,BI	7.39	299	*e*Pn	Pn	20 56 13.0	-2.2
TREB	Trebinje	7.40	288	*e*Pn	Pn	20 56 16.5	+1.2
BMR	Baia Mare	7.53	336⇑	*i*P	Pn	20 56 17.9	+0.9
BMR	Baia Mare	7.53	336⇑	*i*P	Pn	20 56 17.9	+0.9
LTVH	L^tav^`rtes,	7.84	328	*e*Pn	Pn	20 56 20.5	-0.8
LTVH				*ex*	x	20 58 41.9	
LTVH	L^tav^`rtes,	7.84	328	*e*Pn	Pn	20 56 20.5	-0.8
STON	Ston	7.90	288	*e*Pn	Pn	20 56 22.1	0.0
STON	Ston	7.90	288	*i* Pn	Pn	20 56 22.1	0.0
STON				Sn	Sn	20 57 50.6	-1.1
STON	Ston	7.90	288	⇓*i*Pn	Pn	20 56 21.6	-0.5
STON				Sn	Sn	20 57 50.6	-1.1
ANN	Anapa	8.02	57	*e*P	Pn	20 56 19.8	-3.9
ANN				*e*S	Sn	20 57 50.0	-4.6
ANN				pmax	pmax		
	comp=Z,47nm,1.2s						
FASA	Fasano	8.02	273	*e*Pn	Pn	20 56 22.8	-1.0
TAR1	Taranto	8.10	271	*i* Pn	Pn	20 56 22.7	-2.1
MASS	Massafra	8.20	272	*e*Pn	Pn	20 56 24.9	-1.3
TRPA	Tarpa	8.24	334	⇓*i*P	Pn	20 56 25.8	-0.9
TRPA	Tarpa	8.24	334⇑	*e*Pn	Pn	20 56 25.7	-0.9
TRPA	Tarpa	8.24	334	⇓*i*P	Pn	20 56 25.8	-0.9
BAI	Bari	8.37	275	*e*Pn	Pn	20 56 27.9	-0.6
MATE	Matera	8.53	272	⇓*i*P	Pn	20 56 29.6	-1.1
MATE	Matera	8.53	272	⇓*i*P	Pn	20 56 29.6	-1.1
SG1	Sgolgore (BA)	8.53	274	*e*Pn	Pn	20 56 29.7	-1.1
MORH	M¨‡r¡gy, Hung	8.62	312⇑	*e*Pn	Pn	20 56 30.1	-1.8
MORH	M¨‡r¡gy, Hung	8.62	312⇑	*e*Pn	Pn	20 56 30.1	-1.8
TIP	Timpagrande	8.74	263	⇓*i*P	Pn	20 56 32.0	-1.7
TIP	Timpagrande	8.74	263	*e*Pn	Pn	20 56 32.6	-1.1
TIP	Timpagrande	8.74	263	⇓*i*P	Pn	20 56 32.0	-1.7
TIP	Timpagrande	8.74	263	*e*Pn	Pn	20 56 32.6	-1.1
UZH	Uzhgorod	8.76	335	*e*P	Pn	20 56 32.9	-0.9
UZH				*e*S	Sn	20 58 10.9	-1.7
UZH	Uzhgorod	8.76	335	*e*P	Pn	20 56 32.9	-0.9
UZH				*e*S	Sn	20 58 10.9	-1.7
BLY	Banja Luka	8.81	300	⇓*i*P	Pn	20 56 35.2	+0.6
BLY	Banja Luka	8.81	300	*e*Pn	Pn	20 56 34.7	+0.1
BLY	Banja Luka	8.81	300	*e*Pn	Pn	20 56 34.7	+0.1
BLY	Banja Luka	8.81	300	⇓*i*P	Pn	20 56 35.2	+0.6
MS1	Monte Sant'Ang	9.07	279	*e*Pn	Pn	20 56 37.3	-0.9
PSZ	Piszkesteto	9.11	324	⇓*i*P	Pn	20 56 37.5	-1.3
PSZ	Piszkesteto	9.11	324⇑	*e*Pn	Pn	20 56 40.2	+1.4
PSZ	Piszkesteto	9.11	324	*e*Pn	Pn	20 56 36.7	-2.1
PSZ	Piszkesteto	9.11	324	*e*P	Pn	20 56 36.7	-2.1
PSZ	Piszkesteto	9.11	324	*e*P	Pn	20 56 36.7	-2.1
SOC	Sochi	9.16	69	*e*P	Pn	20 56 37.9	-1.5
SOC				*e*		20 58 24.4	
SOC				MLR	MLR		
	comp=Z,982nm,16.0s						
SOC	Sochi	9.16	69	*e*P	Pn	20 56 37.9	-1.5
SOC				*e*S	Sn	20 58 24.4	+1.8
	comp=Z,982nm,16.0s						
BUD	Budapest	9.22	319	*e*Pn	Pn	20 56 40.5	+0.4
CRVS	Cervenica-Dubn	9.27	332	*e*P	Pn	20 56 41.0	+0.1
CRVS	Cervenica-Dubn	9.27	332	*e*PN	Pn	20 56 41.0	+0.1
CRVS	Cervenica-Dubn	9.27	332	*e*P	Pn	20 56 41.0	+0.1
CUC	Castrocucco	9.28	269	*e*Pn	Pn	20 56 41.3	+0.2
CUC	Castrocucco	9.28	269	*e*Pn	Pn	20 56 41.3	+0.2
KECS	Kecovo	9.29	328	*e*P	Pn	20 56 40.8	-0.4
KECS	Kecovo	9.29	328	*e*Pn	Pn	20 56 40.8	-0.4
KECS	Kecovo	9.29	328	*e*P	Pn	20 56 40.8	-0.4
LVV	L'vov	9.38	344	*e*P	Pn	20 56 42.8	+0.4
LVV				*e*S	Sn	20 58 27.5	-0.6
LVV				MLR	MLR		
	comp=Z,3μm,12.0s						
LVV	L'vov	9.38	344	*e*P	Pn	20 56 42.8	+0.4
	comp=Z,3μm,12.0s						
LVV				*e*S	Sn	20 58 27.5	-0.6
KWP	Kalwaria Pacla	9.52	339	*e*Pn	Pn	20 56 44.5	+0.1
KWP	Kalwaria Pacla	9.52	339	*e*Pn	Pn	20 56 44.3	0.0
KWP	Kalwaria Pacla	9.52	339	*e*P	Pn	20 56 44.5	+0.1
KWP	Kalwaria Pacla	9.52	339	*e*Pn	Pn	20 56 44.3	0.0
CSKK	Cs¨‡kako	9.53	316	*e*pPn	Pn	20 56 49.7	+5.3
CEL	Celeste	9.65	258	*e*Pn	Pn	20 56 46.9	+0.7
CEL	Celeste	9.65	258	*e*Pn	Pn	20 56 46.9	+0.7
UDBI	Udbina	9.69	296	*e*Pn	Pn	20 56 48.2	+1.5
UDBI	Udbina	9.69	296	*e*Pn	Pn	20 56 48.1	+1.5
MMAI	Mount Meron Ar	9.84	140	Pn	Pn	20 56 49.5	+0.7
	comp=Z,0.8nm,0.3s,baz=330,slow=12,SNR=14						
BEHE	Becsehely	9.84	309	*es*Pn	Pn	20 56 59.9	+11
BEHE	Becsehely	9.84	309	*e*Pn	Pn	20 56 47.9	-0.8
AK11	Malin Array Si	9.87	5	*e*Pn	Pn	20 56 47.1	-2.0
AK11	Malin Array Si	9.87	5	*e*Pn	Pn	20 56 47.1	-2.0
AKASG	Malin Array Be	9.90	5	Pn	Pn	20 56 46.4	-3.0
	comp=Z,2.4nm,0.3s,baz=187,slow=12,SNR=9.2						
AKASG				Sn	Sn	20 58 46.6	+5.9
	comp=Z,4.4nm,0.3s,baz=192,slow=26,SNR=11						
AKASG				LR	LR	21 00 47.3	
	comp=Z,2μm,18.9s,baz=185,slow=39						
AKBB	Malin Array Si	9.90	5	*e*Pn	Pn	20 56 48.1	-1.3
AKBB	Malin Array Si	9.90	5	*e*P	Pn	20 56 48.1	-1.3
AKBB	Malin Array Si	9.90	5	*e*P	Pn	20 56 48.1	-1.3
VYHS	Vyhne	10.02	323	*e*P	Pn	20 56 49.9	-1.2
VYHS	Vyhne	10.02	323	*e*PN	Pn	20 56 49.9	-1.2
VYHS				*e*PG		20 57 32.1	
ZAG	Zagreb	10.02	304	*e*Pn	Pn	20 56 51.3	+0.1
NIE	Niedzica	10.12	330	*e*Pn	Pn	20 56 51.9	-0.7
NIE	Niedzica	10.12	330	*e*P	Pn	20 56 51.9	-0.7
KOGS	Kog	10.15	307	*e*Pn	Pn	20 56 51.0	-1.9
KOGS	Kog	10.15	307	Pn	Pn	20 56 51.0	-1.9
LANS	Liptovska Anna	10.23	327	*e*P	Pn	20 56 55.2	+1.1
LANS	Liptov

comp=Z,5µm,11.1s
DPC Dobruska-Polom 12.49 323 *e*P **Pn 20 57 25.3 +0.3**
comp=Z,5µm,11.1s
EIL Elat 12.53 151 Pn **Pn 20 57 28.4 +2.9**
comp=Z,0.1nm,0.3s,baz=6.0,slow=19,SNR=2.2
ABTA Abfaltersbach 12.60 303 *i* P **Pn 20 57 26.5 0.0**
comp=Z,6.6nm,0.6s,SNR=12
ABTA Abfaltersbach 12.60 303 P **Pn 20 57 26.5 0.0**
comp=Z,6.6nm,0.6s,SNR=12
UPC Upice 12.74 323 *e*P **Pn 20 57 30.2 +1.8**
UPC *ex* x 20 57 37.1
UPC *ex* x 20 57 43.4
UPC AMS AMS 21 03 50.0
comp=Z,7µm,10.2s
UPC Upice 12.74 323 *e*P **Pn 20 57 30.2 +1.8**
UPC MLR MLR
comp=Z,7µm,10.2s
UPC Upice 12.74 323 *e*P **Pn 20 57 30.2 +1.8**
comp=Z,7µm,10.2s
GNI Garni 12.82 88 Pn **Pn 20 57 31.1 +1.5**
comp=Z,0.3nm,0.3s,baz=37,slow=20,SNR=1.9
GNI Garni 12.82 88 *e*Pn Pn 20 57 34.4 +4.8
GNI Garni 12.82 88⇑ *e*P **Pn 20 57 29.5 -0.1**
GNI Garni 12.82 88 *e*P **Pn 20 57 29.5 -0.1**
VORD Divnogorie 12.83 34 *e*P **Pn 20 57 29.0 -0.5**
VORD pmax pmax
comp=Z,8.0nm,0.6s
VORD MLR MLR
comp=Z,3µm,16.0s
KSP Ksiaz 12.86 325 *e*Pn **Pn 20 57 30.1 +0.2**
KSP Ksiaz 12.86 325 *e*P **Pn 20 57 30.1 +0.1**
GEA0 GERESS Array S 12.86 313 *e*Pn **Pn 20 57 27.6 -2.5**
GEA0 GERESS Array S 12.86 313 *e*Pn **Pn 20 57 27.6 -2.5**
GEC2 GERESS Array S 12.87 313 *e*Pn **Pn 20 57 28.9 -1.2**
GEC2 GERESS Array S 12.87 313 *e*P **Pn 20 57 29.0 -1.2**
GEC2 GERESS Array S 12.87 313 *e*P **Pn 20 57 29.0 -1.2**
GERES GERESS Array B 12.87 313 Pn **Pn 20 57 28.9 -1.2**
comp=Z,0.2nm,0.3s,baz=119,slow=14,SNR=23
GERES LR LR 21 02 35.2
comp=Z,1µm,20.9s,baz=121,slow=38
GOPC GO Pecny, Ondr 12.93 319 *e*P **Pn 20 57 31.9 +1.0**
GOPC *ex* x 20 57 35.6
GOPC AMS AMS 21 03 40.0
comp=Z,6µm,14.0s
GOPC GO Pecny, Ondr 12.93 319 *e*P **Pn 20 57 31.9 +1.0**
GOPC MLR MLR
comp=Z,6µm,14.0s
GOPC GO Pecny, Ondr 12.93 319 *e*P **Pn 20 57 31.9 +1.0**
comp=Z,6µm,14.0s
VSR Storozhevoye 12.96 33 *e*P **Pn 20 57 29.6 -1.7**
VSR *e*S **Sn 20 59 54.1 -1.6**
VSR pmax pmax
comp=Z,10.0nm,0.7s
VSR smax smax
comp=E,140nm,1.2s
VSR MLR MLR
comp=Z,4µm,18.0s
VSR Storozhevoye 12.96 33 *e*P **Pn 20 57 29.6 -1.7**
comp=Z,10.0nm,0.7s
VSR *e*S **Sn 20 59 54.1 -1.6**
comp=Z,4µm,18.0s
KHC Kasperske Hory 13.09 314 *e*P **Pn 20 57 32.4 -0.8**
KHC *ex* x 20 57 37.8
KHC AMS AMS 21 03 30.0
comp=Z,4µm,11.3s
KHC Kasperske Hory 13.09 314 *e*P **Pn 20 57 32.4 -0.8**
KHC MLR MLR
comp=Z,4µm,11.3s
KHC Kasperske Hory 13.09 314 *e*P **Pn 20 57 32.4 -0.8**
comp=Z,4µm,11.3s
PRU Pruhonice 13.10 319 *e*P **Pn 20 57 36.6 +3.4**
PRU *ex* x 20 57 44.4
PRU AMS AMS 21 03 40.0
comp=Z,6µm,13.7s
PRU Pruhonice 13.10 319 *e*P **Pn 20 57 36.6 +3.4**
PRU MLR MLR
comp=Z,6µm,13.7s
VORR Voronezh 13.32 32 *e*P Pn 20 57 27.0 -9.3
VORR pmax pmax
comp=Z,250nm,1.0s
WTTA Wattenberg 13.35 304 *e*Pn **Pn 20 57 38.6 +1.8**
comp=Z,2.2nm,0.4s
WTTA Wattenberg 13.35 304 Pn **Pn 20 57 38.6 +1.8**
comp=Z,2.2nm,0.4s
VLC Villacollemand 13.36 290 *e*Pn **Pn 20 57 36.5 -0.4**
VLC Villacollemand 13.36 290 *e*Pn **Pn 20 57 36.5 -0.4**
PVCC Panska Ves 13.43 321 *e*P **Pn 20 57 37.4 -0.4**
PVCC *ex* x 20 57 44.4
PVCC AMS AMS 21 04 10.0
comp=Z,5µm,11.7s
PVCC Panska Ves 13.43 321 *e*P **Pn 20 57 37.4 -0.4**
PVCC MLR MLR
comp=Z,5µm,11.7s
PVCC Panska Ves 13.43 321 *e*P **Pn 20 57 37.4 -0.4**
comp=Z,5µm,11.7s
WET Wettzell 13.48 313 P **Pn 20 57 38.3 -0.2**
GROC Groznyy 13.49 74 *e*P **Pn 20 57 37.5 -1.1**
GROC *e*S **Sn 21 00 07.3 -1.3**
GROC pmax pmax
comp=Z,12nm,1.2s
GROC Groznyy 13.49 74 *e*P **Pn 20 57 37.5 -1.1**
comp=Z,12nm,1.2s
SUW Suwalki 13.55 348 *e*Pn **Pn 20 57 37.1 -2.3**
SUW Suwalki 13.55 348 *e*Pn **Pn 20 57 40.9 +1.5**
SUW Suwalki 13.55 348 *e*P **Pn 20 57 40.9 +1.5**
MICGM Minsk 13.66 360 *e*P **Pn 20 57 39.0 -1.9**
MICGM *e*S **Sn 21 00 09.0 -3.8**
MICGM *e*LR LR 21 01 20.0
MICGM LRM MLR 21 03 10.0
comp=Z,2.5nm,10.0s
MNK Minsk 13.66 360 *e*P **Pn 20 57 39.0 -1.9**
MNK *e*S **Sn 21 00 09.0 -3.8**
MNK MLR MLR
comp=Z,3µm,10.0s
MOTA Moosalm 13.72 304 *e*Pn **Pn 20 57 40.9 -0.9**
comp=Z,4.1nm,0.7s
MOTA Moosalm 13.72 304 Pn **Pn 20 57 40.9 -0.9**
comp=Z,4.1nm,0.7s
FETA Feichten 13.84 302 *i* Pn Pn 20 57 33.1 -10
comp=Z,4.9nm,1.0s
BRG Berggiesshubel 13.96 321 *e*P **P 20 57 51.6 -1.6**
comp=Z,61nm,2.0s
BRG *i* PP **PnPn 20 57 58.3 +5.5**
comp=Z,23nm,1.2s
comp=N,4µm,10.9s
comp=E,5µm,12.2s
comp=Z,7µm,11.0s
BRG Berggiesshubel 13.96 321 *e*P **P 20 57 51.6 -1.5**
BRG pmax pmax
comp=Z,61nm,2.0s
BRG MLR MLR
comp=N,4µm,10.9s
BRG MLR MLR
comp=E,5µm,12.2s
BRG MLR MLR
comp=Z,7µm,11.0s
RETA Reutte 13.99 304 *e*Pn **Pn 20 57 43.7 -1.7**
comp=Z,1.9nm,0.2s
RETA Reutte 13.99 304 Pn **Pn 20 57 43.7 -1.7**
comp=Z,1.9nm,0.2s
FUORN Ofenpass-Fuorn 14.01 300 *e*Pn **Pn 20 57 45.0 -0.9**
FUORN Ofenpass-Fuorn 14.01 300 *e*Pn **Pn 20 57 45.0 -0.9**
NACGM Naroch 14.09 357 *e*P Pn 20 57 41.0 -5.7
NACGM *e*S Sn 21 00 14.0 -9.1
NACGM *e*LR LR 21 03 38.0
PGF Pioggiola 14.25 283 *e*P **Pn 20 57 50.3 +1.2**
PGF pmax pmax
comp=Z,42nm,1.1s
PGF Pioggiola 14.25 283 *e*P **Pn 20 57 50.3 +1.2**
comp=Z,42nm,1.1s
VSL Villasalto 14.26 271 *e*Pn **Pn 20 57 49.9 +0.7**
VSL Villasalto 14.26 271 *e*Pn **Pn 20 57 49.8 +0.7**
NKC Novy Kostel 14.32 316 *e*P **Pn 20 57 48.8 -1.2**
NKC *ex* x 20 57 54.8
NKC AMS AMS 21 04 40.0
comp=Z,5µm,11.3s
NKC Novy Kostel 14.32 316 *e*P **Pn 20 57 48.8 -1.2**
NKC MLR MLR
comp=Z,5µm,11.3s
DAVA Damuels 14.47 302 *e*Pn Pn 20 57 46.7 -5.5
comp=Z,0.9nm,0.2s
IDID Didziasalis 14.50 357 *e*P **Pn 20 57 49.5 -2.8**
IDID IAmb IAmb 20 58 06.6
comp=Z,16nm,0.8s
IIGN Ignalina 14.56 356 *e*P **Pn 20 57 50.9 -2.2**
IIGN IAmb IAmb 20 58 26.5
comp=Z,20nm,1.0s
IIGN Ignalina 14.56 356 *e*P **Pn 20 57 50.9 -2.2**
SNR=40
TUE Stuetta 14.57 299 *e*Pn **Pn 20 57 52.4 -1.2**
GRFO Grafenberg 14.69 313 *e*Pn **Pn 20 57 57.2 +2.2**
GRFO Grafenberg 14.69 313 *e*P **Pn 20 57 57.2 +2.2**
CLL Collm 14.70 320 *i* P **Pn 20 57 53.6 -1.4**
comp=Z,133nm,2.8s
CLL *i* sP **P 20 57 59.3 -2.0**
comp=Z,238nm,2.7s
CLL *i* sPP 20 58 05.4
CLL Lmax 21 05 00.0
CLL Collm 14.70 320 *e*Pn **Pn 20 57 56.2 +1.2**
CLL Collm 14.70 320 *e*P **Pn 20 57 56.2 +1.2**
CLL Collm 14.70 320 *e*Pn **Pn 20 57 56.2 +1.2**
KLNR Kaliningrad 14.70 342⇑ *i*P **Pn 20 57 54.6 -0.4**
KLNR pmax pmax
comp=Z,49nm,1.0s
MAK Makhachkala 14.73 75 *e*P **Pn 20 57 55.4 -0.1**
MAK *e*S **Sn 21 00 38.1 -0.7**
MAK pmax pmax
comp=Z,249nm,1.0s
MAK MLR MLR
comp=Z,731nm,14.0s
ISAL Salakas 14.78 356 *e*P **Pn 20 57 53.6 -2.6**
ISAL IAmb IAmb 20 58 28.3
comp=Z,15nm,1.0s
AKT Akhty 14.93 81⇓ *i*P **P 20 58 05.8 +1.7**
AKT *e*S **S 21 00 53.3 -8.8**
AKT pmax pmax
comp=Z,7.0nm,1.4s
AKT Akhty 14.93 81 *i* P **P 20 58 05.8 +1.7**
comp=Z,7.0nm,1.4s
IZAR Zarasai 14.96 356 *e*P **Pn 20 57 56.7 -1.8**
IZAR IAmb IAmb 20 58 17.0
comp=Z,11nm,0.8s
IZAR Zarasai 14.96 356 *e*P **Pn 20 57 56.7 -1.8**
SNR=40
MOX Moxa 14.99 316 P **P 20 58 05.4 +0.8**
OBN Obninsk 15.38 19 Pn **Pn 20 57 59.8 -4.3**
comp=Z,1.4nm,0.3s,baz=206,slow=12,SNR=7.0
OBN Sn **Sn 21 00 45.3 -9.3**
comp=Z,1.2nm,0.3s,baz=12,slow=20,SNR=2.5
OBN LR LR 21 04 02.6
comp=Z,766nm,20.4s,baz=208,slow=38
OBN Obninsk 15.38 19 *e*P **Pn 20 58 04.6 +0.5**
STU Stuttgart 15.45 307 *e*Pn **Pn 20 58 05.0 -0.2**
comp=Z,113nm,1.0s
STU Stuttgart 15.45 307 *e*P **Pn 20 58 05.0 -0.2**
STU pmax pmax
comp=Z,113nm,1.0s
STU Stuttgart 15.45 307 *e*Pn **Pn 20 58 05.0 -0.2**
comp=Z,113nm,1.0s
KEST Kesra 15.46 257 Pn **Pn 20 58 06.2 +0.8**
comp=Z,0.3nm,0.3s,baz=7.6,slow=2.2,SNR=11
KEST LR LR 21 05 56.0
comp=Z,546nm,18.6s,baz=26,slow=45
KEST Kesra 15.46 257 *e*Pn **Pn 20 58 04.3 -1.0**
comp=Z,97nm,1.3s
KEST Kesra 15.46 257 *e*Pn **Pn 20 58 04.3 -1.0**
comp=Z,97nm,1.3s
SLE Schleitheim 15.52 303 P **P 20 58 08.4 -2.1**
SLE pmax pmax
comp=Z,45nm,1.2s
SENIN Lac Senin/Sane 15.92 297 *e*Pn **Pn 20 58 10.9 -0.5**
comp=Z,146nm,0.9s
SENIN Lac Senin/Sane 15.92 297 *e*Pn **Pn 20 58 10.9 -0.5**
comp=Z,146nm,0.9s
BNI Bardonecchia 16.11 292 *e*Pn **Pn 20 58 14.9 +1.1**
comp=Z,423nm,1.5s
BNI Bardonecchia 16.11 292 *e*P **Pn 20 58 14.9 +1.1**
BNI pmax pmax
comp=Z,423nm,1.5s
BNI Bardonecchia 16.11 292 *e*P **Pn 20 58 14.9 +1.1**
comp=Z,423nm,1.5s
LPL La Plagne 16.14 294 *e*P **Pn 20 58 15.1 +0.8**
LPL pmax pmax
comp=Z,85nm,1.2s
LPL La Plagne 16.14 294 *e*P **Pn 20 58 15.1 +0.8**
comp=Z,85nm,1.2s
MOS Moscow 16.21 20 *e*P **Pn 20 58 15.0 +0.1**
MOS *e*S **Sn 21 01 16.2 +1.5**
MOS pmax pmax
comp=Z,124nm,1.4s
MOS MLR MLR
comp=Z,1µm,13.0s
CDF Champ du Feu 16.50 304 *e*P **P 20 58 20.2 -1.3**
CDF pmax pmax
comp=Z,172nm,1.1s
CDF Champ du Feu 16.50 304 *e*P **P 20 58 20.2 -1.3**
comp=Z,172nm,1.1s
ECH Echery 16.51 303 *e*Pn **Pn 20 58 18.4 -0.5**
comp=Z,99nm,0.9s
ECH Echery 16.51 303 *e*P **Pn 20 58 18.4 -0.5**
ECH pmax pmax
comp=Z,99nm,0.9s
ECH Echery 16.51 303 *e*P **Pn 20 58 18.4 -0.5**
comp=Z,99nm,0.9s
CMAH Djebel Manchou 16.55 262 P **P 20 58 28.0 +6.0**
HINF Hinteralfeld 16.59 302 *e*P **P 20 58 22.1 -0.3**
HINF pmax pmax
comp=Z,31nm,1.1s
HINF Hinteralfeld 16.59 302 *e*P **P 20 58 22.1 -0.3**
comp=Z,31nm,1.1s
ORIF Oris-en-Rattie 16.66 291 *e*P **P 20 58 22.9 -0.3**
ORIF pmax pmax
comp=Z,34nm,0.8s
ORIF Oris-en-Rattie 16.66 291 *e*P **P 20 58 22.9 -0.3**
comp=Z,34nm,0.8s
BSD Bornholm Skovb 16.68 333 *i* P **P 20 58 21.9 -1.4**
BSD Bornholm Skovb 16.68 333 *e*P **P 20 58 21.9 -1.4**
CABF La Chapelle 16.79 297 *e*P **P 20 58 25.3 +0.7**
CABF pmax pmax
comp=Z,105nm,1.1s
CABF La Chapelle 16.79 297 *e*P **P 20 58 25.3 +0.7**
comp=Z,105nm,1.1s
CAEH 'Ain El Ouahch 16.92 263 P **P 20 58 29.6 +3.5**
CKFL Kef-Lekhel 17.15 262 P **P 20 58 31.7 +2.9**
CASM Ain Smara 17.38 262 P **P 20 58 37.2 +6.0**
VIVF Saint-Julien-l 17.50 291 *e*P **P 20 58 33.4 +0.9**
VIVF pmax pmax
comp=Z,113nm,1.7s
CTEI Djebel Teioual 17.51 261 P **P 20 58 38.8 +6.0**
SSB Saint Sauveur 17.64 292 *e*Pn **Pn 20 58 31.8 -1.2**
comp=Z,79nm,1.4s
SSB Saint Sauveur 17.64 292 *e*P **Pn 20 58 31.8 -1.2**
SSB pmax pmax
comp=Z,79nm,1.4s
SSB Saint Sauveur 17.64 292 *e*P **Pn 20 58 31.8 -1.2**
comp=Z,79nm,1.4s
WLF Walferdange 17.64 307 ⇑P **Pn 20 58 32.7 -0.2**
comp=Z,64nm,1.6s
WLF Walferdange 17.64 307 *e*Pn **Pn 20 58 32.2 -0.8**
comp=Z,88nm,1.2s
WLF Walferdange 17.64 307 *e*P **Pn 20 58 32.2 -0.8**
WLF pmax pmax
comp=Z,88nm,1.2s
VSU Vasula 17.65 358 *c e*P **P 20 58 33.8 -0.1**
VSU pmax pmax
comp=Z,80nm,1.2s
DFRA Djebel Bou Aff 17.73 263 P **P 20 58 40.8 +5.6**
MEM Membach 18.09 310 ⇓P **P 20 58 40.1 +1.1**
comp=Z,58nm,1.2s
MEM Membach 18.09 310 P **P 20 58 41.1 +2.2**
MEM pmax pmax
comp=Z,88nm,1.1s
MEM Membach 18.09 310 P **P 20 58 40.0 +1.1**
comp=Z,58nm,1.2s
CKHR Kef el Ahmar 18.20 262 P **P 20 58 45.1 +4.7**
HGN Heimansgroeve 18.20 310 *e*P **P 20 58 41.8 +1.7**
comp=Z,142nm,1.4s
HGN *e*L L 21 06 32.2
comp=Z,1µm,20.4s
HGN Heimansgroeve 18.20 310 *e*P **P 20 58 41.8 +1.7**
comp=Z,142nm,1.4s
SET Setif 18.22 263 P **P 20 58 45.0 +4.5**
WTSB Winterswijk 18.26 315 *e*P **P 20 58 41.9 +1.2**
comp=Z,70nm,1.3s
WTSB Winterswijk 18.26 315 *e*P **P 20 58 41.9 +1.2**
comp=Z,70nm,1.3s
BEBN Eben Emael 18.36 310 ⇓P **P 20 58 44.8 +3.0**
BCLA Clavier 18.43 309 ⇓P **Pn 20 58 44.9 +2.3**
AVF Avril sur Loir 18.67 297 P **Pn 20 58 45.6 0.0**
AVF pmax pmax
comp=Z,49nm,1.0s
AVF Avril sur Loir 18.67 297 P **Pn 20 58 45.6 0.0**
comp=Z,49nm,1.0s
DOU Dourbes 18.73 307 ⇓P **Pn 20 58 47.9 +1.5**
DOU Dourbes 18.73 307 P **Pn 20 58 47.8 +1.5**
SNF Seneffe 19.07 308 ⇓P **Pn 20 58 52.3 +1.9**
comp=Z,65nm,1.1s
UCC Uccle 19.13 309 *e*P **Pn 20 58 51.7 +0.6**
comp=Z,41nm,1.0s
UCC Uccle 19.13 309 *e*P **Pn 20 58 51.7 +0.6**
UCC pmax pmax
comp=Z,41nm,1.0s
UCC Uccle 19.13 309 *e*P **Pn 20 58 51.7 +0.6**
comp=Z,41nm,1.0s
CAF Calviac 19.36 291 *e*P **Pn 20 58 54.2 +0.2**
CAF pmax pmax
comp=Z,56nm,1.2s
CAF Calviac 19.36 291 *e*P **Pn 20 58 54.2 +0.2**
comp=Z,56nm,1.2s
ABA Alger-Bouzarea 19.79 266 P **Pn 20 58 58.0 -1.2**
ABA Alger-Bouzarea 19.79 266 P **Pn 20 58 58.0 -1.2**
MUD Monsted U'grnd 19.83 328 *i* P **Pn 20 59 03.7 +4.2**
MUD Monsted U'grnd 19.83 328 *e*P **Pn 20 59 03.7 +4.2**
EMHD Djebel Mahouad 20.06 265 P Pn 20 59 04.7 +2.2
FINES FINESS Array B 20.66 357 P **P 20 59 05.5 -1.4**
comp=Z,2.3nm,0.7s,baz=167,slow=11,SNR=15
FINES LR LR 21 07 04.6
comp=Z,1µm,19.5s,baz=174,slow=37
FINES FINESS Array B 20.66 357 *c e*P Pn 20 59 08.8 -0.3
FINES pmax pmax
comp=Z,2.0nm,0.4s
FIA1 FINESS Array S 20.66 357 *e*P Pn 20 59 07.7 -1.4
comp=Z,17nm,0.9s
EBNR Beni Rached 21.11 266 P **P 20 59 17.0 +5.0**
HFS Hagfors 21.24 340 P **P 20 59 12.1 -1.0**
comp=Z,11nm,1.0s,baz=144,slow=10,SNR=12
HFS LR LR 21 08 24.2
comp=Z,829nm,19.9s,baz=147,slow=40
KLMR Klimovskoe 21.26 16 *e*P **P 20 59 09.3 -4.1**
KLMR S **S 21 03 01.2 -8.4**
KLMR pmax pmax
comp=Z,44nm,1.0s
KLMR MLR MLR
comp=Z,1µm,13.0s
KLMR Klimovskoe 21.26 16 *e*P **P 20 59 09.4 -4.0**
KLMR *e*P **P 20 59 09.4 -4.0**
KLMR *e*P **P 20 59 09.4 -4.0**
KLMR AMP 20 59 22.6
comp=Z,44nm,1.0s
KLMR S **S 21 03 01.2 -8.4**
KLMR S **S 21 03 01.2 -8.4**
KLMR LQ LQ 21 05 03.3
KLMR LQ LQ 21 05 03.3
KLMR LR LR 21 05 28.1
KLMR AMP 21 07 39.1
comp=Z,1µm,12.7s
LDF La Druitiere 21.30 301 *e*P **P 20 59 13.2 -0.7**
LDF pmax pmax
comp=Z,95nm,0.9s
GRR Gorron 21.75 300 *e*P **P 20 59 17.9 -0.8**
GRR Gorron 21.75 300 *e*P **P 20 59 17.9 -0.8**
KONO Kongsberg 22.04 335 *e*P **P 20 59 21.9 +0.2**
comp=Z,38nm,1.1s
KONO Kongsberg 22.04 335 *e*P **P 20 59 21.9 +0.2**
KONO pmax pmax
comp=Z,38nm,1.1s
NC602 NORSAR Array S 22.32 339 *e*P **P 20 59 22.7 -2.1**
NC405 NORSAR Array S 22.59 339 *e*P **P 20 59 28.2 +0.6**
NAO01 NORSAR Array S 22.60 338 *e*P **P 20 59 25.6 -2.1**
CART Cartagena 22.61 271 *e*P **P 20 59 27.9 -0.1**
comp=Z,36nm,0.8s
CART Cartagena 22.61 271 *e*P **P 20 59 27.9 -0.1**
comp=Z,36nm,0.8s
NB201 NORSAR Array S 22.65 339 *e*P **P 20 59 27.3 -1.1**
NB2 NORSAR Subarra 22.67 339 P **P 20 59 26.6 -1.9**
comp=Z,11nm,0.8s,baz=145,slow=11
NOA NORSAR Array B 22.67 339 P **P 20 59 28.9 +0.4**
comp=Z,4.1nm,0.8s,baz=148,slow=11,SNR=7.3
RAYN Ar Rayn 22.72 134 *e*P **P 20 59 29.3 0.0**
comp=Z,38nm,1.2s
RAYN Ar Rayn 22.72 134 *e*P **P 20 59 29.3 0.0**
comp=Z,38nm,1.2s
NC303 NORSAR Array S 22.78 339 *e*P **P 20 59 28.9 -0.7**
NC303 *e*Sn Sn 21 03 46.8 -6.2
NBO00 NORSAR Array S 22.78 338 *e*P **P 20 59 28.9 -0.8**
AKTO Aktyubinsk 22.97 55 P **P 20 59 31.0 -0.8**
comp=Z,2.2nm,0.6s,baz=258,slow=12,SNR=11
AKTO LR LR 21 10 59.7
comp=Z,501nm,19.2s,baz=242,slow=43
AKTO Aktyubinsk 22.97 55 P **P 20 59 31.0 -0.8**
NC204 NORSAR Array S 22.99 339 *e*P **P 20 59 31.9 0.0**
QUIF Quistinic 23.21 298 *e*P **P 20 59 34.5 +0.3**
QUIF pmax pmax
comp=Z,300nm,1.8s
PRGR Permogore 23.43 21⇓ *i*P **P 20 59 35.1 -1.1**
PRGR *e*S **S 21 03 51.3 +1.8**
PRGR pmax pmax
comp=Z,58nm,0.9s
GEYT Alibeck 23.45 87 P **P 20 59 35.5 -1.4**
comp=Z,1.7nm,0.5s,baz=272,slow=11,SNR=4.3
GEYT LR LR 21 11 07.5
comp=Z,838nm,18.4s,baz=265,slow=43
GYA0B ALIBECK ARRAY 23.45 87 *e*P **P 20 59 37.4 +0.5**
comp=Z,23nm,1.1s
GYA0B ALIBECK ARRAY 23.45 87 *e*P **P 20 59 37.3 +0.5**
comp=Z,23nm,1.1s
SESP Santiago Espad 23.62 273 P **P 20 59 43.8 +5.1**
ABKAR Akbulak array 23.98 59 *e*P **P 20 59 40.8 -1.0**
TMCR Tamitsa 24.09 11 *e*P **P 20 59 42.0 -0.6**
TMCR pmax pmax
comp=Z,25nm,1.1s
ES19 SONSECA Array 24.25 278 *e*P **P 20 59 44.2 -0.2**
ESDC Sonseca Array 24.30 278 P **P 20 59 44.5 -0.5**
comp=Z,8.1nm,0.9s,baz=68,slow=10.0,SNR=32
ESLA Sonseca Array 24.30 278 *e*P **P 20 59 44.6 -0.3**
comp=Z,116nm,1.8s
ESLA Sonseca Array 24.30 278 *e*P **P 20 59 44.6 -0.3**
comp=Z,116nm,1.8s
PAB San Pablo 24.62 278 *e*P **P 20 59 48.2 +0.3**
comp=Z,169nm,1.7s
PAB San Pablo 24.62 278 *e*P **P 20 59 48.2 +0.3**
PAB pmax pmax
comp=Z,169nm,1.7s
PAB San Pablo 24.62 278 *e*P **P 20 59 48.2 +0.3**
comp=Z,169nm,1.7s
EKA Eskdalemuir Ar 25.06 316 P **P 20 59 50.3 -1.2**
comp=Z,10nm,1.1s,baz=108,slow=11,SNR=9.2
ARU Arti 25.26 42 P **P 20 59 52.4 -1.0**
comp=Z,13nm,0.7s,baz=245,slow=6.9,SNR=23
ARU LR LR 21 10 59.3
comp=Z,1µm,18.8s,baz=248,slow=39
ARU Arti 25.26 42 *e*P **P 20 59 51.8 -1.5**
ARU Arti 25.26 42 *c i*P **P 20 59 51.9 -1.4**
ARU PPP PPP 21 00 31.5
ARU 21 03 25.1
ARU *e*S **S 21 04 18.7 -0.3**
ARU SS **SnSn 21 05 09.7 +0.3**
ARU SSS SSS 21 05 29.5
ARU pmax pmax
comp=Z,61nm,1.7s
ARU MLR MLR
comp=Z,1µm,20.0s
HORN Hornachuelos 25.76 274 P **P 21 00 03.0 +4.9**
PBRG Braganca 25.96 284 *e*P **P 21 00 05.1 +5.2**
comp=Z,62nm,1.7s
TAM Tamanrasset 26.08 233 *e*P **P 21 00 04.3 +3.1**
comp=Z,21nm,1.0s
TAM Tamanrasset 26.08 233 *e*P **P 21 00 04.3 +3.1**
TAM pmax pmax
comp=Z,21nm,1.0s
MVO Moncorvo 26.28 282 *e*P **P 21 00 05.8 +2.9**
comp=Z,57nm,1.3s
MVO *e*S S 21 04 57.2 +22
MVO *e*LR LR 21 10 46.7
comp=Z,528nm,18.0s
SVE Sverdlovsk 26.47 42 *e*P **P 21 00 05.8 +1.5**
SVE pmax pmax
comp=Z,39nm,1.5s
POLO Lamas de Olo 26.81 283 *e*S S 21 05 10.6 +27
MTE Manteigas 26.82 281 *e*P **P 21 00 07.7 -0.1**
comp=Z,107nm,1.3s
MTE *e*S S 21 05 12.6 +28
MTE *e*LR LR 21 10 11.7
comp=Z,426nm,20.0s
MTE Manteigas 26.82 281 *e*P **P 21 00 07.3 -0.5**
comp=Z,60nm,1.1s

MTE	Manteigas	26.82	281	eP		P	21 00 07.3 -0.5
	comp=Z,60nm,1.1s						
PCBR	Castelo Branco	26.90	280	eP		P	21 00 08.2 -0.2
	comp=Z,102nm,1.6s						
PCBR	Castelo Branco	26.90	280	eP		P	21 00 08.2 -0.2
PMRV	Marv??o	26.94	279	eP		P	21 00 07.7 -1.0
	comp=Z,124nm,1.6s						
PMRV				eS		S	21 04 55.1 +9.2
PMRV				eLR		LR	21 10 51.9
	comp=Z,311nm,16.0s						
PMRV	Marv??o	26.94	279	eP		P	21 00 07.7 -1.0
PBAR	Barrancos	27.01	276	eP		P	21 00 15.1 +5.8
	comp=Z,187nm,1.8s						
PBAR				eS		S	21 05 19.8 +33
PVIS	Viseu	27.02	282	eP		P	21 00 16.1 +6.6
	comp=Z,42nm,1.5s						
PGAV	Gavieira, Arco	27.05	284	eP		P	21 00 13.9 +4.0
	comp=Z,103nm,1.7s						
PGAV				eS		S	21 05 19.3 +31
PGAV				eLR		LR	21 11 16.7
	comp=Z,801nm,16.0s						
MDT	Midelt	27.14	263	P		P	21 00 10.6 -0.2
	comp=Z,2.7nm,0.7s,baz=83,slow=14,SNR=3.9						
MDT				LR		LR	21 12 08.6
	comp=Z,202nm,20.2s,baz=66,slow=39						
PESTR	Estremoz	27.23	278	eP		P	21 00 11.4 0.0
	comp=Z,83nm,1.5s						
PESTR				eS		S	21 05 17.0 +26
PESTR	Estremoz	27.23	278	eP		P	21 00 10.5 -0.9
	comp=Z,50nm,1.4s						
PESTR	Estremoz	27.23	278	eP		P	21 00 10.5 -0.9
	comp=Z,50nm,1.4s						
PCAS	Casmilo, Conde	27.61	280	eS		S	21 05 24.8 +28
PTOM	Tomar	27.65	279	eP		P	21 00 15.2 +0.1
	comp=Z,112nm,1.6s						
PTOM	Tomar	27.65	279	eP		P	21 00 15.2 +0.1
PMTG	Montargil	27.65	278	eP		P	21 00 14.6 -0.5
	comp=Z,90nm,1.6s						
PMTG				eS		S	21 05 14.1 +17
PMTG	Montargil	27.65	278	eP		P	21 00 14.6 -0.5
PBEJ	Beja	27.68	276	eP		P	21 00 17.5 +2.1
	comp=Z,40nm,2.0s						
PVAQ	Vaqueiros	27.75	275	eP		P	21 00 20.6 +4.6
	comp=Z,82nm,1.7s						
PVAQ				eS		S	21 05 23.0 +24
PVAQ				eLR		LR	21 12 37.6
	comp=Z,240nm,18.0s						
PCVE	Castro Verde	27.92	275	eP		P	21 00 17.1 -0.5
	comp=Z,45nm,1.5s						
PCVE				eS		S	21 05 28.2 +27
PCVE	Castro Verde	27.92	275	eP		P	21 00 17.1 -0.5
FIG	Monte Figo	27.93	274	P		P	20 59 57.0 -21
PBDV	Barranco-do-Ve	27.96	274	eP		P	21 00 21.5 +3.5
	comp=Z,97nm,1.6s						
PBDV				eS		S	21 05 29.1 +27
MESJ	Messejana	28.00	276	eP		P	21 00 23.7 +5.5
	comp=Z,48nm,2.0s						
PNCL	Nicolau / Gran	28.15	276	eS		S	21 05 33.4 +28
PMAFR	Mafra	28.48	279	eS		S	21 05 43.9 +34
PFVI	Vila Bisbo	28.68	275	eS		S	21 06 31.8 +78
ARCES	ARCESS Array B	28.78	358	P		P	21 00 23.8 -1.1
	comp=Z,3.6nm,1.0s,baz=172,slow=9.7,SNR=7.3						
ARCES				LR		LR	21 11 54.8
	comp=Z,1μm,18.9s,baz=169,slow=36						
BRVK	Borovoye	30.92	52	eP		P	21 00 43.8 -0.2
	comp=Z,4.6nm,0.9s						
BRVK	Borovoye	30.92	52	d iP		P	21 00 44.7 +0.7
BRVK				pmax		pmax	
	comp=Z,11nm,2.5s						
BVAR	Borovoye Array	30.98	52	P		P	21 00 44.8 +0.3
	comp=Z,0.6nm,0.7s,baz=312,slow=9.6,SNR=6.0						
WSAR	Wadi Sarin	31.17	115	LR		LR	21 14 53.8
	comp=Z,562nm,19.7s,baz=340,slow=39						
ATD	Arta Tunnel	32.02	152	LR		LR	21 14 04.5
	comp=Z,231nm,20.4s,baz=325,slow=37						
AAK	Ala-Archa	34.45	71	P		P	21 01 15.4 +0.2
	comp=Z,1.1nm,0.4s,baz=228,slow=8.9,SNR=6.9						
AAK	Ala-Archa	34.45	71	eP		P	21 01 16.1 +0.9
	comp=Z,21nm,1.6s						
AAK	Ala-Archa	34.45	71	d iP		P	21 01 16.0 +0.8
AAK				pmax		pmax	
	comp=Z,5.0nm,1.0s						
FRU	Bishkek	34.49	71	eP		P	21 01 13.0 -2.4
FRU				pmax		pmax	
	comp=Z,120nm,2.5s						
FRU				pmax		pmax	
	comp=E,100nm,1.4s						
NRN	Naryn	35.83	73	eP		P	21 01 29.9 +2.6
	comp=E,29nm,0.4s						
NRN	Naryn	35.83	73	eP		P	21 01 29.9 +2.6
NRN				pmax		pmax	
	comp=Z,29nm,0.4s						
TOA0	Torodi Ar. Sit	35.89	227	eP		P	21 01 26.9 -0.8
TORD	Torodi Ar. Bea	35.89	227	P		P	21 01 26.8 -0.8
	comp=Z,4.4nm,1.0s,baz=34,slow=9.1,SNR=21						
KURBB	Kurchatov Arra	36.00	57	P		P	21 01 28.1 -0.1
	comp=Z,0.8nm,0.6s,baz=280,slow=9.2,SNR=18						
KURK	Kurchatov	36.05	57	eP		P	21 01 28.4 -0.2
	comp=Z,30nm,1.9s						
KURK	Kurchatov	36.05	57	i iP		P	21 01 29.3 +0.6
KURK				pmax		pmax	
	comp=Z,9.0nm,1.7s						
KSH	Kashi	36.36	76	P		P	21 01 30.5 -1.1
KSH				pmax		pmax	
	comp=Z,220nm,5.8s						
KDJ	Kajisay	36.50	71	eP		P	21 01 32.3 -0.6
	comp=Z,14nm,0.4s						
KDJ	Kajisay	36.50	71	P		P	21 01 32.3 -0.6
KDJ				pmax		pmax	
	comp=Z,14nm,0.5s						
SPITS	Spitsbergen Ar	37.74	356	LR		LR	21 18 34.4
	comp=Z,526nm,18.1s,baz=180,slow=38						
KOWA	Kowa	38.23	236	P		P	21 01 48.0 +0.5
	comp=Z,8.2nm,0.9s,baz=350,slow=6.1,SNR=2.0						
NVS	Novosibirsk	38.62	50	eP		P	21 01 50.9 +0.5
NVS				eS		S	21 07 52.1 +5.4
NVS				pmax		pmax	
	comp=Z,20nm,1.5s						
NVS				pmax		pmax	
	comp=N,11nm,1.8s						
NVS				pmax		pmax	
	comp=E,5.0nm,1.4s						
NVS				smax		smax	
	comp=N,13nm,1.9s						
MAKZ	Makanchi	38.79	63	eP		P	21 01 51.7 -0.3
	comp=N,13nm,1.6s						
MAKZ	Makanchi	38.79	63	eP		P	21 01 51.7 -0.3
MAKZ				pmax		pmax	
	comp=Z,13nm,1.6s						
SCO	Scoresbysund	38.93	336	i P		P	21 01 59.6 +6.8
SCO	Scoresbysund	38.93	336	eP		P	21 01 59.6 +6.8
MK31	Makanchi Array	39.00	63	eP		P	21 01 53.4 -0.3
MK31	Makanchi Array	39.00	63	eP		P	21 01 53.4 -0.3
MKAR	Makanchi Array	39.00	63	P		P	21 01 53.8 0.0
	comp=Z,2.4nm,0.5s,baz=272,slow=7.5,SNR=35						
MKAR				LR		LR	21 21 54.2
	comp=Z,268nm,18.0s,baz=251,slow=42						
MKAR	Makanchi Array	39.00	63	eP		P	21 01 53.4 -0.3
	comp=Z,24nm,0.6s						
MK01	Makanchi Array	39.01	63	eP		P	21 01 53.4 -0.4
ZAA0	Zalesovo Array	39.60	51	eP		P	21 01 58.1 -0.5
	comp=Z,23nm,1.6s						
ZALV	Zalesovo Beam	39.60	51	P		P	21 01 58.2 -0.4
	comp=Z,2.3nm,0.5s,baz=270,slow=9.5,SNR=10						
ZALV	Zalesovo Beam	39.60	51	eP		P	21 01 57.7 -0.9
DAG	Danmarks Havn	41.06	345	i P		P	21 02 09.7 -0.7
DAG	Danmarks Havn	41.06	345	eP		P	21 02 09.7 -0.7
NRIK	Noril'sk	41.82	27	P		P	21 02 17.4 +0.6
	comp=Z,1.2nm,0.3s,baz=259,slow=11,SNR=4.7						
NRIK				LR		LR	21 21 32.1
	comp=Z,657nm,18.8s,baz=256,slow=39						
WMQ	Urumqi	43.44	65	P		P	21 02 30.8 +0.5
WMQ				pP		sP	21 02 36.0 +2.3
WMQ				LR		LR	
	comp=Z,1μm,19.5s						
WMQ				LR		LR	
	comp=Z,620nm,22.1s						
WMQ				LR		LR	
	comp=Z,780nm,19.5s						
DBIC	Dimbokro	44.87	230	P		P	21 02 41.5 -0.5
	comp=Z,17nm,1.1s,baz=9.9,slow=6.6,SNR=5.4						
DBIC				LR		LR	21 22 29.8
	comp=Z,235nm,21.1s,baz=2.5,slow=38						
DBIC	Dimbokro	44.87	230	eP		P	21 02 41.3 -0.7
	comp=Z,47nm,0.9s						
TIC	Toumodi	44.99	230	eP		P	21 02 46.5 +3.6
KIC	Kosan Boka	45.06	229	eP		P	21 02 47.2 +3.7
	comp=Z,133nm,1.1s						
LIC	Lamto	45.33	230	eP		P	21 02 49.4 +3.8
	comp=Z,201nm,1.0s						
SFJD	Kangerlussuaq	48.83	329	LR		LR	21 24 43.5
	comp=Z,257nm,18.8s,baz=92,slow=37						
TLY	Talaya	51.21	51	eP		P	21 03 32.7 +2.0
TLY				pmax		pmax	
	comp=Z,13nm,1.6s						
TLY				MLR		MLR	
	comp=Z,247nm,14.0s						
GTA	Gaotai	53.51	66	⇑P		P	21 03 47.4 -0.6
GTA				pP		sP	21 03 52.3 +0.8
GTA				sP		pP	21 03 54.9 +4.4
GTA				S		S	21 11 17.7 -3.4
GTA				pmax		pmax	
	comp=Z,3.0nm,1.4s						
GTA				pmax		pmax	
	comp=Z,86nm,4.8s						
GTA				LR		LR	
	comp=Z,240nm,18.4s						
GTA				LR		LR	
	comp=Z,190nm,17.5s						
GTA				LR		LR	
	comp=Z,380nm,20.0s						
SONA1	Songino Array	54.29	54	eP		P	21 03 53.2 -0.4
SONM	Songino Array	54.29	54	P		P	21 03 53.4 -0.2
	comp=Z,0.9nm,0.7s,baz=278,slow=4.1,SNR=9.5						
SONM				LR		LR	21 31 03.9
	comp=Z,322nm,18.8s,baz=290,slow=40						
TIXI	Tiksi	55.08	22	eP		P	21 03 59.6 +0.8
	comp=Z,8.5nm,1.1s						
TIXI	Tiksi	55.08	22	⇓ i iP		P	21 04 00.4 +1.6
TIXI				pmax		pmax	
	comp=Z,3.0nm,0.8s						
LZH	Lanzhou	57.88	68	eP		P	21 04 18.2 -1.4
LZH				pmax		pmax	
	comp=Z,17nm,1.2s						
SCHQ	Schefferville	60.34	318	LR		LR	21 30 11.7
	comp=Z,171nm,19.2s,baz=74,slow=36						
CD2	Chengdu	60.48	73	P		P	21 04 36.1 -1.4
CD2				pmax		pmax	
	comp=Z,20nm,0.5s						
HHC	Hu-ho-hao-te	60.77	60	eP		P	21 04 39.1 -0.3
HHC				PP		PP	21 06 52.6 -0.3
HHC				S		S	21 12 57.5 +0.7
HHC				pmax		pmax	
	comp=Z,9.0nm,1.2s						
HHC				pmax		pmax	
	comp=Z,56nm,5.5s						
HHC				LR		LR	
	comp=Z,170nm,16.8s						
HHC				LR		LR	
	comp=Z,170nm,16.6s						
HHC				LR		LR	
	comp=Z,250nm,16.7s						
OPO	Ambohidratompo	61.76	159	P		P	21 04 47.8 +1.6
	comp=Z,5.5nm,1.0s,baz=31,slow=5.9,SNR=2.7						
XAN	Xi'an	62.50	68	P		P	21 04 50.1 -1.0
XAN				PP		PP	21 07 09.1 +0.8
XAN				pmax		pmax	
	comp=Z,5.0nm,0.9s						
XAN				pmax		pmax	
	comp=Z,82nm,8.3s						
XAN				LR		LR	
	comp=Z,270nm,15.1s						
XAN				LR		LR	
	comp=Z,270nm,12.6s						
XAN				LR		LR	
	comp=Z,200nm,21.6s						
KMI	Kunming	62.91	79	P		P	21 04 58.3 +4.1
KMI				pmax		pmax	
	comp=Z,8.0nm,0.8s						
KMI				pmax		pmax	
	comp=Z,93nm,4.4s						
KMI				LR		LR	
	comp=Z,180nm,20.1s						
KMI				LR		LR	
	comp=Z,180nm,21.5s						
KMI				LR		LR	
	comp=Z,180nm,26.8s						
CMAR	Chiang Mai Arr	63.94	88	P		P	21 04 59.5 -1.2
	comp=Z,1.6nm,1.0s,baz=292,slow=8.1,SNR=4.3						
CMAR				LR		LR	21 39 01.5
	comp=Z,150nm,18.1s,baz=284,slow=42						
GYA	Guiyang	65.06	76	eP		P	21 05 08.9 +0.7
GYA				pmax		pmax	
	comp=Z,10.0nm,1.0s						
BILL	Bilibino	67.02	16	eP		P	21 05 20.4 +0.5
BILL				e			21 05 48.5
BILL				e			21 07 44.6
BILL				ePPP		PPP	21 09 23.9
BILL				pmax		pmax	
	comp=Z,5.0nm,1.2s						
BILL				MLR		MLR	
	comp=Z,381nm,20.0s						
SEY	Seymchan	67.48	24	eP		P	21 05 22.7 -0.2
CN2	Changchun	67.82	51	eP		P	21 05 25.5 +0.1
CN2				pmax		pmax	
	comp=Z,10.0nm,0.7s						
CN2				LR		LR	
	comp=Z,290nm,14.0s						
CN2				LR		LR	
	comp=Z,350nm,14.0s						
CN2				LR		LR	
	comp=Z,260nm,16.0s						
KLR	Kul'dur	68.08	43	LR		LR	21 38 30.2
	comp=Z,44nm,18.3s,baz=308,slow=39						
KLR	Kul'dur	68.08	43	⇓ i iP		P	21 05 27.0 0.0
BOSA	Boshof	69.15	183	LR		LR	21 39 07.2
	comp=Z,156nm,18.7s,baz=355,slow=39						
MA2	Magadan	69.42	27	⇑ eP		P	21 05 35.8 +0.7
FCC	Fort Churchill	69.73	332	eP		P	21 05 37.3 +0.3
	comp=Z,6.4nm,0.9s						
FCC	Fort Churchill	69.73	332	eP		P	21 05 37.3 +0.3
FCC				pmax		pmax	
	comp=Z,6.0nm,0.9s						
INK	Inuvik	70.28	353	P		P	21 05 39.6 -0.6
	comp=Z,1.6nm,0.8s,baz=35,slow=6.8,SNR=3.1						
NJ2	Nanjing	70.50	64	eP		P	21 05 41.8 -0.4
NJ2				pmax		pmax	
	comp=Z,9.0nm,0.8s						
USRK	Ussuriysk Ar.	71.33	47	LR		LR	21 41 31.6
	comp=Z,220nm,19.0s,baz=304,slow=40						
YKA	Yellowknife Ar	72.70	343	P		P	21 05 55.5 +0.6
	comp=Z,2.0nm,0.9s,baz=26,slow=6.2,SNR=5.8						
YKA				LR		LR	21 38 58.2
	comp=Z,21nm,18.5s,baz=31,slow=37						
YKA	Yellowknife Ar	72.70	343	i P		P	21 05 55.0 +0.1
YKA				pmax		pmax	
	comp=Z,2.0nm,0.9s						
KS01	Wonju Array Si	73.12	55	eP		P	21 05 56.9 -1.0
KSAR	Wonju Array Be	73.14	55	P		P	21 05 57.4 -0.6
KSAR	Wonju Array Be	73.14	55	P		P	21 05 57.4 -0.6
KSRS	Korea Array	73.15	55	P		P	21 05 57.4 -0.7
	comp=Z,1.1nm,0.7s,baz=305,slow=4.3,SNR=5.5						
KSRS				LR		LR	21 43 09.6
	comp=Z,181nm,18.4s,baz=322,slow=40						
IM3	Indian Mountai	73.50	1	eP		P	21 05 59.8 +0.2
PSI	Prapat	73.83	101	LR		LR	21 41 57.9
	comp=Z,135nm,18.2s,baz=271,slow=39						
EGAK	Eagle	74.37	355	eP		P	21 06 07.2 +2.5
	comp=Z,10nm,1.1s						
MDM	Murphy Dome	74.49	358	eP		P	21 06 06.2 +0.7
	comp=Z,14nm,1.0s						
COLA	College	74.57	358	⇑ iP		P	21 06 06.7 +0.8
COLA				i AP		sP	21 06 09.7 +0.4
COLA				pmax		pmax	
	comp=Z,2.0nm,0.8s						
IL1	Eielson Array	74.64	358	eP		P	21 06 07.8 +1.4
ILAR	Eielson Array	74.64	358	P		P	21 06 07.6 +1.2
	comp=Z,0.6nm,0.7s,baz=353,slow=4.7,SNR=7.1						
ILAR				LR		LR	21 39 20.0
	comp=Z,133nm,21.2s,baz=352,slow=36						
CCB	Clear Creek Bu	74.79	358	eP		P	21 06 08.0 +0.8
	comp=Z,22nm,1.8s						
DAWY	Dawson	74.95	354	eP		P	21 06 09.0 +0.8
	comp=Z,16nm,1.2s						
WRH	Wood River Hil	74.98	358	eP		P	21 06 09.2 +0.9
	comp=Z,13nm,0.8s						
HDA	Harding Lake	75.01	358	eP		P	21 06 09.5 +1.0
	comp=Z,11nm,0.9s						
SCRK	Sand Creek	75.32	356	eP		P	21 06 12.6 +2.1
	comp=Z,6.6nm,1.0s						
BPAW	Bear Paw Mtn.	75.39	360	eP		P	21 06 10.9 +0.2
	comp=Z,7.3nm,0.9s						
FFC	Flin Flon	75.62	333	eP		P	21 06 12.1 -0.1
	comp=Z,6.9nm,0.9s						
FFC	Flin Flon	75.62	333	eP		P	21 06 12.1 -0.1
FFC				pmax		pmax	
	comp=Z,7.0nm,0.9s						
DOT	Dot Lake	75.65	356	eP		P	21 06 13.3 +1.0
	comp=Z,35nm,1.0s						
CAST	Castle Rocks	76.08	0	eP		P	21 06 15.4 +0.7
	comp=Z,11nm,0.8s						
PPLA	Purkeypile	76.60	0	eP		P	21 06 19.3 +1.5
	comp=Z,9.8nm,0.8s						
ULM	Lac du Bonnet	76.79	327	P		P	21 06 18.9 +0.1
	comp=Z,0.7nm,0.5s,baz=52,slow=4.4,SNR=2.4						
ULM				LR		LR	21 41 27.0
	comp=Z,344nm,19.0s,baz=33,slow=37						
ULM	Lac du Bonnet	76.79	327	P		P	21 06 19.0 +0.1
PETK	Petropavlovsk-	76.86	28	LR		LR	21 42 06.5
	comp=Z,392nm,20.5s,baz=325,slow=37						
ASAJ	Asahikawa	77.06	42	P		P	21 06 18.3 -2.2
	comp=Z,4.2nm,0.9s,baz=300,slow=14,SNR=2.9						
ASAJ				LR		LR	21 43 58.0
	comp=Z,381nm,18.1s,baz=338,slow=39						
SKT	Skwentna	77.52	360	eP		P	21 06 23.7 +0.9
	comp=Z,16nm,1.0s						
GHO	Glory Hole Cre	77.70	358	eP		P	21 06 24.4 +0.5
	comp=Z,13nm,0.8s						
JNU	Nakatsue	77.78	57	LR		LR	21 44 21.3
	comp=Z,190nm,20.2s,baz=304,slow=38						
SUA	Susitna One	78.04	359	eP		P	21 06 27.4 +1.5
	comp=Z,34nm,1.1s						
MJAR	Matsushiro Arr	79.95	50	P		P	21 06 36.0 -0.6
	comp=Z,0.7nm,0.5s,baz=296,slow=4.8,SNR=3.8						
MJAR				LR		LR	21 46 08.3
	comp=Z,146nm,18.3s,baz=325,slow=39						
JOW	Kunigami	80.16	63	LR		LR	21 50 52.7
	comp=Z,82nm,18.7s,baz=292,slow=42						
JHJ	Hachijo jima 2	83.26	52	LR		LR	21 45 20.3
	comp=Z,114nm,21.4s,baz=93,slow=37						
BOZ	Bozeman (W)	86.64	333	eP		P	21 07 11.5 +0.3
	comp=Z,9.3nm,1.1s						
BOZ	Bozeman (W)	86.64	333	eP		P	21 07 11.5 +0.3
BOZ				pmax		pmax	
	comp=Z,9.0nm,1.1s						
LEM	Lembang	86.68	102	LR		LR	21 48 06.9
	comp=Z,100nm,19.5s,baz=305,slow=37						
LRM	Limekiln Ridge	86.73	333	eP		P	21 07 12.1 +0.4
YPP	Pitchstone Pla	87.50	332	eP		P	21 07 16.3 +0.7
	comp=Z,30nm,1.5s						
FXWY	Fox Creek	88.13	332	eP		P	21 07 19.0 +0.5
	comp=Z,5.9nm,1.2s						
PDAR	Pinedale Array	88.34	330	P		P	21 07 18.3 -1.2
	comp=Z,0.5nm,0.7s,baz=70,slow=4.9,SNR=4.3						
PDAR				LR		LR	21 47 01.6
	comp=Z,234nm,21.3s,baz=40,slow=36						
HVU	Hansel Valley	90.38	332	eP		P	21 07 29.6 +0.6
	comp=Z,9.0nm,1.1s						
HVU	Hansel Valley	90.38	332	eP		P	21 07 29.6 +0.6
HVU				pmax		pmax	
	comp=Z,9.0nm,1.1s						
BGU	Big Grassy Mou	91.22	331	eP		P	21 07 33.5 +0.6
	comp=Z,7.7nm,1.1s						
YBH	Yreka Blue Hor	93.60	338	LR		LR	21 52 43.9
	comp=Z,173nm,18.8s,baz=356,slow=37						
PSUT	Pine Spring	93.63	331	eP		P	21 07 44.3 +0.2
	comp=Z,5.5nm,0.9s						
ANMO	Albuquerque	93.70	324	LR		LR	21 49 55.6
	comp=Z,248nm,21.0s,baz=40,slow=36						
YERR	Yerington	95.08	335	eP		P	21 07 51.3 +0.5
	comp=Z,9.5nm,1.1s						
NVAR	Mina Array Bea	95.28	334	LR		LR	21 52 19.8
	comp=Z,151nm,20.5s,baz=352,slow=36						
ROSC	El Rosal	96.08	282	LR		LR	21 51 07.3
	comp=Z,74nm,18.9s,baz=230,slow=35						
TXAR	Lajitas Array	97.02	319	LR		LR	21 52 39.9
	comp=Z,190nm,20.1s,baz=0.0,slow=36						

*CSEM **07** 20:55:06.4, 42°.43N×13°.29E, h16km, ML1.1/4*
ROM 07 20:55:06.4±0.1, 42°.432N±0°.004×13°.292E±0°.009, h16km±1km, ML1.2/3, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CAMP	Campotosto	0.14	40	P		Pb	20 55 10.6	-0.1
CAMP				S		Sb	20 55 13.3	-0.2
CAMP	Campotosto	0.14	40	P		Pb	20 55 10.6	-0.1
CAMP				S		Sb	20 55 13.3	-0.2
SMA1	SAN MARTINO	0.20	9	P		Pb	20 55 11.6	-0.2
SMA1				S		Sb	20 55 15.2	-0.2
SMA1	SAN MARTINO	0.20	9	P		Pb	20 55 11.6	-0.2
SMA1				S		Sb	20 55 15.2	-0.2
SMA1				AML		AML		
	comp=E,283μm,0.4s							
SMA1				AML		AML		
	comp=N,176μm,0.4s							
SMA1				AML		AML		
	comp=N,176μm,0.4s							
SMA1				AML		AML		
	comp=E,283μm,0.4s							
FIAM	Fiamignano	0.21	218	P		Pb	20 55 11.6	-0.3
FIAM				S		Sb	20 55 15.2	-0.3
FIAM	Fiamignano	0.21	218	P		Pg	20 55 11.6	+0.3
FIAM				S		Sb	20 55 15.2	-0.4
TERO	Teramo	0.30	50	P		Pg	20 55 12.0	-0.8
TERO				S		Sb	20 55 17.8	-0.4
TERO	Teramo	0.30	50	P		Pg	20 55 12.9	+0.2
TERO				S		Sb	20 55 17.8	-0.4
TERO				AML		AML		
	comp=E,9μm,0.3s							
TERO				AML		AML		
	comp=N,8μm,0.5s							
TERO				AML		AML		
	comp=E,9μm,0.3s							
TERO				AML		AML		
	comp=N,8μm,0.5s							
NRCA	Norcia	0.42	342	P		Pg	20 55 14.9	-0.1
NRCA				S		Sg	20 55 21.2	+0.4
NRCA	Norcia	0.42	342	P		Pg	20 55 14.9	-0.1
NRCA				S		Sg	20 55 21.2	+0.4
NRCA				AML		AML		
	comp=E,54μm,1.2s							
NRCA				AML		AML		
	comp=N,27μm,0.8s							
NRCA				AML		AML		
	comp=E,54μm,1.2s							
NRCA				AML		AML		
	comp=N,27μm,0.8s							

*ISCJB **07** 20:58:59.5±0.8, 44°.78N±0°.04×10°.96E±0°.04, h19km±4km, Error ellipse: s-maj=7.8km s-min=4.4km az=23.9*
*ROM **07** 20:58:59.7±0.0, 44°.877N±0°.001×11°.014E±0°.001, h3km, ML2.7/11*
*CSEM **07** 20:59:00.6±0.2, 44°.88N×11°.00E, h5km, ML2.7, Error ellipse: s-maj=5.5km s-min=4.2km az=77.0*
ISC 07 20:59:00.6±0.9, 44°.87N±0°.03×11°.01E±0°.02, h12km±5km, n66, σ0=82/84, 4C-6D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
T0818	Loc. Fossa, Co	0.07	15	⇓ i iP		Pg	20 59 02.1	-1.0
T0818	Loc. Fossa, Co	0.07	15	i P		Pg	20 59 02.1	-1.0
T0828	Loc. Fossoli,	0.08	238	eP		Pg	20 59 02.5	-0.7
T0828				i S		Sg	20 59 05.6	+0.6
T0828	Loc. Fossoli,	0.08	238	eP		Pg	20 59 02.5	-0.7
T0828				i S		Sg	20 59 05.6	+0.6
NDIM	Novi di Modena	0.08	282	AML		AML		
	comp=E,5150μm,1.0s							
NDIM				AML		AML		
	comp=E,5150μm,1.0s							
NDIM				AML		AML		
	comp=N,6265μm,0.2s							
NDIM				AML		AML		
	comp=

NDIM				AML	AML	
	comp=N,6260μm,0.2s					
NDIM				AML	AML	
	comp=N,6295μm,0.2s					
T0814	**Loc. Cortile,**	**0.08**	**198** ⇓	*i*P	**Pg**	**20 59 02.7 -0.5**
T0814	**Loc. Cortile,**	**0.08**	**198**	*i* P	**Pg**	**20 59 02.7 -0.5**
T0827	**Moglia (MN)**	**0.09**	**322** ⇓	*i*P	**Pg**	**20 59 02.6 -0.7**
T0827				*e*S	**Sg**	**20 59 05.8 +0.6**
T0827	**Moglia (MN)**	**0.09**	**322**	*i* P	**Pg**	**20 59 02.6 -0.7**
T0827				*e*S	**Sg**	**20 59 05.8 +0.6**
T0802	**SanFelice sul**	**0.12**	**88**	*e*P	**Pg**	**20 59 03.7 -0.1**
T0802				*i* S	**Sg**	**20 59 07.7 +1.7**
T0802	**SanFelice sul**	**0.12**	**88**	*e*P	**Pg**	**20 59 03.7 -0.1**
T0802				*i* S	**Sg**	**20 59 07.7 +1.7**
T0824	**Loc. Limidi di**	**0.12**	**206** ⇓	*i*P	**Pg**	**20 59 03.6 -0.1**
T0824	**Loc. Limidi di**	**0.12**	**206**	*i* P	**Pg**	**20 59 03.6 -0.1**
T0813	**Massa Finalese**	**0.14**	**87** ⇑	*i*P	**Pg**	**20 59 03.5 -0.5**
T0813				*i* S	**Sg**	**20 59 07.5 +1.1**
T0813	**Massa Finalese**	**0.14**	**87**	*i* P	**Pg**	**20 59 03.5 -0.5**
T0813				*i* S	**Sg**	**20 59 07.5 +1.1**
RAVA	**Ravarino**	**0.14**	**145** ⇓	*i*P	**Pg**	**20 59 03.7 -0.3**
RAVA	**Ravarino**	**0.14**	**145**	*i* P	**Pg**	**20 59 03.7 -0.3**
RAVA				AML	AML	
	comp=E,10205μm,0.2s					
RAVA				AML	AML	
	comp=N,10800μm,0.3s					
RAVA				AML	AML	
	comp=E,10195μm,0.2s					
RAVA				AML	AML	
	comp=N,10800μm,0.3s					
RAVA				AML	AML	
	comp=N,10800μm,0.3s					
RAVA				AML	AML	
	comp=E,10195μm,0.2s					
T0826	**Rio Saliceto (**	**0.14**	**257**	*e*P	**Pg**	**20 59 03.7 -0.3**
T0826				*i* S	**Sg**	**20 59 07.7 +1.3**
T0826	**Rio Saliceto (**	**0.14**	**257**	*e*P	**Pg**	**20 59 03.7 -0.3**
T0826				*i* S	**Sg**	**20 59 07.7 +1.3**
T0812	**Loc. Stoppiaro**	**0.15**	**56**	*e*P	**Pg**	**20 59 03.4 -0.8**
T0812	**Loc. Stoppiaro**	**0.15**	**56**	*e*P	**Pg**	**20 59 03.4 -0.8**
T0825	**Gonzaga (MN)**	**0.15**	**312**	*e*P	**Pg**	**20 59 04.3 +0.1**
T0825				*i* S	**Sg**	**20 59 09.5 +2.8**
T0825	**Gonzaga (MN)**	**0.15**	**312**	*e*P	**Pg**	**20 59 04.3 +0.1**
T0825				*i* S	**Sg**	**20 59 09.4 +2.8**
T0825				AML	AML	
	comp=E,8315μm,0.3s					
T0825				AML	AML	
	comp=N,7385μm,1.1s					
T0825				AML	AML	
	comp=E,8315μm,0.3s					
T0825				AML	AML	
	comp=N,7385μm,1.1s					
T0825				AML	AML	
	comp=E,8315μm,0.3s					
T0825				AML	AML	
	comp=N,7385μm,1.1s					
T0800	**Massa Finalese**	**0.17**	**97**	*e*P	**Pg**	**20 59 03.9 -0.6**
T0800				*i* S	**Sg**	**20 59 08.3 +1.0**
T0800	**Massa Finalese**	**0.17**	**97**	*e*P	**Pg**	**20 59 03.9 -0.6**
T0800				*i* S	**Sg**	**20 59 08.3 +1.0**
T0800				AML	AML	
	comp=E,16550μm,0.2s					
T0800				AML	AML	
	comp=N,10595μm,0.2s					
T0800				AML	AML	
	comp=E,17250μm,0.2s					
T0800				AML	AML	
	comp=N,7330μm,0.6s					
T0800				AML	AML	
	comp=E,16550μm,0.2s					
T0800				AML	AML	
	comp=N,10605μm,0.2s					
T0800				AML	AML	
	comp=E,17200μm,0.2s					
T0800				AML	AML	
	comp=N,7330μm,0.6s					
T0800				AML	AML	
	comp=N,10605μm,0.2s					
T0800				AML	AML	
	comp=E,17200μm,0.2s					
T0800				AML	AML	
	comp=N,7330μm,0.6s					
T0800				AML	AML	
	comp=E,16550μm,0.2s					
T0811	**Palata Pepoli**	**0.18**	**119**	*e*P	**Pg**	**20 59 04.2 -0.4**
T0811				*i* S	**Sg**	**20 59 08.8 +1.4**
T0811	**Palata Pepoli**	**0.18**	**119**	*e*P	**Pg**	**20 59 04.2 -0.4**
T0811				*i* S	**Sg**	**20 59 08.8 +1.4**
SBPO	**S.Benedetto Po**	**0.19**	**341**	*e*P	**Pg**	**20 59 04.9 +0.1**
SBPO	**S.Benedetto Po**	**0.19**	**341**	*e*P	**Pg**	**20 59 04.9 +0.1**
SBPO				AML	AML	
	comp=E,1720μm,0.4s					
SBPO				AML	AML	
	comp=N,9970μm,1.4s					
SBPO				AML	AML	
	comp=E,1720μm,0.4s					
SBPO				AML	AML	
	comp=N,9965μm,1.4s					
SBPO				AML	AML	
	comp=N,9965μm,1.4s					
SBPO				AML	AML	
	comp=E,1720μm,0.4s					
NOVE	**Novellara**	**0.22**	**251**	AML	AML	
	comp=E,597μm,0.9s					
NOVE				AML	AML	
	comp=E,598μm,0.9s					
NOVE				AML	AML	
	comp=N,885μm,1.0s					
NOVE				AML	AML	
	comp=E,597μm,0.9s					
NOVE				AML	AML	
	comp=N,882μm,1.0s					
NOVE				AML	AML	
	comp=N,882μm,1.0s					
T0805	**Bondeno (FE)**	**0.23**	**78**	*e*P	**Pg**	**20 59 04.9 -0.6**
T0805	**Bondeno (FE)**	**0.23**	**78**	*e*P	**Pg**	**20 59 04.9 -0.6**
T0822	**Casumaru (Bond**	**0.24**	**99**	*e*P	**Pg**	**20 59 05.2 -0.5**
T0822				*i* S	**Sg**	**20 59 10.5 +1.3**
T0822	**Casumaru (Bond**	**0.24**	**99**	*e*P	**Pg**	**20 59 05.2 -0.5**
T0822				*i* S	**Sg**	**20 59 10.5 +1.3**
T0822				AML	AML	
	comp=E,1880μm,0.7s					
T0822				AML	AML	
	comp=N,1660μm,0.7s					
GAZZ	**Gazzo Veronese**	**0.25**	**15**	*e*Pg	**Pg**	**20 59 06.3 +0.5**
GAZZ	**Gazzo Veronese**	**0.25**	**15**	*e*Pg	**Pg**	**20 59 06.3 +0.5**
T0803	**Dosso, Cento (**	**0.27**	**113** ⇑	*e*P	**Pg**	**20 59 05.7 -0.4**
T0803	**Dosso, Cento (**	**0.27**	**113**	*e*P	**Pg**	**20 59 05.7 -0.4**
T0823	**Castello D'Arg**	**0.27**	**134**	*e*P	**Pg**	**20 59 06.3 +0.1**
T0823	**Castello D'Arg**	**0.27**	**134**	*e*P	**Pg**	**20 59 06.3 +0.1**
T0817	**Loc. Veratica,**	**0.34**	**69**	*e*P	**Pg**	**20 59 07.7 +0.2**
T0817	**Loc. Veratica,**	**0.34**	**69**	*e*P	**Pg**	**20 59 07.7 +0.2**
TEOL	**Teolo**	**0.68**	**44**	*e*Pg	**Pg**	**20 59 14.0 +0.2**
TEOL	**Teolo**	**0.68**	**44**	*e*P	**Pg**	**20 59 13.4 -0.4**
TEOL	**Teolo**	**0.68**	**44**	*e*Pg	**Pg**	**20 59 14.0 +0.2**
TEOL	**Teolo**	**0.68**	**44**	*e*P	**Pg**	**20 59 13.4 -0.4**
TEOL				AML	AML	
	comp=E,631μm,0.3s					
TEOL				AML	AML	
	comp=N,503μm,0.3s					
TEOL				AML	AML	
	comp=N,503μm,0.3s					
TEOL				AML	AML	
	comp=E,631μm,0.3s					
ADRI	**Adria, Italy**	**0.74**	**77**	*e*Pg	**Pb**	**20 59 15.8 +0.5**
ADRI				*e*Sg	**Sn**	**20 59 27.5 -0.4**
ADRI	**Adria, Italy**	**0.74**	**77**	*e*Pg	**Pb**	**20 59 15.9 +0.5**
ADRI				*e*Sg	**Sn**	**20 59 27.5 -0.4**
ROVR	**Rover¯¤ Verone**	**0.78**	**3**	AML	AML	
	comp=E,259μm,0.9s					
ROVR				AML	AML	
	comp=E,259μm,0.9s					
ROVR				AML	AML	
	comp=N,554μm,0.3s					
ROVR				AML	AML	
	comp=N,554μm,0.3s					
MARN	**Marana (Italy)**	**0.78**	**11** ⇓	*e*Pg	**Pg**	**20 59 15.6 -0.1**
MARN				*e*Sg	**Sn**	**20 59 28.9 -0.2**
MARN	**Marana (Italy)**	**0.78**	**11**	*e*Pg	**Pg**	**20 59 15.6 -0.1**
MARN				*e*Sg	**Sn**	**20 59 28.9 -0.2**
SALO	**Salr**	**0.82**	**336**	*e*P	**Pn**	**20 59 17.7 -0.3**
SALO	**Salr**	**0.82**	**336**	*e*P	**Pn**	**20 59 17.7 -0.3**
SALO				AML	AML	
	comp=E,260μm,0.8s					
SALO				AML	AML	
	comp=N,346μm,1.0s					
SALO				AML	AML	
	comp=N,346μm,1.0s					
SALO				AML	AML	
	comp=E,260μm,0.8s					
POPM	**Popiglio**	**0.84**	**192**	AML	AML	
	comp=E,98μm,0.7s					
POPM				AML	AML	
	comp=E,98μm,0.7s					
POPM				AML	AML	
	comp=N,188μm,0.5s					
POPM				AML	AML	
	comp=N,188μm,0.5s					
MAGA	**Magasa**	**0.94**	**344**	*e*P	**Pg**	**20 59 18.6 -0.2**
MAGA	**Magasa**	**0.94**	**344**	*e*P	**Pg**	**20 59 18.6 -0.2**
MAGA				AML	AML	
	comp=E,968μm,0.4s					
MAGA				AML	AML	
	comp=N,1090μm,0.5s					
MAGA				AML	AML	
	comp=N,1090μm,0.5s					
MAGA				AML	AML	
	comp=E,968μm,0.4s					
DOSS	**Dosso del Somm**	**1.02**	**7** ⇑	*e*Pg	**Pg**	**20 59 19.6 -0.6**
DOSS				*e*Sg	**Sn**	**20 59 35.0 -0.2**
DOSS	**Dosso del Somm**	**1.02**	**7**	*e*Pg	**Pg**	**20 59 19.6 -0.6**
DOSS				*e*Sg	**Sn**	**20 59 35.0 -0.2**
CGRP	**Cima Grappa**	**1.15**	**29** ⇑	*e*Pg	**Pb**	**20 59 21.7 -0.9**
CGRP	**Cima Grappa**	**1.15**	**29**	*e*Pg	**Pb**	**20 59 21.7 -0.9**
OZOL	**Ozolo**	**1.53**	**1**	*e*Pg	**Pn**	**20 59 27.6 -0.4**
OZOL	**Ozolo**	**1.53**	**1**	*e*Pg	**Pn**	**20 59 27.5 -0.4**
CARE	**Lago del Cares**	**1.57**	**352**	*e*Pg	**Pn**	**20 59 27.5 -1.1**
CARE	**Lago del Cares**	**1.57**	**352**	*e*Pg	**Pn**	**20 59 27.5 -1.1**
ABSI	**Aberstueckl**	**1.87**	**7**	AML	AML	
	comp=E,152μm,0.7s					
ABSI				AML	AML	
	comp=E,152μm,0.7s					
ABSI				AML	AML	
	comp=N,120μm,0.8s					
ABSI				AML	AML	
	comp=N,120μm,0.8s					
ROSI	**Rosskopf**	**2.08**	**8**	AML	AML	
	comp=E,70μm,1.1s					
ROSI				AML	AML	
	comp=E,70μm,1.1s					
ROSI				AML	AML	
	comp=N,113μm,1.3s					
ROSI				AML	AML	
	comp=N,113μm,1.3s					

*CSEM **07** 20:59:56.7, 44°.86N×11°.03E, h8km, MD1.9/4*
ROM 07 20:59:56.7±0.2, **44°.859N**±0°.007×**11°.028E**±0°.006,
h8km, Md1.9/4, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0802	**SanFelice sul**	**0.11**	**82**	P	Pg	21 00 01.6	+2.4
T0802				S	Sg	21 00 05.3	+4.3
T0802	**SanFelice sul**	**0.11**	**82**	P	Pg	21 00 01.6	+2.3
T0802				S	Sg	21 00 05.3	+4.3
RAVA	**Ravarino**	**0.12**	**148**	P	Pg	21 00 01.9	+2.5
RAVA				S	Sg	21 00 06.1	+4.8
RAVA	**Ravarino**	**0.12**	**148**	P	Pg	21 00 01.9	+2.5
RAVA				S	Sg	21 00 06.1	+4.9
RAVA				AML	AML		
	comp=E,2220μm,0.8s						
RAVA				AML	AML		
	comp=N,2685μm,0.8s						
RAVA				END			
RAVA				END			
RAVA				END			
RAVA				END			
T0826	**Rio Saliceto (**	**0.16**	**263**	P	Pg	21 00 01.9	+1.9
T0826				S	Sg	21 00 06.0	+3.8
T0826	**Rio Saliceto (**	**0.16**	**263**	P	Pg	21 00 01.9	+1.9
T0826				S	Sg	21 00 06.0	+3.8
T0800	**Massa Finalese**	**0.16**	**94**	P	Pg	21 00 02.2	+2.2
T0800				S	Sg	21 00 06.8	+4.6
T0800	**Massa Finalese**	**0.16**	**94**	P	Pg	21 00 02.2	+2.2
T0800				S	Sg	21 00 06.8	+4.5
T0800				AML	AML		
	comp=E,3630μm,0.2s						
T0800				AML	AML		
	comp=N,2530μm,0.2s						
T0800				AML	AML		
	comp=E,4095μm,0.2s						
T0800				AML	AML		
	comp=N,2015μm,0.2s						
T0800				END			
T0800				END			
T0800				END			
T0800				END			
T0825	**Gonzaga (MN)**	**0.17**	**311**	P	Pg	21 00 02.7	+2.4
T0825				S	Sg	21 00 07.5	+4.8
T0825	**Gonzaga (MN)**	**0.17**	**311**	P	Pg	21 00 02.7	+2.4
T0825				S	Sg	21 00 07.5	+4.7
T0825				AML	AML		
	comp=E,2715μm,1.2s						
T0825				AML	AML		
	comp=N,1885μm,0.5s						
SBPO	**S.Benedetto Po**	**0.21**	**338**	P	Pg	21 00 03.5	+2.6
SBPO	**S.Benedetto Po**	**0.21**	**338**	P	Pg	21 00 03.5	+2.6
SBPO				AML	AML		
	comp=E,658μm,0.3s						
SBPO				AML	AML		
	comp=N,1800μm,0.4s						
SBPO				END			
T0805	**Bondeno (FE)**	**0.22**	**74**	P	Pg	21 00 03.1	+2.0
T0805	**Bondeno (FE)**	**0.22**	**74**	P	Pg	21 00 03.1	+2.0
T0822	**Casumaru (Bond**	**0.23**	**97**	P	Pg	21 00 03.5	+2.2
T0822				S	Sg	21 00 08.8	+4.5
T0822	**Casumaru (Bond**	**0.23**	**97**	P	Pg	21 00 03.5	+2.2
T0822				S	Sg	21 00 08.8	+4.4
T0822				END			
T0822				END			
T0822				END			
T0822				END			
NOVE	**Novellara**	**0.23**	**255**	P	Pg	21 00 03.4	+2.1
NOVE				S	Sg	21 00 08.9	+4.5
NOVE	**Novellara**	**0.23**	**255**	P	Pg	21 00 03.4	+2.0
NOVE				S	Sg	21 00 08.9	+4.5
NOVE				END			
NOVE				END			
NOVE				END			
NOVE				END			
SERM	**Sermide**	**0.24**	**51**	P	Pg	21 00 03.5	+1.9
SERM	**Sermide**	**0.24**	**51**	P	Pg	21 00 03.5	+1.9
SALO	**Salr**	**0.84**	**335**	AML	AML		
	comp=N,232μm,0.8s						
SALO				AML	AML		
	comp=E,192μm,0.3s						

*SOME **07** 21:02:00.5, 39°.57N×77°.08E, h10km*
*KRNET **07** 21:02:01.0±0.1, 39°.65N×77°.12E, mb3.3*
*NNC **07** 21:02:00.8±4.9, 39°.64N×77°.13E, h0km, mb3.8, mpv3.5,*
Error ellipse: s-maj=37.0km s-min=18.3km az=144.0
ISC 07 21:02:04.9±1.6, **39°.68N**±0°.07×**77°.23E**±0°.05, **h10km, n28,**
σ2§25/48, 18C-15D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**0.98**	**261**	Pg	**Pn**	**21 02 24.1**	**-0.8**
KSH				Sg	**Sn**	**21 02 43.4**	**+4.5**
KSH				smax	smax		
	comp=N,470nm,0.6s						
KSH				smax	smax		
	comp=E,300nm,0.4s						
NRN	**Naryn**	**1.99**	**332** ⇑	*i*P	**Pn**	**21 02 37.4**	**-1.5**
	baz=34						
NRN				⇑*i*S	**Sn**	**21 03 04.3**	**+0.2**
	baz=34						
TARG	**Taragay, Kyrgy**	**2.10**	**12** ⇓	*i*P	**Pn**	**21 02 40.0**	**-0.5**
	baz=14						
TARG				⇓*i*S	**Sb**	**21 03 08.9**	**-0.7**
	baz=14						
KDJ	**Kajisay**	**2.45**	**359** ⇑	*i*P	**Pn**	**21 02 45.1**	**-0.1**
	baz=1.0						
KDJ				⇑*i*S	**Sn**	**21 03 17.2**	**+1.9**
	baz=1.0						
ULHL	**Ulahol**	**2.67**	**344** ⇓	*i*P	**Pn**	**21 02 48.0**	**-0.3**
	baz=46						
ULHL				⇓*i*S	**Sn**	**21 03 22.0**	**+1.2**
	baz=46						
KZA	**Kyzart**	**2.83**	**329** ⇓	*i*P	**Pn**	**21 02 49.8**	**-0.8**
	baz=30						
KZA				⇓*i*S	**Sn**	**21 03 25.0**	**+0.1**
	baz=30						
SFK	**Sufi-Kurgan**	**2.88**	**278** ⇑	Pg	**Pn**	**21 02 50.8**	**-0.4**
	comp=E,6.5nm,0.3s						
SFK				⇑Lg	Lg	21 03 29.8	
	comp=E,42nm,0.3s						
SFK	**Sufi-Kurgan**	**2.88**	**278** ⇑	*i*P	**Pn**	**21 02 49.3**	**-1.9**
	baz=79						
SFK				⇑*i*S	**Sn**	**21 03 24.8**	**-1.3**
	baz=79						
PRZ	**Przheval'sk**	**2.94**	**17** ⇓	*i*P	**Pn**	**21 02 52.0**	**+0.1**
	baz=19						
PRZ				⇓*i*S	**Sn**	**21 03 28.8**	**+1.4**
	baz=19						
BOOM	**Boomskoye usch**	**2.98**	**341** ⇑	*e*P	**Pn**	**21 02 51.9**	**-0.5**
	baz=43						
BOOM				⇑*i*S	**Sn**	**21 03 29.0**	**+0.8**
	baz=43						
IZV	**Izvestkoviy**	**3.39**	**352**	*e*P	**Pb**	**21 03 04.0**	**-1.2**
	comp=E,6.8nm,0.3s						
IZV				*e*S	**Sb**	**21 03 49.9**	**+3.3**
	comp=E,90nm,0.6s						
TKM2	**Tokmak 2**	**3.47**	**340** ⇑	Pg	**Pn**	**21 03 00.8**	**+1.7**
	comp=E,2.3nm,0.3s						
TKM2				⇓Lg	Lg	21 03 51.9	
	comp=E,14nm,0.6s						
MDOK	**Medeo**	**3.49**	**358**	Pg	**Pb**	**21 03 06.2**	**-0.7**
	comp=E,5.6nm,0.4s						
MDOK				Lg	Lg	21 03 53.6	
	comp=E,43nm,0.6s						
KST	**Kastek**	**3.50**	**345** ⇓	*i*P	**Pb**	**21 03 05.9**	**-1.1**
	comp=E,6.6nm,0.3s						
KST				⇑*i*S	**Sb**	**21 03 52.9**	**+3.4**
	comp=E,25nm,0.5s						
MTBS	**Maitube**	**3.50**	**350**	*e*P	**Pb**	**21 03 05.9**	**-1.2**
	comp=E,3.1nm,0.1s						
MTBS				⇑*i*S	**Sb**	**21 03 53.2**	**+3.5**
	comp=E,30nm,0.3s						
KNDC	**Almaty**	**3.54**	**357**	⇓Pg	**Pb**	**21 03 08.8**	**+1.0**
	comp=E,7.5nm,0.4s						
KNDC				⇑Lg	Lg	21 03 56.2	
	comp=E,24nm,0.3s						
KOTS	**Kotyrbulak**	**3.56**	**359**	*e*P	**Pb**	**21 03 07.1**	**-0.9**
	comp=E,4.3nm,0.5s						
KOTS				*e*S	**Sb**	**21 03 54.9**	**+3.6**
	comp=E,86nm,0.5s						
AAK	**Ala-Archa**	**3.61**	**326** ⇓	Pg	**Pb**	**21 03 07.1**	**-1.8**
	comp=E,5.9nm,0.4s						
AAK				⇓Lg	Lg	21 03 54.8	
	comp=E,18nm,0.5s						
DGS	**Degeres**	**3.73**	**343**	*e*P	**Pb**	**21 03 10.6**	**-0.3**
	comp=E,2.9nm,0.3s						
DGS				*e*S	**Sg**	**21 04 01.1**	**-3.5**
	comp=E,25nm,0.5s						
KURS	**Kuram**	**3.87**	**10**	*e*P	**Pb**	**21 03 13.2**	**-0.2**
	comp=E,5.2nm,0.8s						
KURS				*e*S	**Sg**	**21 04 05.6**	**-3.7**
	comp=E,9.8nm,0.5s						
PDGK	**Podgornoye**	**4.03**	**24** ⇓	Pg	**Pb**	**21 03 14.9**	**-1.1**
	comp=E,12nm,0.4s						
PDGK				⇑Lg	Lg	21 04 10.1	
	comp=E,31nm,0.9s						
KTBS	**Karatobe**	**4.05**	**354**	*e*P	**Pb**	**21 03 15.4**	**-1.1**
	comp=E,2.4nm,0.3s						
KTBS				*e*S	**Sb**	**21 04 09.4**	**+3.9**
	comp=E,43nm,0.3s						
MRKS	**Merke**	**4.30**	**317**	*e*P	**Pb**	**21 03 19.6**	**-1.1**
	comp=E,14nm,0.3s						
MRKS				⇑*i*S	**Sb**	**21 04 16.7**	**+4.0**
	comp=E,9.2nm,0.4s						
KTMS	**Ketmen**	**4.44**	**31**	*e*P	**Pb**	**21 03 21.9**	**-1.1**
	comp=E,4.9nm,0.3s						
KTMS				*e*S	**Sb**	**21 04 20.4**	**+3.8**
	comp=E,15nm,0.7s						
MNBS	**Baschi**	**4.49**	**11**	*e*P	**Pb**	**21 03 23.8**	**-0.1**
	comp=E,6.3nm,0.4s						
MNBS				*e*S	**Sg**	**21 04 23.8**	**-5.2**
	comp=E,22nm,0.4s						
MNAS	**Manas**	**4.54**	**310** ⇑	Pg	**Pb**	**21 03 23.7**	**-1.1**
	comp=E,3.8nm,0.4s						
MNAS				⇑Lg	Lg	21 04 24.9	
	comp=E,6.9nm,0.7s						
ARXS	**Arharly**	**4.56**	**5**	*e*P	**Pb**	**21 03 24.6**	**-0.4**
	comp=E,2.8nm,0.4s						
ARXS				*e*S	**Sb**	**21 04 25.1**	**+5.1**
	comp=E,27nm,0.6s						
KK31	**Karatay Array**	**6.10**	**306**	Pg	**Pb**	**21 03 51.0**	**-0.3**
	comp=E,0.7nm,0.3s,baz=124,slow=17,SNR=9.3						
KK31				⇓Lg	Lg	21 05 16.7	
	comp=E,3.8nm,0.7s,baz=115,slow=29						

*ISCJB **07** 21:10:12.3±0.4, 30°.48S±0°.04×178°.1W±0°.1, h46km,*
mb4.3/14, MS3.5/3, Error ellipse: s-maj=17.4km
s-min=3.5km az=17.3
*NEIC **07** 21:10:12.7±0.5, 30°.43S×177°.73W, h35km, mb4.6/3, Error*
ellipse: s-maj=15.8km s-min=10.3km az=107.0
*WEL **07** 21:10:12.0, 30°.43S×177°.73W, h35km, ML5.3/2*
*IDC **07** 21:10:14.3±1.8, 30°.25S×177°.77W, h43km±14km, mb4.2/11,*
mb1 4.4/11, mb1mx4.0/47, mbtmp4.4/11, MS3.6/3,
Ms1 3.6/3, ms1mx3.1/49, Error ellipse: s-maj=20.4km
s-min=13.5km az=103.0
ISC 07 21:10:14.3±0.5, **30°.38S**±0°.05×**177°.9W**±0°.1, **h46km, n61,**
σ1§97/71, mb4.4/14, MS3.6/3, 1D, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**1.11**	**360**	P	**Pn**	**21 10 30.9**	**-2.6**
GLKZ				P	**Sn**	**21 10 43.7**	**-4.0**
RAO	**Raoul Island**	**1.12**	**360**	P	**Pn**	**21 10 31.4**	**-2.2**
	648nm,0.3s,baz=68,slow=14,SNR=11						
RAO				S	**Sn**	**21 10 45.3**	**-2.7**
	4μm,0.3s,baz=67,slow=23,SNR=25						
RAO	**Raoul Island**	**1.12**	**360**	*e*Pn	**Pn**	**21 10 31.2**	**-2.5**
RAO				*e*Sn	**Sn**	**21 10 47.4**	**-0.6**
RIZ	**Raoul Island**	**1.13**	**359**	P	**Pn**	**21 10 31.4**	**-2.3**
RIZ				P	**Sn**	**21 10 44.9**	**-3.2**
MXZ	**Matakaoa Point**	**7.82**	**203**	S	**Sn**	**21 13 29.7**	**-2.9**
WMGZ	**Waiomatatini S**	**8.02**	**201**	P	**Pn**	**21 12 06.4**	**-1.8**
WMGZ				S	**Sn**	**21 13 37.4**	**-0.2**
HAZ	**Te Kaha**	**8.18**	**205**	P	**Pn**	**21 12 08.4**	**-2.0**
HAZ				S	**Sn**	**21 13 40.6**	**-0.8**
PKGZ	**Pakihiroa**	**8.19**	**203**	P	**Pn**	**21 12 07.3**	**-3.4**
PKGZ				S	**Sn**	**21 13 39.0**	**-2.9**
PUZ	**Puketiti**	**8.30**	**201**	P	**Pn**	**21 12 09.5**	**-2.6**
PUZ				S	**Sn**	**21 13 40.4**	**-4.1**
RUGZ	**Raukumara Rang**	**8.40**	**205**	P	**Pn**	**21 12 11.2**	**-2.3**
RUGZ				S	**Sn**	**21 13 46.0**	**-1.1**
CNGZ	**Carnagh Statio**	**8.69**	**201**	P	**Pn**	**21 12 15.1**	**-2.4**
MWZ	**Matawai**	**8.78**	**204**	P	**Pn**	**21 12 15.3**	**-3.5**
MWZ				S	**Sn**	**21 13 53.3**	**-3.0**
URZ	**Urewera**	**8.87**	**206**	P	**Pn**	**21 12 15.5**	**-4.3**
	1.1nm,0.3s,baz=266,slow=4.6,SNR=12						
URZ				S	**Sn**	**21 13 56.3**	**-2.1**
	8.7nm,0.3s,baz=200,slow=14,SNR=11						
URZ	**Urewera**	**8.87**	**206**	P	**Pn**	**21 12 17.3**	**-2.6**
URZ				S	**Sn**	**21 13 56.1**	**-2.3**
RAGZ	**Rawiri**	**8.97**	**204**	P	**Pn**	**21 12 18.9**	**-2.3**
RAGZ				S	**Sn**	**21 13 58.0**	**-2.9**
SNGZ	**Shannon Statio**	**9.25**	**204**	P	**Pn**	**21 12 22.9**	**-2.2**
SNGZ				S	**Sn**	**21 14 05.1**	**-2.6**
RPZ	**Rata Peaks**	**15.94**	**210**	P	**Pn**	**21 13 53.9**	**-1.5**
	1.0nm,0.3s,baz=3.6,slow=16,SNR=3.3						
RPZ				S	Sn	21 16 35.9	-15
	0.6nm,0.3s,baz=14,slow=4.2,SNR=3.5						
TBI	**Tubuai**	**26.28**	**81**	*e*T	T	21 43 12.6	
	26nm,0.3s						
PAE	**Paea**	**28.72**	**70**	*e*T	T	21 46 18.8	
	7.3nm,0.3s						
VAH	**Vaihoa**	**31.60**	**68**	*e*T	T	21 49 54.6	
	36nm,0.2s						
CTA	**Charters Tower**	**33.87**	**279**	P	**P**	**21 16 55.1**	**+2.4**
	29nm,0.6s,baz=103,slow=11,SNR=46						
CTAO	**Charters Tower**	**33.87**	**279**	*e*P	**P**	**21 16 54.9**	**+2.2**
	4.8nm,0.4s						
STKA	**

3.4nm,0.4s,baz=105,slow=7.3,SNR=61
ASAR ScP **ScP** 21 23 48.1 +0.8
0.3nm,0.6s,baz=114,slow=3.9,SNR=3.9
ASAR LR LR 21 35 51.7
comp=Z,75nm,19.0s,baz=86,slow=36
WRAB Tennant Creek 44.17 272 *e*P **P** 21 18 19.0 +0.1
1.3nm,0.5s
WRA Warramunga Arr 44.17 272 P **P** 21 18 19.1 +0.2
14nm,0.5s,baz=110,slow=8.1,SNR=235
VNDA Vanda 48.12 186 P **P** 21 18 49.7 +0.6
0.6nm,0.8s,baz=0.0,slow=5.1,SNR=3.2
FITZ Fitzroy Crossi 52.44 270 P **P** 21 19 23.9 +1.3
5.3nm,0.7s,baz=157,slow=9.3,SNR=13
QSPA South Pole Qui 59.73 180 P **P** 21 20 16.5 +2.3
2.2nm,0.7s,baz=7.5,slow=3.7,SNR=11
QSPA South Pole Qui 59.73 180 *e*P **P** 21 20 14.0 -0.2
4.0nm,0.6s
MAW Mawson 72.35 201 P **P** 21 21 35.6 +0.7
3.6nm,0.8s,baz=139,slow=10.0,SNR=8.5
SNAA Sanae 78.17 178 P **P** 21 22 08.9 +0.4
VNA3 Neumayer Olymp 78.32 176 P **P** 21 22 09.5 +0.3
VNA2 Neumayer--Watz 78.75 177 P **P** 21 22 12.6 +1.0
slow=4.7
VNA1 Neumayer--Stat 78.98 177 P **P** 21 22 13.2 +0.4
PETK Petropavlovsk- 85.81 346 P **P** 21 22 48.6 +0.2
4.4nm,0.8s,baz=126,slow=7.5,SNR=4.0
NVAR Mina Array Bea 88.17 43 P **P** 21 23 01.1 +0.5
1.0nm,0.8s,baz=227,slow=9.5,SNR=5.8
KLR Kul'dur 91.06 330 P **P** 21 23 14.2 +0.7
0.1nm,0.6s,baz=95,slow=3.9,SNR=3.1
TXAR Lajitas Array 92.31 57 P **P** 21 23 20.7 +0.8
0.8nm,1.1s,baz=289,slow=7.8,SNR=3.5
CMAR Chiang Mai Arr 93.47 289 P **P** 21 23 27.8 +2.4
0.4nm,0.7s,baz=116,slow=2.1,SNR=3.0
WCI Wyandotte Cave 109.23 56 *e*PKP **PKiKP** 21 28 41.8 +2.5
MKAR Makanchi Array 117.82 310 PKP **PKPdf** 21 28 54.3 -1.1
1.0nm,0.6s,baz=221,slow=1.4,SNR=16
ZALV Zalesovo Beam 118.07 318 PKP **PKPdf** 21 28 54.1 -1.5
0.5nm,0.4s,baz=213,slow=2.3,SNR=3.9
KURK Kurchatov 121.09 314 PKP **PKPdf** 21 29 00.5 -1.0
KURBB Kurchatov Arra 121.13 314 PKP **PKPdf** 21 29 00.5 -1.1
3.3nm,0.6s,baz=109,slow=1.8,SNR=36
AAK Ala-Archa 122.17 304 PKP **PKPdf** 21 29 04.0 -0.1
1.6nm,0.4s,baz=225,slow=4.3,SNR=2.6
BVAR Borovoye Array 126.44 316 PKP **PKPdf** 21 29 11.7 0.0
3.2nm,0.6s,baz=107,slow=0.7,SNR=30
AKTO Aktyubinsk 134.14 312 PKP **PKPdf** 21 29 26.4 0.0
1.7nm,0.7s,baz=112,slow=5.1,SNR=5.7
ARCES ARCESS Array B 138.59 348 PKhKP PKPpre 21 29 29.2
3.3nm,1.0s,baz=62,slow=2.3,SNR=3.9
FINES FINESS Array B 145.15 340 PKPbc **PKPbc** 21 29 44.8 -0.9
14nm,0.5s,baz=56,slow=3.8,SNR=167
KBZ Khabaz 145.16 304 PKPbc **PKPdf** 21 29 46.6 0.0
1.9nm,0.7s,baz=190,slow=1.7,SNR=5.0
NB2 NORSAR Subarra148.74 351 PKP **PKPbc** 21 29 55.2 -0.8
comp=Z,1.8nm,0.7s,baz=16,slow=2.7
NOA NORSAR Array B 148.74 351 PKPbc **PKPbc** 21 29 54.9 -1.1
comp=Z,3.1nm,0.8s,baz=345,slow=1.9,SNR=6.1
HFS Hagfors 149.24 349 PKPbc **PKPbc** 21 29 56.4 -0.8
comp=Z,5.0nm,0.7s,baz=105,slow=1.6,SNR=16
AKASG Malin Array Be 151.33 323 PKPbc **PKPbc** 21 30 01.9 -0.6
comp=Z,7.7nm,0.6s,baz=50,slow=2.9,SNR=28
MMAI Mount Meron Ar 151.60 284 PKPbc **PKPbc** 21 30 04.4 +0.6
comp=Z,2.1nm,0.4s,baz=78,slow=7.5,SNR=12
BRTR Keskin Array B 152.66 299 PKPbc **PKPbc** 21 30 05.5 -0.5
comp=Z,2.1nm,0.9s,baz=132,slow=4.5,SNR=7.5
CLL Collm 157.57 342 ∥PKPab **PKPab** 21 30 36.5 -0.7
GERES GERESS Array B 159.55 338 PKPab **PKPab** 21 30 45.7 -0.3
comp=Z,0.3nm,0.6s,baz=36,slow=5.1,SNR=2.9
TORD Torodi Ar. Bea 162.85 179 PKPab **PKPab** 21 31 01.5 +0.5
comp=Z,1.1nm,0.5s,baz=166,slow=3.5,SNR=6.7

NNC 07 21:11:45.4±2.4, 37°.02N×70°.71E, h0km, mb3.6, mpv3.2, 2C-5D, Error ellipse: s-maj=21.5km s-min=17.0km az=134.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.70**	**35**	⇓P	Pn	21 12 44.6	+0.5
SFK	1.1nm,0.2s			⇑S	Sn	21 13 29.6	+1.1
MNAS	**Manas**	**5.63**	**14**	⇓P	Pn	21 13 09.7	-0.7
MNAS	2.2nm,0.7s			⇓S	Sn	21 14 16.4	+0.5
KK31	**Karatay Array**	**6.07**	**359**	P	Pn	21 13 17.0	+0.6
KK31	1.3nm,0.5s			⇓S	Sn	21 14 28.2	+1.6
AAK	**Ala-Archa**	**6.32**	**26**	⇓P	Pn	21 13 19.3	-0.7
AAK	0.9nm,0.3s			⇑S	Sn	21 14 35.2	+2.3
	1.8nm,0.7s						

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*NIED **07** 21:13:00, 35°.40N×140°.10E, h44km, Mw3.9 Best double couple: M_0=7.26000×10^14 NP1:ϕ_s=350.00000°, δ72.00000°, λ162.00000°. NP2:ϕ_s=86.00000°, δ73.00000°, λ19.00000°.*
*ISCJB **07** 21:13:33.5±0.5, 35°.37N±0°.04×140°.15E±0°.07, h54km±4km, mb4.0/14, MS3.9/1, Error ellipse: s-maj=9.6km s-min=5.6km az=157.5*
*NEIC **07** 21:13:34.7±0.7, 35°.44N×140°.22E, h47km±7km, mb4.4/1, Error ellipse: s-maj=10.9km s-min=7.6km az=76.0*
*IDC **07** 21:13:34.8±1.9, 35°.44N×140°.25E, h47km±16km, mb3.8/12, mb1 3.8/16, mb1mx3.5/68, mbtmp4.0/16, ML3.3/3, MS3.8/1, Ms1 3.8/1, ms1mx2.5/72, Error ellipse: s-maj=28.4km s-min=10.8km az=61.0*
*JMA **07** 21:13:35.0±0.1, 35°.42N×140°.00E, h42km±2km, M3.5 Broadband fault plane solution: P waves. NP1: ϕ_s179.00000°, δ87.00000°, λ-170.00000°. NP2: ϕ_s88.00000°, δ80.00000°, λ-3.00000°. Principal axes: T Plg5.0000°, Azm313.0000°; N Plg80.0000°, Azm194.0000°; P Plg9.0000°, Azm44.0000°;*
JMA Felt II J1.

ISC 07 21:13:35.1±1.0, 35°.38N±0°.06×140°.07E±0°.07, h46km±10km, n39, σ1^{s}14/35, mb4.0/14, 4C-2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCN	**Nagara**	**0.12**	**69**	⇑P	Pn	21 13 42.6	+0.1
TOK	**Tokyo**	**0.40**	**321**	P	Pn	21 13 44.4	-0.4
BSO3	**Boso 3**	**0.68**	**147**	⇑P	Pn	21 13 48.5	+0.4
BSO3				X		21 13 59.1	
JOD2	**Odawara 2**	**0.81**	**262**	⇓P	Pn	21 13 49.2	-0.9
JOD2				S	Sn	21 13 59.2	-1.9
JIM2	**Oshima 3**	**0.84**	**219**	P	Pn	21 13 49.7	-0.8
JYT	**Yasato**	**0.86**	**7**	⇓P	Pn	21 13 49.9	-0.9
JRY	**Ryogami san**	**1.14**	**304**	⇑P	Pn	21 13 53.8	-0.9
JAG	**Ashikaga**	**1.16**	**335**	⇑P	Pn	21 13 54.1	-0.8
MJAR	**Matsushiro Arr**	**1.90**	**308**	P	Pn	21 14 04.9	-0.2
	35nm,0.3s,baz=153,slow=13,SNR=21						
MJAR				S	Sn	21 14 29.3	+1.5
	25nm,0.3s,baz=134,slow=16,SNR=7.6						
MJAR				LR	LR	21 15 14.4	
	comp=Z,128nm,20.9s,baz=100,slow=51						
MAJO	**Matsushiro**	**1.91**	**308**	*e*Pn	Pn	21 14 04.8	-0.3
MAT	**Matsushiro**	**1.91**	**308**	P	Pn	21 14 05.0	-0.1
MAT				S	Sn	21 14 29.0	+1.1
JHJ	**Hachijo jima 2**	**2.26**	**186**	P	Pn	21 14 10.5	+0.5
	61nm,0.3s,baz=285,slow=22,SNR=15						
JHJ				S	Sn	21 14 35.5	-1.1
	120nm,0.3s,baz=224,slow=22,SNR=24						
ERM	**Erimo**	**7.06**	**19**	Pn	Pn	21 15 14.2	-1.5
CBIJ	**Chichi jima**	**8.45**	**167**	P	Pn	21 15 34.8	-0.1
JCJ	**Chichijima**	**8.45**	**167**	P	Pn	21 15 34.8	-0.2
	9.8nm,0.3s,baz=278,slow=19,SNR=4.4						
ASAJ	**Asahikawa**	**8.95**	**12**	P	Pn	21 15 40.1	-1.4
	0.3nm,0.3s,baz=207,slow=13,SNR=3.4						
KSRS	**Korea Array**	**10.00**	**286**	P	Pn	21 15 59.5	+3.5
	0.1nm,0.3s,baz=300,slow=12,SNR=3.4						
KSAR	**Wonju Array Be**	**10.03**	**285**	P	Pn	21 15 59.5	+3.1
H11N2	**WAKE ISLAND Hy 28.32 116**			T	T	21 48 54.2	
	baz=308,slow=75,SNR=17						
H11N1	**WAKE ISLAND Hy 28.32 116**			T	T	21 49 04.9	
	baz=308,slow=75,SNR=15						
H11N3	**WAKE ISLAND Hy 28.33 116**			T	T	21 48 59.5	
	baz=308,slow=75,SNR=13						
H11S3	**WAKE ISLAND Hy 28.95 119**			T	T	21 49 49.4	
	baz=310,slow=76,SNR=8.4						
H11S1	**WAKE ISLAND Hy 28.95 119**			T	T	21 49 49.9	
	baz=310,slow=76,SNR=6.0						
H11S2	**WAKE ISLAND Hy 28.97 119**			T	T	21 49 52.8	
	baz=310,slow=76,SNR=7.9						
ZALV	**Zalesovo Beam**	**42.25**	**314**	P	**P**	**21 21 23.6**	**+0.1**
	1.3nm,0.4s,baz=95,slow=6.3,SNR=7.3						
MKAR	**Makanchi Array**	**44.10**	**303**	P	**P**	**21 21 38.5**	**-0.1**
	1.7nm,0.7s,baz=87,slow=10,SNR=19						
KURK	**Kurchatov**	**46.11**	**309**	*e*P	**P**	**21 21 54.0**	**-0.5**
	3.2nm,0.6s						
KURBB	**Kurchatov Arra**	**46.18**	**309**	P	**P**	**21 21 55.2**	**+0.2**
	8.8nm,0.6s,baz=84,slow=7.6,SNR=104						
BVAR	**Borovoye Array**	**50.89**	**313**	P	**P**	**21 22 31.1**	**-0.1**
	1.1nm,0.5s,baz=72,slow=7.0,SNR=9.4						
ILAR	**Eielson Array**	**51.48**	**32**	P	P	21 22 40.0	+4.6
	0.2nm,0.5s,baz=278,slow=6.9,SNR=3.2						
WRA	**Warramunga Arr**	**55.28**	**187**	P	**P**	**21 23 03.5**	**-0.3**
	0.8nm,0.6s,baz=1.2,slow=7.5,SNR=7.7						
AKTO	**Aktyubinsk**	**58.99**	**312**	P	**P**	**21 23 29.0**	**-0.7**
	0.6nm,0.3s,baz=63,slow=13,SNR=3.2						
ASAR	**Alice Springs**	**59.01**	**187**	P	**P**	**21 23 30.9**	**+0.8**
	0.2nm,0.4s,baz=23,slow=11,SNR=4.3						
ARCES	**ARCESS Array B**	**65.16**	**339**	P	**P**	**21 24 10.5**	**-0.4**
	3.0nm,0.9s,baz=50,slow=7.4,SNR=3.8						
FINES	**FINESS Array B**	**69.77**	**332**	P	**P**	**21 24 39.9**	**-0.1**
	0.7nm,0.4s,baz=70,slow=6.4,SNR=8.6						
NWAO	**Narrogin (SRO)**	**71.24**	**200**	LR	LR	22 01 16.3	
	comp=Z,58nm,18.0s,baz=241,slow=40						
AKASG	**Malin Array Be**	**74.94**	**322**	P	**P**	**21 25 10.8**	**-0.2**
	0.8nm,0.4s,baz=50,slow=5.9,SNR=3.7						
HFS	**Hagfors**	**75.14**	**335**	P	**P**	**21 25 11.4**	**-0.6**
	0.4nm,0.4s,baz=4.1,slow=6.1,SNR=4.7						
NOA	**NORSAR Array B**	**75.29**	**337**	P	**P**	**21 25 13.2**	**+0.3**
	2.3nm,0.8s,baz=39,slow=4.6,SNR=4.2						

IDC 07 21:25:50.4±3.3, 5°.71S×152°.57E, h0km, mb3.6/2, mb1 4.0/3, mb1mx3.4/50, mbtmp3.8/3, ML2.3/1, Error ellipse: s-maj=146.9km s-min=44.5km az=127.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.49**	**235**	Pn	Pn	21 27 28.0	+0.7
	4.1nm,0.3s,baz=82,slow=14,SNR=5.7						
PMG				Sn	Sn	21 28 36.6	-5.5
	1.2nm,0.3s,baz=0.0,slow=20,SNR=3.4						
WRA	**Warramunga Arr**	**22.67**	**230**	P	P	21 30 53.4	-0.2
	1.8nm,1.0s,baz=55,slow=11,SNR=6.3						
ASAR	**Alice Springs**	**25.32**	**223**	P	P	21 31 19.0	-0.1
	1.1nm,0.6s,baz=44,slow=10,SNR=11						
TORD	**Torodi Ar. Bea**	**150.35**	**287**	PKPbc	PKPbc	21 45 44.6	-0.3
	1.0nm,0.8s,baz=69,slow=2.7,SNR=5.5						

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*ISCJB **07** 21:41:42.7±0.5, 22°.42N±0°.03×121°.52E±0°.03, h20km±5km, Error ellipse: s-maj=4.9km s-min=3.9km az=40.0*
*TAP **07** 21:41:43.8, 22°.43N×121°.42E, h27km, ML3.1, C*
*JMA **07** 21:41:45.4±0.1, 22°.61N×121°.46E, h23km, M3.0*

ISC 07 21:41:43.7±1.0, 22°.44N±0°.03×121°.43E±0°.03, h27km±11km, n48, σ0^{s}79/68, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTN	**Taitung**	**0.41**	**321**	*e*P	**Pb**	**21 41 53.2**	**+0.7**
	baz=326						
TTN				*e*S	**Sn**	**21 42 00.2**	**-0.3**
	baz=326						
LAY	**Lan-yu**	**0.41**	**164**	P	**Pb**	**21 41 52.0**	**-0.5**
	baz=155						
ECL	**Taimali**	**0.47**	**290**	P	**Pb**	**21 41 53.0**	**-0.4**
	baz=291						
ECL				S	**Sb**	**21 42 00.2**	**+0.2**
	baz=291						
TWGBT	**Beinan**	**0.50**	**320**	P	**Pb**	**21 41 53.9**	**0.0**
	baz=307						
TAW	**Tawu**	**0.50**	**261**	*e*P	**Pb**	**21 41 53.2**	**-0.7**
	baz=260						
TWG	**Pinlang**	**0.50**	**319**	*e*P	**Pb**	**21 41 54.0**	**-0.1**
	baz=307						
CHKT	**Chengkung**	**0.66**	**355**	*e*P	**Pb**	**21 41 56.2**	**-0.5**
	baz=3.0						
CHKT				*e*S	**Sb**	**21 42 05.0**	**-0.5**
	baz=3.0						
TSEB	**Hengchuen, Pin**	**0.72**	**223**	*e*S	**Sb**	**21 42 08.3**	**+1.1**
	baz=232						
SCZT	**Fangliau**	**0.75**	**265**	*e*P	**Pb**	**21 41 57.5**	**-0.6**
	baz=265						
TWKBT	**Hengchun**	**0.75**	**229**	*e*P	**Pb**	**21 41 58.0**	**-0.2**
	baz=228						
TWKBT				S	**Sb**	**21 42 07.9**	**-0.2**
	baz=228						
MASBT	**Mashibuluo**	**0.76**	**283**	P	**Pb**	**21 41 57.5**	**-0.8**
	baz=283						
TWK1	**Hengchun**	**0.76**	**230**	*e*P	**Pb**	**21 41 57.8**	**-0.4**
	baz=228						
TWK1				S	**Sb**	**21 42 07.7**	**-0.5**
	baz=228						
FULB	**Fuli**	**0.77**	**351**	*e*P	**Pb**	**21 41 57.7**	**-0.7**
	baz=337						
FULB				*e*S	**Sn**	**21 42 08.8**	**-0.7**
	baz=337						
HEN	**Hengchun**	**0.77**	**236**	*e*P	**Pb**	**21 41 59.4**	**+1.0**
	baz=229						
HEN				*e*S	**Sb**	**21 42 08.0**	**-0.5**
	baz=229						
SSD	**Sandimen**	**0.80**	**293**	*e*P	**Pb**	**21 41 58.0**	**-0.9**
	baz=299						
ELDTW	**Lidau**	**0.84**	**333**	*e*P	**Pb**	**21 41 58.9**	**-0.8**
	baz=334						
SLGT	**Liugui**	**0.91**	**308**	*e*P	**Pb**	**21 42 00.9**	**+0.1**
	baz=304						
TWF1	**Yuli**	**0.92**	**353**	*e*P	**Pn**	**21 42 01.0**	**+0.1**
	baz=341						
STYT	**Tauyuan**	**0.95**	**320**	*e*P	**Pb**	**21 42 00.9**	**-0.6**
	baz=328						
YULB	**Yu-li**	**0.96**	**353**	*e*P	**Pb**	**21 42 00.2**	**-1.4**
	baz=342						
SGST	**Jiashian**	**1.01**	**310**	*e*P	**Pb**	**21 42 03.1**	**+0.5**
	baz=315						
HGSD	**Ruisui**	**1.05**	**360**	*e*P	**Pn**	**21 42 01.8**	**-0.9**
	baz=11						
WTP	**Ta-pu**	**1.10**	**317**	P	**Pb**	**21 42 04.3**	**+0.2**
	baz=326						
CHN1	**Nanshi**	**1.11**	**312**	*e*P	**Pb**	**21 42 05.0**	**+0.7**
	baz=312						
TPUB	**Ta-pu**	**1.13**	**320**	*e*P	**Pb**	**21 42 04.7**	**+0.1**
	baz=327						
CHN4	**Tsaushan**	**1.19**	**320**	P	**Pb**	**21 42 06.3**	**+0.7**
	baz=325						
TWK	**Hsinying**	**1.20**	**314**	*e*P	**Pb**	**21 42 06.0**	**+0.2**
	baz=314						
ALS	**Alishan**	**1.21**	**332**	*e*P	**Pb**	**21 42 05.8**	**-0.4**
	baz=332						
EGFH	**Guangfu**	**1.23**	**0**	*e*P	**Pn**	**21 42 05.2**	**+0.1**
	baz=348						
VWDT	**VWDT**	**1.34**	**349**	*e*P	**Pn**	**21 42 06.6**	**0.0**
	baz=2.0						
VWDT				*e*S	**Sb**	**21 42 24.0**	**-0.8**
	baz=2.0						
ESL	**Shilin**	**1.37**	**0**	*e*P	**Pn**	**21 42 07.0**	**-0.1**
	baz=350						
SSLB	**Suanglung**	**1.41**	**342**	*e*P	**Pb**	**21 42 08.8**	**-0.6**
	baz=351						
ENLB	**Shoufeng**	**1.47**	**6**	*e*P	**Pn**	**21 42 08.0**	**-0.4**
	baz=18						
SMLT	**Sun Moon Lake**	**1.52**	**341**	*e*P	**Pb**	**21 42 11.2**	**-0.1**
	baz=350						
SMLT				S	**Sb**	**21 42 32.0**	**+1.9**
	baz=350						
TYC	**Yuchr**	**1.55**	**340**	P	**Pb**	**21 42 11.9**	**+0.1**
	baz=341						
TYC				*e*S	**Sb**	**21 42 32.3**	**+1.3**
	baz=341						
NACB	**Ninganchiao**	**1.73**	**5**	P	**Pn**	**21 42 12.0**	**-0.1**
	baz=355						
WDGT	**Dungji**	**1.82**	**297**	*e*P	**Pn**	**21 42 13.7**	**+0.4**
	baz=296						
NNSB	**Datong**	**1.98**	**359**	*e*P	**Pn**	**21 42 16.8**	**+1.2**
	baz=11						
PHUB	**P'eng-hu**	**2.02**	**302**	*e*P	**Pn**	**21 42 16.1**	**+0.2**
	baz=303						
PHUB				*e*S	**Sn**	**21 42 39.7**	**-0.6**
	baz=303						
JYNG	**Yonagunijimaku**	**2.44**	**35**	P	**Pn**	**21 42 23.3**	**+1.5**
JYNG				*e*S	**Sn**	**21 42 49.3**	**-1.5**
YOJ	**Yonaguni jima**	**2.48**	**36**	P	**Pn**	**21 42 23.7**	**+1.3**
YOJ				*e*S	**Sn**	**21 42 52.6**	**+0.7**
HATJ	**Hateruma jima**	**2.72**	**53**	P	**Pn**	**21 42 26.1**	**+0.5**
HATJ				*e*S	**Sn**	**21 42 56.8**	**-0.8**
IRIF	**Iriomote-Funau**	**2.84**	**48**	P	**Pn**	**21 42 28.0**	**+0.8**
IRIF				S	**Sn**	**21 43 01.2**	**+0.7**
JKRS	**Kuro-shima**	**2.97**	**52**	P	**Pn**	**21 42 30.2**	**+1.1**
JKRS				*e*S	**Sn**	**21 43 03.4**	**-0.5**
JIJ	**Ishigaki jima**	**3.15**	**52**	P	**Pn**	**21 42 32.5**	**+1.0**
JIJ				S	**Sn**	**21 43 06.7**	**-1.5**
JISG	**Ishigakijimahi**	**3.40**	**50**	P	**Pn**	**21 42 35.7**	**+0.7**
JISG				S	**Sn**	**21 43 13.5**	**-1.0**
JTJ	**Tarama**	**3.72**	**53**	P	**Pn**	**21 42 40.4**	**+1.0**
JTJ				*e*S	**Sn**	**21 43 21.3**	**-1.1**
JIRB	**Irabujima**	**4.18**	**55**	P	**Pn**	**21 42 46.7**	**+1.0**
JIRB				*e*S	**Sn**	**21 43 33.1**	**-0.6**

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*IDC **07** 21:51:45.5±2.1, 7°.67S×128°.48E, h130km±22km, mb3.3/3, mb1 3.7/8, mb1mx3.3/52, mbtmp4.1/8, Error ellipse: s-maj=29.3km s-min=17.5km az=79.0*

ISC 07 21:51:45.9±0.9, 7°.91S±0°.07×128°.48E±0°.09, h150km, n8, σ3^{s}35/12, mb3.3/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.28**	**244**	P	**Pn**	**21 53 04.5**	**+1.5**
	26nm,0.3s,baz=101,slow=2.3,SNR=23						
BATI				S	**Sn**	**21 54 00.1**	**-3.1**
	66nm,0.3s,baz=77,slow=21,SNR=19						
SIJI	**Sorong**	**7.53**	**22**	P	**Pn**	**21 53 30.3**	**-2.8**
	2.9nm,0.3s,baz=12,slow=23,SNR=29						
FITZ	**Fitzroy Crossi**	**10.50**	**195**	P	**Pn**	**21 54 14.2**	**+1.7**
	1.8nm,0.3s,baz=30,slow=11,SNR=23						
FITZ				S	**Sn**	**21 56 04.3**	**-4.4**
	3.5nm,0.3s,baz=72,slow=17,SNR=9.4						
WRA	**Warramunga Arr**	**13.24**	**155**	P	**Pn**	**21 54 49.7**	**+1.4**
	0.7nm,0.3s,baz=342,slow=13,SNR=29						
WRA				S	**Sn**	**21 57 10.0**	**-4.9**
	1.0nm,0.3s,baz=330,slow=23,SNR=8.8						
ASAR	**Alice Springs**	**16.51**	**162**	P	**Pn**	**21 55 32.7**	**+3.8**
	0.4nm,0.3s,baz=334,slow=10,SNR=22						
ASAR				S	**S**	**21 58 31.6**	**-0.9**
	0.3nm,0.3s,baz=325,slow=17,SNR=8.6						
STKA	**Stephens Creek**	**26.79**	**155**	P	**P**	**21 57 16.2**	**+4.2**
	1.5nm,0.5s,baz=317,slow=11,SNR=5.8						
MKAR	**Makanchi Array**	**68.17**	**328**	P	**P**	**22 02 30.1**	**+0.1**
	0.2nm,0.4s,baz=121,slow=5.6,SNR=5.1						
KURBB	**Kurchatov Arra**	**72.50**	**329**	P	**P**	**22 02 57.1**	**+0.9**
	0.3nm,0.5s,baz=128,slow=4.7,SNR=4.4						

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*ISCJB **07** 21:54:52.9±0.9, 14°.81N±0°.08×93°.86W±0°.04, h33km, mb3.7/4, MS3.5/11, Error ellipse: s-maj=11.2km s-min=6.1km az=3.4*
*NEIC **07** 21:54:53.0±0.0, 14°.77N×93°.84W, h8km, MD4.2(MEX), After MEX.*
*MEX **07** 21:54:53.0±0.3, 14°.77N×93°.84W, h8km±15km, MD4.2*
*IDC **07** 21:54:55.8±7.4, 15°.02N×93°.65W, h29km±52km, mb3.6/3, mb1 3.9/7, mb1mx3.6/48, mbtmp3.8/7, ML3.5/4, MS3.5/12, Ms1 3.5/12, ms1mx3.2/47, Error ellipse: s-maj=73.6km s-min=23.5km az=36.0*

ISC 07 21:54:55.3±1.1, 14°.8N±0°.1×93°.87W±0°.04, h33km, n27, σ2^{s}54/24, mb3.7/4, MS3.6/11, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.07**	**36**	*e*P	**Pn**	**21 55 11.1**	**-2.9**
PCIG				*e*S	**Sn**	**21 55 24.8**	**-2.9**
PCIG		**1.07**	**36**	*e*P	**Pn**	**21 55 11.1**	**-2.9**
PCIG				*e*S	**Sn**	**21 55 24.8**	**-2.9**
CCIG	**Comitan**	**2.20**	**49**	*e*P	**Pn**	**21 55 29.8**	**0.0**
CCIG				*e*S	**Sn**	**21 55 54.0**	**-2.0**
CCIG	**Comitan**	**2.20**	**49**	*e*P	**Pn**	**21 55 29.8**	**0.0**
CCIG				*e*S	**Sn**	**21 55 54.0**	**-2.0**
HUIG	**Huatulco**	**2.35**	**294**	*e*P	**Pn**	**21 55 29.5**	**-2.2**
HUIG				*i* S	**Sn**	**21 55 55.2**	**-4.3**
HUIG	**Huatulco**	**2.35**	**294**	*e*P	**Pn**	**21 55 29.5**	**-2.2**
HUIG				*i* S	**Sn**	**21 55 55.2**	**-4.3**
CMIG	**Matias Romero**	**2.45**	**337**	Pn	**Pn**	**21 55 31.4**	**-1.6**
	13nm,0.3s,baz=164,slow=12,SNR=41						
CMIG				Lg	Lg	21 55 59.7	
	40nm,0.3s,baz=151,slow=8.8,SNR=9.2						
CMIG				LR	LR	21 56 40.4	
	comp=Z,496nm,18.9s,baz=154,slow=44						
APG	**El Apazote**	**3.29**	**87**	Pn	**Pn**	**21 55 43.1**	**-1.7**
	1.4nm,0.3s,baz=268,slow=24,SNR=6.3						
APG				Lg	Lg	21 56 24.9	
	45nm,0.3s,baz=335,slow=18,SNR=9.2						
VHO	**Vista Hermosa**	**3.54**	**309**	*e*P	**Pn**	**21 55 46.6**	**-1.6**
VHO				*e*S	**Sn**	**21 56 28.9**	**-0.2**
VHO	**Vista Hermosa**	**3.54**	**309**	*e*P	**Pn**	**21 55 46.6**	**-1.6**
VHO				*e*S	**Sn**	**21 56 28.9**	**-0.2**
JTS	**JuntasAbangare**	**9.80**	**116**	Pn	**Pn**	**21 57 13.5**	**-0.6**
	0.6nm,0.3s,baz=65,slow=5.9,SNR=4.4						
JTS				Sn	Sn	21 59 11.8	+8.8
	0.3nm,0.3s,baz=231,slow=19,SNR=2.2						
TXAR	**Lajitas Array**	**17.04**	**330**	Pn	**Pn**	**21 58 53.4**	**+2.2**
	0.1nm,0.3s,baz=146,slow=14,SNR=9.3						
ANMO	**Albuquerque**	**23.01**	**333**	P	**P**	**22 00 03.1**	**+5.5**
	1.0nm,0.6s,baz=130,slow=12,SNR=3.6						
SDV	**Santo Domingo**	**23.48**	**102**	LR	LR	22 10 57.2	
	comp=Z,101nm,18.8s,baz=323,slow=41						
ATAH	**Atahualpa**	**26.68**	**144**	LR	LR	22 08 47.1	
	comp=Z,98nm,22.0s,baz=354,slow=31						
SJG	**San Juan**	**26.77**	**79**	LR	LR	22 10 27.3	
	comp=Z,60nm,21.2s,baz=264,slow=35						
NVAR	**Mina Array Bea**	**31.90**	**322**	P	**P**	**22 01 19.8**	**+1.8**
	1.0nm,0.8s,baz=136,slow=11,SNR=4.5						
YBH	**Yreka Blue Hor**	**36.60**	**323**	LR	LR	22 17 04.1	
	comp=Z,86nm,19.8s,baz=241,slow=36						
SCHQ	**Schefferville**	**45.10**	**22**	LR	LR	22 24 48.5	
	comp=Z,79nm,18.1s,baz=232,slow=40						
DLBC	**Dease Lake**	**51.17**	**337**	LR	LR	22 27 30.2	
	comp=Z,54nm,19.6s,baz=243,slow=

GNL	**Ganaly**	**3.46 270**	*eP*	Pn	22 02 01.4 +4.6
KRMR	**Karymshinskiy**	**3.53 256**	*eP*	Pn	22 02 01.7 +4.2
KRMR			*eS*	Sn	22 02 39.9 +2.0
MTVR	**Mutnovka**	**3.62 250**	*eS*	Sn	22 02 43.6 +3.0
ASAK	**Asacha**	**3.82 250**	*eP*	Pn	22 02 06.3 +4.6
KDTR	**Khodutka, Kamc**	**4.00 242**	*eP*	Pn	22 02 07.2 +3.2
KDTR			*eS*	Sn	22 02 50.0 +0.4

*ISCJB **07** 22:02:27.2±0.3, 2°.78N±0°.03×128°.94E±0°.04, h35km, mb4.4/43, MS3.8/6, Error ellipse: s-maj=5.8km s-min=4.3km az=175.7*
*DJA **07** 22:02:28.6±0.6, 3°N±4°×12°9E±°, h10km, M4.6/10, mb4.6/10, mB5.2/3, MLv4.7/7, Mw(mB)4.6/3*
*IDC **07** 22:02:29.4±4.0, 2°.71N×128°.62E, h39km±38km, mb4.1/22, mb1 4.1/23, mb1mx4.0/56, mbtmp4.3/23, ML3.7/1, MS3.3/5, Ms1 3.4/5, ms1mx2.9/57, Error ellipse: s-maj=26.1km s-min=11.2km az=86.0*
*BJI **07** 22:02:33.3, 2°.66N×128°.92E, h101km, mb4.5/41, mB4.9/25*
*NEIC **07** 22:02:34.0±1.1, 2°.66N×128°.73E, h86km±10km, mb4.5/14, Error ellipse: s-maj=10.3km s-min=5.2km az=77.0*

ISC 07 22:02:28.9±0.5, **2.74N**±0°.05×**128°.93E**±0°.07, **h35**km, **n91,** σ1§**80**/82, **mb4.5**/43, **MS3.8**/6, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.50**	**219**	*e*Pn	**Pn**	**22 03 08.8**	**+1.7**
SGSI	**Sangihe**	**3.52**	**286**	P	**Pn**	**22 03 19.5**	**-1.6**
SGSI				S	**Sn**	**22 04 04.5**	**+2.9**
LBMI	**Labuha**	**3.65**	**203**	P	**Pn**	**22 03 23.2**	**+0.3**
LBMI				S	**Sn**	**22 04 04.8**	**+0.1**
SIJI	**Sorong**	**4.28**	**147**	Pn	**Pn**	**22 03 32.6**	**+0.9**
	4.0nm,0.3s,baz=218,slow=22,SNR=22						
SIJI				Sn	**Sn**	**22 04 21.9**	**+1.5**
	1.8nm,0.3s,baz=181,slow=23,SNR=3.7						
KMSI	**Cibinong**	**5.39**	**247**	P	**Pn**	**22 03 48.7**	**+1.8**
DAV	**Davao City (W)**	**5.44**	**322**	LR	LR	22 05 21.1	
	comp=Z,158nm,18.5s,baz=20,slow=32						
LUWI	**Luwuk**	**7.21**	**239**	P	Pn	22 04 21.6	+10
MRSI	**Marisa**	**7.34**	**252**	P	**Pn**	**22 04 15.1**	**+1.5**
	62nm,1.1s,732nm0.2nm						
MPSI	**Mapaga**	**9.34**	**255**	P	**Pn**	**22 04 43.5**	**+2.4**
	14nm,0.9s,222nm						
MYLDM	**Lahad Datu**	**10.68**	**283**	*e*Pn	**Pn**	**22 05 03.3**	**+3.8**
TTSI	**Tana Toraja**	**10.77**	**238**	P	**Pn**	**22 04 58.8**	**-1.9**
	32nm,0.8s						
SPSI	**Sidrap Palu**	**11.32**	**234**	P	**Pn**	**22 05 06.7**	**-1.5**
	23nm,1.1s						
JAY	**Jayapura**	**12.88**	**114**	LR	LR	22 10 15.3	
	comp=Z,213nm,19.6s,baz=339,slow=36						
TGY	**Tagaytay City**	**13.77**	**325**	LR	LR	22 11 20.0	
	comp=Z,121nm,19.6s,baz=144,slow=39						
PLAI	**Plampang**	**15.99**	**224**	P	**P**	**22 06 17.1**	**+2.6**
SBUM	**Sibu**	**16.69**	**269**	*e*Pn	**P**	**22 06 21.4**	**-0.9**
	51nm,1.4s						
STKI	**Sintang**	**17.64**	**262**	P	**P**	**22 06 35.9**	**+3.1**
JAGI	**Jajag, Banyuwa**	**18.47**	**233**	*e*P	**P**	**22 06 41.2**	**-0.7**
	32nm,1.0s						
BLJI	**Banyuglugur**	**18.51**	**236**	P	Pn	22 06 50.9	+8.2
KSM	**Kuching**	**18.65**	**267**	*e*P	**P**	**22 06 43.0**	**-0.9**
	16nm,1.1s						
GMJI	**Gumukmas**	**18.93**	**235**	P	Pn	22 06 56.0	+8.3
NGJI	**Ngawi**	**20.11**	**240**	P	Pn	22 07 08.5	+6.6
PWJI	**Pagerwojo**	**20.15**	**238**	P	Pn	22 07 02.0	-0.3
	37nm,1.0s						
FITZ	**Fitzroy Crossi**	**20.96**	**189**	P	**P**	**22 07 07.5**	**-1.6**
	4.0nm,1.0s,baz=23,slow=15,SNR=2.5						
SSLB	**Suanglung**	**22.30**	**340**	*e*P	**P**	**22 07 25.8**	**+2.3**
	26nm,1.1s						
KPJI	**Karang Pucung**	**22.32**	**243**	P	**P**	**22 07 25.7**	**+1.9**
	44nm,0.9s						
NACB	**Ninganchiao**	**22.45**	**342**	*e*P	**P**	**22 07 26.5**	**+1.5**
	16nm,0.9s						
YHNB	**Yeheng**	**22.99**	**342**	*e*P	**P**	**22 07 32.4**	**+1.7**
	39nm,1.2s						
WRAB	**Tennant Creek**	**23.16**	**167**	*e*P	**P**	**22 07 32.8**	**+0.4**
	30nm,1.4s						
WRA	**Warramunga Arr**	**23.16**	**167**	P	**P**	**22 07 33.4**	**+0.9**
	15nm,1.0s,baz=343,slow=10,SNR=27						
WB2	**Warramunga Arr**	**23.16**	**167**	*e*P	**P**	**22 07 33.5**	**+1.0**
MDSI	**Maura Dua**	**25.75**	**254**	P	**P**	**22 07 58.3**	**+1.8**
ASAR	**Alice Springs**	**26.69**	**170**	P	**P**	**22 08 05.2**	**+0.2**
	0.9nm,0.5s,baz=354,slow=7.9,SNR=15						
AS01	**Alice Springs**	**26.70**	**170**	*e*P	**P**	**22 08 05.1**	**+0.1**
JNU	**Nakatsue**	**30.28**	**3**	P	**P**	**22 08 38.0**	**+1.2**
	10nm,1.1s,baz=202,slow=11,SNR=3.1						
NJ2	**Nanjing**	**30.66**	**343**	*e*P	**P**	**22 08 41.3**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,14nm,0.7s						
WHN	**Wuhan**	**30.90**	**335**	*e*P	**P**	**22 08 44.2**	**+1.9**
CMAR	**Chiang Mai Arr**	**33.26**	**300**	P	**P**	**22 09 02.0**	**-1.2**
	0.6nm,0.4s,baz=125,slow=7.8,SNR=4.3						
CMAR				LR	LR	22 22 45.1	
	comp=Z,31nm,18.4s,baz=94,slow=37						
KMI	**Kunming**	**33.63**	**314**	P	**P**	**22 09 10.3**	**+3.6**
KMI				pP	sP	22 09 25.7	+4.7
KMI				pmax	pmax		
	comp=Z,7.0nm,1.6s						
KMI				pmax	pmax		
	comp=Z,61nm,5.1s						
KMI				LR	LR		
	comp=N,130nm,18.2s						
KMI				LR	LR		
	comp=E,100nm,18.2s						
KMI				LR	LR		
	comp=Z,170nm,19.9s						
KSAR	**Wonju Array Be**	**34.55**	**359**	P	**P**	**22 09 14.2**	**+0.1**
KSRS	**Korea Array**	**34.56**	**359**	P	**P**	**22 09 14.2**	**0.0**
	2.1nm,0.7s,baz=172,slow=10,SNR=11						
MJAR	**Matsushiro Arr**	**34.71**	**13**	P	**P**	**22 09 15.4**	**-0.2**
	1.6nm,0.7s,baz=193,slow=10,SNR=6.0						
XAN	**Xi'an**	**36.30**	**331**	P	**P**	**22 09 28.6**	**-0.8**
XAN				pP	sP	22 09 51.7	+7.9
XAN				sP	pP	22 10 02.6	+23
XAN				PP	**PP**	**22 10 52.6**	**+0.2**
XAN				PcP	**PcP**	**22 11 53.5**	**-0.3**
XAN				S	**S**	**22 14 59.3**	**-8.7**
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,90nm,5.0s						
XAN				LR	LR		
	comp=N,190nm,11.9s						
XAN				LR	LR		
	comp=E,250nm,10.8s						
XAN				LR	LR		
	comp=Z,240nm,13.2s						
STKA	**Stephens Creek**	**36.47**	**162**	P	**P**	**22 09 31.8**	**+1.0**
	1.9nm,0.6s,baz=330,slow=8.8,SNR=9.7						
STKA				LR	LR	22 27 04.5	
	comp=Z,102nm,20.1s,baz=28,slow=40						
CD2	**Chengdu**	**36.75**	**322**	P	**P**	**22 09 33.0**	**-0.2**
CD2				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NWAO	**Narrogin (SRO)**	**37.16**	**196**	P	**P**	**22 09 35.2**	**-1.4**
	4.3nm,0.8s,baz=258,slow=11,SNR=3.0						
H11S3	**WAKE ISLAND Hy**	**40.15**	**64**	T	T	22 53 03.5	
	baz=252,slow=75,SNR=116						
H11S2	**WAKE ISLAND Hy**	**40.16**	**64**	T	T	22 53 10.6	
	baz=252,slow=75,SNR=76						
H11S1	**WAKE ISLAND Hy**	**40.16**	**64**	T	T	22 53 17.5	
	baz=252,slow=75,SNR=49						
LZH	**Lanzhou**	**40.48**	**328**	*e*P	**P**	**22 10 05.3**	**+0.7**
LZH				pP	sP	22 10 30.5	+11
LZH				sP	pP	22 10 42.9	+28
LZH				pmax	pmax		
	comp=Z,33nm,1.0s						
LZH				pmax	pmax		
	comp=Z,140nm,4.6s						
LZH				LR	LR		
	comp=N,220nm,11.9s						
LZH				LR	LR		
	comp=E,380nm,12.5s						
LZH				LR	LR		
	comp=Z,370nm,19.0s						
H11N1	**WAKE ISLAND Hy**	**40.73**	**63**	T	T	22 53 54.8	
	baz=250,slow=75,SNR=51						
H11N2	**WAKE ISLAND Hy**	**40.74**	**63**	T	T	22 53 57.7	
	baz=250,slow=75,SNR=18						
H11N3	**WAKE ISLAND Hy**	**40.74**	**63**	T	T	22 53 58.0	
	baz=250,slow=75,SNR=72						
HHC	**Hu-ho-hao-te**	**41.05**	**340**	*e*P	**P**	**22 10 11.4**	**+2.3**
HHC				pmax	pmax		
	comp=Z,14nm,1.1s						
HHC				pmax	pmax		
	comp=Z,46nm,5.5s						
USRK	**Ussuriysk Ar.**	**41.37**	**3**	P	**P**	**22 10 12.3**	**+0.7**
	6.1nm,0.8s,baz=182,slow=8.7,SNR=9.0						
MDJ	**Mudanjiang**	**41.70**	**1**	P	**P**	**22 10 12.4**	**-1.9**
MDJ				pmax	pmax		
	comp=Z,13nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,280nm,4.9s						
ASAJ	**Asahikawa**	**42.94**	**14**	P	**P**	**22 10 26.0**	**+1.6**
	4.4nm,0.9s,baz=200,slow=12,SNR=4.6						
GTA	**Gaotai**	**45.08**	**328**	P	**P**	**22 10 41.9**	**+0.1**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KLR	**Kul'dur**	**46.38**	**3**	P	**P**	**22 10 51.5**	**-0.2**
	0.3nm,0.9s,baz=190,slow=4.2,SNR=11						
SONM	**Songino Array**	**48.95**	**340**	P	**P**	**22 11 11.7**	**-0.2**
	2.3nm,0.9s,baz=152,slow=9.8,SNR=12						
SONA1	**Songino Array**	**48.96**	**340**	*e*P	**P**	**22 11 11.8**	**-0.2**
WMQ	**Urumqi**	**54.79**	**324**	P	**P**	**22 11 56.4**	**+0.9**
WMQ				LR	LR		
	comp=N,100nm,23.1s						
WMQ				LR	LR		
	comp=E,63nm,20.9s						
WMQ				LR	LR		
	comp=Z,82nm,18.9s						
PETK	**Petropavlovsk-**	**55.54**	**21**	P	**P**	**22 12 02.6**	**+2.0**
	2.4nm,0.6s,baz=177,slow=2.7,SNR=4.0						
PETK	**Petropavlovsk-**	**55.54**	**21**	*e*P	**P**	**22 12 02.1**	**+1.5**
MK01	**Makanchi Array**	**59.60**	**325**	*e*P	**P**	**22 12 28.6**	**-0.8**
MK31	**Makanchi Array**	**59.62**	**325**	*e*P	**P**	**22 12 28.9**	**-0.5**
MKAR	**Makanchi Array**	**59.62**	**325**	P	**P**	**22 12 28.8**	**-0.7**
	4.9nm,0.7s,baz=123,slow=8.1,SNR=61						
MKAR	**Makanchi Array**	**59.62**	**325**	*e*P	**P**	**22 12 28.9**	**-0.5**
	38nm,0.8s						
MAKZ	**Makanchi**	**59.81**	**324**	*e*P	**P**	**22 12 30.4**	**-0.4**
	9.2nm,0.9s						
KSH	**Kashi**	**60.29**	**315**	P	P	22 12 39.4	+5.1
KSH				pmax	pmax		
	comp=Z,170nm,4.8s						
KDJ	**Kajisay**	**60.54**	**318**	*e*P	**P**	**22 12 35.7**	**-0.4**
	4.5nm,0.9s						
ZAA0	**Zalesovo Array**	**62.47**	**332**	*e*P	**P**	**22 12 47.3**	**-1.3**
	6.9nm,1.2s						
ZALV	**Zalesovo Beam**	**62.47**	**332**	P	**P**	**22 12 47.2**	**-1.4**
	2.8nm,0.8s,baz=104,slow=6.3,SNR=13						
ZALV	**Zalesovo Beam**	**62.47**	**332**	*e*P	**P**	**22 12 46.8**	**-1.8**
KURK	**Kurchatov**	**63.75**	**327**	*e*P	**P**	**22 12 55.8**	**-1.4**
	6.7nm,0.6s						
KURBB	**Kurchatov Arra**	**63.75**	**327**	P	**P**	**22 12 56.5**	**-0.7**
	10nm,0.8s,baz=123,slow=5.9,SNR=86						
BVAR	**Borovoye Array**	**69.34**	**327**	P	**P**	**22 13 31.9**	**-1.0**
	8.7nm,0.9s,baz=116,slow=6.6,SNR=26						
BRVK	**Borovoye**	**69.41**	**327**	*e*P	**P**	**22 13 32.7**	**-0.6**
	9.1nm,0.8s						
ABKAR	**Akbulak array**	**74.30**	**321**	*e*P	**P**	**22 14 01.6**	**-1.1**
AKTO	**Aktyubinsk**	**75.79**	**321**	P	**P**	**22 14 10.5**	**-0.8**
	4.2nm,0.9s,baz=91,slow=10,SNR=11						
ARU	**Arti**	**76.94**	**328**	*e*P	**P**	**22 14 15.4**	**-2.3**
VNDA	**Vanda**	**82.18**	**173**	P	**P**	**22 14 46.8**	**+1.0**
	1.0nm,0.9s,baz=350,slow=2.7,SNR=3.6						
IM3	**Indian Mountai**	**82.35**	**24**	*e*P	**P**	**22 14 48.1**	**+1.2**
RAYN	**Ar Rayn**	**82.89**	**293**	*e*P	**P**	**22 14 49.6**	**-1.1**
	3.6nm,0.9s						
MLY	**Manley**	**83.44**	**25**	*e*P	**P**	**22 14 53.8**	**+1.2**
	8.2nm,1.4s						
RND	**Reindeer**	**84.07**	**27**	*e*P	**P**	**22 14 55.8**	**-0.1**
	7.3nm,0.9s						
ILAR	**Eielson Array**	**85.05**	**25**	P	**P**	**22 15 01.4**	**+0.7**
	1.0nm,1.0s,baz=256,slow=6.7,SNR=7.4						
KLMR	**Klimovskoe**	**87.34**	**331**	*e*P	**P**	**22 15 09.0**	**-3.0**
KLMR				AMP		22 15 17.1	
	comp=Z,11nm,1.5s						
ARCES	**ARCESS Array B**	**92.12**	**340**	P	**P**	**22 15 32.0**	**-2.3**
	comp=Z,3.3nm,0.9s,baz=87,slow=4.8,SNR=4.6						
FINES	**FINESS Array B**	**93.73**	**332**	P	**P**	**22 15 40.1**	**-1.8**
	comp=Z,1.1nm,0.8s,baz=356,slow=11,SNR=3.2						
TORD	**Torodi Ar. Bea**	**125.31**	**288**	PKP	**PKPdf**	**22 21 25.6**	**-1.6**
	comp=Z,0.6nm,0.6s,baz=121,slow=1.9,SNR=4.1						

*IDC **07** 22:07:57.9±2.0, 7°.32S×129°.52E, h126km±20km, mb3.6/8, mb1 4.0/13, mb1mx3.6/51, mbtmp4.3/13, Error ellipse: s-maj=26.2km s-min=15.0km az=84.0*
*ISCJB **07** 22:07:58.4±0.3, 7°.37S±0°.03×129°.51E±0°.03, h150km, mb4.0/13, Error ellipse: s-maj=5.1km s-min=4.5km az=145.0*
*NEIC **07** 22:07:59.4±0.7, 7°.35S×129°.43E, h138km±9km, mb4.3/7, Error ellipse: s-maj=9.5km s-min=8.1km az=69.0*
*DJA **07** 22:08:00.3±0.2, 7°S±2°×13°0E±°, h117km±8km, M4.7/10, mb4.8/9, mB5.2/7, MLv4.8/10, Mw(mB)4.5/7*

ISC 07 22:07:59.4±0.5, **7°.41S**±0°.05×**129°.54E**±0°.05, **h150**km, **n57,** σ2§**05**/64, **mb3.9**/13, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.83**	**108**	P	**Pn**	**22 08 31.2**	**-1.5**
SAUI				S	**Sn**	**22 08 57.7**	**-0.4**
SAUI	**Saumlaki**	**1.83**	**108**	*e*Pn	**Pn**	**22 08 34.5**	**+1.8**
AAI	**Ambon**	**3.93**	**340**	P	**Pn**	**22 08 58.6**	**-0.3**
MSAI	**Masohi**	**4.08**	**351**	P	**Pn**	**22 09 01.2**	**+0.4**
FAKI	**Fak Fak**	**5.21**	**31**	P	**Pn**	**22 09 14.4**	**-1.3**
	89nm,0.8s,3μm0.7nm						
FAKI	**Fak Fak**	**5.21**	**31**	*e*Pn	**Pn**	**22 09 14.3**	**-1.3**
KMPI	**Kaimana, Papua**	**5.57**	**48**	P	**Pn**	**22 09 22.4**	**+2.0**
	224nm,0.8s,11μm1.9nm						
MTN	**Manton Dam**	**5.62**	**164**	*e*Pn	**Pn**	**22 09 23.2**	**+2.0**
SOEI	**Soe**	**5.71**	**246**	P	**Pn**	**22 09 22.3**	**-0.2**
SOEI				S	**Sn**	**22 10 27.1**	**-0.3**
SOEI	**Soe**	**5.71**	**246**	*e*Pn	**Pn**	**22 09 21.5**	**-1.0**
BATI	**Baumata**	**6.44**	**244**	P	**Pn**	**22 09 31.8**	**-0.3**
	49nm,0.3s,baz=103,slow=3.9,SNR=34						
BATI				S	**Sn**	**22 10 41.2**	**-3.4**
	50nm,0.3s,baz=100,slow=11,SNR=11						
BATI	**Baumata**	**6.44**	**244**	P	**Pn**	**22 09 33.0**	**+0.9**
BATI				S	**Sn**	**22 10 42.8**	**-1.9**
SIJI	**Sorong**	**6.72**	**15**	P	**Pn**	**22 09 34.1**	**-1.7**
	6.4nm,0.3s,baz=156,slow=4.7,SNR=30						
SIJI				S	**Sn**	**22 10 45.2**	**-6.1**
	5.4nm,0.3s,baz=290,slow=23,SNR=7.0						
RKPI	**Ransiki, Papua**	**7.46**	**38**	P	**Pn**	**22 09 45.5**	**-0.2**
	108nm,0.4s,3μm1.4nm						
FITZ	**Fitzroy Crossi**	**11.29**	**199**	P	**Pn**	**22 10 35.2**	**-1.2**
	4.4nm,0.3s,baz=31,slow=11,SNR=60						
FITZ				S	**Sn**	**22 12 32.9**	**-8.3**
	3.4nm,0.3s,baz=143,slow=24,SNR=4.7						
WRAB	**Tennant Creek**	**13.30**	**160**	*e*Pn	**Pn**	**22 11 02.4**	**-0.1**
WRAB				*e*Sn	Sn	22 13 22.7	-7.0
WRA	**Warramunga Arr**	**13.30**	**160**	P	**Pn**	**22 11 01.8**	**-0.8**
	2.4nm,0.3s,baz=335,slow=13,SNR=27						
WRA				S	Sn	22 13 22.7	-7.1
	6.0nm,0.3s,baz=334,slow=22,SNR=16						
WB2	**Warramunga Arr**	**13.30**	**160**	*e*Pn	**Pn**	**22 11 02.5**	**-0.2**
COEN	**Coen**	**14.89**	**117**	*e*Pn	**P**	**22 11 25.7**	**+1.2**
	27nm,1.4s						
COEN				*e*Sn	**Sn**	**22 14 02.5**	**-5.5**
JAGI	**Jajag, Banyuwa**	**15.28**	**265**	*e*Pn	**Pn**	**22 11 26.1**	**-1.3**
	66nm,1.6s						
MTKI	**Muara Teweh, K**	**15.95**	**293**	P	**P**	**22 11 39.4**	**+3.1**
MBWA	**Marble Bar**	**16.64**	**214**	*e*P	**Pn**	**22 11 45.3**	**+1.3**
	79nm,1.7s						
AS31	**Alice Springs**	**16.70**	**166**	*e*P	**Pn**	**22 11 47.1**	**+2.3**
	4.3nm,0.6s						
ASAR	**Alice Springs**	**16.70**	**166**	P	**Pn**	**22 11 46.0**	**+1.2**
	1.9nm,0.3s,baz=338,slow=9.4,SNR=49						
ASAR				S	S	22 14 37.5	-13
	0.4nm,0.3s,baz=332,slow=16,SNR=4.7						
AS01	**Alice Springs**	**16.71**	**166**	*e*P	**Pn**	**22 11 47.1**	**+2.1**
PBKI	**Pangkalan Bun**	**18.40**	**284**	P	**Pn**	**22 12 07.2**	**+2.1**
SBUM	**Sibu**	**19.87**	**299**	*e*P	**P**	**22 12 19.1**	**0.0**
	11nm,0.7s						
KSM	**Kuching**	**21.12**	**294**	*e*P	**P**	**22 12 32.7**	**+0.2**
	8.5nm,0.8s						
STKA	**Stephens Creek**	**26.82**	**157**	P	**P**	**22 13 27.5**	**+1.7**
	1.5nm,0.6s,baz=330,slow=12,SNR=4.6						
CMAR	**Chiang Mai Arr**	**39.65**	**311**	P	**P**	**22 15 15.4**	**-1.5**
	1.1nm,0.4s,baz=144,slow=7.9,SNR=8.3						
KMI	**Kunming**	**41.55**	**322**	P	**P**	**22 15 32.7**	**0.0**
KMI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MJAR	**Matsushiro Arr**	**44.47**	**10**	P	**P**	**22 15 55.0**	**-0.7**
	comp=Z,1.1nm,0.6s,baz=196,slow=11,SNR=3.6						
KSRS	**Korea Array**	**44.65**	**358**	P	**P**	**22 15 56.4**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=179,slow=9.5,SNR=4.2						
CD2	**Chengdu**	**45.41**	**328**	P	**P**	**22 16 04.2**	**+0.9**
CD2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**50.79**	**342**	*e*P	**P**	**22 16 48.0**	**+3.5**
HHC				pmax	pmax		
	comp=Z,15nm,1.1s						
HHC				pmax	pmax		
	comp=Z,62nm,6.0s						
ODAN	**Odare**	**53.18**	**312**	*e*P	**P**	**22 17 02.6**	**0.0**
	comp=Z,7.0nm,0.5s						
RAMN	**Ramite**	**53.82**	**311**	*e*P	**P**	**22 17 07.5**	**+0.2**
	comp=Z,15nm,0.6s						
JIRN	**Jiri**	**54.51**	**312**	*e*P	**P**	**22 17 12.3**	**-0.2**
	comp=Z,8.4nm,0.5s						
GUN	**Gumba**	**54.88**	**312**	*e*P	**P**	**22 17 15.0**	**-0.1**
	comp=Z,11nm,0.5s						
PKIN	**Phulchoki**	**55.06**	**311**	*e*P	**P**	**22 17 16.9**	**+0.6**
DMN	**Daman**	**55.29**	**311**	*e*P	**P**	**22 17 17.7**	**-0.2**
GKN	**Gorkha**	**55.85**	**311**	*e*P	**P**	**22 17 21.1**	**-0.7**
	comp=Z,13nm,0.6s						
KOLN	**Koldanda**	**56.51**	**310**	*e*P	**P**	**22 17 26.5**	**-0.1**
	comp=Z,12nm,0.7s						
PYUN	**Piuthan**	**57.15**	**310**	*e*P	**P**	**22 17 31.1**	**+0.1**
	comp=Z,15nm,0.8s						
SONM	**Songino Array**	**58.68**	**342**	P	**P**	**22 17 42.4**	**+1.2**
	comp=Z,0.6nm,0.6s,baz=155,slow=5.6,SNR=4.9						
SONA1	**Songino Array**	**58.69**	**342**	*e*P	**P**	**22 17 41.9**	**+0.6**
WMQ	**Urumqi**	**63.49**	**327**	P	**P**	**22 18 15.5**	**+1.8**
KSH	**Kashi**	**68.01**	**318**	P	**P**	**22 18 46.7**	**+3.9**
KSH				pmax	pmax		
	comp=Z,160nm,6.7s						
MK01	**Makanchi Array**	**68.30**	**327**	*e*P	**P**	**22 18 44.9**	**+0.6**
MK31	**Makanchi Array**	**68.32**	**327**	*e*P	**P**	**22 18 45.3**	**+0.9**
MKAR	**Makanchi Array**	**68.32**	**327**	P	**P**	**22 18 45.5**	**+1.1**
	comp=Z,0.9nm,0.5s,baz=115,slow=8.4,SNR=20						
MKAR	**Makanchi Array**	**68.32**	**327**	*e*P	**P**	**22 18 45.3**	**+0.9**
	comp=Z,8.4nm,0.6s						
ZALV	**Zalesovo Beam**	**71.75**	**334**	P	**P**	**22 19 05.9**	**+0.8**
	comp=Z,1.2nm,0.5s,baz=108,slow=4.8,SNR=6.0						
ZALV	**Zalesovo Beam**	**71.75**	**334**	*e*P	**P**	**22 19 04.6**	**-0.5**
KURBB	**Kurchatov Arra**	**72.62**	**329**	P	**P**	**22 19 11.2**	**+0.8**
	comp=Z,0.8nm,0.4s,baz=130,slow=4.8,SNR=14						
KURK	**Kurchatov**	**72.63**	**329**	*e*P	**P**	**22 19 11.3**	**+0.8**
	comp=Z,2.5nm,0.9s						
TORD	**Torodi Ar. Bea**	**128.44**	**281**	PKP	**PKPdf**	**22 26 51.0**	**+1.6**
	comp=Z,0.8nm,0.6s,baz=149,slow=2.6,SNR=8.5						

MEX 07 22:14:13.2±0.6, **14°.79N**×**93°.83W**, **h16**km±21km, **MD3.8,**
Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.09**	**33**	*e*P	Pb	22 14 30.4	-3.3
PCIG				*e*S	Sb	22 14 42.9	-4.8
CCIG	**Comitan**	**2.21**	**47**	*e*P	Pn	22 14 47.5	-2.0
CCIG				*e*S	Sn	22 15 12.1	-4.5
HUIG	**Huatulco**	**2.40**	**294**	*e*P	Pn	22 14 48.3	-3.6
HUIG				*e*S	Sn	22 15 12.1	-8.9

*IDC **07** 22:22:36.5±1.5, 44°.45N×105°.73W, h0km, mb1 3.3/2, mb1mx3.0/65, mbtmp3.1/2, ML2.5/2, Error ellipse: s-maj=64.4km s-min=8.8km az=144.0*
*ISCJB **07** 22:22:39.6±0.9, 44°.68N±0°.04×105°.51W±0°.09, h0km, Error ellipse: s-maj=9.2km s-min=5.3km az=3.7*
*NEIC **07** 22:22:40.5±0.9, 44°.72N×105°.46W, h0km, ML3.0, Error ellipse: s-maj=14.1km s-min=10.2km az=118.0, Suspected Mining explosion.*
NEIC 48 km [30 miles] N of Gillette.

ISC 07 22:22:34.3±1.0, **44°.52N**±0°.03×**105°.68W**±0°.05, **h0**km, **n11,** σ1§**94**/20, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAO	**LASA Array**	**2.21**	**350**	*e*Pn	**Pg**	**22 23 16.2**	**-0.4**
LAO				*e*Sn	**Sb**	**22 23 44.1**	**+1.0**
RLMT	**Red Lodge**	**2.62**	**285**	*e*Pn	**Pg**	**22 23 23.9**	**-0.6**
RLMT				*e*Sn	**Sg**	**22 23 59.7**	**+1.1**
PDAR	**Pinedale Array**	**3.31**	**240**	Pn	**Pb**	**22 23 32.5**	**-1.6**
	0.4nm,0.3s,baz=74,slow=17,SNR=5.0						
PDAR				Pg	**Pg**	**22 23 36.9**	**-0.9**
	3.9nm,0.3s,baz=67,slow=19,SNR=34						
PDAR				Lg	Lg	22 24 20.4	
	5.2nm,0.3s,baz=59,slow=33,SNR=21						
BW06	**Boulder Array**	**3.31**	**240**	*e*Pn	**Pb**	**22 23 35.3**	**+1.2**
BW06				*e*Sn	**Sg**	**22 24 19.7**	**-1.0**
AHID	**Auburn Hatcher**	**4.31**	**248**	*e*Pn	**Pb**	**22 23 50.9**	**-0.1**
AHID				*e*Pb	**Pg**	**22 23 57.6**	**+0.8**
BOZ	**Bozeman (W)**	**4.35**	**286**	*e*Pn	**Pb**	**22 23 49.8**	**-1.9**
BOZ	

baz=8.0
TWK Hsinying 0.34 354⇑iP Pb 22 22 51.8 -0.1
baz=349
TWK S Sn 22 22 59.1 -2.2
baz=349
TPUB Ta-pu 0.39 14 ⇓P Pg 22 22 52.0 +0.2
baz=7.0
TPUB S Sb 22 22 58.0 -0.5
baz=7.0
SCLT Jiali 0.40 309 eP Pb 22 22 53.3 +0.6
baz=308
SCLT eS Sn 22 23 01.2 -1.3
baz=308
KAU Kaohsiung 0.41 210 eP Pn 22 22 54.2 -1.1
baz=225
CHN4 Tsaushan 0.43 8⇑iP Pb 22 22 53.0 -0.4
baz=2.0
CHN4 eS Sb 22 23 00.0 +0.4
baz=2.0
SSPT Xinbi 0.44 175 ⇑P Pb 22 22 53.2 -0.2
baz=168
SSPT eS Sb 22 23 00.5 +0.7
baz=168
ECL Taimali 0.51 129⇑iP Pg 22 22 53.4 -0.6
baz=137
ECL eS Sg 22 22 59.6 -1.3
baz=137
TWG Pinlang 0.51 101 P Pg 22 22 53.7 -0.4
baz=104
TWG eS Sg 22 23 01.1 +0.2
baz=104
CHN8 Yiju 0.51 325 eP Pb 22 22 55.1 +0.4
baz=324
CHN8 eS Sn 22 23 03.4 -1.9
baz=324
TWGBT Beinan 0.52 102 ⇓P Pg 22 22 53.6 -0.6
baz=104
TWGBT eS Sg 22 23 01.1 -0.1
baz=104
ELDTW Lidau 0.52 59⇓iP Pg 22 22 54.2 -0.1
baz=46
ELDTW eS Sg 22 23 00.8 -0.5
baz=46
SCZT Fangliau 0.55 171⇑iP Pg 22 22 54.6 -0.3
baz=166
SCZT eS Sb 22 23 04.4 +1.2
baz=166
CHY Chiayi 0.58 350 eP Pb 22 22 56.0 +0.2
baz=347
CHY eS Sn 22 23 06.5 -0.5
baz=347
WLCH Liuqiu 0.59 194 P Pn 22 22 58.0 +0.3
baz=197
WLCH eS Sn 22 23 09.2 +2.1
baz=197
WLGB Puzi 0.59 339 P Pb 22 22 56.0 0.0
baz=347
WLGB S Sn 22 23 06.3 -0.9
baz=347
TTN Taitung 0.59 106 P Pb 22 22 56.0 -0.1
baz=109
TTN eS Sn 22 23 05.8 -1.5
baz=109
TWP Hsiaoliuchiu 0.59 195⇑iP Pn 22 22 58.0 +0.1
baz=198
TWP S Sn 22 23 08.9 +1.6
baz=198
CHN2 Minshiung 0.61 355 eP Pb 22 22 56.3 0.0
baz=351
CHN2 S Sn 22 23 06.5 -1.1
baz=351
TAW Tawu 0.66 149⇑iP Pg 22 22 56.3 -0.5
baz=146
TAW S Sg 22 23 05.3 -0.2
baz=146
FULB Fuli 0.76 69⇓iP Pb 22 22 58.8 -0.1
baz=67
FULB S Sg 22 23 09.7 +1.0
baz=67
WGK Gukeng 0.76 2 eP Pg 22 22 59.2 +0.5
baz=360
WGK eS Sn 22 23 10.7 -0.7
baz=360
WDLH Douliu 0.76 1 eP Pg 22 22 59.1 +0.2
baz=357
WDLH eS Sn 22 23 11.1 -0.4
baz=357
WSF Szhu 0.77 338 eP Pg 22 22 58.8 0.0
baz=337
WSF S Sn 22 23 10.7 -0.8
baz=337
CHKT Chengkung 0.79 77⇓iP Pb 22 22 59.3 -0.2
baz=92
CHKT S Sg 22 23 10.9 +1.1
baz=92
TWF1 Yuli 0.83 59⇓iP Pb 22 22 59.4 -0.6
baz=65
TWF1 S Sb 22 23 10.3 -0.7
baz=65
YULB Yu-li 0.85 56 ⇓P Pb 22 22 59.5 -0.9
baz=47
YULB S Sb 22 23 10.0 -1.6
baz=47
WDGT Dungji 0.87 293⇓iP Pb 22 23 00.0 -0.7
baz=294
WDGT eS Sg 22 23 12.3 +0.1
baz=294
TWH Lutao 0.90 103⇑iP Pb 22 23 00.5 -0.8
baz=105
TWH eS Sg 22 23 14.0 +0.8
baz=105
WJS Zhushan 0.91 12 eP Pb 22 23 01.2 -0.4
baz=355
EHY Hungye 0.93 51 eP Pb 22 23 00.9 -1.0
baz=49
EHY eS Sb 22 23 12.9 -1.2
baz=49
HEN Hengchun 0.93 168 P Pg 22 23 02.0 0.0
baz=164
HEN eS Sn 22 23 15.6 -0.1
baz=164
SSLB Suanglung 0.94 24 ⇓P Pb 22 23 01.4 -0.8
baz=22
SSLB eS Sb 22 23 14.5 0.0
baz=22
WTCT Ta-ch'eng 0.96 346 eP Pb 22 23 01.0 -1.4
baz=345
WTCT eS Sn 22 23 15.6 -0.8
baz=345
RLNB Erlin 0.98 351 eP Pb 22 23 01.4 -1.2
baz=349
RLNB eS Sn 22 23 16.3 -0.5
baz=349
HGSD Ruisui 1.00 55 ⇓P Pb 22 23 03.0 0.0
baz=48
HGSD S Sg 22 23 16.4 0.0
baz=48
VWDT VWDT 1.00 34 ⇓P Pb 22 23 02.3 -0.7
baz=24
VWDT eS Sn 22 23 17.6 +0.2
baz=24
TWK1 Hengchun 1.01 165⇑eP Pb 22 23 02.8 -0.3
baz=161
TWKBT Hengchun 1.01 165⇑eP Pb 22 23 02.9 -0.3
baz=155
TWKBT eS Sn 22 23 18.8 +1.2
baz=155
TYC Yuchr 1.02 17 eP Pb 22 23 03.3 -0.1
baz=15
TYC S Sn 22 23 19.5 +1.6
baz=15
VCHM Qimei 1.05 286⇓eP Pb 22 23 02.3 -1.6
baz=288
PHUB P'eng-hu 1.06 304 ⇓P Pb 22 23 02.6 -1.4
baz=305
TSEB Hengchuen, Pin 1.07 161⇑eP Pb 22 23 03.6 -0.7
baz=164
TSEB eS Sb 22 23 18.4 +0.3
baz=164
PNG Penghu 1.10 306 ⇓P Pb 22 23 03.2 -1.5
baz=307
EGFH Guangfu 1.11 48 eP Pb 22 23 04.4 -0.5
baz=45
WCHH Zhanghua 1.15 1 eP Pb 22 23 05.5 -0.1
baz=359
ESL Shilin 1.22 43 ⇓P Pn 22 23 06.1 -0.4
baz=41
ESL eS Sg 22 23 23.0 -0.3
baz=41
TCU Taichung 1.23 6 eP Pn 22 23 05.8 -0.8
baz=354
CHGB Renai 1.28 27 ⇓P Pn 22 23 07.3 -0.2
baz=15
CHGB S Sg 22 23 26.1 +0.8
baz=15
LAY Lan-yu 1.29 133 eP Pn 22 23 05.5 -2.1
baz=121
ENLB Shoufeng 1.39 45⇓eP Pb 22 23 09.5 -0.2
baz=35
ENLB eS Sb 22 23 27.5 +0.4
baz=35
TWQ1 Liyutan 1.44 9 eP Pn 22 23 09.5 0.0
baz=7.0
TWQ1 eS Sb 22 23 29.1 +0.5
baz=7.0
HWA Hwalien 1.44 43 eP Pb 22 23 10.6 0.0
baz=25
TDCB Techi 1.45 23 eP Pn 22 23 09.6 -0.1
baz=22
TDCB eS Sb 22 23 29.4 +0.4
baz=22
NSY Sanyi 1.50 8 eP Pn 22 23 09.9 -0.5
baz=358
TWD Chiawan 1.51 40 eP Pb 22 23 11.1 -0.7
baz=39
TWD eS Sb 22 23 31.3 +0.6
baz=39
NACB Ninganchiao 1.58 38 eP Pn 22 23 11.5 -0.1
baz=36
NACB eS Sn 22 23 31.9 +0.1
baz=36
NMLH Miaoli 1.62 8 eP Pb 22 23 13.1 -0.6
baz=7.0
NNSB Datong 1.69 27 eP Pn 22 23 13.4 +0.3
baz=12
NNSH Datong 1.69 27 eP Pb 22 23 14.3 -0.6
baz=11
NNS Nan Shan 1.70 27 eP Pn 22 23 13.6 +0.4
baz=12
NSTT Nanjuang 1.75 14 eP Pn 22 23 14.1 +0.2
baz=13
LIOB Emei 1.77 14 eP Pn 22 23 13.7 -0.4
baz=13
ENA Nanau 1.87 36 eP Pn 22 23 15.9 +0.4
baz=34
NANB Nanao 1.87 37 eP Pn 22 23 15.0 -0.4
baz=34
NSK Sanguang 1.90 23 eP Pb 22 23 17.3 -1.2
baz=22
YHNB Yeheng 1.90 24 eP Pn 22 23 16.1 0.0
baz=22
SBCB Hsinchu 1.91 13 eP Pb 22 23 18.7 +0.2
baz=11
ENAH Nanao 1.92 37 eP Pn 22 23 15.6 -0.5
baz=35
ENTT Nioudou 1.96 29 eP Pb 22 23 17.9 -1.4
baz=28
ENTT eS Sb 22 23 43.7 +0.1
baz=28
NWLT Wulai 2.05 26 eP Pn 22 23 19.0 +1.0
baz=24
TWC Suao 2.07 36 eP Pn 22 23 18.4 +0.2
baz=34
TWE Neicheng 2.07 30 eP Pb 22 23 20.0 -1.3
baz=46
EOS1 EOS1 2.18 42 eP Pn 22 23 20.9 +1.2
baz=40
TATO Taipei 2.22 23 eP Pb 22 23 22.7 -1.2
baz=21
NTC Toucheng 2.26 32 eP Pn 22 23 22.1 +1.2
baz=45
VWUC VWUC 2.28 335 eP Pn 22 23 20.8 -0.4
baz=335
EGS 2.31 34 eP Pb 22 23 24.3 -0.9
baz=32
TWS1 Kuangyinshan 2.32 20 eP Pb 22 23 24.8 -0.7
baz=19
TIPB Shuangxi 2.36 30 eP Pn 22 23 21.7 -0.6
baz=11
YM04 YM04 2.40 22 eP Pn 22 23 22.6 -0.3
baz=21
YM10 YM10 2.42 23 eP Pn 22 23 22.8 -0.2
baz=21
NWF Wu-fen Shan 2.43 28 eP Pn 22 23 23.8 +0.6
baz=11
WFSB Wu-fen Shan 2.43 28 eP Pb 22 23 25.1 -2.3
baz=11
YM03 YM03 2.43 22 eP Pn 22 23 24.1 +0.8
baz=20
YM11 YM11 2.43 23 eP Pn 22 23 24.7 +1.5
baz=21
YM12 YM12 2.44 23 eP Pn 22 23 24.1 +0.7
baz=21
YM07 YM07 2.46 24 eP Pn 22 23 22.4 -1.2
baz=22
KNMB Chin-men Tao 2.49 308 eP Pn 22 23 23.1 -0.9
baz=311
QZH Quanzhou 2.68 319⇑iPn Pn 22 23 25.8 -0.8
QZH Sn **Sn 22 23 57.0 -1.8**
JYNG Yonagunijimaku 2.69 55 P Pn 22 23 27.9 +1.2
JYNG eS **Sn 22 24 01.1 +2.1**
YOJ Yonaguni jima 2.74 56 P Pn 22 23 28.0 +0.6
baz=55
YOJ eS **Sn 22 24 00.9 +0.5**
baz=55
YOJ Yonaguni jima 2.74 56 P Pn 22 23 28.0 +0.6
YOJ eS **Sn 22 24 01.9 +1.5**
HATJ Hateruma jima 3.21 69 P Pn 22 23 34.2 +0.3
HATJ eS **Sn 22 24 11.9 -0.1**
IRIF Iriomote-Funau 3.25 64 P Pn 22 23 35.2 +0.7
IRIF eS **Sn 22 24 14.1 +1.1**
MATB Ma-tsu 3.26 351 eP Pn 22 23 33.5 -1.1
baz=350
JKRS Kuro-shima 3.45 67 P Pn 22 23 37.8 +0.6
JKRS eS **Sn 22 24 18.3 +0.4**
JIJ Ishigaki jima 3.61 66 P Pn 22 23 39.2 -0.2
JIJ S **Sn 22 24 21.3 -0.5**
JISG Ishigakijimahi 3.84 64 P Pn 22 23 42.2 -0.4
JISG eS **Sn 22 24 26.5 -1.0**
JTJ Tarama 4.19 65 P Pn 22 23 47.6 +0.3
JTJ eS **Sn 22 24 36.9 +0.9**
JIRB Irabujima 4.66 65 P Pn 22 23 54.2 +0.4
JIRB eS **Sn 22 24 47.4 -0.2**
JMJ Miyako jima 2 4.75 66 eS **Sn 22 24 50.1 +0.2**
JIKM Ikemajima 4.75 64 P Pn 22 23 56.7 +1.6
JIKM eS **Sn 22 24 50.0 0.0**
JOGS Gusukube 4.83 67 eS **Sn 22 24 53.9 +2.1**
TGY Tagaytay City 8.78 177 LR LR 22 28 21.5
comp=Z,107nm,18.2s,baz=352,slow=40
JNU Nakatsue 13.66 40 LR LR 22 32 04.2
comp=Z,121nm,18.2s,baz=299,slow=40
KSRS Korea Array 15.82 22 Pn **P 22 26 34.1 +4.2**
0.1nm,0.3s,baz=204,slow=12,SNR=6.4
KSRS LR LR 22 32 17.5
comp=Z,74nm,18.9s,baz=206,slow=36
MJAR Matsushiro Arr 20.45 44 P Pn 22 27 23.4 +0.3
1.6nm,0.7s,baz=230,slow=10.0,SNR=6.5
MJAR LR LR 22 35 25.3
comp=Z,112nm,19.8s,baz=220,slow=37
CMAR Chiang Mai Arr 20.67 262 LR LR 22 36 16.6
comp=Z,51nm,18.8s,baz=83,slow=40
USRK Ussuriysk Ar. 23.23 21 LR LR 22 37 40.1
comp=Z,69nm,18.2s,baz=181,slow=38
SONM Songino Array 27.31 339 P **P 22 28 30.9 +2.7**
0.6nm,0.7s,baz=156,slow=11,SNR=3.2
SONM LR LR 22 39 57.0
comp=Z,65nm,20.1s,baz=165,slow=38
KLR Kul'dur 27.71 16 LR LR 22 40 36.3
comp=Z,6.9nm,18.5s,baz=160,slow=38
ASAJ Asahikawa 27.86 35 LR LR 22 40 03.5
comp=Z,142nm,19.0s,baz=184,slow=37
MKAR Makanchi Array 38.84 317 P **P 22 30 08.7 +0.2**
0.3nm,0.6s,baz=119,slow=11,SNR=4.2
ZALV Zalesovo Beam 40.98 328 P **P 22 30 27.4 +1.2**
0.5nm,0.4s,baz=104,slow=11,SNR=2.7
PETK Petropavlovsk- 41.24 34 LR LR 22 48 12.0
comp=Z,80nm,18.4s,baz=170,slow=37
KURBB Kurchatov Arra 42.70 321 P **P 22 30 41.0 +0.8**
0.4nm,0.8s,baz=140,slow=7.1,SNR=2.7
H11N1 WAKE ISLAND Hy 43.17 85 T T 23 16 10.8
baz=282,slow=75,SNR=9.3
H11N2 WAKE ISLAND Hy 43.18 85 T T 23 16 07.4
baz=282,slow=75,SNR=22
H11N3 WAKE ISLAND Hy 43.19 85 T T 23 16 08.6
baz=282,slow=75,SNR=16
H11S3 WAKE ISLAND Hy 43.27 87 T T 23 16 18.1
baz=284,slow=74,SNR=20
H11S1 WAKE ISLAND Hy 43.28 87 T T 23 16 23.9
baz=284,slow=74,SNR=8.8
H11S2 WAKE ISLAND Hy 43.29 87 T T 23 16 14.1
baz=284,slow=74,SNR=7.1
WRA Warramunga Arr 44.69 161 P **P 22 30 53.6 -2.9**
5.5nm,0.6s,baz=344,slow=8.6,SNR=43
ASAR Alice Springs 48.10 163 P **P 22 31 21.5 -1.8**
1.9nm,0.5s,baz=355,slow=14,SNR=22
STKA Stephens Creek 58.10 159 P **P 22 32 34.4 -2.5**
1.4nm,0.7s,baz=351,slow=3.7,SNR=4.3
ILAR Eielson Array 70.61 27 P **P 22 33 58.9 +0.4**
0.3nm,0.7s,baz=287,slow=6.5,SNR=4.1
EKA Eskdalemuir Ar 88.53 332 LR LR 23 19 50.7
comp=Z,38nm,18.7s,baz=240,slow=39

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*ISCJB **07** 22:24:55.7±1.0, 23°.92S±0°.05×66°.74W±0°.09, h181km, Error ellipse: s-maj=13.0km s-min=5.0km az=154.4*
*SJA **07** 22:24:55.6±0.4, 24°.22S×66°.21W, h292km±11km, ML2.6, MW2.8*
*GUC **07** 22:24:56.9±0.7, 23°.94S×67°.39W, h250km±11km, ML4.1*
ISC 07 22:24:55.9±1.6, 23°.95S±0°.06×66°.77W±0°.10, h181km, n14, σ1§76/25, 8C, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PB15	**IPOC Station P**	**2.58**	**286**	⇑*iP*		**Pn**	**22 25 41.5**	**+1.7**
PB15				*i* S		**Sn**	**22 26 14.7**	**+0.7**
PB15				IAML			22 26 19.2	
comp=E,711nm,0.4s								
GO02	**Mina Guanaco**	**2.84**	**244**	⇑*iP*		**Pn**	**22 25 44.0**	**+1.0**
GO02				*i* S		**Sn**	**22 26 20.4**	**+0.8**
GO02				IAML			22 26 22.9	
comp=E,203nm,0.1s								
PB06	**IPOC Station P**	**2.85**	**295**	⇑*iP*		**Pn**	**22 25 44.5**	**+1.5**
PB06				*i* S		**Sn**	**22 26 19.9**	**+0.3**
PB06				IAML			22 26 22.6	
comp=N,229nm,0.1s								
AHML	**Horco Molle**	**3.11**	**156**	IAML			22 25 47.6	
comp=Z,4.9nm,0.6s								
AHML				*eP*		**Pn**	**22 25 47.8**	**+1.8**
PB09	**IPOC Station P**	**3.12**	**313**	⇑*iP*		**Pn**	**22 25 48.2**	**+1.9**
PB09				*i* S		**Sn**	**22 26 26.7**	**+1.1**
PB10	**IPOC Station P**	**3.49**	**276**	⇑*iP*		**Pn**	**22 25 51.5**	**+0.9**
PB10				*i* S		**Sn**	**22 26 30.0**	**-3.4**
PB04	**IPOC Station P**	**3.50**	**297**	*eP*		**Pn**	**22 25 51.3**	**+0.4**
PB04				*i* S		**Sn**	**22 26 32.2**	**-1.6**
PB04				IAML			22 26 36.3	
comp=E,154nm,0.3s								
PB07	**IPOC Station P**	**3.62**	**307**	⇑*iP*		**Pn**	**22 25 53.0**	**+0.5**
PB07				*i* S		**Sn**	**22 26 35.4**	**-1.3**
PB07				IAML			22 26 37.7	
comp=N,182nm,0.2s								
PB01	**IPOC Station P**	**3.83**	**318**	⇑*iP*		**Pn**	**22 25 55.4**	**+0.4**
PB01				*i* S		**Sn**	**22 26 40.0**	**-1.1**
PB01				IAML			22 26 42.0	
comp=E,133nm,0.3s								
PB02	**IPOC Station P**	**3.89**	**312**	⇑*iP*		**Pn**	**22 25 56.2**	**+0.3**
PB02				*i* S		**Sn**	**22 26 38.7**	**-4.0**
CYA	**Choya**	**4.56**	**169**	*eP*		**Pn**	**22 26 04.3**	**+0.1**
VCA	**Vinchina**	**4.94**	**195**	*eP*		**Pn**	**22 26 11.4**	**+2.2**
VCA				*eS*		**Sn**	**22 27 08.0**	**+1.1**
VCA				IAML			22 27 24.6	
comp=Z,6.3nm,0.3s								
ACLC	**CERRO LA CRUZ**	**5.46**	**182**	*eP*		**Pn**	**22 26 16.2**	**+0.2**
ACLC				*eS*		**Sn**	**22 27 15.7**	**-3.4**
APLL	**PUNTA DE LOS L**	**6.43**	**178**	*eP*		**Pn**	**22 26 27.4**	**-1.2**

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*NEIC **07** 22:35:23.8±0.0, 16°.35N×98°.14W, h13km, MD4.0(MEX), After MEX.*
MEX 07 22:35:23.8±0.5, 16°.35N×98°.14W, h13km±7km, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.27**	**341**	*eP*		Pn	22 35 43.3	-4.2
TLIG				*eS*		Sb	22 35 59.0	-5.1
TLIG	**Tlapa**	**1.27**	**341**	*eP*		Pn	22 35 43.3	-4.2
TLIG				*eS*		Sb	22 35 59.0	-5.1
VHO	**Vista Hermosa**	**1.53**	**62**	*eP*		Pn	22 35 47.5	-3.5
VHO				*eS*		Sn	22 36 05.5	-5.3
VHO	**Vista Hermosa**	**1.53**	**62**	*eP*		Pn	22 35 47.5	-3.5
VHO				*eS*		Sn	22 36 05.5	-5.3
HUIG	**Huatulco**	**2.04**	**106**	*eP*		Pn	22 35 54.4	-3.3
HUIG	**Huatulco**	**2.04**	**106**	*eP*		Pn	22 35 54.4	-3.3
CAIG	**El Cayaco**	**2.15**	**289**	*eP*		Pn	22 35 56.2	-3.2
CAIG				*eS*		Sn	22 36 21.7	-4.3
CAIG	**El Cayaco**	**2.15**	**289**	*eP*		Pn	22 35 56.2	-3.2
CAIG				*eS*		Sn	22 36 21.7	-4.3
PLIG	**Platanillo**	**2.41**	**328**	*eP*		Pn	22 36 01.7	-1.4
PLIG				*eS*		Sn	22 36 28.3	-4.2
PLIG	**Platanillo**	**2.41**	**328**	*eP*		Pn	22 36 01.7	-1.4
PLIG				*eS*		Sn	22 36 28.3	-4.2

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*MAN **07** 22:36:57.6, 6°.61N×126°.41E, h61km, mb4.5, ML3.4, MS3.2*
*ISCJB **07** 22:36:59.3±0.6, 6°.65N±0°.06×126°.32E±0°.07, h79km±6km, mb3.6/6, Error ellipse: s-maj=11.1km s-min=9.5km az=171.9*
*IDC **07** 22:37:01.5±1.9, 6°.70N×126°.25E, h83km±12km, mb3.5/6, mb1 3.6/7, mb1mx3.2/60, mbtmp3.8/7, MS2.8/1, Ms1 3.0/1, ms1mx2.4/37, Error ellipse: s-maj=52.8km s-min=14.1km az=65.0*
ISC 07 22:37:00.6±0.8, 6°.64N±0°.06×126°.30E±0°.07, h72km±8km, n15, σ1§54/20, mb3.8/6, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.31**	**351**	*eP*		**Pn**	**22 37 10.2**	**-1.9**
MATI				*eS*		**Sn**	**22 37 19.5**	**-1.1**
DAV	**Davao City (W)**	**0.84**	**301**	P		**Pn**	**22 37 17.8**	**+0.5**
664nm,0.3s,baz=170,slow=2.6,SNR=23								
DAV				S		**Sn**	**22 37 31.6**	**+1.9**
212nm,0.3s,baz=301,slow=22,SNR=18								
DAV				LR		LR	22 37 47.9	
comp=Z,51nm,21.1s,baz=316,slow=61								
DMPH	**Davao City--Mi**	**0.91**	**299**	⇑*iP*		**Pn**	**22 37 18.4**	**+0.3**
DMPH				*i* S		**Sn**	**22 37 33.4**	**+2.3**
GSPH	**General Santos**	**1.45**	**248**	⇑*iP*		**Pn**	**22 37 23.1**	**-2.1**
GSPH				*i* S		**Sn**	**22 37 41.5**	**-2.2**
BIPH	**Bislig**	**1.54**	**2**	⇓*iP*		**Pn**	**22 37 25.3**	**-0.9**
BIPH				*i* S		**Sn**	**22 37 44.6**	**-0.9**
BUKP	**Musuan**	**1.75**	**315**	*eP*		**Pn**	**22 37 27.8**	**-1.2**
BUKP				*eS*		**Sn**	**22 37 50.7**	**+0.3**
PAGZ	**Pagadian**	**3.14**	**293**	*eP*		**Pn**	**22 37 47.0**	**-0.7**
PAGZ				*eS*		Sn	22 38 33.8	+10
SIJI	**Sorong**	**8.95**	**146**	P		**Pn**	**22 39 09.8**	**+2.6**
1.6nm,0.3s,baz=313,slow=19,SNR=4.1								
FITZ	**Fitzroy Crossi**	**24.59**	**182**	P		**P**	**22 42 14.7**	**+0.6**
3.4nm,0.9s,baz=357,slow=12								
WRA	**Warramunga Arr**	**27.57**	**163**	P		**P**	**22 42 42.6**	**+1.6**
0.4nm,0.8s,baz=344,slow=9.5,SNR=4.4								
CMAR	**Chiang Mai Arr**	**29.13**	**296**	LR		LR	22 55 14.2	
comp=Z,17nm,18.1s,baz=350,slow=38								
ASAR	**Alice Springs**	**31.02**	**166**	P		**P**	**22 43 11.4**	**-0.2**
0.1nm,0.3s,baz=338,slow=6.8,SNR=3.2								
NWAO	**Narrogin (SRO)**	**40.28**	**192**	P		**P**	**22 44 30.4**	**-0.3**
4.5nm,0.8s,baz=228,slow=17,SNR=2.9								
MKAR	**Makanchi Array**	**54.95**	**324**	P		**P**	**22 46 23.4**	**-0.8**
0.5nm,0.4s,baz=116,slow=7.3,SNR=15								
KURBB	**Kurchatov Arra**	**59.09**	**327**	P		**P**	**22 46 52.5**	**-0.9**
0.6nm,0.7s,baz=126,slow=7.7,SNR=5.5								

IDC 07 22:38:05.8±1.7, 29°.68N×141°.40E, h135km±19km, mb3.2/3, mb1 3.2/5, mb1mx2.8/65, mbtmp3.5/5, Error ellipse: s-maj=93.5km s-min=16.6km az=78.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**2.67**	**165**	P		Pn	22 38 47.7	-0.7
6.6nm,0.3s,baz=350,slow=20,SNR=10								
JCJ				S		Sn	22 39 22.0	+0.8
18nm,0.3s,baz=287,slow=20,SNR=4.2								
MJAR	**Matsushiro Arr**	**7.34**	**339**	P		Pn	22 39 49.4	-0.9
0.5nm,0.3s,baz=155,slow=9.4,SNR=4.6								
WRA	**Warramunga Arr**	**49.81**	**189**	P		P	22 46 45.0	+0.1
0.3nm,0.3s,baz=6.2,slow=7.8,SNR=11								
ASAR	**Alice Springs**	**53.53**	**189**	P		P	22 47 11.7	-0.9
0.3nm,0.4s,baz=2.1,slow=5.8,SNR=4.6								

FINES	FINESS Array B	75.33	333	P	P	22 49 34.5 +0.7
	0.3nm,0.5s,baz=75,slow=7.4,SNR=4.6					

IDC 07 22:46:39.1±4.1,18°.05S×176°.40W,h0km,mb4.0/4, mb1 4.1/4,mb1mx3.7/50,mbtmp4.0/4,Error ellipse: s-maj=158.3km s-min=57.1km az=143.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	35.31	261	P	P	22 53 36.8	+0.5
	2.2nm,0.5s,baz=67,slow=11,SNR=4.5						
STKA	Stephens Creek	40.24	242	P	P	22 54 18.1	+0.3
	1.2nm,0.4s,baz=79,slow=10,SNR=5.0						
WRA	Warramunga Arr	46.48	259	P	P	22 55 08.0	-0.4
	0.3nm,0.4s,baz=94,slow=8.1,SNR=7.0						
ASAR	Alice Springs	46.59	254	P	P	22 55 08.5	-0.8
	1.7nm,0.6s,baz=90,slow=8.4,SNR=19						
MMAI	Mount Meron Ar	147.82	304	PKPbc	PKPbc	23 06 25.9	-0.7
	0.5nm,0.5s,baz=78,slow=6.6,SNR=2.5						

IDC 07 22:46:55.7±2.9,36°.04N×141°.13E,h0km,mb3.3/2, mb1 3.5/4,mb1mx3.2/67,mbtmp3.4/4,ML3.3/2,Error ellipse: s-maj=66.0km s-min=27.4km az=64.0
ISCJB 07 22:47:06.3±0.7,35°.73N±0°.04×140°.24E±0°.08,h71km±7km, mb3.2/2,Error ellipse: s-maj=10.5km s-min=7.4km az=172.5
JMA 07 22:47:07.6±0.1,35°.79N×140°.20E,h60km±2km,M2.4
ISC 07 22:47:07.2±1.1,35°.72N±0°.05×140°.26E±0°.06,h66km±9km, n14,σ1°38/20,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCN	Nagara	0.30	189	P	Pn	22 47 19.1	+1.2
JYT	Yasato	0.51	354	P	Pn	22 47 19.0	-0.7
JYT				S	Sn	22 47 27.5	-1.4
BSO3	Boso 3	0.94	167	P	Pn	22 47 25.1	+0.6
JOD2	Odawara 2	1.06	245	P	Pn	22 47 25.9	-0.3
JOD2				S	Sn	22 47 39.2	-1.2
JRY	Ryogami san	1.14	285	P	Pn	22 47 27.5	+0.2
JIM2	Oshima 3	1.21	214	P	Pn	22 47 28.0	-0.2
JIM2				eS	Sn	22 47 43.3	-0.6
BSO1	Boso 1	1.22	151	P	Pn	22 47 28.8	+1.0
JKT	Katashina	1.32	322	P	Pn	22 47 29.3	-0.5
JYN	Shimob	1.41	261	P	Pn	22 47 30.8	-0.1
JYN				eS	Sn	22 47 48.4	-0.4
MJAR	Matsushiro Arr	1.85	297	Pn	Pn	22 47 37.0	+0.3
	6.8nm,0.3s,baz=101,slow=14,SNR=50						
MAT	Matsushiro	1.85	297	P	Pn	22 47 37.4	+0.6
MAT				S	Sn	22 48 03.5	+4.3
JHJ	Hachijo jima 2	2.62	189	Pn	Pn	22 47 45.5	-1.7
	8.8nm,0.3s,baz=59,slow=19,SNR=5.1						
JHJ				Sn	Sn	22 48 19.0	+1.0
	18nm,0.3s,baz=240,slow=20,SNR=3.4						
MKAR	Makanchi Array	44.04	303	P	P	22 55 08.0	-0.4
	0.2nm,0.7s,baz=89,slow=9.1,SNR=2.5						
WRA	Warramunga Arr	55.64	187	P	P	22 56 36.5	0.0
	0.5nm,1.0s,baz=0.4,slow=7.5,SNR=3.0						

IGIL 07 23:00:51.7,37°.30N×15°.54W,h30km,ML2.9
MDD 07 23:00:53.1±1.8,37°.56N×15°.12W,h0km,mb4.5/10,Error ellipse: s-maj=16.4km s-min=14.0km az=40.0,PRXIMO
INMG 07 23:00:54.0±2.0,37°.31N×15°.56W,h10km,ML2.9,Error ellipse: s-maj=6.7km s-min=4.1km az=123.0
SFS 07 23:00:54.0,37°.66N×15°.00W,h0km,ML4.2
CNRM 07 23:00:54.7,37°.08N×15°.01W,h20km
CSEM 07 23:00:56.7±0.4,37°.59N×14°.76W,h10km,mb4.5,Error ellipse: s-maj=8.6km s-min=6.4km az=21.0
ISC 07 23:00:50.3±2.3,37°.50N±0°.07×15°.1W±0°.1,h10km,n121, σ2°37/212,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMAFR	Mafra	4.83	71	ePn	Pn	23 02 06.4	+3.3
PMAFR				eSn	Sn	23 03 00.5	+1.4
PMAFR				A	A	23 03 12.4	
	18nm,0.5s						
PMAFR	Mafra	4.83	71	P	Pn	23 02 06.2	+3.2
	11nm,0.2s,SNR=27						
PMAFR				S	Sn	23 02 58.5	-0.6
	20nm,0.1s,SNR=8.4						
PMAFR	Mafra	4.83	71	P	Pn	23 02 06.2	+3.2
	11nm,0.2s,SNR=27						
PMAFR				S	Sn	23 02 58.5	-0.6
	20nm,0.1s,SNR=8.4						
PMAFR				eSn	Sn	23 03 00.5	+1.4
PMST	Lisbon--Monsan	4.85	73	eSn	Sn	23 03 00.2	+0.6
PMST				A	A	23 03 11.9	
	21nm,0.7s						
PMST	Lisbon--Monsan	4.85	73	eSn	Sn	23 03 00.2	+0.6
PMAR	Madeira	4.99	198	ePn	Pn	23 02 03.2	-2.1
PMAR				eSn	Sn	23 02 48.2	-15
PMAR				A	A	23 02 55.7	
	15nm,0.4s						
PMAR	Madeira	4.99	198	P	Pn	23 02 06.2	+0.9
PFVI	Vila Bisbo	5.04	92	ePn	Pn	23 02 08.0	+2.1
PFVI				eSn	Sn	23 03 03.3	-0.9
PFVI				A	A	23 03 04.1	
	7.9nm,0.3s						
PFVI	Vila Bisbo	5.04	92	P	Pn	23 02 08.0	+2.1
	4.4nm,0.1s,SNR=15						
PFVI				S	Sn	23 03 01.6	-2.6
	16nm,0.1s,SNR=7.3						
PFVI	Vila Bisbo	5.04	92	P	Pn	23 02 08.0	+2.1
	4.4nm,0.1s,SNR=15						
PFVI				S	Sn	23 03 01.6	-2.6
	16nm,0.1s,SNR=7.3						
PFVI				eSn	Sn	23 03 03.3	-0.9
PTEO	Sao Teotonio	5.10	88	ePn	Pn	23 02 08.9	+2.2
PTEO				eSn	Sn	23 03 04.4	-1.2
PTEO				A	A	23 03 15.3	
	9.4nm,0.5s						
PTEO	Sao Teotonio	5.10	88	P	Pn	23 02 08.9	+2.2
PTEO				S	Sn	23 03 04.4	-1.2
	4.7nm,0.5s						
PTEO	Sao Teotonio	5.10	88	P	Pn	23 02 08.9	+2.2
PTEO				S	Sn	23 03 04.4	-1.2
	4.7nm,0.5s						
MORF	Marmelete	5.17	90	eP	Pn	23 02 09.9	+2.2
MORF				eS	Sn	23 03 06.5	-0.9
MORF				AML	AML	23 03 09.6	
	comp=N,21nm,0.3s						
MORF	Marmelete	5.17	90	ePn	Pn	23 02 09.9	+2.2
MORF				eSn	Sn	23 03 06.4	-0.9
MORF				A	A	23 03 14.3	
	comp=N,13nm,0.3s						
MORF	Marmelete	5.17	90	P	Pn	23 02 09.9	+2.2
MORF				S	Sn	23 03 06.5	-0.9
	comp=N,21nm,0.3s						
MORF	Marmelete	5.17	90	P	Pn	23 02 09.9	+2.2
MORF				S	Sn	23 03 06.5	-0.9
	comp=N,21nm,0.3s						
PNCL	Nicolau / Gran	5.27	81	ePn	Pn	23 02 11.5	+2.5
PNCL				eSn	Sn	23 03 09.7	-0.1
PNCL				A	A	23 03 12.2	
	comp=N,7.8nm,0.1s						
PNCL	Nicolau / Gran	5.27	81	ePn	Pn	23 02 11.5	+2.5
PNCL				eSn	Sn	23 03 09.7	-0.1
ALMR	Almeirim	5.41	70	eP	Pn	23 02 13.6	+2.5
ALMR				eS	Sn	23 03 13.3	0.0
ALMR				AML	AML	23 03 16.4	
	comp=N,14nm,0.1s						
ALMR	Almeirim	5.41	70	ePn	Pn	23 02 14.3	+3.3
ALMR				eSn	Sn	23 03 13.4	0.0
ALMR				A	A	23 03 21.2	
	comp=N,11nm,0.5s						
ALMR	Almeirim	5.41	70	P	Pn	23 02 13.6	+2.5
ALMR				P	Pn	23 02 14.3	+3.3
ALMR				S	Sn	23 03 13.3	0.0
	comp=N,6.8nm,0.1s						
ALMR	Almeirim	5.41	70	P	Pn	23 02 13.6	+2.5
ALMR	Almeirim	5.41	70	ePn	Pn	23 02 14.3	+3.3
ALMR				eSn	Sn	23 03 13.4	0.0
MESJ	Messejana	5.50	84	eP	Pn	23 02 14.4	+2.3
MESJ				eS	Sn	23 03 15.0	-0.4
MESJ				AML	AML	23 03 17.5	
	comp=E,12nm,0.2s						
MESJ	Messejana	5.50	84	ePn	Pn	23 02 14.5	+2.3
MESJ				eSn	Sn	23 03 15.6	+0.2
MESJ				A	A	23 03 20.0	
	comp=E,7.4nm,0.3s						
MESJ	Messejana	5.50	84	P	Pn	23 02 14.4	+2.3
MESJ				S	Sn	23 03 15.0	-0.4
	comp=E,12nm,0.2s						
MESJ	Messejana	5.50	84	ePn	Pn	23 02 14.5	+2.3
MESJ				S	Sn	23 03 15.0	-0.4
	comp=E,12nm,0.2s						
MESJ				eSn	Sn	23 03 15.6	+0.2
PCVE	Castro Verde	5.64	87	ePn	Pn	23 02 16.1	+2.0
PCVE				eSn	Sn	23 03 17.3	-1.7
PCVE				A	A	23 03 24.9	
	comp=E,4.9nm,0.2s						
PCVE	Castro Verde	5.64	87	P	Pn	23 02 16.1	+2.0
PCVE				S	Sn	23 03 17.3	-1.7
	comp=E,4.9nm,0.2s						
PCVE	Castro Verde	5.64	87	P	Pn	23 02 16.1	+2.0
PCVE				S	Sn	23 03 17.3	-1.7
	comp=E,4.9nm,0.2s						
PMTG	Montargil	5.66	72	ePn	Pn	23 02 17.0	+2.6
PMTG				eSn	Sn	23 03 18.9	-0.5
PMTG				A	A	23 03 20.9	
	comp=E,5.3nm,0.4s						
PMTG	Montargil	5.66	72	ePn	Pn	23 02 17.0	+2.6
PMTG				eSn	Sn	23 03 18.9	-0.5
PTOM	Tomar	5.68	66	ePn	Pn	23 02 17.8	+3.1
PTOM				eSn	Sn	23 03 20.2	+0.3
PTOM				A	A	23 03 24.6	
	comp=E,5.8nm,0.5s						
PTOM	Tomar	5.68	66	P	Pn	23 02 17.8	+3.1
PTOM				S	Sn	23 03 20.2	+0.3
	comp=E,2.9nm,0.5s						
PTOM	Tomar	5.68	66	P	Pn	23 02 17.8	+3.1
PTOM				S	Sn	23 03 20.2	+0.3
	comp=E,2.9nm,0.5s						
EVO	Evora	5.72	77	ePn	Pn	23 02 18.2	+3.0
EVO				eSn	Sn	23 03 20.9	0.0
EVO				A	A	23 03 25.3	
	comp=E,15nm,0.1s						
EVO	Evora	5.72	77	P	Pn	23 02 18.2	+3.0
EVO				S	Sn	23 03 20.4	-0.5
EVO	Evora	5.72	77	P	Pn	23 02 18.2	+3.0
EVO				eS	Sn	23 03 20.4	-0.5
PBDV	Barranco-do-Ve	5.74	90	ePn	Pn	23 02 18.0	+2.4
PBDV				eSn	Sn	23 03 20.9	-0.7
PBDV				A	A	23 03 25.3	
	comp=E,6.9nm,0.5s						
PBDV	Barranco-do-Ve	5.74	90	P	Pn	23 02 18.0	+2.4
PBDV				S	Sn	23 03 20.9	-0.7
	comp=E,6.9nm,0.5s						
PBDV	Barranco-do-Ve	5.74	90	P	Pn	23 02 18.0	+2.4
PBDV				S	Sn	23 03 20.9	-0.7
	comp=E,6.9nm,0.5s						
PCAS	Casmilo, Conde	5.78	62	ePn	Pn	23 02 19.1	+3.1
PCAS				eSn	Sn	23 03 22.6	+0.2
PCAS				A	A	23 03 39.1	
	comp=E,3.4nm,0.6s						
PCAS	Casmilo, Conde	5.78	62	ePn	Pn	23 02 19.1	+3.1
PCAS				eSn	Sn	23 03 22.6	+0.2
PBEJ	Beja	5.78	83	ePn	Pn	23 02 21.1	+5.0
PBEJ				eSn	Sn	23 03 21.9	-0.6
PBEJ				A	A	23 03 27.0	
	comp=E,5.8nm,0.1s						
PBEJ	Beja	5.78	83	S	Sn	23 03 21.9	-0.6
	comp=E,2.9nm,0.1s						
PBEJ	Beja	5.78	83	S	Sn	23 03 21.9	-0.6
	comp=E,2.9nm,0.1s						
PVAQ	Vaqueiros	5.90	89	ePn	Pn	23 02 20.0	+2.2
PVAQ				eSn	Sn	23 03 24.9	-0.6
PVAQ				A	A	23 03 30.9	
	comp=E,8.9nm,0.3s						
PVAQ	Vaqueiros	5.90	89	P	Pn	23 02 20.0	+2.2
PVAQ				S	Sn	23 03 24.9	-0.6
	comp=E,8.9nm,0.3s						
PVAQ	Vaqueiros	5.90	89	P	Pn	23 02 20.0	+2.2
PVAQ				S	Sn	23 03 24.9	-0.6
	comp=E,8.9nm,0.3s						
EGRO	El Granado	6.08	87	P	Pn	23 02 22.1	+1.9
	comp=E,1.7nm,0.2s,SNR=7.9						
EGRO				S	Sn	23 03 26.6	-3.3
	comp=E,6.3nm,0.1s,SNR=7.9						
EGRO	El Granado	6.08	87	P	Pn	23 02 22.1	+1.9
	comp=E,1.7nm,0.2s,SNR=7.9						
EGRO				S	Sn	23 03 26.6	-3.3
	comp=E,6.3nm,0.1s,SNR=7.9						
PESTR	Estremoz	6.10	75	ePn	Pn	23 02 22.9	+2.4
PESTR				eSn	Sn	23 03 29.4	-0.9
PESTR				A	A	23 03 33.6	
	comp=E,4.0nm,0.5s						
PESTR	Estremoz	6.10	75	ePn	Pn	23 02 22.9	+2.4
PESTR	Estremoz	6.10	75	P	Pn	23 02 24.6	+4.1
PESTR				eSn	Sn	23 03 29.4	-0.9
PTO	Porto	6.23	52	ePn	Pn	23 02 24.5	+2.2
PTO				eSn	Sn	23 03 32.6	-0.9
PTO				A	A	23 03 38.4	
	comp=E,14nm,0.1s						
PTO	Porto	6.23	52	P	Pn	23 02 24.5	+2.2
PTO				S	Sn	23 03 32.6	-0.9
	comp=E,7.2nm,0.1s						
PTO	Porto	6.23	52	P	Pn	23 02 24.5	+2.2
PTO				S	Sn	23 03 32.6	-0.9
	comp=E,7.2nm,0.1s						
PMRV	Marv??o	6.37	70	ePn	Pn	23 02 26.9	+2.7
PMRV				eSn	Sn	23 03 36.2	-0.9
PMRV				A	A	23 03 38.0	
	comp=E,4.0nm,0.3s						
PMRV	Marv??o	6.37	70	P	Pn	23 02 26.9	+2.7
PMRV				S	Sn	23 03 36.2	-0.9
	comp=E,4.0nm,0.3s						
PMRV	Marv??o	6.37	70	P	Pn	23 02 26.9	+2.7
PMRV				S	Sn	23 03 36.2	-0.9
	comp=E,4.0nm,0.3s						
PCBR	Castelo Branco	6.43	66	ePn	Pn	23 02 28.1	+3.1
PCBR				eSn	Sn	23 03 37.6	-0.8
PCBR				A	A	23 03 41.7	
	comp=E,1.5nm,0.1s						
PCBR	Castelo Branco	6.43	66	P	Pn	23 02 28.1	+3.1
PCBR				S	Sn	23 03 37.6	-0.8
	comp=E,0.8nm,0.1s						
PCBR	Castelo Branco	6.43	66	P	Pn	23 02 28.1	+3.1
PCBR				S	Sn	23 03 37.6	-0.8
	comp=E,0.8nm,0.1s						
PBAR	Barrancos	6.44	82	ePn	Pn	23 02 28.5	+3.3
PBAR				eSn	Sn	23 03 37.6	-1.2
PBAR				A	A	23 03 43.1	
	comp=E,10.0nm,0.3s						
PBAR	Barrancos	6.44	82	P	Pn	23 02 28.5	+3.3
PBAR				S	Sn	23 03 37.6	-1.2
	comp=E,10.0nm,0.3s						
PBAR	Barrancos	6.44	82	P	Pn	23 02 28.5	+3.3
PBAR				S	Sn	23 03 37.6	-1.2
	comp=E,10.0nm,0.3s						
PVIS	Viseu	6.48	58	ePn	Pn	23 02 28.7	+3.0
PVIS				eSn	Sn	23 03 38.9	-0.8
PVIS				A	A	23 03 40.5	
	comp=E,3.8nm,0.3s						
PVIS	Viseu	6.48	58	P	Pn	23 02 28.7	+3.0
PVIS				S	Sn	23 03 38.9	-0.8
	comp=E,1.9nm,0.3s						
PVIS	Viseu	6.48	58	P	Pn	23 02 28.7	+3.0
PVIS				S	Sn	23 03 38.9	-0.8
	comp=E,1.9nm,0.3s						
EBAD	Badajoz	6.52	76	P	Pn	23 02 28.3	+2.0
	comp=E,1.6nm,0.1s,SNR=18						
EBAD				S	Sn	23 03 38.3	-2.5
	comp=E,9.4nm,0.2s,SNR=8.8						
EBAD	Badajoz	6.52	76	P	Pn	23 02 28.3	+2.0
	comp=E,1.6nm,0.1s,SNR=18						
EBAD				S	Sn	23 03 38.3	-2.5
	comp=E,9.4nm,0.2s,SNR=8.8						
MTE	Manteigas	6.58	62	ePn	Pn	23 02 30.3	+3.1
MTE				eSn	Sn	23 03 43.4	+1.0
MTE	Manteigas	6.58	62	P	Pn	23 02 30.3	+3.1
MTE	Manteigas	6.58	62	P	Pn	23 02 30.3	+3.1
MTE				eSn	Sn	23 03 43.4	+1.0
EMIN	Mina Concepcio	6.72	85	P	Pn	23 02 32.0	+3.0
	comp=E,1.2nm,0.1s,SNR=12						
EMIN				S	Sn	23 03 41.9	-3.7
	comp=E,1.7nm,0.2s,SNR=10						
EMIN	Mina Concepcio	6.72	85	P	Pn	23 02 32.0	+3.0
	comp=E,1.2nm,0.1s,SNR=12						
EMIN				S	Sn	23 03 41.9	-3.7
	comp=E,1.7nm,0.2s,SNR=10						
PVRL	Vila Real	6.87	54	ePn	Pn	23 02 34.1	+3.0
PVRL	Vila Real	6.87	54	P	Pn	23 02 34.1	+3.0
PVRL	Vila Real	6.87	54	P	Pn	23 02 34.1	+3.0
POLO	Lamas de Olo	6.87	53	ePn	Pn	23 02 34.0	+2.9
POLO				eSn	Sn	23 03 47.0	-2.4
POLO	Lamas de Olo	6.87	53	ePn	Pn	23 02 34.0	+2.9
PCAB	Cabril	6.91	50	ePn	Pn	23 02 33.8	+2.2
PCAB				eSn	Sn	23 03 47.6	-2.7
PCAB	Cabril	6.91	50	P	Pn	23 02 33.8	+2.2
PCAB				S	Sn	23 03 47.6	-2.7
PCAB	Cabril	6.91	50	P	Pn	23 02 33.8	+2.2
PGAV	Gavieira, Arco	6.92	48	ePn	Pn	23 02 34.1	+2.3
PGAV				eSn	Sn	23 03 47.9	-2.7
PGAV	Gavieira, Arco	6.92	48	ePn	Pn	23 02 34.1	+2.3
ELOB	Lobios	6.98	49	P	Pn	23 02 34.4	+1.8
	comp=E,2.7nm,0.1s,SNR=28						
ELOB				S	Sn	23 03 49.0	-3.2
	comp=E,2.8nm,0.2s,SNR=7.9						
ELOB	Lobios	6.98	49	P	Pn	23 02 34.4	+1.8
	comp=E,2.7nm,0.1s,SNR=28						
EMAZ	Mazaricos	7.20	39	P	Pn	23 02 36.1	+0.6
	comp=E,2.2nm,0.1s,SNR=7.9						
EMAZ				S	Sn	23 03 52.3	-5.0
	comp=E,3.3nm,0.1s,SNR=7.9						
MVO	Moncorvo	7.27	57	ePn	Pn	23 02 38.9	+2.3
MVO				eSn	Sn	23 03 57.9	-1.3
MVO	Moncorvo	7.27	57	P	Pn	23 02 38.0	+1.4
	comp=E,2.4nm,0.1s,SNR=7.7						
MVO				S	Sn	23 03 55.0	-4.2
	comp=E,1.1nm,0.1s,SNR=7.9						
MVO	Moncorvo	7.27	57	P	Pn	23 02 38.0	+1.4
	comp=E,2.4nm,0.1s,SNR=7.7						
MVO	Moncorvo	7.27	57	ePn	Pn	23 02 38.9	+2.3
MVO				eSn	Sn	23 03 57.9	-1.3
EPLA	Plasencia	7.52	67	P	Pn	23 02 42.6	+2.6
	comp=E,2.4nm,0.3s,SNR=6.1						
EPLA				S	Sn	23 04 02.6	-2.7
	comp=E,0.8nm,0.2s,SNR=7.9						
EPLA	Plasencia	7.52	67	P	Pn	23 02 42.6	+2.6
	comp=E,2.4nm,0.3s,SNR=6.1						
EPLA				S	Sn	23 04 02.6	-2.7
	comp=E,0.8nm,0.2s,SNR=7.9						
EAGO	Agolada(Pontev	7.56	43	P	Pn	23 02 42.0	+1.5
	comp=E,1.4nm,0.1s,SNR=7.9						
EAGO				S	Sn	23 04 02.0	-4.2
	comp=E,1.2nm,0.1s,SNR=7.9						
EAGO	Agolada(Pontev	7.56	43	P	Pn	23 02 42.0	+1.5
	comp=E,1.4nm,0.1s,SNR=7.9						
ECAB	El Cabril	7.72	83	P	Pn	23 02 45.0	+2.3
	comp=E,0.5nm,0.1s,SNR=13						
ECAB				S	Sn	23 04 07.2	-2.9
	comp=E,0.7nm,0.1s,SNR=7.4						
ECAB	El Cabril	7.72	83	P	Pn	23 02 45.0	+2.3
	comp=E,0.5nm,0.1s,SNR=13						
ECAB				S	Sn	23 04 07.2	-2.9
	comp=E,0.7nm,0.1s,SNR=7.4						
PBRG	Braganca	7.77	54	ePn	Pn	23 02 46.3	+2.9
PBRG	Braganca	7.77	54	P	Pn	23 02 46.3	+2.9
PBRG	Braganca	7.77	54	P	Pn	23 02 46.3	+2.9
HORN	Hornachuelos	7.84	84	P	Pn	23 02 45.3	+0.9
EADA	Adamuz	8.38	82	P	Pn	23 02 54.8	+3.0
	comp=E,0.5nm,0.1s,SNR=7.9						
EADA				S	Sn	23 04 22.1	-4.4
	comp=E,1.0nm,0.1s,SNR=7.9						
EADA	Adamuz	8.38	82	P	Pn	23 02 54.8	+3.0
	comp=E,0.5nm,0.1s,SNR=7.9						
EADA				S	Sn	23 04 22.1	-4.4
	comp=E,1.0nm,0.1s,SNR=7.9						
EPON	Pontenova	8.42	44	P	Pn	23 02 53.4	+1.1
	comp=E,0.8nm,0.2s,SNR=6.0						
EPON				S	Sn	23 04 22.8	-4.6
	comp=E,1.5nm,0.1s,SNR=7.9						
EPON	Pontenova	8.42	44	P	Pn	23 02 53.4	+1.1
	comp=E,0.8nm,0.2s,SNR=6.0						
OUK	Oukaimeden	8.69	134	S	Sn	23 04 30.5	-4.0
PAB	San Pablo	8.70	73	P	Pn	23 02 58.3	+2.1
	comp=E,0.8nm,0.2s,SNR=7.9						
PAB				S	Sn	23 04 30.5	-3.8
	comp=E,0.5nm,0.2s,SNR=7.9						
PAB	San Pablo	8.70	73	P	Pn	23 02 58.3	+2.1
	comp=E,0.8nm,0.2s,SNR=7.9						
PAB				S	Sn	23 04 30.5	-3.8
	comp=E,0.5nm,0.2s,SNR=7.9						
EGOR	Sierra Gorda,	8.79	89	S	Sn	23 04 34.9	-1.9
	comp=E,0.9nm,0.3s,SNR=7.9						
EGOR	Sierra Gorda,	8.79	89	S	Sn	23 04 34.9	-1.9
	comp=E,0.9nm,0.3s,SNR=7.9						
ESDC	Sonseca Array	9.01	73	P	Pn	23 03 01.9	+1.4
	comp=E,0.7nm,0.2s,baz=262,slow=13,SNR=12						
ESDC				S	Sn	23 04 36.4	-5.6
	comp=E,0.5nm,0.2s,baz=260,slow=23,SNR=4.3						
ESDC	Sonseca Array	9.01	73	P	Pn	23 03 01.9	+1.4
	comp=E,0.7nm,0.2s,SNR=12						
EQUE	Quentar	9.32	88	S	Sn	23 04 44.8	-4.9
	comp=E,0.5nm,0.3s,SNR=4.0						
EQUE	Quentar	9.32	88	S	Sn	23 04 44.8	-4.9
	comp=E,0.5nm,0.3s,SNR=4.0						
EARI	Arriondas	9.53	49	P	Pn	23 03 09.2	+1.7
	comp=E,0.6nm,0.1s,SNR=7.9						
EARI	Arriondas	9.53	49	P	Pn	23 03 09.2	+1.7
	comp=E,0.6nm,0.1s,SNR=7.9						
EQES	Quesada	9.57	85	S	Sn	23 04 52.1	-3.8
	comp=E,0.6nm,0.2s,SNR=7.9						
EQES	Quesada	9.57	85	S	Sn	23 04 52.1	-3.8
	comp=E,0.6nm,0.2s,SNR=7.9						

IDC 07 23:16:52.1±42.0,9°.93S×112°.87E,h0km,mb3.7/3, mb1 3.7/3,mb1mx3.3/54,mbtmp3.7/3,Error ellipse: s-maj=948.7km s-min=196.9km az=153.0
ISCJB 07 23:17:17.6±1.9,8°.6S±0°.3×112°.7E±0°.1,h150km,mb3.6/3, Error ellipse: s-maj=42.5km s-min=10.8km az=13.8
DJA 07 23:17:19.7±1.0,9°.S±12°.×11°.3E±°,h138km±7km,M3.6/6, MLv3.6/6
ISC 07 23:17:18.4±1.7,8°.6S±0°.2×112°.65E±0°.09,h150km,n9, σ0°71/11,mb3.6/3,Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMJI	Gumukmas	0.85	67	P	Pn	23 17 42.9	+0.9
GMJI				S	Sn	23 17 58.7	-1.2
PWJI	Pagerwojo	1.02	304	P	Pn	23 17 42.9	-0.5
PWJI				S	Sn	23 18 01.7	-0.7
BLJI	Banyuglugur	1.26	48	P	Pn	23 17 45.9	+0.3
JAGI	Jajag, Banyuwa	1.49	85	P	Pn	23 17 47.3	-0.6
GRJI	Gresik	1.69	354	P	Pn	23 17 49.6	-0.4
NGJI	Ngawi	1.70	316	P	Pn	23 17 50.6	+0.4
SONM	Songino Array	56.46	355	P	P	23 26 45.2	+0.6

comp=Z,136nm,19.2s,baz=117,slow=41
GUMO Guam 18.14 38 LR LR 23 27 43.0
comp=Z,67nm,21.6s,baz=192,slow=34
WRA Warramunga Arr 19.17 177 P **P** **23 21 51.8 -2.7**
0.5nm,0.3s,baz=356,slow=12,SNR=14
WRA S Sn 23 25 14.5 -15
0.3nm,0.3s,baz=89,slow=13,SNR=5.2
ASAR Alice Springs 22.86 179 P **P** **23 22 31.8 -2.6**
4.8nm,0.9s,baz=6.0,slow=12,SNR=21
ASAR LR LR 23 33 20.5
comp=Z,110nm,19.9s,baz=78,slow=42
STKA Stephens Creek 31.98 167 LR LR 23 39 46.7
comp=Z,117nm,18.0s,baz=18,slow=42
H11S3 WAKE ISLAND Hy 37.83 58 T T 00 05 12.9
baz=247
H11S2 WAKE ISLAND Hy 37.84 58 T T 00 05 13.2
baz=247
H11S1 WAKE ISLAND Hy 37.85 58 T T 00 05 13.3
baz=247
H11N1 WAKE ISLAND Hy 38.55 56 T T 00 05 59.0
baz=243,slow=75,SNR=29
H11N2 WAKE ISLAND Hy 38.57 56 T T 00 06 00.5
baz=243,slow=75,SNR=19
H11N3 WAKE ISLAND Hy 38.57 56 T T 00 06 01.4
baz=243,slow=75,SNR=19
SONM Songino Array 53.74 338 P **P** **23 26 52.5 -0.3**
0.2nm,0.5s,baz=148,slow=6.8,SNR=3.0
MKAR Makanchi Array 65.00 324 P **P** **23 28 11.1 +0.6**
1.8nm,0.5s,baz=114,slow=8.1,SNR=25
ZALV Zalesovo Beam 67.58 331 LR LR 00 01 24.2
comp=Z,15nm,18.3s,baz=70,slow=39
KURBB Kurchatov Arra 69.07 326 P **P** **23 28 36.5 +0.2**
1.8nm,0.7s,baz=124,slow=5.8,SNR=16
KDAK Kodiak Island 82.07 31 LR LR 00 03 15.5
comp=Z,43nm,19.6s,baz=146,slow=34
ILAR Eielson Array 86.20 29 P **P** **23 30 10.7 -0.9**
0.6nm,0.7s,baz=241,slow=5.6,SNR=4.5

*ISCJB **07** 23:19:22.8±0.2,58°.04N±0°.02×124°.79W±0°.05,h10km, mb4.0/35,MS3.5/9,Error ellipse: s-maj=3.9km s-min=3.1km az=135.1*
*IDC **07** 23:19:22.8±0.6,57°.86N×124°.79W,h0km,mb3.9/15, mb1 4.1/22,mb1mx3.9/71,mbtmp3.9/22,ML3.7/7,MS3.3/18, Ms1 3.3/18,ms1mx3.1/77,Error ellipse: s-maj=10.3km s-min=7.8km az=148.0*
*NEIC **07** 23:19:23.3±0.0,57°.84N×124°.87W,h10km,mb4.1/33, MW4.3(OTT),After OTT.*
*PGC **07** 23:19:23.1±0.1,57°.80N×124°.84W,h0km,ML4.4/5,168km Wsw of Fort Nelson, Bc British Columbia, Canada*
ISC 07 23:19:24.4±0.4,57°.96N±0°.03×124°.80W±0°.03,h10km, n174,σ1°98/178,mb4.1/35,MS3.6/8,British Columbia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FNBB	**Fort Nelson**	**1.33**	**45**	P	**Pg**	**23 19 50.2**	**+0.3**
FNBB				S	**Sg**	**23 20 08.3**	**+1.2**
FNBB	**Fort Nelson**	**1.33**	**45**	P	**Pg**	**23 19 50.2**	**+0.3**
FNBB				S	**Sg**	**23 20 08.7**	**+1.6**
DLBC	**Dease Lake**	**2.81**	**282**	Pn	**Pn**	**23 20 08.9**	**-0.5**
	12nm,0.3s,baz=97,slow=10.0,SNR=140						
DLBC				Pg	**Pb**	**23 20 14.7**	**+0.1**
	36nm,0.3s,baz=122,slow=12,SNR=55						
DLBC				Lg	Lg	23 20 43.1	
	17nm,0.3s,baz=232,slow=24,SNR=3.7						
DLBC				LR	LR	23 21 32.1	
	comp=Z,298nm,20.2s,baz=104,slow=46						
DLBC	**Dease Lake**	**2.81**	**282**	Pn	**Pn**	**23 20 08.8**	**-0.5**
DLBC				Sn	**Sn**	**23 20 42.0**	**-1.3**
DLBC	**Dease Lake**	**2.81**	**282**	Pn	**Pn**	**23 20 08.8**	**-0.5**
DLBC				Sn	**Sn**	**23 20 42.0**	**-1.3**
WAPA	**Wapiti River**	**4.14**	**130**	Pn	**Pn**	**23 20 25.6**	**-2.1**
WAPA				Sn	**Sn**	**23 21 12.6**	**-3.6**
WAPA	**Wapiti River**	**4.14**	**130**	Pn	**Pn**	**23 20 25.6**	**-2.1**
WAPA				Sn	**Sn**	**23 21 12.6**	**-3.6**
HILA	**High Level**	**4.16**	**78**	Pn	**Pn**	**23 20 27.2**	**-0.6**
HILA				Sn	**Sn**	**23 21 14.5**	**-1.9**
HILA	**High Level**	**4.16**	**78**	Pn	**Pn**	**23 20 27.2**	**-0.6**
HILA				Sn	**Sn**	**23 21 13.5**	**-2.9**
RUBB	**Prince Rupert**	**4.75**	**222**	Pn	**Pn**	**23 20 33.3**	**-2.5**
JIS	**Juneau Island**	**5.09**	**278**	*e*Pn	**Pn**	**23 20 40.9**	**+0.3**
UBRB	**Upper Baezaeko**	**5.09**	**175**	Pn	**Pn**	**23 20 38.6**	**-2.2**
UBRB				Sg	**Sb**	**23 21 55.5**	**+0.6**
UBRB	**Upper Baezaeko**	**5.09**	**175**	Pn	**Pn**	**23 20 39.0**	**-1.8**
UBRB				Sg	**Sb**	**23 21 57.6**	**+2.7**
BESE	**Bessie Mountai**	**5.34**	**281**	Pn	**Pn**	**23 20 43.0**	**-1.1**
BESE				Sn	**Sn**	**23 21 42.6**	**-3.1**
BESE				Sg	**Sb**	**23 22 03.8**	**+1.9**
BESE	**Bessie Mountai**	**5.34**	**281**	*e*Pn	**Pn**	**23 20 44.5**	**+0.3**
BESE				Sn	**Sn**	**23 21 42.6**	**-3.1**
BESE				Sg	**Sg**	**23 22 08.9**	**-6.9**
SKAG	**Skagway**	**5.69**	**290**	*e*Pg	**Pb**	**23 21 05.4**	**+1.8**
BBB	**Bella Bella**	**6.09**	**200**	Pn	**Pn**	**23 20 53.1**	**-1.2**
	0.6nm,0.3s,baz=11,slow=16,SNR=3.9						
BBB				Lg	Lg	23 22 27.4	
	2.2nm,0.3s,baz=308,slow=19,SNR=4.0						
BBB				LR	LR	23 23 25.3	
	comp=Z,667nm,18.1s,baz=8.0,slow=40						
PLBC	**Pleasant Camp**	**6.21**	**289**	Pn	**Pn**	**23 20 55.1**	**-0.9**
DIB	**Dawson Inlet,**	**6.45**	**226**	Pn	**Pn**	**23 20 57.4**	**-1.9**
DIB				Sg	**Sb**	**23 22 36.9**	**+3.2**
DIB	**Dawson Inlet,**	**6.45**	**226**	Pn	**Pn**	**23 20 57.3**	**-1.9**
DIB				Sg	**Sb**	**23 22 36.4**	**+2.7**
YKA	**Yellowknife Ar**	**6.81**	**44**	Pn	**Pn**	**23 21 03.4**	**-0.8**
	3.7nm,0.3s,baz=233,slow=12,SNR=77						
YKA				Sn	**Sn**	**23 22 18.9**	**-2.9**
	4.5nm,0.3s,baz=232,slow=22,SNR=6.9						
YKA				Lg	Lg	23 22 56.7	
	4.9nm,0.3s,baz=230,slow=25,SNR=6.2						
YKA				LR	LR	23 24 07.2	
	comp=Z,52nm,18.2s,baz=218,slow=41						
MNB	**Mounoet Dainar**	**6.85**	**145**	Pn	**Pn**	**23 21 03.0**	**-2.0**
MNB	**Mounoet Dainar**	**6.85**	**145**	Pn	**Pn**	**23 21 03.7**	**-1.3**
YKW1	**Yellowknife Ar**	**6.85**	**44**	Pn	**Pn**	**23 21 04.3**	**-0.4**
YKW1				Sn	**Sn**	**23 22 21.9**	**-0.7**
YKW3	**Yellowknife Ar**	**6.85**	**43**	Pn	**Pn**	**23 21 04.2**	**-0.6**
YKW3				Sn	**Sn**	**23 22 21.2**	**-1.5**
HYT	**Haines Junctio**	**7.09**	**299**	Pn	**Pn**	**23 21 09.0**	**+0.8**
HYT	**Haines Junctio**	**7.09**	**299**	Pn	**Pn**	**23 21 09.0**	**+0.8**
PHC	**Port Hardy**	**7.43**	**193**	Pn	**Pn**	**23 21 12.1**	**-0.6**
LLLB	**Lillooet**	**7.56**	**166**	Pn	**Pn**	**23 21 13.6**	**-0.9**
LLLB	**Lillooet**	**7.56**	**166**	Pn	**Pn**	**23 21 13.6**	**-0.9**
MAYB	**Maynard**	**7.70**	**191**	Pn	**Pn**	**23 21 15.0**	**-1.5**
PACB	**Port Alice, BC**	**7.70**	**193**	Pn	**Pn**	**23 21 15.6**	**-0.8**
WOSB	**Woss**	**7.88**	**188**	Pn	**Pn**	**23 21 17.4**	**-1.6**
BTB	**Buttle Lake**	**8.52**	**183**	Pn	**Pn**	**23 21 25.9**	**-1.9**
DAWY	**Dawson**	**9.35**	**317**	Pn	**Pn**	**23 21 40.1**	**+1.1**
DAWY	**Dawson**	**9.35**	**317**	*e*Pn	**Pn**	**23 21 41.5**	**+2.5**
PA03	**PA03 Flamable**	**9.36**	**174**	Pn	Pn	23 21 29.9	-9.2
PA04	**PA04 Cage**	**9.36**	**174**	Pn	Pn	23 21 29.3	-10
B010	**North Saanich**	**9.36**	**174**	Pn	Pn	23 21 31.1	-8.1
PA05	**PA05 Willingdo**	**9.36**	**174**	Pn	Pn	23 21 31.1	-8.1
PGC	**Sidney**	**9.36**	**174**	Pn	Pn	23 21 30.6	-8.5
B009	**North Saanich**	**9.36**	**174**	Pn	Pn	23 21 30.8	-8.4
PA12	**PA12 Sannich**	**9.36**	**174**	Pn	Pn	23 21 31.1	-8.1
DHRN	**Dharma Camp**	**9.43**	**13**	Pn	**Pn**	**23 21 37.4**	**-2.6**
WHFN	**White Fish Lak**	**9.92**	**55**	Pn	**Pn**	**23 21 45.5**	**-1.4**
NEW	**Newport**	**10.74**	**151**	Lg	Lg	23 24 54.0	
	0.2nm,0.3s,baz=127,slow=11,SNR=2.3						
NEW				LR	LR	23 26 26.1	
	comp=Z,133nm,21.4s,baz=336,slow=40						
KUKN	**Kugluktuk,NWT**	**10.83**	**20**	Pn	**Pn**	**23 21 56.6**	**-2.5**
KUKN				Sn	**Sn**	**23 23 51.9**	**-8.3**
WALA	**Waterton Lakes**	**11.01**	**139**	*e*Pn	**Pn**	**23 22 04.3**	**+2.4**
INK	**Inuvik**	**11.09**	**343**	Pn	**Pn**	**23 22 01.9**	**-0.9**
	0.4nm,0.3s,baz=154,slow=12,SNR=8.9						
INK				LR	LR	23 27 23.9	
	comp=Z,37nm,19.1s,baz=130,slow=43						
INK	**Inuvik**	**11.09**	**343**	Pn	**Pn**	**23 22 02.2**	**-0.6**
HDA	**Harding Lake**	**12.43**	**311**	*e*Pn	**Pn**	**23 22 21.8**	**+0.7**
HDA				*e*Sn	**Sn**	**23 24 37.0**	**-2.5**
ILAR	**Eielson Array**	**12.54**	**312**	Pn	**Pn**	**23 22 22.3**	**-0.4**
	0.0nm,0.3s,baz=112,slow=12,SNR=5.4						
ILAR				Lg	Lg	23 26 00.3	
	0.1nm,0.3s,baz=108,slow=29,SNR=9.0						
EGMT	**Eagleton**	**13.42**	**131**	*e*Pn	**Pn**	**23 22 36.6**	**+1.8**
BMO	**Blue Mountains**	**13.92**	**157**	*e*Pn	**P**	**23 22 46.7**	**-3.2**
	2.1nm,0.8s						
KDAK	**Kodiak Island**	**14.74**	**281**	LR	LR	23 28 04.7	
	comp=Z,120nm,18.3s,baz=110,slow=35						
MCMT	**McKenzie Canyo**	**15.08**	**145**	*e*Pn	**P**	**23 23 00.8**	**-2.2**
IM3	**Indian Mountai**	**15.66**	**313**	*e*Pn	**Pn**	**23 23 05.3**	**+0.5**
YHH	**Holmes Hill**	**15.76**	**141**	*e*Pn	**Pn**	**23 23 07.6**	**+1.1**
	24nm,1.9s						
HLID	**Hailey**	**15.81**	**151**	P	**P**	**23 23 09.6**	**-1.4**
	baz=339						
HLID	**Hailey**	**15.81**	**151**	*e*Pn	**P**	**23 23 11.0**	**+0.1**
	5.7nm,0.9s						
FCC	**Fort Churchill**	**16.07**	**74**	Pn	**Pn**	**23 23 04.7**	**-5.4**
YBH	**Yreka Blue Hor**	**16.30**	**174**	LR	LR	23 30 00.6	
	comp=Z,152nm,19.2s,baz=341,slow=39						
LOHW	**Long Hollow**	**16.88**	**142**	*e*Pn	**P**	**23 23 25.7**	**+2.9**
	4.6nm,1.0s						
REDW	**Red Top Meadow**	**17.03**	**143**	*e*Pn	**P**	**23 23 27.2**	**+2.7**
	22nm,1.4s						
HVU	**Hansel Valley**	**17.91**	**150**	*e*Pn	**P**	**23 23 36.6**	**+2.5**
	7.6nm,1.0s						
BW06	**Boulder Array**	**17.98**	**141**	P	**P**	**23 23 35.9**	**+0.9**
	baz=333						
BW06	**Boulder Array**	**17.98**	**141**	*e*Pn	**P**	**23 23 35.9**	**+0.9**
	13nm,1.5s						
PD31	**Pinedale Array**	**17.98**	**141**	*e*Pn	**P**	**23 23 35.8**	**+0.7**
PDAR	**Pinedale Array**	**17.98**	**141**	P	**P**	**23 23 35.0**	**0.0**
	0.1nm,0.3s,baz=333,slow=12,SNR=13						
PDAR				LR	LR	23 30 35.4	
	comp=Z,51nm,21.1s,baz=319,slow=38						
PDAR	**Pinedale Array**	**17.98**	**141**	*e*Pn	**Pn**	**23 23 34.6**	**+0.1**
ELK	**Elko**	**18.29**	**156**	P	**P**	**23 23 45.2**	**+6.8**
	0.1nm,0.3s,baz=24,slow=5.7,SNR=6.8						
ULM	**Lac du Bonnet**	**18.52**	**102**	P	**P**	**23 23 38.4**	**-2.2**
	0.7nm,0.3s,baz=310,slow=12,SNR=11						
ULM				S	Sn	23 26 54.5	-13
	0.6nm,0.3s,baz=236,slow=7.8,SNR=3.9						
ULM				Lg	Lg	23 28 55.5	
	0.1nm,0.3s,baz=209,slow=19,SNR=2.1						
ULM				LR	LR	23 31 17.2	
	comp=Z,76nm,20.6s,baz=278,slow=39						
ULM	**Lac du Bonnet**	**18.52**	**102**	Pn	**P**	**23 23 38.2**	**-2.4**
ULM	**Lac du Bonnet**	**18.52**	**102**	*e*P	**P**	**23 23 38.5**	**-2.1**
	5.6nm,0.8s						
RSSD	**Black Hills**	**18.92**	**128**	P	**Pn**	**23 23 46.1**	**+0.2**
	baz=324						
C31A	**Landman Farms,**	**19.11**	**110**	P	**P**	**23 23 46.4**	**-0.7**
	baz=312						
B32A	**Ashes, Strandq**	**19.32**	**107**	P	**P**	**23 23 49.4**	**0.0**
	baz=310						
YERR	**Yerington**	**19.33**	**167**	*e*Sn	**S**	**23 27 28.6**	**+0.1**
DUG	**Dugway, Tooele**	**19.38**	**151**	*e*P	**Pn**	**23 23 52.3**	**+0.9**
	9.3nm,1.0s						
KVN	**Kaiserville**	**19.42**	**164**	*e*P	**Pn**	**23 23 53.0**	**+1.2**
	3.7nm,0.8s						
A33A	**Warroad**	**19.56**	**105**	P	**P**	**23 23 50.6**	**-1.4**
	baz=308						
RYN	**Ryan**	**19.77**	**165**	*e*P	**Pn**	**23 23 59.1**	**+3.0**
	10nm,1.1s						
EPLO	**Experimental L**	**19.98**	**101**	Pn	**P**	**23 23 55.5**	**-1.1**
NVAR	**Mina Array Bea**	**20.00**	**165**	P	**Pn**	**23 23 59.3**	**+0.5**
	baz=351,slow=11,SNR=14						
NVAR				LR	LR	23 31 39.3	
	comp=Z,52nm,18.9s,baz=130,slow=37						
NV11	**Mina Array Sit**	**20.02**	**165**	*e*P	Pn	23 23 59.6	+0.6
	0.5nm,1.1s						
RES	**Resolute Bay**	**20.21**	**23**	P	**P**	**23 23 59.6**	**+0.7**
	11nm,0.8s,baz=219,slow=13,SNR=23						
RES				Lg	Lg	23 29 59.6	
	9.8nm,0.9s,baz=246,slow=18,SNR=3.0						
RES	**Resolute Bay**	**20.21**	**23**	Pn	**P**	**23 23 59.0**	**+0.1**
B34A	**Aery, Baudette**	**20.23**	**105**	P	**P**	**23 23 59.6**	**+0.2**
	baz=309						
R11A	**Troy Canyon, C**	**20.53**	**159**	P	Pn	23 24 05.5	+0.5
	baz=346						
R11A	**Troy Canyon, C**	**20.53**	**159**	*e*P	Pn	23 24 05.6	+0.6
	7.7nm,1.0s						
PSUT	**Pine Spring**	**20.71**	**155**	*e*P	Pn	23 24 07.2	+0.1
	8.3nm,1.0s						
PKLO	**Pickle Lake**	**20.74**	**93**	P	**P**	**23 24 03.6**	**-1.3**
O20A	**White River Ci**	**20.78**	**142**	P	**P**	**23 24 06.4**	**+0.8**
	baz=334						
O20A	**White River Ci**	**20.78**	**142**	*e*P	**P**	**23 24 06.6**	**+1.0**
	14nm,0.9s						
B35A	**Bob, Littlefor**	**20.79**	**104**	P	**P**	**23 24 05.4**	**0.0**
	baz=309						
N23A	**Red Feather La**	**20.90**	**137**	*e*P	Pn	23 24 08.5	-1.0
	33nm,1.6s						
SRU	**San Rafael Swe**	**21.02**	**148**	*e*P	**P**	**23 24 09.6**	**+1.5**
	21nm,0.9s						
MSU	**Marysvale**	**21.13**	**152**	*e*P	**P**	**23 24 11.4**	**+2.0**
MTPU	**Mount Pierson**	**21.57**	**152**	*e*P	**P**	**23 24 16.7**	**+2.4**
	13nm,1.3s						
ATKO	**Atikokan Iron**	**21.61**	**101**	P	**P**	**23 24 12.3**	**-1.8**
C36A	**Pine Crest Far**	**21.63**	**104**	P	**P**	**23 24 16.1**	**+1.7**
	baz=310						
CCUT	**Cedar City**	**21.76**	**155**	*e*P	**P**	**23 24 18.3**	**+2.1**
	6.0nm,0.9s						
TPNV	**Topopah Spring**	**21.77**	**161**	P	**P**	**23 24 17.9**	**+1.7**
	baz=348						
TPNV	**Topopah Spring**	**21.77**	**161**	*e*P	**P**	**23 24 18.2**	**+2.0**
	14nm,1.1s						
ISCO	**Idaho Springs**	**21.98**	**137**	*e*P	**P**	**23 24 20.0**	**+1.3**
	5.3nm,1.1s						
PV09	**Paradox Valley**	**21.99**	**146**	*e*P	**P**	**23 24 20.2**	**+1.5**
PV07	**Paradox Valley**	**22.20**	**145**	*e*P	**P**	**23 24 23.9**	**+3.1**
	9.0nm,0.9s						
EYMN	**Ely**	**22.20**	**102**	P	**P**	**23 24 20.2**	**-0.4**
	baz=309						
DAC	**Darwin (Calif)**	**22.21**	**164**	*e*P	**P**	**23 24 25.0**	**+4.0**
	11nm,1.3s						
D37A	**Cotton**	**22.23**	**105**	P	**P**	**23 24 20.9**	**0.0**
	baz=311						
E36A	**McGregor**	**22.23**	**107**	P	**P**	**23 24 20.8**	**-0.1**
	baz=312						
PV03	**Paradox Valley**	**22.30**	**145**	*e*P	**P**	**23 24 24.0**	**+2.0**
	8.4nm,1.1s						
LCMT	**Little Creek M**	**22.30**	**155**	*e*P	**P**	**23 24 23.9**	**+2.0**
	3.8nm,1.0s						
PV15	**Paradox Valley**	**22.33**	**144**	*e*P	**P**	**23 24 23.4**	**+1.1**
	14nm,0.9s						
KNB	**Kanab**	**22.39**	**154**	*e*P	**P**	**23 24 26.3**	**+3.4**
	6.8nm,1.0s						
SHPR	**Sheep Range**	**22.39**	**159**	*e*P	**P**	**23 24 24.3**	**+1.4**
	16nm,1.8s						
MPMC	**Manual Prospec**	**22.44**	**164**	P	**P**	**23 24 24.7**	**+1.3**
	baz=350						
C38A	**Sawbill Land.**	**22.47**	**103**	P	**P**	**23 24 25.0**	**+1.6**
	baz=309						
PV01	**Paradox Valley**	**22.50**	**145**	*e*P	**P**	**23 24 25.9**	**+1.8**
	9.2nm,1.0s						
F36A	**Milaca**	**22.55**	**109**	P	**P**	**23 24 24.5**	**+0.2**
	baz=314						
U15A	**North Rim**	**23.08**	**154**	*e*P	**P**	**23 24 32.7**	**+2.4**
	3.6nm,0.9s						
MVCO	**Mesa Verde**	**23.37**	**146**	P	**P**	**23 24 34.7**	**+1.5**
	baz=338						
MVCO	**Mesa Verde**	**23.37**	**146**	*e*P	**P**	**23 24 35.0**	**+1.8**
	4.6nm,0.9s						
S22A	**4UR Ranch, Cre**	**23.41**	**142**	P	**P**	**23 24 30.2**	**-3.4**
	baz=335						
VIMO	**Victor Mine**	**23.60**	**85**	P	**P**	**23 24 35.2**	**+0.2**
F39A	**Loretta**	**23.84**	**106**	P	**P**	**23 24 37.7**	**+0.3**
	baz=312						
SDCO	**Great Sand Dun**	**23.85**	**140**	P	**P**	**23 24 39.7**	**+1.7**
	baz=334						
E40A	**Wakefield**	**24.01**	**103**	P	**P**	**23 24 40.0**	**+1.0**
	baz=311						
E41A	**Kenton**	**24.48**	**102**	P	**P**	**23 24 44.3**	**+0.9**
	baz=311						
EUNU	**Eureka**	**25.07**	**15**	P	**P**	**23 24 50.9**	**+2.5**
X16A	**Lo Mia Camp, P**	**25.20**	**153**	*e*P	**P**	**23 24 53.1**	**+2.9**
	3.2nm,0.8s						
G42A	**Mountain**	**25.58**	**104**	P	**P**	**23 24 54.0**	**+0.7**
	baz=313						
ANMO	**Albuquerque**	**26.09**	**144**	P	**P**	**23 25 00.3**	**+2.0**
	1.8nm,0.9s,baz=336,slow=10.0,SNR=3.5						
ANMO				LR	LR	23 35 39.5	
	comp=Z,61nm,20.1s,baz=340,slow=38						
ANMO	**Albuquerque**	**26.09**	**144**	*e*P	**P**	**23 25 03.3**	**+5.1**
	2.7nm,1.0s						
TASM	**ASL Pad, Albuq**	**26.09**	**144**	P	**P**	**23 25 00.0**	**+1.8**
	baz=337						
CLRN	**Clyde River**	**26.30**	**39**	P	**P**	**23 25 00.7**	**+1.1**
FRB	**Frobisher Bay**	**27.19**	**54**	P	**P**	**23 25 09.1**	**+1.4**
	6.3nm,0.8s,baz=295,slow=8.8,SNR=9.3						
FRB				LR	LR	23 36 14.5	
	comp=Z,129nm,20.5s,baz=341,slow=37						
FRB	**Frobisher Bay**	**27.19**	**54**	P	**P**	**23 25 08.9**	**+1.3**
121A	**Cookes Peak, D**	**27.94**	**148**	P	**P**	**23 25 16.9**	**+2.0**
	baz=340						
R38A	**Fenwick Farm,**	**28.19**	**121**	P	**P**	**23 25 16.6**	**-0.3**
	baz=324						
WMOK	**Wichita Mounta**	**29.02**	**132**	*e*P	**P**	**23 25 20.5**	**-3.8**
	4.6nm,1.0s						
R41A	**Rosebud**	**29.28**	**118**	P	**P**	**23 25 27.0**	**+0.5**
	baz=323						
T39A	**Clever**	**29.39**	**122**	P	**P**	**23 25 28.3**	**+0.8**
	baz=325						
MNTX	**Cornudas Mount**	**29.43**	**145**	P	**P**	**23 25 28.9**	**+1.0**
	baz=339						
T40A	**Mansfield**	**29.67**	**120**	P	**P**	**23 25 29.9**	**-0.2**
	baz=325						
S41A	**Jillco Farms,**	**29.68**	**119**	P	**P**	**23 25 30.0**	**-0.1**
	baz=324						
T41A	**Mountain View**	**30.11**	**120**	P	**P**	**23 25 33.9**	**-0.1**
	baz=324						
V39A	**Pettigrew**	**30.25**	**123**	P	**P**	**23 25 34.9**	**-0.3**
	baz=327						
S43A	**Fulton Ridge,**	**30.48**	**117**	P	**P**	**23 25 37.1**	**-0.1**
	baz=323						
X39A	**Fountain Ranch**	**31.16**	**125**	P	**P**	**23 25 43.6**	**+0.4**
	baz=328						
MIAR	**Mount Ida**	**31.36**	**125**	P	**P**	**23 25 45.2**	**+0.2**
	baz=328						
SCHQ	**Schefferville**	**31.39**	**70**	LR	LR	23 38 28.1	
	comp=Z,163nm,19.3s,baz=269,slow=36						
TXAR	**Lajitas Array**	**32.16**	**144**	P	**P**	**23 25 50.1**	**-2.0**
	0.4nm,0.8s,baz=307,slow=7.5,SNR=1.7						
TXAR				LR	LR	23 39 56.9	
	comp=Z,83nm,20.1s,baz=0.0,slow=38						
WVT	**Waverly**	**32.71**	**116**	P	**P**	**23 25 56.4**	**-0.4**
	baz=323						
V46A	**Holladay**	**32.83**	**116**	P	**P**	**23 25 57.9**	**0.0**
	baz=324						
SPITS	**Spitsbergen Ar**	**42.08**	**11**	LR	LR	23 45 28.1	
	comp=Z,76nm,18.5s,baz=340,slow=37						
NRIK	**Noril'sk**	**50.86**	**346**	P	**P**	**23 28 26.0**	**+1.4**
	1.5nm,0.4s,baz=45,slow=5.5,SNR=4.5						
HFS	**Hagfors**	**57.82**	**23**	P	**P**	**23 29 16.6**	**+1.2**
	1.5nm,0.6s,baz=343,slow=4.5,SNR=6.6						
FINES	**FINESS Array B**	**58.79**	**16**	P	**P**	**23 29 22.9**	**+0.8**
	1.8nm,0.6s,baz=18,slow=6.6,SNR=9.0						
FINES				LR	LR	23 53 43.1	
	comp=Z,56nm,21.9s,baz=334,slow=35						
SDV	**Santo Domingo**	**64.01**	**117**	LR	LR	23 58 27.7	
	comp=Z,41nm,20.3s,baz=240,slow=37						
ZALV	**Zalesovo Beam**	**65.89**	**341**	P	**P**	**23 30 10.1**	**+0.4**
	1.0nm,0.7s,baz=23,slow=7.5,SNR=4.2						
ARU	**Arti**	**65.93**	**358**	*e*P	**P**	**23 30 11.1**	**+1.1**
	5.2nm,0.5s						
SONM	**Songino Array**	**66.41**	**325**	P	**P**	**23 30 13.9**	**+0.5**
	0.4nm,0.6s,baz=68,slow=4.8,SNR=3.7						
GERES	**GERESS Array B**	**68.20**	**28**	P	**P**	**23 30 26.0**	**+1.4**
	0.2nm,0.4s,baz=339,slow=6.0,SNR=3.9						
BVAR	**Borovoye Array**	**68.69**	**350**	P	**P**	**23 30 28.9**	**+1.4**
	1.1nm,0.7s,baz=23,slow=7.8,SNR=4.7						
BVAR				LR	LR	00 05 09.2	
	comp=Z,29nm,18.7s,baz=6.0,slow=40						
AKASG	**Malin Array Be**	**69.62**	**17**	P	**P**	**23 30 32.9**	**-0.4**
	0.2nm,0.3s,baz=352,slow=6.1,SNR=3.1						
KURK	**Kurchatov**	**69.99**	**344**	P	**P**	**23 30 36.6**	**+1.1**
KURBB	**Kurchatov Arra**	**70.10**	**344**	P	**P**	**23 30 36.6**	**+0.4**
	1.3nm,0.8s,baz=13,slow=5.0,SNR=10						
HHC	**Hu-ho-hao-te**	**70.90**	**318**	*e*P	**P**	**23 30 42.3**	**+0.9**
HHC				pmax	pmax		
	comp=Z,6.0nm,1.3s						
HHC				pmax	pmax		
	comp=Z,43nm,7.5s						
ESDC	**Sonseca Array**	**70.91**	**45**	P	**P**	**23 30 42.4**	**+1.0**
	comp=Z,0.6nm,0.5s,baz=328,slow=5.3,SNR=6.0						
MKAR	**Makanchi Array**	**73.22**	**341**	P	**P**	**23 30 55.0**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=32,slow=7.1,SNR=3.5						
WMQ	**Urumqi**	**75.03**	**336**	*e*P	**P**	**23 31 08.1**	**+2.3**
BRTR	**Keskin Array B**	**81.01**	**17**	P	**P**	**23 31 40.2**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=329,slow=5.6,SNR=2.8						
CD2	**Chengdu**	**82.58**	**319**	P	**P**	**23 31 46.7**	**-0.7**
CD2				pmax	pmax		
	comp=Z,1.0nm,0.5s						

*CSEM **07** 23:33:31.5±0.2,48°.43N×8°.06E,h19km,ML2.1/8,Error ellipse: s-maj=4.5km s-min=3.5km az=130.0*
*STR **07** 23:33:33.0±0.4,48°.N±2°.×±°.,h10km,M2.3/6,MLv2.3/6*
*LDG **07** 23:33:32.4±0.0,48°.42N×8°.08E,h16km,Md2.3/3,Ml2.1/8, Error ellipse: s-maj=0.7km s-min=0.6km az=10.0*
ISC 07 23:33:31.4±1.1,48°.42N±0°.04×8°.09E±0°.04,h19km±3km, n36,σ1°03/62,Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPP	**Oppenau**	**0.10**	**39**

*NIED **07** 23:33:00,37.70N×141.80E,h53km,Mw4.0 Best double couple: Mt1.08000×10^15 NP1:φ=6.00000°, δ39.00000°, λ84.00000°. NP2:φ=194.00000°, δ51.00000°, λ95.00000°.*
*ISCJB **07** 23:33:41.9±0.7,37.66N±0.04×141.83E±0.06,h55km±5km, mb4.0/26,MS3.8/5,Error ellipse: s-maj=9.1km s-min=5.1km az=24.7*
*IDC **07** 23:33:43.2±2.1,37.69N×141.72E,h49km±20km,mb3.8/24, mb1 4.0/27,mb1mx3.8/70,mbtmp4.1/27,ML3.8/3,MS3.6/6, Ms1 3.6/6,ms1mx3.0/65,Error ellipse: s-maj=15.6km s-min=13.3km az=112.0*
*JMA **07** 23:33:43.1,37.68N×141.75E,h48km±1km,M4.2*
JMA Felt II J1.
*NEIC **07** 23:33:44.2±0.9,37.71N×141.77E,h59km±7km,mb4.1/2, Error ellipse: s-maj=10.9km s-min=6.6km az=132.0*
NEIC Recorded [2 JMA] in Fukushima and Miyagi.

ISC 07 23:33:43.1±1.4,37.68N±0.05×141.81E±0.09,h48km±12km, n59,σ1§59/64,mb4.0/26,MS3.9/5,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.81**	**247**	P	**Pn**	**23 33 57.6**	**-0.7**
JFK				S	**Sn**	**23 34 07.9**	**-1.4**
JMM	**Marumori**	**0.83**	**283**	P	**Pn**	**23 33 58.0**	**-0.5**
JMM				S	**Sn**	**23 34 08.7**	**-1.0**
JIO	**Ouri**	**0.85**	**335**	P	**Pn**	**23 33 58.7**	**-0.1**
JIO				S	**Sn**	**23 34 09.7**	**-0.6**
ONAJ	**Iwakimizuishiy**	**0.99**	**235**	P	**Pn**	**23 34 00.1**	**-0.7**
ONAJ				eS	**Sn**	**23 34 12.5**	**-1.3**
JOU	**Okura**	**1.14**	**307**	P	**Pn**	**23 34 02.3**	**-0.4**
JOU				S	**Sn**	**23 34 16.7**	**-0.4**
JFT	**Otama**	**1.18**	**262**	P	**Pn**	**23 34 03.4**	**+0.1**
JFT				S	**Sn**	**23 34 18.1**	**-0.2**
JMK	**Ichinoseki**	**1.35**	**340**	P	**Pn**	**23 34 05.8**	**+0.2**
JMK				eS	**Sn**	**23 34 22.4**	**+0.1**
JYS	**Shiratake**	**1.48**	**292**	P	**Pn**	**23 34 07.4**	**0.0**
JYS				S	**Sn**	**23 34 26.4**	**+0.8**
JYK	**Kaneyama**	**1.68**	**318**	P	**Pn**	**23 34 10.2**	**+0.1**
JFY	**Yanaizu**	**1.70**	**261**	P	**Pn**	**23 34 10.2**	**-0.1**
JOM	**Ohasama**	**1.83**	**347**	P	**Pn**	**23 34 12.7**	**+0.5**
JYA	**Atsumi**	**1.89**	**299**	P	**Pn**	**23 34 12.9**	**0.0**
JYA				eS	**Sn**	**23 34 35.1**	**-0.4**
MJAR	**Matsushiro Arr**	**3.10**	**250**	P	**Pn**	**23 34 29.4**	**-0.1**
	10nm,0.3s,baz=57,slow=8.9,SNR=56						
MJAR				S	**Sn**	**23 35 09.7**	**+4.4**
	8.1nm,0.3s,baz=87,slow=21,SNR=7.1						
MAJO	**Matsushiro**	**3.10**	**250**	ePn	**Pn**	**23 34 30.1**	**+0.6**
MAT	**Matsushiro**	**3.10**	**250**	P	**Pn**	**23 34 30.5**	**+0.9**
MAT				S	**Sn**	**23 35 09.6**	**+4.2**
ERM	**Erimo**	**4.45**	**13**	ePn	**Pn**	**23 34 49.1**	**+1.0**
ERM				eSn	**Sn**	**23 35 40.4**	**+1.9**
JHJ	**Hachijo jima 2**	**4.84**	**201**	P	**Pn**	**23 34 52.0**	**-1.5**
	20nm,0.3s,baz=323,slow=21,SNR=7.6						
JHJ				S	**Sn**	**23 35 44.3**	**-4.0**
	42nm,0.3s,baz=101,slow=23,SNR=8.1						
ASAJ	**Asahikawa**	**6.46**	**5**	P	**Pn**	**23 35 14.9**	**-0.6**
	2.0nm,0.3s,baz=243,slow=11,SNR=5.3						
ASAJ				S	**Sn**	**23 36 22.0**	**-5.8**
	0.9nm,0.3s,baz=233,slow=20,SNR=1.9						
USRK	**Ussuriysk Ar.**	**9.88**	**314**	P	**Pn**	**23 36 06.2**	**+3.8**
	0.6nm,0.3s,baz=123,slow=14,SNR=15						
JNU	**Nakatsue**	**10.02**	**246**	LR	LR	23 40 14.7	
	comp=Z,91nm,20.9s,baz=115,slow=39						
KSRS	**Korea Array**	**11.03**	**273**	P	**Pn**	**23 36 21.5**	**+3.3**
	0.4nm,0.3s,baz=88,slow=14,SNR=11						
KSAR	**Wonju Array Be**	**11.06**	**273**	P	**Pn**	**23 36 21.5**	**+2.9**
SEY	**Seymchan**	**26.09**	**11**	P	**P**	**23 39 13.4**	**+1.4**
	0.9nm,0.6s,baz=170,slow=11,SNR=2.9						
SONM	**Songino Array**	**27.69**	**303**	P	**P**	**23 39 26.7**	**0.0**
	0.9nm,0.6s,baz=100,slow=8.6,SNR=7.0						
H11N2	**WAKE ISLAND Hy**	**28.21**	**122**	T	T	00 09 54.9	
	baz=316,slow=75,SNR=490						
H11N1	**WAKE ISLAND Hy**	**28.22**	**122**	T	T	00 09 55.6	
	baz=316,slow=75,SNR=414						
H11N3	**WAKE ISLAND Hy**	**28.23**	**122**	T	T	00 09 56.2	
	baz=316,slow=75,SNR=451						
H11S1	**WAKE ISLAND Hy**	**28.95**	**124**	T	T	00 10 45.6	
	baz=317,slow=76,SNR=229						
H11S3	**WAKE ISLAND Hy**	**28.95**	**124**	T	T	00 10 46.8	
	baz=317,slow=76,SNR=208						
H11S2	**WAKE ISLAND Hy**	**28.97**	**124**	T	T	00 10 49.2	
	baz=317,slow=76,SNR=140						
JAY	**Jayapura**	**40.01**	**182**	LR	LR	23 57 03.1	
	comp=Z,83nm,21.8s,baz=288,slow=35						
ZALV	**Zalesovo Beam**	**41.72**	**312**	P	**P**	**23 41 26.7**	**-0.4**
	1.5nm,0.6s,baz=94,slow=7.8,SNR=6.5						
MKAR	**Makanchi Array**	**44.05**	**302**	P	**P**	**23 41 45.6**	**-0.5**
	1.4nm,0.8s,baz=86,slow=8.1,SNR=8.3						
KURK	**Kurchatov**	**45.79**	**308**	eP	**P**	**23 41 59.3**	**-0.5**
	2.3nm,0.4s						
KURBB	**Kurchatov Arra**	**45.86**	**308**	P	**P**	**23 41 59.8**	**-0.6**
	4.2nm,0.6s,baz=82,slow=8.1,SNR=15						
KDAK	**Kodiak Island**	**46.41**	**42**	P	**P**	**23 42 04.5**	**-0.1**
	3.6nm,0.6s,baz=272,slow=5.6,SNR=6.6						
COLA	**College**	**48.36**	**33**	P	**P**	**23 42 20.0**	**+0.3**
	0.4nm,0.5s						
ILAR	**Eielson Array**	**48.78**	**33**	P	**P**	**23 42 23.1**	**+0.3**
	1.0nm,0.8s,baz=267,slow=6.5,SNR=9.9						
BVAR	**Borovoye Array**	**50.37**	**312**	P	**P**	**23 42 34.2**	**-1.0**
	0.5nm,0.5s,baz=74,slow=10.0,SNR=6.1						
BVAR				PcP	**PcP**	**23 43 53.0**	**-0.2**
	0.6nm,0.6s,baz=96,slow=2.9,SNR=3.3						
INK	**Inuvik**	**53.67**	**27**	P	**P**	**23 42 58.7**	**-0.7**
	1.0nm,0.5s,baz=280,slow=3.9,SNR=4.3						
WRA	**Warramunga Arr**	**57.75**	**188**	P	**P**	**23 43 28.4**	**-0.8**
	4.0nm,0.5s,baz=6.7,slow=7.3,SNR=5.9						
ASAR	**Alice Springs**	**61.47**	**188**	P	**P**	**23 43 54.8**	**-0.1**
	1.7nm,0.7s,baz=11,slow=7.0,SNR=14						
RES	**Resolute Bay**	**61.89**	**15**	P	**P**	**23 43 55.9**	**-1.2**
	2.6nm,0.8s,baz=320,slow=6.2,SNR=8.1						
YKA	**Yellowknife Ar**	**63.09**	**30**	P	**P**	**23 44 05.5**	**+0.3**
	0.9nm,0.7s,baz=291,slow=5.2,SNR=3.8						
FINES	**FINESS Array B**	**68.39**	**332**	P	**P**	**23 44 38.8**	**-0.5**
	2.3nm,0.7s,baz=49,slow=8.8,SNR=9.4						
STKA	**Stephens Creek**	**69.20**	**180**	P	**P**	**23 44 44.9**	**+0.2**
	0.5nm,0.4s,baz=321,slow=12,SNR=3.3						
HFS	**Hagfors**	**73.63**	**336**	P	**P**	**23 45 10.2**	**-0.9**
	0.9nm,0.4s,baz=72,slow=4.7,SNR=9.2						
NB2	**NORSAR Subarra**	**73.71**	**337**	P	**P**	**23 45 10.5**	**-1.1**
	comp=Z,0.6nm,0.7s,baz=37,slow=5.9						
NOA	**NORSAR Array B**	**73.71**	**337**	P	**P**	**23 45 11.0**	**-0.6**
	comp=Z,1.8nm,0.7s,baz=2.9,slow=1.5,SNR=4.5						
AKASG	**Malin Array Be**	**73.98**	**322**	P	**P**	**23 45 12.4**	**-0.9**
	comp=Z,1.6nm,0.4s,baz=47,slow=6.5,SNR=7.4						
NVAR	**Mina Array Bea**	**74.35**	**53**	P	**P**	**23 45 17.1**	**+1.2**
	comp=Z,0.8nm,0.7s,baz=290,slow=5.2,SNR=5.9						
PDAR	**Pinedale Array**	**76.99**	**46**	P	**P**	**23 45 31.6**	**+0.6**
	comp=Z,0.9nm,0.6s,baz=248,slow=1.6,SNR=7.2						
PDAR				LR	LR	00 18 21.6	
	comp=Z,24nm,22.0s,baz=54,slow=35						
ULM	**Lac du Bonnet**	**78.79**	**34**	P	**P**	**23 45 40.1**	**-0.5**
	comp=Z,1.1nm,0.4s,baz=114,slow=2.3,SNR=3.4						
MMAI	**Mount Meron Ar**	**81.85**	**305**	P	**P**	**23 45 57.8**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=91,slow=6.1,SNR=3.1						
URZ	**Urewera**	**82.28**	**153**	LR	LR	00 19 29.7	
	comp=Z,103nm,19.5s,baz=3.0,slow=33						
GERES	**GERESS Array B**	**82.33**	**328**	P	**P**	**23 45 58.7**	**-1.0**
	comp=Z,0.4nm,0.5s,baz=46,slow=7.6,SNR=6.7						
RPZ	**Rata Peaks**	**85.25**	**159**	LR	LR	00 21 17.7	
	comp=Z,91nm,21.6s,baz=15,slow=34						
TXAR	**Lajitas Array**	**89.47**	**53**	P	**P**	**23 46 36.2**	**+0.8**
	comp=Z,0.6nm,0.6s,baz=310,slow=4.0,SNR=4.8						
TXAR				LR	LR	00 24 08.2	
	comp=Z,46nm,20.6s,baz=0.0,slow=34						
LPAZ	**La Paz**	**146.09**	**59**	PKPbc	**PKPbc**	**23 53 18.8**	**-0.2**
	comp=Z,1.9nm,0.7s,baz=330,slow=3.5,SNR=7.8						

IDC 07 23:40:13.4±1.6,8.94S×130.20E,h0km,mb3.5/2, mb1 3.7/4,mb1mx3.4/48,mbtmp3.5/4,ML3.7/2,Error ellipse: s-maj=85.2km s-min=29.1km az=71.0,Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**11.65**	**160**	Pn	Pn	23 43 01.2	+0.1
	0.5nm,0.3s,baz=339,slow=13,SNR=13						
WRA				Sn	Sn	23 45 06.8	-5.1
	0.6nm,0.3s,baz=341,slow=23,SNR=6.1						
ASAR	**Alice Springs**	**15.07**	**167**	Pn	Pn	23 43 47.8	0.0
	0.3nm,0.3s,baz=357,slow=14,SNR=8.6						
SONM	**Songino Array**	**60.33**	**342**	P	P	23 50 24.4	+0.2
	0.3nm,0.5s,baz=142,slow=7.3,SNR=2.8						
MKAR	**Makanchi Array**	**69.95**	**327**	P	P	23 51 26.3	-0.3
	0.3nm,0.5s,baz=126,slow=7.3,SNR=5.5						

IDC 07 23:53:18.2±3.7,17.17S×179.37E,h0km,mb4.1/4, mb1 4.3/4,mb1mx3.7/50,mbtmp4.1/4,Error ellipse: s-maj=162.1km s-min=31.9km az=139.0,Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.15**	**240**	P	P	00 00 31.2	+0.2
	2.4nm,0.7s,baz=63,slow=9.0,SNR=6.3						
WRA	**Warramunga Arr**	**42.69**	**259**	P	P	00 01 16.6	-0.6
	1.1nm,0.6s,baz=96,slow=8.4,SNR=17						
ASAR	**Alice Springs**	**42.96**	**254**	P	P	00 01 19.4	+0.1
	7.6nm,0.6s,baz=83,slow=9.2,SNR=80						
ILAR	**Eielson Array**	**85.66**	**14**	P	P	00 05 58.3	-0.1
	0.3nm,0.6s,baz=214,slow=6.1,SNR=3.2						

GUC 08 00:00:10.7±0.7,32.51S×71.34W,h34km±4km,ML3.5, 2C-4D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROCH	**El Roble**	**0.54**	**150**	⇓iP	Pn	00 00 22.9	+0.8
ROCH				*i* S	Sn	00 00 31.8	+1.5
ROCH				IAML		00 00 34.8	
	comp=E,2μm,0.3s						
PEL	**Peldehue**	**0.84**	**139**	⇑iP	Pb	00 00 27.5	+0.6
PEL				*i* S	Sb	00 00 39.6	+1.6
PEL				IAML		00 00 41.6	
	comp=N,3μm,0.2s						
CLCH	**Cerro Calan**	**1.11**	**143**	⇓iP	Pb	00 00 31.7	+0.1
CLCH				*i* S	Sb	00 00 47.2	+1.4
CLCH				IAML		00 00 53.1	
	comp=N,2μm,0.5s						
FCH	**Farellones**	**1.20**	**133**	⇓iP	Pb	00 00 33.7	+0.5
FCH				*i* S	Sb	00 00 50.7	+2.1
FCH				IAML		00 00 52.3	
	comp=E,1μm,0.2s						
ANTU	**Antumapu**	**1.21**	**151**	⇑iP	Pb	00 00 32.7	-0.5
ANTU				*i* S	Sb	00 00 48.5	-0.1
ANTU				IAML		00 00 52.1	
	comp=E,2μm,0.4s						
LMEL	**Las Melosas**	**1.64**	**145**	⇓iP	Pb	00 00 39.6	-0.9
LMEL				*i* S	Sb	00 01 01.4	+0.5
LMEL				IAML		00 01 06.8	
	comp=N,2μm,0.4s						
TLL	**Tololo Astrono**	**2.38**	**11**	eP	Pb	00 00 50.7	-2.3
TLL				*i* S	Sb	00 01 21.1	-0.9
TLL				IAML		00 01 33.3	
	comp=E,829nm,0.8s						

*IDC **08** 00:06:20.6±1.1,34.23S×179.55W,h0km,mb4.1/4, mb1 4.3/5,mb1mx3.9/44,mbtmp4.2/5,ML4.0/1,Error ellipse: s-maj=35.7km s-min=26.4km az=72.0*
*WEL **08** 00:06:29.0±1.4,35.5S±21.×18.0W±3.2,h170km±46km*
*ISCJB **08** 00:06:35.7±0.8,34.95S±0.05×179.6E±0.2,h100km, mb4.2/11,Error ellipse: s-maj=18.2km s-min=7.1km az=6.8*
*NEIC **08** 00:06:42.1±2.1,35.31S×179.16E,h136km±19km,mb4.2/7, Error ellipse: s-maj=21.0km s-min=17.4km az=178.0*

ISC 08 00:06:39.1±0.7,35.05S±0.09×179.4E±0.1,h100km,n35, σ1§56/35,mb4.2/11,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.65**	**199**	P	**Pn**	**00 07 18.6**	**-1.6**
MXZ				S	Sn	00 07 59.0	+7.3
WMGZ	**Waiomatatini S**	**2.87**	**195**	P	**Pn**	**00 07 22.0**	**-1.1**
WMGZ				S	Sn	00 08 04.9	+8.0
HAZ	**Te Kaha**	**2.99**	**205**	P	**Pn**	**00 07 24.2**	**-0.4**
HAZ				S	Sn	00 08 09.9	+10
PKGZ	**Pakihiroa**	**3.02**	**200**	P	**Pn**	**00 07 24.2**	**-0.9**
PKGZ				S	Sn	00 08 07.1	+6.5
PUZ	**Puketiti**	**3.15**	**196**	P	**Pn**	**00 07 25.8**	**-1.0**
PUZ				S	Sn	00 08 10.3	+6.7
RUGZ	**Raukumara Rang**	**3.21**	**205**	P	**Pn**	**00 07 27.4**	**-0.4**
RUGZ				S	Sn	00 08 14.0	+8.7
TWGZ	**Tauwhareparae**	**3.32**	**199**	P	**Pn**	**00 07 28.1**	**-1.0**
TWGZ				S	Sn	00 08 15.6	+7.9
CNGZ	**Carnagh Statio**	**3.55**	**195**	P	**Pn**	**00 07 31.3**	**-0.9**
OPRZ	**Ohinepanea**	**3.60**	**218**	P	**Pn**	**00 07 34.5**	**+1.8**
MWZ	**Matawai**	**3.60**	**204**	P	**Pn**	**00 07 32.7**	**-0.1**
TKGZ	**Te Karaka**	**3.60**	**199**	P	**Pn**	**00 07 32.3**	**-0.5**
TKGZ				S	Sn	00 08 21.3	+7.0
URZ	**Urewera**	**3.68**	**209**	Pn	**Pn**	**00 07 32.9**	**-1.0**
	5.8nm,0.3s,baz=36,slow=8.7,SNR=21						
URZ				Sn	Sn	00 08 21.3	+4.9
	3.2nm,0.3s,baz=107,slow=19,SNR=2.4						
URZ	**Urewera**	**3.68**	**209**	P	**Pn**	**00 07 32.9**	**-1.0**
RAGZ	**Rawiri**	**3.78**	**204**	P	**Pn**	**00 07 35.9**	**+0.5**
RIGZ	**Rimuhau**	**3.87**	**199**	P	**Pn**	**00 07 35.1**	**-1.4**
RIGZ				S	Sn	00 08 26.6	+5.6
PRGZ	**Paritu Road**	**4.05**	**197**	P	**Pn**	**00 07 36.7**	**-2.2**
PRGZ				S	**Sn**	**00 08 29.2**	**+4.0**
RAR	**Rarotonga**	**22.92**	**59**	P	**P**	**00 11 37.6**	**+3.0**
	2.9nm,0.6s						
PMG	**Port Moresby**	**38.94**	**303**	P	**P**	**00 13 54.7**	**-0.7**
	7.0nm,0.5s						
ASAR	**Alice Springs**	**40.91**	**274**	P	**P**	**00 14 12.2**	**+0.5**
	2.4nm,0.6s,baz=117,slow=7.8,SNR=26						
WRAB	**Tennant Creek**	**42.32**	**279**	eP	**P**	**00 14 21.2**	**-2.1**
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**42.33**	**279**	P	**P**	**00 14 22.9**	**-0.4**
	2.6nm,0.6s,baz=120,slow=7.5,SNR=20						
QSPA	**South Pole Qui**	**55.07**	**180**	P	**P**	**00 16 01.1**	**+0.7**
	1.6nm,0.8s,baz=66,slow=0.5,SNR=8.6						
QSPA	**South Pole Qui**	**55.07**	**180**	P	**P**	**00 15 58.5**	**-1.9**
	0.5nm,0.3s						
MIDW	**Midway**	**63.00**	**3**	P	**P**	**00 16 56.3**	**+1.1**
	53nm,1.0s						
MAW	**Mawson**	**67.19**	**202**	P	**P**	**00 17 22.7**	**+0.8**
	1.0nm,0.5s,baz=132,slow=9.3,SNR=11						
COCO	**West Island**	**77.05**	**264**	P	**P**	**00 18 19.4**	**-2.1**
EFI	**East Falkland**	**80.07**	**148**	P	**P**	**00 18 36.6**	**-1.0**
	9.5nm,0.6s						
CHTO	**Chiang Mai**	**93.10**	**291**	P	P	00 19 39.7	-2.3
	0.6nm,0.4s						
ANMO	**Albuquerque**	**98.17**	**53**	P	**P**	**00 20 05.0**	**+0.1**
	0.2nm,0.4s						
NEW	**Newport**	**100.41**	**37**	P	**Pdif**	**00 20 14.8**	**+0.4**
	0.7nm,0.4s						
FINES	**FINESS Array B**	**148.60**	**336**	PKPbc	**PKPdf**	**00 26 08.0**	**-1.7**
	0.8nm,0.4s,baz=30,slow=5.1,SNR=18						
MMAI	**Mount Meron Ar**	**150.17**	**277**	PKPbc	**PKPdf**	**00 26 15.0**	**+1.7**
	0.9nm,0.5s,baz=64,slow=6.7,SNR=4.6						
BRTR	**Keskin Array B**	**152.48**	**290**	PKPbc	**PKPdf**	**00 26 19.0**	**+2.3**
	0.2nm,0.4s,baz=119,slow=1.8,SNR=3.4						
HFS	**Hagfors**	**153.23**	**344**	PKPbc	**PKPdf**	**00 26 17.7**	**+0.8**
	2.3nm,0.9s,baz=321,slow=3.7,SNR=4.3						
TORD	**Torodi Ar. Bea**	**158.09**	**186**	PKPab	**PKPab**	**00 26 56.5**	**-2.1**
	0.4nm,0.6s,baz=169,slow=1.5,SNR=4.1						

MAN 08 00:25:59.5,9.33N×125.49E,h1km,mb4.7,ML3.6,MS3.5, 3C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.38**	**160**	eP	Pg	00 26 07.0	+0.3
BUTP				eS	Sb	00 26 14.0	-1.4
SCPH	**Surigao**	**0.45**	**360**	⇑eP	Pb	00 26 09.5	-0.7
SCPH				eS	Sb	00 26 16.8	-0.7
MSLP	**Maasin**	**1.01**	**322**	eP	Pg	00 26 19.0	+0.1
CGP	**Cagayan de Oro**	**1.17**	**222**	⇑iP	Pg	00 26 21.8	-0.1
CGP				*i* S	Sn	00 26 40.7	+1.1
BUKP	**Musuan**	**1.50**	**196**	eP	Pn	00 26 27.4	-0.1
BUKP				eS	Sn	00 26 48.5	+0.6
LLP	**Lapu-Lapu**	**1.79**	**303**	eP	Pn	00 26 30.6	-0.9
LLP				eS	Sb	00 26 56.6	+0.4
PLP	**Palo**	**1.89**	**345**	⇑eP	Pn	00 26 33.6	+0.6
PLP				*i* S	Sg	00 27 02.6	+2.2
PAGZ	**Pagadian**	**2.55**	**235**	eP	Pn	00 26 41.7	-0.3
PAGZ				eS	Sn	00 27 14.3	+0.6

*UCR **08** 00:34:55.5±2.7,11.29N×86.73W,h16km±8km,MD4.5, ML3.8,mb4.2(NEIC)*
*IDC **08** 00:34:57.2±2.2,11.84N×86.08W,h42km±25km,mb3.5/5, mb1 3.9/7,mb1mx3.5/50,mbtmp3.8/7,ML3.5/2,MS3.4/4, Ms1 3.4/4,ms1mx2.8/34,Error ellipse: s-maj=69.9km s-min=20.3km az=49.0*
*NEIC **08** 00:35:02.6±1.3,11.81N×86.42W,h79km±11km,mb4.2/9, Error ellipse: s-maj=26.9km s-min=10.7km az=49.0*

ISC 08 00:34:53.7±0.9,11.28N±0.04×86.60W±0.05,h23km±6km, n68,σ1§66/75,mb4.2/15,MS3.7/4,3C-1D,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRUN	**El Crucero**	**0.76**	**23**	eP	**Pn**	**00 35 11.5**	**+2.4**
MASN	**Masaya**	**0.83**	**32**	eP	**Pn**	**00 35 11.8**	**+1.8**
MASN				AML	AML	00 35 34.1	
	comp=N,4μm,0.4s						
COPN	**Copaltepe**	**0.89**	**1**	eP	**Pn**	**00 35 12.2**	**+1.3**
XAVN	**Gruta Xavier**	**0.90**	**17**	eP	**Pn**	**00 35 12.7**	**+1.7**
MGAN	**Managua**	**0.93**	**22**	eP	**Pn**	**00 35 13.4**	**+2.1**
MGAN				AML	AML	00 35 28.7	
	comp=E,2μm,0.4s						
CRZ1	**La Cruz**	**0.97**	**102**	⇓iP	**Pn**	**00 35 14.1**	**+2.1**
CONN	**Concepcion**	**1.00**	**73**	eP	Pn	00 35 14.9	+2.6
MOMN	**Momotombo**	**1.12**	**3**	eP	**Pb**	**00 35 15.2**	**+0.7**
CNGN	**Cerro Negro**	**1.22**	**356**	eP	**Pb**	**00 35 16.4**	**+0.4**
CNGN				eS	**Sn**	**00 35 33.0**	**+1.8**
CNGN				AML	AML	00 35 40.3	
	comp=N,2μm,0.3s						
BUEV	**Buena Vista**	**1.27**	**112**	⇑eP	**Pb**	**00 35 18.5**	**+1.5**
GPS2	**Hotel Rinc^‡n**	**1.33**	**113**	⇑eP	**Pb**	**00 35 19.6**	**+1.5**
GPS2				eS	Sb	00 35 42.5	+7.7
TELN	**Telica**	**1.33**	**350**	eP	**Pb**	**00 35 18.3**	**+0.2**
TELN				eS	**Sb**	**00 35 37.4**	**+2.6**
BRAN	**Las Pilas**	**1.45**	**10**	eP	Pn	00 35 13.3	-5.3
BOAB	**BOACO BROADBAN**	**1.48**	**38**	eP	**Pb**	**00 35 21.0**	**+0.5**
MESS	**Mesas**	**1.48**	**111**	⇑eP	**Pb**	**00 35 22.2**	**+1.6**
VCR	**Vista de Mar**	**1.49**	**140**	eP	**Pb**	**00 35 20.1**	**-0.6**
MATN	**Matagalpa**	**1.77**	**22**	eP	**Pb**	**00 35 24.9**	**-0.6**
MATN				eS	**Sb**	**00 35 48.3**	**+1.0**
ESTN	**Estel**	**1.82**	**7**	ePn	**Pb**	**00 35 25.5**	**-0.9**
ESTN	**Estel**	**1.82**	**7**	eP	**Pb**	**00 35 25.5**	**-0.9**
ESTN				eS	**Sb**	**00 35 49.6**	**+0.7**
JTS	**JuntasAbangare**	**1.90**	**121**	P	**Pb**	**00 35 27.0**	**-0.6**
	comp=N,32nm,0.3s,baz=15,slow=12,SNR=68						
JTS				S	**Sb**	**00 35 50.6**	**-0.3**
	comp=N,40nm,0.3s,baz=82,slow=20,SNR=5.6						
JTS				LR	LR	00 36 34.3	
	comp=N,323nm,21.3s,baz=30,slow=51						
JTS	**JuntasAbangare**	**1.90**	**121**	eP	**Pb**	**00 35 27.5**	**-0.1**
JTS				eS	**Sb**	**00 35 56.4**	**+5.5**
RCON	**San Juan de Ri**	**2.23**	**11**	eP	**Pb**	**00 35 31.8**	**-1.7**
RCON				eS	**Sb**	**00 36 01.2**	**+0.4**
LCND	**La Ca^–ada**	**2.38**	**328**	IAML		00 36 04.3	
	comp=Z,1μm,0.4s						
ESPN	**Las Esperanzas**	**2.43**	**68**	ePn	**Pb**	**00 35 35.3**	**-1.4**
ESPN	**Las Esperanzas**	**2.43**	**68**	eP	**Pb**	**00 35 35.1**	**-1.6**
CGA2	**Cerro Gallo 2**	**2.45**	**121**	eP	**Pb**	**00 35 36.7**	**-0.4**
CGA2				eS	**Sb**	**00 36 07.6**	**+0.7**
VSM	**San Miguel**	**2.69**	**323**	eP	**Pn**	**00 35 37.7**	**+1.9**
LCY	**Lacayo**	**2.70**	**322**	eP	**Pn**	**00 35 37.2**	**+1.4**
PACA	**Pacayal**	**2.75**	**322**	eP	**Pn**	**00 35 38.3**	**+1.8**
HDC	**Heredia**	**2.76**	**117**	ePn	Pb	00 35 47.2	+4.8
HDC	**Heredia**	**2.76**	**117**	eP	**Pb**	**00 35 42.0**	**-0.3**
TGUH	**Tegucigalpa,Un**	**2.84**	**347**	ePn	**Pn**	**00 35 39.5**	**+1.9**
TGUH	**Tegucigalpa,Un**	**2.84**	**347**	eP	**Pn**	**00 35 39.5**	**+1.9**
TECA	**Tecapa**	**2.88**	**320**	eP	**Pn**	**00 35 40.8**	**+2.4**
CVTR	**Volcan Turrial**	**3.06**	**114**	eP	**Pb**	**00 35 46.5**	**-1.3**
URSC	**Urasca**	**3.12**	**117**	eP	**Pb**	**00 35 46.1**	**-2.6**
BUS	**Buena Vista**	**3.28**	**121**	eP	**Pb**	**00 35 47.8**	**-3.7**
LFRS	**El Faro**	**3.35**	**314**	eP	**Pn**	**00 35 45.9**	**+1.1**
LFRS				eS	**Sn**	**00 36 23.1**	**-0.8**
SNJE	**San Jose**	**3.90**	**312**	eP	**Pn**	**00 35 55.1**	**+2.6**
BRU2	**Volcan**	**4.58**	**122**	eP	Pn	00 36 05.0	+3.3
APG	**El Apazote**	**5.28**	**315**	P	**Pn**	**00 36 15.1**	**+3.6**
	comp=Z,0.8nm,0.3s,baz=106,slow=11,SNR=5.2						
APG				S	**Sn**	**00 37 14.3**	**+2.6**
	comp=Z,0.6nm,0.3s,baz=12,slow=20,SNR=2.0						
APG				LR	LR	00 38 28.7	
	comp=Z,113nm,19.7s,baz=100,slow=40						
CMIG	**

HAPS			*e*Sg	Sb	00 36 40.1	+0.9
HAPS	**Han Pijesak,BI**	0.74 146	*e*Pg	Pg	00 36 26.5	-1.1
	baz=3.0					
HAPS			*e*Sg	Sg	00 36 37.0	-0.2
TEKS	**Tekeris**	0.84 100	*e*Pg	Pg	00 36 29.4	0.0
TEKS			*e*Sg	Sb	00 36 42.4	+0.5
TEKS	**Tekeris**	0.84 100	*e*Pg	Pg	00 36 29.0	-0.4
TEKS			*e*Sg	Sg	00 36 40.4	0.0
BLY	**Banja Luka**	0.85 274	*e*Pg	Pg	00 36 29.1	-0.4
BLY			*e*Sg	Sg	00 36 41.1	+0.6
BLY	**Banja Luka**	0.85 274 ⇑	*i*P	Pb	00 36 30.6	+0.2
BLY			S	Sb	00 36 41.5	-0.6
BLY	**Banja Luka**	0.85 274	*e*Pg	Pg	00 36 29.1	-0.4
	baz=3.0					
BLY	**Banja Luka**	0.85 274 ⇑	*i*P	Pb	00 36 30.6	+0.2
BLY			*e*Sg	Sg	00 36 39.9	-0.6
BLY			S	Sb	00 36 41.5	-0.6
BBLS	**Lazići**	1.12 138	*e*Pg	Pg	00 36 34.7	0.0
BBLS			*e*Sg	Sb	00 36 50.3	+0.4
BBLS	**Lazići**	1.12 138	*e*Pg	Pg	00 36 34.7	0.0
	baz=2.0					
BBLS			*e*Sg	Sg	00 36 49.0	-0.2
FGSL	**Fruska Gora**	1.12 65	*e*Pg	Pg	00 36 34.1	-0.7
	baz=2.0					
FGSL			*e*Sg	Sn	00 36 50.7	-0.7
	baz=8.0					
FRGS	**Fruska Gora**	1.12 65	*e*Pg	Pg	00 36 34.1	-0.7
FRGS			*e*Sg	Sn	00 36 50.7	-0.7
FRGS	**Fruska Gora**	1.12 65 ⇓	*i*Pg	Pg	00 36 33.7	-1.1
FRGS			*e*Sg	Sb	00 36 50.5	+0.5
DIVS	**Divibare**	1.31 117	*e*Pg	Pn	00 36 37.0	-1.2
DIVS			*e*Sg	Sn	00 36 55.8	-0.3
DIVS	**Divibare**	1.31 117	*e*Pg	Pn	00 36 37.0	-1.2
	baz=9.0					
DIVS			*e*Sg	Sb	00 36 55.5	0.0
TRUS	**Trudelj**	1.54 107	*e*Pg	Pb	00 36 41.8	-0.4
TRUS			*e*Sg	Sg	00 37 03.7	+1.1
TRUS	**Trudelj**	1.54 107	*e*Pg	Pb	00 36 41.8	-0.4
TRUS			*e*Sg	Sg	00 37 03.7	+1.1
	baz=3.0					
UPM	**Unac-Piva**	1.55 165	*e*Pn	Pn	00 36 41.0	-0.6
UPM			*e*Sn	Sn	00 37 02.0	-0.1
IVAS	**Ivanjica**	1.71 131	*e*Pn	Pn	00 36 42.6	-1.1
IVAS	**Ivanjica**	1.71 131	*e*Pn	Pn	00 36 42.6	-1.1
	baz=6.0					
BRY	**Bratogost**	1.80 176 ⇑	*i*Pn	Pn	00 36 44.5	-0.6
BRY			*e*Sn	Sn	00 37 07.9	-0.5
SJES	**Sjenica**	1.85 141	*e*Pn	Pn	00 36 45.3	-0.4
SJES			*e*Sn	Sn	00 37 08.0	-1.4
UDBI	**Udbina**	1.87 266	*e*Pn	Pn	00 36 45.8	-0.2
UDBI	**Udbina**	1.87 266	*e*Pn	Pn	00 36 45.7	-0.2
GRUS	**Gruza**	1.87 115	*e*Pn	Pn	00 36 45.1	-0.8
GRUS			*e*Sn	Sn	00 37 10.1	+0.3
GRUS	**Gruza**	1.87 115	*e*Pn	Pn	00 36 45.1	-0.8
	baz=4.0					
GRUS			*e*Sn	Sn	00 37 10.1	+0.3
STON	**Ston**	1.89 195	*e*Pn	Pn	00 36 45.7	-0.4
STON	**Ston**	1.89 195	*e*Pn	Pn	00 36 45.3	-0.8
STON	**Ston**	1.89 195	*e*Pn	Pn	00 36 45.7	-0.4
	baz=2.0					
STON			*e*Sn	Sn	00 37 09.5	-0.8
TREB	**Trebinje**	1.98 180	*e*Pn	Pn	00 36 47.4	0.0
TREB			*e*Sn	Sn	00 37 13.0	+0.4
BANR	**Banloc**	2.08 70 ⇑	*i*P	Pg	00 36 54.8	+1.7
BANR	**Banloc**	2.08 70	S	Sg	00 37 24.0	+4.0
BEHE	**Becsehely**	2.09 328 ⇑	*e*Pn	Pn	00 36 48.8	-0.2
BEHE			*e*Sn	Sg	00 37 23.5	+3.0
BEHE	**Becsehely**	2.09 328	*e*Pn	Pn	00 36 48.7	-0.2
BEHE			*e*Sn	Sn	00 37 16.4	+1.1
OZLJ	**Ozalj**	2.25 295	*e*Pn	Pn	00 36 50.2	-0.8
OZLJ	**Ozalj**	2.25 295	*e*Pn	Pn	00 36 50.2	-0.8
HCY	**Herceg Novi**	2.25 178	*e*Pn	Pn	00 36 50.9	-0.3
HCY			*e*Sn	Sn	00 37 18.3	-1.0
KOGS	**Kog**	2.29 320	*i*Pn	Pn	00 36 51.3	-0.4
KOGS	**Kog**	2.29 320	*i*Pn	Pn	00 36 51.3	-0.4
CRES	**Cresnjev**	2.34 300	*e*Pn	Pn	00 36 51.7	-0.7
CRES			*e*Sn	Sn	00 37 21.8	+0.3
PDG	**Podgorica**	2.36 164	*e*Pn	Pn	00 36 52.9	+0.3
PDG			*e*Sn	Sn	00 37 21.6	-0.2
PDG	**Podgorica**	2.36 164 ⇓	*i*P	Pn	00 36 53.7	+1.1
PDG	**Podgorica**	2.36 164	S	Sb	00 37 26.9	+1.3
PDG	**Podgorica**	2.36 164	*e*Pn	Pn	00 36 52.6	0.0
PDG	**Podgorica**	2.36 164 ⇓	*i*P	Pn	00 36 53.7	+1.1
PDG			*e*Sn	Sn	00 37 21.6	-0.2
	baz=4.0					
KUBS	**Kucevo**	2.38 96	*e*Pn	Pn	00 36 52.4	-0.5
KUBS	**Kucevo**	2.38 96	*e*Pn	Pn	00 36 52.4	-0.5
	baz=3.0					
MDVR	**Moldovita**	2.38 87 ⇑	*i*P	Pb	00 36 57.5	+0.8
MDVR	**Moldovita**	2.38 87	S	Sg	00 37 30.3	+0.5
BZS	**Buzias**	2.47 67	*e*Pn	Pn	00 36 53.4	-0.7
BZS			*e*Sn	Sn	00 37 24.0	-0.7
BZS	**Buzias**	2.47 67 ⇓	*i*P	Pg	00 36 59.5	-1.2
BZS	**Buzias**	2.47 67	S	Sg	00 37 33.2	+0.5
BZS	**Buzias**	2.47 67	*e*Pn	Pn	00 36 53.4	-0.7
	baz=4.0					
BZS			*e*Sn	Sn	00 37 24.0	-0.7
	baz=1.0					
SELS	**Selova**	2.48 126	*e*Pn	Pn	00 36 53.6	-0.6
SELS	**Selova**	2.48 126	*e*Pn	Pn	00 36 53.6	-0.6
	baz=5.0					
NVLJ	**Novalja**	2.50 268	*e*Pn	Pn	00 36 55.0	+0.5
NVLJ			Sn	Sn	00 37 26.5	+1.2
NVLJ	**Novalja**	2.50 268	*e*Pn	Pn	00 36 55.0	+0.5
NVLJ			Sn	Sn	00 37 26.5	+1.2
DRME	**Dracevica, Mon**	2.58 166	*e*Pn	Pn	00 36 56.2	+0.5
DRME			*e*Sn	Sn	00 37 27.8	+0.4
CSKK	**Cs^‡kako**	2.66 358 ⇑	*e*Pn	Pn	00 36 56.3	-0.5
CSKK			*e*Sn	Sg	00 37 40.4	+1.6
CSKK	**Cs^‡kako**	2.66 358 ⇑	*e*Pn	Pn	00 36 56.3	-0.5
ZAGS	**Zajecar**	2.91 106	*e*Pn	Pn	00 36 59.4	-0.8
CEY	**Cerknica**	2.97 292	*e*Pn	Pn	00 37 00.8	-0.3
CEY			*e*Sn	Sn	00 37 36.8	-0.3
PERS	**Pernice**	2.99 311	*i*Pn	Pn	00 37 00.8	-0.5
PERS	**Pernice**	2.99 311	*i*Pn	Pn	00 37 00.8	-0.5
ARSA	**Arzberg**	3.23 323	*i*Pn	Pn	00 37 04.6	0.0
	20nm,0.3s,SNR=40					
ARSA	**Arzberg**	3.23 323	Pn	Pn	00 37 04.6	0.0
	20nm,0.3s,SNR=40					
OBKA	**Obir**	3.23 305	*i*Pn	Pn	00 37 04.7	0.0
	0.8nm,0.2s					
OBKA	**Obir**	3.23 305	Pn	Pn	00 37 04.7	0.0
	0.8nm,0.2s					
SOP	**Sopron**	3.24 338 ⇑	*e*x	Pn	00 37 04.3	-0.3
SOP	**Sopron**	3.24 338 ⇑	*e*Pn	Pn	00 37 04.3	-0.3
PSZ	**Piszkesteto**	3.39 18 ⇑	*i*P	Pn	00 37 05.6	-1.2
PSZ	**Piszkesteto**	3.39 18	S	Sg	00 38 03.7	+1.7
PSZ	**Piszkesteto**	3.39 18 ⇑	*e*x	Pn	00 37 06.3	-0.5
PSZ	**Piszkesteto**	3.39 18 ⇑	*i*P	Pn	00 37 05.6	-1.2
PSZ	**Piszkesteto**	3.39 18 ⇑	*e*Pn	Pn	00 37 06.3	-0.5
ZAPS	**Zavoj**	3.39 113	*e*Pn	Pn	00 37 07.2	+0.4
ZST	**Bratislava**	3.60 346	*e*PN	Pn	00 37 08.5	-1.2
ZST			*e*SN	Sn	00 37 51.2	-1.4
ZST			*e*LG	Lg	00 37 53.6	
CONA	**Conrad Observa**	3.67 333	*i*Pn	Pn	00 37 10.6	0.0
	1.5nm,0.2s,SNR=11					
CONA			*i*Sn	Sb	00 38 00.3	-3.0
	2.6nm,0.4s					
CONA	**Conrad Observa**	3.67 333	Pn	Pn	00 37 10.6	0.0
	1.5nm,0.2s,SNR=11					
MODS	**Modra-Piesok**	3.75 349	*e*PN	Pn	00 37 10.8	-0.9
MODS			*e*SN	Sn	00 37 53.5	-2.7
MODS			*e*LG	Lg	00 37 54.7	
MODS	**Modra-Piesok**	3.75 349	*e*Pn	Pn	00 37 10.8	-0.9
MODS			*e*Sn	Sn	00 37 53.5	-2.7
VYHS	**Vyhne**	3.81 5	*e*PN	Pn	00 37 12.3	-0.2
VYHS	**Vyhne**	3.81 5	*e*Pn	Pn	00 37 12.3	-0.2
MYKA	**Terra Mystica**	3.83 302	*i*Sn	Sn	00 37 58.1	-0.3
	1.5nm,0.3s					
MYKA	**Terra Mystica**	3.83 302	Sn	Sn	00 37 58.1	-0.3
	1.5nm,0.3s					
JAVC	**Velka Javorina**	4.19 354	*e*PN	Pn	00 37 17.8	0.0
MOA	**Molln**	4.24 319	*i*Pn	Pn	00 37 19.1	+0.6
	2.4nm,0.3s,SNR=10					
MOA			*i*Sn	Sn	00 38 07.8	-0.6
	1.8nm,0.2s					
MOA	**Molln**	4.24 319	Pn	Pn	00 37 19.1	+0.6
	2.4nm,0.3s,SNR=10					
MOA			Sn	Sn	00 38 07.8	-0.6
	1.8nm,0.2s					
LANS	**Liptovska Anna**	4.51 9	*e*PN	Pn	00 37 22.6	+0.4
LANS	**Liptovska Anna**	4.51 9	*e*Pn	Pn	00 37 22.6	+0.4
KRUC	**Moravsky**	4.57 343	*e*PN	Pn	00 37 22.1	-0.8
KRUC			*e*SN	Sn	00 38 17.4	+1.1
VRAC	**Vranov**	4.77 346	*e*Pn	Pn	00 37 24.9	-0.8
VRAC			*e*Sn	Sn	00 38 21.6	+0.4
VRAC	**Vranov**	4.77 346	*e*PN	Pn	00 37 24.9	-0.8
VRAC			*e*SN	Sn	00 38 21.6	+0.4
MORC	**Moravsky Berou**	5.11 354 ⇑	*i*P	Pn	00 37 29.0	-1.4
MORC	**Moravsky Berou**	5.11 354 ⇑	*i*P	Pn	00 37 29.0	-1.4
MORC	**Moravsky Berou**	5.11 354	*e*Pn	Pn	00 37 30.3	-0.1
MORC			S	Sn	00 38 30.0	+0.3
MORC	**Moravsky Berou**	5.11 354	*e*PN	Pn	00 37 30.3	-0.1
MORC			*e*SN	Sn	00 38 30.3	+0.6
KHC	**Kasperske Hory**	5.51 325	*e*PN	Pn	00 37 37.0	+1.0
KHC			*ex*	x	00 37 43.2	
KHC	**Kasperske Hory**	5.51 325	Pn	Pn	00 37 37.0	+1.0
DPC	**Dobruska-Polom**	5.82 347	*e*PN	Pn	00 37 39.8	-0.4
DPC	**Dobruska-Polom**	5.82 347	Pn	Pn	00 37 39.8	-0.4

*SOME **08** 01:04:04.4, 44°.65N×81°.25E, h15km*
*NNC **08** 01:04:04.5±1.6, 44°.70N×80°.94E, h0km, mb2.6, mpv2.2,*
Error ellipse: s-maj=70.0km s-min=4.4km az=119.0

ISC 08 01:04:03.0±2.1, 44°.62N±0°.05×81°.26E±0°.08, h9km±14km, n11, σ0°.97/22, 4C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	1.09	255	*e*P	Pn	01 04 24.4	-0.1
	2.8nm,0.1s						
DJR				*e*S	Sn	01 04 38.5	-1.2
	4.3nm,0.1s						
KTMS	**Ketmen**	1.34	210	*e*P	Pn	01 04 28.8	+0.8
	14nm,0.2s						
KTMS				*e*S	Sb	01 04 46.2	+0.5
	9.3nm,0.1s						
KAPS	**Kapalarasan**	1.51	297	*e*P	Pg	01 04 32.0	+0.1
	2.3nm,0.1s						
KAPS				*e*S	Sg	01 04 52.3	+0.8
	2.9nm,0.2s						
PDGK	**Podgornoye**	1.82	225	⇓Pn	Pn	01 04 35.9	+1.4
	1.5nm,0.4s						
PDGK				⇓Sn	Sb	01 04 59.6	+0.3
	12nm,0.8s						
SHLS	**Shalkode**	1.96	222	*e*P	Pn	01 04 36.6	+0.2
	4.7nm,0.6s						
SHLS				*e*S	Sn	01 04 59.6	-1.6
	26nm,0.3s						
MNBS	**Baschi**	2.12	256	*e*P	Pb	01 04 42.2	+0.6
	2.0nm,0.3s						
MNBS				*e*S	Sg	01 05 09.8	-1.3
	6.9nm,0.3s						
KPKS	**Kokpek**	2.19	239	*e*P	Pb	01 04 43.0	+0.2
	6.0nm,0.1s						
KPKS				*e*S	Sb	01 05 10.8	+0.9
	15nm,0.3s						
UZB	**Uzynbulak**	2.19	229	*e*P	Pb	01 04 43.0	+0.3
	1.4nm,0.2s						
UZB				*e*S	Sb	01 05 11.0	+0.9
	5.7nm,0.3s						
MAKZ	**Makanchi**	2.25	13	⇑Pn	Pb	01 04 43.9	+0.2
	0.5nm,0.3s						
MAKZ				⇑Sn	Sb	01 05 11.9	+0.3
	1.2nm,0.6s						
MK31	**Makanchi Array**	2.29	18	⇑Pn	Pb	01 04 44.3	-0.2
	0.5nm,0.3s,baz=197,slow=13,SNR=24						
MK31				⇑Sn	Sb	01 05 13.0	+0.1
	0.8nm,0.5s,baz=202,slow=28,SNR=11						
SATY	**Saty**	2.59	234	*e*P	Pb	01 04 50.4	+0.8
	4.6nm,0.2s						
SATY				*e*S	Sg	01 05 23.9	-2.2
	27nm,0.2s						

IDC 08 01:29:33.4±16.0, 1°.24N×97°.36E, h0km, mb3.6/3, mb1 3.7/4, mb1mx3.3/62, mbtmp3.6/4, MS3.1/1, Ms1 3.1/1, ms1mx2.4/60, Error ellipse: s-maj=451.2km s-min=122.2km az=120.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	17.18	5	P	Pn	01 33 35.0	-0.1
	baz=196,slow=12,SNR=3.1						
H08S2	**Diego Garcia H**	26.32	250	T	T	02 01 51.2	
	baz=72,slow=74,SNR=5.1						
H08S3	**Diego Garcia H**	26.33	250	T	T	02 01 54.8	
	baz=72,slow=74,SNR=5.8						
H08S1	**Diego Garcia H**	26.34	250	T	T	02 01 57.4	
	baz=72,slow=74,SNR=6.1						
MKAR	**Makanchi Array**	47.24	346	P	P	01 38 08.4	+0.1
	0.5nm,0.7s,baz=159,slow=7.1,SNR=5.8						
MKAR				LR	LR	01 59 47.3	
	comp=Z,24nm,20.4s,baz=54,slow=38						
KURBB	**Kurchatov Arra**	51.74	345	P	P	01 38 42.3	-0.2
	0.2nm,0.6s,baz=159,slow=5.7,SNR=2.3						
ZALV	**Zalesovo Beam**	53.55	351	P	P	01 38 55.7	-0.2
	0.8nm,0.5s,baz=159,slow=5.7,SNR=4.7						

*IDC **08** 01:38:22.8±0.8, 29°.76S×72°.90W, h0km, mb4.2/6,*
mb1 4.3/8, mb1mx3.9/36, mbtmp4.2/8, ML4.0/2, MS3.0/1,
Ms1 3.1/1, ms1mx2.6/33, Error ellipse: s-maj=31.3km
s-min=24.2km az=93.0
*ISCJB **08** 01:38:24.1±1.8, 29°.56S±0°.04×72°.82W±0°.05, h15km±13km,*
mb4.3/15, Error ellipse: s-maj=7.7km s-min=6.7km
az=162.3
*NEIC **08** 01:38:24.4±0.3, 29°.66S×72°.75W, h10km, mb4.2/8,*
ML3.9(GUC), Error ellipse: s-maj=9.1km s-min=6.7km
az=96.0
*GUC **08** 01:38:25.9±0.6, 29°.71S×72°.60W, h38km±16km, ML3.9*

ISC 08 01:38:22.8±1.3, 29°.67S±0°.04×72°.70W±0°.06, h1km±7km, n62, σ1°.58/72, mb4.4/15, 1C-1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLL	**Tololo Astrono**	1.72	107	*e*P	Pb	01 38 55.1	-0.2
TLL				*i*S	Sb	01 39 16.8	-0.8
TLL				IAML		01 39 21.8	
	comp=N,1μm,0.6s						
GO04	**Tololo Observa**	1.73	107	*e*Pn	Pb	01 38 55.0	-0.5
GO04				*e*Sn	Sb	01 39 16.6	-1.1
GO04	**Tololo Observa**	1.73	107	*e*P	Pb	01 38 54.8	-0.7
GO04				*i*S	Sb	01 39 17.1	-0.6
GO04				IAML		01 39 22.1	
	comp=N,4μm,0.5s						
LCO	**Las Campanas**	1.87	70	*e*Pn	Pb	01 38 57.4	-0.5
LCO				*e*Sn	Sb	01 39 21.7	-0.1
LCO	**Las Campanas**	1.87	70	⇑*i*P	Pb	01 38 57.7	-0.2
LCO				*i*S	Sb	01 39 21.2	-0.6
LCO				IAML		01 39 22.8	
	comp=E,1μm,0.5s						
AROD	**Rodeo**	2.85	101	*e*P	Pb	01 39 13.5	-1.1
GO03	**Copiap**	3.00	47	*e*Pn	Pn	01 39 12.6	+1.0
GO03				*e*Sn	Sn	01 39 47.8	-0.3
GO03	**Copiap**	3.00	47	⇓*i*P	Pn	01 39 12.9	+1.4
GO03				*i*S	Sn	01 39 49.4	+1.3
GO03				IAML		01 39 50.2	
	comp=E,403nm,0.4s						
ACDV	**Cuesta del Vie**	3.15	100	*e*P	Pb	01 39 19.2	-0.5
ROC1	**El Roble**	3.60	157	*e*Pn	Pn	01 39 18.9	-1.0
ROC1	**El Roble**	3.60	157	*e*P	Pn	01 39 19.7	-0.2
AGUA	**GUANDACOL**	3.67	88	*e*P	Pb	01 39 27.0	-1.6
AUSP	**Uspallata**	3.82	133	*e*P	Pn	01 39 25.9	+2.9
AMOG	**MÓGNA**	3.85	110	*e*P	Pb	01 39 28.1	-3.5
ZON	**Zonda**	3.94	119	*e*P	Pn	01 39 28.1	+3.6
RTLL	**Cerro Villicun**	4.00	115	*e*P	Pn	01 39 28.1	+2.7
VCA	**Vinchina**	4.04	78	*e*P	Pb	01 39 32.4	-2.5
RTCV	**Cerro Valdivia**	4.20	122	*e*P	Pn	01 39 31.3	+3.4
ASAL	**Salagasta**	4.41	132	*e*P	Pn	01 39 35.4	+4.4
ARCO	**CERRO ARCO**	4.52	135	*e*P	Pb	01 39 37.5	-5.5
LMEL	**Las Melosas**	4.68	154	*e*P	Pn	01 39 34.5	-0.1
LMEL				*i*S	Sn	01 40 26.9	-2.8
ACLC	**CERRO LA CRUZ**	5.02	89	*e*P	Pn	01 39 43.2	+3.9
GO02	**Mina Guanaco**	5.27	32	*e*Pn	Pn	01 39 43.1	+0.1
GO02				*e*Sn	Sn	01 40 43.4	-1.3
PB10	**IPOC Station P**	6.43	18	*e*Pn	Pn	01 39 57.4	-1.2
PB04	**IPOC Station P**	7.66	18	*e*Pn	Pn	01 40 14.8	-0.9
PB04				*e*Sn	Sn	01 41 38.7	-4.6
PB01	**IPOC Station P**	9.07	19	*e*Pn	Pn	01 40 33.0	-2.0
PB01				*e*Sn	Sn	01 42 14.0	-3.8
PLCA	**Paso Flores**	11.18	172	Pn	Pn	01 41 04.9	+1.1
	comp=E,0.2nm,0.3s,baz=14,slow=12,SNR=3.2						
LPAZ	**La Paz**	13.97	18	Pn	Pn	01 41 41.9	-0.6
	comp=E,0.2nm,0.3s,baz=128,slow=4.8,SNR=13						
LPAZ				LR	LR	01 47 37.7	
	comp=E,56nm,18.6s,baz=250,slow=39						
SIV	**San Ignacio**	17.31	41	P	P	01 42 27.9	+0.5
	comp=E,0.8nm,0.3s,baz=240,slow=9.2,SNR=40						
SAML	**Samuel**	22.46	25	*e*P	P	01 43 24.2	+0.7
	comp=E,2.4nm,0.7s						
RUSC	**La Rusia**	35.36	359	*e*P	P	01 45 23.4	+2.8
	comp=E,7.4nm,1.2s						
QSPA	**South Pole Qui**	60.55	180	P	P	01 48 34.1	-0.6
	comp=E,0.6nm,0.6s,baz=180,slow=5.1,SNR=3.3						
JCT	**Junction City**	65.15	334	*e*P	P	01 49 06.2	+0.8
	comp=E,4.4nm,0.7s						
TXAR	**Lajitas Array**	65.70	330	P	P	01 49 09.2	+0.1
	comp=E,0.6nm,0.7s,baz=154,slow=7.7,SNR=5.5						
GLAT	**Glass**	67.42	346	*e*P	P	01 49 23.4	+3.6
	comp=E,482nm,0.9s						
MNTX	**Cornudas Mount**	68.48	330	*e*P	P	01 49 25.8	-0.8
	comp=E,1.0nm,0.8s						
AMTX	**Amarillo**	69.79	335	*e*P	P	01 49 34.3	-0.5
	comp=E,2.7nm,0.8s						
ANMO	**Albuquerque**	71.72	331	*e*P	P	01 49 46.2	-0.6
	comp=E,0.5nm,0.5s						
DBIC	**Dimbokro**	74.39	73	P	P	01 50 03.5	+0.8
	comp=E,3.3nm,0.8s,baz=203,slow=7.0,SNR=5.2						
ERRC	**Elmore Ranch**	74.61	323	*e*P	P	01 50 02.8	-0.8
CRY	**Cary Ranch**	75.44	323	*e*P	P	01 50 09.0	+0.5
BBRC	**Big Bear Solar**	76.08	323	*e*P	P	01 50 12.0	-0.3
KOWA	**Kowa**	79.40	67	P	P	01 50 32.6	+1.6
	comp=E,3.7nm,0.6s,baz=225,slow=5.7,SNR=11						
NV01	**Mina Array Sit**	80.02	325	*e*P	P	01 50 34.6	+0.5
NVAR	**Mina Array Bea**	80.02	325	P	P	01 50 34.6	+0.5
	comp=E,0.5nm,0.6s,baz=163,slow=5.7,SNR=4.7						
HLID	**Hailey**	82.30	331	*e*P	P	01 50 46.5	+0.5
	comp=E,0.8nm,0.8s						
TOA0	**Torodi Ar. Sit**	83.30	71	*e*P	P	01 50 53.0	+1.3
	comp=E,6.8nm,0.6s						
TORD	**Torodi Ar. Bea**	83.30	71	P	P	01 50 53.0	+1.3
	comp=E,5.4nm,0.6s,baz=277,slow=5.0,SNR=93						
TOA1	**Torodi Ar. Sit**	83.30	71	*e*P	P	01 50 53.0	+1.2
WR1	**Warramunga Arr**	124.21	211	*e*PKPdf	PKPdf	01 57 22.5	-1.5
WRA	**Warramunga Arr**	124.21	211	PKP	PKPdf	01 57 22.5	-1.5
	comp=E,0.2nm,0.6s,baz=154,slow=1.8,SNR=4.7						
MBWA	**Marble Bar**	128.06	195	*e*PKPdf	PKPdf	01 57 31.5	+0.2
KAPI	**Kappang**	143.50	201	*e*PKPdf	PKPdf	01 57 59.7	-0.3
BVAR	**Borovoye Array**	144.38	39	PKP	PKPdf	01 57 59.4	-0.9
	comp=E,1.1nm,0.6s,baz=344,slow=4.9,SNR=7.8						
KURK	**Kurchatov**	149.95	38	PKPbc	PKPbc	01 58 15.0	+0.4
KURBB	**Kurchatov Arra**	149.95	38	PKPbc	PKPbc	01 58 15.0	+0.4
	comp=E,0.8nm,0.5s,baz=296,slow=3.1,SNR=8.4						
AAK	**Ala-Archa**	150.71	55	PKPbc	PKPbc	01 58 17.7	+0.8
	comp=E,2.5nm,0.6s,baz=269,slow=2.1,SNR=7.8						
AAK	**Ala-Archa**	150.71	55	*e*PKPbc	PKPbc	01 58 18.0	+1.1
ZAA1	**Zalesovo Array**	150.76	28	*e*PKPbc	PKPbc	01 58 16.8	+0.4
ZAA1				*e*PKPab	pPKPab	01 58 24.1	+0.2
ZALV	**Zalesovo Beam**	150.76	28	PKPbc	PKPbc	01 58 16.8	+0.4
	comp=E,1.8nm,0.5s,baz=284,slow=4.0,SNR=9.7						
ZALV				PKPab	pPKPab	01 58 24.1	+0.2
	comp=E,0.5nm,0.3s,baz=291,slow=4.1,SNR=3.9						
MK32	**Makanchi Array**	154.13	42	*e*PKPab	PKPab	01 58 38.9	+1.0
MKAR	**Makanchi Array**	154.13	42	PKPab	PKPab	01 58 38.9	+1.0
	comp=E,0.7nm,0.8s,baz=284,slow=2.0,SNR=4.8						

*ISCJB **08** 01:44:51.4±0.8, 11°.01S±0°.08×164°.45E±0°.10, h100km,*
mb3.5/7, Error ellipse: s-maj=15.8km s-min=8.3km
az=144.2
*IDC **08** 01:44:51.1±3.5, 10°.83S×164°.58E, h83km±29km, mb3.5/6,*
mb1 3.8/8, mb1mx3.6/55, mbtmp4.1/8, MS3.5/3, Ms1 3.5/3,
ms1mx2.9/29, Error ellipse: s-maj=32.0km s-min=22.5km
az=78.0

**ISC 08 01:44:52.8±0.9, 11°.00S±0°.10×164°.5E±0°.1, h100km, n18, σ1°.35/15, m

NIE			*e*Sg	**Sn**	**02 11 48.6**	**-0.3**
DPC	**Dobruska-Polom**	**1.60 275**	*e*PG	**Pn**	**02 11 35.5**	**-0.5**
DPC			*e*SG	**Sn**	**02 11 57.4**	**0.0**
	comp=Z,15nm,0.5s					
DPC	**Dobruska-Polom**	**1.60 275**	Pg	**Pn**	**02 11 35.5**	**-0.5**
DPC			Sg	**Sn**	**02 11 57.4**	**0.0**
	15nm,0.5s					
VRAC	**Vranov**	**1.71 238**	*e*Pn	**Pn**	**02 11 38.0**	**+0.6**
VRAC			*e*Sg	**Sb**	**02 12 01.0**	**+0.3**
VRAC	**Vranov**	**1.71 238**	*e*PN	**Pn**	**02 11 38.0**	**+0.6**
VRAC			*e*SG	**Sb**	**02 12 01.0**	**+0.3**
KSP	**Ksiaz**	**1.72 292**	*e*Pg	**Pb**	**02 11 38.8**	**0.0**
KSP			*e*Sg	**Sb**	**02 12 01.3**	**+0.2**
KSP	**Ksiaz**	**1.72 292**	*e*Pg	**Pb**	**02 11 38.8**	**0.0**
KSP			*e*Sg	**Sb**	**02 12 01.3**	**+0.2**
KSP	**Ksiaz**	**1.72 292**	*e*Pg	**Pb**	**02 11 38.8**	**0.0**
KSP			*e*Sg	**Sb**	**02 12 01.3**	**+0.2**
VYHS	**Vyhne**	**1.74 180**	*e*PN	**Pn**	**02 11 37.3**	**-0.5**
VYHS			*e*SN	**Sn**	**02 12 00.4**	**-0.3**
VYHS			*e*LG	Lg	02 12 06.2	
VYHS	**Vyhne**	**1.74 180**	*e*Pn	**Pn**	**02 11 37.4**	**-0.4**
VYHS			*e*Sn	**Sn**	**02 12 00.4**	**-0.3**
UPC	**Upice**	**1.82 280**	*e*SG	**Sb**	**02 12 04.1**	**+0.3**
	comp=Z,5.6nm,0.4s					
UPC	**Upice**	**1.82 280**	Sg	**Sb**	**02 12 04.1**	**+0.3**
	5.6nm,0.4s					
KRUC	**Moravsky**	**1.96 234**	*e*PN	**Pn**	**02 11 41.3**	**+0.4**
KRUC			*e*SG	**Sb**	**02 12 08.1**	**+0.2**
CRVS	**Cervenica-Dubn**	**2.18 127**	*e*SN	**Sg**	**02 12 15.4**	**-0.8**
GOPC	**GO Pecny, Ondr**	**2.62 265**	*e*SG	**Sb**	**02 12 27.1**	**+0.4**
	comp=Z,3.8nm,0.4s					
PVCC	**Panska Ves**	**2.73 278**	*e*SG	**Sg**	**02 12 32.7**	**-1.5**
	comp=Z,5.3nm,0.2s					
PVCC	**Panska Ves**	**2.73 278**	Sg	**Sg**	**02 12 32.7**	**-1.5**
	5.3nm,0.2s					
PRU	**Pruhonice**	**2.76 267**	*e*SG	**Sb**	**02 12 32.2**	**+1.3**
PRU	**Pruhonice**	**2.76 267**	Sg	**Sb**	**02 12 32.2**	**+1.3**
KHC	**Kasperske Hory**	**3.58 254**	*e*PG	**Pb**	**02 12 10.8**	**+0.3**
KHC			*e*SG	**Sb**	**02 12 56.0**	**+1.6**
	comp=Z,4.5nm,0.5s					
CLL	**Collm**	**3.84 288**	*e*Sg	**Sg**	**02 13 09.0**	**-0.8**

IDC 08 02:13:34.8±1.0, 26°.38N×141°.56E, h276^{km}±18^{km}, mb2.9/2, mb1 3.1/3, mb1mx2.5/67, mbtmp3.6/3, Error ellipse: s-maj=94.5km s-min=25.9km az=79.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**0.91**	**38**	P	Pn	02 14 12.8	+0.7
	baz=270,slow=19						
JCJ				S	S	02 14 41.9	+0.2
	baz=287,slow=20						
KSRS	**Korea Array**	**15.98**	**317**	P	P	02 17 04.1	+0.3
	0.3nm,0.3s,baz=135,slow=12,SNR=6.7						
WRA	**Warramunga Arr**	**46.57**	**189**	P	P	02 21 35.4	-0.2
	0.3nm,0.6s,baz=7.4,slow=8.4,SNR=4.5						
FINES	**FINESS Array B**	**78.34**	**334**	P	P	02 25 04.4	0.0
	0.3nm,0.5s,baz=76,slow=5.1,SNR=3.7						

IDC 08 02:17:10.8±3.3, 16°.68S×174°.05W, h109^{km}±42^{km}, mb3.7/3, mb1 3.9/4, mb1mx3.3/52, mbtmp4.1/4, Error ellipse: s-maj=56.9km s-min=31.0km az=112.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.52**	**39**	P	Pn	02 18 03.8	0.0
	26nm,0.3s,baz=207,slow=9.0,SNR=14						
AFI				S	Sn	02 18 41.6	-3.2
	43nm,0.3s,baz=261,slow=16,SNR=12						
URZ	**Urewera**	**22.86**	**198**	P	P	02 22 04.6	-0.2
	10nm,0.8s,baz=0.0,slow=4.0,SNR=5.4						
WRA	**Warramunga Arr**	**48.95**	**258**	P	P	02 25 46.0	-0.4
	0.5nm,0.9s,baz=92,slow=7.4,SNR=5.4						
ASAR	**Alice Springs**	**49.13**	**253**	P	P	02 25 48.0	+0.2
	3.2nm,0.5s,baz=88,slow=8.5,SNR=40						
BRTR	**Keskin Array B**	**146.73**	**319**	PKPbc	PKPbc	02 36 39.6	-0.9
	0.9nm,0.9s,baz=45,slow=4.3,SNR=3.6						

*ROM **08** 02:28:32.4±0.0, 44°.868N±0°.001×10°.870E±0°.001, h8^{km}, ML2.9/44*
*CSEM **08** 02:28:32.8±0.1, 44°.90N×10°.87E, h10^{km}, ML2.9/34, Error ellipse: s-maj=2.8km s-min=2.2km az=170.0*
*ISCJB **08** 02:28:32.6±0.2, 44°.88N±0°.02×10°.83E±0°.02, h20^{km}±2^{km}, Error ellipse: s-maj=3.4km s-min=2.1km az=160.3*
*LDG **08** 02:28:32.9±0.2, 44°.90N×11°.04E, h2^{km}, Ml3.0/27, Error ellipse: s-maj=3.3km s-min=2.1km az=107.0*
*PRU **08** 02:28:33.8, 44°.99N×10°.71E, h11^{km}*
*STR **08** 02:28:36.0±3.0, 45°N±12°×1°1E±2°8, h5^{km}, M3.6/6, mb3.4/1, MLv3.7/6*

ISC 08 02:28:32.9±0.7, 44°.91N±0°.02×10°.90E±0°.02, h17^{km}±4^{km}, n201, σ1§10/275, 12C-15D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0827	**Moglia (MN)**	**0.04**	**41**	⇑*i*P	**Pg**	**02 28 35.2**	**-0.7**
T0827				⇑*i*S	**Sg**	**02 28 39.5**	**+1.5**
T0827	**Moglia (MN)**	**0.04**	**41**	*i* P	**Pg**	**02 28 35.2**	**-0.7**
T0827				*i* S	**Sg**	**02 28 39.5**	**+1.5**
T0825	**Gonzaga (MN)**	**0.07**	**332**	AML	AML		
	comp=N,74700μm,0.6s						
T0825				AML	AML		
	comp=E,55850μm,0.6s						
T0825				AML	AML		
	comp=N,74750μm,0.6s						
T0825				AML	AML		
	comp=E,55850μm,0.6s						
T0825				AML	AML		
	comp=E,55850μm,0.6s						
T0825				AML	AML		
	comp=N,74750μm,0.6s						
T0825				AML	AML		
	comp=E,55850μm,0.6s						
T0825				AML	AML		
	comp=N,74750μm,0.6s						
T0828	**Loc. Fossoli,**	**0.08**	**171**	⇓*i*P	**Pg**	**02 28 34.6**	**-1.6**
T0828				⇓*i*S	**Sg**	**02 28 37.2**	**-1.1**
T0828	**Loc. Fossoli,**	**0.08**	**171**	*i* P	**Pg**	**02 28 34.6**	**-1.6**
T0828				*i* S	**Sg**	**02 28 37.2**	**-1.1**
T0818	**Loc. Fossa, Co**	**0.10**	**74**	⇑*i*P	**Pg**	**02 28 36.1**	**-0.3**
T0818				⇑*i*S	**Sg**	**02 28 40.4**	**+1.7**
T0818	**Loc. Fossa, Co**	**0.10**	**74**	*i* P	**Pg**	**02 28 36.1**	**-0.3**
T0818				*i* S	**Sg**	**02 28 40.4**	**+1.7**
T0814	**Loc. Cortile,**	**0.13**	**156**	⇓*i*P	**Pg**	**02 28 35.6**	**-1.1**
T0814				⇓*i*S	**Sg**	**02 28 39.4**	**+0.2**
T0814	**Loc. Cortile,**	**0.13**	**156**	*i* P	**Pg**	**02 28 35.6**	**-1.1**
T0814				*i* S	**Sg**	**02 28 39.4**	**+0.2**
T0824	**Loc. Limidi di**	**0.15**	**171**	⇓*i*P	**Pg**	**02 28 35.9**	**-1.1**
T0824				⇓*i*S	**Sg**	**02 28 39.7**	**-0.1**
T0824	**Loc. Limidi di**	**0.15**	**171**	*i* P	**Pg**	**02 28 35.9**	**-1.1**
T0824				*i* S	**Sg**	**02 28 39.6**	**-0.1**
NOVE	**Novellara**	**0.17**	**229**	⇓*i*P	**Pg**	**02 28 36.1**	**-1.1**
NOVE				⇓*i*S	**Sg**	**02 28 39.0**	**-1.2**
NOVE	**Novellara**	**0.17**	**229**	*i* P	**Pg**	**02 28 36.1**	**-1.1**
NOVE				*i* S	**Sg**	**02 28 40.0**	**-0.2**
NOVE				AML	AML		
	comp=E,35050μm,0.3s						
NOVE				AML	AML		
	comp=N,19950μm,0.4s						
NOVE				AML	AML		
	comp=E,35100μm,0.3s						
NOVE				AML	AML		
	comp=N,19950μm,0.4s						
NOVE				AML	AML		
	comp=E,35050μm,0.3s						
NOVE				AML	AML		
	comp=N,19950μm,0.4s						
NOVE				AML	AML		
	comp=E,35050μm,0.3s						
NOVE				AML	AML		
	comp=N,19950μm,0.4s						
T0812	**Loc. Stoppiaro**	**0.21**	**77**	*e*P	**Pb**	**02 28 37.8**	**-0.4**
T0812	**Loc. Stoppiaro**	**0.21**	**77**	*e*P	**Pb**	**02 28 37.8**	**-0.4**
T0813	**Massa Finalese**	**0.22**	**98**	⇑*e*P	**Pg**	**02 28 37.7**	**-0.2**
T0813				⇑*e*S	**Sb**	**02 28 43.4**	**+1.3**
T0813	**Massa Finalese**	**0.22**	**98**	*e*P	**Pg**	**02 28 37.7**	**-0.2**
T0813				*e*S	**Sb**	**02 28 43.4**	**+1.3**
RAVA	**Ravarino**	**0.22**	**134**	⇓*e*P	**Pg**	**02 28 37.5**	**-0.5**
RAVA				⇓*e*S	**Sb**	**02 28 42.6**	**+0.5**
RAVA	**Ravarino**	**0.22**	**134**	*e*P	**Pg**	**02 28 37.5**	**-0.5**
RAVA				*e*S	**Sb**	**02 28 42.6**	**+0.5**
RAVA				AML	AML		
	comp=E,12500μm,0.3s						
RAVA				AML	AML		
	comp=N,5130μm,0.7s						
RAVA				AML	AML		
	comp=E,12500μm,0.3s						
RAVA				AML	AML		
	comp=N,5125μm,0.7s						
RAVA				AML	AML		
	comp=E,12500μm,0.3s						
RAVA				AML	AML		
	comp=N,5130μm,0.7s						
RAVA				AML	AML		
	comp=E,12500μm,0.3s						
RAVA				AML	AML		
	comp=N,5130μm,0.7s						
GAZZ	**Gazzo Veronese**	**0.25**	**34**	⇑*e*Pg	**Pb**	**02 28 39.1**	**+0.1**
GAZZ	**Gazzo Veronese**	**0.25**	**34**	*e*Pg	**Pb**	**02 28 39.1**	**+0.1**
T0800	**Massa Finalese**	**0.26**	**103**	⇑*e*P	**Pg**	**02 28 38.3**	**-0.3**
T0800				⇑*e*S	**Sb**	**02 28 44.6**	**+1.4**
T0800	**Massa Finalese**	**0.26**	**103**	*e*P	**Pg**	**02 28 38.3**	**-0.3**
T0800				*e*S	**Sb**	**02 28 44.6**	**+1.4**
T0800				AML	AML		
	comp=E,7215μm,1.2s						
T0800				AML	AML		
	comp=N,7145μm,0.5s						
T0800				AML	AML		
	comp=E,6460μm,0.4s						
T0800				AML	AML		
	comp=N,6940μm,0.6s						
T0800				AML	AML		
	comp=E,7220μm,1.2s						
T0800				AML	AML		
	comp=N,7145μm,0.5s						
T0800				AML	AML		
	comp=E,6460μm,0.4s						
T0800				AML	AML		
	comp=N,6945μm,0.6s						
T0800				AML	AML		
	comp=E,7215μm,1.2s						
T0800				AML	AML		
	comp=N,7145μm,0.5s						
T0800				AML	AML		
	comp=E,6460μm,0.4s						
T0800				AML	AML		
	comp=N,6940μm,0.6s						
T0800				AML	AML		
	comp=N,7145μm,0.5s						
T0800				AML	AML		
	comp=N,6940μm,0.6s						
T0800				AML	AML		
	comp=E,7215μm,1.2s						
T0800				AML	AML		
	comp=E,6460μm,0.4s						
T0811	**Palata Pepoli**	**0.27**	**118**	*e*P	**Pg**	**02 28 37.0**	**-1.7**
T0811				*e*S	**Sb**	**02 28 44.8**	**+1.3**
T0811	**Palata Pepoli**	**0.27**	**118**	*e*P	**Pg**	**02 28 38.0**	**-0.8**
T0811				*e*S	**Sb**	**02 28 44.8**	**+1.3**
MODE	**Modena**	**0.28**	**172**	⇓*e*P	**Pg**	**02 28 38.6**	**-0.4**
MODE	**Modena**	**0.28**	**172**	*e*P	**Pg**	**02 28 38.6**	**-0.4**
T0805	**Bondeno (FE)**	**0.30**	**88**	*e*P	**Pg**	**02 28 39.2**	**-0.2**
T0805	**Bondeno (FE)**	**0.30**	**88**	*e*P	**Pg**	**02 28 39.2**	**-0.2**
T0823	**Castello D'Arg**	**0.35**	**129**	*e*P	**Pg**	**02 28 40.3**	**+0.1**
T0823	**Castello D'Arg**	**0.35**	**129**	*e*P	**Pg**	**02 28 40.4**	**+0.1**
T0803	**Dosso, Cento (**	**0.35**	**113**	*e*P	**Pg**	**02 28 40.1**	**-0.1**
T0803	**Dosso, Cento (**	**0.35**	**113**	*e*P	**Pg**	**02 28 40.1**	**-0.1**
T0817	**Loc. Veratica,**	**0.41**	**78**	⇑*e*P	**Pb**	**02 28 42.6**	**+1.0**
T0817	**Loc. Veratica,**	**0.41**	**78**	*e*P	**Pb**	**02 28 42.6**	**+1.0**
T0817				*e*S	**Sn**	**02 28 49.9**	**-1.3**
PRMA	**PARMA**	**0.44**	**251**	AML	AML		
	comp=E,1660μm,1.4s						
PRMA				AML	AML		
	comp=E,1660μm,1.4s						
PRMA				AML	AML		
	comp=N,1195μm,0.2s						
PRMA				AML	AML		
	comp=E,1660μm,1.4s						
PRMA				AML	AML		
	comp=N,1195μm,0.2s						
PRMA				AML	AML		
	comp=N,1195μm,0.2s						
PRMA				AML	AML		
	comp=N,1195μm,0.2s						
PRMA				AML	AML		
	comp=E,1660μm,1.4s						
T0821	**Loc. Casaglia**	**0.46**	**90**	AML	AML		
	comp=E,1595μm,0.3s						
T0821				AML	AML		
	comp=N,1735μm,1.2s						
T0821				AML	AML		
	comp=E,1595μm,0.3s						
T0821				AML	AML		
	comp=N,1735μm,1.2s						
T0821				AML	AML		
	comp=N,1735μm,1.2s						
T0821				AML	AML		
	comp=E,1595μm,0.3s						
FIU	**Minerbio Fiu**	**0.50**	**122**	AML	AML		
	comp=E,1600μm,0.6s						
FIU				AML	AML		
	comp=E,1600μm,0.6s						
FIU				AML	AML		
	comp=N,953μm,0.8s						
FIU				AML	AML		
	comp=E,1595μm,0.6s						
FIU				AML	AML		
	comp=N,957μm,0.8s						
FIU				AML	AML		
	comp=E,1600μm,0.6s						
FIU				AML	AML		
	comp=N,956μm,0.8s						
FIU				AML	AML		
	comp=N,956μm,0.8s						
ZCCA	**Zocca**	**0.56**	**174**	AML	AML		
	comp=E,1112μm,0.6s						
ZCCA				AML	AML		
	comp=E,1112μm,0.6s						
ZCCA				AML	AML		
	comp=N,1074μm,0.6s						
ZCCA				AML	AML		
	comp=E,1220μm,0.6s						
ZCCA				AML	AML		
	comp=N,1165μm,0.6s						
ZCCA				AML	AML		
	comp=N,1072μm,0.6s						
ZCCA				AML	AML		
	comp=E,1220μm,0.6s						
ZCCA				AML	AML		
	comp=N,1165μm,0.6s						
ZCCA				AML	AML		
	comp=E,1113μm,0.6s						
ZCCA				AML	AML		
	comp=N,1070μm,0.6s						
ZCCA				AML	AML		
	comp=E,1220μm,0.6s						
ZCCA				AML	AML		
	comp=N,1165μm,0.6s						
ZCCA				AML	AML		
	comp=N,1070μm,0.6s						
ZCCA				AML	AML		
	comp=N,1165μm,0.6s						
ZCCA				AML	AML		
	comp=E,1220μm,0.6s						
ZCCA				AML	AML		
	comp=E,1113μm,0.6s						
TEOL	**Teolo**	**0.71**	**50**	⇓*e*Pg	**Pb**	**02 28 47.0**	**+0.2**
TEOL				⇓*e*Sg	**Sn**	**02 28 59.0**	**+0.2**
TEOL	**Teolo**	**0.71**	**50**	*e*Pg	**Pb**	**02 28 47.0**	**+0.2**
TEOL				*e*Sg	**Sn**	**02 28 59.0**	**+0.2**
TEOL	**Teolo**	**0.71**	**50**	AML	AML		
	comp=N,4745μm,0.3s						
TEOL				AML	AML		
	comp=E,6830μm,0.4s						
TEOL				AML	AML		
	comp=N,4740μm,0.3s						
TEOL				AML	AML		
	comp=E,6830μm,0.4s						
TEOL				AML	AML		
	comp=N,4745μm,0.3s						
TEOL				AML	AML		
	comp=E,6830μm,0.4s						
CMPO	**Campotto Po**	**0.73**	**116**	AML	AML		
	comp=N,4685μm,0.8s						
CMPO				AML	AML		
	comp=E,2225μm,0.6s						
CMPO				AML	AML		
	comp=N,4685μm,0.8s						
CMPO				AML	AML		
	comp=E,2225μm,0.6s						
CMPO				AML	AML		
	comp=N,4685μm,0.8s						
CMPO				AML	AML		
	comp=E,2225μm,0.6s						
ROVR	**Rover¯¤ Verone**	**0.75**	**9**	AML	AML		
	comp=N,3635μm,0.3s						
ROVR				AML	AML		
	comp=E,1550μm,0.8s						
ROVR				AML	AML		
	comp=N,3635μm,0.3s						
ROVR				AML	AML		
	comp=E,1550μm,0.8s						
ROVR				AML	AML		
	comp=N,3635μm,0.3s						
ROVR				AML	AML		
	comp=E,1550μm,0.8s						
SALO	**Salr**	**0.76**	**340**	*e*Pg	**Pb**	**02 28 48.0**	**+0.3**
SALO	**Salr**	**0.76**	**340**	*e*Pg	**Pb**	**02 28 48.0**	**+0.3**
SALO	**Salr**	**0.76**	**340**	AML	AML		
	comp=E,1170μm,0.3s						
SALO				AML	AML		
	comp=E,1170μm,0.3s						
SALO				AML	AML		
	comp=N,1990μm,0.4s						
SALO				AML	AML		
	comp=E,1170μm,0.3s						
SALO				AML	AML		
	comp=N,1990μm,0.4s						
SALO				AML	AML		
	comp=N,1990μm,0.4s						
MARN	**Marana (Italy)**	**0.76**	**17**	⇑*e*Pg	**Pb**	**02 28 48.2**	**+0.4**
MARN				*e*Sg	**Sn**	**02 28 59.7**	**-0.4**
MARN	**Marana (Italy)**	**0.76**	**17**	*e*Pg	**Pb**	**02 28 48.2**	**+0.4**
MARN				*e*Sg	**Sn**	**02 28 59.7**	**-0.4**
BALD	**Monte Baldo**	**0.78**	**356**	*e*Pg	**Pb**	**02 28 48.3**	**+0.2**
BALD	**Monte Baldo**	**0.78**	**356**	*e*Pg	**Pb**	**02 28 48.3**	**+0.2**
ADRI	**Adria, Italy**	**0.81**	**80**	⇑*e*Pg	**Pn**	**02 28 49.4**	**-0.1**
ADRI				*e*Sg	**Sn**	**02 29 01.2**	**+0.2**
ADRI	**Adria, Italy**	**0.81**	**80**	*e*Pg	**Pn**	**02 28 49.4**	**-0.1**
ADRI				*e*Sg	**Sn**	**02 29 01.2**	**+0.2**
VLC	**Villacollemand**	**0.83**	**206**	AML	AML		
	comp=E,249μm,0.6s						
VLC				AML	AML		
	comp=N,318μm,1.2s						
VLC				AML	AML		
	comp=E,249μm,0.6s						
VLC				AML	AML		
	comp=N,318μm,1.2s						
VLC				AML	AML		
	comp=E,249μm,0.6s						
VLC				AML	AML		
	comp=N,318μm,1.2s						
POPM	**Popiglio**	**0.87**	**187**	AML	AML		
	comp=E,402μm,1.5s						
POPM				AML	AML		
	comp=E,402μm,1.5s						
POPM				AML	AML		
	comp=N,392μm,0.3s						
POPM				AML	AML		
	comp=N,392μm,0.3s						
POPM				AML	AML		
	comp=E,402μm,1.5s						
POPM				AML	AML		
	comp=N,392μm,0.3s						
BDI	**Bagni Di Lucca**	**0.87**	**194**	AML	AML		
	comp=E,538μm,0.3s						
BDI				AML	AML		
	comp=E,527μm,0.2s						
BDI				AML	AML		
	comp=N,520μm,0.5s						
BDI				AML	AML		
	comp=N,586μm,0.5s						
BDI				AML	AML		
	comp=E,527μm,0.2s						
BDI				AML	AML		
	comp=E,538μm,0.3s						
BDI				AML	AML		
	comp=N,586μm,0.5s						
BDI				AML	AML		
	comp=N,520μm,0.5s						
MAGA	**Magasa**	**0.89**	**348**	AML	AML		
	comp=N,2760μm,0.6s						
MAGA				AML	AML		
	comp=E,2900μm,0.7s						
MAGA				AML	AML		
	comp=N,2760μm,0.6s						
MAGA				AML	AML		
	comp=E,2900μm,0.7s						
MAGA				AML	AML		
	comp=N,2760μm,0.6s						
MAGA				AML	AML		
	comp=E,2900μm,0.7s						
DOSS	**Dosso del Somm**	**0.99**	**12**	⇓*e*Pg	**Pb**	**02 28 51.8**	**0.0**
DOSS				⇓*e*Sg	**Sn**	**02 29 07.7**	**+1.7**
DOSS	**Dosso del Somm**	**0.99**	**12**	*e*Pg	**Pb**	**02 28 51.8**	**0.0**
DOSS				*e*Sg	**Sn**	**02 29 07.7**	**+1.7**
MAIM	**Mastiano**	**1.03**	**196**	AML	AML		
	comp=N,508μm,0.4s						
MAIM				AML	AML		
	comp=E,518μm,0.3s						
MAIM				AML	AML		
	comp=N,508μm,0.4s						
MAIM				AML	AML		
	comp=E,518μm,0.3s						
MAIM				AML	AML		
	comp=N,508μm,0.4s						
MAIM				AML	AML		
	comp=E,518μm,0.3s						
BOB	**Bobbio (Coli)**	**1.04**	**263**	AML	AML		
	comp=E,690μm,0.6s						
BOB				AML	AML		
	comp=E,690μm,0.6s						
BOB				AML	AML		
	comp=N,860μm,1.5s						
BOB				AML	AML		
	comp=E,846μm,0.7s						
BOB				AML	AML		
	comp=N,845μm,1.5s						
BOB				AML	AML		
	comp=N,860μm,1.5s						
BOB				AML	AML		
	comp=E,846μm,0.7s						
BOB				AML	AML		
	comp=N,845μm,1.5s						
BOB				AML	AML		
	comp=N,845μm,1.5s						
BOB				AML	AML		
	comp=N,860μm,1.5s						
BOB				AML	AML		
	comp=E,846μm,0.7s						
BOB				AML	AML		
	comp=E,690μm,0.6s						
RNI	**Roncone**	**1.09**	**350**	*e*Pg	**Pb**	**02 28 53.5**	**+0.1**
RNI	**Roncone**	**1.09**	**350**	*e*Pg	**Pb**	**02 28 53.5**	**+0.1**
CRMI	**Carmignano**	**1.12**	**177**	AML	AML		
	comp=E,188μm,0.4s						
CRMI				AML	AML		
	comp=E,188μm,0.4s						
CRMI				AML	AML		
	comp=N,100μm,0.4s						
CRMI				AML	AML		
	comp=N,100μm,0.4s						
CRMI				AML	AML		
	comp=E,188μm,0.4s						
CRMI				AML	AML		
	comp=N,100μm,0.4s						
PLMA	**Palmaria, Port**	**1.14**	**221**	AML	AML		
	comp=N,546μm,1.2s						
PLMA				AML	AML		
	comp=E,343μm,0.9s						
PLMA				AML	AML		
	comp=N,546μm,1.2s						
PLMA				AML	AML		
	comp=E,343μm,0.9s						
PLMA				AML	AML		
	comp=E,343μm,0.9s						
PLMA				AML	AML		
	comp=N,546μm,1.2s						
MSSA	**Maissana**	**1.15**	**239**	AML	AML		
	comp=E,304μm,0.2s						
MSSA				AML	AML		
	comp=E,304μm,0.2s						
MSSA				AML	AML		
	comp=N,260μm,0.9s						

MSSA				AML	AML		
	comp=E,304µm,0.2s						
MSSA				AML	AML		
	comp=N,260µm,0.9s						
MSSA				AML	AML		
	comp=N,260µm,0.9s						
CGRP	**Cima Grappa**	**1.16**	**33**	⇓*e*Pg	**Pg**	**02 28 55.0**	**-0.4**
CGRP				*e*Sg	**Sn**	**02 29 13.2**	**+3.1**
CGRP	**Cima Grappa**	**1.16**	**33**	*e*Pg	**Pg**	**02 28 55.0**	**-0.4**
CGRP				*e*Sg	**Sn**	**02 29 13.2**	**+3.1**
CGRP	**Cima Grappa**	**1.16**	**33**	AML	AML		
	comp=N,381µm,0.5s						
CGRP				AML	AML		
	comp=E,476µm,0.4s						
CGRP				AML	AML		
	comp=N,381µm,0.5s						
CGRP				AML	AML		
	comp=E,476µm,0.4s						
MABI	**Malga Bissina**	**1.18**	**347**	AML	AML		
	comp=N,163µm,0.6s						
MABI				AML	AML		
	comp=E,253µm,0.2s						
MABI				AML	AML		
	comp=N,163µm,0.6s						
MABI				AML	AML		
	comp=E,253µm,0.2s						
MABI				AML	AML		
	comp=N,163µm,0.6s						
MABI				AML	AML		
	comp=E,253µm,0.2s						
PANI	**Panarotta**	**1.18**	**15**	*e*Pg	**Pb**	**02 28 54.7**	**-0.3**
PANI				*e*Sg	**Sn**	**02 29 12.5**	**+1.8**
PANI	**Panarotta**	**1.18**	**15**	*e*Pg	**Pb**	**02 28 54.7**	**-0.3**
PANI				*e*Sg	**Sn**	**02 29 12.5**	**+1.8**
SFI	**Santa Sofia**	**1.21**	**145**	AML	AML		
	comp=N,298µm,0.8s						
SFI				AML	AML		
	comp=E,192µm,0.3s						
SFI				AML	AML		
	comp=N,298µm,0.8s						
SFI				AML	AML		
	comp=E,192µm,0.3s						
SFI				AML	AML		
	comp=N,298µm,0.8s						
SFI				AML	AML		
	comp=E,192µm,0.3s						
MTLO	**Montello**	**1.24**	**43**	⇓*e*Pg	**Pb**	**02 28 55.9**	**0.0**
MTLO	**Montello**	**1.24**	**43**	*e*Pg	**Pb**	**02 28 55.9**	**0.0**
ASQU	**Asqua**	**1.28**	**150**	AML	AML		
	comp=E,176µm,0.7s						
ASQU				AML	AML		
	comp=N,146µm,0.7s						
ASQU				AML	AML		
	comp=N,146µm,0.7s						
ASQU				AML	AML		
	comp=E,176µm,0.7s						
VARN	**Col Varnada, M**	**1.38**	**38**	*e*Pg	**Pb**	**02 28 58.5**	**+0.2**
VARN	**Col Varnada, M**	**1.38**	**38**	*e*Pg	**Pb**	**02 28 58.5**	**+0.2**
CRE	**Caprese Michel**	**1.49**	**149**	AML	AML		
	comp=N,132µm,0.3s						
CRE				AML	AML		
	comp=E,115µm,0.3s						
CRE				AML	AML		
	comp=N,132µm,0.3s						
CRE				AML	AML		
	comp=E,115µm,0.3s						
OZOL	**Ozolo**	**1.50**	**4**	*e*Pg	**Pn**	**02 28 59.4**	**+0.2**
OZOL	**Ozolo**	**1.50**	**4**	*e*Pg	**Pn**	**02 28 59.4**	**+0.2**
CARE	**Lago del Cares**	**1.52**	**355**	*e*Pg	**Pn**	**02 28 59.8**	**+0.2**
CARE	**Lago del Cares**	**1.52**	**355**	*e*Pg	**Pn**	**02 28 59.8**	**+0.2**
APPI	**Appiano**	**1.59**	**8**	AML	AML		
	comp=E,345µm,0.6s						
APPI				AML	AML		
	comp=N,536µm,0.4s						
APPI				AML	AML		
	comp=E,345µm,0.6s						
APPI				AML	AML		
	comp=N,536µm,0.4s						
APPI				AML	AML		
	comp=N,536µm,0.4s						
APPI				AML	AML		
	comp=E,345µm,0.6s						
KOSI	**Kohlern**	**1.59**	**12**	AML	AML		
	comp=N,336µm,0.4s						
KOSI				AML	AML		
	comp=E,293µm,0.5s						
KOSI				AML	AML		
	comp=E,293µm,0.5s						
KOSI				AML	AML		
	comp=N,336µm,0.4s						
KOSI				AML	AML		
	comp=E,293µm,0.5s						
KOSI				AML	AML		
	comp=N,336µm,0.4s						
AGOR	**Agordo**	**1.59**	**30**	AML	AML		
	comp=E,207µm,0.3s						
AGOR				AML	AML		
	comp=N,238µm,0.3s						
AGOR				AML	AML		
	comp=N,238µm,0.3s						
AGOR				AML	AML		
	comp=E,207µm,0.3s						
BRMO	**Bormio**	**1.61**	**347**	AML	AML		
	comp=N,133µm,0.5s						
BRMO				AML	AML		
	comp=E,150µm,0.5s						
BRMO				AML	AML		
	comp=N,133µm,0.5s						
BRMO				AML	AML		
	comp=E,150µm,0.5s						
BRMO				AML	AML		
	comp=N,133µm,0.5s						
BRMO				AML	AML		
	comp=E,150µm,0.5s						
PCP	**Piancastagn**	**1.72**	**258**	AML	AML		
	comp=N,209µm,0.6s						
PCP				AML	AML		
	comp=E,178µm,0.5s						
PCP				AML	AML		
	comp=N,209µm,0.6s						
PCP				AML	AML		
	comp=E,178µm,0.5s						
MOSI	**Grossmontoni**	**1.73**	**352**	AML	AML		
	comp=E,434µm,0.4s						
MOSI				AML	AML		
	comp=E,434µm,0.4s						
MOSI				AML	AML		
	comp=N,528µm,0.5s						
MOSI				AML	AML		
	comp=N,528µm,0.5s						
CAFI	**Castiglion Fio**	**1.76**	**154**	AML	AML		
	comp=N,65µm,0.8s						
CAFI				AML	AML		
	comp=E,81µm,0.5s						
CAFI				AML	AML		
	comp=N,65µm,0.8s						
CAFI				AML	AML		
	comp=E,81µm,0.5s						
ABSI	**Aberstueckl**	**1.84**	**9**	AML	AML		
	comp=N,421µm,0.6s						
ABSI				AML	AML		
	comp=E,469µm,0.7s						
ABSI				AML	AML		
	comp=E,469µm,0.7s						
ABSI				AML	AML		
	comp=N,421µm,0.6s						
STAL	**STALIGIAL**	**1.86**	**43**	AML	AML		
	comp=E,360µm,0.3s						
STAL				AML	AML		
	comp=E,296µm,0.3s						
STAL				AML	AML		
	comp=N,340µm,1.2s						
STAL				AML	AML		
	comp=E,360µm,0.3s						
STAL				AML	AML		
	comp=N,284µm,0.3s						
STAL				AML	AML		
	comp=N,340µm,1.2s						
STAL				AML	AML		
	comp=N,284µm,0.3s						
STAL				AML	AML		
	comp=E,296µm,0.3s						
TUE	**Stuetta**	**1.90**	**326**	AML	AML		
	comp=N,200µm,0.5s						
TUE				AML	AML		
	comp=E,152µm,0.3s						
TUE				AML	AML		
	comp=N,200µm,0.5s						
TUE				AML	AML		
	comp=E,152µm,0.3s						
FINB	**Finale Ligure**	**1.98**	**249**	AML	AML		
	comp=E,420µm,0.3s						
FINB				AML	AML		
	comp=E,420µm,0.3s						
FINB				AML	AML		
	comp=N,8µm,0.2s						
FINB				AML	AML		
	comp=N,8µm,0.2s						
ROSI	**Rosskopf**	**2.05**	**10**	AML	AML		
	comp=E,347µm,1.6s						
ROSI				AML	AML		
	comp=E,347µm,1.6s						
ROSI				AML	AML		
	comp=N,428µm,1.6s						
ROSI				AML	AML		
	comp=N,428µm,1.6s						
FETA	**Feichten**	**2.12**	**357**	*e*Pn	**Pb**	**02 29 10.4**	**-0.5**
	SNR=13						
FETA				Sn	**Sb**	**02 29 36.9**	**0.0**
	comp=N,8.5nm,0.5s						
FETA	**Feichten**	**2.12**	**357**	Pn	**Pb**	**02 29 10.4**	**-0.5**
	SNR=13						
FETA				Sn	**Sb**	**02 29 36.9**	**0.0**
	comp=N,8.5nm,0.5s						
ABTA	**Abfaltersbach**	**2.16**	**31**	Pn	**Pb**	**02 29 10.0**	**-1.6**
	comp=N,1.3nm,0.3s						
ABTA				Sn	**Sg**	**02 29 43.2**	**+0.8**
	comp=N,6.2nm,0.3s						
ABTA	**Abfaltersbach**	**2.16**	**31**	Pn	**Pb**	**02 29 10.0**	**-1.6**
	comp=N,1.3nm,0.3s						
RORO	**Rocca Rossa**	**2.18**	**250**	AML	AML		
	comp=N,74µm,1.5s						
RORO				AML	AML		
	comp=E,69µm,0.2s						
RORO				AML	AML		
	comp=N,74µm,1.5s						
RORO				AML	AML		
	comp=E,69µm,0.2s						
RISI	**Rein**	**2.20**	**22**	AML	AML		
	comp=N,281µm,0.3s						
RISI				AML	AML		
	comp=E,262µm,0.5s						
RISI				AML	AML		
	comp=N,281µm,0.3s						
RISI				AML	AML		
	comp=E,262µm,0.5s						
SKDS	**Skadanscina**	**2.29**	**73**	*i* Pn	**Pn**	**02 29 09.8**	**-0.2**
SKDS				*e*Sn	**Sn**	**02 29 37.0**	**-0.8**
	comp=Z,17nm,0.2s						
SKDS	**Skadanscina**	**2.29**	**73**	Pn	**Pn**	**02 29 09.8**	**-0.2**
SKDS				*e*Sn	**Sn**	**02 29 37.0**	**-0.8**
	comp=Z,17nm,0.2s						
IMI	**Imperia**	**2.37**	**246**	AML	AML		
	comp=E,146µm,0.6s						
IMI				AML	AML		
	comp=E,146µm,0.6s						
IMI				AML	AML		
	comp=N,148µm,0.9s						
IMI				AML	AML		
	comp=N,148µm,0.9s						
WTTA	**Wattenberg**	**2.41**	**12**	*i* Pn	**Pb**	**02 29 15.0**	**-1.0**
	comp=N,7.5nm,0.3s						
WTTA				Sn	**Sb**	**02 29 44.8**	**-0.7**
	comp=N,6.0nm,0.3s						
WTTA	**Wattenberg**	**2.41**	**12**	Pn	**Pb**	**02 29 15.0**	**-1.0**
	comp=N,7.5nm,0.3s						
WTTA				Sn	**Sb**	**02 29 44.8**	**-0.7**
	comp=N,6.0nm,0.3s						
WTTA				Sg	**Sg**	**02 29 47.6**	**-2.9**
WTTA	**Wattenberg**	**2.41**	**12**	AML	AML		
	comp=E,126µm,0.4s						
WTTA				AML	AML		
	comp=E,126µm,0.4s						
WTTA				AML	AML		
	comp=N,65µm,0.8s						
WTTA				AML	AML		
	comp=N,65µm,0.8s						
MOTA	**Moosalm**	**2.44**	**3**	*e*Pn	**Pn**	**02 29 14.0**	**+1.9**
	SNR=15						
MOTA				Sn	**Sb**	**02 29 46.8**	**+0.5**
	comp=N,6.7nm,0.2s						
MOTA	**Moosalm**	**2.44**	**3**	Pn	**Pn**	**02 29 14.0**	**+1.9**
	SNR=15						
MOTA				Sn	**Sb**	**02 29 46.8**	**+0.5**
	comp=N,6.7nm,0.2s						
DAVA	**Damuels**	**2.48**	**344**	*e*Pn	**Pn**	**02 29 14.5**	**+1.8**
	comp=N,2.4nm,0.2s						
DAVA				Sn	**Sb**	**02 29 46.5**	**-1.0**
	comp=N,13nm,0.4s						
DAVA	**Damuels**	**2.48**	**344**	Pn	**Pn**	**02 29 14.5**	**+1.8**
	comp=N,2.4nm,0.2s						
DAVA				Sn	**Sb**	**02 29 46.5**	**-1.0**
	comp=N,13nm,0.4s						
SAOF	**Saorge**	**2.56**	**250**	AML	AML		
	comp=E,64µm,1.4s						
SAOF				AML	AML		
	comp=E,64µm,1.4s						
SAOF				AML	AML		
	comp=N,80µm,1.2s						
SAOF				AML	AML		
	comp=N,80µm,1.2s						
MYKA	**Terra Mystica**	**2.58**	**47**	*e*Pn	**Pn**	**02 29 16.1**	**+2.1**
	comp=N,2.2nm,0.2s						
MYKA				*e*Sn	**Sb**	**02 29 48.4**	**-1.8**
	comp=N,8.1nm,0.5s						
MYKA	**Terra Mystica**	**2.58**	**47**	Pn	**Pn**	**02 29 16.1**	**+2.1**
	comp=N,2.2nm,0.2s						
MYKA				Sn	**Sb**	**02 29 48.4**	**-1.8**
	comp=N,8.1nm,0.5s						
RETA	**Reutte**	**2.58**	**358**	*e*Pn	**Pn**	**02 29 16.4**	**+2.4**
	comp=N,1.3nm,0.2s						
RETA				Sn	**Sb**	**02 29 50.3**	**+0.1**
	comp=N,5.3nm,0.3s						
RETA	**Reutte**	**2.58**	**358**	Pn	**Pn**	**02 29 16.4**	**+2.4**
	comp=N,1.3nm,0.2s						
RETA				Sn	**Sb**	**02 29 50.3**	**+0.1**
	comp=N,5.3nm,0.3s						
SBF	**Sospel**	**2.69**	**248**	*e*Pn	**Pn**	**02 29 17.0**	**+1.5**
SBF				*e*Sn	**Sn**	**02 29 49.0**	**+1.3**
	comp=N,20nm,0.2s						
SBF	**Sospel**	**2.69**	**248**	*e*Pn	**Pn**	**02 29 17.0**	**+1.5**
SBF				*e*Sn	**Sn**	**02 29 49.0**	**+1.3**
	comp=N,10nm,0.2s						
PGF	**Pioggiola**	**2.73**	**211**	*e*Pn	**Pn**	**02 29 16.7**	**+0.6**
PGF				*e*Sn	**Sn**	**02 29 49.1**	**+0.4**
	comp=N,12nm,0.3s						
PGF	**Pioggiola**	**2.73**	**211**	*e*Pn	**Pn**	**02 29 16.7**	**+0.6**
PGF				*e*Sn	**Sn**	**02 29 49.1**	**+0.4**
	comp=N,5.8nm,0.3s						
KBA	**Koelnbreinsper**	**2.76**	**37**	*e*Pn	**Pg**	**02 29 24.8**	**-1.0**
KBA				Sn	**Sb**	**02 29 52.9**	**-2.6**
	comp=N,4.6nm,0.3s						
NVLJ	**Novalja**	**2.85**	**96**	*e*Pn	**Pn**	**02 29 17.9**	**+0.3**
NVLJ				Sn	**Sn**	**02 29 50.6**	**-0.9**
NVLJ	**Novalja**	**2.85**	**96**	*e*Pn	**Pn**	**02 29 17.9**	**+0.3**
NVLJ				Sn	**Sn**	**02 29 50.6**	**-0.9**
MBDF	**Montbardon**	**2.94**	**268**	*e*Pn	**Pn**	**02 29 20.4**	**+1.4**
MBDF				*e*Sn	**Sn**	**02 29 55.2**	**+1.2**
	comp=N,20nm,0.5s						
MBDF	**Montbardon**	**2.94**	**268**	*e*Pn	**Pn**	**02 29 20.4**	**+1.4**
MBDF				*e*Sn	**Sn**	**02 29 55.2**	**+1.2**
	comp=N,9.9nm,0.5s						
SURF	**Saint Ours**	**2.94**	**263**	P	**Pn**	**02 29 19.4**	**+0.3**
SURF	**Saint Ours**	**2.94**	**263**	P	**Pn**	**02 29 19.4**	**+0.3**
LPG	**La Plagne**	**2.99**	**283**	*e*Pn	**Pn**	**02 29 21.4**	**+1.6**
LPG				*e*Sn	**Sn**	**02 29 56.6**	**+1.3**
	comp=N,21nm,0.6s						
LPG	**La Plagne**	**2.99**	**283**	*e*Pn	**Pn**	**02 29 21.4**	**+1.6**
LPG				*e*Sn	**Sn**	**02 29 56.6**	**+1.3**
	comp=N,10nm,0.6s						
LPL	**La Plagne**	**3.00**	**283**	*e*Pn	**Pn**	**02 29 21.6**	**+1.7**
LPL				*e*Sn	**Sn**	**02 29 56.3**	**+0.6**
	comp=N,11nm,0.4s						
LPL	**La Plagne**	**3.00**	**283**	*e*Pn	**Pn**	**02 29 21.6**	**+1.7**
LPL				*e*Sn	**Sn**	**02 29 56.3**	**+0.6**
	comp=N,5.6nm,0.4s						
OBKA	**Obir**	**3.02**	**57**	*i* Pn	**Pn**	**02 29 21.1**	**+1.1**
	comp=N,0.4nm,0.3s						
OBKA				*e*Sn	**Sn**	**02 29 56.0**	**+0.2**
	comp=N,5.7nm,0.3s						
OBKA	**Obir**	**3.02**	**57**	Pn	**Pn**	**02 29 21.1**	**+1.1**
	comp=N,0.4nm,0.3s						
OBKA				Sn	**Sn**	**02 29 56.0**	**+0.2**
	comp=N,5.7nm,0.3s						
CALF	**Calern**	**3.08**	**249**	P	**Pn**	**02 29 22.7**	**+1.9**
CALF	**Calern**	**3.08**	**249**	P	**Pn**	**02 29 22.7**	**+1.9**
OZLJ	**Ozalj**	**3.30**	**76**	*e*Pn	**Pn**	**02 29 25.0**	**+1.2**
OZLJ				Sn	**Sn**	**02 30 02.5**	**-0.1**
OZLJ	**Ozalj**	**3.30**	**76**	*e*Pn	**Pn**	**02 29 25.0**	**+1.2**
OZLJ				Sn	**Sn**	**02 30 02.5**	**-0.1**
FRF	**La Foret Royal**	**3.34**	**248**	*e*Pn	**Pn**	**02 29 25.7**	**+1.4**
FRF				*e*Sn	**Sn**	**02 30 04.5**	**+1.0**
	comp=N,14nm,0.2s						
FRF	**La Foret Royal**	**3.34**	**248**	*e*Pn	**Pn**	**02 29 25.7**	**+1.4**
FRF				*e*Sn	**Sn**	**02 30 04.5**	**+1.0**
	comp=N,6.8nm,0.2s						
SOKA	**Soboth**	**3.39**	**57**	*e*Sn	**Sn**	**02 30 05.3**	**+0.3**
	comp=N,2.8nm,0.3s						
SOKA	**Soboth**	**3.39**	**57**	Sn	**Sn**	**02 30 05.3**	**+0.3**
	comp=N,2.8nm,0.3s						
LMR	**La Mourre**	**3.53**	**245**	*e*Pn	**Pn**	**02 29 27.3**	**+0.4**
LMR				*e*Sn	**Sn**	**02 30 08.7**	**+0.5**
	comp=N,6.5nm,0.2s						
LMR	**La Mourre**	**3.53**	**245**	*e*Pn	**Pn**	**02 29 27.3**	**+0.4**
LMR				*e*Sn	**Sn**	**02 30 08.7**	**+0.5**
	comp=N,3.2nm,0.2s						
ORIF	**Oris-en-Rattie**	**3.56**	**272**	*e*Pn	**Pn**	**02 29 29.0**	**+1.5**
ORIF				*e*Sn	**Sn**	**02 30 10.1**	**+0.8**
	comp=N,21nm,0.6s						
ORIF	**Oris-en-Rattie**	**3.56**	**272**	*e*Pn	**Pn**	**02 29 29.0**	**+1.5**
ORIF				*e*Sn	**Sn**	**02 30 10.1**	**+0.8**
	comp=N,11nm,0.6s						
KIZ	**Kirchzarten**	**3.68**	**327**	P	**Pn**	**02 29 29.5**	**+0.5**
KIZ	**Kirchzarten**	**3.68**	**327**	P	**Pn**	**02 29 29.5**	**+0.5**
MOA	**Molln**	**3.75**	**37**	*i* Pn	**Pn**	**02 29 30.9**	**+0.8**
	comp=N,0.8nm,0.3s						
MOA				*e*Sn	**Sn**	**02 30 16.4**	**+2.5**
	comp=N,1.7nm,0.3s						
MOA	**Molln**	**3.75**	**37**	Pn	**Pn**	**02 29 30.9**	**+0.8**
	comp=N,0.8nm,0.3s						
MOA				Sn	**Sn**	**02 30 16.4**	**+2.5**
	comp=N,1.7nm,0.3s						
CHMF	**Charmoille**	**3.77**	**310**	P	**Pn**	**02 29 31.4**	**+1.1**
CHMF	**Charmoille**	**3.77**	**310**	P	**Pn**	**02 29 31.4**	**+1.1**
CABF	**La Chapelle**	**3.77**	**299**	*e*Pn	**Pn**	**02 29 31.6**	**+1.2**
CABF				*e*Sn	**Sn**	**02 30 14.2**	**-0.2**
	comp=N,2.4nm,0.2s						
CABF	**La Chapelle**	**3.77**	**299**	*e*Pn	**Pn**	**02 29 31.6**	**+1.2**
CABF				*e*Sn	**Sn**	**02 30 14.2**	**-0.2**
	comp=N,1.2nm,0.2s						
SMRF	**Simiane la Rot**	**3.92**	**258**	*e*Pn	**Pn**	**02 29 34.2**	**+1.8**
SMRF				*e*Sn	**Sn**	**02 30 18.1**	**+0.1**
	comp=N,1.7nm,0.2s						
SMRF	**Simiane la Rot**	**3.92**	**258**	*e*Pn	**Pn**	**02 29 34.2**	**+1.8**
SMRF				*e*Sn	**Sn**	**02 30 18.1**	**+0.1**
	comp=N,0.9nm,0.2s						
ARSA	**Arzberg**	**3.98**	**52**	*e*Pn	**Pn**	**02 29 34.1**	**+0.9**
	comp=N,0.5nm,0.3s						
ARSA				*e*Sn	**Sg**	**02 30 37.1**	**-3.6**
	comp=N,2.3nm,0.6s						
ARSA	**Arzberg**	**3.98**	**52**	Pn	**Pn**	**02 29 34.1**	**+0.9**
	comp=N,0.5nm,0.3s						
HINF	**Hinteralfeld**	**4.04**	**318**	*e*Pn	**Pn**	**02 29 34.0**	**+0.1**
HINF				*e*Sn	**Sn**	**02 30 20.9**	**+0.1**
	comp=N,5.4nm,0.2s						
HINF	**Hinteralfeld**	**4.04**	**318**	*e*Pn	**Pn**	**02 29 34.0**	**+0.1**
HINF				*e*Sn	**Sn**	**02 30 20.9**	**+0.1**
	comp=N,2.7nm,0.2s						
OPP	**Oppenau**	**4.04**	**334**	P	**Pn**	**02 29 35.0**	**+0.9**
OPP	**Oppenau**	**4.04**	**334**	P	**Pn**	**02 29 34.0**	**0.0**
ECH	**Echery**	**4.19**	**323**	P	**Pn**	**02 29 36.8**	**+0.7**
ECH	**Echery**	**4.19**	**323**	P	**Pn**	**02 29 36.8**	**+0.7**
CDF	**Champ du Feu**	**4.30**	**326**	*e*Pn	**Pn**	**02 29 38.0**	**+0.4**
CDF				*e*Sn	**Sn**	**02 30 25.9**	**-1.5**
	comp=N,2.2nm,0.2s						
CDF	**Champ du Feu**	**4.30**	**326**	*e*Pn	**Pn**	**02 29 38.0**	**+0.4**
CDF				*e*Sn	**Sn**	**02 30 25.9**	**-1.5**
	comp=N,1.1nm,0.2s						
HAU	**Haudompre**	**4.41**	**316**	*e*Pn	**Pn**	**02 29 39.5**	**+0.4**
HAU				*e*Sn	**Sn**	**02 30 30.0**	**-0.1**
	comp=N,21nm,0.3s						
HAU	**Haudompre**	**4.41**	**316**	*e*Pn	**Pn**	**02 29 39.5**	**+0.4**
HAU				*e*Sn	**Sn**	**02 30 30.0**	**-0.1**
	comp=N,10nm,0.3s						
VIVF	**Saint-Julien-l**	**4.42**	**272**	*e*Pn	**Pn**	**02 29 39.6**	**+0.3**
VIVF				*e*Sn	**Sn**	**02 30 29.6**	**-0.8**
	comp=N,2.9nm,0.3s						
VIVF	**Saint-Julien-l**	**4.42**	**272**	*e*Pn	**Pn**	**02 29 39.6**	**+0.3**
VIVF				*e*Sn	**Sn**	**02 30 29.6**	**-0.8**
	comp=N,1.5nm,0.3s						
CONA	**Conrad Observa**	**4.57**	**47**	*e*Pn	**Pn**	**02 29 43.7**	**+2.4**
	comp=N,0.3nm,0.2s						
CONA				*i* Sn	**Sn**	**02 30 35.8**	**+1.7**
	comp=N,1.1nm,0.4s						
CONA	**Conrad Observa**	**4.57**	**47**	Pn	**Pn**	**02 29 43.7**	**+2.4**
	comp=N,0.3nm,0.2s						
CONA				Sn	**Sn**	**02 30 35.8**	**+1.7**
	comp=N,1.1nm,0.4s						
KHC	**Kasperske Hory**	**4.61**	**23**	*e*PN	**Pn**	**02 29 42.5**	**+0.8**
KHC				*e*PG	**Pg**	**02 30 01.9**	**+0.9**
KHC				*e*SN	**Sn**	**02 30 34.7**	**-0.1**
KHC				*e*SG	**Sg**	**02 31 00.4**	**-0.3**
	comp=N,10nm,0.7s						
KHC	**Kasperske Hory**	**4.61**	**23**	Pn	**Pn**	**02 29 42.5**	**+0.8**
KHC				Sn	**Sn**	**02 30 34.7**	**-0.1**
KHC				Sg	**Sg**	**02 31 00.4**	**-0.3**
	comp=N,10nm,0.7s						
PAGF	**Fort de Pagny**	**5.09**	**318**	*e*Pn	**Pn**	**02 29 49.2**	**+0.8**
PAGF				*e*Sn	**Sn**	**02 30 46.3**	**-0.5**
	comp=N,2.1nm,0.2s						
PAGF	**Fort de Pagny**	**5.09**	**318**	*e*Pn	**Pn**	**02 29 49.2**	**+0.8**
PAGF				*e*Sn	**Sn**	**02 30 46.3**	**-0.5**
	comp=N,1.0nm,0.2s						
LASF	**Ste Croix**	**5.11**	**263**	*e*Pn	**Pn**	**02 29 49.4**	**+0.8**
LASF				*e*Sn	**Sn**	**02 30 46.1**	**-1.0**
	comp=N,2.0nm,0.3s						
LASF	**Ste Croix**	**5.11**	**263**	*e*Pn	**Pn**	**02 29 49.4**	**+0.8**
LASF				*e*Sn	**Sn**	**02 30 46.1**	**-1.0**
	comp=N,1.0nm,0.3s						
SFTF	**Sexfontaines**	**5.21**	**311**	*e*Pn	**Pn**	**02 29 51.2**	**+1.1**
SFTF				*e*Sn	**Sn**	**02 30 49.2**	**-0.6**
	comp=N,1.3nm,0.2s						
SFTF	**Sexfontaines**	**5.21**	**311**	*e*Pn	**Pn**	**02 29 51.2**	**+1.1**
SFTF				*e*Sn	**Sn**	**02 30 49.2**	**-0.6**
	comp=N,0.6nm,0.2s						
SMF	**Signal de Mont**	**5.23**	**292**	*e*Pn	**Pn**	**02 29 51.1**	**+0.8**
SMF				*e*Sn	**Sn**	**02 30 49.8**	**-0.5**
	comp=N,4.3nm,0.3s						
SMF	**Signal de Mont**	**5.23**	**292**	*e*Pn	**Pn**	**02 29 51.1**	**+0.8**
SMF				*e*Sn	**Sn**	**02 30 49.8**	**-0.5**
	comp=N,2.2nm,0.3s						
STON	**Ston**	**5.32**	**110**	*e*Pn	**Pn**	**02 29 51.4**	**-0.2**
STON				Sn	**Sn**	**02 30 48.9**	**-3.5**
STON	**Ston**	**5.32**	**110**	*e*Pn	**Pn**	**02 29 51.3**	**-0.2**
MEZF	**Maizieres J'vi**	**5.39**	**314**	*e*Pn	**Pn**	**02 29 53.2**	**+0.7**
MEZF				*e*Sn	**Sn**	**02 30 53.4**	**-0.7**
	comp=N,2.1nm,0.2s						
MEZF	**Maizieres J'vi**	**5.39**	**314**	*e*Pn	**Pn**	**02 29 53.2**	**+0.7**
MEZF				*e*Sn	**Sn**	**02 30 53.4**	**-0.7**
	comp=N,1.0nm,0.2s						
NKC	**Novy Kostel**	**5.43**	**11**	*e*SG	**Sg**	**02 31 26.7**	**-0.4**
NKC	**Novy Kostel**	**5.43**	**11**	Sg	**Sg**	**02 31 26.7**	**-0.4**
LOR	**Lormes**	**5.43**	**298**	*e*Pn	**Pn**	**02 29 53.8**	**+0.7**
LOR				*e*Sn	**Sn**	**02 30 54.3**	**-0.9**
	comp=N,5.8nm,0.3s						
LOR	**Lormes**	**5.43**	**298**	P	**Pn**	**02 29 53.4**	**+0.3**
LOR	**Lormes**	**5.43**	**298**	*e*Pn	**Pn**	**02 29 53.8**	**+0.7**
LOR				*e*Sn	**Sn**	**02 30 54.3**	**-0.9**
	comp=N,2.9nm,0.3s						
SSF	**Saint Saulge**	**5.58**	**295**	*e*Pn	**Pn**	**02 29 56.2**	**+1.1**
SSF				*e*Sn	**Sn**	**02 30 58.3**	**-0.6**
	comp=N,1.9nm,0.3s						
SSF	**Saint Saulge**	**5.58**	**295**	*e*Pn	**Pn**	**02 29 56.2**	**+1.1**
SSF				*e*Sn	**Sn**	**02 30 58.3**	**-0.6**
	comp=N,0.9nm,0.3s						
AVF	**Avril sur Loir**	**5.60**	**292**	*e*Pn	**Pn**	**02 29 55.9**	**+0.6**
AVF				*e*Sn	**Sn**	**02 30 58.6**	**-0.6**
	comp=N,0.8nm,0.3s						
AVF	**Avril sur Loir**	**5.60**	**292

HYF	Humbligny	6.21	295	*e*Pn	Pn	02 30 04.7	+1.0
HYF				*e*Sn	Sn	02 31 13.4	-0.9
BRG	Berggiesshubel	6.31	18	SG	Sg	02 32 12.9	+18
	comp=N,6.1nm,1.1s						
CLL	Collm	6.56	12	*e*Sg	Sg	02 32 04.0	+0.9

IDC 08 02:32:49.2±8.4, 21°.11S×65°.71W, h326km±58km, mb3.5/1, mb1 3.0/3, mb2.7/46, mbtmp3.6/3, Error ellipse: s-maj=125.6km s-min=35.5km az=13.0, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	5.32	334	P	Pn	02 34 11.7	-0.4
	0.5nm,0.3s,baz=140,slow=8.7,SNR=13						
LPAZ				S	S	02 35 19.4	+0.6
	baz=194,slow=19,SNR=2.9						
SIV	San Ignacio	6.73	42	P	Pn	02 34 28.4	+0.4
	0.5nm,0.3s,baz=241,slow=10,SNR=12						
TORD	Torodi Ar. Bea	74.42	69	P	P	02 43 52.4	-0.1
	0.9nm,0.4s,baz=254,slow=5.5,SNR=39						
MKAR	Makanchi Array	143.53	38	PKP	PKPdf	02 51 45.3	0.0
	0.8nm,0.6s,baz=330,slow=3.7,SNR=7.9						

IDC 08 02:34:47.1±4.2, 31°.25N×141°.25E, h0km, mb3.5/3, mb1 3.6/5, mb1mx3.3/70, mbtmp3.5/5, ML3.4/2, MS3.1/1, Ms1 3.1/1, ms1mx2.3/51, Error ellipse: s-maj=171.4km s-min=22.8km az=70.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	2.24	327	LR	LR	02 36 28.9	
	comp=Z,373nm,19.3s,baz=96,slow=46						
JCJ	Chichijima	4.22	169	Pn	Pn	02 35 53.4	+0.6
	5.1nm,0.3s,baz=308,slow=19,SNR=4.3						
JCJ				Sn	Sn	02 36 37.9	-4.8
	2.2nm,0.3s,baz=306,slow=19,SNR=5.7						
MJAR	Matsushiro Arr	5.85	335	Pn	Pn	02 36 14.6	-0.6
	0.5nm,0.3s,baz=148,slow=10,SNR=3.2						
MKAR	Makanchi Array	47.27	307	P	P	02 43 22.7	+0.5
	0.2nm,0.5s,baz=88,slow=9.6,SNR=4.9						
KURBB	Kurchatov Arra	49.61	312	P	P	02 43 39.6	-0.4
	0.3nm,0.5s,baz=84,slow=7.1,SNR=4.8						
WRA	Warramunga Arr	51.33	188	P	P	02 43 52.9	-0.5
	0.4nm,0.4s,baz=4.7,slow=7.6,SNR=6.2						

*GUC **08** 02:36:26.6±0.5, 36°.08S×70°.90W, h10km, ML3.5*
*ISCJB **08** 02:36:28.8±0.8, 36°.06S±0°.04×71°.12W±0°.07, h10km, mb3.5/1, MS3.2/2, Error ellipse: s-maj=8.5km s-min=4.8km az=33.0*
*IDC **08** 02:36:32.9±2.3, 36°.45S×69°.80W, h0km, mb3.3/2, mb1 3.5/3, mb1mx3.3/39, mbtmp3.3/3, ML3.1/1, MS3.1/3, Ms1 3.1/3, ms1mx2.8/13, Error ellipse: s-maj=104.0km s-min=19.4km az=101.0*
ISC 08 02:36:28.6±1.0, 35°.96S±0°.05×71°.17W±0°.07, h10km, n12, σ1§52/15, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCHI	Chillan	0.97	229	*e*P	Pg	02 36 45.7	-1.6
CCHI				*i* S	Sg	02 37 00.4	+0.5
CCHI				IAML		02 37 01.8	
	comp=E,2μm,0.8s						
GO05	HualaæØ	1.14	327	*e*P	Pn	02 36 49.6	-1.0
GO05				*i* S	Sb	02 37 07.7	+2.5
GO05				IAML		02 37 08.4	
	comp=E,3μm,0.3s						
COCH	Cobquecura	1.32	262	*e*P	Pn	02 36 52.4	-0.7
COCH				*i* S	Sn	02 37 12.1	+1.4
COCH				IAML		02 37 14.7	
	comp=N,729nm,0.8s						
CCSP	San Pedro de C	1.79	240	*i* S	Sn	02 37 23.2	+0.8
FCH	Farellones	2.73	16	*e*P	Pb	02 37 15.2	-2.5
FCH				*i* S	Sb	02 37 53.0	+1.7
FCH				IAML		02 37 57.4	
	comp=N,231nm,1.2s						
PEL	Peldehue	2.84	8	*e*P	Pn	02 37 14.2	+0.1
PEL				*i* S	Sb	02 37 53.5	-0.8
ROCH	El Roble	2.99	3	*e*P	Pn	02 37 17.4	+1.2
ROCH				*i* S	Sb	02 37 58.8	+0.2
PLCA	Paso Flores	4.79	174	Pn	Pn	02 37 42.0	+1.2
	comp=N,0.3nm,0.3s,baz=1.9,slow=13,SNR=4.7						
PLCA				Pg	Pb	02 37 51.9	-0.7
	comp=N,1.8nm,0.3s,baz=16,slow=17,SNR=20						
PLCA				Lg	Lg	02 38 47.5	
	comp=N,3.9nm,0.3s,baz=120,slow=20,SNR=14						
LPAZ	La Paz	19.78	9	P	Pn	02 41 08.5	+7.4
	comp=N,0.7nm,0.7s,baz=196,slow=14,SNR=3.2						
LPAZ				LR	LR	02 49 33.3	
	comp=N,14nm,21.4s,baz=276,slow=39						
SIV	San Ignacio	21.84	27	LR	LR	02 51 06.7	
	comp=N,58nm,20.6s,baz=75,slow=40						
APG	El Apazote	53.88	337	LR	LR	03 04 48.4	
	comp=N,41nm,18.5s,baz=230,slow=31						
TORD	Torodi Ar. Bea	84.22	69	P	P	02 49 02.3	+1.7
	comp=N,0.4nm,0.9s,baz=225,slow=5.9,SNR=2.7						

*MEX **08** 02:50:17.4±0.6, 15°.34N×94°.54W, h26km±27km, MD4.2*
*NEIC **08** 02:50:17.4±0.0, 15°.34N×94°.54W, h26km, mb3.7/4, MD4.2(MEX), After MEX.*
*IDC **08** 02:50:19.2±3.8, 15°.55N×94°.47W, h53km±29km, mb3.3/3, mb1 3.8/5, mb1mx3.4/44, mbtmp3.7/5, ML3.8/2, MS2.9/2, Ms1 2.9/2, ms1mx2.5/24, Error ellipse: s-maj=47.3km s-min=8.9km az=43.0*
ISC 08 02:50:13.6±2.3, 15°.51N±0°.09×94°.55W±0°.04, h8km±13km, n22, σ1§66/33, mb3.7/5, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		1.30	81	*i* P	Pn	02 50 37.9	0.0
PCIG				*e*S	Sb	02 50 52.6	-2.4
PCIG		1.30	81	*i* P	Pn	02 50 37.9	0.0
PCIG				*e*S	Sb	02 50 52.6	-2.4
HUIG	Huatulco	1.52	280	*e*P	Pn	02 50 41.2	+0.2
HUIG				*e*S	Sn	02 50 58.2	-2.8
HUIG	Huatulco	1.52	280	*e*P	Pn	02 50 41.2	+0.2
HUIG				*e*S	Sn	02 50 58.2	-2.8
CMIG	Matias Romero	1.60	349	P	Pg	02 50 43.9	-0.4
	28nm,0.3s,baz=175,slow=12,SNR=395						
CMIG				S	Sg	02 51 04.4	-0.7
	225nm,0.3s,baz=69,slow=18,SNR=27						
TGIG		1.86	47	*e*P	Pb	02 50 47.2	-0.7
TGIG				*e*S	Sb	02 51 10.3	-1.1
TGIG		1.86	47	*e*P	Pb	02 50 47.2	-0.7
TGIG				*e*S	Sb	02 51 10.3	-1.1
VHO	Vista Hermosa	2.61	307	*e*P	Pn	02 50 57.8	+1.6
VHO				*e*S	Sn	02 51 29.0	+0.9
VHO	Vista Hermosa	2.61	307	*e*P	Pn	02 50 57.8	+1.6
VHO				*e*S	Sn	02 51 29.0	+0.9
APG	El Apazote	3.98	97	P	Pn	02 51 16.6	+1.5
	10nm,0.3s,baz=311,slow=12,SNR=74						
APG				S	Sn	02 52 02.4	+0.4
	5.5nm,0.3s,baz=252,slow=19,SNR=2.7						
APG				LR	LR	02 52 20.5	
	comp=Z,43nm,21.1s,baz=320,slow=31						
TLIG	Tlapa	4.36	298	*e*P	Pn	02 51 21.6	+1.4
TLIG				*e*S	Sn	02 52 08.1	-3.1
TLIG	Tlapa	4.36	298	*e*P	Pn	02 51 21.6	+1.4
TLIG				*e*S	Sn	02 52 08.1	-3.1
JTS	JuntasAbangare	10.70	118	P	Pn	02 52 49.3	+2.1
	0.5nm,0.3s,baz=252,slow=3.2,SNR=3.0						
HKT	Hockley	14.42	356	*e*Pn	Pn	02 53 39.9	+1.9
JCT	Junction City	15.66	343	*e*Pn	Pn	02 53 55.8	+1.2
	5.3nm,0.8s						
WMOK	Wichita Mounta	19.52	350	*e*P	P	02 54 41.8	+0.4
	2.1nm,0.9s						
SDCO	Great Sand Dun	24.17	338	*e*P	P	02 55 31.2	+0.5
	2.3nm,1.1s						
PFO	Pinyon Flats O	26.77	316	LR	LR	03 08 00.3	
	comp=Z,96nm,18.9s,baz=103,slow=40						
NVAR	Mina Array Bea	30.96	322	P	P	02 56 33.0	+1.5
	0.3nm,0.6s,baz=148,slow=8.6,SNR=3.3						
HLID	Hailey	32.69	333	*e*P	P	02 56 47.6	+1.1
	1.4nm,0.8s						
YKA	Yellowknife Ar	49.02	348	P	P	02 58 59.8	-0.8
	0.7nm,0.6s,baz=155,slow=7.6,SNR=3.4						
ILAR	Eielson Array	60.49	337	P	P	03 00 22.6	-1.1
	0.5nm,0.7s,baz=137,slow=4.2,SNR=5.7						

*CSEM **08** 03:02:23.8±0.2, 38°.33N×19°.73E, h10km, ML2.7, Error ellipse: s-maj=6.6km s-min=3.7km az=179.0*
*ATH **08** 03:02:23.4, 38°.34N×19°.72E, h28km±3km, ML2.6/5, Error ellipse: s-maj=5.1km s-min=1.3km az=88.0*
*THE **08** 03:02:24.9, 38°.39N×19°.77E, h5km±5km, ML2.7/3, Error ellipse: s-maj=5.6km s-min=1.2km az=114.0*
*ROM **08** 03:02:27.4±0.5, 38°.07N±0°.04×19°.56E±0°.03, h31km±1km, ML2.4/3*
ISC 08 03:02:24.9±1.1, 38°.32N±0°.03×19°.77E±0°.03, h30km±12km, n43, σ1§25/69, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FSK	Fiskardo	0.64	77	P	Pb	03 02 36.6	-0.9
FSK				S	Sb	03 02 47.3	+1.0
FSK	Fiskardo	0.64	77	P	Pb	03 02 36.6	-0.9
FSK				S	Sb	03 02 45.9	-0.3
VLS	Valsamata	0.66	102	P	Pb	03 02 37.8	-0.2
VLS				S	Sb	03 02 46.9	-0.1
VLS				AML	AML	03 02 49.2	
	comp=E,1799μm,0.2s						
VLS				AML	AML	03 02 50.2	
	comp=N,2300μm,0.2s						
VLS	Valsamata	0.66	102	P	Pb	03 02 37.5	-0.5
VLS				S	Sb	03 02 47.8	+0.9
VLS	Valsamata	0.66	102	P	Pb	03 02 37.5	-0.5
VLS				S	Sb	03 02 47.2	+0.3
KFL	Anninata	0.83	105	P	Pn	03 02 40.6	0.0
KFL				S	Sb	03 02 52.5	+0.9
KFL				AML	AML	03 02 54.6	
	comp=E,1903μm,0.4s						
KFL				AML	AML	03 02 54.6	
	comp=N,1407μm,0.2s						
KFL	Anninata	0.83	105	P	Pn	03 02 40.4	-0.1
KFL				S	Sn	03 02 52.9	+1.2
KFL	Anninata	0.83	105	P	Pn	03 02 40.5	0.0
KFL				S	Sb	03 02 52.6	+0.9
LKD2	Lefkada island	0.84	56	P	Pn	03 02 39.4	-1.2
LKD2				S	Sb	03 02 51.6	-0.3
LKD2				AML	AML	03 02 52.8	
	comp=E,650μm,0.2s						
LKD2				AML	AML	03 02 54.7	
	comp=N,592μm,0.2s						
LKD2	Lefkada island	0.84	56	P	Pn	03 02 39.8	-0.8
LKD2				S	Sb	03 02 51.5	-0.4
LKD2	Lefkada island	0.84	56	P	Pn	03 02 39.8	-0.8
LKD2				S	Sb	03 02 51.5	-0.4
MGNA	Meganis¸,,	0.87	67	P	Pn	03 02 41.4	+0.4
MGNA				S	Sn	03 02 53.4	+0.8
MGNA				AML	AML	03 02 54.4	
	comp=N,807μm,0.1s						
MGNA				AML	AML	03 02 54.6	
	comp=E,750μm,0.3s						
MGNA	Meganis¸,,	0.87	67	P	Pn	03 02 41.1	+0.1
MGNA				S	Sn	03 02 53.4	+0.8
SGD	Sagiada	1.34	16	P	Pn	03 02 47.5	0.0
SGD	Sagiada	1.34	16	P	Pn	03 02 47.7	+0.2
KEK	Kerkira	1.39	1	P	Pn	03 02 47.6	-0.5
KEK				S	Sb	03 03 09.0	+1.5
KEK				AML	AML	03 03 12.1	
	comp=E,130μm,0.4s						
KEK				AML	AML	03 03 18.7	
	comp=N,126μm,0.6s						
KEK	Kerkira	1.39	1	P	Pn	03 02 48.2	0.0
KEK	Kerkira	1.39	1	P	Pn	03 02 48.2	0.0
KEK				S	Sb	03 03 08.0	+0.5
KASA	Kassiopi	1.43	5	P	Pn	03 02 48.6	-0.1
KASA	Kassiopi	1.43	5	P	Pn	03 02 48.9	+0.2
SRN	Sarande	1.56	7	P	Pb	03 02 53.2	0.0
SRN				S	Sb	03 03 12.0	-0.6
SRN	Sarande	1.56	7	P	Pb	03 02 53.2	0.0
SRN				S	Sb	03 03 12.0	-0.6
AMT	Artemida-Makis	1.73	117	P	Pn	03 02 54.5	+1.7
AMT	Artemida-Makis	1.73	117	P	Pn	03 02 54.3	+1.5
PYL	PYLOS	2.12	132	P	Pn	03 02 58.4	+0.1
PYL	PYLOS	2.12	132	P	Pn	03 02 59.0	+0.8
SERS	Sersale	2.51	287	P	Pn	03 03 05.5	+1.7
SERS				S	Sn	03 03 34.2	+0.7
SERS	Sersale	2.51	287	P	Pn	03 03 05.5	+1.7
SERS				S	Sn	03 03 34.2	+0.7
SERS				AML	AML		
	comp=E,14μm,0.5s						
SERS				AML	AML		
	comp=N,14μm,1.6s						
SERS				AML	AML		
	comp=E,14μm,0.5s						
SERS				AML	AML		
	comp=N,14μm,1.6s						
PLAC	Placanica	2.62	274	P	Pn	03 03 06.0	+0.8
PLAC				S	Sn	03 03 34.5	-1.5
PLAC	Placanica	2.62	274	P	Pn	03 03 07.0	+1.8
PLAC				S	Sn	03 03 34.5	-1.5
PLAC				AML	AML		
	comp=E,25μm,0.3s						
PLAC				AML	AML		
	comp=N,17μm,1.0s						
PLAC				AML	AML		
	comp=E,25μm,0.3s						
PLAC				AML	AML		
	comp=N,17μm,1.0s						
CAR1	CAROLEI	2.93	290	P	Pn	03 03 11.7	+2.3
CAR1				S	Sn	03 03 44.3	+0.6
CAR1	CAROLEI	2.93	290	P	Pn	03 03 11.7	+2.3
CAR1				S	Sn	03 03 44.3	+0.6
CAR1				AML	AML		
	comp=E,32μm,0.4s						
CAR1				AML	AML		
	comp=N,30μm,0.7s						
CAR1				AML	AML		
	comp=E,32μm,0.4s						
CAR1				AML	AML		
	comp=N,30μm,0.7s						
JOPP	Joppolo	3.06	276	P	Pn	03 03 13.9	+2.7
JOPP				S	Sn	03 03 46.4	-0.4
JOPP	Joppolo	3.06	276	P	Pn	03 03 13.9	+2.7
JOPP				S	Sn	03 03 46.4	-0.4
JOPP				AML	AML		
	comp=E,39μm,0.2s						
JOPP				AML	AML		
	comp=N,38μm,1.1s						
JOPP				AML	AML		
	comp=N,38μm,1.1s						
JOPP				AML	AML		
	comp=E,39μm,0.2s						
T0715	Campotenese	3.25	299	AML	AML		
	comp=E,66μm,1.5s						
T0715				AML	AML		
	comp=N,100μm,1.5s						
T0715				AML	AML		
	comp=E,66μm,1.5s						
T0715				AML	AML		
	comp=N,100μm,1.5s						
MSRU	Castanea	3.35	270	P	Pn	03 03 16.6	+1.4
MSRU				S	Sn	03 03 51.8	-2.2
MSRU	Castanea	3.35	270	P	Pn	03 03 16.6	+1.4
MSRU				S	Sn	03 03 51.8	-2.2
ISTR	Stromboli Gino	3.62	279	AML	AML		
	comp=E,7230μm,0.6s						
ISTR				AML	AML		
	comp=E,7230μm,0.6s						
ISTR				AML	AML		
	comp=N,6155μm,0.4s						
ISTR				AML	AML		
	comp=N,6155μm,0.4s						
HAGA	Augusta	3.80	256	P	Pn	03 03 20.8	-0.5
HAGA	Augusta	3.80	256	P	Pn	03 03 20.8	-0.5
HCRL	Carlentini	3.89	256	P	Pn	03 03 22.5	-0.1
HCRL				S	Sn	03 04 03.8	-3.5
HCRL	Carlentini	3.89	256	P	Pn	03 03 22.5	-0.1
HCRL				S	Sn	03 04 03.8	-3.5
HCRL				AML	AML		
	comp=E,222μm,0.9s						
HCRL				AML	AML		
	comp=N,188μm,0.2s						
HCRL				AML	AML		
	comp=E,222μm,0.9s						
HCRL				AML	AML		
	comp=N,188μm,0.2s						
HAVL	Avola	3.93	251	AML	AML		
	comp=E,82μm,0.3s						
HAVL				AML	AML		
	comp=N,77μm,0.3s						
HAVL				AML	AML		
	comp=E,82μm,0.3s						
HAVL				AML	AML		
	comp=N,77μm,0.3s						

*IDC **08** 03:07:13.6±9.8, 36°.98N×72°.21E, h140km±107km, mb3.1/4, mb1 3.1/6, mb1mx2.8/68, mbtmp3.6/6, ML3.1/2, Error ellipse: s-maj=80.2km s-min=50.3km az=92.0*
*ISCJB **08** 03:07:17.7±1.1, 37°.50N±0°.07×71°.74E±0°.08, h150km, mb3.3/4, Error ellipse: s-maj=11.1km s-min=8.3km az=153.3*
*NNC **08** 03:07:19.7±1.8, 37°.60N×71°.66E, h144km±25km, mb3.0, mpv3.9, Error ellipse: s-maj=18.1km s-min=13.9km az=66.0*
ISC 08 03:07:19.2±1.4, 37°.6N±0°.1×71°.69E±0°.09, h150km, n23, σ1§35/30, mb3.4/4, 6C-8D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	2.83	30	⇓P	Pn	03 08 04.5	0.0
	36nm,0.3s						
SFK				⇓S	Sn	03 08 39.8	+0.1
	82nm,0.4s						
AML	Almayashu	4.82	18	P	Pn	03 08 30.5	0.0
	SNR=131						
MNAS	Manas	4.96	7	⇓P	Pn	03 08 32.3	+0.1
	8.2nm,0.4s						
MNAS				⇓S	Sn	03 09 28.6	-0.4
	28nm,0.6s						
UCH	Uchtor	5.14	24	P	Pn	03 08 34.5	-0.3
	SNR=24						
KZA	Kyzart	5.28	30	P	Pn	03 08 35.6	-1.0
	SNR=12						
EKS2	Erkin-Say	5.34	17	P	Pn	03 08 37.8	+0.7
	SNR=9.3						
AAK	Ala-Archa	5.51	22	⇑P	Pn	03 08 39.5	+0.1
	8.2nm,0.5s						
AAK				⇑S	Sn	03 09 42.2	+0.1
	17nm,0.8s						
AAK	Ala-Archa	5.51	22	P	Pn	03 08 39.8	+0.4
	SNR=18						
KK31	Karatay Array	5.61	351	⇑P	Pn	03 08 41.4	+0.9
	2.2nm,0.3s,baz=168,slow=12,SNR=62						
KK31				⇓S	Sn	03 09 45.4	+1.1
	16nm,0.3s,baz=165,slow=22,SNR=31						
KBK	Karagaybulak	5.67	25	P	Pn	03 08 41.8	+0.3
	SNR=7.0						
ULHL	Ulahol	5.84	35	P	Pn	03 08 42.6	-1.3
	SNR=6.9						
CHMS	Chumysh	5.92	22	P	Pn	03 08 45.0	+0.3
	SNR=7.8						
TKM2	Tokmak 2	6.13	28	⇑P	Pn	03 08 47.2	-0.5
	5.7nm,0.5s						
TKM2				⇓S	Sn	03 09 58.3	+1.2
	3.3nm,0.5s						
TKM2	Tokmak 2	6.13	28	P	Pn	03 08 47.5	-0.3
	SNR=11						
MKAR	Makanchi Array	12.11	37	P	Pn	03 10 04.6	-2.2
	0.0nm,0.3s,baz=217,slow=9.1,SNR=3.6						
KURBB	Kurchatov Arra	13.94	18	P	P	03 10 34.0	+0.6
	0.0nm,0.3s,baz=205,slow=11,SNR=4.0						
AB31	Akbulak array	14.45	328	⇓P	Pn	03 10 36.4	-0.1
	0.4nm,0.4s,baz=134,slow=14,SNR=14						
AB31				⇑S	Sn	03 13 12.5	-4.2
	1.1nm,0.6s,baz=155,slow=23,SNR=4.5						
AKTO	Aktyubinsk	16.16	327	P	P	03 11 00.8	+2.8
	0.5nm,0.3s,baz=148,slow=12,SNR=6.9						
AKTO	Aktyubinsk	16.16	327	⇓P	P	03 10 59.5	+1.5
	2.6nm,0.8s						
AKTO				⇑S	S	03 13 56.1	-1.1
	1.8nm,1.0s						
FINES	FINESS Array B	36.92	325	P	P	03 14 14.4	+1.3
	0.2nm,0.3s,baz=120,slow=9.8,SNR=5.6						
ARCES	ARCESS Array B	40.38	337	P	P	03 14 42.8	+0.9
	0.3nm,0.3s,baz=107,slow=7.8,SNR=6.6						
HFS	Hagfors	42.58	321	P	P	03 15 01.0	+1.1
	0.5nm,0.4s,baz=92,slow=10,SNR=7.2						
TORD	Torodi Ar. Bea	66.29	269	P	P	03 17 49.7	-1.9
	0.2nm,0.6s,baz=50,slow=5.1,SNR=3.8						

*ISCJB **08** 03:15:48.3±0.8, 43°.15N±0°.06×146°.20E±0°.06, h67km±6km, mb3.5/4, Error ellipse: s-maj=11.0km s-min=5.0km az=148.5*
*JMA **08** 03:15:49.9±0.1, 43°.13N×146°.10E, h64km±1km, M3.5*
*SKHL **08** 03:15:50.4±0.6, 43°.14N×146°.23E, h36km±5km, mb4.4/6*
*IDC **08** 03:15:52.6±6.5, 43°.30N×146°.08E, h88km±35km, mb3.4/4, mb1 3.5/5, mb1mx3.1/69, mbtmp3.7/5, MS3.3/2, Ms1 3.3/2, ms1mx2.5/51, Error ellipse: s-maj=93.3km s-min=30.2km az=172.0*
ISC 08 03:15:48.5±1.3, 43°.11N±0°.08×146°.24E±0°.06, h59km±9km, n27, σ0§84/34, mb3.5/4, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.44	306	P	Pn	03 16 00.8	+1.0
NEM2				*e*S	Sn	03 16 08.7	+0.7
GLVR	Golovnino	0.82	321	*i* P	Pn	03 16 04.0	-0.2
GLVR				AMB	AMB	03 16 05.0	
	106nm,0.3s						
GLVR				*i* S	Sn	03 16 16.0	+0.3
GLVR				A	A	03 16 17.0	
	164nm,0.3s						
GLVR				A	A	03 16 17.0	
	350nm,0.3s						
SHO	Shikotan	0.88	29	*e*P	Pn	03 16 05.0	+0.1
SHO				AMB	AMB	03 16 06.0	
	15nm,0.2s						
SHO				*i* S	Sn	03 16 16.0	-1.0
SHO				A	A	03 16 18.0	
	314nm,0.2s						
SHO				A	A	03 16 18.0	
	306nm,0.2s						
GRPR	Tuman	0.95	339	*i* P	Pn	03 16 06.0	+0.1
GRPR				AMB	AMB	03 16 06.0	
	370nm,0.2s						
GRPR				AMB	AMB	03 16 06.0	
	185nm,0.2s						
GRPR				AMB	AMB	03 16 06.0	
	602nm,0.2s						
GRPR				*i* S	Sn	03 16 17.0	-1.6
GRPR				A	A	03 16 19.0	
	490nm,0.3s						
GRPR				A	A	03 16 19.0	
	156nm,0.3s						
YUK	Yuzh-Kuril'sk	0.97	344	*i* P	Pn	03 16 06.0	-0.1
YUK				AMB	AMB	03 16 06.0	
	554nm,0.3s						
YUK				*i* S	Sn	03 16 18.0	-1.1
YUK				A	A	03 16 19.0	
	1μm,0.4s						
YUK				A	A	03 16 19.0	
	200nm,0.4s						
LAGR	Lagunnoye	1.00	341	*e*P	Pn	03 16 07.0	+0.4
LAGR				AMB	AMB	03 16 07.0	
	225nm,0.1s						
LAGR				AMB	AMB	03 16 07.0	
	199nm,0.1s						
LAGR				AMB	AMB	03 16 07.0	
	234nm,0.1s						
LAGR				*e*S	Sn	03 16 19.0	-0.9
LAGR				A	A	03 16 20.0	
	307nm,0.3s						
LAGR				A	A	03 16 20.0	
	275nm,0.3s						
JAK	Akkeshi	1.14	265	P	Pn	03 16 08.7	+0.4
JAK				*e*S	Sn	03 16 22.7	-0.3
JRA	Rausu	1.16	316	P	Pn	03 16 09.1	+0.5
JRA				*e*S	Sn	03 16 23.8	+0.2
JNK	Nakash	1.21	294	P	Pn	03 16 09.2	-0.1
JNK				*e*S	Sn	03 16 23.5	-1.2
JOB	Onbets	1.77	264	P	Pn	03 16 17.3	+0.4
JOB				*e*S	Sn	03 16 37.9	-0.5
JAR	Ashorobuto	1.81	277	P	Pn	03 16 18.0	+0.6
JAR				*e*S	Sn	03 16 39.0	-0.4
JTKR	Abashiri--Toko	1.90	298	P	Pn	03 16 19.5	+0.9
JTKR				*e*S	Sn	03 16 41.7	+0.3
JCH	Churui	2.17	258	P	Pn	03 16 22.4	+0.1
JCH				*e*S	Sn	03 16 46.7	-1.3
KUR	Kuril'sk	2.43	28	*e*P	Pn	03 16 27.0	+1.2
KUR				AMB	AMB	03 16 28.0	
	18nm,0.2s						

KUR *i* S **Sn** **03 16 55.0 +0.7**
KUR A A 03 16 56.0
153nm,0.3s
KUR A A 03 16 56.0
108nm,0.3s
ASAJ Asahikawa 2.83 292 P **Pn** **03 16 33.1 +1.8**
8.2nm,0.3s,baz=105,slow=9.9,SNR=68
ASAJ S **Sn** **03 17 05.6 +1.4**
1.9nm,0.3s,baz=334,slow=32,SNR=4.4
MA2 Magadan 16.73 8 LR LR 03 26 20.9
comp=Z,46nm,18.1s,baz=340,slow=38
SONM Songino Array 28.11 294 P **P** **03 21 34.8 0.0**
0.9nm,0.5s,baz=94,slow=7.0,SNR=5.2
H11N2 WAKE ISLAND Hy 29.07 137 T T 03 52 38.3
baz=328,slow=75,SNR=68
H11N1 WAKE ISLAND Hy 29.08 137 T T 03 52 41.9
baz=328,slow=75,SNR=62
H11N3 WAKE ISLAND Hy 29.09 137 T T 03 52 42.2
baz=328,slow=75,SNR=55
H11S1 WAKE ISLAND Hy 30.01 138 T T 03 53 55.6
baz=329,slow=76,SNR=127
H11S3 WAKE ISLAND Hy 30.01 138 T T 03 53 52.9
baz=329,slow=76,SNR=126
H11S2 WAKE ISLAND Hy 30.03 138 T T 03 53 56.2
baz=329,slow=76,SNR=75
ILAR Eielson Array 42.40 36 P **P** **03 23 37.4 +0.6**
0.3nm,0.8s,baz=254,slow=8.7,SNR=4.6
MKAR Makanchi Array 44.30 298 P **P** **03 23 51.8 -0.6**
0.4nm,0.5s,baz=72,slow=7.8,SNR=3.7
FINES FINESS Array B 65.14 333 P **P** **03 26 22.1 -0.7**
1.9nm,0.6s,baz=44,slow=7.8,SNR=8.1
KVAR Kislovodsk Arr 69.69 312 LR LR 04 01 13.4
comp=Z,32nm,18.6s,baz=314,slow=39

*IDC **08** 03:18:26.3±1.9, 35°.57N×70°.94E, h0km, mb4.0/11, mb1 4.1/16, mb1mx3.8/68, mbtmp4.0/16, ML3.8/5, Error ellipse: s-maj=40.9km s-min=19.9km az=142.0*
*ISCJB **08** 03:18:39.3±0.4, 36°.13N±0°.03×70°.93E±0°.06, h102km, mb3.8/12, Error ellipse: s-maj=6.6km s-min=4.4km az=158.3*
*NEIC **08** 03:18:41.0±1.0, 36°.19N×70°.77E, h93km±12km, mb4.0/6, Error ellipse: s-maj=12.6km s-min=9.4km az=109.0*
*NNC **08** 03:18:46.6±2.9, 36°.72N×70°.58E, h166km±40km, mb3.6, mpv4.5, Error ellipse: s-maj=28.8km s-min=19.5km az=55.0*
ISC 08 03:18:40.5±0.7, 36°.13N±0°.06×70°.97E±0°.07, h102km, n56, σ2°.07/63, mb4.0/12, 11C-5D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIL	**Nilore**	**3.11**	**142**	*e*Pn	**Pn**	**03 19 30.9**	**+3.2**
SFK	**Sufi-Kurgan**	**4.36**	**27**	⇓P	**Pn**	**03 19 47.2**	**+2.5**
106nm,0.4s							
SFK				⇑S	**Sn**	**03 20 37.2**	**+2.6**
14nm,0.3s							
AML	**Almayashu**	**6.35**	**19**	P	**Pn**	**03 20 12.4**	**+0.6**
SNR=99							
MNAS	**Manas**	**6.46**	**10**	⇑P	**Pn**	**03 20 12.8**	**-0.2**
20nm,0.6s							
MNAS				⇑S	**Sn**	**03 21 20.3**	**-5.0**
9.4nm,0.3s							
UCH	**Uchtor**	**6.68**	**23**	P	**Pn**	**03 20 17.1**	**+0.8**
SNR=22							
KZA	**Kyzart**	**6.80**	**28**	P	**Pn**	**03 20 18.7**	**+0.7**
SNR=26							
EKS2	**Erkin-Say**	**6.87**	**18**	P	**Pn**	**03 20 19.4**	**+0.7**
SNR=21							
KK31	**Karatay Array**	**6.97**	**357**	⇓P	**Pn**	**03 20 18.6**	**-1.3**
14nm,0.4s,baz=187,slow=14,SNR=190							
KK31				⇑S	**Sn**	**03 21 30.6**	**-7.0**
4.1nm,0.3s,baz=181,slow=24,SNR=6.1							
AAK	**Ala-Archa**	**7.04**	**22**	Pn	**Pn**	**03 20 22.0**	**+1.0**
7.4nm,0.3s,baz=175,slow=15,SNR=44							
AAK				Sn	**Sn**	**03 21 37.7**	**-1.9**
2.7nm,0.3s,baz=126,slow=23,SNR=7.8							
AAK	**Ala-Archa**	**7.04**	**22**	⇑P	**Pn**	**03 20 21.8**	**+0.8**
14nm,0.4s							
AAK				⇑S	**Sn**	**03 21 39.1**	**-0.5**
16nm,0.7s							
AAK	**Ala-Archa**	**7.04**	**22**	P	**Pn**	**03 20 22.0**	**+1.0**
SNR=24							
KBK	**Karagaybulak**	**7.21**	**24**	P	**Pn**	**03 20 24.9**	**+1.7**
SNR=9.3							
ULHL	**Ulahol**	**7.35**	**32**	P	**Pn**	**03 20 26.4**	**+1.1**
SNR=8.5							
CHMS	**Chumysh**	**7.45**	**22**	P	**Pn**	**03 20 27.2**	**+0.8**
SNR=11							
USP	**Ospenovka**	**7.63**	**20**	P	**Pn**	**03 20 29.5**	**+0.7**
SNR=11							
TKM2	**Tokmak 2**	**7.66**	**26**	⇓P	**Pn**	**03 20 30.1**	**+0.6**
6.6nm,0.5s							
TKM2				⇑S	**Sn**	**03 21 52.1**	**-2.6**
9.1nm,0.8s							
TKM2	**Tokmak 2**	**7.66**	**26**	P	**Pn**	**03 20 30.2**	**+0.7**
SNR=23							
NDI	**New Delhi**	**9.11**	**143**	*e*P	**Pn**	**03 20 52.0**	**+2.9**
PDGK	**Podgornoye**	**9.73**	**40**	⇓P	**Pn**	**03 20 57.7**	**+0.3**
2.0nm,0.6s							
OTUK	**Ortayu**	**12.14**	**4**	⇑P	**Pn**	**03 21 27.3**	**-2.6**
5.0nm,0.7s							
PYUN	**Piuthan**	**12.95**	**125**	*e*P	**Pn**	**03 21 39.8**	**-1.0**
29nm,0.4s							
PYUN				*e*S	**Sn**	**03 23 56.2**	**-7.2**
DANN	**Dangsing**	**13.31**	**122**	*e*P	**Pn**	**03 21 45.1**	**-0.5**
38nm,0.5s							
KOLN	**Koldanda**	**13.57**	**124**	*e*P	**Pn**	**03 21 48.1**	**-0.9**
21nm,0.4s							
MKAR	**Makanchi Array**	**13.60**	**35**	Pn	**Pn**	**03 21 49.0**	**0.0**
0.1nm,0.3s,baz=226,slow=16,SNR=4.5							
GKN	**Gorkha**	**14.13**	**121**	*e*P	**Pn**	**03 21 55.1**	**-1.1**
31nm,0.5s							
DMN	**Daman**	**14.70**	**121**	*e*P	**Pn**	**03 22 03.1**	**-0.4**
30nm,0.5s							
KKN	**Kakani**	**14.71**	**120**	*e*P	**Pn**	**03 22 03.1**	**-0.5**
PKIN	**Phulchoki**	**14.92**	**121**	*e*P	**Pn**	**03 22 05.9**	**-0.5**
27nm,0.4s							
GUN	**Gumba**	**15.06**	**119**	*e*P	**Pn**	**03 22 07.4**	**-0.8**
17nm,0.4s							
AB31	**Akbulak array**	**15.39**	**332**	⇑P	**Pn**	**03 22 08.2**	**-3.7**
19nm,0.5s,baz=142,slow=12,SNR=437							
AB31				⇓S	Sn	03 24 47.9	-14
1.2nm,0.5s,baz=151,slow=23,SNR=7.2							
JIRN	**Jiri**	**15.43**	**119**	*e*P	**Pn**	**03 22 12.5**	**-0.4**
28nm,0.3s							
KURBB	**Kurchatov Arra**	**15.48**	**18**	Pn	**Pn**	**03 22 10.2**	**-2.7**
0.1nm,0.3s,baz=213,slow=12,SNR=4.2							
KURK	**Kurchatov**	**15.59**	**18**	*e*Pn	**Pn**	**03 22 15.6**	**+1.4**
9.9nm,0.7s							
RAMN	**Ramite**	**16.15**	**120**	*e*P	**Pn**	**03 22 21.5**	**-0.2**
ODAN	**Odare**	**16.76**	**119**	*e*P	**Pn**	**03 22 30.8**	**+1.5**
20nm,0.5s							
BVAR	**Borovoye Array**	**16.89**	**359**	P	**Pn**	**03 22 29.6**	**-0.8**
0.6nm,0.3s,baz=165,slow=12,SNR=5.7							
BRVK	**Borovoye**	**16.93**	**359**	*e*Pn	**Pn**	**03 22 30.7**	**-0.1**
AKTO	**Aktyubinsk**	**17.09**	**331**	P	**Pn**	**03 22 32.1**	**-0.7**
1.1nm,0.3s,baz=149,slow=14,SNR=54							
AKTO	**Aktyubinsk**	**17.09**	**331**	⇑P	**Pn**	**03 22 31.0**	**-1.8**
20nm,0.8s							
AKTO				⇑S	Sn	03 25 31.1	-12
2.5nm,0.7s							
ZALV	**Zalesovo Beam**	**20.26**	**24**	P	**P**	**03 23 08.2**	**+0.7**
4.4nm,0.5s,baz=218,slow=12,SNR=10							
GNI	**Garni**	**20.99**	**289**	*e*P	**P**	**03 23 15.0**	**-0.6**
26nm,0.5s							
ARU	**Arti**	**21.97**	**341**	P	**P**	**03 23 28.1**	**+2.4**
2.1nm,0.3s,baz=130,slow=5.1,SNR=6.1							
ARU	**Arti**	**21.97**	**341**	*e*P	**P**	**03 23 27.2**	**+1.4**
2.6nm,0.5s							
KIV	**Kislovodsk**	**22.94**	**299**	*e*P	**P**	**03 23 36.0**	**+0.1**
4.7nm,0.5s							
RAYN	**Ar Rayn**	**25.33**	**247**	*e*P	**P**	**03 23 57.3**	**-0.6**
1.3nm,0.5s							
BRTR	**Keskin Array B**	**29.52**	**288**	P	**P**	**03 24 35.8**	**+0.4**
0.6nm,0.7s,baz=106,slow=9.1,SNR=3.8							
FINES	**FINESS Array B**	**37.77**	**326**	P	**P**	**03 25 47.3**	**+1.1**
2.3nm,0.7s,baz=94,slow=7.8,SNR=10							
ARCES	**ARCESS Array B**	**41.47**	**338**	P	**P**	**03 26 18.4**	**+1.6**
1.8nm,0.7s,baz=111,slow=7.6,SNR=12							
HFS	**Hagfors**	**43.34**	**322**	P	**P**	**03 26 32.7**	**+0.6**
3.1nm,0.5s,baz=101,slow=7.5,SNR=29							
NB2	**NORSAR Subarra**	**44.66**	**323**	P	**P**	**03 26 42.8**	**+0.1**
comp=Z,1.0nm,0.5s,baz=97,slow=7.9							
NOA	**NORSAR Array B**	**44.66**	**323**	P	**P**	**03 26 43.4**	**+0.7**
comp=Z,1.4nm,0.4s,baz=102,slow=7.5,SNR=7.4							
TORD	**Torodi Ar. Bea**	**65.68**	**269**	P	**P**	**03 29 12.5**	**-1.8**
comp=Z,1.6nm,0.5s,baz=49,slow=6.2,SNR=40							
INK	**Inuvik**	**74.27**	**9**	P	**P**	**03 30 08.7**	**+2.7**
comp=Z,1.4nm,0.6s,baz=0.5,slow=4.6,SNR=6.0							
INK	**Inuvik**	**74.27**	**9**	*e*P	**P**	**03 30 07.8**	**+1.9**
comp=Z,1.4nm,0.5s							
ILAR	**Eielson Array**	**75.14**	**16**	P	**P**	**03 30 13.0**	**+2.0**
comp=Z,0.4nm,0.8s,baz=316,slow=3.1,SNR=4.9							
YKA	**Yellowknife Ar**	**81.61**	**3**	P	**P**	**03 30 48.0**	**+1.4**
comp=Z,0.4nm,0.5s,baz=352,slow=5.4,SNR=4.1							

*IDC **08** 03:29:13.1±3.9, 51°.83N×161°.69E, h0km, mb3.9/6, mb1 3.9/7, mb1mx3.5/72, mbtmp3.9/7, ML3.1/1, MS3.2/1, Ms1 3.2/1, ms1mx2.4/79, Error ellipse: s-maj=94.5km s-min=38.0km az=179.0*
*KRSC **08** 03:29:19.6±1.2, 52°.68N×161°.64E, h40km±16km, ML3.9*
*ISCJB **08** 03:29:21.8±0.8, 52°.68N±0°.05×161°.59E±0°.07, h42km±8km, mb4.0/6, MS3.0/1, Error ellipse: s-maj=10.7km s-min=4.6km az=144.7*
ISC 08 03:29:21.9±3.1, 52°.71N±0°.07×161°.54E±0°.06, h24km±22km, n40, σ1°.19/51, mb4.0/6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.99**	**293**	*e*P	**Pn**	**03 29 38.2**	**-2.1**
SPN				*e*S	**Sn**	**03 29 51.9**	**-1.6**
NLC	**Nalytchevo**	**1.40**	**290**	*e*P	**Pn**	**03 29 44.5**	**-1.4**
NLC				*e*S	**Sn**	**03 30 02.8**	**-0.8**
UGLR	**Uglovaya**	**1.71**	**288**	*e*P	**Pn**	**03 29 50.0**	**-0.3**
PET	**Petropavlovsk**	**1.77**	**281**	*e*P	**Pn**	**03 29 53.8**	**-0.2**
PET				*e*S	**Sn**	**03 30 12.7**	**-0.1**
AVH	**Avacha**	**1.78**	**289**	*e*P	**Pn**	**03 29 51.1**	**0.0**
KRER	**Koryakskii**	**1.79**	**290**	*e*P	**Pn**	**03 29 51.3**	**0.0**
KII	**Karymskiy**	**1.82**	**317**	*e*P	**Pn**	**03 29 51.6**	**-0.1**
KOK	**Koryaka**	**1.85**	**289**	P	**Pn**	**03 29 51.6**	**-0.5**
MKZ	**Mys Kozlova**	**1.85**	**3**	*e*P	**Pn**	**03 29 51.2**	**-0.8**
MKZ				*e*S	**Sn**	**03 30 14.0**	**-0.6**
KRX	**Arik**	**1.86**	**291**	*e*P	**Pn**	**03 29 52.2**	**-0.1**
RUS	**Russkaya**	**1.87**	**263**	*e*P	**Pn**	**03 29 52.4**	**+0.2**
MTVR	**Mutnovka**	**2.06**	**265**	*e*P	**Pn**	**03 29 55.3**	**+0.3**
MTVR				*e*S	**Sn**	**03 30 21.0**	**+1.0**
KRMR	**Karymshinskiy**	**2.07**	**275**	*e*P	**Pn**	**03 29 55.2**	**+0.1**
KRMR				*e*S	**Sn**	**03 30 20.4**	**+0.3**
ASAK	**Asacha**	**2.25**	**263**	*e*P	**Pn**	**03 29 58.4**	**+0.9**
KDTR	**Khodutka, Kamc**	**2.31**	**248**	*e*P	**Pn**	**03 29 58.5**	**+0.2**
KDTR				*e*S	**Sn**	**03 30 24.9**	**-1.1**
PETK	**Petropavlovsk-**	**2.36**	**281**	Pn	**Pn**	**03 29 59.7**	**+0.7**
16nm,0.3s,baz=92,slow=19,SNR=124							
PETK				Sn	**Sb**	**03 30 31.6**	**-0.7**
7.9nm,0.3s,baz=96,slow=20,SNR=5.0							
GNL	**Ganaly**	**2.38**	**296**	*e*P	**Pn**	**03 30 00.1**	**+0.7**
GNL				*e*S	**Sn**	**03 30 29.3**	**+1.6**
KZV	**Kizimen**	**2.51**	**344**	*e*P	**Pn**	**03 30 01.8**	**+0.5**
KZV				*e*S	**Sn**	**03 30 31.5**	**+0.3**
APC	**Apacha**	**2.67**	**276**	*e*P	**Pn**	**03 30 04.6**	**+1.4**
APC				*e*S	**Sn**	**03 30 37.8**	**+3.1**
TUMR	**Tumrok**	**2.70**	**343**	*e*P	**Pn**	**03 30 05.0**	**+1.1**
MIPR	**Malaya Ipel'ka**	**2.95**	**263**	*e*P	**Pn**	**03 30 09.4**	**+2.2**
KMNR	**Kamenistaya**	**3.14**	**346**	*e*P	**Pn**	**03 30 11.2**	**+1.3**
BZMR	**Bezymyannaya**	**3.29**	**350**	*e*P	**Pn**	**03 30 13.1**	**+1.2**
BZWR	**Bezymyannyi-We**	**3.31**	**350**	*e*P	**Pn**	**03 30 14.1**	**+1.8**
KIRR	**Kirishev**	**3.32**	**348**	*e*P	**Pn**	**03 30 13.8**	**+1.4**
ZLN	**Zelenaya**	**3.34**	**353**	*e*P	**Pn**	**03 30 14.0**	**+1.4**
KPT	**Kopyto**	**3.35**	**347**	*e*P	**Pn**	**03 30 14.1**	**+1.4**
LGNR	**Loginova**	**3.41**	**352**	*e*P	**Pn**	**03 30 15.2**	**+1.4**
CIRR	**Tsirk**	**3.44**	**353**	*e*P	**Pn**	**03 30 15.3**	**+1.3**
KRSR	**Krestovskiy**	**3.56**	**351**	*e*P	**Pn**	**03 30 17.6**	**+2.0**
KBTR	**Krutoberegovo**	**3.58**	**12**	*e*P	**Pn**	**03 30 16.3**	**+0.5**
BKI	**Bering**	**3.62**	**45**	*e*P	**Pn**	**03 30 17.3**	**+1.0**
BKI				*e*S	**Sn**	**03 30 56.4**	**-1.8**
ESO	**Esso**	**3.62**	**334**	*e*P	**Pn**	**03 30 17.3**	**+0.9**
TIXI	**Tiksi**	**23.79**	**335**	LR	LR	03 45 30.9	
comp=Z,45nm,18.1s,baz=231,slow=40							
KURBB	**Kurchatov Arra**	**48.78**	**303**	P	**P**	**03 38 03.3**	**-1.1**
1.1nm,0.5s,baz=60,slow=7.6,SNR=8.4							
MKAR	**Makanchi Array**	**49.11**	**297**	P	**P**	**03 38 05.5**	**-1.6**
0.6nm,0.5s,baz=58,slow=5.8,SNR=10							
AKTO	**Aktyubinsk**	**58.72**	**313**	P	**P**	**03 39 16.9**	**-0.2**
0.9nm,0.4s,baz=67,slow=12,SNR=5.1							
FINES	**FINESS Array B**	**60.81**	**337**	P	**P**	**03 39 32.3**	**+1.0**
0.7nm,0.6s,baz=66,slow=7.9,SNR=3.8							
NOA	**NORSAR Array B**	**64.15**	**344**	P	**P**	**03 39 54.4**	**+0.7**
0.5nm,0.4s,baz=44,slow=15,SNR=2.7							
HFS	**Hagfors**	**64.58**	**343**	P	**P**	**03 39 57.1**	**+0.6**
1.2nm,0.9s,baz=39,slow=9.3,SNR=3.3							

*ISCJB **08** 03:41:35.3±0.5, 33°.34N±0°.02×35°.39E±0°.04, h4km±5km, Error ellipse: s-maj=6.0km s-min=2.9km az=28.7*
*CSEM **08** 03:41:35.5±0.1, 33°.34N×35°.39E, h5km, MD2.3, Error ellipse: s-maj=3.4km s-min=1.5km az=115.0*
*GII **08** 03:41:35.9±0.0, 33°.25N×35°.41E, h2km, MD2.3/4*
*GRAL **08** 03:41:36.3±0.2, 33°.32N×35°.41E, h4km±3km, MD3.0*
ISC 08 03:41:35.9±1.0, 33°.33N±0°.02×35°.41E±0°.03, h11km±9km, n39, σ0°.52/68, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSDI	**Kefar Szold**	**0.25**	**124**	Pg	**Pg**	**03 41 40.8**	**-0.2**
KSDI				Sg	**Sg**	**03 41 44.8**	**+0.4**
KSDI	**Kefar Szold**	**0.25**	**124**	Pg	**Pg**	**03 41 40.8**	**-0.2**
KSDI				Sg	**Sg**	**03 41 44.8**	**+0.4**
SHBL	**Chebaa**	**0.28**	**86**	*e*P	**Pg**	**03 41 41.3**	**-0.3**
SHBL				*e*S	**Sg**	**03 41 45.1**	**-0.3**
SHBL	**Chebaa**	**0.28**	**86**	*e*P	**Pg**	**03 41 41.3**	**-0.3**
SHBL				*e*S	**Sg**	**03 41 45.1**	**-0.3**
QRWL	**Qaraoun**	**0.31**	**46**	*e*P	**Pg**	**03 41 42.1**	**-0.1**
QRWL				*e*S	**Sg**	**03 41 46.5**	**0.0**
QRWL	**Qaraoun**	**0.31**	**46**	*e*P	**Pg**	**03 41 42.1**	**-0.1**
QRWL				*e*S	**Sg**	**03 41 46.5**	**0.0**
MMA0B	**Mount Meron ar**	**0.31**	**182**	Pg	**Pg**	**03 41 41.5**	**-0.8**
MMA0B				Sg	**Sg**	**03 41 46.7**	**+0.2**
MMA0B	**Mount Meron ar**	**0.31**	**182**	Pg	**Pg**	**03 41 41.5**	**-0.8**
MMA0B				Sg	**Sg**	**03 41 46.7**	**+0.2**
HNTI	**Hanita**	**0.32**	**219**	Pg	**Pg**	**03 41 41.8**	**-0.5**
HNTI				Sg	**Sg**	**03 41 47.1**	**+0.6**
HNTI	**Hanita**	**0.32**	**219**	Pg	**Pg**	**03 41 41.8**	**-0.5**
HNTI				Sg	**Sg**	**03 41 47.1**	**+0.6**
RCY	**Rachaya**	**0.39**	**65**	*e*P	**Pg**	**03 41 43.5**	**-0.2**
RCY				*e*S	**Sg**	**03 41 48.7**	**-0.2**
DQRL	**Deir Qamar**	**0.40**	**19**	*e*P	**Pg**	**03 41 43.7**	**-0.1**
DQRL				*e*S	**Sg**	**03 41 49.2**	**+0.1**
DQRL	**Deir Qamar**	**0.40**	**19**	*e*P	**Pg**	**03 41 43.7**	**-0.1**
DQRL				*e*S	**Sg**	**03 41 49.2**	**+0.1**
KSHT	**Keshet**	**0.48**	**136**	Pg	**Pg**	**03 41 45.9**	**+0.6**
KSHT				Sg	**Sb**	**03 41 53.0**	**-0.6**
KSHT	**Keshet**	**0.48**	**136**	Pg	**Pg**	**03 41 45.9**	**+0.6**
KSHT				Sg	**Sb**	**03 41 53.0**	**-0.6**
BHL	**Bhannes**	**0.61**	**19**	*e*P	**Pg**	**03 41 47.4**	**-0.4**
BHL	**Bhannes**	**0.61**	**19**	*e*P	**Pg**	**03 41 47.3**	**-0.4**
BLGI	**Bet Lehem HaGe**	**0.62**	**197**	Pg	**Pg**	**03 41 47.6**	**-0.4**
BLGI				Sg	**Sg**	**03 41 56.7**	**+0.5**
BLGI	**Bet Lehem HaGe**	**0.62**	**197**	Pg	**Pg**	**03 41 47.6**	**-0.4**
BLGI				Sg	**Sg**	**03 41 56.7**	**+0.5**
OFRI	**'Ofer**	**0.79**	**207**	Pg	**Pg**	**03 41 50.7**	**-0.5**
OFRI				Sg	**Sg**	**03 42 02.1**	**+0.5**
OFRI	**'Ofer**	**0.79**	**207**	Pg	**Pg**	**03 41 50.7**	**-0.5**
OFRI				Sg	**Sg**	**03 42 02.1**	**+0.5**
MMLI	**Mount Malkishu**	**0.89**	**180**	Pg	**Pg**	**03 41 52.1**	**-1.0**
MMLI				Sg	**Sg**	**03 42 04.4**	**-0.3**
MMLI	**Mount Malkishu**	**0.89**	**180**	Pg	**Pg**	**03 41 52.1**	**-1.0**
MMLI				Sg	**Sg**	**03 42 04.4**	**-0.3**
HWQ	**Hawqa**	**1.04**	**25**	*e*P	**Pg**	**03 41 55.2**	**-0.8**
HWQ	**Hawqa**	**1.04**	**25**	*e*P	**Pg**	**03 41 55.2**	**-0.8**
HMDT	**Nahal Hemdat**	**1.08**	**175**	Pg	**Pg**	**03 41 55.5**	**-1.1**
HMDT				Sg	**Sg**	**03 42 10.5**	**-0.2**
HMDT	**Nahal Hemdat**	**1.08**	**175**	Pg	**Pg**	**03 41 55.5**	**-1.1**
HMDT				Sg	**Sg**	**03 42 10.5**	**-0.2**
SLTI	**Sal'it**	**1.13**	**196**	Pg	**Pg**	**03 41 56.8**	**-0.8**
SLTI				Sg	**Sg**	**03 42 12.4**	**+0.1**
SLTI	**Sal'it**	**1.13**	**196**	Pg	**Pg**	**03 41 56.8**	**-0.8**
SLTI				Sg	**Sg**	**03 42 12.4**	**+0.1**
DSI	**Dead Sea**	**1.75**	**181**	Pn	**Pn**	**03 42 06.6**	**+0.3**
DSI				Sn	**Sb**	**03 42 30.2**	**0.0**
DSI	**Dead Sea**	**1.75**	**181**	Pn	**Pn**	**03 42 06.6**	**+0.3**
DSI				Sn	**Sb**	**03 42 30.2**	**0.0**
AMAZ	**Amatzia**	**1.84**	**193**	Pn	**Pn**	**03 42 08.1**	**+0.6**
AMAZ				Sn	**Sb**	**03 42 32.9**	**+0.2**
AMAZ	**Amatzia**	**1.84**	**193**	Pn	**Pn**	**03 42 08.1**	**+0.6**
AMAZ				Sn	**Sb**	**03 42 32.9**	**+0.2**
YTIR	**Yattir**	**1.98**	**187**	Pn	**Pn**	**03 42 10.2**	**+0.8**
YTIR	**Yattir**	**1.98**	**187**	Pn	**Pn**	**03 42 10.2**	**+0.8**
MZDA	**Masada**	**2.02**	**181**	Pn	**Pn**	**03 42 10.4**	**+0.6**
MZDA	**Masada**	**2.02**	**181**	Pn	**Pn**	**03 42 10.4**	**+0.6**
PRNI	**Paran**	**2.99**	**187**	Pn	**Pn**	**03 42 23.8**	**+0.5**
PRNI	**Paran**	**2.99**	**187**	Pn	**Pn**	**03 42 23.8**	**+0.5**

*ISN **08** 03:44:12.4±0.3, 32°.72N×47°.10E, h0km, ML2.7*
*CSEM **08** 03:44:21.7, 32°.71N×47°.18E, h46km, ML2.7*
TEH 08 03:44:16.1, 32°.71N×47°.13E, h10km, ML2.7, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKFM	**Kafar-mosalman**	**1.01**	**36**	*e*Pg	Pn	03 44 37.2	+0.9
IKFM				*e*		03 44 47.2	
comp=Z,99nm,0.1s							
SHGR	**Shooshtar-Gavs**	**1.53**	**112**	*e*Pg	Pg	03 44 49.5	+4.0
SHGR				*e*Sg	Sg	03 45 09.5	+4.2
IVIS	**Veis**	**1.83**	**353**	*e*Pn	Pb	03 44 50.4	+0.6
IVIS				*e*Sg	Sg	03 45 17.3	+2.3
IVIS				*e*		03 45 20.9	
comp=Z,1μm,0.1s							
ILIN	**Lien**	**2.21**	**356**	*e*Pn	Pb	03 44 56.5	+0.2
ILIN				*e*		03 45 34.3	
comp=Z,546nm,0.2s							
SNGE	**Sanandaj**	**2.39**	**4**	*e*Pn	Pb	03 44 58.8	-0.5
SNGE				*e*Sg	Sg	03 45 35.5	+2.6
KHMZ	**Khomeyn**	**2.58**	**66**	*e*Pn	Pb	03 45 01.3	-1.3
ASAO	**Ashtian**	**3.03**	**52**	*e*Pn	Pb	03 45 07.7	-2.6
HKZM	**Kohzaman**	**3.04**	**28**	*e*		03 45 18.0	
comp=Z,99nm,0.2s							
HKZM				*e*Pn	Pb	03 45 07.9	-2.6
IKLH	**Kolahrood**	**3.78**	**79**	*e*Pn	Pn	03 45 17.6	+2.9
IKLH				*e*		03 45 35.7	
comp=Z,142nm,0.2s							
IZEF	**Zefreh**	**4.38**	**86**	*e*Pn	Pn	03 45 25.2	+2.3
IZEF				*e*		03 45 26.3	
comp=Z,60nm,0.1s							

*TIR **08** 03:44:25.6, 41°.38N×20°.97E, h7km, Md4.4/7*
*ATH **08** 03:44:26.6, 41°.39N×20°.95E, h16km, ML4.2/26, Error ellipse: s-maj=1.4km s-min=0.8km az=169.0*
*SKO **08** 03:44:26.3, 41°.34N×20°.89E, h15km, M4.0, ML4.3*
*MOS **08** 03:44:27.2±1.0, 41°.30N×20°.75E, h17km, mb4.5/22, Error ellipse: s-maj=4.5km s-min=2.9km az=105.3*
*ISCJB **08** 03:44:27.7±0.2, 41°.361N±0°.009×20°.88E±0°.01, h15km±1km, mb4.3/52, MS3.4/13, Error ellipse: s-maj=1.8km s-min=1.2km az=137.8*
*PDG **08** 03:44:27.4±0.6, 41°.37N×20°.92E, h5km, MD4.3/8, ML4.3/10, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*
*THE **08** 03:44:27.5, 41°.36N×20°.93E, h0km±2km, ML4.4/9, Error ellipse: s-maj=2.0km s-min=0.6km az=312.0*
*CSEM **08** 03:44:27.9±0.1, 41°.34N×20°.89E, h5km, mb4.6/23, ML4.1/10, Mw4.2, Error ellipse: s-maj=2.3km s-min=1.6km az=52.0*
*BEO **08** 03:44:28.7±0.6, 41°.41N×20°.92E, h2km±3km*
*NEIC **08** 03:44:28.2±0.0, 41°.33N×20°.89E, h7km, mb4.4/19, MW4.2, ML4.3(SKO), ML4.4(THE), Moment Tensor Solution. s16 Moment tensor: Scale 10^{15}Nm; M_{rr}-2.53; $M_{\theta\theta}$1.54; $M_{\phi\phi}$0.99; $M_{r\theta}$0.50; $M_{r\phi}$1.30; $M_{\theta\phi}$0.97; Best double couple: $M_0$2.80000×10^{15} NP1:ϕ_s60.00000°, δ35.00000°, λ-75.00000°. NP2:ϕ_s222.00000°, δ56.00000°, λ-100.00000°. Principal axes: T 2.7900, Plg11.0000°, Azm319.0000°; N 0.0000, Plg9.0000°, Azm228.0000°; P -2.7900, Plg76.0000°, Azm100.0000°; After SKO.*
NEIC Felt [III] at Bitola. Also felt at Prilep and Skopje.
*LDG **08** 03:44:29.8±0.1, 41°.27N×20°.94E, h10km, Ml4.4/10 Error ellipse: s-maj=4.8km s-min=3.4km az=26.0*
*PRU **08** 03:44:29.6, 41°.34N×21°.07E, h0km, M4.4*
*IDC **08** 03:44:30.2±3.5, 41°.34N×20°.89E, h24km±23km, mb4.0/21, mb1 4.1/29, mb1mx3.9/70, mbtmp4.1/29, ML3.6/6, MS3.3/15, Ms1 3.3/15, ms1mx3.0/77, Error ellipse: s-maj=10.5km s-min=9.8km az=163.0*
**ISC 08 03:44:28.3±0.7, 41°.34N±0°.01×20°.90E±0°.01, h9km±4km, n776, σ1°.80/956, mb4.4/52, MS3.3/13, 67C-46D, Alb

TIR				*i* SG	**Sb**	**03 44 55.2**	**+0.5**
TIR	**Tirane**	**0.78**	**271**	*e*P	**Pg**	**03 44 42.5**	**-0.8**
TIR				S	**Sg**	**03 44 53.7**	**+0.2**
TIR	**Tirane**	**0.78**	**271**	P	**Pg**	**03 44 41.9**	**-1.4**
TIR	**Tirane**	**0.78**	**271**	*i* Pg	**Pg**	**03 44 42.5**	**-0.8**
TIR				S	**Sg**	**03 44 51.5**	**-2.0**
TIR				*i* Sg	**Sb**	**03 44 55.2**	**+0.5**
NEST	**Nestorio**	**0.93**	**173**	P	**Pg**	**03 44 44.7**	**-1.6**
NEST				S	**Sb**	**03 44 59.2**	**0.0**
NEST				AML	AML	03 45 04.8	
	comp=E,42986µm,0.7s						
NEST				AML	AML	03 45 05.3	
	comp=N,62363µm,0.7s						
NEST	**Nestorio**	**0.93**	**173**	P	**Pg**	**03 44 44.7**	**-1.6**
NEST				S	**Sn**	**03 45 00.4**	**-0.8**
NEST	**Nestorio**	**0.93**	**173**	P	**Pg**	**03 44 45.0**	**-1.3**
NEST				S	**Sb**	**03 44 59.0**	**-0.2**
PUK	**Puka**	**1.03**	**313**	*i* PG	**Pg**	**03 44 45.6**	**-2.5**
PUK				*i* SG	**Sb**	**03 45 02.1**	**+0.1**
PUK	**Puka**	**1.03**	**313**	*i* Pg	**Pg**	**03 44 45.6**	**-2.5**
PUK				*i* Sg	**Sb**	**03 45 02.1**	**+0.1**
STIP	**Stip**	**1.03**	**70**	*i* Pg	**Pn**	**03 44 49.9**	**+1.0**
STIP				*i* Sg	**Sn**	**03 45 06.8**	**+3.3**
PENT	**Pentalofos**	**1.16**	**171**	P	**Pb**	**03 44 49.6**	**-0.9**
PENT				S	**Sg**	**03 45 05.0**	**-0.7**
PENT				AML	AML	03 45 12.3	
	comp=E,31547µm,0.8s						
PENT				AML	AML	03 45 14.3	
	comp=N,34074µm,0.9s						
PENT	**Pentalofos**	**1.16**	**171**	P	**Pb**	**03 44 48.9**	**-1.7**
PENT				S	**Sn**	**03 45 06.8**	**0.0**
PENT	**Pentalofos**	**1.16**	**171**	P	**Pb**	**03 44 48.9**	**-1.7**
PENT				S	**Sg**	**03 45 05.5**	**-0.1**
BCI	**Bajram Curri**	**1.20**	**329**	*i* PN	**Pb**	**03 44 49.1**	**-2.1**
BCI				*i* SN	**Sb**	**03 45 04.2**	**-2.6**
BCI	**Bajram Curri**	**1.20**	**329**	*i* Pn	**Pb**	**03 44 49.1**	**-2.1**
GRG	**Griva**	**1.20**	**108**	P	**Pb**	**03 44 50.1**	**-1.1**
GRG				S	**Sg**	**03 45 06.7**	**-0.2**
GRG	**Griva**	**1.20**	**108**	P	**Pb**	**03 44 50.6**	**-0.6**
GRG				S	**Sb**	**03 45 04.8**	**-2.0**
GRG				AML	AML	03 45 11.6	
	comp=E,33097µm,0.7s						
GRG				AML	AML	03 45 13.0	
	comp=N,31313µm,0.4s						
GRG	**Griva**	**1.20**	**108**	P	**Pb**	**03 44 49.9**	**-1.3**
GRG	**Griva**	**1.20**	**108**	P	**Pb**	**03 44 49.9**	**-1.3**
GRG				S	**Sg**	**03 45 07.0**	**+0.1**
GRG	**Griva**	**1.20**	**108**	P	**Pb**	**03 44 49.9**	**-1.3**
GRG	**Griva**	**1.20**	**108**	P	**Pb**	**03 44 49.7**	**-1.5**
GRG				S	**Sb**	**03 45 05.0**	**-1.8**
KZN	**Kozani**	**1.23**	**147**	P	**Pn**	**03 44 49.5**	**-2.1**
KZN				S	**Sn**	**03 45 08.7**	**+0.2**
KZN				AML	AML	03 45 11.3	
	comp=N,31889µm,0.4s						
KZN				AML	AML	03 45 11.6	
	comp=E,27833µm,0.5s						
KZN	**Kozani**	**1.23**	**147**	P	**Pn**	**03 44 50.0**	**-1.7**
KZN	**Kozani**	**1.23**	**147**	P	**Pn**	**03 44 50.0**	**-1.7**
KZN				S	**Sn**	**03 45 09.6**	**+1.2**
KZN	**Kozani**	**1.23**	**147**	P	**Pn**	**03 44 50.0**	**-1.7**
KZN	**Kozani**	**1.23**	**147**	P	**Pn**	**03 44 49.9**	**-1.7**
KZN				S	**Sn**	**03 45 08.2**	**-0.2**
VAY	**Valandovo**	**1.26**	**90**	*e*Pg	**Pn**	**03 44 51.2**	**-0.8**
VAY				*e*Sg	**Sb**	**03 45 08.2**	**-0.3**
VAY	**Valandovo**	**1.26**	**90**	P	**Pn**	**03 44 51.0**	**-1.0**
VAY	**Valandovo**	**1.26**	**90**	P	**Pn**	**03 44 51.0**	**-1.0**
VAY				S	**Sb**	**03 45 07.9**	**-0.6**
VAY	**Valandovo**	**1.26**	**90**	*i* Pg	**Pn**	**03 44 51.0**	**-1.0**
VAY				*i* Sg	**Sb**	**03 45 08.1**	**-0.4**
VAY				*e*Lg	Lg	03 45 08.9	
	comp=N,6µm,0.5s						
VAY				*e*Lg	Lg	03 45 09.3	
	comp=E,7µm,0.4s						
VAY	**Valandovo**	**1.26**	**90**	P	**Pn**	**03 44 51.0**	**-1.0**
VAY	**Valandovo**	**1.26**	**90**	*e*Pg	**Pn**	**03 44 51.2**	**-0.8**
VAY				S	**Sb**	**03 45 07.9**	**-0.6**
VAY				*e*Sg	**Sb**	**03 45 08.2**	**-0.3**
ULC	**Ulcinj**	**1.39**	**297**	⇊*i*Pg	**Pn**	**03 44 52.8**	**-1.1**
ULC				*e*Sg	**Sg**	**03 45 14.6**	**+1.7**
ULC	**Ulcinj**	**1.39**	**297**	⇊*i*Pg	**Pn**	**03 44 52.8**	**-1.1**
ULC				*e*Sg	**Sg**	**03 45 14.6**	**+1.7**
KPRO	**Kipourio**	**1.43**	**166**	P	**Pn**	**03 44 53.6**	**-0.8**
KPRO				S	**Sg**	**03 45 15.4**	**+1.1**
KPRO				AML	AML	03 45 20.7	
	comp=E,27496µm,0.7s						
KPRO				AML	AML	03 45 23.9	
	comp=N,21852µm,1.0s						
KPRO	**Kipourio**	**1.43**	**166**	P	**Pn**	**03 44 53.9**	**-0.6**
KPRO				S	**Sg**	**03 45 15.0**	**+0.7**
KPRO	**Kipourio**	**1.43**	**166**	P	**Pn**	**03 44 53.9**	**-0.6**
KPRO				S	**Sg**	**03 45 14.9**	**+0.7**
PVY	**Plav**	**1.44**	**331**	⇊*i*Pg	**Pn**	**03 44 53.2**	**-1.4**
PVY				*e*Sg	**Sg**	**03 45 15.8**	**+1.3**
PVY	**Plav**	**1.44**	**331**	⇊*i*Pg	**Pn**	**03 44 53.2**	**-1.4**
PVY				*e*Sg	**Sg**	**03 45 15.8**	**+1.3**
KNT	**Kendrikon**	**1.52**	**96**	P	**Pn**	**03 44 54.6**	**-1.0**
KNT	**Kendrikon**	**1.52**	**96**	P	**Pn**	**03 44 55.1**	**-0.6**
KNT				S	**Sn**	**03 45 14.3**	**-1.2**
KNT				AML	AML	03 45 16.7	
	comp=N,14613µm,0.7s						
KNT				AML	AML	03 45 20.8	
	comp=E,11792µm,0.7s						
KNT	**Kendrikon**	**1.52**	**96**	P	**Pn**	**03 44 55.0**	**-0.6**
KNT				S	**Sb**	**03 45 15.6**	**-0.4**
KNT	**Kendrikon**	**1.52**	**96**	P	**Pn**	**03 44 55.0**	**-0.6**
KNT				S	**Sb**	**03 45 15.6**	**-0.4**
KNT	**Kendrikon**	**1.52**	**96**	P	**Pn**	**03 44 55.0**	**-0.6**
KNT				S	**Sb**	**03 45 15.6**	**-0.4**
KNT	**Kendrikon**	**1.52**	**96**	P	**Pn**	**03 44 54.8**	**-0.8**
KNT				S	**Sn**	**03 45 14.7**	**-0.8**
DRME	**Dracevica, Mon**	**1.54**	**304**	⇑*i*Pg	**Pn**	**03 44 55.4**	**-0.5**
DRME				*e*Sg	**Sg**	**03 45 19.8**	**+2.1**
DRME	**Dracevica, Mon**	**1.54**	**304**	⇑*i*Pn	**Pn**	**03 44 54.9**	**-1.0**
DRME	**Dracevica, Mon**	**1.54**	**304**	⇑*i*Pg	**Pn**	**03 44 55.4**	**-0.5**
SRN	**Sarande**	**1.61**	**205**	*i* PN	**Pb**	**03 44 58.2**	**0.0**
SRN				*i* SN	**Sg**	**03 45 23.1**	**+3.0**
SRN	**Sarande**	**1.61**	**205**	*i* Pn	**Pb**	**03 44 58.2**	**0.0**
SRN				*i* Sn	**Sg**	**03 45 23.1**	**+3.0**
BARS	**Barje**	**1.62**	**25**	*e*Pn	**Pn**	**03 44 57.6**	**+0.5**
BARS				*e*Sn	**Sb**	**03 45 18.8**	**-0.2**
BARS	**Barje**	**1.62**	**25**	Pn	**Pn**	**03 44 57.0**	**-0.1**
BARS	**Barje**	**1.62**	**25**	Pn	**Pn**	**03 44 57.0**	**-0.1**
BARS				*e*Sn	**Sb**	**03 45 18.8**	**-0.2**
PDG	**Podgorica**	**1.64**	**312**	*e*Pn	**Pb**	**03 44 58.7**	**0.0**
PDG	**Podgorica**	**1.64**	**312**	⇊*i*P	**Pn**	**03 44 57.9**	**+0.6**
PDG	**Podgorica**	**1.64**	**312**	P	**Pn**	**03 44 57.4**	**+0.1**
PDG	**Podgorica**	**1.64**	**312**	⇑*i*Pn	**Pn**	**03 44 56.5**	**-0.8**
PDG	**Podgorica**	**1.64**	**312**	⇊*i*P	**Pn**	**03 44 57.9**	**+0.6**
PDG				S	**Sn**	**03 45 17.9**	**-0.6**
TTG	**Podgorica**	**1.64**	**312**	⇑*e*Pn	**Pn**	**03 44 56.9**	**-0.4**
TTG				*e*Sn	**Sg**	**03 45 21.8**	**+0.8**
TTG	**Podgorica**	**1.64**	**312**	*e*Pn	**Pn**	**03 44 56.9**	**-0.4**
TTG	**Podgorica**	**1.64**	**312**	*e*P	**Pn**	**03 44 56.9**	**-0.4**
TTG	**Podgorica**	**1.64**	**312**	*e*Pn	**Pn**	**03 44 56.9**	**-0.4**
JAN	**Janina**	**1.68**	**181**	P	**Pb**	**03 44 59.7**	**+0.3**
JAN				S	**Sg**	**03 45 22.9**	**+0.5**
JAN				AML	AML	03 45 28.1	
	comp=N,14983µm,1.0s						
JAN				AML	AML	03 45 30.4	
	comp=E,16787µm,0.9s						
JAN	**Janina**	**1.68**	**181**	P	**Pn**	**03 44 58.5**	**+0.6**
JAN	**Janina**	**1.68**	**181**	P	**Pn**	**03 44 58.5**	**+0.6**
JAN	**Janina**	**1.68**	**181**	P	**Pn**	**03 44 58.5**	**+0.6**
JAN	**Janina**	**1.68**	**181**	P	**Pn**	**03 44 58.5**	**+0.6**
JAN				S	**Sg**	**03 45 22.1**	**-0.3**
BEY	**Berane**	**1.70**	**334**	⇑*i*Pn	**Pn**	**03 44 58.5**	**+0.2**
BEY				*e*Sn	**Sg**	**03 45 23.0**	**-0.1**
IVA	**Berane**	**1.70**	**334**	⇑*i*Pn	**Pn**	**03 44 58.5**	**+0.2**
IVA				*e*Sn	**Sg**	**03 45 23.0**	**-0.1**
THE	**Thessaloniki**	**1.72**	**114**	P	**Pn**	**03 44 57.9**	**-0.4**
THE				AML	AML	03 45 26.5	
	comp=N,4742µm,0.6s						
THE				AML	AML	03 45 31.6	
	comp=E,2973µm,1.4s						
THE	**Thessaloniki**	**1.72**	**114**	P	**Pn**	**03 44 58.0**	**-0.4**
THE	**Thessaloniki**	**1.72**	**114**	P	**Pn**	**03 44 58.0**	**-0.4**
THE	**Thessaloniki**	**1.72**	**114**	P	**Pn**	**03 44 58.0**	**-0.4**
THE	**Thessaloniki**	**1.72**	**114**	P	**Pn**	**03 44 57.8**	**-0.5**
LIT	**Litokhoron**	**1.73**	**135**	P	**Pn**	**03 44 58.1**	**-0.4**
LIT				AML	AML	03 45 30.9	
	comp=E,8323µm,0.5s						
LIT				AML	AML	03 45 31.6	
	comp=N,11147µm,0.5s						
LIT	**Litokhoron**	**1.73**	**135**	*e*Pn	**Pn**	**03 44 58.9**	**+0.3**
LIT				S	**Sb**	**03 45 22.3**	**+0.2**
LIT	**Litokhoron**	**1.73**	**135**	P	**Pn**	**03 44 58.2**	**-0.4**
LIT				S	**Sb**	**03 45 22.3**	**+0.2**
LIT	**Litokhoron**	**1.73**	**135**	*e*P	**Pn**	**03 44 58.9**	**+0.3**
LIT				S	**Sb**	**03 45 22.3**	**+0.2**
LIT	**Litokhoron**	**1.73**	**135**	P	**Pn**	**03 44 58.2**	**-0.4**
LIT	**Litokhoron**	**1.73**	**135**	*e*Pn	**Pn**	**03 44 58.9**	**+0.3**
LIT				S	**Sb**	**03 45 22.3**	**+0.2**
HORT	**Hortiatis**	**1.82**	**113**	P	**Pn**	**03 44 58.8**	**-1.1**
HORT	**Hortiatis**	**1.82**	**113**	P	**Pn**	**03 44 59.3**	**-0.6**
HORT				AML	AML	03 45 34.7	
	comp=N,5897µm,0.7s						
HORT				AML	AML	03 45 35.9	
	comp=E,3996µm,0.7s						
HORT	**Hortiatis**	**1.82**	**113**	P	**Pn**	**03 44 59.4**	**-0.5**
HORT	**Hortiatis**	**1.82**	**113**	P	**Pn**	**03 44 59.4**	**-0.5**
HORT	**Hortiatis**	**1.82**	**113**	P	**Pn**	**03 44 59.3**	**-0.6**
KOME	**Kolasin**	**1.83**	**326**	⇑*i*Pn	**Pn**	**03 45 00.1**	**+0.1**
KOME				*e*Sn	**Sg**	**03 45 26.5**	**-0.5**
KOME	**Kolasin**	**1.83**	**326**	⇑*i*Pn	**Pn**	**03 45 00.1**	**+0.1**
KOME				*e*Sn	**Sg**	**03 45 26.5**	**-0.5**
KEK	**Kerkira**	**1.83**	**208**	P	**Pb**	**03 45 01.6**	**-0.3**
KEK				AML	AML	03 45 32.2	
	comp=E,6257µm,0.9s						
KEK				AML	AML	03 45 33.6	
	comp=N,3383µm,0.6s						
KEK	**Kerkira**	**1.83**	**208**	P	**Pb**	**03 45 01.0**	**-0.9**
KEK	**Kerkira**	**1.83**	**208**	P	**Pb**	**03 45 01.0**	**-0.9**
KEK	**Kerkira**	**1.83**	**208**	P	**Pb**	**03 45 01.0**	**-0.9**
SELS	**Selova**	**1.88**	**5**	*e*Pg	**Pn**	**03 45 01.3**	**+0.6**
CEME	**Cevo**	**1.91**	**310**	⇑*i*Pn	**Pn**	**03 45 01.2**	**+0.2**
CEME				*e*Sn	**Sg**	**03 45 28.6**	**-1.0**
CEME	**Cevo**	**1.91**	**310**	⇑*i*Pn	**Pn**	**03 45 01.2**	**+0.2**
SOH	**Sokhos**	**1.93**	**105**	P	**Pn**	**03 45 00.8**	**-0.6**
SOH				AML	AML	03 45 36.7	
	comp=E,12708µm,0.7s						
SOH				AML	AML	03 45 37.4	
	comp=N,10641µm,0.7s						
SOH	**Sokhos**	**1.93**	**105**	P	**Pn**	**03 45 00.9**	**-0.4**
SOH	**Sokhos**	**1.93**	**105**	P	**Pn**	**03 45 00.9**	**-0.4**
SOH	**Sokhos**	**1.93**	**105**	P	**Pn**	**03 45 00.9**	**-0.4**
SOH	**Sokhos**	**1.93**	**105**	P	**Pn**	**03 45 00.7**	**-0.6**
THL	**Klokotos Trika**	**1.97**	**154**	P	**Pn**	**03 45 01.7**	**-0.1**
THL				S	**Sb**	**03 45 29.2**	**+0.3**
THL				AML	AML	03 45 34.3	
	comp=E,6679µm,0.9s						
THL				AML	AML	03 45 35.6	
	comp=N,7048µm,0.8s						
THL	**Klokotos Trika**	**1.97**	**154**	P	**Pn**	**03 45 01.8**	**0.0**
THL	**Klokotos Trika**	**1.97**	**154**	P	**Pn**	**03 45 01.8**	**0.0**
THL				S	**Sb**	**03 45 28.4**	**-0.5**
NKME	**Niksic**	**2.03**	**315**	⇊*i*Pn	**Pn**	**03 45 03.8**	**+1.1**
NKME				*e*Sn	**Sb**	**03 45 31.4**	**+0.6**
NKME	**Niksic**	**2.03**	**315**	⇊*i*Pn	**Pn**	**03 45 03.8**	**+1.1**
NKME				*e*Sn	**Sb**	**03 45 31.4**	**+0.6**
SJES	**Sjenica**	**2.04**	**341**	*e*Pn	**Pn**	**03 45 03.9**	**+1.0**
SJES				*e*Sg	**Sb**	**03 45 30.7**	**-0.3**
NKY	**Niksic**	**2.04**	**317**	⇊*i*Pn	**Pn**	**03 45 03.8**	**+0.8**
NKY				*e*Sn	**Sb**	**03 45 31.8**	**+0.6**
NKY	**Niksic**	**2.04**	**317**	⇊*i*Pn	**Pn**	**03 45 03.8**	**+0.8**
NKY				*e*Sn	**Sb**	**03 45 31.8**	**+0.6**
SRS	**Serrai**	**2.04**	**95**	P	**Pn**	**03 45 02.4**	**-0.4**
SRS				AML	AML	03 45 41.0	
	comp=E,3295µm,1.1s						
SRS				AML	AML	03 45 41.9	
	comp=N,5221µm,0.7s						
SRS	**Serrai**	**2.04**	**95**	P	**Pn**	**03 45 02.2**	**-0.7**
HCY	**Herceg Novi**	**2.11**	**302**	⇊*i*Pn	**Pn**	**03 45 05.2**	**+1.4**
HCY				*e*Sn	**Sb**	**03 45 34.0**	**+1.0**
HCY	**Herceg Novi**	**2.11**	**302**	⇑*i*Pn	**Pb**	**03 45 05.5**	**-1.2**
VTS	**Vitosha**	**2.13**	**53**	*e*Pg	**Pn**	**03 45 04.9**	**+0.8**
VTS				*e*Sn	**Sn**	**03 45 31.8**	**+1.0**
VTS	**Vitosha**	**2.13**	**53**	⇑*i*P	**Pn**	**03 45 05.0**	**+0.8**
VTS	**Vitosha**	**2.13**	**53**	*e*Pn	**Pn**	**03 45 04.8**	**+0.6**
VTS				*e*Sn	**Sb**	**03 45 32.4**	**-1.3**
VTS	**Vitosha**	**2.13**	**53**	P	**Pn**	**03 45 04.7**	**+0.6**
VTS	**Vitosha**	**2.13**	**53**	*e*P	**Pn**	**03 45 04.8**	**+0.6**
VTS				*e*		03 45 32.4	
VTS	**Vitosha**	**2.13**	**53**	*e*Pn	**Pn**	**03 45 04.8**	**+0.6**
VTS				*e*Sn	**Sn**	**03 45 31.8**	**+1.0**
VTS				S	**Sb**	**03 45 32.4**	**-1.3**
PLG	**Polygyros**	**2.16**	**116**	P	**Pn**	**03 45 04.9**	**+0.4**
PLG				S	**Sn**	**03 45 29.8**	**-1.6**
PLG				AML	AML	03 45 33.3	
	comp=N,5523µm,0.5s						
PLG				AML	AML	03 45 42.5	
	comp=E,2691µm,0.5s						
PLG	**Polygyros**	**2.16**	**116**	P	**Pn**	**03 45 04.5**	**0.0**
PLG				S	**Sn**	**03 45 30.6**	**-0.8**
NVR	**Nevrokopi**	**2.23**	**89**	P	**Pn**	**03 45 05.7**	**+0.3**
NVR				S	**Sn**	**03 45 31.0**	**-2.1**
NVR				AML	AML	03 45 41.3	
	comp=N,4937µm,0.7s						
NVR				AML	AML	03 45 44.0	
	comp=E,3252µm,0.6s						
NVR	**Nevrokopi**	**2.23**	**89**	P	**Pn**	**03 45 05.2**	**-0.3**
NVR				S	**Sn**	**03 45 31.7**	**-1.4**
SCTE	**Santa Cesarea**	**2.24**	**236**	P	**Pn**	**03 45 04.8**	**-0.8**
SCTE				AML	AML	03 45 42.6	
	comp=N,1020µm,0.5s						
SCTE				AML	AML	03 45 48.5	
	comp=E,879µm,0.5s						
PLE	**Pljevlja**	**2.28**	**331**	⇑*i*Pn	**Pn**	**03 45 07.3**	**+1.1**
PLE				*e*Sn	**Sb**	**03 45 36.9**	**-1.1**
PLE	**Pljevlja**	**2.28**	**331**	P	**Pn**	**03 45 07.3**	**+1.1**
PLE				S	**Sb**	**03 45 37.0**	**-1.1**
PLE	**Pljevlja**	**2.28**	**331**	⇑*i*Pn	**Pn**	**03 45 07.3**	**+1.1**
PLE				*e*Sn	**Sb**	**03 45 36.9**	**-1.1**
IVAS	**Ivanjica**	**2.30**	**346**	*e*Pn	**Pn**	**03 45 06.9**	**+0.4**
ZAPS	**Zavoj**	**2.32**	**33**	*e*Pn	**Pn**	**03 45 08.1**	**+1.4**
TREB	**Trebinje**	**2.34**	**307**	*e*Pn	**Pn**	**03 45 08.6**	**+1.6**
BRY	**Bratogost**	**2.35**	**312**	⇊*i*Pn	**Pn**	**03 45 08.5**	**+1.3**
BRY				*e*Sn	**Sb**	**03 45 39.5**	**-0.5**
BRY	**Bratogost**	**2.35**	**312**	⇑*i*Pn	**Pb**	**03 45 09.4**	**-1.5**
BRY				*e*Sn	**Sb**	**03 45 39.5**	**-0.5**
UPM	**Unac-Piva**	**2.38**	**322**	⇑*i*Pn	**Pn**	**03 45 08.6**	**+1.0**
UPM				*e*Sn	**Sb**	**03 45 39.2**	**-1.7**
UPM	**Unac-Piva**	**2.38**	**322**	*e*Pn	**Pb**	**03 45 10.2**	**-1.2**
UPM				*e*Sn	**Sb**	**03 45 39.2**	**-1.7**
FYTO	**Fytoko, Volos**	**2.48**	**140**	P	**Pn**	**03 45 07.8**	**-1.1**
FYTO	**Fytoko, Volos**	**2.48**	**140**	P	**Pn**	**03 45 08.4**	**-0.5**
EVR	**Evrytania**	**2.52**	**164**	P	**Pn**	**03 45 11.3**	**+1.8**
EVR				AML	AML	03 46 02.1	
	comp=N,5292µm,1.0s						
EVR				AML	AML	03 46 03.7	
	comp=E,3413µm,0.9s						
EVR	**Evrytania**	**2.52**	**164**	P	**Pn**	**03 45 10.6**	**+1.1**
PAIG	**Paliouri**	**2.54**	**123**	P	**Pn**	**03 45 08.7**	**-1.0**
PAIG	**Paliouri**	**2.54**	**123**	P	**Pn**	**03 45 09.3**	**-0.4**
PAIG	**Paliouri**	**2.54**	**123**	P	**Pn**	**03 45 09.1**	**-0.6**
OUR	**Ouranopolis**	**2.55**	**112**	P	**Pn**	**03 45 08.9**	**-0.8**
OUR	**Ouranopolis**	**2.55**	**112**	P	**Pn**	**03 45 09.5**	**-0.2**
OUR				AML	AML	03 46 00.2	
	comp=E,3833µm,1.2s						
OUR				AML	AML	03 46 03.5	
	comp=N,5085µm,0.8s						
OUR	**Ouranopolis**	**2.55**	**112**	P	**Pn**	**03 45 09.5**	**-0.2**
GRUS	**Gruza**	**2.55**	**357**	*e*Pn	**Pn**	**03 45 10.3**	**+0.5**
GRUS	**Gruza**	**2.55**	**357**	*e*Pn	**Pn**	**03 45 10.3**	**+0.5**
LKD2	**Lefkada island**	**2.56**	**184**	P	**Pb**	**03 45 12.2**	**-2.1**
LKD2	**Lefkada island**	**2.56**	**184**	P	**Pn**	**03 45 11.4**	**+1.5**
AGG	**Agios Georgios**	**2.56**	**154**	P	**Pn**	**03 45 09.4**	**-0.6**
AGG	**Agios Georgios**	**2.56**	**154**	P	**Pn**	**03 45 09.9**	**-0.1**
AGG				AML	AML	03 46 00.5	
	comp=E,10534µm,0.8s						
AGG				AML	AML	03 46 03.3	
	comp=N,13554µm,0.7s						
AGG	**Agios Georgios**	**2.56**	**154**	*e*Pn	**Pn**	**03 45 10.4**	**+0.4**
AGG	**Agios Georgios**	**2.56**	**154**	P	**Pn**	**03 45 10.2**	**+0.2**
AGG	**Agios Georgios**	**2.56**	**154**	*e*P	**Pn**	**03 45 10.4**	**+0.4**
AGG	**Agios Georgios**	**2.56**	**154**	P	**Pn**	**03 45 10.1**	**+0.1**
AGG	**Agios Georgios**	**2.56**	**154**	*e*Pn	**Pn**	**03 45 10.4**	**+0.4**
XOR	**Xorichti**	**2.64**	**138**	P	**Pn**	**03 45 09.4**	**-1.6**
XOR	**Xorichti**	**2.64**	**138**	P	**Pn**	**03 45 10.3**	**-0.8**
ZAGS	**Zajecar**	**2.66**	**21**	*e*Pn	**Pn**	**03 45 12.0**	**+0.7**
ZAGS	**Zajecar**	**2.66**	**21**	*e*Pn	**Pn**	**03 45 12.0**	**+0.7**
NEO	**Neokhori**	**2.70**	**138**	P	**Pn**	**03 45 10.1**	**-1.8**
NEO				AML	AML	03 45 58.2	
	comp=E,2839µm,0.7s						
NEO				AML	AML	03 46 03.1	
	comp=N,4119µm,0.6s						
NEO	**Neokhori**	**2.70**	**138**	P	**Pn**	**03 45 11.0**	**-0.9**
KAVA	**Kavala**	**2.75**	**96**	P	**Pn**	**03 45 12.2**	**-0.3**
KAVA	**Kavala**	**2.75**	**96**	P	**Pn**	**03 45 12.1**	**-0.5**
BBLS	**Lazići**	**2.75**	**337**	*e*Pn	**Pn**	**03 45 13.2**	**+0.5**
BBLS	**Lazići**	**2.75**	**337**	⇑*i*Pn	**Pn**	**03 45 13.0**	**+0.3**
STON	**Ston**	**2.83**	**304**	*e*Pn	**Pn**	**03 45 14.2**	**+0.6**
STON				*e*Sn	**Sn**	**03 45 50.0**	**+2.2**
STON	**Ston**	**2.83**	**304**	*e*Pn	**Pn**	**03 45 14.0**	**+0.4**
STON				Sn	**Sn**	**03 45 49.0**	**+1.2**
STON	**Ston**	**2.83**	**304**	⇑*i*Pn	**Pn**	**03 45 13.7**	**+0.1**
STON				*e*Sn	**Sn**	**03 45 50.0**	**+2.2**
DIVS	**Divibare**	**2.83**	**347**	*e*Pn	**Pn**	**03 45 14.1**	**+0.3**
DIVS	**Divibare**	**2.83**	**347**	*e*Pn	**Pn**	**03 45 13.8**	**0.0**
DIVS	**Divibare**	**2.83**	**347**	*e*Pn	**Pn**	**03 45 13.8**	**0.0**
ANX	**Ano Chora**	**2.85**	**164**	P	**Pn**	**03 45 14.9**	**+0.8**
ANX	**Ano Chora**	**2.85**	**164**	P	**Pn**	**03 45 14.9**	**+0.8**
TRUS	**Trudelj**	**2.90**	**353**	*e*Pn	**Pn**	**03 45 15.0**	**+0.3**
TRUS	**Trudelj**	**2.90**	**353**	*e*Pn	**Pn**	**03 45 15.0**	**+0.3**
MASS	**Massafra**	**2.93**	**257**	Sn	**Sn**	**03 45 50.0**	**-0.3**
SKIA	**Skiathos**	**2.93**	**137**	P	**Pn**	**03 45 13.8**	**-1.2**
SKIA	**Skiathos**	**2.93**	**137**	P	**Pn**	**03 45 14.5**	**-0.5**
SVIS	**Svilajnac**	**2.93**	**4**	*e*Pn	**Pn**	**03 45 14.2**	**-0.8**
PLD	**Plovdiv**	**2.95**	**74**	*e*Pn	**Pn**	**03 45 14.8**	**-0.5**
PLD	**Plovdiv**	**2.95**	**74**	P	**Pn**	**03 45 14.9**	**-0.4**
PLD	**Plovdiv**	**2.95**	**74**	*e*P	**Pn**	**03 45 14.8**	**-0.5**
PLD	**Plovdiv**	**2.95**	**74**	*e*Pn	**Pn**	**03 45 14.8**	**-0.5**
NOCI	**Noci**	**2.95**	**260**	P	**Pn**	**03 45 14.4**	**-0.9**
NOCI	**Noci**	**2.95**	**260**	P	**Pn**	**03 45 15.2**	**-0.2**
EFP	**Efpalio**	**3.01**	**165**	P	**Pn**	**03 45 18.0**	**+1.9**
EFP				AML	AML	03 46 08.3	
	comp=N,3637µm,0.8s						
EFP				AML	AML	03 46 12.3	
	comp=E,3380µm,0.9s						
EFP	**Efpalio**	**3.01**	**165**	P	**Pn**	**03 45 17.4**	**+1.2**
SMIA	**Simia**	**3.03**	**143**	P	**Pn**	**03 45 16.4**	**-0.1**
SMIA	**Simia**	**3.03**	**143**	P	**Pn**	**03 45 16.5**	**+0.1**
BAI	**Bari**	**3.04**	**267**	*e*Pn	**Pn**	**03 45 16.7**	**+0.2**
BAI				Sn	**Sn**	**03 45 51.3**	**-1.7**
HAPS	**Han Pijesak,BI**	**3.10**	**333**	*e*Pn	**Pn**	**03 45 17.4**	**0.0**
HAPS	**Han Pijesak,BI**	**3.10**	**333**	*e*Pn	**Pn**	**03 45 16.9**	**-0.5**
KALE	**Kalithea**	**3.10**	**162**	P	**Pn**	**03 45 18.5**	**+1.1**
KALE	**Kalithea**	**3.10**	**162**	P	**Pn**	**03 45 18.2**	**+0.8**
TRIZ	**Trizonia**	**3.11**	**163**	P	**Pn**	**03 45 17.7**	**+0.3**
TRIZ	**Trizonia**	**3.11**	**163**	P	**Pn**	**03 45 17.9**	**+0.5**
KUBS	**Kucevo**	**3.12**	**10**	*e*Pn	**Pn**	**03 45 16.3**	**-1.4**
KUBS	**Kucevo**	**3.12**	**10**	*e*Pn	**Pn**	**03 45 16.3**	**-1.4**
LKR	**Lokris**	**3.13**

GELI Tayfur-Gelibol 4.33 101 P **Pn 03 45 34.4 +0.1**
SIGR SIGRI 4.35 118 P **Pn 03 45 34.9 +0.4**
SIGR SIGRI 4.35 118 P **Pn 03 45 34.6 +0.1**
SIGR SIGRI 4.35 118 P **Pn 03 45 34.7 +0.2**
BLY Banja Luka 4.36 323 *e*Pn **Pn 03 45 36.1 +1.4**
BLY Banja Luka 4.36 323 ⇓*i*P **Pn 03 45 36.4 +1.7**
BLY Banja Luka 4.36 323 *e*Pn **Pn 03 45 36.3 +1.6**
BLY Banja Luka 4.36 323 ⇑*i*Pn **Pn 03 45 36.3 +1.6**
HUMR Humele 4.37 42 ⇑*i*P **Pn 03 45 36.4 +1.5**
HUMR Humele 4.37 42 ⇑*i*P **Pn 03 45 36.4 +1.5**
EZN Ezine 4.40 108 P **Pn 03 45 35.4 +0.2**
TIM Timisoara 4.40 3 ⇓*i*P **Pn 03 45 36.7 +1.5**
TIM Timisoara 4.40 3 ⇓*i*P **Pn 03 45 36.7 +1.5**
EDRB Edirne 4.41 82 P **Pn 03 45 35.9 +0.5**
PYL PYLOS 4.49 171 P **Pn 03 45 35.7 -0.8**
PYL PYLOS 4.49 171 P **Pn 03 45 36.6 +0.1**
LPK Lapseki 4.55 100 P **Pn 03 45 37.6 +0.3**
MES2 Methoni 4.55 172 P **Pn 03 45 36.1 -1.3**
MES2 Methoni 4.55 172 P **Pn 03 45 37.3 0.0**
GOLR 4.59 39 ⇓*i*P **Pn 03 45 39.2 +1.3**
GOLR 4.59 39 ⇓*i*P **Pn 03 45 39.2 +1.3**
LOT Lotru 4.61 26 ⇑*i*P **Pn 03 45 38.3 +0.1**
LOT Lotru 4.61 26 ⇑*i*P **Pn 03 45 38.3 +0.1**
PRK Paraskevi 4.61 115 P **Pn 03 45 39.3 +1.1**
PRK Paraskevi 4.61 115 P **Pn 03 45 38.9 +0.8**
DYR Agios Nikonas 4.71 166 P **Pn 03 45 39.8 +0.3**
DYR Agios Nikonas 4.71 166 P **Pn 03 45 40.2 +0.7**
SGRR Singureni 4.72 51 ⇓*i*P **Pn 03 45 39.8 +0.2**
SGRR Singureni 4.72 51 ⇓*i*P **Pn 03 45 39.8 +0.2**
DEV Deva 4.77 17 ⇓*i*P **Pn 03 45 43.3 +3.0**
DEV Deva 4.77 17 ⇓*i*P **Pn 03 45 43.3 +3.0**
RKY Sarkoy-Tekirda 4.79 96 P **Pn 03 45 41.1 +0.4**
ARR Arges 4.86 33 ⇑*i*P **Pn 03 45 42.4 +0.8**
ARR Arges 4.86 33 ⇑*i*P **Pn 03 45 42.4 +0.8**
ARR S **Sn 03 46 37.3 -0.7**
VLI Veliai 4.88 160 P **Pn 03 45 41.3 -0.5**
VLI Veliai 4.88 160 P **Pn 03 45 42.2 +0.3**
CEL Celeste 4.93 233 *e*Pn **Pn 03 45 44.0 +1.4**
CEL Celeste 4.93 233 *e*Pn **Pn 03 45 44.0 +1.4**
UDBI Udbina 4.93 312 *e*Pn **Pn 03 45 45.1 +2.4**
KRBG Karabiga-Canak 4.94 99 P **Pn 03 45 43.3 +0.6**
CHOS Chios island 4.94 125 P **Pn 03 45 42.9 +0.2**
CHOS Chios island 4.94 125 P **Pn 03 45 42.6 -0.2**
CHOS Chios island 4.94 125 P **Pn 03 45 43.0 +0.2**
SIRR Siria 4.96 6 ⇑*i*P **Pn 03 45 44.9 +2.0**
SIRR Siria 4.96 6 ⇑*i*P **Pn 03 45 44.9 +2.0**
PHSR Pinarhisar 4.98 84 P **Pn 03 45 43.9 +0.6**
VOIR 5.09 35 ⇑*i*P **Pn 03 45 45.7 +0.9**
VOIR 5.09 35 ⇑*i*P **Pn 03 45 45.7 +0.9**
VOIR S **Sn 03 46 45.4 +1.7**
DKL Dikili 5.13 114 P **Pn 03 45 45.7 +0.5**
CRLT Corlu 5.16 90 P **Pn 03 45 46.7 +1.0**
SECR 5.28 44 ⇑*i*P **Pn 03 45 48.6 +1.2**
SECR 5.28 44 ⇑*i*P **Pn 03 45 48.6 +1.2**
URLA Izmir 5.30 122 P **Pn 03 45 47.8 +0.2**
KYTH Kithira 5.34 161 P **Pn 03 45 50.8 +2.6**
MDB Medias 5.42 27 ⇓*i*P **Pn 03 45 50.9 +1.6**
NVLJ Novalja 5.47 308 *i* Pn **Pn 03 45 50.9 +1.0**
NVLJ Sn **Sn 03 46 54.0 +1.0**
SLVT Silivri 5.51 89 P **Pn 03 45 51.4 +0.9**
MLR Muntele Rosu 5.54 40 Pn **Pn 03 45 52.3 +1.3**
comp=N,0.4nm,0.3s,baz=148,slow=4.0,SNR=24
MLR Sn **Sn 03 46 55.6 +0.7**
comp=N,1.3nm,0.3s,baz=282,slow=18,SNR=4.2
MLR Muntele Rosu 5.54 40 ⇓*i*P **Pn 03 45 52.6 +1.6**
MLR Muntele Rosu 5.54 40 ⇓*i*P **Pn 03 45 52.6 +1.6**
MLR Sn **Sn 03 46 55.6 +0.7**
CTYL Yalikoy Yolu 5.56 86 P **Pn 03 45 52.2 +1.1**
APE Apeiranthos 5.58 138 P **Pn 03 45 51.9 +0.4**
APE Apeiranthos 5.58 138 ⇑*i*P **Pn 03 45 51.6 +0.1**
APE Apeiranthos 5.58 138 P **Pn 03 45 51.0 -0.5**
APE Apeiranthos 5.58 138 *d*P **Pn 03 45 52.7 +1.2**
APE Apeiranthos 5.58 138 ⇑*i*P **Pn 03 45 51.6 +0.1**
BALB Balikesir 5.59 105 P **Pn 03 45 52.2 +0.7**
ISR Istrita 5.59 46 ⇑*i*P **Pn 03 45 53.7 +2.1**
DRGR 5.60 13 ⇓*i*P **Pn 03 45 53.2 +1.4**
DOPR Dopca 5.66 34 ⇓*i*P **Pn 03 45 55.6 +3.1**
AQU L'Aquila 5.69 283 *e*Pn **Pn 03 45 53.9 +0.9**
AQU L'Aquila 5.69 283 *e*P **Pn 03 45 53.9 +0.9**
AQU L'Aquila 5.69 283 *e*Pn **Pn 03 45 53.9 +0.9**
CJR Cluj-Napoca 5.71 19 ⇑*i*P **Pn 03 45 54.2 +0.9**
CJR Cluj-Napoca 5.71 19 S **Sg 03 47 33.9 +2.3**
CTKS Kestanelik-??a 5.73 89 P **Pn 03 45 54.6 +1.1**
AMRR Amara 5.74 53 S **Sg 03 47 31.5 -1.0**
KCTX Karacabey (Bur 5.76 98 P **Pn 03 45 55.2 +1.2**
ANKY Antikythira Is 5.78 160 P **Pn 03 45 56.1 +1.9**
OZLJ Ozalj 5.82 319 *e*Pn **Pn 03 45 56.3 +1.6**
BOJS Bojanci 5.85 317 *i* Pn **Pn 03 45 56.4 +1.3**
BOJS *e*Sn **Sn 03 47 01.5 -0.8**
BOJS *i* 03 47 18.4
BOJS *e*Sg **Sg 03 47 41.7 +5.7**
comp=Z,868nm,2.0s
SMG Samos 5.85 126 P **Pn 03 45 56.7 +1.5**
GCIS Gornji Cirnik 5.92 322 *i* Pn **Pn 03 45 57.3 +1.1**
BEHE Becsehely 5.93 331 *e*Pn **Pn 03 45 57.8 +1.6**
BEHE Becsehely 5.93 331 ⇑*i*Pn **Pn 03 45 56.7 +0.5**
BGKT Bogazkoy 5.94 89 P **Pn 03 45 57.3 +1.0**
GRER 5.99 46 ⇓*i*P **Pn 03 46 00.2 +3.1**
ARMT Armutlu 6.08 95 P **Pn 03 45 59.8 +1.5**
SANT Santorini 6.11 143 *e*Pn **Pn 03 46 00.4 +1.7**
SANT Santorini 6.11 143 *e*Pn **Pn 03 46 00.4 +1.7**
KLYT Kilyos 6.13 88 P **Pn 03 46 00.3 +1.3**
PLOR Plostina 6.14 41 ⇓*i*P **Pn 03 46 01.5 +2.3**
HARR Harsova 6.14 55 ⇑*i*P **Pn 03 46 00.1 +0.9**
TLB Topalu 6.16 56 ⇓*i*P **Pn 03 46 00.5 +1.1**
TLB Topalu 6.16 56 S **Sg 03 47 43.2 -2.8**
KAVV Kandilli-Istan 6.16 90 *e*P **Pn 03 46 00.8 +1.4**
MANR Mangalia 6.19 64 ⇓*i*P **Pn 03 46 00.8 +1.0**
MANR Mangalia 6.19 64 S **Sg 03 47 50.1 +3.1**
VRI Vrincioaia 6.19 41 ⇑*i*P **Pn 03 46 01.7 +1.8**
VRI Vrincioaia 6.19 41 S **Sn 03 47 11.4 +0.6**
VRI Vrincioaia 6.19 41 P **Pn 03 46 02.8 +2.9**
VRI Vrincioaia 6.19 41 ⇑*i*P **Pn 03 46 01.7 +1.8**
ARCR ARCALIA 6.25 22 ⇓*i*P **Pn 03 46 02.3 +1.6**
ARCR ARCALIA 6.25 22 S **Sg 03 47 48.2 -0.8**
BUD Budapest 6.29 348 *e*Pn **Pn 03 46 01.6 +0.5**
BUD *e*Sn **Sn 03 47 14.0 +1.0**
BUD Budapest 6.29 348 P **Pn 03 46 02.3 +1.2**
BUD pmax pmax
comp=Z,66nm,0.6s
CSKK Cs^‡kako 6.31 343 *e*Pn **Pn 03 46 02.2 +0.7**
CSKK *e*Sn **Sn 03 47 09.9 -3.7**
TIRR Tirgusor 6.34 58 ⇓*i*P **Pn 03 46 02.6 +0.8**
TIRR Tirgusor 6.34 58 S **Sg 03 47 44.6 -7.0**
TIRR Tirgusor 6.34 58 *e*Pn **Pn 03 46 02.4 +0.6**
TIRR Tirgusor 6.34 58 *e*P **Pn 03 46 02.4 +0.6**
TIRR Tirgusor 6.34 58 *e*Pn **Pn 03 46 02.4 +0.6**
PDKS Podkum 6.37 320 *i* Pn **Pn 03 46 03.4 +1.1**
AYDB Zeytinkoy-Aydi 6.37 120 *e*P **Pn 03 46 03.8 +1.3**
MANT Manisa 6.54 113 *e*Pn **Pn 03 46 05.5 +0.6**
MANT Manisa 6.54 113 *e*Pn **Pn 03 46 05.5 +0.6**
SKDS Skadanscina 6.54 312 *i* Pn **Pn 03 46 04.8 +0.2**
BODT Bodrum 6.56 129 *e*P **Pn 03 46 05.7 +0.8**
SIMA Simav-Kutahya 6.58 107 *e*P **Pn 03 46 06.5 +1.2**
SILT Sile 6.59 89 *e*P **Pn 03 46 06.8 +1.5**
BMR Baia Mare 6.60 15 ⇑*i*P **Pn 03 46 08.4 +3.0**
BMR Baia Mare 6.60 15 S Sg 03 48 09.0 +9.0
PSZ Piszkesteto 6.62 354 ⇑*i*P **Pn 03 46 06.2 +0.5**
PSZ Piszkesteto 6.62 354 S **Sn 03 47 22.1 +0.9**
PSZ Piszkesteto 6.62 354 ⇓*e*Pn **Pn 03 46 05.6 -0.1**
PSZ *e*Sn **Sn 03 47 18.6 -2.6**
PSZ Piszkesteto 6.62 354 *e*Pn **Pn 03 46 05.8 +0.1**
PSZ Piszkesteto 6.62 354 *e*P **Pn 03 46 05.8 +0.1**
PSZ Piszkesteto 6.62 354 *e*Pn **Pn 03 46 05.8 +0.1**
PSZ Piszkesteto 6.62 354 ⇑*i*P **Pn 03 46 06.2 +0.5**
TVSB Tavsanli 6.80 103 *e*P **Pn 03 46 09.2 +0.8**
SOKA Soboth 6.81 324 *e*Pn **Pn 03 46 10.1 +1.7**
comp=Z,2.2nm,0.2s,SNR=17
SOKA *e*Sn **Sn 03 47 25.6 -0.3**
comp=Z,13nm,0.7s
SOKA Soboth 6.81 324 Pn **Pn 03 46 10.1 +1.7**
comp=Z,2.2nm,0.2s,SNR=17
SOKA Sn **Sn 03 47 25.6 -0.3**
comp=Z,13nm,0.7s
IDI Anoyia 6.81 151 Pn **Pn 03 46 08.6 +0.3**
comp=Z,2.8nm,0.3s,baz=258,slow=9.2,SNR=23
IDI Sn **Sn 03 47 24.9 -1.1**
comp=Z,3.8nm,0.3s,baz=119,slow=23,SNR=3.6
IDI LR LR 03 49 10.8
comp=Z,256nm,21.8s,baz=309,slow=41

IDI Anoyia 6.81 151 *e*P **Pn 03 46 08.7 +0.3**
IDI Anoyia 6.81 151 ⇓*i*P **Pn 03 46 09.8 +1.4**
IDI Anoyia 6.81 151 S **Sn 03 47 20.7 -5.4**
TRPA Tarpa 6.89 9 ⇑*i*P **Pn 03 46 09.8 +0.4**
TRPA Tarpa 6.89 9 *e*Pn **Pn 03 46 09.7 +0.4**
OBKA Obir 6.91 321 *e*Pn **Pn 03 46 10.9 +1.2**
comp=Z,5.9nm,0.6s,SNR=15
OBKA *e*Sn **Sn 03 47 30.2 +1.7**
comp=Z,23nm,0.4s
OBKA Obir 6.91 321 Pn **Pn 03 46 10.9 +1.2**
comp=Z,5.9nm,0.6s,SNR=15
TLCR 6.94 54 ⇑*i*P **Pn 03 46 11.8 +1.7**
TLCR 6.94 54 S **Sn 03 47 27.2 -1.8**
BURAR Bucovina Array 6.99 25 ⇑*i*P **Pn 03 46 12.9 +2.0**
BUR04 Bucovina Ar. S 6.99 25 *e*Pn **Pn 03 46 11.8 +0.9**
BUR04 Bucovina Ar. S 6.99 25 *e*Pn **Pn 03 46 11.8 +0.9**
BUR08 Bucovina Ar. S 7.01 25 *e*Pn **Pn 03 46 11.6 +0.4**
BUR08 Bucovina Ar. S 7.01 25 *e*Pn **Pn 03 46 11.6 +0.4**
CLTB Caltabellotta 7.03 240 *e*Pn **Pn 03 46 11.7 +0.2**
CLTB Caltabellotta 7.03 240 *e*Pn **Pn 03 46 11.7 +0.2**
ARSA Arzberg 7.05 329 *i* Pn **Pn 03 46 13.4 +1.7**
comp=Z,7.0nm,0.4s,SNR=21
ARSA *e*Sn **Sn 03 47 30.8 -1.1**
comp=Z,9.6nm,0.8s
ARSA Arzberg 7.05 329 Pn **Pn 03 46 13.4 +1.7**
comp=Z,7.0nm,0.4s,SNR=21
ARSA Sn **Sn 03 47 30.8 -1.1**
comp=Z,9.6nm,0.8s
SOP Sopron 7.06 335 ⇓*e*Pn **Pn 03 46 12.9 +1.2**
SOP Sopron 7.06 335 P **Pn 03 46 15.2 +3.5**
KECS Kecovo 7.15 358 *e*P **Pn 03 46 13.7 +0.7**
KECS *e* 03 47 29.7
KECS Kecovo 7.15 358 *e*PN **Pn 03 46 13.7 +0.7**
KECS *e*SN **Sn 03 47 29.7 -4.5**
VYHS Vyhne 7.30 349 *e*P **Pn 03 46 16.1 +1.0**
VYHS *e* 03 47 33.9
VYHS Vyhne 7.30 349 *e*PN **Pn 03 46 16.1 +1.0**
VYHS *e*SN **Sn 03 47 33.9 -4.1**
UZH Uzhgorod 7.36 7 *e*P **Pn 03 46 20.1 +4.3**
UZH *e*S **Sn 03 47 46.1 +6.8**
ZST Bratislava 7.37 340 *e*P **Pn 03 46 16.6 +0.7**
ZST *e* 03 47 34.0
ZST Bratislava 7.37 340 *e*PN **Pn 03 46 16.6 +0.7**
ZST *e*SN **Sn 03 47 34.0 -5.6**
BORA Eskisehir 7.42 98 *e*P **Pn 03 46 18.1 +1.4**
MYKA Terra Mystica 7.44 318 *i* Pn **Pn 03 46 18.1 +1.1**
comp=Z,4.7nm,0.4s
MYKA *e*Sn **Sn 03 47 42.7 +1.2**
comp=Z,12nm,0.5s
MYKA Terra Mystica 7.44 318 Pn **Pn 03 46 18.1 +1.1**
comp=Z,4.7nm,0.4s
MYKA Sn **Sn 03 47 42.7 +1.2**
comp=Z,12nm,0.5s
TURN Turunc 7.47 124 *e*P **Pn 03 46 15.9 -1.5**
MODS Modra-Piesok 7.49 341 *e*P **Pn 03 46 17.7 +0.1**
MODS *e* 03 47 40.0
MODS Modra-Piesok 7.49 341 *e*PN **Pn 03 46 17.7 +0.1**
MODS *e*SN **Sn 03 47 40.0 -2.6**
CONA Conrad Observa 7.50 333 *e*Pn **Pn 03 46 18.9 +1.0**
comp=Z,2.5nm,0.5s,SNR=6.4
CONA *e*Sn **Sn 03 47 40.1 -2.9**
comp=Z,10nm,0.7s
CONA Conrad Observa 7.50 333 Pn **Pn 03 46 18.9 +1.0**
comp=Z,2.5nm,0.5s,SNR=6.4
CRVS Cervenica-Dubn 7.57 3 *e*P **Pn 03 46 19.0 +0.2**
CRVS Cervenica-Dubn 7.57 3 *e*PN **Pn 03 46 19.0 +0.2**
SMOL Smolenice 7.58 342 *e*P **Pn 03 46 20.4 +1.5**
SMOL *e* 03 47 45.7
SMOL Smolenice 7.58 342 *e*PN **Pn 03 46 20.4 +1.5**
SMOL *e*SN **Sn 03 47 45.7 +0.8**
KARP Karpathos 7.59 138 *e*P **Pn 03 46 19.5 +0.4**
KARP Karpathos 7.59 138 *e*Pn **Pn 03 46 19.7 +0.6**
KARP Karpathos 7.59 138 *e*Pn **Pn 03 46 19.7 +0.6**
JAVC Velka Javorina 7.86 344 *e*PN **Pn 03 46 24.1 +1.4**
JAVC *e*SN **Sn 03 47 51.3 -0.4**
LANS Liptovska Anna 7.87 353 *e*P **Pn 03 46 24.8 +1.8**
LANS *e* 03 47 51.0
LANS Liptovska Anna 7.87 353 *e*PN **Pn 03 46 24.8 +1.8**
LANS *e*SN **Sn 03 47 51.0 -1.2**
KBA Koelnbreinsper 7.89 319 *e*Pn **Pn 03 46 24.8 +1.4**
comp=Z,7.7nm,0.5s,SNR=24
KBA *e*Sn **Sn 03 47 51.8 -1.0**
comp=Z,1.6nm,0.2s
KBA Koelnbreinsper 7.89 319 P **Pn 03 46 24.8 +1.4**
KBA pmax pmax
comp=Z,52nm,1.0s
KBA Koelnbreinsper 7.89 319 Pn **Pn 03 46 24.8 +1.4**
comp=Z,7.7nm,0.5s,SNR=24
KBA Sn **Sn 03 47 51.8 -1.0**
comp=Z,1.6nm,0.2s
FETY Fethiye 7.92 124 *e*P **Pn 03 46 24.1 +0.5**
KIS Kishinev 8.02 43 *e*P **Pn 03 46 27.0 +2.1**
KIS LRM MLR 03 50 04.0
comp=Z,500nm,12.0s
KIS Kishinev 8.02 43 *e*P **Pn 03 46 27.0 +2.1**
KIS MLR MLR
comp=Z,500nm,10.0s
KIS MLR MLR
comp=Z,500nm,12.0s
MOA Molln 8.04 326 *i* Pn **Pn 03 46 27.6 +2.3**
comp=Z,2.5nm,0.6s
MOA Sn **Sn 03 47 56.0 -0.3**
comp=Z,12nm,0.9s
MOA Molln 8.04 326 Pn **Pn 03 46 27.6 +2.3**
comp=Z,2.5nm,0.6s
MOA Sn **Sn 03 47 56.0 -0.3**
comp=Z,12nm,0.9s
NIE Niedzica 8.09 357 *e*Pn **Pn 03 46 27.7 +1.8**
NIE *e*Sn Sn 03 47 42.2 -15
NIE Niedzica 8.09 357 *e*P **Pn 03 46 27.7 +1.8**
ABTA Abfaltersbach 8.10 315 *i* Pn **Pn 03 46 27.3 +1.1**
comp=Z,20nm,0.6s,SNR=16
ABTA *e*Sn **Sn 03 47 57.1 -0.8**
comp=Z,40nm,0.8s
ABTA Abfaltersbach 8.10 315 Pn **Pn 03 46 27.3 +1.1**
comp=Z,20nm,0.6s,SNR=16
ABTA Sn **Sn 03 47 57.1 -0.8**
comp=Z,40nm,0.8s
KRUC Moravsky 8.35 339 *e*PN **Pn 03 46 30.2 +0.8**
KRUC *e*SN **Sn 03 48 00.4 -3.3**
KWP Kalwaria Pacla 8.39 8 *e*Pn **Pn 03 46 32.3 +2.4**
KWP *e* 03 49 20.8
KWP Kalwaria Pacla 8.39 8 *e*Pn **Pn 03 46 31.4 +1.4**
KWP Kalwaria Pacla 8.39 8 *e*P **Pn 03 46 31.4 +1.4**
KWP Kalwaria Pacla 8.39 8 *e*Pn **Pn 03 46 31.4 +1.4**
AKAS Kas 8.50 124 *e*P **Pn 03 46 31.9 +0.3**
VRAC Vranov 8.52 341 ⇑*i*P **Pn 03 46 33.4 +1.6**
VRAC Vranov 8.52 341 S **Sn 03 48 03.4 -4.7**
VRAC Vranov 8.52 341 *e*PN **Pn 03 46 33.1 +1.3**
VRAC *e*SN **Sn 03 48 06.2 -1.9**
OKC Ostrava-Krasne 8.71 348 *e*SN **Sn 03 48 09.9 -2.8**
OKC AMS AMS 03 50 30.0
comp=Z,500nm,10.2s
OKC Ostrava-Krasne 8.71 348 Sn **Sn 03 48 09.9 -2.8**
LVV L'vov 8.76 13 *e*P Pn 03 46 40.5 +5.5
LVV *e* 03 48 21.1
MORC Moravsky Berou 8.76 346 ⇑*i*P **Pn 03 46 37.4 +2.3**
MORC Moravsky Berou 8.76 346 *e*Pn **Pn 03 46 36.1 +1.0**
MORC Moravsky Berou 8.76 346 *e*P **Pn 03 46 36.1 +1.0**
MORC Moravsky Berou 8.76 346 *e*Pn **Pn 03 46 36.1 +1.0**
MORC Moravsky Berou 8.76 346 ⇑*i*P **Pn 03 46 37.4 +2.3**
MORC S **Sn 03 48 13.1 -0.8**
MORC Moravsky Berou 8.76 346 *e*PN **Pn 03 46 36.5 +1.4**
MORC *e*SN **Sn 03 48 14.3 +0.4**
KIZT Kizilcal 8.77 103 *e*P **Pn 03 46 35.6 +0.3**
WTTA Wattenberg 8.89 315 *i* Pn **Pn 03 46 39.3 +2.3**
comp=Z,4.3nm,0.3s
WTTA *e*Sn **Sn 03 48 15.9 -1.5**
comp=Z,32nm,0.8s
WTTA Wattenberg 8.89 315 Pn **Pn 03 46 38.6 +1.5**
WTTA Sn **Sn 03 48 15.9 -1.5**
comp=Z,32nm,0.8s
OJC Ojcow 8.91 355 *e*Pn **Pn 03 46 38.5 +1.4**
OJC Ojcow 8.91 355 *e*Pn **Pn 03 46 38.6 +1.5**
OJC *e*Sn **Sn 03 48 23.3 +5.7**
OJC Ojcow 8.91 355 *e*P **Pn 03 46 38.5 +1.4**
OJC Ojcow 8.91 355 *e*Pn **Pn 03 46 38.7 +1.5**
OJC *e*Sn **Sn 03 48 23.3 +5.7**
PGF Pioggiola 8.95 282 *e*Pn **Pn 03 46 37.4 -0.4**
PGF Pioggiola 8.95 282 *e*Pn **Pn 03 46 37.4 -0.4**
PGF Pioggiola 8.95 282 *e*P **Pn 03 46 37.4 -0.4**
PGF Pioggiola 8.95 282 *e*Pn **Pn 03 46 37.4 -0.4**
GEA0 GERESS Array S 9.06 328 *e*Pn **Pn 03 46 40.2 +1.0**

GEA0 GERESS Array S 9.06 328 *e*Pn **Pn 03 46 40.2 +1.0**
GEC2 GERESS Array S 9.06 328 *e*Pn **Pn 03 46 41.0 +1.7**
GEC2 GERESS Array S 9.06 328 *e*P **Pn 03 46 41.0 +1.7**
GEC2 GERESS Array S 9.06 328 *e*Pn **Pn 03 46 41.0 +1.7**
GERES GERESS Array B 9.06 328 Pn **Pn 03 46 40.6 +1.3**
comp=Z,0.8nm,0.3s,baz=152,slow=13,SNR=19
GERES LR LR 03 51 01.7
comp=Z,286nm,19.7s,baz=106,slow=43
MOTA Moosalm 9.23 314 *i* Pn **Pn 03 46 42.4 +0.7**
comp=Z,18nm,0.5s,SNR=22
MOTA *e*Sn **Sn 03 48 24.7 -0.9**
comp=Z,28nm,0.8s
MOTA Moosalm 9.23 314 Pn **Pn 03 46 42.4 +0.7**
comp=Z,18nm,0.5s,SNR=22
MOTA Sn **Sn 03 48 24.7 -0.9**
comp=Z,28nm,0.8s
FETA Feichten 9.25 311 *i* Pn **Pn 03 46 43.2 +1.3**
comp=Z,4.5nm,0.6s
FETA Sn **Sn 03 48 23.5 -2.7**
comp=Z,9.2nm,0.7s
FETA Feichten 9.25 311 Pn **Pn 03 46 43.2 +1.3**
comp=Z,4.5nm,0.6s
FETA Sn **Sn 03 48 23.5 -2.7**
comp=Z,9.2nm,0.7s
FUORN Ofenpass-Fuorn 9.30 308 *e*Pn **Pn 03 46 44.0 +1.2**
FUORN Ofenpass-Fuorn 9.30 308 *e*Pn **Pn 03 46 44.0 +1.2**
KHC Kasperske Hory 9.34 329 *e*PN **Pn 03 46 45.2 +2.1**
KHC *e*x x 03 46 50.1
KHC *e*x x 03 47 09.2
KHC *e*SN **Sn 03 48 29.5 +1.3**
KHC AMS AMS 03 50 50.0
comp=Z,1µm,10.6s
KHC Kasperske Hory 9.34 329 *e*P **Pn 03 46 45.2 +2.1**
KHC *e* 03 48 29.5
KHC MLR MLR
comp=Z,1µm,10.6s
KHC Kasperske Hory 9.34 329 Pn **Pn 03 46 45.2 +2.1**
KHC Sn **Sn 03 48 29.5 +1.3**
RETA Reutte 9.50 314 Pn **Pn 03 46 48.7 +3.4**
comp=Z,4.5nm,0.4s
RETA *e*Sn **Sn 03 48 30.5 -1.7**
comp=Z,20nm,0.9s
RETA Reutte 9.50 314 Pn **Pn 03 46 48.7 +3.4**
comp=Z,4.5nm,0.4s
RETA Sn **Sn 03 48 30.5 -1.7**
comp=Z,20nm,0.9s
DPC Dobruska-Polom 9.56 342 *e*PN **Pn 03 46 48.9 +2.9**
DPC *e*SN **Sn 03 48 32.4 -1.1**
DPC AMS AMS 03 51 20.0
comp=Z,600nm,7.4s
DPC Dobruska-Polom 9.56 342 *e*P **Pn 03 46 48.9 +2.9**
DPC *e* 03 48 32.4
DPC MLR MLR
comp=Z,600nm,7.4s
DPC Dobruska-Polom 9.56 342 Pn **Pn 03 46 48.9 +2.9**
DPC Sn **Sn 03 48 32.4 -1.1**
GOPC GO Pecny, Ondr 9.58 336 AMS AMS 03 50 50.0
comp=Z,1µm,8.4s
PRU Pruhonice 9.72 335 AMS AMS 03 51 00.0
comp=Z,1µm,8.6s
UPC Upice 9.78 341 *e*SN **Sn 03 48 39.1 +0.3**
UPC AMS AMS 03 51 10.0
comp=Z,600nm,9.1s
UPC Upice 9.78 341 Sn **Sn 03 48 39.1 +0.3**
TUE Stuetta 9.79 305 *e*Pn **Pn 03 46 50.4 +1.0**
TUE Stuetta 9.79 305 *e*Pn **Pn 03 46 50.3 +1.0**
PRA Prague 9.83 335 AMS AMS 03 51 00.0
comp=Z,1µm,8.6s
BRTR Keskin Array B 9.83 95 Pn **Pn 03 46 51.0 +1.0**
comp=Z,0.1nm,0.3s,baz=273,slow=10,SNR=6.3
BRTR LR LR 03 50 31.9
comp=Z,114nm,19.6s,baz=288,slow=37
BRTR Keskin Array B 9.83 95 *ce*P **Pn 03 46 51.5 +1.5**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
BRTR Keskin Array B 9.83 95 Pn **Pn 03 46 51.0 +1.0**
DAVA Damuels 9.88 311 *e*Pn **Pn 03 46 53.0 +2.5**
comp=Z,4.5nm,0.4s
DAVA *e*Sn **Sn 03 48 41.2 -0.4**
comp=Z,10.0nm,0.5s
DAVA Damuels 9.88 311 Pn **Pn 03 46 53.0 +2.5**
comp=Z,4.5nm,0.4s
DAVA Sn **Sn 03 48 41.2 -0.4**
comp=Z,10.0nm,0.5s
PVCC Panska Ves 10.19 337 AMS AMS 03 51 10.0
comp=Z,1µm,8.7s
SBF Sospel 10.24 289 *e*Pn **Pn 03 46 54.2 -1.3**
SBF Sospel 10.24 289 *e*Pn **Pn 03 46 54.2 -1.3**
SBF Sospel 10.24 289 *e*P **Pn 03 46 54.2 -1.3**
SBF Sospel 10.24 289 *e*Pn **Pn 03 46 54.2 -1.3**
CORM Corum 10.48 92 *e*P **Pn 03 46 58.9 +0.1**
KEST Kesra 10.64 242 Pn **Pn 03 47 04.3 +3.4**
comp=Z,0.1nm,0.3s,baz=252,slow=6.9,SNR=6.8
NKC Novy Kostel 10.66 329 AMS AMS 03 51 40.0
comp=Z,900nm,9.6s
BRG Berggiesshubel 10.68 336 *e*P **Pn 03 47 02.4 +1.0**
comp=Z,14nm,1.6s
BRG *e* 03 47 09.2
comp=Z,13nm,1.5s
comp=Z,1µm,8.2s
comp=N,627nm,9.1s
comp=E,520nm,9.1s
BRG Berggiesshubel 10.68 336 *e*P **Pn 03 47 02.4 +1.0**
BRG pmax pmax
comp=Z,15nm,1.6s
BRG MLR MLR
comp=Z,1µm,8.2s
BRG MLR MLR
comp=N,627nm,9.1s
BRG MLR MLR
comp=E,520nm,9.1s
GRFO Grafenberg 10.75 324 *e*Pn **Pn 03 47 03.0 +0.6**
GRFO Grafenberg 10.75 324 *e*P **Pn 03 47 03.0 +0.6**
GRFO Grafenberg 10.75 324 *e*P **Pn 03 47 03.0 +0.6**
FRF La Foret Royal 10.77 287 *e*Pn **Pn 03 47 01.2 -1.3**
FRF La Foret Royal 10.77 287 *e*Pn **Pn 03 47 01.2 -1.3**
FRF La Foret Royal 10.77 287 *e*P **Pn 03 47 01.2 -1.3**
FRF La Foret Royal 10.77 287 *e*Pn **Pn 03 47 01.2 -1.3**
MBDF Montbardon 10.88 293 *e*Pn **Pn 03 47 03.6 -0.7**
MBDF *e*Sn **Sn 03 48 58.8 -7.4**
comp=E,10nm,0.5s
MBDF Montbardon 10.88 293 *e*Pn **Pn 03 47 03.6 -0.7**
MBDF *e*Sn **Sn 03 48 58.8 -7.4**
MBDF Montbardon 10.88 293 *e*P **Pn 03 47 03.6 -0.7**
MBDF *e* 03 48 58.8
MBDF Montbardon 10.88 293 *e*Pn **Pn 03 47 03.6 -0.7**
MBDF *e*Sn **Sn 03 48 58.8 -7.4**
comp=E,5.1nm,0.5s
AKASG Malin Array Be 11.00 29 Pn **Pn 03 47 10.1 +4.4**
comp=E,0.5nm,0.3s,baz=214,slow=12,SNR=5.3
SENIN Lac Senin/Sane 11.03 302 *e*Pn **Pn 03 47 06.3 0.0**
SENIN *e*Sn **Sn 03 49 07.1 -2.7**
SENIN Lac Senin/Sane 11.03 302 *e*Pn **Pn 03 47 06.3 0.0**
SENIN *e*Sn **Sn 03 49 07.1 -2.7**
LPG La Plagne 11.10 297 *e*Pn **Pn 03 47 06.1 -1.2**
LPG *e*Sn **Sn 03 49 03.0 -8.6**
comp=E,12nm,0.4s
LPG La Plagne 11.10 297 *e*Pn **Pn 03 47 06.1 -1.2**
LPG *e*Sn **Sn 03 49 03.0 -8.6**
LPG La Plagne 11.10 297 *e*P **Pn 03 47 06.1 -1.2**
LPG *e* 03 49 03.0
LPG La Plagne 11.10 297 *e*Pn **Pn 03 47 06.1 -1.2**
LPG *e*Sn **Sn 03 49 03.0 -8.6**
comp=E,5.9nm,0.4s
LPL La Plagne 11.11 297 *e*Pn **Pn 03 47 06.5 -1.0**
LPL *e*Sn **Sn 03 49 04.4 -7.6**
comp=E,12nm,0.3s
LPL La Plagne 11.11 297 *e*Pn **Pn 03 47 06.5 -1.0**
LPL *e*Sn **Sn 03 49 04.4 -7.6**
LPL La Plagne 11.11 297 *e*P **Pn 03 47 06.5 -1.0**
LPL *e* 03 49 04.4
LPL La Plagne 11.11 297 *e*Pn **Pn 03 47 06.5 -1.0**
LPL *e*Sn **Sn 03 49 04.4 -7.6**
comp=E,5.9nm,0.3s
CLL Collm 11.36 334 *e*Pn Pn 03 47 16.0 +5.4
CLL *e* 03 47 49.0
CLL *e*Sn Sn 03 48 57.0 -21
CLL *e* 03 49 51.0
CLL *e*Sg 03 50 35.0
CLL *e*Lmax 03 51 49.0
CLL Collm 11.36 334 *e*P Pn 03 47 16.0 +5.4
ORIF Oris-en-Rattie 11.54 293 *e*Pn **Pn 03 47 12.0 -1.3**
ORIF Oris-en-Rattie 11.54 293 *e*Pn **Pn 03 47 12.0 -1.3**
ORIF Oris-en-Rattie 11.54 293 *e*P **Pn 03 47 12.0 -1.3**

ORIF Oris-en-Rattie 11.54 293 *e*Pn **Pn 03 47 12.0 -1.3**
CABF La Chapelle 11.89 301 *e*Pn **Pn 03 47 17.3 -0.8**
CABF La Chapelle 11.89 301 *e*Pn **Pn 03 47 17.3 -0.8**
CABF La Chapelle 11.89 301 *e*P **Pn 03 47 17.3 -0.8**
CABF La Chapelle 11.89 301 *e*Pn **Pn 03 47 17.3 -0.8**
HINF Hinteralfeld 11.92 308 *e*Pn **Pn 03 47 17.7 -0.6**
HINF *e*Sn **Sn 03 49 23.0 -8.4**
comp=E,31nm,0.9s
HINF Hinteralfeld 11.92 308 *e*Pn **Pn 03 47 17.7 -0.6**
HINF *e*Sn **Sn 03 49 23.0 -8.4**
HINF Hinteralfeld 11.92 308 *e*P **Pn 03 47 17.7 -0.6**
HINF *e* 03 49 23.0
HINF Hinteralfeld 11.92 308 *e*Pn **Pn 03 47 17.7 -0.6**
HINF *e*Sn **Sn 03 49 23.0 -8.4**
comp=E,15nm,0.9s
CDF Champ du Feu 11.96 311 *e*Pn **Pn 03 47 17.9 -1.1**
CDF *e*Sn **Sn 03 49 25.4 -7.1**
comp=E,8.5nm,0.7s
CDF Champ du Feu 11.96 311 *e*Pn **Pn 03 47 17.9 -1.1**
CDF *e*Sn **Sn 03 49 25.4 -7.1**
CDF Champ du Feu 11.96 311 *e*P **Pn 03 47 17.9 -1.1**
CDF *e* 03 49 25.4
HAU Haudompre 12.30 308 *e*Pn **Pn 03 47 22.9 -0.7**
HAU *e*Sn **Sn 03 49 32.2 -8.6**
comp=E,29nm,0.8s
HAU Haudompre 12.30 308 *e*Pn **Pn 03 47 22.9 -0.7**
HAU *e*Sn **Sn 03 49 32.2 -8.6**
HAU Haudompre 12.30 308 *e*P **Pn 03 47 22.9 -0.7**
HAU *e* 03 49 32.2
HAU Haudompre 12.30 308 *e*Pn **Pn 03 47 22.9 -0.7**
HAU *e*Sn **Sn 03 49 32.2 -8.6**
comp=E,15nm,0.8s
VIVF Saint-Julien-I 12.37 292 *e*Pn **Pn 03 47 23.1 -1.4**
VIVF Saint-Julien-I 12.37 292 *e*Pn **Pn 03 47 23.1 -1.4**
VIVF Saint-Julien-I 12.37 292 *e*P **Pn 03 47 23.1 -1.4**
VIVF Saint-Julien-I 12.37 292 *e*Pn **Pn 03 47 23.1 -1.4**
SMF Signal de Mont 13.37 299 *e*Pn **Pn 03 47 36.6 -1.5**
SMF *e*Sn **Sn 03 49 58.4 -8.4**
comp=E,15nm,0.6s
SMF Signal de Mont 13.37 299 *e*Pn **Pn 03 47 36.6 -1.5**
SMF *e*Sn **Sn 03 49 58.4 -8.4**
SMF Signal de Mont 13.37 299 *e*P **Pn 03 47 36.6 -1.5**
SMF *e* 03 49 58.4
SMF Signal de Mont 13.37 299 *e*Pn **Pn 03 47 36.6 -1.5**
SMF *e*Sn **Sn 03 49 58.4 -8.4**
comp=E,7.3nm,0.6s
LOR Lormes 13.55 302 *e*Pn **Pn 03 47 38.4 -2.3**
comp=E,17nm,0.7s
LOR Lormes 13.55 302 *e*Pn **Pn 03 47 38.4 -2.3**
LOR Lormes 13.55 302 *e*P **Pn 03 47 38.4 -2.3**
SSF Saint Saulge 13.72 300 *e*Pn **Pn 03 47 40.3 -2.5**
comp=E,19nm,0.9s
SSF Saint Saulge 13.72 300 *e*Pn **Pn 03 47 40.3 -2.5**
SSF Saint Saulge 13.72 300 *e*P **Pn 03 47 40.3 -2.5**
BGF Bois d'Agland 14.00 298 *e*Pn **Pn 03 47 45.0 -1.8**
BGF Bois d'Agland 14.00 298 *e*P **Pn 03 47 49.7 +2.9**
BGF Bois d'Agland 14.00 298 *e*Pn **Pn 03 47 45.0 -1.8**
BGF Bois d'Agland 14.00 298 *e*Pn **Pn 03 47 45.0 -1.8**
BGF Bois d'Agland 14.00 298 *e*Pn **Pn 03 47 45.0 -1.8**
BGF Bois d'Agland 14.00 298 *e*P **Pn 03 47 49.7 +2.9**
MMAI Mount Meron Ar 14.22 121 Pn **Pn 03 47 48.2 -1.8**
comp=E,3.0nm,0.3s,baz=301,slow=12,SNR=3.2
MMAI LR LR 03 54 06.5
comp=E,94nm,19.7s,baz=20,slow=40
TCF Toulx Ste Croi 14.36 296 *e*P **P 03 47 57.5 -1.3**
TCF Toulx Ste Croi 14.36 296 *e*P **P 03 47 57.5 -1.3**
VORD Divnogorie 15.93 47 *e*P **Pn 03 48 13.1 +0.6**
VORD pmax pmax
comp=Z,6.0nm,0.7s
VSR Storozhevoye 15.99 46 *e*P **Pn 03 48 13.6 +0.3**
VSR pmax pmax
comp=Z,5.0nm,0.6s
VSR MLR MLR
comp=Z,350nm,11.0s
ETSF Etsaut 16.00 283 *e*Pn **P 03 48 15.4 -1.6**
comp=Z,137nm,2.5s
ETSF Etsaut 16.00 283 *e*Pn **P 03 48 15.4 -1.6**
ETSF Etsaut 16.00 283 *e*P **P 03 48 15.4 -1.6**
KIV Kislovodsk 16.24 73 *e*Pn **Pn 03 48 15.6 -1.0**
KIV Kislovodsk 16.24 73 *e*P **Pn 03 48 16.6 0.0**
KIV pmax pmax
comp=Z,7.0nm,1.0s
KIV Kislovodsk 16.24 73 *e*Pn **Pn 03 48 15.6 -1.0**
KVAR Kislovodsk Arr 16.24 73 Pn **P 03 48 18.4 -1.4**
baz=247,slow=7.7,SNR=2.8
NEY Neytrino 16.26 76⇓ *i* P **P 03 48 19.7 -0.3**
NEY Neytrino 16.26 76 *i* P **P 03 48 19.7 -0.3**
OBN Obninsk 17.23 32⇓ *e*P **P 03 48 31.9 +1.4**
OBN pmax pmax
comp=Z,77nm,1.3s
VSU Vasula 17.53 10 *d* P **P 03 48 34.8 +1.0**
VSU pmax pmax
comp=Z,72nm,0.6s
VSU Vasula 17.53 10 *i* P **P 03 48 34.8 +1.0**
comp=Z,72nm,0.6s
GNI Garni 18.10 86 Pn **P 03 48 43.4 +3.0**
comp=Z,0.4nm,0.3s,baz=345,slow=1.0,SNR=10.0
GNI Garni 18.10 86 *e*Pn **Pn 03 48 39.8 -0.2**
comp=Z,23nm,1.0s
GNI Garni 18.10 86 *c* P **P 03 48 43.6 +3.2**
GNI pmax pmax
comp=Z,125nm,1.7s
GNI Garni 18.10 86 *e*Pn **Pn 03 48 39.8 -0.2**
comp=Z,23nm,1.0s
GNI Garni 18.10 86 *i* P **P 03 48 43.6 +3.2**
comp=Z,125nm,1.7s
HFS Hagfors 19.34 349 P **P 03 48 52.5 -1.2**
comp=Z,0.4nm,0.3s,baz=152,slow=10,SNR=12
HFS LR LR 03 56 23.2
comp=Z,67nm,21.7s,baz=168,slow=37
AKT Akhty 20.10 81⇑ *i*P Pn 03 49 04.9 +0.8
AKT *e* 03 49 19.8
AKT pmax pmax
comp=Z,20nm,0.8s
AKT Akhty 20.10 81 *i* P Pn 03 49 04.9 +0.8
comp=Z,20nm,0.8s
NC602 NORSAR Array S 20.25 347 *e*P **P 03 49 03.8 +0.1**
FINES FINESS Array B 20.38 7 P **P 03 49 04.4 -0.6**
comp=Z,6.0nm,0.7s,baz=178,slow=9.5,SNR=18
FINES LR LR 03 57 47.2
comp=Z,78nm,18.1s,baz=194,slow=39
FINES FINESS Array B 20.38 7 *i* P Pn 03 49 07.4 +0.4
FINES pmax pmax
comp=Z,10.0nm,0.8s
FIA1 FINESS Array S 20.38 7 *e*P **P 03 49 04.7 -0.2**
comp=Z,15nm,1.0s
NAO01 NORSAR Array S 20.47 346 *e*P **P 03 49 06.2 +0.1**
NC405 NORSAR Array S 20.58 347 *e*P **P 03 49 05.2 -2.0**
NB2 NORSAR Subarra 20.59 347 P **P 03 49 06.1 -1.3**
comp=Z,5.7nm,1.1s,baz=159,slow=11
NOA NORSAR Array B 20.59 347 P **P 03 49 06.8 -0.6**
comp=Z,3.3nm,0.7s,baz=158,slow=11,SNR=8.4
NOA LR LR 03 57 53.7
comp=Z,28nm,19.8s,baz=160,slow=39
NC303 NORSAR Array S 20.74 347 *e*P **P 03 49 08.6 -0.3**
EKA Eskdalemuir Ar 21.11 320 P **P 03 49 12.5 -0.4**
comp=Z,6.9nm,0.7s,baz=114,slow=9.9,SNR=15
ESK Eskdalemuir 21.12 320 *e*P **P 03 49 12.2 -0.9**
comp=Z,16nm,0.7s
ESK Eskdalemuir 21.12 320 *e*P **P 03 49 12.2 -0.9**
ESK pmax pmax
comp=Z,15nm,0.7s
VAF Ylistaro 21.76 2 P **P 03 49 23.1 +3.2**
VAF pmax pmax
comp=Z,23nm,0.9s
MDT Midelt 22.00 255 LR LR 03 57 53.3
comp=Z,63nm,18.0s,baz=57,slow=36
TAM Tamanrasset 22.56 220 *e*P **P 03 49 30.0 +1.1**
comp=Z,7.0nm,1.0s
TAM Tamanrasset 22.56 220 *e*P **P 03 49 30.0 +1.1**
TAM pmax pmax
comp=Z,7.0nm,1.0s
TAM Tamanrasset 22.56 220 *e*P **P 03 49 30.0 +1.1**
comp=Z,7.0nm,1.0s
KLMR Klimovskoe 22.61 24 *e*P **P 03 49 27.1 -1.9**
KLMR pmax pmax
comp=Z,24nm,1.0s
KLMR Klimovskoe 22.61 24 *e*P **P 03 49 27.2 -1.8**
KLMR AMP 03 49 33.3
comp=Z,24nm,1.0s
TMCR Tamitsa 24.93 18 *e*P **P 03 49 51.0 -0.4**
TMCR pmax pmax
comp=Z,51nm,0.9s
PRGR Permogore 25.21 28⇑ *i*P **P 03 49 54.5 +0.6**
PRGR pmax pmax
comp=Z,57nm,0.8s
AKTO Aktyubinsk 27.14 58 P **P 03 50 11.5 -0.1**
comp=Z,1.8nm,0.7s,baz=263,slow=11,SNR=5.2
APA Apatity 27.16 10 *e*P **P 03 50 09.5 -2.0**
APA pmax pmax
comp=Z,4.0nm,1.2s
APA MLR MLR
comp=Z,200nm,13.0s
ABKAR Akbulak array 28.32 60 *e*P **P 03 50 22.3 +0.1**
ARCES ARCESS Array B 28.36 3 P **P 03 50 22.4 +0.1**
comp=Z,2.6nm,1.0s,baz=186,slow=9.8,SNR=8.1
ARU Arti 28.56 45*d i*P **P 03 50 26.6 +2.4**
ARU 03 51 15.9
ARU S **S 03 55 17.3 +5.2**
ARU pmax pmax
comp=Z,12nm,1.7s
SOKR Solikamsk 28.74 38 *e*P **P 03 50 26.9 +1.2**
TOA0 Torodi Ar. Sit 32.71 216 *e*P **P 03 51 01.1 -0.1**
TORD Torodi Ar. Bea 32.71 216 P **P 03 51 01.1 -0.1**
comp=Z,9.7nm,0.9s,baz=30,slow=9.1,SNR=56
JMIC Jan Mayen 33.21 343 LR LR 04 04 55.3
comp=Z,22nm,19.2s,baz=74,slow=37
KOWA Kowa 34.40 226 P **P 03 51 16.0 +0.1**
comp=Z,1.7nm,0.8s,baz=14,slow=13,SNR=3.5
BRVK Borovoye 34.86 53 *e*P **P 03 51 20.1 +0.6**
comp=Z,19nm,1.6s
BRVK Borovoye 34.86 53*c i*P **P 03 51 20.8 +1.2**
BRVK *i* *PP **sP 03 51 24.2 +0.7**
BRVK pmax pmax
comp=Z,11nm,1.7s
BVAR Borovoye Array 34.93 53 P **P 03 51 20.6 +0.5**
comp=Z,2.0nm,0.7s,baz=268,slow=5.8,SNR=13
SPITS Spitsbergen Ar 37.00 358 LR LR 04 08 40.2
comp=Z,64nm,18.5s,baz=235,slow=39
AAK Ala-Archa 39.30 70 LR LR 04 12 43.4
comp=Z,23nm,18.7s,baz=200,slow=43
AAK Ala-Archa 39.30 70 *e*P **P 03 51 56.9 -0.7**
AAK Ala-Archa 39.30 70⇑ *i*P **P 03 51 59.8 +2.2**
AAK pmax pmax
comp=Z,1.0nm,0.9s
KURBB Kurchatov Arra 40.18 57 P **P 03 52 04.2 -0.3**
comp=Z,1.1nm,0.8s,baz=289,slow=10,SNR=6.9
KURBB PcP **PcP 03 54 07.5 -1.2**
comp=Z,0.9nm,0.7s,baz=280,slow=3.8,SNR=6.3
KURK Kurchatov 40.22 56 *e*P **P 03 52 04.7 -0.2**
KURK PcP **PcP 03 54 07.5 -1.3**
KURK Kurchatov 40.22 56⇑ *i*P **P 03 52 05.1 +0.2**
KURK pmax pmax
comp=Z,4.0nm,1.7s
KSH Kashi 41.37 74 P **P 03 52 12.4 -2.3**
KSH pP sP 03 52 18.7 0.0
KSH pmax pmax
comp=Z,310nm,4.8s
DBIC Dimbokro 41.45 221 P **P 03 52 15.4 0.0**
comp=Z,4.1nm,0.8s,baz=34,slow=7.0,SNR=2.7
NVS Novosibirsk 42.35 50 *i* P **P 03 52 23.4 +1.0**
ZAA0 Zalesovo Array 43.41 51 *e*P **P 03 52 31.0 0.0**
comp=Z,6.0nm,0.7s
ZALV Zalesovo Beam 43.41 51 P **P 03 52 30.6 -0.4**
comp=Z,7.9nm,0.7s,baz=276,slow=9.1,SNR=16
ZALV LR LR 04 12 58.3
comp=Z,29nm,18.8s,baz=70,slow=39
ZALV Zalesovo Beam 43.41 51 *e*P **P 03 52 30.9 -0.1**
ZALV Zalesovo Beam 43.41 51 *e*P **P 03 52 30.9 -0.1**
MK31 Makanchi Array 43.46 61 *e*P **P 03 52 31.5 0.0**
MK31 Makanchi Array 43.46 61 *e*P **P 03 52 31.5 0.0**
MKAR Makanchi Array 43.46 61 P **P 03 52 31.2 -0.3**
comp=Z,2.1nm,0.6s,baz=278,slow=6.8,SNR=22
MKAR PcP **PcP 03 54 18.2 -1.4**
comp=Z,1.4nm,0.8s,baz=294,slow=3.9,SNR=4.0
MK01 Makanchi Array 43.47 61 *e*P **P 03 52 31.1 -0.6**
SFJD Kangerlussuaq 45.66 329 LR LR 04 12 29.4
comp=Z,35nm,18.5s,baz=333,slow=37
WMQ Urumqi 48.03 63 P **P 03 53 10.1 +2.4**
TIXI Tiksi 56.59 21⇑ *i*P **P 03 54 12.8 +2.0**
TIXI pmax pmax
comp=Z,5.0nm,2.5s
LSZ Lusaka 56.73 172 *e*P **P 03 54 12.3 -0.2**
comp=Z,2.5nm,0.6s
LSZ Lusaka 56.73 172 *e*P **P 03 54 12.3 -0.2**
LSZ pmax pmax
comp=Z,3.0nm,0.6s
RES Resolute Bay 56.82 343 *e*P **P 03 54 12.0 -0.4**
comp=Z,1.0nm,0.7s
RES Resolute Bay 56.82 343 *e*P **P 03 54 12.0 -0.4**
RES pmax pmax
comp=Z,1.0nm,0.7s
SONM Songino Array 58.26 52 P **P 03 54 22.8 -0.3**
comp=Z,0.6nm,0.6s,baz=284,slow=10,SNR=5.0
LZH Lanzhou 62.56 65 *e*P **P 03 54 54.5 +1.7**
LZH pP sP 03 54 57.8 +1.0
LZH sP pP 03 54 59.3 +3.6
LZH *e*PP **PP 03 57 13.6 +3.5**
LZH pmax pmax
comp=Z,20nm,1.3s
LZH pmax pmax
comp=Z,67nm,7.9s
LZH LR LR
comp=N,280nm,14.9s
LZH LR LR
comp=E,280nm,15.2s
LZH LR LR
comp=Z,360nm,18.0s
HHC Hu-ho-hao-te 65.03 57 *e*P **P 03 55 08.3 -0.6**
HHC pmax pmax
comp=Z,11nm,0.7s
HHC pmax pmax
comp=Z,52nm,8.8s
CD2 Chengdu 65.37 70 P **P 03 55 09.5 -1.6**
CD2 pmax pmax
comp=Z,8.0nm,0.6s
FCC Fort Churchill 66.68 329 *e*P **P 03 55 18.2 -0.8**
comp=Z,3.7nm,0.9s
FCC Fort Churchill 66.68 329 *e*P **P 03 55 18.2 -0.8**
FCC pmax pmax
comp=Z,4.0nm,0.9s
BILL Bilibino 67.87 13⇓ *i*P **P 03 55 28.5 +2.0**
BILL *i* 03 55 54.3
BILL *e* 03 58 00.2
BILL pmax pmax
comp=Z,2.0nm,1.1s
BILL MLR MLR
comp=Z,59nm,20.0s
KMI Kunming 67.99 75 P **P 03 55 26.5 -1.7**
KMI pmax pmax
comp=Z,7.0nm,1.0s
KMI pmax pmax
comp=Z,81nm,5.6s
INK Inuvik 69.00 350 *e*P **P 03 55 33.3 -0.2**
comp=Z,1.2nm,0.5s
INK Inuvik 69.00 350 *e*P **P 03 55 33.3 -0.2**
INK pmax pmax
comp=Z,1.0nm,0.5s
BOSA Boshof 69.72 176 P **P 03 55 38.0 -0.4**
comp=Z,3.0nm,0.9s,baz=344,slow=6.3,SNR=6.4
BOSA LR LR 04 31 09.5
comp=Z,49nm,18.4s,baz=198,slow=40
YKA Yellowknife Ar 70.52 340 P **P 03 55 42.7 -0.3**
comp=Z,0.7nm,0.5s,baz=34,slow=5.3,SNR=4.7
CN2 Changchun 71.52 48 *e*P **P 03 55 51.7 +2.3**
FFC Flin Flon 72.61 329 *e*P **P 03 55 55.3 -0.4**
comp=Z,1.3nm,0.5s
FFC Flin Flon 72.61 329 *e*P **P 03 55 55.3 -0.4**
FFC pmax pmax
comp=Z,1.0nm,0.5s
IM3 Indian Mountai 72.93 358 *e*P **P 03 55 57.8 +0.3**
ULM Lac du Bonnet 73.33 323 P **P 03 55 59.3 -0.8**
comp=Z,4.5nm,1.0s,baz=50,slow=5.3,SNR=10
DAWY Dawson 73.78 351 *e*P **P 03 56 02.3 -0.2**
comp=Z,2.6nm,0.8s
ILAR Eielson Array 73.79 355 P **P 03 56 01.9 -0.7**
comp=Z,0.7nm,0.6s,baz=359,slow=5.6,SNR=10
NJ2 Nanjing 74.99 61 *e*P **P 03 56 11.6 +1.6**
NJ2 pmax pmax
comp=Z,16nm,0.5s
KSAR Wonju Array Be 77.10 51 P **P 03 56 21.1 -0.8**
KSAR Wonju Array Be 77.10 51 P **P 03 56 21.2 -0.8**
KSRS Korea Array 77.11 51 P **P 03 56 21.1 -0.8**
comp=Z,1.3nm,0.7s,baz=309,slow=5.3,SNR=5.7
KSRS Korea Array 77.11 51 P **P 03 56 21.2 -0.8**
KSRS pmax pmax
comp=Z,2.0nm,0.8s
YSS Yuzh-Sakhalins 78.04 36 *e*P **P 03 56 26.2 -0.9**
YSS *e* 03 56 29.8
YSS pmax pmax
comp=Z,10.0nm,1.0s
ECSD EROS Data Cent 78.39 319 *e*P **P 03 56 31.9 +2.8**
comp=Z,1.9nm,0.8s
PET Petropavlovsk 79.18 24 *i* P **P 03 56 35.6 +2.4**
PET pmax pmax
comp=Z,29nm,0.9s
CCM Cathedral Cave 79.64 312 *e*P **P 03 56 37.6 +1.6**
comp=Z,4.8nm,0.9s
CCM Cathedral Cave 79.64 312 *e*P **P 03 56 37.6 +1.6**
CCM pmax pmax
comp=Z,5.0nm,0.9s
KDAK Kodiak Island 81.09 356 LR LR 04 33 07.1
comp=Z,58nm,19.1s,baz=127,slow=36
W41B Gary Mavity, V 82.25 311 *e*P **P 03 56 49.9 -0.1**
comp=Z,6.6nm,1.0s
MIAR Mount Ida 83.46 311 *e*P **P 03 56 56.5 +0.2**
comp=Z,2.7nm,0.7s
MIAR Mount Ida 83.46 311 *e*P **P 03 56 56.5 +0.2**
MIAR pmax pmax
comp=Z,3.0nm,0.7s
MJAR Matsushiro Arr 83.58 46 P **P 03 56 56.0 -0.9**
comp=Z,1.9nm,0.8s,baz=292,slow=7.0,SNR=6.3
YPP Pitchstone Pla 84.38 327 *e*P **P 03 57 03.6 +2.4**
comp=Z,5.8nm,1.4s
PHWY Pilot Hill 84.47 322 *e*P **P 03 57 01.4 -0.3**
comp=Z,3.9nm,0.8s
PDAR Pinedale Array 85.10 326 P **P 03 57 03.8 -1.0**
comp=Z,0.4nm,0.6s,baz=27,slow=7.1,SNR=3.8
TXAR Lajitas Array 93.00 314 P **P 03 57 42.2 -0.2**
comp=Z,0.5nm,0.6s,baz=72,slow=4.1,SNR=5.3
ASAR Alice Springs 122.17 94 PKP **PKPdf 04 03 21.6 -2.1**
comp=Z,0.5nm,0.6s,baz=346,slow=2.0,SNR=5.5

TIR ***08*** *03:49:12.4, 41.°37N±0.°95E, h1km, Md3.5/7*
SKO ***08*** *03:49:13.5, 41.°33N±0.°90E, h15km, M2.9, ML3.2*
ATH ***08*** *03:49:13.8, 41.°36N±0.°91E, h17km±1km, ML3.2/12, Error ellipse: s-maj=1.7km s-min=1.0km az=174.0*
CSEM ***08*** *03:49:14.9±0.1, 41.°34N±0.°94E, h2km, ML3.3, Error ellipse: s-maj=2.8km s-min=1.8km az=54.0*
THE ***08*** *03:49:14.6, 41.°36N±0.°95E, h0km±2km, ML3.3/8, Error ellipse: s-maj=2.2km s-min=0.6km az=25.0*
IDC ***08*** *03:49:14.3±1.8, 41.°26N±0.°97E, h0km, mb3.3/3, mb1 3.5/5, mb1mx3.2/64, mbtmp3.3/5, ML2.9/2, Error ellipse: s-maj=26.7km s-min=15.8km az=142.0*
ISCJB ***08*** *03:49:14.3±0.3, 41.°34N±0.°01×20.°93E±0.°02, h2km±2km, mb3.7/1, Error ellipse: s-maj=2.7km s-min=1.7km az=143.2*
PDG ***08*** *03:49:15.0±0.5, 41.°34N×20.°89E, h3km, ML3.6/13, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*
BEO ***08*** *03:49:15.5±0.3, 41.°31N×20.°94E, h10km±2km*
ISC 08 03:49:14.7±1.0, 41.°33N±0.°01×20.°91E±0.°01, h4km±8km, n200, σ1$07/296, 15C-10D, Albania

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res	ISC
OHR	**Ohrid**	**0.24**	**201**	i Pg			**Pg**	**03 49 19.5**	**+0.3**	
OHR				*i* Sg			**Sg**	**03 49 23.4**	**+1.1**	
OHR				*e*Lg			Lg	03 49 23.7		
OHR	comp=N,7μm,0.5s			*e*Lg			Lg	03 49 23.7		
OHR	comp=E,9μm,0.4s									
BIA	**Bitola**	**0.44**	**135**	P			**Pg**	**03 49 23.8**	**+0.6**	
BIA				S			**Sg**	**03 49 29.7**	**+0.8**	
BIA	**Bitola**	**0.44**	**135**	*i* Pg			**Pg**	**03 49 23.8**	**+0.6**	
BIA				*i* Sg			**Sb**	**03 49 31.2**	**-0.9**	
BIA	**Bitola**	**0.44**	**135**	P			**Pg**	**03 49 23.8**	**+0.6**	
BIA				S			**Sg**	**03 49 29.7**	**+0.8**	
PHP	**Peshkopia**	**0.50**	**315**	P			**Pg**	**03 49 23.5**	**-0.7**	
PHP				S			**Sg**	**03 49 30.9**	**+0.2**	
PHP	**Peshkopia**	**0.50**	**315**	*i* PG			**Pg**	**03 49 21.2**	**-3.0**	
PHP				*i* SG			**Sg**	**03 49 31.2**	**+0.5**	
PHP	**Peshkopia**	**0.50**	**315**	*i* Pg			**Pg**	**03 49 21.2**	**-3.0**	
	baz=315									
PHP	**Peshkopia**	**0.50**	**315**	P			**Pg**	**03 49 23.5**	**-0.7**	
PHP				S			**Sg**	**03 49 30.9**	**+0.2**	
PHP				*i* Sg			**Sg**	**03 49 31.2**	**+0.5**	
FNA	**Florina**	**0.65**	**147**	*e*Pg			**Pg**	**03 49 26.9**	**-0.3**	
FNA				*e*Sg			**Sg**	**03 49 36.5**	**+0.9**	
FNA	**Florina**	**0.65**	**147**	P			**Pg**	**03 49 26.6**	**-0.5**	
FNA				S			**Sg**	**03 49 36.8**	**+1.1**	
FNA				AML			AML	03 49 38.8		
FNA	comp=N,11646μm,0.3s			AML			AML	03 49 38.8		
FNA	comp=E,12293μm,0.3s									
FNA	**Florina**	**0.65**	**147**	P			**Pg**	**03 49 26.8**	**-0.4**	
FNA				S			**Sg**	**03 49 36.7**	**+1.1**	
FNA	**Florina**	**0.65**	**147**	*e*Pg			**Pg**	**03 49 26.9**	**-0.3**	
FNA				*e*Sg			**Sg**	**03 49 36.5**	**+0.9**	
KBN	**Korca**	**0.71**	**187**	P			**Pg**	**03 49 28.5**	**+0.2**	
KBN				S			**Sb**	**03 49 39.6**	**-0.3**	
KBN	**Korca**	**0.71**	**187**	P			**Pg**	**03 49 28.5**	**+0.2**	
KBN				S			**Sb**	**03 49 39.6**	**-0.3**	
SKO	**Skopje**	**0.75**	**32**	*e*Pg			**Pg**	**03 49 29.6**	**+0.5**	
SKO				*e*Sg			**Sb**	**03 49 39.9**	**-1.1**	
SKO	**Skopje**	**0.75**	**32**	P			**Pg**	**03 49 29.3**	**+0.2**	
SKO				S			**Sg**	**03 49 39.4**	**+0.5**	
SKO	**Skopje**	**0.75**	**32**	*i* Pg			**Pg**	**03 49 29.3**	**+0.2**	
SKO				*i* Sg			**Sb**	**03 49 40.0**	**-1.1**	
SKO	**Skopje**	**0.75**	**32**	P			**Pg**	**03 49 29.3**	**+0.2**	
SKO	**Skopje**	**0.75**	**32**	*e*Pg			**Pg**	**03 49 29.6**	**+0.5**	
SKO				S			**Sg**	**03 49 39.4**	**+0.5**	
TIR	**Tirane**	**0.79**	**271**	*e*Pg			**Pg**	**03 49 29.6**	**-0.2**	
TIR				*e*Sg			**Sb**	**03 49 41.6**	**-0.3**	
TIR	**Tirane**	**0.79**	**271**	P			**Pg**	**03 49 29.9**	**+0.1**	
TIR				S			**Sg**	**03 49 38.5**	**-1.4**	
TIR				AML			AML	03 49 43.3		
TIR	comp=E,2217μm,0.2s			AML			AML	03 49 43.5		
TIR	comp=N,3097μm,0.1s									
TIR	**Tirane**	**0.79**	**271**	P			**Pg**	**03 49 29.5**	**-0.2**	
TIR				S			**Sb**	**03 49 41.8**	**-0.1**	
TIR	**Tirane**	**0.79**	**271**	*e*Pg			**Pg**	**03 49 29.6**	**-0.2**	
TIR				*e*Sg			**Sb**	**03 49 41.6**	**-0.3**	
NEST	**Nestorio**	**0.92**	**173**	P			**Pg**	**03 49 31.3**	**-1.1**	
NEST				S			**Sg**	**03 49 44.8**	**+0.6**	
NEST				AML			AML	03 49 51.5		
NEST	comp=E,4865μm,0.4s			AML			AML	03 49 51.8		
NEST	comp=N,5280μm,0.5s									
NEST	**Nestorio**	**0.92**	**173**	P			**Pg**	**03 49 31.8**	**-0.5**	
NEST				S			**Sb**	**03 49 45.8**	**-0.1**	
NEST	**Nestorio**	**0.92**	**173**	P			**Pg**	**03 49 31.8**	**-0.5**	
NEST				S			**Sg**	**03 49 44.9**	**+0.6**	
STIP	**Stip**	**1.02**	**69**	*i* Pg			**Pn**	**03 49 37.1**	**+1.3**	
STIP				*i* Sg			**Sn**	**03 49 53.8**	**+3.1**	
PUK	**Puka**	**1.04**	**313**	*i* PG			**Pg**	**03 49 33.5**	**-1.1**	
PUK				*i* SG			**Sb**	**03 49 49.2**	**-0.1**	
PUK	**Puka**	**1.04**	**313**	*i* Pg			**Pg**	**03 49 33.5**	**-1.1**	
PUK				*i* Sg			**Sb**	**03 49 49.2**	**-0.1**	
PENT	**Pentalofos**	**1.15**	**171**	P			**Pg**	**03 49 36.5**	**-0.1**	
PENT				S			**Sb**	**03 49 52.5**	**+0.1**	
PENT				AML			AML	03 49 58.2		
PENT	comp=E,2566μm,0.5s			AML			AML	03 49 59.3		
PENT	comp=N,1802μm,0.9s									
PENT	**Pentalofos**	**1.15**	**171**	P			**Pg**	**03 49 36.6**	**-0.1**	
PENT				S			**Sn**	**03 49 54.0**	**+0.1**	
PENT	**Pentalofos**	**1.15**	**171**	P			**Pg**	**03 49 36.6**	**-0.1**	
PENT				S			**Sb**	**03 49 52.4**	**-0.1**	
GRG	**Griva**	**1.19**	**108**	P			**Pg**	**03 49 37.0**	**-0.4**	
GRG				S			**Sn**	**03 49 54.1**	**-0.7**	
GRG				AML			AML	03 49 58.4		
GRG	comp=E,1488μm,0.7s			AML			AML	03 49 58.6		
GRG	comp=N,1764μm,0.7s									
GRG	**Griva**	**1.19**	**108**	P			**Pg**	**03 49 36.9**	**-0.5**	
GRG				S			**Sn**	**03 49 54.3**	**-0.4**	
GRG	**Griva**	**1.19**	**108**	P			**Pg**	**03 49 36.9**	**-0.5**	
GRG				S			**Sb**	**03 49 53.5**	**0.0**	
BCI	**Bajram Curri**	**1.21**	**329**	*i* PN			**Pg**	**03 49 36.1**	**-1.8**	
BCI				*i* SN			**Sb**	**03 49 54.1**	**-0.1**	
BCI	**Bajram Curri**	**1.21**	**329**	*i* Pn			**Pg**	**03 49 36.1**	**-1.8**	
BCI				*i* Sn			**Sb**	**03 49 54.1**	**-0.1**	
KZN	**Kozani**	**1.22**	**147**	P			**Pg**	**03 49 36.5**	**-1.5**	
KZN				S			**Sg**	**03 49 53.8**	**+0.1**	
KZN				AML			AML	03 49 58.4		
KZN	comp=N,1816μm,0.4s			AML			AML	03 50 00.1		
KZN	comp=E,2746μm,0.6s									
KZN	**Kozani**	**1.22**	**147**	P			**Pg**	**03 49 37.4**	**-0.5**	

KZN S **Sn** **03 49 55.6 +0.1**
KZN Kozani 1.22 147 P **Pg** **03 49 37.4 -0.5**
KZN S **Sb** **03 49 54.1 -0.2**
VAY Valandovo 1.25 90 *e*Pg **Pg** **03 49 38.5 -0.1**
VAY *e*Sg **Sb** **03 49 55.0 -0.3**
VAY Valandovo 1.25 90 P **Pg** **03 49 38.1 -0.5**
VAY S **Sg** **03 49 54.6 -0.2**
VAY Valandovo 1.25 90 *i* Pg **Pg** **03 49 38.4 -0.1**
VAY *i* Sg **Sb** **03 49 55.0 -0.3**
VAY *e*Lg Lg 03 49 56.1
comp=E,236nm,0.5s
VAY *e*Lg Lg 03 50 01.8
comp=N,291nm,0.6s
VAY Valandovo 1.25 90 P **Pg** **03 49 38.1 -0.5**
VAY Valandovo 1.25 90 *e*Pg **Pg** **03 49 38.5 -0.1**
VAY S **Sg** **03 49 54.6 -0.2**
VAY *e*Sg **Sb** **03 49 55.0 -0.3**
ULC Ulcinj 1.40 297 ⇓*i*Pg **Pn** **03 49 40.5 -0.5**
ULC *e*Sg **Sn** **03 50 01.9 +2.0**
ULC Ulcinj 1.40 297 ⇓*i*Pg **Pn** **03 49 40.5 -0.5**
ULC *e*Sg **Sn** **03 50 01.9 +2.0**
KPRO Kipourio 1.42 166 P **Pn** **03 49 40.9 -0.5**
KPRO S **Sb** **03 49 59.3 -0.9**
KPRO AML AML 03 50 07.4
comp=E,2002µm,0.6s
KPRO AML AML 03 50 10.4
comp=N,1858µm,1.1s
KPRO Kipourio 1.42 166 P **Pn** **03 49 41.0 -0.3**
KPRO S **Sn** **03 50 02.2 +1.7**
KPRO Kipourio 1.42 166 P **Pn** **03 49 41.0 -0.3**
KPRO S **Sb** **03 50 00.1 -0.1**
PVY Plav 1.45 331 ⇓*i*Pg **Pn** **03 49 41.6 -0.2**
PVY *e*Sg **Sn** **03 50 04.3 +3.0**
PVY Plav 1.45 331 ⇓*i*Pg **Pn** **03 49 41.6 -0.2**
PVY *e*Sg **Sn** **03 50 04.3 +3.0**
KNT Kendrikon 1.51 96 P **Pn** **03 49 42.8 +0.2**
KNT S **Sb** **03 50 02.6 -0.1**
KNT AML AML 03 50 07.0
comp=E,467µm,0.6s
KNT AML AML 03 50 08.5
comp=N,797µm,0.7s
KNT Kendrikon 1.51 96 P **Pn** **03 49 42.5 0.0**
KNT Kendrikon 1.51 96 P **Pn** **03 49 42.5 0.0**
KNT S **Sg** **03 50 02.8 -0.3**
DRME Dracevica, Mon 1.55 304 *e*Pg **Pn** **03 49 43.0 0.0**
DRME *e*Sg **Sg** **03 50 07.4 +3.0**
DRME Dracevica, Mon 1.55 304 *e*Pg **Pn** **03 49 43.0 0.0**
DRME *e*Sg **Sg** **03 50 07.4 +3.0**
SRN Sarande 1.61 206 P **Pg** **03 49 45.4 -0.1**
SRN Sarande 1.61 206 P **Pg** **03 49 45.4 -0.1**
BARS Barje 1.63 24 *e*Pn **Pb** **03 49 45.0 -0.3**
BARS Barje 1.63 24 *e*Pn **Pb** **03 49 45.0 -0.3**
PDG Podgorica 1.65 312 *e*Pn **Pb** **03 49 45.7 0.0**
PDG *e*Sg **Sg** **03 50 09.8 +2.1**
PDG Podgorica 1.65 312 P **Pn** **03 49 44.8 +0.3**
PDG S **Sg** **03 50 07.8 +0.1**
PDG Podgorica 1.65 312 P **Pn** **03 49 44.8 +0.3**
PDG Podgorica 1.65 312 ⇓*i*Pn **Pb** **03 49 45.5 -0.2**
PDG S **Sg** **03 50 07.8 +0.1**
PDG *e*Sg **Sg** **03 50 09.8 +2.1**
PDG *e*Sn **Sg** **03 50 10.4 +2.7**
TTG Podgorica 1.65 312 ⇓*i*Pn **Pb** **03 49 45.5 -0.2**
TTG *e*Sn **Sg** **03 50 10.4 +2.7**
JAN Janina 1.68 182 P **Pn** **03 49 45.2 +0.3**
JAN AML AML 03 50 16.8
comp=E,1006µm,0.5s
JAN AML AML 03 50 19.2
comp=N,862µm,0.9s
JAN Janina 1.68 182 P **Pn** **03 49 45.1 +0.3**
JAN Janina 1.68 182 P **Pn** **03 49 45.1 +0.3**
BEY Berane 1.71 334 ⇓*i*Pn **Pb** **03 49 46.3 -0.5**
BEY *e*Sn **Sg** **03 50 11.8 +2.1**
IVA Berane 1.71 334 ⇓*i*Pn **Pb** **03 49 46.3 -0.5**
IVA *e*Sn **Sg** **03 50 11.8 +2.1**
LIT Litokhoron 1.72 135 P **Pn** **03 49 44.8 -0.6**
LIT Litokhoron 1.72 135 P **Pn** **03 49 45.4 0.0**
LIT Litokhoron 1.72 135 P **Pn** **03 49 45.4 0.0**
HORT Hortiatis 1.81 113 P **Pn** **03 49 45.9 -0.9**
HORT Hortiatis 1.81 113 P **Pn** **03 49 46.2 -0.6**
KEK Kerkira 1.83 208 P **Pb** **03 49 48.4 -0.2**
KEK S **Sn** **03 50 10.3 -0.1**
KEK AML AML 03 50 18.7
comp=E,724µm,0.5s
KEK AML AML 03 50 23.1
comp=N,436µm,0.6s
KEK Kerkira 1.83 208 P **Pb** **03 49 47.9 -0.7**
KEK Kerkira 1.83 208 P **Pn** **03 49 47.7 +0.8**
KEK S **Sn** **03 50 10.8 +0.4**
KOME Kolasin 1.84 326 ⇑*i*Pn **Pb** **03 49 48.3 -0.6**
KOME *e*Sn **Sg** **03 50 14.9 +1.2**
KOME Kolasin 1.84 326 ⇑*i*Pn **Pb** **03 49 48.3 -0.6**
KOME *e*Sn **Sg** **03 50 14.9 +1.2**
SELS Selova 1.89 5 *e*Pn **Pn** **03 49 47.2 -0.6**
CEME Cevo 1.92 310 ⇑*i*Pn **Pb** **03 49 49.5 -0.8**
CEME *e*Sn **Sg** **03 50 16.1 -0.2**
CEME Cevo 1.92 310 ⇑*i*Pn **Pb** **03 49 49.5 -0.8**
CEME *e*Sn **Sg** **03 50 16.1 -0.2**
THL Klokotos Trika 1.96 154 P **Pn** **03 49 49.7 +1.1**
THL AML AML 03 50 22.3
comp=N,475µm,0.7s
THL AML AML 03 50 25.9
comp=E,407µm,0.6s
THL Klokotos Trika 1.96 154 P **Pn** **03 49 49.3 +0.7**
SRS Serrai 2.04 95 *e*Pn **Pn** **03 49 49.0 -0.7**
SRS Serrai 2.04 95 P **Pn** **03 49 48.2 -1.5**
SRS Serrai 2.04 95 *e*Pn **Pn** **03 49 49.0 -0.7**
NKME Niksic 2.04 315 ⇑*i*Pn **Pb** **03 49 51.8 -0.6**
NKME *e*Sn **Sg** **03 50 19.8 -0.5**
NKME Niksic 2.04 315 ⇑*i*Pn **Pb** **03 49 51.8 -0.6**
NKME *e*Sn **Sg** **03 50 19.8 -0.5**
SJES Sjenica 2.05 340 *e*Pn **Pn** **03 49 51.0 +1.0**
NKY Niksic 2.06 317 ⇓*i*Pn **Pb** **03 49 52.0 -0.6**
NKY *e*Sn **Sg** **03 50 19.9 -0.8**
NKY Niksic 2.06 317 ⇓*i*Pn **Pb** **03 49 52.0 -0.6**
NKY *e*Sn **Sg** **03 50 19.9 -0.8**
HCY Herceg Novi 2.12 302 ⇑*i*Pn **Pb** **03 49 52.6 -1.1**
HCY *e*Sn **Sb** **03 50 21.3 +1.0**
HCY Herceg Novi 2.12 302 ⇑*i*Pn **Pb** **03 49 52.6 -1.1**
HCY *e*Sn **Sb** **03 50 21.3 +1.0**
VTS Vitosha 2.13 53 *e*Pn **Pn** **03 49 52.1 +1.0**
VTS Vitosha 2.13 53 *e*Pn **Pn** **03 49 52.1 +1.0**
PLG Polygyros 2.15 116 P **Pn** **03 49 51.5 +0.1**
PLG Polygyros 2.15 116 P **Pn** **03 49 51.4 +0.1**
DSL Palaion Diasel 2.20 176 P **Pb** **03 49 54.0 -1.1**
DSL AML AML 03 50 32.1
comp=E,646µm,0.7s
DSL AML AML 03 50 35.5
comp=N,606µm,0.8s
DSL Palaion Diasel 2.20 176 P **Pn** **03 49 53.1 +1.1**
NVR Nevrokopi 2.22 89 P **Pn** **03 49 53.4 +1.0**
NVR Nevrokopi 2.22 89 P **Pn** **03 49 52.8 +0.4**
SCTE Santa Cesarea 2.24 237 P **Pn** **03 49 51.6 -1.0**
SCTE Santa Cesarea 2.24 237 P **Pn** **03 49 52.2 -0.4**
PLE Pljevlja 2.29 331 ⇑*i*Pn **Pn** **03 49 54.5 +1.1**
PLE *e*Sn **Sb** **03 50 25.6 +0.2**
PLE Pljevlja 2.29 331 ⇑*i*Pn **Pn** **03 49 54.5 +1.1**
PLE *e*Sn **Sb** **03 50 25.6 +0.2**
IVAS Ivanjica 2.31 346 *e*Pn **Pn** **03 49 53.5 -0.1**
IVAS *e*Sn **Sn** **03 50 23.5 +1.0**
IVAS Ivanjica 2.31 346 *e*Pn **Pn** **03 49 53.5 -0.1**
IVAS *e*Sn **Sn** **03 50 23.5 +1.0**
ZAPS Zavoj 2.32 33 *e*Pn **Pn** **03 49 54.4 +0.7**
BRY Bratogost 2.36 312 ⇑*i*Pn **Pn** **03 49 56.1 +1.8**
BRY *e*Sn **Sb** **03 50 27.3 -0.1**
BRY Bratogost 2.36 312 ⇑*i*Pn **Pn** **03 49 56.1 +1.8**
BRY *e*Sn **Sb** **03 50 27.3 -0.1**
UPM Unac-Piva 2.39 322 ⇑*i*Pn **Pn** **03 49 56.1 +1.3**
UPM *e*Sn **Sb** **03 50 27.8 -0.5**
UPM Unac-Piva 2.39 322 ⇑*i*Pn **Pn** **03 49 56.1 +1.3**
UPM *e*Sn **Sb** **03 50 27.8 -0.5**
FYTO Fytoko, Volos 2.47 140 P **Pn** **03 49 54.4 -1.3**
FYTO Fytoko, Volos 2.47 140 P **Pn** **03 49 55.2 -0.5**
EVR Evrytania 2.51 164 P **Pn** **03 49 57.5 +1.2**
EVR Evrytania 2.51 164 P **Pn** **03 49 57.1 +0.8**
PAIG Paliouri 2.53 123 P **Pn** **03 49 56.2 -0.4**
PAIG Paliouri 2.53 123 P **Pn** **03 49 56.4 -0.2**
OUR Ouranopolis 2.54 112 P **Pn** **03 49 57.8 +1.2**
OUR Ouranopolis 2.54 112 P **Pn** **03 49 57.3 +0.7**
LKD2 Lefkada island 2.55 184 P **Pn** **03 49 58.8 +2.0**
LKD2 Lefkada island 2.55 184 P **Pn** **03 49 58.0 +1.2**
AGG Agios Georgios 2.55 154 P **Pn** **03 49 57.4 +0.6**
AGG Agios Georgios 2.55 154 P **Pn** **03 49 57.3 +0.4**
GRUS Gruza 2.56 357 *e*Pn **Pn** **03 49 57.0 +0.1**
GRUS Gruza 2.56 357 *e*Pn **Pn** **03 49 57.0 +0.1**
XOR Xorichti 2.63 138 P **Pn** **03 49 56.6 -1.3**
XOR Xorichti 2.63 138 P **Pn** **03 49 57.4 -0.5**
ZAGS Zajecar 2.66 21 *e*Pn **Pn** **03 49 58.3 -0.1**
ZAGS *e*Sn **Sn** **03 50 30.5 -0.6**
ZAGS Zajecar 2.66 21 *e*Pn **Pn** **03 49 58.3 -0.1**
ZAGS *e*Sn **Sn** **03 50 30.5 -0.6**
FASA Fasano 2.74 260 *e*Pn **Pn** **03 50 00.3 +0.9**
KAVA Kavala 2.74 96 P **Pn** **03 49 59.5 +0.1**
KAVA Kavala 2.74 96 P **Pn** **03 49 59.5 +0.1**
BBLS Lazići 2.77 337 *e*Pn **Pn** **03 50 00.1 +0.3**
BBLS Lazići 2.77 337 *e*Pn **Pn** **03 50 00.1 +0.3**
STON Ston 2.84 304 *e*Pn **Pn** **03 50 00.8 0.0**
STON *e*Sn **Sn** **03 50 37.0 +1.6**
STON Ston 2.84 304 *e*Pn **Pn** **03 50 00.6 -0.1**
STON Ston 2.84 304 *e*Pn **Pn** **03 50 00.8 0.0**
STON *e*Sn **Sn** **03 50 37.0 +1.6**
DIVS Divibare 2.85 347 *e*Pn **Pn** **03 50 00.8 -0.2**
DIVS *e*Sn **Sn** **03 50 35.7 0.0**
DIVS Divibare 2.85 347 *e*Pn **Pn** **03 50 00.8 -0.2**
DIVS *e*Sn **Sn** **03 50 35.7 0.0**
TRUS Trudelj 2.91 353 *e*Pn **Pn** **03 50 01.6 -0.2**
TRUS Trudelj 2.91 353 *e*Pn **Pn** **03 50 01.6 -0.2**
SKIA Skiathos 2.92 137 P **Pn** **03 50 00.9 -0.9**
SKIA Skiathos 2.92 137 P **Pn** **03 50 01.6 -0.3**
NOCI Noci 2.96 261 P **Pn** **03 50 01.7 -0.7**
NOCI Noci 2.96 261 P **Pn** **03 50 02.2 -0.2**
EFP Efpalio 3.00 165 P **Pn** **03 50 02.5 -0.5**
EFP Efpalio 3.00 165 P **Pn** **03 50 03.0 0.0**
BAI Bari 3.05 267 *e*Pn **Pn** **03 50 03.9 +0.3**
BAI *e*Sn **Sn** **03 50 38.0 -2.6**
KALE Kalithea 3.09 162 P **Pn** **03 50 05.9 +1.6**
KALE Kalithea 3.09 162 P **Pn** **03 50 05.3 +1.1**
TRIZ Trizonia 3.10 163 P **Pn** **03 50 06.6 +2.3**
TRIZ Trizonia 3.10 163 P **Pn** **03 50 05.8 +1.5**
HAPS Han Pijesak,Bl 3.11 333 *e*Pn **Pn** **03 50 04.3 -0.3**
HAPS Han Pijesak,Bl 3.11 333 *e*Pn **Pn** **03 50 04.3 -0.3**
KUBS Kucevo 3.13 10 *e*Pn **Pn** **03 50 03.0 -1.8**
KUBS Kucevo 3.13 10 *e*Pn **Pn** **03 50 03.0 -1.8**
VLS Valsamata 3.16 185 P **Pn** **03 50 04.7 -0.5**
VLS Valsamata 3.16 185 P **Pn** **03 50 05.3 +0.1**
KFL Anninata 3.22 182 P **Pn** **03 50 06.9 +0.8**
KFL Anninata 3.22 182 P **Pn** **03 50 06.8 +0.8**
SG1 Sgolgore (BA) 3.23 263 *e*Pn **Pn** **03 50 07.2 +0.9**
SG1 Sn **Sn** **03 50 44.7 -0.6**
RLS Riolos of Patr 3.30 172 P **Pn** **03 50 09.4 +2.4**
RLS Riolos of Patr 3.30 172 P **Pn** **03 50 08.6 +1.5**
TEKS Tekeris 3.37 343 *e*Pn **Pn** **03 50 08.7 +0.6**
TEKS Tekeris 3.37 343 *e*Pn **Pn** **03 50 08.7 +0.6**
KLV Kalavryta, Ach 3.42 163 P **Pn** **03 50 11.1 +2.2**
KLV Kalavryta, Ach 3.42 163 P **Pn** **03 50 10.3 +1.5**
EREA Eretria 3.72 140 P **Pn** **03 50 13.2 +0.2**
EREA Eretria 3.72 140 P **Pn** **03 50 13.4 +0.4**
MS1 Monte Sant'Ang 3.75 277 *i* Pn **Pn** **03 50 13.7 +0.3**
MS1 Sn **Sn** **03 50 54.7 -3.3**
TIP Timpagrande 3.84 237 P **Pn** **03 50 13.4 -1.1**
TIP Timpagrande 3.84 237 P **Pn** **03 50 14.3 -0.3**
CUC Castrocucco 4.10 253 P **Pn** **03 50 17.3 -0.9**
CUC Castrocucco 4.10 253 P **Pn** **03 50 18.1 -0.1**
DID Didima 4.22 154 P **Pn** **03 50 21.5 +1.7**
DID Didima 4.22 154 P **Pn** **03 50 21.2 +1.3**
BZS Buzias 4.31 7 *e*Pn **Pn** **03 50 19.8 -1.2**
BZS Buzias 4.31 7 *e*Pn **Pn** **03 50 19.8 -1.2**
BLY Banja Luka 4.37 323 *e*Pn **Pn** **03 50 23.4 +1.6**
BLY Banja Luka 4.37 323 *e*Pn **Pn** **03 50 23.4 +1.6**
PYL PYLOS 4.48 171 P **Pn** **03 50 22.0 -1.3**
PYL PYLOS 4.48 171 P **Pn** **03 50 23.2 -0.1**
UDBI Udbina 4.95 312 *e*Pn **Pn** **03 50 31.7 +1.8**
UDBI Sn **Sn** **03 51 29.9 +2.4**
UDBI Udbina 4.95 312 *e*Pn **Pn** **03 50 31.6 +1.8**
UDBI Sn **Sn** **03 51 29.8 +2.4**
KYTH Kithira 5.33 161 P **Pn** **03 50 39.0 +4.0**
NVLJ Novalja 5.48 308 *i* Pn **Pn** **03 50 38.5 +1.4**
NVLJ Novalja 5.48 308 *i* Pn **Pn** **03 50 38.5 +1.4**
MLR Muntele Rosu 5.54 40 Pn **Pn** **03 50 40.4 +2.3**
comp=N,0.1nm,0.3s,baz=165,slow=12,SNR=4.9
MLR Sn **Sn** **03 51 42.6 +0.3**
comp=N,0.1nm,0.3s,baz=284,slow=11,SNR=2.2
ANKY Antikythira Is 5.77 160 P **Pn** **03 50 40.9 -0.1**
ANKY Antikythira Is 5.77 160 P **Pn** **03 50 41.7 +0.7**
VYHS Vyhne 7.31 349 *e*PN **Pn** **03 51 03.1 +0.9**
VYHS *e*SN **Sn** **03 52 26.9 +1.3**
VYHS *e*LG Lg 03 54 40.5
VYHS Vyhne 7.31 349 *e*Pn **Pn** **03 51 03.1 +0.9**
VYHS *e*Sn **Sn** **03 52 26.9 +1.3**
GERES GERESS Array B 9.07 328 Pn **Pn** **03 51 28.9 +2.5**
comp=N,0.1nm,0.3s,baz=154,slow=14,SNR=3.4
FINES FINESS Array B 20.38 7 P Pn 03 53 54.3 +0.1
comp=N,1.0nm,0.7s,baz=170,slow=18,SNR=3.7
NOA NORSAR Array B 20.61 347 P **P** **03 53 54.0 -0.6**
comp=N,0.8nm,0.6s,baz=166,slow=11,SNR=2.6
TORD Torodi Ar. Bea 32.71 216 P **P** **03 55 47.9 -0.4**
comp=N,0.8nm,0.8s,baz=35,slow=8.4,SNR=4.8

CSEM ***08*** *03:53:48.6±0.6, 49°.95N×18°.58E, h1km, Error ellipse: s-maj=13.9km s-min=4.7km az=20.0*

PRU 08 03:53:49.2, 49.97N×18.56E, h0km, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.30**	**244**	*e*Pg	Pg	03 53 55.6	+0.7
OKC				*e*SG	Sb	03 54 00.9	-2.0
comp=Z,14nm,0.5s							
OKC	**Ostrava-Krasne**	**0.30**	**244**	Pg	Pg	03 53 55.6	+0.7
OKC				Sg	Sb	03 54 00.9	-2.0
14nm,0.5s							
MORC	**Moravsky Berou**	**0.69**	**254**	*e*Pg	Pg	03 54 02.8	+0.5
MORC				*e*Sg	Sg	03 54 12.2	+1.0
MORC	**Moravsky Berou**	**0.69**	**254**	*e*PG	Pg	03 54 02.8	+0.5
MORC				*e*SG	Sg	03 54 12.2	+1.0
LANS	**Liptovska Anna**	**1.01**	**144**	*e*PG	Pg	03 54 07.5	-1.1
LANS				*e*SG	Sg	03 54 21.1	-0.5
LANS	**Liptovska Anna**	**1.01**	**144**	*e*Pg	Pg	03 54 07.5	-1.1
LANS				*e*Sg	Sg	03 54 21.2	-0.4
NIE	**Niedzica**	**1.26**	**115**	*e*Pg	Pg	03 54 12.7	-0.5
NIE				*e*Sg	Sb	03 54 30.7	+0.1
NIE	**Niedzica**	**1.26**	**115**	*e*PG	Pg	03 54 12.7	-0.6
NIE				*e*Sg	Sb	03 54 30.7	+0.2
VYHS	**Vyhne**	**1.49**	**173**	*e*Pg	Pn	03 54 15.9	-1.3
VYHS				*e*Sn	Sg	03 54 34.4	-2.6
VYHS	**Vyhne**	**1.49**	**173**	*e*PG	Pn	03 54 15.9	-1.3
VYHS				*e*SG	Sg	03 54 34.4	-2.6
DPC	**Dobruska-Polom**	**1.49**	**286**	*e*PG	Pn	03 54 17.0	-0.3
DPC				*e*SG	Sn	03 54 37.6	+0.2
comp=Z,4.3nm,0.4s							
DPC	**Dobruska-Polom**	**1.49**	**286**	Pg	Pn	03 54 17.0	-0.3
DPC				Sg	Sn	03 54 37.6	+0.2
4.3nm,0.4s							
UPC	**Upice**	**1.72**	**289**	*e*SG	Sg	03 54 44.9	+0.4
UPC	**Upice**	**1.72**	**289**	Sg	Sg	03 54 44.9	+0.4
GOPC	**GO Pecny, Ondr**	**2.44**	**270**	*e*SG	Sb	03 55 05.2	+0.7
GOPC	**GO Pecny, Ondr**	**2.44**	**270**	Sg	Sb	03 55 05.2	+0.7
PRU	**Pruhonice**	**2.59**	**272**	*e*SG	Sb	03 55 09.9	+0.9
PRU	**Pruhonice**	**2.59**	**272**	Sg	Sb	03 55 09.9	+0.9
KHC	**Kasperske Hory**	**3.35**	**257**	*e*SG	Sg	03 55 35.1	-1.7
KHC	**Kasperske Hory**	**3.35**	**257**	Sg	Sg	03 55 35.1	-1.7

IDC ***08*** *04:09:09.7±1.5, 22°.72N×94°.50E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.4/70, mbtmp3.7/6, MS3.6/2, Ms1 3.6/2, ms1mx2.6/71, Error ellipse: s-maj=63.5km s-min=24.9km az=59.0*

NDI ***08*** *04:09:22.5±1.7, 23°.10N×94°.02E, h10km, ML3.7*

ISCJB ***08*** *04:09:24.1±0.9, 23°.15N±0°.06×93°.97E±0°.05, h100km, mb3.5/6, Error ellipse: s-maj=8.3km s-min=5.9km az=169.0*

ISC 08 04:09:22.8±1.1, 22°.98N±0°.09×94°.09E±0°.07, h100km, n27, σ1°90/42, mb3.6/6, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**1.85**	**356**	*e*P	**Pn**	**04 09 53.6**	**0.0**
IMP				*e*S	**Sn**	**04 10 17.4**	**+0.4**
SHL	**Shillong**	**3.27**	**322**	*e*P	**Pn**	**04 10 12.7**	**+0.3**
SHL				*e*S	**Sn**	**04 10 49.7**	**-1.0**
SHL				IAML		04 10 51.0	
comp=N,330nm,0.1s							
SHL				IAML		04 10 51.1	
comp=E,279nm,0.1s							
MOKO	**MOKOCHONG**	**3.35**	**7**	*e*P	**Pn**	**04 10 14.2**	**+0.8**
MOKO				*e*S	**Sn**	**04 10 50.2**	**-2.3**
MOKO				IAML		04 11 07.8	
comp=E,149nm,0.3s							
MOKO				IAML		04 11 08.0	
comp=N,149nm,0.6s							
TEZP	**TEZPUR**	**3.81**	**342**	*e*P	**Pn**	**04 10 18.7**	**-0.8**
TEZP				*e*S	**Sn**	**04 11 00.3**	**-3.0**
TEZP				IAML		04 11 04.7	
comp=E,376nm,0.0s							
TEZP				IAML		04 11 04.7	
comp=N,390nm,0.0s							
GUWA	**GUWAHATI**	**3.88**	**326**	*e*P	**Pn**	**04 10 19.9**	**-0.4**
GUWA				*e*S	**Sn**	**04 11 02.4**	**-2.5**
GUWA				IAML		04 11 06.0	
comp=N,447nm,0.1s							
GUWA				IAML		04 11 06.0	
comp=E,179nm,0.1s							
TURI	**Tura**	**4.28**	**308**	*e*P	**Pn**	**04 10 26.8**	**+0.9**
TURI				*e*S	**Sn**	**04 11 13.9**	**-0.8**
TURI				IAML		04 11 17.5	
comp=E,915nm,0.1s							
TURI				IAML		04 11 17.7	
comp=N,554nm,0.3s							
ZIRO	**ZIRO**	**4.54**	**357**	*e*P	**Pn**	**04 10 29.2**	**-0.2**
ZIRO				*e*S	**Sn**	**04 11 18.7**	**-2.4**
ZIRO				IAML		04 11 22.7	
comp=E,228nm,0.2s							
ZIRO				IAML		04 11 22.8	
comp=N,304nm,0.3s							
DHUB	**DHUBRI**	**4.81**	**310**	*e*P	**Pn**	**04 10 32.6**	**-0.3**
GTK	**Tadong**	**6.59**	**312**	*e*P	**Pn**	**04 10 58.6**	**+1.3**
BOK	**Bokaro**	**7.58**	**278**	*e*P	**Pn**	**04 11 11.7**	**+1.0**
JIRN	**Jiri**	**8.53**	**305**	*e*Pn	**Pn**	**04 11 24.2**	**+0.3**
JIRN				*e*Sn	**Sn**	**04 12 57.6**	**-1.1**
comp=N,122nm,0.3s							
GUN	**Gumba**	**8.90**	**305**	*e*Pn	**Pn**	**04 11 29.4**	**+0.5**
GUN				*e*Sn	**Sn**	**04 13 06.3**	**-1.3**
comp=N,83nm,0.3s							
PKIN	**Phulchoki**	**9.10**	**302**	*e*Pn	**Pn**	**04 11 31.8**	**+0.2**
PKIN				*e*Sn	**Sn**	**04 13 11.2**	**-1.2**
comp=N,38nm,0.4s							
KKN	**Kakani**	**9.30**	**303**	*e*Pn	**Pn**	**04 11 35.1**	**+0.9**
KKN				*e*Sn	**Sn**	**04 13 16.3**	**-0.8**
comp=N,34nm,0.2s							
DMN	**Daman**	**9.35**	**301**	*e*Pn	**Pn**	**04 11 35.5**	**+0.6**
DMN				*e*Sn	**Sn**	**04 13 16.8**	**-1.5**
comp=N,32nm,0.4s							
GKN	**Gorkha**	**9.90**	**302**	*e*Pn	**Pn**	**04 11 42.2**	**-0.1**
GKN				*e*Sn	**Sn**	**04 13 29.2**	**-2.4**
comp=N,72nm,0.3s							
KOLN	**Koldanda**	**10.62**	**299**	*e*Pn	**Pn**	**04 11 51.1**	**-1.0**
KOLN				*e*Sn	**Sn**	**04 13 44.6**	**-4.6**
comp=N,51nm,0.4s							
DANN	**Dangsing**	**10.74**	**302**	*e*Pn	**Pn**	**04 11 54.3**	**+0.4**
DANN				*e*Sn	**Sn**	**04 13 48.9**	**-3.5**
comp=N,45nm,0.5s							
PYUN	**Piuthan**	**11.24**	**299**	*e*Pn	**Pn**	**04 11 59.6**	**-1.0**
PYUN				*e*Sn	**Sn**	**04 14 00.3**	**-4.1**
comp=N,31nm,0.4s							
AAK	**Ala-Archa**	**25.50**	**325**	LR	LR	04 26 53.8	
comp=N,31nm,19.2s,baz=271,slow=41							
MKAR	**Makanchi Array**	**25.60**	**341**	P	**P**	**04 14 44.2**	**+1.5**
comp=N,0.4nm,0.4s,baz=145,slow=11,SNR=7.2							
MKAR				pP	**pP**	**04 15 08.4**	**+3.6**
comp=N,3.6nm,0.6s,baz=146,slow=10,SNR=17							
SONM	**Songino Array**	**26.68**	**19**	P	**P**	**04 14 51.7**	**-0.9**
comp=N,1.0nm,0.6s,baz=171,slow=11,SNR=5.8							
KURBB	**Kurchatov Arra**	**30.15**	**340**	P	**P**	**04 15 24.5**	**+1.4**
comp=N,0.2nm,0.4s,baz=158,slow=7.2,SNR=3.0							
WRA	**Warramunga Arr**	**57.98**	**134**	P	**P**	**04 19 01.3**	**-4.0**
comp=N,0.2nm,0.4s,baz=321,slow=7.5,SNR=6.7							
ARCES	**ARCESS Array B**	**61.20**	**338**	P	**P**	**04 19 28.6**	**+1.8**
comp=N,2.0nm,1.0s,baz=86,slow=7.4,SNR=3.9							
HFS	**Hagfors**	**65.61**	**327**	P	**P**	**04 19 57.9**	**+2.0**
comp=N,0.6nm,0.5s,baz=111,slow=8.0,SNR=6.2							
BBB	**Bella Bella**	**96.57**	**25**	LR	LR	05 07 34.3	
comp=N,130nm,21.5s,baz=270,slow=36							

NIED ***08*** *04:10:00, 36°.80N×141°.30E, h8km, Mw4.0 Best double couple: M0:1.01000×10^15 NP1:φ=9.00000°, δ=35.00000°, λ=-105.00000°. NP2:φ=206.00000°, δ=57.00000°, λ=-80.00000°.*

JMA ***08*** *04:10:33.6±0.1, 36°.76N×141°.28E, h37km±1km, M4.3*

JMA Felt II J1.

MOS ***08*** *04:10:34.3±1.2, 36°.84N×141°.22E, h28km, mb4.3/12, Error ellipse: s-maj=12.1km s-min=8.3km az=94.3*

ISCJB ***08*** *04:10:34.4±0.8, 36°.80N±0°.03×141°.24E±0°.04, h27km±4km, mb4.2/43, MS3.7/2, Error ellipse: s-maj=6.8km s-min=4.6km az=42.0*

IDC ***08*** *04:10:36.1±6.0, 36°.70N×141°.12E, h32km±45km, mb3.9/19, mb1 4.1/21, mb1mx3.9/71, mbtmp4.1/21, ML4.3/2, MS3.0/1, Ms1 3.0/1, ms1mx2.4/71, Error ellipse: s-maj=18.3km s-min=15.3km az=65.0*

NEIC ***08*** *04:10:38.3±0.7, 36°.91N×141°.10E, h42km±7km, mb4.3/14, Error ellipse: s-maj=8.0km s-min=6.0km az=145.0*

NEIC Recorded [2 JMA] in Fukushima and Ibaraki.

ISC 08 04:10:33.5±1.3, 36°.86N±0°.04×141°.28E±0°.05, h11km±8km, n101, σ1°86/106, mb4.2/43, 9C-4D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.46**	**303**	P	**Pb**	**04 10 44.0**	**+0.4**
ONAJ				S	**Sb**	**04 10 51.4**	**+1.0**
JFK	**Kawauchi**	**0.60**	**328**	P	**Pn**	**04 10 46.6**	**-1.5**
JFK				S	**Sn**	**04 10 55.7**	**-2.2**
JHO	**Hitachi**	**0.62**	**247**	P	**Pb**	**04 10 45.5**	**-0.9**
JHO				*e*S	**Sg**	**04 10 53.6**	**-0.1**
JFT	**Otama**	**1.00**	**312**	P	**Pn**	**04 10 53.2**	**-0.3**
JFT				S	**Sn**	**04 11 06.9**	**-0.7**
JYT	**Yasato**	**1.07**	**235**	P	**Pg**	**04 10 51.7**	**-2.5**
JYT				S	**Sg**	**04 11 05.1**	**-3.1**
JMM	**Marumori**	**1.08**	**339**	P	**Pn**	**04 10 53.9**	**-0.7**
JMM				S	**Sn**	**04 11 08.9**	**-0.6**
JFY	**Yanaizu**	**1.37**	**294**	P	**Pg**	**04 10 58.6**	**-1.3**
JFY				S	**Sn**	**04 11 17.2**	**+0.4**
JAG	**Ashikaga**	**1.53**	**254**	P	**Pn**	**04 10 59.2**	**-1.6**
JAG				S	**Sn**	**04 11 18.3**	**-2.3**
MJAR	**Matsushiro Arr**	**2.49**	**264**	Pn	**Pn**	**04 11 13.7**	**-0.3**
18nm,0.3s,baz=91,slow=14,SNR=61							
MAJO	**Matsushiro**	**2.49**	**264**	*e*Pn	**Pn**	**04 11 14

comp=Z,1.7nm,0.5s,baz=358,slow=3.6,SNR=9.6

ISCJB ***08*** *04:18:58.1±0.2, 1°.67S±0°.02×81°.67W±0°.01, h10km, mb4.7/171, MS3.9/18, Error ellipse: s-maj=3.3km s-min=1.9km az=18.4*

IDC ***08*** *04:18:58.2±0.7, 1°.67S×81°.69W, h0km, mb4.3/20, mb1 4.5/25, mb1mx4.4/54, mbtmp4.4/25, ML4.6/3, MS3.9/22, Ms1 3.9/22, ms1mx3.7/41, Error ellipse: s-maj=22.6km s-min=11.2km az=52.0*

IGQ ***08*** *04:18:60.0±0.3, 2°S±2°×8°2W±°, h12km, M5.2/30, mb4.9/12, mB5.4/4, MLv5.4/30, Mw(mB)4.8/4*

NEIC ***08*** *04:19:03.4±1.2, 1°.66S×81°.51W, h34km±8km, mb4.8/159, ML4.9(IGQ), Error ellipse: s-maj=4.9km s-min=2.9km az=57.0*

GCMT ***08*** *04:19:03.4±0.3, 1°.77S×81°.65W, h18km±1km, MW5.0/80, Moment Tensor Solution. s17,c23; s80,c117; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.04±.13; Mθθ0.49±.10; Mφφ-0.44±.14; Mrθ0.17±.22; Mrφ3.00±.10; Mθφ1.44±.31; Best double couple: M0 3.36400×10^16 NP1:φs4.00000°, δ90.00000°, λ154.00000°. NP2: φs95.00000°, δ64.00000°, λ0.00000°. Principal axes: T 3.4010, Plg18.0000°, Azm317.0000°; N -0.0740, Plg64.0000°, Azm184.0000°; P -3.3260, Plg18.0000°, Azm52.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 08 04:19:00.0±0.7, 1°.74S±0°.04×81°.60W±0°.04, h14km±4km, n739, σ1§35/745, mb4.8/171, MS3.8/19, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGUAY	Guayaquil	1.68	101	P	Pn	04 19 26.9	-2.2
AGUAY				S	Sn	04 19 46.7	-3.7
AMIL	Milagro (Trans	2.05	101	P	Pn	04 19 34.7	+0.6
AMIL				S	Sn	04 19 59.5	0.0
AMIL	Milagro (Trans	2.05	101	P	Pn	04 19 34.7	+0.6
AMIL				S	Sn	04 19 59.5	0.0
MILO	Milagro-Astudi	2.12	105	P	Pn	04 19 33.5	-1.6
MILO				S	Sn	04 19 58.2	-3.0
MILO	Milagro-Astudi	2.12	105	P	Pn	04 19 33.5	-1.6
MILO				S	Sn	04 19 58.2	-3.0
QUEV	Quevedo	2.41	73	P	Pn	04 19 38.8	-0.3
QUEV				S	Sn	04 20 07.4	-1.0
QUEV	Quevedo	2.41	73	P	Pn	04 19 38.8	-0.3
QUEV				S	Sn	04 20 07.4	-1.0
COHC	Cochancay	2.46	107	P	Pn	04 19 38.7	-1.1
COHC				S	Sn	04 20 07.3	-2.3
COHC	Cochancay	2.46	107	P	Pn	04 19 38.7	-1.1
COHC				S	Sn	04 20 07.3	-2.3
MAG1	Magdalena	2.47	48	P	Pn	04 19 39.9	0.0
MAG1				S	Sb	04 20 13.6	-1.0
MAG1	Magdalena	2.47	48	P	Pn	04 19 39.9	0.0
MAG1				S	Sb	04 20 13.6	-1.0
ASDO	Santo Domingo	2.88	59	P	Pn	04 19 45.2	-0.4
ASDO				S	Sn	04 20 17.3	-2.9
ASDO	Santo Domingo	2.88	59	P	Pn	04 19 45.2	-0.4
ASDO				S	Sn	04 20 17.3	-2.9
IGUA	Igualata	2.97	85	P	Pn	04 19 50.0	+2.6
IGUA	Igualata	2.97	85	P	Pn	04 19 50.0	+2.6
RIOE1	Riobamba	2.98	90	P	Pn	04 19 47.5	+0.3
RIOE1				S	Sn	04 20 22.8	-0.1
RIOE1	Riobamba	2.98	90	P	Pn	04 19 47.5	+0.3
RIOE1				S	Sn	04 20 22.8	-0.1
BBIL	Ulba Tungurahu	3.13	85	P	Pn	04 19 50.3	+1.0
BBIL	Ulba Tungurahu	3.13	85	P	Pn	04 19 50.3	+1.0
BMAS	Trigal station	3.13	86	P	Pn	04 19 50.5	+1.1
BMAS				S	Sn	04 20 28.2	+1.4
BMAS	Trigal station	3.13	86	P	Pn	04 19 50.5	+1.1
BMAS				S	Sn	04 20 28.2	+1.4
ARRY	Arrayan	3.16	86	P	Pn	04 19 51.1	+1.4
ARRY				S	Sn	04 20 25.6	-1.8
ARRY	Arrayan	3.16	86	P	Pn	04 19 51.1	+1.4
ARRY				S	Sn	04 20 25.6	-1.8
POND	Pondoa	3.17	84	P	Pn	04 19 50.6	+0.8
POND	Pondoa	3.17	84	P	Pn	04 19 50.6	+0.8
RETU	Refugio	3.17	85	P	Pn	04 19 51.5	+1.5
RETU	Refugio	3.17	85	P	Pn	04 19 51.5	+1.5
BPAT	Tungurahua Vol	3.18	86	P	Pn	04 19 51.9	+1.8
BPAT				S	Sn	04 20 29.1	+1.0
BPAT	Tungurahua Vol	3.18	86	P	Pn	04 19 51.9	+1.8
BPAT				S	Sn	04 20 29.1	+1.0
BRUN	Tungurahua Vol	3.21	84	P	Pn	04 19 51.8	+1.5
BRUN	Tungurahua Vol	3.21	84	P	Pn	04 19 51.8	+1.5
BULB	Ulba Tungurahu	3.21	85	P	Pn	04 19 52.1	+1.6
BULB	Ulba Tungurahu	3.21	85	P	Pn	04 19 52.1	+1.6
PISA	Pisayambo	3.29	78	P	Pn	04 19 53.7	+2.1
PISA	Pisayambo	3.29	78	P	Pn	04 19 53.7	+2.1
BNAS	Cotopaxi Volca	3.30	71	P	Pn	04 19 53.4	+1.6
BNAS	Cotopaxi Volca	3.30	71	P	Pn	04 19 53.4	+1.6
BMOR	Cotopaxi Volca	3.30	72	P	Pn	04 19 53.6	+1.7
BMOR	Cotopaxi Volca	3.30	72	P	Pn	04 19 53.6	+1.7
NAS2	Nasa	3.32	71	P	Pn	04 19 54.6	+2.6
NAS2	Nasa	3.32	71	P	Pn	04 19 54.6	+2.6
BREF	Cotopaxi Volca	3.34	71	P	Pn	04 19 54.1	+1.7
BREF	Cotopaxi Volca	3.34	71	P	Pn	04 19 54.1	+1.7
BVC2	Cotopaxi Volca	3.37	71	P	Pn	04 19 54.7	+1.9
BVC2	Cotopaxi Volca	3.37	71	P	Pn	04 19 54.7	+1.9
BTAM	Cotopaxi Volca	3.38	72	P	Pn	04 19 54.6	+1.7
BTAM	Cotopaxi Volca	3.38	72	P	Pn	04 19 54.6	+1.7
PITA	Cotopaxi Volc	3.38	70	P	Pn	04 19 54.9	+2.0
PITA	Cotopaxi Volc	3.38	70	P	Pn	04 19 54.9	+2.0
VC1	Cotopaxi 1	3.38	71	P	Pn	04 19 54.5	+1.6
VC1	Cotopaxi 1	3.38	71	P	Pn	04 19 54.5	+1.6
COV1	Cotopaxi Volc	3.43	72	P	Pn	04 19 54.0	+0.3
COV1	Cotopaxi Volc	3.43	72	P	Pn	04 19 54.0	+0.3
YANA	Yana	3.43	62	P	Pn	04 19 53.3	-0.3
YANA	Yana	3.43	62	P	Pn	04 19 53.3	-0.3
ANTG	Antisana-Guama	3.57	70	P	Pn	04 19 57.3	+1.8
ANTG	Antisana-Guama	3.57	70	P	Pn	04 19 57.3	+1.8
ANTM	Antisana-La Mi	3.58	71	P	Pn	04 19 58.5	+2.8
ANTM	Antisana-La Mi	3.58	71	P	Pn	04 19 58.5	+2.8
ANTS	Antisana-Sarah	3.65	70	P	Pn	04 19 58.8	+2.1
ANTS	Antisana-Sarah	3.65	70	P	Pn	04 19 58.8	+2.1
OTAV	Otavalo	3.71	58	*e*Pn	Pn	04 19 57.2	-0.2
OTAV				*e*Sn	Sn	04 20 38.3	-3.0
OTAV	Otavalo	3.71	58	*e*P	Pb	04 20 04.0	-1.8
OTAV	Otavalo	3.71	58	P	Pn	04 19 57.1	-0.4
OTAV	Otavalo	3.71	58	*e*P	Pb	04 20 04.0	-1.8
OTAV	Otavalo	3.71	58	P	Pn	04 19 57.1	-0.4
CUIC	Cuicocha-Domo	3.83	58	P	Pn	04 19 58.8	-0.1
CUIC	Cuicocha-Domo	3.83	58	P	Pn	04 19 58.8	-0.1
IMBA	Imbabura, San	3.95	60	P	Pn	04 20 02.0	+1.3
IMBA				S	Sn	04 20 50.6	+3.5
IMBA	Imbabura, San	3.95	60	P	Pn	04 20 02.0	+1.3
IMBA				S	Sn	04 20 50.6	+3.5
URCU	Urcuqui	3.99	57	P	Pn	04 20 01.5	+0.3
URCU				S	Sn	04 20 51.0	+3.1
URCU	Urcuqui	3.99	57	P	Pn	04 20 01.5	+0.3
URCU				S	Sn	04 20 51.0	+3.1
LITE1	Lita	4.11	52	P	Pn	04 20 00.4	-2.2
LITE1	Lita	4.11	52	P	Pn	04 20 00.4	-2.2
YAHU	Yahuarcocha	4.11	59	P	Pn	04 20 04.4	+1.6
YAHU	Yahuarcocha	4.11	59	P	Pn	04 20 04.4	+1.6
TUMC	Tumaco	4.56	39	*e*Pn	Pn	04 20 07.9	-0.8
TUMC	Tumaco	4.56	39	*e*P	Pn	04 20 08.3	-0.4
TUMC	Tumaco	4.56	39	*e*P	Pn	04 20 08.3	-0.4
CMBC	Cumbal	4.62	55	*e*P	Pn	04 20 11.3	+1.4
CMBC	Cumbal	4.62	55	*e*P	Pn	04 20 11.3	+1.4
CPAS1	Pasto	5.18	56	*e*P	Pn	04 20 19.8	+2.2
CPAS1	Pasto	5.18	56	*e*P	Pn	04 20 19.8	+2.2
GCUF	Volcan Galeras	5.18	55	*e*P	Pn	04 20 18.3	+0.6
GCUF	Volcan Galeras	5.18	55	*e*P	Pn	04 20 18.3	+0.6
CPAS2	Pasto	5.25	56	*e*P	Pn	04 20 18.2	-0.3
CPAS2	Pasto	5.25	56	*e*P	Pn	04 20 18.2	-0.3
CRUC	La Cruz	5.70	55	*e*P	Pn	04 20 25.6	+1.0
CRUC	La Cruz	5.70	55	*e*P	Pn	04 20 25.6	+1.0
MAPC	Malpelo	5.71	360	*e*P	Pn	04 20 21.6	-2.9
MAPC	Malpelo	5.71	360	*e*P	Pn	04 20 21.6	-2.9
GRGC	Isla de Gorgon	5.83	36	*e*P	Pn	04 20 22.8	-3.4
GRGC	Isla de Gorgon	5.83	36	*e*P	Pn	04 20 22.8	-3.4
ATAH	Atahualpa	6.24	149	Pn	Pn	04 20 35.0	+2.8
ATAH	9.5nm,0.3s,baz=338,slow=6.9,SNR=76			Sn	Sn	04 21 46.4	+2.8
	12nm,0.3s,baz=188,slow=22,SNR=3.0						
POPC	Popayan, Colom	6.51	49	*e*P	Pn	04 20 35.2	-0.5
POPC	Popayan, Colom	6.51	49	*e*P	Pn	04 20 35.2	-0.5
FLOC	Florencia	6.80	61	*e*P	Pn	04 20 40.0	+0.4
FLOC	Florencia	6.80	61	*e*P	Pn	04 20 40.0	+0.4
MALC	Bahia Malaga	7.13	37	*e*P	Pn	04 20 50.1	+6.0
MALC	Bahia Malaga	7.13	37	*e*P	Pn	04 20 50.1	+6.0
HORQ	Saladito	7.19	44	*e*P	Pn	04 20 43.4	-1.8
HORQ	Saladito	7.19	44	*e*P	Pn	04 20 43.4	-1.8
BETC	Betania	7.57	55	*e*P	Pn	04 20 54.6	+4.5
BETC	Betania	7.57	55	*e*P	Pn	04 20 54.6	+4.5
YOTC	Yotoco, Valle	7.74	43	*e*P	Pn	04 20 50.0	-2.6
YOTC	Yotoco, Valle	7.74	43	*e*P	Pn	04 20 50.0	-2.6
PLMC	San Jos¨ del	8.47	39	*e*P	Pn	04 21 03.4	+0.8
PLMC	San Jos¨ del	8.47	39	*e*P	Pn	04 21 03.4	+0.8
PRAC	Prado	8.63	51	*e*Pn	Pn	04 21 04.5	-0.1
PRAC	Prado	8.63	51	*e*P	Pn	04 21 04.1	-0.5
PRAC	Prado	8.63	51	*e*P	Pn	04 21 04.1	-0.5
PAYG	Puerto Ayora	8.74	277	*e*Pn	Pn	04 21 07.0	+0.8
PAYG				*e*Sn	Sn	04 22 45.4	+0.6
PAYG	Puerto Ayora	8.74	277	*e*P	Pn	04 21 08.1	+1.9
PAYG	Puerto Ayora	8.74	277	*e*P	Pn	04 21 08.1	+1.9
SOLC	Bahia Solano	8.95	28	*e*P	Pn	04 21 09.9	+0.8
SOLC	Bahia Solano	8.95	28	*e*P	Pn	04 21 09.9	+0.8
SJAC	San Juan de Ar	9.13	57	*e*P	Pn	04 21 11.4	-0.2
SJAC	San Juan de Ar	9.13	57	*e*P	Pn	04 21 11.4	-0.2
ROSC	El Rosal	9.78	48	Pn	Pn	04 21 20.3	-0.6
	1.2nm,0.3s,baz=162,slow=10.0,SNR=2.3						
ROSC				LR	LR	04 25 14.2	
	comp=Z,348nm,21.6s,baz=204,slow=38						
ROSC	El Rosal	9.78	48	*e*Pn	Pn	04 21 20.8	0.0
ROSC	El Rosal	9.78	48	*e*P	Pn	04 21 20.2	-0.6
ROSC	El Rosal	9.78	48	*e*P	Pn	04 21 20.2	-0.6
VILC	Villavicencio,	9.81	54	*e*P	Pn	04 21 23.4	+2.5
VILC	Villavicencio,	9.81	54	*e*P	Pn	04 21 23.4	+2.5
NORC	Norcasia	9.89	43	*e*P	Pn	04 21 23.8	+1.8
NORC	Norcasia	9.89	43	*e*P	Pn	04 21 23.8	+1.8
HELC	Santa Helena	9.94	38	*e*Pn	Pn	04 21 23.8	+0.9
HELC	Santa Helena	9.94	38	*e*P	Pn	04 21 25.7	+2.7
HELC	Santa Helena	9.94	38	*e*P	Pn	04 21 25.7	+2.7
CHIC	Chingaza	10.09	51	*e*P	Pn	04 21 25.8	+0.7
CHIC	Chingaza	10.09	51	*e*P	Pn	04 21 25.8	+0.7
DBBC	Dabeiba	10.23	32	*e*P	Pn	04 21 30.1	+3.4
DBBC	Dabeiba	10.23	32	*e*P	Pn	04 21 30.1	+3.4
BCIP	Isla Barro Col	10.98	9	*e*Pn	Pn	04 21 36.6	-0.2
BCIP	Isla Barro Col	10.98	9	*e*P	Pn	04 21 43.3	+6.5
BCIP	Isla Barro Col	10.98	9	P	Pn	04 21 38.5	+1.7
	62nm,1.0s						
BCIP	Isla Barro Col	10.98	9	*e*P	Pn	04 21 43.3	+6.5
BCIP	Isla Barro Col	10.98	9	P	Pn	04 21 38.5	+1.7
NNA	Nana	11.22	155	Pn	Pn	04 21 40.6	+0.4
	8.4nm,0.3s,baz=334,slow=8.1,SNR=20						
NNA				Sn	Sn	04 23 43.0	-2.6
	7.0nm,0.3s,baz=320,slow=21,SNR=4.4						
NNA				LR	LR	04 26 10.5	
	comp=Z,426nm,20.0s,baz=320,slow=38						
NNA	Nana	11.22	155	*e*Pn	Pn	04 21 40.1	-0.2
NNA				*e*Sn	Sn	04 23 37.6	-8.0
NNA				Sn	Sn	04 23 43.0	-2.6
NNA	Nana	11.22	155	P	Pn	04 21 40.9	+0.6
	79nm,0.9s						
NNA	Nana	11.22	155	P	Pn	04 21 40.9	+0.6
ZARC	Zaragoza, Cauc	11.38	36	*e*P	Pn	04 21 44.4	+2.1
ZARC	Zaragoza, Cauc	11.38	36	*e*P	Pn	04 21 44.4	+2.1
RUSC	La Rusia	11.40	48	*e*Pn	Pn	04 21 42.2	-0.9
RUSC	La Rusia	11.40	48	*e*P	Pn	04 21 47.1	+4.0
RUSC	La Rusia	11.40	48	*e*P	Pn	04 21 47.1	+4.0
HDC	Heredia	11.93	348	*e*Pn	Pn	04 21 51.5	+1.5
MOTC	Monteria, Cord	12.01	29	*e*P	Pn	04 21 52.0	+1.1
MOTC	Monteria, Cord	12.01	29	*e*P	Pn	04 21 52.0	+1.1
JTS	JuntasAbangare	12.41	344	LR	LR	04 25 31.7	
	comp=Z,1µm,20.6s,baz=229,slow=32						
JTS	JuntasAbangare	12.41	344	*e*Pn	Pn	04 21 58.5	+2.1
	57nm,1.3s						
JTS	JuntasAbangare	12.41	344	P	Pn	04 21 57.7	+1.3
	39nm,1.7s						
JTS	JuntasAbangare	12.41	344	P	Pn	04 21 57.7	+1.3
OCAC	Ocana	12.90	40	*e*P	Pn	04 22 06.0	+2.6
OCAC	Ocana	12.90	40	*e*P	Pn	04 22 06.0	+2.6
SJCC	San Jacinto, C	13.21	29	*e*P	Pn	04 22 08.2	+0.8
SJCC	San Jacinto, C	13.21	29	*e*P	Pn	04 22 08.2	+0.8
ESPN	Las Esperanzas	14.10	349	*e*Pn	Pn	04 22 18.9	-0.6
CODC	Agust¨›n Codaz	14.16	35	*e*P	Pn	04 22 21.8	+1.4
CODC	Agust¨›n Codaz	14.16	35	*e*P	Pn	04 22 21.8	+1.4
SDV	Santo Domingo	15.20	46	*e*Pn	Pn	04 22 35.5	+0.8
	0.6nm,0.3s,baz=222,slow=9.1,SNR=24						
SDV	Santo Domingo	15.20	46	*e*Pn	Pn	04 22 35.1	+0.5
	86nm,0.8s						
SDV	Santo Domingo	15.20	46	P	Pn	04 22 34.8	+0.1
	111nm,0.8s,820nm						
SDV	Santo Domingo	15.20	46	P	Pn	04 22 34.8	+0.1
ESTN	Estel	15.48	342	*e*Pn	P	04 22 40.3	-2.4
	129nm,1.0s						
ESTN	Estel	15.48	342	P	Pn	04 22 39.3	+1.0
	156nm,1.2s,2µm						
ESTN	Estel	15.48	342	P	Pn	04 22 39.3	+1.0
TGUH	Tegucigalpa,Un	16.67	340	*e*Pn	P	04 22 55.7	-0.1
	214nm,1.1s						
TGUH	Tegucigalpa,Un	16.67	340	P	P	04 22 54.9	-0.9
	150nm,1.9s,2µm						
TGUH	Tegucigalpa,Un	16.67	340	P	P	04 22 54.9	-0.9
APG	El Apazote	18.81	333	P	Pn	04 23 20.8	+0.7
	0.2nm,0.3s,baz=170,slow=7.0,SNR=8.9						
APG				LR	LR	04 29 07.7	
	comp=Z,492nm,19.4s,baz=158,slow=33						
LPAZ	La Paz	19.62	138	P	Pn	04 23 31.2	+0.8
	0.6nm,0.3s,baz=326,slow=11,SNR=89						
LPAZ				LR	LR	04 32 45.9	
	comp=Z,1µm,18.3s,baz=300,slow=42						
LPAZ	La Paz	19.62	138	*e*P	Pn	04 23 30.9	+0.6
	51nm,1.0s						
LPAZ	La Paz	19.62	138	P	P	04 23 29.7	+0.7
LPAZ	La Paz	19.62	138	P	P	04 23 29.7	+0.7
SAML	Samuel	19.68	112	*e*P	P	04 23 28.1	-0.8
	139nm,1.5s						
SAML	Samuel	19.68	112	P	P	04 23 29.3	+0.3
	18nm,0.9s						
SAML	Samuel	19.68	112	P	P	04 23 29.3	+0.3
PB12	IPOC Station P	20.09	147	P	Pn	04 23 36.4	+1.1
PB12	IPOC Station P	20.09	147	P	Pn	04 23 36.4	+1.1
MTDJ	Mount Denham	20.24	11	*e*P	P	04 23 34.5	-0.7
	95nm,1.2s						
PCRV	Puerto La Cruz	20.63	55	P	P	04 23 40.4	+1.1
	52nm,0.9s,baz=205,slow=1.3,SNR=4.2						
PCRV				LR	LR	04 33 21.8	
	comp=Z,565nm,19.9s,baz=243,slow=42						
CCIG	Comitan	20.71	330	*e*P	P	04 23 40.6	+0.2
	63nm,1.4s						
MNMC	Minye Minye	20.91	147	*e*P	P	04 23 43.5	+1.0
	49nm,0.9s						
MNMC	Minye Minye	20.91	147	P	P	04 23 42.5	-0.1
MNMC	Minye Minye	20.91	147	P	P	04 23 42.5	-0.1
PSGC	Pisagua	21.00	148	P	P	04 23 41.4	-2.0
	62nm,1.7s						
PSGC	Pisagua	21.00	148	P	P	04 23 41.4	-2.0
PTGA	Pitinga	21.66	88	P	P	04 23 51.3	+0.8
	5.5nm,0.5s,baz=270,slow=10,SNR=15						
PTGA				LR	LR	04 32 08.9	
	comp=Z,440nm,20.4s,baz=270,slow=36						
PB08	IPOC Station P	21.97	147	P	P	04 23 50.3	-3.8
PB08	IPOC Station P	21.97	147	P	P	04 23 50.3	-3.8
PB01	IPOC Station P	22.53	149	*e*P	P	04 24 01.0	+1.1
	55nm,1.2s						
PB01	IPOC Station P	22.53	149	P	P	04 23 58.1	-1.8
PB01	IPOC Station P	22.53	149	P	P	04 23 58.1	-1.8
PB02	IPOC Station P	22.56	150	P	P	04 23 57.5	-2.6
PB02	IPOC Station P	22.56	150	P	P	04 23 57.5	-2.6
TEIG	Tepich	22.79	344	P	P	04 23 57.3	-5.1
TEIG	Tepich	22.79	344	P	P	04 23 57.3	-5.1
CMIG	Matias Romero	22.84	326	P	P	04 24 02.8	-0.2
	3.5nm,0.9s,baz=152,slow=4.5,SNR=6.9						
CMIG				LR	LR	04 31 13.0	
	comp=Z,223nm,19.9s,baz=150,slow=32						
PB07	IPOC Station P	22.91	151	P	P	04 24 02.1	-1.8
PB07	IPOC Station P	22.91	151	P	P	04 24 02.1	-1.8
PB09	IPOC Station P	23.29	150	P	P	04 24 08.7	+1.0
PB09	IPOC Station P	23.29	150	P	P	04 24 08.7	+1.0
PB04	IPOC Station P	23.30	152	*e*P	P	04 24 09.7	+1.8
	104nm,1.2s						
PB04	IPOC Station P	23.30	152	P	P	04 24 05.7	-2.2
PB04	IPOC Station P	23.30	152	P	P	04 24 05.7	-2.2
PB06	IPOC Station P	23.89	152	P	P	04 24 10.0	-3.7
PB06	IPOC Station P	23.89	152	P	P	04 24 10.0	-3.7
PB10	IPOC Station P	24.15	155	*e*P	P	04 24 17.7	+1.8
	34nm,0.9s						
MPR	Mayaguez	24.41	35	*e*P	P	04 24 18.2	-0.2

66nm,1.1s
SIV San Ignacio 24.70 126 P P 04 24 22.5 +1.5
12nm,0.7s,baz=305,slow=9.7,SNR=75
SIV LR LR 04 35 40.2
comp=Z,635nm,18.3s,baz=325,slow=40
AOPR Arecibo Observ 24.74 36 eP P 04 24 21.3 -0.1
79nm,1.2s
SJG San Juan 24.91 37 P P 04 24 23.5 +0.6
27nm,0.8s,baz=240,slow=5.4,SNR=8.4
SJG LR LR 04 36 19.2
comp=Z,192nm,18.4s,baz=259,slow=42
SJG San Juan 24.91 37 eP P 04 24 23.3 +0.4
43nm,1.0s
SJG San Juan 24.91 37 P P 04 24 22.0 -0.9
SJG San Juan 24.91 37 P P 04 24 22.0 -0.9
HUMP Col San Antoni 25.12 37 eP P 04 24 24.2 -0.5
39nm,1.0s
CBYP Canovanas 25.21 37 eP P 04 24 25.2 -0.5
66nm,0.8s
MTP Monte Pirata 25.27 38 eP P 04 24 25.4 -0.7
54nm,1.0s
TLIG Tlapa 25.45 320 eP P 04 24 28.2 +0.3
38nm,1.5s
LVIG Laguna Verde 25.82 326 eP P 04 24 31.4 +0.3
27nm,1.0s
GO02 Mina Guanaco 26.01 155 eP P 04 24 35.0 +1.8
47nm,0.9s
ABVI Anegada Island 26.50 39 eP P 04 24 36.3 -0.9
102nm,0.9s
JRQG Juriquilla Cam 28.95 321 eP P 04 25 00.6 +1.0
25nm,0.6s
LCO Las Campanas 29.04 160 eP P 04 25 00.7 +0.4
5.2nm,0.6s
LNIG Linares 31.64 328 eP P 04 25 23.0 0.0
14nm,1.7s
349A Repton 33.33 351 P P 04 25 37.5 -0.2
baz=170
253A Americus 33.70 356 P P 04 25 41.2 +0.3
baz=175
CPUP Villa Florida 33.80 138 P P 04 25 42.4 +0.6
2.5nm,0.9s,baz=302,slow=11,SNR=4.3
250A Grady 33.82 353 P P 04 25 42.6 +0.6
baz=172
251A Midway 33.84 354 P P 04 25 41.9 -0.3
baz=173,SNR=7.1
249A Camden 33.94 352 P P 04 25 43.0 0.0
baz=170
344A Westbrook Farm 34.13 346 P P 04 25 45.2 +0.5
baz=164
248A Dixon Mills 34.15 351 P P 04 25 44.6 -0.2
baz=169
155A Kite 34.19 359 P P 04 25 45.9 +0.8
baz=178
154A Montrose 34.20 358 P P 04 25 47.2 +2.0
baz=177
151A Opelika 34.26 354 P P 04 25 46.0 +0.2
baz=173
GO05 HualaæØ 34.30 166 eP P 04 25 47.6 +1.4
48nm,1.5s
HKT Hockley 34.32 338 eP P 04 25 47.1 +0.8
21nm,1.2s
152A Waverly Hall 34.35 355 P P 04 25 46.1 -0.5
baz=174
150A Eclectic 34.42 353 P P 04 25 47.0 -0.1
baz=172
RGRS Roger Stewart 34.49 2 eP P 04 25 45.1 -2.6
184nm,0.9s
149A Jones 34.50 352 P P 04 25 47.4 -0.5
baz=171
148A Greensboro 34.66 351 P P 04 25 49.8 +0.6
baz=169
341A Kurthwood 34.68 342 P P 04 25 49.4 -0.1
baz=159
341A Kurthwood 34.68 342 eP P 04 25 49.6 +0.2
46nm,1.7s
NHSC New Hope 34.69 2 P P 04 25 50.7 +1.3
baz=182
Z54A Sparta 34.81 358 P P 04 25 52.1 +1.6
baz=178
Z52A Williamson 34.84 356 P P 04 25 51.0 +0.1
baz=175
Z53A Monticello 34.88 357 P P 04 25 51.4 +0.3
baz=176
LRAL Lakeview Retre 34.96 352 P P 04 25 51.7 -0.1
baz=170
LRAL Lakeview Retre 34.96 352 eP P 04 25 51.8 -0.1
12nm,0.8s
GOGA Godfrey 35.01 357 P P 04 25 51.2 -1.1
baz=177
GOGA Godfrey 35.01 357 eP P 04 25 51.3 -0.9
7.3nm,0.8s
Z50A Ashland 35.04 354 P P 04 25 51.9 -0.7
baz=172
Z49A Columbiana 35.06 353 P P 04 25 51.6 -1.0
baz=171
Z47A Carrollton 35.28 351 P P 04 25 54.1 -0.5
baz=169
Z48A Northport 35.38 351 P P 04 25 54.4 -1.0
baz=170
Y54A Tignall 35.43 358 P P 04 25 57.1 +1.2
baz=178
Y53A Monroe 35.45 357 P P 04 25 55.6 -0.5
baz=176
142A Monroe 35.48 345 P P 04 25 56.7 +0.4
baz=162
143A Socs Landing, 35.49 346 P P 04 25 57.0 +0.6
baz=163
240A Hunter Patters 35.52 342 P P 04 25 57.5 +0.9
baz=159
Y51A Rockmart 35.60 355 P P 04 25 57.1 -0.3
baz=174
Y50A Piedmont 35.66 354 P P 04 25 57.4 -0.4
baz=173
Y49A Blount Mountai 35.70 353 P P 04 25 58.7 +0.5
baz=172
435B Jarrell 35.74 336 P P 04 25 59.1 +0.5
baz=152
Z44A Pea Ridge, Bel 35.81 347 P P 04 25 59.7 +0.6
baz=165
Y48A Jasper 35.85 352 P P 04 26 00.3 +0.9
baz=170
Y47A UCPARC, Winfie 35.94 351 P P 04 25 58.4 -1.9
baz=169
Y46A Houston 36.09 350 P P 04 26 00.8 -0.7
baz=168
X53A Estanollee 36.09 358 P P 04 26 02.0 +0.5
baz=177
Y45A Yeager Farm, C 36.20 349 P P 04 26 02.4 -0.1
baz=166
X50B Fort Payne 36.21 354 P P 04 26 02.5 -0.1
baz=173
X52A Dahlonega 36.22 357 P P 04 26 03.3 +0.7
baz=176
X51A Calhoun 36.24 355 P P 04 26 02.1 -0.8
baz=174
X49A Woodville 36.33 353 P P 04 26 02.3 -1.3
baz=172
X48A Hartselle 36.36 352 P P 04 26 03.1 -0.7
baz=171
JCT Junction City 36.44 333 P P 04 26 04.1 -0.5
baz=148,SNR=6.9
JCT Junction City 36.44 333 eP P 04 26 05.0 +0.4
X47A Russelville 36.54 351 P P 04 26 04.3 -1.1
baz=169
RPN Rapa Nui 36.66 224 LR LR 04 37 01.9
comp=Z,125nm,20.3s,baz=49,slow=30
KMSC Kings Mountain 36.69 0 P P 04 26 06.4 -0.2
baz=180
W52A Murphy 36.71 357 P P 04 26 06.4 -0.4
baz=176
W53A Cullowhee 36.75 358 P P 04 26 06.6 -0.7
baz=177,SNR=5.8
HPIG 36.76 323 eP P 04 26 13.1 +5.6
12nm,1.3s
WHTX Lake Whitney, 36.76 337 P P 04 26 07.2 -0.1
baz=153
WHTX Lake Whitney, 36.76 337 eP P 04 26 06.9 -0.4
21nm,0.8s
W50A Signal Mountai 36.91 355 P P 04 26 08.4 -0.2
baz=174
W49A Belvidere 36.93 354 P P 04 26 08.0 -0.7
baz=172
W48A Pulaski 37.02 353 P P 04 26 08.8 -0.7
baz=171
PLAL Pickwick Lake 37.03 351 eP P 04 26 14.9 +5.4
30nm,1.9s
CPCT Cooper Cave 37.10 356 eP P 04 26 15.2 +5.1
12nm,0.8s

Y40A Okolona 37.22 344 P P 04 26 10.7 -0.5
baz=160
W47A Westpoint 37.22 352 P P 04 26 10.2 -1.0
baz=170
V53A Saluda 37.23 358 P P 04 26 10.7 -0.6
baz=178
V50A Pikevile 37.36 355 P P 04 26 11.3 -1.1
baz=174
TXAR Lajitas Array 37.42 327 P P 04 26 13.1 -0.1
1.2nm,0.8s,baz=147,slow=10.0,SNR=12
TXAR LR LR 04 40 02.2
comp=Z,128nm,21.7s,baz=0.0,slow=34
TX31 Lajitas Ar. Si 37.42 327 eP P 04 26 13.2 +0.1
V52A Sevierville 37.43 357 P P 04 26 12.5 -0.5
baz=177
V51A Loudon 37.44 356 P P 04 26 14.2 +1.2
baz=175
X41A Kaden, Bauxite 37.47 345 P P 04 26 13.0 -0.3
baz=162
V49A McMinnville 37.53 354 P P 04 26 12.9 -0.9
baz=173
V48A Smith Brothers 37.60 353 P P 04 26 13.4 -1.0
baz=171
V47A Nunnelly 37.78 352 P P 04 26 14.1 -1.8
baz=170
MIAR Mount Ida 37.80 344 P P 04 26 15.3 -0.8
baz=160
MIAR Mount Ida 37.80 344 eP P 04 26 15.7 -0.5
16nm,1.3s
V46A Holladay 37.84 351 P P 04 26 14.8 -1.6
baz=169
X39A Fountain Ranch 37.93 343 P P 04 26 16.9 -0.3
baz=159
W41B Gary Mavity, V 38.05 346 P P 04 26 17.1 -1.0
baz=162
WVT Waverly 38.12 352 P P 04 26 17.5 -1.3
baz=170
WVT Waverly 38.12 352 eP P 04 26 17.2 -1.6
36nm,1.6s
TZTN Tazewell 38.13 357 P P 04 26 16.9 -2.0
baz=177
TZTN Tazewell 38.13 357 eP P 04 26 16.9 -2.0
5.3nm,0.9s
V44A Blytheville 38.17 349 P P 04 26 19.3 +0.2
baz=166
WHAR Wooly Hollow 38.17 346 eP P 04 26 19.0 -0.2
21nm,1.2s
ABTX Abilene, Hawle 38.20 335 P P 04 26 19.1 -0.5
baz=150
ABTX Abilene, Hawle 38.20 335 eP P 04 26 19.5 0.0
39nm,1.4s
U49A Red Boiling Sp 38.26 355 P P 04 26 18.8 -1.1
baz=173
W40A Ferguson Farm, 38.28 345 P P 04 26 20.8 +0.7
baz=161
U48A Cassie Pea, Po 38.33 354 P P 04 26 21.3 +0.8
baz=172
U47A Clarksville 38.35 353 P P 04 26 19.4 -1.3
baz=171
U46A Springville 38.40 351 P P 04 26 19.8 -1.3
baz=169
V42A Cord 38.45 347 P P 04 26 20.3 -1.3
baz=164
W39A Magazine 38.47 344 P P 04 26 21.8 +0.1
baz=160
W39A Magazine 38.47 344 eP P 04 26 21.8 +0.1
24nm,1.0s
U45A Rockin P Farm, 38.48 351 P P 04 26 20.8 -1.0
baz=168
U44B Burton Farm, H 38.57 350 P P 04 26 22.1 -0.4
baz=167
V41A Mountainview 38.61 346 P P 04 26 22.5 -0.4
baz=163
T52A Hallie 38.67 358 P P 04 26 23.2 -0.2
baz=178
T50A Nancy 38.68 356 P P 04 26 23.3 -0.1
baz=175
V40A Witts Springs 38.79 345 P P 04 26 24.4 -0.1
baz=162
T49A Edmonton 38.82 355 P P 04 26 23.9 -0.8
baz=174
T47A Sharon Grove 38.87 353 P P 04 26 23.7 -1.3
baz=171
T48A Bowling Green 38.91 354 P P 04 26 23.7 -1.6
baz=172
U42A Revenden 38.95 348 P P 04 26 25.6 0.0
baz=164
T46A Princeton 39.03 352 P P 04 26 25.4 -1.0
baz=170
V39A Pettigrew 39.04 344 P P 04 26 26.2 -0.4
baz=161
U41A Vola 39.09 347 P P 04 26 26.2 -0.7
baz=163
S51A Beattyville 39.23 358 P P 04 26 27.6 -0.4
baz=177
S52A Salyersville 39.24 358 P P 04 26 29.6 +1.4
baz=178
U40A Yellville 39.33 346 P P 04 26 28.2 -0.7
baz=162
S48A Wiedeman Farm, 39.42 354 P P 04 26 29.4 -0.2
baz=173
T43A Greenville 39.46 349 P P 04 26 28.7 -1.3
baz=166
U39A Green Forest 39.51 345 P P 04 26 29.8 -0.7
baz=161
T42A Van Buren 39.57 348 P P 04 26 29.6 -1.3
baz=165
S46A Don Dixon Farm 39.63 352 P P 04 26 29.8 -1.6
baz=170
WMOK Wichita Mounta 39.70 338 P P 04 26 31.3 -0.8
baz=152,SNR=11
WMOK Wichita Mounta 39.70 338 eP P 04 26 31.5 -0.6
14nm,1.3s
SPRD Spring Road, M 39.72 5 eP P 04 26 31.9 -0.2
15nm,1.1s
T41A Mountain View 39.73 347 P P 04 26 31.2 -1.0
baz=164
TUL1 Leonard 39.73 342 P P 04 26 31.7 -0.6
baz=157,SNR=8.2
TUL1 Leonard 39.73 342 eP P 04 26 32.2 -0.1
34nm,1.0s
S44A Carbondale 39.87 351 P P 04 26 32.7 -0.7
baz=168
S43A Fulton Ridge, 39.90 349 P P 04 26 32.4 -1.2
baz=167
T40A Mansfield 40.00 346 P P 04 26 34.1 -0.4
baz=163
WCI Wyandotte Cave 40.01 354 P P 04 26 33.2 -1.3
baz=173
WCI Wyandotte Cave 40.01 354 eP P 04 26 34.3 -0.2
46nm,1.0s
PLCA Paso Flores 40.09 167 P P 04 26 36.0 +0.7
7.8nm,1.1s,baz=42,slow=9.4,SNR=3.6
T39A Clever 40.09 345 P P 04 26 34.6 -0.7
baz=161
R47A Wooly Knot Far 40.10 354 P P 04 26 34.0 -1.3
baz=172
MNTX Cornudas Mount 40.19 328 P P 04 26 35.1 -1.0
baz=141,SNR=21
MNTX Cornudas Mount 40.19 328 eP P 04 26 36.1 -0.1
14nm,1.1s
S42A Caledonia 40.22 349 P P 04 26 35.7 -0.7
baz=166
S41A Jillco Farms, 40.24 347 P P 04 26 35.5 -1.0
baz=164
R45A Skylar, Fairfi 40.31 352 P P 04 26 36.4 -0.7
baz=170
T38A Diamond 40.34 344 P P 04 26 37.0 -0.4
baz=160
FVM French Village 40.36 349 eP P 04 26 37.2 -0.2
34nm,1.4s
TRQA Tornquist 40.38 156 eP P 04 26 37.1 -0.6
37nm,1.3s
R44A Waltonville 40.38 351 P P 04 26 37.0 -0.6
baz=168
S40A Lebanon 40.42 347 P P 04 26 38.0 -0.1
baz=163
R43A Red Bud 40.55 350 P P 04 26 38.1 -0.9
baz=167
CCM Cathedral Cave 40.59 348 P P 04 26 38.7 -0.7
baz=165
CCM Cathedral Cave 40.59 348 eP P 04 26 38.3 -1.0
57nm,1.6s
S39A Bolivar 40.71 346 P P 04 26 39.7 -0.7
baz=162,SNR=10
OLIL Olney 40.72 352 eP P 04 26 39.5 -0.9
24nm,1.0s
R42A Luebbering 40.72 349 P P 04 26 38.7 -1.7

baz=166
Q47A Bedord North L 40.72 354 P P 04 26 39.4 -1.0
baz=172
MSTX Muleshoe 40.72 333 P P 04 26 40.0 -0.7
baz=146,SNR=16
MSTX Muleshoe 40.72 333 eP P 04 26 40.6 -0.1
31nm,0.9s
S38A Stockton 40.80 345 P P 04 26 40.4 -0.7
baz=161,SNR=6.1
R41A Rosebud 40.85 348 P P 04 26 40.5 -1.0
baz=165
Q45A Warren Harvey, 40.88 352 P P 04 26 40.6 -1.2
baz=170
AMTX Amarillo 41.01 335 P P 04 26 43.1 +0.1
baz=148
AMTX Amarillo 41.01 335 eP P 04 26 42.6 -0.4
22nm,1.0s
Q44A Meyer Farm, Va 41.02 351 P P 04 26 41.9 -1.0
baz=169
R40A Maddies Statio 41.03 347 P P 04 26 42.2 -0.8
baz=164
R39A Chumby, Stover 41.23 346 P P 04 26 44.0 -0.7
baz=162,SNR=8.1
Q42A Golden Eagle 41.28 349 P P 04 26 44.7 -0.3
baz=166
R38A Fenwick Farm, 41.32 345 P P 04 26 44.4 -1.0
baz=161,SNR=6.8
P45A Graceland, Par 41.45 353 P P 04 26 45.8 -0.7
baz=171
Q41A Truxton 41.45 349 P P 04 26 45.5 -0.9
baz=165
P46A Rosedale 41.48 353 P P 04 26 45.7 -1.0
baz=171
Q40A Laux Farm, Aux 41.67 348 P P 04 26 47.6 -0.7
baz=164
ACSO Alum Creek Sta 41.79 358 P P 04 26 48.7 -0.5
baz=178
ACSO Alum Creek Sta 41.79 358 eP P 04 26 48.9 -0.3
13nm,0.9s
P43A Skaggs, Pawnee 41.82 351 P P 04 26 48.5 -0.9
baz=168
O56A Blue Knob Stat 41.90 3 P P 04 26 49.6 -0.6
baz=184
P42A Winchester 41.90 350 P P 04 26 49.3 -0.8
baz=167
Q39A Willow Grove F 41.91 347 P P 04 26 49.4 -0.8
baz=163
O47A Sheridan 41.98 355 P P 04 26 49.5 -1.3
baz=173
Q38A Cooks Store, C 41.98 346 P P 04 26 50.3 -0.6
baz=162,SNR=8.3
Q37A Longview Farm, 42.11 345 P P 04 26 50.9 -1.0
baz=161
P41A Barry, Barry 42.12 349 P P 04 26 51.6 -0.3
baz=166
121A Cookes Peak, D 42.13 326 P P 04 26 52.5 +0.1
baz=139,SNR=13
O45A Potomac 42.16 353 P P 04 26 50.8 -1.4
baz=171
P40A Paris 42.17 348 P P 04 26 51.1 -1.3
baz=164
P39B Salisbury 42.29 347 P P 04 26 52.6 -0.6
baz=163
SSPA Standing Stone 42.31 4 P P 04 26 52.2 -1.2
baz=185
SSPA Standing Stone 42.31 4 eP P 04 26 52.5 -1.0
32nm,1.1s
O41A Passleys Farm, 42.51 349 P P 04 26 54.5 -0.6
baz=166
N54A Moraine State 42.52 2 P P 04 26 54.1 -1.1
baz=182
P38A Dawn 42.59 346 P P 04 26 55.1 -0.6
baz=162
HDIL Hopedale 42.68 351 P P 04 26 55.6 -0.8
baz=168
HDIL Hopedale 42.68 351 eP P 04 26 54.9 -1.6
14nm,0.9s
N46A Monticello 42.69 354 P P 04 26 56.7 +0.1
baz=172
O40A La Belle 42.71 348 P P 04 26 57.1 +0.4
baz=165
N45A Kentland 42.73 353 P P 04 26 56.8 -0.1
baz=171
N44A Piper City 42.75 353 P P 04 26 56.3 -0.7
baz=170
BNM Barren Site 42.76 329 eP P 04 26 58.6 +1.1
P37A Lathrop 42.76 345 P P 04 26 57.1 0.0
baz=161
N59A State Game Lan 42.79 7 P P 04 26 57.4 0.0
baz=188
KSU1 Kansas State U 42.92 343 P P 04 26 57.8 -0.6
baz=158
KSU1 Kansas State U 42.92 343 eP P 04 26 57.5 -0.9
22nm,0.8s
O39A Kirksville 42.98 348 P P 04 26 57.9 -1.0
baz=164
O38A Galt 43.05 347 P P 04 26 58.9 -0.6
baz=162
N42A Yates City 43.06 351 P P 04 27 00.0 +0.5
baz=168
LAZ Ladron 43.22 329 eP P 04 27 01.7 +0.5
O37A Wolven Farm, M 43.26 346 P P 04 27 00.8 -0.3
baz=161
TASL Snake Pit, Alb 43.29 330 P P 04 27 02.3 +0.6
baz=142
ANMO Albuquerque 43.29 330 P P 04 27 02.5 +0.7
13nm,0.8s,baz=154,slow=10,SNR=55
ANMO Albuquerque 43.29 330 P P 04 27 02.3 +0.6
baz=142
ANMO Albuquerque 43.29 330 eP P 04 27 02.5 +0.7
14nm,0.8s
TASM ASL Pad, Albuq 43.29 330 P P 04 27 02.4 +0.6
baz=142
M43A Waltham Townsh 43.49 352 P P 04 27 03.4 +0.4
baz=169
N39A Derby Farms, D 43.56 348 P P 04 27 03.3 -0.3
baz=164
N38A Joes South For 43.64 347 P P 04 27 04.5 +0.3
baz=163
TUC Tucson 43.70 323 P P 04 27 05.0 +0.1
baz=135
TUC Tucson 43.70 323 eP P 04 27 05.1 +0.1
6.5nm,1.0s
N37A Lee Faris, Mou 43.83 346 P P 04 27 05.8 0.0
baz=162
BINY Binghamton 44.03 6 P P 04 27 06.8 -0.6
baz=188
N36A Muff Farm, Cla 44.07 345 P P 04 27 07.4 -0.3
baz=160
M39A Webster 44.08 349 P P 04 27 07.8 +0.1
baz=165
T25A Trinidad 44.10 334 P P 04 27 08.5 +0.3
baz=146
T25A Trinidad 44.10 334 eP P 04 27 08.8 +0.6
44nm,1.4s
L42A Oliver, Polo 44.15 351 P P 04 27 08.6 +0.3
baz=168
M38A Pleasantville 44.23 347 P P 04 27 08.4 -0.6
baz=163
M37A Trindle Farm, 44.41 347 P P 04 27 10.7 +0.3
baz=162
L40A Anamosa 44.46 350 P P 04 27 10.3 -0.5
baz=166
M36A Felix, Anita 44.63 346 P P 04 27 11.6 -0.7
baz=161
L39A Vinton 44.66 349 P P 04 27 12.1 -0.4
baz=165
214A Organ Pipe Nat 44.70 321 P P 04 27 13.5 +0.6
baz=132,SNR=12
X18A Snowflake 44.83 326 eP P 04 27 14.7 +0.6
16nm,0.9s
K41A Shullsburg 44.84 351 P P 04 27 13.1 -0.7
baz=168
K42A Prairie Point, 44.86 352 P P 04 27 14.5 +0.5
baz=169
L38A Oak Wood Farm, 44.87 348 P P 04 27 14.3 +0.2
baz=164
KSCO Kaye Shedlock' 44.93 337 P P 04 27 14.9 +0.1
baz=149
KSCO Kaye Shedlock' 44.93 337 eP P 04 27 15.0 +0.3
74nm,1.4s
L37A Phoenix Point, 45.03 347 P P 04 27 15.3 0.0
baz=163
K40A Colesburg 45.07 350 P P 04 27 14.4 -1.3
baz=166
SDCO Great Sand Dun 45.09 333 P P 04 27 16.4 +0.2
baz=145,SNR=21
SDCO Great Sand Dun 45.09 333 eP P 04 27 16.8 +0.6

13nm,1.0s
JFWS Jewell Farm 45.13 351 P P 04 27 16.7 +0.6
baz=168
JFWS Jewell Farm 45.13 351 eP P 04 27 14.7 -1.5
31nm,1.5s
W18A Petrified Fore 45.14 327 P P 04 27 17.2 +0.6
baz=138,SNR=5.3
W18A Petrified Fore 45.14 327 eP P 04 27 17.3 +0.7
30nm,1.1s
K39A Oelwein 45.20 349 P P 04 27 15.5 -1.3
baz=165
K38A Parkersburg 45.32 348 P P 04 27 16.6 -1.0
baz=164
J42A Columbus 45.36 352 P P 04 27 17.6 -0.3
baz=169
ACCN Adirondack Com 45.48 8 eP P 04 27 18.4 -0.5
15nm,1.3s
J41A Loganville 45.53 351 P P 04 27 17.1 -2.2
baz=168
X16A Lo Mia Camp, P 45.59 325 eP P 04 27 20.2 +0.1
6.6nm,0.8s
K37A Belmond 45.62 348 P P 04 27 20.0 0.0
baz=163
K36A Gilmore City 45.67 347 P P 04 27 19.8 -0.6
baz=162
J40A Soldiers Grove 45.68 351 P P 04 27 20.1 -0.3
baz=167
S22A 4UR Ranch, Cre 45.70 332 P P 04 27 20.3 -0.8
baz=143,SNR=7.2
S22A 4UR Ranch, Cre 45.70 332 eP P 04 27 20.3 -0.8
19nm,1.3s
J39A Decorah 45.78 350 P P 04 27 20.3 -1.0
baz=166
I43A Langenfeld Bro 45.80 353 P P 04 27 20.1 -1.3
baz=171
I42A Draeger Farm, 45.90 353 P P 04 27 20.9 -1.3
baz=170
I42A Draeger Farm, 45.90 353 eP P 04 27 21.7 -0.5
10nm,0.8s
Q24A Divide 45.94 334 P P 04 27 23.1 +0.2
baz=146
Q24A Divide 45.94 334 eP P 04 27 23.2 +0.2
28nm,1.6s
MVCO Mesa Verde 46.09 330 P P 04 27 24.0 -0.1
baz=141
MVCO Mesa Verde 46.09 330 eP P 04 27 23.6 -0.5
16nm,1.4s
I40A Norwalk 46.14 351 P P 04 27 25.0 +0.9
baz=167
I41A Arkdale 46.19 352 P P 04 27 25.7 +1.2
baz=168
I39A Houston 46.25 350 P P 04 27 25.6 +0.6
baz=166
J36A Seneca 1, Swea 46.30 347 P P 04 27 25.4 0.0
baz=162
H43A Windswept, Lux 46.34 354 P P 04 27 26.2 +0.6
baz=171
H43A Windswept, Lux 46.34 354 eP P 04 27 24.1 -1.6
28nm,0.9s
WUAZ Wupatki 46.34 326 P P 04 27 26.6 +0.5
baz=137,SNR=8.4
WUAZ Wupatki 46.34 326 eP P 04 27 27.1 +1.0
26nm,1.1s
I38A Scanlan Farm, 46.58 349 P P 04 27 26.3 -1.3
baz=165
LONY Lake Ozonia 46.58 7 P P 04 27 26.7 -0.9
baz=190
LONY Lake Ozonia 46.58 7 eP P 04 27 26.0 -1.5
10nm,1.2s
LBNH Lisbon 46.59 10 P P 04 27 26.7 -0.9
baz=193
H40A Chili 46.82 351 P P 04 27 28.8 -0.7
baz=168
ISCO Idaho Springs 46.83 335 P P 04 27 30.0 0.0
baz=146,SNR=8.6
ISCO Idaho Springs 46.83 335 eP P 04 27 30.3 +0.3
9.8nm,1.3s
I36A Fitzsimmons Fa 46.89 348 P P 04 27 29.4 -0.6
baz=163
SMCO Snowmass 46.92 333 eP P 04 27 31.6 +0.8
10nm,1.1s
Y12C Blythe 46.97 322 P P 04 27 30.6 -0.2
baz=132
Y12C Blythe 46.97 322 eP P 04 27 31.9 +1.1
12nm,1.3s
H39A Augusta 47.02 351 P P 04 27 30.6 -0.4
baz=167
PV03 Paradox Valley 47.08 331 eP P 04 27 32.4 +0.6
33nm,1.5s
G43A Wallace 47.10 354 P P 04 27 31.1 -0.5
baz=172
PV07 Paradox Valley 47.12 331 eP P 04 27 33.1 +0.9
9.9nm,1.1s
G42A Mountain 47.17 353 P P 04 27 30.6 -1.6
baz=171
G42A Mountain 47.17 353 eP P 04 27 37.0 +4.8
21nm,1.4s
H38A Maiden Rock 47.18 350 P P 04 27 31.3 -0.9
baz=165
PV04 Paradox Valley 47.21 331 eP P 04 27 33.6 +0.8
28nm,1.4s
ECSD EROS Data Cent 47.23 345 P P 04 27 31.6 -1.1
baz=159,SNR=6.9
ECSD EROS Data Cent 47.23 345 eP P 04 27 31.1 -1.6
21nm,1.4s
G41A Antigo 47.23 353 P P 04 27 31.7 -1.0
baz=170
H36A Jessenland, He 47.41 348 P P 04 27 32.8 -1.2
baz=163
W13A Hualapai Mount 47.50 324 eP P 04 27 36.3 +1.2
6.6nm,0.8s
U15A North Rim 47.51 326 eP P 04 27 36.7 +1.4
16nm,1.3s
G38A Ridgeland 47.59 350 P P 04 27 34.2 -1.3
baz=166
G39A Holcombe 47.59 351 P P 04 27 34.5 -0.9
baz=167
MONP2 Monument Peak 47.62 319 P P 04 27 36.2 0.0
baz=129
F43A Flat Rock, Esc 47.62 355 P P 04 27 37.3 +1.6
baz=172
IRM Iron Mountain 47.62 322 P P 04 27 36.4 +0.4
baz=132,SNR=12
F44A Big Bay de Noc 47.70 355 P P 04 27 34.1 -2.1
baz=173
H35A Sunnyside Ranc 47.72 347 P P 04 27 35.3 -1.1
baz=162,SNR=5.9
F41A Three Lakes 47.74 353 P P 04 27 35.9 -0.7
baz=170
SPMN Marine on St. 47.81 349 P P 04 27 37.0 -0.1
baz=165
N23A Red Feather La 47.88 335 P P 04 27 38.0 -0.1
baz=146
N23A Red Feather La 47.88 335 eP P 04 27 39.1 +1.0
10nm,1.1s
F40A Park Falls 48.05 352 P P 04 27 40.1 +1.1
baz=168
BELC Belle Mtn. Jos 48.05 321 P P 04 27 39.7 +0.2
baz=131
PKME Peaks-Kenny Pk 48.06 12 P P 04 27 38.7 -0.3
baz=196
PFO Pinyon Flats O 48.10 320 P P 04 27 40.2 +0.5
baz=130
E43A Lone Tree Farm 48.15 355 P P 04 27 39.7 0.0
baz=173
H33A Prehn Over Nor 48.15 346 P P 04 27 38.9 -1.0
baz=159,SNR=5.8
H32A Carlson Farm, 48.16 345 P P 04 27 38.6 -1.3
baz=158
TRQ Mont Tremblant 48.16 7 eP P 04 27 39.0 -0.9
KNB Kanab 48.23 326 eP P 04 27 42.5 +1.7
23nm,1.6s
O20A White River Ci 48.27 333 P P 04 27 40.4 -0.6
baz=143
O20A White River Ci 48.27 333 eP P 04 27 41.7 +0.6
37nm,1.5s
E42A Champion 48.29 354 P P 04 27 39.5 -1.3
baz=171
F38A Pierce - Schro 48.36 350 P P 04 27 39.8 -1.6
baz=166
GMRC Granite Mounta 48.36 322 P P 04 27 41.4 -0.4
baz=132
G34A Benson 48.41 347 P P 04 27 40.6 -1.2
baz=161
E41A Kenton 48.44 353 P P 04 27 42.9 +0.9
baz=170
LCMT Little Creek M 48.47 326 eP P 04 27 43.7 +1.2
20nm,1.6s

E40A Wakefield 48.54 352 P P 04 27 41.9 -0.8
baz=169
G33A Ortonville 48.56 346 P P 04 27 42.2 -0.7
baz=160
F36A Milaca 48.56 349 P P 04 27 41.7 -1.2
baz=164
E39A Mellen 48.56 352 P P 04 27 41.5 -1.5
baz=168
SRU San Rafael Swe 48.57 330 eP P 04 27 40.3 -3.1
18nm,1.6s
MTPU Mount Pierson 48.63 328 eP P 04 27 46.1 +2.1
9.7nm,1.5s
F35A Swanville 48.77 348 P P 04 27 43.9 -0.6
baz=163
SZCU Shurtz Canyon 48.80 327 eP P 04 27 46.4 +1.2
13nm,1.3s
HEC Hector,Ludlow 48.80 321 P P 04 27 45.4 +0.2
baz=131,SNR=6.6
F34A Alexandria 48.85 347 P P 04 27 43.9 -1.3
baz=162
CCUT Cedar City 48.92 326 eP P 04 27 47.5 +1.4
18nm,1.3s
TUQ Turquoise Moun 48.95 322 P P 04 27 46.1 -0.2
baz=132,SNR=5.9
P17A Butcher Ranch, 48.95 330 eP P 04 27 46.9 +0.6
7.2nm,0.7s
MSU Marysvale 48.97 328 eP P 04 27 47.4 +0.9
D41A Chassel 48.98 354 P P 04 27 45.2 -0.9
baz=171
RWWY Rawlins 49.07 335 eP P 04 27 46.9 -0.3
13nm,1.0s
E36A McGregor 49.14 349 P P 04 27 47.0 -0.3
baz=164
SHPR Sheep Range 49.21 324 eP P 04 27 49.3 +1.0
6.2nm,1.1s
BFSC Mount Baldy Ra 49.27 320 P P 04 27 47.1 -1.6
baz=129
GSC Goldstone, Bar 49.41 322 P P 04 27 49.7 0.0
baz=131
GSC Goldstone, Bar 49.41 322 eP P 04 27 50.8 +1.1
8.2nm,1.1s
SHOC Shoshone, Teco 49.47 323 P P 04 27 50.1 0.0
baz=132
E34A Wadena 49.52 348 P P 04 27 49.9 -0.3
baz=162
K22A Casper 49.58 336 P P 04 27 50.4 -0.6
baz=146
K22A Casper 49.58 336 eP P 04 27 51.4 +0.4
5.0nm,0.9s
E33A Westby DABS, E 49.69 347 P P 04 27 50.7 -0.9
baz=161
D36A Goodland 49.76 350 P P 04 27 51.5 -0.6
baz=165
MPU Maple Canyon 49.81 330 eP P 04 27 53.5 +0.6
5.2nm,0.8s
RSSD Black Hills 49.87 339 P P 04 27 53.3 0.0
baz=150
RSSD Black Hills 49.87 339 eP P 04 27 53.9 +0.6
6.6nm,0.7s
EDW2 Edwards Air Fo 49.88 320 P P 04 27 53.4 +0.1
baz=129,SNR=5.4
C40A Isle Royale Na 49.89 353 P P 04 27 52.4 -0.6
baz=170
PSUT Pine Spring 49.89 327 eP P 04 27 54.6 +1.1
4.5nm,0.9s
C39A Grand Marais 49.91 352 P P 04 27 50.8 -2.5
baz=169
D34A Park Rapids 50.07 348 P P 04 27 53.5 -1.0
baz=162
LRMC Laurel Mtn Rad 50.07 321 P P 04 27 54.4 -0.4
baz=130
C37A Embarrass 50.13 351 P P 04 27 54.5 -0.3
baz=166
TPNV Topopah Spring 50.16 324 P P 04 27 55.3 -0.2
baz=132
TPNV Topopah Spring 50.16 324 eP P 04 27 56.9 +1.3
4.6nm,0.8s
JLU Jordanelle 50.17 330 eP P 04 27 56.4 +0.7
18nm,1.4s
FURC Furnace Creek, 50.20 323 P P 04 27 56.0 +0.4
baz=131,SNR=5.4
MPMC Manual Prospec 50.32 322 P P 04 27 55.4 -1.4
baz=130
CTU Camp Tracy 50.38 330 eP P 04 27 58.4 +1.2
15nm,1.3s
C35A Jirik Farms, M 50.41 349 P P 04 27 56.7 -0.3
baz=164
DAC Darwin (Calif) 50.52 322 eP P 04 27 57.9 -0.5
8.7nm,1.2s
C34A RKJ Ranch, Bem 50.55 348 P P 04 27 57.4 -0.6
baz=163
DUG Dugway, Tooele 50.55 329 P P 04 27 58.1 -0.3
baz=138
DUG Dugway, Tooele 50.55 329 eP P 04 27 57.9 -0.5
13nm,1.5s
R11A Troy Canyon, C 50.72 325 P P 04 28 00.1 +0.3
baz=134,SNR=7.5
R11A Troy Canyon, C 50.72 325 eP P 04 28 00.3 +0.5
3.3nm,0.9s
CWC Cottonwood Cre 50.93 322 P P 04 28 00.9 -0.4
baz=130
BW06 Boulder Array 50.97 334 P P 04 28 00.6 -1.0
baz=143
BW06 Boulder Array 50.97 334 eP P 04 28 01.0 -0.6
8.7nm,1.3s
PD31 Pinedale Array 50.97 334 eP P 04 28 01.3 -0.3
PDAR Pinedale Array 50.97 334 P P 04 28 00.8 -0.8
2.0nm,0.9s,baz=134,slow=8.6,SNR=15
PDAR LR LR 04 49 50.8
comp=Z,133nm,18.9s,baz=147,slow=36
HWUT Hardware Ranch 50.99 331 eP P 04 28 02.0 +0.3
19nm,1.1s
B35A Bob, Littlefor 51.00 350 P P 04 28 00.8 -0.6
baz=164
SPUT South Promonto 51.20 330 eP P 04 28 03.8 +0.5
8.0nm,1.0s
BGU Big Grassy Mou 51.20 330 eP P 04 28 03.9 +0.6
8.1nm,1.0s
B34A Aery, Baudette 51.30 349 P P 04 28 02.9 -0.7
baz=163,SNR=8.0
C31A Landman Farms, 51.30 346 P P 04 28 02.8 -0.9
baz=159
AGMN Agassiz Nation 51.36 348 P P 04 28 03.5 -0.7
baz=162,SNR=7.8
AGMN Agassiz Nation 51.36 348 eP P 04 28 04.0 -0.2
21nm,1.0s
B32A Ashes, Strandq 51.60 347 P P 04 28 05.3 -0.6
baz=161
AHID Auburn Hatcher 51.66 332 eP P 04 28 06.8 -0.1
5.7nm,0.9s
HVU Hansel Valley 51.71 330 eP P 04 28 07.2 +0.1
9.9nm,1.3s
MDND Maddock 51.83 345 P P 04 28 08.3 +0.6
baz=157
A33A Warroad 51.87 348 P P 04 28 07.4 -0.6
baz=162,SNR=8.5
B31A Greenbush Farm 51.88 346 P P 04 28 07.7 -0.3
baz=159
REDW Red Top Meadow 52.02 333 eP P 04 28 09.7 +0.2
36nm,1.3s
SNOW Snow King Moun 52.05 333 eP P 04 28 10.1 +0.4
24nm,1.4s
A32A Rocking H Ranc 52.08 348 P P 04 28 08.8 -0.7
baz=161,SNR=5.6
LOHW Long Hollow 52.10 333 eP P 04 28 10.2 +0.1
5.2nm,0.9s
TPAW Teton Pass 52.16 333 eP P 04 28 10.7 +0.1
10nm,1.0s
ELK Elko 52.22 328 P P 04 28 13.8 +2.8
5.6nm,1.1s,baz=181,slow=5.4,SNR=11
OMMB Old Mammoth Mi 52.25 322 eP P 04 28 12.7 +1.4
17nm,1.3s
NV11 Mina Array Sit 52.27 324 eP P 04 28 12.5 +1.2
0.7nm,1.0s
MOOW Moose Ponds 52.27 334 eP P 04 28 11.4 +0.1
6.6nm,1.2s
MDPB Devils Postpil 52.31 322 eP P 04 28 13.0 +1.3
13nm,1.2s
FXWY Fox Creek 52.31 333 eP P 04 28 11.6 0.0
17nm,1.8s
IMW Indian Meadow 52.48 333 eP P 04 28 13.1 +0.2
4.1nm,0.8s
KVN Kaiserville 52.65 324 eP P 04 28 15.5 +1.3
8.4nm,1.3s
H17A Grant Village 52.71 334 P P 04 28 13.0 -1.6
baz=142
H17A Grant Village 52.71 334 eP P 04 28 15.9 +1.3
9.0nm,1.3s

YPP Pitchstone Pla 52.71 334 eP P 04 28 16.0 +1.3
7.1nm,1.0s
RLMT Red Lodge 52.74 336 P P 04 28 14.1 -0.6
baz=144
RLMT Red Lodge 52.74 336 eP P 04 28 13.9 -0.8
13nm,1.6s
YFT Old Faithful 52.87 334 eP P 04 28 17.9 +2.2
32nm,1.4s
BMN Battle Mountai 53.08 326 eP P 04 28 18.1 +0.8
16nm,1.3s
WAKR Walker 53.08 323 eP P 04 28 18.7 +1.3
18nm,1.5s
YHH Holmes Hill 53.14 334 eP P 04 28 19.2 +1.3
10nm,1.2s
ULM Lac du Bonnet 53.22 349 P P 04 28 17.1 -0.8
14nm,0.7s,baz=159,slow=7.1,SNR=42
ULM Lac du Bonnet 53.22 349 eP P 04 28 17.1 -0.8
22nm,0.7s
QLMT Earthquake Lak 53.43 334 eP P 04 28 21.3 +1.4
GCMT Greycliff 53.45 336 eP P 04 28 20.3 +0.4
HLID Hailey 53.84 331 P P 04 28 22.8 -0.1
baz=138,SNR=11
HLID Hailey 53.84 331 eP P 04 28 23.2 +0.3
6.6nm,1.0s
MCMT McKenzie Canyo 54.06 333 eP P 04 28 25.5 +0.9
BOZ Bozeman (W) 54.12 334 P P 04 28 24.9 +0.1
baz=142,SNR=19
BOZ Bozeman (W) 54.12 334 eP P 04 28 25.0 +0.1
27nm,1.4s
AFDM Forest Hills D 54.29 322 eP P 04 28 26.9 +0.8
8.8nm,1.3s
DLMT Dillon 54.36 333 eP P 04 28 27.5 +0.9
7.4nm,1.0s
MFID Camas Ranch 54.44 330 eP P 04 28 27.8 +0.6
21nm,1.4s
BEKR Beckworth 54.50 324 eP P 04 28 28.6 +0.9
16nm,1.5s
LRM Limekiln Ridge 54.65 334 eP P 04 28 29.1 +0.3
ORV Oroville 54.99 323 eP P 04 28 32.2 +1.1
18nm,1.3s
WVOR Wild Horse Val 55.22 327 eP P 04 28 33.1 +0.3
15nm,1.1s
EGMT Eagleton 55.30 337 P P 04 28 32.8 -0.5
baz=145
EGMT Eagleton 55.30 337 eP P 04 28 33.6 +0.3
O03D Paynes Creek 55.63 323 P P 04 28 35.5 -0.3
baz=129
MOD Modoc Plateau 55.79 326 eP P 04 28 37.7 +0.7
18nm,1.6s
RKT Rikitea 55.89 243 eLR LR 04 45 01.5
336nm,27.8s
RKT Rikitea 55.89 243 eT T 05 28 30.0
13nm,0.3s
MSO Missoula 56.09 334 P P 04 28 38.6 -0.4
baz=140
MSO Missoula 56.09 334 eP P 04 28 39.4 +0.4
30nm,1.6s
BMO Blue Mountains 56.21 330 eP P 04 28 38.5 -1.4
6.4nm,1.2s
M04C Macdoel 56.59 325 P P 04 28 42.0 -0.7
baz=129
N02D Trinity Center 56.59 323 P P 04 28 41.7 -0.9
baz=128
K05A Summer Lake 56.66 326 eP P 04 28 44.2 +1.0
K05A epP sP 04 28 47.9 -1.5
M02C Callahan 56.94 324 P P 04 28 43.5 -1.6
baz=128
F10A Beach Ranch, E 56.98 331 eP P 04 28 46.3 +1.0
13nm,1.1s
YBH Yreka Blue Hor 57.06 324 P P 04 28 45.1 -0.9
3.8nm,0.9s,baz=266,slow=18,SNR=9.0
YBH LR LR 04 51 03.3
comp=Z,115nm,21.8s,baz=164,slow=34
YBH Yreka Blue Hor 57.06 324 eP P 04 28 45.1 -0.9
8.7nm,1.1s
J05D Fort Rock, OR 57.21 326 P P 04 28 47.0 -0.1
baz=131,SNR=9.0
G08A Pilot Rock 57.35 329 eP P 04 28 48.5 +0.5
14nm,1.0s
PINE Pine Mountain 57.38 327 eP P 04 28 49.3 +1.0
17nm,0.9s
J04D Umpqua Nationa 57.67 326 P P 04 28 49.9 -0.5
baz=130
SCHQ Schefferville 57.68 10 LR LR 04 56 48.9
comp=Z,37nm,18.0s,baz=154,slow=39
WALA Waterton Lakes 57.79 335 eP P 04 28 50.8 -0.3
9.9nm,1.0s
L02D Cave Junction, 57.85 324 P P 04 28 51.5 +0.1
baz=128
I05D Terrebonne, OR 57.96 327 P P 04 28 52.3 +0.1
baz=131
G06A Carlson Farm, 58.18 328 eP P 04 28 55.1 +1.4
G06A epP sP 04 29 03.5 +3.6
G05D Wamic, OR 58.54 328 P P 04 28 56.0 -0.2
baz=132
NEW Newport 58.59 333 P P 04 28 56.2 -0.3
5.1nm,1.0s,baz=125,slow=6.0,SNR=4.8
NEW Newport 58.59 333 P P 04 28 56.4 -0.2
baz=137
NEW Newport 58.59 333 eP P 04 28 57.3 +0.8
12nm,1.1s
TAOE Nuku Hiva Isla 58.66 261 eLR LR 04 46 09.0
156nm,28.9s
FFC Flin Flon 58.74 346 eP P 04 28 56.4 -1.0
FCC Fort Churchill 61.13 353 eP P 04 29 13.5 -0.2
13nm,0.9s
FRB Frobisher Bay 66.05 6 P P 04 29 45.1 -1.0
1.8nm,0.6s,baz=145,slow=5.1,SNR=3.8
PPT2 Papeete2 68.49 252 eLR LR 04 50 51.6
291nm,26.0s,baz=69
YKA Yellowknife Ar 68.75 344 P P 04 30 02.2 -1.0
1.8nm,0.9s,baz=135,slow=6.1,SNR=8.5
TBI Tubuai 69.01 246 eLR LR 04 51 12.0
222nm,30.0s
DLBC Dease Lake 71.14 335 P P 04 30 19.2 +1.0
1.2nm,0.5s,baz=137,slow=9.0,SNR=3.1
DLBC Dease Lake 71.14 335 eP P 04 30 18.4 +0.2
9.5nm,1.0s
LIC Lamto 76.85 83 eP P 04 30 57.2 +4.8
45nm,1.4s
TIC Toumodi 76.88 83 eP P 04 30 56.4 +3.8
DBIC Dimbokro 77.05 83 LR LR 05 04 20.4
comp=Z,75nm,20.0s,baz=240,slow=35
KIC Kosan Boka 77.14 83 eP P 04 30 58.3 +4.2
28nm,1.0s
DAWY Dawson 78.04 338 eP P 04 30 57.3 -0.8
3.7nm,0.9s
INK Inuvik 78.39 343 P P 04 30 59.9 0.0
3.3nm,1.0s,baz=204,slow=6.5,SNR=4.1
INK Inuvik 78.39 343 eP P 04 30 58.8 -1.0
11nm,1.3s
SUMG Summit 78.99 12 iP P 04 31 08.4 +4.8
6.5nm,0.9s
EGAK Eagle 79.06 338 eP P 04 31 03.0 -0.6
10nm,1.2s
DOT Dot Lake 79.67 336 eP P 04 31 07.3 +0.2
16nm,1.1s
RIDG Independ'e Rid 80.03 336 eP P 04 31 09.6 +0.6
7.4nm,0.9s
IL1 Eielson Array 81.27 337 eP P 04 31 14.6 -1.0
ILAR Eielson Array 81.27 337 P P 04 31 14.6 -0.9
1.4nm,0.9s,baz=133,slow=3.7,SNR=14
RND Reindeer 81.55 335 eP P 04 31 17.4 +0.3
38nm,1.8s
ESDC Sonseca Array 81.61 50 P P 04 31 18.7 +0.7
0.7nm,0.7s,baz=277,slow=5.7,SNR=3.7
ES19 SONSECA Array 81.66 50 eP P 04 31 18.2 -0.1
COLA College 81.69 337 eP P 04 31 17.8 +0.1
2.2nm,0.6s
TRF Thorofare Moun 82.16 335 eP P 04 31 20.6 +0.1
25nm,1.7s
SKT Skwentna 82.22 333 eP P 04 31 20.6 -0.1
12nm,1.0s
VNA3 Neumayer Olymp 82.60 162 P P 04 31 22.7 +0.2
BPAW Bear Paw Mtn. 82.68 336 eP P 04 31 22.6 -0.4
9.8nm,1.0s
PPLA Purkeypile 82.80 334 eP P 04 31 23.5 -0.3
9.7nm,0.9s
VNA1 Neumayer--Stat 82.88 161 P P 04 31 24.4 +0.5
TOA0 Torodi Ar. Sit 83.87 77 eP P 04 31 31.9 +1.8
TORD Torodi Ar. Bea 83.87 77 P P 04 31 31.7 +1.6
0.5nm,0.7s,baz=267,slow=5.5,SNR=6.6
TORD LR LR 05 06 05.7
comp=Z,84nm,21.9s,baz=190,slow=34
SNAA Sanae 84.82 162 P P 04 31 33.9 -0.1
SNAA Sanae 84.82 162 eP P 04 31 38.1 +4.1
10nm,1.3s

EKA	Eskdalemuir Ar	84.86	34	LR	LR	05 11 00.5	
	comp=Z,25nm,18.2s,baz=245,slow=37						
DAG	Danmarks Havn	85.68	12	*i* P	P	04 31 36.8	-1.2
	4.5nm,0.7s						
DAG	Danmarks Havn	85.68	12	P	P	04 31 36.0	-2.0
DAG	Danmarks Havn	85.68	12	P	P	04 31 36.0	-2.0
KEST	Kesra	91.78	54	LR	LR	05 15 31.8	
	comp=Z,34nm,18.1s,baz=271,slow=37						
NOA	NORSAR Array B	92.88	29	LR	LR	05 10 19.3	
	comp=Z,17nm,20.8s,baz=185,slow=33						
SPITS	Spitsbergen Ar	93.33	12	LR	LR	05 13 26.5	
	comp=Z,36nm,20.8s,baz=295,slow=35						
GERES	GERESS Array B	94.80	41	LR	LR	05 08 45.1	
	comp=Z,32nm,21.8s,baz=310,slow=32						
KURK	Kurchatov	128.41	16	*e*PKPdf	PKPdf	04 38 07.6	+1.1
CN2	Changchun	131.71	334	*e*PKP	PKPdf	04 38 13.2	+0.2
WMQ	Urumqi	137.03	11	PKP	PKPdf	04 38 23.0	-0.1
WMQ				LR	LR		
	comp=N,260nm,12.9s						
WMQ				LR	LR		
	comp=E,590nm,21.5s						
WMQ				LR	LR		
	comp=Z,640nm,27.1s						
KSH	Kashi	137.21	26	PKP	PKPdf	04 38 22.1	-1.5
KSH				sPKP		04 38 38.7	
H01W1	Cape Leeuwin H	140.68	201	T	T	07 16 10.4	
	baz=151,slow=76,SNR=13						
H01W2	Cape Leeuwin H	140.68	201	T	T	07 16 16.2	
	baz=151,slow=76,SNR=13						
H01W3	Cape Leeuwin H	140.69	201	T	T	07 15 55.2	
	baz=151,slow=76,SNR=14						
GTA	Gaotai	142.48	358	*e*PKP	PKPdf	04 38 32.4	-0.8
NJ2	Nanjing	144.21	330	*e*PKP	PKPdf	04 38 36.5	+0.2
LZH	Lanzhou	145.45	352	*e*PKPbc	PKPbc	04 38 38.0	-0.5
LZH				pPKP	sPKPab	04 38 48.1	+3.1
LZH				sPKP		04 38 52.0	
LZH				LR	LR		
	comp=N,130nm,18.0s						
LZH				LR	LR		
	comp=E,130nm,17.8s						
LZH				LR	LR		
	comp=Z,170nm,20.2s						
CD2	Chengdu	150.55	351	PKPbc	PKPdf	04 38 45.3	-1.6
GYA	Guiyang	154.17	343	*e*PKPbc	PKPdf	04 38 51.0	-1.5
GYA				PKPab	pPKPab	04 39 15.5	-3.3
GYA				PP	PP	04 42 52.6	+5.1
GYA				AMB	AMB		
	comp=Z,120nm,7.8s						

TIR ***08*** *04:19:13.7, 41°.35N×20°.91E, h7km, Md0.6/3*
SKO 08 04:19:13.5, 41°.35N×20°.97E, h14km, M1.4, ML1.7, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHR	Ohrid	0.27	208	*e*Pg	Pg	04 19 19.5	+0.3
OHR				*i* Sg	Sg	04 19 23.6	+0.4
OHR				*e*Lg	Lg	04 19 23.7	
	comp=N,153nm,0.3s						
OHR				*e*Lg	Lg	04 19 23.9	
	comp=E,202nm,0.5s						
BIA	Bitola	0.42	141	*e*Pg	Pg	04 19 22.3	+0.3
BIA				*e*Sg	Sn	04 19 31.2	-1.6
PHP	Peshkopia	0.52	310	*i* PG	Pg	04 19 22.8	-1.0
PHP				*i* SG	Sg	04 19 30.9	+0.2
SKO	Skopje	0.71	29	*e*Pg	Pg	04 19 27.2	-0.2
SKO				*e*Sg	Sn	04 19 39.5	-0.4
STIP	Stip	0.98	69	*e*Pg	Pn	04 19 36.9	+4.2
STIP				*e*Sg	Sn	04 19 53.3	+7.0
BCI	Bajram Curri	1.22	327	*i* PN	Pn	04 19 29.5	-6.6
BCI				*i* SN	Sg	04 19 53.1	+0.3

NIED ***08*** *04:27:00, 36°.20N×139°.10E, h175km, Mw4.1 Best double couple: M0=1.76000×10^15 NP1:φs=173.00000°, δ83.00000°, λ-178.00000°. NP2:φs=82.00000°, δ88.00000°, λ-7.00000°.*
MOS ***08*** *04:27:19.4±1.1, 36°.41N×139°.08E, h154km, mb4.1/18, Error ellipse: s-maj=12.0km s-min=7.7km az=91.7*
ISCJB ***08*** *04:27:19.2±0.3, 36°.23N±0°.04×139°.10E±0°.05, h160km±2km, mb4.1/27, Error ellipse: s-maj=6.8km s-min=5.8km az=23.1*
IDC ***08*** *04:27:19.8±0.6, 36°.17N×139°.10E, h153km±4km, mb3.7/10, mb1 3.7/15, mb1mx3.4/81, mbtmp4.1/15, Error ellipse: s-maj=15.8km s-min=8.3km az=69.0*
JMA ***08*** *04:27:20.7±0.1, 36°.19N×139°.15E, h154km±1km, M3.9 Broadband fault plane solution: P waves. NP1: φs=262.00000°, δ85.00000°, λ23.00000°. NP2: φs=170.00000°, δ67.00000°, λ174.00000°. Principal axes: T Plg20.0000°, Azm128.0000°; N Plg66.0000°, Azm275.0000°; P Plg12.0000°, Azm34.0000°;*
JMA Felt I J1.
NEIC ***08*** *04:27:20.2±0.6, 36°.32N×139°.07E, h150km±6km, mb4.2/8 Error ellipse: s-maj=12.4km s-min=8.7km az=127.0*
ISC 08 04:27:20.2±0.6, 36°.26N±0°.05×139°.10E±0°.06, h154km±5km, n83, σ1°.34/93, mb4.1/27, 14C-5D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JRY	Ryogami san	0.29	214	⇑P	Pn	04 27 42.1	+0.8
JRY				S	Sn	04 27 58.0	+0.7
JAG	Ashikaga	0.33	59	⇑P	Pn	04 27 42.0	+0.7
JAG				S	Sn	04 27 58.0	+0.6
JKT	Katashina	0.52	13	⇑P	Pn	04 27 43.2	+1.0
JKT				S	Sn	04 28 00.5	+1.3
MJAR	Matsushiro Arr	0.78	292	P	Pn	04 27 43.9	+0.3
	147nm,0.3s,baz=140,slow=4.2,SNR=534						
MJAR				S	Sn	04 28 01.7	+0.1
	86nm,0.3s,baz=70,slow=42,SNR=31						
MAJO	Matsushiro	0.78	292	*e*Pn	Pn	04 27 44.2	+0.6
MAJO				*e*Sn	Sn	04 28 00.7	-0.9
MAJO	Matsushiro	0.78	292	*c i* P	Pn	04 27 44.2	+0.6
MAT	Matsushiro	0.78	292	P	Pn	04 27 44.2	+0.5
MAT				S	Sn	04 28 02.1	+0.5
MAT	Matsushiro	0.78	292	P	Pn	04 27 44.2	+0.5
MAT				S	Sn	04 28 02.2	+0.6
MJB9	Matsu-Tunnel	0.78	292	*e*Pn	Pn	04 27 44.2	+0.5
JYN	Shimob	0.88	211	⇓P	Pn	04 27 44.5	0.0
JYN				S	Sn	04 28 03.5	+0.4
JOD2	Odawara 2	0.99	181	⇓P	Pn	04 27 45.0	-0.4
JOD2				S	Sn	04 28 03.8	-0.7
JFT	Otama	1.60	38	⇓P	Pn	04 27 52.6	+1.5
JFT				eS	Sn	04 28 16.9	+2.0
JSZ	Suzu	1.83	311	⇑P	Pn	04 27 54.1	+0.5
JSZ				*e*S	Sn	04 28 20.6	+1.2
INU	Inuyama	1.92	242	*e*Pn	Pn	04 27 54.4	-0.3
JHJ	Hachijo jima 2	3.18	170	P	Pn	04 28 09.2	-0.8
	77nm,0.3s,baz=128,slow=5.4,SNR=18						
JHJ				S	Sn	04 28 45.7	-2.9
	108nm,0.3s,baz=102,slow=22,SNR=15						
JHJ2	Mitsune	3.19	169	*e*P	Pn	04 28 09.5	-0.7
ERM	Erimo	6.56	27	*e*Pn	Pn	04 28 52.5	-1.8
ERM				*e*Sn	Sn	04 30 03.0	-5.0
ERM	Erimo	6.56	27	*c e*P	Pn	04 28 52.2	-2.0
ERM				pmax	pmax		
	comp=Z,165nm,0.8s						
JNU	Nakatsue	7.46	248	P	Pn	04 29 06.5	+0.1
	comp=Z,1.1nm,0.3s,baz=57,slow=3.8,SNR=8.1						
JNU	Nakatsue	7.46	248	*e*Pn	Pn	04 29 07.4	+1.0
ASAJ	Asahikawa	8.29	18	P	Pn	04 29 14.5	-2.9
	comp=Z,7.6nm,0.3s,baz=220,slow=11,SNR=24						
KSRS	Korea Array	9.04	281	P	Pn	04 29 29.0	+1.7
	comp=Z,0.5nm,0.3s,baz=94,slow=14,SNR=16						
YUK	Yuzh-Kuril'sk	9.33	32	⇑*i* P	Pn	04 29 28.2	-2.9
TJN	Taejon	9.48	274	⇓*i* P	Pn	04 29 26.9	-6.2
USRK	Ussuriysk Ar.	9.62	328	P	Pn	04 29 35.7	+0.8
	comp=Z,0.1nm,0.3s,baz=151,slow=12,SNR=5.3						
YSS	Yuzh-Sakhalins	11.03	13	*e*Pn	Pn	04 29 51.0	-2.5
YSS	Yuzh-Sakhalins	11.03	13	⇑*i* P	Pn	04 29 51.2	-2.3
YSS				pmax	pmax		
	comp=Z,60nm,1.1s						
YSS				pmax	pmax		
	comp=N,40nm,1.2s						
KUR	Kuril'sk	11.15	34	*i* P	Pn	04 29 53.5	-1.7
CN2	Changchun	12.88	310	*e*P	Pn	04 30 11.9	-5.7
KLR	Kul'dur	14.04	340	P	Pn	04 30 31.2	-1.0
	comp=N,0.1nm,0.3s,baz=174,slow=9.5,SNR=24						
NJ2	Nanjing	17.27	262	*e*P	Pn	04 31 11.8	-0.3
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
PEA0B	Petropavlovsk-	21.31	32	*e*P	P	04 31 56.2	+1.6
	comp=Z,16nm,1.1s						
PETK	Petropavlovsk-	21.31	32	P	P	04 31 55.6	+1.0
	comp=Z,6.1nm,0.9s,baz=221,slow=5.7,SNR=7.3						
PETK	Petropavlovsk-	21.31	32	*e*P	P	04 31 56.3	+1.7
PET	Petropavlovsk	21.67	33	⇑*e*P	P	04 31 59.3	+0.9
PET				pmax	pmax		
	comp=Z,21nm,0.9s						
GUMO	Guam	23.16	166	*e*P	P	04 32 14.6	+1.5
GUMO	Guam	23.16	166	*e*P	P	04 32 14.6	+1.5
MA2	Magadan	24.53	14	P	P	04 32 25.7	+0.6
	comp=Z,14nm,0.6s,baz=182,slow=8.9,SNR=6.6						
MA2	Magadan	24.53	14	*e*P	P	04 32 25.6	+0.4
	comp=Z,18nm,0.9s						
MA2	Magadan	24.53	14	*i* P	P	04 32 26.4	+1.2
MA2				pmax	pmax		
	comp=Z,20nm,1.3s						
ULN	Ulaanbaatar	26.28	306	*e*P	P	04 32 41.0	-0.3
	comp=Z,1.9nm,0.6s						
ULN	Ulaanbaatar	26.28	306	*e*P	P	04 32 41.0	-0.3
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SONA1	Songino Array	26.70	306	*e*P	P	04 32 43.1	-1.9
SONM	Songino Array	26.70	306	P	P	04 32 43.6	-1.4
	comp=Z,1.8nm,0.7s,baz=104,slow=8.7,SNR=7.9						
LZH	Lanzhou	28.37	280	*e*P	P	04 33 00.1	0.0
LZH				pP	pP	04 33 28.5	-3.9
LZH				sP	sP	04 33 44.6	-5.6
LZH				PP	PnPn	04 33 55.2	-2.4
LZH				pmax	pmax		
	comp=Z,23nm,1.0s						
LZH				pmax	pmax		
	comp=Z,72nm,4.8s						
CD2	Chengdu	29.82	270	P	P	04 33 13.5	+0.7
CD2				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KMI	Kunming	33.00	261	P	P	04 33 43.1	+2.1
KMI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
TIXI	Tiksi	35.86	354	⇓*i* P	P	04 34 05.3	+0.6
WMQ	Urumqi	39.54	297	P	P	04 34 37.2	+1.2
ZALV	Zalesovo Beam	41.08	313	P	P	04 34 48.2	-0.2
	comp=Z,2.3nm,0.6s,baz=92,slow=7.5,SNR=6.6						
ZALV	Zalesovo Beam	41.08	313	*e*P	P	04 34 47.6	-0.8
MK01	Makanchi Array	42.96	302	*e*P	P	04 35 03.2	-0.6
MK31	Makanchi Array	42.96	302	*e*P	P	04 35 03.6	-0.3
MK31	Makanchi Array	42.96	302	*e*P	P	04 35 03.6	-0.3
MKAR	Makanchi Array	42.96	302	P	P	04 35 03.1	-0.8
	comp=Z,1.6nm,0.6s,baz=90,slow=9.6,SNR=19						
MKAR	Makanchi Array	42.96	302	*c e*P	P	04 35 03.5	-0.4
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KURK	Kurchatov	44.95	308	*e*P	P	04 35 19.2	-0.5
KURK	Kurchatov	44.95	308	*c i* P	P	04 35 19.1	-0.5
KURK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KURBB	Kurchatov Arra	45.02	308	P	P	04 35 19.4	-0.7
	comp=Z,2.8nm,0.4s,baz=79,slow=7.5,SNR=26						
PDGK	Podgornoye	45.50	298	P	P	04 35 24.5	+0.3
PDGK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TARG	Taragay, Kyrgy	47.08	296	*e*P	P	04 35 37.7	+0.9
	comp=Z,6.8nm,0.8s						
IM3	Indian Mountai	48.26	30	*e*P	P	04 35 47.1	+1.9
KSH	Kashi	49.02	294	P	P	04 35 56.1	+4.6
KSH				pP	pP	04 36 25.8	-0.5
KSH				sP	sP	04 36 43.6	+0.1
KSH				pmax	pmax		
	comp=Z,210nm,4.7s						
AAK	Ala-Archa	49.22	298	*e*P	P	04 35 53.2	+0.2
	comp=Z,2.7nm,0.8s						
AAK	Ala-Archa	49.22	298	⇑*i* P	P	04 35 51.8	-1.2
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
OTUK	Ortayu	49.38	306	P	P	04 35 54.1	+0.2
OTUK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BVAR	Borovoye Array	49.72	312	P	P	04 35 57.3	+0.9
	comp=Z,1.0nm,0.3s,baz=95,slow=7.4,SNR=7.5						
BRVK	Borovoye	49.78	313	⇑*i* P	P	04 35 56.0	-0.8
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MDM	Murphy Dome	50.56	32	*e*P	P	04 36 04.2	+1.6
	comp=Z,23nm,2.0s						
MNAS	Manas	50.68	299	P	P	04 36 05.2	+1.2
MNAS				pmax	pmax		
	comp=Z,4.0nm,1.0s						
IL1	Eielson Array	51.14	32	*e*P	P	04 36 06.9	0.0
ILAR	Eielson Array	51.14	32	P	P	04 36 07.0	+0.1
	comp=Z,0.9nm,0.8s,baz=276,slow=5.5,SNR=9.8						
ILAR	Eielson Array	51.14	32	P	P	04 36 07.0	+0.1
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
PAX	Paxson	51.93	34	*e*P	P	04 36 17.1	+4.3
	comp=Z,3.2nm,0.6s						
PAX	Paxson	51.93	34	*e*P	P	04 36 17.1	+4.3
PAX				pmax	pmax		
	comp=Z,3.0nm,0.6s						
EGAK	Eagle	53.58	32	*e*P	P	04 36 25.1	+0.3
	comp=Z,1.2nm,0.7s						
ARU	Arti	55.71	318	*c i* P	P	04 36 39.8	-0.5
ARU						04 37 40.0	
ARU						04 38 42.6	
ARU				S	S	04 44 11.0	-3.5
ARU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WRAB	Tennant Creek	56.06	185	*e*P	P	04 36 42.0	-1.1
WRAB	Tennant Creek	56.06	185	*e*P	P	04 36 42.1	-1.1
ABKAR	Akbulak array	57.01	310	*e*P	P	04 36 49.5	-0.1
ASAR	Alice Springs	59.80	186	P	P	04 37 09.7	+0.5
	comp=Z,1.2nm,0.5s,baz=8.9,slow=6.6,SNR=3.0						
SPA0	Spitsbergen Ar	60.92	349	*e*P	P	04 37 16.9	+0.7
RES	Resolute Bay	63.81	14	P	P	04 37 35.2	-0.1
	comp=Z,0.7nm,0.5s,baz=304,slow=6.0,SNR=7.3						

ISCJB ***08*** *04:29:46.9±0.3, 4°.22S±0°.03×135°.63E±0°.04, h20km, mb4.3/24, MS3.9/16, Error ellipse: s-maj=5.9km s-min=4.4km az=5.5*
IDC ***08*** *04:29:47.0±0.8, 3°.92S×135°.67E, h0km, mb4.3/12, mb1 4.3/14, mb1mx4.2/52, mbtmp4.3/14, ML4.3/2, MS3.8/19, Ms1 3.8/19, ms1mx3.5/56, Error ellipse: s-maj=29.7km s-min=17.6km az=74.0*
NEIC ***08*** *04:29:47.2±3.8, 4°.19S×135°.68E, h9km±25km, mb4.6/7, Error ellipse: s-maj=10.4km s-min=8.0km az=77.0*
BJI ***08*** *04:29:47.4, 4°.33S×136°.02E, h29km, mb4.8/19, mB4.9/10, Ms4.6/5, Ms7 4.3/4*
DJA ***08*** *04:29:49.2±0.3, 4°.S±3°×13°.6E±°, h10km, M5.0/8, mb5.2/6, mB5.4/5, MLv5.0/8, Mw(mB)4.8/5*
ISC 08 04:29:49.6±0.5, 4°.20S±0°.05×135°.62E±0°.05, h20km, n76, σ2°.43/71, mb4.5/24, MS3.9/16, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMPI	Kaimana, Papua	1.98	286	P	Pn	04 30 22.6	+0.6
SRPI	Serui, Papua	2.40	15	P	Pn	04 30 26.2	-1.5
SRPI				S	Sn	04 30 54.9	-1.7
BAKI	Biak	3.03	9	P	Pn	04 30 33.9	-2.5
RKPI	Ransiki, Papua	3.04	332	P	Pn	04 30 35.2	-1.3
RKPI				S	Sn	04 31 09.7	-2.6
FAKI	Fak Fak	3.60	291	P	Pn	04 30 43.7	-0.5
FAKI				S	Sn	04 31 27.1	+0.9
FAKI	Fak Fak	3.60	291	*e*Pn	Pn	04 30 43.8	-0.4
FAKI				*e*Sn	Sn	04 31 24.9	-1.3
GENI	Genyem	4.81	71	P	Pn	04 31 01.3	+0.3
JAY	Jayapura	5.35	72	Pn	Pn	04 31 08.3	0.0
	3.4nm,0.3s,baz=223,slow=13,SNR=13						
JAY				LR	LR	04 33 39.7	
	comp=Z,1μm,19.3s,baz=312,slow=45						
JAY	Jayapura	5.35	72	P	Pn	04 31 09.7	+1.4
SIJI	Sorong	5.47	307	Pn	Pn	04 31 08.0	-1.9
	31nm,0.3s,baz=244,slow=22,SNR=75						
SIJI				Sn	Sn	04 32 08.2	-4.1
	20nm,0.3s,baz=109,slow=24,SNR=7.7						
SIJI				LR	LR	04 33 29.6	
	comp=Z,1μm,19.4s,baz=128,slow=42						
SAUI	Saumlaki	5.71	229	*e*Pn	Pn	04 31 12.6	-0.7
NLAI	Namlea	8.55	276	P	Pn	04 31 58.8	+6.4
LBMI	Labuha	8.85	293	P	Pn	04 31 57.4	+1.0
TNTI	Ternate	9.61	301	*e*Pn	Pn	04 32 07.5	+0.6
MTN	Manton Dam	9.66	207	*e*Pn	Pn	04 32 08.4	+0.8
MTN				*e*Sn	Sn	04 33 53.9	-1.8
SANI	Sanana	9.85	282	P	Pn	04 32 08.1	-2.1
SOEI	Soe	12.54	243	P	Pn	04 32 48.7	+1.5
SOEI	Soe	12.54	243	*e*Pn	Pn	04 32 47.0	-0.2
PMG	Port Moresby	12.57	115	Pn	Pn	04 32 53.0	+5.7
	1.5nm,0.3s,baz=325,slow=13,SNR=7.3						
PMG	Port Moresby	12.57	115	*e*Pn	Pn	04 32 50.1	+2.7
WRAB	Tennant Creek	15.69	184	*e*Pn	Pn	04 33 26.4	-3.2
	33nm,0.8s						
WB2	Warramunga Arr	15.69	184	*e*Pn	Pn	04 33 26.4	-3.3
	44nm,0.8s						
WRA	Warramunga Arr	15.70	184	Pn	Pn	04 33 25.9	-3.8
	0.9nm,0.3s,baz=7.5,slow=13,SNR=31						
WRA				Sn	Sn	04 36 15.2	-8.0
	1.4nm,0.3s,baz=2.6,slow=23,SNR=4.6						
WRA				LR	LR	04 40 19.2	
	comp=Z,323nm,21.5s,baz=355,slow=40						
TTSI	Tana Toraja	15.81	274	P	P	04 33 42.3	+7.4
PCI	Palu	16.10	281	P	P	04 33 44.4	+6.2
FITZ	Fitzroy Crossi	16.91	215	Pn	Pn	04 33 43.7	-1.5
	1.4nm,0.3s,baz=42,slow=11,SNR=35						
FITZ				Sn	Sn	04 36 43.4	-9.4
	2.2nm,0.3s,baz=73,slow=16,SNR=5.5						
FITZ				LR	LR	04 40 49.1	
	comp=Z,324nm,20.3s,baz=38,slow=38						
AS01	Alice Springs	19.42	185	*e*P	P	04 34 14.7	0.0
AS31	Alice Springs	19.42	185	*e*P	P	04 34 15.2	+0.4
	20nm,0.6s						
ASAR	Alice Springs	19.42	185	P	P	04 34 14.6	-0.2
	2.7nm,0.3s,baz=10,slow=11,SNR=160						
GUMO	Guam	19.92	27	LR	LR	04 42 21.0	
	comp=Z,129nm,18.9s,baz=206,slow=38						
MTKI	Muara Teweh, K	20.95	278	P	Pn	04 34 35.3	+1.2
KKM	Kota Kinabalu	21.89	298	*e*P	P	04 34 40.8	-0.9
	26nm,1.0s						
SBUM	Sibu	24.30	285	*e*P	P	04 35 06.6	+0.6
	43nm,1.3s						
KSM	Kuching	25.91	282	*e*P	P	04 35 21.7	+1.0
	19nm,1.1s						
STKA	Stephens Creek	28.10	169	P	P	04 35 42.3	+2.2
	2.5nm,0.8s,baz=329,slow=6.6,SNR=5.0						
JOW	Kunigami	31.66	347	LR	LR	04 47 52.5	
	comp=Z,151nm,21.6s,baz=266,slow=35						
JNU	Nakatsue	37.39	353	P	P	04 36 59.6	-1.6
	7.9nm,0.9s,baz=180,slow=5.1,SNR=5.0						
JNU				LR	LR	04 51 23.6	
	comp=Z,82nm,18.8s,baz=128,slow=35						
NJ2	Nanjing	39.42	337	*e*P	P	04 37 19.0	+0.7
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
MJAR	Matsushiro Arr	40.60	3	P	P	04 37 25.1	-3.0
	1.4nm,0.6s,baz=186,slow=7.6,SNR=3.3						
MJAR				LR	LR	04 51 36.7	
	comp=Z,137nm,19.8s,baz=195,slow=32						
KSAR	Wonju Array Be	42.05	351	P	P	04 37 38.2	-1.7
KSRS	Korea Array	42.06	351	P	P	04 37 38.2	-1.7
	1.7nm,0.8s,baz=168,slow=8.7,SNR=7.7						
KMI	Kunming	43.24	314	P	P	04 37 56.3	+6.2
KMI				pP	sP	04 38 05.7	+6.9
KMI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KMI				pmax	pmax		
	comp=Z,80nm,3.7s						
KMI				LR	LR		
	comp=N,65nm,17.1s						
KMI				LR	LR		
	comp=E,110nm,20.7s						
KMI				LR	LR		
	comp=Z,140nm,21.7s						
XAN	Xi'an	45.63	329	P	P	04 38 02.0	-6.8
XAN				pP	sP	04 38 17.5	-0.1
XAN				sP	pP	04 38 24.6	+9.5
XAN				S	S	04 44 29.9	-21
XAN				sS	pS	04 44 56.7	-1.4
XAN				pmax	pmax		
	comp=Z,5.0nm,0.5s						
XAN				pmax	pmax		
	comp=Z,93nm,4.7s						
CD2	Chengdu	46.30	321	P	P	04 38 14.0	-0.2
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
USRK	Ussuriysk Ar.	48.29	357	LR	LR	04 57 08.1	
	comp=Z,122nm,18.4s,baz=142,slow=34						
ASAJ	Asahikawa	48.51	7	P	P	04 38 29.8	-1.3
	comp=Z,4.6nm,0.4s,baz=225,slow=12,SNR=6.9						
ASAJ				LR	LR	04 57 33.7	
	comp=Z,119nm,20.7s,baz=188,slow=35						
CN2	Changchun	48.66	350	*e*P	P	04 38 35.1	+2.9
LZH	Lanzhou	49.90	326	*e*P	P	04 38 43.5	+1.4
LZH				pP	sP	04 38 54.7	+3.8
LZH				sP	pP	04 38 59.0	+11
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZH				pmax	pmax		
	comp=Z,65nm,6.5s						
LZH				LR	LR		
	comp=Z,220nm,15.2s						
LZH				LR	LR		
	comp=Z,220nm,15.6s						
LZH				LR	LR		
	comp=Z,320nm,18.3s						
HHC	Hu-ho-hao-te	49.95	336	*e*P	P	04 38 45.4	+3.1
KLR	Kul'dur	53.32	357	P	P	04 39 06.0	-1.3
	comp=Z,0.1nm,0.7s,baz=147,slow=7.0,SNR=5.5						
ULN	Ulaanbaatar	57.59	338	*e*P	P	04 39 37.5	-0.7
	comp=Z,2.3nm,0.7s						
SONM	Songino Array	57.82	337	P	P	04 39 39.2	-0.6
	comp=Z,0.8nm,0.6s,baz=141,slow=9.6,SNR=4.8						
SONM				LR	LR	05 06 06.8	
	comp=Z,29nm,19.1s,baz=114,slow=38						
SONA1	Songino Array	57.82	337	*e*P	P	04 39 39.5	-0.3
PETK	Petropavlovsk-	60.06	15	LR	LR	05 02 43.7	
	comp=Z,58nm,20.8s,baz=190,slow=33						
WMQ	Urumqi	64.31	323	P	P	04 40 26.1	+2.2
MK01	Makanchi Array	69.11	324	*e*P	P	04 40 54.4	0.0
MK31	Makanchi Array	69.12	324	*e*P	P	04 40 54.4	0.0
MKAR	Makanchi Array	69.12	324	P	P	04 40 54.5	0.0
	comp=Z,3.8nm,0.8s,baz=112,slow=8.1,SNR=19						
MAKZ	Makanchi	69.32	324	*e*P	P	04 40 55.4	-0.3
	comp=Z,5.4nm,0.8s						
KSH	Kashi	69.90	315	P	P	04 41 03.1	+3.6
KSH				pP	sP	04 41 14.1	+5.6
KSH				PP	PP	04 43 39.0	+4.6
KSH				S	S	04 50 08.5	-

NEIC Felt [III PIVS] at Borongan, Oras, San Policarpio and Taft, Samar. Felt [II PIVS] at Tacloban, Leyte.
*MAN **08** 04:41:33.1, 11°.87N×125°.31E, h27km, mb4.6, ML3.5, MS3.3*
*IDC **08** 04:41:36.3±8.8, 11°.70N×125°.11E, h79km±82km, mb3.8/12, mb1 3.8/12, mb1mx3.5/63, mbtmp4.1/12, MS3.3/1, Ms1 3.3/1, ms1mx2.6/66, Error ellipse: s-maj=104.8km s-min=14.7km az=67.0*

ISC 08 04:41:32.7±0.9, 11°.92N±0°.04×125°.41E±0°.07, h48km±8km, n32, σ1°65/38, mb4.1/13, 1C-2D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.31**	**176**	*e*P	**Pn**	**04 41 41.6**	**-0.3**
BESP				*e*S	**Sn**	**04 41 48.5**	**+0.2**
PLP	**Palo**	**0.86**	**210**	⇓*e*P	**Pn**	**04 41 47.5**	**-1.1**
PLP				*i* S	**Sn**	**04 41 58.9**	**-1.2**
CNP	**Catarman**	**0.94**	**309**	*e*P	**Pn**	**04 41 49.4**	**-0.2**
CNP				*e*S	**Sn**	**04 42 02.2**	**+0.2**
OCLP	**Ormoc**	**1.17**	**223**	*e*P	**Pn**	**04 41 52.8**	**+0.1**
OCLP				*e*S	**Sn**	**04 42 09.2**	**+1.7**
MSLP	**Maasin**	**1.85**	**197**	*e*P	**Pn**	**04 42 03.7**	**+1.6**
MSLP				*e*S	**Sn**	**04 42 29.7**	**+5.4**
PVCP	**Virac**	**2.07**	**324**	*e*P	**Pn**	**04 42 04.2**	**-0.9**
PVCP				*e*S	**Sn**	**04 42 35.8**	**+6.0**
SCPH	**Surigao**	**2.12**	**178**	⇓*e*P	**Pn**	**04 42 07.5**	**+1.7**
LLP	**Lapu-Lapu**	**2.13**	**222**	*e*P	**Pn**	**04 42 06.0**	**+0.2**
LLP				*e*S	**Sn**	**04 42 31.2**	**0.0**
RCP	**Roxas**	**2.64**	**263**	⇑*e*P	**Pn**	**04 42 13.8**	**+1.0**
GUIM	**Jordan**	**3.05**	**245**	*e*P	**Pn**	**04 42 19.1**	**+0.6**
GUIM				*e*S	**Sn**	**04 42 53.9**	**0.0**
OTRP	**Odiongan**	**3.35**	**278**	*e*P	**Pn**	**04 42 23.1**	**+0.5**
BUKP	**Musuan**	**4.03**	**185**	*e*P	**Pn**	**04 42 33.0**	**+1.0**
BUKP				*e*S	**Sn**	**04 43 18.7**	**+0.8**
WRA	**Warramunga Arr**	**32.85**	**164**	P	**P**	**04 48 00.8**	**-1.3**
	0.4nm,0.7s,baz=342,slow=9.1,SNR=4.5						
ASAR	**Alice Springs**	**36.33**	**167**	P	**P**	**04 48 31.6**	**-0.5**
	0.4nm,0.4s,baz=343,slow=6.9,SNR=7.5						
ASAR				PcP	**PcP**	**04 50 55.5**	**-0.7**
	0.5nm,0.4s,baz=342,slow=2.7,SNR=5.7						
SONM	**Songino Array**	**39.19**	**340**	P	**P**	**04 48 57.1**	**+0.9**
	1.1nm,0.6s,baz=153,slow=7.7,SNR=4.4						
H11N1	**WAKE ISLAND Hy**	**40.57**	**74**	T	T	05 32 40.5	
	baz=265,slow=74,SNR=27						
H11N2	**WAKE ISLAND Hy**	**40.58**	**74**	T	T	05 32 31.5	
	baz=265,slow=74,SNR=21						
H11N3	**WAKE ISLAND Hy**	**40.59**	**74**	T	T	05 32 33.8	
	baz=265,slow=74,SNR=26						
PALK	**Pallekele**	**44.29**	**268**	LR	LR	05 08 03.0	
	comp=Z,40nm,19.8s,baz=100,slow=36						
STKA	**Stephens Creek**	**46.22**	**161**	P	**P**	**04 49 53.3**	**+0.2**
	1.7nm,0.6s,baz=322,slow=10,SNR=4.3						
MKAR	**Makanchi Array**	**50.22**	**322**	P	**P**	**04 50 24.7**	**+0.8**
	2.2nm,0.7s,baz=122,slow=8.5,SNR=23						
ZALV	**Zalesovo Beam**	**52.79**	**331**	P	**P**	**04 50 43.1**	**+0.2**
	0.5nm,0.3s,baz=113,slow=6.9,SNR=3.7						
KURK	**Kurchatov**	**54.24**	**325**	P	**P**	**04 50 54.5**	**+0.8**
KURBB	**Kurchatov Arra**	**54.25**	**325**	P	**P**	**04 50 54.5**	**+0.8**
	3.6nm,0.5s,baz=125,slow=7.1,SNR=29						
BVAR	**Borovoye Array**	**59.84**	**325**	P	**P**	**04 51 33.6**	**+0.4**
	1.6nm,0.6s,baz=120,slow=8.8,SNR=9.3						
BRVK	**Borovoye**	**59.91**	**325**	*e*P	**P**	**04 51 34.0**	**+0.3**
ARU	**Arti**	**67.40**	**326**	*e*P	**P**	**04 52 22.6**	**-0.4**
RAYN	**Ar Rayn**	**76.19**	**291**	*e*P	**P**	**04 53 14.4**	**-2.0**
	2.5nm,0.9s						
ARCES	**ARCESS Array B**	**82.37**	**340**	P	**P**	**04 53 49.9**	**+0.7**
	2.4nm,0.6s,baz=72,slow=6.1,SNR=14						
BRTR	**Keskin Array B**	**83.84**	**309**	P	**P**	**04 53 56.8**	**-0.9**
	0.6nm,0.8s,baz=60,slow=8.5,SNR=3.4						
FINES	**FINESS Array B**	**84.05**	**332**	P	**P**	**04 53 58.5**	**+0.5**
	1.7nm,0.7s,baz=48,slow=2.8,SNR=5.9						
AKASG	**Malin Array Be**	**84.77**	**321**	P	**P**	**04 54 00.9**	**-1.0**
	0.5nm,0.4s,baz=64,slow=6.5,SNR=4.4						

MEX 08 05:01:39.7±0.3, 16°.37N×98°.57W, h12km±6km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.19**	**0**	*e*P	Pn	05 01 58.6	-3.6
TLIG				*e*S	Sb	05 02 13.3	-4.3
CAIG	**El Cayaco**	**1.77**	**293**	*e*P	Pn	05 02 06.4	-3.6
CAIG				*e*S	Sn	05 02 27.8	-4.6
VHO	**Vista Hermosa**	**1.89**	**68**	*e*P	Pn	05 02 08.6	-3.4
VHO				*e*S	Sn	05 02 30.9	-4.9
HUIG	**Huatulco**	**2.44**	**104**	*e*P	Pn	05 02 16.5	-2.8

*ISCJB **08** 05:03:09.2±0.4, 22°.36N±0°.02×121°.50E±0°.03, h20km±4km, Error ellipse: s-maj=4.4km s-min=3.2km az=28.4*
*TAP **08** 05:03:09.9, 22°.41N×121°.42E, h25km, ML2.8, C*
*JMA **08** 05:03:10.5±0.1, 22°.46N×121°.44E, h32km, M3.1*

ISC 08 05:03:08.7±1.2, 22°.43N±0°.02×121°.48E±0°.03, h4km±10km, n42, σ0°78/73, 1C-2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWH	**Lutao**	**0.28**	**0**	⇑*i*P	**Pb**	**05 03 16.7**	**+0.4**
TWH	baz=21			S	**Sb**	**05 03 21.8**	**+0.3**
LAY	**Lan-yu**	**0.39**	**170**	*e*P	**Pg**	**05 03 17.5**	**+1.3**
LAY	baz=161			*e*S	**Sb**	**05 03 24.2**	**-0.4**
TTN	**Taitung**	**0.45**	**317**	*e*P	**Pb**	**05 03 19.8**	**+0.7**
TTN	baz=328			*e*S	**Sb**	**05 03 27.3**	**+1.2**
ECL	**Taimali**	**0.51**	**290**	⇓*i*P	**Pb**	**05 03 19.4**	**-0.8**
ECL	baz=293			S	**Sb**	**05 03 26.8**	**-1.2**
TWGBT	**Beinan**	**0.53**	**317**	*e*P	**Pb**	**05 03 20.6**	**-0.1**
TWGBT	baz=309			*e*S	**Sb**	**05 03 28.3**	**-0.4**
TAW	**Tawu**	**0.54**	**263**	*e*P	**Pg**	**05 03 19.7**	**+0.7**
TAW	baz=263			S	**Sg**	**05 03 26.1**	**0.0**
TWG	**Pinlang**	**0.54**	**317**	P	**Pb**	**05 03 20.5**	**-0.2**
TWG	baz=309			*e*S	**Sb**	**05 03 28.3**	**-0.6**
EAST	**Anshuo**	**0.58**	**266**	⇓P	**Pg**	**05 03 20.3**	**+0.5**
EAST	baz=266			S	**Sg**	**05 03 27.3**	**-0.1**
CHKT	**Chengkung**	**0.68**	**351**	*e*P	**Pb**	**05 03 23.1**	**0.0**
CHKT	baz=3.0			*e*S	**Sb**	**05 03 33.1**	**+0.3**
TSEB	**Hengchuen, Pin**	**0.75**	**226**	*e*P	**Pg**	**05 03 22.3**	**-0.7**
TSEB	baz=233			*e*S	**Sb**	**05 03 34.1**	**-0.7**
TWKBT	**Hengchun**	**0.78**	**232**	*e*P	**Pg**	**05 03 23.5**	**-0.1**
TWKBT	baz=230			*e*S	**Sg**	**05 03 33.2**	**-0.6**
TWK1	**Hengchun**	**0.79**	**232**	P	**Pg**	**05 03 23.6**	**-0.1**
TWK1	baz=230			S	**Sg**	**05 03 33.3**	**-0.6**
FULB	**Fuli**	**0.79**	**348**	P	**Pb**	**05 03 25.1**	**+0.1**
FULB	baz=359			*e*S	**Sb**	**05 03 37.0**	**+1.0**
SCZT	**Fangliau**	**0.79**	**266**	P	**Pg**	**05 03 23.8**	**-0.1**
SCZT	baz=267			*e*S	**Sg**	**05 03 32.7**	**-1.5**
MASBT	**Mashibuluo**	**0.80**	**284**	*e*P	**Pg**	**05 03 23.9**	**-0.2**
MASBT	baz=279			*e*S	**Sg**	**05 03 33.4**	**-1.0**
HEN	**Hengchun**	**0.80**	**239**	*e*P	**Pg**	**05 03 24.2**	**+0.2**
HEN	baz=229			S	**Sg**	**05 03 33.8**	**-0.6**
SSD	**Sandimen**	**0.84**	**292**	*e*P	**Pg**	**05 03 24.6**	**-0.3**
	baz=301						
ELDTW	**Lidau**	**0.87**	**331**	*e*P	**Pn**	**05 03 27.8**	**0.0**
	baz=325						
TWF1	**Yuli**	**0.94**	**350**	*e*P	**Pn**	**05 03 28.2**	**-0.4**
	baz=341						
TWF1				*e*S	**Sb**	**05 03 41.1**	**+0.8**
	baz=341						
SLGT	**Liugui**	**0.95**	**307**	P	**Pn**	**05 03 28.1**	**-0.7**
	baz=306						
YULB	**Yu-li**	**0.98**	**350**	*e*P	**Pg**	**05 03 27.4**	**0.0**
	baz=360						
STYT	**Tauyuan**	**0.99**	**318**	*e*P	**Pg**	**05 03 27.6**	**0.0**
	baz=329						
WLCH	**Liuqiu**	**1.02**	**266**	*e*P	**Pn**	**05 03 30.8**	**+1.1**
	baz=269						
WLCH				*e*S	**Sn**	**05 03 46.3**	**+1.8**
	baz=269						
TWP	**Hsiaoliuchiu**	**1.03**	**266**	*e*P	**Pn**	**05 03 30.9**	**+0.9**
	baz=265						
TWP				*e*S	**Sn**	**05 03 46.2**	**+1.4**
	baz=265						
SGST	**Jiashian**	**1.05**	**309**	*i* P	**Pn**	**05 03 29.8**	**-0.4**
	baz=319						
HGSD	**Ruisui**	**1.06**	**357**	*e*P	**Pg**	**05 03 29.1**	**0.0**
	baz=11						
HGSD				*e*S	**Sn**	**05 03 45.8**	**+0.2**
	baz=11						
EHY	**Hungye**	**1.08**	**353**	*e*P	**Pg**	**05 03 29.4**	**-0.1**
	baz=343						
EHY				*e*S	**Sg**	**05 03 43.7**	**+0.1**
	baz=343						
WTP	**Ta-pu**	**1.14**	**316**	P	**Pn**	**05 03 31.4**	**-0.1**
	baz=319						
WTP				*e*S	**Sn**	**05 03 47.5**	**0.0**
	baz=319						
CHN1	**Nanshi**	**1.16**	**311**	*e*P	**Pn**	**05 03 31.5**	**-0.2**
	baz=313						
CHN1				*e*S	**Sn**	**05 03 48.7**	**+0.7**
	baz=313						
TPUB	**Ta-pu**	**1.17**	**318**	*e*P	**Pn**	**05 03 31.8**	**-0.1**
	baz=321						
TPUB				*e*S	**Sn**	**05 03 49.1**	**+0.9**
	baz=321						
CHN4	**Tsaushan**	**1.23**	**319**	*e*P	**Pn**	**05 03 33.0**	**+0.3**
	baz=321						
CHN4				*e*S	**Sn**	**05 03 51.2**	**+1.4**
	baz=321						
TWK	**Hsinying**	**1.24**	**313**	*e*P	**Pn**	**05 03 32.8**	**0.0**
	baz=325						
TWK				*e*S	**Sn**	**05 03 49.8**	**-0.2**
	baz=325						
VWDT	**VWDT**	**1.36**	**347**	*e*P	**Pn**	**05 03 33.3**	**-1.1**
	baz=3.0						
VWDT				*e*S	**Sn**	**05 03 52.7**	**-0.2**
	baz=3.0						
SSLB	**Suanglung**	**1.44**	**341**	*e*P	**Pg**	**05 03 36.3**	**0.0**
	baz=353						
SSLB				*e*S	**Sg**	**05 03 55.0**	**+0.1**
	baz=353						
SMLT	**Sun Moon Lake**	**1.54**	**340**	*e*P	**Pg**	**05 03 38.9**	**+0.6**
	baz=343						
TYC	**Yuchr**	**1.58**	**339**	*e*P	**Pg**	**05 03 39.2**	**+0.2**
	baz=350						
JYNG	**Yonagunijimaku**	**2.43**	**34**	*e*S	**Sn**	**05 04 18.3**	**-1.0**
YOJ	**Yonaguni jima**	**2.47**	**35**	P	**Pn**	**05 03 51.1**	**+1.4**
HATJ	**Hateruma jima**	**2.69**	**52**	*e*S	**Sn**	**05 04 25.2**	**-0.5**
JIJ	**Ishigaki jima**	**3.12**	**51**	P	**Pn**	**05 03 59.4**	**+0.8**
JIJ				*e*S	**Sn**	**05 04 34.9**	**-1.5**
JISG	**Ishigakijimahi**	**3.38**	**50**	P	**Pn**	**05 04 02.2**	**0.0**
JISG				*e*S	**Sn**	**05 04 41.1**	**-1.6**
JTJ	**Tarama**	**3.69**	**53**	P	**Pn**	**05 04 07.6**	**+1.1**
JTJ				*e*S	**Sn**	**05 04 48.5**	**-2.0**

TAP 08 05:04:05.5, 24°.91N×122°.31E, h12km±1km, ML2.2, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.40**	**205**	*e*P	Pg	05 04 13.8	+0.3
	baz=205						
EOS1				*e*S	Sb	05 04 19.8	-0.6
	baz=205						
TIPB	**Shuangxi**	**0.45**	**278**	P	Pg	05 04 14.3	-0.1
	baz=277						
TIPB				S	Sg	05 04 20.7	+0.3
	baz=277						
TWC	**Suao**	**0.52**	**235**	*e*P	Pg	05 04 15.2	-0.5
	baz=233						
TWC				S	Sg	05 04 22.0	-0.5
	baz=233						
YM07	**YM07**	**0.68**	**293**	*e*P	Pg	05 04 18.3	-0.5
	baz=292						
YM07				*e*S	Sg	05 04 28.2	+0.4
	baz=292						
NANB	**Nanao**	**0.70**	**227**	*e*P	Pg	05 04 18.6	-0.5
	baz=226						
NANB				*e*S	Sg	05 04 28.6	+0.2
	baz=226						
ENA	**Nanau**	**0.71**	**227**	*e*P	Pg	05 04 19.5	+0.2
	baz=226						
ENA				*e*S	Sg	05 04 28.6	0.0
	baz=226						
YOJ	**Yonaguni jima**	**0.78**	**125**	*e*P	Pg	05 04 19.1	-1.4
	baz=125						
YOJ				*e*S	Sg	05 04 29.5	-1.2
	baz=125						
YOJ	**Yonaguni jima**	**0.78**	**125**	S	Pg	05 04 19.5	-1.1

*SKO **08** 05:04:54.9, 41°.34N×20°.89E, h15km, M2.3, ML2.6*
*TIR **08** 05:04:55.0, 41°.37N×20°.97E, h7km, Md3.0/5*
*ATH **08** 05:04:55.8, 41°.37N×20°.91E, h12km±1km, ML2.5/7, Error ellipse: s-maj=2.8km s-min=1.4km az=133.0*
*THE **08** 05:04:56.8, 41°.34N×20°.90E, h8km±1km, ML2.6/4, Error ellipse: s-maj=1.8km s-min=0.8km az=285.0*
*PDG **08** 05:04:57.9±0.4, 41°.41N×20°.95E, h3km, ML2.9/12, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*
*BEO **08** 05:04:57.9±0.3, 41°.33N×20°.93E, h1km±3km*
*CSEM **08** 05:04:57.4±0.1, 41°.32N×20°.94E, h2km, ML2.6, Error ellipse: s-maj=3.8km s-min=2.4km az=58.0*

ISC 08 05:04:56.6±1.1, 41°.33N±0°.01×20°.94E±0°.01, h2km±9km, n119, σ1°10/197, 13C-17D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHR	**Ohrid**	**0.25**	**206**	⇑*i*Pg	**Pg**	**05 05 01.5**	**+0.1**
OHR				*i* Sg	**Sg**	**05 05 05.5**	**+0.9**
OHR				*e*Lg	Lg	05 05 05.7	
	comp=N,2μm,0.3s						
OHR				*e*Lg	Lg	05 05 05.8	
	comp=E,2μm,0.4s						
BIA	**Bitola**	**0.42**	**138**	P	**Pg**	**05 05 05.6**	**+0.8**
BIA				S	**Sb**	**05 05 12.7**	**-1.0**
BIA	**Bitola**	**0.42**	**138**	⇑*i*Pg	**Pg**	**05 05 05.7**	**+0.8**
BIA				*i* Sg	**Sb**	**05 05 13.2**	**-0.5**
BIA	**Bitola**	**0.42**	**138**	P	**Pg**	**05 05 05.6**	**+0.8**
BIA				S	**Sb**	**05 05 12.7**	**-1.0**
PHP	**Peshkopia**	**0.52**	**313**	P	**Pg**	**05 05 05.4**	**-1.1**
PHP				S	**Sg**	**05 05 13.2**	**0.0**
FNA	**Florina**	**0.64**	**149**	*e*Pg	**Pg**	**05 05 08.8**	**-0.1**
FNA				*e*Sg	**Sg**	**05 05 18.4**	**+1.2**
FNA	**Florina**	**0.64**	**149**	P	**Pg**	**05 05 08.4**	**-0.5**
FNA				S	**Sb**	**05 05 19.7**	**-0.2**
FNA				AML	AML	05 05 23.6	
	comp=E,1863μm,0.3s						
FNA				AML	AML	05 05 24.1	
	comp=N,1662μm,0.3s						
FNA	**Florina**	**0.64**	**149**	P	**Pg**	**05 05 08.7**	**-0.1**
FNA				S	**Sb**	**05 05 19.5**	**-0.4**
FNA	**Florina**	**0.64**	**149**	*e*Pg	**Pg**	**05 05 08.8**	**-0.1**
FNA				*e*Sg	**Sg**	**05 05 18.4**	**+1.2**
FNA				S	**Sb**	**05 05 19.2**	**-0.7**
KBN	**Korca**	**0.72**	**190**	P	**Pg**	**05 05 09.9**	**-0.5**
KBN				S	**Sg**	**05 05 20.5**	**+0.8**
KBN	**Korca**	**0.72**	**190**	P	**Pg**	**05 05 09.9**	**-0.5**
KBN				S	**Sg**	**05 05 20.5**	**+0.8**
SKO	**Skopje**	**0.74**	**30**	*e*Pg	**Pb**	**05 05 12.0**	**-0.2**
SKO				*e*Sg	**Sg**	**05 05 21.3**	**+0.9**
SKO	**Skopje**	**0.74**	**30**	P	**Pb**	**05 05 11.5**	**-0.7**
SKO				S	**Sb**	**05 05 23.7**	**+1.0**
SKO	**Skopje**	**0.74**	**30**	*i* Pg	**Pb**	**05 05 11.7**	**-0.5**
SKO				*i* Sg	**Sg**	**05 05 21.4**	**+1.1**
SKO	**Skopje**	**0.74**	**30**	P	**Pb**	**05 05 11.5**	**-0.7**
SKO	**Skopje**	**0.74**	**30**	*e*Pg	**Pb**	**05 05 12.0**	**-0.2**
SKO				*e*Sg	**Sg**	**05 05 21.3**	**+0.9**
SKO				S	**Sb**	**05 05 23.7**	**+1.0**
TIR	**Tirane**	**0.81**	**271**	*e*Pg	**Pg**	**05 05 11.6**	**-0.6**
TIR				*e*Sg	**Sg**	**05 05 23.6**	**+0.8**
TIR	**Tirane**	**0.81**	**271**	⇑*i*P	**Pg**	**05 05 11.4**	**-0.8**
TIR				S	**Sb**	**05 05 23.8**	**-1.1**
TIR	**Tirane**	**0.81**	**271**	P	**Pg**	**05 05 11.5**	**-0.6**
TIR				S	**Sb**	**05 05 23.8**	**-1.1**
TIR	**Tirane**	**0.81**	**271**	*e*Pg	**Pg**	**05 05 11.6**	**-0.6**
TIR				S	**Sb**	**05 05 23.8**	**-1.1**
PRZK	**Prizren**	**0.89**	**351**	P	**Pg**	**05 05 13.6**	**0.0**
NEST	**Nestorio**	**0.92**	**175**	P	**Pg**	**05 05 13.2**	**-1.1**
NEST				S	**Sb**	**05 05 28.4**	**+0.4**
NEST				AML	AML	05 05 33.6	
	comp=N,651μm,0.7s						
NEST				AML	AML	05 05 33.8	
	comp=E,835μm,0.5s						
NEST	**Nestorio**	**0.92**	**175**	P	**Pg**	**05 05 13.6**	**-0.7**
NEST				S	**Sb**	**05 05 28.3**	**+0.2**
NEST	**Nestorio**	**0.92**	**175**	P	**Pg**	**05 05 13.6**	**-0.7**
NEST				S	**Sb**	**05 05 27.9**	**-0.2**
STIP	**Stip**	**1.00**	**68**	*i* Pg	**Pn**	**05 05 19.0**	**+1.4**
STIP				*i* Sg	**Sn**	**05 05 35.7**	**+3.4**
ZATK	**Zatriq**	**1.14**	**348**	P	**Pb**	**05 05 18.9**	**-0.2**
PENT	**Pentalofos**	**1.15**	**173**	P	**Pg**	**05 05 18.8**	**+0.1**
PENT				S	**Sb**	**05 05 34.4**	**-0.1**
PENT				AML	AML	05 05 42.6	
	comp=E,410μm,0.6s						
PENT				AML	AML	05 05 42.6	
	comp=N,409μm,0.5s						
PENT	**Pentalofos**	**1.15**	**173**	P	**Pg**	**05 05 18.5**	**-0.1**
PENT				S	**Sb**	**05 05 34.6**	**0.0**
GRG	**Griva**	**1.16**	**108**	P	**Pg**	**05 05 18.8**	**-0.1**
GRG				S	**Sn**	**05 05 36.5**	**+0.1**
GRG	**Griva**	**1.16**	**108**	P	**Pg**	**05 05 18.8**	**-0.1**
GRG	**Griva**	**1.16**	**108**	P	**Pg**	**05 05 18.8**	**-0.1**
GRG				S	**Sn**	**05 05 35.8**	**-0.6**
KZN	**Kozani**	**1.20**	**148**	P	**Pg**	**05 05 18.8**	**-0.9**
KZN				S	**Sn**	**05 05 36.7**	**-0.7**
KZN	**Kozani**	**1.20**	**148**	P	**Pg**	**05 05 18.8**	**-0.9**
KZN				S	**Sn**	**05 05 36.7**	**-0.7**
VAY	**Valandovo**	**1.22**	**90**	*e*Pg	**Pg**	**05 05 20.1**	**0.0**
VAY				*e*Sg	**Sn**	**05 05 37.2**	**-0.6**
VAY	**Valandovo**	**1.22**	**90**	P	**Pg**	**05 05 19.8**	**-0.3**
VAY	**Valandovo**	**1.22**	**90**	*i* Pg	**Pg**	**05 05 19.9**	**-0.3**
VAY				*i* Sg	**Sn**	**05 05 38.1**	**+0.3**
VAY				*e*Lg	Lg	05 05 39.4	
	comp=N,69nm,0.6s						
VAY				*e*Lg	Lg	05 05 40.0	
	comp=E,52nm,0.6s						
VAY	**Valandovo**	**1.22**	**90**	P	**Pg**	**05 05 19.8**	**-0.3**
VAY	**Valandovo**	**1.22**	**90**	*e*Pg	**Pg**	**05 05 20.1**	**0.0**
VAY				*e*Sg	**Sn**	**05 05 37.2**	**-0.6**
PEJK	**Peje**	**1.40**	**339**	P	**Pn**	**05 05 21.3**	**-1.9**
KPRO	**Kipourio**	**1.41**	**167**	P	**Pg**	**05 05 24.2**	**+0.5**
KPRO				S	**Sn**	**05 05 42.5**	**-0.2**
KPRO				AML	AML	05 05 51.7	
	comp=N,228μm,0.5s						
KPRO				AML	AML	05 05 57.2	
	comp=E,280μm,0.7s						
KPRO	**Kipourio**	**1.41**	**167**	P	**Pb**	**05 05 23.6**	**-0.1**
KPRO				S	**Sn**	**05 05 42.7**	**+0.1**
KPRO	**Kipourio**	**1.41**	**167**	P	**Pb**	**05 05 23.7**	**0.0**
KPRO				S	**Sn**	**05 05 42.7**	**+0.1**
ULC	**Ulcinj**	**1.42**	**297**	⇑*i*Pg	**Pn**	**05 05 22.2**	**-1.3**
ULC				*e*Sg	**Sn**	**05 05 45.3**	**+2.6**
ULC	**Ulcinj**	**1.42**	**297**	P	**Pn**	**05 05 22.4**	**-1.1**
ULC				*e*Sg	**Sn**	**05 05 45.3**	**+2.6**
PVY	**Plav**	**1.46**	**330**	⇓*i*Pg	**Pb**	**05 05 24.3**	**-0.2**
PVY				*e*Sg	**Sg**	**05 05 45.0**	**+1.5**
PVY	**Plav**	**1.46**	**330**	⇓*i*Pg	**Pb**	**05 05 24.3**	**-0.2**
PVY				*e*Sg	**Sg**	**05 05 45.0**	**+1.5**
KNT	**Kendrikon**	**1.48**	**96**	P	**Pb**	**05 05 24.8**	**-0.1**
KNT				S	**Sn**	**05 05 44.0**	**-0.3**
KNT	**Kendrikon**	**1.48**	**96**	P	**Pn**	**05 05 24.5**	**+0.2**
KNT				S	**Sg**	**05 05 44.6**	**+0.3**
SMRK	**Smrekonice**	**1.54**	**360**	P	**Pb**	**05 05 25.3**	**-0.6**
DRME	**Dracevica, Mon**	**1.57**	**303**	⇓*i*Pg	**Pn**	**05 05 25.2**	**-0.3**
DRME				*e*Sg	**Sg**	**05 05 50.5**	**+3.5**
DRME	**Dracevica, Mon**	**1.57**	**303**	*e*Pn	**Pn**	**05 05 24.1**	**-1.4**
DRME	**Dracevica, Mon**	**1.57**	**303**	⇓*i*Pg	**Pn**	**05 05 25.2**	**-0.3**
DRME				*e*Sg	**Sg**	**05 05 50.5**	**+3.5**
BARS	**Barje**	**1.62**	**23**	*e*Pn	**Pg**	**05 05 27.6**	**0.0**
BARS				*e*Sn	**Sg**	**05 05 48.5**	**-0.1**
BARS	**Barje**	**1.62**	**23**	*e*Pn	**Pg**	**05 05 27.6**	**0.0**
BARS				*e*Sn	**Sg**	**05 05 48.5**	**-0.1**
PDG	**Podgorica**	**1.67**	**312**	*e*Pn	**Pg**	**05 05 29.0**	**+0.4**
PDG				*e*Sn	**Sg**	**05 05 50.5**	**+0.2**
PDG	**Podgorica**	**1.67**	**312**	⇑*i*P	**Pn**	**05 05 26.1**	**-0.8**
PDG	**Podgorica**	**1.67**	**312**	⇑*i*P	**Pn**	**05 05 26.1**	**-0.8**
PDG	**Podgorica**	**1.67**	**312**	*e*Pn	**Pg**	**05 05 29.0**	**+0.4**
PDG				*e*Sn	**Sg**	**05 05 50.5**	**+0.2**
PDG				S	**Sb**	**05 05 51.2**	**+1.7**
TTG	**Podgorica**	**1.67**	**312**	⇑*i*Pn	**Pb**	**05 05 27.6**	**-0.5**
TTG				*e*Sn	**Sg**	**05 05 53.3**	**+3.0**
BEY	**Berane**	**1.72**	**333**	⇑*i*Pn	**Pb**	**05 05 28.3**	**-0.8**
BEY	**Berane**	**1.72**	**333**	P	**Pb**	**05 05 28.7**	**-0.4**
BEY				*e*Sn	**Sg**	**05 05 54.0**	**+2.0**
IVA	**Berane**	**1.72**	**333**	⇑*i*Pn	**Pb**	**05 05 28.3**	**-0.8**
IVA				*e*Sn	**Sg**	**05 05 54.0**	**+2.0**
SGD	**Sagiada**	**1.80**	**198**	P	**Pb**	**05 05 30.1**	**-0.2**
SGD	**Sagiada**	**1.80**	**198**	P	**Pb**	**05 05 29.7**	**-0.6**
KEK	**Kerkira**	**1.84**	**209**	P	**Pb**	**05 05 30.4**	**-0.5**
KEK				S	**Sb**	**05 05 55.0**	**+0.6**
KEK				AML	AML	05 06 00.3	
	comp=E,110μm,0.6s						
KEK				AML	AML	05 06 02.5	
	comp=N,90μm,0.4s						
KEK	**Kerkira**	**1.84**	**209**	P	**Pb**	**05 05 30.1**	**-0.9**
KEK				S	**Sb**	**05 05 54.8**	**+0.4**
KOME	**Kolasin**	**1.85**	**325**	⇓*i*Pn	**Pb**	**05 05 31.3**	**+0.1**
KOME				*e*Sn	**Sg**	**05 05 56.8**	**+0.7**
KOME	**Kolasin**	**1.85**	**325**	⇓*i*Pn	**Pb**	**05 05 31.3**	**+0.1**
KOME				*e*Sn	**Sg**	**05 05 56.8**	**+0.7**
SELS	**Selova**	**1.89**	**4**	*e*Pn	**Pb**	**05 05 30.7**	**-1.1**
CEME	**Cevo**	**1.94**	**309**	⇓*i*Pn	**Pb**	**05 05 32.1**	**-0.6**
CEME	

UPM	Unac-Piva	2.40	322	*e*Pn	Pb	05 05 39.3	-1.4
UPM	Unac-Piva	2.40	322	P	Pg	05 05 42.0	-0.7
UPM				*e*Sn	Sb	05 06 10.3	-0.6
AGG	Agios Georgios	2.54	155	P	Pn	05 05 38.7	-0.2
AGG				S	Sn	05 06 11.1	+0.7
AGG				AML	AML	05 06 17.3	
	comp=N,200μm,0.4s						
AGG				AML	AML	05 06 17.4	
	comp=E,151μm,0.3s						
AGG	Agios Georgios	2.54	155	P	Pn	05 05 39.3	+0.4
AGG				S	Sn	05 06 11.7	+1.3
GRUS	Gruza	2.56	356	*e*Pn	Pb	05 05 41.4	-1.8
GRUS	Gruza	2.56	356	*e*Pn	Pb	05 05 41.4	-1.8
ZAGS	Zajecar	2.65	21	*e*Pn	Pb	05 05 42.8	-2.0
ZAGS	Zajecar	2.65	21	*e*Pn	Pb	05 05 42.8	-2.0
BBLS	Lazići	2.77	336	*e*Pn	Pb	05 05 44.4	-2.5
BBLS	Lazići	2.77	336	*e*Pn	Pb	05 05 44.4	-2.5
ANX	Ano Chora	2.84	164	P	Pb	05 05 46.0	-2.1
ANX	Ano Chora	2.84	164	P	Pn	05 05 45.0	+2.0
DIVS	Divibare	2.85	346	*e*Pn	Pn	05 05 43.1	-0.1
DIVS	Divibare	2.85	346	*e*Pn	Pn	05 05 43.1	-0.1
STON	Ston	2.86	304	*e*Pn	Pn	05 05 43.8	+0.6
STON	Ston	2.86	304	*i* Pn	Pn	05 05 42.8	-0.4
STON				Sn	Sn	05 06 19.2	+1.0
STON	Ston	2.86	304	*e*Pn	Pn	05 05 43.8	+0.6
STON				Sn	Sn	05 06 19.1	+1.0
HAPS	Han Pijesak,BI	3.12	333	*e*Pn	Pn	05 05 47.2	+0.3
TEKS	Tekeris	3.38	343	*e*Pn	Pn	05 05 50.5	+0.1
MDVR	Moldovita	3.49	9	*i*P	Pn	05 05 44.6	-7.4
UDBI	Udbina	4.96	312	*e*Pn	Pn	05 06 14.9	+2.6
UDBI	Udbina	4.96	312	*e*Pn	Pn	05 06 14.8	+2.6
VOIR		5.08	35	S	Pn	05 06 10.1	-3.6
NVLJ	Novalja	5.50	308	*e*Pn	Pn	05 06 19.6	0.0
NVLJ	Novalja	5.50	308	*e*Pn	Pn	05 06 19.5	0.0

ISK ***08*** *05:05:46.8,40°.88N×27°.95E,h9km,ML2.1/13*
ISCJB ***08*** *05:05:47.1±0.4,40°.88N±0°.04×27°.97E±0°.04,h12km,Error ellipse: s-maj=6.4km s-min=3.7km az=158.9*
CSEM ***08*** *05:05:47.2±0.1,40°.87N×27°.96E,h8km,ML2.1,Error ellipse: s-maj=2.2km s-min=1.3km az=155.0*
DDA ***08*** *05:05:50.5,40°.73N×27°.78E,h7km,Ml2.6*
ISC 08 05:05:47.4±0.9,40°.88N±0°.03×27°.95E±0°.02,h12km,n41,σ0§40/46,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKR	Tekirdag	0.34	289	PG	Pg	05 05 53.9	-0.3
TKR	Tekirdag	0.34	289	*e*Pg	Pg	05 05 53.9	-0.3
SLVT	Silivri	0.40	29	PG	Pg	05 05 55.5	+0.2
SLVT	Silivri	0.40	29	*e*Pg	Pg	05 05 55.5	+0.2
CTKS	Kestanelik-??a	0.55	50	PG	Pg	05 05 57.7	-0.4
CTKS	Kestanelik-??a	0.55	50	*e*Pg	Pg	05 05 57.7	-0.4
RKY	Sarkoy-Tekirda	0.62	252	PG	Pg	05 05 59.4	-0.1
RKY				SG	Sg	05 06 08.3	+0.6
RKY	Sarkoy-Tekirda	0.62	252	*e*Pg	Pg	05 05 59.4	-0.1
RKY				*e*Sg	Sg	05 06 08.3	+0.6
KNL	Bal¨`-kesir	0.69	208	*i* P	Pb	05 06 01.3	-0.1
KRBG	Karabiga-Canak	0.70	226	PG	Pg	05 06 00.5	-0.5
KRBG	Karabiga-Canak	0.70	226	*e*Pg	Pg	05 06 00.5	-0.5
ARMT	Armutlu	0.76	114	PG	Pg	05 06 02.1	0.0
ARMT	Armutlu	0.76	114	*e*Pg	Pg	05 06 02.1	0.0
ISK	Istanbul-Kandi	0.86	77	PG	Pg	05 06 03.7	-0.3
ISK	Istanbul-Kandi	0.86	77	*e*Pg	Pg	05 06 03.7	-0.3
KAVV	Kandilli-Istan	0.86	77	PG	Pg	05 06 03.7	-0.3
KAVV	Kandilli-Istan	0.86	77	*e*Pg	Pg	05 06 03.7	-0.3
GONE	Gonen-Balikesi	0.86	194	PG	Pg	05 06 03.7	-0.3
GONE	Gonen-Balikesi	0.86	194	*e*Pg	Pg	05 06 03.7	-0.3
KLYT	Kilyos	0.90	65	PG	Pg	05 06 04.5	-0.3
KLYT	Kilyos	0.90	65	*e*Pg	Pg	05 06 04.5	-0.3
KESN	Edirne-Kesan	0.97	267	*i* P	Pn	05 06 06.8	-0.3
KESN				*i* S	Sg	05 06 19.1	+0.3
KESN	Edirne-Kesan	0.97	267	P	Pb	05 06 06.8	+0.5
LPK	Lapseki	1.04	241	PG	Pb	05 06 07.2	-0.2
LPK	Lapseki	1.04	241	*e*Pg	Pb	05 06 07.2	-0.2
ERIK	Erikli-Kesan	1.11	260	PN	Pb	05 06 08.6	0.0
ERIK	Erikli-Kesan	1.11	260	*e*Pn	Pb	05 06 08.6	0.0
BALY	Balya	1.17	193	*i* P	Pb	05 06 08.7	-0.9
BALY	Balya	1.17	193	P	Pb	05 06 08.7	-0.9
BALB	Balikesir	1.24	183	PN	Pn	05 06 10.4	-0.2
BALB	Balikesir	1.24	183	*e*Pn	Pn	05 06 10.4	-0.2
SILT	Sile	1.31	78	PN	Pb	05 06 11.9	0.0
SILT	Sile	1.31	78	*e*Pn	Pb	05 06 11.9	0.0
EDRB	Edirne	1.33	317	PN	Pb	05 06 12.1	-0.1
EDRB	Edirne	1.33	317	*e*Pn	Pb	05 06 12.1	-0.1
DURS	Dursunbey	1.34	163	*i* P	Pg	05 06 14.2	+1.0
DURS	Dursunbey	1.34	163	P	Pg	05 06 14.2	+1.0
ALN	Alexandroupoli	1.45	271	PN	Pn	05 06 13.7	+0.3
ALN	Alexandroupoli	1.45	271	*e*Pn	Pn	05 06 13.7	+0.3
BAYC	CANAKKALE_Bayr	1.57	224	*i* P	Pn	05 06 15.3	+0.2
BAYC				*i* S	Sb	05 06 35.9	-0.2
BAYC	CANAKKALE_Bayr	1.57	224	P	Pn	05 06 15.3	+0.2
BAYC				S	Sb	05 06 35.9	-0.2

NIED ***08*** *05:15:00,31°.00N×131°.00E,h68km,Mw4.0 Best double couple: M0:1.03000×10^15 NP1:φs=320.00000°,δ27.00000°,λ159.00000°. NP2:φs=70.00000°,δ81.00000°,λ65.00000°.*
BJI ***08*** *05:15:47.6,30°.77N×131°.15E,h68km,mb4.3/14,mB4.4/8,Ms4.5/2,Ms7 4.1/2*
ISCJB ***08*** *05:15:49.9±0.3,31°.03N±0°.02×131°.00E±0°.04,h72km±2km,mb4.1/28,Error ellipse: s-maj=6.0km s-min=3.5km az=23.6*
JMA ***08*** *05:15:51.2,31°.05N×130°.99E,h62km±1km,M3.8*
JMA Felt II J1.
NEIC ***08*** *05:15:51.8±0.6,31°.01N×130°.96E,h74km±5km,mb4.5/12,Error ellipse: s-maj=7.3km s-min=6.3km az=160.0*
IDC ***08*** *05:15:51.3±1.2,31°.04N×130°.94E,h70km±10km,mb3.8/12,mb1 4.0/17,mb1mx3.7/69,mbtmp4.2/17,MS2.5/1,Ms1 2.5/1,ms1mx2.1/65,Error ellipse: s-maj=19.4km s-min=9.0km az=100.0*
ISC 08 05:15:51.4±0.7,31°.04N±0°.04×130°.98E±0°.05,h67km±5km,n76,σ1§15/92,mb4.2/28,1C-8D,Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTSR	Tashiro 2	0.14	339	⇓P	Pn	05 16 00.4	-1.0
JTSR				S	Sn	05 16 07.4	-1.3
JTN	Tanegashima 3	0.38	180	⇑P	Pn	05 16 02.3	-0.6
JTN				S	Sn	05 16 10.3	-0.9
JNAR	Kushima--Naru	0.55	27	⇓P	Pn	05 16 04.0	-0.4
JNAR				S	Sn	05 16 14.4	-0.5
JSU	Suzuyama	0.65	316	⇓P	Pn	05 16 04.9	-0.6
JSU				S	Sn	05 16 15.2	-0.7
JTZ	Takazaki	0.87	6	⇓P	Pn	05 16 07.5	-0.6
JTZ				S	Sn	05 16 19.7	-0.7
JKC	Kuchinoerabu	0.89	230	⇓P	Pn	05 16 07.7	-0.6
JKC				*e*S	Sn	05 16 20.2	-0.6
JYAK	Yakushimahirau	0.89	207	P	Pn	05 16 07.9	-0.5
JYAK				*e*S	Sn	05 16 20.5	-0.4
JZO	Okuchi	1.15	344	⇓P	Pn	05 16 11.3	-0.4
JZO				S	Sn	05 16 26.4	-0.4
JSJ	Shimokoshiki	1.26	301	P	Pn	05 16 12.2	-0.8
JSJ				*e*S	Sn	05 16 28.3	-1.0
JTSN	Tsuno	1.29	20	⇓P	Pn	05 16 12.5	-0.9
JTSN				*e*S	Sn	05 16 28.6	-1.3
JNN	Nakanoshima	1.53	219	⇓P	Pn	05 16 16.5	-0.1
JNN				S	Sn	05 16 35.5	-0.1
JNU	Nakatsue	2.08	358	P	Pn	05 16 24.2	+0.1
JNU				S	Sn	05 16 49.1	+0.1
	48nm,0.3s,baz=67,slow=18,SNR=6.6						
JZK	Kikaishima	2.85	198	P	Pn	05 16 35.2	+0.7
JAM	Amami Oshima	2.88	205	P	Pn	05 16 35.0	+0.1
JAMN	Amaminishikomi	3.20	210	P	Pn	05 16 39.2	0.0
JTK	Tokunoshima	3.69	209	P	Pn	05 16 46.7	+0.7
JOKE	Okinoerabujima	4.22	211	P	Pn	05 16 54.0	+0.7
JOW	Kunigami	4.81	210	P	Pn	05 17 01.1	-0.2
	40nm,0.3s,baz=254,slow=8.1,SNR=28						
JOW				S	Sn	05 17 55.5	-0.3
	1.4nm,0.3s,baz=3.9,slow=27,SNR=2.3						
INU	Inuyama	6.64	48	*e*Pn	Pn	05 17 26.8	+0.5
INU				*e*Sn	Sn	05 18 38.5	-2.0
KSRS	Korea Array	6.88	339	P	Pn	05 17 31.2	+1.6
	1.1nm,0.3s,baz=156,slow=14,SNR=7.5						
KSRS				LR	LR	05 20 27.0	
	comp=Z,40nm,19.9s,baz=150,slow=40						
KS15	Wonju Array Si	6.88	339	*e*Pn	Pn	05 17 31.4	+1.8
KSAR	Wonju Array Be	6.88	339	P	Pn	05 17 31.2	+1.6
JHJ	Hachijo jima 2	7.75	72	P	Pn	05 17 42.5	+0.9
	34nm,0.3s,baz=240,slow=20,SNR=8.1						
JHJ2	Mitsune	7.78	72	*e*Pn	Pn	05 17 42.4	+0.5
MAJO	Matsushiro	8.14	46	*e*Pn	Pn	05 17 47.2	+0.4
MAT	Matsushiro	8.14	46	P	Pn	05 17 46.9	0.0
MJAR	Matsushiro Arr	8.14	46	P	Pn	05 17 47.5	+0.6
	2.3nm,0.3s,baz=246,slow=14,SNR=9.6						
MJB9	Matsu-Tunnel	8.14	46	*e*Pn	Pn	05 17 47.4	+0.5
NJ2	Nanjing	10.40	279	*e*P	Pn	05 18 17.3	-0.4
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
CN2	Changchun	13.47	343	*e*P	Pn	05 19 02.3	+2.8
KLR	Kul'dur	18.18	2	P	Pn	05 19 58.9	-0.1
	0.0nm,0.3s,baz=181,slow=9.7,SNR=8.6						
HHC	Hu-ho-hao-te	18.49	307	*e*P	P	05 20 02.0	-0.1
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,37nm,6.2s						
LZH	Lanzhou	23.13	290	*e*P	P	05 20 51.4	-0.7
LZH				pP	pP	05 21 07.5	+0.9
LZH				sP	sP	05 21 16.0	+1.1
LZH				PP	PnPn	05 21 25.3	+5.2
LZH				pmax	pmax		
	comp=Z,23nm,1.0s						
LZH				pmax	pmax		
	comp=Z,78nm,4.9s						
LZH				LR	LR		
	comp=N,380nm,12.6s						
LZH				LR	LR		
	comp=E,380nm,13.2s						
LZH				LR	LR		
	comp=Z,410nm,16.3s						
ULN	Ulaanbaatar	24.82	319	*e*P	P	05 21 07.8	+0.3
	3.2nm,0.7s						
SONM	Songino Array	25.18	319	P	P	05 21 11.1	+0.5
	2.0nm,0.8s,baz=135,slow=8.5,SNR=6.3						
SONA1	Songino Array	25.18	319	*e*P	P	05 21 11.1	+0.5
GTA	Gaotai	26.70	297	*e*P	P	05 21 24.7	+0.3
GTA				pP	pP	05 21 40.9	+0.5
GTA				sP	sP	05 21 49.7	+1.4
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
WMQ	Urumqi	36.27	303	P	P	05 22 49.8	+1.5
WMQ				pP	pP	05 23 03.1	-1.5
WMQ				LR	LR		
	comp=N,310nm,12.1s						
WMQ				LR	LR		
	comp=E,600nm,17.3s						
WMQ				LR	LR		
	comp=Z,640nm,26.7s						
ZALV	Zalesovo Beam	40.07	319	*e*P	P	05 23 20.0	0.0
MK01	Makanchi Array	40.34	307	*e*P	P	05 23 21.6	-0.8
MK31	Makanchi Array	40.35	307	*e*P	P	05 23 22.6	+0.1
MKAR	Makanchi Array	40.35	307	P	P	05 23 21.8	-0.7
	0.5nm,0.4s,baz=96,slow=11,SNR=4.6						
TIXI	Tiksi	40.68	359	*e*P	P	05 23 25.6	+0.8
	1.6nm,0.8s						
KURK	Kurchatov Arra	43.18	313	*e*P	P	05 23 45.3	-0.1
	3.3nm,0.7s						
KURBB	Kurchatov Arra	43.22	312	P	P	05 23 45.3	-0.4
	1.2nm,0.4s,baz=98,slow=8.9,SNR=9.2						
KSH	Kashi	45.10	297	P	P	05 24 04.4	+3.3
KSH				pP	sP	05 24 22.7	-2.9
KSH				pmax	pmax		
	comp=Z,230nm,6.1s						
BVAR	Borovoye Array	48.44	315	P	P	05 24 26.6	-0.3
	3.9nm,0.5s,baz=98,slow=9.7,SNR=19						
BVAR				PcP	PcP	05 25 51.9	-0.2
	0.8nm,0.5s,baz=67,slow=4.8,SNR=5.0						
BRVK	Borovoye	48.50	315	*e*P	P	05 24 27.3	0.0
	6.4nm,0.4s						
KK31	Karatay Array	48.76	302	*e*P	P	05 24 28.6	-0.9
KKAR	Karatay Array	48.76	302	*e*P	P	05 24 28.6	-0.9
WRA	Warramunga Arr	50.79	176	P	P	05 24 44.7	-0.3
	0.6nm,0.8s,baz=353,slow=8.1,SNR=3.4						
ARU	Arti	55.21	320	*e*P	P	05 25 16.1	-1.0
	7.2nm,0.9s						
ABKAR	Akbulak array	55.23	311	*e*P	P	05 25 17.0	-0.4
PPLA	Purkeypile	56.93	32	*e*P	P	05 25 30.6	+1.0
	12nm,1.4s						
MDM	Murphy Dome	58.48	30	*e*P	P	05 25 40.8	+0.6
	4.7nm,1.4s						
GEYT	Alibeck	59.07	298	P	P	05 25 44.9	+0.1
	1.5nm,0.6s,baz=76,slow=6.6,SNR=4.0						
ILAR	Eielson Array	59.08	30	P	P	05 25 44.7	+0.4
	0.3nm,0.7s,baz=284,slow=8.2,SNR=5.5						
DOT	Dot Lake	60.48	31	*e*P	P	05 25 54.1	+0.1
	4.8nm,1.2s						
ARCES	ARCESS Array B	66.44	338	P	P	05 26 31.9	-1.3
	1.6nm,0.8s,baz=52,slow=7.9,SNR=5.1						
KBZ	Khabaz	68.03	309	P	P	05 26 43.6	0.0
	6.0nm,0.8s,baz=100,slow=1.0,SNR=11						
FIA1	FINESS Array S	69.89	330	*e*P	P	05 26 53.6	-1.2
	5.2nm,0.4s						
FINES	FINESS Array B	69.89	330	P	P	05 26 53.5	-1.3
	4.2nm,0.4s,baz=68,slow=5.6,SNR=40						
RES	Resolute Bay	70.38	12	*e*P	P	05 26 59.0	+1.3
	3.3nm,1.3s						
AKASG	Malin Array Be	73.46	320	P	P	05 27 15.2	-1.3
	0.9nm,0.3s,baz=55,slow=6.6,SNR=8.0						
AKBB	Malin Array Si	73.46	320	*e*P	P	05 27 15.3	-1.2
	3.0nm,0.6s						
AK11	Malin Array Si	73.50	319	*e*P	P	05 27 16.4	-0.4
RAYN	Ar Rayn	74.59	288	*e*P	P	05 27 23.5	-0.2
	5.8nm,1.0s						
HFS	Hagfors	75.69	333	P	P	05 27 27.9	-1.4
	1.3nm,0.6s,baz=72,slow=6.2,SNR=9.2						
NC405	NORSAR Array S	75.83	334	*e*P	P	05 27 28.1	-2.1
BR131	Keskin Array S	76.00	308	*e*P	P	05 27 31.0	-0.6
BRTR	Keskin Array B	76.00	308	P	P	05 27 30.6	-1.0
	2.4nm,0.9s,baz=96,slow=5.0,SNR=9.1						
NB2	NORSAR Subarra	76.07	334	P	P	05 27 27.9	-3.6
	comp=Z,0.4nm,0.5s,baz=50,slow=5.9						
NC204	NORSAR Array S	76.08	335	*e*P	P	05 27 30.7	-0.9
BUR04	Bucovina Ar. S	77.29	318	*e*P	P	05 27 38.6	-0.1
KOWA	Kowa	117.40	310	*e*PKPdf	PKPdf	05 34 29.1	-0.9
QSPA	South Pole Qui	120.80	180	*e*PKPdf	PKPdf	05 34 36.4	+1.4

ISCJB ***08*** *05:18:03.0±0.9,43°.67N±0°.06×146°.40E±0°.06,h76km±7km,Error ellipse: s-maj=11.7km s-min=5.6km az=149.4*
JMA ***08*** *05:18:03.6±0.2,43°.65N×146°.35E,h82km±2km,M2.9*
SKHL ***08*** *05:18:03.2±0.6,43°.59N×146°.40E,h75km±3km,mb4.0/6*
ISC 08 05:18:03.9±1.6,43°.68N±0°.07×146°.40E±0°.06,h71km±10km,n14,σ0§61/28,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHO	Shikotan	0.37	59	*i* P	Pn	05 18 15.0	-0.6
SHO				AMB	AMB	05 18 15.0	
	10.0nm,0.1s						
SHO				AMB	AMB	05 18 15.0	
	35nm,0.1s						
SHO				*i* S	Sn	05 18 24.0	-0.3
SHO				A	A	05 18 25.0	
	811nm,0.2s						
SHO				A	A	05 18 25.0	
	321nm,0.2s						
YUK	Yuzh-Kuril'sk	0.53	313	*i* P	Pn	05 18 16.0	-1.0
YUK				AMB	AMB	05 18 17.0	
	31nm,0.2s						
YUK				AMB	AMB	05 18 17.0	
	79nm,0.2s						
YUK				*e*S	Sn	05 18 27.0	+0.3
YUK				A	A	05 18 28.0	
	236nm,0.2s						
YUK				A	A	05 18 28.0	
	310nm,0.2s						
GRPR	Tuman	0.55	305	*e*P	Pn	05 18 17.0	-0.3
GRPR				AMB	AMB	05 18 17.0	
	49nm,0.2s						
GRPR				*e*S	Sn	05 18 27.0	-0.1
GRPR				A	A	05 18 27.0	
	561nm,0.2s						
GRPR				A	A	05 18 27.0	
	269nm,0.2s						
NEM2	Nemuro 2	0.57	237	P	Pn	05 18 17.9	+0.5
NEM2				*e*S	Sn	05 18 28.3	+0.9
LAGR	Lagunnoye	0.58	311	*e*P	Pn	05 18 17.0	-0.5
LAGR				AMB	AMB	05 18 17.0	
	84nm,0.2s						
LAGR				*e*S	Sn	05 18 28.0	+0.4
LAGR				A	A	05 18 28.0	
	327nm,0.2s						
LAGR				A	A	05 18 28.0	
	240nm,0.2s						
GLVR	Golovnino	0.64	276	*e*P	Pn	05 18 18.0	-0.1
GLVR				AMB	AMB	05 18 19.0	
	37nm,0.2s						
GLVR				*i* S	Sn	05 18 30.0	+1.3
GLVR				A	A	05 18 30.0	
	1μm,0.3s						
GLVR				A	A	05 18 30.0	
	583nm,0.3s						
JRA	Rausu	0.96	286	P	Pn	05 18 22.1	+0.2
JRA				*e*S	Sn	05 18 36.3	+1.1
JNK	Nakash	1.22	266	P	Pn	05 18 24.8	-0.4
JNK				*e*S	Sn	05 18 40.4	-0.8
JAK	Akkeshi	1.42	242	P	Pn	05 18 27.4	-0.3
JAK				*e*S	Sn	05 18 45.5	-0.2
JTKR	Abashiri--Toko	1.82	280	P	Pn	05 18 33.1	0.0
JTKR				*e*S	Sn	05 18 54.6	-0.8
KUR	Kuril'sk	1.88	34	*e*P	Pn	05 18 34.2	+0.4
KUR				AMB	AMB	05 18 34.9	
	32nm,0.2s						
KUR				*e*S	Sn	05 18 57.1	+0.5
KUR				A	A	05 18 59.6	
	58nm,0.2s						
KUR				A	A	05 18 59.6	
	48nm,0.2s						
JAR	Ashorobuto	1.95	260	P	Pn	05 18 35.2	+0.4
JAR				*e*S	Sn	05 18 58.7	+0.3
JOB	Onbets	2.02	248	P	Pn	05 18 36.0	+0.2
JOB				*e*S	Sn	05 19 00.1	-0.1
JCH	Churui	2.46	245	P	Pn	05 18 41.4	-0.3
JCH				*e*S	Sn	05 19 10.0	-0.8

NIED ***08*** *05:22:00,37°.50N×142°.00E,h38km,Mw4.8 Best double couple: M0:2.09000×10^16 NP1:φs=156.00000°,δ5.00000°,λ-137.00000°. NP2:φs=23.00000°,δ86.00000°,λ-86.00000°.*
JMA ***08*** *05:22:34.7±0.1,37°.52N×142°.03E,h33km±3km,M4.9*
JMA Felt III J1.
ISCJB ***08*** *05:22:36.4±0.7,37°.54N±0°.02×141°.91E±0°.02,h31km±4km,mb4.9/359,MS4.2/65,Error ellipse: s-maj=3.5km s-min=2.3km az=159.1*
BJI ***08*** *05:22:36.4,37°.52N×141°.95E,h41km,mb5.0/78,mB5.0/49,Ms4.4/73,Ms7 4.3/70*
MOS ***08*** *05:22:38.2±1.1,37°.59N×141°.91E,h45km,mb5.1/92,MS4.2/10,Error ellipse: s-maj=5.8km s-min=4.0km az=103.1*
IDC ***08*** *05:22:39.7±1.6,37°.53N×141°.88E,h47km±14km,mb4.5/38,mb1 4.6/44,mb1mx4.5/78,mbtmp4.8/44,ML4.2/5,MS4.1/48,Ms1 4.1/48,ms1mx4.0/63,Error ellipse: s-maj=10.8km s-min=9.0km az=105.0*
NEIC ***08*** *05:22:40.2±0.4,37°.56N×141°.85E,h49km±3km,mb4.9/279,Error ellipse: s-maj=3.0km s-min=2.0km az=144.0*
NEIC Felt at Koriyama and Sendai-shi. Recorded [3 JMA] in Miyagi.
ISC 08 05:22:37.3±0.4,37°.54N±0°.03×141°.97E±0°.03,h29km±2km,h29km:pP-P,n1021,σ1§27/1051,mb5.0/364,MS4.2/66,27C-16D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	Kawauchi	0.89	259	P	Pb	05 22 51.6	-2.6
JFK				S	Sb	05 23 04.0	-1.7
JMM	Marumori	0.99	290	P	Pn	05 22 53.1	-2.2
JMM				*e*S	Sb	05 23 06.8	-1.8
ONAJ	Iwakimizuishiy	1.03	245	P	Pn	05 22 53.6	-2.3
ONAJ				S	Sb	05 23 07.4	-2.4
JIO	Ouri	1.04	332	P	Pn	05 22 53.8	-2.2
JIO				S	Sn	05 23 07.8	-1.8
JFT	Otama	1.30	270	P	Pn	05 22 58.3	-1.3
JFT				S	Sn	05 23 16.0	0.0
JOU	Okura	1.32	309	P	Pn	05 22 58.4	-1.5
JOU				S	Sn	05 23 16.2	-0.4
JMK	Ichinoseki	1.53	338	P	Pn	05 23 01.2	-1.6
JFY	Yanaizu	1.81	267	P	Pn	05 23 05.8	-0.8
JFY				*e*S	Sn	05 23 28.4	-0.2
JYK	Kaneyama	1.88	318	P	Pn	05 23 06.3	-1.2
JOM	Ohasama	2.01	345	P	Pn	05 23 08.3	-1.0
JYA	Atsumi	2.07	301	P	Pn	05 23 09.5	-0.7
MJAR	Matsushiro Arr	3.17	253	P	Pn	05 23 26.5	+1.2
	28nm,0.3s,baz=77,slow=15,SNR=108						
MJAR				LR	LR	05 24 57.6	
	comp=Z,5μm,19.3s,baz=75,slow=45						
MAJO	Matsushiro	3.17	253	*e*Pn	Pn	05 23 26.6	+1.3
MAJO	Matsushiro	3.17	253	*c i*P	Pn	05 23 26.9	+1.6
MAJO				pmax	pmax		
	comp=Z,177nm,0.7s						
MAT	Matsushiro	3.17	253	P	Pn	05 23 26.7	+1.4
MAT				S	Sn	05 24 00.7	-1.5
MJB9	Matsu-Tunnel	3.17	253	*e*Pn	Pn	05 23 26.6	+1.3
INU	Inuyama	4.55	243	*e*Pn	Pn	05 23 46.1	+1.9
ERM	Erimo	4.57	11	*e*Pn	Pn	05 23 44.3	-0.1
ERM				*e*Sn	Sn	05 24 40.7	+4.2
ERM	Erimo	4.57	11	*c i*P	Pn	05 23 44.1	-0.3
ERM				pmax	pmax		
	comp=Z,22nm,0.6s						
JHJ2	Mitsune	4.75	202	*e*Pn	Pn	05 23 47.0	0.0
JHJ2				*e*Sn	Sn	05 24 40.6	-0.6
JHJ	Hachijo jima 2	4.75	203	P	Pn	05 23 47.1	0.0
	comp=Z,125nm,0.3s,baz=334,slow=21,SNR=28						
JHJ				S	Sn	05 24 39.1	-2.2
	comp=Z,387nm,0.3s,baz=64,slow=23,SNR=9.9						
JHJ				LR	LR	05 25 50.0	
	comp=Z,1μm,20.6s,baz=104,slow=40						
ASAJ	Asahikawa	6.59	4	P	Pn	05 24 13.7	+1.5
	comp=Z,7.8nm,0.3s,baz=208,slow=8.6,SNR=20						
ASAJ				S	Sn	05 25 26.4	0.0
	comp=Z,8.7nm,0.3s,baz=76,slow=33,SNR=6.8						
ASA

comp=Z,1μm,21.4s,baz=80,slow=39
JNU Nakatsue 10.07 247 *e*Pn **Pn 05 25 02.0 +1.9**
CBIJ Chichi jima 10.41 179 *e*Pn **Pn 05 25 03.7 -1.0**
CBIJ S **Sn 05 26 51.9 -8.6**
CBIJ *e*Sn Sn 05 27 01.1 +0.7
JCJ Chichijima 10.41 179 P **Pn 05 25 02.9 -1.8**
comp=Z,38nm,0.3s,baz=268,slow=14,SNR=12
JCJ S **Sn 05 26 51.9 -8.6**
comp=Z,27nm,0.3s,baz=280,slow=22,SNR=8.8
KSRS Korea Array 11.16 274 P **Pn 05 25 19.1 +4.2**
comp=Z,1.1nm,0.3s,baz=87,slow=13,SNR=64
KSRS LR LR 05 29 26.3
comp=Z,1μm,18.8s,baz=79,slow=37
KS01 Wonju Array Si 11.19 274 *e*Pn **Pn 05 25 17.9 +2.6**
KS15 Wonju Array Si 11.20 274 *e*Pn **Pn 05 25 19.1 +3.7**
KSAR Wonju Array Be 11.20 274 P **Pn 05 25 19.1 +3.7**
KSAR Wonju Array Be 11.20 274 P **Pn 05 25 19.1 +3.7**
MDJ Mudanjiang 11.71 311 P **Pn 05 25 24.3 +1.9**
MDJ pmax pmax
comp=Z,61nm,1.3s
MDJ LR LR
comp=Z,950nm,19.2s
MDJ LR LR
comp=Z,870nm,22.8s
MDJ LR LR
comp=Z,2μm,17.4s
MDJ Mudanjiang 11.71 311 *e*Pn Pn 05 25 28.4 +6.0
TJN Taejon 11.75 269 *d i*P **Pn 05 25 25.6 +2.7**
INCN Inchon 12.18 274 *e*Pn Pn 05 25 33.5 +4.6
TYV Tymovskoe 13.33 2 *e*P **Pn 05 25 42.5 -2.0**
TYV *e*S **Sn 05 28 03.7 -8.0**
TYV pmax pmax
comp=Z,26nm,0.8s
TYV smax smax
comp=E,7.0nm,1.0s
TYV smax smax
comp=N,300nm,5.4s
TYV MLR MLR
comp=Z,500nm,15.0s
GRNR Gornyy 13.81 345 *e*P **Pn 05 25 51.5 +0.4**
GRNR pmax pmax
comp=Z,42nm,1.0s
KLR Kul'dur 13.84 331 P **Pn 05 25 51.5 +0.1**
comp=Z,0.0nm,0.3s,baz=129,slow=10,SNR=9.8
KLR LR LR 05 31 04.1
comp=Z,104nm,19.6s,baz=141,slow=36
KLR Kul'dur 13.84 331⇑ *i*P **Pn 05 25 51.7 +0.3**
CN2 Changchun 14.01 302 *e*P **Pn 05 25 55.1 +1.3**
CN2 *es*P P 05 26 10.8 +9.5
CN2 pmax pmax
comp=Z,20nm,1.0s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=Z,450nm,16.0s
CN2 LR LR
comp=Z,770nm,16.0s
CN2 LR LR
comp=Z,890nm,18.0s
SNY Shenyang 14.79 293⇑P **Pn 05 26 04.5 0.0**
SNY pmax pmax
comp=Z,11nm,1.1s
SNY pmax pmax
comp=Z,140nm,5.9s
SNY LR LR
comp=Z,460nm,11.4s
SNY LR LR
comp=Z,2μm,18.5s
SNY LR LR
comp=Z,2μm,18.5s
DL2 Dalian 16.05 281 P **Pn 05 26 21.2 +0.3**
DL2 S **Sn 05 29 19.2 +1.3**
DL2 pmax pmax
comp=Z,100nm,0.6s
DL2 pmax pmax
comp=Z,120nm,4.2s
DL2 LR LR
comp=Z,410nm,12.4s
DL2 LR LR
comp=Z,760nm,17.0s
DL2 LR LR
comp=Z,900nm,18.8s
SSE Sheshan 18.32 256 P **P 05 26 48.4 -0.8**
SSE S **Sn 05 30 10.8 -2.1**
SSE pmax pmax
comp=Z,30nm,0.7s
SSE pmax pmax
comp=Z,93nm,3.7s
SSE LR LR
comp=Z,260nm,16.1s
SSE LR LR
comp=Z,330nm,18.3s
PEA0B Petropavlovsk- 19.03 30 *e*P **Pn 05 26 58.3 +0.6**
comp=Z,35nm,1.2s
PETK Petropavlovsk- 19.03 30 P **Pn 05 26 57.7 0.0**
comp=Z,0.2nm,0.3s,baz=181,slow=7.0,SNR=5.3
PETK Petropavlovsk- 19.03 30 *e*P **P 05 26 57.1 +0.2**
ZEA Zeya 19.13 333 *e*P **P 05 26 57.2 -0.8**
ZEA pmax pmax
comp=N,39nm,0.6s
ZEA pmax pmax
comp=Z,45nm,0.7s
ZEA MLR MLR
comp=Z,1μm,15.0s
ZEA MLR MLR
comp=E,400nm,16.0s
ZEA MLR MLR
comp=N,600nm,14.0s
NJ2 Nanjing 19.74 261 *e*P **P 05 27 03.8 -1.0**
NJ2 pmax pmax
comp=N,19nm,0.7s
NJ2 LR LR
comp=N,380nm,14.4s
NJ2 LR LR
comp=N,610nm,13.0s
NJ2 LR LR
comp=N,720nm,13.8s
TIA Tai'an 19.91 274 P **P 05 27 05.7 -0.9**
TIA S **S 05 30 42.7 -6.5**
TIA pmax pmax
comp=N,8.0nm,0.7s
TIA LR LR
comp=N,200nm,13.3s
TIA LR LR
comp=N,300nm,13.9s
TIA LR LR
comp=N,350nm,13.3s
BJI Beijing 20.24 285 P **P 05 27 08.8 -1.4**
BJI pmax pmax
comp=N,29nm,0.6s
BJI LR LR
comp=N,510nm,16.9s
BJI LR LR
comp=N,460nm,13.7s
BJI LR LR
comp=N,2μm,61.6s
BJT Baijiatuau 20.25 285 *e*P **P 05 27 08.6 -1.7**
comp=N,39nm,0.8s
BJT Baijiatuau 20.25 285 *e*P **P 05 27 08.6 -1.7**
BJT pmax pmax
comp=Z,39nm,0.8s
YOJ Yonaguni jima 20.78 237 *e*P **P 05 27 15.8 -0.3**
comp=Z,96nm,1.3s
YOJ Yonaguni jima 20.78 237 *e*P **P 05 27 15.8 -0.3**
YOJ pmax pmax
comp=Z,96nm,1.3s
YHNB Yeheng 21.75 240 *e*P **P 05 27 26.5 -0.1**
comp=Z,19nm,0.8s
CLNS Chul'man 22.41 335 *e*P **P 05 27 31.7 -1.7**
CLNS pmax pmax
comp=Z,25nm,1.2s
CLNS pmax pmax
comp=N,33nm,1.2s
CLNS pmax pmax
comp=E,12nm,1.1s
YULB Yu-li 22.65 237 *e*P **P 05 27 36.2 -0.1**
comp=E,12nm,0.7s
MA2 Magadan 22.77 12 P **P 05 27 38.4 +1.2**
comp=E,12nm,0.7s,baz=190,slow=9.1,SNR=5.3
MA2 LR LR 05 37 10.1
comp=E,148nm,19.8s,baz=168,slow=38
MA2 Magadan 22.77 12 *e*P **P 05 27 37.4 +0.2**
comp=E,34nm,0.8s
MA2 Magadan 22.77 12⇑ *e*P **P 05 27 37.8 +0.6**
TPUB Ta-pu 23.16 238 *e*P **P 05 27 40.2 -1.4**
comp=E,26nm,0.7s
TWG Pinlang 23.20 237 *e*P **P 05 27 44.0 +2.1**
comp=E,254nm,1.3s
QZH Quanzhou 23.53 244 P **P 05 27 49.1 +4.0**
QZH S **S 05 31 57.8 +0.5**
QZH LR LR
comp=N,260nm,20.4s
QZH LR LR
comp=E,320nm,22.7s
QZH LR LR
comp=Z,420nm,18.9s
HHC Hu-ho-hao-te 23.74 287 *e*P **P 05 27 45.9 -1.3**
HHC sP sP 05 28 02.2 +3.3
HHC S **S 05 31 52.2 -8.5**
HHC sS sS 05 32 11.2 -3.2
HHC SS **SnSn 05 32 43.1 +3.4**
HHC pmax pmax
comp=Z,11nm,1.0s
HHC pmax pmax
comp=Z,90nm,7.6s
HHC LR LR
comp=Z,1μm,14.7s
HHC LR LR
comp=Z,1μm,13.8s
HHC LR LR
comp=Z,1μm,15.6s
WHN Wuhan 23.87 261⇓P **P 05 27 47.8 -0.6**
WHN LR LR
comp=Z,660nm,15.1s
WHN LR LR
comp=Z,860nm,12.7s
WHN LR LR
comp=Z,1μm,16.2s
GUMO Guam 23.99 173 LR LR 05 44 09.5
comp=Z,33nm,18.0s,baz=27,slow=54
CIT Chita 24.63 315 *e*P **P 05 27 54.7 -0.5**
CIT *e* 05 28 10.4
CIT pmax pmax
comp=Z,217nm,1.1s
BTO Baotou 24.92 287 *e*P **P 05 27 51.9 -6.1**
YAK Yakutsk 25.68 347 *e*P **P 05 28 04.9 +0.4**
comp=Z,54nm,0.6s
YAK Yakutsk 25.68 347 *e*P **P 05 28 03.1 -1.4**
YAK *e**PP **pP 05 28 10.3 -2.5**
YAK *e* 05 31 38.6
YAK *e*S **S 05 32 27.2 -3.8**
YAK *e* 05 39 01.4
YAK pmax pmax
comp=Z,56nm,0.9s
YAK pmax pmax
comp=N,18nm,1.1s
YAK pmax pmax
comp=E,9.0nm,1.1s
YAK smax smax
comp=E,82nm,2.7s
YAK smax smax
comp=N,62nm,1.8s
YAK MLR MLR
comp=Z,571nm,14.0s
YAK MLR MLR
comp=N,430nm,12.0s
YAK MLR MLR
comp=E,88nm,11.0s
SEY Seymchan 26.21 11 P **P 05 28 10.2 +0.8**
comp=E,7.2nm,0.9s,baz=193,slow=5.9,SNR=18
SEY Seymchan 26.21 11 *i*P **P 05 28 10.0 +0.7**
XAN Xi'an 26.96 273 P **P 05 28 15.1 -1.3**
XAN S S 05 32 38.9 -13
XAN pmax pmax
comp=E,29nm,0.6s
XAN LR LR
comp=E,320nm,16.2s
XAN LR LR
comp=E,260nm,14.7s
XAN LR LR
comp=E,360nm,18.3s
BOD Bodaibo 27.35 327 *e*P **P 05 28 18.7 -0.9**
BOD pmax pmax
comp=Z,7.0nm,1.0s
ULN Ulaanbaatar 27.45 303 *e*P **P 05 28 21.1 +0.2**
comp=Z,18nm,0.8s
ULN Ulaanbaatar 27.45 303 *c i*P **P 05 28 20.8 0.0**
ULN pmax pmax
comp=Z,34nm,1.2s
ENH Enshi 27.82 265 *e*P **P 05 28 23.3 -0.9**
comp=Z,96nm,1.0s
SONA1 Songino Array 27.88 303 *e*P **P 05 28 24.6 0.0**
SONM Songino Array 27.88 303 P **P 05 28 23.7 -0.9**
comp=Z,16nm,0.7s,baz=102,slow=9.0,SNR=66
SONM LR LR 05 40 02.7
comp=Z,414nm,18.2s,baz=82,slow=38
H11N2 WAKE ISLAND Hy 28.03 122 T T 05 57 59.7
baz=315,slow=75,SNR=462
H11N1 WAKE ISLAND Hy 28.04 122 T T 05 57 57.8
baz=315,slow=75,SNR=508
H11N3 WAKE ISLAND Hy 28.05 122 T T 05 57 58.4
baz=315,slow=75,SNR=464
H11S1 WAKE ISLAND Hy 28.77 124 T T 05 58 52.5
baz=316,slow=76,SNR=108
H11S3 WAKE ISLAND Hy 28.77 124 T T 05 58 55.8
baz=316,slow=76,SNR=63
H11S2 WAKE ISLAND Hy 28.78 124 T T 05 58 54.3
baz=316,slow=76,SNR=67
ZAK Zakamensk 30.31 308 *e*P **P 05 28 45.3 -0.9**
ZAK pmax pmax
comp=Z,17nm,1.2s
TLY Talaya 30.34 310 P **P 05 28 46.6 +0.3**
comp=Z,5.9nm,0.6s,baz=106,slow=6.9,SNR=4.8
TLY LR LR 05 41 35.0
comp=Z,598nm,18.8s,baz=100,slow=38
TLY Talaya 30.34 310 *e*P **P 05 28 45.8 -0.6**
comp=Z,9.8nm,0.8s
TLY Talaya 30.34 310 *e*P **P 05 28 46.5 +0.1**
TLY pmax pmax
comp=Z,15nm,1.3s
TLY MLR MLR
comp=Z,431nm,16.0s
LZH Lanzhou 30.42 279 *e*P **P 05 28 47.5 +0.1**
LZH pP sP 05 28 58.6 -0.7
LZH sP pP 05 29 03.5 +7.7
LZH PP **PnPn 05 29 45.4 -0.9**
LZH *e*S **S 05 33 43.4 -3.2**
LZH sS sS 05 34 00.8 +0.4
LZH *e*SS **ScP 05 35 25.9 -1.0**
LZH pmax pmax
comp=Z,60nm,1.1s
LZH pmax pmax
comp=Z,260nm,4.8s
LZH LR LR
comp=Z,580nm,12.9s
LZH LR LR
comp=Z,970nm,13.2s
LZH LR LR
comp=Z,1μm,16.3s
GYA Guiyang 31.75 260⇑ *i*P **P 05 28 58.2 -0.9**
GYA pP sP 05 29 12.6 +1.7
GYA sP pP 05 29 17.8 +10
GYA PP **PnPn 05 30 07.0 +3.4**
GYA PcP **PcP 05 31 52.2 +2.1**
GYA S **S 05 34 06.8 -0.5**
GYA sS sS 05 34 26.5 +5.3
GYA SS **SnSn 05 35 58.6 +3.3**
GYA ScS **ScS 05 39 28.0 -1.8**
GYA pmax pmax
comp=Z,40nm,1.1s
GYA pmax pmax
comp=Z,130nm,5.0s
GYA LR LR
comp=Z,590nm,17.2s
GYA LR LR
comp=Z,520nm,17.8s
GYA LR LR
comp=Z,540nm,17.6s
MOY Mondy 31.96 310 *e*P **P 05 29 00.6 -0.1**
MOY pmax pmax
comp=Z,13nm,1.3s
CD2 Chengdu 32.12 270 P **P 05 29 00.5 -1.7**
CD2 pP sP 05 29 12.5 -1.6
CD2 PP **PP 05 30 13.3 -1.7**
CD2 S **S 05 34 09.5 -3.5**
CD2 sS sS 05 34 30.3 +3.5
CD2 pmax pmax
comp=Z,50nm,0.7s
CD2 pmax pmax
comp=Z,140nm,5.1s
CD2 LR LR
comp=Z,700nm,18.0s
CD2 LR LR
comp=Z,640nm,20.4s
GTA Gaotai 32.84 287 P **P 05 29 07.8 -0.8**
GTA pP sP 05 29 18.8 -1.7
GTA sP pP 05 29 25.0 +8.0
GTA PcP **PcP 05 31 56.0 +3.0**
GTA S **S 05 34 20.2 -4.1**
GTA sS sS 05 34 41.8 +3.7
GTA SS **SnSn 05 36 22.8 +1.1**
GTA pmax pmax
comp=Z,7.0nm,0.8s
GTA pmax pmax
comp=Z,56nm,6.3s
GTA LR LR
comp=Z,240nm,19.6s
GTA LR LR
comp=Z,450nm,19.2s
GTA LR LR
comp=Z,590nm,18.6s
BILL Bilibino 33.42 16 *e*P **P 05 29 13.3 +0.2**
comp=Z,8.5nm,0.9s
BILL Bilibino 33.42 16 *d i*P **P 05 29 12.7 -0.4**
BILL *e* 05 30 29.3
BILL pmax pmax
comp=Z,11nm,1.7s
BILL MLR MLR
comp=Z,212nm,22.0s
QIZ Qiongzhong 33.54 246 P **P 05 29 15.5 +0.8**
QIZ S **S 05 34 35.4 +0.3**
QIZ sS **sS 05 34 55.6 +6.6**
QIZ pmax pmax
comp=Z,11nm,1.2s
QIZ LR LR
comp=Z,300nm,15.2s
QIZ LR LR
comp=Z,200nm,20.1s
QIZ LR LR
comp=Z,300nm,16.2s
ATKA Atka Island 33.79 50 *e*P **P 05 29 17.6 +1.1**
comp=Z,17nm,0.9s
ATKA *e*PcP **PcP 05 31 55.3 +0.1**
DAV Davao City (W) 33.79 210 LR LR 05 44 29.2
comp=Z,113nm,18.2s,baz=346,slow=39
TIXI Tiksi 34.85 353 P **P 05 29 26.0 +0.6**
comp=Z,1.8nm,0.5s,baz=151,slow=7.4,SNR=4.2
TIXI Tiksi 34.85 353 *e*P **P 05 29 25.5 +0.1**
comp=Z,4.7nm,0.8s
TIXI Tiksi 34.85 353 *ce*P **P 05 29 26.2 +0.8**
TIXI pmax pmax
comp=Z,3.0nm,0.9s
KMI Kunming 35.48 261 P **P 05 29 31.3 -0.4**
KMI pP sP 05 29 41.7 -1.9
KMI sP pP 05 29 47.2 +7.1
KMI S **S 05 35 04.5 -0.9**
KMI pmax pmax
comp=Z,34nm,1.0s
KMI pmax pmax
comp=Z,45nm,3.1s
KMI LR LR
comp=Z,200nm,22.5s
KMI LR LR
comp=Z,510nm,18.7s
KMI LR LR
comp=Z,530nm,20.6s
HVS Khovu-Aksy 36.44 308⇑ *i*P **P 05 29 40.1 +0.6**
HVS pmax pmax
comp=Z,25nm,1.0s
SPIA Saint Paul Isl 36.90 42 *e*P **P 05 29 44.7 +1.5**
comp=Z,65nm,1.2s
NIKH Nikolski High 37.11 49 *e*P **P 05 29 46.1 +1.0**
comp=Z,32nm,0.7s
SKNT Sakolnakorn 39.14 249 P **P 05 30 03.8 +1.2**
comp=Z,14nm,1.2s
SIJI Sorong 39.48 197 P **P 05 30 05.4 +0.1**
comp=Z,8.9nm,0.6s,baz=18,slow=15,SNR=4.0
JAY Jayapura 39.87 182 LR LR 05 46 09.8
comp=Z,116nm,19.2s,baz=330,slow=35
WMQ Urumqi 41.01 296 P **P 05 30 18.4 +0.5**
WMQ pP sP 05 30 31.0 +1.1
WMQ sP pP 05 30 37.0 +11
WMQ PP **PP 05 31 50.1 -2.5**
WMQ S **S 05 36 34.7 +6.3**
WMQ pmax pmax
comp=Z,66nm,1.1s
WMQ pmax pmax
comp=Z,310nm,3.6s
WMQ LR LR
comp=Z,270nm,10.3s
WMQ LR LR
comp=Z,580nm,21.3s
WMQ LR LR
comp=Z,640nm,25.3s
CMAI Chiengmai2 41.13 257 P **P 05 30 20.9 +1.7**
comp=Z,125nm,1.4s,comp=Z,8μm
FAKI Fak Fak 41.25 195 *e*P **P 05 30 20.6 +0.6**
comp=Z,26nm,0.9s
LAMP Lampang 41.49 255 P P 05 30 27.6 +5.6
comp=Z,5.3nm,0.8s
PBKT Sadao Pong 41.64 251 P P 05 30 32.9 +10
comp=Z,18nm,1.3s
PBKT Sadao Pong 41.64 251 *e*P **P 05 30 22.0 -1.2**
CHTO Chiang Mai 41.85 256 P P 05 30 29.8 +4.9
comp=Z,57nm,1.1s
CHTO Chiang Mai 41.85 256 *e*P **P 05 30 24.9 0.0**
comp=Z,26nm,1.5s
CHTO Chiang Mai 41.85 256 *e*P **P 05 30 24.9 0.0**
CHTO pmax pmax
comp=Z,26nm,1.5s
ZAA0 Zalesovo Array 41.91 312 *e*P **P 05 30 24.8 -0.2**
comp=Z,33nm,0.8s
ZALV Zalesovo Beam 41.91 312 P **P 05 30 24.9 -0.1**
comp=Z,22nm,0.6s,baz=92,slow=7.0,SNR=37
ZALV PcP **PcP 05 32 20.0 -0.2**
comp=Z,2.9nm,0.5s,baz=78,slow=3.8,SNR=3.4
ZALV LR LR 05 48 31.5
comp=Z,408nm,19.0s,baz=69,slow=37
ZALV Zalesovo Beam 41.91 312 *e*P **P 05 30 24.3 -0.7**
ZALV PcP **PcP 05 32 20.0 -0.2**
CMAR Chiang Mai Arr 42.05 255 P **P 05 30 26.7 +0.1**
comp=Z,1.9nm,0.6s,baz=45,slow=8.5,SNR=7.5
CMAR LR LR 05 49 15.3
comp=Z,146nm,18.9s,baz=62,slow=38
CMAR Chiang Mai Arr 42.05 255 *i* P **P 05 30 30.2 +3.6**
CMAR pmax pmax
comp=Z,2.0nm,0.6s
CM01 Chiang Mai Arr 42.06 255 *e*P P 05 30 31.7 +5.0
LSA Lhasa 42.61 275 P **P 05 30 32.3 +0.7**
LSA pmax pmax
comp=Z,9.0nm,1.0s
NVS Novosibirsk 42.82 313⇑ *i*P **P 05 30 32.4 0.0**
NVS pmax pmax
comp=Z,34nm,0.9s
NVS pmax pmax
comp=N,3.0nm,0.5s
NVS pmax pmax
comp=E,14nm,0.6s
NRIK Noril'sk 43.00 335 LR LR 05 49 38.4
comp=E,530nm,18.5s,baz=98,slow=38
SHL Shillong 43.86 269 *e*P **P 05 30 40.0 -1.4**
MK01 Makanchi Array 44.23 302 *e*P **P 05 30 43.3 -0.6**
MK31 Makanchi Array 44.23 302 *e*P **P 05 30 43.5 -0.5**
MK31 Makanchi Array 44.23 302 *e*P **P 05 30 43.5 -0.5**
MKAR Makanchi Array 44.23 302 P **P 05 30 43.5 -0.4**
comp=E,20nm,0.7s,baz=84,slow=9.1,SNR=109
MKAR LR LR 05 50 16.4
comp=E,173nm,18.9s,baz=64,slow=38
MKAR Makanchi Array 44.23 302 *e*P **P 05 30 43.5 -0.4**
comp=E,198nm,1.0s
SBUM Sibu 44.33 225 *e*P **P 05 30 47.6 +2.6**
comp=E,20nm,1.3s
MAKZ Makanchi 44.44 302 *e*P **P 05 30 45.3 -0.3**
comp=E,43nm,1.0s
MAKZ *e*PcP **PP 05 32 30.4 +1.1**
MAKZ Makanchi 44.44 302 *e*P **P 05 30 45.3 -0.3**
MAKZ *e* 05 32 30.5
MAKZ pmax pmax
comp=Z,43nm,1.0s
PHET Kaeng Krachan 44.96 248 P P 05 31 02.8 +13
SII Sitkinak Islan 45.64 44 *e*P **P 05 30 56.0 +1.0**
comp=Z,52nm,1.1s
KURK Kurchatov 45.98 308 *e*P **P 05 30 57.0 -0.7**
comp=Z,88nm,0.9s
KURK Kurchatov 45.98 308 *d i*P **P 05 30 57.3 -0.4**
KURK *i **PP **sP 05 31 08.1 -1.6**
KURK pmax pmax
comp=Z,57nm,0.9s
IM3 Indian Mountai 45.99 31 *e*P **P 05 30 57.8 +0.2**

IM3 *e*PcP **PcP** **05 32 35.1 +1.3**
KURBB Kurchatov Arra 46.05 308 P **P** **05 30 57.7 -0.6**
comp=Z,32nm,0.5s,baz=83,slow=8.2,SNR=166
OHAK Old Harbor 46.09 43 *e*P **P** **05 30 58.6 +0.2**
comp=Z,17nm,0.9s
OHAK *e*PcP **PcP** **05 32 35.0 +0.7**
RSO Redoubt South 46.23 39 *e*P **P** **05 31 00.9 +1.1**
KDAK Kodiak Island 46.43 42 P **P** **05 31 01.3 +0.2**
comp=Z,25nm,0.7s,baz=284,slow=3.9,SNR=38
KDAK Kodiak Island 46.43 42 *e*P **P** **05 31 01.4 +0.2**
comp=Z,32nm,0.8s
KDAK Kodiak Island 46.43 42 *i* P **P** **05 31 01.1 0.0**
PPLA Purkeypile 46.50 35 *e*P **P** **05 31 03.5 +1.6**
comp=Z,13nm,1.2s
CAST Castle Rocks 46.56 34 *e*P **P** **05 31 03.7 +1.5**
comp=Z,6.3nm,0.7s
SPU Mount Spurr 46.56 38 *e*P **P** **05 31 03.7 +1.4**
SKT Skwentna 46.81 36 *e*P **P** **05 31 05.6 +1.5**
comp=Z,4.4nm,0.9s
ODAN Odare 46.83 273 *e*P **P** **05 31 04.9 -0.1**
comp=Z,54nm,0.9s
BPAW Bear Paw Mtn. 47.06 34 *e*P **P** **05 31 07.2 +1.1**
comp=Z,8.4nm,1.1s
KTH Kantishna Hill 47.08 34 *e*P **P** **05 31 07.7 +1.4**
comp=Z,15nm,1.0s
KAPI Kappang 47.12 211 *e*P **P** **05 31 08.2 +1.2**
comp=Z,51nm,1.2s
MLY Manley 47.19 32 *e*P **P** **05 31 08.2 +1.2**
comp=Z,9.1nm,0.9s
MLY *e*PcP **PcP** **05 32 38.9 +0.7**
SUA Susitna One 47.19 37 *e*P **P** **05 31 07.3 +0.1**
comp=Z,11nm,0.9s
BRLK Bradley Lake 47.19 39 *e*P **P** **05 31 08.1 +0.9**
comp=Z,11nm,0.9s
TRF Thorofare Moun 47.37 34 *e*P **P** **05 31 09.1 +0.5**
comp=Z,7.1nm,0.8s
RAMN Ramite 47.41 274 *e*P **P** **05 31 09.3 -0.3**
JIRN Jiri 47.42 275 *e*P **P** **05 31 09.8 +0.1**
comp=Z,62nm,0.5s
COLD Coldfoot 47.50 29 *e*P **P** **05 31 10.3 +0.9**
comp=Z,4.9nm,1.3s
GUN Gumba 47.55 275 *e*P **P** **05 31 10.7 0.0**
comp=Z,94nm,0.4s
RC01 Rabbit Creek A 47.69 38 *e*P **P** **05 31 11.6 +0.6**
comp=Z,20nm,1.0s
BWN Browne 47.73 33 *e*P **P** **05 31 13.1 +1.9**
comp=Z,54nm,1.2s
TOLK Toolik Lake Re 47.82 27 *e*P **P** **05 31 13.2 +1.2**
comp=Z,11nm,1.0s
TOLK *e*PcP **PcP** **05 32 41.7 +1.4**
SEW Seward 47.89 39 *e*P **P** **05 31 13.0 +0.5**
comp=Z,18nm,1.1s
PMR Palmer 47.96 37 *e*P **P** **05 31 13.7 +0.7**
comp=Z,17nm,1.0s
PMR Palmer 47.96 37 *e*P **P** **05 31 13.7 +0.7**
PMR pmax pmax
comp=Z,17nm,1.0s
MCK McKinley 47.97 34 *e*P **P** **05 31 14.0 +0.9**
comp=Z,8.1nm,0.7s
MCK McKinley 47.97 34 *e*P **P** **05 31 14.0 +0.9**
MCK pmax pmax
comp=Z,8.0nm,0.7s
RND Reindeer 48.01 34 *e*P **P** **05 31 14.1 +0.6**
comp=Z,11nm,0.8s
RND Reindeer 48.01 34 *e*P **P** **05 31 14.1 +0.6**
RND pmax pmax
comp=Z,11nm,0.8s
KKN Kakani 48.08 276 *e*P **P** **05 31 14.4 -0.3**
comp=Z,75nm,0.7s
MDM Murphy Dome 48.25 32 *e*P **P** **05 31 16.1 +0.8**
comp=Z,16nm,1.0s
MDM *e*PcP **PcP** **05 32 43.7 +1.8**
DMN Daman 48.30 276 *e*P **P** **05 31 16.0 -0.4**
comp=Z,16nm,0.5s
WRH Wood River Hil 48.32 33 *e*P **P** **05 31 16.1 +0.3**
comp=Z,5.4nm,0.7s
WRH *e*PcP **PcP** **05 32 42.5 +0.3**
SML Sawmill 48.33 37 *e*P **P** **05 31 16.6 +0.8**
comp=Z,15nm,0.8s
SML Sawmill 48.33 37 *e*P **P** **05 31 16.7 +0.8**
SML pmax pmax
comp=Z,15nm,0.8s
COLA College 48.42 32 *e*P **P** **05 31 17.6 +1.1**
comp=Z,9.2nm,0.8s
COLA College 48.42 32 *e*P **P** **05 31 17.6 +1.1**
COLA pmax pmax
comp=Z,9.0nm,0.8s
CCB Clear Creek Bu 48.44 33 *e*P **P** **05 31 17.0 +0.3**
comp=Z,3.1nm,0.6s
GKN Gorkha 48.49 276 *e*P **P** **05 31 17.5 -0.3**
comp=Z,114nm,0.9s
TARG Taragay, Kyrgy 48.58 296 *e*P **P** **05 31 18.9 +0.2**
comp=Z,26nm,0.9s
DHY Denali Highway 48.70 35 *e*P **P** **05 31 19.5 +0.6**
comp=Z,5.6nm,0.8s
SCM Sheep Creek Mo 48.80 37 *e*P **P** **05 31 20.3 +0.7**
comp=Z,17nm,0.9s
SCM Sheep Creek Mo 48.80 37 *e*P **P** **05 31 20.3 +0.7**
SCM pmax pmax
comp=Z,17nm,0.9s
IL1 Eielson Array 48.83 33 *e*P **P** **05 31 19.4 -0.3**
ILAR Eielson Array 48.83 33 P **P** **05 31 19.5 -0.2**
comp=Z,7.8nm,0.7s,baz=267,slow=6.5,SNR=96
ILB Eielson Array 48.83 33 *e*P **P** **05 31 20.0 +0.3**
KDJ Kajisay 48.90 297 *e*P **P** **05 31 20.9 +0.1**
comp=Z,9.4nm,0.6s
KDJ Kajisay 48.90 297 P **P** **05 31 20.9 +0.1**
KDJ pmax pmax
comp=Z,9.0nm,0.6s
DANN Dangsing 49.03 277 *e*P **P** **05 31 22.3 +0.2**
comp=Z,143nm,0.6s
KOLN Koldanda 49.41 277 *e*P **P** **05 31 24.9 0.0**
comp=Z,37nm,0.7s
KLU Klutina 49.50 37 *e*P **P** **05 31 26.3 +1.3**
comp=Z,24nm,1.2s
KLU *e*PcP **PcP** **05 32 48.2 +1.7**
PAX Paxson 49.57 35 *e*P **P** **05 31 26.4 +0.9**
comp=Z,4.8nm,0.7s
PAX *e*PcP **PcP** **05 32 47.6 +0.8**
PAX Paxson 49.57 35 *e*P **P** **05 31 26.4 +0.9**
PAX *e* 05 32 47.6
PAX pmax pmax
comp=Z,5.0nm,0.7s
DIV Divide 49.61 37 *e*P **P** **05 31 26.9 +1.1**
comp=Z,18nm,0.8s
HNR Honiara 49.66 156 LR LR 05 49 37.4
comp=Z,221nm,21.8s,baz=309,slow=33
PYUN Piuthan 49.75 277 *e*P **P** **05 31 27.3 -0.2**
comp=Z,162nm,0.9s
HARP HAARP 49.77 36 *e*P **P** **05 31 28.1 +1.1**
comp=Z,16nm,0.9s
TKM2 Tokmak 2 49.78 298 P **P** **05 31 27.9 +0.4**
SNR=74
RIDG Independ'e Rid 49.79 34 *e*P **P** **05 31 27.4 +0.3**
comp=Z,6.5nm,1.0s
RIDG *e*PcP **PcP** **05 32 47.7 +0.1**
NRN Naryn 49.96 296 *e*P **P** **05 31 29.2 +0.1**
comp=Z,6.1nm,0.8s
NRN Naryn 49.96 296 *e*P **P** **05 31 29.2 +0.1**
NRN pmax pmax
comp=Z,6.0nm,0.8s
DOT Dot Lake 50.14 34 *e*P **P** **05 31 30.0 +0.2**
comp=Z,15nm,0.7s
SCRK Sand Creek 50.14 34 *e*P **P** **05 31 30.7 +0.8**
comp=Z,8.9nm,0.8s
BMRM Bremner River 50.19 37 *e*P **P** **05 31 31.2 +1.0**
comp=Z,21nm,1.1s
BMRM *e*PcP **PcP** **05 32 50.3 +1.2**
RAGM Ragged Mountai 50.23 38 *e*P **P** **05 31 32.1 +1.6**
comp=Z,61nm,1.4s
KZA Kyzart 50.29 297 P **P** **05 31 32.6 +0.9**
SNR=13
KBK Karagaybulak 50.32 298 P **P** **05 31 31.8 +0.2**
SNR=36
CHMS Chumysh 50.35 299 P **P** **05 31 32.9 +1.2**
SNR=5.4
USP Ospenovka 50.45 299 P **P** **05 31 32.4 0.0**
SNR=8.5
OTUK Ortayu 50.49 306 P **P** **05 31 32.3 -0.4**
OTUK pmax pmax
comp=Z,30nm,1.1s
FRU Bishkek 50.50 298 *e*P **P** **05 31 33.0 +0.2**
FRU *i* 05 31 43.0
FRU pmax pmax
comp=Z,40nm,1.3s
BVA0 Borovoye Array 50.56 312 *i* P **P** **05 31 32.5 -0.6**
BVA0 pmax pmax
comp=Z,8.0nm,0.6s
BVAR Borovoye Array 50.56 312 P **P** **05 31 32.6 -0.4**
comp=Z,8.5nm,0.5s,baz=73,slow=7.5,SNR=33
BVAR LR LR 05 54 00.1
comp=Z,351nm,18.8s,baz=88,slow=37
KSH Kashi 50.61 294 P **P** **05 31 38.1 +4.3**
KSH pP sP 05 31 48.7 +2.8
KSH PP **PP** **05 33 36.7 +7.1**
KSH S **S** **05 38 50.1 +3.4**
KSH sS sS 05 39 10.3 +9.3
KSH ScS **ScS** **05 41 23.6 +0.8**
KSH SS **SS** **05 42 20.1 -0.6**
KSH pmax pmax
comp=Z,15nm,0.6s
KSH pmax pmax
comp=Z,180nm,4.6s
KSH LR LR
comp=Z,230nm,7.1s
KSH LR LR
comp=Z,210nm,5.6s
KSH LR LR
comp=Z,460nm,6.9s
BRVK Borovoye 50.62 312 *e*P **P** **05 31 32.9 -0.5**
comp=Z,19nm,1.1s
BRVK Borovoye 50.62 312⇑ *i*P **P** **05 31 33.7 +0.2**
BRVK pmax pmax
comp=Z,28nm,1.0s
AAK Ala-Archa 50.64 298 P **P** **05 31 34.0 0.0**
comp=Z,13nm,0.7s,baz=105,slow=5.3,SNR=22
AAK Ala-Archa 50.64 298 P **P** **05 31 36.5 +2.5**
SNR=9.2
AAK Ala-Archa 50.64 298 *e*P **P** **05 31 33.8 -0.2**
comp=Z,14nm,0.7s
CRQM Cirque 50.93 38 *e*P **P** **05 31 37.0 +1.0**
comp=Z,17nm,0.8s
TGL Tana Glacier 51.08 38 *e*P **P** **05 31 38.3 +1.3**
comp=Z,12nm,0.9s
TGL *e*PcP **PcP** **05 32 54.0 +1.6**
EKS2 Erkin-Say 51.14 298 P **P** **05 31 40.2 +2.5**
SNR=9.7
COEN Coen 51.23 179 *e*P **P** **05 31 39.1 +0.8**
comp=Z,32nm,1.1s
BALM Baldy 51.27 37 *e*P **P** **05 31 39.5 +1.1**
comp=Z,9.0nm,0.7s
BALM Baldy 51.27 37 *e*P **P** **05 31 39.5 +1.1**
BALM pmax pmax
comp=Z,9.0nm,0.7s
EGAK Eagle 51.28 32 *e*P **P** **05 31 38.7 +0.4**
comp=Z,4.0nm,0.8s
AML Almayashu 51.37 298 P **P** **05 31 40.2 +0.4**
SNR=32
MNAS Manas 52.08 299 P **P** **05 31 44.8 0.0**
MNAS pmax pmax
comp=Z,47nm,0.8s
DAWY Dawson 52.14 33 *e*P **P** **05 31 45.9 +1.1**
comp=Z,2.6nm,0.8s
SFK Sufi-Kurgan 52.22 295 P **P** **05 31 42.3 -3.7**
PSI Prapat 52.43 239 LR LR 05 55 18.6
comp=Z,111nm,18.2s,baz=87,slow=37
KK31 Karatay Array 53.26 300 *e*P **P** **05 31 54.0 +0.7**
KK31 Karatay Array 53.26 300 *e*P **P** **05 31 54.0 +0.7**
KKAR Karatay Array 53.26 300 *e*P **P** **05 31 53.8 +0.4**
KKAR Karatay Array 53.26 300 *e*P **P** **05 31 53.8 +0.4**
INK Inuvik 53.74 27 P **P** **05 31 57.2 +0.9**
comp=Z,4.3nm,0.6s,baz=283,slow=7.3,SNR=15
INK Inuvik 53.74 27 *e*P **P** **05 31 57.3 +0.9**
comp=Z,13nm,1.1s
INK Inuvik 53.74 27 *e*P **P** **05 31 57.3 +0.9**
INK pmax pmax
comp=Z,13nm,1.1s
KIP Kipapa 53.81 90⇓ *i*P **P** **05 31 56.0 -1.6**
GSI Gunungsitoli 54.44 239 *e*P **P** **05 32 03.5 +1.3**
comp=Z,46nm,0.9s
LEM Lembang 54.55 223 LR LR 05 58 07.1
comp=Z,64nm,18.1s,baz=120,slow=39
NIL Nilore 54.88 288 *e*P **P** **05 32 05.5 +0.2**
comp=Z,80nm,0.8s
NIL Nilore 54.88 288 *e*P **P** **05 32 05.5 +0.2**
NIL pmax pmax
comp=Z,80nm,0.8s
SVE Sverdlovsk 55.07 318⇓ *e*P **P** **05 32 08.6 +2.4**
SVE pmax pmax
comp=Z,49nm,1.0s
SVE MLR MLR
comp=Z,529nm,16.0s
JIS Juneau Island 55.84 39 *e*P **P** **05 32 13.7 +1.9**
comp=Z,12nm,0.8s
SOKR Solikamsk 56.20 322 *e*P **P** **05 32 15.9 +1.6**
SOKR pmax pmax
comp=Z,14nm,1.3s
SOKR MLR MLR
comp=Z,185nm,20.0s
ARU Arti 56.28 318 *e*P **P** **05 32 14.8 -0.1**
comp=Z,26nm,0.6s
ARU Arti 56.28 318*c* *i*P **P** **05 32 14.3 -0.6**
ARU *PP **sP** **05 32 24.9 -2.2**
ARU 05 33 08.0
ARU S **S** **05 40 03.4 +0.5**
ARU SS **SS** **05 43 44.8 -4.4**
ARU pmax pmax
comp=Z,34nm,1.0s
ARU MLR MLR
comp=Z,547nm,19.0s
MLOA Mauna Loa Obse 56.74 90 *e*P **P** **05 32 20.8 +1.6**
comp=Z,204nm,1.4s
HMH Humu'ula Sheep 56.78 90 *e*P **P** **05 32 20.9 +1.4**
comp=Z,135nm,1.3s
MLH Mauna Loa 56.92 90 *e*P **P** **05 32 21.6 +1.3**
comp=Z,329nm,1.4s
MLH Mauna Loa 56.92 90 *e*P **P** **05 32 21.6 +1.3**
MLH pmax pmax
comp=Z,329nm,1.4s
AIN Ainahou 56.92 90 *e*P **P** **05 32 22.0 +1.8**
comp=Z,215nm,1.0s
CRAG Craig 57.39 42 *e*P **P** **05 32 24.8 +2.0**
comp=Z,29nm,1.3s
FITZ Fitzroy Crossi 57.43 199 P **P** **05 32 23.8 +0.3**
comp=Z,10nm,1.0s,baz=4.7,slow=6.7,SNR=5.7
CTA Charters Tower 57.46 175 P **P** **05 32 23.3 -0.3**
comp=Z,6.1nm,0.9s,baz=14,slow=7.6,SNR=7.0
CTAO Charters Tower 57.46 175 *e*P **P** **05 32 23.5 -0.1**
comp=Z,23nm,1.4s
CTAO Charters Tower 57.46 175 *e*P **P** **05 32 23.5 -0.1**
CTAO pmax pmax
comp=Z,23nm,1.4s
WRAB Tennant Creek 57.61 188 *e*P **P** **05 32 23.6 -1.1**
comp=Z,34nm,1.0s
WRAB Tennant Creek 57.61 188*c* *i*P **P** **05 32 24.4 -0.3**
WRAB pmax pmax
comp=Z,57nm,1.7s
WB2 Warramunga Arr 57.62 188 *e*P **P** **05 32 24.2 -0.6**
comp=Z,31nm,0.9s
WRA Warramunga Arr 57.62 189 P **P** **05 32 24.1 -0.6**
comp=Z,27nm,0.9s,baz=7.2,slow=7.3,SNR=117
KBL Kabul 57.65 291 *e*P **P** **05 32 24.8 -0.5**
comp=Z,21nm,0.8s
KBL Kabul 57.65 291 *e*P **P** **05 32 24.8 -0.5**
KBL pmax pmax
comp=Z,21nm,0.8s
AB31 Akbulak array 57.96 310 *i*P **P** **05 32 26.0 -0.9**
AB31 pmax pmax
comp=Z,8.0nm,0.7s
ABKAR Akbulak array 57.96 310 *e*P **P** **05 32 26.3 -0.6**
DLBC Dease Lake 57.96 38 *e*P **P** **05 32 28.9 +2.0**
comp=Z,11nm,0.8s
AKTO Aktyubinsk 58.67 312 P **P** **05 32 31.0 -0.9**
comp=Z,11nm,1.0s,baz=71,slow=12,SNR=14
AKTO LR LR 05 58 57.9
comp=Z,240nm,18.1s,baz=72,slow=37
SPITS Spitsbergen Ar 60.12 349 LR LR 06 01 17.8
comp=Z,131nm,19.3s,baz=30,slow=39
PRGR Permogore 60.59 327 *e*P **P** **05 32 44.5 -0.4**
PRGR pmax pmax
comp=Z,15nm,0.9s
AS01 Alice Springs 61.34 188 *e*P **P** **05 32 50.3 -0.2**
AS31 Alice Springs 61.35 188 *e*P **P** **05 32 50.4 -0.1**
comp=Z,6.3nm,0.7s
ASAR Alice Springs 61.35 188 P **P** **05 32 50.2 -0.2**
comp=Z,22nm,0.7s,baz=10,slow=6.3,SNR=133
ASAR LR LR 06 00 01.3
comp=Z,80nm,19.1s,baz=41,slow=36
RES Resolute Bay 62.00 15 *e*P **P** **05 32 54.2 -0.1**
comp=Z,9.9nm,1.0s
RES Resolute Bay 62.00 15 *e*P **P** **05 32 54.2 -0.1**
RES pmax pmax
comp=Z,10.0nm,1.0s
MBWA Marble Bar 62.02 204 *e*P **P** **05 32 55.1 +0.1**
comp=Z,23nm,0.8s
TMCR Tamitsa 62.52 331 *e*P **P** **05 32 58.3 +0.4**
TMCR pmax pmax
comp=Z,14nm,0.9s
PALK Pallekele 62.91 258 LR LR 06 02 24.2
comp=Z,81nm,20.7s,baz=157,slow=38
YKW3 Yellowknife Ar 63.11 30 *e*P **P** **05 33 02.4 +0.6**
comp=Z,5.5nm,1.0s
YKA Yellowknife Ar 63.15 30 P **P** **05 33 02.2 +0.1**
comp=Z,3.5nm,0.6s,baz=303,slow=6.6,SNR=17
EIDS Eidsvold 63.15 171 *e*P **P** **05 33 03.4 +0.9**
comp=Z,50nm,1.5s
KLMR Klimovskoe 63.57 328 *e*P **P** **05 33 03.6 -1.3**
KLMR *e* 05 35 21.0
KLMR pmax pmax
comp=Z,13nm,0.8s
KLMR Klimovskoe 63.57 328 *e*P **P** **05 33 03.7 -1.2**
KLMR AMP 05 33 16.9
comp=Z,13nm,0.8s
KLMR *e*PP **PP** **05 35 21.0 -3.4**
DZM Mont Dzumac 63.61 155 *e*LR LR 05 52 05.5
comp=Z,412nm,21.6s
DZM Mont Dzumac 63.61 155 LR LR 05 57 51.3
comp=Z,262nm,20.7s,baz=20,slow=33
ARCES ARCESS Array B 63.68 339 LR LR 06 04 03.3
comp=Z,78nm,21.1s,baz=45,slow=39
ARCES ARCESS Array B 63.68 339 *e*P **P** **05 33 08.5 +2.9**
ARCES ARCESS Array B 63.68 339 *e*P **P** **05 33 08.5 +2.9**
GEYT Alibeck 63.98 299 P **P** **05 33 07.6 -0.5**
comp=Z,8.9nm,1.0s,baz=39,slow=2.8,SNR=7.9
GEYT LR LR 06 03 55.7
comp=Z,104nm,18.2s,baz=25,slow=39
TULEG Thule 64.55 8 *e*P **P** **05 33 10.5 -0.6**
comp=Z,22nm,1.1s
DAG Danmarks Havn 65.31 355 *i*P **P** **05 33 15.4 -0.6**
DAG *i*S **pP** **05 33 27.6 +2.6**
DAG Danmarks Havn 65.31 355 *i*P **P** **05 33 15.5 -0.6**
comp=Z,6.8nm,0.7s
DAG *i* 05 33 27.8
DAG Danmarks Havn 65.31 355 *i*P **P** **05 33 15.4 -0.6**
DAG *i*S **pP** **05 33 27.6 +2.6**
LLLB Lillooet 65.58 44 *e*P **P** **05 33 18.8 +0.5**
comp=Z,11nm,0.9s
A04D Lummi Island 66.06 46 P **P** **05 33 22.2 +0.9**
baz=300
B05A Bryant 66.64 46 P **P** **05 33 25.8 +0.7**
baz=301
MOS Moscow 67.11 324 *e*P P 05 33 38.1 +10
AFI Afiamalu 67.12 130 LR LR 05 58 17.6
comp=Z,109nm,20.7s,baz=306,slow=32
OBN Obninsk 67.96 323⇓ *e*P **P** **05 33 35.2 +1.9**
OBN *e* 05 36 01.7
LTY Liberty 67.99 47 *e*P **P** **05 33 34.6 +0.8**
comp=Z,8.7nm,1.1s
KEBM Edson Butte 68.06 52 *e*P **P** **05 33 35.9 +1.6**
comp=Z,98nm,1.5s
B08A Colville Reser 68.17 45 *e*P **P** **05 33 35.5 +0.7**
comp=Z,12nm,1.1s
I03D Drain, OR 68.25 51 P **P** **05 33 36.9 +1.6**
baz=302
H04A Detroit Lake 68.44 50 *e*P **P** **05 33 38.0 +1.4**
comp=Z,20nm,0.9s
KBO Bosley Butte 68.47 53 *e*P **P** **05 33 38.5 +1.7**
comp=Z,51nm,1.3s
FIA1 FINESS Array S 68.58 332 *e*P **P** **05 33 36.4 -0.6**
comp=Z,21nm,0.7s
FINES FINESS Array B 68.58 332 P **P** **05 33 36.7 -0.3**
comp=Z,9.6nm,0.7s,baz=56,slow=7.1,SNR=32
FINES LR LR 06 05 58.6
comp=Z,206nm,18.8s,baz=29,slow=38
FINES FINESS Array B 68.58 332 *i*P **P** **05 33 36.9 -0.1**
FINES pmax pmax
comp=Z,10.0nm,0.7s
G05D Wamic, OR 68.67 49 P **P** **05 33 39.2 +1.2**
baz=302
I04A Tendick Farm, 68.77 51 P **P** **05 33 39.8 +1.2**
baz=302
VSR Storozhevoye 68.85 319 *e*P **P** **05 33 37.3 -1.6**
VSR pmax pmax
comp=Z,10.0nm,1.0s
L02D Cave Junction, 68.89 53 P **P** **05 33 40.7 +1.2**
baz=302
VORD Divnogorie 68.92 319 *e*P **P** **05 33 38.7 -0.7**
VORD pmax pmax
comp=Z,10.0nm,0.8s
STKA Stephens Creek 69.06 180 P **P** **05 33 40.2 0.0**
comp=Z,7.4nm,0.7s,baz=343,slow=8.2,SNR=17
STKA Stephens Creek 69.06 180 *e*P **P** **05 33 40.4 +0.2**
comp=Z,1.6nm,0.8s
STKA Stephens Creek 69.06 180 *e*P **P** **05 33 40.4 +0.2**
STKA pmax pmax
comp=Z,2.0nm,0.8s
C09A Chrisman Ranch 69.07 45 *e*P **P** **05 33 41.2 +0.8**
comp=Z,17nm,1.3s
I05D Terrebonne, OR 69.14 50 P **P** **05 33 42.1 +1.1**
baz=302
F07A Phinny Hill Vi 69.15 48 *e*P **P** **05 33 42.3 +1.4**
comp=Z,18nm,0.8s
FORT Forrest 69.19 193 *e*P **P** **05 33 41.7 +0.5**
comp=Z,52nm,0.7s
J04D Umpqua Nationa 69.25 51 P **P** **05 33 43.0 +1.1**
baz=302,SNR=5.5
JCC Jacoby Creek, 69.33 54 *e*P **P** **05 33 43.9 +1.8**
comp=Z,32nm,1.4s
NEW Newport 69.46 44 P **P** **05 33 43.4 +0.6**
baz=304
NEW Newport 69.46 44 *e*P **P** **05 33 43.7 +0.8**
comp=Z,12nm,1.3s
NEW Newport 69.46 44 *e*P **P** **05 33 43.7 +0.8**
NEW pmax pmax
comp=Z,12nm,1.3s
KHMM Horse Mountain 69.49 54 *e*P **P** **05 33 44.9 +1.6**
comp=Z,29nm,1.4s
PINE Pine Mountain 69.67 50 *e*P **P** **05 33 46.1 +1.6**
comp=Z,40nm,0.8s
YBH Yreka Blue Hor 69.69 53 P **P** **05 33 45.9 +1.5**
comp=Z,5.3nm,0.7s,baz=352,slow=5.3,SNR=17
YBH Yreka Blue Hor 69.69 53 *e*P **P** **05 33 46.1 +1.7**
comp=Z,8.6nm,0.9s
YBH Yreka Blue Hor 69.69 53 *e*P **P** **05 33 46.1 +1.7**
YBH pmax pmax
comp=Z,9.0nm,0.9s
J05D Fort Rock, OR 69.77 51 P **P** **05 33 46.4 +1.4**
baz=303,SNR=11
M02C Callahan 69.78 53 P **P** **05 33 46.4 +1.4**
baz=303,SNR=5.0
K04D Chiloquin, OR 69.81 51 P **P** **05 33 46.1 +0.9**
baz=303
KMRM Mail Ridge 69.86 54 *e*P **P** **05 33 47.3 +1.9**
comp=Z,24nm,1.4s
N02D Trinity Center 70.10 53 P **P** **05 33 48.4 +1.4**
baz=303,SNR=6.5
SUMG Summit 70.18 0 *i*P **P** **05 33 47.7 +0.4**
comp=Z,4.0nm,0.6s
SUMG Summit 70.18 0 *e*P **P** **05 33 47.8 +0.5**
comp=Z,15nm,1.1s
SUMG Summit 70.18 0 *i*P **P** **05 33 47.7 +0.4**
SUMG pmax pmax
comp=Z,4.0nm,0.6s
BBOO Buckleboo 70.20 185 *e*P **P** **05 33 47.6 +0.3**
comp=Z,19nm,0.9s
M04C Macdoel 70.21 52 P **P** **05 33 48.8 +1.1**
baz=303
VSU Vasula 70.25 330⇓ *i*P **P** **05 33 48.0 +0.6**
VSU *i* *PP **sP** **05 33 59.4 -0.3**
VSU pmax pmax
comp=Z,29nm,1.0s
K05A Summer Lake 70.28 51 *e*P **P** **05 33 49.9 +1.7**
comp=Z,33nm,0.9s
I07A Izee 70.39 49 *e*P **P** **05 33 49.8 +1.1**
comp=Z,7.4nm,1.0s
WDC Whiskeytown Da 70.41 54 *e*P **P** **05 33 49.7 +0.9**
comp=Z,9.1nm,0.9s
WDC Whiskeytown Da 70.41 54 *e*P **P** **05 33 49.7 +0.9**
WDC pmax pmax
comp=Z,9.0nm,0.9s
F10A Beach Ranch, E 70.68 47 *e*P **P** **05 33 51.0 +0.6**
comp=Z,8.4nm,1.1s
WALA Waterton Lakes 70.77 43 *e*P **P** **05 33 51.8 +0.8**
comp=Z,11nm,0.8s
KBZ Khabaz 70.91 311 P **P** **05 33 52.2 +0.5**
comp=Z,6.2nm,0.8s,baz=43,slow=12,SNR=7.2
KIV Kislovodsk 70.91 311 *e*P **P** **05 33 52.5 +0.6**
comp=Z,53nm,0.9s
KIV Kislovodsk 70.91 311 *e*P **P** **05 33 52.7 +0.8**
KIV pmax pmax

comp=Z,28nm,0.9s
KIV MLR MLR
O03D Paynes Creek 71.04 54 P P 05 33 53.0 +0.3
baz=304,SNR=8.3
MOD Modoc Plateau 71.10 51 eP P 05 33 54.1 +1.0
comp=Z,9.8nm,0.8s
WSAR Wadi Sarin 71.17 285 P P 05 33 53.9 +0.3
comp=Z,7.6nm,0.9s,baz=36,slow=11,SNR=3.9
WSAR LR LR 06 09 35.3
comp=Z,84nm,18.1s,baz=64,slow=40
BMO Blue Mountains 71.26 48 eP P 05 33 54.8 +0.8
comp=Z,10nm,0.9s
BMO Blue Mountains 71.26 48 eP P 05 33 54.8 +0.8
BMO pmax pmax
comp=Z,10.0nm,0.9s
NEY Neytrino 71.29 310⇑ iP P 05 33 54.3 0.0
JTMT Jette 71.33 44 eP P 05 33 55.2 +0.8
comp=Z,16nm,1.1s
ORV Oroville 71.64 54 eP P 05 33 56.8 +0.5
comp=Z,11nm,0.9s
ORV Oroville 71.64 54 eP P 05 33 56.8 +0.5
ORV pmax pmax
comp=Z,11nm,0.9s
SCO Scoresbysund 71.66 354 eP P 05 33 56.2 +0.4
comp=Z,8.3nm,1.2s
SCO Scoresbysund 71.66 354 eP P 05 33 56.2 +0.4
SCO pmax pmax
comp=Z,8.0nm,1.2s
GNI Garni 71.76 307 LR LR 06 08 07.5
comp=Z,126nm,19.0s,baz=60,slow=38
GNI Garni 71.76 307c iP P 05 33 59.5 +2.3
GNI pmax pmax
comp=Z,55nm,1.2s
WVOR Wild Horse Val 71.83 50 eP P 05 33 58.5 +1.0
comp=Z,16nm,1.3s
WVOR Wild Horse Val 71.83 50 eP P 05 33 58.5 +1.0
WVOR pmax pmax
comp=Z,16nm,1.3s
AKH Akhalkalaki 71.84 308⇓ iP P 05 33 59.1 +1.4
MSO Missoula 72.05 44 P P 05 33 59.1 +0.3
baz=306,SNR=9.0
MSO Missoula 72.05 44 eP P 05 33 59.4 +0.7
comp=Z,6.9nm,1.0s
UOSS Minazif 72.08 288 eP P 05 33 59.0 -0.1
comp=Z,24nm,0.9s
BEKR Beckworth 72.20 53 eP P 05 34 00.6 +0.8
comp=Z,16nm,0.8s
IDID Didziasalis 72.30 327 eP P 05 34 00.5 +0.6
IDID IAmb IAmb 05 34 01.4
comp=Z,16nm,0.5s
AFDM Forest Hills D 72.32 54 eP P 05 34 01.4 +1.0
comp=Z,9.8nm,1.2s
ISAL Salakas 72.39 328 eP P 05 34 01.1 +0.6
ISAL IAmb IAmb 05 34 13.9
comp=Z,12nm,1.0s
IIGN Ignalina 72.50 327 eP P 05 34 01.7 +0.6
IIGN IAmb IAmb 05 34 14.5
comp=Z,5.7nm,0.8s
RUBR Rubicon Trail 72.79 54 eP P 05 34 04.9 +1.5
comp=Z,19nm,0.8s
PAHR Pah Rah Range 72.91 53 eP P 05 34 04.9 +0.9
comp=Z,15nm,1.0s
MFID Camas Ranch 72.96 48 eP P 05 34 05.3 +1.0
comp=Z,12nm,0.8s
VCNR Virginia City 72.97 53 eP P 05 34 06.0 +1.5
comp=Z,6.8nm,0.8s
FFC Flin Flon 73.04 33 eP P 05 34 04.8 +0.5
comp=Z,11nm,0.8s
FFC Flin Flon 73.04 33 eP P 05 34 04.8 +0.5
FFC pmax pmax
comp=Z,11nm,0.8s
PNTR Pine Nut 73.12 54 eP P 05 34 07.0 +1.6
comp=Z,8.8nm,0.8s
CMB Columbia Colle 73.22 55 eP P 05 34 06.4 +0.7
comp=Z,14nm,0.9s
CMB Columbia Colle 73.22 55 eP P 05 34 06.4 +0.7
CMB pmax pmax
comp=Z,14nm,0.9s
FCC Fort Churchill 73.35 27 eP P 05 34 06.0 0.0
comp=Z,11nm,1.0s
FCC Fort Churchill 73.35 27 eP P 05 34 06.0 0.0
FCC pmax pmax
comp=Z,11nm,1.0s
LRM Limekiln Ridge 73.48 45 eP P 05 34 08.1 +0.7
ANN Anapa 73.50 314 eP P 05 34 07.5 +0.3
ANN pmax pmax
comp=Z,108nm,1.6s
ANN pmax pmax
comp=Z,55nm,3.2s
WAKR Walker 73.56 54 eP P 05 34 09.6 +1.6
comp=Z,8.2nm,0.9s
EGMT Eagleton 73.60 42 P P 05 34 08.4 +0.5
baz=308,SNR=6.0
EGMT Eagleton 73.60 42 eP P 05 34 08.7 +0.9
comp=Z,15nm,0.8s
DLMT Dillon 73.67 45 eP P 05 34 09.4 +1.0
comp=Z,18nm,0.8s
NC405 NORSAR Array S 73.69 337 eP P 05 34 06.9 -1.1
HLID Hailey 73.70 47 P P 05 34 09.7 +1.0
baz=307,SNR=18
HLID Hailey 73.70 47 eP P 05 34 09.8 +1.2
comp=Z,11nm,1.0s
HFS Hagfors 73.81 336 P P 05 34 08.3 -0.5
comp=Z,10.0nm,0.9s,baz=47,slow=6.5,SNR=17
HFS LR LR 06 09 28.6
comp=Z,455nm,19.2s,baz=28,slow=38
NC204 NORSAR Array S 73.85 338 eP P 05 34 08.5 -0.5
BMN Battle Mountai 73.85 51 eP P 05 34 10.9 +1.3
comp=Z,14nm,1.0s
BMN Battle Mountai 73.85 51 eP P 05 34 10.9 +1.3
BMN pmax pmax
comp=Z,14nm,1.0s
MCMT McKenzie Canyo 73.85 46 eP P 05 34 10.4 +0.8
NB201 NORSAR Array S 73.86 337 eP P 05 34 08.4 -0.7
NB2 NORSAR Subarra 73.89 337 P P 05 34 09.1 -0.2
comp=Z,8.5nm,0.8s,baz=40,slow=6.2
NB2 NORSAR Subarra 73.89 337 P P 05 34 07.6 -1.7
NB2 pmax pmax
comp=Z,7.0nm,0.7s
NOA NORSAR Array B 73.89 337 P P 05 34 09.1 -0.2
comp=Z,10nm,0.8s,baz=36,slow=2.8,SNR=18
NOA LR LR 06 09 10.7
comp=Z,276nm,21.4s,baz=45,slow=38
NBO00 NORSAR Array S 74.03 338 eP P 05 34 10.5 +0.4
BOZ Bozeman (W) 74.07 44 P P 05 34 11.4 +0.6
baz=308,SNR=27
BOZ Bozeman (W) 74.07 44 eP P 05 34 11.6 +0.8
comp=Z,17nm,1.0s
BOZ Bozeman (W) 74.07 44 eP P 05 34 11.6 +0.8
BOZ pmax pmax
comp=Z,17nm,1.0s
RYN Ryan 74.08 53 eP P 05 34 12.0 +1.1
comp=Z,14nm,1.0s
KVN Kaiserville 74.10 53 eP P 05 34 12.2 +1.1
comp=Z,26nm,1.1s
KVN Kaiserville 74.10 53 eP P 05 34 12.2 +1.1
KVN pmax pmax
comp=Z,26nm,1.1s
NAO01 NORSAR Array S 74.15 337 eP P 05 34 11.2 +0.5
AKASG Malin Array Be 74.17 322 P P 05 34 10.6 -0.5
comp=Z,5.4nm,0.5s,baz=46,slow=6.3,SNR=13
AKASG LR LR 06 10 58.7
comp=Z,128nm,18.0s,baz=65,slow=39
AKBB Malin Array Si 74.17 322 eP P 05 34 10.7 -0.3
comp=Z,15nm,1.0s
AKBB Malin Array Si 74.17 322 eP P 05 34 10.7 -0.3
AKBB pmax pmax
comp=Z,15nm,1.0s
AK11 Malin Array Si 74.21 322 eP P 05 34 11.0 -0.3
MDPB Devils Postpil 74.29 55 eP P 05 34 13.5 +1.2
comp=Z,7.4nm,0.8s
NV01 Mina Array Sit 74.33 54 eP P 05 34 13.7 +1.2
NVAR Mina Array Bea 74.33 54 P P 05 34 13.6 +1.1
comp=Z,11nm,0.8s,baz=284,slow=6.0,SNR=81
NVAR LR LR 06 00 35.8
comp=Z,55nm,21.8s,baz=98,slow=31
OMMB Old Mammoth Mi 74.36 55 eP P 05 34 13.9 +1.1
comp=Z,14nm,1.4s
NV11 Mina Array Sit 74.42 53 eP P 05 34 14.0 +1.1
comp=Z,1.0nm,1.1s
MLAC Mammoth, Mammo 74.45 54 P P 05 34 14.7 +1.4
baz=306
PAGB Antelope Grade 74.62 57 eP P 05 34 15.1 +1.2
comp=Z,27nm,0.8s
QLMT Earthquake Lak 74.65 45 eP P 05 34 15.4 +1.2
YHB Horse Butte 74.83 45 eP P 05 34 16.4 +1.1
comp=Z,18nm,0.9s
YHH Holmes Hill 75.00 45 eP P 05 34 17.1 +0.7
comp=Z,13nm,1.2s
YMR Madison River 75.01 45 eP P 05 34 17.1 +0.7
comp=Z,12nm,0.7s
SMMC Simmler 75.03 57 P P 05 34 17.5 +1.1
baz=306
GCMT Greycliff 75.03 43 eP P 05 34 17.7 +1.4
YFT Old Faithful 75.22 45 eP P 05 34 19.5 +2.0
comp=Z,12nm,0.7s
SIM Simferopol' 75.28 316 eP P 05 34 29.7 +12
SIM pmax pmax
comp=Z,15nm,0.5s
VES Vestal, Richgr 75.33 56 P P 05 34 18.2 +0.2
baz=306,SNR=7.9
SFJD Kangerlussuaq 75.35 5 LR LR 06 07 59.1
comp=Z,69nm,21.6s,baz=344,slow=36
SFJD Kangerlussuaq 75.35 5 iP P 05 34 16.5 -1.0
comp=Z,6.5nm,0.7s
SFJD Kangerlussuaq 75.35 5 eP P 05 34 16.5 -1.0
SFJD pmax pmax
comp=Z,7.0nm,0.7s
YPP Pitchstone Pla 75.35 45 eP P 05 34 20.6 +2.2
comp=Z,5.8nm,0.7s
H17A Grant Village 75.40 45 P P 05 34 21.1 +2.5
baz=309,SNR=27
H17A Grant Village 75.40 45 eP P 05 34 20.8 +2.2
comp=Z,26nm,0.8s
PKM Mcpherson Peak 75.40 57 P P 05 34 19.6 +0.9
baz=306
IMW Indian Meadow 75.50 46 eP P 05 34 20.6 +1.4
comp=Z,18nm,0.8s
FXWY Fox Creek 75.61 46 eP P 05 34 21.3 +1.5
comp=Z,15nm,1.0s
CWC Cottonwood Cre 75.64 55 P P 05 34 20.6 +0.6
baz=306
RLMT Red Lodge 75.67 44 P P 05 34 20.9 +0.8
baz=309,SNR=8.2
RLMT Red Lodge 75.67 44 eP P 05 34 21.3 +1.2
comp=Z,6.8nm,0.8s
MOOW Moose Ponds 75.71 46 eP P 05 34 21.8 +1.4
comp=Z,13nm,1.1s
SBC Santa Barbara 75.73 58 P P 05 34 21.3 +1.0
baz=306
HVU Hansel Valley 75.74 48 eP P 05 34 21.8 +1.3
comp=Z,12nm,1.0s
HVU Hansel Valley 75.74 48 eP P 05 34 21.8 +1.3
HVU pmax pmax
comp=Z,12nm,1.0s
TPAW Teton Pass 75.75 46 eP P 05 34 21.6 +0.9
comp=Z,11nm,0.8s
GRAC Grapevine Rang 75.77 54 P P 05 34 21.6 +1.0
baz=306,SNR=5.9
ISA Isabella, Lake 75.84 56 P P 05 34 20.8 -0.3
baz=306,SNR=5.7
ISA Isabella, Lake 75.84 56 eP P 05 34 20.7 -0.3
comp=Z,8.0nm,0.8s
ISA Isabella, Lake 75.84 56 eP P 05 34 20.7 -0.3
ISA pmax pmax
comp=Z,8.0nm,0.8s
LOHW Long Hollow 75.87 46 eP P 05 34 22.2 +1.0
comp=Z,5.5nm,0.8s
SNOW Snow King Moun 75.88 46 eP P 05 34 22.9 +1.5
comp=Z,12nm,0.8s
REDW Red Top Meadow 75.89 46 eP P 05 34 22.7 +1.3
comp=Z,15nm,1.0s
SCZ2 Santa Cruz Isl 76.04 58 P P 05 34 22.6 +0.4
baz=306
DAC Darwin (Calif) 76.05 55 eP P 05 34 23.2 +0.8
comp=Z,11nm,0.9s
DAC Darwin (Calif) 76.05 55 eP P 05 34 23.2 +0.8
DAC pmax pmax
comp=Z,11nm,0.9s
R11A Troy Canyon, C 76.10 52 P P 05 34 23.5 +0.8
baz=307,SNR=18
R11A Troy Canyon, C 76.10 52 eP P 05 34 23.6 +1.0
comp=Z,19nm,1.1s
BGU Big Grassy Mou 76.11 49 eP P 05 34 23.1 +0.5
comp=Z,6.0nm,0.9s
AHID Auburn Hatcher 76.11 47 eP P 05 34 23.3 +0.6
comp=Z,8.2nm,0.8s
DGMT Dagmar 76.17 39 P P 05 34 23.0 +0.3
baz=312,SNR=5.9
DGMT Dagmar 76.17 39 eP P 05 34 23.0 +0.3
comp=Z,40nm,1.4s
SPUT South Promonto 76.22 48 eP P 05 34 24.7 +1.5
comp=Z,9.2nm,1.1s
MPMC Manual Prospec 76.25 55 P P 05 34 24.3 +0.8
baz=307,SNR=14
LAO LASA Array 76.30 41 P P 05 34 24.3 +0.8
baz=311,SNR=8.8
LAO LASA Array 76.30 41 eP P 05 34 24.6 +1.1
comp=Z,19nm,0.9s
BLG Laguna Peak, P 76.36 58 P P 05 34 24.3 +0.4
baz=306
FURC Furnace Creek, 76.41 54 P P 05 34 25.1 +1.0
baz=307,SNR=22
TPNV Topopah Spring 76.52 54 P P 05 34 25.9 +0.9
baz=307,SNR=27
TPNV Topopah Spring 76.52 54 eP P 05 34 25.9 +0.9
comp=Z,22nm,0.9s
TPNV Topopah Spring 76.52 54 eP P 05 34 25.9 +0.9
TPNV pmax pmax
comp=Z,22nm,0.9s
HWUT Hardware Ranch 76.56 48 eP P 05 34 26.4 +1.2
comp=Z,24nm,1.2s
EDW2 Edwards Air Fo 76.61 56 P P 05 34 26.4 +1.0
baz=307,SNR=8.1
DUG Dugway, Tooele 76.69 49 P P 05 34 27.0 +1.2
baz=308,SNR=23
DUG Dugway, Tooele 76.69 49 eP P 05 34 27.1 +1.2
comp=Z,13nm,0.7s
DUG Dugway, Tooele 76.69 49 eP P 05 34 27.1 +1.2
DUG pmax pmax
comp=Z,13nm,0.7s
TCUT Toone Canyon 76.96 48 eP P 05 34 28.6 +1.0
comp=Z,19nm,0.8s
BW06 Boulder Array 77.00 46 P P 05 34 28.1 +0.4
baz=310,SNR=11
BW06 Boulder Array 77.00 46 eP P 05 34 26.8 -0.9
comp=Z,8.2nm,0.7s
PD31 Pinedale Array 77.00 46 eP P 05 34 28.2 +0.4
PDAR Pinedale Array 77.00 46 P P 05 34 28.1 +0.4
comp=Z,6.1nm,0.6s,baz=264,slow=2.1,SNR=63
PDAR LR LR 06 04 40.0
comp=Z,50nm,21.4s,baz=301,slow=33
CTU Camp Tracy 77.02 49 eP P 05 34 29.0 +1.2
comp=Z,7.7nm,0.9s
PSUT Pine Spring 77.07 51 eP P 05 34 29.1 +1.0
comp=Z,12nm,1.0s
FMP Fort Macarthur 77.11 57 P P 05 34 28.3 +0.2
baz=307
SHOC Shoshone, Teco 77.13 55 P P 05 34 28.9 +0.6
baz=307,SNR=5.8
GSC Goldstone, Bar 77.15 55 P P 05 34 29.1 +0.6
baz=307,SNR=6.0
GSC Goldstone, Bar 77.15 55 eP P 05 34 29.3 +0.8
comp=Z,10nm,0.9s
GSC Goldstone, Bar 77.15 55 eP P 05 34 29.3 +0.8
GSC pmax pmax
comp=Z,10.0nm,0.9s
BFSC Mount Baldy Ra 77.22 57 P P 05 34 29.4 +0.5
baz=307
JLU Jordanelle 77.26 48 eP P 05 34 30.1 +0.8
comp=Z,11nm,1.1s
SHPR Sheep Range 77.48 54 eP P 05 34 31.6 +1.2
comp=Z,14nm,0.9s
MPU Maple Canyon 77.51 49 eP P 05 34 31.8 +1.2
comp=Z,14nm,0.8s
TUQ Turquoise Moun 77.64 55 P P 05 34 32.1 +0.8
baz=308,SNR=11
BBRC Big Bear Solar 77.69 56 P P 05 34 32.0 +0.3
baz=307
HEC Hector,Ludlow 77.74 56 P P 05 34 32.5 +0.7
baz=307
TCRU Three Creeks R 77.89 51 eP P 05 34 33.8 +1.0
comp=Z,14nm,1.0s
MURC Murrieta 77.91 57 P P 05 34 33.2 +0.5
baz=307
ILGA Ilgaz 77.96 313 eP P 05 34 34.2 +1.1
ILGA ePcP pP 05 34 40.4 -1.8
KWP Kalwaria Pacla 77.98 325 eP P 05 34 33.8 +1.0
KWP Kalwaria Pacla 77.98 325 eP P 05 34 32.9 +0.1
comp=Z,323nm,1.3s
KWP Kalwaria Pacla 77.98 325 eP P 05 34 33.8 +1.0
CCUT Cedar City 77.98 52 eP P 05 34 34.6 +1.4
comp=Z,15nm,1.1s
MSU Marysvale 78.12 50 eP P 05 34 35.5 +1.5
MSU Marysvale 78.12 50 eP P 05 34 35.5 +1.5
SZCU Shurtz Canyon 78.13 52 eP P 05 34 34.5 +0.4
comp=Z,6.9nm,0.9s
BUR08 Bucovina Ar. S 78.18 322 eP P 05 34 34.5 +0.5
BUR04 Bucovina Ar. S 78.19 322 eP P 05 34 34.3 +0.2
BURAR Bucovina Array 78.19 322⇑ iP P 05 34 34.5 +0.4
BURAR Bucovina Array 78.19 322 P P 05 34 34.5 +0.4
GMRC Granite Mounta 78.21 55 P P 05 34 35.1 +0.7
baz=308,SNR=8.9
TMUT Trail Mountain 78.22 49 eP P 05 34 35.5 +0.9
comp=Z,5.8nm,1.0s
TESR Tescani 78.23 320⇑ iP P 05 34 33.7 -0.5
LDFC Landfair 78.39 55 eP P 05 34 36.1 +0.7
comp=Z,13nm,0.8s
LCMT Little Creek M 78.39 52 eP P 05 34 36.2 +0.8
comp=Z,17nm,1.0s
P17A Butcher Ranch, 78.39 49 eP P 05 34 36.7 +1.2
comp=Z,18nm,0.8s
P17A eS S 05 44 28.9 -0.5
PFO Pinyon Flats O 78.39 57 P P 05 34 35.9 +0.4
baz=308
PFO Pinyon Flats O 78.39 57 eP P 05 34 35.9 +0.4
comp=Z,10nm,1.0s
PFO Pinyon Flats O 78.39 57 eP P 05 34 35.9 +0.4
PFO pmax pmax
comp=Z,10.0nm,1.0s
109C Camp Elliot, M 78.40 57 P P 05 34 36.0 +0.6
baz=307
CPE Camp Elliot 78.40 57 eP P 05 34 36.1 +0.8
comp=Z,13nm,0.8s
MTPU Mount Pierson 78.41 51 eP P 05 34 37.4 +1.6
comp=Z,14nm,0.8s
BELC Belle Mtn. Jos 78.46 56 P P 05 34 36.0 +0.2
baz=308
VRI Vrincioaia 78.63 320⇑ iP P 05 34 37.8 +1.4
VRI Vrincioaia 78.63 320 P P 05 34 37.8 +1.4
KNB Kanab 78.65 52 eP P 05 34 38.2 +1.3
comp=Z,27nm,1.2s
KNB Kanab 78.65 52 eP P 05 34 38.2 +1.3
KNB pmax pmax
comp=Z,27nm,1.2s
PLOR Plostina 78.68 320⇓ iP P 05 34 38.5 +1.8
PLOR Plostina 78.68 320 P P 05 34 38.6 +1.8
SRU San Rafael Swe 78.75 49 eP P 05 34 38.3 +0.9
comp=Z,20nm,0.9s
SRU San Rafael Swe 78.75 49 eP P 05 34 38.3 +0.9
SRU pmax pmax
comp=Z,20nm,0.9s
K22A Casper 78.78 44 P P 05 34 37.9 +0.4
baz=311,SNR=5.8
K22A Casper 78.78 44 eP P 05 34 37.9 +0.4
comp=Z,24nm,1.4s
TLB Topalu 78.81 318⇓ iP P 05 34 38.3 +0.9
TLB Topalu 78.81 318 P P 05 34 38.3 +0.9
BAR Barrett 78.81 57 eP P 05 34 38.2 +0.5
comp=Z,11nm,0.9s
ULM Lac du Bonnet 78.84 34 P P 05 34 37.1 -0.3
comp=Z,3.7nm,0.6s,baz=303,slow=6.3,SNR=10
ULM Lac du Bonnet 78.84 34 eP P 05 34 36.9 -0.6
comp=Z,5.5nm,0.7s
MDND Maddock 78.84 37 P P 05 34 38.1 +0.5
baz=315
MDND Maddock 78.84 37 eP P 05 34 37.0 -0.6
comp=Z,39nm,1.1s
BR131 Keskin Array S 78.85 312 eP P 05 34 37.4 -0.6
BRTR Keskin Array B 78.85 312 P P 05 34 37.7 -0.2
comp=Z,3.8nm,1.0s,baz=56,slow=3.1,SNR=11
BRTR LR LR 06 14 09.8
comp=Z,53nm,18.1s,baz=56,slow=39
BRTR Keskin Array B 78.85 312 iP P 05 34 38.0 +0.1
BRTR pmax pmax
comp=Z,4.0nm,1.0s
MONP2 Monument Peak 78.85 57 P P 05 34 38.4 +0.3
baz=308
OJC Ojcow 78.87 326 eP P 05 34 38.3 +0.6
OJC Ojcow 78.87 326 eP P 05 34 38.1 +0.4
comp=Z,13nm,0.9s
OJC Ojcow 78.87 326 eP P 05 34 38.3 +0.6
UZH Uzhgorod 78.88 324 eP P 05 34 39.1 +1.4
UZH e 05 34 50.7
NEE2 Needles Airpor 78.89 55 P P 05 34 38.5 +0.4
baz=308
IRM Iron Mountain 78.93 55 P P 05 34 38.9 +0.6
baz=308,SNR=7.0
RWWY Rawlins 79.03 45 eP P 05 34 38.5 -0.5
comp=Z,14nm,0.9s
TRPA Tarpa 79.12 324⇑ iP P 05 34 39.9 +0.9
RSSD Black Hills 79.16 42 P P 05 34 39.7 0.0
baz=312
RSSD Black Hills 79.16 42 eP P 05 34 39.5 -0.1
comp=Z,7.1nm,0.7s
RSSD Black Hills 79.16 42 eP P 05 34 39.5 -0.1
RSSD pmax pmax
comp=Z,7.0nm,0.7s
W13A Hualapai Mount 79.16 54 eP P 05 34 40.5 +0.7
comp=Z,7.7nm,1.0s
A31A Linda, St. Vin 79.20 35 P P 05 34 39.0 -0.5
baz=316
IKP In-Ko-Pah, Jac 79.21 57 P P 05 34 40.5 +0.6
baz=308
NIE Niedzica 79.23 326 eP P 05 34 40.7 +1.0
NIE Niedzica 79.23 326 eP P 05 34 40.7 +1.0
SWSC Sam W. Stewart 79.23 57 P P 05 34 40.3 +0.4
baz=308
MLR Muntele Rosu 79.29 320 P P 05 34 41.5 +1.3
comp=Z,0.5nm,0.5s,baz=173,slow=11,SNR=4.4
MLR Muntele Rosu 79.29 320⇓ iP P 05 34 42.5 +2.3
MLR Muntele Rosu 79.29 320 eP P 05 34 41.2 +1.0
comp=Z,5.8nm,1.1s
MLR Muntele Rosu 79.29 320 P P 05 34 42.5 +2.3
U15A North Rim 79.35 52 eP P 05 34 41.9 +1.0
comp=Z,12nm,0.8s
B31A Greenbush Farm 79.36 36 P P 05 34 40.3 0.0
baz=316,SNR=6.7
O20A White River Ci 79.44 47 P P 05 34 41.5 +0.2
baz=311,SNR=8.0
O20A White River Ci 79.44 47 eP P 05 34 41.5 +0.2
comp=Z,9.9nm,0.8s
PDMCI Parker Dam,Lak 79.49 55 P P 05 34 41.9 +0.6
baz=308,SNR=6.0
A32A Rocking H Ranc 79.53 35 P P 05 34 40.9 -0.4
baz=317,SNR=5.6
Y12C Blythe 79.58 55 P P 05 34 42.4 +0.6
baz=308,SNR=7.6
Y12C Blythe 79.58 55 eP P 05 34 42.7 +0.9
comp=Z,13nm,0.9s
C31A Landman Farms, 79.77 36 P P 05 34 42.5 -0.1
baz=316,SNR=6.5
LANS Liptovska Anna 79.80 326 eP P 05 34 43.7 +0.9
LANS Liptovska Anna 79.80 326 eP P 05 34 43.7 +0.9
GLA Glamis 79.81 56 P P 05 34 43.8 +0.7
baz=308,SNR=5.0
GLA Glamis 79.81 56 eP P 05 34 44.3 +1.1
comp=Z,34nm,1.4s
GLA Glamis 79.81 56 eP P 05 34 44.3 +1.1
GLA pmax pmax
comp=Z,34nm,1.4s
OKC Ostrava-Krasne 79.87 327 AMS AMS 06 13 20.0
comp=Z,300nm,14.1s
B32A Ashes, Strandq 79.89 35 P P 05 34 42.7 -0.5
baz=317,SNR=11
KSP Ksiaz 79.91 328 eP P 05 34 44.1 +0.8
KSP Ksiaz 79.91 328 eP P 05 34 44.1 +0.8
PV09 Paradox Valley 79.97 49 eP P 05 34 45.3 +1.0
A33A Warroad 80.02 34 P P 05 34 43.3 -0.6
baz=317
ARR Arges 80.04 321⇓ iP P 05 34 45.6 +1.4
RAR Rarotonga 80.09 126 LR LR 06 03 44.0
comp=Z,229nm,19.7s,baz=286,slow=31
PV10 Paradox Valley 80.11 49 eP P 05 34 46.3 +1.3
comp=Z,45nm,0.8s
PV04 Paradox Valley 80.18 49 eP P 05 34 46.4 +1.2
comp=Z,22nm,1.1s
MORC Moravsky Berou 80.18 327⇑ iP P 05 34 46.3 +1.5
MORC Moravsky Berou 80.18 327 eP P 05 34 45.6 +0.8
comp=Z,46nm,1.1s
MORC Moravsky Berou 80.18 327 P P 05 34 46.3 +1.5
MORC Moravsky Berou 80.18 327 eP P 05 34 45.5 +0.7
PV05 Paradox Valley 80.27 49 eP P 05 34 47.0 +1.2
comp=Z,34nm,1.0s
N23A Red Feather La 80.27 45 P P 05 34 46.6 +0.8
baz=312,SNR=12
N23A Red Feather La 80.27 45 eP P 05 34 46.6 +0.8
comp=Z,41nm,1.5s
DPC Dobruska-Polom 80.27 328 eP P 05 34 46.5 +1.2
DPC ePCP PcP 05 34 50.0 -2.4

DPC AMS AMS 06 13 10.0
DPC Dobruska-Polom 80.27 328 *e*P **P 05 34 46.5 +1.2**
AGMN Agassiz Nation 80.27 35 P **P 05 34 44.5 -0.8**
baz=317,SNR=5.1
AGMN Agassiz Nation 80.27 35 *e*P **P 05 34 44.5 -0.8**
comp=Z,13nm,1.3s
UPC Upice 80.28 328 *e*P **P 05 34 46.0 +0.7**
UPC AMS AMS 06 13 10.0
comp=Z,200nm,19.0s
UPC Upice 80.28 328 *e*P **P 05 34 46.0 +0.7**
UPC MLR MLR
comp=Z,200nm,19.0s
PV03 Paradox Valley 80.30 49 *e*P **P 05 34 46.9 +0.9**
comp=Z,17nm,1.0s
C32A Crookston 80.31 36 P **P 05 34 45.2 -0.3**
baz=317
D31A Mcclaflin, Tow 80.31 37 P **P 05 34 45.2 -0.3**
baz=316
PV02 Paradox Valley 80.40 49 *e*P **P 05 34 47.2 +0.7**
comp=Z,13nm,0.8s
PV15 Paradox Valley 80.47 49 *e*P **P 05 34 47.4 +0.6**
comp=Z,7.1nm,0.8s
WUAZ Wupatki 80.50 52 P **P 05 34 47.7 +0.7**
baz=310,SNR=9.4
WUAZ Wupatki 80.50 52 *e*P **P 05 34 48.3 +1.3**
comp=Z,20nm,1.0s
PSZ Piszkesteto 80.51 325 ⇓*i*P **P 05 34 45.0 -1.7**
PSZ Piszkesteto 80.51 325 *e*P **P 05 34 47.2 +0.6**
comp=Z,12nm,1.0s
PSZ Piszkesteto 80.51 325 *e*P **P 05 34 47.2 +0.6**
PSZ pmax pmax
comp=Z,12nm,1.0s
PV01 Paradox Valley 80.55 49 *e*P **P 05 34 48.2 +0.9**
comp=Z,13nm,1.0s
VYHS Vyhne 80.56 326 *e*P **P 05 34 47.6 +0.7**
VYHS pmax pmax
comp=Z,4.0nm,1.1s
VYHS Vyhne 80.56 326 *e*P **P 05 34 47.6 +0.7**
E31A Nome 80.58 37 P **P 05 34 46.9 -0.1**
baz=316,SNR=9.8
B34A Aery, Baudette 80.68 34 P **P 05 34 46.9 -0.6**
baz=318
113A Mohawk Valley, 80.69 56 *e*P **P 05 34 48.4 +0.6**
comp=Z,12nm,1.0s
C33A Trail 80.71 35 P **P 05 34 47.4 -0.3**
baz=317
SMCO Snowmass 80.81 47 *e*P **P 05 34 49.8 +0.9**
comp=Z,3.2nm,0.7s
JAVC Velka Javorina 80.81 326 *e*P **P 05 34 49.8 +1.5**
BRG Berggiesshubel 80.85 330 *e*P **P 05 34 48.7 +0.4**
comp=Z,6.3nm,0.9s
BRG Berggiesshubel 80.85 330 *e*P **P 05 34 48.7 +0.4**
BRG pmax pmax
comp=Z,6.0nm,0.9s
PVCC Panska Ves 80.86 329 AMS AMS 06 13 20.0
CLL Collm 80.88 330 *i*P **P 05 34 48.5 0.0**
comp=Z,14nm,1.0s
CLL *e*pP **sP 05 35 00.0 -0.9**
CLL *e*SS SS 05 50 24.0 +16
CLL *e*SSS SSS 05 53 42.0
CLL Collm 80.88 330 *e*P **P 05 34 48.2 -0.3**
comp=Z,12nm,0.9s
CLL Collm 80.88 330 *i*P **P 05 34 48.5 0.0**
CLL *e* 05 35 00.0
CLL pmax pmax
comp=Z,14nm,1.0s
VRAC Vranov 80.94 327 ⇑*i*P **P 05 34 49.8 +0.9**
VRAC Vranov 80.94 327 P **P 05 34 49.8 +0.9**
VRAC Vranov 80.94 327 *e*P **P 05 34 49.5 +0.6**
D33A AnnSam, Waubun 81.12 36 P **P 05 34 49.5 -0.4**
baz=317
X16A Lo Mia Camp, P 81.16 53 *e*P **P 05 34 51.8 +1.3**
comp=Z,15nm,1.0s
C34A RKJ Ranch, Bem 81.18 35 P **P 05 34 49.7 -0.5**
baz=318
ISCO Idaho Springs 81.18 46 P **P 05 34 51.7 +0.9**
baz=312,SNR=8.5
ISCO Idaho Springs 81.18 46 *e*P **P 05 34 51.6 +0.9**
comp=Z,4.0nm,0.8s
ISCO Idaho Springs 81.18 46 *e*P **P 05 34 51.6 +0.8**
ISCO pmax pmax
comp=Z,4.0nm,0.8s
B35A Bob, Littlefor 81.18 34 P **P 05 34 49.8 -0.4**
baz=318,SNR=6.5
MVCO Mesa Verde 81.19 50 P **P 05 34 51.4 +0.7**
baz=311,SNR=12
MVCO Mesa Verde 81.19 50 *e*P **P 05 34 51.7 +1.0**
comp=Z,8.5nm,0.8s
KRUC Moravsky 81.21 327 *e*P **P 05 34 50.9 +0.6**
GOPC GO Pecny, Ondr 81.24 329 *e*P **P 05 34 50.7 +0.2**
GOPC AMS AMS 06 13 50.0
comp=Z,200nm,13.9s
GOPC GO Pecny, Ondr 81.24 329 *e*P **P 05 34 50.7 +0.2**
GOPC MLR MLR
comp=Z,200nm,13.9s
PRU Pruhonice 81.29 329 AMS AMS 06 14 10.0
MODS Modra-Piesok 81.35 326 *e*P **P 05 34 51.5 +0.4**
MODS pmax pmax
comp=Z,9.0nm,0.9s
MODS Modra-Piesok 81.35 326 *e*P **P 05 34 51.5 +0.4**
BZS Buzias 81.36 322 ⇑*i*P **P 05 34 51.0 -0.2**
BZS Buzias 81.36 322 P **P 05 34 51.0 -0.2**
G31A Conde 81.38 38 P **P 05 34 51.0 -0.3**
baz=316
F32A Veblen 81.44 37 P **P 05 34 51.2 -0.4**
baz=317
D34A Park Rapids 81.47 35 P **P 05 34 51.2 -0.5**
baz=318
E33A Westby DABS, E 81.52 36 P **P 05 34 51.9 -0.1**
baz=317,SNR=5.2
C35A Jirik Farms, M 81.56 34 P **P 05 34 51.4 -0.8**
baz=318,SNR=8.4
SUSD Miller 81.57 39 P **P 05 34 52.2 -0.1**
baz=316
ASF Jabal al Asfar 81.60 304 P **P 05 34 53.5 +0.8**
comp=Z,4.0nm,0.8s,baz=80,slow=8.3,SNR=4.4
G32A Webster 81.71 38 P **P 05 34 53.0 -0.1**
baz=316
W18A Petrified Fore 81.78 52 P **P 05 34 54.7 +0.9**
baz=310
W18A Petrified Fore 81.78 52 *e*P **P 05 34 54.6 +0.7**
comp=Z,6.3nm,0.9s
214A Organ Pipe Nat 81.83 56 P **P 05 34 54.6 +0.7**
baz=309,SNR=8.0
S22A 4UR Ranch, Cre 81.84 48 P **P 05 34 55.3 +1.1**
baz=312,SNR=11
S22A 4UR Ranch, Cre 81.84 48 *e*P **P 05 34 54.5 +0.3**
comp=Z,7.7nm,1.0s
MDVR Moldovita 81.92 322 ⇓*i*P **P 05 34 54.3 +0.1**
NKC Novy Kostel 81.94 330 AMS AMS 06 14 40.0
comp=Z,200nm,16.9s
D35A Remer 81.99 35 P **P 05 34 53.9 -0.6**
baz=318
C36A Pine Crest Far 82.03 34 P **P 05 34 54.3 -0.3**
baz=319
X18A Snowflake 82.03 52 *e*P **P 05 34 56.2 +1.1**
comp=Z,6.5nm,0.9s
MMAI Mount Meron Ar 82.04 306 LR LR 06 15 19.7
comp=Z,126nm,18.4s,baz=150,slow=38
E35A Pequot Lakes 82.22 35 P **P 05 34 55.2 -0.5**
baz=318
G33A Ortonville 82.27 37 P **P 05 34 55.9 -0.1**
baz=317
CONA Conrad Observa 82.30 327 *e*P **P 05 34 56.9 +0.7**
comp=Z,5.3nm,0.9s
D36A Goodland 82.32 34 P **P 05 34 55.5 -0.7**
baz=319
C37A Embarrass 82.34 34 P **P 05 34 55.9 -0.4**
baz=320,SNR=6.4
KHC Kasperske Hory 82.35 329 *e*P **P 05 34 56.8 +0.4**
KHC *e*PCP **PcP 05 35 00.3 -1.3**
KHC *e*pP **sP 05 35 09.1 +0.3**
KHC AMS AMS 06 16 00.0
comp=Z,300nm,20.7s
KHC Kasperske Hory 82.35 329 *e*P **P 05 34 56.8 +0.4**
KHC *e* 05 35 09.1
KHC MLR MLR
comp=Z,300nm,20.7s
OGNE Ogallala 82.41 43 P **P 05 34 56.9 0.0**
baz=314
EYMN Ely 82.47 33 P **P 05 34 56.6 -0.4**
baz=320,SNR=11
EYMN Ely 82.47 33 *e*P **P 05 34 56.8 -0.2**
comp=Z,8.9nm,0.9s
H33A Prehn Over Nor 82.49 38 P **P 05 34 57.1 -0.1**
baz=317,SNR=7.5

GEC2 GERESS Array S 82.52 328 *e*P **P 05 34 57.3 -0.1**
comp=Z,3.4nm,0.8s
GEC2 GERESS Array S 82.52 328 *e*P **P 05 34 57.3 0.0**
GEC2 pmax pmax
comp=Z,3.0nm,0.8s
GERES GERESS Array B 82.52 328 P **P 05 34 57.2 -0.1**
comp=Z,2.4nm,0.7s,baz=39,slow=5.1,SNR=18
GERES LR LR 06 13 31.6
comp=Z,140nm,20.8s,baz=36,slow=37
GEA0 GERESS Array S 82.53 328 *e*P **P 05 34 57.1 -0.2**
G34A Benson 82.62 37 P **P 05 34 57.7 0.0**
baz=318,SNR=5.3
SDCO Great Sand Dun 82.62 48 P **P 05 34 59.0 +0.6**
baz=312,SNR=9.8
SDCO Great Sand Dun 82.62 48 *e*P **P 05 34 59.2 +0.9**
comp=Z,3.8nm,0.8s
WET Wettzell 82.62 329 P **P 05 34 59.8 +2.0**
F35A Swanville 82.66 36 P **P 05 34 57.6 -0.5**
baz=318
D37A Cotton 82.67 34 P **P 05 34 57.4 -0.6**
baz=320
VTS Vitosha 82.73 319 ⇓*i*P **P 05 34 59.3 +0.7**
VTS Vitosha 82.73 319 *e*P **P 05 34 58.9 +0.3**
comp=Z,8.4nm,1.1s
VTS Vitosha 82.73 319 P **P 05 34 59.3 +0.7**
C38A Sawbill Land. 82.75 33 P **P 05 34 58.1 -0.4**
baz=320,SNR=10
E36A McGregor 82.78 35 P **P 05 34 58.3 -0.3**
baz=319
EKA Estalemuir Ar 82.81 341 LR LR 06 16 05.4
comp=Z,137nm,18.2s,baz=10.0,slow=39
TUC Tucson 82.92 55 P **P 05 35 00.4 +0.7**
baz=310
TUC Tucson 82.92 55 *e*P **P 05 34 59.9 +0.1**
comp=Z,3.7nm,0.9s
TUC Tucson 82.92 55 *e*P **P 05 34 59.9 +0.1**
TUC pmax pmax
comp=Z,4.0nm,0.9s
ARSA Arzberg 82.97 326 *i*P **P 05 34 56.9 -2.7**
comp=Z,2.9nm,0.6s
MOA Molln 83.05 328 *e*P **P 05 34 60.0 -0.1**
comp=Z,9.6nm,1.4s
F36A Milaca 83.15 35 P **P 05 34 59.8 -0.8**
baz=319
C39A Grand Marais 83.16 32 P **P 05 34 59.8 -0.8**
baz=321,SNR=6.5
ECSD EROS Data Cent 83.25 39 P **P 05 35 00.9 -0.2**
baz=317,SNR=6.7
ECSD EROS Data Cent 83.25 39 *e*P **P 05 35 01.3 +0.2**
comp=Z,9.3nm,0.9s
DIVS Divibare 83.26 322 *e*P **P 05 35 00.9 -0.4**
comp=Z,11nm,1.4s
H35A Sunnyside Ranc 83.40 37 P **P 05 35 02.0 +0.2**
baz=318,SNR=14
E38A The Farm, Brul 83.47 34 P **P 05 35 01.8 -0.4**
baz=320,SNR=11
C40A Isle Royale Na 83.50 32 P **P 05 35 01.6 -0.7**
baz=322
G36A St. Michael 83.52 36 P **P 05 35 02.3 -0.1**
baz=319
SOKA Soboth 83.62 326 *e*P **P 05 35 03.5 +0.4**
comp=Z,10nm,0.8s
F37A Hinrichs Farm, 83.67 35 P **P 05 35 03.1 -0.1**
baz=320
T25A Trinidad 83.67 47 P **P 05 35 04.3 +0.5**
baz=313,SNR=5.6
T25A Trinidad 83.67 47 *e*P **P 05 35 04.2 +0.5**
comp=Z,14nm,0.8s
F38A Pierce - Schro 83.83 35 P **P 05 35 04.0 0.0**
baz=320,SNR=14
LAZ Ladron 83.87 51 *e*P **P 05 35 05.9 +1.2**
TASM ASL Pad, Albuq 83.92 50 P **P 05 35 05.6 +0.6**
baz=312
ANMO Albuquerque 83.92 50 P **P 05 35 05.8 +0.8**
baz=312
ANMO Albuquerque 83.92 50 *e*P **P 05 35 05.7 +0.8**
comp=Z,13nm,1.1s
ANMO Albuquerque 83.92 50 *c i*P **P 05 35 06.4 +1.4**
ANMO pmax pmax
comp=Z,16nm,1.2s
H36A Jessenland, He 83.92 37 P **P 05 35 04.9 +0.3**
baz=319,SNR=7.2
TASL Snake Pit, Alb 83.92 50 P **P 05 35 05.7 +0.7**
baz=312
SPMN Marine on St. 83.96 35 P **P 05 35 04.4 -0.3**
baz=319
SPMN Marine on St. 83.96 35 *e*P **P 05 35 04.1 -0.6**
comp=Z,6.8nm,0.9s
OBKA Obir 83.97 327 *e*P **P 05 35 02.6 -2.3**
comp=Z,5.3nm,1.1s
PMOR Pomariorio Ree 83.97 114 *e*T T 07 07 16.2
comp=Z,11nm,0.2s
KBA Koelnbreinsper 84.05 328 *e*PcP **P 05 35 06.2 +0.9**
comp=Z,4.5nm,0.8s
E39A Mellen 84.09 34 P **P 05 35 04.9 -0.4**
baz=321,SNR=12
BGNE Belgrade 84.15 41 P **P 05 35 05.3 -0.5**
baz=316
BGNE Belgrade 84.15 41 *e*P **P 05 35 05.8 0.0**
comp=Z,80nm,1.5s
LPM Los Pinos Moun 84.24 51 *e*P **P 05 35 07.8 +1.3**
MYKA Terra Mystica 84.27 327 *e*P **P 05 35 05.5 -0.8**
comp=Z,4.2nm,0.8s
I36A Fitzsimmons Fa 84.30 37 P **P 05 35 06.2 -0.3**
baz=319
E40A Wakefield 84.33 33 P **P 05 35 06.8 +0.2**
baz=321,SNR=19
BNM Barren Site 84.35 51 *e*P **P 05 35 08.0 +0.8**
STU Stuttgart 84.39 331 *e*P **P 05 35 07.9 +1.1**
comp=Z,22nm,1.0s
STU Stuttgart 84.39 331 *e*P **P 05 35 07.9 +1.1**
STU pmax pmax
comp=Z,22nm,1.0s
H37A Dierke Farm, C 84.40 36 P **P 05 35 07.1 +0.2**
baz=319,SNR=5.4
D41A Chassel 84.42 32 P **P 05 35 06.9 -0.1**
baz=322,SNR=8.3
G38A Ridgeland 84.44 35 P **P 05 35 06.6 -0.5**
baz=320
PPT Papeete 84.46 117 LR LR 06 07 41.9
comp=Z,120nm,21.1s,baz=308,slow=32
PPT2 Papeete2 84.48 117 *e*LR LR 06 01 40.3
comp=Z,258nm,24.0s
I37A Lemond, Waseca 84.60 37 P **P 05 35 08.3 +0.3**
baz=319
WTTA Wattenberg 84.62 329 *e*PcP **P 05 35 10.2 +2.0**
comp=Z,2.4nm,0.6s
H38A Maiden Rock 84.62 36 P **P 05 35 08.0 -0.1**
baz=320
F40A Park Falls 84.64 34 P **P 05 35 07.8 -0.3**
baz=321,SNR=7.3
ABTA Abfaltersbach 84.66 328 *e*P **P 05 35 08.1 -0.2**
comp=Z,3.3nm,0.9s
G39A Holcombe 84.66 35 P **P 05 35 07.7 -0.5**
baz=320
J36A Seneca 1, Swea 84.66 38 P **P 05 35 08.3 0.0**
baz=319
121A Cookes Peak, D 84.70 53 P **P 05 35 09.8 +0.8**
baz=312,SNR=7.9
E41A Kenton 84.72 33 P **P 05 35 08.4 -0.1**
baz=322,SNR=9.6
MOTA Mosalm 84.77 329 *e*P **P 05 35 08.8 -0.2**
comp=Z,6.6nm,1.0s
RETA Reutte 84.80 329 *e*P **P 05 35 09.0 0.0**
comp=Z,4.1nm,0.8s
PDG Podgorica 84.85 321 ⇑*i*P **P 05 35 09.5 +0.3**
TTG Podgorica 84.85 321 *e*P **P 05 35 09.0 -0.2**
comp=Z,16nm,1.1s
TTG Podgorica 84.85 321 *e*P **P 05 35 09.0 -0.2**
TTG pmax pmax
comp=Z,16nm,1.1s
LIT Litokhoron 84.88 318 *e*P **P 05 35 08.8 -0.7**
comp=Z,9.7nm,0.7s
LIT Litokhoron 84.88 318 *e*P **P 05 35 08.8 -0.7**
LIT pmax pmax
comp=Z,10.0nm,0.7s
COWI Conover 84.93 33 *e*P **P 05 35 09.4 -0.2**
comp=Z,4.3nm,0.6s
HSIG 84.93 57 *e*P **P 05 35 10.3 +0.4**
comp=Z,13nm,1.1s
FNA Florina 84.98 319 *e*P **P 05 35 09.7 -0.3**
comp=Z,7.7nm,1.2s
FNA Florina 84.98 319 *e*P **P 05 35 09.7 -0.3**
FNA pmax pmax
comp=Z,8.0nm,1.2s
J37A Redenius Farm, 85.06 37 P **P 05 35 10.1 -0.2**
baz=319
H39A Augusta 85.08 35 P **P 05 35 10.2 -0.2**

baz=320
I38A Scanlan Farm, 85.08 36 P **P 05 35 10.1 -0.3**
baz=320
G40A Rib Lake 85.11 34 P **P 05 35 10.2 -0.3**
baz=321
K36A Gilmore City 85.12 38 P **P 05 35 10.5 -0.1**
baz=318
FETA Feichten 85.19 329 *e*P **P 05 35 10.2 -0.9**
comp=Z,6.0nm,1.0s
E42A Champion 85.19 32 P **P 05 35 10.8 -0.1**
baz=323
F41A Three Lakes 85.22 33 P **P 05 35 11.1 0.0**
baz=322,SNR=10
DAVA Damuels 85.32 330 *e*P **P 05 35 11.4 -0.3**
comp=Z,9.1nm,0.9s
L36A Harm Buss Farm 85.42 39 P **P 05 35 11.9 -0.3**
baz=318
K37A Belmond 85.42 38 P **P 05 35 12.1 0.0**
baz=319,SNR=5.2
H40A Chili 85.53 35 P **P 05 35 12.4 -0.2**
baz=321,SNR=6.6
J38A Wedel Dairy, R 85.56 37 P **P 05 35 12.5 -0.3**
baz=320
I39A Houston 85.60 36 P **P 05 35 12.4 -0.6**
baz=320,SNR=5.7
G41A Antigo 85.60 34 P **P 05 35 12.5 -0.5**
baz=322
E43A Lone Tree Farm 85.62 32 P **P 05 35 12.7 -0.3**
baz=323,SNR=7.9
FUORN Ofenpass-Fuorn 85.70 329 *e*P **P 05 35 14.2 +0.5**
comp=Z,13nm,0.6s
M36A Felix, Anita 85.83 39 P **P 05 35 14.2 -0.1**
baz=318
L37A Phoenix Point, 85.85 38 P **P 05 35 14.0 -0.3**
baz=319
H41A Junction City 85.86 34 P **P 05 35 14.1 -0.2**
baz=322
H41A Junction City 85.86 34 *e*P **P 05 35 14.0 -0.2**
comp=Z,9.9nm,1.0s
TAOE Nuku Hiva Isla 85.86 104 *e*LR LR 06 02 26.2
comp=Z,343nm,25.1s
E44A Grand Marais A 85.86 31 P **P 05 35 14.2 0.0**
baz=324,SNR=5.6
G42A Mountain 85.91 33 P **P 05 35 14.4 -0.1**
baz=322,SNR=5.1
G42A Mountain 85.91 33 *e*P **P 05 35 14.6 +0.1**
comp=Z,6.9nm,0.7s
J39A Decorah 85.91 36 P **P 05 35 14.0 -0.5**
baz=320,SNR=8.6
F43A Flat Rock, Esc 85.98 32 P **P 05 35 14.8 0.0**
baz=323
I40A Norwalk 85.99 35 P **P 05 35 14.5 -0.4**
baz=321
EPT El Paso 86.02 53 *e*P **P 05 35 15.9 +0.4**
comp=Z,10nm,1.2s
F44A Big Bay de Noc 86.18 32 P **P 05 35 15.6 -0.2**
baz=324,SNR=6.7
I41A Arkdale 86.20 35 P **P 05 35 15.8 -0.2**
baz=321
G43A Wallace 86.22 33 P **P 05 35 16.0 0.0**
baz=323,SNR=5.1
G43A Wallace 86.22 33 *e*P **P 05 35 16.1 +0.2**
comp=Z,10.0nm,0.7s
L38A Oak Wood Farm, 86.22 38 P **P 05 35 15.7 -0.4**
baz=320
N36A Muff Farm, Cla 86.23 40 P **P 05 35 16.5 +0.3**
baz=318
M37A Trindle Farm, 86.24 39 P **P 05 35 16.6 +0.4**
baz=319
SCIA State Center 86.28 38 P **P 05 35 16.3 -0.1**
baz=319
SCIA State Center 86.28 38 *e*P **P 05 35 16.8 +0.4**
comp=Z,23nm,1.0s
K39A Oelwein 86.31 37 P **P 05 35 15.9 -0.7**
baz=320,SNR=7.0
J40A Soldiers Grove 86.31 36 P **P 05 35 15.9 -0.6**
baz=321
E45A Wooded Hills, 86.38 31 P **P 05 35 16.7 -0.1**
baz=324
H42A Shiocton 86.44 34 P **P 05 35 17.2 0.0**
baz=322
H42A Shiocton 86.44 34 *e*P **P 05 35 17.3 +0.2**
comp=Z,32nm,1.4s
KSU1 Kansas State U 86.64 42 P **P 05 35 17.6 -0.6**
baz=317,SNR=5.4
KSU1 Kansas State U 86.64 42 *e*P **P 05 35 18.0 -0.2**
comp=Z,18nm,0.9s
N37A Lee Faris, Mou 86.65 39 P **P 05 35 18.3 +0.1**
baz=319,SNR=5.1
M38A Pleasantville 86.66 38 P **P 05 35 17.7 -0.6**
baz=319,SNR=6.9
K40A Colesburg 86.67 36 P **P 05 35 17.8 -0.4**
baz=321
J41A Loganville 86.67 35 P **P 05 35 17.9 -0.4**
baz=321,SNR=5.7
L39A Vinton 86.70 37 P **P 05 35 18.2 -0.2**
baz=320,SNR=9.1
I42A Draeger Farm, 86.76 34 P **P 05 35 18.7 0.0**
baz=322,SNR=6.1
I42A Draeger Farm, 86.76 34 *e*P **P 05 35 18.8 0.0**
comp=Z,9.3nm,0.8s
MNTX Cornudas Mount 86.77 52 P **P 05 35 19.2 +0.2**
baz=313,SNR=7.3
MNTX Cornudas Mount 86.77 52 *e*P **P 05 35 19.4 +0.4**
comp=Z,6.2nm,1.3s
F45A CMU Biological 86.79 31 P **P 05 35 18.7 0.0**
baz=324
H43A Windswept, Lux 86.81 33 P **P 05 35 19.2 +0.2**
baz=323
H43A Windswept, Lux 86.81 33 *e*P **P 05 35 18.9 0.0**
comp=Z,18nm,0.9s
MSTX Muleshoe 86.82 49 P **P 05 35 19.4 +0.1**
baz=314
MSTX Muleshoe 86.82 49 *e*P **P 05 35 19.4 +0.1**
comp=Z,14nm,1.4s
AMTX Amarillo 86.83 48 P **P 05 35 19.7 +0.4**
baz=315
AMTX Amarillo 86.83 48 *e*P **P 05 35 19.9 +0.6**
comp=Z,17nm,0.9s
JFWS Jewell Farm 86.92 36 P **P 05 35 19.0 -0.5**
baz=321
JFWS Jewell Farm 86.92 36 *e*P **P 05 35 19.1 -0.4**
comp=Z,9.9nm,1.2s
JFWS Jewell Farm 86.92 36 *e*P **P 05 35 19.1 -0.4**
JFWS pmax pmax
comp=Z,10.0nm,1.2s
IDI Anoyia 86.97 313 LR LR 06 19 20.0
comp=Z,42nm,18.0s,baz=287,slow=39
F46A Macinaw City C 87.02 31 P **P 05 35 19.7 -0.2**
baz=325
I43A Langenfeld Bro 87.10 34 P **P 05 35 20.1 -0.3**
baz=322
N38A Joes South For 87.11 39 P **P 05 35 20.5 0.0**
baz=319
M39A Webster 87.11 38 P **P 05 35 20.4 -0.1**
baz=320,SNR=6.2
J42A Columbus 87.11 35 P **P 05 35 19.9 -0.5**
baz=322
L40A Anamosa 87.12 37 P **P 05 35 20.1 -0.4**
baz=321,SNR=6.5
O37A Wolven Farm, M 87.12 40 P **P 05 35 20.6 0.0**
baz=319
K41A Shullsburg 87.13 36 P **P 05 35 20.2 -0.3**
baz=321,SNR=6.2
J43A Natural Harves 87.38 34 P **P 05 35 21.4 -0.3**
baz=322
N39A Derby Farms, D 87.41 38 P **P 05 35 22.0 +0.1**
baz=320,SNR=5.4
K42A Prairie Point, 87.44 35 P **P 05 35 21.5 -0.5**
baz=322
L41A Preston 87.45 36 P **P 05 35 21.6 -0.4**
baz=321
P37A Lathrop 87.45 40 P **P 05 35 22.0 -0.2**
baz=319,SNR=7.8
M40A Post Highland 87.48 37 P **P 05 35 22.1 -0.2**
baz=320,SNR=6.0
O38A Galt 87.50 39 P **P 05 35 22.4 0.0**
baz=319
P38A Dawn 87.84 40 P **P 05 35 23.9 -0.1**
baz=319,SNR=5.7
N40A Mertquake, Sal 87.85 38 P **P 05 35 24.2 +0.2**
baz=320
O39A Kirksville 87.86 39 P **P 05 35 24.0 -0.1**
baz=320
L42A Oliver, Polo 87.89 36 P **P 05 35 23.6 -0.6**
baz=322
Q37A Longview Farm, 87.93 41 P **P 05 35 24.1 -0.4**
baz=319

K43A	Burlington	87.95	35	P	P	05 35 23.9	-0.6
	baz=322						
M41A	Milan	87.97	37	P	P	05 35 24.3	-0.3
	baz=321						
L43A	Garden Prairie	88.18	35	P	P	05 35 25.1	-0.5
	baz=322						
M42A	Sheffield	88.28	36	P	P	05 35 25.6	-0.5
	baz=322						
O40A	La Belle	88.29	38	P	P	05 35 26.1	0.0
	baz=320,SNR=6.0						
Q38A	Cooks Store, C	88.30	40	P	P	05 35 25.8	-0.4
	baz=319						
N41A	Harden Midland	88.34	37	P	P	05 35 26.1	-0.2
	baz=321						
P39B	Salisbury	88.34	39	P	P	05 35 26.1	-0.3
	baz=320						
TBI	Tubual	88.40	121	eLR	LR	06 03 12.9	
	comp=Z,270nm,32.5s,baz=321						
TBI	Tubual	88.40	121	eT	T	07 12 47.6	
	comp=Z,16nm,0.3s						
TIP	Timpagrande	88.54	321	eP	P	05 35 29.0	+1.6
	comp=Z,9.1nm,1.1s						
L44A	Lake County Fo	88.56	35	P	P	05 35 27.0	-0.4
	baz=323						
Q39A	Willow Grove F	88.56	40	P	P	05 35 27.4	0.0
	baz=320,SNR=5.5						
WMOK	Wichita Mounta	88.61	46	P	P	05 35 27.7	-0.1
	baz=316,SNR=10						
WMOK	Wichita Mounta	88.61	46	eP	P	05 35 28.5	+0.7
	comp=Z,5.8nm,0.9s						
WMOK	Wichita Mounta	88.61	46	eP	P	05 35 28.5	+0.7
WMOK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
N42A	Yates City	88.64	37	P	P	05 35 27.6	-0.2
	baz=321						
P40A	Paris	88.66	39	P	P	05 35 27.9	0.0
	baz=320,SNR=6.8						
M43A	Waltham Townsh	88.67	36	P	P	05 35 27.8	-0.1
	baz=322,SNR=8.8						
R38A	Fenwick Farm,	88.73	41	P	P	05 35 28.1	-0.2
	baz=319						
O41A	Passleys Farm,	88.78	38	P	P	05 35 28.1	-0.3
	baz=321						
N43A	Stutzman Famil	88.96	36	P	P	05 35 29.1	-0.2
	baz=322						
P41A	Barry, Barry	89.03	38	P	P	05 35 29.7	+0.1
	baz=321,SNR=7.2						
Q40A	Laux Farm, Aux	89.06	39	P	P	05 35 29.8	+0.1
	baz=320						
R39A	Chumby, Stover	89.08	40	P	P	05 35 29.6	-0.4
	baz=320,SNR=5.9						
M44A	Midewin, Midew	89.13	35	P	P	05 35 29.9	-0.2
	baz=323						
S38A	Stockton	89.15	41	P	P	05 35 29.8	-0.4
	baz=319						
HDIL	Hopedale	89.20	36	P	P	05 35 30.4	0.0
	baz=322						
HDIL	Hopedale	89.20	36	eP	P	05 35 30.9	+0.5
	comp=Z,32nm,1.4s						
T38A	Diamond	89.39	42	P	P	05 35 31.1	-0.3
	baz=319,SNR=6.6						
O43A	Sugar Creek Fa	89.40	37	P	P	05 35 31.3	0.0
	baz=322						
S39A	Bolivar	89.41	41	P	P	05 35 30.7	-0.7
	baz=319,SNR=6.1						
TUL1	Leonard	89.43	43	P	P	05 35 31.7	+0.1
	baz=318						
TUL1	Leonard	89.43	43	eP	P	05 35 31.9	+0.3
	comp=Z,7.7nm,0.7s						
P42A	Winchester	89.45	38	P	P	05 35 31.5	-0.1
	baz=321,SNR=5.4						
TX31	Lajitas Ar. Si	89.46	53	eP	P	05 35 32.6	+0.6
TXAR	Lajitas Array	89.46	53	P	P	05 35 32.4	+0.4
	comp=Z,4.5nm,0.7s,baz=304,slow=3.1,SNR=37						
TXAR				LR	LR	06 13 07.4	
	comp=Z,49nm,19.6s,baz=0.0,slow=34						
R40A	Maddies Statio	89.50	40	P	P	05 35 31.4	-0.4
	baz=320,SNR=6.9						
Q41A	Truxton	89.51	39	P	P	05 35 31.9	+0.1
	baz=321						
N44A	Piper City	89.56	36	P	P	05 35 32.0	0.0
	baz=323						
ABTX	Abilene, Hawle	89.62	48	P	P	05 35 32.7	+0.1
	baz=316						
ABTX	Abilene, Hawle	89.62	48	eP	P	05 35 32.9	+0.3
	comp=Z,18nm,1.4s						
N45A	Kentland	89.80	35	P	P	05 35 33.3	+0.1
	baz=323,SNR=5.1						
HPIG		89.81	56	eP	P	05 35 34.3	+0.5
	comp=Z,5.8nm,1.1s						
P43A	Skaggs, Pawnee	89.81	37	P	P	05 35 33.4	+0.1
	baz=322						
M46A	Old House Fiel	89.88	34	P	P	05 35 33.8	+0.3
	baz=324						
Q42A	Golden Eagle	89.89	38	P	P	05 35 33.8	+0.2
	baz=321						
T39A	Clever	89.89	41	P	P	05 35 33.4	-0.3
	baz=319						
S40A	Lebanon	89.90	40	P	P	05 35 33.4	-0.4
	baz=320						
O44A	Mansfield	89.91	36	P	P	05 35 33.6	-0.1
	baz=322						
R41A	Rosebud	89.94	39	P	P	05 35 33.8	-0.1
	baz=321,SNR=5.8						
N46A	Monticello	90.12	35	P	P	05 35 34.4	-0.3
	baz=324						
HHAR	Hobbs	90.15	42	eP	P	05 35 34.8	-0.1
	comp=Z,4.3nm,0.6s						
ATD	Arta Tunnel	90.18	285	LR	LR	06 21 06.8	
	comp=Z,46nm,18.2s,baz=30,slow=39						
CCM	Cathedral Cave	90.19	39	P	P	05 35 34.9	-0.1
	baz=321						
CCM	Cathedral Cave	90.19	39	eP	P	05 35 35.0	-0.1
	comp=Z,11nm,0.9s						
CCM	Cathedral Cave	90.19	39	eP	P	05 35 35.0	-0.1
CCM				pmax	pmax		
	comp=Z,11nm,0.9s						
T40A	Mansfield	90.23	41	P	P	05 35 34.7	-0.6
	baz=320						
R42A	Luebbering	90.24	39	P	P	05 35 35.3	0.0
	baz=321						
S41A	Jillco Farms,	90.30	40	P	P	05 35 35.3	-0.3
	baz=320						
U39A	Green Forest	90.31	42	P	P	05 35 35.4	-0.4
	baz=319,SNR=14						
SFIN	Lafayette	90.36	35	P	P	05 35 35.9	0.0
	baz=323						
SFIN	Lafayette	90.36	35	eP	P	05 35 35.9	0.0
	comp=Z,6.1nm,0.9s						
P44A	Sand Creek, Wi	90.38	37	P	P	05 35 36.1	+0.2
	baz=322						
TRQ	Mont Tremblant	90.39	24	eP	P	05 35 36.1	+0.1
PLVO	Plevna	90.57	27	eP	P	05 35 36.6	-0.1
	comp=Z,4.4nm,0.8s						
Q44A	Meyer Farm, Va	90.63	37	P	P	05 35 37.1	0.0
	baz=322						
V39A	Pettigrew	90.64	42	P	P	05 35 36.7	-0.5
	baz=319,SNR=6.4						
S42A	Caledonia	90.64	39	P	P	05 35 37.0	-0.2
	baz=321,SNR=6.2						
FVM	French Village	90.66	39	eP	P	05 35 35.1	-2.2
	comp=Z,6.0nm,1.1s						
FVM	French Village	90.66	39	eP	P	05 35 35.1	-2.2
FVM				pmax	pmax		
	comp=Z,6.0nm,1.1s						
U40A	Yellville	90.67	41	P	P	05 35 37.0	-0.4
	baz=320,SNR=18						
T41A	Mountain View	90.71	40	P	P	05 35 36.9	-0.6
	baz=320,SNR=5.9						
P45A	Graceland, Par	90.74	36	P	P	05 35 37.5	-0.1
	baz=323						
VAE	Valguarnera	91.03	321	LR	LR	06 20 41.1	
	comp=Z,144nm,18.8s,baz=30,slow=38						
W39A	Magazine	91.05	43	P	P	05 35 38.9	-0.3
	baz=319						
Q45A	Warren Harvey,	91.05	37	P	P	05 35 39.1	0.0
	baz=323						
JCT	Junction City	91.05	50	P	P	05 35 39.3	0.0
	baz=316						
JCT	Junction City	91.05	50	eP	P	05 35 39.1	-0.2
	comp=Z,6.9nm,0.6s						
JCT	Junction City	91.05	50	eP	P	05 35 39.1	-0.2
JCT				pmax	pmax		
	comp=Z,7.0nm,0.6s						
T42A	Van Buren	91.06	40	P	P	05 35 39.0	-0.2
	baz=321						
V40A	Witts Springs	91.10	42	P	P	05 35 38.8	-0.6
	baz=320						
V40A	Witts Springs	91.10	42	eP	P	05 35 39.0	-0.4
	comp=Z,4.1nm,0.6s						
S43A	Fulton Ridge,	91.15	39	P	P	05 35 39.5	0.0
	baz=321						
U41A	Viola	91.16	41	P	P	05 35 39.3	-0.4
	baz=320						
OLIL	Olney	91.20	37	eP	P	05 35 39.2	-0.6
	comp=Z,20nm,1.3s						
WHTX	Lake Whitney,	91.36	47	P	P	05 35 40.7	+0.1
	baz=317						
WHTX	Lake Whitney,	91.36	47	eP	P	05 35 40.9	+0.3
	comp=Z,19nm,0.8s						
X39A	Fountain Ranch	91.38	43	P	P	05 35 40.9	+0.2
	baz=319,SNR=6.3						
T43A	Greenville	91.42	39	P	P	05 35 40.8	0.0
	baz=321						
W40A	Ferguson Farm,	91.43	42	P	P	05 35 40.9	0.0
	baz=320						
P47A	Martinsville	91.46	35	P	P	05 35 40.9	-0.1
	baz=324						
V41A	Mountainview	91.47	41	P	P	05 35 40.7	-0.3
	baz=320,SNR=9.7						
PBMO	Poplar Bluff	91.59	40	eP	P	05 35 41.7	+0.1
	comp=Z,6.9nm,0.8s						
MIAR	Mount Ida	91.65	43	P	P	05 35 42.1	+0.3
	baz=319,SNR=12						
MIAR	Mount Ida	91.65	43	eP	P	05 35 42.2	+0.3
	comp=Z,10nm,0.8s						
MIAR	Mount Ida	91.65	43	eP	P	05 35 42.2	+0.3
MIAR				pmax	pmax		
	comp=Z,11nm,0.8s						
WHAR	Wooly Hollow	91.77	42	eP	P	05 35 43.0	+0.5
	comp=Z,14nm,0.8s						
V42A	Cord	91.85	41	P	P	05 35 42.4	-0.4
	baz=321						
W41B	Gary Mavity, V	91.88	42	P	P	05 35 42.7	-0.3
	baz=320						
W41B	Gary Mavity, V	91.88	42	eP	P	05 35 43.1	+0.1
	comp=Z,5.8nm,0.8s						
U43A	Rector	91.92	40	P	P	05 35 43.3	+0.2
	baz=321						
X40A	Basin Creek Fa	92.09	42	P	P	05 35 44.6	+0.6
	baz=320						
X40A	Basin Creek Fa	92.09	42	eP	P	05 35 44.0	+0.1
	comp=Z,5.4nm,0.8s						
435B	Jarrell	92.16	48	P	P	05 35 44.5	+0.1
	baz=317						
435B	Jarrell	92.16	48	eP	P	05 35 44.5	+0.1
	comp=Z,11nm,1.0s						
Y40A	Okolona	92.21	43	P	P	05 35 44.3	-0.2
	baz=319						
X41A	Kaden, Bauxite	92.26	42	P	P	05 35 44.8	+0.1
	baz=320						
ACSO	Alum Creek Sta	92.31	33	P	P	05 35 44.8	-0.1
	baz=326						
WCI	Wyandotte Cave	92.46	36	P	P	05 35 45.3	-0.3
	baz=324						
U44B	Burton Farm, H	92.48	39	P	P	05 35 45.4	-0.3
	baz=322						
NCB	Newcomb	92.49	25	eP	P	05 35 45.6	-0.1
	comp=Z,5.5nm,1.1s						
M54A	Oil Creek Stat	92.62	30	P	P	05 35 46.2	-0.2
	baz=328						
T46A	Princeton	92.64	38	P	P	05 35 46.5	0.0
	baz=323						
N54A	Moraine State	92.95	30	P	P	05 35 47.8	0.0
	baz=328						
N54A	Moraine State	92.95	30	eP	P	05 35 48.1	+0.3
	comp=Z,7.7nm,1.1s						
S48A	Wiedeman Farm,	93.03	36	P	P	05 35 48.1	-0.2
	baz=324						
T47A	Sharon Grove	93.07	37	P	P	05 35 48.2	-0.2
	baz=323						
V46A	Holladay	93.51	39	P	P	05 35 50.1	-0.4
	baz=323						
V47A	Nunnelly	93.79	38	P	P	05 35 51.6	-0.2
	baz=323						
U49A	Red Boiling Sp	94.08	37	P	P	05 35 53.3	+0.2
	baz=324						
T50A	Nancy	94.11	36	P	P	05 35 53.0	-0.2
	baz=325						
V48A	Smith Brothers	94.20	38	P	P	05 35 53.4	-0.3
	baz=323						
W47A	Westpoint	94.21	39	P	P	05 35 53.0	-0.7
	baz=323						
KEST	Kesra	94.89	323	LR	LR	06 24 00.5	
	comp=Z,198nm,18.4s,baz=300,slow=39						
TZTN	Tazewell	95.10	35	P	P	05 35 57.1	-0.7
	baz=326						
244A	Avery, Jackson	95.12	43	P	P	05 35 57.6	-0.3
	baz=321						
Z46A	Louisville	95.15	41	P	P	05 35 57.9	-0.2
	baz=322						
X49A	Woodville	95.42	38	P	P	05 35 59.1	-0.2
	baz=324						
Y51A	Rockmart	96.54	38	P	P	05 36 03.9	-0.5
	baz=324						
ESDC	Sonseca Array	97.03	334	LR	LR	06 24 48.6	
	comp=Z,195nm,19.4s,baz=90,slow=38						
RKT	Rikitea	98.53	112	eLR	LR	06 08 23.8	
	comp=Z,280nm,25.8s						
SBA	Scott Base	116.11	174	ePKPdf	PKPdf	05 41 17.2	+0.9
SBA	Scott Base	116.11	174	ePKIKP	PKPdf	05 41 17.2	+0.9
TOA0	Torodi Ar. Sit	117.29	316	ePKPdf	PKPdf	05 41 19.3	-1.2
TORD	Torodi Ar. Bea	117.29	316	PKP	PKPdf	05 41 19.1	-1.4
	comp=Z,0.4nm,0.5s,baz=69,slow=1.9,SNR=7.9						
KOWA	Kowa	119.17	322	PKP	PKPdf	05 41 23.2	-0.8
	comp=Z,1.7nm,0.5s,baz=59,slow=5.4,SNR=6.4						
MAW	Mawson	120.18	206	PKP	PKPdf	05 41 23.9	-0.4
	comp=Z,1.5nm,0.7s,baz=83,slow=5.9,SNR=6.0						
MAW	Mawson	120.18	206	ePKPdf	PKPdf	05 41 24.3	0.0
MAW	Mawson	120.18	206	ePKIKP	PKPdf	05 41 24.3	0.0
SDV	Santo Domingo	124.66	40	PKP	PKPdf	05 41 34.6	-0.3
	comp=Z,5.0nm,0.7s,baz=6.7,slow=3.7,SNR=7.6						
DBIC	Dimbokro	126.22	318	PKP	PKPdf	05 41 37.2	-0.5
	comp=Z,1.3nm,0.5s,baz=343,slow=7.9,SNR=4.1						
DBIC	Dimbokro	126.22	318	ePKPdf	PKPdf	05 41 37.6	-0.1
DBIC	Dimbokro	126.22	318	ePKIKP	PKPdf	05 41 37.6	-0.1
QSPA	South Pole Qui	127.28	180	ePKPdf	PKPdf	05 41 37.5	-0.6
SNAA	Sanae	141.36	197	ePKPpre	PKPpre	05 41 57.5	
SNAA	Sanae	141.36	197	ePKHKP	PKPpre	05 41 57.5	
LPAZ	La Paz	146.06	60	PKPbc	PKPbc	05 42 15.4	-0.3
	comp=Z,17nm,0.6s,baz=344,slow=2.9,SNR=100						
LPAZ	La Paz	146.06	60	ePKPdf	PKPdf	05 42 14.4	-0.5
LPAZ				ePKPbc	PKPbc	05 42 15.8	+0.1
MNMC	Minye Minye	146.93	65	ePKPdf	PKPbc	05 42 17.4	-0.4
MNMC				ePKPbc	PKPab	05 42 18.5	-0.7
PB01	IPOC Station P	148.21	68	ePKPbc	PKPbc	05 42 21.2	+0.3
SIV	San Ignacio	150.42	50	PKP	PKPdf	05 42 21.6	+0.3
	comp=Z,11nm,0.9s,baz=343,slow=3.9,SNR=4.7						
SIV				PKPbc	PKPbc	05 42 26.4	-0.2
	comp=Z,11nm,0.9s,baz=320,slow=1.2,SNR=34						
SIV				PKPab	PKPab	05 42 32.7	-0.3
	comp=Z,3.8nm,0.5s,baz=294,slow=6.0,SNR=11						
GO02	Mina Guanaco	150.50	74	ePKPbc	PKPbc	05 42 27.5	+0.7
LCO	Las Campanas	151.50	82	ePKPbc	PKPbc	05 42 29.5	+0.4
GO05	HualaæØ	152.64	95	ePKPbc	PKPbc	05 42 30.8	-0.3
ROC1	El Roble	152.76	90	ePKPbc	PKPbc	05 42 31.7	-0.1
PLCA	Paso Flores	154.65	107	ePKPab	PKPab	05 42 52.0	+1.7
	comp=Z,9.2nm,1.0s,baz=288,slow=4.4,SNR=7.8						
PLCA	Paso Flores	154.65	107	ePKPab	PKPab	05 42 51.5	+1.1
CPUP	Villa Florida	160.21	61	PKPab	PKPab	05 43 14.1	-0.4
	comp=Z,0.5nm,0.4s,baz=312,slow=4.0,SNR=5.1						
CPUP	Villa Florida	160.21	61	ePKPab	PKPab	05 43 14.3	-0.1
CPUP	Villa Florida	160.21	61	ePKP2	PKPab	05 43 14.4	-0.1
TRQA	Tornquist	161.07	99	ePKPab	PKPab	05 43 18.6	+0.5

JMA 08 05:23:36.1±0.2, 37°.42N×141°.82E, h24km±3km, M4.6,
Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	Kawauchi	0.76	266	P	Pb	05 23 50.4	-0.2
JFK				S	Sb	05 24 00.5	0.0
ONAJ	Iwakimizuishiy	0.88	249	P	Pb	05 23 52.1	-0.6
ONAJ				S	Sb	05 24 03.3	-0.7
JMM	Marumori	0.93	299	P	Pb	05 23 52.8	-0.7
JMM				S	Sb	05 24 04.9	-0.5
JIO	Ouri	1.10	340	P	Pn	05 23 55.8	-0.2
JIO				eS	Sb	05 24 09.1	-1.2
JFT	Otama	1.18	275	S	Sb	05 24 13.2	+0.4
JOU	Okura	1.31	316	S	Sb	05 24 16.6	0.0
JYS	Shirataka	1.60	300	S	Sb	05 24 25.3	+0.5
JFY	Yanaizu	1.68	270	S	Sb	05 24 26.7	-0.5

IDC ***08*** *05:32:26.4±1.6, 32°.51N×46°.98E, h0km, mb4.0/7, mb1 4.0/9, mb1mx3.7/61, mbtmp4.0/9, ML3.9/2, MS2.6/1, Ms1 2.6/1, ms1mx2.1/61, Error ellipse: s-maj=34.1km s-min=23.4km az=164.0*
SGS ***08*** *05:32:28.3, 32°.95N×46°.83E, h9km*
ISCJB ***08*** *05:32:29.3±1.0, 32°.64N±0°.03×47°.08E±0°.04, h11km±7km, mb3.9/7, Error ellipse: s-maj=6.1km s-min=4.7km az=152.5*
CSEM ***08*** *05:32:29.9±0.2, 32°.61N×47°.09E, h2km, ML3.7, Error ellipse: s-maj=5.5km s-min=4.1km az=18.0*
THR ***08*** *05:32:29.9±0.5, 32°.62N×46°.98E, h18km±6km, ML3.7*
ISN ***08*** *05:32:30.6±1.2, 32°.61N×47°.10E, h24km±6km, ML3.6*
TEH ***08*** *05:32:31.1, 32°.62N×47°.07E, h10km, ML3.6*
ISC 08 05:32:28.5±1.2, 32°.63N±0°.04×46°.99E±0°.04, h8km±10km, n62, σ1§47/67, mb4.0/7, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKFM	Kafar-mosalman	1.15	39	ePg	Pb	05 32 50.7	0.0
IKFM				eSg	Sg	05 33 05.9	+0.3
IKFM				e		05 33 08.2	
	comp=Z,99nm,0.2s						
IKFM	Kafar-mosalman	1.15	39	ePg	Pn	05 32 50.9	0.0
SHGR	Shooshtar-Gavs	1.62	108	ePg	Pg	05 32 59.8	+0.2
SHGR				eSg	Sg	05 33 21.4	+0.7
SHGR				AML	AML	05 33 25.6	
	comp=E,904nm,0.7s						
SHGR				AML	AML	05 33 33.3	
	comp=N,1μm,0.5s						
SHGR	Shooshtar-Gavs	1.62	108	ePg	Pg	05 32 59.8	+0.2
SHGR				eSg	Sg	05 33 21.4	+0.7
NSR	Nassriya	1.76	204	ePn	Pg	05 33 02.0	-0.4
	SNR=5.0						
NSR				eSn	Sg	05 33 24.0	-1.2
	SNR=5.0						
IVIS	Veis	1.90	357	ePn	Pb	05 33 03.4	-0.1
IVIS				eSg	Sg	05 33 30.9	+1.3
IVIS				e		05 33 38.7	
	comp=Z,7μm,0.2s						
IVIS	Veis	1.90	357	ePn	Pb	05 33 03.3	-0.2
BHD	Baghdad	2.28	287	ePn	Pb	05 33 10.0	0.0
	SNR=5.0						
BHD				eSn	Sb	05 33 39.0	+0.7
	SNR=5.0						
ILIN	Lien	2.29	360	e		05 33 48.0	
	comp=Z,4μm,0.2s						
ILIN				ePn	Pb	05 33 09.3	-0.9
SNGE	Sanandaj	2.48	7	ePn	Pb	05 33 11.9	-1.6
SNGE				AML	AML	05 33 51.9	
	comp=E,253nm,0.6s						
SNGE	Sanandaj	2.48	7	ePn	Pb	05 33 11.9	-1.6
KHMZ	Khomeyn	2.73	65	ePn	Pn	05 33 15.0	+2.1
KHMZ	Khomeyn	2.73	65	ePn	Pn	05 33 15.0	+2.1
HAGD	Aghdareh	2.83	39	ePn	Pn	05 33 16.0	+1.7
HAGD				e		05 33 22.8	
	comp=Z,99nm,0.1s						
HAGD	Aghdareh	2.83	39	ePn	Pn	05 33 16.4	+2.1
HKZM	Kohzaman	3.17	30	ePn	Pn	05 33 21.6	+2.6
HKZM				e		05 34 09.3	
	comp=Z,99nm,0.3s						
HKZM	Kohzaman	3.17	30	ePn	Pn	05 33 21.9	+2.9
ASAO	Ashtian	3.18	52	ePn	Pn	05 33 21.5	+2.4
ASAO				eSg	Sg	05 34 09.5	-1.2
ASAO	Ashtian	3.18	52	ePn	Pn	05 33 21.5	+2.4
ASAO				eSg	Sg	05 34 09.5	-1.2
ZNGN	Zangian	3.31	98	e		05 34 36.8	
	comp=Z,99nm,0.3s						
ROKH	ROKH	3.43	94	ePn	Pn	05 33 24.3	+1.7
ROKH				e		05 34 34.6	
	comp=Z,99nm,0.3s						
ROKH	ROKH	3.43	94	ePn	Pn	05 33 24.2	+1.7
IBRJ	Brojen	3.69	100	ePn	Pn	05 33 26.5	+0.4
IBRJ				e		05 33 41.7	
	comp=Z,893nm,0.2s						
IRAZ	Razeghan	3.70	41	ePn	Pn	05 33 28.5	+2.3
IRAZ				e		05 33 41.1	
	comp=Z,2μm,0.2s						
IRAZ	Razeghan	3.70	41	ePn	Pn	05 33 28.5	+2.3
IKLH	Kolahrood	3.92	79	ePn	Pn	05 33 30.9	+1.6
IKLH				e		05 33 49.5	
	comp=Z,1μm,0.2s						
IKLH	Kolahrood	3.92	79	ePn	Pn	05 33 31.3	+2.0
GHVR	GHOM	4.05	62	ePn	Pn	05 33 32.8	+2.0
GHVR	GHOM	4.05	62	ePn	Pn	05 33 32.8	+2.0
IGAR	Gharneh	4.28	92	ePn	Pn	05 33 34.9	+0.7
IGAR				e		05 33 37.3	
	comp=Z,723nm,0.1s						
IMHD	Mahdasht	4.32	44	ePn	Pn	05 33 36.4	+1.8
IMHD				e		05 33 53.0	
	comp=Z,653nm,0.2s						
IMHD	Mahdasht	4.32	44	ePn	Pn	05 33 35.6	+1.0
KFJS		4.50	169	P	Pn	05 33 39.5	+2.5
IZEF	Zefreh	4.51	85	ePn	Pn	05 33 38.4	+1.0
IZEF				e		05 34 03.1	
	comp=Z,570nm,0.3s						
IZEF	Zefreh	4.51	85	ePn	Pn	05 33 38.6	+1.2
IVRN	Varamin	4.60	58	ePn	Pn	05 33 40.2	+1.8
IVRN				e		05 34 00.8	
	comp=Z,450nm,0.1s						
IVRN	Varamin	4.60	58	ePn	Pn	05 33 40.3	+1.8
IGZV	Ghazvin	4.60	35	ePn	Pn	05 33 39.5	+0.9
IGZV				e		05 34 06.6	
	comp=Z,502nm,0.2s						
IGZV	Ghazvin	4.60	35	ePn	Pn	05 33 39.9	+1.3
IRAM	Ramesheh	4.65	99	ePn	Pn	05 33 39.2	0.0
IRAM				e		05 34 41.8	
	comp=Z,341nm,0.1s						
IRAM	Ramesheh	4.65	99	ePn	Pn	05 33 38.8	-0.4
IKAZ	Kazeroun	5.04	123	ePn	Pn	05 33 45.5	+0.8
IKAZ				e		05 34 45.3	
	comp=Z,3μm,0.3s						
IKAZ	Kazeroun	5.04	123	ePn	Pn	05 33 45.8	+1.1
IBST	Bostanabad	5.06	359	ePn	Pn	05 33 45.1	+0.1
IBST				e		05 34 08.8	
	comp=Z,143nm,0.2s						
IDMV	Damavand	5.12	54	ePn	Pn	05 33 46.7	+1.0
IDMV				e		05 34 10.8	
	comp=Z,470nm,0.3s						
IDMV	Damavand	5.12	54	ePn	Pn	05 33 46.8	+1.0
RTB	Rutbah	5.63	276	ePn	Pn	05 33 56.0	+3.3
	SNR=5.0						
IFIR	Firoozkooh	5.65	56	ePn	Pn	05 33 53.8	+0.7
IFIR				e		05 33 54.8	
	comp=Z,263nm,0.2s						
IHRS	Heris	5.68	0	ePn	Pn	05 33 54.0	+0.6
ANAR	Anarak	5.70	83	e		05 34 02.6	
	comp=N,99nm,0.2s						
IPAR	Pars	5.89	117	ePn	Pn	05 33 57.0	+0.6
IPAR				e		05 35 15.1	
	comp=Z,392nm,0.4s						
BTHS		9.20	157	P	Pn	05 34 42.8	+1.2
KVAR	Kislovodsk Arr	11.80	345	LR	LR	05 40 26.1	
	comp=Z,31nm,19.2s,baz=115,slow=40						
WSA

ISC 08 05:37:58.3±0.8, 36°82N±0°02×22°90E±0°02, h8km±6km, n46, σ0°63/82, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLI	**Veliai**	**0.11**	**164**	P	**Pg**	**05 38 00.1**	**-0.6**
VLI				S	**Sg**	**05 38 01.8**	**-0.6**
VLI				AML	AML	05 38 04.2	
	comp=N,3542μm,0.4s						
VLI				AML	AML	05 38 04.5	
	comp=E,2871μm,0.3s						
VLI	**Veliai**	**0.11**	**164**	P	**Pg**	**05 38 00.8**	**+0.1**
VLI				S	**Sg**	**05 38 02.8**	**+0.3**
VLI	**Veliai**	**0.11**	**164**	P	**Pg**	**05 38 00.8**	**+0.1**
VLI				S	**Sg**	**05 38 02.7**	**+0.3**
MNVA	**Monemvasia**	**0.17**	**141**	P	**Pg**	**05 38 01.1**	**-0.7**
MNVA				S	**Sg**	**05 38 03.8**	**-0.4**
MNVA	**Monemvasia**	**0.17**	**141**	P	**Pg**	**05 38 01.8**	**0.0**
MNVA				S	**Sg**	**05 38 04.6**	**+0.4**
DYR	**Agios Nikonas**	**0.46**	**263**	P	**Pg**	**05 38 07.9**	**+0.7**
DYR				S	**Sg**	**05 38 13.6**	**+0.5**
DYR				AML	AML	05 38 14.4	
	comp=N,199μm,0.1s						
DYR				AML	AML	05 38 15.4	
	comp=E,136μm,0.2s						
DYR	**Agios Nikonas**	**0.46**	**263**	P	**Pg**	**05 38 07.6**	**+0.4**
DYR				S	**Sg**	**05 38 14.0**	**+0.8**
DYR	**Agios Nikonas**	**0.46**	**263**	P	**Pg**	**05 38 07.6**	**+0.4**
DYR				S	**Sg**	**05 38 13.7**	**+0.5**
KYTH	**Kithira**	**0.57**	**168**	P	**Pg**	**05 38 09.7**	**+0.4**
KYTH				S	**Sb**	**05 38 18.1**	**-0.7**
KYTH				AML	AML	05 38 19.3	
	comp=N,434μm,0.2s						
KYTH				AML	AML	05 38 23.6	
	comp=E,375μm,0.3s						
KYTH	**Kithira**	**0.57**	**168**	P	**Pg**	**05 38 09.3**	**+0.1**
KYTH				S	**Sg**	**05 38 17.9**	**+1.2**
KRND	**KRANIDI**	**0.59**	**20**	P	**Pg**	**05 38 09.9**	**+0.1**
KRND				S	**Sg**	**05 38 17.6**	**+0.1**
KRND				AML	AML	05 38 18.3	
	comp=E,276μm,0.3s						
KRND				AML	AML	05 38 22.1	
	comp=N,252μm,0.4s						
KRND	**KRANIDI**	**0.59**	**20**	P	**Pg**	**05 38 10.0**	**+0.3**
KRND				S	**Sg**	**05 38 18.0**	**+0.4**
KRND	**KRANIDI**	**0.59**	**20**	P	**Pg**	**05 38 09.8**	**+0.1**
KRND				S	**Sg**	**05 38 17.9**	**+0.4**
VLX	**Vlachokerasia**	**0.69**	**323**	P	**Pg**	**05 38 11.9**	**+0.3**
VLX	**Vlachokerasia**	**0.69**	**323**	P	**Pg**	**05 38 12.2**	**+0.7**
VLX				S	**Sb**	**05 38 21.8**	**-0.5**
VLX	**Vlachokerasia**	**0.69**	**323**	P	**Pg**	**05 38 11.7**	**+0.2**
VLX				S	**Sb**	**05 38 21.8**	**-0.5**
DID	**Didima**	**0.73**	**21**	P	**Pg**	**05 38 12.5**	**0.0**
DID				S	**Sg**	**05 38 22.6**	**+0.6**
DID				AML	AML	05 38 26.1	
	comp=E,279μm,0.3s						
DID				AML	AML	05 38 28.6	
	comp=N,202μm,0.3s						
DID	**Didima**	**0.73**	**21**	P	**Pb**	**05 38 13.3**	**0.0**
DID				S	**Sb**	**05 38 23.4**	**-0.2**
DID	**Didima**	**0.73**	**21**	P	**Pg**	**05 38 12.4**	**0.0**
DID				S	**Sg**	**05 38 22.6**	**+0.6**
ITM	**Ithomi**	**0.86**	**295**	P	**Pg**	**05 38 14.9**	**+0.2**
ITM				S	**Sg**	**05 38 24.7**	**-1.2**
ITM				AML	AML	05 38 26.0	
	comp=N,247μm,0.2s						
ITM				AML	AML	05 38 26.0	
	comp=E,232μm,0.2s						
ITM	**Ithomi**	**0.86**	**295**	P	**Pg**	**05 38 14.8**	**+0.1**
ITM	**Ithomi**	**0.86**	**295**	P	**Pg**	**05 38 14.8**	**+0.1**
ITM				S	**Sg**	**05 38 25.6**	**-0.3**
PYL	**PYLOS**	**0.93**	**275**	P	**Pg**	**05 38 16.0**	**-0.2**
PYL	**PYLOS**	**0.93**	**275**	P	**Pg**	**05 38 16.1**	**-0.1**
PYL	**PYLOS**	**0.93**	**275**	P	**Pg**	**05 38 16.1**	**-0.1**
ANKY	**Antikythira Is**	**1.01**	**161**	P	**Pg**	**05 38 16.8**	**-0.8**
ANKY				S	**Sg**	**05 38 30.1**	**-0.6**
ANKY	**Antikythira Is**	**1.01**	**161**	P	**Pg**	**05 38 17.1**	**-0.5**
ANKY	**Antikythira Is**	**1.01**	**161**	P	**Pg**	**05 38 17.2**	**-0.4**
ANKY				S	**Sg**	**05 38 30.8**	**+0.2**
MES3	**Kyparissia**	**1.07**	**294**	P	**Pg**	**05 38 18.4**	**-0.4**
MES3				S	**Sg**	**05 38 31.2**	**-1.5**
MES3	**Kyparissia**	**1.07**	**294**	P	**Pg**	**05 38 18.4**	**-0.4**
MES3				S	**Sg**	**05 38 32.1**	**-0.6**
AMT	**Artemida-Makis**	**1.19**	**307**	P	**Pg**	**05 38 21.2**	**+0.2**
AMT	**Artemida-Makis**	**1.19**	**307**	P	**Pg**	**05 38 21.2**	**+0.2**
GUR	**Goura**	**1.20**	**338**	P	**Pg**	**05 38 19.4**	**-1.9**
GUR				S	**Sg**	**05 38 36.9**	**0.0**
GUR				AML	AML	05 38 41.7	
	comp=N,288μm,0.5s						
GUR				AML	AML	05 38 42.7	
	comp=E,356μm,0.3s						
GUR	**Goura**	**1.20**	**338**	P	**Pg**	**05 38 20.7**	**-0.6**
GUR	**Goura**	**1.20**	**338**	P	**Pg**	**05 38 20.7**	**-0.6**
GUR				S	**Sg**	**05 38 37.1**	**+0.3**
LTK	**Loutraki**	**1.20**	**3**	P	**Pg**	**05 38 20.8**	**-0.5**
LTK				S	**Sg**	**05 38 35.4**	**-1.5**
LTK				AML	AML	05 38 39.4	
	comp=N,120μm,0.3s						
LTK				AML	AML	05 38 44.2	
	comp=E,137μm,0.3s						
LTK	**Loutraki**	**1.20**	**3**	P	**Pg**	**05 38 21.0**	**-0.3**
LTK	**Loutraki**	**1.20**	**3**	P	**Pg**	**05 38 21.0**	**-0.3**
LTK				S	**Sg**	**05 38 36.4**	**-0.5**
MHLO	**Agia Marina, M**	**1.21**	**96**	P	**Pg**	**05 38 21.2**	**-0.3**
MHLO				S	**Sn**	**05 38 39.2**	**+1.0**
MHLO	**Agia Marina, M**	**1.21**	**96**	P	**Pg**	**05 38 21.3**	**-0.2**
MHLO				S	**Sn**	**05 38 38.7**	**+0.5**
THAL	**Thalero**	**1.23**	**351**	P	**Pn**	**05 38 22.8**	**+1.0**
THAL				S	**Sg**	**05 38 37.3**	**-0.5**
THAL				AML	AML	05 38 42.2	
	comp=N,335μm,0.4s						
THAL				AML	AML	05 38 44.0	
	comp=E,353μm,0.3s						
THAL	**Thalero**	**1.23**	**351**	P	**Pb**	**05 38 22.1**	**+0.4**
THAL				S	**Sg**	**05 38 37.8**	**0.0**
KLV	**Kalavryta, Ach**	**1.36**	**334**	P	**Pn**	**05 38 21.8**	**-1.8**
KLV				S	**Sn**	**05 38 42.4**	**+0.5**
KLV	**Kalavryta, Ach**	**1.36**	**334**	P	**Pn**	**05 38 22.8**	**-0.8**
KLV				S	**Sn**	**05 38 42.4**	**+0.5**
DSF	**Desfina**	**1.61**	**350**	P	**Pn**	**05 38 28.2**	**+1.0**
DSF				S	**Sg**	**05 38 51.0**	**+0.9**
DSF	**Desfina**	**1.61**	**350**	P	**Pb**	**05 38 28.4**	**0.0**
DSF				S	**Sg**	**05 38 50.8**	**+0.6**

MEX 08 05:39:40.1±0.4, 16°87N×98°97W, h20km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**0.79**	**29**	*i* P	Pb	05 39 53.2	-2.2
TLIG				*e*S	Sb	05 40 02.5	-3.2
CAIG	**El Cayaco**	**1.25**	**279**	*e*P	Pn	05 39 59.2	-3.2
CAIG				*e*S	Sn	05 40 14.3	-4.5
VHO	**Vista Hermosa**	**2.15**	**84**	*e*P	Pn	05 40 12.3	-2.7
VHO				*e*S	Sn	05 40 37.9	-3.4
HUIG	**Huatulco**	**2.96**	**111**	*e*P	Pb	05 40 30.1	-2.0

IDC 08 06:04:42.3±1.5, 1°22N×128°47E, h0km, mb3.2/3, mb1 3.5/4, mb1mx3.3/50, mbtmp3.4/4, ML3.6/1, MS3.1/1, Ms1 3.1/1, ms1mx2.4/29, Error ellipse: s-maj=70.2km s-min=23.5km az=60.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.48**	**127**	Pn	Pn	06 05 36.9	-0.9
	5.2nm,0.3s,baz=137,slow=23,SNR=8.9						
SIJI				Sn	Sn	06 06 16.8	-3.0
	2.6nm,0.3s,baz=274,slow=20,SNR=2.7						
TGY	**Tagaytay City**	**14.81**	**330**	LR	LR	06 14 07.1	
	comp=Z,83nm,20.3s,baz=213,slow=38						
WRA	**Warramunga Arr**	**21.81**	**165**	P	P	06 09 35.5	-0.7
	0.8nm,0.8s,baz=344,slow=11,SNR=5.6						
ASAR	**Alice Springs**	**25.30**	**168**	P	P	06 10 11.6	+0.9
	0.2nm,0.4s,baz=349,slow=9.3,SNR=2.8						
MKAR	**Makanchi Array**	**60.59**	**325**	P	P	06 14 54.8	-0.1
	0.2nm,0.6s,baz=134,slow=4.2,SNR=3.0						

*ISCJB **08** 06:09:02.0±0.8, 25°17S±0°03×72°15W±0°08, h33km, mb3.6/3, Error ellipse: s-maj=10.3km s-min=3.8km az=6.5*
*GUC **08** 06:09:05.8±0.5, 24°95S×71°90W, h39km±2km, ML3.8*

*IDC **08** 06:09:38.4±6.6, 23°31S×70°17W, h211km±48km, mb3.1/3, mb1 3.4/6, mb1mx3.1/40, mbtmp3.8/6, MS3.2/1, Ms1 3.2/1, ms1mx2.6/13, Error ellipse: s-maj=76.9km s-min=26.7km az=31.0*

ISC 08 06:09:05.2±1.4, 25°11S±0°04×72°1W±0°1, h35km, n27, σ2°22/35, mb3.7/3, 2C, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB14	**IPOC Station P**	**1.61**	**73**	⇑*i*P	**Pn**	**06 09 30.9**	**-0.6**
PB14				*i* S	**Sn**	**06 09 49.5**	**-1.7**
PB14				IAML		06 09 53.5	
	comp=E,1μm,0.4s						
PB10	**IPOC Station P**	**2.12**	**42**	*e*P	**Pn**	**06 09 37.2**	**-1.1**
PB10				*i* S	**Sn**	**06 10 00.9**	**-2.5**
GO02	**Mina Guanaco**	**2.27**	**92**	*e*P	**Pn**	**06 09 40.8**	**+0.2**
GO02				*i* S	**Sn**	**06 10 07.5**	**0.0**
GO02				IAML		06 10 10.1	
	comp=N,2μm,0.7s						
GO03	**Copiap**	**2.98**	**146**	*e*P	**Pn**	**06 09 48.0**	**-2.1**
GO03				*i* S	**Sn**	**06 10 20.3**	**-4.3**
GO03				IAML		06 10 23.1	
	comp=N,382nm,0.3s						
PB04	**IPOC Station P**	**3.29**	**33**	⇑*i*P	**Pn**	**06 09 53.4**	**-1.1**
PB04				*i* S	**Sn**	**06 10 28.5**	**-4.0**
PB04				IAML		06 10 35.2	
	comp=N,280nm,0.6s						
PB06	**IPOC Station P**	**3.33**	**44**	*e*P	**Pn**	**06 09 54.7**	**-0.3**
PB06				*i* S	**Sn**	**06 10 31.3**	**-2.0**
PB06				IAML		06 10 36.6	
	comp=N,230nm,0.6s						
PB09	**IPOC Station P**	**4.21**	**39**	*e*P	**Pn**	**06 10 07.8**	**+0.6**
PB09				*i* S	**Sn**	**06 10 53.5**	**-1.8**
PB02	**IPOC Station P**	**4.28**	**29**	*e*P	**Pn**	**06 10 07.5**	**-0.6**
VCA	**Vinchina**	**5.01**	**137**	*e*P	**Pn**	**06 10 18.8**	**+0.7**
VCA				IAML		06 10 22.6	
	comp=Z,93nm,0.3s						
AGUA	**GUANDACOL**	**5.41**	**144**	*e*P	**Pn**	**06 10 23.3**	**-0.2**
AGUA				*e*S	**Sn**	**06 11 26.6**	**+2.0**
AROD	**Rodeo**	**5.54**	**156**	*e*P	**Pn**	**06 10 23.6**	**-2.0**
AROD				*e*S	**Sn**	**06 11 27.3**	**-1.0**
ACDV	**Cuesta del Vie**	**5.69**	**153**	*e*P	**Pn**	**06 10 26.2**	**-1.2**
ACDV				*e*S	**Sn**	**06 11 30.8**	**-0.7**
ACLC	**CERRO LA CRUZ**	**6.28**	**134**	*e*P	**Pn**	**06 10 36.9**	**+1.4**
AMOG	**MOGNA**	**6.62**	**152**	*e*P	**Pn**	**06 10 38.5**	**-1.6**
AMOG				*e*S	**Sn**	**06 11 52.5**	**-1.8**
APLL	**PUNTA DE LOS L**	**7.21**	**138**	*e*P	**Pn**	**06 10 48.7**	**+0.5**
RTCV	**Cerro Valdivia**	**7.41**	**156**	*e*P	**Pn**	**06 10 48.6**	**-2.4**
AUSP	**Uspallata**	**7.47**	**162**	*e*P	**Pn**	**06 10 48.9**	**-3.1**
ASAL	**Salagasta**	**7.98**	**160**	*e*P	Pn	06 10 55.3	-3.4
ACAN	**Cantantal**	**8.33**	**150**	*e*P	**Pn**	**06 11 01.5**	**-2.1**
MRA	**San Martin**	**9.18**	**144**	*e*P	**Pn**	**06 11 14.0**	**-1.2**
MRA				IAML		06 11 17.4	
	comp=Z,11nm,0.6s						
LPAZ	**La Paz**	**9.53**	**24**	P	**Pn**	**06 11 22.2**	**+1.6**
	comp=Z,0.7nm,0.3s,baz=208,slow=4.3,SNR=33						
CPUP	**Villa Florida**	**13.37**	**98**	P	**P**	**06 12 23.1**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=267,slow=14,SNR=3.5						
CPUP				LR	LR	06 17 55.8	
	comp=Z,105nm,20.4s,baz=272,slow=41						
SIV	**San Ignacio**	**13.74**	**51**	P	**Pn**	**06 12 14.6**	**-3.0**
	comp=Z,1.5nm,0.3s,baz=251,slow=12,SNR=61						
TXAR	**Lajitas Array**	**62.05**	**329**	P	P	06 19 32.4	+10
	comp=Z,0.4nm,0.6s,baz=144,slow=9.2,SNR=3.7						
NVAR	**Mina Array Bea**	**76.62**	**324**	P	P	06 21 04.0	+11
	comp=Z,0.3nm,0.7s,baz=163,slow=7.4,SNR=4.0						
TORD	**Torodi Ar. Bea**	**81.31**	**71**	P	**P**	**06 21 19.2**	**+0.7**
	comp=Z,0.6nm,0.7s,baz=251,slow=5.6,SNR=3.4						
ZALV	**Zalesovo Beam**	**146.45**	**25**	PKP	**PKPab**	**06 28 49.8**	**+6.6**
	comp=Z,1.3nm,0.6s,baz=311,slow=3.2,SNR=4.3						

*KRNET **08** 06:12:26.8±0.1, 40°47N×80°23E, mb2.8*
*SOME **08** 06:12:28.6, 40°85N×79°72E, h0km*

ISC 08 06:12:31.1±3.1, 40°9N±0°1×80°0E±0°1, h10km, n8, σ1°52/16, 2C-4D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.88**	**299**	⇑*i*P	**Pb**	**06 13 04.0**	**-1.8**
	baz=5.0						
TARG				⇑*i*S	**Sg**	**06 13 31.1**	**-0.4**
	baz=5.0						
SHLS	**Shalkode**	**2.34**	**350**	*e*P	**Pb**	**06 13 11.8**	**-1.7**
	5.5nm,0.3s						
SHLS				*e*S	**Sb**	**06 13 42.9**	**+0.4**
	8.9nm,0.4s						
UZB	**Uzynbulak**	**2.41**	**343**	*e*P	**Pb**	**06 13 12.4**	**-2.2**
	1.5nm,0.3s						
UZB				*e*S	**Sb**	**06 13 44.0**	**-0.5**
	3.6nm,0.3s						
PDGK	**Podgornoye**	**2.51**	**351**	⇓*i*P	**Pn**	**06 13 13.5**	**+1.5**
	baz=49						
PDGK				⇓*i*S	**Sb**	**06 13 47.6**	**+0.4**
	baz=49						
SATY	**Saty**	**2.51**	**332**	*e*P	**Pb**	**06 13 14.9**	**-1.4**
	5.3nm,0.3s						
SATY				*e*S	**Sb**	**06 13 48.5**	**+1.2**
	5.1nm,0.5s						
ZHN	**Zhinishke**	**2.59**	**334**	*e*P	**Pn**	**06 13 14.8**	**+1.5**
	7.9nm,0.4s						
ZHN				*e*S	**Sb**	**06 13 48.2**	**-1.5**
	6.4nm,0.2s						
KPKS	**Kokpek**	**2.79**	**340**	*e*P	**Pb**	**06 13 19.5**	**-1.6**
	8.1nm,1.0s						
KPKS				*e*S	**Sb**	**06 13 55.7**	**+0.3**
	9.9nm,0.9s						
ULHL	**Ulahol**	**3.15**	**297**	⇓*i*P	**Pn**	**06 13 21.5**	**+0.5**
	baz=2.0						
ULHL				⇓*i*S	**Sn**	**06 14 01.1**	**+2.3**
	baz=2.0						

*JMA **08** 06:14:53.5±0.4, 43°99N×147°65E, h6km, M4.1*
*SKHL **08** 06:14:53.1±0.4, 44°22N×147°97E, h40km±7km, mb4.2/6*

ISC 08 06:14:52.9±4.0, 44°2N±0°2×147°9E±0°2, h25km±23km, n16, σ1°29/11, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.84**	**244**	*e*P	Pn	06 15 08.0	-1.1
SHO				AMB	AMB	06 15 08.7	
	121nm,0.3s						
SHO				*i* S	**Sb**	**06 15 18.9**	**-0.8**
SHO				A	A	06 15 21.1	
	562nm,0.3s						
SHO				A	A	06 15 21.1	
	479nm,0.3s						
KUR	**Kuril'sk**	**0.99**	**360**	*i* P	Pn	06 15 10.0	-1.2
KUR				AMB	AMB	06 15 10.0	
	109nm,0.3s						
KUR				AMB	AMB	06 15 10.0	
	127nm,0.3s						
KUR				AMB	AMB	06 15 10.0	
	35nm,0.3s						
KUR				*e*S	**Sn**	**06 15 23.0**	**-1.3**
KUR				A	A	06 15 23.0	
	394nm,0.3s						
KUR				A	A	06 15 23.0	
	453nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.47**	**262**	*i* P	Pn	06 15 17.0	-0.7
YUK				AMB	AMB	06 15 18.0	
	58nm,0.2s						
YUK				AMB	AMB	06 15 18.0	
	131nm,0.2s						
YUK				AMB	AMB	06 15 18.0	
	46nm,0.2s						
YUK				*i* S	**Sn**	**06 15 35.6**	**-0.5**
YUK				A	A	06 15 38.5	
	524nm,0.4s						
YUK				A	A	06 15 38.5	
	818nm,0.4s						
LAGR	**Lagunnoye**	**1.52**	**264**	*e*P	Pn	06 15 18.0	-0.4
LAGR				AMB	AMB	06 15 19.0	
	13nm,0.1s						
LAGR				AMB	AMB	06 15 19.0	
	74nm,0.1s						
LAGR				AMB	AMB	06 15 19.0	
	30nm,0.1s						
LAGR				*e*S	**Sn**	**06 15 37.0**	**-0.3**
LAGR				A	A	06 15 39.0	
	775nm,0.3s						
LAGR				A	A	06 15 39.0	
	120nm,0.3s						
GRPR	**Tuman**	**1.54**	**261**	*e*P	Pn	06 15 18.3	-0.4
GRPR				AMB	AMB	06 15 19.0	
	151nm,0.2s						
GRPR				AMB	AMB	06 15 19.0	
	64nm,0.2s						
GRPR				AMB	AMB	06 15 19.0	
	116nm,0.2s						
GRPR				*e*S	Sn	06 15 36.0	-1.8
GRPR				A	A	06 15 38.0	
	752nm,0.3s						
GRPR				A	A	06 15 38.0	
	228nm,0.3s						
GLVR	**Golovnino**	**1.77**	**254**	*e*P	Pn	06 15 22.0	+0.1
GLVR				AMB	AMB	06 15 22.0	
	121nm,0.3s						
GLVR				*e*S	**Sn**	**06 15 44.0**	**+0.3**
GLVR				A	A	06 15 48.0	
	81nm,0.3s						
GLVR				A	A	06 15 48.0	
	482nm,0.3s						
NEM2	**Nemuro 2**	**1.78**	**241**	P	Pn	06 15 21.3	-0.7
NEM2				*e*S	**Sn**	**06 15 42.0**	**-1.7**
JRA	**Rausu**	**2.01**	**262**	P	Pn	06 15 25.9	+0.8
JNK	**Nakash**	**2.37**	**255**	P	Pn	06 15 30.4	+0.2
JNK				*e*S	**Sn**	**06 15 57.5**	**-1.0**
JAK	**Akkeshi**	**2.62**	**243**	P	Pn	06 15 33.3	-0.3
JTKR	**Abashiri--Toko**	**2.87**	**266**	P	**Pn**	**06 15 38.5**	**+1.5**
JAR	**Ashorobuto**	**3.12**	**254**	P	**Pn**	**06 15 41.5**	**+1.0**
JCH	**Churui**	**3.67**	**245**	P	Pn	06 15 48.1	+0.1
JCH				*e*S	**Sn**	**06 16 29.4**	**-1.0**
JNBK	**Urakawa-nobuka**	**4.22**	**244**	P	Pn	06 15 55.7	+0.1
JKB	**Kayabe**	**5.54**	**247**	P	**Pn**	**06 16 14.3**	**+0.6**
JOT	**Ohata**	**5.78**	**243**	P	Pn	06 16 16.8	-0.2

*BJI **08** 06:29:08.4, 3°19N×127°34E, h39km, mb4.7/38, mB4.8/23, Ms4.1/6, Ms7 3.9/5*
*MOS **08** 06:29:10.8±0.9, 3°67N×127°31E, h33km, mb5.0/34, Error ellipse: s-maj=11.9km s-min=6.1km az=103.5*
*ISCJB **08** 06:29:12.3±0.1, 3°68N±0°02×127°29E±0°02, h45km, mb4.8/129, MS3.6/17, Error ellipse: s-maj=3.6km s-min=2.8km az=159.6*
*NEIC **08** 06:29:13.0±0.1, 3°71N×127°33E, h35km, mb4.9/81, Error ellipse: s-maj=4.8km s-min=3.4km az=78.0*
*IDC **08** 06:29:15.1±3.1, 3°65N×127°32E, h58km±30km, mb4.3/29, mb1 4.4/30, mb1mx4.2/62, mbtmp4.6/30, ML4.8/1, MS3.5/17, Ms1 3.5/17, ms1mx3.3/61, Error ellipse: s-maj=21.3km s-min=10.9km az=81.0*
*DJA **08** 06:29:17.1±0.4, 4°N±4°×12°7E±°, h83km±4km, M4.9/24, mb4.9/24, mB5.4/12, MLv5.0/11, Mw(mB)4.9/12*

ISC 08 06:29:14.3±0.3, 3.71N±0°04×127°27E±0°05, h45km, n267, σ1°49/270, mb4.8/128, MS3.6/18, 11C-1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.74**	**269**	P	**Pn**	**06 29 42.1**	**0.0**
SGSI				S	**Sn**	**06 30 03.4**	**+0.3**
TNTI	**Ternate**	**2.92**	**178**	*e*Pn	**Pn**	**06 29 59.7**	**+1.4**
TNTI				*e*Sn	**Sn**	**06 30 37.8**	**+5.7**
GSPH	**General Santos**	**3.31**	**316**	⇓*i*P	**Pn**	**06 30 04.2**	**+0.4**
DAV	**Davao City (W)**	**3.74**	**333**	LR	LR	06 32 03.9	
	comp=Z,458nm,19.9s,baz=147,slow=44						
SKMP	**Bagumbayan, Su**	**3.90**	**316**	*e*P	**Pn**	**06 30 13.1**	**+1.3**
SKMP				*e*S	**Sn**	**06 30 57.3**	**+1.0**
LBMI	**Labuha**	**4.32**	**177**	P	**Pn**	**06 30 19.4**	**+1.8**
LBMI				S	**Sn**	**06 31 14.6**	**+7.9**
KMSI	**Cibinong**	**4.53**	**227**	P	**Pn**	**06 30 23.1**	**+2.7**
BUKP	**Musuan**	**4.69**	**332**	*e*P	**Pn**	**06 30 24.9**	**+2.2**
BUKP				*e*S	**Sn**	**06 31 22.6**	**+6.6**
PAGZ	**Pagadian**	**5.65**	**317**	*e*P	**Pn**	**06 30 35.4**	**-0.4**
PAGZ				*e*S	**Sn**	**06 31 40.8**	**+1.4**
SANI	**Sanana**	**5.86**	**193**	P	**Pn**	**06 30 37.4**	**-1.3**
SIJI	**Sorong**	**6.05**	**139**	P	**Pn**	**06 30 42.6**	**+1.2**
	22nm,0.3s,baz=181,slow=18,SNR=32						
SIJI				S	**Sn**	**06 31 49.1**	**-0.3**
	4.5nm,0.3s,baz=170,slow=23,SNR=6.7						
MRSI	**Marisa**	**6.22**	**239**	P	**Pn**	**06 30 45.8**	**+2.2**
LUWI	**Luwuk**	**6.52**	**224**	P	**Pn**	**06 30 49.5**	**+1.8**
LUWI	**Luwuk**	**6.52**	**224**	*e*Pn	**Pn**	**06 30 50.7**	**+2.9**
NLAI	**Namlea**	**6.90**	**181**	P	**Pn**	**06 30 54.3**	**+1.3**
APSI	**Ampana**	**7.25**	**231**	P	**Pn**	**06 31 00.8**	**+3.0**
MPSI	**Mapaga**	**8.09**	**246**	P	**Pn**	**06 31 09.7**	**+0.4**
FAKI	**Fak Fak**	**8.25**	**143**	*e*Pn	**Pn**	**06 31 12.9**	**+1.3**
PCI	**Palu**	**8.73**	**238**	P	**Pn**	**06 31 21.3**	**+3.2**
	88nm,1.0s						
PCI	**Palu**	**8.73**	**238**	P	**Pn**	**06 31 22.7**	**+4.6**
MYLDM	**Lahad Datu**	**8.87**	**280**	*e*Pn	**Pn**	**06 31 22.5**	**+2.5**
KDI	**Kendari**	**8.92**	**211**	P	**Pn**	**06 31 19.2**	**-1.5**
TTSI	**Tana Toraja**	**10.02**	**228**	P	**Pn**	**06 31 37.3**	**+1.5**
BAKI	**Biak**	**10.08**	**119**	P	**Pn**	**06 31 41.3**	**+4.6**
SPSI	**Sidrap Palu**	**10.69**	**225**	P	**Pn**	**06 31 45.8**	**+0.9**
KAPI	**Kappang**	**11.46**	**221**	*e*Pn	**Pn**	**06 31 55.3**	**-0.3**
	21nm,0.8s						
KAPI	**Kappang**	**11.46**	**221**	*e*P	**Pn**	**06 31 55.3**	**-0.3**
KAPI				pmax	pmax		
	comp=Z,21nm,0.8s						
TGY	**Tagaytay City**	**12.07**	**329**	LR	LR	06 37 13.8	
	comp=Z,265nm,19.4s,baz=229,slow=39						
MTKI	**Muara Teweh, K**	**13.20**	**250**	P	**Pn**	**06 32 22.0**	**+2.7**
SOEI	**Soe**	**13.70**	**193**	P	P	06 32 42.5	+8.6
SOEI	**Soe**	**13.70**	**193**	*e*Pn	**Pn**	**06 32 26.9**	**+0.6**
BATI	**Baumata**	**14.28**	**195**	P	**P**	**06 32 38.7**	**-1.5**
	comp=Z,18nm,0.3s,baz=88,slow=2.1,SNR=8.2						
GENI	**Genyem**	**14.33**	**116**	P	**P**	**06 32 42.2**	**+1.5**
JAY	**Jayapura**	**14.78**	**115**	P	**P**	**06 32 46.4**	**+0.6**
	comp=Z,5.9nm,0.3s,baz=284,slow=4.3,SNR=34						
JAY				LR	LR	06 37 28.5	
	comp=Z,258nm,21.0s,baz=322,slow=34						
JAY	**Jayapura**	**14.78**	**115**	P	**P**	**06 32 46.0**	**+0.2**
SBUM	**Sibu**	**15.08**	**266**	*e*Pn	**Pn**	**06 32 45.9**	**+1.3**
	comp=Z,34nm,0.9s						
PLAI	**Plampang**	**15.64**	**217**	P	**Pn**	**06 32 51.1**	**-0.7**
MTN	**

comp=Z,32nm,2.3s
AS31 Alice Springs 27.96 167 *e*P **P 06 34 59.2 -1.6**
comp=Z,1.6nm,0.8s
ASAR Alice Springs 27.96 167 P **P 06 34 59.0 -1.9**
comp=Z,2.6nm,0.5s,baz=352,slow=7.9,SNR=24
AS01 Alice Springs 27.97 167 *e*P **P 06 34 59.2 -1.8**
KRAB Krabi 28.27 280 P **P 06 35 02.7 -1.0**
comp=Z,98nm,0.5s,comp=Z,15μm
PSI Prapat 28.31 269 LR LR 06 47 18.5
comp=Z,83nm,21.2s,baz=89,slow=38
PBKT Sadao Pong 28.82 298 P **P 06 35 10.6 +2.1**
comp=Z,17nm,0.9s,comp=Z,753nm
PBKT Sadao Pong 28.82 298 *e*P **P 06 35 07.2 -1.4**
NJ2 Nanjing 29.29 345 *e*P **P 06 35 12.8 +0.3**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
JNU Nakatsue 29.46 6 LR LR 06 46 26.8
comp=Z,57nm,21.0s,baz=118,slow=35
PHIT Phitsanulok 29.55 299 P **P 06 35 15.3 +0.2**
comp=Z,26nm,1.0s,comp=Z,429nm
GSI Gunungsitoli 29.76 266 *e*P **P 06 35 14.9 -2.1**
comp=Z,17nm,0.8s
NANT Nan 29.99 302 P **P 06 35 18.7 -0.3**
comp=Z,5.9nm,0.5s
LAMP Lampang 30.78 301 P **P 06 35 26.7 +0.7**
comp=Z,5.3nm,0.9s
CM01 Chiang Mai Arr 31.32 300 *e*P **P 06 35 29.6 -1.1**
ENH Enshi 31.32 329 *e*P **P 06 35 30.3 -0.3**
comp=Z,12nm,0.7s
CM31 Chiang Mai Arr 31.35 300 *e*P **P 06 35 30.7 -0.3**
CMAR Chiang Mai Arr 31.35 300 P **P 06 35 30.2 -0.8**
comp=Z,6.7nm,0.8s,baz=115,slow=7.4,SNR=22
CMAR LR LR 06 49 22.2
comp=Z,37nm,19.6s,baz=119,slow=38
CMAR Chiang Mai Arr 31.35 300 *i* P **P 06 35 30.6 -0.4**
CMAR pmax pmax
comp=Z,8.0nm,0.8s
CHTO Chiang Mai 31.50 301 P **P 06 35 31.9 -0.4**
comp=Z,74nm,1.1s
CHTO Chiang Mai 31.50 301 *e*P **P 06 35 31.5 -0.8**
comp=Z,11nm,0.6s
CHTO Chiang Mai 31.50 301 *e*P **P 06 35 31.5 -0.8**
CHTO pmax pmax
comp=Z,11nm,0.6s
KMI Kunming 31.78 314 P **P 06 35 35.9 +1.0**
KMI pP pP 06 35 44.1 -2.8
KMI sP sP 06 35 47.6 -4.7
KMI pmax pmax
comp=Z,10.0nm,0.9s
KMI pmax pmax
comp=Z,63nm,6.7s
KMI LR LR
comp=Z,100nm,22.2s
KMI LR LR
comp=Z,99nm,24.9s
KMI LR LR
comp=Z,160nm,25.8s
CMAI Chiengmai2 31.90 303 P **P 06 35 35.8 -0.1**
comp=Z,107nm,0.5s,comp=Z,19μm
KSAR Wonju Array Be 33.58 1 P **P 06 35 50.3 +0.1**
KSAR Wonju Array Be 33.58 1 P **P 06 35 50.3 +0.1**
KSRS Korea Array 33.59 1 P **P 06 35 50.3 0.0**
comp=Z,2.8nm,0.7s,baz=178,slow=10,SNR=16
MJAR Matsushiro Arr 34.20 16 P **P 06 35 54.2 -1.4**
comp=Z,2.3nm,0.8s,baz=183,slow=10.0,SNR=6.5
MJAR LR LR 06 47 23.5
comp=Z,97nm,22.0s,baz=205,slow=32
MAJO Matsushiro 34.20 16 *i* P **P 06 35 54.2 -1.4**
MAJO pmax pmax
comp=Z,4.0nm,0.9s
FORT Forrest 34.30 179 *e*P **P 06 35 55.2 -1.3**
comp=Z,22nm,0.8s
XAN Xi'an 34.68 333 P **P 06 35 58.6 -1.3**
XAN pmax pmax
comp=Z,7.0nm,0.9s
XAN pmax pmax
comp=Z,84nm,5.2s
CD2 Chengdu 34.98 323 P **P 06 36 02.2 -0.4**
CD2 pmax pmax
comp=Z,20nm,0.5s
EIDS Eidsvold 37.00 143 *e*P **P 06 36 19.2 -0.6**
comp=Z,8.9nm,0.8s
BBOO Buckleboo 37.26 168 *e*P **P 06 36 20.6 -1.4**
comp=Z,25nm,1.4s
NWAO Narrogin (SRO) 37.65 194 *e*P **P 06 36 24.6 -0.6**
comp=Z,26nm,1.1s
NWAO *e*S **S 06 42 11.2 -0.9**
NWAO Narrogin (SRO) 37.65 194 *e*P **P 06 36 24.6 -0.6**
NWAO *e*S **S 06 42 11.2 -0.9**
NWAO pmax pmax
comp=Z,26nm,1.1s
STKA Stephens Creek 37.92 160 P **P 06 36 26.5 -1.0**
comp=Z,8.8nm,0.6s,baz=335,slow=9.3,SNR=38
STKA Stephens Creek 37.92 160 *e*P **P 06 36 26.5 -1.0**
comp=Z,1.9nm,0.7s
STKA Stephens Creek 37.92 160 *e*P **P 06 36 26.5 -1.0**
STKA pmax pmax
comp=Z,2.0nm,0.7s
LZH Lanzhou 38.80 329 *e*P **P 06 36 35.2 +0.1**
LZH pP pP 06 36 45.6 -1.7
LZH sP sP 06 36 51.0 -1.6
LZH PP **PnPn 06 38 09.5 +2.4**
LZH pmax pmax
comp=Z,22nm,1.3s
LZH pmax pmax
comp=Z,86nm,5.4s
LZH LR LR
comp=Z,380nm,13.2s
LZH LR LR
comp=Z,390nm,14.0s
LZH LR LR
comp=Z,480nm,16.7s
HHC Hu-ho-hao-te 39.59 341 *e*P **P 06 36 43.1 +1.6**
HHC pmax pmax
comp=Z,6.0nm,0.7s
HHC pmax pmax
comp=Z,41nm,5.0s
CN2 Changchun 39.96 358 *e*P **P 06 36 46.2 +1.8**
USRK Ussuriysk Ar. 40.54 5 P **P 06 36 50.3 +1.1**
comp=Z,5.2nm,0.9s,baz=179,slow=8.6,SNR=6.1
ARMA Armidale 41.15 147 *e*P **P 06 36 54.3 -0.3**
comp=Z,8.1nm,0.6s
H11S3 WAKE ISLAND Hy 41.25 66 T T 07 20 17.9
baz=253,slow=74,SNR=15
H11S1 WAKE ISLAND Hy 41.26 66 T T 07 20 20.9
baz=253,slow=74,SNR=6.3
H11S2 WAKE ISLAND Hy 41.26 66 T T 07 20 20.6
baz=253,slow=74,SNR=12
ASAJ Asahikawa 42.46 16 P **P 06 37 04.9 -0.1**
comp=Z,6.0nm,0.6s,baz=233,slow=9.2,SNR=7.7
ASAJ LR LR 06 52 48.8
comp=Z,112nm,21.0s,baz=172,slow=33
ASAJ Asahikawa 42.46 16 *e*P **P 06 37 05.2 +0.3**
comp=Z,7.4nm,0.7s
LSA Lhasa 42.86 311 *e*P **P 06 37 09.1 +0.1**
comp=Z,18nm,0.6s
LSA Lhasa 42.86 311 *e*P **P 06 37 09.1 +0.1**
LSA pmax pmax
comp=Z,18nm,0.6s
GTA Gaotai 43.40 329 P **P 06 37 12.6 -0.2**
GTA pP pP 06 37 22.2 -2.9
GTA sP sP 06 37 26.3 -4.1
GTA S **S 06 43 40.2 +2.3**
GTA sS sS 06 43 56.1 -2.4
GTA SS **SS 06 46 49.2 -3.9**
GTA pmax pmax
comp=Z,4.0nm,0.8s
GTA pmax pmax
comp=Z,25nm,5.4s
GTA LR LR
comp=Z,140nm,18.2s
GTA LR LR
comp=Z,170nm,19.6s
GTA LR LR
comp=Z,130nm,18.2s
ODAN Odare 44.52 305 *e*P **P 06 37 21.0 -1.2**
comp=Z,54nm,0.8s
YSS Yuzh-Sakhalins 45.12 15⇑ *e*P **P 06 37 26.3 0.0**
YSS pmax pmax
comp=Z,10.0nm,0.6s
RAMN Ramite 45.20 305 *e*P **P 06 37 26.5 -1.1**
comp=Z,56nm,0.9s
KLR Kul'dur 45.52 4 P **P 06 37 28.7 -0.7**
comp=Z,0.4nm,0.7s,baz=207,slow=4.2,SNR=12
KLR Kul'dur 45.52 4 *i* P **P 06 37 28.8 -0.6**
JIRN Jiri 45.82 306 *e*P **P 06 37 31.3 -1.3**
comp=Z,86nm,0.9s

DZM Mont Dzumac 46.08 126 *e*P **P 06 37 34.9 +0.5**
comp=Z,31nm,1.1s
GUN Gumba 46.18 306 *e*P **P 06 37 34.1 -1.3**
comp=Z,72nm,0.8s
PKIN Phulchoki 46.44 305 *e*P **P 06 37 35.5 -1.8**
comp=Z,27nm,0.7s
KKN Kakani 46.61 305 *e*P **P 06 37 37.1 -1.6**
comp=Z,30nm,0.7s
DMN Daman 46.69 305 *e*P **P 06 37 37.9 -1.4**
comp=Z,42nm,0.9s
GKN Gorkha 47.22 305 *e*P **P 06 37 41.8 -1.5**
comp=Z,26nm,0.7s
ULN Ulaanbaatar 47.31 342 *e*P **P 06 37 44.5 +0.8**
comp=Z,5.9nm,0.8s
ULN Ulaanbaatar 47.31 342 *ce*P **P 06 37 45.0 +1.3**
ULN pmax pmax
comp=Z,15nm,1.7s
SONM Songino Array 47.49 341 P **P 06 37 47.4 +2.4**
comp=Z,3.0nm,0.6s,baz=159,slow=8.5,SNR=7.0
KOLN Koldanda 47.98 305 *e*P **P 06 37 48.1 -1.2**
comp=Z,100nm,0.6s
DANN Dangsing 48.07 305 *e*P **P 06 37 48.6 -1.5**
comp=Z,130nm,0.6s
PYUN Piuthan 48.60 305 *e*P **P 06 37 53.0 -1.1**
comp=Z,125nm,0.9s
TLY Talaya 51.72 341⇑ *e*P **P 06 38 17.4 +0.3**
TLY pmax pmax
comp=Z,8.0nm,1.7s
WMQ Urumqi 53.05 325 P **P 06 38 29.2 +2.0**
WMQ pmax pmax
comp=Z,27nm,0.7s
WMQ pmax pmax
comp=Z,130nm,3.7s
WMQ LR LR
comp=Z,150nm,27.1s
PEA0B Petropavlovsk- 55.25 22 *e*P **P 06 38 43.7 +0.8**
comp=Z,19nm,0.7s
PETK Petropavlovsk- 55.25 22 P **P 06 38 42.6 -0.3**
comp=Z,17nm,0.7s,baz=188,slow=4.8,SNR=23
PETK LR LR 06 59 31.7
comp=Z,52nm,21.9s,baz=187,slow=33
PETK Petropavlovsk- 55.25 22 *e*P **P 06 38 43.8 +0.9**
PETK Petropavlovsk- 55.25 22 *e*P **P 06 38 43.8 +0.9**
MK01 Makanchi Array 57.86 325 *e*P **P 06 39 01.4 -0.3**
MK31 Makanchi Array 57.88 325 *e*P **P 06 39 01.9 +0.1**
MK31 Makanchi Array 57.88 325 *e*P **P 06 39 01.9 +0.1**
MKAR Makanchi Array 57.88 325 P **P 06 39 01.4 -0.4**
comp=Z,5.0nm,0.6s,baz=124,slow=8.2,SNR=53
MKAR LR LR 07 05 39.2
comp=Z,52nm,18.3s,baz=66,slow=38
MKAR Makanchi Array 57.88 325 *e*P **P 06 39 01.8 0.0**
comp=Z,46nm,1.0s
MAKZ Makanchi 58.07 325 *e*P **P 06 39 03.2 +0.1**
comp=Z,7.7nm,0.9s
MAKZ Makanchi 58.07 325 *e*P **P 06 39 03.2 +0.1**
MAKZ pmax pmax
comp=Z,8.0nm,0.9s
YAK Yakutsk 58.22 1 *e*P **P 06 39 02.0 -1.7**
YAK pmax pmax
comp=Z,23nm,1.0s
YAK pmax pmax
comp=N,7.0nm,1.1s
YAK pmax pmax
comp=E,3.0nm,1.3s
KSH Kashi 58.44 315 P **P 06 39 08.7 +2.7**
KSH pP pP 06 39 17.8 -0.9
KSH PP **PP 06 41 20.1 +4.4**
KSH S **S 06 47 08.1 +1.9**
KSH sS sS 06 47 24.9 -2.6
KSH pmax pmax
comp=E,270nm,4.8s
MA2 Magadan 58.60 14 *i* P **P 06 39 05.9 -0.6**
MA2 pmax pmax
comp=Z,29nm,1.7s
KDJ Kajisay 58.72 318 *e*P **P 06 39 08.3 +0.4**
comp=Z,10nm,1.1s
KDJ Kajisay 58.72 318 *e*P **P 06 39 08.3 +0.4**
KDJ pmax pmax
comp=Z,10.0nm,1.1s
AAK Ala-Archa 60.74 318 *i* P **P 06 39 21.5 -0.3**
AAK pmax pmax
comp=Z,3.0nm,1.1s
ZAA0 Zalesovo Array 60.85 333 *e*P **P 06 39 22.3 +0.2**
comp=Z,5.7nm,0.8s
ZALV Zalesovo Beam 60.85 333 P **P 06 39 21.4 -0.7**
comp=Z,3.7nm,0.5s,baz=124,slow=6.3,SNR=15
ZALV LR LR 07 06 14.2
comp=Z,26nm,19.7s,baz=68,slow=36
ZALV Zalesovo Beam 60.85 333 *e*P **P 06 39 21.2 -0.9**
THZ Tophouse 61.35 142 *e*P **P 06 39 25.0 -0.8**
comp=Z,52nm,1.2s
LBZ Lake Benmore 61.36 146 *e*P **P 06 39 25.6 -0.1**
comp=Z,45nm,1.3s
RPZ Rata Peaks 61.43 145 *e*P **P 06 39 26.1 -0.1**
comp=Z,107nm,1.5s
LTZ Lake Taylor 61.57 144 *e*P **P 06 39 27.7 +0.5**
comp=Z,36nm,1.2s
OXZ Oxford 61.76 144 *e*P **P 06 39 28.0 -0.4**
comp=Z,11nm,0.8s
SEY Seymchan 61.94 13 *ce*P **P 06 39 31.2 +2.0**
KURBB Kurchatov Arra 62.05 327 P **P 06 39 29.6 -0.7**
comp=Z,10nm,0.7s,baz=127,slow=6.3,SNR=53
KURK Kurchatov 62.05 327 *e*P **P 06 39 30.3 0.0**
comp=Z,18nm,0.8s
KURK Kurchatov 62.05 327 *ce*P **P 06 39 30.2 0.0**
KURK pmax pmax
comp=Z,32nm,1.2s
KHZ Kahutara 62.12 143 *e*P **P 06 39 30.1 -0.6**
comp=Z,26nm,1.4s
NVS Novosibirsk 62.14 333 *i* P **P 06 39 31.3 +0.6**
URZ Urewera 62.16 137 *e*P **P 06 39 30.1 -1.1**
comp=Z,28nm,1.1s
BKZ Black Stump Fm 62.20 138 *e*P **P 06 39 31.1 -0.5**
comp=Z,28nm,1.2s
KK31 Karatay Array 63.62 317 *e*P **P 06 39 40.3 -0.6**
KK31 Karatay Array 63.62 317 *e*P **P 06 39 40.3 -0.6**
KKAR Karatay Array 63.62 317 *e*P **P 06 39 40.4 -0.5**
KKAR Karatay Array 63.62 317 *e*P **P 06 39 40.4 -0.5**
BVAR Borovoye Array 67.63 327 P **P 06 40 06.7 +0.1**
comp=Z,6.4nm,0.7s,baz=133,slow=8.1,SNR=37
BRVK Borovoye 67.71 327 *e*P **P 06 40 07.2 +0.2**
comp=Z,18nm,0.9s
BRVK Borovoye 67.71 327 *ce*P **P 06 40 07.1 +0.1**
BRVK pmax pmax
comp=Z,27nm,1.2s
TIXI Tiksi 67.86 1 P **P 06 40 07.0 -0.6**
comp=Z,8.4nm,0.6s,baz=189,slow=3.2,SNR=16
TIXI Tiksi 67.86 1 *e*P **P 06 40 06.9 -0.6**
comp=Z,8.7nm,0.8s
TIXI Tiksi 67.86 1 *ce*P **P 06 40 06.7 -0.9**
TIXI pmax pmax
comp=Z,10.0nm,0.8s
ATKA Atka Island 68.21 34 *e*P **P 06 40 10.0 -0.2**
comp=Z,14nm,1.0s
BILL Bilibino 69.44 15 *i* P **P 06 40 17.2 -0.3**
BILL *e* 06 40 42.5
BILL *e* 06 42 54.1
BILL pmax pmax
comp=Z,1.0nm,0.8s
NRIK Noril'sk 70.58 346 P **P 06 40 25.4 +0.9**
comp=Z,6.5nm,0.7s,baz=118,slow=6.1,SNR=7.8
NRIK LR LR 07 14 41.7
comp=Z,35nm,19.5s,baz=158,slow=39
ABKAR Akbulak array 72.51 321 *e*P **P 06 40 36.2 -0.3**
UNV Unalaska Valle 73.14 35 *e*P **P 06 40 40.9 +0.8**
comp=Z,11nm,1.0s
AKTO Aktyubinsk 74.01 322 P **P 06 40 45.5 +0.1**
comp=Z,14nm,0.8s,baz=97,slow=7.2,SNR=46
SVE Sverdlovsk 74.26 328 *e*P **P 06 40 48.8 +2.1**
SVE pmax pmax
comp=Z,25nm,1.1s
ARU Arti 75.25 328 P **P 06 40 52.0 -0.3**
comp=Z,7.8nm,0.4s,baz=115,slow=1.5,SNR=12
ARU Arti 75.25 328 *e*P **P 06 40 52.5 +0.1**
comp=Z,10nm,0.7s
ARU Arti 75.25 328 *c i*P **P 06 40 51.9 -0.5**
ARU 06 43 38.7
ARU S **S 06 50 31.3 +3.2**
ARU SS **SS 06 55 21.6 +3.3**
ARU pmax pmax
comp=Z,14nm,1.0s
SDPT Sand Point 76.91 34 *e*P **P 06 41 01.5 -0.4**
comp=Z,33nm,0.6s
RAYN Ar Rayn 80.99 293 *e*P **P 06 41 24.7 -0.3**
comp=Z,9.4nm,1.3s
RAYN Ar Rayn 80.99 293 *e*P **P 06 41 24.7 -0.3**

RAYN pmax pmax
comp=Z,9.0nm,1.3s
OHAK Old Harbor 81.18 33 *e*P **P 06 41 25.5 +0.4**
comp=Z,16nm,1.2s
KDAK Kodiak Island 81.62 32 *e*P **P 06 41 27.8 +0.3**
comp=Z,18nm,1.1s
KDAK Kodiak Island 81.62 32 *ce*P **P 06 41 27.5 0.0**
IM3 Indian Mountai 82.15 24 *e*P **P 06 41 30.6 +0.4**
PPLA Purkeypile 82.41 27 *e*P **P 06 41 31.8 +0.1**
comp=Z,6.6nm,1.0s
CNPM China Poot 82.50 31 *e*P **P 06 41 32.2 +0.1**
comp=Z,17nm,1.1s
CAST Castle Rocks 82.51 27 *e*P **P 06 41 32.4 +0.2**
comp=Z,7.4nm,0.8s
SKT Skwentna 82.61 28 *e*P **P 06 41 31.9 -0.7**
comp=Z,9.8nm,0.9s
BRLK Bradley Lake 82.70 30 *e*P **P 06 41 32.8 -0.4**
comp=Z,10nm,0.8s
PRGR Permogore 82.78 332 *e*P **P 06 41 33.2 -0.3**
PRGR pmax pmax
comp=Z,9.0nm,0.5s
SUA Susitna One 82.93 29 *e*P **P 06 41 34.4 -0.1**
comp=Z,15nm,0.7s
KTH Kantishna Hill 83.05 27 *e*P **P 06 41 34.4 -0.5**
comp=Z,16nm,1.1s
BPAW Bear Paw Mtn. 83.07 26 *e*P **P 06 41 35.2 +0.2**
comp=Z,11nm,0.9s
MLY Manley 83.27 25 *e*P **P 06 41 36.4 +0.3**
comp=Z,13nm,0.8s
TRF Thorofare Moun 83.32 27 *e*P **P 06 41 36.1 -0.3**
comp=Z,9.9nm,0.9s
VNDA Vanda 83.33 173 P **P 06 41 36.0 -0.1**
comp=Z,1.8nm,0.7s,baz=295,slow=7.8,SNR=10
VNDA Vanda 83.33 173 *e*P **P 06 41 36.0 -0.1**
comp=Z,1.9nm,0.6s
RC01 Rabbit Creek A 83.38 29 *e*P **P 06 41 36.3 -0.3**
comp=Z,9.8nm,0.6s
KBZ Khabaz 83.39 313 P **P 06 41 36.5 -0.5**
comp=Z,3.6nm,0.9s,baz=108,slow=3.2,SNR=3.9
SEW Seward 83.45 30 *e*P **P 06 41 36.9 -0.1**
comp=Z,7.9nm,0.8s
KIV Kislovodsk 83.54 314 *e*P **P 06 41 36.4 -1.6**
KIV pmax pmax
comp=Z,8.0nm,1.1s
KIV MLR MLR
comp=Z,26nm,19.0s
COLD Coldfoot 83.70 23 *e*P **P 06 41 38.9 +0.7**
comp=Z,16nm,0.8s
PMR Palmer 83.71 29 *e*P **P 06 41 38.1 -0.2**
comp=Z,14nm,0.9s
PMR Palmer 83.71 29 *e*P **P 06 41 38.1 -0.2**
PMR pmax pmax
comp=Z,14nm,0.9s
MCK McKinley 83.94 26 *e*P **P 06 41 39.1 -0.4**
comp=Z,18nm,0.9s
RND Reindeer 83.96 27 *e*P **P 06 41 39.0 -0.7**
comp=Z,14nm,0.8s
RND Reindeer 83.96 27 *e*P **P 06 41 39.0 -0.7**
RND pmax pmax
comp=Z,14nm,0.8s
TOLK Toolik Lake Re 84.07 21 *e*P **P 06 41 41.1 +1.1**
comp=Z,14nm,0.8s
SML Sawmill 84.10 28 *e*P **P 06 41 40.4 0.0**
comp=Z,29nm,0.8s
SML Sawmill 84.10 28 *e*P **P 06 41 40.4 0.0**
SML pmax pmax
comp=Z,29nm,0.8s
MDM Murphy Dome 84.33 25 *e*P **P 06 41 41.2 -0.2**
comp=Z,5.2nm,1.1s
WRH Wood River Hil 84.36 26 *e*P **P 06 41 40.8 -0.7**
comp=Z,11nm,1.1s
CCB Clear Creek Bu 84.49 26 *e*P **P 06 41 41.5 -0.7**
comp=Z,10nm,1.1s
DHY Denali Highway 84.61 27 *e*P **P 06 41 43.4 +0.3**
comp=Z,3.7nm,0.8s
GLI Glacier Island 84.66 29 *e*P **P 06 41 43.9 +0.7**
comp=Z,14nm,0.7s
ILAR Eielson Array 84.89 25 P **P 06 41 42.4 -1.8**
comp=Z,1.9nm,0.8s,baz=244,slow=5.3,SNR=19
ILB Eielson Array 84.89 25 *e*P **P 06 41 43.8 -0.5**
PAX Paxson 85.47 27 *e*P **P 06 41 46.6 -0.6**
comp=Z,5.0nm,0.7s
PAX Paxson 85.47 27 *e*P **P 06 41 46.7 -0.6**
PAX pmax pmax
comp=Z,5.0nm,0.7s
KLMR Klimovskoe 85.69 331 *e*P **P 06 41 47.3 -1.0**
KLMR pmax pmax
comp=Z,12nm,0.7s
KLMR Klimovskoe 85.69 331 *e*P **P 06 41 47.3 -1.0**
KLMR AMP 06 41 50.4
comp=Z,12nm,0.7s
RIDG Independ'e Rid 85.76 26 *e*P **P 06 41 48.2 -0.5**
comp=Z,5.0nm,1.0s
VORD Divnogorie 85.87 321 *e*P **P 06 41 48.6 -0.8**
VORD pmax pmax
comp=Z,6.0nm,0.5s
VSR Storozhevoye 85.95 321 *e*P **P 06 41 48.3 -1.5**
VSR pmax pmax
comp=Z,8.0nm,0.5s
DOT Dot Lake 86.11 27 *e*P **P 06 41 49.6 -0.8**
comp=Z,5.8nm,0.7s
TGL Tana Glacier 86.75 29 *e*P **P 06 41 53.8 +0.1**
comp=Z,7.9nm,0.9s
EGAK Eagle 87.35 25 *e*P **P 06 41 55.8 -0.6**
comp=Z,2.1nm,0.7s
OBN Obninsk 87.39 325⇑ *e*P **P 06 41 58.1 +1.4**
OBN *e* 06 45 25.0
DAWY Dawson 88.16 26 *e*P **P 06 42 00.2 -0.1**
comp=Z,5.4nm,1.0s
ASF Jabal al Asfar 88.37 302 P **P 06 42 02.3 +0.3**
comp=Z,3.2nm,0.7s,baz=42,slow=5.6,SNR=6.7
INK Inuvik 89.99 22 *e*P **P 06 42 07.9 -0.8**
comp=Z,5.2nm,1.3s
INK Inuvik 89.99 22 *e*P **P 06 42 07.9 -0.8**
INK pmax pmax
comp=Z,5.0nm,1.3s
BRTR Keskin Array B 90.45 310 P **P 06 42 11.2 -0.5**
comp=Z,0.8nm,0.5s,baz=110,slow=7.1,SNR=5.0
ARCES ARCESS Array B 90.66 340 P **P 06 42 10.6 -1.2**
comp=Z,2.4nm,0.8s,baz=57,slow=4.5,SNR=7.6
ARCES ARCESS Array B 90.66 340 *e*P **P 06 42 10.3 -1.5**
FIA1 FINESS Array S 92.11 332 *e*P **P 06 42 18.5 -0.2**
FINES FINESS Array B 92.11 332 P **P 06 42 18.2 -0.5**
comp=Z,1.3nm,0.5s,baz=74,slow=5.6,SNR=9.7
AKASG Malin Array Be 92.25 321 P **P 06 42 18.8 -0.8**
comp=Z,1.6nm,0.7s,baz=65,slow=5.4,SNR=4.2
AKASG Malin Array Be 92.25 321 *i* P **P 06 42 20.3 +0.7**
AKASG pmax pmax
comp=Z,1.0nm,0.6s
MLR Muntele Rosu 95.29 316 P **P 06 42 34.7 +0.8**
comp=Z,0.4nm,0.5s,baz=219,slow=10,SNR=3.3
BUR04 Bucovina Ar. S 95.38 318 *e*P **P 06 42 35.2 +1.0**
BUR08 Bucovina Ar. S 95.38 318 *e*P **P 06 42 34.9 +0.7**
HFS Hagfors 98.29 332 P **P 06 42 46.7 -0.3**
comp=Z,1.6nm,0.8s,baz=60,slow=8.9,SNR=3.5
NOA NORSAR Array B 99.05 334 LR LR 07 34 24.0
comp=Z,19nm,18.2s,baz=95,slow=39
YKA Yellowknife Ar 99.30 25 P **Pdif 06 42 50.1 -1.3**
comp=Z,1.2nm,0.7s,baz=296,slow=4.2,SNR=4.0
YKA Yellowknife Ar 99.30 25 *i* P **Pdif 06 42 50.5 -0.9**
YKA pmax pmax
comp=Z,1.0nm,0.7s
G42A Mountain 121.81 29 *e*PKPdf **PKPdf 06 48 02.6 -1.2**
TORD Torodi Ar. Bea 123.44 288 PKP **PKPdf 06 48 07.2 -0.5**
comp=Z,0.7nm,0.7s,baz=85,slow=1.8,SNR=4.2
ESPN Las Esperanzas 144.87 63 *e*PKPdf **PKPdf 06 48 47.5 -0.1**
ROC1 El Roble 146.23 152 *e*PKPdf **PKPab 06 48 51.6 0.0**
LCO Las Campanas 149.59 148 *e*PKPbc **PKPbc 06 49 00.2 +0.2**
LCO Las Campanas 149.59 148 *e*PKP2 **PKPbc 06 49 00.3 +0.2**
GO02 Mina Guanaco 153.20 144 *e*PKPbc **PKPbc 06 49 09.1 +0.5**

*ISCJB **08** 06:38:11.7±0.7, 49°.2S±0°.1×123°.3E±0°.3, h13km, mb4.0/8, MS3.8/21, Error ellipse: s-maj=31.7km s-min=11.7km az=20.1*
*IDC **08** 06:38:11.7±0.8, 49°.17S×123°.34E, h0km, mb4.1/8, mb1 4.2/8, mb1mx4.0/42, mbtmp4.1/8, MS3.8/22, Ms1 3.8/22, ms1mx3.6/40, Error ellipse: s-maj=43.2km s-min=15.8km az=106.0*
ISC 08 06:38:13.8±0.8, 49°.2S±0°.1×123°.3E±0°.3, h13km, n35, σ1§19/14, mb4.1/8, MS3.8/21, 1C, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W1	Cape Leeuwin H	15.81	331	T	T	06 58 18.7	

baz=158,slow=77,SNR=98
H01W2 Cape Leeuwin H 15.81 331 T T 06 58 15.4
baz=158,slow=77,SNR=108
H01W3 Cape Leeuwin H 15.83 331 T T 06 58 15.8
baz=158,slow=77,SNR=108
NWAO Narrogin (SRO) 16.88 342 LR LR 06 47 08.8
comp=Z,588nm,19.9s,baz=20,slow=32
STKA Stephens Creek 22.08 45 P **P 06 43 09.1 +0.7**
2.3nm,0.8s,baz=200,slow=14,SNR=3.1
STKA LR LR 06 50 08.2
comp=Z,225nm,21.4s,baz=207,slow=32
ASAR Alice Springs 26.80 22 P **P 06 43 52.0 -1.6**
4.1nm,0.9s,baz=199,slow=8.4,SNR=9.7
ASAR LR LR 06 54 40.2
comp=Z,242nm,18.3s,baz=192,slow=37
WRA Warramunga Arr 30.49 21 P **P 06 44 26.6 +0.2**
0.8nm,1.0s,baz=201,slow=11,SNR=3.9
FITZ Fitzroy Crossi 31.07 4 LR LR 06 56 21.5
comp=Z,199nm,19.6s,baz=180,slow=35
VNDA Vanda 31.97 165 P **P 06 44 38.5 -0.4**
2.1nm,1.0s,baz=293,slow=11,SNR=4.2
VNDA LR LR 06 56 38.4
comp=Z,322nm,19.6s,baz=320,slow=35
MAW Mawson 34.81 216 P **P 06 45 03.8 +0.1**
3.0nm,1.0s,baz=90,slow=12,SNR=3.7
MAW LR LR 06 56 47.9
comp=Z,118nm,18.4s,baz=56,slow=32
BATI Baumata 38.86 1 LR LR 07 01 10.2
comp=Z,292nm,21.1s,baz=198,slow=36
QSPA South Pole Qui 40.93 180 P **P 06 45 55.7 0.0**
5.8nm,1.0s,baz=334,slow=4.1,SNR=9.9
QSPA LR LR 07 02 04.3
comp=Z,224nm,19.9s,baz=340,slow=35
SYO Syowa Base 43.13 212⇑*eX* **P 06 46 12.2 -1.1**
LEM Lembang 44.26 337 LR LR 07 04 07.0
comp=Z,69nm,21.5s,baz=172,slow=35
PMG Port Moresby 44.38 35 LR LR 07 05 00.1
comp=Z,99nm,18.6s,baz=118,slow=36
SIJI Sorong 48.62 11 LR LR 07 07 04.3
comp=Z,73nm,19.9s,baz=183,slow=36
HNR Honiara 50.02 50 LR LR 07 05 12.0
comp=Z,151nm,20.9s,baz=236,slow=32
SNAA Sanae 53.60 198 PKiKP **P 06 47 34.1 0.0**
SNAA Sanae 53.60 198 P **P 06 47 34.2 +0.1**
4.2nm,0.8s,baz=149,slow=8.8,SNR=17
SNAA LR LR 07 09 26.0
comp=Z,108nm,19.0s,baz=158,slow=35
VNA2 Neumayer--Watz 55.11 198 PKiKP **P 06 47 45.6 +0.7**
baz=143,slow=7.8
VNA3 Neumayer Olymp 55.29 197 PKiKP **P 06 47 46.0 -0.3**
VNA1 Neumayer--Stat 55.50 198 PKiKP **P 06 47 51.0 +3.2**
PSI Prapat 55.94 330 LR LR 07 11 51.2
comp=Z,64nm,18.0s,baz=91,slow=36
DAV Davao City (W) 56.06 3 LR LR 07 11 43.2
comp=Z,57nm,21.4s,baz=156,slow=36
PALK Palikele 67.42 313 LR LR 07 12 35.7
comp=Z,75nm,21.7s,baz=94,slow=31
CMAR Chiang Mai Arr 70.75 335 P **P 06 49 29.7 +0.1**
1.4nm,0.3s,baz=185,slow=5.8,SNR=5.5
CMAR LR LR 07 18 25.3
comp=Z,31nm,20.9s,baz=175,slow=34
JNU Nakatsue 82.22 6 LR LR 07 26 43.3
comp=Z,14nm,22.0s,baz=120,slow=35
KSRS Korea Array 86.36 4 LR LR 07 28 43.8
comp=Z,11nm,21.4s,baz=165,slow=35
PLCA Paso Flores 89.62 169 LR LR 07 27 38.1
comp=Z,60nm,20.7s,baz=198,slow=33
RPN Rapa Nui 90.70 135 LR LR 07 22 15.5
comp=Z,37nm,21.9s,baz=226,slow=29
WSAR Wadi Sarin 92.19 304 LR LR 07 24 40.9
comp=Z,122nm,21.3s,baz=221,slow=30
H10S2 ASCENSION HYDR 11.39 225 T T 08 58 38.0
baz=151,slow=75,SNR=8.6
H10S3 ASCENSION HYDR 11.41 225 T T 08 58 44.3
baz=151,slow=75,SNR=2.7
H10S1 ASCENSION HYDR 11.41 225 T T 08 58 37.2
baz=151,slow=75,SNR=9.2
YKA Yellowknife Ar 146.11 45 PKPbc **PKPbc 06 57 52.1 -0.2**
1.6nm,0.7s,baz=272,slow=3.4,SNR=6.6

*ATH **08** 06:44:12.3, 41.°34N×20.°91E, h13km±2km, ML2.3/9, Error ellipse: s-maj=3.1km s-min=1.4km az=129.0*
*SKO **08** 06:44:12.0, 41.°34N×20.°91E, h15km, M2.2, ML2.5*
*PDG **08** 06:44:13.4±0.3, 41.°32N×20.°89E, h4km, ML2.8/11, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*
*CSEM **08** 06:44:13.4±0.1, 41.°30N×20.°92E, h2km, ML2.3, Error ellipse: s-maj=4.1km s-min=2.4km az=56.0*
*THE **08** 06:44:13.0, 41.°34N×20.°90E, h2km±1km, ML2.3/6, Error ellipse: s-maj=1.6km s-min=0.6km az=263.0*
*BEO **08** 06:44:14.1±0.3, 41.°33N×20.°94E, h0km*

ISC 08 06:44:12.9±0.9, **41.°33N**±0.°01×**20.°90E**±0.°02, **h13**km±7km, **n99**, σ1°28/175, **8C-12D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHR	**Ohrid**	**0.23**	**200**	*i* Pg	**Pg**	**06 44 17.6**	**-0.3**
OHR				*i* Sg	**Sg**	**06 44 21.7**	**+0.4**
OHR				*e*Lg	Lg	06 44 21.9	
	comp=N,1μm,0.3s						
OHR				*e*Lg	Lg	06 44 22.0	
	comp=E,1μm,0.5s						
BIA	**Bitola**	**0.45**	**134**	P	**Pb**	**06 44 21.8**	**-0.8**
BIA				S	**Sb**	**06 44 28.9**	**-0.3**
BIA	**Bitola**	**0.45**	**134**	*i* Pg	**Pg**	**06 44 21.7**	**0.0**
BIA				*i* Sg	**Sb**	**06 44 29.4**	**+0.1**
BIA	**Bitola**	**0.45**	**134**	P	**Pb**	**06 44 21.8**	**-0.8**
PHP	**Peshkopia**	**0.50**	**316**	P	**Pg**	**06 44 21.7**	**-1.0**
PHP				S	**Sb**	**06 44 29.8**	**-0.9**
PHP	**Peshkopia**	**0.50**	**316**	*i* PG	**Pg**	**06 44 21.6**	**-1.0**
PHP				*i* SG	**Sb**	**06 44 29.5**	**-1.3**
PHP	**Peshkopia**	**0.50**	**316**	P	**Pg**	**06 44 21.7**	**-1.0**
PHP				*i* Sg	**Sb**	**06 44 29.5**	**-1.3**
FNA	**Florina**	**0.65**	**147**	*e*Pg	**Pg**	**06 44 24.8**	**-0.8**
FNA				*e*Sg	**Sb**	**06 44 34.9**	**-0.3**
FNA	**Florina**	**0.65**	**147**	P	**Pg**	**06 44 24.5**	**-1.1**
FNA				S	**Sb**	**06 44 35.3**	**0.0**
FNA				AML	AML	06 44 39.1	
	comp=E,1346μm,0.2s						
FNA				AML	AML	06 44 39.4	
	comp=N,951μm,0.4s						
FNA	**Florina**	**0.65**	**147**	P	**Pg**	**06 44 24.9**	**-0.7**
FNA				S	**Sb**	**06 44 34.8**	**-0.4**
FNA	**Florina**	**0.65**	**147**	P	**Pg**	**06 44 24.9**	**-0.7**
FNA				S	**Sb**	**06 44 34.8**	**-0.4**
KBN	**Korca**	**0.71**	**187**	P	**Pb**	**06 44 26.7**	**-0.5**
KBN				S	**Sb**	**06 44 36.7**	**-0.2**
KBN	**Korca**	**0.71**	**187**	*i* PG	**Pg**	**06 44 24.2**	**-2.5**
KBN				*i* SG	**Sn**	**06 44 38.6**	**-1.0**
KBN	**Korca**	**0.71**	**187**	*i* Pg	**Pg**	**06 44 24.2**	**-2.5**
KBN	**Korca**	**0.71**	**187**	P	**Pb**	**06 44 26.7**	**-0.5**
KBN				S	**Sb**	**06 44 36.7**	**-0.2**
KBN				*i* Sg	**Sn**	**06 44 38.6**	**-1.0**
SKO	**Skopje**	**0.76**	**32**	*e*Pg	**Pb**	**06 44 27.7**	**-0.3**
SKO				*e*Sg	**Sb**	**06 44 37.6**	**-0.6**
SKO	**Skopje**	**0.76**	**32**	P	**Pb**	**06 44 27.3**	**-0.7**
SKO				S	**Sn**	**06 44 40.2**	**-0.5**
SKO	**Skopje**	**0.76**	**32**	*i* Pg	**Pb**	**06 44 27.4**	**-0.6**
SKO				*i* Sg	**Sb**	**06 44 37.8**	**-0.4**
SKO	**Skopje**	**0.76**	**32**	P	**Pb**	**06 44 27.3**	**-0.7**
SKO	**Skopje**	**0.76**	**32**	*e*Pg	**Pb**	**06 44 27.7**	**-0.3**
SKO				*e*Sg	**Sb**	**06 44 37.6**	**-0.6**
SKO				S	**Sn**	**06 44 40.2**	**-0.5**
NEST	**Nestorio**	**0.92**	**173**	P	**Pg**	**06 44 29.8**	**-0.9**
NEST				S	**Sg**	**06 44 42.6**	**-0.2**
NEST				AML	AML	06 44 49.9	
	comp=N,468μm,0.5s						
NEST				AML	AML	06 44 50.0	
	comp=E,596μm,0.6s						
NEST	**Nestorio**	**0.92**	**173**	P	**Pg**	**06 44 30.2**	**-0.5**
NEST				S	**Sn**	**06 44 44.1**	**-0.7**
NEST	**Nestorio**	**0.92**	**173**	P	**Pg**	**06 44 30.2**	**-0.5**
NEST				S	**Sb**	**06 44 42.8**	**-0.2**
STIP	**Stip**	**1.03**	**69**	*i* Pg	**Pn**	**06 44 35.4**	**+2.3**
STIP				*i* Sg	**Sn**	**06 44 51.6**	**+4.2**
PUK	**Puka**	**1.04**	**314**	*i* PG	**Pb**	**06 44 30.1**	**-2.7**
PUK				*i* SG	**Sn**	**06 44 47.6**	**-0.1**
PUK	**Puka**	**1.04**	**314**	*i* Pg	**Pb**	**06 44 30.1**	**-2.7**
PUK				*i* Sg	**Sn**	**06 44 47.6**	**-0.1**
PENT	**Pentalofos**	**1.15**	**171**	P	**Pg**	**06 44 35.4**	**+0.4**
PENT				S	**Sn**	**06 44 50.8**	**+0.4**
PENT				AML	AML	06 44 58.8	
	comp=E,345μm,0.6s						
PENT				AML	AML	06 44 58.8	
	comp=N,318μm,0.4s						
PENT	**Pentalofos**	**1.15**	**171**	P	**Pg**	**06 44 34.7**	**-0.2**
PENT				S	**Sn**	**06 44 51.7**	**+1.3**
PENT	**Pentalofos**	**1.15**	**171**	P	**Pg**	**06 44 34.8**	**-0.2**
PENT				S	**Sn**	**06 44 50.5**	**+0.1**
GRG	**Griva**	**1.19**	**108**	P	**Pg**	**06 44 35.1**	**-0.8**
GRG				S	**Sg**	**06 44 52.6**	**+1.2**
GRG				AML	AML	06 44 54.4	
	comp=E,182μm,0.3s						
GRG				AML	AML	06 44 59.0	
	comp=N,205μm,0.4s						
GRG	**Griva**	**1.19**	**108**	P	**Pg**	**06 44 35.0**	**-0.8**
GRG				S	**Sg**	**06 44 52.5**	**+1.2**
GRG	**Griva**	**1.19**	**108**	P	**Pg**	**06 44 35.0**	**-0.8**
GRG				S	**Sg**	**06 44 52.0**	**+0.7**
BCI	**Bajram Curri**	**1.21**	**329**	*i* PN	**Pn**	**06 44 34.7**	**-0.9**
BCI				*i* SN	**Sg**	**06 44 54.4**	**+2.5**
BCI	**Bajram Curri**	**1.21**	**329**	*i* Pn	**Pn**	**06 44 34.7**	**-0.9**
BCI				*i* Sn	**Sg**	**06 44 54.4**	**+2.5**
KZN	**Kozani**	**1.22**	**147**	P	**Pn**	**06 44 34.8**	**-0.9**
KZN				S	**Sg**	**06 44 52.6**	**+0.5**
KZN				AML	AML	06 44 58.2	
	comp=N,224μm,0.4s						
KZN				AML	AML	06 45 00.5	
	comp=E,227μm,0.4s						
KZN	**Kozani**	**1.22**	**147**	P	**Pg**	**06 44 36.3**	**0.0**
KZN				S	**Sg**	**06 44 54.1**	**+2.0**
KZN	**Kozani**	**1.22**	**147**	P	**Pg**	**06 44 36.3**	**0.0**
KZN				S	**Sg**	**06 44 52.6**	**+0.5**
VAY	**Valandovo**	**1.26**	**90**	*e*Pg	**Pb**	**06 44 36.1**	**-0.3**
VAY				*e*Sg	**Sg**	**06 44 53.3**	**-0.1**
VAY	**Valandovo**	**1.26**	**90**	*i* Pg	**Pb**	**06 44 36.1**	**-0.3**
VAY				*i* Sg	**Sg**	**06 44 53.2**	**-0.1**
VAY				*e*Lg	Lg	06 44 56.2	
	comp=N,68nm,0.7s						
VAY				*e*Lg	Lg	06 44 57.7	
	comp=E,70nm,0.8s						
VAY	**Valandovo**	**1.26**	**90**	*e*Pg	**Pb**	**06 44 36.1**	**-0.3**
VAY				*e*Sg	**Sg**	**06 44 53.3**	**-0.1**
ULC	**Ulcinj**	**1.40**	**298**	⇑*i*Pg	**Pb**	**06 44 38.2**	**-0.6**
ULC				*e*Sg	**Sg**	**06 45 00.6**	**+2.8**
ULC	**Ulcinj**	**1.40**	**298**	⇑*i*Pg	**Pb**	**06 44 38.2**	**-0.6**
ULC				*e*Sg	**Sg**	**06 45 00.6**	**+2.8**
KPRO	**Kipourio**	**1.42**	**166**	P	**Pn**	**06 44 38.3**	**-0.2**
KPRO				S	**Sg**	**06 44 58.0**	**-0.5**
KPRO				AML	AML	06 45 05.4	
	comp=E,234μm,0.8s						
KPRO				AML	AML	06 45 12.8	
	comp=N,138μm,0.6s						
KPRO	**Kipourio**	**1.42**	**166**	P	**Pb**	**06 44 38.5**	**-0.8**
KPRO				S	**Sg**	**06 44 59.7**	**+1.1**
KPRO	**Kipourio**	**1.42**	**166**	P	**Pb**	**06 44 38.7**	**-0.6**
KPRO				S	**Sg**	**06 44 58.4**	**-0.2**
PVY	**Plav**	**1.45**	**331**	⇑*i*Pg	**Pg**	**06 44 40.3**	**-0.4**
PVY				*e*Sg	**Sg**	**06 45 02.7**	**+3.2**
PVY	**Plav**	**1.45**	**331**	⇑*i*Pg	**Pg**	**06 44 40.3**	**-0.4**
PVY				*e*Sg	**Sg**	**06 45 02.7**	**+3.2**
KNT	**Kendrikon**	**1.51**	**96**	P	**Pg**	**06 44 41.1**	**-0.8**
KNT				S	**Sb**	**06 44 60.0**	**0.0**
KNT				AML	AML	06 45 05.2	
	comp=E,68μm,0.5s						
KNT				AML	AML	06 45 06.0	
	comp=N,134μm,0.5s						
KNT	**Kendrikon**	**1.51**	**96**	P	**Pg**	**06 44 41.0**	**-1.0**
KNT				S	**Sg**	**06 45 01.0**	**-0.6**
KNT	**Kendrikon**	**1.51**	**96**	P	**Pg**	**06 44 40.9**	**-1.0**
KNT				S	**Sg**	**06 45 00.7**	**-0.9**
DRME	**Dracevica, Mon**	**1.54**	**304**	⇓*i*Pg	**Pb**	**06 44 41.1**	**-0.3**
DRME				*e*Sg	**Sg**	**06 45 06.0**	**+3.4**
DRME	**Dracevica, Mon**	**1.54**	**304**	⇓*i*Pg	**Pb**	**06 44 41.1**	**-0.3**
DRME				*e*Sg	**Sg**	**06 45 06.0**	**+3.4**
PDG	**Podgorica**	**1.65**	**312**	*e*Pn	**Pg**	**06 44 44.6**	**+0.1**
PDG				*e*Sn	**Sg**	**06 45 07.1**	**+1.1**
PDG	**Podgorica**	**1.65**	**312**	⇓*i*Pn	**Pg**	**06 44 44.4**	**-0.1**
PDG				*e*Sn	**Sg**	**06 45 07.1**	**+1.1**
TTG	**Podgorica**	**1.65**	**312**	⇓*i*Pn	**Pg**	**06 44 44.4**	**-0.1**
TTG				*e*Sn	**Sg**	**06 45 08.7**	**+2.7**
BEY	**Berane**	**1.71**	**334**	⇓*i*Pn	**Pg**	**06 44 45.0**	**-0.8**
BEY				*e*Sn	**Sg**	**06 45 09.7**	**+1.7**
IVA	**Berane**	**1.71**	**334**	⇓*i*Pn	**Pg**	**06 44 45.0**	**-0.8**
IVA				*e*Sn	**Sg**	**06 45 09.7**	**+1.7**
LIT	**Litokhoron**	**1.72**	**135**	P	**Pn**	**06 44 43.0**	**+0.4**
LIT	**Litokhoron**	**1.72**	**135**	P	**Pn**	**06 44 43.0**	**+0.4**
KEK	**Kerkira**	**1.82**	**208**	P	**Pg**	**06 44 46.7**	**-1.1**
KEK	**Kerkira**	**1.82**	**208**	P	**Pb**	**06 44 46.2**	**+0.1**
SELS	**Selova**	**1.90**	**5**	*e*Pn	**Pg**	**06 44 47.5**	**-1.7**
CEME	**Cevo**	**1.92**	**310**	⇑*i*Pn	**Pb**	**06 44 47.8**	**+0.1**
CEME				*e*Sn	**Sg**	**06 45 14.9**	**+0.4**
CEME	**Cevo**	**1.92**	**310**	⇑*i*Pn	**Pb**	**06 44 47.8**	**+0.1**
CEME				*e*Sn	**Sg**	**06 45 14.9**	**+0.4**
THL	**Klokotos Trika**	**1.96**	**154**	P	**Pb**	**06 44 49.0**	**+0.6**
THL				S	**Sb**	**06 45 13.7**	**+1.0**
THL				AML	AML	06 45 18.6	
	comp=N,76μm,0.6s						
THL				AML	AML	06 45 25.7	
	comp=E,72μm,0.7s						
THL	**Klokotos Trika**	**1.96**	**154**	P	**Pb**	**06 44 48.3**	**-0.1**
THL				S	**Sb**	**06 45 13.5**	**+0.8**
SRS	**Serrai**	**2.04**	**95**	*e*Pn	**Pb**	**06 44 49.9**	**+0.1**
SRS	**Serrai**	**2.04**	**95**	*e*Pn	**Pb**	**06 44 49.9**	**+0.1**
NKME	**Niksic**	**2.04**	**315**	⇑*i*Pn	**Pb**	**06 44 49.8**	**-0.1**
NKME				*e*Sn	**Sg**	**06 45 17.6**	**-0.9**
NKME	**Niksic**	**2.04**	**315**	⇑*i*Pn	**Pb**	**06 44 49.8**	**-0.1**
NKME				*e*Sn	**Sg**	**06 45 17.6**	**-0.9**
SJES	**Sjenica**	**2.05**	**341**	*e*Pn	**Pb**	**06 44 49.7**	**-0.4**
NKY	**Niksic**	**2.05**	**317**	⇓*i*Pn	**Pb**	**06 44 49.8**	**-0.3**
NKY				*e*Sn	**Sg**	**06 45 18.2**	**-0.7**
NKY	**Niksic**	**2.05**	**317**	⇓*i*Pn	**Pb**	**06 44 49.8**	**-0.3**
NKY				*e*Sn	**Sg**	**06 45 18.2**	**-0.7**
HCY	**Herceg Novi**	**2.12**	**303**	*e*Pn	**Pb**	**06 44 50.4**	**-0.7**
HCY				*e*Sn	**Sg**	**06 45 19.6**	**-1.3**
HCY	**Herceg Novi**	**2.12**	**303**	*e*Pn	**Pb**	**06 44 50.4**	**-0.7**
HCY				*e*Sn	**Sg**	**06 45 19.6**	**-1.3**
VTS	**Vitosha**	**2.13**	**53**	*e*Pn	**Pb**	**06 44 50.6**	**-0.9**
VTS				*e*Sn	**Sb**	**06 45 17.4**	**-0.5**
VTS	**Vitosha**	**2.13**	**53**	*e*Pn	**Pb**	**06 44 50.6**	**-0.9**
VTS				*e*Sn	**Sb**	**06 45 17.4**	**-0.5**
PLE	**Pljevlja**	**2.29**	**331**	⇓*i*Pn	**Pb**	**06 44 53.6**	**-0.6**
PLE				*e*Sn	**Sg**	**06 45 24.4**	**-2.2**
PLE	**Pljevlja**	**2.29**	**331**	⇓*i*Pn	**Pb**	**06 44 53.6**	**-0.6**
PLE				*e*Sn	**Sg**	**06 45 24.4**	**-2.2**
ZAPS	**Zavoj**	**2.33**	**33**	*e*Pn	**Pb**	**06 44 52.9**	**-1.9**
BRY	**Bratogost**	**2.36**	**313**	⇓*i*Pn	**Pb**	**06 44 54.1**	**-1.2**
BRY				*e*Sn	**Sb**	**06 45 25.4**	**+1.0**
BRY	**Bratogost**	**2.36**	**313**	⇓*i*Pn	**Pb**	**06 44 54.1**	**-1.2**
BRY				*e*Sn	**Sb**	**06 45 25.4**	**+1.0**
UPM	**Unac-Piva**	**2.39**	**322**	*e*Pn	**Pb**	**06 44 55.4**	**-0.5**
UPM				*e*Sn	**Sb**	**06 45 26.1**	**+0.8**
UPM	**Unac-Piva**	**2.39**	**322**	*e*Pn	**Pb**	**06 44 55.4**	**-0.5**
UPM				*e*Sn	**Sb**	**06 45 26.1**	**+0.8**
AGG	**Agios Georgios**	**2.55**	**154**	P	**Pn**	**06 44 54.8**	**+0.7**
AGG				S	**Sn**	**06 45 26.3**	**+1.4**
AGG				AML	AML	06 45 28.6	
	comp=N,154μm,0.5s						
AGG				AML	AML	06 45 29.6	
	comp=E,129μm,1.0s						
AGG	**Agios Georgios**	**2.55**	**154**	P	**Pn**	**06 44 55.4**	**+1.4**
AGG				S	**Sb**	**06 45 27.1**	**-2.8**
GRUS	**Gruza**	**2.56**	**357**	*e*Pn	**Pb**	**06 44 56.2**	**-2.5**
GRUS	**Gruza**	**2.56**	**357**	*e*Pn	**Pb**	**06 44 56.2**	**-2.5**
ZAGS	**Zajecar**	**2.67**	**21**	*e*Pn	**Pb**	**06 44 59.0**	**-1.5**
ZAGS	**Zajecar**	**2.67**	**21**	*e*Pn	**Pb**	**06 44 59.0**	**-1.5**
BBLS	**Lazići**	**2.77**	**337**	*e*Pn	**Pb**	**06 45 00.3**	**-1.9**
BBLS	**Lazići**	**2.77**	**337**	*e*Pn	**Pb**	**06 45 00.3**	**-1.9**
STON	**Ston**	**2.84**	**304**	*e*Pn	**Pb**	**06 45 01.0**	**-2.4**
STON	**Ston**	**2.84**	**304**	*e*Pn	**Pb**	**06 44 59.7**	**+1.8**
STON	**Ston**	**2.84**	**304**	*e*Pn	**Pb**	**06 45 01.0**	**-2.4**
TEKS	**Tekeris**	**3.37**	**343**	*e*Pn	**Pn**	**06 45 06.9**	**+1.6**
TEKS	**Tekeris**	**3.37**	**343**	*e*Pn	**Pn**	**06 45 06.9**	**+1.6**
NVLJ	**Novalja**	**5.48**	**308**	*e*Pn	**Pn**	**06 45 36.2**	**+1.9**
NVLJ	**Novalja**	**5.48**	**308**	*e*Pn	**Pn**	**06 45 36.1**	**+1.9**

*DDA **08** 06:46:03.4, 36.°98N×27.°55E, h20km, Ml3.3*
*CSEM **08** 06:46:04.3±0.1, 36.°99N×27.°58E, h10km, ML3.3, Error ellipse: s-maj=2.9km s-min=2.5km az=58.0*
*ISCJB **08** 06:46:04.5±0.3, 36.°99N±0.°02×27.°59E±0.°03, h7km±3km, Error ellipse: s-maj=3.7km s-min=2.7km az=145.8*
*THE **08** 06:46:04.7, 37.°01N×27.°63E, h5km±3km, ML3.0/3, Error ellipse: s-maj=3.2km s-min=1.1km az=259.0*
*ATH **08** 06:46:04.3, 36.°98N×27.°57E, h33km±5km, ML3.0/4, Error ellipse: s-maj=5.1km s-min=1.5km az=254.0*
*ISK **08** 06:46:04.0, 36.°96N×27.°54E, h9km, ML3.3/3*

ISC 08 06:46:04.2±0.8, **36.°98N**±0.°02×**27.°59E**±0.°02, **h12**km±6km, **n50**, σ0°95/87, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.14**	**305**	*i* P	**Pg**	**06 46 07.6**	**-0.1**
BDRM				*i* S	**Sg**	**06 46 10.2**	**0.0**
BDRM	**Kayabasi**	**0.14**	**305**	P	**Pg**	**06 46 07.6**	**-0.1**
BDRM				S	**Sg**	**06 46 10.2**	**0.0**
DATC	**Datca-Mugla**	**0.23**	**166**	PG	**Pg**	**06 46 08.8**	**-0.3**
DATC				SG	**Sg**	**06 46 12.5**	**+0.2**
DATC	**Datca-Mugla**	**0.23**	**166**	*e*Pg	**Pg**	**06 46 08.8**	**-0.3**
DATC				*e*Sg	**Sg**	**06 46 12.5**	**+0.2**
DAT	**Datca**	**0.25**	**182**	*i* P	**Pg**	**06 46 09.6**	**0.0**
DAT				*i* S	**Sb**	**06 46 14.8**	**-0.4**
DAT	**Datca**	**0.25**	**182**	P	**Pg**	**06 46 09.6**	**0.0**
DAT				S	**Sb**	**06 46 14.9**	**-0.4**
YKAV	**Yalikavak-Bodr**	**0.29**	**300**	PG	**Pg**	**06 46 09.6**	**-0.5**
YKAV				SG	**Sg**	**06 46 14.2**	**+0.2**
YKAV	**Yalikavak-Bodr**	**0.29**	**300**	*e*Pg	**Pg**	**06 46 09.6**	**-0.5**
YKAV				*e*Sg	**Sg**	**06 46 14.2**	**+0.2**
NISR	**Nisiros**	**0.52**	**225**	P	**Pn**	**06 46 17.0**	**-0.6**
NISR				S	**Sb**	**06 46 22.8**	**-0.1**
NISR				AML	AML	06 46 23.3	
	comp=E,3259μm,0.3s						
NISR				AML	AML	06 46 27.3	
	comp=N,1966μm,0.2s						
NISR	**Nisiros**	**0.52**	**225**	P	**Pn**	**06 46 17.0**	**-0.6**
NISR				S	**Sb**	**06 46 23.8**	**+0.9**
NISR	**Nisiros**	**0.52**	**225**	P	**Pb**	**06 46 16.2**	**+0.8**
NISR				S	**Sb**	**06 46 23.2**	**+0.3**
MRSB	**Marmaris-Mugla**	**0.55**	**118**	PG	**Pg**	**06 46 15.8**	**+0.7**
MRSB	**Marmaris-Mugla**	**0.55**	**118**	*e*Pg	**Pg**	**06 46 15.8**	**+0.7**
YER	**Yerkesik**	**0.57**	**74**	P	**Pg**	**06 46 15.2**	**-0.3**
YER				S	**Sg**	**06 46 23.1**	**0.0**
YER	**Yerkesik**	**0.57**	**74**	P	**Pg**	**06 46 15.2**	**-0.3**
YER				S	**Sg**	**06 46 23.1**	**0.0**
AYDN	**Tasoluk**	**0.72**	**19**	*i* P	**Pg**	**06 46 17.9**	**-0.3**
AYDN				*i* S	**Sg**	**06 46 28.0**	**+0.4**
AYDN	**Tasoluk**	**0.72**	**19**	P	**Pg**	**06 46 17.9**	**-0.3**
AYDN				S	**Sg**	**06 46 28.0**	**+0.4**
GCAM	**G?zelcaml?**	**0.77**	**338**	*i* P	**Pg**	**06 46 18.2**	**-1.0**
GCAM				*i* S	**Sb**	**06 46 30.9**	**+0.9**
GCAM	**G?zelcaml?**	**0.77**	**338**	P	**Pg**	**06 46 18.2**	**-1.0**
GCAM				S	**Sb**	**06 46 31.0**	**+0.9**
TURN	**Turunc**	**0.82**	**97**	*i* P	Pg	06 46 14.6	-5.5
TURN				*i* S	**Sg**	**06 46 23.7**	**-7.0**
DALY	**Dalyan (Mu¨la**	**0.87**	**101**	*i* P	**Pg**	**06 46 21.2**	**+0.2**
DALY				*i* S	**Sn**	**06 46 34.9**	**0.0**
DALY	**Dalyan (Mu¨la**	**0.87**	**101**	P	**Pg**	**06 46 21.2**	**+0.2**
DALY				S	**Sn**	**06 46 34.9**	**0.0**
ARG	**Arkhangelos**	**0.88**	**150**	PG	**Pb**	**06 46 21.6**	**+0.2**
ARG				SG	**Sb**	**06 46 34.1**	**+1.0**
ARG	**Arkhangelos**	**0.88**	**150**	P	**Pg**	**06 46 21.2**	**0.0**
ARG				S	**Sb**	**06 46 34.4**	**+1.3**
ARG				AML	AML	06 46 37.1	
	comp=N,2828μm,0.7s						
ARG				AML	AML	06 46 39.6	
	comp=E,3015μm,0.4s						
ARG	**Arkhangelos**	**0.88**	**150**	P	**Pg**	**06 46 21.1**	**0.0**
ARG				S	**Sn**	**06 46 35.2**	**0.0**
ARG	**Arkhangelos**	**0.88**	**150**	P	**Pg**	**06 46 21.3**	**+0.1**
ARG	**Arkhangelos**	**0.88**	**150**	*e*Pg	**Pb**	**06 46 21.6**	**+0.2**
ARG				*e*Sg	**Sb**	**06 46 34.1**	**+1.0**
SMG	**Samos**	**0.94**	**321**	P	**Pg**	**06 46 21.2**	**-1.3**
SMG				S	**Sn**	**06 46 36.1**	**-0.7**
SMG				AML	AML	06 46 41.1	
	comp=N,1474μm,0.3s						
SMG				AML	AML	06 46 42.0	
	comp=E,2098μm,0.7s						
SMG	**Samos**	**0.94**	**321**	P	**Pg**	**06 46 21.8**	**-0.6**
SMG				S	**Sn**	**06 46 36.5**	**-0.3**
SMG	**Samos**	**0.94**	**321**	P	**Pg**	**06 46 21.8**	**-0.6**
SMG				S	**Sb**	**06 46 35.6**	**+0.5**
TAVA	**DENIZLI_Tavas**	**1.16**	**65**	*i* P	**Pb**	**06 46 26.3**	**-0.1**
TAVA				*i* S	**Sb**	**06 46 42.0**	**+0.6**
TAVA	**DENIZLI_Tavas**	**1.16**	**65**	P	**Pb**	**06 46 26.3**	**-0.1**
TAVA				S	**Sb**	**06 46 42.0**	**+0.6**
DGB	**¨zmir**	**1.21**	**332**	*i* P	**Pb**	**06 46 26.5**	**-0.6**
DGB				*i* S	**Sn**	**06 46 43.5**	**+0.2**
FETY	**Fethiye**	**1.25**	**106**	P	**Pn**	**06 46 27.6**	**0.0**
FETY				S	**Sb**	**06 46 43.8**	**0.0**
FETY	**Fethiye**	**1.25**	**106**	P	**Pn**	**06 46 27.6**	**0.0**
FETY				S	**Sb**	**06 46 43.8**	**0.0**
DNZL	**Caki

18nm,0.3s,baz=241,slow=17,SNR=1529
KK31 ⇓S **Sn** **06 47 27.3 -1.4**
160nm,0.3s,baz=340,slow=31,SNR=21
KK31 Karatay Array 0.80 53 *e*Pn **Pn** **06 47 15.4 -0.6**
KK31 *e*Sn **Sn** **06 47 28.2 -0.5**
KK31 Karatay Array 0.80 53 PG **Pn** **06 47 15.7 -0.3**
KK31 S **Sn** **06 47 27.5 -1.2**
KK31 pmax pmax
comp=Z,18nm,0.3s
KK31 smax smax
comp=N,43nm,0.3s
KKAR Karatay Array 0.80 53 *e*Pn **Pn** **06 47 15.6 -0.5**
KKAR *e*Sn **Sn** **06 47 28.3 -0.4**
KKAR Karatay Array 0.80 53 *e*PG **Pn** **06 47 15.6 -0.5**
KKAR *e* 06 47 28.3
DZA Taraz 1.28 77 *e*P **Pg** **06 47 24.5 +2.6**
baz=72
DZA *e*S **Sn** **06 47 42.3 +2.0**
baz=72
DZA Taraz 1.28 77 *e*P **Pg** **06 47 24.5 +2.6**
comp=N,187nm,0.2s
DZA *e*S **Sn** **06 47 42.4 +2.0**
comp=N,577nm,0.2s
TAS Tashkent 1.32 192 ⇑*i*P **Pn** **06 47 20.2 -2.9**
TAS baz=89 ⇑*i*S **Sb** **06 47 36.4 -4.0**
baz=89
TAS Tashkent 1.32 192 PG **Pn** **06 47 20.0 -3.1**
TAS pmax pmax
comp=Z,258nm,0.3s
ARK Arkit 1.91 115 ⇑*i*P **Pb** **06 47 33.9 +0.6**
ARK baz=10.0 ⇑*i*S **Sg** **06 48 01.0 +2.1**
baz=10.0
MNAS Manas 2.12 93 ⇓Pn **Pg** **06 47 38.4 +0.3**
comp=Z,58nm,0.5s
MNAS ⇓Sn **Sb** **06 48 05.1 +1.3**
comp=Z,358nm,0.6s
MNAS Manas 2.12 93 ⇑*i*P **Pb** **06 47 36.9 +0.1**
MNAS baz=89 ⇑*i*S **Sg** **06 48 06.0 +0.4**
baz=89
MNAS Manas 2.12 93 PN **Pb** **06 47 36.4 -0.4**
MNAS 06 48 05.1
MNAS pmax pmax
comp=Z,58nm,0.5s
MNAS smax smax
comp=N,358nm,0.6s
TOKL Toktogul 2.49 105 ⇓*i*P **Pb** **06 47 41.9 -1.2**
baz=1.0
TOKL ⇓*i*S **Sb** **06 48 14.3 -0.1**
baz=1.0
MRKS Merke 2.65 86 *e*P **Pb** **06 47 46.6 +0.8**
MRKS baz=83 *e*S **Sg** **06 48 21.2 -1.4**
baz=83
MRKS Merke 2.65 86 *e*P **Pb** **06 47 46.6 +0.8**
comp=N,63nm,0.5s
MRKS *e*S **Sg** **06 48 21.2 -1.4**
comp=N,187nm,0.5s
BTK Batken 2.71 160 ⇑*i*P **Pn** **06 47 42.8 +0.5**
BTK baz=58 ⇑*i*S **Sn** **06 48 15.4 -0.4**
baz=58
ARSB Arslanbob 2.81 116 ⇓*i*P **Pn** **06 47 46.2 +2.5**
ARSB baz=13 ⇓*i*S **Sb** **06 48 21.4 -2.2**
baz=13
AML Almayashu 3.04 98 P **Pb** **06 47 50.3 -2.5**
SNR=15
AML Almayashu 3.04 98 ⇓*i*P **Pn** **06 47 50.1 +2.9**
AML baz=95 ⇓*i*S **Sb** **06 48 28.4 -2.2**
baz=95
EKS2 Erkin-Say 3.06 88 P **Pn** **06 47 49.9 +2.8**
SNR=6.7
EKS2 Erkin-Say 3.06 88 ⇑*i*P **Pb** **06 47 50.0 -2.7**
EKS2 baz=85 ⇑*i*S **Sb** **06 48 28.5 -2.1**
baz=85
DRK Karamyk 3.54 152 ⇑*i*P **Pn** **06 47 54.4 +0.5**
DRK baz=50 ⇑*i*S **Sn** **06 48 35.6 -0.9**
baz=50
AAK Ala-Archa 3.58 88 Pn **Pn** **06 47 57.1 +2.7**
comp=N,2.7nm,0.3s,baz=244,slow=7.6,SNR=21
AAK Pg **Pg** **06 48 05.3 -0.9**
comp=N,10nm,0.3s,baz=245,slow=5.2,SNR=20
AAK Lg Lg 06 48 52.4
comp=N,18nm,0.3s,baz=304,slow=23,SNR=7.2
AAK LR LR 06 49 12.9
comp=N,41nm,19.2s,baz=218,slow=37
AAK Ala-Archa 3.58 88 ⇑Pn **Pn** **06 47 56.7 +2.3**
comp=N,6.3nm,0.5s
AAK ⇑Pg **Pg** **06 48 06.7 +0.5**
comp=N,18nm,0.5s
AAK ⇓Lg Lg 06 48 53.1
comp=N,57nm,0.6s
AAK Ala-Archa 3.58 88 P **Pn** **06 47 57.2 +2.8**
SNR=10.0
AAK Ala-Archa 3.58 88 *e*Pn **Pn** **06 47 56.8 +2.3**
AAK Ala-Archa 3.58 88 ⇑*i*P **Pn** **06 47 57.1 +2.7**
AAK baz=86 ⇑*i*S **Sb** **06 48 41.5 -4.3**
baz=86
AAK Ala-Archa 3.58 88 PN **Pn** **06 47 56.6 +2.3**
AAK 06 48 06.6
AAK 06 48 53.1
AAK pmax pmax
comp=Z,6.0nm,0.5s
AAK pmax pmax
comp=Z,18nm,0.5s
AAK pmax pmax
comp=N,57nm,0.6s
USP Ospenovka 3.63 78 P **Pn** **06 47 57.3 +2.4**
SNR=15
USP Ospenovka 3.63 78 ⇑*i*P **Pn** **06 47 57.3 +2.4**
USP baz=76 ⇑*i*S **Sb** **06 48 42.3 -4.7**
baz=76
UCH Uchtor 3.63 95 P **Pn** **06 47 58.3 +3.0**
SNR=7.1
UCH Uchtor 3.63 95 ⇓*i*P **Pn** **06 47 58.1 +2.8**
UCH baz=92 ⇓*i*S **Sb** **06 48 43.1 -4.4**
baz=92
FRU Bishkek 3.67 85 *e*PN **Pg** **06 48 08.0 +0.1**
FRU *e* 06 48 51.0
FRU *i* 06 49 08.0
FRU pmax pmax
comp=Z,80nm,1.6s
FRU pmax pmax
comp=N,350nm,1.8s
CHMS Chumysh 3.78 83 P **Pn** **06 47 58.9 +1.9**
SNR=11
CHMS Chumysh 3.78 83 ⇑*i*P **Pn** **06 48 00.0 +3.0**
CHMS baz=81 ⇑*i*S **Sn** **06 48 45.4 +3.2**
baz=81
SFK Sufi-Kurgan 3.91 131 ⇑Pn **Pb** **06 48 09.5 +2.2**
comp=N,6.0nm,0.3s
SFK ⇑Sn **Sb** **06 48 59.4 +4.3**
comp=N,65nm,0.9s
SFK Sufi-Kurgan 3.91 131 ⇑*i*P **Pn** **06 48 00.5 +1.6**
SFK baz=28 ⇑*i*S **Sn** **06 48 46.3 +0.8**
baz=28
SFK Sufi-Kurgan 3.91 131 PN **Pn** **06 47 59.4 +0.5**
SFK pmax pmax
comp=Z,6.0nm,0.3s
KBK Karagaybulak 3.92 88 P **Pn** **06 48 01.9 +2.9**
SNR=7.8
KBK Karagaybulak 3.92 88 ⇑*e*P **Pn** **06 48 01.3 +2.3**
KBK baz=86 ⇑*i*S **Sn** **06 48 49.7 +4.0**
baz=86
KZA Kyzart 4.20 96 P **Pn** **06 48 05.9 +2.9**
SNR=21
KZA Kyzart 4.20 96 ⇑*i*P **Pn** **06 48 05.4 +2.4**
KZA baz=94 ⇑*i*S **Sn** **06 48 56.4 +3.5**
baz=94
TKM2 Tokmak 2 4.40 84 ⇑Pn **Pn** **06 48 07.6 +2.0**
comp=Z,5.8nm,0.5s
TKM2 ⇑Lg Lg 06 49 16.2
comp=Z,99nm,0.9s
TKM2 Tokmak 2 4.40 84 P **Pn** **06 48 07.8 +2.2**
SNR=20
TKM2 Tokmak 2 4.40 84 ⇓*i*P **Pn** **06 48 07.9 +2.2**
TKM2 baz=82 ⇓*i*S **Sn** **06 49 01.2 +3.6**
baz=82
TKM2 Tokmak 2 4.40 84 PN **Pn** **06 48 07.6 +2.0**
TKM2 06 49 16.1
TKM2 pmax pmax
comp=Z,6.0nm,0.5s
TKM2 pmax pmax
comp=N,99nm,1.0s
DGS Degeres 4.55 80 *e*P **Pg** **06 48 22.9 -1.7**
DGS baz=78 *e*S **Sg** **06 49 23.1 -0.4**
baz=78
DGS Degeres 4.55 80 *e*P **Pg** **06 48 22.9 -1.7**
comp=N,8.5nm,0.6s
DGS *e*S **Sg** **06 49 23.2 -0.4**
comp=N,108nm,0.7s
KST Kastek 4.67 83 *e*P **Pg** **06 48 24.2 -2.7**
KST baz=81 *e*S **Sg** **06 49 25.8 -1.7**
baz=81
KST Kastek 4.67 83 *e*P **Pg** **06 48 24.2 -2.7**
comp=N,16nm,0.6s
KST *e*S **Sg** **06 49 25.9 -1.7**
comp=N,130nm,0.5s
ULHL Ulahol 4.90 92 P **Pn** **06 48 15.7 +3.1**
SNR=9.2
MTBS Maitube 5.02 82 *e*P **Pg** **06 48 32.1 -1.5**
MTBS baz=80 *e*S **Sg** **06 49 38.9 +0.3**
baz=80
MTBS Maitube 5.02 82 *e*P **Pg** **06 48 32.1 -1.5**
comp=N,17nm,0.7s
MTBS *e*S **Sg** **06 49 38.9 +0.3**
comp=N,81nm,0.6s
IZV Izvestkoviy 5.15 83 *e*P **Pg** **06 48 33.3 -2.8**
IZV baz=82 *e*S **Sg** **06 49 40.7 -2.1**
baz=82
IZV Izvestkoviy 5.15 83 *e*P **Pg** **06 48 33.3 -2.8**
comp=N,40nm,0.5s
IZV *e*S **Sg** **06 49 40.7 -2.1**
comp=N,56nm,0.7s
KTBS Karatobe 5.27 76 *e*P **Pg** **06 48 37.4 -0.9**
KTBS baz=74 *e*S **Sg** **06 49 48.0 +1.4**
baz=74
KTBS Karatobe 5.27 76 *e*P **Pg** **06 48 37.4 -0.9**
comp=N,15nm,0.6s
KTBS *e*S **Sg** **06 49 48.0 +1.4**
comp=N,60nm,0.9s
AAA Alma-Ata 5.38 81 *e*PN **Pg** **06 48 43.6 +3.1**
AAA pmax pmax
comp=Z,100nm,0.2s
AAA MLR MLR
comp=Z,300nm,5.0s
TNSS Tian-Shan 5.39 83 *e*P **Pb** **06 48 35.8 +3.1**
TNSS baz=82 *e*S **Sg** **06 49 46.4 -4.2**
baz=82
KNDC Almaty 5.42 81 ⇑Pg **Pg** **06 48 42.6 +1.4**
comp=Z,51nm,0.6s
KNDC ⇓Lg Lg 06 49 49.0
comp=Z,169nm,0.7s
MDOK Medeo 5.47 82 ⇑Pg **Pg** **06 48 40.7 -1.6**
comp=Z,15nm,0.5s
MDOK ⇓Lg Lg 06 49 48.3
comp=Z,66nm,0.8s
MDOK Medeo 5.47 82 *e*P **Pg** **06 48 40.6 -1.7**
MDOK baz=80 *e*S **Sg** **06 49 53.3 +0.1**
baz=80
MDOK Medeo 5.47 82 *e*P **Pg** **06 48 40.6 -1.7**
comp=Z,22nm,0.5s
MDOK *e*S **Sg** **06 49 53.3 +0.1**
comp=Z,82nm,0.9s
KOTS Kotyrbulak 5.52 81 *e*P **Pg** **06 48 42.5 -0.8**
comp=Z,17nm,0.8s
KOTS *e*S **Sg** **06 49 56.6 +1.8**
comp=Z,46nm,0.8s
OTUK Ortayu 5.94 18 ⇓Pn Pn 06 48 30.1 +3.5
comp=Z,18nm,0.5s
OTUK ⇓Sn **Sn** **06 49 29.4 -5.8**
comp=Z,63nm,0.5s
OTUK Ortayu 5.94 18 PN Pn 06 48 30.1 +3.5
OTUK 06 49 38.2
OTUK pmax pmax
comp=Z,18nm,0.5s
OTUK smax smax
comp=N,63nm,0.5s
ARXS Arharly 6.17 72 *e*P **Pg** **06 48 54.7 -1.0**
comp=N,18nm,0.9s
ARXS *e*S **Sg** **06 50 17.8 +2.1**
comp=N,70nm,0.8s
PDGK Podgornoye 7.26 81 ⇓Pg **Pg** **06 49 14.7 -1.8**
comp=N,10nm,0.8s
PDGK ⇓Lg Lg 06 50 47.1
comp=N,36nm,0.8s
KBL Kabul 8.08 183 *e*Pn Pn 06 49 00.2 +4.0
KBL Kabul 8.08 183 *e*P Pn 06 49 00.2 +4.0
NIL Nilore 9.39 161 *e*Pn **Pn** **06 49 15.3 +1.2**
NIL Nilore 9.39 161 *e*P **Pn** **06 49 15.3 +1.2**
ABKAR Akbulak array 9.46 318 *e*Pn **Pn** **06 49 13.8 -1.1**
MAKZ Makanchi 9.73 60 ⇑Pn **Pn** **06 49 18.2 -0.4**
comp=N,2.1nm,0.6s
MAKZ ⇑Sn **Sn** **06 51 00.4 -8.1**
comp=N,11nm,1.2s
MAKZ ⇓Lg Lg 06 52 00.4
comp=N,24nm,1.1s
MAKZ Makanchi 9.73 60 *e*Pn **Pn** **06 49 19.6 +1.0**
MAKZ Makanchi 9.73 60 *e*P **Pn** **06 49 19.6 +1.0**
MK01 Makanchi Array 9.92 61 *e*Pn **Pn** **06 49 23.1 +1.8**
MK31 Makanchi Array 9.93 61 ⇑Pn **Pn** **06 49 22.9 +1.6**
comp=N,1.5nm,0.5s,baz=243,slow=15,SNR=54
MK31 ⇑Sn **Sn** **06 51 06.0 -7.4**
comp=N,2.1nm,0.5s,baz=273,slow=19,SNR=4.1
MK31 ⇑Lg Lg 06 52 04.8
comp=N,11nm,0.7s,baz=247,slow=29,SNR=3.8
MK31 Makanchi Array 9.93 61 *e*Pn **Pn** **06 49 22.9 +1.6**
MK31 Makanchi Array 9.93 61 *e*P **Pn** **06 49 22.5 +1.2**
MK31 pmax pmax
comp=Z,1.0nm,0.4s
MK32 Makanchi Array 9.93 61 *e*Pn **Pn** **06 49 22.6 +1.3**
MKAR Makanchi Array 9.93 61 Pn **Pn** **06 49 22.6 +1.3**
comp=Z,1.5nm,0.3s,baz=245,slow=15,SNR=34
MKAR Lg Lg 06 52 14.3
comp=Z,0.8nm,0.3s,baz=250,slow=31,SNR=6.8
GYA0B ALIBECK ARRAY 9.97 246 *e*Pn Pn 06 49 25.9 +4.0
KURBB Kurchatov Arra 10.07 34 Pn **Pn** **06 49 24.6 +1.4**
comp=Z,0.2nm,0.3s,baz=224,slow=13,SNR=12
KURBB Kurchatov Arra 10.07 34 ⇑Pn **Pn** **06 49 25.0 +1.8**
comp=Z,1.6nm,0.5s
KURBB ⇓Sn Sn 06 51 07.1 -10
comp=Z,7.7nm,0.7s
KURBB ⇑Lg Lg 06 52 07.0
comp=Z,51nm,1.1s
KURK Kurchatov 10.18 34 ⇑Pn **Pn** **06 49 25.0 +0.3**
comp=Z,1.3nm,0.3s
KURK ⇓Sn **Sn** **06 51 10.4 -8.9**
comp=Z,10nm,1.0s
KURK ⇓Lg Lg 06 52 12.6
comp=Z,63nm,0.9s
KURK Kurchatov 10.18 34 *e*Pn **Pn** **06 49 24.6 -0.1**
KURK Kurchatov 10.18 34 *i*P Pn 06 49 30.0 +5.4
BVA0 Borovoye Array 10.42 3 ⇓Pn Pn 06 49 31.5 +3.5
comp=Z,2.1nm,0.5s,baz=167,slow=12,SNR=6.6
BVA0 ⇑Sn **Sn** **06 51 22.5 -3.0**
comp=Z,6.5nm,0.7s,baz=173,slow=23,SNR=3.3
BVA0 ⇑Lg Lg 06 52 22.6
comp=Z,24nm,1.1s,baz=173,slow=23,SNR=3.3
BVA0 Borovoye Array 10.42 3 *i*P **Pn** **06 49 28.6 +0.6**
BVA0 pmax pmax
comp=Z,4.0nm,0.6s
BVAR Borovoye Array 10.42 3 Pn **Pn** **06 49 29.6 +1.5**
comp=Z,0.9nm,0.3s,baz=187,slow=10,SNR=8.6
BVAR LR LR 06 53 49.0
comp=Z,56nm,21.6s,baz=116,slow=39
BRVK Borovoye 10.45 2 ⇓Pn **Pn** **06 49 28.3 -0.1**
comp=Z,3.7nm,0.6s
BRVK ⇑Sn **Sn** **06 51 20.4 -5.8**
comp=Z,7.2nm,0.5s
BRVK ⇑Lg Lg 06 52 23.7
comp=Z,28nm,1.0s
BRVK Borovoye 10.45 2 *e*Pn **Pn** **06 49 30.2 +1.7**
BRVK Borovoye 10.45 2 *i*P **Pn** **06 49 31.3 +2.9**
AKTO Aktyubinsk 11.18 318 Pn **Pn** **06 49 37.4 -0.9**
comp=Z,0.8nm,0.3s,baz=102,slow=12,SNR=8.3
AKTO LR LR 06 54 19.4
comp=Z,64nm,18.4s,baz=118,slow=39
AKTO Aktyubinsk 11.18 318 P **Pn** **06 49 36.4 -2.0**
AKTO pmax pmax
comp=Z,2.0nm,0.5s
ZAA0 Zalesovo Array 15.15 36 *e*Pn **P** **06 50 35.0 -2.8**
comp=Z,1.9nm,0.6s
ZALV Zalesovo Beam 15.15 36 Pn **P** **06 50 34.6 -3.2**
comp=Z,0.7nm,0.3s,baz=234,slow=14,SNR=7.7
ZAA1 Zalesovo Array 15.15 36 *e*Pn **P** **06 50 34.6 -3.3**
ARU Arti 15.55 337 LR LR 06 56 58.3
comp=Z,61nm,19.6s,baz=170,slow=38
ARU Arti 15.55 337 *c i*P **P** **06 50 40.0 -2.3**
ARU S **Sn** **06 53 34.1 +3.5**
ARU pmax pmax
comp=Z,2.0nm,0.6s
KIV Kislovodsk 19.64 283 *e*P **Pn** **06 51 30.1 +1.2**
KIV pmax pmax
comp=Z,8.0nm,0.9s
ULN Ulaanbaatar 26.68 66 *i*P **P** **06 52 40.1 +2.0**
ULN pmax pmax
comp=Z,2.0nm,0.7s
BR101 Keskin Array S 27.12 276 *e*P **P** **06 52 43.5 +1.3**
BRTR Keskin Array B 27.12 276 P **P** **06 52 43.5 +1.3**
comp=Z,0.9nm,0.7s,baz=39,slow=9.3,SNR=2.5
BRTR Keskin Array B 27.12 276 *e*P **P** **06 52 47.7 +5.5**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
FIA1 FINESS Array S 31.93 321 *e*P **P** **06 53 25.0 +0.6**
FIA0 FINESS Array S 31.93 321 *e*P **P** **06 53 25.8 +1.4**
FIA0 FINESS Array S 31.93 321 *e*P **P** **06 53 25.8 +1.4**
FINES FINESS Array B 31.93 321 P **P** **06 53 25.8 +1.4**
comp=Z,0.3nm,0.4s,baz=103,slow=12,SNR=4.1
ARA0 ARCESS Array S 35.13 335 *e*P **P** **06 53 54.5 +2.4**
ARCES ARCESS Array B 35.13 335 P **P** **06 53 54.5 +2.4**
comp=Z,0.8nm,0.6s,baz=106,slow=9.1,SNR=5.1
HFS Hagfors 37.72 317 P **P** **06 54 15.0 +0.6**
comp=Z,0.8nm,0.3s,baz=113,slow=9.2,SNR=11
HFS Hagfors 37.72 317 P **P** **06 54 15.0 +0.6**
YAK Yakutsk 39.76 40 *e*P **P** **06 54 28.8 -2.6**
comp=Z,28nm,0.4s
YAK Yakutsk 39.76 40 *i*P **P** **06 54 33.3 +1.9**
YAK pmax pmax
comp=Z,9.0nm,0.7s
TIXI Tiksi 40.58 25 *i*P **P** **06 54 39.6 +1.5**
TIXI pmax pmax
comp=Z,8.0nm,2.6s
KLR Kul'dur 42.62 59 *i*P **P** **06 54 56.7 +1.5**
TATO Taipei 45.80 95 *e*P **P** **06 55 19.7 -1.2**
comp=Z,38nm,0.9s
BILL Bilibino 53.63 28 *e*P **P** **06 56 19.0 -1.0**
comp=Z,2.1nm,0.6s
BILL Bilibino 53.63 28 *e*P **P** **06 56 19.0 -1.0**
BILL pmax pmax
comp=Z,2.0nm,0.6s
TAM Tamanrasset 56.13 271 *e*P **P** **06 56 40.2 +1.2**
comp=Z,2.0nm,0.3s
TAM Tamanrasset 56.13 271 *e*P **P** **06 56 40.2 +1.2**
TAM pmax pmax
comp=Z,2.0nm,0.3s
IM3 Indian Mountai 66.67 18 *e*P **P** **06 57 50.2 +0.7**
KOWA Kowa 68.34 270 *e*P **P** **06 58 01.6 +0.8**
comp=Z,2.8nm,1.1s
WRA Warramunga Arr 86.10 122 P **P** **06 59 39.0 -1.3**
comp=Z,0.5nm,0.8s,baz=325,slow=4.5,SNR=4.6
WR1 Warramunga Arr 86.10 122 *e*P **P** **06 59 39.0 -1.3**
comp=Z,3.8nm,1.0s
NVAR Mina Array Bea 99.01 6 LR LR 07 49 42.1
comp=Z,52nm,18.9s,baz=94,slow=38

NEIC ***08*** *06:50:47.6±0.0, 15°.79N×98°.77W, h15km, MD4.0(MEX), After MEX.*

MEX 08 06:50:47.6±0.3, 15°.79N×98°.77W, h15km±7km, MD4.0, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.77**	**6**	*e*P	Pn	06 51 14.4	-3.5
TLIG				*i* S	Sn	06 51 33.9	-6.4
TLIG	**Tlapa**	**1.77**	**6**	*e*P	Pn	06 51 14.4	-3.5
TLIG				*i* S	Sn	06 51 33.9	-6.4
CAIG	**El Cayaco**	**1.91**	**311**	*e*P	Pn	06 51 16.3	-3.3
CAIG				*e*S	Sn	06 51 38.6	-4.7
CAIG	**El Cayaco**	**1.91**	**311**	*e*P	Pn	06 51 16.3	-3.3
CAIG				*e*S	Sn	06 51 38.6	-4.7
VHO	**Vista Hermosa**	**2.33**	**57**	*e*P	Pn	06 51 22.5	-3.2
VHO				*e*S	Sn	06 51 49.9	-4.3
VHO	**Vista Hermosa**	**2.33**	**57**	*e*P	Pn	06 51 22.5	-3.2
VHO				*e*S	Sn	06 51 49.9	-4.3
HUIG	**Huatulco**	**2.56**	**90**	*e*P	Pn	06 51 25.8	-2.9
HUIG	**Huatulco**	**2.56**	**90**	*e*P	Pn	06 51 25.8	-2.9

ISCJB ***08*** *06:54:02.3±2.4, 23°.5N±0°.2×109°.8W±0°.2, h10km, mb4.0/2, MS4.0/1, Error ellipse: s-maj=37.2km s-min=8.7km az=29.7*

MEX ***08*** *06:54:04.5±0.3, 23°.57N×109°.77W, h15km±9km, MD3.9*

IDC ***08*** *06:54:06.2±3.8, 23°.77N×109°.81W, h0km, mb4.1/2, mb1 4.2/5, mb1mx3.7/53, mbtmp3.8/5, ML4.0/3, MS3.4/3, Ms1 3.4/3, ms1mx2.8/51, Error ellipse: s-maj=62.7km s-min=12.1km az=17.0*

ISC 08 06:54:03.3±2.2, 23°.5N±0°.2×109°.8W±0°.1, h10km, n10, σ2°.76/10, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	**La Paz**	**0.79**	**323**	LR	LR	06 54 16.1	
LPIG	comp=Z,27nm,20.8s,baz=210,slow=18 399nm,0.3s,baz=141,slow=8.0,SNR=78			Pg	**Pg**	**06 54 16.5**	**-2.0**
LPIG	2μm,0.3s,baz=121,slow=3.7,SNR=117			Lg	Lg	06 54 25.0	
LPIG	**La Paz**	**0.79**	**323**	*i* P	**Pg**	**06 54 16.3**	**-2.2**
LPIG				*e*S	**Sg**	**06 54 25.2**	**-3.6**
MAIG	**Mazatlaan**	**3.11**	**95**	*e*P	**Pn**	**06 54 51.3**	**-1.0**
MAIG				*e*S	**Sn**	**06 55 25.8**	**-3.7**
TXAR	**Lajitas Array**	**8.01**	**42**	Pn	**Pn**	**06 56 01.5**	**+1.6**
TXAR	0.2nm,0.3s,baz=218,slow=14,SNR=10 comp=Z,164nm,20.2s,baz=0.0,slow=39			LR	LR	06 59 10.3	
ANMO	**Albuquerque**	**11.80**	**14**	Pn	Pn	06 56 57.6	+5.8
ANMO	0.1nm,0.3s,baz=194,slow=12,SNR=12 comp=Z,98nm,21.1s,baz=234,slow=35			LR	LR	07 00 53.4	
NVAR	**Mina Array Bea**	**16.59**	**336**	Pn	**P**	**06 58 00.2**	**+1.5**
PDAR	baz=158,slow=11,SNR=2.9 **Pinedale Array**	**19.25**	**1**	P	**Pn**	**06 58 30.8**	**+1.8**
ULM	0.3nm,0.3s,baz=163,slow=9.9,SNR=37 **Lac du Bonnet**	**28.86**	**19**	P	**P**	**07 00 02.6**	**+0.7**
ILAR	2.4nm,0.8s,baz=197,slow=10,SNR=4.5 **Eielson Array**	**47.80**	**340**	P	**P**	**07 02 43.6**	**+3.0**
URZ	1.5nm,0.8s,baz=152,slow=7.3,SNR=13 **Urewera**	**91.95**	**229**	LR	LR	07 38 22.5	
	comp=Z,55nm,19.6s,baz=359,slow=29						

SOME ***08*** *06:58:21.8, 40°.90N×72°.85E, h0km*

NNC ***08*** *06:58:23.0±1.6, 40°.93N×72°.88E, h2km±14km, mb3.7, mpv3.4, Error ellipse: s-maj=20.4km s-min=6.7km az=77.0*

KRNET ***08*** *06:58:23.7±0.1, 40°.94N×72°.87E, h18km, mb3.2*

KNET ***08*** *06:58:25.6±0.7, 40°.96N×73°.18E, h0km±4km, ml2.7, Error ellipse: s-maj=7.2km s-min=3.0km az=92.0*

ISC 08 06:58:23.3±1.1, 40°.93N±0°.02×72°.91E±0°.02, h6km±10km, n45, σ1°.41/82, 43C-17D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**0.40**	**8**	⇑*i*P	**Pg**	**06 58 31.2**	**+0.2**
ARSB	baz=13			⇑*i*S	**Sg**	**06 58 37.5**	**+1.2**
TOKL	**Toktogul**	**1.01**	**358**	⇓*e*P	**Pg**	**06 58 42.7**	**+0.1**
TOKL	baz=0.0			⇓*i*S	**Sb**	**06 58 56.6**	**-0.2**
SFK	**Sufi-Kurgan**	**1.02**	**154**	⇓P	**Pb**	**06 58 43.9**	**+0.4**
SFK	15nm,0.6s 60nm,0.3s			⇓S	**Sg**	**06 58 56.8**	**+0.6**
SFK	**Sufi-Kurgan**	**1.02**	**154**	⇑*i*P	**Pg**	**06 58 43.6**	**+0.7**
	baz=52						

NEIC ***08*** *07:04:24.0±0.4, 5°.88S×107°.42E, h309km±3km, mb4.5/43, Error ellipse: s-maj=7.4km s-min=4.1km az=49.0*

ISC 08 07:04:23.6±0.5, 5°.88S×0°.05×107°.46E±0°.05, h302km±4km, n207, σ1§40/234, mb4.4/75, 3C, Jawa

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TNG	**Tangerang**	**0.86**	**250**	P	P		**Pn**	**07 05 04.7**	**+1.2**
TNG				P	P		**Pn**	**07 05 04.7**	**+1.2**
LEM	**Lembang**	**0.95**	**171**	P	P		**Pn**	**07 05 04.0**	**-0.2**
	360nm,0.3s,baz=6.8,slow=2.5,SNR=133								
LEM				S	S		**S**	**07 05 36.5**	**+0.1**
	38nm,0.3s,baz=319,slow=23,SNR=6.7								
DBJI	**Dramaga**	**0.97**	**227**	P	P		**Pn**	**07 05 04.1**	**0.0**
DBJI				S	S		**S**	**07 05 36.5**	**+0.2**
JCJI	**Jatiwangi**	**1.01**	**127**	P	P		**Pn**	**07 05 04.8**	**+0.6**
SBJI	**Serang**	**1.34**	**260**	P	P		**Pn**	**07 05 06.7**	**+0.7**
SBJI				S	S		**S**	**07 05 38.3**	**-1.4**
SKJI	**Sukabumi**	**1.43**	**219**	P	P		**Pn**	**07 05 06.1**	**-0.4**
SKJI				S	S		**S**	**07 05 38.0**	**-2.7**
CGJI	**Cibinong**	**1.90**	**247**	P	P		**Pn**	**07 05 09.5**	**-0.2**
CGJI				S	S		**S**	**07 05 42.6**	**-3.9**
KPJI	**Karang Pucung**	**2.05**	**135**	P	P		**Pn**	**07 05 10.4**	**-0.5**
CMJI	**Cimerak**	**2.13**	**153**	P	P		**Pn**	**07 05 09.1**	**-2.4**
KLI	**Kotabumi**	**2.78**	**291**	P	P		**Pn**	**07 05 19.0**	**+1.6**
KASI	**Kota Agung**	**2.97**	**277**	P	P		**Pn**	**07 05 21.0**	**+1.8**
SMRI	**Semarang**	**3.18**	**112**	P	P		**Pn**	**07 05 22.1**	**+0.8**
SMRI	**Semarang**	**3.18**	**112**	*e*Pn	P		**Pn**	**07 05 22.0**	**+0.8**
LWLI	**Liwa**	**3.49**	**284**	P	P		**Pn**	**07 05 27.2**	**+2.6**
MDSI	**Maura Dua**	**3.55**	**293**	P	P		**Pn**	**07 05 26.3**	**+1.2**
UGM	**Wanagama**	**3.65**	**124**	P	P		**Pn**	**07 05 24.9**	**-1.2**
UGM	**Wanagama**	**3.65**	**124**	*e*Pn	P		**Pn**	**07 05 25.0**	**-1.2**
PPBI	**Pangkal Pinang**	**3.92**	**340**	P	P		**Pn**	**07 05 30.2**	**+1.1**
NGJI	**Ngawi**	**4.24**	**111**	P	P		**Pn**	**07 05 33.3**	**+0.8**
PCJI	**Pacitan**	**4.35**	**122**	P	P		**Pn**	**07 05 31.2**	**-2.5**
TBJI	**Tambak Boyo**	**4.46**	**102**	P	P		**Pn**	**07 05 36.1**	**+1.1**
MNAI	**Manna**	**4.74**	**288**	*e*Pn	P		**Pn**	**07 05 39.3**	**+1.1**
MNAI				*e*S	S		**S**	**07 06 34.6**	**-3.4**
PWJI	**Pagerwojo**	**4.81**	**116**	P	P		**Pn**	**07 05 37.2**	**-1.8**
GRJI	**Gresik**	**5.09**	**102**	P	P		**Pn**	**07 05 43.4**	**+1.1**
MASI	**Maura Aman, Be**	**5.87**	**297**	P	P		**Pn**	**07 05 53.3**	**+1.8**
KRJI	**Kerinci**	**7.07**	**302**	P	P		**Pn**	**07 06 07.5**	**+1.5**
JAGI	**Jajag, Banyuwa**	**7.12**	**112**	*e*Pn	P		**Pn**	**07 06 05.6**	**-0.9**
JAGI				*e*S	S		**S**	**07 07 23.5**	**-6.2**
STKI	**Sintang**	**7.14**	**34**	P	P		**Pn**	**07 06 08.2**	**+1.4**
KSM	**Kuching**	**7.84**	**21**	*e*Pn	P		**Pn**	**07 06 16.9**	**+1.6**
PDSI	**Padang**	**8.55**	**305**	P	P		**Pn**	**07 06 23.4**	**-0.6**
SISI	**Saibi**	**9.50**	**298**	P	P		**Pn**	**07 06 35.7**	**+0.1**
SBUM	**Sibu**	**9.54**	**30**	*e*Pn	P		**P**	**07 06 38.5**	**-1.7**
MNSI	**Mandailing Nat**	**10.29**	**310**	P	P		**Pn**	**07 06 44.4**	**-0.9**
PSI	**Prapat**	**12.13**	**315**	P	P		**Pn**	**07 07 06.2**	**-1.6**
	3.6nm,0.3s,baz=180,slow=9.8,SNR=9.4								
PSI	**Prapat**	**12.13**	**315**	*e*Pn	P		**Pn**	**07 07 06.1**	**-1.7**
IPM	**Ipoh**	**12.13**	**328**	*e*Pn	P		**P**	**07 07 10.3**	**+1.3**
GSI	**Gunungsitoli**	**12.18**	**306**	P	P		**Pn**	**07 07 06.7**	**-1.7**
GSI	**Gunungsitoli**	**12.18**	**306**	*e*Pn	P		**Pn**	**07 07 06.3**	**-2.1**
KULM	**Kulim**	**13.02**	**328**	*e*Pn	P		**P**	**07 07 19.6**	**+0.8**
KCSI	**Kotacane, Aceh**	**13.45**	**314**	P	P		**P**	**07 07 21.9**	**-1.7**
TPTI		**13.71**	**311**	P	P		**P**	**07 07 26.0**	**-0.4**
MPSI	**Mapaga**	**13.87**	**64**	P	P		**Pn**	**07 07 30.4**	**+1.7**
KKM	**Kota Kinabalu**	**14.72**	**37**	*e*P	P		**Pn**	**07 07 40.2**	**+1.4**
LHMI	**Lhok Sumawe**	**15.23**	**316**	*e*P	P		**P**	**07 07 41.8**	**-1.4**
	128nm,1.0s								
MYLDM	**Lahad Datu**	**15.56**	**45**	*e*P	P		**Pn**	**07 07 50.6**	**+2.0**
	20nm,1.0s								
KRAB	**Krabi**	**16.25**	**329**	P	P		**Pn**	**07 07 57.9**	**+1.2**
	95nm,0.7s								
SOEI	**Soe**	**17.09**	**104**	*e*P	P		**P**	**07 08 04.6**	**+1.1**
	62nm,1.2s								
MBWA	**Marble Bar**	**19.29**	**143**	*e*P	P		**P**	**07 08 27.8**	**+0.8**
	19nm,0.9s								
FITZ	**Fitzroy Crossi**	**21.50**	**126**	P	P		**P**	**07 08 49.4**	**+0.3**
	1.7nm,0.4s,baz=320,slow=8.0,SNR=8.0								
PBKT	**Sadao Pong**	**23.21**	**344**	*e*P	P		**P**	**07 09 04.7**	**+0.2**
	16nm,0.8s								
MTN	**Manton Dam**	**24.34**	**108**	*e*P	P		**P**	**07 09 16.1**	**+1.2**
	29nm,1.4s								
LAMP	**Lampang**	**25.45**	**342**	P	P		**P**	**07 09 26.3**	**+1.6**
	11nm,0.9s,229nm								
CM01	**Chiang Mai Arr**	**25.56**	**341**	*e*P	P		**P**	**07 09 26.6**	**+0.8**
CM31	**Chiang Mai Arr**	**25.60**	**341**	*e*P	P		**P**	**07 09 26.8**	**+0.7**
CMAR	**Chiang Mai Arr**	**25.60**	**341**	P	P		**P**	**07 09 26.8**	**+0.7**
	4.7nm,0.5s,baz=177,slow=8.6,SNR=17								
CHTO	**Chiang Mai**	**25.94**	**341**	*e*P	P		**P**	**07 09 30.0**	**+0.9**
	16nm,1.3s								
CMAI	**Chiengmai2**	**26.96**	**342**	P	P		**P**	**07 09 39.2**	**+0.9**
	147nm,0.6s,4μm								
NWAO	**Narrogin (SRO)**	**28.41**	**163**	P	P		**P**	**07 09 52.0**	**+1.2**
	4.8nm,0.4s,baz=206,slow=7.5,SNR=6.1								
NWAO	**Narrogin (SRO)**	**28.41**	**163**	*e*P	P		**P**	**07 09 52.2**	**+1.4**
	8.8nm,0.8s								
WRA	**Warramunga Arr**	**29.62**	**121**	P	P		**P**	**07 10 02.3**	**+0.5**
	1.8nm,0.5s,baz=309,slow=8.7,SNR=58								
WRA				pP	pP		**pP**	**07 10 59.4**	**-0.4**
	1.6nm,0.6s,baz=294,slow=11,SNR=4.4								
WRA				PcP	PcP		**PcP**	**07 12 58.4**	**+0.2**
	1.8nm,0.5s,baz=305,slow=1.9,SNR=12								
WRA				ScP	ScP		**ScP**	**07 16 10.5**	**-0.7**
	1.4nm,0.7s,baz=306,slow=2.8,SNR=8.0								
WRAB	**Tennant Creek**	**29.63**	**121**	*e*P	P		**P**	**07 10 02.3**	**+0.4**
	6.6nm,0.8s								
WC3	**Warramunga Arr**	**29.66**	**121**	*e*PcP	PcP		**PcP**	**07 12 58.6**	**+0.3**
AS31	**Alice Springs**	**30.98**	**128**	*e*P	P		**P**	**07 10 14.3**	**+0.6**
	2.2nm,0.4s								
AS31				*e*S	S		**S**	**07 14 57.4**	**+1.5**
ASAR	**Alice Springs**	**30.98**	**128**	P	P		**P**	**07 10 14.2**	**+0.6**
	3.3nm,0.4s,baz=301,slow=7.7,SNR=89								
ASAR				pP	pP		**pP**	**07 11 13.5**	**+1.5**
	2.4nm,0.6s,baz=304,slow=8.7,SNR=5.6								
ASAR				PcP	PcP		**PcP**	**07 13 02.2**	**+0.3**
	2.1nm,0.6s,baz=308,slow=2.1,SNR=16								
ASAR				S	S		**S**	**07 14 54.0**	**-1.8**
	1.5nm,0.6s,baz=294,slow=14,SNR=8.2								
ASAR				ScP	ScP		**ScP**	**07 16 15.7**	**+0.1**
	2.4nm,0.8s,baz=307,slow=2.8,SNR=15								
AS01	**Alice Springs**	**31.02**	**127**	*e*P	P		**P**	**07 10 14.3**	**+0.3**
AS01				*e*PcP	PcP		**PcP**	**07 13 02.2**	**+0.3**
KMI	**Kunming**	**31.16**	**352**	P	P		**P**	**07 10 18.4**	**+3.0**
KMI				pmax	pmax				
	comp=Z,14nm,0.9s								
FORT	**Forrest**	**31.43**	**145**	*e*P	P		**P**	**07 10 18.9**	**+1.5**
	20nm,0.9s								
GYA	**Guiyang**	**32.16**	**359**	⇑*i*P	P		**P**	**07 10 25.2**	**+1.3**
GYA				pP	pP			07 11 26.4	+4.0
GYA				sP	sP			07 12 01.0	+3.6
GYA				S	S		**S**	**07 15 17.2**	**+3.2**
GYA				pmax	pmax				
	comp=Z,10.0nm,0.8s								
SHL	**Shillong**	**34.73**	**335**	*e*P	P		**P**	**07 10 45.4**	**-0.7**
	17nm,0.6s								
CD2	**Chengdu**	**36.76**	**355**	P	P		**P**	**07 11 04.1**	**+1.1**
CD2				pmax	pmax				
	comp=Z,20nm,0.5s								
BBOO	**Buckleboo**	**37.77**	**139**	*e*P	P		**P**	**07 11 12.1**	**+0.6**
	20nm,1.3s								
ODAN	**Odare**	**37.91**	**330**	*e*P	P		**P**	**07 11 12.7**	**-0.2**
	46nm,0.5s								
RAMN	**Ramite**	**38.38**	**329**	*e*P	P		**P**	**07 11 16.9**	**+0.1**
	23nm,0.4s								
LSA	**Lhasa**	**38.69**	**337**	*e*P	P		**P**	**07 11 20.3**	**+0.7**
	11nm,0.6s								
JIRN	**Jiri**	**39.17**	**329**	*e*P	P		**P**	**07 11 23.3**	**-0.2**
	51nm,0.4s								
NJ2	**Nanjing**	**39.26**	**15**	*e*P	P		**P**	**07 11 23.1**	**-0.5**
NJ2				pmax	pmax				
	comp=Z,11nm,0.5s								
PKIN	**Phulchoki**	**39.51**	**328**	*e*P	P		**P**	**07 11 25.3**	**-0.8**
	11nm,0.4s								
GUN	**Gumba**	**39.53**	**329**	*e*P	P		**P**	**07 11 26.1**	**-0.3**
	32nm,0.4s								
DMN	**Daman**	**39.69**	**328**	*e*P	P		**P**	**07 11 27.0**	**-0.6**
	15nm,0.5s								
XAN	**Xi'an**	**39.73**	**2**	P	P		**P**	**07 11 28.3**	**+0.8**
XAN				pP	pP			07 12 31.3	+3.2
XAN				sP	PP			07 13 07.4	+1.2
XAN				S	S		**S**	**07 17 00.7**	**-7.6**
XAN				pmax	pmax				
	comp=Z,17nm,0.6s								
XAN				pmax	pmax				
	comp=Z,68nm,5.4s								
KKN	**Kakani**	**39.74**	**328**	*e*P	P		**P**	**07 11 27.4**	**-0.6**
	12nm,0.4s								
GKN	**Gorkha**	**40.25**	**328**	*e*P	P		**P**	**07 11 31.5**	**-0.6**
	19nm,0.3s								
KOLN	**Koldanda**	**40.63**	**327**	*e*P	P		**P**	**07 11 34.5**	**-0.7**
	42nm,0.6s								
DANN	**Dangsing**	**40.99**	**327**	*e*P	P		**P**	**07 11 37.5**	**-0.8**
	59nm,0.5s								
STKA	**Stephens Creek**	**41.06**	**133**	P	P		**P**	**07 11 39.5**	**+1.1**
	10nm,0.7s,baz=299,slow=7.7,SNR=25								
STKA				PcP	PcP		**PcP**	**07 13 32.4**	**+0.5**
	2.7nm,0.4s,baz=302,slow=3.5,SNR=3.8								
STKA				ScP	ScP		**ScP**	**07 16 52.6**	**+0.1**
	2.9nm,0.7s,baz=287,slow=7.7,SNR=5.0								
STKA	**Stephens Creek**	**41.06**	**133**	*e*P	P		**P**	**07 11 39.6**	**+1.1**
	1.9nm,0.6s								
STKA				*e*PcP	PcP		**PcP**	**07 13 32.6**	**+0.7**
STKA				ScP	ScP		**ScP**	**07 16 52.6**	**+0.1**
PYUN	**Piuthan**	**41.22**	**326**	*e*P	P		**P**	**07 11 39.1**	**-0.9**
	33nm,0.5s								
LZH	**Lanzhou**	**41.88**	**356**	⇑P	P		**P**	**07 11 46.7**	**+1.5**
LZH				pP	pP			07 12 48.6	+2.3
LZH				sP	sP			07 13 22.4	+1.8
LZH				PP	PcP		**PcP**	**07 13 32.0**	**-2.7**
LZH				pmax	pmax				
	comp=Z,20nm,1.3s								
LZH				pmax	pmax				
	comp=Z,64nm,6.0s								
GTA	**Gaotai**	**45.62**	**352**	P	P		**P**	**07 12 16.3**	**+1.7**
GTA				pP	pP			07 13 17.6	+0.7
GTA				sP	PcP			07 13 48.9	+1.6
GTA				S	S		**S**	**07 18 37.6**	**+3.7**
GTA				SS	SS		**SS**	**07 22 01.9**	**-0.7**
GTA				pmax	pmax				
	comp=Z,15nm,0.9s								
GTA				pmax	pmax				
	comp=Z,74nm,4.9s								
BJI	**Beijing**	**46.40**	**9**	P	P		**P**	**07 12 21.2**	**+0.8**
BJI				pmax	pmax				
	comp=Z,43nm,0.7s								
BJI				LR	LR				
	comp=N,170nm,19.1s								
BJI				LR	LR				
	comp=E,380nm,24.0s								
BJI				LR	LR				
	comp=Z,4μm,34.1s								
HHC	**Hu-ho-hao-te**	**46.66**	**4**	*e*P	P		**P**	**07 12 24.6**	**+2.0**
HHC				pmax	pmax				
	comp=Z,11nm,0.7s								
HHC				pmax	pmax				
	comp=Z,25nm,4.9s								
KSAR	**Wonju Array Be**	**47.13**	**22**	P	P		**P**	**07 12 26.8**	**+0.7**
KSRS	**Korea Array**	**47.15**	**22**	P	P		**P**	**07 12 26.8**	**+0.5**
	5.1nm,0.8s,baz=208,slow=8.4,SNR=23								
KS01	**Wonju Array Si**	**47.16**	**22**	*e*P	P		**P**	**07 12 27.2**	**+0.8**
CAN	**Canberra**	**48.12**	**133**	*e*P	P		**P**	**07 12 35.8**	**+1.8**
	24nm,1.4s								
NIL	**Nilore**	**50.94**	**323**	*e*P	P		**P**	**07 12 53.0**	**-2.0**
	19nm,0.7s								
MJAR	**Matsushiro Arr**	**51.09**	**32**	P	P		**P**	**07 12 54.7**	**-1.3**
	1.9nm,0.4s,baz=214,slow=8.1,SNR=6.0								
CN2	**Changchun**	**52.06**	**16**	*e*P	P		**P**	**07 13 04.0**	**+1.0**
WMQ	**Urumqi**	**52.60**	**342**	P	P		**P**	**07 13 07.6**	**+0.6**
WMQ				sP	sP			07 14 46.7	+2.0
WMQ				pmax	pmax				
	comp=Z,20nm,0.9s								
WMQ				pmax	pmax				
	comp=Z,190nm,3.9s								
SONM	**Songino Array**	**53.49**	**359**	P	P		**P**	**07 13 14.8**	**+1.3**
	14nm,0.6s,baz=170,slow=6.8,SNR=14								
SONA1	**Songino Array**	**53.51**	**359**	*e*P	P		**P**	**07 13 14.7**	**+1.1**
ULN	**Ulaanbaatar**	**53.52**	**360**	*e*P	P		**P**	**07 13 14.5**	**+0.8**
	24nm,0.6s								
KSH	**Kashi**	**53.72**	**330**	P	P		**P**	**07 13 13.2**	**-2.1**
KSH				pP	pP			07 14 21.1	+1.2
KSH				PP	PP		**PP**	**07 15 25.6**	**+5.6**
KSH				sS	sS			07 22 24.0	+3.8
KSH				pmax	pmax				
	comp=Z,15nm,0.6s								
KSH				pmax	pmax				
	comp=Z,150nm,4.0s								
USRK	**Ussuriysk Ar.**	**54.53**	**22**	P	P		**P**	**07 13 20.7**	**-0.1**
	5.9nm,0.5s,baz=189,slow=5.9,SNR=12								
TARG	**Taragay, Kyrgy**	**54.58**	**333**	*e*P	P		**P**	**07 13 21.5**	**-0.2**
	7.5nm,1.1s								
KDJ	**Kajisay**	**55.18**	**333**	*e*P	P		**P**	**07 13 25.6**	**-0.2**
	15nm,0.7s								
WSAR	**Wadi Sarin**	**55.78**	**303**	P	P		**P**	**07 13 29.9**	**-0.2**
	4.8nm,0.8s,baz=228,slow=3.2,SNR=8.6								
KZA	**Kyzart**	**56.04**	**331**	P	P		**P**	**07 13 31.5**	**-0.6**
	SNR=12								
TKM2	**Tokmak 2**	**56.53**	**332**	P	P		**P**	**07 13 34.9**	**-0.4**
	SNR=5.5								
KBK	**Karagaybulak**	**56.62**	**332**	P	P		**P**	**07 13 35.7**	**-0.2**
	SNR=7.1								
AAK	**Ala-Archa**	**56.83**	**331**	P	P		**P**	**07 13 36.6**	**-0.7**
	1.6nm,0.4s,baz=139,slow=4.4,SNR=5.5								
AAK	**Ala-Archa**	**56.83**	**331**	*e*P	P		**P**	**07 13 36.7**	**-0.6**
	10nm,1.4s								
AML	**Almayashu**	**56.83**	**330**	P	P		**P**	**07 13 36.7**	**-0.9**
	SNR=9.0								
MK01	**Makanchi Array**	**56.98**	**340**	*e*P	P		**P**	**07 13 37.8**	**-0.4**
MK31	**Makanchi Array**	**57.00**	**340**	*e*P	P		**P**	**07 13 37.9**	**-0.4**
MKAR	**Makanchi Array**	**57.00**	**340**	P	P		**P**	**07 13 38.0**	**-0.3**
	34nm,0.4s,baz=153,slow=8.2,SNR=601								
MKAR	**Makanchi Array**	**57.00**	**340**	*e*P	P		**P**	**07 13 37.9**	**-0.3**
	289nm,0.4s								
MAKZ	**Makanchi**	**57.12**	**339**	*e*P	P		**P**	**07 13 38.6**	**-0.5**
	6.9nm,0.6s								
EKS2	**Erkin-Say**	**57.19**	**331**	P	P		**P**	**07 13 39.0**	**-0.8**
	SNR=9.1								
ERM	**Erimo**	**57.71**	**31**	*e*P	P		**P**	**07 13 43.1**	**-0.2**
	40nm,1.5s								
ASAJ	**Asahikawa**	**58.98**	**29**	*e*P	P		**P**	**07 13 51.8**	**-0.1**
	6.0nm,0.8s								
KURBB	**Kurchatov Arra**	**61.57**	**339**	P	P		**P**	**07 14 08.8**	**-0.5**
	10nm,0.5s,baz=156,slow=5.8,SNR=55								
KURK	**Kurchatov**	**61.62**	**340**	*e*P	P		**P**	**07 14 09.2**	**-0.4**
	25nm,1.1s								
CRZF	**Crozet Islands**	**62.47**	**220**	*e*P	P		**P**	**07 14 13.5**	**-1.8**
	94nm,1.1s								
ZAA0	**Zalesovo Array**	**62.58**	**345**	*e*P	P		**P**	**07 14 15.1**	**-0.7**
	9.8nm,0.9s								
ZALV	**Zalesovo Beam**	**62.58**	**345**	P	P		**P**	**07 14 14.9**	**-0.9**
	11nm,0.3s,baz=154,slow=6.6,SNR=46								
ZALV	**Zalesovo Beam**	**62.58**	**345**	*e*P	P		**P**	**07 14 14.6**	**-1.2**
BVAR	**Borovoye Array**	**66.53**	**337**	P	P		**P**	**07 14 40.7**	**-0.6**
	14nm,0.6s,baz=140,slow=8.8,SNR=59								
BRVK	**Borovoye**	**66.59**	**337**	*e*P	P		**P**	**07 14 41.5**	**-0.2**
	13nm,0.9s								
RAYN	**Ar Rayn**	**67.11**	**298**	*e*P	P		**P**	**07 14 44.8**	**-0.8**
	5.0nm,0.6s								
ABKAR	**Akbulak array**	**68.70**	**329**	*e*P	P		**P**	**07 14 54.0**	**-0.8**
YAK	**Yakutsk**	**69.86**	**11**	*e*P	P		**P**	**07 15 01.2**	**-0.4**
	33nm,1.0s								
BKZ	**Black Stump Fm**	**70.08**	**129**	*e*P	P		**P**	**07 15 03.9**	**+0.3**
	39nm,1.5s								
AKTO	**Aktyubinsk**	**70.41**	**329**	P	P		**P**	**07 15 04.1**	**-1.1**
	2.1nm,0.3s,baz=120,slow=5.1,SNR=9.5								
ARU	**Arti**	**73.82**	**334**	P	P		**P**	**07 15 24.7**	**-0.5**
	7.5nm,0.2s,baz=123,slow=4.6,SNR=6.4								
ARU	**Arti**	**73.82**	**334**	*e*P	P		**P**	**07 15 24.5**	**-0.7**
	8.1nm,1.0s								
KBZ	**Khabaz**	**76.14**	**318**	P	P		**P**	**07 15 38.0**	**-0.6**
	4.1nm,0.7s,baz=117,slow=2.7,SNR=7.9								
NRIK	**Noril'sk**	**76.30**	**353**	P	P		**P**	**07 15 38.1**	**-0.9**
	2.0nm,0.3s,baz=169,slow=0.6,SNR=4.8								
SYO	**Syowa Base**	**76.70**	**200**	⇑*e*P	P		**P**	**07 15 43.0**	**+1.7**
MBAR	**Mbarara**	**76.73**	**271**	*e*P	P		**P**	**07 15 43.5**	**+0.6**
	12nm,0.9s								
ASF	**Jabal al Asfar**	**76.89**	**305**	P	P		**P**	**07 15 43.7**	**+0.4**
	4.1nm,0.6s,baz=81,slow=6.1,SNR=11								
VNDA	**Vanda**	**76.97**	**170**	P	P		**P**	**07 15 44.6**	**+1.8**
	0.3nm,0.4s,baz=303,slow=4.6,SNR=5.7								
VNDA	**Vanda**	**76.97**	**170**	*e*P	P		**P**	**07 15 44.2**	**+1.4**
	3.5nm,1.3s								
LSZ	**Lusaka**	**78.15**	**256**	*e*P	P		**P**	**07 15 51.7**	**+1.1**
	7.2nm,0.6s								
MMAI	**Mount Meron Ar**	**78.33**	**305**	P	P		**P**	**07 15 51.7**	**+0.6**
	2.5nm,0.4s,baz=94,slow=9.5,SNR=4.0								
TIXI	**Tiksi**	**78.65**	**7**	*e*P	P		**P**	**07 15 50.6**	**-1.3**
	7.2nm,0.6s								
LBTB	**Lobatse**	**80.18**	**246**	*e*P	P		**P**	**07 16 02.0**	**+0.7**
	8.2nm,1.1s								
BOSA	**Boshof**	**80.38**	**242**	P	P		**P**	**07 16 03.4**	**+1.1**
	2.9nm,0.6s,baz=92,slow=3.1,SNR=10.0								
BOSA	**Boshof**	**80.38**	**242**	*e*P	P		**P**	**07 16 03.3**	**+1.0**
	7.7nm,1.1s								
BR131	**Keskin Array S**	**81.43**	**311**	*e*P	P		**P**	**07 16 06.9**	**-0.8**
BRTR	**Keskin Array B**	**81.43**	**311**	*e*P	P		**P**	**07 16 06.8**	**-0.9**
	2.5nm,0.7s,baz=133,slow=6.2,SNR=10								
AKASG	**Malin Array Be**	**87.11**	**321**	P	P		**P**	**07 16 33.8**	**-1.7**

ISCJB ***08*** *07:04:22.8±0.2, 5°.92S±0°.04×107°.40E±0°.03, h310km±2km, mb4.4/75, Error ellipse: s-maj=6.6km s-min=3.8km az=38.6*

DJA ***08*** *07:04:22.7±0.3, 6°S±5°×10°7E±°, h311km±4km, M4.7/25, mb4.8/16, mB5.2/12, MLv4.6/25, Mw(mB)4.6/12*

IDC ***08*** *07:04:23.5±0.4, 5°.81S×107°.42E, h300km±4km, mb3.9/27, mb1 4.0/28, mb1mx3.8/63, mbtmp4.6/28, Error ellipse: s-maj=14.3km s-min=7.3km az=57.0*

BJI ***08*** *07:04:23.1, 5°.90S×107°.40E, h308km, mb4.5/43, mB4.4/29*

1.0nm,0.5s,baz=78,slow=6.1,SNR=5.0
ALN Alexandroupoli 87.35 311 *e*P **P 07 16 36.4 -0.5**
3.0nm,0.6s
ATKA Atka Island 87.51 37 *e*P **P 07 16 36.7 -0.7**
5.2nm,0.8s
TSUM Tsumeb 87.98 251 *e*P **P 07 16 41.9 +1.4**
14nm,1.4s
MLR Muntele Rosu 88.23 316 P **P 07 16 39.9 -1.3**
0.5nm,0.7s,baz=116,slow=5.2,SNR=4.3
AGG Agios Georgios 89.89 309 *e*P **P 07 16 47.7 -1.2**
11nm,1.2s
LIT Litokhoron 89.91 310 *e*P **P 07 16 48.1 -0.8**
12nm,0.4s
UNV Unalaska Valle 92.37 36 *e*P **P 07 16 59.0 -0.9**
8.7nm,1.1s
ARCES ARCESS Array B 92.66 340 P **P 07 16 59.4 -1.6**
0.8nm,0.7s,baz=109,slow=5.4,SNR=6.0
TORD Torodi Ar. Bea 106.64 282 PKiKP **PKiKP 07 22 13.2 -0.7**
0.7nm,0.5s,baz=68,slow=1.6,SNR=10
YKA Yellowknife Ar 115.66 20 PKP **PKPdf 07 22 28.6 -1.0**
0.2nm,0.3s,baz=319,slow=2.8,SNR=4.6
K05A Summer Lake 123.78 41 *e*PKPdf **PKPdf 07 22 46.9 +0.7**
KVN Kaiserville 127.32 44 *e*PKPdf **PKPdf 07 22 53.6 +0.6**
ULM Lac du Bonnet 131.64 20 SKPbc **SKPbc 07 25 55.3 -2.2**
3.2nm,1.0s,baz=5.0,slow=6.7,SNR=5.1
LCMT Little Creek M 131.66 44 *e*PKPdf **PKPdf 07 23 00.3 -1.0**
RSSD Black Hills 132.96 31 *e*PKPdf **PKPdf 07 23 03.7 0.0**
NCB Newcomb 142.04 2 *e*PKPpre PKPpre 07 23 16.0
WMOK Wichita Mounta 142.43 37 *e*PKPdf **PKPdf 07 23 18.9 -2.1**
TX31 Lajitas Ar. Si 142.49 48 *e*PKPdf **PKPdf 07 23 18.3 -3.1**
TXAR Lajitas Array 142.49 48 PKP **PKPdf 07 23 19.2 -2.2**
0.2nm,0.4s,baz=215,slow=0.7,SNR=8.9
TXAR SKPbc **SKPbc 07 26 29.4 -0.9**
0.7nm,0.7s,baz=270,slow=1.5,SNR=6.8
HHAR Hobbs 143.94 30 *e*PKPdf PKPab 07 23 21.3 -0.5
M54A Oil Creek Stat 143.96 9 *e*PKPdf PKPab 07 23 21.3 -0.3
KSPA Keystone Colle 144.36 4 *e*PKPbc **PKPab 07 23 22.6 -0.5**
N54A Moraine State 144.44 10 *e*PKPbc **PKPab 07 23 22.7 -0.8**
ACSO Alum Creek Sta 144.54 14 *e*PKPbc **PKPab 07 23 23.3 -0.6**
JCT Junction City 144.57 43 *e*PKPbc **PKPdf 07 23 24.8 -0.2**
CPUP Villa Florida 144.74 204 PKP **PKPdf 07 23 26.2 +0.9**
3.6nm,0.5s,baz=152,slow=1.9,SNR=24
CPUP SKPbc **SKPbc 07 26 35.2 -0.4**
1.8nm,0.8s,baz=224,slow=2.9,SNR=3.7
CPUP Villa Florida 144.74 204 *e*PKPbc **PKPdf 07 23 25.8 +0.5**
CPUP SKPbc **SKPbc 07 26 35.2 -0.4**
V40A Witts Springs 144.87 29 *e*PKPbc **PKPdf 07 23 25.3 0.0**
N59A State Game Lan 145.00 4 *e*PKPdf **PKPdf 07 23 24.9 -0.5**
PAL Palisades 145.01 2 *e*PKPdf **PKPdf 07 23 24.7 -0.6**
SSPA Standing Stone 145.07 7 *e*PKPdf **PKPdf 07 23 24.9 -0.5**
PBMO Poplar Bluff 145.16 26 *e*PKPdf **PKPdf 07 23 25.1 -0.6**
W40A Ferguson Farm, 145.23 30 *e*PKPdf **PKPdf 07 23 25.0 -0.8**
O56A Blue Knob Stat 145.34 8 *e*PKPdf **PKPdf 07 23 25.5 -0.5**
WCI Wyandotte Cave 145.46 19 *e*PKPdf **PKPbc 07 23 26.6 -0.2**
MIAR Mount Ida 145.48 32 *e*PKPbc **PKPbc 07 23 26.8 -0.2**
MVL Millersville 145.86 5 *e*PKPdf **PKPbc 07 23 27.5 -0.4**
PSUB Penn St. - Bra 146.00 4 *e*PKPdf **PKPdf 07 23 27.6 +0.6**
WVT Waverly 146.78 23 *e*PKPbc **PKPbc 07 23 30.2 -0.5**
NATX Nacogdoches 146.97 36 *e*PKPbc **PKPbc 07 23 32.1 +0.8**
SPRD Spring Road, M 147.64 8 *e*PKPbc **PKPbc 07 23 32.4 -0.5**
PLAL Pickwick Lake 147.69 24 *e*PKPbc **PKPbc 07 23 32.1 -1.0**
IP01 Cuckoo 147.70 8 *e*PKPbc **PKPbc 07 23 32.1 -1.0**
TZTN Tazewell 147.86 17 *e*PKPbc **PKPbc 07 23 33.2 -0.5**
JSRW J. Sargeant Re 147.96 8 *e*PKPbc **PKPbc 07 23 33.3 -0.5**
341A Kurthwood 148.14 35 *e*PKPbc **PKPbc 07 23 35.1 +0.6**
SWET Sewanee 148.30 21 *e*PKPbc **PKPbc 07 23 33.7 -1.1**
CPCT Cooper Cave 148.57 19 *e*PKPbc **PKPbc 07 23 34.9 -0.6**
GO02 Mina Guanaco 149.01 185 *e*PKPbc **PKPbc 07 23 38.8 +1.6**
KMSC Kings Mountain 149.77 14 *e*PKPbc **PKPbc 07 23 37.3 -1.1**
LRAL Lakeview Retre 149.82 25 *e*PKPbc **PKPbc 07 23 37.8 -0.8**
PAULI Pauline 149.96 15 *e*PKPbc **PKPbc 07 23 37.8 -1.1**
JSC Jenkinsville 150.61 15 *e*PKPbc **PKPbc 07 23 40.5 0.0**
GOGA Godfrey 150.79 19 *e*PKPbc **PKPbc 07 23 40.9 0.0**
BRAL Brewton 151.40 27 *e*PKPbc **PKPbc 07 23 42.8 +0.4**

MEX 08 07:04:55.4±0.4, 15°.87N×98°.12W, h8km±10km, MD3.9, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.73**	**346**	*e*P	Pn	07 05 22.2	-3.7
TLIG				*e*S	Sn	07 05 45.1	-3.2
VHO	**Vista Hermosa**	**1.79**	**48**	*e*P	Pn	07 05 23.1	-3.6
VHO				*e*S	Sn	07 05 45.2	-4.5
HUIG	**Huatulco**	**1.94**	**93**	*e*P	Pn	07 05 25.2	-3.4
CAIG	**El Cayaco**	**2.37**	**300**	*e*P	Pn	07 05 31.7	-2.9
CAIG				*e*S	Sn	07 05 59.0	-4.8

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*ISK **08** 07:09:34.8, 37°.28N×28°.23E, h5km, ML2.1/7*
*ISCJB **08** 07:09:35.8±0.7, 37°.27N±0°.04×28°.23E±0°.04, h0km, Error ellipse: s-maj=6.6km s-min=3.6km az=39.6*
*DDA **08** 07:09:35.6, 37°.22N×28°.19E, h7km, Ml2.5, Suspected Mining explosion.*
*CSEM **08** 07:09:35.9±0.3, 37°.27N×28°.23E, h1km, ML2.1, Error ellipse: s-maj=8.4km s-min=4.1km az=33.0, Suspected Mining explosion.*

ISC 08 07:09:34.1±1.1, 37°.34N±0°.05×28°.31E±0°.04, h0km, n20, σ0^{s}65/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.20**	**186**	PG	**Pg**	**07 09 38.2**	**+0.2**
YER				SG	**Sg**	**07 09 41.6**	**+0.9**
YER	**Yerkesik**	**0.20**	**186**	*i* Pg	**Pg**	**07 09 38.2**	**+0.2**
YER				*e*Sg	**Sg**	**07 09 41.6**	**+0.9**
MLSB	**Milas**	**0.43**	**264**	PG	**Pg**	**07 09 42.9**	**+0.6**
MLSB	**Milas**	**0.43**	**264**	*e*Pg	**Pg**	**07 09 42.9**	**+0.6**
AYDN	**Tasoluk**	**0.47**	**313**	*i* P	**Pb**	**07 09 45.4**	**+0.1**
AYDN				*i* S	**Sb**	**07 09 52.9**	**0.0**
AYDN	**Tasoluk**	**0.47**	**313**	P	**Pb**	**07 09 45.4**	**+0.1**
AYDN				S	**Sb**	**07 09 52.9**	**0.0**
TURN	**Turunc**	**0.52**	**153**	PG	**Pb**	**07 09 45.4**	**-0.7**
TURN	**Turunc**	**0.52**	**153**	*i* P	**Pg**	**07 09 43.9**	**-0.2**
TURN				*i* S	**Sg**	**07 09 51.9**	**+1.1**
TURN	**Turunc**	**0.52**	**153**	P	**Pg**	**07 09 43.9**	**-0.2**
TURN	**Turunc**	**0.52**	**153**	*e*Pg	**Pb**	**07 09 45.4**	**-0.7**
TURN				S	**Sg**	**07 09 51.9**	**+1.1**
DALY	**Dalyan (Mu¨la**	**0.59**	**152**	PG	**Pb**	**07 09 47.1**	**-0.2**
DALY				SG	**Sb**	**07 09 56.1**	**-0.1**
DALY	**Dalyan (Mu¨la**	**0.59**	**152**	*e*Pg	**Pb**	**07 09 47.1**	**-0.2**
DALY				*e*Sg	**Sb**	**07 09 56.1**	**-0.1**
BDRM	**Kayabasi**	**0.74**	**249**	*i* P	**Pg**	**07 09 47.0**	**-1.4**
BDRM				*i* S	**Sg**	**07 09 57.4**	**-0.6**
BDRM	**Kayabasi**	**0.74**	**249**	P	**Pg**	**07 09 47.0**	**-1.4**
BDRM				S	**Sg**	**07 09 57.4**	**-0.6**
BODT	**Bodrum**	**0.84**	**251**	PG	**Pg**	**07 09 50.9**	**+0.6**
BODT	**Bodrum**	**0.84**	**251**	*e*Pg	**Pg**	**07 09 50.9**	**+0.6**
DAT	**Datca**	**0.84**	**224**	PG	**Pg**	**07 09 50.8**	**+0.5**
DAT				SG	**Sg**	**07 10 01.8**	**+0.6**
DAT	**Datca**	**0.84**	**224**	*e*Pg	**Pg**	**07 09 50.8**	**+0.5**
DAT				*e*Sg	**Sg**	**07 10 01.8**	**+0.6**
FETY	**Fethiye**	**0.94**	**138**	PG	**Pn**	**07 09 54.3**	**-0.3**
FETY	**Fethiye**	**0.94**	**138**	*e*Pg	**Pn**	**07 09 54.3**	**-0.3**

IDC 08 07:30:04.6±3.7, 28°.54S×177°.96W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.6/42, mbtmp3.8/3, Error ellipse: s-maj=74.9km s-min=18.0km az=64.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.72**	**177**	Pn	Pn	07 30 22.3	+0.4
RAO				Sn	Sn	07 30 33.8	+0.1
STKA	**Stephens Creek**	**34.97**	**254**	P	P	07 36 59.0	+0.4
ASAR	**Alice Springs**	**43.28**	**265**	P	P	07 38 07.4	-0.8
WRA	**Warramunga Arr**	**44.09**	**270**	P	P	07 38 14.9	+0.1
FINES	**FINESS Array B**	**143.41**	**341**	PKP	PKPbc	07 49 38.8	+1.3

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*KRNET **08** 08:00:58.0±0.1, 40°.94N×72°.86E, h16km, mb3.0*
*NNC **08** 08:00:58.5±1.4, 40°.97N×73°.01E, h0km, mb3.1, mpv3.0, Error ellipse: s-maj=29.1km s-min=6.9km az=74.0*

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*KNET **08** 08:00:59.9±0.6, 40°.98N×73°.13E, h0km, ml2.4, Error ellipse: s-maj=5.9km s-min=3.7km az=66.0*
*SOME **08** 08:01:01.5, 41°.03N×72°.90E, h15km*

ISC 08 08:00:57.9±1.3, 40°.94N±0°.03×73°.00E±0°.03, h3km±12km, n41, σ1^{s}27/73, 34C-11D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**0.39**	**358**	⇑*i*P	**Pg**	**08 01 05.6**	**+0.2**
ARSB				⇑*i*S	**Sg**	**08 01 11.6**	**+1.2**
SFK	**Sufi-Kurgan**	**1.00**	**157**	P	**Pb**	**08 01 18.8**	**+0.8**
SFK				S	**Sb**	**08 01 32.0**	**+0.3**
SFK	**Sufi-Kurgan**	**1.00**	**157**	⇑*i*P	**Pb**	**08 01 17.8**	**-0.2**
SFK				⇑*i*S	**Sb**	**08 01 31.7**	**0.0**
TOKL	**Toktogul**	**1.00**	**355**	⇑*i*P	**Pb**	**08 01 17.1**	**-0.9**
TOKL				⇑*i*S	**Sb**	**08 01 30.6**	**-1.1**
AML	**Almayashu**	**1.30**	**24**	⇓P	**Pn**	**08 01 23.0**	**-0.3**
AML	**Almayashu**	**1.30**	**24**	⇑*i*P	**Pn**	**08 01 22.9**	**-0.4**
AML				⇑*i*S	**Sg**	**08 01 41.2**	**+1.4**
MNAS	**Manas**	**1.59**	**347**	⇑P	**Pb**	**08 01 28.8**	**+0.8**
MNAS				S	**Sb**	**08 01 47.7**	**-0.9**
MNAS	**Manas**	**1.59**	**347**	⇓*i*P	**Pn**	**08 01 26.8**	**-0.3**
MNAS				⇓*i*S	**Sb**	**08 01 48.2**	**-0.4**
UCH	**Uchtor**	**1.72**	**41**	⇑P	**Pb**	**08 01 31.0**	**+0.6**
UCH				⇑S	**Sg**	**08 01 55.3**	**+2.1**
UCH	**Uchtor**	**1.72**	**41**	⇑*e*P	**Pb**	**08 01 31.0**	**+0.6**
UCH				⇑*i*S	**Sg**	**08 01 54.7**	**+1.5**
MRKS	**Merke**	**1.81**	**5**	*e*P	**Pb**	**08 01 33.0**	**+1.3**
MRKS				*e*S	**Sb**	**08 01 55.5**	**+0.6**
EKS2	**Erkin-Say**	**1.82**	**18**	⇑P	**Pg**	**08 01 33.3**	**+0.6**
EKS2				⇑S	**Sg**	**08 01 59.0**	**+2.7**
EKS2	**Erkin-Say**	**1.82**	**18**	⇑*i*P	**Pb**	**08 01 32.4**	**+0.5**
EKS2				⇑*i*S	**Sg**	**08 01 57.0**	**+0.7**
BTK	**Batken**	**1.88**	**243**	⇓*i*P	**Pn**	**08 01 30.8**	**-0.2**
BTK				⇓*i*S	**Sn**	**08 01 55.1**	**-0.1**
AAK	**Ala-Archa**	**2.03**	**33**	Pn	**Pb**	**08 01 36.7**	**+1.1**
AAK				Lg	Lg	08 02 05.3	
AAK	**Ala-Archa**	**2.03**	**33**	⇑P	**Pb**	**08 01 36.9**	**+1.4**
AAK	**Ala-Archa**	**2.03**	**33**	⇑*i*P	**Pb**	**08 01 35.8**	**+0.2**
AAK				⇑*i*S	**Sg**	**08 02 02.7**	**-0.6**
KZA	**Kyzart**	**2.04**	**55**	⇓P	**Pb**	**08 01 36.6**	**+0.8**
KZA	**Kyzart**	**2.04**	**55**	⇑*i*P	**Pb**	**08 01 36.4**	**+0.6**
KZA				⇑*i*S	**Sg**	**08 02 04.0**	**+0.6**
KBK	**Karagaybulak**	**2.25**	**40**	⇑P	**Pb**	**08 01 40.7**	**+1.4**
KBK	**Karagaybulak**	**2.25**	**40**	⇓*i*P	**Pb**	**08 01 39.6**	**+0.3**
KBK				⇓*i*S	**Sb**	**08 02 08.5**	**+0.9**
NRN	**Naryn**	**2.32**	**77**	⇓*i*P	**Pb**	**08 01 39.5**	**-1.0**
NRN				⇓*i*S	**Sb**	**08 02 10.7**	**+1.0**
CHMS	**Chumysh**	**2.44**	**32**	⇑*i*P	**Pb**	**08 01 41.2**	**-1.2**
CHMS				⇑*i*S	**Sb**	**08 02 13.1**	**+0.2**
IUG	**Iuzhnay**	**2.53**	**299**	*e*P	**Pb**	**08 01 42.9**	**-1.1**
IUG				*e*S	**Sn**	**08 02 12.5**	**+1.1**
USP	**Ospenovka**	**2.58**	**25**	⇑P	**Pb**	**08 01 44.1**	**-0.7**
USP	**Ospenovka**	**2.58**	**25**	⇑*e*P	**Pb**	**08 01 43.1**	**-1.7**
USP				⇑*i*S	**Sb**	**08 02 15.5**	**-1.5**
BOOM	**Boomskoye usch**	**2.69**	**54**	⇑*i*P	**Pb**	**08 01 45.3**	**-1.5**
BOOM				⇑*i*S	**Sb**	**08 02 19.4**	**-0.9**
ULHL	**Ulahol**	**2.76**	**61**	⇑*i*P	**Pn**	**08 01 46.0**	**+2.8**
ULHL				⇑*i*S	**Sb**	**08 02 21.0**	**-1.3**
TKM2	**Tokmak 2**	**2.77**	**44**	Pg	**Pb**	**08 01 46.7**	**-1.5**
TKM2				Lg	Lg	08 02 25.2	
TKM2	**Tokmak 2**	**2.77**	**44**	⇓P	**Pb**	**08 01 47.3**	**-0.9**
TKM2	**Tokmak 2**	**2.77**	**44**	⇑*i*P	**Pb**	**08 01 46.2**	**-2.0**
TKM2				⇑*i*S	**Sb**	**08 02 21.1**	**-1.5**
KK31	**Karatay Array**	**2.85**	**320**	Pg	**Pb**	**08 01 49.3**	**0.0**
KK31				Lg	Lg	08 02 27.4	
KST	**Kastek**	**3.05**	**45**	*e*P	**Pg**	**08 01 55.7**	**-0.7**
KST				*e*S	**Sg**	**08 02 34.2**	**-1.7**
DGS	**Degeres**	**3.09**	**41**	*e*P	**Pg**	**08 01 57.2**	**+0.1**
DGS				*e*S	**Sg**	**08 02 37.5**	**+0.3**
BRLS	**Borolday**	**3.15**	**313**	*e*P	**Pb**	**08 01 54.6**	**+0.1**
BRLS				*e*S	**Sb**	**08 02 33.2**	**-0.1**
IZV	**Izvestkoviy**	**3.41**	**51**	*e*P	**Pg**	**08 02 03.2**	**-0.1**
IZV				*e*S	**Sg**	**08 02 48.2**	**+0.7**
TNSS	**Tian-Shan**	**3.62**	**53**	*e*P	**Pg**	**08 02 06.4**	**-0.7**
TNSS				*e*S	**Sg**	**08 02 53.7**	**-0.4**
KOTS	**Kotyrbulak**	**3.83**	**52**	*e*P	**Pg**	**08 02 10.6**	**-0.6**
KOTS				*e*S	**Sg**	**08 03 00.1**	**-0.7**
KTBS	**Karatobe**	**3.89**	**43**	*e*P	**Pb**	**08 02 11.0**	**-1.5**
KTBS				*e*S	**Sg**	**08 03 01.7**	**-1.2**
CHKK	**Chushkaly**	**4.15**	**44**	*e*P	**Pb**	**08 02 15.3**	**+3.7**
CHKK				*e*S	**Sg**	**08 03 07.8**	**-3.3**
ARXS	**Arharly**	**4.84**	**46**	*e*P	**Pg**	**08 02 28.6**	**-2.1**
ARXS				*e*S	**Sg**	**08 03 31.1**	**-2.2**

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*NNC **08** 08:10:55.8±1.1, 40°.94N×72°.86E, h0km, mb3.5, mpv3.3, Error ellipse: s-maj=20.4km s-min=4.4km az=71.0*
*KRNET **08** 08:10:56.6±0.1, 40°.95N×72°.86E, h17km, mb3.2*
*SOME **08** 08:10:57.9, 41°.02N×72°.83E, h0km*
*KNET **08** 08:10:58.1±1.1, 40°.82N×73°.41E, h0km, ml2.8, Error ellipse: s-maj=16.7km s-min=7.4km az=132.0*

ISC 08 08:10:57.7±0.8, 40°.96N±0°.03×72°.86E±0°.03, h10km, n45, σ1^{s}81/82, 40C-15D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**0.38**	**14**	⇑*i*P	**Pg**	**08 11 03.9**	**-1.4**
ARSB				⇑*i*S	**Sg**	**08 11 09.9**	**-0.5**
TOKL	**Toktogul**	**0.98**	**0**	⇑*e*P	**Pg**	**08 11 15.4**	**-1.3**
TOKL				⇑*i*S	**Sg**	**08 11 29.2**	**-0.3**
SFK	**Sufi-Kurgan**	**1.06**	**152**	⇑P	**Pg**	**08 11 17.0**	**-1.1**
SFK				⇑S	**Sg**	**08 11 30.1**	**-1.8**
SFK	**Sufi-Kurgan**	**1.06**	**152**	⇑*i*P	**Pg**	**08 11 16.2**	**-1.9**
SFK				⇑*i*S	**Sg**	**08 11 31.1**	**-0.8**
AML	**Almayashu**	**1.33**	**28**	⇓P	**Pn**	**08 11 21.4**	**-1.4**
AML	**Almayashu**	**1.33**	**28**	⇑*i*P	**Pn**	**08 11 21.3**	**-1.4**
AML				⇑*i*S	**Sb**	**08 11 40.0**	**-0.3**
MNAS	**Manas**	**1.55**	**350**	⇓P	**Pn**	**08 11 25.4**	**-0.1**
MNAS				⇓S	**Sn**	**08 11 46.2**	**+0.3**
MNAS	**Manas**	**1.55**	**350**	⇑*i*P	**Pn**	**08 11 25.2**	**-0.4**
MNAS				⇑*i*S	**Sb**	**08 11 46.4**	**-0.1**
UCH	**Uchtor**	**1.78**	**44**	⇑P	**Pn**	**08 11 29.2**	**+0.3**
UCH				⇑S	**Sg**	**08 11 54.0**	**-0.9**
UCH	**Uchtor**	**1.78**	**44**	⇓*i*P	**Pn**	**08 11 29.4**	**+0.5**
UCH				⇓*i*S	**Sb**	**08 11 53.3**	**+0.1**
BTK	**Batken**	**1.80**	**241**	⇑*i*P	**Pn**	**08 11 29.3**	**+0.5**
BTK				⇑*i*S	**Sb**	**08 11 53.9**	**+0.6**
MRKS	**Merke**	**1.81**	**9**	*e*P	**Pb**	**08 11 31.3**	**+0.3**
MRKS				*e*S	**Sg**	**08 11 55.0**	**-0.9**
EKS2	**Erkin-Say**	**1.84**	**22**	⇓P	**Pb**	**08 11 31.8**	**+0.3**
EKS2	**Erkin-Say**	**1.84**	**22**	⇑*i*P	**Pn**	**08 11 30.1**	**+0.6**
EKS2				⇑*i*S	**Sb**	**08 11 55.2**	**+0.6**
AAK	**Ala-Archa**	**2.08**	**35**	⇑Pg	**Pb**	**08 11 35.0**	**-0.6**
AAK				⇑Lg	Lg	08 12 02.6	
AAK	**Ala-Archa**	**2.08**	**35**	⇑P	**Pb**	**08 11 35.3**	**-0.4**
AAK				⇓S	**Sg**	**08 12 03.8**	**-0.7**
AAK	**Ala-Archa**	**2.08**	**35**	⇑*i*P	**Pn**	**08 11 34.0**	**+1.2**
AAK				⇑*i*S	**Sb**	**08 12 00.8**	**-0.8**
KZA	**Kyzart**	**2.12**	**57**	P	**Pb**	**08 11 35.0**	**-1.4**
KZA				⇑S	**Sn**	**08 12 00.2**	**+0.1**
KZA	**Kyzart**	**2.12**	**57**	⇑*i*P	**Pn**	**08 11 34.0**	**+0.5**
KZA				⇑*i*S	**Sb**	**08 12 01.8**	**-1.1**
KBK	**Karagaybulak**	**2.31**	**42**	⇑P	**Pb**	**08 11 39.1**	**-0.4**
KBK				⇓S	**Sg**	**08 12 11.1**	**-0.8**
KBK	**Karagaybulak**	**2.31**	**42**	⇑*i*P	**Pn**	**08 11 36.9**	**+0.9**
KBK				⇑*i*S	**Sb**	**08 12 06.7**	**-1.5**
NRN	**Naryn**	**2.42**	**78**	⇑*e*P	**Pn**	**08 11 37.7**	**+0.1**
NRN				⇑*e*S	**Sn**	**08 12 08.7**	**+1.3**
IUG	**Iuzhnay**	**2.43**	**300**	*e*P	**Pb**	**08 11 40.6**	**-1.0**
IUG				*e*S	**Sb**	**08 12 11.3**	**-0.4**
CHMS	**Chumysh**	**2.48**	**34**	⇑P	**Pb**	**08 11 40.6**	**-1.8**
CHMS	**Chumysh**	**2.48**	**34**	⇑*i*P	**Pn**	**08 11 39.2**	**+1.0**
CHMS				⇑*i*S	**Sn**	**08 12 10.5**	**+1.9**
USP	**Ospenovka**	**2.61**	**27**	⇑P	**Pn**	**08 11 42.1**	**+2.1**
USP	**Ospenovka**	**2.61**	**27**	⇑*i*P	**Pn**	**08 11 41.3**	**+1.3**
USP				⇑*i*S	**Sn**	**08 12 13.5**	**+1.7**
BOOM	**Boomskoye usch**	**2.77**	**55**	⇓*i*P	**Pn**	**08 11 43.3**	**+1.0**
BOOM				⇓*i*S	**Sn**	**08 12 17.2**	**+1.3**
KK31	**Karatay Array**	**2.77**	**322**	Pg	**Pn**	**08 11 43.5**	**+1.3**
KK31				⇑Lg	Lg	08 12 23.0	
TKM2	**Tokmak 2**	**2.83**	**45**	⇑Pg	**Pn**	**08 11 45.2**	**+2.0**
TKM2				⇓Lg	Lg	08 12 24.6	
TKM2	**Tokmak 2**	**2.83**	**45**	P	**Pn**	**08 11 45.8**	**+2.5**
ULHL	**Ulahol**	**2.84**	**62**	⇓*i*P	**Pn**	**08 11 44.6**	**+1.2**
ULHL				⇓*i*S	**Sn**	**08 12 19.4**	**+1.6**
BRLS	**Borolday**	**3.06**	**314**	*e*P	**Pb**	**08 11 53.0**	**+0.7**
BRLS				*e*S	**Sb**	**08 12 32.7**	**+2.9**
KST	**Kastek**	**3.12**	**47**	*e*P	**Pb**	**08 11 53.2**	**-0.1**
KST				⇓*i*S	**Sb**	**08 12 33.1**	**+1.7**
DGS	**Degeres**	**3.15**	**43**	*e*P	**Pb**	**08 11 54.2**	**+0.3**
DGS				*e*S	**Sb**	**08 12 35.2**	**+2.9**
MTBS	**Maitube**	**3.43**	**50**	*e*P	**Pb**	**08 11 59.6**	**+0.9**
MTBS				*e*S	**Sb**	**08 12 43.3**	**+2.8**
IZV	**Izvestkoviy**	**3.49**	**52**	*e*P	**Pb**	**08 12 01.6**	**+2.0**
IZV				*e*S	**Sg**	**08 12 46.8**	**-2.8**
TNSS	**Tian-Shan**	**3.69**	**54**	*e*P	**Pb**	**08 12 04.8**	**+1.6**
TNSS				⇑*i*S	**Sg**	**08 12 52.5**	**-3.7**
MDOK	**Medeo**	**3.82**	**53**	*e*P	**Pb**	**08 12 06.5**	**+1.2**
MDOK				*e*S	**Sb**	**08 12 55.0**	**+3.4**
KOTS	**Kotyrbulak**	**3.90**	**53**	*e*P	**Pb**	**08 12 07.7**	**+1.1**
KOTS				*e*S	**Sg**	**08 12 58.9**	**-4.0**
KUU	**Kurty**	**3.91**	**40**	*e*P	**Pb**	**08 12 07.9**	**+1.3**
KUU				⇓*i*S	**Sg**	**08 12 58.8**	**-4.3**
KTBS	**Karatobe**	**3.95**	**45**	*e*P	**Pb**	**08 12 09.0**	**+1.5**
KTBS				*e*S	**Sg**	**08 12 60.0**	**-4.6**
CHKK	**Chushkaly**	**4.21**	**45**	*e*P	**Pb**	**08 12 14.4**	**+2.5**
CHKK				*e*S	**Sg**	**08 13 09.7**	**-3.2**
ARXS	**Arharly**	**4.90**	**47**	*e*P	**Pb**	**08 12 27.0**	**+3.3**

3.6nm,0.3s
ARXS eS **Sg** **08 13 32.4 -2.7**
10nm,0.7s
MNBS Baschi 5.15 51 eP **Pb** **08 12 31.9 +4.0**
2.5nm,0.4s
MNBS eS **Sg** **08 13 40.0 -2.9**
4.0nm,0.7s

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*NIED **08** 08:13:00, 41˚.60N×143˚.70E, h29km, Mw4.0 Best double couple: M0=1.02000×10^15 NP1:φ=143.00000°, δ=28.00000°, λ=-85.00000°. NP2:φ=318.00000°, δ=62.00000°, λ=-93.00000°.*
*ISCJB **08** 08:13:23.0±0.5, 41˚.52N±0˚.04×143˚.72E±0˚.08, h31km, mb3.9/15, MS3.5/4, Error ellipse: s-maj=8.8km s-min=5.9km az=14.6*
*JMA **08** 08:13:25.4±0.2, 41˚.65N×143˚.68E, h33km±3km, M3.9*
*IDC **08** 08:13:25.3±5.1, 41˚.58N×143˚.60E, h33km±39km, mb3.7/15, mb1 3.9/7, mb1mx3.6/73, mbtmp3.9/17, ML3.5/2, MS3.3/10, Ms1 3.3/10, ms1mx2.9/73, Error ellipse: s-maj=19.8km s-min=15.0km az=106.0*
ISC 08 08:13:25.1±0.7, 41˚.63N±0˚.06×143˚.67E±0˚.08, h31km, n37, σ0§67/29, mb4.0/15, MS3.5/4, 2C, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEM	**Erimo**	**0.54**	**316**	⇑P	**Pb**	**08 13 35.8**	**-0.4**
JEM				eS	**Sn**	**08 13 44.4**	**-0.3**
JNBK	**Urakawa-nobuka**	**0.94**	**314**	P	**Pb**	**08 13 43.1**	**+0.2**
JCH	**Churui**	**1.01**	**347**	P	**Pn**	**08 13 43.3**	**+0.2**
JOB	**Onbets**	**1.28**	**6**	P	**Pn**	**08 13 47.1**	**+0.3**
JBT2	**Biratori 2**	**1.50**	**320**	P	**Pb**	**08 13 51.3**	**-1.0**
JAK	**Akkeshi**	**1.57**	**29**	P	**Pn**	**08 13 50.3**	**-0.4**
JAR	**Ashorobuto**	**1.67**	**3**	⇑P	**Pn**	**08 13 52.1**	**-0.1**
ASAJ	**Asahikawa**	**2.61**	**343**	Pn	**Pn**	**08 14 06.7**	**+1.6**
	4.3nm,0.3s,baz=178,slow=13,SNR=15						
ASAJ				LR	LR	08 15 22.8	
	comp=Z,221nm,20.7s,baz=172,slow=44						
MAT	**Matsushiro**	**6.62**	**222**	P	**Pn**	**08 15 00.2**	**0.0**
MAT				S	**Sn**	**08 16 15.2**	**+0.6**
MJAR	**Matsushiro Arr**	**6.62**	**222**	Pn	**Pn**	**08 15 00.4**	**+0.2**
	1.8nm,0.3s,baz=30,slow=13,SNR=14						
MJAR				LR	LR	08 18 03.5	
	comp=Z,239nm,19.2s,baz=45,slow=42						
KSRS	**Korea Array**	**12.85**	**256**	LR	LR	08 21 20.2	
	comp=Z,93nm,18.0s,baz=62,slow=37						
JNU	**Nakatsue**	**13.24**	**234**	LR	LR	08 21 54.2	
	comp=Z,68nm,18.9s,baz=116,slow=39						
MA2	**Magadan**	**18.51**	**11**	LR	LR	08 25 38.1	
	comp=Z,72nm,18.3s,baz=156,slow=40						
JOW	**Kunigami**	**19.44**	**225**	LR	LR	08 25 01.4	
	comp=Z,110nm,20.8s,baz=14,slow=36						
SEY	**Seymchan**	**21.95**	**11**	P	**P**	**08 18 14.6**	**-1.2**
	2.3nm,0.8s,baz=183,slow=12,SNR=5.7						
SONM	**Songino Array**	**27.00**	**296**	P	**P**	**08 19 03.8**	**-0.4**
	1.6nm,0.7s,baz=87,slow=9.1,SNR=3.6						
H11N2	**WAKE ISLAND Hy 29.42**	**131**		T	T	08 50 20.9	
	baz=324,slow=76,SNR=665						
H11N1	**WAKE ISLAND Hy 29.43**	**131**		T	T	08 50 22.4	
	baz=324,slow=76,SNR=745						
H11N3	**WAKE ISLAND Hy 29.44**	**131**		T	T	08 50 22.9	
	baz=324,slow=76,SNR=613						
H11S1	**WAKE ISLAND Hy 30.29**	**133**		T	T	08 51 26.0	
	baz=325,slow=76,SNR=715						
H11S3	**WAKE ISLAND Hy 30.29**	**133**		T	T	08 51 26.7	
	baz=325,slow=76,SNR=490						
H11S2	**WAKE ISLAND Hy 30.31**	**133**		T	T	08 51 26.4	
	baz=325,slow=76,SNR=502						
ZALV	**Zalesovo Beam**	**40.27**	**308**	P	**P**	**08 20 58.7**	**-0.2**
	0.7nm,0.5s,baz=91,slow=5.9,SNR=4.3						
ZALV				PcP	**PcP**	**08 23 02.5**	**+0.4**
	0.5nm,0.3s,baz=23,slow=4.7,SNR=4.0						
MKAR	**Makanchi Array**	**43.31**	**298**	P	**P**	**08 21 23.8**	**-0.2**
	1.2nm,0.6s,baz=84,slow=9.4,SNR=13						
MKAR				PcP	**PcP**	**08 23 12.8**	**+0.5**
	0.3nm,0.5s,baz=46,slow=6.2,SNR=3.2						
CMAR	**Chiang Mai Arr**	**44.45**	**253**	LR	LR	08 42 15.7	
	comp=Z,25nm,18.6s,baz=75,slow=39						
KURBB	**Kurchatov Arra**	**44.69**	**305**	P	**P**	**08 21 34.7**	**-0.2**
	1.4nm,0.4s,baz=76,slow=8.7,SNR=8.1						
ILAR	**Eielson Array**	**44.71**	**35**	P	**P**	**08 21 35.3**	**+0.5**
	0.6nm,0.6s,baz=272,slow=6.4,SNR=9.5						
BVAR	**Borovoye Array**	**48.87**	**310**	P	**P**	**08 22 07.4**	**-0.2**
	0.7nm,0.4s,baz=95,slow=10,SNR=4.9						
INK	**Inuvik**	**49.52**	**29**	P	**P**	**08 22 13.6**	**+1.3**
	1.5nm,0.7s,baz=295,slow=4.5,SNR=3.7						
SPITS	**Spitsbergen Ar**	**56.37**	**349**	LR	LR	08 47 38.1	
	comp=Z,38nm,20.2s,baz=95,slow=36						
RES	**Resolute Bay**	**57.72**	**16**	P	**P**	**08 23 12.3**	**+0.1**
	0.9nm,0.6s,baz=342,slow=5.6,SNR=5.3						
WRA	**Warramunga Arr**	**61.86**	**190**	P	**P**	**08 23 40.1**	**-1.2**
	1.9nm,0.8s,baz=7.1,slow=6.8,SNR=28						
FINES	**FINESS Array B**	**65.57**	**332**	P	**P**	**08 24 04.8**	**-0.5**
	1.6nm,0.4s,baz=50,slow=7.0,SNR=22						
FINES				LR	LR	08 56 32.5	
	comp=Z,43nm,18.7s,baz=31,slow=39						
ASAR	**Alice Springs**	**65.59**	**190**	P	**P**	**08 24 05.4**	**-0.5**
	1.0nm,0.8s,baz=8.9,slow=7.2,SNR=10						
HFS	**Hagfors**	**70.62**	**336**	P	**P**	**08 24 36.8**	**-0.2**
	0.8nm,0.4s,baz=45,slow=6.5,SNR=6.7						
HFS				LR	LR	08 58 06.3	
	comp=Z,27nm,19.9s,baz=30,slow=38						
PDAR	**Pinedale Array**	**73.24**	**47**	P	**P**	**08 24 54.0**	**+0.6**
	0.4nm,0.6s,baz=270,slow=3.0,SNR=5.0						
TXAR	**Lajitas Array**	**85.97**	**54**	P	**P**	**08 26 03.2**	**+0.7**
	0.4nm,0.6s,baz=284,slow=3.4,SNR=7.4						

IDC 08 08:22:25.5±37.0, 20˚.38S×179˚.25W, h650km±310km, mb3.1/4, mb1 3.2/4, mb1mx2.7/49, mbtmp4.2/4, Error ellipse: s-maj=345.7km s-min=108.4km az=75.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**32.34**	**264**	P	P	08 28 05.2	+0.5
	3.0nm,0.4s,baz=89,slow=10,SNR=8.6						
STKA	**Stephens Creek**	**36.79**	**244**	P	P	08 28 41.1	-0.2
	1.2nm,0.7s,baz=88,slow=12,SNR=3.6						
ASAR	**Alice Springs**	**43.41**	**257**	P	P	08 29 34.0	+0.2
	2.8nm,0.5s,baz=96,slow=7.7,SNR=51						
ASAR				PcP	PcP	08 31 06.8	-0.2
	0.2nm,0.5s,baz=94,slow=3.9,SNR=4.3						
WRA	**Warramunga Arr**	**43.46**	**262**	P	P	08 29 34.1	-0.1
	1.7nm,0.6s,baz=97,slow=7.4,SNR=42						

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*NIED **08** 08:29:00, 38˚.70N×144˚.70E, h5km, Mw3.8 Best double couple: M0=4.99000×10^14 NP1:φ=227.00000°, δ=7.00000°, λ=-49.00000°. NP2:φ=5.00000°, δ=85.00000°, λ=-94.00000°.*
*IDC **08** 08:29:00.5±0.9, 38˚.53N×144˚.90E, h0km, mb3.6/7, mb1 3.9/10, mb1mx3.6/67, mbtmp3.7/10, ML3.5/3, MS3.2/2, Ms1 3.2/2, ms1mx2.4/69, Error ellipse: s-maj=27.0km s-min=19.8km az=85.0*
*ISCJB **08** 08:29:03.9±0.7, 38˚.78N±0˚.04×144˚.74E±0˚.06, h35km, mb3.7/7, MS3.1/2, Error ellipse: s-maj=6.7km s-min=5.8km az=25.9*
*JMA **08** 08:29:03.9±0.2, 38˚.72N×144˚.74E, h52km, M3.9*
ISC 08 08:29:05.6±0.9, 38˚.71N±0˚.06×144˚.74E±0˚.07, h35km, n28, σ1§88/34, mb3.7/7, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.42**	**280**	P	**Pn**	**08 29 42.2**	**-0.5**
MIYJ	**Miyakonagasawa**	**2.43**	**292**	P	**Pn**	**08 29 42.1**	**-0.7**
MIYJ				eS	**Sn**	**08 30 10.1**	**-1.1**
JMK	**Ichinoseki**	**2.76**	**276**	P	**Pn**	**08 29 47.1**	**-0.2**
JMK				eS	**Sn**	**08 30 18.9**	**-0.4**
JOM	**Ohasama**	**2.79**	**287**	P	**Pn**	**08 29 47.5**	**-0.2**
JANG	**Nango**	**2.99**	**305**	P	**Pn**	**08 29 49.4**	**-1.2**
JYK	**Kaneyama**	**3.42**	**275**	P	**Pn**	**08 29 56.8**	**+0.3**
JYK				eS	**Sn**	**08 30 36.7**	**+0.8**
JOT	**Ohata**	**3.89**	**315**	P	**Pn**	**08 30 02.4**	**-0.5**
JOT				eS	**Sn**	**08 30 46.0**	**-1.3**
JCH	**Churui**	**4.04**	**345**	P	**Pn**	**08 30 03.6**	**-1.3**
JCH				eS	**Sn**	**08 30 49.0**	**-2.0**
JKB	**Kayabe**	**4.25**	**319**	P	**Pn**	**08 30 07.8**	**-0.1**
JKB				eS	**Sn**	**08 30 55.3**	**-0.9**
NEM2	**Nemuro 2**	**4.71**	**9**	P	**Pn**	**08 30 11.7**	**-2.5**
NEM2				eS	**Sn**	**08 31 02.6**	**-5.0**
JTKR	**Abashiri--Toko**	**5.29**	**354**	P	**Pn**	**08 30 21.5**	**-0.6**
JTKR				eS	**Sn**	**08 31 19.1**	**-2.8**
JRY	**Ryogami san**	**5.37**	**242**	P	**Pn**	**08 30 21.4**	**-1.8**
JRY				eS	**Sn**	**08 31 18.4**	**-5.4**
JHR	**Hokuryu**	**5.52**	**337**	eS	**Sn**	**08 31 27.7**	**+0.3**
MJAR	**Matsushiro Arr**	**5.61**	**249**	Pn	**Pn**	**08 30 26.5**	**-0.1**
	5.1nm,0.3s,baz=59,slow=9.3,SNR=32						
MAT	**Matsushiro**	**5.61**	**249**	P	**Pn**	**08 30 26.7**	**+0.1**
MAT				S	**Sn**	**08 31 26.6**	**-3.3**
ASAJ	**Asahikawa**	**5.64**	**344**	Pn	**Pn**	**08 30 28.3**	**+1.4**
	1.3nm,0.3s,baz=200,slow=9.8,SNR=5.5						
USRK	**Ussuriysk Ar.**	**11.02**	**304**	Pn	**Pn**	**08 31 42.4**	**+1.7**
	0.7nm,0.3s,baz=101,slow=16,SNR=7.4						
H11N2	**WAKE ISLAND Hy 26.93**	**128**		T	T	09 02 38.7	
	baz=320,slow=75,SNR=7.8						
H11N1	**WAKE ISLAND Hy 26.94**	**128**		T	T	09 02 39.4	
	baz=320,slow=75,SNR=12						
H11N3	**WAKE ISLAND Hy 26.95**	**128**		T	T	09 02 41.1	
	baz=320,slow=75,SNR=8.7						
SONM	**Songino Array**	**29.11**	**301**	LR	LR	08 46 37.4	
	comp=Z,33nm,19.1s,baz=222,slow=36						
MKAR	**Makanchi Array**	**45.48**	**301**	P	**P**	**08 37 22.7**	**+1.4**
	0.7nm,0.9s,baz=82,slow=9.9,SNR=6.1						
MKAR				LR	LR	08 57 36.8	
	comp=Z,31nm,18.4s,baz=55,slow=38						
ILAR	**Eielson Array**	**46.67**	**33**	P	**P**	**08 37 31.0**	**+0.7**
	0.3nm,0.6s,baz=274,slow=7.6,SNR=5.2						
KURBB	**Kurchatov Arra**	**47.06**	**307**	P	**P**	**08 37 35.1**	**+1.5**
	0.5nm,0.5s,baz=79,slow=8.3,SNR=4.4						
WRA	**Warramunga Arr**	**59.15**	**191**	P	**P**	**08 39 01.6**	**-1.2**
	1.4nm,0.7s,baz=9.9,slow=6.9,SNR=10.0						
ASAR	**Alice Springs**	**62.87**	**191**	P	**P**	**08 39 27.5**	**-0.6**
	0.5nm,0.8s,baz=8.9,slow=7.7,SNR=3.9						
FINES	**FINESS Array B**	**68.54**	**333**	P	**P**	**08 40 05.8**	**+1.6**
	0.9nm,0.7s,baz=10,slow=8.5,SNR=3.3						
TXAR	**Lajitas Array**	**87.02**	**54**	P	**P**	**08 41 48.2**	**+0.5**
	0.2nm,0.6s,baz=270,slow=1.3,SNR=3.6						

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*IDC **08** 08:49:01.0±2.4, 14˚.50N×94˚.48W, h0km, mb3.3/1, mb1 3.7/4, mb1mx3.4/51, mbtmp3.5/4, ML3.4/3, Error ellipse: s-maj=50.3km s-min=29.0km az=18.0*
*ISCJB **08** 08:49:03.6±1.3, 14˚.8N±0˚.1×94˚.59W±0˚.04, h28km, mb3.4/1, Error ellipse: s-maj=14.9km s-min=5.2km az=8.4*
*MEX **08** 08:49:06.5±0.3, 14˚.79N×94˚.60W, h27km±9km, MD4.1*
*NEIC **08** 08:49:06.5±0.0, 14˚.79N×94˚.60W, h27km, MD4.1(MEX), After MEX.*
ISC 08 08:49:05.1±1.3, 14˚.84N±0˚.09×94˚.57W±0˚.04, h28km, n14, σ1§49/24, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.56**	**56**	*i* P	**Pn**	**08 49 30.8**	**-0.1**
PCIG				*i* S	**Sn**	**08 49 50.0**	**-0.3**
PCIG		**1.56**	**56**	*i* P	**Pn**	**08 49 30.8**	**-0.1**
PCIG				*i* S	**Sn**	**08 49 50.0**	**-0.3**
HUIG	**Huatulco**	**1.75**	**302**	eP	**Pn**	**08 49 33.2**	**-0.5**
HUIG				eS	**Sn**	**08 49 53.6**	**-1.4**
HUIG	**Huatulco**	**1.75**	**302**	eP	**Pn**	**08 49 33.2**	**-0.5**
HUIG				eS	**Sn**	**08 49 53.6**	**-1.4**
CMIG	**Matias Romero**	**2.25**	**352**	Pn	**Pb**	**08 49 43.6**	**-1.6**
	24nm,0.3s,baz=170,slow=14,SNR=494						
CMIG				Sn	**Sb**	**08 50 13.2**	**+0.5**
	8.5nm,0.3s,baz=197,slow=20,SNR=4.2						
TGIG		**2.37**	**36**	eP	**Pb**	**08 49 44.5**	**-2.7**
TGIG				eS	**Sn**	**08 50 10.8**	**+0.3**
TGIG		**2.37**	**36**	eP	**Pb**	**08 49 44.5**	**-2.7**
TGIG				eS	**Sn**	**08 50 10.8**	**+0.3**
VHO	**Vista Hermosa**	**3.04**	**317**	eP	**Pn**	**08 49 51.4**	**-0.2**
VHO				eS	**Sn**	**08 50 26.7**	**-0.6**
VHO	**Vista Hermosa**	**3.04**	**317**	eP	**Pn**	**08 49 51.4**	**-0.2**
VHO				eS	**Sn**	**08 50 26.7**	**-0.6**
APG	**El Apazote**	**3.97**	**87**	Pn	**Pn**	**08 50 02.7**	**-1.7**
	3.0nm,0.3s,baz=212,slow=15,SNR=23						
APG				Sn	**Sn**	**08 50 50.6**	**+0.5**
	3.7nm,0.3s,baz=327,slow=19,SNR=7.5						
TLIG	**Tlapa**	**4.70**	**306**	*i* S	**Sn**	**08 51 06.2**	**-1.8**
TXAR	**Lajitas Array**	**16.69**	**331**	Pn	**P**	**08 53 02.4**	**+3.1**
	0.0nm,0.3s,baz=156,slow=14,SNR=5.5						
ILAR	**Eielson Array**	**61.09**	**337**	P	**P**	**08 59 19.3**	**+2.8**
	0.2nm,0.6s,baz=127,slow=7.0,SNR=2.9						
WRA	**Warramunga Arr**	**133.18**	**256**	PKP	**PKPdf**	**09 08 18.8**	**-0.4**
	0.3nm,0.8s,baz=80,slow=2.3,SNR=4.8						

IDC 08 09:00:04.6±3.4, 53˚.62N×87˚.98E, h0km, mb1 3.1/2, mb1mx2.9/73, mbtmp3.1/2, ML2.6/2, Error ellipse: s-maj=34.6km s-min=18.4km az=51.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.91**	**281**	*i*		09 12 00.0	
	baz=102,slow=337,SNR=6.5						
ZALV	**Zalesovo Beam**	**1.91**	**281**	Pn	Pn	09 00 37.5	-0.8
	2.8nm,0.3s,baz=98,slow=11,SNR=21						
ZALV				Lg	Lg	09 01 05.3	
	5.6nm,0.3s,baz=95,slow=24,SNR=15						
KURBB	**Kurchatov Arra**	**6.55**	**247**	Pn	Pn	09 01 42.5	+0.4
	0.1nm,0.3s,baz=60,slow=14,SNR=4.6						
MKAR	**Makanchi Array**	**7.75**	**210**	Pn	Pn	09 01 59.9	+1.4
	0.1nm,0.3s,baz=29,slow=13,SNR=6.7						

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*IDC **08** 09:00:25.6±3.2, 64˚.57N×31˚.57E, h0km, mb1 3.1/4, mb1mx2.9/70, mbtmp3.0/4, ML2.1/3, Error ellipse: s-maj=44.2km s-min=10.6km az=102.0*
*CSEM **08** 09:00:26.6±0.5, 64˚.67N×30˚.54E, h2km, ML2.1, Error ellipse: s-maj=11.1km s-min=7.0km az=91.0, Mining explosion.*
*HEL **08** 09:00:26.9±0.2, 64˚.68N×30˚.79E, h0km, ML2.1, Explosion*
*BER **08** 09:00:29.1±2.8, 64˚.69N×30˚.31E, h0km, ML2.3(NAO), Suspected explosion*
*NAO **08** 09:00:29.4±2.1, 64˚.70N×30˚.16E, ML2.3*
ISC 08 09:00:25.3±1.2, 64˚.73N±0˚.03×30˚.98E±0˚.07, h0km, n37, σ1§19/54, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KU6	**Riekki**	**1.38**	**341**	eP	**Pb**	**09 00 51.8**	**-0.1**
KU6				eS	**Sn**	**09 01 10.3**	**-0.4**
KU6	**Riekki**	**1.38**	**341**	eP	**Pb**	**09 00 51.8**	**-0.1**
KU6				eS	**Sn**	**09 01 10.3**	**-0.4**
MSF	**Maaselka**	**1.44**	**326**	eP	**Pn**	**09 00 52.3**	**-0.3**
MSF				eS	**Sg**	**09 01 10.6**	**-0.9**
MSF	**Maaselka**	**1.44**	**326**	eP	**Pn**	**09 00 52.3**	**-0.3**
MSF				eS	**Sg**	**09 01 10.6**	**-0.9**
JOF	**Joensuu**	**1.83**	**175**	eP	**Pn**	**09 00 57.9**	**0.0**
JOF				eS	**Sn**	**09 01 22.0**	**+0.3**
JOF	**Joensuu**	**1.83**	**175**	eP	**Pn**	**09 00 57.9**	**0.0**
JOF				eS	**Sn**	**09 01 22.0**	**+0.3**
OUL	**Oulu**	**2.20**	**282**	eP	**Pn**	**09 01 03.8**	**+0.8**
OUL				eSB	**Sn**	**09 01 30.9**	**+0.1**
OUL	**Oulu**	**2.20**	**282**	eP	**Pn**	**09 01 03.8**	**+0.8**
OUL				eSb	**Sn**	**09 01 30.9**	**+0.1**
OUF	**Merijarvi**	**2.73**	**265**	eSG	**Sb**	**09 01 47.3**	**-1.4**
OUF				MSG		09 01 48.3	
	comp=Z,16nm,0.2s						
OUF	**Merijarvi**	**2.73**	**265**	eSg	**Sb**	**09 01 47.3**	**-1.4**
	comp=Z,48nm,16.2s						
RNF	**Rovaniemi**	**2.79**	**315**	eP	**Pn**	**09 01 12.7**	**+1.5**
RNF	**Rovaniemi**	**2.79**	**315**	eP	**Pn**	**09 01 12.7**	**+1.5**
VRF	**Varrio**	**3.08**	**350**	eSG	**Sg**	**09 02 03.0**	**-1.2**
VRF				MSG		09 02 06.0	
	comp=Z,3.2nm,0.2s						
VRF	**Varrio**	**3.08**	**350**	eSg	**Sg**	**09 02 03.0**	**-1.2**
	comp=Z,6.0nm,3.2s						
TOF	**Tornio**	**3.10**	**299**	eSG	**Sb**	**09 02 00.9**	**+1.5**
TOF				MSG		09 02 03.4	
	comp=Z,2.6nm,0.2s						
TOF	**Tornio**	**3.10**	**299**	eSg	**Sb**	**09 02 00.9**	**+1.5**
	comp=Z,3.4nm,2.6s						
KEF	**Keuruu**	**3.76**	**230**	eP	**Pn**	**09 01 26.2**	**+1.7**
KEF				eSG	**Sb**	**09 02 19.6**	**+1.0**
KEF				MSG		09 02 26.6	
	comp=Z,4.7nm,0.2s						
KEF	**Keuruu**	**3.76**	**230**	eP	**Pn**	**09 01 26.2**	**+1.7**
KEF				eSg	**Sb**	**09 02 19.6**	**+1.0**
	comp=Z,27nm,4.7s						
FIA0	**FINESS Array S**	**3.98**	**216**	Pn	**Pn**	**09 01 27.7**	**+0.2**
	baz=32,slow=16						
FIA0				Pg	**Pb**	**09 01 36.5**	**+0.3**
	baz=32,slow=18						
FIA0				Lg	Lg	09 02 25.9	
	baz=31,slow=37						
FIA0	**FINESS Array S**	**3.98**	**216**	Pn	**Pn**	**09 01 27.7**	**+0.2**
	SNR=6.9						
FIA0	**FINESS Array S**	**3.98**	**216**	Pg	**Pb**	**09 01 36.5**	**+0.3**
	SNR=3.2						
FIA0				Lg	Lg	09 02 25.9	
	SNR=9.8						
FIA0	**FINESS Array S**	**3.98**	**216**	Pn	**Pn**	**09 01 27.7**	**+0.2**
	baz=32,slow=16						
FIA0				Pg	**Pb**	**09 01 36.5**	**+0.3**
	baz=32,slow=18						
FIA0				Lg	Lg	09 02 25.9	
	baz=31,slow=37						
FINES	**FINESS Array B**	**3.98**	**216**	Pn	**Pn**	**09 01 27.6**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=40,slow=14,SNR=5.5						
FINES				Sn	**Sn**	**09 02 12.8**	**-2.1**
	comp=Z,0.3nm,0.3s,baz=40,slow=20,SNR=3.4						
FINES				Lg	Lg	09 02 26.3	
	comp=Z,1.1nm,0.3s,baz=39,slow=28,SNR=13						
VAF	**Ylistaro**	**4.05**	**249**	eSG	**Sb**	**09 02 28.5**	**+1.8**
VAF	**Ylistaro**	**4.05**	**249**	eSg	**Sb**	**09 02 28.5**	**+1.8**
ARA0	**ARCESS Array S**	**5.28**	**339**	Pn	**Pn**	**09 01 46.3**	**+1.0**
	baz=156,slow=14						
ARA0				Sn	**Sn**	**09 02 46.2**	**-0.5**
	baz=163,slow=28						
ARA0				Lg	Lg	09 03 08.0	
	baz=144,slow=37						
ARA0	**ARCESS Array S**	**5.28**	**339**	Pn	**Pn**	**09 01 46.3**	**+1.0**
	SNR=6.5						
ARA0				Sn	**Sn**	**09 02 46.2**	**-0.5**
	SNR=6.5						
ARA0				Lg	Lg	09 03 08.0	
	SNR=9.4						
ARA0	**ARCESS Array S**	**5.28**	**339**	Pn	**Pn**	**09 01 46.3**	**+1.0**
	baz=156,slow=14						
ARA0				Sn	**Sn**	**09 02 46.2**	**-0.5**
	baz=163,slow=28						
ARA0				Lg	Lg	09 03 08.0	
	baz=144,slow=37						
ARCES	**ARCESS Array B**	**5.28**	**339**	Pn	**Pn**	**09 01 46.5**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=157,slow=14,SNR=26						
ARCES				Sn	**Sn**	**09 02 46.1**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=154,slow=25,SNR=6.0						
ARCES				Lg	Lg	09 03 09.4	
	comp=Z,1.1nm,0.3s,baz=158,slow=26,SNR=11						
HFS	**Hagfors**	**9.23**	**248**	Pn	**Pn**	**09 02 36.0**	**-3.5**
HFS	**Hagfors**	**9.23**	**248**	Pn	**Pn**	**09 02 38.9**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=55,slow=18,SNR=5.1						
HFS	**Hagfors**	**9.23**	**248**	Pn	**Pn**	**09 02 36.0**	**-3.5**
NB2	**NORSAR Subarra**	**9.74**	**257**	Pn	**Pn**	**09 02 46.0**	**-0.4**
	baz=63,slow=16						
NB2	**NORSAR Subarra**	**9.74**	**257**	Pn	**Pn**	**09 02 46.0**	**-0.4**
	baz=63,slow=16						
NOA	**NORSAR Array B**	**9.74**	**257**	Pn	**Pn**	**09 02 45.8**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=45,slow=3.7,SNR=4.2						
NRA0	**NORESS Array S**	**9.76**	**255**	Pn	**Pn**	**09 02 45.5**	**-1.3**
	baz=55,slow=16						
NRA0	**NORESS Array S**	**9.76**	**255**	Pn	**Pn**	**09 02 45.5**	**-1.3**
	baz=55,slow=16						

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*CSEM **08** 09:01:51.9±0.4, 13˚.21N×49˚.88E, h2km, ML3.9, Error ellipse: s-maj=14.7km s-min=9.9km az=20.0*
*IDC **08** 09:01:51.6±1.0, 13˚.24N×50˚.05E, h0km, mb3.9/9, mb1 4.1/10, mb1mx3.7/69, mbtmp3.9/10, ML4.3/1, MS3.4/17, Ms1 3.4/17, ms1mx3.1/59, Error ellipse: s-maj=27.9km s-min=22.0km az=13.0*
*ISCJB **08** 09:01:52.1±0.7, 13˚.37N±0˚.07×49˚.86E±0˚.05, h10km, mb3.9/10, MS3.3/15, Error ellipse: s-maj=9.9km s-min=7.3km az=10.0*
*NEIC **08** 09:01:53.3±0.5, 13˚.26N×50˚.07E, h10km, mb4.1/1, Error ellipse: s-maj=11.7km s-min=9.8km az=140.0*
*DHMR **08** 09:01:54.1±1.8, 13˚.36N×49˚.60E, h10km, ML3.9*
ISC 08 09:01:54.2±0.8, 13˚.43N±0˚.09×49˚.87E±0˚.07, h10km, n31, σ1§53/23, mb4.0/10, MS3.4/15, 1C, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MUKL	**Al Mukalla**	**1.32**	**322**	⇑*i* P	**Pn**	**09 02 16.5**	**-2.2**
MUKL				*e*		09 02 16.5	
	baz=139,slow=1.3						
MUKL				*i* S	**Sb**	**09 02 34.7**	**-1.3**
MUKL				AML	AML	09 02 35.0	
	comp=N,2μm,0.7s						
BDHA	**Al Bayda'**	**4.22**	**278**	*i* P	**Pn**	**09 02 58.1**	**-0.7**
BDHA				AML	AML	09 02 59.0	
	comp=E,498nm,0.6s						
BDHA				*i* S	**Sn**	**09 03 47.3**	**-1.0**
BDHA	**Al Bayda'**	**4.22**	**278**	*i* P	**Pn**	**09 02 58.1**	**-0.7**
BDHA				*i* S	**Sn**	**09 03 47.3**	**-1.0**
LBOS		**4.52**	**276**	*i* P	**Pn**	**09 03 01.9**	**-1.1**
LBOS				*i* S	**Sn**	**09 03 53.4**	**-2.3**
ATD	**Arta Tunnel**	**7.12**	**255**	Pn	**Pn**	**09 03 39.5**	**+1.0**
	comp=E,4.8nm,0.3s,baz=38,slow=3.4,SNR=20						
ATD				LR	LR	09 05 37.7	
	comp=E,334nm,19.0s,baz=106,slow=31						
RAYN	**Ar Rayn**	**10.86**	**338**	*e*Pn	**Pn**	**09 04 32.5**	**+2.7**
RAYN	**Ar Rayn**	**10.86**	**338**	*e*Pn	**Pn**	**09 04 32.5**	**+2.7**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLMH	**Al Salmeh**	**0.17**	**195**	*i* P	**Pg**	**09 21 01.0**	**+0.1**
SLMH				*e*S	**Sg**	**09 21 03.2**	**-0.6**
SLMH				AML	AML	09 21 04.1	
	comp=N,5μm,0.3s						
SLMH				AML	AML	09 21 04.2	
	comp=E,1μm,0.1s						
SURC	**SANLIURFA_SURC**	**0.71**	**45**	*i* P	**Pg**	**09 21 10.1**	**-0.5**
SURC				*i* S	**Sg**	**09 21 20.0**	**-0.1**
SURC	**SANLIURFA_SURC**	**0.71**	**45**	P	**Pg**	**09 21 10.1**	**-0.5**
SURC				S	**Sg**	**09 21 20.0**	**-0.1**
KUZU	**Kuzuini**	**0.83**	**299**	*i* P	**Pg**	**09 21 12.7**	**-0.2**
KUZU				*i* S	**Sb**	**09 21 24.0**	**+0.3**
KUZU	**Kuzuini**	**0.83**	**299**	P	**Pg**	**09 21 12.6**	**-0.2**
KUZU				S	**Sb**	**09 21 24.0**	**+0.3**
GAZ	**Gaziantep**	**1.01**	**322**	PG	**Pg**	**09 21 16.2**	**+0.1**
GAZ				SG	**Sg**	**09 21 29.7**	**+0.4**
GAZ	**Gaziantep**	**1.01**	**322**	*e*Pg	**Pg**	**09 21 16.2**	**+0.1**
GAZ				*e*Sg	**Sg**	**09 21 29.7**	**+0.4**
ATAB	**Bozova**	**1.12**	**13**	*i* P	**Pb**	**09 21 17.7**	**0.0**
ATAB				*i* S	**Sg**	**09 21 32.7**	**-0.3**
ATAB	**Bozova**	**1.12**	**13**	P	**Pb**	**09 21 17.7**	**0.0**
ATAB				S	**Sg**	**09 21 32.7**	**-0.3**
SANL	**SANLIURFA_Merk**	**1.13**	**45**	*i* P	**Pn**	**09 21 18.2**	**+0.3**
SANL				*i* S	**Sb**	**09 21 32.8**	**+0.3**
SANL	**SANLIURFA_Merk**	**1.13**	**45**	P	**Pn**	**09 21 18.2**	**+0.3**
SANL				S	**Sb**	**09 21 32.8**	**+0.3**
URFA	**Urfa**	**1.26**	**32**	PN	**Pn**	**09 21 19.8**	**+0.1**
URFA	**Urfa**	**1.26**	**32**	*e*Pn	**Pn**	**09 21 19.8**	**+0.1**
KMRS	**Kahramanmaras**	**1.42**	**323**	PN	**Pn**	**09 21 22.1**	**+0.2**
KMRS	**Kahramanmaras**	**1.42**	**323**	*e*Pn	**Pn**	**09 21 22.1**	**+0.2**
TAHT	**Tahtakopru-Hat**	**1.45**	**271**	PN	**Pb**	**09 21 23.0**	**-0.2**
TAHT	**Tahtakopru-Hat**	**1.45**	**271**	*e*Pn	**Pb**	**09 21 23.0**	**-0.2**
YAYL	**Yayladag**	**1.55**	**258**	PN	**Pn**	**09 21 24.5**	**+0.7**
YAYL	**Yayladag**	**1.55**	**258**	*i* P	**Pb**	**09 21 25.0**	**-0.1**
YAYL				*i* S	**Sg**	**09 21 46.9**	**+0.2**
YAYL	**Yayladag**	**1.55**	**258**	*e*Pn	**Pn**	**09 21 24.5**	**+0.7**
YAYL	**Yayladag**	**1.55**	**258**	P	**Pb**	**09 21 25.0**	**-0.1**
YAYL				S	**Sg**	**09 21 46.9**	**+0.2**
ANDN	**Andirin**	**1.78**	**313**	*i* P	**Pg**	**09 21 30.0**	**-0.8**
ANDN				*i* S	**Sg**	**09 21 53.5**	**-0.4**
ANDN	**Andirin**	**1.78**	**313**	P	**Pg**	**09 21 30.0**	**-0.8**
ANDN				S	**Sg**	**09 21 53.5**	**-0.4**
CEYT	**Ceyhan**	**1.90**	**290**	PN	**Pn**	**09 21 29.3**	**+0.9**
CEYT	**Ceyhan**	**1.90**	**290**	*e*Pn	**Pn**	**09 21 29.3**	**+0.9**
AKCD	**Akcadag**	**1.92**	**359**	*i* P	**Pn**	**09 21 30.2**	**+1.4**
AKCD	**Akcadag**	**1.92**	**359**	P	**Pn**	**09 21 30.2**	**+1.4**
YURE	**YUREGIR**	**1.94**	**284**	PN	**Pn**	**09 21 29.5**	**+0.5**
YURE	**YUREGIR**	**1.94**	**284**	*e*Pn	**Pn**	**09 21 29.5**	**+0.5**
MALT	**Malatya**	**1.97**	**10**	PN	**Pn**	**09 21 30.5**	**+1.1**
MALT	**Malatya**	**1.97**	**10**	*e*Pn	**Pn**	**09 21 30.5**	**+1.1**
KOZT	**Kozan**	**2.05**	**303**	PN	**Pn**	**09 21 31.5**	**+1.0**
KOZT	**Kozan**	**2.05**	**303**	*e*Pn	**Pn**	**09 21 31.5**	**+1.0**
ELBS	**KAHRAMANMARAS**	**2.06**	**341**	*i* P	**Pn**	**09 21 31.4**	**+0.7**
ELBS	**KAHRAMANMARAS**	**2.06**	**341**	P	**Pn**	**09 21 31.4**	**+0.7**
KRTS	**Karatas**	**2.11**	**276**	PN	**Pn**	**09 21 31.3**	**0.0**
KRTS	**Karatas**	**2.11**	**276**	*e*Pn	**Pn**	**09 21 31.3**	**0.0**
DARE	**Darende-Malaty**	**2.23**	**350**	PN	**Pn**	**09 21 33.7**	**+0.7**
DARE	**Darende-Malaty**	**2.23**	**350**	*e*Pn	**Pn**	**09 21 33.7**	**+0.7**
MAZI	**Mazidag**	**2.25**	**61**	PN	**Pn**	**09 21 34.3**	**+0.9**
MAZI	**Mazidag**	**2.25**	**61**	*e*Pn	**Pn**	**09 21 34.3**	**+0.9**
SVRC	**Sivrice-ELAZID**	**2.26**	**27**	PN	**Pn**	**09 21 35.3**	**+1.8**
SVRC	**Sivrice-ELAZID**	**2.26**	**27**	*e*Pn	**Pn**	**09 21 35.3**	**+1.8**
SARI	**SarD1z-Kayseri**	**2.38**	**329**	PN	**Pn**	**09 21 36.3**	**+1.1**
PTK	**Pertek**	**2.75**	**24**	PN	**Pn**	**09 21 42.2**	**+1.9**
PTK	**Pertek**	**2.75**	**24**	*e*Pn	**Pn**	**09 21 42.2**	**+1.9**
HANI	**Diyarbakir_Han**	**2.80**	**43**	*i* P	**Sn**	**09 22 12.6**	**-1.9**
KIZK	**Mersin**	**3.10**	**273**	PN	**Pn**	**09 21 45.6**	**+0.8**
QASN	**Qassioun**	**3.16**	**207**	*e*P	**Pn**	**09 21 46.1**	**+0.3**
QASN				*e*S	**Sn**	**09 22 22.7**	**-0.7**
QASN				AML	AML	09 22 47.6	
	comp=N,85nm,0.5s						
QASN				AML	AML	09 22 47.6	
	comp=E,90nm,0.5s						
TOTH	**TOTAH**	**3.27**	**203**	*e*P	**Pn**	**09 21 48.1**	**+0.9**
TOTH				*e*S	**Sn**	**09 22 25.6**	**-0.3**
TOTH				AML	AML	09 22 47.6	
	comp=E,20nm,0.7s						
TOTH				AML	AML	09 22 51.6	
	comp=N,22nm,0.5s						
BRBR	**Barbar**	**3.40**	**210**	*e*P	**Pn**	**09 21 50.7**	**+1.5**
BRBR				*e*S	**Sn**	**09 22 28.0**	**-1.2**
BRBR				AML	AML	09 22 47.6	
	comp=N,32nm,0.9s						
BRBR				AML	AML	09 22 52.6	
	comp=E,35nm,0.5s						

MAN 08 09:24:17.0, 11°.51N×124°.40E, h20km, mb4.1, ML2.8, MS2.5, 1C-1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.50**	**156**	*e*P	Pb	09 24 27.8	+0.8
OCLP				*e*S	Sn	09 24 37.6	+0.6
PLP	**Palo**	**0.66**	**121**	⇓*e*P	Pb	09 24 30.1	+0.3
PLP				*e*S	Sn	09 24 41.6	+0.6
CNP	**Catarman**	**1.03**	**14**	*e*P	Pb	09 24 36.0	-0.2
CNP				*e*S	Sn	09 24 50.4	+0.2
LLP	**Lapu-Lapu**	**1.26**	**200**	*e*P	Pn	09 24 38.6	-0.9
LLP				*e*S	Sb	09 24 57.4	+1.6
MSLP	**Maasin**	**1.44**	**162**	*e*P	Pb	09 24 45.0	+1.9
MSLP				*e*S	Sb	09 25 06.5	+5.6
RCP	**Roxas**	**1.62**	**272**	⇑*e*P	Pn	09 24 43.9	-0.6
RCP				*e*S	Sn	09 25 04.8	0.0
GUIM	**Jordan**	**1.98**	**244**	*e*P	Pn	09 24 49.8	+0.4
GUIM				*e*S	Sn	09 25 15.0	+1.3

SJA 08 09:52:26.0±1.0, 31°.14S×67°.34W, h94km±18km, ML3.3, MW3.8, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APLL	**PUNTA DE LOS L**	**1.02**	**43**	*i* P	Pn	09 52 46.5	+0.2
APLL				*i* S	Sn	09 53 03.2	+1.8
APLL				IAML		09 53 03.7	
	comp=Z,14nm,0.1s						
ACLC	**CERRO LA CRUZ**	**1.75**	**11**	*i* P	Pn	09 52 56.6	+1.4
ACLC				*i* S	Sn	09 53 18.7	+1.4
ACLC				IAML		09 53 20.7	
	comp=Z,11μm,0.2s						
ACDV	**Cuesta del Vie**	**1.81**	**302**	*i* P	Pn	09 52 57.5	+1.4
ACDV				*i* S	Sn	09 53 20.8	+1.8
AGUA	**GUANDACOL**	**1.93**	**329**	*i* P	Pn	09 52 59.3	+1.8
AGUA				*i* S	Sn	09 53 22.8	+1.3

NNC 08 10:01:59.8±4.2, 37°.79N×71°.53E, h0km, mb3.5, mpv3.1, 5C-3D, Error ellipse: s-maj=32.0km s-min=27.0km az=157.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**2.70**	**34**	⇑Pn	Pn	10 02 45.8	+1.0
	1.4nm,0.3s						
SFK				⇓Sn	Sn	10 03 20.4	+2.1
	19nm,0.4s						
MNAS	**Manas**	**4.75**	**9**	⇓Pn	Pn	10 03 13.8	+1.0
	1.7nm,0.4s						
MNAS				⇑Sn	Sn	10 04 09.2	+0.5
	9.4nm,0.9s						
AAK	**Ala-Archa**	**5.35**	**24**	Pn	Pn	10 03 18.8	-2.2
	1.3nm,0.8s						
AAK				Sn	Sn	10 04 23.1	-0.3
	4.8nm,0.6s						
KK31	**Karatay Array**	**5.36**	**352**	⇑Pn	Pn	10 03 22.6	+1.4
	3.8nm,0.3s,baz=177,slow=14,SNR=42						
KK31				⇓Sn	Sn	10 04 25.3	+1.7
	1.8nm,0.3s,baz=173,slow=22,SNR=8.8						
TKM2	**Tokmak 2**	**5.99**	**30**	⇑Pn	Pn	10 03 25.9	-4.0
	0.6nm,0.6s						
TKM2				⇑Sn	Sn	10 04 39.5	+0.1
	1.3nm,0.7s						

CSEM ***08*** *10:11:16.8, 54°.11N×62°.00E, h0km, mb3.2, Suspected Mining explosion.*

NNC 08 10:11:16.8±3.4, 54°.11N×62°.00E, h0km, mb3.2, mpv4.0, 7C-1D, Error ellipse: s-maj=35.9km s-min=11.9km az=150.0, Suspected Mining explosion., Ural Mountains region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKTO	**Aktyubinsk**	**4.42**	**215**	⇑Pg	Pb	10 12 36.8	+1.6
	2.6nm,1.2s						
AKTO				⇑Lg	Lg	10 13 41.9	
	2.1nm,0.7s						
AKTO	**Aktyubinsk**	**4.42**	**215**	Pg	Pb	10 12 36.8	+1.6
	2.6nm,1.2s						
AKTO				Lg	Lg	10 13 41.9	
	2.1nm,0.7s						
AB31	**Akbulak array**	**5.03**	**196**	⇓Pg	Pb	10 12 46.5	+0.9
	7μm,0.1s,baz=280,slow=33,SNR=2.6						
AB31				⇑Lg	Lg	10 13 57.3	
	2.0nm,0.5s,baz=43,slow=26,SNR=2.9						
AB31	**Akbulak array**	**5.03**	**196**	Pg	Pb	10 12 46.5	+0.9
	7μm,0.1s,SNR=2.6						
AB31				Lg	Lg	10 13 57.3	
	2.0nm,0.5s,SNR=2.9						
BRVK	**Borovoye**	**5.05**	**99**	⇑Pg	Pg	10 12 50.2	-3.2
	1.2nm,0.8s						
BRVK				⇑Lg	Lg	10 13 56.4	
	3.9nm,0.8s						
BRVK	**Borovoye**	**5.05**	**99**	Pg	Pg	10 12 50.2	-3.2
	1.2nm,0.8s						
BRVK				Lg	Lg	10 13 56.4	
	3.9nm,0.8s						
BVA0	**Borovoye Array**	**5.12**	**99**	⇑Pg	Pb	10 12 49.5	+2.4
	0.7nm,0.6s,baz=286,slow=14,SNR=4.2						
BVA0				⇑Lg	Lg	10 13 59.9	
	5.4nm,0.8s,baz=285,slow=29						
BVA0	**Borovoye Array**	**5.12**	**99**	Pg	Pb	10 12 49.5	+2.4
	0.7nm,0.6s,SNR=4.2						
BVA0				Lg	Lg	10 13 59.9	
	5.4nm,0.8s						

IDC ***08*** *10:42:37.6±2.1, 22°.47S×170°.48E, h0km, mb3.8/6, mb1 4.0/7, mb1mx3.7/45, mbtmp3.8/7, ML3.8/1, Error ellipse: s-maj=70.1km s-min=27.9km az=155.0*

ISC 08 10:42:43.1±1.8, 22°.4S±0°.4×170°.4E±0°.1, h33km, n10, σ0°55/11, mb3.8/6, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.64**	**274**	Pn	**Pn**	**10 43 37.4**	**+0.2**
	7.5nm,0.3s,baz=123,slow=12,SNR=330						
DZM				Sn	**Sn**	**10 44 18.5**	**-0.5**
	18nm,0.3s,baz=136,slow=22,SNR=14						
ASAR	**Alice Springs**	**33.51**	**261**	P	**P**	**10 49 20.0**	**+0.2**
	0.5nm,0.7s,baz=86,slow=9.0,SNR=9.1						
WRA	**Warramunga Arr**	**33.62**	**267**	P	**P**	**10 49 20.6**	**-0.2**
	0.4nm,0.4s,baz=94,slow=8.4,SNR=11						
MJAR	**Matsushiro Arr**	**66.01**	**332**	P	**P**	**10 53 26.4**	**0.0**
	0.7nm,0.5s,baz=174,slow=6.1,SNR=5.1						
KSRS	**Korea Array**	**71.68**	**326**	P	**P**	**10 54 02.4**	**+0.8**
	0.8nm,0.7s,baz=136,slow=6.0,SNR=5.2						
SONM	**Songino Array**	**90.35**	**323**	P	**P**	**10 55 41.5**	**+0.6**
	0.9nm,0.8s,baz=132,slow=4.4,SNR=4.2						
ILAR	**Eielson Array**	**92.92**	**17**	P	**P**	**10 55 51.6**	**-0.7**
	0.2nm,0.7s,baz=250,slow=4.1,SNR=3.7						
ARCES	**ARCESS Array B**	**128.36**	**345**	PKP	**PKPdf**	**11 01 45.4**	**-0.2**
	3.0nm,1.1s,baz=335,slow=4.0,SNR=4.4						
EKA	**Eskdalemuir Ar**	**146.74**	**353**	PKPbc	**PKPbc**	**11 02 20.6**	**-0.7**
	1.8nm,0.5s,baz=5.7,slow=2.8,SNR=9.4						
GERES	**GERESS Array B**	**147.74**	**331**	PKPbc	**PKPbc**	**11 02 24.8**	**+0.3**
	0.8nm,0.6s,baz=205,slow=2.8,SNR=5.1						

IDC ***08*** *10:47:04.6±0.6, 22°.87S×175°.39W, h0km, mb4.3/15, mb1 4.5/15, mb1mx4.4/44, mbtmp4.3/15, MS3.8/2, Ms1 3.8/2, ms1mx3.0/45, Error ellipse: s-maj=23.0km s-min=17.1km az=139.0*

NEIC ***08*** *10:47:05.7±0.3, 22°.88S×175°.41W, h10km, mb4.6/29, Error ellipse: s-maj=12.8km s-min=6.3km az=126.0*

ISCJB ***08*** *10:47:07.8±0.2, 22°.95S±0°.05×175°.43W±0°.07, h34km, mb4.8/57, MS4.1/3, Error ellipse: s-maj=10.1km s-min=5.4km az=34.3*

ISC 08 10:47:09.3±0.5, 22°.92S±0°.07×175°.3W±0°.1, h34km, n90, σ1°41/93, mb4.7/57, MS3.9/3, 1C, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**6.73**	**200**	*e*Pn	**Pn**	**10 48 41.9**	**-3.8**
RAO				*e*Sn	**Sn**	**10 50 00.9**	**-0.2**
AFI	**Afiamalu**	**9.57**	**21**	Pn	Pn	10 49 19.3	-5.5
	12nm,0.3s,baz=122,slow=1.9,SNR=13						
AFI				Sn	Sn	10 50 57.6	-14
	2.9nm,0.3s,baz=350,slow=21,SNR=2.3						
AFI	**Afiamalu**	**9.57**	**21**	*e*Pn	Pn	10 49 19.5	-5.3
AFI				*e*Sn	**Sn**	**10 51 04.6**	**-6.6**
URZ	**Urewera**	**16.61**	**201**	*e*Pn	**Pn**	**10 50 56.8**	**-2.7**
	9.1nm,0.7s						
BKZ	**Black Stump Fm**	**17.64**	**201**	*e*Pn	**Pn**	**10 51 10.5**	**-1.9**
	11nm,1.1s						
CTA	**Charters Tower**	**35.81**	**267**	P	**P**	**10 54 05.7**	**-0.1**
	6.4nm,0.4s,baz=92,slow=12,SNR=33						
CTAO	**Charters Tower**	**35.81**	**267**	*e*P	**P**	**10 54 05.2**	**-0.6**
	8.1nm,0.8s						
STKA	**Stephens Creek**	**39.08**	**247**	P	**P**	**10 54 32.4**	**-1.0**
	3.4nm,0.9s,baz=87,slow=13,SNR=6.3						
STKA	**Stephens Creek**	**39.08**	**247**	*e*P	**P**	**10 54 31.2**	**-2.2**
	1.2nm,0.9s						
MWH	**Moku'aweowe**	**46.33**	**26**	*e*P	**P**	**10 55 32.2**	**-0.5**
	55nm,0.8s						
KKO	**Keanakako'i**	**46.39**	**27**	*e*P	**P**	**10 55 32.8**	**0.0**
	527nm,1.2s						
NPH	**North Pit**	**46.40**	**27**	*e*P	**P**	**10 55 31.4**	**-1.5**
	658nm,1.2s						
UWE	**Uwekahuna**	**46.40**	**26**	*e*P	**P**	**10 55 30.3**	**-2.6**
	454nm,1.1s						
OBL	**Observatory Le**	**46.40**	**27**	*e*P	**P**	**10 55 30.9**	**-2.0**
	485nm,1.0s						
BYL	**Byron's Ledge**	**46.41**	**27**	*e*P	**P**	**10 55 33.4**	**+0.6**
	667nm,1.2s						
AS01	**Alice Springs**	**46.41**	**259**	*e*P	**P**	**10 55 31.4**	**-1.6**
UWB	**Uwekahuna B**	**46.41**	**27**	*e*P	**P**	**10 55 32.0**	**-0.9**
	106nm,0.9s						
HATHI	**Halema'uma'u T**	**46.42**	**27**	*e*P	**P**	**10 55 32.1**	**-0.8**
	391nm,1.1s						
STCH	**Steam Cracks**	**46.44**	**27**	*e*P	**P**	**10 55 32.8**	**-0.3**
	94nm,0.7s						
AS31	**Alice Springs**	**46.45**	**259**	*e*P	**P**	**10 55 32.5**	**-0.7**
	1.7nm,1.0s						
ASAR	**Alice Springs**	**46.45**	**259**	P	**P**	**10 55 32.5**	**-0.8**
	4.3nm,0.8s,baz=94,slow=8.0,SNR=38						
ASAR				LR	LR	11 14 43.7	
	comp=Z,122nm,18.6s,baz=79,slow=36						
NPOC	**North of Pu'u**	**46.45**	**27**	*e*P	**P**	**10 55 33.6**	**+0.4**
	214nm,0.7s						
WC3	**Warramunga Arr**	**46.75**	**264**	*e*P	**P**	**10 55 34.0**	**-1.7**
	7.4nm,0.6s						
WB2	**Warramunga Arr**	**46.78**	**264**	*e*P	**P**	**10 55 34.7**	**-1.1**
WRAB	**Tennant Creek**	**46.78**	**264**	*e*P	**P**	**10 55 34.2**	**-1.6**
	13nm,1.0s						
WR1	**Warramunga Arr**	**46.79**	**264**	*e*P	**P**	**10 55 34.3**	**-1.6**
	12nm,0.9s						
WRA	**Warramunga Arr**	**46.79**	**264**	P	**P**	**10 55 34.3**	**-1.6**
	5.6nm,0.6s,baz=91,slow=8.5,SNR=297						
FORT	**Forrest**	**50.68**	**248**	*e*P	**P**	**10 56 04.7**	**-1.0**
	37nm,1.1s						
FITZ	**Fitzroy Crossi**	**55.21**	**263**	P	**P**	**10 56 39.0**	**-0.2**
	6.6nm,0.8s,baz=110,slow=4.9,SNR=14						
SBA	**Scott Base**	**55.65**	**185**	*e*P	**P**	**10 56 44.0**	**+2.5**
	3.8nm,0.8s						
VNDA	**Vanda**	**55.75**	**186**	P	**P**	**10 56 43.7**	**+1.5**
	1.1nm,0.8s,baz=11,slow=6.6,SNR=7.1						
QSPA	**South Pole Qui**	**67.16**	**180**	*e*P	**P**	**10 58 00.2**	**+0.5**
	6.3nm,0.9s						
MJAR	**Matsushiro Arr**	**73.64**	**323**	P	**P**	**10 58 39.5**	**+0.1**
	1.8nm,0.8s,baz=167,slow=6.2,SNR=7.9						
MAJO	**Matsushiro**	**73.64**	**323**	*e*P	**P**	**10 58 39.5**	**+0.1**
MAT	**Matsushiro**	**73.64**	**323**	P	**P**	**10 58 40.4**	**+1.0**
ASAJ	**Asahikawa**	**77.05**	**330**	*e*P	**P**	**10 59 00.8**	**+2.0**
	8.0nm,0.8s						
PETK	**Petropavlovsk-**	**79.26**	**344**	P	**P**	**10 59 10.5**	**-0.3**
	3.1nm,0.7s,baz=114,slow=7.2,SNR=5.0						
PETK				LR	LR	11 35 43.9	
	comp=Z,45nm,18.3s,baz=126,slow=37						
PEA1	**Petropavlovsk-**	**79.27**	**344**	*e*P	**P**	**10 59 10.5**	**-0.3**
CMB	**Columbia Colle**	**79.58**	**41**	*e*P	**P**	**10 59 13.3**	**+0.2**
	1.8nm,0.8s						
MAW	**Mawson**	**80.13**	**199**	P	**P**	**10 59 16.4**	**+0.9**
	7.4nm,0.8s,baz=144,slow=5.5,SNR=20						
MAW	**Mawson**	**80.13**	**199**	*e*P	**P**	**10 59 16.9**	**+1.4**
	1.7nm,0.8s						
KSRS	**Korea Array**	**80.35**	**318**	P	**P**	**10 59 18.0**	**+0.8**
	1.0nm,0.7s,baz=132,slow=6.4,SNR=6.0						
WAKR	**Walker**	**80.46**	**41**	*e*P	**P**	**10 59 18.5**	**+0.6**
	5.2nm,1.0s						
PNTR	**Pine Nut**	**80.73**	**41**	*e*P	**P**	**10 59 20.1**	**+0.7**
	5.2nm,0.8s						
NV01	**Mina Array Sit**	**81.10**	**42**	*e*P	**P**	**10 59 21.8**	**+0.3**
NVAR	**Mina Array Bea**	**81.10**	**42**	P	**P**	**10 59 21.9**	**+0.5**
	2.6nm,0.8s,baz=225,slow=9.4,SNR=23						
NV11	**Mina Array Sit**	**81.20**	**42**	*e*P	**P**	**10 59 22.4**	**+0.6**
	0.3nm,1.0s						
KVN	**Kaiserville**	**81.61**	**41**	*e*P	**P**	**10 59 24.3**	**+0.2**
	2.2nm,1.0s						
USRK	**Ussuriysk Ar.**	**82.37**	**325**	P	**P**	**10 59 29.7**	**+2.1**
	4.1nm,0.8s,baz=79,slow=1.4,SNR=5.5						
NJ2	**Nanjing**	**83.34**	**309**	*e*P	**P**	**10 59 34.8**	**+1.8**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
WVOR	**Wild Horse Val**	**83.41**	**39**	*e*P	**P**	**10 59 33.8**	**+0.4**
	comp=Z,4.3nm,0.9s						
LCMT	**Little Creek M**	**83.48**	**45**	*e*P	**P**	**10 59 34.8**	**+1.0**
	comp=Z,2.2nm,0.9s						
CCUT	**Cedar City**	**83.71**	**45**	*e*P	**P**	**10 59 36.4**	**+1.3**
	comp=Z,3.8nm,0.9s						
KNB	**Kanab**	**83.76**	**46**	*e*P	**P**	**10 59 36.1**	**+0.8**
	comp=Z,3.4nm,0.9s						
U15A	**North Rim**	**83.78**	**46**	*e*P	**P**	**10 59 36.1**	**+0.6**
	comp=Z,4.3nm,0.9s						
SZCU	**Shurtz Canyon**	**83.91**	**45**	*e*P	**P**	**10 59 36.9**	**+0.7**
	comp=Z,6.0nm,1.0s						
SYO	**Syowa Base**	**84.91**	**192**	⇑*e*P	**P**	**10 59 39.0**	**-1.4**
SNAA	**Sanae**	**85.52**	**178**	P	**P**	**10 59 43.8**	**+0.2**
SNAA	**Sanae**	**85.52**	**178**	*e*P	**P**	**10 59 43.1**	**-0.5**
	comp=Z,2.5nm,0.9s						
CN2	**Changchun**	**85.74**	**321**	*e*P	**P**	**10 59 47.7**	**+2.8**
KLR	**Kul'dur**	**85.88**	**328**	P	**P**	**10 59 47.3**	**+1.9**
	comp=Z,0.2nm,0.9s,baz=72,slow=2.3,SNR=7.7						
TMUT	**Trail Mountain**	**86.09**	**44**	*e*P	**P**	**10 59 47.6**	**+0.4**
	comp=Z,3.5nm,0.8s						
VNA1	**Neumayer--Stat**	**86.24**	**176**	P	**P**	**10 59 47.6**	**+0.6**
TX31	**Lajitas Ar. Si**	**86.28**	**56**	*e*P	**P**	**10 59 48.5**	**+0.5**
TXAR	**Lajitas Array**	**86.28**	**56**	P	**P**	**10 59 48.4**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=206,slow=8.3,SNR=8.4						
SRU	**San Rafael Swe**	**86.43**	**45**	*e*P	**P**	**10 59 49.2**	**+0.6**
	comp=Z,2.3nm,0.8s						
GSI	**Gunungsitoli**	**87.84**	**272**	*e*P	**P**	**10 59 57.3**	**+1.4**
	comp=Z,37nm,0.8s						
TRF	**Thorofare Moun**	**88.31**	**11**	*e*P	**P**	**10 59 57.1**	**0.0**
	comp=Z,4.4nm,0.8s						
PDAR	**Pinedale Array**	**89.03**	**42**	P	**P**	**11 00 00.7**	**-0.5**
	comp=Z,0.6nm,0.8s,baz=224,slow=4.1,SNR=5.5						
DOT	**Dot Lake**	**89.70**	**13**	*e*P	**P**	**11 00 04.3**	**+0.8**
	comp=Z,4.3nm,1.1s						
IL1	**Eielson Array**	**90.14**	**12**	*e*P	**P**	**11 00 05.2**	**-0.2**
ILAR	**Eielson Array**	**90.14**	**12**	P	**P**	**11 00 05.7**	**+0.3**
	comp=Z,0.9nm,0.9s,baz=213,slow=5.7,SNR=6.6						
IM3	**Indian Mountai**	**90.14**	**9**	*e*P	**P**	**11 00 04.9**	**-0.5**
XAN	**Xi'an**	**91.58**	**306**	P	**P**	**11 00 12.6**	**-0.3**
XAN				pmax	pmax		
	comp=Z,4.0nm,1.2s						
XAN				pmax	pmax		
	comp=Z,58nm,4.2s						
HHC	**Hu-ho-hao-te**	**92.83**	**313**	*e*P	**P**	**11 00 19.2**	**+0.6**
HHC				pmax	pmax		
	comp=Z,27nm,0.7s						
HHC				pmax	pmax		
	comp=Z,64nm,6.1s						
CMAR	**Chiang Mai Arr**	**93.27**	**289**	P	**P**	**11 00 23.4**	**+2.4**
	comp=Z,2.8nm,0.6s,baz=133,slow=3.5,SNR=15						
CD2	**Chengdu**	**94.19**	**302**	P	**P**	**11 00 24.6**	**-0.5**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
LZH	**Lanzhou**	**96.22**	**306**	*e*P	**P**	**11 00 33.0**	**-1.4**
LZH				pP	pP	11 00 44.1	-1.1
LZH				sP	sP	11 00 49.3	+0.2
LZH				*e*PP	**PP**	**11 04 29.2**	**+1.0**
LZH				pmax	pmax		
	comp=Z,17nm,1.4s						
LZH				pmax	pmax		
	comp=Z,63nm,9.2s						
LZH				LR	LR		
	comp=N,130nm,17.3s						
LZH				LR	LR		
	comp=E,130nm,17.6s						
LZH				LR	LR		
	comp=Z,170nm,19.5s						
KSH	**Kashi**	**118.31**	**304**	PKP	**PKPdf**	**11 05 54.3**	**+0.9**
KSH				smax	smax		
	comp=N,

ARA0				Sn	Sn	10 50 55.5	-1.3
	baz=124,slow=26,SNR=1.5						
ARA0				Lg	Lg	10 51 06.4	
	SNR=2.6						
ARA0	**ARCESS Array S**	**3.73**	**305**	Pn	Pn	10 50 13.6	+1.4
	baz=122,slow=16						
ARA0				Sn	Sn	10 50 55.5	-1.3
	baz=124,slow=28						
ARA0				Sg	Sb	10 51 06.4	+0.6
	baz=118,slow=37						
ARCES	**ARCESS Array B**	**3.73**	**305**	Pn	Pn	10 50 13.7	+1.5
	comp=Z,9.3nm,0.3s,baz=123,slow=15,SNR=279						
ARCES				Sn	Sn	10 50 55.4	-1.4
	comp=Z,4.7nm,0.3s,baz=121,slow=25,SNR=18						
ARCES				Lg	Lg	10 51 07.0	
	comp=Z,12nm,0.3s,baz=118,slow=32,SNR=12						
ARE0	**ARCESS Array S**	**3.73**	**305**	PN	Pn	10 50 13.6	+1.4
	baz=123						
ARE0				SN	Sn	10 50 55.5	-1.3
ARE0	**ARCESS Array S**	**3.73**	**305**	Pn	Pn	10 50 13.6	+1.4
ARE0				Sn	Sn	10 50 55.5	-1.3
HEF	**Hetta**	**4.05**	**286**	PN	Pn	10 50 17.7	+1.1
	baz=97						
HEF				SN	Sn	10 51 03.9	-0.7
HEF	**Hetta**	**4.05**	**286**	Pn	Pn	10 50 17.7	+1.1
HEF				Sn	Sn	10 51 03.9	-0.7
HEF	**Hetta**	**4.05**	**286**	*e*P	Pn	10 50 17.9	+1.3
HEF				*e*S	Sn	10 51 04.0	-0.7
TOF	**Tornio**	**4.20**	**253**	PG	Pb	10 50 30.0	+1.8
TOF	**Tornio**	**4.20**	**253**	Pg	Pb	10 50 30.0	+1.8
OUL	**Oulu**	**4.21**	**237**	PG	Pb	10 50 26.6	-1.8
	baz=48						
KTK1	**Kautokeino**	**4.31**	**294**	*e*P	Pn	10 50 22.1	+2.0
KTK1				IAML		10 51 28.7	
	comp=Z,14nm,0.3s						
LANU	**Lannavaara**	**4.65**	**281**	PN	Pn	10 50 24.9	-0.1
LANU				SG	Sb	10 51 34.6	+2.2
LANU	**Lannavaara**	**4.65**	**281**	Pn	Pn	10 50 24.9	-0.1
KALU	**Kalix**	**4.66**	**253**	PN	Pn	10 50 26.9	+1.9
	baz=65						
KALU				SG	Sb	10 51 35.8	+3.3
KALU	**Kalix**	**4.66**	**253**	Pn	Pn	10 50 26.9	+1.9
KALU				Sg	Sb	10 51 35.8	+3.3
ERTU	**Ertsjaerv**	**4.82**	**263**	PN	Pn	10 50 27.7	+0.4
	baz=70						
ERTU				SN	Sn	10 51 22.4	-1.3
ERTU	**Ertsjaerv**	**4.82**	**263**	Pn	Pn	10 50 27.7	+0.4
ERTU				Sn	Sn	10 51 22.4	-1.3
JOF	**Joensuu**	**4.88**	**196**	PN	Pn	10 50 29.0	+1.0
	baz=8.0						
JOF				SN	Sn	10 51 24.5	-0.7
JOF	**Joensuu**	**4.88**	**196**	Pn	Pn	10 50 29.0	+1.0
JOF				Sn	Sn	10 51 24.5	-0.7
KIF	**Kilpisjarvi**	**5.17**	**292**	*e*P	Pn	10 50 33.0	+1.1
FIA0	**FINESS Array S**	**7.12**	**213**	Pn	Pn	10 51 00.5	+1.7
	baz=23,slow=14						
FIA0				Sn	Sn	10 52 18.2	-2.1
	baz=37,slow=22						
FIA0				Lg	Lg	10 52 52.9	
	baz=29,slow=28						
FIA0	**FINESS Array S**	**7.12**	**213**	Pn	Pn	10 51 00.5	+1.7
	baz=23,slow=14						
FIA0				Sn	Sn	10 52 18.2	-2.1
	baz=37,slow=22						
FIA0				Lg	Lg	10 52 52.9	
	baz=29,slow=28						
FINES	**FINESS Array B**	**7.12**	**213**	Pn	Pn	10 51 00.5	+1.7
	comp=Z,0.2nm,0.3s,baz=29,slow=14,SNR=5.6						
FINES				Sn	Sn	10 52 19.0	-1.4
	comp=Z,0.3nm,0.3s,baz=37,slow=20,SNR=3.5						
STEI	**Steigen**	**7.20**	**281**	*e*P	Pn	10 50 59.5	-0.3
STEI				IAML		10 52 58.5	
	comp=Z,2.8nm,0.6s						
HFS	**Hagfors**	**11.70**	**240**	Pn	Pn	10 52 00.4	-1.0
	baz=47,slow=11						
HFS	**Hagfors**	**11.70**	**240**	Pn	Pn	10 52 00.3	-1.1
	comp=Z,0.1nm,0.3s,baz=46,slow=13,SNR=3.8						
HFS	**Hagfors**	**11.70**	**240**	Pn	Pn	10 52 00.4	-1.0
	baz=47,slow=11						
SPA0	**Spitsbergen Ar**	**11.73**	**342**	Pn	Pn	10 52 01.7	-0.1
	baz=130,slow=9.3						
SPA0	**Spitsbergen Ar**	**11.73**	**342**	Pn	Pn	10 52 01.7	-0.1
	baz=130,slow=9.3						
SPITS	**Spitsbergen Ar**	**11.73**	**342**	Pn	Pn	10 52 01.7	-0.1
	baz=135,slow=9.5,SNR=10						
NOA	**NORSAR Array B**	**11.90**	**247**	Pn	Pn	10 52 03.3	-0.9
	comp=Z,0.4nm,0.3s,baz=45,slow=11,SNR=4.6						
NRA0	**NORESS Array S**	**11.99**	**246**	Pn	Pn	10 52 02.9	-2.6
	baz=38,slow=16						
NRA0	**NORESS Array S**	**11.99**	**246**	Pn	Pn	10 52 02.9	-2.6
	baz=38,slow=16						

*CSEM **08** 11:01:03.6±0.2, 38°.59N×39°.14E, h15km, ML2.5, Error ellipse: s-maj=6.6km s-min=4.3km az=132.0*
*DDA **08** 11:01:03.2, 38°.56N×39°.24E, h7km, Ml2.5*
*ISK **08** 11:01:03.3, 38°.56N×39°.17E, h22km±4km, ML2.0/2*
*ISCJB **08** 11:01:04.3±0.7, 38°.56N±0°.05×39°.19E±0°.05, h15km±6km, Error ellipse: s-maj=9.3km s-min=5.4km az=147.1*

ISC 08 11:01:03.9±1.0, 38°.58N±0°.03×39°.16E±0°.04, h18km±3km, n13, σ1§57/25, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.16**	**241**	*i* P	Pb	11 01 08.0	+0.3
ELZG				*i* S	Sg	11 01 11.5	-0.2
ELZG	**Elazig**	**0.16**	**241**	P	Pb	11 01 08.0	+0.3
ELZG				S	Sg	11 01 11.5	-0.2
SVRC	**Sivrice-ELAZID**	**0.23**	**150**	PG	Pg	11 01 09.3	-0.2
SVRC				SG	Sg	11 01 13.3	0.0
SVRC	**Sivrice-ELAZID**	**0.23**	**150**	*e*Pg	Pg	11 01 09.3	-0.2
SVRC				*e*Sg	Sg	11 01 13.3	0.0
PTK	**Pertek**	**0.36**	**30**	PG	Pg	11 01 11.9	+0.2
PTK				SG	Sg	11 01 17.8	+0.8
PTK	**Pertek**	**0.36**	**30**	*e*Pg	Pg	11 01 11.9	+0.2
PTK				*e*Sg	Sg	11 01 17.8	+0.8
TNCL	**Tunceli-Merkez**	**0.61**	**29**	*i* P	Pb	11 01 15.1	-1.0
TNCL				*i* S	Sb	11 01 24.1	-0.4
TNCL	**Tunceli-Merkez**	**0.61**	**29**	P	Pb	11 01 15.1	-1.0
TNCL				S	Sb	11 01 24.0	-0.4
MALT	**Malatya**	**0.64**	**246**	PG	Pb	11 01 16.1	-0.4
MALT				SG	Sn	11 01 26.1	-1.7
MALT	**Malatya**	**0.64**	**246**	*e*Pg	Pb	11 01 16.1	-0.4
MALT				*e*Sg	Sn	11 01 26.1	-1.7
KEMA	**Kemaliye**	**0.87**	**323**	*i* P	Pn	11 01 24.2	+2.9
KEMA				*i* S	Sb	11 01 26.4	-5.4
HEKM	**Malatya_Hekimh**	**0.99**	**288**	*i* P	Pb	11 01 22.2	-0.4
HEKM				*i* S	Sn	11 01 38.7	+2.0
HEKM	**Malatya_Hekimh**	**0.99**	**288**	P	Pb	11 01 22.2	-0.4

*ISK **08** 11:03:33.3, 37°.04N×27°.76E, h5km, ML2.7/4*
*CSEM **08** 11:03:35.2±0.4, 37°.04N×27°.77E, h1km, ML2.7, Error ellipse: s-maj=7.9km s-min=5.6km az=144.0, Suspected Mining explosion.*
*DDA **08** 11:03:35.6, 37°.04N×27°.78E, h7km, Ml2.9, Suspected Mining explosion.*

ISC 08 11:03:33.4±1.1, 36°.98N±0°.03×27°.87E±0°.02, h4km±14km, n17, σ0§78/30, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSB	**Milas**	**0.33**	**347**	PG	Pg	11 03 39.6	-0.2
MLSB				SG	Sg	11 03 44.3	+0.2
MLSB	**Milas**	**0.33**	**347**	*e*Pg	Pg	11 03 39.6	-0.2
MLSB				*e*Sg	Sg	11 03 44.3	+0.2
DAT	**Datca**	**0.34**	**224**	PG	Pb	11 03 41.8	-0.3
DAT	**Datca**	**0.34**	**224**	*i* P	Pb	11 03 42.0	-0.1
DAT				*i* S	Sb	11 03 48.6	+0.7
DAT	**Datca**	**0.34**	**224**	P	Pb	11 03 42.0	-0.1
DAT				S	Sb	11 03 48.6	+0.7
BDRM	**Kayabasi**	**0.35**	**285**	*i* P	Pg	11 03 41.1	+0.9
BDRM				*i* S	Sg	11 03 45.6	+0.8
BDRM	**Kayabasi**	**0.35**	**285**	P	Pg	11 03 41.1	+0.9
BDRM				S	Sg	11 03 45.6	+0.8
YER	**Yerkesik**	**0.37**	**64**	PG	Pb	11 03 42.6	+0.1
YER				SG	Sb	11 03 50.0	+1.4
YER	**Yerkesik**	**0.37**	**64**	*e*Pg	Pb	11 03 42.6	+0.1
YER				*e*Sg	Sb	11 03 50.0	+1.4
BODT	**Bodrum**	**0.46**	**281**	PG	Pg	11 03 41.3	-0.9
BODT	**Bodrum**	**0.46**	**281**	*e*Pg	Pg	11 03 41.3	-0.9
YKAV	**Yalikavak-Bodr**	**0.50**	**288**	PG	Pg	11 03 41.9	-1.0
YKAV				SG	Sg	11 03 48.8	-0.6
YKAV	**Yalikavak-Bodr**	**0.50**	**288**	*e*Pg	Pg	11 03 41.9	-1.0
YKAV				*e*Sg	Sg	11 03 48.8	-0.6
TURN	**Turunc**	**0.59**	**100**	*i* P	Pg	11 03 44.3	-0.5
TURN				*i* S	Sg	11 03 51.8	-0.8
TURN	**Turunc**	**0.59**	**100**	P	Pg	11 03 44.3	-0.5
AYDN	**Tasoluk**	**0.68**	**1**	*i* P	Pb	11 03 48.2	+0.3
AYDN				*i* S	Sb	11 03 56.7	-1.1
AYDN	**Tasoluk**	**0.68**	**1**	P	Pb	11 03 48.2	+0.3
AYDN				S	Sb	11 03 56.7	-1.1

*IDC **08** 11:05:37.1±7.4, 37°.12N×74°.09E, h0km, mb3.9/1, mb1 3.8/6, mb1mx3.4/69, mbtmp3.7/6, ML3.3/4, Error ellipse: s-maj=108.4km s-min=43.0km az=155.0*
*NNC **08** 11:06:03.6±2.0, 38°.56N×73°.56E, h145km±16km, mb2.6, mpv3.5, Error ellipse: s-maj=34.7km s-min=16.4km az=65.0*

ISC 08 11:06:03.8±2.2, 38°.7N±0°.2×73°.8E±0°.1, h150km, n11, σ1§92/17, 5C-5D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**1.38**	**352**	⇑P	Pn	11 06 32.0	-0.3
	9.9nm,0.4s						
SFK				⇓S	Sn	11 06 54.9	+0.7
	373nm,0.4s						
MNAS	**Manas**	**3.95**	**346**	⇑P	Pn	11 07 04.1	+0.6
	4.9nm,0.4s						
MNAS				⇓S	Sn	11 07 51.0	+1.0
	41nm,0.4s						
AAK	**Ala-Archa**	**4.03**	**8**	Pn	Pn	11 07 04.8	+0.3
	1.4nm,0.3s,baz=176,slow=6.0,SNR=5.1						
AAK				Sn	Sn	11 07 55.4	+3.7
	2.9nm,0.3s,baz=47,slow=21,SNR=13						
KK31	**Karatay Array**	**5.08**	**332**	⇑P	Pn	11 07 19.4	+1.1
	3.5nm,0.4s,baz=148,slow=13,SNR=34						
KK31				⇑S	Sn	11 08 17.1	+0.7
	9.7nm,0.4s,baz=154,slow=23,SNR=14						
MKAR	**Makanchi Array**	**10.28**	**35**	Pn	Pn	11 08 23.6	-3.8
	baz=210,slow=14,SNR=4.8						
KURBB	**Kurchatov Arra**	**12.44**	**14**	Pn	Pn	11 08 53.7	-1.9
	0.0nm,0.3s,baz=201,slow=11,SNR=3.5						
AB31	**Akbulak array**	**14.51**	**321**	⇓P	Pn	11 09 22.0	+0.1
	0.5nm,0.4s,baz=134,slow=12,SNR=9.7						
AB31				⇓S	Sn	11 11 59.6	-3.2
	1.0nm,0.7s,baz=158,slow=23,SNR=4.8						
AKTO	**Aktyubinsk**	**16.23**	**322**	P	P	11 09 44.2	+0.9
	0.3nm,0.3s,baz=129,slow=13,SNR=5.6						
AKTO	**Aktyubinsk**	**16.23**	**322**	⇓P	P	11 09 44.3	+0.9
	3.7nm,1.1s						
AKTO				⇑S	S	11 12 42.6	-0.7
	1.5nm,0.8s						
ZALV	**Zalesovo Beam**	**17.07**	**23**	P	P	11 09 52.6	0.0
	0.5nm,0.3s,baz=212,slow=10,SNR=4.8						
ARCES	**ARCESS Array B**	**40.04**	**336**	P	P	11 13 25.7	+2.0
	1.5nm,0.8s,baz=107,slow=8.6,SNR=9.2						

MEX 08 11:28:25.8±0.4, 16°.43N×98°.40W, h16km±999km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.14**	**352**	*i* P	Pb	11 28 43.7	-3.6
TLIG				*e*S	Sb	11 28 57.4	-4.5
VHO	**Vista Hermosa**	**1.72**	**68**	*e*P	Pn	11 28 48.3	-7.0
VHO				*e*S	Sn	11 29 12.2	-4.9
CAIG	**El Cayaco**	**1.89**	**289**	*e*P	Pn	11 28 54.0	-3.5
CAIG				*e*S	Sn	11 29 16.2	-4.7
HUIG	**Huatulco**	**2.30**	**106**	*e*P	Pn	11 29 00.0	-3.1

*NEIC **08** 11:31:00.0±0.0, 30°.76S×150°.41E, h0km, mb4.0/6, MW4.0, ML4.2(AUST), Moment Tensor Solution. s3 Moment tensor: Scale 1015Nm; Mrr1.07; Mθθ-0.05; Mφφ-1.02; Mrθ0.26; Mφθ0.23; Mφr-0.86; Best double couple: M0 1.40000×1015 NP1:φs350.00000°, δ25.00000°, λ95.00000°. NP2:φs164.00000°, δ65.00000°, λ88.00000°. Principal axes: T 1.4000, Plg70.0000°, Azm70.0000°; N 0.0000, Plg2.0000°, Azm165.0000°; P -1.4000, Plg20.0000°, Azm256.0000°; After AUST.*
NEIC Felt [IV] at Gunnedah and Tamworth; [III] at Armidale and Inverell; [II] at Narrabri. Also felt at Attunga, Ballina, Bendemeer, Coffs Harbour, Dubbo, Dungowan, Glenn Innes, Muswellbrook, Nelson Bay, Orange, Sydney and Taree.
*ISCJB **08** 11:31:01.9±0.3, 30°.72S±0°.03×150°.37E±0°.04, h10km, mb4.5/7, MS3.7/2 Error ellipse: s-maj=4.6km s-min=4.2km az=135.4*
*AUST **08** 11:31:01.6±0.0, 30°.76S×150°.42E, h0km, Error ellipse: s-maj=0.8km s-min=0.7km az=289.0*
*IDC **08** 11:31:03.1±1.2, 30°.87S×150°.42E, h0km, mb4.1/4, mb1 4.2/6, mb1mx3.9/40, mbtmp4.1/6, ML4.1/2, MS3.3/2, Ms1 3.3/2, ms1mx2.8/42, Error ellipse: s-maj=33.6km s-min=20.6km az=65.0*

ISC 08 11:31:03.7±0.4, 30°.79S±0°.04×150°.42E±0°.04, h10km, n53, σ2§22/65, mb4.5/7, New South Wales

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARMA	**Armidale**	**1.11**	**71**	P	Pb	11 31 23.5	-1.5
	baz=1.1,SNR=1000						
ARMA				S	Sg	11 31 37.3	-2.1
	baz=1.1,SNR=12						
ARMA	**Armidale**	**1.11**	**71**	*e*Pn	Pb	11 31 23.5	-1.5
ARMA				*e*Sn	Sg	11 31 37.6	-1.8
MGCD	**Mangrove Creek**	**2.48**	**166**	P	Pn	11 31 44.5	+0.3
	baz=2.5,SNR=108						
MGCD				S	Sb	11 32 20.1	+1.0
	baz=2.5,SNR=6.5						
RIV	**Riverview**	**3.09**	**169**	P	Pn	11 31 53.3	+0.7
	baz=3.1,SNR=19						
YNG	**Young**	**3.89**	**205**	P	Pn	11 32 04.7	+1.0
	baz=3.9,SNR=49						
RMQ	**Roma**	**4.53**	**341**	P	Pn	11 32 13.0	+0.6
	baz=4.5,SNR=43						
CNB	**Canberra Magne**	**4.60**	**191**	P	Pn	11 32 13.6	+0.2
	baz=4.6,SNR=15						
CNB				S	Sb	11 33 25.1	+5.1
	baz=4.6,SNR=8.6						
CAN	**Canberra**	**4.67**	**194**	*e*Pn	Pn	11 32 14.8	+0.4
CAN				*e*Pg	Pg	11 32 31.9	-1.3
CAN				*e*Sg	Sg	11 33 29.4	-4.4
EIDS	**Eidsvold**	**5.43**	**6**	P	Pn	11 32 24.8	0.0
	baz=5.4,SNR=35						
EIDS	**Eidsvold**	**5.43**	**6**	*e*Pn	Pn	11 32 24.5	-0.3
EIDS				*e*Pg	Pg	11 32 47.2	-0.6
EIDS				*e*Sn	Sn	11 33 25.8	-1.6
QLP	**Quilpie**	**6.86**	**306**	P	Pn	11 32 43.8	-0.6
	baz=6.8,SNR=18						
LHI	**Lord Howe Isla**	**7.45**	**98**	P	Pn	11 32 49.6	-2.7
	baz=7.4,SNR=6.6						
LHI	**Lord Howe Isla**	**7.45**	**98**	*e*Pn	Pn	11 32 49.7	-2.7
STKA	**Stephens Creek**	**7.62**	**260**	Pn	Pn	11 32 54.1	-0.8
	1.9nm,0.3s,baz=91,slow=15,SNR=11						
STKA				Sn	Sn	11 34 17.2	-4.2
	6.2nm,0.3s,baz=36,slow=22,SNR=4.8						
STKA				Lg	Lg	11 35 05.8	
	4.7nm,0.3s,baz=0.7,slow=22,SNR=3.9						
STKA				LR	LR	11 36 19.4	
	comp=Z,235nm,18.2s,baz=37,slow=42						
STKA	**Stephens Creek**	**7.62**	**260**	P	Pn	11 32 54.8	-0.1
	baz=7.6,SNR=6.9						
STKA	**Stephens Creek**	**7.62**	**260**	*e*Pn	Pn	11 32 54.4	-0.5
STKA				*e*Sn	Sn	11 34 18.0	-3.4
TOO	**Toolangi**	**7.90**	**210**	P	Pn	11 32 59.7	+1.1
	baz=7.9,SNR=14						
ARPS	**Mount Arapiles**	**9.30**	**228**	P	Pn	11 33 18.6	+0.8
	baz=9.3,SNR=35						
HTT	**Hallett**	**10.10**	**252**	P	Pn	11 33 29.0	+0.2
	baz=10,SNR=10						
CTA	**Charters Tower**	**11.30**	**340**	Pn	Pn	11 33 46.2	+0.9
	0.9nm,0.3s,baz=156,slow=15,SNR=7.8						
CTA				Lg	Lg	11 37 04.5	
	0.9nm,0.3s,baz=58,slow=20,SNR=3.7						
CTAO	**Charters Tower**	**11.30**	**340**	*e*Pn	Pn	11 33 46.4	+1.1
CTAO				*e*Sn	Sn	11 35 53.4	+1.7
BBOO	**Buckleboo**	**12.38**	**257**	P	Pn	11 34 02.6	+2.6
	baz=12,SNR=6.7						
BBOO	**Buckleboo**	**12.38**	**257**	*e*Pn	Pn	11 33 59.1	-0.9
QIS	**Mount Isa**	**14.09**	**314**	P	Pn	11 34 20.3	-3.1
	baz=14,SNR=5.8						
AS01	**Alice Springs**	**16.27**	**292**	*e*Pn	Pn	11 34 50.4	-2.0
AS31	**Alice Springs**	**16.30**	**292**	*e*Pn	Pn	11 34 50.4	-2.5
	6.9nm,0.7s						
AS31				*e*Sn	Sn	11 37 56.0	+2.2
ASAR	**Alice Springs**	**16.30**	**292**	Pn	Pn	11 34 49.4	-3.5
	1.4nm,0.3s,baz=114,slow=13,SNR=42						
ASAR				Sn	Sn	11 37 45.6	-8.3
	0.5nm,0.3s,baz=111,slow=23,SNR=5.1						
DZM	**Mont Dzumac**	**16.76**	**63**	*e*Pn	Pn	11 35 00.3	+1.6
	41nm,1.3s						
WB2	**Warramunga Arr**	**18.07**	**303**	*e*Pn	Pn	11 35 14.1	-1.0
WRAB	**Tennant Creek**	**18.08**	**303**	*e*Pn	Pn	11 35 15.1	-0.1
	9.0nm,0.8s						
WR1	**Warramunga Arr**	**18.08**	**303**	*e*Pn	Pn	11 35 11.1	-4.0
	5.4nm,0.6s						
WR1				*e*Sn	Sn	11 38 23.0	-14
WRA	**Warramunga Arr**	**18.08**	**303**	Pn	Pn	11 35 11.1	-4.0
	0.2nm,0.3s,baz=136,slow=12,SNR=16						
WRA				Sn	Sn	11 38 23.0	-14
	0.3nm,0.3s,baz=131,slow=23,SNR=3.7						
FORT	**Forrest**	**19.21**	**264**	*e*P	P	11 35 28.4	+0.5
	22nm,1.0s						
WRKA	**Warakurna**	**20.36**	**281**	P	P	11 35 41.9	+1.4
	baz=20,SNR=7.3						
KNRA	**Kununurra**	**24.88**	**302**	P	P	11 36 28.1	+1.4
	baz=25,SNR=15						
KNRA				S	S	11 40 51.7	+1.9
	baz=25,SNR=21						
MMRI	**Maumere**	**34.31**	**304**	S	S	11 43 06.7	-11
	baz=34,SNR=3.7						
LUWI	**Luwuk**	**39.52**	**313**	P	P	11 38 35.1	+0.2
	baz=40,SNR=5.6						
VNDA	**Vanda**	**47.10**	**177**	P	P	11 39 34.9	-0.5
	1.4nm,1.1s,baz=348,slow=9.4,SNR=2.8						
QSPA	**South Pole Qui**	**59.31**	**180**	P	P	11 41 06.4	+0.9
	4.2nm,0.9s,baz=328,slow=4.4,SNR=9.6						
MAW	**Mawson**	**61.01**	**206**	P	P	11 41 17.7	+0.8
	2.6nm,0.7s,baz=96,slow=8.1,SNR=6.7						
MAW	**Mawson**	**61.01**	**206**	*e*P	P	11 41 18.2	+1.3
	1.0nm,0.9s						
TAOE	**Nuku Hiva Isla**	**67.87**	**87**	*e*P	P	11 42 01.4	-1.4
	40nm,1.2s						
CMAR	**Chiang Mai Arr**	**69.61**	**308**	P	P	11 42 15.2	+1.8
	1.4nm,0.6s,baz=148,slow=5.2,SNR=7.2						
CMAR				LR	LR	12 17 08.8	
	comp=Z,13nm,18.4s,baz=125,slow=40						
SNAA	**Sanae**	**76.11**	**188**	P	P	11 42 51.5	+0.2
VNA1	**Neumayer--Stat**	**77.70**	**187**	P	P	11 43 01.2	+1.0
LZH	**Lanzhou**	**79.60**	**323**	*e*P	P	11 43 12.0	+0.7
LZH				pP	sP	11 43 17.3	+1.5
LZH				sP	PcP	11 43 20.0	+0.9
LZH				*e*PP	PP	11 46 20.5	+8.1
LZH				pmax	pmax		
	comp=Z,15nm,1.4s						
LZH				pmax	pmax		
	comp=Z,42nm,8.6s						
LZH				LR	LR		
	comp=N,53nm,17.0s						
LZH				LR	LR		
	comp=E,61nm,17.3s						
LZH				LR	LR		
	comp=Z,85nm,19.0s						
HHC	**Hu-ho-hao-te**	**79.83**	**331**	*e*P	P	11 43 16.5	+4.2
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,73nm,6.2s						
WMQ	**Urumqi**	**93.78**	**320**	P	P	11 44 22.5	+1.6
PAGS	**Pennsylvania G**	**140.88**	**63**	*e*PKPpre	PKPpre	11 50 27.6	
TOA0	**Torodi Ar. Sit**	**146.26**	**246**	*e*PKPdf	**PKPdf**	11 50 45.0	+0.9
TORD	**Torodi Ar. Bea**	**146.26**	**246**	PKPbc	**PKPdf**	11 50 45.1	+1.0
	comp=Z,3.3nm,0.9s,baz=114,slow=3.6,SNR=13						
TOA1	**Torodi Ar. Sit**	**146.27**	**246**	*e*PKPdf	**PKPdf**	11 50 45.1	+1.0
DBIC	**Dimbokro**	**146.64**	**229**	PKPbc	**PKPbc**	11 50 46.5	+0.2
	comp=Z,7.3nm,0.8s,baz=133,slow=3.2,SNR=7.0						

*NEIC **08** 11:32:39.0±0.0, 30°.75S×150°.40E, h0km, ML4.1(AUST), After AUST.*
*ISCJB **08** 11:32:41.4±0.8, 30°.54S±0°.07×150°.39E±0°.05, h10km, mb5.0/3, Error ellipse: s-maj=9.9km s-min=6.1km az=3.9*
*AUST **08** 11:32:50.3±0.4, 30°.99S×152°.07E, h10km, Error ellipse: s-maj=1.5km s-min=0.3km az=255.0*

ISC 08 11:32:40.9±0.8, 29°.91S±0°.09×150°.61E±0°.07, h10km, n10, σ2§80/15, mb5.1/3, New South Wales

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARMA	**Armidale**	**1.02**	**120**	P	Pb	11 33 02.4	+1.7
	baz=0.7						
ARMA				S	Sb	11 33 16.1	+1.9
	baz=0.7						
ARMA	**Armidale**	**1.02**	**120**	*e*Pg	Pb	11 33 02.4	+1.7
ARMA				*e*Sn	Sg	11 33 16.0	+2.2
MGCD	**Mangrove Creek**	**3.31**	**173**	P	Pn	11 33 30.2	-2.7
	baz=2.4						
MGCD				S	Sn	11 33 58.7	-14
	baz=2.4						
RIV	**Riverview**	**3.93**	**173**	P	Pn	11 33 38.3	-3.1
	baz=2.9						
RIV				S	Sn	11 34 10.5	-17
	baz=2.9						
LHI	**Lord Howe Isla**	**7.45**	**105**	*e*Pn	Pn	11 34 28.7	-1.0
LHI				*e*Sn	Sn	11 35 48.2	-6.0
CTAO	**Charters Tower**	**10.55**	**337**	*e*Pn	Pn	11 35 12.5	+0.2
CTAO				*e*Sn	Sn	11 37 08.1	-2.5
AS31	**Alice Springs**	**16.16**	**289**	*e*Pn	Pn	11 36 29.3	+1.1
	3.2nm,0.8s						
AS31				*e*Sn	Sn	11 39 30.7	+3.2
LTZ	**Lake Taylor**	**21.59**	**132**	*e*P	P	11 37 30.2	-0.6
	30nm,0.9s						
OXZ	**Oxford**	**21.71**	**134**	*e*P	P	11 37 34.6	+2.4
	119nm,1.6s						
MQZ	**McQueen's Vall**	**22.29**	**134**	*e*P	P	11 37 39.8	+1.4
	253nm,1.7s						

*IDC **08** 11:36:19.4±0.8, 7°.72S×147°.13E, h0km, mb4.3/13, mb1 4.5/16

1.6nm,0.9s,baz=48,slow=22,SNR=4.0
ASAR LR LR 11 49 26.5
comp=Z,178nm,18.9s,baz=54,slow=39
GUMO Guam 21.32 355 LR LR 11 49 25.7
comp=Z,50nm,18.3s,baz=178,slow=37
SOEI Soe 22.40 263 *e*P **P 11 41 24.3 +3.2**
18nm,0.8s
ARMA Armidale 22.97 169 *e*P **P 11 41 28.5 +1.6**
31nm,1.1s
STKA Stephens Creek 24.47 191 LR LR 11 50 50.5
comp=Z,118nm,19.5s,baz=22,slow=35
MYLDM Lahad Datu 31.07 294 *e*P **P 11 42 37.7 -2.7**
15nm,1.1s
FUNA Funafuti 32.03 94 *e*P P 11 42 38.5 -10
70nm,1.1s
JAGI Jajag, Banyuwa 32.37 266 *e*P **P 11 42 50.1 -1.7**
14nm,0.9s
KKM Kota Kinabalu 33.50 293 *e*P **P 11 43 01.1 -0.7**
9.5nm,0.8s
KSM Kuching 37.58 283 *e*P **P 11 43 36.5 -0.3**
5.4nm,0.8s
JNU Nakatsue 43.42 340 LR LR 12 01 43.4
comp=Z,40nm,18.1s,baz=118,slow=35
MJAR Matsushiro Arr 44.82 350 P **P 11 44 35.3 -0.7**
2.6nm,1.0s,baz=184,slow=10,SNR=5.4
MAJO Matsushiro 44.82 350 *e*P **P 11 44 35.3 -0.7**
MAT Matsushiro 44.82 350 P **P 11 44 35.6 -0.4**
KSRS Korea Array 48.35 340 P **P 11 45 03.2 -0.4**
8.5nm,0.9s,baz=157,slow=9.0,SNR=20
KSRS LR LR 12 03 58.1
comp=Z,50nm,20.1s,baz=144,slow=34
KS01 Wonju Array Si 48.38 340 *e*P **P 11 45 03.5 -0.3**
USRK Ussuriysk Ar. 53.45 347 P **P 11 45 41.5 -0.4**
7.6nm,0.9s,baz=148,slow=9.1,SNR=8.4
CM01 Chiang Mai Arr 53.94 299 *e*P **P 11 45 47.2 +1.3**
CMAR Chiang Mai Arr 53.97 299 P **P 11 45 47.4 +1.3**
1.6nm,0.6s,baz=119,slow=5.8,SNR=7.0
KMI Kunming 53.97 309 P **P 11 45 48.4 +2.1**
KMI sP sP 11 45 59.0 -2.0
KMI pmax pmax
comp=Z,8.0nm,0.9s
KMI pmax pmax
comp=Z,63nm,3.5s
CN2 Changchun 54.88 341 *e*P **P 11 45 54.8 +2.5**
XAN Xi'an 54.96 321 P **P 11 45 53.3 +0.2**
XAN pmax pmax
comp=Z,10.0nm,1.0s
XAN pmax pmax
comp=Z,43nm,6.9s
HHC Hu-ho-hao-te 58.26 329 *e*P **P 11 46 20.4 +3.9**
HHC pmax pmax
comp=Z,12nm,0.8s
HHC pmax pmax
comp=Z,59nm,5.7s
LZH Lanzhou 59.46 320 *e*P **P 11 46 25.0 0.0**
LZH pP pP 11 46 36.5 +0.8
LZH sP sP 11 46 40.7 +0.9
LZH *e*PP **PP 11 48 39.2 +2.5**
LZH pmax pmax
comp=Z,22nm,1.3s
LZH pmax pmax
comp=Z,79nm,6.2s
LZH LR LR
comp=N,370nm,14.5s
LZH LR LR
comp=E,350nm,15.0s
LZH LR LR
comp=Z,430nm,18.2s
PETK Petropavlovsk- 61.35 7 P **P 11 46 37.3 -0.1**
3.9nm,0.9s,baz=174,slow=7.2,SNR=3.6
PETK LR LR 12 07 59.1
comp=Z,44nm,21.0s,baz=145,slow=31
PEA1 Petropavlovsk- 61.35 7 *e*P **P 11 46 37.3 -0.1**
GTA Gaotai 64.01 321 *e*P **P 11 46 56.9 +1.3**
GTA pP pP 11 47 02.3 -4.0
GTA pmax pmax
comp=Z,4.0nm,0.9s
SONA0 Songino Array 65.88 331 *e*P **P 11 47 07.9 +0.4**
SONM Songino Array 65.88 331 P **P 11 47 07.9 +0.4**
2.3nm,0.8s,baz=134,slow=6.4,SNR=9.0
SONA1 Songino Array 65.88 331 *e*P **P 11 47 07.8 +0.2**
VNDA Vanda 70.16 177 P **P 11 47 34.1 +0.3**
0.5nm,0.6s,baz=330,slow=7.2,SNR=6.4
WMQ Urumqi 74.03 320 P **P 11 47 59.1 +1.4**
MK01 Makanchi Array 78.75 321 *e*P **P 11 48 24.4 +0.1**
MK31 Makanchi Array 78.77 321 *e*P **P 11 48 24.5 +0.1**
MK32 Makanchi Array 78.77 321 *e*P **P 11 48 24.6 +0.3**
MKAR Makanchi Array 78.77 321 P **P 11 48 24.6 +0.3**
3.6nm,0.6s,baz=105,slow=6.3,SNR=25
MKAR Makanchi Array 78.77 321 *e*P **P 11 48 24.5 +0.1**
22nm,0.7s
MAKZ Makanchi 78.97 321 *e*P **P 11 48 25.7 +0.2**
8.9nm,1.1s
ZAA0 Zalesovo Array 80.43 328 *e*P **P 11 48 32.8 -0.4**
2.4nm,0.6s
ZALV Zalesovo Beam 80.43 328 P **P 11 48 32.1 -1.1**
2.3nm,0.6s,baz=106,slow=4.8,SNR=9.4
ZALV Zalesovo Beam 80.43 328 *e*P **P 11 48 32.2 -1.0**
ZAA1 Zalesovo Array 80.43 328 *e*P **P 11 48 32.1 -1.1**
KSH Kashi 80.45 312 P **P 11 48 36.7 +2.9**
KSH pP sP 11 48 47.2 -1.7
KSH pmax pmax
comp=Z,230nm,6.6s
MAW Mawson 80.56 203 P **P 11 48 34.7 +1.0**
1.6nm,0.8s,baz=48,slow=11,SNR=3.6
MAW Mawson 80.56 203 *e*P **P 11 48 34.4 +0.7**
0.6nm,1.1s
QSPA South Pole Qui 82.20 180 *e*P **P 11 48 41.3 -1.4**
5.4nm,0.9s
KURK Kurchatov 82.53 323 *e*P **P 11 48 44.5 +0.1**
KURBB Kurchatov Arra 82.55 323 P **P 11 48 44.2 -0.3**
2.2nm,1.0s,baz=112,slow=4.3,SNR=10.0
SKT Skwentna 84.03 25 *e*P **P 11 48 48.9 -3.0**
7.2nm,0.7s
SUA Susitna One 84.12 25 *e*P **P 11 48 49.7 -2.8**
39nm,0.8s
IM3 Indian Mountai 85.19 21 *e*P **P 11 48 56.6 -1.1**
RND Reindeer 85.79 24 *e*P **P 11 49 00.0 -0.8**
5.5nm,0.8s
DHY Denali Highway 86.25 25 *e*P **P 11 49 05.4 +2.2**
4.6nm,0.6s
CCB Clear Creek Bu 86.75 23 *e*P **P 11 49 02.7 -2.8**
2.7nm,0.8s
NRIK Noril'sk 86.91 342 LR LR 12 26 57.5
comp=Z,23nm,20.6s,baz=73,slow=35
IL1 Eielson Array 87.16 23 *e*P **P 11 49 04.8 -2.6**
ILAR Eielson Array 87.16 23 P **P 11 49 04.8 -2.6**
2.2nm,0.8s,baz=261,slow=4.8,SNR=16
ILB Eielson Array 87.16 23 *e*P **P 11 49 05.0 -2.4**
DOT Dot Lake 87.85 25 *e*P **P 11 49 09.4 -1.4**
5.9nm,1.2s
YBH Yreka Blue Hor 95.44 49 LR LR 12 23 25.4
comp=Z,44nm,21.9s,baz=285,slow=30
SNAA Sanae 98.23 189 LR LR 12 33 05.6
comp=Z,50nm,20.2s,baz=335,slow=35
TORD Torodi Ar. Bea 145.34 282 PKPbc **PKPdf 11 55 59.9 -0.6**
12nm,0.7s,baz=78,slow=4.0,SNR=36
TOA1 Torodi Ar. Sit 145.34 282 *e*PKPbc **PKPdf 11 55 59.9 -0.6**
KIC Kosan Boka 151.77 269 *e*PKP1 **PKPbc 11 56 18.2 +0.8**
98nm,1.7s
DBIC Dimbokro 151.91 270 PKPbc **PKPbc 11 56 19.5 +1.8**
4.7nm,0.7s,baz=143,slow=2.7,SNR=5.7
LIC Lamto 152.04 269 *e*PKP1 **PKPbc 11 56 19.3 +1.3**
20nm,0.7s
TIC Toumodi 152.07 270 *e*PKP1 **PKPbc 11 56 18.8 +0.7**

RSNC 08 11:41:14.9±0.9, 6°.83N×73°.13W, h145km±6km, ML3.3, Mw3.9, 1C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.24**	**192**	*i* P	Pn	11 41 34.9	-0.1
BARC				*e*S	Sn	11 41 50.1	-0.1
BARC				*i*		11 41 51.5	
	comp=Z,280nm,0.3s						
RUSC	**La Rusia**	**0.94**	**177**	⇑*i*P	Pn	11 41 38.7	-0.5
RUSC				*e*S	Sn	11 41 57.1	-0.6
RUSC				*i*		11 41 58.4	
	comp=Z,184nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.35**	**258**	*e*P	Pn	11 41 41.7	-0.8
PTBC				*e*S	Sn	11 42 02.7	-0.8
PTBC				*i*		11 42 10.0	
	comp=Z,258nm,0.4s						
OCAC	**Ocana**	**1.41**	**352**	*e*P	Pn	11 41 43.1	-0.2
OCAC				*i*		11 42 10.0	
	comp=Z,388nm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.83**	**291**	*e*P	Pn	11 41 47.3	-0.5
ZARC				*e*S	Sn	11 42 12.7	-0.3
ZARC				*i*		11 42 18.4	
	comp=Z,286nm,0.3s						
NORC	**Norcasia**	**2.14**	**234**	*i* P	Pn	11 41 50.9	-0.5
NORC				*e*S	Sn	11 42 18.0	-1.5
CHIC	**Chingaza**	**2.27**	**195**	*e*P	Pn	11 41 52.8	-0.5
CHIC				*e*S	Sn	11 42 22.2	-0.7
CHIC				*i*		11 42 27.9	
	comp=Z,101nm,0.3s						
ROSC	**El Rosal**	**2.31**	**211**	*e*S	Sn	11 42 24.8	+1.1
HELC	**Santa Helena**	**2.47**	**255**	*e*P	Pn	11 41 55.9	+0.2
HELC				*i*		11 42 33.3	
	comp=Z,102nm,0.3s						
DBBC	**Dabeiba**	**3.06**	**274**	*e*P	Pn	11 42 02.8	-0.1
CODC	**Agust`›n Codaz**	**3.10**	**354**	*e*P	Pn	11 42 02.6	-0.7
CODC				*e*S	Sn	11 42 40.4	-0.4
CODC				*i*		11 42 47.1	
	comp=Z,66nm,0.4s						
TOLC	**Tolima**	**3.12**	**224**	*e*P	Pn	11 42 04.2	+0.3
SDV	**Santo Domingo**	**3.21**	**50**	*e*P	Pn	11 42 04.1	-0.8
PRAC	**Prado**	**3.56**	**210**	*e*P	Pn	11 42 08.2	-1.1
PRAC				*e*S	Sn	11 42 51.0	-0.5
SJCC	**San Jacinto, C**	**3.66**	**326**	*e*P	Pn	11 42 09.1	-1.6
SJCC				*i*		11 42 54.7	
	comp=Z,35nm,0.5s						

ATH ***08*** *11:46:04.3, 39°.55N×23°.51E, h29km, ML3.6/19, Error ellipse: s-maj=1.2km s-min=0.6km az=273.0*
ISCJB ***08*** *11:46:05.2±0.5, 39°.54N±0°.01×23°.52E±0°.03, h13km±4km, mb3.8/4, MS3.1/2, Error ellipse: s-maj=3.5km s-min=2.2km az=178.6*
CSEM ***08*** *11:46:05.2±0.1, 39°.54N×23°.53E, h15km, ML3.6, Error ellipse: s-maj=2.3km s-min=1.5km az=87.0*
THE ***08*** *11:46:05.7, 39°.55N×23°.52E, h16km, ML3.5/13, Error ellipse: s-maj=0.8km s-min=0.4km az=205.0*
IDC ***08*** *11:46:05.2±1.3, 39°.32N×23°.63E, h0km, mb3.8/4, mb1 3.8/7, mb1mx3.4/68, mbtmp3.7/7, ML3.4/3, MS2.8/4, Ms1 2.8/4, ms1mx2.4/65, Error ellipse: s-maj=31.4km s-min=18.3km az=99.0*
ISC 08 11:46:05.5±0.9, 39°.54N±0°.01×23°.51E±0°.02, h11km±7km, n154, σ1§40/194, mb3.8/4, 8C-8D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XOR	**Xorichti**	**0.30**	**235**	P	**Pb**	**11 46 12.5**	**-0.6**
XOR				S	**Sg**	**11 46 16.1**	**+0.3**
XOR				AML	AML	11 46 17.9	
	comp=E,32882μm,0.7s						
XOR				AML	AML	11 46 18.3	
	comp=N,41185μm,0.7s						
XOR	**Xorichti**	**0.30**	**235**	P	**Pb**	**11 46 12.2**	**-0.8**
XOR				S	**Sb**	**11 46 17.1**	**-0.9**
XOR	**Xorichti**	**0.30**	**235**	P	**Pg**	**11 46 12.1**	**+0.4**
XOR				S	**Sg**	**11 46 16.7**	**+0.9**
NEO	**Neokhori**	**0.33**	**224**	P	**Pg**	**11 46 11.7**	**-0.4**
NEO				S	**Sg**	**11 46 16.5**	**0.0**
NEO				AML	AML	11 46 18.5	
	comp=N,51930μm,0.5s						
NEO				AML	AML	11 46 18.9	
	comp=E,70272μm,0.4s						
NEO	**Neokhori**	**0.33**	**224**	P	**Pg**	**11 46 12.1**	**0.0**
NEO				S	**Sg**	**11 46 17.2**	**+0.7**
NEO	**Neokhori**	**0.33**	**224**	P	**Pg**	**11 46 12.1**	**0.0**
NEO				S	**Sg**	**11 46 17.2**	**+0.7**
SKIA	**Skiathos**	**0.38**	**186**	P	**Pb**	**11 46 13.8**	**-0.4**
SKIA				S	**Sg**	**11 46 18.4**	**+0.4**
SKIA				AML	AML	11 46 21.7	
	comp=E,17631μm,0.3s						
SKIA				AML	AML	11 46 22.2	
	comp=N,18928μm,0.3s						
SKIA	**Skiathos**	**0.38**	**186**	P	**Pb**	**11 46 13.5**	**-0.8**
SKIA				S	**Sb**	**11 46 19.7**	**-0.4**
SKIA	**Skiathos**	**0.38**	**186**	P	**Pb**	**11 46 13.4**	**-0.8**
SKIA				S	**Sb**	**11 46 18.9**	**-1.2**
PAIG	**Paliouri**	**0.41**	**18**	P	**Pb**	**11 46 14.1**	**-0.6**
PAIG				AML	AML	11 46 20.8	
	comp=E,19312μm,0.5s						
PAIG				AML	AML	11 46 21.9	
	comp=N,8823μm,0.6s						
PAIG	**Paliouri**	**0.41**	**18**	P	**Pb**	**11 46 13.7**	**-1.0**
PAIG				S	**Sb**	**11 46 20.8**	**-0.1**
PAIG	**Paliouri**	**0.41**	**18**	P	**Pb**	**11 46 13.7**	**-1.0**
PAIG				S	**Sb**	**11 46 20.8**	**-0.1**
ALNA	**Alonissos**	**0.48**	**145**	P	**Pb**	**11 46 15.3**	**-0.6**
ALNA				S	**Sb**	**11 46 21.9**	**-1.1**
ALNA				AML	AML	11 46 24.0	
	comp=E,44888μm,0.4s						
ALNA				AML	AML	11 46 24.6	
	comp=N,35425μm,0.6s						
ALNA	**Alonissos**	**0.48**	**145**	P	**Pb**	**11 46 15.0**	**-1.0**
ALNA				S	**Sb**	**11 46 22.1**	**-0.9**
SMIA	**Simia**	**0.70**	**200**	P	**Pn**	**11 46 21.1**	**-0.4**
SMIA				S	**Sb**	**11 46 29.6**	**+0.1**
SMIA				AML	AML	11 46 33.1	
	comp=N,39428μm,0.5s						
SMIA				AML	AML	11 46 34.0	
	comp=E,27673μm,0.7s						
SMIA	**Simia**	**0.70**	**200**	P	**Pb**	**11 46 19.7**	**-0.1**
SMIA				S	**Sb**	**11 46 29.2**	**-0.3**
PLG	**Polygyros**	**0.83**	**356**	P	**Pb**	**11 46 21.2**	**-0.8**
PLG				S	**Sb**	**11 46 31.0**	**-2.2**
PLG				AML	AML	11 46 34.2	
	comp=E,7637μm,0.4s						
PLG				AML	AML	11 46 34.3	
	comp=N,6504μm,0.4s						
PLG	**Polygyros**	**0.83**	**356**	P	**Pb**	**11 46 21.0**	**-1.0**
PLG				S	**Sg**	**11 46 32.9**	**+0.4**
PLG	**Polygyros**	**0.83**	**356**	P	**Pb**	**11 46 21.0**	**-1.0**
PLG				S	**Sb**	**11 46 31.7**	**-1.6**
OUR	**Ouranopolis**	**0.87**	**24**	P	**Pn**	**11 46 22.4**	**-1.3**
OUR				S	**Sg**	**11 46 33.3**	**-0.4**
OUR				AML	AML	11 46 36.4	
	comp=N,9260μm,0.6s						
OUR				AML	AML	11 46 43.6	
	comp=E,8600μm,0.5s						
OUR	**Ouranopolis**	**0.87**	**24**	P	**Pg**	**11 46 22.1**	**-0.2**
OUR				S	**Sn**	**11 46 34.4**	**-1.9**
OUR	**Ouranopolis**	**0.87**	**24**	P	**Pb**	**11 46 21.8**	**-0.8**
OUR				S	**Sg**	**11 46 33.4**	**-0.3**
LIT	**Litokhoron**	**0.97**	**306**	P	**Pb**	**11 46 23.4**	**-0.9**
LIT	**Litokhoron**	**0.97**	**306**	P	**Pb**	**11 46 23.2**	**-1.1**
LIT				S	**Sg**	**11 46 37.0**	**+0.2**
LIT	**Litokhoron**	**0.97**	**306**	P	**Pb**	**11 46 23.2**	**-1.1**
LIT				S	**Sg**	**11 46 37.0**	**+0.2**
LKR	**Lokris**	**0.98**	**204**	P	**Pg**	**11 46 24.1**	**-0.2**
LKR				AML	AML	11 46 40.3	
	comp=N,5336μm,0.5s						
LKR				AML	AML	11 46 40.7	
	comp=E,3254μm,0.3s						
LKR	**Lokris**	**0.98**	**204**	P	**Pb**	**11 46 23.7**	**-0.7**
LKR				S	**Sn**	**11 46 38.0**	**-1.0**
LKR	**Lokris**	**0.98**	**204**	P	**Pb**	**11 46 23.7**	**-0.7**
LKR				S	**Sn**	**11 46 38.0**	**-1.0**
SKY	**Skiros Island**	**1.04**	**129**	P	**Pb**	**11 46 24.7**	**-0.9**
SKY	**Skiros Island**	**1.04**	**129**	P	**Pb**	**11 46 24.6**	**-1.0**
SKY				S	**Sn**	**11 46 39.2**	**-1.4**
SKY	**Skiros Island**	**1.04**	**129**	P	**Pb**	**11 46 24.6**	**-1.0**
SKY				S	**Sn**	**11 46 39.2**	**-1.4**
AGG	**Agios Georgios**	**1.05**	**241**	P	**Pb**	**11 46 25.3**	**-0.5**
AGG				S	**Sg**	**11 46 39.4**	**-0.2**
AGG				AML	AML	11 46 46.8	
	comp=E,19386μm,0.7s						
AGG				AML	AML	11 46 46.9	
	comp=N,17053μm,0.6s						
AGG	**Agios Georgios**	**1.05**	**241**	P	**Pb**	**11 46 25.3**	**-0.5**
AGG				S	**Sn**	**11 46 40.4**	**-0.6**
AGG	**Agios Georgios**	**1.05**	**241**	P	**Pb**	**11 46 24.9**	**-0.9**
AGG				S	**Sb**	**11 46 39.3**	**-0.4**
HORT	**Hortiatis**	**1.10**	**343**	P	**Pb**	**11 46 25.6**	**-1.1**
HORT				S	**Sb**	**11 46 39.4**	**-1.7**
HORT				AML	AML	11 46 45.0	
	comp=N,2024μm,0.9s						
HORT				AML	AML	11 46 51.0	
	comp=E,4184μm,0.9s						
HORT	**Hortiatis**	**1.10**	**343**	P	**Pb**	**11 46 25.4**	**-1.3**
HORT				S	**Sn**	**11 46 41.7**	**-0.5**
HORT	**Hortiatis**	**1.10**	**343**	P	**Pb**	**11 46 25.4**	**-1.3**
HORT				S	**Sb**	**11 46 39.9**	**-1.2**
THL	**Klokotos Trika**	**1.16**	**272**	P	**Pn**	**11 46 26.8**	**-0.9**
THL				AML	AML	11 46 48.8	
	comp=N,1994μm,0.9s						
THL				AML	AML	11 46 52.9	
	comp=E,1022μm,0.5s						
THL	**Klokotos Trika**	**1.16**	**272**	P	**Pn**	**11 46 26.5**	**-1.2**
THL				S	**Sb**	**11 46 42.1**	**-0.5**
THL	**Klokotos Trika**	**1.16**	**272**	P	**Pn**	**11 46 26.5**	**-1.2**
THL				S	**Sb**	**11 46 42.1**	**-0.5**
EREA	**Eretria**	**1.17**	**164**	P	**Pn**	**11 46 26.7**	**-1.1**
EREA	**Eretria**	**1.17**	**164**	P	**Pn**	**11 46 26.7**	**-1.1**
THE	**Thessaloniki**	**1.17**	**339**	P	**Pn**	**11 46 26.8**	**-1.0**
THE				AML	AML	11 46 52.6	
	comp=N,1679μm,1.0s						
THE				AML	AML	11 46 53.5	
	comp=E,2573μm,0.8s						
THE	**Thessaloniki**	**1.17**	**339**	P	**Pn**	**11 46 26.5**	**-1.3**
THE	**Thessaloniki**	**1.17**	**339**	P	**Pn**	**11 46 26.5**	**-1.3**
SOH	**Sokhos**	**1.28**	**355**	P	**Pn**	**11 46 28.7**	**-0.8**
SOH				S	**Sb**	**11 46 44.1**	**-2.2**
SOH				AML	AML	11 46 57.6	
	comp=E,5710μm,0.8s						
SOH				AML	AML	11 46 58.6	
	comp=N,2995μm,0.5s						
SOH	**Sokhos**	**1.28**	**355**	P	**Pn**	**11 46 28.5**	**-1.0**
SOH	**Sokhos**	**1.28**	**355**	P	**Pn**	**11 46 28.4**	**-1.0**
SOH				S	**Sb**	**11 46 44.8**	**-1.5**
LIA	**Limnos Island**	**1.33**	**74**	P	**Pn**	**11 46 27.9**	**-2.1**
LIA				AML	AML	11 46 49.4	
	comp=E,2569μm,0.8s						
LIA				AML	AML	11 46 50.0	
	comp=N,2395μm,0.5s						
LIA	**Limnos Island**	**1.33**	**74**	P	**Pn**	**11 46 28.1**	**-2.0**
LIA				S	**Sb**	**11 46 47.1**	**-0.6**
LIA	**Limnos Island**	**1.33**	**74**	P	**Pn**	**11 46 28.5**	**-1.6**
LIA				S	**Sb**	**11 46 47.1**	**-0.6**
DSF	**Desfina**	**1.37**	**215**	P	**Pn**	**11 46 28.6**	**-1.9**
DSF	**Desfina**	**1.37**	**215**	P	**Pn**	**11 46 29.2**	**-1.4**
DSF	**Desfina**	**1.37**	**215**	P	**Pn**	**11 46 29.1**	**-1.5**
PROD	**Prodromos**	**1.37**	**201**	P	**Pn**	**11 46 28.9**	**-1.7**
PROD	**Prodromos**	**1.37**	**201**	P	**Pn**	**11 46 29.2**	**-1.4**
EVR	**Evrytania**	**1.47**	**245**	P	**Pn**	**11 46 30.1**	**-1.9**
EVR	**Evrytania**	**1.47**	**245**	P	**Pn**	**11 46 30.4**	**-1.6**
DION	**Dionisos Attik**	**1.50**	**167**	P	**Pn**	**11 46 31.0**	**-1.3**
DION				S	**Sb**	**11 46 51.7**	**-0.7**
DION				AML	AML	11 46 58.3	
	comp=N,4455μm,0.3s						
DION				AML	AML	11 47 03.5	
	comp=E,4132μm,0.5s						
DION	**Dionisos Attik**	**1.50**	**167**	P	**Pn**	**11 46 31.2**	**-1.2**
DION				S	**Sb**	**11 46 51.4**	**-1.0**
PTL	**Penteli**	**1.52**	**169**	P	**Pn**	**11 46 31.3**	**-1.3**
PTL				S	**Sb**	**11 46 52.0**	**-0.9**
PTL				AML	AML	11 46 59.5	
	comp=N,1934μm,0.4s						
PTL				AML	AML	11 47 04.0	
	comp=E,4978μm,0.6s						
PTL	**Penteli**	**1.52**	**169**	P	**Pn**	**11 46 31.5**	**-1.1**
PTL	**Penteli**	**1.52**	**169**	P	**Pn**	**11 46 31.5**	**-1.1**
PTL				S	**Sb**	**11 46 51.8**	**-1.1**
KZN	**Kozani**	**1.54**	**300**	P	**Pn**	**11 46 32.0**	**-1.0**
KZN	**Kozani**	**1.54**	**300**	P	**Pn**	**11 46 32.0**	**-1.0**
ANX	**Ano Chora**	**1.56**	**233**	P	**Pn**	**11 46 33.0**	**-0.3**
ANX	**Ano Chora**	**1.56**	**233**	P	**Pn**	**11 46 33.0**	**-0.3**
KALE	**Kalithea**	**1.57**	**223**	P	**Pn**	**11 46 32.8**	**-0.6**
KALE	**Kalithea**	**1.57**	**223**	P	**Pn**	**11 46 32.7**	**-0.7**
KALE	**Kalithea**	**1.57**	**223**	P	**Pn**	**11 46 32.6**	**-0.8**
ATH	**Athens Observa**	**1.57**	**174**	P	**Pn**	**11 46 32.1**	**-1.3**
ATH	**Athens Observa**	**1.57**	**174**	P	**Pn**	**11 46 32.3**	**-1.1**
SRS	**Serrai**	**1.57**	**2**	P	**Pn**	**11 46 31.6**	**-1.9**
SRS				S	**Sb**	**11 46 53.4**	**-1.2**
SRS				AML	AML	11 47 04.3	
	comp=E,1208μm,1.0s						
SRS				AML	AML	11 47 08.2	
	comp=N,1802μm,0.9s						
SRS	**Serrai**	**1.57**	**2**	P	**Pn**	**11 46 32.0**	**-1.4**
SRS	**Serrai**	**1.57**	**2**	*e*Pn	**Pn**	**11 46 32.2**	**-1.2**
SRS				S	**Sn**	**11 46 52.9**	**-0.9**
LTK	**Loutraki**	**1.58**	**196**	P	**Pn**	**11 46 31.5**	**-1.9**
LTK	**Loutraki**	**1.58**	**196**	P	**Pn**	**11 46 32.3**	**-1.1**
LTK	**Loutraki**	**1.58**	**196**	P	**Pn**	**11 46 32.3**	**-1.1**
SERG	**Sergoula**	**1.60**	**226**	P	**Pn**	**11 46 33.1**	**-0.7**
SERG	**Sergoula**	**1.60**	**226**	P	**Pn**	**11 46 33.1**	**-0.7**
TRIZ	**Trizonia**	**1.63**	**224**	P	**Pn**	**11 46 33.5**	**-0.6**
TRIZ	**Trizonia**	**1.63**	**224**	P	**Pn**	**11 46 33.5**	**-0.6**
KAVA	**Kavala**	**1.64**	**27**	P	**Pn**	**11 46 32.7**	**-1.6**
KAVA	**Kavala**	**1.64**	**27**	P	**Pn**	**11 46 32.5**	**-1.8**
KAVA	**Kavala**	**1.64**	**27**	P	**Pn**	**11 46 33.0**	**-1.3**
GRG	**Griva**	**1.65**	**329**	P	**Pn**	**11 46 33.3**	**-1.2**
GRG	**Griva**	**1.65**	**329**	P	**Pn**	**11 46 33.3**	**-1.2**
GRG	**Griva**	**1.65**	**329**	P	**Pn**	**11 46 33.3**	**-1.2**
KARY	**Karystos**	**1.67**	**154**	P	**Pn**	**11 46 33.4**	**-1.3**
KARY	**Karystos**	**1.67**	**154**	P	**Pn**	**11 46 33.6**	**-1.1**
EFP	**Efpalio**	**1.68**	**229**	P	**Pn**	**11 46 34.3**	**-0.5**
EFP	**Efpalio**	**1.68**	**229**	P	**Pn**	**11 46 34.3**	**-0.5**
KNT	**Kendrikon**	**1.69**	**344**	P	**Pn**	**11 46 34.4**	**-0.5**
KNT				S	**Sn**	**11 46 55.7**	**-0.9**
KNT				AML	AML	11 47 04.2	
	comp=E,901μm,0.8s						
KNT				AML	AML	11 47 04.9	
	comp=N,1072μm,1.0s						
KNT	**Kendrikon**	**1.69**	**344**	P	**Pn**	**11 46 34.1**	**-0.8**
KNT				S	**Sn**	**11 46 55.5**	**-1.0**
VLY	**Voula,Athens**	**1.70**	**173**	P	**Pn**	**11 46 33.8**	**-1.3**
VLY	**Voula,Athens**	**1.70**	**173**	P	**Pn**	**11 46 34.2**	**-0.9**
VLY	**Voula,Athens**	**1.70**	**173**	P	**Pn**	**11 46 34.2**	**-0.9**
SMTH	**Samothraki Isl**	**1.81**	**58**	P	**Pn**	**11 46 34.2**	**-2.4**
SMTH	**Samothraki Isl**	**1.81**	**58**	P	**Pn**	**11 46 34.2**	**-2.4**
SIGR	**SIGRI**	**1.84**	**100**	P	**Pn**	**11 46 36.5**	**-0.6**
SIGR	**SIGRI**	**1.84**	**100**	P	**Pn**	**11 46 36.5**	**-0.6**
VAY	**Valandovo**	**1.92**	**338**	*i* Pn	**Pn**	**11 46 38.2**	**+0.1**
VAY				*e*Sn	**Sg**	**11 47 10.5**	**+3.3**
VAY	**Valandovo**	**1.92**	**338**	*e*Pn	**Pn**	**11 46 38.1**	**0.0**
MMB	**Musomiste**	**2.05**	**4**	*i* P	**Pn**	**11 46 40.0**	**0.0**
FNA	**Florina**	**2.06**	**308**	⇓*i*Pn	**Pn**	**11 46 39.3**	**-0.8**
BIA	**Bitola**	**2.23**	**312**	*e*Pn	Pg	11 46 56.1	+7.8
CHOS	**Chios island**	**2.29**	**119**	P	**Pn**	**11 46 42.7**	**-0.6**
CHOS	**Chios island**	**2.29**	**119**	P	**Pn**	**11 46 42.7**	**-0.6**
RZN	**Rozhen**	**2.33**	**23**	*i* P	**Pn**	**11 46 43.2**	**-0.8**
KKB	**Krupnik**	**2.34**	**352**	*i* P	**Pn**	**11 46 43.8**	**-0.2**
STIP	**Stip**	**2.38**	**335**	*i* Pn	**Pn**	**11 46 43.1**	**-1.4**
OHR	**Ohrid**	**2.60**	**308**	*e*Pn	**Pb**	**11 46 50.2**	**-2.0**
PLD	**Plovdiv**	**2.71**	**19**	*i* P	**Pb**	**11 46 52.3**	**-1.8**
SKO	**Skopje**	**2.89**	**328**	*e*Pn	**Pn**	**11 46 51.3**	**-0.2**
SKO	**Skopje**	**2.89**	**328**	*e*Pn	**Pn**	**11 46 51.7**	**+0.1**
APE	**Apeiranthos**	**2.94**	**147**	⇓*i*P	**Pn**	**11 46 51.2**	**-0.9**
APE	**Apeiranthos**	**2.94**	**147**	⇓*i*P	**Pn**	**11 46 51.2**	**-0.9**
DIM	**Dimitrovgrad**	**2.94**	**31**	*i* P	**Pg**	**11 47 01.9**	**+0.1**
PGB	**Panagyurishte**	**3.04**	**9**	*i* P	**Pb**	**11 46 57.7**	**-2.1**
VTS	**Vitosha**	**3.06**	**356**	⇑*i*P

VRI	**Vrincioaia**	**6.75**	**19**⇑	*iP*	Pn	11 47 48.5	+4.0
BRTR	**Keskin Array B**	**7.82**	**85**	Pn	**Pn**	**11 48 00.4**	**+1.1**
	comp=N,0.2nm,0.3s,baz=266,slow=12,SNR=3.5						
KVAR	**Kislovodsk Arr**	**14.97**	**67**	LR	LR	11 56 53.9	
	comp=N,31nm,20.3s,baz=314,slow=43						
HFS	**Hagfors**	**21.52**	**347**	P	**P**	**11 50 57.5**	**+3.3**
	comp=N,3.4nm,1.0s,baz=140,slow=12,SNR=5.0						
FINES	**FINESS Array B**	**21.98**	**3**	P	**P**	**11 51 02.7**	**+3.5**
	comp=N,1.8nm,0.8s,baz=165,slow=12,SNR=5.9						
FINES				LR	LR	12 01 30.8	
	comp=N,33nm,20.2s,baz=0.5,slow=42						
NB2	**NORSAR Subarra**	**22.83**	**345**	P	**P**	**11 51 12.6**	**+4.2**
	comp=Z,2.1nm,0.8s,baz=154,slow=11						
NOA	**NORSAR Array B**	**22.83**	**345**	P	**P**	**11 51 13.2**	**+4.8**
	comp=Z,4.3nm,0.8s,baz=154,slow=11,SNR=5.6						
TORD	**Torodi Ar. Bea**	**32.59**	**222**	P	**P**	**11 52 36.5**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=30,slow=8.8,SNR=5.2						
TIXI	**Tiksi**	**57.55**	**21**	LR	LR	12 22 52.1	
	comp=Z,36nm,18.1s,baz=244,slow=38						

MEX 08 11:49:36.7±0.3, 15°.95N×93°.20W, h88km±12km, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PCIG		**0.24**	**184**	*eP*		Pn	11 49 48.2	-1.3
PCIG				*eS*		Sn	11 49 57.3	-1.8

*IASPEI **08** 11:50:04.7±0.8, 43°.26N±0°.02×77°.10E±0°.02, h8km±5km, Error ellipse: s-maj=3.6km s-min=2.6km az=163.8, GT5 selection from ISC bulletin GT5 identified by Bondár and McLaughlin (2009) selection criteria Bondár and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*

*SOME **08** 11:50:04.6, 43°.28N×77°.07E, h0km*

*KRNET **08** 11:50:04.9±0.1, 43°.26N×77°.09E, h17km, mb3.3*

*NNC **08** 11:50:04.9±0.9, 43°.21N×77°.12E, h6km±4km, mb3.5, mpv3.2, Error ellipse: s-maj=7.7km s-min=4.4km az=57.0*

*KNET **08** 11:50:04.4±1.0, 43°.41N×77°.05E, h0km, ml2.6, Error ellipse: s-maj=17.8km s-min=8.0km az=153.0*

ISC 08 11:50:04.7±0.8, 43°.28N±0°.02×77°.09E±0°.01, h8km±5km, n65, σ0°.82/118, 38C-26D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KOTS	**Kotyrbulak**	**0.05**	**161**	*eP*		**Pg**	**11 50 05.8**	**-0.8**
	591nm,0.2s							
KOTS				*eS*		**Sg**	**11 50 07.1**	**-0.8**
	3μm,0.6s							
KNDC	**Almaty**	**0.11**	**235**	⇑P		**Pg**	**11 50 07.2**	**-0.2**
	464nm,0.5s							
KNDC				⇓S		**Sg**	**11 50 10.8**	**+1.7**
	1μm,0.5s							
MDOK	**Medeo**	**0.12**	**194**	P		**Pg**	**11 50 06.9**	**-0.6**
	366nm,0.4s							
MDOK				S		**Sg**	**11 50 09.5**	**0.0**
	749nm,0.6s							
MDOK	**Medeo**	**0.12**	**194**	⇓*iP*		**Pg**	**11 50 07.1**	**-0.4**
	baz=96							
MDOK				⇓*eS*		**Sg**	**11 50 09.3**	**-0.2**
	baz=96							
MDOK	**Medeo**	**0.12**	**194**	⇓*iP*		**Pg**	**11 50 07.1**	**-0.4**
	637nm,0.4s							
MDOK				*eS*		**Sg**	**11 50 09.3**	**-0.2**
	943nm,0.4s							
AAA	**Alma-Ata**	**0.15**	**241**	*eP*		**Pg**	**11 50 08.6**	**+0.7**
	832nm,0.2s							
AAA				*eS*		**Sg**	**11 50 12.0**	**+1.9**
	1μm,0.4s							
TNSS	**Tian-Shan**	**0.27**	**203**	*eP*		**Pg**	**11 50 10.1**	**-0.1**
	baz=5.0							
TNSS				*eS*		**Sg**	**11 50 14.5**	**+0.8**
	baz=5.0							
TNSS	**Tian-Shan**	**0.27**	**203**	*eP*		**Pg**	**11 50 10.1**	**-0.1**
	84nm,0.4s							
TNSS				*eS*		**Sg**	**11 50 14.6**	**+0.8**
	254nm,0.7s							
IZV	**Izvestkoviy**	**0.43**	**235**	*eP*		**Pg**	**11 50 13.6**	**+0.6**
	58nm,0.5s							
IZV				*eS*		**Sb**	**11 50 20.9**	**-0.5**
	110nm,0.7s							
MTBS	**Maitube**	**0.51**	**253**	*eP*		**Pg**	**11 50 14.9**	**+0.4**
	baz=55							
MTBS				*eS*		**Sb**	**11 50 22.7**	**-0.8**
	baz=55							
MTBS	**Maitube**	**0.51**	**253**	*eP*		**Pg**	**11 50 14.9**	**+0.4**
	43nm,0.3s							
MTBS				*eS*		**Sb**	**11 50 22.7**	**-0.8**
	57nm,0.4s							
KTBS	**Karatobe**	**0.52**	**326**	*eP*		**Pb**	**11 50 15.4**	**-0.9**
	14nm,0.3s							
KTBS				*eS*		**Sb**	**11 50 23.8**	**-0.2**
	127nm,0.5s							
CHKK	**Chushkaly**	**0.58**	**353**	*eP*		**Pb**	**11 50 16.5**	**-0.7**
	baz=54							
CHKK				*eS*		**Sb**	**11 50 24.9**	**-0.7**
	baz=54							
CHKK	**Chushkaly**	**0.58**	**353**	*eP*		**Pb**	**11 50 16.5**	**-0.7**
	24nm,0.5s							
CHKK				*eS*		**Sb**	**11 50 24.8**	**-0.7**
	80nm,0.3s							
KURS	**Kuram**	**0.81**	**75**	⇓*iP*		**Pb**	**11 50 21.1**	**-0.1**
	baz=73							
KURS				⇑*iS*		**Sb**	**11 50 32.2**	**-0.2**
	baz=73							
KURS	**Kuram**	**0.81**	**75**	⇓*iP*		**Pb**	**11 50 21.1**	**-0.1**
	8.8nm,0.6s							
KURS				⇑*iS*		**Sb**	**11 50 33.1**	**+0.8**
	25nm,0.7s							
KUU	**Kurty**	**0.82**	**319**	*eP*		**Pb**	**11 50 20.6**	**-0.7**
	baz=20							
KUU				*eS*		**Sb**	**11 50 32.2**	**-0.3**
	baz=20							
KUU	**Kurty**	**0.82**	**319**	*eP*		**Pb**	**11 50 20.6**	**-0.7**
	10nm,0.4s							
KUU				*eS*		**Sb**	**11 50 32.1**	**-0.3**
	38nm,0.9s							
KST	**Kastek**	**0.86**	**254**	*eP*		**Pg**	**11 50 21.1**	**-0.1**
	baz=56							
KST				*eS*		**Sb**	**11 50 33.0**	**-0.7**
	baz=56							
KST	**Kastek**	**0.86**	**254**	*eP*		**Pg**	**11 50 21.1**	**-0.1**
	45nm,0.4s							
KST				*eS*		**Sb**	**11 50 33.0**	**-0.7**
	33nm,0.8s							
DGS	**Degeres**	**0.96**	**268**	*eP*		**Pg**	**11 50 23.1**	**-0.1**
	5.8nm,0.6s							
DGS				*eS*		**Sn**	**11 50 37.5**	**-1.1**
	46nm,1.1s							
SATY	**Saty**	**0.99**	**103**	⇑*iP*		**Pb**	**11 50 24.2**	**0.0**
	24nm,0.5s							
SATY				⇓*iS*		**Sn**	**11 50 38.4**	**-0.9**
	48nm,0.5s							
ZHN	**Zhinishke**	**0.99**	**96**	*eP*		**Pg**	**11 50 23.7**	**-0.1**
	baz=95							
ZHN				*eS*		**Sb**	**11 50 37.4**	**-0.1**
	baz=95							
ZHN	**Zhinishke**	**0.99**	**96**	*eP*		**Pg**	**11 50 23.6**	**-0.1**
	20nm,0.5s							
ZHN				*eS*		**Sb**	**11 50 37.4**	**-0.1**
	24nm,0.4s							
ARXS	**Arharly**	**1.07**	**30**	*eP*		**Pb**	**11 50 25.5**	**-0.2**
	24nm,0.5s							
ARXS				*eS*		**Sn**	**11 50 41.1**	**-0.3**
	42nm,0.5s							
TKM2	**Tokmak 2**	**1.15**	**252**	⇓P		**Pg**	**11 50 26.4**	**-0.4**
	26nm,0.5s							
TKM2				⇓S		**Sn**	**11 50 42.7**	**-0.8**
	17nm,0.5s							
TKM2	**Tokmak 2**	**1.15**	**252**	⇑P		**Pg**	**11 50 26.5**	**-0.3**
	26nm,0.2s,SNR=48							
TKM2				⇑S		**Sn**	**11 50 42.9**	**-0.5**
	27nm,0.3s							
TKM2	**Tokmak 2**	**1.15**	**252**	⇑*iP*		**Pg**	**11 50 26.4**	**-0.4**
	baz=53							
TKM2				⇑*iS*		**Sb**	**11 50 42.2**	**0.0**
	baz=53							
BOOM	**Boomskoye usch**	**1.16**	**227**	⇑*iP*		**Pg**	**11 50 25.8**	**-1.2**
	baz=28							
BOOM				⇑*iS*		**Sg**	**11 50 41.0**	**-1.0**
	baz=28							
KPKS	**Kokpek**	**1.18**	**80**	*eP*		**Pn**	**11 50 27.7**	**+0.1**
	45nm,0.3s							
KPKS				*eS*		**Sn**	**11 50 44.6**	**+0.6**
	138nm,0.6s							
MNBS	**Baschi**	**1.24**	**50**	*eP*		**Pg**	**11 50 28.6**	**0.0**
	baz=55							
MNBS				*eS*		**Sn**	**11 50 46.1**	**+0.6**
	baz=55							
MNBS	**Baschi**	**1.24**	**50**	*eP*		**Pg**	**11 50 28.6**	**0.0**
	22nm,0.3s							
MNBS				*eS*		**Sn**	**11 50 46.1**	**+0.6**
	42nm,0.4s							
PRZ	**Przheval'sk**	**1.25**	**129**	⇑*iP*		**Pn**	**11 50 27.4**	**-1.3**
	baz=28							
PRZ				⇑*iS*		**Sb**	**11 50 45.0**	**0.0**
	baz=28							
UZB	**Uzynbulak**	**1.42**	**95**	*eP*		**Pb**	**11 50 31.4**	**-0.2**
	baz=94							
UZB				*eS*		**Sg**	**11 50 51.1**	**+0.7**
	baz=94							
UZB	**Uzynbulak**	**1.42**	**95**	*eP*		**Pb**	**11 50 31.4**	**-0.2**
	21nm,0.3s							
UZB				*eS*		**Sg**	**11 50 51.1**	**+0.7**
	32nm,0.3s							
TARG	**Taragay, Kyrgy**	**1.64**	**161**	⇑*iP*		**Pb**	**11 50 34.7**	**-0.8**
	baz=61							
TARG				⇑*iS*		**Sg**	**11 50 57.3**	**-0.1**
	baz=61							
KBK	**Karagaybulak**	**1.69**	**249**	P		**Pb**	**11 50 36.4**	**+0.1**
	68nm,0.5s,SNR=72							
KBK				⇑S		**Sg**	**11 51 00.0**	**+0.9**
	54nm,0.4s							
KBK	**Karagaybulak**	**1.69**	**249**	⇑*iP*		**Pb**	**11 50 36.0**	**-0.2**
	baz=50							
KBK				⇑*iS*		**Sg**	**11 50 58.7**	**-0.4**
	baz=50							
CHMS	**Chumysh**	**1.73**	**261**	⇑P		**Pb**	**11 50 36.4**	**-0.5**
	6.3nm,0.2s,SNR=11							
CHMS				⇓S		**Sg**	**11 51 01.3**	**+0.8**
	6.2nm,0.2s							
CHMS	**Chumysh**	**1.73**	**261**	⇓*iP*		**Pb**	**11 50 36.2**	**-0.7**
	baz=62							
CHMS				⇓*iS*		**Sb**	**11 50 59.3**	**+0.5**
	baz=62							
SHLS	**Shalkode**	**1.74**	**93**	*eP*		Pg	11 50 42.6	+4.5
	72nm,0.4s							
SHLS				*eS*		Sg	11 51 11.0	+10
	63nm,0.8s							
PDGK	**Podgornoye**	**1.75**	**88**	⇑P		**Pb**	**11 50 37.3**	**+0.1**
	12nm,0.4s							
PDGK				⇓S		**Sg**	**11 51 01.6**	**+0.5**
	41nm,0.6s							
PDGK	**Podgornoye**	**1.75**	**88**	⇓*iP*		**Pb**	**11 50 37.1**	**-0.1**
	baz=87							
PDGK				⇓*iS*		**Sg**	**11 51 00.7**	**-0.4**
	baz=87							
KZA	**Kyzart**	**1.81**	**229**	⇓P		**Pg**	**11 50 38.8**	**-0.7**
	4.8nm,0.5s,SNR=15							
KZA	**Kyzart**	**1.81**	**229**	⇑*eP*		**Pb**	**11 50 38.0**	**-0.4**
	baz=30							
KZA				⇑*iS*		**Sg**	**11 51 02.8**	**-0.2**
	baz=30							
USP	**Ospenovka**	**1.89**	**270**	⇑P		**Pb**	**11 50 39.1**	**-0.4**
	32nm,0.4s,SNR=37							
USP	**Ospenovka**	**1.89**	**270**	⇓*iP*		**Pb**	**11 50 39.3**	**-0.3**
	baz=71							
USP				⇓*iS*		**Sg**	**11 51 04.8**	**-0.7**
	baz=71							
TDK	**Taldyqorghan**	**1.96**	**28**	*eP*		**Pg**	**11 50 41.3**	**-1.1**
	74nm,0.4s							
TDK				*eS*		**Sg**	**11 51 08.0**	**+0.2**
	102nm,0.9s							
AAK	**Ala-Archa**	**2.01**	**252**	⇑Pn		**Pb**	**11 50 41.3**	**-0.4**
	8.5nm,0.3s							
AAK				⇑Lg		Lg	11 51 09.0	
	48nm,0.8s							
AAK	**Ala-Archa**	**2.01**	**252**	⇓P		**Pb**	**11 50 41.7**	**0.0**
	9.7nm,0.2s,SNR=22							
AAK	**Ala-Archa**	**2.01**	**252**	⇑*eP*		**Pb**	**11 50 41.4**	**-0.3**
	baz=53							
AAK				⇑*iS*		**Sb**	**11 51 07.5**	**+0.6**
	baz=53							
NRN	**Naryn**	**2.02**	**204**	⇑*eP*		**Pb**	**11 50 40.9**	**-0.9**
	baz=5.0							
NRN				⇑*iS*		**Sb**	**11 51 07.3**	**+0.1**
	baz=5.0							
UCH	**Uchtor**	**2.17**	**242**	⇑P		**Pb**	**11 50 44.7**	**+0.2**
	39nm,0.4s,SNR=33							
UCH	**Uchtor**	**2.17**	**242**	⇑*iP*		**Pb**	**11 50 43.4**	**-1.1**
	baz=42							
UCH				⇑*iS*		**Sb**	**11 51 11.2**	**-0.6**
	baz=42							
DJR	**Jarkent**	**2.22**	**61**	⇓*iP*		**Pb**	**11 50 45.1**	**-0.1**
	32nm,0.3s							
DJR				*eS*		**Sg**	**11 51 15.0**	**-1.1**
	49nm,0.4s							
EKS2	**Erkin-Say**	**2.51**	**257**	P		**Pb**	**11 50 50.0**	**-0.1**
	8.6nm,0.4s,SNR=16							
KAPS	**Kapalarasan**	**2.58**	**38**	⇓*iP*		**Pb**	**11 50 51.2**	**-0.1**
	7.0nm,0.4s							
KAPS				*eS*		**Sg**	**11 51 25.2**	**-2.4**
	19nm,0.6s							
AML	**Almayashu**	**2.75**	**246**	⇓P		**Pb**	**11 50 53.7**	**-0.8**
	9.5nm,0.3s,SNR=16							
AML				⇓S		**Sg**	**11 51 32.5**	**-0.8**
	8.2nm,0.3s							
AML	**Almayashu**	**2.75**	**246**	⇑*eP*		**Pn**	**11 50 51.7**	**+2.1**
	baz=47							
AML				⇑*iS*		**Sn**	**11 51 25.7**	**+2.5**
	baz=47							
BTLS	**Baital**	**2.81**	**310**	*eP*		**Pb**	**11 50 56.3**	**+1.1**
	2.8nm,0.2s							
BTLS				*eS*		**Sg**	**11 51 33.9**	**-1.0**
	9.4nm,0.7s							
MRKS	**Merke**	**2.88**	**261**	*eP*		**Pb**	**11 50 57.2**	**+0.7**
	7.8nm,0.5s							
MRKS				*eS*		**Sg**	**11 51 35.3**	**-2.1**
	12nm,0.6s							
MNAS	**Manas**	**3.46**	**258**	⇑Pg		**Pb**	**11 51 05.6**	**-0.8**
	1.6nm,0.4s							
MNAS				⇑Lg		Lg	11 51 57.2	
	9.6nm,0.9s							
KK31	**Karatay Array**	**4.81**	**270**	⇑Pg		**Pg**	**11 51 35.5**	**-1.4**
	0.6nm,0.3s,baz=85,slow=17,SNR=6.1							
KK31				⇓Lg		Lg	11 52 40.7	
	6.1nm,0.8s,baz=91,slow=25,SNR=8.8							
MAKZ	**Makanchi**	**4.94**	**43**	⇑Pn		**Pn**	**11 51 21.5**	**+2.2**
	1.1nm,0.5s							
MAKZ				⇑Lg		Lg	11 52 39.7	
	3.1nm,0.8s							
MK31	**Makanchi Array**	**5.09**	**45**	⇓Pn		**Pn**	**11 51 23.8**	**+2.4**
	1.7nm,0.6s,baz=219,slow=14,SNR=14							
MK31				⇓Lg		Lg	11 52 44.9	
	3.2nm,0.7s,baz=220,slow=27,SNR=6.7							

IDC 08 11:56:05.5±2.5, 53°.48N×87°.72E, h0km, mb1 3.5/2, mb1mx3.0/73, mbtmp3.5/2, ML3.3/2, Error ellipse: s-maj=22.6km s-min=15.8km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.78**	**286**	*i*			12 07 20.0	
	baz=106,slow=338,SNR=3.0							
ZALV	**Zalesovo Beam**	**1.78**	**286**	Pn		Pn	11 56 36.5	-1.1
	5.2nm,0.3s,baz=104,slow=16,SNR=41							
ZALV				Lg		Lg	11 57 02.3	
	14nm,0.3s,baz=102,slow=26,SNR=23							
KURBB	**Kurchatov Arra**	**6.35**	**247**	Pn		Pn	11 57 40.8	+0.5
	0.6nm,0.3s,baz=62,slow=14,SNR=33							
KURBB				Sn		Sn	11 58 52.5	-0.9
	0.1nm,0.3s,baz=60,slow=28,SNR=5.8							
KURBB				Lg		Lg	11 59 28.5	
	0.2nm,0.3s,baz=64,slow=31,SNR=6.0							
MKAR	**Makanchi Array**	**7.55**	**210**	Pn		Pn	11 57 58.2	+1.4
	0.5nm,0.3s,baz=30,slow=13,SNR=12							
MKAR				Lg		Lg	12 00 04.6	
	0.5nm,0.3s,baz=26,slow=30,SNR=6.8							

*ISCJB **08** 11:57:16.4±0.3, 38°.83N±0°.01×26°.45E±0°.02, h11km±2km, mb3.3/3, MS2.8/1, Error ellipse: s-maj=2.5km s-min=1.9km az=160.6*

*ATH **08** 11:57:16.7, 38°.82N×26°.39E, h26km±1km, ML3.9/3, Error ellipse: s-maj=3.2km s-min=1.0km az=73.0*

*ISK **08** 11:57:16.5, 38°.83N×26°.49E, h15km, ML3.9/41*

*DDA **08** 11:57:16.1, 38°.84N×26°.46E, h27km, Ml3.9*

*IDC **08** 11:57:17.3±1.4, 38°.68N×26°.79E, h0km, mb3.4/3, mb1 3.5/6, mb1mx3.2/65, mbtmp3.5/6, ML3.4/3, MS2.6/2, Ms1 2.6/2, ms1mx2.3/37, Error ellipse: s-maj=36.0km s-min=22.4km az=162.0*

*CSEM **08** 11:57:17.0±0.1, 38°.81N×26°.49E, h10km, ML3.9, Error ellipse: s-maj=1.9km s-min=1.5km az=73.0*

*THE **08** 11:57:17.5, 38°.84N×26°.45E, h7km±1km, ML3.7/7, Error ellipse: s-maj=1.5km s-min=0.5km az=269.0*

ISC 08 11:57:17.4±0.8, 38°.83N±0°.01×26°.49E±0°.02, h11km±6km, n258, σ0°.85/319, mb3.3/3, 25C-6D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
FOCM	**Fo^§a**	**0.22**	**121**	PG		**Pg**	**11 57 22.0**	**0.0**
FOCM				SG		**Sg**	**11 57 25.6**	**+0.4**
FOCM	**Fo^§a**	**0.22**	**121**	*e*Pg		**Pg**	**11 57 22.0**	**0.0**
FOCM				*e*Sg		**Sg**	**11 57 25.6**	**+0.4**
KRBN	**Karaburun**	**0.24**	**168**	PG		**Pg**	**11 57 22.4**	**0.0**
KRBN	**Karaburun**	**0.24**	**168**	*e*Pg		**Pg**	**11 57 22.4**	**0.0**
CAND	**Candarli**	**0.28**	**63**	PG		**Pg**	**11 57 22.9**	**-0.1**
CAND				SG		**Sg**	**11 57 27.4**	**+0.6**
DKL	**Dikili**	**0.41**	**53**	PG		**Pg**	**11 57 25.3**	**-0.1**
DKL				SG		**Sg**	**11 57 31.2**	**+0.4**
DKL	**Dikili**	**0.41**	**53**	*e*Pg		**Pg**	**11 57 25.3**	**-0.1**
DKL				*e*Sg		**Sg**	**11 57 31.2**	**+0.4**
PRK	**Paraskevi**	**0.45**	**338**	P		**Pg**	**11 57 26.1**	**-0.2**
PRK				S		**Sg**	**11 57 31.9**	**-0.3**
PRK				AML		AML	11 57 32.8	
	comp=E,33875μm,0.3s							
PRK				AML		AML	11 57 33.1	
	comp=N,35660μm,0.5s							
PRK	**Paraskevi**	**0.45**	**338**	P		**Pg**	**11 57 26.0**	**-0.2**
PRK				S		**Sg**	**11 57 32.3**	**+0.1**
PRK	**Paraskevi**	**0.45**	**338**	P		**Pg**	**11 57 26.0**	**-0.2**
PRK				S		**Sg**	**11 57 32.3**	**+0.1**
URLA	**Izmir**	**0.48**	**170**	PG		**Pg**	**11 57 25.7**	**-1.0**
URLA	**Izmir**	**0.48**	**170**	*i* P		**Pg**	**11 57 25.7**	**-1.0**
URLA				*i* S		**Sg**	**11 57 32.9**	**-0.1**
URLA	**Izmir**	**0.48**	**170**	P		**Pg**	**11 57 25.7**	**-1.0**
URLA				S		**Sg**	**11 57 32.9**	**-0.1**
AYVA	**Ayvalik**	**0.50**	**18**	*i* P		**Pg**	**11 57 26.9**	**-0.3**
AYVA				*i* S		**Sg**	**11 57 34.0**	**+0.1**
AYVA	**Ayvalik**	**0.50**	**18**	P		**Pg**	**11 57 26.9**	**-0.3**
AYVA				S		**Sg**	**11 57 34.0**	**+0.1**
CESE	**^e¯me**	**0.52**	**197**	PG		**Pg**	**11 57 27.2**	**-0.3**
CESE	**^e¯me**	**0.52**	**197**	*e*Pg		**Pg**	**11 57 27.2**	**-0.3**
CHOS	**Chios island**	**0.56**	**218**	PG		**Pb**	**11 57 28.5**	**-0.7**
CHOS	**Chios island**	**0.56**	**218**	P		**Pb**	**11 57 28.4**	**-0.7**
CHOS				S		**Sb**	**11 57 36.2**	**-0.9**
CHOS	**Chios island**	**0.56**	**218**	P		**Pb**	**11 57 28.4**	**-0.7**
CHOS				S		**Sb**	**11 57 36.2**	**-0.9**
ZEY	**¯zmir**	**0.59**	**179**	*i* P		**Pg**	**11 57 28.5**	**-0.3**
ZEY				*i* S		**Sn**	**11 57 39.4**	**-1.7**
SIGR	**SIGRI**	**0.62**	**308**	PG		**Pb**	**11 57 29.5**	**-0.8**
SIGR	**SIGRI**	**0.62**	**308**	P		**Pg**	**11 57 29.3**	**-0.2**
SIGR				S		**Sg**	**11 57 37.6**	**-0.1**
SIGR	**SIGRI**	**0.62**	**308**	P		**Pg**	**11 57 29.3**	**-0.2**
SIGR				S		**Sg**	**11 57 37.6**	**-0.1**
GMLD	**Gumuldur**	**0.82**	**156**	PG		**Pg**	**11 57 32.4**	**-0.8**
GMLD	**Gumuldur**	**0.82**	**156**	*e*Pg		**Pg**	**11 57 32.4**	**-0.8**
DGB	**¯zmir**	**0.83**	**158**	*i* P		**Pg**	**11 57 33.0**	**-0.5**
DGB				*i* S		**Sb**	**11 57 44.4**	**-0.7**
BAYC	**CANAKKALE_Bayr**	**0.91**	**3**	*i* P		**Pb**	**11 57 33.7**	**-1.5**
BAYC				*i* S		**Sg**	**11 57 47.3**	**+0.4**
BAYC	**CANAKKALE_Bayr**	**0.91**	**3**	P		**Pb**	**11 57 33.7**	**-1.5**
BAYC				S		**Sg**	**11 57 47.3**	**+0.4**
EZN	**Ezine**	**1.00**	**353**	PG		**Pb**	**11 57 35.9**	**-0.8**
EZN	**Ezine**	**1.00**	**353**	P		**Pb**	**11 57 35.5**	**-1.2**
EZN				S		**Sn**	**11 57 50.6**	**-0.8**
EZN	**Ezine**	**1.00**	**353**	P		**Pb**	**11 57 35.5**	**-1.2**
EZN	**Ezine**	**1.00**	**353**	*e*Pg		**Pb**	**11 57 35.9**	**-0.8**
EZN				S		**Sn**	**11 57 50.6**	**-0.8**
AKS	**Akhisar**	**1.03**	**87**	PG		**Pg**	**11 57 36.9**	**-0.4**
AKS	**Akhisar**	**1.03**	**87**	*e*Pg		**Pg**	**11 57 36.9**	**-0.4**
AKHS	**Akhisar**	**1.04**	**87**	*i* P		**Pg**	**11 57 37.0**	**-0.3**
AKHS				*i* S		**Sn**	**11 57 51.7**	**-0.6**
AKHS	**Akhisar**	**1.04**	**87**	P		**Pg**	**11 57 37.0**	**-0.3**
AKHS				S		**Sn**	**11 57 51.7**	**-0.6**
BOZC	**Bozcaada**	**1.07**	**342**	*i* P		**Pb**	**11 57 37.0**	**-0.8**
BOZC				*i* P		**Pn**	**11 57 37.1**	**-1.1**
BOZC				*i* S		**Sb**	**11 57 50.6**	**-1.2**
BOZC				*i* S		**Sg**	**11 57 51.2**	**-0.6**
STEP	**BALIKESIR_Sava**	**1.10**	**60**	*i* P		**Pn**	**11 57 38.1**	**-0.6**
STEP				*i* S		**Sn**	**11 57 53.8**	**-0.1**
STEP	**BALIKESIR_Sava**	**1.10**	**60**	P		**Pn**	**11 57 38.1**	**-0.6**
STEP				S		**Sn**	**11 57 53.8**	**-0.1**
SMG	**Samos**	**1.15**	**166**	P		**Pg**	**11 57 39.2**	**-0.3**
SMG				S		**Sg**	**11 57 56.7**	**+2.2**
SMG				AML		AML	11 57 57.5	
	comp=N,13002μm,0.5s							
SMG				AML		AML	11 57 58.8	
	comp=E,13357μm,0.3s							
SMG	**Samos**	**1.15**	**166**	P		**Pn**	**11 57 38.4**	**-1.0**
SMG				S		**Sg**	**11 57 56.4**	**+1.9**
SMG	**Samos**	**1.15**	**166**	P		**Pn**	**11 57 38.4**	**-1.0**
SMG				S		**Sg**	**11 57 56.0**	**+1.5**
BALY	**Balya**	**1.26**	**44**	*i* P		**Pn**	**11 57 39.5**	**-1.5**
BALY				*i* S		**Sn**	**11 57 57.2**	**-0.8**
BALY	**Balya**	**1.26**	**44**	P		**Pn**	**11 57 39.5**	**-1.5**
BALY				S		**Sn**	**11 57 57.2**	**-0.8**
BALB	**Balikesir**	**1.35**	**53**	PN		**Pb**	**11 57 41.7**	**-0.9**
BALB	**Balikesir**	**1.35**	**53**	*e*Pn		**Pb**	**11 57 41.7**	**-0.9**
AYDB	**Zeytinkoy-Aydi**	**1.41**	**128**	PN		**Pb**	**11 57 42.9**	**-0.8**
AYDB	**Zeytinkoy-Aydi**	**1.41**	**128**	*e*Pn		**Pb**	**11 57 42.9**	**-0.8**
GADA	**Gvkgeada**	**1.44**	**342**	PN		**

ERIK	Erikli-Kesan	1.84	1	ePn		Pn	11 57 48.5	-0.3
EDC	Edincik	1.85	35	PN		Pn	11 57 48.7	-0.3
EDC	Edincik	1.85	35	ePn		Pn	11 57 48.7	-0.3
BODT	Bodrum	1.88	160	PN		Pn	11 57 48.9	-0.5
BODT	Bodrum	1.88	160	ePn		Pn	11 57 48.9	-0.5
APE	Apeiranthos	1.91	204	PN		Pn	11 57 48.9	-1.0
APE	Apeiranthos	1.91	204	⇑iP		Pn	11 57 48.8	-1.1
APE	Apeiranthos	1.91	204	P		Pn	11 57 48.4	-1.5
APE	Apeiranthos	1.91	204	P		Pn	11 57 48.5	-1.5
APE				S		Sb	11 58 15.2	-1.0
APE	Apeiranthos	1.91	204	ePn		Pn	11 57 48.9	-1.0
APE				S		Sb	11 58 15.2	-1.0
BDRM	Kayabasi	1.92	156	iP		Pn	11 57 49.8	-0.1
BDRM				iS		Sg	11 58 20.9	+1.9
BDRM	Kayabasi	1.92	156	P		Pn	11 57 49.8	-0.1
ENEZ	Enez	1.92	352	PN		Pn	11 57 49.8	-0.2
ENEZ	Enez	1.92	352	ePn		Pn	11 57 49.8	-0.2
RKY	Sarkoy-Tekirda	1.93	16	PN		Pb	11 57 51.2	-1.4
RKY	Sarkoy-Tekirda	1.93	16	ePn		Pb	11 57 51.2	-1.4
SIMA	Simav-Kutahya	1.96	82	PN		Pn	11 57 50.5	-0.1
SIMA	Simav-Kutahya	1.96	82	ePn		Pn	11 57 50.5	-0.1
KCTX	Karacabey (Bur	2.04	45	PN		Pn	11 57 51.3	-0.3
KCTX	Karacabey (Bur	2.04	45	ePn		Pn	11 57 51.3	-0.3
ALN	Alexandroupoli	2.09	351	PN		Pn	11 57 52.2	-0.1
ALN	Alexandroupoli	2.09	351	P		Pn	11 57 51.7	-0.6
ALN				S		Sn	11 58 18.8	+0.5
ALN	Alexandroupoli	2.09	351	P		Pn	11 57 51.7	-0.6
ALN	Alexandroupoli	2.09	351	ePn		Pn	11 57 52.2	-0.1
ALN				S		Sn	11 58 18.8	+0.5
SHAP	Saphane-Kutahy	2.14	84	PN		Pn	11 57 53.1	0.0
SHAP	Saphane-Kutahy	2.14	84	ePn		Pn	11 57 53.1	0.0
DION	Dionisos Attik	2.14	250	P		Pn	11 57 52.1	-1.0
DION	Dionisos Attik	2.14	250	P		Pb	11 57 52.0	-1.0
YER	Yerkesik	2.21	139	PN		Pn	11 57 53.9	0.0
YER	Yerkesik	2.21	139	P		Pn	11 57 54.0	0.0
YER	Yerkesik	2.21	139	ePn		Pn	11 57 53.9	0.0
ORLT	Orhaneli	2.23	56	PN		Pn	11 57 54.2	0.0
ORLT	Orhaneli	2.23	56	ePn		Pn	11 57 54.2	0.0
DAT	Datca	2.27	157	PN		Pn	11 57 54.4	-0.4
DAT	Datca	2.27	157	iP		Pn	11 57 54.0	-0.8
DAT				iS		Sn	11 58 21.5	-1.3
DAT	Datca	2.27	157	P		Pn	11 57 54.0	-0.8
DAT	Datca	2.27	157	ePn		Pn	11 57 54.4	-0.4
DAT				S		Sn	11 58 21.5	-1.3
GEDZ	Gediz	2.29	84	PN		Pn	11 57 55.3	+0.2
GEDZ	Gediz	2.29	84	ePn		Pn	11 57 55.3	+0.2
TKR	Tekirdag	2.30	20	PN		Pn	11 57 55.1	-0.1
TKR	Tekirdag	2.30	20	ePn		Pn	11 57 55.1	-0.1
DNZL	Cakiroluk	2.31	119	iP		Pn	11 57 55.6	+0.1
DNZL				iS		Sb	11 58 26.9	-0.9
DNZL	Cakiroluk	2.31	119	P		Pn	11 57 55.6	+0.1
DNZL				S		Sb	11 58 26.9	-0.9
TAVA	DENIZLI_Tavas	2.35	125	iP		Pn	11 57 56.1	+0.2
TAVA				iS		Sn	11 58 25.9	+1.2
TAVA	DENIZLI_Tavas	2.35	125	P		Pn	11 57 56.1	+0.2
TAVA				S		Sn	11 58 25.9	+1.2
SBT3	Marmara-Eregli	2.35	29	PN		Pn	11 57 55.9	+0.2
SBT3	Marmara-Eregli	2.35	29	ePn		Pn	11 57 55.9	+0.2
TVSB	Tavsanli	2.39	74	PN		Pn	11 57 55.7	-0.9
TVSB	Tavsanli	2.39	74	ePn		Pn	11 57 55.7	-0.9
KHAL	Karahalli	2.40	100	iP		Pn	11 57 55.7	-0.9
KHAL				iS		Sb	11 58 30.1	-0.1
KHAL	Karahalli	2.40	100	P		Pn	11 57 55.7	-0.9
KHAL				S		Sb	11 58 30.1	-0.1
MDNY	Mudanya-Bursa	2.41	50	PN		Pn	11 57 56.9	+0.3
MDNY	Mudanya-Bursa	2.41	50	ePn		Pn	11 57 56.9	+0.3
RDO	Rodhopi	2.43	343	PN		Pn	11 57 56.8	-0.1
RDO	Rodhopi	2.43	343	P		Pn	11 57 56.9	-0.1
RDO	Rodhopi	2.43	343	P		Pn	11 57 56.7	-0.1
RDO	Rodhopi	2.43	343	ePn		Pn	11 57 56.8	-0.1
OUR	Ouranopolis	2.45	309	PN		Pn	11 57 56.8	-0.4
OUR	Ouranopolis	2.45	309	ePn		Pn	11 57 56.8	-0.4
ARMT	Armutlu	2.52	46	PN		Pn	11 57 58.0	-0.2
ARMT	Armutlu	2.52	46	ePn		Pn	11 57 58.0	-0.2
ANAF	Anafi Island	2.53	193	P		Pn	11 57 58.2	-0.2
ANAF	Anafi Island	2.53	193	P		Pn	11 57 57.7	-0.7
ANAF	Anafi Island	2.53	193	P		Pn	11 57 57.7	-0.7
THR5	Thira Island,	2.57	201	P		Pn	11 57 58.3	-0.6
THR5	Thira Island,	2.57	201	P		Pn	11 57 58.3	-0.6
TURN	Turunc	2.57	139	PN		Pn	11 57 57.3	-1.6
TURN	Turunc	2.57	139	ePn		Pn	11 57 57.3	-1.6
SBT5	Esenkoy-Cinarc	2.58	45	PN		Pn	11 57 59.2	+0.3
SBT5	Esenkoy-Cinarc	2.58	45	ePn		Pn	11 57 59.2	+0.3
SANT	Santorini	2.59	199	⇑iP		Pn	11 57 58.3	-0.8
SANT	Santorini	2.59	199	⇑iP		Pn	11 57 58.3	-0.8
THR6	Thira Island,	2.62	200	P		Pn	11 57 59.5	0.0
THR6	Thira Island,	2.62	200	P		Pn	11 57 59.4	-0.1
GEMT	Gemlik	2.63	52	PN		Pn	11 58 00.3	+0.6
GEMT	Gemlik	2.63	52	ePn		Pn	11 58 00.3	+0.6
DALY	Dalyan (Mu¨la	2.64	139	PN		Pn	11 58 00.1	+0.3
DALY	Dalyan (Mu¨la	2.64	139	ePn		Pn	11 58 00.1	+0.3
KAVA	Kavala	2.65	326	P		Pn	11 57 59.4	-0.5
KAVA	Kavala	2.65	326	P		Pn	11 57 59.4	-0.5
SLVT	Silivri	2.74	28	PN		Pn	11 58 01.3	+0.1
SLVT	Silivri	2.74	28	ePn		Pn	11 58 01.3	+0.1
PLG	Polygyros	2.81	304	P		Pn	11 58 00.7	-1.6
PLG	Polygyros	2.81	304	P		Pn	11 58 01.1	-1.2
YLV	Yalova	2.82	51	PN		Pn	11 58 02.2	-0.2
YLV	Yalova	2.82	51	ePn		Pn	11 58 02.2	-0.2
CTKS	Kestanelik-??a	2.86	32	PN		Pn	11 58 02.6	-0.3
CTKS	Kestanelik-??a	2.86	32	ePn		Pn	11 58 02.6	-0.3
PHSR	Pinarhisar	2.91	15	PN		Pn	11 58 03.6	+0.1
PHSR	Pinarhisar	2.91	15	ePn		Pn	11 58 03.6	+0.1
BGKT	Bogazkoy	2.93	36	PN		Pn	11 58 03.7	-0.1
BGKT	Bogazkoy	2.93	36	ePn		Pn	11 58 03.7	-0.1
CAVI	Cavuskoy	2.93	61	PN		Pn	11 58 03.6	-0.3
CAVI	Cavuskoy	2.93	61	ePn		Pn	11 58 03.6	-0.3
AUBOZ	BOZOYUK	2.95	67	PN		Pn	11 58 04.4	+0.2
AUBOZ	BOZOYUK	2.95	67	ePn		Pn	11 58 04.4	+0.2
ADVT	Abdulvahap	2.98	56	PN		Pn	11 58 04.9	+0.4
ADVT	Abdulvahap	2.98	56	ePn		Pn	11 58 04.9	+0.4
CTYL	Yalikoy Yolu	2.98	27	PN		Pn	11 58 03.9	-0.6
CTYL	Yalikoy Yolu	2.98	27	ePn		Pn	11 58 03.9	-0.6
KAVV	Kandilli-Istan	2.98	41	PN		Pn	11 58 04.7	+0.2
KAVV	Kandilli-Istan	2.98	41	ePn		Pn	11 58 04.7	+0.2
ISK	Istanbul-Kandi	2.98	41	PN		Pn	11 58 05.0	+0.5
ISK	Istanbul-Kandi	2.98	41	ePn		Pn	11 58 05.0	+0.5
RZN	Rozhen	3.16	335	eP		Pn	11 58 07.3	+0.1
SRS	Serrai	3.19	317	ePn		Pn	11 58 07.0	-0.4
NVR	Nevrokopi	3.23	322	P		Pn	11 58 07.5	-0.4
NVR	Nevrokopi	3.23	322	P		Pn	11 58 07.6	-0.4
DIM	Dimitrovgrad	3.30	348	eP		Pn	11 58 08.8	-0.1
MMB	Musomiste	3.47	323	eP		Pn	11 58 11.2	-0.2
KLV	Kalavryta, Ach	3.50	258	P		Pn	11 58 12.1	+0.4
KLV	Kalavryta, Ach	3.50	258	P		Pn	11 58 11.5	-0.2
PLD	Plovdiv	3.54	338	eP		Pn	11 58 12.6	+0.3
PLD	Plovdiv	3.54	338	ePn		Pn	11 58 12.7	+0.4
ZKR	Zakros	3.71	183	P		Pn	11 58 13.9	-0.7
ZKR	Zakros	3.71	183	P		Pn	11 58 14.4	-0.2
KYTH	Kithira	3.75	228	P		Pn	11 58 13.6	-1.5
KYTH	Kithira	3.75	228	P		Pn	11 58 14.1	-1.0
LAST	Lasithi	3.75	193	P		Pn	11 58 14.0	-1.2
LAST	Lasithi	3.75	193	P		Pn	11 58 14.6	-0.6
IDI	Anoyia	3.76	200	Pn		Pn	11 58 14.2	-1.1
	comp=E,1.1nm,0.3s,baz=29,slow=16,SNR=10							
IDI	Anoyia	3.76	200	⇑iP		Pn	11 58 13.1	-2.2
IDI	Anoyia	3.76	200	⇑iP		Pn	11 58 13.1	-2.2
VAY	Valandovo	3.90	311	ePn		Pn	11 58 32.6	+0.5
KKB	Krupnik	4.00	320	eP		Pn	11 58 20.3	+1.8
PGB	Panagyurishte	4.12	335	eP		Pn	11 58 20.0	-0.2
ROIA	ROIAK	4.31	9	eP		Pn	11 58 23.1	+0.2
STIP	Stip	4.36	312	iPn		Pn	11 58 22.4	-1.1
FNA	Florina	4.39	298	ePn		Pn	11 58 25.6	+1.6
PRD	Provadia	4.42	9	eP		Pn	11 58 23.9	-0.4
SZH	Strazhica	4.45	355	eP		Pn	11 58 23.0	-1.8
VTS	Vitosha	4.51	327	⇑iP		Pn	11 58 26.8	+1.1
VTS	Vitosha	4.51	327	eP		Pn	11 58 26.3	+0.6
VTS	Vitosha	4.51	327	ePn		Pn	11 58 26.3	+0.6
VTS	Vitosha	4.51	327	⇑iP		Pn	11 58 26.8	+1.1
BARS	Barje	5.33	320	ePn		Pn	11 58 37.6	+0.7
ICOR	Ion Corvin	5.37	10	⇑iP		Pn	11 58 38.0	+0.6
ICOR	Ion Corvin	5.37	10	⇑iP		Pn	11 58 38.0	+0.6
BRTR	Keskin Array B	5.62	79	Pn		Pn	11 58 42.0	+1.1
	comp=E,1.0nm,0.3s,baz=255,slow=13,SNR=19							
TIRR	Tirgusor	5.81	14	⇑iP		Pn	11 58 43.5	+0.2
TIRR	Tirgusor	5.81	14	⇑iP		Pn	11 58 43.5	+0.2
TLB	Topalu	5.87	11	⇑iP		Pn	11 58 44.4	+0.2
TLB	Topalu	5.87	11	⇑iP		Pn	11 58 44.4	+0.2
ZAGS	Zajecar	5.92	329	ePn		Pn	11 58 45.5	+0.6
BOVS	Bovan	6.00	325	ePn		Pn	11 58 46.8	+0.7
KUBS	Kucevo	6.64	329	ePn		Pn	11 58 54.5	-0.3
GRUS	Gruza	6.66	321	ePn		Pn	11 58 55.1	0.0
MLR	Muntele Rosu	6.67	357	LR		LR	12 02 10.6	
	comp=E,19nm,18.5s,baz=168,slow=43							
MLR	Muntele Rosu	6.67	357	⇑iP		Pn	11 58 56.5	+1.2
MLR	Muntele Rosu	6.67	357	⇑iP		Pn	11 58 56.5	+1.2
ARR	Arges	6.68	349	⇑iP		Pn	11 58 57.3	+1.9
ARR	Arges	6.68	349	⇑iP		Pn	11 58 57.3	+1.9
VOIR		6.69	351	⇑iP		Pn	11 58 55.9	+0.3
VOIR		6.69	351	⇑iP		Pn	11 58 55.9	+0.3
LOT	Lotru	6.92	344	⇓iP		Pn	11 58 59.0	+0.3
LOT	Lotru	6.92	344	⇓iP		Pn	11 58 59.0	+0.3
MDVR	Moldovita	6.93	331	⇓iP		Pn	11 58 59.1	+0.2
MDVR	Moldovita	6.93	331	⇓iP		Pn	11 58 59.1	+0.2
PLOR	Plostina	7.02	1	⇑iP		Pn	11 59 01.6	+1.6
PLOR	Plostina	7.02	1	⇑iP		Pn	11 59 01.6	+1.6
DIVS	Divibare	7.18	319	ePn		Pn	11 59 04.0	+1.8
TESR	Tescani	7.68	1	⇑iP		Pn	11 59 09.1	0.0
TESR	Tescani	7.68	1	⇑iP		Pn	11 59 09.1	0.0
BZS	Buzias	7.68	334	⇓iP		Pn	11 59 10.8	+1.7
BZS	Buzias	7.68	334	⇓iP		Pn	11 59 10.8	+1.7
BURAR	Bucovina Array	8.83	354	⇑iP		Pn	11 59 27.2	+2.3
BURAR	Bucovina Array	8.83	354	⇑iP		Pn	11 59 27.2	+2.3
MMAI	Mount Meron Ar	9.27	126	Pn		Pn	11 59 30.5	-0.5
	comp=E,1.4nm,0.3s,baz=316,slow=13,SNR=5.2							
HFS	Hagfors	22.81	343	LR		LR	12 12 03.2	
	comp=E,32nm,19.5s,baz=338,slow=38							
ESDC	Sonseca Array	23.55	282	P		P	12 02 33.0	+5.3
	comp=E,0.4nm,0.6s,baz=74,slow=11,SNR=4.5							
KURBB	Kurchatov Arra	38.06	55	P		P	12 04 35.8	+0.2
	comp=E,0.5nm,0.4s,baz=276,slow=9.0,SNR=4.2							
MKAR	Makanchi Array	40.95	60	P		P	12 04 59.7	-0.1
	comp=E,0.4nm,0.6s,baz=282,slow=7.3,SNR=4.0							

IDC 08 12:01:50.4±13.0, 17°.94S×168°.35E, h0km, mb3.8/3, mb1 3.9/4, mb1mx3.5/50, mbtmp3.7/4, ML3.6/1, MS3.2/1, Ms1 3.2/1, ms1mx2.7/41, Error ellipse: s-maj=226.7km s-min=44.4km az=83.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.48	203	Pn	Pn	12 02 59.5	-0.2
	3.1nm,0.3s,baz=107,slow=17,SNR=9.2						
DZM				Sn	Sn	12 03 53.4	+0.8
	3.7nm,0.3s,baz=128,slow=20,SNR=7.0						
DZM				LR	LR	12 04 37.8	
	comp=Z,284nm,19.1s,baz=355,slow=37						
STKA	Stephens Creek	27.86	235	P	P	12 07 42.5	+0.6
	1.7nm,0.6s,baz=55,slow=12,SNR=5.0						
WRA	Warramunga Arr	32.20	261	P	P	12 08 20.1	-0.4
	0.3nm,0.6s,baz=93,slow=8.7,SNR=3.4						
ASAR	Alice Springs	32.65	254	P	P	12 08 24.3	-0.1
	1.0nm,0.6s,baz=82,slow=8.6,SNR=13						

*ISCJB **08** 12:03:13.7±0.7, 38°.84N±0°.03×26°.48E±0°.09, h7km±9km, Error ellipse: s-maj=12.5km s-min=3.7km az=165.5*
*CSEM **08** 12:03:13.8±0.2, 38°.83N×26°.50E, h10km, ML1.5, Error ellipse: s-maj=7.5km s-min=3.1km az=81.0*
*DDA **08** 12:03:13.4, 38°.83N×26°.55E, h7km, Ml2.5*
*ATH **08** 12:03:13.9, 38°.85N×26°.41E, h26km±2km, ML1.5/2, Error ellipse: s-maj=4.4km s-min=1.2km az=269.0*

ISC 08 12:03:13.6±1.0, 38°.84N±0°.03×26°.51E±0°.06, h13km±10km, n16, σ0°57/28, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	Paraskevi	0.45	335	P	Pg	12 03 22.8	+0.2
PRK				S	Sg	12 03 29.0	+0.4
PRK				AML	AML	12 03 33.9	
	comp=N,108μm,0.2s						
PRK				AML	AML	12 03 33.9	
	comp=E,169μm,0.4s						
PRK	Paraskevi	0.45	335	P	Pg	12 03 22.8	+0.2
PRK				S	Sg	12 03 29.2	+0.6
URLA	Izmir	0.48	172	iP	Pg	12 03 22.2	-0.9
URLA				iS	Sg	12 03 29.9	+0.3
URLA	Izmir	0.48	172	P	Pg	12 03 22.2	-0.9
URLA				S	Sg	12 03 29.9	+0.3
CHOS	Chios island	0.58	219	P	Pg	12 03 25.1	+0.1
CHOS				S	Sg	12 03 32.5	-0.2
CHOS				AML	AML	12 03 34.9	
	comp=N,122μm,0.3s						
CHOS				AML	AML	12 03 35.2	
	comp=E,155μm,0.4s						
CHOS	Chios island	0.58	219	P	Pg	12 03 25.0	+0.1
CHOS				S	Sg	12 03 32.8	+0.2
ZEY	˜zmir	0.60	181	iP	Pg	12 03 24.9	-0.4
ZEY				iS	Sb	12 03 35.1	+0.8
SIGR	SIGRI	0.63	306	P	Pg	12 03 26.2	+0.2
SIGR				S	Sg	12 03 33.6	-0.7
SIGR	SIGRI	0.63	306	P	Pg	12 03 25.8	-0.2
SIGR				S	Sg	12 03 33.7	-0.7
DGB	˜zmir	0.84	160	iP	Pg	12 03 29.3	-0.5
DGB				iS	Sb	12 03 41.8	+0.7
BAYC	CANAKKALE_Bayr	0.90	2	iP	Pb	12 03 30.9	-0.2
BAYC				iS	Sn	12 03 44.2	-0.7
BAYC	CANAKKALE_Bayr	0.90	2	P	Pb	12 03 30.9	-0.2
BAYC				S	Sn	12 03 44.2	-0.7
SMG	Samos	1.16	167	P	Pg	12 03 36.6	+0.7
SMG	Samos	1.16	167	P	Pg	12 03 36.6	+0.7
SMTH	Samothraki Isl	1.80	335	P	Pn	12 03 44.4	0.0
SMTH	Samothraki Isl	1.80	335	P	Pn	12 03 44.6	+0.3

IDC 08 12:06:05.9±3.0, 53°.73N×88°.06E, h0km, mb1 3.4/2, mb1mx3.0/71, mbtmp3.4/2, ML3.0/2, Error ellipse: s-maj=28.0km s-min=16.5km az=62.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.94	278	i		12 18 22.3	
	baz=92,slow=327,SNR=1.3						
ZALV	Zalesovo Beam	1.94	278	Pn	Pn	12 06 40.1	+0.1
	3.1nm,0.3s,baz=92,slow=15,SNR=49						
ZALV				Lg	Lg	12 07 07.1	
	9.3nm,0.3s,baz=96,slow=28,SNR=25						
KURBB	Kurchatov Arra	6.64	246	Pn	Pn	12 07 45.3	+0.7
	0.2nm,0.3s,baz=62,slow=14,SNR=8.6						
MKAR	Makanchi Array	7.86	210	Pn	Pn	12 08 02.7	+1.2
	0.3nm,0.3s,baz=32,slow=14,SNR=11						
MKAR				Sn	Sn	12 09 30.0	-1.2
	baz=26,slow=24,SNR=2.1						
MKAR				Lg	Lg	12 10 14.4	
	baz=28,slow=28,SNR=5.7						

IDC 08 12:07:09.7±8.6, 16°.73S×174°.56E, h0km, mb4.2/4, mb1 4.4/4, mb1mx3.7/49, mbtmp4.2/4, MS3.7/1, Ms1 3.7/1, ms1mx2.7/44, Error ellipse: s-maj=193.6km s-min=42.3km az=31.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	27.05	259	P	P	12 13 01.0	+7.0
	2.7nm,0.6s,baz=103,slow=14,SNR=5.0						
STKA	Stephens Creek	33.45	237	P	P	12 13 51.4	+0.8
	1.2nm,0.6s,baz=85,slow=11,SNR=4.2						
JAY	Jayapura	36.15	289	LR	LR	12 28 22.7	
	comp=Z,115nm,18.2s,baz=117,slow=35						
WRA	Warramunga Arr	38.25	259	P	P	12 14 31.3	-0.6
	0.6nm,0.4s,baz=94,slow=8.1,SNR=46						
ASAR	Alice Springs	38.67	253	P	P	12 14 35.1	-0.3
	6.9nm,0.3s,baz=84,slow=8.6,SNR=152						
VNDA	Vanda	61.14	183	P	P	12 17 25.5	+0.1
	0.8nm,0.7s,baz=9.3,slow=3.8,SNR=6.0						

*ATH **08** 12:22:35.6, 38°.85N×26°.59E, h18km±3km, ML2.0/3, Error ellipse: s-maj=6.3km s-min=1.6km az=276.0*
*DDA **08** 12:22:35.8, 38°.85N×26°.50E, h7km, Ml2.8*
*ISCJB **08** 12:22:36.2±0.5, 38°.85N±0°.02×26°.52E±0°.04, h6km±6km, Error ellipse: s-maj=5.5km s-min=3.3km az=177.2*
*CSEM **08** 12:22:36.1±0.2, 38°.83N×26°.57E, h10km, ML2.0, Error ellipse: s-maj=4.7km s-min=3.1km az=113.0*

ISC 08 12:22:35.7±1.1, 38°.86N±0°.02×26°.56E±0°.03, h6km±10km, n25, σ0°58/46, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	Paraskevi	0.45	330	P	Pg	12 22 45.0	+0.6
PRK				S	Sb	12 22 53.1	+0.1
PRK				AML	AML	12 22 56.2	
	comp=N,403μm,0.2s						
PRK				AML	AML	12 22 56.2	
	comp=E,491μm,0.4s						
PRK	Paraskevi	0.45	330	P	Pg	12 22 45.0	+0.6
PRK				S	Sb	12 22 52.5	-0.5
AYVA	Ayvalik	0.47	13	iP	Pb	12 22 45.8	-0.5
AYVA				iS	Sb	12 22 52.7	-0.7
AYVA	Ayvalik	0.47	13	P	Pb	12 22 45.8	-0.5
AYVA				S	Sb	12 22 52.7	-0.7
URLA	Izmir	0.49	177	iP	Pg	12 22 44.7	-0.5
URLA				iS	Sg	12 22 52.3	+0.7
URLA	Izmir	0.49	177	P	Pg	12 22 44.7	-0.5
URLA				S	Sg	12 22 52.3	+0.7
CHOS	Chios island	0.61	220	P	Pg	12 22 47.3	-0.1
CHOS				S	Sg	12 22 55.5	+0.1
CHOS				AML	AML	12 22 57.3	
	comp=N,404μm,0.3s						
CHOS				AML	AML	12 22 59.5	
	comp=E,458μm,0.2s						
CHOS	Chios island	0.61	220	P	Pg	12 22 47.5	+0.1
CHOS				S	Sg	12 22 56.1	+0.7
ZEY	˜zmir	0.62	184	iP	Pg	12 22 47.5	0.0
ZEY				iS	Sb	12 22 58.3	+0.5
SIGR	SIGRI	0.65	303	P	Pg	12 22 48.2	-0.1
SIGR				S	Sg	12 22 55.6	-1.2
SIGR				AML	AML	12 22 57.0	
	comp=E,221μm,0.4s						
SIGR				AML	AML	12 22 57.3	
	comp=N,215μm,0.3s						
SIGR	SIGRI	0.65	303	P	Pg	12 22 48.5	+0.3
SIGR				S	Sg	12 22 56.9	+0.2
PSRA	Psara	0.84	248	P	Pn	12 22 53.6	-0.4
PSRA				S	Sb	12 23 03.7	-0.4
PSRA	Psara	0.84	248	P	Pb	12 22 52.9	+0.3
PSRA				S	Sb	12 23 03.9	-0.3
DGB	˜zmir	0.84	162	iP	Pb	12 22 52.1	-0.5
DGB				iS	Sb	12 23 04.2	-0.1
BAYC	CANAKKALE_Bayr	0.89	359	iP	Pg	12 22 53.0	+0.3
BAYC				iS	Sb	12 23 05.9	+0.3
BAYC	CANAKKALE_Bayr	0.89	359	P	Pg	12 22 53.0	+0.3
BAYC				S	Sb	12 23 05.9	+0.3
STEP	BALIKESIR_Sava	1.04	60	iP	Pn	12 22 57.1	+0.2
STEP				iS	Sn	12 23 13.1	+1.3
STEP	BALIKESIR_Sava	1.04	60	P	Pn	12 22 57.1	+0.2
STEP				S	Sn	12 23 13.1	+1.3
BOZC	Bozcaada	1.06	338	iP	Pg	12 22 56.1	+0.1
BOZC				iS	Sg	12 23 10.1	+0.3
BALY	Balya	1.21	43	iP	Pb	12 22 58.2	-0.8
BALY				iS	Sn	12 23 15.4	-0.5
BALY	Balya	1.21	43	P	Pb	12 22 58.2	-0.8
BALY				S	Sn	12 23 15.4	-0.5
SMTH	Samothraki Isl	1.80	334	P	Pb	12 23 08.5	-0.6
SMTH	Samothraki Isl	1.80	334	P	Pb	12 23 08.3	-0.8
ALN	Alexandroupoli	2.08	349	P	Pn	12 23 11.4	+0.4
ALN	Alexandroupoli	2.08	349	P	Pn	12 23 11.7	+0.6

*ISCJB **08** 12:24:57.2±0.5, 3°.61S±0°.07×137°.65E±0°.06, h100km, mb3.9/6, Error ellipse: s-maj=10.8km s-min=8.0km az=18.1*
*IDC **08** 12:24:57.1±2.2, 3°.62S×137°.65E, h89km±21km, mb3.7/7, mb1 3.9/10, mb1mx3.6/44, mbtmp4.1/10, MS3.1/5, Ms1 3.1/5, ms1mx2.8/47, Error ellipse: s-maj=25.1km s-min=12.5km az=93.0*
*DJA **08** 12:24:58.3±0.3, 4°.S±6°.×13°.8E±°, h122km±13km, M4.5/2, mb4.5/2*

ISC 08 12:24:58.2±0.7, 3°.54S±0°.07×137°.64E±0°.06, h100km, n21, σ2°08/21, mb3.8/6, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRPI	Serui, Papua	2.17	320	P	Pn	12 25 35.2	+2.2
GEN

CHOS				S	Sg	12 51 33.6	-1.7
CHOS	**Chios island**	**0.61**	**221**	P	**Pg**	**12 51 27.4**	**+0.1**
CHOS				S	**Sb**	**12 51 36.2**	**-0.7**
ZEY	**˜zmir**	**0.61**	**184**	*i* P	**Pg**	**12 51 27.1**	**-0.2**
ZEY				*i* S	**Sb**	**12 51 37.6**	**+0.7**
SIGR	**SIGRI**	**0.66**	**304**	P	**Pg**	**12 51 28.3**	**-0.1**
SIGR				S	**Sg**	**12 51 35.9**	**-1.1**
SIGR				AML	AML	12 51 36.8	
	comp=E,263µm,0.4s						
SIGR				AML	AML	12 51 38.7	
	comp=N,243µm,0.4s						
SIGR	**SIGRI**	**0.66**	**304**	P	**Pg**	**12 51 27.9**	**-0.4**
SIGR				S	**Sg**	**12 51 36.3**	**-0.7**
SIGR	**SIGRI**	**0.66**	**304**	P	**Pg**	**12 51 28.2**	**-0.1**
SIGR				S	**Sg**	**12 51 36.7**	**-0.3**
DGB	**˜zmir**	**0.83**	**162**	*i* P	**Pg**	**12 51 31.3**	**-0.2**
DGB				*i* S	**Sg**	**12 51 43.1**	**+0.8**
PSRA	**Psara**	**0.84**	**249**	P	**Pb**	**12 51 32.9**	**+0.7**
PSRA	**Psara**	**0.84**	**249**	P	**Pb**	**12 51 32.3**	**+0.1**
BAYC	**CANAKKALE_Bayr**	**0.89**	**359**	*i* P	**Pg**	**12 51 32.6**	**-0.1**
BAYC				*i* S	**Sg**	**12 51 45.0**	**+0.6**
BAYC	**CANAKKALE_Bayr**	**0.89**	**359**	P	**Pg**	**12 51 32.6**	**-0.1**
BAYC				S	**Sg**	**12 51 45.0**	**+0.6**
AKHS	**Akhisar**	**0.98**	**88**	*i* P	**Pn**	**12 51 36.1**	**+0.8**
AKHS				*i* S	**Sg**	**12 51 45.9**	**-1.1**
AKHS	**Akhisar**	**0.98**	**88**	P	**Pn**	**12 51 36.1**	**+0.8**
AKHS				S	**Sg**	**12 51 45.9**	**-1.1**
STEP	**BALIKESIR_Sava**	**1.04**	**59**	*i* P	**Pn**	**12 51 36.6**	**+0.3**
STEP				*i* S	**Sn**	**12 51 52.4**	**+1.4**
STEP	**BALIKESIR_Sava**	**1.04**	**59**	P	**Pn**	**12 51 36.6**	**+0.3**
BOZC	**Bozcaada**	**1.07**	**338**	*i* P	**Pg**	**12 51 35.1**	**-1.0**
BOZC				*i* S	**Sg**	**12 51 49.4**	**-0.7**
SMG	**Samos**	**1.16**	**169**	P	**Pn**	**12 51 38.3**	**+0.5**
SMG				S	**Sg**	**12 51 53.4**	**+0.6**
SMG				AML	AML	12 51 56.3	
	comp=N,220µm,0.5s						
SMG				AML	AML	12 51 57.6	
	comp=E,199µm,0.3s						
SMG	**Samos**	**1.16**	**169**	P	**Pn**	**12 51 38.1**	**+0.3**
SMG				S	**Sn**	**12 51 55.0**	**+1.3**
SMG	**Samos**	**1.16**	**169**	P	**Pn**	**12 51 38.1**	**+0.3**
SMG				S	**Sn**	**12 51 53.8**	**+0.1**
BALY	**Balya**	**1.21**	**42**	*i* P	**Pn**	**12 51 37.9**	**-0.7**
BALY				*i* S	**Sb**	**12 51 53.0**	**-1.4**
BALY	**Balya**	**1.21**	**42**	P	**Pn**	**12 51 37.9**	**-0.7**
BALY				S	**Sb**	**12 51 53.0**	**-1.4**
LIA	**Limnos Island**	**1.50**	**315**	P	**Pn**	**12 51 43.1**	**+0.6**
LIA				S	**Sb**	**12 52 02.5**	**-0.1**
LIA				AML	AML	12 52 03.9	
	comp=E,123µm,0.4s						
LIA				AML	AML	12 52 04.3	
	comp=N,70µm,0.3s						
LIA	**Limnos Island**	**1.50**	**315**	P	**Pn**	**12 51 43.1**	**+0.6**
LIA				S	**Sn**	**12 52 02.2**	**+0.1**
LIA	**Limnos Island**	**1.50**	**315**	P	**Pn**	**12 51 43.1**	**+0.6**
LIA				S	**Sb**	**12 52 02.4**	**-0.1**
SMTH	**Samothraki Isl**	**1.81**	**334**	P	**Pn**	**12 51 46.5**	**-0.3**
SMTH	**Samothraki Isl**	**1.81**	**334**	P	**Pn**	**12 51 46.5**	**-0.3**
SMTH				S	**Sb**	**12 52 11.2**	**-0.3**
SMTH	**Samothraki Isl**	**1.81**	**334**	P	**Pn**	**12 51 46.5**	**-0.3**
SMTH				S	**Sb**	**12 52 11.2**	**-0.3**
SART	**Tekirdag**	**1.90**	**14**	*i* P	**Pn**	**12 51 49.2**	**+1.1**
SART				*i* S	**Sn**	**12 52 10.8**	**-1.3**
SART	**Tekirdag**	**1.90**	**14**	P	**Pn**	**12 51 49.2**	**+1.1**
SART				S	**Sn**	**12 52 10.8**	**-1.3**

*IDC **08** 12:54:19.3±0.8, 12°.59S×77°.22W, h35km±5km, mb3.9/10, mb1 4.0/10, mb1mx3.8/38, mbtmp4.1/10, MS3.5/10, Ms1 3.5/10, ms1mx3.2/41, Error ellipse: s-maj=19.5km s-min=11.7km az=121.0*

*NEIC **08** 12:54:20.0±0.9, 12°.65S×77°.17W, h43km±8km, mb4.6/33, ML4.3(ARE), Error ellipse: s-maj=12.8km s-min=5.9km az=62.0*

NEIC Felt [III] at Lima.

*ISCJB **08** 12:54:26.1±0.4, 12°.54S±0°.06×76°.13W±0°.09, h44km, mb4.6/37, MS3.7/8, Error ellipse: s-maj=14.5km s-min=5.4km az=147.0*

ISC 08 12:54:20.8±0.5, 12°.54S±0°.05×77°.11W±0°.07, h44km, n206, σ19 72/86, mb4.6/38, MS3.7/8, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**0.60**	**25**	Pg	**Pn**	**12 54 33.1**	**+0.1**
	2µm,0.3s,baz=221,slow=12,SNR=2543						
NNA				Lg	Lg	12 54 43.4	
	3µm,0.3s,baz=338,slow=10,SNR=44						
NNA	**Nana**	**0.60**	**25**	*e*Pn	**Pn**	**12 54 33.2**	**+0.1**
NNA				*e*Sn	**Sn**	**12 54 43.9**	**+2.0**
ATAH	**Atahualpa**	**5.51**	**347**	Pn	**Pn**	**12 55 42.8**	**+2.0**
	20nm,0.3s,baz=154,slow=4.0,SNR=86						
ATAH				Sn	**Sn**	**12 56 43.2**	**+0.1**
	8.3nm,0.3s,baz=201,slow=0.1,SNR=5.8						
ATAH				LR	LR	12 58 27.8	
	comp=Z,80nm,21.7s,baz=212,slow=45						
ARE	**Arequipa**	**6.69**	**126**	P	Pn	12 55 48.0	-8.9
LPAZ	**La Paz**	**9.46**	**114**	Pn	**Pn**	**12 56 37.5**	**+2.4**
	0.1nm,0.3s,baz=317,slow=12,SNR=5.1						
LPAZ				LR	LR	13 00 55.1	
	comp=Z,125nm,20.3s,baz=294,slow=42						
LPAZ	**La Paz**	**9.46**	**114**	*e*Pn	**Pn**	**12 56 32.0**	**-3.1**
MNMC	**Minye Minye**	**9.76**	**133**	*e*Pn	**Pn**	**12 56 36.4**	**-2.4**
PB01	**IPOC Station P**	**11.17**	**140**	*e*Pn	**Pn**	**12 56 56.5**	**-1.5**
PB04	**IPOC Station P**	**11.79**	**147**	*e*Pn	**Pn**	**12 57 07.5**	**+1.0**
PB10	**IPOC Station P**	**12.57**	**151**	*e*Pn	**Pn**	**12 57 19.7**	**+2.7**
OTAV	**Otavalo**	**12.76**	**354**	*e*Pn	**Pn**	**12 57 17.5**	**-2.6**
FLOC	**Florencia**	**14.10**	**6**	*e*P	**Pn**	**12 57 37.9**	**-0.1**
SAML	**Samuel**	**14.14**	**77**	*e*Pn	**Pn**	**12 57 37.9**	**-0.5**
SAML				*e*Sn	**Sn**	**13 00 09.3**	**-4.8**
TUMC	**Tumaco**	**14.36**	**353**	*e*Pn	**P**	**12 57 47.0**	**-0.5**
BETC	**Betania**	**15.21**	**6**	*e*P	**P**	**12 57 55.8**	**-1.2**
HORQ	**Saladito**	**15.92**	**2**	*e*P	**Pn**	**12 58 03.1**	**+1.0**
PRAC	**Prado**	**16.29**	**8**	*e*Pn	**P**	**12 58 10.0**	**+0.9**
	47nm,1.5s						
GO03	**Copiap**	**16.30**	**158**	*e*Pn	**P**	**12 58 11.9**	**+2.7**
	8.0nm,0.7s						
TOLC	**Tolima**	**17.10**	**6**	*e*P	P	12 58 31.7	+13
CHIC	**Chingaza**	**17.38**	**11**	*e*P	**P**	**12 58 23.1**	**+1.6**
ROSC	**El Rosal**	**17.48**	**9**	LR	LR	13 06 23.8	
	comp=Z,278nm,19.1s,baz=242,slow=41						
ROSC	**El Rosal**	**17.48**	**9**	*e*Pn	**P**	**12 58 26.4**	**+3.8**
	8.6nm,0.7s						
PAYG	**Puerto Ayora**	**17.60**	**311**	*e*Pn	**Pn**	**12 58 21.0**	**-1.9**
	69nm,1.3s						
NORC	**Norcasia**	**18.12**	**7**	*e*P	**Pn**	**12 58 29.7**	**+0.4**
YOPC	**Yopal, Colombi**	**18.37**	**15**	*e*P	P	12 58 20.4	-12
RUSC	**La Rusia**	**18.74**	**13**	*e*Pn	**Pn**	**12 58 39.3**	**+2.0**
	7.7nm,0.7s						
RUSC	**La Rusia**	**18.74**	**13**	*e*P	**Pn**	**12 58 39.0**	**+1.7**
BARC	**Barichara**	**19.40**	**12**	*e*P	**P**	**12 58 43.0**	**-0.5**
ZARC	**Zaragoza, Cauc**	**20.02**	**7**	*e*P	**P**	**12 58 51.0**	**+0.9**
PTGA	**Pitinga**	**20.65**	**57**	P	**P**	**12 58 57.7**	**+0.8**
	4.9nm,0.4s,baz=244,slow=12,SNR=13						
PTGA	**Pitinga**	**20.65**	**57**	*e*P	**P**	**12 58 57.5**	**+0.5**
	29nm,1.4s						
CPUP	**Villa Florida**	**23.11**	**129**	LR	LR	13 09 48.0	
	comp=Z,103nm,19.3s,baz=358,slow=40						
JTS	**JuntasAbangare**	**23.98**	**341**	LR	LR	13 07 20.4	
	comp=Z,85nm,21.0s,baz=228,slow=33						
PLCA	**Paso Flores**	**28.67**	**170**	P	**P**	**13 00 12.2**	**-1.4**
	3.4nm,0.8s,baz=11,slow=10.0,SNR=5.0						
PLCA				LR	LR	13 08 53.2	
	comp=Z,81nm,19.5s,baz=60,slow=30						
TRQA	**Tornquist**	**28.78**	**155**	*e*P	P	13 00 08.6	-5.9
	116nm,1.9s						
SPB	**Sao Paulo**	**30.21**	**116**	*e*P	**P**	**13 00 27.8**	**+0.4**
	102nm,1.6s						
GRTK	**Grand Turk**	**34.34**	**10**	*e*P	**P**	**13 01 07.1**	**+3.7**
	194nm,1.3s						
344A	**Westbrook Farm**	**45.65**	**344**	P	pP	13 02 47.3	-2.0
	baz=160						
150A	**Eclectic**	**45.69**	**349**	P	pP	13 02 46.9	-2.7
	baz=167						
Z55A	**Blythe**	**45.75**	**354**	P	pP	13 02 46.7	-3.4
	baz=172						
Z54A	**Sparta**	**45.84**	**353**	P	pP	13 02 48.2	-2.7
	baz=171						
Z52A	**Williamson**	**46.00**	**351**	P	pP	13 02 49.3	-2.8
	baz=169						
147A	**Livingston**	**46.20**	**347**	P	pP	13 02 51.1	-2.6
	baz=164						
LRAL	**Lakeview Retre**	**46.29**	**348**	P	pP	13 02 51.6	-2.7
	baz=166						
LRAL	**Lakeview Retre**	**46.29**	**348**	P	**P**	**13 02 41.2**	**-0.9**
	7.4nm,0.9s						
LRAL				*e*		13 02 51.5	
Z50A	**Ashland**	**46.30**	**350**	P	pP	13 02 51.5	-3.0
	baz=167						
Z48A	**Northport**	**46.73**	**348**	P	pP	13 02 55.2	-2.6
	baz=165						
Y51A	**Rockmart**	**46.79**	**351**	P	pP	13 02 55.5	-2.9
	baz=168						
Y49A	**Blount Mountai**	**46.98**	**349**	P	pP	13 02 57.1	-2.7
	baz=167						
Y47A	**UCPARC, Winfie**	**47.30**	**348**	P	pP	13 02 60.0	-2.3
	baz=165						
X52A	**Dahlonega**	**47.32**	**352**	P	pP	13 03 00.1	-2.3
	baz=170						
X48A	**Hartselle**	**47.67**	**349**	P	pP	13 03 02.4	-2.8
	baz=166						
W53A	**Cullowhee**	**47.79**	**353**	P	pP	13 03 03.7	-2.5
	baz=171						
W52A	**Murphy**	**47.81**	**352**	P	pP	13 03 03.7	-2.6
	baz=170						
Y44A	**Strider, Charl**	**47.89**	**345**	P	pP	13 03 04.5	-2.4
	baz=162						
X47A	**Russelville**	**47.90**	**348**	P	pP	13 03 04.0	-2.9
	baz=165						
W49A	**Belvidere**	**48.18**	**350**	P	pP	13 03 06.0	-3.2
	baz=167						
W48A	**Pulaski**	**48.32**	**349**	P	pP	13 03 07.2	-3.0
	baz=166						
PLAL	**Pickwick Lake**	**48.39**	**348**	*e*P	**P**	**13 03 00.9**	**+2.5**
	5.4nm,0.9s						
W47A	**Westpoint**	**48.55**	**349**	P	pP	13 03 08.5	-3.5
	baz=165						
V48A	**Smith Brothers**	**48.88**	**350**	P	pP	13 03 11.2	-3.4
	baz=166						
TXAR	**Lajitas Array**	**48.89**	**329**	P	**P**	**13 03 01.7**	**-0.8**
	0.3nm,0.7s,baz=138,slow=9.6,SNR=5.0						
TXAR				pP	**pP**	**13 03 13.6**	**-1.3**
	2.0nm,0.8s,baz=145,slow=9.1,SNR=15						
TX31	**Lajitas Ar. Si**	**48.89**	**329**	*e*P	**P**	**13 03 03.3**	**+0.7**
MIAR	**Mount Ida**	**49.37**	**342**	P	pP	13 03 16.0	-2.3
	baz=158						
MIAR	**Mount Ida**	**49.37**	**342**	*e*P	**P**	**13 03 05.2**	**-0.8**
	16nm,1.4s						
WVT	**Waverly**	**49.45**	**349**	P	pP	13 03 15.0	-3.8
	baz=165						
WVT	**Waverly**	**49.45**	**349**	*e*P	**P**	**13 03 06.0**	**-0.5**
	3.8nm,0.8s						
U49A	**Red Boiling Sp**	**49.46**	**351**	P	pP	13 03 15.6	-3.4
	baz=168						
X39A	**Fountain Ranch**	**49.50**	**341**	P	pP	13 03 17.4	-1.9
	baz=157						
W41B	**Gary Mavity, V**	**49.57**	**344**	P	pP	13 03 17.4	-2.4
	baz=160						
W41B	**Gary Mavity, V**	**49.57**	**344**	*e*P	**P**	**13 03 07.2**	**-0.3**
	7.6nm,0.9s						
BLA	**Blacksburg**	**49.58**	**357**	*e*P	**P**	**13 03 08.7**	**+1.1**
	8.2nm,0.9s						
WHAR	**Wooly Hollow**	**49.69**	**344**	*e*P	**P**	**13 03 08.8**	**+0.4**
	10nm,0.8s						
ABTX	**Abilene, Hawle**	**49.81**	**335**	P	pP	13 03 20.2	-1.5
	baz=150						
ABTX	**Abilene, Hawle**	**49.81**	**335**	*e*P	**P**	**13 03 09.1**	**-0.3**
	5.8nm,0.8s						
W40A	**Ferguson Farm,**	**49.82**	**343**	P	pP	13 03 19.8	-1.9
	baz=159						
W40A	**Ferguson Farm,**	**49.82**	**343**	*e*P	**P**	**13 03 09.7**	**+0.4**
	11nm,0.8s						
GLAT	**Glass**	**49.88**	**347**	*e*P	**P**	**13 03 09.2**	**-0.7**
	40nm,0.6s						
T49A	**Edmonton**	**50.01**	**351**	P	pP	13 03 20.2	-3.0
	baz=168						
W39A	**Magazine**	**50.03**	**342**	P	pP	13 03 21.3	-2.0
	baz=158						
V41A	**Mountainview**	**50.12**	**344**	P	pP	13 03 20.8	-3.3
	baz=160,SNR=9.8						
T48A	**Bowling Green**	**50.15**	**350**	P	pP	13 03 21.3	-2.9
	baz=167						
V40A	**Witts Springs**	**50.32**	**343**	P	pP	13 03 23.1	-2.5
	baz=159,SNR=8.8						
V40A	**Witts Springs**	**50.32**	**343**	*e*P	**P**	**13 03 13.1**	**-0.2**
	15nm,0.6s						
U42A	**Revenden**	**50.42**	**345**	P	pP	13 03 22.9	-3.4
	baz=161,SNR=10						
U41A	**Viola**	**50.59**	**345**	P	pP	13 03 24.4	-3.2
	baz=160,SNR=8.4						
U40A	**Yellville**	**50.85**	**344**	P	pP	13 03 26.5	-3.1
	baz=159,SNR=11						
T43A	**Greenville**	**50.89**	**346**	P	pP	13 03 26.3	-3.5
	baz=162,SNR=6.5						
T42A	**Van Buren**	**51.03**	**346**	P	pP	13 03 27.8	-3.1
	baz=162						
U39A	**Green Forest**	**51.05**	**343**	P	pP	13 03 28.5	-2.5
	baz=158						
T41A	**Mountain View**	**51.21**	**345**	P	pP	13 03 28.9	-3.3
	baz=161,SNR=6.2						
S44A	**Carbondale**	**51.25**	**348**	P	pP	13 03 29.1	-3.4
	baz=164						
S43A	**Fulton Ridge,**	**51.31**	**347**	P	pP	13 03 29.6	-3.4
	baz=163						
WMOK	**Wichita Mounta**	**51.32**	**337**	P	pP	13 03 30.7	-2.5
	baz=152						
T40A	**Mansfield**	**51.50**	**344**	P	pP	13 03 31.5	-2.9
	baz=160						
T39A	**Clever**	**51.62**	**343**	P	pP	13 03 32.5	-2.9
	baz=159						
MNTX	**Cornudas Mount**	**51.66**	**329**	P	pP	13 03 34.1	-1.7
	baz=143						
MNTX	**Cornudas Mount**	**51.66**	**329**	*e*P	**P**	**13 03 23.9**	**+0.5**
S41A	**Jillco Farms,**	**51.72**	**345**	P	pP	13 03 32.8	-3.2
	baz=161,SNR=14						
T38A	**Diamond**	**51.89**	**343**	P	pP	13 03 34.9	-2.5
	baz=158						
S40A	**Lebanon**	**51.92**	**344**	P	pP	13 03 34.7	-2.9
	baz=160						
Q47A	**Bedord North L**	**51.94**	**351**	P	pP	13 03 34.3	-3.3
	baz=168						
OLIL	**Olney**	**52.02**	**349**	*e*P	**P**	**13 03 27.6**	**+1.7**
	13nm,0.8s						
CCM	**Cathedral Cave**	**52.04**	**346**	P	pP	13 03 35.5	-2.9
	baz=162						
R42A	**Luebbering**	**52.15**	**346**	P	pP	13 03 36.0	-3.2
	baz=162						
S39A	**Bolivar**	**52.23**	**344**	P	pP	13 03 36.9	-3.0
	baz=159,SNR=6.9						
R41A	**Rosebud**	**52.30**	**346**	P	pP	13 03 37.0	-3.4
	baz=162,SNR=6.0						
S38A	**Stockton**	**52.33**	**343**	P	pP	13 03 37.4	-3.2
	baz=158,SNR=6.1						
Q44A	**Meyer Farm, Va**	**52.37**	**348**	P	pP	13 03 37.1	-3.7
	baz=164,SNR=5.4						
R40A	**Maddies Statio**	**52.52**	**345**	P	pP	13 03 38.5	-3.5
	baz=160,SNR=9.7						
Q43A	**New Douglas**	**52.54**	**348**	P	pP	13 03 38.7	-3.5
	baz=164						
P45A	**Graceland, Par**	**52.73**	**350**	P	pP	13 03 39.7	-3.9
	baz=166						
R39A	**Chumby, Stover**	**52.74**	**344**	P	pP	13 03 40.6	-3.0
	baz=160						
P44A	**Sand Creek, Wi**	**52.83**	**349**	P	pP	13 03 40.8	-3.5
	baz=165						
R38A	**Fenwick Farm,**	**52.85**	**343**	P	pP	13 03 41.2	-3.3
	baz=158,SNR=5.5						
Q41A	**Truxton**	**52.89**	**346**	P	pP	13 03 41.9	-2.8
	baz=162						
P43A	**Skaggs, Pawnee**	**53.18**	**348**	P	pP	13 03 43.5	-3.3
	baz=164						
P42A	**Winchester**	**53.30**	**347**	P	pP	13 03 44.4	-3.3
	baz=163						
Q39A	**Willow Grove F**	**53.41**	**345**	P	pP	13 03 45.8	-2.7
	baz=160						
Q38A	**Cooks Store, C**	**53.50**	**344**	P	pP	13 03 46.2	-3.1
	baz=159,SNR=6.3						
P40A	**Paris**	**53.63**	**346**	P	pP	13 03 47.0	-3.2
	baz=161						
P39B	**Salisbury**	**53.77**	**345**	P	pP	13 03 47.6	-3.6
	baz=160,SNR=7.5						
O41A	**Passleys Farm,**	**53.92**	**347**	P	pP	13 03 48.5	-3.9
	baz=162						
O40A	**La Belle**	**54.15**	**346**	P	pP	13 03 50.4	-3.6
	baz=161,SNR=5.4						
O37A	**Wolven Farm, M**	**54.77**	**344**	P	pP	13 03 55.3	-3.2
	baz=159						
TASL	**Snake Pit, Alb**	**54.81**	**330**	P	pP	13 03 57.0	-2.2
	baz=143						
ANMO	**Albuquerque**	**54.81**	**330**	P	pP	13 03 57.0	-2.2
	baz=143						
ANMO	**Albuquerque**	**54.81**	**330**	*e*P	**P**	**13 03 46.1**	**-0.6**
	4.0nm,1.3s						
TASM	**ASL Pad, Albuq**	**54.81**	**330**	P	pP	13 03 56.8	-2.4
	baz=143						
N39A	**Derby Farms, D**	**55.02**	**346**	P	pP	13 03 56.9	-3.4
	baz=161						
M38A	**Pleasantville**	**55.70**	**345**	P	pP	13 04 02.1	-3.1
	baz=160						
L40A	**Anamosa**	**55.86**	**347**	P	pP	13 04 03.3	-3.1
	baz=162						
K40A	**Colesburg**	**56.45**	**348**	P	pP	13 04 06.9	-3.7
	baz=163						
SDCO	**Great Sand Dun**	**56.67**	**333**	P	pP	13 04 10.1	-2.5
	baz=146						
SDCO	**Great Sand Dun**	**56.67**	**333**	*e*P	**P**	**13 03 58.9**	**-1.2**
	3.2nm,1.0s						
L36A	**Harm Buss Farm**	**56.72**	**344**	P	pP	13 04 09.8	-2.7
	baz=159						
I42A	**Draeger Farm,**	**57.18**	**350**	P	pP	13 04 12.6	-3.2
	baz=166						
S22A	**4UR Ranch, Cre**	**57.26**	**332**	P	pP	13 04 15.0	-1.8
	baz=144						
PV01	**Paradox Valley**	**58.39**	**331**	*e*P	**P**	**13 04 09.8**	**-2.3**
SWSC	**Sam W. Stewart**	**58.39**	**322**	*e*P	**P**	**13 04 13.8**	**+1.9**
ISCO	**Idaho Springs**	**58.43**	**334**	P	pP	13 04 22.9	-2.2
	baz=146						
ISCO	**Idaho Springs**	**58.43**	**334**	*e*P	**P**	**13 04 11.7**	**-0.7**
	1.6nm,0.7s						
SMCO	**Snowmass**	**58.50**	**333**	*e*P	**P**	**13 04 09.8**	**-3.3**
	5.0nm,1.1s						
PV02	**Paradox Valley**	**58.52**	**331**	*e*P	**P**	**13 04 13.2**	**+0.1**
	3.6nm,0.9s						
ECSD	**EROS Data Cent**	**58.76**	**344**	P	pP	13 04 24.1	-2.8
	baz=157						
IRM	**Iron Mountain**	**58.85**	**323**	P	pP	13 04 26.2	-1.6
	baz=135						
H32A	**Carlson Farm,**	**59.70**	**343**	P	pP	13 04 30.7	-2.7
	baz=156						
E40A	**Wakefield**	**59.82**	**350**	P	pP	13 04 30.7	-3.5
	baz=165						
F36A	**Milaca**	**59.98**	**347**	P	pP	13 04 32.0	-3.3
	baz=161						
HLNC	**Highland**	**60.06**	**322**	*e*P	**P**	**13 04 22.3**	**-1.1**
E35A	**Pequot Lakes**	**60.84**	**346**	P	pP	13 04 38.0	-3.2
	baz=160						
K22A	**Casper**	**61.19**	**336**	P	pP	13 04 41.4	-2.4
	baz=146						
C37A	**Embarrass**	**61.48**	**348**	P	pP	13 04 42.2	-3.3
	baz=162						
RSSD	**Black Hills**	**61.48**	**338**	P	pP	13 04 44.1	-1.8
	baz=149						
C36A	**Pine Crest Far**	**61.64**	**348**	P	pP	13 04 43.5	-3.0
	baz=162						
PDAR	**Pinedale Array**	**62.56**	**334**	pP	pP	13 04 51.5	-1.7
	0.7nm,0.6s,baz=126,slow=7.5,SNR=2.1						
BGU	**Big Grassy Mou**	**62.71**	**330**	*e*P	**P**	**13 04 41.9**	**+0.4**
	7.0nm,1.7s						
B34A	**Aery, Baudette**	**62.71**	**347**	P	pP	13 04 50.7	-3.1
	baz=160						
C31A	**Landman Farms,**	**62.81**	**345**	P	pP	13 04 51.5	-2.9
	baz=156						
AGMN	**Agassiz Nation**	**62.81**	**346**	P	pP	13 04 51.6	-2.9
	baz=159						
B32A	**Ashes, Strandq**	**63.07**	**346**	P	pP	13 04 53.5	-2.6
	baz=158						
A33A	**Warroad**	**63.30**	**347**	P	pP	13 04 55.7	-2.0
	baz=159						
NVAR	**Mina Array Bea**	**63.67**	**325**	P	**P**	**13 04 48.5**	**+0.6**
	0.8nm,0.7s,baz=135,slow=6.7,SNR=7.7						
RLMT	**Red Lodge**	**64.35**	**335**	P	pP	13 05 03.3	-1.6
	baz=144						
ULM	**Lac du Bonnet**	**64.65**	**347**	P	**P**	**13 04 52.8**	**-1.0**
	2.4nm,0.8s,baz=166,slow=8.2,SNR=5.7						
ULM				pP	**pP**	**13 05 03.5**	**-3.0**
	8.0nm,0.8s,baz=158,slow=5.7,SNR=11						
ULM	**Lac du Bonnet**	**64.65**	**347**	*e*P	**P**	**13 04 52.8**	**-1.0**
	8.5nm,0.8s						
YHB	**Horse Butte**	**64.86**	**334**	*e*P	**P**	**13 04 55.3**	**-0.3**
	9.2nm,1.5s						
HLID	**Hailey**	**65.39**	**331**	P	pP	13 05 10.1	-1.6
	baz=139						
BOZ	**Bozeman (W)**	**65.71**	**334**	P	pP	13 05 12.3	-1.5
	baz=142						
BOZ	**Bozeman (W)**	**65.71**	**334**	*e*P	**P**	**13 05 01.4**	**+0.3**
	2.8nm,0.8s						
BEKR	**Beckworth**	**65.81**	**325**	*e*P	**P**	**13 05 01.6**	**-0.2**
	2.9nm,1.0s						
DLMT	**Dillon**	**65.95**	**333**	*e*P	**P**	**13 05 01.5**	**-1.1**
	12nm,1.8s						
MFID	**Camas Ranch**	**65.95**	**330**	*e*P	**P**	**13 05 03.0**	**+0.4**
	4.1nm,1.0s						
GDXM	**Geysers**	**66.53**	**322**	*e*P	P	13 04 57.5	-8.8
	16nm,1.2s						
SCHQ	**Schefferville**	**67.67**	**6**	LR	LR	13 35 22.4	
	comp=Z,44nm,19.7s,baz=261,slow=36						
MSO	**Missoula**	**67.68**	**334**	P	pP	13 05 25.2	-1.1
	baz=140						
VNA3	**Neumayer Olymp**	**71.02**	**162**	P	pP	13 05 50.0	+3.4
VNA1	**Neumayer--Stat**	**71.29**	**161**	P	pP	13 05 48.6	+0.4
SNAA	**Sanae**	**73.24**	**161**	P	**P**	**13 05 46.4**	**-0.7**
SNAA	**Sanae**	**73.24**	**161**	P	**P**	**13 05 46.1**	**-0.9**
	1.1nm,0.8s,baz=245,slow=9.1,SNR=4.9						
DBIC	**Dimbokro**	**74.29**	**79**	P	**P**	**13 05 54.2**	**+0.1**
	2.5nm,0.7s,baz=239,slow=8.9,SNR=3.7						
KOWA	**Kowa**	**77.21**	**72**	LR	LR	13 40 07.0	
	comp=Z,53nm,18.0s,ba

*NNC **08** 13:04:17.4±1.4,50.°87N×73.°76E,h0km,mb3.4,mpv3.1, Error ellipse: s-maj=14.4km s-min=10.8km az=24.0, Suspected Mining explosion.*
*IDC **08** 13:04:23.3±1.3,50.°98N×73.°80E,h0km,mb3.5/1, mb1 3.1/5,mb1mx3.0/77,mbtmp2.9/5,ML2.4/4,Error ellipse: s-maj=29.7km s-min=9.2km az=31.0*

ISC 08 13:04:20.7±1.2,51.°0N±0.°1×73.°55E±0.°08,h0km,n12, σ0§92/11,4C-6D,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTUK	**Ortayu**	**2.82**	**197**	⇓Pg	**Pn**	**13 05 07.2**	**+0.1**
OTUK	4.2nm,0.5s			⇓Lg	Lg	13 05 45.9	
BVA0	**Borovoye Array**	**2.85**	**318**	Pg	**Pb**	**13 05 12.8**	**+0.4**
BVA0	4.0nm,0.7s,baz=132,slow=16,SNR=23 28nm,0.9s,baz=129,slow=26,SNR=14			⇑Lg	Lg	13 05 53.6	
BVAR	**Borovoye Array**	**2.85**	**318**	Pn	**Pb**	**13 05 11.8**	**-0.7**
BVAR	1.2nm,0.3s,baz=136,slow=16,SNR=13 2.2nm,0.3s,baz=123,slow=27,SNR=9.2			Lg	Lg	13 05 55.0	
BRVK	**Borovoye**	**2.92**	**318**	⇑Pg	**Pb**	**13 05 13.7**	**+0.1**
BRVK	3.6nm,0.5s 28nm,0.8s			⇓Lg	Lg	13 05 53.7	
KURBB	**Kurchatov Arra**	**3.18**	**94**	Pn	**Pn**	**13 05 12.3**	**+0.5**
KURBB	0.2nm,0.3s,baz=277,slow=14,SNR=18 0.5nm,0.3s,baz=274,slow=32,SNR=15			Lg	Lg	13 05 58.7	
KURBB	**Kurchatov Arra**	**3.18**	**94**	⇑Pg	**Pn**	**13 05 11.9**	**+0.1**
KURBB	10nm,0.7s 143nm,1.0s			⇓Lg	Lg	13 05 58.3	
KURK	**Kurchatov**	**3.22**	**92**	⇑Pg	**Pn**	**13 05 13.2**	**+0.7**
KURK	5.3nm,0.8s 53nm,1.1s			⇓Lg	Lg	13 05 58.4	
MK31	**Makanchi Array**	**7.11**	**122**	⇓Lg	Lg	13 08 00.2	
MKAR	**Makanchi Array**	**7.11**	**122**	Pn	**Pn**	**13 06 06.1**	**+0.2**
MKAR	0.1nm,0.3s,baz=307,slow=14,SNR=3.1 0.2nm,0.3s,baz=309,slow=29,SNR=5.4			Lg	Lg	13 08 02.2	
ZALV	**Zalesovo Beam**	**7.51**	**62**	Pn	**Pn**	**13 06 12.8**	**+1.4**
ZALV	0.2nm,0.3s,baz=250,slow=13,SNR=3.4 0.2nm,0.3s,baz=250,slow=17,SNR=3.5			Sn	**Sn**	**13 07 35.3**	**-1.8**
ZALV				Lg	Lg	13 08 20.4	
AAK	**Ala-Archa**	**8.34**	**175**	Lg	Lg	13 08 42.8	
ILAR	**Eielson Array**	**60.43**	**19**	P	**P**	**13 14 31.6**	**+0.2**
	0.3nm,0.6s,baz=328,slow=5.7,SNR=4.1						

IDC 08 13:11:30.5±1.8,2.°61S×139.°45E,h0km,mb3.2/2, mb1 3.6/3,mb1mx3.3/46,mbtmp3.2/3,ML3.1/1,Error ellipse: s-maj=37.4km s-min=21.8km az=146.0,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**1.26**	**86**	Pn	Pn	13 11 55.4	+0.1
JAY	10nm,0.3s,baz=242,slow=11,SNR=32 29nm,0.3s,baz=107,slow=18,SNR=18			Sn	Sn	13 12 13.3	+0.3
WRA	**Warramunga Arr**	**17.93**	**196**	P	P	13 15 41.9	-0.3
ASAR	**Alice Springs**	**21.61**	**194**	P	P	13 16 22.4	+0.1
ILAR	**Eielson Array**	**85.44**	**24**	P	P	13 24 09.7	-0.1
	0.4nm,0.7s,baz=16,slow=10,SNR=5.6 0.3nm,0.8s,baz=242,slow=7.0,SNR=4.3						

MEX 08 13:23:09.2±0.5,15.°12N×93.°68W,h16km±999km,MD3.9, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.73**	**37**	*e*P	Pg	13 23 21.0	-2.5
PCIG				*e*S	Sg	13 23 30.0	-3.2
CCIG	**Comitan**	**1.88**	**52**	*e*S	Sn	13 23 55.5	-8.9

*IDC **08** 13:42:43.2±2.6,36.°22N×70.°76E,h196km±23km,mb3.8/13, mb1 3.9/18,mb1mx3.5/65,mbtmp4.3/18,Error ellipse: s-maj=18.3km s-min=13.7km az=0.0*
*ISCJB **08** 13:42:43.8±0.3,36.°42N±0.°02×70.°72E±0.°04,h200km, mb4.1/29,Error ellipse: s-maj=4.9km s-min=3.3km az=165.1*
*BJI **08** 13:42:44.3,36.°10N×71.°01E,h193km,mb3.9/2*
*MOS **08** 13:42:44.3±1.0,36.°40N×70.°86E,h219km±10km,mb4.3/2, Error ellipse: s-maj=11.1km s-min=5.2km az=87.1*
*NEIC **08** 13:42:45.8±0.9,36.°40N×70.°86E,h219km±10km,mb4.3/2, Error ellipse: s-maj=13.0km s-min=9.6km az=79.0*
*NNC **08** 13:42:48.8±1.7,36.°75N×70.°71E,h205km±20km,mb3.6, mpv4.8,Error ellipse: s-maj=17.9km s-min=12.9km az=60.0*

ISC 08 13:42:44.5±0.4,36.°41N±0.°04×70.°74E±0.°05,h200km,n99, σ1§42/119,mb4.1/29,22C-8D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.32**	**217**	PN	**Pn**	**13 43 27.5**	**+0.8**
CEP	**Cherat**	**2.75**	**159**	P	**Pn**	**13 43 33.0**	**+1.5**
CEP				S	**Sn**	**13 44 09.0**	**+1.0**
CHCP	**Chirah Chowk**	**3.44**	**142**	P	**Pn**	**13 43 41.1**	**+1.6**
NIL	**Nilore**	**3.44**	**142**	*e*P	**Pn**	**13 43 41.1**	**+1.7**
NIL	**Nilore**	**3.44**	**142**	*e*PN	**Pn**	**13 43 41.2**	**+1.7**
THW	**Thamme Wali**	**3.70**	**167**	P	**Pn**	**13 43 43.7**	**+1.0**
SFK	**Sufi-Kurgan**	**4.21**	**30**	⇑P	**Pn**	**13 43 49.7**	**+0.5**
SFK	95nm,0.5s 116nm,0.5s			⇑S	**Sn**	**13 44 39.8**	**-0.1**
SFK	**Sufi-Kurgan**	**4.21**	**30**	PN	**Pn**	**13 43 49.6**	**+0.5**
SFK				S	**Sn**	**13 44 39.8**	**-0.1**
SFK	comp=Z,95nm,0.5s			pmax	pmax		
SFK	comp=N,116nm,0.5s			smax	smax		
SARP	**Sargodha**	**4.75**	**160**	P	**Pn**	**13 43 57.1**	**+1.3**
KSH	**Kashi**	**5.17**	**52**	P	**Pn**	**13 43 57.6**	**-3.6**
KSH				S	Sn	13 44 51.3	-10
KSH				smax	smax		
KSH	comp=N,180nm,0.6s			smax	smax		
AML	**Almayashu**	**6.16**	**21**	P	**Pn**	**13 44 14.4**	**+0.3**
MNAS	**Manas**	**6.23**	**12**	⇑P	**Pn**	**13 44 14.6**	**-0.2**
MNAS	SNR=492 comp=N,36nm,0.6s			⇑S	**Sn**	**13 45 23.2**	**-3.0**
MNAS	**Manas**	**6.23**	**12**	PN	**Pn**	**13 44 14.5**	**-0.2**
MNAS				pmax	pmax		
UCH	**Uchtor**	**6.51**	**26**	P	**Pn**	**13 44 19.2**	**+0.4**
KZA	**Kyzart**	**6.66**	**30**	P	**Pn**	**13 44 20.8**	**+0.2**
EKS2	**Erkin-Say**	**6.67**	**20**	P	**Pn**	**13 44 21.7**	**+1.2**
KK31	**Karatay Array**	**6.69**	**359**	⇓P	**Pn**	**13 44 20.9**	**+0.2**
KK31	comp=Z,18nm,0.3s,baz=178,slow=12,SNR=302 comp=Z,50nm,0.7s,baz=182,slow=20,SNR=7.6			⇓S	**Sn**	**13 45 32.7**	**-4.3**
KK31	**Karatay Array**	**6.69**	**359**	*e*PN	**Pn**	**13 44 20.4**	**-0.3**
KK31	comp=Z,18nm,0.4s			pmax	pmax		
AAK	**Ala-Archa**	**6.87**	**24**	P	**Pn**	**13 44 23.7**	**+0.6**
AAK	comp=Z,14nm,0.3s,baz=189,slow=7.6,SNR=107 comp=Z,4.8nm,0.3s,baz=195,slow=22,SNR=10			S	**Sn**	**13 45 39.8**	**-1.5**
AAK	**Ala-Archa**	**6.87**	**24**	⇑P	**Pn**	**13 44 23.4**	**+0.2**
AAK	comp=Z,29nm,0.5s comp=Z,41nm,0.8s			⇑S	**Sn**	**13 45 40.3**	**-1.1**
AAK	**Ala-Archa**	**6.87**	**24**	P	**Pn**	**13 44 23.7**	**+0.6**
AAK	SNR=52 comp=Z,11nm,0.5s			S	**Sn**	**13 45 39.8**	**-1.5**
AAK	**Ala-Archa**	**6.87**	**24**	*de*PN	**Pn**	**13 44 23.5**	**+0.4**
AAK	comp=Z,29nm,0.5s			pmax	pmax		
KBK	**Karagaybulak**	**7.04**	**26**	P	**Pn**	**13 44 26.0**	**+0.7**
FRU	**Bishkek**	**7.08**	**24**	⇓*e*PN	**Pn**	**13 44 26.0**	**+0.2**
FRU	SNR=34 comp=Z,80nm,1.0s			pmax	pmax		
ULHL	**Ulahol**	**7.22**	**35**	P	**Pn**	**13 44 28.4**	**+0.6**
CHMS	**Chumysh**	**7.28**	**24**	P	**Pn**	**13 44 29.1**	**+0.8**
TKM2	**Tokmak 2**	**7.51**	**28**	⇑P	**Pn**	**13 44 31.7**	**+0.2**
TKM2	SNR=8.2 comp=Z,146nm,1.0s			⇓S	**Sn**	**13 45 53.7**	**-2.8**
TKM2	**Tokmak 2**	**7.51**	**28**	P	**Pn**	**13 44 32.0**	**+0.5**
TKM2	**Tokmak 2**	**7.51**	**28**	PN	**Pn**	**13 44 31.7**	**+0.2**
TKM2	SNR=35 comp=Z,146nm,1.0s			pmax	pmax		
MDOK	**Medeo**	**8.31**	**34**	⇑P	**Pn**	**13 44 42.0**	**+0.1**
PDGK	**Podgornoye**	**9.64**	**42**	P	**Pn**	**13 45 00.7**	**+1.5**
PDGK	comp=Z,35nm,0.6s comp=Z,7.0nm,0.9s			pmax	pmax		
GEYT	**Alibeck**	**10.19**	**282**	P	**Pn**	**13 45 06.0**	**-0.2**
OTUK	**Ortayu**	**11.89**	**5**	P	**Pn**	**13 45 27.8**	**-0.1**
OTUK	comp=Z,1.1nm,0.3s,baz=93,slow=12,SNR=1.9 comp=Z,14nm,0.8s			pmax	pmax		
PYUN	**Piuthan**	**13.26**	**125**	*e*P	**Pn**	**13 45 43.7**	**-1.8**
MK31	**Makanchi Array**	**13.49**	**36**	*ce*P	**Pn**	**13 45 48.1**	**+0.1**
MK31	comp=Z,38nm,0.4s comp=Z,5.0nm,0.5s			pmax	pmax		
MKAR	**Makanchi Array**	**13.49**	**36**	P	**Pn**	**13 45 48.6**	**+0.5**
MKAR	**Makanchi Array**	**13.49**	**36**	*i* P	**Pn**	**13 45 48.5**	**+0.5**
MKAR	comp=Z,0.4nm,0.3s,baz=222,slow=14,SNR=18 comp=Z,3.0nm,0.8s			pmax	pmax		
DANN	**Dangsing**	**13.62**	**122**	*e*P	**Pn**	**13 45 49.2**	**-0.8**
KOLN	**Koldanda**	**13.88**	**125**	*e*P	**Pn**	**13 45 52.3**	**-1.0**
GKN	**Gorkha**	**14.43**	**122**	*e*P	**Pn**	**13 45 59.9**	**-0.1**
DMN	**Daman**	**15.00**	**122**	*e*P	**Pn**	**13 46 06.8**	**-0.3**
KKN	**Kakani**	**15.01**	**121**	*e*P	**Pn**	**13 46 06.5**	**-0.6**
AB31	**Akbulak array**	**15.06**	**332**	⇓P	**P**	**13 46 08.6**	**+0.7**
AB31	comp=Z,4.7nm,1.0s,baz=138,slow=21,SNR=4.3			⇑S	**S**	**13 48 54.5**	**+0.1**
AB31	**Akbulak array**	**15.06**	**332**	*e*P	**Pn**	**13 46 06.8**	**-0.5**
AB31	comp=Z,3.0nm,0.4s			pmax	pmax		
PKIN	**Phulchoki**	**15.22**	**121**	*e*P	**Pn**	**13 46 09.3**	**-0.5**
KURBB	**Kurchatov Arra**	**15.28**	**19**	P	**Pn**	**13 46 09.3**	**-0.7**
GUN	**Gumba**	**15.36**	**119**	*e*P	**P**	**13 46 11.7**	**0.0**
KURK	**Kurchatov**	**15.39**	**19**	P	**Pn**	**13 46 09.3**	**-2.0**
KURK	**Kurchatov**	**15.39**	**19**	*ce*P	**Pn**	**13 46 11.3**	**0.0**
KURK	comp=Z,3.0nm,0.7s			pmax	pmax		
JIRN	**Jiri**	**15.73**	**119**	*e*P	**Pn**	**13 46 16.1**	**+0.1**
RAMN	**Ramite**	**16.45**	**120**	*e*P	**P**	**13 46 23.5**	**-0.2**
BVAR	**Borovoye Array**	**16.62**	**359**	P	**Pn**	**13 46 25.8**	**-0.2**
BVAR	comp=Z,1.1nm,0.3s,baz=165,slow=11,SNR=12 comp=Z,0.1nm,0.3s,baz=166,slow=13,SNR=2.6			S	**S**	**13 49 25.8**	**-2.6**
BRVK	**Borovoye**	**16.66**	**359**	⇑P	**P**	**13 46 25.8**	**+0.4**
BRVK	**Borovoye**	**16.66**	**359**	*e*P	**P**	**13 46 22.1**	**-3.3**
BRVK	**Borovoye**	**16.66**	**359**	*ce*P	**P**	**13 46 26.0**	**+0.6**
BRVK	comp=Z,7.0nm,1.2s			pmax	pmax		
AKTO	**Aktyubinsk**	**16.76**	**331**	P	**Pn**	**13 46 27.9**	**+0.2**
AKTO	**Aktyubinsk**	**16.76**	**331**	⇑P	**P**	**13 46 27.4**	**+0.8**
AKTO	comp=Z,3.4nm,0.3s,baz=140,slow=11,SNR=39 comp=Z,35nm,1.1s			⇑S	**S**	**13 49 29.0**	**-2.2**
AKTO	**Aktyubinsk**	**16.76**	**331**	P	**P**	**13 46 27.4**	**+0.8**
AKTO	comp=Z,11nm,1.1s			S	**S**	**13 49 29.0**	**-2.2**
AKTO	comp=Z,35nm,1.2s			pmax	pmax		
AKTO	comp=Z,11nm,1.2s			smax	smax		
ODAN	**Odare**	**17.06**	**119**	*e*P	**Pn**	**13 46 32.1**	**+0.3**
ZALV	**Zalesovo Beam**	**20.09**	**25**	P	**P**	**13 47 02.7**	**+0.1**
NVS	**Novosibirsk**	**20.35**	**211**	⇑*i*P	**P**	**13 47 06.5**	**+1.2**
NVS	comp=Z,6.9nm,0.5s,baz=218,slow=11,SNR=34			*e*S	**S**	**13 50 42.1**	**+0.2**
NVS	comp=Z,14nm,0.6s			pmax	pmax		
NVS	comp=N,9.0nm,0.6s			pmax	pmax		
NVS	comp=E,2.0nm,0.6s			pmax	pmax		
NVS	comp=N,9.0nm,1.1s			smax	smax		
NVS	comp=E,9.0nm,0.8s			smax	smax		
GNI	**Garni**	**20.72**	**288**	*d i*P	**P**	**13 47 08.8**	**-0.9**
GNI	comp=Z,20nm,1.0s			pmax	pmax		
SHL	**Shillong**	**21.06**	**115**	P	**P**	**13 47 15.6**	**+2.2**
SHL	comp=Z,18nm,0.8s			pmax	pmax		
SVE	**Sverdlovsk**	**21.53**	**345**	*e*P	**P**	**13 47 20.7**	**+3.0**
SVE	comp=Z,15nm,1.4s			pmax	pmax		
ARU	**Arti**	**21.65**	**341**	*c i*P	**P**	**13 47 19.6**	**+0.6**
ARU				*PP	**pP**	**13 47 52.8**	**-0.2**
ARU						13 48 01.3	
ARU				S	**S**	**13 51 08.0**	**+3.1**
ARU	comp=Z,12nm,0.6s			pmax	pmax		
GTA	**Gaotai**	**23.09**	**74**	*e*P	**P**	**13 47 35.0**	**+2.2**
GTA	comp=Z,4.0nm,1.3s			pmax	pmax		
RAYN	**Ar Rayn**	**25.27**	**246**	P	**P**	**13 47 47.9**	**-4.7**
ULN	**Ulaanbaatar**	**29.01**	**55**	*i* P	**P**	**13 48 25.1**	**-0.6**
ULN	comp=Z,2.2nm,0.5s comp=Z,1.0nm,0.9s			pmax	pmax		
PRGR	**Permogore**	**29.77**	**336**	*e*P	**P**	**13 48 31.0**	**-1.1**
PRGR	comp=Z,14nm,0.6s			pmax	pmax		
OBN	**Obninsk**	**29.87**	**320**	⇓*e*P	**P**	**13 48 32.1**	**-0.9**
OBN				*e*PP	**pP**	**13 49 15.2**	**+1.4**
OBN				*e*		13 49 41.6	
OBN				*e*S	**S**	**13 53 16.8**	**+1.9**
OBN	comp=Z,5.0nm,0.4s			pmax	pmax		
CMAR	**Chiang Mai Arr**	**30.60**	**118**	*ce*P	**P**	**13 48 36.7**	**-3.2**
CMAR	comp=Z,1.0nm,0.3s			pmax	pmax		
KLMR	**Klimovskoe**	**31.46**	**331**	*e*P	**P**	**13 48 44.5**	**-2.4**
KLMR	comp=Z,20nm,1.2s			pmax	pmax		
KLMR	**Klimovskoe**	**31.46**	**331**	*e*P	**P**	**13 48 44.5**	**-2.4**
KLMR	comp=Z,20nm,1.2s			AMP		13 48 48.0	
AKASG	**Malin Array Be**	**32.84**	**309**	P	**P**	**13 48 59.1**	**+0.1**
AKASG	**Malin Array Be**	**32.84**	**309**	*ce*P	**P**	**13 48 58.9**	**-0.2**
AKASG	comp=Z,1.6nm,0.4s,baz=82,slow=7.0,SNR=9.6 comp=Z,2.0nm,0.4s			pmax	pmax		
KIEV	**Kiev**	**32.85**	**309**	*i* P	**P**	**13 48 58.4**	**-0.7**
KIEV	comp=Z,1.0nm,0.7s			pmax	pmax		
TMCR	**Tamitsa**	**34.04**	**335**	*e*P	**P**	**13 49 10.2**	**+0.9**
TMCR	comp=Z,12nm,0.9s			pmax	pmax		
NRIK	**Noril'sk**	**34.26**	**11**	P	**P**	**13 49 12.8**	**+1.7**
MLR	**Muntele Rosu**	**34.64**	**299**	P	**P**	**13 49 17.9**	**+3.0**
MLR	comp=Z,8.0nm,0.9s			pmax	pmax		
JOF	**Joensuu**	**35.84**	**330**	P	**P**	**13 49 25.7**	**+1.0**
JOF	comp=Z,14nm,0.9s			pmax	pmax		
VSU	**Vasula**	**36.13**	**322**	*i* P	**P**	**13 49 27.5**	**+0.4**
VSU	comp=Z,15nm,1.1s			pmax	pmax		
FINES	**FINESS Array B**	**37.44**	**326**	P	**P**	**13 49 38.4**	**+0.2**
FINES	**FINESS Array B**	**37.44**	**326**	*ce*P	**P**	**13 49 38.7**	**+0.5**
FINES	comp=Z,2.0nm,0.4s			pmax	pmax		
ARCES	**ARCESS Array B**	**41.15**	**338**	P	**P**	**13 50 09.4**	**+0.6**
HFS	**Hagfors**	**43.01**	**322**	P	**P**	**13 50 23.8**	**-0.1**
YAK	**Yakutsk**	**44.17**	**35**	*i* P	**P**	**13 50 32.5**	**-0.5**
YAK	comp=Z,3.0nm,0.8s			pmax	pmax		
NB2	**NORSAR Subarra**	**44.33**	**323**	P	**P**	**13 50 33.6**	**-0.8**
NOA	**NORSAR Array B**	**44.33**	**323**	P	**P**	**13 50 34.1**	**-0.4**
TIXI	**Tiksi**	**45.94**	**22**	*ce*P	**P**	**13 50 46.9**	**0.0**
TIXI	comp=Z,5.0nm,0.7s			pmax	pmax		
KEST	**Kesra**	**48.86**	**288**	P	**P**	**13 51 11.0**	**+1.0**
DAG	**Danmarks Havn**	**54.76**	**344**	P	**P**	**13 51 53.5**	**+0.7**
DAG	comp=Z,5.0nm,1.0s			pmax	pmax		
BILL	**Bilibino**	**58.78**	**26**	⇑*e*P	**P**	**13 52 22.4**	**+1.2**
BILL				*e**PP	**pP**	**13 53 06.7**	**0.0**
BILL				*e*		13 54 33.7	
BILL				*e*S	**S**	**14 00 12.2**	**+2.1**
BILL	comp=Z,2.0nm,1.0s			pmax	pmax		
SUMG	**Summit**	**61.08**	**341**	P	**P**	**13 52 39.5**	**+2.2**
SUMG	comp=Z,9.0nm,1.1s			pmax	pmax		
TORD	**Torodi Ar. Bea**	**65.50**	**269**	P	**P**	**13 53 05.1**	**-1.6**
ILAR	**Eielson Array**	**74.93**	**16**	P	**P**	**13 54 02.6**	**-0.5**
YKA	**Yellowknife Ar**	**81.35**	**3**	P	**P**	**13 54 38.3**	**0.0**
WRA	**Warramunga Arr**	**82.12**	**122**	P	**P**	**13 54 41.6**	**-1.3**
ASAR	**Alice Springs**	**84.38**	**125**	P	**P**	**13 54 53.2**	**-1.2**
	comp=Z,0.5nm,0.6s,baz=310,slow=4.7,SNR=8.0						

*ISCJB **08** 13:57:24.5±0.4,39.°49N±0.°02×26.°28E±0.°03,h7km±4km, Error ellipse: s-maj=4.1km s-min=3.1km az=171.0*
*CSEM **08** 13:57:24.5±0.1,39.°49N×26.°28E,h10km,ML1.8,Error ellipse: s-maj=2.1km s-min=1.6km az=94.0*
*ATH **08** 13:57:24.2,39.°48N×26.°28E,h17km±6km,ML1.8/5, Error ellipse: s-maj=6.1km s-min=1.0km az=186.0*
*DDA **08** 13:57:24.6,39.°51N×26.°30E,h7km,Ml2.8*
*ISK **08** 13:57:24.1,39.°49N×26.°29E,h9km,ML2.6/12*

ISC 08 13:57:24.7±0.9,39.°49N±0.°02×26.°27E±0.°02,h12km±7km, n54,σ0§54/83,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**0.24**	**180**	P	**Pg**	**13 57 29.8**	**-0.1**
PRK				AML	AML	13 57 33.7	
PRK	comp=N,1181μm,0.2s			S	**Sg**	**13 57 33.7**	**+0.4**
PRK				AML	AML	13 57 40.6	
PRK	comp=E,454μm,0.6s **Paraskevi**	**0.24**	**180**	P	**Pg**	**13 57 29.7**	**-0.1**
PRK				S	**Sg**	**13 57 33.6**	**+0.3**
BAYC	**CANAKKALE_Bayr**	**0.33**	**41**	*i* P	**Pg**	**13 57 31.2**	**-0.2**
BAYC				*i* S	**Sg**	**13 57 35.9**	**0.0**
BAYC	**CANAKKALE_Bayr**	**0.33**	**41**	P	**Pg**	**13 57 31.2**	**-0.2**
BAYC				S	**Sg**	**13 57 35.9**	**0.0**
EZN	**Ezine**	**0.34**	**7**	PG	**Pg**	**13 57 31.4**	**-0.1**
EZN				SG	**Sg**	**13 57 36.4**	**+0.3**
EZN	**Ezine**	**0.34**	**7**	*e*Pg	**Pg**	**13 57 31.4**	**-0.1**
EZN				*e*Sg	**Sg**	**13 57 36.4**	**+0.3**
AYVA	**Ayvalik**	**0.37**	**119**	*i* P	**Pg**	**13 57 32.2**	**0.0**
AYVA				*i* S	**Sb**	**13 57 37.8**	**-1.2**
AYVA	**Ayvalik**	**0.37**	**119**	P	**Pg**	**13 57 32.2**	**0.0**
AYVA				S	**Sb**	**13 57 37.8**	**-1.2**
BOZC	**Bozcaada**	**0.39**	**335**	*i* P	**Pg**	**13 57 32.2**	**-0.3**
BOZC				*i* S	**Sg**	**13 57 38.1**	**+0.4**
SIGR	**SIGRI**	**0.43**	**229**	PG	**Pg**	**13 57 33.2**	**+0.1**
SIGR				SG	**Sg**	**13 57 39.7**	**+0.9**
SIGR	**SIGRI**	**0.43**	**229**	P	**Pg**	**13 57 32.2**	**-0.9**
SIGR				S	**Sg**	**13 57 38.7**	**-0.1**
SIGR	comp=N,454μm,0.2s			AML	AML	13 57 39.2	
SIGR	comp=E,354μm,0.2s			AML	AML	13 57 39.6	
SIGR	**SIGRI**	**0.43**	**229**	P	**Pg**	**13 57 32.5**	**-0.6**
SIGR	**SIGRI**	**0.43**	**229**	*e*Pg	**Pg**	**13 57 33.2**	**+0.1**
SIGR				S	**Sg**	**13 57 38.9**	**+0.1**
SIGR				*e*Sg	**Sg**	**13 57 39.7**	**+0.9**
DKL	**Dikili**	**0.65**	**130**	PG	**Pg**	**13 57 36.7**	**-0.6**
DKL	**Dikili**	**0.65**	**130**	*e*Pg	**Pg**	**13 57 36.7**	**-0.6**
GADA	**Gvkgeada**	**0.76**	**338**	PG	**Pg**	**13 57 38.9**	**-0.5**
GADA	**Gvkgeada**	**0.76**	**338**	*e*Pg	**Pg**	**13 57 38.9**	**-0.5**
FOCM	**Fo^§a**	**0.86**	**155**	PG	**Pb**	**13 57 41.2**	**-0.2**
FOCM				SG	**Sb**	**13 57 53.3**	**+0.5**
FOCM	**Fo^§a**	**0.86**	**155**	*e*Pg	**Pb**	**13 57 41.2**	**-0.2**
FOCM				*e*Sg	**Sb**	**13 57 53.3**	**+0.5**
GELI	**Tayfur-Gelibol**	**0.92**	**10**	PG	**Pb**	**13 57 42.7**	**+0.1**
GELI	**Tayfur-Gelibol**	**0.92**	**10**	*e*Pg	**Pb**	**13 57 42.7**	**+0.1**
LIA	**Limnos Island**	**0.93**	**296**	P	**Pg**	**13 57 42.4**	**-0.3**
LIA				S	**Sn**	**13 57 56.4**	**-0.4**
LIA				AML	AML	13 58 00.6	
LIA	comp=E,77μm,0.4s			AML	AML	13 58 01.7	
LIA	comp=N,60μm,0.4s			P	**Pg**	**13 57 42.3**	**-0.3**
LIA	**Limnos Island**	**0.93**	**296**	S	**Sb**	**13 57 55.9**	**+0.9**
LIA				PG	**Pg**	**13 57 42.4**	**-0.8**
LPK	**Lapseki**	**0.96**	**23**	*e*Pg	**Pg**	**13 57 42.4**	**-0.8**
LPK	**Lapseki**	**0.96**	**23**	*i* P	**Pg**	**13 57 44.5**	**-0.9**
BALY	**Balya**	**1.07**	**76**	*i* S	**Sb**	**13 57 59.0**	**-0.1**
BALY				P	**Pg**	**13 57 44.5**	**-0.9**
BALY	**Balya**	**1.07**	**76**	S	**Sb**	**13 57 59.0**	**-0.1**
BALY				PN	**Pb**	**13 57 45.9**	**0.0**
CHOS	**Chios island**	**1.11**	**189**	P	**Pb**	**13 57 45.4**	**-0.6**
CHOS	**Chios island**	**1.11**	**189**	P	**Pb**	**13 57 45.3**	**-0.6**
CHOS	**Chios island**	**1.11**	**189**	*e*Pn	**Pb**	**13 57 45.9**	**0.0**
CHOS	**Chios island**	**1.11**	**189**	*i* P	**Pn**	**13 57 46.2**	**-0.1**
STEP	**BALIKESIR_Sava**	**1.13**	**95**	*i* S	**Sn**	**13 58 03.7**	**+2.0**
STEP				P	**Pn**	**13 57 46.2**	**-0.1**
STEP	**BALIKESIR_Sava**	**1.13**	**95**	S	**Sn**	**13 58 03.7**	**+2.0**
STEP				P	**Pb**	**13 57 45.7**	**-0.4**
SMTH	**Samothraki Isl**	**1.13**	**330**	S	**Sn**	**13 58 01.9**	**0.0**
SMTH				AML	AML	13 58 03.2	
SMTH	comp=E,58μm,0.1s			AML	AML	13 58 03.5	
SMTH	comp=N,64μm,0.1s			P	**Pb**	**13 57 45.8**	**-0.4**
SMTH	**Samothraki Isl**	**1.13**	**330**	S	**Sn**	**13 58 01.8**	**0.0**
SMTH				P	**Pb**	**13 57 46.1**	**-0.5**
URLA	**Izmir**	**1.16**	**167**	PN	**Pb**	**13 57 46.1**	**-0.5**
URLA	**Izmir**	**1.16**	**167**	*e*Pn	**Pb**	**13 57 47.2**	**0.0**
ERIK	**Erikli-Kesan**	**1.19**	**9**	PN	**Pb**	**13 57 47.2**	**0.0**
ERIK	**Erikli-Kesan**	**1.19**	**9**	*e*Pn	**Pb**	**13 57 47.2**	**0.0**
KRBG	**Karabiga-Canak**	**1.20**	**41**	PN	**Pn**	**13 57 47.2**	**0.0**
KRBG	**Karabiga-Canak**	**1.20**	**41**	*e*Pn	**Pn**	**13 57 47.2**	**0.0**
GONE	**Gonen-Balikesi**	**1.23**	**63**	PN	**Pg**	**13 57 48.3**	**0.0**
GONE	**Gonen-Balikesi**	**1.23**	**63**	*e*Pn	**Pg**	**13 57 48.3**	**0.0**
ENEZ	**Enez**	**1.25**	**356**	PN	**Pg**	**13 57 48.6**	**-0.1**
ENEZ	**Enez**	**1.25**	**356**	*e*Pn	**Pg**	**13 57 48.6**	**-0.1**
KESN	**Edirne-Kesan**	**1.37**	**13**	*i* P	**Pn**	**13 57 49.9**	**-0.1**
KESN				*i* S	**Sb**	**13 58 08.2**	**+0.2**
KESN	**Edirne-Kesan**	**1.37**	**13**	P	**Pn**	**13 57 49.9**	**-0.1**
KESN				S	**Sb**	**13 58 08.2**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.38**	**30**	PN	**Pn**	**13 57 49.6**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.38**	**30**	*e*Pn	**Pn**	**13 57 49.6**	**-0.2**
SART	**Tekirdag**	**1.39**	**30**	*i* P	**Pn**	**13 57 49.4**	**-0.5**
SART				*i* S	**Sb**	**13 58 08.0**	**-0.2**
SART	**Tekirdag**	**1.39**	**30**	P	**Pn**	**13 57 49.4**	**-0.5**
SART				S	**Sb**	**13 58 08.0**	**-0.2**
ALN	**Alexandroupoli**	**

ALN			S	Sb	13 58 09.4	+0.4
ALN			AML	AML	13 58 11.7	
	comp=E,68μm,0.3s					
ALN			AML	AML	13 58 12.1	
	comp=N,58μm,0.5s					
ALN	**Alexandroupoli**	**1.42 353**	*e*Pn	**Pb**	**13 57 50.9**	**-0.1**
ALN			S	**Sg**	**13 58 10.0**	**-0.3**

MEX 08 14:04:19.7±0.3, 17°.24N×101°.24W, h15km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.42**	**329**	*e*P	Pg	14 04 27.1	-1.1
ZIIG				*e*S	Sg	14 04 32.8	-1.1
ARIG	**Puente Sto Nin**	**1.34**	**39**	*e*P	Pn	14 04 40.2	-3.7
ARIG				*e*S	Sn	14 04 55.9	-5.6
EZ5V		**3.16**	**315**	*e*P	Pn	14 05 05.2	-4.0

*ISCJB **08** 14:08:40.0±0.6, 3°.71S±0°.07×128°.36E±0°.05, h100km, mb3.0/1, Error ellipse: s-maj=10.1km s-min=6.3km az=8.9*
*DJA **08** 14:08:40.8±0.5, 4°.5±6°.×12°.8E±°, h113km±4km, M3.2/4, MLv3.2/4*
*IDC **08** 14:08:43.9±6.4, 3°.60S×128°.68E, h154km±77km, mb3.1/2, mb1 3.4/4, mb1mx3.0/59, mbtmp3.8/4, Error ellipse: s-maj=89.7km s-min=18.8km az=84.0*
ISC 08 14:08:41.0±0.9, 3°.66S±0°.08×128°.34E±0°.05, h100km, n16, σ2§08/20, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.15**	**259**	P	**Pn**	**14 08 57.4**	**+2.3**
AAI				S	**Sn**	**14 09 10.1**	**+4.5**
MSAI	**Masohi**	**0.66**	**62**	P	**Pn**	**14 08 59.9**	**+1.8**
MSAI				S	**Sn**	**14 09 15.1**	**+4.1**
NLAI	**Namlea**	**1.31**	**289**	P	**Pn**	**14 09 06.2**	**+1.2**
NLAI				S	**Sn**	**14 09 25.9**	**+2.8**
BNDI	**Bandanaira**	**1.78**	**119**	P	**Pn**	**14 09 11.3**	**+0.5**
SANI	**Sanana**	**2.84**	**304**	P	**Pn**	**14 09 24.8**	**+0.1**
LBMI	**Labuha**	**3.12**	**344**	P	**Pn**	**14 09 30.3**	**+1.9**
FAKI	**Fak Fak**	**3.97**	**79**	P	**Pn**	**14 09 41.0**	**+1.2**
SIJI	**Sorong**	**4.03**	**47**	P	**Pn**	**14 09 41.4**	**+0.7**
	2.1nm,0.3s,baz=50,slow=22,SNR=18						
SIJI				S	**Sn**	**14 10 25.6**	**-1.2**
	5.2nm,0.3s,baz=204,slow=22,SNR=13						
KMSI	**Cibinong**	**6.06**	**314**	P	**Pn**	**14 10 08.3**	**+0.2**
LUWI	**Luwuk**	**6.14**	**295**	P	**Pn**	**14 10 09.1**	**-0.2**
RKPI	**Ransiki, Papua**	**6.21**	**70**	P	**Pn**	**14 10 09.8**	**-0.4**
APSI	**Ampana**	**7.22**	**292**	P	**Pn**	**14 10 24.2**	**+0.2**
MRSI	**Marisa**	**7.60**	**303**	P	**Pn**	**14 10 29.2**	**0.0**
WRA	**Warramunga Arr**	**17.21**	**161**	P	**Pn**	**14 12 33.5**	**-1.8**
	1.0nm,0.3s,baz=340,slow=11,SNR=30						
ASAR	**Alice Springs**	**20.60**	**165**	P	**P**	**14 13 10.8**	**-1.6**
	1.2nm,0.3s,baz=345,slow=11,SNR=26						
MKAR	**Makanchi Array**	**64.54**	**327**	P	**P**	**14 19 05.4**	**-2.2**
	0.1nm,0.4s,baz=111,slow=8.0,SNR=2.9						

JMA 08 14:13:45.4±0.1, 35°.88N×140°.48E, h35km±1km, M3.0, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.35**	**120**	P	Pn	14 13 53.7	-0.3
CHOJ				S	Sn	14 13 59.5	-0.4
JYT	**Yasato**	**0.42**	**326**	P	Pn	14 13 54.8	-0.1
JYT				S	Sn	14 14 01.1	-0.3
JHO	**Hitachi**	**0.73**	**6**	P	Pn	14 13 58.9	-0.4
JHO				S	Sn	14 14 08.3	-0.9
MAT	**Matsushiro**	**1.95**	**290**	P	Pn	14 14 17.3	+1.2
MAT				*e*S	Sn	14 14 38.2	-1.2

*ATH **08** 14:52:42.6, 40°.13N×20°.47E, h16km±2km, ML2.8/8, Error ellipse: s-maj=2.3km s-min=1.2km az=146.0*
*ISCJB **08** 14:52:43.6±0.4, 40°.10N±0°.02×20°.55E±0°.03, h1km±5km, Error ellipse: s-maj=4.4km s-min=3.0km az=35.1*
*TIR **08** 14:52:43.0, 40°.00N×20°.53E, h22km, Md3.3/6*
*CSEM **08** 14:52:43.5±0.2, 40°.12N×20°.53E, h2km, ML3.3, Error ellipse: s-maj=5.4km s-min=3.9km az=126.0*
*THE **08** 14:52:44.0, 40°.10N×20°.55E, h0km±2km, ML2.7/13, Error ellipse: s-maj=2.9km s-min=0.8km az=311.0*
ISC 08 14:52:43.8±1.0, 40°.08N±0°.01×20°.55E±0°.02, h8km±9km, n75, σ1§11/117, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PENT	**Pentalofos**	**0.46**	**75**	P	**Pg**	**14 52 52.2**	**-0.7**
PENT				S	**Sg**	**14 53 00.1**	**+1.1**
PENT				AML	AML	14 53 04.9	
	comp=E,1288μm,0.8s						
PENT				AML	AML	14 53 06.0	
	comp=N,2089μm,0.5s						
PENT	**Pentalofos**	**0.46**	**75**	P	**Pg**	**14 52 51.7**	**-1.2**
PENT				S	**Sb**	**14 53 01.4**	**0.0**
PENT				AML	AML	14 53 04.9	
	comp=E,1288μm,0.8s						
PENT				AML	AML	14 53 06.0	
	comp=N,2089μm,0.5s						
PENT	**Pentalofos**	**0.46**	**75**	P	**Pg**	**14 52 52.2**	**-0.7**
PENT				S	**Sg**	**14 53 00.3**	**+1.3**
PENT	**Pentalofos**	**0.46**	**75**	P	**Pg**	**14 52 52.2**	**-0.7**
PENT				S	**Sg**	**14 53 00.3**	**+1.3**
SRN	**Sarande**	**0.47**	**245**	P	**Pg**	**14 52 52.0**	**-0.9**
SRN				S	**Sb**	**14 53 01.1**	**-0.2**
SRN	**Sarande**	**0.47**	**245**	*i* PG	**Pg**	**14 52 53.0**	**+0.1**
SRN				*i* SG	**Sg**	**14 52 59.3**	**+0.2**
SRN	**Sarande**	**0.47**	**245**	P	**Pg**	**14 52 52.0**	**-0.9**
SRN	**Sarande**	**0.47**	**245**	*i* Pg	**Pg**	**14 52 53.0**	**+0.1**
	baz=269						
SRN				*i* Sg	**Sg**	**14 52 59.3**	**+0.2**
	baz=269						
SRN				S	**Sb**	**14 53 01.1**	**-0.2**
JAN	**Janina**	**0.48**	**151**	P	**Pg**	**14 52 53.1**	**-0.1**
JAN				S	**Sb**	**14 53 01.3**	**-0.5**
JAN				AML	AML	14 53 04.8	
	comp=E,2999μm,0.4s						
JAN				AML	AML	14 53 05.7	
	comp=N,2666μm,0.4s						
JAN	**Janina**	**0.48**	**151**	P	**Pg**	**14 52 52.7**	**-0.5**
JAN				S	**Sb**	**14 53 02.8**	**+1.0**
JAN				AML	AML	14 53 04.8	
	comp=E,2999μm,0.4s						
JAN				AML	AML	14 53 05.7	
	comp=N,2666μm,0.4s						
JAN	**Janina**	**0.48**	**151**	P	**Pg**	**14 52 53.2**	**0.0**
JAN				S	**Sb**	**14 53 01.6**	**-0.2**
JAN	**Janina**	**0.48**	**151**	P	**Pg**	**14 52 53.2**	**0.0**
JAN				S	**Sb**	**14 53 01.6**	**-0.2**
NEST	**Nestorio**	**0.51**	**49**	P	**Pg**	**14 52 53.0**	**-0.7**
NEST	**Nestorio**	**0.51**	**49**	P	**Pg**	**14 52 54.2**	**+0.5**
NEST				S	**Sg**	**14 53 00.3**	**0.0**
NEST				AML	AML	14 53 06.7	
	comp=E,1108μm,0.7s						
NEST				AML	AML	14 53 07.2	
	comp=N,1102μm,0.7s						
NEST	**Nestorio**	**0.51**	**49**	P	**Pg**	**14 52 52.8**	**-0.9**
NEST				S	**Sb**	**14 53 01.7**	**-0.9**
NEST	**Nestorio**	**0.51**	**49**	P	**Pg**	**14 52 52.8**	**-0.9**
NEST				S	**Sg**	**14 53 00.4**	**0.0**
SGD	**Sagiada**	**0.53**	**208**	P	**Pg**	**14 52 53.2**	**-0.9**
SGD	**Sagiada**	**0.53**	**208**	P	**Pg**	**14 52 53.2**	**-0.9**
KBN	**Korca**	**0.57**	**18**	P	**Pg**	**14 52 54.1**	**-0.8**
KBN				S	**Sg**	**14 53 02.7**	**+0.3**
KBN	**Korca**	**0.57**	**18**	*i* PG	**Pb**	**14 52 55.7**	**-0.4**
KBN				*i* SG	**Sb**	**14 53 05.1**	**+0.7**
KBN	**Korca**	**0.57**	**18**	P	**Pg**	**14 52 54.1**	**-0.8**
KBN	**Korca**	**0.57**	**18**	*i* Pg	**Pb**	**14 52 55.7**	**-0.4**
	baz=5.0						
KASA	**Kassiopi**	**0.58**	**235**	P	**Pg**	**14 52 54.1**	**-0.9**
KASA				S	**Sb**	**14 53 05.4**	**+0.9**
KASA	**Kassiopi**	**0.58**	**235**	P	**Pg**	**14 52 54.8**	**-0.3**
KPRO	**Kipourio**	**0.64**	**101**	P	**Pg**	**14 52 55.9**	**-0.2**
KEK	**Kerkira**	**0.69**	**238**	P	**Pg**	**14 52 56.6**	**-0.5**
KEK				S	**Sg**	**14 53 04.6**	**-1.4**
KEK				AML	AML	14 53 14.7	
	comp=N,892μm,0.6s						
KEK				AML	AML	14 53 17.4	
	comp=E,903μm,0.7s						
KEK	**Kerkira**	**0.69**	**238**	P	**Pb**	**14 52 58.1**	**+0.1**
KEK				S	**Sb**	**14 53 07.9**	**+0.3**
KEK				AML	AML	14 53 12.0	
	comp=E,895μm,0.5s						
KEK				AML	AML	14 53 16.0	
	comp=N,606μm,0.5s						
KEK	**Kerkira**	**0.69**	**238**	P	**Pg**	**14 52 56.0**	**-1.1**
KEK				S	**Sb**	**14 53 08.0**	**+0.4**
KEK	**Kerkira**	**0.69**	**238**	P	**Pg**	**14 52 56.0**	**-1.1**
FNA	**Florina**	**0.94**	**42**	P	**Pg**	**14 53 00.1**	**-1.9**
FNA				S	**Sg**	**14 53 12.2**	**-2.0**
FNA				AML	AML	14 53 28.7	
	comp=E,709μm,0.4s						
FNA				AML	AML	14 53 31.4	
	comp=N,591μm,0.7s						
FNA	**Florina**	**0.94**	**42**	P	**Pg**	**14 53 00.3**	**-1.7**
FNA				S	**Sg**	**14 53 14.3**	**+0.1**
FNA	**Florina**	**0.94**	**42**	P	**Pg**	**14 53 00.3**	**-1.7**
FNA				S	**Sg**	**14 53 14.3**	**+0.1**
KZN	**Kozani**	**0.96**	**76**	P	**Pb**	**14 53 03.0**	**+0.2**
DSL	**Palaion Diasel**	**1.03**	**156**	P	**Pg**	**14 53 02.6**	**-1.1**
DSL				S	**Sn**	**14 53 18.4**	**-0.8**
DSL				AML	AML	14 53 33.1	
	comp=E,950μm,0.7s						
DSL				AML	AML	14 53 34.1	
	comp=N,731μm,0.7s						
DSL	**Palaion Diasel**	**1.03**	**156**	P	**Pg**	**14 53 03.3**	**-0.4**
DSL				S	**Sn**	**14 53 18.3**	**-1.0**
DSL	**Palaion Diasel**	**1.03**	**156**	P	**Pg**	**14 53 03.3**	**-0.4**
DSL				S	**Sn**	**14 53 18.3**	**-1.0**
OHR	**Ohrid**	**1.05**	**10**	*e*Pn	**Pb**	**14 53 03.1**	**-1.1**
THL	**Klokotos Trika**	**1.24**	**114**	P	**Pn**	**14 53 06.9**	**-0.4**
THL				S	**Sg**	**14 53 27.3**	**+3.6**
THL				AML	AML	14 53 33.3	
	comp=E,447μm,0.7s						
THL				AML	AML	14 53 34.3	
	comp=N,856μm,0.8s						
THL	**Klokotos Trika**	**1.24**	**114**	P	**Pb**	**14 53 07.6**	**+0.2**
THL	**Klokotos Trika**	**1.24**	**114**	P	**Pn**	**14 53 07.0**	**-0.4**
THL				S	**Sg**	**14 53 25.5**	**+1.8**
THL	**Klokotos Trika**	**1.24**	**114**	P	**Pb**	**14 53 07.4**	**0.0**
THL				S	**Sg**	**14 53 25.5**	**+1.8**
LKD2	**Lefkada island**	**1.29**	**176**	P	**Pb**	**14 53 08.1**	**-0.3**
LKD2				S	**Sb**	**14 53 22.9**	**-2.2**
LKD2				AML	AML	14 53 33.8	
	comp=E,833μm,0.5s						
LKD2				AML	AML	14 53 34.8	
	comp=N,1241μm,0.7s						
LKD2	**Lefkada island**	**1.29**	**176**	P	**Pg**	**14 53 09.3**	**+0.7**
LKD2				S	**Sg**	**14 53 27.8**	**+2.4**
LKD2	**Lefkada island**	**1.29**	**176**	P	**Pg**	**14 53 09.3**	**+0.7**
LKD2				S	**Sg**	**14 53 27.8**	**+2.4**
TIR	**Tirane**	**1.37**	**338**	*i* PN	**Pg**	**14 53 11.6**	**+1.5**
KRUS	**Krusevo**	**1.39**	**22**	*e*Pn	**Pg**	**14 53 10.7**	**+0.2**
LIT	**Litokhoron**	**1.49**	**89**	P	**Pg**	**14 53 12.5**	**+0.2**
LIT	**Litokhoron**	**1.49**	**89**	P	**Pn**	**14 53 11.0**	**+0.2**
LIT	**Litokhoron**	**1.49**	**89**	P	**Pn**	**14 53 11.0**	**+0.2**
EVR	**Evrytania**	**1.52**	**140**	P	**Pb**	**14 53 12.1**	**-0.1**
EVR	**Evrytania**	**1.52**	**140**	P	**Pb**	**14 53 12.2**	**-0.1**
EVR	**Evrytania**	**1.52**	**140**	P	**Pn**	**14 53 11.5**	**+0.2**
EVR	**Evrytania**	**1.52**	**140**	P	**Pb**	**14 53 12.1**	**-0.1**
PDO	**Prodromos**	**1.56**	**162**	P	**Pb**	**14 53 12.8**	**-0.1**
PDO				S	**Sg**	**14 53 34.7**	**+0.8**
PDO	**Prodromos**	**1.56**	**162**	P	**Pb**	**14 53 12.8**	**-0.1**
PDO				S	**Sg**	**14 53 34.7**	**+0.8**
PHP	**Peshkopia**	**1.60**	**357**	P	**Pb**	**14 53 13.5**	**-0.2**
PHP	**Peshkopia**	**1.60**	**357**	*i* PN	**Pg**	**14 53 15.4**	**+0.8**
PHP				*i* SN	**Sg**	**14 53 41.6**	**+6.2**
PHP	**Peshkopia**	**1.60**	**357**	P	**Pb**	**14 53 13.5**	**-0.2**
PVO	**Paravola**	**1.65**	**152**	P	**Pb**	**14 53 14.3**	**-0.1**
PVO				S	**Sg**	**14 53 37.5**	**+0.8**
PVO	**Paravola**	**1.65**	**152**	P	**Pb**	**14 53 14.3**	**-0.1**
PVO				S	**Sg**	**14 53 37.5**	**+0.8**
GRG	**Griva**	**1.66**	**58**	P	**Pb**	**14 53 14.5**	**-0.2**
GRG	**Griva**	**1.66**	**58**	P	**Pn**	**14 53 13.8**	**+0.6**
GRG	**Griva**	**1.66**	**58**	P	**Pn**	**14 53 13.8**	**+0.6**
AGG	**Agios Georgios**	**1.73**	**127**	P	**Pn**	**14 53 13.8**	**-0.4**
AGG				S	**Sn**	**14 53 36.2**	**-0.3**
AGG				AML	AML	14 53 48.6	
	comp=N,1325μm,0.8s						
AGG				AML	AML	14 53 51.7	
	comp=E,604μm,0.7s						
AGG	**Agios Georgios**	**1.73**	**127**	P	**Pb**	**14 53 16.0**	**+0.1**
AGG	**Agios Georgios**	**1.73**	**127**	P	**Pb**	**14 53 16.0**	**+0.1**
ANX	**Ano Chora**	**1.83**	**144**	P	**Pb**	**14 53 16.7**	**-0.8**
ANX				S	**Sb**	**14 53 40.0**	**-0.5**
ANX	**Ano Chora**	**1.83**	**144**	P	**Pb**	**14 53 16.7**	**-0.8**
ANX				S	**Sb**	**14 53 40.0**	**-0.5**
PUK	**Puka**	**2.02**	**346**	*i* PN	**Pn**	**14 53 17.6**	**-0.7**
PUK				*i* SN	**Sg**	**14 53 51.8**	**+3.0**
PUK	**Puka**	**2.02**	**346**	*i* Pn	**Pn**	**14 53 17.6**	**-0.7**
	baz=345						
STIP	**Stip**	**2.03**	**37**	*e*Pn	**Pb**	**14 53 21.0**	**+0.1**
KNT	**Kendrikon**	**2.09**	**58**	P	**Pn**	**14 53 18.2**	**-0.9**
KNT	**Kendrikon**	**2.09**	**58**	P	**Pn**	**14 53 18.2**	**-0.9**
XOR	**Xorichti**	**2.16**	**108**	P	**Pn**	**14 53 21.1**	**+1.0**
XOR	**Xorichti**	**2.16**	**108**	P	**Pn**	**14 53 21.1**	**+1.0**

*IDC **08** 15:08:05.9±0.9, 2°.97N×126°.03E, h0km, mb3.7/6, mb1 3.8/7, mb1mx3.6/61, mbtmp3.8/7, ML3.9/1, Error ellipse: s-maj=78.3km s-min=16.4km az=62.0*
ISC 08 15:08:10.8±1.2, 3°.3N±0°.3×126°.7E±0°.3, h35km, n7, σ1§38/8, mb4.0/6, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.15**	**132**	Pn	**Pn**	**15 09 41.2**	**+2.0**
	2.4nm,0.3s,baz=198,slow=18,SNR=14						
SIJI				Sn	**Sn**	**15 10 46.2**	**-2.2**
	0.7nm,0.3s,baz=161,slow=20,SNR=2.9						
WRA	**Warramunga Arr**	**24.25**	**162**	P	**P**	**15 13 24.4**	**-0.4**
	0.7nm,0.6s,baz=336,slow=11,SNR=16						
ASAR	**Alice Springs**	**27.67**	**166**	P	**P**	**15 13 56.1**	**+0.5**
	0.1nm,0.3s,baz=347,slow=7.0,SNR=10						
STKA	**Stephens Creek**	**37.71**	**159**	P	**P**	**15 15 22.8**	**-0.4**
	1.9nm,0.9s,baz=329,slow=5.9,SNR=2.8						
MKAR	**Makanchi Array**	**57.91**	**325**	P	**P**	**15 17 59.1**	**-0.4**
	0.7nm,0.5s,baz=122,slow=7.9,SNR=8.8						
ZALV	**Zalesovo Beam**	**60.99**	**333**	P	**P**	**15 18 20.3**	**-0.2**
	0.5nm,0.3s,baz=112,slow=5.2,SNR=2.8						
KURBB	**Kurchatov Arra**	**62.11**	**328**	P	**P**	**15 18 27.6**	**-0.5**
	1.3nm,0.7s,baz=126,slow=6.2,SNR=11						

*DDA **08** 15:09:01.8, 38°.85N×26°.49E, h7km, Ml3.1*
*ATH **08** 15:09:01.3, 38°.87N×26°.54E, h26km±1km, ML2.4/4, Error ellipse: s-maj=3.3km s-min=1.2km az=262.0*
*ISK **08** 15:09:01.7, 38°.83N×26°.47E, h7km, ML3.0/17*
*CSEM **08** 15:09:02.5±0.1, 38°.83N×26°.46E, h10km, ML3.0, Error ellipse: s-maj=3.1km s-min=2.4km az=84.0*
*ISCJB **08** 15:09:02.2±0.3, 38°.84N±0°.01×26°.47E±0°.03, h7km±3km, Error ellipse: s-maj=3.4km s-min=2.4km az=167.4*
*THE **08** 15:09:02.7, 38°.83N×26°.41E, h11km±1km, ML2.3/7, Error ellipse: s-maj=2.2km s-min=0.7km az=263.0*
ISC 08 15:09:02.1±0.9, 38°.84N±0°.01×26°.48E±0°.02, h14km±7km, n83, σ0§64/139, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FOCM	**Fo˜§a**	**0.23**	**122**	PG	**Pg**	**15 09 06.8**	**-0.4**
FOCM	**Fo˜§a**	**0.23**	**122**	*e*Pg	**Pg**	**15 09 06.8**	**-0.4**
KRBN	**Karaburun**	**0.25**	**167**	PG	**Pg**	**15 09 07.5**	**0.0**
KRBN	**Karaburun**	**0.25**	**167**	*e*Pg	**Pg**	**15 09 07.5**	**0.0**
CAND	**Candarli**	**0.28**	**65**	PG	**Pg**	**15 09 08.1**	**+0.1**
DKL	**Dikili**	**0.41**	**55**	PG	**Pg**	**15 09 10.5**	**+0.3**
DKL				SG	**Sg**	**15 09 16.2**	**+0.4**
DKL	**Dikili**	**0.41**	**55**	*e*Pg	**Pg**	**15 09 10.5**	**+0.3**
DKL				*e*Sg	**Sg**	**15 09 16.2**	**+0.4**
PRK	**Paraskevi**	**0.44**	**338**	P	**Pb**	**15 09 11.3**	**-0.3**
PRK				S	**Sg**	**15 09 17.1**	**+0.3**
PRK				AML	AML	15 09 19.8	
	comp=E,1098μm,0.5s						
PRK				AML	AML	15 09 21.6	
	comp=N,894μm,0.6s						
PRK	**Paraskevi**	**0.44**	**338**	P	**Pg**	**15 09 10.9**	**+0.1**
PRK				S	**Sg**	**15 09 17.3**	**+0.5**
PRK	**Paraskevi**	**0.44**	**338**	P	**Pg**	**15 09 11.0**	**+0.1**
PRK				S	**Sg**	**15 09 17.3**	**+0.5**
URLA	**Izmir**	**0.49**	**169**	PG	**Pg**	**15 09 10.6**	**-1.1**
URLA				SG	**Sb**	**15 09 18.8**	**-0.6**
URLA	**Izmir**	**0.49**	**169**	*i* P	**Pg**	**15 09 10.8**	**-0.9**
URLA				*i* S	**Sg**	**15 09 18.2**	**0.0**
URLA	**Izmir**	**0.49**	**169**	P	**Pg**	**15 09 10.8**	**-0.9**
URLA				S	**Sg**	**15 09 18.2**	**0.0**
AYVA	**Ayvalik**	**0.50**	**19**	*i* P	**Pg**	**15 09 11.8**	**-0.2**
AYVA				*i* S	**Sg**	**15 09 18.3**	**-0.3**
AYVA	**Ayvalik**	**0.50**	**19**	P	**Pg**	**15 09 11.8**	**-0.2**
AYVA				S	**Sg**	**15 09 18.3**	**-0.3**
CHOS	**Chios island**	**0.56**	**217**	PG	**Pg**	**15 09 13.0**	**-0.1**
CHOS				SG	**Sg**	**15 09 20.7**	**+0.1**
CHOS	**Chios island**	**0.56**	**217**	P	**Pg**	**15 09 13.0**	**-0.1**
CHOS				S	**Sb**	**15 09 22.0**	**+0.4**
CHOS	**Chios island**	**0.56**	**217**	P	**Pb**	**15 09 13.4**	**-0.3**
CHOS				S	**Sg**	**15 09 20.1**	**-0.5**
CHOS	**Chios island**	**0.56**	**217**	*e*Pg	**Pg**	**15 09 13.0**	**-0.1**
CHOS	**Chios island**	**0.56**	**217**	P	**Pb**	**15 09 13.4**	**-0.3**
CHOS				S	**Sg**	**15 09 20.1**	**-0.5**
ZEY	**˜zmir**	**0.60**	**178**	*i* P	**Pg**	**15 09 13.5**	**-0.3**
ZEY				*i* S	**Sb**	**15 09 24.1**	**+1.4**
SIGR	**SIGRI**	**0.61**	**308**	PG	**Pb**	**15 09 14.4**	**-0.2**
SIGR				SG	**Sb**	**15 09 22.9**	**-0.1**
SIGR	**SIGRI**	**0.61**	**308**	P	**Pb**	**15 09 14.6**	**0.0**
SIGR				S	**Sg**	**15 09 21.8**	**-0.4**
SIGR				AML	AML	15 09 23.0	
	comp=E,510μm,0.5s						
SIGR				AML	AML	15 09 23.2	
	comp=N,426μm,0.3s						
SIGR	**SIGRI**	**0.61**	**308**	P	**Pb**	**15 09 14.2**	**-0.3**
SIGR				S	**Sg**	**15 09 22.2**	**0.0**
SIGR	**SIGRI**	**0.61**	**308**	P	**Pb**	**15 09 14.3**	**-0.3**
SIGR				S	**Sb**	**15 09 22.6**	**-0.4**
PSRA	**Psara**	**0.78**	**248**	P	**Pn**	**15 09 18.2**	**-0.3**
PSRA				S	**Sb**	**15 09 28.9**	**+1.2**
PSRA	**Psara**	**0.78**	**248**	P	**Pb**	**15 09 17.9**	**+0.6**
PSRA				S	**Sn**	**15 09 29.2**	**-0.8**
DGB	**˜zmir**	**0.85**	**158**	*i* P	**Pg**	**15 09 18.1**	**-0.4**
DGB				*i* S	**Sb**	**15 09 29.9**	**+0.2**
BAYC	**CANAKKALE_Bayr**	**0.90**	**3**	*i* P	**Pg**	**15 09 19.0**	**-0.6**
BAYC				*i* S	**Sb**	**15 09 32.5**	**+1.1**
BAYC	**CANAKKALE_Bayr**	**0.90**	**3**	P	**Pg**	**15 09 19.0**	**-0.6**
BAYC				S	**Sb**	**15 09 32.5**	**+1.1**
EZN	**Ezine**	**0.99**	**353**	PG	**Pn**	**15 09 21.9**	**+0.3**
EZN				SG	**Sn**	**15 09 36.3**	**+0.9**
EZN	**Ezine**	**0.99**	**353**	*e*Pg	**Pn**	**15 09 21.9**	**+0.3**
EZN				*e*Sg	**Sn**	**15 09 36.3**	**+0.9**
AKHS	**Akhisar**	**1.04**	**87**	*i* P	**Pn**	**15 09 22.4**	**+0.1**
AKHS				*i* S	**Sn**	**15 09 37.2**	**+0.6**
AKHS	**Akhisar**	**1.04**	**87**	P	**Pn**	**15 09 22.4**	**+0.1**
AKHS				S	**Sn**	**15 09 37.2**	**+0.6**
BOZC	**Bozcaada**	**1.06**	**342**	*i* P	**Pn**	**15 09 22.8**	**+0.3**
BOZC				*i* S	**Sb**	**15 09 36.3**	**+0.5**
STEP	**BALIKESIR_Sava**	**1.10**	**60**	*i* P	**Pg**	**15 09 23.2**	**-0.2**
STEP				*i* S	**Sn**	**15 09 38.3**	**+0.1**
STEP	**BALIKESIR_Sava**	**1.10**	**60**	P	**Pg**	**15 09 23.2**	**-0.2**
STEP				S	**Sn**	**15 09 38.3**	**+0.1**
SMG	**Samos**	**1.16**	**166**	P	**Pb**	**15 09 23.9**	**0.0**
SMG				S	**Sn**	**15 09 41.5**	**+2.0**
SMG				AML	AML	15 09 42.5	
	comp=N,654μm,0.5s						
SMG				AML	AML	15 09 43.8	
	comp=E,731μm,0.3s						
SMG	**Samos**	**1.16**	**166**	P	**Pb**	**15 09 23.9**	**0.0**
SMG				S	**Sn**	**15 09 40.1**	**+0.5**
SMG	**Samos**	**1.16**	**166**	P	**Pb**	**15 09 23.9**	**0.0**
SMG				S	**Sn**	**15 09 40.1**	**+0.5**
BALY	**Balya**	**1.26**	**44**	*i* P	**Pn**	**15 09 24.0**	**-1.4**
BALY				*i* S	**Sb**	**15 09 40.8**	**-1.0**
BALY	**Balya**	**1.26**	**44**	P	**Pn**	**15 09 24.0**	**-1.4**
BALY				S	**Sb**	**15 09 40.8**	**-1.0**
AYDB	**Zeytinkoy-Aydi**	**1.42**	**128**	PN	**Pb**	**15 09 28.6**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**1.42**	**128**	*e*Pn	**Pb**	**15 09 28.6**	**+0.2**
GADA	**Gvkgeada**	**1.42**	**342**	PN	**Pb**	**15 09 28.2**	**-0.2**
GADA	**Gvkgeada**	**1.42**	**342**	*e*Pn	**Pb**	**15 09 28.2**	**-0.2**
LIA	**Limnos Island**	**1.46**	**317**	P	**Pn**	**15 09 28.0**	**0.0**
LIA				AML	AML	15 09 49.6	
	comp=N,159μm,0.4s						
LIA				S	**Sg**	**15 09 49.6**	**+0.5**
LIA				AML	AML	15 09 50.1	
	comp=E,230μm,0.4s						
LIA	**Limnos Island**	**1.46**	**317**	P	**Pn**	**15 09 28.0**	**0.0**
LIA				S	**Sn**	**15 09 47.1**	**+0.2**
LIA	**Limnos Island**	**1.46**	**317**	P	**Pn**	**15 09 28.1**	**0.0**
LIA				S	**Sn**	**15 09 47.1**	**+0.2**
GONE	**Gonen-Balikesi**	**1.53**	**37**	PN	**Pb**	**15 09 30.2**	**+0.1**
GONE	**Gonen-Balikesi**	**1.53**	**37**	*e*Pn	**Pb**	**15 09 30.2**	**+0.1**
LPK	**Lapseki**	**1.55**	**8**	PN	**Pb**	**15 09 30.3**	**-0.2**
LPK	**Lapseki**	**1.55**	**8**	*e*Pn	**Pb**	**15 09 30.3**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.56**	**360**	PN	**Pb**	**15 09 30.6**	**-0.1**
GELI	**Tayfur-Gelibol**	**1.56**	**360**	*e*Pn	**Pb**	**15 09 30.6**	**-0.1**
AYDN	**Tasoluk**	**1.61**	**136**	*i* P	**Pg**	**15 09 32.5**	**-0.6**
AYDN				*i* S	**Sn**

*ISCJB **08** 15:26:55.8±0.4, 40°.84N±0°.03×27°.85E±0°.03, h5km±5km, Error ellipse: s-maj=4.9km s-min=3.9km az=162.9*
*ISK **08** 15:26:55.5, 40°.82N×27°.87E, h14km, ML2.1/11*
*DDA **08** 15:26:55.9, 40°.82N×27°.82E, h7km, Ml2.6*
*CSEM **08** 15:26:56.0±0.1, 40°.84N×27°.85E, h10km, ML2.1, Error ellipse: s-maj=3.9km s-min=2.6km az=158.0*
ISC 08 15:26:56.2±0.8, 40°.83N±0°.02×27°.83E±0°.02, h13km±6km, n42, σ0§63/62, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBT3	**Marmara-Eregli**	**0.12**	**61**	PG	**Pg**	**15 26 58.9**	**-0.4**
SBT3				SG	**Sg**	**15 27 01.9**	**+0.4**
SBT3	**Marmara-Eregli**	**0.12**	**61**	*e*Pg	**Pg**	**15 26 58.9**	**-0.4**
SBT3				*e*Sg	**Sg**	**15 27 01.9**	**+0.4**
EDC	**Edincik**	**0.48**	**177**	PG	**Pg**	**15 27 05.3**	**-0.3**
EDC				SG	**Sg**	**15 27 12.3**	**+0.3**
EDC	**Edincik**	**0.48**	**177**	*e*Pg	**Pg**	**15 27 05.3**	**-0.3**
EDC				*e*Sg	**Sg**	**15 27 12.3**	**+0.3**
SLVT	**Silivri**	**0.49**	**35**	PG	**Pg**	**15 27 05.5**	**-0.4**
SLVT				SG	**Sg**	**15 27 12.0**	**-0.5**
SLVT	**Silivri**	**0.49**	**35**	*e*Pg	**Pg**	**15 27 05.5**	**-0.4**
SLVT				*e*Sg	**Sg**	**15 27 12.0**	**-0.5**
SART	**Tekirdag**	**0.52**	**255**	*i* P	**Pg**	**15 27 04.6**	**-1.7**
SART				*i* S	**Sg**	**15 27 13.4**	**+0.2**
SART	**Tekirdag**	**0.52**	**255**	P	**Pg**	**15 27 04.6**	**-1.7**
SART				S	**Sg**	**15 27 13.4**	**+0.2**
RKY	**Sarkoy-Tekirda**	**0.52**	**255**	PG	**Pb**	**15 27 06.8**	**-0.3**
RKY				SG	**Sb**	**15 27 14.6**	**+0.1**
RKY	**Sarkoy-Tekirda**	**0.52**	**255**	*e*Pg	**Pb**	**15 27 06.8**	**-0.3**
RKY				*e*Sg	**Sb**	**15 27 14.6**	**+0.1**
KRBG	**Karabiga-Canak**	**0.59**	**224**	PG	**Pb**	**15 27 08.6**	**+0.2**
KRBG	**Karabiga-Canak**	**0.59**	**224**	*e*Pg	**Pb**	**15 27 08.6**	**+0.2**
CTKS	**Kestanelik-??a**	**0.65**	**51**	PG	**Pg**	**15 27 08.4**	**-0.5**
CTKS	**Kestanelik-??a**	**0.65**	**51**	*e*Pg	**Pg**	**15 27 08.4**	**-0.5**
KCTX	**Karacabey (Bur**	**0.69**	**144**	PG	**Pg**	**15 27 08.6**	**-0.9**
KCTX	**Karacabey (Bur**	**0.69**	**144**	*e*Pg	**Pg**	**15 27 08.6**	**-0.9**
SBT5	**Esenkoy-Cinarc**	**0.82**	**103**	PG	**Pg**	**15 27 11.1**	**-0.9**
SBT5	**Esenkoy-Cinarc**	**0.82**	**103**	*e*Pg	**Pg**	**15 27 11.1**	**-0.9**
ARMT	**Armutlu**	**0.82**	**108**	PG	**Pg**	**15 27 11.5**	**-0.6**
ARMT	**Armutlu**	**0.82**	**108**	*e*Pg	**Pg**	**15 27 11.5**	**-0.6**
KESN	**Edirne-Kesan**	**0.88**	**270**	*i* P	**Pg**	**15 27 13.0**	**-0.2**
KESN				*i* S	**Sb**	**15 27 26.2**	**+1.0**
KESN	**Edirne-Kesan**	**0.88**	**270**	P	**Pg**	**15 27 13.0**	**-0.2**
KESN				S	**Sb**	**15 27 26.2**	**+1.0**
ISK	**Istanbul-Kandi**	**0.96**	**75**	PG	**Pg**	**15 27 13.6**	**-1.1**
ISK	**Istanbul-Kandi**	**0.96**	**75**	*e*Pg	**Pg**	**15 27 13.6**	**-1.1**
KLYT	**Kilyos**	**1.01**	**65**	PG	**Pg**	**15 27 14.9**	**-0.7**
KLYT	**Kilyos**	**1.01**	**65**	*e*Pg	**Pg**	**15 27 14.9**	**-0.7**
ERIK	**Erikli-Kesan**	**1.01**	**262**	PG	**Pb**	**15 27 15.9**	**+0.3**
ERIK	**Erikli-Kesan**	**1.01**	**262**	*e*Pg	**Pb**	**15 27 15.9**	**+0.3**
BALY	**Balya**	**1.10**	**189**	*i* P	**Pg**	**15 27 16.4**	**-0.9**
BALY				*i* S	**Sn**	**15 27 32.0**	**-0.3**
BALY	**Balya**	**1.10**	**189**	P	**Pg**	**15 27 16.4**	**-0.9**
BALY				S	**Sn**	**15 27 32.0**	**-0.3**
GELI	**Tayfur-Gelibol**	**1.12**	**248**	PN	**Pb**	**15 27 17.2**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.12**	**248**	*e*Pn	**Pb**	**15 27 17.2**	**-0.2**
DURS	**Dursunbey**	**1.32**	**158**	*i* P	**Pg**	**15 27 21.7**	**+0.2**
DURS				*i* S	**Sg**	**15 27 38.9**	**+0.2**
DURS	**Dursunbey**	**1.32**	**158**	P	**Pg**	**15 27 21.7**	**+0.2**
DURS				S	**Sg**	**15 27 38.9**	**+0.2**
ALN	**Alexandroupoli**	**1.36**	**274**	PN	**Pb**	**15 27 21.7**	**+0.3**
ALN	**Alexandroupoli**	**1.36**	**274**	*e*Pn	**Pb**	**15 27 21.7**	**+0.3**
STEP	**BALIKESIR_Sava**	**1.45**	**184**	*i* P	**Pg**	**15 27 23.7**	**-0.3**
STEP				*i* S	**Sg**	**15 27 42.2**	**-0.7**
STEP	**BALIKESIR_Sava**	**1.45**	**184**	P	**Pg**	**15 27 23.7**	**-0.3**
STEP				S	**Sg**	**15 27 42.2**	**-0.7**
BAYC	**CANAKKALE_Bayr**	**1.46**	**223**	*i* P	**Pb**	**15 27 23.4**	**+0.1**
BAYC				*i* S	**Sg**	**15 27 43.1**	**-0.2**
BAYC	**CANAKKALE_Bayr**	**1.46**	**223**	P	**Pb**	**15 27 23.4**	**+0.1**
BAYC				S	**Sg**	**15 27 43.1**	**-0.2**
RDO	**Rodhopi**	**1.77**	**281**	PN	**Pn**	**15 27 26.9**	**+0.5**
RDO	**Rodhopi**	**1.77**	**281**	*e*Pn	**Pn**	**15 27 26.9**	**+0.5**

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*IDC **08** 15:31:03.0±1.7, 0°.79S×133°.25E, h0km, mb3.5/2, mb1 3.7/3, mb1mx3.4/54, mbtmp3.5/3, ML3.6/1, Error ellipse: s-maj=28.0km s-min=17.5km az=15.0*
*ISCJB **08** 15:31:08.6±0.9, 0°.79S±0°.08×133°.18E±0°.05, h33km, mb3.5/2, Error ellipse: s-maj=11.6km s-min=6.8km az=4.9*
*DJA **08** 15:31:08.3±0.3, 1°.S±4°×13°.3E±°, h10km, M3.7/5, MLv3.7/5*
ISC 08 15:31:09.4±1.2, 0°.83S±0°.09×133°.21E±0°.05, h35km, n12, σ1§46/14, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**1.18**	**125**	P	**Pn**	**15 31 30.1**	**+0.6**
RKPI				S	**Sn**	**15 31 44.8**	**+0.5**
SIJI	**Sorong**	**1.94**	**269**	Pg	**Pn**	**15 31 40.0**	**+0.1**
	61nm,0.3s,baz=258,slow=4.4,SNR=436						
SIJI				Lg	Lg	15 32 05.6	
	62nm,0.3s,baz=219,slow=23,SNR=19						
FAKI	**Fak Fak**	**2.28**	**205**	P	**Pn**	**15 31 46.1**	**+1.4**
FAKI				S	**Sn**	**15 32 12.9**	**+1.3**
KMPI	**Kaimana, Papua**	**2.85**	**170**	P	**Pn**	**15 31 52.8**	**+0.3**
BAKI	**Biak**	**2.92**	**97**	P	**Pn**	**15 31 55.3**	**+1.9**
SRPI	**Serui, Papua**	**3.20**	**109**	P	**Pn**	**15 31 58.5**	**+1.2**
MSAI	**Masohi**	**4.95**	**240**	P	**Pn**	**15 32 22.8**	**+1.4**
LBMI	**Labuha**	**5.71**	**272**	P	**Pn**	**15 32 34.2**	**+2.4**
AAI	**Ambon**	**5.75**	**240**	P	**Pn**	**15 32 32.8**	**+0.4**
WRA	**Warramunga Arr**	**19.02**	**177**	P	**P**	**15 35 26.7**	**-1.8**
	0.2nm,0.3s,baz=355,slow=11,SNR=7.4						
ASAR	**Alice Springs**	**22.71**	**178**	P	**P**	**15 36 07.3**	**-1.1**
	1.2nm,0.4s,baz=358,slow=12,SNR=36						
MKAR	**Makanchi Array**	**65.00**	**324**	P	**P**	**15 41 44.7**	**-1.3**
	0.2nm,0.5s,baz=129,slow=7.2,SNR=3.2						

IDC 08 15:32:59.0±6.8, 7°.31S×121°.91E, h485km±20km, mb3.0/1, mb1 2.8/4, mb1mx2.5/59, mbtmp3.5/4, Error ellipse: s-maj=181.9km s-min=91.6km az=52.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**3.36**	**149**	P	P	15 34 11.6	+0.2
	2.7nm,0.3s,baz=272,slow=19,SNR=2.6						
BATI				S	S	15 35 10.6	+0.3
	4.5nm,0.3s,baz=297,slow=17,SNR=2.1						
WRA	**Warramunga Arr**	**17.41**	**137**	P	P	15 36 34.1	-0.4
	0.1nm,0.3s,baz=316,slow=11,SNR=4.8						
ASAR	**Alice Springs**	**19.93**	**146**	P	P	15 36 57.9	0.0
	0.1nm,0.3s,baz=322,slow=8.8,SNR=4.3						
STKA	**Stephens Creek**	**30.56**	**146**	P	P	15 38 32.2	+0.1
	1.5nm,0.8s,baz=329,slow=12,SNR=3.9						

MEX 08 16:04:37.8±0.7, 15°.19N×93°.01W, h136km±20km, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.55**	**339**	*e*P	Pn	16 04 56.6	-1.2
PCIG				*i* S	Sn	16 05 11.0	-2.0
CCIG	**Comitan**	**1.38**	**38**	*e*P	Pn	16 05 12.6	+7.4
CCIG				*e*S	Sn	16 05 42.8	+17
TGIG		**1.58**	**356**	*e*P	Pn	16 05 05.6	-1.7

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*BJI **08** 16:15:08.7, 29°.67N×50°.11E, h32km, mb5.0/63, mB5.1/40, Ms4.8/50, Ms7 4.5/49*
*GII **08** 16:15:10.6±0.0, 29°.78N×50°.75E, h12km*
*MOS **08** 16:15:11.1±1.4, 29°.77N×50°.77E, h16km, mb5.1/87, MS4.4/21, Error ellipse: s-maj=4.9km s-min=3.2km az=106.4*
*ISN **08** 16:15:12.0±0.8, 29°.64N×50°.66E, h0km±105km, ML4.8*
*DSN **08** 16:15:12.3±0.5, 29°.74N×50°.65E, h10km, mb5.2/4, ML5.0/11, Error ellipse: s-maj=9.2km s-min=5.1km az=57.0*
*ISCJB **08** 16:15:13.4±0.3, 29°.71N±0°.02×50°.70E±0°.02, h35km±2km, mb4.9/191, MS4.3/67, Error ellipse: s-maj=2.9km s-min=2.0km az=26.0*
*IDC **08** 16:15:14.8±1.9, 29°.78N×50°.74E, h33km±14km, mb4.5/42, mb1 4.5/49, mb1mx4.4/66, mbtmp4.6/49, ML4.1/6, MS4.2/46, Ms1 4.2/46, ms1mx4.1/63, Error ellipse: s-maj=10.0km s-min=8.6km az=162.0*
*TEH **08** 16:15:14.8, 29°.78N×50°.71E, h15km, ML4.8*
*NEIC **08** 16:15:14.8±0.0, 29°.78N×50°.71E, h15km, mb5.0/60, MN4.8(TEH), After TEH.*

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*GCMT **08** 16:15:14.8±0.2, 29°.69N×50°.62E, h13km, MW5.0/93, Moment Tensor Solution. s41,c63; s93,c144; Duration: 0 Moment tensor: Scale 10^16Nm; M_{rr}3.31±.14; $M_{\theta\theta}$-1.52±.11; $M_{\phi\phi}$-1.80±.10; $M_{r\theta}$0.70±.26; $M_{\theta\phi}$2.06±.07; $M_{\phi r}$-0.87±.23; Best double couple: $M_0$3.69100×10^16 NP1:φs139.00000°, δ54.00000°, λ92.00000°. NP2: φs315.00000°, δ36.00000°, λ87.00000°. Principal axes: T 3.4840, Plg81.0000°, Azm57.0000°; N 0.4020, Plg2.0000°, Azm317.0000°; P -3.8970, Plg9.0000°, Azm227.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*THR **08** 16:15:15.0±0.6, 29°.79N×50°.77E, h46km±4km, ML4.8*
*CSEM **08** 16:15:15.8±0.1, 29°.77N×50°.74E, h40km, mb4.9/99, Error ellipse: s-maj=3.8km s-min=2.7km az=33.0*
*OMAN **08** 16:15:18.5±1.0, 29°.78N×50°.98E, h35km, Error ellipse: s-maj=22.1km s-min=6.2km az=55.0*
ISC 08 16:15:14.0±0.7, 29°.73N±0°.03×50°.72E±0°.02, h26km±4km, n741, σ1§80/807, mb4.9/197, MS4.3/68, 33C-15D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKAZ	**Kazeroun**	**0.98**	**87**	*e*Pg	**Pb**	**16 15 32.8**	**+0.3**
IKAZ				*e*Sg	**Sn**	**16 15 45.7**	**+0.1**
IKAZ				*e*		16 15 49.7	
	comp=Z,2μm,0.5s						
IKAZ	**Kazeroun**	**0.98**	**87**	*e*Pg	**Pn**	**16 15 29.4**	**-3.0**
AHBU	**AHRAM**	**1.00**	**149**	*e*Pg	**Pb**	**16 15 34.7**	**+2.1**
AHBU				*e*Sg	**Sn**	**16 15 49.1**	**+3.5**
SHI	**Shiraz**	**1.57**	**93**	*e*Pn	**Pb**	**16 15 41.8**	**-0.6**
SHI				*e*Sg	**Sb**	**16 16 04.8**	**+2.9**
SHI				*e*		16 16 08.8	
	comp=Z,49μm,0.4s						
IPAR	**Pars**	**2.03**	**86**	*e*Pn	**Pb**	**16 15 49.5**	**-0.9**
IPAR				*e*		16 16 29.5	
	comp=Z,96μm,0.4s						
IPAR	**Pars**	**2.03**	**86**	*e*Pn	**Pb**	**16 15 49.4**	**-0.9**
IBRJ	**Brojen**	**2.22**	**12**	*e*Pn	**Pn**	**16 15 50.1**	**+0.7**
IBRJ				*e*		16 16 34.4	
	comp=Z,40μm,0.3s						
ZNGN	**Zangian**	**2.38**	**3**	*e*Pn	**Pn**	**16 15 52.7**	**+1.0**
ZNGN				*e*		16 16 33.6	
	comp=Z,99nm,0.4s						
ZNGN	**Zangian**	**2.38**	**3**	*e*Pn	**Pn**	**16 15 52.6**	**+0.9**
GHIR	**Ghir-Karzin**	**2.45**	**125**	*e*Pn	**Pn**	**16 15 53.6**	**+1.1**
GHIR				*e*Sg	**Sb**	**16 16 31.1**	**+3.7**
GHIR				AML	AML	16 16 45.0	
	comp=E,4μm,0.6s						
GHIR				AML	AML	16 17 01.6	
	comp=N,4μm,0.5s						
GHIR	**Ghir-Karzin**	**2.45**	**125**	*e*Pn	**Pn**	**16 15 53.6**	**+1.1**
IRAM	**Ramesheh**	**2.52**	**34**	*e*Pn	**Pn**	**16 15 54.5**	**+1.0**
IRAM				*e*		16 16 02.8	
	comp=Z,40μm,0.3s						
IRAM	**Ramesheh**	**2.52**	**34**	*e*Pn	**Pn**	**16 15 54.3**	**+0.8**
ROKH	**ROKH**	**2.62**	**6**	*e*Pn	**Pn**	**16 15 55.7**	**+0.8**
ROKH				*e*		16 16 44.0	
	comp=Z,99nm,0.6s						
ROKH	**ROKH**	**2.62**	**6**	*e*Pn	**Pn**	**16 15 55.5**	**+0.6**
KFJS		**2.88**	**238**	P	**Pn**	**16 16 00.5**	**+2.4**
SHGR	**Shooshtar-Gavs**	**2.89**	**326**	*e*Pn	**Pn**	**16 15 59.2**	**+0.9**
SHGR				*e*Sg	**Sb**	**16 16 42.7**	**+3.0**
SHGR				AML	AML	16 16 55.6	
	comp=E,3μm,0.7s						
SHGR				AML	AML	16 16 57.2	
	comp=N,3μm,0.6s						
SHGR	**Shooshtar-Gavs**	**2.89**	**326**	*e*Pn	**Sb**	**16 16 41.8**	**+2.1**
IGAR	**Gharneh**	**2.90**	**23**	*e*Pn	**Pn**	**16 16 00.3**	**+1.6**
IGAR				*e*		16 16 10.1	
	comp=Z,16μm,0.1s						
IPIR	**Pirpir**	**2.95**	**3**	*e*Pn	**Pn**	**16 16 00.7**	**+1.2**
IPIR				*e*		16 16 47.4	
	comp=Z,22μm,0.3s						
IPIR	**Pirpir**	**2.95**	**3**	*e*Pn	**Pn**	**16 16 00.7**	**+1.2**
ISAD	**Sadrabad**	**3.36**	**49**	*e*		16 16 23.8	
	comp=Z,20μm,0.4s						
ISAD				*e*Pn	**Pn**	**16 16 06.2**	**+1.1**
IZEF	**Zefreh**	**3.45**	**23**	*e*		16 16 12.2	
	comp=Z,9μm,0.1s						
IZEF				*e*Pn	**Pn**	**16 16 06.8**	**+0.5**
IKLH	**Kolahrood**	**3.66**	**11**	*e*Pn	**Pn**	**16 16 10.5**	**+1.4**
IKLH				*e*		16 16 12.5	
	comp=Z,11μm,0.1s						
IKLH	**Kolahrood**	**3.66**	**11**	*e*Pn	**Pn**	**16 16 09.6**	**+0.5**
IMEH	**Mehriz**	**3.75**	**63**	*e*Pn	**Pn**	**16 16 11.5**	**+1.1**
IMEH				*e*		16 17 21.6	
	comp=Z,24μm,0.7s						
IMEH	**Mehriz**	**3.75**	**63**	*e*Pn	**Pn**	**16 16 11.4**	**+1.1**
BOQSS		**4.02**	**197**	P	**Pn**	**16 16 17.2**	**+3.2**
ICHK	**Chekchek**	**4.04**	**51**	*e*Pn	**Pn**	**16 16 15.1**	**+0.7**
ICHK				*e*		16 17 12.2	
	comp=Z,13μm,0.6s						
ICHK	**Chekchek**	**4.04**	**51**	*e*Pn	**Pn**	**16 16 14.9**	**+0.5**
KHMZ	**Khomeyn**	**4.05**	**351**	*e*Pn	**Pn**	**16 16 15.2**	**+0.7**
KHMZ	**Khomeyn**	**4.05**	**351**	*e*Pn	**Pn**	**16 16 15.2**	**+0.7**
QAM	**Ghamsar**	**4.07**	**9**	*e*Pn	**Pn**	**16 16 15.7**	**+1.0**
QAM				*e*		16 16 23.7	
	comp=Z,16μm,0.1s						
NSR	**Nassriya**	**4.16**	**289**	*e*Pn	**Pn**	**16 16 18.0**	**+2.3**
	SNR=4.0						
NSR				*e*Sn	**Sn**	**16 17 05.5**	**+2.0**
	SNR=4.0						
ANAR	**Anarak**	**4.30**	**36**	*e*Pn	**Pn**	**16 16 18.4**	**+0.5**
SLWS		**4.91**	**181**	P	**Pn**	**16 16 29.3**	**+3.1**
KHGB	**Koh Gabri**	**5.04**	**81**	*e*Pn	**Pn**	**16 16 30.0**	**+1.9**
KHGB				*e*		16 16 50.3	
	comp=Z,99nm,0.7s						
KHGB	**Koh Gabri**	**5.04**	**81**	*e*Pn	**Pn**	**16 16 29.2**	**+1.1**
IKOM	**Komasi**	**5.20**	**329**	*e*Pn	**Pn**	**16 16 31.6**	**+1.3**
IKOM				*e*		16 18 52.9	
	comp=Z,99nm,0.8s						
IKOM	**Komasi**	**5.20**	**329**	*e*Pn	**Pn**	**16 16 30.9**	**+0.6**
NGRK	**Negar Kerman**	**5.23**	**89**	*e*Pn	**Pn**	**16 16 33.5**	**+2.6**
NGRK				*e*		16 18 16.6	
	comp=Z,99nm,0.8s						
NGRK	**Negar Kerman**	**5.23**	**89**	*e*Pn	**Pn**	**16 16 32.4**	**+1.5**
KCHF	**Cheshme Sefid,**	**5.50**	**326**	*e*Pn	**Pn**	**16 16 34.6**	**+0.1**
KCHF				*e*		16 18 56.2	
	comp=Z,99nm,0.6s						
KCHF	**Cheshme Sefid,**	**5.50**	**326**	*e*Pn	**Pn**	**16 16 35.1**	**+0.6**
IBND	**Bandar-abas**	**5.60**	**113**	*e*Pn	**Pn**	**16 16 36.8**	**+1.2**
IBND				*e*		16 17 57.4	
	comp=Z,16μm,0.3s						
IBND	**Bandar-abas**	**5.60**	**113**	*e*Pn	**Pn**	**16 16 37.2**	**+1.6**
BTHS		**5.66**	**179**	P	**Pn**	**16 16 39.1**	**+2.6**
IVIS	**Veis**	**5.80**	**327**	*e*Pn	**Pn**	**16 16 39.1**	**+0.6**
IVIS				*e*		16 17 58.8	
	comp=Z,3μm,0.3s						
IVIS	**Veis**	**5.80**	**327**	*e*Pn	**Pn**	**16 16 39.1**	**+0.6**
CHMN	**Cheshme madani**	**5.93**	**87**	*e*Pn	**Pn**	**16 16 42.4**	**+1.9**
CHMN				*e*		16 19 13.9	
	comp=Z,99nm,1.8s						
CHMN	**Cheshme madani**	**5.93**	**87**	*e*Pn	**Pn**	**16 16 42.4**	**+1.9**
DAMV	**Damavand**	**5.98**	**10**	*e*Pn	**Pn**	**16 16 41.3**	**+0.2**
DAMV	**Damavand**	**5.98**	**10**	*e*Pn	**Pn**	**16 16 41.3**	**+0.2**
ASYS		**6.03**	**250**	P	**Pn**	**16 16 41.2**	**-0.4**
SHME	**Shamm**	**6.04**	**126**	*i* P	**Pn**	**16 16 42.1**	**+0.4**
	SNR=18						
SHME	**Shamm**	**6.04**	**126**	Pn	**Pn**	**16 16 42.5**	**+0.8**
	SNR=18						
ILIN	**Lien**	**6.07**	**329**	*e*Pn	**Pn**	**16 16 42.5**	**+0.1**
ILIN				*e*		16 18 03.8	
	comp=Z,6μm,0.4s						
ILIN	**Lien**	**6.07**	**329**	*e*Pn	**Pn**	**16 16 42.4**	**+0.1**
BANOM	**Banah**	**6.23**	**126**	Pn	**Pn**	**16 16 44.7**	**+0.4**
	SNR=58						
BANOM				Sn	**Sn**	**16 17 56.1**	**+1.3**
BANOM	**Banah**	**6.23**	**126**	P	**Pn**	**16 16 44.7**	**+0.4**
	SNR=58						
BANOM				S	**Sn**	**16 17 56.1**	**+1.3**
BANOM	**Banah**	**6.23**	**126**	*i* P	**Pn**	**16 16 44.9**	**+0.6**
	SNR=58						
BANOM	**Banah**	**6.23**	**126**	P	**Pn**	**16 16 44.9**	**+0.6**
	SNR=58						
AJN	**Ajban**	**6.40**	**143**	*i* P	**Pn**	**16 16 47.7**	**+1.1**
	SNR=12						
NAZ	**Nazwa, Dubai**	**6.45**	**136**	Pn	**Pn**	**16 16 49.0**	**+1.6**
	SNR=32						
NAZ				Sn	**Sn**	**16 18 01.9**	**+1.7**
NAZ	**Nazwa, Dubai**	**6.45**	**136**	P	**Pn**	**16 16 49.0**	**+1.6**
	SNR=32						
NAZ				S	**Sn**	**16 18 01.9**	**+1.7**
NAZ	**Nazwa, Dubai**	**6.45**	**136**	*i* P	**Pn**	**16 16 48.2**	**+0.8**
	SNR=36						
NAZ	**Nazwa, Dubai**	**6.45**	**136**	*e*Pn	**Pn**	**16 16 48.3**	**+1.0**
MSFE	**Esma-Masafi**	**6.50**	**131**	*i* P	**Pn**	**16 16 48.0**	**-0.1**
	SNR=22						
MSFE	**Esma-Masafi**	**6.50**	**131**	*e*Pn	**Pn**	**16 16 47.9**	**-0.2**
MSFE	**Esma-Masafi**	**6.50**	**131**	P	**Pn**	**16 16 48.6**	**+0.5**
	SNR=22						
ASUD	**Al Ashush, Dub**	**6.53**	**140**	Pn	**Pn**	**16 16 50.0**	**+1.5**
	SNR=78						
ASUD	**Al Ashush, Dub**	**6.53**	**140**	P	**Pn**	**16 16 50.0**	**+1.5**
	SNR=78						
ASUD	**Al Ashush, Dub**	**6.53**	**140**	*i* P	**Pn**	**16 16 49.9**	**+1.4**
	SNR=89						
ASUD	**Al Ashush, Dub**	**6.53**	**140**	P	**Pn**	**16 16 49.9**	**+1.4**
	SNR=89						
ASUD	**Al Ashush, Dub**	**6.53**	**140**	*e*Pn	**Pn**	**16 16 50.2**	**+1.7**
FAQ	**Al Faqa, Dubai**	**6.59**	**138**	P	**Pn**	**16 16 50.5**	**+1.2**
FAQ	**Al Faqa, Dubai**	**6.59**	**138**	P	**Pn**	**16 16 50.5**	**+1.2**
MDH	**Madha**	**6.63**	**130**	*i* P	**Pn**	**16 16 49.8**	**-0.1**
	SNR=13						
MDH	**Madha**	**6.63**	**130**	P	**Pn**	**16 16 50.1**	**+0.2**
	SNR=13						
TABS	**Tabas**	**6.71**	**53**	*e*Pn	**Pn**	**16 16 51.4**	**+0.4**
TABS	**Tabas**	**6.71**	**53**	*e*Pn	**Pn**	**16 16 51.4**	**+0.4**
UOSS	**Minazif**	**6.82**	**133**	*e*Pn	**Pn**	**16 16 52.8**	**+0.4**
UOSS	**Minazif**	**6.82**	**133**	Pn	**Pn**	**16 16 55.1**	**+2.7**
UOSS				Sn	**Sn**	**16 18 09.6**	**+0.4**
UOSS	**Minazif**	**6.82**	**133**	P	**Pn**	**16 16 55.1**	**+2.7**
UOSS				S	**Sn**	**16 18 09.6**	**+0.4**
UOSS	**Minazif**	**6.82**	**133**	*i* P	**Pn**	**16 16 52.7**	**+0.4**
	SNR=36						
UOSS	**Minazif**	**6.82**	**133**	*e*Pn	**Pn**	**16 16 52.8**	**+0.4**
HATD	**Hatta, Dubai**	**6.86**	**134**	Pn	**Pn**	**16 16 55.0**	**+2.0**
	SNR=12						
HATD				Sn	**Sn**	**16 18 11.6**	**+1.3**
HATD	**Hatta, Dubai**	**6.86**	**134**	P	**Pn**	**16 16 55.0**	**+2.0**
	SNR=12						
HATD				S	**Sn**	**16 18 11.6**	**+1.3**
HATD	**Hatta, Dubai**	**6.86**	**134**	*i* P	**Pn**	**16 16 53.9**	**+0.9**
	SNR=15						
HATD	**Hatta, Dubai**	**6.86**	**134**	P	**Pn**	**16 16 53.9**	**+0.9**
	SNR=15						
MZR	**Muzera**	**7.14**	**159**	*i* P	**Pn**	**16 16 58.5**	**+1.6**
	SNR=281						
ALNE	**Al Ain**	**7.22**	**140**	*i* P	**Pn**	**16 16 58.9**	**+0.9**
	SNR=84						
ALNE	**Al Ain**	**7.22**	**140**	*e*Pn	**Pn**	**16 16 58.8**	**+0.9**
ALNE	**Al Ain**	**7.22**	**140**	P	**Pn**	**16 16 59.2**	**+1.3**
	SNR=43						
SOHO	**SOHO**	**7.61**	**136**	*i* P	**Pn**	**16 17 03.8**	**+0.5**
	SNR=27						
SOHO	**SOHO**	**7.61**	**136**	Pn	**Pn**	**16 17 04.0**	**+0.7**
	SNR=26						
RAYN	**Ar Rayn**	**7.74**	**218**	*e*Pn	**Pn**	**16 17 04.5**	**-0.6**
RAYN	**Ar Rayn**	**7.74**	**218**	*i* P	**Pn**	**16 17 05.0**	**-0.1**
	SNR=585						
RAYN	**Ar Rayn**	**7.74**	**218**	P	**Pn**	**16 17 04.5**	**-0.6**
RAYN	**Ar Rayn**	**7.74**	**218**	*e*Pn	**Pn**	**16 17 04.6**	**-0.6**
RAYN	**Ar Rayn**	**7.74**	**218**	P	**Pn**	**16 17 05.0**	**-0.1**
	SNR=585						
ARQ	**Araqi**	**8.22**	**139**	pPn	Pn	16 17 17.8	+6.2
	SNR=30						
ARQ				Sn	**Sn**	**16 18 43.3**	**-0.4**
ARQ	**Araqi**	**8.22**	**139**	P	Pn	16 17 17.8	+6.2
	SNR=30						
ARQ				S	**Sn**	**16 18 43.3**	**-0.4**
HOQ	**Hoqain**	**8.50**	**135**	pPn	**Pn**	**16 17 19.7**	**+4.3**
	SNR=22						
HOQ				Sn	**Sn**	**16 18 49.7**	**-0.9**
HOQ	**Hoqain**	**8.50**	**135**	P	**Pn**	**16 17 19.7**	**+4.3**
	SNR=22						
HOQ				S	**Sn**	**16 18 49.7**	**-0.9**
HOQ	**Hoqain**	**8.50**	**135**	*e*Pn	**Pn**	**16 17 17.5**	**+2.0**
BIDO	**Bidbid**	**9.06**	**131**	pPn	Pn	16 17 29.0	+5.8
	SNR=7.0						
BIDO				Sn	**Sn**	**16 19 02.1**	**-2.3**
BIDO	**Bidbid**	**9.06**	**131**	P	Pn	16 17 29.0	+5.8
	SNR=7.0						
BIDO				S	**Sn**	**16 19 02.1**	**-2.3**
BIDO	**Bidbid**	**9.06**	**131**	*e*Pn	**Pn**	**16 17 22.7**	**

OFRI	'Ofer	13.77	286	Pn	Pn	16 18 25.5 -2.1
RMNI	Mount Ramon	13.83	278	Pn	Pn	16 18 27.6 -0.9
GROC	Groznyy	14.01	345	eP	P	16 18 37.6 -0.8
GROC				pmax	pmax	
	comp=Z,160nm,0.7s					
GROC	Groznyy	14.01	345	eP	P	16 18 37.6 -0.8
	comp=Z,160nm,0.7s					
NCK	Nalchik	14.87	339	i P	Pn	16 18 42.6 +0.1
NCK	Nalchik	14.87	339	i P	Pn	16 18 42.6 +0.1
NEY	Neytrino	14.94	337	i P	Pn	16 18 42.6 -0.9
NEY	Neytrino	14.94	337	i P	Pn	16 18 42.6 -0.9
MUKL	Al Mukalla	15.26	186	i P	Pn	16 18 46.4 -1.3
MUKL				i S	Sn	16 21 29.1 -7.0
KBZ	Khabaz	15.30	338	Pn	Pn	16 18 50.0 +1.9
	comp=Z,0.6nm,0.3s,baz=138,slow=8.9,SNR=25					
KIV	Kislovodsk	15.57	338	ePn	P	16 18 54.9 -1.0
	comp=Z,126nm,1.0s					
KIV	Kislovodsk	15.57	338	P	P	16 18 55.8 -0.1
	SNR=27					
KIV	Kislovodsk	15.57	338	P	P	16 18 55.8 -0.1
	SNR=27					
KIV	Kislovodsk	15.57	338	i P	Pn	16 18 53.5 +1.6
	SNR=18					
KIV	Kislovodsk	15.57	338	eP	Pn	16 18 51.9 +0.1
KIV				eS	Sn	16 21 42.1 -1.5
KIV				pmax	pmax	
	comp=Z,119nm,1.1s					
KIV				MLR	MLR	
	comp=Z,173nm,12.0s					
KIV	Kislovodsk	15.57	338	eP	Pn	16 18 51.9 +0.1
	comp=Z,119nm,1.1s					
KIV	Kislovodsk	15.57	338	ePn	P	16 18 54.9 -1.0
	comp=Z,126nm,1.0s					
KIV				eS	Sn	16 21 42.1 -1.5
	comp=Z,173nm,12.0s					
CSS	Mathiatis	15.59	294	ePn	Pn	16 18 49.9 -2.1
	comp=Z,9.4nm,1.0s					
CSS	Mathiatis	15.59	294	Pn	Pn	16 18 50.7 -1.3
CSS	Mathiatis	15.59	294	ePn	Pn	16 18 49.9 -2.1
	comp=Z,9.4nm,1.0s					
DAMY	Dhamar	16.17	203	ePn	Pn	16 18 58.6 -1.3
	comp=Z,76nm,0.6s					
DHBB	Dhamar BB	16.18	203	i P	Pn	16 18 59.4 -0.6
KBL	Kabul	16.25	68	ePn	Pn	16 19 00.9 +0.2
	comp=Z,60nm,1.1s					
KBL	Kabul	16.25	68	eP	Pn	16 19 00.9 +0.2
KBL				pmax	pmax	
	comp=Z,60nm,1.1s					
KBL	Kabul	16.25	68	ePn	Pn	16 19 00.9 +0.2
	comp=Z,60nm,1.1s					
SOC	Sochi	16.38	331	eP	Pn	16 19 02.0 -0.1
SOC				e		16 22 00.2
SOC				pmax	pmax	
	comp=Z,46nm,0.8s					
SOC				MLR	MLR	
	comp=Z,674nm,13.0s					
SOC	Sochi	16.38	331	eP	Pn	16 19 02.0 -0.1
	comp=Z,674nm,13.0s					
SOC				eS	Sn	16 22 00.2 -2.9
BDHA	Al Bayda'	16.39	198	i P	Pn	16 19 00.9 -1.6
BDHA				AMb	AMB	16 19 02.7
	comp=Z,67nm,0.9s					
BDHA				i S	Sn	16 21 54.9 -8.9
BDHA	Al Bayda'	16.39	198	i P	Pn	16 19 00.9 -1.6
	comp=Z,34nm,0.9s					
BDHA				i S	Sn	16 21 54.9 -8.9
GOF	Gofitskoye	16.46	340⇑	eP	P	16 19 05.1 -0.5
GOF				pmax	pmax	
	comp=Z,68nm,1.1s					
GOF	Gofitskoye	16.46	340	eP	P	16 19 05.1 -0.5
	comp=Z,68nm,1.1s					
LBOS		16.57	199	i P	Pn	16 19 02.9 -2.1
BR131	Keskin Array S	17.19	310	ePn	Pn	16 19 08.9 -3.6
BR131	Keskin Array S	17.19	310	ePn	Pn	16 19 08.9 -3.6
BRTR	Keskin Array B	17.19	310	P	Pn	16 19 12.4 -0.1
	comp=Z,0.5nm,0.3s,baz=131,slow=13,SNR=21					
BRTR	Keskin Array B	17.19	310	i P	P	16 19 14.1 +0.2
BRTR				pmax	pmax	
	comp=Z,6.0nm,0.7s					
BRTR	Keskin Array B	17.19	310	i P	P	16 19 14.1 +0.2
	comp=Z,6.0nm,0.7s					
ANTO	Ankara	17.83	309⇓	iP	P	16 19 21.9 +1.0
ANTO	Ankara	17.83	309	ePn	Pn	16 19 19.1 -1.2
	comp=Z,18nm,1.0s					
ANTO	Ankara	17.83	309	pPn	P	16 19 23.5 +2.6
	SNR=7.4					
ANTO	Ankara	17.83	309	P	P	16 19 23.5 +2.6
	SNR=7.4					
ANTO	Ankara	17.83	309	eP	Pn	16 19 19.1 -1.2
ANTO				pmax	pmax	
	comp=Z,18nm,1.0s					
ANTO	Ankara	17.83	309	ePn	Pn	16 19 19.1 -1.2
	comp=Z,18nm,1.0s					
ANTO	Ankara	17.83	309⇓	iP	P	16 19 21.9 +1.0
ILGA	Ilgaz	17.85	314	ePn	P	16 19 22.0 +0.8
	comp=Z,36nm,1.3s					
ILGA	Ilgaz	17.85	314	ePn	P	16 19 22.0 +0.8
	comp=Z,36nm,1.3s					
THW	Thamme Wali	18.23	75	P	Pn	16 19 23.6 -1.7
ANN	Anapa	18.35	329	eP	Pn	16 19 28.2 +1.7
ANN				eS	S	16 22 54.9 +0.2
ANN				pmax	pmax	
	comp=Z,136nm,4.6s					
ANN				MLR	MLR	
	comp=N,994nm,20.0s					
ANN				MLR	MLR	
	comp=Z,745nm,20.0s					
ANN	Anapa	18.35	329	eP	Pn	16 19 28.2 +1.7
	comp=Z,136nm,4.6s					
ANN				eS	S	16 22 54.9 +0.2
	comp=Z,745nm,20.0s					
CEP	Cherat	18.47	72	P	P	16 19 26.9 -1.2
CEP				S	Sn	16 22 50.0 -4.0
SARP	Sargodha	18.98	78	P	P	16 19 32.0 -1.5
TAS	Tashkent	18.99	47	P	Pn	16 19 34.5 +0.1
TAS				pmax	pmax	
	comp=Z,105nm,0.8s					
TAS	Tashkent	18.99	47	P	Pn	16 19 34.5 +0.1
	comp=Z,105nm,0.8s					
ATD	Arta Tunnel	19.53	204	P	Pn	16 19 42.1 +1.0
	comp=Z,0.7nm,0.3s,baz=330,slow=18,SNR=3.3					
ATD				LR	LR	16 28 01.7
	comp=Z,899nm,18.0s,baz=19,slow=39					
ATD	Arta Tunnel	19.53	204	eP	P	16 19 40.3 +0.5
	comp=Z,23nm,0.9s					
NIL	Nilore	19.56	73	eP	P	16 19 38.4 -1.5
	comp=Z,300nm,1.0s					
NIL	Nilore	19.56	73	eP	P	16 19 38.4 -1.5
NIL				pmax	pmax	
	comp=Z,300nm,1.0s					
NIL	Nilore	19.56	73	eP	P	16 19 38.4 -1.5
	comp=Z,300nm,1.0s					
CHCP	Chirah Chowk	19.57	73	P	P	16 19 38.7 -1.4
CHM	Chimkent	19.73	45	eP	Pn	16 19 42.6 -0.6
	comp=Z,22nm,0.8s					
CHM				eS	S	16 23 21.7 -1.0
CHM				LR	LR	16 28 24.3
	comp=Z,419nm,11.0s					
IUG	Iuzhnay	19.90	46⇓	iP	P	16 19 44.4 +0.8
	comp=Z,12nm,0.8s					
IUG				LR	LR	16 28 33.7
	comp=Z,536nm,11.0s					
SIM	Simferopol'	20.07	324	eP	Pn	16 19 47.4 +0.2
SIM				S	S	16 23 25.0 -4.5
SIM				pmax	pmax	
	comp=Z,18nm,0.9s					
SIM	Simferopol'	20.07	324	eP	Pn	16 19 47.4 +0.2
	comp=Z,18nm,0.9s					
SIM				S	S	16 23 25.0 -4.5
MANT	Manisa	20.29	301	eP	P	16 19 47.5 -0.5
	comp=Z,96nm,1.0s					
MANT	Manisa	20.29	301	eP	P	16 19 47.5 -0.5
	comp=Z,96nm,1.0s					
KARP	Karpathos	20.65	292	eP	P	16 19 48.1 -3.6
	comp=Z,24nm,0.8s					
KARP	Karpathos	20.65	292	eP	P	16 19 48.1 -3.6
	comp=Z,24nm,0.8s					
KK31	Karatay Array	20.72	45	eP	P	16 19 51.9 -0.5
KK31	Karatay Array	20.72	45	eP	P	16 19 51.9 -0.5
KK31	Karatay Array	20.72	45	eP	P	16 19 51.9 -0.5
KKAR	Karatay Array	20.72	45	eP	P	16 19 52.0 -0.4
KKAR	Karatay Array	20.72	45	eP	P	16 19 52.0 -0.4
KKAR	Karatay Array	20.72	45	eP	P	16 19 52.0 -0.4
AB31	Akbulak array	20.73	17	i P	P	16 19 51.4 -1.0
AB31				pmax	pmax	
	comp=Z,8.0nm,0.5s					
AB31	Akbulak array	20.73	17	i P	P	16 19 51.4 -1.0
	comp=Z,8.0nm,0.5s					
ABKAR	Akbulak array	20.73	17	eP	P	16 19 51.3 -1.1
ABKAR	Akbulak array	20.73	17	eP	P	16 19 51.3 -1.1
SFK	Sufi-Kurgan	21.27	55	P	P	16 19 59.1 +0.5
SFK				pmax	pmax	
	comp=Z,64nm,0.7s					
SFK	Sufi-Kurgan	21.27	55	P	P	16 19 59.1 +0.5
	comp=Z,64nm,0.7s					
AKTK	Aktyubinsk	21.40	13	P	P	16 19 57.8 -1.9
	comp=Z,57nm,1.0s					
AKTO	Aktyubinsk	21.40	13	P	P	16 19 58.5 -1.1
	comp=Z,32nm,0.8s,baz=201,slow=11,SNR=67					
AKTO				LR	LR	16 29 52.5
	comp=Z,336nm,20.4s,baz=190,slow=41					
AKTO	Aktyubinsk	21.40	13	P	P	16 19 57.8 -1.9
AKTO				pmax	pmax	
	comp=Z,57nm,1.0s					
MNAS	Manas	21.65	48	P	P	16 20 02.7 +0.1
MNAS	Manas	21.65	48	P	P	16 20 02.7 +0.1
LAST	Lasithi	21.95	291	P	P	16 20 05.4 -0.4
LAST	Lasithi	21.95	291	P	P	16 20 05.4 -0.4
LAST	Lasithi	21.95	291	P	P	16 20 05.4 -0.4
SANT	Santorini	22.15	294⇑	iP	P	16 20 07.2 -0.7
SANT	Santorini	22.15	294	eP	P	16 20 04.7 -3.2
	comp=Z,54nm,0.7s					
SANT	Santorini	22.15	294⇑	iP	P	16 20 07.2 -0.7
AML	Almayashu	22.27	50	P	P	16 20 09.0 -0.5
	SNR=60					
IDI	Anoyia	22.44	291	P	P	16 20 10.5 -0.5
	comp=Z,20nm,0.7s,baz=104,slow=16,SNR=17					
IDI				LR	LR	16 32 53.6
	comp=Z,206nm,20.5s,baz=96,slow=47					
IDI	Anoyia	22.44	291⇓	iP	P	16 20 10.0 -1.1
IDI	Anoyia	22.44	291	eP	P	16 20 09.0 -2.1
	comp=Z,30nm,0.6s					
IDI	Anoyia	22.44	291⇓	iP	P	16 20 10.0 -1.1
EKS2	Erkin-Say	22.56	49	P	P	16 20 14.2 +1.8
	SNR=58					
UCH	Uchtor	22.86	50	P	P	16 20 15.6 -0.2
	SNR=35					
VORD	Divnogorie	22.88	341	eP	P	16 20 15.7 +0.3
VORD				eS	S	16 24 18.6 -4.8
VORD				pmax	pmax	
	comp=Z,70nm,0.7s					
VORD				smax	smax	
	comp=E,180nm,1.0s					
VORD	Divnogorie	22.88	341	eP	P	16 20 15.7 +0.3
	comp=E,70nm,0.7s					
VORD				eS	S	16 24 18.6 -4.8
KSH	Kashi	22.90	58	P	P	16 20 11.8 -4.1
KSH				pP	pP	16 20 21.7 -1.3
KSH				S	S	16 24 11.3 -13
KSH				sS	pS	16 24 25.7 -6.5
KSH				SS	SnSn	16 24 55.4 -1.0
KSH				pmax	pmax	
	comp=E,160nm,0.6s					
KSH				LR	LR	
	comp=E,2μm,8.9s					
KSH				LR	LR	
	comp=E,1μm,6.2s					
KSH				LR	LR	
	comp=E,4μm,10.0s					
ALN	Alexandroupoli	22.93	306	eP	P	16 20 16.3 +0.2
	comp=E,8.4nm,0.9s					
ALN	Alexandroupoli	22.93	306	P	P	16 20 15.0 -1.1
ALN	Alexandroupoli	22.93	306	eP	P	16 20 16.3 +0.2
ALN				pmax	pmax	
	comp=Z,8.0nm,0.9s					
ALN	Alexandroupoli	22.93	306	eP	P	16 20 16.3 +0.2
	comp=Z,8.0nm,0.9s					
TIRR	Tirgusor	22.98	316⇑	iP	P	16 20 17.0 +0.5
TIRR	Tirgusor	22.98	316	eP	P	16 20 16.8 +0.3
	comp=Z,26nm,0.8s					
TIRR	Tirgusor	22.98	316	eP	P	16 20 16.8 +0.3
TIRR				pmax	pmax	
	comp=Z,26nm,0.8s					
TIRR	Tirgusor	22.98	316⇑	iP	P	16 20 17.0 +0.5
PRD	Provadia	22.98	312	eP	P	16 20 20.6 +4.1
AAK	Ala-Archa	23.02	50	P	P	16 20 18.1 +0.9
	comp=Z,19nm,0.9s,baz=221,slow=11,SNR=20					
AAK				PcP	PcP	16 24 05.9 -0.3
	comp=Z,4.9nm,0.8s,baz=249,slow=1.5,SNR=2.5					
AAK				LR	LR	16 30 24.3
	comp=Z,684nm,20.7s,baz=222,slow=40					
AAK	Ala-Archa	23.02	50	P	P	16 20 19.9 +2.7
	SNR=13					
AAK	Ala-Archa	23.02	50	eP	P	16 20 17.8 +0.6
	comp=Z,23nm,0.8s					
AAK				PcP	PcP	16 24 05.9 -0.3
AAK	Ala-Archa	23.02	50	P	P	16 20 18.0 +0.8
	SNR=22					
AAK	Ala-Archa	23.02	50	P	P	16 20 18.0 +0.8
	SNR=22					
AAK	Ala-Archa	23.02	50	i P	P	16 20 18.1 +0.9
	SNR=13					
AAK	Ala-Archa	23.02	50	i P	P	16 20 17.6 +0.4
AAK				pmax	pmax	
	comp=Z,15nm,1.1s					
AAK	Ala-Archa	23.02	50	eP	P	16 20 17.8 +0.6
	comp=Z,23nm,0.8s					
TLCR		23.14	318⇓	iP	P	16 20 19.0 +0.9
VSR	Storozhevoye	23.14	341	eP	P	16 20 15.9 -2.2
VSR				eS	S	16 24 22.6 -5.2
VSR				pmax	pmax	
	comp=Z,30nm,0.6s					
VSR				smax	smax	
	comp=N,250nm,1.1s					
VSR	Storozhevoye	23.14	341	eP	P	16 20 15.9 -2.2
	comp=N,30nm,0.6s					
VSR				eS	S	16 24 22.6 -5.2
	comp=N,250nm,1.1s					
NDI	New Delhi	23.14	86	eP	P	16 20 19.0 +0.6
NDI				eS	S	16 24 33.0 +4.6
JMB	Yambol	23.18	310	eP	P	16 20 16.7 -2.0
FRU	Bishkek	23.19	49	eP	P	16 20 20.0 +1.2
FRU				i		16 20 41.0
FRU				eS	S	16 24 32.0 +3.0
FRU				e		16 24 39.0
FRU				pmax	pmax	
	comp=Z,90nm,2.2s					
FRU	Bishkek	23.19	49	eP	P	16 20 20.0 +1.2
	comp=Z,90nm,2.2s					
FRU				eS	S	16 24 32.0 +3.0
TLB	Topalu	23.27	316⇑	iP	P	16 20 21.0 +1.5
KZA	Kyzart	23.29	51	P	P	16 20 23.9 +3.6
	SNR=12					
USP	Ospenovka	23.31	48	P	P	16 20 20.1 +0.1
	SNR=18					
KBK	Karagaybulak	23.33	50	P	P	16 20 22.1 +1.7
	SNR=14					
CHMS	Chumysh	23.35	49	P	P	16 20 21.3 +0.9
	SNR=13					
VORR	Voronezh	23.54	342	eP	P	16 20 21.0 -1.0
VORR				eS	S	16 24 29.0 -5.3
VORR				pmax	pmax	
	comp=Z,500nm,1.4s					
VORR	Voronezh	23.54	342	eP	P	16 20 21.0 -1.0
	comp=Z,500nm,1.4s					
VORR				eS	S	16 24 29.0 -5.3
NRN	Naryn	23.56	53	eP	P	16 20 23.0 +0.2
	comp=Z,58nm,0.9s					
NRN	Naryn	23.56	53	P	P	16 20 22.9 +0.2
NRN				pmax	pmax	
	comp=Z,58nm,1.0s					
NRN	Naryn	23.56	53	eP	P	16 20 23.0 +0.2
	comp=Z,58nm,0.9s					
ANKY	Antikythira Is	23.80	292	P	P	16 20 26.2 +1.5
ANKY	Antikythira Is	23.80	292	P	P	16 20 26.2 +1.5
ANKY	Antikythira Is	23.80	292	P	P	16 20 26.2 +1.5
TKM2	Tokmak 2	23.88	50	P	P	16 20 25.9 +0.2
	SNR=18					
BTLS	Baital	23.91	44⇑	iP	P	16 20 25.9 +0.3
	comp=Z,20nm,0.9s					
BTLS				eS	S	16 24 39.9 -0.6
BTLS				LR	LR	16 31 03.3
	comp=Z,490nm,11.4s					
SZH	Strazhica	23.96	311	eP	P	16 20 28.0 +1.8
ULHL	Ulahol	24.04	52	P	P	16 20 28.2 +1.0
	SNR=6.0					
RZN	Rozhen	24.15	307	eP	P	16 20 29.9 +1.7
KIS	Kishinev	24.20	321	eP	P	16 20 30.0 +1.6
	comp=Z,300nm,2.5s					
KIS				eS	S	16 24 44.0 -1.1
KIS				eLR	LR	16 30 10.0
	comp=Z,400nm,16.0s					
KIS	Kishinev	24.20	321	eP	P	16 20 30.0 +1.6
KIS				eS	S	16 24 44.0 -1.1
KIS				pmax	pmax	
	comp=Z,300nm,2.5s					
KIS	Kishinev	24.20	321	eP	P	16 20 30.0 +1.6
	comp=Z,300nm,2.5s					
KIS				eS	S	16 24 44.0 -1.1
PAIG	Paliouri	24.33	302	P	P	16 20 29.1 -0.5
PAIG				pmax	pmax	
	comp=Z,25nm,0.8s					
PAIG	Paliouri	24.33	302	P	P	16 20 29.1 -0.5
	comp=Z,25nm,0.8s					
ISR	Istrita	24.46	316	P	P	16 20 33.2 +2.4
ISR				pmax	pmax	
	comp=Z,65nm,1.3s					
ISR	Istrita	24.46	316	P	P	16 20 33.2 +2.4
	comp=Z,65nm,1.3s					
VRI	Vrincioaia	24.74	317⇓	iP	P	16 20 33.4 +0.1
VRI	Vrincioaia	24.74	317	P	P	16 20 34.3 +1.0
VRI				pmax	pmax	
	comp=Z,198nm,0.7s					
VRI	Vrincioaia	24.74	317⇓	iP	P	16 20 33.4 +0.1
SRS	Serrai	24.75	305	P	P	16 20 35.2 +1.7
SRS	Serrai	24.75	305	P	P	16 20 35.2 +1.7
SRS	Serrai	24.75	305	P	P	16 20 33.6 +0.1
SRS				pmax	pmax	
	comp=Z,29nm,1.4s					
SRS	Serrai	24.75	305	P	P	16 20 33.6 +0.1
	comp=Z,29nm,1.4s					
PLOR	Plostina	24.78	317⇑	iP	P	16 20 34.9 +1.2
PLOR	Plostina	24.78	317	P	P	16 20 34.9 +1.2
PLOR	Plostina	24.78	317⇑	iP	P	16 20 34.9 +1.2
KUU	Kurty	24.79	48	eP	P	16 20 34.0 +0.2
	comp=Z,31nm,1.1s					
KUU				LR	LR	16 31 36.3
	comp=Z,621nm,10.0s					
SOH	Sokhos	24.83	304	P	P	16 20 34.8 +0.6
SOH				pmax	pmax	
	comp=Z,33nm,0.9s					
SOH	Sokhos	24.83	304	P	P	16 20 34.8 +0.6
	comp=Z,33nm,0.9s					
OTUK	Ortayu	24.84	36	P	P	16 20 34.9 +0.7
OTUK				pmax	pmax	
	comp=Z,61nm,1.1s					
OTUK	Ortayu	24.84	36	P	P	16 20 34.9 +0.7
	comp=Z,61nm,1.1s					
PGB	Panagyurishte	24.85	308	eP	P	16 20 37.5 +3.1
AAA	Alma-Ata	24.88	50	eP	P	16 20 37.9 +3.3
AAA				pmax	pmax	
	comp=Z,200nm,5.1s					
AAA				MLR	MLR	
	comp=Z,800nm,11.0s					
MDOK	Medeo	24.95	50	i P	P	16 20 35.9 +0.5
	comp=Z,106nm,0.7s					
MDOK				LR	LR	16 32 20.3
	comp=Z,692nm,10.4s					
MLR	Muntele Rosu	25.01	316	P	P	16 20 37.0 +1.2
	comp=Z,2.4nm,0.5s,baz=2.7,slow=1.2,SNR=12					
MLR				LR	LR	16 33 29.2
	comp=Z,171nm,18.1s,baz=104,slow=44					
MLR	Muntele Rosu	25.01	316⇑	iP	P	16 20 37.3 +1.4
MLR	Muntele Rosu	25.01	316	eP	P	16 20 37.1 +1.2
	comp=Z,34nm,0.7s					
MLR	Muntele Rosu	25.01	316	eP	P	16 20 37.1 +1.2
MLR				pmax	pmax	
	comp=Z,34nm,0.7s					
MLR	Muntele Rosu	25.01	316	eP	P	16 20 37.1 +1.2
	comp=Z,34nm,0.7s					
ITM	Ithomi	25.08	295	eP	P	16 20 36.3 -0.1
	comp=Z,18nm,0.6s					
ITM	Ithomi	25.08	295	eP	P	16 20 36.3 -0.1
	comp=Z,18nm,0.6s					
AGG	Agios Georgios	25.11	299	eP	P	16 20 34.3 -2.5
	comp=Z,67nm,1.0s					
AGG	Agios Georgios	25.11	299	P	P	16 20 37.1 +0.3
AGG	Agios Georgios	25.11	299	eP	P	16 20 34.3 -2.5
AGG				pmax	pmax	
	comp=Z,67nm,1.0s					
AGG	Agios Georgios	25.11	299	P	P	16 20 37.1 +0.3
TESR	Tescani	25.13	318⇑	iP	P	16 20 36.5 -0.3
SORM	Soroca	25.16	323⇑	iP	P	16 20 35.8 -1.2
LIT	Litokhoron	25.26	302	eP	P	16 20 39.6 +1.5
	comp=Z,16nm,0.8s					
LIT	Litokhoron	25.26	302	eP	P	16 20 39.6 +1.5
LIT				pmax	pmax	
	comp=Z,16nm,0.8s					
LIT	Litokhoron	25.26	302	eP	P	16 20 39.6 +1.5
	comp=Z,16nm,0.8s					
ANX	Ano Chora	25.33	298	P	P	16 20 39.1 +0.3
KKB	Krupnik	25.36	306	eP	P	16 20 41.2 +2.2
DRO	Drossia	25.38	297	P	P	16 20 39.3 +0.2
VTS	Vitosha	25.53	308⇓	iP	P	16 20 40.7 +0.1
VTS	Vitosha	25.53	308	eP	P	16 20 40.2 -0.4
	comp=Z,11nm,0.9s					
VTS	Vitosha	25.53	308	eP	P	16 20 41.6 +1.0
VTS	Vitosha	25.53	308	eP	P	16 20 40.2 -0.4
VTS				pmax	pmax	
	comp=Z,11nm,0.9s					
VTS	Vitosha	25.53	308⇓	iP	P	16 20 40.7 +0.1
VOIR		25.53	315	P	P	16 20 41.0 +0.5
VOIR				pmax	pmax	
	comp=Z,41nm,0.8s					
VOIR		25.53	315	P	P	16 20 41.0 +0.5
	comp=Z,41nm,0.8s					
VAY	Valandovo	25.55	305	i P	P	16 20 43.1 +2.5
GRG	Griva	25.56	304	P	P	16 20 40.8 0.0
GRG				pmax	pmax	
	comp=Z,36nm,1.0s					
GRG	Griva	25.56	304	P	P	16 20 40.8 0.0
	comp=Z,36nm,1.0s					
DOPR	Dopca	25.59	316⇑	iP	P	16 20 41.6 +0.6
ARR	Arges	25.75	314⇓	iP	P	16 20 43.5 +0.9
SATY	Saty	25.82	51	eP	P	16 20 44.2 +0.9
	comp=Z,11nm,1.1s					
SATY				LR	LR	16 32 28.9
	comp=Z,349nm,12.2s					
ZHN	Zhinishke	25.88	51	eP	P	16 20 45.0 +1.2
	comp=Z,12nm,0.9s					
ZHN				LR	LR	16 32 35.6
	comp=Z,174nm,11.3s					
STIP	Stip	25.94	305	i P	P	16 20 42.3 -1.9
BRZS	Berezniki	26.16	33	eP	P	16 20 46.7 +0.5
	comp=Z,22nm,0.9s					
BRZS				eS	S	16 25 15.8 -0.6
BRZS				LR	LR	16 32 01.8
	comp=Z,630nm,11.9s					
KPKS	Kokpek	26.16	51	i P	P	16 20 46.8 +0.4
	comp=Z,12nm,0.8s					
KPKS				LR	LR	16 33 06.2
	comp=Z,433nm,10.3s					
FNA	Florina	26.26	303	eP	P	16 20 46.5 -0.7
	comp=Z,15nm,0.8s					
FNA	Florina	26.26	303	eP	P	16 20 46.5 -0.7
FNA				pmax	pmax	
	comp=Z,15nm,0.8s					
FNA	Florina	26.26	303	eP	P	16 20 46.5 -0.7
	comp=Z,15nm,0.8s					
UZB	Uzynbulak	26.27	52	eP	P	16 20 48.1 +0.7
	comp=Z,15nm,1.1s					
UZB				LR	LR	16 32 34.0
	comp=Z,256nm,12.5s					
PENT	Pentalofos	26.28	301	P	P	16 20 48.9 +1.4
LKD2	Lefkada island	26.34	298	P	P	16 20 46.8 -1.1
LKD2	Lefkada island	26.34	298	P	P	16 20 46.8 -1.1
LKD2	Lefkada island	26.34	298	P	P	16 20 46.8 -1.1
BIA	Bitola	26.36	303	i P	P	16 20 50.9 +2.8
AKASG	Malin Array Be	26.43	328	P	P	16 20 47.8 -0.7
	comp=Z,8.7nm,0.4s,baz=131,slow=9.2,SNR=20					
AKASG				PcP	PcP	16 24 12.9 -0.4
	comp=Z,0.9nm,0.3s,baz=87,slow=2.6,SNR=4.8					
AKASG	Malin Array Be	26.43	328	cePcP	P	16 20 49.5 +0.9
AKASG				pmax	pmax	
	comp=Z,9.0nm,0.4s					
AKBB	Malin Array Si	26.43	328	eP	P	16 20 46.9 -1.6
	comp=Z,42nm,0.7s					
AKBB	Malin Array Si	26.43	328	eP	P	16 20 46.9 -1.6
AKBB				pmax	pmax	
	comp=Z,42nm,0.7s					
AKBB	Malin Array Si	26.43	328	eP	P	16 20 46.9 -1.6
	comp=Z,42nm,0.7s					
KIEV	Kiev	26.44	328	eP	P	16 20 46.0 -2.5
	comp=Z,41nm,0.7s

KIEV pmax pmax
comp=Z,31nm,0.9s
KIEV Kiev 26.44 328 *i* P **P 16 20 47.3 -1.3**
comp=Z,31nm,0.9s
AK11 Malin Array Si 26.45 328 *e*P **P 16 20 47.0 -1.6**
AK11 Malin Array Si 26.45 328 *e*P **P 16 20 47.0 -1.6**
KRUS Krusevo 26.51 304 *i* P **P 16 20 52.7 +3.2**
SKO Skopje 26.55 305 *i* P **P 16 20 49.3 -0.4**
BURAR Bucovina Array 26.56 319⇑*i*P **P 16 20 51.6 +1.8**
BURAR Bucovina Array 26.56 319 P **P 16 20 51.6 +1.8**
BUR04 Bucovina Ar. S 26.56 319 *e*P **P 16 20 49.5 -0.4**
BUR04 Bucovina Ar. S 26.56 319 *e*P **P 16 20 49.5 -0.4**
SHLS Shalkode 26.58 52 *e*P **P 16 20 53.0 +2.9**
comp=Z,5.8nm,0.8s
SHLS LR LR 16 32 53.7
comp=Z,422nm,12.8s
BUR08 Bucovina Ar. S 26.58 319 *e*P **P 16 20 50.4 +0.2**
BUR08 Bucovina Ar. S 26.58 319 *e*P **P 16 20 50.3 +0.2**
KBN Korca 26.65 302 *i* P **P 16 20 52.2 +1.4**
OHR Ohrid 26.77 303 P **P 16 20 51.6 -0.2**
OHR pmax pmax
comp=Z,47nm,1.1s
OHR Ohrid 26.77 303 P **P 16 20 51.6 -0.2**
comp=Z,47nm,1.1s
PHP Peshkopia 27.18 304 *i* P **P 16 20 58.8 +3.3**
ARU Arti 27.26 10 P **P 16 20 55.4 -0.5**
comp=Z,4.1nm,0.5s,baz=212,slow=8.6,SNR=8.8
ARU LR LR 16 33 57.9
comp=Z,440nm,18.6s,baz=193,slow=41
ARU Arti 27.26 10 *e*P **P 16 20 54.5 -1.4**
comp=Z,15nm,0.7s
ARU Arti 27.26 10*d i*P **P 16 20 55.6 -0.3**
ARU PPP PPP 16 21 48.4
ARU S **S 16 25 34.0 +0.5**
ARU SS **SnSn 16 26 45.2 +2.7**
ARU SSS SSS 16 27 03.0
ARU pmax pmax
comp=Z,9.0nm,1.0s
ARU MLR MLR
comp=Z,345nm,16.0s
ARU Arti 27.26 10 *i* P **P 16 20 55.6 -0.3**
comp=Z,9.0nm,1.0s
ARU S **S 16 25 34.0 +0.5**
OBN Obninsk 27.33 342 P **P 16 20 55.7 -0.8**
comp=Z,15nm,0.4s,baz=180,slow=1.0,SNR=4.7
OBN Obninsk 27.33 342⇓*e*P **P 16 20 57.7 +1.2**
OBN *e* 16 21 41.7
OBN *e*S **S 16 25 40.4 +5.9**
OBN pmax pmax
comp=Z,35nm,0.7s
OBN Obninsk 27.33 342 P **P 16 20 55.7 -0.8**
OBN *e*S **S 16 25 40.4 +5.9**
MDVR Moldovita 27.36 311⇑*i*P **P 16 20 57.4 +0.4**
BRVK Borovoye 27.37 26 *e*P **P 16 20 55.8 -1.2**
comp=Z,24nm,0.9s
BRVK Borovoye 27.37 26 P **P 16 20 57.1 +0.1**
SNR=16
BRVK Borovoye 27.37 26 P **P 16 20 57.1 +0.1**
SNR=16
BRVK Borovoye 27.37 26*ce*P **P 16 20 57.3 +0.3**
BRVK pmax pmax
comp=Z,14nm,0.7s
BVA0 Borovoye Array 27.39 26 *i* P **P 16 20 56.8 -0.3**
BVA0 pmax pmax
comp=Z,25nm,1.0s
BVA0 Borovoye Array 27.39 26 *i* P **P 16 20 56.8 -0.3**
comp=Z,25nm,1.0s
BVAR Borovoye Array 27.39 26 P **P 16 20 57.6 +0.5**
comp=Z,16nm,0.6s,baz=223,slow=7.3,SNR=109
BVAR PcP **PcP 16 24 15.0 -0.5**
comp=Z,3.5nm,0.7s,baz=214,slow=4.9,SNR=5.5
BVAR LR LR 16 33 29.4
comp=Z,425nm,20.3s,baz=217,slow=40
TIR Tirane 27.51 303 *i* P **P 16 21 02.4 +4.1**
MOS Moscow 27.62 344 *e*P **P 16 21 01.8 +2.7**
MOS *e* 16 21 48.1
MOS *i* S **S 16 25 46.2 +7.1**
MOS *e* 16 25 58.7
MOS Moscow 27.62 344 *e*P **P 16 21 01.8 +2.7**
MOS *i* S **S 16 25 46.2 +7.1**
BCI Bajram Curri 27.65 305 *i* P **P 16 21 01.2 +1.6**
PUK Puka 27.68 305 *i* P **P 16 20 59.6 -0.4**
SVE Sverdlovsk 27.97 12⇑*e*P **P 16 21 04.7 +2.4**
SVE *e*S **S 16 25 45.0 +0.3**
SVE pmax pmax
comp=Z,16nm,1.1s
SVE MLR MLR
comp=Z,517nm,15.0s
SVE Sverdlovsk 27.97 12 *e*P **P 16 21 04.7 +2.4**
comp=Z,16nm,1.1s
SVE *e*S **S 16 25 45.0 +0.3**
comp=Z,517nm,15.0s
PYUN Piuthan 28.25 85 *e*P **P 16 21 05.2 -0.2**
comp=Z,133nm,0.9s
UZH Uzhgorod 28.76 319 *e*P **P 16 21 11.3 +1.9**
UZH *e* 16 21 16.9
UZH *e* 16 21 18.5
UZH Uzhgorod 28.76 319 *e*P **P 16 21 11.3 +1.9**
KOLN Koldanda 28.85 86 *e*P **P 16 21 10.2 -0.5**
comp=Z,34nm,0.7s
DANN Dangsing 28.87 84 *e*P **P 16 21 11.1 +0.1**
comp=Z,184nm,0.8s
KWP Kalwaria Pacla 29.05 321 *e*P **P 16 21 12.5 +0.5**
KWP Kalwaria Pacla 29.05 321 *e*P **P 16 21 12.5 +0.5**
KWP Kalwaria Pacla 29.05 321 *e*P **P 16 21 12.5 +0.5**
CRVS Cervenica-Dubn 29.37 319 *e*P **P 16 21 15.9 +1.0**
CRVS pmax pmax
comp=Z,8.0nm,0.8s
CRVS Cervenica-Dubn 29.37 319 *e*P **P 16 21 15.9 +1.0**
CRVS Cervenica-Dubn 29.37 319 *e*P **P 16 21 15.9 +1.0**
comp=Z,8.0nm,0.8s
TIP Timpagrande 29.40 298⇓*i*P **P 16 21 14.8 -0.5**
KURBB Kurchatov Arra 29.50 37 P **P 16 21 16.5 +0.6**
comp=Z,8.3nm,0.7s,baz=238,slow=9.2,SNR=46
KURBB PcP **PcP 16 24 20.9 +0.1**
comp=Z,2.3nm,0.9s,baz=236,slow=3.5,SNR=3.5
KURBB ScP **ScP 16 28 00.6 -0.4**
comp=Z,1.1nm,0.3s,baz=255,slow=3.7,SNR=6.7
KURK Kurchatov 29.60 37 *e*P **P 16 21 17.2 +0.4**
comp=Z,33nm,1.1s
KURK PcP **PcP 16 24 20.9 -0.2**
KURK ScP **ScP 16 28 00.6 -0.7**
KURK Kurchatov 29.60 37 P **P 16 21 17.9 +1.1**
SNR=14
KURK Kurchatov 29.60 37 P **P 16 21 17.9 +1.1**
SNR=14
KURK Kurchatov 29.60 37*ce*P **P 16 21 17.7 +0.9**
KURK pmax pmax
comp=Z,26nm,1.2s
MAKZ Makanchi 29.62 46 *e*P **P 16 21 17.0 -0.2**
comp=Z,28nm,1.3s
MAKZ Makanchi 29.62 46 *e*P **P 16 21 17.0 -0.2**
MAKZ pmax pmax
comp=Z,28nm,1.3s
MAKZ Makanchi 29.62 46 *e*P **P 16 21 17.0 -0.2**
comp=Z,28nm,1.3s
GKN Gorkha 29.70 85 *e*P **P 16 21 17.4 -0.8**
KECS Kecovo 29.73 318 *e*P **P 16 21 18.6 +0.5**
KECS *e* 16 21 19.0
KECS pmax pmax
comp=Z,6.0nm,0.8s
KECS Kecovo 29.73 318 *e*P **P 16 21 18.6 +0.5**
KECS Kecovo 29.73 318 *e*P **P 16 21 18.6 +0.5**
comp=Z,6.0nm,0.8s
MK01 Makanchi Array 29.81 46 *e*P **P 16 21 18.9 +0.1**
MK01 Makanchi Array 29.81 46 *e*P **P 16 21 18.9 +0.1**
MK31 Makanchi Array 29.82 46 *e*P **P 16 21 17.9 -0.9**
MK31 Makanchi Array 29.82 46 *e*P **P 16 21 17.9 -0.9**
MK31 Makanchi Array 29.82 46 *e*P **P 16 21 17.9 -0.9**
MKAR Makanchi Array 29.82 46 P **P 16 21 18.9 +0.1**
comp=Z,7.2nm,0.7s,baz=242,slow=8.7,SNR=45
MKAR LR LR 16 34 46.6
comp=Z,780nm,18.1s,baz=224,slow=39
MKAR Makanchi Array 29.82 46 P **P 16 21 19.0 +0.1**
MKAR pmax pmax
comp=Z,7.0nm,0.7s
MKAR MLR MLR
comp=Z,780nm,18.1s
MKAR Makanchi Array 29.82 46 P **P 16 21 19.0 +0.1**
comp=Z,780nm,18.1s
SOKR Solikamsk 30.15 6 *e*P **P 16 21 24.9 +3.4**
SOKR pmax pmax
comp=Z,17nm,1.1s
SOKR MLR MLR
comp=Z,423nm,15.0s

DMN Daman 30.18 85 *e*P **P 16 21 22.1 -0.5**
comp=Z,102nm,0.7s
KKN Kakani 30.30 85 *e*P **P 16 21 23.1 -0.4**
comp=Z,143nm,1.0s
SEM Semipalatinsk 30.30 39 *e*P **P 16 21 24.0 +0.7**
comp=Z,5.8nm,0.9s
SEM LR LR 16 34 43.6
comp=Z,439nm,10.9s
PKIN Phulchoki 30.44 85 *e*P **P 16 21 24.7 -0.2**
comp=Z,192nm,1.0s
LANS Liptovska Anna 30.64 318 *e*P **P 16 21 26.6 +0.5**
LANS Liptovska Anna 30.64 318 *e*P **P 16 21 26.6 +0.5**
LANS Liptovska Anna 30.64 318 *e*P **P 16 21 26.6 +0.5**
VYHS Vyhne 30.72 317 *e*P **P 16 21 27.1 +0.3**
VYHS pmax pmax
comp=Z,4.0nm,1.1s
VYHS Vyhne 30.72 317 *e*P **P 16 21 27.1 +0.3**
VYHS Vyhne 30.72 317 *e*P **P 16 21 27.1 +0.3**
comp=Z,4.0nm,1.1s
IDID Didziasalis 30.78 333 *e*P **P 16 21 25.9 -1.2**
IDID IAmb IAmb 16 21 30.7
comp=Z,3.7nm,0.8s
GUN Gumba 30.79 85 *e*P **P 16 21 27.6 -0.5**
comp=Z,178nm,0.9s
OJC Ojcow 30.97 320 *e*P **P 16 21 28.8 -0.1**
OJC Ojcow 30.97 320 *e*P **P 16 21 28.8 -0.1**
OJC Ojcow 30.97 320 *e*P **P 16 21 28.8 -0.1**
IIGN Ignalina 31.01 333 *e*P **P 16 21 27.8 -1.5**
IIGN IAmb IAmb 16 21 38.7
comp=Z,10nm,0.9s
VAE Valguarnera 31.06 294 LR LR 16 37 25.4
comp=Z,246nm,18.2s,baz=122,slow=43
JIRN Jiri 31.11 85 *e*P **P 16 21 30.4 -0.5**
comp=Z,172nm,1.0s
ISAL Salakas 31.21 333 *e*P **P 16 21 30.8 -0.2**
ISAL IAmb IAmb 16 21 40.5
comp=Z,6.0nm,0.7s
IZAR Zarasai 31.29 333 *e*P **P 16 21 33.8 +2.1**
IZAR IAmb IAmb 16 21 38.4
comp=Z,10nm,0.6s
SUW Suwalki 31.41 328 *e*P **P 16 21 31.5 -1.2**
SUW Suwalki 31.41 328 *e*P **P 16 21 31.5 -1.2**
JAVC Velka Javorina 31.57 317 *e*P **P 16 21 33.1 -1.2**
RAMN Ramite 31.63 86 *e*P **P 16 21 33.8 -1.5**
comp=Z,107nm,1.0s
ZSN Zaisan 31.69 46 *e*P **P 16 21 35.2 -0.2**
comp=Z,0.6nm,0.9s
ZSN *e*S **S 16 26 41.9 -1.4**
ZSN LR LR 16 35 37.0
comp=Z,45nm,9.2s
OKC Ostrava-Krasne 31.72 318 *e*P **P 16 21 35.5 -0.1**
OKC *ex* x 16 21 38.2
OKC AMS AMS 16 36 50.0
comp=Z,300nm,15.4s
OKC Ostrava-Krasne 31.72 318 *e*P **P 16 21 35.5 -0.1**
OKC *e* 16 21 38.2
OKC MLR MLR
comp=Z,300nm,15.4s
OKC Ostrava-Krasne 31.72 318 *e*P **P 16 21 35.5 -0.1**
comp=Z,300nm,15.4s
KLMR Klimovskoe 32.01 350 *e*P **P 16 21 35.2 -2.8**
KLMR pmax pmax
comp=Z,30nm,0.7s
KLMR Klimovskoe 32.01 350 *e*P **P 16 21 35.2 -2.8**
KLMR AMP 16 21 41.1
comp=Z,30nm,0.7s
MORC Moravsky Berou 32.04 318 P **P 16 21 38.5 0.0**
MORC pmax pmax
comp=Z,59nm,1.1s
MORC Moravsky Berou 32.04 318 P **P 16 21 38.5 0.0**
comp=Z,59nm,1.1s
MORC Moravsky Berou 32.04 318 *e*P **P 16 21 37.2 -1.3**
PRGR Permogore 32.09 355 *e*P **P 16 21 36.4 -2.2**
PRGR *e* 16 24 27.3
PRGR pmax pmax
comp=Z,34nm,0.6s
CONA Conrad Observa 32.31 314 P **P 16 21 40.8 -0.1**
comp=Z,6.0nm,0.9s
CONA Conrad Observa 32.31 314 P **P 16 21 40.8 -0.1**
comp=Z,6.0nm,0.9s
ODAN Odare 32.34 86 *e*P **P 16 21 40.5 -1.0**
comp=Z,72nm,1.0s
VRAC Vranov 32.40 317 *e*P **P 16 21 40.7 -0.9**
KRUC Moravsky 32.42 316 *e*P **P 16 21 43.5 +1.8**
WMQ Urumqi 32.50 54 P **P 16 21 44.3 +1.7**
WMQ pP pP 16 21 49.3 -0.9
WMQ sP sP 16 21 58.3 +4.9
WMQ PP **PP 16 22 58.3 +2.1**
WMQ S **S 16 27 00.1 +3.9**
WMQ ScP **ScP 16 28 06.2 -5.1**
WMQ ScS **ScS 16 32 09.2 -1.4**
WMQ pmax pmax
comp=Z,35nm,0.7s
WMQ pmax pmax
comp=Z,310nm,4.1s
WMQ LR LR
comp=Z,1μm,16.5s
WMQ LR LR
comp=Z,1μm,15.3s
WMQ LR LR
comp=Z,2μm,13.1s
KRLC Kraliky 32.62 318 *e*P **P 16 21 43.8 +0.3**
KRLC Kraliky 32.62 318 *e*P **P 16 21 43.8 +0.3**
DPC Dobruska-Polom 33.00 318 *e*P **P 16 21 46.7 -0.2**
DPC *ex* x 16 21 49.1
DPC AMS AMS 16 38 20.0
comp=Z,400nm,13.7s
DPC Dobruska-Polom 33.00 318 *e*P **P 16 21 46.7 -0.2**
DPC *e* 16 21 49.1
DPC MLR MLR
comp=Z,400nm,13.7s
DPC Dobruska-Polom 33.00 318 P **P 16 21 46.7 -0.2**
VSU Vasula 33.13 337*ce*P **P 16 21 49.6 +1.9**
VSU pmax pmax
comp=Z,33nm,0.7s
KSP Ksiaz 33.23 319 *e*P **P 16 21 48.6 -0.2**
KSP Ksiaz 33.23 319 *e*P **P 16 21 48.6 -0.2**
KSP Ksiaz 33.23 319 *e*P **P 16 21 48.6 -0.2**
UPC Upice 33.25 318 AMS AMS 16 37 40.0
KBA Koelnbreinsper 33.63 311 *e*pP **P 16 21 54.8 +2.2**
comp=Z,8.6nm,0.7s
GOPC GO Pecny, Ondr 33.72 317 AMS AMS 16 39 00.0
comp=Z,400nm,16.8s
PRU Pruhonice 33.90 317 AMS AMS 16 39 10.0
comp=Z,400nm,15.1s
GEA0 GERESS Array S 33.98 315 *e*P **P 16 21 59.2 +3.7**
GEA0 GERESS Array S 33.98 315 *e*P **P 16 21 59.2 +3.7**
GERES GERESS Array B 33.98 315 P **P 16 21 55.0 -0.5**
comp=Z,1.1nm,0.6s,baz=115,slow=6.0,SNR=6.7
GERES PcP **PcP 16 24 32.4 -0.8**
comp=Z,1.4nm,0.6s,baz=125,slow=3.7,SNR=5.8
GERES ScP **ScP 16 28 16.1 -0.3**
comp=Z,1.2nm,0.8s,baz=117,slow=4.7,SNR=7.3
GERES LR LR 16 39 57.4
comp=Z,239nm,19.3s,baz=123,slow=44
PVCC Panska Ves 34.09 318 AMS AMS 16 40 00.0
comp=Z,400nm,16.8s
KHC Kasperske Hory 34.16 315 AMS AMS 16 39 00.0
NVS Novosibirsk 34.24 34 *e*P **P 16 21 57.7 +0.2**
NVS *e*S **S 16 27 26.8 +4.2**
NVS pmax pmax
comp=Z,18nm,0.9s
NVS pmax pmax
comp=N,4.0nm,0.5s
NVS pmax pmax
comp=E,3.0nm,0.6s
NVS smax smax
comp=N,17nm,1.7s
NVS smax smax
comp=E,2.0nm,0.4s
ZAA0 Zalesovo Array 34.54 36 *e*P **P 16 21 58.5 -1.6**
comp=E,17nm,0.8s
ZALV Zalesovo Beam 34.54 36 P **P 16 22 00.1 0.0**
comp=E,17nm,0.6s,baz=248,slow=9.3,SNR=80
ZALV LR LR 16 38 13.0
comp=E,425nm,20.6s,baz=248,slow=40
ZALV Zalesovo Beam 34.54 36 *e*P **P 16 21 59.4 -0.7**
WET Wettzell 34.59 315 P **P 16 22 03.8 +3.1**
WET pmax pmax
comp=Z,7.0nm,1.8s
BRG Berggiesshubel 34.60 318 *e*P **P 16 22 02.0 +1.3**
comp=Z,3.0nm,0.6s
BRG *e* 16 22 05.3
comp=Z,7.8nm,0.8s
BRG *e* 16 22 15.4

comp=Z,6.5nm,0.9s
BRG Berggiesshubel 34.60 318 *e*P **P 16 22 02.0 +1.3**
BRG *e* 16 22 05.3
BRG pmax pmax
comp=Z,3.0nm,0.6s
WTTA Wattenberg 34.80 311 *e*pP **P 16 22 04.3 +1.6**
comp=Z,6.3nm,0.8s
LSA Lhasa 34.99 80 *e*P **P 16 22 05.3 +0.5**
comp=Z,29nm,1.4s
LSA Lhasa 34.99 80 *e*P **P 16 22 05.4 +0.5**
LSA pmax pmax
comp=Z,29nm,1.4s
LSA Lhasa 34.99 80 *e*P **P 16 22 05.4 +0.5**
comp=Z,29nm,1.4s
KEST Kesra 35.12 291 P **P 16 22 04.5 -0.9**
comp=Z,4.2nm,0.9s,baz=63,slow=2.3,SNR=3.4
KEST LR LR 16 39 40.8
comp=Z,288nm,18.4s,baz=195,slow=42
MOTA Moosalm 35.17 311 *e*P **P 16 22 04.7 -1.2**
comp=Z,6.0nm,0.5s
MOTA Moosalm 35.17 311 P **P 16 22 04.7 -1.2**
comp=Z,6.0nm,0.5s
NKC Novy Kostel 35.24 316 AMS AMS 16 41 00.0
comp=Z,400nm,13.6s
CLL Collm 35.31 318 *i* P **P 16 22 06.7 -0.1**
comp=Z,14nm,1.1s
CLL *i* pP **pP 16 22 11.3 -3.2**
comp=Z,13nm,1.0s
CLL *e* 16 22 21.0
CLL *e*S **S 16 27 43.0 +3.7**
CLL Collm 35.31 318 *i* P **P 16 22 06.7 -0.1**
CLL *i* 16 22 11.3
CLL *e*S **S 16 27 43.0 +3.7**
CLL pmax pmax
comp=Z,14nm,1.1s
FETA Feichten 35.33 311 *e*P **P 16 22 07.8 +0.5**
comp=Z,9.9nm,0.9s
FETA Feichten 35.33 311 P **P 16 22 07.8 +0.5**
comp=Z,9.9nm,0.9s
TMCR Tamitsa 35.38 350 *e*P **P 16 22 06.0 -1.2**
TMCR pmax pmax
comp=Z,45nm,0.8s
RETA Reutte 35.43 311 *e*P **P 16 22 08.3 +0.3**
comp=Z,8.4nm,0.9s
RETA Reutte 35.43 311 P **P 16 22 08.3 +0.3**
comp=Z,8.4nm,0.9s
JOF Joensuu 35.50 345 *e*P **P 16 22 05.9 -2.3**
JOF pmax pmax
comp=Z,14nm,0.9s
FIA1 FINESS Array S 35.65 340 *e*P **P 16 22 07.8 -1.7**
FINES FINESS Array B 35.65 340 P **P 16 22 07.9 -1.7**
comp=Z,2.5nm,0.4s,baz=146,slow=9.4,SNR=30
FINES LR LR 16 38 02.2
comp=Z,340nm,19.1s,baz=140,slow=38
PALK Pallekele 35.96 122 P **P 16 22 12.0 -0.8**
comp=Z,11nm,0.9s,baz=293,slow=15,SNR=3.6
PALK LR LR 16 37 16.6
comp=Z,214nm,18.9s,baz=297,slow=37
PALK Pallekele 35.96 122 P **P 16 22 12.0 -0.8**
DAVA Damuels 35.96 311 *e*P **P 16 22 11.9 -0.8**
comp=Z,17nm,0.7s
DAVA Damuels 35.96 311 P **P 16 22 11.9 -0.8**
comp=Z,17nm,0.7s
SHL Shillong 36.57 86 P **P 16 22 18.7 +0.6**
SHL pmax pmax
comp=Z,23nm,0.7s
SHL Shillong 36.57 86 P **P 16 22 18.7 +0.6**
comp=Z,23nm,0.7s
ORIF Oris-en-Rattie 38.24 306 *e*P **P 16 22 35.7 +3.7**
ORIF pmax pmax
comp=Z,40nm,1.7s
ORIF Oris-en-Rattie 38.24 306 *e*P **P 16 22 35.7 +3.7**
comp=Z,40nm,1.7s
HVS Khovu-Aksy 38.37 44 *i* P **P 16 22 33.1 +0.1**
HVS pmax pmax
comp=Z,19nm,0.9s
OUL Oulu 38.62 343 P **P 16 22 32.5 -2.2**
VIVF Saint-Julien-l 39.08 306 *e*P **P 16 22 40.2 +1.2**
VIVF pmax pmax
comp=Z,26nm,1.6s
VIVF Saint-Julien-l 39.08 306 *e*P **P 16 22 40.2 +1.2**
comp=Z,26nm,1.6s
HFS Hagfors 39.22 332 P **P 16 22 38.5 -1.4**
comp=Z,6.7nm,0.5s,baz=126,slow=9.8,SNR=50
APA Apatity 39.26 350⇑*i*P P 16 22 32.5 -7.6
APA pmax pmax
comp=Z,11nm,0.7s
APA MLR MLR
comp=Z,400nm,16.0s
LVZ Lovozero 39.38 350 *e*P **P 16 22 39.0 -2.0**
comp=Z,25nm,0.8s
LVZ Lovozero 39.38 350 *e*P **P 16 22 39.1 -2.0**
LVZ pmax pmax
comp=Z,25nm,0.8s
AVF Avril sur Loir 40.24 309 *e*P **P 16 22 50.1 +1.6**
AVF pmax pmax
comp=Z,54nm,1.7s
AVF Avril sur Loir 40.24 309 *e*P **P 16 22 50.1 +1.6**
comp=Z,54nm,1.7s
NC405 NORSAR Array S 40.58 332 *e*P **P 16 22 47.6 -3.5**
NB201 NORSAR Array S 40.72 332 *e*P P 16 22 47.5 -4.8
NB2 NORSAR Subarra 40.74 332 P **P 16 22 50.3 -2.2**
comp=Z,5.9nm,0.7s,baz=122,slow=8.6
NB2 NORSAR Subarra 40.74 332 P **P 16 22 56.2 +3.7**
NB2 pmax pmax
comp=Z,7.0nm,0.7s
NOA NORSAR Array B 40.74 332 P **P 16 22 50.5 -2.0**
comp=Z,2.2nm,0.5s,baz=127,slow=9.2,SNR=15
NOA PP **PP 16 24 27.4 +0.9**
comp=Z,3.6nm,0.7s,baz=129,slow=12,SNR=4.0
NOA LR LR 16 41 03.7
comp=Z,216nm,19.4s,baz=120,slow=38
TAM Tamanrasset 40.91 271 *e*P **P 16 22 55.7 +1.2**
comp=Z,5.8nm,0.8s
TAM Tamanrasset 40.91 271 *e*P **P 16 22 55.7 +1.2**
TAM pmax pmax
comp=Z,6.0nm,0.8s
TCF Toulx Ste Croi 40.97 308 *e*P **P 16 22 56.8 +2.2**
TCF pmax pmax
comp=Z,39nm,1.4s
TCF Toulx Ste Croi 40.97 308 *e*P **P 16 22 56.8 +2.2**
comp=Z,39nm,1.4s
NC204 NORSAR Array S 41.05 332 *e*P **P 16 22 56.3 +1.2**
GTA Gaotai 41.13 63⇑P **P 16 22 56.8 +0.6**
GTA pP sP 16 23 06.5 -0.5
GTA sP pP 16 23 10.7 +6.8
GTA S **S 16 29 08.2 +0.3**
GTA sS sS 16 29 23.7 +3.1
GTA SS **SS 16 32 10.0 -0.8**
GTA pmax pmax
comp=Z,18nm,1.2s
GTA pmax pmax
comp=Z,120nm,4.8s
GTA LR LR
comp=Z,340nm,15.2s
GTA LR LR
comp=Z,470nm,14.8s
GTA LR LR
comp=Z,610nm,16.8s
RJF Les Rejaudoux 41.35 306 *e*P **P 16 23 01.3 +3.6**
RJF pmax pmax
comp=Z,17nm,1.2s
RJF Les Rejaudoux 41.35 306 *e*P **P 16 23 01.3 +3.6**
comp=Z,17nm,1.2s
LFF La Frestale 41.87 305 *e*P **P 16 23 04.1 +2.1**
LFF pmax pmax
comp=Z,25nm,1.2s
EPF Esparros 42.08 303 *e*P **P 16 23 05.0 +1.2**
EPF pmax pmax
comp=Z,6.0nm,0.8s
EPF Esparros 42.08 303 *e*P **P 16 23 05.0 +1.2**
comp=Z,6.0nm,0.8s
ARCES ARCESS Array B 42.38 347 P **P 16 23 04.9 -0.9**
comp=Z,2.5nm,0.6s,baz=154,slow=7.7,SNR=15
ARCES PP **PP 16 24 44.2 +0.1**
comp=Z,4.1nm,0.8s,baz=141,slow=7.8,SNR=4.4
ARCES PcP **PcP 16 24 59.0 +0.3**
comp=Z,4.1nm,0.7s,baz=134,slow=3.5,SNR=5.7
ARCES LR LR 16 44 03.9
comp=Z,240nm,18.2s,baz=140,slow=41
MOY Mondy 42.93 45 *e*P **P 16 23 11.8 +1.2**
MOY pmax pmax
comp=Z,45nm,1.4s
FLN La Foliniere 43.06 311 *e*P **P 16 23 14.0 +2.4**
FLN pmax pmax
comp=Z,138nm,2.1s

SJPF Ste Jean 43.23 303 *eP* **P 16 23 12.6 -0.4**
SJPF Ste Jean 43.23 303 *eP* **P 16 23 12.6 -0.4**
GRR Gorron 43.27 310 *eP* **P 16 23 14.7 +1.4**
GRR pmax pmax
comp=Z,97nm,1.7s
ZAK Zakamensk 44.15 47 *eP* **P 16 23 20.4 -0.1**
ZAK *e* 16 25 04.5
ZAK pmax pmax
comp=Z,10.0nm,1.1s
ZAK pmax pmax
comp=Z,7.0nm,1.4s
TLY Talaya 44.56 45 P **P 16 23 22.7 -1.0**
comp=Z,2.5nm,0.4s,baz=213,slow=18,SNR=3.6
TLY Talaya 44.56 45 *eP* **P 16 23 26.6 +3.0**
comp=Z,9.8nm,0.9s
TLY Talaya 44.56 45 P **P 16 23 25.1 +1.4**
SNR=8.1
TLY Talaya 44.56 45 P **P 16 23 25.1 +1.4**
SNR=8.1
TLY Talaya 44.56 45 *eP* **P 16 23 25.5 +1.9**
TLY *eS* **S 16 29 59.3 +1.6**
TLY *e*SSS SSS 16 34 10.7
TLY pmax pmax
comp=Z,16nm,1.3s
TLY MLR MLR
comp=Z,1μm,16.0s
LZH Lanzhou 44.60 67 ⇑P **P 16 23 25.0 +0.7**
LZH pP sP 16 23 35.2 0.0
LZH sP pP 16 23 39.0 +6.9
LZH PP **PP 16 25 10.7 +2.2**
LZH *eS* **S 16 29 58.0 -0.9**
LZH sS sS 16 30 14.9 +3.2
LZH pmax pmax
comp=Z,82nm,1.3s
LZH pmax pmax
comp=Z,240nm,4.9s
LZH LR LR
comp=Z,660nm,14.0s
LZH LR LR
comp=Z,1μm,13.6s
LZH LR LR
comp=Z,1μm,16.3s
CMAI Chiengmai2 44.66 91 P **P 16 23 29.7 +4.7**
comp=Z,234nm,0.7s
QUIF Quistinic 44.77 310 *eP* **P 16 23 25.8 +0.5**
QUIF pmax pmax
comp=Z,60nm,1.2s
NRIK Noril'sk 44.90 18 P **P 16 23 26.3 +0.3**
comp=Z,8.1nm,0.4s,baz=151,slow=3.2,SNR=12
NRIK LR LR 16 45 54.5
comp=Z,566nm,18.4s,baz=216,slow=41
CHTO Chiang Mai 45.01 93 P **P 16 23 30.6 +3.0**
comp=Z,63nm,1.2s
CHTO Chiang Mai 45.01 93 *eP* **P 16 23 25.6 -2.0**
comp=Z,14nm,1.2s
CHTO Chiang Mai 45.01 93 *eP* **P 16 23 25.6 -2.0**
CHTO pmax pmax
comp=Z,14nm,1.2s
CMAR Chiang Mai Arr 45.15 93 P **P 16 23 28.0 -0.7**
comp=Z,3.4nm,0.9s,baz=290,slow=7.7,SNR=12
CMAR PcP **PcP 16 25 09.2 +0.2**
comp=Z,2.5nm,0.7s,baz=293,slow=4.8,SNR=5.7
CMAR LR LR 16 46 47.3
comp=Z,200nm,18.6s,baz=287,slow=42
CMAR Chiang Mai Arr 45.15 93 *i P* **P 16 23 30.5 +1.8**
CMAR pmax pmax
comp=Z,4.0nm,0.9s
ESDC Sonseca Array 45.42 298 P **P 16 23 30.1 -0.6**
comp=Z,0.5nm,0.4s,baz=71,slow=8.5,SNR=2.4
ESDC PcP **PcP 16 25 09.2 -0.4**
comp=Z,2.2nm,0.8s,baz=50,slow=3.7,SNR=3.8
CD2 Chengdu 45.44 75 P **P 16 23 29.0 -1.9**
CD2 pmax pmax
comp=Z,10.0nm,0.6s
EKA Eskdalemuir Ar 45.74 320 P **P 16 23 32.0 -0.9**
comp=Z,5.7nm,0.6s,baz=107,slow=7.9,SNR=16
EKA Eskdalemuir Ar 45.74 320 P **P 16 23 32.0 -0.9**
SONM Songino Array 45.97 51 P **P 16 23 34.9 -0.2**
comp=Z,8.8nm,1.1s,baz=261,slow=8.3,SNR=15
SONM LR LR 16 45 22.1
comp=Z,566nm,19.0s,baz=266,slow=39
SONA1 Songino Array 45.98 51 *eP* **P 16 23 35.1 0.0**
KMI Kunming 46.09 83 P **P 16 23 35.7 -0.7**
KMI pP sP 16 23 47.2 -0.1
KMI sP pP 16 23 52.3 +8.1
KMI S **S 16 30 26.6 +5.7**
KMI pmax pmax
comp=Z,26nm,1.1s
KMI pmax pmax
comp=Z,110nm,3.4s
KMI LR LR
comp=Z,320nm,18.2s
KMI LR LR
comp=Z,210nm,18.0s
KMI LR LR
comp=Z,200nm,22.3s
ULN Ulaanbaatar 46.42 51 *eP* **P 16 23 38.7 +0.1**
comp=Z,14nm,0.9s
ULN Ulaanbaatar 46.42 51 P **P 16 23 39.0 +0.4**
SNR=11
ULN Ulaanbaatar 46.42 51 P **P 16 23 39.0 +0.4**
SNR=11
ULN Ulaanbaatar 46.42 51*ceP* **P 16 23 38.9 +0.4**
ULN pmax pmax
comp=Z,18nm,1.0s
NANT Nan 46.54 92 P **P 16 23 41.9 +2.2**
comp=Z,3.7nm,1.1s
MDT Midelt 46.94 289 LR LR 16 47 45.5
comp=Z,92nm,18.1s,baz=84,slow=42
PHIT Phitsanulok 46.95 94 P **P 16 23 47.1 +4.2**
comp=Z,20nm,1.0s
PBRG Braganca 47.35 301 *eP* **P 16 23 45.7 -0.1**
comp=Z,27nm,1.7s
PBRG Braganca 47.35 301 *eP* **P 16 23 45.7 -0.1**
MVO Moncorvo 47.62 300 *eP* **P 16 23 49.2 +1.2**
comp=Z,27nm,2.0s
MVO Moncorvo 47.62 300 *eP* **P 16 23 49.2 +1.2**
PBKT Sadao Pong 47.69 94 P **P 16 23 50.1 +1.5**
comp=Z,23nm,0.9s,comp=Z,630nm
PBKT Sadao Pong 47.69 94 *eP* **P 16 23 47.5 -1.2**
comp=Z,19nm,0.9s
PBAR Barrancos 47.98 296 *eP* **P 16 23 51.1 +0.5**
comp=Z,30nm,1.5s
PBAR Barrancos 47.98 296 *eP* **P 16 23 51.1 +0.5**
PVRL Vila Real 48.13 300 *eP* **P 16 23 53.3 +1.4**
comp=Z,27nm,1.8s
PVRL Vila Real 48.13 300 *eP* **P 16 23 53.3 +1.4**
TOA0 Torodi Ar. Sit 48.15 261 *eP* **P 16 23 52.0 -0.3**
comp=Z,21nm,0.8s
TORD Torodi Ar. Bea 48.15 261 P **P 16 23 52.3 0.0**
comp=Z,13nm,0.7s,baz=55,slow=8.0,SNR=78
TORD ScP **ScP 16 29 09.6 -2.9**
comp=Z,1.0nm,0.9s,baz=57,slow=5.2,SNR=2.3
TORD LR LR 16 46 21.2
comp=Z,517nm,18.6s,baz=60,slow=39
PHET Kaeng Krachan 48.17 100 P P 16 24 00.4 +8.0
comp=Z,17nm,1.0s
POLO Lamas de Olo 48.18 301 *eP* **P 16 23 53.5 +1.2**
comp=Z,20nm,1.8s
POLO Lamas de Olo 48.18 301 *eP* **P 16 23 53.5 +1.2**
PVIS Viseu 48.32 300 *eP* **P 16 23 54.2 +0.8**
comp=Z,33nm,1.4s
PVIS Viseu 48.32 300 *eP* **P 16 23 54.2 +0.8**
PGAV Gavieira, Arco 48.48 301 *eP* **P 16 23 56.9 +2.3**
comp=Z,60nm,1.6s
PGAV Gavieira, Arco 48.48 301 *eP* **P 16 23 56.9 +2.3**
EVO Evora 48.69 297 *eP* **P 16 23 55.2 -0.9**
comp=Z,29nm,1.6s
EVO Evora 48.69 297 *eP* **P 16 23 55.2 -0.9**
PMTG Montargil 48.77 298 *eP* **P 16 23 59.1 +2.3**
comp=Z,17nm,1.4s
PMTG Montargil 48.77 298 *eP* **P 16 23 59.1 +2.3**
CHAI Chaiyaphum 48.85 95 P P 16 24 05.1 +7.4
comp=Z,4.8nm,1.1s
PCAS Casmilo, Conde 48.86 299 *eP* **P 16 24 00.8 +3.4**
PCAS Casmilo, Conde 48.86 299 *eP* **P 16 24 00.8 +3.4**
BTO Baotou 48.86 60 *eP* **P 16 23 56.9 -0.7**
BTO pmax pmax
comp=Z,6.0nm,0.8s
MESJ Messejana 48.95 296 *eP* **P 16 23 59.6 +1.5**
comp=Z,28nm,1.8s
MESJ Messejana 48.95 296 *eP* **P 16 23 59.6 +1.5**
NONG Nongkai 48.96 91 P **P 16 24 00.3 +1.9**
comp=Z,104nm,0.9s,comp=Z,5μm
XAN Xi'an 49.05 69 P **P 16 23 58.1 -0.9**
XAN pP pP 16 24 08.2 +1.3
XAN sP sP 16 24 12.3 +2.3
XAN PP **PP 16 25 49.2 -3.4**
XAN ScS ScS 16 33 46.8 -3.0
XAN pmax pmax
comp=Z,29nm,0.7s
XAN pmax pmax
comp=Z,120nm,3.0s
XAN LR LR
comp=Z,380nm,14.2s
XAN LR LR
comp=Z,480nm,14.2s
XAN LR LR
comp=Z,400nm,15.9s
GYA Guiyang 49.06 79⇑*iP* **P 16 24 00.8 +1.5**
GYA pP sP 16 24 12.7 +2.4
GYA PP **PP 16 25 54.3 +1.4**
GYA S **S 16 31 01.0 -1.8**
GYA sS sS 16 31 17.8 +2.0
GYA SS **SS 16 34 28.2 -5.8**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,130nm,5.4s
GYA LR LR
comp=Z,530nm,17.5s
GYA LR LR
comp=Z,500nm,17.2s
GYA LR LR
comp=Z,480nm,17.8s
SRAK Srakaew 49.74 97 P P 16 24 10.7 +6.3
comp=Z,133nm,1.0s,comp=Z,963nm
LSZ Lusaka 49.74 209 P **P 16 24 05.8 +1.4**
comp=Z,6.4nm,0.8s,baz=28,slow=8.9,SNR=11
HHC Hu-ho-hao-te 49.99 60 *eP* **P 16 24 06.7 +0.5**
HHC pP sP 16 24 15.7 -1.5
HHC sP pP 16 24 20.3 +6.2
HHC S **S 16 31 14.2 -1.3**
HHC ScS **ScS 16 33 52.3 -3.8**
HHC pmax pmax
comp=Z,12nm,0.7s
HHC pmax pmax
comp=Z,75nm,3.7s
HHC LR LR
comp=Z,260nm,14.7s
HHC LR LR
comp=Z,210nm,15.6s
HHC LR LR
comp=Z,260nm,14.7s
SKNT Sakolnakorn 50.13 92 P **P 16 24 08.5 +1.1**
comp=Z,6.2nm,1.0s
ENH Enshi 50.39 74 *eP* **P 16 24 08.6 -0.7**
comp=Z,11nm,0.5s
ENH Enshi 50.39 74 *eP* **P 16 24 08.6 -0.7**
comp=Z,11nm,0.5s
CIT Chita 50.71 45 *eP* **P 16 24 11.5 +0.1**
CIT *e* 16 24 14.7
SPITS Spitsbergen Ar 50.89 351 P **P 16 24 12.1 -0.3**
comp=Z,6.8nm,0.6s,baz=151,slow=3.8,SNR=14
SPITS LR LR 16 49 32.8
comp=Z,154nm,19.0s,baz=140,slow=40
BOD Bodaibo 51.24 38 *eP* **P 16 24 15.0 -0.2**
BOD pmax pmax
comp=Z,53nm,1.1s
KOWA Kowa 52.47 266 P **P 16 24 25.1 +0.1**
comp=Z,29nm,0.5s,baz=61,slow=7.8,SNR=40
KOWA LR LR 16 48 41.6
comp=Z,342nm,18.2s,baz=55,slow=38
KOWA Kowa 52.47 266 *eP* **P 16 24 24.3 -0.7**
comp=Z,32nm,0.6s
GSI Gunungsitoli 52.72 114 P **P 16 24 30.9 +4.1**
GSI Gunungsitoli 52.72 114 *eP* **P 16 24 27.1 +0.3**
comp=Z,37nm,1.0s
PSI Prapat 52.92 111 LR LR 16 47 50.7
comp=Z,145nm,21.8s,baz=60,slow=37
BJI Beijing 53.59 60 P **P 16 24 32.9 0.0**
BJI S **S 16 32 05.5 +0.7**
BJI pmax pmax
comp=Z,12nm,0.7s
BJI LR LR
comp=Z,570nm,20.6s
BJI LR LR
comp=Z,500nm,18.1s
BJI LR LR
comp=Z,560nm,24.5s
MATP Matopo 54.26 206 P **P 16 24 38.6 +0.5**
comp=Z,10nm,0.9s,baz=350,slow=6.1,SNR=12
MATP LR LR 16 48 31.7
comp=Z,256nm,19.2s,baz=21,slow=37
WHN Wuhan 54.36 72 ⇑P **P 16 24 41.1 +2.5**
WHN S **S 16 32 19.7 +4.3**
WHN LR LR
comp=Z,700nm,11.4s
WHN LR LR
comp=Z,480nm,9.9s
WHN LR LR
comp=Z,790nm,20.9s
TIA Tai'an 55.13 65 P **P 16 24 44.1 -0.1**
TIA pmax pmax
comp=Z,8.0nm,0.7s
DBIC Dimbokro 56.95 258 P **P 16 24 57.9 +0.4**
comp=Z,32nm,0.7s,baz=35,slow=7.3,SNR=22
DBIC LR LR 16 51 36.3
comp=Z,473nm,19.3s,baz=40,slow=38
DBIC Dimbokro 56.95 258 *eP* **P 16 24 57.2 -0.3**
comp=Z,32nm,0.6s
KIC Kosan Boka 57.01 257 *eP* **P 16 24 58.2 +0.3**
comp=Z,66nm,0.9s
TIC Toumodi 57.10 258 *eP* **P 16 24 58.7 +0.1**
LIC Lamto 57.32 257 *eP* **P 16 25 00.3 +0.2**
comp=Z,139nm,0.6s
NJ2 Nanjing 57.62 69 *eP* **P 16 25 01.8 -0.1**
NJ2 pmax pmax
comp=Z,17nm,0.7s
KRJI Kerinci 57.85 114 P P 16 25 09.4 +5.5
TIXI Tiksi 58.36 21 *eP* **P 16 25 05.8 -0.7**
comp=Z,7.7nm,1.0s
TIXI Tiksi 58.36 21*ceP* **P 16 25 06.1 -0.4**
TIXI pmax pmax
comp=Z,23nm,2.5s
ZEA Zeya 58.85 42 *eP* **P 16 25 10.9 +0.6**
ZEA pmax pmax
comp=E,18nm,1.0s
ZEA pmax pmax
comp=Z,26nm,1.0s
ZEA MLR MLR
comp=Z,600nm,13.0s
ZEA MLR MLR
comp=E,400nm,14.0s
YAK Yakutsk 59.10 33 *eP* **P 16 25 09.3 -2.5**
YAK *e* 16 25 58.2
YAK *e* 16 27 26.7
YAK *eS* **S 16 33 14.1 -3.0**
YAK *e* 16 34 56.3
YAK pmax pmax
comp=Z,18nm,1.2s
YAK pmax pmax
comp=N,3.0nm,1.6s
YAK pmax pmax
comp=E,6.0nm,1.2s
YAK pmax pmax
comp=Z,33nm,1.9s
YAK pmax pmax
comp=E,21nm,2.3s
YAK pmax pmax
comp=N,22nm,2.1s
YAK smax smax
comp=E,87nm,13.9s
YAK MLR MLR
comp=Z,405nm,13.0s
MASI Maura Aman, Be 59.10 114 P **P 16 25 17.0 +4.4**
LBTB Lobatse 59.53 207 *eP* **P 16 25 17.1 +1.7**
comp=Z,23nm,0.8s
LBTB Lobatse 59.53 207 *eP* **P 16 25 17.1 +1.7**
LBTB pmax pmax
comp=Z,23nm,0.8s
CN2 Changchun 59.59 54 *eP* **P 16 25 15.2 -0.4**
CN2 *ep*P sP 16 25 26.0 -0.6
CN2 *eS* **S 16 33 21.9 -2.2**
CN2 pmax pmax
comp=Z,20nm,1.0s
CN2 LR LR
comp=Z,350nm,16.0s
CN2 LR LR
comp=Z,340nm,16.0s
CN2 LR LR
comp=Z,450nm,18.0s
MDSI Maura Dua 61.45 114 P **P 16 25 29.1 +0.5**
comp=Z,17nm,1.1s
LWLI Liwa 61.67 115 P **P 16 25 32.9 +2.6**
comp=Z,36nm,0.5s
SUMG Summit 61.69 340 *eP* **P 16 25 30.5 +0.6**
comp=Z,10nm,0.9s
SUMG Summit 61.69 340 *eP* **P 16 25 30.5 +0.6**
SUMG pmax pmax
comp=Z,10.0nm,0.9s
KLR Kul'dur 62.52 47 *i P* **P 16 25 34.7 -0.6**
BOSA Boshof 62.91 205 P **P 16 25 37.3 -0.9**
comp=Z,15nm,0.7s,baz=11,slow=6.1,SNR=14
BOSA LR LR 16 54 23.7
comp=Z,381nm,18.8s,baz=38,slow=37
BOSA Boshof 62.91 205 *eP* **P 16 25 40.5 +2.3**
comp=Z,24nm,0.9s
BOSA Boshof 62.91 205 *eP* **P 16 25 40.5 +2.3**
BOSA pmax pmax
comp=Z,25nm,0.9s
TJN Taejon 63.03 62*ceP* **P 16 25 37.5 -1.5**
TJN Taejon 63.03 62 *eP* **P 16 25 37.5 -1.5**
KSAR Wonju Array Be 63.10 60 P **P 16 25 38.9 -0.5**
KSAR Wonju Array Be 63.10 60 P **P 16 25 38.9 -0.5**
KSAR Wonju Array Be 63.10 60 P **P 16 25 38.9 -0.5**
KSRS Korea Array 63.13 60 P **P 16 25 38.9 -0.6**
comp=Z,6.8nm,0.6s,baz=280,slow=6.9,SNR=46
KSRS LR LR 16 56 44.5
comp=Z,343nm,19.0s,baz=290,slow=40
MSHR Mys Shultsa 63.94 54 *i P* **P 16 25 44.1 -0.7**
USRK Ussuriysk Ar. 64.04 52 P **P 16 25 43.7 -1.8**
comp=Z,2.9nm,0.6s,baz=250,slow=4.4,SNR=4.6
USRK LR LR 16 57 10.0
comp=Z,370nm,18.8s,baz=269,slow=39
GRNR Gornyy 65.01 44 *eP* **P 16 25 52.3 +0.6**
LEM Lembang 65.58 114 LR LR 16 56 26.8
comp=Z,107nm,19.4s,baz=260,slow=38
TGY Tagaytay City 66.11 87 LR LR 16 57 00.7
comp=Z,157nm,19.3s,baz=309,slow=38
JNU Nakatsue 66.86 64 LR LR 16 58 46.4
comp=Z,203nm,18.4s,baz=297,slow=39
TEY Ternei 66.91 50 *eP* P 16 26 10.0 +6.0
TYV Tymovskoe 68.72 43 *eP* **P 16 26 12.8 -2.5**
TYV *e* 16 35 11.6
TYV pmax pmax
comp=Z,13nm,1.8s
SEY Seymchan 69.01 29*ceP* **P 16 26 17.6 +0.7**
MA2 Magadan 69.67 32 *eP* **P 16 26 21.1 0.0**
comp=Z,9.8nm,0.9s
MA2 Magadan 69.67 32⇑*eP* **P 16 26 22.0 +0.9**
MA2 pmax pmax
comp=Z,13nm,1.3s
YSS Yuzh-Sakhalins 70.23 47⇑*eP* **P 16 26 23.6 -1.1**
YSS *e* 16 26 26.6
YSS pmax pmax
comp=Z,10.0nm,0.6s
YSS MLR MLR
comp=Z,360nm,13.0s
YSS MLR MLR
comp=E,340nm,14.0s
INU Inuyama 70.73 60 *eP* **P 16 26 29.9 +1.9**
comp=E,19nm,1.0s
INU Inuyama 70.73 60 *eP* **P 16 26 29.9 +1.9**
comp=E,19nm,1.0s
MJB9 Matsu-Tunnel 71.14 58 *eP* **P 16 26 30.2 -0.4**
comp=E,11nm,1.0s
MAJO Matsushiro 71.15 58 *i P* **P 16 26 31.5 +1.0**
MAJO pmax pmax
comp=Z,8.0nm,1.0s
MAT Matsushiro 71.15 58 P **P 16 26 29.6 -0.9**
MJAR Matsushiro Arr 71.15 58 P **P 16 26 28.8 -1.8**
comp=Z,2.9nm,0.8s,baz=289,slow=7.6,SNR=4.6
MJAR LR LR 17 01 31.1
comp=Z,125nm,19.2s,baz=260,slow=39
ASAJ Asahikawa 71.23 49 P **P 16 26 29.4 -1.4**
comp=Z,3.5nm,0.7s,baz=239,slow=5.9,SNR=5.3
ASAJ LR LR 17 00 39.7
comp=Z,440nm,18.8s,baz=296,slow=38
BILL Bilibino 71.58 21 *eP* **P 16 26 33.0 +0.4**
comp=Z,18nm,1.0s
BILL Bilibino 71.58 21*c iP* **P 16 26 32.7 +0.2**
BILL *e* 16 26 53.6
BILL *e* 16 29 14.1
BILL pmax pmax
comp=Z,19nm,1.0s
BILL MLR MLR
comp=Z,417nm,16.0s
DAV Davao City (W) 73.40 91 LR LR 17 02 34.5
comp=Z,86nm,20.0s,baz=324,slow=39
MRSI Marisa 73.50 99 P P 16 26 49.7 +4.8
JHJ Hachijo jima 2 73.73 61 LR LR 17 02 45.7
comp=Z,228nm,18.2s,baz=27,slow=39
PETK Petropavlovsk- 76.09 36 P **P 16 26 58.1 -1.2**
comp=Z,8.6nm,1.0s,baz=354,slow=1.5,SNR=5.7
PETK LR LR 17 03 37.9
comp=Z,300nm,18.9s,baz=298,slow=38
PETK Petropavlovsk- 76.09 36 *eP* **P 16 27 00.1 +0.9**
PETK Petropavlovsk- 76.09 36 *eP* **P 16 27 00.2 +0.9**
TNTI Ternate 78.03 96 *eP* **P 16 27 08.3 -2.5**
comp=Z,37nm,1.0s
SCHQ Schefferville 80.23 329 P **P 16 27 22.1 0.0**
comp=Z,6.4nm,0.8s,baz=88,slow=7.9,SNR=3.8
SCHQ LR LR 17 04 22.5
comp=Z,68nm,19.7s,baz=358,slow=37
AAI Ambon 80.99 99 P **P 16 27 29.2 +2.3**
AAI pmax pmax
comp=Z,62nm,1.1s
INK Inuvik 82.21 2 *eP* **P 16 27 32.5 +0.1**
comp=Z,7.1nm,1.0s
INK Inuvik 82.21 2 *eP* **P 16 27 32.5 +0.1**
INK pmax pmax
comp=Z,7.0nm,1.0s
IM3 Indian Mountai 82.75 10 *eP* **P 16 27 34.7 -0.6**
IL1 Eielson Array 84.81 7 *eP* **P 16 27 44.8 -1.1**
ILAR Eielson Array 84.81 7 P **P 16 27 45.2 -0.7**
comp=Z,2.7nm,0.7s,baz=322,slow=3.9,SNR=25
ILAR PP **PP 16 31 06.8 +5.4**
comp=Z,0.8nm,0.9s,baz=337,slow=7.6,SNR=4.3
ILAR LR LR 17 13 22.0
comp=Z,61nm,18.2s,baz=330,slow=41
BPAW Bear Paw Mtn. 84.93 9 *eP* **P 16 27 46.6 +0.1**
comp=Z,20nm,0.8s
EGAK Eagle 85.35 5 *eP* **P 16 27 48.7 +0.1**
comp=Z,17nm,1.1s
MCK McKinley 85.56 9 *eP* **P 16 27 49.8 +0.1**
comp=Z,34nm,1.4s
MCK McKinley 85.56 9 *eP* **P 16 27 49.8 +0.1**
MCK pmax pmax
comp=Z,34nm,1.4s
RND Reindeer 85.89 9 *eP* **P 16 27 50.0 -1.3**
comp=Z,8.3nm,0.8s
RND Reindeer 85.89 9 *eP* **P 16 27 50.0 -1.3**
RND pmax pmax
comp=Z,8.0nm,0.8s
SCRK Sand Creek 85.89 6 *eP* **P 16 27 52.1 +0.7**
comp=Z,14nm,0.9s
PPLA Purkeypile 85.89 10 *eP* **P 16 27 49.8 -1.7**
comp=Z,13nm,0.9s
RIDG Independ'e Rid 86.04 7 *eP* **P 16 27 52.0 -0.1**
comp=Z,17nm,1.4s
DAWY Dawson 86.18 4 *eP* **P 16 27 52.5 -0.3**
comp=Z,18nm,1.4s
GUMO Guam 86.91 76 LR LR 17 10 31.8
comp=Z,59nm,20.6s,baz=279,slow=38
FCC Fort Churchill 87.10 342 *eP* **P 16 27 57.5 +0.3**
comp=Z,8.9nm,0.9s
FCC Fort Churchill 87.10 342 *eP* **P 16 27 57.5 +0.3**
FCC pmax pmax
comp=Z,9.0nm,0.9s
YKA Yellowknife Ar 87.35 353 P **P 16 27 58.1 -0.3**
comp=Z,2.5nm,0.7s,baz=9.0,slow=5.4,SNR=8.1
YKA LR LR 17 13 39.9
comp=Z,10nm,18.7s,baz=10.0,slow=40
KDAK Kodiak Island 90.65 12 *i P* **P 16 28 14.6 +0.6**
FFC Flin Flon 92.66 345 *eP* **P 16 28 26.1 +2.7**
comp=Z,7.0nm,1.1s
FFC Flin Flon 92.66 345 *eP* **P 16 28 26.1 +2.7**
FFC pmax pmax
comp=Z,7.0nm,1.1s
WRA Warramunga Arr 94.38 110 P **P 16 28 30.9 -1.1**
comp=Z,0.9nm,0.4s,baz=314,slow=4.1,SNR=14
WRA Warramunga Arr 94.38 110 *i P* **P 16 28 32.0 +0.1**
WRA pmax pmax
comp=Z,1.0nm,0.4s
ULM Lac du Bonnet 95.04 339 P **P 16 28 32.2 -2.2**
comp=Z,2.2nm,0.8s,baz=333,slow=4.5,SNR=2.0
ULM LR LR 17 13 10.5

comp=Z,150nm,20.1s,baz=34,slow=37
ASAR Alice Springs 95.87 114 P **P 16 28 37.2 -1.5**
comp=Z,1.8nm,0.8s,baz=307,slow=4.7,SNR=28
AS01 Alice Springs 95.91 114 *e*P **P 16 28 37.3 -1.6**
MAW Mawson 97.46 175 LR LR 17 10 38.6
comp=Z,83nm,18.2s,baz=46,slow=34
WVT Waverly 103.78 327 *e*Pdif **Pdif 16 29 14.9 +1.0**
WVT Waverly 103.78 327 *e*P **Pdif 16 29 14.9 +1.0**
NVAR Mina Array Bea 111.42 351 PKiKP **PKiKP 16 33 46.5 +0.2**
comp=Z,0.5nm,0.5s,baz=273,slow=0.7,SNR=5.6
TXAR Lajitas Array 116.38 335 PKP **PKPdf 16 33 53.3 -2.6**
comp=Z,0.3nm,0.8s,baz=60,slow=2.2,SNR=3.2
QSPA South Pole Qui 119.57 180 *e*PKPdf **PKPdf 16 34 00.5 -0.2**
LPAZ La Paz 122.72 269 PKP **PKPdf 16 34 07.7 -1.2**
comp=Z,1.6nm,0.7s,baz=211,slow=3.3,SNR=7.3

TEH ***08*** *16:21:18.7, 29°.77N×50°.57E, h2km, ML3.6*
THR ***08*** *16:21:19.5±0.5, 29°.80N×50°.57E, h32km±7km, ML3.7*
CSEM ***08*** *16:21:19.0±0.6, 29°.80N×50°.65E, h2km, ML3.6, Error ellipse: s-maj=16.7km s-min=7.0km az=60.0*
ISCJB ***08*** *16:21:20.3±0.9, 29°.81N±0°.05×50°.62E±0°.08, h22km, Error ellipse: s-maj=10.9km s-min=5.1km az=149.0*
ISC 08 16:21:20.6±1.3, 29°.79N±0°.05×50°.62E±0°.07, h22km, n29, σ1§07/34, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKAZ	**Kazeroun**	**1.06**	**90**	*e*Pg	**Pn**	**16 21 38.1**	**-2.3**
IKAZ				*e*Sg	**Sb**	**16 21 53.7**	**-0.3**
IKAZ				*e*		16 21 58.4	
	comp=Z,19μm,0.2s						
IKAZ	**Kazeroun**	**1.06**	**90**	*e*Pg	**Pn**	**16 21 38.2**	**-2.2**
AHBU	**AHRAM**	**1.09**	**147**	*e*Pg	**Pn**	**16 21 40.3**	**-0.3**
AHBU				*e*Sg	**Sb**	**16 21 55.5**	**+0.8**
IPAR	**Pars**	**2.11**	**88**	*e*Pn	**Pn**	**16 21 55.7**	**+0.9**
IPAR				*e*		16 22 36.5	
	comp=Z,5μm,0.4s						
IBRJ	**Brojen**	**2.18**	**14**	*e*Pn	**Pn**	**16 21 55.9**	**+0.1**
IBRJ				*e*Sg	**Sb**	**16 22 27.5**	**+1.3**
IBRJ				*e*		16 22 38.7	
	comp=Z,3μm,0.3s						
ZNGN	**Zangian**	**2.33**	**5**	*e*Pn	**Pb**	**16 22 00.6**	**-1.5**
ZNGN				*e*		16 22 36.2	
	comp=Z,99nm,0.3s						
ZNGN	**Zangian**	**2.33**	**5**	*e*Pn	**Pb**	**16 22 00.5**	**-1.5**
IRAM	**Ramesheh**	**2.52**	**37**	*e*		16 22 09.4	
	comp=Z,3μm,0.2s						
IRAM				*e*Pn	**Pn**	**16 22 01.2**	**+0.8**
GHIR	**Ghir-Karzin**	**2.56**	**125**	*e*Pn	**Pn**	**16 22 01.5**	**+0.7**
GHIR				*e*Sg	**Sb**	**16 22 38.9**	**+2.0**
ROKH	**ROKH**	**2.57**	**8**	*e*Pn	**Pn**	**16 22 01.9**	**+0.8**
ROKH				*e*		16 22 48.1	
	comp=Z,99nm,0.5s						
ROKH	**ROKH**	**2.57**	**8**	*e*Pn	**Pn**	**16 22 01.9**	**+0.8**
SHGR	**Shooshtar-Gavs**	**2.79**	**326**	*e*Pn	**Pn**	**16 22 03.4**	**-0.5**
SHGR				AML	AML	16 23 05.8	
	comp=N,248nm,0.7s						
SHGR				AML	AML	16 23 09.7	
	comp=E,368nm,0.5s						
SHGR	**Shooshtar-Gavs**	**2.79**	**326**	*e*Pn	**Pn**	**16 22 03.4**	**-0.5**
IGAR	**Gharneh**	**2.87**	**25**	*e*		16 22 08.7	
	comp=Z,1μm,0.1s						
IGAR				*e*Pn	**Pn**	**16 22 05.8**	**+0.5**
IPIR	**Pirpir**	**2.89**	**4**	*e*		16 22 50.2	
	comp=Z,3μm,0.4s						
IPIR				*e*Pn	**Pn**	**16 22 06.7**	**+1.1**
ISAD	**Sadrabad**	**3.38**	**50**	*e*Pn	**Pn**	**16 22 12.5**	**+0.2**
ISAD				*e*		16 22 56.5	
	comp=Z,979nm,0.2s						
ISAD	**Sadrabad**	**3.38**	**50**	*e*Pn	**Pn**	**16 22 12.5**	**+0.2**
IZEF	**Zefreh**	**3.42**	**25**	*e*Pn	**Pn**	**16 22 13.2**	**+0.3**
IZEF				*e*		16 22 14.2	
	comp=Z,807nm,0.1s						
IZEF	**Zefreh**	**3.42**	**25**	*e*Pn	**Pn**	**16 22 13.2**	**+0.3**
IKLH	**Kolahrood**	**3.61**	**13**	*e*Pn	**Pn**	**16 22 16.3**	**+0.8**
IKLH				*e*		16 23 13.0	
	comp=Z,866nm,0.2s						
IKLH	**Kolahrood**	**3.61**	**13**	*e*Pn	**Pn**	**16 22 16.7**	**+1.2**
IMEH	**Mehriz**	**3.79**	**64**	*e*Pn	**Pn**	**16 22 18.7**	**+0.8**
IMEH				*e*		16 22 19.4	
	comp=Z,468nm,0.1s						
IMEH	**Mehriz**	**3.79**	**64**	*e*Pn	**Pn**	**16 22 18.7**	**+0.8**
KHMZ	**Khomeyn**	**3.98**	**352**	*e*Pn	**Pn**	**16 22 20.7**	**+0.3**
KHMZ	**Khomeyn**	**3.98**	**352**	*e*Pn	**Pn**	**16 22 20.7**	**+0.3**
QAM	**Ghamsar**	**4.02**	**10**	*e*Pn	**Pn**	**16 22 22.0**	**+1.0**
QAM				*e*		16 23 13.7	
	comp=Z,2μm,0.2s						
ICHK	**Chekchek**	**4.07**	**52**	*e*Pn	**Pn**	**16 22 21.5**	**-0.2**
ICHK				*e*		16 22 35.5	
	comp=Z,494nm,0.3s						
ICHK	**Chekchek**	**4.07**	**52**	*e*Pn	**Pn**	**16 22 21.4**	**-0.2**

CSEM ***08*** *16:25:43.7±0.2, 38°.60N×35°.82E, h2km, ML2.7, Error ellipse: s-maj=5.5km s-min=4.8km az=1.0, Suspected Mining explosion.*
ISK ***08*** *16:25:43.0, 38°.66N×35°.79E, h5km, ML2.7/8, Suspected Mining explosion.*
ISCJB ***08*** *16:25:44.1±0.5, 38°.62N±0°.03×35°.73E±0°.03, h0km, Error ellipse: s-maj=4.2km s-min=3.4km az=30.3*
DDA ***08*** *16:25:44.3, 38°.65N×35°.73E, h9km, Ml2.6*
ISC 08 16:25:44.0±0.8, 38°.63N±0°.02×35°.78E±0°.02, h0km, n37, σ0§78/56, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNN	**Bunyan**	**0.23**	**13**	PG	**Pg**	**16 25 47.7**	**-0.6**
BNN				SG	**Sg**	**16 25 51.8**	**+0.5**
BNN	**Bunyan**	**0.23**	**13**	*e*Pg	**Pg**	**16 25 47.7**	**-0.6**
BNN				*e*Sg	**Sg**	**16 25 51.8**	**+0.5**
SARI	**SarD1z-Kayseri**	**0.55**	**114**	PG	**Pg**	**16 25 54.9**	**+0.4**
SARI				SG	**Sb**	**16 26 03.7**	**-1.3**
YAHY	**KAYSERI_Yahyal**	**0.63**	**212**	*i* P	**Pg**	**16 25 56.1**	**0.0**
YAHY	**KAYSERI_Yahyal**	**0.63**	**212**	P	**Pg**	**16 25 56.1**	**0.0**
AVNS	**Nevsehir-Avano**	**0.75**	**284**	*i* P	**Pg**	**16 25 58.6**	**+0.2**
AVNS	**Nevsehir-Avano**	**0.75**	**284**	P	**Pg**	**16 25 58.6**	**+0.2**
CUSAR	**Sarkisla-SIVAS**	**0.86**	**24**	*i* P	**Pg**	**16 26 00.1**	**-0.5**
CUSAR				*i* S	**Sb**	**16 26 13.9**	**-0.3**
CUSAR	**Sarkisla-SIVAS**	**0.86**	**24**	P	**Pg**	**16 26 00.1**	**-0.5**
CUSAR				S	**Sb**	**16 26 13.9**	**-0.3**
CUALT	**Altinyayla-SIV**	**0.99**	**50**	*i* P	**Pg**	**16 26 02.6**	**-0.5**
CUALT				*i* S	**Sb**	**16 26 18.2**	**+0.3**
CUALT	**Altinyayla-SIV**	**0.99**	**50**	P	**Pg**	**16 26 02.6**	**-0.5**
CUALT				S	**Sb**	**16 26 18.2**	**+0.3**
YOZ	**Yozgat**	**1.07**	**340**	PG	**Pg**	**16 26 04.4**	**-0.1**
YOZ				SG	**Sb**	**16 26 19.9**	**-0.2**
YOZ	**Yozgat**	**1.07**	**340**	*e*Pg	**Pg**	**16 26 04.4**	**-0.1**
YOZ				*e*Sg	**Sb**	**16 26 19.9**	**-0.2**
ELBS	**KAHRAMANMARAS**	**1.10**	**106**	*i* P	**Pg**	**16 26 04.2**	**-1.0**
ELBS				*i* S	**Sn**	**16 26 23.1**	**+0.3**
ELBS	**KAHRAMANMARAS**	**1.10**	**106**	P	**Pg**	**16 26 04.2**	**-1.0**
ELBS				S	**Sn**	**16 26 23.1**	**+0.3**
KOZT	**Kozan**	**1.15**	**178**	PN	**Pb**	**16 26 06.6**	**-0.2**
KOZT	**Kozan**	**1.15**	**178**	*e*Pn	**Pb**	**16 26 06.6**	**-0.2**
GULA	**Gulagac**	**1.25**	**257**	PN	**Pn**	**16 26 08.5**	**-0.3**
GULA	**Gulagac**	**1.25**	**257**	*e*Pn	**Pn**	**16 26 08.5**	**-0.3**
DARE	**Darende-Malaty**	**1.33**	**92**	PN	**Pn**	**16 26 10.3**	**+0.3**
DARE	**Darende-Malaty**	**1.33**	**92**	*e*Pn	**Pn**	**16 26 10.3**	**+0.3**
CDAG	**Cicekdag**	**1.48**	**312**	*i* P	**Pn**	**16 26 11.5**	**-0.5**
CDAG				*i* S	**Sn**	**16 26 32.3**	**+0.2**
CDAG	**Cicekdag**	**1.48**	**312**	P	**Pn**	**16 26 11.5**	**-0.5**
CDAG				S	**Sn**	**16 26 32.3**	**+0.2**
CUKAN	**kangal_SIVAS**	**1.48**	**62**	*i* P	**Pb**	**16 26 12.6**	**+0.1**
CUKAN				*i* S	**Sn**	**16 26 35.0**	**+2.8**
CUKAN	**kangal_SIVAS**	**1.48**	**62**	P	**Pb**	**16 26 12.6**	**+0.1**
CUKAN				S	**Sn**	**16 26 35.0**	**+2.8**
YAYX	**Yaylak**	**1.57**	**282**	PN	**Pn**	**16 26 12.6**	**-0.7**
YAYX	**Yaylak**	**1.57**	**282**	*e*Pn	**Pn**	**16 26 12.6**	**-0.7**
HEKM	**Malatya_Hekimh**	**1.72**	**81**	*i* P	**Pn**	**16 26 14.9**	**-0.5**
HEKM	**Malatya_Hekimh**	**1.72**	**81**	P	**Pn**	**16 26 14.9**	**-0.5**
COAL	**Corum-Alaca**	**1.73**	**339**	*i* P	**Pb**	**16 26 16.6**	**-0.3**
COAL				*i* S	**Sb**	**16 26 39.0**	**-0.2**
COAL	**Corum-Alaca**	**1.73**	**339**	P	**Pb**	**16 26 16.5**	**-0.3**
COAL				S	**Sb**	**16 26 39.0**	**-0.2**
CORM	**Corum**	**1.78**	**330**	PN	**Pn**	**16 26 16.0**	**-0.2**
CORM	**Corum**	**1.78**	**330**	*e*Pn	**Pn**	**16 26 16.0**	**-0.2**
CTAK	**Corum_Osmancik**	**2.15**	**339**	*i* P	**Pb**	**16 26 22.9**	**-1.1**
CTAK				*i* S	**Sg**	**16 26 55.2**	**+1.9**
CTAK	**Corum_Osmancik**	**2.15**	**339**	P	**Pb**	**16 26 22.9**	**-1.1**
KEMA	**Kemaliye**	**2.21**	**72**	*i* P	**Pb**	**16 26 24.4**	**-0.4**
KEMA				*i* S	**Sg**	**16 26 54.1**	**-0.8**
KEMA	**Kemaliye**	**2.21**	**72**	P	**Pb**	**16 26 24.4**	**-0.4**

IDC 08 16:31:24.8±5.0, 17°.42S×175°.91W, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.7/45, mbtmp4.1/3, Error ellipse: s-maj=172.5km s-min=99.7km az=157.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.95**	**241**	P	P	16 39 10.3	+1.0
	0.9nm,0.4s,baz=89,slow=9.5,SNR=3.6						
WRA	**Warramunga Arr**	**47.06**	**259**	P	P	16 39 58.2	-0.4
	1.2nm,0.4s,baz=96,slow=8.3,SNR=45						
ASAR	**Alice Springs**	**47.21**	**254**	P	P	16 39 59.2	-0.5
	3.4nm,0.6s,baz=89,slow=8.6,SNR=73						
ASAR				PcP	PcP	16 41 31.0	-0.4
	0.2nm,0.5s,baz=105,slow=4.2,SNR=4.6						

KRSC 08 16:39:32.2±0.9, 49°.73N×156°.21E, h129km±10km, ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.96**	**357**	*i* P	Pn	16 39 55.3	+0.7
SKR				*e*S	Sn	16 40 13.2	+1.5
PAU	**Pauzhetka**	**1.79**	**12**	*i* P	Pn	16 40 03.9	+0.4
PAU				*i* S	Sn	16 40 28.5	+1.1
KDTR	**Khodutka, Kamc**	**2.40**	**29**	*e*P	Pn	16 40 13.0	+2.0
KDTR				*e*S	Sn	16 40 42.5	+1.6
ASAK	**Asacha**	**2.87**	**21**	*e*P	Pn	16 40 19.3	+2.2
RUS	**Russkaya**	**3.08**	**27**	*e*P	Pn	16 40 21.3	+1.6
RUS				*e*S	Sn	16 40 57.2	+0.8
PET	**Petropavlovsk**	**3.64**	**24**	*e*S	Sn	16 41 11.2	+1.6
DALK	**Dalny**	**3.68**	**25**	*e*P	Pn	16 40 29.6	+2.1
DALK				*e*S	Sn	16 41 12.8	+2.4
UGLR	**Uglovaya**	**3.85**	**24**	*e*P	Pn	16 40 32.3	+2.3
KRER	**Koryakskii**	**3.92**	**23**	*e*P	Pn	16 40 32.9	+1.9
SDLR	**Sedlovina**	**3.93**	**24**	*e*P	Pn	16 40 33.3	+2.2
SPN	**Mys Shipunski**	**4.14**	**34**	*e*P	Pn	16 40 35.6	+2.0
SPN				*e*S	Sn	16 41 22.3	+0.9
MKZ	**Mys Kozlova**	**5.91**	**33**	*e*P	Pn	16 40 59.9	+2.5
KBTR	**Krutoberegovo**	**7.62**	**29**	P	Pn	16 41 22.4	+2.1

IDC ***08*** *16:42:03.3±1.1, 29°.95N×50°.55E, h0km, mb3.8/11, mb1 3.8/13, mb1mx3.6/58, mbtmp3.8/13, ML3.5/2, MS3.4/1, Ms1 3.4/1, ms1mx2.4/64, Error ellipse: s-maj=27.5km s-min=16.6km az=150.0*
ISCJB ***08*** *16:42:04.7±0.5, 29°.71N±0°.05×50°.55E±0°.05, h22km, mb3.8/11, Error ellipse: s-maj=7.6km s-min=5.5km az=22.8*
CSEM ***08*** *16:42:05.9, 29°.91N×50°.78E, h18km, ML3.4*
TEH ***08*** *16:42:08.2, 29°.82N×50°.75E, h17km, ML3.4*
ISC 08 16:42:06.2±0.7, 29°.79N±0°.05×50°.67E±0°.05, h22km, n33, σ1§96/37, mb3.8/11, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKAZ	**Kazeroun**	**1.01**	**90**	*e*Pg	**Pn**	**16 42 25.9**	**+0.5**
IKAZ				*e*Sg	**Sb**	**16 42 37.9**	**-0.4**
IKAZ				*e*		16 42 40.5	
	comp=Z,23μm,0.3s						
AHBU	**AHRAM**	**1.07**	**149**	*e*Pg	**Pb**	**16 42 27.2**	**+1.2**
AHBU				*e*Sg	**Sn**	**16 42 42.2**	**+2.1**
IPAR	**Pars**	**2.06**	**88**	*e*Pn	**Pn**	**16 42 41.1**	**+1.3**
IBRJ	**Brojen**	**2.17**	**13**	*e*Pn	**Pn**	**16 42 43.1**	**+1.9**
IBRJ				*e*Sg	**Sb**	**16 43 14.9**	**+3.4**
IBRJ				*e*		16 43 22.9	
	comp=Z,2μm,0.2s						
ZNGN	**Zangian**	**2.32**	**4**	*e*Pn	**Pn**	**16 42 44.3**	**+0.9**
ZNGN				*e*		16 43 22.5	
	comp=Z,99nm,0.5s						
IRAM	**Ramesheh**	**2.49**	**36**	*e*Pn	**Pn**	**16 42 47.6**	**+2.0**
IRAM				*e*		16 42 56.0	
	comp=Z,3μm,0.2s						
GHIR	**Ghir-Karzin**	**2.52**	**126**	*e*Pn	**Pn**	**16 42 48.0**	**+2.1**
GHIR				*e*Sg	**Sb**	**16 43 24.9**	**+3.5**
ROKH	**ROKH**	**2.56**	**7**	*e*Pn	**Pn**	**16 42 48.1**	**+1.5**
ROKH				*e*		16 43 32.3	
	comp=Z,99nm,0.4s						
SHGR	**Shooshtar-Gavs**	**2.81**	**326**	*e*Pn	**Pn**	**16 42 51.4**	**+1.5**
IGAR	**Gharneh**	**2.86**	**24**	*e*Pn	**Pn**	**16 42 52.3**	**+1.7**
IGAR				*e*		16 43 36.8	
	comp=Z,1μm,0.2s						
IPIR	**Pirpir**	**2.89**	**4**	*e*Pn	**Pn**	**16 42 53.1**	**+1.9**
IPIR				*e*		16 43 42.5	
	comp=Z,2μm,0.2s						
ISAD	**Sadrabad**	**3.34**	**50**	*e*Pn	**Pn**	**16 42 58.8**	**+1.4**
ISAD				*e*		16 43 03.0	
	comp=Z,565nm,0.2s						
IZEF	**Zefreh**	**3.40**	**24**	*e*Pn	**Pn**	**16 42 59.9**	**+1.7**
IZEF				*e*		16 43 01.5	
	comp=Z,687nm,0.1s						
IKLH	**Kolahrood**	**3.60**	**12**	*e*Pn	**Pn**	**16 43 02.2**	**+1.3**
IKLH				*e*		16 44 09.7	
	comp=Z,673nm,0.2s						
IMEH	**Mehriz**	**3.75**	**64**	*e*		16 43 05.7	
	comp=Z,338nm,0.2s						
IMEH				*e*Pn	**Pn**	**16 43 05.0**	**+2.0**
KHMZ	**Khomeyn**	**3.98**	**351**	*e*Pn	**Pn**	**16 43 07.2**	**+1.1**
ICHK	**Chekchek**	**4.03**	**52**	*e*		16 43 16.4	
	comp=Z,348nm,0.2s						
ICHK				*e*Pn	**Pn**	**16 43 07.7**	**+0.9**
IKFM	**Kafar-mosalman**	**4.43**	**328**	*e*Pn	**Pn**	**16 43 14.1**	**+2.0**
IVIS	**Veis**	**5.73**	**327**	*e*Pn	**Pn**	**16 43 32.8**	**+2.8**
IVIS				*e*		16 44 41.6	
	comp=Z,299nm,0.2s						
WSAR	**Wadi Sarin**	**9.66**	**131**	Pn	**Pn**	**16 44 25.1**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=312,slow=9.8,SNR=6.6						
WSAR				Sn	**Sn**	**16 46 05.7**	**-6.1**
	comp=Z,0.2nm,0.3s,baz=320,slow=22,SNR=2.1						
ASF	**Jabal al Asfar**	**12.06**	**285**	LR	LR	16 50 51.1	
	comp=Z,189nm,19.2s,baz=288,slow=44						
MMAI	**Mount Meron Ar**	**13.43**	**288**	Pn	**Pn**	**16 45 13.9**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=99,slow=17,SNR=2.3						
AKTO	**Aktyubinsk**	**21.35**	**13**	P	**P**	**16 46 50.8**	**-0.9**
	comp=Z,1.5nm,0.5s,baz=208,slow=12,SNR=6.4						
AKASG	**Malin Array Be**	**26.36**	**328**	P	**P**	**16 47 38.8**	**-1.8**
	comp=Z,0.4nm,0.3s,baz=139,slow=9.5,SNR=3.7						
BVAR	**Borovoye Array**	**27.34**	**26**	P	**P**	**16 47 49.8**	**+0.4**
	comp=Z,1.4nm,0.4s,baz=228,slow=7.6,SNR=13						
KURBB	**Kurchatov Arra**	**29.47**	**37**	P	**P**	**16 48 08.6**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=236,slow=9.5,SNR=3.6						
MKAR	**Makanchi Array**	**29.80**	**46**	P	**P**	**16 48 11.6**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=242,slow=10,SNR=4.7						
ZALV	**Zalesovo Beam**	**34.51**	**36**	P	**P**	**16 48 52.3**	**-0.2**
	comp=Z,0.7nm,0.4s,baz=257,slow=9.1,SNR=5.0						
FINES	**FINESS Array B**	**35.58**	**340**	P	**P**	**16 48 59.8**	**-1.8**
	comp=Z,0.6nm,0.5s,baz=133,slow=11,SNR=5.7						
HFS	**Hagfors**	**39.15**	**332**	P	**P**	**16 49 30.6**	**-1.3**
	comp=Z,0.5nm,0.4s,baz=126,slow=9.8,SNR=6.0						
TORD	**Torodi Ar. Bea**	**48.13**	**261**	P	**P**	**16 50 44.5**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=55,slow=8.2,SNR=8.5						
KOWA	**Kowa**	**52.44**	**266**	P	**P**	**16 51 17.3**	**-0.2**
	comp=Z,1.4nm,0.6s,baz=90,slow=4.3,SNR=3.6						
DBIC	**Dimbokro**	**56.92**	**258**	P	**P**	**16 51 50.5**	**+0.5**
	comp=Z,4.5nm,0.9s,baz=30,slow=8.1,SNR=2.8						

ISCJB ***08*** *16:45:15.4±0.5, 22°.41N±0°.02×121°.51E±0°.03, h20km±5km, Error ellipse: s-maj=4.8km s-min=3.9km az=23.4*
JMA ***08*** *16:45:15.2±0.1, 22°.50N×121°.59E, h5km±3km, M3.1*
TAP ***08*** *16:45:16.0, 22°.41N×121°.44E, h25km±1km, ML2.6, C*
ISC 08 16:45:15.3±1.1, 22°.39N±0°.03×121°.47E±0°.04, h17km±8km, n42, σ0§58/61, 1C-2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWH	**Lutao**	**0.32**	**2**	⇑*i*P	**Pb**	**16 45 22.4**	**-0.2**
	baz=8.0						
TWH				S	**Sg**	**16 45 27.0**	**+0.4**
	baz=8.0						
LAY	**Lan-yu**	**0.36**	**167**	*e*P	**Pn**	**16 45 24.9**	**-0.9**
	baz=163						
LAY				*e*S	**Sb**	**16 45 29.6**	**+0.9**
	baz=163						
TTN	**Taitung**	**0.46**	**321**	*e*P	**Pb**	**16 45 25.5**	**+0.4**
	baz=321						
TTN				*e*S	**Sb**	**16 45 32.3**	**+0.7**
	baz=321						
ECL	**Taimali**	**0.52**	**293**	⇓*i*P	**Pg**	**16 45 25.5**	**-0.1**
	baz=292						
ECL				S	**Sg**	**16 45 32.5**	**-0.1**
	baz=292						
TAW	**Tawu**	**0.53**	**266**	P	**Pb**	**16 45 25.9**	**-0.3**
	baz=263						
TAW				*e*S	**Sg**	**16 45 32.9**	**-0.1**
	baz=263						
TWGBT	**Beinan**	**0.55**	**320**	*e*P	**Pb**	**16 45 26.5**	**-0.1**
	baz=320						
TWGBT				*e*S	**Sb**	**16 45 34.5**	**+0.3**
	baz=320						
TWG	**Pinlang**	**0.56**	**319**	P	**Pg**	**16 45 26.5**	**0.0**
	baz=320						
TWG				*i* S	**Sg**	**16 45 34.1**	**+0.1**
	baz=320						
EAST	**Anshuo**	**0.57**	**269**	*i* P	**Pb**	**16 45 26.7**	**-0.2**
	baz=267						
EAST				*e*S	**Sg**	**16 45 34.2**	**-0.2**
	baz=267						
CHKT	**Chengkung**	**0.71**	**352**	P	**Pg**	**16 45 28.7**	**-0.6**
	baz=354						
CHKT				*e*S	**Sg**	**16 45 38.0**	**-0.7**
	baz=354						
TWKBT	**Hengchun**	**0.76**	**233**	*e*S	**Sb**	**16 45 40.5**	**+0.5**
	baz=231						
TWK1	**Hengchun**	**0.76**	**234**	*e*P	**Pb**	**16 45 30.2**	**+0.1**
	baz=231						
HEN	**Hengchun**	**0.78**	**240**	*e*P	**Pn**	**16 45 31.7**	**+0.2**
	baz=237						
HEN				*e*S	**Sb**	**16 45 40.8**	**+0.2**
	baz=237						
SCZT	**Fangliau**	**0.78**	**269**	*e*P	**Pb**	**16 45 30.1**	**-0.3**
	baz=266						
MASBT	**Mashibuluo**	**0.80**	**286**	⇓P	**Pb**	**16 45 30.1**	**-0.7**
	baz=284						
FULB	**Fuli**	**0.82**	**349**	*e*P	**Pb**	**16 45 30.4**	**-0.8**
	baz=350						
FULB				*e*S	**Sb**	**16 45 41.8**	**0.0**
	baz=350						
SSD	**Sandimen**	**0.85**	**295**	P	**Pb**	**16 45 30.6**	**-1.0**
	baz=294						
ELDTW	**Lidau**	**0.89**	**332**	*e*P	**Pb**	**16 45 31.6**	**-0.9**
	baz=333						
SLGT	**Liugui**	**0.96**	**308**	*e*P	**Pb**	**16 45 33.2**	**-0.4**
	baz=308						
TWF1	**Yuli**	**0.97**	**351**	*e*P	**Pb**	**16 45 33.3**	**-0.4**
	baz=352						
YULB	**Yu-li**	**1.01**	**351**	*e*P	**Pb**	**16 45 33.3**	**-1.0**
	baz=352						
HGSD	**Ruisui**	**1.09**	**358**	*e*P	**Pb**	**16 45 34.6**	**-1.2**
	baz=359						
WTP	**Ta-pu**	**1.16**	**317**	*e*P	**Pb**	**16 45 37.0**	**+0.1**
	baz=317						
WTP				*e*S	**Sg**	**16 45 54.1**	**+1.2**
	baz=317						
CHN1	**Nanshi**	**1.17**	**312**	*e*P	**Pg**	**16 45 37.6**	**-0.3**
	baz=312						
TPUB	**Ta-pu**	**1.19**	**320**	*e*P	**Pb**	**16 45 37.4**	**0.0**
	baz=319						
TWK	**Hsinying**	**1.25**	**314**	*e*P	**Pb**	**16 45 39.0**	**+0.4**
	baz=314						
ALS	**Alishan**	**1.27**	**331**	*e*P	**Pg**	**16 45 40.0**	**+0.2**
	baz=332						
VWDT	**VWDT**	**1.39**	**348**	*e*P	**Pn**	**16 45 40.0**	**+0.1**
	baz=348						
ESL	**Shilin**	**1.41**	**359**	*e*P	**Pn**	**16 45 39.9**	**-0.4**
	baz=359						
SSLB	**Suanglung**	**1.47**	**341**	*e*P	**Pb**	**16 45 42.2**	**0.0**
	baz=341						
SMLT	**Sun Moon Lake**	**1.57**	**341**	*e*P	**Pb**	**16 45 44.1**	**+0.1**
	baz=341						
OWD	**Renai**	**1.58**	**350**	*e*P	**Pn**	**16 45 43.1**	**+0.5**
	baz=350						
TYC	**Yuchr**	**1.60**	**340**	*e*P	**Pb**	**16 45 44.8**	**+0.3**
	baz=340						
CHGB	**Renai**	**1.68**	**351**	*e*P	**Pn**	**16 45 44.7**	**+0.5**
	baz=351						
NACB	**Ninganchiao**	**1.78**	**4**	*e*P	**Pn**	**16 45 44.9**	**-0.4**
	baz=4.0						
JYNG	**Yonagunijimaku**	**2.46**	**33**	S	**Sn**	**16 46 23.1**	**-1.2**
HATJ	**Hateruma jima**	**2.71**	**52**	P	**Pn**	**16 45 59.0**	**+0.8**
HATJ				*e*S	**Sn**	**16 46 30.8**	**+0.2**
IRIF	**Iriomote-Funau**	**2.84**	**47**	P	**Pn**	**16 46 00.5**	**+0.6**
IRIF				*e*S	**Sn**	**16 46 33.3**	**-0.4**
JKRS	**Kuro-shima**	**2.97**	**51**	P	**Pn**	**16 46 02.8**	**+1.1**
JKRS				*e*S	**Sn**	**16 46 36.6**	**-0.4**
JIJ	**Ishigaki jima**	**3.15**	**51**	P	**Pn**	**16 46 04.8**	**+0.7**
JIJ				*e*S	**Sn**	**16 46 40.5**	**-0.7**
JISG	**Ishigakijimahi**	**3.40**	**50**	P	**Pn**	**16 46 08.0**	**+0.4**
JISG				*e*S	**Sn**	**16 46 47.5**	**-0.1**
JTJ	**Tarama**	**3.72**	**52**	P	**Pn**	**16 46 12.9**	**+0.9**
JTJ

GTA			LR	LR		
	comp=N,420nm,16.3s					
GTA			LR	LR		
	comp=E,300nm,13.4s					
GTA			LR	LR		
	comp=Z,220nm,13.4s					
WMQ	**Urumqi**	**8.98 344**	P	Pn	17 27 31.1	+1.2
LZH	**Lanzhou**	**10.43 81**	*e*P	Pn	17 27 48.6	-1.2
LZH			*e*PP	PnPn	17 27 57.0	-0.4
LZH			LR	LR		
	comp=N,150nm,10.0s					
LZH			LR	LR		
	comp=E,140nm,10.3s					
LZH			LR	LR		
	comp=Z,180nm,11.6s					

NEIC ***08*** *17:33:54.3±0.9, 36°.57N×146°.34E, h10km, mb4.5/8, Error ellipse: s-maj=18.2km s-min=10.9km az=160.0*
NIED ***08*** *17:34:00, 38°.90N×142°.00E, h53km, Mw4.0 Best double couple: M₀1.14000×10¹⁵ NP1:φs178.00000°, δ22.00000°, λ66.00000°. NP2:φs24.00000°, δ70.00000°, λ100.00000°.*
ISCJB ***08*** *17:34:32.4±0.8, 38°.89N±0°.04×141°.97E±0°.10, h59km±4km, mb4.1/16, MS3.3/4, Error ellipse: s-maj=13.4km s-min=5.6km az=18.5*
JMA ***08*** *17:34:33.3±0.1, 38°.89N×141°.97E, h50km±1km, M3.9*
JMA Felt II J1.
IDC ***08*** *17:34:35.4±1.1, 38°.91N×142°.04E, h71km±7km, mb3.6/10, mb1 3.6/14, mb1mx3.4/71, mbtmp3.8/14, MS3.0/8, Ms1 3.0/8, ms1mx2.7/69, Error ellipse: s-maj=20.4km s-min=10.4km az=113.0*

ISC 08 17:34:34.3±1.0, 38°.89N±0°.05×141°.97E±0°.09, h56km±7km, n53, σ1°83/50, mb4.2/16, MS3.2/4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.30**	**309**	P	**Pn**	**17 34 42.6**	**-1.4**
OFUJ				S	**Sn**	**17 34 48.9**	**-2.1**
JMK	**Ichinoseki**	**0.59**	**276**	P	**Pn**	**17 34 45.7**	**-1.3**
JMK				S	**Sn**	**17 34 54.4**	**-1.7**
JIO	**Ouri**	**0.66**	**228**	P	**Pn**	**17 34 46.3**	**-1.4**
JIO				S	**Sn**	**17 34 55.1**	**-2.4**
JOM	**Ohasama**	**0.79**	**318**	P	**Pn**	**17 34 48.3**	**-1.1**
JOM				S	**Sn**	**17 34 59.0**	**-1.4**
JOU	**Okura**	**1.15**	**243**	P	**Pn**	**17 34 52.7**	**-1.5**
JRG	**Rokugo**	**1.16**	**296**	P	**Pn**	**17 34 53.2**	**-1.1**
JYK	**Kaneyama**	**1.26**	**272**	P	**Pn**	**17 34 54.6**	**-1.0**
JMM	**Marumori**	**1.38**	**223**	P	**Pn**	**17 34 55.6**	**-1.7**
JMM				*e*S	**Sn**	**17 35 12.4**	**-2.1**
JANG	**Nango**	**1.52**	**347**	P	**Pn**	**17 34 58.0**	**-1.2**
ERM	**Erimo**	**3.25**	**16**	*e*Pn	**Pn**	**17 35 22.6**	**-0.1**
MAJO	**Matsushiro**	**3.80**	**233**	*e*Pn	**Pn**	**17 35 31.0**	**+0.7**
MAT	**Matsushiro**	**3.80**	**233**	P	**Pn**	**17 35 31.1**	**+0.8**
MAT				S	**Sn**	**17 36 18.2**	**+4.5**
MJAR	**Matsushiro Arr**	**3.80**	**233**	P	**Pn**	**17 35 31.4**	**+1.1**
	2.9nm,0.3s,baz=41,slow=11,SNR=35						
MJAR				S	**Sn**	**17 36 17.5**	**+3.8**
	1.5nm,0.3s,baz=41,slow=15,SNR=4.4						
MJAR				LR	LR	17 37 18.8	
	comp=Z,95nm,18.8s,baz=105,slow=43						
MJB9	**Matsu-Tunnel**	**3.80**	**233**	*e*Pn	**Pn**	**17 35 31.4**	**+1.1**
ASAJ	**Asahikawa**	**5.24**	**5**	P	**Pn**	**17 35 49.8**	**-0.2**
	1.1nm,0.3s,baz=210,slow=12,SNR=29						
ASAJ				S	**Sn**	**17 36 50.1**	**+1.0**
	0.9nm,0.3s,baz=284,slow=12,SNR=3.6						
ASAJ				LR	LR	17 38 17.8	
	comp=Z,104nm,19.5s,baz=166,slow=43						
ASAJ	**Asahikawa**	**5.24**	**5**	*e*Pn	**Pn**	**17 35 50.9**	**+0.8**
INU	**Inuyama**	**5.31**	**230**	*e*Pn	**Pn**	**17 35 48.1**	**-2.9**
USRK	**Ussuriysk Ar.**	**9.17**	**309**	P	**Pn**	**17 36 44.4**	**+0.6**
	0.3nm,0.3s,baz=121,slow=13,SNR=9.9						
MDJ	**Mudanjiang**	**10.87**	**306**	*e*Pn	Pn	17 37 24.4	+17
	33nm,1.4s						
KSRS	**Korea Array**	**11.15**	**267**	P	**Pn**	**17 37 14.8**	**+3.8**
	0.2nm,0.3s,baz=91,slow=14,SNR=4.8						
KSRS				LR	LR	17 41 16.8	
	comp=Z,63nm,18.1s,baz=73,slow=36						
KS01	**Wonju Array Si**	**11.17**	**267**	*e*Pn	Pn	17 37 19.3	+8.1
KS15	**Wonju Array Si**	**11.19**	**267**	*e*Pn	Pn	17 37 20.8	+9.4
KLR	**Kul'dur**	**12.67**	**328**	LR	LR	17 42 30.0	
	comp=Z,8.4nm,18.5s,baz=168,slow=37						
SEY	**Seymchan**	**24.89**	**11**	P	**P**	**17 39 52.5**	**+1.0**
	1.8nm,0.9s,baz=188,slow=5.5,SNR=6.2						
H11N2	**WAKE ISLAND Hy**	**28.78**	**124**	T	T	18 10 50.8	
	baz=317,slow=75,SNR=1249						
H11N1	**WAKE ISLAND Hy**	**28.79**	**124**	T	T	18 10 54.0	
	baz=317,slow=75,SNR=1327						
H11N3	**WAKE ISLAND Hy**	**28.79**	**124**	T	T	18 10 52.7	
	baz=317,slow=75,SNR=1335						
TLY	**Talaya**	**29.49**	**308**	LR	LR	17 52 43.8	
	comp=Z,52nm,18.1s,baz=52,slow=37						
H11S1	**WAKE ISLAND Hy**	**29.55**	**126**	T	T	18 11 45.0	
	baz=318,slow=76,SNR=42						
H11S3	**WAKE ISLAND Hy**	**29.55**	**126**	T	T	18 11 45.6	
	baz=318,slow=76,SNR=20						
H11S2	**WAKE ISLAND Hy**	**29.57**	**126**	T	T	18 11 51.5	
	baz=318,slow=76,SNR=132						
ZAA0	**Zalesovo Array**	**41.01**	**311**	*e*P	**P**	**17 42 10.5**	**-1.2**
	3.6nm,0.7s						
ZALV	**Zalesovo Beam**	**41.01**	**311**	P	**P**	**17 42 10.9**	**-0.8**
	0.9nm,0.3s,baz=93,slow=7.4,SNR=9.5						
ZALV				pP	**pP**	**17 42 28.6**	**+2.5**
	3.2nm,0.6s,baz=88,slow=8.0,SNR=8.3						
ZALV				LR	LR	17 58 43.9	
	comp=Z,29nm,18.6s,baz=70,slow=35						
ZALV	**Zalesovo Beam**	**41.01**	**311**	*e*P	**P**	**17 42 10.5**	**-1.2**
NRIK	**Noril'sk**	**41.78**	**334**	LR	LR	18 00 13.3	
	comp=Z,29nm,19.1s,baz=302,slow=37						
MK01	**Makanchi Array**	**43.53**	**301**	*e*P	**P**	**17 42 31.6**	**-0.7**
MK31	**Makanchi Array**	**43.53**	**301**	*e*P	**P**	**17 42 31.5**	**-0.8**
MKAR	**Makanchi Array**	**43.53**	**301**	P	**P**	**17 42 31.9**	**-0.4**
	2.0nm,0.7s,baz=84,slow=10.0,SNR=22						
MKAR				pP	**pP**	**17 42 49.6**	**+2.8**
	2.0nm,0.8s,baz=83,slow=9.9,SNR=7.4						
MKAR	**Makanchi Array**	**43.53**	**301**	*e*P	**P**	**17 42 31.4**	**-1.0**
	18nm,0.8s						
MAKZ	**Makanchi**	**43.74**	**301**	*e*P	**P**	**17 42 33.7**	**-0.4**
	2.9nm,0.8s						
KURK	**Kurchatov**	**45.16**	**307**	*e*P	**P**	**17 42 44.3**	**-0.9**
	4.8nm,0.8s						
KURBB	**Kurchatov Arra**	**45.23**	**307**	P	**P**	**17 42 45.3**	**-0.5**
	1.7nm,0.4s,baz=82,slow=8.2,SNR=26						
KURBB				pP	**pP**	**17 43 02.8**	**+2.5**
	4.6nm,0.8s,baz=81,slow=8.5,SNR=10						
ILAR	**Eielson Array**	**47.70**	**33**	P	**P**	**17 43 04.9**	**0.0**
	0.4nm,0.6s,baz=266,slow=6.4,SNR=4.8						
BVAR	**Borovoye Array**	**49.66**	**311**	P	**P**	**17 43 19.5**	**-0.8**
	0.9nm,0.5s,baz=81,slow=7.9,SNR=10.0						
BVAR				pP	**pP**	**17 43 37.8**	**+2.9**
	0.8nm,0.5s,baz=80,slow=9.1,SNR=4.7						
BRVK	**Borovoye**	**49.72**	**311**	*e*P	**P**	**17 43 20.0**	**-0.6**
	2.5nm,1.0s						
NIL	**Nilore**	**54.47**	**287**	*e*P	P	17 43 48.9	-7.3
	5.3nm,0.9s						
ARU	**Arti**	**55.27**	**318**	*e*P	P	17 43 55.6	-6.0
	4.0nm,0.9s						
ABKAR	**Akbulak array**	**57.09**	**309**	*e*P	**P**	**17 44 10.6**	**-4.1**
AKTO	**Aktyubinsk**	**57.77**	**311**	P	**P**	**17 44 19.2**	**-0.3**
	0.9nm,0.5s,baz=78,slow=12,SNR=4.1						
WRA	**Warramunga Arr**	**58.96**	**188**	P	**P**	**17 44 27.0**	**-1.0**
	0.9nm,0.7s,baz=6.8,slow=7.0,SNR=9.7						
ASAR	**Alice Springs**	**62.69**	**188**	P	**P**	**17 44 52.6**	**-0.7**
	0.4nm,0.6s,baz=12,slow=5.6,SNR=8.1						
FINES	**FINESS Array B**	**67.38**	**332**	P	**P**	**17 45 22.6**	**-0.6**
	1.5nm,0.8s,baz=5.4,slow=6.1,SNR=5.2						
VAE	**Valguarnera**	**89.98**	**321**	LR	LR	18 29 44.3	
	comp=Z,28nm,18.2s,baz=170,slow=37						

ISCJB ***08*** *17:40:11.8±0.6, 20°.49S±0°.09×177°.6W±0°.1, h450km, mb3.6/7, Error ellipse: s-maj=17.8km s-min=8.4km az=34.8*
IDC ***08*** *17:40:11.7±1.9, 20°.65S×177°.64W, h430km±21km, mb3.3/7, mb1 3.4/9, mb1mx3.1/48, mbtmp4.2/9, Error ellipse: s-maj=18.5km s-min=13.0km az=107.0*

ISC 08 17:40:12.6±0.7, 20°.5S±0°.1×177°.6W±0°.1, h450km, n17, σ1°64/19, mb3.8/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.59**	**41**	P	**P**	**17 42 15.3**	**+0.8**
	3.0nm,0.3s,baz=74,slow=1.7,SNR=3.9						
AFI				S	**S**	**17 43 52.2**	**-2.4**
	6.1nm,0.3s,baz=63,slow=22,SNR=4.1						
URZ	**Urewera**	**18.28**	**193**	P	**P**	**17 43 56.7**	**-1.1**
	0.7nm,0.3s,baz=45,slow=8.6,SNR=4.6						
URZ				S	**S**	**17 46 58.3**	**-4.1**
	0.3nm,0.3s,baz=60,slow=22,SNR=5.3						
CTA	**Charters Tower**	**33.89**	**264**	P	**P**	**17 46 16.8**	**+0.2**
	2.9nm,0.7s,baz=94,slow=14,SNR=4.2						
STKA	**Stephens Creek**	**38.15**	**244**	P	**P**	**17 46 52.1**	**+0.2**
	0.8nm,0.5s,baz=91,slow=11,SNR=4.9						
ASAR	**Alice Springs**	**44.91**	**257**	P	**P**	**17 47 45.5**	**-0.4**
	2.0nm,0.5s,baz=92,slow=8.2,SNR=60						
ASAR				PcP	**PcP**	**17 49 19.0**	**+0.6**
	0.4nm,0.5s,baz=107,slow=4.3,SNR=7.1						
WRA	**Warramunga Arr**	**45.00**	**262**	P	**P**	**17 47 45.8**	**-0.9**
	0.6nm,0.3s,baz=97,slow=7.5,SNR=48						
WRA				PcP	**PcP**	**17 49 19.7**	**+1.0**
	0.2nm,0.4s,baz=93,slow=3.9,SNR=3.4						
VNDA	**Vanda**	**57.94**	**185**	P	**P**	**17 49 21.2**	**+1.3**
	0.9nm,0.9s,baz=315,slow=3.6,SNR=3.7						
QSPA	**South Pole Qui**	**69.56**	**180**	P	**P**	**17 50 36.7**	**+1.8**
	1.7nm,0.6s,baz=0.0,slow=1.0,SNR=8.6						
CMAR	**Chiang Mai Arr**	**90.50**	**289**	P	**P**	**17 52 26.4**	**+0.6**
	1.0nm,0.8s,baz=105,slow=2.6,SNR=5.9						
MKAR	**Makanchi Array**	**111.50**	**313**	PKiKP	**PKiKP**	**17 57 55.5**	**+0.8**
	0.2nm,0.4s,baz=56,slow=0.8,SNR=4.9						
BVAR	**Borovoye Array**	**119.35**	**320**	PKP	**PKPdf**	**17 58 10.0**	**+0.4**
	0.5nm,0.4s,baz=135,slow=2.2,SNR=9.2						
ARCES	**ARCESS Array B**	**129.00**	**350**	PKP	**PKPdf**	**17 58 28.2**	**+0.6**
	3.1nm,1.0s,baz=1.4,slow=4.9,SNR=4.3						
FINES	**FINESS Array B**	**135.90**	**344**	PKP	**PKPdf**	**17 58 40.4**	**-0.3**
	1.1nm,0.8s,baz=316,slow=7.7,SNR=3.4						
HFS	**Hagfors**	**139.61**	**351**	PKhKP	PKPpre	17 58 40.2	
	1.8nm,1.0s,baz=95,slow=1.7,SNR=3.3						
AKASG	**Malin Array Be**	**143.22**	**331**	PKhKP	PKPpre	17 58 51.6	
	3.3nm,0.5s,baz=43,slow=4.5,SNR=12						
BRTR	**Keskin Array B**	**147.14**	**313**	PKPbc	**PKPbc**	**17 59 04.5**	**0.0**
	1.0nm,0.7s,baz=93,slow=3.7,SNR=6.5						
MMAI	**Mount Meron Ar**	**148.17**	**300**	PKPbc	**PKPab**	**17 59 08.8**	**-3.0**
	0.8nm,0.4s,baz=64,slow=3.4,SNR=6.7						

SJA ***08*** *17:53:33.7±0.3, 29°.95S×71°.12W, h7km±2km, ML2.7, MW3.1*
GUC ***08*** *17:53:36.2±0.9, 29°.78S×71°.14W, h37km±6km, ML3.6*

ISC 08 17:53:35.9±2.2, 29°.84S±0°.04×71°.3W±0°.1, h21km±6km, n16, σ0°72/24, 2C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLL	**Tololo Astrono**	**0.53**	**127**	⇑*i*P	**Pn**	**17 53 48.2**	**-0.3**
TLL				*i*S	**Sn**	**17 53 56.5**	**-0.6**
TLL				IAML		17 53 57.9	
	comp=N,5μm,0.3s						
GO04	**Tololo Observa**	**0.54**	**128**	*e*P	**Pb**	**17 53 47.8**	**+0.9**
GO04				*i*S	**Sn**	**17 53 56.5**	**-0.7**
GO04				IAML		17 53 59.5	
	comp=N,13μm,0.6s						
LCO	**Las Campanas**	**0.98**	**32**	⇓*i*P	**Pb**	**17 53 53.7**	**-0.6**
LCO				*i*S	**Sb**	**17 54 06.5**	**-0.3**
VACH	**Vallenar**	**1.35**	**20**	*e*P	Pb	17 54 29.0	+29
VACH				*i*S	Sb	17 54 45.5	+28
AROD	**Rodeo**	**1.61**	**102**	*e*P	**Pn**	**17 54 01.8**	**-1.6**
AROD				*e*S	**Sn**	**17 54 22.6**	**-1.1**
ACDV	**Cuesta del Vie**	**1.91**	**100**	*e*P	**Pn**	**17 54 06.8**	**-0.6**
ACDV				*e*S	**Sn**	**17 54 31.5**	**+0.5**
ACDV				IAML		17 54 38.8	
	comp=Z,70nm,0.5s						
GO03	**Copiap**	**2.43**	**23**	⇑*i*P	**Pn**	**17 54 14.2**	**-0.2**
GO03				*i*S	**Sn**	**17 54 44.2**	**+0.7**
GO03				IAML		17 54 49.9	
	comp=N,236nm,0.2s						
AGUA	**GUANDACOL**	**2.46**	**82**	*e*P	**Pn**	**17 54 15.1**	**+0.1**
RTLS	**Leoncito**	**2.60**	**139**	*e*P	**Pn**	**17 54 16.8**	**-0.2**
RTLS				*e*S	**Sn**	**17 54 48.7**	**+0.6**
AMOG	**MOGNA**	**2.66**	**115**	*e*P	**Pn**	**17 54 16.9**	**-0.7**
AUSP	**Uspallata**	**2.88**	**146**	*e*P	**Pn**	**17 54 20.9**	**0.0**
VCA	**Vinchina**	**2.91**	**69**	*e*P	**Pn**	**17 54 21.8**	**+0.6**
VCA	**Vinchina**	**2.91**	**69**	*e*P	**Pn**	**17 54 21.6**	**+0.4**
VCA				*i*S	**Sn**	**17 54 55.5**	**-0.1**
VCA				IAML		17 55 04.1	
	comp=N,390nm,0.5s						
RTCV	**Cerro Valdivia**	**3.11**	**131**	*e*P	**Pn**	**17 54 23.1**	**-0.7**
ACLC	**CERRO LA CRUZ**	**3.80**	**85**	*e*P	**Pn**	**17 54 34.0**	**+0.6**
ACLC				*e*S	**Sn**	**17 55 18.5**	**+0.8**
ACAN	**Cantantal**	**4.28**	**126**	*e*P	**Pn**	**17 54 40.0**	**+0.2**

ISCJB ***08*** *18:07:10.7±0.5, 41°.32N±0°.04×142°.12E±0°.06, h66km±5km, mb3.5/8, Error ellipse: s-maj=8.6km s-min=5.2km az=27.8*
JMA ***08*** *18:07:11.4, 41°.37N×142°.13E, h55km±2km, M3.3*
IDC ***08*** *18:07:12.4±2.0, 41°.30N×142°.28E, h71km±20km, mb3.3/8, mb1 3.3/10, mb1mx3.1/63, mbtmp3.5/10, MS3.6/1, Ms1 3.6/1, ms1mx2.4/33, Error ellipse: s-maj=35.3km s-min=14.2km az=90.0*

ISC 08 18:07:11.5±1.0, 41°.33N±0°.04×142°.12E±0°.05, h56km±10km, n31, σ0°77/31, mb3.7/8, 4D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOT	**Ohata**	**0.81**	**274**	⇓P	**Pn**	**18 07 26.8**	**-0.1**
JOT				*e*S	**Sn**	**18 07 38.2**	**+0.1**
JTM	**Tenmabayashi**	**0.96**	**236**	⇓P	**Pn**	**18 07 29.3**	**+0.4**
JTM				*e*S	**Sn**	**18 07 42.6**	**+0.9**
JKB	**Kayabe**	**0.99**	**305**	⇓P	**Pn**	**18 07 28.9**	**-0.3**
JKB				*e*S	**Sn**	**18 07 42.1**	**-0.1**
JEM	**Erimo**	**1.03**	**48**	P	**Pn**	**18 07 29.3**	**-0.5**
JNBK	**Urakawa-nobuka**	**1.06**	**26**	P	**Pn**	**18 07 29.5**	**-0.7**
JANG	**Nango**	**1.06**	**206**	P	**Pn**	**18 07 30.2**	**0.0**
JANG				*e*S	**Sn**	**18 07 43.8**	**-0.3**
JSR	**Shiriuchi**	**1.29**	**279**	P	**Pn**	**18 07 33.8**	**+0.5**
JNB	**Noboribetsu**	**1.39**	**325**	P	**Pn**	**18 07 33.9**	**-0.7**
JNB				*e*S	**Sn**	**18 07 51.5**	**-0.5**
JBT2	**Biratori 2**	**1.46**	**7**	P	**Pn**	**18 07 35.9**	**+0.4**
JYM2	**Yakumo 2**	**1.53**	**302**	⇓P	**Pn**	**18 07 36.7**	**+0.3**
JCH	**Churui**	**1.58**	**35**	P	**Pn**	**18 07 37.5**	**+0.3**
JCH				*e*S	**Sn**	**18 07 56.9**	**+0.3**
JFR	**Furan**	**1.86**	**11**	P	**Pn**	**18 07 41.1**	**+0.1**
JOM	**Ohasama**	**1.96**	**199**	P	**Pn**	**18 07 42.7**	**+0.3**
JOSM	**Okushiri--Mats**	**2.12**	**292**	P	**Pn**	**18 07 44.3**	**-0.2**
ASAJ	**Asahikawa**	**2.81**	**7**	P	**Pn**	**18 07 55.1**	**+1.2**
	4.4nm,0.3s,baz=204,slow=15,SNR=48						
ASAJ				S	**Sn**	**18 08 28.9**	**+2.5**
	2.2nm,0.3s,baz=182,slow=33,SNR=7.9						
MJAR	**Matsushiro Arr**	**5.67**	**214**	P	**Pn**	**18 08 34.2**	**+1.0**
	0.1nm,0.3s,baz=74,slow=13,SNR=3.1						
H11N2	**WAKE ISLAND Hy**	**30.13**	**128**	T	T	18 45 46.1	
	baz=321,slow=76,SNR=5.9						
H11N1	**WAKE ISLAND Hy**	**30.14**	**128**	T	T	18 45 47.8	
	baz=321,slow=76,SNR=6.1						
H11N3	**WAKE ISLAND Hy**	**30.15**	**128**	T	T	18 45 47.5	
	baz=321,slow=76,SNR=5.6						
H11S1	**WAKE ISLAND Hy**	**30.97**	**130**	T	T	18 46 47.2	
	baz=322,slow=76,SNR=5.3						
H11S3	**WAKE ISLAND Hy**	**30.97**	**130**	T	T	18 46 45.6	
	baz=322,slow=76,SNR=4.9						
H11S2	**WAKE ISLAND Hy**	**30.99**	**130**	T	T	18 46 48.4	
	baz=322,slow=76,SNR=5.5						
ZALV	**Zalesovo Beam**	**39.54**	**309**	P	**P**	**18 14 36.9**	**+0.2**
	0.6nm,0.5s,baz=89,slow=8.7,SNR=3.4						
MKAR	**Makanchi Array**	**42.43**	**298**	P	**P**	**18 15 01.9**	**+1.4**
	0.5nm,0.9s,baz=76,slow=8.5,SNR=4.2						
KDAK	**Kodiak Island**	**43.60**	**45**	LR	LR	18 32 56.6	
	comp=Z,75nm,18.3s,baz=85,slow=36						
KURBB	**Kurchatov Arra**	**43.90**	**305**	P	**P**	**18 15 12.0**	**-0.3**
	0.8nm,0.4s,baz=78,slow=8.9,SNR=11						
BVAR	**Borovoye Array**	**48.17**	**310**	P	**P**	**18 15 46.1**	**+0.2**
	0.3nm,0.4s,baz=95,slow=8.7,SNR=5.6						
WRA	**Warramunga Arr**	**61.39**	**188**	P	**P**	**18 17 20.4**	**-1.2**
	0.2nm,0.6s,baz=6.6,slow=6.9,SNR=5.7						
ASAR	**Alice Springs**	**65.11**	**188**	P	**P**	**18 17 46.0**	**-0.3**
	0.1nm,0.6s,baz=0.8,slow=7.1,SNR=3.2						
FINES	**FINESS Array B**	**65.28**	**332**	P	**P**	**18 17 46.5**	**-0.5**
	0.5nm,0.5s,baz=49,slow=8.8,SNR=5.1						
HFS	**Hagfors**	**70.41**	**335**	P	**P**	**18 18 18.7**	**-0.5**
	0.4nm,0.3s,baz=60,slow=8.5,SNR=4.0						

ISCJB ***08*** *18:07:35.8±0.5, 24°.63N±0°.04×122°.83E±0°.02, h89km±5km, Error ellipse: s-maj=6.7km s-min=2.7km az=0.0*
JMA ***08*** *18:07:35.2±0.1, 24°.60N×122°.82E, h98km±1km, M2.3*
TAP ***08*** *18:07:35.6, 24°.69N×122°.83E, h91km, ML3.1, C*

ISC 08 18:07:36.4±1.4, 24°.63N±0°.05×122°.83E±0°.02, h88km±8km, n59, σ0°74/84, 2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.20**	**149**	P	**Pn**	**18 07 49.2**	**+0.1**
JYNG				*e*S	**Sn**	**18 07 59.3**	**+0.8**
YOJ	**Yonaguni jima**	**0.23**	**135**	⇓*i*P	**Pn**	**18 07 49.3**	**+0.1**
	baz=149						
YOJ				S	**Sn**	**18 07 59.5**	**+0.9**
	baz=149						
YOJ	**Yonaguni jima**	**0.23**	**135**	P	**Pn**	**18 07 49.2**	**+0.1**
YOJ				*e*S	**Sn**	**18 07 59.6**	**+0.9**
IRIF	**Iriomote-Funau**	**0.87**	**109**	P	**Pn**	**18 07 54.0**	**-0.4**
IRIF				S	**Sn**	**18 08 08.3**	**+0.4**
TWC	**Suao**	**0.90**	**269**	P	**Pn**	**18 07 54.2**	**-0.5**
	baz=267						
TWC				*e*S	**Sn**	**18 08 07.4**	**-1.0**
	baz=267						
NTC	**Toucheng**	**0.94**	**284**	*e*P	**Pn**	**18 07 55.3**	**+0.1**
	baz=279						
NTC				*e*S	**Sn**	**18 08 09.1**	**-0.1**
	baz=279						
TIPB	**Shuangxi**	**0.98**	**291**	⇓P	**Pn**	**18 07 54.5**	**-1.2**
	baz=280						
TIPB				*e*S	**Sn**	**18 08 08.6**	**-1.5**
	baz=280						
NANB	**Nanao**	**1.00**	**259**	*e*P	**Pn**	**18 07 56.0**	**+0.1**
	baz=255						
ENA	**Nanau**	**1.01**	**259**	P	**Pn**	**18 07 56.3**	**+0.2**
	baz=255						
NWF	**Wu-fen Shan**	**1.05**	**295**	*e*S	**Sn**	**18 08 11.7**	**-0.1**
	baz=291						
WFSB	**Wu-fen Shan**	**1.05**	**295**	*e*S	**Sn**	**18 08 12.1**	**+0.5**
	baz=291						
HATJ	**Hateruma jima**	**1.05**	**122**	P	**Pn**	**18 07 56.5**	**0.0**
HATJ				*e*S	**Sn**	**18 08 12.0**	**+0.4**
TWE	**Neicheng**	**1.06**	**275**	P	**Pn**	**18 07 56.4**	**-0.2**
	baz=273						
TWE				*e*S	**Sn**	**18 08 11.2**	**-0.6**
	baz=273						
JKRS	**Kuro-shima**	**1.14**	**110**	P	**Pn**	**18 07 57.5**	**0.0**
JKRS				*e*S	**Sn**	**18 08 14.0**	**+0.5**
ENTT	**Nioudou**	**1.15**	**271**	P	**Pn**	**18 07 58.1**	**+0.4**
	baz=263						
NACB	**Ninganchiao**	**1.22**	**248**	P	**Pn**	**18 07 57.8**	**-0.6**
	baz=237						
NWLT	**Wulai**	**1.22**	**277**	*e*P	**Pn**	**18 07 58.4**	**-0.1**
	baz=279						
NWLT				*e*S	**Sn**	**18 08 14.5**	**-0.7**
	baz=279						
JIJ	**Ishigaki jima**	**1.22**	**102**	P	**Pn**	**18 07 57.9**	**-0.6**
JIJ				*e*S	**Sn**	**18 08 14.2**	**-1.0**
TWD	**Chiawan**	**1.25**	**244**	*e*P	**Pn**	**18 07 58.8**	**-0.1**
	baz=233						
TWD				*e*S	**Sn**	**18 08 14.8**	**-1.0**
	baz=233						
YM10	**YM10**	**1.27**	**295**	*e*P	**Pn**	**18 07 59.0**	**-0.1**
	baz=291						
YM04	**YM04**	**1.29**	**294**	*e*P	**Pn**	**18 07 59.2**	**-0.2**
	baz=291						
YHNB	**Yeheng**	**1.33**	**272**	*e*P	**Pn**	**18 08 00.0**	**+0.1**
	baz=276						
NNSB	**Datong**	**1.33**	**262**	*e*P	**Pn**	**18 07 59.9**	**-0.2**
	baz=250						
NNSH	**Datong**	**1.33**	**262**	P	**Pn**	**18 07 59.8**	**-0.3**
	baz=251						
NSK	**Sanguang**	**1.34**	**272**	P	**Pn**	**18 08 00.2**	**+0.2**
	baz=276						
JISG	**Ishigakijimahi**	**1.35**	**91**	P	**Pn**	**18 07 59.4**	**-0.6**
JISG				*e*S	**Sn**	**18 08 17.9**	**0.0**
NTST	**Danshui**	**1.36**	**293**	*e*P	**Pn**	**18 08 00.4**	**+0.1**
	baz=290						
ESL	**Shilin**	**1.51**	**238**	P	**Pn**	**18 08 01.7**	**-0.4**
	baz=235						
ESL				*e*S	**Sn**	**18 08 20.9**	**-0.8**
	baz=235						
TDCB	**Techi**	**1.57**	**257**	*e*P	**Pn**	**18 08 03.2**	**+0.2**
	baz=248						
TDCB				*e*S	**Sn**	**18 08 22.6**	**-0.6**
	baz=248						
EGFH	**Guangfu**	**1.60**	**234**	*e*P	**Pn**	**18 08 02.6**	**-0.7**
	baz=231						
CHGB	**Renai**	**1.61**	**250**	*e*P	**Pn**	**18 08 03.7**	**0.0**
	baz=239						
CHGB				*e*S	**Sn**	**18 08 24.2**	**-0.1**
	baz=239						
LIOB	**Emei**	**1.65**	**271**	P	**Pn**	**18 08 04.0**	**0.0**
	baz=268						
LIOB				*e*S	**Sn**	**18 08 25.1**

0.3nm,0.3s,baz=296,slow=18,SNR=1.3
PALK Sn Sn 18 20 09.7 -11
0.5nm,0.3s,baz=116,slow=6.5,SNR=3.8
CMAR Chiang Mai Arr 16.33 22 Pn **Pn 18 18 52.2 +0.5**
0.1nm,0.3s,baz=215,slow=12,SNR=6.0
H01W3 Cape Leeuwin H 42.96 154 T T 19 09 58.4
baz=329
H01W2 Cape Leeuwin H 42.98 154 T T 19 09 55.0
baz=329
H01W1 Cape Leeuwin H 42.98 154 T T 19 09 55.8
baz=329
MKAR Makanchi Array 44.31 350 P **P 18 23 11.4 -0.9**
0.4nm,0.6s,baz=169,slow=7.5,SNR=4.6
WRA Warramunga Arr 46.97 121 P **P 18 23 33.4 -0.5**
0.7nm,1.1s,baz=300,slow=8.7,SNR=2.9
ASAR Alice Springs 48.26 126 P **P 18 23 43.6 -0.2**
0.4nm,1.0s,baz=302,slow=7.8,SNR=3.0
KURBB Kurchatov Arra 48.70 348 P **P 18 23 46.0 -0.7**
0.2nm,0.8s,baz=172,slow=8.0,SNR=3.6
ZALV Zalesovo Beam 50.95 354 P **P 18 24 03.3 -0.4**
0.3nm,0.4s,baz=217,slow=7.0,SNR=2.8
BRTR Keskin Array B 64.39 313 P **P 18 25 39.0 +0.1**
0.3nm,0.7s,baz=142,slow=7.3,SNR=2.5

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*ISCJB **08** 18:25:16.9±0.8, 52°.0N±0°.1×95°.93E±0°.08, h10km, mb3.4/3, MS3.1/2, Error ellipse: s-maj=20.5km s-min=6.7km az=179.7*
*IDC **08** 18:25:16.5±1.1, 51°.89N×96°.05E, h0km, mb3.6/3, mb1 3.3/6, mb1mx3.1/74, mbtmp3.3/6, ML2.6/3, MS3.2/2, Ms1 3.2/2, ms1mx2.4/69, Error ellipse: s-maj=30.7km s-min=12.1km az=171.0*
*MOS **08** 18:25:18.7±2.1, 52°.48N×95°.95E, h2km, mb4.0/1, Error ellipse: s-maj=29.4km s-min=15.4km az=13.1*
ISC 08 18:25:17.6±0.9, 51°.9N±0°.2×96°.05E±0°.06, h10km, n20, σ1§72/17, mb3.5/3, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ORL	**Orlik**	**2.40**	**73**	*e*PN	**Pn**	**18 25 57.6**	**+0.5**
ORL				*e*		18 26 28.8	
ORL				pmax	pmax		
	comp=Z,64nm,0.5s						
ORL				smax	smax		
	comp=N,233nm,1.1s						
MOY	**Mondy**	**3.08**	**93**	*e*PN	**Pn**	**18 26 10.1**	**+3.7**
MOY				*e*		18 26 50.7	
MOY				pmax	pmax		
	comp=Z,34nm,0.5s						
MOY				smax	smax		
	comp=N,234nm,1.0s						
ARS	**Arshan**	**3.95**	**87**	*e*PN	**Pb**	**18 26 26.3**	**-1.0**
ARS				*e*		18 27 18.4	
ARS				pmax	pmax		
	comp=Z,37nm,0.4s						
ARS				smax	smax		
	comp=E,288nm,0.6s						
TLY	**Talaya**	**4.72**	**90**	Pg	**Pb**	**18 26 40.1**	**-0.4**
	comp=E,0.0nm,0.3s,baz=271,slow=12,SNR=4.4						
TLY				Lg	Lg	18 27 40.4	
	comp=E,0.1nm,0.3s,baz=218,slow=19,SNR=9.6						
TLY	**Talaya**	**4.72**	**90**	*e*PN	**Pb**	**18 26 40.5**	**0.0**
TLY				*e*		18 27 40.1	
TLY				pmax	pmax		
	comp=Z,5.0nm,0.4s						
ZAK	**Zakamensk**	**4.81**	**106**	*e*PN	Pn	18 26 39.3	+9.2
ZAK				*e*		18 27 43.3	
ZAK				pmax	pmax		
	comp=Z,20nm,0.8s						
ZAK				smax	smax		
	comp=N,119nm,1.7s						
IRK	**Irkutsk**	**5.08**	**83**	*e*PN	**Pb**	**18 26 46.7**	**+0.1**
IRK				*e*		18 27 51.2	
IRK				pmax	pmax		
	comp=Z,43nm,0.5s						
IRK				smax	smax		
	comp=N,219nm,0.6s						
TRG	**Tyrgan**	**6.37**	**78**	*e*PN	**Pn**	**18 26 49.1**	**-2.5**
TRG				*e*		18 28 29.9	
TRG				pmax	pmax		
	comp=Z,13nm,1.3s						
TRG				smax	smax		
	comp=N,62nm,1.3s						
ZALV	**Zalesovo Beam**	**7.09**	**291**	Pn	**Pn**	**18 27 03.1**	**+1.8**
	comp=N,0.4nm,0.3s,baz=100,slow=13,SNR=6.4						
ZALV				Pg	Pb	18 27 22.6	+1.9
	comp=N,0.8nm,0.3s,baz=113,slow=15,SNR=6.8						
ZALV				Sn	**Sn**	**18 28 21.7**	**-0.1**
	comp=N,0.4nm,0.3s,baz=106,slow=20,SNR=3.7						
ZALV				Lg	Lg	18 28 57.0	
	comp=N,1.4nm,0.3s,baz=116,slow=28,SNR=7.9						
OGRR	**Ongureny**	**7.22**	**72**	*e*PN	**Pn**	**18 27 03.7**	**+0.6**
OGRR				*e*		18 27 26.4	
OGRR				*e*		18 28 57.4	
OGRR				pmax	pmax		
	comp=Z,13nm,0.6s						
OGRR				smax	smax		
	comp=N,61nm,1.2s						
SONM	**Songino Array**	**7.83**	**117**	Pg	Pb	18 27 34.0	+0.5
	comp=N,0.3nm,0.3s,baz=305,slow=17,SNR=8.8						
SONM				Lg	Lg	18 29 21.4	
	comp=N,0.6nm,0.3s,baz=304,slow=28,SNR=13						
MKAR	**Makanchi Array**	**10.33**	**246**	Pn	**Pn**	**18 27 45.6**	**-0.2**
	comp=N,0.1nm,0.3s,baz=40,slow=14,SNR=4.3						
MKAR				Pg		18 28 26.5	
	comp=N,0.1nm,0.3s,baz=69,slow=16,SNR=3.9						
MKAR				Lg	Lg	18 30 44.3	
	comp=N,0.1nm,0.3s,baz=46,slow=28,SNR=5.6						
KURK	**Kurchatov**	**10.98**	**271**	P	**Pn**	**18 27 57.1**	**+2.5**
KURBB	**Kurchatov Arra**	**11.05**	**270**	Pn	**Pn**	**18 27 57.1**	**+1.5**
	comp=N,0.0nm,0.3s,baz=76,slow=16,SNR=5.0						
KURBB				Lg	Lg	18 31 06.9	
	comp=N,0.0nm,0.3s,baz=73,slow=32,SNR=8.9						
BVAR	**Borovoye Array**	**15.65**	**284**	Pn	**P**	**18 28 59.8**	**-2.4**
	comp=N,0.1nm,0.3s,baz=83,slow=10,SNR=5.4						
TIXI	**Tiksi**	**24.56**	**24**	P	**P**	**18 30 37.5**	**+0.4**
	comp=N,0.6nm,0.3s,baz=253,slow=6.6,SNR=4.5						
MA2	**Magadan**	**30.92**	**54**	LR	LR	18 43 47.5	
	comp=N,58nm,18.9s,baz=105,slow=36						
SPITS	**Spitsbergen Ar**	**37.71**	**341**	LR	LR	18 48 18.7	
	comp=N,28nm,21.7s,baz=190,slow=37						
FINES	**FINESS Array B**	**37.77**	**313**	P	**P**	**18 32 33.7**	**+0.3**
	comp=N,0.6nm,0.6s,baz=92,slow=12,SNR=3.6						
TORD	**Torodi Ar. Bea**	**82.44**	**282**	P	**P**	**18 37 38.8**	**-1.4**
	comp=N,0.2nm,0.6s,baz=45,slow=5.1,SNR=2.9						

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*ISCJB **08** 18:27:34.9±0.1, 62°.22N±0°.01×147°.88W±0°.03, h65km±2km, mb3.9/29, Error ellipse: s-maj=2.6km s-min=2.3km az=11.8*
*IDC **08** 18:27:35.2±1.3, 62°.25N×148°.17W, h50km±12km, mb3.6/17, mb1 3.8/21, mb1mx3.6/79, mbtmp3.9/21, ML3.9/5, MS3.4/6, Ms1 3.4/6, ms1mx2.9/54, Error ellipse: s-maj=12.0km s-min=8.7km az=93.0*
*NEIC **08** 18:27:36.8±0.0, 62°.23N×147°.88W, h40km, mb4.2/9, MW4.2, ML4.3(AEIC), Moment Tensor Solution. s35 Moment tensor: Scale 10^15^Nm; M_{rr}=1.50; $M_{\theta\theta}$0.50; $M_{\phi\phi}$0.99; $M_{r\theta}$1.10; $M_{\theta\phi}$1.92; $M_{\phi r}$-0.77; Best double couple: M_0=2.70000×10^15^ NP1:ϕ_s=8.00000°, δ56.00000°, λ-143.00000°. NP2:ϕ_s=255.00000°, δ60.00000°, λ-40.00000°. Principal axes: T 2.6900, Plg2.0000°, Azm312.0000°; N 0.0000, Plg42.0000°, Azm44.0000°; P -2.6900, Plg48.0000°, Azm220.0000°; After AEIC.*
NEIC Felt [III] at Anchorage. Also felt at Chugiak and Talkeetna.
ISC 08 18:27:35.7±0.8, 62°.25N±0°.03×147°.91W±0°.03, h47km±8km, n161, σ1§54/185, mb3.9/29, MS3.4/5, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SML	**Sawmill**	**0.48**	**205**	*e*Pn	**Pn**	**18 27 46.6**	**0.0**
SML				*e*Sn	**Sn**	**18 27 54.7**	**+0.3**
SCM	**Sheep Creek Mo**	**0.50**	**146**	P	**Pn**	**18 27 46.5**	**-0.3**
SCM				S	**Sn**	**18 27 54.9**	**+0.2**
GHO	**Glory Hole Cre**	**0.68**	**226**	*e*Pn	**Pn**	**18 27 48.9**	**-0.1**
GHO				*e*Sn	**Sn**	**18 27 59.2**	**+0.6**
DHY	**Denali Highway**	**0.87**	**16**	*e*Pn	**Pn**	**18 27 51.7**	**+0.1**
DHY				*e*Sn	**Sn**	**18 28 03.4**	**0.0**
PMR	**Palmer**	**0.88**	**222**	*e*Pn	**Pn**	**18 27 51.4**	**-0.2**
PMR				*e*Sn	**Sn**	**18 28 00.6**	**-2.6**
HUR	**Hurricane**	**1.09**	**313**	*e*Pn	**Pn**	**18 27 54.7**	**+0.2**
KLU	**Klutina**	**1.21**	**128**	*e*Pn	**Pn**	**18 27 56.1**	**-0.1**
KLU				*e*Sn	**Sn**	**18 28 12.3**	**+0.8**
RND	**Reindeer**	**1.24**	**340**	*e*Pn	**Pn**	**18 27 57.1**	**+0.5**
RND				*e*Sn	**Sn**	**18 28 13.1**	**+0.8**
HARP	**HAARP**	**1.29**	**82**	*e*Pn	**Pn**	**18 27 58.2**	**+0.9**
PAX	**Paxson**	**1.34**	**56**	*e*Pn	**Pn**	**18 27 58.5**	**+0.5**
PAX				*e*Sn	**Sn**	**18 28 14.7**	**-0.1**
VLZ	**Valdez**	**1.35**	**145**	*e*Pn	**Pn**	**18 27 57.4**	**-0.6**
JPK	**Jack Peak**	**1.35**	**152**	*e*Pn	**Pn**	**18 27 57.6**	**-0.4**
RC01	**Rabbit Creek A**	**1.45**	**218**	*e*Pn	**Pn**	**18 28 00.5**	**+1.0**
RC01				*e*Sn	**Sn**	**18 28 20.0**	**+2.7**
DIV	**Divide**	**1.51**	**137**	*e*Pn	**Pn**	**18 27 59.9**	**-0.4**
DIV				*e*Sn	**Sn**	**18 28 19.1**	**+0.2**
PS10	**TAPS Pump St10**	**1.54**	**39**	*e*Sn	**Sn**	**18 28 21.9**	**+2.4**
SUA	**Susitna One**	**1.56**	**241**	*e*Pn	**Pn**	**18 28 01.9**	**+1.0**
SUA				*e*Sn	**Sn**	**18 28 23.9**	**+3.9**
MCK	**McKinley**	**1.56**	**343**	*e*Pn	**Pn**	**18 28 02.0**	**+1.0**
TRF	**Thorofare Moun**	**1.63**	**319**	*e*Pn	**Pn**	**18 28 02.5**	**+0.5**
SKT	**Skwentna**	**1.72**	**263**	*e*Pn	**Pn**	**18 28 04.1**	**+0.9**
SKT				*e*Sn	**Sn**	**18 28 25.8**	**+1.8**
SKT				*e*Sn	Sn	18 28 27.2	+3.2
KTH	**Kantishna Hill**	**1.90**	**315**	*e*Pn	**Pn**	**18 28 06.6**	**+0.9**
EYAK	**Cordova Ski Ar**	**2.00**	**148**	*e*Pn	**Pn**	**18 28 07.4**	**+0.6**
BMRM	**Bremner River**	**2.03**	**128**	*e*Pn	**Pn**	**18 28 07.0**	**-0.5**
BMRM				*e*Sn	**Sn**	**18 28 37.2**	**+5.6**
RIDG	**Independ'e Rid**	**2.05**	**42**	*e*Pn	**Pn**	**18 28 09.3**	**+1.6**
RIDG				*e*Sn	**Sn**	**18 28 34.3**	**+2.2**
BWN	**Browne**	**2.06**	**341**	*e*Pn	**Pn**	**18 28 08.5**	**+0.8**
SLKM	**Skilak Lake**	**2.07**	**214**	*e*Pn	**Pn**	**18 28 08.5**	**+0.6**
PPLA	**Purkeypile**	**2.09**	**290**	*e*Pn	**Pn**	**18 28 09.1**	**+0.9**
HDA	**Harding Lake**	**2.21**	**11**	*e*Pn	**Pn**	**18 28 11.5**	**+1.6**
WRH	**Wood River Hil**	**2.24**	**358**	*e*Pn	**Pn**	**18 28 10.6**	**+0.5**
WRH				*e*Sn	**Sn**	**18 28 37.6**	**+1.1**
SPU	**Mount Spurr**	**2.25**	**243**	*e*Pn	**Pn**	**18 28 11.5**	**+1.2**
SPCP	**Crater Peak Br**	**2.25**	**246**	P	**Pn**	**18 28 11.7**	**+1.3**
CAST	**Castle Rocks**	**2.25**	**303**	*e*Pn	**Pn**	**18 28 11.5**	**+1.1**
DOT	**Dot Lake**	**2.25**	**50**	*e*Pn	**Pn**	**18 28 11.3**	**+0.9**
SEW	**Seward**	**2.28**	**200**	*e*Pn	**Pn**	**18 28 11.5**	**+0.8**
SEW				*e*Sn	**Sn**	**18 28 42.0**	**+4.5**
CKT	**Bend**	**2.30**	**245**	*e*Pn	**Pn**	**18 28 12.3**	**+1.2**
BPAW	**Bear Paw Mtn.**	**2.33**	**324**	*e*Pn	**Pn**	**18 28 11.9**	**+0.5**
PS08	**TAPS Pump Stn8**	**2.36**	**12**	*e*Pn	**Pn**	**18 28 13.3**	**+1.5**
PS08				*e*Sn	**Sn**	**18 28 41.7**	**+2.2**
CKL	**Chakachamna La**	**2.36**	**245**	P	**Pn**	**18 28 13.2**	**+1.3**
NEA	**Nenana**	**2.40**	**348**	*e*Pn	**Pn**	**18 28 12.8**	**+0.4**
CCB	**Clear Creek Bu**	**2.41**	**1**	P	**Pn**	**18 28 13.1**	**+0.6**
CCB				S	**Sn**	**18 28 41.4**	**+0.6**
SPWE	**Spurr West**	**2.42**	**248**	P	**Pn**	**18 28 14.2**	**+1.5**
RAGM	**Ragged Mountai**	**2.43**	**139**	*e*Pn	**Pn**	**18 28 13.0**	**+0.1**
MCARA	**McCarthy VSAT**	**2.48**	**108**	*e*Pn	**Pn**	**18 28 14.2**	**+0.8**
SCRK	**Sand Creek**	**2.49**	**44**	*e*Pn	**Pn**	**18 28 14.6**	**+0.8**
ILAR	**Eielson Array**	**2.58**	**10**	P	**Pn**	**18 28 16.1**	**+1.2**
	38nm,0.3s,baz=194,slow=14,SNR=1093						
ILAR				S	**Sn**	**18 28 46.0**	**+1.1**
	181nm,0.3s,baz=191,slow=22,SNR=45						
ILB	**Eielson Array**	**2.58**	**10**	*e*Pn	**Pn**	**18 28 16.0**	**+1.2**
ILB				*e*Sn	**Sn**	**18 28 45.6**	**+0.7**
IL1	**Eielson Array**	**2.58**	**10**	*e*Pn	**Pn**	**18 28 15.5**	**+0.7**
IL1				*e*Sn	**Sn**	**18 28 45.9**	**+1.0**
CHUM	**Lake Minchumin**	**2.59**	**311**	*e*Pn	**Pn**	**18 28 15.8**	**+0.8**
COLA	**College**	**2.64**	**1**	*e*Pn	**Pn**	**18 28 16.4**	**+0.7**
COLA				*e*Sn	**Sn**	**18 28 46.4**	**0.0**
MDM	**Murphy Dome**	**2.73**	**357**	*e*Pn	**Pn**	**18 28 17.6**	**+0.7**
MDM				*e*Sn	**Sn**	**18 28 48.8**	**+0.1**
CRQM	**Cirque**	**2.73**	**121**	*e*Pn	**Pn**	**18 28 16.8**	**-0.3**
CRQM				*e*Sn	**Sn**	**18 28 55.7**	**+6.8**
BERG	**Berg Lake**	**2.75**	**131**	*e*Pn	**Pn**	**18 28 17.0**	**-0.2**
GLM	**Gilmore Dome**	**2.76**	**5**	*e*Pn	**Pn**	**18 28 18.6**	**+1.2**
NICHA	**Nichawak Mount**	**2.77**	**135**	*e*Pn	**Pn**	**18 28 17.8**	**+0.3**
PTPK	**Patty Peak**	**2.80**	**110**	*e*Pn	**Pn**	**18 28 18.6**	**+0.6**
DFR	**Drift River**	**2.83**	**236**	P	**Pn**	**18 28 19.2**	**+0.7**
TGL	**Tana Glacier**	**2.86**	**119**	*e*Pn	**Pn**	**18 28 18.5**	**-0.3**
KAIM	**Kayak Island**	**2.88**	**142**	*e*Pn	**Pn**	**18 28 18.8**	**-0.2**
RDJH	**Redoubt Jeurge**	**2.88**	**237**	P	**Pn**	**18 28 20.0**	**+0.9**
BRLK	**Bradley Lake**	**2.88**	**212**	*e*Pn	**Pn**	**18 28 19.8**	**+0.7**
KHIT	**Khitrov Hills**	**2.88**	**127**	*e*Pn	**Pn**	**18 28 18.8**	**-0.3**
BALM	**Baldy**	**2.92**	**112**	*e*Pn	**Pn**	**18 28 19.6**	**0.0**
MID	**Middleton Isla**	**2.93**	**164**	*e*Pn	**Pn**	**18 28 21.3**	**+1.7**
RSO	**Redoubt South**	**2.94**	**235**	*e*Pn	**Pn**	**18 28 20.9**	**+0.9**
BCA3	**Beaver Creek A**	**2.94**	**71**	*e*Pn	**Pn**	**18 28 20.6**	**+0.8**
NCT	**North Crescent**	**2.95**	**237**	*e*Pn	**Pn**	**18 28 21.3**	**+1.3**
GRIN	**Grindle Hills**	**2.97**	**130**	*e*Pn	**Pn**	**18 28 20.1**	**-0.1**
KIAG	**Kiagna River**	**2.97**	**114**	*e*Pn	**Pn**	**18 28 20.0**	**-0.3**
MLY	**Manley**	**3.07**	**337**	*e*Pn	**Pn**	**18 28 22.6**	**+1.0**
ISLE	**Juniper Island**	**3.14**	**119**	*e*Pn	**Pn**	**18 28 22.0**	**-0.7**
HOM	**Homer**	**3.17**	**217**	*e*Pn	**Pn**	**18 28 24.1**	**+1.1**
CNPM	**China Poot**	**3.18**	**212**	*e*Pn	**Pn**	**18 28 24.2**	**+1.2**
BARK	**Barkley Ridge**	**3.20**	**123**	*e*Pn	**Pn**	**18 28 23.4**	**-0.1**
BARN	**Barnard Glacie**	**3.21**	**109**	*e*Pn	**Pn**	**18 28 24.1**	**+0.4**
ILIM	**Iliamna**	**3.27**	**231**	*e*Pn	**Pn**	**18 28 25.4**	**+1.0**
GRNC	**Granite Creek**	**3.32**	**115**	*e*Pn	**Pn**	**18 28 24.8**	**-0.4**
CTGM	**Chitina Glacie**	**3.39**	**109**	*e*Pn	**Pn**	**18 28 26.6**	**+0.4**
PRP	**Porcupine Dome**	**3.45**	**17**	*e*Pn	**Pn**	**18 28 28.1**	**+1.2**
MESA	**MESA**	**3.55**	**123**	*e*Pn	**Pn**	**18 28 28.4**	**0.0**
SVW2	**Sparrevohn**	**3.83**	**256**	*e*Pn	**Pn**	**18 28 32.2**	**+0.1**
EGAK	**Eagle**	**3.95**	**47**	*e*Pn	**Pn**	**18 28 34.5**	**+0.9**
AUNW	**Augustine NWes**	**3.96**	**226**	P	**Pn**	**18 28 35.0**	**+1.2**
AUW	**Augustine West**	**3.97**	**226**	P	**Pn**	**18 28 35.2**	**+1.3**
AUI	**Augustine Isla**	**3.98**	**225**	P	**Pn**	**18 28 35.2**	**+1.1**
DAWY	**Dawson**	**4.27**	**61**	*e*Pn	**Pn**	**18 28 39.2**	**+1.1**
CDD	**Cape Douglas**	**4.37**	**223**	P	**Pn**	**18 28 39.9**	**+0.5**
FYU	**Fort Yukon**	**4.49**	**14**	*e*Pn	**Pn**	**18 28 42.3**	**+1.3**
FONW	**Fourpeaked Sta**	**4.53**	**224**	P	**Pn**	**18 28 42.0**	**+0.4**
IM3	**Indian Mountai**	**4.54**	**328**	*e*Pn	**Pn**	**18 28 42.9**	**+1.2**
PS05	**TAPS Pump Stn5**	**4.74**	**347**	*e*Pn	**Pn**	**18 28 45.8**	**+1.4**
KAPH	**Katmai Pasha**	**4.86**	**224**	P	**Pn**	**18 28 46.3**	**+0.2**
YKU2	**Yakutat**	**4.87**	**121**	*e*Pn	**Pn**	**18 28 46.6**	**+0.4**
KAHC	**Katmai Hardscr**	**5.04**	**227**	P	**Pn**	**18 28 48.7**	**+0.1**
KARR	**Katmai Rainbow**	**5.05**	**225**	P	**Pn**	**18 28 49.4**	**+0.6**
KDAK	**Kodiak Island**	**5.05**	**210**	P	**Pn**	**18 28 47.9**	**-0.8**
	3.2nm,0.3s,baz=51,slow=8.9,SNR=56						
KDAK				S	**Sn**	**18 29 42.6**	**-3.1**
	15nm,0.3s,baz=308,slow=23,SNR=6.8						
KDAK	**Kodiak Island**	**5.05**	**210**	*e*Pn	**Pn**	**18 28 47.8**	**-0.9**
COLD	**Coldfoot**	**5.10**	**350**	*e*Pn	**Pn**	**18 28 51.2**	**+1.8**
KAKN	**Katmai Knife C**	**5.33**	**225**	P	**Pn**	**18 28 52.6**	**+0.1**
KELA	**Mount Kelaz**	**5.45**	**229**	P	**Pn**	**18 28 54.5**	**+0.2**
CAHL	**Cahill**	**5.60**	**225**	P	**Pn**	**18 28 56.6**	**+0.3**
OHAK	**Old Harbor**	**5.72**	**211**	*e*Pn	**Pn**	**18 28 56.2**	**-1.7**
TOLK	**Toolik Lake Re**	**6.46**	**355**	*e*Pn	**Pn**	**18 29 11.3**	**+3.2**
TOLK				*e*Sn	**Sn**	**18 30 28.1**	**+7.7**
SKAG	**Skagway**	**6.75**	**109**	*e*Pn	**Pn**	**18 29 12.6**	**+0.6**
BESE	**Bessie Mountai**	**7.43**	**114**	*e*Pn	**Pn**	**18 29 21.3**	**-0.1**
JIS	**Juneau Island**	**7.81**	**115**	*e*Pn	**Pn**	**18 29 26.3**	**-0.2**
CHGN	**Chignik**	**8.02**	**227**	*e*Pn	**Pn**	**18 29 28.8**	**-0.6**
ANM	**Nome**	**8.17**	**294**	*e*Pn	**Pn**	**18 29 32.8**	**+1.3**
ANM				*e*Sn	**Sn**	**18 31 00.1**	**-2.1**
INK	**Inuvik**	**8.54**	**38**	P	**Pn**	**18 29 38.0**	**+1.5**
	3.0nm,0.3s,baz=231,slow=14,SNR=42						
INK				S	**Sn**	**18 31 09.2**	**-2.1**
	1.9nm,0.3s,baz=250,slow=9.4,SNR=6.5						
INK				LR	LR	18 33 12.1	
	comp=Z,127nm,18.4s,baz=214,slow=39						
INK	**Inuvik**	**8.54**	**38**	*e*Pn	**Pn**	**18 29 37.5**	**+1.0**
INK				*e*Sn	**Sn**	**18 31 09.1**	**-2.2**
RDOG	**Red Dog Mine**	**8.57**	**319**	*e*Pn	**Pn**	**18 29 38.6**	**+1.7**
RDOG				*e*Sn	**Sn**	**18 31 11.3**	**-0.8**
SDPT	**Sand Point**	**9.49**	**229**	*e*Pn	**Pn**	**18 29 49.3**	**-0.2**
DLBC	**Dease Lake**	**9.64**	**105**	P	**Pn**	**18 29 51.5**	**-0.1**
	0.8nm,0.3s,baz=276,slow=14,SNR=6.2						
DLBC				LR	LR	18 33 45.4	
	comp=Z,191nm,20.6s,baz=299,slow=38						
CRAG	**Craig**	**10.22**	**125**	*e*Pn	**Pn**	**18 29 58.8**	**-0.7**
DIB	**Dawson Inlet,**	**12.22**	**131**	*e*Pn	**Pn**	**18 30 26.6**	**-0.1**
NIKH	**Nikolski High**	**14.50**	**240**	*e*Pn	**Pn**	**18 30 57.3**	**-0.4**
YKW3	**Yellowknife Ar**	**15.34**	**74**	*e*Pn	**Pn**	**18 31 07.3**	**-1.2**
	4.9nm,0.8s						
YKA	**Yellowknife Ar**	**15.36**	**74**	P	**Pn**	**18 31 08.8**	**0.0**
	0.2nm,0.3s,baz=283,slow=10,SNR=5.8						
YKA				LR	LR	18 38 29.4	
	comp=Z,4.3nm,19.2s,baz=286,slow=42						
ATKA	**Atka Island**	**17.29**	**246**	*e*Pn	**Pn**	**18 31 33.2**	**-0.1**
	12nm,0.8s						
MARYW	**Marymoor Park**	**20.59**	**123**	*e*pP	pP	18 32 23.4	+2.0
HTW	**Haystack Looko**	**20.61**	**122**	*e*pP	pP	18 32 25.5	+3.7
RES	**Resolute Bay**	**22.07**	**34**	P	P	18 32 36.9	+11
	3.7nm,0.8s,baz=230,slow=17,SNR=11						
RES	**Resolute Bay**	**22.07**	**34**	*e*P	**P**	**18 32 29.4**	**+3.5**
	5.6nm,0.9s						
NEW	**Newport**	**22.16**	**115**	*e*P	**P**	**18 32 28.3**	**+1.1**
	24nm,1.8s						
SMY	**Shemya**	**22.21**	**262**	*e*P	**P**	**18 32 29.6**	**+2.0**
	128nm,1.4s						
E07A	**Sunnyside**	**22.39**	**122**	*e*P	**P**	**18 32 29.9**	**+0.2**
	12nm,0.8s						
WALA	**Waterton Lakes**	**22.95**	**109**	*e*P	**P**	**18 32 34.3**	**-1.4**
	8.3nm,1.0s						
FFC	**Flin Flon**	**24.68**	**87**	*e*P	**P**	**18 32 52.1**	**+0.4**
	22nm,2.0s						
BMO	**Blue Mountains**	**24.81**	**120**	*e*P	**P**	**18 32 54.7**	**+1.7**
	5.4nm,1.1s						
LBFM	**Black Fox Moun**	**26.07**	**131**	*e*PcP	**PcP**	**18 36 31.1**	**0.0**
SEY	**Seymchan**	**26.65**	**298**	P	**P**	**18 33 08.1**	**-1.3**
	2.2nm,0.6s,baz=47,slow=5.4,SNR=18						
ELK	**Elko**	**29.08**	**122**	P	**P**	**18 33 33.5**	**+1.9**
	0.5nm,0.4s,baz=333,slow=11,SNR=2.8						
PETK	**Petropavlovsk-**	**29.62**	**277**	LR	LR	18 45 13.9	
	comp=Z,53nm,19.7s,baz=92,slow=36						
PDAR	**Pinedale Array**	**29.75**	**113**	P	**P**	**18 33 37.6**	**+0.1**
	0.6nm,0.7s,baz=327,slow=4.8,SNR=1.5						
PDAR				LR	LR	18 46 20.5	
	comp=Z,81nm,20.2s,baz=320,slow=38						
NVAR	**Mina Array Bea**	**29.93**	**129**	P	**P**	**18 33 40.6**	**+1.5**
	0.6nm,0.7s,baz=313,slow=8.3,SNR=5.0						
TIXI	**Tiksi**	**31.17**	**323**	P	**P**	**18 33 47.7**	**-1.7**
	0.5nm,0.3s,baz=90,slow=8.9,SNR=3.0						
RPV	**Rancho Palos V**	**34.10**	**133**	*e*pP	pP	18 34 23.8	-4.1
FRD	**Ford Ranch, An**	**34.95**	**131**	*e*pP	pP	18 34 33.3	-2.1
TXAR	**Lajitas Array**	**43.65**	**118**	P	**P**	**18 35 35.4**	**0.0**
	0.4nm,0.7s,baz=324,slow=7.5,SNR=5.8						
TXAR				PcP	**PcP**	**18 37 21.4**	**-0.5**
	0.3nm,0.7s,baz=347,slow=3.7,SNR=2.3						
TXAR				LR	LR	18 55 07.0	
	comp=Z,87nm,19.2s,baz=0.0,slow=38						
KLR	**Kul'dur**	**44.05**	**292**	P	**P**	**18 35 37.9**	**-0.4**
	0.1nm,0.6s,baz=0.0,slow=13,SNR=3.1						
ARA0	**ARCESS Array S**	**48.42**	**3**	*e*P	**P**	**18 36 10.6**	**-1.8**
ARCES	**ARCESS Array B**	**48.42**	**3**	P	**P**	**18 36 10.6**	**-1.8**
	0.9nm,0.7s,baz=6.0,slow=8.0,SNR=6.7						
SONA0	**Songino Array**	**55.41**	**308**	*e*P	**P**	**18 37 05.1**	**+0.3**
SONM	**Songino Array**	**55.41**	**308**	P	**P**	**18 37 05.1**	**+0.3**
	0.5nm,0.5s,baz=27,slow=9.7,SNR=3.5						
NB2	**NORSAR Subarra**	**56.01**	**12**	P	pP	18 37 21.8	-0.1
	comp=Z,1.1nm,0.7s,baz=350,slow=7.4						
FIA0	**FINESS Array S**	**56.55**	**3**	*e*P	**P**	**18 37 11.0**	**-1.6**
FINES	**FINESS Array B**	**56.55**	**3**	P	**P**	**18 37 11.0**	**-1.6**
	comp=Z,0.5nm,0.5s,baz=12,slow=9.8,SNR=4.1						
ZAA1	**Zalesovo Array**	**56.96**	**326**	*e*P	**P**	**18 37 14.0**	**-1.6**
ZALV	**Zalesovo Beam**	**56.96**	**326**	P	**P**	**18 37 14.0**	**-1.6**
	comp=Z,1.4nm,0.6s,baz=20,slow=6.7,SNR=6.7						
ZALV				LR	LR	19 04 02.9	
	comp=Z,29nm,20.9s,baz=69,slow=38						
BVAR	**Borovoye Array**	**61.16**	**335**	P	**P**	**18 37 42.9**	**-1.8**
	comp=Z,1.3nm,0.6s,baz=44,slow=8.9,SNR=6.6						
KURBB	**Kurchatov Arra**	**61.59**

JANG	Nango	3.31 331	P	Pn	19 04 32.6	-0.1
JAG	Ashikaga	3.50 254	P	Pn	19 04 35.3	-0.1
BSO1	Boso 1	3.55 218	P	Pn	19 04 35.4	-0.2
BSO1			S	Sn	19 05 16.1	+0.1
JAW	Awa shima	3.59 287	P	Pn	19 04 37.2	+0.7
JRY	Ryogami san	4.07 250	P	Pn	19 04 43.1	-0.1
JOT	Ohata	4.36 334	P	Pn	19 04 47.2	0.0
MJAR	Matsushiro Arr	4.43 259	Pn	Pn	19 04 48.6	+0.4
	3.6nm,0.3s,baz=90,slow=15,SNR=46					
MJAR			Sn	Sn	19 05 39.1	+0.5
	2.4nm,0.3s,baz=88,slow=14,SNR=7.6					
MAT	Matsushiro	4.44 259	P	Pn	19 04 49.9	+1.7
MAT			S	Sn	19 05 38.3	-0.3
JCH	Churui	5.12 358	P	Pn	19 04 55.8	-1.7
JHJ	Hachijo jima 2	5.38 217	Pn	Pn	19 04 59.6	-1.5
	12nm,0.3s,baz=342,slow=22,SNR=9.7					
JHJ			Sn	Sn	19 05 56.2	-5.5
	22nm,0.3s,baz=84,slow=23,SNR=7.0					
ASAJ	Asahikawa	6.66 354	Pn	Pn	19 05 17.9	-0.8
	3.6nm,0.3s,baz=196,slow=8.8,SNR=50					
ASAJ			Sn	Sn	19 06 30.1	-3.3
	0.8nm,0.3s,baz=284,slow=33,SNR=7.0					
JCJ	Chichijima	10.44 187	Pn	Pn	19 06 06.3	-4.3
	3.8nm,0.3s,baz=283,slow=19,SNR=9.1					
KSRS	Korea Array	12.47 275	Pn	Pn	19 06 40.1	+1.7
	0.1nm,0.3s,baz=85,slow=14,SNR=6.0					
SONM	Songino Array	29.00 303	P	P	19 09 41.9	+2.0
	0.3nm,0.4s,baz=115,slow=6.5,SNR=2.4					
ZALV	Zalesovo Beam	42.91 312	P	P	19 11 40.2	+1.9
	0.3nm,0.3s,baz=64,slow=6.6,SNR=2.4					
KURBB	Kurchatov Arra	47.11 308	P	P	19 12 13.1	+1.3
	0.5nm,0.7s,baz=81,slow=8.3,SNR=7.1					
ILAR	Eielson Array	48.16 33	P	P	19 12 22.4	+2.7
	0.2nm,0.6s,baz=258,slow=4.3,SNR=2.4					
WRA	Warramunga Arr	57.79 190	P	P	19 13 31.5	+0.3
	0.7nm,0.5s,baz=8.7,slow=7.1,SNR=13					

NIED ***08*** *19:07:00,35°.00N×138°.40E, h32km, Mw4.0 Best double couple: M0=1.01000×10^15 NP1:φs=315.00000°, δ68.00000°, λ168.00000°. NP2:φs=50.00000°, δ79.00000°, λ23.00000°.*
ISCJB ***08*** *19:07:36.1±0.6, 34°.95N±0°.04×138°.36E±0°.05, h32km±5km, mb3.9/18, MS3.1/4, Error ellipse: s-maj=7.5km s-min=5.6km az=152.4*
JMA ***08*** *19:07:37.0, 35°.02N×138°.37E, h26km±1km, M4.0 Broadband fault plane solution: P waves. NP1: φs=219.00000°, δ63.00000°, λ-32.00000°. NP2: φs=325.00000°, δ62.00000°, λ-149.00000°. Principal axes: T Plg1.0000°, Azm272.0000°; N Plg49.0000°, Azm3.0000°; P Plg41.0000°, Azm181.0000°;*
JMA Felt III J1.
IDC ***08*** *19:07:38.7±1.4, 34°.92N×138°.38E, h44km±13km, mb3.7/18, mb1 3.8/21, mb1mx3.6/77, mbtmp3.9/21, ML3.2/4, MS3.0/7, Ms1 3.0/7, ms1mx2.8/72 Error ellipse: s-maj=18.5km s-min=10.1km az=89.0*

ISC 08 19:07:36.8±0.8, 35°.01N±0°.04×138°.38E±0°.04, h26km±6km, n41, σ0°84/40, mb4.0/18, MS3.0/4, 5C-2D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHZ3	Shizuoka 3	0.15	293	⇑P	Pb	19 07 41.9	-0.2
SHZ3				S	Sb	19 07 45.5	-0.1
JIZS	Izushimoda	0.50	125	⇑P	Pb	19 07 47.0	-0.1
JIZS				S	Sb	19 07 54.3	+0.2
JYN	Shimob	0.51	16	⇓P	Pb	19 07 46.9	-0.3
JYN				S	Sb	19 07 54.3	0.0
JNY	Yasuok	0.55	310	⇑P	Pb	19 07 47.5	-0.4
KTJJ	Kamata 2	0.57	98	⇑P	Pb	19 07 48.2	0.0
KTJJ				S	Sb	19 07 56.3	+0.3
JOD2	Odawara 2	0.64	66	⇑P	Pb	19 07 49.0	-0.3
JOD2				S	Sb	19 07 57.4	-0.5
TK04	Tokai 4	0.75	214	⇓P	Pn	19 07 51.7	+0.2
MJAR	Matsushiro Arr	1.54	355	P	Pn	19 08 03.1	+0.6
	111nm,0.3s,baz=180,slow=14,SNR=302						
MJAR				S	Sb	19 08 24.5	+0.8
	118nm,0.3s,baz=187,slow=24,SNR=17						
MJAR				LR	LR	19 08 34.2	
	comp=Z,153nm,21.5s,baz=185,slow=34						
MAT	Matsushiro	1.54	355	P	Pn	19 08 03.8	+1.2
MAT				S	Sb	19 08 23.9	+0.2
JHJ	Hachijo jima 2	2.22	148	P	Pn	19 08 12.2	+0.3
	29nm,0.3s,baz=127,slow=20,SNR=4.1						
JHJ				S	Sb	19 08 44.4	+1.3
	47nm,0.3s,baz=45,slow=19,SNR=4.4						
JNU	Nakatsue	6.50	255	P	Pn	19 09 11.8	+1.0
	0.9nm,0.3s,baz=91,slow=17,SNR=8.8						
JNU				LR	LR	19 11 39.7	
	comp=Z,57nm,20.6s,baz=118,slow=37						
KSRS	Korea Array	8.79	289	P	Pn	19 09 43.9	+1.7
	0.2nm,0.3s,baz=107,slow=14,SNR=6.1						
KSRS				LR	LR	19 13 04.2	
	comp=Z,63nm,18.2s,baz=91,slow=37						
USRK	Ussuriysk Ar.	10.41	334	LR	LR	19 14 01.4	
	comp=Z,72nm,18.3s,baz=197,slow=36						
KLR	Kul'dur	15.03	343	P	P	19 11 10.2	-2.2
	0.0nm,0.3s,baz=131,slow=14,SNR=4.1						
PETK	Petropavlovsk-	22.68	31	LR	LR	19 21 30.1	
	comp=Z,43nm,19.2s,baz=113,slow=36						
MA2	Magadan	25.89	14	P	P	19 13 07.0	+0.8
	2.2nm,0.6s,baz=254,slow=7.3,SNR=3.8						
SONM	Songino Array	26.98	308	P	P	19 13 18.0	+1.5
	0.6nm,0.7s,baz=124,slow=7.2,SNR=3.4						
SONM				LR	LR	19 24 20.7	
	comp=Z,31nm,20.0s,baz=95,slow=37						
H11N2	WAKE ISLAND Hy	29.41	114	T	T	19 44 20.1	
	baz=315,slow=75,SNR=22						
H11N1	WAKE ISLAND Hy	29.42	114	T	T	19 44 24.0	
	baz=315,slow=75,SNR=32						
H11N3	WAKE ISLAND Hy	29.43	114	T	T	19 44 23.7	
	baz=315,slow=75,SNR=42						
H11S3	WAKE ISLAND Hy	30.01	116	T	T	19 45 20.8	
	baz=316,slow=76,SNR=32						
H11S1	WAKE ISLAND Hy	30.02	116	T	T	19 45 12.6	
	baz=316,slow=76,SNR=23						
H11S2	WAKE ISLAND Hy	30.03	116	T	T	19 45 21.3	
	baz=316,slow=76,SNR=19						
CMAR	Chiang Mai Arr	38.60	255	P	P	19 14 57.7	-0.2
	0.6nm,0.8s,baz=45,slow=7.4,SNR=3.6						
ZALV	Zalesovo Beam	41.51	314	P	P	19 15 21.4	-0.2
	0.6nm,0.4s,baz=105,slow=6.8,SNR=3.3						
ZALV				LR	LR	19 33 04.2	
	comp=Z,31nm,18.7s,baz=68,slow=37						
MKAR	Makanchi Array	43.14	304	P	P	19 15 35.3	+0.2
	1.1nm,0.6s,baz=91,slow=10,SNR=16						
NRIK	Noril'sk	44.11	337	LR	LR	19 35 19.9	
	comp=Z,47nm,18.3s,baz=61,slow=38						
KURBB	Kurchatov Arra	45.34	309	P	P	19 15 51.8	-0.8
	3.7nm,0.8s,baz=81,slow=6.6,SNR=42						
BVAR	Borovoye Array	50.14	313	P	P	19 16 29.4	-0.3
	1.6nm,0.5s,baz=90,slow=7.0,SNR=22						
ILAR	Eielson Array	52.51	31	P	P	19 16 48.7	+1.4
	0.5nm,0.7s,baz=282,slow=8.7,SNR=5.3						
WRA	Warramunga Arr	54.78	185	P	P	19 17 02.7	-1.7
	0.8nm,0.6s,baz=1.2,slow=7.7,SNR=12						
ASAR	Alice Springs	58.51	185	P	P	19 17 30.4	-0.5
	0.4nm,0.8s,baz=5.3,slow=13,SNR=4.4						
RES	Resolute Bay	65.16	14	P	P	19 18 14.9	-0.1
	1.6nm,0.7s,baz=313,slow=5.9,SNR=5.0						
FINES	FINESS Array B	69.44	332	P	P	19 18 42.4	+0.1
	2.5nm,0.7s,baz=62,slow=6.3,SNR=16						
KBZ	Khabaz	70.33	310	P	P	19 18 48.6	+0.6
	2.5nm,0.9s,baz=323,slow=1.6,SNR=4.5						
AKASG	Malin Array Be	74.37	321	P	P	19 19 11.0	-1.0
	0.4nm,0.5s,baz=50,slow=6.3,SNR=3.1						
HFS	Hagfors	74.89	335	P	P	19 19 14.9	0.0
	1.3nm,0.5s,baz=58,slow=5.4,SNR=8.6						
NB2	NORSAR Subarra	75.08	336	P	P	19 19 15.6	-0.5
	comp=Z,0.7nm,0.8s,baz=43,slow=5.9						
NOA	NORSAR Array B	75.08	336	P	P	19 19 15.1	-0.9
	comp=Z,2.7nm,0.8s,baz=64,slow=6.0,SNR=4.2						
BRTR	Keskin Array B	78.32	310	P	P	19 19 35.6	+0.7
	comp=Z,1.8nm,1.0s,baz=90,slow=4.9,SNR=7.2						
EKA	Eskdalemuir Ar	84.18	339	P	P	19 20 05.5	0.0
	comp=Z,0.5nm,0.4s,baz=46,slow=4.1,SNR=4.5						

ISCJB ***08*** *19:08:11.6±0.8, 37°.59N±0°.03×141°.89E±0°.07, h50km±8km, mb3.8/5, Error ellipse: s-maj=9.9km s-min=5.4km az=14.7*
IDC ***08*** *19:08:12.7±2.0, 37°.61N×142°.00E, h43km±21km, mb3.5/5, mb1 3.8/9, mb1mx3.4/77, mbtmp3.9/9, ML3.6/4, Error ellipse: s-maj=35.2km s-min=14.0km az=85.0*
JMA ***08*** *19:08:13.8, 37°.63N×141°.74E, h45km±1km, M3.8*
JMA Felt II J1.

ISC 08 19:08:12.3±1.2, 37°.57N±0°.05×141°.91E±0°.09, h35km±6km, n21, σ0°90/35, mb3.8/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	Kawauchi	0.84	257	P	Pn	19 08 27.9	+0.2
JFK				eS	Sn	19 08 38.0	-0.9
JMM	Marumori	0.93	289	P	Pn	19 08 28.7	-0.2
JMM				S	Sn	19 08 39.3	-1.7
JIO	Ouri	0.99	334	P	Pn	19 08 29.9	+0.2
JIO				S	Sn	19 08 41.2	-1.2
ONAJ	Iwakimizuishiy	1.00	243	P	Pn	19 08 30.3	+0.5
ONAJ				eS	Sn	19 08 42.2	-0.5
JFT	Otama	1.25	268	P	Pn	19 08 33.9	+0.6
JFT				eS	Sn	19 08 48.2	-0.6
JOU	Okura	1.27	310	P	Pn	19 08 33.3	-0.2
JOU				eS	Sn	19 08 48.3	-1.0
JMK	Ichinoseki	1.49	339	P	Pn	19 08 37.1	+0.6
JMK				eS	Sn	19 08 54.0	-0.7
JYS	Shiratake	1.60	295	P	Pn	19 08 38.4	+0.4
JYS				eS	Sn	19 08 57.2	-0.2
JFY	Yanaizu	1.76	265	P	Pn	19 08 40.8	+0.5
JFY				eS	Sn	19 09 00.8	-0.6
JYK	Kaneyama	1.82	318	P	Pn	19 08 41.4	+0.3
JYK				eS	Sn	19 09 01.9	-1.0
JOM	Ohasama	1.96	346	P	Pn	19 08 44.1	+1.0
JOM				eS	Sn	19 09 06.9	+0.4
JYA	Atsumi	2.01	301	P	Pn	19 08 44.3	+0.6
JYA				eS	Sn	19 09 07.8	+0.2
JHJ	Hachijo jima 2	4.76	202	P	Pn	19 09 23.5	+1.9
	9.3nm,0.3s,baz=75,slow=20,SNR=2.5						
JHJ				S	Sn	19 10 13.8	-1.8
	45nm,0.3s,baz=61,slow=22,SNR=7.1						
ASAJ	Asahikawa	6.56	4	P	Pn	19 09 45.4	-0.9
	0.9nm,0.3s,baz=206,slow=14,SNR=12						
ASAJ				S	Sn	19 11 00.1	+0.2
	0.7nm,0.3s,baz=18,slow=20,SNR=2.7						
JCJ	Chichijima	10.44	179	P	Pn	19 10 39.1	-0.4
	3.0nm,0.3s,baz=37,slow=20,SNR=3.1						
KSRS	Korea Array	11.11	274	P	Pn	19 10 50.4	+1.9
	0.1nm,0.3s,baz=85,slow=14,SNR=3.0						
ZALV	Zalesovo Beam	41.85	312	P	P	19 15 58.6	-0.1
	0.4nm,0.3s,baz=93,slow=5.9,SNR=2.6						
MKAR	Makanchi Array	44.17	302	P	P	19 16 17.4	-0.2
	0.4nm,0.4s,baz=87,slow=10,SNR=10						
KURBB	Kurchatov Arra	45.99	308	P	P	19 16 30.7	-1.2
	0.5nm,0.4s,baz=81,slow=7.7,SNR=6.8						
WRA	Warramunga Arr	57.64	188	P	P	19 17 58.7	-0.3
	1.5nm,0.5s,baz=5.8,slow=7.0,SNR=13						
ASAR	Alice Springs	61.37	188	P	P	19 18 24.9	+0.2
	0.8nm,0.7s,baz=12,slow=6.2,SNR=8.0						

SJA 08 19:19:42.3±0.5, 30°.61S×64°.58W, h40km±999km, MW4.0, Cordoba Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APLL	PUNTA DE LOS L	1.70	277	eP	Pn	19 20 10.9	+1.4
APLL				eS	Sn	19 20 32.5	+2.4
ACLC	CERRO LA CRUZ	2.38	299	eP	Pn	19 20 20.9	+2.0
ACLC				eS	Sn	19 20 49.4	+2.4
AGUA	GUANDACOL	3.57	287	eP	Pn	19 20 38.2	+2.8
ACDV	Cuesta del Vie	3.95	275	eP	Pn	19 20 43.5	+2.9

IDC 08 19:22:21.3±3.8, 3°.17N×92°.66E, h0km, mb3.4/4, mb1 3.6/7, mb1mx3.3/71, mbtmp3.6/7, ML3.5/3, Error ellipse: s-maj=75.9km s-min=32.9km az=14.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	6.27	93	Pn	Pn	19 23 55.1	-0.1
	0.7nm,0.3s,baz=0.0,slow=20,SNR=6.9						
PALK	Pallekele	12.58	289	Pn	Pn	19 25 21.6	-0.3
	0.5nm,0.3s,baz=118,slow=14,SNR=3.7						
PALK				Sn	Sn	19 27 32.8	-10
	1.1nm,0.3s,baz=114,slow=12,SNR=5.3						
CMAR	Chiang Mai Arr	16.39	22	Pn	Pn	19 26 12.3	-0.7
	0.1nm,0.3s,baz=214,slow=13,SNR=5.7						
MKAR	Makanchi Array	44.38	350	P	P	19 30 33.1	-0.4
	0.4nm,0.6s,baz=173,slow=8.2,SNR=5.4						
SONM	Songino Array	46.04	13	P	P	19 30 47.1	+0.2
	0.2nm,0.5s,baz=193,slow=11,SNR=2.6						
KURBB	Kurchatov Arra	48.76	348	P	P	19 31 08.6	+0.7
	0.3nm,0.9s,baz=164,slow=7.7,SNR=3.7						
ZALV	Zalesovo Beam	51.02	354	P	P	19 31 24.3	-0.7
	0.2nm,0.3s,baz=186,slow=7.8,SNR=2.7						

IDC 08 19:32:39.7±50.0, 17°.73S×177°.90W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.6/53, mbtmp4.0/3, Error ellipse: s-maj=916.6km s-min=148.9km az=79.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.14	241	P	P	19 40 09.9	+0.6
	1.0nm,0.6s,baz=95,slow=11,SNR=2.2						
WRA	Warramunga Arr	45.14	259	P	P	19 40 58.5	+0.1
	0.7nm,0.3s,baz=96,slow=7.6,SNR=40						
ASAR	Alice Springs	45.31	254	P	P	19 40 58.8	-1.0
	2.3nm,0.6s,baz=91,slow=8.1,SNR=73						

IDC ***08*** *19:56:24.0±1.2, 2°.89N×127°.15E, h0km, mb3.7/5, mb1 3.8/6, mb1mx3.5/63, mbtmp3.7/6, ML3.5/1, Error ellipse: s-maj=90.5km s-min=17.9km az=62.0*
ISCJB ***08*** *19:56:27.4±1.1, 3°.2N±0°.2×127°.8E±0°.3, h44km, mb3.6/5, Error ellipse: s-maj=55.1km s-min=11.0km az=142.3*

ISC 08 19:56:29.6±1.3, 3°.1N±0°.3×127°.6E±0°.4, h44km, n6, σ0°78/7, mb3.8/5, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	5.35	137	Pn	Pn	19 57 47.8	+0.8
	1.5nm,0.3s,baz=244,slow=23,SNR=8.9						
SIJI				Sn	Sn	19 58 46.5	-0.8
	0.5nm,0.3s,baz=37,slow=20,SNR=2.8						
WRA	Warramunga Arr	23.81	164	P	P	20 01 38.1	-0.6
	1.0nm,0.7s,baz=341,slow=11,SNR=10.0						
ASAR	Alice Springs	27.28	167	P	P	20 02 10.8	+0.7
	0.2nm,0.4s,baz=350,slow=7.6,SNR=5.1						
STKA	Stephens Creek	37.21	160	P	P	20 03 36.7	-0.2
	1.4nm,0.4s,baz=335,slow=9.4,SNR=9.0						
MKAR	Makanchi Array	58.60	325	P	P	20 06 22.4	+0.2
	0.5nm,0.4s,baz=114,slow=7.8,SNR=8.9						
KURBB	Kurchatov Arra	62.77	327	P	P	20 06 49.9	-0.5
	0.3nm,0.4s,baz=124,slow=6.4,SNR=4.4						

SJA ***08*** *20:06:41.6±0.6, 31°.82S×68°.39W, h15km±4km, ML2.9, MW3.5*
GUC ***08*** *20:06:43.8±0.5, 31°.89S×68°.03W, h83km±128km, ML3.4*

ISC 08 20:06:40.5±1.2, 31°.80S±0°.03×68°.26W±0°.03, h6km±13km, n25, σ0°92/29, 1C-1D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTCV	Cerro Valdivia	0.25	256	eP	Pg	20 06 45.7	+0.3
RTCV				eS	Sg	20 06 48.0	-0.6
SJA	San Juan	0.38	317	eP	Pb	20 06 49.0	-0.6
SJA				eS	Sg	20 06 53.9	+1.1
SJA				IAML		20 06 55.2	
	comp=Z,750nm,0.3s						
ZON	Zonda	0.44	306	eP	Pg	20 06 49.3	+0.3
ZON				eS	Sg	20 06 55.5	+0.7
ZON				IAML		20 06 57.8	
	comp=Z,594nm,0.3s						
RTLL	Cerro Villicun	0.51	339	eP	Pb	20 06 51.9	0.0
RTLL				IAML		20 07 00.5	
	comp=Z,346nm,0.3s						
RTLS	Leoncito	0.88	270	eP	Pg	20 06 57.2	-0.3
RTLS				IAML		20 07 13.5	
	comp=Z,182nm,0.4s						
AMOG	MOGNA	0.89	347	eP	Pn	20 06 59.0	-0.7
ASAL	Salagasta	0.92	212	eP	Pn	20 06 59.4	-0.8
ACAN	Cantantal	1.02	118	eP	Pn	20 07 02.5	+1.0
AUSP	Uspallata	1.04	246	eP	Pg	20 07 00.2	-0.4
ARCO	CERRO ARCO	1.18	209	eP	Pg	20 07 04.9	+1.7
ARCO				IAML		20 07 26.0	
	comp=Z,298nm,0.3s						
AAGR	Agrelo	1.36	200	eP	Pg	20 07 08.1	+1.3
ACDV	Cuesta del Vie	1.79	335	eP	Pg	20 07 14.5	-0.3
ACDV				IAML		20 07 39.0	
	comp=Z,95nm,0.6s						
AROD	Rodeo	1.94	327	eP	Pg	20 07 17.0	-0.6
APLL	PUNTA DE LOS L	2.04	47	eP	Pg	20 07 19.9	+0.2
APLL				IAML		20 07 49.0	
	comp=Z,144nm,0.4s						
MRA	San Martin	2.24	107	eP	Pg	20 07 22.6	-0.9
MRA				IAML		20 07 56.5	
	comp=Z,271nm,0.5s						
FCH	Farellones	2.29	228	eP	Pg	20 07 23.1	-1.4
FCH				iS	Sg	20 07 52.8	-1.4
FCH				IAML		20 07 55.7	
	comp=N,113nm,0.3s						
AGUA	GUANDACOL	2.32	355	eP	Pg	20 07 24.4	-0.6
PEL	Peldehue	2.45	236	eP	Pb	20 07 24.8	-0.2
PEL				iS	Sb	20 07 55.8	+0.3
ROCH	El Roble	2.60	243	IAML		20 08 05.3	
	comp=E,146nm,0.5s						
ROC1	El Roble	2.61	243	eP	Pb	20 07 27.9	0.0
LMEL	Las Melosas	2.61	218	eP	Pb	20 07 27.0	-0.9
LMEL				IAML		20 08 06.2	
	comp=N,75nm,0.9s						
ACLC	CERRO LA CRUZ	2.62	26	eP	Pg	20 07 30.1	-0.7
GO04	Tololo Observa	2.72	306	‖iP	Pb	20 07 30.0	+0.2
TLL	Tololo Astrono	2.73	306	‖iP	Pb	20 07 30.3	+0.4
TLL				iS	Sb	20 08 05.9	+2.1
TLL				IAML		20 08 11.1	
	comp=N,280nm,0.6s						
CYA	Choya	3.97	33	IAML		20 08 54.8	
	comp=Z,37nm,0.5s						

SJA 08 20:08:17.4±0.7, 31°.79S×68°.47W, h15km±2km, ML2.5, MW3.6, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTCV	Cerro Valdivia	0.10	221	eP	Pg	20 08 20.6	-0.2
RTCV				eS	Sg	20 08 23.1	+0.2
SJA	San Juan	0.27	343	eP	Pb	20 08 23.9	-0.1
SJA				eS	Sb	20 08 28.1	-0.4
SJA				IAML		20 08 30.0	
	comp=Z,537nm,0.2s						
ZON	Zonda	0.30	323	eP	Pg	20 08 24.2	+0.4
ZON				eS	Sb	20 08 29.2	-0.2
ZON				IAML		20 08 32.7	
	comp=Z,279nm,0.3s						
RTLL	Cerro Villicun	0.46	359	eP	Pg	20 08 26.7	+0.1
RTLL				IAML		20 08 35.9	
	comp=Z,212nm,0.4s						
RTLS	Leoncito	0.71	269	eP	Pb	20 08 32.0	+0.4
RTLS				IAML		20 08 52.9	
	comp=Z,65nm,0.4s						
AMOG	MOGNA	0.85	358	eP	Pn	20 08 34.4	-0.5
ARCO	CERRO ARCO	1.12	201	IAML		20 09 01.5	
	comp=Z,61nm,0.5s						
ACAN	Cantantal	1.19	114	eP	Pg	20 08 40.2	-0.2
AAGR	Agrelo	1.33	193	eP	Pg	20 08 42.6	-0.4
ACDV	Cuesta del Vie	1.71	341	IAML		20 09 13.9	
	comp=Z,54nm,0.6s						
AROD	Rodeo	1.83	332	eP	Pg	20 08 51.9	-0.8
APLL	PUNTA DE LOS L	2.17	51	eP	Pb	20 08 55.1	-1.3
APLL				IAML		20 09 31.5	
	comp=Z,73nm,0.3s						
AGUA	GUANDACOL	2.30	359	eP	Pb	20 08 57.5	-1.1
MRA	San Martin	2.42	106	eP	Pb	20 08 59.2	-1.4
MRA				IAML		20 09 30.7	
	comp=Z,115nm,0.5s						
ACLC	CERRO LA CRUZ	2.69	29	eP	Pb	20 09 03.0	-2.4
VCA	Vinchina	3.05	4	IAML		20 09 53.8	
	comp=Z,56nm,0.3s						
CYA	Choya	4.06	35	eP	Pn	20 09 22.4	+3.4

IGQ ***08*** *20:22:02.6±0.6, 3°.5±4°.×7°.8W±°, h12km, MLv4.5/2*

ISC 08 20:22:02.3±2.2, 2°.60S±0°.08×78°.07W±0°.07, h11km±12km, n39, σ1°27/47, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIOE1	Riobamba	1.01	327	P	Pg	20 22 21.1	-0.8
RIOE1				S	Sn	20 22 37.0	-0.3
BPAT	Tungurahua Vol	1.15	342	P	Pg	20 22 23.3	-1.2
BPAT				S	Sn	20 22 40.8	0.0
ARRY	Arrayan	1.15	341	P	Pg	20 22 23.1	-1.5
BMAS	Trigal station	1.17	340	P	Pg	20 22 23.5	-1.3
COHC	Cochancay	1.19	277	P	Pn	20 22 23.9	-1.0
RETU	Refugio	1.20	342	P	Pg	20 22 24.2	-1.4
BILB	Ulba Tungurahu	1.21	344	P	Pg	20 22 24.1	-1.4
BBIL	Ulba Tungurahu	1.22	340	P	Pg	20 22 24.4	-1.4
BRUN	Tungurahua Vol	1.22	344	P	Pg	20 22 24.4	-1.4
POND	Pondoa	1.23	342	P	Pg	20 22 24.5	-1.5
MILO	Milagro-Astudi	1.52	282	P	Pg	20 22 31.0	-0.4
MILO				S	Sg	20 22 54.3	+3.2
PISA	Pisayambo	1.57	349	P	Pn	20 22 30.6	0.0
BMOR	Cotopaxi Volca	1.90	348	P	Pb	20 22 36.4	-0.9
BMOR				S	Sg	20 23 04.1	+0.5
BTAM	Cotopaxi Volca	1.94	350	P	Pb	20 22 37.0	-1.1
COV1	Cotopaxi Volc	1.95	352	P	Pb	20 22 37.6	-0.6
BREF	Cotopaxi Volca	1.96	349	P	Pb	20 22 37.6	-0.8
BNAS	Cotopaxi Volca	1.96	348	P	Pb	20 22 37.7	-0.7
BVC2	Cotopaxi Volca	1.96	350	P	Pb	20 22 37.4	-1.1
BVC2				S	Sg	20 23 08.1	+2.6
QUEV	Quevedo	1.98	322	P	Pb	20 22 38.1	-0.3
VC1	Cotopaxi 1	1.98	350	P	Pb	20 22 37.6	-1.0
NAS2	Nasa	1.98	349	P	Pb	20 22 38.2	-0.6
ILLI	Illinizas Sur	1.99	341	P	Pn	20 22 37.3	+0.9
ANTM	Antisana-La Mi	2.06	356	P	Pn	20 22 38.1	+0.7
ANTM				S	Sb	20 23 06.9	+1.0
PITA	Cotopaxi Volc	2.06	350	P	Pb	20 22 39.2	-0.9
AN

YKAV				*e*Sg	**Sb**	20 27 20.0	-1.2
DAT	**Datca**	**0.27**	**178**	PG	**Pg**	20 27 15.1	-0.5
DAT				SG	**Sg**	20 27 19.4	+0.1
DAT	**Datca**	**0.27**	**178**	*i* P	**Pg**	20 27 14.7	-0.9
DAT	**Datca**	**0.27**	**178**	P	**Pg**	20 27 14.7	-0.9
DAT	**Datca**	**0.27**	**178**	*e*Pg	**Pg**	20 27 15.1	-0.5
DAT				*e*Sg	**Sg**	20 27 19.4	+0.1
MLSB	**Milas**	**0.34**	**29**	PG	**Pg**	20 27 16.4	-0.4
MLSB				SG	**Sg**	20 27 21.9	+0.6
MLSB	**Milas**	**0.34**	**29**	*e*Pg	**Pg**	20 27 16.4	-0.4
MLSB				*e*Sg	**Sg**	20 27 21.9	+0.6
NISR	**Nisiros**	**0.53**	**222**	P	**Pg**	20 27 19.4	-0.9
NISR				S	**Sg**	20 27 26.7	-0.5
NISR				AML	AML	20 27 29.1	
	comp=N,4823μm,0.3s						
NISR				AML	AML	20 27 29.4	
	comp=E,11180μm,0.3s						
NISR	**Nisiros**	**0.53**	**222**	P	**Pg**	20 27 20.4	+0.2
NISR				S	**Sb**	20 27 28.3	-0.5
NISR	**Nisiros**	**0.53**	**222**	P	**Pg**	20 27 20.4	+0.2
NISR				S	**Sg**	20 27 27.0	-0.2
MRSB	**Marmaris-Mugla**	**0.58**	**119**	PG	**Pg**	20 27 21.2	0.0
MRSB				SG	**Sb**	20 27 29.6	-0.8
MRSB	**Marmaris-Mugla**	**0.58**	**119**	*e*Pg	**Pg**	20 27 21.2	0.0
MRSB				*e*Sg	**Sb**	20 27 29.6	-0.8
YER	**Yerkesik**	**0.59**	**77**	PG	**Pg**	20 27 21.2	-0.2
YER	**Yerkesik**	**0.59**	**77**	P	**Pg**	20 27 21.2	-0.2
YER				S	**Sg**	20 27 29.5	+0.3
YER	**Yerkesik**	**0.59**	**77**	P	**Pg**	20 27 21.2	-0.2
YER				S	**Sg**	20 27 29.5	+0.3
AYDN	**Tasoluk**	**0.70**	**21**	*i* P	**Pg**	20 27 23.5	-0.1
AYDN				*i* S	**Sb**	20 27 33.6	-0.5
AYDN	**Tasoluk**	**0.70**	**21**	P	**Pg**	20 27 23.5	-0.1
AYDN				S	**Sb**	20 27 33.6	-0.5
TURN	**Turunc**	**0.84**	**99**	PG	Pg	20 27 20.9	-5.3
TURN				SG	**Sg**	20 27 29.9	-7.2
TURN	**Turunc**	**0.84**	**99**	*i* P	Pg	20 27 20.3	-5.8
TURN				*i* S	**Sg**	20 27 29.2	-7.9
DALY	**Dalyan (Mu¨la**	**0.89**	**102**	PG	**Pg**	20 27 27.1	0.0
DALY	**Dalyan (Mu¨la**	**0.89**	**102**	*i* P	**Pg**	20 27 26.9	-0.3
DALY				*i* S	**Sb**	20 27 40.0	+0.7
DALY	**Dalyan (Mu¨la**	**0.89**	**102**	*e*Pg	**Pg**	20 27 27.1	0.0
DALY				S	**Sb**	20 27 40.0	+0.7
ARG	**Arkhangelos**	**0.90**	**150**	PG	**Pg**	20 27 26.9	-0.5
ARG				SG	**Sb**	20 27 40.0	+0.2
ARG	**Arkhangelos**	**0.90**	**150**	P	**Pb**	20 27 28.1	+0.5
ARG				S	**Sb**	20 27 39.6	-0.1
ARG				AML	AML	20 27 42.2	
	comp=N,4532μm,0.6s						
ARG				AML	AML	20 27 45.9	
	comp=E,3532μm,0.7s						
ARG	**Arkhangelos**	**0.90**	**150**	P	**Pb**	20 27 27.6	-0.1
ARG				S	**Sb**	20 27 40.9	+1.2
ARG	**Arkhangelos**	**0.90**	**150**	*e*Pg	**Pg**	20 27 26.9	-0.5
ARG	**Arkhangelos**	**0.90**	**150**	P	**Pb**	20 27 27.6	-0.1
ARG				S	**Sb**	20 27 39.9	+0.2
SMG	**Samos**	**0.92**	**321**	P	**Pb**	20 27 27.6	-0.3
SMG				S	**Sg**	20 27 39.1	-0.4
SMG				AML	AML	20 27 43.8	
	comp=N,4306μm,0.4s						
SMG				AML	AML	20 27 47.3	
	comp=E,6039μm,0.4s						
SMG	**Samos**	**0.92**	**321**	P	**Pg**	20 27 27.5	-0.1
SMG				S	**Sb**	20 27 40.1	0.0
SMG	**Samos**	**0.92**	**321**	P	**Pg**	20 27 27.5	-0.1
SMG				S	**Sg**	20 27 39.2	-0.4
AYDB	**Zeytinkoy-Aydi**	**0.98**	**15**	PG	**Pb**	20 27 28.9	-0.1
AYDB	**Zeytinkoy-Aydi**	**0.98**	**15**	*e*Pg	**Pb**	20 27 28.9	-0.1
TAVA	**DENIZLI_Tavas**	**1.17**	**66**	*i* P	**Pg**	20 27 30.6	-1.9
TAVA				*i* S	**Sn**	20 27 49.0	+0.6
TAVA	**DENIZLI_Tavas**	**1.17**	**66**	P	**Pg**	20 27 30.6	-1.9
TAVA				S	**Sn**	20 27 49.0	+0.6
DGB	**˜zmir**	**1.18**	**333**	*i* P	**Pg**	20 27 30.9	-1.8
DGB				*i* S	**Sn**	20 27 48.8	+0.3
FETY	**Fethiye**	**1.27**	**106**	PN	**Pg**	20 27 33.5	-0.9
FETY	**Fethiye**	**1.27**	**106**	P	**Pg**	20 27 32.9	-1.5
FETY				S	**Sg**	20 27 50.1	-0.8
FETY	**Fethiye**	**1.27**	**106**	P	**Pg**	20 27 32.9	-1.5
FETY	**Fethiye**	**1.27**	**106**	*e*Pn	**Pg**	20 27 33.5	-0.9
FETY				S	**Sg**	20 27 50.1	-0.8
DNZL	**Cakiroluk**	**1.36**	**59**	*i* P	**Pn**	20 27 35.6	+0.4
DNZL				*i* S	**Sn**	20 27 55.3	+2.0
DNZL	**Cakiroluk**	**1.36**	**59**	P	**Pn**	20 27 35.6	+0.4
DNZL				S	**Sn**	20 27 55.3	+2.0
KARP	**Karpathos**	**1.49**	**193**	P	**Pn**	20 27 36.2	-0.5
KARP				AML	AML	20 28 02.3	
	comp=E,1008μm,0.5s						
KARP				AML	AML	20 28 02.6	
	comp=N,2126μm,0.7s						
KARP	**Karpathos**	**1.49**	**193**	P	**Pb**	20 27 37.8	+0.1
KARP	**Karpathos**	**1.49**	**193**	P	**Pb**	20 27 37.8	+0.1
ZEY	**˜zmir**	**1.50**	**326**	*i* P	**Pb**	20 27 38.0	+0.2
ZEY				*i* S	**Sg**	20 28 00.1	+2.0
GLHS	**Glhisar (BURDU**	**1.55**	**84**	PN	**Pn**	20 27 38.5	+0.8
GLHS	**Glhisar (BURDU**	**1.55**	**84**	*e*Pn	**Pn**	20 27 38.5	+0.8
URLA	**Izmir**	**1.56**	**331**	PN	**Pn**	20 27 38.2	+0.6
URLA	**Izmir**	**1.56**	**331**	*i* P	**Pn**	20 27 38.4	+0.6
URLA	**Izmir**	**1.56**	**331**	P	**Pn**	20 27 38.3	+0.6
ANAF	**Anafi Island**	**1.58**	**246**	P	**Pb**	20 27 39.4	+0.1
ANAF				AML	AML	20 28 05.8	
	comp=E,2634μm,0.4s						
ANAF				AML	AML	20 28 07.8	
	comp=N,2533μm,0.3s						
ANAF	**Anafi Island**	**1.58**	**246**	P	**Pn**	20 27 38.7	+0.7
GOLH	**Golhisar**	**1.61**	**81**	*i* P	**Pb**	20 27 40.2	+0.4
GOLH				*i* S	**Sb**	20 28 00.4	+0.2
GOLH	**Golhisar**	**1.61**	**81**	P	**Pb**	20 27 40.2	+0.4
GOLH				S	**Sb**	20 28 00.4	+0.2
APE	**Apeiranthos**	**1.63**	**273**	PN	**Pn**	20 27 39.6	+0.9
APE	**Apeiranthos**	**1.63**	**273**	P	**Pn**	20 27 38.8	-0.9
APE				AML	AML	20 28 06.5	
	comp=N,459μm,0.6s						
APE				AML	AML	20 28 09.0	
	comp=E,517μm,0.4s						
APE	**Apeiranthos**	**1.63**	**273**	P	**Pn**	20 27 38.4	-0.3
APE				S	**Sn**	20 27 58.9	-0.9
APE	**Apeiranthos**	**1.63**	**273**	P	**Pn**	20 27 38.4	-0.3
APE	**Apeiranthos**	**1.63**	**273**	*e*Pn	**Pn**	20 27 39.6	+0.9
APE				S	**Sn**	20 27 58.9	-0.9
MANT	**Manisa**	**1.68**	**28**	*i* P	**Pb**	20 27 41.3	+0.2
MANT	**Manisa**	**1.68**	**28**	P	**Pb**	20 27 41.3	+0.2
KULA	**Kula-Manisa**	**1.74**	**29**	PN	**Pn**	20 27 41.3	+1.1
KULA	**Kula-Manisa**	**1.74**	**29**	*e*Pn	**Pn**	20 27 41.3	+1.1
AKAS	**Kas**	**1.81**	**115**	PN	**Pn**	20 27 42.3	+1.1
AKAS	**Kas**	**1.81**	**115**	*i* P	**Pn**	20 27 42.1	+0.9
AKAS				*i* S	**Sg**	20 28 09.8	+1.6
AKAS	**Kas**	**1.81**	**115**	P	**Pn**	20 27 42.1	+0.9
SANT	**Santorini**	**1.81**	**250**	PN	**Pn**	20 27 42.3	+1.2
SANT	**Santorini**	**1.81**	**250**	*e*Pn	**Pn**	20 27 42.3	+1.2
CHOS	**Chios island**	**1.83**	**319**	PN	**Pn**	20 27 42.3	+0.8
CHOS	**Chios island**	**1.83**	**319**	P	**Pn**	20 27 42.1	+0.6
CHOS				AML	AML	20 28 14.0	
	comp=E,724μm,0.6s						
CHOS				AML	AML	20 28 15.6	
	comp=N,471μm,0.5s						
CHOS	**Chios island**	**1.83**	**319**	P	**Pn**	20 27 41.9	+0.4
CHOS				S	**Sn**	20 28 04.3	-0.4
CHOS	**Chios island**	**1.83**	**319**	P	**Pn**	20 27 41.9	+0.4
CHOS	**Chios island**	**1.83**	**319**	*e*Pn	**Pn**	20 27 42.3	+0.8
CHOS				S	**Sn**	20 28 04.3	-0.4
THR6	**Thira Island,**	**1.86**	**250**	P	**Pn**	20 27 41.8	0.0
THR6	**Thira Island,**	**1.86**	**250**	P	**Pn**	20 27 41.8	0.0
AKHS	**Akhisar**	**1.88**	**6**	*i* P	**Pg**	20 27 46.1	0.0
ELL	**Elmali**	**1.89**	**97**	PN	**Pn**	20 27 42.9	+0.5
ELL	**Elmali**	**1.89**	**97**	*e*Pn	**Pn**	20 27 42.9	+0.5
KHAL	**Karahalli**	**2.05**	**48**	*i* P	**Pb**	20 27 46.2	-1.1
KHAL	**Karahalli**	**2.05**	**48**	P	**Pb**	20 27 46.2	-1.1
BRDR	**BURDUR-Merkez**	**2.10**	**70**	*i* P	**Pn**	20 27 46.9	+1.7
BRDR	**BURDUR-Merkez**	**2.10**	**70**	P	**Pn**	20 27 46.9	+1.7
DKL	**Dikili**	**2.13**	**346**	PN	**Pb**	20 27 47.7	-0.9
DKL	**Dikili**	**2.13**	**346**	*e*Pn	**Pb**	20 27 47.7	-0.9
KORT	**Korkueli**	**2.23**	**89**	PN	**Pn**	20 27 48.4	+1.4
KORT	**Korkueli**	**2.23**	**89**	*e*Pn	**Pn**	20 27 48.4	+1.4
DEMI	**Demirci**	**2.23**	**24**	*i* P	**Pg**	20 27 52.1	-0.7
NPS	**Neapolis**	**2.35**	**223**	P	**Pn**	20 27 50.4	+1.8
NPS	**Neapolis**	**2.35**	**223**	P	**Pn**	20 27 49.7	+1.1
STEP	**BALIKESIR_Sava**	**2.37**	**3**	*i* P	**Pg**	20 27 55.0	-0.5
PRK	**Paraskevi**	**2.46**	**336**	P	**Pn**	20 27 48.9	-1.2
PRK	**Paraskevi**	**2.46**	**336**	P	**Pn**	20 27 48.9	-1.2
LAST	**Lasithi**	**2.50**	**223**	P	**Pn**	20 27 51.4	+0.8
LAST	**Lasithi**	**2.50**	**223**	P	**Pn**	20 27 51.2	+0.5
SIGR	**SIGRI**	**2.59**	**329**	P	**Pn**	20 27 50.9	-0.9
SIGR	**SIGRI**	**2.59**	**329**	P	**Pn**	20 27 51.6	-0.2
KARY	**Karystos**	**2.69**	**293**	P	**Pn**	20 27 52.4	-0.8
KARY	**Karystos**	**2.69**	**293**	P	**Pn**	20 27 53.1	-0.2
BAGO	**Egridir - ISPA**	**2.74**	**68**	*i* P	**Pg**	20 28 03.0	+0.5
BAYC	**CANAKKALE_Bayr**	**2.85**	**344**	*i* P	**Pn**	20 27 55.3	-0.1
BAYC	**CANAKKALE_Bayr**	**2.85**	**344**	P	**Pn**	20 27 55.3	-0.1
DION	**Dionisos Attik**	**3.08**	**291**	P	**Pn**	20 27 59.3	+0.6
DION	**Dionisos Attik**	**3.08**	**291**	P	**Pn**	20 27 59.2	+0.6
VLY	**Voula,Athens**	**3.12**	**287**	P	**Pn**	20 28 00.1	+0.9
VLY	**Voula,Athens**	**3.12**	**287**	P	**Pn**	20 27 59.9	+0.7
PTL	**Penteli**	**3.12**	**291**	P	**Pn**	20 28 00.0	+0.8
PTL	**Penteli**	**3.12**	**291**	P	**Pn**	20 27 59.9	+0.7
KEPZ	**Antalya-Kepez**	**3.23**	**91**	*i* P	**Pn**	20 28 03.9	+3.2
KEPZ	**Antalya-Kepez**	**3.23**	**91**	P	**Pn**	20 28 03.9	+3.2
LIA	**Limnos Island**	**3.44**	**328**	P	**Pn**	20 28 04.3	+0.8
LIA	**Limnos Island**	**3.44**	**328**	P	**Pn**	20 28 04.4	+0.8
DID	**Didima**	**3.49**	**280**	P	**Pn**	20 28 04.3	0.0
DID	**Didima**	**3.49**	**280**	P	**Pn**	20 28 04.6	+0.3
VLI	**Veliai**	**3.73**	**267**	P	**Pn**	20 28 08.1	+0.6
VLI	**Veliai**	**3.73**	**267**	P	**Pn**	20 28 08.1	+0.6
LTK	**Loutraki**	**3.80**	**287**	P	**Pn**	20 28 09.5	+1.0
LTK	**Loutraki**	**3.80**	**287**	P	**Pn**	20 28 09.3	+0.8
SMTH	**Samothraki Isl**	**3.81**	**336**	P	**Pn**	20 28 08.4	-0.2
SMTH	**Samothraki Isl**	**3.81**	**336**	P	**Pn**	20 28 08.8	+0.1
SMTH	**Samothraki Isl**	**3.81**	**336**	P	**Pn**	20 28 09.0	+0.3
PROD	**Prodromos**	**3.91**	**290**	P	**Pn**	20 28 11.9	+1.8
PROD	**Prodromos**	**3.91**	**290**	P	**Pn**	20 28 11.4	+1.4
ALN	**Alexandroupoli**	**4.07**	**343**	P	**Pn**	20 28 12.0	-0.1
ALN	**Alexandroupoli**	**4.07**	**343**	P	**Pn**	20 28 12.6	+0.5
GUR	**Goura**	**4.26**	**284**	P	**Pn**	20 28 15.6	+0.7
GUR	**Goura**	**4.26**	**284**	P	**Pn**	20 28 15.7	+0.7
KLV	**Kalavryta, Ach**	**4.43**	**285**	P	**Pn**	20 28 19.0	+1.8
KLV	**Kalavryta, Ach**	**4.43**	**285**	P	**Pn**	20 28 18.6	+1.4
TRIZ	**Trizonia**	**4.57**	**289**	P	**Pn**	20 28 20.7	+1.7
TRIZ	**Trizonia**	**4.57**	**289**	P	**Pn**	20 28 20.4	+1.4

IDC 08 20:27:22.2±1.9, 7°.11S×129°.44E, h137km±23km, mb2.9/1, mb1 3.0/5, mb1mx2.8/50, mbtmp3.4/5, Error ellipse: s-maj=28.4km s-min=14.3km az=120.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.46**	**16**	P	Pn	20 28 56.1	+1.0
	0.3nm,0.3s,baz=204,slow=20,SNR=5.7						
SIJI				S	Sn	20 30 07.5	-0.2
	0.8nm,0.3s,baz=229,slow=19,SNR=4.1						
BATI	**Baumata**	**6.49**	**241**	P	Pn	20 28 56.5	+1.0
	1.3nm,0.3s,baz=292,slow=16,SNR=2.7						
BATI				S	Sn	20 30 07.7	-0.7
	3.2nm,0.3s,baz=76,slow=23,SNR=9.5						
WRA	**Warramunga Arr**	**13.61**	**160**	P	Pn	20 30 28.9	-1.0
	0.2nm,0.3s,baz=349,slow=13,SNR=8.5						
WRA				S	Sn	20 32 51.2	-9.1
	0.3nm,0.3s,baz=338,slow=23,SNR=7.1						
ASAR	**Alice Springs**	**17.01**	**166**	P	Pn	20 31 12.4	+0.4
	0.1nm,0.3s,baz=338,slow=9.3,SNR=13						
ASAR				S	Sn	20 34 15.8	-6.3
	0.1nm,0.3s,baz=338,slow=24,SNR=5.3						
MKAR	**Makanchi Array**	**68.02**	**327**	P	P	20 38 06.7	-0.1
	0.1nm,0.3s,baz=114,slow=8.0,SNR=4.3						

*DDA **08** 20:30:24.5, 38°.82N×26°.39E, h7km, Ml2.7*
*ISCJB **08** 20:30:25.3±0.6, 38°.84N±0°.02×26°.51E±0°.05, h3km±8km, Error ellipse: s-maj=6.8km s-min=3.6km az=161.3*
*CSEM **08** 20:30:25.5±0.2, 38°.82N×26°.53E, h10km, ML1.6, Error ellipse: s-maj=6.0km s-min=4.2km az=94.0*
*ATH **08** 20:30:25.8, 38°.85N×26°.46E, h19km±2km, ML1.6/2, Error ellipse: s-maj=3.2km s-min=1.1km az=260.0*

ISC 08 20:30:25.0±1.0, 38°.83N±0°.02×26°.48E±0°.04, h14km±9km, n27, σ0°.58/44, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**0.45**	**338**	P	**Pb**	**20 30 34.7**	**0.0**
PRK				S	**Sg**	**20 30 40.5**	**+0.6**
PRK				AML	AML	20 30 43.4	
	comp=E,227μm,0.5s						
PRK				AML	AML	20 30 46.0	
	comp=N,265μm,0.4s						
PRK	**Paraskevi**	**0.45**	**338**	P	**Pb**	**20 30 34.6**	**0.0**
PRK				S	**Sg**	**20 30 40.7**	**+0.8**
URLA	**Izmir**	**0.48**	**169**	*i* P	**Pg**	**20 30 33.5**	**-1.0**
URLA				*i* S	**Sb**	**20 30 41.6**	**-0.5**
URLA	**Izmir**	**0.48**	**169**	P	**Pg**	**20 30 33.5**	**-1.0**
URLA				S	**Sb**	**20 30 41.6**	**-0.5**
AYVA	**Ayvalik**	**0.50**	**19**	*i* P	**Pg**	**20 30 34.8**	**-0.1**
AYVA	**Ayvalik**	**0.50**	**19**	P	**Pg**	**20 30 34.8**	**-0.1**
CHOS	**Chios island**	**0.56**	**217**	P	**Pb**	**20 30 36.3**	**-0.3**
CHOS				S	**Sb**	**20 30 45.5**	**+1.1**
CHOS	**Chios island**	**0.56**	**217**	P	**Pb**	**20 30 36.6**	**0.0**
CHOS				S	**Sb**	**20 30 45.2**	**+0.8**
ZEY	**˜zmir**	**0.59**	**178**	*i* P	**Pb**	**20 30 37.3**	**+0.2**
ZEY				*i* S	**Sn**	**20 30 47.2**	**-1.2**
SIGR	**SIGRI**	**0.62**	**308**	P	**Pb**	**20 30 37.6**	**0.0**
SIGR				S	**Sb**	**20 30 46.1**	**0.0**
SIGR				AML	AML	20 30 46.8	
	comp=N,99μm,0.3s						
SIGR				AML	AML	20 30 47.1	
	comp=E,89μm,0.4s						
SIGR	**SIGRI**	**0.62**	**308**	P	**Pb**	**20 30 37.5**	**0.0**
SIGR				S	**Sb**	**20 30 46.1**	**0.0**
DGB	**˜zmir**	**0.84**	**158**	*i* P	**Pb**	**20 30 41.1**	**-0.2**
DGB				*i* S	**Sb**	**20 30 53.1**	**+0.7**
BAYC	**CANAKKALE_Bayr**	**0.91**	**3**	*i* P	**Pg**	**20 30 42.6**	**0.0**
BAYC				*i* S	**Sn**	**20 30 56.3**	**0.0**
BAYC	**CANAKKALE_Bayr**	**0.91**	**3**	P	**Pg**	**20 30 42.6**	**0.0**
BAYC				S	**Sn**	**20 30 56.3**	**0.0**
BOZC	**Bozcaada**	**1.06**	**342**	*i* P	**Pb**	**20 30 44.6**	**-0.5**
BOZC				*i* S	**Sb**	**20 30 59.3**	**+0.3**
STEP	**BALIKESIR_Sava**	**1.10**	**60**	*i* P	**Pn**	**20 30 46.6**	**+0.5**
STEP				*i* S	**Sn**	**20 31 01.6**	**+0.5**
STEP	**BALIKESIR_Sava**	**1.10**	**60**	P	**Pn**	**20 30 46.6**	**+0.5**
STEP				S	**Sn**	**20 31 01.6**	**+0.5**
SMG	**Samos**	**1.16**	**166**	P	**Pg**	**20 30 48.2**	**+0.9**
SMG	**Samos**	**1.16**	**166**	P	**Pg**	**20 30 48.1**	**+0.9**
BALY	**Balya**	**1.27**	**44**	*i* P	**Pn**	**20 30 47.3**	**-1.0**
BALY				*i* S	**Sg**	**20 31 06.1**	**+0.2**
BALY	**Balya**	**1.27**	**44**	P	**Pn**	**20 30 47.3**	**-1.0**
BALY				S	**Sg**	**20 31 06.1**	**+0.2**
LIA	**Limnos Island**	**1.47**	**317**	P	**Pg**	**20 30 52.9**	**-0.2**
LIA	**Limnos Island**	**1.47**	**317**	P	**Pg**	**20 30 53.0**	**-0.2**
SMTH	**Samothraki Isl**	**1.79**	**336**	P	**Pb**	**20 30 57.4**	**-0.2**
SMTH	**Samothraki Isl**	**1.79**	**336**	P	**Pb**	**20 30 57.5**	**-0.2**
ALN	**Alexandroupoli**	**2.09**	**351**	P	**Pb**	**20 31 02.1**	**-0.5**
ALN	**Alexandroupoli**	**2.09**	**351**	P	**Pb**	**20 31 02.0**	**-0.7**

IDC 08 20:41:22.6±7.4, 0°.86S×90°.77W, h0km, mb3.7/5, mb1 4.0/5, mb1mx3.8/35, mbtmp3.7/5, Error ellipse: s-maj=292.5km s-min=138.7km az=68.0, Galapagos Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**32.46**	**339**	P	P	20 47 54.6	-0.3
	0.5nm,0.7s,baz=154,slow=8.6,SNR=6.9						
ANMO	**Albuquerque**	**38.53**	**339**	P	P	20 48 47.2	0.0
	1.7nm,0.7s,baz=146,slow=7.3,SNR=4.7						
NVAR	**Mina Array Bea**	**46.60**	**330**	P	P	20 49 52.5	-0.4
	0.3nm,0.3s,baz=157,slow=12,SNR=5.4						
PDAR	**Pinedale Array**	**46.61**	**341**	P	P	20 49 53.2	+0.4
	0.3nm,0.5s,baz=147,slow=5.4,SNR=4.1						
ILAR	**Eielson Array**	**76.97**	**339**	P	P	20 53 16.9	0.0
	0.6nm,0.8s,baz=140,slow=5.9,SNR=4.7						
H11S2	**WAKE ISLAND Hyl**	**02.15**	**289**	T	T	22 48 29.6	
	baz=86,slow=74,SNR=14						
H11S1	**WAKE ISLAND Hyl**	**02.16**	**289**	T	T	22 48 29.8	
	baz=86,slow=74,SNR=18						
H11S3	**WAKE ISLAND Hyl**	**02.17**	**289**	T	T	22 48 30.8	
	baz=86,slow=74,SNR=10						

*JMA **08** 20:50:04.0±0.1, 38°.73N×142°.20E, h39km±1km, M3.4*
*IDC **08** 20:50:06.1±2.6, 38°.69N×142°.26E, h61km±22km, mb3.3/6, mb1 3.4/10, mb1mx3.2/67, mbtmp3.5/10, ML2.9/4, MS3.3/1, Ms1 3.3/1, ms1mx2.3/32, Error ellipse: s-maj=27.6km s-min=15.8km az=111.0*

ISC 08 20:50:01.4±1.7, 38°.65N±0°.05×142°.17E±0°.07, h17km±10km, n22, σ1°.30/31, mb3.6/6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.58**	**318**	P	**Pn**	**20 50 15.4**	**+0.5**
OFUJ				S	**Sn**	**20 50 23.3**	**-0.8**
JIO	**Ouri**	**0.67**	**254**	P	**Pn**	**20 50 17.6**	**+1.5**
JIO				S	**Sn**	**20 50 26.9**	**+0.6**
JMK	**Ichinoseki**	**0.80**	**293**	P	**Pn**	**20 50 19.1**	**+1.2**
JMK				S	**Sn**	**20 50 29.5**	**0.0**
JOM	**Ohasama**	**1.07**	**321**	P	**Pg**	**20 50 22.5**	**+0.4**
JOM				S	**Sg**	**20 50 35.8**	**-0.3**
JOU	**Okura**	**1.22**	**257**	P	**Pg**	**20 50 25.7**	**+0.9**
JOU				S	**Sg**	**20 50 41.6**	**+0.9**
JMM	**Marumori**	**1.34**	**235**	P	**Pb**	**20 50 27.0**	**+1.0**
JMM				*e*S	**Sb**	**20 50 44.3**	**+1.5**
JRG	**Rokugo**	**1.41**	**302**	P	**Pg**	**20 50 27.9**	**-0.7**
JRG				*e*S	**Sg**	**20 50 45.7**	**-1.3**
JYK	**Kaneyama**	**1.44**	**281**	P	**Pg**	**20 50 28.7**	**-0.4**
JYK				*e*S	**Sb**	**20 50 46.4**	**+0.5**
JFK	**Kawauchi**	**1.64**	**219**	P	**Pb**	**20 50 31.5**	**+0.3**
JFK				*e*S	**Sb**	**20 50 52.2**	**+0.6**
JYS	**Shiratake**	**1.71**	**256**	P	**Pb**	**20 50 33.0**	**+0.7**
JYS				*e*S	**Sb**	**20 50 54.6**	**+1.1**
MJAR	**Matsushiro Arr**	**3.78**	**237**	P	**Pb**	**20 51 03.5**	**-4.2**
	2.0nm,0.3s,baz=338,slow=6.6,SNR=26						
MAT	**Matsushiro**	**3.78**	**237**	P	Pn	20 51 02.9	+3.9
MAT				S	**Sb**	**20 51 51.9**	**-1.4**
ASAJ	**Asahikawa**	**5.47**	**3**	P	**Pn**	**20 51 23.6**	**+1.4**
	0.5nm,0.3s,baz=167,slow=22,SNR=6.6						
ASAJ				S	**Sn**	**20 52 26.0**	**+1.3**
	0.7nm,0.3s,baz=49,slow=20,SNR=3.4						
USRK	**Ussuriysk Ar.**	**9.44**	**309**	P	**Pn**	**20 52 19.1**	**+2.4**
	0.2nm,0.3s,baz=122,slow=13,SNR=8.5						
KSRS	**Korea Array**	**11.30**	**268**	P	Pn	20 52 47.1	+5.1
	0.1nm,0.3s,baz=76,slow=15,SNR=2.4						
ZALV	**Zalesovo Beam**	**41.29**	**311**	P	**P**	**20 57 45.5**	**-0.2**
	0.5nm,0.4s,baz=90,slow=10,SNR=3.6						
NRIK	**Noril'sk**	**42.06**	**334**	LR	LR	21 15 42.4	
	comp=Z,36nm,19.8s,baz=78,slow=36						
MKAR	**Makanchi Array**	**43.79**	**301**	P	**P**	**20 58 06.1**	**-0.1**
	0.3nm,0.6s,baz=85,slow=9.7,SNR=4.9						
KURBB	**Kurchatov Arra**	**45.50**	**307**	P	**P**	**20 58 19.3**	**-0.4**
	2.0nm,0.8s,baz=81,slow=8.0,SNR=13						
ILAR	**Eielson Array**	**47.81**	**33**	P	**P**	**20 58 37.2**	**-0.4**
	0.3nm,0.8s,baz=247,slow=6.7,SNR=2.6						
BVAR	**Borovoye Array**	**49.94**	**311**	P	**P**	**20 58 53.2**	**-0.9**
	0.4nm,0.5s,baz=52,slow=9.3,SNR=3.5						
WRA	**Warramunga Arr**	**58.74**	**189**	P	**P**	**20 59 57.4**	**-1.0**
	0.4nm,0.8s,baz=7.3,slow=7.1,SNR=3.0						

*ATH **08** 20:53:26.4, 40°.42N×20°.65E, h11km±2km, ML2.1/10, Error ellipse: s-maj=2.9km s-min=1.2km az=94.0*
*THE **08** 20:53:26.9, 40°.42N×20°.65E, h3km±1km, ML2.0/11, Error ellipse: s-maj=1.7km s-min=0.6km az=327.0*
*TIR **08** 20:53:26.2, 40°.33N×20°.74E, h5km, Md2.9/5*
*CSEM **08** 20:53:27.2±0.3, 40°.41N×20°.67E, h2km, ML2.9, Error ellipse: s-maj=6.0km s-min=4.5km az=134.0*

DSL			S	Sg	20 54 10.8	+2.3
DSL	**Palaion Diasel**	**1.30 165**	P	Pg	20 53 51.7	-0.1
DSL			S	Sg	20 54 10.8	+2.3
PHP	**Peshkopia**	**1.31 353**	*i* PG	Pg	20 53 52.5	+0.5
PHP			*i* SG	Sg	20 54 11.2	+2.3
PHP	**Peshkopia**	**1.31 353**	*i* Pg	Pg	20 53 52.5	+0.5
	baz=351					
THL	**Klokotos Trika**	**1.32 128**	P	Pn	20 53 51.0	-0.7
THL			AML	AML	20 54 14.2	
	comp=E,70μm,0.7s					
THL			AML	AML	20 54 14.7	
	comp=N,95μm,0.6s					
THL	**Klokotos Trika**	**1.32 128**	P	Pn	20 53 50.9	-0.8
THL			S	Sg	20 54 10.7	+1.3
THL	**Klokotos Trika**	**1.32 128**	P	Pn	20 53 51.4	-0.3
THL			S	Sg	20 54 10.7	+1.3
LIT	**Litokhoron**	**1.42 101**	P	Pg	20 53 54.5	+0.3
LIT			AML	AML	20 54 18.0	
	comp=E,113μm,0.6s					
LIT			AML	AML	20 54 18.2	
	comp=N,125μm,0.7s					
LIT	**Litokhoron**	**1.42 101**	P	Pb	20 53 53.9	+0.2
LIT			S	Sg	20 54 13.8	+1.2
LIT	**Litokhoron**	**1.42 101**	P	Pb	20 53 53.9	+0.2
LIT			S	Sg	20 54 13.8	+1.2
GRG	**Griva**	**1.44 66**	P	Pb	20 53 53.6	-0.3
GRG	**Griva**	**1.44 66**	P	Pn	20 53 53.5	+0.2
LKD2	**Lefkada island**	**1.60 180**	P	Pg	20 53 57.3	-0.2
LKD2	**Lefkada island**	**1.60 180**	P	Pg	20 53 57.2	-0.3
EVR	**Evrytania**	**1.71 149**	P	Pb	20 53 59.1	+0.3
EVR			AML	AML	20 54 30.9	
	comp=N,101μm,0.6s					
EVR			AML	AML	20 54 31.4	
	comp=E,90μm,0.6s					
EVR	**Evrytania**	**1.71 149**	P	Pb	20 53 59.0	+0.3
STIP	**Stip**	**1.74 41**	*i* Pg	Pg	20 54 02.2	+2.0
PUK	**Puka**	**1.75 341**	*i* PN	Pb	20 54 00.2	+0.8
PUK			*i* SN	Sg	20 54 23.2	-0.1
PUK	**Puka**	**1.75 341**	*i* Pn	Pb	20 54 00.2	+0.8
	baz=340					
AGG	**Agios Georgios**	**1.87 136**	P	Pb	20 54 01.0	-0.4
AGG	**Agios Georgios**	**1.87 136**	P	Pb	20 54 01.1	-0.3
XOR	**Xorichti**	**2.19 117**	P	Pn	20 54 04.6	+0.9
XOR	**Xorichti**	**2.19 117**	P	Pb	20 54 05.1	-1.8
KALE	**Kalithea**	**2.30 150**	P	Pb	20 54 09.3	+0.7
KALE	**Kalithea**	**2.30 150**	P	Pb	20 54 08.2	-0.4

MEX 08 20:56:03.9±0.8, 18°.64N×102°.72W, h20km±162km, MD3.7, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.69**	**240**	*e*P	Pb	20 56 14.8	-2.4
MMIG				*i* S	Sb	20 56 23.5	-2.9
EZ5V		**1.18**	**315**	*e*P	Pn	20 56 21.8	-3.8
EZ5V				*e*P	Pb	20 56 21.8	-4.0
EZ5V				*e*S	Sb	20 56 37.0	-3.8
EZ5V				*e*S	Sn	20 56 37.1	-4.1
ZIIG	**Zihuatanejo**	**1.57**	**131**	*i* P	Pn	20 56 28.2	-2.5
ZIIG				*e*S	Sn	20 56 46.8	-3.7
MOIG	**Morelia**	**1.78**	**54**	*i* P	Pn	20 56 30.3	-3.4
MOIG				*i* S	Sn	20 56 51.9	-3.9
ARIG	**Puente Sto Nin**	**2.28**	**99**	*e*P	Pn	20 56 38.1	-2.3
ARIG				*e*S	Sn	20 57 02.8	-5.1

*ISCJB **08** 21:25:50.4±0.5, 29°.78N±0°.03×50°.70E±0°.08, h22km, Error ellipse: s-maj=9.8km s-min=4.4km az=0.6*
*CSEM **08** 21:25:50.5, 29°.78N×50°.75E, h46km, ML2.9*
*TEH **08** 21:25:52.0, 29°.87N×50°.78E, h10km, ML2.9*
ISC 08 21:25:51.1±1.2, 29.79N±0°.04×50.80E±0°.06, h22km, n19, σ1°33/23, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKAZ	**Kazeroun**	**0.91**	**90**	*e*		21 26 22.4	
	comp=Z,7μm,0.4s						
IKAZ				*e*Pg	Pb	21 26 05.2	-3.1
AHBU	**AHRAM**	**1.02**	**155**	*e*Pg	Pn	21 26 10.2	+0.2
AHBU				*e*Sg	Sn	21 26 24.6	+1.0
IBRJ	**Brojen**	**2.15**	**11**	*e*Pn	Pn	21 26 26.7	+0.8
IBRJ				*e*Sg	Sb	21 26 56.6	+0.7
IBRJ				*e*		21 27 00.3	
	comp=Z,688nm,0.2s						
ZNGN	**Zangian**	**2.32**	**1**	*e*Pn	Pn	21 26 29.4	+1.1
ZNGN				*e*		21 27 07.9	
	comp=Z,99nm,0.3s						
GHIR	**Ghir-Karzin**	**2.43**	**127**	*e*Pn	Pn	21 26 29.3	-0.3
GHIR				*e*Sg	Sb	21 27 06.1	+2.3
IRAM	**Ramesheh**	**2.43**	**34**	*e*Pn	Pn	21 26 31.3	+1.6
IRAM				*e*		21 26 35.5	
	comp=Z,869nm,0.2s						
ROKH	**ROKH**	**2.56**	**4**	*e*Pn	Pn	21 26 32.3	+0.8
ROKH				*e*		21 27 13.0	
	comp=Z,99nm,0.3s						
IGAR	**Gharneh**	**2.82**	**22**	*e*Pn	Pn	21 26 36.6	+1.6
IGAR				*e*		21 26 44.4	
	comp=Z,490nm,0.1s						
KFJS		**2.97**	**238**	P	Pn	21 26 37.2	+0.3
ISAD	**Sadrabad**	**3.27**	**49**	*e*Pn	Pn	21 26 42.6	+1.4
ISAD				*e*		21 26 46.0	
	comp=Z,290nm,0.1s						
IZEF	**Zefreh**	**3.37**	**23**	*e*Pn	Pn	21 26 43.7	+1.1
IZEF				*e*		21 26 57.9	
	comp=Z,310nm,0.2s						
NASN	**Na'in**	**3.46**	**29**	*e*Pn	Pn	21 26 44.1	+0.1
IKLH	**Kolahrood**	**3.58**	**11**	*e*Pn	Pn	21 26 46.6	+1.0
IKLH				*e*		21 26 48.3	
	comp=Z,313nm,0.1s						
IMEH	**Mehriz**	**3.66**	**63**	*e*Pn	Pn	21 26 48.0	+1.4
IMEH				*e*		21 26 51.0	
	comp=Z,216nm,0.1s						
KHMZ	**Khomeyn**	**4.00**	**350**	*e*Pn	Pn	21 26 50.4	-0.9
BOQSS		**4.10**	**198**	P	Pn	21 26 53.9	+1.5
ASAO	**Ashtian**	**4.79**	**352**	*e*Pn	Pn	21 27 02.0	-0.2
SLWS		**4.97**	**182**	P	Pn	21 27 05.8	+1.4
BTHS		**5.72**	**180**	P	Pn	21 27 15.2	+0.5
BTHS				S	Sn	21 28 19.8	+0.1

*IDC **08** 21:55:21.7±5.2, 22°.18S×68°.21W, h0km, mb4.1/1, mb1 4.0/2, mb1mx3.5/43, mbtmp3.9/2, ML3.7/1, Error ellipse: s-maj=152.7km s-min=53.2km az=67.0*
*ISCJB **08** 21:55:39.3±0.8, 21°.07S±0°.04×68°.6W±0°.2, h146km±11km, mb3.6/1, Error ellipse: s-maj=23.2km s-min=7.1km az=179.9*
*GUC **08** 21:55:39.8±0.7, 21°.07S×68°.59W, h132km±6km, ML3.3*
ISC 08 21:55:39.9±1.1, 21°.06S±0°.05×68°.6W±0°.2, h138km±12km, n12, σ0°47/20, 6C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.84**	**271**	⇑*i*P	Pn	21 56 02.0	-0.3
PB01				*i* S	Sn	21 56 18.8	-0.5
PB01				IAML		21 56 21.2	
	comp=N,722nm,0.2s						
PB09	**IPOC Station P**	**0.95**	**219**	⇑*i*P	Pn	21 56 03.5	+0.2
PB09				*i* S	Sn	21 56 21.0	-0.2
PB09				IAML		21 56 22.9	
	comp=E,357nm,0.3s						
PB08	**IPOC Station P**	**1.05**	**330**	⇑*i*P	Pn	21 56 04.9	+0.3
PB08				*i* S	Sn	21 56 23.4	+0.2
PB08				IAML		21 56 24.6	
	comp=E,320nm,0.2s						
PB02	**IPOC Station P**	**1.25**	**258**	⇑*i*P	Pn	21 56 06.3	+0.3
PB02				*i* S	Sn	21 56 26.1	+0.2
PB02				IAML		21 56 28.0	
	comp=E,2μm,0.6s						
PB07	**IPOC Station P**	**1.38**	**241**	⇑*i*P	Pn	21 56 07.6	+0.1
PB07				*i* S	Sn	21 56 28.4	-0.1
PB06	**IPOC Station P**	**1.88**	**209**	⇑*i*P	Pn	21 56 13.0	-0.1
PB06				*i* S	Sn	21 56 38.3	-0.2
PB06				IAML		21 56 38.9	
	comp=N,363nm,0.4s						
PSGC	**Pisagua**	**2.04**	**315**	⇓*i*P	Pn	21 56 14.6	-0.4
PSGC				*i* S	Sn	21 56 41.5	-0.4
MNMC	**Minye Minye**	**2.14**	**334**	⇓*i*P	Pn	21 56 17.0	+0.7
MNMC				*i* S	Sn	21 56 44.7	+0.5
MNMC				IAML		21 56 48.5	
	comp=N,431nm,0.1s						
PB15	**IPOC Station P**	**2.29**	**201**	*e*P	Pn	21 56 18.6	+0.5

LPAZ	**La Paz**	**4.77**	**5**	Pn	Pn	21 56 50.4	-0.2
	comp=N,1.0nm,0.3s,baz=167,slow=5.6,SNR=49						
TORD	**Torodi Ar. Bea**	**76.93**	**70**	P	P	22 07 16.8	-0.7
	comp=N,0.8nm,0.5s,baz=261,slow=5.1,SNR=18						
MKAR	**Makanchi Array**	**145.10**	**36**	PKPbc	PKPdf	22 15 01.9	+1.0
	comp=N,0.5nm,0.7s,baz=303,slow=3.6,SNR=5.8						

*ISCJB **08** 22:01:52.6±0.5, 22°.56N±0°.02×121°.68E±0°.03, h18km±5km, Error ellipse: s-maj=4.1km s-min=3.3km az=21.0*
*JMA **08** 22:01:53.0±0.1, 22°.54N×121°.63E, h28km, M3.1*
*TAP **08** 22:01:53.9, 22°.57N×121°.61E, h14km, ML3.0, C*
ISC 08 22:01:53.0±1.1, 22°.56N±0°.03×121°.65E±0°.03, h20km±4km, n51, σ0°76/92, 1C-6D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWH	**Lutao**	**0.21**	**313**	⇓*i*P	Pg	22 01 58.3	0.0
TWH	baz=321			*i* S	Sg	22 02 00.9	-1.0
TTN	**Taitung**	**0.50**	**292**	*e*P	Pb	22 02 03.5	+0.4
TTN	baz=294			*e*S	Sg	22 02 10.2	+0.3
LAY	**Lan-yu**	**0.53**	**190**	P	Pg	22 02 03.5	-0.2
LAY	baz=185			*e*S	Sb	22 02 11.1	+0.3
TWGBT	**Beinan**	**0.58**	**296**	⇓*e*P	Pg	22 02 04.4	-0.2
TWGBT	baz=309			*e*S	Sg	22 02 12.9	+0.4
TWG	**Pinlang**	**0.59**	**296**	⇓P	Pg	22 02 04.4	-0.4
TWG	baz=309			*e*S	Sg	22 02 12.4	-0.4
CHKT	**Chengkung**	**0.59**	**334**	⇑*i*P	Pg	22 02 04.7	-0.1
CHKT	baz=338			*e*S	Sg	22 02 12.4	-0.4
ECL	**Taimali**	**0.64**	**273**	⇓P	Pg	22 02 05.4	-0.3
ECL	baz=288			*e*S	Sg	22 02 13.8	-0.6
FULB	**Fuli**	**0.71**	**333**	*e*P	Pb	22 02 06.4	-0.3
FULB	baz=335			*e*S	Sb	22 02 15.8	-0.3
TAW	**Tawu**	**0.72**	**254**	*e*P	Pb	22 02 07.0	+0.1
TAW	baz=264			*e*S	Sb	22 02 16.1	-0.3
EAST	**Anshuo**	**0.76**	**256**	⇓*i*P	Pb	22 02 07.5	-0.1
EAST	baz=265			*e*S	Sb	22 02 17.0	-0.5
TWF1	**Yuli**	**0.85**	**338**	P	Pb	22 02 09.0	-0.1
TWF1	baz=340			*e*S	Sb	22 02 20.3	+0.3
ELDTW	**Lidau**	**0.85**	**317**	P	Pb	22 02 08.8	-0.4
ELDTW	baz=319			*e*S	Sb	22 02 19.0	-1.2
YULB	**Yu-li**	**0.89**	**339**	*e*P	Pb	22 02 09.6	-0.1
YULB	baz=353			*e*S	Sb	22 02 20.9	-0.2
MASBT	**Mashibuluo**	**0.94**	**273**	*e*P	Pb	22 02 10.2	-0.4
MASBT	baz=281			*e*S	Sb	22 02 21.2	-1.4
HGSD	**Ruisui**	**0.95**	**348**	*e*P	Pb	22 02 09.9	-0.8
HGSD	baz=350			*e*S	Sg	22 02 24.0	0.0
SSD	**Sandimen**	**0.95**	**281**	P	Pb	22 02 10.3	-0.6
SSD	baz=273			*e*S	Sb	22 02 21.7	-1.4
SCZT	**Fangliau**	**0.97**	**259**	P	Pb	22 02 10.8	-0.3
SCZT	baz=257			*e*S	Sb	22 02 22.7	-0.8
TWKBT	**Hengchun**	**0.99**	**231**	*e*P	Pb	22 02 11.3	-0.1
TWKBT	baz=229			*e*S	Sb	22 02 23.3	-0.8
STYT	**Tauyuan**	**1.01**	**306**	⇓P	Pb	22 02 11.7	-0.2
STYT	baz=307			*e*S	Sb	22 02 24.1	-0.8
SGST	**Jiashian**	**1.11**	**298**	*e*P	Pb	22 02 14.3	+0.8
SGST	baz=307			*e*S	Sb	22 02 28.4	+0.9
WTP	**Ta-pu**	**1.17**	**306**	P	Pb	22 02 15.2	+0.6
WTP	baz=307			*e*S	Sn	22 02 30.9	+1.1
TPUB	**Ta-pu**	**1.19**	**308**	*e*P	Pn	22 02 14.9	+0.4
TPUB	baz=309			*e*S	Sn	22 02 31.0	+0.8
CHN1	**Nanshi**	**1.20**	**301**	*e*P	Pg	22 02 16.2	-0.1
CHN1	baz=302			*e*S	Sg	22 02 32.3	+0.2
ALS	**Alishan**	**1.22**	**321**	P	Pb	22 02 16.0	+0.4
ALS	baz=330			*e*S	Sb	22 02 30.7	-0.3
ESL	**Shilin**	**1.26**	**351**	*e*P	Pn	22 02 15.3	-0.2
ESL	baz=3.0			*e*S	Sb	22 02 30.5	-1.4
VWDT	**VWDT**	**1.27**	**339**	*e*P	Pn	22 02 15.9	+0.2
VWDT	baz=351			*e*S	Sb	22 02 31.4	-0.9
TWK	**Hsinying**	**1.28**	**303**	*e*P	Pb	22 02 17.1	+0.7
TWK	baz=304			*e*S	Sg	22 02 34.3	-0.1
ENLB	**Shoufeng**	**1.33**	**358**	*e*P	Pn	22 02 16.6	+0.1
ENLB	baz=13			*e*S	Sn	22 02 33.5	-0.2
SSLB	**Suanglung**	**1.37**	**333**	*e*P	Pn	22 02 17.7	+0.6
SSLB	baz=345			*e*S	Sn	22 02 34.5	-0.3
SMLT	**Sun Moon Lake**	**1.48**	**333**	*e*P	Pb	22 02 20.0	+0.1
SMLT	baz=344			*e*S	Sb	22 02 39.5	+1.1
TWD	**Chiawan**	**1.51**	**358**	*e*P	Pn	22 02 18.8	-0.2
TWD	baz=11			*e*S	Sn	22 02 37.2	-0.9
TYC	**Yuchr**	**1.52**	**332**	*e*P	Pb	22 02 21.0	+0.5
CHGB	**Renai**	**1.55**	**344**	*e*P	Pn	22 02 20.4	+0.7
CHGB	baz=345			*e*S	Sn	22 02 39.3	-0.1
NACB	**Ninganchiao**	**1.60**	**358**	*e*P	Pn	22 02 19.9	-0.3
NACB	baz=10.0			*e*S	Sn	22 02 39.1	-1.3
TDCB	**Techi**	**1.74**	**345**	P	Pn	22 02 23.1	+0.9
NANB	**Nanao**	**1.86**	**3**	*e*P	Pn	22 02 24.0	+0.3
NNSB	**Datong**	**1.87**	**353**	P	Pn	22 02 25.1	+1.0
TWQ1	**Liyutan**	**1.95**	**336**	*e*P	Pb	22 02 27.9	0.0
TWQ1	baz=337			*e*S	Sb	22 02 52.0	+0.3
WDGT	**Dungji**	**1.96**	**291**	*e*P	Pn	22 02 26.2	+1.1
WDGT	baz=292			*e*S	Sn	22 02 49.2	+0.1
TWC	**Suao**	**2.04**	**5**	*e*P	Pn	22 02 27.4	+1.1
ENTT	**Nioudou**	**2.07**	**358**	*e*P	Pn	22 02 27.6	+0.9

	baz=359						
YHNB	**Yeheng**	**2.11**	**353**	*e*P	Pn	22 02 28.8	+1.5
	baz=4.0						
NSK	**Sanguang**	**2.12**	**353**	*e*P	Pn	22 02 28.9	+1.5
	baz=5.0						
JYNG	**Yonagunijimaku**	**2.23**	**32**	P	Pn	22 02 30.2	+1.4
YOJ	**Yonaguni jima**	**2.27**	**33**	P	Pn	22 02 30.4	+1.1
YOJ				*e*S	Sn	22 02 58.2	+1.5
HATJ	**Hateruma jima**	**2.48**	**53**	P	Pn	22 02 33.3	+1.0
HATJ				*e*S	Sn	22 03 01.5	-0.5
IRIF	**Iriomote-Funau**	**2.60**	**47**	P	Pn	22 02 35.1	+1.1
IRIF				*e*S	Sn	22 03 04.6	-0.4
JIJ	**Ishigaki jima**	**2.91**	**52**	P	Pn	22 02 39.7	+1.5
JIJ				*e*S	Sn	22 03 11.3	-1.3
JISG	**Ishigakijimahi**	**3.17**	**50**	P	Pn	22 02 42.8	+1.1
JISG				S	Sn	22 03 18.5	-0.5
JTJ	**Tarama**	**3.48**	**53**	P	Pn	22 02 47.2	+1.1
JTJ				*e*S	Sn	22 03 26.0	-0.8
JIRB	**Irabujima**	**3.94**	**54**	*e*S	Sn	22 03 36.7	-1.4

*ISCJB **08** 22:12:03.7±0.3, 24°.18N±0°.01×121°.73E±0°.02, h6km±2km, Error ellipse: s-maj=2.8km s-min=1.7km az=29.4*
*JMA **08** 22:12:03.6±0.1, 24°.15N×121°.68E, h11km±1km, M2.6*
*TAP **08** 22:12:03.3, 24°.17N×121°.73E, h12km, ML3.1, B*
ISC 08 22:12:03.6±0.8, 24°.16N±0°.02×121°.72E±0°.02, h11km±6km, n89, σ0°70/128, 4C-10D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**0.11**	**275**	⇑P	Pg	22 12 06.5	+0.1
NACB	baz=273			S	Sg	22 12 08.4	-0.1
TWD	**Chiawan**	**0.14**	**233**	⇑*i*P	Pg	22 12 06.9	+0.1
TWD	baz=233			S	Sg	22 12 09.3	+0.3
HWA	**Hwalien**	**0.21**	**209**	*e*P	Pb	22 12 09.1	-0.4
ENA	**Nanau**	**0.26**	**5**	P	Pg	22 12 08.8	-0.2
ENA	baz=3.0			*e*S	Sg	22 12 12.2	-0.4
NANB	**Nanao**	**0.26**	**7**	⇓P	Pg	22 12 08.8	-0.2
NANB	baz=4.0			S	Sg	22 12 12.2	-0.4
ENLB	**Shoufeng**	**0.28**	**202**	*e*P	Pb	22 12 10.5	-0.2
ENAH	**Nanao**	**0.30**	**17**	*e*P	Pg	22 12 09.3	-0.3
ENAH	baz=13			*e*S	Sg	22 12 13.4	-0.3
NNSB	**Datong**	**0.40**	**311**	⇓P	Pg	22 12 11.8	+0.2
NNSB	baz=309			S	Sg	22 12 17.2	+0.3
NNSH	**Datong**	**0.40**	**311**	⇓P	Pg	22 12 11.8	+0.2
NNSH	baz=309			S	Sg	22 12 17.1	+0.2
NNS	**Nan Shan**	**0.42**	**311**	⇓*i*P	Pg	22 12 12.1	+0.2
NNS	baz=310			S	Sg	22 12 17.7	+0.3
ESL	**Shilin**	**0.43**	**217**	P	Pg	22 12 12.0	-0.1
ESL	baz=224			*e*S	Sb	22 12 18.4	-1.4
TWC	**Suao**	**0.46**	**15**	⇓*i*P	Pg	22 12 12.4	-0.2
TWC	baz=8.0			*e*S	Sg	22 12 17.6	-1.2
ENTT	**Nioudou**	**0.49**	**344**	⇓*i*P	Pg	22 12 13.4	+0.2
ENTT	baz=342			*e*S	Sg	22 12 20.2	+0.4
TWT	**Tachien**	**0.50**	**280**	*e*P	Pb	22 12 14.2	-0.3
TWT	baz=279			*e*S	Sb	22 12 20.8	-1.2
CHGB	**Renai**	**0.51**	**258**	P	Pb	22 12 14.1	-0.5
CHGB	baz=251			S	Sb	22 12 21.0	-1.1
TDCB	**Techi**	**0.52**	**280**	P	Pb	22 12 14.2	-0.6
TDCB	baz=280			S	Sg	22 12 20.7	+0.1
EOS1	**EOS1**	**0.54**	**44**	*e*P	Pg	22 12 14.2	+0.2
TWE	**Neicheng**	**0.56**	**355**	P	Pg	22 12 14.6	+0.1
TWE	baz=354			S	Sg	22 12 21.9	+0.1
EGFH	**Guangfu**	**0.56**	**208**	*e*P	Pb	22 12 14.8	-0.6
EGFH	baz=218			*e*S	Sb	22 12 24.6	+1.2
YHNB	**Yeheng**	**0.59**	**328**	⇓*i*P	Pb	22 12 15.6	-0.4
YHNB	baz=327			S	Sg	22 12 23.1	+0.1
NSK	**Sanguang**	**0.61**	**327**	⇓*i*P	Pb	22 12 15.8	-0.5
NSK	baz=326			*e*S	Sg	22 12 23.3	-0.1
NWLT	**Wulai**	**0.64**	**342**	⇓P	Pb	22 12 16.3	-0.5
NWLT	baz=341			*e*S	Sg	22 12 24.4	-0.1
VWDT	**VWDT**	**0.67**	**232**	*e*P	Pb	22 12 16.6	-0.6
VWDT	baz=234			*e*S	Sb	22 12 27.1	+0.6
NTC	**Toucheng**	**0.69**	**8**	*e*P	Pg	22 12 16.8	-0.3
EGS	baz=7.0	**0.71**	**16**	*e*P	Pg	22 12 16.8	-0.4
HGSD	**Ruisui**	**0.72**	**202**	P	Pn	22 12 18.6	-1.1
EHY	baz=194 **Hungye**	**0.75**	**209**	*e*P	Pb	22 12 18.4	-0.2
SSLB	baz=211 **Suanglung**	**0.79**	**242**	⇑P	Pb	22 12 19.1	-0.4
SSLB	baz=253			*e*S	Sb	22 12 29.2	-1.0
SMLT	baz=253 **Sun Moon Lake**	**0.80**	**250**	*e*P	Pb	22 12 19.6	0.0
SMLT	baz=250			*e*S	Sb	22 12 29.4	-1.0
LIOB	baz=250 **Emei**	**0.80**	**307**	*e*P	Pn	22 12 20.0	-0.8
LIOB	baz=306			*e*S	Sb	22 12 30.6	+0.2
NSTT	baz=306 **Nanjuang**	**0.80**	**306**	*e*P	Pb	22 12 19.7	+0.1
TIPB	baz=305 **Shuangxi**	**0.81**	**7**	⇓P	Pg	22 12 18.1	-1.1
TYC	baz=358 **Yuchr**	**0.83**	**252**	⇑*e*P	Pn	22 12 20.6	-0.6
TYC	baz=246			*e*S	Sn	22 12 31.9	-1.5
TATO	**Taipei**	**0.83**	**346**	P	Pb	22 12 20.0	-0.1
TATO	baz=344			S	Sg	22 12 30.2	-0.4
YULB	baz=344 **Yu-li**	**0.86**	**207**	*e*P	Pg	22 12 19.5	-0.7
TWQ1	baz=220 **Liyutan**	**0.88**	**282**	*e*P	Pn	22 12 23.1	+1.2
TAP1	baz=282 **Taipei**	**0.89**	**349**	*e*P	Pg	22 12 20.6	-0.1
TWF1	baz=346 **Yuli**	**0.90**	**206**	*e*P	Pg	22 12 20.2	-0.7
NWF	baz=218 **Wu-fen Shan**	**0.91**	**4**	P	Pb	22 12 21.2	-0.1
NWF	baz=353			*e*S	Sg	22 12 32.8	-0.1
WFSB	baz=353 **Wu-fen Shan**	**0.91**	**4**	P	Pb	22 12 21.2	-0.1
WFSB	baz=353			S	Sg	22 12 32.8	-0.1
NSY	baz=353 **Sanyi**	**0.91**	**286**	*e*P	Pn	22 12 22.4	+0.1
SBCB	baz=286 **Hsinchu**	**0.91**	**313**	*e*P	Pn	22 12 22.9	+0.5

baz=313
NMLH Miaoli 0.92 294 *e*P **Pn 22 12 24.0 +1.5**
baz=294
WJS Zhushan 0.97 250 *e*P **Pn 22 12 23.6 +0.5**
baz=244
TWS1 Kuangyinshan 0.97 344 *e*P **Pn 22 12 23.3 +0.1**
baz=342
YM10 YM10 1.00 352 *e*P **Pb 22 12 22.9 0.0**
baz=350
YM04 YM04 1.00 351 *e*P **Pg 22 12 22.8 -0.1**
baz=338
YM11 YM11 1.01 353 *e*P **Pn 22 12 24.3 +0.6**
baz=351
YM07 YM07 1.01 355 *e*P **Pg 22 12 22.4 -0.7**
baz=353
YM07 S **Sb 22 12 36.9 +0.4**
baz=353
YM12 YM12 1.02 352 *e*P **Pb 22 12 23.4 0.0**
baz=351
YM03 YM03 1.02 351 *e*P **Pn 22 12 23.6 -0.3**
baz=349
NTST Danshui 1.03 346 *e*P **Pn 22 12 24.5 +0.6**
baz=344
YM08 YM08 1.03 354 *e*P **Pg 22 12 22.9 -0.4**
baz=352
FULB Fuli 1.04 202 *e*P **Pb 22 12 23.3 -0.3**
baz=219
CHKT Chengkung 1.11 197 *e*P **Pb 22 12 24.2 -0.5**
baz=185
TWY Chenhua 1.11 355 *e*P **Pn 22 12 25.8 +0.7**
baz=4.0
JYNG Yonagunijimaku 1.16 75 P **Pg 22 12 26.2 +0.4**
JYNG *e*S **Sn 22 12 42.1 +0.6**
ELDTW Lidau 1.16 214 *e*P **Pb 22 12 24.7 -1.1**
baz=217
WDLH Douliu 1.18 247 *e*P **Pg 22 12 27.8 +1.6**
baz=249
YOJ Yonaguni jima 1.22 76 *e*P **Pn 22 12 26.3 -0.3**
baz=62
YOJ Yonaguni jima 1.22 76 P **Pn 22 12 26.6 0.0**
YOJ *e*S **Sn 22 12 43.6 +0.6**
RLNB Erlin 1.27 258 *e*P **Pg 22 12 29.2 +1.2**
baz=260
TPUB Ta-pu 1.32 229 *e*P **Pg 22 12 28.9 +0.1**
baz=222
TPUB *e*S **Sg 22 12 47.4 +1.4**
baz=222
STYT Tauyuan 1.33 222 *e*P **Pg 22 12 28.7 -0.4**
baz=225
STYT *e*S **Sg 22 12 47.2 +0.8**
baz=225
WTP Ta-pu 1.36 228 *e*P **Pg 22 12 29.8 0.0**
baz=232
TWK Hsinying 1.44 232 *e*P **Pg 22 12 30.9 -0.3**
baz=235
CHN1 Nanshi 1.46 228 *e*P **Pg 22 12 31.3 -0.4**
baz=222
CHN1 *e*S **Sg 22 12 52.0 +1.4**
baz=222
TWG Pinlang 1.46 204 *e*P **Pn 22 12 29.3 -0.6**
baz=191
TWGBT Beinan 1.46 204 *e*P **Pn 22 12 28.5 -1.4**
baz=191
TWH Lutao 1.46 189 *e*P **Pn 22 12 28.7 -1.2**
baz=192
WLGB Puzi 1.47 243 *e*P **Pb 22 12 30.4 -0.5**
baz=246
SGST Jiashian 1.50 224 *e*P **Pn 22 12 30.5 +0.1**
baz=228
SGST *e*S **Sg 22 12 52.8 +1.1**
baz=228
SLGT Liugui 1.52 220 *e*P **Pb 22 12 31.4 -0.5**
baz=224
ECL Taimali 1.71 204 *e*P **Pn 22 12 32.9 -0.4**
baz=194
SSD Sandimen 1.73 215 *e*P **Pb 22 12 35.2 -0.2**
baz=232
MASBT Mashibuluo 1.84 213 *e*P **Pn 22 12 35.8 +0.7**
baz=206
IRIF Iriomote-Funau 1.84 84 P **Pb 22 12 37.0 -0.3**
SCZT Fangliau 2.05 210 *e*P **Pb 22 12 39.3 -1.6**
baz=204
SCZT *e*S **Sb 22 13 06.9 +0.5**
baz=204
PNG Penghu 2.07 254 *e*P **Pn 22 12 39.2 +1.0**
baz=257
PHUB P'eng-hu 2.07 252 *e*P **Pn 22 12 38.0 -0.3**
baz=257
PHUB *e*S **Sb 22 13 05.8 -1.1**
baz=257
WDGT Dungji 2.09 245 *e*P **Pn 22 12 39.6 +1.0**
baz=249
WDGT *e*S **Sb 22 13 07.4 0.0**
baz=249
JKRS Kuro-shima 2.09 88 P **Pn 22 12 39.8 +1.2**
JIJ Ishigaki jima 2.22 84 P **Pn 22 12 40.0 -0.4**
JIJ *e*S **Sn 22 13 08.6 +0.7**
VWUC VWUC 2.22 292 *e*P **Pn 22 12 39.7 -0.7**
baz=291
VWUC *e*S **Sn 22 13 08.0 +0.1**
baz=291
VCHM Qimei 2.30 246 *e*P **Pn 22 12 42.7 +1.2**
baz=236
TWKBT Hengchun 2.36 201 *e*P **Pn 22 12 43.4 +1.1**
baz=192
JISG Ishigakijimahi 2.40 79 P **Pn 22 12 44.4 +1.5**
MATB Ma-tsu 2.55 321 *e*P **Pn 22 12 44.8 -0.1**
baz=319
JTJ Tarama 2.76 79 *e*S **Sn 22 13 22.8 +1.6**

*ISCJB **08** 22:24:48.8±0.3, 32.°10N±0.°02×115.°69W±0.°02, h19km±3km, Error ellipse: s-maj=3.3km s-min=2.6km az=31.1*
*NEIC **08** 22:24:49.7±0.0, 32.°09N×115.°73W, h6km, ML3.8(PAS), ML3.8(ECX), After ECX.*
NEIC Felt at El Cajon and San Diego, California.
*ECX **08** 22:24:49.7±0.5, 32.°09N×115.°73W, h6km, MD3.6, ML3.8*
*MEX **08** 22:24:50.3±0.7, 32.°13N×115.°75W, h5km, MD3.9*
ISC 08 22:24:48.3±1.0, 32.°11N±0.°02×115.°72W±0.°02, h17km±7km, n94, σ1§45/133, 8C-1D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPBX	**Cerro Prieto**	**0.47**	**49**	*e*P	**Pb**	**22 24 58.2**	**0.0**
CPBX				*e*S	**Sb**	**22 25 05.2**	**+0.3**
CPBX				IAML		22 25 08.3	
	comp=N,27μm,0.6s						
MBIG	**Mexicali**	**0.54**	**56**	*e*P	**Pb**	**22 24 59.7**	**+0.4**
MBIG	**Mexicali**	**0.54**	**56**	*e*P	**Pb**	**22 24 59.6**	**+0.4**
MBIG				*i*S	**Sb**	**22 25 08.8**	**+2.0**
SGL	**Mount Signal**	**0.54**	**360**	⇑*i*P	**Pb**	**22 24 59.2**	**-0.1**
YUH	**Yuha Desert**	**0.57**	**343**	⇑*i*P	**Pg**	**22 24 59.5**	**0.0**
YUH	**Yuha Desert**	**0.57**	**343**	*e*Pg	**Pg**	**22 24 59.5**	**0.0**
RMX	**La Rumorosa**	**0.58**	**329**	⇑*e*P	**Pb**	**22 25 00.3**	**+0.1**
RMX				*e*		22 25 06.0	
RMX				IAML		22 25 06.0	
	comp=N,4μm,0.2s						
RMX				*e*S	**Sg**	**22 25 08.0**	**+0.4**
IKP	**In-Ko-Pah, Jac**	**0.63**	**329**	P	**Pg**	**22 25 00.8**	**0.0**
	baz=150,SNR=77						
IKP				S	**Sg**	**22 25 09.1**	**-0.2**
	baz=150						
IKP	**In-Ko-Pah, Jac**	**0.63**	**329**	⇑*e*P	**Pg**	**22 25 00.8**	**0.0**
ERPC	**Ernies Place**	**0.64**	**5**	*e*Pg	**Pb**	**22 25 01.5**	**+0.5**
WESC	**Westside Schoo**	**0.65**	**359**	*e*Pg	**Pb**	**22 25 02.2**	**+0.9**
WESC				*e*Sg	**Sb**	**22 25 11.4**	**+1.4**
CRR	**Carrizo Plain**	**0.81**	**345**	*e*Pg	**Pb**	**22 25 04.2**	**+0.4**
CBX	**Cerro Bola**	**0.82**	**285**	⇑*i*P	**Pb**	**22 25 04.5**	**+0.2**
CBX				*e*S	**Sb**	**22 25 15.6**	**+0.4**
CBX	**Cerro Bola**	**0.82**	**285**	*e*Pg	**Pg**	**22 25 04.2**	**-0.2**
CBX				*e*Sg	**Sb**	**22 25 15.6**	**+0.4**
CBX	**Cerro Bola**	**0.82**	**285**	*e*P	**Pg**	**22 25 04.2**	**-0.2**
CBX				*e*S	**Sb**	**22 25 15.6**	**+0.4**
SWSC	**Sam W. Stewart**	**0.84**	**356**	P	**Pg**	**22 25 04.6**	**-0.1**
	baz=176,SNR=100						
SWSC				S	**Sg**	**22 25 14.3**	**-1.4**
	baz=176						
SWSC	**Sam W. Stewart**	**0.84**	**356**	*e*Pg	**Pn**	**22 25 05.4**	**0.0**
ECBX	**El Chinero**	**0.85**	**138**	*e*P	**Pg**	**22 25 03.7**	**-1.2**
ECBX				*e*S	**Sg**	**22 25 14.9**	**-1.2**
ECBX				IAML		22 25 17.0	
	comp=N,3μm,0.6s						
ECBX				⇓*e*		22 25 17.0	
ECNX	**Esteban Cantu**	**0.87**	**239**	⇑*e*P	**Pb**	**22 25 04.8**	**-0.2**
ECNX				⇑*i*P	**Pg**	**22 25 04.0**	**-1.3**
TJIG	**Tijuana**	**0.87**	**292**	*e*P	**Pg**	**22 25 04.9**	**-0.4**
TJIG				*e*S	**Sg**	**22 25 16.0**	**-0.7**
CBKC	**Canebrake**	**0.91**	**331**	*e*Pg	**Pb**	**22 25 06.2**	**+0.5**
COA	**Coachella**	**0.91**	**34**	*e*Pg	**Pg**	**22 25 05.6**	**-0.4**
PBX	**Punta Banda**	**0.93**	**247**	*e*P	**Pg**	**22 25 05.9**	**-0.4**
MONP2	**Monument Peak**	**0.98**	**323**	P	**Pg**	**22 25 07.3**	**-0.1**
	baz=144,SNR=226						
MONP2				S	**Sg**	**22 25 20.0**	**-0.3**
	baz=144						
BAR	**Barrett**	**0.99**	**306**	⇑*i*P	**Pg**	**22 25 07.0**	**-0.5**
BAR	**Barrett**	**0.99**	**306**	*e*Pg	**Pg**	**22 25 06.9**	**-0.5**
BAR				*e*Sg	**Sg**	**22 25 19.9**	**-0.5**
BTCC	**Brunts Corner**	**1.00**	**25**	*e*Pg	**Pg**	**22 25 06.9**	**-0.7**
BTCC				*e*Sn	**Sg**	**22 25 20.2**	**-0.5**
ERRC	**Elmore Ranch**	**1.01**	**355**	*e*Pn	**Pn**	**22 25 08.7**	**+1.0**
ERRC				*e*Sn	**Sn**	**22 25 22.9**	**+1.4**
SPIG	**San Pedro Mart**	**1.08**	**168**	*e*P	**Pg**	**22 25 08.8**	**-0.5**
SPIG	**San Pedro Mart**	**1.08**	**168**	*e*Pn	**Pg**	**22 25 08.8**	**-0.5**
SPIG				*e*Sn	**Sn**	**22 25 24.4**	**+0.6**
SPIG	**San Pedro Mart**	**1.08**	**168**	*e*P	**Pg**	**22 25 08.8**	**-0.5**
SPIG				*e*S	**Sn**	**22 25 24.4**	**+0.6**
SPX	**San Pedro Mart**	**1.08**	**168**	*e*Pn	**Pg**	**22 25 08.9**	**-0.4**
SPX				*e*Sn	**Sb**	**22 25 23.6**	**+0.9**
SPX	**San Pedro Mart**	**1.08**	**168**	*e*P	**Pg**	**22 25 08.9**	**-0.4**
SPX				*e*S	**Sb**	**22 25 23.6**	**+0.9**
SDRC	**San Diego Road**	**1.21**	**302**	*e*P	**Pn**	**22 25 10.8**	**+0.4**
GLA	**Glamis**	**1.21**	**39**	P	**Pn**	**22 25 09.7**	**-0.8**
	baz=219,SNR=110						
GLA				S	**Sb**	**22 25 24.9**	**-1.2**
	baz=219						
GLA	**Glamis**	**1.21**	**39**	*e*Pg	**Pn**	**22 25 09.6**	**-1.0**
GLA				*e*Sn	**Sb**	**22 25 25.0**	**-1.1**
EML	**El Monte Cty P**	**1.23**	**310**	*e*Pn	**Pn**	**22 25 11.3**	**+0.5**
EML				*e*Sn	**Sb**	**22 25 27.2**	**+0.5**
FRK	**Frink**	**1.29**	**3**	*e*Pn	**Pn**	**22 25 11.0**	**-0.6**
DPP	**Dos Picos Cty**	**1.36**	**311**	*e*Pn	**Pb**	**22 25 13.6**	**+0.2**
DPP				*e*Sn	**Sb**	**22 25 31.1**	**+0.6**
HWB	**Hans Werner Br**	**1.39**	**312**	*e*Pg	**Pg**	**22 25 14.6**	**-0.5**
HWB				*e*Sn	**Sb**	**22 25 32.0**	**+0.6**
109C	**Camp Elliot, M**	**1.41**	**304**	P	**Pn**	**22 25 13.9**	**+0.7**
	baz=124,SNR=52						
109C				S	**Sn**	**22 25 31.8**	**+0.5**
	baz=124						
CPE	**Camp Elliot**	**1.41**	**304**	*e*Pn	**Pb**	**22 25 14.1**	**0.0**
CPE				*e*Sn	**Sn**	**22 25 31.9**	**+0.6**
FRD	**Ford Ranch, An**	**1.57**	**332**	*e*Pn	**Pn**	**22 25 15.7**	**+0.2**
FRD				*e*Sn	**Sg**	**22 25 38.5**	**-0.5**
CTW	**Cottonwood Mou**	**1.57**	**355**	*e*Pn	**Pn**	**22 25 15.4**	**-0.2**
PLM	**Palomar**	**1.57**	**323**	*e*Pn	**Pb**	**22 25 17.8**	**+0.7**
PLM				*e*Sn	**Sg**	**22 25 38.4**	**-0.7**
PFO	**Pinyon Flats O**	**1.62**	**338**	P	**Pn**	**22 25 16.2**	**-0.1**
	baz=158,SNR=20						
PFO				S	**Sn**	**22 25 36.2**	**-0.8**
	baz=158						
PFO	**Pinyon Flats O**	**1.62**	**338**	*e*Pn	**Pn**	**22 25 16.2**	**-0.1**
SNDA	**J Saunders Pla**	**1.62**	**333**	*e*Pn	**Pn**	**22 25 17.2**	**+0.8**
SNDA				*e*Sn	**Sg**	**22 25 40.8**	**0.0**
CRY	**Cary Ranch**	**1.69**	**330**	*e*Pn	**Pg**	**22 25 20.6**	**-0.2**
CRY				*e*Sn	**Sg**	**22 25 42.1**	**-0.6**
113A	**Mohawk Valley,**	**1.78**	**68**	*e*Pn	**Pn**	**22 25 18.1**	**-0.2**
BELC	**Belle Mtn. Jos**	**1.90**	**353**	S	**Sn**	**22 25 42.3**	**-1.6**
	baz=173						
Y12C	**Blythe**	**1.92**	**31**	P	**Pn**	**22 25 20.1**	**-0.2**
	baz=212,SNR=21						
Y12C	**Blythe**	**1.92**	**31**	*e*Pn	**Pg**	**22 25 24.3**	**-1.0**
HMTC	**Hemet**	**1.93**	**326**	*e*Pn	**Pg**	**22 25 24.3**	**-1.0**
MURC	**Murrieta**	**1.94**	**321**	P	**Pn**	**22 25 21.1**	**+0.5**
	baz=140,SNR=33						
MURC				Sb	**Sb**	**22 25 48.4**	**+1.2**
	baz=140						
214A	**Organ Pipe Nat**	**2.48**	**93**	P	**Pn**	**22 25 27.0**	**-0.9**
	baz=274,SNR=13						
SCI2	**San Clemente I**	**2.54**	**291**	P	**Pn**	**22 25 30.0**	**+1.2**
	baz=110						
PDMCI	**Parker Dam,Lak**	**2.56**	**31**	S	**Sn**	**22 25 59.0**	**-0.8**
	baz=211						
CIS	**Catalina Islan**	**2.61**	**300**	P	**Pn**	**22 25 30.6**	**+0.8**
	baz=119,SNR=9.1						
CIS				S	**Sn**	**22 26 03.2**	**+2.1**
	baz=119						
GMRC	**Granite Mounta**	**2.67**	**1**	P	**Pn**	**22 25 31.0**	**+0.2**
	baz=181						
GMRC				S	**Sn**	**22 26 01.0**	**-1.8**
	baz=181						
SSK	**Sunset Peak**	**2.67**	**322**	*e*Pn	**Pb**	**22 25 36.1**	**+0.3**
BFSC	**Mount Baldy Ra**	**2.67**	**323**	P	**Pn**	**22 25 31.1**	**+0.3**
	baz=142						
BFSC				Sb	**Sb**	**22 26 09.9**	**+1.4**
	baz=142						
BFSC	**Mount Baldy Ra**	**2.67**	**323**	*e*Pn	**Pn**	**22 25 31.2**	**+0.3**
FMP	**Fort Macarthur**	**2.69**	**307**	Sb	**Sb**	**22 26 11.1**	**+2.3**
	baz=126						
PEM	**Pine Mountain**	**2.73**	**319**	*e*Pn	**Pb**	**22 25 37.4**	**+0.7**
NEE2	**Needles Airpor**	**2.81**	**19**	S	**Sn**	**22 26 05.5**	**-0.5**
	baz=199						
MWC	**Mount Wilson**	**2.88**	**318**	*e*Pn	**Pb**	**22 25 39.3**	**-0.1**
PASC	**Pasadena Art C**	**2.92**	**316**	*e*Pn	**Pb**	**22 25 39.9**	**0.0**
Y14A	**Wickenburg**	**2.92**	**51**	*e*Pn	**Pn**	**22 25 35.3**	**+1.2**
DECC	**Green Verdugo**	**3.06**	**315**	Sb	**Sb**	**22 26 21.8**	**+2.2**
	baz=134						
TUQ	**Turquoise Moun**	**3.33**	**357**	*e*Pg	**Pb**	**22 25 49.2**	**+2.3**
EDW2	**Edwards Air Fo**	**3.35**	**326**	Sb	**Sb**	**22 26 31.5**	**+3.5**
	baz=145						
W13A	**Hualapai Mount**	**3.35**	**27**	*e*Pn	**Pn**	**22 25 42.1**	**+1.9**
BLG	**Laguna Peak, P**	**3.44**	**306**	P	**Pn**	**22 25 41.9**	**+0.7**
	baz=125						
CCCA	**Chr Cany lake**	**3.67**	**339**	*e*Pn	**Pn**	**22 25 48.9**	**+4.5**
ARVC	**Arvin**	**3.97**	**320**	Sb	**Sb**	**22 26 49.7**	**+4.0**
	baz=139						
TUC	**Tucson**	**4.19**	**86**	*e*Pn	**Pn**	**22 25 53.5**	**+1.9**
TUC				*e*Sb	**Sb**	**22 26 55.8**	**+3.8**
TUC				*e*Sg	**Sg**	**22 27 06.6**	**+3.7**
ISA	**Isabella, Lake**	**4.22**	**328**	*e*Pg	**Pg**	**22 26 07.0**	**-2.2**
X16A	**Lo Mia Camp, P**	**4.26**	**56**	*e*Pn	**Pn**	**22 25 54.6**	**+2.0**
DAC	**Darwin (Calif)**	**4.44**	**340**	*e*Pg	**Pg**	**22 26 13.0**	**-0.4**
GATR	**Gnd/Air Tx Cnt**	**4.69**	**303**	*e*Pn	**Pn**	**22 25 57.3**	**-1.1**
GATR				*e*Pg	**Pb**	**22 26 11.9**	**+1.8**
GATR				*e*Sg	**Sb**	**22 27 10.9**	**+4.7**
WUAZ	**Wupatki**	**4.97**	**46**	*e*Pn	**Pn**	**22 26 05.4**	**+3.1**
U15A	**North Rim**	**5.16**	**32**	*e*Pn	**Pn**	**22 26 08.6**	**+3.4**
X18A	**Snowflake**	**5.40**	**62**	*e*Pn	**Pn**	**22 26 10.6**	**+2.2**
KNB	**Kanab**	**5.45**	**25**	*e*Pn	**Pn**	**22 26 12.1**	**+3.1**
CCUT	**Cedar City**	**5.77**	**19**	*e*Pn	**Pn**	**22 26 16.6**	**+3.2**
W18A	**Petrified Fore**	**5.83**	**57**	*e*Pn	**Pn**	**22 26 15.8**	**+1.6**
RCCR	**Rock Creek Can**	**5.91**	**336**	*e*Pn	Pn	22 26 22.8	+7.4
MSU	**Marysvale**	**7.02**	**23**	*e*Pg	**Pg**	**22 27 00.7**	**-1.9**
JPC	**Peters Creek,**	**7.42**	**316**	*e*Pn	**Pn**	**22 26 32.7**	**-3.1**
CVPM	**Vollmer Peak**	**7.85**	**319**	*e*Pn	Pn	22 26 46.8	+5.0
BMO	**Blue Mountains**	**12.79**	**355**	*e*Pn	**P**	**22 27 57.2**	**-3.2**
BOZ	**Bozeman (W)**	**13.84**	**12**	*e*Pn	**Pn**	**22 28 05.5**	**+1.7**
BOZ				*e*Sn	**Sn**	**22 30 34.9**	**-2.3**
SVTR	**Two Rivers Sch**	**16.05**	**345**	*e*Pn	**Pn**	**22 28 32.5**	**-0.7**

*ISCJB **08** 22:27:10.8±0.8, 6.°97S±0.°07×129.°57E±0.°09, h139km, mb3.7/3, Error ellipse: s-maj=13.3km s-min=9.0km az=28.6*
*IDC **08** 22:27:13.7±2.3, 6.°92S×129.°42E, h145km±22km, mb3.6/3, mb1 3.6/6, mb1mx3.2/50, mbtmp4.0/6, Error ellipse: s-maj=25.1km s-min=18.8km az=102.0*
ISC 08 22:27:12.2±0.9, 6.°96S±0.°08×129.°6E±0.°1, h139km, n7, σ2§00/9, mb3.9/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.28**	**16**	P	**Pn**	**22 28 44.2**	**+1.6**
	1.0nm,0.3s,baz=210,slow=20,SNR=3.1						
SIJI				S	**Sn**	**22 29 50.6**	**-2.7**
	1.9nm,0.3s,baz=290,slow=23,SNR=7.5						
BATI	**Baumata**	**6.68**	**241**	P	**Pn**	**22 28 48.6**	**+0.6**
	2.4nm,0.3s,baz=60,slow=8.1,SNR=2.4						
BATI				S	**Sn**	**22 30 01.7**	**-1.3**
	7.2nm,0.3s,baz=243,slow=23,SNR=8.2						
WRA	**Warramunga Arr**	**13.71**	**161**	P	**Pn**	**22 30 18.6**	**-2.3**
	0.3nm,0.3s,baz=348,slow=13,SNR=14						
WRA				S	Sn	22 32 42.9	-10
	1.2nm,0.3s,baz=332,slow=23,SNR=8.4						
ASAR	**Alice Springs**	**17.12**	**166**	P	**P**	**22 31 03.5**	**+0.8**
	0.7nm,0.3s,baz=345,slow=10,SNR=40						
ASAR				S	S	22 34 01.1	-13
	0.1nm,0.3s,baz=343,slow=24,SNR=2.8						
STKA	**Stephens Creek**	**27.21**	**157**	P	**P**	**22 32 45.4**	**+2.3**
	3.5nm,1.2s,baz=352,slow=15,SNR=2.9						
MKAR	**Makanchi Array**	**67.97**	**327**	P	**P**	**22 37 56.9**	**+0.7**
	1.0nm,0.4s,baz=118,slow=7.9,SNR=23						
KURBB	**Kurchatov Arra**	**72.26**	**329**	P	**P**	**22 38 21.6**	**-0.7**
	0.6nm,0.6s,baz=128,slow=5.1,SNR=7.3						

*ISCJB **08** 22:41:32.5±0.4, 67.°05N±0.°02×21.°04E±0.°07, h0km, Error ellipse: s-maj=4.1km s-min=2.8km az=9.2*
*CSEM **08** 22:41:33.9±0.2, 67.°07N×21.°02E, h2km, ML2.1, Error ellipse: s-maj=4.4km s-min=3.4km az=112.0, Mining explosion.*
*HEL **08** 22:41:34.0±0.3, 67.°16N×20.°60E, h0km, ML2.1, Explosion*
*IDC **08** 22:41:34.9±0.9, 67.°13N×20.°79E, h0km, mb1 3.0/4, mb1mx2.8/66, mbtmp2.9/4, ML2.6/4, Error ellipse: s-maj=14.4km s-min=7.2km az=117.0*
*NAO **08** 22:41:34.7±0.9, 67.°11N×20.°96E, ML2.8*
*BER **08** 22:41:37.3±3.7, 67.°14N×20.°83E, h0km, ML2.3, ML2.8(NAO), Suspected explosion*
ISC 08 22:41:33.7±0.8, 67.°12N±0.°03×20.°56E±0.°03, h0km, n48, σ1§45/83, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KALU	**Kalix**	**1.69**	**137**	SN	**Sg**	**22 42 28.4**	**+0.4**
HEF	**Hetta**	**1.75**	**41**	PG	**Pn**	**22 42 04.6**	**-0.7**
	baz=228						
HEF				MSG		22 42 25.1	
	comp=Z,16nm,0.2s						
HEF				SG	**Sn**	**22 42 26.9**	**-1.3**
HEF	**Hetta**	**1.75**	**41**	Pg	**Pn**	**22 42 04.6**	**-0.7**
HEF				Sg	**Sn**	**22 42 26.9**	**-1.3**
	comp=Z,16nm,0.2s						
HEF	**Hetta**	**1.75**	**41**	*e*P	**Pn**	**22 42 04.8**	**-0.4**
HEF				*e*S	**Sn**	**22 42 26.9**	**-1.3**
TOF	**Tornio**	**1.83**	**123**	PG	**Pn**	**22 42 06.6**	**+0.2**
TOF				MSG		22 42 28.7	
	comp=Z,14nm,0.2s						
TOF				SG	**Sb**	**22 42 31.6**	**+0.2**
TOF	**Tornio**	**1.83**	**123**	Pg	**Pn**	**22 42 06.6**	**+0.2**
KIF	**Kilpisjarvi**	**1.89**	**3**	Pn	**Pb**	**22 42 08.7**	**-0.3**
KIF				Sn	**Sb**	**22 42 33.5**	**+0.3**
KIF	**Kilpisjarvi**	**1.89**	**3**	PG	**Pn**	**22 42 07.8**	**+0.6**
KIF				MSG		22 42 30.5	
	comp=Z,14nm,0.2s						
KIF				SG	**Sb**	**22 42 33.3**	**+0.1**
KIF	**Kilpisjarvi**	**1.89**	**3**	Pn	**Pb**	**22 42 08.7**	**-0.3**
KIF				Sn	**Sb**	**22 42 33.5**	**+0.3**
KIF	**Kilpisjarvi**	**1.89**	**3**	Pn	**Pb**	**22 42 08.7**	**-0.3**
KIF				Sn	**Sb**	**22 42 33.5**	**+0.3**
KTK1	**Kautokeino**	**2.15**	**27**	*e*P	**Pn**	**22 42 11.8**	**+1.1**
KTK1				IAML		22 42 41.3	
	comp=Z,60nm,0.4s						
STEI	**Steigen**	**2.20**	**294**	IAML		22 42 47.5	
	comp=Z,22nm,0.4s						
RNF	**Rovaniemi**	**2.21**	**101**	PB	**Pn**	**22 42 12.0**	**+0.4**
	baz=290						
RNF				SG	**Sb**	**22 42 41.4**	**-1.1**
RNF	**Rovaniemi**	**2.21**	**101**	Pb	**Pn**	**22 42 12.0**	**+0.4**
RNF				Sg	**Sb**	**22 42 41.3**	**-1.1**
SGF	**Sodankyl**	**2.34**	**79**	PG	**Pn**	**22 42 14.3**	**+1.0**
	baz=263						
SGF				SG	**Sn**	**22 42 44.2**	**+1.5**
SGF	**Sodankyl**	**2.34**	**79**	Pg	**Pn**	**22 42 14.3**	**+1.0**
SGF				Sg	**Sn**	**22 42 44.2**	**+1.5**
BURU	**Burvik**	**2.57**	**172**	SB	**Sn**	**22 42 50.9**	**+2.4**
MOR8	**Moi Rana**	**2.62**	**251**	*e*P	**Pn**	**22 42 19.2**	**+2.0**
MOR8				IAML		22 42 54.4	
	comp=Z,42nm,0.5s						
OUL	**Oulu**	**2.98**	**131**	PG	**Pb**	**22 42 26.6**	**-1.0**
	baz=317						
OUL	**Oulu**	**2.98**	**131**	Pg	**Pb**	**22 42 26.6**	**-1.0**
ARCES	**ARCESS Array B**	**3.04**	**35**	Pn	**Pn**	**22 42 23.4**	**+0.4**
	comp=Z,1.1nm,0.3s,baz=216,slow=13,SNR=28						
ARCES				Sn	**Sn**	**22 43 00.2**	**+0.2**
	comp=Z,2.1nm,0.3s,baz=217,slow=19,SNR=12						
ARE0	**ARCESS Array S**	**3.04**	**35**	PN	**Pn**	**22 42 23.1**	**+0.1**
ARE0				SB	**Sn**	**22 43 01.1**	**+1.1**
ARE0	**ARCESS Array S**	**3.04**	**35**	Pn	**Pn**	**22 42 23.1**	**+0.1**
ARA0	**ARCESS Array S**	**3.04**	**35**	Pn	**Pn**	**22 42 23.1**	**+0.1**
	baz=216,slow=12						
ARA0				Sn	**Sn**	**22 42 59.1**	**-0.9**
	baz=212,slow=22						
ARA0	**ARCESS Array S**	**3.04**	**35**	Pn	**Pn**	**22 42 23.0**	**+0.1**
	baz=216,slow=12,SNR=3.4						
ARA0				Sn	**Sn**	**22 42 59.1**	**-0.9**
	baz=212,slow=22,SNR=5.7						
ARA0	**ARCESS Array S**	**3.04**	**35**	Pn	**Pn**	**22 42 23.1**	**+0.1**
	baz=216,slow=12						
ARA0				Sn	**Sn**	**22 42 59.1**	**-0.9**
	baz=212,slow=22						
UMAU	**Umeaa**	**3.25**	**179**	SB	**Sn**	**22 43 08.9**	**+3.6**
OUF	**Merijarvi**	**3.26**	**146**	PG	**Pb**	**22 42 33.1**	**+0.8**
OUF				SG	**Sg**	**22 43 16.4**	**-1.9**
OUF	**Merijarvi**	**3.26**	**146**	Pg	**Pb**	**22 42 33.1**	**+0.8**
OUF				Sg	**Sg**	**22 43 16.4**	**-1.9**
VRF	**Varrio**	**3.54**	**76**	PG	**Pb**	**22 42 39.2**	**+2.0**
VRF				SG	**Sb**	**22 43 20.9**	**+0.2**
VRF	**Varrio**	**3.54**	**76**	Pg	**Pb**	**22 42 39.2**	**+2.0**
VRF				Sg	**Sb**	**22 43 20.9**	**+0.2**
MSF	**Maaselka**	**3.61**	**106**	PG	**Pb**	**22 42 39.3**	**+1.1**
MSF				SG	**Sb**	**22 43 24.8**	**+2.3**
MSF	**Maaselka**	**3.61**	**106**	Pg	**Pb**	**22 42 39.3**	**+1.1**
MSF				Sg	**Sb**	**22 43 24.8**	**+2.3**
KU6	**Riekki**	**3.88**	**102**	PN	**Pn**	**22 42 35.2**	**+0.6**
KU6				SG	**Sg**	**22 43 35.6**	**-2.7**
VAF	**Ylistaro**	**4.20**	**167**	PN	**Pn**	**22 42 40.6**	**+1.8**
VAF				SG	**Sg**	**22 43 46.0**	**-2.3**
FIA0	**FINESS Array S**	**6.18**	**155**	Pn	**Pn**	**22 43 07.8**	**+1.6**
	baz=342,slow=14						
FIA0				Sn	**Sn**	**22 44 15.9**	**-1.5**
	baz=342,slow=28						
FIA0				Lg	Lg	22 44 47.9	
	baz=345,slow=37						
FIA0	**FINESS Array S**	**6.18**	**155**	Sn	**Sn**	**22 44 15.9**	**-1.5**
	baz=342,slow=27,SNR=6.5						
FIA0				Lg	Lg	22 44 47.9	

baz=33,slow=22
HFS Lg Lg 22 45 34.6
baz=32,slow=28
HFS Hagfors 7.65 207 Pn **Pn 22 43 26.8 +0.6**
comp=Z,0.1nm,0.3s,baz=22,slow=13,SNR=5.5
HFS Sn **Sn 22 44 52.0 -1.4**
comp=Z,0.5nm,0.3s,baz=21,slow=22,SNR=11
HFS Lg Lg 22 45 35.0
comp=Z,0.4nm,0.3s,baz=32,slow=25,SNR=3.6
HFS Hagfors 7.65 207 Pn **Pn 22 43 26.6 +0.4**
baz=22,slow=12
HFS Sn **Sn 22 44 52.1 -1.4**
baz=33,slow=22
HFS Lg Lg 22 45 34.6
baz=32,slow=28

NNC 08 22:43:36.8±6.8, 37°.99N×71°.75E, h0km, mb3.7, mpv3.3, 4C-2D, Error ellipse: s-maj=52.2km s-min=40.5km az=168.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**2.44**	**34**	⇑Pn	Pn	22 44 18.5	+0.4
SFK	8.7nm,0.3s			⇑Sn	Sb	22 44 51.4	-1.0
MNAS	16nm,0.5s **Manas**	**4.53**	**7**	⇓Pn	Pn	22 44 46.4	-0.4
MNAS	3.5nm,0.4s			⇓Sn	Sn	22 45 40.2	+0.1
AAK	6.9nm,0.7s **Ala-Archa**	**5.09**	**23**	Pn	Pn	22 44 51.4	-3.1
AAK	2.2nm,0.6s			Sn	Sn	22 45 52.4	-1.7
KK31	3.2nm,0.6s **Karatay Array**	**5.19**	**350**	⇑Pn	Pn	22 44 56.2	+0.4
KK31	0.7nm,0.4s,baz=158,slow=12,SNR=11 1.9nm,0.3s,baz=164,slow=23,SNR=15			⇑Sn	Sn	22 45 58.2	+1.9

MEX 08 22:51:15.2±0.8, 14°.30N×91°.80W, h75km±24km, MD3.7, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.96**	**316**	*e*P	Pn	22 51 44.7	-1.6
PCIG				*e*S	Sn	22 52 08.8	-1.3
CCIG	**Comitan**	**2.00**	**351**	*e*P	Pn	22 51 44.7	-2.4
CCIG				*e*S	Sn	22 52 11.2	-0.2

*TIR **08** 23:38:41.4, 41°.29N×20°.98E, h4km, Md2.6/3*
*SKO **08** 23:38:43.4, 41°.30N×20°.82E, h19km, M1.5, ML1.6*
*ATH **08** 23:38:44.8, 41°.29N×20°.95E, h20km±3km, ML1.5/3, Error ellipse: s-maj=3.8km s-min=1.1km az=201.0*
*CSEM **08** 23:38:44.7±0.2, 41°.30N×20°.94E, h5km, ML1.5, Error ellipse: s-maj=5.5km s-min=3.0km az=45.0*

ISC 08 23:38:45.4±1.0, 41°.25N±0°.03×20°.89E±0°.03, h18km±3km, n24, σ1°.30/44, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHR	**Ohrid**	**0.16**	**207**	*i*Pg	**Pb**	**23 38 48.5**	**-0.5**
OHR				*i*Sg	**Sb**	**23 38 51.2**	**0.0**
OHR				*e*Lg	Lg	23 38 51.3
	comp=N,364nm,0.3s					
OHR				*e*Lg	Lg	23 38 51.4
	comp=E,133nm,0.3s					
KRUS	**Krusevo**	**0.29**	**67**	*i*Pg	**Pg**	**23 38 50.6**	**-1.2**
KRUS				*i*Sg	**Sg**	**23 38 55.8**	**-0.5**
BIA	**Bitola**	**0.40**	**126**	*i*Pg	**Pb**	**23 38 53.6**	**-0.4**
BIA				*i*Sg	**Sb**	**23 39 00.3**	**+0.4**
PHP	**Peshkopia**	**0.55**	**322**	*i*PG	**Pb**	**23 38 55.0**	**-1.4**
PHP				*i*SG	**Sb**	**23 39 04.1**	**+0.2**
PHP	**Peshkopia**	**0.55**	**322**	*i*Pg	**Pb**	**23 38 55.0**	**-1.4**
PHP				*i*Sg	**Sb**	**23 39 04.1**	**+0.2**
FNA	**Florina**	**0.59**	**142**	P	**Pb**	**23 38 56.6**	**-0.6**
FNA				S	**Sg**	**23 39 06.0**	**+0.8**
FNA				AML	AML	23 39 06.0
	comp=E,255μm,0.3s					
FNA				AML	AML	23 39 07.3
	comp=N,215μm,0.3s					
FNA	**Florina**	**0.59**	**142**	P	**Pb**	**23 38 56.7**	**-0.5**
FNA				S	**Sg**	**23 39 05.7**	**+0.5**
TIR	**Tirane**	**0.78**	**277**	P	**Pb**	**23 38 58.9**	**-1.5**
TIR				S	**Sn**	**23 39 12.8**	**+0.1**
TIR				AML	AML	23 39 14.3
	comp=N,76μm,0.1s					
TIR				AML	AML	23 39 14.9
	comp=E,49μm,0.4s					
TIR	**Tirane**	**0.78**	**277**	P	**Pb**	**23 38 59.7**	**-0.7**
TIR				S	**Sn**	**23 39 12.4**	**-0.3**
NEST	**Nestorio**	**0.85**	**172**	P	**Pb**	**23 39 00.8**	**-0.7**
NEST				S	**Sn**	**23 39 14.2**	**-0.2**
NEST				AML	AML	23 39 18.7
	comp=E,48μm,0.4s					
NEST				AML	AML	23 39 19.3
	comp=N,44μm,0.4s					
NEST	**Nestorio**	**0.85**	**172**	P	**Pb**	**23 39 01.3**	**-0.3**
NEST				S	**Sg**	**23 39 14.1**	**+1.0**
STIP	**Stip**	**1.07**	**65**	*i*Pg	**Pg**	**23 39 08.5**	**+2.4**
STIP				*i*Sg	**Sg**	**23 39 25.4**	**+5.3**
PENT	**Pentalofos**	**1.07**	**170**	P	**Pb**	**23 39 05.8**	**+0.3**
PENT				S	**Sg**	**23 39 21.6**	**+1.3**
PENT	**Pentalofos**	**1.07**	**170**	P	**Pb**	**23 39 05.8**	**+0.3**
PENT				S	**Sg**	**23 39 21.4**	**+1.1**
PUK	**Puka**	**1.09**	**317**	*i*PN	**Pg**	**23 39 05.9**	**-0.6**
PUK				*i*SN	**Sg**	**23 39 22.6**	**+1.8**
PUK	**Puka**	**1.09**	**317**	*i*Pn	**Pg**	**23 39 05.9**	**-0.6**
PUK				*i*Sn	**Sg**	**23 39 22.5**	**+1.8**
GRG	**Griva**	**1.18**	**104**	P	**Pg**	**23 39 06.8**	**-1.3**
GRG				S	**Sg**	**23 39 23.2**	**-0.4**
GRG	**Griva**	**1.18**	**104**	P	**Pg**	**23 39 06.7**	**-1.5**
GRG				S	**Sg**	**23 39 22.9**	**-0.7**
KPRO	**Kipourio**	**1.35**	**164**	P	**Pb**	**23 39 10.4**	**+0.3**
KPRO				S	**Sg**	**23 39 29.2**	**+0.3**
KPRO	**Kipourio**	**1.35**	**164**	P	**Pb**	**23 39 10.6**	**+0.5**
KPRO				S	**Sg**	**23 39 29.4**	**+0.5**
KNT	**Kendrikon**	**1.52**	**93**	P	**Pb**	**23 39 12.3**	**-0.7**
KNT	**Kendrikon**	**1.52**	**93**	P	**Pg**	**23 39 12.4**	**-2.2**
KEK	**Kerkira**	**1.75**	**209**	P	**Pb**	**23 39 18.0**	**+1.1**
KEK	**Kerkira**	**1.75**	**209**	P	**Pb**	**23 39 17.5**	**+0.6**

KRSC 08 23:44:48.4±1.4, 49°.42N×156°.28E, h100km±20km, ML3.9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.27**	**355**	*e*P	Pn	23 45 12.7	+0.9
SKR				*e*S	Sn	23 45 30.3	+0.9
PAU	**Pauzhetka**	**2.07**	**9**	*e*P	Pn	23 45 23.5	+1.6
PAU				*e*S	Sn	23 45 49.4	+2.0
KDTR	**Khodutka, Kamc**	**2.65**	**25**	*e*P	Pn	23 45 31.8	+2.4
KDTR				*e*S	Sn	23 46 03.4	+2.6
MIPR	**Malaya Ipel'ka**	**2.87**	**6**	*e*P	Pn	23 45 32.8	+0.4
ASAK	**Asacha**	**3.13**	**18**	*e*P	Pn	23 45 38.4	+2.4
MTVR	**Mutnovka**	**3.29**	**21**	*e*P	Pn	23 45 41.2	+3.1
MTVR				*e*S	Sn	23 46 19.9	+3.5
RUS	**Russkaya**	**3.33**	**24**	*e*P	Pn	23 45 40.6	+2.2
RUS				*e*S	Sn	23 46 19.2	+2.1
KRMR	**Karymshinskiy**	**3.60**	**18**	*e*S	Sn	23 46 25.2	+1.5
UGLR	**Uglovaya**	**4.11**	**22**	*e*P	Pn	23 45 52.1	+3.0
AVH	**Avacha**	**4.14**	**21**	*e*P	Pn	23 45 51.8	+2.3
KRER	**Koryakskii**	**4.18**	**21**	*e*P	Pn	23 45 52.5	+2.4
SDLR	**Sedlovina**	**4.19**	**22**	*e*P	Pn	23 45 52.6	+2.4
KRX	**Arik**	**4.21**	**20**	*e*P	Pn	23 45 52.8	+2.3
SPN	**Mys Shipunski**	**4.36**	**31**	*e*S	Sn	23 46 43.3	+1.2
GNL	**Ganaly**	**4.40**	**13**	*e*P	Pn	23 45 54.7	+1.7
MKZ	**Mys Kozlova**	**6.14**	**31**	*e*P	Pn	23 46 18.6	+2.1
KZV	**Kizimen**	**6.21**	**22**	*e*P	Pn	23 46 20.9	+3.4
TUMR	**Tumrok**	**6.33**	**20**	*e*P	Pn	23 46 22.1	+3.0
KBTR	**Krutoberegovo**	**7.86**	**28**	*e*P	Pn	23 46 42.1	+2.3

*ISK **09** 00:05:58.3, 38°.82N×26°.50E, h17km, ML2.3/5*
*DDA **09** 00:05:58.3, 38°.84N×26°.48E, h7km, Ml2.5*
*ISCJB **09** 00:05:59.4±0.4, 38°.82N±0°.02×26°.48E±0°.04, h21km±8km, Error ellipse: s-maj=5.7km s-min=3.9km az=6.5*
*CSEM **09** 00:05:59.0±0.2, 38°.81N×26°.49E, h15km, ML2.3, Error ellipse: s-maj=5.4km s-min=3.6km az=102.0*

ISC 09 00:05:58.3±1.3, 38°.82N±0°.02×26°.48E±0°.03, h13km±11km, n33, σ0°.54/50, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DKL	**Dikili**	**0.42**	**52**	PG	**Pb**	**00 06 07.4**	**-0.2**
DKL				SG	**Sb**	**00 06 13.3**	**-0.5**
DKL	**Dikili**	**0.42**	**52**	*e*Pg	**Pb**	**00 06 07.4**	**-0.2**
DKL				*e*Sg	**Sb**	**00 06 13.3**	**-0.5**
URLA	**Izmir**	**0.46**	**169**	PG	**Pg**	**00 06 07.8**	**+0.3**
URLA				SG	**Sb**	**00 06 14.8**	**-0.3**
URLA	**Izmir**	**0.46**	**169**	*i*P	**Pg**	**00 06 07.3**	**-0.2**
URLA	**Izmir**	**0.46**	**169**	P	**Pg**	**00 06 07.3**	**-0.2**
URLA	**Izmir**	**0.46**	**169**	*e*Pg	**Pg**	**00 06 07.8**	**+0.3**
URLA				*e*Sg	**Sb**	**00 06 14.8**	**-0.3**
AYVA	**Ayvalik**	**0.52**	**18**	*i*P	**Pb**	**00 06 09.0**	**-0.3**
AYVA	**Ayvalik**	**0.52**	**18**	P	**Pb**	**00 06 09.0**	**-0.3**
CHOS	**Chios island**	**0.54**	**218**	PG	**Pb**	**00 06 10.2**	**+0.4**
CHOS				SG	**Sb**	**00 06 18.1**	**+0.6**
CHOS	**Chios island**	**0.54**	**218**	*e*Pg	**Pb**	**00 06 10.2**	**+0.4**
CHOS				*e*Sg	**Sb**	**00 06 18.1**	**+0.6**
ZEY	**˜zmir**	**0.58**	**178**	*i*P	**Pg**	**00 06 09.3**	**-0.3**
ZEY				*i*S	**Sn**	**00 06 20.9**	**-0.7**
SIGR	**SIGRI**	**0.63**	**309**	PG	**Pn**	**00 06 11.9**	**-1.0**
SIGR				SG	**Sb**	**00 06 20.3**	**+0.4**
SIGR	**SIGRI**	**0.63**	**309**	*e*Pg	**Pn**	**00 06 11.9**	**-1.0**
SIGR				*e*Sg	**Sb**	**00 06 20.3**	**+0.4**
DGB	**˜zmir**	**0.82**	**157**	*i*P	**Pb**	**00 06 14.1**	**-0.4**
DGB				*i*S	**Sb**	**00 06 26.1**	**+0.6**
BAYC	**CANAKKALE_Bayr**	**0.93**	**3**	*i*P	**Pb**	**00 06 16.1**	**-0.1**
BAYC				*i*S	**Sb**	**00 06 28.0**	**-0.4**
BAYC	**CANAKKALE_Bayr**	**0.93**	**3**	P	**Pb**	**00 06 16.1**	**-0.1**
BAYC				S	**Sb**	**00 06 28.0**	**-0.4**
BOZC	**Bozcaada**	**1.08**	**342**	*i*P	**Pg**	**00 06 19.4**	**+0.3**
BOZC				*i*S	**Sb**	**00 06 32.6**	**-0.2**
STEP	**BALIKESIR_Sava**	**1.11**	**59**	*i*P	**Pg**	**00 06 20.4**	**+0.6**
STEP				*i*S	**Sn**	**00 06 35.7**	**+0.8**
STEP	**BALIKESIR_Sava**	**1.11**	**59**	P	**Pg**	**00 06 20.4**	**+0.6**
STEP				S	**Sn**	**00 06 35.7**	**+0.8**
BALY	**Balya**	**1.28**	**43**	*i*P	**Pb**	**00 06 22.1**	**-0.2**
BALY				*i*S	**Sn**	**00 06 38.9**	**0.0**
BALY	**Balya**	**1.28**	**43**	P	**Pb**	**00 06 22.0**	**-0.2**
BALY				S	**Sn**	**00 06 38.9**	**0.0**
GADA	**Gvkgeada**	**1.45**	**342**	PN	**Pn**	**00 06 23.6**	**-0.6**
GADA	**Gvkgeada**	**1.45**	**342**	*e*Pn	**Pn**	**00 06 23.6**	**-0.6**
LPK	**Lapseki**	**1.57**	**8**	PN	**Pn**	**00 06 25.5**	**-0.4**
LPK	**Lapseki**	**1.57**	**8**	*e*Pn	**Pn**	**00 06 25.5**	**-0.4**
GELI	**Tayfur-Gelibol**	**1.58**	**360**	PN	**Pb**	**00 06 26.7**	**-0.7**
GELI	**Tayfur-Gelibol**	**1.58**	**360**	*e*Pn	**Pb**	**00 06 26.7**	**-0.7**
ERIK	**Erikli-Kesan**	**1.85**	**1**	PN	**Pn**	**00 06 30.6**	**+0.8**
ERIK	**Erikli-Kesan**	**1.85**	**1**	*e*Pn	**Pn**	**00 06 30.6**	**+0.8**
SART	**Tekirdag**	**1.95**	**16**	*i*P	**Pb**	**00 06 33.5**	**-0.2**
SART	**Tekirdag**	**1.95**	**16**	P	**Pb**	**00 06 33.5**	**-0.2**
ALN	**Alexandroupoli**	**2.10**	**351**	PN	**Pn**	**00 06 34.0**	**+0.8**
ALN	**Alexandroupoli**	**2.10**	**351**	*e*Pn	**Pn**	**00 06 34.0**	**+0.8**

SKO 09 00:08:47.6, 41°.30N×20°.84E, h15km, ML0.6, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHR	**Ohrid**	**0.19**	**189**	*e*Pg	Pg	00 08 52.3	+0.2
OHR				*i*Sg	Sg	00 08 55.1	0.0
OHR				*e*Lg	Lg	00 08 55.2
	comp=N,32nm,0.3s					
OHR	**Ohrid**	**0.19**	**189**	*i*Pg	Pg	00 08 52.3	+0.2
OHR				*i*Sg	Sg	00 08 55.3	+0.1
KRUS	**Krusevo**	**0.32**	**77**	*e*Pg	Pg	00 08 54.0	-0.2
KRUS				*i*Sg	Sg	00 08 59.3	+0.6
KRUS	**Krusevo**	**0.32**	**77**	*e*Pg	Pb	00 08 55.5	+0.5
KRUS				*i*Sg	Sg	00 08 59.3	+0.6
BIA	**Bitola**	**0.46**	**127**	*e*Pg	Pb	00 08 57.3	-0.1
BIA				*i*Sg	Sb	00 09 04.2	+0.1

*NEIC **09** 00:12:01.8±1.4, 24°.27N×141°.52E, h120km±11km, mb4.3/2, Error ellipse: s-maj=12.5km s-min=10.9km az=106.0*
*IDC **09** 00:12:01.7±1.8, 24°.31N×141°.50E, h117km±14km, mb3.8/21, mb1 3.9/24, mb1mx3.7/63, mbtmp4.1/24, MS3.0/2, Ms1 3.0/2, ms1mx2.5/61, Error ellipse: s-maj=16.0km s-min=13.4km az=107.0*
*JMA **09** 00:12:03.3±0.1, 24°.43N×141°.45E, h129km, M4.5*
*ISCJB **09** 00:12:04.6±0.7, 24°.57N±0°.07×141°.5E±0°.1, h148km, mb3.9/23, Error ellipse: s-maj=14.1km s-min=7.9km az=28.9*

ISC 09 00:12:06.6±0.8, 24°.6N±0°.1×141°.5E±0°.1, h148km, n46, σ0°.91/42, mb4.0/23, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**2.09**	**17**	P	**Pn**	**00 12 41.1**	**-1.5**
JHHJ				*e*S	**Sn**	**00 13 09.6**	**-0.8**
CBIJ	**Chichi jima**	**2.54**	**14**	P	**Pn**	**00 12 46.7**	**-1.4**
CBIJ				S	**Sn**	**00 13 20.4**	**+0.2**
CBIJ	**Chichi jima**	**2.54**	**14**	P	**Pn**	**00 12 47.2**	**-0.9**
CBIJ				*e*S	**Sn**	**00 13 19.7**	**-0.4**
JCJ	**Chichijima**	**2.54**	**14**	P	**Pn**	**00 12 46.7**	**-1.4**
JCJ	98nm,0.3s,baz=110,slow=3.3,SNR=21 164nm,0.3s,baz=260,slow=24,SNR=15			S	**Sn**	**00 13 20.4**	**+0.2**
BSO4	**Boso 4**	**10.37**	**355**	P	**Pn**	**00 14 30.8**	**-0.6**
GUMO	**Guam**	**11.44**	**163**	LR	LR	00 18 24.9
	comp=Z,34nm,18.1s,baz=109,slow=34					
JAG	**Ashikaga**	**11.89**	**352**	P	**Pn**	**00 14 49.6**	**-1.8**
JHO	**Hitachi**	**11.97**	**356**	P	**Pn**	**00 14 51.2**	**-1.2**
JOW	**Kunigami**	**12.10**	**283**	LR	LR	00 18 15.7
	comp=Z,141nm,21.6s,baz=206,slow=31					
MJAR	**Matsushiro Arr**	**12.20**	**347**	P	**Pn**	**00 14 55.1**	**-0.4**
	0.2nm,0.3s,baz=158,slow=9.7,SNR=2.9					
KSRS	**Korea Array**	**17.25**	**321**	P	**Pn**	**00 15 60.0**	**+1.6**
	0.3nm,0.3s,baz=139,slow=11,SNR=3.2					
KSAR	**Wonju Array Be**	**17.26**	**321**	P	**Pn**	**00 15 60.0**	**+1.4**
ERM	**Erimo**	**17.40**	**4**	P	**Pn**	**00 15 59.9**	**-0.2**
	15nm,1.1s					
USRK	**Ussuriysk Ar.**	**21.01**	**341**	P	**P**	**00 16 38.0**	**-0.3**
	1.7nm,0.6s,baz=208,slow=3.7,SNR=4.2					
H11N1	**WAKE ISLAND Hy 24.02**	**97**		T	T	00 42 15.9
	baz=283,slow=74,SNR=4.2					
H11N2	**WAKE ISLAND Hy 24.02**	**97**		T	T	00 42 15.1
	baz=283,slow=74,SNR=5.7					
H11N3	**WAKE ISLAND Hy 24.04**	**97**		T	T	00 42 20.2
	baz=283,slow=74,SNR=3.5					
H11S3	**WAKE ISLAND Hy 24.21**	**100**		T	T	00 42 32.8
	baz=288,slow=75,SNR=8.4					
H11S1	**WAKE ISLAND Hy 24.21**	**100**		T	T	00 42 32.2
	baz=288,slow=75,SNR=6.1					
H11S2	**WAKE ISLAND Hy 24.23**	**100**		T	T	00 42 32.9
	baz=288,slow=75,SNR=6.1					
KLR	**Kul'dur**	**25.71**	**345**	P	**P**	**00 17 23.5**	**+0.6**
	0.1nm,0.3s,baz=135,slow=14,SNR=5.0					
CMAR	**Chiang Mai Arr**	**39.92**	**270**	P	**P**	**00 19 25.2**	**-1.2**
	1.2nm,0.4s,baz=61,slow=8.4,SNR=4.1					
WRA	**Warramunga Arr**	**44.84**	**190**	P	P	00 20 01.4	-4.7
	2.5nm,0.6s,baz=9.0,slow=8.6,SNR=18					
WRA				PcP	**PcP**	**00 21 45.0**	**-0.4**
	0.4nm,0.5s,baz=11,slow=3.7,SNR=3.2					
BILL	**Bilibino**	**45.99**	**13**	*e*P	**P**	**00 20 16.2**	**+1.6**
	1.8nm,0.3s					
ASAR	**Alice Springs**	**48.57**	**189**	P	P	00 20 29.6	-5.5
	0.4nm,0.6s,baz=18,slow=12,SNR=4.6					
ZALV	**Zalesovo Beam**	**50.95**	**321**	P	**P**	**00 20 52.9**	**+0.1**
	0.7nm,0.5s,baz=111,slow=6.4,SNR=4.4					
ZALV				PcP	**PcP**	**00 22 07.5**	**+0.6**
	0.6nm,0.5s,baz=106,slow=5.2,SNR=3.1					
MKAR	**Makanchi Array**	**51.58**	**311**	P	**P**	**00 20 58.3**	**+0.7**
	1.1nm,0.4s,baz=88,slow=9.5,SNR=36					
KURK	**Kurchatov**	**54.28**	**316**	P	**P**	**00 21 18.1**	**+0.9**
KURBB	**Kurchatov Arra**	**54.33**	**316**	P	**P**	**00 21 18.1**	**+0.5**
	2.2nm,0.3s,baz=93,slow=7.7,SNR=15					
NRIK	**Noril'sk**	**54.72**	**339**	P	**P**	**00 21 20.3**	**+0.3**
	2.7nm,0.4s,baz=110,slow=6.7,SNR=5.2					
KDAK	**Kodiak Island**	**56.72**	**36**	P	**P**	**00 21 35.4**	**+0.9**
	6.5nm,0.7s,baz=294,slow=7.5,SNR=16					
BVAR	**Borovoye Array**	**59.44**	**318**	P	**P**	**00 21 54.0**	**+0.4**
	1.1nm,0.3s,baz=89,slow=7.5,SNR=12					
ILAR	**Eielson Array**	**60.18**	**28**	P	**P**	**00 21 58.5**	**+0.1**
	2.1nm,0.7s,baz=259,slow=5.6,SNR=23					
INK	**Inuvik**	**65.53**	**24**	P	**P**	**00 22 34.5**	**+0.9**
	1.6nm,0.5s,baz=343,slow=6.1,SNR=4.9					
SPITS	**Spitsbergen Ar**	**72.69**	**350**	P	**P**	**00 23 18.0**	**+0.3**
	2.3nm,0.7s,baz=112,slow=16,SNR=8.0					
SPITS	**Spitsbergen Ar**	**72.69**	**350**	P	**P**	**00 23 18.0**	**+0.3**
YKA	**Yellowknife Ar**	**74.61**	**28**	P	**P**	**00 23 29.2**	**+0.1**
	0.6nm,0.4s,baz=295,slow=5.9,SNR=7.6					
ARCES	**ARCESS Array B**	**75.66**	**341**	P	**P**	**00 23 34.9**	**-0.1**
	2.4nm,0.9s,baz=67,slow=7.0,SNR=6.8					
YBH	**Yreka Blue Hor**	**78.12**	**50**	P	**P**	**00 23 49.8**	**+0.3**
	2.2nm,0.6s,baz=281,slow=10,SNR=5.6					
KBZ	**Khabaz**	**79.27**	**313**	P	**P**	**00 23 55.5**	**+0.2**
	2.6nm,0.8s,baz=123,slow=1.6,SNR=4.2					
FINES	**FINESS Array B**	**79.87**	**334**	P	**P**	**00 23 57.8**	**-0.6**
	0.6nm,0.4s,baz=65,slow=6.7,SNR=9.1					
NVAR	**Mina Array Bea**	**82.55**	**51**	P	**P**	**00 24 11.8**	**-1.5**
	0.9nm,0.5s,baz=320,slow=4.2,SNR=4.8					
HFS	**Hagfors**	**85.43**	**337**	P	**P**	**00 24 25.9**	**-1.3**
	1.8nm,1.0s,baz=66,slow=3.6,SNR=6.5					
NOA	**NORSAR Array B**	**85.66**	**338**	P	**P**	**00 24 27.2**	**-1.2**
	0.4nm,0.3s,baz=64,slow=6.9,SNR=2.1					
TORD	**Torodi Ar. Bea**	**125.68**	**309**	PKP	**PKPdf**	**00 30 50.7**	**-0.6**
	0.2nm,0.4s,baz=59,slow=1.3,SNR=8.2					
LPAZ	**La Paz**	**151.09**	**79**	PKPbc	**PKPbc**	**00 31 43.8**	**+0.1**
	0.7nm,0.4s,baz=0.0,slow=5.1,SNR=3.7					

*KRNET **09** 00:35:13.9±0.1, 39°.99N×69°.22E, mb3.2*
*ISCJB **09** 00:35:14.9±0.7, 40°.02N±0°.03×69°.22E±0°.06, h10km, Error ellipse: s-maj=6.6km s-min=4.6km az=23.0*
*SOME **09** 00:35:14.5, 39°.93N×69°.68E, h10km*
*NNC **09** 00:35:14.6±0.3, 39°.97N×69°.36E, h0km, mb3.6, mpv3.4, Error ellipse: s-maj=6.4km s-min=2.0km az=104.0*

ISC 09 00:35:14.6±1.1, 40°.00N±0°.03×69°.28E±0°.05, h10km, n26, σ2°.24/46, 16C-20D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	**Batken**	**1.18**	**87**	⇓*i*P	**Pb**	**00 35 36.8**	**-0.3**
BTK	baz=86			⇓*i*S	**Sn**	**00 35 53.6**	**+0.1**
DZET	baz=86 **Dzherino**	**1.25**	**196**	⇓P	**Pn**	**00 35 37.2**	**-0.9**
DZET	38nm,0.3s			⇓S	**Sb**	**00 35 55.0**	**+0.6**
TAS	335nm,0.5s **Tashkent**	**1.33**	**0**	⇓P	**Pn**	**00 35 39.4**	**+0.2**
TAS	168nm,0.2s			⇓S	**Sg**	**00 35 59.0**	**+1.7**
TAS	368nm,0.3s **Tashkent**	**1.33**	**0**	⇓*i*P	**Pn**	**00 35 39.3**	**+0.2**
TAS	baz=2.0			⇓*i*S	**Sn**	**00 35 57.6**	**+0.7**
DRK	baz=2.0 **Karamyk**	**2.01**	**104**	⇑*i*P	**Pb**	**00 35 50.9**	**-0.5**
DRK	baz=3.0			⇑*i*S	**Sg**	**00 36 18.0**	**-1.3**
IUG	baz=3.0 **Iuzhnay**	**2.22**	**15**	*e*P	**Pb**	**00 35 54.7**	**-0.1**
IUG	80nm,0.3s			*e*S	**Sg**	**00 36 24.9**	**-0.9**
ARK	341nm,0.4s **Arkit**	**2.71**	**48**	⇓*i*P	**Pn**	**00 36 00.4**	**+2.1**
ARK	baz=49			⇓*i*S	**Sb**	**00 36 34.4**	**-2.2**
ARSB	baz=49 **Arslanbob**	**3.11**	**64**	⇑*e*P	**Pn**	**00 36 05.8**	**+2.0**
ARSB	baz=64			⇑*e*S	**Sn**	**00 36 44.4**	**+3.3**
KK31	baz=64 **Karatay Array**	**3.23**	**16**	⇑Pn	**Pn**	**00 36 05.9**	**+0.5**
KK31	0.3nm,0.2s,baz=194,slow=12,SNR=123 14nm,0.5s,baz=204,slow=21,SNR=6.9			⇓Pg	**Pb**	**00 36 13.7**	**+1.6**
KK31	67nm,0.6s,baz=195,slow=27,SNR=24			⇑Lg	Lg	00 36 55.7
SFK	**Sufi-Kurgan**	**3.24**	**88**	⇓Pn	**Pn**	**00 36 08.4**	**+2.6**
SFK	0.4nm,0.2s			⇓Lg	Lg	00 36 54.6
SFK	15nm,0.5s **Sufi-Kurgan**	**3.24**	**88**	⇓*i*P	**Pn**	**00 36 08.1**	**+2.4**
SFK	baz=88			⇓*i*S	**Sn**	**00 36 47.8**	**+3.3**
DZA	baz=88 **Taraz**	**3.27**	**27**	*e*P	**Pb**	**00 36 13.4**	**+0.7**
DZA	42nm,0.5s			⇑*i*S	**Sg**	**00 36 57.8**	**-1.9**
MNAS	214nm,0.3s **Manas**	**3.48**	**43**	⇑Pn	**Pn**	**00 36 09.8**	**+1.0**
MNAS	1.2nm,0.3s			⇓Pg	**Pb**	**00 36 18.1**	**+1.8**
MNAS	8.6nm,0.6s			⇓Sn	**Sn**	**00 36 51.9**	**+1.8**
MNAS	6.4nm,0.4s			⇑Lg	Lg	00 37 04.0
MNAS	28nm,0.7s **Manas**	**3.48**	**43**	⇑*i*P	**Pn**	**00 36 10.4**	**+1.6**
MNAS	baz=44			⇑*i*S	**Sn**	**00 36 53.1**	**+3.0**
AML	baz=44 **Almayashu**	**3.96**	**56**	P	**Pn**	**00 36 16.9**	**+1.2**
AML	SNR=20 **Almayashu**	**3.96**	**56**	⇑*i*P	**Pn**	**00 36 16.7**	**+1.0**
AML	baz=56			⇑*i*S	**Sn**	**00 37 03.3**	**+1.0**
MRKS	baz=56 **Merke**	**4.04**	**46**	*e*P	**Pn**	**00 36 18.8**	**+2.2**
MRKS	4.9nm,0.4s			*e*S	**Sn**	**00 37 07.2**	**+3.2**
UCH	17nm,0.3s **Uchtor**	**4.54**	**59**	P	**Pn**	**00 36 24.6**	**+0.9**
AAK	SNR=6.8 **Ala-Archa**	**4.73**	**54**	⇓Pn	**Pn**	**00 36 26.4**	**+0.4**
AAK	0.9nm,0.3s			⇓Pg	**Pg**	**00 36 42.8**	**-2.3**
AAK	7.6nm,0.6s			⇑Sn	**Sn**	**00 37 23.4**	**+2.4**
AAK	5.7nm,0.4s			⇑Lg	Lg	00 37 43.8
KZA	5.6nm,0.4s **Kyzart**	**4.97**	**63**	P	**Pn**

*TIR **09** 00:55:21.3, 41°.23N×20°.91E, h4km, Md2.7/3*
*CSEM **09** 00:55:21.9±0.3, 41°.29N×20°.91E, h10km, ML1.8, Error ellipse: s-maj=7.9km s-min=4.4km az=43.0*
*ATH **09** 00:55:22.1, 41°.23N×20°.92E, h20km±1km, ML1.8/7, Error ellipse: s-maj=1.8km s-min=1.0km az=186.0*

SKO 09 00:55:20.1, 41°.32N×20°.84E, h15km, ML1.8, 2C, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHR	**Ohrid**	**0.21**	**188**	⇑*i* Pg	Pg	00 55 25.2	+0.3
OHR				*i* Sg	Sg	00 55 28.0	-0.2
OHR				*e*Lg	Lg	00 55 28.1	
PHP	**Peshkopia**	**0.47**	**321**	*i* PG	Pb	00 55 30.4	+0.3
PHP				*i* SG	Sn	00 55 40.4	-0.2
PHP	**Peshkopia**	**0.47**	**321**	*i* Pg	Pb	00 55 30.5	+0.3
	baz=335						
PHP				*i* Sg	Sn	00 55 40.4	-0.1
	baz=335						
BIA	**Bitola**	**0.47**	**129**	⇑*i* Pg	Pb	00 55 30.2	0.0
BIA				*i* Sg	Sb	00 55 36.5	-0.5
FNA	**Florina**	**0.67**	**143**	P	Pg	00 55 33.2	-0.1
FNA				S	Sb	00 55 42.6	-0.1
FNA				AML	AML	00 55 43.3	
	comp=N,979μm,0.3s						
FNA				AML	AML	00 55 44.2	
	comp=E,729μm,0.3s						
FNA	**Florina**	**0.67**	**143**	P	Pg	00 55 33.3	0.0
FNA				S	Sg	00 55 42.1	-0.1
TIR	**Tirane**	**0.73**	**272**	P	Pn	00 55 36.5	+0.6
TIR				S	Sn	00 55 49.3	+2.4
TIR				AML	AML	00 55 51.1	
	comp=N,111μm,0.2s						
TIR				AML	AML	00 55 55.2	
	comp=E,103μm,0.4s						
TIR	**Tirane**	**0.73**	**272**	P	Pn	00 55 37.1	+1.1
TIR				S	Sn	00 55 49.1	+2.2
NEST	**Nestorio**	**0.92**	**170**	P	Pb	00 55 37.6	-0.2
NEST				S	Sb	00 55 48.2	-1.7
NEST				AML	AML	00 55 54.9	
	comp=N,121μm,0.4s						
NEST				AML	AML	00 55 57.3	
	comp=E,113μm,0.3s						
NEST	**Nestorio**	**0.92**	**170**	P	Pb	00 55 37.8	0.0
NEST				S	Sb	00 55 48.9	-1.0
PUK	**Puka**	**1.01**	**316**	*i* PN	Pn	00 55 43.2	+3.3
PUK				*i* SN	Sn	00 55 58.4	+4.5
PUK	**Puka**	**1.01**	**316**	*i* Pn	Pn	00 55 43.2	+3.3
	baz=115						
PUK				*i* Sn	Sn	00 55 58.4	+4.5
	baz=115						
STIP	**Stip**	**1.08**	**69**	*i* Pg	Pg	00 55 45.4	+4.4
STIP				*i* Sg	Sn	00 56 02.6	+7.2
PENT	**Pentalofos**	**1.15**	**168**	P	Pg	00 55 42.7	+0.5
PENT				S	Sb	00 55 55.9	-0.6
PENT				AML	AML	00 56 03.4	
	comp=E,90μm,0.4s						
PENT				AML	AML	00 56 05.2	
	comp=N,50μm,0.4s						
PENT	**Pentalofos**	**1.15**	**168**	P	Pg	00 55 42.4	+0.2
PENT				S	Sb	00 55 56.3	-0.1
GRG	**Griva**	**1.23**	**107**	P	Pg	00 55 43.6	-0.3
GRG				S	Sg	00 56 00.7	+0.7
GRG				AML	AML	00 56 04.9	
	comp=N,46μm,0.5s						
GRG				AML	AML	00 56 07.9	
	comp=E,29μm,0.4s						
GRG	**Griva**	**1.23**	**107**	P	Pg	00 55 43.8	-0.1
GRG				S	Sg	00 56 00.3	+0.3
KZN	**Kozani**	**1.23**	**145**	P	Pg	00 55 43.8	-0.1
KZN				S	Sn	00 55 59.6	+0.2
KZN				AML	AML	00 56 03.8	
	comp=N,108μm,0.4s						
KZN				AML	AML	00 56 04.0	
	comp=E,138μm,0.5s						
KZN	**Kozani**	**1.23**	**145**	P	Pg	00 55 43.7	-0.2
KZN				S	Sn	00 55 59.5	+0.2
KPRO	**Kipourio**	**1.42**	**164**	P	Pg	00 55 48.0	+0.5
KPRO	**Kipourio**	**1.42**	**164**	P	Pg	00 55 47.5	0.0
KNT	**Kendrikon**	**1.56**	**95**	P	Pg	00 55 50.3	+0.2
KNT	**Kendrikon**	**1.56**	**95**	P	Pg	00 55 50.1	0.0
LIT	**Litokhoron**	**1.75**	**134**	P	Pb	00 55 52.2	+0.3
LIT	**Litokhoron**	**1.75**	**134**	P	Pb	00 55 52.1	+0.2
KEK	**Kerkira**	**1.79**	**207**	P	Pg	00 55 53.8	-0.7
KEK				S	Sg	00 56 17.5	-0.3
KEK				AML	AML	00 56 25.6	
	comp=N,26μm,0.6s						
KEK				AML	AML	00 56 27.6	
	comp=E,26μm,0.6s						
KEK	**Kerkira**	**1.79**	**207**	P	Pg	00 55 53.6	-0.9
KEK				S	Sg	00 56 16.9	-0.9
THL	**Klokotos Trika**	**1.97**	**153**	P	Pn	00 55 53.8	+0.9
THL	**Klokotos Trika**	**1.97**	**153**	P	Pb	00 55 54.5	-1.2
DSL	**Palaion Diasel**	**2.19**	**175**	P	Pn	00 55 57.0	+0.9
DSL	**Palaion Diasel**	**2.19**	**175**	P	Pn	00 55 57.7	+1.6
LKD2	**Lefkada island**	**2.53**	**183**	P	Pb	00 56 04.3	-1.0
LKD2	**Lefkada island**	**2.53**	**183**	P	Pb	00 56 03.8	-1.5
AGG	**Agios Georgios**	**2.56**	**153**	P	Pb	00 56 03.7	-2.1
AGG	**Agios Georgios**	**2.56**	**153**	P	Pb	00 56 03.6	-2.2
XOR	**Xorichti**	**2.65**	**137**	P	Pn	00 56 04.4	+2.0
XOR	**Xorichti**	**2.65**	**137**	P	Pn	00 56 04.6	+2.2

*BJI **09** 00:55:25.8, 6°.99S×129°.68E, h193km, mb4.5/15, mB4.5/7*
*ISCJB **09** 00:55:26.1±0.2, 6°.49S±0°.03×129°.49E±0°.03, h165km, mb4.5/27, Error ellipse: s-maj=4.7km s-min=4.1km az=14.1*
*IDC **09** 00:55:26.8±1.4, 6°.50S×129°.51E, h163km±13km, mb3.9/15, mb1 4.0/20, mb1mx3.8/54, mbtmp4.4/20, MS3.0/1, Ms1 3.0/1, ms1mx2.4/54, Error ellipse: s-maj=13.1km s-min=9.5km az=100.0*
*NEIC **09** 00:55:29.1±0.6, 6°.51S×129°.54E, h183km±7km, mb4.7/8, Error ellipse: s-maj=7.4km s-min=6.2km az=56.0*
*DJA **09** 00:55:29.4±0.2, 6°.S±2°×13°.0E±°, h161km±5km, M4.9/17, mb5.0/17, mB5.3/11, MLv5.2/13, Mw(mB)4.7/11*

ISC 09 00:55:27.4±0.4, 6°.55S±0°.04×129°.58E±0°.05, h165km, n86, σ1§88/91, mb4.7/27, 1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**2.04**	**9**	P	**Pn**	**00 56 01.2**	**-2.7**
SAUI	**Saumlaki**	**2.23**	**130**	P	Pn	00 56 11.2	+5.1
SAUI				S	**Sn**	**00 56 40.0**	**+4.0**
SAUI	**Saumlaki**	**2.23**	**130**	*e*Pn	Pn	00 56 12.0	+5.9
AAI	**Ambon**	**3.16**	**334**	P	**Pn**	**00 56 17.8**	**+0.4**
MSAI	**Masohi**	**3.24**	**348**	P	**Pn**	**00 56 17.8**	**-0.7**
FAKI	**Fak Fak**	**4.48**	**37**	P	**Pn**	**00 56 35.3**	**+1.0**
FAKI	**Fak Fak**	**4.48**	**37**	*e*Pn	**Pn**	**00 56 36.1**	**+1.7**
KMPI	**Kaimana, Papua**	**5.01**	**55**	P	**Pn**	**00 56 43.4**	**+2.1**
KMPI				S	**Sn**	**00 57 40.1**	**+1.1**
SANI	**Sanana**	**5.72**	**321**	P	**Pn**	**00 56 53.1**	**+2.4**
	100nm,1.0s,855nm0.3nm						
SIJI	**Sorong**	**5.88**	**17**	P	**Pn**	**00 56 53.9**	**+1.0**
	40nm,0.3s,baz=235,slow=21,SNR=30						
SIJI				S	**Sn**	**00 57 57.5**	**-2.3**
	30nm,0.3s,baz=196,slow=21,SNR=21						
SIJI				LR	LR	00 59 27.2	
	comp=Z,147nm,20.5s,baz=212,slow=41						
SOEI	**Soe**	**6.15**	**238**	P	**Pn**	**00 56 59.9**	**+3.5**
	92nm,0.6s,1μm3.3nm						
SOEI	**Soe**	**6.15**	**238**	*e*Pn	**Pn**	**00 56 57.6**	**+1.1**
LBMI	**Labuha**	**6.22**	**340**	P	**Pn**	**00 56 58.9**	**+1.6**
	656nm,0.9s,6μm2.4nm						
MTN	**Manton Dam**	**6.44**	**166**	*e*Pn	**Pn**	**00 57 02.2**	**+2.0**
RKPI	**Ransiki, Papua**	**6.79**	**43**	P	**Pn**	**00 57 05.8**	**+1.1**
	1μm,0.6s,17μm7.9nm						
BATI	**Baumata**	**6.89**	**238**	P	**Pn**	**00 57 05.7**	**-0.5**
	48nm,0.3s,baz=142,slow=2.8,SNR=29						
BATI				S	**Sn**	**00 58 20.8**	**-3.0**
	35nm,0.3s,baz=47,slow=2.7,SNR=12						
BATI	**Baumata**	**6.89**	**238**	P	**Pn**	**00 57 06.3**	**+0.1**
	112nm,0.6s,1μm0.7nm						
TNTI	**Ternate**	**7.60**	**343**	*e*Pn	**Pn**	**00 57 17.8**	**+2.3**
BAKI	**Biak**	**8.41**	**51**	P	**Pn**	**00 57 29.9**	**+3.6**
	104nm,0.5s,2μm						
APSI	**Ampana**	**9.69**	**305**	P	**Pn**	**00 57 46.7**	**+3.5**
	36nm,1.0s						
SPSI	**Sidrap Palu**	**10.10**	**284**	P	**P**	**00 57 59.3**	**+1.2**
MRSI	**Marisa**	**10.33**	**312**	P	**Pn**	**00 57 54.6**	**+2.9**
	20nm,1.2s						
SGSI	**Sangihe**	**10.94**	**338**	P	**Pn**	**00 58 01.3**	**+1.7**
	306nm,0.9s,9μm						
JAY	**Jayapura**	**11.79**	**71**	P	**Pn**	**00 58 11.6**	**+0.8**
	0.4nm,0.3s,baz=229,slow=16,SNR=2.1						
JAY				S	**Sn**	**01 00 16.0**	**-5.5**
	baz=157,slow=15,SNR=2.2						
MPSI	**Mapaga**	**11.84**	**305**	P	**P**	**00 58 16.2**	**-1.4**
	11nm,1.6s						
WRAB	**Tennant Creek**	**14.09**	**161**	*e*Pn	**Pn**	**00 58 40.2**	**+0.2**
WRA	**Warramunga Arr**	**14.10**	**161**	P	**Pn**	**00 58 38.9**	**-1.2**
	1.6nm,0.3s,baz=342,slow=13,SNR=37						
WRA				S	**Sn**	**01 01 09.2**	**-7.6**
	6.8nm,0.3s,baz=338,slow=22,SNR=12						
WB2	**Warramunga Arr**	**14.10**	**161**	*e*Pn	**Pn**	**00 58 39.3**	**-0.8**
COEN	**Coen**	**15.27**	**120**	*e*Pn	**P**	**00 58 57.2**	**+1.5**
	14nm,0.6s						
JAGI	**Jajag, Banyuwa**	**15.41**	**262**	*e*Pn	**Pn**	**00 58 56.1**	**-0.4**
	72nm,1.6s						
BLJI	**Banyuglugur**	**15.90**	**265**	P	**P**	**00 59 04.7**	**+1.9**
	76nm,0.9s						
MBWA	**Marble Bar**	**17.38**	**212**	*e*P	**Pn**	**00 59 21.2**	**+1.1**
	26nm,1.3s						
AS31	**Alice Springs**	**17.52**	**167**	*e*P	**Pn**	**00 59 23.1**	**+1.3**
	31nm,0.6s						
ASAR	**Alice Springs**	**17.52**	**167**	P	**P**	**00 59 21.0**	**+0.4**
	12nm,0.3s,baz=341,slow=9.4,SNR=473						
ASAR				S	**S**	**01 02 33.8**	**-0.7**
	1.4nm,0.3s,baz=337,slow=9.3,SNR=8.7						
AS01	**Alice Springs**	**17.53**	**167**	*e*P	**Pn**	**00 59 22.9**	**+0.9**
PMG	**Port Moresby**	**17.64**	**100**	P	**Pn**	**00 59 22.6**	**-0.7**
	1.6nm,0.3s,baz=297,slow=11,SNR=2.3						
SBUM	**Sibu**	**19.50**	**297**	*e*P	**P**	**00 59 43.2**	**+1.1**
	16nm,0.7s						
KPJI	**Karang Pucung**	**20.51**	**267**	P	Pn	01 00 07.6	+10
KSM	**Kuching**	**20.82**	**292**	*e*P	**P**	**00 59 56.9**	**+0.6**
	15nm,0.8s						
LEM	**Lembang**	**21.81**	**268**	P	**P**	**01 00 07.0**	**0.0**
	56nm,0.7s,baz=333,slow=4.3,SNR=10						
CGJI	**Cibinong**	**23.73**	**268**	P	**P**	**01 00 22.5**	**-2.2**
FORT	**Forrest**	**24.15**	**183**	*e*P	**P**	**01 00 30.5**	**+2.1**
	68nm,0.8s						
MNAI	**Manna**	**26.59**	**273**	*e*P	**P**	**01 00 50.7**	**+0.1**
	720nm,1.4s						
MYKOM	**Kota Tinggi**	**26.99**	**287**	*e*P	**P**	**01 00 54.1**	**-0.1**
	98nm,1.8s						
STKA	**Stephens Creek**	**27.59**	**158**	P	**P**	**01 01 01.0**	**+1.7**
	1.7nm,0.7s,baz=354,slow=13,SNR=3.5						
MNSI	**Mandailing Nat**	**30.82**	**283**	P	**P**	**01 01 29.6**	**+1.5**
	32nm,0.8s						
PSI	**Prapat**	**31.98**	**286**	P	**P**	**01 01 36.5**	**-1.9**
	29nm,0.9s,baz=179,slow=2.6,SNR=13						
PSI	**Prapat**	**31.98**	**286**	*e*P	**P**	**01 01 38.0**	**-0.4**
	26nm,0.8s						
GSI	**Gunungsitoli**	**32.88**	**283**	*e*P	**P**	**01 01 45.6**	**-0.6**
	31nm,0.8s						
CMAR	**Chiang Mai Arr**	**39.12**	**310**	P	**P**	**01 02 38.2**	**-0.9**
	1.9nm,0.4s,baz=137,slow=6.9,SNR=7.4						
NJ2	**Nanjing**	**39.72**	**346**	*e*P	**P**	**01 02 44.0**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
KMI	**Kunming**	**40.90**	**321**	P	**P**	**01 02 57.1**	**+3.1**
KMI				pmax	pmax		
	comp=Z,17nm,0.6s						
KMI				pmax	pmax		
	comp=Z,30nm,3.7s						
MJAR	**Matsushiro Arr**	**43.62**	**10**	P	**P**	**01 03 13.3**	**-2.2**
	2.1nm,0.5s,baz=194,slow=10,SNR=6.1						
KSAR	**Wonju Array Be**	**43.79**	**358**	P	**P**	**01 03 15.3**	**-1.5**
KSRS	**Korea Array**	**43.80**	**358**	P	**P**	**01 03 15.3**	**-1.6**
	0.8nm,0.5s,baz=180,slow=8.3,SNR=4.2						
CD2	**Chengdu**	**44.70**	**328**	P	**P**	**01 03 24.2**	**0.0**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LZH	**Lanzhou**	**48.81**	**332**	⇓P	**P**	**01 03 56.0**	**-0.2**
LZH				pP	pP	01 04 39.5	+6.2
LZH				sP	sP	01 05 01.0	+9.4
LZH				PP	**PP**	**01 05 52.0**	**+0.9**
LZH				pmax	pmax		
	comp=Z,21nm,1.2s						
LZH				pmax	pmax		
	comp=Z,83nm,6.5s						
HHC	**Hu-ho-hao-te**	**49.98**	**342**	*e*P	**P**	**01 04 08.8**	**+3.8**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,46nm,8.0s						
USRK	**Ussuriysk Ar.**	**50.56**	**2**	P	**P**	**01 04 07.4**	**-1.6**
	1.8nm,0.5s,baz=201,slow=6.1,SNR=4.2						
ODAN	**Odare**	**52.65**	**311**	*e*P	**P**	**01 04 24.0**	**-1.2**
	22nm,0.6s						
RAMN	**Ramite**	**53.29**	**311**	*e*P	**P**	**01 04 29.1**	**-0.8**
	51nm,0.6s						
JIRN	**Jiri**	**53.97**	**311**	*e*P	**P**	**01 04 33.5**	**-1.5**
	23nm,0.6s						
GUN	**Gumba**	**54.34**	**311**	*e*P	**P**	**01 04 36.5**	**-1.1**
	36nm,0.6s						
KKN	**Kakani**	**54.73**	**311**	*e*P	**P**	**01 04 39.0**	**-1.3**
	22nm,0.6s						
DMN	**Daman**	**54.76**	**310**	*e*P	**P**	**01 04 39.4**	**-1.2**
	8.9nm,0.4s						
GKN	**Gorkha**	**55.32**	**311**	*e*P	**P**	**01 04 43.3**	**-1.2**
	22nm,0.5s						
KOLN	**Koldanda**	**55.99**	**310**	*e*P	**P**	**01 04 48.2**	**-1.1**
	17nm,0.5s						
DANN	**Dangsing**	**56.16**	**310**	*e*P	**P**	**01 04 49.3**	**-1.3**
	14nm,0.6s						
PYUN	**Piuthan**	**56.62**	**310**	*e*P	**P**	**01 04 52.7**	**-1.1**
	36nm,0.8s						
WMQ	**Urumqi**	**62.79**	**327**	P	**P**	**01 05 34.6**	**-0.8**
WMQ				pmax	pmax		
	comp=Z,24nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,230nm,5.1s						
WMQ				LR	LR		
	comp=N,85nm,18.9s						
WMQ				LR	LR		
	comp=E,54nm,17.9s						
WMQ				LR	LR		
	comp=Z,51nm,18.9s						
PETK	**Petropavlovsk-**	**64.03**	**18**	P	**P**	**01 05 44.3**	**+1.0**
	2.1nm,0.7s,baz=187,slow=6.8,SNR=3.3						
JOHN	**Johnston Islan**	**64.49**	**68**	*e*P	**P**	**01 05 46.5**	**-0.4**
	139nm,0.8s						
KSH	**Kashi**	**67.40**	**318**	P	**P**	**01 06 08.2**	**+2.8**
KSH				pP	sP	01 06 56.5	-6.0
KSH				pmax	pmax		
	comp=Z,120nm,4.0s						
MK01	**Makanchi Array**	**67.60**	**327**	*e*P	**P**	**01 06 05.8**	**-0.6**
MK31	**Makanchi Array**	**67.62**	**327**	*e*P	**P**	**01 06 06.1**	**-0.4**
MKAR	**Makanchi Array**	**67.62**	**327**	P	**P**	**01 06 06.0**	**-0.5**
	5.3nm,1.0s,baz=126,slow=8.3,SNR=31						
MKAR	**Makanchi Array**	**67.62**	**327**	*e*P	**P**	**01 06 06.1**	**-0.4**
ZALV	**Zalesovo Beam**	**70.99**	**334**	P	**P**	**01 06 25.9**	**-1.0**
	1.5nm,0.5s,baz=119,slow=5.5,SNR=7.8						
KURBB	**Kurchatov Arra**	**71.91**	**329**	P	**P**	**01 06 32.1**	**-0.5**
	2.9nm,0.6s,baz=130,slow=4.9,SNR=36						
KURK	**Kurchatov**	**71.91**	**329**	*e*P	**P**	**01 06 32.0**	**-0.6**
VNDA	**Vanda**	**72.95**	**173**	P	**P**	**01 06 37.8**	**-0.5**
	0.8nm,1.0s,baz=333,slow=5.3,SNR=2.5						
MAW	**Mawson**	**75.22**	**201**	P	**P**	**01 06 51.7**	**+0.2**
	1.3nm,0.6s,baz=238,slow=19,SNR=3.6						
WSAR	**Wadi Sarin**	**75.29**	**296**	P	**P**	**01 06 52.6**	**-0.3**
	8.3nm,0.6s,baz=122,slow=9.5,SNR=2.7						
BVAR	**Borovoye Array**	**77.46**	**328**	P	**P**	**01 07 03.0**	**-1.5**
	1.0nm,0.6s,baz=126,slow=7.3,SNR=10.0						
RAYN	**Ar Rayn**	**87.18**	**294**	*e*P	**P**	**01 07 55.0**	**-0.6**
TORD	**Torodi Ar. Bea**	**128.31**	**282**	PKP	**PKPdf**	**01 14 14.7**	**-0.7**
	0.3nm,0.6s,baz=73,slow=0.8,SNR=4.3						

SKO 09 01:21:00.9, 41°.26N×20°.80E, h22km, M1.0, ML1.5, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHR	**Ohrid**	**0.15**	**180**	*i* Pg	Pb	01 21 05.9	+0.1
OHR				*e*Lg	Lg	01 21 08.7	
	comp=N,142nm,0.3s						
OHR				*i* Sg	Sb	01 21 08.8	-0.2
OHR				*e*Lg	Lg	01 21 08.9	
KRUS	**Krusevo**	**0.35**	**72**	*i* Pg	Pb	01 21 08.7	0.0
KRUS				*i* Sg	Sb	01 21 12.9	-1.0
BIA	**Bitola**	**0.46**	**121**	*i* Pg	Pb	01 21 10.9	+0.5
BIA				*i* Sg	Sb	01 21 17.4	+0.5
STIP	**Stip**	**1.13**	**67**	*e*Pg	Pb	01 21 25.7	+4.0
STIP				*i* Sg	Sn	01 21 43.1	+7.0

TIR 09 01:21:24.4, 41°.27N×20°.94E, h2km, Md2.8/5, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.56**	**318**	*i* PG	Pg	01 21 35.8	+0.7
PHP				*i* SG	Sb	01 21 44.4	-0.9
KBN	**Korca**	**0.66**	**190**	*i* PG	Pb	01 21 38.8	+0.3
KBN				*i* SG	Sb	01 21 48.6	+0.5
TIR	**Tirane**	**0.81**	**276**	*i* PG	Pb	01 21 41.2	+0.1
TIR				*i* SG	Sb	01 21 53.2	+0.6
PUK	**Puka**	**1.10**	**315**	*i* PG	Pg	01 21 45.6	+0.1
PUK				*i* SG	Sg	01 21 52.4	-7.3

*NIED **09** 01:23:00, 35°.90N×141°.00E, h5km, Mw3.8 Best double couple: M0:6.65000×10^14 NP1:φs24.00000°, δ48.00000°, λ-47.00000°. NP2:φs150.00000°, δ57.00000°, λ-127.00000°.*
*IDC **09** 01:23:09.3±1.4, 35°.89N×141°.00E, h0km, mb3.6/5, mb1 3.7/7, mb1mx3.4/69, mbtmp3.6/7, ML3.4/2, MS2.9/5, Ms1 2.9/5, ms1mx2.6/69, Error ellipse: s-maj=29.9km s-min=19.3km az=84.0*
*ISCJB **09** 01:23:10.1±1.0, 35°.90N±0°.04×140°.98E±0°.06, h12km±6km, mb3.6/5, MS3.0/2, Error ellipse: s-maj=8.7km s-min=5.9km az=175.4*
*JMA **09** 01:23:11.1±0.1, 35°.86N×140°.91E, h13km±1km, M3.8*
JMA Felt II J1.

ISC 09 01:23:10.8±1.4, 35°.90N±0°.04×140°.93E±0°.07, h8km±9km, n25, σ0§62/23, mb3.8/5, 2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.20**	**195**	⇓P	**Pg**	**01 23 14.9**	**+0.1**
CHOJ				S	**Sg**	**01 23 17.5**	**-0.1**
JYT	**Yasato**	**0.68**	**299**	P	**Pb**	**01 23 24.5**	**-0.3**
JYT				*e*S	**Sg**	**01 23 33.3**	**+0.6**
JCN	**Nagara**	**0.76**	**231**	P	**Pb**	**01 23 25.8**	**-0.4**
JCN				*e*S	**Sg**	**01 23 35.6**	**+0.4**
JHO	**Hitachi**	**0.77**	**338**	⇓P	**Pb**	**01 23 26.3**	**-0.1**
JHO				*e*S	**Sb**	**01 23 37.2**	**+0.2**
TOK	**Tokyo**	**0.97**	**258**	P	**Pb**	**01 23 30.1**	**+0.3**
TOK				*e*S	**Sb**	**01 23 42.8**	**0.0**
BSO4	**Boso 4**	**1.02**	**208**	P	**Pb**	**01 23 30.9**	**+0.2**
BSO3	**Boso 3**	**1.15**	**197**	P	**Pb**	**01 23 31.7**	**-1.0**
MJAR	**Matsushiro Arr**	**2.29**	**287**	Pn	**Pn**	**01 23 48.4**	**-0.5**
	8.9nm,0.3s,baz=106,slow=8.0,SNR=22						
MJAR				Sn	**Sn**	**01 24 17.3**	**0.0**
	7.7nm,0.3s,baz=104,slow=32,SNR=6.5						
MJAR				LR	LR	01 24 25.8	
	comp=Z,52nm,21.1s,baz=105,slow=33						
MAT	**Matsushiro**	**2.29**	**287**	P	**Pn**	**01 23 48.5**	**-0.4**
MAT				S	**Sn**	**01 24 16.4**	**-0.9**
JHJ	**Hachijo jima 2**	**2.93**	**199**	Pn	**Pn**	**01 23 57.5**	**-0.2**
	17nm,0.3s,baz=73,slow=19,SNR=3.2						
JHJ				Sn	**Sn**	**01 24 34.7**	**+1.7**
	24nm,0.3s,baz=73,slow=19,SNR=3.5						
JNU	**Nakatsue**	**8.74**	**254**	LR	LR	01 29 04.0	
	comp=Z,120nm,20.5s,baz=116,slow=40						
KSRS	**Korea Array**	**10.56**	**282**	LR	LR	01 29 32.0	
	comp=Z,57nm,21.9s,baz=103,slow=36						
MA2	**Magadan**	**24.54**	**12**	LR	LR	01 38 39.7	
	comp=Z,54nm,20.2s,baz=146,slow=38						
H11N2	**WAKE ISLAND Hy**	**27.93**	**118**	T	T	01 58 04.4	
	baz=311,slow=75,SNR=237						
H11N1	**WAKE ISLAND Hy**	**27.94**	**118**	T	T	01 58 08.9	
	baz=311,slow=75,SNR=240						
H11N3	**WAKE ISLAND Hy**	**27.95**	**118**	T	T	01 58 09.7	
	baz=311,slow=75,SNR=278						
H11S1	**WAKE ISLAND Hy**	**28.60**	**120**	T	T	01 58 57.4	
	baz=312,slow=75,SNR=160						
H11S3	**WAKE ISLAND Hy**	**28.60**	**120**	T	T	01 58 57.6	
	baz=312,slow=75,SNR=134						
H11S2	**WAKE ISLAND Hy**	**28.61**	**120**	T	T	01 58 58.8	
	baz=312,slow=75,SNR=105						
CMAR	**Chiang Mai Arr**	**40.84**	**256**	LR	LR	01 48 25.5	
	comp=Z,21nm,18.1s,baz=155,slow=37						
ZALV	**Zalesovo Beam**	**42.40**	**313**	P	**P**	**01 31 06.1**	**+0.5**
	0.5nm,0.5s,baz=103,slow=6.2,SNR=2.9						
MKAR	**Makanchi Array**	**44.40**	**303**	P	**P**	**01 31 21.9**	**+0.1**
	0.5nm,0.8s,baz=93,slow=6.8,SNR=5.5						
KURBB	**Kurchatov Arra**	**46.40**	**309**	P	**P**	**01 31 37.1**	**-0.5**
	0.7nm,0.6s,baz=81,slow=7.9,SNR=8.1						
WRA	**Warramunga Arr**	**55.88**	**187**	P	**P**	**01 32 48.5**	**-0.6**
	0.9nm,1.0s,baz=23,slow=7.3,SNR=6.5						
RES	**Resolute Bay**	**63.80**	**14**	P	**P**	**01 33 43.5**	**+0.6**
	0.3nm,0.4s,baz=310,slow=7.9,SNR=3.2						

*MOS **09** 01:29:57.2±1.0, 48°.28N×153°.25E, h118km, mb4.6/40, Error ellipse: s-maj=9.9km s-min=5.3km az=101.5*
*ISCJB **09** 01:29:58.8±0.6, 48°.34N±0°.05×153°.32E±0°.06, h132km±4km, mb4.2/92, Error ellipse: s-maj=9.3km s-min=4.0km az=141.9*
*NEIC **09** 01:29:59.6±0.7, 48°.30N×153°.30E, h129km±5km, mb4.3/29, Error ellipse: s-maj=8.3km s-min=4.2km az=153.0*
*IDC **09** 01:30:00.5±1.9, 48°.31N×153°.30E, h136km±16km, mb4.0/34, mb1 4.1/36, mb1mx4.0/75, mbtmp4.4/36, Error ellipse: s-maj=14.4km s-min=9.6km az=145.0*
*SKHL **09** 01:30:00.6±0.6, 48°.30N×153°.39E, h128km±1km, mb4.5/6, msh5.5/5*

ISC 09 01:29:59.2±0.8, 48°.30N±0°.06×153°.26E±0°.05, h125km±7km, n284, σ1§10/295, mb4.4/92, 25C-18D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.02**	**37**

comp=N,29nm,0.3s
SHO A A 01 32 39.6
comp=N,85nm,0.3s
SHO Shikotan 6.30 228 *c i* PN **Pn 01 31 28.2 -1.4**
SHO *i* S **Sn 01 32 35.7 -4.4**
SHO pmax pmax
comp=Z,16nm,0.3s
SHO pmax pmax
comp=N,7.0nm,0.2s
SHO pmax pmax
comp=E,12nm,0.2s
SHO smax smax
comp=N,29nm,0.3s
SHO smax smax
comp=E,85nm,0.3s
YSS Yuzh-Sakhalins 7.23 263 *e* P **Pn 01 31 44.6 +2.5**
YSS AMB AMB 01 31 49.3
comp=E,10.0nm,0.7s
YSS Yuzh-Sakhalins 7.23 263 *e* Pn **Pn 01 31 40.4 -1.7**
YSS Yuzh-Sakhalins 7.23 263⇑ *e* PN Pn 01 31 48.3 +6.2
YSS pmax pmax
comp=Z,10.0nm,0.7s
TYV Tymovskoe 7.36 294 *e* P **Pn 01 31 46.5 +2.7**
TYV AMB AMB 01 31 53.3
comp=Z,12nm,1.0s
TYV *e* S **Sn 01 33 06.0 +0.3**
TYV Tymovskoe 7.36 294 *e* PN **Pn 01 31 43.8 0.0**
TYV *e* S **Sn 01 33 01.4 -4.3**
TYV pmax pmax
comp=Z,12nm,1.0s
TYV smax smax
comp=E,8.0nm,1.6s
JKA Kamikawa-asahi 8.50 244 *e* P **Pn 01 32 02.3 +3.1**
ASAJ Asahikawa 8.50 244 P **Pn 01 32 02.3 +3.1**
comp=E,1.0nm,0.3s,baz=75,slow=15,SNR=11
ERM Erimo 9.51 232 *e* P **Pn 01 32 14.4 +1.6**
ERM Erimo 9.51 232 *i* PN **Pn 01 32 14.4 +1.6**
MA2 Magadan 11.39 354 *e* P **Pn 01 32 38.2 +0.3**
MA2 Magadan 11.39 354⇑ *e* PN **Pn 01 32 38.2 +0.3**
MA2 pmax pmax
comp=Z,18nm,2.5s
EKMR Ekimchan 13.72 298 *e* P **Pn 01 33 09.0 +0.7**
EKMR AMB AMB 01 33 17.4
comp=Z,5.0nm,0.6s
KLR Kul'dur 14.22 282 P **P 01 33 19.5 +1.3**
comp=Z,0.0nm,0.3s,baz=79,slow=11,SNR=12
KLR Kul'dur 14.22 282 *e* P **P 01 33 17.5 -0.7**
SEY Seymchan 14.67 358 P **Pn 01 33 21.0 +0.7**
comp=Z,0.9nm,0.3s,baz=180,slow=9.6,SNR=20
SEY Seymchan 14.67 358 *e* P **P 01 33 22.0 -1.2**
SEY Seymchan 14.67 358 *c e* P **P 01 33 22.0 -1.2**
BMKR Bomnak 16.45 302 *e* P **Pn 01 33 42.0 -0.4**
KROS Kirovskiy 17.46 300 *e* P **P 01 33 54.0 -0.1**
KROS AMB AMB 01 33 57.4
comp=Z,4.0nm,0.4s
YAK Yakutsk 19.09 325 *e* P **P 01 34 13.0 +1.3**
YAK pmax pmax
comp=Z,13nm,0.8s
BILL Bilibino 20.86 14 *e* P **P 01 34 30.8 +0.1**
BILL Bilibino 20.86 14 *e* P **P 01 34 30.6 -0.1**
comp=Z,6.0nm,0.6s
BILL Bilibino 20.86 14 *i* P **P 01 34 30.8 +0.1**
BILL *i* 01 38 11.4
BILL pmax pmax
comp=Z,3.0nm,0.7s
KSRS Korea Array 21.41 249 P **P 01 34 37.7 +0.8**
comp=Z,1.0nm,0.5s,baz=55,slow=11,SNR=6.3
KSAR Wonju Array Be 21.44 249 P **P 01 34 37.7 +0.5**
KSAR Wonju Array Be 21.44 249 P **P 01 34 37.7 +0.5**
TIK Tiksi 26.00 343 *e* P **P 01 35 19.6 -0.3**
TIXI Tiksi 26.01 343 P **P 01 35 19.6 -0.4**
comp=Z,3.2nm,0.3s,baz=156,slow=8.0,SNR=9.3
TIXI Tiksi 26.01 343 *e* P **P 01 35 19.1 -0.9**
comp=Z,4.4nm,0.8s
HHC Hu-ho-hao-te 30.32 272 *e* P **P 01 35 59.2 +0.4**
HHC pmax pmax
comp=Z,14nm,1.1s
HHC pmax pmax
comp=Z,23nm,6.3s
ULN Ulaanbaatar 30.51 287 *e* P **P 01 36 00.6 +0.1**
ULN Ulaanbaatar 30.51 287 *c e* P **P 01 36 00.6 +0.1**
ULN pmax pmax
comp=Z,1.0nm,0.9s
H11N2 WAKE ISLAND Hy 30.56 154 T T 02 08 20.8
baz=342,slow=76,SNR=437
H11N1 WAKE ISLAND Hy 30.58 154 T T 02 08 21.5
baz=342,slow=76,SNR=506
H11N3 WAKE ISLAND Hy 30.58 154 T T 02 08 20.9
baz=342,slow=76,SNR=265
SONM Songino Array 30.94 287 P **P 01 36 05.5 +1.3**
comp=Z,0.3nm,0.3s,baz=60,slow=8.8,SNR=3.3
TLY Talaya 31.58 295 *e* P **P 01 36 09.3 -0.4**
TLY Talaya 31.58 295 *e* P **P 01 36 09.3 -0.4**
H11S1 WAKE ISLAND Hy 31.67 155 T T 02 09 39.9
baz=343,slow=76,SNR=730
H11S3 WAKE ISLAND Hy 31.68 155 T T 02 09 40.2
baz=343,slow=76,SNR=520
H11S2 WAKE ISLAND Hy 31.68 155 T T 02 09 40.1
baz=343,slow=76,SNR=501
IM3 Indian Mountai 32.46 38 *e* P **P 01 36 16.8 -0.3**
MDM Murphy Dome 34.70 40 *e* P **P 01 36 37.6 +1.0**
comp=Z,3.2nm,0.8s
WRH Wood River Hil 34.77 40 *e* P P 01 36 42.0 +4.9
comp=Z,2.4nm,0.6s
COLA College 34.87 40 *e* P **P 01 36 38.2 +0.3**
COLA College 34.87 40 *e* P **P 01 36 38.2 +0.3**
comp=Z,4.0nm,0.7s
COLA College 34.87 40 *e* P **P 01 36 38.2 +0.3**
COLA pmax pmax
comp=Z,4.0nm,0.7s
ILAR Eielson Array 35.28 40 P **P 01 36 41.4 -0.1**
comp=Z,0.9nm,0.8s,baz=267,slow=6.8,SNR=12
NRIK Noril'sk 37.49 328 P **P 01 36 59.3 -0.9**
comp=Z,2.2nm,0.4s,baz=116,slow=9.0,SNR=3.3
EGAK Eagle 37.73 40 *e* P **P 01 37 02.2 -0.1**
comp=Z,4.4nm,0.9s
LZH Lanzhou 37.97 270 ⇑P **P 01 37 05.6 +0.8**
LZH pP pP 01 37 33.5 +1.0
LZH sP sP 01 37 48.6 +1.9
LZH PP **PnPn 01 38 39.2 +2.5**
LZH pmax pmax
comp=Z,18nm,1.1s
LZH pmax pmax
comp=Z,42nm,5.3s
INK Inuvik 40.29 33 P **P 01 37 24.4 +0.9**
comp=Z,3.6nm,0.6s,baz=303,slow=11,SNR=11
INK Inuvik 40.29 33 *e* P **P 01 37 24.6 +1.1**
INK Inuvik 40.29 33 *e* P **P 01 37 24.6 +1.1**
comp=Z,4.7nm,0.7s
INK Inuvik 40.29 33 *e* P **P 01 37 24.6 +1.1**
INK pmax pmax
comp=Z,5.0nm,0.7s
CD2 Chengdu 41.13 264 P **P 01 37 28.6 -2.4**
CD2 pmax pmax
comp=Z,1.0nm,0.5s
ZAA0 Zalesovo Array 41.80 304 *e* P **P 01 37 36.3 +0.3**
comp=Z,5.1nm,0.5s
ZALV Zalesovo Beam 41.80 304 P **P 01 37 36.1 +0.1**
comp=Z,5.4nm,0.4s,baz=57,slow=6.3,SNR=27
ZALV PcP **PcP 01 39 33.1 +3.4**
comp=Z,1.0nm,0.3s,baz=74,slow=6.2,SNR=3.2
ZALV Zalesovo Beam 41.80 304 *e* P **P 01 37 35.8 -0.2**
ZALV PcP **PcP 01 39 33.0 +3.4**
WMQ Urumqi 44.48 290 P **P 01 37 59.6 +1.8**
KMI Kunming 45.64 258 P **P 01 38 08.7 +1.3**
KMI pmax pmax
comp=Z,11nm,0.8s
MK31 Makanchi Array 46.33 296 *e* P **P 01 38 12.6 +0.3**
MK31 Makanchi Array 46.33 296 *e* P **P 01 38 12.6 +0.3**
MKAR Makanchi Array 46.33 296 P **P 01 38 12.7 +0.4**
comp=Z,6.3nm,0.7s,baz=69,slow=7.8,SNR=57
MKAR PcP **PcP 01 39 48.6 +3.2**
comp=Z,0.4nm,0.4s,baz=64,slow=1.3,SNR=4.9
MKAR Makanchi Array 46.33 296 *i* P **P 01 38 12.6 +0.3**
MKAR pmax pmax
comp=Z,6.0nm,0.7s
MK01 Makanchi Array 46.34 296 *e* P **P 01 38 12.2 -0.2**
MAKZ Makanchi 46.51 296 *e* P **P 01 38 14.1 +0.4**
comp=Z,3.7nm,0.6s
MAKZ Makanchi 46.51 296 *e* P **P 01 38 14.1 +0.4**
MAKZ pmax pmax
comp=Z,4.0nm,0.6s
KURK Kurchatov 46.60 302 *e* P **P 01 38 14.4 +0.1**
KURK Kurchatov 46.60 302 *e* P **P 01 38 14.6 +0.3**
KURK PcP **PcP 01 39 47.7 +1.5**

KURK Kurchatov 46.60 302 *c e* P **P 01 38 14.4 +0.1**
KURK pmax pmax
comp=Z,17nm,0.9s
KURBB Kurchatov Arra 46.70 302 P **P 01 38 15.2 +0.2**
comp=Z,16nm,0.8s,baz=65,slow=8.5,SNR=67
KURBB PcP **PcP 01 39 47.7 +1.2**
comp=Z,0.2nm,0.2s,baz=72,slow=3.0,SNR=3.2
RES Resolute Bay 49.33 19 P **P 01 38 35.4 +0.5**
comp=Z,6.1nm,0.6s,baz=328,slow=8.4,SNR=29
RES Resolute Bay 49.33 19 *e* P **P 01 38 35.7 +0.7**
RES Resolute Bay 49.33 19 *e* P **P 01 38 35.7 +0.7**
comp=Z,7.3nm,0.7s
RES Resolute Bay 49.33 19 *e* P **P 01 38 35.7 +0.7**
RES pmax pmax
comp=Z,7.0nm,0.7s
YKA Yellowknife Ar 49.62 38 P **P 01 38 37.5 +0.2**
comp=Z,2.1nm,0.8s,baz=298,slow=6.9,SNR=5.4
YKA PcP **PcP 01 39 56.6 -0.2**
comp=Z,0.2nm,0.5s,baz=302,slow=3.6,SNR=3.0
PDGK Podgornoye 49.82 294 P **P 01 38 40.6 +1.3**
PDGK pmax pmax
comp=Z,3.0nm,0.6s
BVAR Borovoye Array 49.96 308 P **P 01 38 40.5 +0.5**
comp=Z,12nm,0.4s,baz=57,slow=7.9,SNR=94
BVAR PcP **PcP 01 39 58.8 +0.5**
comp=Z,1.3nm,0.5s,baz=81,slow=3.8,SNR=3.6
BRVK Borovoye 50.00 309 *e* P **P 01 38 40.6 +0.3**
BRVK Borovoye 50.00 309 *e* P **P 01 38 40.7 +0.4**
BRVK Borovoye 50.00 309 *c e* P **P 01 38 40.6 +0.3**
BRVK pmax pmax
comp=Z,13nm,0.6s
SPITS Spitsbergen Ar 51.10 350 P **P 01 38 47.2 -1.1**
comp=Z,2.6nm,0.6s,baz=19,slow=9.4,SNR=12
OTUK Ortayu 51.38 302 P **P 01 38 52.0 +1.2**
OTUK pmax pmax
comp=Z,5.0nm,0.8s
CHTO Chiang Mai 52.59 256 *e* P **P 01 38 58.7 -1.4**
comp=Z,2.2nm,0.5s
CHTO Chiang Mai 52.59 256 *e* P **P 01 38 58.7 -1.4**
CHTO pmax pmax
comp=Z,2.0nm,0.5s
CMAR Chiang Mai Arr 52.85 255 P **P 01 39 01.4 -0.6**
comp=Z,1.5nm,0.3s,baz=62,slow=9.9,SNR=5.0
CMAR Chiang Mai Arr 52.85 255 *e* P **P 01 39 01.2 -0.8**
CMAR Chiang Mai Arr 52.85 255 *c e* P **P 01 39 01.2 -0.8**
CMAR pmax pmax
comp=Z,2.0nm,0.3s
AAK Ala-Archa 53.25 295 P **P 01 39 05.2 +0.4**
comp=Z,3.0nm,0.6s,baz=126,slow=6.2,SNR=7.8
AAK Ala-Archa 53.25 295 *e* P **P 01 39 05.3 +0.5**
AAK Ala-Archa 53.25 295 *e* P **P 01 39 05.6 +0.8**
comp=Z,3.2nm,0.8s
AAK Ala-Archa 53.25 295 *i* P **P 01 39 05.3 +0.5**
AAK pmax pmax
comp=Z,2.0nm,0.8s
ARU Arti 53.94 317 *e* P **P 01 39 09.1 -0.4**
ARU Arti 53.94 317 *e* P **P 01 39 09.0 -0.4**
comp=Z,5.4nm,0.7s
ARU Arti 53.94 317 *c i* P **P 01 39 09.0 -0.4**
ARU 01 40 08.6
ARU 01 41 08.0
ARU S **S 01 46 36.5 +1.5**
ARU SS **SS 01 50 16.2 -0.9**
ARU pmax pmax
comp=Z,4.0nm,0.6s
MNAS Manas 54.53 296 P **P 01 39 15.3 +1.2**
MNAS pmax pmax
comp=Z,4.0nm,0.6s
DAG Danmarks Havn 55.10 358 *i* P **P 01 39 16.3 -1.2**
comp=Z,0.9nm,0.7s
DAG Danmarks Havn 55.10 358 *i* P **P 01 39 16.3 -1.2**
DAG pmax pmax
comp=Z,1.0nm,0.7s
KK31 Karatay Array 55.35 298 *e* P **P 01 39 20.1 +0.3**
KK31 Karatay Array 55.35 298 *e* P **P 01 39 20.2 +0.3**
KKAR Karatay Array 55.35 298 *e* P **P 01 39 20.1 +0.3**
KKAR Karatay Array 55.35 298 *e* P **P 01 39 20.2 +0.3**
KULLO Kullorsuaq 55.71 9 *i* P **P 01 39 20.9 -1.0**
comp=Z,10nm,0.7s
KULLO Kullorsuaq 55.71 9 *e* P **P 01 39 20.9 -1.0**
KULLO pmax pmax
comp=Z,10.0nm,0.7s
PRGR Permogore 56.12 327 *e* P **P 01 39 24.4 -0.6**
PRGR pmax pmax
comp=Z,5.0nm,1.0s
ARCES ARCESS Array B 56.42 341 P **P 01 39 26.5 -0.6**
comp=Z,0.8nm,0.3s,baz=29,slow=7.6,SNR=26
ABKAR Akbulak array 57.52 309 *e* P **P 01 39 35.2 +0.2**
AKTO Aktyubinsk 57.77 311 P **P 01 39 36.5 -0.3**
comp=Z,2.0nm,0.4s,baz=64,slow=10,SNR=8.1
KLMR Klimovskoe 58.83 328 *e* P P 01 39 38.7 -5.3
KLMR pmax pmax
comp=Z,8.0nm,1.0s
KLMR Klimovskoe 58.83 328 *e* P P 01 39 38.7 -5.3
KLMR AMP 01 39 46.1
comp=Z,8.0nm,1.0s
SUMG Summit 59.14 4⇑ *i* P **P 01 39 46.8 +0.3**
comp=Z,13nm,1.0s
SUMG Summit 59.14 4⇑ *i* P **P 01 39 46.8 +0.3**
SUMG pmax pmax
comp=Z,13nm,1.0s
NIL Nilore 59.52 288 *e* P **P 01 39 50.4 +1.1**
comp=Z,17nm,0.7s
NIL Nilore 59.52 288 *e* P **P 01 39 50.4 +1.1**
NIL pmax pmax
comp=Z,17nm,0.7s
FCC Fort Churchill 59.91 34 *e* P **P 01 39 51.0 -0.4**
comp=Z,1.8nm,0.5s
FCC Fort Churchill 59.91 34 *e* P **P 01 39 51.0 -0.4**
FCC pmax pmax
comp=Z,2.0nm,0.5s
NVAR Mina Array Bea 61.63 63 P **P 01 40 04.0 +0.2**
comp=Z,0.4nm,0.2s,baz=295,slow=7.4,SNR=3.1
TPAW Teton Pass 62.51 55 *e* P **P 01 40 07.8 -1.8**
comp=Z,2.9nm,0.6s
FIA1 FINESS Array S 62.68 334 *e* P **P 01 40 09.4 -0.6**
FINES FINESS Array B 62.68 334 P **P 01 40 09.8 -0.3**
comp=Z,6.2nm,0.4s,baz=38,slow=7.4,SNR=218
OBN Obninsk 64.09 325 *e* P **P 01 40 19.0 -0.4**
OBN Obninsk 64.09 325 *i* P **P 01 40 16.4 -3.0**
OBN pmax pmax
comp=Z,5.0nm,0.9s
RSSD Black Hills 65.75 50 *e* P **P 01 40 30.8 +0.1**
comp=Z,1.1nm,0.6s
RSSD Black Hills 65.75 50 *e* P **P 01 40 30.8 +0.1**
RSSD pmax pmax
comp=Z,1.0nm,0.6s
NC405 NORSAR Array S 66.62 341 *e* P **P 01 40 34.8 -0.9**
NC204 NORSAR Array S 66.68 341 *e* P **P 01 40 36.4 +0.3**
NB201 NORSAR Array S 66.77 341 *e* P **P 01 40 36.0 -0.6**
NB2 NORSAR Subarra 66.79 341 P **P 01 40 36.4 -0.4**
comp=Z,4.1nm,0.5s,baz=30,slow=6.5
NOA NORSAR Array B 66.79 341 P **P 01 40 37.0 +0.2**
comp=Z,14nm,0.6s,baz=29,slow=6.5,SNR=55
PHWY Pilot Hill 66.98 53 *e* P **P 01 40 38.2 -0.4**
comp=Z,7.2nm,0.8s
HFS Hagfors 67.04 339 P **P 01 40 38.7 +0.4**
comp=Z,11nm,0.5s,baz=57,slow=5.3,SNR=111
SUW Suwalki 69.68 331 *e* P **P 01 40 54.5 -0.3**
SUW Suwalki 69.68 331 *e* P **P 01 40 54.5 -0.3**
KIV Kislovodsk 69.79 314 *e* P **P 01 40 56.0 +0.2**
KIV Kislovodsk 69.79 314 *e* P **P 01 40 56.0 +0.2**
KIV pmax pmax
comp=Z,5.0nm,1.0s
KBZ Khabaz 69.86 314 P **P 01 40 57.2 +1.1**
comp=Z,2.4nm,0.7s,baz=342,slow=3.2,SNR=4.1
WRA Warramunga Arr 70.02 199 P **P 01 40 56.2 -1.0**
comp=Z,1.7nm,0.8s,baz=17,slow=6.2,SNR=8.6
WRA Warramunga Arr 70.02 199 *i* P **P 01 40 54.9 -2.3**
WRA pmax pmax
comp=Z,2.0nm,0.7s
AKASG Malin Array Be 70.31 326 P **P 01 40 58.5 -0.2**
comp=Z,4.2nm,0.5s,baz=34,slow=6.2,SNR=12
AKBB Malin Array Si 70.31 326 *e* P **P 01 40 58.9 +0.2**
comp=Z,4.4nm,0.7s
AKBB Malin Array Si 70.31 326 *e* P **P 01 40 58.9 +0.2**
AKBB pmax pmax
comp=Z,4.0nm,0.7s
KIEV Kiev 70.33 326 *e* P **P 01 40 58.1 -0.7**
KIEV Kiev 70.33 326 *e* P **P 01 40 58.1 -0.7**
comp=Z,4.4nm,0.7s
KIEV Kiev 70.33 326 *e* P **P 01 40 58.1 -0.7**
KIEV pmax pmax
comp=Z,4.0nm,0.7s
GKP Gorka Klasztor 72.15 334 *e* P **P 01 41 10.0 +0.3**
GKP Gorka Klasztor 72.15 334 *e* P **P 01 41 10.0 +0.3**

SORM Soroca 72.74 325⇑ *i* P **P 01 41 13.1 -0.2**
KWP Kalwaria Pacla 73.54 329 *e* P **P 01 41 18.9 +0.8**
KWP Kalwaria Pacla 73.54 329 *e* P **P 01 41 18.9 +0.8**
ASAR Alice Springs 73.71 198 P **P 01 41 19.8 +0.6**
comp=Z,0.5nm,0.6s,baz=18,slow=5.1,SNR=5.8
ASAR Alice Springs 73.71 198 *e* P **P 01 41 18.6 -0.7**
ASAR Alice Springs 73.71 198 *e* P **P 01 41 18.6 -0.7**
ASAR pmax pmax
comp=Z,1.0nm,0.6s
OJC Ojcow 74.01 331 *e* P **P 01 41 21.2 +0.5**
OJC Ojcow 74.01 331 *e* P **P 01 41 21.3 +0.5**
OJC Ojcow 74.01 331 *e* P **P 01 41 21.3 +0.5**
comp=Z,10nm,0.6s
OJC Ojcow 74.01 331 *e* P **P 01 41 21.3 +0.5**
OJC pmax pmax
comp=Z,10.0nm,0.6s
BUR08 Bucovina Ar. S 74.33 326 *e* P **P 01 41 23.4 +0.6**
BUR04 Bucovina Ar. S 74.35 326 *e* P **P 01 41 23.0 +0.1**
BURAR Bucovina Array 74.35 326 ‖ *i* P **P 01 41 22.9 0.0**
BURAR Bucovina Array 74.35 326 P **P 01 41 23.3 +0.4**
NIE Niedzica 74.54 330 *e* P **P 01 41 24.7 +0.9**
NIE Niedzica 74.54 330 *e* P **P 01 41 24.7 +0.8**
KSP Ksiaz 74.56 333 *e* P **P 01 41 24.5 +0.6**
KSP Ksiaz 74.56 333 *e* P **P 01 41 24.5 +0.6**
TESR Tescani 74.73 325⇑ *i* P **P 01 41 24.6 -0.4**
EKA Eskdalemuir Ar 74.85 346 P **P 01 41 25.8 +0.3**
comp=Z,3.2nm,0.5s,baz=17,slow=5.0,SNR=36
TRPA Tarpa 74.88 328⇑ *i* P **P 01 41 26.6 +0.8**
UPC Upice 74.94 333 ‖ *e* P **P 01 41 27.3 +1.2**
UPC Upice 74.94 333 *e* P **P 01 41 27.3 +1.2**
DPC Dobruska-Polom 74.98 333 ‖ *i* P **P 01 41 27.6 +1.1**
DPC *ex* x 01 41 33.8
DPC Dobruska-Polom 74.98 333 ‖ *i* P **P 01 41 27.6 +1.1**
DPC *e* 01 41 33.8
LANS Liptovska Anna 75.04 331 *e* P **P 01 41 28.2 +1.4**
LANS Liptovska Anna 75.04 331 *e* P **P 01 41 28.2 +1.4**
KRLC Kraliky 75.09 333 ‖ *e* P **P 01 41 28.0 +1.0**
KRLC *ex* x 01 41 35.6
KRLC Kraliky 75.09 333 *e* P **P 01 41 28.0 +1.0**
KRLC *e* 01 41 35.6
CLL Collm 75.09 335 *e* P **P 01 41 27.2 +0.2**
CLL Collm 75.09 335⇑ *i* P **P 01 41 27.2 +0.2**
comp=Z,20nm,0.8s
CLL Collm 75.09 335⇑ *i* P **P 01 41 27.2 +0.2**
CLL pmax pmax
comp=Z,20nm,0.8s
MORC Moravsky Berou 75.11 332 P **P 01 41 28.9 +1.7**
MORC pmax pmax
comp=Z,13nm,0.9s
MORC Moravsky Berou 75.11 332 *e* P **P 01 41 27.8 +0.6**
BRG Berggiesshubel 75.22 335 *i* P **P 01 41 27.9 +0.2**
comp=Z,8.6nm,1.1s
BRG Berggiesshubel 75.22 335 *e* P **P 01 41 27.9 +0.2**
BRG Berggiesshubel 75.22 335 *i* P **P 01 41 27.9 +0.2**
BRG pmax pmax
comp=Z,9.0nm,1.1s
VRI Vrincioaia 75.24 325 ‖ *i* P **P 01 41 28.6 +0.7**
PLOR Plostina 75.28 325 ‖ *i* P **P 01 41 29.3 +1.1**
KECS Kecovo 75.28 330 *e* P **P 01 41 27.8 -0.3**
KECS Kecovo 75.28 330 *e* P **P 01 41 27.8 -0.3**
PVCC Panska Ves 75.35 334 ‖ *e* P **P 01 41 29.2 +0.8**
PVCC *ex* x 01 41 32.3
PVCC Panska Ves 75.35 334 *e* P **P 01 41 29.2 +0.8**
TIRR Tirgusor 75.74 323⇑ *i* P **P 01 41 31.9 +1.1**
TLB Topalu 75.78 323⇑ *i* P **P 01 41 31.7 +0.7**
PRA Prague 75.79 334 ‖ *e* P **P 01 41 31.9 +0.9**
PRA Prague 75.79 334 *e* P **P 01 41 31.9 +0.9**
VRAC Vranov 75.82 332 *e* P **P 01 41 32.0 +0.8**
VYHS Vyhne 75.82 331 *e* P **P 01 41 32.1 +0.8**
VYHS pmax pmax
comp=Z,3.0nm,0.7s
VYHS Vyhne 75.82 331 *e* P **P 01 41 32.0 +0.8**
GOPC GO Pecny, Ondr 75.83 334 ‖ *e* P **P 01 41 32.1 +0.8**
GOPC GO Pecny, Ondr 75.83 334 *e* P **P 01 41 32.1 +0.8**
PRU Pruhonice 75.83 334 ‖ *e* P **P 01 41 32.3 +1.1**
PRU Pruhonice 75.83 334 *e* P **P 01 41 32.3 +1.1**
PRU Pruhonice 75.83 334 *e* P **P 01 41 32.3 +1.1**
MLR Muntele Rosu 75.85 325 P **P 01 41 31.8 +0.2**
comp=Z,2.6nm,0.5s,baz=333,slow=6.8,SNR=41
MLR Muntele Rosu 75.85 325 ‖ *i* P **P 01 41 32.0 +0.4**
JAVC Velka Javorina 75.88 332 *e* P **P 01 41 33.2 +1.6**
DRGR 75.96 327 ‖ *i* P **P 01 41 32.7 +0.6**
MOX Moxa 76.07 336 P **P 01 41 33.8 +1.2**
MOX pmax pmax
comp=Z,8.0nm,0.9s
KRUC Moravsky 76.10 332 *e* P **P 01 41 33.4 +0.6**
NKC Novy Kostel 76.22 335 ‖ *e* P **P 01 41 34.1 +0.7**
NKC Novy Kostel 76.22 335 *e* P **P 01 41 34.1 +0.7**
VOIR 76.24 325 ‖ *i* P **P 01 41 34.7 +1.0**
VOIR 76.24 325 P **P 01 41 34.9 +1.2**
SMOL Smolenice 76.26 332 *e* P **P 01 41 35.1 +1.4**
SMOL Smolenice 76.26 332 *e* P **P 01 41 35.1 +1.4**
ICOR Ion Corvin 76.27 323 ‖ *i* P **P 01 41 34.9 +1.1**
MODS Modra-Piesok 76.43 332 *e* P **P 01 41 34.9 +0.2**
MODS pmax pmax
comp=Z,8.0nm,1.0s
MODS Modra-Piesok 76.43 332 *e* P **P 01 41 34.9 +0.2**
ARR Arges 76.46 325⇑ *i* P **P 01 41 36.9 +2.0**
TX31 Lajitas Ar. Si 76.64 61 *e* P **P 01 41 36.2 -0.1**
TXAR Lajitas Array 76.64 61 P **P 01 41 35.8 -0.5**
comp=Z,0.6nm,0.5s,baz=301,slow=5.0,SNR=11
TXAR Lajitas Array 76.64 61 *e* P **P 01 41 36.0 -0.3**
TXAR Lajitas Array 76.64 61 *e* P **P 01 41 36.0 -0.3**
TXAR pmax pmax
comp=Z,1.0nm,0.5s
LOT Lotru 76.71 326⇑ *i* P **P 01 41 37.0 +0.6**
KHC Kasperske Hory 76.88 334 ‖ *e* P **P 01 41 38.1 +0.9**
KHC *ex* x 01 41 44.3
KHC Kasperske Hory 76.88 334 *e* P **P 01 41 38.1 +0.9**
KHC Kasperske Hory 76.88 334 *e* P **P 01 41 37.8 +0.6**
comp=Z,4.3nm,0.8s
KHC Kasperske Hory 76.88 334 *e* P **P 01 41 38.1 +0.9**
KHC *e* 01 41 44.3
GRFO Grafenberg 77.05 336 *e* P **P 01 41 38.6 +0.6**
GRFO Grafenberg 77.05 336 *e* P **P 01 41 38.7 +0.6**
WET Wettzell 77.07 335 P **P 01 41 39.3 +1.0**
WET pmax pmax
comp=Z,13nm,0.9s
GEC2 GERESS Array S 77.10 334 *e* P **P 01 41 39.3 +0.7**
comp=Z,4.7nm,0.9s
GEC2 GERESS Array S 77.10 334 *e* P **P 01 41 39.3 +0.7**
GEC2 pmax pmax
comp=Z,5.0nm,0.9s
GERES GERESS Array B 77.10 334 P **P 01 41 38.8 +0.2**
comp=Z,2.3nm,0.5s,baz=33,slow=5.7,SNR=27
GERES GERESS Array B 77.10 334 *e* P **P 01 41 38.9 +0.3**
GERES GERESS Array B 77.10 334 *e* P **P 01 41 38.9 +0.3**
GERES pmax pmax
comp=Z,2.0nm,0.5s
GEA0 GERESS Array S 77.11 334 *e* P **P 01 41 38.6 0.0**
CONA Conrad Observa 77.27 332 *i* P **P 01 41 40.6 +1.1**
comp=Z,6.6nm,0.7s,SNR=12
BR131 Keskin Array S 77.33 317 *e* P **P 01 41 41.1 +1.1**
BRTR Keskin Array B 77.33 317 P **P 01 41 40.4 +0.4**
comp=Z,2.3nm,0.7s,baz=54,slow=3.7,SNR=17
BRTR Keskin Array B 77.33 317 *e* P **P 01 41 40.9 +0.9**
BRTR pmax pmax
comp=Z,2.0nm,0.7s
BZS Buzias 77.36 327⇑ *i* P **P 01 41 40.1 +0.2**
MOA Molln 77.83 333 *i* P **P 01 41 43.4 +0.9**
comp=Z,5.7nm,0.8s,SNR=6.7
ARSA Arzberg 77.97 332 *i* P **P 01 41 44.2 +0.9**
comp=Z,6.6nm,1.1s
MDVR Moldovita 78.04 327⇑ *i* P **P 01 41 42.8 -1.0**
SOKA Soboth 78.64 332 *e* P **P 01 41 47.7 +0.6**
comp=Z,10nm,1.2s,SNR=8.6
PERS Pernice 78.65 332 *i* P **P 01 41 47.6 +0.5**
KBA Koelnbreinsper 78.80 333 *e* P **P 01 41 49.2 +1.2**
comp=Z,10nm,0.7s
WCI Wyandotte Cave 78.91 44 *e* P **P 01 41 47.8 -0.8**
WCI Wyandotte Cave 78.91 44 *e* P **P 01 41 47.8 -0.8**
GOLS Golise 79.05 331 *i* P **P 01 41 49.4 +0.2**
WTTA Wattenberg 79.13 334 *e* P **P 01 41 51.3 +1.4**
comp=Z,11nm,0.8s
RETA Reutte 79.18 335 *e* P **P 01 41 51.0 +1.1**
comp=Z,6.5nm,0.9s
MOTA Moosalm 79.21 335 *i* P **P 01 41 50.0 -0.3**
comp=Z,11nm,1.0s
DIVS Divibare 79.25 328 *e* P **P 01 41 50.5 0.0**
comp=Z,7.6nm,1.0s
ABTA Abfaltersbach 79.34 334 *i* P **P 01 41 51.2 +0.3**
comp=Z,5.3nm,1.1s
VTS Vitosha 79.36 325⇑ *i* P **P 01 41 51.0 -0.1**

FETA	Feichten	79.61	335	*i* P	P	01 41 52.3	-0.2
	comp=Z,7.7nm,1.3s						
ALN	Alexandroupoli	79.67	322	*e*P	P	01 41 53.4	+0.8
	comp=Z,4.8nm,0.9s						
ALN	Alexandroupoli	79.67	322	*e*P	P	01 41 53.4	+0.8
ALN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SRS	Serrai	80.47	324	P	P	01 41 57.9	+0.9
PDG	Podgorica	80.97	327	⇑*i* P	P	01 41 59.0	-0.6
TTG	Podgorica	80.97	327	*e*P	P	01 41 59.3	-0.3
	comp=Z,8.6nm,0.8s						
TTG	Podgorica	80.97	327	*e*P	P	01 41 59.3	-0.3
TTG				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CSS	Mathiatis	81.31	314	*e*P	P	01 42 01.9	+0.4
	comp=Z,2.6nm,0.6s						
FNA	Florina	81.61	325	*e*P	P	01 42 03.5	+0.4
	comp=Z,4.1nm,0.8s						
FNA	Florina	81.61	325	*e*P	P	01 42 03.5	+0.4
FNA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TIR	Tirane	81.69	326	⇓*i* P	P	01 42 04.2	+0.8
ASF	Jabal al Asfar	81.78	310	P	P	01 42 04.1	0.0
	comp=Z,1.5nm,0.6s,baz=45,slow=1.4,SNR=5.0						
MMAI	Mount Meron Ar	81.86	311	P	P	01 42 05.8	+1.2
	comp=Z,6.1nm,0.5s,baz=46,slow=6.6,SNR=36						
RAYN	Ar Rayn	83.77	298	*e*P	P	01 42 15.3	+0.8
	comp=Z,4.0nm,0.7s						
IDI	Anoyia	84.89	320	P	P	01 42 18.6	-1.4
	comp=Z,9.4nm,1.1s,baz=90,slow=5.1,SNR=8.5						
ESDC	Sonseca Array	90.10	343	P	P	01 42 43.9	-1.0
	comp=Z,0.2nm,0.4s,baz=354,slow=4.4,SNR=3.9						
KEST	Kesra	90.36	331	P	P	01 42 46.7	+0.5
	comp=Z,2.8nm,0.8s,baz=346,slow=8.3,SNR=3.3						

IDC 09 01:38:11.2±1.3, 3°.64S×128°.59E, $h0^{km}$, mb3.6/3, mb1 3.8/5, mb1mx3.4/57, mbtmp3.6/5, ML3.4/2, Error ellipse: s-maj=36.3km s-min=24.1km az=82.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	3.84	44	Pn	Pn	01 39 11.8	+0.1
	5.0nm,0.3s,baz=221,slow=20,SNR=26						
SIJI				Sn	Sn	01 39 57.5	0.0
	4.8nm,0.3s,baz=211,slow=19,SNR=6.4						
WRA	Warramunga Arr	17.15	161	P	Pn	01 42 11.4	-1.1
	0.1nm,0.3s,baz=342,slow=12,SNR=3.8						
ASAR	Alice Springs	20.56	166	P	P	01 42 52.2	+0.4
	4.9nm,0.8s,baz=349,slow=11,SNR=28						
MKAR	Makanchi Array	64.66	327	P	P	01 48 50.4	-0.5
	0.4nm,0.8s,baz=131,slow=7.9,SNR=3.2						
KURBB	Kurchatov Arra	68.93	328	P	P	01 49 18.8	+0.7
	0.2nm,0.3s,baz=134,slow=5.2,SNR=5.2						

SKO 09 01:39:07.8, 41°.32N×20°.88E, $h29^{km}$, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHR	Ohrid	0.22	196	*i* Pg	Pb	01 39 14.4	+0.3
OHR				*e*Sg	Sb	01 39 18.7	+0.3
KRUS	Krusevo	0.28	80	*i* Pg	Pb	01 39 15.2	+0.3
KRUS				*e*Sg	Sb	01 39 18.9	-0.9
BIA	Bitola	0.45	132	*e*Pg	Pb	01 39 17.8	+0.4
BIA				*i* Sg	Sn	01 39 26.3	+0.8
PHP	Peshkopia	0.49	318	*i* PG	Pb	01 39 18.4	+0.3
PHP				*i* SG	Sb	01 39 25.4	+0.3

*TIR **09** 01:51:24.1, 41°.27N×20°.92E, $h2^{km}$, Md3.0/5*
*ATH **09** 01:51:25.5, 41°.29N×20°.89E, $h10^{km}\pm3^{km}$, ML2.1/7, Error ellipse: s-maj=4.0km s-min=1.5km az=124.0*
*SKO **09** 01:51:25.2, 41°.25N×20°.89E, $h19^{km}$, M1.5, ML2.1*
*PDG **09** 01:51:26.6±0.2, 41°.24N×20°.92E, $h5^{km}$, ML2.5/12, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
*THE **09** 01:51:26.0, 41°.29N×20°.93E, $h0^{km}\pm2^{km}$, ML2.0/9, Error ellipse: s-maj=2.1km s-min=0.6km az=355.0*
*BEO **09** 01:51:27.4±0.3, 41°.24N×20°.90E, $h0^{km}$*
*CSEM **09** 01:51:27.0±0.1, 41°.23N×20°.93E, $h2^{km}$, ML3.0, Error ellipse: s-maj=4.1km s-min=2.3km az=58.0*

ISC 09 01:51:26.3±1.0, 41°.24N±0°.01×20°.91E±0°.02, $h5^{km}\pm8^{km}$, n103, σ1$27/177, 18C-4D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHR	Ohrid	0.15	212	⇑*i* Pg	Pg	01 51 29.3	-0.2
OHR				*i* Sg	Sg	01 51 32.2	+0.6
OHR				*e*Lg	Lg	01 51 32.3	
	comp=E,1μm,0.5s						
OHR				*e*Lg	Lg	01 51 32.3	
	comp=N,526nm,0.2s						
KRUS	Krusevo	0.29	64	⇑*i* Pg	Pg	01 51 32.0	0.0
KRUS				*i* Sg	Sg	01 51 36.5	+0.7
KRUS				*e*Lg	Lg	01 51 38.3	
	comp=N,49nm,0.5s						
KRUS				*e*Lg	Lg	01 51 38.5	
	comp=E,64nm,0.3s						
BIA	Bitola	0.39	125	P	Pg	01 51 34.3	+0.5
BIA				S	Sg	01 51 40.3	+1.4
BIA	Bitola	0.39	125	⇑*i* Pg	Pg	01 51 34.1	+0.3
BIA				*i* Sg	Sg	01 51 40.3	+1.4
BIA				*e*Lg	Lg	01 51 40.8	
	comp=E,107nm,0.3s						
BIA				*e*Lg	Lg	01 51 40.8	
	comp=N,81nm,0.3s						
BIA	Bitola	0.39	125	P	Pg	01 51 34.3	+0.5
BIA				S	Sg	01 51 40.3	+1.4
PHP	Peshkopia	0.56	322	P	Pg	01 51 35.9	-1.3
PHP				S	Sg	01 51 44.7	+0.1
PHP	Peshkopia	0.56	322	*i* PG	Pg	01 51 35.8	-1.4
PHP				*i* SG	Sg	01 51 44.7	+0.1
PHP	Peshkopia	0.56	322	P	Pg	01 51 35.9	-1.3
PHP				S	Sg	01 51 44.7	+0.1
FNA	Florina	0.58	142	*e*Pg	Pg	01 51 37.3	-0.2
FNA				*e*Sg	Sb	01 51 46.2	-1.3
FNA	Florina	0.58	142	P	Pg	01 51 37.1	-0.4
FNA				S	Sb	01 51 46.4	-1.1
FNA				AML	AML	01 51 47.2	
	comp=N,2290μm,0.3s						
FNA				AML	AML	01 51 47.8	
	comp=E,1934μm,0.3s						
FNA	Florina	0.58	142	P	Pg	01 51 37.2	-0.2
FNA				S	Sg	01 51 46.1	+1.1
FNA	Florina	0.58	142	P	Pg	01 51 37.3	-0.2
FNA				S	Sg	01 51 46.1	+1.1
KBN	Korca	0.62	188	P	Pg	01 51 38.1	-0.3
KBN				S	Sb	01 51 48.3	-0.5
KBN	Korca	0.62	188	*i* PG	Pg	01 51 38.1	-0.3
KBN				*i* SG	Sb	01 51 48.3	-0.5
KBN	Korca	0.62	188	P	Pg	01 51 38.1	-0.3
KBN				S	Sb	01 51 48.3	-0.5
TIR	Tirane	0.79	278	*e*Pg	Pg	01 51 40.9	-0.6
TIR				*e*Sg	Sb	01 51 53.2	-0.4
TIR	Tirane	0.79	278	P	Pg	01 51 41.0	-0.6
TIR				S	Sb	01 51 53.3	-0.4
TIR	Tirane	0.79	278	*i* PN	Pg	01 51 41.1	-0.5
TIR				*i* SN	Sb	01 51 53.2	-0.4
TIR	Tirane	0.79	278	P	Pg	01 51 41.0	-0.6
TIR				*e*Sg	Sb	01 51 53.2	-0.4
SKO	Skopje	0.83	28	*e*Pg	Pg	01 51 42.1	-0.2
SKO				*e*Sg	Sg	01 51 53.6	+0.5
SKO	Skopje	0.83	28	P	Pg	01 51 41.9	-0.4
SKO				S	Sg	01 51 53.3	+0.2
SKO	Skopje	0.83	28	⇑*i* Pg	Pg	01 51 41.5	-0.8
SKO				*i* Sg	Sg	01 51 53.5	+0.4
SKO				*e*Lg	Lg	01 51 53.7	
	comp=E,7.0nm,0.3s						
SKO				*e*Lg	Lg	01 51 54.1	
	comp=N,7.9nm,0.3s						
SKO	Skopje	0.83	28	*e*Pg	Pg	01 51 42.1	-0.2
SKO				S	Sg	01 51 53.3	+0.2
NEST	Nestorio	0.83	173	P	Pg	01 51 41.8	-0.5
NEST				S	Sb	01 51 54.2	-0.7
NEST				AML	AML	01 51 58.5	
	comp=E,202μm,0.3s						
NEST				AML	AML	01 52 00.5	
	comp=N,187μm,0.4s						
NEST	Nestorio	0.83	173	P	Pg	01 51 41.9	-0.4
NEST				S	Sn	01 51 55.9	-1.6
NEST	Nestorio	0.83	173	P	Pg	01 51 42.0	-0.4
NEST				S	Sb	01 51 54.2	-0.7
PRZK	Prizren	0.97	353	P	Pg	01 51 44.5	-0.5
PENT	Pentalofos	1.06	170	P	Pg	01 51 46.3	-0.4
PENT				S	Sg	01 52 00.7	+0.3
PENT				AML	AML	01 52 07.7	
	comp=N,128μm,0.5s						
PENT				AML	AML	01 52 10.1	
	comp=E,108μm,0.5s						
PENT	Pentalofos	1.06	170	P	Pg	01 51 46.4	-0.3
PENT				S	Sn	01 52 03.7	+0.6
PENT	Pentalofos	1.06	170	P	Pg	01 51 46.4	-0.3
PENT				S	Sb	01 52 01.1	-0.3
STIP	Stip	1.06	64	*e*Pg	Pn	01 51 49.7	+1.9
STIP				*i* Sg	Sn	01 52 07.4	+4.4
STIP				*e*Lg	Lg	01 52 08.5	
	comp=E,12nm,0.4s						
STIP				*e*Lg	Lg	01 52 08.6	
	comp=N,11nm,0.3s						
PUK	Puka	1.10	317	*i* PG	Pg	01 51 45.5	-2.0
KZN	Kozani	1.14	145	P	Pb	01 51 47.6	-1.0
KZN				S	Sn	01 52 05.6	+0.5
KZN				AML	AML	01 52 09.5	
	comp=N,182μm,0.3s						
KZN				AML	AML	01 52 11.1	
	comp=E,195μm,0.5s						
KZN	Kozani	1.14	145	P	Pb	01 51 47.9	-0.7
KZN				S	Sn	01 52 05.9	+0.8
KZN	Kozani	1.14	145	P	Pb	01 51 47.9	-0.7
KZN				S	Sn	01 52 04.9	-0.2
GRG	Griva	1.16	104	P	Pb	01 51 48.0	-0.9
GRG				S	Sn	01 52 05.2	-0.3
GRG				AML	AML	01 52 11.6	
	comp=E,72μm,0.5s						
GRG				AML	AML	01 52 13.5	
	comp=N,76μm,0.4s						
GRG	Griva	1.16	104	P	Pb	01 51 48.0	-0.9
GRG				S	Sn	01 52 04.7	-0.9
GRG	Griva	1.16	104	P	Pb	01 51 48.0	-0.9
GRG				S	Sn	01 52 04.7	-0.9
KPRO	Kipourio	1.33	165	P	Pg	01 51 52.0	+0.1
KPRO				S	Sg	01 52 10.5	+1.4
KPRO				AML	AML	01 52 18.0	
	comp=E,109μm,0.4s						
KPRO				AML	AML	01 52 19.9	
	comp=N,151μm,0.6s						
KPRO	Kipourio	1.33	165	P	Pg	01 51 52.0	+0.1
KPRO				S	Sg	01 52 12.2	+3.1
KPRO	Kipourio	1.33	165	P	Pb	01 51 51.7	-0.1
KPRO				S	Sg	01 52 10.4	+1.3
ULC	Ulcinj	1.44	301	⇓*i* Pg	Pb	01 51 53.2	-0.5
ULC				*e*Sg	Sg	01 52 16.1	+3.4
ULC	Ulcinj	1.44	301	⇓*i* Pg	Pb	01 51 53.2	-0.5
ULC				*e*Sg	Sg	01 52 16.1	+3.4
PEJK	Peje	1.48	342	P	Pn	01 51 51.7	-1.9
KNT	Kendrikon	1.50	92	P	Pb	01 51 54.5	-0.3
KNT	Kendrikon	1.50	92	P	Pb	01 51 54.2	-0.5
PVY	Plav	1.53	333	*e*Pg	Pb	01 51 55.0	-0.2
PVY				*e*Sg	Sg	01 52 18.5	+3.1
PVY	Plav	1.53	333	*e*Pg	Pb	01 51 55.0	-0.2
PVY				*e*Sg	Sg	01 52 18.5	+3.1
DRME	Dracevica, Mon	1.60	307	⇑*i* Pn	Pb	01 51 56.5	+0.2
DRME				*e*Sn	Sg	01 52 20.9	+3.2
DRME	Dracevica, Mon	1.60	307	⇑*i* Pn	Pb	01 51 56.5	+0.2
DRME				*e*Sn	Sg	01 52 20.9	+3.2
SMRK	Smrekonice	1.63	1	P	Pb	01 51 56.3	-0.6
LIT	Litokhoron	1.66	133	P	Pn	01 51 55.8	-0.3
LIT	Litokhoron	1.66	133	P	Pb	01 51 56.5	-0.8
BARS	Barje	1.71	23	*e*Pn	Pb	01 51 58.4	+0.1
BARS	Barje	1.71	23	*e*Pn	Pb	01 51 58.4	+0.1
PDG	Podgorica	1.71	314	*e*Pg	Pn	01 51 57.1	+0.3
PDG				*e*Sg	Sb	01 52 20.3	+0.2
PDG	Podgorica	1.71	314	*e*Pg	Pn	01 51 57.1	+0.3
PDG	Podgorica	1.71	314	⇑*i* Pn	Pb	01 51 58.4	+0.1
PDG				*e*Sg	Sb	01 52 20.3	+0.2
PDG				*e*Sn	Sg	01 52 23.5	+2.1
TTG	Podgorica	1.71	314	⇑*i* Pn	Pb	01 51 58.4	+0.1
TTG				*e*Sn	Sg	01 52 23.5	+2.1
KEK	Kerkira	1.75	209	P	Pg	01 51 59.3	-0.5
KEK				S	Sg	01 52 23.7	+1.2
KEK				AML	AML	01 52 31.6	
	comp=E,46μm,0.5s						
KEK				AML	AML	01 52 33.4	
	comp=N,39μm,0.6s						
KEK	Kerkira	1.75	209	P	Pb	01 51 58.8	0.0
KEK				S	Sg	01 52 23.0	+0.6
BEY	Berane	1.79	335	⇓*i* Pn	Pb	01 51 59.2	-0.5
BEY				*e*Sn	Sg	01 52 25.2	+1.2
IVA	Berane	1.79	335	⇓*i* Pn	Pb	01 51 59.2	-0.5
IVA				*e*Sn	Sg	01 52 25.2	+1.2
BUM	Brajici-Budva	1.84	306	⇑*i* Pn	Pb	01 51 59.9	-0.6
BUM				*e*Sn	Sg	01 52 26.2	+0.7
BUM	Brajici-Budva	1.84	306	⇑*i* Pn	Pb	01 51 59.9	-0.6
BUM				*e*Sn	Sg	01 52 26.2	+0.7
THL	Klokotos Trika	1.88	153	P	Pn	01 51 59.5	+0.4
THL	Klokotos Trika	1.88	153	P	Pb	01 51 59.9	-1.2
KOME	Kolasin	1.91	328	*e*Pn	Pb	01 52 01.2	-0.6
KOME				*e*Sn	Sg	01 52 28.2	+0.4
KOME	Kolasin	1.91	328	*e*Pn	Pb	01 52 01.2	-0.6
KOME				*e*Sn	Sg	01 52 28.2	+0.4
CEME	Cevo	1.98	312	⇑*i* Pn	Pb	01 52 01.6	-1.2
CEME				*e*Sn	Sg	01 52 29.7	-0.1
CEME	Cevo	1.98	312	⇑*i* Pn	Pb	01 52 01.6	-1.2
CEME				*e*Sn	Sg	01 52 29.7	-0.1
SELS	Selova	1.98	4	*e*Pn	Pb	01 52 02.1	-0.8
SRS	Serrai	2.03	93	*e*Pn	Pn	01 52 01.9	+0.7
SRS	Serrai	2.03	93	*e*Pn	Pn	01 52 01.9	+0.7
NKME	Niksic	2.11	317	*e*Pn	Pb	01 52 04.1	-1.0
NKME				*e*Sn	Sg	01 52 33.6	-0.5
NKME	Niksic	2.11	317	*e*Pn	Pb	01 52 04.1	-1.0
NKME				*e*Sn	Sg	01 52 33.6	-0.5
NKY	Niksic	2.12	318	⇑*i* Pn	Pb	01 52 03.6	-1.7
NKY				*e*Sn	Sg	01 52 33.4	-1.1
NKY	Niksic	2.12	318	⇑*i* Pn	Pb	01 52 03.6	-1.7
NKY				*e*Sn	Sg	01 52 33.4	-1.1
SJES	Sjenica	2.13	341	*e*Pn	Pn	01 52 03.7	+1.0
SJES				*e*Sn	Sb	01 52 31.9	-0.4
HCY	Herceg Novi	2.17	305	⇑*i* Pn	Pb	01 52 04.4	-1.7
HCY				*e*Sn	Sb	01 52 34.2	+1.0
HCY	Herceg Novi	2.17	305	⇑*i* Pn	Pb	01 52 04.4	-1.7
HCY				*e*Sn	Sb	01 52 34.2	+1.0
VTS	Vitosha	2.18	51	*e*Pn	Pb	01 52 05.4	-1.0
VTS	Vitosha	2.18	51	*e*Pn	Pb	01 52 05.4	-1.0
ZAPS	Zavoj	2.40	32	*e*Pn	Pb	01 52 07.9	-2.1
BRY	Bratogost	2.42	314	*e*Pn	Pn	01 52 08.0	+1.3
BRY				*e*Sn	Sb	01 52 40.5	-0.1
BRY	Bratogost	2.42	314	*e*Pn	Pn	01 52 08.0	+1.3
BRY				*e*Sn	Sb	01 52 40.5	-0.1
LKD2	Lefkada island	2.46	185	P	Pb	01 52 09.0	-2.0
LKD2	Lefkada island	2.46	185	P	Pb	01 52 08.8	-2.2
UPM	Unac-Piva	2.46	323	⇑*i* Pn	Pb	01 52 09.1	-2.0
UPM				*e*Sn	Sb	01 52 41.8	0.0
UPM	Unac-Piva	2.46	323	⇑*i* Pn	Pb	01 52 09.1	-2.0
UPM				*e*Sn	Sb	01 52 41.8	0.0
AGG	Agios Georgios	2.47	153	P	Pn	01 52 07.1	-0.2
AGG	Agios Georgios	2.47	153	P	Pn	01 52 08.1	+0.8
AGG				S	Sb	01 52 39.8	-2.1
AGG	Agios Georgios	2.47	153	P	Pn	01 52 07.9	+0.6
AGG				S	Sb	01 52 39.8	-2.1
GRUS	Gruza	2.65	357	*e*Pn	Pb	01 52 12.0	-2.2
GRUS	Gruza	2.65	357	*e*Pn	Pb	01 52 12.0	-2.2
ZAGS	Zajecar	2.75	20	*e*Pn	Pb	01 52 13.5	-2.4
ZAGS	Zajecar	2.75	20	*e*Pn	Pb	01 52 13.5	-2.4
BBLS	Lazići	2.85	338	*e*Pn	Pn	01 52 14.5	+2.0
BBLS	Lazići	2.85	338	*e*Pn	Pn	01 52 14.5	+2.0
STON	Ston	2.89	305	*e*Pn	Pn	01 52 13.2	+0.2
STON				Sn	Sn	01 52 49.8	+1.7
STON	Ston	2.89	305	*e*Pn	Pn	01 52 13.2	+0.2
STON				Sn	Sn	01 52 49.8	+1.7
DIVS	Divibare	2.93	347	*e*Pn	Pb	01 52 16.1	-3.0
DIVS	Divibare	2.93	347	*e*Pn	Pb	01 52 16.1	-3.0

SKO 09 02:04:53.9, 41°.29N×20°.85E, $h15^{km}$, ML0.7, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHR	Ohrid	0.18	192	*i* Pg	Pg	02 04 58.5	+0.2
OHR				*i* Sg	Sg	02 05 01.5	+0.2
KRUS	Krusevo	0.31	75	*e*Pg	Pg	02 05 00.1	-0.4
KRUS				*i* Sg	Sg	02 05 05.5	+0.6
BIA	Bitola	0.45	127	*e*Pg	Pb	02 05 03.6	0.0
BIA				*e*Sg	Sb	02 05 10.1	0.0

*MOS **09** 02:04:55.4±0.9, 46°.12N×12°.49E, $h11^{km}$, mb4.5/21, Error ellipse: s-maj=3.4km s-min=2.8km az=86.8*
*LDG **09** 02:04:55.8±0.1, 46°.11N×12°.65E, $h2^{km}$, Md4.1/3, Ml4.4/38, Error ellipse: s-maj=2.0km s-min=1.6km az=40.0*
*NEIC **09** 02:04:55.9±0.0, 46°.21N×12°.44E, $h7^{km}$, mb4.5/21, ML4.4(LDG), ML4.5(ROM), After ROM.*
NEIC Felt [IV] at Pordenone and San Quirino; [III] at Aviano, Fontanafredda and Sacile. Felt strongly throughout Friuli-Venezia Giulia. Also felt in Veneto.
*CSEM **09** 02:04:56.8±0.0, 46°.16N×12°.51E, $h5^{km}$, mb4.4/27, ML4.9/26, Mw4.0, Error ellipse: s-maj=1.2km s-min=1.0km az=3.0*
*ISCJB **09** 02:04:56.3±0.1, 46°.175N±0°.007×12°.514E±0°.009, $h14^{km}\pm1^{km}$, mb4.2/51, Error ellipse: s-maj=1.3km s-min=1.1km az=1.4*
*ROM **09** 02:04:56.6±0.1, 46°.180N±0°.005×12°.488E±0°.006, $h7^{km}$, ML4.4/73*
*VIE **09** 02:04:56.2±0.2, 46°.16N×12°.46E, $h10^{km}$, mb4.0/14, ml4.8/15, Error ellipse: s-maj=2.0km s-min=1.0km az=11.0 19 km E of Belluno*
*BNS **09** 02:04:56.3±0.5, 46°.23N×13°.17E, $h10^{km}$, ML4.4*
*BEO **09** 02:04:57.6±0.8, 46°.17N×12°.45E, $h6^{km}\pm3^{km}$*
*IDC **09** 02:04:57.7±1.9, 46°.12N×12°.49E, $h16^{km}\pm11^{km}$, mb4.0/19, mb1 4.1/31, mb1mx4.0/68, mbtmp4.0/31, ML3.9/8, MS3.1/17, Ms1 3.1/17, ms1mx2.9/71, Error ellipse: s-maj=10.4km s-min=8.7km az=47.0*
*PRU **09** 02:04:58.5, 46°.23N×12°.50E, $h4^{km}$*
*BGR **09** 02:05:00.1±0.6, 46°.22N×12°.55E, $h10^{km}$, ML4.6/16, Error ellipse: s-maj=10.0km s-min=5.6km az=1.0*
BGR Felt in Eastern and Northern Tirol and Kaernten and as far as Salzburg and Steiermark.
*STR **09** 02:05:04.1±0.7, 46°.N±3°×1°.2E±°, $h5^{km}$, M4.9/7, mB4.6/3, mb4.6/2, MLv5.0/3, MLv4.9/7, Mw(mB)3.8/3*
*TIR **09** 02:05:59.1, 46°.13N×12°.54E, $h2^{km}$, Md4.5/5*

ISC 09 02:04:57.3±0.6, 46°.18N±0°.01×12°.466E±0°.010, $h13^{km}\pm3^{km}$, n1159, σ1$55/1436, mb4.4/51, 66C-97D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLNI	Malnisio	0.10	104	⇑*e*Pg	Pg	02 04 59.8	-0.6
MLNI				*e*Sg	Sg	02 05 01.9	-0.7
MLNI	Malnisio	0.10	104	*e*Pg	Pg	02 04 59.8	-0.6
MLNI				*e*Sg	Sg	02 05 01.9	-0.7
CIMO	Cimolais	0.14	352	⇓*i* Pg	Pg	02 04 59.9	-0.9
CIMO				*i* Sg	Sg	02 05 01.9	-1.3
CIMO	Cimolais	0.14	352	*i* Pg	Pg	02 04 59.9	-0.9
CIMO				*i* Sg	Sg	02 05 01.9	-1.3
CSO	Casso	0.14	315	⇓*i* Pg	Pg	02 04 60.0	-0.9
CSO				*i* Sg	Sg	02 05 02.1	-1.3
CSO	Casso	0.14	315	*i* Pg	Pg	02 05 00.0	-0.9
CSO				*i* Sg	Sg	02 05 02.1	-1.3
POLC	Polcenigo	0.15	171	⇑*e*P	Pg	02 05 00.7	-0.2
POLC				S	Sb	02 05 04.6	-0.5
POLC	Polcenigo	0.15	171	*e*P	Pg	02 05 00.7	-0.2
POLC				S	Sb	02 05 04.6	-0.5
POLC				AML	AML		
POLC				AML	AML		
POLC				AML	AML		
POLC				AML	AML		
POLC				AML	AML		
POLC				AML	AML		
POLC				AML	AML		
POLC				AML	AML		
CAE	Caneva	0.17	187	⇑*e*Pg	Pg	02 05 00.8	-0.5
CAE				*e*Sg	Sg	02 05 04.2	+0.1
CAE	Caneva	0.17	187	*e*Pg	Pg	02 05 00.8	-0.5
CAE				*e*Sg	Sg	02 05 04.2	+0.1
FRE8	Fregona	0.18	206	⇑*e*P	Pg	02 05 00.9	-0.5
FRE8				S	Sg	02 05 04.3	+0.1
FRE8	Fregona	0.18	206	*e*P	Pg	02 05 00.9	-0.5
FRE8				S	Sg	02 05 04.3	+0.1
FRE8				AML	AML		
FRE8				AML	AML		
FRE8				AML	AML		
FRE8				AML	AML		
FRE8				AML	AML		
FRE8				AML	AML		
STAL	STALIGIAL	0.19	64	⇑*i* P	Pg	02 05 00.0	-1.6
STAL				S	Sg	02 05 04.1	-0.4
STAL	STALIGIAL	0.19	64	*i* P	Pg	02 05 00.9	-0.6
STAL				S	Sg	02 05 04.1	-0.4
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
STAL				AML	AML		
AGOR	Agordo	0.31	290	⇓*e*Pg	Pg	02 05 02.6	-1.0
AGOR				*e*Sg	Sg	02 05 07.1	-0.8
AGOR	Agordo	0.31	290	*e*Pg	Pg	02 05 02.6	-1.0
AGOR				S	Sg	02 05 06.6	-1.3
AGOR				*e*Sg	Sg	02 05 07.1	-0.8
AGOR	Agordo	0.31	290	*i* P	Pg	02 05 02.6	-1.0
AGOR				S	Sg	02 05 06.6	-1.3
AGOR				AML	AML		
	comp=E,64300μm,0.3s						
AGOR				AML	AML		
	comp=N,54250μm,0.3s						
AGOR				AML	AML		
	comp=E,64300μm,0.3s						
AGOR				AML	AML		
	comp=N,54250μm,0.3s						
AGOR				AML	AML		
	comp=E,64300μm,0.3s						
AGOR				AML	AML		
	comp=N,54250μm,0.4s						
AGOR				AML	AML		
	comp=N,54250μm,0.4s						
AGOR				AML	AML		
	comp=E,64300μm,0.3s						
VARN	Col Varnada, M	0.31	234	⇑*e*Pg	Pg	02 05 02.9	-0.8
VARN				*e*Sg	Sg	02 05 07.9	-0.1
VARN	Col Varnada, M	0.31	234	*e*Pg

FVI				AML	AML		
	comp=N,54600µm,0.3s						
FVI				AML	AML		
	comp=E,44000µm,0.8s						
FVI				AML	AML		
	comp=N,54600µm,0.3s						
FVI				AML	AML		
	comp=E,44000µm,0.8s						
FVI				AML	AML		
	comp=N,54600µm,0.3s						
GEPF	**Gemona**	**0.48**	**78**	P	**Pg**	**02 05 06.2**	**-0.5**
GEPF	**Gemona**	**0.48**	**78**	P	**Pg**	**02 05 06.2**	**-0.5**
GEPF				S	**Sb**	**02 05 14.1**	**-0.4**
GEPF				AML	AML		
	comp=E,38850µm,0.3s						
GEPF				AML	AML		
	comp=N,41950µm,0.5s						
GEPF				AML	AML		
	comp=E,38850µm,0.3s						
GEPF				AML	AML		
	comp=N,41950µm,0.5s						
GEPF				AML	AML		
	comp=E,38850µm,0.3s						
GEPF				AML	AML		
	comp=N,41950µm,0.5s						
GEPF				AML	AML		
	comp=E,38850µm,0.3s						
GEPF				AML	AML		
	comp=N,41950µm,0.5s						
TLI	**Talmassons**	**0.51**	**120**‖	*e*Pg	**Pg**	**02 05 06.9**	**-0.4**
TLI	**Talmassons**	**0.51**	**120**	*e*Pg	**Pg**	**02 05 06.9**	**-0.4**
ZOU	**Zoufplan**	**0.52**	**42**‖	*e*Pg	**Pg**	**02 05 06.6**	**-0.9**
ZOU	**Zoufplan**	**0.52**	**42**‖	*e*Pg	**Pg**	**02 05 06.6**	**-0.9**
ZOU	**Zoufplan**	**0.52**	**42**	*e*Pg	**Pg**	**02 05 06.6**	**-0.9**
BAD	**Bernadia**	**0.54**	**83**‖	*e*Pg	**Pg**	**02 05 07.0**	**-1.0**
BAD				*e*Sg	**Sg**	**02 05 15.6**	**+0.4**
BAD	**Bernadia**	**0.54**	**83**	*e*Pg	**Pg**	**02 05 07.0**	**-1.0**
BAD				*e*Sg	**Sg**	**02 05 15.6**	**+0.4**
CGRP	**Cima Grappa**	**0.55**	**238**⇑	*e*Pg	**Pg**	**02 05 06.7**	**-1.3**
CGRP				*e*Sg	**Sb**	**02 05 16.6**	**-0.2**
CGRP	**Cima Grappa**	**0.55**	**238**	P	**Pg**	**02 05 06.8**	**-1.3**
CGRP				*e*Sg	**Sb**	**02 05 16.6**	**-0.2**
CGRP	**Cima Grappa**	**0.55**	**238**	P	**Pg**	**02 05 06.8**	**-1.3**
CGRP				S	**Sb**	**02 05 16.7**	**-0.1**
CGRP				AML	AML		
	comp=E,41800µm,1.0s						
CGRP				AML	AML		
	comp=N,38150µm,0.6s						
CGRP				AML	AML		
	comp=E,41800µm,1.0s						
CGRP				AML	AML		
	comp=N,38150µm,0.6s						
CGRP				AML	AML		
	comp=E,41800µm,1.0s						
CGRP				AML	AML		
	comp=N,38150µm,0.6s						
CGRP				AML	AML		
	comp=E,41800µm,1.0s						
CGRP				AML	AML		
	comp=N,38150µm,0.6s						
VINO	**Villanova**	**0.57**	**82**‖	*e*Pg	**Pg**	**02 05 07.3**	**-1.2**
VINO	**Villanova**	**0.57**	**82**	*e*Pg	**Pg**	**02 05 07.3**	**-1.2**
VINO	**Villanova**	**0.57**	**82**⇑	*e*P	**Pg**	**02 05 07.6**	**-0.9**
VINO				S	**Sb**	**02 05 16.8**	**-0.5**
VINO	**Villanova**	**0.57**	**82**	*e*P	**Pg**	**02 05 07.6**	**-0.9**
VINO				S	**Sb**	**02 05 16.8**	**-0.5**
VINO				AML	AML		
	comp=E,14650µm,0.2s						
VINO				AML	AML		
	comp=N,28000µm,0.6s						
VINO				AML	AML		
	comp=E,14650µm,0.2s						
VINO				AML	AML		
	comp=N,28000µm,0.6s						
VINO				AML	AML		
	comp=E,14650µm,0.2s						
VINO				AML	AML		
	comp=N,28000µm,0.6s						
VINO				AML	AML		
	comp=N,28000µm,0.6s						
VINO				AML	AML		
	comp=E,14650µm,0.2s						
ABTA	**Abfaltersbach**	**0.57**	**3**	*e*Pg	**Pg**	**02 05 07.7**	**-0.8**
	comp=E,207nm,0.1s,SNR=1049						
ABTA				*e*Sg	**Sg**	**02 05 16.2**	**+0.1**
	comp=E,3µm,0.2s						
ABTA	**Abfaltersbach**	**0.57**	**3**	Pg	**Pg**	**02 05 07.7**	**-0.8**
	comp=E,207nm,0.1s,SNR=1000						
ABTA				Sg	**Sg**	**02 05 16.2**	**+0.1**
	comp=E,3µm,0.2s						
CTI	**Castel Tesino**	**0.58**	**258**	P	**Pg**	**02 05 07.2**	**-1.5**
CTI	**Castel Tesino**	**0.58**	**258**	P	**Pg**	**02 05 07.2**	**-1.5**
CTI	**Castel Tesino**	**0.58**	**258**	P	**Pg**	**02 05 07.4**	**-1.3**
CTI	**Castel Tesino**	**0.58**	**258**	P	**Pg**	**02 05 07.4**	**-1.3**
CTI				AML	AML		
	comp=E,54850µm,0.3s						
CTI				AML	AML		
	comp=N,66350µm,0.3s						
CTI				AML	AML		
	comp=E,54850µm,0.3s						
CTI				AML	AML		
	comp=N,66350µm,0.3s						
CTI				AML	AML		
	comp=E,54850µm,0.3s						
CTI				AML	AML		
	comp=N,66350µm,0.3s						
CTI				AML	AML		
	comp=N,66350µm,0.3s						
CTI				AML	AML		
	comp=E,54850µm,0.3s						
PLRO	**Paularo**	**0.60**	**51**	*e*Pg	**Pg**	**02 05 08.2**	**-0.9**
PLRO	**Paularo**	**0.60**	**51**	*e*Pg	**Pg**	**02 05 08.2**	**-0.9**
COLI	**Coloredo**	**0.64**	**94**	*e*Pg	**Pg**	**02 05 08.9**	**-0.8**
COLI	**Coloredo**	**0.64**	**94**	*e*Pg	**Pg**	**02 05 08.9**	**-0.8**
PTCC	**Patocco-Chiusa**	**0.66**	**69**	P	**Pg**	**02 05 07.1**	**-3.0**
PTCC	**Patocco-Chiusa**	**0.66**	**69**	P	**Pg**	**02 05 08.9**	**-1.2**
PTCC				S	**Sb**	**02 05 19.3**	**-0.4**
PTCC	**Patocco-Chiusa**	**0.66**	**69**	P	**Pg**	**02 05 08.9**	**-1.2**
PTCC				S	**Sb**	**02 05 19.3**	**-0.4**
PTCC				AML	AML		
	comp=E,12650µm,0.9s						
PTCC				AML	AML		
	comp=N,10650µm,0.5s						
PTCC				AML	AML		
	comp=E,12650µm,0.9s						
PTCC				AML	AML		
	comp=N,10650µm,0.5s						
PTCC				AML	AML		
	comp=N,10650µm,0.5s						
PTCC				AML	AML		
	comp=E,12650µm,0.9s						
IESO	**Jesolo**	**0.66**	**175**⇑	*e*Pg	**Pb**	**02 05 10.4**	**-0.2**
IESO	**Jesolo**	**0.66**	**175**	*e*Pg	**Pb**	**02 05 10.4**	**-0.2**
ROBS	**Robic**	**0.73**	**84**	*i* Pg	**Pg**	**02 05 09.8**	**-1.6**
ROBS				*i* Sg	**Sg**	**02 05 20.4**	**-0.6**
	comp=Z,1µm,0.1s						
ROBS	**Robic**	**0.73**	**84**	Pg	**Pg**	**02 05 09.8**	**-1.6**
ROBS				*i* Sg	**Sg**	**02 05 20.4**	**-0.6**
	comp=Z,1µm,0.1s						
LSR	**Lussari**	**0.80**	**67**⇑	*e*Pg	**Pg**	**02 05 11.5**	**-1.2**
LSR	**Lussari**	**0.80**	**67**	*e*Pg	**Pg**	**02 05 11.5**	**-1.2**
PANI	**Panarotta**	**0.80**	**261**	*e*Pg	**Pg**	**02 05 11.4**	**-1.4**
KOSI	**Kohlern**	**0.81**	**291**‖	*e*P	**Pg**	**02 05 12.0**	**-0.9**
KOSI				S	**Sg**	**02 05 23.8**	**+0.3**
KOSI	**Kohlern**	**0.81**	**291**	*e*P	**Pg**	**02 05 12.0**	**-0.9**
KOSI				S	**Sg**	**02 05 23.8**	**+0.3**
KOSI				AML	AML		
	comp=E,39900µm,1.2s						
KOSI				AML	AML		
	comp=N,42250µm,0.4s						
KOSI				AML	AML		
	comp=E,39900µm,1.2s						
KOSI				AML	AML		
	comp=N,42250µm,0.4s						
KOSI				AML	AML		
	comp=N,42250µm,0.4s						
KOSI				AML	AML		
	comp=E,39900µm,1.2s						
PRED	**Cave del Predi**	**0.81**	**70**⇑	*e*Pg	**Pg**	**02 05 11.4**	**-1.5**
PRED				*e*Sg	**Sg**	**02 05 23.6**	**+0.1**
PRED	**Cave del Predi**	**0.81**	**70**	*e*Pg	**Pg**	**02 05 11.4**	**-1.5**
PRED				*e*Sg	**Sg**	**02 05 23.6**	**+0.1**
SABO	**M.te Sabotino**	**0.81**	**104**⇑	*e*Pg	**Pg**	**02 05 12.2**	**-0.8**
SABO	**M.te Sabotino**	**0.81**	**104**	*e*Pg	**Pg**	**02 05 12.2**	**-0.8**
SABO	**M.te Sabotino**	**0.81**	**104**	P	**Pg**	**02 05 12.7**	**-0.3**
SABO	**M.te Sabotino**	**0.81**	**104**	P	**Pg**	**02 05 12.7**	**-0.3**
SABO				AML	AML		
	comp=E,25150µm,0.8s						
SABO				AML	AML		
	comp=N,39700µm,0.4s						
SABO				AML	AML		
	comp=E,25150µm,0.8s						
SABO				AML	AML		
	comp=N,39700µm,0.4s						
SABO				AML	AML		
	comp=E,25150µm,0.8s						
SABO				AML	AML		
	comp=N,39700µm,0.4s						
ACOM	**Acomizza, Ital**	**0.81**	**62**⇑	*e*Pg	**Pg**	**02 05 12.0**	**-1.1**
ACOM				*e*Sg	**Sb**	**02 05 24.8**	**+0.4**
ACOM	**Acomizza, Ital**	**0.81**	**62**	P	**Pg**	**02 05 12.2**	**-0.9**
ACOM				*e*Sg	**Sb**	**02 05 24.8**	**+0.4**
ACOM	**Acomizza, Ital**	**0.81**	**62**	P	**Pg**	**02 05 12.2**	**-0.9**
ACOM				AML	AML		
	comp=E,35150µm,1.0s						
ACOM				AML	AML		
	comp=N,33200µm,0.7s						
ACOM				AML	AML		
	comp=E,35150µm,1.0s						
ACOM				AML	AML		
	comp=N,33200µm,0.7s						
ACOM				AML	AML		
	comp=E,35150µm,1.0s						
ACOM				AML	AML		
	comp=N,33200µm,0.7s						
RISI	**Rein**	**0.82**	**341**‖	*e*P	**Pg**	**02 05 12.3**	**-0.8**
RISI	**Rein**	**0.82**	**341**	*e*P	**Pg**	**02 05 12.3**	**-0.8**
RISI				AML	AML		
	comp=E,30000µm,0.4s						
RISI				AML	AML		
	comp=N,34950µm,0.6s						
RISI				AML	AML		
	comp=E,30000µm,0.4s						
RISI				AML	AML		
	comp=N,34950µm,0.6s						
RISI				AML	AML		
	comp=E,30000µm,0.4s						
RISI				AML	AML		
	comp=N,34950µm,0.6s						
DRE	**Drenchia**	**0.82**	**90**	*e*Pg	**Pg**	**02 05 11.9**	**-1.2**
DRE	**Drenchia**	**0.82**	**90**	*e*Pg	**Pg**	**02 05 11.9**	**-1.2**
BOSI	**Bolzano**	**0.86**	**292**	P	**Pg**	**02 05 13.4**	**-0.4**
BOSI	**Bolzano**	**0.86**	**292**	P	**Pg**	**02 05 13.4**	**-0.4**
BOSI				AML	AML		
	comp=E,52600µm,0.9s						
BOSI				AML	AML		
	comp=N,93000µm,0.4s						
BOSI				AML	AML		
	comp=E,52600µm,0.9s						
BOSI				AML	AML		
	comp=N,93000µm,0.4s						
BOSI				AML	AML		
	comp=N,93000µm,0.4s						
BOSI				AML	AML		
	comp=E,52600µm,0.9s						
APPI	**Appiano**	**0.91**	**290**	P	**Pg**	**02 05 13.8**	**-1.1**
APPI	**Appiano**	**0.91**	**290**‖	*e*P	**Pg**	**02 05 13.8**	**-1.1**
APPI	**Appiano**	**0.91**	**290**	*e*P	**Pg**	**02 05 13.8**	**-1.1**
APPI				AML	AML		
	comp=E,20700µm,0.4s						
APPI				AML	AML		
	comp=N,21100µm,0.4s						
APPI				AML	AML		
	comp=E,20700µm,0.4s						
APPI				AML	AML		
	comp=N,21100µm,0.4s						
APPI				AML	AML		
	comp=N,21100µm,0.4s						
APPI				AML	AML		
	comp=E,20700µm,0.4s						
MYKA	**Terra Mystica**	**0.93**	**60**	*e*Pg	**Pg**	**02 05 14.1**	**-1.2**
	comp=E,365nm,0.3s,SNR=258						
MYKA				*e*Sg	**Sb**	**02 05 28.4**	**+0.7**
	comp=E,2µm,0.3s						
MYKA	**Terra Mystica**	**0.93**	**60**	Pg	**Pg**	**02 05 14.1**	**-1.2**
	comp=E,365nm,0.3s,SNR=258						
MYKA				Sg	**Sb**	**02 05 28.4**	**+0.7**
	comp=E,2µm,0.3s						
ABSI	**Aberstueckl**	**0.97**	**305**‖	*e*P	**Pg**	**02 05 14.8**	**-1.2**
ABSI				S	**Sb**	**02 05 29.0**	**+0.2**
ABSI	**Aberstueckl**	**0.97**	**305**	*e*P	**Pg**	**02 05 14.8**	**-1.2**
ABSI				S	**Sb**	**02 05 29.0**	**+0.2**
ABSI				AML	AML		
	comp=E,53400µm,0.5s						
ABSI				AML	AML		
	comp=N,37250µm,0.6s						
ABSI				AML	AML		
	comp=E,53400µm,0.5s						
ABSI				AML	AML		
	comp=N,37250µm,0.6s						
ABSI				AML	AML		
	comp=E,53400µm,0.5s						
ABSI				AML	AML		
	comp=N,37250µm,0.6s						
TEOL	**Teolo**	**0.99**	**215**	P	**Pb**	**02 05 16.1**	**-0.1**
TEOL	**Teolo**	**0.99**	**215**	P	**Pb**	**02 05 16.1**	**-0.1**
TEOL	**Teolo**	**0.99**	**215**	P	**Pb**	**02 05 16.2**	**-0.1**
TEOL				AML	AML		
TEOL				AML	AML		
TEOL				AML	AML		
TEOL				AML	AML		
TEOL				AML	AML		
TEOL				AML	AML		
TRI	**Trieste**	**1.02**	**117**	*e*Pg	**Pb**	**02 05 16.4**	**-0.4**
TRI	**Trieste**	**1.02**	**117**	*e*P	**Pb**	**02 05 16.4**	**-0.4**
TRI	**Trieste**	**1.02**	**117**	P	**Pb**	**02 05 15.9**	**-0.9**
TRI	**Trieste**	**1.02**	**117**	*e*Pg	**Pb**	**02 05 16.4**	**-0.4**
TRI	**Trieste**	**1.02**	**117**	P	**Pb**	**02 05 15.9**	**-0.9**
TRI				AML	AML		
	comp=E,20450µm,0.4s						
TRI				AML	AML		
	comp=N,17900µm,0.3s						
TRI				AML	AML		
	comp=E,20450µm,0.4s						
TRI				AML	AML		
	comp=N,17900µm,0.3s						
TRI				AML	AML		
	comp=E,20450µm,0.4s						
TRI				AML	AML		
	comp=N,17900µm,0.3s						
MARN	**Marana (Italy)**	**1.03**	**239**	*e*Pg	**Pb**	**02 05 16.5**	**-0.5**
MARN	**Marana (Italy)**	**1.03**	**239**	*e*Pg	**Pb**	**02 05 16.5**	**-0.5**
ROSI	**Rosskopf**	**1.05**	**316**‖	*e*P	**Pb**	**02 05 16.6**	**-0.8**
ROSI	**Rosskopf**	**1.05**	**316**	*e*P	**Pb**	**02 05 16.6**	**-0.8**
ROSI				AML	AML		
	comp=E,29200µm,0.9s						
ROSI				AML	AML		
	comp=N,24650µm,0.4s						
ROSI				AML	AML		
	comp=E,29200µm,0.9s						
ROSI				AML	AML		
	comp=N,24650µm,0.4s						
ROSI				AML	AML		
	comp=N,24650µm,0.4s						
ROSI				AML	AML		
	comp=E,29200µm,0.9s						
KBA	**Koelnbreinsper**	**1.09**	**34**	*e*Sg	**Sg**	**02 05 32.4**	**0.0**
KBA	**Koelnbreinsper**	**1.09**	**34**	*e*Pg	**Pn**	**02 05 18.4**	**0.0**
	comp=E,549nm,0.2s,SNR=593						
KBA				*e*Sg	**Sg**	**02 05 32.4**	**0.0**
	comp=E,1µm,0.3s						
KBA	**Koelnbreinsper**	**1.09**	**34**	P	**Pn**	**02 05 18.4**	**0.0**
KBA	**Koelnbreinsper**	**1.09**	**34**	Pg	**Pn**	**02 05 18.4**	**0.0**
	comp=E,549nm,0.2s,SNR=593						
KBA				Sg	**Sg**	**02 05 32.4**	**0.0**
	comp=E,1µm,0.3s						
ROVR	**Rover¯¤ Verone**	**1.11**	**242**	P	**Pb**	**02 05 17.8**	**-0.6**
ROVR	**Rover¯¤ Verone**	**1.11**	**242**	P	**Pb**	**02 05 17.8**	**-0.6**
ROVR				AML	AML		
	comp=E,20500µm,0.4s						
ROVR				AML	AML		
	comp=N,50200µm,0.3s						
ROVR				AML	AML		
	comp=E,20500µm,0.4s						
ROVR				AML	AML		
	comp=N,50200µm,0.3s						
ROVR				AML	AML		
	comp=N,50200µm,0.3s						
ROVR				AML	AML		
	comp=E,20500µm,0.4s						
TREG	**Tregnago**	**1.12**	**235**	P	**Pg**	**02 05 19.2**	**+0.3**
TREG	**Tregnago**	**1.12**	**235**	P	**Pg**	**02 05 19.2**	**+0.3**
TREG				AML	AML		
	comp=E,22350µm,1.3s						
TREG				AML	AML		
	comp=N,45750µm,0.2s						
TREG				AML	AML		
	comp=E,22350µm,1.3s						
TREG				AML	AML		
	comp=N,45700µm,0.2s						
TREG				AML	AML		
	comp=N,45700µm,0.2s						
TREG				AML	AML		
	comp=E,22350µm,1.3s						
WTTA	**Wattenberg**	**1.23**	**333**	*e*Pg	**Pn**	**02 05 20.3**	**-0.2**
	comp=E,544nm,0.3s,SNR=502						
WTTA				*e*Sg	**Sg**	**02 05 38.0**	**+1.0**
	comp=E,6µm,0.7s						
WTTA	**Wattenberg**	**1.23**	**333**	P	**Pn**	**02 05 20.2**	**-0.2**
WTTA				Sg	**Sg**	**02 05 38.0**	**+1.0**
	comp=E,6µm,0.7s						
WTTA	**Wattenberg**	**1.23**	**333**	P	**Pn**	**02 05 20.2**	**-0.2**
WTTA				AML	AML		
	comp=E,15450µm,0.5s						
WTTA				AML	AML		
	comp=N,10535µm,0.5s						
WTTA				AML	AML		
	comp=N,10535µm,0.5s						
WTTA				AML	AML		
	comp=E,15450µm,0.5s						
BALD	**Monte Baldo**	**1.25**	**247**	*e*Pg	**Pn**	**02 05 20.4**	**-0.3**
BALD				*e*Sg	**Sg**	**02 05 38.1**	**+0.5**
BALD	**Monte Baldo**	**1.25**	**247**	*e*Pg	**Pn**	**02 05 20.4**	**-0.3**
BALD				*e*Sg	**Sg**	**02 05 38.2**	**+0.5**
CRNS	**Crni Vrh**	**1.25**	**94**	*i* Pn	**Pn**	**02 05 19.2**	**-1.3**
CRNS				*i* Sn	**Sg**	**02 05 39.0**	**+1.4**
	comp=Z,3µm,0.2s						
CRNS	**Crni Vrh**	**1.25**	**94**	*i* Pn	**Pn**	**02 05 19.2**	**-1.3**
CRNS				*i* Sn	**Sg**	**02 05 39.0**	**+1.4**
	comp=Z,3µm,0.2s						
ZEN8	**San Zeno di Mo**	**1.32**	**247**	P	**Pn**	**02 05 21.7**	**+0.1**
ZEN8				S	**Sg**	**02 05 40.2**	**+0.2**
ZEN8	**San Zeno di Mo**	**1.32**	**247**	P	**Pn**	**02 05 21.7**	**+0.1**
ZEN8				S	**Sg**	**02 05 40.2**	**+0.2**
MAGA	**Magasa**	**1.34**	**253**	P	**Pn**	**02 05 22.1**	**+0.2**
MAGA	**Magasa**	**1.34**	**253**⇑	*i* P	**Pg**	**02 05 22.9**	**-0.2**
MAGA				S	**Sg**	**02 05 41.6**	**+1.1**
MAGA	**Magasa**	**1.34**	**253**	*i* P	**Pg**	**02 05 22.9**	**-0.2**
MAGA				S	**Sg**	**02 05 41.6**	**+1.1**
MAGA				AML	AML		
	comp=E,88650µm,0.5s						
MAGA				AML	AML		
	comp=N,71950µm,0.4s						
MAGA				AML	AML		
	comp=E,88650µm,0.5s						
MAGA				AML	AML		
	comp=N,71950µm,0.4s						
MAGA				AML	AML		
	comp=N,71950µm,0.4s						
MAGA				AML	AML		
	comp=E,88650µm,0.5s						
MABI	**Malga Bissina**	**1.36**	**266**	P	**Pb**	**02 05 22.6**	**-0.2**
MABI	**Malga Bissina**	**1.36**	**266**	P	**Pg**	**02 05 23.3**	**-0.2**
MABI	**Malga Bissina**	**1.36**	**266**	P	**Pg**	**02 05 23.3**	**-0.2**
MABI				AML	AML		
	comp=E,18200µm,0.4s						
MABI				AML	AML		
	comp=N,19350µm,0.3s						
MABI				AML	AML		
	comp=N,19350µm,0.3s						
MABI				AML	AML		
	comp=E,18200µm,0.4s						
MOSI	**Grossmontoni**	**1.40**	**289**	P	**Pn**	**02 05 22.0**	**-0.7**
MOSI	**Grossmontoni**	**1.40**	**289**	P	**Pn**	**02 05 22.9**	**+0.2**
MOSI				AML	AML		
	comp=E,39100µm,0.5s						
MOSI				AML	AML		
	comp=N,59600µm,0.5s						
MOSI				AML	AML		
	comp=E,39100µm,0.5s						
MOSI				AML	AML		
	comp=N,59600µm,0.5s						
MOSI				AML	AML		
	comp=E,39100µm,0.5s						
MOSI				AML	AML		
	comp=N,59600µm,0.5s						
SERM	**Sermide**	**1.43**	**216**	P	**Pg**	**02 05 24.4**	**-0.2**
SERM	**Sermide**	**1.43**	**216**	P	**Pg**	**02 05 24.4**	**-0.2**
SERM				AML	AML		
	comp=E,11950µm,1.0s						
SERM				AML	AML		
	comp=N,10220µm,0.4s						
SERM				AML	AML		
	comp=E,21650µm,0.7s						
SERM				AML	AML		
	comp=N,15150µm,0.4s						
SERM				AML	AML		
	comp=E,11950µm,1.0s						
SERM				AML	AML		
	comp=N,10250µm,0.4s						
SERM				AML	AML		
	comp=E,21700µm,0.7s						
SERM				AML	AML		
	comp=N,15150µm,0.4s						
SERM				AML	AML		
	comp=E,11950µm,1.0s						
SERM				AML	AML		
	comp=E,21700µm,0.7s						
SERM				AML	AML		
	comp=N,15150µm,0.4s						
SERM				AML	AML		
	comp=N,10250µm,0.4s						
T0821	**Loc. Casaglia**	**1.43**	**207**	AML	AML		
	comp=E,52400µm,0.7s						
T0821				AML	AML		
	comp=E,52400µm,0.7s						
T0821				AML	AML		
	comp=N,35350µm,0.5s						
T0821				AML	AML		
	comp=E,52500µm,0.6s						
T0821				AML	AML		
	comp=N,37050µm,0.5s						
T0821				AML	AML		
	comp=E,52500µm,0.6s						
T0821				AML	AML		
	comp=N,35350µm,0.5s						
T0821				AML	AML		
	comp=N,37050µm,0.5s						
GAZZ	**Gazzo Veronese**	**1.43**	**223**	*e*Pg	**Pb**	**02 05 23.9**	**+0.1**
GAZZ	**Gazzo Veronese**	**1.43**	**223**	*e*Pg	**Pb**	**02 05 23.9**	**+0.1**
CEY	**Cerknica**	**1.44**	**107**‖	*i* Pg	**Pb**	**02 05 23.7**	**-0.2**
CEY				*e*Sg	**Sg**	**02 05 43.8**	**+0.3**
CEY	**Cerknica**	**1.44**	**107**‖	*i* Pg	**Pb**	**02 05 23.7**	**-0.2**
CEY				*e*Sg	**Sg**	**02 05 43.8**	**+0.3**
BAG8	**Bagolino**	**1.44**	**256**	P	**Pg**	**02 05 24.9**	**0.0**
BAG8	**Bagolino**	**1.44**	**256**	P	**Pg**	**02 05 24.9**	**0.0**
LJU	**Ljubljana**	**1.44**	**95**‖	*i* Pg	**Pb**	**02 05 24.2**	**+0.2**
LJU				*e*Sg	**Sg**	**02 05 44.2**	**+0.6**
LJU	**Ljubljana**	**1.44**	**95**‖	*i* Pn	**Pb**	**02 05 24.2**	**+0.2**
LJU				*e*Sg	**Sg**	**02 05 44.2**	**+0.6**
LJU	**Ljubljana**	**1.44**	**95**	P	**Pb**	**02 05 24.2**	**+0.2**
LJU				AML	AML		
	comp=E,43650µm,0.6s						
LJU				AML	AML		
	comp=N,51500µm,0.5s						
LJU				AML	AML		
	comp=E,43650µm,0.6s						
LJU				AML	AML		
	comp=N,51500µm,0.5s						
FETA	**Feichten**	**1.47**	**306**	*e*Pg	**Pb**	**02 05 24.1**	**-0.4**
	comp=N,902nm,0.4s,SNR=701						
FETA				Sg	**Sg**	**02 05 44.0**	**-0.5**
	comp=N,4µm,0.6s						
FETA	**Feichten**	**1.47**	**306**	Pg	**Pb**	**02 05 24.1**	**-0.4**
	comp=N,902nm,0.4s,SNR=701						
FETA				Sg	**Sg**	**02 05 44.0**	**-0.5**
	comp=N,4µm,0.6s						
SALO	**Salr**	**1.47**	**248**	P	**Pb**	**02 05 24.4**	**0.0**
SALO	**Salr**	**1.47**	**248**	P	**Pb**	**02 05 24.4**	**0.0**
SALO				AML	AML		
	comp=E,26550µm,0.7s						
SALO				AML	AML		
	comp=N,21000µm,1.1s						
SALO				AML	AML		
	comp=E,26550µm,0.7s						
SALO				AML	AML		
	comp=N,21000µm,1.1s						

SALO				AML	AML	
	comp=E,26550µm,0.7s					
SALO				AML	AML	
	comp=N,21000µm,1.1s					
VOBA	**Vobarno**	**1.47 249**		P	**Pb**	**02 05 24.9 +0.4**
VOBA	**Vobarno**	**1.47 249**		P	**Pb**	**02 05 24.9 +0.4**
VOBA				AML	AML	
	comp=E,27100µm,0.5s					
VOBA				AML	AML	
	comp=N,20000µm,0.5s					
VOBA				AML	AML	
	comp=N,20000µm,0.5s					
VOBA				AML	AML	
	comp=E,27100µm,0.5s					
BRMO	**Bormio**	**1.48 282**		P	**Pn**	**02 05 22.6 -1.2**
BRMO	**Bormio**	**1.48 282**		P	**Pb**	**02 05 24.4 -0.4**
BRMO	**Bormio**	**1.48 282**		P	**Pb**	**02 05 24.4 -0.4**
BRMO				AML	AML	
	comp=E,9230µm,1.1s					
BRMO				AML	AML	
	comp=N,10325µm,0.6s					
BRMO				AML	AML	
	comp=E,9230µm,1.1s					
BRMO				AML	AML	
	comp=N,10325µm,0.6s					
BRMO				AML	AML	
	comp=N,10325µm,0.6s					
BRMO				AML	AML	
	comp=E,9230µm,1.1s					
OBKA	**Obir**	**1.48 76**	*e*Pn		**Pn**	**02 05 24.0 +0.3**
OBKA			*e*Sg		**Sg**	**02 05 45.7 +0.8**
OBKA	**Obir**	**1.48 76**	*e*Pg		**Pb**	**02 05 24.9 +0.2**
	comp=E,570nm,0.3s,SNR=382					
OBKA			Sg		**Sg**	**02 05 45.5 +0.5**
	comp=E,3µm,0.3s					
OBKA	**Obir**	**1.48 76**	Pn		**Pn**	**02 05 24.0 +0.3**
OBKA	**Obir**	**1.48 76**	Pg		**Pb**	**02 05 24.9 +0.2**
	comp=E,570nm,0.3s,SNR=382					
OBKA			Sg		**Sg**	**02 05 45.5 +0.5**
	comp=E,3µm,0.3s					
MOTA	**Moosalm**	**1.50 322**	*e*Pg		**Pn**	**02 05 24.5 +0.5**
	SNR=1486					
MOTA			*e*Sg		**Sg**	**02 05 44.8 -0.7**
	comp=E,3µm,0.6s					
MOTA	**Moosalm**	**1.50 322**	Pg		**Pn**	**02 05 24.5 +0.5**
	SNR=1000					
MOTA			Sg		**Sg**	**02 05 44.8 -0.7**
	comp=E,3µm,0.6s					
T0820	**Chiesuoi del F**	**1.52 205**		AML	AML	
	comp=E,22000µm,1.3s					
T0820				AML	AML	
	comp=E,22000µm,1.3s					
T0820				AML	AML	
	comp=N,17200µm,0.6s					
T0820				AML	AML	
	comp=E,20550µm,0.8s					
T0820				AML	AML	
	comp=N,18350µm,0.5s					
T0820				AML	AML	
	comp=E,20550µm,0.8s					
T0820				AML	AML	
	comp=N,18350µm,0.5s					
T0820				AML	AML	
	comp=N,17200µm,0.6s					
T0822	**Casumaru (Bond**	**1.56 211**		P	**Pb**	**02 05 25.5 -0.5**
T0822	**Casumaru (Bond**	**1.56 211**		P	**Pb**	**02 05 25.5 -0.5**
T0822				AML	AML	
	comp=E,18000µm,0.6s					
T0822				AML	AML	
	comp=N,16000µm,1.3s					
T0822				AML	AML	
	comp=E,18000µm,0.6s					
T0822				AML	AML	
	comp=N,16000µm,1.3s					
RJOB	**Jochberg**	**1.58 8**	*e*Pn		**Pb**	**02 05 25.9 -0.5**
RJOB	**Jochberg**	**1.58 8**	Pn		**Pb**	**02 05 25.9 -0.5**
T0800	**Massa Finalese**	**1.58 213**		P	**Pn**	**02 05 25.4 +0.4**
T0800	**Massa Finalese**	**1.58 213**		P	**Pn**	**02 05 25.4 +0.4**
T0800				AML	AML	
	comp=E,16800µm,1.0s					
T0800				AML	AML	
	comp=N,19500µm,0.4s					
T0800				AML	AML	
	comp=E,16500µm,1.0s					
T0800				AML	AML	
	comp=N,19200µm,0.7s					
T0800				AML	AML	
	comp=E,16750µm,1.0s					
T0800				AML	AML	
	comp=N,19450µm,0.4s					
T0800				AML	AML	
	comp=E,16450µm,1.0s					
T0800				AML	AML	
	comp=N,19250µm,0.7s					
T0800				AML	AML	
	comp=E,16750µm,1.0s					
T0800				AML	AML	
	comp=E,16450µm,1.0s					
T0800				AML	AML	
	comp=N,19450µm,0.4s					
T0800				AML	AML	
	comp=N,19250µm,0.7s					
FUORN	**Ofenpass-Fuorn**	**1.59 287**	*e*Pn		**Pb**	**02 05 26.0 -0.6**
FUORN	**Ofenpass-Fuorn**	**1.59 287**	*e*Pn		**Pb**	**02 05 26.0 -0.6**
FUORN	**Ofenpass-Fuorn**	**1.59 287**	⇓*e*P		**Pb**	**02 05 26.4 -0.2**
FUORN	**Ofenpass-Fuorn**	**1.59 287**	*e*P		**Pb**	**02 05 26.4 -0.2**
BOTT	**Botticino**	**1.63 248**		P	**Pb**	**02 05 26.5 -0.7**
BOTT	**Botticino**	**1.63 248**		P	**Pb**	**02 05 26.5 -0.7**
BOTT				AML	AML	
	comp=E,9495µm,0.4s					
BOTT				AML	AML	
	comp=N,10740µm,0.4s					
BOTT				AML	AML	
	comp=E,9495µm,0.4s					
BOTT				AML	AML	
	comp=N,10740µm,0.4s					
RIY	**Rijeka**	**1.65 120**	⇓*i*Pg		**Pn**	**02 05 26.6 +0.7**
RIY			*e*Sg		**Sb**	**02 05 49.0 +0.8**
CMPO	**Campotto Po**	**1.66 197**	⇓*e*P		**Pn**	**02 05 26.8 +0.7**
CMPO	**Campotto Po**	**1.66 197**	*e*P		**Pn**	**02 05 26.8 +0.7**
CMPO				AML	AML	
	comp=E,20500µm,0.8s					
CMPO				AML	AML	
	comp=N,18050µm,1.0s					
CMPO				AML	AML	
	comp=E,20500µm,0.8s					
CMPO				AML	AML	
	comp=N,18050µm,1.0s					
FIU	**Minerbio Fiu**	**1.68 204**		P	**Pn**	**02 05 26.9 +0.5**
FIU	**Minerbio Fiu**	**1.68 204**		P	**Pn**	**02 05 26.9 +0.5**
FIU				AML	AML	
	comp=E,13750µm,0.7s					
FIU				AML	AML	
	comp=N,12900µm,1.2s					
FIU				AML	AML	
	comp=N,12900µm,1.2s					
FIU				AML	AML	
	comp=E,13750µm,0.7s					
NDIM	**Novi di Modena**	**1.69 221**		AML	AML	
	comp=E,18850µm,1.2s					
NDIM				AML	AML	
	comp=E,18850µm,1.2s					
NDIM				AML	AML	
	comp=N,21700µm,1.1s					
NDIM				AML	AML	
	comp=E,18850µm,1.2s					
NDIM				AML	AML	
	comp=N,21750µm,1.1s					
NDIM				AML	AML	
	comp=E,18850µm,1.2s					
NDIM				AML	AML	
	comp=N,21750µm,1.1s					
NDIM				AML	AML	
	comp=N,21700µm,1.1s					
VISS	**Visnje**	**1.70 102**	*i* Pn		**Pb**	**02 05 27.7 -0.7**
VISS			*e*Sn		**Sb**	**02 05 50.1 +0.5**
	comp=Z,5µm,0.4s					
VISS	**Visnje**	**1.70 102**	*i* Pn		**Pb**	**02 05 27.7 -0.7**
VISS			*e*Sn		**Sb**	**02 05 50.1 +0.5**
	comp=Z,5µm,0.4s					
RAVA	**Ravarino**	**1.71 214**		P	**Pb**	**02 05 28.2 -0.3**
RAVA	**Ravarino**	**1.71 214**		P	**Pb**	**02 05 28.2 -0.3**
RAVA				AML	AML	
	comp=E,18550µm,0.4s					
RAVA				AML	AML	
	comp=N,16450µm,0.7s					
RAVA				AML	AML	
	comp=N,16450µm,0.7s					
RAVA				AML	AML	
	comp=E,18550µm,0.4s					
BERNI	**Berninapass**	**1.71 279**		P	**Pb**	**02 05 28.7 -0.1**
BERNI	**Berninapass**	**1.71 279**		P	**Pb**	**02 05 28.7 -0.1**
RETA	**Reutte**	**1.76 319**	*e*Pg		**Pg**	**02 05 30.3 -0.7**
	comp=E,1µm,0.6s,SNR=486					
RETA			*e*Sg		**Sg**	**02 05 55.6 +1.8**
	comp=E,5µm,0.8s					
RETA	**Reutte**	**1.76 319**	Pg		**Pg**	**02 05 30.3 -0.7**
	comp=E,1µm,0.6s,SNR=486					
RETA			Sg		**Sg**	**02 05 55.6 +1.8**
	comp=E,5µm,0.8s					
SOKA	**Soboth**	**1.84 73**	*e*Pn		**Pb**	**02 05 30.0 -0.9**
	comp=E,204nm,0.3s,SNR=161					
SOKA			*e*Sg		**Sg**	**02 05 57.8 +1.2**
	comp=E,787nm,0.4s					
SOKA	**Soboth**	**1.84 73**	Pn		**Pb**	**02 05 30.0 -0.9**
	comp=E,204nm,0.3s,SNR=161					
SOKA			Sg		**Sg**	**02 05 57.8 +1.2**
	comp=E,787nm,0.4s					
NOVE	**Novellara**	**1.85 222**		P	**Pn**	**02 05 29.4 +0.8**
NOVE	**Novellara**	**1.85 222**		P	**Pn**	**02 05 29.4 +0.8**
NOVE				AML	AML	
	comp=E,11850µm,1.1s					
NOVE				AML	AML	
	comp=N,15350µm,0.4s					
NOVE				AML	AML	
	comp=N,15350µm,0.4s					
NOVE				AML	AML	
	comp=E,11850µm,1.1s					
DAVOX	**Davos/Dischmat**	**1.89 290**		P	**Pb**	**02 05 31.3 -0.4**
DAVOX	**Davos/Dischmat**	**1.89 290**		P	**Pb**	**02 05 31.3 -0.4**
DAVOX	**Davos/Dischmat**	**1.89 290**		P	**Pb**	**02 05 31.3 -0.4**
IMOL	**Imola, Italy**	**1.89 196**		P	**Pb**	**02 05 30.6 -1.0**
IMOL	**Imola, Italy**	**1.89 196**		P	**Pb**	**02 05 30.6 -1.0**
IMOL				AML	AML	
	comp=E,5300µm,1.6s					
IMOL				AML	AML	
	comp=N,6365µm,1.0s					
IMOL				AML	AML	
	comp=N,6365µm,1.0s					
IMOL				AML	AML	
	comp=E,5300µm,1.6s					
MTRZ	**Monterenzio**	**1.93 202**		P	**Pb**	**02 05 32.4 0.0**
MTRZ	**Monterenzio**	**1.93 202**		P	**Pb**	**02 05 32.4 0.0**
MTRZ				AML	AML	
	comp=E,8085µm,0.7s					
MTRZ				AML	AML	
	comp=N,6525µm,0.7s					
MTRZ				AML	AML	
	comp=E,8480µm,0.7s					
MTRZ				AML	AML	
	comp=N,6565µm,0.7s					
MTRZ				AML	AML	
	comp=E,8480µm,0.7s					
MTRZ				AML	AML	
	comp=E,8085µm,0.7s					
MTRZ				AML	AML	
	comp=N,6565µm,0.7s					
MTRZ				AML	AML	
	comp=N,6525µm,0.7s					
OBER	**Oberstdorf**	**1.94 310**	*e*Pn		**Pb**	**02 05 33.3 +0.8**
OBER	**Oberstdorf**	**1.94 310**	Pn		**Pb**	**02 05 33.3 +0.8**
BOJS	**Bojanci**	**2.06 108**	*i* Pn		**Pn**	**02 05 32.7 +1.1**
BOJS			*i* Sn		**Sn**	**02 05 57.6 +0.4**
	comp=Z,1µm,0.4s					
BOJS	**Bojanci**	**2.06 108**	*i* Pn		**Pn**	**02 05 32.7 +1.1**
BOJS			*i* Sn		**Sn**	**02 05 57.6 +0.4**
	comp=Z,1µm,0.4s					
BOJS	**Bojanci**	**2.06 108**	*i* P		**Pn**	**02 05 32.8 +1.1**
BOJS				AML	AML	
	comp=E,6425µm,1.1s					
BOJS				AML	AML	
	comp=N,7475µm,0.5s					
BOJS				AML	AML	
	comp=E,6425µm,1.1s					
BOJS				AML	AML	
	comp=N,7475µm,0.5s					
MOA	**Molln**	**2.08 36**	*e*Pn		**Pb**	**02 05 34.3 -0.5**
MOA	**Molln**	**2.08 36**	*e*Pg		**Pb**	**02 05 34.4 -0.5**
	comp=N,366nm,0.4s,SNR=278					
MOA	**Molln**	**2.08 36**	Pn		**Pb**	**02 05 34.3 -0.5**
CTL8	**Castelleone**	**2.10 246**		P	**Pb**	**02 05 34.2 -0.9**
CTL8	**Castelleone**	**2.10 246**		P	**Pb**	**02 05 34.2 -0.9**
CTL8				AML	AML	
	comp=E,10600µm,0.7s					
CTL8				AML	AML	
	comp=N,10275µm,0.7s					
CTL8				AML	AML	
	comp=E,2990µm,1.3s					
CTL8				AML	AML	
	comp=N,2290µm,0.8s					
CTL8				AML	AML	
	comp=N,10275µm,0.7s					
CTL8				AML	AML	
	comp=E,2990µm,1.3s					
CTL8				AML	AML	
	comp=E,10600µm,0.7s					
CTL8				AML	AML	
	comp=N,2290µm,0.8s					
DAVA	**Damuels**	**2.10 303**	*e*Pg		**Pb**	**02 05 35.4 +0.1**
	comp=N,721nm,0.3s,SNR=618					
DAVA			*e*Sg		**Sg**	**02 06 05.4 +0.7**
	comp=N,4µm,0.5s					
DAVA	**Damuels**	**2.10 303**	Pg		**Pb**	**02 05 35.4 +0.1**
	comp=N,721nm,0.3s,SNR=618					
DAVA			Sg		**Sg**	**02 06 05.4 +0.7**
	comp=N,4µm,0.5s					
ZCCA	**Zocca**	**2.11 210**		P	**Pb**	**02 05 34.4 -1.0**
ZCCA	**Zocca**	**2.11 210**		P	**Pn**	**02 05 33.7 +1.4**
ZCCA	**Zocca**	**2.11 210**		P	**Pn**	**02 05 33.7 +1.4**
ZCCA				AML	AML	
	comp=E,2940µm,1.1s					
ZCCA				AML	AML	
	comp=N,2610µm,1.6s					
ZCCA				AML	AML	
	comp=E,3045µm,1.1s					
ZCCA				AML	AML	
	comp=N,2655µm,1.6s					
ZCCA				AML	AML	
	comp=N,2610µm,1.6s					
ZCCA				AML	AML	
	comp=N,2655µm,1.6s					
ZCCA				AML	AML	
	comp=E,2940µm,1.1s					
ZCCA				AML	AML	
	comp=E,3045µm,1.1s					
CRES	**Cresnjev**	**2.11 98**	⇓*i*Pn		**Pn**	**02 05 33.3 +0.9**
FUR	**Furstenfeldbru**	**2.15 338**	*e*Pn		**Pb**	**02 05 35.6 -0.5**
FUR	**Furstenfeldbru**	**2.15 338**	P		**Pb**	**02 05 35.0 -1.1**
FUR	**Furstenfeldbru**	**2.15 338**	P		**Pb**	**02 05 35.0 -1.1**
FUR	**Furstenfeldbru**	**2.15 338**	Pn		**Pb**	**02 05 35.6 -0.5**
OZLJ	**Ozalj**	**2.17 104**	*i* Pn		**Pn**	**02 05 34.4 +1.3**
OZLJ			Sn		**Sn**	**02 06 01.2 +1.4**
OZLJ	**Ozalj**	**2.17 104**	*i* Pn		**Pn**	**02 05 34.3 +1.3**
OZLJ			Sn		**Sn**	**02 06 01.2 +1.4**
TUE	**Stuetta**	**2.18 279**	*e*Pn		**Pb**	**02 05 35.7 -1.0**
TUE	**Stuetta**	**2.18 279**	P		**Pb**	**02 05 35.7 -1.0**
TUE	**Stuetta**	**2.18 279**	P		**Pb**	**02 05 35.7 -1.0**
TUE				AML	AML	
	comp=E,3370µm,0.6s					
TUE				AML	AML	
	comp=N,3975µm,0.6s					
TUE				AML	AML	
	comp=N,3975µm,0.6s					
TUE				AML	AML	
	comp=E,3370µm,0.6s					
FNVD	**Fontana Vidola**	**2.22 206**		P	**Pn**	**02 05 35.1 +1.2**
FNVD	**Fontana Vidola**	**2.22 206**		P	**Pn**	**02 05 35.1 +1.2**
RSM	**Repubblica di**	**2.25 180**		P	**Pn**	**02 05 34.6 +0.4**
RSM				AML	AML	
	comp=E,4610µm,1.2s					
RSM				AML	AML	
	comp=N,4945µm,0.7s					
RSM				AML	AML	
	comp=E,4610µm,1.2s					
RSM				AML	AML	
	comp=N,4945µm,0.7s					
PESA	**Pesaro**	**2.25 173**		P	**Pn**	**02 05 34.8 +0.5**
PESA	**Pesaro**	**2.25 173**	⇓P		**Pn**	**02 05 34.7 +0.5**
PESA	**Pesaro**	**2.25 173**		P	**Pn**	**02 05 34.7 +0.5**
PESA				AML	AML	
	comp=E,5870µm,1.1s					
PESA				AML	AML	
	comp=N,5930µm,1.2s					
PESA				AML	AML	
	comp=E,5870µm,1.1s					
PESA				AML	AML	
	comp=N,5930µm,1.2s					
SEI	**Scarperia**	**2.26 201**		P	**Pb**	**02 05 38.4 +0.4**
PLONS	**Plons/SG**	**2.30 293**		P	**Pb**	**02 05 38.2 -0.4**
SFI	**Santa Sofia**	**2.31 191**		P	**Pn**	**02 05 35.1 0.0**
SFI	**Santa Sofia**	**2.31 191**	⇓P		**Pn**	**02 05 35.2 0.0**
SFI	**Santa Sofia**	**2.31 191**		P	**Pn**	**02 05 35.1 0.0**
SFI				AML	AML	
	comp=E,6530µm,0.3s					
SFI				AML	AML	
	comp=N,4030µm,1.3s					
SFI				AML	AML	
	comp=E,6770µm,0.3s					
SFI				AML	AML	
	comp=N,4235µm,1.4s					
SFI				AML	AML	
	comp=E,6770µm,0.3s					
SFI				AML	AML	
	comp=E,6530µm,0.3s					
SFI				AML	AML	
	comp=N,4030µm,1.3s					
SFI				AML	AML	
	comp=N,4235µm,1.4s					
NVLJ	**Novalja**	**2.34 133**	*i* Pn		**Pn**	**02 05 36.3 +0.9**
NVLJ	**Novalja**	**2.34 133**	*i* Pn		**Pn**	**02 05 36.3 +0.9**
ARSA	**Arzberg**	**2.36 62**	*e*Pn		**Pn**	**02 05 37.2 +1.4**
ARSA	**Arzberg**	**2.36 62**	*e*Pn		**Pn**	**02 05 37.1 +1.4**
ARSA	**Arzberg**	**2.36 62**	*e*Pn		**Pn**	**02 05 37.1 +1.4**
	comp=N,88nm,0.4s,SNR=77					
ARSA			Sg		**Sg**	**02 06 12.2 -1.0**
	comp=N,360nm,0.5s					
ARSA	**Arzberg**	**2.36 62**	Pn		**Pn**	**02 05 37.1 +1.3**
	comp=N,88nm,0.4s,SNR=77					
ARSA	**Arzberg**	**2.36 62**	⇑*i*P		**Pb**	**02 05 37.9 -1.8**
ARSA			Sg		**Sg**	**02 06 12.2 -1.0**
	comp=N,360nm,0.5s					
ARSA	**Arzberg**	**2.36 62**	*i* P		**Pb**	**02 05 37.9 -1.8**
ARSA				AML	AML	
	comp=E,1072µm,0.6s					
ARSA				AML	AML	
	comp=N,1190µm,0.6s					
ARSA				AML	AML	
	comp=N,1190µm,0.6s					
ARSA				AML	AML	
	comp=E,1072µm,0.6s					
CPGN	**Carpegna, Ital**	**2.38 183**		P	**Pn**	**02 05 36.7 +0.6**
CPGN	**Carpegna, Ital**	**2.38 183**		P	**Pn**	**02 05 36.7 +0.6**
CPGN				AML	AML	
	comp=E,3415µm,0.8s					
CPGN				AML	AML	
	comp=N,3560µm,0.5s					
CPGN				AML	AML	
	comp=E,3157µm,0.8s					
CPGN				AML	AML	
	comp=N,3520µm,0.5s					
CPGN				AML	AML	
	comp=N,3560µm,0.5s					
CPGN				AML	AML	
	comp=N,3520µm,0.5s					
CPGN				AML	AML	
	comp=E,3415µm,0.8s					
CPGN				AML	AML	
	comp=E,3157µm,0.8s					
MUGIO	**Muggio**	**2.40 265**		P	**Pn**	**02 05 37.2 +0.9**
MUGIO	**Muggio**	**2.40 265**		P	**Pn**	**02 05 37.1 +0.9**
ASQU	**Asqua**	**2.43 192**		P	**Pn**	**02 05 36.8 +0.1**
ASQU	**Asqua**	**2.43 192**		P	**Pn**	**02 05 36.8 +0.1**
ASQU				AML	AML	
	comp=E,4080µm,1.3s					
ASQU				AML	AML	
	comp=N,4025µm,0.6s					
ASQU				AML	AML	
	comp=N,4025µm,0.6s					
ASQU				AML	AML	
	comp=E,4080µm,1.3s					
PTF	**Prato**	**2.43 205**		P	**Pn**	**02 05 37.8 +1.1**
PTF	**Prato**	**2.43 205**		P	**Pn**	**02 05 37.8 +1.1**
POPM	**Popiglio**	**2.45 210**		P	**Pn**	**02 05 37.6 +0.6**
POPM	**Popiglio**	**2.45 210**		P	**Pn**	**02 05 37.6 +0.6**
POPM				AML	AML	
	comp=E,1630µm,0.7s					
POPM				AML	AML	
	comp=N,1630µm,0.4s					
POPM				AML	AML	
	comp=N,1630µm,0.4s					
POPM				AML	AML	
	comp=E,1630µm,0.7s					
ZAG	**Zagreb**	**2.48 97**		P	**Pn**	**02 05 38.3 +0.9**
ZAG	**Zagreb**	**2.48 97**	⇓*i*Pn		**Pn**	**02 05 38.2 +0.9**
ZAG	**Zagreb**	**2.48 97**		P	**Pn**	**02 05 38.2 +0.9**
BDI	**Bagni Di Lucca**	**2.49 213**		P	**Pn**	**02 05 38.4 +0.8**
BDI	**Bagni Di Lucca**	**2.49 213**		P	**Pn**	**02 05 38.4 +0.8**
BDI				AML	AML	
	comp=E,2100µm,1.1s					
BDI				AML	AML	
	comp=N,2045µm,0.4s					
BDI				AML	AML	
	comp=E,2260µm,0.5s					
BDI				AML	AML	
	comp=N,1830µm,0.5s					
BDI				AML	AML	
	comp=E,2260µm,0.5s					
BDI				AML	AML	
	comp=E,2100µm,1.1s					
BDI				AML	AML	
	comp=N,2045µm,0.4s					
BDI				AML	AML	
	comp=N,1830µm,0.5s					
FSSB	**Fossombrone**	**2.49 175**		P	**Pn**	**02 05 37.8 +0.2**
FSSB	**Fossombrone**	**2.49 175**	⇓*i*P		**Pn**	**02 05 37.8 +0.2**
FSSB	**Fossombrone**	**2.49 175**	*i* P		**Pn**	**02 05 37.8 +0.2**
FSSB				AML	AML	
	comp=E,5315µm,0.9s					
FSSB				AML	AML	
	comp=N,7680µm,0.5s					
FSSB				AML	AML	
	comp=E,5315µm,0.9s					
FSSB				AML	AML	
	comp=N,7680µm,0.5s					
VLC	**Villacollemand**	**2.50 217**	*e*Pn		**Pn**	**02 05 39.6 +2.0**
VLC	**Villacollemand**	**2.50 217**	P		**Pn**	**02 05 38.9 +1.3**
VLC	**Villacollemand**	**2.50 217**	*e*Pn		**Pn**	**02 05 39.6 +2.0**
VLC	**Villacollemand**	**2.50 217**	P		**Pn**	**02 05 38.9 +1.3**
SENI	**Senigallia**	**2.53 167**	P		**Pn**	**02 05 38.8 +0.8**
SENI	**Senigallia**	**2.53 167**	P		**Pn**	**02 05 38.8 +0.8**
PARC	**Parchiule**	**2.53 184**	P		**Pn**	**02 05 38.2 +0.1**
PARC	**Parchiule**	**2.53 184**	⇓P		**Pn**	**02 05 38.2 +0.1**
PARC	**Parchiule**	**2.53 184**	P		**Pn**	**02 05 38.2 +0.1**
PARC				AML	AML	
	comp=E,2055µm,0.6s					
PARC				AML	AML	
	comp=N,2290µm,0.5s					
PARC				AML	AML	
	comp=N,2290µm,0.5s					
PARC				AML	AML	
	comp=E,2055µm,0.6s					
BOB	**Bobbio (Coli)**	**2.55 238**		P	**Pn**	**02 05 40.3 +1.9**
BOB				pmax	pmax	
	comp=Z,2µm,2.0s					
BOB	**Bobbio (Coli)**	**2.55 238**		P	**Pn**	**02 05 40.3 +1.9**
	comp=Z,2µm,2.0s					
MPAG	**Monte Paganucc**	**2.56 175**	⇓*i*P		**Pn**	**02 05 38.8 +0.3**
MPAG	**Monte Paganucc**	**2.56 175**	*i* P		**Pn**	**02 05 38.8 +0.3**
MPAG				AML	AML	
	comp=E,3390µm,1.0s					
MPAG				AML	AML	
	comp=N,2450µm,0.7s					
MPAG				AML	AML	
	comp=E,3390µm,1.0s					
MPAG				AML	AML	
	comp=N,2450µm,0.7s					
NARO	**Abbazia di Nar**	**2.57 178**	⇓P		**Pn**	**02 05 38.8 +0.2**
NARO	**Abbazia di Nar**	**2.57 178**	P		**Pn**	**02 05 38.8 +0.2**
NARO				AML	AML	
	comp=E,1740µm,1.0s					
NARO				AML	AML	
	comp=N,1685µm,0.7s					
NARO				AML	AML	
	comp=E,1740µm,1.0s					
NARO				AML	AML	
	comp=N,1685µm,0.7s					
COR1	**Corinaldo**	**2.57 171**	⇓P		**Pn**	**02 05 39.7 +1.1**
COR1	**Corinaldo**	**2.57 171**	P		**Pn**	**02 05 39.7 +1.1**
COR1				AML	AML	

comp=E,7665µm,1.0s
COR1 AML AML
comp=N,6270µm,0.9s
COR1 AML AML
comp=E,4080µm,1.0s
COR1 AML AML
comp=N,6505µm,0.6s
COR1 AML AML
comp=N,6270µm,0.9s
COR1 AML AML
comp=N,6505µm,0.6s
COR1 AML AML
comp=E,4080µm,1.0s
COR1 AML AML
comp=E,7665µm,1.0s
CRE Caprese Michel 2.58 188 ⇓P Pn 02 05 39.4 +0.5
CRE Caprese Michel 2.58 188 P Pn 02 05 39.4 +0.5
CRE AML AML
comp=E,2185µm,1.3s
CRE AML AML
comp=N,3970µm,0.3s
CRE AML AML
comp=E,2185µm,1.3s
CRE AML AML
comp=N,3970µm,0.3s
VARE Varese 2.59 265 ⇑P Pn 02 05 40.3 +1.3
VARE Varese 2.59 265 P Pn 02 05 40.3 +1.3
VARE AML AML
comp=E,4180µm,0.7s
VARE AML AML
comp=N,3715µm,1.2s
VARE AML AML
comp=N,3715µm,1.2s
VARE AML AML
comp=E,4180µm,0.7s
CRMI Carmignano 2.61 205 P Pn 02 05 39.5 +0.3
CRMI Carmignano 2.61 205 P Pn 02 05 39.5 +0.3
CRMI AML AML
comp=E,2190µm,0.4s
CRMI AML AML
comp=N,1550µm,0.4s
CRMI AML AML
comp=E,2190µm,0.4s
CRMI AML AML
comp=N,1550µm,0.4s
SSP9 Sansepolcro 2.61 185 P Pn 02 05 40.8 +1.6
SSP9 Sansepolcro 2.61 185 P Pn 02 05 40.8 +1.6
SSP9 AML AML
comp=E,1750µm,1.2s
SSP9 AML AML
comp=N,2945µm,1.6s
SSP9 AML AML
comp=N,2945µm,1.6s
SSP9 AML AML
comp=E,1750µm,1.2s
ATCA Cantone 2.61 183 P Pn 02 05 39.5 +0.2
ATCA Cantone 2.61 183 P Pn 02 05 39.5 +0.2
ATCA AML AML
comp=E,3050µm,0.5s
ATCA AML AML
comp=N,2265µm,0.4s
ATCA AML AML
comp=N,2265µm,0.4s
ATCA AML AML
comp=E,3050µm,0.5s
PIEI Pieia 2.64 179 ⇓P Pn 02 05 39.8 +0.2
PIEI Pieia 2.64 179 P Pn 02 05 39.8 +0.2
PIEI AML AML
comp=E,2475µm,0.3s
PIEI AML AML
comp=N,1645µm,0.5s
PIEI AML AML
comp=E,2475µm,0.3s
PIEI AML AML
comp=N,1645µm,0.5s
FUSIO Fusio 2.65 277 P Pn 02 05 41.8 +1.9
FUSIO Fusio 2.65 277 P Pn 02 05 41.8 +1.9
MAIM Mastiano 2.66 212 P Pn 02 05 40.8 +0.9
MAIM Mastiano 2.66 212 P Pn 02 05 40.8 +0.9
FRON Frontone 2.66 176 ⇓P Pn 02 05 40.4 +0.5
FRON Frontone 2.66 176 P Pn 02 05 40.4 +0.5
FRON AML AML
comp=E,2595µm,0.7s
FRON AML AML
comp=N,2625µm,1.4s
FRON AML AML
comp=E,2595µm,0.7s
FRON AML AML
comp=N,2625µm,1.4s
BADI Badiali 2.67 183 P Pn 02 05 40.6 +0.6
BADI Badiali 2.67 183 P Pn 02 05 40.6 +0.6
BADI AML AML
comp=E,4965µm,0.5s
BADI AML AML
comp=N,4875µm,0.5s
BADI AML AML
comp=N,4875µm,0.5s
BADI AML AML
comp=E,4965µm,0.5s
ATPC Poggio Castell 2.69 180 ⇓P Pn 02 05 40.8 +0.4
ATPC Poggio Castell 2.69 180 P Pn 02 05 40.8 +0.4
ATPC AML AML
comp=E,1083µm,0.7s
ATPC AML AML
comp=N,3895µm,1.0s
ATPC AML AML
comp=E,3635µm,0.9s
ATPC AML AML
comp=N,3905µm,1.0s
ATPC AML AML
comp=N,3895µm,1.0s
ATPC AML AML
comp=N,3905µm,1.0s
ATPC AML AML
comp=E,3635µm,0.9s
ATPC AML AML
comp=E,1083µm,0.7s
ARVD Arcevia 2.70 173 ⇓P Pn 02 05 40.9 +0.5
ARVD Arcevia 2.70 173 P Pn 02 05 40.9 +0.5
ARVD AML AML
comp=E,2040µm,0.6s
ARVD AML AML
comp=N,1225µm,0.7s
ARVD AML AML
comp=N,1225µm,0.7s
ARVD AML AML
comp=E,2040µm,0.6s
ATBU Serra di Buran 2.70 179 ⇓*i* P Pn 02 05 41.6 +1.1
ATBU Serra di Buran 2.70 179 *i* P Pn 02 05 41.6 +1.1
ATBU AML AML
comp=E,7040µm,0.6s
ATBU AML AML
comp=N,4955µm,0.5s
ATBU AML AML
comp=E,7040µm,0.6s
ATBU AML AML
comp=N,4955µm,0.5s
ATPI Pietralunga - 2.73 181 ⇓P Pn 02 05 41.2 +0.4
ATPI Pietralunga - 2.73 181 P Pn 02 05 41.2 +0.4
ATPI AML AML
comp=E,2080µm,0.6s
ATPI AML AML
comp=N,2380µm,0.8s
ATPI AML AML
comp=N,2380µm,0.8s
ATPI AML AML
comp=E,2080µm,0.6s
ATMC Monte Cedrone 2.74 184 ⇓P Pn 02 05 41.8 +0.8
ATMC Monte Cedrone 2.74 184 P Pn 02 05 41.8 +0.8
ATMC AML AML
comp=E,4530µm,0.7s
ATMC AML AML
comp=N,6030µm,0.5s
ATMC AML AML
comp=N,6030µm,0.5s
ATMC AML AML
comp=E,4530µm,0.7s
AOI Ancona 2.75 162 ⇓P Pn 02 05 41.7 +0.6
AOI Ancona 2.75 162 P Pn 02 05 41.7 +0.6
AOI AML AML
comp=E,2205µm,0.4s
AOI AML AML
comp=N,2225µm,0.2s
AOI AML AML
comp=N,2225µm,0.2s
AOI AML AML
comp=E,2205µm,0.4s

SSFR Montelago di S 2.75 175 ⇓*i* P Pn 02 05 41.4 +0.3
SSFR Montelago di S 2.75 175 *i* P Pn 02 05 41.4 +0.3
SSFR AML AML
comp=E,5305µm,0.3s
SSFR AML AML
comp=N,3280µm,0.7s
SSFR AML AML
comp=E,5305µm,0.3s
SSFR AML AML
comp=N,3280µm,0.7s
GEA0 GERESS Array S 2.79 17 *e*Pn Pn 02 05 42.1 +0.3
GEA0 GERESS Array S 2.79 17 *e*Pn Pn 02 05 42.1 +0.3
MSSA Maissana 2.79 229 P Pn 02 05 43.2 +1.5
MSSA Maissana 2.79 229 P Pn 02 05 43.2 +1.5
ATVO AVT- Monte Val 2.79 181 ⇓P Pn 02 05 42.3 +0.6
ATVO AVT- Monte Val 2.79 181 P Pn 02 05 42.4 +0.6
ATVO AML AML
comp=E,2530µm,0.6s
ATVO AML AML
comp=N,2440µm,0.9s
ATVO AML AML
comp=N,2440µm,0.9s
ATVO AML AML
comp=E,2530µm,0.6s
GEC2 GERESS Array S 2.80 17 *e*Pn Pn 02 05 43.2 +1.3
GEC2 GERESS Array S 2.80 17 *e*Pn Pn 02 05 43.0 +1.1
GEC2 GERESS Array S 2.80 17 *e*P Pn 02 05 43.0 +1.1
GEC2 GERESS Array S 2.80 17 *e*Pn Pn 02 05 43.0 +1.1
GERES GERESS Array B 2.80 17 Pn Pn 02 05 43.1 +1.3
comp=E,48nm,0.3s,baz=196,slow=13,SNR=1614
GERES Pg **Pg 02 05 50.2 -0.7**
comp=E,67nm,0.3s,baz=193,slow=15,SNR=57
GERES Sn **Sn 02 06 18.2 +2.6**
comp=E,106nm,0.3s,baz=204,slow=26,SNR=8.0
GERES Lg Lg 02 06 26.4
comp=E,135nm,0.3s,baz=196,slow=28,SNR=8.3
GERES LR LR 02 07 14.4
comp=E,230nm,21.7s,baz=168,slow=48
CING Cingoli 2.85 169 ⇓P Pn 02 05 43.4 +0.9
CING Cingoli 2.85 169 P Pn 02 05 43.4 +0.9
UDBI Udbina 2.85 124 *e*Pn Pn 02 05 43.5 +0.9
UDBI Udbina 2.85 124 *e*Pn Pn 02 05 43.4 +0.9
CAFI Castiglion Fio 2.87 187 ⇓P Pn 02 05 42.8 +0.1
CAFI Castiglion Fio 2.87 187 P Pn 02 05 42.8 +0.1
BNALP Bannalp 2.88 285 P Pb 02 05 46.1 -2.4
BNALP Bannalp 2.88 285 P Pb 02 05 46.1 -2.4
ATVA AVT- Monte Val 2.90 183 ⇓P Pn 02 05 43.8 +0.6
ATVA AVT- Monte Val 2.90 183 P Pn 02 05 43.8 +0.6
CONA Conrad Observa 2.91 52 *e*Pn Pn 02 05 44.9 +1.5
comp=E,32nm,0.3s,SNR=67
CONA Sn **Sn 02 06 20.3 +2.1**
comp=E,194nm,0.4s
CONA Conrad Observa 2.91 52 Pn Pn 02 05 44.9 +1.5
comp=E,32nm,0.3s,SNR=67
CONA Sn **Sn 02 06 20.3 +2.1**
comp=E,194nm,0.4s
MURB Monte Urbino 2.91 179 ⇓P Pn 02 05 44.3 +0.9
MURB Monte Urbino 2.91 179 P Pn 02 05 44.3 +0.9
SNTG Esanatoglia 2.94 173 ⇓P Pn 02 05 44.2 +0.5
SNTG Esanatoglia 2.94 173 P Pn 02 05 44.2 +0.5
ATTE AVT- Monte Tez 2.98 182 ⇓P Pn 02 05 44.7 +0.4
ATTE AVT- Monte Tez 2.98 182 P Pn 02 05 44.7 +0.4
WET Wettzell 2.98 5 *e*Pn Pn 02 05 45.5 +1.2
WET Wettzell 2.98 5 P Pn 02 05 45.8 +1.5
WET Wettzell 2.98 5 Pn Pn 02 05 45.5 +1.2
WET Wettzell 2.98 5 P Pn 02 05 45.8 +1.5
ATCC AVT- Casa Cast 2.99 178 ⇓P Pn 02 05 45.3 +0.8
ATCC AVT- Casa Cast 2.99 178 P Pn 02 05 45.3 +0.8
BEHE Becsehely 3.00 83 ⇓*e*Pn Pn 02 05 44.8 +0.3
BEHE *e*Sn **Sn 02 06 21.8 +1.4**
BEHE Becsehely 3.00 83 ⇓*i* Pn Pn 02 05 44.8 +0.3
BEHE *e*Sn **Sn 02 06 21.8 +1.4**
KHC Kasperske Hory 3.05 14 ⇑*i*PN Pn 02 05 46.7 +1.4
KHC *e*PG **Pg 02 05 54.4 -1.3**
KHC *e*SN **Sn 02 06 22.8 +1.1**
KHC *e*SG **Sg 02 06 34.0 -1.2**
comp=E,1µm,0.8s
KHC AMS AMS 02 07 00.0
comp=E,3µm,9.2s
KHC Kasperske Hory 3.05 14 *e*Pn Pn 02 05 46.5 +1.2
KHC Kasperske Hory 3.05 14 ⇑*i*P Pn 02 05 46.7 +1.4
KHC *e* 02 06 22.8
KHC smax smax
comp=N,1µm,0.8s
KHC MLR MLR
comp=Z,3µm,9.2s
KHC Kasperske Hory 3.05 14 *e*Pn Pn 02 05 46.5 +1.2
FROS Frosini 3.11 198 P Pn 02 05 45.8 -0.2
FROS Frosini 3.11 198 P Pn 02 05 45.8 -0.2
MMK Mattmark 3.13 269 P Pn 02 05 47.6 +1.0
MMK Mattmark 3.13 269 P Pn 02 05 47.6 +1.0
ASSB Assisi San Ben 3.14 177 ⇓P Pn 02 05 47.1 +0.7
ASSB Assisi San Ben 3.14 177 P Pn 02 05 47.1 +0.7
SLE Schleitheim 3.15 302 P Pn 02 05 48.5 +1.9
SLE Schleitheim 3.15 302 P Pn 02 05 48.5 +1.9
SPAK Spaichingen-Ko 3.17 309 P Pn 02 05 48.7 +1.8
SPAK Spaichingen-Ko 3.17 309 P Pn 02 05 48.7 +1.8
FDMO Fiordimonte 3.17 172 ⇓P Pn 02 05 47.2 +0.3
FDMO Fiordimonte 3.17 172 P Pn 02 05 47.2 +0.3
ROTM Rocchetta Tana 3.18 247 P Pn 02 05 48.7 +1.7
ROTM Rocchetta Tana 3.18 247 P Pn 02 05 48.6 +1.7
SOP Sopron 3.18 60 ⇑*e*pPn Pn 02 05 48.2 +1.2
SOP *e*Sn **Sn 02 06 21.8 -3.1**
SOP Sopron 3.18 60 P Pn 02 05 47.8 +0.8
SOP Sopron 3.18 60 P Pn 02 05 47.8 +0.8
SOP Sopron 3.18 60 ⇑*e*Pn Pn 02 05 48.2 +1.2
SOP *e*Sn **Sn 02 06 21.8 -3.1**
PCP Piancastagn 3.21 241 P Pn 02 05 49.1 +1.6
PCP Piancastagn 3.21 241 P Pn 02 05 49.1 +1.6
TRIF Trifonti 3.26 201 P Pn 02 05 47.9 -0.2
TRIF Trifonti 3.26 201 P Pn 02 05 47.9 -0.2
MGAB Montegabbione 3.27 185 ⇓P Pn 02 05 48.9 +0.6
MGAB Montegabbione 3.27 185 P Pn 02 05 48.9 +0.6
GUMA Gualdo di Mace 3.29 161 ⇓P Pn 02 05 47.4 -1.1
GUMA Gualdo di Mace 3.29 161 P Pn 02 05 47.4 -1.1
SACS San Casciano d 3.35 187 P Pn 02 05 49.6 +0.2
OFFI Offida 3.36 165 ⇓P Pn 02 05 50.4 +1.0
OFFI Offida 3.36 165 P Pn 02 05 50.4 +1.0
MONC Moncucco Torin 3.37 253 P Pn 02 05 51.4 +1.8
MONC Moncucco Torin 3.37 253 P Pn 02 05 51.4 +1.8
MOMA Monte Martano 3.37 179 P Pn 02 05 49.6 -0.1
MOMA Monte Martano 3.37 179 P Pn 02 05 49.6 -0.1
NRCA Norcia 3.37 172 ⇓P Pn 02 05 50.2 +0.4
NRCA Norcia 3.37 172 P Pn 02 05 50.2 +0.4
MCIV Monte Civitell 3.44 190 ⇑P Pn 02 05 51.9 +1.2
MCIV Monte Civitell 3.44 190 P Pn 02 05 51.9 +1.2
QLNO Quiliano 3.45 239 P Pn 02 05 51.6 +0.9
QLNO Quiliano 3.45 239 P Pn 02 05 51.6 +0.9
DIX Grande Dixence 3.52 270 P Pn 02 05 53.6 +1.7
DIX Grande Dixence 3.52 270 P Pn 02 05 53.6 +1.7
FINB Finale Ligure 3.54 237 P Pn 02 05 52.4 +0.4
FINB Finale Ligure 3.54 237 P Pn 02 05 52.4 +0.4
BFO Black Forest 3.55 309 *e*Pn Pn 02 05 53.9 +1.9
BFO Black Forest 3.55 309 *e*Pn Pn 02 05 53.2 +1.1
BFO *e*Pg **Pg 02 06 04.6 -0.6**
BFO *e*Sn **Sn 02 06 34.5 +0.7**
BFO *e*Sg **Sg 02 06 50.8 -0.4**
BFO Black Forest 3.55 309 *i* P Pn 02 05 53.7 +1.6
BFO Black Forest 3.55 309 *e*Pn Pn 02 05 53.2 +1.1
BFO Black Forest 3.55 309 *i* P Pn 02 05 53.7 +1.6
CESX Cesi 3.57 179 ⇓P Pn 02 05 52.3 0.0
CESX Cesi 3.57 179 P Pn 02 05 52.3 0.0
CASP Castiglione de 3.57 199 ⇓P Pn 02 05 51.9 -0.5
CASP Castiglione de 3.57 199 P Pn 02 05 51.9 -0.5
KIZ Kirchzarten 3.58 301 P Pn 02 05 54.5 +2.0
KIZ Kirchzarten 3.58 301 P Pn 02 05 54.5 +2.0
KIZ S **Sn 02 06 36.5 +1.8**
SENIN Lac Senin/Sane 3.59 275 *e*Pn Pn 02 05 55.6 +2.8
SENIN Lac Senin/Sane 3.59 275 *e*Pn Pn 02 05 55.6 +2.8
LNSS Leonessa 3.60 173 ⇓P Pn 02 05 53.2 +0.4
LNSS Leonessa 3.60 173 P Pn 02 05 53.2 +0.4
ROTZ Rotzenmuhle 3.60 357 *e*Pn Pn 02 05 53.1 +0.4
ROTZ *e*Sn **Sn 02 06 35.3 +0.2**
ROTZ Rotzenmuhle 3.60 357 Pn Pn 02 05 53.1 +0.4
ROTZ Sn **Sn 02 06 35.3 +0.2**
SMA1 SAN MARTINO 3.60 170 ⇓P Pn 02 05 53.3 +0.4
SMA1 SAN MARTINO 3.60 170 P Pn 02 05 53.3 +0.4
ARRO Arrone 3.60 176 P Pn 02 05 53.0 +0.2
ARRO Arrone 3.60 176 P Pn 02 05 53.0 +0.2
BLY Banja Luka 3.61 112 *i* Pn Pn 02 05 53.7 +0.8
BLY Banja Luka 3.61 112 ⇑*i*P Pn 02 05 53.9 +0.9

BLY Banja Luka 3.61 112 *e*Pn Pn 02 05 52.9 -0.1
BLY Banja Luka 3.61 112 *e*Pn Pn 02 05 52.9 -0.1
BLY Banja Luka 3.61 112 P Pn 02 05 53.6 +0.6
BLY Banja Luka 3.61 112 P Pn 02 05 53.6 +0.6
GRA1 Grafenberg Arr 3.62 347 Pn Pn 02 05 53.7 +0.7
GRF Grafenberg Arr 3.62 347 *e*Pn Pn 02 05 53.7 +0.7
GRFO Grafenberg 3.62 347 *e*Pn Pn 02 05 53.4 +0.4
GRFO *e*Pg **Pg 02 06 05.7 -0.8**
GRFO *e*Sn **Sn 02 06 36.6 +1.1**
GRFO *e*Sg **Sg 02 06 54.8 +1.5**
GRFO Grafenberg 3.62 347 *e*P Pn 02 05 53.4 +0.4
GRFO *e* 02 06 36.7
GRFO Grafenberg 3.62 347 *e*Pn Pn 02 05 53.4 +0.4
GRFO Grafenberg 3.62 347 *e*Pg Pg 02 06 05.7 -0.8
GRFO *e*S **Sn 02 06 36.7 +1.1**
TERO Teramo 3.65 167 ⇓P Pn 02 05 53.5 0.0
TERO Teramo 3.65 167 P Pn 02 05 53.5 0.0
OPP Oppenau 3.72 310 P Pn 02 05 56.6 +2.1
OPP Oppenau 3.72 310 P Pn 02 05 56.6 +2.1
OPP S **Sn 02 06 40.1 +1.9**
ZST Bratislava 3.75 56 *e*P Pn 02 05 54.8 -0.1
ZST Bratislava 3.75 56 *e*PN Pn 02 05 54.8 -0.1
ZST *e*PG **Pg 02 06 07.2 -1.9**
ZST *e*SG **Sg 02 06 54.8 -2.9**
ZST *e*LG Lg 02 06 56.9
ZST Bratislava 3.75 56 *e*Pn Pn 02 05 54.8 -0.1
MANZ Manzenberg 3.82 357 *e*Pn Pn 02 05 56.2 +0.4
MANZ Manzenberg 3.82 357 Pn Pn 02 05 56.2 +0.4
AQU L'Aquila 3.88 170 *e*Pn Pn 02 05 56.9 +0.2
AQU L'Aquila 3.88 170 *e*P Pn 02 05 56.9 +0.2
AQU L'Aquila 3.88 170 *e*P Pn 02 05 56.9 +0.2
KRUC Moravsky 3.92 41 *e*PN Pn 02 05 57.9 +0.7
KRUC *e*SG **Sb 02 06 57.7 +4.0**
MODS Modra-Piesok 3.94 54 *e*P Pn 02 05 57.5 -0.1
MODS Modra-Piesok 3.94 54 *e*PN Pn 02 05 57.4 -0.1
MODS *e*PG **Pb 02 06 09.4 +2.7**
MODS *e*SG **Sg 02 07 00.4 -3.5**
MODS *e*LG Lg 02 07 07.0
MODS Modra-Piesok 3.94 54 *e*Pn Pn 02 05 57.5 -0.1
MOF Molkenrain 4.01 297 P Pn 02 06 00.2 +1.7
MOF Molkenrain 4.01 297 P Pn 02 06 00.2 +1.7
LOMF Lomont 4.05 289 P Pn 02 06 00.7 +1.7
LOMF Lomont 4.05 289 P Pn 02 06 00.7 +1.7
GOPC GO Pecny, Ondr 4.05 22 ⇑*i*PN Pn 02 06 00.2 +1.2
GOPC *ex* x 02 06 07.9
GOPC *e*PG **Pg 02 06 12.6 -2.2**
GOPC *e*SN **Sn 02 06 47.1 +0.8**
GOPC *e*SG **Sg 02 07 04.7 -2.6**
comp=Z,739nm,0.9s
GOPC AMS AMS 02 07 30.0
comp=Z,2µm,7.9s
GOPC GO Pecny, Ondr 4.05 22 ⇑*i*P Pn 02 06 00.2 +1.2
GOPC *e* 02 06 47.1
GOPC smax smax
comp=N,739nm,0.9s
GOPC MLR MLR
comp=Z,2µm,7.9s
GOPC GO Pecny, Ondr 4.05 22 Pn Pn 02 06 00.2 +1.2
GOPC Sn **Sn 02 06 47.1 +0.8**
GOPC Sg **Sg 02 07 04.7 -2.6**
comp=Z,739nm,0.9s
LPG La Plagne 4.05 262 *e*Pn Pn 02 06 00.4 +1.2
SNR=1.0
LPG *e*Sn **Sn 02 06 45.3 -1.4**
comp=Z,254nm,0.5s
LPG La Plagne 4.05 262 *e*Pn Pn 02 06 00.4 +1.2
LPG *e*Sn **Sn 02 06 45.3 -1.4**
LPG La Plagne 4.05 262 *e*P Pn 02 06 00.4 +1.2
LPG *e* 02 06 45.3
LPG La Plagne 4.05 262 *e*Pn Pn 02 06 00.4 +1.2
SNR=1.0
LPG *e*Sn **Sn 02 06 45.3 -1.4**
comp=Z,127nm,0.5s
NKC Novy Kostel 4.06 360 ⇑*e*PN Pn 02 06 00.3 +1.2
NKC *ex* x 02 06 08.2
NKC *e*PG **Pg 02 06 16.0 +1.0**
NKC *e*SN **Sn 02 06 47.5 +1.0**
NKC *ex* x 02 06 57.9
NKC *e*SG **Sg 02 07 06.7 -0.9**
comp=Z,829nm,0.9s
NKC AMS AMS 02 07 40.0
comp=Z,3µm,10.5s
NKC Novy Kostel 4.06 360 *e*P Pn 02 06 00.3 +1.2
NKC *e* 02 06 47.5
NKC smax smax
comp=N,829nm,0.9s
NKC MLR MLR
comp=Z,3µm,10.5s
NKC Novy Kostel 4.06 360 Pn Pn 02 06 00.3 +1.2
NKC Sn **Sn 02 06 47.5 +1.0**
NKC Sg **Sg 02 07 06.7 -0.9**
comp=Z,829nm,0.9s
LPL La Plagne 4.06 263 *e*Pn Pn 02 06 00.4 +1.1
SNR=1.0
LPL *e*Sn **Sn 02 06 44.6 -2.2**
comp=Z,324nm,0.6s,SNR=1.0
LPL La Plagne 4.06 263 *e*Pn Pn 02 06 00.4 +1.1
LPL *e*Sn **Sn 02 06 44.6 -2.2**
LPL La Plagne 4.06 263 *e*P Pn 02 06 00.4 +1.1
LPL *e* 02 06 44.6
LPL La Plagne 4.06 263 *e*Pn Pn 02 06 00.4 +1.1
SNR=1.0
LPL *e*Sn **Sn 02 06 44.6 -2.2**
comp=Z,162nm,0.6s,SNR=1.0
PRU Pruhonice 4.06 19 ⇑*i*PN Pn 02 06 00.0 +0.9
PRU *e*PG **Pg 02 06 12.9 -2.1**
PRU *ex* x 02 06 43.2
PRU *e*SN **Sn 02 06 46.3 -0.2**
PRU *e*SG **Sb 02 07 02.5 +4.9**
comp=Z,362nm,0.7s
PRU AMS AMS 02 07 30.0
comp=Z,2µm,10.0s
PRU Pruhonice 4.06 19 ⇑*i*P Pn 02 06 00.0 +0.9
PRU *e* 02 06 46.3
PRU smax smax
comp=N,362nm,0.7s
PRU MLR MLR
comp=Z,2µm,10.0s
PRU Pruhonice 4.06 19 Pn Pn 02 06 00.0 +0.9
PRU Sn **Sn 02 06 46.3 -0.2**
PRU Sg **Sb 02 07 02.5 +4.9**
comp=Z,362nm,0.7s
SMOL Smolenice 4.11 53 *e*P Pn 02 06 01.0 +1.3
SMOL Smolenice 4.11 53 *e*PN Pn 02 06 00.9 +1.3
SMOL Smolenice 4.11 53 *e*Pn Pn 02 06 01.0 +1.3
SAOF Saorge 4.11 240 P Pn 02 06 01.0 +1.1
SAOF Saorge 4.11 240 ⇓P Pn 02 06 01.1 +1.3
SAOF Saorge 4.11 240 P Pn 02 06 01.1 +1.3
PRA Prague 4.11 18 ⇑*e*PN Pn 02 06 00.8 +1.0
PRA *e*PG **Pb 02 06 12.5 +3.0**
PRA *e*SN **Sn 02 06 47.5 -0.3**
PRA *e*SG **Sg 02 07 08.2 -1.1**
comp=Z,678nm,0.8s
PRA AMS AMS 02 07 30.0
comp=Z,2µm,9.5s
PRA Prague 4.11 18 *e*P Pn 02 06 00.8 +1.0
PRA *e* 02 06 47.5
PRA smax smax
comp=N,678nm,0.8s
PRA MLR MLR
comp=Z,2µm,9.5s
PRA Prague 4.11 18 Pn Pn 02 06 00.8 +1.0
PRA Sn **Sn 02 06 47.5 -0.3**
PRA Sg **Sg 02 07 08.2 -1.1**
comp=Z,678nm,0.8s
WLS Welschbruch 4.14 305 P Pn 02 06 02.2 +2.0
WLS Welschbruch 4.14 305 P Pn 02 06 02.2 +2.0
CHMF Charmoille 4.14 287 P Pn 02 06 02.1 +1.8
CHMF Charmoille 4.14 287 P Pn 02 06 02.1 +1.8
CHMF S **Sn 02 06 49.2 +0.6**
ECH Echery 4.15 301 *e*Pn Pn 02 06 02.0 +1.6
ECH Echery 4.15 301 *e*P Pn 02 06 02.0 +1.6
ECH Echery 4.15 301 *e*Pn Pn 02 06 02.0 +1.6
CSKK Cs^‡kako 4.16 71 ⇓*e*pPn Pn 02 06 02.6 +2.2
CSKK *e*Sn **Sn 02 06 47.7 -1.1**
CSKK Cs^‡kako 4.16 71 ⇓*e*Pn Pn 02 06 02.6 +2.2
CSKK *e*Sn **Sn 02 06 47.7 -1.1**
HINF Hinteralfeld 4.18 295 *e*Pn Pn 02 06 02.1 +1.4
SNR=1.0
HINF *e*Sn **Sn 02 06 48.3 -1.1**
comp=Z,448nm,0.4s,SNR=1.0
HINF Hinteralfeld 4.18 295 *e*Pn Pn 02 06 02.1 +1.4

HINF				*e*Sn	**Sn**	**02 06 48.3**	**-1.1**
HINF	**Hinteralfeld**	**4.18**	**295**	*e*P	**Pn**	**02 06 02.1**	**+1.4**
HINF				*e*		02 06 48.3	
HINF	**Hinteralfeld**	**4.18**	**295**	*e*Pn	**Pn**	**02 06 02.1**	**+1.4**
	SNR=1.0						
HINF				*e*Sn	**Sn**	**02 06 48.3**	**-1.1**
	comp=Z,224nm,0.4s,SNR=1.0						
CDF	**Champ du Feu**	**4.18**	**304**	*e*Pn	**Pn**	**02 06 02.5**	**+1.7**
CDF				*e*Sn	**Sn**	**02 06 48.6**	**-1.0**
	comp=Z,758nm,0.6s,SNR=1.0						
CDF	**Champ du Feu**	**4.18**	**304**	*e*Pn	**Pn**	**02 06 02.5**	**+1.7**
CDF				*e*Sn	**Sn**	**02 06 48.6**	**-1.0**
CDF	**Champ du Feu**	**4.18**	**304**	*e*P	**Pn**	**02 06 02.5**	**+1.7**
CDF				*e*		02 06 48.6	
CDF	**Champ du Feu**	**4.18**	**304**	*e*Pn	**Pn**	**02 06 02.5**	**+1.7**
CDF				*e*Sn	**Sn**	**02 06 48.6**	**-1.0**
	comp=Z,379nm,0.6s,SNR=1.0						
VRAC	**Vranov**	**4.19**	**40**	*e*Pn	**Pn**	**02 06 01.4**	**+0.5**
VRAC				*e*Sg	**Sg**	**02 07 07.0**	**-4.8**
VRAC	**Vranov**	**4.19**	**40**	*e*PN	**Pn**	**02 06 01.4**	**+0.5**
VRAC				*e*SG	**Sg**	**02 07 07.0**	**-4.8**
BNI	**Bardonecchia**	**4.21**	**257**	*e*Pn	**Pn**	**02 06 01.8**	**+0.4**
BNI	**Bardonecchia**	**4.21**	**257**	*e*P	**Pn**	**02 06 01.8**	**+0.4**
BNI	**Bardonecchia**	**4.21**	**257**	*e*Pn	**Pn**	**02 06 01.8**	**+0.4**
DOB	**Doboj**	**4.22**	**108**	*e*Pn	**Pn**	**02 06 01.0**	**-0.3**
LANF	**Langenberg**	**4.22**	**313**	P	**Pn**	**02 06 03.2**	**+1.9**
LANF	**Langenberg**	**4.22**	**313**	P	**Pn**	**02 06 03.2**	**+1.9**
SBF	**Sospel**	**4.25**	**239**	*e*Pn	**Pn**	**02 06 02.4**	**+0.6**
	SNR=1.0						
SBF				*e*Sn	**Sn**	**02 06 48.9**	**-2.4**
	comp=Z,268nm,0.4s						
SBF	**Sospel**	**4.25**	**239**	*e*Pn	**Pn**	**02 06 02.4**	**+0.6**
SBF				*e*Sn	**Sn**	**02 06 48.9**	**-2.4**
SBF	**Sospel**	**4.25**	**239**	*e*P	**Pn**	**02 06 02.4**	**+0.6**
SBF				*e*		02 06 48.9	
SBF	**Sospel**	**4.25**	**239**	*e*Pn	**Pn**	**02 06 02.4**	**+0.6**
	SNR=1.0						
SBF				*e*Sn	**Sn**	**02 06 48.9**	**-2.4**
	comp=Z,134nm,0.4s						
MBDF	**Montbardon**	**4.26**	**252**	*e*Pn	**Pn**	**02 06 01.6**	**-0.4**
	SNR=1.0						
MBDF				*e*Sn	**Sn**	**02 06 49.2**	**-2.5**
	comp=Z,429nm,0.6s						
MBDF	**Montbardon**	**4.26**	**252**	*e*Pn	**Pn**	**02 06 01.6**	**-0.4**
MBDF				*e*Sn	**Sn**	**02 06 49.2**	**-2.5**
MBDF	**Montbardon**	**4.26**	**252**	*e*P	**Pn**	**02 06 01.6**	**-0.4**
MBDF				*e*		02 06 49.2	
MBDF	**Montbardon**	**4.26**	**252**	*e*Pn	**Pn**	**02 06 01.6**	**-0.4**
	SNR=1.0						
MBDF				*e*Sn	**Sn**	**02 06 49.2**	**-2.5**
	comp=Z,214nm,0.6s						
LUCF	**Luceram**	**4.29**	**240**	P	**Pn**	**02 06 03.2**	**+0.9**
LUCF	**Luceram**	**4.29**	**240**	P	**Pn**	**02 06 03.2**	**+0.9**
MORH	**M^‡r^¡gy, Hung**	**4.29**	**87⇓**	*e*Pn	**Pn**	**02 06 01.6**	**-0.6**
MORH				*e*Sn	**Sn**	**02 06 49.8**	**-2.3**
MORH	**M^‡r^¡gy, Hung**	**4.29**	**87⇓**	*e*Pn	**Pn**	**02 06 01.6**	**-0.6**
MORH				*e*Sn	**Sn**	**02 06 49.8**	**-2.3**
REVF	**Revere**	**4.36**	**238**	P	**Pn**	**02 06 04.3**	**+1.0**
REVF	**Revere**	**4.36**	**238**	P	**Pn**	**02 06 04.3**	**+1.0**
PGF	**Pioggiola**	**4.40**	**216**	*e*Pn	**Pn**	**02 06 04.3**	**+0.5**
	SNR=1.0						
PGF				*e*Sn	**Sn**	**02 06 50.5**	**-4.4**
	comp=Z,106nm,0.3s,SNR=1.0						
PGF	**Pioggiola**	**4.40**	**216**	*e*Pn	**Pn**	**02 06 04.3**	**+0.5**
PGF				*e*Sn	**Sn**	**02 06 50.5**	**-4.4**
PGF	**Pioggiola**	**4.40**	**216**	*e*P	**Pn**	**02 06 04.3**	**+0.5**
PGF				*e*		02 06 50.5	
PGF	**Pioggiola**	**4.40**	**216**	*e*Pn	**Pn**	**02 06 04.3**	**+0.5**
	SNR=1.0						
JAVC	**Velka Javorina**	**4.43**	**51**	*e*PN	**Pn**	**02 06 06.2**	**+1.9**
CABF	**La Chapelle**	**4.43**	**278**	*e*Pn	**Pn**	**02 06 05.7**	**+1.4**
	SNR=1.0						
CABF	**La Chapelle**	**4.43**	**278**	*e*Pn	**Pn**	**02 06 05.7**	**+1.4**
CABF	**La Chapelle**	**4.43**	**278**	*e*P	**Pn**	**02 06 05.7**	**+1.4**
CABF	**La Chapelle**	**4.43**	**278**	*e*Pn	**Pn**	**02 06 05.7**	**+1.4**
	SNR=1.0						
MOX	**Moxa**	**4.51**	**353**	*e*Pn	**Pn**	**02 06 05.5**	**+0.2**
MOX	**Moxa**	**4.51**	**353**	Pn	**Pn**	**02 06 05.5**	**+0.2**
HAU	**Haudompre**	**4.56**	**296**	*e*Pn	**Pn**	**02 06 07.4**	**+1.4**
	SNR=1.0						
HAU				*e*Sn	**Sn**	**02 06 57.8**	**-1.1**
	comp=Z,854nm,0.5s						
HAU	**Haudompre**	**4.56**	**296**	*e*Pn	**Pn**	**02 06 07.4**	**+1.4**
HAU				*e*Sn	**Sn**	**02 06 57.8**	**-1.1**
HAU	**Haudompre**	**4.56**	**296**	*e*P	**Pn**	**02 06 07.4**	**+1.4**
HAU				*e*		02 06 57.8	
HAU	**Haudompre**	**4.56**	**296**	*e*Pn	**Pn**	**02 06 07.4**	**+1.4**
	SNR=1.0						
HAU				*e*Sn	**Sn**	**02 06 57.8**	**-1.1**
	comp=Z,427nm,0.5s						
PVCC	**Panska Ves**	**4.58**	**17⇑**	*e*PN	**Pn**	**02 06 06.7**	**+0.5**
PVCC				*e*x	x	02 06 22.1	
PVCC				*e*SN	**Sn**	**02 06 57.7**	**-1.5**
PVCC				*e*SG	**Sg**	**02 07 21.8**	**-2.3**
	comp=Z,333nm,0.4s						
PVCC				AMS	AMS	02 07 50.0	
	comp=Z,2µm,7.2s						
PVCC	**Panska Ves**	**4.58**	**17⇑**	*e*P	**Pn**	**02 06 06.7**	**+0.5**
PVCC				*e*		02 06 57.7	
PVCC				smax	smax		
	comp=N,333nm,0.4s						
PVCC				MLR	MLR		
	comp=Z,2µm,7.2s						
PVCC	**Panska Ves**	**4.58**	**17**	Pn	**Pn**	**02 06 06.7**	**+0.5**
PVCC				Sn	**Sn**	**02 06 57.7**	**-1.5**
PVCC				Sg	**Sg**	**02 07 21.8**	**-2.3**
	comp=Z,333nm,0.4s						
SMPL	**Sampolo**	**4.68**	**210**	⇑P	**Pn**	**02 06 09.4**	**+1.8**
SMPL	**Sampolo**	**4.68**	**210**	P	**Pn**	**02 06 09.4**	**+1.8**
ORIF	**Oris-en-Rattie**	**4.79**	**257**	*e*Pn	**Pn**	**02 06 11.2**	**+1.9**
ORIF				*e*Sn	**Sn**	**02 07 01.7**	**-3.0**
	comp=Z,139nm,0.5s						
ORIF	**Oris-en-Rattie**	**4.79**	**257**	*e*Pn	**Pn**	**02 06 11.2**	**+1.9**
ORIF				*e*Sn	**Sn**	**02 07 01.7**	**-3.0**
ORIF	**Oris-en-Rattie**	**4.79**	**257**	*e*P	**Pn**	**02 06 11.2**	**+1.9**
ORIF				*e*		02 07 01.7	
ORIF	**Oris-en-Rattie**	**4.79**	**257**	*e*Pn	**Pn**	**02 06 11.2**	**+1.9**
ORIF				*e*Sn	**Sn**	**02 07 01.7**	**-3.0**
	comp=Z,69nm,0.5s						
BRG	**Berggiesshubel**	**4.80**	**11**	*i* PN	**Pn**	**02 06 09.7**	**+0.4**
	comp=Z,79nm,0.4s						
BRG				PG	**Pb**	**02 06 24.5**	**+3.3**
BRG				SN	**Sn**	**02 07 04.0**	**-0.7**
BRG				SG	**Sg**	**02 07 30.2**	**-1.2**
	comp=Z,2µm,8.9s						
	comp=N,2µm,7.5s						
	comp=E,750nm,7.5s						
BRG	**Berggiesshubel**	**4.80**	**11**	*i* P	**Pn**	**02 06 09.7**	**+0.4**
BRG						02 07 04.0	
BRG				pmax	pmax		
	comp=Z,79nm,0.4s						
BRG				MLR	MLR		
	comp=Z,2µm,8.9s						
BRG				MLR	MLR		
	comp=N,2µm,7.5s						
BRG				MLR	MLR		
	comp=E,750nm,7.5s						
BRG	**Berggiesshubel**	**4.80**	**11**	*i* P	**Pn**	**02 06 09.7**	**+0.4**
	comp=E,79nm,0.4s						
BRG				S	**Sn**	**02 07 04.0**	**-0.7**
	comp=E,2µm,8.9s						
KRLC	**Kraliky**	**4.86**	**35⇑**	*e*PN	**Pn**	**02 06 10.8**	**+0.7**
KRLC				*e*SN	**Sn**	**02 07 06.7**	**+0.6**
KRLC				*e*SG	**Sg**	**02 07 32.0**	**-1.1**
	comp=E,134nm,0.7s						
KRLC	**Kraliky**	**4.86**	**35**	*e*P	**Pn**	**02 06 10.8**	**+0.7**
KRLC				*e*		02 07 06.7	
KRLC				smax	smax		
	comp=N,134nm,0.7s						
KRLC	**Kraliky**	**4.86**	**35**	Pn	**Pn**	**02 06 10.8**	**+0.7**
KRLC				Sn	**Sn**	**02 07 06.7**	**+0.6**
KRLC				Sg	**Sg**	**02 07 32.0**	**-1.1**
	comp=N,134nm,0.7s						
TNS	**Taunus Mts**	**4.86**	**328**	*e*Pn	**Pn**	**02 06 11.8**	**+1.7**
TNS	**Taunus Mts**	**4.86**	**328**	Pn	**Pn**	**02 06 11.8**	**+1.7**
THEF	**They Montfort**	**4.87**	**297**	P	**Pn**	**02 06 11.6**	**+1.4**
THEF	**They Montfort**	**4.87**	**297**	P	**Pn**	**02 06 11.6**	**+1.4**
FRF	**La Foret Royal**	**4.89**	**240**	*e*Pn	**Pn**	**02 06 10.9**	**+0.4**
	SNR=1.0						
FRF				*e*Sn	**Sn**	**02 07 04.1**	**-2.9**
	comp=N,99nm,0.4s						
FRF	**La Foret Royal**	**4.89**	**240**	*e*Pn	**Pn**	**02 06 10.9**	**+0.4**
FRF				*e*Sn	**Sn**	**02 07 04.1**	**-2.9**
FRF	**La Foret Royal**	**4.89**	**240**	*e*P	**Pn**	**02 06 10.9**	**+0.4**
FRF				*e*		02 07 04.1	
FRF	**La Foret Royal**	**4.89**	**240**	*e*Pn	**Pn**	**02 06 10.9**	**+0.4**
	SNR=1.0						
FRF				*e*Sn	**Sn**	**02 07 04.1**	**-2.9**
	comp=N,49nm,0.4s						
DPC	**Dobruska-Polom**	**4.91**	**30⇑**	*i*PN	**Pn**	**02 06 10.8**	**0.0**
DPC				*e*x	x	02 06 18.6	
DPC				*e*PG	**Pg**	**02 06 28.2**	**-3.0**
DPC				*e*SN	**Sn**	**02 07 06.5**	**-0.9**
DPC				*e*x	x	02 07 19.9	
DPC				*e*SG	**Sg**	**02 07 31.0**	**-3.7**
	comp=N,619nm,1.0s						
DPC				AMS	AMS	02 08 00.0	
	comp=N,1µm,7.6s						
DPC	**Dobruska-Polom**	**4.91**	**30**	*i* P	**Pn**	**02 06 10.8**	**0.0**
DPC				*e*		02 07 06.5	
DPC				smax	smax		
	comp=N,619nm,1.0s						
DPC				MLR	MLR		
	comp=Z,1µm,7.6s						
DPC	**Dobruska-Polom**	**4.91**	**30**	Pn	**Pn**	**02 06 10.8**	**0.0**
DPC				Sn	**Sn**	**02 07 06.5**	**-0.9**
DPC				Sg	**Sg**	**02 07 31.0**	**-3.7**
	comp=Z,619nm,1.0s						
VYHS	**Vyhne**	**4.91**	**60**	*e*P	**Pn**	**02 06 10.5**	**-0.3**
VYHS				*e*		02 07 05.0	
VYHS				pmax	pmax		
	comp=N,106nm,1.2s						
VYHS	**Vyhne**	**4.91**	**60**	*e*PN	**Pn**	**02 06 10.5**	**-0.3**
VYHS				*e*SN	**Sn**	**02 07 05.0**	**-2.5**
VYHS				*e*LG	Lg	02 07 48.8	
VYHS	**Vyhne**	**4.91**	**60**	*e*Pn	**Pn**	**02 06 10.5**	**-0.3**
VYHS				*e*Sn	**Sn**	**02 07 05.0**	**-2.5**
UPC	**Upice**	**4.94**	**27⇑**	*e*PN	**Pn**	**02 06 11.5**	**+0.4**
UPC				*e*x	x	02 06 20.5	
UPC				*e*PG	**Pg**	**02 06 29.2**	**-2.6**
UPC				*e*SN	**Sn**	**02 07 05.3**	**-2.8**
UPC				*e*x	x	02 07 19.9	
UPC				*e*SG	**Sg**	**02 07 33.7**	**-2.0**
	comp=N,721nm,0.8s						
UPC	**Upice**	**4.94**	**27**	*e*P	**Pn**	**02 06 11.5**	**+0.4**
UPC				*e*		02 07 05.3	
UPC				smax	smax		
	comp=N,721nm,0.8s						
UPC	**Upice**	**4.94**	**27**	Pn	**Pn**	**02 06 11.5**	**+0.4**
UPC				Sn	**Sn**	**02 07 05.3**	**-2.8**
UPC				Sg	**Sg**	**02 07 33.7**	**-2.0**
	comp=N,721nm,0.8s						
MORC	**Moravsky Berou**	**4.96**	**42**	*e*Pn	**Pn**	**02 06 12.1**	**+0.6**
MORC	**Moravsky Berou**	**4.96**	**42**	*e*P	**Pn**	**02 06 12.1**	**+0.6**
MORC	**Moravsky Berou**	**4.96**	**42**	*e*Pn	**Pn**	**02 06 12.0**	**+0.6**
MORC				*e*Sg	**Sg**	**02 07 30.9**	**-5.5**
MORC	**Moravsky Berou**	**4.96**	**42**	*e*PN	**Pn**	**02 06 12.0**	**+0.6**
MORC				*e*SG	**Sg**	**02 07 30.9**	**-5.5**
STON	**Ston**	**4.99**	**130⇓**	*i*Pn	**Pn**	**02 06 11.4**	**-0.5**
STON				*e*Sn	**Sn**	**02 07 09.8**	**+0.4**
STON	**Ston**	**4.99**	**130**	*i* Pn	**Pn**	**02 06 11.3**	**-0.6**
STON				Sn	**Sn**	**02 07 09.4**	**+0.1**
STON	**Ston**	**4.99**	**130⇓**	*i*Pn	**Pn**	**02 06 11.4**	**-0.5**
STON				*e*Sn	**Sn**	**02 07 09.8**	**+0.4**
HAPS	**Han Pijesak,BI**	**5.04**	**112**	*i* Pn	**Pn**	**02 06 12.8**	**+0.1**
HAPS				*e*Sn	**Sn**	**02 07 09.6**	**-1.2**
HAPS	**Han Pijesak,BI**	**5.04**	**112**	*i* Pn	**Pn**	**02 06 12.8**	**+0.1**
HAPS				*e*Sn	**Sn**	**02 07 09.6**	**-1.2**
LMR	**La Mourre**	**5.11**	**238**	*e*Pn	**Pn**	**02 06 13.4**	**-0.1**
	SNR=1.0						
LMR				*e*Sn	**Sn**	**02 07 08.3**	**-3.9**
	comp=N,70nm,0.4s,SNR=1.0						
LMR	**La Mourre**	**5.11**	**238**	*e*Pn	**Pn**	**02 06 13.4**	**-0.1**
LMR				*e*Sn	**Sn**	**02 07 08.3**	**-3.9**
LMR	**La Mourre**	**5.11**	**238**	*e*P	**Pn**	**02 06 13.4**	**-0.1**
LMR				*e*		02 07 08.3	
LMR	**La Mourre**	**5.11**	**238**	*e*Pn	**Pn**	**02 06 13.4**	**-0.1**
	SNR=1.0						
MS1	**Monte Sant'Ang**	**5.12**	**149**	*i* Pn	**Pn**	**02 06 12.4**	**-1.4**
CLL	**Collm**	**5.15**	**4**	*e*Pn	**Pn**	**02 06 15.0**	**+1.0**
	comp=Z,211nm,0.8s						
CLL				*e*Pg	**Pg**	**02 06 38.0**	**+2.2**
CLL				*e*		02 07 13.0	
CLL				*e*Sg	**Sg**	**02 07 43.0**	**+0.6**
	comp=Z,658nm,1.0s						
CLL	**Collm**	**5.15**	**4**	*e*Pn	**Pn**	**02 06 14.4**	**+0.4**
CLL	**Collm**	**5.15**	**4**	*e*P	**Pn**	**02 06 15.0**	**+1.0**
CLL				pmax	pmax		
	comp=Z,211nm,0.8s						
CLL	**Collm**	**5.15**	**4**	*e*Pn	**Pn**	**02 06 14.4**	**+0.4**
CLL	**Collm**	**5.15**	**4**	*e*P	**Pn**	**02 06 15.0**	**+1.0**
	comp=Z,211nm,0.8s						
PAGF	**Fort de Pagny**	**5.16**	**300**	*e*Pn	**Pn**	**02 06 17.0**	**+2.8**
PAGF				*e*Sn	**Sn**	**02 07 11.4**	**-2.2**
PAGF				*e*Sg	**Sg**	**02 07 41.9**	**-1.0**
	comp=Z,352nm,0.6s						
PAGF	**Fort de Pagny**	**5.16**	**300**	*e*Pn	**Pn**	**02 06 17.0**	**+2.8**
PAGF				*e*Sn	**Sn**	**02 07 11.4**	**-2.2**
PAGF				*e*Sg	**Sg**	**02 07 41.9**	**-1.0**
PAGF	**Fort de Pagny**	**5.16**	**300**	*e*Pn	**Pn**	**02 06 17.0**	**+2.8**
PAGF				*e*Sn	**Sn**	**02 07 11.4**	**-2.2**
PAGF				*e*Sg	**Sg**	**02 07 41.9**	**-1.0**
	comp=Z,176nm,0.6s						
TEKS	**Tekeris**	**5.24**	**106**	*e*Pn	**Pn**	**02 06 16.1**	**+0.8**
TEKS	**Tekeris**	**5.24**	**106**	*e*Pn	**Pn**	**02 06 16.1**	**+0.8**
FGSL	**Fruska Gora**	**5.25**	**99⇑**	*i*Pn	**Pn**	**02 06 15.7**	**+0.3**
FRGS	**Fruska Gora**	**5.25**	**99⇑**	*i*Pn	**Pn**	**02 06 15.7**	**+0.3**
FRGS	**Fruska Gora**	**5.25**	**99⇓**	*i*Pn	**Pn**	**02 06 15.4**	**0.0**
OKC	**Ostrava-Krasne**	**5.29**	**44⇑**	*e*PN	**Pn**	**02 06 16.7**	**+0.8**
OKC				*e*x	x	02 06 20.9	
OKC				*e*x	x	02 06 30.0	
OKC				*e*SN	**Sn**	**02 07 16.3**	**-0.4**
OKC				*e*SG	**Sg**	**02 07 42.0**	**-4.9**
	comp=Z,206nm,0.9s						
OKC				AMS	AMS	02 08 10.0	
	comp=Z,600nm,6.9s						
OKC	**Ostrava-Krasne**	**5.29**	**44**	*e*P	**Pn**	**02 06 16.7**	**+0.8**
OKC				*e*		02 07 16.3	
OKC				smax	smax		
	comp=N,206nm,0.9s						
OKC				MLR	MLR		
	comp=Z,600nm,6.9s						
OKC	**Ostrava-Krasne**	**5.29**	**44**	Pn	**Pn**	**02 06 16.7**	**+0.8**
OKC				Sn	**Sn**	**02 07 16.3**	**-0.4**
OKC				Sg	**Sg**	**02 07 42.0**	**-4.9**
	comp=Z,206nm,0.9s						
BGG	**Burgeitz**	**5.29**	**321**	*e*Pn	**Pn**	**02 06 17.9**	**+1.9**
BGG				*e*Sn	**Sn**	**02 07 20.1**	**+3.3**
BGG	**Burgeitz**	**5.29**	**321**	Pn	**Pn**	**02 06 17.9**	**+1.9**
BGG				Sn	**Sn**	**02 07 20.1**	**+3.3**
KOE	**Koeppel**	**5.30**	**325**	*e*Pn	**Pn**	**02 06 17.9**	**+1.8**
KOE				*e*Sn	**Sn**	**02 07 19.5**	**+2.5**
KOE	**Koeppel**	**5.30**	**325**	Pn	**Pn**	**02 06 17.9**	**+1.8**
KOE				Sn	**Sn**	**02 07 19.5**	**+2.5**
KSP	**Ksiaz**	**5.32**	**27**	*e*Pn	**Pn**	**02 06 16.6**	**+0.2**
KSP	**Ksiaz**	**5.32**	**27**	*e*P	**Pn**	**02 06 16.6**	**+0.2**
KSP	**Ksiaz**	**5.32**	**27**	*e*Pn	**Pn**	**02 06 16.6**	**+0.2**
SMRF	**Simiane la Rot**	**5.35**	**248**	*e*Pn	**Pn**	**02 06 18.5**	**+1.6**
	SNR=1.0						
SMRF				*e*Sn	**Sn**	**02 07 15.5**	**-2.9**
	comp=Z,91nm,0.5s,SNR=1.0						
SMRF	**Simiane la Rot**	**5.35**	**248**	*e*Pn	**Pn**	**02 06 18.5**	**+1.6**
SMRF				*e*Sn	**Sn**	**02 07 15.5**	**-2.9**
SMRF	**Simiane la Rot**	**5.35**	**248**	*e*Pn	**Pn**	**02 06 18.5**	**+1.6**
	SNR=1.0						
SMRF				*e*Sn	**Sn**	**02 07 15.5**	**-2.9**
	comp=Z,46nm,0.5s,SNR=1.0						
PAOL	**Paolisi**	**5.36**	**163**	⇓Pn	**Pn**	**02 06 16.4**	**-0.7**
PAOL	**Paolisi**	**5.36**	**163**	P	**Pn**	**02 06 16.4**	**-0.7**
MRB1	**Monte Rocchett**	**5.37**	**159**	⇑Pn	**Pn**	**02 06 17.5**	**+0.4**
MRB1	**Monte Rocchett**	**5.37**	**159**	P	**Pn**	**02 06 17.5**	**+0.4**
PSZ	**Piszkesteto**	**5.37**	**68⇑**	*i*P	**Pn**	**02 06 19.6**	**+2.5**
PSZ	**Piszkesteto**	**5.37**	**68⇓**	*e*Pn	**Pn**	**02 06 18.4**	**+1.3**
PSZ				*e*Sn	**Sn**	**02 07 18.4**	**-0.4**
PSZ	**Piszkesteto**	**5.37**	**68**	*e*Pn	**Pn**	**02 06 18.4**	**+1.3**
PSZ	**Piszkesteto**	**5.37**	**68**	*e*P	**Pn**	**02 06 18.4**	**+1.3**
PSZ	**Piszkesteto**	**5.37**	**68⇓**	*e*Pn	**Pn**	**02 06 18.4**	**+1.3**
PSZ				*e*Sn	**Sn**	**02 07 18.4**	**-0.4**
BBLS	**Lazići**	**5.43**	**113⇑**	*i*Pn	**Pn**	**02 06 19.0**	**+1.0**
BBLS	**Lazići**	**5.43**	**113⇑**	*i*Pn	**Pn**	**02 06 19.0**	**+1.0**
SFTF	**Sexfontaines**	**5.46**	**295**	*e*Pn	**Pn**	**02 06 19.6**	**+1.3**
SFTF				*e*Sn	**Sn**	**02 07 18.2**	**-2.7**
	comp=Z,292nm,0.5s						
SFTF	**Sexfontaines**	**5.46**	**295**	*e*Pn	**Pn**	**02 06 19.6**	**+1.3**
SFTF				*e*Sn	**Sn**	**02 07 18.2**	**-2.7**
SFTF	**Sexfontaines**	**5.46**	**295**	*e*Pn	**Pn**	**02 06 19.6**	**+1.3**
WLF	**Walferdange**	**5.49**	**312**	⇑P	**Pn**	**02 06 21.2**	**+2.4**
	comp=Z,140nm,0.5s						
WLF	**Walferdange**	**5.49**	**312**	*e*Pn	**Pn**	**02 06 21.1**	**+2.4**
WLF	**Walferdange**	**5.49**	**312**	*e*Pn	**Pn**	**02 06 21.2**	**+2.4**
WLF	**Walferdange**	**5.49**	**312**	*e*P	**Pn**	**02 06 21.2**	**+2.4**
WLF	**Walferdange**	**5.49**	**312**	Pn	**Pn**	**02 06 21.1**	**+2.3**
CAFE	**Carife**	**5.53**	**158**	⇑Pn	**Pn**	**02 06 18.7**	**-0.6**
CAFE	**Carife**	**5.53**	**158**	P	**Pn**	**02 06 18.7**	**-0.6**
MEZF	**Maizieres J'vi**	**5.55**	**297**	*e*Pn	**Pn**	**02 06 21.2**	**+1.7**
	SNR=1.0						
MEZF				*e*Sn	**Sn**	**02 07 21.3**	**-1.9**
	comp=Z,86nm,0.3s						
MEZF	**Maizieres J'vi**	**5.55**	**297**	*e*Pn	**Pn**	**02 06 21.2**	**+1.7**
MEZF				*e*Sn	**Sn**	**02 07 21.3**	**-1.9**
MEZF	**Maizieres J'vi**	**5.55**	**297**	*e*Pn	**Pn**	**02 06 21.2**	**+1.7**
	SNR=1.0						
LANS	**Liptovska Anna**	**5.59**	**55**	*e*P	**Pn**	**02 06 20.7**	**+0.6**
LANS				*e*		02 07 28.2	
LANS	**Liptovska Anna**	**5.59**	**55**	*e*PN	**Pn**	**02 06 20.7**	**+0.6**
LANS				*e*SN	**Sn**	**02 07 28.2**	**+4.0**
LANS	**Liptovska Anna**	**5.59**	**55**	*e*Pn	**Pn**	**02 06 20.7**	**+0.6**
SNAL	**S. Angelo Dei**	**5.61**	**158**	⇓Pn	**Pn**	**02 06 19.6**	**-0.9**
SNAL	**S. Angelo Dei**	**5.61**	**158**	P	**Pn**	**02 06 19.6**	**-0.9**
SSB	**Saint Sauveur**	**5.62**	**264**	*e*Pn	**Pn**	**02 06 20.3**	**-0.3**
SSB	**Saint Sauveur**	**5.62**	**264**	*e*P	**Pn**	**02 06 20.3**	**-0.3**
SSB	**Saint Sauveur**	**5.62**	**264**	*e*Pn	**Pn**	**02 06 20.3**	**-0.3**
VIVF	**Saint-Julien-I**	**5.63**	**259**	*e*Pn	**Pn**	**02 06 21.2**	**+0.5**
	SNR=1.0						
VIVF				*e*Sn	**Sn**	**02 07 22.5**	**-2.8**
	comp=Z,28nm,0.3s						
VIVF	**Saint-Julien-I**	**5.63**	**259**	*e*Pn	**Pn**	**02 06 21.2**	**+0.5**
VIVF				*e*Sn	**Sn**	**02 07 22.5**	**-2.8**
VIVF	**Saint-Julien-I**	**5.63**	**259**	*e*P	**Pn**	**02 06 21.2**	**+0.5**
VIVF				*e*		02 07 22.5	
VIVF	**Saint-Julien-I**	**5.63**	**259**	*e*Pn	**Pn**	**02 06 21.2**	**+0.5**
	SNR=1.0						
HILG	**Hillesheim**	**5.65**	**319**	*e*Pn	**Pn**	**02 06 22.8**	**+1.9**
HILG	**Hillesheim**	**5.65**	**319**	Pn	**Pn**	**02 06 22.8**	**+1.9**
VULT	**Monte Vulture**	**5.70**	**155**	⇑Pn	**Pn**	**02 06 20.9**	**-0.8**
VULT	**Monte Vulture**	**5.70**	**155**	P	**Pn**	**02 06 20.9**	**-0.8**
DIVS	**Divibare**	**5.71**	**109**	*e*Pn	**Pn**	**02 06 22.4**	**+0.5**
DIVS	**Divibare**	**5.71**	**109**	*e*Pn	**Pn**	**02 06 22.5**	**+0.6**
DIVS	**Divibare**	**5.71**	**109**	*e*Pn	**Pn**	**02 06 22.4**	**+0.5**
MCRV	**Calabrutti - M**	**5.74**	**159**	⇓Pn	**Pn**	**02 06 21.3**	**-1.0**
MCRV	**Calabrutti - M**	**5.74**	**159**	P	**Pn**	**02 06 21.3**	**-1.0**
MRVN	**Minervino Murg**	**5.79**	**151**	⇓Pn	**Pn**	**02 06 21.3**	**-1.5**
MRVN	**Minervino Murg**	**5.79**	**151**	P	**Pn**	**02 06 21.3**	**-1.5**
STB	**Steinbach**	**5.79**	**322**	*e*Pn	**Pn**	**02 06 24.4**	**+1.5**
STB	**Steinbach**	**5.79**	**322**	Pn	**Pn**	**02 06 24.4**	**+1.5**
PALZ	**Palazzo San Ge**	**5.81**	**153**	⇓Pn	**Pn**	**02 06 21.0**	**-2.2**
PALZ	**Palazzo San Ge**	**5.81**	**153**	P	**Pn**	**02 06 21.9**	**-1.2**
MRLC	**Muro Lucano**	**5.85**	**157**	⇓Pn	**Pn**	**02 06 23.2**	**-0.5**
MRLC	**Muro Lucano**	**5.85**	**157**	P	**Pn**	**02 06 23.2**	**-0.5**
HOBG	**Hohbusch**	**5.89**	**327**	*e*Pn	**Pn**	**02 06 25.8**	**+1.6**
HOBG	**Hohbusch**	**5.89**	**327**	Pn	**Pn**	**02 06 25.8**	**

GIVF Givet 6.45 310 *e*Pn **Pn 02 06 34.8 +2.9**
GIVF *e*Sn **Sn 02 07 45.3 0.0**
GIVF Givet 6.45 310 *e*P **Pn 02 06 34.8 +2.9**
GIVF *e* 02 07 45.3
GIVF Givet 6.45 310 *e*Pn **Pn 02 06 34.8 +2.9**
SNR=1.0
GIVF *e*Sn **Sn 02 07 45.3 0.0**
comp=Z,78nm,0.6s,SNR=1.0
BEBN Eben Emael 6.46 318 ⇓P **Pn 02 06 35.3 +3.3**
comp=Z,9.9nm,0.6s
SVIS Svilajnac 6.47 104 *e*Pn **Pn 02 06 32.8 +0.7**
SVIS Svilajnac 6.47 104 *e*Pn **Pn 02 06 32.8 +0.7**
AGO Saint Agoulin 6.49 272 P **Pn 02 06 33.4 +0.9**
AGO Saint Agoulin 6.49 272 P **Pn 02 06 33.4 +0.9**
LBL Lubilhac 6.53 265 P **Pn 02 06 33.2 +0.2**
LBL Lubilhac 6.53 265 P **Pn 02 06 33.2 +0.2**
DOU Dourbes 6.57 310 ⇑P **Pn 02 06 36.6 +3.1**
comp=Z,29nm,0.4s
PYM Petit Puy Mans 6.61 270 P **Pn 02 06 34.3 +0.2**
PYM Petit Puy Mans 6.61 270 P **Pn 02 06 34.3 +0.2**
CUC Castrocucco 6.65 157 *e*Pn **Pn 02 06 34.5 -0.2**
CUC Castrocucco 6.65 157 *e*Pn **Pn 02 06 34.5 -0.2**
MDVR Moldovita 6.65 99 ⇓*i*P **Pn 02 06 35.1 +0.4**
MDVR Moldovita 6.65 99 S **Sn 02 07 47.5 -2.8**
BCI Bajram Curri 6.65 122 *i*Pn **Pn 02 06 37.9 +3.1**
BCI *i*SN **Sg 02 08 27.1 -3.7**
BGF Bois d'Agland 6.67 277 *e*Pn **Pn 02 06 35.9 +1.0**
SNR=1.0
BGF *e*Sn **Sn 02 07 47.0 -3.7**
comp=Z,193nm,0.4s,SNR=1.0
BGF Bois d'Agland 6.67 277 *e*Pn **Pn 02 06 35.9 +1.0**
BGF *e*Sn **Sn 02 07 47.0 -3.7**
BGF Bois d'Agland 6.67 277 *e*P **Pn 02 06 35.9 +1.0**
BGF *e* 02 07 47.0
BGF Bois d'Agland 6.67 277 *e*Pn **Pn 02 06 35.9 +1.0**
SNR=1.0
CRVS Cervenica-Dubn 6.67 63 *e*P **Pn 02 06 36.1 +1.1**
CRVS Cervenica-Dubn 6.67 63 *e*PN **Pn 02 06 36.1 +1.1**
CRVS Cervenica-Dubn 6.67 63 *e*Pn **Pn 02 06 36.1 +1.1**
KUBS Kucevo 6.73 102 *i*Pn **Pn 02 06 34.7 -1.1**
KUBS Kucevo 6.73 102 *i*Pn **Pn 02 06 34.7 -1.1**
PUK Puka 6.75 125 *i*PN **Pn 02 06 31.4 -4.8**
PUK *i*SN Sg 02 08 44.1 +10
BAIF Baives 6.76 308 *e*Pn **Pn 02 06 38.8 +2.7**
SNR=1.0
BAIF *e*Sn **Sn 02 07 49.2 -3.6**
comp=Z,201nm,0.7s
BAIF Baives 6.76 308 *e*Pn **Pn 02 06 38.8 +2.7**
BAIF *e*Sn **Sn 02 07 49.2 -3.6**
BAIF Baives 6.76 308 *e*P **Pn 02 06 38.8 +2.7**
BAIF *e* 02 07 49.2
BAIF Baives 6.76 308 *e*Pn **Pn 02 06 38.8 +2.7**
SNR=1.0
ORI Oriolo Calabro 6.77 153 P **Pn 02 06 36.1 -0.2**
ORI Oriolo Calabro 6.77 153 P **Pn 02 06 36.1 -0.2**
SELS Selova 6.84 113 *e*Pn **Pn 02 06 37.8 +0.5**
SELS Selova 6.84 113 *e*Pn **Pn 02 06 37.8 +0.5**
HYF Humbligny 6.84 283 *e*Pn **Pn 02 06 39.1 +1.8**
HYF *e*Sn **Sn 02 07 52.2 -2.9**
HYF Humbligny 6.84 283 *e*Pn **Pn 02 06 39.1 +1.8**
HYF *e*Sn **Sn 02 07 52.2 -2.9**
HYF Humbligny 6.84 283 *e*Pn **Pn 02 06 39.1 +1.8**
WTSB Winterswijk 6.89 329 *e*Pn **Pn 02 06 39.7 +1.9**
comp=Z,72nm,0.4s
SNF Seneffe 6.96 311 ⇑P **Pn 02 06 43.0 +4.0**
UCC Uccle 7.10 314 ⇑P **Pn 02 06 43.9 +3.1**
UCC Uccle 7.10 314 *e*Pn **Pn 02 06 43.2 +2.5**
UCC Uccle 7.10 314 *e*P **Pn 02 06 43.2 +2.5**
UCC Uccle 7.10 314 *e*Pn **Pn 02 06 43.2 +2.5**
DRGR 7.10 81 ⇓*i*P **Pn 02 06 43.6 +2.7**
DRGR 7.10 81 S **Sn 02 07 59.9 -1.6**
DRGR 7.10 81 S **Sn 02 07 59.9 -1.6**
UZH Uzhgorod 7.11 66 *e*P **Pn 02 06 45.5 +4.6**
UZH *e*S **Sn 02 08 07.3 +5.8**
TCF Toulx Ste Croi 7.12 275 *e*Pn **Pn 02 06 42.1 +1.0**
SNR=1.0
TCF *e*Sn **Sn 02 07 57.9 -3.9**
comp=Z,78nm,0.5s,SNR=1.0
TCF Toulx Ste Croi 7.12 275 *e*Pn **Pn 02 06 42.1 +1.0**
TCF *e*Sn **Sn 02 07 57.9 -3.9**
TCF Toulx Ste Croi 7.12 275 *e*P **Pn 02 06 42.1 +1.0**
TCF *e* 02 07 57.9
TCF Toulx Ste Croi 7.12 275 *e*Pn **Pn 02 06 42.1 +1.0**
SNR=1.0
TRPA Tarpa 7.14 70 ⇓*i*P **Pn 02 06 43.5 +2.1**
TIR Tirane 7.21 129 *e*Pn **Pn 02 06 42.4 +0.1**
TIR Tirane 7.21 129 ⇑*i*P **Pn 02 06 41.4 -0.9**
TIR Tirane 7.21 129 *e*Pn **Pn 02 06 41.4 -0.9**
TIR Tirane 7.21 129 P **Pn 02 06 41.5 -0.9**
TIR Tirane 7.21 129 *i*PN Pn 02 06 51.3 +9.0
TIR *i*SN Sb 02 08 37.4 +9.3
TIR Tirane 7.21 129 *e*P **Pn 02 06 41.4 -0.9**
TIR Tirane 7.21 129 *e*P **Pn 02 06 41.4 -0.9**
TIR Tirane 7.21 129 *e*Pn **Pn 02 06 42.4 +0.1**
PHP Peshkopia 7.30 125 P **Pn 02 06 44.4 +0.8**
PHP Peshkopia 7.30 125 P **Pn 02 06 44.4 +0.8**
PHP Peshkopia 7.30 125 *i*PN Pn 02 06 50.4 +6.7
PHP *i*SN **Sb 02 08 31.4 +0.6**
PHP Peshkopia 7.30 125 P **Pn 02 06 44.4 +0.8**
PHP Peshkopia 7.30 125 P **Pn 02 06 44.4 +0.8**
ZAGS Zajecar 7.32 105 *e*Pn **Pn 02 06 44.3 +0.5**
ZAGS Zajecar 7.32 105 *e*Pn **Pn 02 06 44.3 +0.5**
CAF Calviac 7.41 264 *e*Pn **Pn 02 06 45.4 +0.3**
SNR=1.0
CAF *e*Sn **Sn 02 08 04.7 -4.3**
comp=Z,41nm,0.6s
CAF Calviac 7.41 264 *e*Pn **Pn 02 06 45.4 +0.3**
CAF *e*Sn **Sn 02 08 04.7 -4.3**
CAF Calviac 7.41 264 *e*P **Pn 02 06 45.4 +0.3**
CAF *e* 02 08 04.7
CAF Calviac 7.41 264 *e*Pn **Pn 02 06 45.4 +0.3**
SNR=1.0
BARS Barje 7.48 113 *e*Pn **Pn 02 06 46.4 +0.3**
BARS Barje 7.48 113 *e*Pn **Pn 02 06 46.4 +0.3**
TIP Timpagrande 7.67 154 ⇑*i*P **Pn 02 06 48.8 0.0**
TIP Timpagrande 7.67 154 *e*Pn **Pn 02 06 48.0 -0.8**
TIP Timpagrande 7.67 154 P **Pn 02 06 48.5 -0.3**
TIP Timpagrande 7.67 154 *e*Pn **Pn 02 06 48.0 -0.8**
TIP Timpagrande 7.67 154 ⇑*i*P **Pn 02 06 48.8 0.0**
KWP Kalwaria Pacla 7.70 60 *e*Pn **Pn 02 06 51.5 +2.5**
KWP Kalwaria Pacla 7.70 60 *e*P **Pn 02 06 51.6 +2.5**
KWP Kalwaria Pacla 7.70 60 *e*Pn **Pn 02 06 51.5 +2.5**
RJF Les Rejaudoux 7.71 267 *e*Pn **Pn 02 06 50.4 +1.2**
SNR=1.0
RJF *e*Sn **Sn 02 08 12.3 -4.1**
comp=Z,32nm,0.5s
RJF Les Rejaudoux 7.71 267 *e*Pn **Pn 02 06 50.4 +1.2**
RJF *e*Sn **Sn 02 08 12.3 -4.1**
RJF Les Rejaudoux 7.71 267 *e*P **Pn 02 06 50.4 +1.2**
RJF *e* 02 08 12.3
RJF Les Rejaudoux 7.71 267 *e*Pn **Pn 02 06 50.4 +1.2**
SNR=1.0
ZAPS Zavoj 7.80 108 *e*Pn **Pn 02 06 51.3 +0.8**
MTLF Montolieu 7.83 252 *e*Pn **Pn 02 06 50.9 +0.1**
SNR=1.0
MTLF *e*Sn **Sn 02 08 14.0 -5.2**
comp=Z,8.1nm,0.4s
MTLF Montolieu 7.83 252 *e*Pn **Pn 02 06 50.9 +0.1**
MTLF *e*Sn **Sn 02 08 14.0 -5.2**
MTLF Montolieu 7.83 252 *e*P **Pn 02 06 50.9 +0.1**
MTLF *e* 02 08 14.0
MTLF Montolieu 7.83 252 *e*Pn **Pn 02 06 50.9 +0.1**
SNR=1.0
OHR Ohrid 7.88 127 *e*Pn **Pn 02 06 52.0 +0.4**
GRI Girifalco 7.91 157 P **Pn 02 06 53.1 +1.1**
GRI Girifalco 7.91 157 P **Pn 02 06 53.1 +1.1**
LOT Lotru 7.93 91 ⇓*i*P **Pn 02 06 54.0 +1.6**
KRUS Krusevo 7.96 124 *e*Pn **Pn 02 06 51.9 -0.9**
KBN Korca 8.21 130 P **Pn 02 06 56.5 +0.3**
KBN Korca 8.21 130 P **Pn 02 06 56.5 +0.3**
KBN Korca 8.21 130 *i*PN Pn 02 06 45.8 -10
KBN *i*SN **Sg 02 09 25.1 +4.4**
KBN Korca 8.21 130 P **Pn 02 06 56.5 +0.3**
KBN Korca 8.21 130 P **Pn 02 06 56.5 +0.3**
BIA Bitola 8.24 126 *e*Pn **Pn 02 06 57.1 +0.6**
STIP Stip 8.32 119 *e*Pn **Pn 02 06 58.2 +0.6**
LFF La Frestale 8.32 266 *e*Pn **Pn 02 06 58.6 +1.0**
SNR=1.0
LFF *e*Sn **Sn 02 08 27.1 -4.3**
comp=Z,34nm,0.5s
LFF La Frestale 8.32 266 *e*Pn **Pn 02 06 58.6 +1.0**
LFF *e*Sn **Sn 02 08 27.1 -4.3**

LFF La Frestale 8.32 266 *e*P **Pn 02 06 58.6 +1.0**
LFF *e* 02 08 27.1
LFF La Frestale 8.32 266 *e*Pn **Pn 02 06 58.6 +1.0**
SNR=1.0
SRN Sarande 8.37 136 P **Pn 02 06 57.1 -1.1**
SRN Sarande 8.37 136 P **Pn 02 06 57.1 -1.1**
SRN Sarande 8.37 136 P **Pn 02 06 57.1 -1.1**
KEK Kerkira 8.40 138 P **Pn 02 06 58.0 -0.7**
KEK Kerkira 8.40 138 P **Pn 02 06 58.0 -0.7**
KEK Kerkira 8.40 138 P **Pn 02 06 58.0 -0.7**
FNA Florina 8.42 127 *e*Pn **Pn 02 06 59.7 +0.6**
FNA Florina 8.42 127 P **Pn 02 06 59.4 +0.3**
FNA Florina 8.42 127 *e*P **Pn 02 06 59.7 +0.6**
FNA Florina 8.42 127 *e*Pn **Pn 02 06 59.7 +0.6**
VTS Vitosha 8.49 111 ⇑*i*P **Pn 02 07 00.1 0.0**
VTS Vitosha 8.49 111 *e*Pn **Pn 02 06 60.0 0.0**
VTS Vitosha 8.49 111 *e*P **Pn 02 07 00.0 0.0**
VTS Vitosha 8.49 111 *e*Pn **Pn 02 07 00.0 0.0**
NEST Nestorio 8.50 130 P **Pn 02 07 00.7 +0.5**
ARR Arges 8.55 91 ⇑*i*P **Pn 02 07 02.4 +1.7**
LVV L'vov 8.57 61 *e*P Pn 02 07 06.1 +5.1
SGD Sagiada 8.69 136 P **Pn 02 07 01.8 -0.8**
PENT Pentalofos 8.71 130 P **Pn 02 07 03.0 0.0**
MFF Saint Martin d 8.73 277 *e*Pn **Pn 02 07 03.6 +0.4**
SNR=1.0
MFF *e*Sn **Sn 02 08 36.9 -4.5**
comp=Z,24nm,0.5s
MFF Saint Martin d 8.73 277 *e*Pn **Pn 02 07 03.6 +0.4**
MFF *e*Sn **Sn 02 08 36.9 -4.5**
MFF Saint Martin d 8.73 277 *e*P **Pn 02 07 03.6 +0.4**
MFF *e* 02 08 36.9
MFF Saint Martin d 8.73 277 *e*Pn **Pn 02 07 03.6 +0.4**
SNR=1.0
VAY Valandovo 8.77 120 *e*Pn **Pn 02 07 03.6 -0.2**
VAY Valandovo 8.77 120 *e*Pn **Pn 02 07 01.4 -2.4**
VAY Valandovo 8.77 120 *e*Pn **Pn 02 07 03.6 -0.2**
VAE Valguarnera 8.81 170 Pn **Pn 02 07 04.5 +0.1**
comp=Z,0.2nm,0.3s,baz=0.0,slow=20,SNR=1.5
VAE LR LR 02 10 32.5
comp=Z,106nm,21.6s,baz=346,slow=38
VOIR 8.82 90 ⇑*i*P **Pn 02 07 06.4 +1.8**
BUR08 Bucovina Ar. S 8.84 76 *e*Pn **Pn 02 07 06.4 +1.6**
BUR08 Bucovina Ar. S 8.84 76 *e*Pn **Pn 02 07 06.4 +1.6**
BUR04 Bucovina Ar. S 8.85 76 *e*Pn **Pn 02 07 05.9 +1.0**
BUR04 Bucovina Ar. S 8.85 76 *e*Pn **Pn 02 07 05.9 +1.0**
BURAR Bucovina Array 8.85 76 ⇑*i*P **Pn 02 07 07.0 +2.1**
LDF La Druitiere 8.88 290 *e*Pn **Pn 02 07 06.5 +1.3**
SNR=1.0
LDF *e*Sn **Sn 02 08 40.7 -4.3**
comp=Z,17nm,0.3s
LDF La Druitiere 8.88 290 *e*Pn **Pn 02 07 06.5 +1.3**
LDF *e*Sn **Sn 02 08 40.7 -4.3**
LDF La Druitiere 8.88 290 *e*P **Pn 02 07 06.5 +1.3**
LDF *e* 02 08 40.7
LDF La Druitiere 8.88 290 *e*Pn **Pn 02 07 06.5 +1.3**
SNR=1.0
GRG Griva 8.90 122 P **Pn 02 07 05.4 -0.1**
GRG Griva 8.90 122 P **Pn 02 07 05.4 -0.1**
GRG Griva 8.90 122 P **Pn 02 07 05.4 -0.1**
GRG Griva 8.90 122 P **Pn 02 07 05.4 -0.1**
JAN Janina 8.96 134 P **Pn 02 07 06.8 +0.5**
JAN Janina 8.96 134 P **Pn 02 07 06.8 +0.5**
JAN Janina 8.96 134 P **Pn 02 07 06.8 +0.5**
JAN Janina 8.96 134 P **Pn 02 07 06.8 +0.5**
KZN Kozani 8.97 128 P **Pn 02 07 05.9 -0.7**
KZN Kozani 8.97 128 P **Pn 02 07 05.9 -0.7**
KZN Kozani 8.97 128 P **Pn 02 07 05.9 -0.7**
KZN Kozani 8.97 128 P **Pn 02 07 05.9 -0.7**
DOPR Dopca 8.99 87 ⇓*i*P **Pn 02 07 08.6 +1.8**
KPRO Kipourio 9.00 131 P **Pn 02 07 07.0 0.0**
KNT Kendrikon 9.07 120 P **Pn 02 07 07.8 0.0**
KNT Kendrikon 9.07 120 P **Pn 02 07 07.8 0.0**
KNT Kendrikon 9.07 120 P **Pn 02 07 07.8 0.0**
KNT Kendrikon 9.07 120 P **Pn 02 07 07.8 0.0**
BSD Bornholm Skovb 9.08 9 ⇑*i*P **Pn 02 07 07.4 -0.6**
BSD *i*S **Sn 02 08 46.7 -3.3**
comp=Z,580nm,12.0s
BSD Bornholm Skovb 9.08 9 ⇑*i*P **Pn 02 07 07.4 -0.6**
BSD *i*S **Sn 02 08 46.7 -3.3**
BSD MLR MLR
comp=Z,590nm,12.0s
FLN La Foliniere 9.14 291 *e*Pn **Pn 02 07 10.7 +1.9**
SNR=1.0
FLN *e*Sn **Sn 02 08 49.2 -2.4**
comp=Z,46nm,0.5s
FLN La Foliniere 9.14 291 *e*Pn **Pn 02 07 10.7 +1.9**
FLN *e*Sn **Sn 02 08 49.2 -2.4**
FLN La Foliniere 9.14 291 *e*P **Pn 02 07 10.7 +1.9**
FLN *e* 02 08 49.2
FLN La Foliniere 9.14 291 *e*Pn **Pn 02 07 10.7 +1.9**
SNR=1.0
LLD Lille Linde 9.17 359 *i*P **Pn 02 07 10.0 +0.9**
LLD Lille Linde 9.17 359 *e*P **Pn 02 07 10.0 +0.9**
LLD Lille Linde 9.17 359 *e*P **Pn 02 07 10.0 +0.9**
EPF Esparros 9.20 254 *e*Pn **Pn 02 07 08.6 -1.1**
SNR=1.0
EPF Esparros 9.20 254 *e*Pn **Pn 02 07 08.6 -1.1**
EPF Esparros 9.20 254 *e*P **Pn 02 07 08.6 -1.1**
EPF Esparros 9.20 254 *e*Pn **Pn 02 07 08.6 -1.1**
SNR=1.0
GRR Gorron 9.32 289 *e*Pn **Pn 02 07 12.8 +1.5**
SNR=1.0
GRR *e*Sn **Sn 02 08 51.3 -4.7**
comp=Z,22nm,0.5s
GRR Gorron 9.32 289 *e*Pn **Pn 02 07 12.8 +1.5**
GRR *e*Sn **Sn 02 08 51.3 -4.7**
GRR Gorron 9.32 289 *e*P **Pn 02 07 12.8 +1.5**
GRR *e* 02 08 51.3
GRR Gorron 9.32 289 *e*Pn **Pn 02 07 12.8 +1.5**
SNR=1.0
MLR Muntele Rosu 9.44 89 Pn **Pn 02 07 14.7 +1.7**
comp=Z,0.1nm,0.3s,baz=227,slow=6.1,SNR=12
MLR Sn **Sn 02 08 57.7 -1.3**
comp=Z,0.1nm,0.3s,baz=288,slow=20,SNR=4.4
MLR LR LR 02 11 19.4
comp=Z,42nm,18.6s,baz=276,slow=40
MLR Muntele Rosu 9.44 89 ⇓*i*P **Pn 02 07 14.6 +1.6**
MLR Muntele Rosu 9.44 89 S **Sn 02 08 56.5 -2.5**
DSL Palaion Diasel 9.48 135 P **Pn 02 07 13.3 -0.2**
DSL Palaion Diasel 9.48 135 P **Pn 02 07 13.3 -0.2**
DSL Palaion Diasel 9.48 135 P **Pn 02 07 13.3 -0.2**
LIT Litokhoron 9.51 126 *e*Pn **Pn 02 07 14.0 +0.1**
LIT Litokhoron 9.51 126 *e*P **Pn 02 07 14.0 +0.1**
LIT Litokhoron 9.51 126 *e*Pn **Pn 02 07 14.0 +0.1**
LKD2 Lefkada island 9.54 138 P **Pn 02 07 12.8 -1.5**
LKD2 Lefkada island 9.54 138 P **Pn 02 07 12.8 -1.5**
LKD2 Lefkada island 9.54 138 P **Pn 02 07 12.8 -1.5**
SOH Sokhos 9.55 120 P **Pn 02 07 14.3 -0.2**
SOH Sokhos 9.55 120 P **Pn 02 07 14.3 -0.2**
SOH Sokhos 9.55 120 P **Pn 02 07 14.3 -0.2**
SOH Sokhos 9.55 120 P **Pn 02 07 14.3 -0.2**
NVR Nevrokopi 9.55 116 P **Pn 02 07 14.2 -0.3**
NVR Nevrokopi 9.55 116 P **Pn 02 07 14.2 -0.3**
NVR Nevrokopi 9.55 116 P **Pn 02 07 14.2 -0.3**
THL Klokotos Trika 9.63 130 P **Pn 02 07 14.9 -0.6**
FSK Fiskardo 9.76 139 P **Pn 02 07 15.9 -1.4**
KLNR Kaliningrad 9.77 28 *i*P **Pn 02 07 19.3 +1.9**
ETSF Etsaut 9.86 255 *e*Pn **Pn 02 07 19.9 +1.1**
SNR=1.0
ETSF Etsaut 9.86 255 *e*Pg Pn 02 08 00.2 +41
ETSF *e*Sn **Sn 02 09 03.4 -5.9**
comp=Z,35nm,1.0s
ETSF Etsaut 9.86 255 *e*Pn **Pn 02 07 19.9 +1.1**
ETSF *e*Pg 02 08 00.2
ETSF *e*Sn **Sn 02 09 03.4 -5.9**
ETSF Etsaut 9.86 255 *e*P **Pn 02 07 19.9 +1.1**
ETSF *e* 02 09 03.4
ETSF Etsaut 9.86 255 *e*Pn **Pn 02 07 19.9 +1.1**
SNR=1.0
PLOR Plostina 9.88 87 ⇑*i*P **Pn 02 07 20.3 +1.4**
PLG Polygyros 9.88 122 P **Pn 02 07 18.9 -0.1**
PLG Polygyros 9.88 122 P **Pn 02 07 18.9 -0.1**
PLG Polygyros 9.88 122 P **Pn 02 07 18.9 -0.1**
PLG Polygyros 9.88 122 P **Pn 02 07 18.9 -0.1**
VRI Vrincioaia 9.93 87 ⇓*i*P **Pn 02 07 21.3 +1.7**
PDO Prodromos 9.94 137 P **Pn 02 07 18.8 -1.0**
EVR Evrytania 10.00 133 P **Pn 02 07 20.6 -0.1**
EVR Evrytania 10.00 133 P **Pn 02 07 20.6 -0.1**
EVR Evrytania 10.00 133 P **Pn 02 07 20.6 -0.1**
VLS Valsamata 10.01 140 P **Pn 02 07 19.5 -1.2**
VLS Valsamata 10.01 140 P **Pn 02 07 19.5 -1.2**
VLS Valsamata 10.01 140 P **Pn 02 07 19.5 -1.2**

VLS Valsamata 10.01 140 P **Pn 02 07 19.5 -1.2**
PVO Paravola 10.09 135 P **Pn 02 07 21.3 -0.6**
KFL Anninata 10.15 140 P **Pn 02 07 21.5 -1.2**
AGG Agios Georgios 10.19 131 *e*Pn **Pn 02 07 22.1 -1.2**
AGG Agios Georgios 10.19 131 P **Pn 02 07 22.0 -1.2**
AGG Agios Georgios 10.19 131 *e*P **Pn 02 07 22.1 -1.2**
AGG Agios Georgios 10.19 131 *e*Pn **Pn 02 07 22.1 -1.2**
SJPF Ste Jean 10.23 257 *e*Pn **Pn 02 07 23.4 -0.3**
SNR=1.0
SJPF Ste Jean 10.23 257 *e*Pn **Pn 02 07 23.4 -0.3**
SJPF Ste Jean 10.23 257 *e*P **Pn 02 07 23.4 -0.3**
SJPF Ste Jean 10.23 257 *e*Pn **Pn 02 07 23.4 -0.3**
SNR=1.0
ANX Ano Chora 10.30 134 P **Pn 02 07 24.4 -0.5**
PAIG Paliouri 10.31 123 P **Pn 02 07 24.0 -0.8**
PAIG Paliouri 10.31 123 P **Pn 02 07 24.0 -0.8**
PAIG Paliouri 10.31 123 P **Pn 02 07 24.0 -0.8**
PAIG Paliouri 10.31 123 P **Pn 02 07 24.0 -0.8**
XOR Xorichti 10.41 127 P **Pn 02 07 24.7 -1.5**
XOR Xorichti 10.41 127 P **Pn 02 07 24.7 -1.5**
XOR Xorichti 10.41 127 P **Pn 02 07 24.7 -1.5**
EFP Efpalio 10.43 135 P **Pn 02 07 25.8 -0.6**
SGMF Saint Gilles 10.43 287 *e*Pn **Pn 02 07 27.2 +0.7**
SNR=1.0
SGMF *e*Sn **Sn 02 09 17.7 -5.5**
comp=Z,13nm,0.4s
SGMF Saint Gilles 10.43 287 *e*Pn **Pn 02 07 27.2 +0.7**
SGMF *e*Sn **Sn 02 09 17.7 -5.5**
SGMF Saint Gilles 10.43 287 *e*P **Pn 02 07 27.2 +0.7**
SGMF *e* 02 09 17.7
SGMF Saint Gilles 10.43 287 *e*Pn **Pn 02 07 27.2 +0.7**
SNR=1.0
MUD Monsted U'grnd 10.50 350 *i*P **Pn 02 07 29.3 +2.0**
MUD Monsted U'grnd 10.50 350 *e*P **Pn 02 07 29.3 +2.0**
SERG Sergoula 10.51 134 P **Pn 02 07 26.9 -0.7**
TRIZ Trizonia 10.56 134 P **Pn 02 07 27.3 -0.9**
KALE Kalithea 10.57 134 P **Pn 02 07 27.4 -1.1**
KALE Kalithea 10.57 134 P **Pn 02 07 27.4 -1.1**
KALE Kalithea 10.57 134 P **Pn 02 07 27.4 -1.1**
LAKA Lakka 10.61 135 P **Pn 02 07 27.8 -1.2**
LAKA Lakka 10.61 135 P **Pn 02 07 27.8 -1.2**
LAKA Lakka 10.61 135 P **Pn 02 07 27.8 -1.2**
KEST Kesra 10.70 194 Pn **Pn 02 07 34.3 +4.0**
comp=Z,2.6nm,0.3s,baz=304,slow=3.9,SNR=49
KEST Kesra 10.70 194 *e*Pn **Pn 02 07 34.0 +3.8**
QUIF Quistinic 10.81 285 *e*Pn **Pn 02 07 32.4 +0.7**
SNR=1.0
QUIF *e*Sn **Sn 02 09 26.8 -5.6**
comp=Z,17nm,0.4s
QUIF Quistinic 10.81 285 *e*Pn **Pn 02 07 32.4 +0.7**
QUIF *e*Sn **Sn 02 09 26.8 -5.6**
QUIF Quistinic 10.81 285 *e*P **Pn 02 07 32.4 +0.7**
QUIF *e* 02 09 26.8
KLV Kalavryta, Ach 10.85 135 P **Pn 02 07 31.4 -0.8**
KLV Kalavryta, Ach 10.85 135 P **Pn 02 07 31.4 -0.8**
KLV Kalavryta, Ach 10.85 135 P **Pn 02 07 31.4 -0.8**
ROSF Rostrenen 10.92 287 *e*Pn **Pn 02 07 33.8 +0.7**
SNR=1.0
ROSF *e*Sn **Sn 02 09 29.5 -5.5**
comp=Z,17nm,0.5s
ROSF Rostrenen 10.92 287 *e*Pn **Pn 02 07 33.8 +0.7**
ROSF *e*Sn **Sn 02 09 29.5 -5.5**
ROSF Rostrenen 10.92 287 *e*P **Pn 02 07 33.8 +0.7**
ROSF *e* 02 09 29.5
ROSF Rostrenen 10.92 287 *e*Pn **Pn 02 07 33.8 +0.7**
SNR=1.0
GUR Goura 11.02 135 P **Pn 02 07 33.0 -1.7**
GUR Goura 11.02 135 P **Pn 02 07 33.0 -1.7**
GUR Goura 11.02 135 P **Pn 02 07 33.0 -1.7**
ALN Alexandroupoli 11.18 113 *e*Pn **Pn 02 07 36.7 0.0**
ALN Alexandroupoli 11.18 113 *e*P **Pn 02 07 36.7 0.0**
ALN Alexandroupoli 11.18 113 *e*Pn **Pn 02 07 36.7 0.0**
KIS Kishinev 11.29 80 *e*P **Pn 02 07 42.0 +3.8**
KIS *e*LQ LQ 02 11 28.0
comp=Z,500nm,15.0s
KIS LRM MLR 02 12 45.0
comp=Z,400nm,12.0s
KIS Kishinev 11.29 80 *e*P **Pn 02 07 42.0 +3.8**
KIS MLR MLR
comp=Z,400nm,12.0s
KIS MLR MLR
comp=Z,400nm,12.0s
ITM Ithomi 11.43 139 *e*Pn **Pn 02 07 39.1 -1.1**
ITM Ithomi 11.43 139 *e*Pn **Pn 02 07 39.1 -1.1**
VLY Voula,Athens 11.83 131 P **Pn 02 07 44.2 -1.4**
VLY Voula,Athens 11.83 131 P **Pn 02 07 44.2 -1.4**
VLY Voula,Athens 11.83 131 P **Pn 02 07 44.2 -1.4**
KIEV Kiev 12.00 62 *e*Pn **Pn 02 07 46.3 -1.6**
comp=Z,2.1nm,0.6s
KIEV Kiev 12.00 62 *i*P **Pn 02 07 49.7 +1.8**
KIEV Kiev 12.00 62 *e*Pn **Pn 02 07 46.3 -1.6**
comp=Z,2.1nm,0.6s
AKASG Malin Array Be 12.01 62 Pn **Pn 02 07 49.1 +1.0**
comp=Z,0.3nm,0.3s,baz=253,slow=12,SNR=4.3
AKASG Malin Array Be 12.01 62 *ce*P **Pn 02 07 52.5 +4.5**
AKASG pmax pmax
comp=Z,1.0nm,0.6s
EKA Eskdalemuir Ar 13.46 319 Pn **Pn 02 08 08.5 +0.7**
baz=131,slow=13,SNR=26
EKA Sn **Sn 02 10 35.7 -1.3**
baz=124,slow=25,SNR=6.7
ESK Eskdalemuir 13.47 318 *e*Pn **Pn 02 08 10.9 +3.0**
ESK Eskdalemuir 13.47 318 *e*P **Pn 02 08 10.9 +3.0**
ES19 SONSECA Array 13.61 247 *e*Pn **Pn 02 08 10.9 +0.8**
ES19 SONSECA Array 13.61 247 *e*Pn **Pn 02 08 10.9 +0.8**
ESDC Sonseca Array 13.67 247 Pn **Pn 02 08 10.6 -0.2**
comp=Z,0.8nm,0.3s,baz=57,slow=14,SNR=19
ESDC LR LR 02 13 35.2
comp=Z,30nm,20.9s,baz=90,slow=38
HFS Hagfors 14.00 3 Pn **Pn 02 08 15.9 +0.7**
comp=Z,0.2nm,0.3s,baz=184,slow=18,SNR=6.2
HFS LR LR 02 14 03.9
comp=Z,158nm,21.1s,baz=184,slow=39
IDI Anoyia 14.37 135 Pn **Pn 02 08 19.3 -1.1**
comp=Z,0.3nm,0.3s,baz=310,slow=17,SNR=5.3
IDI Anoyia 14.37 135 *e*Pn **Pn 02 08 19.2 -1.2**
PBRG Braganca 14.49 259 *e*P **Pn 02 08 23.8 +1.7**
comp=Z,17nm,1.9s
NC602 NORSAR Array S 14.60 358 *e*Pn **P 02 08 30.9 +1.2**
NAO01 NORSAR Array S 14.73 357 *e*Pn **P 02 08 32.5 +1.3**
NB2 NORSAR Subarra 14.91 358 P **Pn 02 08 27.8 +0.2**
comp=Z,175nm,0.7s,baz=175,slow=11
NOA NORSAR Array B 14.91 358 Pn **Pn 02 08 27.4 -0.2**
comp=Z,0.4nm,0.3s,baz=176,slow=12,SNR=7.5
NOA LR LR 02 14 19.5
comp=Z,85nm,20.3s,baz=175,slow=38
NBO00 NORSAR Array S 14.92 357 *e*Pn **P 02 08 34.5 +1.2**
NB201 NORSAR Array S 14.92 358 *e*Pn **P 02 08 33.1 -0.3**
MVO Moncorvo 14.96 257 *e*P **Pn 02 08 30.1 +1.7**
comp=Z,19nm,1.5s
MVO *e*LR LR 02 14 24.2
comp=Z,26nm,14.0s
NC405 NORSAR Array S 14.97 359 *e*Pn **Pn 02 08 27.8 -0.7**
VSU Vasula 15.04 30 *ce*P **Pn 02 08 29.2 -0.1**
VSU pmax pmax
comp=Z,31nm,0.9s
NC303 NORSAR Array S 15.09 358 *e*Pn **Pn 02 08 31.9 +1.9**
NC204 NORSAR Array S 15.16 357 *e*Pn **Pn 02 08 32.7 +1.7**
POLO Lamas de Olo 15.39 259 *e*P **P 02 08 36.6 -2.2**
comp=Z,12nm,1.5s
PGAV Gavieira, Arco 15.48 262 *e*P **Pn 02 08 37.4 +2.1**
comp=Z,47nm,1.6s
PGAV *e*LR LR 02 14 31.0
comp=Z,55nm,16.0s
MTE Manteigas 15.66 256 *e*P **P 02 08 42.7 +1.0**
comp=Z,20nm,1.9s
MTE *e*LR LR 02 14 50.3
comp=Z,79nm,18.0s
PVIS Viseu 15.75 257 *e*P **Pn 02 08 39.5 +0.7**
comp=Z,19nm,1.6s
PCBR Castelo Branco 15.88 254 *e*P **P 02 08 45.3 +1.1**
comp=Z,17nm,2.3s
PCBR Castelo Branco 15.88 254 *e*P **P 02 08 45.3 +1.1**
PMRV Marv??o 16.04 252 *e*P **P 02 08 46.2 +0.3**
comp=Z,13nm,1.6s
PESTR Estremoz 16.47 251 *e*P **P 02 08 50.8 +0.2**
comp=Z,21nm,1.4s
PESTR Estremoz 16.47 251 *e*P **P 02 08 50.8 +0.2**
PTOM Tomar 16.62 254 *e*P **Pn 02 08 50.9 +1.0**
comp=Z,15nm,1.5s
PTOM Tomar 16.62 254 *e*P **Pn 02 08 50.9 +1.0**
BRTR Keskin Array B 16.76 105 Pn **Pn 02 08 52.9 +1.1**
comp=Z,0.0nm,0.3s,baz=299,slow=9.5,SNR=2.9
PMTG Montargil 16.78 252 *e*P **Pn 02 08 50.1 -1.8**

comp=Z,18nm,1.6s
ALMR Almeirim 16.96 253 *e*P **Pn 02 08 52.9 -1.3**
comp=Z,56nm,1.2s
FINES FINESS Array B 17.22 22 P **Pn 02 08 56.0 -1.2**
comp=Z,0.9nm,0.3s,baz=204,slow=8.7,SNR=25
FINES LR LR 02 16 02.8
comp=Z,138nm,20.6s,baz=212,slow=38
FINES FINESS Array B 17.22 22 *e*P **Pn 02 08 56.7 -0.5**
FINES pmax pmax
comp=Z,1.0nm,0.3s
FIA1 FINESS Array S 17.22 22 *e*Pn **Pn 02 08 56.8 -0.4**
comp=Z,22nm,0.9s
PVAQ Vaqueiros 17.38 247 *e*LR LR 02 15 49.7
comp=Z,34nm,16.0s
ANN Anapa 17.55 85 *e*P Pn 02 08 52.3 -9.1
ANN pmax pmax
comp=Z,45nm,1.0s
ANN MLR MLR
comp=Z,127nm,11.0s
OBN Obninsk 17.63 51 P **Pn 02 09 02.0 -0.4**
comp=Z,0.5nm,0.3s,baz=210,slow=15,SNR=6.2
OBN Obninsk 17.63 51 *i* P **Pn 02 09 00.9 -1.5**
OBN pmax pmax
comp=Z,14nm,1.1s
OBN MLR MLR
comp=Z,53nm,15.0s
VSR Storozhevoye 18.28 64 *e*P **Pn 02 09 09.5 -1.0**
VSR pmax pmax
comp=Z,9.0nm,0.9s
MOS Moscow 18.42 50 *e*P **P 02 09 05.6 -6.4**
CSS Mathiatis 19.35 118 *e*P **P 02 09 22.1 -0.4**
comp=Z,1.5nm,0.8s
CSS Mathiatis 19.35 118 *e*P **P 02 09 22.0 -0.4**
comp=Z,1.5nm,0.8s
JOF Joensuu 19.89 26 P **P 02 09 28.8 +0.8**
JOF pmax pmax
comp=Z,14nm,1.2s
KIV Kislovodsk 21.40 85 *e*P **P 02 09 46.0 +1.3**
KIV pmax pmax
comp=Z,8.0nm,1.0s
KIV MLR MLR
comp=Z,32nm,14.0s
KVAR Kislovodsk Arr 21.41 85 LR LR 02 18 57.3
comp=Z,43nm,20.0s,baz=192,slow=39
KLMR Klimovskoe 21.56 37 *e*P **P 02 09 44.0 -2.2**
KLMR pmax pmax
comp=Z,36nm,1.6s
KLMR Klimovskoe 21.56 37 *e*P **P 02 09 44.0 -2.2**
KLMR AMP 02 09 51.4
comp=Z,36nm,1.6s
KBZ Khabaz 21.61 85 P **P 02 09 47.8 +1.0**
comp=Z,1.6nm,0.7s,baz=274,slow=15,SNR=2.9
KBZ LR LR 02 19 05.0
comp=Z,47nm,20.1s,baz=236,slow=39
MMAI Mount Meron Ar 21.93 119 P **P 02 09 51.7 +1.2**
comp=Z,5.5nm,0.7s,baz=321,slow=12,SNR=13
MMAI LR LR 02 20 37.6
comp=Z,52nm,20.7s,baz=270,slow=43
ASF Jabal al Asfar 23.42 118 P **P 02 10 05.7 -0.4**
comp=Z,3.3nm,0.7s,baz=260,slow=6.0,SNR=9.5
APA Apatity 24.06 20 ‖ *i*P **P 02 10 10.2 -1.6**
APA pmax pmax
comp=Z,6.0nm,1.3s
APA MLR MLR
comp=Z,400nm,12.0s
EIL Elat 24.08 125 P **P 02 10 12.8 +0.4**
comp=Z,4.9nm,0.6s,baz=334,slow=11,SNR=3.5
GNI Garni 24.19 93 *i* P **P 02 10 15.1 +1.6**
GNI pmax pmax
comp=Z,29nm,1.1s
ARCES ARCESS Array B 24.32 11 P **P 02 10 13.7 -0.6**
comp=Z,1.6nm,0.6s,baz=191,slow=10,SNR=12
ARCES ARCESS Array B 24.32 11 *e*P **P 02 10 13.9 -0.3**
ARCES pmax pmax
comp=Z,2.0nm,0.6s
PRGR Permogore 24.55 39 *e*P **P 02 10 16.3 -0.1**
PRGR pmax pmax
comp=Z,7.0nm,0.8s
JMIC Jan Mayen 26.86 345 LR LR 02 21 20.6
comp=Z,38nm,19.1s,baz=100,slow=36
ARU Arti 30.04 53 *e*P **P 02 11 05.5 -0.3**
comp=Z,9.7nm,0.8s
ARU Arti 30.04 53 *d i*P **P 02 11 05.9 +0.2**
ARU 02 12 03.5
ARU S **S 02 16 09.8 +6.4**
ARU SS **ScP 02 17 43.1 -5.9**
ARU pmax pmax
comp=Z,10.0nm,0.7s
AKTO Aktyubinsk 30.23 65 LR LR 02 25 08.1
comp=Z,26nm,20.2s,baz=277,slow=40
SVE Sverdlovsk 31.19 52 ‖ *e*P **P 02 11 19.3 +3.5**
SVE pmax pmax
comp=Z,26nm,0.9s
SPITS Spitsbergen Ar 32.15 2 P **P 02 11 22.8 -1.3**
comp=Z,4.3nm,0.8s,baz=142,slow=7.3,SNR=6.0
TORD Torodi Ar. Bea 34.16 199 P **P 02 11 40.8 -1.3**
comp=Z,0.5nm,0.6s,baz=8.0,slow=8.6,SNR=8.4
TORD PcP **PcP 02 14 19.2 +0.1**
comp=Z,0.8nm,0.6s,baz=317,slow=3.0,SNR=8.1
RAYN Ar Rayn 34.91 119 *e*P **P 02 11 49.5 +0.8**
comp=Z,1.5nm,0.7s
RAYN Ar Rayn 34.91 119 *e*P **P 02 11 49.5 +0.8**
comp=Z,1.5nm,0.7s
SUMG Summit 35.15 336 *i* P **P 02 11 51.9 +1.3**
comp=Z,4.8nm,0.6s
SUMG Summit 35.15 336 *i* P **P 02 11 51.9 +1.3**
SUMG pmax pmax
comp=Z,5.0nm,0.6s
BVAR Borovoye Array 37.25 58 LR LR 02 28 48.2
comp=Z,67nm,18.3s,baz=322,slow=38
SFJD Kangerlussuaq 38.29 326 LR LR 02 27 07.7
comp=Z,68nm,19.8s,baz=0.5,slow=35
KK31 Karatay Array 40.62 73 *e*P **P 02 12 37.4 +0.6**
KK31 Karatay Array 40.62 73 *e*P **P 02 12 37.4 +0.6**
KKAR Karatay Array 40.62 73 *e*P **P 02 12 37.4 +0.6**
KKAR Karatay Array 40.62 73 *e*P **P 02 12 37.4 +0.6**
KURBB Kurchatov Arra 42.78 59 P **P 02 12 54.2 -0.1**
comp=Z,0.5nm,0.5s,baz=304,slow=8.7,SNR=4.6
KURK Kurchatov 42.80 59 *e*P **P 02 12 54.1 -0.3**
KURK Kurchatov 42.80 59 *i* P **P 02 12 55.9 +1.4**
KURK pmax pmax
comp=Z,1.0nm,0.8s
NVS Novosibirsk 44.03 52 *e*P **P 02 13 04.9 +0.6**
ZALV Zalesovo Beam 45.20 53 P **P 02 13 13.5 -0.2**
comp=Z,1.2nm,0.5s,baz=295,slow=7.8,SNR=6.2
ZALV LR LR 02 34 47.7
comp=Z,26nm,19.8s,baz=68,slow=40
ZALV Zalesovo Beam 45.20 53 *e*P **P 02 13 13.8 +0.1**
ZALV Zalesovo Beam 45.20 53 *e*P **P 02 13 13.8 +0.1**
KSH Kashi 45.93 74 P **P 02 13 19.6 -0.2**
KSH pmax pmax
comp=Z,250nm,4.7s
FRB Frobisher Bay 46.18 322 LR LR 02 33 56.3
comp=Z,58nm,18.7s,baz=126,slow=38
MKAR Makanchi Array 46.59 63 P **P 02 13 24.0 -0.8**
comp=Z,0.6nm,0.6s,baz=317,slow=5.9,SNR=6.3
MKAR Makanchi Array 46.59 63 *e*P **P 02 13 24.8 0.0**
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MK01 Makanchi Array 46.61 63 *e*P **P 02 13 23.7 -1.2**
WMQ Urumqi 51.36 64 P **P 02 14 03.7 +2.3**
PKME Peaks-Kenny Pk 54.59 301 *e*P **P 02 14 24.9 -0.2**
TLY Talaya 56.37 48 *e*P **P 02 14 38.8 +0.9**
TLY pmax pmax
comp=Z,8.0nm,0.9s
FCC Fort Churchill 59.30 324 *e*P **P 02 14 57.5 -0.7**
comp=Z,1.8nm,0.7s
FCC Fort Churchill 59.30 324 *e*P **P 02 14 57.5 -0.7**
FCC pmax pmax
comp=Z,2.0nm,0.7s
SONA1 Songino Array 60.04 51 *e*P **P 02 15 04.6 +0.8**
SONM Songino Array 60.04 51 P **P 02 15 03.0 -0.8**
comp=Z,1.8nm,0.6s,baz=285,slow=8.5,SNR=7.5
SONM Songino Array 60.04 51 *e*P **P 02 15 03.9 +0.1**
SONM pmax pmax
comp=Z,2.0nm,0.6s
ULN Ulaanbaatar 60.38 51 *e*P **P 02 15 05.8 -0.4**
comp=Z,1.4nm,0.5s
ULN Ulaanbaatar 60.38 51 *c e*P **P 02 15 07.2 +1.1**
ULN pmax pmax
comp=Z,5.0nm,2.5s
INK Inuvik 63.03 347 *e*P **P 02 15 24.3 +0.9**
comp=Z,1.5nm,0.6s
INK Inuvik 63.03 347 *e*P **P 02 15 24.3 +0.9**
INK pmax pmax
comp=Z,2.0nm,0.6s

YKA Yellowknife Ar 63.74 336 P **P 02 15 28.0 -0.2**
comp=Z,1.2nm,0.6s,baz=37,slow=5.8,SNR=22
BILL Bilibino 64.42 11 *i* P **P 02 15 34.9 +2.3**
BILL pmax pmax
comp=Z,1.0nm,0.9s
FFC Flin Flon 65.23 324 *e*P **P 02 15 37.8 -0.3**
comp=Z,2.1nm,0.6s
FFC Flin Flon 65.23 324 *e*P **P 02 15 37.8 -0.3**
FFC pmax pmax
comp=Z,2.0nm,0.6s
ULM Lac du Bonnet 65.73 318 P **P 02 15 41.5 +0.1**
comp=Z,7.9nm,0.6s,baz=49,slow=6.1,SNR=17
LZH Lanzhou 65.91 63 *e*P **P 02 15 42.8 -0.2**
LZH pP pP 02 15 47.5 +0.3
LZH sP sP 02 15 50.0 +1.3
LZH *e*PP **PP 02 18 09.3 +1.6**
LZH pmax pmax
comp=Z,21nm,1.2s
LZH pmax pmax
comp=Z,65nm,7.6s
LZH LR LR
comp=N,170nm,15.5s
LZH LR LR
comp=E,170nm,15.2s
LZH LR LR
comp=Z,230nm,18.3s
CD2 Chengdu 69.26 67 P **P 02 16 01.5 -2.6**
CD2 pmax pmax
comp=Z,5.0nm,0.6s
ECSD ERDS Data Cent 70.69 313 *e*P **P 02 16 13.1 +0.4**
comp=Z,3.0nm,0.6s
CCM Cathedral Cave 71.85 306 *e*P **P 02 16 19.1 -0.6**
comp=Z,3.0nm,0.6s
CCM Cathedral Cave 71.85 306 *e*P **P 02 16 19.1 -0.6**
CCM pmax pmax
comp=Z,3.0nm,0.6s
LRAL Lakeview Retre 72.89 300 *e*P **P 02 16 25.8 -0.3**
LAO LASA Array 73.02 321 *e*P **P 02 16 27.9 +1.3**
CHTO Chiang Mai 74.28 79 *e*P **P 02 16 33.7 -0.7**
comp=Z,2.0nm,0.5s
CHTO Chiang Mai 74.28 79 *e*P **P 02 16 33.7 -0.7**
CHTO pmax pmax
comp=Z,2.0nm,0.5s
CMAR Chiang Mai Arr 74.52 79 P **P 02 16 35.4 -0.5**
comp=Z,0.8nm,0.3s,baz=309,slow=7.4,SNR=5.4
CMAR LR LR 02 56 20.2
comp=Z,11nm,19.9s,baz=195,slow=41
CMAR Chiang Mai Arr 74.52 79 *e*P **P 02 16 36.3 +0.5**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
HHAR Hobbs 74.63 306 *e*P **P 02 16 36.0 -0.2**
comp=Z,3.4nm,0.6s
USRK Ussuriysk Ar. 75.32 40 P **P 02 16 39.2 -0.8**
comp=Z,1.9nm,0.5s,baz=14,slow=2.4,SNR=4.7
JTMT Jette 75.52 326 *e*P **P 02 16 42.4 +1.1**
comp=Z,6.6nm,0.7s
MIAR Mount Ida 75.67 305 *e*P **P 02 16 42.1 -0.1**
MIAR Mount Ida 75.67 305 *e*P **P 02 16 42.1 -0.1**
BOZ Bozeman (W) 76.20 323 *e*P **P 02 16 46.5 +1.3**
comp=Z,6.4nm,1.4s
BOZ Bozeman (W) 76.20 323 *e*P **P 02 16 46.6 +1.3**
BOZ pmax pmax
comp=Z,6.0nm,1.4s
DLMT Dillon 76.79 324 *e*P **P 02 16 49.9 +1.4**
comp=Z,2.8nm,0.8s
YPP Pitchstone Pla 76.91 322 *e*P **P 02 16 51.6 +2.1**
comp=Z,2.7nm,0.7s
PDAR Pinedale Array 77.57 320 P **P 02 16 53.0 -0.1**
comp=Z,0.5nm,0.6s,baz=64,slow=5.8,SNR=5.1
NJ2 Nanjing 77.68 56 *e*P **P 02 16 54.3 +0.7**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
WMOK Wichita Mounta 78.43 308 *e*P **P 02 16 58.8 +1.0**
comp=Z,5.9nm,1.2s
WMOK Wichita Mounta 78.43 308 *e*P **P 02 16 58.8 +1.0**
WMOK pmax pmax
comp=Z,6.0nm,1.2s
KSAR Wonju Array Be 78.58 47 P **P 02 16 57.9 -0.6**
KSAR Wonju Array Be 78.58 47 P **P 02 16 57.9 -0.6**
KSRS Korea Array 78.59 47 P **P 02 16 57.9 -0.7**
comp=Z,1.9nm,0.8s,baz=327,slow=7.0,SNR=7.0
HLID Hailey 79.01 324 *e*P **P 02 17 02.8 +1.8**
comp=Z,9.9nm,1.9s
BMO Blue Mountains 79.09 326 *e*P **P 02 17 01.7 +0.4**
BMO Blue Mountains 79.09 326 *e*P **P 02 17 01.7 +0.4**
S22A 4UR Ranch, Cre 80.28 315 *e*P **P 02 17 09.6 +1.4**
comp=Z,13nm,1.9s
ANMO Albuquerque 82.30 313 P **P 02 17 19.2 +0.4**
comp=Z,1.2nm,0.6s,baz=73,slow=6.8,SNR=6.7
ANMO Albuquerque 82.30 313 *c e*P **P 02 17 20.7 +1.9**
ANMO pmax pmax
comp=Z,1.0nm,0.8s
PSUT Pine Spring 82.91 320 *e*P **P 02 17 23.8 +1.8**
comp=Z,3.7nm,0.9s
CCUT Cedar City 83.50 320 *e*P **P 02 17 26.5 +1.5**
comp=Z,3.3nm,0.9s
MNTX Cornudas Mount 84.30 311 *e*P **P 02 17 28.9 0.0**
NVAR Mina Array Bea 84.91 323 P **P 02 17 32.4 +0.2**
comp=Z,0.7nm,0.7s,baz=353,slow=3.1,SNR=2.8
X16A Lo Mia Camp, P 85.17 316 *e*P **P 02 17 35.1 +1.5**
TX31 Lajitas Ar. Si 85.22 308 *e*P **P 02 17 35.2 +1.5**
TXAR Lajitas Array 85.22 308 P **P 02 17 35.1 +1.3**
comp=Z,5.0nm,0.8s,baz=64,slow=4.4,SNR=59
TUC Tucson 86.56 315 *e*P **P 02 17 41.7 +1.4**
comp=Z,1.6nm,0.6s
TUC Tucson 86.56 315 *e*P **P 02 17 41.7 +1.4**
TUC pmax pmax
comp=Z,2.0nm,0.6s
NVL N'lazarevskaya 116.63 180 *e*PKIKP PKPdf 02 23 50.9 +11
NVL pmax pmax
comp=Z,4.0nm,0.6s
WRA Warramunga Arr 126.09 81 PKP **PKPdf 02 23 59.1 -0.3**
comp=Z,0.5nm,0.7s,baz=326,slow=1.8,SNR=5.0
ASAR Alice Springs 128.27 85 PKP **PKPdf 02 24 02.7 -0.8**
comp=Z,0.4nm,0.6s,baz=335,slow=1.8,SNR=3.5

IDC 09 02:11:31.2±1.9, 32°.20S×178°.21W, h0km, mb3.8/2, mb1 4.0/3, mb1mx3.7/47, mbtmp3.8/3, ML3.2/1, Error ellipse: s-maj=43.8km s-min=35.7km az=105.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.16**	**211**	Pn	Pn	02 13 15.7	-1.5
	0.4nm,0.3s,baz=52,slow=19,SNR=2.3						
URZ				Sn	Sn	02 14 39.6	+0.4
	0.8nm,0.3s,baz=342,slow=20,SNR=4.1						
ASAR	**Alice Springs**	**42.86**	**269**	P	P	02 19 31.5	0.0
	0.6nm,0.5s,baz=107,slow=7.7,SNR=6.1						
WRA	**Warramunga Arr**	**44.01**	**274**	P	P	02 19 41.0	+0.2
	1.2nm,0.5s,baz=113,slow=8.0,SNR=17						
FINES	**FINESS Array B**	**146.76**	**339**	PKPbc	PKPdf	02 31 13.1	+0.4
	0.5nm,0.5s,baz=46,slow=4.0,SNR=7.2						
TORD	**Torodi Ar. Bea**	**161.04**	**180**	PKPab	PKPab	02 32 16.8	0.0
	0.4nm,0.9s,baz=184,slow=4.2,SNR=2.9						

*ISCJB **09** 02:25:31.6±0.7, 18°.7S±0°.1×169°.7E±0°.1, h300km, mb4.1/13, Error ellipse: s-maj=18.4km s-min=13.5km az=149.7*
*NEIC **09** 02:25:33.0±1.4, 18°.73S×169°.75E, h303km±13km, mb4.1/3, Error ellipse: s-maj=16.6km s-min=14.0km az=157.0*
*IDC **09** 02:25:33.3±2.6, 18°.71S×169°.76E, h306km±25km, mb3.9/10, mb1 4.0/12, mb1mx3.6/49, mbtmp4.6/12, Error ellipse: s-maj=27.8km s-min=19.2km az=165.0*
ISC 09 02:25:32.7±0.8, 18.75±0°.1×169.8E±0°.1, h300km, n18, σ0=93/18, mb4.1/13, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.58**	**222**	P	Pn	02 26 45.7	+0.3
	7.7nm,0.3s,baz=53,slow=18,SNR=65						
HNR	**Honiara**	**13.26**	**313**	P	Pn	02 28 30.1	-0.4
	12nm,0.3s,baz=104,slow=19,SNR=5.9						
CTA	**Charters Tower**	**22.23**	**263**	P	P	02 30 05.2	+0.3
	6.5nm,0.7s,baz=111,slow=9.3,SNR=9.5						
CTAO	**Charters Tower**	**22.23**	**263**	*e*P	P	02 30 05.0	+0.2
PMG	**Port Moresby**	**23.78**	**290**	P	P	02 30 19.5	+0.5
	29nm,0.9s,baz=83,slow=8.1,SNR=5.8						
STKA	**Stephens Creek**	**28.55**	**237**	P	P	02 31 03.0	+1.6
	3.5nm,0.6s,baz=90,slow=8.0,SNR=8.2						
WRAB	**Tennant Creek**	**33.41**	**262**	*e*P	P	02 31 42.9	-1.1
	2.4nm,0.5s						
WRA	**Warramunga Arr**	**33.42**	**262**	P	P	02 31 43.1	-1.0
	4.4nm,0.8s,baz=96,slow=8.5,SNR=26						
ASAR	**Alice Springs**	**33.75**	**255**	P	P	02 31 46.8	-0.1
	18nm,0.6s,baz=83,slow=8.8,SNR=198						
MBWA	**Marble Bar**	**46.95**	**258**	*e*P	P	02 33 34.0	-0.4
KAPI	**Kappang**	**50.63**	**279**	*e*P	P	02 34 02.2	0.0
	6.2nm,0.8s						
CMAR	**Chiang Mai Arr**	**78.75**	**294**	P	P	02 37 02.0	-0.8
	1.1nm,0.3s,baz=134,slow=2.6,SNR=4.7						
BILL	**Bilibino**	**86.54**	**359**	*e*P	P	02 37 42.4	+0.8
	2.1nm,0.6s						
YBH	**Yreka Blue Hor**	**86.57**	**44**	P	P	02 37 41.8	-0.7
	1.1nm,0.6s,baz=270,slow=8.1,SNR=3.4						
PMSA	**Palmer Station**	**87.23**	**160**	P	P	02 37 43.3	-1.8
	24nm,0.8s,baz=248,slow=5.4,SNR=3.6						
ILAR	**Eielson Array**	**89.58**	**17**	P	P	02 37 55.9	-0.1
	0.4nm,0.6s,baz=236,slow=4.8,SNR=6.1						
TXAR	**Lajitas Array**	**96.07**	**61**	P	P	02 38 28.3	+1.5
	0.2nm,0.5s,baz=230,slow=5.6,SNR=3.0						
GRFO	**Grafenberg**	**144.62**	**336**	*e*PKPdf	PKPdf	02 44 33.9	+0.4

*ISCJB **09** 02:54:38.8±0.4, 38°.99N±0°.02×26°.27E±0°.03, h5km±4km, Error ellipse: s-maj=4.4km s-min=3.0km az=170.1*
*ATH **09** 02:54:38.6, 39°.01N×26°.26E, h19km±1km, ML1.9/6, Error ellipse: s-maj=1.8km s-min=0.9km az=268.0*
*DDA **09** 02:54:39.0, 39°.01N×26°.32E, h7km, Ml2.6*
*CSEM **09** 02:54:39.0±0.1, 39°.00N×26°.28E, h5km, ML1.9, Error ellipse: s-maj=2.0km s-min=1.7km az=97.0*
ISC 09 02:54:39.1±0.9, 39°.00N±0°.02×26°.28E±0°.02, h11km±9km, n31, σ0=55/56, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**0.25**	**358**	P	**Pg**	**02 54 43.9**	**-0.3**
PRK				S	**Sg**	**02 54 48.8**	**+1.1**
PRK				AML	AML	02 54 49.7	
	comp=E,692μm,0.2s						
PRK				AML	AML	02 54 51.4	
	comp=N,600μm,0.4s						
PRK	**Paraskevi**	**0.25**	**358**	P	**Pg**	**02 54 44.1**	**-0.1**
PRK				S	**Sg**	**02 54 48.6**	**+0.9**
SIGR	**SIGRI**	**0.40**	**303**	P	**Pg**	**02 54 46.7**	**-0.2**
SIGR				S	**Sg**	**02 54 51.4**	**-0.8**
SIGR				AML	AML	02 54 52.6	
	comp=E,613μm,0.5s						
SIGR				AML	AML	02 54 53.2	
	comp=N,400μm,0.3s						
SIGR	**SIGRI**	**0.40**	**303**	P	**Pg**	**02 54 46.6**	**-0.3**
SIGR				S	**Sg**	**02 54 51.8**	**-0.4**
AYVA	**Ayvalik**	**0.45**	**45**	*i* P	**Pg**	**02 54 47.7**	**-0.1**
AYVA				*i* S	**Sg**	**02 54 53.2**	**-0.5**
AYVA	**Ayvalik**	**0.45**	**45**	P	**Pg**	**02 54 47.7**	**-0.1**
AYVA				S	**Sg**	**02 54 53.2**	**-0.5**
CHOS	**Chios island**	**0.63**	**196**	P	**Pg**	**02 54 51.7**	**+0.2**
CHOS				S	**Sg**	**02 55 00.2**	**+0.4**
CHOS				AML	AML	02 55 03.2	
	comp=N,220μm,0.2s						
CHOS				AML	AML	02 55 03.6	
	comp=E,492μm,0.2s						
CHOS	**Chios island**	**0.63**	**196**	P	**Pg**	**02 54 51.4**	**0.0**
CHOS				S	**Sg**	**02 55 00.2**	**+0.4**
URLA	**Izmir**	**0.68**	**159**	*i* P	**Pg**	**02 54 51.8**	**-0.5**
URLA				*i* S	**Sg**	**02 55 00.6**	**-0.6**
URLA	**Izmir**	**0.68**	**159**	P	**Pg**	**02 54 51.8**	**-0.5**
URLA				S	**Sg**	**02 55 00.6**	**-0.6**
PSRA	**Psara**	**0.72**	**231**	P	**Pg**	**02 54 52.2**	**-0.8**
PSRA				S	**Sg**	**02 55 02.9**	**+0.4**
PSRA	**Psara**	**0.72**	**231**	P	**Pg**	**02 54 52.4**	**-0.7**
PSRA				S	**Sg**	**02 55 02.8**	**+0.3**
BAYC	**CANAKKALE_Bayr**	**0.77**	**15**	*i* P	**Pb**	**02 54 54.8**	**+0.2**
BAYC	**CANAKKALE_Bayr**	**0.77**	**15**	P	**Pb**	**02 54 54.8**	**+0.2**
ZEY	**¨zmir**	**0.78**	**167**	*i* P	**Pb**	**02 54 54.6**	**0.0**
ZEY				*i* S	**Sb**	**02 55 05.8**	**+0.6**
BOZC	**Bozcaada**	**0.86**	**348**	*i* P	**Pg**	**02 54 54.9**	**-0.9**
BOZC				*i* S	**Sb**	**02 55 07.9**	**+0.1**
DGB	**¨zmir**	**1.05**	**153**	*i* P	**Pg**	**02 54 58.7**	**-0.7**
DGB				*i* S	**Sg**	**02 55 11.5**	**-1.5**
STEP	**BALIKESIR_Sava**	**1.18**	**71**	*i* P	**Pg**	**02 55 01.1**	**-0.7**
STEP				*i* S	**Sb**	**02 55 17.2**	**+0.4**
STEP	**BALIKESIR_Sava**	**1.18**	**71**	P	**Pg**	**02 55 01.1**	**-0.7**
STEP				S	**Sb**	**02 55 17.2**	**+0.4**
AKHS	**Akhisar**	**1.20**	**95**	*i* P	**Pn**	**02 55 02.3**	**+0.4**
AKHS	**Akhisar**	**1.20**	**95**	P	**Pn**	**02 55 02.3**	**+0.4**
LIA	**Limnos Island**	**1.24**	**317**	P	**Pb**	**02 55 02.2**	**-0.3**
LIA				S	**Sg**	**02 55 18.4**	**-0.6**
LIA				AML	AML	02 55 18.5	
	comp=E,62μm,0.5s						
LIA				AML	AML	02 55 21.9	
	comp=N,57μm,0.3s						
LIA	**Limnos Island**	**1.24**	**317**	P	**Pb**	**02 55 02.0**	**-0.5**
LIA				S	**Sg**	**02 55 18.5**	**-0.5**
BALY	**Balya**	**1.27**	**54**	*i* P	**Pn**	**02 55 03.1**	**+0.1**
BALY				*i* S	**Sg**	**02 55 20.1**	**-0.1**
BALY	**Balya**	**1.27**	**54**	P	**Pn**	**02 55 03.1**	**+0.1**
BALY				S	**Sg**	**02 55 20.1**	**-0.1**
SMG	**Samos**	**1.36**	**161**	P	**Pn**	**02 55 03.9**	**-0.1**
SMG				S	**Sg**	**02 55 23.4**	**+0.7**
SMG				AML	AML	02 55 24.3	
	comp=N,128μm,0.5s						
SMG				AML	AML	02 55 25.4	
	comp=E,175μm,0.3s						
SMG	**Samos**	**1.36**	**161**	P	**Pn**	**02 55 04.3**	**+0.3**
SMG				S	**Sg**	**02 55 23.5**	**+0.7**
SMTH	**Samothraki Isl**	**1.58**	**339**	P	**Pn**	**02 55 07.6**	**+0.5**
SMTH				S	**Sb**	**02 55 28.9**	**+0.4**
SMTH				AML	AML	02 55 30.8	
	comp=N,19μm,0.2s						
SMTH				AML	AML	02 55 34.1	
	comp=E,21μm,0.4s						
SMTH	**Samothraki Isl**	**1.58**	**339**	P	**Pn**	**02 55 07.6**	**+0.5**
SMTH				S	**Sb**	**02 55 28.8**	**+0.4**
ALN	**Alexandroupoli**	**1.91**	**355**	P	**Pn**	**02 55 11.9**	**+0.4**
ALN	**Alexandroupoli**	**1.91**	**355**	P	**Pn**	**02 55 12.1**	**+0.5**

*ISCJB **09** 03:10:43.9±2.4, 33°.98N±0°.06×25°.92E±0°.06, h11km±15km, mb3.5/6, Error ellipse: s-maj=10.0km s-min=6.6km az=31.0*
*CSEM **09** 03:10:44.2, 34°.04N×25°.88E, h12km, ML2.6/4*
*ATH **09** 03:10:44.1, 34°.04N×25°.88E, h12km±2km, ML2.6/4, Error ellipse: s-maj=4.4km s-min=1.7km az=357.0*
*IDC **09** 03:10:50.2±2.4, 34°.15N×25°.60E, h51km±23km, mb3.4/6, mb1 3.4/8, mb1mx3.2/55, mbtmp3.6/8, ML3.4/2, Error ellipse: s-maj=22.8km s-min=22.2km az=55.0*
ISC 09 03:10:45.7±1.8, 34°.11N±0°.07×25°.83E±0°.04, h15km±10km, n26, σ0=80/34, mb3.5/6, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**1.06**	**18**	P	**Pb**	**03 11 05.1**	**-0.7**
ZKR				S	**Sn**	**03 11 20.4**	**-0.1**
ZKR				AML	AML	03 11 29.8	
	comp=E,496μm,0.5s						
ZKR				AML	AML	03 11 34.5	
	comp=N,176μm,0.7s						
ZKR	**Zakros**	**1.06**	**18**	P	**Pb**	**03 11 05.0**	**-0.7**
ZKR				S	**Sg**	**03 11 20.3**	**+0.4**
LAST	**Lasithi**	**1.09**	**345**	P	**Pn**	**03 11 06.4**	**-0.1**
LAST				S	**Sn**	**03 11 22.3**	**+0.8**
LAST				AML	AML	03 11 26.7	
	comp=N,499μm,0.5s						
LAST				AML	AML	03 11 31.2	
	comp=E,256μm,0.5s						
LAST	**Lasithi**	**1.09**	**345**	P	**Pb**	**03 11 06.3**	**0.0**
LAST				S	**Sn**	**03 11 22.2**	**+0.8**
NPS	**Neapolis**	**1.17**	**351**	P	**Pn**	**03 11 06.8**	**-0.7**
NPS	**Neapolis**	**1.17**	**351**	P	**Pn**	**03 11 07.1**	**-0.4**
SIVA	**Sivas**	**1.24**	**318**	P	**Pb**	**03 11 08.9**	**+0.1**
SIVA				S	**Sg**	**03 11 26.8**	**+1.1**
SIVA				AML	AML	03 11 31.7	
	comp=N,917μm,0.6s						
SIVA				AML	AML	03 11 37.1	
	comp=E,888μm,0.6s						
SIVA	**Sivas**	**1.24**	**318**	P	**Pb**	**03 11 08.9**	**+0.1**
SIVA				S	**Sg**	**03 11 26.8**	**+1.1**
IDI	**Anoyia**	**1.41**	**327**	P	**Pb**	**03 11 11.5**	**-0.2**
	comp=E,3.0nm,0.3s,baz=140,slow=18,SNR=17						
GVD	**Gavdhos**	**1.61**	**297**	P	**Pg**	**03 11 15.9**	**-0.7**
GVD				S	**Sg**	**03 11 38.4**	**+0.8**
GVD				AML	AML	03 11 46.8	
	comp=N,248μm,0.6s						
GVD				AML	AML	03 11 49.5	

comp=E,251μm,0.5s
GVD Gavdhos 1.61 297 P Pb 03 11 15.7 +0.5
GVD S **Sg 03 11 38.4 +0.8**
KARP Karpathos 1.81 37 P Pb 03 11 17.9 -0.6
KARP Karpathos 1.81 37 P Pb 03 11 17.8 -0.7
VAM Vamos 1.86 315 P Pb 03 11 18.9 -0.6
VAM Vamos 1.86 315 P Pb 03 11 19.0 -0.5
IMMV Iera Moni Meta 2.03 312 P Pb 03 11 21.3 -1.0
IMMV Iera Moni Meta 2.03 312 P Pb 03 11 21.4 -1.0
KSL Kastellorizon 3.69 55 P Pn 03 11 43.6 +1.4
EIL Elat 8.93 117 P Pn 03 12 58.6 +4.5
comp=E,0.7nm,0.3s,baz=195,slow=11,SNR=8.1
EIL S **Sn 03 14 34.6 +0.1**
comp=E,0.1nm,0.3s,baz=18,slow=20,SNR=2.2
GERES GERESS Array B 17.27 332 P **P 03 14 47.7 0.0**
comp=E,0.1nm,0.3s,baz=142,slow=11,SNR=3.9
HFS Hagfors 27.23 347 P **P 03 16 28.5 -0.2**
comp=E,4.8nm,1.1s,baz=138,slow=11,SNR=3.8
FINES FINESS Array B 27.36 0 P **P 03 16 29.0 -0.9**
comp=E,0.5nm,0.4s,baz=163,slow=11,SNR=5.5
TORD Torodi Ar. Bea 30.26 232 P **P 03 16 55.2 -0.9**
comp=E,1.0nm,1.2s,baz=32,slow=8.5,SNR=2.8
ARCES ARCESS Array B 35.48 360 P **P 03 17 40.3 -1.0**
comp=E,1.0nm,0.7s,baz=174,slow=9.1,SNR=4.2
KURBB Kurchatov Arra 41.37 50 P **P 03 18 32.1 +1.1**
comp=E,0.3nm,0.5s,baz=276,slow=8.3,SNR=2.9
MKAR Makanchi Array 43.90 56 P **P 03 18 53.2 +1.5**
comp=E,0.2nm,0.5s,baz=274,slow=8.5,SNR=3.0

DDA 09 03:10:56.5, 39°.02N×26°.27E, h7km, Ml2.3, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
AYVA	**Ayvalik**	**0.43**	**49**	*i* P		Pg	03 11 04.5	-0.3
AYVA				*i* S		Sg	03 11 11.4	+0.9
BAYC	**CANAKKALE_Bayr**	**0.75**	**16**	*i* P		Pb	03 11 11.5	-0.3
BAYC				*i* S		Sb	03 11 22.7	+0.4
BOZC	**Bozcaada**	**0.83**	**348**	*i* P		Pb	03 11 13.0	-0.3
BOZC				*i* S		Sg	03 11 23.7	+0.3

DJA 09 03:22:29.9±0.4, 1°.S±4°.×12°.3E±°, h154km±4km, M3.6/9, mb3.8/3, MLv3.5/9, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.32**	**176**	P		Pn	03 22 52.2	+1.2
LUWI				S		Sn	03 23 08.7	+1.6
APSI	**Ampana**	**1.12**	**260**	P		Pn	03 22 57.1	+1.1
APSI				S		Sn	03 23 17.3	+1.3
MRSI	**Marisa**	**1.44**	**326**	P		Pn	03 22 57.7	-1.4
KMSI	**Cibinong**	**1.78**	**44**	P		Pn	03 23 02.9	+0.1
PCI	**Palu**	**2.92**	**266**	P		Pn	03 23 17.3	+0.9
MPSI	**Mapaga**	**3.04**	**290**	P		Pn	03 23 18.5	+0.6
KDI	**Kendari**	**3.22**	**182**	P		Pn	03 23 20.4	+0.2
SANI	**Sanana**	**3.50**	**112**	P		Pn	03 23 23.7	-0.1
TTSI	**Tana Toraja**	**3.73**	**232**	P		Pn	03 23 26.7	-0.1
SPSI	**Sidrap Palu**	**4.39**	**223**	P		Pn	03 23 34.6	-0.8
SGKI	**Sangatta, Kali**	**5.15**	**272**	P		Pn	03 23 48.7	+3.3
BKSI	**Bulukumba**	**5.27**	**210**	P		Pn	03 23 45.9	-1.1
	5.0nm,0.6s,0.0nm							
MSAI	**Masohi**	**6.70**	**113**	P		Pn	03 24 07.5	+1.4
	7.2nm,0.8s							

CSEM ***09*** *03:37:07.8±0.2, 37°.61N×32°.10E, h5km, ML2.4, Error ellipse: s-maj=4.7km s-min=3.2km az=97.0*
DDA ***09*** *03:37:07.3, 37°.60N×32°.08E, h7km, Ml2.4*
ISK ***09*** *03:37:07.2, 37°.61N×32°.10E, h4km, ML2.5/2*
ISC 09 03:37:07.8±1.0, 37°.60N±0°.02×32°.10E±0°.03, h8km±9km, n25, σ0°.64/44, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KMER	**Konya-Meram**	**0.27**	**50**	*i* P		**Pg**	**03 37 13.2**	**-0.1**
KMER				*i* S		**Sg**	**03 37 17.9**	**+1.0**
KMER	**Konya-Meram**	**0.27**	**50**	P		**Pg**	**03 37 13.1**	**-0.1**
KMER				S		**Sg**	**03 37 17.9**	**+1.0**
KONT	**Konya--Tatoy**	**0.40**	**30**	PG		**Pg**	**03 37 15.7**	**0.0**
KONT				SG		**Sb**	**03 37 22.1**	**-1.5**
KONT	**Konya--Tatoy**	**0.40**	**30**	*i* P		**Pg**	**03 37 15.3**	**-0.4**
KONT				*i* S		**Sg**	**03 37 21.8**	**+0.7**
KONT	**Konya--Tatoy**	**0.40**	**30**	*e*Pg		**Pg**	**03 37 15.7**	**0.0**
KONT				*e*Sg		**Sb**	**03 37 22.1**	**-1.5**
DOGA	**KONYA_Doganhis**	**0.61**	**326**	*i* P		**Pg**	**03 37 19.6**	**-0.2**
DOGA				*i* S		**Sg**	**03 37 28.0**	**+0.2**
DOGA	**KONYA_Doganhis**	**0.61**	**326**	P		**Pg**	**03 37 19.5**	**-0.2**
DOGA				S		**Sg**	**03 37 28.0**	**+0.2**
LADK	**Ladik-KONYA**	**0.64**	**19**	PG		**Pg**	**03 37 20.0**	**-0.1**
LADK				SG		**Sg**	**03 37 28.7**	**+0.2**
LADK	**Ladik-KONYA**	**0.64**	**19**	*e*Pg		**Pg**	**03 37 20.0**	**-0.1**
LADK				*e*Sg		**Sg**	**03 37 28.7**	**+0.2**
KEPZ	**Antalya-Kepez**	**0.80**	**210**	*i* P		**Pg**	**03 37 23.1**	**-0.1**
KEPZ				*i* S		**Sg**	**03 37 33.6**	**0.0**
KEPZ	**Antalya-Kepez**	**0.80**	**210**	P		**Pg**	**03 37 23.1**	**-0.1**
KEPZ				S		**Sg**	**03 37 33.6**	**0.0**
SUTC	**Sutluce-Ispart**	**0.89**	**263**	PG		**Pb**	**03 37 24.8**	**-0.7**
SUTC				SG		**Sb**	**03 37 37.4**	**-0.1**
SUTC	**Sutluce-Ispart**	**0.89**	**263**	*e*Pg		**Pb**	**03 37 24.8**	**-0.7**
SUTC				*e*Sg		**Sb**	**03 37 37.4**	**-0.1**
KDHN	**Kadinhani**	**0.92**	**1**	*i* P		**Pg**	**03 37 24.6**	**-1.0**
KDHN	**Kadinhani**	**0.92**	**1**	P		**Pg**	**03 37 24.6**	**-1.0**
ERMK	**Ermenek**	**1.15**	**146**	*i* P		**Pn**	**03 37 31.0**	**+0.6**
ERMK				*i* S		**Sn**	**03 37 46.9**	**+0.5**
ERMK	**Ermenek**	**1.15**	**146**	P		**Pn**	**03 37 31.0**	**+0.6**
ERMK				S		**Sn**	**03 37 46.9**	**+0.5**
CHBY	**Cihanbeyli**	**1.16**	**32**	PN		**Pb**	**03 37 30.0**	**-0.2**
CHBY	**Cihanbeyli**	**1.16**	**32**	*e*Pn		**Pb**	**03 37 30.0**	**-0.2**
KIZT	**Kizilcal**	**1.29**	**352**	PN		**Pb**	**03 37 32.4**	**-0.1**
KIZT				SN		**Sn**	**03 37 50.8**	**+0.9**
KIZT	**Kizilcal**	**1.29**	**352**	*e*Pn		**Pb**	**03 37 32.4**	**-0.1**
KIZT				*e*Sn		**Sn**	**03 37 50.8**	**+0.9**
GAZI	**Gazipasa**	**1.37**	**173**	*i* P		**Pn**	**03 37 32.8**	**-0.4**
GAZI				*i* S		**Sn**	**03 37 52.3**	**+0.7**
GAZI	**Gazipasa**	**1.37**	**173**	P		**Pn**	**03 37 32.8**	**-0.4**
GAZI				S		**Sn**	**03 37 52.3**	**+0.7**
BOLV	**Bolvadin**	**1.44**	**321**	*i* P		**Pg**	**03 37 36.3**	**+0.8**
BOLV	**Bolvadin**	**1.44**	**321**	P		**Pg**	**03 37 36.3**	**+0.8**

IDC 09 03:47:35.0±4.5, 2°.59N×89°.88E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.3/71, mbtmp3.6/4, Error ellipse: s-maj=162.4km s-min=29.4km az=58.0, North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
H08S3	**Diego Garcia H**	**20.11**	**240**	T		T	04 12 54.4	
	baz=59,slow=74,SNR=11							
H08S2	**Diego Garcia H**	**20.11**	**239**	T		T	04 12 55.1	
	baz=59,slow=74,SNR=7.2							
H08S1	**Diego Carcia H**	**20.13**	**240**	T		T	04 12 53.9	
	baz=59,slow=74,SNR=7.6							
H01W3	**Cape Leeuwin H**	**43.68**	**151**	T		T	04 42 17.1	
	baz=326,slow=76,SNR=5.2							
H01W2	**Cape Leeuwin H**	**43.69**	**151**	T		T	04 42 16.8	
	baz=326,slow=76,SNR=6.3							
H01W1	**Cape Leeuwin H**	**43.70**	**151**	T		T	04 42 14.5	
	baz=326,slow=76,SNR=7.6							
MKAR	**Makanchi Array**	**44.52**	**353**	P		P	03 55 48.1	-0.3
	0.3nm,0.4s,baz=172,slow=9.1,SNR=4.8							
SONM	**Songino Array**	**47.27**	**15**	P		P	03 56 10.7	+0.4
	1.0nm,0.5s,baz=184,slow=7.4,SNR=4.5							
KURBB	**Kurchatov Arra**	**48.81**	**350**	P		P	03 56 21.6	-0.3
	0.2nm,0.4s,baz=179,slow=7.2,SNR=4.4							
WRA	**Warramunga Arr**	**49.03**	**119**	P		P	03 56 24.0	-0.2
	0.8nm,0.7s,baz=298,slow=8.9,SNR=3.1							

DDA ***09*** *03:55:04.3, 40°.93N×42°.15E, h4km, Ml3.4*
TIF ***09*** *03:55:04.9, 40°.95N×42°.10E, h14km±1km*
CSEM ***09*** *03:55:05.5±0.2, 40°.91N×42°.13E, h2km, ML3.4, Error ellipse: s-maj=4.7km s-min=3.8km az=172.0*
ISK ***09*** *03:55:05.0, 40°.95N×42°.10E, h6km, ML3.5/4*
ISC 09 03:55:05.2±1.1, 40°.93N±0°.02×42°.14E±0°.02, h3km±13km, n64, σ0°.72/89, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
DDEM	**Demirkent**	**0.30**	**262**	*i* P		**Pg**	**03 55 10.9**	**0.0**
DDEM	**Demirkent**	**0.30**	**262**	P		**Pg**	**03 55 10.9**	**0.0**
DBOC	**Borcka**	**0.54**	**319**	*i* P		**Pg**	**03 55 15.6**	**-0.1**
DBOC				*i* S		**Sg**	**03 55 22.8**	**+0.1**
DBOC	**Borcka**	**0.54**	**319**	P		**Pg**	**03 55 15.6**	**-0.1**
DBOC				S		**Sg**	**03 55 22.8**	**+0.1**
BCA	**Borcka**	**0.64**	**323**	PG		**Pg**	**03 55 17.5**	**0.0**
BCA				SG		**Sg**	**03 55 26.0**	**+0.1**
BCA	**Borcka**	**0.64**	**323**	*e*Pg		**Pg**	**03 55 17.5**	**0.0**
BCA				*e*Sg		**Sg**	**03 55 26.0**	**+0.1**
EPOS	**Posof**	**0.72**	**38**	*i* P		**Pg**	**03 55 18.9**	**-0.1**
EPOS				*i* S		**Sg**	**03 55 29.3**	**+0.9**
EPOS	**Posof**	**0.72**	**38**	P		**Pg**	**03 55 18.9**	**-0.1**
EPOS				S		**Sg**	**03 55 29.3**	**+0.9**
KARS	**Kars**	**0.78**	**113**	PG		**Pb**	**03 55 21.1**	**-0.3**
KARS				SG		**Sb**	**03 55 33.2**	**+0.8**
KARS	**Kars**	**0.78**	**113**	*e*Pg		**Pb**	**03 55 21.1**	**-0.3**
KARS				*e*Sg		**Sb**	**03 55 33.2**	**+0.8**
HOMI	**Horasan**	**0.91**	**191**	*i* P		**Pg**	**03 55 21.2**	**-1.3**
HOMI				*i* S		**Sg**	**03 55 34.9**	**+0.6**
CHOM	**Cayeli-Rize**	**1.05**	**279**	PG		**Pg**	**03 55 25.1**	**-0.3**
CHOM				SG		**Sb**	**03 55 39.8**	**-0.5**
CHOM	**Cayeli-Rize**	**1.05**	**279**	*e*Pg		**Pg**	**03 55 25.1**	**-0.3**
DIGO	**Kars**	**1.07**	**119**	*i* P		**Pg**	**03 55 23.9**	**-1.8**
DIGO				*i* S		**Sg**	**03 55 39.2**	**-0.4**
CHAY	**Cayeli-Rize**	**1.08**	**279**	PG		**Pg**	**03 55 25.5**	**-0.4**
CHAY				SG		**Sb**	**03 55 40.7**	**-0.3**
CHAY	**Cayeli-Rize**	**1.08**	**279**	*e*Pg		**Pg**	**03 55 25.5**	**-0.4**
CHAY				*e*Sg		**Sb**	**03 55 40.7**	**-0.3**
EATA	**Eleskirt**	**1.10**	**166**	*i* P		**Pg**	**03 55 25.7**	**-0.6**
EATA	**Eleskirt**	**1.10**	**166**	P		**Pg**	**03 55 25.7**	**-0.6**
AKH	**Akhalkalaki**	**1.13**	**65**	PN		**Pb**	**03 55 27.3**	**-0.1**
AKH	**Akhalkalaki**	**1.13**	**65**	P		**Pg**	**03 55 26.4**	**-0.4**
AKH				S		**Sb**	**03 55 42.0**	**-0.5**
AKH	**Akhalkalaki**	**1.13**	**65**	P		**Pg**	**03 55 26.4**	**-0.4**
AKH	**Akhalkalaki**	**1.13**	**65**	*e*Pn		**Pb**	**03 55 27.3**	**-0.1**
AKH				S		**Sb**	**03 55 42.0**	**-0.5**
EAK	**Akyaka**	**1.14**	**102**	*i* P		**Pg**	**03 55 25.9**	**-1.1**
EAK	**Akyaka**	**1.14**	**102**	P		**Pg**	**03 55 25.9**	**-1.1**
BGD	**Bogdanovka**	**1.15**	**73**	P		**Pg**	**03 55 27.1**	**-0.2**
BGD				S		**Sb**	**03 55 43.2**	**0.0**
BGD	**Bogdanovka**	**1.15**	**73**	P		**Pg**	**03 55 27.1**	**-0.2**
BGD				S		**Sb**	**03 55 43.2**	**0.0**
ERZM	**Erzurum**	**1.19**	**210**	*i* P		**Pg**	**03 55 27.5**	**-0.4**
ERZM	**Erzurum**	**1.19**	**210**	P		**Pg**	**03 55 27.5**	**-0.4**
AGRB	**Hanur-Agry**	**1.51**	**154**	PN		**Pb**	**03 55 33.5**	**-0.4**
AGRB	**Hanur-Agry**	**1.51**	**154**	*e*Pn		**Pb**	**03 55 33.5**	**-0.4**
KOPT	**Kop Dagi**	**1.55**	**234**	*i* P		**Pb**	**03 55 34.7**	**0.0**
KOPT				*i* S		**Sg**	**03 55 58.6**	**+3.6**
KOPT	**Kop Dagi**	**1.55**	**234**	P		**Pb**	**03 55 34.7**	**0.0**
BAYT	**Ayd¨–ntepe-Bay**	**1.61**	**251**	PN		**Pn**	**03 55 33.9**	**-0.8**
BAYT	**Ayd¨–ntepe-Bay**	**1.61**	**251**	*e*Pn		**Pn**	**03 55 33.9**	**-0.8**
TUTA	**Tutak**	**1.61**	**161**	*i* P		**Pb**	**03 55 35.6**	**-0.2**
TUTA	**Tutak**	**1.61**	**161**	P		**Pb**	**03 55 35.6**	**-0.2**
EKAR	**Karacoban**	**1.68**	**182**	*i* P		**Pg**	**03 55 37.5**	**+0.2**
EKAR	**Karacoban**	**1.68**	**182**	P		**Pg**	**03 55 37.5**	**+0.2**
CHVG	**Ch'k'valeri**	**1.78**	**359**	PN		**Pg**	**03 55 39.5**	**+0.1**
CHVG	**Ch'k'valeri**	**1.78**	**359**	P		**Pb**	**03 55 38.0**	**-0.5**
CHVG				S		**Sg**	**03 56 03.6**	**+1.1**
CHVG	**Ch'k'valeri**	**1.78**	**359**	P		**Pb**	**03 55 38.0**	**-0.5**
CHVG	**Ch'k'valeri**	**1.78**	**359**	*e*Pn		**Pg**	**03 55 39.5**	**+0.1**
CHVG				S		**Sg**	**03 56 03.0**	**+0.5**
MACK	**Trabzon**	**1.80**	**271**	*i* P		**Pn**	**03 55 37.6**	**+0.5**
MACK	**Trabzon**	**1.80**	**271**	P		**Pn**	**03 55 37.6**	**+0.5**
DYDN	**Diyadin**	**1.83**	**139**	*i* P		**Pg**	**03 55 41.1**	**+0.9**
ONI	**Oni**	**1.93**	**30**	P		**Pb**	**03 55 40.6**	**-0.4**
ONI				S		**Sg**	**03 56 06.6**	**-0.4**
ONI	**Oni**	**1.93**	**30**	P		**Pb**	**03 55 40.6**	**-0.4**
ONI				S		**Sg**	**03 56 06.6**	**-0.4**
YEDI	**Yedisu-Bingol**	**1.93**	**220**	PN		**Pn**	**03 55 39.2**	**+0.2**
YEDI	**Yedisu-Bingol**	**1.93**	**220**	*e*Pn		**Pn**	**03 55 39.2**	**+0.2**
TBLG	**Delisi**	**2.11**	**67**	PN		**Pn**	**03 55 42.2**	**+0.8**
TBLG	**Delisi**	**2.11**	**67**	P		**Pb**	**03 55 44.2**	**+0.1**
TBLG				S		**Sg**	**03 56 12.6**	**-0.5**
TBLG	**Delisi**	**2.11**	**67**	*e*Pn		**Pn**	**03 55 42.2**	**+0.8**
TBLG	**Delisi**	**2.11**	**67**	P		**Pb**	**03 55 44.2**	**+0.1**
TBLG				S		**Sg**	**03 56 12.6**	**-0.5**
GNI	**Garni**	**2.13**	**111**	PN		**Pn**	**03 55 42.5**	**+0.7**
GNI	**Garni**	**2.13**	**111**	*e*Pn		**Pn**	**03 55 42.5**	**+0.7**
GUDG	**Gudauri**	**2.33**	**48**	P		**Pb**	**03 55 47.5**	**-0.3**
GUDG	**Gudauri**	**2.33**	**48**	P		**Pb**	**03 55 47.5**	**-0.3**
KELT	**Kelkit**	**2.33**	**251**	*i* P		**Pb**	**03 55 46.7**	**-1.3**
KELT				*i* S		**Sb**	**03 56 16.8**	**-0.4**
KELT	**Kelkit**	**2.33**	**251**	P		**Pb**	**03 55 46.7**	**-1.3**
ESPY	**Espiye-Giresun**	**2.58**	**271**	PN		**Pn**	**03 55 48.3**	**+0.4**
ESPY	**Espiye-Giresun**	**2.58**	**271**	*e*Pn		**Pn**	**03 55 48.3**	**+0.4**
PTK	**Pertek**	**2.94**	**227**	PN		**Pn**	**03 55 53.9**	**+1.0**
PTK	**Pertek**	**2.94**	**227**	*e*Pn		**Pn**	**03 55 53.9**	**+1.0**
SUSE	**Susehri**	**3.08**	**258**	*i* P		**Pb**	**03 55 59.0**	**-1.7**

IDC 09 03:55:41.9±3.9, 5°.22S×150°.72E, h0km, mb3.1/2, mb1 3.5/2, mb1mx3.3/48, mbtmp3.2/2, Error ellipse: s-maj=150.1km s-min=51.8km az=116.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.64**	**226**	P		P	04 00 34.1	0.0
	0.6nm,0.6s,baz=52,slow=10,SNR=6.6							
ASAR	**Alice Springs**	**24.47**	**220**	P		P	04 01 02.8	-0.1
	0.2nm,0.3s,baz=53,slow=8.5,SNR=7.8							
TORD	**Torodi Ar. Bea**	**148.46**	**287**	PKPbc		PKPbc	04 15 31.1	-0.6
	0.5nm,0.7s,baz=86,slow=1.2,SNR=4.3							

NIED ***09*** *03:59:00, 46°.60N×152°.90E, h44km, Mw4.6 Best double couple: M₀9.16000×10¹⁵ NP1:φ₀227.00000°, δ57.00000°, λ144.00000°. NP2:φ₀339.00000°, δ60.00000°, λ39.00000°.*
JMA ***09*** *03:59:09.7±0.9, 46°.61N×152°.92E, h30km, M5.6*
SKHL ***09*** *03:59:11.7±0.8, 46°.51N×152°.89E, h71km±5km, mb5.2/16, Ms4.2/2*
ISCJB ***09*** *03:59:11.8±0.4, 46°.69N±0°.02×152°.50E±0°.02, h59km±3km, mb4.8/291, MS4.0/53, Error ellipse: s-maj=4.3km s-min=2.2km az=159.9*
BJI ***09*** *03:59:12.8, 46°.82N×152°.58E, h77km, mb5.0/52, mB4.9/34, Ms4.4/33, Ms7 4.1/26*
MOS ***09*** *03:59:13.0±0.9, 46°.73N×152°.47E, h67km, mb5.1/87, Error ellipse: s-maj=5.9km s-min=3.9km az=96.6*
IDC ***09*** *03:59:15.4±2.0, 46°.78N×152°.43E, h73km±17km, mb4.4/42, mb1 4.6/47, mb1mx4.5/69, mbtmp4.8/47, MS3.8/45, Ms1 3.8/45, ms1mx3.7/66, Error ellipse: s-maj=10.9km s-min=8.5km az=131.0*
NEIC ***09*** *03:59:16.1±0.5, 46°.79N×152°.34E, h80km±4km, mb4.8/184, Error ellipse: s-maj=4.3km s-min=2.3km az=161.0*
ISC 09 03:59:12.7±0.5, 46°.68N±0°.04×152°.54E±0°.04, h52km±4km, n1213, σ1°.17/1244, mb4.8/295, MS3.9/54, 42C-33D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.56**	**248**	*i* P		**Pn**	**04 00 07.4**	**+2.0**
KUR						AMB	AMB	04 00 08.2
	952nm,1.0s							
KUR						AMB	AMB	04 00 09.6
	334nm,0.6s							
KUR						AMB	AMB	04 00 09.6
	164nm,0.6s							
KUR						AMB	AMB	04 00 09.6
	745nm,0.6s							
KUR				*i* S		**Sn**	**04 00 48.8**	**+2.6**
KUR						A	A	04 00 51.4
	3μm,2.0s							
KUR						A	A	04 00 51.4
	3μm,2.0s							
KUR						A	A	04 00 56.6
	3μm,0.4s							
KUR						A	A	04 00 56.6
	1μm,0.4s							
KUR	**Kuril'sk**	**3.56**	**248**	*d* PN		**Pn**	**04 00 07.4**	**+2.0**
KUR				*i* S		**Sn**	**04 00 49.2**	**+3.0**
KUR						pmax	pmax	
	comp=Z,740nm,0.6s							
KUR						pmax	pmax	
	comp=N,334nm,0.2s							
KUR						pmax	pmax	
	comp=E,160nm,0.1s							
KUR						smax	smax	
	comp=E,3μm,2.3s							
KUR						smax	smax	
	comp=N,3μm,1.0s							
KUR						MLR	MLR	
	comp=Z,1μm,12.0s							
SKR	**Severo-Kuril's**	**4.65**	**29**	*e*P		**Pn**	**04 00 20.7**	**+0.4**
SKR						AMB	AMB	04 00 25.3
	comp=Z,410nm,0.5s							
SKR				*e*S		**Sn**	**04 01 10.6**	**-2.4**
SKR						A	A	04 01 36.6
	comp=Z,440nm,0.8s							
SKR						A	A	04 01 36.6
	comp=Z,1μm,0.8s							
SKR	**Severo-Kuril's**	**4.65**	**29**	*e*PN		**Pn**	**04 00 22.1**	**+1.8**
SKR				*e*S		**Sn**	**04 01 11.3**	**-1.7**
SKR						pmax	pmax	
	comp=Z,409nm,0.5s							
SKR						smax	smax	
	comp=E,1μm,0.8s							
SKR						smax	smax	
	comp=N,440nm,0.7s							
SHO	**Shikotan**	**4.91**	**237**	*i* P		**Pn**	**04 00 23.5**	**-0.4**
SHO						AMB	AMB	04 00 32.9
	comp=N,500nm,2.6s							
SHO						AMB	AMB	04 00 33.8
	comp=N,260nm,0.4s							
SHO				*i* S		**Sn**	**04 01 19.3**	**-0.1**
SHO						A	A	04 01 36.5
	comp=N,2μm,0.3s							
SHO						A	A	04 01 36.5
	comp=N,2μm,0.3s							
SHO	**Shikotan**	**4.91**	**237**	*c* iPN		**Pn**	**04 00 23.5**	**-0.4**
SHO				*i* S		**Sn**	**04 01 19.3**	**-0.1**
SHO						pmax	pmax	
	comp=Z,479nm,2.6s							
SHO						pmax	pmax	
	comp=Z,257nm,0.4s							
SHO						pmax	pmax	
	comp=N,182nm,0.3s							
SHO						pmax	pmax	
	comp=E,281nm,0.2s							
SHO						smax	smax	
	comp=E,2μm,0.3s							
SHO						smax	smax	
	comp=N,1μm,0.4s							
YUK	**Yuzh-Kuril'sk**	**5.40**	**243**	*e*P		**Pn**	**04 00 32.5**	**+2.0**
YUK						AMB	AMB	04 00 38.5
	comp=N,179nm,0.3s							
YUK						AMB	AMB	04 00 38.5
	comp=N,338nm,0.3s							
YUK						AMB	AMB	04 00 38.5
	comp=N,88nm,0.3s							
YUK				*i* S		**Sn**	**04 01 33.1**	**+1.8**
YUK						A	A	04 01 50.8
	comp=N,2μm,0.8s							
YUK						A	A	04 01 50.8
	comp=N,363nm,0.8s							
YUK						AMS	AMS	04 02 38.0
	comp=N,651nm,13.0s							
YUK	**Yuzh-Kuril'sk**	**5.40**	**243**	*c* iPN		**Pn**	**04 00 32.5**	**+2.0**
YUK				*i* S		**Sn**	**04 01 33.1**	**+1.8**
YUK						pmax	pmax	
	comp=Z,877nm,0.2s							
YUK						pmax	pmax	
	comp=N,179nm,0.1s							
YUK						pmax	pmax	
	comp=E,338nm,0.3s							
YUK						smax	smax	
	comp=E,4μm,1.0s							
YUK						smax	smax	
	comp=N,2μm,0.7s							
YUK						MLR	MLR	
	comp=Z,651nm,13.0s							
LAGR	**Lagunnoye**	**5.43**	**244**	*i* P		**Pn**	**04 00 33.1**	**+2.1**
LAGR						AMB	AMB	04 00 48.9
	comp=Z,93nm,0.5s							
LAGR				*e*S		**Sn**	**04 01 34.7**	**+2.5**
LAGR						A	A	04 01 54.1
	comp=Z,5μm,0.6s							
LAGR						A	A	04 01 54.1
	comp=Z,500nm,0.6s							
LAGR	**Lagunnoye**	**5.43**	**244**	⇑ *i* PN		**Pn**	**04 00 33.1**	**+2.1**
LAGR				*e*S		**Sn**	**04 01 34.7**	**+2.5**
LAGR						pmax	pmax	
	comp=Z,934nm,0.5s							
LAGR						pmax	pmax	
	comp=N,1μm,0.6s							
LAGR						pmax	pmax	
	comp=E,541nm,0.4s							
LAGR						smax	smax	
	comp=E,5μm,0.6s							
LAGR						smax	smax	
	comp=N,5μm,0.4s							
LAGR						MLR	MLR	
	comp=Z,577nm,11.0s							
GRPR	**Tuman**	**5.47**	**243**	*i* P		**Pn**	**04 00 33.2**	**+1.6**
GRPR						AMB	AMB	04 00 46.7
	comp=Z,68nm,0.4s							
GRPR				*i* S		**Sn**	**04 01 34.4**	**+1.2**
GRPR						A	A	04 01 53.6
	comp=Z,230nm,0.6s							
GRPR						A	A	04 01 53.6
	comp=Z,1μm,0.6s							
GRPR	**Tuman**	**5.47**	**243**	*d* iPN		**Pn**	**04 00 33.2**	**+1.6**
GRPR				*i* S		**Sn**	**04 01 34.4**	**+1.2**
GRPR						pmax	pmax	
	comp=Z,678nm,0.4s							
GRPR						pmax	pmax	
	comp=E,202nm,0.3s							
GRPR						pmax	pmax	
	comp=N,409nm,0.2s							
GRPR						smax	smax	
	comp=E,2μm,0.6s							
GRPR						smax	smax	
	comp=N,1μm,0.5s							
PAU	**Pauzhetka**	**5.55**	**29**	*e*P		**Pn**	**04 00 33.7**	**+1.1**
PAU				*e*S		**Sn**	**04 01 34.4**	**-0.6**
GLVR	**Golovnino**	**5.76**	**242**	*e*P		**Pn**	**04 00 37.0**	**+1.4**
GLVR				

PEA0B Petropavlovsk- 7.25 25 *e*Pn Pn 04 00 58.6 +2.8
PETK Petropavlovsk- 7.25 25 P **Pn 04 00 57.3 +1.4**
comp=Z,4.4nm,0.3s,baz=180,slow=11,SNR=25
PETK S Sn 04 02 26.2 +10
baz=170,slow=26,SNR=1.6
PETK LR LR 04 03 49.0
comp=Z,394nm,20.0s,baz=198,slow=38
JOB Onbets 7.25 242 P **Pn 04 00 56.2 +0.3**
JOB *e*S **Sn 04 02 14.3 -2.5**
HRK Horoka 7.39 248 *e*P **Pn 04 01 00.2 +2.2**
UGL Uglegorsk 7.44 293 *e*P Pn 04 01 02.9 +4.4
UGL AMB AMB 04 01 05.0
comp=Z,740nm,2.0s
UGL AMB AMB 04 01 06.0
comp=Z,370nm,0.9s
JKA Kamikawa-asahi 7.45 253 *e*P Pn 04 01 02.2 +3.5
ASAJ Asahikawa 7.45 253 P Pn 04 01 02.2 +3.5
comp=Z,10nm,0.3s,baz=87,slow=15,SNR=89
ASAJ S **Sn 04 02 28.1 +6.3**
comp=Z,4.8nm,0.3s,baz=205,slow=14,SNR=1.5
ASAJ LR LR 04 03 46.5
comp=Z,755nm,20.5s,baz=57,slow=37
ASAJ Asahikawa 7.45 253 *e*Pn Pn 04 01 02.6 +3.9
ASAJ S **Sn 04 02 28.1 +6.3**
ASAJ Asahikawa 7.45 253 P Pn 04 01 02.4 +3.7
JKK2 Kamakawa 2 7.46 251 P **Pn 04 01 01.8 +3.1**
PET Petropavlovsk 7.48 30 *e*P **Pn 04 00 58.3 -0.7**
PET AMB AMB 04 01 16.9
comp=Z,37nm,0.6s
PET AMS AMS 04 03 55.6
comp=Z,370nm,20.0s
PET Petropavlovsk 7.48 30 *e*Pn **Pn 04 00 59.9 +0.9**
PET Petropavlovsk 7.48 30 *e*PN **Pn 04 00 58.6 -0.4**
PET pmax pmax
comp=Z,39nm,0.6s
PET MLR MLR
comp=Z,400nm,20.0s
JWK2 Keihoku 7.54 263 P Pn 04 01 05.7 +5.9
JCH Churui 7.70 241 P **Pn 04 01 01.8 -0.3**
JCH *e*S **Sn 04 02 24.3 -3.6**
TYV Tymovskoe 7.75 306 *e*P Pn 04 01 06.1 +3.3
TYV AMB AMB 04 01 06.9
comp=Z,94nm,0.8s
TYV AMB AMB 04 01 09.3
comp=Z,200nm,3.0s
TYV *e*S **Sn 04 02 31.2 +2.1**
TYV A A 04 02 33.1
comp=Z,24nm,0.6s
TYV A A 04 02 46.3
comp=Z,300nm,3.0s
TYV AMS AMS 04 04 32.1
comp=Z,600nm,14.0s
TYV AMS AMS 04 04 32.1
comp=Z,800nm,14.0s
TYV Tymovskoe 7.75 306 *e*PN Pn 04 01 06.1 +3.3
TYV *e*S **Sn 04 02 31.2 +2.1**
TYV pmax pmax
comp=Z,94nm,0.8s
TYV pmax pmax
comp=Z,200nm,3.3s
TYV smax smax
comp=N,24nm,0.6s
TYV smax smax
comp=N,300nm,3.1s
TYV MLR MLR
comp=Z,800nm,14.0s
TYV MLR MLR
comp=N,600nm,14.0s
JFR Furan 7.88 247 P **Pn 04 01 06.4 +1.8**
MYR Moyori 7.94 240 *e*P **Pn 04 01 04.9 -0.4**
JAB Ashibetsu 7.96 250 P **Pn 04 01 08.7 +3.1**
ERM Erimo 8.18 239 *e*P **Pn 04 01 10.1 +1.4**
ERM Erimo 8.18 239 *e*Pn **Pn 04 01 09.0 +0.3**
ERM *e*Sn **Sn 04 02 39.3 -0.3**
ERM Erimo 8.18 239 *de*PN **Pn 04 01 10.1 +1.4**
ERM pmax pmax
comp=Z,107nm,1.7s
JBT2 Biratori 2 8.23 245 P **Pn 04 01 09.8 +0.5**
JNBK Urakawa-nobuka 8.26 241 P **Pn 04 01 08.1 -1.7**
JNBK *e*S **Sn 04 02 38.5 -3.2**
JEW Eniwo 8.77 248 P **Pn 04 01 18.5 +1.7**
JNB Noboribetsu 9.22 247 P **Pn 04 01 22.7 -0.2**
JNB *e*S **Sn 04 03 03.5 -1.7**
OKH Okha 9.23 322 *e*P **Pn 04 01 25.6 +2.6**
OKH AMB AMB 04 01 28.6
comp=Z,100nm,5.0s
OKH AMS AMS 04 05 11.5
comp=Z,500nm,18.0s
OKH Okha 9.23 322 *e*PN Pn 04 01 17.5 -5.5
OKH pmax pmax
comp=Z,100nm,5.4s
JKB Kayabe 9.54 244 P **Pn 04 01 26.3 -0.9**
JKB *e*S **Sn 04 03 07.5 -5.4**
JSH Shimam 9.77 250 P **Pn 04 01 31.7 +1.3**
JYM2 Yakumo 2 9.83 247 P **Pn 04 01 30.9 -0.3**
NKL Nikolayevsk 10.01 315 *e*P **Pn 04 01 36.5 +2.8**
NKL AMB AMB 04 01 39.0
comp=Z,68nm,1.0s
NKL AMB AMB 04 01 39.0
comp=Z,140nm,1.0s
NKL AMB AMB 04 01 39.0
comp=Z,500nm,2.0s
NKL AMS AMS 04 06 42.0
comp=Z,1μm,14.0s
NKL AMS AMS 04 06 42.0
comp=Z,800nm,14.0s
NKL AMS AMS 04 06 42.0
comp=Z,2μm,14.0s
NKL Nikolayevsk 10.01 315 *e*PN **Pn 04 01 36.0 +2.3**
NKL *e* 04 03 37.0
NKL pmax pmax
comp=N,68nm,1.0s
NKL pmax pmax
comp=Z,140nm,1.0s
NKL pmax pmax
comp=Z,500nm,2.0s
NKL MLR MLR
comp=N,1μm,14.0s
NKL MLR MLR
comp=E,800nm,14.0s
NKL MLR MLR
comp=Z,2μm,14.0s
JSR Shiriuchi 10.12 244 P **Pn 04 01 34.4 -0.8**
JTM Tenmabayashi 10.17 239 P **Pn 04 01 33.8 -2.1**
JTM *e*S Sn 04 03 19.7 -8.8
JANG Nango 10.18 236 P **Pn 04 01 32.9 -3.2**
JANG *e*S Sn 04 03 19.4 -9.4
JOSM Okushiri--Mats 10.42 249 P **Pn 04 01 39.1 -0.1**
JAH Hinai 10.81 237 P **Pn 04 01 42.2 -2.4**
OFUJ Ofunato 11.01 230 *e*S Sn 04 03 38.9 -10
TEY Ternei 11.24 267 *e*P **Pn 04 01 53.0 +2.6**
TEY AMB AMB 04 01 57.3
comp=Z,43nm,1.0s
TEY AMB AMB 04 01 57.3
comp=Z,52nm,1.0s
TEY Ternei 11.24 267 *e*PN Pn 04 01 56.9 +6.5
TEY pmax pmax
comp=E,43nm,1.0s
TEY pmax pmax
comp=Z,52nm,1.0s
JRG Rokugo 11.34 234 P **Pn 04 01 49.9 -2.0**
JRG *e*S Sn 04 03 50.1 -7.0
GRNR Gornyy 11.40 297 *e*P **Pn 04 01 56.0 +3.3**
GRNR AMB AMB 04 01 59.0
comp=Z,140nm,1.0s
GRNR AMB AMB 04 01 59.0
comp=Z,130nm,1.0s
GRNR Gornyy 11.40 297 *e*PN Pn 04 01 57.0 +4.3
GRNR pmax pmax
comp=E,140nm,1.0s
GRNR pmax pmax
comp=Z,130nm,1.0s
JYA Atsumi 12.42 234 P **Pn 04 02 04.1 -2.5**
JYA *e*S Sn 04 04 16.6 -6.7
MA2 Magadan 12.96 356 P Pn 04 02 16.0 +2.2
comp=Z,17nm,0.3s,baz=169,slow=9.6,SNR=33
MA2 LR LR 04 06 53.4
comp=Z,281nm,21.4s,baz=148,slow=36
MA2 Magadan 12.96 356 *e*P **Pn 04 02 15.6 +1.7**
MA2 Magadan 12.96 356 *e*Pn **Pn 04 02 15.7 +1.8**
MA2 Magadan 12.96 356 *e*PN **Pn 04 02 15.7 +1.8**
MA2 pmax pmax
comp=Z,66nm,0.7s
EKMR Ekimchan 14.13 304 *e*P **Pn 04 02 31.0 +1.1**
EKMR AMB AMB 04 02 40.9
comp=Z,5.0nm,0.8s
KLR Kul'dur 14.16 288 P **Pn 04 02 32.6 +2.5**
comp=Z,0.1nm,0.3s,baz=92,slow=11,SNR=29
KLR LR LR 04 08 11.2
comp=Z,51nm,18.9s,baz=93,slow=38
KLR Kul'dur 14.16 288 *e*P **Pn 04 02 31.3 +1.1**
KLR Kul'dur 14.16 288 *c i*P **Pn 04 02 31.2 +1.1**
USRK Ussuriysk Ar. 14.64 268 P **Pn 04 02 37.5 +1.0**
comp=Z,2.7nm,0.3s,baz=79,slow=13,SNR=26
USRK S **Sn 04 05 22.6 +5.4**
comp=Z,0.1nm,0.3s,baz=79,slow=7.8,SNR=1.9
USRK LR LR 04 08 00.3
comp=Z,415nm,20.7s,baz=50,slow=36
MJAR Matsushiro Arr 14.72 232 P **Pn 04 02 34.9 -2.8**
comp=Z,0.8nm,0.3s,baz=24,slow=13,SNR=15
MJAR LR LR 04 08 31.6
comp=Z,179nm,21.0s,baz=55,slow=38
MJB9 Matsu-Tunnel 14.72 232 *e*Pn **Pn 04 02 35.6 -2.2**
MAJO Matsushiro 14.72 232 *e*Pn **Pn 04 02 35.5 -2.2**
MAJO *e*P **P 04 02 43.2 +0.5**
MAJO Matsushiro 14.72 232 *d i*P **Pn 04 02 35.0 -2.7**
MAT Matsushiro 14.72 232 P **Pn 04 02 35.4 -2.3**
MAT *e*S **Sn 04 05 20.6 +1.0**
MDJ Mudanjiang 16.17 271 P **Pn 04 02 54.0 -2.3**
MDJ pmax pmax
comp=Z,60nm,0.8s
MDJ pmax pmax
comp=Z,1μm,12.5s
MDJ Mudanjiang 16.17 271 P **Pn 04 02 55.0 -1.3**
MDJ pmax pmax
comp=Z,60nm,0.8s
MDJ pmax pmax
comp=Z,1μm,12.5s
MDJ Mudanjiang 16.17 271 *e*Pn **Pn 04 02 57.1 +0.8**
comp=Z,46nm,0.8s
INU Inuyama 16.26 231 *e*Pn **Pn 04 02 56.9 -0.5**
comp=Z,26nm,0.9s
SEY Seymchan 16.29 360 P **P 04 02 59.0 -0.9**
comp=Z,1.9nm,0.3s,baz=186,slow=10,SNR=23
SEY Seymchan 16.29 360 ⇓ *e*P **P 04 02 58.9 -0.9**
BMKR Bomnak 16.97 307 *e*P **P 04 03 06.5 -0.9**
BMKR AMB AMB 04 03 12.4
comp=Z,68nm,0.5s
ZEA Zeya 17.60 303 *e*P **P 04 03 13.5 -0.9**
ZEA AMB AMB 04 03 18.4
comp=Z,21nm,0.8s
ZEA AMB AMB 04 03 18.4
comp=Z,31nm,0.8s
ZEA AMS AMS 04 11 01.0
comp=Z,500nm,13.0s
ZEA Zeya 17.60 303 *e*P **P 04 03 16.0 +1.6**
ZEA pmax pmax
comp=E,21nm,0.8s
ZEA pmax pmax
comp=Z,31nm,0.8s
ZEA MLR MLR
comp=Z,500nm,13.0s
KROS Kirovskiy 17.93 305 *e*P **Pn 04 03 15.0 -3.0**
KROS AMB AMB 04 03 18.0
comp=Z,40nm,0.4s
KROS AMB AMB 04 03 18.0
comp=Z,28nm,0.4s
KROS AMB AMB 04 03 18.0
comp=Z,19nm,0.4s
CN2 Changchun 19.26 271 *e*P **P 04 03 32.0 -0.7**
CN2 *es*P sP 04 03 56.3 +5.3
CN2 *e*S S 04 06 57.6 -10
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 LR LR
comp=Z,100nm,17.0s
CN2 LR LR
comp=Z,320nm,17.0s
CLNS Chul'man 19.77 311 *e*P **Pn 04 03 40.7 +0.7**
CLNS Chul'man 19.77 311 *e*P **Pn 04 03 40.7 +0.7**
CLNS pmax pmax
comp=Z,11nm,0.7s
CLNS pmax pmax
comp=N,12nm,0.6s
CLNS pmax pmax
comp=E,15nm,0.8s
CLNS MLR MLR
comp=N,245nm,16.0s
CLNS MLR MLR
comp=E,369nm,15.0s
CLNS MLR MLR
comp=Z,530nm,17.0s
YAK Yakutsk 20.17 328 *e*P Pn 04 03 44.0 -0.7
YAK Yakutsk 20.17 328 *e*P Pn 04 03 42.4 -2.3
YAK Yakutsk 20.17 328 *d i*P Pn 04 03 44.0 -0.7
YAK *e* 04 04 01.8
YAK *i* S Sn 04 07 27.2 -3.4
YAK *e*SS **SnSn 04 07 48.6 +3.0**
YAK *e* 04 15 13.0
YAK pmax pmax
comp=Z,99nm,0.9s
YAK pmax pmax
comp=E,25nm,0.9s
YAK pmax pmax
comp=N,14nm,0.9s
YAK pmax pmax
comp=Z,224nm,1.6s
YAK pmax pmax
comp=N,145nm,1.5s
YAK pmax pmax
comp=E,207nm,1.6s
YAK smax smax
comp=N,31nm,1.6s
YAK smax smax
comp=E,26nm,1.5s
YAK MLR MLR
comp=Z,197nm,14.0s
YAK MLR MLR
comp=E,79nm,13.0s
YAK MLR MLR
comp=N,202nm,14.0s
KSRS Korea Array 20.40 252 P **P 04 03 47.0 +1.9**
comp=N,35nm,0.9s,baz=54,slow=11,SNR=59
KSRS PcP **PcP 04 07 57.1 +1.4**
comp=N,3.0nm,0.7s,baz=358,slow=0.9,SNR=10
KSRS LR LR 04 10 35.2
comp=N,179nm,21.3s,baz=68,slow=33
KS01 Wonju Array Si 20.41 252 *e*P **P 04 03 45.3 +0.1**
KS01 *e*PcP **PcP 04 07 56.9 +1.1**
KS15 Wonju Array Si 20.43 252 *e*P **P 04 03 47.3 +1.9**
KSAR Wonju Array Be 20.43 252 P **P 04 03 47.0 +1.6**
KSAR PcP **PcP 04 07 57.1 +1.3**
KSAR Wonju Array Be 20.43 252 P **P 04 03 47.1 +1.6**
KSAR 04 07 57.2
JCJ Chichijima 21.19 206 LR LR 04 12 56.5
comp=N,80nm,19.2s,baz=104,slow=39
INCN Inchon 21.23 254 *e*P **P 04 03 54.9 +0.8**
comp=N,37nm,0.6s
SNY Shenyang 21.24 267 ⇑P **P 04 03 55.7 +1.6**
SNY pmax pmax
comp=N,85nm,0.7s
SNY pmax pmax
comp=N,92nm,5.5s
SNY LR LR
comp=N,300nm,16.9s
SNY LR LR
comp=N,520nm,20.1s
JNU Nakatsue 21.35 238 P **P 04 03 56.4 +1.0**
comp=N,46nm,0.9s,baz=69,slow=1.9,SNR=12
JNU Nakatsue 21.35 238 *e*P **P 04 03 56.2 +0.8**
comp=N,33nm,0.7s
TJN Taejon 21.39 250 *ce*P **P 04 03 57.4 +1.6**
BILL Bilibino 22.55 13 *e*P **P 04 04 07.7 -0.3**
BILL Bilibino 22.55 13 *e*P **P 04 04 07.1 -0.9**
comp=N,22nm,1.1s
BILL Bilibino 22.55 13 *i*P **P 04 04 07.7 -0.3**
BILL *i* 04 04 33.3
BILL pmax pmax
comp=Z,15nm,0.8s
BILL MLR MLR
comp=Z,164nm,17.0s
BOD Bodaibo 25.73 310 *e*P **P 04 04 36.0 -1.9**
BOD pmax pmax
comp=Z,15nm,1.1s
BJI Beijing 27.08 269 P **P 04 04 50.9 +0.7**
BJI pmax pmax
comp=Z,25nm,0.9s
BJI LR LR
comp=Z,230nm,13.7s
BJI LR LR
comp=Z,480nm,19.4s
BJT Baijiatuau 27.09 269 *e*P **P 04 04 48.7 -1.7**
comp=Z,28nm,0.9s
BJT Baijiatuau 27.09 269 *e*P **P 04 04 48.7 -1.7**
BJT pmax pmax
comp=Z,29nm,0.9s
TIXI Tiksi 27.43 344 P **P 04 04 52.0 -1.0**
comp=Z,1.9nm,0.4s,baz=135,slow=11,SNR=5.2
TIXI PcP **PcP 04 08 10.4 +0.2**
comp=Z,4.1nm,0.7s,baz=110,slow=3.0,SNR=7.1
TIXI LR LR 04 16 16.4
comp=Z,241nm,20.4s,baz=136,slow=37
TIXI Tiksi 27.43 344 *ce*P **P 04 04 51.8 -1.2**
TIXI pmax pmax
comp=Z,3.0nm,0.8s
H11N2 WAKE ISLAND Hy 29.34 152 T T 04 36 29.4
baz=340,slow=76
H11N1 WAKE ISLAND Hy 29.36 152 T T 04 36 30.6
baz=340,slow=76,SNR=6871
H11N3 WAKE ISLAND Hy 29.36 152 T T 04 36 33.8
baz=340,slow=76
NJ2 Nanjing 29.60 252 *e*P **P 04 05 13.1 +0.4**
NJ2 pmax pmax
comp=Z,15nm,0.7s
HHC Hu-ho-hao-te 29.90 274 *e*P **P 04 05 13.5 -2.0**
HHC S **S 04 10 04.6 -4.5**
HHC pmax pmax
comp=Z,17nm,0.6s
HHC pmax pmax
comp=Z,34nm,4.1s
HHC LR LR
comp=Z,1μm,13.8s
HHC LR LR
comp=Z,1μm,13.8s
HHC LR LR
comp=Z,1μm,14.7s
H11S1 WAKE ISLAND Hy 30.42 153 T T 04 37 55.9
baz=341,slow=76
H11S3 WAKE ISLAND Hy 30.43 153 T T 04 37 56.6
baz=341,slow=76
H11S2 WAKE ISLAND Hy 30.44 153 T T 04 37 50.3
baz=341,slow=76
ULN Ulaanbaatar 30.55 289 *e*P **P 04 05 19.7 -1.4**
comp=Z,24nm,0.9s
ULN Ulaanbaatar 30.55 289 *ce*P **P 04 05 20.9 -0.3**
ULN pmax pmax
comp=Z,12nm,1.2s
SONA1 Songino Array 30.98 289 *e*P **P 04 05 23.9 -1.0**
SONM Songino Array 30.98 289 P **P 04 05 23.9 -1.1**
comp=Z,2.1nm,0.5s,baz=69,slow=7.7,SNR=8.5
SONM PcP **PcP 04 08 20.1 +0.2**
comp=Z,2.2nm,0.9s,baz=77,slow=3.2,SNR=4.2
RDOG Red Dog Mine 31.08 31 *e*P **P 04 05 26.6 +1.1**
comp=Z,18nm,1.2s
TLY Talaya 31.86 297 *e*P **P 04 05 31.7 -0.8**
comp=Z,9.2nm,0.7s
TLY Talaya 31.86 297 *e*P **P 04 05 31.7 -0.8**
TLY pmax pmax
comp=Z,9.0nm,0.7s
MOY Mondy 33.48 298 *e*P **P 04 05 47.6 +0.8**
WHN Wuhan 33.53 255 ⇓P **P 04 05 47.6 +0.4**
IM3 Indian Mountai 34.06 36 *e*P **P 04 05 51.9 +0.5**
IM3 *e*PcP **PcP 04 08 28.6 +0.8**
KDAK Kodiak Island 34.45 51 *e*P **P 04 05 54.7 -0.2**
KDAK Kodiak Island 34.45 51 *ce*P **P 04 05 54.7 -0.2**
BPAW Bear Paw Mtn. 35.06 40 *e*P **P 04 06 01.4 +1.2**
comp=Z,7.2nm,1.0s
XAN Xi'an 35.12 265 P **P 04 06 01.2 +0.2**
XAN pP sP 04 06 18.6 -2.0
XAN sP pP 04 06 28.1 +14
XAN S **S 04 11 24.1 -6.0**
XAN sS sS 04 11 57.2 +4.5
XAN pmax pmax
comp=Z,26nm,1.0s
XAN LR LR
comp=Z,170nm,16.7s
XAN LR LR
comp=Z,170nm,15.5s
XAN LR LR
comp=Z,190nm,16.5s
SUA Susitna One 35.16 44 *e*P **P 04 06 01.2 0.0**
comp=Z,14nm,0.9s
TRF Thorofare Moun 35.35 41 *e*P **P 04 06 03.9 +1.0**
comp=Z,8.0nm,0.9s
COLD Coldfoot 35.61 34 *e*P **P 04 06 04.9 +0.1**
comp=Z,6.5nm,0.5s
BWN Browne 35.73 40 *e*P **P 04 06 07.3 +1.4**
comp=Z,78nm,1.3s
MCK McKinley 35.96 40 *e*P **P 04 06 08.6 +0.7**
MCK McKinley 35.96 40 *e*P **P 04 06 08.6 +0.7**
comp=Z,14nm,1.2s
MCK McKinley 35.96 40 *e*P **P 04 06 08.6 +0.7**
MCK pmax pmax
comp=Z,14nm,1.2s
RND Reindeer 36.00 41 *e*P **P 04 06 08.1 -0.2**
comp=Z,13nm,1.1s
RND Reindeer 36.00 41 *e*P **P 04 06 08.1 -0.2**
RND pmax pmax
comp=Z,13nm,1.1s
TOLK Toolik Lake Re 36.01 32 P **P 04 06 08.0 -0.3**
baz=263
TOLK Toolik Lake Re 36.01 32 *e*P **P 04 06 08.8 +0.4**
comp=Z,14nm,0.5s
MDM Murphy Dome 36.28 38 *e*P **P 04 06 11.8 +1.2**
comp=Z,7.8nm,0.8s
WRH Wood River Hil 36.33 39 *e*P **P 04 06 11.6 +0.6**
comp=Z,6.7nm,0.9s
CCB Clear Creek Bu 36.45 39 *e*P **P 04 06 12.9 +0.8**
comp=Z,3.7nm,0.6s
DHY Denali Highway 36.68 41 *e*P **P 04 06 14.7 +0.5**
comp=Z,10.0nm,1.1s
IL1 Eielson Array 36.85 38 *e*P **P 04 06 15.2 -0.2**
ILAR Eielson Array 36.85 38 P **P 04 06 15.6 +0.2**
comp=Z,2.5nm,0.5s,baz=262,slow=7.1,SNR=29
ILAR PcP **PcP 04 08 35.0 -1.1**
comp=Z,1.1nm,1.0s,baz=290,slow=3.8,SNR=4.3
ILAR LR LR 04 23 36.2
comp=Z,82nm,18.6s,baz=296,slow=40
ILB Eielson Array 36.85 38 *e*P **P 04 06 15.8 +0.4**
ENH Enshi 36.96 259 *e*P **P 04 06 15.7 -1.2**
comp=Z,12nm,0.7s
LZH Lanzhou 37.49 272 *e*P **P 04 06 23.0 +1.6**
LZH pP sP 04 06 40.6 -0.4
LZH sP pP 04 06 49.5 +15
LZH *e*PP **PnPn 04 07 53.0 +4.2**
LZH pmax pmax
comp=Z,23nm,1.2s
LZH pmax pmax
comp=Z,85nm,5.1s
LZH LR LR
comp=Z,260nm,13.5s
LZH LR LR
comp=Z,410nm,14.2s
LZH LR LR
comp=Z,470nm,18.4s
HARP HAARP 37.74 42 *e*P **P 04 06 23.9 +0.9**
comp=Z,14nm,0.6s
RIDG Independ'e Rid 37.78 40 *e*P **P 04 06 23.7 +0.3**
comp=Z,10nm,1.0s
DOT Dot Lake 38.13 40 *e*P **P 04 06 26.4 +0.1**
comp=Z,14nm,0.7s
BMRM Bremner River 38.16 45 *e*P **P 04 06 27.9 +1.2**
comp=Z,21nm,1.0s
GTA Gaotai 38.59 279 P **P 04 06 31.2 +0.6**
GTA pP sP 04 06 48.6 -1.6
GTA sP pP 04 06 58.6 +14
GTA PcP **PcP 04 08 43.4 +1.3**
GTA S **S 04 12 21.1 -2.0**
GTA sS sS 04 12 51.7 +5.8
GTA SS **SnSn 04 15 03.5 -11**
GTA pmax pmax
comp=Z,6.0nm,1.2s
GTA pmax pmax
comp=Z,38nm,5.0s
GTA LR LR
comp=Z,100nm,16.5s
GTA LR LR
comp=Z,110nm,16.8s
GTA LR LR
comp=Z,160nm,15.5s
NRIK Noril'sk 38.62 329 LR LR 04 24 15.7
comp=Z,170nm,18.1s,baz=96,slow=39
CRQM Cirque 38.90 45 *e*P **P 04 06 34.5 +1.5**
comp=Z,31nm,0.9s
EGAK Eagle 39.30 38 *e*P **P 04 06 36.2 +0.2**
comp=Z,17nm,1.1s
CD2 Chengdu 40.48 265 P **P 04 06 44.4 -1.9**

CD2 pmax pmax
comp=Z,13nm,0.6s
GYA Guiyang 41.31 257⇑ *i*P P 04 06 54.4 +1.1
GYA pP sP 04 07 12.2 -0.8
GYA sP pP 04 07 21.6 +15
GYA PP **PnPn 04 08 34.0 -0.2**
GYA PcP **PcP 04 08 53.0 +2.0**
GYA S **S 04 13 02.4 -1.6**
GYA sS sS 04 13 33.8 +6.9
GYA SS **SS 04 16 01.2 -7.7**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,120nm,5.3s
GYA LR LR
comp=Z,530nm,17.8s
GYA LR LR
comp=Z,500nm,18.2s
GYA LR LR
comp=Z,480nm,18.0s
INK Inuvik 41.92 32 *e*P P 04 06 58.8 +1.2
INK Inuvik 41.92 32 *e*P P 04 06 58.8 +1.2
comp=Z,21nm,1.1s
INK Inuvik 41.92 32 *e*P P 04 06 58.8 +1.2
INK pmax pmax
comp=Z,21nm,1.1s
ZAA0 Zalesovo Array 42.33 306 *e*P P 04 06 59.8 -1.3
comp=Z,4.3nm,0.6s
ZALV Zalesovo Beam 42.33 306 P **P 04 06 59.3 -1.8**
comp=Z,4.3nm,0.5s,baz=62,slow=7.1,SNR=16
ZALV PcP **PcP 04 08 53.9 +0.2**
comp=Z,10nm,0.8s,baz=67,slow=2.6,SNR=20
ZALV LR LR 04 25 56.1
comp=Z,499nm,18.0s,baz=70,slow=38
WMQ Urumqi 44.58 291 P **P 04 07 21.0 +1.5**
WMQ pP sP 04 07 39.1 -0.2
WMQ sP pP 04 07 45.3 +12
WMQ pmax pmax
comp=Z,26nm,0.7s
WMQ pmax pmax
comp=Z,160nm,4.3s
WMQ LR LR
comp=Z,240nm,22.3s
WMQ LR LR
comp=Z,260nm,25.3s
WMQ LR LR
comp=Z,310nm,18.3s
KMI Kunming 44.84 259 P **P 04 07 22.4 +0.5**
KMI pmax pmax
comp=Z,14nm,0.8s
DAV Davao City (W) 45.75 219 LR LR 04 24 05.1
comp=Z,48nm,21.2s,baz=340,slow=32
DLBC Dease Lake 45.93 46 *e*P P 04 07 32.6 +2.7
comp=Z,11nm,1.0s
MK31 Makanchi Array 46.62 297 *e*P P 04 07 34.1 -1.4
MK31 Makanchi Array 46.62 297 *e*P P 04 07 34.1 -1.4
MKAR Makanchi Array 46.62 297 P **P 04 07 34.2 -1.3**
comp=Z,15nm,0.8s,baz=68,slow=8.1,SNR=71
MKAR PcP **PcP 04 09 08.7 +0.1**
comp=Z,4.4nm,0.5s,baz=69,slow=1.8,SNR=11
MKAR LR LR 04 28 21.4
comp=Z,474nm,18.9s,baz=63,slow=38
MK01 Makanchi Array 46.63 297 *e*P P 04 07 33.5 -2.0
DIB Dawson Inlet, 46.64 53 *e*P P 04 07 34.7 -0.7
comp=Z,57nm,1.8s
MAKZ Makanchi 46.81 297 *e*P P 04 07 35.8 -1.1
comp=Z,6.7nm,0.8s
MAKZ Makanchi 46.81 297 *e*P P 04 07 35.8 -1.1
MAKZ pmax pmax
comp=Z,7.0nm,0.8s
KURK Kurchatov 47.07 303 *e*P P 04 07 37.2 -1.7
comp=Z,13nm,0.6s
KURK *e*PcP **PcP 04 09 09.6 -0.5**
KURK Kurchatov 47.07 303 *ce*P P 04 07 37.6 -1.3
KURK pmax pmax
comp=Z,12nm,0.7s
KURBB Kurchatov Arra 47.16 303 P **P 04 07 37.8 -1.8**
comp=Z,9.6nm,0.6s,baz=69,slow=8.6,SNR=56
KURBB PcP **PcP 04 09 10.2 -0.2**
comp=Z,3.8nm,0.7s,baz=69,slow=3.5,SNR=9.2
LSA Lhasa 49.88 273 *e*P P 04 08 02.7 +1.3
comp=Z,18nm,0.4s
LSA Lhasa 49.88 273 P **P 04 08 03.1 +1.7**
LSA Lhasa 49.88 273 *e*P P 04 08 02.7 +1.3
LSA pmax pmax
comp=Z,18nm,0.4s
PDGK Podgornoye 50.03 294 P **P 04 07 58.9 -3.0**
PDGK pmax pmax
comp=Z,5.0nm,0.7s
BVA0 Borovoye Array 50.60 309 P **P 04 08 03.9 -2.0**
BVA0 pmax pmax
comp=Z,6.0nm,0.8s
BVAR Borovoye Array 50.60 309 P **P 04 08 04.6 -1.3**
comp=Z,6.1nm,0.5s,baz=46,slow=7.5,SNR=27
BVAR PcP **PcP 04 09 23.0 +0.1**
comp=Z,7.1nm,0.4s,baz=93,slow=3.5,SNR=14
BVAR LR LR 04 31 24.4
comp=Z,212nm,18.8s,baz=52,slow=38
BRVK Borovoye 50.64 309 *e*P P 04 08 05.6 -0.6
comp=Z,13nm,0.6s
BRVK *e*PcP **PcP 04 09 22.7 -0.3**
BRVK Borovoye 50.64 309 *ce*P P 04 08 05.5 -0.6
BRVK pmax pmax
comp=Z,12nm,0.8s
CMAI Chiengmai2 50.87 257 P **P 04 08 09.9 +1.4**
comp=Z,76nm,0.7s,comp=Z,6μm
SIJI Sorong 50.91 208 P **P 04 08 09.4 +0.8**
comp=Z,9.2nm,0.6s,baz=352,slow=9.6,SNR=6.9
RES Resolute Bay 51.03 18 *e*P P 04 08 09.2 +0.4
RES Resolute Bay 51.03 18 *e*P P 04 08 09.2 +0.4
comp=Z,11nm,1.2s
RES Resolute Bay 51.03 18 *e*P P 04 08 09.2 +0.4
RES pmax pmax
comp=Z,11nm,1.2s
YKW3 Yellowknife Ar 51.18 36 *e*P P 04 08 11.0 +0.9
comp=Z,5.2nm,1.0s
YKA Yellowknife Ar 51.22 37 P **P 04 08 10.7 +0.4**
comp=Z,2.1nm,0.7s,baz=300,slow=7.0,SNR=18
YKA PcP **PcP 04 09 25.2 +0.3**
comp=Z,1.9nm,0.5s,baz=304,slow=3.7,SNR=12
YKA LR LR 04 31 50.0
comp=Z,6.2nm,19.5s,baz=274,slow=38
CHTO Chiang Mai 51.72 256 P **P 04 08 15.6 +0.9**
comp=Z,113nm,0.9s
CHTO Chiang Mai 51.72 256 *e*P P 04 08 15.8 +1.1
comp=Z,19nm,0.9s
CHTO Chiang Mai 51.72 256 *e*P P 04 08 15.8 +1.1
CHTO pmax pmax
comp=Z,19nm,0.9s
CHAI Chaiyaphum 51.80 251 P **P 04 08 16.1 +0.8**
comp=Z,9.3nm,0.8s
PHIT Phitsanulok 51.90 254 P **P 04 08 17.9 +1.9**
comp=Z,22nm,0.9s
CMAR Chiang Mai Arr 51.97 256 P **P 04 08 17.4 +0.8**
comp=Z,7.8nm,0.7s,baz=35,slow=7.4,SNR=27
CMAR PcP **PcP 04 09 29.8 +1.3**
comp=Z,3.4nm,0.7s,baz=20,slow=3.2,SNR=6.8
CMAR LR LR 04 32 28.0
comp=Z,68nm,19.1s,baz=32,slow=38
SHL Shillong 51.97 268 *e*P P 04 08 16.0 -0.8
SHL Shillong 51.97 268 P **P 04 08 17.1 +0.3**
PBKT Sadao Pong 51.98 252 P **P 04 08 16.8 +0.2**
comp=Z,21nm,1.0s
PBKT Sadao Pong 51.98 252 *e*P P 04 08 17.0 +0.4
comp=Z,11nm,0.7s
KBS Kingsbay 52.51 351 *e*P P 04 08 19.7 -0.1
SPA0 Spitsbergen Ar 52.61 350 *e*P P 04 08 19.6 -1.0
SPITS Spitsbergen Ar 52.61 350 P **P 04 08 19.5 -1.0**
comp=Z,2.9nm,0.4s,baz=24,slow=8.2,SNR=28
SPITS PcP **PcP 04 09 30.0 0.0**
comp=Z,5.7nm,0.8s,baz=23,slow=5.2,SNR=2.8
SPITS LR LR 04 32 12.5
comp=Z,51nm,19.9s,baz=5.0,slow=38
ULHL Ulahol 52.64 295 P **P 04 08 21.7 +0.2**
SNR=7.6
SRAK Srakaew 53.16 249 P **P 04 08 24.4 -1.0**
comp=Z,79nm,0.9s
USP Ospenovka 53.16 297 P **P 04 08 25.0 -0.2**
SNR=9.8
KBK Karagaybulak 53.22 296 P **P 04 08 25.6 -0.2**
SNR=5.3
KZA Kyzart 53.35 295 P **P 04 08 27.5 +0.5**
SNR=10
AAK Ala-Archa 53.51 296 *e*P P 04 08 27.2 -0.7
AAK Ala-Archa 53.51 296 P **P 04 08 28.0 +0.1**
SNR=6.0
AAK Ala-Archa 53.51 296 *e*P P 04 08 27.2 -0.7
comp=Z,7.7nm,0.8s
AAK Ala-Archa 53.51 296 *i*P P 04 08 27.9 0.0
SNR=5.9
AAK Ala-Archa 53.51 296⇓ *i*P P 04 08 27.2 -0.7
AAK pmax pmax
comp=Z,7.0nm,0.7s
LLLB Lillooet 53.65 52 *e*P P 04 08 30.0 +1.4
comp=Z,7.6nm,0.9s
EKS2 Erkin-Say 53.94 296 P **P 04 08 30.4 -0.6**
SNR=8.2
A04D Lummi Island 54.19 54 P **P 04 08 32.9 +0.4**
baz=303
ODAN Odare 54.24 273 *e*P P 04 08 34.4 +0.9
comp=Z,35nm,0.6s
TULEG Thule 54.27 11 *e*P P 04 08 31.9 -0.8
comp=Z,19nm,1.0s
KSH Kashi 54.31 292 P P 04 08 39.2 +5.5
KSH pP sP 04 08 55.5 +1.7
KSH PP **PP 04 10 41.1 +5.3**
KSH S **S 04 16 09.3 +1.5**
KSH sS sS 04 16 43.3 +12
KSH ScS **ScS 04 18 14.6 -3.8**
KSH SS **SS 04 19 48.9 -1.0**
KSH pmax pmax
comp=Z,29nm,0.4s
KSH pmax pmax
comp=Z,260nm,5.9s
KSH LR LR
comp=Z,200nm,4.1s
KSH LR LR
comp=Z,210nm,4.8s
KSH LR LR
comp=Z,690nm,16.0s
JIRN Jiri 54.56 274 *e*P P 04 08 36.9 +1.0
comp=Z,260nm,0.8s
GUN Gumba 54.61 275 *e*P P 04 08 37.0 +0.7
comp=Z,51nm,0.5s
RAMN Ramite 54.73 273 *e*P P 04 08 37.7 +0.7
comp=Z,261nm,0.9s
B05A Bryant 54.78 55 P **P 04 08 37.4 +0.6**
baz=303
ARU Arti 54.80 317 *e*P P 04 08 36.4 -0.4
ARU Arti 54.80 317 *e*P P 04 08 35.5 -1.3
comp=Z,14nm,0.5s
ARU Arti 54.80 317 *c i*P P 04 08 36.1 -0.7
ARU *PP **sP 04 08 51.0 -5.9**
ARU 04 09 36.8
ARU 04 10 37.5
ARU S **S 04 16 13.3 -0.2**
ARU SS **SS 04 19 52.9 -3.6**
ARU pmax pmax
comp=Z,8.0nm,0.5s
MNAS Manas 54.82 297 P **P 04 08 36.1 -1.3**
MNAS pmax pmax
comp=Z,5.0nm,0.7s
KKN Kakani 55.10 275 *e*P P 04 08 40.4 +0.7
comp=Z,98nm,0.7s
PKIN Phulchoki 55.15 275 *e*P P 04 08 41.0 +0.9
comp=Z,73nm,0.6s
DMN Daman 55.33 275 *e*P P 04 08 42.3 +0.9
comp=Z,160nm,0.9s
GKN Gorkha 55.41 276 *e*P P 04 08 42.6 +0.8
comp=Z,78nm,0.6s
PHET Kaeng Krachan 55.54 251 P **P 04 08 44.9 +2.2**
comp=Z,18nm,0.8s
SFK Sufi-Kurgan 55.60 294 P **P 04 08 41.6 -1.5**
SFK pmax pmax
comp=Z,6.0nm,0.4s
KK31 Karatay Array 55.69 299 *e*P P 04 08 43.0 -0.5
KK31 Karatay Array 55.69 299 *e*P P 04 08 43.0 -0.5
KKAR Karatay Array 55.69 299 *e*P P 04 08 43.0 -0.5
KKAR Karatay Array 55.69 299 *e*P P 04 08 43.0 -0.5
DANN Dangsing 55.79 277 *e*P P 04 08 45.8 +1.1
comp=Z,112nm,0.6s
PMG Port Moresby 56.04 186 LR LR 04 28 32.8
comp=Z,85nm,21.4s,baz=43,slow=31
PMG Port Moresby 56.04 186 *e*P P 04 08 47.4 +1.3
comp=Z,26nm,1.1s
PMG Port Moresby 56.04 186 *e*P P 04 08 47.4 +1.3
PMG pmax pmax
comp=Z,26nm,1.1s
KOLN Koldanda 56.26 276 *e*P P 04 08 48.9 +0.9
comp=Z,103nm,0.8s
PYUN Piuthan 56.47 277 *e*P P 04 08 50.3 +0.8
comp=Z,184nm,1.0s
DAG Danmarks Havn 56.70 358⇑ *i*P P 04 08 49.3 -0.8
comp=Z,9.2nm,0.8s
DAG Danmarks Havn 56.70 358⇑ *i*P P 04 08 49.3 -0.8
DAG pmax pmax
comp=Z,9.0nm,0.8s
PRGR Permogore 57.21 327 *e*P P 04 08 53.7 -0.2
PRGR pmax pmax
comp=Z,11nm,0.6s
KULLO Kullorsuaq 57.39 9 *i*P P 04 08 54.3 -0.8
comp=Z,20nm,0.9s
KULLO Kullorsuaq 57.39 9 *i*P P 04 08 54.3 -0.8
KULLO pmax pmax
comp=Z,20nm,0.9s
I05D Terrebonne, OR 57.42 58 P **P 04 08 56.0 +0.2**
baz=306
NEW Newport 57.53 52 P **P 04 08 57.0 +0.5**
baz=306
ARCES ARCESS Array B 57.79 341 P **P 04 08 57.7 -0.3**
comp=Z,2.1nm,0.4s,baz=38,slow=7.1,SNR=28
ARCES PcP **PcP 04 09 50.0 0.0**
comp=Z,5.9nm,0.7s,baz=39,slow=4.7,SNR=10
ARCES ARCESS Array B 57.79 341 *e*P P 04 08 57.2 -0.7
ARCES PcP **PcP 04 09 50.0 0.0**
J05D Fort Rock, OR 58.09 59 P **P 04 09 01.5 +0.8**
baz=306
YBH Yreka Blue Hor 58.12 61 LR LR 04 31 24.6
comp=Z,44nm,20.1s,baz=290,slow=33
AB31 Akbulak array 58.17 310 *i*P P 04 08 59.4 -1.5
AB31 pmax pmax
comp=Z,3.0nm,0.4s
ABKAR Akbulak array 58.17 310 *e*P P 04 08 59.9 -1.0
TMCR Tamitsa 58.21 332 *e*P P 04 09 01.2 +0.3
TMCR pmax pmax
comp=Z,10.0nm,0.6s
AKTO Aktyubinsk 58.48 312 P **P 04 09 01.8 -1.2**
comp=Z,3.6nm,0.5s,baz=76,slow=8.2,SNR=15
AKTO PcP **PcP 04 09 52.9 -0.2**
comp=Z,4.1nm,0.5s,baz=65,slow=3.0,SNR=5.1
AKTO LR LR 04 36 43.6
comp=Z,370nm,18.6s,baz=53,slow=38
N02D Trinity Center 58.58 62 P **P 04 09 05.1 +1.1**
baz=307
WALA Waterton Lakes 58.79 50 *e*P P 04 09 05.3 -0.1
comp=Z,15nm,0.8s
F10A Beach Ranch, E 58.81 55 *e*P P 04 09 08.6 +3.0
comp=Z,4.1nm,0.8s
KRAB Krabi 59.34 247 P **P 04 09 11.2 +1.8**
comp=Z,58nm,0.6s,comp=Z,6μm
JTMT Jette 59.38 52 *e*P P 04 09 11.1 +1.6
comp=Z,7.1nm,0.9s
BMO Blue Mountains 59.44 56 *e*P P 04 09 11.2 +1.3
comp=Z,4.7nm,1.0s
BMO Blue Mountains 59.44 56 *e*P P 04 09 11.2 +1.3
BMO pmax pmax
comp=Z,5.0nm,1.0s
NIL Nilore 59.55 288 *e*P P 04 09 11.1 +0.3
NIL Nilore 59.55 288 *e*P P 04 09 11.1 +0.3
KLMR Klimovskoe 59.96 329 *e*P P 04 09 10.5 -2.6
KLMR pmax pmax
comp=Z,18nm,1.2s
KLMR Klimovskoe 59.96 329 *e*P P 04 09 10.5 -2.6
KLMR AMP 04 09 14.2
comp=Z,18nm,1.2s
MSO Missoula 60.12 52 P **P 04 09 15.3 +0.8**
baz=308,SNR=11
MSO Missoula 60.12 52 *e*P P 04 09 15.6 +1.0
comp=Z,11nm,0.9s
WVOR Wild Horse Val 60.13 59 *e*P P 04 09 15.3 +0.6
comp=Z,5.8nm,1.0s
WVOR Wild Horse Val 60.13 59 *e*P P 04 09 15.4 +0.6
WVOR pmax pmax
comp=Z,6.0nm,1.0s
SUMG Summit 60.80 4⇑ *i*P P 04 09 19.3 +0.2
comp=Z,44nm,0.8s
SUMG Summit 60.80 4⇑ *i*P P 04 09 19.3 +0.2
SUMG pmax pmax
comp=Z,44nm,0.8s
FFC Flin Flon 61.05 40 *e*P P 04 09 21.3 +0.7
FFC Flin Flon 61.05 40 *e*P P 04 09 21.3 +0.7
comp=Z,10nm,1.0s
FFC Flin Flon 61.05 40 *e*P P 04 09 21.3 +0.7
FFC pmax pmax
comp=Z,10.0nm,1.0s
JOF Joensuu 61.22 333 P **P 04 09 21.4 -0.2**
JOF pmax pmax
comp=Z,15nm,0.9s
FCC Fort Churchill 61.54 33 *e*P P 04 09 23.9 +0.1
FCC Fort Churchill 61.54 33 *e*P P 04 09 23.9 +0.1
LRM Limekiln Ridge 61.55 52 *e*P P 04 09 25.2 +0.8
EGMT Eagleton 61.60 49 P **P 04 09 25.3 +0.7**
baz=309,SNR=5.2
EGMT Eagleton 61.60 49 *e*P P 04 09 24.4 -0.2
comp=Z,19nm,1.0s
DLMT Dillon 61.76 53 *e*P P 04 09 27.0 +1.2
comp=Z,4.2nm,0.9s
HLID Hailey 61.87 55 P **P 04 09 27.6 +1.0**
baz=309
HLID Hailey 61.87 55 *e*P P 04 09 26.9 +0.3
HLID *e*PcP **PcP 04 10 08.0 +0.9**
MCMT McKenzie Canyo 61.96 53 *e*P P 04 09 28.1 +0.9
BOZ Bozeman (W) 62.14 52 P **P 04 09 29.4 +1.0**
baz=310,SNR=14
BOZ Bozeman (W) 62.14 52 *e*P P 04 09 29.6 +1.3
BOZ Bozeman (W) 62.14 52 *e*P P 04 09 29.6 +1.3
comp=Z,8.1nm,0.6s
BOZ Bozeman (W) 62.14 52 *e*P P 04 09 29.6 +1.3
BOZ pmax pmax
comp=Z,8.0nm,0.6s
KVN Kaiserville 62.55 61 *e*P P 04 09 32.7 +1.5
comp=Z,16nm,1.8s
KVN Kaiserville 62.55 61 *e*P P 04 09 32.7 +1.5
KVN pmax pmax
comp=Z,16nm,1.8s
NV01 Mina Array Sit 62.81 62 *e*P P 04 09 34.0 +1.0
NVAR Mina Array Bea 62.81 62 P **P 04 09 34.1 +1.1**
comp=Z,1.7nm,0.7s,baz=292,slow=7.1,SNR=11
YHB Horse Butte 62.91 53 *e*P P 04 09 35.3 +1.7
comp=Z,7.5nm,0.9s
YHH Holmes Hill 63.08 52 *e*P P 04 09 36.3 +1.5
comp=Z,5.5nm,0.8s
SCO Scoresbysund 63.08 358⇑ *i*P P 04 09 34.2 +0.2
SCO Scoresbysund 63.08 358 *e*P P 04 09 33.2 -0.8
comp=Z,26nm,1.2s
SCO Scoresbysund 63.08 358⇑ *i*P P 04 09 34.2 +0.2
ILULI Ilulissat 63.11 9 *e*P P 04 09 33.6 -0.6
comp=Z,12nm,0.7s
ILULI Ilulissat 63.11 9 *e*P P 04 09 33.6 -0.6
ILULI pmax pmax
comp=Z,12nm,0.7s
H17A Grant Village 63.48 53 P **P 04 09 38.4 +1.0**
baz=310
H17A Grant Village 63.48 53 *e*P P 04 09 40.2 +2.8
comp=Z,6.8nm,0.8s
VAF Ylistaro 63.62 337 P **P 04 09 38.5 +0.9**
VAF pmax pmax
comp=Z,24nm,0.7s
PSI Prapat 63.70 244 P **P 04 09 39.5 +0.6**
comp=Z,8.5nm,0.6s,baz=0.0,slow=3.2,SNR=5.3
PSI PcP **PcP 04 10 15.1 +0.3**
comp=Z,6.6nm,0.7s,baz=0.1,slow=2.7,SNR=4.4
RLMT Red Lodge 63.72 51 P **P 04 09 40.0 +1.1**
baz=311,SNR=6.5
RLMT Red Lodge 63.72 51 *e*P P 04 09 40.4 +1.4
comp=Z,31nm,1.9s
FXWY Fox Creek 63.72 54 *e*P P 04 09 40.9 +1.9
comp=Z,3.6nm,0.8s
SMMC Simmler 63.75 66 P **P 04 09 40.3 +1.3**
baz=310
TPAW Teton Pass 63.86 54 *e*P P 04 09 41.8 +1.9
comp=Z,13nm,0.9s
FINES FINESS Array B 63.93 335 P **P 04 09 39.2 -0.5**
comp=Z,26nm,0.4s,baz=35,slow=7.0,SNR=432
FINES PcP **PcP 04 10 13.9 -0.9**
comp=Z,4.4nm,0.6s,baz=52,slow=3.4,SNR=4.6
FINES LR LR 04 40 11.8
comp=Z,87nm,18.6s,baz=23,slow=38
FINES FINESS Array B 63.93 335 *e*P P 04 09 38.5 -1.2
FINES FINESS Array B 63.93 335 *i*P P 04 09 38.5 -1.2
FINES pmax pmax
comp=Z,26nm,0.4s
SNOW Snow King Moun 63.99 54 *e*P P 04 09 43.0 +2.2
comp=Z,13nm,1.2s
REDW Red Top Meadow 64.00 54 *e*P P 04 09 42.8 +2.0
comp=Z,13nm,1.0s
DGMT Dagmar 64.14 46 P **P 04 09 42.1 +0.7**
baz=312
DGMT Dagmar 64.14 46 *e*P P 04 09 42.2 +0.8
comp=Z,21nm,0.8s
CWC Cottonwood Cre 64.22 64 P **P 04 09 43.4 +1.2**
baz=310
AHID Auburn Hatcher 64.25 54 *e*P P 04 09 43.8 +1.4
comp=Z,6.6nm,1.1s
LAO LASA Array 64.30 49 P **P 04 09 43.6 +1.1**
baz=312,SNR=8.4
LAO LASA Array 64.30 49 *e*P P 04 09 43.8 +1.3
comp=Z,18nm,0.9s
R11A Troy Canyon, C 64.51 61 P **P 04 09 44.8 +0.6**
baz=311
R11A Troy Canyon, C 64.51 61 *e*P P 04 09 45.3 +1.2
comp=Z,3.3nm,0.9s
HWUT Hardware Ranch 64.74 56 *e*P P 04 09 47.2 +1.6
comp=Z,5.0nm,0.8s
MPMC Manual Prospec 64.83 64 P **P 04 09 47.4 +1.1**
baz=311
DUG Dugway, Tooele 64.94 57 P **P 04 09 48.0 +1.1**
baz=311,SNR=6.7
DUG Dugway, Tooele 64.94 57 *e*P P 04 09 47.2 +0.3
DUG Dugway, Tooele 64.94 57 *e*P P 04 09 47.2 +0.3
comp=Z,11nm,1.1s
DUG Dugway, Tooele 64.94 57 *e*P P 04 09 47.2 +0.3
DUG pmax pmax
comp=Z,11nm,1.1s
FURC Furnace Creek, 64.95 63 P **P 04 09 48.2 +1.4**
baz=311
TPNV Topopah Spring 65.01 62 P **P 04 09 48.3 +0.8**
baz=311
BW06 Boulder Array 65.11 54 P **P 04 09 48.5 +0.4**
baz=312,SNR=11
BW06 Boulder Array 65.11 54 *e*P P 04 09 47.8 -0.2
comp=Z,8.1nm,1.0s
PD31 Pinedale Array 65.11 54 *e*P P 04 09 49.0 +1.0
PDAR Pinedale Array 65.11 54 P **P 04 09 48.7 +0.7**
comp=Z,5.4nm,0.8s,baz=318,slow=2.0,SNR=44
PDAR LR LR 04 40 36.5
comp=Z,27nm,18.1s,baz=294,slow=38
PDAR Pinedale Array 65.11 54 *e*P P 04 09 48.4 +0.4
OBN Obninsk 65.14 325 *e*P P 04 09 47.2 -0.5
OBN Obninsk 65.14 325 *i*P P 04 09 47.2 -0.5
OBN *i* 04 10 17.6
OBN pmax pmax
comp=Z,6.0nm,0.7s
OBN MLR MLR
comp=Z,109nm,23.0s
EDW2 Edwards Air Fo 65.28 65 P **P 04 09 49.5 +0.4**
baz=311
SFJD Kangerlussuaq 65.29 10 P **P 04 09 47.8 -0.6**
comp=Z,7.2nm,0.8s,baz=321,slow=8.1,SNR=3.9
SFJD LR LR 04 37 49.6
comp=Z,41nm,21.8s,baz=342,slow=36
JLU Jordanelle 65.47 56 *e*P P 04 09 52.5 +2.1
comp=Z,7.4nm,0.9s
NLU North Lily Min 65.53 57 *e*P P 04 09 52.6 +1.8
comp=Z,8.1nm,1.0s
GSC Goldstone, Bar 65.75 64 P **P 04 09 52.6 +0.5**
baz=311
VSU Vasula 66.09 332 *de*P P 04 09 53.4 -0.4
VSU pmax pmax
comp=Z,20nm,0.7s
GEYT Alibeck 66.30 301 P **P 04 09 56.2 +0.7**
comp=Z,51nm,0.3s,baz=22,slow=4.7,SNR=2.2
GEYT LR LR 04 41 01.4
comp=Z,200nm,19.6s,baz=155,slow=38
GYA0B ALIBECK ARRAY 66.30 301 *e*P P 04 09 52.6 -2.9
comp=Z,9.8nm,0.8s
CCUT Cedar City 66.36 60 *e*P P 04 09 57.6 +1.4
comp=Z,4.1nm,1.1s
TMUT Trail Mountain 66.47 57 *e*P P 04 09 58.4 +1.5
comp=Z,6.9nm,1.1s
P17A Butcher Ranch, 66.62 57 *e*P P 04 09 59.1 +1.4
comp=Z,9.3nm,1.1s
CTA Charters Tower 66.69 186 P **P 04 09 58.0 0.0**
comp=Z,2.9nm,0.8s,baz=0.0,slow=8.1,SNR=2.9
LCMT Little Creek M 66.78 60 *e*P P 04 10 00.4 +1.6
comp=Z,4.4nm,0.9s
MDND Maddock 66.81 44 P **P 04 09 59.0 +0.5**
baz=315
ULM Lac du Bonnet 66.83 40 P **P 04 09 58.3 -0.3**

comp=Z,4.2nm,0.7s,baz=297,slow=7.7,SNR=8.1
ULM Lac du Bonnet 66.83 40 *e*P **P 04 09 58.7 0.0**
ULM Lac du Bonnet 66.83 40 *e*P **P 04 09 58.7 0.0**
comp=Z,5.1nm,0.8s
ULM Lac du Bonnet 66.83 40 *e*P **P 04 09 58.7 0.0**
ULM pmax pmax
comp=Z,5.0nm,0.8s
K22A Casper 66.85 52 P **P 04 09 59.5 +0.4**
baz=313,SNR=6.3
K22A Casper 66.85 52 *e*P **P 04 09 59.6 +0.4**
comp=Z,8.3nm,1.0s
VSR Storozhevoye 66.92 321 *e*P **P 04 09 58.1 -1.1**
VSR pmax pmax
comp=Z,10.0nm,0.6s
SRU San Rafael Swe 66.99 57 *e*P **P 04 10 01.3 +1.2**
comp=Z,10nm,0.9s
SRU San Rafael Swe 66.99 57 *e*P **P 04 10 01.3 +1.2**
SRU pmax pmax
comp=Z,10.0nm,0.9s
KNB Kanab 67.03 60 *e*P **P 04 10 02.3 +1.9**
comp=Z,5.1nm,0.9s
KNB Kanab 67.03 60 *e*P **P 04 10 02.3 +1.9**
KNB pmax pmax
comp=Z,5.0nm,0.9s
RWWY Rawlins 67.12 53 *e*P **P 04 10 00.8 -0.2**
comp=Z,8.6nm,1.0s
RSSD Black Hills 67.17 49 P **P 04 10 01.5 +0.4**
baz=314
RSSD Black Hills 67.17 49 *e*P **P 04 10 01.6 +0.4**
comp=Z,14nm,0.9s
RSSD Black Hills 67.17 49 *e*P **P 04 10 01.6 +0.4**
RSSD pmax pmax
comp=Z,15nm,0.9s
B31A Greenbush Farm 67.33 43 P **P 04 10 02.0 +0.2**
baz=316
A32A Rocking H Ranc 67.51 42 P **P 04 10 03.0 0.0**
baz=316
IRM Iron Mountain 67.53 64 P **P 04 10 04.0 +0.6**
baz=312
O20A White River Ci 67.60 55 P **P 04 10 04.2 +0.3**
baz=313
O20A White River Ci 67.60 55 *e*P **P 04 10 04.7 +0.7**
comp=Z,8.1nm,1.0s
C31A Landman Farms, 67.74 43 P **P 04 10 04.4 -0.1**
baz=316,SNR=5.1
B32A Ashes, Strandq 67.86 42 P **P 04 10 05.2 -0.1**
baz=316,SNR=7.0
NC303 NORSAR Array S 67.97 341 *e*P **P 04 10 05.0 -0.6**
NC405 NORSAR Array S 67.99 341 *e*P **P 04 10 04.7 -1.1**
PDMCI Parker Dam,Lak 68.05 63 P **P 04 10 07.2 +0.6**
baz=312
NC204 NORSAR Array S 68.06 341 *e*P **P 04 10 06.2 -0.1**
NB201 NORSAR Array S 68.14 341 *e*P **P 04 10 05.7 -1.1**
NB2 NORSAR Subarra 68.17 341 P **P 04 10 05.6 -1.4**
comp=Z,15nm,0.5s,baz=28,slow=6.5
NB2 NORSAR Subarra 68.17 341 P **P 04 10 05.6 -1.4**
baz=28,slow=6.5
NOA NORSAR Array B 68.17 341 P **P 04 10 07.0 0.0**
comp=Z,39nm,0.4s,baz=30,slow=6.5,SNR=190
NOA LR LR 04 44 15.9
comp=Z,70nm,18.7s,baz=20,slow=40
NOA NORSAR Array B 68.17 341 P **P 04 10 07.0 0.0**
Y12C Blythe 68.18 64 P **P 04 10 08.5 +1.0**
baz=312
PV09 Paradox Valley 68.20 57 *e*P **P 04 10 09.2 +1.3**
AGMN Agassiz Nation 68.25 42 P **P 04 10 07.2 -0.4**
baz=317,SNR=5.1
AGMN Agassiz Nation 68.25 42 *e*P **P 04 10 07.7 0.0**
comp=Z,9.3nm,1.0s
NBO00 NORSAR Array S 68.27 341 *e*P **P 04 10 07.5 -0.1**
D31A Mcclaflin, Tow 68.28 44 P **P 04 10 07.8 0.0**
baz=316
C32A Crookston 68.28 43 P **P 04 10 07.7 -0.1**
baz=316
AFI Afiamalu 68.30 142 LR LR 04 35 14.9
comp=Z,68nm,21.4s,baz=139,slow=32
WRAB Tennant Creek 68.31 198 *e*P **P 04 10 07.2 -1.0**
comp=Z,3.0nm,0.5s
WRAB Tennant Creek 68.31 198 *e*P **P 04 10 07.2 -1.0**
WRAB pmax pmax
comp=Z,3.0nm,0.5s
WRA Warramunga Arr 68.32 198 P **P 04 10 07.6 -0.6**
comp=Z,4.6nm,0.8s,baz=18,slow=6.7,SNR=7.8
WRA Warramunga Arr 68.32 198 *i* P **P 04 10 08.0 -0.3**
WRA pmax pmax
comp=Z,5.0nm,0.8s
N23A Red Feather La 68.36 53 P **P 04 10 09.6 +0.8**
baz=314,SNR=6.6
N23A Red Feather La 68.36 53 *e*P **P 04 10 09.8 +1.0**
comp=Z,11nm,1.1s
HFS Hagfors 68.38 339 P **P 04 10 07.7 -0.5**
comp=Z,36nm,0.4s,baz=48,slow=4.2,SNR=500
HFS LR LR 04 44 51.6
comp=Z,87nm,18.1s,baz=19,slow=40
B33A Robert and Kas 68.39 42 P **P 04 10 08.4 -0.2**
baz=317
NAO01 NORSAR Array S 68.41 341 *e*P **P 04 10 07.9 -0.6**
IZAR Zarasai 68.42 331 *e*P **P 04 10 08.3 -0.2**
IZAR IAmb IAmb 04 10 09.1
comp=Z,7.9nm,0.6s
GLA Glamis 68.46 64 P **P 04 10 09.8 +0.5**
baz=313
PV05 Paradox Valley 68.51 57 *e*P **P 04 10 11.1 +1.3**
comp=Z,12nm,0.9s
PV07 Paradox Valley 68.52 57 *e*P **P 04 10 11.3 +1.5**
comp=Z,4.7nm,0.8s
PV03 Paradox Valley 68.53 57 *e*P **P 04 10 10.9 +1.0**
comp=Z,10nm,1.1s
D32A Dogwood Acres, 68.55 43 P **P 04 10 09.3 -0.3**
baz=316
E31A Nome 68.55 44 P **P 04 10 09.4 -0.2**
baz=316,SNR=6.1
IDID Didziasalis 68.60 330 *e*P **P 04 10 09.4 -0.3**
IDID IAmb IAmb 04 10 10.3
comp=Z,10nm,0.9s
ISAL Salakas 68.61 331 *e*P **P 04 10 09.5 -0.3**
ISAL IAmb IAmb 04 10 10.4
comp=Z,6.5nm,0.8s
B34A Aery, Baudette 68.66 41 P **P 04 10 09.8 -0.5**
baz=317
C33A Trail 68.68 42 P **P 04 10 10.0 -0.4**
baz=317
PV15 Paradox Valley 68.68 56 *e*P **P 04 10 11.9 +1.1**
comp=Z,8.7nm,1.0s
IIGN Ignalina 68.75 330 *e*P **P 04 10 10.4 -0.2**
IIGN IAmb IAmb 04 10 11.3
comp=Z,24nm,0.5s
PV01 Paradox Valley 68.77 57 *e*P **P 04 10 12.5 +1.1**
comp=Z,17nm,1.7s
MAK Makhachkala 68.82 311 *e*P **P 04 10 12.2 +1.0**
MAK *e*S **S 04 19 13.7 +2.8**
MAK pmax pmax
comp=Z,236nm,1.3s
MAK MLR MLR
comp=Z,312nm,14.0s
SMCO Snowmass 68.97 55 *e*P **P 04 10 13.8 +1.0**
comp=Z,7.2nm,0.8s
POO Poona 69.07 275 *e*P **P 04 10 10.0 -3.2**
D33A AnnSam, Waubun 69.10 43 P **P 04 10 12.6 -0.3**
baz=317
HYA Hoyanger 69.12 343 *e*P **P 04 10 12.7 -0.1**
C34A RKJ Ranch, Bem 69.16 42 P **P 04 10 12.9 -0.5**
baz=317
B35A Bob, Littlefor 69.17 41 P **P 04 10 12.8 -0.6**
baz=318
ISCO Idaho Springs 69.30 54 P **P 04 10 15.8 +1.1**
baz=314,SNR=12
ISCO Idaho Springs 69.30 54 *e*P **P 04 10 15.8 +1.1**
comp=Z,7.7nm,0.9s
ISCO Idaho Springs 69.30 54 *e*P **P 04 10 15.8 +1.1**
ISCO pmax pmax
comp=Z,8.0nm,0.9s
F32A Veblen 69.41 44 P **P 04 10 14.2 -0.7**
baz=317
D34A Park Rapids 69.44 42 P **P 04 10 14.7 -0.3**
baz=317,SNR=10
MVCO Mesa Verde 69.45 57 P **P 04 10 16.0 +0.4**
baz=314
MVCO Mesa Verde 69.45 57 *e*P **P 04 10 16.0 +0.4**
comp=Z,8.1nm,1.0s
E33A Westby DABS, E 69.48 43 P **P 04 10 15.3 -0.1**
baz=317,SNR=7.2
DZM Mont Dzumac 69.57 166 *e*LR LR 04 31 30.2
comp=Z,414nm,25.7s
DZM Mont Dzumac 69.57 166 LR LR 04 35 03.4
comp=Z,74nm,21.8s,baz=36,slow=31
X16A Lo Mia Camp, P 69.61 61 *e*P **P 04 10 18.1 +1.6**
comp=Z,3.8nm,1.0s
KONO Kongsberg 69.77 341 *e*P **P 04 10 17.1 +0.2**
comp=Z,20nm,0.7s
KONO Kongsberg 69.77 341 *e*P **P 04 10 17.1 +0.2**
KONO pmax pmax
comp=Z,20nm,0.7s
ASK Askoy 69.94 343 *e*P **P 04 10 17.4 -0.4**
D35A Remer 69.97 42 P **P 04 10 17.9 -0.4**
baz=318
C36A Pine Crest Far 70.02 41 P **P 04 10 18.1 -0.5**
baz=318
S22A 4UR Ranch, Cre 70.04 56 P **P 04 10 20.2 +0.9**
baz=314,SNR=12
S22A 4UR Ranch, Cre 70.04 56 *e*P **P 04 10 20.6 +1.3**
comp=Z,7.6nm,1.0s
Q24A Divide 70.14 54 P **P 04 10 20.0 +0.1**
baz=315
ODD1 Odda 70.17 343 *e*P **P 04 10 19.7 +0.3**
E35A Pequot Lakes 70.20 42 P **P 04 10 19.4 -0.3**
baz=318
G33A Ortonville 70.23 45 P **P 04 10 19.8 -0.1**
baz=317,SNR=5.2
H32A Carlson Farm, 70.25 46 P **P 04 10 19.7 -0.4**
baz=317
D36A Goodland 70.31 41 P **P 04 10 19.7 -0.7**
baz=318
C37A Embarrass 70.33 40 P **P 04 10 20.0 -0.6**
baz=319
F34A Alexandria 70.36 43 P **P 04 10 20.4 -0.3**
baz=318
NCK Nalchik 70.44 313 *i* P **P 04 10 21.7 +0.4**
NCK pmax pmax
comp=Z,19nm,1.1s
H33A Prehn Over Nor 70.46 45 P **P 04 10 21.2 -0.2**
baz=317
EYMN Ely 70.48 40 P **P 04 10 21.0 -0.4**
baz=319
EYMN Ely 70.48 40 *e*P **P 04 10 21.4 -0.1**
comp=Z,6.6nm,0.9s
KIV Kislovodsk 70.56 314 *e*P **P 04 10 22.0 -0.2**
KIV Kislovodsk 70.56 314 *e*P **P 04 10 21.9 -0.2**
comp=Z,19nm,0.7s
KIV Kislovodsk 70.56 314 P **P 04 10 21.2 -0.9**
KIV Kislovodsk 70.56 314 *e*P **P 04 10 22.0 -0.2**
KIV pmax pmax
comp=Z,23nm,0.9s
KIV MLR MLR
comp=Z,123nm,18.0s
G34A Benson 70.58 44 P **P 04 10 22.0 -0.1**
baz=318
KBZ Khabaz 70.62 314 P **P 04 10 22.9 +0.6**
comp=Z,6.2nm,0.5s,baz=68,slow=6.7,SNR=12
KBZ LR LR 04 46 05.8
comp=Z,162nm,18.4s,baz=32,slow=40
F35A Swanville 70.63 43 P **P 04 10 22.2 -0.3**
baz=318
D37A Cotton 70.65 41 P **P 04 10 22.1 -0.4**
baz=319
C38A Sawbill Land. 70.75 40 P **P 04 10 22.5 -0.5**
baz=319
E36A McGregor 70.76 42 P **P 04 10 23.0 -0.2**
baz=319
SDCO Great Sand Dun 70.79 55 P **P 04 10 24.3 +0.4**
baz=315,SNR=6.3
SDCO Great Sand Dun 70.79 55 *e*P **P 04 10 24.7 +0.8**
comp=Z,2.0nm,0.8s
ZEI Tsey 70.80 312 *e*P **P 04 10 22.8 -0.9**
ZEI Tsey 70.80 312 *e*P **P 04 10 22.8 -0.9**
ZEI pmax pmax
comp=Z,9.0nm,0.5s
F36A Milaca 71.12 42 P **P 04 10 24.7 -0.6**
baz=319
G35A Watkins 71.15 43 P **P 04 10 25.8 +0.3**
baz=318,SNR=5.1
C39A Grand Marais 71.17 39 P **P 04 10 24.8 -0.8**
baz=320
ECSD EROS Data Cent 71.22 46 P **P 04 10 25.8 -0.2**
baz=318,SNR=16
ECSD EROS Data Cent 71.22 46 *e*P **P 04 10 25.9 -0.1**
comp=Z,14nm,1.0s
KLNR Kaliningrad 71.33 333 *d i* P **P 04 10 25.4 -1.0**
KLNR pmax pmax
comp=Z,47nm,0.7s
H35A Sunnyside Ranc 71.37 44 P **P 04 10 27.2 +0.3**
baz=318,SNR=7.8
AKASG Malin Array Be 71.38 326 P **P 04 10 26.1 -0.8**
comp=Z,19nm,0.3s,baz=35,slow=6.1,SNR=80
AKASG LR LR 04 43 59.3
comp=Z,110nm,19.5s,baz=35,slow=38
AKASG Malin Array Be 71.38 326 *i* P **P 04 10 26.2 -0.6**
AKASG pmax pmax
comp=Z,21nm,0.3s
KIEV Kiev 71.39 326 *e*P **P 04 10 26.0 -0.9**
KIEV Kiev 71.39 326 *e*P **P 04 10 25.5 -1.4**
KIEV Kiev 71.39 326 *i* P **P 04 10 26.2 -0.7**
SNR=12
KIEV Kiev 71.39 326 *c i* P **P 04 10 26.0 -0.9**
KIEV pmax pmax
comp=Z,16nm,0.8s
TUC Tucson 71.46 63 P **P 04 10 28.2 +0.5**
baz=314
TUC Tucson 71.46 63 *e*P **P 04 10 28.9 +1.2**
comp=Z,2.7nm,1.0s
TUC Tucson 71.46 63 *e*P **P 04 10 28.9 +1.2**
TUC pmax pmax
comp=Z,3.0nm,1.0s
E38A The Farm, Brul 71.46 41 P **P 04 10 26.9 -0.5**
baz=320
G36A St. Michael 71.48 43 P **P 04 10 27.1 -0.5**
baz=319
SNART Snartemo 71.49 342 *e*P **P 04 10 27.6 +0.2**
F37A Hinrichs Farm, 71.64 42 P **P 04 10 27.9 -0.6**
baz=319
F38A Pierce - Schro 71.81 41 P **P 04 10 29.4 0.0**
baz=320,SNR=8.2
T25A Trinidad 71.83 55 P **P 04 10 30.5 +0.4**
baz=315,SNR=6.3
T25A Trinidad 71.83 55 *e*P **P 04 10 31.0 +0.9**
comp=Z,6.5nm,0.9s
H36A Jessenland, He 71.89 44 P **P 04 10 30.4 +0.3**
baz=319,SNR=11
SPMN Marine on St. 71.93 42 P **P 04 10 29.8 -0.4**
baz=319
SPMN Marine on St. 71.93 42 *e*P **P 04 10 30.4 +0.1**
comp=Z,9.6nm,0.8s
AS01 Alice Springs 72.01 198 *e*P **P 04 10 31.6 +0.8**
AKH Akhalkaki 72.01 312 *e*P **P 04 10 32.9 +1.9**
comp=Z,10nm,0.9s
AKH Akhalkaki 72.01 312 *e*P **P 04 10 32.9 +1.9**
AKH pmax pmax
comp=Z,10.0nm,0.9s
ASAR Alice Springs 72.02 198 P **P 04 10 31.8 +0.9**
comp=Z,3.8nm,0.6s,baz=14,slow=6.1,SNR=16
E39A Mellen 72.08 40 P **P 04 10 30.5 -0.6**
baz=320,SNR=7.9
LAZ Ladron 72.19 59 *e*P **P 04 10 33.9 +1.7**
TASM ASL Pad, Albuq 72.21 58 P **P 04 10 33.0 +0.7**
baz=315
ANMO Albuquerque 72.21 58 P **P 04 10 33.3 +0.9**
comp=Z,2.5nm,0.8s,baz=304,slow=10.0,SNR=13
ANMO LR LR 04 39 39.0
comp=Z,38nm,21.5s,baz=267,slow=34
ANMO Albuquerque 72.21 58 P **P 04 10 32.9 +0.6**
baz=315
ANMO Albuquerque 72.21 58 *e*P **P 04 10 32.6 +0.3**
comp=Z,2.9nm,0.8s
ANMO Albuquerque 72.21 58 *c e*P **P 04 10 33.1 +0.8**
ANMO pmax pmax
comp=Z,4.0nm,1.2s
TASL Snake Pit, Alb 72.21 58 P **P 04 10 33.0 +0.7**
baz=315
I36A Fitzsimmons Fa 72.27 44 P **P 04 10 32.3 0.0**
baz=319
GNI Garni 72.27 310 P **P 04 10 34.0 +1.5**
comp=Z,5.6nm,0.4s,baz=56,slow=7.3,SNR=5.1
GNI LR LR 04 46 09.4
comp=Z,151nm,18.6s,baz=43,slow=39
GNI Garni 72.27 310 *e*P **P 04 10 33.0 +0.4**
comp=Z,11nm,0.8s
GNI Garni 72.27 310 P **P 04 10 34.4 +1.8**
F39A Loretta 72.28 41 P **P 04 10 32.0 -0.3**
baz=320,SNR=7.9
PALK Pallekele 72.29 262 P **P 04 10 33.2 +0.4**
comp=Z,18nm,0.8s,baz=113,slow=2.0,SNR=5.9
PALK Pallekele 72.29 262 *e*P **P 04 10 32.7 -0.2**
comp=Z,20nm,0.8s
PALK Pallekele 72.29 262 P **P 04 10 33.4 +0.5**
PALK Pallekele 72.29 262 *i* P **P 04 10 34.0 +1.1**
E40A Wakefield 72.33 40 P **P 04 10 32.7 +0.1**
baz=320,SNR=9.3
H37A Dierke Farm, C 72.37 43 P **P 04 10 32.8 -0.1**
baz=319,SNR=5.7
G38A Ridgeland 72.42 42 P **P 04 10 32.4 -0.7**
baz=320
D41A Chassel 72.43 39 P **P 04 10 32.8 -0.4**
baz=321
BSD Bornholm Skovb 72.46 336 ⇓ *i* P **P 04 10 32.8 -0.4**
comp=Z,23nm,0.6s
BSD Bornholm Skovb 72.46 336 ⇓ *i* P **P 04 10 32.8 -0.4**
BSD pmax pmax
comp=Z,23nm,0.6s
ANN Anapa 72.46 317 *e*P P 04 10 28.7 -4.7
I37A Lemond, Waseca 72.56 44 P **P 04 10 34.4 +0.4**
baz=319,SNR=12
H38A Maiden Rock 72.59 43 P **P 04 10 34.0 -0.2**
baz=320
J36A Seneca 1, Swea 72.63 45 P **P 04 10 34.0 -0.5**
baz=319
COP Copenhagen 72.63 338 *i* P **P 04 10 33.7 -0.5**
comp=Z,28nm,0.8s
COP Copenhagen 72.63 338 *i* P **P 04 10 33.7 -0.5**
COP pmax pmax
comp=Z,28nm,0.8s
F40A Park Falls 72.63 41 P **P 04 10 33.9 -0.5**
baz=320,SNR=6.5
G39A Holcombe 72.64 42 P **P 04 10 33.6 -0.9**
baz=320
E41A Kenton 72.72 40 P **P 04 10 34.7 -0.3**
baz=321
MUD Monsted U'grnd 72.75 340 *i* P **P 04 10 34.9 0.0**
MUD Monsted U'grnd 72.75 340 *i* P **P 04 10 34.9 0.0**
COWI Conover 72.93 40 *e*P **P 04 10 34.9 -1.3**
comp=Z,6.8nm,1.0s
LLD Lille Linde 73.00 338 ⇓ *i* P **P 04 10 36.3 -0.1**
comp=Z,35nm,0.7s
LLD Lille Linde 73.00 338 ⇓ *i* P **P 04 10 36.3 -0.1**
LLD pmax pmax
comp=Z,35nm,0.7s
J37A Redenius Farm, 73.02 44 P **P 04 10 36.4 -0.4**
baz=319
319A Douglas 73.03 62 *e*P **P 04 10 38.6 +1.4**
comp=Z,8.1nm,0.8s
I38A Scanlan Farm, 73.05 43 P **P 04 10 36.5 -0.5**
baz=320,SNR=6.2
H39A Augusta 73.05 42 P **P 04 10 36.5 -0.5**
baz=320
K36A Gilmore City 73.09 45 P **P 04 10 36.7 -0.5**
baz=319
G40A Rib Lake 73.09 41 P **P 04 10 36.5 -0.7**
baz=320
E42A Champion 73.21 39 P **P 04 10 37.6 -0.3**
baz=322
F41A Three Lakes 73.22 40 P **P 04 10 37.6 -0.3**
baz=321,SNR=7.9
L36A Harm Buss Farm 73.39 46 P **P 04 10 38.4 -0.5**
baz=319
GKP Gorka Klasztor 73.39 334 *e*P **P 04 10 38.4 -0.3**
GKP Gorka Klasztor 73.39 334 *e*P **P 04 10 38.4 -0.3**
K37A Belmond 73.39 45 P **P 04 10 38.2 -0.8**
baz=319
BEL Belsk 73.48 331 *e*P **P 04 10 39.6 +0.3**
BEL Belsk 73.48 331 *e*P **P 04 10 39.6 +0.3**
H40A Chili 73.50 42 P **P 04 10 38.8 -0.8**
baz=320
SCHQ Schefferville 73.53 23 P **P 04 10 39.5 0.0**
comp=Z,3.3nm,0.4s,baz=354,slow=9.0,SNR=4.9
J38A Wedel Dairy, R 73.53 44 P **P 04 10 38.9 -0.8**
baz=320
I39A Houston 73.57 43 P **P 04 10 39.3 -0.7**
baz=320,SNR=5.8
SORM Soroca 73.78 325 ⇑ *i* P **P 04 10 40.8 -0.4**
SORM Soroca 73.78 325 P **P 04 10 40.7 -0.4**
M36A Felix, Anita 73.81 46 P **P 04 10 41.1 -0.4**
baz=319
L37A Phoenix Point, 73.82 45 P **P 04 10 41.0 -0.4**
baz=319
H41A Junction City 73.84 41 P **P 04 10 41.0 -0.6**
baz=321
J39A Decorah 73.88 43 P **P 04 10 40.9 -0.9**
baz=320,SNR=10
K38A Parkersburg 73.90 44 P **P 04 10 41.3 -0.6**
baz=320
E44A Grand Marais A 73.91 38 P **P 04 10 41.4 -0.5**
baz=323
I40A Norwalk 73.96 42 P **P 04 10 41.6 -0.7**
baz=321
F43A Flat Rock, Esc 74.00 39 P **P 04 10 42.1 -0.3**
baz=322
LVV L'vov 74.05 328 *e*P **P 04 10 42.6 -0.1**
I41A Arkdale 74.18 42 P **P 04 10 43.1 -0.5**
baz=321
L38A Oak Wood Farm, 74.19 45 P **P 04 10 43.6 -0.1**
baz=320
N36A Muff Farm, Cla 74.20 47 P **P 04 10 43.5 -0.2**
baz=319
G43A Wallace 74.22 40 P **P 04 10 43.2 -0.6**
baz=322
SCIA State Center 74.24 45 P **P 04 10 43.8 -0.2**
baz=320
SCIA State Center 74.24 45 *e*P **P 04 10 44.5 +0.5**
K39A Oelwein 74.28 44 P **P 04 10 43.0 -1.2**
baz=320,SNR=6.8
J40A Soldiers Grove 74.29 43 P **P 04 10 43.3 -0.9**
baz=321
H42A Shiocton 74.43 41 P **P 04 10 44.2 -0.8**
baz=322
N37A Lee Faris, Mou 74.62 46 P **P 04 10 45.8 -0.4**
baz=319
M38A Pleasantville 74.62 45 P **P 04 10 45.8 -0.4**
baz=320,SNR=5.6
K40A Colesburg 74.64 43 P **P 04 10 45.5 -0.7**
baz=320
KSU1 Kansas State U 74.64 49 P **P 04 10 46.0 -0.3**
baz=318
J41A Loganville 74.65 42 P **P 04 10 45.5 -0.8**
baz=321,SNR=5.3
L39A Vinton 74.67 44 P **P 04 10 45.9 -0.5**
baz=320,SNR=12
KWP Kalwaria Pacla 74.68 329 *e*P **P 04 10 46.7 +0.3**
KWP Kalwaria Pacla 74.68 329 *e*P **P 04 10 46.7 +0.3**
I42A Draeger Farm, 74.74 41 P **P 04 10 46.3 -0.5**
baz=322
I42A Draeger Farm, 74.74 41 *e*P **P 04 10 46.7 -0.1**
comp=Z,9.3nm,0.8s
H43A Windswept, Lux 74.80 40 P **P 04 10 46.6 -0.5**
baz=322
F45A CMU Biological 74.82 38 P **P 04 10 46.5 -0.7**
baz=323
JFWS Jewell Farm 74.89 43 P **P 04 10 46.7 -0.9**
baz=321
AMTX Amarillo 74.99 55 P **P 04 10 48.7 +0.2**
baz=317
AMTX Amarillo 74.99 55 *e*P **P 04 10 49.5 +1.0**
comp=Z,16nm,0.8s
MSTX Muleshoe 75.03 56 P **P 04 10 48.8 0.0**
baz=317
MSTX Muleshoe 75.03 56 *e*P **P 04 10 49.5 +0.7**
comp=Z,9.3nm,1.0s
F46A Macinaw City C 75.07 38 P **P 04 10 48.0 -0.7**
baz=323
M39A Webster 75.08 45 P **P 04 10 48.5 -0.3**
baz=320,SNR=14
N38A Joes South For 75.08 46 P **P 04 10 48.3 -0.5**
baz=320,SNR=7.7
L40A Anamosa 75.08 44 P **P 04 10 48.0 -0.8**
baz=321,SNR=6.2
I43A Langenfeld Bro 75.09 41 P **P 04 10 48.1 -0.8**
baz=322
J42A Columbus 75.09 42 P **P 04 10 48.0 -0.9**
baz=321,SNR=6.3
K41A Shullsburg 75.10 43 P **P 04 10 48.1 -0.8**
baz=321
O37A Wolven Farm, M 75.10 47 P **P 04 10 48.4 -0.5**
baz=319
MNTX Cornudas Mount 75.14 60 P **P 04 10 49.9 +0.6**
baz=316,SNR=8.2
MNTX Cornudas Mount 75.14 60 *e*P **P 04 10 50.4 +1.0**
comp=Z,4.5nm,1.0s
LEOM Leova 75.16 324 ⇓ *i* P **P 04 10 49.8 +0.6**
LEOM Leova 75.16 324 P **P 04 10 49.7 +0.6**
OJC Ojcow 75.19 331 *e*P **P 04 10 49.2 -0.1**
OJC Ojcow 75.19 331 *e*P **P 04 10 49.2 -0.1**
OJC Ojcow 75.19 331 *e*P **P 04 10 49.1 -0.1**
comp=Z,19nm,0.6s

OJC Ojcow 75.19 331 eP P 04 10 49.2 -0.1
J43A Natural Harves 75.37 41 P P 04 10 49.6 -0.8
baz=322
N39A Derby Farms, D 75.38 45 P P 04 10 50.1 -0.4
baz=320,SNR=5.0
BUR08 Bucovina Ar. S 75.41 326 eP P 04 10 50.3 -0.4
K42A Prairie Point, 75.41 42 P P 04 10 49.7 -1.0
baz=321,SNR=5.1
L41A Preston 75.42 43 P P 04 10 50.0 -0.8
baz=321
BUR04 Bucovina Ar. S 75.43 326 eP P 04 10 50.8 -0.1
BURAR Bucovina Array 75.43 326⇑ iP P 04 10 51.3 +0.5
P37A Lathrop 75.44 47 P P 04 10 50.3 -0.6
baz=319,SNR=5.2
M40A Post Highland 75.45 44 P P 04 10 50.5 -0.5
baz=320,SNR=7.4
O38A Galt 75.47 46 P P 04 10 50.9 -0.2
baz=320,SNR=8.0
BANOM Banah 75.64 292 i P P 04 10 52.9 +0.5
SNR=7.9
SHME Shamm 75.66 293 i P P 04 10 52.3 -0.1
SNR=10
NIE Niedzica 75.70 330 eP P 04 10 52.7 +0.4
NIE Niedzica 75.70 330 eP P 04 10 52.7 +0.4
CRVS Cervenica-Dubn 75.73 329 eP P 04 10 52.8 +0.4
CRVS pmax pmax
comp=Z,46nm,2.2s
CRVS Cervenica-Dubn 75.73 329 eP P 04 10 52.8 +0.4
TESR Tescani 75.78 325⇑ iP P 04 10 52.4 -0.3
KSP Ksiaz 75.79 333 eP P 04 10 52.6 -0.1
KSP Ksiaz 75.79 333 eP P 04 10 52.6 -0.1
N40A Mertquake, Sal 75.82 45 P P 04 10 52.7 -0.3
baz=321
P38A Dawn 75.82 47 P P 04 10 52.7 -0.4
baz=320
O39A Kirksville 75.83 46 P P 04 10 52.8 -0.4
baz=320
L42A Oliver, Polo 75.86 43 P P 04 10 52.3 -1.0
baz=321
Q37A Longview Farm, 75.92 48 P P 04 10 52.9 -0.7
baz=320
K43A Burlington 75.94 42 P P 04 10 52.7 -1.0
baz=322
M41A Milan 75.94 44 P P 04 10 52.9 -0.8
baz=321,SNR=5.7
TLCR 75.97 323⇓ iP P 04 10 54.3 +0.5
TRPA Tarpa 76.00 328⇓ iP P 04 10 54.8 +0.9
WSAR Wadi Sarin 76.03 289 LR LR 04 49 45.8
comp=Z,62nm,18.2s,baz=63,slow=40
OKC Ostrava-Krasne 76.06 332 eP P 04 10 54.4 +0.1
OKC ex x 04 10 59.5
OKC Ostrava-Krasne 76.06 332 eP P 04 10 54.4 +0.1
OKC e 04 10 59.5
L43A Garden Prairie 76.15 42 P P 04 10 53.9 -1.0
baz=322
UPC Upice 76.17 333 eP P 04 10 55.4 +0.5
UPC AMS AMS 04 47 50.0
UPC Upice 76.17 333 eP P 04 10 55.4 +0.5
PETR Petresti 76.19 324⇑ iP P 04 10 56.5 +1.5
DPC Dobruska-Polom 76.21 333 eP P 04 10 55.6 +0.5
DPC Dobruska-Polom 76.21 333 eP P 04 10 55.6 +0.5
LANS Liptovska Anna 76.22 330 eP P 04 10 55.9 +0.7
LANS Liptovska Anna 76.22 330 eP P 04 10 55.9 +0.7
ODBI Odobesti 76.22 324⇓ iP P 04 10 56.9 +1.7
O40A La Belle 76.26 45 P P 04 10 55.3 -0.3
baz=321,SNR=13
VRI Vrincioaia 76.27 324⇓ iP P 04 10 56.0 +0.4
VRI Vrincioaia 76.27 324 P P 04 10 57.9 +2.3
VRI pmax pmax
comp=Z,75nm,0.6s
Q38A Cooks Store, C 76.28 47 P P 04 10 55.1 -0.6
baz=320,SNR=9.7
KRLC Kraliky 76.30 332 eP P 04 10 55.9 +0.2
KRLC Kraliky 76.30 332 eP P 04 10 55.9 +0.2
N41A Harden Midland 76.31 44 P P 04 10 55.4 -0.4
baz=321,SNR=6.2
EKA Eskdalemuir Ar 76.31 346 P P 04 10 54.9 -0.6
comp=Z,0.6nm,0.3s,baz=34,slow=5.2,SNR=14
EKA LR LR 04 50 19.7
comp=Z,28nm,18.3s,baz=270,slow=40
EKA Eskdalemuir Ar 76.31 346 P P 04 10 55.0 -0.6
P39B Salisbury 76.31 46 P P 04 10 55.0 -0.8
baz=320
MORC Moravsky Berou 76.31 332 eP P 04 10 55.8 0.0
PLOR Plostina 76.32 324⇑ iP P 04 10 56.7 +0.9
PLOR Plostina 76.32 324 P P 04 10 56.7 +0.9
CLL Collm 76.36 335 eP P 04 10 55.4 -0.5
CLL Collm 76.36 335⇑ iP P 04 10 55.4 -0.5
comp=Z,30nm,0.8s
CLL LmV 04 47 00.0
comp=Z,100nm,20.5s
CLL Collm 76.36 335⇑ iP P 04 10 55.4 -0.5
CLL pmax pmax
comp=Z,30nm,0.8s
UOSS Minazif 76.40 292 i P P 04 10 56.4 -0.2
SNR=11
KECS Kecovo 76.43 329 eP P 04 10 58.4 +2.0
KECS Kecovo 76.43 329 eP P 04 10 58.4 +2.0
BRG Berggiesshubel 76.47 334 i P P 04 10 56.1 -0.5
comp=Z,7.3nm,0.8s
BRG Berggiesshubel 76.47 334 eP P 04 10 56.1 -0.5
BRG Berggiesshubel 76.47 334 i P P 04 10 56.1 -0.5
BRG pmax pmax
comp=Z,7.0nm,0.8s
HATD Hatta, Dubai 76.53 292 i P P 04 10 57.8 +0.4
SNR=14
Q39A Willow Grove F 76.54 47 P P 04 10 56.9 -0.3
baz=320
PVCC Panska Ves 76.59 334 eP P 04 10 57.4 +0.1
PVCC Panska Ves 76.59 334 eP P 04 10 57.4 +0.1
N42A Yates City 76.60 44 P P 04 10 57.0 -0.5
baz=321,SNR=5.8
P40A Paris 76.63 46 P P 04 10 57.4 -0.3
baz=321,SNR=11
M43A Waltham Townsh 76.64 43 P P 04 10 56.8 -0.9
baz=322
NAZ Nazwa, Dubai 76.71 292 i P P 04 10 58.6 +0.2
SNR=7.0
WMOK Wichita Mounta 76.72 53 P P 04 10 58.2 -0.1
baz=318
WMOK Wichita Mounta 76.72 53 eP P 04 10 58.5 +0.2
comp=Z,5.8nm,0.9s
WMOK Wichita Mounta 76.72 53 eP P 04 10 58.5 +0.2
WMOK pmax pmax
comp=Z,6.0nm,0.9s
DOPR Dopca 76.72 325⇓ iP P 04 10 59.2 +1.1
R38A Fenwick Farm, 76.72 48 P P 04 10 57.0 -1.2
baz=320,SNR=6.5
TIRR Tirgusor 76.73 322⇓ iP P 04 10 58.4 +0.3
O41A Passleys Farm, 76.75 45 P P 04 10 58.0 -0.4
baz=321,SNR=8.8
SOHO SOHO 76.76 291 i P P 04 10 58.7 +0.1
SNR=6.1
TLB Topalu 76.78 323⇑ iP P 04 10 58.4 0.0
MLR Muntele Rosu 76.89 325 P P 04 10 59.2 0.0
comp=Z,4.8nm,0.5s,baz=342,slow=3.2,SNR=64
MLR LR LR 04 46 51.8
comp=Z,23nm,21.7s,baz=40,slow=37
MLR Muntele Rosu 76.89 325⇑ iP P 04 11 00.6 +1.4
N43A Stutzman Famil 76.93 43 P P 04 10 58.8 -0.5
baz=322
ISR Istrita 76.96 324⇓ iP P 04 11 00.4 +0.9
VYHS Vyhne 76.99 330 eP P 04 10 59.9 +0.3
VYHS pmax pmax
comp=Z,6.0nm,0.8s
VYHS Vyhne 76.99 330 eP P 04 10 59.9 +0.3
P41A Barry, Barry 77.00 45 P P 04 10 59.5 -0.2
baz=321,SNR=9.5
Q40A Laux Farm, Aux 77.03 46 P P 04 10 59.4 -0.6
baz=321
VRAC Vranov 77.03 332 eP P 04 11 00.1 +0.3
DRGR 77.06 327⇑ iP P 04 11 00.1 0.0
GOPC GO Pecny, Ondr 77.07 334 eP P 04 11 00.2 +0.2
GOPC GO Pecny, Ondr 77.07 334 eP P 04 11 00.2 +0.2
R39A Chumby, Stover 77.07 47 P P 04 10 59.3 -0.8
baz=320,SNR=6.0
JAVC Velka Javorina 77.07 331 eP P 04 11 01.3 +1.2
PRU Pruhonice 77.08 334 eP P 04 11 00.4 +0.4
PRU AMS AMS 04 48 40.0
PRU Pruhonice 77.08 334 eP P 04 11 00.4 +0.4
ILGA Ilgaz 77.09 317 eP P 04 11 02.0 +1.4
comp=Z,16nm,0.8s
M44A Midewin, Midew 77.10 42 P P 04 10 59.4 -0.9
baz=322
PSZ Piszkesteto 77.12 329⇓ iP P 04 11 01.4 +1.0
PSZ Piszkesteto 77.12 329 eP P 04 11 01.0 +0.6
comp=Z,13nm,0.9s
PSZ Piszkesteto 77.12 329 eP P 04 11 01.0 +0.6
PSZ pmax pmax
comp=Z,13nm,0.9s
S38A Stockton 77.14 48 P P 04 10 59.6 -1.0
baz=320,SNR=7.3
HDIL Hopedale 77.17 44 P P 04 11 00.3 -0.3
baz=322,SNR=6.9
HDIL Hopedale 77.17 44 eP P 04 11 00.5 -0.2
comp=Z,24nm,0.7s
ASUD Al Ashush, Dub 77.18 292 i P P 04 11 01.2 +0.3
SNR=9.3
ICOR Ion Corvin 77.26 323⇓ iP P 04 11 01.7 +0.6
VOIR 77.29 325⇓ iP P 04 11 02.3 +0.9
KRUC Moravsky 77.31 332 eP P 04 11 01.5 +0.2
MOX Moxa 77.35 336 P P 04 11 02.4 +0.8
O43A Sugar Creek Fa 77.37 44 P P 04 11 01.1 -0.8
baz=322
S39A Bolivar 77.40 48 P P 04 11 00.8 -1.2
baz=320,SNR=9.8
T38A Diamond 77.40 49 P P 04 11 01.5 -0.6
baz=320,SNR=23
P42A Winchester 77.42 45 P P 04 11 01.4 -0.7
baz=321
TUL1 Leonard 77.46 51 P P 04 11 02.1 -0.3
baz=319
TUL1 Leonard 77.46 51 eP P 04 11 02.7 +0.3
comp=Z,6.3nm,0.8s
R40A Maddies Statio 77.47 47 P P 04 11 01.8 -0.6
baz=321,SNR=6.9
Q41A Truxton 77.48 46 P P 04 11 02.3 -0.1
baz=321,SNR=10
NKC Novy Kostel 77.48 335 eP P 04 11 02.5 +0.2
NKC Novy Kostel 77.48 335 eP P 04 11 02.5 +0.2
ARR Arges 77.52 325⇓ iP P 04 11 03.8 +1.2
LPIG La Paz 77.52 68 LR LR 04 38 26.6
comp=Z,26nm,19.8s,baz=226,slow=30
N44A Piper City 77.53 43 P P 04 11 01.6 -1.1
baz=322
MODS Modra-Piesok 77.62 331 eP P 04 11 02.9 -0.2
MODS pmax pmax
comp=Z,16nm,0.9s
MODS Modra-Piesok 77.62 331 eP P 04 11 02.9 -0.2
N45A Kentland 77.78 42 P P 04 11 03.4 -0.6
baz=323
P43A Skaggs, Pawnee 77.78 44 P P 04 11 03.6 -0.5
baz=322
ABTX Abilene, Hawle 77.80 55 P P 04 11 04.2 -0.2
baz=318
ZST Bratislava 77.83 331 eP P 04 11 03.8 -0.4
ZST pmax pmax
comp=Z,1.0nm,0.7s
ZST Bratislava 77.83 331 eP P 04 11 03.8 -0.4
Q42A Golden Eagle 77.85 45 P P 04 11 04.6 0.0
baz=321,SNR=6.5
TX31 Lajitas Ar. Si 77.87 60 eP P 04 11 05.5 +0.6
TXAR Lajitas Array 77.87 60 P P 04 11 05.5 +0.6
comp=Z,6.6nm,0.7s,baz=297,slow=4.3,SNR=93
O44A Mansfield 77.88 43 P P 04 11 04.0 -0.6
baz=322
T39A Clever 77.88 48 P P 04 11 04.0 -0.7
baz=320,SNR=6.9
S40A Lebanon 77.89 47 P P 04 11 04.0 -0.7
baz=321,SNR=13
R41A Rosebud 77.91 46 P P 04 11 04.3 -0.5
baz=321,SNR=5.1
N46A Monticello 78.09 42 P P 04 11 05.1 -0.7
baz=323
KHC Kasperske Hory 78.13 334 eP P 04 11 06.2 +0.3
KHC ex x 04 11 10.8
KHC epP sP 04 11 24.7 -1.9
KHC Kasperske Hory 78.13 334 eP P 04 11 06.2 +0.3
KHC Kasperske Hory 78.13 334 eP P 04 11 06.0 0.0
comp=Z,7.2nm,0.7s
KHC Kasperske Hory 78.13 334 eP P 04 11 06.2 +0.3
KHC e 04 11 10.8
KHC e*PP sP 04 11 24.7 -1.9
O45A Potomac 78.15 43 P P 04 11 05.7 -0.4
baz=323,SNR=5.7
HHAR Hobbs 78.16 49 eP P 04 11 05.8 -0.5
comp=Z,7.4nm,0.8s
CCM Cathedral Cave 78.17 46 P P 04 11 05.7 -0.6
baz=321
CCM Cathedral Cave 78.17 46 eP P 04 11 06.1 -0.2
comp=Z,9.6nm,0.9s
CCM Cathedral Cave 78.17 46 eP P 04 11 06.1 -0.2
CCM pmax pmax
comp=Z,10.0nm,0.9s
BR131 Keskin Array S 78.17 316 eP P 04 11 06.9 +0.4
BRTR Keskin Array B 78.17 316 P P 04 11 06.8 +0.4
comp=Z,8.9nm,0.8s,baz=76,slow=3.9,SNR=54
BRTR LR LR 04 51 34.3
comp=Z,54nm,18.8s,baz=45,slow=40
R42A Luebbering 78.22 46 P P 04 11 06.2 -0.4
baz=321
T40A Mansfield 78.22 48 P P 04 11 05.8 -0.9
baz=321,SNR=5.1
Q43A New Douglas 78.24 45 P P 04 11 06.2 -0.5
baz=322
S41A Jillco Farms, 78.28 47 P P 04 11 06.2 -0.7
baz=321,SNR=6.7
U39A Green Forest 78.32 49 P P 04 11 06.7 -0.5
baz=320,SNR=22
GRFO Grafenberg 78.32 336 eP P 04 11 07.3 +0.4
GRFO Grafenberg 78.32 336 eP P 04 11 07.3 +0.4
WET Wettzell 78.33 334 P P 04 11 08.0 +1.0
WET pmax pmax
comp=Z,18nm,0.9s
AAM Ann Arbor 78.34 39 P P 04 11 07.2 0.0
baz=324
SFIN Lafayette 78.34 42 P P 04 11 06.6 -0.5
baz=323
SFIN Lafayette 78.34 42 eP P 04 11 06.7 -0.5
comp=Z,17nm,1.4s
P44A Sand Creek, Wi 78.34 44 P P 04 11 07.0 -0.2
baz=322,SNR=6.7
GEC2 GERESS Array S 78.34 334 eP P 04 11 07.0 -0.2
comp=Z,7.3nm,0.6s
GEC2 GERESS Array S 78.34 334 eP P 04 11 07.0 -0.2
GEC2 pmax pmax
comp=Z,7.0nm,0.6s
GERES GERESS Array B 78.34 334 P P 04 11 07.0 -0.2
comp=Z,5.7nm,0.6s,baz=35,slow=5.9,SNR=72
GERES LR LR 04 49 48.3
comp=Z,117nm,18.3s,baz=56,slow=39
GERES GERESS Array B 78.34 334 eP P 04 11 07.0 -0.2
GERES GERESS Array B 78.34 334 P P 04 11 07.0 -0.2
GEA0 GERESS Array S 78.35 334 eP P 04 11 06.8 -0.5
ANTO Ankara 78.45 317⇑ iP P 04 11 08.9 +1.0
ANTO Ankara 78.45 317 eP P 04 11 07.9 -0.1
ANTO Ankara 78.45 317 eP P 04 11 07.9 -0.1
BZS Buzias 78.46 327⇑ iP P 04 11 08.1 +0.3
SOP Sopron 78.46 331 P P 04 11 09.3 +1.6
SOP pmax pmax
comp=Z,25nm,0.9s
CONA Conrad Observa 78.47 332 i P P 04 11 08.4 +0.5
comp=Z,16nm,0.6s,SNR=11
Q44A Meyer Farm, Va 78.60 44 P P 04 11 08.2 -0.4
baz=322
S42A Caledonia 78.61 46 P P 04 11 08.3 -0.5
baz=321,SNR=14
FVM French Village 78.63 46 eP P 04 11 08.7 -0.2
comp=Z,8.2nm,0.7s
FVM French Village 78.63 46 eP P 04 11 08.7 -0.2
FVM pmax pmax
comp=Z,8.0nm,0.7s
R43A Red Bud 78.64 45 P P 04 11 08.3 -0.6
baz=322
V39A Pettigrew 78.65 49 P P 04 11 08.4 -0.7
baz=320,SNR=10
U40A Yellville 78.66 48 P P 04 11 08.5 -0.5
baz=321,SNR=22
TRQ Mont Tremblant 78.67 31 eP P 04 11 08.4 -0.6
T41A Mountain View 78.69 47 P P 04 11 08.4 -0.8
baz=321,SNR=6.2
P45A Graceland, Par 78.71 43 P P 04 11 08.9 -0.3
baz=323,SNR=5.3
PLVO Plevna 78.75 33 eP P 04 11 09.1 -0.3
comp=Z,8.0nm,1.0s
STKA Stephens Creek 78.81 189 P P 04 11 10.3 +0.7
comp=Z,2.4nm,0.8s,baz=1.7,slow=5.7,SNR=3.5
STKA LR LR 04 44 08.0
comp=Z,27nm,22.0s,baz=27,slow=34
MEM Membach 78.87 339 ⇑P P 04 11 09.9 0.0
comp=Z,25nm,1.0s
O47A Sheridan 78.88 42 P P 04 11 09.0 -1.1
baz=323
P46A Rosedale 78.89 43 P P 04 11 09.9 -0.4
baz=323,SNR=5.8
Q45A Warren Harvey, 79.02 44 P P 04 11 10.3 -0.6
baz=323,SNR=7.1
T42A Van Buren 79.04 47 P P 04 11 10.2 -0.9
baz=321,SNR=6.0
MOA Molln 79.05 333 i P P 04 11 11.0 0.0
comp=Z,12nm,0.8s,SNR=7.6
W39A Magazine 79.07 50 P P 04 11 11.0 -0.3
baz=320
W39A Magazine 79.07 50 eP P 04 11 11.4 +0.1
comp=Z,8.7nm,1.3s
R44A Waltonville 79.08 45 P P 04 11 10.8 -0.5
baz=322
V40A Witts Springs 79.10 49 P P 04 11 10.9 -0.6
baz=321
V40A Witts Springs 79.10 49 eP P 04 11 10.9 -0.6
comp=Z,4.5nm,0.8s
S43A Fulton Ridge, 79.12 46 P P 04 11 11.0 -0.5
baz=322
MDVR Moldovita 79.13 327⇓ iP P 04 11 11.2 -0.3
U41A Viola 79.15 48 P P 04 11 11.1 -0.6
baz=321,SNR=6.1
OLIL Olney 79.17 44 eP P 04 11 12.1 +0.3
comp=Z,12nm,0.8s
ARSA Arzberg 79.18 332 i P P 04 11 11.9 +0.2
comp=Z,5.5nm,0.7s
BCLA Clavier 79.22 339 ⇑P P 04 11 11.5 -0.3
comp=Z,12nm,1.0s
Q46A CEJHS Indians, 79.29 43 P P 04 11 12.1 -0.3
baz=323
JCT Junction City 79.30 57 P P 04 11 12.8 +0.1
baz=318
JCT Junction City 79.30 57 eP P 04 11 12.4 -0.3
comp=Z,7.2nm,0.8s
JCT Junction City 79.30 57 eP P 04 11 12.4 -0.3
JCT pmax pmax
comp=Z,7.0nm,0.8s
T43A Greenville 79.40 46 P P 04 11 12.7 -0.4
baz=322,SNR=6.7
X39A Fountain Ranch 79.42 50 P P 04 11 13.3 +0.1
baz=320,SNR=6.3
S44A Carbondale 79.43 45 P P 04 11 12.9 -0.4
baz=322
R45A Skylar, Fairfi 79.43 44 P P 04 11 12.7 -0.5
baz=323
P47A Martinsville 79.43 42 P P 04 11 12.5 -0.7
baz=324,SNR=6.3
W40A Ferguson Farm, 79.44 49 P P 04 11 13.2 -0.2
baz=321,SNR=5.3
W40A Ferguson Farm, 79.44 49 eP P 04 11 13.5 +0.2
comp=Z,15nm,0.9s
V41A Mountainview 79.46 48 P P 04 11 12.7 -0.8
baz=321,SNR=8.1
U42A Revenden 79.49 47 P P 04 11 12.7 -0.8
baz=321
WHTX Lake Whitney, 79.50 54 P P 04 11 13.7 0.0
baz=319
MZR Muzera 79.52 292 i P P 04 11 14.4 +0.5
SNR=13
MPEP Malo Peshtene 79.55 325 i P P 04 11 13.7 -0.1
PBMO Poplar Bluff 79.57 47 eP P 04 11 13.3 -0.6
comp=Z,62nm,1.8s
BLO Bloomington 79.57 43 eP P 04 11 14.0 0.0
comp=Z,9.7nm,0.6s
BLO Bloomington 79.57 43 eP P 04 11 14.0 0.0
BLO pmax pmax
comp=Z,10.0nm,0.6s
MIAR Mount Ida 79.67 50 P P 04 11 14.6 +0.1
baz=320,SNR=8.0
MIAR Mount Ida 79.67 50 eP P 04 11 14.7 +0.1
comp=Z,7.7nm,0.8s
MIAR Mount Ida 79.67 50 eP P 04 11 14.7 +0.1
MIAR pmax pmax
comp=Z,8.0nm,0.8s
T44A Benton 79.74 46 P P 04 11 14.8 -0.1
baz=322
S45A Carrier Mills 79.77 45 P P 04 11 14.9 -0.2
baz=322
WHAR Wooly Hollow 79.77 49 eP P 04 11 14.8 -0.3
comp=Z,12nm,0.9s
Q47A Bedord North L 79.80 43 P P 04 11 14.8 -0.4
baz=324,SNR=8.3
BAIF Baives 79.82 340 eP P 04 11 14.5 -0.6
BAIF pmax pmax
comp=Z,36nm,1.4s
V42A Cord 79.84 48 P P 04 11 14.8 -0.6
baz=321,SNR=6.5
SOKA Soboth 79.84 332 i P P 04 11 15.4 0.0
comp=Z,23nm,1.2s,SNR=15
R46A Gibon Southern 79.86 44 P P 04 11 15.1 -0.4
baz=323
W41B Gary Mavity, V 79.89 49 P P 04 11 15.3 -0.4
baz=321,SNR=7.7
W41B Gary Mavity, V 79.89 49 eP P 04 11 15.8 0.0
comp=Z,12nm,0.8s
U43A Rector 79.90 47 P P 04 11 15.6 -0.2
baz=322
KBA Koelnbreinsper 80.02 333 i P P 04 11 17.2 +0.7
comp=Z,20nm,0.6s,SNR=13
KBA Koelnbreinsper 80.02 333 P P 04 11 17.9 +1.4
KBA pmax pmax
comp=Z,34nm,0.8s
ERPA Erie 80.04 37 P P 04 11 16.2 -0.3
baz=327
X40A Basin Creek Fa 80.11 50 P P 04 11 16.8 -0.1
baz=321
X40A Basin Creek Fa 80.11 50 eP P 04 11 17.4 +0.4
comp=Z,9.3nm,1.2s
RAR Rarotonga 80.12 136 LR LR 04 44 03.8
comp=Z,249nm,18.6s,baz=298,slow=34
OBKA Obir 80.15 332 i P P 04 11 16.9 -0.2
comp=Z,5.7nm,0.6s
U44A Portageville 80.15 46 P P 04 11 16.8 -0.4
baz=322
W42A Bald Knob 80.18 48 P P 04 11 17.1 -0.3
baz=321
S46A Don Dixon Farm 80.19 44 P P 04 11 17.0 -0.3
baz=323
PLD Plovdiv 80.20 323 P P 04 11 19.4 +2.1
R47A Wooly Knot Far 80.27 43 P P 04 11 17.4 -0.3
baz=324,SNR=10
X41A Kaden, Bauxite 80.27 49 P P 04 11 17.6 -0.2
baz=321
ACSO Alum Creek Sta 80.32 40 P P 04 11 17.6 -0.4
baz=325,SNR=5.4
ACSO Alum Creek Sta 80.32 40 eP P 04 11 18.1 +0.1
comp=Z,16nm,0.6s
MYKA Terra Mystica 80.33 333 i P P 04 11 17.6 -0.4
comp=Z,5.6nm,0.5s
DIVS Divibare 80.36 327 eP P 04 11 17.4 -0.9
comp=Z,8.1nm,0.6s
BFO Black Forest 80.36 337 eP P 04 11 17.1 -1.0
comp=Z,19nm,0.9s
BFO Black Forest 80.36 337 i P P 04 11 18.1 0.0
ALLY Alegheny Colle 80.37 37 eP P 04 11 18.4 +0.1
comp=Z,18nm,0.8s
WTTA Wattenberg 80.38 334 i P P 04 11 18.9 +0.5
comp=Z,19nm,0.5s,SNR=7.7
VTS Vitosha 80.40 325⇓ iP P 04 11 19.0 +0.4
VTS Vitosha 80.40 325 eP P 04 11 18.5 -0.1
comp=Z,39nm,1.3s
VTS Vitosha 80.40 325 i P P 04 11 18.5 -0.1
VTS Vitosha 80.40 325 P P 04 11 18.3 -0.3
VTS Vitosha 80.40 325 eP P 04 11 18.5 -0.1
VTS pmax pmax
comp=Z,39nm,1.3s
WCI Wyandotte Cave 80.43 43 P P 04 11 18.6 0.0
baz=324
WCI Wyandotte Cave 80.43 43 eP P 04 11 18.7 0.0
comp=Z,18nm,0.9s
WCI Wyandotte Cave 80.43 43 eP P 04 11 18.7 0.0
WCI pmax pmax
comp=Z,17nm,0.9s
RETA Reutte 80.44 335 i P P 04 11 18.7 +0.1
comp=Z,10nm,0.8s
U44B Burton Farm, H 80.45 46 P P 04 11 18.7 0.0
baz=322
MOTA Moosalm 80.47 335 i P P 04 11 18.1 -0.8
comp=Z,22nm,0.9s,SNR=16
R48A Northridge Ran 80.49 43 P P 04 11 19.0 +0.1
baz=324,SNR=6.0
RZN Rozhen 80.54 323 i P P 04 11 19.4 0.0
ABTA Abfaltersbach 80.58 333 i P P 04 11 19.6 +0.2
comp=Z,12nm,1.1s
T46A Princeton 80.61 45 P P 04 11 19.8 +0.2

baz=323,SNR=13
ALN Alexandroupoli 80.64 322 eP P 04 11 19.8 +0.1
comp=Z,16nm,1.2s
ALN Alexandroupoli 80.64 322 P P 04 11 18.7 -1.0
ALN Alexandroupoli 80.64 322 eP P 04 11 19.8 +0.1
ALN pmax pmax
comp=Z,16nm,1.2s
M54A Oil Creek Stat 80.68 37 P P 04 11 19.5 -0.4
baz=327,SNR=6.0
M54A Oil Creek Stat 80.68 37 eP P 04 11 19.7 -0.2
comp=Z,21nm,1.1s
U45A Rockin P Farm, 80.73 46 P P 04 11 20.3 0.0
baz=323
ECH Echery 80.78 337 eP P 04 11 20.2 -0.2
comp=Z,14nm,0.9s
ECH Echery 80.78 337 eP P 04 11 20.2 -0.2
ECH pmax pmax
comp=Z,14nm,0.9s
FETA Feichten 80.87 335 i P P 04 11 21.3 +0.3
comp=Z,7.6nm,0.9s
DAVA Damuels 80.88 335 i P P 04 11 20.8 -0.3
comp=Z,14nm,0.8s
S48A Wiedeman Farm, 81.00 43 P P 04 11 21.3 -0.4
baz=324,SNR=5.2
N54A Moraine State 81.00 37 P P 04 11 21.4 -0.3
baz=327,SNR=8.7
N54A Moraine State 81.00 37 eP P 04 11 21.5 -0.1
comp=Z,17nm,0.9s
U46A Springville 81.01 45 P P 04 11 21.6 -0.2
baz=323
MMB Musomiste 81.03 324 i P P 04 11 21.9 +0.1
T47A Sharon Grove 81.03 44 P P 04 11 21.8 0.0
baz=323,SNR=7.0
KKB Krupnik 81.06 324 i P P 04 11 22.1 +0.2
V45A Humboldt 81.11 46 P P 04 11 22.0 -0.3
baz=322
140A Cam and Jess, 81.14 51 P P 04 11 22.2 -0.2
baz=321
833A Chaparral WMA, 81.14 58 P P 04 11 22.8 +0.2
baz=319
Y42A Garnett, Star 81.16 49 P P 04 11 22.6 0.0
baz=321
NVR Nevrokopi 81.18 324 P P 04 11 22.6 0.0
NVR Nevrokopi 81.18 324 P P 04 11 22.6 0.0
KAVA Kavala 81.20 323 P P 04 11 22.5 -0.2
KAVA Kavala 81.20 323 P P 04 11 22.5 -0.2
T48A Bowling Green 81.28 44 P P 04 11 22.7 -0.4
baz=324
TAOE Nuku Hiva Isla 81.28 113 eLR LR 04 36 52.1
comp=Z,167nm,27.0s
PMOR Pomariorio Ree 81.35 123 eT T 05 41 19.3
comp=Z,43nm,0.2s
WVT Waverly 81.36 45 P P 04 11 23.3 -0.4
baz=323
WVT Waverly 81.36 45 eP P 04 11 23.6 0.0
comp=Z,13nm,0.8s
WVT Waverly 81.36 45 eP P 04 11 23.6 0.0
WVT pmax pmax
comp=Z,13nm,0.8s
FUORN Ofenpass-Fuorn 81.37 335 eP P 04 11 24.6 +0.7
comp=Z,15nm,1.0s
U47A Clarksville 81.38 45 P P 04 11 23.8 +0.1
baz=323,SNR=5.2
W45A Hickory Valley 81.46 47 P P 04 11 23.6 -0.6
baz=322
SRS Serrai 81.48 324 P P 04 11 23.4 -0.8
SRS Serrai 81.48 324 P P 04 11 23.4 -0.8
SRS Serrai 81.48 324 P P 04 11 23.4 -0.8
V46A Holladay 81.48 46 P P 04 11 24.1 -0.2
baz=323,SNR=8.4
X44A Crenshaw 81.49 48 P P 04 11 23.4 -0.9
baz=322
Z42A Norrel Spur, H 81.51 50 P P 04 11 24.6 +0.2
baz=321
141A Papa Simpson, 81.52 51 P P 04 11 25.0 +0.4
baz=321
BINY Binghamton 81.58 34 P P 04 11 23.8 -0.9
baz=329
U48A Cassie Pea, Po 81.69 44 P P 04 11 25.2 -0.1
baz=324,SNR=8.8
T49A Edmonton 81.69 43 P P 04 11 24.9 -0.5
baz=324
VAY Valandovo 81.73 324 P P 04 11 25.3 -0.1
VAY Valandovo 81.73 324 P P 04 11 25.3 -0.1
VAY Valandovo 81.73 324 P P 04 11 25.3 -0.1
V47A Nunnelly 81.76 45 P P 04 11 25.6 -0.1
baz=323,SNR=8.9
NVLJ Novalja 81.76 331 P P 04 11 24.2 -1.3
TUE Stuetta 81.77 335 eP P 04 11 26.0 +0.1
comp=Z,14nm,0.8s
LIA Limnos Island 81.84 322 P P 04 11 25.5 -0.5
LIA Limnos Island 81.84 322 P P 04 11 25.5 -0.5
OXF Oxford 81.86 47 P P 04 11 26.0 -0.3
baz=322
OXF Oxford 81.86 47 eP P 04 11 25.6 -0.6
comp=Z,24nm,0.9s
OXF Oxford 81.86 47 eP P 04 11 25.6 -0.6
OXF pmax pmax
comp=Z,24nm,0.9s
Y44A Strider, Charl 81.88 48 P P 04 11 26.5 +0.1
baz=322,SNR=6.7
W46A Michie 81.88 46 P P 04 11 25.8 -0.6
baz=323
Z43A Armstrong Fami 81.93 49 P P 04 11 26.8 +0.1
baz=322
X45A UM Field Stati 81.93 47 P P 04 11 26.3 -0.3
baz=322
241A Mo Tay, Goldon 81.97 51 P P 04 11 27.3 +0.5
baz=321
OUR Ouranopolis 81.98 323 P P 04 11 26.3 -0.5
OUR Ouranopolis 81.98 323 P P 04 11 26.3 -0.5
OUR Ouranopolis 81.98 323 P P 04 11 26.3 -0.5
U49A Red Boiling Sp 82.05 44 P P 04 11 27.1 -0.2
baz=324
PDG Podgorica 82.07 327 ||i P P 04 11 26.9 -0.3
PDG Podgorica 82.07 327 P P 04 11 26.4 -0.8
TTG Podgorica 82.07 327 P P 04 11 26.4 -0.8
TTG Podgorica 82.07 327 P P 04 11 26.4 -0.8
142A Monroe 82.08 50 P P 04 11 27.8 +0.3
baz=322
CSS Mathiatis 82.08 314 eP P 04 11 27.2 -0.2
comp=Z,7.0nm,0.6s
CSS Mathiatis 82.08 314 P P 04 11 27.6 +0.1
T50A Nancy 82.08 43 P P 04 11 27.3 -0.1
baz=324
SSPA Standing Stone 82.14 36 P P 04 11 27.3 -0.3
baz=328
SSPA Standing Stone 82.14 36 eP P 04 11 27.7 +0.1
comp=Z,7.5nm,0.7s
MCWV Mont Chateau 82.15 38 P P 04 11 27.4 -0.3
baz=327
MCWV Mont Chateau 82.15 38 eP P 04 11 28.3 +0.6
comp=Z,16nm,1.0s
PLAL Pickwick Lake 82.15 46 eP P 04 11 27.5 -0.3
comp=Z,9.3nm,1.0s
S51A Beattyville 82.16 42 P P 04 11 27.2 -0.6
baz=325
V48A Smith Brothers 82.17 45 P P 04 11 27.7 -0.2
baz=324
O56A Blue Knob Stat 82.17 37 P P 04 11 27.4 -0.5
baz=328,SNR=5.9
O56A Blue Knob Stat 82.17 37 eP P 04 11 28.0 +0.1
comp=Z,12nm,0.8s
W47A Westpoint 82.18 46 P P 04 11 27.6 -0.3
baz=323,SNR=6.1
X46A Booneville 82.24 47 P P 04 11 27.7 -0.6
baz=323
143A Socs Landing, 82.24 50 P P 04 11 28.7 +0.4
baz=322
PHP Peshkopia 82.26 326 P P 04 11 27.6 -0.7
PHP Peshkopia 82.26 326 P P 04 11 27.6 -0.7
PHP Peshkopia 82.26 326 P P 04 11 27.6 -0.7
STON Ston 82.26 328 P P 04 11 25.6 -2.6
Y45A Yeager Farm, C 82.30 48 P P 04 11 28.9 +0.3
baz=322,SNR=6.2
Z44A Pea Ridge, Bel 82.30 49 P P 04 11 28.7 +0.2
baz=322
242A Grayson 82.34 51 P P 04 11 29.0 +0.2
baz=321
S52A Salyersville 82.36 41 P P 04 11 28.6 -0.2
baz=325
ASF Jabal al Asfar 82.44 310 P P 04 11 30.3 +0.9
comp=Z,4nm,0.6s,baz=157,slow=0.2,SNR=17
PPT Papeete 82.44 125 LR LR 04 39 48.9
comp=Z,90nm,20.4s,baz=111,slow=30
PAIG Paliouri 82.45 323 P P 04 11 28.5 -0.7
PAIG Paliouri 82.45 323 P P 04 11 28.5 -0.7
PAIG Paliouri 82.45 323 P P 04 11 28.5 -0.7
PPT2 Papeete2 82.45 125 eLR LR 04 37 36.5
comp=Z,234nm,24.0s
PPT2 Papeete2 82.45 125 eT T 05 42 43.1
comp=Z,3.3nm,0.2s
CABF La Chapelle 82.54 337 eP P 04 11 29.3 -0.5
CABF pmax pmax
comp=Z,15nm,1.0s
TIAR Tiarei 82.56 125 eT T 05 42 51.0
comp=Z,2.4nm,0.2s
MMAI Mount Meron Ar 82.56 311 P P 04 11 30.8 +0.7
comp=Z,15nm,0.4s,baz=50,slow=6.6,SNR=61
MMAI LR LR 04 53 34.1
comp=Z,149nm,18.4s,baz=190,slow=40
V49A McMinnville 82.59 44 P P 04 11 29.8 -0.3
baz=324
W48A Pulaski 82.59 45 P P 04 11 30.0 -0.1
baz=324,SNR=9.5
X47A Russelville 82.63 46 P P 04 11 29.6 -0.7
baz=323,SNR=6.9
Y46A Houston 82.63 47 P P 04 11 30.3 0.0
baz=323,SNR=9.8
FNA Florina 82.66 325 eP P 04 11 30.0 -0.4
comp=Z,10nm,0.7s
FNA Florina 82.66 325 eP P 04 11 30.0 -0.4
FNA pmax pmax
comp=Z,10.0nm,0.7s
CHOS Chios island 82.72 320 P P 04 11 30.4 -0.4
CHOS Chios island 82.72 320 P P 04 11 30.4 -0.4
YER Yerkesik 82.75 318 P P 04 11 31.3 +0.3
YER Yerkesik 82.75 318 P P 04 11 31.3 +0.3
YER Yerkesik 82.75 318 P P 04 11 31.3 +0.3
N59A State Game Lan 82.75 35 P P 04 11 30.4 -0.5
baz=329,SNR=5.5
N59A State Game Lan 82.75 35 eP P 04 11 30.9 0.0
comp=Z,8.2nm,0.8s
TIR Tirane 82.77 326⇑ i P P 04 11 31.1 +0.2
TIR Tirane 82.77 326 eP P 04 11 30.9 0.0
comp=Z,22nm,0.7s
TIR Tirane 82.77 326 eP P 04 11 30.9 0.0
TIR pmax pmax
comp=Z,22nm,0.7s
LIT Litokhoron 82.79 324 eP P 04 11 30.2 -0.9
comp=Z,6.6nm,0.7s
LIT Litokhoron 82.79 324 P P 04 11 29.8 -1.3
LIT Litokhoron 82.79 324 eP P 04 11 30.2 -0.9
LIT pmax pmax
comp=Z,7.0nm,0.7s
441A DeRidder 82.80 52 P P 04 11 31.0 -0.2
baz=321
144A Alexander Plac 82.81 49 P P 04 11 31.6 +0.3
baz=322
T52A Hallie 82.87 42 P P 04 11 31.6 +0.1
baz=325
W49A Belvidere 82.94 45 P P 04 11 31.4 -0.4
baz=324
HRV Adam Dziewonsk 82.96 31 P P 04 11 31.6 -0.3
baz=331
PAGS Pennsylvania G 82.96 36 eP P 04 11 31.6 -0.3
comp=Z,11nm,0.9s
SWET Sewanee 83.02 45 eP P 04 11 32.1 -0.3
comp=Z,18nm,0.8s
V50A Pikevile 83.05 44 P P 04 11 32.0 -0.5
baz=324
TZTN Tazewell 83.07 42 P P 04 11 32.1 -0.5
baz=325
X48A Hartselle 83.09 46 P P 04 11 32.0 -0.6
baz=324
145A Houston Renfro 83.09 49 P P 04 11 32.9 +0.1
baz=322
XOR Xorichti 83.12 323 P P 04 11 31.6 -1.2
XOR Xorichti 83.12 323 P P 04 11 31.6 -1.2
Y47A UCPARC, Winfie 83.13 47 P P 04 11 32.5 -0.4
baz=323,SNR=5.9
Z46A Louisville 83.14 48 P P 04 11 33.0 +0.1
baz=323
244A Avery, Jackson 83.14 50 P P 04 11 33.4 +0.5
baz=322
NEO Neokhori 83.16 323 P P 04 11 31.4 -1.6
NEO Neokhori 83.16 323 P P 04 11 31.4 -1.6
PENT Pentalofos 83.25 325 P P 04 11 32.7 -0.9
V51A Loudon 83.30 43 P P 04 11 33.5 -0.3
baz=325
W50A Signal Mountai 83.33 44 P P 04 11 33.7 -0.3
baz=324
LPL La Plagne 83.38 337 eP P 04 11 34.3 0.0
LPG La Plagne 83.39 337 eP P 04 11 34.5 +0.1
LPG pmax pmax
comp=Z,11nm,0.8s
X49A Woodville 83.39 45 P P 04 11 34.0 -0.3
baz=324,SNR=7.9
PAL Palisades 83.40 34 P P 04 11 33.3 -0.8
baz=330
Y48A Jasper 83.46 46 P P 04 11 33.8 -0.8
baz=324
CPCT Cooper Cave 83.51 44 eP P 04 11 35.0 +0.2
comp=Z,11nm,0.9s
146A Union 83.52 48 P P 04 11 35.4 +0.5
baz=323,SNR=6.8
245A Little AP, Sta 83.56 49 P P 04 11 35.6 +0.5
baz=322,SNR=7.4
344A Westbrook Farm 83.57 50 P P 04 11 35.6 +0.4
baz=322
Z47A Carrollton 83.57 47 P P 04 11 35.0 -0.1
baz=323,SNR=5.6
V52A Sevierville 83.62 43 P P 04 11 35.2 -0.3
baz=325
U53A Fall Branch 83.67 42 P P 04 11 35.2 -0.5
baz=326
Z48A Northport 83.69 47 P P 04 11 35.2 -0.6
baz=323
X50B Fort Payne 83.77 45 P P 04 11 35.7 -0.5
baz=324
AGG Agios Georgios 83.77 323 eP P 04 11 34.5 -1.7
comp=Z,20nm,0.9s
AGG Agios Georgios 83.77 323 eP P 04 11 34.5 -1.7
AGG pmax pmax
comp=Z,20nm,0.9s
LKR Lokris 83.81 323 P P 04 11 34.7 -1.6
LKR Lokris 83.81 323 P P 04 11 34.7 -1.6
JAN Janina 83.83 325 P P 04 11 36.4 0.0
JAN Janina 83.83 325 P P 04 11 36.4 0.0
JAN Janina 83.83 325 P P 04 11 36.4 0.0
Y49A Blount Mountai 83.88 46 P P 04 11 36.3 -0.4
baz=324
147A Livingston 83.89 48 P P 04 11 37.0 +0.2
baz=323
BLA Blacksburg 83.94 40 P P 04 11 36.8 -0.2
baz=327,SNR=6.5
BLA Blacksburg 83.94 40 eP P 04 11 37.2 +0.2
comp=Z,13nm,0.9s
BLA Blacksburg 83.94 40 eP P 04 11 37.3 +0.2
BLA pmax pmax
comp=Z,13nm,0.9s
RAYN Ar Rayn 84.11 298 eP P 04 11 38.5 +0.4
comp=Z,14nm,0.8s
RAYN Ar Rayn 84.11 298 i P P 04 11 38.5 +0.4
SNR=12
SGD Sagiada 84.11 325 P P 04 11 37.1 -0.7
V53A Saluda 84.13 42 P P 04 11 37.6 -0.4
baz=326
VLY Voula,Athens 84.14 322 P P 04 11 36.1 -1.9
VLY Voula,Athens 84.14 322 P P 04 11 36.1 -1.9
ORIF Oris-en-Rattie 84.16 337 eP P 04 11 38.2 +0.1
DSL Palaion Diasel 84.18 324 P P 04 11 37.5 -0.7
DSL Palaion Diasel 84.18 324 P P 04 11 37.5 -0.7
SSB Saint Sauveur 84.18 338 eP P 04 11 38.5 +0.3
comp=Z,20nm,0.9s
SSB Saint Sauveur 84.18 338 eP P 04 11 38.5 +0.3
SSB pmax pmax
comp=Z,20nm,0.9s
Y50A Piedmont 84.18 45 P P 04 11 37.9 -0.4
baz=324,SNR=7.0
KEK Kerkira 84.20 325 P P 04 11 37.3 -1.0
KEK Kerkira 84.20 325 P P 04 11 37.3 -1.0
IP04 Greensprings 84.20 38 eP P 04 11 38.9 +0.5
comp=Z,12nm,0.9s
DSF Desfina 84.21 323 P P 04 11 36.4 -2.0
DSF Desfina 84.21 323 P P 04 11 36.4 -2.0
247A Quitman 84.21 48 P P 04 11 39.5 +1.0
baz=323
LRAL Lakeview Retre 84.25 47 P P 04 11 38.0 -0.6
baz=324
148A Greensboro 84.27 47 P P 04 11 38.3 -0.4
baz=323
346A Big Creek Wild 84.29 49 P P 04 11 39.6 +0.7
baz=323
IP03 Louisa 84.30 38 eP P 04 11 39.3 +0.5
comp=Z,10nm,0.9s
ANX Ano Chora 84.30 323 P P 04 11 37.6 -1.3
CVRD Centerville Ro 84.34 38 eP P 04 11 39.4 +0.3
comp=Z,15nm,0.9s
LTK Loutraki 84.35 322 P P 04 11 36.9 -2.2
LTK Loutraki 84.35 322 P P 04 11 36.9 -2.2
Z49A Columbiana 84.35 46 P P 04 11 38.8 -0.3
baz=324
SPRD Spring Road, M 84.35 38 eP P 04 11 39.3 +0.3
comp=Z,4.1nm,0.8s
W53A Cullowhee 84.38 43 P P 04 11 39.1 -0.3
baz=325
IP07 Quail 84.38 38 eP P 04 11 39.6 +0.5
comp=Z,10nm,0.9s
KALE Kalithea 84.38 323 P P 04 11 37.7 -1.6
KALE Kalithea 84.38 323 P P 04 11 37.7 -1.6
CBN Corbin Frederi 84.41 37 P P 04 11 39.0 -0.4
baz=328
TRIZ Trizonia 84.43 323 P P 04 11 38.0 -1.5
X52A Dahlonega 84.49 44 P P 04 11 39.7 -0.2
baz=325
Y51A Rockmart 84.50 45 P P 04 11 39.5 -0.5
baz=325,SNR=8.3
VIVF Saint-Julien-l 84.54 338 eP P 04 11 40.0 0.0
MATE Matera 84.56 328 ||i P P 04 11 39.8 -0.2
IP05 Hopewell Churc 84.57 38 eP P 04 11 40.3 +0.1
comp=Z,7.4nm,0.8s
LAKA Lakka 84.58 323 P P 04 11 39.2 -1.1
LAKA Lakka 84.58 323 P P 04 11 39.2 -1.1
PDO Prodromos 84.60 324 P P 04 11 39.6 -0.7
Z50A Ashland 84.60 46 P P 04 11 40.1 -0.4
baz=324,SNR=14
248A Dixon Mills 84.62 48 P P 04 11 40.2 -0.3
baz=323
BG3 Lake Jocassee 84.63 43 eP P 04 11 41.2 +0.6
comp=Z,15nm,0.8s
LKD2 Lefkada island 84.65 324 P P 04 11 39.6 -1.0
LKD2 Lefkada island 84.65 324 P P 04 11 39.6 -1.0
DID Didima 84.67 322 P P 04 11 37.8 -3.0
DID Didima 84.67 322 P P 04 11 37.8 -3.0
KLV Kalavryta, Ach 84.67 323 P P 04 11 39.3 -1.5
KLV Kalavryta, Ach 84.67 323 P P 04 11 39.3 -1.5
GUR Goura 84.69 323 P P 04 11 39.2 -1.7
GUR Goura 84.69 323 P P 04 11 39.2 -1.7
149A Jones 84.70 47 P P 04 11 40.9 0.0
baz=324
347A Saraland 84.76 49 P P 04 11 42.1 +0.9
baz=323
545A Edgard 84.81 51 P P 04 11 41.7 +0.3
baz=322
X53A Estanollee 84.86 43 P P 04 11 42.0 +0.3
baz=325
DRO Drossia 84.93 323 P P 04 11 41.7 -0.3
FSK Fiskardo 84.97 324 P P 04 11 40.9 -1.3
Y52A Lilburn 85.02 44 P P 04 11 42.5 0.0
baz=325
249A Camden 85.03 47 P P 04 11 43.0 +0.4
baz=324,SNR=10.0
150A Eclectic 85.08 46 P P 04 11 42.4 -0.4
baz=324,SNR=5.3
KFL Anninata 85.18 324 P P 04 11 42.4 -0.8
VLS Valsamata 85.20 324 P P 04 11 42.5 -0.9
VLS Valsamata 85.20 324 P P 04 11 42.5 -0.9
VLS Valsamata 85.20 324 P P 04 11 42.5 -0.9
KMSC Kings Mountain 85.25 42 P P 04 11 43.0 -0.6
baz=326
KMSC Kings Mountain 85.25 42 eP P 04 11 43.3 -0.4
comp=Z,6.1nm,0.6s
Y53A Monroe 85.25 44 P P 04 11 43.6 0.0
baz=325
AMT Artemida-Makis 85.29 323 P P 04 11 42.9 -1.0
Z52A Williamson 85.39 45 P P 04 11 44.1 -0.3
baz=325
NWAO Narrogin (SRO) 85.40 209 P P 04 11 44.5 +0.4
comp=Z,9.3nm,0.8s,baz=241,slow=4.4,SNR=5.4
250A Grady 85.46 47 P P 04 11 45.0 +0.3
baz=324,SNR=5.0
CUC Castrocucco 85.46 328 eP P 04 11 43.2 -1.5
comp=Z,5.0nm,0.8s
VLI Veliai 85.47 322 P P 04 11 41.9 -2.8
VLI Veliai 85.47 322 P P 04 11 41.9 -2.8
151A Opelika 85.48 46 P P 04 11 44.4 -0.4
baz=324
349A Repton 85.50 48 P P 04 11 45.2 +0.3
baz=324
ITM Ithomi 85.50 323 P P 04 11 43.6 -1.3
ITM Ithomi 85.50 323 P P 04 11 43.6 -1.3
HODGE Hodges 85.57 43 eP P 04 11 46.0 +0.8
comp=Z,7.7nm,0.9s
LAST Lasithi 85.65 319 P P 04 11 45.4 -0.4
LAST Lasithi 85.65 319 P P 04 11 45.4 -0.4
152A Waverly Hall 85.67 45 P P 04 11 45.3 -0.4
baz=325
GOGA Godfrey 85.67 44 P P 04 11 45.6 -0.1
baz=325
GOGA Godfrey 85.67 44 eP P 04 11 45.1 -0.6
GOGA Godfrey 85.67 44 eP P 04 11 45.1 -0.6
Y54A Tignall 85.67 43 P P 04 11 45.6 -0.2
baz=326
DYR Agios Nikonas 85.68 322 P P 04 11 44.5 -1.3
BRAL Brewton 85.71 48 P P 04 11 46.4 +0.4
baz=324
Z53A Monticello 85.73 44 P P 04 11 46.0 -0.1
baz=325
251A Midway 85.80 46 P P 04 11 46.4 0.0
baz=324
IDI Anoyia 85.81 319 P P 04 11 44.8 -1.7
comp=Z,16nm,0.5s,baz=14,slow=4.2,SNR=44
IDI Anoyia 85.81 319⇑ i P P 04 11 45.0 -1.5
PYL PYLOS 85.82 323 P P 04 11 44.7 -1.7
PYL PYLOS 85.82 323 P P 04 11 44.7 -1.7
TIP Timpagrande 85.83 327 ||i P P 04 11 46.6 +0.1
TIP Timpagrande 85.83 327 eP P 04 11 46.3 -0.3
comp=Z,13nm,0.8s
TIP Timpagrande 85.83 327 P P 04 11 46.1 -0.4
350A Dozier 85.87 47 P P 04 11 47.3 +0.5
baz=324
JSC Jenkinsville 85.99 42 eP P 04 11 47.7 +0.4
comp=Z,8.9nm,1.0s
JSC Jenkinsville 85.99 42 eP P 04 11 47.7 +0.4
JSC pmax pmax
comp=Z,9.0nm,1.0s
VAM Vamos 86.02 320 P P 04 11 47.2 -0.3
VAM Vamos 86.02 320 P P 04 11 47.2 -0.3
VAM Vamos 86.02 320 P P 04 11 47.2 -0.3
ANKY Antikythira Is 86.03 321 P P 04 11 45.9 -1.6
ANKY Antikythira Is 86.03 321 P P 04 11 45.9 -1.6
IMMV Iera Moni Meta 86.07 320 P P 04 11 47.0 -0.7
SIVA Sivas 86.07 319 P P 04 11 47.2 -0.5
SIVA Sivas 86.07 319 P P 04 11 47.2 -0.5
Z54A Sparta 86.11 44 P P 04 11 48.0 +0.1
baz=326
252A Lumpkin 86.21 46 P P 04 11 47.7 -0.8
baz=325
450A Crestview 86.24 48 P P 04 11 48.5 -0.1
baz=324
351A Pinckard 86.36 47 P P 04 11 49.4 +0.3
baz=324
253A Americus 86.45 45 P P 04 11 49.4 -0.3
baz=325
Z55A Blythe 86.46 43 P P 04 11 49.9 +0.2
baz=326
154A Montrose 86.50 44 P P 04 11 50.0 +0.2
baz=326
352A Blakely 86.53 46 P P 04 11 50.3 +0.3
baz=325,SNR=5.9
CNNC Cliffs of the 86.70 39 P P 04 11 50.6 -0.2
baz=328
155A Kite 86.80 44 P P 04 11 51.4 +0.1
baz=326
254A Abbeville 86.95 45 P P 04 11 52.6 +0.5
baz=326
353A Camilla 86.99 46 P P 04 11 52.7 +0.4
baz=325
TBI Tubuai 87.16 129 eT T 05 48 36.0
comp=Z,27nm,0.2s
TIGA Tifton 87.22 45 P P 04 11 53.8 +0.4
baz=325
156A Sylvania 87.23 43 P P 04 11 53.9 +0.5
baz=326
EPF Esparros 87.33 340 eP P 04 11 52.8 -1.0
EPF pmax pmax
comp=Z,20nm,1.6s
255A Hazlehurst 87.36 44 P P 04 11 54.4 +0.4

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	baz=326						
355A	**Pearson**	**87.66**	**45**	P	**P**	**04 11 55.8**	**+0.3**
	baz=326						
556A	**Lake Butler**	**88.98**	**45**	P	**P**	**04 12 02.0**	**+0.2**
	baz=326						
557A	**Orange Park**	**89.30**	**45**	P	**P**	**04 12 03.2**	**-0.1**
	baz=326						
656A	**Willston**	**89.44**	**46**	P	**P**	**04 12 03.9**	**0.0**
	baz=326						
ES19	**SONSECA Array**	**91.46**	**342**	*e*P	**P**	**04 12 11.7**	**-1.6**
ESDC	**Sonseca Array**	**91.50**	**342**	P	**P**	**04 12 11.2**	**-2.2**
	comp=Z,3.1nm,0.9s,baz=9.6,slow=3.9,SNR=14						
ESDC				LR	LR	04 57 39.8	
	comp=Z,39nm,20.4s,baz=330,slow=38						
KEST	**Kesra**	**91.54**	**331**	P	**P**	**04 12 13.6**	**-0.1**
	comp=Z,6.1nm,0.8s,baz=288,slow=3.0,SNR=6.8						
ATD	**Arta Tunnel**	**94.78**	**292**	LR	LR	04 58 51.8	
	comp=Z,82nm,19.9s,baz=346,slow=38						
MDT	**Midelt**	**98.23**	**341**	LR	LR	05 03 46.9	
	comp=Z,31nm,18.6s,baz=27,slow=40						
TORD	**Torodi Ar. Bea**	**114.95**	**328**	PKP	PKPdf	04 17 47.0	-1.0
	comp=Z,1.1nm,0.5s,baz=13,slow=1.7,SNR=12						
OTAV	**Otavalo**	**115.49**	**59**	*e*PKPdf	**PKPdf**	**04 17 50.3**	**+0.7**
KOWA	**Kowa**	**115.56**	**335**	PKP	**PKPdf**	**04 17 48.0**	**-1.1**
	comp=Z,0.8nm,0.4s,baz=348,slow=2.4,SNR=3.1						
DBIC	**Dimbokro**	**123.21**	**333**	PKP	**PKPdf**	**04 18 01.9**	**-2.0**
	comp=Z,3.7nm,0.7s,baz=342,slow=3.6,SNR=6.4						
VNDA	**Vanda**	**124.06**	**178**	PKP	**PKPdf**	**04 18 03.3**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=315,slow=3.7,SNR=9.4						
LSZ	**Lusaka**	**124.39**	**285**	*e*PKPdf	**PKPdf**	**04 18 06.4**	**+0.3**
LSZ	**Lusaka**	**124.39**	**285**	*e*PKIKP	**PKPdf**	**04 18 06.4**	**+0.3**
MATP	**Matopo**	**127.81**	**280**	PKP	**PKPdf**	**04 18 12.2**	**-0.4**
	comp=Z,2.3nm,0.6s,baz=16,slow=3.1,SNR=4.9						
SAML	**Samuel**	**131.63**	**51**	*e*PKPdf	**PKPdf**	**04 18 19.6**	**-0.3**
MAW	**Mawson**	**131.94**	**211**	PKP	**PKPdf**	**04 18 18.9**	**+0.2**
	comp=Z,2.6nm,0.8s,baz=88,slow=3.3,SNR=6.0						
TSUM	**Tsumeb**	**134.17**	**291**	*e*PKPdf	**PKPdf**	**04 18 24.4**	**-0.3**
LPAZ	**La Paz**	**134.72**	**62**	PKP	**PKPdf**	**04 18 25.8**	**-0.5**
	comp=Z,1.2nm,0.8s,baz=2.5,slow=3.9,SNR=5.3						
QSPA	**South Pole Qui**	**136.42**	**180**	PKP	**PKPdf**	**04 18 28.0**	**+0.7**
	comp=Z,2.1nm,0.5s,baz=322,slow=0.8,SNR=14						
PLCA	**Paso Flores**	**148.59**	**95**	PKPbc	**PKPbc**	**04 18 53.9**	**+0.5**
	comp=Z,9.9nm,0.8s,baz=297,slow=3.2,SNR=21						
CPUP	**Villa Florida**	**148.84**	**60**	PKPbc	**PKPbc**	**04 18 54.4**	**+0.1**
	comp=Z,5.6nm,0.7s,baz=331,slow=2.3,SNR=13						
NVL	**N'lazarevskaya**	**149.41**	**204**	⇓*i*PKP2	**PKPbc**	**04 18 53.6**	**-0.8**
NVL				pmax	pmax		
	comp=Z,23nm,0.9s						
SNAA	**Sanae**	**152.38**	**197**	PKPbc	**PKPbc**	**04 19 01.0**	**-0.4**
	comp=Z,3.6nm,0.6s,baz=151,slow=5.1,SNR=27						
TRQA	**Tornquist**	**153.25**	**84**	*e*PKPbc	**PKPbc**	**04 19 04.3**	**0.0**

*ISCJB **09** 04:01:39.8±0.4, 6°.63S±0°.05×127°.57E±0°.06, h408km, mb3.7/7, Error ellipse: s-maj=8.1km s-min=6.6km az=21.9*
*IDC **09** 04:01:41.0±1.3, 6°.61S×127°.59E, h412km±14km, mb3.4/7, mb1 3.6/12, mb1mx3.2/53, mbtmp4.3/12, Error ellipse: s-maj=23.9km s-min=9.9km az=68.0*
*DJA **09** 04:01:41.7±0.8, 7°.S±5°.×12°.8E±°, h398km±14km, M4.3/4, mb4.3/4, mB4.8/4, MLv4.3/3, Mw(mB)4.0/4*

ISC 09 04:01:40.2±0.7, 6°.56S±0°.06×127°.57E±0°.08, h408km, n25, σ1§73/31, mb3.7/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**2.92**	**12**	P	**P**	**04 02 45.2**	**+1.8**
BNDI	**Bandanaira**	**3.08**	**49**	P	**P**	**04 02 45.5**	**+0.8**
MSAI	**Masohi**	**3.47**	**23**	P	**P**	**04 02 49.1**	**+1.2**
SAUI	**Saumlaki**	**3.97**	**111**	P	**P**	**04 02 54.1**	**+1.7**
SOEI	**Soe**	**4.55**	**226**	P	**P**	**04 02 58.5**	**+0.4**
SANI	**Sanana**	**4.75**	**341**	P	**P**	**04 03 00.0**	**+0.1**
BATI	**Baumata**	**5.29**	**227**	P	**P**	**04 03 07.0**	**+1.5**
	25nm,0.3s,baz=118,slow=5.7,SNR=8.9						
BATI				S	**S**	**04 04 11.6**	**-3.7**
	60nm,0.3s,baz=260,slow=21,SNR=30						
BATI	**Baumata**	**5.29**	**227**	P	**P**	**04 03 06.7**	**+1.2**
KDI	**Kendari**	**5.56**	**297**	P	**P**	**04 03 09.4**	**+1.1**
	28nm,0.8s,764nm						
FAKI	**Fak Fak**	**5.90**	**52**	P	**P**	**04 03 11.9**	**0.0**
EDFI	**Ende, Flores**	**6.22**	**249**	P	**P**	**04 03 16.6**	**+1.3**
	79nm,0.6s,5μm						
SIJI	**Sorong**	**6.75**	**33**	P	**P**	**04 03 21.9**	**0.0**
	5.4nm,0.3s,baz=202,slow=22,SNR=12						
SIJI				S	**S**	**04 04 38.9**	**-5.1**
	3.4nm,0.3s,baz=256,slow=22,SNR=6.0						
RKPI	**Ransiki, Papua**	**8.28**	**53**	P	**P**	**04 03 40.7**	**+2.0**
JAY	**Jayapura**	**13.70**	**74**	P	**P**	**04 04 40.9**	**+2.4**
	1.6nm,0.3s,baz=242,slow=14,SNR=7.2						
WRA	**Warramunga Arr**	**14.84**	**154**	P	**P**	**04 04 51.0**	**+0.2**
	6.0nm,0.3s,baz=336,slow=11,SNR=252						
WRA				S	**S**	**04 07 25.2**	**-3.3**
	0.8nm,0.3s,baz=323,slow=20,SNR=9.2						
ASAR	**Alice Springs**	**18.07**	**161**	P	**P**	**04 05 25.8**	**+0.6**
	3.8nm,0.3s,baz=349,slow=13,SNR=232						
ASAR				S	**S**	**04 08 30.4**	**-0.8**
	0.4nm,0.3s,baz=336,slow=19,SNR=9.2						
ASAR				ScP	**ScP**	**04 12 34.2**	**+0.1**
	baz=1.1,slow=4.7,SNR=2.7						
CTA	**Charters Tower**	**22.58**	**128**	P	**P**	**04 06 06.8**	**-1.0**
	3.3nm,0.8s,baz=312,slow=12,SNR=3.5						
STKA	**Stephens Creek**	**28.40**	**154**	P	**P**	**04 07 00.1**	**+0.8**
	5.5nm,0.4s,baz=328,slow=8.7,SNR=23						
MKAR	**Makanchi Array**	**66.55**	**328**	P	**P**	**04 11 48.9**	**+0.9**
	0.7nm,0.4s,baz=120,slow=7.8,SNR=7.8						
ZALV	**Zalesovo Beam**	**70.14**	**335**	P	**P**	**04 12 10.0**	**+0.2**
	0.9nm,0.4s,baz=153,slow=5.1,SNR=3.8						
KURBB	**Kurchatov Arra**	**70.89**	**329**	P	**P**	**04 12 15.2**	**+0.9**
	1.2nm,0.5s,baz=133,slow=5.1,SNR=13						
VNDA	**Vanda**	**73.18**	**173**	P	**P**	**04 12 27.3**	**-0.1**
	0.2nm,0.3s,baz=295,slow=9.0,SNR=3.5						
QSPA	**South Pole Qui**	**83.42**	**180**	P	**P**	**04 13 22.1**	**-0.9**
	0.8nm,0.5s,baz=313,slow=3.3,SNR=5.9						
TORD	**Torodi Ar. Bea**	**126.35**	**281**	PKP	**PKPdf**	**04 19 56.9**	**+0.5**
	0.6nm,0.8s,baz=60,slow=3.3,SNR=2.8						
LPAZ	**La Paz**	**152.50**	**146**	PKPbc	**PKPbc**	**04 20 51.6**	**+0.8**
	0.4nm,0.4s,baz=315,slow=2.9,SNR=4.3						
LPAZ				PKPab	**PKPab**	**04 21 04.7**	**+1.8**
	1.0nm,0.7s,baz=266,slow=14,SNR=4.2						

*NEIC **09** 04:18:41.2±0.0, 18°.69N×68°.85W, h137km, MD3.6(RSPR), After RSPR.*

RSPR 09 04:18:41.2, 18°.69N×68°.85W, h137km±1km, MD3.5/11, 9C-14D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DR12	**Loma Pena Alta**	**0.51**	**281**	⇓*e*P	Pn	04 19 00.5	-0.7
DR12				*e*S	Sn	04 19 16.3	0.0
DR12	**Loma Pena Alta**	**0.51**	**281**	⇓*e*P	Pn	04 19 00.5	-0.7
IMPR	**Mona Island, P**	**1.06**	**125**	⇑*e*P	Pn	04 19 24.0	+0.4
IMPR	**Mona Island, P**	**1.06**	**125**	⇑*e*P	Pn	04 19 04.7	-0.7
IDE	**Isla Desecheo**	**1.34**	**103**	*e*S	Sn	04 19 28.4	-0.2
IDE	**Isla Desecheo**	**1.34**	**103**	⇓*e*P	Pn	04 19 07.9	-0.2
IDE	**Isla Desecheo**	**1.34**	**103**	⇓*e*P	Pn	04 19 07.9	-0.2
IDE				*e*S	Sn	04 19 28.4	-0.2
AGPR	**Aguadilla, PR**	**1.66**	**97**	⇑*e*P	Pn	04 19 11.5	-0.1
AGPR	**Aguadilla, PR**	**1.66**	**97**	*e*S	Sn	04 19 34.9	0.0
AGPR	**Aguadilla, PR**	**1.66**	**97**	⇑*e*P	Pn	04 19 11.5	-0.1
AGPR				*e*S	Sn	04 19 34.9	0.0
LSP	**Las Mesas**	**1.75**	**107**	⇓*e*P	Pn	04 19 12.8	+0.1
LSP	**Las Mesas**	**1.75**	**107**	⇓*e*P	Pn	04 19 12.8	+0.1
CRPR	**Cabo Rojo, PR**	**1.79**	**112**	⇓*e*P	Pn	04 19 12.7	-0.4
CRPR	**Cabo Rojo, PR**	**1.79**	**112**	*e*S	Sn	04 19 37.8	+0.5
CRPR	**Cabo Rojo, PR**	**1.79**	**112**	⇓*e*P	Pn	04 19 12.7	-0.4
CRPR				*e*S	Sn	04 19 37.8	+0.5
AOPR	**Arecibo Observ**	**2.02**	**99**	⇓*e*P	Pn	04 19 16.4	+0.6
AOPR	**Arecibo Observ**	**2.02**	**99**	*e*S	Sn	04 19 43.1	+0.8
AOPR	**Arecibo Observ**	**2.02**	**99**	⇓*e*P	Pn	04 19 16.4	+0.6
AOPR				*e*S	Sn	04 19 43.1	+0.8
EMPR	**Esperanza - Ma**	**2.21**	**95**	⇑*e*P	Pn	04 19 18.1	+0.1
EMPR	**Esperanza - Ma**	**2.21**	**95**	*e*S	Sn	04 19 46.7	+0.3
EMPR	**Esperanza - Ma**	**2.21**	**95**	⇑*e*P	Pn	04 19 18.1	+0.1
EMPR				*e*S	Sn	04 19 46.7	+0.3
OBIP	**Obispado Ponce**	**2.23**	**106**	⇓*e*P	Pn	04 19 18.1	-0.2
OBIP	**Obispado Ponce**	**2.23**	**106**	*e*S	Sn	04 19 46.8	0.0
OBIP	**Obispado Ponce**	**2.23**	**106**	⇓*e*P	Pn	04 19 18.1	-0.2
OBIP				*e*S	Sn	04 19 46.8	0.0
SJG	**San Juan**	**2.63**	**102**	⇑*e*P	Pn	04 19 23.5	+0.2
SJG	**San Juan**	**2.63**	**102**	*e*S	Sn	04 19 55.2	-0.5
SJG	**San Juan**	**2.63**	**102**	⇑*e*P	Pn	04 19 23.5	+0.2
SJG				*e*S	Sn	04 19 55.2	-0.5
CBYP	**Canovanas**	**2.87**	**98**	⇑*e*P	Pn	04 19 26.1	-0.4
CBYP	**Canovanas**	**2.87**	**98**	⇑*e*P	Pn	04 19 26.1	-0.4
HUMP	**Col San Antoni**	**2.90**	**100**	⇓*e*P	Pn	04 19 27.3	+0.5
HUMP	**Col San Antoni**	**2.90**	**100**	⇓*e*P	Pn	04 19 27.3	+0.5

*ISK **09** 04:19:49.9, 37°.06N×29°.12E, h8km, ML2.3/3*
*DDA **09** 04:19:49.8, 37°.04N×29°.14E, h7km, Ml2.7*
*ISCJB **09** 04:19:50.2±0.5, 37°.04N±0°.03×29°.13E±0°.03, h0km±7km, Error ellipse: s-maj=4.6km s-min=3.8km az=162.4*
*CSEM **09** 04:19:50.2±0.2, 37°.05N×29°.14E, h8km, ML2.3, Error ellipse: s-maj=3.8km s-min=3.0km az=2.0*

ISC 09 04:19:49.9±1.0, 37°.07N±0°.02×29°.17E±0°.02, h10km±9km, n44, σ0§94/64, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.28**	**71**	PG	**Pb**	**04 19 56.7**	**-0.3**
GLHS				SG	**Sb**	**04 20 01.8**	**0.0**
GLHS	**Glhisar (BURDU**	**0.28**	**71**	*e*Pg	**Pb**	**04 19 56.7**	**-0.3**
GLHS				*e*Sg	**Sb**	**04 20 01.8**	**0.0**
GOLH	**Golhisar**	**0.36**	**61**	*i* P	**Pg**	**04 19 56.7**	**-0.3**
GOLH				*i* S	**Sb**	**04 20 03.9**	**-0.2**
GOLH	**Golhisar**	**0.36**	**61**	P	**Pg**	**04 19 56.7**	**-0.3**
GOLH				S	**Sb**	**04 20 03.9**	**-0.2**
FETY	**Fethiye**	**0.44**	**189**	PG	**Pg**	**04 19 58.7**	**+0.3**
FETY	**Fethiye**	**0.44**	**189**	P	**Pg**	**04 19 56.6**	**-1.8**
FETY	**Fethiye**	**0.44**	**189**	*e*Pg	**Pg**	**04 19 58.7**	**+0.3**
FETY				S	**Sg**	**04 20 03.9**	**-0.3**
TAVA	**DENIZLI_Tavas**	**0.45**	**333**	*i* P	**Pb**	**04 19 59.1**	**-0.8**
TAVA				*i* S	**Sb**	**04 20 06.4**	**-0.3**
TAVA	**DENIZLI_Tavas**	**0.45**	**333**	P	**Pb**	**04 19 59.1**	**-0.8**
TAVA				S	**Sb**	**04 20 06.4**	**-0.3**
DALY	**Dalyan (Mu¨la**	**0.48**	**239**	PG	**Pg**	**04 19 58.9**	**-0.4**
DALY	**Dalyan (Mu¨la**	**0.48**	**239**	*i* P	**Pg**	**04 19 58.6**	**-0.7**
DALY	**Dalyan (Mu¨la**	**0.48**	**239**	P	**Pg**	**04 19 58.6**	**-0.7**
DALY	**Dalyan (Mu¨la**	**0.48**	**239**	*e*Pg	**Pg**	**04 19 58.9**	**-0.4**
TURN	**Turunc**	**0.49**	**247**	PG	**Pn**	**04 20 04.9**	**+1.9**
TURN	**Turunc**	**0.49**	**247**	*i* P	**Pn**	**04 20 02.9**	**0.0**
TURN	**Turunc**	**0.49**	**247**	P	**Pn**	**04 20 02.9**	**0.0**
ELL	**Elmali**	**0.67**	**118**	PG	**Pb**	**04 20 03.9**	**+0.1**
ELL				SG	**Sn**	**04 20 14.5**	**-1.7**
ELL	**Elmali**	**0.67**	**118**	*e*Pg	**Pb**	**04 20 03.9**	**+0.1**
ELL				*e*Sg	**Sn**	**04 20 14.5**	**-1.7**
YER	**Yerkesik**	**0.71**	**276**	PG	**Pg**	**04 20 02.9**	**-0.8**
YER				SG	**Sb**	**04 20 13.4**	**-0.9**
YER	**Yerkesik**	**0.71**	**276**	*e*Pg	**Pg**	**04 20 02.9**	**-0.8**
YER				*e*Sg	**Sb**	**04 20 13.4**	**-0.9**
AKAS	**Kas**	**0.90**	**157**	PG	**Pn**	**04 20 08.0**	**-0.7**
AKAS	**Kas**	**0.90**	**157**	*i* P	**Pn**	**04 20 08.5**	**-0.3**
AKAS				*i* S	**Sn**	**04 20 26.1**	**+4.2**
AKAS	**Kas**	**0.90**	**157**	*e*Pg	**Pn**	**04 20 08.0**	**-0.7**
AKAS	**Kas**	**0.90**	**157**	P	**Pn**	**04 20 08.5**	**-0.3**
KORT	**Korkueli**	**0.95**	**94**	PG	**Pn**	**04 20 08.8**	**-0.5**
KORT	**Korkueli**	**0.95**	**94**	*i* P	**Pn**	**04 20 09.3**	**0.0**
KORT	**Korkueli**	**0.95**	**94**	*e*Pg	**Pn**	**04 20 08.8**	**-0.5**
KORT	**Korkueli**	**0.95**	**94**	P	**Pn**	**04 20 09.4**	**0.0**
AYDN	**Tasoluk**	**1.19**	**300**	*i* P	**Pb**	**04 20 12.1**	**-0.4**
AYDN				*i* S	**Sn**	**04 20 29.1**	**+0.3**
AYDN	**Tasoluk**	**1.19**	**300**	P	**Pb**	**04 20 12.1**	**-0.4**
AYDN				S	**Sn**	**04 20 29.1**	**+0.3**
ARG	**Arkhangelos**	**1.19**	**225**	PN	**Pg**	**04 20 12.7**	**-0.1**
ARG	**Arkhangelos**	**1.19**	**225**	*e*Pn	**Pg**	**04 20 12.7**	**-0.1**
DAT	**Datca**	**1.32**	**256**	PN	**Pb**	**04 20 14.7**	**-0.1**
DAT	**Datca**	**1.32**	**256**	*i* P	**Pg**	**04 20 15.3**	**+0.1**
DAT				*i* S	**Sg**	**04 20 33.5**	**+1.1**
DAT	**Datca**	**1.32**	**256**	*e*Pn	**Pb**	**04 20 14.7**	**-0.1**
DAT	**Datca**	**1.32**	**256**	P	**Pg**	**04 20 15.3**	**+0.1**
DAT				S	**Sg**	**04 20 33.5**	**+1.1**
KHAL	**Karahalli**	**1.33**	**11**	*i* P	**Pn**	**04 20 13.9**	**-0.6**
KHAL				*i* S	**Sg**	**04 20 35.0**	**+2.4**
KHAL	**Karahalli**	**1.33**	**11**	P	**Pn**	**04 20 13.9**	**-0.6**
KHAL				S	**Sg**	**04 20 35.0**	**+2.4**
AYDB	**Zeytinkoy-Aydi**	**1.34**	**311**	PN	**Pg**	**04 20 15.5**	**-0.2**
AYDB	**Zeytinkoy-Aydi**	**1.34**	**311**	*e*Pn	**Pg**	**04 20 15.5**	**-0.2**
BDRM	**Kayabasi**	**1.38**	**270**	*i* P	**Pg**	**04 20 16.5**	**+0.1**
BDRM				*i* S	**Sg**	**04 20 34.2**	**-0.1**
BDRM	**Kayabasi**	**1.38**	**270**	P	**Pg**	**04 20 16.5**	**+0.1**
BDRM				S	**Sg**	**04 20 34.2**	**-0.1**
BODT	**Bodrum**	**1.49**	**270**	PN	**Pn**	**04 20 16.7**	**0.0**
BODT	**Bodrum**	**1.49**	**270**	*e*Pn	**Pn**	**04 20 16.7**	**0.0**

*ISCJB **09** 04:29:18.6±1.7, 36°.10N±0°.06×70°.5E±0°.2, h35km, Error ellipse: s-maj=25.7km s-min=5.9km az=166.8*
*NNC **09** 04:29:31.5±2.9, 37°.02N×70°.61E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=24.3km s-min=13.7km az=168.0*

ISC 09 04:29:19.4±2.2, 36°.19N±0°.09×70°.3E±0°.2, h35km, n23, σ2§21/26, 7C-6D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZET	**Dzherino**	**2.87**	**336**	Pn	Pn	04 30 11.3	+8.5
	26nm,0.3s						
DZET				⇓Lg	Lg	04 30 44.9	
	118nm,0.5s						
SFK	**Sufi-Kurgan**	**4.57**	**32**	⇓Pn	Pn	04 30 31.5	+5.3
	2.5nm,0.4s						
SFK				⇓Sn	**Sn**	**04 31 19.3**	**+1.1**
	53nm,0.4s						
AML	**Almayashu**	**6.49**	**23**	P	**Pn**	**04 30 55.4**	**+2.7**
	SNR=21						
MNAS	**Manas**	**6.52**	**14**	⇑Pn	**Pn**	**04 30 55.4**	**+2.5**
	1.9nm,0.5s						
MNAS				⇑Sn	**Sn**	**04 32 03.2**	**-2.8**
	39nm,0.8s						
UCH	**Uchtor**	**6.86**	**27**	P	**Pn**	**04 31 00.4**	**+2.7**
	SNR=19						
KK31	**Karatay Array**	**6.91**	**1**	⇓Pn	**Pn**	**04 31 00.1**	**+2.0**
	0.2nm,0.2s,baz=179,slow=14,SNR=13						
KK31				⇑Sn	**Sn**	**04 32 12.6**	**-3.0**
	10nm,0.8s,baz=190,slow=25,SNR=6.6						
KK31				⇑Lg	Lg	04 32 42.6	
	3.4nm,0.5s						
KZA	**Kyzart**	**7.02**	**32**	P	**Pn**	**04 31 02.2**	**+2.2**
	SNR=6.8						
AAK	**Ala-Archa**	**7.21**	**25**	⇑Pn	**Pn**	**04 31 04.9**	**+2.6**
	3.7nm,0.5s						
AAK				⇑Sn	**Sn**	**04 32 20.8**	**-2.2**
	10.0nm,0.7s						
AAK	**Ala-Archa**	**7.21**	**25**	P	**Pn**	**04 31 05.4**	**+3.0**
	SNR=6.6						
ULHL	**Ulahol**	**7.60**	**35**	P	**Pn**	**04 31 10.1**	**+2.3**
	SNR=6.1						
TKM2	**Tokmak 2**	**7.86**	**30**	⇑Pn	**Pn**	**04 31 13.6**	**+2.2**
	6.7nm,0.6s						
TKM2				⇓Sn	**Sn**	**04 32 35.8**	**-3.4**
	6.5nm,0.9s						
TKM2				⇓Lg	Lg	04 33 13.9	
	2.8nm,0.8s						
TKM2	**Tokmak 2**	**7.86**	**30**	P	**Pn**	**04 31 13.4**	**+2.0**
	SNR=14						
PYUN	**Piuthan**	**13.41**	**123**	*e*P	**Pn**	**04 32 26.1**	**-1.3**
	9.3nm,0.5s						
DANN	**Dangsing**	**13.79**	**121**	*e*P	**Pn**	**04 32 33.1**	**+0.5**
	7.0nm,0.5s						
KOLN	**Koldanda**	**14.04**	**123**	*e*P	**Pn**	**04 32 33.7**	**-2.2**
GKN	**Gorkha**	**14.61**	**120**	*e*P	**Pn**	**04 32 43.5**	**-0.2**
	16nm,0.4s						
DMN	**Daman**	**15.18**	**120**	*e*P	**Pn**	**04 32 50.2**	**-1.2**
KKN	**Kakani**	**15.19**	**119**	*e*P	**Pn**	**04 32 50.8**	**-0.7**
	14nm,0.4s						
PKIN	**Phulchoki**	**15.40**	**120**	*e*P	**Pn**	**04 32 53.1**	**-1.2**
	20nm,0.6s						
GUN	**Gumba**	**15.54**	**118**	*e*P	**Pn**	**04 32 56.7**	**+0.5**
	14nm,0.6s						
JIRN	**Jiri**	**15.91**	**118**	*e*P	**Pn**	**04 33 01.2**	**+0.2**
	42nm,0.5s						
RAMN	**Ramite**	**16.63**	**119**	*e*P	**Pn**	**04 33 08.0**	**-2.0**
	18nm,0.6s						
ODAN	**Odare**	**17.25**	**118**	*e*P	**Pn**	**04 33 15.8**	**-1.9**
	8.5nm,0.5s						

*CSEM **09** 04:33:06.0, 44°.86N×10°.97E, h9km, ML2.1/14*

ROM 09 04:33:07.0±0.1, 44°.861N±0°.002×10°.968E±0°.001, h9km, ML2.1/6, 2C-4D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0828	**Loc. Fossoli,**	**0.05**	**232**	⇓*i*P	Pg	04 33 09.3	+0.5
T0828				*i* S	Sg	04 33 12.3	+2.2
T0828	**Loc. Fossoli,**	**0.05**	**232**	*i* P	Pg	04 33 09.3	+0.5
T0828				*i* S	Sg	04 33 12.3	+2.2
NDIM	**Novi di Modena**	**0.06**	**298**	*i* P	Pg	04 33 09.1	+0.3
NDIM				*i* S	Sg	04 33 11.4	+1.1
NDIM				AML	AML		
	comp=E,1755μm,0.1s						
NDIM				AML	AML		
	comp=N,2255μm,0.2s						
NDIM				AML	AML		
	comp=E,1700μm,0.2s						
NDIM				AML	AML		
	comp=N,2265μm,0.2s						
T0814	**Loc. Cortile,**	**0.07**	**179**	⇓*i*P	Pg	04 33 09.6	+0.6
T0814				*i* S	Sg	04 33 12.6	+2.2
T0814	**Loc. Cortile,**	**0.07**	**179**	*i* P	Pg	04 33 09.6	+0.6
T0814				*i* S	Sg	04 33 12.6	+2.1
T0827	**Moglia (MN)**	**0.08**	**341**	⇑*i*P	Pg	04 33 09.9	+0.7
T0827				*i* S	Sg	04 33 13.3	+2.5
T0827	**Moglia (MN)**	**0.08**	**341**	*i* P	Pg	04 33 09.9	+0.8
T0827				*i* S	Sg	04 33 13.3	+2.5
T0818	**Loc. Fossa, Co**	**0.09**	**31**	⇑*i*P	Pg	04 33 09.0	-0.2
T0818				*i* S	Sg	04 33 13.2	+2.3
T0818	**Loc. Fossa, Co**	**0.09**	**31**	*i* P	Pg	04 33 10.0	+0.7
T0818				*i* S	Sg	04 33 13.2	+2.4
T0824	**Loc. Limidi di**	**0.11**	**196**	⇓*i*P	Pg	04 33 10.4	+0.9
T0824				*i* S	Sg	04 33 13.0	+1.7
T0824	**Loc. Limidi di**	**0.11**	**196**	*i* P	Pg	04 33 10.4	+0.9
T0824				*i* S	Sg	04 33 14.0	+2.7
T0826	**Rio Saliceto (**	**0.11**	**259**	*e*P	Pg	04 33 10.3	+0.7
T0826				*i* S	Sg	04 33 13.8	+2.3
T0826	**Rio Saliceto (**	**0.11**	**259**	*e*P	Pg	04 33 10.3	+0.7
T0826				*i* S	Sg	04 33 13.8	+2.4
RAVA	**Ravarino**	**0.15**	**134**	*e*P	Pg	04 33 11.7	+1.5
RAVA				*i* S	Sg	04 33 14.6	+2.2
RAVA	**Ravarino**	**0.15**	**134**	*e*P	Pg	04 33 11.7	+1.5
RAVA				*i* S	Sg	04 33 14.6	+2.1
RAVA				AML	AML		
	comp=E,1025μm,0.3s						
RAVA				AML	AML		
	comp=N,718μm,0.2s						
RAVA				AML	AML		
	comp=E,1460μm,0.3s						
RAVA				AML	AML		
	comp=N,1052μm,0.2s						
RAVA				AML	AML		
	comp=E,1460μm,0.3s						
RAVA				AML	AML		
	comp=N,1052μm,0.2s						
T0802	**SanFelice sul**	**0.15**	**85**	*e*P	Pg	04 33 10.5	+0.3
T0802				*i* S	Sg	04 33 15.3	+2.8
T0802	**SanFelice sul**	**0.15**	**85**	*e*P	Pg	04 33 10.5	+0.2
T0802				*i* S	Sg	04 33 15.3	+2.8
T0813	**Massa Finalese**	**0.17**	**84**	⇓*e*P	Pg	04 33 11.2	+0.7
T0813				*i* S	Sg	04 33 15.4	+2.5
T0813	**Massa Finalese**	**0.17**	**84**	*e*P	Pg	04 33 11.2	+0.8
T0813				*i* S	Sg	04 33 15.4	+2.5
T0812	**Loc. Stoppiaro**	**0.18**	**58**	*e*P	Pg	04 33 11.2	+0.5
T0812	**Loc. Stoppiaro**	**0.18**	**58**	*e*P	Pg	04 33 11.2	+0.6
NOVE	**Novellara**	**0.19**	**251**	*e*P	Pg	04 33 11.7	+0.8
NOVE				*i* S	Sg	04 33 17.9	+4.3
NOVE	**Novellara**	**0.19**	**251**	*e*P	Pg	04 33 11.7	+0.8
NOVE				*i* S	Sg	04 33 17.9	+4.3
NOVE				AML	AML

T0814				*i* S	Sg	04 34 10.8 +2.1
T0827	**Moglia (MN)**	**0.08**	**344**	⇑*i*P	Pg	04 34 08.2 +0.8
T0827				*i* S	Sg	04 34 11.5 +2.5
T0827	**Moglia (MN)**	**0.08**	**344**	*i* P	Pg	04 34 08.2 +0.8
T0827				*i* S	Sg	04 34 11.5 +2.5
T0818	**Loc. Fossa, Co**	**0.09**	**33**	⇑*i*P	Pg	04 34 08.2 +0.7
T0818				*i* S	Sg	04 34 11.5 +2.3
T0818	**Loc. Fossa, Co**	**0.09**	**33**	*i* P	Pg	04 34 08.2 +0.6
T0818				*i* S	Sg	04 34 11.5 +2.3
T0824	**Loc. Limidi di**	**0.10**	**194**	⇓*i*P	Pg	04 34 08.6 +0.9
T0824				*i* S	Sg	04 34 12.2 +2.7
T0824	**Loc. Limidi di**	**0.10**	**194**	*i* P	Pg	04 34 08.6 +0.9
T0824				*i* S	Sg	04 34 12.2 +2.7
T0826	**Rio Saliceto (**	**0.11**	**259**	⇓*i*P	Pg	04 34 08.5 +0.7
T0826				*i* S	Sg	04 34 12.7 +3.0
T0826	**Rio Saliceto (**	**0.11**	**259**	*i* P	Pg	04 34 08.5 +0.7
T0826				*i* S	Sg	04 34 12.7 +3.0
RAVA	**Ravarino**	**0.15**	**133**	⇑*i*P	Pg	04 34 09.4 +0.9
RAVA				*i* S	Sg	04 34 13.5 +2.8
RAVA	**Ravarino**	**0.15**	**133**	*i* P	Pg	04 34 09.4 +0.9
RAVA				*i* S	Sg	04 34 13.5 +2.8
RAVA				AML	AML	
	comp=E,1460μm,0.3s					
RAVA				AML	AML	
	comp=N,1050μm,0.2s					
RAVA				AML	AML	
	comp=E,1460μm,0.3s					
RAVA				AML	AML	
	comp=N,1052μm,0.2s					
RAVA				AML	AML	
	comp=E,1460μm,0.3s					
RAVA				AML	AML	
	comp=N,1052μm,0.2s					
T0802	**SanFelice sul**	**0.16**	**85**	⇑*i*P	Pg	04 34 09.3 +0.8
T0802				*i* S	Sg	04 34 13.5 +2.6
T0802	**SanFelice sul**	**0.16**	**85**	*i* P	Pg	04 34 09.3 +0.8
T0802				*i* S	Sg	04 34 13.5 +2.7
T0813	**Massa Finalese**	**0.17**	**84**	⇑*i*P	Pg	04 34 09.5 +0.7
T0813				*i* S	Sg	04 34 13.8 +2.6
T0813	**Massa Finalese**	**0.17**	**84**	*i* P	Pg	04 34 09.6 +0.8
T0813				*i* S	Sg	04 34 13.8 +2.6
NOVE	**Novellara**	**0.19**	**251**	*e*P	Pg	04 34 10.1 +1.0
NOVE				*e*S	Sg	04 34 15.3 +3.6
NOVE	**Novellara**	**0.19**	**251**	*e*P	Pg	04 34 10.1 +1.1
NOVE				*e*S	Sg	04 34 15.3 +3.6
NOVE				AML	AML	
	comp=E,502μm,0.2s					
NOVE				AML	AML	
	comp=N,480μm,0.2s					
NOVE				AML	AML	
	comp=E,503μm,0.2s					
NOVE				AML	AML	
	comp=N,480μm,0.2s					
NOVE				AML	AML	
	comp=N,481μm,0.2s					
NOVE				AML	AML	
	comp=E,504μm,0.2s					
SBPO	**S.Benedetto Po**	**0.19**	**351**	*i* P	Pg	04 34 10.5 +1.3
SBPO	**S.Benedetto Po**	**0.19**	**351**	*i* P	Pg	04 34 10.5 +1.3
SBPO				AML	AML	
	comp=E,324μm,0.2s					
SBPO				AML	AML	
	comp=N,1262μm,1.3s					
SBPO				AML	AML	
	comp=E,324μm,0.2s					
SBPO				AML	AML	
	comp=N,1263μm,1.3s					
SBPO				AML	AML	
	comp=E,324μm,0.2s					
SBPO				AML	AML	
	comp=N,1263μm,1.3s					
T0800	**Massa Finalese**	**0.20**	**93**	⇑*i*P	Pg	04 34 09.9 +0.6
T0800				*i* S	Sg	04 34 14.7 +2.5
T0800	**Massa Finalese**	**0.20**	**93**	*i* P	Pg	04 34 09.9 +0.5
T0800				*i* S	Sg	04 34 14.7 +2.5
T0800				AML	AML	
	comp=E,912μm,0.5s					
T0800				AML	AML	
	comp=N,1180μm,0.2s					
T0800				AML	AML	
	comp=E,998μm,0.2s					
T0800				AML	AML	
	comp=N,1050μm,0.2s					
T0800				AML	AML	
	comp=E,908μm,0.5s					
T0800				AML	AML	
	comp=N,1180μm,0.2s					
T0800				AML	AML	
	comp=E,997μm,0.2s					
T0800				AML	AML	
	comp=N,1050μm,0.2s					
T0800				AML	AML	
	comp=E,906μm,0.5s					
T0800				AML	AML	
	comp=E,996μm,0.2s					
T0800				AML	AML	
	comp=N,1176μm,0.2s					
T0800				AML	AML	
	comp=N,1050μm,0.2s					
T0822	**Casumaru (Bond**	**0.27**	**96**	⇓*i*P	Pg	04 34 11.2 +0.6
T0822				*i* S	Sb	04 34 16.8 -0.1
T0822	**Casumaru (Bond**	**0.27**	**96**	*i* P	Pg	04 34 11.2 +0.5
T0822				*i* S	Sb	04 34 16.9 -0.1
T0822				AML	AML	
	comp=E,310μm,1.1s					
T0822				AML	AML	
	comp=N,530μm,1.6s					
T0823	**Castello D'Arg**	**0.28**	**128**	*e*P	Pg	04 34 11.0 +0.2
T0823				*e*S	Sb	04 34 18.9 +1.7
T0823	**Castello D'Arg**	**0.28**	**128**	*e*P	Pb	04 34 12.0 -0.4
T0823				*e*S	Sb	04 34 18.9 +1.7
SALO	**Salr**	**0.82**	**338**	AML	AML	
	comp=N,74μm,0.8s					
SALO				AML	AML	
	comp=E,48μm,1.6s					
SALO				AML	AML	
	comp=N,74μm,0.8s					
SALO				AML	AML	
	comp=E,49μm,1.6s					
SALO				AML	AML	
	comp=E,49μm,1.6s					
SALO				AML	AML	
	comp=N,74μm,0.8s					

NIED ***09*** *04:41:00, 22.°90N×120.°40E, h23km, Mw4.6 Best double couple: M0 8.16000×10^15 NP1:φ0=302.00000°, δ58.00000°, λ15.00000°. NP2:φ0=204.00000°, δ77.00000°, λ147.00000°.*
IDC ***09*** *04:41:16.9±0.5, 22.°84N×120.°70E, h0km, mb4.1/20, mb1 4.3/22, mb1mx4.1/63, mbtmp4.2/22, ML3.5/2, MS3.8/33, Ms1 3.8/33, ms1mx3.6/68, Error ellipse: s-maj=18.9km s-min=10.8km az=65.0*
JMA ***09*** *04:41:17.8±0.1, 22.°92N×120.°43E, h2km±2km, M4.7*
BJI ***09*** *04:41:18.9, 22.°91N×120.°58E, h8km, mb4.3/40, mB4.5/29, ML4.2/5, Ms4.4/36, Ms7 4.3/34*
NEIC ***09*** *04:41:19.9±0.8, 22.°83N×120.°64E, h18km±4km, mb4.5/21, ML4.8(TAP), Error ellipse: s-maj=5.7km s-min=5.2km az=71.0*
NEIC Felt at Shanhua, Tainan and Yongkang. Recorded [4 TAP] in Pingtung; [3 TAP] in Taitung; [2 TAP] in Chiayi and Yunlin; [1 TAP] in Changhua.
TAP ***09*** *04:41:19.8, 22.°92N×120.°57E, h15km, ML4.9, B*
ISCJB ***09*** *04:41:20.5±0.2, 22.°87N±0.°01×120.°52E±0.°01, h27km±1km, mb4.4/46, MS3.9/33, Error ellipse: s-maj=2.0km s-min=1.8km az=173.2*

ISC 09 04:41:20.3±0.7, 22.°91N±0.°01×120.°57E±0.°01, h16km±4km, n249, σ1§64/325, mb4.5/46, MS3.8/33, 25C-26D, Taiwan

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
SLGT	**Liugui** baz=55	**0.11**	**39**	⇓*i*P	**Pb**	**04 41 23.9**	**-0.1**
SLGT	baz=55			S	**Sb**	**04 41 26.6**	**+0.1**
SGST	**Jiashian** baz=8.0	**0.17**	**3**	⇓*i*P	**Pg**	**04 41 24.9**	**+0.3**
SGST	baz=8.0			S	**Sg**	**04 41 28.5**	**+0.9**
SSD	**Sandimen** baz=151	**0.17**	**162**	⇓*i*P	**Pg**	**04 41 25.0**	**+0.4**
SSD	baz=151			S	**Sg**	**04 41 28.3**	**+0.8**
SGLT	**Jiouru** baz=193	**0.20**	**202**	*e*P	**Pb**	**04 41 26.3**	**+0.8**
CHN3	**Shinhua** baz=317	**0.25**	**311**	⇓P	**Pb**	**04 41 27.2**	**+0.7**
CHN3	baz=317			*e*S	**Sb**	**04 41 33.1**	**+2.4**
CHN1	**Nanshi** baz=358	**0.28**	**351**	⇑P	**Pg**	**04 41 26.8**	**+0.5**
CHN1	baz=358			*e*S	**Sb**	**04 41 31.7**	**+0.3**
MASBT	**Mashibuluo** baz=163	**0.30**	**169**	⇑P	**Pg**	**04 41 27.1**	**+0.4**
MASBT	baz=163			S	**Sg**	**04 41 32.0**	**+0.9**
STYT	**Tauyuan** baz=41	**0.30**	**34**	⇓*i*P	**Pg**	**04 41 27.3**	**+0.5**
STYT	baz=41			*e*S	**Sb**	**04 41 32.6**	**+0.4**
WTP	**Ta-pu** baz=9.0	**0.34**	**6**	⇓*i*P	**Pg**	**04 41 27.9**	**+0.6**
WTP	baz=9.0			S	**Sb**	**04 41 33.6**	**+0.5**
TAI1	**Yung-k'ang** baz=292	**0.34**	**292**	⇓*e*P	**Pg**	**04 41 28.1**	**+0.7**
TWK	**Hsinying** baz=351	**0.36**	**348**	⇓P	**Pg**	**04 41 28.3**	**+0.5**
TWK	baz=351			S	**Sb**	**04 41 35.1**	**+1.1**
TPUB	**Ta-pu** baz=9.0	**0.39**	**8**	⇓P	**Pg**	**04 41 28.6**	**+0.3**
TPUB	baz=9.0			S	**Sb**	**04 41 35.2**	**+0.4**
TPUB	**Ta-pu**	**0.39**	**8**	*e*Pg	**Pg**	**04 41 28.5**	**+0.2**
KAU	**Kaohsiung** baz=224	**0.42**	**216**	*e*P	**Pb**	**04 41 29.9**	**+0.6**
SSPT	**Xinbi** baz=167	**0.42**	**181**	*e*P	**Pb**	**04 41 29.7**	**+0.3**
SSPT	baz=167			*e*S	**Sb**	**04 41 36.9**	**+1.3**
SCLT	**Jiali** baz=309	**0.44**	**307**	⇓P	**Pg**	**04 41 29.6**	**+0.5**
SCLT	baz=309			*e*S	**Sb**	**04 41 37.3**	**+1.3**
TWG	**Pinlang** baz=103	**0.47**	**101**	⇓*i*P	**Pb**	**04 41 30.4**	**+0.2**
TWG	baz=103			S	**Sb**	**04 41 37.7**	**+0.8**
TWG	**Pinlang**	**0.47**	**101**	*e*Pg	**Pg**	**04 41 30.1**	**+0.4**
ECL	**Taimali** baz=135	**0.47**	**131**	⇓*i*P	**Pg**	**04 41 30.1**	**+0.4**
ECL	baz=135			*e*S	**Sg**	**04 41 36.4**	**+0.3**
TWGBT	**Beinan** baz=100	**0.48**	**101**	⇓P	**Pb**	**04 41 30.4**	**+0.1**
TWGBT	baz=100			*e*S	**Sb**	**04 41 38.0**	**+0.9**
ELDTW	**Lidau** baz=57	**0.49**	**56**	⇓*i*P	**Pb**	**04 41 31.0**	**+0.3**
ELDTW	baz=57			*e*S	**Sb**	**04 41 38.0**	**+0.3**
SCZT	**Fangliau** baz=165	**0.54**	**175**	⇑*i*P	**Pg**	**04 41 31.3**	**+0.3**
SCZT	baz=165			*e*S	**Sb**	**04 41 39.8**	**+0.9**
CHN8	**Yiju** baz=325	**0.55**	**323**	⇓P	**Pg**	**04 41 31.2**	**+0.1**
CHN8	baz=325			S	**Sb**	**04 41 41.0**	**+1.8**
TTN	**Taitung** baz=106	**0.55**	**106**	⇓*i*P	**Pb**	**04 41 32.7**	**+1.1**
TTN	baz=106			S	**Sn**	**04 41 42.1**	**-0.3**
EAST	**Anshuo** baz=147	**0.58**	**154**	⇑*i*P	**Pg**	**04 41 32.3**	**+0.5**
EAST	baz=147			*e*S	**Sb**	**04 41 40.8**	**+0.6**
WLCH	**Liuqiu** baz=197	**0.58**	**198**	⇓P	**Pn**	**04 41 34.6**	**+0.6**
WLCH	baz=197			*e*S	**Sn**	**04 41 45.9**	**+2.7**
TWP	**Hsiaoliuchiu** baz=198	**0.59**	**199**	⇓P	**Pn**	**04 41 34.6**	**+0.5**
TWP	baz=198			*e*S	**Sn**	**04 41 44.2**	**+0.8**
CHY	**Chiayi** baz=348	**0.60**	**347**	*e*P	**Pg**	**04 41 32.6**	**+0.4**
CHY	baz=348			*e*S	**Sb**	**04 41 41.9**	**+1.2**
WLGB	**Puzi** baz=337	**0.62**	**336**	⇓P	**Pg**	**04 41 32.6**	**+0.1**
WLGB	baz=337			S	**Sb**	**04 41 42.3**	**+1.1**
TAW	**Tawu** baz=145	**0.63**	**151**	⇑P	**Pg**	**04 41 33.0**	**+0.4**
TAW	baz=145			*e*S	**Sb**	**04 41 42.0**	**+0.6**
FULB	**Fuli** baz=66	**0.72**	**66**	⇑*i*P	**Pg**	**04 41 35.4**	**+0.9**
FULB	baz=66			*e*S	**Sn**	**04 41 46.3**	**-0.4**
CHKT	**Chengkung** baz=91	**0.75**	**75**	⇑P	**Pg**	**04 41 35.8**	**+0.8**
CHKT	baz=91			S	**Sn**	**04 41 47.8**	**+0.4**
WGK	**Gukeng**	**0.77**	**359**	⇓*e*P	**Pb**	**04 41 35.7**	**+0.4**
WGK				*e*S	**Sn**	**04 41 47.7**	**-0.2**
WDLH	**Douliu** baz=358	**0.78**	**358**	*e*P	**Pg**	**04 41 35.9**	**+0.5**
WDLH	baz=358			*e*S	**Sn**	**04 41 47.8**	**-0.1**
WSF	**Szhu** baz=337	**0.79**	**336**	*e*P	**Pb**	**04 41 35.5**	**-0.2**
WSF	baz=337			*e*S	**Sg**	**04 41 47.2**	**+1.0**
TWF1	**Yuli** baz=64	**0.80**	**56**	⇑*i*P	**Pb**	**04 41 36.0**	**+0.2**
TWF1	baz=64			S	**Sg**	**04 41 46.9**	**+0.5**
YULB	**Yu-li** baz=47	**0.82**	**54**	⇑P	**Pb**	**04 41 36.2**	**0.0**
YULB	baz=47			*e*S	**Sb**	**04 41 46.7**	**-0.4**
YULB	**Yu-li**	**0.82**	**54**	*e*Pg	**Pb**	**04 41 35.6**	**-0.6**
TWH	**Lutao** baz=104	**0.86**	**103**	⇑*i*P	**Pg**	**04 41 37.2**	**+0.2**
TWH	baz=104			*e*S	**Sn**	**04 41 50.4**	**+0.5**
EHY	**Hungye** baz=49	**0.91**	**49**	⇑P	**Pb**	**04 41 37.7**	**0.0**
EHY	baz=49			*e*S	**Sn**	**04 41 51.6**	**+0.4**
WDGT	**Dungji** baz=294	**0.91**	**293**	*e*P	**Pb**	**04 41 36.6**	**-1.1**
WDGT	baz=294			*e*S	**Sb**	**04 41 49.0**	**-0.6**
HEN	**Hengchun** baz=157	**0.91**	**170**	P	**Pn**	**04 41 38.7**	**+0.2**
HEN	baz=157			S	**Sn**	**04 41 52.5**	**+1.2**
WJS	**Zhushan** baz=355	**0.92**	**9**	*e*P	**Pb**	**04 41 38.0**	**+0.1**
WJS	baz=355			*e*S	**Sg**	**04 41 51.0**	**+0.7**
SSLB	**Suanglung** baz=22	**0.94**	**22**	⇑P	**Pb**	**04 41 38.0**	**-0.2**
SSLB	baz=22			*e*S	**Sg**	**04 41 51.5**	**+0.6**
SSLB	**Suanglung**	**0.94**	**22**	*e*Pg	**Pb**	**04 41 38.1**	**-0.2**
HGSD	**Ruisui** baz=47	**0.97**	**53**	⇑P	**Pg**	**04 41 39.6**	**+0.4**
HGSD	baz=47			S	**Sn**	**04 41 53.3**	**+0.4**
TWK1	**Hengchun** baz=155	**0.99**	**167**	⇑P	**Pn**	**04 41 39.6**	**+0.1**
TWK1	baz=155			*e*S	**Sn**	**04 41 53.7**	**+0.6**
WTCT	**Ta-ch'eng** baz=345	**0.99**	**344**	*e*P	**Pb**	**04 41 38.5**	**-0.5**
WTCT	baz=345			*e*S	**Sb**	**04 41 52.4**	**+0.6**
VWDT	**VWDT** baz=33	**0.99**	**32**	⇑P	**Pb**	**04 41 38.9**	**-0.1**
VWDT	baz=33			*e*S	**Sn**	**04 41 53.9**	**+0.7**
TWKBT	**Hengchun** baz=155	**0.99**	**167**	⇑P	**Pn**	**04 41 39.6**	**+0.1**
TWKBT	baz=155			*e*S	**Sn**	**04 41 54.1**	**+0.9**
RLNB	**Erlin** baz=349	**1.00**	**349**	*e*P	**Pb**	**04 41 39.1**	**-0.1**
RLNB	baz=349			*e*S	**Sb**	**04 41 52.3**	**+0.2**
SMLT	**Sun Moon Lake** baz=17	**1.01**	**17**	⇓*e*P	**Pb**	**04 41 39.6**	**0.0**
SMLT	baz=17			S	**Sn**	**04 41 54.4**	**+0.4**
TYC	**Yuchr** baz=15	**1.02**	**15**	*e*P	**Pb**	**04 41 39.5**	**-0.1**
TYC	baz=15			*e*S	**Sn**	**04 41 55.3**	**+1.3**
EGFH	**Guangfu** baz=46	**1.09**	**46**	*e*P	**Pb**	**04 41 41.0**	**+0.2**
EGFH	baz=46			*e*S	**Sg**	**04 41 57.0**	**+1.4**
VCHM	**Qimei** baz=288	**1.09**	**286**	⇓*e*P	**Pb**	**04 41 39.1**	**-1.8**
PHUB	**P'eng-hu** baz=318	**1.10**	**303**	⇓*e*P	**Pb**	**04 41 39.1**	**-1.9**
PHUB	baz=318			*e*S	**Sb**	**04 41 52.6**	**-2.4**
WCHH	**Zhanghua** baz=359	**1.16**	**359**	*e*P	**Pn**	**04 41 41.9**	**0.0**
WCHH	baz=359			*e*S	**Sg**	**04 41 58.5**	**+0.5**
ESL	**Shilin** baz=41	**1.20**	**41**	⇑P	**Pb**	**04 41 42.8**	**+0.2**
ESL	baz=41			*e*S	**Sn**	**04 41 58.5**	**+0.2**
TCU	**Taichung** baz=5.0	**1.23**	**4**	*e*P	**Pn**	**04 41 42.8**	**-0.1**
TCU	baz=5.0			*e*S	**Sb**	**04 41 59.0**	**0.0**
LAY	**Lan-yu** baz=119	**1.25**	**134**	*e*P	**Pn**	**04 41 42.4**	**-0.8**
CHGB	**Renai** baz=25	**1.27**	**26**	⇑P	**Pn**	**04 41 43.8**	**+0.1**
CHGB	baz=25			S	**Sn**	**04 42 01.1**	**+0.6**
ENLB	**Shoufeng** baz=35	**1.37**	**43**	*e*P	**Pn**	**04 41 45.0**	**+0.2**
ENLB	baz=35			*e*S	**Sg**	**04 42 04.6**	**+0.1**
HWA	**Hwalien** baz=34	**1.42**	**42**	*e*P	**Pb**	**04 41 46.7**	**+0.2**
HWA	baz=34			*e*S	**Sg**	**04 42 06.8**	**+0.5**
TDCB	**Techi** baz=21	**1.44**	**22**	⇑P	**Pn**	**04 41 46.0**	**+0.1**
TDCB	baz=21			*e*S	**Sb**	**04 42 05.1**	**0.0**
TWT	**Tachien** baz=21	**1.45**	**22**	*e*P	**Pn**	**04 41 46.3**	**+0.3**
TWT	baz=21			*e*S	**Sb**	**04 42 06.0**	**+0.7**
TWD	**Chiawan** baz=38	**1.50**	**39**	⇓P	**Pn**	**04 41 47.3**	**+0.8**
TWD	baz=38			*e*S	**Sb**	**04 42 07.6**	**+1.1**
NSY	**Sanyi** baz=6.0	**1.51**	**7**	*e*P	**Pn**	**04 41 47.1**	**+0.4**
NSY	baz=6.0			*e*S	**Sb**	**04 42 07.3**	**+0.5**
NACB	**Ninganchiao** baz=36	**1.57**	**36**	P	**Pn**	**04 41 47.8**	**+0.3**
NACB	baz=36			S	**Sb**	**04 42 08.2**	**-0.4**
NACB	**Ninganchiao**	**1.57**	**36**	*e*Pn	**Pn**	**04 41 47.8**	**+0.3**
NMLH	**Miaoli** baz=7.0	**1.63**	**7**	*e*P	**Pn**	**04 41 49.5**	**+1.1**
NNSB	**Datong** baz=11	**1.68**	**26**	⇑P	**Pn**	**04 41 49.6**	**+0.4**
NNSB	baz=11			S	**Sb**	**04 42 12.7**	**+0.6**
NNSH	**Datong** baz=12	**1.68**	**26**	*e*P	**Pn**	**04 41 49.8**	**+0.5**
NNSH	baz=12			*e*S	**Sb**	**04 42 12.2**	**+0.2**
NNS	**Nan Shan** baz=11	**1.69**	**26**	⇓*e*P	**Pn**	**04 41 50.3**	**+0.9**
NNS	baz=11			*e*S	**Sb**	**04 42 12.9**	**+0.7**
NSTT	**Nanjuang** baz=12	**1.76**	**13**	*e*P	**Pn**	**04 41 49.6**	**-0.5**
NSTT	baz=12			*e*S	**Sb**	**04 42 14.7**	**+0.7**
LIOB	**Emei** baz=13	**1.77**	**13**	*e*P	**Pn**	**04 41 49.1**	**-1.3**
ENA	**Nanau** baz=34	**1.85**	**35**	*e*P	**Pn**	**04 41 52.1**	**+0.7**
NANB	**Nanao** baz=35	**1.86**	**35**	⇑P	**Pn**	**04 41 52.0**	**+0.5**
NANB	baz=35			*e*S	**Sb**	**04 42 16.2**	**-0.6**
NSK	**Sanguang** baz=22	**1.90**	**22**	*e*P	**Pn**	**04 41 52.5**	**+0.3**
YHNB	**Yeheng** baz=6.0	**1.90**	**23**	⇑P	**Pn**	**04 41 52.4**	**+0.3**
YHNB	baz=6.0			*e*S	**Sb**	**04 42 18.2**	**+0.1**
YHNB	**Yeheng**	**1.90**	**23**	*e*Pn	**Pn**	**04 41 52.5**	**+0.4**
ENAH	**Nanao** baz=35	**1.91**	**36**	*e*P	**Pn**	**04 41 53.1**	**+0.9**
SBCB	**Hsinchu** baz=11	**1.91**	**11**	*e*P	**Pb**	**04 41 54.0**	**-0.8**
HSN	**Hsinchu** baz=12	**1.92**	**11**	*e*P	**Pb**	**04 41 54.1**	**-0.8**
ENTT	**Nioudou** baz=27	**1.95**	**28**	*e*P	**Pb**	**04 41 54.5**	**-1.0**
ENTT	baz=27			*e*S	**Sb**	**04 42 20.5**	**+1.0**
NWLT	**Wulai** baz=24	**2.04**	**24**	*e*P	**Pn**	**04 41 55.0**	**+0.9**
TWC	**Suao** baz=34	**2.06**	**34**	*e*P	**Pn**	**04 41 55.1**	**+0.9**
TWC	baz=34			*e*S	**Sb**	**04 42 22.0**	**-0.6**
TWE	**Neicheng** baz=28	**2.06**	**29**	*e*P	**Pb**	**04 41 56.1**	**-1.3**
TWE	baz=28			*e*S	**Sb**	**04 42 23.7**	**+0.9**
ILA	**Ilan** baz=46	**2.14**	**30**	*e*P	**Pb**	**04 41 58.0**	**-0.7**
EOS1	**EOS1** baz=40	**2.17**	**41**	*e*P	**Pb**	**04 41 58.0**	**-1.1**
EOS1	baz=40			*e*S	**Sb**	**04 42 26.1**	**+0.3**
TATO	**Taipei** baz=22	**2.22**	**22**	*e*P	**Pn**	**04 41 57.2**	**+0.8**
TATO	**Taipei**	**2.22**	**22**	*e*Pn	**Pn**	**04 41 56.9**	**+0.5**
TATO				*e*Pg	**Pb**	**04 42 01.4**	**+1.3**
TATO				*e*Sn	**Sn**	**04 42 22.5**	**-1.1**
NTC	**Toucheng** baz=45	**2.25**	**30**	*e*P	**Pn**	**04 41 58.3**	**+1.4**
TAP	**Taipei** baz=22	**2.29**	**22**	*e*P	**Pb**	**04 42 00.7**	**-0.5**
TWS1	**Kuangyinshan** baz=3.0	**2.31**	**19**	*e*P	**Pb**	**04 42 00.0**	**-1.6**
VWUC	**VWUC** baz=335	**2.31**	**334**	*e*P	**Pn**	**04 41 56.1**	**-1.6**
TIPB	**Shuangxi** baz=11	**2.35**	**29**	*e*P	**Pn**	**04 41 59.0**	**+0.6**
TIPB	baz=11			*e*S	**Sb**	**04 42 30.5**	**-0.6**
NTST	**Danshui** baz=3.0	**2.38**	**19**	*e*P	**Pb**	**04 42 01.3**	**-1.5**
YM04	**YM04** baz=21	**2.40**	**21**	*e*P	**Pn**	**04 41 58.7**	**-0.3**
YM10	**YM10** baz=21	**2.41**	**22**	*e*P	**Pn**	**04 41 59.4**	**+0.2**
NWF	**Wu-fen Shan** baz=11	**2.42**	**27**	*e*P	**Pn**	**04 42 01.2**	**+2.0**
WFSB	**Wu-fen Shan** baz=11	**2.42**	**27**	*e*P	**Pn**	**04 42 01.1**	**+1.9**
YM03	**YM03** baz=21	**2.42**	**21**	*e*P	**Pn**	**04 42 00.8**	**+1.5**
YM11	**YM11** baz=22	**2.42**	**22**	*e*P	**Pn**	**04 42 00.9**	**+1.5**
YM12	**YM12** baz=21	**2.44**	**22**	*e*P	**Pb**	**04 42 02.6**	**-1.2**
YM07	**YM07** baz=22	**2.45**	**23**	*e*P	**Pn**	**04 42 01.4**	**+1.7**
YM08	**YM08** baz=22	**2.45**	**22**	*e*P	**Pn**	**04 42 02.0**	**+2.3**
KNM	**Kinmen** baz=309	**2.47**	**308**	*e*P	**Pn**	**04 41 60.0**	**+0.1**
KNMB	**Chin-men Tao**	**2.53**	**308**	*e*P	**Pn**	**04 41 59.4**	**-1.4**

baz=311
TWY Chenhua 2.54 22 eP Pn 04 42 03.3 +2.5
baz=21
JYNG Yonagunijimaku 2.66 54 P Pn 04 42 04.1 +1.6
JYNG eS Sb 04 42 37.7 -2.3
YOJ Yonaguni jima 2.72 55 ⇑P Pn 04 42 04.7 +1.4
baz=54
YOJ eS Sn 04 42 37.5 +1.7
baz=54
YOJ Yonaguni jima 2.72 55 ePn Pn 04 42 04.0 +0.8
YOJ Yonaguni jima 2.72 55 P Pn 04 42 05.0 +1.7
YOJ S Sb 04 42 39.1 -2.5
QZH Quanzhou 2.72 319 ⇓iPn Pn 04 42 02.4 -0.9
QZH Sn Sn 04 42 34.6 -1.2
QZH smax smax
comp=N,640nm,0.5s
QZH smax smax
comp=E,590nm,0.6s
HATJ Hateruma jima 3.18 68 P Pn 04 42 10.8 +1.1
HATJ S Sn 04 42 49.0 +1.7
IRIF Iriomote-Funau 3.22 63 P Pn 04 42 11.5 +1.2
IRIF eS Sn 04 42 50.5 +2.1
MATB Ma-tsu 3.28 350 eP Pn 04 42 10.0 -1.0
baz=351
JKRS Kuro-shima 3.42 67 P Pn 04 42 14.2 +1.3
JKRS S Sn 04 42 55.2 +2.0
JIJ Ishigaki jima 3.58 65 P Pn 04 42 15.8 +0.6
JIJ S Sn 04 42 58.1 +1.0
JISG Ishigakijimahi 3.81 63 P Pn 04 42 18.8 +0.5
JISG S Sn 04 43 03.7 +0.9
JTJ Tarama 4.16 65 P Pn 04 42 24.0 +0.9
JTJ S Sn 04 43 12.8 +1.4
VDOS Pratas Island 4.19 239 eP Pn 04 42 23.6 0.0
baz=240
JIRB Irabujima 4.62 65 P Pn 04 42 30.5 +1.0
JIRB eS Sn 04 43 23.6 +0.7
JIKM Ikemajima 4.72 64 P Pn 04 42 31.9 +1.0
JIKM eS Sn 04 43 26.3 +0.9
JOGS Gusukube 4.79 66 P Pn 04 42 32.3 +0.4
JOGS eS Sn 04 43 29.1 +2.0
MCO Taipa Grande 6.53 264 P Pb 04 43 12.0 -1.6
GZH Guangzhou 6.66 273 P Pn 04 42 53.5 -4.1
GZH S Sn 04 44 01.7 -11
GZH smax smax
comp=N,390nm,1.7s
GZH smax smax
comp=E,280nm,1.1s
JOW Kunigami 8.01 59 eP Pn 04 43 16.0 0.0
baz=59
JOW Kunigami 8.01 59 ePn Pn 04 43 15.7 -0.4
TGY Tagaytay City 8.77 178 LR LR 04 47 34.5
comp=E,429nm,19.9s,baz=63,slow=43
NJ2 Nanjing 9.23 351 eP Pn 04 43 32.7 -0.1
NJ2 S Sn 04 45 20.3 +3.9
NJ2 pmax pmax
comp=E,15nm,0.7s
NJ2 LR LR
comp=E,1μm,9.5s
NJ2 LR LR
comp=E,730nm,8.1s
NJ2 LR LR
comp=E,1μm,10.3s
WHN Wuhan 9.42 325 ⇑P Pn 04 43 34.4 -0.9
WHN S Sn 04 45 21.2 +0.3
WHN LR LR
comp=E,2μm,7.1s
WHN LR LR
comp=E,2μm,9.5s
WHN LR LR
comp=E,3μm,15.1s
QIZ Qiongzhong 10.74 251 P Pn 04 43 53.6 0.0
QIZ pmax pmax
comp=E,19nm,1.4s
QIZ pmax pmax
comp=E,140nm,4.1s
QIZ LR LR
comp=E,1μm,14.7s
QIZ LR LR
comp=E,2μm,14.2s
QIZ LR LR
comp=E,2μm,14.7s
GYA Guiyang 13.13 288 ⇑iP Pn 04 44 27.4 +1.1
GYA PP P 04 44 38.0 +1.6
GYA S Sn 04 46 54.8 +2.7
GYA SS SnSn 04 47 11.0 +6.6
GYA pmax pmax
comp=E,10.0nm,0.7s
GYA LR LR
comp=E,2μm,11.8s
GYA LR LR
comp=E,2μm,12.2s
GYA LR LR
comp=E,2μm,12.0s
JNU Nakatsue 13.64 40 Pn Pn 04 44 32.2 -1.0
comp=E,0.2nm,0.3s,baz=225,slow=16,SNR=2.7
JNU LR LR 04 50 50.9
comp=E,476nm,18.0s,baz=278,slow=42
KSAR Wonju Array Be 15.79 22 Pn Pn 04 45 02.8 +0.8
KSRS Korea Array 15.82 22 Pn Pn 04 45 02.8 +0.5
comp=E,0.2nm,0.3s,baz=197,slow=12,SNR=8.1
KSRS LR LR 04 51 40.1
comp=E,250nm,19.8s,baz=204,slow=39
KS01 Wonju Array Si 15.83 22 ePn Pn 04 45 01.6 -0.9
KMI Kunming 16.44 281 P P 04 45 15.7 +2.3
KMI S S 04 48 19.8 -5.3
KMI pmax pmax
comp=E,8.0nm,1.2s
KMI pmax pmax
comp=E,93nm,4.5s
KMI LR LR
comp=E,310nm,9.9s
KMI LR LR
comp=E,970nm,12.8s
KMI LR LR
comp=E,1μm,13.2s
DAV Davao City (W) 16.47 162 LR LR 04 51 39.1
comp=E,468nm,21.5s,baz=343,slow=38
CD2 Chengdu 16.97 302 P Pn 04 45 16.5 -0.6
CD2 sP pP 04 45 22.4 -1.1
CD2 PP PnPn 04 45 32.2 +5.3
CD2 S Sn 04 48 26.5 +1.0
CD2 SS SnSn 04 48 46.4 +7.5
CD2 pmax pmax
comp=E,40nm,1.0s
CD2 pmax pmax
comp=E,90nm,4.3s
CD2 LR LR
comp=E,2μm,9.0s
CD2 LR LR
comp=E,2μm,13.8s
BJI Beijing 17.48 349 P P 04 45 28.3 +3.8
BJI pmax pmax
comp=E,9.0nm,0.6s
INU Inuyama 18.94 45 eP Pn 04 45 42.6 +1.3
comp=E,18nm,0.8s
HHC Hu-ho-hao-te 19.43 339 eP P 04 45 46.9 +0.8
HHC sP sP 04 45 54.0 +1.3
HHC S Sn 04 49 20.5 -4.5
HHC sS S 04 49 24.8 -0.6
HHC SS SnSn 04 49 49.7 +10
HHC pmax pmax
comp=E,10.0nm,0.6s
HHC pmax pmax
comp=E,55nm,5.0s
HHC LR LR
comp=E,440nm,12.5s
HHC LR LR
comp=E,280nm,11.7s
HHC LR LR
comp=E,330nm,14.3s
PBKT Sadao Pong 19.49 255 P Pn 04 45 49.9 +1.8
comp=E,17nm,1.1s
PBKT Sadao Pong 19.49 255 eP Pn 04 45 48.4 +0.4
comp=E,17nm,1.2s
LZH Lanzhou 19.57 316 eP P 04 45 48.5 +0.8
LZH pP pP 04 45 51.4 -0.8
LZH sP sP 04 45 56.6 +2.3
LZH PP PnPn 04 46 06.0 +3.4
LZH eS S 04 49 23.2 -5.1
LZH sS Sn 04 49 30.8 +2.3
LZH SS SnSn 04 49 50.8 +7.9
LZH pmax pmax
comp=E,26nm,1.0s
LZH pmax pmax
comp=E,240nm,5.6s
LZH LR LR
comp=E,920nm,13.7s
LZH LR LR
comp=E,1μm,13.2s
LZH LR LR
comp=E,2μm,15.7s
CHBT CHBT 20.07 243 P Pn 04 46 03.8 +8.9
comp=E,348nm,1.0s
CMAI Chiengmai2 20.26 266 P Pn 04 46 00.6 +3.3
comp=E,93nm,1.3s
MAJO Matsushiro 20.43 44 eP P 04 45 54.6 -2.3
comp=E,17nm,1.0s
MAT Matsushiro 20.43 44 P Pn 04 45 58.4 -0.6
MAT eS S 04 49 44.2 -0.9
MJB9 Matsu-Tunnel 20.43 44 eP P 04 45 55.3 -1.6
comp=E,17nm,1.0s
MJAR Matsushiro Arr 20.43 44 P P 04 45 55.4 -1.5
comp=E,15nm,0.9s,baz=234,slow=9.1,SNR=24
MJAR LR LR 04 54 26.0
comp=E,193nm,21.9s,baz=235,slow=39
CHTO Chiang Mai 20.61 263 P Pn 04 46 04.0 +2.6
comp=E,58nm,1.3s
CHTO Chiang Mai 20.61 263 eP P 04 45 58.1 -1.0
comp=E,22nm,1.4s
CMAR Chiang Mai Arr 20.71 262 P P 04 46 00.2 +0.1
comp=E,2.0nm,0.5s,baz=66,slow=9.0,SNR=6.8
CMAR LR LR 04 55 36.0
comp=E,393nm,19.1s,baz=76,slow=41
CN2 Changchun 21.22 10 eP P 04 46 08.7 +3.3
CN2 esP sP 04 46 17.4 +5.4
CN2 eS S 04 50 00.4 -0.4
CN2 pmax pmax
comp=E,10.0nm,0.6s
CN2 pmax pmax
comp=E,200nm,3.0s
CN2 LR LR
comp=E,470nm,16.0s
CN2 LR LR
comp=E,270nm,16.0s
CN2 LR LR
comp=E,630nm,17.0s
MRSI Marisa 22.34 176 P P 04 46 21.3 +3.7
MPSI Mapaga 22.45 182 P P 04 46 21.3 +2.6
USRK Ussuriysk Ar. 23.22 21 LR LR 04 56 11.2
comp=E,214nm,19.5s,baz=173,slow=38
APSI Ampana 23.70 177 P P 04 46 32.2 +0.6
GTA Gaotai 24.12 318 P P 04 46 41.7 +6.1
GTA pP sP 04 46 45.4 +3.0
GTA sP pP 04 46 47.7 +7.3
GTA pmax pmax
comp=E,5.0nm,1.2s
GTA pmax pmax
comp=E,69nm,5.0s
GTA LR LR
comp=E,320nm,17.5s
GTA LR LR
comp=E,380nm,18.6s
GTA LR LR
comp=E,620nm,16.8s
LBMI Labuha 24.36 163 P P 04 46 46.3 +8.5
GUMO Guam 24.83 108 P P 04 46 40.2 -1.9
comp=E,82nm,0.7s,baz=221,slow=8.2,SNR=6.2
GUMO LR LR 04 55 39.4
comp=E,181nm,19.6s,baz=284,slow=35
SANI Sanana 25.36 167 P P 04 46 49.3 +2.5
comp=E,37nm,0.9s,comp=E,704nm
SIJI Sorong 25.83 155 P P 04 46 49.2 -1.8
comp=E,17nm,0.6s,baz=0.4,slow=4.7,SNR=10
SHL Shillong 26.27 282 ex P 04 46 56.0 +0.7
SPSI Sidrap Palu 26.72 182 P P 04 47 10.3 +11
ULN Ulaanbaatar 27.15 340 eP P 04 47 03.1 +0.2
comp=E,3.0nm,0.7s
LSA Lhasa 27.18 291 eP P 04 47 03.8 0.0
comp=E,9.3nm,0.4s
SONM Songino Array 27.34 339 P P 04 47 04.9 +0.3
comp=E,5.1nm,1.0s,baz=155,slow=9.1,SNR=9.3
SONM LR LR 04 59 21.6
comp=E,265nm,18.1s,baz=114,slow=40
SONA1 Songino Array 27.34 339 eP P 04 47 04.2 -0.5
KLR Kul'dur 27.71 16 P P 04 47 09.0 +1.2
comp=E,0.1nm,0.4s,baz=198,slow=7.9,SNR=3.9
ASAJ Asahikawa 27.85 35 LR LR 04 58 51.5
comp=E,402nm,19.1s,baz=160,slow=38
FAKI Fak Fak 28.09 155 P P 04 47 12.4 +1.0
comp=E,32nm,0.9s,comp=E,9μm
TPI Tanjungpandan 28.45 208 P P 04 47 05.3 -9.4
PDSI Padang 30.73 222 P P 04 47 39.4 +4.5
comp=E,48nm,1.1s,comp=E,20μm
MDSI Maura Dua 31.59 212 P P 04 47 55.1 +13
JAY Jayapura 32.00 140 LR LR 04 58 39.8
comp=E,192nm,20.6s,baz=335,slow=33
BATI Baumata 33.05 174 LR LR 05 02 14.3
comp=E,105nm,21.1s,baz=116,slow=38
WMQ Urumqi 34.15 316 P P 04 48 06.5 +1.8
WMQ pmax pmax
comp=E,17nm,0.9s
WMQ pmax pmax
comp=E,52nm,4.3s
WMQ LR LR
comp=E,820nm,15.5s
WMQ LR LR
comp=E,520nm,11.9s
WMQ LR LR
comp=E,340nm,17.5s
MK01 Makanchi Array 38.86 317 eP P 04 48 45.0 +0.1
MK31 Makanchi Array 38.87 317 eP P 04 48 45.5 +0.5
MKAR Makanchi Array 38.87 317 P P 04 48 45.5 +0.6
comp=E,2.2nm,0.7s,baz=110,slow=9.8,SNR=18
MKAR PcP **PcP 04 50 55.7 0.0**
comp=E,1.1nm,0.8s,baz=108,slow=4.0,SNR=3.8
ZALV Zalesovo Beam 41.02 328 P P 04 49 02.1 -0.5
comp=E,0.9nm,0.4s,baz=101,slow=7.7,SNR=5.2
ZALV PcP **PcP 04 51 02.4 0.0**
comp=E,0.6nm,0.4s,baz=123,slow=5.3,SNR=2.4
ZALV LR LR 05 06 59.0
comp=E,100nm,18.5s,baz=68,slow=38
ZALV Zalesovo Beam 41.02 328 eP P 04 49 03.0 +0.5
ZALV PcP **PcP 04 51 02.4 0.0**
KSH Kashi 41.14 304 P P 04 49 10.4 +6.4
KSH sP sP 04 49 16.1 +5.2
KSH PP **PnPn 04 50 46.4 +3.1**
KSH S S 04 55 28.7 +12
KSH sS sS 04 55 33.9 +9.1
KSH SS **SS 04 58 23.5 +4.1**
KSH pmax pmax
comp=E,260nm,4.8s
KSH LR LR
comp=E,270nm,8.0s
KSH LR LR
comp=E,220nm,4.4s
KSH LR LR
comp=E,430nm,13.3s
PMG Port Moresby 41.34 138 LR LR 05 03 46.6
comp=E,75nm,21.1s,baz=96,slow=33
PMG Port Moresby 41.34 138 eP P 04 49 03.9 -1.7
comp=E,17nm,0.9s
PALK Pallekele 41.35 254 LR LR 05 08 11.3
comp=E,151nm,18.2s,baz=88,slow=39
KURK Kurchatov 42.72 321 P P 04 49 16.4 -0.1
KURBB Kurchatov Arra 42.73 321 P P 04 49 16.4 -0.2
comp=E,0.4nm,0.3s,baz=123,slow=6.9,SNR=5.3
AAK Ala-Archa 42.84 309 LR LR 05 09 54.3
comp=E,200nm,18.4s,baz=100,slow=40
H11N1 WAKE ISLAND Hy 43.13 85 T T 05 34 22.5
baz=283,slow=74,SNR=18
H11N2 WAKE ISLAND Hy 43.14 85 T T 05 34 23.9
baz=283,slow=74,SNR=18
H11N3 WAKE ISLAND Hy 43.15 85 T T 05 34 21.1
baz=283,slow=74,SNR=23
H11S3 WAKE ISLAND Hy 43.23 87 T T 05 34 44.6
baz=284,slow=74,SNR=26
H11S1 WAKE ISLAND Hy 43.24 87 T T 05 34 45.3
baz=284,slow=74,SNR=11
H11S2 WAKE ISLAND Hy 43.25 87 T T 05 34 46.3
baz=284,slow=74,SNR=16
WRAB Tennant Creek 44.66 161 eP P 04 49 30.3 -2.2
comp=E,7.7nm,0.5s
WRA Warramunga Arr 44.66 161 P P 04 49 30.2 -2.3
comp=E,20nm,0.7s,baz=344,slow=8.6,SNR=124
WRA PcP **PcP 04 51 13.8 -1.3**
comp=E,2.3nm,0.8s,baz=343,slow=3.5,SNR=4.8
AS31 Alice Springs 48.08 163 eP P 04 49 58.0 -1.3
comp=E,3.3nm,0.5s
ASAR Alice Springs 48.08 163 P P 04 49 58.1 -1.2
comp=E,5.3nm,0.5s,baz=354,slow=14,SNR=55
ASAR PcP **PcP 04 51 25.9 -1.2**
comp=E,2.1nm,0.7s,baz=355,slow=3.1,SNR=7.3
AS01 Alice Springs 48.09 163 eP P 04 49 57.8 -1.6
AS01 ePcP **PcP 04 51 25.4 -1.6**
BVAR Borovoye Array 48.31 322 P P 04 50 00.9 +0.1
comp=E,1.1nm,0.6s,baz=114,slow=5.8,SNR=6.6
BVAR PcP **PcP 04 51 27.3 -0.1**
comp=E,0.6nm,0.5s,baz=116,slow=5.3,SNR=2.9
BVAR LR LR 05 09 31.5
comp=E,37nm,20.2s,baz=86,slow=35
BRVK Borovoye 48.38 322 eP P 04 50 01.7 +0.4
comp=E,4.4nm,0.9s
TIXI Tiksi 48.99 3 P P 04 50 04.4 -1.3
comp=E,4.1nm,0.7s,baz=154,slow=5.2,SNR=8.8
TIXI Tiksi 48.99 3 eP P 04 50 04.0 -1.7
comp=E,4.5nm,0.8s
CTA Charters Tower 49.54 148 P P 04 50 08.2 -2.4
comp=E,3.2nm,0.2s,baz=276,slow=7.3,SNR=4.7
CTAO Charters Tower 49.54 148 eP P 04 50 08.9 -1.7
NRIK Noril'sk 50.49 345 LR LR 05 13 16.8
comp=E,78nm,18.4s,baz=182,slow=38
GEYT Alibeck 54.96 301 LR LR 05 18 05.6
comp=E,99nm,18.4s,baz=105,slow=40
AKTO Aktyubinsk 55.30 316 LR LR 05 16 14.4
comp=E,173nm,18.0s,baz=104,slow=38
ARU Arti 55.79 324 LR LR 05 16 40.9
comp=E,68nm,20.3s,baz=142,slow=38
STKA Stephens Creek 58.07 159 P P 04 51 11.4 -1.4
comp=E,1.9nm,0.5s,baz=332,slow=5.4,SNR=9.0
STKA LR LR 05 19 09.4
comp=E,55nm,18.4s,baz=22,slow=39
GNI Garni 65.06 305 LR LR 05 23 56.9
comp=E,42nm,20.4s,baz=86,slow=39
KVAR Kislovodsk Arr 65.95 309 LR LR 05 24 15.9
comp=E,71nm,18.5s,slow=39
IM3 Indian Mountai 67.57 26 eP P 04 52 15.6 -0.1
OBN Obninsk 68.15 322 LR LR 05 24 37.3
comp=E,56nm,19.7s,baz=322,slow=38
TOLK Toolik Lake Re 68.84 23 eP P 04 52 24.1 +0.4
comp=E,6.1nm,0.9s
ARCES ARCESS Array B 70.51 338 P P 04 52 36.4 +2.5
comp=E,3.2nm,0.7s,baz=66,slow=8.9,SNR=16
ILAR Eielson Array 70.60 27 P P 04 52 32.9 -1.7
comp=E,0.6nm,0.7s,baz=247,slow=7.6,SNR=21
ILB Eielson Array 70.60 27 eP P 04 52 35.3 +0.7
SPITS Spitsbergen Ar 70.60 348 P P 04 52 34.5 +0.1
comp=E,5.2nm,0.8s,baz=67,slow=5.2,SNR=8.1
SPITS LR LR 05 29 31.5
comp=E,44nm,18.1s,baz=30,slow=41
FINES FINESS Array B 72.26 330 P P 04 52 44.0 -0.6
comp=E,1.2nm,0.7s,baz=67,slow=6.4,SNR=5.7
EGAK Eagle 72.97 26 eP P 04 52 48.3 -0.5
comp=E,4.4nm,0.7s
KIEV Kiev 73.46 318 eP P 04 52 52.1 +0.2
comp=E,1.7nm,0.6s
BRTR Keskin Array B 73.47 307 P P 04 52 52.6 +0.1
comp=E,0.2nm,0.4s,baz=142,slow=28,SNR=2.2
DAWY Dawson 73.92 27 eP P 04 52 54.3 -0.2
comp=E,6.6nm,0.9s
MMAI Mount Meron Ar 74.03 299 LR LR 05 27 39.3
comp=E,39nm,19.3s,baz=300,slow=38
INK Inuvik 74.61 22 eP P 04 52 57.8 -0.5
comp=E,10.0nm,0.9s
BUR04 Bucovina Ar. S 76.89 316 eP P 04 53 13.1 +1.2
MLR Muntele Rosu 77.13 314 P P 04 53 12.1 -1.2
comp=E,0.2nm,0.3s,baz=167,slow=4.9,SNR=3.7
MLR LR LR 05 29 51.6
comp=E,13nm,18.9s,baz=31,slow=38
DAG Danmarks Havn 77.53 351 iP P 04 53 14.0 -0.8
comp=E,4.0nm,1.1s
HFS Hagfors 78.40 331 P P 04 53 20.8 +0.9
comp=E,3.2nm,0.9s,baz=72,slow=11,SNR=4.0
HFS LR LR 05 31 07.3
comp=E,95nm,19.1s,baz=68,slow=38
NB2 NORSAR Subarra 79.08 332 P P 04 53 23.1 -0.7
comp=Z,1.3nm,0.8s,baz=62,slow=5.9
NOA NORSAR Array B 79.08 332 LR LR 05 31 39.9
comp=Z,91nm,21.0s,baz=60,slow=38
RES Resolute Bay 80.00 9 eP P 04 53 27.9 -0.5
comp=Z,2.9nm,0.8s
VYHS Vyhne 80.55 319 eP P 04 53 32.8 +0.9
GERES GERESS Array B 83.47 320 P P 04 53 47.1 -0.2
comp=Z,0.2nm,0.5s,baz=76,slow=4.1,SNR=3.5
GERES LR LR 05 35 15.5
comp=Z,49nm,21.2s,baz=72,slow=39
SUMG Summit 83.70 354 iP P 04 53 48.4 -0.1
comp=Z,6.3nm,0.8s
YKA Yellowknife Ar 84.36 23 P P 04 53 50.4 -1.0
comp=Z,2.2nm,0.7s,baz=310,slow=4.9,SNR=20
EKA Eskdalemuir Ar 88.56 332 LR LR 05 38 10.5
comp=Z,112nm,18.7s,baz=80,slow=38
NEW Newport 92.36 34 eP P 04 54 28.8 -1.4
comp=Z,4.2nm,1.0s
YBH Yreka Blue Hor 93.07 42 LR LR 05 33 56.4
comp=Z,30nm,21.3s,baz=290,slow=34
FCC Fort Churchill 93.72 17 eP P 04 54 34.6 -1.5
comp=Z,2.8nm,1.2s
FFC Flin Flon 94.52 23 eP P 04 54 39.1 -0.8
comp=Z,0.9nm,0.4s
R11A Troy Canyon, C 99.47 41 eP Pdif 04 55 04.3 +1.4
OTAV Otavalo 150.47 41 ePKPdf PKPdf 05 01 06.5 -0.9
OTAV ePKPbc **PKPbc 05 01 12.8 +0.1**

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*IDC **09** 04:55:54.6±1.3, 8°.48S×110°.81E, h0km, mb3.9/10, mb1 3.9/10, mb1mx3.7/62, mbtmp3.9/10, Error ellipse: s-maj=56.6km s-min=19.2km az=47.0*
*DJA **09** 04:56:09.8±0.4, 9°S±6°×11°1E±°, h83km±6km, M4.2/12, MLv4.2/12*
ISC 09 04:56:06.0±1.2, 8°.8S±0°.1×111°.1E±0°.1, h100km, n25, σ1°76/18, mb3.8/10, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	**Pacitan**	**0.56**	**9**	P	Pn	04 56 25.8	+3.6
PCJI				S	**Sn**	**04 56 37.0**	**+2.7**
UGM	**Wanagama**	**1.00**	**326**	P	Pn	04 56 31.5	+5.0
UGM				S	Sn	04 56 47.7	+5.8
NGJI	**Ngawi**	**1.42**	**15**	P	**Pn**	**04 56 33.7**	**+2.4**
TBJI	**Tambak Boyo**	**2.06**	**21**	P	**Pn**	**04 56 39.7**	**+0.3**
GRJI	**Gresik**	**2.28**	**37**	P	**Pn**	**04 56 41.8**	**-0.5**
GMJI	**Gumukmas**	**2.38**	**79**	P	**Pn**	**04 56 43.5**	**+0.1**
KPJI	**Karang Pucung**	**2.56**	**303**	P	Pn	04 56 52.4	+6.5
BLJI	**Banyuglugur**	**2.67**	**68**	P	**Pn**	**04 56 46.9**	**-0.5**
CMJI	**Cimerak**	**2.78**	**290**	P	Pn	04 56 55.0	+6.1
JAGI	**Jajag, Banyuwa**	**3.04**	**85**	P	**Pn**	**04 56 52.2**	**-0.1**
SRBI	**Singaraja**	**4.13**	**81**	P	**Pn**	**04 57 06.4**	**-0.6**
WRA	**Warramunga Arr**	**25.09**	**119**	P	**P**	**05 01 23.4**	**+1.9**
	0.4nm,0.9s,baz=296,slow=11,SNR=5.6						
ASAR	**Alice Springs**	**26.39**	**127**	P	**P**	**05 01 37.9**	**+4.5**
	0.1nm,0.3s,baz=305,slow=9.2,SNR=4.2						
H08S2	**Diego Garcia H**	**38.21**	**269**	T	T	05 44 41.3	
	baz=96						
H08S3	**Diego Garcia H**	**38.22**	**269**	T	T	05 44 41.4	
	baz=96						
H08S1	**Diego Carcia H**	**38.23**	**269**	T	T	05 44 38.4	
	baz=96						
KSRS	**Korea Array**	**48.59**	**18**	P	**P**	**05 04 38.5**	**-0.8**
	0.7nm,0.6s,baz=198,slow=8.6,SNR=3.8						
SONM	**Songino Array**	**56.49**	**356**	P	**P**	**05 05 36.1**	**-1.6**
	1.2nm,0.5s,baz=180,slow=7.9,SNR=3.8						
MKAR	**Makanchi Array**	**60.96**	**338**	P	**P**	**05 06 08.0**	**-0.6**
	2.0nm,0.3s,baz=152,slow=7.1,SNR=39						
KURBB	**Kurchatov Arra**	**65.53**	**338**	P	**P**	**05 06 37.8**	**-0.9**
	0.5nm,0.4s,baz=156,slow=5.1,SNR=5.3						
ZALV	**Zalesovo Beam**	**66.29**	**343**	P	**P**	**05 06 41.9**	**-1.5**
	2.1nm,0.4s,baz=162,slow=4.3,SNR=5.0						
BVAR	**Borovoye Array**	**70.59**	**335**	P	**P**	**05 07 09.4**	**-0.9**
	1.2nm,0.7s,baz=123,slow=7.3,SNR=6.0						
AKTO	**Aktyubinsk**	**74.72**	**328**	P	**P**	**05 07 34.4**	**-0.4**
	1.4nm,0.6s,baz=71,slow=6.6,SNR=6.4						
BRTR	**Keskin Array B**	**86.02**	**311**	P	**P**	**05 08 34.9**	**-0.8**
	0.4nm,0.6s,baz=101,slow=7.5,SNR=2.9						
TXAR	**Lajitas Array**	**141.52**	**53**	PKhKP	PKPpre	05 15 21.9	
	0.1nm,0.3s,baz=194,slow=3.3,SNR=3.6						

NNC 09 05:08:33.8±2.8, 54°.45N×83°.36E, h0km, mb3.6, mpv3.1, 4C-4D, Error ellipse: s-maj=28.1km s-min=7.5km az=0.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**0.99**	**120**	⇓P	Pg	05 08 52.3	-0.5
	9.5nm,0.6s						
ZAA0				⇓S	Sb	05 09 06.8	-0.6
	34nm,0.5s						
KURK	**Kurchatov**	**4.73**	**220**	⇓Pn	Pn	05 09 49.2	+3.0

	3.9nm,0.7s						
KURK			⇑Sn	Sn	05 10 41.8	0.0
	3.2nm,1.2s						
KURK			⇑Lg	Lg	05 11 05.5	
	4.2nm,0.6s						
KURBB	**Kurchatov Arra**	**4.83 220**	⇑Pn	Pn	05 09 49.2	+1.5
	2.3nm,0.8s,baz=40,slow=15						
KURBB			⇑Sn	Sn	05 10 44.4	0.0
	3.9nm,0.7s						
KURBB			⇓Lg	Lg	05 11 08.4	
	6.7nm,0.6s,baz=38,slow=32						

MEX 09 05:15:32.9±0.3, 23°.51N×110°.06W, h20km, MD3.6, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	**La Paz**	**0.63**	**339**	*e*P	Pb	05 15 43.2	-2.1
	baz=159,slow=3.7						
LPIG				*e*S	Sb	05 15 51.2	-2.4

*STR **09** 05:47:17.2±4.3, 45°.N±16°×1°.2E±3°.6, h5km, M3.4/6, mb3.2/1, MLv3.5/6*
*ROM **09** 05:47:20.3±0.0, 44°.852N±0°.001×11°.281E±0°.001, h9km, ML3.0/17*
*ISCJB **09** 05:47:20.1±0.3, 44°.81N±0°.02×11°.28E±0°.03, h19km±1km, Error ellipse: s-maj=4.0km s-min=2.5km az=146.0*
*CSEM **09** 05:47:20.3±0.1, 44°.89N×11°.31E, h10km, ML3.0/26, Error ellipse: s-maj=3.7km s-min=2.3km az=137.0*
*LDG **09** 05:47:20.9±0.1, 44°.86N×11°.39E, h2km, Ml3.0/22, Error ellipse: s-maj=2.9km s-min=1.7km az=89.0*
*PRU **09** 05:47:22.1, 44°.93N×11°.30E, h10km*
ISC 09 05:47:20.5±0.7, 44°.88N±0°.02×11°.29E±0°.01, h15km±3km, n172, σ1°.13/260, 14C-20D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0800	**Massa Finalese**	**0.04**	**226**	⇑*i*P	**Pg**	**05 47 22.2**	**-1.1**
T0800				⇑*i*S	**Sg**	**05 47 24.4**	**-0.7**
T0800	**Massa Finalese**	**0.04**	**226**	*i* P	**Pg**	**05 47 22.2**	**-1.1**
T0800				*i* S	**Sg**	**05 47 24.4**	**-0.7**
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0805	**Bondeno (FE)**	**0.05**	**30**	⇓*i*P	**Pg**	**05 47 22.8**	**-0.6**
T0805	**Bondeno (FE)**	**0.05**	**30**	*i* P	**Pg**	**05 47 22.8**	**-0.6**
T0822	**Casumaru (Bond**	**0.06**	**138**	⇑*i*P	**Pg**	**05 47 22.5**	**-1.0**
T0822				⇑*i*S	**Sg**	**05 47 24.9**	**-0.4**
T0822	**Casumaru (Bond**	**0.06**	**138**	*i* P	**Pg**	**05 47 22.5**	**-1.0**
T0822				*i* S	**Sg**	**05 47 24.9**	**-0.4**
T0822				AML	AML		
	comp=E,56150μm,0.2s						
T0822				AML	AML		
T0822				AML	AML		
	comp=E,56150μm,0.2s						
T0822				AML	AML		
T0822				AML	AML		
	comp=E,56150μm,0.2s						
T0822				AML	AML		
T0822				AML	AML		
	comp=E,56150μm,0.2s						
T0822				AML	AML		
T0813	**Massa Finalese**	**0.06**	**271**	⇓*i*P	**Pg**	**05 47 22.7**	**-0.8**
T0813				⇓*i*S	**Sg**	**05 47 25.2**	**-0.2**
T0813	**Massa Finalese**	**0.06**	**271**	*i* P	**Pg**	**05 47 22.7**	**-0.8**
T0813				*i* S	**Sg**	**05 47 25.2**	**-0.2**
T0802	**SanFelice sul**	**0.08**	**268**	⇓*i*P	**Pg**	**05 47 22.9**	**-0.7**
T0802				⇓*i*S	**Sg**	**05 47 25.4**	**-0.2**
T0802	**SanFelice sul**	**0.08**	**268**	*i* P	**Pg**	**05 47 22.9**	**-0.7**
T0802				*i* S	**Sg**	**05 47 25.4**	**-0.2**
T0811	**Palata Pepoli**	**0.10**	**206**	⇓*i*P	**Pg**	**05 47 22.9**	**-1.0**
T0811				⇓*i*S	**Sg**	**05 47 25.7**	**-0.3**
T0811	**Palata Pepoli**	**0.10**	**206**	*i* P	**Pg**	**05 47 22.9**	**-1.0**
T0811				*i* S	**Sg**	**05 47 25.7**	**-0.3**
T0812	**Loc. Stoppiaro**	**0.11**	**315**	⇓*i*P	**Pg**	**05 47 23.7**	**-0.3**
T0812				⇓*i*S	**Sg**	**05 47 27.5**	**+1.3**
T0812	**Loc. Stoppiaro**	**0.11**	**315**	*i* P	**Pg**	**05 47 23.7**	**-0.3**
T0812				*i* S	**Sg**	**05 47 27.6**	**+1.3**
T0803	**Dosso, Cento (**	**0.12**	**158**	⇓*i*P	**Pg**	**05 47 23.2**	**-0.9**
T0803				⇓*i*S	**Sg**	**05 47 26.3**	**0.0**
T0803	**Dosso, Cento (**	**0.12**	**158**	*i* P	**Pg**	**05 47 23.2**	**-0.9**
T0803				*i* S	**Sg**	**05 47 26.3**	**0.0**
SERM	**Sermide**	**0.13**	**2**	*e*P	**Pg**	**05 47 24.5**	**+0.2**
SERM	**Sermide**	**0.13**	**2**	*e*P	**Pg**	**05 47 24.5**	**+0.2**
SERM				AML	AML		
	comp=E,4185μm,0.3s						
SERM				AML	AML		
	comp=N,4445μm,0.5s						
SERM				AML	AML		
	comp=E,4185μm,0.3s						
SERM				AML	AML		
	comp=N,4445μm,0.5s						
SERM				AML	AML		
	comp=E,4185μm,0.3s						
SERM				AML	AML		
	comp=N,4445μm,0.5s						
SERM				AML	AML		
	comp=N,4445μm,0.5s						
SERM				AML	AML		
	comp=E,4185μm,0.3s						
T0817	**Loc. Veratica,**	**0.17**	**46**	⇑*e*P	**Pg**	**05 47 24.8**	**+0.1**
T0817	**Loc. Veratica,**	**0.17**	**46**	*e*P	**Pg**	**05 47 24.8**	**+0.1**
RAVA	**Ravarino**	**0.17**	**225**	⇑*i*P	**Pg**	**05 47 24.5**	**-0.3**
RAVA				⇑*i*S	**Sg**	**05 47 28.7**	**+1.1**
RAVA	**Ravarino**	**0.17**	**225**	*i* P	**Pg**	**05 47 24.5**	**-0.3**
RAVA				*i* S	**Sg**	**05 47 28.7**	**+1.1**
RAVA				AML	AML		
	comp=E,64550μm,0.2s						
RAVA				AML	AML		
	comp=N,39250μm,0.3s						
RAVA				AML	AML		
	comp=E,64600μm,0.2s						
RAVA				AML	AML		
	comp=N,39200μm,0.3s						
RAVA				AML	AML		
	comp=E,64600μm,0.2s						
RAVA				AML	AML		
	comp=N,39200μm,0.3s						
RAVA				AML	AML		
	comp=E,64600μm,0.2s						
RAVA				AML	AML		
	comp=N,39200μm,0.3s						
T0821	**Loc. Casaglia**	**0.18**	**82**	*e*P	**Pg**	**05 47 24.3**	**-0.6**
T0821	**Loc. Casaglia**	**0.18**	**82**	*e*P	**Pg**	**05 47 24.3**	**-0.6**
T0821				AML	AML		
	comp=E,3590μm,1.2s						
T0821				AML	AML		
	comp=N,4125μm,1.6s						
T0821				AML	AML		
	comp=E,3595μm,1.3s						
T0821				AML	AML		
	comp=N,4150μm,0.7s						
T0821				AML	AML		
	comp=E,3590μm,1.2s						
T0821				AML	AML		
	comp=N,4125μm,1.6s						
T0821				AML	AML		
	comp=E,3595μm,1.3s						
T0821				AML	AML		
	comp=N,4145μm,0.7s						
T0821				AML	AML		
	comp=E,3590μm,1.2s						
T0821				AML	AML		
	comp=E,3595μm,1.3s						
T0821				AML	AML		
	comp=N,4125μm,1.6s						
T0821				AML	AML		
	comp=N,4145μm,0.7s						
T0823	**Castello D'Arg**	**0.19**	**183**	⇓*i*P	**Pg**	**05 47 24.6**	**-0.4**
T0823				⇓*i*S	**Sg**	**05 47 29.2**	**+1.1**
T0823	**Castello D'Arg**	**0.19**	**183**	*i* P	**Pg**	**05 47 24.6**	**-0.4**
T0823				*i* S	**Sg**	**05 47 29.2**	**+1.1**
T0820	**Chiesuol del F**	**0.22**	**113**	AML	AML		
	comp=N,7610μm,0.4s						
T0820				AML	AML		
	comp=E,8485μm,0.4s						
T0820				AML	AML		
	comp=N,7675μm,0.4s						
T0820				AML	AML		
	comp=E,9120μm,0.4s						
T0820				AML	AML		
	comp=N,7615μm,0.4s						
T0820				AML	AML		
	comp=E,8485μm,0.4s						
T0820				AML	AML		
	comp=N,7675μm,0.4s						
T0820				AML	AML		
	comp=E,9115μm,0.4s						
T0820				AML	AML		
	comp=N,7610μm,0.4s						
T0820				AML	AML		
	comp=E,8485μm,0.4s						
T0820				AML	AML		
	comp=E,9115μm,0.4s						
T0820				AML	AML		
	comp=N,7675μm,0.4s						
T0814	**Loc. Cortile,**	**0.24**	**250**	⇑*i*P	**Pg**	**05 47 25.8**	**-0.1**
T0814				⇑*i*S	**Sg**	**05 47 31.3**	**+1.8**
T0814	**Loc. Cortile,**	**0.24**	**250**	*i* P	**Pg**	**05 47 25.8**	**-0.1**
T0814				*i* S	**Sg**	**05 47 31.3**	**+1.8**
T0827	**Moglia (MN)**	**0.26**	**284**	⇑*e*P	**Pb**	**05 47 26.7**	**-0.2**
T0827	**Moglia (MN)**	**0.26**	**284**	*e*P	**Pb**	**05 47 26.7**	**-0.2**
T0827				*e*S	**Sb**	**05 47 33.2**	**+2.0**
T0828	**Loc. Fossoli,**	**0.27**	**260**	⇑*e*P	**Pg**	**05 47 26.3**	**-0.1**
T0828				⇑*e*S	**Sb**	**05 47 32.3**	**+0.9**
T0828	**Loc. Fossoli,**	**0.27**	**260**	*e*P	**Pg**	**05 47 26.3**	**-0.1**
T0828				*e*S	**Sb**	**05 47 32.3**	**+0.9**
GAZZ	**Gazzo Veronese**	**0.27**	**330**	⇑*e*Pg	**Pb**	**05 47 27.1**	**-0.1**
GAZZ	**Gazzo Veronese**	**0.27**	**330**	*e*Pg	**Pb**	**05 47 27.0**	**-0.1**
T0824	**Loc. Limidi di**	**0.28**	**246**	⇑*e*P	**Pg**	**05 47 26.6**	**0.0**
T0824	**Loc. Limidi di**	**0.28**	**246**	*e*P	**Pg**	**05 47 26.6**	**0.0**
T0815	**Correggio (RE)**	**0.31**	**91**	*e*P	**Pb**	**05 47 27.7**	**0.0**
T0815	**Correggio (RE)**	**0.31**	**91**	*e*P	**Pb**	**05 47 27.7**	**0.0**
T0815				*e*S	**Sb**	**05 47 34.2**	**+1.7**
NOVE	**Novellara**	**0.41**	**259**	AML	AML		
	comp=E,1585μm,1.0s						
NOVE				AML	AML		
	comp=E,1590μm,1.0s						
NOVE				AML	AML		
	comp=N,1760μm,0.6s						
NOVE				AML	AML		
	comp=N,1760μm,0.6s						
NOVE				AML	AML		
	comp=N,1760μm,0.6s						
NOVE				AML	AML		
	comp=E,1585μm,1.0s						
TEOL	**Teolo**	**0.55**	**29**	⇓*e*Pg	**Pb**	**05 47 31.9**	**0.0**
TEOL				*e*Sg	**Sb**	**05 47 40.7**	**+1.1**
TEOL	**Teolo**	**0.55**	**29**	⇓*e*P	**Pb**	**05 47 31.9**	**0.0**
TEOL				*e*Sg	**Sb**	**05 47 40.7**	**+1.1**
TEOL	**Teolo**	**0.55**	**29**	*e*P	**Pb**	**05 47 31.9**	**0.0**
TEOL				AML	AML		
	comp=E,2730μm,0.4s						
TEOL				AML	AML		
	comp=N,2315μm,0.5s						
TEOL				AML	AML		
	comp=E,2730μm,0.4s						
TEOL				AML	AML		
	comp=N,2315μm,0.5s						
TEOL				AML	AML		
	comp=E,2730μm,0.4s						
TEOL				AML	AML		
	comp=N,2315μm,0.5s						
IMOL	**Imola, Italy**	**0.61**	**148**	AML	AML		
	comp=N,1530μm,1.0s						
IMOL				AML	AML		
	comp=E,1500μm,0.7s						
IMOL				AML	AML		
	comp=N,1535μm,1.0s						
IMOL				AML	AML		
	comp=E,1500μm,0.7s						
IMOL				AML	AML		
	comp=E,1500μm,0.6s						
IMOL				AML	AML		
	comp=N,1535μm,1.0s						
IMOL				AML	AML		
	comp=E,236μm,0.7s						
IMOL				AML	AML		
	comp=N,208μm,0.6s						
IMOL				AML	AML		
	comp=N,208μm,0.6s						
IMOL				AML	AML		
	comp=E,236μm,0.7s						
IMOL				AML	AML		
	comp=E,1500μm,0.6s						
IMOL				AML	AML		
	comp=N,1535μm,1.0s						
MARN	**Marana (Italy)**	**0.76**	**356**	⇓*e*Pg	**Pg**	**05 47 35.5**	**+0.1**
MARN				*e*Sg	**Sn**	**05 47 48.9**	**+0.9**
MARN	**Marana (Italy)**	**0.76**	**356**	*e*Pg	**Pg**	**05 47 35.5**	**+0.1**
MARN				*e*Sg	**Sn**	**05 47 48.9**	**+0.9**
ROVR	**Rover˜¤ Verone**	**0.79**	**349**	AML	AML		
	comp=E,1274μm,0.9s						
ROVR				AML	AML		
	comp=N,2245μm,0.4s						
ROVR				AML	AML		
	comp=E,1274μm,0.9s						
ROVR				AML	AML		
	comp=N,2245μm,0.4s						
ROVR				AML	AML		
	comp=N,2245μm,0.4s						
ROVR				AML	AML		
	comp=E,1274μm,0.9s						
BALD	**Monte Baldo**	**0.87**	**338**	⇓*e*Pg	**Pb**	**05 47 37.9**	**+0.4**
BALD				*e*Sg	**Sn**	**05 47 52.6**	**+1.6**
BALD	**Monte Baldo**	**0.87**	**338**	*e*Pg	**Pb**	**05 47 37.9**	**+0.4**
BALD				*e*Sg	**Sn**	**05 47 52.6**	**+1.6**
SALO	**Salr**	**0.92**	**324**	AML	AML		
	comp=E,2695μm,1.3s						
SALO				AML	AML		
	comp=E,2695μm,1.3s						
SALO				AML	AML		
	comp=N,3015μm,1.2s						
SALO				AML	AML		
	comp=N,3015μm,1.2s						
SALO				AML	AML		
	comp=N,3015μm,1.2s						
SALO				AML	AML		
	comp=E,2695μm,1.3s						
DOSS	**Dosso del Somm**	**1.01**	**356**	⇓*e*Pg	**Pg**	**05 47 39.8**	**-0.3**
DOSS				*e*Sg	**Sn**	**05 47 55.1**	**+0.9**
DOSS	**Dosso del Somm**	**1.01**	**356**	*e*Pg	**Pg**	**05 47 39.8**	**-0.3**
DOSS				*e*Sg	**Sn**	**05 47 55.1**	**+0.9**
MAGA	**Magasa**	**1.01**	**333**	AML	AML		
	comp=N,7345μm,0.4s						
MAGA				AML	AML		
	comp=E,9515μm,0.5s						
MAGA				AML	AML		
	comp=N,7345μm,0.4s						
MAGA				AML	AML		
	comp=E,9515μm,0.5s						
MAGA				AML	AML		
	comp=N,7345μm,0.4s						
MAGA				AML	AML		
	comp=E,9515μm,0.5s						
CGRP	**Cima Grappa**	**1.07**	**20**	⇓*e*Pg	**Pg**	**05 47 41.0**	**-0.2**
CGRP				*e*Sg	**Sn**	**05 47 57.0**	**+1.3**
CGRP	**Cima Grappa**	**1.07**	**20**	*e*Pg	**Pg**	**05 47 41.0**	**-0.2**
CGRP				*e*Sg	**Sn**	**05 47 57.0**	**+1.3**
CGRP	**Cima Grappa**	**1.07**	**20**	AML	AML		
	comp=E,676μm,0.6s						
CGRP				AML	AML		
	comp=E,676μm,0.6s						
CGRP				AML	AML		
	comp=N,602μm,0.7s						
CGRP				AML	AML		
	comp=E,676μm,0.6s						
CGRP				AML	AML		
	comp=N,602μm,0.7s						
CGRP				AML	AML		
	comp=N,602μm,0.7s						
MTLO	**Montello**	**1.10**	**31**	*e*Pg	**Pb**	**05 47 41.6**	**+0.4**
MTLO				*e*Sg	**Sn**	**05 47 57.2**	**+1.0**
MTLO	**Montello**	**1.10**	**31**	*e*Pg	**Pb**	**05 47 41.6**	**+0.4**
MTLO				*e*Sg	**Sn**	**05 47 57.2**	**+1.0**
PANI	**Panarotta**	**1.17**	**2**	*e*Pg	**Pg**	**05 47 42.1**	**-1.1**
PANI	**Panarotta**	**1.17**	**2**	*e*Pg	**Pg**	**05 47 42.1**	**-1.1**
RNI	**Roncone**	**1.20**	**337**	*e*Pg	**Pb**	**05 47 42.8**	**-0.2**
RNI	**Roncone**	**1.20**	**337**	*e*Pg	**Pb**	**05 47 42.8**	**-0.2**
VARN	**Col Varnada, M**	**1.25**	**27**	⇓*e*Pg	**Pn**	**05 47 43.8**	**+0.2**
VARN	**Col Varnada, M**	**1.25**	**27**	*e*Pg	**Pn**	**05 47 43.8**	**+0.2**
MABI	**Malga Bissina**	**1.30**	**335**	AML	AML		
	comp=E,235μm,1.6s						
MABI				AML	AML		
	comp=E,235μm,1.6s						
MABI				AML	AML		
	comp=N,277μm,0.7s						
MABI				AML	AML		
	comp=N,277μm,0.7s						
BOB	**Bobbio (Coli)**	**1.31**	**266**	AML	AML		
	comp=E,385μm,0.9s						
BOB				AML	AML		
	comp=E,385μm,0.9s						
BOB				AML	AML		
	comp=N,434μm,1.6s						
BOB				AML	AML		
	comp=N,434μm,1.6s						
CAE	**Caneva**	**1.39**	**35**	*e*Pg	**Pn**	**05 47 45.0**	**-0.4**
CAE	**Caneva**	**1.39**	**35**	*e*Pg	**Pn**	**05 47 45.0**	**-0.4**
OZOL	**Ozolo**	**1.54**	**354**	*e*Pg	**Pn**	**05 47 47.5**	**0.0**
OZOL	**Ozolo**	**1.54**	**354**	*e*Pg	**Pn**	**05 47 47.5**	**0.0**
NARO	**Abbazia di Nar**	**1.57**	**143**	AML	AML		
	comp=N,170μm,1.0s						
NARO				AML	AML		
	comp=E,168μm,0.9s						
NARO				AML	AML		
	comp=E,168μm,0.9s						
NARO				AML	AML		
	comp=N,170μm,1.0s						
NARO				AML	AML		
	comp=N,170μm,1.0s						
NARO				AML	AML		
	comp=E,168μm,0.9s						
KOSI	**Kohlern**	**1.59**	**2**	AML	AML		
	comp=N,422μm,0.8s						
KOSI				AML	AML		
	comp=E,266μm,0.9s						
KOSI				AML	AML		
	comp=N,422μm,0.8s						
KOSI				AML	AML		
	comp=E,266μm,0.9s						
APPI	**Appiano**	**1.60**	**358**	AML	AML		
	comp=E,436μm,1.2s						
APPI				AML	AML		
	comp=N,356μm,0.4s						
APPI				AML	AML		
	comp=E,436μm,1.2s						
APPI				AML	AML		
	comp=N,356μm,0.4s						
CARE	**Lago del Cares**	**1.60**	**345**	*e*Pg	**Pn**	**05 47 49.0**	**+0.4**
CARE	**Lago del Cares**	**1.60**	**345**	*e*Pg	**Pn**	**05 47 49.0**	**+0.4**
CIMO	**Cimolais**	**1.65**	**29**	*e*Pg	**Pn**	**05 47 49.0**	**+0.1**
CIMO	**Cimolais**	**1.65**	**29**	*e*Pg	**Pn**	**05 47 49.0**	**+0.1**
STAL	**STALIGIAL**	**1.71**	**35**	AML	AML		
	comp=N,398μm,0.3s						
STAL				AML	AML		
	comp=E,330μm,0.3s						
STAL				AML	AML		
	comp=N,398μm,0.3s						
STAL				AML	AML		
	comp=E,380μm,0.8s						
STAL				AML	AML		
	comp=N,439μm,1.5s						
STAL				AML	AML		
	comp=E,380μm,0.8s						
STAL				AML	AML		
	comp=N,439μm,1.5s						
STAL				AML	AML		
	comp=E,330μm,0.3s						
BRMO	**Bormio**	**1.72**	**338**	AML	AML		
	comp=N,168μm,0.6s						
BRMO				AML	AML		
	comp=E,152μm,1.0s						
BRMO				AML	AML		
	comp=N,168μm,0.6s						
BRMO				AML	AML		
	comp=E,152μm,1.0s						
MOSI	**Grossmontoni**	**1.81**	**344**	AML	AML		
	comp=E,512μm,0.8s						
MOSI				AML	AML		
	comp=E,512μm,0.8s						
MOSI				AML	AML		
	comp=N,636μm,0.7s						
MOSI				AML	AML		
	comp=N,636μm,0.7s						
ABSI	**Aberstueckl**	**1.85**	**1**	AML	AML		
	comp=E,507μm,0.5s						
ABSI				AML	AML		
	comp=E,507μm,0.5s						
ABSI				AML	AML		
	comp=N,498μm,0.5s						
ABSI				AML	AML		
	comp=N,498μm,0.5s						
VINO	**Villanova**	**1.96**	**45**	AML	AML		
	comp=E,144μm,0.5s						
VINO				AML	AML		
	comp=N,200μm,0.6s						
VINO				AML	AML		
	comp=N,200μm,0.6s						
VINO				AML	AML		
	comp=E,144μm,0.5s						
PCP	**Piancastagn**	**1.98**	**261**	AML	AML		
	comp=N,97μm,0.3s						
PCP				AML	AML		
	comp=E,105μm,1.6s						
PCP				AML	AML		
	comp=E,105μm,1.6s						
PCP				AML	AML		
	comp=N,97μm,0.3s						
ABTA	**Abfaltersbach**	**2.06**	**24**	*e*Pn	**Pn**	**05 47 56.2**	**+1.6**
	comp=N,0.3nm,0.1s						
ABTA				*e*Pg	**Pg**	**05 47 59.6**	**-0.4**
	comp=N,7.3nm,0.3s,SNR=13						
ABTA				*e*Sg	**Sg**	**05 48 26.6**	**-0.1**
	comp=N,36nm,0.5s						
ABTA	**Abfaltersbach**	**2.06**	**24**	Pn	**Pn**	**05 47 56.2**	**+1.6**
	comp=N,0.3nm,0.1s						
FETA	**Feichten**	**2.18**	**350**	*e*Pn	**Pb**	**05 47 59.3**	**-0.5**
	comp=N,5.5nm,0.7s						
FETA				*e*Pg	**Pg**	**05 48 01.8**	**-0.6**
	comp=N,3.5nm,0.2s,SNR=8.3						
FETA				*e*Sg	**Sg**	**05 48 30.0**	**-0.7**
	comp=N,8.6nm,0.3s						
FETA	**Feichten**	**2.18**	**350**	Pn	**Pb**	**05 47 59.3**	**-0.5**
	comp=N,5.5nm,0.7s						
FETA	**Feichten**	**2.18**	**350**	Pg	**Pg**	**05 48 01.8**	**-0.6**
	comp=N,3.5nm,0.2s,SNR=8.3						
FETA				Sg	**Sg**	**05 48 30.0**	**-0.7**
	comp=N,8.6nm,0.3s						
WTTA	**Wattenberg**	**2.40**	**6**	*e*Pg	**Pg**	**05 48 05.4**	**-1.2**
	comp=N,12nm,0.3s,SNR=10						
WTTA				*e*Sg	**Sg**	**05 48 37.7**	**0.0**
	comp=N,42nm,0.6s						
WTTA	**Wattenberg**	**2.40**	**6**	Pg	**Pb**	**05 48 04.0**	**+0.5**
WTTA				Sg	**Sg**	**05 48 36.7**	**-1.0**
MYKA	**Terra Mystica**	**2.41**	**42**	*e*Pg	**Pg**	**05 48 06.1**	**-0.6**
	comp=N,2.3nm,0.1s						
MYKA				*i* Sn	**Sn**	**05 48 30.7**	**+2.1**
	comp=N,8.0nm,0.3s						
MYKA				*e*Sg	**Sg**	**05 48 38.7**	**+0.8**
	comp=N,24nm,0.4s						
MYKA	**Terra Mystica**	**2.41**	**42**	Pg	**Pg**	**05 48 06.1**	**-0.6**
	comp=N,2.3nm,0.1s						
MYKA				Sn	**Sn**	**05 48 30.7**	**+2.1**
	comp=N,8.0nm,0.3s						
MYKA				Sg	**Sg**	**05 48 38.7**	**+0.8**
	comp=N,24nm,0.4s						
MOTA	**Moosalm**	**2.47**	**357**	*e*Pn	**Pn**	**05 48 02.1**	**+1.7**
	comp=N,3.4nm,0.3s						
MOTA				*e*Pg	**Pb**	**05 48 05.9**	**+1.2**
	comp=N,15nm,0.3s,SNR=11						
MOTA	**Moosalm**	**2.47**	**357**	Pn	**Pn**	**05 48 02.1**	**+1.7**
	comp=N,3.4nm,0.3s						
NVLJ	**Novalja**	**2.57**	**96**	*e*Pn	**Pn**	**05 48 00.5**	**-1.1**
NVLJ				Sn	**Sn**	**05 48 32.0**	**-0.5**
NVLJ	**Novalja**	**2.57**	**96**	*e*Pn	**Pn**	**05 48 00.4**	**-1.1**
NVLJ				Sn	**Sn**	**05 48 32.0**	**-0.5**
DAVA	**Damuels**	**2.60**	**338**	*e*Pn	**Pb**	**05 48 05.3**	**-1.6**
	comp=N,5.8nm,0.3s						
DAVA				*e*Sn	**Sn**	**05 48 36.9**	**+3.3**
	comp=N,11nm,0.2s						

DAVA	**Damuels**	**2.60**	**338**	Pn		**Pb**	**05 48 05.3**	**-1.6**
	comp=N,5.8nm,0.3s							
DAVA				Sn		**Sn**	**05 48 36.9**	**+3.3**
	comp=N,11nm,0.2s							
KBA	**Koelnbreinsper**	**2.63**	**32**	*e*Pn		**Pg**	**05 48 09.9**	**-1.0**
	comp=N,10nm,0.3s,SNR=9.7							
KBA				*e*Sg		**Sg**	**05 48 44.3**	**-0.6**
	comp=N,31nm,0.5s							
OBKA	**Obir**	**2.81**	**53**	*e*Pg		**Pg**	**05 48 13.7**	**-0.7**
	comp=N,6.4nm,0.5s							
OBKA				Sg		**Sg**	**05 48 50.9**	**+0.2**
	comp=N,37nm,0.6s							
OBKA	**Obir**	**2.81**	**53**	Pg		**Pg**	**05 48 13.7**	**-0.7**
	comp=N,6.4nm,0.5s							
OBKA				Sg		**Sg**	**05 48 50.9**	**+0.2**
	comp=N,37nm,0.6s							
PGF	**Pioggiola**	**2.86**	**216**	*e*Pn		**Pn**	**05 48 06.3**	**+0.7**
	SNR=1.0							
PGF				*e*Sn		**Sn**	**05 48 39.2**	**-0.6**
	comp=N,40nm,0.7s,SNR=1.0							
PGF	**Pioggiola**	**2.86**	**216**	*e*Pn		**Pn**	**05 48 06.3**	**+0.7**
	SNR=1.0							
PGF				*e*Sn		**Sn**	**05 48 39.2**	**-0.6**
	comp=N,20nm,0.7s,SNR=1.0							
SBF	**Sospel**	**2.94**	**251**	*e*Pn		**Pn**	**05 48 07.4**	**+0.6**
	SNR=1.0							
SBF				*e*Sn		**Sn**	**05 48 42.1**	**+0.3**
	comp=N,15nm,0.3s,SNR=1.0							
SBF	**Sospel**	**2.94**	**251**	*e*Pn		**Pn**	**05 48 07.4**	**+0.6**
	SNR=1.0							
SBF				*e*Sn		**Sn**	**05 48 42.1**	**+0.3**
	comp=N,7.4nm,0.3s,SNR=1.0							
SOKA	**Soboth**	**3.18**	**54**	*i* Sn		**Sn**	**05 48 49.5**	**+1.8**
	comp=N,6.2nm,0.4s							
SOKA				*e*Sg		**Sg**	**05 49 01.7**	**-0.9**
	comp=N,9.9nm,0.5s							
SOKA	**Soboth**	**3.18**	**54**	Sn		**Sn**	**05 48 49.5**	**+1.8**
	comp=N,6.2nm,0.4s							
SOKA				Sg		**Sg**	**05 49 01.7**	**-0.9**
	comp=N,9.9nm,0.5s							
SURF	**Saint Ours**	**3.22**	**264**	P		**Pn**	**05 48 11.1**	**+0.5**
SURF	**Saint Ours**	**3.22**	**264**	P		**Pn**	**05 48 11.1**	**+0.5**
MBDF	**Montbardon**	**3.22**	**269**	*e*Pn		**Pn**	**05 48 11.4**	**+0.8**
	SNR=1.0							
MBDF				*e*Sn		**Sn**	**05 48 49.1**	**+0.3**
	comp=N,20nm,0.6s,SNR=1.0							
MBDF	**Montbardon**	**3.22**	**269**	*e*Pn		**Pn**	**05 48 11.4**	**+0.8**
	SNR=1.0							
MBDF				*e*Sn		**Sn**	**05 48 49.1**	**+0.3**
	comp=N,9.8nm,0.6s,SNR=1.0							
LPG	**La Plagne**	**3.27**	**283**	*e*Pn		**Pn**	**05 48 12.3**	**+0.9**
	SNR=1.0							
LPG				*e*Sn		**Sn**	**05 48 51.2**	**+1.0**
	comp=N,7.4nm,0.3s							
LPG	**La Plagne**	**3.27**	**283**	*e*Pn		**Pn**	**05 48 12.3**	**+0.9**
	SNR=1.0							
LPG				*e*Sn		**Sn**	**05 48 51.2**	**+1.0**
	comp=N,3.7nm,0.3s							
LPL	**La Plagne**	**3.28**	**283**	*e*Pn		**Pn**	**05 48 12.9**	**+1.3**
	SNR=1.0							
LPL				*e*Sn		**Sn**	**05 48 50.1**	**-0.4**
	comp=N,5.2nm,0.3s							
LPL	**La Plagne**	**3.28**	**283**	*e*Pn		**Pn**	**05 48 12.9**	**+1.3**
	SNR=1.0							
LPL				*e*Sn		**Sn**	**05 48 50.1**	**-0.4**
	comp=N,2.6nm,0.3s							
CALF	**Calern**	**3.33**	**252**	P		**Pn**	**05 48 12.8**	**+0.7**
CALF	**Calern**	**3.33**	**252**	P		**Pn**	**05 48 12.8**	**+0.7**
RSL	**Roselend**	**3.39**	**285**	P		**Pn**	**05 48 14.5**	**+1.5**
RSL	**Roselend**	**3.39**	**285**	P		**Pn**	**05 48 14.5**	**+1.5**
FRF	**La Foret Royal**	**3.59**	**250**	*e*Pn		**Pn**	**05 48 16.4**	**+0.8**
	SNR=1.0							
FRF				*e*Sn		**Sn**	**05 48 58.0**	**+0.4**
	comp=N,5.9nm,0.3s							
FRF	**La Foret Royal**	**3.59**	**250**	*e*Pn		**Pn**	**05 48 16.4**	**+0.8**
	SNR=1.0							
FRF				*e*Sn		**Sn**	**05 48 58.0**	**+0.4**
	comp=N,3.0nm,0.3s							
MOA	**Molln**	**3.62**	**34**	*i* Pn		**Pn**	**05 48 18.1**	**+2.1**
	comp=N,1.4nm,0.2s							
MOA				*i* Sn		**Sn**	**05 48 59.9**	**+1.5**
	comp=N,3.4nm,0.3s							
MOA	**Molln**	**3.62**	**34**	Pn		**Pn**	**05 48 18.1**	**+2.1**
	comp=N,1.4nm,0.2s							
MOA				Sn		**Sn**	**05 48 59.9**	**+1.5**
	comp=N,3.4nm,0.3s							
LMR	**La Mourre**	**3.77**	**248**	*e*Pn		**Pn**	**05 48 18.7**	**+0.6**
LMR				*e*Sn		**Sn**	**05 49 02.0**	**-0.2**
	comp=N,5.6nm,0.3s,SNR=1.0							
LMR	**La Mourre**	**3.77**	**248**	*e*Pn		**Pn**	**05 48 18.7**	**+0.6**
LMR				*e*Sn		**Sn**	**05 49 02.0**	**-0.2**
	comp=N,2.8nm,0.3s,SNR=1.0							
ORIF	**Oris-en-Rattie**	**3.84**	**273**	*e*Pn		**Pn**	**05 48 20.4**	**+1.2**
	SNR=1.0							
ORIF				*e*Sn		**Sn**	**05 49 04.0**	**-0.1**
	comp=N,8.4nm,0.3s,SNR=1.0							
ORIF	**Oris-en-Rattie**	**3.84**	**273**	P		**Pn**	**05 48 20.9**	**+1.7**
ORIF	**Oris-en-Rattie**	**3.84**	**273**	*e*Pn		**Pn**	**05 48 20.4**	**+1.2**
	SNR=1.0							
ORIF				*e*Sn		**Sn**	**05 49 04.0**	**-0.1**
	comp=N,4.2nm,0.3s,SNR=1.0							
KIZ	**Kirchzarten**	**3.86**	**324**	P		**Pn**	**05 48 20.6**	**+1.2**
KIZ	**Kirchzarten**	**3.86**	**324**	P		**Pn**	**05 48 20.6**	**+1.2**
CHMF	**Charmoille**	**4.00**	**308**	P		**Pn**	**05 48 23.6**	**+2.3**
CHMF	**Charmoille**	**4.00**	**308**	P		**Pn**	**05 48 23.6**	**+2.3**
CABF	**La Chapelle**	**4.03**	**297**	*e*Pn		**Pn**	**05 48 22.8**	**+1.0**
	SNR=1.0							
CABF				*e*Sn		**Sn**	**05 49 08.2**	**-0.5**
	SNR=1.0							
CABF				*e*Sg		**Sg**	**05 49 29.8**	**-0.2**
	comp=N,12nm,0.7s							
CABF	**La Chapelle**	**4.03**	**297**	*e*Pn		**Pn**	**05 48 22.8**	**+1.0**
	SNR=1.0							
CABF				*e*Sn		**Sn**	**05 49 08.2**	**-0.5**
	SNR=1.0							
CABF				*e*Sg		**Sg**	**05 49 29.8**	**-0.2**
	comp=N,6.2nm,0.7s							
SMRF	**Simiane la Rot**	**4.19**	**260**	*e*Pn		**Pn**	**05 48 25.2**	**+1.3**
	SNR=1.0							
SMRF	**Simiane la Rot**	**4.19**	**260**	*e*Pn		**Pn**	**05 48 25.2**	**+1.3**
	SNR=1.0							
HINF	**Hinteralfeld**	**4.25**	**315**	*e*Pn		**Pn**	**05 48 24.9**	**+0.2**
	SNR=1.0							
HINF				*e*Sn		**Sn**	**05 49 12.8**	**-1.3**
	SNR=1.0							
HINF				*e*Sg		**Sg**	**05 49 36.0**	**-1.0**
	comp=N,3.2nm,0.3s							
HINF	**Hinteralfeld**	**4.25**	**315**	*e*Pn		**Pn**	**05 48 24.9**	**+0.2**
	SNR=1.0							
HINF				*e*Sn		**Sn**	**05 49 12.8**	**-1.3**
	SNR=1.0							
HINF				*e*Sg		**Sg**	**05 49 36.0**	**-1.0**
	comp=N,1.6nm,0.3s							
ECH	**Echery**	**4.39**	**321**	P		**Pn**	**05 48 27.9**	**+1.3**
ECH	**Echery**	**4.39**	**321**	P		**Pn**	**05 48 27.9**	**+1.3**
CDF	**Champ du Feu**	**4.49**	**323**	*e*Pn		**Pn**	**05 48 28.5**	**+0.5**
	SNR=1.0							
CDF				*e*Sn		**Sn**	**05 49 18.7**	**-1.2**
	comp=N,5.0nm,0.3s,SNR=1.0							
CDF	**Champ du Feu**	**4.49**	**323**	*e*Pn		**Pn**	**05 48 28.5**	**+0.5**
	SNR=1.0							
CDF				*e*Sn		**Sn**	**05 49 18.7**	**-1.2**
	comp=N,2.5nm,0.3s,SNR=1.0							
KHC	**Kasperske Hory**	**4.53**	**19**	*e*PN		**Pn**	**05 48 30.1**	**+1.5**
KHC				*e*PG		**Pg**	**05 48 45.0**	**-2.3**
KHC				*e*SN		**Sn**	**05 49 19.6**	**-1.4**
KHC				*e*SG		**Sg**	**05 49 44.0**	**-2.0**
	comp=N,6.2nm,0.7s							
KHC	**Kasperske Hory**	**4.53**	**19**	Pn		**Pn**	**05 48 30.1**	**+1.5**
KHC				Sn		**Sn**	**05 49 19.6**	**-1.4**
KHC				Sg		**Sg**	**05 49 44.0**	**-2.0**
	comp=N,6.2nm,0.7s							
HAU	**Haudompre**	**4.63**	**314**	*e*Pn		**Pn**	**05 48 30.3**	**+0.4**
	SNR=1.0							
HAU				*e*Sn		**Sn**	**05 49 22.1**	**-1.3**
	comp=N,10nm,0.3s,SNR=1.0							
HAU	**Haudompre**	**4.63**	**314**	*e*Pn		**Pn**	**05 48 30.3**	**+0.4**
	SNR=1.0							
HAU				*e*Sn		**Sn**	**05 49 22.1**	**-1.3**
	comp=N,5.2nm,0.3s,SNR=1.0							
VIVF	**Saint-Julien-l**	**4.70**	**272**	*e*Pn		**Pn**	**05 48 31.4**	**+0.5**
	SNR=1.0							
VIVF				*e*Sn		**Sn**	**05 49 24.5**	**-0.7**
	comp=N,1.6nm,0.3s,SNR=1.0							
VIVF	**Saint-Julien-l**	**4.70**	**272**	*e*Pn		**Pn**	**05 48 31.4**	**+0.5**
	SNR=1.0							
VIVF				*e*Sn		**Sn**	**05 49 24.5**	**-0.7**
	comp=N,0.8nm,0.3s,SNR=1.0							
LASF	**Ste Croix**	**5.38**	**264**	*e*Pn		**Pn**	**05 48 41.4**	**+1.2**
	SNR=1.0							
LASF	**Ste Croix**	**5.38**	**264**	*e*Pn		**Pn**	**05 48 41.4**	**+1.2**
	SNR=1.0							
SMF	**Signal de Mont**	**5.50**	**291**	*e*Pn		**Pn**	**05 48 42.5**	**+0.6**
	SNR=1.0							
SMF				*e*Sn		**Sn**	**05 49 43.2**	**-1.7**
	comp=N,3.3nm,0.3s,SNR=1.0							
SMF	**Signal de Mont**	**5.50**	**291**	*e*Pn		**Pn**	**05 48 42.5**	**+0.6**
	SNR=1.0							
PRU	**Pruhonice**	**5.57**	**22**	*e*SG		**Sg**	**05 50 18.0**	**-1.2**
PRU	**Pruhonice**	**5.57**	**22**	Sg		**Sg**	**05 50 18.0**	**-1.2**
GOPC	**GO Pecny, Ondr**	**5.57**	**24**	*e*PG		**Pg**	**05 49 04.2**	**-2.9**
GOPC				*e*SN		**Sn**	**05 49 45.2**	**-1.3**
MEZF	**Maizieres J'vi**	**5.62**	**312**	*e*Pn		**Pn**	**05 48 44.3**	**+0.9**
MEZF				*e*Sn		**Sn**	**05 49 45.3**	**-2.3**
MEZF				*e*Sg		**Sg**	**05 50 18.8**	**-1.9**
	comp=N,4.8nm,0.4s							
MEZF	**Maizieres J'vi**	**5.62**	**312**	*e*Pn		**Pn**	**05 48 44.3**	**+0.9**
MEZF				*e*Sg		**Sg**	**05 50 18.8**	**-1.9**
	comp=N,2.4nm,0.4s							
LOR	**Lormes**	**5.70**	**297**	*e*Pn		**Pn**	**05 48 45.4**	**+0.9**
LOR				*e*Sn		**Sn**	**05 49 48.1**	**-1.5**
	comp=N,4.4nm,0.3s,SNR=1.0							
LOR	**Lormes**	**5.70**	**297**	*e*Pn		**Pn**	**05 48 45.4**	**+0.9**
LBL	**Lubilhac**	**5.71**	**276**	P		**Pn**	**05 48 46.1**	**+1.3**
LBL	**Lubilhac**	**5.71**	**276**	P		**Pn**	**05 48 46.1**	**+1.3**
SSF	**Saint Saulge**	**5.85**	**295**	*e*Pn		**Pn**	**05 48 47.2**	**+0.6**
	SNR=1.0							
SSF				*e*Sn		**Sn**	**05 49 51.7**	**-1.6**
	comp=N,3.1nm,0.4s,SNR=1.0							
SSF	**Saint Saulge**	**5.85**	**295**	*e*Pn		**Pn**	**05 48 47.2**	**+0.6**
	SNR=1.0							
AVF	**Avril sur Loir**	**5.87**	**292**	*e*Pn		**Pn**	**05 48 47.5**	**+0.7**
	SNR=1.0							
AVF				*e*Sn		**Sn**	**05 49 52.5**	**-1.3**
	comp=N,1.0nm,0.3s							
AVF	**Avril sur Loir**	**5.87**	**292**	*e*Pn		**Pn**	**05 48 47.5**	**+0.7**
	SNR=1.0							
AVF				*e*Sn		**Sn**	**05 49 52.5**	**-1.3**
	comp=N,0.5nm,0.3s							
BGF	**Bois d'Agland**	**6.15**	**289**	*e*Pn		**Pn**	**05 48 51.4**	**+0.7**
	SNR=1.0							
BGF				*e*Sn		**Sn**	**05 49 59.1**	**-1.6**
	comp=N,9.3nm,0.5s							
BGF	**Bois d'Agland**	**6.15**	**289**	*e*Pn		**Pn**	**05 48 51.4**	**+0.7**
	SNR=1.0							
BRG	**Berggiesshubel**	**6.26**	**16**	PG		**Pg**	**05 49 17.4**	**-2.9**
BRG				SG		**Sg**	**05 50 45.6**	**+4.3**
	comp=N,9.9nm,1.3s							
UPC	**Upice**	**6.47**	**28**	*e*SG		**Sg**	**05 50 45.0**	**-3.1**
CLL	**Collm**	**6.54**	**9**	*i* Pn		**Pn**	**05 48 56.8**	**+0.8**
CLL				*e*Sg		**Sg**	**05 50 47.0**	**-3.1**
	comp=Z,6.0nm,1.1s							
EPF	**Esparros**	**8.11**	**261**	*e*Pn		**Pn**	**05 49 18.7**	**+0.9**
	SNR=1.0							
EPF	**Esparros**	**8.11**	**261**	*e*Pn		**Pn**	**05 49 18.7**	**+0.9**
	SNR=1.0							

*IDC **09** 05:57:34.7±1.4, 34°.87N×138°.33E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.4/62, mbtmp3.6/5, MS2.4/1, Ms1 2.4/1, ms1mx2.2/63, Error ellipse: s-maj=33.0km s-min=14.3km az=91.0*

*ISCJB **09** 05:57:38.1±0.5, 34°.98N±0°.04×138°.36E±0°.05, h30km±3km, mb3.6/5, Error ellipse: s-maj=6.5km s-min=5.9km az=138.5*

*JMA **09** 05:57:38.7, 35°.02N×138°.37E, h27km±1km, M3.3 Broadband fault plane solution: P waves. NP1: φs=317.00000°, δ74.00000°, λ-152.00000°. NP2: φs=219.00000°, δ63.00000°, λ-18.00000°. Principal axes: T Plg7.0000°, Azm86.0000°; N Plg58.0000°, Azm345.0000°; P Plg31.0000°, Azm180.0000°;*

JMA Felt I J1.

ISC 09 05:57:38.5±0.9, 34°.99N±0°.03×138°.37E±0°.04, h26km±6km, n17, σ0°.77/23, mb3.7/5, 6C-1D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHZ3	**Shizuoka 3**	**0.15**	**299**	⇑P	**Pb**	**05 57 43.7**	**-0.1**
SHZ3				S	**Sb**	**05 57 47.5**	**+0.2**
JIZS	**Izushimoda**	**0.50**	**123**	⇑P	**Pb**	**05 57 48.8**	**0.0**
JIZS				S	**Sb**	**05 57 56.1**	**+0.3**
JYN	**Shimob**	**0.52**	**16**	⇑P	**Pb**	**05 57 48.7**	**-0.5**
JYN				S	**Sb**	**05 57 56.2**	**-0.3**
JNY	**Yasuok**	**0.55**	**311**	⇑P	**Pb**	**05 57 49.2**	**-0.5**
JNY				S	**Sb**	**05 57 56.9**	**-0.4**
JOD2	**Odawara 2**	**0.65**	**65**	⇑P	**Pb**	**05 57 50.8**	**-0.5**
JOD2				S	**Sb**	**05 57 59.0**	**-1.0**
TK04	**Tokai 4**	**0.73**	**214**	⇓P	**Pn**	**05 57 53.5**	**+0.4**
JIM2	**Oshima 3**	**0.92**	**107**	P	**Pb**	**05 57 55.8**	**0.0**
JRY	**Ryogami san**	**1.11**	**23**	⇑P	**Pn**	**05 57 58.3**	**-0.2**
JRY				S	**Sb**	**05 58 12.5**	**-0.7**
TK02	**Tokai 2**	**1.16**	**206**	P	**Pb**	**05 57 58.4**	**-1.4**
MJAR	**Matsushiro Arr**	**1.55**	**355**	Pg	**Pn**	**05 58 05.4**	**+0.9**
	38nm,0.3s,baz=177,slow=14,SNR=121						
MJAR				Lg	Lg	05 58 26.7	
	47nm,0.3s,baz=178,slow=27,SNR=16						
MAT	**Matsushiro**	**1.55**	**355**	P	**Pb**	**05 58 05.5**	**-1.1**
MAT				S	**Sb**	**05 58 26.5**	**+0.7**
KSRS	**Korea Array**	**8.79**	**289**	LR	LR	06 02 55.9	
	comp=Z,23nm,19.8s,baz=125,slow=36						
MKAR	**Makanchi Array**	**43.14**	**304**	P	**P**	**06 05 36.9**	**0.0**
	0.4nm,0.6s,baz=82,slow=8.7,SNR=4.1						
KURBB	**Kurchatov Arra**	**45.34**	**309**	P	**P**	**06 05 54.2**	**-0.1**
	0.7nm,0.7s,baz=86,slow=7.9,SNR=6.1						
WRA	**Warramunga Arr**	**54.77**	**185**	P	**P**	**06 07 05.1**	**-1.0**
	0.3nm,0.8s,baz=360,slow=7.5,SNR=3.6						
AKTO	**Aktyubinsk**	**58.20**	**312**	P	**P**	**06 07 32.1**	**+1.8**
	0.8nm,0.6s,baz=69,slow=8.6,SNR=2.7						
FINES	**FINESS Array B**	**69.45**	**332**	P	**P**	**06 08 44.0**	**-0.1**
	0.7nm,0.6s,baz=51,slow=7.3,SNR=3.5						

*SOME **09** 06:07:17.0, 44°.63N×82°.33E, h20km*

*ISCJB **09** 06:07:19.3±1.3, 44°.67N±0°.08×82°.5E±0°.1, h10km, Error ellipse: s-maj=14.8km s-min=7.0km az=43.5*

*NNC **09** 06:07:21.1±1.5, 44°.84N×81°.81E, h0km, mb3.3, mpv2.8, Error ellipse: s-maj=31.3km s-min=6.2km az=115.0*

ISC 09 06:07:17.1±1.8, 44°.65N±0°.06×82°.33E±0°.09, h10km, n17, σ1°.19/31, 5C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.85**	**261**	*e*P	**Pb**	**06 07 50.6**	**-0.4**
	9.7nm,0.1s						
DJR				*e*S	**Sb**	**06 08 14.0**	**-0.1**
	8.6nm,0.3s						
MK31	**Makanchi Array**	**2.14**	**359**	⇑Pn	**Pb**	**06 07 55.9**	**-0.1**
	6.7nm,0.3s,baz=182,slow=14,SNR=259						
MK31				⇑Lg	Lg	06 08 23.7	
	3.8nm,0.3s,baz=185,slow=27,SNR=18						
MAKZ	**Makanchi**	**2.17**	**354**	⇑Pn	**Pb**	**06 07 55.9**	**-0.6**
	3.6nm,0.4s						
MAKZ				⇓Lg	Lg	06 08 23.7	
	3.6nm,0.3s						
KAPS	**Kapalarasan**	**2.20**	**288**	*e*P	**Pb**	**06 07 55.8**	**-1.2**
	7.8nm,0.1s						
KAPS				*e*S	**Sb**	**06 08 22.4**	**-2.1**
	8.6nm,0.2s						
PDGK	**Podgornoye**	**2.44**	**238**	⇓Pn	**Pb**	**06 08 00.1**	**-0.9**
	1.3nm,0.4s						
PDGK				⇑Lg	Lg	06 08 31.3	
	14nm,0.5s						
SHLS	**Shalkode**	**2.56**	**235**	*e*P	**Pn**	**06 07 59.6**	**+0.9**
	11nm,0.2s						
SHLS				*e*S	**Sn**	**06 08 29.6**	**-0.2**
	36nm,0.3s						
TDK	**Taldyqorghan**	**2.81**	**279**	*e*P	**Pb**	**06 08 06.5**	**-0.9**
	49nm,0.3s						
TDK				*e*S	**Sb**	**06 08 41.2**	**-0.7**
	41nm,0.4s						
UZB	**Uzynbulak**	**2.83**	**239**	*e*P	**Pb**	**06 08 06.5**	**-1.1**
	2.4nm,0.2s						
UZB				*e*S	**Sb**	**06 08 40.8**	**-1.6**
	6.0nm,0.3s						
MNBS	**Baschi**	**2.88**	**260**	*e*P	**Pb**	**06 08 08.1**	**-0.4**
	4.4nm,0.2s						
MNBS				*e*S	**Sb**	**06 08 43.8**	**0.0**
	17nm,0.2s						
KPKS	**Kokpek**	**2.88**	**247**	*e*P	**Pb**	**06 08 06.4**	**-2.3**
	8.3nm,0.3s						
KPKS				*e*S	**Sb**	**06 08 41.6**	**-2.4**
	27nm,0.2s						
KURS	**Kuram**	**3.22**	**250**	*e*P	**Pb**	**06 08 13.7**	**-0.5**
	2.0nm,0.4s						
KURS				*e*S	**Sb**	**06 08 53.5**	**0.0**
	3.1nm,0.7s						
SATY	**Saty**	**3.25**	**242**	*e*P	**Pb**	**06 08 14.6**	**-0.4**
	3.5nm,0.1s						
SATY				*e*S	**Sb**	**06 08 54.7**	**-0.1**
	23nm,0.4s						
ARXS	**Arharly**	**3.26**	**264**	*e*P	**Pb**	**06 08 14.8**	**-0.2**
	1.4nm,0.2s						
ARXS				*e*S	**Sb**	**06 08 55.0**	**+0.3**
	11nm,0.3s						
CHKK	**Chushkaly**	**3.92**	**260**	*e*P	**Pb**	**06 08 25.7**	**-0.6**
	0.8nm,0.3s						
CHKK				*e*S	**Sb**	**06 09 14.0**	**+0.2**
	6.6nm,0.2s						
KTBS	**Karatobe**	**4.17**	**259**	*e*P	**Pb**	**06 08 31.1**	**+0.6**
	0.9nm,0.3s						
KTBS				*e*S	**Sb**	**06 09 22.9**	**+2.0**
	4.6nm,0.3s						
TNSS	**Tian-Shan**	**4.22**	**249**	*e*P	**Pb**	**06 08 31.9**	**+0.4**
	1.4nm,0.4s						
TNSS				*e*S	**Sb**	**06 09 24.5**	**+1.9**
	3.1nm,0.4s						
KUU	**Kurty**	**4.37**	**262**	*e*P	**Pb**	**06 08 34.6**	**+0.7**
	1.0nm,0.3s						
KUU				⇑*i*S	**Sb**	**06 09 29.1**	**+2.4**
	3.6nm,0.3s						

*IDC **09** 06:19:19.5±3.2, 16°.28N×98°.38W, h0km, mb3.8/7, mb1 3.9/11, mb1mx3.8/49, mbtmp3.7/11, ML3.3/4, MS3.5/7, Ms1 3.5/7, ms1mx3.1/48, Error ellipse: s-maj=61.2km s-min=17.1km az=10.0*

*MEX **09** 06:19:21.1±0.5, 16°.04N×98°.56W, h16km, MD4.2*

*NEIC **09** 06:19:21.1±0.0, 16°.04N×98°.56W, h16km, mb4.2/64, MD4.2(MEX), After MEX.*

NEIC Felt at Pinotepa Nacional.

ISC 09 06:19:17.4±1.9, 16°.04N±0°.07×98°.55W±0°.04, h5km±11km, n279, σ1°.44/283, mb4.2/53, MS3.6/6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**1.50**	**304**	*e*P	**Pn**	**06 19 44.3**	**-0.8**
ACX	**Acapulco**	**1.50**	**304**	*e*P	**Pn**	**06 19 44.3**	**-0.8**
TLIG	**Tlapa**	**1.52**	**359**	*e*Pn	**Pn**	**06 19 44.5**	**-0.9**
TLIG				*e*Sn	**Sn**	**06 20 04.4**	**-1.2**
TLIG	**Tlapa**	**1.52**	**359**	*i* P	**Pn**	**06 19 44.0**	**-1.4**
TLIG				*i* S	**Sn**	**06 20 02.7**	**-2.9**
ACP2	**Acapulco**	**1.53**	**303**	*e*P	**Pg**	**06 19 47.7**	**+0.9**
CAIG	**El Cayaco**	**1.93**	**302**	*e*P	**Pn**	**06 19 50.1**	**-0.9**
CAIG				*e*S	**Sn**	**06 20 12.0**	**-3.6**
CAIG	**El Cayaco**	**1.93**	**302**	*e*P	**Pn**	**06 19 50.1**	**-0.9**
CAIG				*e*S	**Sn**	**06 20 12.0**	**-3.6**
VHO	**Vista Hermosa**	**2.02**	**59**	*e*P	**Pn**	**06 19 52.0**	**-0.5**
VHO				*e*S	**Sn**	**06 20 15.3**	**-2.9**
VHO	**Vista Hermosa**	**2.02**	**59**	*e*P	**Pn**	**06 19 52.0**	**-0.5**
VHO				*e*S	**Sn**	**06 20 15.3**	**-2.9**
HUIG	**Huatulco**	**2.36**	**96**	*e*P	**Pn**	**06 19 56.3**	**-0.6**
HUIG	**Huatulco**	**2.36**	**96**	*e*P	**Pn**	**06 19 56.3**	**-0.6**
PLIG	**Platanillo**	**2.52**	**339**	*e*P	**Pn**	**06 19 58.9**	**-0.1**
PLIG				*e*S	**Sn**	**06 20 27.9**	**-2.3**
PLIG	**Platanillo**	**2.52**	**339**	*e*P	**Pn**	**06 19 58.9**	**-0.1**
PLIG				*e*S	**Sn**	**06 20 27.9**	**-2.3**
PHPU	**Puebla**	**3.01**	**7**	*e*P	**Pb**	**06 20 12.6**	**+0.8**
UNM	**Universidad Na**	**3.33**	**350**	*e*Pn	**Pb**	**06 20 16.9**	**-0.3**
CMIG	**Matias Romero**	**3.67**	**73**	Pn	**Pn**	**06 20 14.4**	**-0.5**
	3.4nm,0.3s,baz=260,slow=11,SNR=97						
CMIG				Sn	**Sn**	**06 20 55.9**	**-2.6**
	18nm,0.3s,baz=264,slow=10.0,SNR=5.3						
CMIG				Lg	Lg	06 21 09.9	
	25nm,0.3s,baz=263,slow=10,SNR=5.8						
LVIG	**Laguna Verde**	**4.19**	**29**	*e*Pn	**Pn**	**06 20 19.8**	**-2.2**
MOIG	**Morelia**	**4.41**	**326**	*e*Pn	**Pb**	**06 20 32.0**	**-3.6**
JRQG	**Juriquilla Cam**	**4.98**	**339**	*e*Pg	**Pg**	**06 20 52.3**	**-0.6**
CCIG	**Comitan**	**6.17**	**87**	*e*Pn	**Pn**	**06 20 51.3**	**+2.0**
ZAIG	**Zacatecas**	**7.70**	**331**	*e*Pn	**Pn**	**06 21 14.3**	**+3.8**
APG	**El Apazote**	**7.86**	**96**	Pn	**Pn**	**06 21 14.2**	**+1.4**
	0.3nm,0.3s,baz=306,slow=16,SNR=4.1						
APG				Sn	**Sn**	**06 22 38.9**	**-3.3**
	0.5nm,0.3s,baz=151,slow=19,SNR=2.0						
APG				Lg	Lg	06 23 32.3	
	1.0nm,0.3s,baz=300,slow=20,SNR=2.6						
H06E1	**SOCORRO T-PHASE**	**12.12**	**285**	T	T	06 34 20.7	
	SNR=14					

baz=204
Z48A **Northport** 19.92 28 P P 06 23 49.4 -0.7
baz=212
TUL1 **Leonard** 19.95 7 P P 06 23 49.5 -0.8
baz=188
TUL1 **Leonard** 19.95 7 eP P 06 23 49.5 -0.8
28nm,1.5s
WHAR **Wooly Hollow** 19.98 15 eP Pn 06 23 51.6 -0.8
7.1nm,1.1s
X45A **UM Field Stati** 20.08 23 P P 06 23 50.9 -0.8
baz=206
TASL **Snake Pit, Alb** 20.12 341 P P 06 23 53.4 +0.9
baz=158
ANMO **Albuquerque** 20.12 341 P Pn 06 23 54.9 +0.7
0.1nm,0.3s,baz=148,slow=13,SNR=14
ANMO LR LR 06 32 16.9
comp=Z,232nm,19.8s,baz=152,slow=39
ANMO **Albuquerque** 20.12 341 P P 06 23 53.5 +1.0
baz=158
ANMO **Albuquerque** 20.12 341 eP Pn 06 23 55.0 +0.7
2.7nm,0.8s
TASM **ASL Pad, Albuq** 20.12 341 P P 06 23 53.5 +1.0
baz=158
OXF **Oxford** 20.15 22 P P 06 23 52.1 -0.5
baz=206
V39A **Pettigrew** 20.20 12 P P 06 23 52.4 -0.8
baz=194,SNR=16
Y47A **UCPARC, Winfie** 20.24 27 P P 06 23 53.0 -0.5
baz=211
Z49A **Columbiana** 20.25 30 P P 06 23 52.7 -1.0
baz=215
151A **Opelika** 20.33 34 P P 06 23 53.8 -0.8
baz=219
V40A **Witts Springs** 20.34 13 P P 06 23 54.4 -0.3
baz=196
V40A **Witts Springs** 20.34 13 eP P 06 23 54.5 -0.2
11nm,0.9s
V41A **Mountainview** 20.48 15 P P 06 23 55.2 -0.9
baz=198
X46A **Booneville** 20.50 24 P P 06 23 54.9 -1.5
baz=208
Y48A **Jasper** 20.54 28 P P 06 23 56.0 -0.9
baz=213
HHAR **Hobbs** 20.58 11 eP P 06 23 58.1 +0.9
4.3nm,0.9s
Z50A **Ashland** 20.60 31 P P 06 23 56.9 -0.5
baz=217
U39A **Green Forest** 20.76 12 P P 06 23 57.1 -2.1
baz=194
X47A **Russelville** 20.76 26 P P 06 23 56.7 -2.5
baz=210
Y49A **Blount Mountai** 20.85 29 P P 06 23 57.6 -2.6
baz=214
U40A **Yellville** 20.86 13 P P 06 23 59.2 -1.1
baz=196,SNR=9.3
X48A **Hartselle** 21.05 27 P P 06 24 00.2 -2.1
baz=212
U41A **Viola** 21.07 15 P P 06 24 00.4 -2.1
baz=198,SNR=6.2
X18A **Snowflake** 21.07 333 eP P 06 24 05.6 +2.8
18nm,1.5s
PLAL **Pickwick Lake** 21.07 25 eP P 06 24 01.9 -0.7
7.4nm,0.8s
T38A **Diamond** 21.25 9 P P 06 24 03.3 -1.2
baz=191,SNR=6.6
U42A **Revenden** 21.25 16 P P 06 24 02.8 -1.7
baz=200
T39A **Clever** 21.40 11 P P 06 24 05.9 -0.2
baz=194,SNR=7.6
X49A **Woodville** 21.43 29 P P 06 24 05.2 -1.2
baz=214
W18A **Petrified Fore** 21.48 334 P P 06 24 08.1 +0.9
baz=150
W47A **Westpoint** 21.50 25 P P 06 24 06.1 -1.1
baz=210
T25A **Trinidad** 21.65 347 P P 06 24 10.4 +1.4
baz=165,SNR=7.3
T25A **Trinidad** 21.65 347 eP P 06 24 11.6 +2.5
6.3nm,0.8s
X16A **Lo Mia Camp, P** 21.66 330 eP P 06 24 12.2 +3.0
6.9nm,0.9s
W48A **Pulaski** 21.68 27 P P 06 24 07.5 -1.6
baz=212
T40A **Mansfield** 21.70 13 P P 06 24 08.3 -1.0
baz=196
T41A **Mountain View** 21.77 15 P P 06 24 08.7 -1.4
baz=198,SNR=9.1
V46A **Holladay** 21.78 23 P P 06 24 08.6 -1.5
baz=208,SNR=9.8
PBMO **Poplar Bluff** 21.88 18 eP P 06 24 13.2 +1.9
20nm,0.8s
S38A **Stockton** 21.90 10 P P 06 24 10.5 -0.9
baz=192,SNR=6.5
T42A **Van Buren** 21.93 16 P P 06 24 10.4 -1.3
baz=200,SNR=9.0
W49A **Belvidere** 21.96 28 P P 06 24 10.8 -1.3
baz=213
UTMT **University of** 21.99 21 eP P 06 24 14.1 +1.7
32nm,0.8s
V47A **Nunnelly** 22.03 24 P P 06 24 12.0 -0.9
baz=209,SNR=8.5
S39A **Bolivar** 22.06 11 P P 06 24 12.0 -1.2
baz=194,SNR=5.3
Y14A **Wickenburg** 22.08 326 eP P 06 24 16.9 +3.4
6.0nm,1.1s
S40A **Lebanon** 22.14 13 P P 06 24 13.2 -0.8
baz=196,SNR=10
WVT **Waverly** 22.18 24 P P 06 24 13.4 -1.0
baz=208
WVT **Waverly** 22.18 24 eP P 06 24 15.7 +1.3
13nm,0.8s
SWET **Sewanee** 22.19 28 eP P 06 24 14.1 -0.5
8.4nm,0.8s
T43A **Greenville** 22.21 18 P P 06 24 13.2 -1.5
baz=201,SNR=5.5
V48A **Smith Brothers** 22.24 26 P P 06 24 13.2 -2.0
baz=211
S41A **Jillco Farms,** 22.30 14 P P 06 24 14.4 -1.3
baz=197,SNR=14
R38A **Fenwick Farm,** 22.44 10 P P 06 24 15.8 -1.5
baz=192
W50A **Signal Mountai** 22.47 29 P P 06 24 16.1 -1.5
baz=215
SDCO **Great Sand Dun** 22.48 345 P P 06 24 17.8 -0.2
baz=162
WUAZ **Wupatki** 22.54 332 P P 06 24 20.3 +1.8
baz=146,SNR=5.8
WUAZ **Wupatki** 22.54 332 eP P 06 24 21.9 +3.4
6.9nm,0.8s
U47A **Clarksville** 22.66 24 P P 06 24 17.7 -1.9
baz=209,SNR=6.9
V49A **McMinnville** 22.66 28 P P 06 24 17.9 -1.8
baz=213
S42A **Caledonia** 22.71 16 P P 06 24 19.4 -0.7
baz=200,SNR=10.0
R39A **Chumby, Stover** 22.72 11 P P 06 24 18.6 -1.6
baz=194,SNR=6.2
S43A **Fulton Ridge,** 22.72 18 P P 06 24 19.4 -0.8
baz=202
Y54A **Tignall** 22.79 36 P P 06 24 19.7 -1.3
baz=223
S22A **4UR Ranch, Cre** 22.83 343 P P 06 24 23.0 +1.3
baz=159,SNR=7.0
S22A **4UR Ranch, Cre** 22.83 343 eP P 06 24 24.2 +2.5
4.5nm,1.0s
R40A **Maddies Statio** 22.85 13 P P 06 24 20.7 -0.9
baz=196,SNR=15
MVCO **Mesa Verde** 22.86 339 P P 06 24 23.0 +1.1
baz=155
MVCO **Mesa Verde** 22.86 339 eP P 06 24 23.9 +1.9
18nm,1.4s
CCM **Cathedral Cave** 22.86 15 P P 06 24 21.7 0.0
baz=198
CCM **Cathedral Cave** 22.86 15 eP P 06 24 22.7 +1.0
9.9nm,0.9s
V50A **Pikeville** 22.95 29 P P 06 24 21.7 -1.0
baz=215
IKP **In-Ko-Pah, Jac** 22.95 319 P P 06 24 23.5 +0.6
baz=132
T46A **Princeton** 22.96 22 P P 06 24 22.1 -0.6
baz=207
FVM **French Village** 23.01 17 eP P 06 24 23.7 +0.4
6.7nm,0.9s
U48A **Cassie Pea, Po** 23.02 25 P P 06 24 20.9 -2.5
baz=211,SNR=5.7
Q37A **Longview Farm,** 23.04 8 P P 06 24 23.7 +0.2
baz=190
CPCT **Cooper Cave** 23.05 30 eP P 06 24 23.6 -0.1
6.1nm,0.9s

R41A **Rosebud** 23.06 15 P P 06 24 23.7 0.0
baz=198
S44A **Carbondale** 23.08 19 P P 06 24 23.7 -0.3
baz=203
T47A **Sharon Grove** 23.21 24 P P 06 24 24.4 -0.9
baz=209,SNR=8.8
Q38A **Cooks Store, C** 23.25 10 P P 06 24 25.3 -0.4
baz=192
V51A **Loudon** 23.41 30 P P 06 24 26.3 -1.0
baz=216
R43A **Red Bud** 23.42 17 P P 06 24 26.7 -0.7
baz=201
Q39A **Willow Grove F** 23.44 11 P P 06 24 27.2 -0.4
baz=194
W53A **Cullowhee** 23.51 33 P P 06 24 27.3 -1.2
baz=220
Q24A **Divide** 23.57 347 eP P 06 24 31.2 +1.9
5.1nm,1.1s
T48A **Bowling Green** 23.59 25 P P 06 24 28.4 -0.8
baz=210
R44A **Waltonville** 23.65 19 P P 06 24 28.5 -1.2
baz=203,SNR=5.3
U15A **North Rim** 23.70 332 eP P 06 24 33.6 +3.0
7.2nm,1.3s
Q41A **Truxton** 23.72 14 P P 06 24 29.3 -1.1
baz=198,SNR=5.3
PV01 **Paradox Valley** 23.72 340 eP P 06 24 32.9 +2.2
9.9nm,1.4s
NHSC **New Hope** 23.77 41 P P 06 24 29.8 -1.0
baz=229
Q42A **Golden Eagle** 23.85 16 P P 06 24 30.8 -0.8
baz=199
USIN **University of** 23.86 22 eP P 06 24 32.3 +0.6
16nm,0.8s
PV15 **Paradox Valley** 23.88 340 eP P 06 24 34.0 +1.8
5.8nm,0.8s
P38A **Dawn** 23.91 10 P P 06 24 31.6 -0.5
baz=192
P39B **Salisbury** 23.91 11 P P 06 24 31.1 -1.1
baz=194
PV03 **Paradox Valley** 23.92 340 eP P 06 24 34.2 +1.6
4.1nm,1.1s
R45A **Skylar, Fairfi** 23.94 20 P P 06 24 31.9 -0.7
baz=205
T49A **Edmonton** 23.95 26 P P 06 24 31.1 -1.5
baz=212
PV07 **Paradox Valley** 24.02 340 eP P 06 24 35.4 +1.9
5.2nm,0.9s
PV04 **Paradox Valley** 24.07 340 eP P 06 24 35.9 +2.0
5.5nm,0.8s
P40A **Paris** 24.09 12 P P 06 24 32.9 -1.0
baz=195,SNR=5.6
T50A **Nancy** 24.18 28 P P 06 24 33.6 -1.2
baz=214
S48A **Wiedeman Farm,** 24.20 25 P P 06 24 33.6 -1.4
baz=210
Q44A **Meyer Farm, Va** 24.27 18 P P 06 24 34.5 -1.0
baz=203
TZTN **Tazewell** 24.39 30 P P 06 24 35.7 -1.1
baz=217
KNB **Kanab** 24.43 332 eP P 06 24 41.7 +4.4
4.1nm,0.9s
P41A **Barry, Barry** 24.44 14 P P 06 24 36.0 -1.1
baz=198
ISCO **Idaho Springs** 24.47 347 P P 06 24 39.2 +1.5
baz=164,SNR=9.1
ISCO **Idaho Springs** 24.47 347 eP P 06 24 40.0 +2.2
4.9nm,0.8s
Q45A **Warren Harvey,** 24.53 20 P P 06 24 37.2 -0.7
baz=205
P42A **Winchester** 24.53 15 P P 06 24 37.4 -0.6
baz=199
R47A **Wooly Knot Far** 24.57 23 P P 06 24 37.5 -0.9
baz=209,SNR=9.3
WCI **Wyandotte Cave** 24.60 24 P P 06 24 38.0 -0.6
baz=209
WCI **Wyandotte Cave** 24.60 24 eP P 06 24 38.9 +0.2
14nm,1.1s
LCMT **Little Creek M** 24.62 331 eP P 06 24 42.8 +3.8
2.0nm,0.9s
O40A **La Belle** 24.69 12 P P 06 24 39.2 -0.2
baz=196
O41A **Passleys Farm,** 24.91 14 P P 06 24 40.8 -0.5
baz=198,SNR=5.4
P44A **Sand Creek, Wi** 24.91 18 P P 06 24 40.6 -0.7
baz=203
MTPU **Mount Pierson** 25.00 334 eP P 06 24 45.2 +2.5
8.4nm,1.0s
OGNE **Ogallala** 25.00 354 eP P 06 24 44.9 +2.5
21nm,0.8s
N38A **Joes South For** 25.10 10 P P 06 24 42.7 -0.3
baz=192,SNR=5.3
Q47A **Bedord North L** 25.17 23 P P 06 24 43.1 -0.7
baz=208,SNR=5.2
S51A **Beattyville** 25.25 29 P P 06 24 43.9 -0.6
baz=216
SRU **San Rafael Swe** 25.27 338 eP P 06 24 48.5 +3.7
6.8nm,1.2s
N39A **Derby Farms, D** 25.30 11 P P 06 24 44.9 0.0
baz=194
BLO **Bloomington** 25.34 22 eP P 06 24 45.3 0.0
7.6nm,0.8s
MSU **Marysvale** 25.40 334 eP P 06 24 47.5 +1.4
O20A **White River Ci** 25.45 343 P P 06 24 49.5 +3.0
baz=158
S52A **Salyersville** 25.52 29 P P 06 24 46.6 -0.4
baz=216
M37A **Trindle Farm,** 25.57 8 P P 06 24 48.3 +1.0
baz=190
O44A **Manafield** 25.58 18 P P 06 24 47.7 +0.3
baz=203
N23A **Red Feather La** 25.59 347 P P 06 24 49.5 +1.7
baz=163
N23A **Red Feather La** 25.59 347 eP P 06 24 49.8 +2.0
4.6nm,0.8s
TMUT **Trail Mountain** 25.69 337 eP P 06 24 51.0 +2.2
7.4nm,1.3s
M38A **Pleasantville** 25.71 9 P P 06 24 48.1 -0.5
baz=192,SNR=9.8
P47A **Martinsville** 25.71 22 P P 06 24 48.8 +0.1
baz=208
HDIL **Hopedale** 25.72 16 P P 06 24 48.8 +0.1
baz=201
N42A **Yates City** 25.79 15 P P 06 24 49.3 0.0
baz=199
PHWY **Pilot Hill** 25.88 348 eP P 06 24 51.9 +1.4
4.3nm,0.9s
O45A **Potomac** 25.90 19 P P 06 24 50.9 +0.6
baz=204
M39A **Webster** 25.95 11 P P 06 24 51.1 +0.4
baz=194
M40A **Post Highland** 26.00 12 P P 06 24 51.0 -0.3
baz=196
SCIA **State Center** 26.19 9 P P 06 24 53.4 +0.4
baz=192
SCIA **State Center** 26.19 9 eP P 06 24 53.8 +0.8
21nm,0.8s
SFIN **Lafayette** 26.22 20 P P 06 24 53.3 +0.1
baz=206
SFIN **Lafayette** 26.22 20 eP P 06 24 53.1 -0.2
4.2nm,0.8s
N44A **Piper City** 26.27 18 P P 06 24 53.6 -0.1
baz=203
O47A **Sheridan** 26.41 22 P P 06 24 54.3 -0.7
baz=208
M42A **Sheffield** 26.44 15 P P 06 24 54.6 -0.7
baz=199
L38A **Oak Wood Farm,** 26.46 9 P P 06 24 55.3 0.0
baz=192
BLA **Blacksburg** 26.50 34 P P 06 24 54.3 -1.6
baz=222
L39A **Vinton** 26.60 11 P P 06 24 56.2 -0.4
baz=194
M43A **Waltham Townsh** 26.63 16 P P 06 24 56.7 -0.3
baz=201
L40A **Anamosa** 26.69 12 P P 06 24 57.0 -0.5
baz=196
R11A **Troy Canyon, C** 26.81 329 P P 06 25 00.1 +1.2
baz=142
M44A **Midewin, Midew** 26.85 18 P P 06 24 58.7 -0.2
baz=203
L41A **Preston** 26.86 13 P P 06 24 58.5 -0.5
baz=197
K37A **Belmond** 26.97 8 P P 06 24 59.9 -0.1
baz=190
K38A **Parkersburg** 26.98 9 P P 06 24 59.9 -0.1
baz=192
L42A **Oliver, Polo** 26.98 15 P P 06 24 59.5 -0.7

baz=199
K40A **Colesburg** 27.32 12 P P 06 25 03.2 0.0
baz=196
L43A **Garden Prairie** 27.39 16 P P 06 25 03.6 -0.1
baz=201
J36A **Seneca 1, Swea** 27.44 7 P P 06 25 04.2 0.0
baz=189
J37A **Redenius Farm,** 27.52 8 P P 06 25 04.5 -0.4
baz=190
J38A **Wedel Dairy, R** 27.68 10 P P 06 25 05.8 -0.6
baz=193
JFWS **Jewell Farm** 27.71 13 P P 06 25 05.4 -1.3
baz=197
JFWS **Jewell Farm** 27.71 13 eP P 06 25 06.7 0.0
6.1nm,0.8s
K42A **Prairie Point,** 27.80 15 P P 06 25 06.5 -0.9
baz=199
J41A **Loganville** 28.20 13 P P 06 25 09.5 -1.4
baz=198
BW06 **Boulder Array** 28.26 343 eP P 06 25 13.6 +1.7
6.5nm,1.4s
PD31 **Pinedale Array** 28.26 343 eP P 06 25 13.6 +1.7
PDAR **Pinedale Array** 28.26 343 P P 06 25 13.8 +1.9
1.4nm,0.9s,baz=150,slow=16,SNR=6.6
PDAR LR LR 06 37 58.6
comp=Z,66nm,18.0s,baz=172,slow=40
PDAR **Pinedale Array** 28.26 343 eP P 06 25 13.3 +1.4
NV01 **Mina Array Sit** 28.27 326 eP P 06 25 14.8 +2.8
NVAR **Mina Array Bea** 28.27 326 P P 06 25 15.1 +3.1
1.1nm,0.8s,baz=159,slow=8.9,SNR=5.0
J42A **Columbus** 28.36 15 P P 06 25 11.4 -1.0
baz=199
I38A **Scanlan Farm,** 28.41 9 P P 06 25 12.5 -0.4
baz=193
ELK **Elko** 28.56 333 P P 06 25 14.7 +0.2
0.3nm,0.3s,baz=291,slow=6.2,SNR=2.6
ELK LR LR 06 37 30.8
comp=Z,93nm,21.4s,baz=252,slow=38
H33A **Prehn Over Nor** 28.60 3 P P 06 25 14.2 -0.4
baz=184
H36A **Jessenland, He** 28.72 7 P P 06 25 15.8 +0.2
baz=189
H38A **Maiden Rock** 29.04 9 P P 06 25 18.2 -0.2
baz=192
SNOW **Snow King Moun** 29.25 342 eP P 06 25 21.9 +1.2
3.8nm,1.0s
SPMN **Marine on St.** 29.50 8 P P 06 25 21.8 -0.8
baz=191
G39A **Holcombe** 29.82 11 P P 06 25 25.0 -0.4
baz=194
F36A **Milaca** 30.03 7 P P 06 26 26.4 -0.8
baz=190
F40A **Park Falls** 30.62 12 P P 06 25 32.0 -0.4
baz=196
E40A **Wakefield** 31.17 12 P P 06 25 37.0 -0.3
baz=196
F43A **Flat Rock, Esc** 31.20 15 P P 06 25 37.4 -0.2
baz=201
DLMT **Dillon** 31.53 341 eP P 06 25 43.6 +2.9
4.1nm,0.9s
C36A **Pine Crest Far** 31.98 7 P P 06 25 44.6 +0.1
baz=190
AGMN **Agassiz Nation** 32.25 3 P P 06 25 47.0 +0.3
baz=185
AGMN **Agassiz Nation** 32.25 3 eP P 06 25 47.5 +0.7
B32A **Ashes, Strandq** 32.31 3 P P 06 25 47.4 +0.1
baz=184
B35A **Bob, Littlefor** 32.48 6 P P 06 25 48.1 -0.7
baz=189
A32A **Rocking H Ranc** 32.84 3 P P 06 25 52.0 +0.1
baz=184
F10A **Beach Ranch, E** 33.69 336 eP P 06 26 01.3 +1.8
3.7nm,0.9s
ULM **Lac du Bonnet** 34.20 3 P P 06 26 03.3 -0.5
1.1nm,0.7s,baz=176,slow=9.9,SNR=3.7
FFC **Flin Flon** 38.70 357 eP P 06 26 43.3 +1.1
4.6nm,0.9s
FCC **Fort Churchill** 42.78 3 eP P 06 27 16.7 +1.0
2.3nm,0.8s
YKA **Yellowknife Ar** 47.76 350 P P 06 27 56.0 +0.7
0.9nm,0.8s,baz=157,slow=7.7,SNR=4.2
YKA **Yellowknife Ar** 47.76 350 P P 06 27 56.0 +0.7
EGAK **Eagle** 56.54 340 eP P 06 29 02.9 +2.3
2.2nm,0.8s
INK **Inuvik** 56.78 345 P P 06 29 03.1 +0.9
1.0nm,0.6s,baz=124,slow=4.0,SNR=3.0
IL1 **Eielson Array** 58.53 338 eP P 06 29 16.6 +2.0
ILAR **Eielson Array** 58.53 338 P P 06 29 16.5 +1.9
0.5nm,0.7s,baz=144,slow=5.0,SNR=7.5
RES **Resolute Bay** 58.69 1 eP P 06 29 16.3 +0.8
4.6nm,1.4s
TRF **Thorofare Moun** 59.15 336 eP P 06 29 21.9 +2.8
6.0nm,1.0s
SPITS **Spitsbergen Ar** 79.33 11 LR LR 07 10 26.4
comp=Z,26nm,18.6s,baz=180,slow=39
FINES **FINESS Array B** 91.25 23 LR LR 07 13 53.6
comp=Z,25nm,20.8s,baz=38,slow=36
TORD **Torodi Ar. Bea** 96.00 75 LR LR 07 14 15.9
comp=Z,33nm,18.3s,baz=160,slow=34

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*IDC **09** 06:34:36.3±0.9, 4.°89S×123.°21E, h0km, mb4.0/6, mb1 4.1/8, mb1mx3.7/59, mbtmp4.1/8, ML4.1/2, MS3.2/3, Ms1 3.2/3, ms1mx2.6/63, Error ellipse: s-maj=101.7km s-min=18.2km az=64.0*

*ISCJB **09** 06:34:38.8±0.7, 5.°57S±0.°06×122.°22E±0.°05, h33km, mb3.9/6, MS3.5/3, Error ellipse: s-maj=9.1km s-min=7.6km az=21.9*

*DJA **09** 06:34:40.2±0.4, 6.°S±3.°×12.°2E±.°, h63km±20km, M4.3/6, mb4.6/2, MLv4.2/6*

ISC 09 06:34:40.9±0.9, **5.°55S**±0.°08×**122.°20E**±0.°07, **h35**km, **n19**, σ1$**09**/18, **mb4.1**/6, **MS3.0**/3, **Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDI	**Kendari**	**1.64**	**15**	P	**Pn**	**06 35 06.7**	**-0.6**
KDI				S	**Sn**	**06 35 28.3**	**+1.1**
BKSI	**Bulukumba**	**2.08**	**276**	P	**Pn**	**06 35 12.2**	**-1.1**
BKSI				S	**Sn**	**06 35 38.1**	**0.0**
SPSI	**Sidrap Palu**	**2.89**	**303**	P	**Pn**	**06 35 24.5**	**0.0**
SPSI				S	**Sn**	**06 35 57.6**	**-0.5**
TTSI	**Tana Toraja**	**3.44**	**316**	P	**Pn**	**06 35 31.5**	**-0.6**
APSI	**Ampana**	**4.64**	**353**	P	**Pn**	**06 35 46.5**	**-2.1**
BATI	**Baumata**	**4.84**	**163**	Pn	Pn	06 35 57.0	+5.6
	7.0nm,0.3s,baz=340,slow=2.7,SNR=7.6						
PCI	**Palu**	**5.18**	**333**	P	**Pn**	**06 35 56.2**	**+0.1**
	78nm,0.6s,0.3nm						
MRSI	**Marisa**	**6.00**	**358**	P	**Pn**	**06 36 06.0**	**-1.2**
LEM	**Lembang**	**14.55**	**264**	LR	LR	06 44 39.7	
	comp=Z,154nm,21.0s,baz=166,slow=39						
WRA	**Warramunga Arr**	**18.55**	**142**	P	**Pn**	**06 38 53.6**	**-1.6**
	0.6nm,0.3s,baz=317,slow=12,SNR=24						
ASAR	**Alice Springs**	**21.25**	**149**	P	**P**	**06 39 25.4**	**+1.2**
	1.8nm,0.7s,baz=331,slow=12,SNR=17						
ASAR				PcP	**PcP**	**06 43 29.3**	**+0.7**
	0.2nm,0.4s,baz=349,slow=1.9,SNR=3.6						
STKA	**Stephens Creek**	**31.86**	**148**	LR	LR	06 54 19.2	
	comp=Z,36nm,19.9s,baz=27,slow=37						
CMAR	**Chiang Mai Arr**	**33.09**	**317**	LR	LR	06 55 36.5	
	comp=Z,19nm,18.6s,baz=160,slow=38						
MKAR	**Makanchi Array**	**62.95**	**330**	P	**P**	**06 45 04.8**	**+0.8**
	1.2nm,0.7s,baz=135,slow=6.9,SNR=17						
ZALV	**Zalesovo Beam**	**67.05**	**337**	P	**P**	**06 45 29.2**	**-1.2**
	1.5nm,0.7s,baz=130,slow=4.5,SNR=4.7						
KURBB	**Kurchatov Arra**	**67.39**	**332**	P	**P**	**06 45 32.5**	**-0.1**
	0.4nm,0.3s,baz=140,slow=5.6,SNR=6.0						
SEY	**Semychan**	**72.05**	**14**	LR	LR	07 16 28.0	
	comp=Z,478nm,21.6s,baz=150,slow=35						
BVAR	**Borovoye Array**	**72.84**	**330**	P	**P**	**06 46 07.1**	**+1.1**
	0.4nm,0.5s,baz=117,slow=5.7,SNR=3.9						
AKTO	**Aktyubinsk**	**78.27**	**324**	P	**P**	**06 46 38.0**	**+0.7**
	1.7nm,0.6s,baz=102,slow=9.1,SNR=5.5						

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*ISCJB **09** 06:52:21.6±0.3, 59.°81N±0.°03×153.°19W±0.°06, h128km±3km, mb4.2/1, Error ellipse: s-maj=5.3km s-min=4.0km az=29.7*

*IDC **09** 06:52:21.8±2.0, 59.°72N×153.°37W, h106km±32km, mb3.7/1, mb1 3.6/3, mb1mx2.9/79, mbtmp3.8/3, MS3.2/1, Ms1 3.2/1, ms1mx2.4/70, Error ellipse: s-maj=37.4km s-min=21.8km az=107.0*

*NEIC **09** 06:52:23.9±0.0, 59.°81N×153.°21W, h116km, ML3.0(AEIC), After AEIC.*

ISC 09 06:52:22.5±1.0, **59.°80N**±0.°04×**153.°21W**±0.°04,

h125km±6km, n79, σ0°99/89, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILS	**Iliamna Low So**	**0.17**	**25**	P	**Pn**	**06 52 39.4**	**-0.3**
AUNW	**Augustine NWes**	**0.45**	**198**	P	**Pn**	**06 52 40.7**	**+0.1**
AUE	**Augustine Isla**	**0.45**	**190**	P	**Pn**	**06 52 40.6**	**-0.1**
AUW	**Augustine West**	**0.46**	**197**	P	**Pn**	**06 52 40.9**	**+0.2**
AUI	**Augustine Isla**	**0.48**	**193**	P	**Pn**	**06 52 40.9**	**0.0**
AUI				S	**Sn**	**06 52 53.9**	**-0.8**
RDWB	**Redoubt West**	**0.71**	**15**	P	**Pn**	**06 52 42.3**	**-0.3**
RDWB				S	**Sn**	**06 52 56.8**	**-1.0**
NCT	**North Crescent**	**0.77**	**10**	P	**Pn**	**06 52 43.0**	**0.0**
HOM	**Homer**	**0.81**	**100**	P	**Pn**	**06 52 43.4**	**+0.3**
HOM				S	**Sn**	**06 52 59.3**	**+0.5**
RDJH	**Redoubt Jeurge**	**0.82**	**14**	P	**Pn**	**06 52 43.4**	**0.0**
RDJH				S	**Sn**	**06 52 58.5**	**-0.8**
DFR	**Drift River**	**0.83**	**18**	P	**Pn**	**06 52 43.4**	**0.0**
MCNL	**McNeil River**	**0.84**	**223**	P	**Pn**	**06 52 43.2**	**-0.3**
CDD	**Cape Douglas**	**0.90**	**194**	P	**Pn**	**06 52 44.0**	**0.0**
FONW	**Fourpeaked Sta**	**1.04**	**201**	P	**Pn**	**06 52 45.4**	**+0.1**
CNPM	**China Poot**	**1.04**	**105**	P	**Pn**	**06 52 45.2**	**-0.1**
CNPM				S	**Sn**	**06 53 01.9**	**-0.7**
BRLK	**Bradley Lake**	**1.18**	**91**	P	**Pn**	**06 52 46.8**	**+0.2**
BRLK				S	**Sn**	**06 53 04.4**	**-0.6**
KAPH	**Katmai Pasha**	**1.34**	**206**	P	**Pn**	**06 52 48.9**	**+0.3**
CKL	**Chakachamna La**	**1.46**	**17**	P	**Pn**	**06 52 50.2**	**+0.3**
KAHC	**Katmai Hardscr**	**1.48**	**219**	P	**Pn**	**06 52 50.1**	**0.0**
CKT	**Bend**	**1.49**	**19**	P	**Pn**	**06 52 50.3**	**+0.1**
SPWE	**Spurr West**	**1.51**	**12**	P	**Pn**	**06 52 51.0**	**+0.6**
KARR	**Katmai Rainbow**	**1.52**	**211**	P	**Pn**	**06 52 50.9**	**+0.4**
SPCP	**Crater Peak Br**	**1.56**	**19**	P	**Pn**	**06 52 51.4**	**+0.4**
SPCP				S	**Sn**	**06 53 12.9**	**+0.2**
SLKM	**Skilak Lake**	**1.65**	**63**	P	**Pn**	**06 52 52.5**	**+0.5**
SVW2	**Sparrevohn**	**1.75**	**319**	P	**Pn**	**06 52 52.7**	**-0.4**
SVW2				S	**Sn**	**06 53 15.0**	**-1.5**
KAKN	**Katmai Knife C**	**1.79**	**213**	P	**Pn**	**06 52 53.9**	**+0.3**
KELA	**Mount Kelaz**	**1.89**	**225**	P	**Pn**	**06 52 55.0**	**+0.1**
SEW	**Seward**	**1.92**	**79**	P	**Pn**	**06 52 55.1**	**+0.1**
SEW				S	**Sn**	**06 53 18.4**	**-1.5**
KDAK	**Kodiak Island**	**2.05**	**171**	P	**Pn**	**06 52 56.1**	**-0.7**
	7.6nm,0.3s,baz=348,slow=20,SNR=66						
KDAK				S	**Sn**	**06 53 19.1**	**-3.8**
	5.1nm,0.3s,baz=335,slow=15,SNR=4.2						
SUA	**Susitna One**	**2.06**	**35**	P	**Pn**	**06 52 57.5**	**+0.5**
RC01	**Rabbit Creek A**	**2.15**	**52**	P	**Pn**	**06 52 58.1**	**+0.1**
SKT	**Skwentna**	**2.33**	**20**	P	**Pn**	**06 53 00.5**	**+0.2**
OHAK	**Old Harbor**	**2.59**	**181**	P	**Pn**	**06 53 02.5**	**-1.0**
PLK1	**Peulik 1**	**2.67**	**223**	P	**Pn**	**06 53 05.5**	**+0.9**
PMR	**Palmer**	**2.69**	**46**	P	**Pn**	**06 53 04.1**	**-0.7**
KNK	**Knik Glacier**	**2.85**	**53**	P	**Pn**	**06 53 06.3**	**-0.6**
GHO	**Glory Hole Cre**	**2.88**	**45**	P	**Pn**	**06 53 07.1**	**-0.3**
SML	**Sawmill**	**3.12**	**48**	P	**Pn**	**06 53 09.8**	**-0.7**
PPLA	**Purkeypile**	**3.14**	**9**	P	**Pn**	**06 53 12.0**	**+1.1**
SII	**Sitkinak Islan**	**3.29**	**189**	P	**Pn**	**06 53 11.7**	**-1.0**
TT01	**Tatalina**	**3.40**	**338**	P	**Pn**	**06 53 13.8**	**-0.2**
JPK	**Jack Peak**	**3.51**	**66**	P	**Pn**	**06 53 15.6**	**0.0**
MID	**Middleton Isla**	**3.51**	**93**	P	**Pn**	**06 53 15.5**	**0.0**
SCM	**Sheep Creek Mo**	**3.53**	**52**	P	**Pn**	**06 53 15.5**	**-0.4**
VLZ	**Valdez**	**3.66**	**66**	P	**Pn**	**06 53 17.6**	**+0.2**
DIV	**Divide**	**3.92**	**67**	P	**Pn**	**06 53 21.2**	**+0.2**
TRF	**Thorofare Moun**	**3.92**	**20**	P	**Pn**	**06 53 19.8**	**-1.3**
KTH	**Kantishna Hill**	**3.92**	**15**	P	**Pn**	**06 53 20.6**	**-0.3**
KLU	**Klutina**	**3.97**	**62**	P	**Pn**	**06 53 21.1**	**-0.6**
CHUM	**Lake Minchumin**	**4.12**	**6**	P	**Pn**	**06 53 23.9**	**+0.4**
RND	**Reindeer**	**4.17**	**28**	P	**Pn**	**06 53 24.5**	**+0.2**
CHR	**Chirikof Islan**	**4.20**	**199**	P	**Pn**	**06 53 23.6**	**-1.0**
DHY	**Denali Highway**	**4.32**	**38**	P	**Pn**	**06 53 26.1**	**-0.3**
BMRM	**Bremner River**	**4.43**	**71**	P	**Pn**	**06 53 28.2**	**+0.5**
MCK	**McKinley**	**4.43**	**25**	P	**Pn**	**06 53 28.4**	**+0.6**
BPAW	**Bear Paw Mtn.**	**4.44**	**13**	P	**Pn**	**06 53 27.8**	**-0.1**
VRDI	**Verde Repeater**	**5.03**	**69**	P	**Pn**	**06 53 36.6**	**+0.7**
NEA	**Nenana**	**5.17**	**20**	P	**Pn**	**06 53 37.5**	**-0.1**
WRH	**Wood River Hil**	**5.26**	**25**	P	**Pn**	**06 53 38.5**	**-0.4**
MCARA	**McCarthy VSAT**	**5.27**	**68**	P	**Pn**	**06 53 39.2**	**+0.2**
MLY	**Manley**	**5.37**	**11**	P	**Pn**	**06 53 40.5**	**+0.1**
BARK	**Barkley Ridge**	**5.40**	**79**	P	**Pn**	**06 53 41.6**	**+0.8**
CCB	**Clear Creek Bu**	**5.48**	**25**	P	**Pn**	**06 53 41.2**	**-0.5**
ISLE	**Juniper Island**	**5.48**	**77**	P	**Pn**	**06 53 41.7**	**-0.3**
KIAG	**Kiagna River**	**5.50**	**74**	P	**Pn**	**06 53 42.9**	**+0.6**
BAGL	**Bagley Icefiel**	**5.60**	**78**	P	**Pn**	**06 53 43.9**	**+0.5**
RIDG	**Independ'e Rid**	**5.60**	**42**	P	**Pn**	**06 53 43.5**	**0.0**
MESA	**MESA**	**5.67**	**81**	P	**Pn**	**06 53 45.0**	**+0.5**
MDM	**Murphy Dome**	**5.67**	**22**	P	**Pn**	**06 53 44.0**	**-0.3**
ILAR	**Eielson Array**	**5.79**	**28**	P	**Pn**	**06 53 45.6**	**-0.4**
	2.7nm,0.3s,baz=217,slow=14,SNR=99						
ILAR				S	**Sn**	**06 54 44.9**	**-6.2**
	baz=197,slow=15,SNR=3.2						
ILB	**Eielson Array**	**5.79**	**28**	P	**Pn**	**06 53 45.6**	**-0.4**
CHX	**Chaix Hills**	**6.09**	**82**	P	**Pn**	**06 53 50.2**	**+0.2**
IM3	**Indian Mountai**	**6.21**	**358**	P	**Pn**	**06 53 52.0**	**+0.4**
BCA3	**Beaver Creek A**	**6.38**	**54**	P	**Pn**	**06 53 54.0**	**0.0**
PNL	**Peninsula**	**6.99**	**85**	P	**Pn**	**06 54 02.6**	**+0.4**
EGAK	**Eagle**	**7.51**	**43**	*e*Pn	**Pn**	**06 54 08.2**	**-0.9**
BM3	**Burnt Mountain**	**8.54**	**23**	P	**Pn**	**06 54 22.8**	**-0.3**
YKA	**Yellowknife Ar**	**18.63**	**65**	P	**P**	**06 56 32.0**	**+1.9**
	0.2nm,0.3s,baz=276,slow=10.0,SNR=12						
TIXI	**Tiksi**	**31.58**	**324**	LR	LR	07 14 14.5	
	comp=Z,35nm,18.6s,baz=244,slow=42						
ZALV	**Zalesovo Beam**	**57.47**	**324**	P	**P**	**07 01 59.2**	**+1.3**
	0.7nm,0.3s,baz=27,slow=9.0,SNR=2.5						

*BGR **09** 06:53:14.6±0.2, 48°.54N×8°.72E, h10km, ML1.8/5, Error ellipse: s-maj=3.3km s-min=2.2km az=114.0*
*LDG **09** 06:53:14.8±0.0, 48°.55N×8°.71E, h10km, Ml2.9/11, Error ellipse: s-maj=0.8km s-min=0.6km az=106.0*
*CSEM **09** 06:53:14.2±0.1, 48°.55N×8°.68E, h10km, ML2.9/14, Error ellipse: s-maj=2.2km s-min=1.9km az=121.0*
*STR **09** 06:53:16.2±0.6, 49°N±2°×°±°, h10km, M2.9/13, MLv2.9/13*
*VIE **09** 06:53:18.4±0.7, 48°.33N×8°.67E, h8km, mb1.7/2, ml2.5/4, Error ellipse: s-maj=11.0km s-min=5.0km az=49.0 24 km WNW of Onstmettingen*
*PRU **09** 06:53:19.3, 48°.59N×9°.00E, h0km*

ISC 09 06:53:15.4±0.9, 48°.54N±0°.01×8°.70E±0°.01, h6km±7km, n125, σ1°47/221, 3C-4D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBG	**Lerchenberg**	**0.14**	**27**	⇑*i* P*	**Pg**	**06 53 17.9**	**-0.3**
LBG				*i* S*	**Sg**	**06 53 20.2**	**0.0**
LBG	**Lerchenberg**	**0.14**	**27**	Pb	**Pg**	**06 53 17.9**	**-0.3**
LBG				Sb	**Sg**	**06 53 20.2**	**0.0**
TUBL	**Tuebingen-Lenn**	**0.26**	**94**	⇑*i* P*	**Pg**	**06 53 19.8**	**-0.5**
TUBL				S*	**Sg**	**06 53 23.3**	**-0.4**
TUBL	**Tuebingen-Lenn**	**0.26**	**94**	Pb	**Pg**	**06 53 19.8**	**-0.5**
TUBL				Sb	**Sg**	**06 53 23.3**	**-0.4**
BFO	**Black Forest**	**0.32**	**230**	⇑P*	**Pg**	**06 53 21.3**	**-0.4**
BFO				*i* S*	**Sg**	**06 53 25.9**	**0.0**
BFO	**Black Forest**	**0.32**	**230**	Pb	**Pg**	**06 53 21.3**	**-0.4**
BFO				Sb	**Sg**	**06 53 25.9**	**0.0**
OPP	**Oppenau**	**0.34**	**263**	P*	**Pg**	**06 53 22.0**	**0.0**
OPP				S*	**Sg**	**06 53 26.3**	**-0.2**
OPP	**Oppenau**	**0.34**	**263**	Pg	**Pg**	**06 53 21.3**	**-0.7**
OPP	**Oppenau**	**0.34**	**263**	Pg	**Pg**	**06 53 21.3**	**-0.7**
OPP	**Oppenau**	**0.34**	**263**	Pb	**Pg**	**06 53 22.0**	**0.0**
OPP				Sb	**Sg**	**06 53 26.3**	**-0.2**
SPAK	**Spaichingen-Ko**	**0.44**	**172**	⇓*i* P*	**Pg**	**06 53 23.6**	**-0.3**
SPAK				S*	**Sg**	**06 53 29.7**	**0.0**
SPAK				SmS		06 53 32.4	
SPAK	**Spaichingen-Ko**	**0.44**	**172**	Pb	**Pg**	**06 53 23.6**	**-0.3**
SPAK				Sb	**Sg**	**06 53 29.7**	**0.0**
SPAK				S	**Sb**	**06 53 32.3**	**-0.2**
BRET	**Bretten**	**0.47**	**359**	⇓*i* P*	**Pg**	**06 53 23.9**	**-0.6**
BRET				S*	**Sg**	**06 53 30.1**	**-0.6**
BRET				SmS		06 53 33.3	
BRET	**Bretten**	**0.47**	**359**	Pb	**Pg**	**06 53 23.9**	**-0.6**
BRET				Sb	**Sg**	**06 53 30.1**	**-0.6**
BRET				S	**Sb**	**06 53 33.3**	**-0.1**
GUT	**Gutenstein**	**0.55**	**149**	⇓*i* P*	**Pg**	**06 53 25.4**	**-0.4**
GUT				S*	**Sg**	**06 53 33.0**	**0.0**
GUT				SmS		06 53 34.9	
GUT	**Gutenstein**	**0.55**	**149**	Pb	**Pg**	**06 53 25.4**	**-0.4**
GUT				Sb	**Sg**	**06 53 33.0**	**0.0**
GUT				S	**Sb**	**06 53 34.9**	**-0.6**
SUBF	**Surbourg**	**0.68**	**304**	Pg	**Pg**	**06 53 28.2**	**-0.2**
SUBF	**Surbourg**	**0.68**	**304**	Pg	**Pg**	**06 53 28.2**	**-0.2**
LANF	**Langenberg**	**0.74**	**307**	P*	**Pg**	**06 53 29.1**	**-0.5**
LANF				S*	**Sg**	**06 53 38.9**	**-0.2**
LANF				SmS		06 53 40.9	
LANF	**Langenberg**	**0.74**	**307**	Pg	**Pg**	**06 53 29.0**	**-0.5**
LANF	**Langenberg**	**0.74**	**307**	Pb	**Pg**	**06 53 29.1**	**-0.5**
LANF				Sg	**Sg**	**06 53 38.5**	**-0.6**
LANF				S	**Sb**	**06 53 40.8**	**-0.2**
FBB	**Freiburg im Br**	**0.78**	**227**	P*	**Pg**	**06 53 30.1**	**-0.3**
FBB				S*	**Sg**	**06 53 40.0**	**-0.5**
FBB				SmS		06 53 41.2	
FBB	**Freiburg im Br**	**0.78**	**227**	Pb	**Pg**	**06 53 30.0**	**-0.3**
FBB				Sb	**Sg**	**06 53 40.0**	**-0.5**
FBB				S	**Sb**	**06 53 41.2**	**-1.0**
KIZ	**Kirchzarten**	**0.78**	**222**	P*	**Pg**	**06 53 29.6**	**-0.8**
KIZ				S*	**Sg**	**06 53 40.0**	**-0.6**
KIZ	**Kirchzarten**	**0.78**	**222**	Pg	**Pg**	**06 53 29.7**	**-0.7**
KIZ	**Kirchzarten**	**0.78**	**222**	Pb	**Pg**	**06 53 29.6**	**-0.8**
KIZ				Sb	**Sg**	**06 53 40.0**	**-0.6**
SLE	**Schleitheim**	**0.79**	**190**	⇓P*	**Pg**	**06 53 29.8**	**-0.7**
SLE				S*	**Sg**	**06 53 40.3**	**-0.4**
SLE				SmS		06 53 41.8	
SLE	**Schleitheim**	**0.79**	**190**	Pb	**Pg**	**06 53 29.8**	**-0.7**
SLE				Sb	**Sg**	**06 53 40.3**	**-0.4**
SLE				S	**Sb**	**06 53 41.8**	**-0.7**
FELD	**Feldberg im Sc**	**0.81**	**215**	P*	**Pg**	**06 53 30.1**	**-0.8**
FELD				PmP		06 53 30.6	
FELD				S*	**Sg**	**06 53 40.8**	**-0.6**
FELD	**Feldberg im Sc**	**0.81**	**215**	Pb	**Pg**	**06 53 30.1**	**-0.8**
FELD	**Feldberg im Sc**	**0.81**	**215**	P	**Pg**	**06 53 30.6**	**-0.3**
FELD				Sb	**Sg**	**06 53 40.8**	**-0.6**
PEB	**Petersbachel**	**0.84**	**309**	*i* P*	**Pg**	**06 53 30.9**	**-0.5**
PEB				*i* S*	**Sg**	**06 53 42.0**	**-0.2**
PEB				SmS		06 53 42.9	
PEB	**Petersbachel**	**0.84**	**309**	Pb	**Pg**	**06 53 30.9**	**-0.5**
PEB				Sb	**Sg**	**06 53 42.0**	**-0.2**
SISB	**Singen-Schiene**	**0.87**	**168**	P*	**Pg**	**06 53 31.3**	**-0.8**
SISB				PmP		06 53 31.8	
SISB				S*	**Sg**	**06 53 43.4**	**0.0**
SISB	**Singen-Schiene**	**0.87**	**168**	Pb	**Pg**	**06 53 31.3**	**-0.8**
SISB	**Singen-Schiene**	**0.87**	**168**	P	**Pg**	**06 53 31.8**	**-0.3**
SISB				Sb	**Sg**	**06 53 43.4**	**0.0**
KTD	**Kalmit**	**0.88**	**333**	PmP		06 53 31.7	
KTD	**Kalmit**	**0.88**	**333**	Pg	**Pg**	**06 53 31.9**	**-0.3**
KTD	**Kalmit**	**0.88**	**333**	Pg	**Pg**	**06 53 31.9**	**-0.3**
WLS	**Welschbruch**	**0.91**	**262**	P	**Pg**	**06 53 31.7**	**-1.0**
WLS				Pg	**Pg**	**06 53 31.9**	**-0.8**
WLS				S	**Sg**	**06 53 43.9**	**-0.5**
WLS	**Welschbruch**	**0.91**	**262**	Pg	**Pg**	**06 53 31.9**	**-0.8**
WLS	**Welschbruch**	**0.91**	**262**	P	**Pg**	**06 53 31.7**	**-1.0**
WLS				S	**Sg**	**06 53 43.9**	**-0.5**
SWS	**Schriesheim-Wi**	**0.94**	**0**	P	**Pg**	**06 53 31.9**	**-1.6**
SWS				*i* Pg	**Pb**	**06 53 32.3**	**-1.9**
SWS				S	**Sg**	**06 53 44.5**	**-1.2**
SWS	**Schriesheim-Wi**	**0.94**	**0**	P	**Pg**	**06 53 31.9**	**-1.6**
CDF	**Champ du Feu**	**0.96**	**263**	*e*Pg	**Pg**	**06 53 32.8**	**-0.9**
CDF				*e*Sg	**Sg**	**06 53 45.4**	**-0.7**
	39nm,0.2s						
CDF	**Champ du Feu**	**0.96**	**263**	*e*Pg	**Pg**	**06 53 32.8**	**-0.9**
CDF				*e*Sg	**Sg**	**06 53 45.4**	**-0.7**
	19nm,0.2s						
SIND	**Sindeldorf**	**1.01**	**36**	P	**Pg**	**06 53 33.3**	**-1.3**
SIND				S	**Sg**	**06 53 45.3**	**-2.4**
SIND				Sg	**Sb**	**06 53 46.5**	**-2.2**
SIND	**Sindeldorf**	**1.01**	**36**	P	**Pg**	**06 53 33.3**	**-1.3**
SIND				S	**Sg**	**06 53 45.3**	**-2.4**
SIND				Sg	**Sb**	**06 53 46.5**	**-2.2**
ENDD	**Endenburg**	**1.05**	**218**	Pg	**Pg**	**06 53 34.3**	**-1.1**
ENDD				S	**Sg**	**06 53 47.3**	**-1.7**
ENDD				Sg	**Sb**	**06 53 48.3**	**-1.7**
TOD	**Tromm**	**1.07**	**4**	P	**Pg**	**06 53 33.3**	**-2.5**
TOD				Pg	**Pb**	**06 53 34.5**	**-1.8**
TOD				Sg	**Sg**	**06 53 48.8**	**-0.9**
TOD	**Tromm**	**1.07**	**4**	P	**Pg**	**06 53 33.3**	**-2.5**
ECH	**Echery**	**1.08**	**253**	P	**Pg**	**06 53 33.2**	**-2.8**
ECH				Pg	**Pb**	**06 53 34.6**	**-1.8**
ECH				Sg	**Sg**	**06 53 49.1**	**-0.9**
ECH	**Echery**	**1.08**	**253**	P	**Pg**	**06 53 33.2**	**-2.8**
SULZ	**Cheisacher**	**1.09**	**201**	Pg	**Pg**	**06 53 35.5**	**-0.7**
SULZ				S	**Sg**	**06 53 48.0**	**-2.3**
SULZ				Sg	**Sb**	**06 53 49.7**	**-1.4**
SULZ	**Cheisacher**	**1.09**	**201**	Pg	**Pg**	**06 53 35.5**	**-0.7**
SULZ				S	**Sg**	**06 53 48.0**	**-2.3**
SULZ				Sg	**Sb**	**06 53 49.7**	**-1.4**
WBA	**Furth**	**1.12**	**4**	Pg	Pn	06 53 44.6	+7.0
WBA	**Furth**	**1.12**	**4**	Pg	Pn	06 53 44.6	+7.0
WILA	**Wila**	**1.14**	**173**	Pg	**Pb**	**06 53 36.6**	**-0.8**
WILA				Sg	**Sg**	**06 53 51.7**	**-0.1**
WILA	**Wila**	**1.14**	**173**	Pg	**Pb**	**06 53 36.6**	**-0.8**
WILA				Sg	**Sg**	**06 53 51.7**	**-0.1**
IMS	**Imsbach**	**1.18**	**334**	Pg	**Pb**	**06 53 37.1**	**-1.0**
IMS	**Imsbach**	**1.18**	**334**	Pg	**Pb**	**06 53 37.1**	**-1.0**
MOF	**Molkenrain**	**1.25**	**237**	Pg	**Pn**	**06 53 38.7**	**-0.9**
UBR	**Ueberruh**	**1.28**	**132**	Pg	**Pn**	**06 53 39.4**	**-0.4**
UBR				Sg	**Sb**	**06 53 56.8**	**+0.2**
UBR	**Ueberruh**	**1.28**	**132**	Pg	**Pn**	**06 53 39.4**	**-0.4**
UBR				Sg	**Sb**	**06 53 56.8**	**+0.2**
WBB	**Darmstadt**	**1.30**	**359**	Sg	**Sg**	**06 53 58.9**	**+1.6**
WBB	**Darmstadt**	**1.30**	**359**	Sg	**Sg**	**06 53 58.8**	**+1.6**
BALST	**Balsthal**	**1.38**	**210**	P	**Pn**	**06 53 37.6**	**-3.7**
BALST				Pg	**Pb**	**06 53 40.9**	**-0.7**
BALST				S	**Sb**	**06 53 55.0**	**-4.5**
BALST				Sg	**Sn**	**06 53 58.5**	**-1.4**
BALST	**Balsthal**	**1.38**	**210**	P	**Pn**	**06 53 37.6**	**-3.7**
HINF	**Hinteralfeld**	**1.43**	**240**	*e*Pg	**Pn**	**06 53 41.6**	**-0.3**
HINF				*e*Sg	**Sn**	**06 53 59.9**	**-1.2**
	8.0nm,0.2s						
DAVA	**Damuels**	**1.48**	**147**	*e*Sg	**Sb**	**06 54 03.1**	**+0.5**
DAVA	**Damuels**	**1.48**	**147**	*e*Pn	**Pb**	**06 53 43.7**	**+0.2**
	1.2nm,0.1s						
DAVA				*e*Sg	**Sb**	**06 54 02.8**	**+0.2**
	5.9nm,0.3s						
DAVA	**Damuels**	**1.48**	**147**	Pn	**Pb**	**06 53 43.7**	**+0.2**
	1.2nm,0.1s						
DAVA				Sg	**Sb**	**06 54 02.8**	**+0.2**
	5.9nm,0.3s						
BOURR	**Bourrignon**	**1.51**	**221**	Pg	**Pn**	**06 53 43.5**	**+0.4**
BOURR				Sg	**Sn**	**06 54 03.0**	**-0.2**
BOURR	**Bourrignon**	**1.51**	**221**	Pg	**Pn**	**06 53 43.5**	**+0.4**
BOURR				Sg	**Sn**	**06 54 03.0**	**-0.2**
DUP	**Duppenweiler**	**1.53**	**305**	Pg	**Pn**	**06 53 43.7**	**+0.4**
DUP				Sg	**Sn**	**06 54 03.2**	**-0.3**
DUP	**Duppenweiler**	**1.53**	**305**	Pg	**Pn**	**06 53 43.7**	**+0.4**
DUP				Sg	**Sn**	**06 54 03.2**	**-0.3**
ABH	**Alteburg**	**1.54**	**331**	Pg	**Pn**	**06 53 43.7**	**+0.3**
ABH				Sg	**Sn**	**06 54 03.8**	**0.0**
ABH	**Alteburg**	**1.54**	**331**	Pg	**Pn**	**06 53 43.2**	**-0.2**
ABH	**Alteburg**	**1.54**	**331**	Pg	**Pn**	**06 53 43.7**	**+0.3**
ABH				Sg	**Sn**	**06 54 03.8**	**0.0**
RUP	**Ruppelstein**	**1.58**	**318**	Pg	**Pn**	**06 53 44.6**	**+0.4**
RUP	**Ruppelstein**	**1.58**	**318**	Pg	**Pn**	**06 53 44.7**	**+0.6**
HAU	**Haudompre**	**1.66**	**252**	*e*Pg	**Pn**	**06 53 45.4**	**+0.4**
HAU				*e*Sg	**Sn**	**06 54 07.4**	**+0.7**
	10.0nm,0.3s						
TNS	**Taunus Mts**	**1.69**	**355**	P	**Pn**	**06 53 42.9**	**-2.6**
TNS				Sg	**Sb**	**06 54 08.6**	**+0.1**
TNS	**Taunus Mts**	**1.69**	**355**	P	**Pn**	**06 53 42.9**	**-2.6**
TNS				Sg	**Sb**	**06 54 08.6**	**+0.1**
RIVT	**Riveris**	**1.73**	**313**	Pg	**Pn**	**06 53 47.0**	**+1.1**
RIVT	**Riveris**	**1.73**	**313**	Pg	**Pn**	**06 53 47.0**	**+1.1**
LOMF	**Lomont**	**1.73**	**227**	Pg	**Pb**	**06 53 47.5**	**-0.1**
LOMF	**Lomont**	**1.73**	**227**	Pg	**Pb**	**06 53 47.7**	**+0.1**
LOMF	**Lomont**	**1.73**	**227**	Pg	**Pb**	**06 53 47.5**	**-0.1**
RETA	**Reutte**	**1.74**	**127**	*e*Pn	**Pb**	**06 53 48.0**	**+0.2**
	1.3nm,0.2s						
RETA				*e*Sn	**Sb**	**06 54 10.1**	**+0.2**
	21nm,0.2s						
RETA	**Reutte**	**1.74**	**127**	Pn	**Pb**	**06 53 48.0**	**+0.2**
	1.3nm,0.2s						
RETA				Sn	**Sb**	**06 54 10.1**	**+0.2**
	21nm,0.2s						
THEF	**They Montfort**	**1.84**	**261**	Pg	**Pb**	**06 53 48.9**	**-0.4**
THEF				Sg	**Sb**	**06 54 13.3**	**+0.7**
THEF	**They Montfort**	**1.84**	**261**	Pg	**Pb**	**06 53 49.2**	**-0.2**
THEF	**They Montfort**	**1.84**	**261**	Pg	**Pb**	**06 53 48.9**	**-0.4**
THEF				Sg	**Sb**	**06 54 13.3**	**+0.7**
CHMF	**Charmoille**	**1.89**	**228**	Pg	**Pb**	**06 53 50.5**	**+0.2**
CHMF	**Charmoille**	**1.89**	**228**	Pg	**Pb**	**06 53 50.5**	**+0.2**
GRC1	**Grafenberg Arr**	**1.92**	**75**	*e*Pg	**Pb**	**06 53 50.3**	**-0.5**
GRC1	**Grafenberg Arr**	**1.92**	**75**	Pg	**Pb**	**06 53 50.3**	**-0.5**
PAGF	**Fort de Pagny**	**1.98**	**272**	*e*Pg	**Pb**	**06 53 51.8**	**+0.1**
PAGF				*e*Sg	**Sb**	**06 54 16.9**	**+0.3**
	7.3nm,0.2s						
MOTA	**Moosalm**	**2.01**	**126**	*e*Pn	**Pb**	**06 53 51.6**	**-0.8**
	1.5nm,0.2s						
MOTA				*e*Sn	**Sn**	**06 54 16.4**	**+0.8**
	8.8nm,0.1s						
MOTA	**Moosalm**	**2.01**	**126**	Pn	**Pb**	**06 53 51.6**	**-0.8**
	1.5nm,0.2s						
GRFO	**Grafenberg**	**2.02**	**54**	*e*Sg	**Sb**	**06 54 17.1**	**-0.7**
GRFO	**Grafenberg**	**2.02**	**54**	Sg	**Sb**	**06 54 17.1**	**-0.7**
GRA1	**Grafenberg Arr**	**2.02**	**54**	Pg	**Pb**	**06 53 52.4**	**-0.1**
GRA1				Sg	**Sb**	**06 54 17.1**	**-0.7**
GRF	**Grafenberg Arr**	**2.02**	**54**	Pg	**Pb**	**06 53 52.4**	**-0.1**
GRF				*e*Sg	**Sb**	**06 54 17.1**	**-0.7**
FETA	**Feichten**	**2.05**	**137**	*i* Pn	**Pn**	**06 53 50.8**	**+0.3**
	0.2nm,0.1s						
FETA				*e*Sg	**Sg**	**06 54 21.1**	**0.0**
	1.3nm,0.1s						
FETA	**Feichten**	**2.05**	**137**	Pn	**Pn**	**06 53 50.8**	**+0.3**
	0.2nm,0.1s						
FETA				Sg	**Sg**	**06 54 21.1**	**0.0**
	1.3nm,0.1s						
MEZF	**Maizieres J'vi**	**2.42**	**270**	*e*Sg	**Sb**	**06 54 31.2**	**+1.7**
	14nm,0.6s						
MEZF	**Maizieres J'vi**	**2.42**	**270**	*e*Sg	**Sb**	**06 54 31.2**	**+1.7**
	7.2nm,0.6s						
SFTF	**Sexfontaines**	**2.46**	**264**	*e*Pg	**Pb**	**06 54 00.7**	**+0.7**
SFTF				*e*Sg	**Sb**	**06 54 32.7**	**+2.1**
	7.5nm,0.3s						
SFTF	**Sexfontaines**	**2.46**	**264**	*e*Pg	**Pb**	**06 54 00.7**	**+0.7**
SFTF				*e*Sg	**Sb**	**06 54 32.7**	**+2.1**
	3.8nm,0.3s						
CABF	**La Chapelle**	**2.62**	**223**	*e*Pg	**Pb**	**06 54 03.7**	**+1.0**
CABF				*e*Sg	**Sb**	**06 54 37.5**	**+2.3**
	160nm,2.0s						
CABF	**La Chapelle**	**2.62**	**223**	*e*Pg	**Pb**	**06 54 03.7**	**+1.0**
CABF				*e*Sg	**Sb**	**06 54 37.5**	**+2.3**
	80nm,2.0s						
WET	**Wettzell**	**2.83**	**76**	Pg	**Pb**	**06 54 07.7**	**+1.5**
WET				Sg	**Sb**	**06 54 43.4**	**+2.3**
NKC	**Novy Kostel**	**2.98**	**54**	*e*PG	**Pb**	**06 54 09.8**	**+1.0**
NKC				*e*SG	**Sb**	**06 54 46.4**	**+1.0**
	comp=Z,4.3nm,0.3s						
NKC	**Novy Kostel**	**2.98**	**54**	Pg	**Pb**	**06 54 09.8**	**+1.0**
NKC				Sg	**Sb**	**06 54 46.4**	**+1.0**
	4.3nm,0.3s						
KHC	**Kasperske Hory**	**3.28**	**78**	*e*PG	**Pb**	**06 54 16.2**	**+2.3**
KHC

KCHF e 07 18 21.5
comp=Z,99nm,0.2s
IKFM Kafar-mosalman 3.34 146 *e*Pn Pn 07 17 49.5 +0.4
IKFM *e* 07 19 13.3
comp=Z,99nm,0.3s

MAN 09 07:20:43.8, 15°.83N×122°.05E, h13km, mb4.4, ML3.2, MS3.0, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALP	**Baler**	**0.46**	**259**	*e*P	Pg	07 20 52.7	-0.3
BALP				*e*S	Sg	07 20 59.9	+0.7
PCPH	**Palayan**	**0.95**	**254**	⇓*e*P	Pb	07 21 01.9	-0.3
PCPH				*e*S	Sn	07 21 16.9	+0.5
CAUP	**Cauayan**	**1.13**	**349**	*e*P	Pb	07 21 02.9	-2.4
CAUP				*e*S	Sg	07 21 20.2	-0.2

IDC 09 07:20:45.7±1.4, 27°.94N×104°.32E, h0km, mb3.6/4, mb1 3.6/5, mb1mx3.3/68, mbtmp3.6/5, ML4.2/1, MS2.8/1, Ms1 2.8/1, ms1mx2.3/62, Error ellipse: s-maj=83.4km s-min=24.2km az=62.0, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**19.93**	**4**	P	P	07 25 19.6	+0.4
	0.7nm,0.3s,baz=177,slow=10,SNR=4.6						
MKAR	**Makanchi Array**	**25.56**	**323**	P	P	07 26 17.0	+0.8
	0.7nm,0.8s,baz=133,slow=10,SNR=6.0						
ZALV	**Zalesovo Beam**	**29.67**	**337**	P	P	07 26 52.3	-0.7
	0.5nm,0.4s,baz=142,slow=7.3,SNR=2.4						
ZALV				LR	LR	07 38 59.5	
	comp=Z,19nm,19.6s,baz=246,slow=37						
KURBB	**Kurchatov Arra**	**29.92**	**326**	P	P	07 26 54.7	-0.5
	0.3nm,0.4s,baz=136,slow=9.0,SNR=5.0						
ASAR	**Alice Springs**	**58.71**	**148**	P	P	07 30 45.4	0.0
	0.7nm,0.8s,baz=335,slow=7.0,SNR=6.3						

IDC 09 07:24:29.9±2.1, 6°.27S×128°.68E, h0km, mb3.5/2, mb1 3.4/4, mb1mx3.3/48, mbtmp3.3/4, ML3.4/2, Error ellipse: s-maj=211.6km s-min=29.6km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.67**	**158**	Pn	Pn	07 27 56.7	-2.1
	0.2nm,0.3s,baz=332,slow=14,SNR=15						
WRA				Sn	Sn	07 30 21.0	-21
	0.3nm,0.3s,baz=327,slow=24,SNR=8.0						
ASAR	**Alice Springs**	**18.02**	**164**	P	P	07 28 43.2	+0.7
	0.1nm,0.3s,baz=338,slow=9.0,SNR=4.5						
MKAR	**Makanchi Array**	**66.90**	**327**	P	P	07 35 23.7	-0.4
	0.2nm,0.4s,baz=116,slow=7.1,SNR=4.9						
KURBB	**Kurchatov Arra**	**71.20**	**329**	P	P	07 35 51.0	+0.3
	0.2nm,0.5s,baz=120,slow=6.4,SNR=3.7						

*ISN **09** 07:29:25.8±1.2, 36°.34N×45°.07E, h15km±854km, ML2.5*
TEH 09 07:29:26.6, 36°.31N×46°.15E, h28km, ML2.5, Northwestern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBST	**Bostanabad**	**1.51**	**23**	*e*Pn	Pn	07 29 51.5	-0.5
IBST				*e*Sg	Sb	07 30 14.6	+1.8
IBST				*e*		07 30 19.7	
	comp=Z,250nm,0.2s						
ILIN	**Lien**	**1.54**	**154**	*e*Pn	Pn	07 29 51.8	-0.7
ILIN				*e*		07 30 23.2	
	comp=Z,638nm,0.1s						
IVIS	**Veis**	**1.87**	**162**	*e*Pn	Pn	07 29 57.4	+0.5
IVIS				*e*Sg	Sb	07 30 25.5	+2.3
IVIS				*e*		07 30 33.1	
	comp=Z,543nm,0.2s						
ISHB	**Shabestar**	**2.01**	**348**	*e*Pn	Pn	07 29 58.6	-0.3
ISHB				*e*		07 30 29.3	
	comp=N,903nm,0.2s						
IKOM	**Komasi**	**2.41**	**152**	*e*Pn	Pn	07 30 05.6	+1.3
IKOM				*e*		07 30 56.5	
	comp=Z,99nm,0.2s						

*ISCJB **09** 07:45:50.5±0.4, 36°.32N±0°.03×70°.86E±0°.05, h100km, mb3.6/10, Error ellipse: s-maj=5.7km s-min=4.0km az=152.1*
*IDC **09** 07:45:50.6±3.1, 36°.23N×71°.01E, h105km±26km, mb3.4/11, mb1 3.5/16, mb1mx3.3/69, mbtmp3.8/16, MS3.6/1, Ms1 3.6/1, ms1mx2.2/56, Error ellipse: s-maj=22.0km s-min=16.1km az=175.0*
*NNC **09** 07:45:58.7±2.4, 36°.92N×71°.03E, h0km, mb4.4, mpv4.1, Error ellipse: s-maj=19.2km s-min=8.3km az=173.0*
ISC 09 07:45:51.3±0.6, 36°.35N±0°.05×70°.85E±0°.05, h100km, n42, σ2° 47/54, mb3.6/10, 10C-5D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZET	**Dzherino**	**2.93**	**327**	⇓P	Pn	07 46 41.8	+5.5
	67nm,0.3s						
DZET				S	**Sn**	**07 47 15.3**	**+4.5**
	313nm,0.5s						
SFK	**Sufi-Kurgan**	**4.21**	**29**	⇑P	**Pn**	**07 46 57.5**	**+4.0**
	23nm,0.7s						
SFK				⇑S	**Sn**	**07 47 43.4**	**+1.6**
	75nm,0.2s						
THN	**Thein Dam**	**5.61**	**133**	*e*P	Pn	07 47 16.6	+4.3
THN				*e*S	**Sn**	**07 48 17.0**	**+1.6**
DHRM	**DHARAMSHALA**	**6.09**	**131**	*e*P	**Pn**	**07 47 22.1**	**+3.1**
DHRM				*e*S	**Sn**	**07 48 27.8**	**+0.4**
DHRM				IAML		07 48 31.1	
	comp=N,175nm,0.1s						
DHRM				IAML		07 48 31.7	
	comp=E,151nm,0.4s						
AML	**Almayashu**	**6.18**	**20**	P	**Pn**	**07 47 22.8**	**+2.4**
	SNR=59						
MNAS	**Manas**	**6.26**	**11**	⇑P	**Pn**	**07 47 23.9**	**+2.6**
	comp=E,11nm,0.4s						
MNAS				⇓S	**Sn**	**07 48 31.0**	**-0.3**
	comp=E,50nm,0.7s						
UCH	**Uchtor**	**6.52**	**25**	P	**Pn**	**07 47 27.2**	**+2.1**
	SNR=11						
KZA	**Kyzart**	**6.66**	**29**	P	**Pn**	**07 47 28.5**	**+1.6**
	SNR=8.5						
EKS2	**Erkin-Say**	**6.70**	**19**	P	**Pn**	**07 47 30.0**	**+2.9**
	SNR=18						
KK31	**Karatay Array**	**6.75**	**358**	⇓P	**Pn**	**07 47 30.6**	**+2.8**
	comp=E,19nm,0.5s,baz=189,slow=14,SNR=259						
KK31				⇑S	**Sn**	**07 48 41.7**	**-1.4**
	comp=E,16nm,0.6s,baz=181,slow=19,SNR=11						
AAK	**Ala-Archa**	**6.88**	**23**	P	**Pn**	**07 47 31.7**	**+2.1**
	comp=E,3.2nm,0.3s,baz=191,slow=11,SNR=11						
AAK				S	**Sn**	**07 48 46.4**	**-0.1**
	comp=E,2.3nm,0.3s,baz=355,slow=20,SNR=12						
AAK	**Ala-Archa**	**6.88**	**23**	⇑P	**Pn**	**07 47 31.8**	**+2.1**
	comp=E,2.6nm,0.3s						
AAK				⇓S	**Sn**	**07 48 45.3**	**-1.2**
	comp=E,22nm,0.8s						
AAK	**Ala-Archa**	**6.88**	**23**	P	**Pn**	**07 47 32.0**	**+2.4**
	SNR=7.1						
ULHL	**Ulahol**	**7.22**	**34**	P	**Pn**	**07 47 36.1**	**+1.8**
	SNR=7.1						
CHMS	**Chumysh**	**7.29**	**23**	P	**Pn**	**07 47 37.1**	**+2.0**
	SNR=6.5						
SMLA	**Simla**	**7.40**	**133**	*e*P	**Pn**	**07 47 40.1**	**+3.5**
SMLA				*e*S	**Sn**	**07 48 58.5**	**-0.6**
SMLA				IAML		07 49 03.3	
SMLA				IAML		07 49 04.7	
	comp=E,70nm,0.3s						
USP	**Ospenovka**	**7.45**	**21**	P	**Pn**	**07 47 38.9**	**+1.5**
	SNR=7.2						
TKM2	**Tokmak 2**	**7.51**	**28**	⇑P	**Pn**	**07 47 40.3**	**+2.0**
	comp=E,6.5nm,0.5s						
TKM2				⇑S	**Sn**	**07 49 02.2**	**+0.3**
	comp=E,14nm,1.2s						
TKM2	**Tokmak 2**	**7.51**	**28**	P	**Pn**	**07 47 40.2**	**+1.9**
	SNR=18						
KHET	**Khetri**	**9.26**	**152**	*e*P	**Pn**	**07 48 03.8**	**+1.8**
KHET				*e*S	**Sn**	**07 49 40.3**	**-4.0**
KHET				IAML		07 49 44.8	
	comp=N,12nm,0.6s						
KHET				IAML		07 49 45.3	
	comp=E,11nm,0.3s						
JOSI	**Joshimath**	**9.29**	**126**	*e*P	Pn	07 48 08.6	+6.1
JOSI				*e*S	**Sn**	**07 49 43.2**	**-2.1**
SONA	**Sohna**	**9.64**	**145**	*e*S	**Sn**	**07 49 50.5**	**-3.1**
SONA				IAML		07 50 01.3	
	comp=E,13nm,0.3s						
SONA				IAML		07 50 01.4	
	comp=N,8.3nm,0.5s						
GEYT	**Alibeck**	**10.29**	**283**	P	**Pn**	**07 48 16.9**	**+1.0**
	comp=N,9.2nm,0.3s,baz=105,slow=11,SNR=2.3						
GEYT				S	**Sn**	**07 50 12.0**	**+2.7**
	comp=N,9.4nm,0.3s,baz=138,slow=18,SNR=2.4						
MKAR	**Makanchi Array**	**13.48**	**36**	P	**Pn**	**07 48 58.6**	**+0.2**
	baz=212,slow=13,SNR=4.7						
AB31	**Akbulak array**	**15.16**	**332**	⇑P	**P**	**07 49 26.4**	**+3.8**
	comp=N,2.2nm,0.5s,baz=145,slow=12,SNR=47						
AB31				⇑S	**S**	**07 52 14.1**	**-3.3**
	comp=N,1.7nm,0.7s,baz=156,slow=25,SNR=4.2						
KURBB	**Kurchatov Arra**	**15.30**	**19**	P	**Pn**	**07 49 19.8**	**-1.8**
	comp=N,0.1nm,0.3s,baz=210,slow=9.9,SNR=4.8						
BVAR	**Borovoye Array**	**16.68**	**359**	P	**Pn**	**07 49 38.7**	**0.0**
	comp=N,0.4nm,0.3s,baz=170,slow=9.0,SNR=9.5						
BVAR				S	**Sn**	**07 52 35.1**	**-8.5**
	comp=N,0.1nm,0.3s,baz=234,slow=37,SNR=2.5						
AKTO	**Aktyubinsk**	**16.85**	**331**	P	**P**	**07 49 42.2**	**+0.8**
	comp=N,0.3nm,0.3s,baz=175,slow=6.4,SNR=8.5						
AKTO				S	**Sn**	**07 52 44.1**	**-3.8**
	comp=N,0.2nm,0.3s,baz=104,slow=19,SNR=4.3						
AKTO	**Aktyubinsk**	**16.85**	**331**	⇓P	P	07 49 49.2	+7.9
	comp=N,3.9nm,1.2s						
AKTO				⇑S	**S**	**07 52 53.9**	**+2.0**
	comp=N,3.3nm,1.0s						
ZALV	**Zalesovo Beam**	**20.10**	**25**	P	**P**	**07 50 15.7**	**-1.1**
	comp=N,2.0nm,0.5s,baz=217,slow=13,SNR=7.0						
ASF	**Jabal al Asfar**	**28.28**	**272**	LR	LR	08 06 04.9	
	comp=N,106nm,20.0s,baz=86,slow=43						
AKASG	**Malin Array Be**	**32.95**	**309**	P	**P**	**07 52 16.6**	**+0.5**
	comp=N,0.4nm,0.4s,baz=81,slow=7.2,SNR=4.6						
FINES	**FINESS Array B**	**37.54**	**326**	P	**P**	**07 52 56.1**	**+0.8**
	comp=N,1.4nm,0.8s,baz=111,slow=11,SNR=5.5						
ARCES	**ARCESS Array B**	**41.24**	**338**	P	**P**	**07 53 26.7**	**+0.7**
	comp=N,1.1nm,0.7s,baz=114,slow=8.4,SNR=4.7						
HFS	**Hagfors**	**43.11**	**322**	P	**P**	**07 53 41.9**	**+0.6**
	comp=N,0.7nm,0.3s,baz=94,slow=12,SNR=9.0						
NB2	**NORSAR Subarra**	**44.43**	**323**	P	**P**	**07 53 51.9**	**0.0**
	comp=Z,0.4nm,0.5s,baz=97,slow=7.9						
NOA	**NORSAR Array B**	**44.43**	**323**	P	**P**	**07 53 52.0**	**0.0**
	comp=Z,0.9nm,0.5s,baz=103,slow=7.1,SNR=4.8						
SPITS	**Spitsbergen Ar**	**47.61**	**347**	P	**P**	**07 54 15.4**	**-1.3**
	comp=Z,6.7nm,1.0s,baz=305,slow=48,SNR=3.0						
TORD	**Torodi Ar. Bea**	**65.59**	**269**	P	**P**	**07 56 23.6**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=50,slow=6.0,SNR=8.2						
YKA	**Yellowknife Ar**	**81.40**	**3**	P	**P**	**07 57 55.9**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=350,slow=5.3,SNR=5.5						
WRA	**Warramunga Arr**	**82.02**	**122**	P	**P**	**07 57 58.2**	**-2.3**
	comp=Z,0.2nm,0.4s,baz=324,slow=4.9,SNR=7.0						
ASAR	**Alice Springs**	**84.27**	**125**	P	**P**	**07 58 10.2**	**-1.9**
	comp=Z,0.2nm,0.6s,baz=312,slow=5.7,SNR=4.7						

IDC 09 07:48:33.2±2.0, 6°.25S×150°.26E, h0km, mb3.4/3, mb1 3.8/4, mb1mx3.5/46, mbtmp3.5/4, ML1.5/1, Error ellipse: s-maj=119.6km s-min=24.3km az=127.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.39**	**224**	Pn	Pn	07 49 43.2	+2.1
	1.9nm,0.3s,baz=61,slow=10,SNR=3.5						
PMG				Sn	Sn	07 50 32.4	-0.6
	6.5nm,0.3s,baz=201,slow=17,SNR=9.8						
WRA	**Warramunga Arr**	**20.60**	**227**	P	P	07 53 13.9	-0.3
	1.2nm,0.7s,baz=52,slow=11,SNR=15						
ASAR	**Alice Springs**	**23.39**	**221**	P	P	07 53 42.8	-1.1
	0.4nm,0.5s,baz=56,slow=9.1,SNR=7.7						
ILAR	**Eielson Array**	**84.45**	**23**	P	P	08 01 07.2	-0.3
	0.5nm,0.9s,baz=250,slow=8.8,SNR=5.0						
TORD	**Torodi Ar. Bea**	**148.29**	**285**	PKPbc	PKPbc	08 08 22.7	+0.2
	0.3nm,0.4s,baz=60,slow=2.3,SNR=3.6						

*BJI **09** 07:54:06.0, 28°.30N×83°.87E, h10km, mb4.5/38, mB4.5/20, Ms4.1/17, Ms7 3.8/16*
*ISCJB **09** 07:54:08.7±0.5, 28°.37N±0°.02×84°.11E±0°.02, h18km±3km, mb4.7/159, MS3.6/16, Error ellipse: s-maj=4.2km s-min=2.3km az=23.3*
*NDI **09** 07:54:10.7±2.8, 28°.30N×84°.15E, h15km, ML4.6, mb4.8(NEIC)*
*DMN **09** 07:54:10.0±0.4, 28°.32N×84°.17E, h2km, Ml5.1/5, Error ellipse: s-maj=13.4km s-min=4.2km az=7.0*
*NEIC **09** 07:54:11.1±1.5, 28°.40N×84°.13E, h20km±10km, mb4.8/80, Error ellipse: s-maj=5.2km s-min=3.5km az=216.0*
NEIC Felt [III] at Pokhara and [II] at Kathmandu. Also felt at Bharatpur.
*MOS **09** 07:54:11.1±0.9, 28°.42N×84°.11E, h33km, mb5.0/60, Error ellipse: s-maj=8.1km s-min=3.8km az=117.3*
*IDC **09** 07:54:12.2±2.8, 28°.34N×84°.24E, h31km±20km, mb4.4/42, mb1 4.4/45, mb1mx4.3/70, mbtmp4.5/45, ML4.4/3, MS3.4/13, Ms1 3.5/13, ms1mx3.1/68, Error ellipse: s-maj=12.8km s-min=10.2km az=31.0*
ISC 09 07:54:10.4±0.6, 28°.30N±0°.03×84°.09E±0°.02, h19km±2km, h19km:pP-P, n390, σ1s 84/433, mb4.8/162, MS3.5/16, 14C-10D, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DANN	**Dangsing**	**0.30**	**281**	*e*Pg	**Pg**	**07 54 17.0**	**-0.1**
DANN				*e*Sg	**Sg**	**07 54 21.5**	**-0.3**
	89μm,0.4s						
GKN	**Gorkha**	**0.56**	**121**	*e*Pg	**Pg**	**07 54 19.6**	**-2.1**
GKN				*e*Sg	**Sg**	**07 54 26.1**	**-3.2**
	25μm,0.3s						
KOLN	**Koldanda**	**0.68**	**220**	*e*Pg	**Pb**	**07 54 24.4**	**+0.7**
KOLN				*e*Sg	**Sn**	**07 54 34.7**	**-0.7**
	11μm,0.4s						
PYUN	**Piuthan**	**0.99**	**259**	*e*Pg	**Pg**	**07 54 29.8**	**+0.1**
DMN	**Daman**	**1.13**	**127**	*e*Pg	**Pb**	**07 54 30.3**	**-1.1**
DMN				*e*Sg	**Sb**	**07 54 45.4**	**-0.4**
	9μm,0.5s						
KKN	**Kakani**	**1.16**	**115**	*e*Pg	**Pn**	**07 54 30.5**	**-1.4**
PKIN	**Phulchoki**	**1.36**	**121**	*e*Pg	**Pn**	**07 54 34.6**	**0.0**
PKIN				*e*Sg	**Sn**	**07 54 52.3**	**+0.1**
	10μm,0.6s						
GUN	**Gumba**	**1.62**	**103**	*e*Pg	**Pn**	**07 54 39.0**	**+0.7**
GUN				*e*Sg	**Sn**	**07 54 59.0**	**+0.1**
JIRN	**Jiri**	**1.96**	**108**	*e*Pg	**Pn**	**07 54 44.1**	**+1.2**
RAMN	**Ramite**	**2.60**	**120**	*e*Pn	**Pn**	**07 54 51.9**	**+0.3**
RAMN				*e*Sn	**Sn**	**07 55 19.4**	**-3.4**
	4μm,0.6s						
ODAN	**Odare**	**3.26**	**115**	*e*Pn	**Pn**	**07 55 01.8**	**+1.1**
ODAN				*e*Sn	**Sn**	**07 55 36.2**	**-2.9**
ODAN				*e*Sn	Sb	07 55 37.0	-10
	2μm,0.4s						
TAPN	**Taplejung**	**3.34**	**106**	*e*Pn	**Pn**	**07 55 02.4**	**+0.5**
TAPN				*e*Sn	**Sn**	**07 55 38.5**	**-2.7**
	2μm,0.6s						
GTK	**Tadong**	**4.11**	**103**	*e*P	**Pn**	**07 55 10.8**	**-1.5**
JOSI	**Joshimath**	**4.55**	**301**	*e*P	**Pn**	**07 55 20.6**	**+2.1**
BOK	**Bokaro**	**4.76**	**160**	*e*P	**Pn**	**07 55 21.8**	**+0.7**
BOK				*e*S	**Sn**	**07 56 14.8**	**-1.1**
DDI	**Dehra Dun**	**5.64**	**292**	*e*P	**Pn**	**07 55 35.7**	**+2.4**
DDI				*e*S	**Sn**	**07 56 37.4**	**-0.3**
DDI				IAML		07 56 43.8	
	comp=E,1μm,0.3s						
DDI				IAML		07 56 44.0	
	comp=N,2μm,0.1s						
DHUB	**DHUBRI**	**5.73**	**112**	*e*P	**Pn**	**07 55 34.2**	**-0.2**
NDI	**New Delhi**	**6.06**	**275**	*e*P	**Pn**	**07 55 40.0**	**+1.0**
NDI				*e*S	**Sn**	**07 56 47.0**	**-0.9**
SONA	**Sohna**	**6.18**	**271**	*e*P	**Pn**	**07 55 41.8**	**+1.1**
TURI	**Tura**	**6.21**	**115**	*e*P	**Pn**	**07 55 39.4**	**-1.6**
BHGR	**Bahadurgarh**	**6.31**	**275**	*e*P	**Pn**	**07 55 45.1**	**+2.8**
LSA	**Lhasa**	**6.34**	**76**	P	**Pn**	**07 55 42.8**	**-0.4**
SMLA	**Simla**	**6.65**	**297**	*e*P	**Pn**	**07 55 48.6**	**+1.5**
SMLA				*e*S	**Sn**	**07 56 58.5**	**-3.9**
GUWA	**GUWAHATI**	**7.08**	**105**	*e*P	**Pn**	**07 55 52.8**	**-0.2**
KHET	**Khetri**	**7.32**	**270**	*e*P	**Pn**	**07 55 56.3**	**0.0**
SHL	**Shillong**	**7.46**	**110**	*e*P	**Pn**	**07 55 56.5**	**-2.0**
SHL				*e*S	**Sn**	**07 57 16.5**	**-6.2**
SHL	**Shillong**	**7.46**	**110**	*e*Pn	**Pn**	**07 55 56.3**	**-2.1**
SHL	**Shillong**	**7.46**	**110**	*e*P	**Pn**	**07 55 56.3**	**-2.1**
AGT	**Agartala**	**7.79**	**123**	*ex*	Pn	07 55 55.0	-7.7
DHRM	**DHARAMSHALA**	**7.81**	**302**	*e*P	**Pn**	**07 56 03.5**	**+0.4**
DHRM				*e*S	**Sn**	**07 57 27.3**	**-3.8**
DHRM				IAML		07 57 36.2	
	comp=E,446nm,0.5s						
DHRM				IAML		07 57 36.9	
	comp=N,356nm,0.6s						
BHPL	**Bhopal**	**7.84**	**232**	*e*P	**Pn**	**07 56 02.9**	**-0.5**
BHPL				*e*S	**Sn**	**07 57 27.0**	**-4.7**
BHPL				IAML		07 58 18.0	
	comp=N,387nm,0.4s						
BHPL				IAML		07 58 19.4	
	comp=E,390nm,0.4s						
TEZP	**TEZPUR**	**7.91**	**100**	*e*P	**Pn**	**07 56 02.4**	**-2.1**
TEZP				*e*S	**Sn**	**07 57 27.9**	**-5.6**
BWNR	**Bhubaneshwar**	**8.12**	**169**	*e*P	**Pn**	**07 56 07.3**	**+0.1**
THN	**Thein Dam**	**8.33**	**302**	*e*P	**Pn**	**07 56 10.4**	**+0.3**
THN				*e*S	**Sn**	**07 57 37.0**	**-6.6**
NGP	**Nagpur**	**8.46**	**214**	*e*P	**Pn**	**07 56 12.6**	**+0.6**
NGP				*e*S	**Sn**	**07 57 42.6**	**-4.4**
ZIRO	**ZIRO**	**8.67**	**93**	*e*P	**Pn**	**07 56 14.5**	**-0.4**
AZL	**Aizawl**	**8.96**	**118**	*e*P	**Pn**	**07 56 18.6**	**-0.4**
AZL				*e*S	**Sn**	**07 57 52.8**	**-6.7**
IMP	**Imphal**	**9.47**	**109**	*e*P	**Pn**	**07 56 25.9**	**0.0**
MOKO	**MOKOCHONG**	**9.48**	**100**	*e*P	**Pn**	**07 56 24.6**	**-1.4**
SAIH	**SAIHA**	**9.90**	**124**	*e*P	**Pn**	**07 56 32.6**	**+0.8**
SARP	**Sargodha**	**10.53**	**293**	P	**Pn**	**07 56 40.8**	**+0.5**
CHCP	**Chirah Chowk**	**10.72**	**303**	P	**Pn**	**07 56 43.2**	**+0.3**
THW	**Thamme Wali**	**11.55**	**296**	P	**Pn**	**07 56 52.7**	**-1.6**
CEP	**Cherat**	**11.81**	**301**	P	**Pn**	**07 56 56.1**	**-1.8**
HYB	**Hyderabad**	**11.97**	**206**	*i*P	**Pn**	**07 56 59.0**	**-1.1**
HYB				*e*S	**Sn**	**07 59 07.0**	**-6.1**
HYB	**Hyderabad**	**11.97**	**206**	*e*P	**Pn**	**07 56 57.1**	**-2.9**
HYB				IAmb	IAmb	07 56 59.2	
	comp=Z,65nm,1.0s						
KSH	**Kashi**	**13.06**	**331**	P	**Pn**	**07 57 11.6**	**-3.4**
KSH				pP	P	07 57 17.3	-7.9
KSH				PP	**PnPn**	**07 57 22.4**	**-0.5**
KSH				S	**Sn**	**07 59 34.1**	**-5.7**
KSH				sS		07 59 43.1	
KSH				SS	**SnSn**	**07 59 52.1**	**-0.1**
KSH				pmax	pmax		
	comp=Z,49nm,0.5s						
KSH				LR	LR		
	comp=Z,1μm,9.9s						
KSH				LR	LR		
	comp=Z,640nm,12.4s						
KSH				LR	LR		
	comp=Z,230nm,5.9s						
POO	**Poona**	**13.52**	**226**	*e*P	**Pn**	**07 57 20.6**	**-0.6**
POO				IAmb	IAmb	07 57 26.1	
	comp=Z,63nm,0.2s						
BHJ	**Bhuj**	**13.94**	**252**	*e*S	**Sn**	**08 00 04.4**	**+3.2**
KBL	**Kabul**	**14.27**	**300**	*e*Pn	**Pn**	**07 57 29.5**	**-2.2**
KBL	**Kabul**	**14.27**	**300**	*e*P	**Pn**	**07 57 29.5**	**-2.2**
TARG	**Taragay, Kyrgy**	**14.35**	**341**	*e*Pn	**Pn**	**07 57 31.8**	**-1.1**
SHLS	**Shalkode**	**15.29**	**347**	*e*P	**Pn**	**07 57 42.6**	**-2.7**
	comp=Z,3.6nm,0.8s						
UZB	**Uzynbulak**	**15.38**	**346**	*e*P	**Pn**	**07 57 44.0**	**-2.5**
	comp=Z,5.8nm,0.7s						
SATY	**Saty**	**15.43**	**344**	*e*P	**Pn**	**07 57 44.6**	**-2.6**
	comp=Z,3.6nm,0.7s						
SATY				*e*S	**Sn**	**08 00 31.8**	**-5.9**
PDGK	**Podgornoye**	**15.46**	**347**	P	**Pn**	**07 57 44.4**	**-3.0**
PDGK				pmax	pmax		
	comp=Z,13nm,0.8s						
ZHN	**Zhinishke**	**15.53**	**344**	*e*P	**Pn**	**07 57 45.9**	**-2.5**
	comp=Z,2.7nm,0.7s						
WMQ	**Urumqi**	**15.76**	**10**	P	**Pn**	**07 57 52.6**	**+1.2**
WMQ				PP	**sP**	**07 58 04.1**	**+1.1**
WMQ				LR	LR		
	comp=Z,690nm,14.5s						
WMQ				LR	LR		
	comp=Z,170nm,6.1s						
WMQ				LR	LR		
	comp=Z,310nm,23.9s						
MDOK	**Medeo**	**15.89**	**341**	*e*P	**Pn**	**07 57 50.9**	**-2.2**
	comp=Z,36nm,0.7s						
MDOK				LR	LR	08 04 02.8	
	comp=Z,183nm,13.1s						
CMAI	**Chiengmai2**	**15.98**	**118**	P	**P**	**07 57 57.2**	**-0.6**
	comp=Z,381nm,0.7s,comp=Z,4μm						
TKM2	**Tokmak 2**	**16.13**	**337**	P	**Pn**	**07 57 52.6**	**-3.7**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.6s						
AAK	**Ala-Archa**	**16.29**	**334**	Pn	**Pn**	**07 57 59.5**	**+1.3**
	comp=Z,1.5nm,0.3s,baz=125,slow=9.3,SNR=22						
AAK				Sn	**Sn**	**08 00 54.7**	**-3.8**
	comp=Z,0.3nm,0.3s,baz=357,slow=23,SNR=2.5						
AAK				LR	LR	08 04 34.3	
	comp=Z,82nm,19.9s,baz=132,slow=38						
AAK	**Ala-Archa**	**16.29**	**334**	*e*Pn	**Pn**	**07 57 57.1**	**-1.1**
AAK				*e*P	**P**	**07 58 02.9**	**+1.8**
AAK				Sn	**Sn**	**08 00 54.7**	**-3.8**
AAK	**Ala-Archa**	**16.29**	**334**	⇓*e*P	**Pn**	**07 57 57.2**	**-1.1**
CHTO	**Chiang Mai**	**16.55**	**122**	P	**P**	**07 58 06.8**	**+2.8**
	comp=Z,128nm,1.1s						
CHTO	**Chiang Mai**	**16.55**	**122**	*e*Pn	**P**	**07 58 05.2**	**+1.2**
	comp=Z,22nm,0.9s						
CHTO	**Chiang Mai**	**16.55**	**122**	*e*P	**P**	**07 58 05.2**	**+1.2**
CHTO				pmax	pmax		
	comp=Z,22nm,0.9s						
KUU	**Kurty**	**16.77**	**340**	*e*P	**Pn**	**07 58 03.3**	**-0.8**
	comp=Z,8.2nm,1.0s						
KUU				LR	LR	08 04 49.0	
	comp=Z,133nm,11.1s						
CM31	**Chiang Mai Arr**	**16.77**	**123**	*e*Pn	**P**	**07 58 06.5**	**0.0**
CMAR	**Chiang Mai Arr**	**16.77**	**123**	Pn	**Pn**	**07 58 04.0**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=317,slow=13,SNR=22						
CMAR				LR	LR	08 06 07.1	
	comp=Z,45nm,19.2s,baz=316,slow=43

MK31 pmax pmax
comp=Z,2.0nm,0.4s
MKAR Makanchi Array 18.52 356 P P 07 58 24.8 -0.8
comp=Z,1.4nm,0.3s,baz=165,slow=13,SNR=62
MKAR ScP **ScP 08 06 29.3 -0.2**
comp=Z,0.0nm,0.3s,baz=201,slow=2.8,SNR=3.6
MKAR Makanchi Array 18.52 356 *eP* **P 07 58 24.2 -1.4**
comp=Z,46nm,0.5s
MKAR ScP **ScP 08 06 29.3 -0.2**
BTLS Baital 18.53 337 *eP* **P 07 58 24.7 -1.0**
comp=Z,2.3nm,1.2s
BTLS *eS* **Sn 08 01 47.9 -4.5**
MAKZ Makanchi 18.56 355 *eP* **P 07 58 24.5 -1.5**
comp=Z,12nm,1.3s
MAKZ Makanchi 18.56 355 *eP* **P 07 58 24.5 -1.5**
MAKZ pmax pmax
comp=Z,12nm,1.3s
PHIT Phitsanulok 18.65 123 P **Pn 07 58 33.2 +5.6**
comp=Z,15nm,0.9s
ZSN Zaisan 19.13 2 *eP* **P 07 58 32.4 +0.1**
comp=Z,1.8nm,1.0s
PBKT Sadao Pong 19.45 123 P **Pn 07 58 38.6 +1.4**
comp=Z,14nm,0.8s,comp=Z,1μm
PBKT Sadao Pong 19.45 123 *eP* **Pn 07 58 37.4 +0.1**
GYA Guiyang 20.13 90 P **P 07 58 43.9 +0.5**
GYA pP sP 07 58 51.0 -0.3
GYA PP **PnPn 07 59 06.2 +6.3**
GYA S **S 08 02 25.4 -3.5**
GYA sS Sn 08 02 34.4 +2.9
GYA SS **SnSn 08 02 54.8 +8.9**
GYA pmax pmax
comp=Z,20nm,0.7s
GYA pmax pmax
comp=Z,120nm,4.9s
GYA LR LR
comp=Z,2μm,13.8s
GYA LR LR
comp=Z,2μm,14.2s
GYA LR LR
comp=Z,2μm,14.0s
CHAI Chaiyaphum 20.63 123 P Pn 07 58 50.2 -1.0
comp=Z,15nm,0.8s,comp=Z,132nm
PHET Kaeng Krachan 21.08 133 P **P 07 58 58.7 +5.1**
comp=Z,12nm,0.9s
PALK Pallekele 21.15 189 P **P 07 58 58.5 +4.0**
comp=Z,5.9nm,0.3s,baz=296,slow=8.4,SNR=4.9
PALK LR LR 08 06 31.3
comp=Z,84nm,20.3s,baz=294,slow=35
SKNT Sakolnakorn 21.50 117 P **P 07 58 59.9 +1.6**
comp=Z,12nm,0.9s
OTUK Ortayu 21.90 339 P **P 07 59 01.1 -1.2**
OTUK pmax pmax
comp=Z,14nm,0.6s
SRAK Srakaew 21.92 127 P P 07 59 11.5 +8.8
comp=Z,47nm,1.0s
XAN Xi'an 21.98 69 P **P 07 59 01.2 -2.1**
XAN pmax pmax
comp=Z,8.0nm,1.1s
XAN pmax pmax
comp=Z,68nm,4.4s
SEM Semipalatinsk 22.28 354 *eP* **P 07 59 05.7 -0.8**
comp=Z,5.0nm,0.9s
SEM LR LR 08 08 31.3
comp=Z,97nm,13.8s
KURBB Kurchatov Arra 22.70 351 P **P 07 59 10.3 -0.4**
comp=Z,13nm,0.8s,baz=171,slow=10,SNR=56
KURBB ScP **ScP 08 06 38.1 -1.3**
comp=Z,0.2nm,0.3s,baz=182,slow=2.5,SNR=4.8
KURK Kurchatov 22.77 351 *eP* **P 07 59 11.3 -0.2**
comp=Z,36nm,1.1s
KURK ScP **ScP 08 06 38.1 -1.5**
KURK Kurchatov 22.77 351*c iP* **P 07 59 10.5 -1.0**
KURK pmax pmax
comp=Z,22nm,1.0s
BRZS Berezniki 23.34 341 *eP* **P 07 59 17.2 -0.2**
comp=Z,6.6nm,0.8s
BRZS LR LR 08 08 45.2
comp=Z,28nm,9.3s
WSAR Wadi Sarin 23.46 263 P **P 07 59 22.3 +3.4**
comp=Z,2.0nm,0.4s,baz=153,slow=6.8,SNR=2.3
GEYT Alibeck 23.72 301 P **P 07 59 22.2 +0.9**
comp=Z,34nm,0.3s,baz=134,slow=8.3,SNR=1.9
GYA0B ALIBECK ARMY 23.72 301 *eP* **P 07 59 21.8 +0.6**
comp=Z,19nm,1.0s
HVS Khovu-Aksy 23.94 15*deP* **P 07 59 23.4 +0.1**
HVS pmax pmax
comp=Z,30nm,1.0s
ZAA0 Zalesovo Array 25.64 1 *eP* **P 07 59 38.2 -0.4**
comp=Z,10nm,0.6s
ZALV Zalesovo Beam 25.64 1 P **P 07 59 38.7 +0.2**
comp=Z,9.9nm,0.5s,baz=185,slow=9.4,SNR=31
ZALV Zalesovo Beam 25.64 1 *eP* **P 07 59 38.6 +0.1**
HHC Hu-ho-hao-te 25.74 54 *eP* **P 07 59 39.1 -0.7**
HHC pmax pmax
comp=Z,8.0nm,0.7s
HHC pmax pmax
comp=Z,67nm,7.0s
SONM Songino Array 26.09 36 P **P 07 59 43.7 +0.8**
comp=Z,13nm,0.6s,baz=219,slow=11,SNR=21
SONA1 Songino Array 26.10 36 *eP* **P 07 59 44.0 +0.9**
ULN Ulaanbaatar 26.44 36 *eP* **P 07 59 47.1 +0.9**
comp=Z,16nm,0.8s
ULN Ulaanbaatar 26.44 36*c iP* **P 07 59 46.8 +0.6**
ULN pmax pmax
comp=Z,22nm,1.0s
NVS Novosibirsk 26.53 359 *eP* **P 07 59 46.4 -0.3**
MOY Mondy 26.57 24 *eP* **P 07 59 51.0 +3.8**
BVAR Borovoye Array 26.71 341 P **P 07 59 48.5 +0.2**
comp=Z,2.9nm,0.4s,baz=149,slow=11,SNR=18
BRVK Borovoye 26.77 341 *eP* **P 07 59 48.9 +0.1**
comp=Z,4.7nm,0.7s
BRVK Borovoye 26.77 341⇑*eP* **P 07 59 48.7 -0.1**
BRVK pmax pmax
comp=Z,6.0nm,1.0s
TLY Talaya 27.58 27 LR LR 08 12 03.3
comp=Z,61nm,21.1s,baz=244,slow=39
AB31 Akbulak array 27.94 325 P **P 08 00 00.0 +0.6**
AB31 pmax pmax
comp=Z,4.0nm,0.5s
ABKAR Akbulak array 27.94 325 *eP* **P 08 00 00.0 +0.6**
AKTO Aktyubinsk 29.65 325 P **P 08 00 15.0 +0.4**
comp=Z,3.0nm,0.5s,baz=115,slow=9.9,SNR=12
AKTO LR LR 08 13 34.5
comp=Z,130nm,18.7s,baz=138,slow=39
AKTO Aktyubinsk 29.65 325 P **P 08 00 15.0 +0.4**
NJ2 Nanjing 30.21 74 *eP* **P 08 00 20.0 +0.3**
NJ2 pmax pmax
comp=Z,16nm,0.5s
ARU Arti 33.47 334 P **P 08 00 48.5 +0.3**
comp=Z,7.5nm,0.4s,baz=125,slow=4.7,SNR=10
ARU Arti 33.47 334 *eP* **P 08 00 48.1 0.0**
comp=Z,8.8nm,0.5s
ARU Arti 33.47 334*c iP* **P 08 00 48.4 +0.3**
ARU 08 01 55.7
ARU S **S 08 06 09.8 +1.1**
ARU SS **SnSn 08 08 08.1 -2.9**
ARU pmax pmax
comp=Z,6.0nm,0.5s
GNI Garni 34.36 301 P **P 08 00 57.7 +1.5**
comp=Z,4.7nm,0.4s,baz=43,slow=6.5,SNR=3.4
GNI Garni 34.36 301⇑*eP* **P 08 00 55.4 -0.9**
GNI pmax pmax
comp=Z,20nm,1.7s
ZEI Tsey 35.41 305 *eP* **P 08 01 06.6 +1.3**
ZEI pmax pmax
comp=Z,14nm,0.5s
AKH Akhalkalaki 35.48 302 *eP* **P 08 01 08.7 +2.8**
comp=Z,22nm,0.9s
AKH Akhalkalaki 35.48 302 *eP* **P 08 01 08.7 +2.8**
AKH pmax pmax
comp=Z,22nm,0.9s
KBZ Khabaz 36.31 306 P **P 08 01 14.1 +1.4**
comp=Z,5.1nm,0.8s,baz=114,slow=8.1,SNR=4.5
KVAR Kislovodsk Arr 36.50 307 P **P 08 01 15.5 +1.0**
comp=Z,5.8nm,0.7s,baz=188,slow=6.9,SNR=3.2
KIV Kislovodsk 36.50 307 *eP* **P 08 01 14.2 -0.4**
KIV pmax pmax
comp=Z,11nm,1.0s
KIV MLR MLR
comp=Z,29nm,16.0s
KSAR Wonju Array Be 37.62 64 P **P 08 01 22.6 -1.4**
KSAR Wonju Array Be 37.62 64 P **P 08 01 22.6 -1.4**
KSRS Korea Array 37.65 64 P **P 08 01 22.6 -1.6**
comp=Z,0.9nm,0.5s,baz=274,slow=9.4,SNR=5.0
KSRS LR LR 08 18 17.6
comp=Z,25nm,18.9s,baz=300,slow=39

JNU Nakatsue 40.26 71 LR LR 08 20 37.2
comp=Z,48nm,18.5s,baz=119,slow=40
VSR Storozhevoye 40.60 317 *eP* **P 08 01 47.9 -0.8**
VSR pmax pmax
comp=Z,10.0nm,0.8s
ASF Jabal al Asfar 40.71 287 P **P 08 01 51.6 +1.6**
comp=Z,3.0nm,0.6s,baz=11,slow=5.8,SNR=5.8
NRIK Noril'sk 41.13 2 P **P 08 01 53.5 +0.6**
comp=Z,18nm,0.6s,baz=172,slow=6.8,SNR=22
USRK Ussuriysk Ar. 41.16 54 P **P 08 01 52.2 -1.2**
comp=Z,1.4nm,0.6s,baz=253,slow=8.7,SNR=3.9
KLR Kul'dur 41.80 47⇓*eP* **P 08 01 58.8 +0.1**
MMAI Mount Meron Ar 41.86 289 P **P 08 02 01.8 +2.4**
comp=Z,3.0nm,0.6s,baz=71,slow=14,SNR=6.7
PRGR Permogore 41.92 334 *eP* **P 08 01 59.0 -0.4**
PRGR pmax pmax
comp=Z,27nm,0.6s
ILGA Ilgaz 42.79 301 *eP* **P 08 02 08.0 +0.9**
comp=Z,6.9nm,0.8s
BR131 Keskin Array S 42.85 299 *eP* **P 08 02 08.4 +0.9**
BRTR Keskin Array B 42.85 299 P **P 08 02 08.3 +0.8**
comp=Z,2.5nm,0.7s,baz=103,slow=9.0,SNR=18
OBN Obninsk 43.27 322 *eP* **P 08 02 11.0 +0.5**
comp=Z,103nm,1.1s
OBN Obninsk 43.27 322 *i* P **P 08 02 10.0 -0.5**
OBN *i* 08 02 28.5
OBN *i* 08 03 51.8
OBN *i* 08 04 00.1
OBN pmax pmax
comp=Z,17nm,0.8s
OBN MLR MLR
comp=Z,42nm,18.0s
CSS Mathiatis 43.35 292 *eP* **P 08 02 12.5 +1.0**
comp=Z,2.6nm,0.5s
BR231 Keskin MP Arra 43.51 299 *eP* **P 08 02 13.8 +0.9**
KLMR Klimovskoe 44.05 330 *eP* **P 08 02 15.4 -1.3**
KLMR *e* 08 03 57.7
KLMR pmax pmax
comp=Z,14nm,0.7s
KLMR Klimovskoe 44.05 330 *eP* **P 08 02 15.4 -1.3**
KLMR AMP 08 02 17.2
KLMR *eP* **PP 08 03 57.8 -1.5**
TMCR Tamitsa 46.21 334 *eP* **P 08 02 33.0 -0.8**
AKASG Malin Array Be 46.64 314 P **P 08 02 37.0 -0.4**
comp=Z,2.5nm,0.5s,baz=78,slow=7.2,SNR=26
AKBB Malin Array Si 46.64 314 *eP* **P 08 02 36.7 -0.6**
comp=Z,14nm,0.7s
AKBB Malin Array Si 46.64 314 *eP* **P 08 02 36.7 -0.6**
AKBB pmax pmax
comp=Z,14nm,0.7s
KIEV Kiev 46.65 314 *eP* **P 08 02 36.9 -0.5**
comp=Z,14nm,0.7s
KIEV Kiev 46.65 314*c iP* **P 08 02 36.8 -0.6**
KIEV pmax pmax
comp=Z,11nm,0.8s
AK11 Malin Array Si 46.67 314 *eP* **P 08 02 37.3 -0.3**
VRI Vrincioaia 47.96 308⇑*iP* **P 08 02 49.8 +2.0**
VRI Vrincioaia 47.96 308 P **P 08 02 49.8 +2.0**
PLOR Plostina 48.02 308⇑*iP* **P 08 02 50.1 +1.8**
PLOR Plostina 48.02 308 P **P 08 02 50.1 +1.8**
KARP Karpathos 48.29 294 *eP* **P 08 02 51.6 +1.1**
comp=Z,22nm,0.9s
JOF Joensuu 48.44 331 P **P 08 02 51.6 +0.4**
JOF pmax pmax
comp=Z,47nm,0.8s
MLR Muntele Rosu 48.51 307 P **P 08 02 53.3 +1.1**
comp=Z,3.7nm,0.9s,baz=104,slow=4.2,SNR=22
MLR Muntele Rosu 48.51 307⇓*iP* **P 08 02 54.5 +2.3**
MLR Muntele Rosu 48.51 307 *eP* **P 08 02 53.8 +1.6**
comp=Z,18nm,0.9s
IDID Didziasalis 48.79 320 *eP* **P 08 02 54.4 +0.5**
IDID IAmb IAmb 08 02 54.8
comp=Z,8.7nm,0.5s
YSS Yuzh-Sakhalins 48.88 51 *eP* **P 08 02 55.2 +0.4**
BURAR Bucovina Array 49.03 310⇓*iP* **P 08 02 57.3 +1.2**
BUR04 Bucovina Ar. S 49.04 310 *eP* **P 08 02 56.6 +0.4**
BUR08 Bucovina Ar. S 49.05 310 *eP* **P 08 02 56.6 +0.3**
IIGN Ignalina 49.09 320 *eP* **P 08 02 57.0 +0.8**
IIGN IAmb IAmb 08 02 57.8
comp=Z,19nm,0.5s
IZAR Zarasai 49.13 321 *eP* **P 08 02 57.4 +0.7**
IZAR IAmb IAmb 08 02 57.7
comp=Z,15nm,0.5s
VOIR 49.14 307⇓*iP* **P 08 02 57.2 +0.3**
VOIR 49.14 307 P **P 08 02 57.2 +0.3**
LVZ Lovozero 49.20 338 *eP* **P 08 02 57.4 +0.4**
comp=Z,22nm,1.1s
LVZ Lovozero 49.20 338 *eP* **P 08 02 57.4 +0.4**
LVZ pmax pmax
comp=Z,22nm,1.1s
VSU Vasula 49.37 324*deP* **P 08 02 58.4 0.0**
VSU pmax pmax
comp=Z,54nm,1.7s
TIXI Tiksi 49.79 17 *eP* **P 08 03 00.9 -0.5**
TIXI pmax pmax
comp=Z,10nm,0.6s
TIXI Tiksi 49.79 17*ceP* **P 08 03 00.7 -0.7**
TIXI pmax pmax
comp=Z,7.0nm,0.5s
TIXI MLR MLR
comp=Z,38nm,15.0s
IDI Anoyia 50.17 294 P **P 08 03 05.4 +0.6**
comp=Z,6.4nm,0.6s,baz=41,slow=12,SNR=7.9
IDI Anoyia 50.17 294 *eP* **P 08 03 05.5 +0.6**
comp=Z,7.2nm,0.5s
FIA1 FINESS Array S 50.36 328 *eP* **P 08 03 06.1 +0.3**
comp=Z,19nm,0.6s
FINES FINESS Array B 50.36 328 P **P 08 03 06.0 +0.1**
comp=Z,14nm,0.4s,baz=110,slow=8.0,SNR=107
FINES LR LR 08 26 03.0
comp=Z,87nm,18.4s,baz=60,slow=38
FINES FINESS Array B 50.36 328 P **P 08 03 06.0 +0.1**
MSF Maaselka 50.41 334 P **P 08 03 07.3 +1.1**
MSF pmax pmax
comp=Z,15nm,0.7s
VTS Vitosha 50.59 303⇑*iP* **P 08 03 08.1 0.0**
VTS Vitosha 50.59 303 *eP* **P 08 03 08.6 +0.5**
comp=Z,7.4nm,0.9s
VTS Vitosha 50.59 303 *eP* **P 08 03 08.6 +0.5**
VTS pmax pmax
comp=Z,7.0nm,0.9s
SUW Suwalki 50.68 318 *eP* **P 08 03 07.8 -0.6**
comp=Z,34nm,0.7s
SUW Suwalki 50.68 318 *eP* **P 08 03 07.8 -0.6**
SUW pmax pmax
comp=Z,34nm,0.7s
KWP Kalwaria Pacla 50.74 313 *eP* **P 08 03 09.6 +0.7**
KWP Kalwaria Pacla 50.74 313 *eP* **P 08 03 09.8 +0.9**
comp=Z,185nm,0.7s
KWP Kalwaria Pacla 50.74 313 *eP* **P 08 03 09.6 +0.7**
TRPA Tarpa 50.84 311⇓*iP* **P 08 03 10.5 +0.8**
LIT Litokhoron 51.37 300 *eP* **P 08 03 13.5 -0.4**
comp=Z,4.4nm,0.8s
LIT Litokhoron 51.37 300 *eP* **P 08 03 13.5 -0.4**
LIT pmax pmax
comp=Z,4.0nm,0.8s
MDVR Moldovita 51.52 306⇓*iP* **P 08 03 15.5 +0.5**
AGG Agios Georgios 51.63 299 *eP* **P 08 03 15.1 -0.7**
comp=Z,27nm,0.8s
AGG Agios Georgios 51.63 299 *eP* **P 08 03 15.1 -0.7**
AGG pmax pmax
comp=Z,27nm,0.8s
SGF Sodankyl 51.87 336 P **P 08 03 17.9 +0.8**
SGF pmax pmax
comp=Z,19nm,1.4s
VAF Ylistaro 52.27 330 P **P 08 03 21.4 +1.3**
VAF pmax pmax
comp=Z,53nm,1.1s
NIE Niedzica 52.31 312 *eP* **P 08 03 22.2 +1.5**
NIE Niedzica 52.31 312 *eP* **P 08 03 22.2 +1.5**
KEV Kevo 52.49 338 *eP* **P 08 03 22.1 +0.5**
comp=Z,27nm,1.1s
KEV Kevo 52.49 338 *eP* **P 08 03 22.2 +0.5**
KEV pmax pmax
comp=Z,27nm,1.1s
OJC Ojcow 52.62 313 *eP* **P 08 03 23.0 0.0**
OJC Ojcow 52.62 313 *eP* **P 08 03 22.9 -0.1**
comp=Z,8.8nm,0.6s
OJC Ojcow 52.62 313 *eP* **P 08 03 22.9 -0.1**
OJC pmax pmax
comp=Z,9.0nm,0.6s
DIVS Divibare 52.81 306 *eP* **P 08 03 23.3 -1.3**
comp=Z,8.5nm,1.0s
ARCES ARCESS Array B 52.91 338 P **P 08 03 25.0 +0.2**
comp=Z,10nm,0.6s,baz=89,slow=7.2,SNR=74
ARE0 ARCESS Array S 52.91 338 *eP* **P 08 03 25.2 +0.4**

comp=Z,13nm,0.8s
VYHS Vyhne 53.30 311 *eP* **P 08 03 28.4 +0.3**
VYHS pmax pmax
comp=Z,3.0nm,1.1s
VYHS Vyhne 53.30 311 *eP* **P 08 03 28.4 +0.3**
PDG Podgorica 53.52 304⇑*iP* **P 08 03 28.6 -1.1**
TTG Podgorica 53.52 304 *eP* **P 08 03 29.6 -0.1**
comp=Z,11nm,1.0s
TTG Podgorica 53.52 304 *eP* **P 08 03 29.6 -0.1**
TTG pmax pmax
comp=Z,11nm,1.0s
OKC Ostrava-Krasne 53.70 313 *eP* **P 08 03 31.8 +0.9**
OKC Ostrava-Krasne 53.70 313 *eP* **P 08 03 31.8 +0.9**
JAVC Velka Javorina 54.05 312 *eP* **P 08 03 34.5 +0.9**
MORC Moravsky Berou 54.09 313 *eP* **P 08 03 33.9 +0.1**
comp=Z,27nm,0.8s
MORC Moravsky Berou 54.09 313 *eP* **P 08 03 33.9 +0.1**
MORC pmax pmax
comp=Z,27nm,0.8s
MORC Moravsky Berou 54.09 313 *eP* **P 08 03 34.1 +0.2**
KRLC Kraliky 54.56 313 *eP* **P 08 03 37.9 +0.6**
KRLC Kraliky 54.56 313 *eP* **P 08 03 37.9 +0.6**
VRAC Vranov 54.73 312 *eP* **P 08 03 38.9 +0.4**
DPC Dobruska-Polom 54.84 314 *eP* **P 08 03 40.2 +0.9**
DPC *epP* **pP 08 03 45.2 -0.2**
DPC Dobruska-Polom 54.84 314 *eP* **P 08 03 40.2 +0.9**
DPC *e* 08 03 45.2
KRUC Moravsky 54.88 312 *eP* **P 08 03 39.6 +0.1**
UPC Upice 55.03 314 *eP* **P 08 03 42.0 +1.4**
UPC Upice 55.03 314 *eP* **P 08 03 42.0 +1.4**
CONA Conrad Observa 55.33 311 *i P* **P 08 03 43.3 +0.4**
comp=Z,13nm,1.0s,SNR=10
SEY Seymchan 55.35 31⇓*eP* **P 08 03 43.4 +0.7**
ARSA Arzberg 55.62 310 *i P* **P 08 03 45.3 +0.4**
comp=Z,4.2nm,0.8s
CRES Cresnjev 55.82 308 *i P* **P 08 03 46.9 +0.4**
GOPC GO Pecny, Ondr 55.86 313 *eP* **P 08 03 47.2 +0.6**
GOPC GO Pecny, Ondr 55.86 313 *eP* **P 08 03 47.2 +0.6**
PRU Pruhonice 56.01 313 *eP* **P 08 03 48.3 +0.6**
PRU *epP* **pP 08 03 53.0 -0.7**
PRU Pruhonice 56.01 313 *eP* **P 08 03 48.3 +0.6**
SOKA Soboth 56.02 309 *eP* **P 08 03 48.4 +0.5**
comp=Z,6.4nm,0.7s,SNR=8.7
HFS Hagfors 56.20 325 P **P 08 03 48.9 +0.1**
comp=Z,23nm,0.6s,baz=91,slow=7.4,SNR=104
HFS LR LR 08 29 20.1
comp=Z,81nm,18.9s,baz=80,slow=38
BRG Berggiesshubel 56.32 314 *i P* **P 08 03 50.1 +0.3**
comp=Z,8.7nm,0.8s
BRG Berggiesshubel 56.32 314 *i P* **P 08 03 50.1 +0.3**
BRG pmax pmax
comp=Z,9.0nm,0.8s
OBKA Obir 56.37 309 *i P* **P 08 03 50.8 +0.4**
comp=Z,7.3nm,0.8s
MOA Molln 56.40 311 *eP* **P 08 03 50.1 -0.5**
comp=Z,4.7nm,0.6s,SNR=5.1
LJU Ljubljana 56.44 308 *i P* **P 08 03 51.5 +0.6**
CUC Castrocucco 56.45 301 *eP* **P 08 03 51.0 -0.1**
comp=Z,8.5nm,0.8s
CEY Cerknica 56.55 308 *i P* **P 08 03 52.1 +0.4**
GEC2 GERESS Array S 56.67 312 *eP* **P 08 03 52.2 -0.3**
comp=Z,5.4nm,1.1s
GEC2 GERESS Array S 56.67 312 *eP* **P 08 03 52.2 -0.3**
GEC2 pmax pmax
comp=Z,5.0nm,1.1s
GERES GERESS Array B 56.67 312 P **P 08 03 52.6 +0.2**
comp=Z,2.2nm,0.6s,baz=95,slow=7.1,SNR=18
GERES LR LR 08 31 08.0
comp=Z,28nm,18.9s,baz=295,slow=39
GEA0 GERESS Array S 56.67 312 *eP* **P 08 03 52.4 -0.1**
KHC Kasperske Hory 56.72 312 *eP* **P 08 03 53.2 +0.4**
KHC *epP* **pP 08 03 57.3 -1.5**
KHC Kasperske Hory 56.72 312 *eP* **P 08 03 52.8 +0.1**
comp=Z,2.2nm,0.8s
KHC Kasperske Hory 56.72 312 *eP* **P 08 03 53.2 +0.4**
NC405 NORSAR Array S 57.19 327 *eP* **P 08 03 54.7 -1.2**
NC303 NORSAR Array S 57.36 327 *eP* **P 08 03 56.7 -0.3**
NB2 NORSAR Subarra 57.43 327 P **P 08 03 56.1 -1.5**
comp=Z,7.1nm,0.7s,baz=90,slow=7.4
NB2 NORSAR Subarra 57.43 327 P **P 08 03 54.4 -3.2**
NB2 pmax pmax
comp=Z,7.0nm,0.6s
NOA NORSAR Array B 57.43 327 P **P 08 03 57.0 -0.6**
comp=Z,2.7nm,0.5s,baz=145,slow=15,SNR=18
NOA LR LR 08 30 16.6
comp=Z,61nm,18.7s,baz=230,slow=38
NC204 NORSAR Array S 57.65 327 *eP* **P 08 03 59.0 -0.2**
SPA0 Spitsbergen Ar 57.97 347 *eP* **P 08 04 01.7 +0.6**
SPITS Spitsbergen Ar 57.97 347 P **P 08 04 01.6 +0.4**
comp=Z,5.5nm,0.6s,baz=78,slow=8.1,SNR=24
SPITS LR LR 08 31 58.3
comp=Z,30nm,21.5s,baz=35,slow=39
PEA0B Petropavlovsk- 58.25 43 *eP* **P 08 04 02.8 -0.7**
comp=Z,36nm,1.3s
PETK Petropavlovsk- 58.25 43 P **P 08 04 02.3 -1.1**
comp=Z,2.9nm,0.7s,baz=330,slow=1.9,SNR=5.2
PETK Petropavlovsk- 58.25 43 *eP* **P 08 04 02.7 -0.7**
PETK Petropavlovsk- 58.25 43 *eP* **P 08 04 02.7 -0.7**
KONO Kongsberg 58.27 325 *eP* **P 08 04 03.5 0.0**
comp=Z,7.3nm,0.9s
KONO Kongsberg 58.27 325 *eP* **P 08 04 03.5 0.0**
KONO pmax pmax
comp=Z,7.0nm,0.9s
MOTA Moosalm 58.59 310 *i P* **P 08 04 04.1 -2.1**
comp=Z,8.0nm,0.7s,SNR=5.0
OPO Ambohidratompo 58.69 222 P **P 08 04 09.3 +2.2**
comp=Z,3.3nm,0.8s,baz=310,slow=7.9,SNR=3.1
RETA Reutte 58.80 311 *i P* **P 08 04 06.8 -0.7**
comp=Z,3.8nm,0.5s,SNR=4.7
FETA Feichten 58.89 310 *i P* **P 08 04 07.2 -1.0**
comp=Z,4.6nm,0.5s,SNR=6.3
KBS Kingsbay 59.01 348 *eP* **P 08 04 08.6 +0.3**
comp=Z,9.4nm,1.0s
KBS Kingsbay 59.01 348 *eP* **P 08 04 08.6 +0.3**
KBS pmax pmax
comp=Z,9.0nm,1.0s
FUORN Ofenpass-Fuorn 59.27 310 *eP* **P 08 04 10.7 -0.3**
comp=Z,9.8nm,1.4s
DAVA Damuels 59.42 310 *i P* **P 08 04 11.3 -0.6**
comp=Z,13nm,0.7s,SNR=5.5
TUE Stuetta 59.92 310 *eP* **P 08 04 15.2 -0.3**
comp=Z,4.9nm,0.6s
PGF Pioggiola 60.97 305 *eP* **P 08 04 26.5 +4.0**
PGF pmax pmax
comp=Z,15nm,1.1s
BILL Bilibino 61.18 25 *eP* **P 08 04 23.9 +0.6**
comp=Z,4.9nm,0.7s
BILL Bilibino 61.18 25*c iP* **P 08 04 24.0 +0.6**
BILL *i* 08 06 44.5
BILL *i S* S 08 13 04.1 +22
BILL pmax pmax
comp=Z,4.0nm,0.9s
BILL MLR MLR
comp=Z,80nm,18.0s
MTN Manton Dam 61.19 125 *eP* **P 08 04 21.5 -2.6**
comp=Z,30nm,1.4s
SENIN Lac Senin/Sane 61.34 310 *eP* **P 08 04 24.8 -0.3**
comp=Z,12nm,0.6s
HINF Hinteralfeld 61.34 311 *eP* **P 08 04 24.3 -0.6**
HINF pmax pmax
comp=Z,7.0nm,0.9s
HAU Haudompre 61.63 312 *eP* **P 08 04 26.3 -0.5**
HAU pmax pmax
comp=Z,6.0nm,0.7s
LPG La Plagne 61.89 309 *eP* **P 08 04 28.9 0.0**
LPG pmax pmax
comp=Z,13nm,0.8s
LPL La Plagne 61.90 309 *eP* **P 08 04 28.9 0.0**
LPL pmax pmax
comp=Z,14nm,0.7s
MBDF Montbardon 62.05 308 *eP* **P 08 04 31.2 +1.3**
MBDF pmax pmax
comp=Z,6.0nm,0.7s
CABF La Chapelle 62.10 310 *eP* **P 08 04 30.5 +0.4**
CABF pmax pmax
comp=Z,30nm,1.7s
KEST Kesra 62.42 298 P **P 08 04 33.0 +0.6**
comp=Z,14nm,0.9s,baz=324,slow=6.3,SNR=8.4
KEST Kesra 62.42 298 *eP* **P 08 04 33.4 +1.0**
comp=Z,13nm,0.9s
BAIF Baives 62.59 314 *eP* **P 08 04 33.1 -0.1**
BAIF pmax pmax
comp=Z,23nm,1.3s
SMF Signal de Mont 63.60 311 *eP* **P 08 04 39.3 -0.7**
SMF pmax pmax

comp=Z,13nm,1.0s
SSF Saint Saulge 63.72 311 *e*P P 08 04 40.1 -0.6
SSF pmax pmax
comp=Z,81nm,2.0s
TCF Toulx Ste Croi 64.78 311 *e*P P 08 04 47.6 -0.1
TCF pmax pmax
comp=Z,18nm,1.3s
CAF Calviac 65.24 309 *e*P P 08 04 50.6 -0.2
CAF pmax pmax
comp=Z,14nm,1.2s
DAG Danmarks Havn 65.54 346 *i* P P 08 04 51.5 -0.6
comp=Z,7.3nm,0.8s
DAG Danmarks Havn 65.54 346 *i* P P 08 04 51.5 -0.6
DAG pmax pmax
comp=Z,7.0nm,0.8s
EKA Eskdalemuir Ar 65.72 321 P P 08 04 53.4 -0.3
comp=Z,2.1nm,0.5s,baz=84,slow=6.8,SNR=9.6
WRA Warramunga Arr 68.25 129 P P 08 05 10.1 -0.1
comp=Z,1.8nm,0.5s,baz=323,slow=6.4,SNR=23
WRAB Tennant Creek 68.25 129 *e*P P 08 05 10.0 -0.1
comp=Z,5.5nm,0.9s
WRAB Tennant Creek 68.25 129 *e*P P 08 05 10.0 -0.1
WRAB pmax pmax
comp=Z,6.0nm,0.9s
WB2 Warramunga Arr 68.25 129 *e*P P 08 05 10.2 0.0
comp=Z,8.2nm,1.1s
NWAO Narrogin (SRO) 68.54 150 P P 08 05 12.5 +0.8
comp=Z,6.8nm,0.7s,baz=200,slow=6.0,SNR=5.8
SCO Scoresbysund 68.76 340 *e*P P 08 05 13.6 +1.0
comp=Z,6.9nm,1.2s
SCO Scoresbysund 68.76 340 *e*P P 08 05 13.6 +1.0
SCO pmax pmax
comp=Z,7.0nm,1.2s
LSZ Lusaka 69.29 239 *e*P P 08 05 17.1 +0.2
comp=Z,3.9nm,0.6s
LSZ Lusaka 69.29 239 *e*P P 08 05 17.1 +0.2
LSZ pmax pmax
comp=Z,4.0nm,0.6s
AS31 Alice Springs 70.52 132 *e*P P 08 05 24.1 -0.1
comp=Z,1.2nm,0.9s
ASAR Alice Springs 70.52 132 P P 08 05 23.8 -0.4
comp=Z,3.1nm,1.0s,baz=315,slow=6.3,SNR=28
AS01 Alice Springs 70.55 132 *e*P P 08 05 24.1 -0.2
ES19 SONSECA Array 71.10 305 *e*P P 08 05 27.9 +0.2
ESDC Sonseca Array 71.16 305 P P 08 05 28.4 +0.3
comp=Z,1.9nm,0.8s,baz=57,slow=6.5,SNR=11
SUMG Summit 72.14 345 ⇑*i*P P 08 05 33.9 +0.2
comp=Z,21nm,0.9s
SUMG Summit 72.14 345 *e*P P 08 05 34.1 +0.4
comp=Z,20nm,0.8s
SUMG Summit 72.14 345 ⇑*i*P P 08 05 33.9 +0.2
SUMG pmax pmax
comp=Z,21nm,0.9s
TULEG Thule 74.07 354 *e*P P 08 05 44.0 -0.6
comp=Z,7.6nm,0.7s
TOLK Toolik Lake Re 75.68 18 *e*P P 08 05 54.5 +0.4
comp=Z,9.5nm,0.7s
IM3 Indian Mountai 76.22 21 *e*P P 08 05 57.2 +0.1
CTAO Charters Tower 76.94 121 *e*P P 08 06 01.7 -0.2
comp=Z,10nm,1.3s
CTAO Charters Tower 76.94 121 *e*P P 08 06 01.7 -0.2
CTAO pmax pmax
comp=Z,10.0nm,1.3s
RES Resolute Bay 77.28 360 *e*P P 08 06 03.1 +0.2
comp=Z,2.7nm,1.1s
RES Resolute Bay 77.28 360 *e*P P 08 06 03.1 +0.2
RES pmax pmax
comp=Z,3.0nm,1.1s
TOA0 Torodi Ar. Sit 77.28 278 *e*P P 08 06 03.5 -0.5
TORD Torodi Ar. Bea 77.28 278 P P 08 06 03.8 -0.3
comp=Z,1.7nm,0.6s,baz=60,slow=4.4,SNR=20
LBTB Lobatse 77.30 232 *e*P P 08 06 04.4 +0.4
comp=Z,8.0nm,1.0s
LBTB Lobatse 77.30 232 *e*P P 08 06 04.4 +0.4
LBTB pmax pmax
comp=Z,8.0nm,1.0s
MLY Manley 77.80 21 *e*P P 08 06 06.5 +0.4
comp=Z,5.0nm,0.6s
BPAW Bear Paw Mtn. 78.35 22 *e*P P 08 06 09.7 +0.5
comp=Z,6.0nm,1.0s
MDM Murphy Dome 78.62 20 *e*P P 08 06 10.9 +0.3
comp=Z,5.0nm,0.7s
SVW2 Sparrevohn 78.71 25 *e*P P 08 06 12.3 +1.1
comp=Z,10.0nm,1.4s
KTH Kantishna Hill 78.74 22 *e*P P 08 06 12.1 +0.7
comp=Z,5.0nm,1.0s
PPLA Purkeypile 78.76 23 *e*P P 08 06 12.4 +0.8
comp=Z,21nm,1.4s
CCB Clear Creek Bu 78.97 20 *e*P P 08 06 12.3 -0.2
comp=Z,3.0nm,0.6s
WRH Wood River Hil 79.01 20 *e*P P 08 06 12.3 -0.4
comp=Z,2.3nm,0.8s
SFJD Kangerlussuaq 79.06 343 *i* P P 08 06 12.6 -0.3
comp=Z,9.1nm,0.8s
SFJD Kangerlussuaq 79.06 343 *e*P P 08 06 12.8 -0.2
comp=Z,12nm,0.9s
SFJD Kangerlussuaq 79.06 343 *i* P P 08 06 12.6 -0.3
SFJD pmax pmax
comp=Z,9.0nm,0.8s
IL1 Eielson Array 79.16 20 *e*P P 08 06 12.8 -0.8
ILAR Eielson Array 79.16 20 P P 08 06 12.8 -0.7
comp=Z,2.4nm,0.6s,baz=304,slow=4.8,SNR=39
ILAR PP **PP 08 09 13.2 +0.9**
comp=Z,0.7nm,0.7s,baz=306,slow=7.1,SNR=6.1
ILB Eielson Array 79.16 20 *e*P P 08 06 13.3 -0.3
MCK McKinley 79.26 21 *e*P P 08 06 14.5 +0.3
comp=Z,5.8nm,1.2s
MCK McKinley 79.26 21 *e*P P 08 06 14.5 +0.3
MCK pmax pmax
comp=Z,6.0nm,1.2s
RND Reindeer 79.52 21 *e*P P 08 06 15.9 +0.2
comp=Z,6.8nm,1.2s
RND Reindeer 79.52 21 *e*P P 08 06 15.9 +0.2
RND pmax pmax
comp=Z,7.0nm,1.2s
SKT Skwentna 79.60 23 *e*P P 08 06 16.5 +0.4
comp=Z,11nm,0.7s
BOSA Boshof 79.83 230 P P 08 06 17.9 0.0
comp=Z,3.5nm,0.8s,baz=34,slow=3.6,SNR=3.7
DHY Denali Highway 80.23 21 *e*P P 08 06 20.4 +0.8
comp=Z,2.6nm,0.6s
SUA Susitna One 80.23 23 *e*P P 08 06 20.3 +0.8
comp=Z,12nm,0.6s
RIDG Independ'e Rid 80.53 20 *e*P P 08 06 20.9 -0.2
comp=Z,6.0nm,0.7s
EGAK Eagle 80.79 18 *e*P P 08 06 22.8 +0.4
comp=Z,3.1nm,0.9s
SML Sawmill 80.82 22 *e*P P 08 06 23.1 +0.4
comp=Z,14nm,0.7s
SML Sawmill 80.82 22 *e*P P 08 06 23.1 +0.4
SML pmax pmax
comp=Z,14nm,0.7s
DOT Dot Lake 80.83 20 *e*P P 08 06 22.9 +0.3
comp=Z,33nm,0.8s
STKA Stephens Creek 81.07 133 P P 08 06 23.0 -1.3
comp=Z,0.5nm,0.4s,baz=318,slow=11,SNR=3.0
STKA Stephens Creek 81.07 133 P P 08 06 23.0 -1.3
SCM Sheep Creek Mo 81.13 22 *e*P P 08 06 24.9 +0.5
comp=Z,11nm,0.6s
SCM Sheep Creek Mo 81.13 22 *e*P P 08 06 24.9 +0.5
SCM pmax pmax
comp=Z,11nm,0.6s
CNPM China Poot 81.37 25 *e*P P 08 06 25.4 -0.2
comp=Z,39nm,1.3s
KOWA Kowa 81.64 282 P P 08 06 28.2 +0.4
comp=Z,4.8nm,0.6s,baz=56,slow=6.0,SNR=9.8
DAWY Dawson 81.83 18 *e*P P 08 06 28.2 +0.3
comp=Z,3.1nm,0.7s
KDAK Kodiak Island 82.03 27 *e*P P 08 06 29.4 +0.4
comp=Z,23nm,1.1s
KDAK Kodiak Island 82.03 27 *i* P P 08 06 29.2 +0.2
OHAK Old Harbor 82.12 28 *e*P P 08 06 29.7 +0.2
comp=Z,13nm,0.9s
CRQM Cirque 83.30 21 *e*P P 08 06 37.3 +1.4
comp=Z,8.7nm,0.7s
FRB Frobisher Bay 85.75 348 LR LR 08 48 58.4
comp=Z,46nm,18.8s,baz=276,slow=38
DBIC Dimbokro 85.96 275 P P 08 06 49.9 0.0
comp=Z,3.9nm,0.8s,baz=308,slow=5.9,SNR=2.9
DBIC Dimbokro 85.96 275 *e*P P 08 06 50.2 +0.4
comp=Z,18nm,1.3s
DBIC Dimbokro 85.96 275 *e*P P 08 06 50.3 +0.4
DBIC pmax pmax
comp=Z,18nm,1.3s
YKA Yellowknife Ar 88.29 9 P P 08 06 59.7 -0.6
comp=Z,2.0nm,0.7s,baz=339,slow=4.9,SNR=13
SCHQ Schefferville 93.52 344 P P 08 07 24.1 -0.7
comp=Z,3.3nm,0.4s,baz=272,slow=12,SNR=3.9
TUL1 Leonard 116.14 360 *e*PKPdf PKPdf 08 12 51.4 -1.2
TXAR Lajitas Array 122.22 8 PKP PKPdf 08 13 04.2 -0.4
comp=Z,0.4nm,0.8s,baz=267,slow=1.2,SNR=5.4
CPUP Villa Florida 145.76 264 PKPbc PKPdf 08 13 47.9 -0.2
comp=Z,1.7nm,0.8s,baz=85,slow=8.2,SNR=3.4
OTAV Otavalo 147.06 327 *e*PKPbc PKPab 08 13 54.3 -0.5
OTAV Otavalo 147.06 327 PKP2 PKPab 08 13 54.3 -0.5
TRQA Tornquist 150.12 242 *e*PKPbc PKPbc 08 14 00.3 +0.3
LPAZ La Paz 151.73 289 PKPbc PKPbc 08 14 04.8 -0.4
comp=Z,2.2nm,0.8s,baz=94,slow=2.2,SNR=12
LPAZ La Paz 151.73 289 *e*PKPdf PKPbc 08 14 05.0 -0.1
LPAZ *e*PKPbc **pPKPdf 08 14 05.2 -0.2**

NIED ***09*** *08:10:00.37°.70N×142°.00E, h14km, Mw3.6 Best double couple: M₀2.94000×10¹⁴ NP1:φ₀s141.00000°, δ44.00000°, λ-86.00000°. NP2:φ₀s316.00000°, δ47.00000°, λ-93.00000°.*
IDC ***09*** *08:10:26.8±0.9, 37°.72N×142°.08E, h0km, mb3.5/6, mb1 3.8/9, mb1mx3.5/69, mbtmp3.6/9, ML3.4/3, Error ellipse: s-maj=25.0km s-min=18.3km az=116.0*
ISCJB ***09*** *08:10:27.7±1.1, 37°.71N±0°.04×142°.09E±0°.06, h17km±7km, mb3.6/6, Error ellipse: s-maj=7.7km s-min=5.8km az=22.1*
JMA ***09*** *08:10:30.1±0.1, 37°.75N×141°.97E, h31km±2km, M3.8*
ISC 09 08:10:27.6±2.5, 37°.71N±0°.04×142°.02E±0°.06, h8km±14km, n31, σ1§17/33, mb3.6/6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**0.92**	**325**	P	**Pb**	**08 10 46.0**	**+0.2**
JIO				*e*S	**Sg**	**08 10 56.8**	**-0.3**
JFK	**Kawauchi**	**0.97**	**250**	P	**Pb**	**08 10 47.3**	**+0.5**
JMM	**Marumori**	**0.99**	**280**	P	**Pb**	**08 10 47.3**	**+0.3**
JMM				S	**Sg**	**08 10 59.2**	**-0.2**
ONAJ	**Iwakimizuishiy**	**1.15**	**239**	P	**Pb**	**08 10 49.8**	**0.0**
ONAJ				S	**Sb**	**08 11 04.0**	**-0.9**
JOU	**Okura**	**1.26**	**302**	P	**Pb**	**08 10 51.7**	**+0.1**
JOU				S	**Sb**	**08 11 06.9**	**-1.1**
JFT	**Otama**	**1.35**	**262**	P	**Pb**	**08 10 53.6**	**+0.4**
JFT				S	**Sb**	**08 11 10.3**	**-0.4**
JMK	**Ichinoseki**	**1.39**	**333**	P	**Pn**	**08 10 53.1**	**-0.3**
JYS	**Shiratake**	**1.63**	**289**	*e*S	**Sb**	**08 11 17.9**	**-0.8**
JYK	**Kaneyama**	**1.78**	**313**	P	**Pn**	**08 10 59.3**	**+0.6**
JOM	**Ohasama**	**1.85**	**342**	P	**Pn**	**08 10 59.8**	**+0.1**
JOM				S	**Sn**	**08 11 22.8**	**-0.6**
JFY	**Yanaizu**	**1.87**	**261**	S	**Sn**	**08 11 23.6**	**-0.1**
JRG	**Rokugo**	**2.01**	**328**	P	**Pn**	**08 11 02.6**	**+0.8**
JYA	**Atsumi**	**2.02**	**297**	*e*S	**Sn**	**08 11 27.5**	**-0.1**
MJAR	**Matsushiro Arr**	**3.26**	**250**	Pn	**Pn**	**08 11 21.3**	**+2.1**
	4.5nm,0.3s,baz=78,slow=16,SNR=47						
MJAR				Sn	**Sb**	**08 12 02.4**	**-3.4**
	2.6nm,0.3s,baz=37,slow=15,SNR=3.4						
MAT	**Matsuhiro**	**3.26**	**250**	P	**Pn**	**08 11 21.2**	**+2.0**
MAT				S	**Sn**	**08 11 59.3**	**+1.1**
JHJ	**Hachijo jima 2**	**4.93**	**202**	Pn	**Pn**	**08 11 41.2**	**-0.8**
	8.1nm,0.3s,baz=72,slow=20,SNR=3.7						
JHJ				Sn	**Sn**	**08 12 35.8**	**-3.5**
	12nm,0.3s,baz=90,slow=20,SNR=2.8						
ASAJ	**Asahikawa**	**6.42**	**4**	Pn	**Pn**	**08 12 02.4**	**-0.1**
	0.5nm,0.3s,baz=215,slow=12,SNR=3.4						
USRK	**Ussuriysk Ar.**	**9.98**	**314**	Pn	Pn	08 12 57.8	+6.5
	baz=127,slow=16,SNR=2.5						
H11N2	**WAKE ISLAND Hy**	**28.09**	**123**	T	T	08 46 16.3	
	baz=315,slow=75,SNR=103						
H11N1	**WAKE ISLAND Hy**	**28.10**	**123**	T	T	08 45 55.8	
	baz=315,slow=75,SNR=108						
H11N3	**WAKE ISLAND Hy**	**28.11**	**123**	T	T	08 45 56.5	
	baz=315,slow=75,SNR=89						
H11S1	**WAKE ISLAND Hy**	**28.83**	**125**	T	T	08 46 42.3	
	baz=317,slow=76,SNR=21						
H11S3	**WAKE ISLAND Hy**	**28.83**	**125**	T	T	08 46 49.7	
	baz=317,slow=76,SNR=49						
H11S2	**WAKE ISLAND Hy**	**28.85**	**125**	T	T	08 46 45.1	
	baz=317,slow=76,SNR=26						
MKAR	**Makanchi Array**	**44.18**	**302**	P	**P**	**08 18 36.8**	**-0.1**
	0.3nm,0.8s,baz=87,slow=9.4,SNR=2.9						
KURBB	**Kurchatov Arra**	**45.97**	**308**	P	**P**	**08 18 51.1**	**+0.1**
	0.8nm,0.6s,baz=82,slow=8.0,SNR=6.1						
ILAR	**Eielson Array**	**48.67**	**33**	P	**P**	**08 19 12.1**	**+0.2**
	0.4nm,0.8s,baz=240,slow=7.2,SNR=4.0						
WRA	**Warramunga Arr**	**57.80**	**189**	P	**P**	**08 20 19.7**	**+0.2**
	0.9nm,0.5s,baz=6.4,slow=7.0,SNR=20						
ASAR	**Alice Springs**	**61.52**	**188**	P	**P**	**08 20 45.9**	**+0.7**
	0.4nm,0.7s,baz=7.8,slow=7.5,SNR=4.2						
TXAR	**Lajitas Array**	**89.33**	**53**	P	**P**	**08 23 25.4**	**+0.4**
	0.2nm,0.5s,baz=320,slow=2.4,SNR=3.1						
LPAZ	**La Paz**	**145.93**	**59**	PKPbc	**PKPbc**	**08 30 09.0**	**0.0**
	0.7nm,0.6s,baz=306,slow=1.6,SNR=5.8						

IDC ***09*** *08:14:38.2±1.1, 20°.15N×82°.88E, h0km, mb3.7/5, mb1 3.9/6, mb1mx3.5/68, mbtmp3.8/6, ML4.1/1, MS2.9/1, Ms1 2.9/1, ms1mx2.3/69, Error ellipse: s-maj=41.5km s-min=24.1km az=76.0*
NDI ***09*** *08:14:40.9±2.1, 20°.14N×82°.89E, h9km±11km, ML3.9*
ISCJB ***09*** *08:14:41.1±0.4, 20°.22N±0°.04×82°.80E±0°.04, h33km, mb3.6/5, MS2.7/1, Error ellipse: s-maj=5.3km s-min=4.6km az=139.7*
ISC 09 08:14:42.5±0.7, 20°.22N±0°.05×82°.83E±0°.05, h35km, n26, σ2§39/37, mb3.6/5, Southern India

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VIS	**Vishakhapatnam**	**2.54**	**169**	*e*P	**Pn**	**08 15 21.6**	**+0.4**
VIS				*e*S	**Sn**	**08 15 49.7**	**-1.1**
VIS				IAML		08 15 56.6	
	comp=E,959nm,0.2s						
VIS				IAML		08 15 56.8	
	comp=N,343nm,0.1s						
BWNR	**Bhubaneshwar**	**2.80**	**88**	*e*P	**Pn**	**08 15 26.7**	**+1.9**
BWNR				*e*S	**Sn**	**08 15 58.9**	**+1.5**
NGP	**Nagpur**	**3.65**	**285**	*e*P	**Pn**	**08 15 39.2**	**+2.7**
NGP				*e*S	**Sn**	**08 16 21.1**	**+2.7**
NGP				IAML		08 16 40.2	
	comp=E,329nm,0.4s						
NGP				IAML		08 16 40.8	
	comp=N,489nm,0.1s						
BOK	**Bokaro**	**4.55**	**38**	*e*P	**Pn**	**08 15 51.0**	**+2.1**
BOK				*e*S	**Sn**	**08 16 39.7**	**-0.8**
BOK				IAML		08 16 58.5	
	comp=N,322nm,0.4s						
BOK				IAML		08 16 58.5	
	comp=E,221nm,0.5s						
HYB	**Hyderabad**	**4.92**	**236**	*e*P	**Pn**	**08 15 54.5**	**+0.5**
HYB				*e*S	**Sn**	**08 16 49.4**	**-0.3**
HYB				IAML		08 17 17.0	
	comp=E,376nm,0.2s						
HYB				IAML		08 17 17.1	
	comp=N,416nm,0.3s						
BHPL	**Bhopal**	**5.85**	**302**	*e*P	**Pn**	**08 16 08.2**	**+1.4**
BHPL				*e*S	**Sn**	**08 17 13.8**	**+1.1**
BHPL				IAML		08 17 46.2	
	comp=N,288nm,0.4s						
BHPL				IAML		08 17 46.2	
	comp=E,209nm,0.4s						
KOLN	**Koldanda**	**7.55**	**5**	*e*Pn	**Pn**	**08 16 31.0**	**+0.8**
DMN	**Daman**	**7.64**	**15**	*e*Pn	**Pn**	**08 16 32.9**	**+1.3**
DMN				*e*Sn	**Sn**	**08 17 54.2**	**-2.9**
	comp=E,77nm,0.5s						
PKIN	**Phulchoki**	**7.69**	**17**	*e*Pn	**Pn**	**08 16 33.8**	**+1.5**
PKIN				*e*Sn	**Sn**	**08 17 55.8**	**-2.5**
	comp=E,68nm,0.3s						
PYUN	**Piuthan**	**7.84**	**1**	*e*Pn	**Pn**	**08 16 35.7**	**+1.4**
KKN	**Kakani**	**7.86**	**16**	*e*Pn	**Pn**	**08 16 36.0**	**+1.4**
JIRN	**Jiri**	**8.02**	**22**	*e*Pn	**Pn**	**08 16 38.5**	**+1.7**
JIRN				*e*Sn	**Sn**	**08 18 04.4**	**-2.1**
	comp=E,151nm,0.4s						
DANN	**Dangsing**	**8.13**	**6**	*e*Pn	**Pn**	**08 16 39.3**	**+0.9**
GUN	**Gumba**	**8.14**	**19**	*e*Pn	**Pn**	**08 16 40.1**	**+1.5**
GUN				*e*Sn	**Sn**	**08 18 07.3**	**-2.3**
	comp=E,60nm,0.3s						
POO	**Poona**	**8.64**	**260**	*e*P	**Pn**	**08 16 45.4**	**+0.3**
POO				*e*S	**Sn**	**08 18 18.3**	**-3.1**
POO				IAML		08 19 14.6	
	comp=E,50nm,0.1s						
POO				IAML		08 19 15.0	
NDI	**New Delhi**	**9.85**	**330**	*e*S	**Sn**	**08 18 48.0**	**-3.0**
SHL	**Shillong**	**9.90**	**56**	*e*S	**Sn**	**08 18 45.4**	**-7.1**
SMLA	**Simla**	**11.99**	**336**	*e*P	**Pn**	**08 17 31.9**	**+0.9**
SMLA				*e*S	**Sn**	**08 19 37.4**	**-6.1**
SMLA				IAML		08 21 40.0	
	comp=E,16nm,0.4s						
SMLA				IAML		08 21 41.1	
	comp=N,13nm,0.6s						
PALK	**Pallekele**	**13.04**	**189**	Pn	**Pn**	**08 17 43.1**	**-2.3**
	comp=N,1.0nm,0.3s,baz=116,slow=7.2,SNR=6.1						
PALK				Sn	Sn	08 19 59.0	-10
	comp=N,0.9nm,0.3s,baz=297,slow=9.0,SNR=3.4						
AAK	**Ala-Archa**	**23.42**	**344**	LR	LR	08 31 02.3	
	comp=N,32nm,21.6s,baz=86,slow=42						
MKAR	**Makanchi Array**	**26.51**	**359**	P	**P**	**08 20 18.3**	**+1.7**
	comp=N,1.2nm,0.8s,baz=187,slow=10.0,SNR=4.7						
KURBB	**Kurchatov Arra**	**30.52**	**355**	P	**P**	**08 20 53.6**	**+1.3**
	comp=N,0.2nm,0.4s,baz=182,slow=8.4,SNR=2.8						
FINES	**FINESS Array B**	**56.72**	**331**	P	**P**	**08 24 23.4**	**+1.1**
	comp=N,1.0nm,0.5s,baz=116,slow=8.7,SNR=9.6						
ASAR	**Alice Springs**	**66.19**	**129**	P	**P**	**08 25 27.5**	**+0.5**
	comp=N,0.7nm,0.8s,baz=309,slow=6.3,SNR=4.8						
TORD	**Torodi Ar. Bea**	**77.37**	**279**	P	**P**	**08 26 36.2**	**+1.8**
	comp=N,0.7nm,1.1s,baz=88,slow=3.4,SNR=3.4						
LPAZ	**La Paz**	**152.16**	**273**	PKPbc	**PKPbc**	**08 34 38.0**	**+2.0**
	comp=N,0.4nm,0.5s,baz=171,slow=8.2,SNR=4.9						

IDC 09 08:15:47.9±7.4, 1°.24N×93°.25E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/65, mbtmp3.6/3, Error ellipse: s-maj=328.4km s-min=30.7km az=56.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.44**	**120**	P	P	08 24 09.6	+0.6
	1.0nm,0.5s,baz=296,slow=8.6,SNR=13						
MKAR	**Makanchi Array**	**46.37**	**350**	P	P	08 24 15.9	-0.1
	0.5nm,0.7s,baz=167,slow=8.1,SNR=4.1						
ASAR	**Alice Springs**	**46.62**	**125**	P	P	08 24 17.3	-1.0
	0.1nm,0.4s,baz=293,slow=8.0,SNR=3.2						

IDC 09 08:27:48.1±1.2, 1°.67S×77°.29W, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.6/38, mbtmp3.6/5, Error ellipse: s-maj=59.0km s-min=29.4km az=52.0, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**39.84**	**323**	P	P	08 35 24.2	+0.5
	0.2nm,0.7s,baz=150,slow=9.3,SNR=3.1						
ANMO	**Albuquerque**	**45.53**	**326**	P	P	08 36 10.6	+0.6
	1.0nm,0.5s,baz=146,slow=12,SNR=7.4						
TORD	**Torodi Ar. Bea**	**79.66**	**76**	P	P	08 39 58.7	+0.4
	0.2nm,0.5s,baz=280,slow=5.6,SNR=4.5						
ILAR	**Eielson Array**	**82.93**	**336**	P	P	08 40 12.8	-1.9
	0.4nm,0.9s,baz=120,slow=4.2,SNR=5.3						
QSPA	**South Pole Qui**	**88.39**	**180**	P	P	08 40 42.1	+0.1
	0.5nm,0.4s,baz=125,slow=7.1,SNR=6.2						

NNC ***09*** *08:31:42.7±2.4, 53°.66N×88°.04E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=19.2km s-min=13.7km az=68.0*
IDC 09 08:31:43.7±2.5, 53°.65N×88°.05E, h0km, mb1 3.4/3, mb1mx3.1/73, mbtmp3.4/3, ML3.2/3, 9C-4D, Error ellipse: s-maj=21.5km s-min=13.8km az=59.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.94**	**280**	*i*		08 43 49.6	
	baz=101,slow=335,SNR=4.8						
ZAA0	**Zalesovo Array**	**1.94**	**280**	⇑Pn	Pn	08 32 16.5	-1.4
	21nm,0.7s						
ZAA0				⇑Lg	Lg	08 32 44.7	
	23nm,0.5s						
ZALV	**Zalesovo Beam**	**1.94**	**280**	Pn	Pn	08 32 16.5	-1.4
	7.5nm,0.3s,baz=99,slow=15,SNR=74						
ZALV				Lg	Lg	08 32 44.1	
	12nm,0.3s,baz=98,slow=26,SNR=24						
KURK	**Kurchatov**	**6.50**	**247**	⇓Pn	Pn	08 33 19.8	-0.7
	1.8nm,0.7s						
KURK				⇓Sn	Sn	08 34 34.1	-1.2
	1.5nm,0.5s						
KURK				⇑Lg	Lg	08 35 08.0	
	4.9nm,0.7s						
KURBB	**Kurchatov Arra**	**6.60**	**246**	Pn	Pn	08 33 21.8	0.0
	0.5nm,0.3s,baz=61,slow=14,SNR=26						
KURBB				Sn	Sn	08 34 36.4	-1.3
	0.1nm,0.3s,baz=62,slow=23,SNR=3.5						
KURBB				Lg	Lg	08 35 13.8	
	0.1nm,0.3s,baz=61,slow=30,SNR=7.4						
KURBB	**Kurchatov Arra**	**6.60**	**246**	⇑Pn	Pn	08 33 21.6	-0.3
	4.3nm,0.3s						
KURBB				⇑Sn	Sn	08 34 36.4	-1.3
	6.8nm,0.6s						
KURBB				⇑Lg	Lg	08 35 13.5	
	6.7nm,0.6s						
MK31	**Makanchi Array**	**7.79**	**211**	⇑Pn	Pn	08 33 39.3	+1.1
	0.5nm,0.5s,baz=30,slow=13,SNR=12						
MK31				⇓Sn	Sn	08 35 08.2	+1.0
	0.5nm,0.5s,baz=248,slow=35,SNR=6.4						
MK31				⇑Lg	Lg	08 35 50.2	
	1.6nm,0.7s,baz=30,slow=31,SNR=4.4						
MKAR	**Makanchi Array**	**7.79**	**211**	Pn	Pn	08 33 39.2	+0.9
	0.3nm,0.3s,baz=29,slow=13,SNR=13						
MKAR				Sn	Sn	08 35 08.5	+1.3
	0.5nm,0.3s,baz=29,slow=25,SNR=9.0						
MKAR				Lg	Lg	08 35 50.3	
	0.1nm,0.3s,baz=26,slow=31,SNR=3.9						
MAKZ	**Makanchi**	**7.87**	**212**	⇑Sn	Sn	08 35 09.9	+0.7
	0.8nm,0.4s						
MAKZ				⇓Lg	Lg	08 35 54.3	
	1.8nm,0.7s						
BVAR	**Borovoye Array**	**10.58**	**274**	Pn	Pn	08 34 16.0	-0.4
	0.2nm,0.3s,baz=79,slow=14,SNR=3.7						
BVAR				Sn	Sn	08 36 12.0	-3.6
	0.8nm,0.3s,baz=71,slow=18,SNR=12						

IDC ***09*** *08:32:46.3±0.7, 11°.37S×116°.27E, h0km, mb4.1/12, mb1 4.1/14, mb1mx3.8/62, mbtmp4.1/14, ML3.9/2, Error ellipse: s-maj=29.1km s-min=14.8km az=68.0*
ISCJB ***09*** *08:32:48.4±0.4, 11°.46S±0°.04×116°.24E±0°.04, h33km, mb4.4/13, Error ellipse: s-maj=7.0km s-min=4.5km az=39.8*
NEIC ***09*** *08:32:48.0±2.3, 11°.39S×116°.28E, h11km±14km, mb4.2/7, Error ellipse: s-maj=8.4km s-min=4.8km az=211.0*
DJA ***09*** *08:32:49.0±1.5, 11°S±13°×11°6E±°, h13km±21km, M4.4/8, mB5.5/1, mb4.7/4, MLv4.3/8, Mw(mB)4.9/1*
ISC 09 08:32:51.1±0.5, 11°.44S±0°.06×116°.24E±0°.06, h35km, n55, σ1§18/58, mb4.3/13, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**3.01**	**30**	P	**Pn**	**08 33 36.8**	**+0.5**
PLAI				S	**Sn**	**08 34 12.6**	**+1.4**
SRBI	**Singaraja**	**3.49**	**343**	P	**Pn**	**08 33 41.9**	**-1.0**
SRBI				S	**Sn**	**08 34 23.6**	**+0.6**
JAGI	**Jajag, Banyuwa**	**3.60**	**325**	P	**Pn**	**08 33 43.3**	**-1.1**
JAGI	**Jajag, Banyuwa**	**3.60**	**325**	*e*Pn	**Pn**	**08 33 42.5**	**-2.0**
JAGI				*e*Sn	**Sn**	**08 34 22.6**	**-3.1**
GMJI	**Gumukmas**	**4.18**	**319**	P	**Pn**	**08 33 51.4**	**-1.1**
PWJI	**Pagerwojo**	**5.54**	**307**	P	**Pn**	**08 34 08.7**	**-2.4**
	54nm,0.6s,0.3nm						
UGM	**Wanagama**	**6.64**	**301**	*e*Pn	**Pn**	**08 34 24.3**	**-1.9**
BKSI	**Bulukumba**	**7.19**	**33**	P	**Pn**	**08 34 33.9**	**0.0**
	19nm,0.7s,0.1nm						
SMRI	**Semarang**	**7.20**	**307**	*e*Pn	**Pn

2.3nm,0.8s,baz=303,slow=9.7,SNR=15
ASAR S S 08 41 08.6 -10
2.3nm,0.8s,baz=296,slow=23,SNR=9.7
AS31 Alice Springs 20.74 128 *eP* **P 08 37 27.4 -1.5**
1.4nm,1.0s
AS01 Alice Springs 20.78 128 *eP* **P 08 37 30.0 +0.7**
NWAO Narrogin (SRO) 21.40 178 P **P 08 37 35.5 -0.4**
3.8nm,0.5s,baz=244,slow=13,SNR=7.5
NWAO Narrogin (SRO) 21.40 178 *eP* **P 08 37 36.3 +0.4**
35nm,1.4s
STKA Stephens Creek 30.98 135 P **P 08 39 05.4 +0.2**
0.8nm,0.4s,baz=316,slow=10,SNR=5.5
STKA Stephens Creek 30.98 135 *eP* **P 08 39 05.4 +0.2**
1.8nm,1.4s
KSAR Wonju Array Be 49.84 12 P **P 08 41 41.1 +0.3**
KSRS Korea Array 49.86 12 P **P 08 41 41.1 +0.2**
0.7nm,0.6s,baz=190,slow=6.2,SNR=3.8
MCQ Macquarie Isla 54.53 151 *eP* **P 08 42 14.5 -1.0**
257nm,1.4s
USRK Ussuriysk Ar. 57.20 13 P **P 08 42 34.3 -0.4**
4.5nm,0.9s,baz=174,slow=4.1,SNR=5.8
SONA0 Songino Array 59.66 352 *eP* **P 08 42 51.8 -0.1**
SONM Songino Array 59.66 352 P **P 08 42 51.8 -0.1**
1.0nm,0.6s,baz=170,slow=9.9,SNR=4.2
MK01 Makanchi Array 65.42 335 *eP* **P 08 43 30.6 +0.3**
MK31 Makanchi Array 65.45 335 *eP* **P 08 43 30.9 +0.4**
MK31 *eS* **S 08 52 14.9 +2.2**
MK32 Makanchi Array 65.45 335 *eP* **P 08 43 30.8 +0.3**
MKAR Makanchi Array 65.45 335 P **P 08 43 30.8 +0.3**
1.3nm,0.4s,baz=150,slow=7.3,SNR=23
MKAR Makanchi Array 65.45 335 *eP* **P 08 43 31.0 +0.5**
11nm,0.6s
MKAR *eS* **S 08 52 14.9 +2.2**
KURBB Kurchatov Arra 70.00 336 P **P 08 43 59.6 +0.6**
0.6nm,0.7s,baz=146,slow=5.1,SNR=6.7
KURK Kurchatov 70.03 336 *eP* **P 08 43 59.6 +0.4**
ZALV Zalesovo Beam 70.39 341 P **P 08 44 00.5 -0.9**
2.3nm,0.3s,baz=160,slow=4.6,SNR=9.3
ZAA1 Zalesovo Array 70.40 341 *eP* **P 08 44 00.5 -0.9**
PETK Petropavlovsk- 73.40 25 *eP* **P 08 44 20.3 +0.8**
BVAR Borovoye Array 75.20 333 P **P 08 44 31.7 +1.7**
0.3nm,0.4s,baz=150,slow=6.7,SNR=2.7
QSPA South Pole Qui 78.57 180 P **P 08 44 51.1 +2.2**
3.3nm,1.1s,baz=309,slow=2.8,SNR=5.1
SNAA Sanae 87.92 196 P **P 08 45 37.8 +0.8**
0.8nm,0.7s,baz=326,slow=3.6,SNR=6.0
SNAA Sanae 87.92 196 *eP* **P 08 45 38.2 +1.2**
4.9nm,1.3s
KEKH Kekaha 88.80 67 *eP* **P 08 45 40.9 -1.0**
100nm,1.1s
TOA0 Torodi Ar. Sit 116.18 279 *e*PKPdf **PKPdf 08 51 32.2 +0.5**
TORD Torodi Ar. Bea 116.18 279 PKP **PKPdf 08 51 31.9 +0.2**
0.4nm,1.0s,baz=80,slow=1.6,SNR=2.6
TOA1 Torodi Ar. Sit 116.19 279 *e*PKPdf **PKPdf 08 51 31.9 +0.2**
NATX Nacogdoches 145.07 50 *e*PKPbc **PKPdf 08 52 25.8 +0.4**
PBMO Poplar Bluff 145.18 39 *e*PKPbc **PKPdf 08 52 26.1 +0.7**
WLAR White Oak Lake 145.22 46 *e*PKPbc **PKPdf 08 52 27.7 +2.1**
UTMT University of 146.42 38 *e*PKPdf **PKPdf 08 52 27.8 +0.2**

*CSEM **09** 08:33:22.6±0.5, 48.°34N×9.°39E, h5km, ML2.8, Error ellipse: s-maj=12.5km s-min=7.9km az=30.0*
*LDG **09** 08:33:31.6±0.1, 48.°55N×8.°70E, h10km, Md2.1/1, Ml2.2/3, Error ellipse: s-maj=1.2km s-min=1.1km az=99.0*
*STR **09** 08:33:32.4±0.9, 49.°N±3.°×±.°, h10km, M2.8/7, MLv2.8/7*
ISC 09 08:33:33.7±2.1, 48.°51N±0.°06×8.°54E±0.°10, h14km±8km, n18, σ1§12/27, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPP	**Oppenau**	**0.24 267**		Pg	**Pg**	08 33 38.4	**-0.4**
OPP	**Oppenau**	**0.24 267**		Pg	**Pg**	08 33 38.4	**-0.4**
OPP				Sg	**Sg**	08 33 43.3	**+1.0**
KIZ	**Kirchzarten**	**0.69 217**		Pg	**Pg**	08 33 46.8	**-0.4**
KIZ	**Kirchzarten**	**0.69 217**		Pg	**Pg**	08 33 46.8	**-0.4**
KIZ				Sg	**Sb**	08 33 57.3	**+0.2**
WLS	**Welschbruch**	**0.80 264**		Pg	**Pg**	08 33 48.6	**-0.6**
WLS	**Welschbruch**	**0.80 264**		Pg	**Pg**	08 33 48.6	**-0.6**
CDF	**Champ du Feu**	**0.85 264**		*e*Pg	**Pg**	08 33 49.4	**-0.8**
CDF				*e*Sg	**Sg**	08 34 01.6	**+0.3**
10nm,0.2s							
CDF	**Champ du Feu**	**0.85 264**		*e*Pg	**Pg**	08 33 49.4	**-0.8**
CDF				*e*Sg	**Sg**	08 34 01.6	**+0.3**
5.2nm,0.2s							
ECH	**Echery**	**0.97 253**		Pg	**Pg**	08 33 51.4	**-1.0**
ECH	**Echery**	**0.97 253**		Pg	**Pg**	08 33 51.4	**-1.0**
ECH				Sg	**Sb**	08 34 06.1	**+1.1**
HINF	**Hinteralfeld**	**1.33 239**		*e*Pg	**Pn**	08 33 58.2	**+0.3**
HINF				*e*Sg	**Sn**	08 34 16.5	**+1.1**
3.3nm,0.2s							
HINF	**Hinteralfeld**	**1.33 239**		*e*Pg	**Pn**	08 33 58.2	**+0.3**
HINF				*e*Sg	**Sn**	08 34 16.5	**+1.1**
1.6nm,0.2s							
ABH	**Alteburg**	**1.52 335**		Pg	**Pn**	08 34 00.3	**-0.3**
ABH	**Alteburg**	**1.52 335**		Pg	**Pn**	08 34 00.3	**-0.3**
HAU	**Haudompre**	**1.55 252**		*e*Pn	**Pn**	08 33 58.0	**-3.0**
HAU	**Haudompre**	**1.55 252**		*e*Pg	**Pb**	08 34 02.6	**+0.3**
HAU				*e*Sg	**Sg**	08 34 24.3	**+0.7**
3.1nm,0.3s							
HAU	**Haudompre**	**1.55 252**		*e*Pn	**Pn**	08 33 58.0	**-3.0**
HAU	**Haudompre**	**1.55 252**		*e*Pg	**Pb**	08 34 02.6	**+0.3**
HAU				*e*Sg	**Sg**	08 34 24.3	**+0.7**
1.5nm,0.3s							

*IDC **09** 08:41:32.6±1.0, 3.°85S×128.°50E, h0km, mb4.1/3, mb1 4.2/5, mb1mx3.7/56, mbtmp4.0/5, ML3.4/2, MS3.4/1, Ms1 3.4/1, ms1mx2.9/59, Error ellipse: s-maj=45.2km s-min=14.7km az=74.0*
*ISCJB **09** 08:41:33.9±0.6, 3.°66S±0.°05×128.°68E±0.°04, h10km, mb3.9/2, Error ellipse: s-maj=8.0km s-min=4.9km az=157.8*
*DJA **09** 08:41:35.6±0.3, 4.°S±3.°×12.°9E±.°, h10km, M4.4/7, mb4.5/5, mB5.0/3, MLv4.3/7, Mw(mB)4.3/3*
ISC 09 08:41:34.7±0.8, 3.°68S±0.°06×128.°69E±0.°04, h10km, n14, σ1§40/19, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.41**	**35**	P	**Pg**	08 41 42.6	**-0.2**
MSAI				S	**Sg**	08 41 48.7	**+0.5**
AAI	**Ambon**	**0.50 269**		P	**Pg**	08 41 45.0	**+0.6**
AAI				S	**Sg**	08 41 51.4	**+0.4**
BNDI	**Bandanaira**	**1.47 125**		P	**Pn**	08 42 02.6	**+1.3**
BNDI				S	**Sb**	08 42 24.0	**+3.1**
SANI	**Sanana**	**3.15 301**		P	**Pn**	08 42 24.7	**+0.3**
LBMI	**Labuha**	**3.25 338**		P	**Pn**	08 42 26.2	**+0.4**
SIJI	**Sorong**	**3.80 43**		Pn	**Pn**	08 42 35.2	**+1.9**
3.8nm,0.3s,baz=241,slow=10,SNR=25							
SIJI				Sn	**Sn**	08 43 16.5	**-1.6**
2.2nm,0.3s,baz=217,slow=23,SNR=6.2							
RKPI	**Ransiki, Papua**	**5.89**	**69**	P	**Pn**	08 43 03.5	**+1.4**
87nm,0.8s,5μm0.5nm							
APSI	**Ampana**	**7.55 291**		P	**Pn**	08 43 25.3	**+0.3**
52nm,0.7s,718nm0.2nm							
BATI	**Baumata**	**8.18 217**		LR	LR	08 46 51.6	
comp=Z,262nm,19.6s,baz=38,slow=40							
SPSI	**Sidrap Palu**	**8.91 268**		P	**Pn**	08 43 44.5	**+0.9**
WRA	**Warramunga Arr**	**17.08 162**		Pn	**Pn**	08 45 31.3	**-2.5**
0.1nm,0.3s,baz=338,slow=12,SNR=6.1							
ASAR	**Alice Springs**	**20.50 166**		P	**P**	**08 46 13.1**	**0.0**
17nm,0.8s,baz=347,slow=10,SNR=59							
ASAR				S	**S**	**08 50 00.8**	**-1.8**
0.5nm,0.8s,baz=351,slow=21,SNR=4.2							
ASAR				PcP	**PcP**	**08 50 24.7**	**-0.2**
0.4nm,0.6s,baz=352,slow=1.6,SNR=5.4							
MKAR	**Makanchi Array**	**64.75 327**		P	**P**	**08 52 13.3**	**-0.2**
0.8nm,0.7s,baz=122,slow=8.3,SNR=9.0							
KURBB	**Kurchatov Arra**	**69.02 328**		P	**P**	**08 52 39.7**	**-0.7**
1.2nm,0.7s,baz=129,slow=5.8,SNR=8.1							

*CSEM **09** 08:47:44.8±0.4, 41.°28N×34.°64E, h1km, ML1.8, Error ellipse: s-maj=11.6km s-min=7.3km az=158.0, Suspected Mining explosion.*
*ISK **09** 08:47:51.4, 41.°56N×35.°44E, h5km, ML1.8/4*
DDA 09 08:47:52.3, 41.°57N×35.°36E, h7km, Ml2.3, Suspected Mining explosion., Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DIKM	**Dikmen**	**0.12 317**		PG	Pg	08 47 55.2	+0.3
DIKM				SG	Sg	08 47 58.2	+1.6
DIKM	**Dikmen**	**0.12 317**		*e*Pg	Pg	08 47 55.2	+0.3
BOYT	**Boyabat**	**0.38 248**		*i* P	Pg	08 47 59.9	+0.2
SINO	**SINOP_Merkez**	**0.47 345**		*i* P	Pg	08 48 01.7	+0.3
SINO	**SINOP_Merkez**	**0.47 345**		P	Pg	08 48 01.7	+0.3
SNOP	**Sinop**	**0.47 346**		PG	Pg	08 48 01.5	+0.1
SNOP				SG	Sb	08 48 08.9	-1.2
SNOP	**Sinop**	**0.47 346**		*e*Pg	Pg	08 48 01.5	+0.1
HAVZ	**Havza**	**0.56 151**		*i* P	Pg	08 48 02.2	-0.9
HAVZ				*i* S	Sb	08 48 11.5	-1.1
HAVZ	**Havza**	**0.56 151**		P	Pg	08 48 02.2	-0.9
HAVZ				S	Sb	08 48 11.5	-1.1
KVT	**Kavak**	**0.71 133**		PG	Pg	08 48 04.6	-1.3
KVT				SG	Sg	08 48 14.2	-0.9
KVT	**Kavak**	**0.71 133**		*e*Pg	Pg	08 48 04.6	-1.3
COAL	**Corum-Alaca**	**1.34 192**		*i* P	Pb	08 48 17.8	0.0
CORM	**Corum**	**1.49 202**		PN	Pn	08 48 19.7	0.0

*ISCJB **09** 08:48:41.9±0.4, 39.°65N±0.°03×29.°45E±0.°04, h0km, Error ellipse: s-maj=4.2km s-min=4.1km az=32.6*
*DDA **09** 08:48:41.7, 39.°66N×29.°47E, h7km, Ml2.5, Suspected Mining explosion.*
*ISK **09** 08:48:41.3, 39.°64N×29.°47E, h5km, ML2.2/5, Suspected Mining explosion.*
*CSEM **09** 08:48:42.1±0.2, 39.°63N×29.°48E, h2km, ML2.2, Error ellipse: s-maj=4.1km s-min=3.8km az=24.0, Suspected Mining explosion.*
ISC 09 08:48:42.0±0.8, 39.°65N±0.°02×29.°46E±0.°02, h0km, n52, σ0§49/56, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVSB	**Tavsanli**	**0.20**	**180**	PG	**Pg**	**08 48 45.9**	**+0.2**
TVSB				SG	**Sg**	**08 48 49.3**	**+1.0**
TVSB	**Tavsanli**	**0.20**	**180**	*e*Pg	**Pg**	**08 48 45.9**	**+0.2**
TVSB				*e*Sg	**Sg**	**08 48 49.3**	**+1.0**
AUBOZ	**BOZOYUK**	**0.51**	**59**	PG	**Pg**	**08 48 52.6**	**+0.7**
AUBOZ				SG	**Sb**	**08 49 00.6**	**-1.4**
AUBOZ	**BOZOYUK**	**0.51**	**59**	*e*Pg	**Pg**	**08 48 52.6**	**+0.7**
AUBOZ				*e*Sg	**Sb**	**08 49 00.6**	**-1.4**
CAVI	**Cavuskoy**	**0.63**	**27**	PG	**Pg**	**08 48 54.2**	**+0.1**
CAVI	**Cavuskoy**	**0.63**	**27**	*e*Pg	**Pg**	**08 48 54.2**	**+0.1**
DURS	**Dursunbey**	**0.77**	**267**	*i* P	**Pg**	**08 48 56.7**	**0.0**
DURS	**Dursunbey**	**0.77**	**267**	P	**Pg**	**08 48 56.7**	**0.0**
BORA	**Eskisehir**	**0.80**	**73**	PG	**Pg**	**08 48 57.3**	**0.0**
BORA	**Eskisehir**	**0.80**	**73**	*i* P	**Pg**	**08 48 56.9**	**-0.4**
BORA	**Eskisehir**	**0.80**	**73**	P	**Pg**	**08 48 56.9**	**-0.4**
BORA	**Eskisehir**	**0.80**	**73**	*e*Pg	**Pg**	**08 48 57.3**	**0.0**
MDNY	**Mudanya-Bursa**	**0.85 329**		PG	**Pb**	**08 48 59.4**	**-0.3**
MDNY	**Mudanya-Bursa**	**0.85 329**		*e*Pg	**Pb**	**08 48 59.4**	**-0.3**
YLV	**Yalova**	**0.92 356**		PG	**Pb**	**08 49 00.8**	**-0.2**
YLV	**Yalova**	**0.92 356**		*e*Pg	**Pb**	**08 49 00.8**	**-0.2**
ARMT	**Armutlu**	**1.03 334**		PG	**Pg**	**08 49 01.7**	**-0.1**
ARMT	**Armutlu**	**1.03 334**		*e*Pg	**Pg**	**08 49 01.7**	**-0.1**
KCTX	**Karacabey (Bur**	**1.05 306**		PG	**Pb**	**08 49 03.1**	**-0.1**
KCTX	**Karacabey (Bur**	**1.05 306**		*e*Pg	**Pb**	**08 49 03.1**	**-0.1**
GEYV	**SAKARYA_Geyve**	**1.05**	**37**	*i* P	**Pg**	**08 49 01.6**	**-0.7**
GEYV	**SAKARYA_Geyve**	**1.05**	**37**	P	**Pg**	**08 49 01.5**	**-0.7**
ESKT	**Eskisehir**	**1.08**	**96**	*i* P	**Pg**	**08 49 02.4**	**-0.3**
ESKT				*i* S	**Sb**	**08 49 18.6**	**+0.3**
SEYT	**Eskypehyr**	**1.08**	**96**	P	**Pg**	**08 49 02.4**	**-0.3**
SEYT	**Eskypehyr**	**1.08**	**96**	S	**Sb**	**08 49 18.6**	**+0.3**
SBT5	**Esenkoy-Cinarc**	**1.08 336**		PN	**Pg**	**08 49 03.1**	**+0.3**
SBT5	**Esenkoy-Cinarc**	**1.08 336**		*e*Pn	**Pg**	**08 49 03.1**	**+0.3**
GULT	**Gulveren**	**1.13**	**45**	PN	**Pg**	**08 49 03.7**	**+0.1**
GULT	**Gulveren**	**1.13**	**45**	*e*Pn	**Pg**	**08 49 03.7**	**+0.1**
HRT	**Hereke**	**1.19**	**8**	PN	**Pg**	**08 49 04.9**	**+0.1**
HRT	**Hereke**	**1.19**	**8**	*e*Pn	**Pg**	**08 49 04.9**	**+0.1**
KHAL	**Karahalli**	**1.27 179**		*i* P	**Pg**	**08 49 05.8**	**-0.6**
KHAL	**Karahalli**	**1.27 179**		P	**Pg**	**08 49 05.8**	**-0.6**
MANT	**Manisa**	**1.35 212**		*i* P	**Pg**	**08 49 08.0**	**+0.1**
MANT	**Manisa**	**1.35 212**		P	**Pg**	**08 49 08.0**	**+0.1**
STEP	**BALIKESIR_Sava**	**1.38 259**		*i* P	Pg	08 49 03.1	-5.3
BALY	**Balya**	**1.43 274**		*i* P	**Pn**	**08 49 08.4**	**-0.8**
BALY	**Balya**	**1.43 274**		P	**Pn**	**08 49 08.4**	**-0.8**
KAVV	**Kandilli-Istan**	**1.45 348**		PN	**Pn**	**08 49 09.5**	**0.0**
KAVV	**Kandilli-Istan**	**1.45 348**		*e*Pn	**Pn**	**08 49 09.5**	**0.0**
ISK	**Istanbul-Kandi**	**1.45 348**		PN	**Pb**	**08 49 10.2**	**+0.2**
ISK	**Istanbul-Kandi**	**1.45 348**		*e*Pn	**Pb**	**08 49 10.2**	**+0.2**
SILT	**Sile**	**1.51**	**5**	PN	**Pg**	**08 49 11.1**	**+0.1**
SILT	**Sile**	**1.51**	**5**	*e*Pn	**Pg**	**08 49 11.1**	**+0.1**
AUMIH	**MIHALICIK**	**1.57**	**81**	PN	**Pn**	**08 49 11.5**	**+0.2**
AUMIH	**MIHALICIK**	**1.57**	**81**	*e*Pn	**Pn**	**08 49 11.5**	**+0.2**
SAHE	**Sakarya_HENDEK**	**1.61**	**41**	*i* P	**Pb**	**08 49 12.6**	**-0.1**
SAHE	**Sakarya_HENDEK**	**1.61**	**41**	P	**Pb**	**08 49 12.6**	**-0.1**
AUSIV	**SIVRIHISAR**	**1.62**	**97**	PN	**Pn**	**08 49 12.1**	**+0.2**
AUSIV	**SIVRIHISAR**	**1.62**	**97**	*e*Pn	**Pn**	**08 49 12.1**	**+0.2**
RKY	**Sarkoy-Tekirda**	**2.04 301**		PN	**Pn**	**08 49 18.2**	**+0.5**
RKY	**Sarkoy-Tekirda**	**2.04 301**		*e*Pn	**Pn**	**08 49 18.2**	**+0.5**

*BJI **09** 08:49:24.3, 3.°34S×128.°13E, h33km, mb5.0/56, mB5.2/43, Ms4.7/47, Ms7 4.4/44*
*IDC **09** 08:49:24.5±0.3, 3.°04S×127.°60E, h0km, mb4.8/33, mb1 4.8/36, mb1mx4.7/55, mbtmp4.8/36, ML4.8/4, MS4.3/45, Ms1 4.3/45, ms1mx4.3/62, Error ellipse: s-maj=14.6km s-min=9.4km az=73.0*
*ISCJB **09** 08:49:28.3±0.4, 2.°95S±0.°02×127.°70E±0.°02, h33km±3km, mb5.0/138, MS4.4/56, Error ellipse: s-maj=3.7km s-min=3.2km az=34.8*
*MOS **09** 08:49:29.1±1.5, 3.°05S×127.°61E, h42km, mb5.1/45, Error ellipse: s-maj=9.8km s-min=5.3km az=110.6*
*NEIC **09** 08:49:30.2±0.5, 2.°99S×127.°67E, h38km±4km, mb5.1/89, Error ellipse: s-maj=5.3km s-min=3.8km az=58.0*
*GCMT **09** 08:49:30.2±0.1, 2.°85S×127.°63E, h17km, MW5.2/128, Moment Tensor Solution. s79,c109; s128,c211; Duration: 1§0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.60±.14; $M_{\theta\theta}$1.66±.10; $M_{\phi\phi}$-5.26±.13; $M_{r\theta}$-3.80±.34; $M_{\theta\phi}$4.64±.09; $M_{r\phi}$-0.37±.27; Best double couple: $M_0$7.59700×10^{16} NP1:φs298.00000°, δ67.00000°, λ39.00000°. NP2:φs190.00000°, δ54.00000°, λ151.00000°. Principal axes: T 7.4230, Plg44.0000°, Azm158.0000°; N 0.3470, Plg45.0000°, Azm323.0000°; P -7.7700, Plg8.0000°, Azm61.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*DJA **09** 08:49:31.6±0.3, 3.°S±1.°×12.°8E±.°, h38km±4km, M5.2/49, mb5.4/49, mB5.7/36, MLv5.4/14, Mw(mB)5.2/36*
ISC 09 08:49:30.6±0.4, 3.°02S±0.°03×127.°65E±0.°04, h40km±3km, n440, σ1§61/463, mb5.1/136, MS4.4/57, 15C-6D, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.86 141**		P	**Pn**	**08 49 47.0**	**+0.7**
AAI				S	**Sn**	**08 50 04.8**	**+7.1**
AAI	**Ambon**	**0.86 141**		P	**Pn**	**08 49 44.7**	**-1.6**
MSAI	**Masohi**	**1.32 104**		P	**Pn**	**08 49 55.2**	**+2.6**
MSAI				S	**Sn**	**08 50 11.7**	**+2.7**
SANI	**Sanana**	**1.92 300**		P	**Pn**	**08 49 56.5**	**-4.3**
SANI				S	**Sn**	**08 50 22.5**	**-1.2**
LBMI	**Labuha**	**2.37 356**		P	**Pn**	**08 50 05.1**	**-1.9**
LBMI				S	**Sn**	**08 50 34.7**	**-0.1**
BNDI	**Bandanaira**	**2.70 124**		P	**Pn**	**08 50 14.0**	**+2.4**
TNTI	**Ternate**	**3.77 356**		*e*Pn	**Pn**	**08 50 24.4**	**-1.9**
SIJI	**Sorong**	**4.20**	**60**	Pn	**Pn**	**08 50 29.6**	**-2.6**
25nm,0.3s,baz=132,slow=0.8,SNR=78							
SIJI				Sn	**Sn**	**08 51 20.6**	**+0.6**
49nm,0.3s,baz=68,slow=20,SNR=13							
SIJI				LR	LR	08 52 55.5	
comp=Z,9μm,19.6s,baz=275,slow=50							
FAKI	**Fak Fak**	**4.59**	**89**	*e*Pn	**Pn**	**08 50 35.7**	**-1.9**
KDI	**Kendari**	**5.11 259**		P	**Pn**	**08 50 43.9**	**-0.8**
206nm,0.9s,4μm1.0nm							
KMSI	**Cibinong**	**5.12 314**		P	**Pn**	**08 50 43.9**	**-0.9**
LUWI	**Luwuk**	**5.25 292**		P	**Pn**	**08 50 45.2**	**-1.5**
LUWI	**Luwuk**	**5.25 292**		*e*Pn	**Pn**	**08 50 44.6**	**-2.1**
KMPI	**Kaimana, Papua**	**6.08**	**96**	P	**Pn**	**08 50 59.4**	**+1.4**
SAUI	**Saumlaki**	**6.13 144**		P	**Pn**	**08 51 02.4**	**+3.7**
SAUI	**Saumlaki**	**6.13 144**		*e*Pn	**Pn**	**08 50 59.6**	**+0.9**
APSI	**Ampana**	**6.35 289**		P	**Pn**	**08 50 59.7**	**-2.0**
2μm,0.9s,14μm5.2nm							
MRSI	**Marisa**	**6.68 301**		P	**Pn**	**08 51 05.3**	**-0.9**
227nm,0.6s,3μm1.1nm							
RKPI	**Ransiki, Papua**	**6.69**	**77**	P	**Pn**	**08 51 07.0**	**+0.5**
462nm,1.0s,14μm4.8nm							
SGSI	**Sangihe**	**6.99 342**		P	**Pn**	**08 51 08.3**	**-2.2**
680nm,0.7s,8μm3.2nm							
SOEI	**Soe**	**7.49 206**		P	**Pn**	**08 51 21.1**	**+3.6**
SOEI	**Soe**	**7.49 206**		*e*Pn	**Pn**	**08 51 19.9**	**+2.4**
MMRI	**Maumere**	**7.75 224**		P	**Pn**	**08 51 24.7**	**+3.7**
MMRI	**Maumere**	**7.75 224**		*e*Pn	**Pn**	**08 51 24.2**	**+3.2**
TTSI	**Tana Toraja**	**7.82 270**		P	**Pn**	**08 51 23.1**	**+1.2**
224nm,1.0s,2μm0.8nm							
BKSI	**Bulukumba**	**7.85 253**		P	**Pn**	**08 51 24.7**	**+2.4**
351nm,0.7s,4μm1.1nm							
SPSI	**Sidrap Palu**	**7.92 263**		P	**Pn**	**08 51 24.4**	**+1.1**
163nm,0.8s,2μm0.6nm							
BATI	**Baumata**	**8.17 209**		Pn	Pn	08 51 31.5	+4.8
15nm,0.3s,baz=67,slow=2.4,SNR=13							
BATI				LR	LR	08 55 32.1	
comp=Z,6μm,19.1s,baz=25,slow=45							
BATI	**Baumata**	**8.17 209**		P	**Pn**	**08 51 30.3**	**+3.6**
123nm,1.0s,1μm							
EDFI	**Ende, Flores**	**8.22 226**		P	**Pn**	**08 51 31.0**	**+3.5**
193nm,0.7s,3μm							
MPSI	**Mapaga**	**8.43 293**		P	**Pn**	**08 51 28.7**	**-1.6**
113nm,0.7s,1μm							
BAKI	**Biak**	**8.64**	**78**	P	**Pn**	**08 51 33.9**	**+0.6**
SRPI	**Serui, Papua**	**8.66**	**83**	P	Pn	08 51 43.3	+10
BASI	**Baing, Sumba**	**10.02 224**		P	**Pn**	**08 51 55.3**	**+3.1**
757nm,1.2s,7μm							
MTN	**Manton Dam**	**10.36 161**		*e*Pn	**Pn**	**08 51 58.7**	**+2.0**
PLAI	**Plampang**	**11.39 239**		P	**Pn**	**08 52 13.1**	**+2.2**
224nm,0.9s,2μm							
MYLDM	**Lahad Datu**	**12.24 312**		*e*Pn	**Pn**	**08 52 21.6**	**-0.8**
GENI	**Genyem**	**12.51**	**88**	P	**Pn**	**08 52 27.2**	**+1.0**
JAY	**Jayapura**	**13.05**	**88**	Pn	**Pn**	**08 52 33.1**	**-0.5**
0.8nm,0.3s,baz=280,slow=12,SNR=4.7							
JAY				LR	LR	08 59 21.4	
comp=Z,5μm,20.6s,baz=279,slow=46							
JAY	**Jayapura**	**13.05**	**88**	P	**Pn**	**08 52 34.2**	**+0.6**
327nm,0.8s,4μm							
SRBI	**Singaraja**	**13.36 247**		P	**Pn**	**08 52 40.4**	**+2.6**
97nm,1.1s,1μm							
IGBI	**Denpasar**	**13.70 245**		P	**Pn**	**08 52 45.3**	**+2.8**
157nm,0.8s,4μm							
JAGI	**Jajag, Banyuwa**	**14.48 247**		P	**Pn**	**08 52 55.5**	**+2.5**
JAGI	**Jajag, Banyuwa**	**14.48 247**		*e*Pn	**Pn**	**08 52 55.0**	**+2.0**
KKM	**Kota Kinabalu**	**14.54 308**		*e*Pn	**Pn**	**08 52 50.4**	**-3.5**
BLJI	**Banyuglugur**	**14.76 251**		P	**Pn**	**08 52 58.5**	**+1.8**
245nm,0.7s,14μm							
GMJI	**Gumukmas**	**15.06 249**		P	**Pn**	**08 53 02.8**	**+1.9**
184nm,1.2s,3μm							
RCP	**Roxas**	**15.28 341⇑**		*e*P	**Pn**	**08 53 00.7**	**-2.9**
GRJI	**Gresik**	**15.60 255**		P	**P**	**08 53 10.4**	**-1.1**
144nm,1.2s,2μm							
SBUM	**Sibu**	**16.35 289**		*e*Pn	**Pn**	**08 53 17.4**	**0.0**
21nm,1.0s							
STKI	**Sintang**	**16.45 280**		P	**Pn**	**08 53 18.9**	**+0.2**
PWJI	**Pagerwojo**	**16.53 252**		P	**P**	**08 53 22.2**	**+0.3**
146nm,1.1s,4μm							
NGJI	**Ngawi**	**16.69 254**		P	**P**	**08 53 23.5**	**-0.1**
255nm,1.0s							
PCJI	**Pacitan**	**17.18 252**		P	**P**	**08 53 29.8**	**+0.8**
218nm,0.8s,3μm							
SMRI	**Semarang**	**17.60 256**		*e*P	**P**	**08 53 34.0**	**+0.3**
301nm,1.1s							
UGM	**Wanagama**	**17.72 253**		P	**P**	**08 53 36.3**	**+1.2**
253nm,1.5s,6μm							
UGM	**Wanagama**	**17.72 253**		*e*Pn	**P**	**08 53 36.0**	**+0.9**
180nm,1.0s							
KSM	**Kuching**	**17.90 284**		*e*Pn	**Pn**	**08 53 36.9**	**+0.2**
83nm,1.0s							
WRAB	**Tennant Creek**	**18.04 159**		*e*Pn	**Pn**	**08 53 36.7**	**-1.8**
155nm,1.0s							
WRAB	**Tennant Creek**	**18.04 159**	*c*	*i*P	**Pn**	**08 53 37.1**	**-1.4**
WRAB				pmax	pmax		
comp=Z,122nm,1.0s							
WRA	**Warramunga Arr**	**18.05 159**		P	**Pn**	**08 53 36.0**	**-2.5**
comp=Z,4.1nm,0.3s,baz=343,slow=13,SNR=81							
WRA				S	**Sn**	**08 56 56.9**	**-2.1**
baz=338,slow=24,SNR=4.5							
WRA				ScP	**ScP**	**09 01 46.7**	**+2.4**
comp=Z,0.1nm,0.3s,baz=334,slow=2.2,SNR=7.1							
WB2	**Warramunga Arr**	**18.05 159**		*e*Pn	**Pn**	**08 53 36.8**	**-1.8**
comp=Z,131nm,0.7s							
TGY	**Tagaytay City**	**18.26 339**		P	**Pn**	**08 53 41.4**	**+0.2**
comp=Z,19nm,0.3s,baz=128,slow=19,S

QZH LR LR
comp=Z,570nm,15.5s
PSI Prapat 29.29 281 P **P 08 55 31.6 +1.9**
comp=Z,19nm,1.0s,baz=176,slow=0.9,SNR=2.4
PSI LR LR 09 09 07.4
comp=Z,979nm,18.1s,baz=90,slow=40
PSI Prapat 29.29 281 *e*P **P 08 55 28.3 -1.4**
comp=Z,39nm,1.0s
JOW Kunigami 29.68 1 P **P 08 55 31.7 -1.1**
comp=Z,19nm,0.8s,baz=261,slow=29,SNR=3.6
JOW LR LR 09 08 42.1
comp=Z,244nm,20.4s,baz=162,slow=39
JOW Kunigami 29.68 1 *e*P **P 08 55 31.9 -0.9**
comp=Z,47nm,1.1s
GSI Gunungsitoli 30.37 278 P P 08 55 45.0 +5.9
GSI Gunungsitoli 30.37 278 *e*P **P 08 55 37.7 -1.4**
comp=Z,67nm,1.0s
BBOO Buckleboo 30.67 166 *e*P **P 08 55 38.8 -2.8**
comp=Z,27nm,1.0s
NWAO Narrogin (SRO) 31.32 197 P **P 08 55 45.6 -1.6**
comp=Z,8.7nm,0.6s,baz=257,slow=7.6,SNR=11
NWAO Narrogin (SRO) 31.32 197 *e*P **P 08 55 45.6 -1.6**
comp=Z,20nm,0.8s
NWAO Narrogin (SRO) 31.32 197 *e*P **P 08 55 45.6 -1.6**
NWAO pmax pmax
comp=Z,20nm,0.8s
STKA Stephens Creek 31.57 157 P **P 08 55 48.6 -0.9**
comp=Z,24nm,0.7s,baz=329,slow=8.7,SNR=40
STKA LR LR 09 10 02.7
comp=Z,3μm,18.6s,baz=340,slow=39
STKA Stephens Creek 31.57 157 *e*P **P 08 55 47.4 -2.0**
comp=Z,5.2nm,0.8s
CHAI Chaiyaphum 31.58 307 P **P 08 55 50.8 +1.0**
comp=Z,16nm,0.8s,comp=Z,183nm
NONG Nongkai 31.97 312 P **P 08 55 53.3 +0.2**
comp=Z,48nm,0.9s
PBKT Sadao Pong 32.76 307 P P 08 56 09.1 +9.0
PBKT Sadao Pong 32.76 307 *e*P **P 08 55 57.8 -2.3**
comp=Z,28nm,1.4s
PHIT Phitsanulok 33.55 308 P **P 08 56 09.5 +2.5**
comp=Z,29nm,0.9s
CM01 Chiang Mai Arr 35.38 308 *e*P **P 08 56 21.7 -1.2**
CMAR Chiang Mai Arr 35.42 308 P **P 08 56 24.0 +0.8**
comp=Z,4.1nm,0.6s,baz=138,slow=7.7,SNR=13
CMAR PcP **PcP 08 58 53.7 +1.1**
comp=Z,1.8nm,0.4s,baz=143,slow=2.3,SNR=3.5
CMAR LR LR 09 13 01.5
comp=Z,228nm,20.5s,baz=147,slow=40
ARMA Armidale 35.46 143 *e*P **P 08 56 23.8 +0.2**
comp=Z,14nm,0.8s
CHTO Chiang Mai 35.62 309 P **P 08 56 26.9 +2.0**
comp=Z,154nm,0.9s
CHTO Chiang Mai 35.62 309 *e*P **P 08 56 25.7 +0.8**
comp=Z,26nm,0.9s
CHTO Chiang Mai 35.62 309 *e*P **P 08 56 25.7 +0.8**
CHTO pmax pmax
comp=Z,26nm,0.9s
GYA Guiyang 35.64 327⇑*i*P **P 08 56 24.8 -0.3**
GYA pP pP 08 56 37.2 +1.0
GYA PP **PP 08 57 48.0 +1.4**
GYA PcP **PcP 08 58 54.6 +1.4**
GYA S **S 09 02 00.4 +1.4**
GYA sS sS 09 02 19.0 +1.5
GYA SS **SnSn 09 04 21.7 -0.9**
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,130nm,5.0s
GYA LR LR
comp=Z,630nm,17.0s
GYA LR LR
comp=Z,530nm,17.2s
GYA LR LR
comp=Z,580nm,17.6s
WHN Wuhan 35.71 340⇓P **P 08 56 25.6 +0.2**
WHN S **S 09 01 59.6 0.0**
WHN LR LR
comp=Z,700nm,12.9s
WHN LR LR
comp=Z,700nm,15.2s
WHN LR LR
comp=Z,790nm,16.7s
NJ2 Nanjing 35.86 347 *e*P **P 08 56 26.0 -0.7**
NJ2 pmax pmax
comp=Z,17nm,0.6s
JNU Nakatsue 36.07 5 LR LR 09 12 49.5
comp=Z,469nm,18.2s,baz=174,slow=39
KMI Kunming 36.97 321 P **P 08 56 39.4 +2.8**
KMI pP pP 08 56 47.0 -0.7
KMI sP sP 08 56 50.6 -1.9
KMI PP **PnPn 08 58 05.0 +3.2**
KMI S **S 09 02 25.5 +6.0**
KMI sS sS 09 02 39.5 +1.5
KMI SS **SnSn 09 04 57.1 +2.2**
KMI pmax pmax
comp=Z,37nm,1.2s
KMI pmax pmax
comp=Z,150nm,3.1s
KMI LR LR
comp=Z,280nm,17.3s
KMI LR LR
comp=Z,570nm,17.3s
KMI LR LR
comp=Z,320nm,18.3s
ENH Enshi 37.38 334 *e*P **P 08 56 39.4 -0.3**
comp=Z,33nm,1.1s
JHJ Hachijo jima 2 37.73 17 LR LR 09 10 36.4
comp=Z,516nm,21.7s,baz=84,slow=34
CAN Canberra 37.75 151 *e*P **P 08 56 42.3 -0.6**
comp=Z,43nm,0.7s
CAN Canberra 37.75 151 *e*P **P 08 56 42.3 -0.6**
CAN pmax pmax
comp=Z,43nm,0.7s
INU Inuyama 39.16 12 *e*P **P 08 56 53.8 -0.9**
comp=Z,30nm,0.8s
KS15 Wonju Array Si 40.25 0 *e*P **P 08 57 02.9 -0.8**
KSAR Wonju Array Be 40.25 0 P **P 08 57 03.2 -0.4**
KSAR PcP **PcP 08 59 08.5 +1.5**
KSAR Wonju Array Be 40.25 0 P **P 08 57 03.3 -0.4**
KSAR 08 59 08.5
KSRS Korea Array 40.27 0 P **P 08 57 03.2 -0.5**
comp=Z,10.0nm,0.8s,baz=179,slow=9.4,SNR=44
KSRS PcP **PcP 08 59 08.5 +1.4**
comp=Z,2.2nm,0.7s,baz=183,slow=4.5,SNR=5.3
KSRS LR LR 09 17 04.5
comp=Z,140nm,18.9s,baz=180,slow=41
KS01 Wonju Array Si 40.29 0 *e*P **P 08 57 03.4 -0.5**
INCN Inchon 40.30 359 *e*P **P 08 57 03.4 -0.8**
comp=Z,31nm,1.0s
MAJO Matsushiro 40.57 13 *e*P **P 08 57 04.9 -1.4**
comp=Z,22nm,0.8s
MAJO Matsushiro 40.57 13 *ce*P **P 08 57 04.4 -2.0**
MAJO pmax pmax
comp=Z,20nm,0.7s
MAT Matsushiro 40.57 13 P **P 08 57 03.9 -2.5**
MAT *e*S **S 09 03 07.6 -5.5**
MJAR Matsushiro Arr 40.57 13 P **P 08 57 04.7 -1.7**
comp=Z,19nm,0.7s,baz=190,slow=9.9,SNR=38
MJAR LR LR 09 12 31.9
comp=Z,839nm,20.6s,baz=195,slow=34
MJB9 Matsu-Tunnel 40.57 13 *e*P **P 08 57 05.0 -1.4**
comp=Z,22nm,0.8s
CD2 Chengdu 40.71 328 P **P 08 57 07.6 0.0**
CD2 sP sP 08 57 23.4 -0.2
CD2 PP **PP 08 58 42.3 +0.3**
CD2 S **S 09 03 15.4 0.0**
CD2 sS sS 09 03 35.4 +1.4
CD2 SS **SS 09 06 20.0 +2.8**
CD2 pmax pmax
comp=Z,50nm,0.7s
CD2 pmax pmax
comp=Z,170nm,4.4s
CD2 LR LR
comp=Z,800nm,10.3s
CD2 LR LR
comp=Z,580nm,21.6s
XAN Xi'an 40.87 336 P **P 08 57 07.5 -1.4**
XAN pP pP 08 57 18.1 -2.0
XAN sP sP 08 57 21.7 -3.2
XAN S **S 09 03 15.4 -2.3**
XAN pmax pmax
comp=Z,19nm,0.8s
XAN pmax pmax
comp=Z,84nm,3.1s
XAN LR LR
comp=Z,410nm,18.6s
XAN LR LR
comp=Z,340nm,18.9s
XAN LR LR
comp=Z,500nm,19.1s
DL2 Dalian 42.08 353 P **P 08 57 17.6 -1.1**
DL2 S **S 09 03 37.1 +1.7**
DL2 pmax pmax
comp=Z,18nm,0.9s
DL2 LR LR
comp=Z,410nm,17.1s
DL2 LR LR
comp=Z,410nm,15.5s
DZM Mont Dzumac 42.14 120 *e*S **S 09 03 35.1 -2.0**
comp=Z,156nm,28.3s
DZM *e*LR LR 09 09 04.5
comp=Z,1μm,26.7s
DZM Mont Dzumac 42.14 120 P **P 08 57 19.9 +0.3**
comp=Z,21nm,1.1s,baz=130,slow=16,SNR=2.8
TAU Tasmania Unive 43.42 159 *e*P **P 08 57 30.8 +1.3**
comp=Z,62nm,1.4s
TAU Tasmania Unive 43.42 159 *e*P **P 08 57 30.8 +1.3**
TAU pmax pmax
comp=Z,62nm,1.4s
BJI Beijing 44.12 347 P **P 08 57 33.9 -1.3**
BJI pmax pmax
comp=Z,23nm,1.0s
SNY Shenyang 44.79 356⇑P **P 08 57 39.4 -1.0**
SNY pmax pmax
comp=Z,28nm,0.9s
SNY pmax pmax
comp=Z,190nm,3.9s
SNY LR LR
comp=Z,250nm,15.9s
SNY LR LR
comp=Z,640nm,16.9s
SNY LR LR
comp=Z,500nm,22.9s
SHL Shillong 44.81 311 *e*P **P 08 57 43.0 +1.8**
SHL Shillong 44.81 311 *e*P **P 08 57 40.6 -0.6**
comp=Z,43nm,0.7s
SHL Shillong 44.81 311 *e*P **P 08 57 40.6 -0.6**
SHL pmax pmax
comp=Z,43nm,0.7s
LZH Lanzhou 44.81 332 *e*P **P 08 57 42.5 +1.5**
LZH pP pP 08 57 53.5 +1.2
LZH sP sP 08 58 00.5 +3.5
LZH PP **PP 08 59 26.3 +0.1**
LZH S **S 09 04 16.1 +0.3**
LZH sS sS 09 04 37.2 +2.6
LZH SS **ScS 09 07 34.4 -1.2**
LZH pmax pmax
comp=Z,66nm,1.0s
LZH pmax pmax
comp=Z,330nm,4.2s
LZH LR LR
comp=Z,750nm,14.0s
LZH LR LR
comp=Z,960nm,14.5s
LZH LR LR
comp=Z,1μm,17.0s
MSHR Mys Shultsa 45.49 4⇑*e*P **P 08 57 45.7 -0.4**
HHC Hu-ho-hao-te 46.06 343 *e*P **P 08 57 51.8 +1.0**
HHC sP sP 08 58 05.3 -1.5
HHC S **S 09 04 34.4 +0.8**
HHC sS sS 09 04 50.0 -2.5
HHC SS **SS 09 07 54.0 -5.3**
HHC pmax pmax
comp=Z,11nm,0.7s
HHC pmax pmax
comp=Z,36nm,5.5s
HHC LR LR
comp=Z,1μm,18.1s
HHC LR LR
comp=Z,1μm,18.1s
HHC LR LR
comp=Z,1μm,19.9s
CN2 Changchun 46.65 358 *e*P **P 08 57 58.2 +3.1**
CN2 *es*P sP 08 58 12.0 +0.8
CN2 *e*S **S 09 04 45.3 +3.6**
CN2 SS **SS 09 08 04.6 -3.8**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=Z,260nm,19.0s
CN2 LR LR
comp=Z,250nm,19.0s
CN2 LR LR
comp=Z,280nm,22.0s
USRK Ussuriysk Ar. 47.16 4 P **P 08 57 58.9 -0.3**
comp=Z,16nm,0.6s,baz=186,slow=6.6,SNR=38
USRK LR LR 09 16 37.0
comp=Z,164nm,20.2s,baz=175,slow=35
MDJ Mudanjiang 47.45 2 P **P 08 57 58.4 -3.0**
MDJ sP pP 08 58 13.4 +0.6
MDJ PP **PP 08 59 51.0 -2.2**
MDJ S **S 09 04 56.7 +3.6**
MDJ sS sS 09 05 14.2 +2.2
MDJ pmax pmax
comp=Z,190nm,6.4s
MDJ LR LR
comp=Z,320nm,23.1s
MDJ LR LR
comp=Z,330nm,23.1s
MDJ LR LR
comp=Z,530nm,23.9s
MDJ Mudanjiang 47.45 2 *e*P **P 08 58 01.1 -0.3**
comp=Z,20nm,0.8s
LSA Lhasa 47.72 316 P **P 08 58 05.5 +1.1**
ASAJ Asahikawa 48.80 14 P **P 08 58 12.4 +0.5**
comp=Z,10nm,0.7s,baz=222,slow=11,SNR=11
ASAJ LR LR 09 17 44.9
comp=Z,665nm,20.7s,baz=208,slow=35
ASAJ Asahikawa 48.80 14 *e*P **P 08 58 11.0 -0.9**
comp=Z,37nm,1.4s
ODAN Odare 48.90 310 *e*P **P 08 58 14.5 +1.3**
comp=Z,74nm,0.8s
GTA Gaotai 49.38 332 *e*P **P 08 58 16.3 -0.2**
GTA pP pP 08 58 25.1 -2.9
GTA sP sP 08 58 29.0 -3.6
GTA S **S 09 05 23.9 +3.1**
GTA sS sS 09 05 39.7 -0.1
GTA pmax pmax
comp=Z,7.0nm,0.8s
GTA pmax pmax
comp=Z,60nm,5.4s
GTA LR LR
comp=Z,340nm,20.6s
GTA LR LR
comp=Z,340nm,17.5s
GTA LR LR
comp=Z,350nm,18.2s
RAMN Ramite 49.56 310 *e*P **P 08 58 18.6 +0.4**
comp=Z,196nm,1.1s
JIRN Jiri 50.23 310 *e*P **P 08 58 23.0 -0.5**
comp=Z,83nm,1.0s
GUN Gumba 50.59 310 *e*P **P 08 58 25.8 -0.4**
comp=Z,213nm,1.2s
DMN Daman 51.04 309 *e*P **P 08 58 30.2 +0.8**
comp=Z,74nm,1.0s
YSS Yuzh-Sakhalins 51.51 13 *e*P **P 08 58 34.4 +2.1**
YSS pmax pmax
comp=Z,10.0nm,0.8s
GKN Gorkha 51.59 310 *e*P **P 08 58 33.2 -0.3**
comp=Z,70nm,0.9s
KLR Kul'dur 52.16 3 LR LR 09 20 51.9
comp=Z,25nm,19.7s,baz=175,slow=36
KLR Kul'dur 52.16 3 *d i*P **P 08 58 37.0 -0.1**
KOLN Koldanda 52.28 309 *e*P **P 08 58 38.4 -0.3**
comp=Z,55nm,0.7s
DANN Dangsing 52.44 310 *e*P **P 08 58 38.8 -1.1**
comp=Z,124nm,0.9s
HYB Hyderabad 52.50 295 *i*P **P 08 58 44.0 +3.7**
PYUN Piuthan 52.91 309 *e*P **P 08 58 42.3 -1.1**
comp=Z,143nm,1.1s
ULN Ulaanbaatar 53.78 343 *e*P **P 08 58 47.8 -1.5**
comp=Z,20nm,0.8s
ULN Ulaanbaatar 53.78 343 *c i*P **P 08 58 48.3 -1.0**
ULN pmax pmax
comp=Z,21nm,0.9s
SONM Songino Array 53.95 342 P **P 08 58 49.6 -0.9**
comp=Z,12nm,0.8s,baz=156,slow=8.9,SNR=23
SONM LR LR 09 24 55.6
comp=Z,146nm,18.0s,baz=186,slow=40
SONA1 Songino Array 53.96 342 *e*P **P 08 58 48.9 -1.7**
MLZ Mavora Lakes 55.07 146 *e*P **P 08 58 59.7 +1.1**
comp=Z,37nm,1.3s
WHZ Wether Hill Ro 55.30 147 *e*P **P 08 59 01.2 +1.0**
comp=Z,61nm,1.2s
LBZ Lake Benmore 55.66 144 *e*P **P 08 59 03.6 +0.8**
comp=Z,50nm,1.2s
RPZ Rata Peaks 55.80 143 *e*P **P 08 59 05.5 +1.6**
comp=Z,42nm,0.9s
LTZ Lake Taylor 56.04 141 *e*P **P 08 59 06.9 +1.3**
comp=Z,70nm,1.4s
OXZ Oxford 56.19 142 *e*P **P 08 59 08.6 +2.0**
comp=Z,20nm,0.8s
ZEA Zeya 56.55 360 *e*P **P 08 59 10.4 +1.4**
ZEA pmax pmax
comp=Z,23nm,1.0s
NKL Nikolayevsk 57.02 9 *e*P **P 08 59 09.5 -2.8**
BKZ Black Stump Fm 57.06 136 *e*P **P 08 59 11.1 -1.9**
comp=Z,20nm,0.7s
URZ Urewera 57.10 135 *e*P **P 08 59 11.2 -2.0**
comp=Z,25nm,1.0s
ZAK Zakamensk 57.16 342 *e*P **P 08 59 11.9 -1.6**
ZAK pmax pmax
comp=Z,5.0nm,1.6s
BFZ Birch Farm 57.58 137 *e*P **P 08 59 16.9 +0.4**
comp=Z,50nm,1.2s
TLY Talaya 58.19 343 LR LR 09 27 47.8
comp=Z,146nm,18.1s,baz=138,slow=40
TLY Talaya 58.19 343 *e*P **P 08 59 21.8 +1.2**
TLY *e*S **S 09 07 22.1 +2.7**
TLY pmax pmax
comp=Z,9.0nm,1.5s
TLY MLR MLR
comp=Z,115nm,17.0s
WMQ Urumqi 58.80 327 P **P 08 59 26.8 +1.7**
WMQ pP pP 08 59 37.1 +0.3
WMQ sP sP 08 59 41.3 -0.1
WMQ S **S 09 07 27.0 -0.8**
WMQ pmax pmax
comp=Z,36nm,0.9s
WMQ pmax pmax
comp=Z,240nm,3.7s
WMQ LR LR
comp=Z,1μm,15.9s
WMQ LR LR
comp=Z,560nm,13.5s
WMQ LR LR
comp=Z,470nm,32.9s
MOY Mondy 59.01 341 *e*P **P 08 59 27.4 +1.0**
MOY pmax pmax
comp=Z,33nm,1.8s
AFI Afiamalu 60.73 104 LR LR 09 25 53.4
comp=Z,246nm,18.8s,baz=284,slow=36
HVS Khovu-Aksy 61.23 336⇓*e*P **P 08 59 41.3 -0.3**
HVS pmax pmax
comp=Z,23nm,0.9s
PEA0B Petropavlovsk- 61.35 20 *e*P **P 08 59 42.5 +0.2**
comp=Z,30nm,0.9s
PETK Petropavlovsk- 61.35 20 P **P 08 59 41.9 -0.4**
comp=Z,15nm,0.9s,baz=192,slow=4.6,SNR=11
PETK LR LR 09 26 07.1
comp=Z,119nm,20.1s,baz=212,slow=36
PET Petropavlovsk 61.62 21 *e*P **P 08 59 47.9 +3.9**
PET *e*S **S 09 08 08.6 +5.3**
PET pmax pmax
comp=Z,37nm,1.1s
BOD Bodaibo 61.63 352 *e*P **P 08 59 44.2 +0.2**
BOD pmax pmax
comp=Z,25nm,1.6s
KSH Kashi 63.52 317 P **P 09 00 00.3 +3.1**
KSH sP sP 09 00 12.0 -1.6
KSH PP **PP 09 02 16.2 -1.2**
KSH S **S 09 08 31.4 +3.3**
KSH sS sS 09 08 47.5 -0.1
KSH ScS **ScS 09 09 47.6 -0.1**
KSH pmax pmax
comp=Z,180nm,4.9s
KSH LR LR
comp=Z,190nm,4.3s
KSH LR LR
comp=Z,160nm,4.4s
KSH LR LR
comp=Z,380nm,7.9s
MK01 Makanchi Array 63.61 327 *e*P **P 08 59 55.9 -1.7**
MK31 Makanchi Array 63.63 327 *e*P **P 08 59 56.3 -1.4**
MK31 Makanchi Array 63.63 327 *e*P **P 08 59 56.3 -1.4**
MKAR Makanchi Array 63.63 327 P **P 08 59 56.8 -0.9**
comp=Z,4.5nm,0.7s,baz=128,slow=7.4,SNR=32
MKAR LR LR 09 31 26.7
comp=Z,97nm,18.1s,baz=104,slow=40
MKAR Makanchi Array 63.63 327 *e*P **P 08 59 56.3 -1.4**
comp=Z,74nm,0.8s
MKAR Makanchi Array 63.63 327 *ce*P **P 08 59 56.5 -1.2**
MKAR pmax pmax
comp=Z,5.0nm,0.7s
MAKZ Makanchi 63.81 327 *e*P **P 08 59 58.0 -0.9**
comp=Z,17nm,1.0s
MAKZ Makanchi 63.81 327 *e*P **P 08 59 58.0 -0.9**
MAKZ pmax pmax
comp=Z,17nm,1.0s
CASY Casey 64.28 188 *e*P **P 09 00 00.2 -1.4**
comp=Z,32nm,1.4s
YAK Yakutsk 64.89 1 *e*P **P 09 00 06.0 +0.5**
comp=Z,42nm,0.6s
YAK Yakutsk 64.89 1 *e*P **P 09 00 06.1 +0.5**
YAK *e* 09 00 34.2
YAK *e*PPP PPP 09 04 03.8
YAK *e*S **S 09 08 45.6 +1.8**
YAK *e**SS **pS 09 09 01.1 +3.0**
YAK *e* 09 09 53.6
YAK *e*SS **SS 09 12 54.2 -1.9**
YAK *e*SSS SSS 09 15 56.1
YAK pmax pmax
comp=Z,24nm,0.8s
YAK pmax pmax
comp=N,3.0nm,0.9s
YAK smax smax
comp=N,106nm,4.1s
YAK smax smax
comp=E,40nm,4.0s
MA2 Magadan 65.01 13⇑*e*P **P 09 00 08.9 +2.5**
MA2 pmax pmax
comp=Z,11nm,1.1s
AAK Ala-Archa 66.01 320 LR LR 09 28 39.8
comp=Z,101nm,19.4s,baz=95,slow=36
AAK Ala-Archa 66.01 320 *e*P **P 09 00 12.2 -1.3**
comp=Z,14nm,1.2s
AAK Ala-Archa 66.01 320⇑*e*P **P 09 00 13.0 -0.4**
AAK pmax pmax
comp=Z,3.0nm,1.1s
ZAA0 Zalesovo Array 67.00 334 *e*P **P 09 00 19.2 -0.1**
comp=Z,15nm,1.1s
ZALV Zalesovo Beam 67.00 334 P **P 09 00 18.0 -1.3**
comp=Z,3.8nm,0.7s,baz=129,slow=5.5,SNR=10
ZALV LR LR 09 29 50.9
comp=Z,136nm,21.4s,baz=70,slow=36
ZALV Zalesovo Beam 67.00 334 *e*P **P 09 00 17.2 -2.1**
ZALV Zalesovo Beam 67.00 334 P **P 09 00 18.0 -1.3**
ZALV pmax pmax
comp=Z,4.0nm,0.7s
ZALV MLR MLR
comp=Z,137nm,21.4s
KURBB Kurchatov Arra 67.91 329 P **P 09 00 23.7 -1.4**
comp=Z,7.5nm,0.8s,baz=130,slow=5.8,SNR=31
KURBB PP **PP 09 02 54.8 -0.6**
comp=Z,2.1nm,0.9s,baz=133,slow=8.2,SNR=5.3
KURK Kurchatov 67.92 329 *e*P **P 09 00 23.6 -1.6**
comp=Z,28nm,0.9s
KURK PP **PP 09 02 54.8 -0.7**
KURK Kurchatov 67.92 329 P **P 09 00 23.7 -1.5**
KURK 09 02 54.8
KURK pmax pmax
comp=Z,8.0nm,0.8s
KURK pmax pmax
comp=Z,2.0nm,1.0s
NVS Novosibirsk 68.28 334 *e*P **P 09 00 27.2 -0.2**
NVS pmax pmax
comp=Z,15nm,1.1s
SEY Seymchan 68.38 12⇑*e*P **P 09 00 28.8 +1.0**
KK31 Karatay Array 68.82 319 *e*P **P 09 00 29.9 -1.1**
KK31 Karatay Array 68.82 319 *e*P **P 09 00 30.0 -1.1**
KKAR Karatay Array 68.82 319 *e*P **P 09 00 29.9 -1.1**
KKAR Karatay Array 68.82 319 *e*P **P 09 00 30.0 -1.1**
WSAR Wadi Sarin 72.04 295 LR LR 09 36 55.2
comp=Z,235nm,18.3s,baz=124,slow=40
BVAR Borovoye Array 73.47 328 P **P 09 00 57.7 -1.2**
comp=Z,2.3nm,0.8s,baz=131,slow=8.6,SNR=10.0

BVAR LR LR 09 36 01.3
comp=Z,103nm,20.0s,baz=132,slow=38
BRVK Borovoye 73.54 328 *eP* **P 09 00 57.1 -2.3**
comp=Z,13nm,1.0s
BRVK Borovoye 73.54 328⇓ *eP* **P 09 00 58.2 -1.1**
BRVK pmax pmax
comp=Z,10.0nm,1.2s
ATKA Atka Island 73.56 33 *eP* **P 09 00 58.9 -0.6**
comp=Z,22nm,0.8s
TIXI Tiksi 74.53 0 LR LR 09 34 32.4
comp=Z,111nm,21.2s,baz=190,slow=36
TIXI Tiksi 74.53 0 *eP* **P 09 01 03.4 -1.4**
comp=Z,9.8nm,0.7s
TIXI Tiksi 74.53 0*d i*P **P 09 01 03.9 -0.9**
TIXI pmax pmax
comp=Z,13nm,1.2s
BILL Bilibino 75.81 14 *i* P **P 09 01 14.4 +2.2**
BILL *i* 09 01 31.3
BILL pmax pmax
comp=Z,1.0nm,0.9s
GEYT Alibeck 75.87 310 P **P 09 01 14.5 +1.3**
comp=Z,58nm,0.4s,baz=81,slow=10,SNR=2.5
GEYT LR LR 09 40 39.1
comp=Z,145nm,19.6s,baz=85,slow=40
VNDA Vanda 76.66 173 P **P 09 01 16.4 -0.6**
comp=Z,2.8nm,0.8s,baz=318,slow=6.0,SNR=18
VNDA LR LR 09 35 01.7
comp=Z,740nm,18.7s,baz=338,slow=36
VNDA Vanda 76.66 173 *eP* **P 09 01 15.7 -1.2**
comp=Z,5.4nm,0.8s
NRIK Noril'sk 77.16 346 P **P 09 01 19.4 -0.4**
comp=Z,6.0nm,0.6s,baz=145,slow=6.8,SNR=8.4
NRIK LR LR 09 38 47.2
comp=Z,155nm,18.9s,baz=147,slow=38
SBA Scott Base 77.57 172 *eP* **P 09 01 22.3 +0.3**
comp=Z,15nm,1.1s
SBA Scott Base 77.57 172 *eP* **P 09 01 22.3 +0.3**
SBA pmax pmax
comp=Z,15nm,1.1s
MAW Mawson 77.80 201 P **P 09 01 22.1 -1.3**
comp=Z,7.3nm,0.7s,baz=96,slow=6.1,SNR=21
MAW LR LR 09 31 23.5
comp=Z,378nm,21.8s,baz=60,slow=32
MAW Mawson 77.80 201 *eP* **P 09 01 20.6 -2.9**
comp=Z,2.2nm,0.8s
ABKAR Abkulak array 77.95 322 *eP* **P 09 01 26.5 +1.9**
AKTO Aktyubinsk 79.51 322 P **P 09 01 33.1 -0.1**
comp=Z,2.1nm,0.8s,baz=90,slow=9.1,SNR=4.0
AKTO LR LR 09 40 06.2
comp=Z,137nm,21.5s,baz=109,slow=38
OPO Ambohidratompo 80.01 252 LR LR 09 34 35.2
comp=Z,159nm,18.0s,baz=78,slow=34
SVE Sverdlovsk 80.17 329 *eP* P 09 01 41.3 +4.7
ARU Arti 81.11 328 *eP* **P 09 01 42.5 +0.8**
comp=Z,17nm,1.0s
ARU Arti 81.11 328*c i*P **P 09 01 43.1 +1.4**
ARU 09 04 45.1
ARU S **S 09 11 53.0 +4.6**
ARU SS **SS 09 17 07.2 +3.3**
ARU pmax pmax
comp=Z,14nm,1.7s
PPT2 Papeete2 82.21 107 *e*LR LR 09 27 44.6
comp=Z,616nm,29.2s
PPT Papeete 82.21 107 LR LR 09 36 24.9
comp=Z,95nm,19.4s,baz=312,slow=34
SDPT Sand Point 82.27 33 *eP* **P 09 01 48.4 +0.6**
comp=Z,73nm,1.0s
TBI Tubuai 82.29 113 *e*LR LR 09 27 41.7
comp=Z,328nm,30.2s
SOKR Solikamsk 83.02 331 *eP* P 09 01 56.2 +4.7
SOKR pmax pmax
comp=Z,7.0nm,0.8s
RAYN Ar Rayn 84.00 294 *eP* **P 09 01 56.8 -0.7**
comp=Z,8.3nm,0.9s
RAYN Ar Rayn 84.00 294 P **P 09 01 56.8 -0.7**
RAYN pmax pmax
comp=Z,8.0nm,0.9s
ATD Arta Tunnel 85.51 282 LR LR 09 41 17.7
comp=Z,143nm,18.0s,baz=54,slow=36
SVW2 Sparrevohn 86.25 28 *eP* **P 09 02 08.7 +0.8**
comp=Z,5.0nm,0.8s
SYO Syowa Base 86.50 201⇓ *e*X **P 09 02 05.3 -3.7**
SYO Syowa Base 86.50 201⇑ *e*X P 09 02 17.0 +8.0
OHAK Old Harbor 86.61 32 *eP* **P 09 02 10.3 +0.6**
comp=Z,51nm,1.3s
QSPA South Pole Qui 86.94 180 P **P 09 02 10.1 -1.2**
comp=Z,11nm,0.7s,baz=275,slow=1.7,SNR=32
QSPA LR LR 09 41 29.2
comp=Z,684nm,18.1s,baz=349,slow=36
QSPA South Pole Qui 86.94 180 *eP* **P 09 02 09.2 -2.1**
comp=Z,21nm,0.8s
KDAK Kodiak Island 87.08 32 P **P 09 02 12.8 +0.8**
comp=Z,9.3nm,0.7s,baz=227,slow=8.9,SNR=7.8
KDAK Kodiak Island 87.08 32 *eP* **P 09 02 13.1 +1.1**
comp=Z,33nm,1.0s
KDAK Kodiak Island 87.08 32 *i* P **P 09 02 13.5 +1.5**
ZEI Tsey 87.44 313 *eP* **P 09 02 16.1 +1.7**
ZEI pmax pmax
comp=Z,29nm,1.0s
AKH Akhalkalaki 87.59 312 *e*pP pP 09 02 26.8 -0.6
AKH Akhalkalaki 87.59 312 *eP* P 09 02 26.8 +12
IM3 Indian Mountai 88.10 24 *eP* **P 09 02 16.4 -0.3**
PPLA Purkeypile 88.19 27 *eP* **P 09 02 17.5 +0.1**
comp=Z,5.4nm,0.9s
KBZ Khabaz 88.27 314 P **P 09 02 19.2 +1.2**
comp=Z,2.2nm,0.9s,baz=322,slow=2.0,SNR=3.9
SKT Skwentna 88.33 28 *eP* **P 09 02 15.8 -2.2**
comp=Z,10nm,1.0s
KIV Kislovodsk 88.44 314 *eP* **P 09 02 18.0 -1.0**
KIV *eS* **SKSac 09 12 43.2 -2.0**
KIV pmax pmax
comp=Z,7.0nm,1.0s
SUA Susitna One 88.62 28 *eP* **P 09 02 19.0 -0.5**
comp=Z,20nm,0.9s
PRGR Permogore 88.84 332 *eP* **P 09 02 19.0 -1.3**
PRGR pmax pmax
comp=Z,20nm,0.6s
RC01 Rabbit Creek A 89.04 29 *eP* **P 09 02 21.7 +0.4**
comp=Z,18nm,1.0s
MLY Manley 89.17 25 *eP* **P 09 02 23.6 +1.7**
comp=Z,3.7nm,0.8s
RND Reindeer 89.76 27 *eP* **P 09 02 24.2 -0.5**
RND *e*PcP **PcP 09 02 24.7 -1.3**
RND Reindeer 89.76 27 *eP* **P 09 02 24.2 -0.5**
SML Sawmill 89.80 28 *eP* **P 09 02 25.5 +0.6**
comp=Z,15nm,0.8s
SML Sawmill 89.80 28 *eP* **P 09 02 25.5 +0.6**
SML pmax pmax
comp=Z,15nm,0.8s
MDM Murphy Dome 90.22 25 *eP* **P 09 02 27.8 +1.0**
comp=Z,5.2nm,1.0s
WRH Wood River Hil 90.22 26 *eP* **P 09 02 25.9 -0.9**
WRH *e*PcP **PcP 09 02 27.3 -0.6**
CCB Clear Creek Bu 90.36 25 *eP* **P 09 02 26.1 -1.3**
comp=Z,4.7nm,0.9s
DHY Denali Highway 90.39 27 *eP* **P 09 02 27.2 -0.6**
comp=Z,15nm,1.5s
ILAR Eielson Array 90.77 25 P **P 09 02 28.5 -0.8**
comp=Z,1.6nm,0.8s,baz=268,slow=4.2,SNR=18
ILB Eielson Array 90.77 25 *eP* **P 09 02 27.8 -1.5**
IL1 Eielson Array 90.77 25 *eP* **P 09 02 28.5 -0.8**
DIV Divide 90.96 29 *eP* **P 09 02 30.2 -0.2**
comp=Z,9.7nm,1.0s
PAX Paxson 91.24 27 *eP* **P 09 02 31.9 +0.2**
comp=Z,4.7nm,1.0s
PAX Paxson 91.24 27 *eP* **P 09 02 31.9 +0.2**
PAX pmax pmax
comp=Z,5.0nm,1.0s
BMRM Bremner River 91.52 29 *eP* **P 09 02 33.4 +0.4**
comp=Z,24nm,1.4s
RIDG Independ'e Rid 91.58 26 *eP* **P 09 02 32.6 -0.5**
comp=Z,8.8nm,1.0s
RIDG *eS* **S 09 13 27.5 -2.6**
KLMR Klimovskoe 91.70 331 *eP* **P 09 02 37.6 +4.0**
KLMR pmax pmax
comp=Z,22nm,1.8s
KLMR Klimovskoe 91.70 331 *eP* **P 09 02 37.6 +4.0**
KLMR AMP 09 02 50.9
comp=Z,22nm,1.8s
TAOE Nuku Hiva Isla 91.72 99 *e*LR LR 09 31 50.4
comp=Z,576nm,24.6s
DOT Dot Lake 91.92 27 *eP* **P 09 02 33.2 -1.5**
comp=Z,26nm,0.8s
SCRK Sand Creek 91.97 26 *eP* **P 09 02 32.9 -2.2**
comp=Z,3.0nm,0.8s
SCRK *eS* **S 09 13 33.6 -0.2**

TGL Tana Glacier 92.37 29 *eP* **P 09 02 38.1 +1.1**
comp=Z,11nm,0.9s
EGAK Eagle 93.22 25 *eP* **P 09 02 40.2 -0.4**
comp=Z,4.3nm,0.9s
MMAI Mount Meron Ar 93.51 303 LR LR 09 50 09.6
comp=Z,194nm,20.9s,baz=145,slow=39
DAWY Dawson 93.99 26 *eP* **P 09 02 45.3 +1.1**
comp=Z,5.4nm,0.8s
BRTR Keskin Array B 95.00 309 P **P 09 02 50.3 +0.8**
comp=Z,1.2nm,0.8s,baz=148,slow=3.1,SNR=5.7
BRTR Keskin Array B 95.00 309 *i* P **P 09 02 50.7 +1.1**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
NVL N'lazarevskaya 95.44 197 *eP* P 09 02 45.3 -5.4
NVL *eS* **SKSac 09 13 19.1 -4.2**
NVL pmax pmax
comp=Z,6.0nm,0.6s
INK Inuvik 96.06 22 P **P 09 02 53.1 -0.4**
comp=Z,1.3nm,0.6s,baz=308,slow=5.6,SNR=5.5
INK Inuvik 96.06 22 *eP* **P 09 02 53.1 -0.4**
comp=Z,4.2nm,0.9s
INK Inuvik 96.06 22 *eP* **P 09 02 53.1 -0.4**
INK pmax pmax
comp=Z,4.0nm,0.9s
WHY Whitehorse 96.28 29 *eP* **P 09 02 55.7 +0.8**
comp=Z,7.5nm,1.0s
ARCES ARCESS Array B 97.05 340 P **P 09 02 57.2 -0.9**
comp=Z,2.8nm,0.7s,baz=77,slow=5.2,SNR=8.0
ARCES LR LR 09 51 25.1
comp=Z,66nm,21.2s,baz=78,slow=38
ARCES ARCESS Array B 97.05 340 *eP* **P 09 02 57.6 -0.5**
ARCES ARCESS Array B 97.05 340 *eP* **P 09 02 57.6 -0.5**
SPITS Spitsbergen Ar 97.23 349 P Pdif 09 02 58.9 +0.1
comp=Z,5.6nm,0.9s,baz=344,slow=7.9,SNR=3.2
SPITS LR LR 09 52 03.3
comp=Z,137nm,19.1s,baz=45,slow=39
MATP Matopo 97.52 249 LR LR 09 45 47.7
comp=Z,144nm,18.6s,baz=98,slow=35
AKASG Malin Array Be 97.66 321 P Pdif 09 03 02.1 +0.9
comp=Z,0.5nm,0.4s,baz=85,slow=4.4,SNR=2.7
AKASG LR LR 09 53 29.5
comp=Z,50nm,19.3s,baz=55,slow=39
KIEV Kiev 97.67 321⇑ *eP* Pdif 09 03 01.8 +0.5
KIEV pmax pmax
comp=Z,2.0nm,1.2s
LSZ Lusaka 98.32 254 LR LR 09 39 48.7
comp=Z,153nm,21.0s,baz=87,slow=31
SNAA Sanae 98.95 194 P **P 09 03 06.6 -0.1**
comp=Z,2.4nm,1.1s,baz=210,slow=1.9,SNR=6.1
SNAA LR LR 09 44 50.4
comp=Z,536nm,21.8s,baz=122,slow=34
SNAA Sanae 98.95 194 *eP* **P 09 03 06.2 -0.5**
comp=Z,6.8nm,1.5s
BOSA Boshof 99.41 241 LR LR 09 44 51.0
comp=Z,154nm,19.0s,baz=44,slow=34
LBTB Lobatse 99.62 244 LR LR 09 43 38.4
comp=Z,191nm,20.5s,baz=102,slow=33
UZH Uzhgorod 102.39 319 *eP* **Pdif 09 03 22.1 -0.2**
YKA Yellowknife Ar 105.20 25 PP PP 09 07 57.6 +2.1
comp=Z,0.5nm,0.7s,baz=301,slow=2.1,SNR=3.7
CLL Collm 107.58 323 *e*PS PS 09 17 45.0 +8.8
CLL *e*PPS PPS 09 18 31.0
CLL *e* 09 21 54.0
CLL *e*SS SS 09 23 18.0 -2.8
CLL *e*(SSS) 09 26 48.0
CLL LmV 10 05 00.0
comp=Z,100nm,19.7s
FCC Fort Churchill 115.66 23 *e*PKPdf **PKPdf 09 08 08.9 +0.5**
FCC Fort Churchill 115.66 23 *e*PKIKP **PKPdf 09 08 08.9 +0.5**
PDAR Pinedale Array 115.70 43 PKP **PKPdf 09 08 11.4 +2.0**
comp=Z,0.4nm,0.6s,baz=242,slow=1.9,SNR=4.9
S22A 4UR Ranch, Cre 119.46 48 *e*PKPdf **PKPdf 09 08 17.6 +0.8**
319A Douglas 119.55 55 *e*PKPdf **PKPdf 09 08 17.5 +0.5**
ULM Lac du Bonnet 120.33 31 PKP **PKPdf 09 08 17.1 -0.6**
comp=Z,1.0nm,0.4s,baz=234,slow=1.3,SNR=7.0
ULM Lac du Bonnet 120.33 31 *e*PKPdf **PKPdf 09 08 17.4 -0.3**
ULM Lac du Bonnet 120.33 31 *e*PKIKP **PKPdf 09 08 17.4 -0.3**
TASM ASL Pad, Albuq 120.71 51 P **PKPdf 09 08 20.1 +0.9**
baz=290
ANMO Albuquerque 120.72 51 P **PKPdf 09 08 20.2 +1.0**
baz=290
C31A Landman Farms, 120.77 34 P **PKPdf 09 08 18.5 -0.2**
baz=304
LPM Los Pinos Moun 120.79 51 *e*PKPdf **PKPdf 09 08 20.1 +0.8**
B32A Ashes, Strandq 121.08 33 P **PKPdf 09 08 18.6 -0.6**
baz=306
E31A Nome 121.37 35 P **PKPdf 09 08 19.5 -0.4**
baz=304
A33A Warroad 121.37 32 P **PKPdf 09 08 19.6 -0.1**
baz=307
B34A Aery, Baudette 122.03 32 P **PKPdf 09 08 20.9 -0.1**
baz=308
E33A Westby DABS, E 122.47 34 P **PKPdf 09 08 22.0 0.0**
baz=305
D34A Park Rapids 122.58 33 P **PKPdf 09 08 22.1 -0.1**
baz=306
B35A Bob, Littlefor 122.60 32 P **PKPdf 09 08 22.0 -0.1**
baz=308
MNTX Cornudas Mount 122.63 54 P **PKPdf 09 08 22.7 0.0**
baz=289
MNTX Cornudas Mount 122.63 54 *e*PKPdf **PKPdf 09 08 23.1 +0.4**
G33A Ortonville 122.97 36 P **PKPdf 09 08 23.0 0.0**
baz=304
ESDC Sonseca Array 123.03 317 PKP **PKPdf 09 08 22.8 -0.5**
comp=Z,0.2nm,0.4s,baz=60,slow=3.8,SNR=3.7
D35A Remer 123.21 33 P **PKPdf 09 08 22.9 -0.5**
baz=308
D36A Goodland 123.63 32 P **PKPdf 09 08 24.2 0.0**
baz=308
ECSD EROS Data Cent 123.67 37 P **PKPdf 09 08 24.6 +0.3**
baz=303
ECSD EROS Data Cent 123.67 37 *e*PKPdf **PKPdf 09 08 25.0 +0.6**
HPIG 123.79 59 *e*PKPdf **PKPdf 09 08 25.5 +0.2**
MSTX Muleshoe 123.91 51 P **PKPdf 09 08 26.1 +0.9**
baz=292
MSTX Muleshoe 123.91 51 *e*PKPdf **PKPdf 09 08 25.5 +0.3**
E36A McGregor 123.99 33 P **PKPdf 09 08 25.1 +0.2**
baz=308
G35A Watkins 124.08 35 P **PKPdf 09 08 25.6 +0.5**
baz=306
H35A Sunnyside Ranc 124.19 36 P **PKPdf 09 08 25.8 +0.5**
baz=306
F36A Milaca 124.24 34 P **PKPdf 09 08 25.5 +0.1**
baz=307
H36A Jessenland, He 124.78 35 P **PKPdf 09 08 27.1 +0.7**
baz=306
TX31 Lajitas Ar. Si 124.78 56 *e*PKPdf **PKPdf 09 08 26.1 -0.9**
TXAR Lajitas Array 124.78 56 PKP **PKPdf 09 08 28.3 +1.3**
comp=Z,1.6nm,0.9s,baz=246,slow=1.7,SNR=14
F37A Hinrichs Farm, 124.82 33 P **PKPdf 09 08 26.8 +0.3**
baz=308
E38A The Farm, Brul 124.85 32 P **PKPdf 09 08 26.5 0.0**
baz=310
F38A Pierce - Schro 125.08 33 P **PKPdf 09 08 27.7 +0.7**
baz=309
I37A Lemond, Waseca 125.42 36 P **PKPdf 09 08 28.5 +0.8**
baz=306
E39A Mellen 125.52 32 P **PKPdf 09 08 27.9 +0.1**
baz=311
G38A Ridgeland 125.59 34 P **PKPdf 09 08 27.6 -0.4**
baz=309
K36A Gilmore City 125.59 37 P **PKPdf 09 08 28.4 +0.3**
baz=305
F39A Loretta 125.63 32 P **PKPdf 09 08 28.3 +0.3**
baz=310
TOA0 Torodi Ar. Sit 125.66 284 *e*PKPdf **PKPdf 09 08 28.2 -0.7**
TORD Torodi Ar. Bea 125.66 284 PKP **PKPdf 09 08 28.9 0.0**
comp=Z,4.9nm,0.7s,baz=73,slow=2.0,SNR=22
E40A Wakefield 125.82 31 P **PKPdf 09 08 28.8 +0.4**
baz=311
G39A Holcombe 125.89 33 P **PKPdf 09 08 28.6 +0.1**
baz=310
I38A Scanlan Farm, 126.02 35 P **PKPdf 09 08 28.6 -0.2**
baz=308
F40A Park Falls 126.05 32 P **PKPdf 09 08 28.9 0.0**
baz=311
D41A Chassel 126.08 30 P **PKPdf 09 08 29.7 +0.9**
baz=313
G40A Rib Lake 126.43 33 P **PKPdf 09 08 30.1 +0.5**
baz=310
COWI Conover 126.44 31 *e*PKPdf **PKPdf 09 08 29.1 -0.5**
I39A Houston 126.59 35 P **PKPdf 09 08 29.5 -0.4**
baz=308
F41A Three Lakes 126.70 32 P **PKPdf 09 08 30.7 +0.6**
baz=312
H40A Chili 126.74 33 P **PKPdf 09 08 30.7 +0.5**
baz=310

J39A Decorah 126.81 35 P **PKPdf 09 08 30.5 +0.1**
baz=308
K39A Oelwein 127.09 36 P **PKPdf 09 08 30.8 -0.1**
baz=307
H41A Junction City 127.15 33 P **PKPdf 09 08 29.9 -1.1**
baz=311
L39A Vinton 127.37 37 P **PKPdf 09 08 31.7 +0.2**
baz=307
G42A Mountain 127.39 32 P **PKPdf 09 08 32.0 +0.6**
baz=312
K40A Colesburg 127.53 36 P **PKPdf 09 08 32.1 +0.3**
baz=308
JCT Junction City 127.54 53 P **PKPdf 09 08 32.9 +0.7**
baz=292
JCT Junction City 127.54 53 *e*PKPdf **PKPdf 09 08 32.4 +0.2**
JCT Junction City 127.54 53 *e*PKIKP **PKPdf 09 08 32.4 +0.2**
ZAIG Zacatecas 127.58 64 *e*PKPdf **PKPdf 09 08 32.9 +0.1**
M39A Webster 127.65 37 P **PKPdf 09 08 32.4 +0.4**
baz=306
J41A Loganville 127.75 34 P **PKPdf 09 08 32.1 -0.1**
baz=310
L40A Anamosa 127.87 36 P **PKPdf 09 08 32.0 -0.4**
baz=308
JFWS Jewell Farm 127.91 35 *e*PKPdf **PKPdf 09 08 31.1 -1.4**
JFWS Jewell Farm 127.91 35 *e*PKIKP **PKPdf 09 08 31.1 -1.4**
I42A Draeger Farm, 128.03 33 P **PKPdf 09 08 33.1 +0.5**
baz=311
M40A Post Highland 128.09 37 P **PKPdf 09 08 33.3 +0.5**
baz=307
R38A Fenwick Farm, 128.39 42 P **PKPdf 09 08 34.0 +0.5**
baz=302
K42A Prairie Point, 128.51 34 P **PKPdf 09 08 33.9 +0.3**
baz=310
Q39A Willow Grove F 128.54 40 P **PKPdf 09 08 34.5 +0.7**
baz=304
S38A Stockton 128.69 42 P **PKPdf 09 08 34.4 +0.3**
baz=302
R39A Chumby, Stover 128.90 41 P **PKPdf 09 08 35.0 +0.5**
baz=303
S39A Bolivar 129.05 42 P **PKPdf 09 08 35.8 +1.0**
baz=303
O41A Passleys Farm, 129.24 38 P **PKPdf 09 08 35.6 +0.5**
baz=307
P41A Barry, Barry 129.39 39 P **PKPdf 09 08 36.4 +1.0**
baz=306
R40A Maddies Statio 129.42 41 P **PKPdf 09 08 35.9 +0.4**
baz=304
Q41A Truxton 129.71 40 P **PKPdf 09 08 37.6 +1.6**
baz=306
T40A Mansfield 129.88 42 P **PKPdf 09 08 36.3 -0.1**
baz=303
R41A Rosebud 129.99 40 P **PKPdf 09 08 37.7 +1.2**
baz=305
CCM Cathedral Cave 130.22 40 *e*PKPdf **PKPdf 09 08 38.4 +1.4**
CCM Cathedral Cave 130.22 40 *e*PKIKP **PKPdf 09 08 38.4 +1.4**
P43A Skaggs, Pawnee 130.37 38 P **PKPdf 09 08 38.5 +1.3**
baz=308
KOWA Kowa 131.00 287 PKP **PKPdf 09 08 39.4 +0.3**
comp=Z,1.8nm,0.5s,baz=135,slow=2.9,SNR=6.5
BLO Bloomington 132.46 36 *e*PKPdf **PKPdf 09 08 40.9 -0.3**
BLO Bloomington 132.46 36 *e*PKIKP **PKPdf 09 08 40.9 -0.3**
DBIC Dimbokro 132.55 276 PKP **PKPdf 09 08 43.0 +0.9**
comp=Z,3.4nm,0.6s,baz=121,slow=10,SNR=3.0
PLCA Paso Flores 133.39 161 PKP **PKPdf 09 08 44.6 +1.5**
comp=Z,3.6nm,0.9s,baz=217,slow=5.1,SNR=5.6
GO03 Copiap 145.03 152 *e*PKPbc **PKPbc 09 09 02.7 -1.2**
JTS JuntasAbangare 146.85 76 PKPbc **PKPab 09 09 11.3 +0.2**
comp=Z,28nm,0.9s,baz=10,slow=8.4,SNR=14
ESPN La Esperanzas 147.08 72 *e*PKPdf **PKPdf 09 09 08.1 -0.2**
GO02 Mina Guanaco 147.37 150 *e*PKPbc **PKPdf 09 09 10.2 +1.2**
FSCY Frank Sound, G 147.50 58 *e*PKPdf **PKPdf 09 09 09.8 +1.0**
CPUP Villa Florida 150.43 171 PKPbc **PKPbc 09 09 17.9 -0.8**
comp=Z,22nm,0.9s,baz=142,slow=1.8,SNR=18
CPUP Villa Florida 150.43 171 *e*PKPbc **PKPbc 09 09 17.0 -1.7**
CPUP Villa Florida 150.43 171 *e*PKIKP **PKPbc 09 09 17.0 -1.7**
PB01 IPOC Station P 150.78 146 *e*PKPbc **PKPbc 09 09 18.4 -1.4**
NNA Nana 151.46 122 *e*PKPbc **PKPbc 09 09 20.8 -0.7**
NNA Nana 151.46 122 *e*PKIKP **PKPbc 09 09 20.8 -0.7**
LPAZ La Paz 155.28 141 PKP **PKPdf 09 09 22.8 +1.2**
comp=Z,1.2nm,0.6s,baz=248,slow=5.8,SNR=5.4
LPAZ La Paz 155.28 141 *e*PKPdf **PKPdf 09 09 21.1 -0.4**
LPAZ La Paz 155.28 141 *e*PKIKP **PKPdf 09 09 21.1 -0.4**
PRAC Prado 157.49 88 *e*PKPdf **PKPdf 09 09 22.9 -0.9**
RUSC La Rusia 159.14 81 *e*PKPdf **PKPdf 09 09 26.8 +0.5**
SAML Samuel 163.94 138 *e*PKPdf **PKPdf 09 09 32.0 +1.3**
SAML *e*PKPab **PKPab 09 10 23.0 -0.5**

ISCJB ***09*** *09:03:59.0±1.1, 17°.0N±0°.1×96°.66W±0°.09, h67km±8km,*
Error ellipse: s-maj=25.2km s-min=7.2km az=30.7
MEX ***09*** *09:04:01.8±0.8, 17°.18N×96°.63W, h55km±10km, MD4.2*
NEIC ***09*** *09:04:01.8±0.0, 17°.18N×96°.63W, h55km, mb4.0/1,*
MD4.2(MEX), After MEX.
ISC 09 09:04:00.6±1.4, **17°.1**N±0°.2×**96°.67W**±0°.08, **h56**km±9km, **n49,**
σ0°.65/55, **Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**0.06**	**286**	*i* P	**Pn**	**09 04 09.3**	**0.0**
VHO				*eS*	**Sn**	**09 04 15.4**	**-0.2**
VHO	**Vista Hermosa**	**0.06**	**286**	*i* P	**Pn**	**09 04 09.3**	**0.0**
VHO				*eS*	**Sn**	**09 04 15.4**	**-0.2**
TLIG	**Tlapa**	**1.88**	**286**	*eP*	**Pn**	**09 04 30.1**	**-0.4**
TLIG	**Tlapa**	**1.88**	**286**	*eP*	**Pn**	**09 04 30.1**	**-0.4**
TGIG		**3.41**	**94**	*eP*	**Pn**	**09 04 50.6**	**-0.7**
TGIG		**3.41**	**94**	*eP*	**Pn**	**09 04 50.6**	**-0.7**
PCIG		**3.57**	**112**	*eP*	**Pn**	**09 04 53.7**	**+0.2**
PCIG				*i* S	**Sn**	**09 05 34.6**	**+0.1**
PCIG		**3.57**	**112**	*eP*	**Pn**	**09 04 53.7**	**+0.2**
PCIG				*i* S	**Sn**	**09 05 34.6**	**+0.1**
CCIG	**Comitan**	**4.41**	**99**	*eP*	**Pn**	**09 05 04.9**	**-0.3**
CCIG				*i* S	**Sn**	**09 05 55.3**	**-0.2**
CCIG	**Comitan**	**4.41**	**99**	*eP*	**Pn**	**09 05 04.9**	**-0.3**
CCIG				*i* S	**Sn**	**09 05 55.3**	**-0.2**
MIAR	**Mount Ida**	**17.64**	**8**	P	**P**	**09 08 03.3**	**+0.6**
baz=190							
MIAR	**Mount Ida**	**17.64**	**8**	*eP*	**Pn**	**09 08 02.4**	**0.0**
8.5nm,0.7s							
X41A	**Kaden, Bauxite**	**17.76**	**11**	P	**Pn**	**09 08 03.9**	**0.0**
baz=193							
LRAL	**Lakeview Retre**	**18.15**	**27**	P	**Pn**	**09 08 09.3**	**+0.6**
baz=211							
X43A	**Marvell**	**18.15**	**16**	P	**Pn**	**09 08 09.5**	**+0.9**
baz=198							
Y46A	**Houston**	**18.17**	**21**	P	**Pn**	**09 08 10.0**	**+1.1**
baz=205							
W39A	**Magazine**	**18.25**	**8**	P	**Pn**	**09 08 10.6**	**+0.7**
baz=189							
151A	**Opelika**	**18.51**	**32**	P	**P**	**09 08 12.2**	**-0.1**
baz=216							
Y47A	**UCPARC, Winfie**	**18.55**	**24**	P	**P**	**09 08 13.0**	**+0.2**
baz=207							
TUL1	**Leonard**	**18.80**	**2**	P	**P**	**09 08 15.5**	**+0.1**
baz=182							
X46A	**Booneville**	**18.87**	**21**	P	**P**	**09 08 16.4**	**+0.1**
baz=204							
V39A	**Pettigrew**	**18.90**	**8**	P	**Pn**	**09 08 17.4**	**-0.4**
baz=189							
V40A	**Witts Springs**	**18.99**	**10**	P	**P**	**09 08 18.0**	**+0.4**
baz=191							
V41A	**Mountainview**	**19.08**	**11**	P	**P**	**09 08 19.0**	**+0.3**
baz=193							
X47A	**Russelville**	**19.10**	**23**	P	**P**	**09 08 19.4**	**+0.6**
baz=206							
Y49A	**Blount Mountai**	**19.10**	**27**	P	**P**	**09 08 18.9**	**+0.1**
baz=211							
V42A	**Cord**	**19.26**	**13**	P	**P**	**09 08 20.7**	**+0.2**
baz=195							
X48A	**Hartselle**	**19.35**	**25**	P	**P**	**09 08 20.6**	**-0.9**
baz=209							
Y50A	**Piedmont**	**19.43**	**28**	P	**P**	**09 08 22.2**	**-0.2**
baz=213							
U39A	**Green Forest**	**19.46**	**8**	P	**P**	**09 08 23.2**	**+0.5**
baz=189							
U40A	**Yellville**	**19.52**	**9**	P	**P**	**09 08 24.1**	**+0.7**
baz=191							
U41A	**Viola**	**19.67**	**11**	P	**P**	**09 08 24.9**	**-0.1**
baz=194							
X49A	**Woodville**	**19.70**	**26**	P	**P**	**09 08 24.6**	**-0.7**
baz=211							
U42A	**Revenden**	**19.82**	**13**	P	**P**	**09 08 26.3**	**-0.2**
baz=195							
U43A	**Rector**	**20.02**	**15**	P	**P**	**09 08 28.5**	**-0.3**
baz=198							
V46A	**Holladay**	**20.16**	**21**	P	**P**	**09 08 29.6**	**-0.7**

baz=204
GOGA Godfrey 20.16 34 P P 09 08 29.1 -1.2
baz=219
W49A Belvidere 20.25 25 P P 09 08 30.6 -0.7
baz=210
V47A Nunnelly 20.39 22 P P 09 08 32.3 -0.6
baz=206
T42A Van Buren 20.50 13 P P 09 08 34.1 +0.1
baz=195
WVT Waverly 20.56 21 P P 09 08 34.0 -0.6
baz=205
V48A Smith Brothers 20.57 23 P P 09 08 34.0 -0.8
baz=208
W50A Signal Mountai 20.72 27 P P 09 08 34.7 -1.7
baz=212
T43A Greenville 20.73 15 P P 09 08 35.5 -1.0
baz=197
V49A McMinnville 20.95 25 P P 09 08 38.1 -0.8
baz=210
V50A Pikevile 21.21 27 P P 09 08 43.5 +1.8
baz=212
U49A Red Boiling Sp 21.65 24 P P 09 08 47.4 +1.0
baz=209
V51A Loudon 21.65 28 P P 09 08 47.1 +0.7
baz=214
R47A Wooly Knot Far 22.96 21 P P 09 09 00.4 +0.2
baz=206

IDC 09 09:05:53.6±1.4, 0°33S×28°60W, h0km, mb3.8/7, mb1 4.0/7, mb1mx3.7/59, mbtmp3.8/7, MS3.9/15, Ms1 3.9/15, ms1mx3.6/56, Error ellipse: s-maj=58.2km s-min=21.1km az=161.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N3	ASCENSION HYDR	15.91	118	T	T	09 27 29.8	
	baz=300,slow=75,SNR=1849						
H10N2	ASCENSION HYDR	15.92	118	T	T	09 27 25.5	
	baz=300,slow=75,SNR=1899						
H10N1	ASCENSION HYDR	15.94	118	T	T	09 27 31.3	
	baz=300,slow=75,SNR=1661						
H10S3	ASCENSION HYDR	16.31	122	T	T	09 28 02.5	
	baz=303,slow=74,SNR=1575						
H10S1	ASCENSION HYDR	16.32	122	T	T	09 28 02.9	
	baz=303,slow=74,SNR=1698						
H10S2	ASCENSION HYDR	16.33	122	T	T	09 28 03.8	
	baz=303,slow=74,SNR=1410						
DBIC	Dimbokro	24.69	73	P	P	09 11 16.7	0.0
	8.0nm,1.1s,baz=249,slow=12,SNR=2.7						
DBIC				LR	LR	09 19 18.9	
	comp=Z,125nm,18.9s,baz=228,slow=33						
KOWA	Kowa	28.44	58	P	P	09 11 49.1	-1.3
	1.1nm,0.5s,baz=107,slow=17,SNR=1.9						
KOWA				LR	LR	09 21 32.6	
	comp=Z,279nm,19.6s,baz=231,slow=33						
TORD	Torodi Ar. Bea	32.88	65	P	P	09 12 29.2	-0.5
	1.1nm,1.0s,baz=253,slow=9.6,SNR=7.1						
TORD				LR	LR	09 24 17.9	
	comp=Z,128nm,19.7s,baz=255,slow=34						
CPUP	Villa Florida	37.87	225	LR	LR	09 28 50.0	
	comp=Z,679nm,18.7s,baz=66,slow=36						
H09N1	TRISTAN DA CUN	39.54	159	T	T	09 57 16.5	
	SNR=22						
H09W1	TRISTAN DA CUN	39.56	159	T	T	09 57 16.9	
	SNR=13						
MDT	Midelt	39.98	32	LR	LR	09 29 42.0	
	comp=Z,130nm,18.1s,baz=224,slow=36						
LPAZ	La Paz	42.07	246	P	P	09 13 49.5	+1.2
	1.9nm,0.9s,baz=45,slow=9.8,SNR=4.2						
LPAZ				LR	LR	09 30 49.3	
	comp=Z,169nm,20.7s,baz=67,slow=36						
ESDC	Sonseca Array	45.74	27	P	P	09 14 17.5	+0.6
	0.6nm,0.7s,baz=223,slow=8.5,SNR=4.4						
ESDC				LR	LR	09 33 16.4	
	comp=Z,46nm,18.8s,baz=315,slow=36						
ROSC	El Rosal	45.95	277	LR	LR	09 31 52.6	
	comp=Z,136nm,20.2s,baz=123,slow=34						
KEST	Kesra	50.34	41	LR	LR	09 36 32.6	
	comp=Z,164nm,19.7s,baz=202,slow=36						
VAE	Valguarnera	54.67	42	LR	LR	09 38 52.8	
	comp=Z,71nm,19.2s,baz=311,slow=36						
PLCA	Paso Flores	55.33	218	LR	LR	09 39 46.9	
	comp=Z,95nm,18.1s,baz=152,slow=37						
GERES	GERESS Array B	61.03	31	P	P	09 16 10.9	+1.7
	0.2nm,0.4s,baz=212,slow=9.2,SNR=2.7						
OBN	Obninsk	76.31	32	LR	LR	09 51 21.2	
	comp=Z,128nm,19.0s,baz=236,slow=36						
TXAR	Lajitas Array	77.16	300	P	P	09 17 48.3	-1.6
	0.4nm,0.9s,baz=107,slow=4.8,SNR=4.2						
LPIG	La Paz	82.56	294	LR	LR	09 53 34.8	
	comp=Z,326nm,18.7s,baz=230,slow=35						
PDAR	Pinedale Array	83.57	313	LR	LR	09 52 33.1	
	comp=Z,79nm,18.7s,baz=320,slow=34						

MAN 09 09:14:16.2, 15°20N×122°06E, h59km, mb4.7, ML3.6, MS3.5, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALP	Baler	0.71	319	eP	Pn	09 14 30.7	+0.1
BALP				eS	Sn	09 14 44.2	+3.2
PCPH	Palayan	1.00	291	eP	Pn	09 14 34.5	+0.2
PCPH				eS	Sn	09 14 49.6	+2.1
GQP	Guinayangan	1.34	164	⇑eP	Pn	09 14 39.5	+0.7
GQP				eS	Sn	09 14 57.4	+1.7
CAUP	Cauayan	1.75	352	eP	Pn	09 14 45.0	+0.7
CAUP				eS	Sn	09 15 12.7	+7.2
BOAC	Boac	1.75	187	eP	Pn	09 14 45.5	+1.2
BOAC				eS	Sn	09 15 10.9	+5.4

SOME 09 09:19:12.9, 43°08N×80°58E, h5km
KRNET 09 09:19:13.4±0.1, 43°02N×80°58E, h19km, mb2.6
ISC 09 09:19:12.4±2.3, 43°05N±0°05×80°48E±0°09, h3km±12km, n17, σ2°03/34, 6C, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	Shalkode	0.75	279	eP	Pg	09 19 24.1	-2.8
	baz=86						
SHLS				eS	Sg	09 19 31.9	-4.7
	baz=86						
SHLS	Shalkode	0.75	279	eP	Pg	09 19 24.1	-2.8
	28nm,0.2s						
SHLS				eS	Sg	09 19 31.9	-4.7
	158nm,0.3s						
PDGK	Podgornoye	0.78	292	⇑iP	Pn	09 19 29.5	-0.9
	baz=92						
PDGK				⇑iS	Sn	09 19 41.3	-1.4
	baz=92						
UZB	Uzynbulak	1.07	276	eP	Pn	09 19 34.6	+0.1
	baz=77						
UZB				eS	Sn	09 19 50.1	+0.1
	baz=77						
UZB	Uzynbulak	1.07	276	eP	Pn	09 19 34.6	+0.1
	2.7nm,0.2s						
UZB				eS	Sn	09 19 50.0	+0.1
	19nm,0.1s						
KPKS	Kokpek	1.38	288	eP	Pg	09 19 40.1	+1.3
	baz=88						
KPKS				eS	Sg	09 19 59.5	+2.9
	baz=88						
KPKS	Kokpek	1.38	288	eP	Pg	09 19 40.1	+1.3
	6.2nm,0.2s						
KPKS				eS	Sg	09 19 59.5	+2.9
	29nm,0.3s						
DJR	Jarkent	1.38	339	eP	Pb	09 19 38.5	-0.4
	4.3nm,0.1s						
DJR				eS	Sg	09 19 57.1	+0.4
	4.5nm,0.4s						
SATY	Saty	1.52	271	eP	Pg	09 19 41.7	+0.1
	3.2nm,0.1s						
SATY				eS	Sg	09 20 02.3	+1.0
	35nm,0.1s						
KURS	Kuram	1.74	285	eP	Pg	09 19 47.0	+1.2
	baz=86						
KURS				eS	Sg	09 20 11.5	+3.0
	baz=86						
KURS	Kuram	1.74	285	eP	Pg	09 19 47.0	+1.2
	2.9nm,0.7s						
KURS				eS	Sg	09 20 11.4	+3.0
	1.8nm,0.3s						
MNBS	Baschi	1.83	305	eP	Pg	09 19 47.4	-0.1
	3.6nm,0.1s						
MNBS				eS	Sg	09 20 12.8	+1.6
	7.7nm,0.2s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPS	Kapalarasan	2.38	341	eP	Pb	09 19 55.6	-0.3
	1.5nm,0.2s						
KAPS				eS	Sb	09 20 26.5	+0.8
	2.7nm,0.3s						
TARG	Taragay, Kyrgy	2.38	237	⇑iP	Pg	09 19 58.1	+0.1
	baz=39						
TARG				⇑iS	Sg	09 20 32.0	+3.1
	baz=39						
TNSS	Tian-Shan	2.59	271	eP	Pg	09 20 02.2	+0.2
	1.0nm,0.2s						
TNSS				eS	Sg	09 20 37.5	+1.9
	3.0nm,0.5s						
CHKK	Chushkaly	2.67	289	eP	Pg	09 20 02.6	-0.9
	1.1nm,0.4s						
CHKK				eS	Sg	09 20 38.2	+0.1
	4.1nm,0.4s						
ULHL	Ulahol	3.23	257	⇑iP	Pb	09 20 09.6	-0.9
	baz=58						
ULHL				⇑iS	Sb	09 20 51.0	+0.7
	baz=58						

NNC 09 09:26:40.8±1.8, 53°45N×87°58E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=14.2km s-min=6.6km az=59.0
IDC 09 09:26:41.8±2.3, 53°42N×87°47E, h0km, mb1 3.7/3, mb1mx3.2/72, mbtmp3.7/3, ML3.4/3, 11C-7D, Error ellipse: s-maj=20.4km s-min=12.0km az=64.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.66	290	i		09 37 50.0	
	baz=106,slow=335,SNR=3.8						
ZAA0	Zalesovo Array	1.66	290	⇑P	Pn	09 27 10.7	-1.5
	34nm,0.8s						
ZAA0				⇓S	Sg	09 27 35.2	0.0
	72nm,0.8s						
ZALV	Zalesovo Beam	1.66	290	Pg	Pn	09 27 10.5	-1.7
	8.8nm,0.3s,baz=106,slow=16,SNR=73						
ZALV				Lg	Lg	09 27 36.2	
	16nm,0.3s,baz=110,slow=25,SNR=9.5						
KURK	Kurchatov	6.09	247	⇓Pn	Pn	09 28 13.9	+0.9
	4.7nm,0.7s						
KURK				⇓Sn	Sn	09 29 25.5	+2.2
	9.2nm,0.7s						
KURK				⇓Lg	Lg	09 29 57.4	
	28nm,0.8s						
KURBB	Kurchatov Arra	6.19	247	Pn	Pn	09 28 15.2	+0.9
	0.5nm,0.3s,baz=62,slow=14,SNR=57						
KURBB				Sn	Sn	09 29 22.7	-3.0
	0.1nm,0.3s,baz=71,slow=23,SNR=5.6						
KURBB				Lg	Lg	09 29 59.0	
	0.1nm,0.3s,baz=62,slow=34,SNR=6.2						
KURBB	Kurchatov Arra	6.19	247	⇑Pn	Pn	09 28 15.1	+0.8
	7.2nm,0.4s						
KURBB				⇑Sn	Sn	09 29 24.7	-0.9
	26nm,0.7s						
KURBB				⇑Lg	Lg	09 29 58.7	
	26nm,0.6s						
MK31	Makanchi Array	7.42	209	⇓Pn	Pn	09 28 32.3	+1.1
	3.1nm,0.8s,baz=28,slow=12,SNR=24						
MK31				⇑Sn	Sn	09 29 58.1	+2.0
	2.0nm,0.7s						
MK31				⇑Lg	Lg	09 30 39.0	
	14nm,0.9s,baz=28,slow=31,SNR=4.9						
MKAR	Makanchi Array	7.42	209	Pn	Pn	09 28 32.5	+1.2
	0.8nm,0.3s,baz=24,slow=11,SNR=31						
MKAR				Sn	Sn	09 29 56.7	+0.6
	0.1nm,0.3s,baz=24,slow=18,SNR=4.3						
MKAR				Lg	Lg	09 30 37.8	
	0.4nm,0.3s,baz=30,slow=27,SNR=9.7						
MAKZ	Makanchi	7.50	210	⇑Pn	Pn	09 28 34.0	+1.6
	3.2nm,0.8s						
MAKZ				⇓Sn	Sn	09 29 59.9	+1.9
	3.3nm,0.7s						
MAKZ				⇑Lg	Lg	09 30 38.6	
	9.2nm,0.9s						
BVA0	Borovoye Array	10.25	275	⇑Pn	Pn	09 29 09.3	-0.8
	1.1nm,0.5s						
BVA0				⇓Sn	Sn	09 31 07.5	+1.9
	7.9nm,1.4s,baz=38,slow=66,SNR=4.3						
BVAR	Borovoye Array	10.25	275	Pn	Pn	09 29 08.7	-1.3
	0.5nm,0.3s,baz=76,slow=15,SNR=7.7						
BVAR				Sn	Sn	09 31 01.2	-4.4
	0.4nm,0.3s,baz=75,slow=23,SNR=9.8						
BRVK	Borovoye	10.31	275	⇑Pn	Pn	09 29 11.3	+0.5
	4.8nm,1.2s						
BRVK				⇑Sn	Sn	09 31 08.1	+1.1
	3.1nm,1.0s						
AAK	Ala-Archa	13.82	224	Lg	Lg	09 34 03.2	
	0.3nm,0.3s,baz=20,slow=21,SNR=3.4						

ISK 09 09:28:45.7, 38°65N×42°99E, h5km, ML3.6/9
ISN 09 09:28:45.1±1.2, 38°54N×42°99E, h14km±7km, ML3.5
DDA 09 09:28:47.0, 38°64N×42°98E, h7km, Ml3.6
CSEM 09 09:28:47.5±0.2, 38°62N×43°05E, h10km, ML3.6, Error ellipse: s-maj=6.3km s-min=4.4km az=137.0
ISC 09 09:28:47.4±1.0, 38°65N±0°02×42°99E±0°02, h9km±10km, n68, σ0°65/81, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADCV	BITLIS_Adilcev	0.26	308	iP	Pg	09 28 52.9	+0.2
VANB	Van	0.32	100	PG	Pg	09 28 54.0	+0.2
VANB				SG	Sb	09 29 00.1	-0.7
VANB	Van	0.32	100	ePg	Pg	09 28 54.0	+0.2
GEVA	Gevas	0.34	170	iP	Pg	09 28 53.5	-0.7
GEVA				iS	Sg	09 28 58.8	0.0
GEVA	Gevas	0.34	170	P	Pg	09 28 53.5	-0.7
GEVA				S	Sg	09 28 58.8	0.0
TVAN	Van	0.35	110	iP	Pg	09 28 54.4	0.0
TVAN				iS	Sg	09 28 59.7	+0.6
TVAN	Van	0.35	110	P	Pg	09 28 54.4	0.0
ERCV	ERCIS-VAN	0.46	37	PG	Pg	09 28 55.9	-0.5
ERCV				SG	Sg	09 29 03.5	+1.0
ERCV	ERCIS-VAN	0.46	37	ePg	Pg	09 28 55.9	-0.5
ERCV				eSg	Sg	09 29 03.5	+1.0
VMUR	Van-Muradiye	0.57	53	iP	Pg	09 28 58.5	0.0
VMUR	Van-Muradiye	0.57	53	P	Pg	09 28 58.5	0.0
GURO	Guroymak-BITLI	0.75	263	PG	Pg	09 29 01.4	-0.5
GURO	Guroymak-BITLI	0.75	263	ePg	Pg	09 29 01.4	-0.5
TUTA	Tutak	0.76	350	iP	Pg	09 29 01.8	-0.4
CLDR	Caldiran	0.88	56	PG	Pg	09 29 03.0	-1.3
CLDR	Caldiran	0.88	56	iP	Pg	09 29 03.1	-1.2
CLDR	Caldiran	0.88	56	P	Pg	09 29 03.1	-1.2
AGRB	Hanur-Agry	0.92	0	PG	Pg	09 29 04.7	-0.5
AGRB	Hanur-Agry	0.92	0	ePg	Pg	09 29 04.7	-0.5
EKAR	Karacoban	0.94	310	iP	Pg	09 29 04.6	-0.9
SRTM	Siirt_Merkez	1.06	232	iP	Pg	09 29 07.6	-0.3
SRTM				iS	Sb	09 29 22.2	0.0
SRTM	Siirt_Merkez	1.06	232	P	Pg	09 29 07.6	-0.3
SRTM				S	Sb	09 29 22.2	0.0
SIRT	Sirnak	1.23	201	PN	Pb	09 29 10.3	-0.5
SIRT	Sirnak	1.23	201	ePn	Pb	09 29 10.3	-0.5
SIRN	S¨¨-rnak	1.24	202	iP	Pg	09 29 11.6	+0.4
SIRN	S¨¨-rnak	1.24	202	P	Pg	09 29 11.6	+0.4
EATA	Eleskirt	1.27	343	iP	Pn	09 29 11.2	-0.5
EATA	Eleskirt	1.27	343	P	Pn	09 29 11.2	-0.5
VRTB	Varto-Mus	1.30	294	PN	Pn	09 29 11.7	-0.2
VRTB	Varto-Mus	1.30	294	iP	Pn	09 29 11.5	-0.4
VRTB	Varto-Mus	1.30	294	ePn	Pn	09 29 11.7	-0.2
BNGL	BINGOL	1.47	282	iP	Pb	09 29 14.9	-0.1
IGDI	IGDIR	1.48	35	iP	Pb	09 29 15.4	+0.2
BTMN	Batman	1.55	241	iP	Pb	09 29 16.6	+0.2
BTMN				iS	Sg	09 29 37.2	0.0
BTMN	Batman	1.55	241	P	Pb	09 29 16.5	+0.2
BTMN				S	Sg	09 29 37.2	0.0
HOMI	Horasan	1.62	329	iP	Pb	09 29 17.6	-0.1
ERZM	Erzurum	1.77	315	iP	Pb	09 29 20.4	+0.1
ERZM	Erzurum	1.77	315	P	Pb	09 29 20.4	+0.1
DIGO	Kars	1.79	10	iP	Pb	09 29 19.7	-0.8
DIGO	Kars	1.79	10	P	Pb	09 29 19.7	-0.8
ECAT	Cat-ERZURUM	1.83	302	iP	Pg	09 29 22.3	-0.2
ECAT	Cat-ERZURUM	1.83	302	P	Pg	09 29 22.3	-0.2
BNGB	Bing¶ll	1.83	281	PN	Pn	09 29 19.6	+0.3
BGOL	Bingol	1.84	281	iP	Pb	09 29 21.2	-0.1
BGOL	Bingol	1.84	281	P	Pb	09 29 21.2	-0.1
BINT	Bingol	1.96	277	ePn	Pn	09 29 19.6	-1.5
KARS	Kars	1.98	2	PN	Pn	09 29 21.6	+0.4
KARS	Kars	1.98	2	ePn	Pn	09 29 21.6	+0.4
GNI	Garni	2.02	42	PN	Pn	09 29 22.4	+0.5
GNI	Garni	2.02	42	ePn	Pn	09 29 22.4	+0.5
HANI	Diyarbakir_Han	2.04	264	iP	Pb	09 29 24.5	-0.3
HANI				iS	Sg	09 29 52.6	-0.4
HANI	Diyarbakir_Han	2.04	264	P	Pb	09 29 24.5	-0.3
HANI				S	Sg	09 29 52.6	-0.4
YEDI	Yedisu-Bingol	2.06	293	PN	Pn	09 29 22.9	+0.5
YEDI	Yedisu-Bingol	2.06	293	ePn	Pn	09 29 22.9	+0.5
EAK	Akyaka	2.09	13	iP	Pb	09 29 25.5	-0.1
MARD	Mardin	2.20	233	iP	Pn	09 29 24.3	+0.1
MARD				iS	Sn	09 29 53.0	+1.3
MAZI	Mazidag	2.33	240	PN	Pn	09 29 26.6	+0.5
MAZI	Mazidag	2.33	240	ePn	Pn	09 29 26.6	+0.5
KOPT	Kop Dagi	2.36	306	iP	Pg	09 29 31.8	-0.9
BAYT	Ayd¨¨-ntepe-Bay	2.81	309	PN	Pn	09 29 33.5	+0.8
BAYT	Ayd¨¨-ntepe-Bay	2.81	309	ePn	Pn	09 29 33.5	+0.8
PTK	Pertek	2.82	276	PN	Pn	09 29 33.7	+0.8
PTK	Pertek	2.82	276	ePn	Pn	09 29 33.7	+0.8
SVRC	Sivrice-ELAZID	2.90	266	PN	Pn	09 29 34.9	+0.9
SVRC	Sivrice-ELAZID	2.90	266	ePn	Pn	09 29 34.9	+0.9
MALT	Malatya	3.59	266	PN	Pn	09 29 44.7	+1.3
MALT	Malatya	3.59	266	ePn	Pn	09 29 44.7	+1.3
RTB	Rutbah	6.02	202	ePn	Pn	09 30 15.0	-1.7
	SNR=5.0						

MEX 09 09:29:29.9±0.8, 17°18N×100°56W, h11km±37km, MD3.6, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.31	116	iP	Pg	09 29 35.5	-0.7
CAIG				eS	Sg	09 29 40.6	+0.3
ACP2	Acapulco	0.71	115	eP	Pg	09 29 42.4	-1.3
ACP2				eS	Sg	09 29 50.9	-2.1
ACX	Acapulco	0.74	115	eP	Pg	09 29 41.8	-2.4
ACX				eS	Sg	09 29 50.0	-3.9

ISCJB 09 09:53:50.1±0.3, 60°76S±0°07×26°5W±0°1, h20km, mb5.0/31, MS4.1/11, Error ellipse: s-maj=11.7km s-min=6.4km az=38.7
IDC 09 09:53:50.7±0.5, 60°41S×26°44W, h0km, mb4.8/15, mb1 4.8/15, mb1mx4.5/31, mbtmp4.7/15, MS3.9/10, Ms1 3.9/10, ms1mx3.7/30, Error ellipse: s-maj=18.8km s-min=15.1km az=62.0
NEIC 09 09:53:51.5±0.3, 60°58S×26°42W, h10km, mb5.1/18, Error ellipse: s-maj=12.2km s-min=7.7km az=215.0
BJI 09 09:53:56.2, 60°60S×26°40W, h30km, mB5.3/4, Ms5.1/3, Ms7 4.9/5
ISC 09 09:53:53.6±0.4, 60°53S±0°09×26°50W±0°10, h20km, n101, σ1°65/101, mb5.1/31, MS4.0/11, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	12.57	151	P	Pn	09 56 47.2	-3.8
VNA1	Neumayer--Stat	12.57	151	S	Sn	09 58 59.5	-11
VNA3	Neumayer Olymp	12.69	155	P	Pn	09 56 48.1	-4.6
VNA3				S	Sn	09 59 00.2	-13
VNA2	Neumayer--Watz	12.97	151	P	Pn	09 56 53.1	-3.4
	baz=308,slow=16						
VNA2				S	Sn	09 59 05.8	-14
SNAA	Sanae	14.57	150	P	Pn	09 57 13.9	-4.5
SNAA				S	Sn	09 59 43.0	-16
SNAA	Sanae	14.57	150	Pn	Pn	09 57 14.1	-4.3
	2.9nm,0.3s,baz=323,slow=19,SNR=72						
SNAA				Sn	Sn	09 59 41.0	-18
	0.6nm,0.3s,baz=335,slow=19,SNR=7.9						
SNAA				LR	LR	10 01 23.1	
	comp=Z,552nm,21.1s,baz=288,slow=31						
QSPA	South Pole Qui	29.71	180	P	P	09 59 59.8	+1.8
	29nm,1.0s,baz=205,slow=2.7,SNR=52						
QSPA				LR	LR	10 11 43.9	
	comp=Z,249nm,19.6s,baz=193,slow=36						
QSPA	South Pole Qui	29.71	180	eP	P	09 59 58.0	0.0
	63nm,1.3s						
TRQA	Tornquist	31.63	299	eP	P	10 00 15.2	+0.1
	39nm,0.7s						
PLCA	Paso Flores	33.38	286	P	P	10 00 30.0	-0.4
	2.1nm,0.6s,baz=166,slow=7.0,SNR=7.2						
PLCA				LR	LR	10 14 05.1	
	comp=Z,196nm,18.8s,baz=186,slow=36						
PLCA	Paso Flores	33.38	286	eP	P	10 00 30.5	+0.2
	14nm,1.4s						
MAW	Mawson	36.40	140	P	P	10 00 57.1	+1.1
	3.4nm,0.9s,baz=275,slow=7.9,SNR=4.6						
MAW				LR	LR	10 14 26.5	
	comp=Z,208nm,19.0s,baz=240,slow=34						
MAW	Mawson	36.40	140	eP	P	10 00 58.3	+2.3
	0.8nm,0.8s						
MRA	San Martin	38.02	300	eP	P	10 01 09.1	-1.2
ACAN	Cantantal	38.78	298	eP	P	10 01 15.5	-1.1
AAGR	Agrelo	38.82	296	eP	P	10 01 16.0	-0.9
ASAL	Salagasta	39.24	296	eP	P	10 01 19.4	-1.0
RTCV	Cerro Valdivia	39.73	297	eP	P	10 01 23.4	-1.2
AUSP	Uspallata	39.80	296	eP	P	10 01 24.4	-0.9
ROC1	El Roble	39.89	293	eP	P	10 01 25.4	-0.8
	27nm,0.6s						
APLL	PUNTA DE LOS L	40.12	300	eP	P	10 01 26.6	-1.2
RTLS	Leoncito	40.12	296	eP	P	10 01 27.3	-0.7
CPUP	Villa Florida	40.14	314	P	P	10 01 27.5	-0.3
	6.1nm,0.5s,baz=154,slow=7.4,SNR=24						
CPUP	Villa Florida	40.14	314	eP	P	10 01 26.9	-0.9
	21nm,1.2s						
AMOG	MOGNA	40.50	298	eP	P	10 01 29.2	-1.7
ACLC	CERRO LA CRUZ	41.14	301	eP	P	10 01 35.1	-1.2
ACDV	Cuesta del Vie	41.43	298	eP	P	10 01 37.8	-0.9
CYA	Choya	41.52	303	eP	P	10 01 38.0	-1.3
VNDA	Vanda	42.10	183	P	P	10 01 45.6	+2.2
	3.8nm,0.8s,baz=192,slow=6.0,SNR=25						
VNDA				LR	LR	10 18 41.5	
	comp=Z,67nm,18.4s,baz=160,slow=35						
VNDA	Vanda	42.10	183	eP	P	10 01 45.7	+2.2
	4.7nm,0.8s						
VCA	Vinchina	42.27	300	eP	P	10 01 44.4	-1.2
LCO	Las Campanas	43.12	297	eP	P	10 01 52.2	-0.5
	32nm,0.7s						
BOSA	Boshof	46.90	71	P	P	10 02 21.4	-1.2
	4.3nm,0.7s,baz=202,slow=7.0,SNR=9.1						
PB10	IPOC Station P	47.85	301	eP	P	10 02 27.2	-2.6
	62nm,1.1s						
PB04	IPOC Station P	48.73	302	eP	P	10 02 36.1	-0.7
	68nm,0.9s						
PB01	IPOC Station P	49.60	303	eP	P	10 02 43.0	-0.3
	48nm,0.7s						
MNMC	Minye Minye	51.35	304	eP	P	10 02 56.9	+0.1
	64nm,0.7s						
H10S2	ASCENSION HYDR	52.22	15	T	T	11 00 03.4	
	baz=187,slow=75,SNR=11						
H10S3	ASCENSION HYDR	52.23	15	T	T	11 00 13.8	
	baz=187,slow=75,SNR=9.3						
H10S1	ASCENSION HYDR	52.24	15	T	T	11 00 04.7	
	baz=187,slow=75,SNR=10						
LPAZ	La Paz	53.33	307	P	P	10 03 11.6	-0.4
	16nm,0.4s,baz=116,slow=4.9,SNR=182						
LPAZ	La Paz	53.33	307	eP	P	10 03 11.7	-0.3
	22nm,0.5s						
H10N1	ASCENSION HYDR	53.34	15	T	T	11 01 43.2	
	baz=194						
H10N3	ASCENSION HYDR	53.34	15	T	T	11 01 39.4	
	baz=194,slow=74				

OTAV *e*pP **sP** **10 05 31.1 +3.0**
PRAC Prado 74.23 309 *e*P **P** **10 05 28.0 -0.9**
22nm,0.6s
RUSC La Rusia 75.56 312 *e*P **P** **10 05 35.3 -1.8**
7.8nm,1.2s
PCRV Puerto La Cruz 76.68 321 P **P** **10 05 42.3 -0.6**
8.8nm,0.6s,baz=184,slow=1.7,SNR=4.7
HELC Santa Helena 76.75 310 *e*P **P** **10 05 41.3 -2.5**
13nm,0.9s
TOA0 Torodi Ar. Sit 76.81 28 *e*P **P** **10 05 43.6 0.0**
TORD Torodi Ar. Bea 76.81 28 P **P** **10 05 43.9 +0.2**
15nm,0.3s,baz=201,slow=6.3,SNR=459
TORD LR LR 10 34 56.7
comp=Z,62nm,18.6s,baz=195,slow=32
KOWA Kowa 76.92 22 P **P** **10 05 44.9 +0.8**
18nm,0.7s,baz=178,slow=7.2,SNR=34
KOWA Kowa 76.92 22 *e*P **P** **10 05 45.0 +0.8**
20nm,0.6s
SDV Santo Domingo 77.45 315 P **P** **10 05 46.5 -1.0**
11nm,0.6s,baz=108,slow=6.4,SNR=5.8
SDV Santo Domingo 77.45 315 *e*P **P** **10 05 46.0 -1.5**
13nm,0.7s
URZ Urewera 79.67 199 LR LR 10 38 24.6
comp=Z,73nm,18.5s,baz=186,slow=34
STKA Stephens Creek 87.41 170 LR LR 10 44 38.2
comp=Z,100nm,18.1s,baz=200,slow=35
ASAR Alice Springs 94.60 162 P **P** **10 07 12.2 -0.7**
0.5nm,0.5s,baz=183,slow=3.8,SNR=13
ASAR LR LR 10 48 10.0
comp=Z,139nm,18.4s,baz=201,slow=34
WRA Warramunga Arr 98.32 162 P **P** **10 07 28.5 -1.2**
0.7nm,1.1s,baz=193,slow=4.4,SNR=3.4
TXAR Lajitas Array 109.13 296 PKiKP **PKiKP** **10 12 22.1 +0.7**
0.4nm,0.9s,baz=145,slow=3.3,SNR=4.3
HWUT Hardware Ranch 122.89 297 *e*PKPdf **PKPdf** **10 12 46.8 -0.7**
PDAR Pinedale Array 122.96 299 PKP **PKPdf** **10 12 47.5 -0.1**
1.1nm,0.5s,baz=124,slow=4.6,SNR=15
NVAR Mina Array Bea 123.38 290 PKP **PKPdf** **10 12 50.4 +1.8**
2.2nm,0.9s,baz=146,slow=3.4,SNR=8.5
HVU Hansel Valley 123.57 296 *e*Pdif **Pdif** **10 09 20.2 -1.2**
ULM Lac du Bonnet 123.68 314 PKP **PKPdf** **10 12 47.9 -0.5**
2.0nm,0.5s,baz=159,slow=3.2,SNR=6.2
NB2 NORSAR Subarra124.67 21 PKPdf **PKPdf** **10 12 50.1 0.0**
comp=Z,0.8nm,0.8s,baz=196,slow=1.8
NOA NORSAR Array B124.67 21 PKP **PKPdf** **10 12 50.0 0.0**
comp=Z,5.0nm,0.9s,baz=195,slow=1.8,SNR=4.8
MFID Camas Ranch 126.23 295 *e*PKPdf **PKPdf** **10 12 55.2 +1.5**
BMO Blue Mountains 128.02 295 *e*PKPdf **PKPdf** **10 12 57.2 +0.1**
FINES FINESS Array B 128.16 29 PKP **PKPdf** **10 12 56.5 -0.1**
comp=Z,5.3nm,0.8s,baz=142,slow=4.3,SNR=13
KSH Kashi 129.31 77 PKP **PKPdf** **10 13 01.5 +1.8**
KSH sPKP 10 13 14.2
KSH PKS **PKSdf** **10 16 37.5 +1.2**
KSH SKS **SKSdf** **10 20 07.9 -2.0**
KSH SKKS **SKKSac** **10 22 01.8 -2.7**
KSH SS **SS** **10 32 27.5 -2.1**
KSH AMB AMB
comp=Z,130nm,4.5s
KSH LR LR
comp=Z,140nm,6.6s
KSH LR LR
comp=Z,190nm,6.7s
KMI Kunming 130.58 112 PKP **PKPdf** **10 13 04.6 +1.8**
GYA Guiyang 133.51 116 *e*Pdif **Pdif** **10 10 08.0 +2.0**
GYA PKP **PKiKP** **10 13 09.8 +0.5**
GYA PP **PP** **10 15 42.6 +6.2**
GYA AMB AMB
comp=Z,130nm,7.9s
ARCES ARCESS Array B 134.96 23 PKhKP PKPpre 10 12 53.0
comp=Z,1.4nm,0.8s,baz=201,slow=2.1,SNR=4.8
ARCES PKP **PKPdf** **10 13 10.1 +0.8**
comp=Z,2.0nm,0.7s,baz=158,slow=0.7,SNR=5.5
CD2 Chengdu 135.97 109 PKP **PKPdf** **10 13 12.8 +0.3**
MKAR Makanchi Array 137.81 76 PKP **PKPdf** **10 13 14.1 -1.3**
comp=Z,0.5nm,0.6s,baz=209,slow=2.2,SNR=4.8
WMQ Urumqi 138.28 83 *e*PKP **PKPdf** **10 13 18.5 +2.1**
WMQ LR LR
comp=Z,79nm,19.7s
WMQ LR LR
comp=Z,140nm,32.5s
WMQ LR LR
comp=Z,65nm,18.7s
YKA Yellowknife Ar 139.66 314 PKP **PKPdf** **10 13 18.3 +0.2**
comp=Z,4.3nm,0.7s,baz=141,slow=1.1,SNR=5.3
YKA PP **PP** **10 16 12.7 -2.0**
comp=Z,0.4nm,0.7s,baz=125,slow=6.1,SNR=4.4
LZH Lanzhou 140.26 105 *e*PKP **PKPdf** **10 13 21.3 +0.9**
LZH sPKP 10 13 36.5
LZH LR LR
comp=Z,130nm,18.0s
LZH LR LR
comp=Z,130nm,18.1s
LZH LR LR
comp=Z,170nm,20.2s
SPITS Spitsbergen Ar 140.88 13 PKhKP PKPpre 10 13 13.6
comp=Z,1.6nm,0.6s,baz=243,slow=0.2,SNR=8.7
NJ2 Nanjing 143.56 126 *e*PKP **PKPdf** **10 13 27.8 +1.7**
ZALV Zalesovo Beam 143.84 69 PKhKP PKPpre 10 13 22.4
comp=Z,1.6nm,0.5s,baz=248,slow=3.1,SNR=4.3
HHC Hu-ho-hao-te 147.71 108 *e*PKPbc **PKPbc** **10 13 34.9 -1.1**
INK Inuvik 149.39 316 PKPbc **PKPbc** **10 13 39.4 +0.2**
comp=Z,8.1nm,0.7s,baz=94,slow=2.4,SNR=21
INK Inuvik 149.39 316 *e*PKPbc **PKPbc** **10 13 39.6 +0.4**
DAWY Dawson 149.91 306 *e*PKPbc **PKPbc** **10 13 40.4 -0.3**
DAWY *e*PKPab **PKPab** **10 13 46.0 -0.5**
SONM Songino Array 150.35 94 PKPbc **PKPbc** **10 13 42.1 -0.3**
comp=Z,4.3nm,0.8s,baz=191,slow=3.2,SNR=6.5
EGAK Eagle 150.90 307 *e*PKPbc **PKPbc** **10 13 43.6 +0.7**
KSAR Wonju Array Be 151.77 133 PKPbc **PKPbc** **10 13 46.0 +0.1**
KSRS Korea Array 151.80 133 PKPbc **PKPbc** **10 13 46.0 +0.1**
comp=Z,0.8nm,0.7s,baz=194,slow=2.6,SNR=6.0
ILAR Eielson Array 153.19 305 PKPbc **PKPbc** **10 13 48.4 +0.2**
comp=Z,2.4nm,0.4s,baz=147,slow=3.9,SNR=38

IDC 09 10:06:32.1±1.9,5°.99S×129°.12E,h0km,mb3.2/1, mb1 3.7/4,mb1mx3.3/57,mbtmp3.5/4,ML3.6/3,Error ellipse: s-maj=61.4km s-min=28.5km az=82.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.52**	**23**	Pn	Pn	10 07 55.9	+0.3
	5.0nm,0.3s,baz=223,slow=23,SNR=34						
SIJI				Sn	Sn	10 08 49.5	-10
	6.2nm,0.3s,baz=239,slow=22,SNR=12						
WRA	**Warramunga Arr**	**14.77**	**160**	Pn	Pn	10 10 03.9	+1.5
	0.1nm,0.3s,baz=340,slow=13,SNR=19						
WRA				Sn	Sn	10 12 47.2	+0.2
	0.2nm,0.3s,baz=333,slow=25,SNR=5.4						
ASAR	**Alice Springs**	**18.17**	**166**	P	Pn	10 10 45.1	-0.9
	0.2nm,0.3s,baz=348,slow=11,SNR=18						
ASAR				S	Sn	10 13 59.8	-10
	0.1nm,0.3s,baz=345,slow=19,SNR=5.3						
MKAR	**Makanchi Array**	**66.91**	**327**	P	P	10 17 26.2	0.0
	0.1nm,0.3s,baz=124,slow=4.4,SNR=1.2						

NIED ***09*** *10:07:00,37°.50N×141°.50E,h47km,Mw3.7 Best double couple: M₀4.67000×10¹⁴ NP1:φ₀181.00000°,δ59.00000°, λ0.00000°. NP2:φ₀90.00000°,δ90.00000°,λ149.00000°.*
ISCJB ***09*** *10:07:16.9±0.8,37°.43N±0°.03×141°.62E±0°.07,h42km±9km, mb3.6/7,MS3.2/2,Error ellipse: s-maj=9.3km s-min=5.1km az=17.0*
JMA ***09*** *10:07:18.5±0.1,37°.47N×141°.51E,h41km±2km,M3.9*
JMA Felt II J1.
IDC ***09*** *10:07:20.6±2.5,37°.36N×141°.57E,h60km±24km,mb3.2/7, mb1 3.7/11,mb1mx3.4/70,mbtmp3.8/11,ML3.4/3,MS2.9/3, Ms1 2.9/3,ms1mx2.5/28,Error ellipse: s-maj=18.6km s-min=15.3km az=70.0*

ISC 09 10:07:16.8±1.5,37°.45N±0°.04×141°.62E±0°.06,h27km±11km, n31,σ1§63/37,mb3.5/7,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.60**	**262**	P	**Pn**	**10 07 29.4**	**-0.1**
JFK				S	**Sb**	**10 07 36.7**	**-0.2**
ONAJ	**Iwakimizuishiy**	**0.74**	**242**	P	**Pn**	**10 07 31.6**	**+0.1**
ONAJ				S	**Sn**	**10 07 40.4**	**-1.5**
JMM	**Marumori**	**0.78**	**303**	P	**Pb**	**10 07 31.8**	**+0.1**
JMM				*e*S	**Sn**	**10 07 41.1**	**-1.6**
JFT	**Otama**	**1.02**	**274**	P	**Pb**	**10 07 35.9**	**0.0**
JFT				S	**Sn**	**10 07 47.8**	**-1.0**
JIO	**Ouri**	**1.03**	**348**	P	**Pb**	**10 07 36.0**	**+0.1**
JIO				S	**Sn**	**10 07 47.8**	**-1.1**
JOU	**Okura**	**1.19**	**321**	P	**Pn**	**10 07 37.9**	**+0.3**
JOU				S	**Sb**	**10 07 52.5**	**-1.2**
JYS	**Shiratake**	**1.45**	**303**	P	**Pn**	**10 07 41.8**	**+0.6**
JYS				S	**Sn**	**10 07 58.9**	**-0.5**
JFY	**Yanaizu**	**1.52**	**269**	P	**Pn**	**10 07 42.7**	**+0.5**
JFY				S	**Sn**	**10 08 00.1**	**-1.1**
JMK	**Ichinoseki**	**1.54**	**348**	P	**Pn**	**10 07 43.1**	**+0.8**
JMK				*e*S	**Sn**	**10 08 01.5**	**+0.1**
MJAR	**Matsushiro Arr**	**2.88**	**253**	P	**Pn**	**10 08 02.0**	**+1.2**
	10.0nm,0.3s,baz=80,slow=17,SNR=104						
MJAR				S	**Sn**	**10 08 37.2**	**+2.7**
	5.3nm,0.3s,baz=73,slow=38,SNR=8.7						
MJAR				LR	LR	10 09 33.6	
	comp=Z,39nm,20.8s,baz=5.0,slow=48						
MAT	**Matsushiro**	**2.88**	**253**	P	**Pn**	**10 08 02.3**	**+1.5**
MAT				S	**Sn**	**10 08 36.9**	**+2.3**
JHJ	**Hachijo jima 2**	**4.57**	**200**	P	**Pn**	**10 08 25.1**	**+1.0**
	25nm,0.3s,baz=327,slow=23,SNR=14						
JHJ				S	**Sn**	**10 09 16.0**	**-0.3**
	37nm,0.3s,baz=66,slow=20,SNR=4.1						
ASAJ	**Asahikawa**	**6.70**	**6**	P	**Pn**	**10 08 54.1**	**+0.8**
	0.6nm,0.3s,baz=218,slow=10.0,SNR=7.5						
ASAJ				S	**Sn**	**10 10 06.2**	**-2.5**
	baz=336,slow=20,SNR=2.5						
JCJ	**Chichijima**	**10.33**	**177**	P	**Pn**	**10 09 44.0**	**+0.8**
	baz=299,slow=17						
JCJ				S	**Sn**	**10 11 31.8**	**-6.3**
PETK	**Petropavlovsk-**	**19.25**	**30**	P	**Pn**	**10 11 40.5**	**+0.6**
	0.1nm,0.3s,baz=226,slow=12,SNR=4.0						
H11N2	**WAKE ISLAND Hy 28.22**	**122**		T	T	10 43 15.3	
	baz=315,slow=75,SNR=235						
H11N1	**WAKE ISLAND Hy 28.23**	**122**		T	T	10 43 23.5	
	baz=315,slow=75,SNR=207						
H11N3	**WAKE ISLAND Hy 28.24**	**122**		T	T	10 43 24.1	
	baz=315,slow=75,SNR=152						
H11S1	**WAKE ISLAND Hy 28.95**	**124**		T	T	10 44 16.5	
	baz=316,slow=76,SNR=134						
H11S3	**WAKE ISLAND Hy 28.95**	**124**		T	T	10 44 17.3	
	baz=316,slow=76,SNR=121						
H11S2	**WAKE ISLAND Hy 28.96**	**124**		T	T	10 44 18.5	
	baz=316,slow=76,SNR=100						
TLY	**Talaya**	**30.19**	**310**	LR	LR	10 24 52.4	
	comp=Z,20nm,19.5s,baz=236,slow=35						
MKAR	**Makanchi Array**	**44.04**	**302**	P	**P**	**10 15 20.7**	**-1.3**
	0.3nm,0.5s,baz=90,slow=9.3,SNR=5.0						
KURBB	**Kurchatov Arra**	**45.88**	**308**	P	**P**	**10 15 34.9**	**-1.6**
	1.1nm,0.6s,baz=84,slow=7.9,SNR=4.4						
ILAR	**Eielson Array**	**49.06**	**33**	P	**P**	**10 16 02.4**	**+1.3**
	0.6nm,0.7s,baz=267,slow=6.6,SNR=5.1						
HNR	**Honiara**	**49.70**	**156**	LR	LR	10 37 49.5	
	comp=Z,52nm,18.4s,baz=348,slow=37						
WRA	**Warramunga Arr**	**57.49**	**188**	P	**P**	**10 17 03.0**	**-0.4**
	0.3nm,0.6s,baz=6.9,slow=7.6,SNR=7.1						
ASAR	**Alice Springs**	**61.22**	**188**	P	**P**	**10 17 28.9**	**-0.3**
	0.3nm,0.7s,baz=19,slow=6.5,SNR=3.6						
PDAR	**Pinedale Array**	**77.26**	**46**	P	**P**	**10 19 10.3**	**+1.5**
	0.2nm,0.5s,baz=306,slow=6.4,SNR=2.8						
TXAR	**Lajitas Array**	**89.74**	**52**	P	**P**	**10 20 14.6**	**+1.7**
	0.2nm,0.5s,baz=293,slow=2.1,SNR=4.6						
VNDA	**Vanda**	**115.37**	**175**	PKP	**PKPdf**	**10 25 54.2**	**-0.3**
	0.4nm,0.6s,baz=221,slow=2.0,SNR=5.0						

NNC 09 10:12:52.2±5.9,36°.92N×70°.14E,h0km,mb3.8,mpv3.4, 5C-3D,Error ellipse: s-maj=45.6km s-min=39.4km az=162.0,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**4.06**	**40**	⇑Pn	Pn	10 13 54.7	-1.1
	4.2nm,0.3s						
SFK				⇑Sn	Sn	10 14 45.2	+1.0
	12nm,0.3s						
MNAS	**Manas**	**5.85**	**17**	⇓Pn	Pn	10 14 20.6	+0.3
	0.9nm,0.4s						
MNAS				⇓Sn	Sn	10 15 28.9	+0.7
	3.0nm,0.4s						
KK31	**Karatay Array**	**6.18**	**3**	⇑Pn	Pn	10 14 24.8	+0.1
	1.8nm,0.6s,baz=187,slow=13,SNR=9.6						
KK31				⇑Sn	Sn	10 15 39.0	+2.9
	1.5nm,0.4s,baz=188,slow=24,SNR=5.8						
AAK	**Ala-Archa**	**6.62**	**29**	⇑Pn	Pn	10 14 33.7	+2.9
	1.9nm,0.6s						
AAK				⇓Sn	Sn	10 15 46.8	-0.3
	5.3nm,0.8s						

NIED ***09*** *10:20:00,36°.40N×140°.70E,h59km,Mw3.8 Best double couple: M₀5.81000×10¹⁴ NP1:φ₀173.00000°,δ19.00000°, λ45.00000°. NP2:φ₀39.00000°,δ77.00000°,λ103.00000°.*
ISCJB ***09*** *10:20:13.8±0.6,36°.36N±0°.03×140°.90E±0°.07,h58km±4km, mb4.0/8,MS3.4/3,Error ellipse: s-maj=9.6km s-min=4.8km az=15.5*
NEIC ***09*** *10:20:15.7±0.7,36°.39N×140°.82E,h53km±7km,mb4.2/3, Error ellipse: s-maj=9.7km s-min=7.1km az=100.0*
JMA ***09*** *10:20:16.2±0.1,36°.37N×140°.64E,h52km±1km,M3.9 Broadband fault plane solution: P waves. NP1: φ₀23.00000°,δ75.00000°,λ87.00000°. NP2:φ₀213.00000°, δ15.00000°,λ100.00000°. Principal axes: T Plg60.0000°, Azm289.0000°; N Plg3.0000°, Azm24.0000°; P Plg30.0000°, Azm115.0000°;*
JMA Felt III J1.
IDC ***09*** *10:20:16.9±2.3,36°.41N×140°.66E,h58km±21km,mb3.5/5, mb1 3.7/8,mb1mx3.3/69,mbtmp3.8/8,ML3.8/2,MS3.2/4, Ms1 3.2/4,ms1mx2.7/51 Error ellipse: s-maj=27.8km s-min=19.6km az=91.0*

ISC 09 10:20:14.9±0.8,36°.36N±0°.04×140°.82E±0°.06,h49km±7km, n48,σ1§18/48,mb4.0/8,MS3.6/3,8D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.32**	**321**	⇓P	**Pn**	**10 20 25.2**	**+1.0**
JHO				S	**Sn**	**10 20 31.2**	**+0.4**
JYT	**Yasato**	**0.52**	**255**	⇓P	**Pn**	**10 20 26.5**	**+0.1**
JYT				S	**Sn**	**10 20 33.3**	**-1.3**
ONAJ	**Iwakimizuishiy**	**0.74**	**359**	⇓P	**Pn**	**10 20 30.0**	**+0.8**
ONAJ				S	**Sn**	**10 20 40.1**	**+0.5**
JFK	**Kawauchi**	**1.00**	**2**	⇓P	**Pn**	**10 20 33.3**	**+0.6**
JFK				S	**Sn**	**10 20 45.8**	**0.0**
JFT	**Otama**	**1.22**	**342**	⇓P	**Pn**	**10 20 36.3**	**+0.7**
JFT				S	**Sn**	**10 20 51.5**	**+0.5**
JKT	**Katashina**	**1.33**	**288**	⇓P	**Pn**	**10 20 37.0**	**-0.2**
JFY	**Yanaizu**	**1.37**	**320**	⇓P	**Pn**	**10 20 38.1**	**+0.4**
JRY	**Ryogami san**	**1.59**	**258**	⇓P	**Pn**	**10 20 40.3**	**-0.4**
MJAR	**Matsushiro Arr**	**2.11**	**276**	P	**Pn**	**10 20 47.7**	**-0.2**
	26nm,0.3s,baz=92,slow=15,SNR=259						
MJAR				S	Sn	10 21 02.8	-10
	31nm,0.3s,baz=80,slow=17,SNR=19						
MJAR				LR	LR	10 21 43.2	
	comp=Z,84nm,19.9s,baz=130,slow=44						
MAJO	**Matsushiro**	**2.12**	**276**	*e*Pn	**Pn**	**10 20 48.7**	**+0.8**
MAJO				*e*Sn	Sn	10 21 02.8	-10
MAJO				*e*		10 21 43.2	
MAT	**Matsushiro**	**2.12**	**276**	P	**Pn**	**10 20 48.1**	**+0.2**
MAT				S	**Sn**	**10 21 14.4**	**+1.4**
MAT	**Matsushiro**	**2.12**	**276**	P	Pn	10 21 03.2	+15
MAT				*e*S	Sn	10 21 31.4	+18
MJB9	**Matsu-Tunnel**	**2.12**	**276**	*e*Pn	**Pn**	**10 20 48.7**	**+0.8**
INU	**Inuyama**	**3.25**	**253**	*e*Pn	**Pn**	**10 21 05.4**	**+2.0**
JHJ	**Hachijo jima 2**	**3.35**	**195**	P	**Pn**	**10 21 07.5**	**+2.8**
	19nm,0.3s,baz=127,slow=22,SNR=11						
JHJ				S	**Sn**	**10 21 44.0**	**+0.8**
	27nm,0.3s,baz=59,slow=19,SNR=4.4						
JHJ2	**Mitsune**	**3.35**	**195**	*e*Pn	**Pn**	**10 21 07.6**	**+2.9**
ERM	**Erimo**	**5.93**	**17**	*e*Pn	**Pn**	**10 21 40.7**	**+0.6**
ERM				*e*Sn	**Sn**	**10 22 47.3**	**+0.6**
ASAJ	**Asahikawa**	**7.86**	**9**	P	**Pn**	**10 22 06.4**	**-0.2**
	1.7nm,0.3s,baz=229,slow=8.8,SNR=23						
ASAJ				S	**Sn**	**10 23 33.2**	**-1.0**
	0.3nm,0.3s,baz=100,slow=19,SNR=3.0						
ASAJ	**Asahikawa**	**7.86**	**9**	*e*Pn	**Pn**	**10 22 06.8**	**+0.2**
ASAJ				*e*Sn	**Sn**	**10 23 33.2**	**-1.0**
CBIJ	**Chichi jima**	**9.31**	**172**	*e*Pn	**Pn**	**10 22 25.4**	**-1.1**
CBIJ				*e*Sn	Sn	10 24 01.6	-8.3
JCJ	**Chichijima**	**9.31**	**172**	P	**Pn**	**10 22 25.0**	**-1.5**
	6.2nm,0.3s,baz=295,slow=23,SNR=2.8						
JCJ				S	Sn	10 24 01.6	-8.3
	4.7nm,0.3s,baz=268,slow=23,SNR=2.3						
USRK	**Ussuriysk Ar.**	**10.33**	**322**	P	**Pn**	**10 22 41.2**	**+0.9**
	0.2nm,0.3s,baz=128,slow=11,SNR=4.5						
KSRS	**Korea Array**	**10.39**	**280**	LR	LR	10 26 18.9	
	comp=Z,25nm,21.2s,baz=350,slow=35						
BJT	**Baijiatuan**	**19.70**	**288**	*e*P	**P**	**10 24 36.1**	**-4.0**
	11nm,1.2s						
SONM	**Songino Array**	**27.77**	**305**	LR	LR	10 36 22.0	
	comp=Z,32nm,18.5s,baz=12,slow=35						
H11N2	**WAKE ISLAND Hy 28.23**	**119**		T	T	10 56 03.6	
	baz=312,slow=75,SNR=54						
H11N1	**WAKE ISLAND Hy 28.23**	**119**		T	T	10 56 09.4	
	baz=312,slow=75,SNR=48						
H11N3	**WAKE ISLAND Hy 28.25**	**119**		T	T	10 56 05.0	
	baz=312,slow=75,SNR=41						
H11S1	**WAKE ISLAND Hy 28.91**	**121**		T	T	10 56 54.7	
	baz=314,slow=76,SNR=152						
H11S3	**WAKE ISLAND Hy 28.91**	**121**		T	T	10 56 58.4	
	baz=314,slow=76,SNR=109						
H11S2	**WAKE ISLAND Hy 28.92**	**121**		T	T	10 56 55.8	
	baz=314,slow=76,SNR=81						
TIXI	**Tiksi**	**35.90**	**354**	*e*P	**P**	**10 27 09.6**	**-0.2**
	4.3nm,1.4s						
ZAA1	**Zalesovo Array**	**42.02**	**313**	*e*P	**P**	**10 28 00.7**	**-0.6**
ZALV	**Zalesovo Beam**	**42.02**	**313**	P	**P**	**10 28 00.7**	**-0.6**
	2.0nm,0.6s,baz=87,slow=5.6,SNR=8.3						
ZALV	**Zalesovo Beam**	**42.02**	**313**	*e*P	**P**	**10 28 01.0**	**-0.2**
MK01	**Makanchi Array**	**44.07**	**303**	*e*P	**P**	**10 28 18.1**	**+0.1**
MK32	**Makanchi Array**	**44.08**	**303**	*e*P	**P**	**10 28 18.6**	**+0.5**
MKAR	**Makanchi Array**	**44.08**	**303**	P	**P**	**10 28 18.6**	**+0.5**
	0.9nm,0.8s,baz=91,slow=9.0,SNR=5.9						
KAPI	**Kappang**	**45.64**	**210**	*e*P	**P**	**10 28 31.9**	**+1.2**
KAPI				*e*pP	**pP**	**10 28 43.2**	**-0.8**
TARG	**Taragay, Kyrgy**	**48.27**	**297**	*e*P	**P**	**10 28 52.0**	**+0.4**
	3.0nm,0.9s						
BATI	**Baumata**	**49.06**	**203**	LR	LR	10 51 17.7	
	comp=Z,59nm,19.4s,baz=214,slow=38						
ILAR	**Eielson Array**	**50.32**	**32**	P	**P**	**10 29 08.3**	**+2.0**
	0.6nm,0.7s,baz=263,slow=5.7,SNR=8.6						
ILB	**Eielson Array**	**50.32**	**32**	*e*P	**P**	**10 29 06.4**	**+0.1**
PSI	**Prapat**	**51.04**	**239**	LR	LR	10 51 46.1	
	comp=Z,84nm,18.2s,baz=94,slow=37						
WR1	**Warramunga Arr**	**56.33**	**187**	*e*P	**P**	**10 29 51.4**	**+0.5**
	22nm,1.6s						
WRA	**Warramunga Arr**	**56.33**	**187**	P	**P**	**10 29 51.4**	**+0.5**
	0.4nm,0.6s,baz=5.2,slow=7.6,SNR=4.3						
ARA0	**ARCESS Array S**	**64.46**	**339**	*e*P	**P**	**10 30 45.5**	**-0.3**
ARCES	**ARCESS Array B**	**64.46**	**339**	P	**P**	**10 30 45.5**	**-0.3**
	1.4nm,0.9s,baz=54,slow=7.9,SNR=3.7						

ISCJB ***09*** *10:24:42.9±0.5,16°.4S±0°.1×174°.2W±0°.1,h35km,mb4.2/14, MS3.5/1,Error ellipse: s-maj=26.8km s-min=8.4km az=137.0*
NEIC ***09*** *10:24:47.9±1.4,16°.40S×174°.15W,h66km±12km,mb4.1/1, Error ellipse: s-maj=16.9km s-min=8.6km az=141.0*
IDC ***09*** *10:24:47.5±3.3,16°.41S×174°.19W,h62km±29km,mb3.8/12, mb1 4.1/13,mb1mx3.9/45,mbtmp4.2/13,ML4.4/1,MS3.1/2, Ms1 3.1/2,ms1mx2.7/47,Error ellipse: s-maj=26.3km s-min=13.4km az=138.0*

ISC 09 10:24:44.7±0.6,16°.5S±0°.2×174°.2W±0°.2,h35km,n23, σ1§26/24,mb4.2/14,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.43**	**43**	P	**Pn**	**10 25 38.6**	**+2.9**
	39nm,0.3s,baz=189,slow=3.1,SNR=115						
AFI				S	**Sn**	**10 26 14.1**	**-1.1**
	124nm,0.3s,baz=33,slow=22,SNR=15						
AFI				LR	LR	10 27 02.2	
	comp=Z,143nm,21.7s,baz=326,slow=40						
AFI	**Afiamalu**	**3.43**	**43**	*e*Pn	**Pn**	**10 25 38.2**	**+2.5**
AFI				*e*Sn	**Sn**	**10 26 13.5**	**-1.7**
AFI				S		10 26 14.1	
STKA	**Stephens Creek**	**42.87**	**241**	P	**P**	**10 32 40.0**	**+0.2**
	1.1nm,0.5s,baz=84,slow=12,SNR=8.1						
WRAB	**Tennant Creek**	**48.88**	**258**	*e*P	**P**	**10 33 29.5**	**+2.1**
	0.9nm,0.4s						
WRA	**Warramunga Arr**	**48.88**	**258**	P	**P**	**10 33 26.8**	**-0.7**
	0.6nm,0.4s,baz=93,slow=6.9,SNR=16						
ASAR	**Alice Springs**	**49.08**	**253**	P	**P**	**10 33 28.9**	**0.0**
	2.6nm,0.4s,baz=88,slow=8.2,SNR=62						
SIJI	**Sorong**	**55.90**	**280**	LR	LR	10 58 00.0	
	comp=Z,38nm,19.6s,baz=108,slow=36						
VNDA	**Vanda**	**62.26**	**186**	P	**P**	**10 35 03.4**	**+0.7**
	0.9nm,0.7s,baz=3.6,slow=6.6,SNR=4.5						
QSPA	**South Pole Qui**	**73.60**	**180**	P	**P**	**10 36 13.9**	**-0.4**
	1.9nm,0.8s,baz=74,slow=4.7,SNR=5.5						
YBH	**Yreka Blue Hor**	**74.88**	**37**	P	**P**	**10 36 22.4**	**+0.5**
	3.2nm,0.6s,baz=191,slow=6.7,SNR=17						
NVAR	**Mina Array Bea**	**75.60**	**42**	P	**P**	**10 36 25.6**	**-0.8**
	1.4nm,0.8s,baz=234,slow=8.3,SNR=6.2						
LEM	**Lembang**	**76.82**	**267**	P	**P**	**10 36 33.6**	**-0.1**
	37nm,0.4s,baz=282,slow=20,SNR=4.4						
TXAR	**Lajitas Array**	**81.81**	**56**	P	**P**	**10 37 00.6**	**-0.1**
	1.1nm,1.1s,baz=226,slow=4.9,SNR=6.5						
ANMO	**Albuquerque**	**82.04**	**50**	P	**P**	**10 37 01.0**	**-0.8**
	0.4nm,0.4s,baz=229,slow=8.1,SNR=2.5						
PDAR	**Pinedale Array**	**83.54**	**42**	P	**P**	**10 37 08.6**	**-0.9**
	2.3nm,0.7s,baz=215,slow=3.5,SNR=21						
ILAR	**Eielson Array**	**83.61**	**11**	P	**P**	**10 37 08.0**	**-1.1**
	1.3nm,0.5s,baz=221,slow=5.6,SNR=29						
MAW	**Mawson**	**86.56**	**199**	P	**P**	**10 37 23.6**	**-0.4**
	0.9nm,0.5s,baz=127,slow=10,SNR=4.2						
ARCES	**ARCESS Array B**	**125.54**	**352**	PKP	**PKPdf**	**10 43 40.5**	**-1.2**
	2.2nm,0.8s,baz=304,slow=2.8,SNR=4.4						
CLL	**Collm**	**144.75**	**352**	*e*PKPdf	**PKPab**	**10 44 16.0**	**-0.6**
BRTR	**Keskin Array B**	**146.48**	**319**	PKPbc	**PKPdf**	**10 44 21.9**	**+0.6**
	1.8nm,0.7s,baz=86,slow=2.1,SNR=9.3						
GERES	**GERESS Array B**	**147.06**	**350**	PKPbc	**PKPdf**	**10 44 23.4**	**+1.5**
	1.3nm,0.7s,ba

baz=54
EKS2 ⇑iS **Sn** **10 30 36.4 -0.8**
baz=54
KST Kastek 5.53 60 eP **Pb** **10 30 25.8 -1.6**
3.4nm,0.4s
KST eS **Sb** **10 31 33.3 -0.3**
5.2nm,0.7s
TNSS Tian-Shan 6.19 63 eP **Pb** **10 30 38.2 -0.6**
2.7nm,0.5s
TNSS eS **Sb** **10 31 54.4 +1.7**
2.8nm,0.5s

IDC 09 10:45:48.7±15.0, 1°.27S×128°.08E, h0km, mb3.4/2, mb1 3.4/3, mb1mx3.1/58, mbtmp3.2/3, ML2.9/1, Error ellipse: s-maj=230.4km s-min=124.8km az=155.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.55**	**162**	P	P	10 50 17.8	-0.3
	0.0nm,0.3s,baz=342,slow=12,SNR=1.3						
ASAR	**Alice Springs**	**22.97**	**166**	P	P	10 50 55.0	-0.1
	0.2nm,0.4s,baz=345,slow=11,SNR=1.7						
STKA	**Stephens Creek**	**33.01**	**159**	P	P	10 52 26.0	+0.2
	1.5nm,0.9s,baz=323,slow=15,SNR=2.9						

NIED ***09*** *11:01:00, 36°.50N×144°.00E, h8km, Mw3.7 Best double couple: M0=4.14000×10^14 NP1:φ=45.00000°, δ=26.00000°, λ=-72.00000°. NP2:φ=205.00000°, δ=65.00000°, λ=-99.00000°.*
IDC ***09*** *11:01:25.1±0.9, 36°.20N×144°.32E, h0km, mb3.7/7, mb1 4.0/10, mb1mx3.7/63, mbtmp3.8/10, ML3.4/3, MS2.6/1, Ms1 2.6/1, ms1mx2.2/67, Error ellipse: s-maj=24.0km s-min=20.7km az=124.0*
ISCJB ***09*** *11:01:28.1±0.6, 36°.39N±0°.05×144°.04E±0°.05, h33km, mb3.6/7, Error ellipse: s-maj=7.3km s-min=5.8km az=170.6*
JMA ***09*** *11:01:30.1±0.3, 36°.48N×143°.95E, h63km, M3.9*
ISC 09 11:01:30.1±0.9, 36°.44N±0°.06×144°.08E±0°.08, h35km, n30, σ2°.90/34, mb3.5/7, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**2.71**	**255**	P	**Pn**	**11 02 11.3**	**+0.2**
ONAJ	**Iwakimizuishiy**	**2.72**	**285**	P	**Pn**	**11 02 11.3**	**0.0**
JFK	**Kawauchi**	**2.73**	**291**	P	**Pn**	**11 02 11.1**	**-0.4**
JFK				eS	**Sn**	**11 02 41.3**	**-2.0**
JHO	**Hitachi**	**2.83**	**275**	P	**Pn**	**11 02 12.3**	**-0.5**
JFT	**Otama**	**3.19**	**291**	P	**Pn**	**11 02 18.3**	**+0.6**
JFT				S	**Sn**	**11 02 54.1**	**-0.3**
JMK	**Ichinoseki**	**3.38**	**319**	P	**Pn**	**11 02 20.3**	**-0.1**
JMK				eS	**Sn**	**11 02 58.2**	**-1.0**
JRY	**Ryogami san**	**4.21**	**266**	P	**Pn**	**11 02 31.4**	**-0.4**
JRY				eS	**Sn**	**11 03 17.8**	**-1.9**
JOD2	**Odawara 2**	**4.22**	**255**	P	**Pn**	**11 02 31.6**	**-0.3**
JOD2				eS	**Sn**	**11 03 18.7**	**-1.3**
MJAR	**Matsushiro Arr**	**4.73**	**273**	Pn	**Pn**	**11 02 39.6**	**+0.6**
	2.8nm,0.3s,baz=315,slow=23,SNR=39						
MJAR				Sn	**Sn**	**11 03 33.3**	**+0.7**
	0.8nm,0.3s,baz=108,slow=17,SNR=2.9						
MAT	**Matsushiro**	**4.73**	**273**	P	**Pn**	**11 02 40.0**	**+1.0**
MAT				eS	**Sn**	**11 03 31.7**	**-0.9**
JHJ2	**Mitsune**	**4.83**	**228**	P	**Pn**	**11 02 38.2**	**-2.1**
JHJ	**Hachijo jima 2**	**4.84**	**228**	Pn	**Pn**	**11 02 38.2**	**-2.3**
	14nm,0.3s,baz=339,slow=23,SNR=13						
JHJ				Sn	**Sn**	**11 03 30.2**	**-5.1**
	22nm,0.3s,baz=240,slow=20,SNR=4.6						
JOT	**Ohata**	**5.47**	**335**	P	**Pn**	**11 02 49.4**	**+0.3**
JKB	**Kayabe**	**5.93**	**337**	S	**Sn**	**11 03 58.6**	**-3.5**
JCH	**Churui**	**6.19**	**355**	P	**Pn**	**11 02 57.5**	**-1.5**
JCH				eS	**Sn**	**11 04 02.9**	**-5.6**
ASAJ	**Asahikawa**	**7.75**	**352**	Pn	**Pn**	**11 03 19.9**	**-0.4**
	1.5nm,0.3s,baz=204,slow=15,SNR=17						
ASAJ				Sn	**Sn**	**11 04 44.7**	**-2.2**
	0.6nm,0.3s,baz=47,slow=19,SNR=4.3						
ASAJ				LR	LR	11 07 04.0	
	comp=Z,39nm,19.2s,baz=264,slow=42						
USRK	**Ussuriysk Ar.**	**12.04**	**314**	Pn	**Pn**	**11 04 21.5**	**+2.4**
	0.4nm,0.3s,baz=113,slow=13,SNR=4.7						
H11N2	**WAKE ISLAND Hy**	**26.02**	**124**	T	T	11 34 21.0	
	baz=322						
H11N1	**WAKE ISLAND Hy**	**26.03**	**124**	T	T	11 34 08.1	
	baz=322						
H11N3	**WAKE ISLAND Hy**	**26.04**	**124**	T	T	11 34 26.5	
	baz=322						
H11S1	**WAKE ISLAND Hy**	**26.76**	**126**	T	T	11 35 18.6	
	baz=321						
H11S3	**WAKE ISLAND Hy**	**26.76**	**126**	T	T	11 35 12.3	
	baz=321						
H11S2	**WAKE ISLAND Hy**	**26.77**	**126**	T	T	11 35 00.7	
	baz=321						
MKAR	**Makanchi Array**	**46.24**	**303**	P	**P**	**11 09 54.7**	**+2.9**
	0.2nm,0.5s,baz=48,slow=8.6,SNR=3.7						
KURBB	**Kurchatov Arra**	**48.05**	**309**	P	**P**	**11 10 08.5**	**+2.7**
	1.3nm,0.2s,baz=80,slow=7.0,SNR=2.8						
ILAR	**Eielson Array**	**48.85**	**32**	P	**P**	**11 10 12.2**	**+0.4**
	0.8nm,0.6s,baz=258,slow=6.3,SNR=11						
WRA	**Warramunga Arr**	**56.83**	**191**	P	**P**	**11 11 09.9**	**-1.1**
	0.7nm,0.8s,baz=9.7,slow=7.1,SNR=6.0						
ASAR	**Alice Springs**	**60.55**	**191**	P	**P**	**11 11 35.9**	**-1.0**
	0.2nm,0.8s,baz=9.4,slow=5.5,SNR=3.4						
NVAR	**Mina Array Bea**	**73.61**	**54**	P	**P**	**11 13 00.6**	**+0.5**
	0.1nm,0.4s,baz=290,slow=5.8,SNR=4.1						
TXAR	**Lajitas Array**	**88.76**	**54**	P	**P**	**11 14 21.1**	**+0.5**
	0.2nm,0.7s,baz=282,slow=2.4,SNR=3.8						

GUC 09 11:04:46.1±0.6, 22°.83S×68°.69W, h173km±30km, ML3.6, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**IPOC Station P**	**1.44**	**290**	eP	Pn	11 05 17.9	+0.9
PB04				iS	Sn	11 05 42.0	+1.2
PB04				IAML		11 05 47.5	
	comp=E,498nm,0.3s						
PB07	**IPOC Station P**	**1.56**	**314**	eP	Pn	11 05 19.3	+1.1
PB07				iS	Sn	11 05 44.1	+1.1
PB07				IAML		11 05 46.0	
	comp=N,673nm,0.3s						
PB02	**IPOC Station P**	**1.87**	**323**	eP	Pn	11 05 22.6	+1.2
PB02				iS	Sn	11 05 49.8	+1.1
PB02				IAML		11 05 54.3	
	comp=E,452nm,0.5s						
PB01	**IPOC Station P**	**1.92**	**337**	eP	Pn	11 05 22.5	+0.5
PB01				iS	Sn	11 05 51.1	+1.4
PB01				IAML		11 05 53.4	
	comp=N,444nm,0.2s						

IDC 09 11:17:05.5±12.0, 15°.86S×164°.96E, h0km, mb3.8/3, mb1 4.0/4, mb1mx3.6/48, mbtmp3.8/4, ML3.4/1, Error ellipse: s-maj=222.4km s-min=33.9km az=50.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.34**	**167**	Pn	Pn	11 18 40.3	0.0
	0.9nm,0.3s,baz=322,slow=12,SNR=11						
DZM				Sn	Sn	11 19 55.0	+1.5
	baz=156,slow=20,SNR=2.2						
STKA	**Stephens Creek**	**26.57**	**229**	P	P	11 22 44.9	-0.5
	0.8nm,0.5s,baz=90,slow=14,SNR=3.0						
WRA	**Warramunga Arr**	**29.40**	**257**	P	P	11 23 10.9	+0.1
	0.5nm,0.6s,baz=83,slow=7.6,SNR=15						
ASAR	**Alice Springs**	**30.19**	**250**	P	P	11 23 18.1	+0.2
	1.3nm,0.7s,baz=75,slow=9.3,SNR=24						

ISCJB ***09*** *11:34:22.0±0.6, 71°.75N±0°.05×1°.0W±0°.2, h10km, mb3.2/6, MS2.9/4, Error ellipse: s-maj=9.4km s-min=7.4km az=170.7*
IDC ***09*** *11:34:21.9±1.1, 71°.65N×1°.54W, h0km, mb3.3/6, mb1 3.6/12, mb1mx3.4/70, mbtmp3.5/12, ML3.5/6, MS2.8/8, Ms1 2.8/8, ms1mx2.5/45, Error ellipse: s-maj=23.3km s-min=17.8km az=59.0*
BER ***09*** *11:34:24.0±3.3, 71°.80N×1°.55W, h0km±63km, ML2.6*
NAO ***09*** *11:34:24.7±4.6, 71°.69N×0°.57W, ML3.2*
ISC 09 11:34:23.8±0.8, 71°.67N±0°.07×1°.00W±0°.08, h10km, n34, σ1°.54/34, mb3.3/6, MS2.8/4, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMIC	**Jan Mayen**	**2.51**	**258**	Pn	**Pn**	**11 35 05.6**	**+1.0**
	3.9nm,0.3s,baz=201,slow=8.6,SNR=3.1						
JMIC				LR	LR	11 35 23.6	
	comp=Z,26nm,18.7s,baz=52,slow=26						
JMIC				Sn	Sn	11 35 26.0	-9.2
	1.4nm,0.3s,baz=152,slow=16,SNR=2.5						
STEI	**Steigen**	**6.75**	**116**	eP	**Pn**	**11 36 04.4**	**+1.7**
STEI				eS	**Sn**	**11 37 17.1**	**-2.3**
STEI				IAML		11 37 20.1	
	comp=Z,7.5nm,0.7s						
HSPB	**Hornsund (broa**	**6.94**	**32**	Pn	**Pn**	**11 36 05.2**	**-0.2**
HSP	**Hornsund**	**6.95**	**32**	Pn	**Pn**	**11 36 05.2**	**-0.3**
DAG	**Danmarks Havn**	**6.99**	**325**	iP	Pn	11 35 59.6	-6.4
DAG				iS	Sn	11 37 03.0	-22
KONS	**Konsvik**	**7.23**	**129**	eP	**Pn**	**11 36 11.0**	**+1.7**
KONS				IAML		11 37 30.2	
	comp=Z,6.6nm,0.5s						
MOR8	**Moi Rana**	**7.82**	**127**	eP	**Pn**	**11 36 19.1**	**+1.8**
MOR8				eS	**Sn**	**11 37 43.7**	**-2.0**
MOR8				IAML		11 37 48.3	
	comp=Z,7.5nm,0.4s						
SPA0	**Spitsbergen Ar**	**7.90**	**27**	Pn	**Pn**	**11 36 18.2**	**-0.2**
	baz=235,slow=14						
SPA0	**Spitsbergen Ar**	**7.90**	**27**	Pn	**Pn**	**11 36 18.2**	**-0.2**
	baz=235,slow=14						
SPITS	**Spitsbergen Ar**	**7.90**	**27**	Pn	**Pn**	**11 36 18.6**	**+0.2**
	baz=225,slow=14,SNR=99						
NSS	**Namsos**	**8.63**	**140**	eP	**Pn**	**11 36 30.8**	**+2.4**
ARA0	**ARCESS Array S**	**9.03**	**91**	Pn	**Pn**	**11 36 34.9**	**+0.9**
	baz=302,slow=12						
ARA0	**ARCESS Array S**	**9.03**	**91**	Pn	**Pn**	**11 36 34.9**	**+0.9**
	baz=302,slow=12						
ARCES	**ARCESS Array B**	**9.03**	**91**	Pn	**Pn**	**11 36 35.0**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=301,slow=11,SNR=14						
NB2	**NORSAR Subarra**	**11.71**	**150**	Pn	**Pn**	**11 37 12.7**	**+2.0**
	baz=339,slow=12						
NB2	**NORSAR Subarra**	**11.71**	**150**	Pn	**Pn**	**11 37 12.7**	**+2.0**
	baz=339,slow=12						
NOA	**NORSAR Array B**	**11.71**	**150**	Pn	**Pn**	**11 37 12.4**	**+1.7**
	comp=Z,0.4nm,0.3s,baz=319,slow=16,SNR=5.0						
NOA				LR	LR	11 41 36.2	
	comp=Z,46nm,21.0s,baz=340,slow=37						
NRA0	**NORESS Array S**	**12.05**	**149**	Pn	**Pn**	**11 37 15.5**	**+0.2**
	baz=351,slow=12						
NRA0	**NORESS Array S**	**12.05**	**149**	Pn	**Pn**	**11 37 15.5**	**+0.2**
	baz=351,slow=12						
HFS	**Hagfors**	**12.98**	**146**	Pn	**Pn**	**11 37 29.7**	**+1.7**
	baz=341,slow=12						
HFS	**Hagfors**	**12.98**	**146**	Pn	**Pn**	**11 37 29.8**	**+1.7**
	comp=Z,1.1nm,0.3s,baz=352,slow=9.7,SNR=36						
HFS				Sn	**Sn**	**11 39 48.9**	**-3.5**
	comp=Z,0.1nm,0.3s,baz=330,slow=25,SNR=2.3						
HFS				LR	LR	11 42 15.8	
	comp=Z,51nm,20.4s,baz=344,slow=36						
HFS	**Hagfors**	**12.98**	**146**	Pn	**Pn**	**11 37 29.7**	**+1.7**
	baz=341,slow=12						
FIA0	**FINESS Array S**	**14.69**	**120**	Pn	**Pn**	**11 37 52.5**	**+1.1**
	baz=326,slow=16						
FIA0	**FINESS Array S**	**14.69**	**120**	Pn	**Pn**	**11 37 52.5**	**+1.1**
	baz=326,slow=16						
FINES	**FINESS Array B**	**14.69**	**120**	Pn	**Pn**	**11 37 52.1**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=325,slow=12,SNR=4.8						
FINES				LR	LR	11 43 04.6	
	comp=Z,43nm,18.5s,baz=22,slow=35						
EKA	**Eskdalemuir Ar**	**16.43**	**184**	Pn	**Pn**	**11 38 15.1**	**+1.0**
	baz=360,slow=13,SNR=3.0						
GERES	**GERESS Array B**	**23.89**	**156**	P	**P**	**11 39 36.6**	**-0.6**
	comp=Z,0.5nm,0.8s,baz=347,slow=12,SNR=2.9						
GERES				LR	LR	11 48 45.6	
	comp=Z,32nm,21.2s,baz=356,slow=36						
AKASG	**Malin Array Be**	**25.05**	**131**	P	**P**	**11 39 48.5**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=342,slow=9.5,SNR=2.6						
MLR	**Muntele Rosu**	**29.23**	**139**	LR	LR	11 52 42.8	
	comp=Z,11nm,18.6s,baz=28,slow=38						
IDI	**Anoyia**	**38.89**	**145**	LR	LR	11 58 40.4	
	comp=Z,18nm,19.1s,baz=271,slow=37						
KURBB	**Kurchatov Arra**	**39.83**	**78**	P	**P**	**11 41 58.0**	**+1.3**
	comp=Z,0.5nm,0.8s,baz=333,slow=5.8,SNR=5.3						
ILAR	**Eielson Array**	**41.85**	**339**	P	**P**	**11 42 13.2**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=17,slow=6.6,SNR=3.3						
TORD	**Torodi Ar. Bea**	**58.52**	**177**	P	**P**	**11 44 20.1**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=8.8,slow=7.1,SNR=4.8						
TORD				LR	LR	12 09 17.1	
	comp=Z,34nm,18.8s,baz=100,slow=36						
TXAR	**Lajitas Array**	**66.31**	**292**	P	**P**	**11 45 09.7**	**-2.5**
	comp=Z,0.2nm,0.6s,baz=38,slow=4.6,SNR=3.3						

DJA 09 11:36:25.7±0.4, 4°.S±3°.×12°.8E±°, h44km±5km, M4.0/9, mb4.6/3, MLv3.6/9, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.14**	**219**	P	Pn	11 36 34.4	+1.4
AAI				S	Sn	11 36 40.5	+2.4
MSAI	**Masohi**	**0.69**	**70**	P	Pn	11 36 39.3	+0.2
MSAI				S	Sn	11 36 49.1	+0.4
BNDI	**Bandanaira**	**1.87**	**120**	P	Pn	11 36 55.5	+0.2
BNDI				S	Sn	11 37 18.9	+1.2
SANI	**Sanana**	**2.75**	**304**	P	Pn	11 37 06.6	-0.7
LBMI	**Labuha**	**3.02**	**345**	P	Pn	11 37 11.7	+0.6
SAUI	**Saumlaki**	**5.31**	**146**	P	Pn	11 37 41.8	-0.7
	391nm,1.4s,2.4nm						
KDI	**Kendari**	**5.66**	**266**	P	Pn	11 37 45.9	-1.4

IDC 09 11:38:10.3±1.5, 6°.36S×129°.29E, h0km, mb3.7/2, mb1 4.0/5, mb1mx3.6/49, mbtmp3.8/5, ML3.8/3, Error ellipse: s-maj=63.8km s-min=27.4km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.80**	**20**	Pn	Pn	11 39 37.6	-0.1
	2.0nm,0.3s,baz=201,slow=22,SNR=10.0						
SIJI				Sn	Sn	11 40 32.2	-13
	5.4nm,0.3s,baz=80,slow=23,SNR=10						
WRA	**Warramunga Arr**	**14.37**	**160**	Pn	Pn	11 41 33.7	-1.5
	0.5nm,0.3s,baz=333,slow=15,SNR=19						
WRA				Sn	Sn	11 44 02.6	-13
	0.9nm,0.3s,baz=352,slow=24,SNR=10.0						
ASAR	**Alice Springs**	**17.77**	**166**	P	P	11 42 20.4	+0.1
	0.5nm,0.3s,baz=348,slow=9.1,SNR=10						
ASAR				S	Sn	11 45 27.1	-11
	0.1nm,0.3s,baz=358,slow=29,SNR=5.1						
MKAR	**Makanchi Array**	**67.30**	**327**	P	P	11 49 07.5	+0.4
	0.5nm,0.4s,baz=115,slow=7.9,SNR=11						
KURBB	**Kurchatov Arra**	**71.59**	**329**	P	P	11 49 33.1	-0.4
	0.2nm,0.5s,baz=122,slow=4.9,SNR=3.1						

CSEM ***09*** *11:47:28.9±0.2, 48°.23N×7°.83E, h20km, ML1.3, Error ellipse: s-maj=4.5km s-min=3.5km az=170.0*
LDG ***09*** *11:47:29.5±0.2, 48°.21N×7°.79E, h2km, Md1.8/2, Ml2.2/3, Error ellipse: s-maj=3.9km s-min=2.7km az=91.0*
STR 09 11:47:29.6±0.5, 48°.N±2°.×°.±°, h13km±7km, MLv1.3/6, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIZ	**Kirchzarten**	**0.28**	**167**	Pg	Pg	11 47 35.2	-0.2
KIZ	**Kirchzarten**	**0.28**	**167**	Pg	Pg	11 47 35.2	-0.2
KIZ				Sg	Sg	11 47 38.0	-1.3
OPP	**Oppenau**	**0.36**	**41**	Pg	Pg	11 47 37.1	+0.1
OPP	**Oppenau**	**0.36**	**41**	Pg	Pg	11 47 37.1	+0.1
OPP				Sg	Sg	11 47 42.3	+0.4
WLS	**Welschbruch**	**0.37**	**301**	Pg	Pg	11 47 36.9	-0.2
WLS	**Welschbruch**	**0.37**	**301**	Pg	Pg	11 47 36.9	-0.2
WLS				Sg	Sg	11 47 41.6	-0.5
CDF	**Champ du Feu**	**0.41**	**297**	ePg	Pg	11 47 37.2	-0.7
CDF				eSg	Sg	11 47 42.7	-0.8
	3.7nm,0.2s						
CDF	**Champ du Feu**	**0.41**	**297**	ePg	Pg	11 47 37.2	-0.7
CDF				eSg	Sg	11 47 42.7	-0.8
	1.9nm,0.2s						
ECH	**Echery**	**0.45**	**269**	Pg	Pg	11 47 38.0	-0.5
ECH	**Echery**	**0.45**	**269**	Pg	Pg	11 47 38.0	-0.5
MOF	**Molkenrain**	**0.60**	**231**	Pg	Pg	11 47 41.4	+0.1
MOF				Sg	Sg	11 47 50.3	0.0
MOF	**Molkenrain**	**0.60**	**231**	Pg	Pg	11 47 41.4	+0.1
HINF	**Hinterlalfeld**	**0.77**	**238**	ePg	Pg	11 47 43.6	-1.0
HINF				eSg	Sg	11 47 52.9	-1.8
	5.6nm,0.2s						
HINF	**Hinterlalfeld**	**0.77**	**238**	ePg	Pg	11 47 43.6	-1.0
HINF				eSg	Sg	11 47 52.9	-1.8
	2.8nm,0.2s						
HAU	**Haudompre**	**1.01**	**258**	ePg	Pb	11 47 48.0	-1.0
HAU				eSg	Sb	11 48 00.5	-1.7
	6.8nm,0.2s						
HAU	**Haudompre**	**1.01**	**258**	ePg	Pb	11 47 48.0	-1.0
HAU				eSg	Sb	11 48 00.5	-1.7
	3.4nm,0.2s						
CHMF	**Charmoille**	**1.26**	**219**	Pg	Pn	11 47 52.4	-0.5
CHMF	**Charmoille**	**1.26**	**219**	Pg	Pn	11 47 52.4	-0.5
SFTF	**Sexfontaines**	**1.86**	**270**	eSg	Sb	11 48 27.9	+1.2
	3.6nm,0.2s						

ISCJB ***09*** *11:55:58.9±0.5, 38°.64N±0°.04×42°.96E±0°.04, h15km, Error ellipse: s-maj=5.3km s-min=4.8km az=1.9*
CSEM ***09*** *11:55:58.7±0.2, 38°.64N×42°.96E, h12km, ML2.5, Error ellipse: s-maj=4.0km s-min=3.9km az=17.0*
DDA ***09*** *11:55:58.7, 38°.64N×42°.99E, h7km, Ml2.5*
ISK ***09*** *11:55:58.4, 38°.64N×42°.97E, h10km, ML2.3/3*
ISC 09 11:55:58.9±0.9, 38°.64N±0°.03×42°.97E±0°.03, h15km, n22, σ0°.43/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADCV	**BITLIS_Adilcev**	**0.26**	**311**	iP	**Pg**	**11 56 04.6**	**0.0**
ADCV	**BITLIS_Adilcev**	**0.26**	**311**	P	**Pg**	**11 56 04.6**	**0.0**
VANB	**Van**	**0.33**	**98**	PG	**Pg**	**11 56 06.0**	**+0.2**
VANB				SG	**Sb**	**11 56 11.9**	**+0.2**
VANB	**Van**	**0.33**	**98**	ePg	**Pg**	**11 56 06.0**	**+0.2**
VANB				eSg	**Sb**	**11 56 11.9**	**+0.2**
GEVA	**Gevas**	**0.33**	**168**	iP	**Pg**	**11 56 05.4**	**-0.5**
GEVA	**Gevas**	**0.33**	**168**	P	**Pg**	**11 56 05.4**	**-0.5**
TVAN	**Van**	**0.36**	**108**	iP	**Pg**	**11 56 06.0**	**-0.3**
TVAN	**Van**	**0.36**	**108**	P	**Pg**	**11 56 06.0**	**-0.3**
GURO	**Guroymak-BITLI**	**0.74**	**263**	PG	**Pg**	**11 56 13.2**	**-0.2**
GURO				SG	**Sb**	**11 56 23.8**	**+0.2**
GURO	**Guroymak-BITLI**	**0.74**	**263**	ePg	**Pg**	**11 56 13.2**	**-0.2**
GURO				eSg	**Sb**	**11 56 23.8**	**+0.2**
TUTA	**Tutak**	**0.77**	**351**	iP	**Pg**	**11 56 13.4**	**-0.6**
TUTA	**Tutak**	**0.77**	**351**	P	**Pg**	**11 56 13.4**	**-0.6**
AGRB	**Hanur-Agry**	**0.94**	**1**	PG	**Pb**	**11 56 16.6**	**-0.3**
AGRB				SG	**Sg**	**11 56 30.2**	**+0.8**
AGRB	**Hanur-Agry**	**0.94**	**1**	ePg	**Pb**	**11 56 16.6**	**-0.3**
AGRB				eSg	**Sg**	**11 56 30.2**	**+0.8**
SRTM	**Siirt_Merkez**	**1.05**	**232**	iP	**Pb**	**11 56 19.1**	**+0.3**
SRTM	**Siirt_Merkez**	**1.05**	**232**	P	**Pb**	**11 56 19.1**	**+0.3**
SIRT	**Sirnak**	**1.21**	**200**	PN	**Pb**	**11 56 21.9**	**+0.3**
SIRT	**Sirnak**	**1.21**	**200**	ePn	**Pb**	**11 56 21.9**	**+0.3**
EATA	**Eleskirt**	**1.28**	**343**	iP	**Pb**	**11 56 23.2**	**+0.3**
EATA	**Eleskirt**	**1.28**	**343**	P	**Pb**	**11 56 23.2**	**+0.3**
BTMN	**Batman**	**1.53**	**241**	iP	**Pn**	**11 56 25.2**	**-0.6**
BTMN	**Batman**	**1.53**	**241**	P	**Pn**	**11 56 25.2**	**-0.6**

IDC 09 11:59:05.5±30.0, 23°.04S×175°.06W, h0km, mb4.2/4, mb1 4.4/4, mb1mx3.8/48, mbtmp4.2/4, Error ellipse: s-maj=541.6km s-min=147.2km az=79.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**36.03**	**267**	P	P	12 06 10.4	+1.6
	3.8nm,0.3s,baz=90,slow=11,SNR=5.2						
STKA	**Stephens Creek**	**39.24**	**247**	P	P	12 06 34.7	-1.2
	1.0nm,0.4s,baz=74,slow=9.2,SNR=5.5						
ASAR	**Alice Springs**	**46.65**	**259**	P	P	12 07 35.6	-0.5
	0.6nm,0.3s,baz=89,slow=7.8,SNR=30						
WRA	**Warramunga Arr**	**47.00**	**264**	P	P	12 07 38.6	-0.2
	2.9nm,0.5s,baz=99,slow=8.0,SNR=32						

ISCJB ***09*** *11:59:58.3±0.5, 28°.44N±0°.05×86°.75E±0°.05, h10km, mb3.8/6, Error ellipse: s-maj=8.4km s-min=5.3km az=39.0*
NDI ***09*** *12:00:03.8±2.6, 28°.42N×86°.76E, h20km±16km, ML3.5*
IDC ***09*** *12:00:09.0±1.0, 28°.99N×84°.38E, h0km, mb3.7/8, mb1 3.9/9, mb1mx3.6/71, mbtmp3.8/9, ML4.1/1, MS3.2/1, Ms1 3.2/1, ms1mx2.5/62, Error ellipse: s-maj=43.8km s-min=20.2km az=57.0*
ISC 09 11:59:59.9±0.8, 28°.45N±0°.08×86°.78E±0°.05, h10km, n24, σ2°.76/24, mb3.8/8, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTK	**Tadong**	**1.97**	**124**	eP	**Pn**	**12 00 34.8**	**+1.3**
GTK				eS	**Sn**	**12 01 01.5**	**+3.1**
GTK				IAML		12 01 09.7	
	comp=E,177nm,0.1s						
GTK				IAML		12 01 12.5	
	comp=N,214nm,0.8s						
DHUB	**DHUBRI**	**3.75**	**129**	eS	**Sn**	**12 01 42.1**	**0.0**
DHUB				IAML		12 01 48.3	
DHUB				IAML		12 01 48.4	
	comp=E,135nm,0.6s						
TURI	**Tura**	**4.29**	**132**	eP	**Pn**	**12 01 08.4**	**+3.1**
BOK	**Bokaro**	**4.71**	**190**	eP	**Pn**	**12 01 11.1**	**+0.1**
BOK				eS	**Sn**	**12 02 03.5**	**-2.3**
BOK				IAML		12 02 09.6	
	comp=E,158nm,0.2s						
BOK				IAML		12 02 09.7	
	comp=N,118nm,0.4s						
GUWA	**GUWAHATI**	**4.92**	**116**	eS	**Sn**	**12 02 09.5**	**-1.4**
SHL	**Shillong**	**5.39**	**121**	eP	**Pn**	**12 01 23.0**	**+2.5**
SHL				eS	**Sn**	**12 02 20.0**	**-2.7**
SHL				IAML		12 02 22.6	
	comp=E,55nm,0.4s						
SHL				IAML		12 02 23.8	
	comp=N,55nm,0.3s						
ZIRO	**ZIRO**	**6.32**	**97**	eS	**Sn**	**12 02 41.8**	**-4.0**
AZL	**Aizawl**	**7.09**	**130**	eP	**Pn**	**12 01 45.4**	**+1.5**
AZL				eS	**Sn**	**12 03 00.7**	**-3.9**
AZL				IAML		12 03 10.7	
	comp=E,34nm,0.2s						
AZL				IA

n18,σ0°42/36,8C,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SATY	**Saty** 192nm,0.1s	**0.01**	**29**	*e*P	**Pg**	**12 01 13.6**	**0.0**
SATY	18μm,0.1s			*e*S	**Sg**	**12 01 14.1**	**-0.1**
ZHN	**Zhinishke** baz=9.0	**0.12**	**13**	*e*P	**Pg**	**12 01 15.4**	**+0.2**
ZHN	baz=9.0			*e*S	**Sg**	**12 01 16.9**	**0.0**
ZHN	**Zhinishke** 35nm,0.1s	**0.12**	**13**	*e*P	**Pg**	**12 01 15.4**	**+0.2**
ZHN	477nm,0.3s			*e*S	**Sg**	**12 01 16.9**	**0.0**
KPKS	**Kokpek** baz=26	**0.47**	**26**	*e*P	**Pg**	**12 01 21.8**	**+0.1**
KPKS	baz=26			*e*S	**Sg**	**12 01 28.2**	**+0.4**
KPKS	**Kokpek** 11nm,0.1s	**0.47**	**26**	*e*P	**Pg**	**12 01 21.8**	**+0.1**
KPKS	35nm,0.7s			*e*S	**Sg**	**12 01 28.2**	**+0.4**
UZB	**Uzynbulak** baz=77	**0.47**	**78**	*e*P	**Pg**	**12 01 22.1**	**+0.4**
UZB	baz=77			*e*S	**Sg**	**12 01 28.6**	**+0.8**
UZB	**Uzynbulak** 3.8nm,0.3s	**0.47**	**78**	*e*P	**Pg**	**12 01 22.1**	**+0.4**
UZB	13nm,0.1s			*e*S	**Sg**	**12 01 28.6**	**+0.8**
KURS	**Kuram** baz=38	**0.47**	**339**	*e*P	**Pg**	**12 01 22.3**	**+0.5**
KURS	baz=38			*e*S	**Sg**	**12 01 28.6**	**+0.7**
KURS	**Kuram** 1.3nm,0.2s	**0.47**	**339**	*e*P	**Pg**	**12 01 22.3**	**+0.5**
KURS	4.4nm,0.3s			*e*S	**Sg**	**12 01 28.5**	**+0.7**
PDGK	**Podgornoye** baz=70	**0.84**	**70⇑**	*i*P	**Pg**	**12 01 28.8**	**-0.1**
PDGK	baz=70		⇑	*i*S	**Sg**	**12 01 40.0**	**+0.1**
TNSS	**Tian-Shan** baz=70	**1.06**	**270**	*e*P	**Pg**	**12 01 33.4**	**+0.2**
TNSS	baz=70			*e*S	**Sb**	**12 01 48.2**	**-0.3**
TNSS	**Tian-Shan** 1.8nm,0.3s	**1.06**	**270**	*e*P	**Pg**	**12 01 33.4**	**+0.2**
TNSS	5.1nm,0.5s			*e*S	**Sb**	**12 01 48.1**	**-0.3**
ARXS	**Arharly** 1.3nm,0.7s	**1.23**	**341**	*e*P	**Pg**	**12 01 36.5**	**+0.1**
ARXS	6.8nm,0.3s			*e*S	**Sn**	**12 01 53.3**	**-0.9**
TARG	**Taragay, Kyrgy** baz=99	**1.39**	**199⇑**	*i*P	**Pb**	**12 01 39.5**	**-0.1**
TARG	baz=99		⇑	*i*S	**Sb**	**12 01 57.7**	**-0.2**
KTBS	**Karatobe** 1.1nm,0.2s	**1.42**	**298**	*e*P	**Pn**	**12 01 39.2**	**-0.2**
KTBS	6.7nm,0.4s			*e*S	**Sn**	**12 01 58.0**	**-0.6**
DJR	**Jarkent** 3.2nm,0.1s	**1.63**	**38**	*e*P	**Pb**	**12 01 43.2**	**-0.3**
DJR	6.2nm,0.3s			*e*S	**Sb**	**12 02 04.8**	**+0.3**
ULHL	**Ulahol** baz=44	**1.78**	**244⇑**	*i*P	**Pb**	**12 01 46.4**	**+0.3**
ULHL	baz=44		⇑	*i*S	**Sg**	**12 02 10.4**	**+0.4**
BOOM	**Boomskoye usch** baz=54	**1.90**	**254⇑**	*e*P	**Pb**	**12 01 48.4**	**+0.4**
BOOM	baz=54		⇑	*i*S	**Sg**	**12 02 13.9**	**+0.3**

KRSC ***09*** *12:02:43.5±1.7,51.°38N×159.°89E,h43km±18km,ML5.5, FELT [II] at Petropavlovsk.*
BJI ***09*** *12:02:43.7,51.°76N×159.°06E,h11km,mb5.2/78,mB5.0/53, Ms5.1/83,Ms7 4.9/75*
ISCJB ***09*** *12:02:43.9±0.1,51.°44N±0.°02×159.°46E±0.°02,h18km, mb5.1/334,MS4.8/89,Error ellipse: s-maj=2.7km s-min=1.7km az=162.0*
NEIC ***09*** *12:02:46.4±0.2,51.°70N×159.°21E,mb5.0/191,Error ellipse: s-maj=5.2km s-min=2.7km az=161.0*
NEIC Felt at Petropavlovsk-Kamchatskiy.
GCMT ***09*** *12:02:46.4±0.2,51.°42N×159.°76E,h24km,MW5.1/92, Moment Tensor Solution. s54,c74; s92,c148; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.32±.19; $M_{\theta\theta}$-1.54±.12; $M_{\phi\phi}$-2.78±.12; $M_{r\theta}$1.54±.17; $M_{\theta\phi}$-2.00±.07; $M_{\phi r}$1.88±.15; Best double couple: $M_0$4.92800×10^{16} NP1:ϕ_s38.00000°,δ60.00000°,λ91.00000°. NP2: ϕ_s215.00000°,δ30.00000°,λ88.00000°. Principal axes: T 4.9620, Plg75.0000°, Azm312.0000°; N -0.0690, Plg1.0000°, Azm217.0000°; P -4.8930, Plg15.0000°, Azm127.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
IDC ***09*** *12:02:50.6±1.9,51.°59N×159.°25E,h55km±16km,mb4.8/43, mb1 4.9/48,mb1mx4.7/74,mbtmp5.0/48,ML4.5/3,MS4.5/53, Ms1 4.5/53,ms1mx4.4/70 Error ellipse: s-maj=11.7km s-min=8.3km az=149.0*
MOS ***09*** *12:02:50.0±0.9,51.°69N×159.°21E,h44km,mb5.4/101, MS5.0/28,Error ellipse: s-maj=6.1km s-min=2.8km az=90.5*
MOS Felt (II) at Petropavlovsk-Kamchatskiy.

ISC 09 12:02:46.6±0.4,51.°52N±0.°04×159.°59E±0.°03,h24km±2km, h24km:pP-P,n1224,σ1°55/1270,mb5.2/342,MS4.8/91, 86C-39D,Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDTR	**Khodutka, Kamc**	**0.98**	**288**	*e*P	**Pn**	**12 03 04.5**	**-0.4**
KDTR				*e*S	**Sb**	**12 03 18.7**	**+1.2**
RUS	**Russkaya**	**1.13**	**324**	*i*P	**Pn**	**12 03 07.1**	**+0.2**
RUS				*e*S	**Sb**	**12 03 23.3**	**+1.6**
RUS	**Russkaya**	**1.13**	**324**	PN	**Pn**	**12 03 07.1**	**+0.2**
RUS				S	**Sb**	**12 03 23.3**	**+1.6**
MTVR	**Mutnovka**	**1.30**	**318**	*i*P	**Pn**	**12 03 09.9**	**+0.5**
MTVR	**Mutnovka**	**1.30**	**318**	PN	**Pn**	**12 03 09.9**	**+0.5**
ASAK	**Asacha**	**1.35**	**310**	*i*P	**Pn**	**12 03 10.8**	**+0.7**
ASAK	**Asacha**	**1.35**	**310**	PN	**Pn**	**12 03 10.8**	**+0.7**
GRL	**Gorelyy**	**1.39**	**318**	*i*P	**Pb**	**12 03 12.0**	**0.0**
GRL	**Gorelyy**	**1.39**	**318**	PN	**Pb**	**12 03 12.0**	**0.0**
KRMR	**Karymshinskiy**	**1.59**	**326**	*i*P	**Pn**	**12 03 14.2**	**+1.0**
KRMR				*e*S	**Sb**	**12 03 36.3**	**+1.4**
KRMR	**Karymshinskiy**	**1.59**	**326**	PN	**Pn**	**12 03 14.2**	**+1.0**
DALK	**Dalny**	**1.60**	**342**	*i*P	**Pn**	**12 03 13.8**	**+0.5**
DALK				*e*S	**Sb**	**12 03 36.4**	**+1.3**
DALK	**Dalny**	**1.60**	**342**	PN	**Pn**	**12 03 13.8**	**+0.5**
SPN	**Mys Shipunski**	**1.60**	**9**	*e*P	**Pn**	**12 03 13.5**	**+0.1**
SPN				*e*S	**Sb**	**12 03 35.5**	**+0.2**
SPN	**Mys Shipunski**	**1.60**	**9**	PN	**Pn**	**12 03 13.5**	**+0.1**
SPN				S	**Sb**	**12 03 35.5**	**+0.2**
PET	**Petropavlovsk**	**1.61**	**339**	*e*Pn	**Pn**	**12 03 13.8**	**+0.3**
PET				*e*Sn	**Sb**	**12 03 36.4**	**+0.9**
PET	**Petropavlovsk**	**1.61**	**339⇑**	*i*PN	**Pn**	**12 03 13.9**	**+0.3**
PET	comp=Z,9μm,1.6s			pmax	pmax		
PET	comp=Z,2μm,2.3s			pmax	pmax		
PET	comp=Z,4μm,0.5s			pmax	pmax		
NLC	**Nalytchevo**	**1.66**	**355**	*e*P	**Pn**	**12 03 15.2**	**+1.0**
NLC				*e*S	**Sb**	**12 03 37.4**	**+0.5**
NLC	**Nalytchevo**	**1.66**	**355**	PN	**Pn**	**12 03 15.2**	**+1.0**
NLC				S	**Sb**	**12 03 37.4**	**+0.5**
PAU	**Pauzhetka**	**1.74**	**269**	*e*P	**Pn**	**12 03 15.9**	**+0.6**
PAU				*e*S	**Sb**	**12 03 38.8**	**-0.3**
PAU	**Pauzhetka**	**1.74**	**269**	PN	**Pn**	**12 03 15.9**	**+0.6**
PAU				S	**Sb**	**12 03 38.8**	**-0.3**
UGLR	**Uglovaya**	**1.75**	**345**	*i*P	**Pn**	**12 03 16.6**	**+1.0**
UGLR	**Uglovaya**	**1.75**	**345**	PN	**Pn**	**12 03 16.6**	**+1.0**
SDLR	**Sedlovina**	**1.81**	**347**	*e*P	**Pn**	**12 03 16.8**	**+0.4**
SDLR	**Sedlovina**	**1.81**	**347**	PN	**Pn**	**12 03 16.8**	**+0.4**
AVH	**Avacha**	**1.82**	**344**	*i*P	**Pn**	**12 03 17.6**	**+1.1**
AVH	**Avacha**	**1.82**	**344**	PN	**Pn**	**12 03 17.6**	**+1.1**
KRER	**Koryakskii**	**1.86**	**344**	*e*P	**Pn**	**12 03 18.2**	**+1.0**
KRER	**Koryakskii**	**1.86**	**344**	PN	**Pn**	**12 03 18.2**	**+1.0**
KOK	**Koryaka**	**1.87**	**342**	*e*P	**Pn**	**12 03 18.2**	**+1.0**
KOK	**Koryaka**	**1.87**	**342**	PN	**Pn**	**12 03 18.2**	**+1.0**
MIPR	**Malaya Ipel'ka**	**1.91**	**294**	*i*P	**Pn**	**12 03 18.8**	**+1.1**
MIPR	**Malaya Ipel'ka**	**1.91**	**294**	PN	**Pn**	**12 03 18.8**	**+1.1**
KRX	**Arik**	**1.93**	**343**	*e*P	**Pn**	**12 03 19.4**	**+1.3**
KRX	**Arik**	**1.93**	**343**	PN	**Pn**	**12 03 19.4**	**+1.3**
I44RU	**PETROPAVLOVSK-** baz=125,slow=19,SNR=1.6	**1.96**	**325**	P	**Pn**	**12 03 20.0**	**+1.6**
PEA0B	**Petropavlovsk-**	**1.97**	**325**	*e*Pn	**Pn**	**12 03 19.9**	**+1.5**
PETK	**Petropavlovsk-** comp=Z,1μm,0.3s,baz=126,slow=17,SNR=1023	**1.97**	**325**	P	**Pn**	**12 03 20.5**	**+2.1**
PETK	comp=Z,473nm,0.3s,baz=216,slow=32,SNR=10			S	**Sb**	**12 03 50.9**	**+5.1**
PETK	comp=Z,4μm,21.9s,baz=34,slow=34			LR	LR	12 03 52.4	
PETK	**Petropavlovsk-**	**1.97**	**325**	*e*Pn	**Pn**	**12 03 19.8**	**+1.3**
PETK				S	**Sb**	**12 03 50.9**	**+5.1**
APC	**Apacha**	**2.05**	**314**	*i*P	**Pn**	**12 03 21.2**	**+1.6**
APC				*i*S	**Sb**	**12 03 49.6**	**+1.4**
APC	**Apacha**	**2.05**	**314**	PN	**Pn**	**12 03 21.2**	**+1.6**
SKR	**Severo-Kuril's**	**2.34**	**250**	*e*P	**Pn**	**12 03 23.2**	**-0.4**
SKR				*e*S	**Sn**	**12 03 53.3**	**+1.7**
SKR	**Severo-Kuril's**	**2.34**	**250⇑**	*i*PN	**Pn**	**12 03 23.4**	**-0.2**
SKR				*e*S	**Sn**	**12 03 51.4**	**-0.2**
SKR	comp=Z,2μm,0.9s			pmax	pmax		
SKR	comp=Z,4μm,1.3s			pmax	pmax		
SKR	comp=N,25μm,0.9s			smax	smax		
SKR	comp=E,21μm,0.6s			smax	smax		
SKR	comp=Z,43μm,12.0s			MLR	MLR		
SKR	comp=Z,24μm,12.0s			MLR	MLR		
GNL	**Ganaly**	**2.40**	**336**	*i*P	**Pn**	**12 03 26.1**	**+1.6**
GNL	**Ganaly**	**2.40**	**336**	PN	**Pn**	**12 03 26.1**	**+1.6**
KII	**Karymskiy**	**2.52**	**358**	*e*P	**Pn**	**12 03 27.7**	**+1.6**
KII	**Karymskiy**	**2.52**	**358**	PN	**Pn**	**12 03 27.7**	**+1.6**
MKZ	**Mys Kozlova**	**3.30**	**22**	*e*P	**Pn**	**12 03 36.6**	**-0.2**
MKZ	**Mys Kozlova**	**3.30**	**22**	PN	**Pn**	**12 03 36.6**	**-0.2**
KZV	**Kizimen**	**3.62**	**6**	*e*P	**Pn**	**12 03 42.8**	**+1.4**
KZV	**Kizimen**	**3.62**	**6**	PN	**Pn**	**12 03 42.8**	**+1.4**
TUMD	**Tumrok D**	**3.72**	**7**	*e*P	**Pn**	**12 03 43.3**	**+0.7**
TUMR	**Tumrok**	**3.78**	**5**	*e*P	**Pn**	**12 03 45.7**	**+2.2**
TUMR	**Tumrok**	**3.78**	**5**	PN	**Pn**	**12 03 43.3**	**-0.2**
KMNR	**Kamenistaya**	**4.26**	**5**	*e*P	**Pn**	**12 03 52.4**	**+2.3**
KMNR	**Kamenistaya**	**4.26**	**5**	PN	**Pn**	**12 03 52.4**	**+2.3**
ESO	**Esso**	**4.44**	**354**	*e*P	**Pn**	**12 03 54.4**	**+1.9**
ESO	**Esso**	**4.44**	**354**	PN	**Pn**	**12 03 54.4**	**+1.9**
BZMR	**Bezymyannaya**	**4.45**	**7**	*e*P	**Pn**	**12 03 55.2**	**+2.4**
BZMR	**Bezymyannaya**	**4.45**	**7**	PN	**Pn**	**12 03 55.2**	**+2.4**
KIRR	**Kirishev**	**4.46**	**5**	*e*P	**Pn**	**12 03 55.0**	**+2.1**
KIRR	**Kirishev**	**4.46**	**5**	PN	**Pn**	**12 03 55.0**	**+2.1**
KPT	**Kopyto**	**4.47**	**5**	*e*P	**Pn**	**12 03 55.1**	**+2.2**
KPT	**Kopyto**	**4.47**	**5**	PN	**Pn**	**12 03 55.1**	**+2.2**
BZWR	**Bezymyannyi-We**	**4.48**	**7**	*e*P	**Pn**	**12 03 55.5**	**+2.3**
BZWR	**Bezymyannyi-We**	**4.48**	**7**	PN	**Pn**	**12 03 55.5**	**+2.3**
KOZ	**Kozyrevsk**	**4.55**	**2**	*e*P	**Pn**	**12 03 56.3**	**+2.4**
KOZ	**Kozyrevsk**	**4.55**	**2**	PN	**Pn**	**12 03 56.3**	**+2.4**
ZLN	**Zelenaya**	**4.56**	**9**	*e*P	**Pn**	**12 03 56.5**	**+2.3**
ZLN	**Zelenaya**	**4.56**	**9**	PN	**Pn**	**12 03 56.5**	**+2.3**
LGNR	**Loginova**	**4.62**	**8**	*e*P	**Pn**	**12 03 57.9**	**+2.8**
LGNR	**Loginova**	**4.62**	**8**	PN	**Pn**	**12 03 57.9**	**+2.8**
CIRR	**Tsirk**	**4.65**	**8**	*e*P	**Pn**	**12 03 57.8**	**+2.3**
CIRR	**Tsirk**	**4.65**	**8**	PN	**Pn**	**12 03 57.8**	**+2.3**
KRSR	**Krestovskiy**	**4.74**	**7**	*e*P	**Pn**	**12 03 58.5**	**+1.9**
KRSR	**Krestovskiy**	**4.74**	**7**	PN	**Pn**	**12 03 58.5**	**+1.9**
KLY	**Klyuchi**	**4.84**	**7**	*e*P	**Pn**	**12 04 00.1**	**+2.2**
KLY	**Klyuchi**	**4.84**	**7**	PN	**Pn**	**12 04 00.1**	**+2.2**
KBTR	**Krutoberegovo**	**5.07**	**21**	*e*P	**Pn**	**12 04 02.3**	**+1.2**
KBTR	**Krutoberegovo**	**5.07**	**21**	PN	**Pn**	**12 04 02.3**	**+1.2**
BDR	**Baidarnaya**	**5.14**	**10**	*e*P	**Pn**	**12 04 04.6**	**+2.4**
BDR				*e*S	**Sn**	**12 05 03.7**	**+2.9**
BDR	**Baidarnaya**	**5.14**	**10**	PN	**Pn**	**12 04 04.6**	**+2.4**
BDR				S	**Sn**	**12 05 03.7**	**+2.9**
SMKR	**Semkarok**	**5.19**	**12**	*e*P	**Pn**	**12 04 04.8**	**+2.0**
SMKR	**Semkarok**	**5.19**	**12**	PN	**Pn**	**12 04 04.8**	**+2.0**
SRKR	**Sorokina**	**5.23**	**10**	*e*P	**Pn**	**12 04 05.6**	**+2.3**
SRKR	**Sorokina**	**5.23**	**10**	PN	**Pn**	**12 04 05.6**	**+2.3**
BKI	**Bering**	**5.31**	**44**	*e*P	**Pn**	**12 04 03.8**	**-0.6**
BKI				*e*S	**Sn**	**12 04 59.6**	**-5.1**
BKI	**Bering**	**5.31**	**44**	PN	**Pn**	**12 04 03.8**	**-0.6**
PALN	**Palana**	**7.59**	**1**	*e*P	**Pn**	**12 04 37.1**	**+1.5**
PALN	**Palana**	**7.59**	**1**	PN	**Pn**	**12 04 37.1**	**+1.5**
OSSR	**Ossora**	**7.99**	**13**	*e*P	**Pn**	**12 04 44.0**	**+2.9**
OSSR	**Ossora**	**7.99**	**13**	PN	**Pn**	**12 04 44.0**	**+2.9**
SMY	**Shemya**	**9.01**	**77**	*e*Pn	**Pn**	**12 04 54.9**	**-0.2**
SMY				*e*Sn	**Sn**	**12 06 31.3**	**-4.5**
SMY	**Shemya**	**9.01**	**77**	*e*PN	**Pn**	**12 04 54.9**	**-0.2**
MA2	**Magadan** comp=Z,1.1nm,0.3s,baz=138,slow=9.0,SNR=16	**9.48**	**332**	P	**Pn**	**12 05 03.2**	**+1.6**
MA2	comp=Z,2μm,19.1s,baz=187,slow=41			LR	LR	12 09 16.5	
MA2	**Magadan**	**9.48**	**332**	*e*Pn	Pn	12 04 53.6	-8.0
MA2	**Magadan**	**9.48**	**332**	*i*PN	**Pn**	**12 05 02.2**	**+0.6**
MA2	comp=Z,69nm,1.7s			pmax	pmax		
TILK	**Tilichiki**	**9.66**	**20**	*e*P	**Pn**	**12 05 05.0**	**+1.0**
TILK	**Tilichiki**	**9.66**	**20**	PN	**Pn**	**12 05 05.0**	**+1.0**
KUR	**Kuril'sk**	**10.01**	**236***c*	*i*PN	**Pn**	**12 05 10.6**	**+1.7**
KUR				*i*S	**Sn**	**12 07 04.0**	**+3.6**
KUR	comp=Z,106nm,1.1s			pmax	pmax		
KUR	comp=N,23nm,0.7s			pmax	pmax		
KUR	comp=E,42nm,1.3s			pmax	pmax		
TYV	**Tymovskoe**	**10.65**	**273**	*e*PN	Pn	12 05 07.2	-10
TYV	comp=Z,500nm,3.2s			pmax	pmax		
TYV	comp=Z,28nm,1.0s			pmax	pmax		
TYV	comp=Z,6μm,15.0s			MLR	MLR		
TYV	comp=E,7μm,14.0s			MLR	MLR		
SHO	**Shikotan**	**11.50**	**233***d*	*i*PN	**Pn**	**12 05 26.7**	**-2.5**
SHO	comp=N,26nm,0.4s			pmax	pmax		
SHO	comp=Z,48nm,0.4s			pmax	pmax		
SHO	comp=E,19nm,0.3s			MLR	MLR		
SHO	comp=E,3μm,16.0s			MLR	MLR		
SHO	comp=Z,2μm,16.0s			MLR	MLR		
SHO	comp=N,5μm,19.0s						
KMSK	**Kamenskaya**	**11.54**	**16**	P	**Pn**	**12 05 31.9**	**+2.2**
KMSK	**Kamenskaya**	**11.54**	**16**	PN	**Pn**	**12 05 31.9**	**+2.2**
NKL	**Nikolayevsk**	**11.68**	**285**	*e*PN	**Pn**	**12 05 35.0**	**+3.4**
NKL	comp=Z,43nm,1.0s			pmax	pmax		
NKL	comp=E,700nm,9.0s			pmax	pmax		
NKL	comp=Z,600nm,9.0s			pmax	pmax		
NKL	comp=E,4μm,14.0s			MLR	MLR		
NKL	comp=Z,7μm,14.0s			MLR	MLR		
YUK	**Yuzh-Kuril'sk**	**11.88**	**236⇑**	*i*PN	**Pn**	**12 05 37.7**	**+3.3**
YUK				*e*S	**Sn**	**12 07 53.8**	**+7.8**
YUK	comp=N,146nm,0.5s			pmax	pmax		
YUK	comp=E,246nm,0.5s			pmax	pmax		
YUK	comp=Z,180nm,0.5s			pmax	pmax		
LAGR	**Lagunnoye**	**11.90**	**237⇑**	*i*PN	**Pn**	**12 05 38.4**	**+3.7**
LAGR				S	Sn	12 07 57.7	+11
LAGR	comp=Z,123nm,0.4s			pmax	pmax		
LAGR	comp=E,161nm,0.6s			pmax	pmax		
LAGR	comp=N,365nm,0.5s			pmax	pmax		
YSS	**Yuzh-Sakhalins**	**11.91**	**254**	*e*Pn	**Pn**	**12 05 34.9**	**+0.1**
YSS	**Yuzh-Sakhalins**	**11.91**	**254**	*e*PN	**Pn**	**12 05 36.0**	**+1.2**
YSS				*e*S	**Sn**	**12 07 53.3**	**+6.6**
YSS	comp=N,20nm,0.9s			pmax	pmax		
YSS	comp=Z,20nm,0.9s			pmax	pmax		
YSS	comp=Z,500nm,2.6s			pmax	pmax		
YSS	comp=E,600nm,2.3s			pmax	pmax		
YSS	comp=Z,2μm,15.0s			MLR	MLR		
GRPR	**Tuman**	**11.95**	**236**	*e*PN	**Pn**	**12 05 39.6**	**+4.2**
GRPR				S	**Sn**	**12 07 56.4**	**+8.5**
GRPR	comp=Z,53nm,0.1s			pmax	pmax		
GRPR	comp=N,76nm,0.4s			pmax	pmax		
GRPR	comp=E,135nm,0.4s			pmax	pmax		
SEY	**Seymchan** comp=E,0.1nm,0.3s,baz=159,slow=13,SNR=8.7	**12.08**	**344**	P	**Pn**	**12 05 39.9**	**+2.9**
SEY	**Seymchan**	**12.08**	**344**	*e*PN	**Pn**	**12 05 36.8**	**-0.2**
ASAJ	**Asahikawa** comp=E,3.7nm,0.3s,baz=76,slow=12,SNR=52	**13.59**	**244**	P	**Pn**	**12 05 58.0**	**+0.2**
ASAJ				LR	LR	12 10 53.9	
ASAJ	**Asahikawa** comp=E,2μm,21.1s,baz=56,slow=36	**13.59**	**244**	*e*Pn	**Pn**	**12 05 57.2**	**-0.6**
ASAJ	**Asahikawa**	**13.59**	**244**	PN	**Pn**	**12 05 58.0**	**+0.2**
ASAJ	comp=Z,4.0nm,0.3s			pmax	pmax		
ASAJ	comp=Z,2μm,21.1s			MLR	MLR		
KIWB	**Kanaga Island**	**14.42**	**80**	*e*Pn	**Pn**	**12 06 11.5**	**+2.4**
GRNR	**Gornyy**	**14.55**	**276**	*e*P	**Pn**	**12 06 13.2**	**+2.3**
GRNR	comp=Z,54nm,1.0s			pmax	pmax		
ERM	**Erimo**	**14.71**	**236**	*e*Pn	**Pn**	**12 06 09.1**	**-3.8**
ERM				*e*Sn	Sn	12 08 40.8	-14
ERM	**Erimo**	**14.71**	**236⇑**	*e*P	**Pn**	**12 06 09.4**	**-3.6**
ATKA	**Atka Island** comp=Z,246nm,1.1s	**16.18**	**77**	*e*Pn	**P**	**12 06 34.8**	**-0.5**
TEY	**Ternei**	**16.58**	**256**	*e*P	**P**	**12 06 39.7**	**0.0**
TEY	comp=E,65nm,1.0s			pmax	pmax		
TEY	comp=Z,90nm,1.0s			pmax	pmax		
TEY	comp=N,2μm,15.0s			MLR	MLR		
TEY	comp=Z,2μm,15.0s			MLR	MLR		
BILL	**Bilibino** comp=Z,67nm,0.8s	**16.89**	**9**	*e*Pn	**Pn**	**12 06 40.4**	**-0.7**
BILL	**Bilibino**	**16.89**	**9***c*	*i*P	**Pn**	**12 06 42.1**	**+1.0**
BILL	comp=Z,62nm,0.9s			pmax	pmax		
BILL	comp=Z,4μm,17.0s			MLR	MLR		
KLR	**Kul'dur** comp=Z,0.2nm,0.3s,baz=70,slow=12,SNR=194	**17.86**	**274**	P	**P**	**12 06 54.1**	**+0.3**
KLR	comp=Z,286nm,18.5s,baz=74,slow=40			LR	LR	12 14 31.6	
KLR	**Kul'dur**	**17.86**	**274***c*	*i*P	**P**	**12 06 54.0**	**+0.2**
YAK	**Yakutsk** comp=Z,586nm,0.8s	**19.28**	**315**	*e*P	**P**	**12 07 06.6**	**-2.6**
YAK	**Yakutsk**	**19.28**	**315***c*	*i*P	**P**	**12 07 06.9**	**-2.4**
YAK				*e*S	**Sn**	**12 10 38.6**	**-7.0**
YAK	comp=Z,580nm,0.9s			pmax	pmax		
YAK	comp=N,57nm,1.0s			pmax	pmax		
YAK	comp=E,161nm,1.1s			pmax	pmax		
YAK	comp=N,39nm,1.8s			smax	smax		
YAK	comp=E,25nm,1.8s			smax	smax		
YAK	comp=Z,3μm,13.0s			MLR	MLR		
YAK	comp=N,2μm,13.0s			MLR	MLR		
YAK	comp=E,2μm,12.0s			MLR	MLR		
NIKH	**Nikolski High** comp=E,59nm,1.0s	**19.30**	**73**	*e*P	**P**	**12 07 08.2**	**-1.4**
ZEA	**Zeya**	**19.66**	**289**	*e*P	**P**	**12 07 11.8**	**-1.8**
ZEA	comp=N,42nm,0.8s			pmax	pmax		
ZEA	comp=E,72nm,1.2s			pmax	pmax		
ZEA	comp=Z,92nm,1.2s			pmax	pmax		
ZEA	comp=Z,3μm,16.0s			MLR	MLR		
ZEA	comp=E,2μm,15.0s			MLR	MLR		
USRK	**Ussuriysk Ar.** comp=E,0.6nm,0.3s,baz=63,slow=10,SNR=76	**19.83**	**259**	P	**P**	**12 07 13.1**	**-2.4**
USRK	comp=E,1μm,19.4s,baz=55,slow=38			LR	LR	12 15 19.5	
UNV	**Unalaska Valle** comp=E,58nm,1.0s	**20.58**	**70**	*e*P	**P**	**12 07 23.6**	**+0.1**
CLNS	**Chul'man**	**20.83**	**298**	*e*P	**P**	**12 07 25.0**	**-1.3**
CLNS	comp=Z,32nm,0.8s			pmax	pmax		
CLNS	comp=E,22nm,0.9s			pmax	pmax		
CLNS	comp=N,19nm,1.0s			pmax	pmax		
CLNS	comp=N,551nm,12.0s			MLR	MLR		
CLNS	comp=Z,2μm,13.0s			MLR	MLR		
CLNS	comp=E,1μm,14.0s			MLR	MLR		
MDJ	**Mudanjiang**	**21.10**	**263**	P	**P**	**12 07 23.4**	**-5.8**
MDJ				pP	pP	12 07 29.2	-6.6
MDJ				sP	sP	12 07 31.3	-7.5
MDJ				S	**S**	**12 11 21.7**	**-1.0**
MDJ	comp=E,60nm,0.9s			pmax	pmax		
MDJ	comp=E,3μm,13.9s			LR	LR		
MDJ	comp=E,3μm,15.1s			LR	LR		
MDJ	comp=E,5μm,15.9s			LR	LR		
MDJ	**Mudanjiang** comp=E,40nm,0.7s	**21.10**	**263**	*e*P	**P**	**12 07 26.5**	**-2.7**
MSHR	**Mys Shultsa**	**21.22**	**256⇑**	*e*P	**P**	**12 07 27.4**	**-3.1**
MJB9	**Matsu-Tunnel** comp=E,195nm,1.0s	**21.34**	**234**	*e*P	**P**	**12 07 32.5**	**+0.5**
MAJO	**Matsushiro** comp=E,200nm,1.0s	**21.34**	**234**	*e*P	**P**	**12 07 32.6**	**+0.7**
MAJO	**Matsushiro**	**21.34**	**234***c*	*i*P	**P**	**12 07 31.7**	**-0.2**
MAJO	comp=Z,165nm,1.0s			pmax	pmax		
MAT	**Matsushiro**	**21.34**	**234**	P	**P**	**12 07 31.5**	**-0.4**
MAT				S	Sn	12 11 37.2	+1.5
MJAR	**Matsushiro Arr** comp=Z,87nm,1.0s,baz=23,slow=8.9,SNR=154	**21.34**	**234**	P	**P**	**12 07 31.9**	**+0.1**
MJAR	comp=Z,2μm,20.7s,baz=55,slow=38			LR	LR	12 16 22.7	
MJAR	**Matsushiro Arr**	**21.34**	**234**	P	**P**	**12 07 32.0**	**+0.1**
INU	**Inuyama** comp=Z,146nm,0.8s	**22.88**	**234**	*e*P	**P**	**12 07 48.0**	**-0.2**
JHJ2	**Mitsune** comp=Z,617nm,1.4s	**23.37**	**226**	*e*P	**P**	**12 07 53.7**	**+0.4**
JHJ	**Hachijo jima 2** comp=Z,426nm,18.3s,baz=100,slow=46	**23.38**	**226**	LR	LR	12 20 41.8	
CN2	**Changchun**	**24.08**	**265**	*e*P	**P**	**12 07 57.3**	**-2.7**
CN2				*e*sP	pP	12 08 06.1	-1.0
CN2				*e*S	**S**	**12 12 08.7**	**-7.3**
CN2	comp=Z,30nm,0.6s			pmax	pmax		
CN2	comp=Z,200nm,3.0s			pmax	pmax		
CN2	comp=Z,620nm,14.0s			LR	LR		
CN2	comp=Z,2μm,14.0s			LR	LR		
CN2	comp=Z,3μm,14.0s			LR	LR		
TIXI	**Tiksi** comp=Z,106nm,0.6s,baz=128,slow=10.0,SNR=380	**24.39**	**337**	P	**P**	**12 08 01.8**	**-0.8**
TIXI	**Tiksi** comp=Z,124nm,0.7s	**24.39**	**337**	*e*P	**P**	**12 08 00.9**	**-1.7**
TIXI	**Tiks

comp=Z,2μm,16.0s
RDOG Red Dog Mine 24.52 33 *e*P P 12 08 05.8 +2.0
comp=Z,65nm,1.0s
HIA Hailar 25.29 281 *e*P P 12 08 08.5 -2.5
comp=Z,205nm,0.8s
HIA Hailar 25.29 281 *e*P P 12 08 08.5 -2.5
HIA pmax pmax
comp=Z,205nm,0.8s
SVW2 Sparrevohn 26.14 51 *e*P P 12 08 19.7 +1.1
comp=Z,9.0nm,0.9s
SNY Shenyang 26.30 263 ⇓P P 12 08 18.9 -1.2
SNY S **S 12 12 55.8 +4.5**
SNY pmax pmax
comp=Z,60nm,0.7s
SNY pmax pmax
comp=Z,210nm,5.3s
SNY LR LR
comp=Z,3μm,20.6s
SNY LR LR
comp=Z,2μm,20.8s
SNY LR LR
comp=Z,5μm,15.9s
KSRS Korea Array 26.36 250 P **P 12 08 21.0 +0.3**
comp=Z,26nm,0.8s,baz=44,slow=9.5,SNR=105
KSRS LR LR 12 19 38.1
comp=Z,1μm,18.7s,baz=56,slow=38
KS15 Wonju Array Si 26.39 250 *e*P P 12 08 21.4 +0.4
KSAR Wonju Array Be 26.39 250 P **P 12 08 21.0 0.0**
KSAR Wonju Array Be 26.39 250 P **P 12 08 21.0 0.0**
BOD Bodaibo 26.67 302 *e*P P 12 08 21.5 -1.9
BOD pmax pmax
comp=Z,55nm,1.5s
INCN Inchon 27.11 252 *e*P P 12 08 27.5 0.0
comp=Z,48nm,1.1s
IM3 Indian Mountai 27.39 40 *e*P P 12 08 30.9 +1.2
TJN Taejon 27.42 249*c i*P P 12 08 30.3 0.0
JNU Nakatsue 27.81 240 P **P 12 08 34.2 +0.3**
comp=Z,81nm,0.9s,baz=11,slow=3.4,SNR=21
JNU LR LR 12 21 55.8
comp=Z,930nm,18.4s,baz=41,slow=41
JNU Nakatsue 27.81 240 *e*P P 12 08 34.4 +0.5
comp=Z,102nm,1.0s
KDAK Kodiak Island 27.87 58 P **P 12 08 34.8 +0.7**
comp=Z,6.3nm,0.9s,baz=241,slow=13,SNR=3.3
BPAW Bear Paw Mtn. 28.36 45 *e*P P 12 08 40.3 +1.7
BPAW *e*pP **P 12 08 40.5 +2.0**
KTH Kantishna Hill 28.37 46 *e*P P 12 08 40.4 +1.7
comp=Z,12nm,1.1s
MLY Manley 28.53 43 *e*P P 12 08 41.3 +1.3
comp=Z,7.6nm,0.9s
MLY *e*PcP **PcP 12 11 51.7 +0.9**
TRF Thorofare Moun 28.66 46 *e*P P 12 08 43.0 +1.7
comp=Z,14nm,0.9s
COLD Coldfoot 28.97 38 *e*P P 12 08 45.3 +1.4
comp=Z,8.4nm,0.9s
SEW Seward 29.20 53 *e*P P 12 08 44.6 -1.4
comp=Z,29nm,1.1s
DL2 Dalian 29.22 259 ⇓*i*P P 12 08 44.9 -1.4
DL2 S **S 12 13 35.3 -2.1**
DL2 pmax pmax
comp=Z,65nm,0.9s
DL2 pmax pmax
comp=Z,89nm,7.7s
DL2 LR LR
comp=Z,1μm,15.7s
DL2 LR LR
comp=Z,830nm,15.1s
DL2 LR LR
comp=Z,1μm,15.3s
MCK McKinley 29.26 45 *e*P P 12 08 46.9 +0.4
comp=Z,11nm,0.8s
MCK McKinley 29.26 45 *e*P P 12 08 46.9 +0.4
MCK pmax pmax
comp=Z,11nm,0.8s
RND Reindeer 29.30 46 *e*P P 12 08 47.9 +1.0
comp=Z,18nm,1.1s
RND Reindeer 29.30 46 *e*P P 12 08 47.9 +1.0
RND pmax pmax
comp=Z,19nm,1.1s
TOLK Toolik Lake Re 29.42 35 P **P 12 08 47.9 0.0**
baz=261,SNR=8.9
TOLK Toolik Lake Re 29.42 35 *e*P P 12 08 48.7 +0.8
comp=Z,9.8nm,0.6s
MDM Murphy Dome 29.59 43 *e*P P 12 08 50.1 +0.8
comp=Z,8.8nm,0.9s
SML Sawmill 29.60 49 *e*P P 12 08 50.8 +1.3
comp=Z,29nm,0.9s
SML Sawmill 29.60 49 *e*P P 12 08 50.8 +1.3
SML pmax pmax
comp=Z,29nm,0.9s
WRH Wood River Hil 29.64 44 *e*P P 12 08 51.2 +1.4
comp=Z,14nm,1.0s
COLA College 29.75 43 *e*P P 12 08 52.3 +1.6
comp=Z,19nm,0.9s
COLA College 29.75 43 *e*P P 12 08 52.3 +1.6
COLA pmax pmax
comp=Z,19nm,0.9s
CCB Clear Creek Bu 29.76 44 *e*P P 12 08 51.9 +1.1
comp=Z,9.5nm,0.8s
DHY Denali Highway 29.98 47 *e*P P 12 08 54.6 +1.6
comp=Z,25nm,1.5s
SCM Sheep Creek Mo 30.07 49 *e*P P 12 08 57.6 +3.8
comp=Z,23nm,0.9s
SCM Sheep Creek Mo 30.07 49 *e*P P 12 08 57.6 +3.8
SCM pmax pmax
comp=Z,23nm,0.9s
HDA Harding Lake 30.13 44 *e*P P 12 08 55.1 +1.0
comp=Z,7.7nm,0.8s
IL1 Eielson Array 30.16 43 *e*P P 12 08 54.7 +0.3
ILAR Eielson Array 30.16 43 P **P 12 08 55.0 +0.7**
comp=Z,7.1nm,0.8s,baz=260,slow=7.8,SNR=90
ILAR PcP **PcP 12 11 54.1 -0.9**
comp=Z,2.3nm,0.9s,baz=272,slow=3.2,SNR=5.9
ILB Eielson Array 30.16 43 *e*P P 12 08 55.1 +0.7
PAX Paxson 30.85 47 *e*P P 12 09 07.3 +6.6
comp=Z,5.1nm,0.8s
PAX Paxson 30.85 47 *e*P P 12 09 07.3 +6.7
PAX pmax pmax
comp=Z,5.0nm,0.8s
RIDG Independ'e Rid 31.08 45 *e*P P 12 09 02.9 +0.3
comp=Z,10nm,1.0s
SCRK Sand Creek 31.45 45 *e*P P 12 09 05.8 -0.1
comp=Z,12nm,0.8s
BMRM Bremner River 31.48 51 *e*P P 12 09 12.8 +6.8
comp=Z,28nm,1.1s
BJI Beijing 31.92 266 P **P 12 09 08.4 -1.7**
BJI S **S 12 14 26.2 +6.5**
BJI pmax pmax
comp=Z,14nm,0.6s
BJI LR LR
comp=Z,3μm,14.5s
BJI LR LR
comp=Z,2μm,16.1s
BJI LR LR
comp=Z,3μm,19.0s
BJT Baijiatuau 31.94 266 *e*P P 12 09 08.8 -1.5
comp=Z,18nm,0.6s
BJT Baijiatuau 31.94 266 *e*P P 12 09 08.8 -1.5
BJT pmax pmax
comp=Z,18nm,0.6s
CRQM Cirque 32.22 51 *e*P P 12 09 17.4 +4.7
comp=Z,17nm,0.8s
H11N2 WAKE ISLAND Hy 32.24 167 T T 12 43 29.0
baz=350,slow=76,SNR=306
H11N3 WAKE ISLAND Hy 32.26 167 T T 12 43 29.4
baz=350,slow=76,SNR=511
H11N1 WAKE ISLAND Hy 32.26 167 T T 12 43 29.3
baz=350,slow=76,SNR=410
EGAK Eagle 32.61 43 *e*P P 12 09 15.7 -0.3
comp=Z,23nm,0.8s
H11S1 WAKE ISLAND Hy 33.42 168 T T 12 44 50.6
baz=351,slow=76,SNR=52
H11S3 WAKE ISLAND Hy 33.43 168 T T 12 45 01.3
baz=351,slow=76,SNR=65
H11S2 WAKE ISLAND Hy 33.44 168 T T 12 44 53.2
baz=351,slow=76,SNR=36
DAWY Dawson 33.45 44 *e*P P 12 09 24.7 +1.4
comp=Z,6.8nm,0.9s
IRK Irkutsk 33.45 293 *e*P P 12 09 21.4 -2.0
IRK pmax pmax
comp=Z,52nm,1.4s
ULN Ulaanbaatar 33.57 285 *e*P P 12 09 23.4 -1.4
comp=Z,19nm,0.9s
ULN Ulaanbaatar 33.57 285 P **P 12 09 23.7 -1.1**
SNR=12
ULN Ulaanbaatar 33.57 285 P **P 12 09 23.7 -1.1**
SNR=12
ULN Ulaanbaatar 33.57 285*c i*P P 12 09 22.6 -2.1
ULN pmax pmax
comp=Z,24nm,1.0s
TIA Tai'an 33.70 260 P **P 12 09 24.3 -1.4**
TIA pmax pmax
comp=Z,22nm,1.0s
SONA1 Songino Array 33.97 285 *e*P P 12 09 26.3 -1.9
SONM Songino Array 33.98 285 P **P 12 09 25.9 -2.4**
comp=Z,7.3nm,0.7s,baz=46,slow=5.2,SNR=14
SONM PcP **PcP 12 12 06.1 +0.2**
comp=Z,4.9nm,0.7s,baz=91,slow=1.7,SNR=5.9
SONM LR LR 12 24 45.9
comp=Z,3μm,18.3s,baz=64,slow=39
TLY Talaya 34.02 293 P **P 12 09 25.7 -2.7**
comp=Z,28nm,0.9s,baz=51,slow=5.7,SNR=8.9
TLY LR LR 12 24 39.4
comp=Z,684nm,18.7s,baz=55,slow=39
TLY Talaya 34.02 293 *e*P P 12 09 25.9 -2.4
comp=Z,40nm,1.0s
TLY Talaya 34.02 293 P **P 12 09 28.2 -0.1**
SNR=8.9
TLY Talaya 34.02 293 P **P 12 09 28.2 -0.1**
SNR=8.9
TLY Talaya 34.02 293 *e*P P 12 09 27.7 -0.7
TLY *e* 12 10 47.8
TLY *e*SS SS 12 17 17.8 -1.5
TLY pmax pmax
comp=Z,58nm,1.3s
TLY MLR MLR
comp=Z,655nm,12.0s
JOW Kunigami 34.16 236 P **P 12 09 28.6 -1.2**
comp=Z,45nm,0.9s,baz=331,slow=3.9,SNR=8.2
JOW Kunigami 34.16 236 *e*P P 12 09 30.1 +0.4
comp=Z,58nm,0.9s
HHC Hu-ho-hao-te 34.34 271 *e*P P 12 09 30.7 -0.7
HHC sP pP 12 09 40.6 +2.1
HHC PP **PnPn 12 10 45.4 -0.5**
HHC S **S 12 14 55.1 -2.3**
HHC sS pS 12 15 07.2 +1.7
HHC SS **SnSn 12 17 03.8 -3.7**
HHC pmax pmax
comp=Z,17nm,0.7s
HHC pmax pmax
comp=Z,55nm,7.0s
HHC LR LR
comp=Z,480nm,14.7s
HHC LR LR
comp=Z,950nm,13.8s
HHC LR LR
comp=Z,1μm,14.7s
ZAK Zakamensk 34.74 291 *e*P P 12 09 33.2 -1.6
ZAK pmax pmax
comp=Z,31nm,1.1s
SSE Sheshan 34.78 249 P **P 12 09 35.1 -0.1**
SSE S **S 12 15 07.4 +3.2**
SSE pmax pmax
comp=Z,27nm,0.7s
SSE pmax pmax
comp=Z,110nm,8.4s
SSE LR LR
comp=Z,320nm,16.3s
SSE LR LR
comp=Z,350nm,16.3s
INK Inuvik 35.31 36 P **P 12 09 40.3 +0.9**
comp=Z,21nm,0.9s,baz=282,slow=7.5,SNR=34
INK Inuvik 35.31 36 *e*P P 12 09 40.2 +0.9
comp=Z,23nm,0.8s
INK *e*pP **P 12 09 43.8 +4.5**
NJ2 Nanjing 35.47 253 *e*P P 12 09 41.0 -0.1
NJ2 S **S 12 15 20.3 +5.5**
NJ2 pmax pmax
comp=Z,37nm,0.9s
NJ2 pmax pmax
comp=Z,210nm,3.7s
NJ2 LR LR
comp=Z,1μm,18.4s
NJ2 LR LR
comp=Z,820nm,14.6s
NJ2 LR LR
comp=Z,2μm,14.6s
MOY Mondy 35.55 294 *e*P P 12 09 41.0 -0.7
MOY pmax pmax
comp=Z,60nm,1.1s
TIY Taiyuan 35.65 266 *e*P P 12 09 42.3 -0.4
TIY PP **PnPn 12 11 02.0 -0.3**
TIY pmax pmax
comp=Z,49nm,0.5s
TIY LR LR
comp=Z,400nm,12.6s
TIY LR LR
comp=Z,850nm,13.9s
TIY LR LR
comp=Z,890nm,14.2s
SKAG Skagway 36.32 51 *e*P P 12 09 51.4 +3.4
comp=Z,29nm,1.3s
NRIK Noril'sk 37.02 326 P **P 12 09 52.3 -1.7**
comp=Z,18nm,0.8s,baz=94,slow=10,SNR=21
NRIK LR LR 12 26 36.6
comp=Z,2μm,18.5s,baz=60,slow=39
JIS Juneau Island 37.15 53 *e*P P 12 10 00.8 +5.7
comp=Z,32nm,1.1s
WRAK Wrangell Islan 38.85 55 *e*P P 12 10 13.5 +4.1
comp=Z,20nm,1.1s
DLBC Dease Lake 39.25 52 *e*P P 12 10 14.0 +1.1
comp=Z,11nm,1.0s
DLBC *e*pP **pP 12 10 21.2 +1.0**
WHN Wuhan 39.25 255 ⇓P **P 12 10 12.5 -0.6**
WHN S **S 12 16 12.1 -0.1**
WHN pmax pmax
comp=Z,68nm,0.8s
WHN LR LR
comp=Z,710nm,12.5s
WHN LR LR
comp=Z,2μm,16.0s
WHN LR LR
comp=Z,3μm,14.6s
GUMO Guam 39.66 203 LR LR 12 29 53.1
comp=Z,210nm,18.2s,baz=21,slow=41
HVS Khovu-Aksy 39.90 296⇑*e*P P 12 10 17.3 -1.1
HVS pmax pmax
comp=Z,31nm,1.1s
XAN Xi'an 40.19 264 P **P 12 10 19.1 -1.9**
XAN pP pP 12 10 25.0 -3.2
XAN sP sP 12 10 29.6 -1.5
XAN pmax pmax
comp=Z,29nm,1.1s
XAN pmax pmax
comp=Z,72nm,3.8s
XAN LR LR
comp=Z,1μm,16.5s
XAN LR LR
comp=Z,1μm,16.9s
XAN LR LR
comp=Z,1μm,18.6s
QZH Quanzhou 40.93 245 *e*P P 12 10 28.1 +1.1
QZH S **S 12 16 41.3 +4.0**
QZH LR LR
comp=Z,650nm,14.8s
QZH LR LR
comp=Z,170nm,5.2s
QZH LR LR
comp=Z,620nm,13.3s
LZH Lanzhou 42.03 271 ⇑P **P 12 10 35.7 -0.6**
LZH pP pP 12 10 43.8 +0.3
LZH sP sP 12 10 46.5 +0.1
LZH PP **PP 12 12 15.4 +1.9**
LZH *e*S **S 12 16 53.9 0.0**
LZH sS pS 12 17 01.5 -0.8
LZH SS **SS 12 19 53.4 -7.8**
LZH pmax pmax
comp=Z,110nm,1.0s
LZH pmax pmax
comp=Z,430nm,4.6s
LZH LR LR
comp=Z,3μm,14.6s
LZH LR LR
comp=Z,4μm,14.6s
LZH LR LR
comp=Z,4μm,17.9s
ENH Enshi 42.41 260 *e*P P 12 10 38.5 -0.8
comp=Z,79nm,0.9s
GTA Gaotai 42.49 278 ⇑P **P 12 10 38.8 -1.1**
GTA pP pP 12 10 44.1 -3.1
GTA sP sP 12 10 47.0 -3.1
GTA PP **PP 12 12 20.5 +2.1**
GTA PcP **PcP 12 12 32.2 -0.1**
GTA S **S 12 16 59.1 -1.4**
GTA SS **SS 12 20 02.5 -7.5**
GTA pmax pmax
comp=Z,31nm,1.1s
GTA pmax pmax
comp=Z,130nm,5.8s
GTA LR LR
comp=Z,2μm,16.1s
GTA LR LR
comp=Z,2μm,13.4s
GTA LR LR
comp=Z,3μm,13.7s
ZAA0 Zalesovo Array 43.38 304 *e*P P 12 10 44.0 -2.8
comp=Z,10nm,0.8s
ZALV Zalesovo Beam 43.38 304 P **P 12 10 43.9 -2.8**
comp=Z,10nm,0.7s,baz=61,slow=6.3,SNR=40
ZALV PcP **PcP 12 12 33.5 -1.4**
comp=Z,9.7nm,0.9s,baz=64,slow=3.4,SNR=10
ZALV LR LR 12 30 06.9
comp=Z,2μm,18.7s,baz=69,slow=38
NVS Novosibirsk 43.76 306 ⇓*i*P **P 12 10 47.9 -1.9**
NVS *e* 12 12 31.6
NVS pmax pmax
comp=Z,78nm,1.0s
NVS pmax pmax
comp=N,16nm,0.9s
NVS pmax pmax
comp=E,38nm,0.9s
YKW3 Yellowknife Ar 44.51 41 *e*P P 12 10 57.1 +1.5
comp=E,9.7nm,1.0s
YKA Yellowknife Ar 44.54 41 P **P 12 10 57.0 +1.1**
comp=E,6.2nm,0.8s,baz=299,slow=8.0,SNR=29
YKA Yellowknife Ar 44.54 41 P **P 12 10 57.0 +1.1**
YKA Yellowknife Ar 44.54 41 P **P 12 10 57.0 +1.1**
RES Resolute Bay 44.90 21 *e*P P 12 10 59.3 +0.6
comp=E,12nm,0.8s
RES *e*pP **pP 12 11 05.3 -0.7**
RES *e*PcP **PcP 12 12 40.1 +0.5**
RES Resolute Bay 44.90 21 *e*P P 12 10 59.3 +0.6
RES *e* 12 12 40.1
RES pmax pmax
comp=Z,12nm,0.8s
CD2 Chengdu 45.52 265 P **P 12 11 03.5 -0.7**
CD2 sP pP 12 11 10.5 -1.0
CD2 PP **PP 12 12 49.3 -1.4**
CD2 S **S 12 17 43.4 -1.2**
CD2 sS pS 12 17 51.8 -1.4
CD2 pmax pmax
comp=Z,110nm,1.1s
CD2 pmax pmax
comp=Z,150nm,4.3s
CD2 LR LR
comp=Z,1μm,16.8s
CD2 LR LR
comp=Z,1μm,15.6s
GYA Guiyang 46.87 259 ⇑*i*P **P 12 11 14.1 -0.8**
GYA pP pP 12 11 22.8 +0.6
GYA PP **PP 12 13 05.0 -0.2**
GYA ScP **ScP 12 16 41.2 +1.7**
GYA S **S 12 18 04.5 +0.2**
GYA SS **SS 12 21 23.2 -7.6**
GYA pmax pmax
comp=Z,110nm,0.9s
GYA pmax pmax
comp=Z,130nm,5.2s
GYA LR LR
comp=Z,540nm,17.6s
GYA LR LR
comp=Z,500nm,18.0s
GYA LR LR
comp=Z,520nm,17.8s
WMQ Urumqi 47.21 290 P **P 12 11 16.7 -0.7**
WMQ pP pP 12 11 23.5 -1.2
WMQ sP sP 12 11 28.5 +0.9
WMQ PP **PP 12 13 09.6 +1.4**
WMQ pmax pmax
comp=Z,150nm,0.9s
WMQ pmax pmax
comp=Z,490nm,3.6s
WMQ LR LR
comp=Z,1μm,14.1s
WMQ LR LR
comp=Z,4μm,15.5s
WMQ LR LR
comp=Z,2μm,16.7s
A04D Lummi Island 47.69 61 P **P 12 11 21.2 +0.3**
baz=305
B05A Bryant 48.28 61 P **P 12 11 25.9 +0.4**
baz=305
KURK Kurchatov 48.31 303 *e*P P 12 11 23.2 -2.5
comp=Z,74nm,0.8s
KURK PcP **PcP 12 12 52.3 +0.2**
KURK Kurchatov 48.31 303 P **P 12 11 23.6 -2.1**
SNR=36
KURK Kurchatov 48.31 303 P **P 12 11 23.6 -2.1**
SNR=36
KURK Kurchatov 48.31 303*c i*P P 12 11 23.1 -2.5
KURK pmax pmax
comp=Z,73nm,0.9s
KBS Kingsbay 48.39 352 *e*P P 12 11 26.6 +0.6
comp=Z,111nm,0.9s
KBS Kingsbay 48.39 352 *e*P P 12 11 26.6 +0.6
KBS pmax pmax
comp=Z,111nm,0.9s
KURBB Kurchatov Arra 48.41 303 P **P 12 11 24.2 -2.3**
comp=Z,42nm,0.8s,baz=60,slow=7.8,SNR=175
KURBB PcP **PcP 12 12 52.3 -0.2**
comp=Z,8.9nm,0.8s,baz=56,slow=3.7,SNR=7.9
TGY Tagaytay City 48.51 234 LR LR 12 34 11.7
comp=Z,130nm,18.7s,baz=6.5,slow=39
TULEG Thule 48.55 14 *e*P P 12 11 27.5 +0.3
comp=Z,19nm,1.0s
MK31 Makanchi Array 48.57 297 *e*P P 12 11 25.5 -2.3
MK31 Makanchi Array 48.57 297 *e*P P 12 11 25.5 -2.3
MKAR Makanchi Array 48.57 297 P **P 12 11 25.5 -2.3**
comp=Z,10nm,0.5s,baz=55,slow=6.6,SNR=114
MKAR LR LR 12 32 53.5
comp=Z,835nm,18.9s,baz=49,slow=37
MKAR Makanchi Array 48.57 297 *e*P P 12 11 25.5 -2.3
comp=Z,132nm,0.6s
MKAR Makanchi Array 48.57 297 *e*P P 12 11 25.5 -2.3
MKAR pmax pmax
comp=Z,132nm,0.6s
MK01 Makanchi Array 48.58 297 *e*P P 12 11 25.3 -2.6
SPA0 Spitsbergen Ar 48.63 351 *e*P P 12 11 27.9 +0.1
SPITS Spitsbergen Ar 48.63 351 P **P 12 11 28.1 +0.2**
comp=Z,259nm,0.9s,baz=44,slow=8.5,SNR=322
SPITS LR LR 12 32 44.3
comp=Z,433nm,19.8s,baz=355,slow=37
MAKZ Makanchi 48.73 297 *e*P P 12 11 26.8 -2.3
comp=Z,19nm,0.8s
MAKZ Makanchi 48.73 297 *e*P P 12 11 26.8 -2.3
MAKZ pmax pmax
comp=Z,19nm,0.8s
HSPB Hornsund (broa 49.76 350 *e*P P 12 11 36.6 +0.2
KMI Kunming 50.25 261 P **P 12 11 40.8 -0.3**
KMI pP pP 12 11 46.1 -2.4
KMI sP sP 12 11 49.0 -2.4
KMI PP **PP 12 13 36.1 -0.3**
KMI S **S 12 18 55.5 +3.3**
KMI pmax pmax
comp=Z,84nm,1.2s
KMI pmax pmax
comp=Z,190nm,3.1s
KMI LR LR
comp=Z,950nm,18.6s
KMI LR LR
comp=Z,680nm,17.6s
KMI LR LR
comp=Z,830nm,14.9s
QIZ Qiongzhong 50.58 249 P **P 12 11 42.2 -1.2**
QIZ sP **pP 12 11 52.6 +1.9**
QIZ S **S 12 18 55.7 -0.7**
QIZ pmax pmax
comp=Z,150nm,4.1s
QIZ LR LR
comp=Z,540nm,17.2s
QIZ LR LR
comp=Z,550nm,17.1s
QIZ LR LR
comp=Z,520nm,13.7s
QIZ Qiongzhong 50.58 249 *e*P P 12 11 45.2 +1.8
comp=Z,78nm,1.1s
HAWA Hanford 50.80 62 *e*P P 12 11 46.9 +2.2
comp=Z,8.7nm,0.8s
BVA0 Borovoye Array 51.13 309 *i*P P 12 11 44.3 -2.8

BVA0 pmax pmax
comp=Z,50nm,0.8s
BVAR Borovoye Array 51.13 309 P P 12 11 44.7 -2.4
comp=Z,37nm,0.6s,baz=58,slow=8.9,SNR=263
BVAR PcP **PcP 12 13 02.3 -0.1**
comp=Z,6.4nm,0.7s,baz=46,slow=4.2,SNR=2.9
BVAR LR LR 12 35 32.4
comp=Z,2μm,18.1s,baz=60,slow=38
BRVK Borovoye 51.16 309 *e*P **P 12 11 44.9 -2.5**
comp=Z,58nm,0.8s
BRVK *e*PcP **PcP 12 13 01.5 -1.0**
BRVK Borovoye 51.16 309 P **P 12 11 45.2 -2.1**
SNR=28
BRVK Borovoye 51.16 309 P **P 12 11 45.2 -2.1**
SNR=28
BRVK Borovoye 51.16 309*c i*P **P 12 11 44.7 -2.6**
BRVK pmax pmax
comp=Z,57nm,0.9s
J05D Fort Rock, OR 51.75 66 P **P 12 11 52.2 +0.1**
baz=309
KULLO Kullorsuaq 51.79 12⇑*i*P **P 12 11 51.5 -0.2**
comp=Z,18nm,0.7s
KULLO Kullorsuaq 51.79 12⇑*i*P **P 12 11 51.5 -0.2**
KULLO pmax pmax
comp=Z,19nm,0.7s
YBH Yreka Blue Hor 51.87 68 P **P 12 11 55.8 +2.9**
comp=Z,2.9nm,0.9s,baz=284,slow=10,SNR=3.5
YBH LR LR 12 31 07.6
comp=Z,236nm,20.4s,baz=313,slow=33
DAG Danmarks Havn 51.98 359⇑*i*P **P 12 11 52.9 -0.2**
comp=Z,51nm,0.9s
DAG Danmarks Havn 51.98 359⇑*i*P **P 12 11 52.9 -0.2**
DAG pmax pmax
comp=Z,51nm,0.9s
WALA Waterton Lakes 52.18 56 *e*P P 12 12 01.8 +6.6
comp=Z,9.7nm,1.1s
PDGK Podgornoye 52.24 295 P **P 12 11 53.8 -2.0**
PDGK pmax pmax
comp=Z,27nm,1.0s
OTUK Ortayu 53.07 303 P **P 12 11 59.6 -2.1**
OTUK pmax pmax
comp=Z,66nm,1.3s
MOD Modoc Plateau 53.16 67 *e*P **P 12 12 05.4 +2.8**
comp=Z,17nm,1.1s
SVE Sverdlovsk 53.22 317*de*P P 12 11 56.9 -5.6
SVE pmax pmax
comp=Z,58nm,1.3s
SVE MLR MLR
comp=Z,2μm,16.0s
O03D Paynes Creek 53.32 69 P **P 12 12 04.6 +1.0**
baz=311
MSO Missoula 53.55 58 P **P 12 12 05.5 +0.1**
baz=310
MSO Missoula 53.55 58 *e*P **P 12 12 08.2 +2.8**
comp=Z,7.2nm,1.1s
WVOR Wild Horse Val 53.77 65 *e*P **P 12 12 08.7 +1.7**
comp=Z,20nm,1.1s
WVOR *e*PcP **PcP 12 13 11.4 -1.3**
WVOR *e*PP **PP 12 14 10.2 +2.4**
WVOR Wild Horse Val 53.77 65 *e*P **P 12 12 08.7 +1.7**
WVOR *e* 12 13 11.4
WVOR *e* 12 14 10.2
WVOR pmax pmax
comp=Z,20nm,1.1s
ORV Oroville 53.98 70 *e*P **P 12 12 10.5 +2.1**
comp=Z,6.1nm,1.0s
ORV Oroville 53.98 70 *e*P **P 12 12 10.5 +2.1**
ORV pmax pmax
comp=Z,6.0nm,1.0s
HAMF Hammerfest 54.09 343 *e*P **P 12 12 07.9 -0.9**
KEV Kevo 54.21 342 *e*P **P 12 12 08.4 -1.2**
comp=Z,33nm,0.8s
KEV Kevo 54.21 342 *e*P **P 12 12 08.4 -1.2**
KEV pmax pmax
comp=Z,33nm,0.8s
LSA Lhasa 54.22 274 *e*P **P 12 12 11.3 +0.5**
comp=Z,22nm,0.8s
LSA Lhasa 54.22 274 P **P 12 12 11.0 +0.1**
LSA Lhasa 54.22 274 *e*P **P 12 12 11.3 +0.5**
LSA pmax pmax
comp=Z,22nm,0.8s
ARU Arti 54.35 318 *e*P **P 12 12 08.0 -2.8**
comp=Z,38nm,0.8s
ARU Arti 54.35 318*c i*P **P 12 12 08.5 -2.3**
ARU 12 13 11.0
ARU 12 14 12.4
ARU PPP PPP 12 15 18.9
ARU S **S 12 19 47.7 +0.6**
ARU SS **SS 12 23 27.9 -0.7**
ARU pmax pmax
comp=Z,71nm,1.2s
ARU MLR MLR
comp=Z,2μm,16.0s
FFC Flin Flon 54.35 45 *e*P **P 12 12 12.8 +1.9**
comp=Z,6.2nm,0.8s
FFC Flin Flon 54.35 45 *e*P **P 12 12 12.8 +1.9**
FFC pmax pmax
comp=Z,6.0nm,0.8s
BEKR Beckworth 54.44 69 *e*P **P 12 12 14.6 +2.6**
comp=Z,9.1nm,1.0s
APA Apatity 54.59 338⇑*i*P **P 12 12 10.4 -2.0**
APA pmax pmax
comp=Z,21nm,0.8s
ARCES ARCESS Array B 54.69 342 P **P 12 12 12.4 -0.7**
comp=Z,52nm,0.8s,baz=38,slow=8.3,SNR=97
ARCES LR LR 12 39 50.6
comp=Z,564nm,18.1s,baz=25,slow=41
ARCES ARCESS Array B 54.69 342 *e*P **P 12 12 12.2 -1.0**
ARE0 ARCESS Array S 54.69 342 *e*P **P 12 12 12.9 -0.2**
comp=Z,71nm,0.9s
TKM2 Tokmak 2 54.70 296 P **P 12 12 12.5 -1.3**
SNR=10
FCC Fort Churchill 54.91 38 *e*P **P 12 12 15.4 +0.6**
comp=Z,20nm,0.8s
FCC Fort Churchill 54.91 38 *e*P **P 12 12 15.4 +0.6**
FCC pmax pmax
comp=Z,20nm,0.8s
EGMT Eagleton 54.98 55 *e*P **P 12 12 17.9 +2.3**
comp=Z,28nm,1.5s
LRM Limekiln Ridge 54.99 59 *e*P **P 12 12 19.7 +3.8**
USP Ospenovka 55.09 297 P **P 12 12 15.0 -1.5**
SNR=16
CHMS Chumysh 55.12 297 P **P 12 12 15.2 -1.5**
SNR=6.8
KBK Karagaybulak 55.23 297 P **P 12 12 16.3 -1.4**
SNR=8.4
FRU Bishkek 55.30 297 *e*P **P 12 12 14.0 -4.0**
FRU MLR MLR
comp=E,2μm,14.0s
NONG Nongkai 55.31 255 P **P 12 12 19.2 +1.0**
comp=E,73nm,1.0s
PNTR Pine Nut 55.39 69 *e*P **P 12 12 21.9 +3.0**
comp=E,16nm,1.1s
HLID Hailey 55.40 62 *e*P **P 12 12 21.8 +2.9**
comp=E,7.0nm,1.1s
MCMT McKenzie Canyo 55.42 60 *e*P **P 12 12 21.9 +2.8**
AAK Ala-Archa 55.50 297 P **P 12 12 18.1 -1.5**
comp=E,12nm,0.8s,baz=98,slow=3.3,SNR=23
AAK Ala-Archa 55.50 297 P **P 12 12 18.2 -1.4**
SNR=9.5
AAK Ala-Archa 55.50 297 *e*P **P 12 12 18.2 -1.4**
comp=E,20nm,1.0s
AAK Ala-Archa 55.50 297 P **P 12 12 17.9 -1.7**
SNR=8.3
AAK Ala-Archa 55.50 297 P **P 12 12 17.9 -1.7**
SNR=8.3
AAK Ala-Archa 55.50 297 *i* P **P 12 12 18.0 -1.5**
SNR=9.8
AAK Ala-Archa 55.50 297*c i*P **P 12 12 17.9 -1.7**
AAK pmax pmax
comp=Z,16nm,0.9s
SUMG Summit 55.56 6⇑*i*P **P 12 12 20.3 +0.5**
comp=Z,61nm,1.3s
SUMG Summit 55.56 6 *e*P **P 12 12 20.2 +0.3**
comp=Z,38nm,0.9s
SUMG Summit 55.56 6⇑*i*P **P 12 12 20.3 +0.5**
SUMG pmax pmax
comp=Z,61nm,1.3s
BOZ Bozeman (W) 55.58 58 P **P 12 12 20.2 +0.2**
baz=311
PRGR Permogore 55.61 328 *e*P **P 12 12 18.1 -1.7**
PRGR *e* 12 14 21.3
PRGR pmax pmax
comp=Z,40nm,0.6s
CMB Columbia Colle 55.63 70 *e*P **P 12 12 23.6 +3.2**
comp=Z,12nm,1.2s
CMB pmax pmax
comp=Z,12nm,1.2s
SKNT Sakolnakorn 55.65 253 P **P 12 12 20.5 -0.2**
comp=Z,73nm,1.1s
YERR Yerington 55.67 69 *e*P **P 12 12 23.7 +2.8**
comp=Z,12nm,1.0s
TRO Tromso 55.79 344 *e*P **P 12 12 20.4 -0.6**
WAKR Walker 55.88 69 *e*P **P 12 12 25.5 +3.1**
comp=Z,14nm,1.1s
BMN Battle Mountai 55.88 66 *e*P **P 12 12 24.7 +2.4**
comp=Z,14nm,1.2s
BMN Battle Mountai 55.88 66 *e*P **P 12 12 24.7 +2.4**
BMN pmax pmax
comp=Z,14nm,1.2s
EKS2 Erkin-Say 55.88 297 P **P 12 12 21.3 -1.0**
SNR=11
TMCR Tamitsa 56.04 333 *e*P **P 12 12 21.7 -1.2**
TMCR pmax pmax
comp=Z,26nm,0.6s
SGF Sodankyl 56.24 340 P **P 12 12 23.9 -0.4**
SGF pmax pmax
comp=Z,121nm,1.1s
AML Almayashu 56.28 297 P **P 12 12 24.2 -1.3**
SNR=5.8
KVN Kaiserville 56.29 68 *e*P **P 12 12 27.9 +2.6**
comp=Z,14nm,1.0s
KVN Kaiserville 56.29 68 *e*P **P 12 12 28.0 +2.6**
KVN pmax pmax
comp=Z,14nm,1.0s
PAYA Payao 56.31 259 P **P 12 12 26.8 +1.4**
comp=Z,28nm,0.8s,comp=Z,229nm
RYN Ryan 56.33 69 *e*P **P 12 12 28.4 +2.8**
comp=Z,11nm,0.9s
CMAI Chiengmai2 56.38 260 P **P 12 12 26.9 +0.8**
comp=Z,356nm,1.1s,comp=Z,26μm
GCMT Greycliff 56.48 57 *e*P P 12 12 31.2 +4.7
YHH Holmes Hill 56.52 59 *e*P **P 12 12 30.5 +3.5**
comp=Z,4.9nm,0.8s
NV01 Mina Array Sit 56.59 69 *e*P **P 12 12 29.9 +2.4**
NVAR Mina Array Bea 56.59 69 P **P 12 12 27.9 +0.4**
comp=Z,1.9nm,0.8s,baz=290,slow=8.0,SNR=9.2
NVAR LR LR 12 34 58.2
comp=Z,55nm,21.8s,baz=76,slow=34
SHL Shillong 56.69 270⇑*i*P **P 12 12 27.0 -1.3**
SHL Shillong 56.69 270 *e*P **P 12 12 27.9 -0.4**
comp=Z,60nm,0.9s
SHL Shillong 56.69 270 *e*P **P 12 12 27.9 -0.4**
SHL pmax pmax
comp=Z,60nm,0.9s
MNAS Manas 56.70 298 P **P 12 12 25.9 -2.3**
MNAS pmax pmax
comp=Z,9.0nm,0.8s
KSH Kashi 56.73 293 P **P 12 12 31.1 +2.7**
KSH sP sP 12 12 43.9 +5.2
KSH PP **PP 12 14 39.0 +4.7**
KSH S **S 12 20 23.4 +3.8**
KSH sS sS 12 20 37.4 +5.5
KSH SS **SS 12 24 13.1 +6.1**
KSH pmax pmax
comp=Z,37nm,1.0s
KSH pmax pmax
comp=Z,320nm,4.2s
KSH LR LR
comp=Z,390nm,6.1s
KSH LR LR
comp=Z,810nm,9.8s
KSH LR LR
comp=Z,930nm,18.5s
YFT Old Faithful 56.75 59 *e*P P 12 12 33.6 +5.0
comp=Z,11nm,0.9s
H17A Grant Village 56.93 59 P **P 12 12 30.3 +0.4**
baz=312
IMW Indian Meadow 57.07 59 *e*P **P 12 12 34.4 +3.5**
comp=Z,9.7nm,1.0s
LAMP Lampang 57.09 258 P **P 12 12 32.0 +1.0**
comp=Z,20nm,0.8s,comp=Z,162nm
RLMT Red Lodge 57.14 57 P **P 12 12 31.6 +0.3**
baz=312
RLMT Red Lodge 57.14 57 *e*P **P 12 12 32.9 +1.6**
comp=Z,13nm,1.1s
RLMT *e*pP P 12 12 36.6 +5.3
FXWY Fox Creek 57.19 60 *e*P **P 12 12 34.4 +2.7**
comp=Z,4.3nm,0.8s
CHTO Chiang Mai 57.29 259 P **P 12 12 33.1 +0.7**
comp=Z,338nm,1.1s,comp=Z,3μm
CHTO Chiang Mai 57.29 259 P **P 12 12 33.3 +0.9**
SNR=11
CHTO Chiang Mai 57.29 259 P **P 12 12 33.3 +0.9**
SNR=11
TPAW Teton Pass 57.33 60 *e*P **P 12 12 37.2 +4.5**
comp=Z,7.8nm,1.1s
MYLDM Lahad Datu 57.38 231 *e*P **P 12 12 35.1 +2.0**
comp=Z,32nm,1.2s
KK31 Karatay Array 57.38 300 *e*P **P 12 12 31.1 -1.7**
KK31 Karatay Array 57.38 300 *e*P **P 12 12 31.1 -1.7**
LOHW Long Hollow 57.44 60 *e*P **P 12 12 37.2 +3.7**
comp=Z,7.4nm,1.1s
SNOW Snow King Moun 57.46 60 *e*P P 12 12 38.6 +4.9
comp=Z,13nm,1.2s
REDW Red Top Meadow 57.47 60 *e*P **P 12 12 37.9 +4.2**
comp=Z,11nm,1.0s
ILULI Ilulissat 57.48 12 *i* P **P 12 12 32.2 -0.8**
comp=Z,14nm,0.8s
ILULI Ilulissat 57.48 12 *i* P **P 12 12 32.2 -0.8**
ILULI pmax pmax
comp=Z,14nm,0.8s
CM31 Chiang Mai Arr 57.56 259 *e*P **P 12 12 35.7 +1.4**
CMAR Chiang Mai Arr 57.56 259 P **P 12 12 35.4 +1.1**
comp=Z,24nm,0.8s,baz=29,slow=7.0,SNR=111
CMAR LR LR 12 39 45.0
comp=Z,336nm,19.4s,baz=47,slow=39
CM01 Chiang Mai Arr 57.58 259 *e*P **P 12 12 33.5 -0.9**
PHIT Phitsanulok 57.63 256 P **P 12 12 36.3 +1.5**
comp=Z,40nm,0.9s,comp=Z,298nm
CHAI Chaiyaphum 57.67 254 P **P 12 12 35.8 +0.7**
comp=Z,25nm,1.1s,comp=Z,193nm
AHID Auburn Hatcher 57.74 61 *e*P **P 12 12 38.2 +2.6**
comp=Z,14nm,0.9s
PBKT Sadao Pong 57.77 255 P **P 12 12 35.9 +0.1**
comp=Z,22nm,1.3s
PBKT Sadao Pong 57.77 255 *e*P **P 12 12 36.1 +0.3**
comp=Z,29nm,1.3s
VES Vestal, Richgr 57.88 72 P **P 12 12 37.4 +1.1**
baz=314
LOF Lofoten 58.01 346 *e*P **P 12 12 35.6 -1.1**
TAPN Taplejung 58.02 275 *e*P **P 12 12 37.6 -0.2**
comp=Z,85nm,0.8s
CWC Cottonwood Cre 58.06 70 P **P 12 12 38.9 +1.0**
baz=314
GRAC Grapevine Rang 58.10 69 P **P 12 12 39.1 +1.1**
baz=314
KLMR Klimovskoe 58.16 330 *e*P **P 12 12 35.8 -2.1**
KLMR pmax pmax
comp=Z,41nm,0.9s
KLMR MLR MLR
comp=Z,3μm,19.0s
KLMR Klimovskoe 58.16 330 *e*P **P 12 12 35.8 -2.1**
KLMR AMP 12 12 38.9
comp=Z,41nm,0.9s
KLMR LQ LQ 12 36 10.1
KLMR LQ LQ 12 36 10.1
KLMR LR LR 12 38 12.4
KLMR AMP 12 41 25.1
comp=Z,3μm,18.7s
R11A Troy Canyon, C 58.22 67 P **P 12 12 40.5 +1.6**
baz=313
R11A Troy Canyon, C 58.22 67 *e*P **P 12 12 41.5 +2.6**
comp=Z,5.8nm,0.9s
HWUT Hardware Ranch 58.27 62 *e*P **P 12 12 42.0 +2.7**
comp=Z,5.3nm,0.9s
SCO Scoresbysund 58.30 1 *i* P **P 12 12 39.1 +0.3**
comp=Z,18nm,1.3s
SCO Scoresbysund 58.30 1 *e*P **P 12 12 39.4 +0.7**
comp=Z,10.0nm,0.9s
SCO Scoresbysund 58.30 1 *e*P **P 12 12 39.4 +0.7**
SCO pmax pmax
comp=Z,10.0nm,0.9s
OUL Oulu 58.37 339 P **P 12 12 38.8 -0.5**
OUL pmax pmax
comp=Z,151nm,1.0s
DUG Dugway, Tooele 58.53 64 P **P 12 12 42.7 +1.6**
baz=313
DUG Dugway, Tooele 58.53 64 *e*P **P 12 12 43.0 +1.9**
comp=Z,14nm,0.9s
DUG Dugway, Tooele 58.53 64 *e*P **P 12 12 43.0 +1.9**
DUG pmax pmax
comp=Z,14nm,0.9s
ODAN Odare 58.56 275 *e*P **P 12 12 41.4 -0.2**
comp=Z,40nm,0.5s
BW06 Boulder Array 58.57 60 P **P 12 12 42.8 +1.4**
baz=313
PD31 Pinedale Array 58.57 60 *e*P **P 12 12 43.8 +2.4**
PDAR Pinedale Array 58.57 60 P **P 12 12 42.3 +0.9**
comp=Z,3.2nm,0.8s,baz=311,slow=3.3,SNR=16
PDAR Pinedale Array 58.57 60 *e*P **P 12 12 42.5 +1.1**
AB31 Akbulak array 58.58 311 P **P 12 12 38.1 -3.0**
AB31 pmax pmax
comp=Z,40nm,1.0s
AKTO Aktyubinsk 58.66 313 P **P 12 12 39.3 -2.3**
comp=Z,12nm,0.8s,baz=48,slow=6.5,SNR=26
AKTO LR LR 12 40 29.9
comp=Z,2μm,19.1s,baz=38,slow=39
AKTO Aktyubinsk 58.66 313 *i* P **P 12 12 38.9 -2.7**
AKTO pmax pmax
comp=Z,25nm,1.0s
MPMC Manual Prospec 58.67 70 P **P 12 12 42.0 -0.2**
baz=314
JIRN Jiri 58.74 276 *e*P **P 12 12 42.1 -0.8**
comp=Z,104nm,0.7s
GUN Gumba 58.76 277 *e*P **P 12 12 42.3 -0.7**
comp=Z,75nm,0.6s
FURC Furnace Creek, 58.76 70 P **P 12 12 42.9 +0.5**
baz=314
TPNV Topopah Spring 58.79 69 P **P 12 12 44.1 +1.2**
baz=314
TPNV Topopah Spring 58.79 69 *e*P **P 12 12 46.1 +3.2**
comp=Z,9.9nm,0.9s
TPNV Topopah Spring 58.79 69 *e*P **P 12 12 46.1 +3.2**
TPNV pmax pmax
comp=Z,10.0nm,0.9s
RAMN Ramite 58.99 275 *e*P **P 12 12 44.0 -0.5**
SRAK Srakaew 59.12 253 P **P 12 12 44.2 -1.0**
comp=Z,257nm,0.9s,comp=Z,2μm
EDW2 Edwards Air Fo 59.19 72 P **P 12 12 46.3 +0.7**
baz=314
KKN Kakani 59.21 277 *e*P **P 12 12 45.6 -0.4**
comp=Z,83nm,0.5s
PKIN Phulchoki 59.29 277 *e*P **P 12 12 45.9 -0.7**
comp=Z,99nm,0.7s
DMN Daman 59.45 277 *e*P **P 12 12 47.5 -0.2**
comp=Z,140nm,0.8s
GKN Gorkha 59.46 278 *e*P **P 12 12 47.0 -0.7**
comp=Z,120nm,0.8s
KONS Konsvik 59.57 345 *e*P **P 12 12 47.3 -0.4**
SFJD Kangerlussuaq 59.62 13 P **P 12 12 46.9 -1.0**
comp=Z,9.1nm,0.8s,baz=356,slow=9.4,SNR=4.3
SFJD LR LR 12 41 54.8
comp=Z,624nm,18.1s,baz=346,slow=39
SFJD Kangerlussuaq 59.62 13 *i* P **P 12 12 47.3 -0.6**
comp=Z,9.7nm,0.8s
SFJD Kangerlussuaq 59.62 13 *e*P **P 12 12 47.8 -0.1**
comp=Z,15nm,1.1s
SFJD Kangerlussuaq 59.62 13 *i* P **P 12 12 47.3 -0.6**
SFJD pmax pmax
comp=Z,10.0nm,0.8s
SHPR Sheep Range 59.73 68 *e*P P 12 12 53.9 +4.5
comp=Z,7.7nm,1.2s
DANN Dangsing 59.76 278 *e*P **P 12 12 49.5 -0.4**
comp=Z,123nm,0.8s
BFSC Mount Baldy Ra 59.83 72 P **P 12 12 50.5 +0.4**
baz=315
MRSI Marisa 59.92 225 P **P 12 12 50.8 +0.1**
CHBT CHBT 59.94 251 P P 12 12 56.3 +5.5
comp=Z,538nm,1.0s,comp=Z,39μm
CCUT Cedar City 60.04 66 *e*P P 12 12 56.1 +4.5
comp=Z,7.4nm,1.1s
TMUT Trail Mountain 60.05 64 *e*P **P 12 12 54.9 +3.1**
comp=Z,8.9nm,0.9s
ULM Lac du Bonnet 60.13 46 P **P 12 12 53.0 +1.2**
comp=Z,5.5nm,1.0s,baz=311,slow=7.3,SNR=8.8
P17A Butcher Ranch, 60.19 63 *e*P **P 12 12 56.3 +3.7**
comp=Z,4.3nm,0.9s
HEC Hector,Ludlow 60.20 71 P **P 12 12 52.6 0.0**
baz=315
KOLN Koldanda 60.27 278 *e*P **P 12 12 52.7 -0.6**
comp=Z,66nm,0.7s
K22A Casper 60.27 58 P **P 12 12 53.1 0.0**
baz=315
PYUN Piuthan 60.41 279 *e*P **P 12 12 53.6 -0.7**
comp=Z,220nm,0.9s
LCMT Little Creek M 60.48 67 *e*P **P 12 12 57.3 +2.8**
comp=Z,12nm,1.1s
SANI Sanana 60.51 219 P **P 12 12 53.6 -1.1**
RSSD Black Hills 60.55 55 P **P 12 12 56.3 +1.3**
baz=315
RSSD Black Hills 60.55 55 *e*P **P 12 12 56.6 +1.6**
comp=Z,19nm,0.7s
RSSD Black Hills 60.55 55 *e*P **P 12 12 56.6 +1.6**
RSSD pmax pmax
comp=Z,19nm,0.7s
SRU San Rafael Swe 60.56 63 *e*P **P 12 12 58.1 +3.0**
comp=Z,11nm,1.0s
SRU San Rafael Swe 60.56 63 *e*P **P 12 12 58.1 +3.0**
SRU pmax pmax
comp=Z,11nm,1.0s
SRDT SRDT 60.61 255 P **P 12 12 57.7 +2.3**
comp=Z,36nm,1.8s,comp=Z,5μm
GMRC Granite Mounta 60.63 70 P **P 12 12 56.2 +0.6**
baz=315
B31A Greenbush Farm 60.63 48 P **P 12 12 56.1 +0.9**
baz=316
HNR Honiara 60.70 180 LR LR 12 36 09.9
comp=Z,239nm,21.1s,baz=358,slow=33
LDFC Landfair 60.75 70 *e*P **P 12 12 59.0 +2.6**
comp=Z,19nm,1.0s
A32A Rocking H Ranc 60.81 47 P **P 12 12 57.5 +1.1**
baz=316
BELC Belle Mtn. Jos 60.98 71 P **P 12 12 58.6 +0.6**
baz=315
C31A Landman Farms, 61.04 49 P **P 12 12 58.6 +0.5**
baz=316
O20A White River Ci 61.11 61 P **P 12 12 59.5 +0.7**
baz=315
B32A Ashes, Strandq 61.17 48 P **P 12 13 00.1 +1.2**
baz=317
APSI Ampana 61.29 224 P **P 12 12 59.5 -0.5**
A33A Warroad 61.30 47 P **P 12 13 00.2 +0.5**
baz=317
IRM Iron Mountain 61.37 70 P **P 12 13 02.2 +1.7**
baz=315
PHET Kaeng Krachan 61.42 254 P **P 12 13 02.9 +1.9**
comp=Z,38nm,0.9s,comp=Z,309nm
FIA1 FINESS Array S 61.44 337 *e*P **P 12 12 59.8 -0.7**
FINES FINESS Array B 61.44 337 P **P 12 12 60.0 -0.5**
comp=Z,46nm,0.8s,baz=39,slow=7.7,SNR=177
FINES LR LR 12 43 37.6
comp=Z,1μm,18.4s,baz=28,slow=40
FINES FINESS Array B 61.44 337 P **P 12 13 00.0 -0.5**
AGMN Agassiz Nation 61.55 47 P **P 12 13 01.7 +0.3**
baz=317
AGMN Agassiz Nation 61.55 47 *e*P **P 12 13 02.3 +0.9**
comp=Z,7.7nm,0.9s
PMG Port Moresby 61.62 194 LR LR 12 36 19.9
comp=Z,215nm,20.8s,baz=5.0,slow=33
PUL Pulkovo 61.75 334||*e*P **P 12 13 01.5 -1.1**
PUL pmax pmax
comp=Z,126nm,0.5s
N23A Red Feather La 61.82 59 *e*P P 12 13 08.4 +4.7
comp=Z,12nm,0.9s
B34A Aery, Baudette 61.96 47 P **P 12 13 04.9 +0.7**
baz=318
PV07 Paradox Valley 62.08 63 *e*P **P 12 13 08.7 +3.3**
comp=Z,7.1nm,1.0s
PV05 Paradox Valley 62.08 63 *e*P **P 12 13 08.8 +3.4**
comp=Z,25nm,0.9s
PV03 Paradox Valley 62.09 63 *e*P **P 12 13 08.7 +3.2**
comp=Z,9.3nm,0.9s
PV15 Paradox Valley 62.24 63 *e*P P 12 13 12.3 +5.7
comp=Z,25nm,1.1s
NIL Nilore 62.36 290 *e*P **P 12 13 06.4 -0.7**
comp=Z,300nm,0.9s
NIL Nilore 62.36 290 *e*P **P 12 13 06.4 -0.7**
NIL pmax pmax
comp=Z,300nm,0.9s
B35A Bob, Littlefor 62.47 46 P **P 12 13 07.5 -0.1**
baz=318,SNR=5.9
D34A Park Rapids 62.74 48 P **P 12 13 09.6 +0.1**
baz=318,SNR=6.6
ISCO Idaho Springs 62.77 60 *e*P **P 12 13 11.3 +1.1**
comp=Z,8.9nm,0.9s
ISCO *e*pP **pP 12 13 18.0 +0.3**
ISCO Idaho Springs 62.77 60 *e*P **P 12 13 11.3 +1.1**
ISCO pmax pmax

comp=Z,9.0nm,0.9s
MOS Moscow 62.81 327 *e*P **P 12 13 06.6 -3.1**
MOS *e* 12 13 20.9
MOS pmax pmax
comp=Z,57nm,1.1s
MOS MLR MLR
comp=Z,1μm,16.0s
C35A Jirik Farms, M 62.85 47 P **P 12 13 10.9 +0.7**
baz=318
SBUM Sibu 62.88 236 *e*P **P 12 13 11.3 +0.6**
comp=Z,31nm,0.7s
MVCO Mesa Verde 63.03 64 P **P 12 13 13.0 +1.2**
baz=316
MVCO Mesa Verde 63.03 64 *e*P **P 12 13 13.7 +1.9**
comp=Z,9.7nm,1.1s
D35A Remer 63.27 47 P **P 12 13 13.8 +0.8**
baz=318
C36A Pine Crest Far 63.32 46 P **P 12 13 13.8 +0.5**
baz=319
E35A Pequot Lakes 63.50 48 P **P 12 13 15.0 +0.5**
baz=318
G33A Ortonville 63.55 50 P **P 12 13 15.1 +0.2**
baz=318
H32A Carlson Farm, 63.57 51 P **P 12 13 15.8 +0.8**
baz=318
S22A 4UR Ranch, Cre 63.58 62 P **P 12 13 16.9 +1.4**
baz=316
S22A 4UR Ranch, Cre 63.58 62 *e*P **P 12 13 18.9 +3.4**
comp=Z,6.8nm,1.0s
D36A Goodland 63.61 47 P **P 12 13 15.9 +0.7**
baz=319
Q24A Divide 63.62 60 P **P 12 13 17.2 +1.4**
baz=316
C37A Embarrass 63.64 46 P **P 12 13 15.3 -0.1**
baz=319
OBN Obninsk 63.67 327 *i* P **P 12 13 12.2 -3.2**
OBN *i* 12 13 34.1
OBN pmax pmax
comp=Z,94nm,1.5s
EYMN Ely 63.78 45 P **P 12 13 16.2 -0.2**
baz=319,SNR=6.0
EYMN Ely 63.78 45 *e*P **P 12 13 17.1 +0.8**
comp=Z,9.8nm,0.9s
EYMN *e*pP **pP 12 13 21.1 -2.8**
W18A Petrified Fore 63.83 66 P **P 12 13 18.5 +1.4**
baz=316
VSU Vasula 63.84 335*c i*P **P 12 13 16.0 -0.5**
VSU pmax pmax
comp=Z,250nm,0.9s
OGNE Ogallala 63.85 57 *e*P **P 12 13 13.9 -3.1**
comp=Z,18nm,0.8s
D37A Cotton 63.95 46 P **P 12 13 17.3 -0.2**
baz=319
C38A Sawbill Land. 64.05 45 P **P 12 13 17.7 -0.4**
baz=319,SNR=6.1
E36A McGregor 64.06 47 P **P 12 13 18.1 -0.1**
baz=319,SNR=6.5
MOL Molde 64.12 346 *e*P **P 12 13 16.5 -1.7**
KBL Kabul 64.16 293 *e*P **P 12 13 17.1 -2.2**
comp=Z,26nm,0.9s
KBL Kabul 64.16 293 *e*P **P 12 13 17.1 -2.2**
KBL pmax pmax
comp=Z,26nm,0.9s
SDCO Great Sand Dun 64.31 61 P **P 12 13 20.3 0.0**
baz=317
SDCO Great Sand Dun 64.31 61 *e*P **P 12 13 23.7 +3.4**
comp=Z,10nm,1.5s
SDCO *e*pP **pP 12 13 27.6 -0.2**
DOMB Dombas 64.38 345 *e*P **P 12 13 20.0 -0.1**
F36A Milaca 64.42 48 P **P 12 13 21.1 +0.5**
baz=319
MTKI Muara Teweh, K 64.45 231 P P 12 13 34.5 +13
C39A Grand Marais 64.48 44 P **P 12 13 21.0 +0.1**
baz=320
ECSD EROS Data Cent 64.54 51 P **P 12 13 22.2 +0.8**
baz=318
ECSD EROS Data Cent 64.54 51 *e*P **P 12 13 22.1 +0.8**
comp=Z,11nm,0.9s
ECSD *e*pP **pP 12 13 26.6 -2.4**
H35A Sunnyside Ranc 64.68 49 P **P 12 13 23.3 +1.0**
baz=319
E38A The Farm, Brul 64.77 46 P **P 12 13 23.2 +0.4**
baz=320,SNR=7.2
SPSI Sidrap Palu 64.84 225 P **P 12 13 23.6 0.0**
NB2 NORSAR Subarra 64.96 344 P **P 12 13 23.0 -0.9**
comp=Z,55nm,0.8s,baz=22,slow=6.9
NB2 NORSAR Subarra 64.96 344 P **P 12 13 23.0 -0.9**
baz=22,slow=6.9
NOA NORSAR Array B 64.96 344 P **P 12 13 23.8 -0.2**
comp=Z,86nm,0.7s,baz=25,slow=7.4,SNR=140
NOA LR LR 12 44 30.6
comp=Z,227nm,19.4s,baz=20,slow=39
F38A Pierce - Schro 65.11 47 P **P 12 13 25.4 +0.3**
baz=320,SNR=10
SPMN Marine on St. 65.24 48 P **P 12 13 26.0 +0.1**
baz=319
SPMN Marine on St. 65.24 48 *e*P **P 12 13 27.4 +1.6**
comp=Z,10nm,0.8s
TUC Tucson 65.24 69 P **P 12 13 27.0 +0.8**
baz=317
HFS Hagfors 65.35 342 P **P 12 13 26.1 -0.2**
comp=Z,28nm,0.5s,baz=55,slow=5.5,SNR=135
HFS LR LR 12 46 09.2
comp=Z,728nm,19.2s,baz=22,slow=40
E39A Mellen 65.39 46 P **P 12 13 26.6 -0.3**
baz=320,SNR=6.1
SKLT Songkhla 65.39 249 P **P 12 13 28.1 +0.9**
TRTT Trang 65.40 251 P **P 12 13 30.8 +3.5**
comp=Z,17nm,1.4s
IVI Ivigtut 65.45 14 *e*P **P 12 13 27.2 +0.3**
comp=Z,16nm,0.8s
F39A Loretta 65.58 46 P **P 12 13 28.3 +0.2**
baz=320,SNR=6.5
E40A Wakefield 65.63 45 P **P 12 13 28.5 0.0**
baz=320,SNR=19
H37A Dierke Farm, C 65.67 48 P **P 12 13 29.8 +1.1**
baz=320
G38A Ridgeland 65.72 47 P **P 12 13 28.6 -0.4**
baz=320,SNR=5.6
D41A Chassel 65.74 44 P **P 12 13 29.4 +0.3**
baz=321
TASM ASL Pad, Albuq 65.81 64 P **P 12 13 30.6 +0.7**
baz=317
ANMO Albuquerque 65.81 64 P **P 12 13 32.2 +2.2**
comp=Z,1.4nm,0.7s,baz=324,slow=8.7,SNR=4.8
ANMO LR LR 12 41 35.6
comp=Z,116nm,19.6s,baz=338,slow=35
ANMO Albuquerque 65.81 64 P **P 12 13 31.9 +1.9**
baz=317
ANMO Albuquerque 65.81 64 *e*P **P 12 13 32.1 +2.2**
comp=Z,3.9nm,1.0s
TASL Snake Pit, Alb 65.81 64 P **P 12 13 31.5 +1.5**
baz=317
LAZ Ladron 65.82 65 *e*P **P 12 13 33.5 +3.4**
I37A Lemond, Waseca 65.87 49 P **P 12 13 31.3 +1.2**
baz=320
H38A Maiden Rock 65.90 48 P **P 12 13 31.4 +1.2**
baz=320
VSR Storozhevoye 65.92 324 *e*P **P 12 13 28.0 -2.1**
VSR *e* 12 15 49.8
VSR pmax pmax
comp=Z,30nm,0.8s
VSR MLR MLR
comp=Z,8μm,22.0s
F40A Park Falls 65.93 46 P **P 12 13 30.4 0.0**
baz=320
G39A Holcombe 65.94 47 P **P 12 13 31.1 +0.6**
baz=320
SUE Sulen 65.97 347 *e*P **P 12 13 30.8 +0.4**
E41A Kenton 66.03 45 P **P 12 13 30.6 -0.4**
baz=321,SNR=7.2
VORD Divnogorie 66.07 323 *e*P **P 12 13 29.8 -1.3**
VORD *e* 12 15 51.8
VORD pmax pmax
comp=Z,40nm,0.9s
OSL Oslo 66.08 343 *e*P **P 12 13 31.2 +0.2**
COWI Conover 66.23 45 *e*P **P 12 13 33.1 +0.8**
comp=Z,9.4nm,1.0s
IZAR Zarasai 66.32 333 *e*P **P 12 13 32.5 -0.2**
IZAR IAmb IAmb 12 13 33.5
comp=Z,31nm,0.6s
J37A Redenius Farm, 66.33 50 P **P 12 13 33.8 +0.8**
baz=320
H39A Augusta 66.35 47 P **P 12 13 32.8 -0.3**
baz=320
I38A Scanlan Farm, 66.36 48 P **P 12 13 33.9 +0.8**
baz=320

G40A Rib Lake 66.40 46 P **P 12 13 33.0 -0.3**
baz=321
ASK Askoy 66.46 346 *e*P **P 12 13 33.8 +0.3**
E42A Champion 66.51 44 P **P 12 13 34.2 +0.1**
baz=321,SNR=6.4
ISAL Salakas 66.51 333 *e*P **P 12 13 33.8 0.0**
ISAL IAmb IAmb 12 13 35.1
comp=Z,30nm,0.7s
F41A Three Lakes 66.53 45 P **P 12 13 35.1 +0.9**
baz=321
KONO Kongsberg 66.55 344 *e*P **P 12 13 34.6 +0.5**
comp=Z,35nm,0.9s
KONO Kongsberg 66.55 344 *e*P **P 12 13 34.6 +0.5**
KONO pmax pmax
comp=Z,35nm,0.9s
IDID Didziasalis 66.56 333 *e*P **P 12 13 34.1 -0.1**
IDID IAmb IAmb 12 13 35.3
comp=Z,50nm,0.9s
CBKS Cedar Bluff 66.61 57 P **P 12 13 36.2 +1.4**
baz=318
IIGN Ignalina 66.68 333 *e*P **P 12 13 35.0 +0.1**
IIGN IAmb IAmb 12 13 35.9
comp=Z,77nm,0.6s
ODD1 Odda 66.79 346 *e*P **P 12 13 36.2 +0.6**
H40A Chili 66.81 47 P **P 12 13 36.4 +0.4**
baz=321
121A Cookes Peak, D 66.81 67 P **P 12 13 37.7 +1.2**
baz=318
J38A Wedel Dairy, R 66.84 49 P **P 12 13 37.2 +1.0**
baz=320
I39A Houston 66.88 48 P **P 12 13 37.2 +0.8**
baz=320
KULM Kulim 66.89 248 *e*P **P 12 13 37.9 +1.1**
comp=Z,39nm,1.1s
NACGM Naroch 66.91 333 *e*P **P 12 13 35.0 -1.4**
NACGM PM 12 13 37.0
comp=Z,0.4nm,1.0s
MICGM Minsk 66.93 332⇑ *i*P **P 12 13 36.0 -0.6**
MICGM PM 12 13 37.0
comp=Z,0.8nm,0.8s
MICGM *e*LR LR 12 45 16.0
MICGM LRM MLR 12 46 22.0
comp=Z,2.7nm,17.0s
MNK Minsk 66.93 332⇑ *i*P **P 12 13 36.0 -0.6**
MNK pmax pmax
comp=Z,830nm,0.8s
E43A Lone Tree Farm 66.95 44 P **P 12 13 36.9 0.0**
baz=322
L37A Phoenix Point, 67.14 51 P **P 12 13 38.6 +0.5**
baz=320
H41A Junction City 67.15 46 P **P 12 13 38.8 +0.6**
baz=321
H41A Junction City 67.15 46 *e*P **P 12 13 39.1 +1.0**
comp=Z,9.7nm,0.9s
J39A Decorah 67.19 49 P **P 12 13 38.5 +0.1**
baz=320
SCHQ Schefferville 67.19 27 P **P 12 13 38.5 +0.3**
comp=Z,8.9nm,0.6s,baz=358,slow=5.9,SNR=5.7
SCHQ LR LR 12 45 23.3
comp=Z,173nm,19.8s,baz=352,slow=38
SCHQ Schefferville 67.19 27 *e*P **P 12 13 38.6 +0.3**
comp=Z,9.6nm,0.8s
G42A Mountain 67.21 45 P **P 12 13 39.4 +0.8**
baz=322
I40A Norwalk 67.27 48 P **P 12 13 39.3 +0.4**
baz=321
F43A Flat Rock, Esc 67.30 44 P **P 12 13 39.4 +0.3**
baz=322
IPM Ipoh 67.33 247 *e*P **P 12 13 40.4 +0.8**
comp=Z,27nm,1.0s
I41A Arkdale 67.48 47 P **P 12 13 40.8 +0.5**
baz=321
L38A Oak Wood Farm, 67.51 50 P **P 12 13 40.9 +0.5**
baz=320
G43A Wallace 67.53 45 P **P 12 13 41.0 +0.5**
baz=322
SCIA State Center 67.56 50 P **P 12 13 41.7 +0.9**
baz=320
SCIA State Center 67.56 50 *e*P **P 12 13 42.3 +1.5**
comp=Z,52nm,0.9s
SCIA *e*pP **pP 12 13 46.6 -1.8**
PBKI Pangkalan Bun 67.56 233 P **P 12 13 42.1 +1.0**
K39A Oelwein 67.58 49 P **P 12 13 41.5 +0.6**
baz=321
J40A Soldiers Grove 67.59 48 P **P 12 13 40.5 -0.5**
baz=321
GEYT Alibeck 67.68 303 LR LR 12 45 47.3
comp=Z,794nm,18.9s,baz=30,slow=38
GYA0B ALIBECK ARRAY 67.68 303 *e*P **P 12 13 41.1 -0.6**
comp=Z,19nm,0.8s
H42A Shiocton 67.73 46 P **P 12 13 41.9 +0.1**
baz=322
E45A Wooded Hills, 67.75 43 P **P 12 13 41.8 -0.1**
baz=323
MYKOM Kota Tinggi 67.93 243 *e*P **P 12 13 45.3 +1.9**
comp=Z,30nm,0.9s
K40A Colesburg 67.94 49 P **P 12 13 43.6 +0.4**
baz=321
M38A Pleasantville 67.94 51 P **P 12 13 44.1 +0.8**
baz=320
J41A Loganville 67.95 48 P **P 12 13 43.8 +0.5**
baz=321
L39A Vinton 67.98 50 P **P 12 13 44.2 +0.8**
baz=321
I42A Draeger Farm, 68.04 46 P **P 12 13 43.9 0.0**
baz=322
I42A Draeger Farm, 68.04 46 *e*P **P 12 13 44.2 +0.4**
comp=Z,12nm,0.9s
F45A CMU Biological 68.13 43 P **P 12 13 44.2 -0.1**
baz=323
F46A Macinaw City C 68.39 43 P **P 12 13 46.3 +0.5**
baz=323
M39A Webster 68.39 50 P **P 12 13 46.6 +0.6**
baz=321
L40A Anamosa 68.39 49 P **P 12 13 46.6 +0.6**
baz=321
J42A Columbus 68.39 47 P **P 12 13 46.5 +0.5**
baz=322
I43A Langenfeld Bro 68.40 46 P **P 12 13 46.0 0.0**
baz=322
K41A Shullsburg 68.40 48 P **P 12 13 47.0 +0.9**
baz=321
AMTX Amarillo 68.50 61 *e*P **P 12 13 48.4 +1.5**
comp=Z,26nm,1.1s
AMTX *e*pP **pP 12 13 52.9 -1.6**
N39A Derby Farms, D 68.69 51 P **P 12 13 48.5 +0.6**
baz=321
SUW Suwalki 68.70 334 *e*P **P 12 13 47.0 -0.8**
SUW Suwalki 68.70 334 *e*P **P 12 13 47.2 -0.5**
comp=Z,184nm,1.0s
SUW Suwalki 68.70 334 *e*P **P 12 13 47.2 -0.5**
SUW pmax pmax
comp=Z,184nm,1.0s
K42A Prairie Point, 68.71 48 P **P 12 13 48.5 +0.5**
baz=322
L41A Preston 68.72 49 P **P 12 13 48.5 +0.5**
baz=321
M40A Post Highland 68.76 50 P **P 12 13 49.2 +0.8**
baz=321
P37A Lathrop 68.78 53 P **P 12 13 49.5 +1.0**
baz=320
MNTX Cornudas Mount 68.80 66 P **P 12 13 50.5 +1.8**
baz=318
MNTX Cornudas Mount 68.80 66 *e*P **P 12 13 51.6 +2.8**
comp=Z,7.0nm,0.9s
KLNR Kaliningrad 68.95 336*ce*P **P 12 13 48.3 -0.9**
KLNR pmax pmax
comp=Z,141nm,0.9s
MAK Makhachkala 69.04 313 *e*P **P 12 13 49.2 -0.8**
MAK *e*S **S 12 22 51.8 -1.5**
MAK pmax pmax
comp=Z,135nm,1.0s
MAK MLR MLR
comp=Z,2μm,15.0s
N40A Mertquake, Sal 69.13 50 P **P 12 13 51.0 +0.4**
baz=321
P38A Dawn 69.15 52 P **P 12 13 50.9 +0.1**
baz=321
L42A Oliver, Polo 69.17 48 P **P 12 13 51.5 +0.7**
baz=322
K43A Burlington 69.24 47 P **P 12 13 51.6 +0.3**
baz=322
M41A Milan 69.25 49 P **P 12 13 51.7 +0.3**
baz=322
GOF Gofitskoye 69.33 317⇑ *e*P **P 12 13 51.1 -0.7**
GOF pmax pmax
comp=Z,64nm,0.8s

L43A Garden Prairie 69.46 48 P **P 12 13 53.1 +0.4**
baz=322
O40A La Belle 69.58 51 P **P 12 13 54.4 +1.0**
baz=321
N41A Harden Midland 69.62 50 P **P 12 13 54.6 +0.9**
baz=322
P39B Salisbury 69.64 52 P **P 12 13 54.5 +0.6**
baz=321
MUD Monsted U'grnd 69.65 343 *i* P **P 12 13 54.2 +0.7**
comp=Z,47nm,0.9s
MUD Monsted U'grnd 69.65 343 *i* P **P 12 13 54.2 +0.7**
MUD pmax pmax
comp=Z,47nm,0.9s
COP Copenhagen 69.74 341 *i* P **P 12 13 53.9 -0.2**
comp=Z,34nm,0.8s
COP Copenhagen 69.74 341 *e*P **P 12 13 53.9 -0.2**
COP pmax pmax
comp=Z,34nm,0.8s
BSD Bornholm Skovb 69.74 339 *i* P **P 12 13 54.4 +0.3**
comp=Z,29nm,0.8s
BSD Bornholm Skovb 69.74 339 *e*P **P 12 13 54.4 +0.3**
BSD pmax pmax
comp=Z,29nm,0.8s
AFI Afiamalu 69.76 150 LR LR 12 40 51.4
comp=Z,344nm,19.4s,baz=310,slow=33
AKASG Malin Array Be 69.80 329 P **P 12 13 53.6 -1.0**
comp=Z,102nm,0.7s,baz=31,slow=6.3,SNR=163
AKASG LR LR 12 47 45.3
comp=Z,345nm,19.6s,baz=30,slow=39
AKASG Malin Array Be 69.80 329 *i* P **P 12 13 53.5 -1.1**
AKASG pmax pmax
comp=Z,102nm,0.7s
KIEV Kiev 69.81 329 *e*P **P 12 13 53.4 -1.3**
comp=Z,122nm,0.9s
KIEV Kiev 69.81 329 *i* P **P 12 13 53.5 -1.2**
SNR=69
KIEV Kiev 69.81 329*c i*P **P 12 13 53.1 -1.5**
KIEV pmax pmax
comp=Z,107nm,0.9s
PSI Prapat 69.90 248 P **P 12 13 56.0 +0.2**
comp=Z,9.9nm,0.9s,baz=360,slow=3.7,SNR=2.9
PSI LR LR 12 44 28.0
comp=Z,216nm,21.8s,baz=86,slow=36
N42A Yates City 69.91 49 P **P 12 13 55.5 0.0**
baz=322
M43A Waltham Townsh 69.94 48 P **P 12 13 55.5 -0.1**
baz=322
P40A Paris 69.96 51 P **P 12 13 56.2 +0.4**
baz=321
O41A Passleys Farm, 70.07 50 P **P 12 13 56.2 -0.2**
baz=322,SNR=6.0
R38A Fenwick Farm, 70.07 53 P **P 12 13 55.1 -1.4**
baz=321
LLD Lille Linde 70.11 341 *i* P **P 12 13 56.9 +0.5**
LLD Lille Linde 70.11 341 *i* P **P 12 13 56.9 +0.5**
WMOK Wichita Mounta 70.17 59 P **P 12 13 57.3 +0.1**
baz=320,SNR=8.1
WMOK Wichita Mounta 70.17 59 *e*P **P 12 13 58.6 +1.4**
comp=Z,10nm,0.8s
WMOK Wichita Mounta 70.17 59 *e*P **P 12 13 58.6 +1.4**
WMOK pmax pmax
comp=Z,10.0nm,0.8s
N43A Stutzman Famil 70.23 49 P **P 12 13 58.1 +0.7**
baz=322
P41A Barry, Barry 70.32 51 P **P 12 13 59.0 +1.0**
baz=322
NCK Nalchik 70.35 316⇓ *e*P **P 12 13 57.4 -0.7**
NCK pmax pmax
comp=Z,12nm,0.7s
Q40A Laux Farm, Aux 70.36 52 P **P 12 13 58.3 +0.1**
baz=321
KIV Kislovodsk 70.37 317 P **P 12 13 57.8 -0.6**
KIV Kislovodsk 70.37 317 *e*P **P 12 13 57.6 -0.8**
KIV pmax pmax
comp=Z,18nm,1.1s
M44A Midewin, Midew 70.41 48 P **P 12 13 59.1 +0.7**
baz=323
R39A Chumby, Stover 70.41 53 P **P 12 13 57.8 -0.7**
baz=321,SNR=8.4
KBZ Khabaz 70.46 317 P **P 12 13 58.0 -0.8**
comp=Z,11nm,0.8s,baz=44,slow=3.2,SNR=17
KBZ LR LR 12 48 04.2
comp=Z,280nm,19.0s,baz=12,slow=39
KBZ Khabaz 70.46 317 P **P 12 13 58.0 -0.8**
HDIL Hopedale 70.48 49 P **P 12 13 58.7 -0.2**
baz=322
S38A Stockton 70.50 54 P **P 12 13 58.4 -0.7**
baz=321
P42A Winchester 70.74 50 P **P 12 13 59.4 -1.1**
baz=322
S39A Bolivar 70.75 53 P **P 12 14 00.3 -0.4**
baz=321
T38A Diamond 70.76 55 P **P 12 14 01.2 +0.5**
baz=321
ZEI Tsey 70.78 315 *e*P **P 12 13 58.0 -3.0**
ZEI pmax pmax
comp=Z,22nm,1.0s
Q41A Truxton 70.80 51 P **P 12 14 01.0 +0.1**
baz=322
R40A Maddies Statio 70.81 52 P **P 12 14 01.1 +0.1**
baz=322
N44A Piper City 70.83 48 P **P 12 14 01.1 0.0**
baz=323
GKP Gorka Klasztor 70.90 337 *e*P **P 12 14 01.7 +0.4**
GKP Gorka Klasztor 70.90 337 *e*P **P 12 14 01.7 +0.4**
NEY Neytrino 70.93 316⇓ *e*P **P 12 14 01.8 -0.1**
NEY pmax pmax
comp=Z,4.0nm,1.8s
HYB Hyderabad 71.02 274 *i* P **P 12 14 02.0 -0.6**
N45A Kentland 71.08 48 P **P 12 14 02.6 0.0**
baz=323
P43A Skaggs, Pawnee 71.09 50 P **P 12 14 02.6 -0.1**
baz=322
Q42A Golden Eagle 71.17 51 P **P 12 14 03.5 +0.3**
baz=322
S40A Lebanon 71.23 53 P **P 12 14 04.5 +0.9**
baz=322
T39A Clever 71.24 54 P **P 12 14 04.3 +0.7**
baz=321
R41A Rosebud 71.24 52 P **P 12 14 04.5 +0.9**
baz=322
TBLG Delisi 71.26 314 *e*P **P 12 14 02.9 -0.8**
TBLG Delisi 71.26 314 *e*P **P 12 14 02.9 -0.8**
BEL Belsk 71.30 334 *e*P **P 12 14 04.1 +0.4**
BEL Belsk 71.30 334 *e*P **P 12 14 04.1 +0.4**
ABTX Abilene, Hawle 71.31 61 P **P 12 14 05.4 +1.2**
baz=320
ABTX Abilene, Hawle 71.31 61 *e*P **P 12 14 06.1 +1.9**
comp=Z,23nm,1.4s
O45A Potomac 71.45 48 P **P 12 14 05.5 +0.7**
baz=323
CCM Cathedral Cave 71.50 52 P **P 12 14 06.0 +0.9**
baz=322
CCM Cathedral Cave 71.50 52 *e*P **P 12 14 06.2 +1.0**
comp=Z,12nm,1.0s
CCM Cathedral Cave 71.50 52 *e*P **P 12 14 06.2 +1.0**
CCM pmax pmax
comp=Z,12nm,1.0s
HHAR Hobbs 71.53 55 *e*P **P 12 14 06.2 +0.8**
comp=Z,12nm,0.8s
R42A Luebbering 71.54 51 P **P 12 14 06.6 +1.2**
baz=322
TX31 Lajitas Ar. Si 71.55 66 *e*P **P 12 14 06.6 +0.8**
TXAR Lajitas Array 71.55 66 P **P 12 14 06.3 +0.6**
comp=Z,3.1nm,0.8s,baz=302,slow=4.3,SNR=35
T40A Mansfield 71.57 53 P **P 12 14 06.3 +0.7**
baz=322
LPIG La Paz 71.58 74 LR LR 12 38 38.3
comp=Z,79nm,20.3s,baz=299,slow=30
S41A Jillco Farms, 71.61 52 P **P 12 14 06.5 +0.6**
baz=322
SFIN Lafayette 71.64 48 P **P 12 14 05.9 -0.1**
baz=323
P44A Sand Creek, Wi 71.65 49 P **P 12 14 06.3 +0.3**
baz=323
U39A Green Forest 71.68 54 P **P 12 14 06.4 +0.1**
baz=321,SNR=17
ANN Anapa 71.84 321 *e*P **P 12 14 05.6 -1.5**
ANN pmax pmax
comp=Z,50nm,1.2s
GSI Gunungsitoli 71.89 248 *e*P **P 12 14 08.2 +0.4**
comp=Z,48nm,1.1s
Q44A Meyer Farm, Va 71.91 50 P **P 12 14 07.4 -0.2**
baz=323
S42A Caledonia 71.94 52 P **P 12 14 08.4 +0.5**
baz=322
R43A Red Bud 71.97 51 P **P 12 14 08.6 +0.6**

baz=322
P45A Graceland, Par 72.02 49 P **P** 12 14 08.2 -0.1
baz=323
V39A Pettigrew 72.02 55 P **P** 12 14 08.5 +0.1
baz=321
U40A Yellville 72.02 54 P **P** 12 14 08.5 +0.1
baz=322,SNR=9.0
T41A Mountain View 72.03 53 P **P** 12 14 08.7 +0.3
baz=322
AKH Akhalkalaki 72.07 315⇓ *i*P **P** 12 14 09.4 +0.6
AKH Akhalkalaki 72.07 315 *e*P **P** 12 14 09.2 +0.4
comp=Z,16nm,1.0s
AKH Akhalkalaki 72.07 315 *e*P **P** 12 14 09.2 +0.4
AKH pmax pmax
comp=Z,16nm,1.0s
LVV L'vov 72.18 332 *e*P **P** 12 14 09.3 +0.2
LVV MLR MLR
comp=N,1μm,18.0s
LVV MLR MLR
comp=E,1μm,18.0s
LVV MLR MLR
comp=Z,1μm,18.0s
P46A Rosedale 72.20 48 P **P** 12 14 10.1 +0.8
baz=323
SORM Soroca 72.31 328⇓ *i*P **P** 12 14 09.2 -0.6
SORM Soroca 72.31 328 P **P** 12 14 08.6 -1.2
Q45A Warren Harvey, 72.33 49 P **P** 12 14 10.5 +0.4
baz=323
T42A Van Buren 72.37 52 P **P** 12 14 11.3 +0.9
baz=322
R44A Waltonville 72.40 50 P **P** 12 14 11.4 +0.9
baz=323
W39A Magazine 72.45 55 P **P** 12 14 11.1 +0.2
baz=322
S43A Fulton Ridge, 72.45 51 P **P** 12 14 11.2 +0.3
baz=322
V40A Witts Springs 72.47 54 P **P** 12 14 11.7 +0.7
baz=322
OLIL Olney 72.48 49 *e*P **P** 12 14 13.4 +2.4
comp=Z,15nm,1.0s
U41A Viola 72.50 53 P **P** 12 14 11.9 +0.7
baz=322
GNI Garni 72.53 313 LR LR 12 50 25.9
comp=Z,908nm,18.0s,baz=22,slow=40
EKA Eskdalemuir Ar 72.55 350 P **P** 12 14 11.0 -0.2
comp=Z,28nm,0.6s,baz=19,slow=5.1,SNR=105
EKA Eskdalemuir Ar 72.55 350 P **P** 12 14 11.0 -0.2
ESK Eskdalemuir 72.57 350 *e*P **P** 12 14 12.0 +0.7
comp=Z,53nm,0.8s
ESK Eskdalemuir 72.57 350 *e*P **P** 12 14 12.0 +0.7
ESK pmax pmax
comp=Z,53nm,0.8s
P47A Martinsville 72.74 48 P **P** 12 14 13.1 +0.6
baz=324
KWP Kalwaria Pacla 72.74 332 *e*P **P** 12 14 12.6 +0.2
KWP Kalwaria Pacla 72.74 332 *e*P **P** 12 14 12.4 0.0
comp=Z,3μm,1.0s
KWP Kalwaria Pacla 72.74 332 *e*P **P** 12 14 12.4 0.0
R45A Skar, Fairfi 72.74 50 P **P** 12 14 13.4 +0.7
baz=323
S44A Carbondale 72.75 51 P **P** 12 14 13.7 +1.0
baz=323
X39A Fountain Ranch 72.81 56 P **P** 12 14 13.9 +0.9
baz=322
W40A Ferguson Farm, 72.82 55 P **P** 12 14 13.0 0.0
baz=322
W40A Ferguson Farm, 72.82 55 *e*P P 12 14 18.5 +5.4
comp=Z,21nm,0.9s
V41A Mountainview 72.82 54 P **P** 12 14 13.5 +0.3
baz=322
U42A Revenden 72.83 53 P **P** 12 14 12.5 -0.7
baz=322
JCT Junction City 72.86 63 P **P** 12 14 14.2 +0.8
baz=320
JCT Junction City 72.86 63 *e*P **P** 12 14 14.3 +0.8
comp=Z,25nm,1.1s
JCT Junction City 72.86 63 *e*P **P** 12 14 14.3 +0.8
JCT pmax pmax
comp=Z,25nm,1.1s
MASI Maura Aman, Be 72.90 242 P **P** 12 14 14.2 +0.4
WHTX Lake Whitney, 72.98 60 P **P** 12 14 14.5 +0.3
baz=321
SIM Simferopol' 73.00 323 *ce*P **P** 12 14 13.4 -0.6
SIM S S 12 23 29.9 -9.4
SIM pmax pmax
comp=Z,42nm,0.7s
OJC Ojcow 73.03 334 *e*P **P** 12 14 14.2 +0.1
OJC Ojcow 73.03 334 *e*P **P** 12 14 14.2 +0.1
comp=Z,89nm,1.1s
OJC Ojcow 73.03 334 *e*P **P** 12 14 14.2 +0.1
MIAR Mount Ida 73.06 56 P **P** 12 14 15.1 +0.6
baz=322
MIAR Mount Ida 73.06 56 *e*P **P** 12 14 16.1 +1.6
comp=Z,9.1nm,0.9s
MIAR Mount Ida 73.06 56 *e*P **P** 12 14 16.1 +1.6
MIAR pmax pmax
comp=Z,9.0nm,0.9s
T44A Benton 73.07 51 P **P** 12 14 15.3 +0.8
baz=323
POO Poona 73.10 279⇓ *i*PN **P** 12 14 11.0 -4.0
comp=Z,140nm,1.0s
Q47A Bedord North L 73.11 48 P **P** 12 14 15.2 +0.5
baz=324
KIS Kishinev 73.14 327⇑ *i*P **P** 12 14 13.0 -1.8
comp=Z,200nm,1.0s
KIS *e*S S 12 23 26.0 -15
KIS *e*L L 12 45 28.0
KIS LRM MLR 12 50 20.0
comp=Z,900nm,17.0s
KIS Kishinev 73.14 327⇑ *i*P **P** 12 14 13.0 -1.8
KIS *i* 12 14 22.5
KIS pmax pmax
comp=Z,190nm,1.0s
KIS MLR MLR
comp=N,400nm,14.0s
KIS MLR MLR
comp=E,900nm,16.0s
V42A Cord 73.19 53 P **P** 12 14 15.6 +0.4
baz=322
W41B Gary Mavity, V 73.25 54 P **P** 12 14 16.6 +1.0
baz=322
W41B Gary Mavity, V 73.25 54 *e*P **P** 12 14 17.0 +1.3
comp=E,14nm,1.0s
ERPA Erie 73.36 42 P **P** 12 14 15.4 -0.8
baz=326
KSP Ksiaz 73.36 337 *e*P **P** 12 14 16.1 0.0
KSP Ksiaz 73.36 337 *e*P **P** 12 14 16.1 0.0
IAS Iasi 73.39 328⇓ *i*P **P** 12 14 16.2 -0.1
LONY Lake Ozonia 73.42 37 P **P** 12 14 16.0 -0.4
baz=328
LONY Lake Ozonia 73.42 37 *e*P **P** 12 14 16.1 -0.4
comp=E,10nm,1.0s
DZM Mont Dzumac 73.52 173 *e*LR LR 12 37 01.0
comp=E,347nm,21.9s
DZM Mont Dzumac 73.52 173 LR LR 12 42 00.8
comp=E,259nm,20.9s,baz=26,slow=32
R47A Wooly Knot Far 73.57 49 P **P** 12 14 17.1 -0.4
baz=324
NIE Niedzica 73.62 334 *e*P **P** 12 14 18.1 +0.4
NIE Niedzica 73.62 334 *e*P **P** 12 14 18.1 +0.4
ACSO Alum Creek Sta 73.62 45 P **P** 12 14 17.7 0.0
baz=325
ALLY Alegheny Colle 73.68 42 *e*P **P** 12 14 18.8 +0.6
comp=E,45nm,1.1s
MMNY Mt. Morris Dam 73.71 40 *e*P **P** 12 14 18.1 -0.1
comp=E,32nm,1.0s
CLL Collm 73.71 339⇑ *i*P **P** 12 14 17.8 -0.3
comp=Z,51nm,1.0s
CLL *i*pP **pP** 12 14 24.3 -1.4
CLL *i* 12 14 29.7
CLL *e*PP PP 12 17 12.0 +10
CLL *e*S **S** 12 23 48.0 +0.9
CLL *e* 12 24 06.0
CLL *e*PPS PPS 12 24 36.0
CLL *e*SS SS 12 28 42.0 +13
CLL *e* 12 32 48.0
CLL Collm 73.71 339 *e*P **P** 12 14 17.4 -0.7
comp=Z,50nm,1.0s
CLL Collm 73.71 339⇑ *i*P **P** 12 14 17.8 -0.3
CLL *i* 12 14 29.7
CLL *e*S **S** 12 23 48.0 +0.9
CLL pmax pmax
comp=Z,51nm,1.0s
WCI Wyandotte Cave 73.73 48 P **P** 12 14 18.5 0.0
baz=324
WCI Wyandotte Cave 73.73 48 *e*P **P** 12 14 19.8 +1.4
comp=Z,13nm,1.0s
WCI Wyandotte Cave 73.73 48 *e*P **P** 12 14 19.8 +1.4
WCI pmax pmax
comp=Z,13nm,1.0s
UPC Upice 73.74 337 *e*P **P** 12 14 19.0 +0.7
UPC *ex* x 12 14 30.8
UPC *e*PCP **PcP** 12 14 34.5 +0.6
UPC AMS AMS 12 52 20.0
comp=Z,900nm,14.9s
UPC Upice 73.74 337 *e*P **P** 12 14 19.0 +0.7
UPC *e* 12 14 30.8
UPC *e* 12 14 34.5
UPC MLR MLR
comp=Z,900nm,14.9s
CRVS Cervenica-Dubn 73.76 333 *e*P **P** 12 14 18.7 +0.3
CRVS pmax pmax
comp=Z,33nm,1.1s
CRVS Cervenica-Dubn 73.76 333 *e*P **P** 12 14 18.7 +0.3
BUR08 Bucovina Ar. S 73.76 330 *e*P **P** 12 14 18.4 -0.2
UZH Uzhgorod 73.76 332⇓ *i*P **P** 12 14 16.7 -1.7
UZH *e* 12 14 31.5
BUR04 Bucovina Ar. S 73.78 330 *e*P **P** 12 14 17.6 -1.1
BURAR Bucovina Array 73.78 330⇓ *i*P **P** 12 14 19.0 +0.3
BURAR Bucovina Array 73.78 330 P **P** 12 14 18.2 -0.5
LEOM Leova 73.79 327⇑ *i*P **P** 12 14 18.6 0.0
DPC Dobruska-Polom 73.81 336 *e*P **P** 12 14 19.5 +0.7
DPC *ex* x 12 14 30.5
DPC AMS AMS 12 52 20.0
comp=Z,700nm,14.0s
DPC Dobruska-Polom 73.81 336 *e*P **P** 12 14 19.5 +0.7
DPC *e* 12 14 30.5
DPC MLR MLR
comp=Z,700nm,14.0s
OKC Ostrava-Krasne 73.82 335 *e*P **P** 12 14 19.5 +0.8
OKC *e*pP **pP** 12 14 26.5 +0.1
OKC AMS AMS 12 51 50.0
comp=Z,600nm,17.1s
OKC Ostrava-Krasne 73.82 335 *e*P **P** 12 14 19.5 +0.8
OKC MLR MLR
comp=Z,600nm,17.1s
BRG Berggiesshubel 73.90 338 *i*P **P** 12 14 19.2 0.0
comp=Z,19nm,1.1s
BRG *e* 12 14 26.1
comp=Z,16nm,1.0s
comp=Z,1μm,15.8s
comp=N,560nm,14.2s
comp=E,330nm,14.2s
BRG Berggiesshubel 73.90 338 *i*P **P** 12 14 19.2 0.0
BRG pmax pmax
comp=Z,19nm,1.1s
BRG MLR MLR
comp=Z,1μm,15.8s
BRG MLR MLR
comp=N,560nm,14.2s
BRG MLR MLR
comp=E,330nm,14.2s
T46A Princeton 73.93 50 P **P** 12 14 19.9 +0.3
baz=324,SNR=9.6
KRLC Kraliky 73.95 336 *e*P **P** 12 14 20.3 +0.7
KRLC *ex* x 12 14 31.6
KRLC *e*PCP **PcP** 12 14 35.4 +0.5
KRLC Kraliky 73.95 336 *e*P **P** 12 14 20.3 +0.7
KRLC *e* 12 14 31.6
KRLC *e* 12 14 35.4
CGJI Cibinong 73.95 237 P **P** 12 14 17.3 -2.6
M54A Oil Creek Stat 74.00 42 P **P** 12 14 19.8 -0.2
baz=326,SNR=9.5
MORC Moravsky Berou 74.03 335 *e*P **P** 12 14 20.3 +0.2
comp=E,151nm,0.8s
MORC Moravsky Berou 74.03 335 *e*P **P** 12 14 20.3 +0.2
MORC pmax pmax
comp=Z,151nm,0.8s
MORC Moravsky Berou 74.03 335 *e*P **P** 12 14 20.2 +0.2
PVCC Panska Ves 74.08 338 *e*P **P** 12 14 20.4 +0.2
PVCC *ex* x 12 14 31.2
PVCC AMS AMS 12 52 20.0
comp=Z,1μm,15.6s
PVCC Panska Ves 74.08 338 *e*P **P** 12 14 20.4 +0.2
PVCC *e* 12 14 31.2
PVCC MLR MLR
comp=Z,1μm,15.6s
LANS Liptovska Anna 74.09 334 *e*P **P** 12 14 21.5 +1.1
LANS Liptovska Anna 74.09 334 *e*P **P** 12 14 21.5 +1.1
NCB Newcomb 74.11 37 *e*P **P** 12 14 20.4 -0.2
comp=Z,9.1nm,0.9s
TRPA Tarpa 74.14 332⇑ *i*P **P** 12 14 21.4 +0.8
TRPA Tarpa 74.14 332⇑ *e*P **P** 12 14 20.9 +0.3
BMR Baia Mare 74.26 331⇑ *i*P **P** 12 14 21.6 +0.2
TESR Tescani 74.29 328⇓ *i*P **P** 12 14 20.7 -0.9
S48A Wiedeman Farm, 74.31 49 P **P** 12 14 22.0 +0.2
baz=324
N54A Moraine State 74.32 43 P **P** 12 14 21.8 -0.1
baz=326,SNR=10.0
T47A Sharon Grove 74.35 50 P **P** 12 14 22.9 +0.9
baz=324
VT1 Waterbury 74.35 36 *e*P **P** 12 14 22.3 +0.3
comp=Z,13nm,0.8s
WTSB Winterswijk 74.36 343 *e*P **P** 12 14 22.2 +0.4
comp=Z,57nm,0.7s
KECS Kecovo 74.41 333 *e*P **P** 12 14 22.6 +0.3
KECS pmax pmax
comp=Z,31nm,1.4s
KECS Kecovo 74.41 333 *e*P **P** 12 14 22.6 +0.3
WRAB Tennant Creek 74.51 205 *e*P **P** 12 14 23.3 +0.3
comp=Z,26nm,0.9s
WRAB Tennant Creek 74.51 205 *de*P **P** 12 14 23.1 +0.1
WRAB pmax pmax
comp=Z,22nm,0.9s
ARCR ARCALIA 74.52 330⇓ *i*P **P** 12 14 23.6 +0.7
WRA Warramunga Arr 74.52 205 P **P** 12 14 22.6 -0.5
comp=Z,18nm,0.8s,baz=18,slow=6.2,SNR=60
PRA Prague 74.53 338 *e*P **P** 12 14 23.7 +0.8
PRA AMS AMS 12 52 40.0
comp=Z,2μm,14.2s
PRA Prague 74.53 338 *e*P **P** 12 14 23.7 +0.8
PRA MLR MLR
comp=Z,2μm,14.2s
PRU Pruhonice 74.58 337 *e*P **P** 12 14 23.9 +0.7
PRU *e*pP **pP** 12 14 31.2 +0.3
PRU *e*PCP **sP** 12 14 35.6 +1.9
PRU AMS AMS 12 52 40.0
comp=Z,2μm,14.1s
PRU Pruhonice 74.58 337 *e*P **P** 12 14 23.9 +0.7
PRU *e* 12 14 35.6
PRU MLR MLR
comp=Z,2μm,14.1s
T48A Bowling Green 74.59 49 P **P** 12 14 23.6 +0.2
baz=324
GOPC GO Pecny, Ondr 74.59 337 *e*P **P** 12 14 24.0 +0.7
GOPC *e*PCP **sP** 12 14 35.7 +1.9
GOPC AMS AMS 12 52 40.0
comp=Z,1μm,15.4s
GOPC GO Pecny, Ondr 74.59 337 *e*P **P** 12 14 24.0 +0.7
GOPC *e* 12 14 35.7
GOPC MLR MLR
comp=Z,1μm,15.4s
GIUM Giurgiulesti 74.67 327⇑ *i*P **P** 12 14 24.5 +0.7
WVT Waverly 74.69 51 P **P** 12 14 24.7 +0.7
baz=324
WVT Waverly 74.69 51 *e*P **P** 12 14 25.5 +1.5
comp=Z,6.7nm,0.9s
WVT Waverly 74.69 51 *e*P **P** 12 14 25.5 +1.5
WVT pmax pmax
comp=Z,7.0nm,0.9s
U47A Clarksville 74.70 50 P **P** 12 14 24.4 +0.3
baz=324
VRAC Vranov 74.70 336 *e*P **P** 12 14 24.2 +0.2
TLCR 74.72 326⇓ *i*P **P** 12 14 24.3 +0.2
LBNH Lisbon 74.73 36 P **P** 12 14 23.5 -0.7
baz=330
PKME Peaks-Kenny Pk 74.77 33 P **P** 12 14 24.6 +0.2
baz=331
PKME Peaks-Kenny Pk 74.77 33 *e*P **P** 12 14 25.0 +0.6
comp=Z,19nm,1.0s
PETR Petresti 74.79 328⇓ *i*P **P** 12 14 26.0 +1.5
V46A Holladay 74.81 51 P **P** 12 14 24.3 -0.5
baz=324
ODBI Odobesti 74.81 328⇓ *i*P **P** 12 14 24.8 +0.2
ACCN Adirondack Com 74.82 37 *e*P **P** 12 14 24.6 -0.1
comp=Z,20nm,0.9s
VRI Vrincioaia 74.83 328⇓ *i*P **P** 12 14 25.0 +0.2
VRI Vrincioaia 74.83 328 P **P** 12 14 25.0 +0.2
JAVC Velka Javorina 74.84 335 *e*P **P** 12 14 26.1 +1.3
NKC Novy Kostel 74.84 339 *e*P **P** 12 14 25.2 +0.5
NKC AMS AMS 12 52 50.0
comp=Z,900nm,15.9s
NKC Novy Kostel 74.84 339 *e*P **P** 12 14 25.2 +0.5
NKC MLR MLR
comp=Z,900nm,15.9s
VYHS Vyhne 74.86 334 *e*P **P** 12 14 25.4 +0.5
VYHS pmax pmax
comp=Z,18nm,0.9s
VYHS Vyhne 74.86 334 *e*P **P** 12 14 25.4 +0.5
PLOR Plostina 74.87 328⇑ *i*P **P** 12 14 25.2 +0.2
PLOR Plostina 74.87 328 P **P** 12 14 24.9 -0.1
BINY Binghamton 74.92 39 P **P** 12 14 24.6 -0.8
baz=328
BINY Binghamton 74.92 39 *e*P **P** 12 14 25.4 0.0
comp=Z,13nm,1.0s
DSB Dublin 74.94 351 *e*P **P** 12 14 26.6 +1.4
comp=Z,35nm,0.9s
KRUC Moravsky 74.98 336 *e*P **P** 12 14 25.8 +0.3
LTVH L''tav''rtes, 75.00 332⇑ *e*P **P** 12 14 26.2 +0.6
T49A Edmonton 75.00 49 P **P** 12 14 25.9 0.0
baz=324
U48A Cassie Pea, Po 75.00 50 P **P** 12 14 25.6 -0.3
baz=324
V47A Nunnelly 75.08 51 P **P** 12 14 27.1 +0.8
baz=324
CJR Cluj-Napoca 75.08 330⇑ *i*P **P** 12 14 27.3 +1.1
PSZ Piszkesteto 75.09 333⇑ *i*P **P** 12 14 27.1 +0.8
PSZ Piszkesteto 75.09 333⇑ *e*P **P** 12 14 26.7 +0.5
PSZ Piszkesteto 75.09 333 *e*P **P** 12 14 26.8 +0.5
comp=Z,55nm,1.1s
PSZ Piszkesteto 75.09 333 *e*P **P** 12 14 26.8 +0.5
PSZ pmax pmax
comp=Z,55nm,1.1s
GRER 75.18 328⇑ *i*P **P** 12 14 28.3 +1.6
DOPR Dopca 75.18 329⇓ *i*P **P** 12 14 27.9 +1.1
OXF Oxford 75.20 53 P **P** 12 14 27.3 +0.3
baz=323
OXF Oxford 75.20 53 *e*P **P** 12 14 28.9 +1.9
comp=Z,19nm,0.8s
OXF Oxford 75.20 53 *e*P **P** 12 14 28.9 +1.9
OXF pmax pmax
comp=Z,19nm,0.8s
SMOL Smolenice 75.22 335 P **P** 12 14 28.7 +1.8
WVL Waterville 75.26 34 *e*P **P** 12 14 27.9 +0.8
comp=Z,28nm,1.0s
DRGR 75.29 331⇑ *i*P **P** 12 14 27.6 +0.2
DRGR 75.29 331 P **P** 12 14 27.3 -0.1
U49A Red Boiling Sp 75.36 49 P **P** 12 14 27.9 0.0
baz=324
MODS Modra-Piesok 75.39 335 *e*P **P** 12 14 27.7 -0.2
MODS pmax pmax
comp=Z,35nm,1.0s
MODS Modra-Piesok 75.39 335 *e*P **P** 12 14 27.6 -0.3
T50A Nancy 75.39 48 P **P** 12 14 28.8 +0.7
baz=325
MLR Muntele Rosu 75.42 328 P **P** 12 14 28.6 +0.3
comp=Z,17nm,0.8s,baz=136,slow=2.6,SNR=102
MLR LR LR 12 52 08.2
comp=Z,293nm,18.3s,baz=21,slow=39
MLR Muntele Rosu 75.42 328⇓ *i*P **P** 12 14 29.0 +0.7
MLR Muntele Rosu 75.42 328 *e*P **P** 12 14 27.9 -0.4
comp=Z,78nm,0.8s
MLR Muntele Rosu 75.42 328 *e*P **P** 12 14 27.9 -0.4
MLR pmax pmax
comp=Z,78nm,0.8s
HARR Harsova 75.46 327⇓ *i*P **P** 12 14 28.6 +0.3
HARR Harsova 75.46 327 P **P** 12 14 29.4 +1.1
MCWV Mont Chateau 75.46 43 P **P** 12 14 28.2 -0.3
baz=327
MCWV Mont Chateau 75.46 43 *e*P **P** 12 14 29.5 +1.0
comp=Z,12nm,0.9s
S51A Beattyville 75.46 47 P **P** 12 14 29.0 +0.5
baz=325
SSPA Standing Stone 75.47 42 P **P** 12 14 28.3 -0.2
baz=327
SSPA Standing Stone 75.47 42 *e*P **P** 12 14 28.2 -0.2
comp=Z,19nm,0.9s
SSPA *e*pP **pP** 12 14 32.6 -3.5
PLAL Pickwick Lake 75.48 52 *e*P **P** 12 14 29.7 +1.0
comp=Z,10nm,0.9s
V48A Smith Brothers 75.48 50 P **P** 12 14 28.9 +0.2
baz=324
O56A Blue Knob Stat 75.50 42 P **P** 12 14 28.5 -0.2
baz=327,SNR=5.4
O56A Blue Knob Stat 75.50 42 *e*P **P** 12 14 28.1 -0.6
TIRR Tirgusor 75.50 326⇑ *i*P **P** 12 14 28.7 +0.2
TIRR Tirgusor 75.50 326 *e*P **P** 12 14 27.9 -0.6
comp=Z,102nm,0.8s
TIRR Tirgusor 75.50 326 *e*P **P** 12 14 27.9 -0.6
TIRR pmax pmax
comp=Z,102nm,0.8s
W47A Westpoint 75.50 51 P **P** 12 14 29.4 +0.7
baz=324
TLB Topalu 75.51 326⇑ *i*P **P** 12 14 29.0 +0.4
ISR Istrita 75.55 328⇓ *i*P **P** 12 14 30.0 +1.0
ISR Istrita 75.55 328 P **P** 12 14 29.5 +0.5
KSPA Keystone Colle 75.56 40 *e*P **P** 12 14 28.9 -0.1
comp=Z,13nm,0.8s
ZST Bratislava 75.60 335 *e*P **P** 12 14 29.0 -0.1
ZST pmax pmax
comp=Z,3.0nm,1.0s
ZST Bratislava 75.60 335 *e*P **P** 12 14 29.0 -0.1
KHC Kasperske Hory 75.61 338 *e*P **P** 12 14 30.1 +0.9
KHC *e*PCP **pP** 12 14 39.5 +2.6
KHC AMS AMS 12 53 20.0
comp=Z,2μm,15.2s
KHC Kasperske Hory 75.61 338 *e*P **P** 12 14 29.7 +0.5
comp=Z,17nm,0.9s
KHC Kasperske Hory 75.61 338 *e*P **P** 12 14 29.7 +0.5
KHC pmax pmax
comp=Z,17nm,0.9s
GRFO Grafenberg 75.62 339 *e*P **P** 12 14 29.6 +0.4
comp=Z,57nm,1.1s
GRFO Grafenberg 75.62 339 *e*P **P** 12 14 29.6 +0.4
GRFO pmax pmax
comp=Z,57nm,1.1s
Y45A Yeager Farm, C 75.65 53 P **P** 12 14 30.4 +0.8
baz=323
S52A Salyersville 75.66 47 P **P** 12 14 29.5 -0.1
baz=326
HGN Heimansgroeve 75.67 343 *e*P **P** 12 14 29.5 +0.1
comp=Z,74nm,1.1s
BOYT Boyabat 75.69 320 *i*P **P** 12 14 29.7 -0.1
BUD Budapest 75.73 334⇑ *e*P **P** 12 14 30.4 +0.6
BUD Budapest 75.73 334 P **P** 12 14 31.0 +1.2
AMRR Amara 75.73 327⇓ *i*P **P** 12 14 30.9 +1.0
CVDA Cernavoda 75.73 326⇓ *i*P **P** 12 14 30.8 +0.9
VOIR 75.76 329⇓ *i*P **P** 12 14 30.9 +0.7
VOIR 75.76 329 P **P** 12 14 30.3 +0.1
MEM Membach 75.80 343 ⇓P **P** 12 14 31.0 +0.8
comp=Z,50nm,0.8s
GERES GERESS Array B 75.85 338 P **P** 12 14 30.9 +0.2
comp=Z,13nm,0.7s,baz=35,slow=4.9,SNR=108
GERES LR LR 12 52 39.5
comp=Z,763nm,18.5s,baz=22,slow=40
V49A McMinnville 75.90 50 P **P** 12 14 30.6 -0.5
baz=324
W48A Pulaski 75.92 51 P **P** 12 14 31.2 +0.1
baz=324
ARR Arges 75.96 329⇑ *i*P **P** 12 14 32.7 +1.4
Y46A Houston 75.98 53 P **P** 12 14 31.0 -0.5
baz=324
ICOR Ion Corvin 76.01 326⇑ *i*P **P** 12 14 32.5 +1.0
SULR 76.04 328⇓ *i*P **P** 12 14 31.9 +0.3
CSKK Cs^tkako 76.05 334⇑ *e*P **P** 12 14 32.6 +0.9
SIRR Siria 76.07 331 *i*P **P** 12 14 32.2 +0.3
N59A State Game Lan 76.10 40 P **P** 12 14 31.6 -0.5
baz=328,SNR=7.3
N59A State Game Lan 76.10 40 *e*P **P** 12 14 32.4 +0.3
BCLA Clavier 76.11 343 ⇓P **P** 12 14 32.7 +0.7
comp=Z,23nm,0.8s
LOT Lotru 76.16 330⇑ *i*P **P** 12 14 32.4 -0.1
CONA Conrad Observa 76.17 336 *i*pP **P** 12 14 33.1 +0.6
comp=Z,33nm,0.9s,SNR=15
T52A Hallie 76.17 47 P **P** 12 14 32.9 +0.3
baz=326
SOP Sopron 76.21 335⇑ *e*P **P** 12 14 33.3 +0.7
SOP Sopron 76.21 335 P **P** 12 14 33.8 +1.2
W49A Belvidere 76.25 50 P **P** 12 14 33.7 +0.7
baz=324
PSN Preselentsi 76.25 326 *i*P **P** 12 14 32.8 -0.1
SWET Sewanee 76.33 50 *e*P **P** 12 14 34.3 +0.8
comp=Z,14nm,1.0s
HRV Adam Dziewonsk 76.36 36 P **P** 12 14 33.2 -0.3
baz=330
V50A Pikevile 76.36 49 P **P** 12 14 34.1 +0.4

baz=325
TZTN Tazewell 76.38 48 P P 12 14 34.2 +0.5
baz=325
TZTN Tazewell 76.38 48 eP P 12 14 34.3 +0.5
ILGA Ilgaz 76.47 321 eP P 12 14 35.3 +0.8
comp=Z,180nm,0.9s
GIVF Givet 76.50 344 eP P 12 14 33.9 -0.3
GIVF pmax pmax
comp=Z,24nm,0.9s
LUPA Lehigh Univers 76.53 40 eP P 12 14 34.7 +0.2
comp=Z,1.4nm,1.0s
DOU Dourbes 76.55 344 ⇑P P 12 14 35.5 +1.0
comp=Z,17nm,1.0s
V51A Loudon 76.61 49 P P 12 14 35.3 +0.3
baz=325
MOA Molln 76.64 337 iP P 12 14 35.3 +0.2
comp=Z,16nm,0.8s,SNR=9.0
W50A Signal Mountai 76.64 50 P P 12 14 35.7 +0.4
baz=325
BAIF Baives 76.65 344 eP P 12 14 35.0 0.0
BAIF pmax pmax
comp=Z,30nm,1.0s
BZS Buzias 76.67 331 ⇓iP P 12 14 35.3 0.0
X49A Woodville 76.71 51 P P 12 14 36.4 +0.7
baz=324
PAL Palisades 76.76 39 P P 12 14 35.9 +0.1
baz=329
CPCT Cooper Cave 76.81 49 eP P 12 14 37.1 +0.9
comp=Z,15nm,1.3s
BRYW Bryant College 76.88 37 eP P 12 14 36.9 +0.4
comp=Z,27nm,0.8s
ARSA Arzberg 76.88 336 iP P 12 14 36.9 +0.4
comp=Z,23nm,0.9s,SNR=12
V52A Sevierville 76.93 48 P P 12 14 36.8 -0.1
baz=326
PRD Provadia 76.95 326 iP P 12 14 36.5 -0.3
MORH M˘tr¡gy, Hung 77.00 332⇑eP P 12 14 36.4 -0.6
AKCD Akcadag 77.07 317 iP P 12 14 38.3 +0.5
X50B Fort Payne 77.08 50 P P 12 14 37.9 +0.2
baz=325
Y49A Blount Mountai 77.20 51 P P 12 14 37.6 -0.8
baz=325
ZIMR 77.24 328⇑iP P 12 14 38.3 -0.1
BEHE Becsehely 77.27 335⇑eP P 12 14 39.1 +0.5
BCAM Yenicaga 77.31 322 iP P 12 14 39.2 +0.1
W52A Murphy 77.39 49 P P 12 14 38.8 -0.7
baz=325
SZH Strazhica 77.39 327 iP P 12 14 38.6 -0.8
MDVR Moldovita 77.40 331⇑iP P 12 14 39.2 -0.2
CDAG Cicekdag 77.42 320 iP P 12 14 39.8 +0.1
PALK Pallekele 77.43 266 P P 12 14 39.6 -0.3
comp=Z,32nm,0.9s,baz=297,slow=3.3,SNR=8.7
PALK LR LR 12 53 11.5
comp=Z,216nm,19.5s,baz=159,slow=39
PALK Pallekele 77.43 266 eP P 12 14 40.1 +0.2
comp=Z,38nm,0.9s
PALK Pallekele 77.43 266 iP P 12 14 35.3 -4.7
V53A Saluda 77.43 48 P P 12 14 40.2 +0.4
baz=326
IP04 Greensprings 77.52 43 eP P 12 14 41.1 +1.0
comp=Z,15nm,1.0s
BFO Black Forest 77.53 341 eP P 12 14 37.9 -2.2
comp=Z,39nm,1.2s
BFO Black Forest 77.53 341 eP P 12 14 37.9 -2.2
BFO pmax pmax
comp=Z,39nm,1.2s
SOKA Soboth 77.54 336 iP P 12 14 40.6 +0.4
comp=Z,46nm,1.1s,SNR=26
PERS Pernice 77.56 336 iP P 12 14 40.6 +0.3
KBA Koelnbreinsper 77.58 337 ipP P 12 14 41.4 +0.9
comp=Z,160nm,0.9s,SNR=77
KBA Koelnbreinsper 77.58 337 P P 12 14 41.5 +0.9
BRTR Keskin Array B 77.63 320 P P 12 14 40.8 -0.2
comp=Z,46nm,0.9s,baz=46,slow=3.6,SNR=183
BRTR PP PP 12 17 33.5 -1.9
comp=Z,2.5nm,1.0s,baz=62,slow=3.4,SNR=4.0
BRTR LR LR 12 54 54.3
comp=Z,142nm,18.2s,baz=11,slow=40
CVRD Centerville Ro 77.66 43 eP P 12 14 41.5 +0.6
comp=Z,29nm,1.3s
CDF Champ du Feu 77.66 342 eP P 12 14 40.6 -0.3
SPRD Spring Road, M 77.67 43 eP P 12 14 41.5 +0.6
comp=Z,12nm,1.1s
Z49A Columbiana 77.68 52 P P 12 14 40.7 -0.4
baz=325
W53A Cullowhee 77.68 48 P P 12 14 40.5 -0.8
baz=326
X52A Dahlonega 77.80 49 P P 12 14 41.8 0.0
baz=326
RETA Reutte 77.81 339 iP P 12 14 41.9 +0.2
comp=Z,29nm,1.1s,SNR=12
WTTA Wattenberg 77.82 338 ipP P 12 14 42.6 +0.7
comp=Z,48nm,1.2s,SNR=13
OBKA Obir 77.82 336 iP P 12 14 42.0 +0.2
comp=Z,29nm,1.0s,SNR=11
Y51A Rockmart 77.82 50 P P 12 14 41.8 -0.1
baz=325
ANTO Ankara 77.84 321 ⇓iP P 12 14 43.0 +1.0
ANTO Ankara 77.84 321 eP P 12 14 42.3 +0.3
comp=Z,81nm,0.9s
ANTO Ankara 77.84 321 P P 12 14 42.6 +0.5
SNR=22
ANTO Ankara 77.84 321 P P 12 14 42.6 +0.5
SNR=22
ANTO Ankara 77.84 321 eP P 12 14 42.3 +0.3
ANTO pmax pmax
comp=Z,81nm,0.9s
SHME Shamm 77.86 296 iP P 12 14 41.1 -1.1
SNR=13
MOTA Moosalm 77.86 339 iP P 12 14 41.3 -0.8
comp=Z,87nm,1.2s,SNR=14
BANOM Banah 77.87 296 iP P 12 14 41.6 -0.7
SNR=12
JMB Yambol 77.88 326 iP P 12 14 41.5 -0.6
Z50A Ashland 77.93 51 P P 12 14 43.0 +0.4
baz=325
MYKA Terra Mystica 77.93 337 iP P 12 14 42.5 +0.1
comp=Z,22nm,1.4s,SNR=6.9
BG3 Lake Jocassee 77.93 48 eP P 12 14 43.8 +1.3
comp=Z,20nm,1.3s
149A Jones 78.03 52 P P 12 14 43.6 +0.5
baz=325
MPEP Malo Peshtene 78.04 329 iP P 12 14 42.9 -0.1
ABTA Abfaltersbach 78.10 338 iP P 12 14 43.4 +0.1
comp=Z,59nm,0.9s,SNR=32
X53A Estanollee 78.16 49 P P 12 14 43.7 0.0
baz=326
DAVA Damuels 78.19 339 iP P 12 14 44.2 +0.3
comp=Z,38nm,1.0s,SNR=10
ASAR Alice Springs 78.19 204 P P 12 14 44.6 +0.8
comp=Z,6.4nm,0.8s,baz=16,slow=5.4,SNR=54
ASAR LR LR 12 52 19.4
comp=Z,91nm,18.5s,baz=14,slow=38
HAU Haudompre 78.23 342 eP P 12 14 43.7 -0.3
HAU pmax pmax
comp=Z,37nm,1.0s
FETA Feichten 78.25 339 ipP P 12 14 44.8 +0.5
comp=Z,53nm,1.0s,SNR=26
LJU Ljubljana 78.26 336 iP P 12 14 43.8 -0.3
HINF Hinteralfeld 78.31 342 eP P 12 14 43.9 -0.6
HINF pmax pmax
comp=Z,11nm,0.8s
ANDN Andirin 78.34 317 iP P 12 14 44.9 0.0
MDH Madha 78.36 296 P P 12 14 43.7 -1.3
AUMIH MIHALICIK 78.36 322 iP P 12 14 45.0 +0.1
MSFE Esma-Masafi 78.39 296 iP P 12 14 44.2 -1.0
SNR=6.4
NCAT North Carolina 78.47 45 eP P 12 14 46.4 +1.0
KMSC Kings Mountain 78.55 47 P P 12 14 45.8 -0.1
baz=327
CEY Cerknica 78.57 336 iP P 12 14 45.3 -0.6
BOJS Bojanci 78.57 335 iP P 12 14 45.7 -0.1
DIM Dimitrovgrad 78.61 327 iP P 12 14 46.2 +0.1
PGB Panagyurishte 78.62 328 iP P 12 14 46.0 -0.3
WSAR Wadi Sarin 78.63 293 P P 12 14 46.5 0.0
comp=Z,51nm,0.8s,baz=87,slow=4.7,SNR=17
FLN La Foliniere 78.65 347 eP P 12 14 45.9 -0.3
FLN pmax pmax
comp=Z,24nm,0.9s
UOSS Minazif 78.68 296 eP P 12 14 46.0 -0.8
comp=Z,115nm,0.9s
UOSS Minazif 78.68 296 iP P 12 14 45.5 -1.3
SNR=17
BORA Eskisehir 78.74 323 iP P 12 14 46.7 -0.3
BLY Banja Luka 78.75 334⇑iP P 12 14 47.2 +0.4
BLY Banja Luka 78.75 334 eP P 12 14 46.4 -0.4
comp=Z,19nm,0.8s
LDF La Druitiere 78.76 346 eP P 12 14 46.5 -0.3
LDF pmax pmax
comp=Z,19nm,1.0s
HATD Hatta, Dubai 78.82 296 P P 12 14 48.0 +0.5
SNR=8.3
HATD Hatta, Dubai 78.82 296 P P 12 14 48.0 +0.5
SNR=8.3
HATD Hatta, Dubai 78.82 296 iP P 12 14 46.7 -0.8
SNR=22
PLD Plovdiv 78.84 327 P P 12 14 47.6 +0.2
AUBOZ BOZOYUK 78.87 323 iP P 12 14 47.7 0.0
VTS Vitosha 78.90 329⇑iP P 12 14 47.6 -0.4
VTS Vitosha 78.90 329 eP P 12 14 47.5 -0.4
comp=Z,36nm,0.9s
VTS Vitosha 78.90 329 iP P 12 14 47.0 -1.0
VTS Vitosha 78.90 329 P P 12 14 46.9 -1.0
VTS Vitosha 78.90 329 eP P 12 14 47.5 -0.4
VTS pmax pmax
comp=Z,36nm,0.9s
NAZ Nazwa, Dubai 78.95 296 P P 12 14 48.0 -0.3
SNR=5.3
NAZ Nazwa, Dubai 78.95 296 P P 12 14 48.0 -0.3
SNR=5.3
NAZ Nazwa, Dubai 78.95 296 iP P 12 14 47.3 -1.0
SNR=11
Y54A Tignall 78.98 49 P P 12 14 48.8 +0.5
baz=326
KDZ Kurdzhali 79.01 327 iP P 12 14 48.1 -0.2
HOQ Hoqain 79.12 294 P P 12 14 52.0 +2.7
SNR=5.7
HOQ Hoqain 79.12 294 P P 12 14 52.0 +2.7
SNR=5.7
251A Midway 79.12 52 P P 12 14 49.4 +0.3
baz=325
SOHO SOHO 79.13 295 iP P 12 14 47.9 -1.4
SNR=36
TAOE Nuku Hiva Isla 79.23 119 eLR LR 12 39 29.3
comp=Z,169nm,22.4s
RDO Rodhopi 79.41 326 P P 12 14 50.3 -0.2
PLE Pljevlja 79.42 332 eP P 12 14 49.5 -1.2
Z54A Sparta 79.42 49 P P 12 14 51.4 +0.7
baz=326
ASUD Al Ashush, Dub 79.42 296 P P 12 14 51.0 +0.1
SNR=5.4
ASUD Al Ashush, Dub 79.42 296 P P 12 14 51.0 +0.1
SNR=5.4
ASUD Al Ashush, Dub 79.42 296 iP P 12 14 50.0 -0.8
SNR=16
ALN Alexandroupoli 79.46 326 eP P 12 14 50.5 -0.2
ALN Alexandroupoli 79.46 326 P P 12 14 50.0 -0.8
ALN Alexandroupoli 79.46 326 eP P 12 14 50.5 -0.2
KKB Krupnik 79.59 328 iP P 12 14 51.4 -0.1
MMB Musomiste 79.63 328 iP P 12 14 51.2 -0.6
ALNE Al Ain 79.64 296 iP P 12 14 51.2 -0.8
SNR=9.6
SSF Saint Saulge 79.67 344 eP P 12 14 51.7 -0.1
SSF pmax pmax
comp=Z,22nm,0.8s
UPM Unac-Piva 79.68 332 eP P 12 14 51.3 -0.9
IVA Berane 79.69 331 eP P 12 14 51.7 -0.4
ARQ Araqi 79.76 295 P P 12 14 58.0 +5.2
SNR=5.7
NVR Nevrokopi 79.80 328 P P 12 14 52.3 -0.4
KOME Kolasin 79.82 331⇑iP P 12 14 52.1 -0.7
BSY Bisya 79.84 294 P P 12 14 54.0 +0.8
SNR=13
BSY Bisya 79.84 294 P P 12 14 54.0 +0.8
SNR=13
QUIF Quistinic 79.84 348 eP P 12 14 55.4 +2.7
QUIF pmax pmax
comp=Z,157nm,2.2s
BALY Balya 79.92 324 iP P 12 14 51.3 -2.1
PVY Plav 79.92 331⇑iP P 12 14 52.8 -0.6
AVF Avril sur Loir 79.95 344 eP P 12 14 53.3 -0.1
SMTH Samothraki Isl 80.02 326 P P 12 14 52.8 -1.0
STIP Stip 80.04 329⇓iP P 12 14 52.6 -1.3
BRY Bratogost 80.06 332⇑iP P 12 14 53.2 -1.0
NKME Niksic 80.06 332⇑iP P 12 14 53.2 -0.9
SRS Serrai 80.10 328 P P 12 14 53.4 -0.9
GADA Gvkgeada 80.14 326 P P 12 14 53.7 -0.7
VAY Valandovo 80.25 329 P P 12 14 54.9 -0.2
VAY Valandovo 80.25 329 eP P 12 14 55.4 +0.4
CEME Cevo 80.27 332⇑iP P 12 14 54.3 -1.0
PDG Podgorica 80.28 331⇑iP P 12 14 54.8 -0.4
TTG Podgorica 80.28 331⇑iP P 12 14 54.5 -0.7
TTG Podgorica 80.28 331 eP P 12 14 54.5 -0.7
TTG Podgorica 80.28 331 eP P 12 14 54.5 -0.7
KNT Kendrikon 80.29 328 P P 12 14 55.1 -0.2
BAYC CANAKKALE_Bay 80.30 325 iP P 12 14 54.3 -1.1
PMOR Pomariorio Ree 80.41 129 eT T 13 43 13.0
comp=Z,1.6nm,0.2s
HCY Herceg Novi 80.49 332⇑iP P 12 14 55.1 -1.2
ISP Isparta 80.50 321⇓iP P 12 14 56.4 -0.2
ISP Isparta 80.50 321 P P 12 14 55.4 -1.2
BUM Brajici-Budva 80.51 332⇑iP P 12 14 55.3 -1.2
DRME Dracevica, Mon 80.52 331⇑iP P 12 14 55.7 -0.8
LPL La Plagne 80.54 341 eP P 12 14 57.4 +0.6
LPL pmax pmax
comp=Z,33nm,0.8s
TIGA Tifton 80.54 51 P P 12 14 57.6 +0.8
baz=326
LPG La Plagne 80.56 341 eP P 12 14 57.7 +0.7
LPG pmax pmax
comp=Z,52nm,1.0s
PHP Peshkopia 80.60 330 P P 12 14 55.9 -1.1
KRUS Krusevo 80.63 330⇓iP P 12 14 57.1 -0.2
GRG Griva 80.63 329 P P 12 14 56.7 -0.5
LIA Limnos Island 80.64 326 P P 12 14 56.4 -0.8
OUR Ouranopolis 80.67 327 P P 12 14 56.3 -1.0
MANT Manisa 80.67 323 eP P 12 14 57.5 -0.2
comp=Z,291nm,1.0s
255A Hazlehurst 80.68 50 P P 12 14 58.3 +0.8
baz=326
RAR Rarotonga 80.71 142 LR LR 12 49 03.1
comp=Z,168nm,18.4s,baz=318,slow=34
ULC Ulcinj 80.71 331⇑iP P 12 14 56.7 -0.9
PLG Polygyros 80.81 328 P P 12 14 57.2 -1.0
PRK Paraskevi 80.84 325 P P 12 14 57.3 -0.9
OHR Ohrid 81.01 330 eP P 12 14 59.3 +0.1
SIGR SIGRI 81.02 325 P P 12 14 57.8 -1.4
TIR Tirane 81.08 330⇑iP P 12 15 00.8 +1.3
FNA Florina 81.12 329 P P 12 14 59.0 -0.8
PAIG Paliouri 81.14 327 P P 12 14 58.7 -1.1
LIT Litokhoron 81.38 328 P P 12 14 59.6 -1.5
455A Stateville 81.39 51 P P 12 15 01.9 +0.6
baz=326
KZN Kozani 81.43 329 P P 12 14 59.9 -1.6
NEST Nestorio 81.56 329 P P 12 15 01.5 -0.7
VIVF Saint-Julien-l 81.58 342 eP P 12 15 03.6 +1.4
VIVF pmax pmax
comp=Z,19nm,0.9s
CHOS Chios island 81.68 325 P P 12 15 01.9 -0.9
RJF Les Rejaudoux 81.71 345 eP P 12 15 03.2 +0.4
RJF pmax pmax
comp=Z,46nm,1.2s
PENT Pentalofos 81.73 329 P P 12 15 02.1 -1.0
MZR Muzera 81.74 297 iP P 12 15 02.5 -0.8
SNR=16
XOR Xorichti 81.80 327 P P 12 15 01.9 -1.5
PPT Papeete 81.83 132 LR LR 12 43 59.5
comp=Z,191nm,21.0s,baz=318,slow=30
CSS Mathiatis 81.84 318 P P 12 15 03.0 -0.7
PPT2 Papeete2 81.85 132 eLR LR 12 40 52.2
comp=Z,510nm,22.8s
FYTO Fytoko, Volos 81.85 328 P P 12 15 02.3 -1.3
SKIA Skiathos 81.89 327 P P 12 15 02.5 -1.3
YER Yerkesik 81.96 323 P P 12 15 04.0 -0.3
FETY Fethiye 82.10 322 P P 12 15 03.0 -2.0
SMIA Simia 82.24 327 P P 12 15 04.3 -1.4
JAN Janina 82.31 329 P P 12 15 05.8 -0.3
KSL Kastellorizon 82.33 321 P P 12 15 04.9 -1.3
AGG Agios Georgios 82.40 328 P P 12 15 04.6 -2.0
LKR Lokris 82.51 327 P P 12 15 05.2 -1.9
SGD Sagiada 82.55 330 P P 12 15 06.5 -0.8
KEK Kerkira 82.59 330 P P 12 15 06.4 -1.1
MMAI Mount Meron Ar 82.62 316 P P 12 15 07.2 -0.7
comp=Z,19nm,0.5s,baz=41,slow=6.5,SNR=52
MMAI LR LR 12 57 22.8
comp=Z,471nm,18.7s,baz=35,slow=40
MATE Matera 82.67 332⇑iP P 12 15 08.0 +0.2
EVR Evrytania 82.67 328 P P 12 15 06.0 -2.1
DSL Palaion Diasel 82.71 329 P P 12 15 07.1 -1.1
ATHU Athens Univers 82.86 326 P P 12 15 05.7 -3.2
DSF Desfina 82.89 327 P P 12 15 06.8 -2.3
ANX Ano Chora 82.93 328 P P 12 15 07.5 -1.9
KALE Kalithea 83.04 328 P P 12 15 07.8 -2.1
SERG Sergoula 83.04 328 P P 12 15 07.9 -2.0
TRIZ Trizonia 83.08 328 P P 12 15 08.1 -1.9
LKD2 Lefkada island 83.16 329 P P 12 15 09.3 -1.2
PDO Prodromos 83.17 328 P P 12 15 09.5 -1.0
THAL Thalero 83.18 327 P P 12 15 08.3 -2.3
LAKA Lakka 83.23 328 P P 12 15 09.3 -1.6
KLV Kalavryta, Ach 83.35 327 P P 12 15 09.7 -1.8
GUR Goura 83.38 327 P P 12 15 09.5 -2.2
DID Didima 83.46 326 P P 12 15 09.7 -2.4
FSK Fiskardo 83.49 329 P P 12 15 10.2 -2.0
RLS Riolos of Patr 83.56 328 P P 12 15 11.8 -0.7
DRO Drossia 83.58 328 P P 12 15 11.8 -0.9
KFL Anninata 83.74 328 P P 12 15 12.3 -1.2
VLS Valsamata 83.74 329 P P 12 15 12.1 -1.4
KARP Karpathos 83.79 323 P P 12 15 10.9 -2.9
AMT Artemida-Makis 83.96 328 P P 12 15 13.4 -1.2
TIP Timpagrande 84.01 332⇑iP P 12 15 15.6 +0.7
TIP Timpagrande 84.01 332 P P 12 15 14.7 -0.2
ITM Ithomi 84.20 327 P P 12 15 14.1 -1.8
VLI Veliai 84.27 326 P P 12 15 13.1 -3.1
DYR Agios Nikonas 84.44 327 P P 12 15 15.5 -1.6
PYL PYLOS 84.52 327 P P 12 15 15.1 -2.4
STKA Stephens Creek 84.54 195 P P 12 15 16.4 -0.9
comp=Z,1.3nm,0.9s,baz=340,slow=17,SNR=2.5
LAST Lasithi 84.76 324 P P 12 15 16.8 -2.0
IDI Anoyia 84.86 324 P P 12 15 17.4 -1.9
comp=Z,18nm,0.6s,baz=13,slow=10.0,SNR=20
IDI LR LR 12 57 10.9
comp=Z,171nm,20.3s,baz=50,slow=38
IDI Anoyia 84.86 324⇑iP P 12 15 17.2 -2.1
ANKY Antikythira Is 84.91 326 P P 12 15 17.6 -1.8
IMMV Iera Moni Meta 85.04 325 P P 12 15 17.4 -2.7
RAYN Ar Rayn 85.65 303 eP P 12 15 22.4 -1.0
comp=Z,48nm,0.8s
RAYN Ar Rayn 85.65 303 iP P 12 15 22.7 -0.7
SNR=42
VAE Valguarnera 86.27 333 LR LR 12 59 28.7
comp=Z,520nm,18.4s,baz=348,slow=39
TBI Tubuai 86.90 134 eLR LR 12 42 56.7
comp=Z,241nm,30.8s
ESDC Sonseca Array 88.05 347 P P 12 15 34.5 -0.3
comp=Z,3.8nm,0.8s,baz=0.9,slow=4.7,SNR=21
ESDC LR LR 13 02 07.1
comp=Z,289nm,18.1s,baz=35,slow=40
CMAH Djebel Manchou 88.89 338 P P 12 15 39.6 +0.7
KEST Kesra 89.27 336 LR LR 13 00 35.0
comp=Z,271nm,19.4s,baz=256,slow=39
DFRA Djebel Bou Aff 89.32 339 P P 12 15 42.8 +1.8
CKHR Kef el Ahmar 89.91 339 P P 12 15 44.0 +0.3
APG El Apazote 90.29 65 LR LR 12 58 36.1
comp=Z,87nm,18.9s,baz=17,slow=37
RKT Rikitea 93.77 123 eLR LR 12 46 33.2
comp=Z,598nm,22.2s
MDT Midelt 94.88 347 LR LR 13 06 06.6
comp=Z,90nm,18.1s,baz=24,slow=40
ATD Arta Tunnel 96.92 298 LR LR 13 07 05.6
comp=Z,241nm,18.4s,baz=16,slow=40
TORD Torodi Ar. Bea 112.79 337 PP PP 12 22 05.0 -3.3
comp=Z,9.5nm,1.1s,baz=11,slow=7.7,SNR=12
DBIC Dimbokro 120.52 342 PKP PKPdf 12 21 36.2 -0.1
comp=Z,2.5nm,0.6s,baz=346,slow=1.2,SNR=3.8
DBIC PP PP 12 23 00.8 -1.4
comp=Z,8.7nm,0.9s,baz=341,slow=11,SNR=4.8
LPAZ La Paz 128.41 65 PKP PKPdf 12 21 52.5 +0.4
comp=Z,1.6nm,1.0s,baz=356,slow=4.5,SNR=4.8
VNDA Vanda 128.78 179 PKP PKPdf 12 21 49.4 -0.8
comp=Z,1.1nm,1.2s,baz=22,slow=3.3,SNR=3.6
MAW Mawson 138.52 215 PKP PKPdf 12 22 10.0 +1.4
comp=Z,4.6nm,1.0s,baz=358,slow=4.7,SNR=7.0
BOSA Boshof 139.10 286 PKhKP PKPpre 12 22 07.5
comp=Z,3.6nm,0.9s,baz=90,slow=2.0,SNR=2.3
QSPA South Pole Qui 141.26 180 PKhKP PKPpre 12 22 07.9
comp=Z,1.9nm,0.9s,baz=308,slow=0.8,SNR=5.8
PLCA Paso Flores 144.28 93 PKP PKPdf 12 22 20.0 0.0
comp=Z,4.0nm,0.8s,baz=12,slow=3.6,SNR=7.0
SYO Syowa Base 147.24 215⇓ePKPdf PKPdf 12 22 24.6 +0.6
SYO Syowa Base 147.24 215⇑ePKPab PKPab 12 22 31.6 +3.4
TRQA Tornquist 148.03 82 ePKPbc PKPbc 12 22 30.8 +1.2

NNC 09 12:03:13.5±0.6, 37°.04N×70°.62E, h0km, mb3.6, mpv3.2, 4C-2D, Error ellipse: s-maj=12.2km s-min=10.9km az=167.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.73	36	⇓Pn	Pn	12 04 12.4	-0.2
	4.5nm,0.3s						
SFK				⇑Sn	Sn	12 04 58.8	+1.4
	24nm,0.4s						
MNAS	Manas	5.63	14	⇑Pn	Pn	12 04 38.6	0.0
	0.7nm,0.3s						
MNAS				⇓Sn	Sn	12 05 45.2	+1.1
	3.7nm,0.5s						
KK31	Karatay Array	6.06	359	⇑Pn	Pn	12 04 45.0	+0.6
	0.3nm,0.2s,baz=173,slow=12,SNR=4.5						
KK31				⇑Sn	Sn	12 05 55.5	+1.0
	0.7nm,0.3s,baz=173,slow=22,SNR=5.5						

MEX 09 12:11:42.5±0.3, 14°.88N×92°.26W, h79km±14km, MD3.5, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		1.23	312	eP	Pn	12 12 03.0	-1.3
PCIG				eS	Sn	12 12 19.1	-1.7
CCIG	Comitan	1.40	5	iP	Pn	12 12 05.3	-1.4
TGIG		2.06	336	eP	Pn	12 12 14.0	-1.2

JMA 09 12:46:51.4±0.1, 41°.20N×146°.63E, h54km, M3.5, Off southeast coast of Hokkaido

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	2.26	343	P	Pn	12 47 27.5	+1.2
NEM2				eS	Sn	12 47 54.8	+1.8
JAK	Akkeshi	2.30	322	P	Pn	12 47 28.0	+1.2
JAK				eS	Sn	12 47 55.6	+1.7
JOB	Onbets	2.69	310	eS	Sn	12 48 05.8	+2.3
JNK	Nakash	2.77	330	P	Pn	12 47 34.2	+0.9
JNK				eS	Sn	12 48 05.8	+0.2
JCH	Churui	2.82	301	P	Pn	12 47 35.3	+1.4
JCH				eS	Sn	12 48 07.5	+0.8
JAR	Ashorobuto	2.98	316	P	Pn	12 47 37.7	+1.5
JAR				eS	Sn	12 48 11.8	+1.1
JNBK	Urakawa-nobuka	3.10	292	P	Pn	12 47 39.5	+1.8
JNBK				eS	Sn	12 48 15.1	+1.6
JANG	Nango	3.97	260	P	Pn	12 47 47.9	-1.8
JOT	Ohata	4.21	274	P	Pn	12 47 52.8	-0.2

*IDC **09** 12:47:14.3±1.4, 1°.35N×92°.31E, h0km, mb3.8/8, mb1 3.9/8, mb1mx3.5/70, mbtmp3.8/8, MS3.6/1, Ms1 3.5/1, ms1mx2.6/67, Error ellipse: s-maj=64.2km s-min=20.3km az=55.0*

*ISCJB **09** 12:47:17.8±1.4, 1°.5N±0°.3×92°.5E±0°.3, h33km, mb3.8/8, MS3.6/1, Error ellipse: s-maj=56.7km s-min=17.4km az=144.0*

ISC 09 12:47:19.7±1.4, 1°.4N±0°.3×92°.4E±0°.4, h35km, n13, σ0.46/10, mb3.8/8, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	Diego Garcia H	21.77	245	T	T	13 14 35.6	
	baz=78						
H08S3	Diego Garcia H	21.77	245	T	T	13 14 34.2	
	baz=78						
H08S1	Diego Carcia H	21.79	245	T	T	13 14 38.6	
	baz=78						
MKAR	Makanchi Array	46.08	350	P	P	12 55 40.3	0.0
	0.7nm,0.6s,baz=167,slow=9.0,SNR=8.0						
WRA	Warramunga Arr	46.27	119	P	P	12 55 42.1	-0.1
	0.6nm,0.9s,baz=299,slow=8.4,SNR=3.4						
ASAR	Alice Springs	47.41	124	P	P	12 55 51.0	-0.1
	0.3nm,1.0s,baz=296,slow=8.3,SNR=3.7						
ASAR				PcP	PcP	12 57 21.7	+0.3
	0.2nm,0.5s,baz=304,slow=3.2,SNR=5.6						
SONM	Songino Array	47.84	13	P	P	12 55 54.6	+0.4
	1.9nm,0.6s,baz=192,slow=9.5,SNR=6.8						
KURBB	Kurchatov Arra	50.45	349	P	P	12 56 13.1	-0.8

0.9nm,0.7s,baz=168,slow=7.1,SNR=9.2
ZALV Zalesovo Beam 52.76 354 P **P 12 56 30.9 -0.2**
1.6nm,0.4s,baz=194,slow=8.8,SNR=6.2
STKA Stephens Creek 57.11 130 LR LR 13 22 47.2
comp=Z,44nm,18.1s,baz=22,slow=37
FINES FINESS Array B 77.64 333 P **P 12 59 11.9 -0.4**
2.1nm,0.9s,baz=117,slow=11,SNR=7.1
GERES GERESS Array B 81.51 319 P **P 12 59 34.3 +0.5**
0.5nm,0.6s,baz=118,slow=5.7,SNR=5.4
TXAR Lajitas Array 145.82 25 PKPbc **PKPab 13 06 56.4 -0.1**
0.3nm,0.5s,baz=323,slow=0.7,SNR=5.0

*ISCJB **09** 13:14:07.9±0.6, 41°.94N±0°.03×16°.18E±0°.05, h30km±5km, Error ellipse: s-maj=7.2km s-min=4.0km az=144.8*
*CSEM **09** 13:14:08.2±0.2, 41°.93N×16°.19E, h25km±1km, ML2.6, Error ellipse: s-maj=4.1km s-min=2.0km az=49.0*
*ROM **09** 13:14:09.4±0.2, 41°.83N±0°.02×16°.09E±0°.02, h33km, ML2.5/11*

ISC 09 13:14:08.3±1.0, 41°.92N±0°.03×16°.16E±0°.04, h31km±7km, n53, σ0s.72/70, 6C-6D, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MS1	**Monte Sant'Ang**	**0.27**	**217**	*i* Pg	**Pn**	**13 14 15.8**	**-0.3**
MS1				Sg	**Sb**	**13 14 20.8**	**+0.4**
MSAG	**Monte S. Angel**	**0.28**	**222**	P	**Pb**	**13 14 15.9**	**+0.2**
MSAG				S	**Sb**	**13 14 20.2**	**-0.4**
MSAG	**Monte S. Angel**	**0.28**	**222**	P	**Pb**	**13 14 15.9**	**+0.2**
MSAG				S	**Sb**	**13 14 20.2**	**-0.4**
MSAG	comp=E,3375μm,0.2s			AML	AML		
MSAG	comp=N,6980μm,0.5s			AML	AML		
MSAG	comp=E,3875μm,0.5s			AML	AML		
MSAG	comp=N,7360μm,0.5s			AML	AML		
MSAG	comp=E,3375μm,0.2s			AML	AML		
MSAG	comp=N,6980μm,0.5s			AML	AML		
MSAG	comp=E,3875μm,0.5s			AML	AML		
MSAG	comp=N,7360μm,0.5s			AML	AML		
MSAG	comp=E,3375μm,0.2s			AML	AML		
MSAG	comp=N,6980μm,0.5s			AML	AML		
MSAG	comp=E,3875μm,0.5s			AML	AML		
MSAG	comp=N,7360μm,0.5s			AML	AML		
MSAG	comp=E,3375μm,0.2s			AML	AML		
MSAG	comp=E,3875μm,0.5s			AML	AML		
MSAG	comp=N,6980μm,0.5s			AML	AML		
MSAG	comp=N,7360μm,0.5s			AML	AML		
SGRT	**San Giovanni R**	**0.35**	**242**	P	**Pb**	**13 14 16.6**	**0.0**
SGRT				S	**Sb**	**13 14 21.6**	**-0.7**
SGRT	**San Giovanni R**	**0.35**	**242**	P	**Pb**	**13 14 16.6**	**0.0**
SGRT				S	**Sb**	**13 14 21.6**	**-0.7**
SGRT	comp=E,1620μm,0.2s			AML	AML		
SGRT	comp=N,1960μm,1.2s			AML	AML		
SGRT	comp=E,1620μm,0.2s			AML	AML		
SGRT	comp=N,1960μm,1.2s			AML	AML		
SGRT	comp=E,1620μm,0.2s			AML	AML		
SGRT	comp=N,1960μm,1.2s			AML	AML		
SGRT	comp=E,1620μm,0.2s			AML	AML		
SGRT	comp=N,1960μm,1.2s			AML	AML		
MELA	**Melanico ??? S**	**0.80**	**255**	P	**Pb**	**13 14 23.3**	**-0.4**
MELA				S	**Sb**	**13 14 33.5**	**-0.7**
MELA	**Melanico ??? S**	**0.80**	**255**	P	**Pb**	**13 14 23.3**	**-0.4**
MELA				S	**Sb**	**13 14 33.5**	**-0.7**
MELA	comp=E,829μm,0.2s			AML	AML		
MELA	comp=N,404μm,0.3s			AML	AML		
MELA	comp=E,904μm,0.2s			AML	AML		
MELA	comp=N,444μm,0.3s			AML	AML		
MELA	comp=E,828μm,0.2s			AML	AML		
MELA	comp=N,404μm,0.3s			AML	AML		
MELA	comp=E,904μm,0.2s			AML	AML		
MELA	comp=N,444μm,0.3s			AML	AML		
MELA	comp=E,829μm,0.2s			AML	AML		
MELA	comp=N,404μm,0.3s			AML	AML		
MELA	comp=E,904μm,0.2s			AML	AML		
MELA	comp=N,444μm,0.3s			AML	AML		
MELA	comp=N,444μm,0.3s			AML	AML		
MELA	comp=N,404μm,0.3s			AML	AML		
MELA	comp=E,904μm,0.2s			AML	AML		
MELA	comp=E,828μm,0.2s			AML	AML		
MRVN	**Minervino Murg**	**0.86**	**178**	P	**Pn**	**13 14 24.2**	**0.0**
MRVN				S	**Sn**	**13 14 35.4**	**-0.3**
MRVN	**Minervino Murg**	**0.86**	**178**	P	**Pn**	**13 14 24.2**	**0.0**
MRVN				S	**Sn**	**13 14 35.4**	**-0.3**
MRVN	comp=E,157μm,0.3s			AML	AML		
MRVN	comp=N,108μm,0.4s			AML	AML		
MRVN	comp=E,157μm,0.3s			AML	AML		
MRVN	comp=N,108μm,0.4s			AML	AML		
MRVN	comp=E,157μm,0.3s			AML	AML		
MRVN	comp=N,109μm,0.4s			AML	AML		
MRVN	comp=E,157μm,0.3s			AML	AML		
MRVN	comp=N,109μm,0.4s			AML	AML		
CIGN	**Sant'Elia a Pi**	**0.97**	**255**	P	**Pn**	**13 14 26.1**	**+0.3**
CIGN	**Sant'Elia a Pi**	**0.97**	**255**	P	**Pn**	**13 14 26.1**	**+0.3**
BAI	**Bari**	**0.98**	**146**	*e*Pg	**Pn**	**13 14 26.3**	**+0.5**
PALZ	**Palazzo San Ge**	**0.98**	**189**	⇓P	**Pn**	**13 14 26.1**	**+0.1**
PALZ	**Palazzo San Ge**	**0.98**	**189**	P	**Pn**	**13 14 26.1**	**+0.1**
PALZ	comp=E,154μm,1.5s			AML	AML		
PALZ	comp=N,128μm,1.6s			AML	AML		
PALZ	comp=E,154μm,1.5s			AML	AML		
PALZ	comp=N,128μm,1.6s			AML	AML		
PALZ	comp=E,154μm,1.5s			AML	AML		
PALZ	comp=N,128μm,1.6s			AML	AML		
AMUR	**Altamura**	**1.06**	**161**	⇓P	**Pn**	**13 14 27.4**	**+0.3**
AMUR	**Altamura**	**1.06**	**161**	P	**Pn**	**13 14 27.4**	**+0.3**
AMUR	comp=E,185μm,0.7s			AML	AML		
AMUR	comp=N,128μm,1.3s			AML	AML		
AMUR	comp=E,185μm,0.7s			AML	AML		
AMUR	comp=N,128μm,1.3s			AML	AML		
AMUR	comp=E,185μm,0.7s			AML	AML		
AMUR	comp=N,128μm,1.3s			AML	AML		
CAFE	**Carife**	**1.13**	**218**	P	**Pb**	**13 14 29.3**	**0.0**
CAFE	**Carife**	**1.13**	**218**	P	**Pb**	**13 14 29.3**	**0.0**
ACER	**Acerenza**	**1.14**	**188**	⇑P	**Pn**	**13 14 28.4**	**+0.2**
ACER	**Acerenza**	**1.14**	**188**	P	**Pn**	**13 14 28.4**	**+0.2**
ACER	comp=E,170μm,0.3s			AML	AML		
ACER	comp=N,176μm,0.5s			AML	AML		
ACER	comp=E,170μm,0.3s			AML	AML		
ACER	comp=N,176μm,0.5s			AML	AML		
ACER	comp=E,170μm,0.3s			AML	AML		
ACER	comp=N,176μm,0.5s			AML	AML		
SG1	**Sgolgore (BA)**	**1.15**	**160**	*e*Pg	**Pn**	**13 14 28.5**	**+0.3**
NOCI	**Noci**	**1.32**	**149**	⇓P	**Pn**	**13 14 31.2**	**+0.6**
NOCI				S	**Sn**	**13 14 46.8**	**-0.3**
NOCI	**Noci**	**1.32**	**149**	P	**Pn**	**13 14 31.2**	**+0.6**
NOCI				S	**Sn**	**13 14 46.8**	**-0.3**
NOCI	comp=E,200μm,1.0s			AML	AML		
NOCI	comp=N,284μm,0.8s			AML	AML		
NOCI	comp=E,200μm,1.0s			AML	AML		
NOCI	comp=N,284μm,0.8s			AML	AML		
NOCI	comp=N,284μm,0.8s			AML	AML		
NOCI	comp=E,200μm,1.0s			AML	AML		
MIGL	**Miglionico**	**1.33**	**171**	P	**Pn**	**13 14 31.2**	**+0.5**
MIGL	**Miglionico**	**1.33**	**171**	P	**Pn**	**13 14 31.2**	**+0.5**
MIGL	comp=E,262μm,1.1s			AML	AML		
MIGL	comp=N,254μm,1.5s			AML	AML		
MIGL	comp=E,262μm,1.1s			AML	AML		
MIGL	comp=N,254μm,1.5s			AML	AML		
MIGL	comp=E,262μm,1.1s			AML	AML		
MIGL	comp=N,254μm,1.5s			AML	AML		
MATE	**Matera**	**1.33**	**162**	P	**Pn**	**13 14 31.2**	**+0.5**
MATE				S	**Sn**	**13 14 46.8**	**-0.6**
MATE	**Matera**	**1.33**	**162**	P	**Pn**	**13 14 31.2**	**+0.5**
MATE				S	**Sn**	**13 14 46.8**	**-0.6**
MATE	comp=E,112μm,1.1s			AML	AML		
MATE	comp=N,124μm,0.6s			AML	AML		
MATE	comp=E,112μm,1.1s			AML	AML		
MATE	comp=N,124μm,0.6s			AML	AML		
MATE	comp=N,124μm,0.6s			AML	AML		
MATE	comp=E,112μm,1.1s			AML	AML		
FASA	**Fasano**	**1.42**	**140**	*e*Pg	**Pn**	**13 14 32.6**	**+0.6**
FASA				Sg	**Sn**	**13 14 50.4**	**+0.8**
MASS	**Massafra**	**1.48**	**150**	*e*Pg	**Pn**	**13 14 33.5**	**+0.7**
STON	**Ston**	**1.49**	**50**	*i* Pg	**Pn**	**13 14 32.7**	**-0.1**
STON				Sg	**Sn**	**13 14 50.8**	**-0.4**
STON	**Ston**	**1.49**	**50**	*i* Pg	**Pn**	**13 14 32.7**	**-0.1**
STON				Sg	**Sn**	**13 14 50.7**	**-0.4**
TAR1	**Taranto**	**1.63**	**148**	*e*Pg	**Pn**	**13 14 34.6**	**-0.2**
INTR	**Introdacqua**	**1.68**	**274**	AML	AML		
INTR	comp=N,91μm,0.8s			AML	AML		
INTR	comp=E,71μm,0.6s			AML	AML		
INTR	comp=N,91μm,0.8s			AML	AML		
INTR	comp=E,71μm,0.6s			AML	AML		
INTR	comp=E,71μm,0.6s			AML	AML		
INTR	comp=N,91μm,0.8s			AML	AML		
SALB	**San Lorenzo Be**	**2.04**	**176**	⇑P	**Pn**	**13 14 41.4**	**+0.8**
SALB	**San Lorenzo Be**	**2.04**	**176**	P	**Pn**	**13 14 41.4**	**+0.8**
SALB	comp=E,47μm,0.3s			AML	AML		
SALB	comp=N,31μm,0.8s			AML	AML		
SMA1	**SAN MARTINO**	**2.21**	**290**	⇑P	**Pn**	**13 14 43.7**	**+0.8**
SMA1	**SAN MARTINO**	**2.21**	**290**	P	**Pn**	**13 14 43.7**	**+0.8**
LNSS	**Leonessa**	**2.41**	**287**	⇑P	**Pn**	**13 14 46.0**	**+0.3**
LNSS	**Leonessa**	**2.41**	**287**	P	**Pn**	**13 14 47.0**	**+1.3**
FDMO	**Fiordimonte**	**2.53**	**297**	⇑P	**Pn**	**13 14 48.5**	**+1.3**
FDMO	**Fiordimonte**	**2.53**	**297**	P	**Pn**	**13 14 48.5**	**+1.3**
SCTE	**Santa Cesarea**	**2.54**	**136**	⇑P	**Pn**	**13 14 48.4**	**+1.1**
SCTE	**Santa Cesarea**	**2.54**	**136**	P	**Pn**	**13 14 48.4**	**+1.1**
NVLJ	**Novalja**	**2.81**	**341**	*e*Pn	**Pn**	**13 14 51.2**	**+0.3**
NVLJ				Sn	**Sn**	**13 15 22.9**	**-0.7**
NVLJ	**Novalja**	**2.81**	**341**	*e*Pn	**Pn**	**13 14 51.2**	**+0.3**
NVLJ				Sn	**Sn**	**13 15 22.9**	**-0.7**
ASSB	**Assisi San Ben**	**2.82**	**295**	P	**Pn**	**13 14 52.8**	**+1.6**
ASSB	**Assisi San Ben**	**2.82**	**295**	P	**Pn**	**13 14 52.8**	**+1.6**
PIEI	**Pieia**	**3.12**	**302**	⇓P	**Pn**	**13 14 55.9**	**+0.6**
PIEI	**Pieia**	**3.12**	**302**	P	**Pn**	**13 14 55.9**	**+0.6**
ATPC	**Poggio Castell**	**3.14**	**301**	⇓P	**Pn**	**13 14 57.1**	**+1.5**
ATPC	**Poggio Castell**	**3.14**	**301**	P	**Pn**	**13 14 57.1**	**+1.5**
ATMC	**Monte Cedrone**	**3.30**	**299**	⇓P	**Pn**	**13 14 59.3**	**+1.5**
ATMC	**Monte Cedrone**	**3.30**	**299**	P	**Pn**	**13 14 59.3**	**+1.5**

MAN 09 13:17:28.3, 12°.76N×125°.16E, h31km, mb4.4, ML3.3, MS3.1, 1C, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.55**	**243**	*e*P	Pn	13 17 41.1	+1.1
CNP				*e*S	Sn	13 17 49.3	+1.2
BESP	**Borongan**	**1.18**	**167**	*e*P	Pn	13 17 47.8	-0.9
BESP				*e*S	Sb	13 18 04.8	-0.3
PVCP	**Virac**	**1.29**	**310**	*e*P	Pn	13 17 50.3	+0.1
PVCP				*e*S	Sb	13 18 13.7	+5.5
PLP	**Palo**	**1.59**	**187**	⇑*e*P	Pn	13 17 54.3	-0.1
PLP				*i* S	Sb	13 18 17.7	+0.8
MSLP	**Maasin**	**2.62**	**187**	*e*P	Pb	13 18 11.9	-2.8
MSLP				*e*S	Sb	13 18 52.7	+6.2

*NIC **09** 13:21:57.8±0.2, 34°.65N×32°.98E, h10km, ML3.2*
*ISK **09** 13:21:57.5, 34°.67N×32°.96E, h19km, ML3.0/4*
*ISCJB **09** 13:21:58.3±1.2, 34°.69N±0°.07×32°.96E±0°.05, h13km±3km, Error ellipse: s-maj=12.6km s-min=6.6km az=173.7*
*CSEM **09** 13:21:58.1±0.6, 34°.66N×32°.95E, h10km, ML3.2, Error ellipse: s-maj=12.7km s-min=6.9km az=178.0*
*DDA **09** 13:22:07.8, 34°.85N×33°.01E, h5km, Ml3.2*

ISC 09 13:21:58.9±1.2, 34°.72N±0°.06×32°.95E±0°.03, h13km±6km, n57, σ0s.95/69, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SZAC	**Souni**	**0.06**	**305**	P	**Pg**	**13 22 01.4**	**-0.2**
SZAC	baz=142			S	**Sg**	**13 22 03.7**	**+0.2**
SZAC	**Souni**	**0.06**	**305**	P	**Pg**	**13 22 01.4**	**-0.2**
SZAC				S	**Sg**	**13 22 03.7**	**+0.2**
CSS	**Mathiatis**	**0.40**	**52**	PG	**Pg**	**13 22 06.7**	**-0.2**
CSS				SG	**Sg**	**13 22 13.0**	**+0.6**
CSS	**Mathiatis**	**0.40**	**52**	PG	**Pg**	**13 22 06.8**	**-0.2**
CSS				SG	**Sg**	**13 22 11.9**	**-0.5**
CSS	**Mathiatis**	**0.40**	**52**	P	**Pg**	**13 22 06.8**	**-0.2**
CSS	baz=223			S	**Sg**	**13 22 12.9**	**+0.6**
CSS	**Mathiatis**	**0.40**	**52**	*e*Pg	**Pg**	**13 22 06.7**	**-0.2**
CSS				S	**Sg**	**13 22 12.9**	**+0.6**
LEF	**Lefka**	**0.40**	**354**	PG	**Pg**	**13 22 06.8**	**-0.2**
LEF				SG	**Sb**	**13 22 14.2**	**+0.2**
LEF	**Lefka**	**0.40**	**354**	PG	**Pb**	**13 22 07.7**	**-0.2**
LEF				SG	**Sg**	**13 22 11.9**	**-0.6**
LEF	**Lefka**	**0.40**	**354**	P	**Pg**	**13 22 06.7**	**-0.2**
LEF				*e*Sg	**Sb**	**13 22 14.2**	**+0.2**
LEF				S	**Sg**	**13 22 15.3**	**+2.8**
MAMC	**Mammari**	**0.51**	**26**	P	**Pg**	**13 22 08.4**	**-0.5**
MAMC	baz=201 **Mammari**	**0.51**	**26**	P	**Pg**	**13 22 08.4**	**-0.5**
AKIN	**Ak¨-nc¨-lar- K**	**0.52**	**55**	PG	**Pg**	**13 22 08.8**	**-0.4**
AKIN	**Ak¨-nc¨-lar- K**	**0.52**	**55**	PG	**Pb**	**13 22 09.8**	**-0.1**
AKIN	**Ak¨-nc¨-lar- K**	**0.52**	**55**	*e*Pg	**Pg**	**13 22 08.8**	**-0.4**
PPCY	**Paphos**	**0.52**	**289**	P	**Pg**	**13 22 09.0**	**-0.2**
PPCY	baz=113 **Paphos**	**0.52**	**289**	P	**Pg**	**13 22 09.0**	**-0.2**
ALFC	**Alefka**	**0.52**	**327**	P	**Pg**	**13 22 09.0**	**-0.2**
ALFC	baz=148 **Alefka**	**0.52**	**327**	P	**Pg**	**13 22 09.0**	**-0.2**
AKDN	**Akdeniz- K¨-br**	**0.58**	**2**	PG	**Pg**	**13 22 10.5**	**+0.2**
AKDN	**Akdeniz- K¨-br**	**0.58**	**2**	PG	**Pg**	**13 22 08.6**	**-1.7**
AKDN	**Akdeniz- K¨-br**	**0.58**	**2**	*i* Pg	**Pg**	**13 22 10.5**	**+0.2**
AKMC	**Akamas**	**0.59**	**302**	P	**Pg**	**13 22 10.5**	**0.0**
AKMC	baz=124 **Akamas**	**0.59**	**302**	P	**Pg**	**13 22 10.5**	**0.0**
EREN	**Erenkoy**	**1.29**	**51**	PN	**Pn**	**13 22 21.3**	**-1.3**
EREN	**Erenkoy**	**1.29**	**51**	PG	**Pn**	**13 22 21.5**	**-1.1**
EREN	**Erenkoy**	**1.29**	**51**	*e*Pn	**Pn**	**13 22 21.3**	**-1.3**
AKKU	**Akkuyu-Mersin**	**1.52**	**19**	PN	**Pn**	**13 22 24.8**	**-1.0**
AKKU				SN	**Sn**	**13 22 45.0**	**-0.4**
AKKU	**Akkuyu-Mersin**	**1.52**	**19**	PN	**Pn**	**13 22 25.3**	**-0.5**
AKKU	**Akkuyu-Mersin**	**1.52**	**19**	*e*Pn	**Pn**	**13 22 24.8**	**-1.0**
AKKU				*e*Sn	**Sn**	**13 22 45.0**	**-0.4**
YESI	**Yesilovacik-Me**	**1.58**	**21**	PN	**Pn**	**13 22 25.8**	**-0.8**
YESI	**Yesilovacik-Me**	**1.58**	**21**	PN	**Pn**	**13 22 26.6**	**0.0**
YESI	**Yesilovacik-Me**	**1.58**	**21**	*e*Pn	**Pn**	**13 22 25.8**	**-0.8**
GAZI	**Gazipasa**	**1.60**	**341**	*i* P	**Pn**	**13 22 26.4**	**-0.4**
GAZI	**Gazipasa**	**1.60**	**341**	P	**Pn**	**13 22 26.5**	**-0.4**
IKL	**Isikli**	**1.63**	**21**	PN	**Pn**	**13 22 26.8**	**-0.5**
IKL	**Isikli**	**1.63**	**21**	PN	**Pn**	**13 22 27.4**	**+0.1**
IKL	**Isikli**	**1.63**	**21**	*e*Pn	**Pn**	**13 22 26.8**	**-0.5**
TEVE	**Tevekalti-Mers**	**1.76**	**13**	PN	**Pn**	**13 22 28.5**	**-0.7**
TEVE	**Tevekalti-Mers**	**1.76**	**13**	PN	**Pn**	**13 22 29.9**	**+0.7**
TEVE	**Tevekalti-Mers**	**1.76**	**13**	*e*Pn	**Pn**	**13 22 28.5**	**-0.7**
ERMK	**Ermenek**	**1.92**	**359**	*i* P	**Pb**	**13 22 32.9**	**-1.0**
ERMK	**Ermenek**	**1.92**	**359**	P	**Pb**	**13 22 32.9**	**-1.0**
KIZK	**Mersin**	**2.01**	**29**	PN	**Pn**	**13 22 31.9**	**-0.6**
KIZK	**Mersin**	**2.01**	**29**	PN	**Pn**	**13 22 33.4**	**+0.9**
KIZK	**Mersin**	**2.01**	**29**	*i* P	**Pn**	**13 22 33.8**	**+1.3**
KIZK	**Mersin**	**2.01**	**29**	P	**Pn**	**13 22 33.8**	**+1.3**
KEPZ	**Antalya-Kepez**	**2.44**	**334**	*i* P	**Pn**	**13 22 38.6**	**+0.2**
KEPZ	**Antalya-Kepez**	**2.44**	**334**	P	**Pn**	**13 22 38.6**	**+0.2**
MERS	**Mersin**	**2.50**	**30**	PN	**Pn**	**13 22 38.8**	**-0.5**
MERS	**Mersin**	**2.50**	**30**	PN	**Pn**	**13 22 40.3**	**+1.0**
MERS	**Mersin**	**2.50**	**30**	*e*Pn	**Pn**	**13 22 38.8**	**-0.5**
KERG	**Konya-Eregli**	**2.86**	**19**	*i* P	**Pn**	**13 22 46.9**	**+2.6**
KERG	**Konya-Eregli**	**2.86**	**19**	P	**Pn**	**13 22 46.9**	**+2.6**
YAYL	**Yayladag**	**2.90**	**62**	*i* P	**Pn**	**13 22 46.4**	**+1.5**
YAYL	**Yayladag**	**2.90**	**62**	P	**Pn**	**13 22 46.3**	**+1.5**
GULE	**Gulek**	**2.96**	**30**	*i* P	**Pn**	**13 22 47.8**	**+2.1**
GULE	**Gulek**	**2.96**	**30**	P	**Pn**	**13 22 47.8**	**+2.1**

*ROM **09** 13:25:15.9±0.0, 44°.871N±0°.001×11°.084E±0°.003, h8km, ML3.4/26*
*ISCJB **09** 13:25:15.9±0.2, 44°.81N±0°.02×11°.10E±0°.02, h20km±1km, Error ellipse: s-maj=3.9km s-min=2.5km az=151.4*
*LDG **09** 13:25:16.3±0.2, 44°.90N×11°.19E, h2km, Ml3.4/15, Error ellipse: s-maj=4.1km s-min=3.1km az=86.0*
*CSEM **09** 13:25:16.3±0.1, 44°.89N×11°.12E, h10km, ML3.4/19, Error ellipse: s-maj=3.9km s-min=2.5km az=138.0*
*IASPEI **09** 13:25:16.4±0.8, 44°.87N±0°.02×11°.09E±0°.02, h13km±4km, Error ellipse: s-maj=3.3km s-min=2.5km az=158.3, GT5 selection from ISC bulletin GT5 identified by Bond¨¡r and McLaughlin (2009) selection criteria Bond¨¡r and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
*PRU **09** 13:25:17.0, 44°.93N×10°.96E, h11km*
*STR **09** 13:25:20.0±1.7, 45°.N±8°.×1°.1E±1°.4, h5km, M3.8/7, MLv3.8/7*

ISC 09 13:25:16.3±0.7, 44°.89N±0°.02×11°.07E±0°.02, h15km±3km, n185, σ1s.27/266, 13C-17D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0818	**Loc. Fossa, Co**	**0.05**	**327**	*e*P	**Pg**	**13 25 18.7**	**-0.4**
T0818				*e*S	**Sg**	**13 25 21.7**	**+0.7**
T0818	**Loc. Fossa, Co**	**0.05**	**327**	*e*P	**Pg**	**13 25 18.7**	**-0.4**
T0818				*e*S	**Sg**	**13 25 21.7**	**+0.7**
T0802	**SanFelice sul**	**0.08**	**101**	⇓*e*P	**Pg**	**13 25 18.2**	**-1.1**
T0802				⇓*e*S	**Sg**	**13 25 22.4**	**+1.1**
T0802	**SanFelice sul**	**0.08**	**101**	*e*P	**Pg**	**13 25 18.2**	**-1.1**
T0802				*e*S	**Sg**	**13 25 22.4**	**+1.1**
T0813	**Massa Finalese**	**0.09**	**98**	⇓*e*P	**Pg**	**13 25 18.5**	**-1.0**
T0813				⇓*e*S	**Sg**	**13 25 22.3**	**+0.8**
T0813	**Massa Finalese**	**0.09**	**98**	*e*P	**Pg**	**13 25 18.5**	**-1.0**
T0813				*e*S	**Sg**	**13 25 22.3**	**+0.8**
T0812	**Loc. Stoppiaro**	**0.10**	**50**	⇑*e*P	**Pg**	**13 25 19.2**	**-0.4**
T0812	**Loc. Stoppiaro**	**0.10**	**50**	*e*P	**Pg**	**13 25 19.2**	**-0.4**
T0827	**Moglia (MN)**	**0.11**	**296**	⇑*e*P	**Pg**	**13 25 19.7**	**0.0**
T0827				⇑*e*S	**Sb**	**13 25 23.6**	**+0.9**
T0827	**Moglia (MN)**	**0.11**	**296**	*e*P	**Pg**	**13 25 19.7**	**0.0**
T0827				*e*S	**Sb**	**13 25 23.6**	**+0.9**
T0814	**Loc. Cortile,**	**0.12**	**217**	⇓*e*P	**Pg**	**13 25 19.3**	**-0.5**
T0814				⇓*e*S	**Sb**	**13 25 23.5**	**+0.5**
T0814	**Loc. Cortile,**	**0.12**	**217**	*e*P	**Pg**	**13 25 19.3**	**-0.5**
T0814				*e*S	**Sb**	**13 25 23.5**	**+0.5**
NDIM	**Novi di Modena**	**0.12**	**269**	AML	AML		
NDIM	comp=N,98550μm,0.5s			AML	AML		
NDIM	comp=N,98800μm,0.5s			AML	AML		
NDIM	comp=N,97700μm,0.5s			AML	AML		
NDIM	comp=N,98550μm,0.5s			AML	AML		
NDIM	comp=N,97700μm,0.5s			AML	AML		
NDIM	comp=N,97700μm,0.5s			AML	AML		
NDIM				AML	AML		
NDIM				AML	AML		
T0828	**Loc. Fossoli,**	**0.13**	**242**	⇓*e*P	**Pg**	**13 25 19.4**	**-0.5**
T0828				⇓*e*S	**Sb**	**13 25 23.2**	**+0.1**
T0828	**Loc. Fossoli,**	**0.13**	**242**	*e*P	**Pg**	**13 25 19.4**	**-0.5**
T0828				*e*S	**Sb**	**13 25 23.2**	**+0.1**
T0800	**Massa Finalese**	**0.13**	**108**	⇓*e*P	**Pg**	**13 25 19.2**	**-0.8**
T0800				⇓*e*S	**Sb**	**13 25 23.1**	**-0.2**
T0800	**Massa Finalese**	**0.13**	**108**	*e*P	**Pg**	**13 25 19.2**	**-0.8**
T0800				*e*S	**Sb**	**13 25 23.1**	**-0.2**
T0800	comp=E,33450μm,0.8s			AML	AML		
T0800	comp=N,53700μm,1.0s			AML	AML		
T0800	comp=E,34350μm,1.1s			AML	AML		
T0800	comp=N,48650μm,0.9s			AML	AML		
T0800	comp=E,33450μm,0.8s			AML	AML		
T0800	comp=N,53700μm,1.0s			AML	AML		
T0800	comp=E,34350μm,1.1s			AML	AML		
T0800	comp=N,48650μm,0.9s			AML	AML		
RAVA	**Ravarino**	**0.14**	**166**	⇓*e*P	**Pg**	**13 25 19.4**	**-0.7**
RAVA				⇓*e*S	**Sg**	**13 25 23.2**	**+0.7**
RAVA	**Ravarino**	**0.14**	**166**	*e*P	**Pg**	**13 25 19.4**	**-0.7**
RAVA				*e*S	**Sg**	**13 25 23.2**	**+0.7**
RAVA	comp=E,59900μm,0.4s			AML	AML		
RAVA	comp=N,82850μm,0.5s			AML	AML		
RAVA	comp=E,59950μm,0.4s			AML	AML		
RAVA	comp=N,82850μm,0.5s			AML	AML		
RAVA	comp=E,59900μm,0.4s			AML	AML		
RAVA	comp=N,82850μm,0.5s			AML	AML		

RAVA AML AML
comp=E,59900µm,0.4s
RAVA AML AML
comp=N,82850µm,0.5s
T0811 Palata Pepoli 0.15 134⇓ ePg Pg 13 25 19.3 -0.9
T0811 ⇓ eSg **Sg 13 25 23.4 +0.6**
T0811 Palata Pepoli 0.15 134 ePg Pg 13 25 19.3 -0.9
T0811 eSg **Sg 13 25 23.4 +0.6**
T0824 Loc. Limidi di 0.17 218⇓ ePg Pg 13 25 20.2 -0.2
T0824 ⇓ eSg **Sg 13 25 23.5 +0.4**
T0824 Loc. Limidi di 0.17 218 ePg Pg 13 25 20.2 -0.2
T0824 eSg **Sg 13 25 23.5 +0.4**
T0805 Bondeno (FE) 0.18 81 ePg Pg 13 25 20.2 -0.4
T0805 Bondeno (FE) 0.18 81 ePg Pg 13 25 20.2 -0.4
T0826 Rio Saliceto (0.19 255 AML AML
comp=N,24100µm,0.3s
T0826 AML AML
comp=E,24850µm,0.2s
T0826 AML AML
comp=N,24100µm,0.3s
T0826 AML AML
comp=E,24900µm,0.2s
T0826 AML AML
comp=N,24100µm,0.3s
T0826 AML AML
comp=E,24850µm,0.2s
T0826 AML AML
comp=N,24100µm,0.3s
T0826 AML AML
comp=E,24850µm,0.2s
SBPO S.Benedetto Po 0.19 326 ePg Pb 13 25 21.5 -0.1
SBPO S.Benedetto Po 0.19 326 ePg Pb 13 25 21.5 -0.1
SBPO AML AML
comp=E,10365µm,0.7s
SBPO AML AML
comp=N,36950µm,0.6s
SBPO AML AML
comp=E,10365µm,0.7s
SBPO AML AML
comp=N,36950µm,0.6s
SBPO AML AML
comp=E,10365µm,0.7s
SBPO AML AML
comp=N,36950µm,0.6s
SERM Sermide 0.20 53 ePg Pg 13 25 21.1 +0.2
SERM Sermide 0.20 53 ePg Pg 13 25 21.1 +0.2
SERM AML AML
comp=E,9990µm,0.8s
SERM AML AML
comp=N,7960µm,1.0s
SERM AML AML
comp=E,17000µm,0.8s
SERM AML AML
comp=N,15800µm,0.7s
SERM AML AML
comp=E,10000µm,0.8s
SERM AML AML
comp=N,7975µm,1.0s
SERM AML AML
comp=E,9980µm,0.8s
SERM AML AML
comp=N,7975µm,1.0s
SERM AML AML
comp=E,9980µm,0.8s
T0822 Casumaru (Bond 0.20 106⇑ ePg Pg 13 25 20.5 -0.5
T0822 ⇑ eSg **Sb 13 25 25.0 -0.3**
T0822 Casumaru (Bond 0.20 106 ePg Pg 13 25 20.5 -0.5
T0822 eSg **Sb 13 25 25.0 -0.3**
T0822 AML AML
comp=E,21000µm,0.5s
T0822 AML AML
comp=N,14750µm,0.4s
T0822 AML AML
comp=E,21000µm,0.5s
T0822 AML AML
comp=N,14750µm,0.4s
T0822 AML AML
comp=E,21000µm,0.5s
T0822 AML AML
comp=N,14750µm,0.4s
T0822 AML AML
comp=E,21000µm,0.5s
T0822 AML AML
comp=N,14750µm,0.4s
GAZZ Gazzo Veronese 0.22 4⇑ ePg Pg 13 25 21.8 +0.5
GAZZ Gazzo Veronese 0.22 4 ePg Pg 13 25 21.8 +0.5
T0803 Dosso, Cento (0.23 122 ePg Pg 13 25 20.0 -1.5
T0803 Dosso, Cento (0.23 122 ePg Pg 13 25 21.0 -0.5
T0803 AML AML
comp=E,14650µm,0.4s
T0803 AML AML
comp=N,18400µm,0.5s
T0803 AML AML
comp=E,14600µm,0.5s
T0803 AML AML
comp=N,18450µm,0.5s
T0803 AML AML
comp=N,18450µm,0.5s
T0803 AML AML
comp=E,14600µm,0.5s
NOVE Novellara 0.27 250 ePg Pg 13 25 22.6 +0.5
NOVE eSg **Sb 13 25 28.5 +1.2**
NOVE Novellara 0.27 250 ePg Pg 13 25 22.6 +0.5
NOVE eSg **Sb 13 25 28.4 +1.2**
NOVE AML AML
comp=E,7740µm,0.3s
NOVE AML AML
comp=N,7685µm,0.7s
NOVE AML AML
comp=E,7740µm,0.3s
NOVE AML AML
comp=N,7690µm,0.7s
NOVE AML AML
comp=E,7740µm,0.3s
NOVE AML AML
comp=N,7685µm,0.7s
NOVE AML AML
comp=E,7740µm,0.3s
NOVE AML AML
comp=N,7685µm,0.7s
MODE Modena 0.27 199 ePg Pg 13 25 22.5 +0.4
MODE Modena 0.27 199 ePg Pg 13 25 22.5 +0.4
MODE AML AML
comp=E,43200µm,0.7s
MODE AML AML
comp=N,21350µm,0.7s
MODE AML AML
comp=E,43200µm,0.7s
MODE AML AML
comp=N,21350µm,0.7s
MODE AML AML
comp=N,21350µm,0.7s
MODE AML AML
comp=E,43200µm,0.7s
T0817 Loc. Veratica, 0.29 69 ePg Pg 13 25 22.7 +0.2
T0817 Loc. Veratica, 0.29 69 ePg Pg 13 25 22.6 +0.2
TEOL Teolo 0.63 42⇓ ePg Pb 13 25 29.0 -0.1
TEOL eSg **Sb 13 25 39.0 +1.2**
TEOL Teolo 0.63 42 ePg Pb 13 25 29.0 -0.1
TEOL eSg **Sb 13 25 39.0 +1.2**
TEOL Teolo 0.63 42 AML AML
comp=N,3490µm,0.9s
TEOL AML AML
comp=E,4605µm,0.5s
TEOL AML AML
comp=N,3490µm,0.9s
TEOL AML AML
comp=E,4605µm,0.5s
TEOL AML AML
comp=N,3490µm,0.9s
TEOL AML AML
comp=E,4605µm,0.5s
ROVR Rover¨¤ Verone 0.76 0 AML AML
comp=N,2770µm,0.4s
ROVR AML AML
comp=E,1575µm,0.4s
ROVR AML AML
comp=N,2770µm,0.4s
ROVR AML AML
comp=E,1575µm,0.4s
BALD Monte Baldo 0.81 347 ePg Pb 13 25 32.9 +0.6
BALD eSg **Sn 13 25 46.5 +1.1**
BALD Monte Baldo 0.81 347 ePg Pb 13 25 32.9 +0.6
BALD eSg **Sn 13 25 46.5 +1.1**

SALO Salr 0.82 332 AML AML
comp=N,3590µm,0.7s
SALO AML AML
comp=E,2710µm,1.0s
SALO AML AML
comp=N,3590µm,0.7s
SALO AML AML
LEOD Capriano del C 0.88 311 AML AML
comp=E,2865µm,0.7s
LEOD AML AML
comp=E,2865µm,0.7s
LEOD AML AML
comp=N,1955µm,1.1s
LEOD AML AML
comp=N,1955µm,1.1s
MAGA Magasa 0.94 341 AML AML
comp=N,5850µm,0.5s
MAGA AML AML
comp=E,8200µm,0.3s
MAGA AML AML
comp=E,8200µm,0.3s
MAGA AML AML
comp=N,5850µm,0.5s
DOSS Dosso del Somm 0.99 5⇑ ePg Pb 13 25 35.2 -0.2
DOSS eSg **Sn 13 25 51.5 +1.7**
DOSS Dosso del Somm 0.99 5 ePg Pb 13 25 35.2 -0.2
DOSS eSg **Sn 13 25 51.5 +1.7**
CTL8 Castelleone 1.00 293 AML AML
comp=N,684µm,0.9s
CTL8 AML AML
comp=E,2820µm,0.5s
CTL8 AML AML
comp=N,1865µm,1.0s
CTL8 AML AML
comp=E,1095µm,0.9s
CTL8 AML AML
comp=N,695µm,0.9s
CTL8 AML AML
comp=E,2825µm,0.5s
CTL8 AML AML
comp=N,1870µm,1.0s
CTL8 AML AML
comp=E,1135µm,0.9s
CTL8 AML AML
comp=N,684µm,0.9s
CTL8 AML AML
comp=E,2825µm,0.5s
CTL8 AML AML
comp=N,1870µm,1.0s
CTL8 AML AML
comp=E,1135µm,0.9s
CGRP Cima Grappa 1.11 27⇑ ePg Pb 13 25 37.6 +0.2
CGRP eSg **Sn 13 25 54.6 +1.8**
CGRP Cima Grappa 1.11 27 ePg Pb 13 25 37.6 +0.2
CGRP eSg **Sn 13 25 54.6 +1.8**
CGRP Cima Grappa 1.11 27 AML AML
comp=N,1315µm,0.7s
CGRP AML AML
comp=E,850µm,1.0s
CGRP AML AML
comp=N,1315µm,0.7s
CGRP AML AML
comp=E,850µm,1.0s
RNI Roncone 1.14 344⇑ ePg Pb 13 25 37.1 -0.7
RNI eSg **Sn 13 25 54.6 +1.3**
RNI Roncone 1.14 344 ePg Pb 13 25 37.1 -0.7
RNI eSg **Sn 13 25 54.6 +1.3**
MTLO Montello 1.17 38⇑ ePg Pb 13 25 38.6 +0.3
MTLO eSg **Sg 13 25 56.2 +2.0**
MTLO Montello 1.17 38 ePg Pb 13 25 38.6 +0.3
MTLO eSg **Sg 13 25 56.2 +2.0**
PANI Panarotta 1.18 9 ePg Pn 13 25 37.8 -0.6
PANI Panarotta 1.18 9 ePg Pn 13 25 37.8 -0.6
CTI Castel Tesino 1.23 19 AML AML
comp=E,1202µm,1.0s
CTI AML AML
comp=E,1202µm,1.0s
CTI AML AML
comp=N,1825µm,0.4s
CTI AML AML
comp=N,1825µm,0.4s
MABI Malga Bissina 1.23 342 AML AML
comp=E,428µm,0.4s
MABI AML AML
comp=N,270µm,1.1s
MABI AML AML
comp=N,270µm,1.1s
MABI AML AML
comp=E,428µm,0.4s
VARN Col Varnada, M 1.32 33⇑ ePg Pn 13 25 40.2 -0.1
VARN Col Varnada, M 1.32 33 ePg Pn 13 25 40.2 -0.1
CAE Caneva 1.47 40⇑ ePg Pn 13 25 42.4 0.0
CAE Caneva 1.47 40 ePg Pn 13 25 42.4 0.0
FAU Forcella Aurin 1.48 25 ePg Pn 13 25 43.1 +0.6
FAU Forcella Aurin 1.48 25 ePg Pn 13 25 43.2 +0.6
OZOL Ozolo 1.52 359 ePg Pn 13 25 43.2 +0.2
OZOL Ozolo 1.52 359 ePg Pn 13 25 43.2 +0.2
POLC Polcenigo 1.52 41 AML AML
comp=N,1740µm,0.5s
POLC AML AML
comp=E,1530µm,0.5s
POLC AML AML
comp=N,1740µm,0.5s
POLC AML AML
comp=E,1530µm,0.5s
AGOR Agordo 1.55 26⇑ ePg Pn 13 25 44.0 +0.5
AGOR eSg **Sg 13 26 06.8 +0.4**
AGOR Agordo 1.55 26 AML AML
comp=N,434µm,1.1s
AGOR AML AML
comp=E,622µm,0.5s
AGOR AML AML
comp=N,434µm,1.1s
AGOR AML AML
comp=E,622µm,0.5s
CARE Lago del Cares 1.56 350 ePg Pn 13 25 44.0 +0.2
CARE Lago del Cares 1.56 350 ePg Pn 13 25 44.0 +0.2
KOSI Kohlern 1.59 8 AML AML
comp=E,694µm,0.6s
KOSI AML AML
comp=E,694µm,0.6s
KOSI AML AML
comp=N,640µm,0.5s
KOSI AML AML
comp=N,640µm,0.5s
APPI Appiano 1.59 4 AML AML
comp=E,1455µm,1.2s
APPI AML AML
comp=E,1455µm,1.2s
APPI AML AML
comp=N,1138µm,0.3s
APPI AML AML
comp=N,1138µm,0.3s
BRMO Bormio 1.66 343 AML AML
comp=N,258µm,0.6s
BRMO AML AML
comp=E,316µm,0.8s
BRMO AML AML
comp=N,258µm,0.6s
BRMO AML AML
comp=E,316µm,0.8s
GROG Isola di Gorgo 1.69 211 AML AML
comp=N,435µm,0.7s
GROG AML AML
comp=E,508µm,0.8s
GROG AML AML
comp=E,508µm,0.8s
GROG AML AML
comp=N,435µm,0.7s
GROG AML AML
comp=N,435µm,0.7s
GROG AML AML
comp=E,508µm,0.8s
CIMO Cimolais 1.71 34 ePn Pn 13 25 45.6 -0.1
CIMO Cimolais 1.71 34 ePn Pn 13 25 45.6 -0.1
MOSI Grossmontoni 1.77 348 AML AML
comp=N,1170µm,0.5s
MOSI AML AML
comp=E,947µm,0.7s
MOSI AML AML
comp=N,1170µm,0.5s
MOSI AML AML
comp=E,947µm,0.7s
SABO M.te Sabotino 2.09 58 AML AML
comp=N,644µm,0.6s
SABO AML AML
comp=E,444µm,0.5s
SABO AML AML
comp=N,644µm,0.6s
SABO AML AML
comp=E,444µm,0.5s
ABTA Abfaltersbach 2.11 28 ePg Pg 13 25 56.5 -0.3
comp=E,16nm,0.3s,SNR=14
ABTA eSg **Sg 13 26 27.5 +3.2**
comp=E,121nm,0.8s
ABTA Abfaltersbach 2.11 28 Pg Pg 13 25 56.5 -0.3
comp=E,16nm,0.3s,SNR=14
ABTA Sg **Sg 13 26 27.5 +3.2**
comp=E,121nm,0.8s
FETA Feichten 2.15 354 ePn Pb 13 25 54.2 -0.8
comp=E,2.0nm,0.3s,SNR=19
FETA ePg **Pg 13 25 56.8 -0.7**
comp=E,13nm,0.4s
FETA Feichten 2.15 354 Pn Pb 13 25 54.2 -0.8
comp=E,2.0nm,0.3s,SNR=19
WTTA Wattenberg 2.41 9 ePn Pb 13 25 58.7 -0.7
comp=E,1.8nm,0.1s
WTTA eSg **Sg 13 26 33.4 -0.3**
comp=E,24nm,0.3s
WTTA Wattenberg 2.41 9 Pg Pb 13 25 58.7 -0.7
WTTA Sg **Sg 13 26 32.7 -1.0**
MOTA Moosalm 2.46 1 ePn Pn 13 25 57.7 +1.7
comp=E,20nm,0.3s,SNR=27
MOTA eSg **Sb 13 26 31.9 +1.5**
comp=E,27nm,0.5s
MOTA Moosalm 2.46 1 Pn Pn 13 25 57.7 +1.7
comp=E,20nm,0.3s,SNR=27
MOTA Sg **Sb 13 26 31.9 +1.5**
comp=E,27nm,0.5s
MYKA Terra Mystica 2.50 45 ePn Pg 13 26 03.5 -0.8
comp=E,9.6nm,0.3s,SNR=17
MYKA Sg **Sg 13 26 38.5 +1.7**
comp=E,44nm,0.5s
DAVA Damuels 2.54 341 ePn Pb 13 25 59.9 -1.7
comp=E,15nm,0.5s,SNR=7.4
DAVA eSn **Sb 13 26 33.2 +0.5**
comp=E,35nm,0.4s
DAVA Damuels 2.54 341 Pn Pb 13 25 59.9 -1.7
comp=E,15nm,0.5s,SNR=7.4
DAVA Sn **Sb 13 26 33.2 +0.5**
comp=E,35nm,0.4s
RETA Reutte 2.61 355 ePn Pb 13 26 00.9 -1.9
comp=E,11nm,0.3s,SNR=7.9
RETA eSn **Sb 13 26 34.1 -0.5**
comp=E,21nm,0.4s
RETA Reutte 2.61 355 Pn Pb 13 26 00.9 -1.9
comp=E,11nm,0.3s,SNR=7.9
RETA Sn **Sb 13 26 34.1 -0.5**
comp=E,21nm,0.4s
KBA Koelnbreinsper 2.70 35 ePg Pg 13 26 07.2 -0.9
comp=E,10nm,0.3s,SNR=8.0
KBA Sg **Sg 13 26 43.0 -0.1**
comp=E,49nm,0.5s
KBA Koelnbreinsper 2.70 35 Pg Pg 13 26 07.2 -0.9
comp=E,10nm,0.3s,SNR=8.0
KBA Sg **Sg 13 26 43.0 -0.1**
comp=E,49nm,0.5s
NVLJ Novalja 2.73 96 ePn Pn 13 25 59.5 0.0
NVLJ Novalja 2.73 96 ePn Pn 13 25 59.5 0.0
PGF Pioggiola 2.78 213 ePn Pn 13 26 01.5 +1.1
PGF eSn **Sn 13 26 34.1 +0.3**
comp=E,38nm,0.5s
PGF Pioggiola 2.78 213 ePn Pn 13 26 01.5 +1.1
PGF eSn **Sn 13 26 34.1 +0.3**
comp=E,19nm,0.5s
SBF Sospel 2.80 250 ePn Pn 13 26 02.3 +1.6
SBF eSn **Sn 13 26 34.1 -0.1**
comp=E,72nm,0.5s
SBF Sospel 2.80 250 ePn Pn 13 26 02.3 +1.6
SBF eSn **Sn 13 26 34.1 -0.1**
comp=E,36nm,0.5s
LUCF Luceram 2.85 251 P Pb 13 26 04.7 -2.2
LUCF Luceram 2.85 251 P Pb 13 26 04.7 -2.2
LUCF S **Sb 13 26 41.2 -0.5**
OBKA Obir 2.92 55 ePn Pn 13 26 03.3 +0.9
comp=E,6.3nm,0.4s
OBKA eSg **Sg 13 26 51.4 +1.1**
comp=E,64nm,0.5s
OBKA Obir 2.92 55 Pn Pn 13 26 03.3 +0.9
comp=E,6.3nm,0.4s
OBKA Sg **Sg 13 26 51.4 +1.1**
comp=E,64nm,0.5s
MVIF Mont Vial 2.98 252 P Pn 13 26 05.9 +2.7
MVIF Mont Vial 2.98 252 P Pn 13 26 05.9 +2.7
MBDF Montbardon 3.06 268 ePn Pn 13 26 04.8 +0.4
MBDF eSn **Sn 13 26 41.4 +0.6**
comp=E,53nm,0.7s
MBDF Montbardon 3.06 268 ePn Pn 13 26 04.8 +0.4
MBDF eSn **Sn 13 26 41.4 +0.6**
comp=E,26nm,0.7s
LPG La Plagne 3.11 283 ePn Pn 13 26 06.4 +1.2
LPG eSn **Sn 13 26 41.8 -0.4**
comp=E,37nm,0.7s
LPG La Plagne 3.11 283 ePn Pn 13 26 06.4 +1.2
LPG eSn **Sn 13 26 41.8 -0.4**
comp=E,18nm,0.7s
LPL La Plagne 3.13 283 ePn Pn 13 26 08.3 +3.0
LPL eSn **Sn 13 26 41.4 -1.1**
comp=E,43nm,0.7s
LPL La Plagne 3.13 283 ePn Pn 13 26 08.3 +3.0
LPL eSn **Sn 13 26 41.4 -1.1**
comp=E,21nm,0.7s
CALF Calern 3.19 251 P Pn 13 26 09.4 +3.4
CALF Calern 3.19 251 P Pn 13 26 09.4 +3.4
SOKA Soboth 3.30 56 *i* Pn **Pn 13 26 08.4 +0.9**
comp=E,1.4nm,0.3s,SNR=9.5
SOKA Sg **Sg 13 27 03.8 +1.6**
comp=E,17nm,0.6s
SOKA Soboth 3.30 56 Pn Pn 13 26 08.4 +0.9
comp=E,1.4nm,0.3s,SNR=9.5
SOKA Sg **Sg 13 27 03.8 +1.6**
comp=E,17nm,0.6s
FRF La Foret Royal 3.45 249 ePn Pn 13 26 10.9 +1.4
FRF eSn **Sn 13 26 50.3 +0.3**
comp=E,36nm,0.5s
FRF La Foret Royal 3.45 249 ePn Pn 13 26 10.9 +1.4
FRF eSn **Sn 13 26 50.3 +0.3**
comp=E,18nm,0.5s
LMR La Mourre 3.63 246 ePn Pn 13 26 12.8 +0.8
LMR eSn **Sn 13 26 55.1 +0.5**
comp=E,26nm,0.4s
LMR La Mourre 3.63 246 ePn Pn 13 26 12.8 +0.8
LMR eSn **Sn 13 26 55.1 +0.5**
comp=E,13nm,0.4s
ORIF Oris-en-Rattie 3.69 272 ePn Pn 13 26 14.8 +1.9
ORIF eSn **Sn 13 26 56.2 +0.1**
comp=E,18nm,0.3s
ORIF Oris-en-Rattie 3.69 272 P Pn 13 26 15.2 +2.3
ORIF Oris-en-Rattie 3.69 272 ePn Pn 13 26 14.8 +1.9
ORIF eSn **Sn 13 26 56.2 +0.1**
comp=E,9.1nm,0.3s
MOA Molln 3.69 36 *i* Pn **Pn 13 26 14.9 +2.0**
comp=E,1.2nm,0.2s
MOA Molln 3.69 36 Pn Pn 13 26 14.9 +2.0
comp=E,1.2nm,0.2s
KIZ Kirchzarten 3.76 326 P Pn 13 26 15.1 +1.3
KIZ Kirchzarten 3.76 326 P Pn 13 26 15.1 +1.3
CHMF Charmoille 3.88 309 P Pn 13 26 16.8 +1.4
CHMF Charmoille 3.88 309 P Pn 13 26 16.8 +1.4
ARSA Arzberg 3.90 51 ePn Pn 13 26 15.9 +0.3
comp=E,5.2nm,0.3s
ARSA Arzberg 3.90 51 Pn Pn 13 26 15.9 +0.3
comp=E,5.2nm,0.3s
OG35 Corcelles 4.04 289 P Pn 13 26 20.2 +2.6
OG35 Corcelles 4.04 289 P Pn 13 26 20.2 +2.6
OPP Oppenau 4.12 332 P Pn 13 26 20.2 +1.5
OPP Oppenau 4.12 332 P Pn 13 26 20.2 +1.5
HINF Hinteralfeld 4.13 317 ePn Pn 13 26 19.9 +0.9
HINF eSn **Sn 13 27 05.1 -1.9**
comp=E,17nm,0.3s
HINF Hinteralfeld 4.13 317 ePn Pn 13 26 19.9 +0.9
HINF eSn **Sn 13 27 05.1 -1.9**
comp=E,8.6nm,0.3s
ECH Echery 4.28 322 P Pn 13 26 21.9 +0.9
ECH Echery 4.28 322 P Pn 13 26 21.9 +0.9
CDF Champ du Feu 4.39 325 ePn Pn 13 26 23.2 +0.8
CDF eSn **Sn 13 27 11.3 -2.0**
comp=E,6.9nm,0.3s
CDF Champ du Feu 4.39 325 ePn Pn 13 26 23.2 +0.8
CDF eSn **Sn 13 27 11.3 -2.0**
comp=E,3.5nm,0.3s
CONA Conrad Observa 4.50 46 *i* Pn **Pn 13 26 24.9 +0.9**

comp=E,2.6nm,0.3s,SNR=12
CONA Conrad Observa 4.50 46 Pn **Pn 13 26 24.9 +0.9**
comp=E,2.6nm,0.3s,SNR=12
HAU Haudompre 4.51 315 *e*Pn **Pn 13 26 25.0 +0.9**
HAU *e*Sn **Sn 13 27 14.7 -1.6**
comp=E,27nm,0.3s
HAU Haudompre 4.51 315 *e*Pn **Pn 13 26 25.0 +0.9**
HAU *e*Sn **Sn 13 27 14.7 -1.6**
comp=E,13nm,0.3s
VIVF Saint-Julien-I 4.55 272 *e*Pn **Pn 13 26 25.0 +0.4**
VIVF *e*Sn **Sn 13 27 16.8 -0.4**
comp=E,4.7nm,0.3s
VIVF Saint-Julien-I 4.55 272 *e*Pn **Pn 13 26 25.0 +0.4**
VIVF *e*Sn **Sn 13 27 16.8 -0.4**
comp=E,2.3nm,0.3s
KHC Kasperske Hory 4.58 21 *e*PN **Pn 13 26 25.7 +0.7**
KHC *e*PG **Pg 13 26 41.7 -2.2**
KHC *e*SN **Sn 13 27 17.3 -0.6**
KHC *e*SG **Sg 13 27 41.4 -1.7**
comp=E,33nm,1.0s
KHC Kasperske Hory 4.58 21 Pn **Pn 13 26 25.7 +0.7**
KHC Sn **Sn 13 27 17.3 -0.6**
KHC Sg **Sg 13 27 41.4 -1.7**
comp=E,33nm,1.0s
STON Ston 5.20 111 *e*Pn **Pn 13 26 32.8 -0.7**
STON Sn **Sn 13 27 31.2 -1.9**
STON Ston 5.20 111 *e*Pn **Pn 13 26 32.8 -0.7**
STON Sn **Sn 13 27 31.2 -1.9**
LASF Ste Croix 5.23 264 *e*Pn Pn 13 26 28.0 -5.9
LASF *e*Sn **Sn 13 27 32.5 -1.4**
SMF Signal de Mont 5.36 292 *e*Pn **Pn 13 26 36.5 +0.8**
SMF *e*Sn **Sn 13 27 35.7 -1.4**
comp=E,8.6nm,0.2s
SMF Signal de Mont 5.36 292 *e*Pn **Pn 13 26 36.5 +0.8**
SMF *e*Sn **Sn 13 27 35.7 -1.4**
comp=E,4.3nm,0.2s
NKC Novy Kostel 5.43 9 *e*SG **Sg 13 28 09.7 -0.7**
comp=E,9.3nm,0.6s
NKC Novy Kostel 5.43 9 Sg **Sg 13 28 09.7 -0.7**
comp=E,9.3nm,0.6s
MODS Modra-Piesok 5.51 49 *e*PN **Pn 13 26 38.4 +0.5**
MODS *e*SG **Sg 13 28 19.6 +6.4**
MODS Modra-Piesok 5.51 49 *e*Pn **Pn 13 26 38.4 +0.5**
LOR Lormes 5.55 298 *e*Pn **Pn 13 26 39.5 +1.1**
LOR *e*Sn **Sn 13 27 39.3 -2.6**
comp=E,8.9nm,0.3s
LOR Lormes 5.55 298 *e*Pn **Pn 13 26 39.5 +1.1**
PRU Pruhonice 5.62 24 *e*SG **Sg 13 28 14.3 -2.2**
comp=E,12nm,0.8s
PRU Pruhonice 5.62 24 Sg **Sg 13 28 14.3 -2.2**
comp=E,12nm,0.8s
GOPC GO Pecny, Ondr 5.62 25 *e*PN **Pn 13 26 40.9 +1.5**
GOPC *e*PG **Pg 13 27 03.3 -0.6**
GOPC *e*SG **Sg 13 28 16.3 -0.4**
comp=E,14nm,0.8s
GOPC GO Pecny, Ondr 5.62 25 Pn **Pn 13 26 40.9 +1.5**
GOPC Sg **Sg 13 28 16.3 -0.4**
comp=E,14nm,0.8s
SSF Saint Saulge 5.70 295 *e*Pn **Pn 13 26 41.1 +0.7**
SSF *e*Sn **Sn 13 27 42.9 -2.7**
SSF Saint Saulge 5.70 295 *e*Pn **Pn 13 26 41.1 +0.7**
AVF Avril sur Loir 5.72 292 *e*Pn **Pn 13 26 41.0 +0.4**
AVF Avril sur Loir 5.72 292 *e*Pn **Pn 13 26 41.0 +0.4**
PVCC Panska Ves 6.11 21 *e*SG **Sg 13 28 29.6 -2.8**
comp=E,40nm,1.1s
BRG Berggiesshubel 6.29 17 PN **Pn 13 26 50.1 +1.6**
comp=E,3.6nm,0.6s
BRG PG **Pg 13 27 14.8 -1.9**
BRG SG **Sg 13 28 36.3 -1.7**
comp=E,10nm,0.8s
TCF Toulx Ste Croi 6.37 286 *e*Sn **Sn 13 28 00.6 -1.6**
comp=E,7.5nm,0.5s
VYHS Vyhne 6.44 53 *e*PG **Pg 13 27 19.3 -0.3**
VYHS Vyhne 6.44 53 *e*Pg **Pg 13 27 19.3 -0.3**
DPC Dobruska-Polom 6.51 31 *e*PN **Pn 13 26 51.2 -0.4**
DPC *ex* x 13 27 19.6
DPC *e*SG **Sg 13 28 43.1 -2.1**
comp=E,9.3nm,0.8s
DPC Dobruska-Polom 6.51 31 Pn **Pn 13 26 51.2 -0.4**
DPC Sg **Sg 13 28 43.1 -2.1**
comp=E,9.3nm,0.8s
UPC Upice 6.53 29 *e*SG **Sg 13 28 45.5 -0.3**
comp=E,21nm,0.9s
UPC Upice 6.53 29 Sg **Sg 13 28 45.5 -0.3**
comp=E,21nm,0.9s
CLL Collm 6.55 11 *e*Pn **Pn 13 26 53.0 +1.0**
CLL *e* 13 28 39.0
CLL *e*Sg **Sg 13 28 47.0 +0.6**
comp=Z,16nm,1.1s

*IDC **09** 13:25:50.1±5.7, 19°.37N×64°.90W, h0km, mb3.5/3, mb1 4.0/3, mb1mx3.4/61, mbtmp3.5/3, MS3.4/3, Ms1 3.3/3, ms1mx2.7/37, Error ellipse: s-maj=104.1km s-min=27.2km az=106.0*
*ISCJB **09** 13:25:52.7±0.8, 19°.49N±0°.05×65°.03W±0°.05, h23km, mb3.6/3, MS3.3/3, Error ellipse: s-maj=8.3km s-min=5.5km az=27.7*
*RSPR **09** 13:25:53.6, 19°.48N×64°.95W, h71km±8km, MD3.6/12*
*NEIC **09** 13:25:53.6±0.0, 19°.48N×64°.95W, h71km, MD3.6(RSPR), After RSPR.*
ISC 09 13:25:53.9±1.1, 19°.44N±0°.07×64°.99W±0°.05, h23km, n44, σ0s93/50, mb3.6/3, MS3.2/3, 25C-9D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.94**	**139**	⇓*e*P	**Pn**	**13 26 10.5**	**-1.2**
ABV	**Anegada**	**0.94**	**139**	*e*S	**Sn**	**13 26 24.6**	**+0.1**
ABV	**Anegada**	**0.94**	**139**	⇓*e*P	**Pn**	**13 26 10.5**	**-1.2**
ABV				*e*S	**Sn**	**13 26 24.6**	**+0.1**
ABVI	**Anegada Island**	**0.94**	**139**	⇓*e*P	**Pn**	**13 26 10.5**	**-1.2**
ABVI				*e*S	**Sn**	**13 26 24.6**	**+0.1**
STVI	**Saint Thomas**	**1.08**	**178**	⇑*e*P	**Pn**	**13 26 12.8**	**-0.9**
STVI	**Saint Thomas**	**1.08**	**178**	⇑*e*P	**Pn**	**13 26 12.8**	**-0.9**
STVI	**Saint Thomas**	**1.08**	**178**	⇑*e*P	**Pn**	**13 26 12.8**	**-0.9**
CUPR	**Culebra, Puert**	**1.16**	**194**	⇑*e*P	**Pn**	**13 26 14.0**	**-0.8**
CUPR	**Culebra, Puert**	**1.16**	**194**	⇑*e*P	**Pn**	**13 26 14.0**	**-0.8**
CBYP	**Canovanas**	**1.43**	**215**	⇓*e*P	**Pn**	**13 26 17.4**	**-1.0**
CBYP	**Canovanas**	**1.43**	**215**	⇓*e*P	**Pn**	**13 26 17.4**	**-1.0**
CBYP	**Canovanas**	**1.43**	**215**	⇓*e*P	**Pn**	**13 26 17.4**	**-1.0**
MTP	**Monte Pirata**	**1.44**	**202**	⇑*e*P	**Pn**	**13 26 18.3**	**-0.3**
MTP	**Monte Pirata**	**1.44**	**202**	*e*S	**Sb**	**13 26 37.7**	**-0.2**
MTP	**Monte Pirata**	**1.44**	**202**	⇑*e*P	**Pn**	**13 26 18.3**	**-0.3**
MTP				*e*S	**Sb**	**13 26 37.7**	**-0.2**
MTP	**Monte Pirata**	**1.44**	**202**	⇑*e*P	**Pn**	**13 26 18.3**	**-0.3**
MTP				*e*S	**Sb**	**13 26 37.7**	**-0.2**
HUMP	**Col San Antoni**	**1.53**	**212**	⇑*e*P	**Pn**	**13 26 19.0**	**-0.8**
HUMP	**Col San Antoni**	**1.53**	**212**	⇑*e*P	**Pn**	**13 26 19.0**	**-0.8**
HUMP	**Col San Antoni**	**1.53**	**212**	⇑*e*P	**Pn**	**13 26 19.0**	**-0.8**
SJG	**San Juan**	**1.72**	**220**	⇑*e*P	**Pn**	**13 26 21.5**	**-0.9**
SJG	**San Juan**	**1.72**	**220**	*e*S	**Sn**	**13 26 43.2**	**-0.5**
SJG	**San Juan**	**1.72**	**220**	Pn	**Pn**	**13 26 21.5**	**-0.9**
	22nm,0.3s,baz=47,slow=10,SNR=36						
SJG				Sn	**Sb**	**13 26 44.9**	**-1.1**
	52nm,0.3s,baz=323,slow=14,SNR=9.8						
SJG				LR	LR	13 26 49.9	
	comp=Z,135nm,18.3s,baz=351,slow=35						
SJG	**San Juan**	**1.72**	**220**	⇑*e*P	**Pn**	**13 26 21.5**	**-0.9**
SJG				*e*S	**Sn**	**13 26 43.2**	**-0.5**
SJG				Sn	**Sb**	**13 26 44.9**	**-1.1**
SJG	**San Juan**	**1.72**	**220**	⇑*e*P	**Pn**	**13 26 21.5**	**-0.9**
SJG				*e*S	**Sn**	**13 26 43.2**	**-0.5**
EMPR	**Esperanza - Ma**	**1.75**	**237**	⇑*e*P	**Pn**	**13 26 22.0**	**-0.8**
EMPR	**Esperanza - Ma**	**1.75**	**237**	⇑*e*P	**Pn**	**13 26 22.0**	**-0.8**
AOPR	**Arecibo Observ**	**1.99**	**237**	⇓*e*P	**Pn**	**13 26 25.4**	**-0.8**
AOPR	**Arecibo Observ**	**1.99**	**237**	⇓*e*P	**Pn**	**13 26 25.4**	**-0.8**
AOPR	**Arecibo Observ**	**1.99**	**237**	⇓*e*P	**Pn**	**13 26 25.4**	**-0.8**
LSP	**Las Mesas**	**2.35**	**238**	⇑*e*P	**Pn**	**13 26 30.4**	**-0.8**
LSP	**Las Mesas**	**2.35**	**238**	⇑*e*P	**Pn**	**13 26 30.4**	**-0.8**
LSP	**Las Mesas**	**2.35**	**238**	⇑*e*P	**Pn**	**13 26 30.4**	**-0.8**
CRPR	**Cabo Rojo, PR**	**2.46**	**235**	⇑*e*P	**Pn**	**13 26 32.0**	**-0.7**
CRPR	**Cabo Rojo, PR**	**2.46**	**235**	⇑*e*P	**Pn**	**13 26 32.0**	**-0.7**
CRPR	**Cabo Rojo, PR**	**2.46**	**235**	⇑*e*P	**Pn**	**13 26 32.0**	**-0.7**
IDE	**Isla Desecheo**	**2.58**	**246**	⇑*e*P	**Pn**	**13 26 33.1**	**-1.1**
IDE	**Isla Desecheo**	**2.58**	**246**	⇑*e*P	**Pn**	**13 26 33.1**	**-1.1**
IDE	**Isla Desecheo**	**2.58**	**246**	⇑*e*P	**Pn**	**13 26 33.1**	**-1.1**
SDV	**Santo Domingo**	**11.83**	**208**	Pn	Pn	13 28 46.8	+5.3
	0.4nm,0.3s,baz=33,slow=10,SNR=4.4						
SDV				Sn	**Sn**	**13 30 55.8**	**+2.8**
	0.6nm,0.3s,baz=351,slow=19,SNR=1.3						
SCHQ	**Schefferville**	**35.36**	**358**	LR	LR	13 48 14.5	
	comp=Z,38nm,18.1s,baz=250,slow=38						

TXAR	**Lajitas Array**	**36.43**	**293**	P	**P**	**13 32 57.1**	**-0.1**
	0.5nm,0.6s,baz=110,slow=10,SNR=8.5						
TXAR				LR	LR	13 53 26.6	
	comp=Z,36nm,18.2s,baz=0.0,slow=45						
PDAR	**Pinedale Array**	**44.03**	**312**	P	**P**	**13 34 01.3**	**+1.1**
	0.3nm,0.3s,baz=95,slow=9.5,SNR=1.3						
NVAR	**Mina Array Bea**	**49.64**	**304**	P	**P**	**13 34 44.6**	**+0.6**
	0.7nm,0.7s,baz=111,slow=6.7,SNR=4.0						
YBH	**Yreka Blue Hor**	**53.37**	**308**	LR	LR	14 00 19.4	
	comp=Z,50nm,18.9s,baz=310,slow=39						

IDC 09 13:43:23.8±4.3, 30°.72S×179°.51E, h0km, mb3.2/2, mb1 3.5/2, mb1mx3.2/42, mbtmp3.2/2, Error ellipse: s-maj=278.1km s-min=66.9km az=170.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**40.95**	**268**	P	P	13 51 08.3	-0.1
	0.2nm,0.4s,baz=108,slow=7.7,SNR=5.8						
WRA	**Warramunga Arr**	**41.97**	**274**	P	P	13 51 16.5	-0.3
	0.2nm,0.5s,baz=111,slow=8.0,SNR=5.3						
MKAR	**Makanchi Array**	**116.34**	**310**	PKP	PKPdf	14 02 09.1	0.0
	0.4nm,0.7s,baz=110,slow=4.5,SNR=5.1						

*CSEM **09** 14:00:05.0±0.3, 44°.74N×11°.03E, h20km, ML2.3, Error ellipse: s-maj=9.0km s-min=6.8km az=90.0*
ROM 09 14:00:06.4±0.1, 44°.873N±0°.002×11°.016E±0°.004, h3km, ML2.4/11, 3C-10D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0818	**Loc. Fossa, Co**	**0.06**	**9**	⇓*i*P	Pg	14 00 08.7	+1.0
T0818	**Loc. Fossa, Co**	**0.06**	**9**	*i* P	Pg	14 00 08.7	+1.0
T0828	**Loc. Fossoli,**	**0.08**	**240**	⇓*i*P	Pg	14 00 09.3	+1.2
T0828				*e*S	Sg	14 00 12.5	+3.3
T0828	**Loc. Fossoli,**	**0.08**	**240**	*i* P	Pg	14 00 09.3	+1.2
T0828				*e*S	Sg	14 00 12.5	+3.3
NDIM	**Novi di Modena**	**0.09**	**280**	*e*P	Pg	14 00 08.9	+0.8
NDIM				AML	AML		
	comp=E,9265μm,1.1s						
NDIM				AML	AML		
	comp=N,8070μm,0.1s						
NDIM				AML	AML		
	comp=E,9365μm,1.1s						
NDIM				AML	AML		
	comp=N,7810μm,0.1s						
NDIM				AML	AML		
	comp=E,30300μm,0.6s						
NDIM				AML	AML		
	comp=N,24050μm,0.5s						
NDIM				AML	AML		
	comp=E,31250μm,0.6s						
NDIM				AML	AML		
	comp=N,23350μm,0.5s						
T0814	**Loc. Cortile,**	**0.09**	**203**	⇓*i*P	Pg	14 00 09.4	+1.3
T0814	**Loc. Cortile,**	**0.09**	**203**	*i* P	Pg	14 00 09.4	+1.3
T0827	**Moglia (MN)**	**0.09**	**318**	⇓*i*P	Pg	14 00 09.4	+1.2
T0827				*e*S	Sg	14 00 12.7	+3.3
T0827	**Moglia (MN)**	**0.09**	**318**	*i* P	Pg	14 00 09.4	+1.2
T0827				*e*S	Sg	14 00 12.7	+3.3
T0802	**SanFelice sul**	**0.12**	**89**	⇑*e*P	Pg	14 00 10.1	+1.4
T0802				*e*S	Sg	14 00 13.7	+3.4
T0802	**SanFelice sul**	**0.12**	**89**	*e*P	Pg	14 00 10.1	+1.4
T0802				*e*S	Sg	14 00 13.7	+3.4
T0802				AML	AML		
	comp=E,11100μm,0.6s						
T0802				AML	AML		
	comp=N,13600μm,0.2s						
T0802				AML	AML		
	comp=E,11075μm,0.6s						
T0802				AML	AML		
	comp=N,13550μm,0.2s						
T0824	**Loc. Limidi di**	**0.13**	**209**	⇓*i*P	Pg	14 00 10.4	+1.5
T0824				*e*S	Sg	14 00 14.5	+3.9
T0824	**Loc. Limidi di**	**0.13**	**209**	*i* P	Pg	14 00 10.4	+1.5
T0824				*e*S	Sg	14 00 14.5	+3.9
T0813	**Massa Finalese**	**0.13**	**88**	⇓*i*P	Pg	14 00 10.2	+1.2
T0813				*e*S	Sg	14 00 13.9	+3.2
T0813	**Massa Finalese**	**0.13**	**88**	*i* P	Pg	14 00 10.2	+1.3
T0813				*e*S	Sg	14 00 13.9	+3.2
RAVA	**Ravarino**	**0.14**	**148**	⇓*i*P	Pg	14 00 10.4	+1.3
RAVA	**Ravarino**	**0.14**	**148**	*i* P	Pg	14 00 10.4	+1.3
RAVA				AML	AML		
	comp=E,8685μm,0.3s						
RAVA				AML	AML		
	comp=N,11600μm,0.3s						
RAVA				AML	AML		
	comp=E,8680μm,0.3s						
RAVA				AML	AML		
	comp=N,11600μm,0.3s						
RAVA				AML	AML		
	comp=N,11600μm,0.3s						
RAVA				AML	AML		
	comp=E,8680μm,0.3s						
T0826	**Rio Salicetо (**	**0.15**	**257**	AML	AML		
	comp=E,4615μm,0.2s						
T0826				AML	AML		
	comp=N,4530μm,0.9s						
T0826				AML	AML		
	comp=E,14150μm,0.2s						
T0826				AML	AML		
	comp=N,19350μm,0.1s						
T0826				AML	AML		
	comp=N,19350μm,0.1s						
T0826				AML	AML		
	comp=E,14150μm,0.2s						
T0800	**Massa Finalese**	**0.17**	**98**	⇑*e*P	Pg	14 00 10.5	+0.9
T0800				*e*S	Sg	14 00 14.9	+3.1
T0800	**Massa Finalese**	**0.17**	**98**	*e*P	Pg	14 00 10.6	+0.9
T0800				*e*S	Sg	14 00 14.9	+3.1
T0800				AML	AML		
	comp=E,12550μm,0.2s						
T0800				AML	AML		
	comp=N,9415μm,0.2s						
T0800				AML	AML		
	comp=E,13700μm,0.2s						
T0800				AML	AML		
	comp=N,8030μm,0.7s						
T0811	**Palata Pepoli**	**0.17**	**121**	*e*P	Pg	14 00 10.8	+1.0
T0811				*e*S	Sg	14 00 15.3	+3.3
T0811	**Palata Pepoli**	**0.17**	**121**	*e*P	Pg	14 00 10.8	+1.1
T0811				*e*S	Sg	14 00 15.3	+3.2
SBPO	**S.Benedetto Po**	**0.19**	**339**	*e*P	Pg	14 00 11.6	+1.5
SBPO	**S.Benedetto Po**	**0.19**	**339**	*e*P	Pg	14 00 11.6	+1.5
SBPO				AML	AML		
	comp=E,2165μm,0.3s						
SBPO				AML	AML		
	comp=N,11100μm,1.4s						
SBPO				AML	AML		
	comp=N,11100μm,1.4s						
SBPO				AML	AML		
	comp=E,2165μm,0.3s						
NOVE	**Novellara**	**0.23**	**251**	*e*P	Pg	14 00 11.9	+1.1
NOVE	**Novellara**	**0.23**	**251**	*e*P	Pg	14 00 11.9	+1.2
NOVE				AML	AML		
	comp=E,805μm,0.2s						
NOVE				AML	AML		
	comp=N,834μm,0.8s						
NOVE				AML	AML		
	comp=E,2970μm,0.3s						
NOVE				AML	AML		
	comp=N,2465μm,0.2s						
NOVE				AML	AML		
	comp=N,2465μm,0.2s						
NOVE				AML	AML		
	comp=E,2970μm,0.3s						
T0803	**Dosso, Cento (**	**0.26**	**114**	*e*P	Pg	14 00 07.3	-4.1
ZCCA	**Zocca**	**0.52**	**183**	AML	AML		
	comp=E,205μm,0.6s						
ZCCA				AML	AML		
	comp=N,182μm,1.2s						
ZCCA				AML	AML		
	comp=E,205μm,0.6s						
ZCCA				AML	AML		
	comp=N,182μm,1.2s						
TEOL	**Teolo**	**0.67**	**43**	⇓*e*Pg	Pb	14 00 20.7	-0.1
TEOL				*e*Sg	Sb	14 00 30.1	-0.5
TEOL	**Teolo**	**0.67**	**43**	*e*P	Pb	14 00 20.7	-0.1
TEOL				*e*Sg	Sb	14 00 30.1	-0.5
TEOL	**Teolo**	**0.67**	**43**	*e*P	Pb	14 00 20.7	-0.1
ROVR	**Rover¤ Verone**	**0.78**	**3**	*e*P	Pg	14 00 21.8	+0.5
ROVR	**Rover¤ Verone**	**0.78**	**3**	*e*P	Pg	14 00 21.8	+0.5
MARN	**Marana (Italy)**	**0.78**	**10**	*e*Pg	Pb	14 00 22.6	-0.1
MARN				*e*Sg	Sb	14 00 34.2	+0.6
MARN	**Marana (Italy)**	**0.78**	**10**	*e*Pg	Pb	14 00 22.5	-0.1
MARN				*e*Sg	Sb	14 00 34.2	+0.6
BALD	**Monte Baldo**	**0.82**	**350**	⇓*e*Pg	Pb	14 00 23.8	+0.3
BALD				*e*Sg	Sn	14 00 36.6	-1.3
BALD	**Monte Baldo**	**0.82**	**350**	*e*Pg	Pb	14 00 23.8	+0.3
BALD				*e*Sg	Sn	14 00 36.6	-1.3
SALO	**Salr**	**0.82**	**335**	*e*P	Pb	14 00 24.1	+0.7
SALO				*e*S	Sn	14 00 37.0	-0.7
SALO	**Salr**	**0.82**	**335**	*e*P	Pb	14 00 24.1	+0.7
SALO				*e*S	Sn	14 00 38.0	+0.3
SALO				AML	AML		
	comp=E,252μm,0.3s						
SALO				AML	AML		
	comp=N,376μm,0.2s						
SALO				AML	AML		
	comp=E,252μm,0.3s						
SALO				AML	AML		
	comp=N,376μm,0.2s						
POPM	**Popiglio**	**0.85**	**193**	AML	AML		
	comp=E,87μm,0.6s						
POPM				AML	AML		
	comp=N,221μm,0.5s						
POPM				AML	AML		
	comp=N,221μm,0.5s						
POPM				AML	AML		
	comp=E,87μm,0.6s						
MAGA	**Magasa**	**0.94**	**343**	AML	AML		
	comp=N,1320μm,0.5s						
MAGA				AML	AML		
	comp=E,851μm,0.5s						
MAGA				AML	AML		
	comp=N,1320μm,0.5s						
MAGA				AML	AML		
	comp=E,851μm,0.5s						
DOSS	**Dosso del Somm**	**1.02**	**7**	*e*Pg	Pg	14 00 25.9	0.0
DOSS				*e*Sg	Sb	14 00 40.8	+0.2
DOSS	**Dosso del Somm**	**1.02**	**7**	*e*Pg	Pg	14 00 25.9	0.0
DOSS				*e*Sg	Sb	14 00 40.8	+0.2
MAIM	**Mastiano**	**1.03**	**202**	AML	AML		
	comp=E,82μm,0.6s						
MAIM				AML	AML		
	comp=E,82μm,0.6s						
MAIM				AML	AML		
	comp=N,120μm,0.7s						
MAIM				AML	AML		
	comp=N,120μm,0.7s						
BOB	**Bobbio (Coli)**	**1.12**	**265**	AML	AML		
	comp=N,106μm,0.3s						
BOB				AML	AML		
	comp=E,124μm,0.6s						
BOB				AML	AML		
	comp=E,124μm,0.6s						
BOB				AML	AML		
	comp=N,106μm,0.3s						
RNI	**Roncone**	**1.14**	**346**	*e*Pg	Pg	14 00 27.5	-0.8
RNI				*e*Sg	Sb	14 00 44.5	+0.2
RNI	**Roncone**	**1.14**	**346**	*e*Pg	Pg	14 00 27.5	-0.8
RNI				*e*Sg	Sb	14 00 44.5	+0.2
CGRP	**Cima Grappa**	**1.15**	**28**	⇑*e*Pg	Pg	14 00 28.4	-0.1
CGRP	**Cima Grappa**	**1.15**	**28**	*e*Pg	Pg	14 00 28.4	0.0
PANI	**Panarotta**	**1.20**	**11**	⇓*e*Pg	Pg	14 00 28.2	-1.2
PANI				*e*Sg	Sg	14 00 45.1	+0.1
PANI	**Panarotta**	**1.20**	**11**	*e*Pg	Pg	14 00 28.2	-1.2
PANI				*e*Sg	Sg	14 00 45.1	+0.2
MSSA	**Maissana**	**1.21**	**243**	AML	AML		
	comp=E,64μm,0.3s						
MSSA				AML	AML		
	comp=E,64μm,0.3s						
MSSA				AML	AML		
	comp=N,80μm,0.9s						
MSSA				AML	AML		
	comp=N,80μm,0.9s						

*ROM **09** 14:00:49.4±0.0, 44°.873N±0°.002×10°.919E±0°.001, h7km, ML2.4/2*
*CSEM **09** 14:00:49.4±0.2, 44°.86N×10°.89E, h10km, ML2.4, Error ellipse: s-maj=8.2km s-min=4.7km az=86.0*
ISC 09 14:00:50.4±1.0, 44°.88N±0°.02×10°.90E±0°.03, h8km±5km, n36, σ0s85/56, 8C-4D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NDIM	**Novi di Modena**	**0.00**	**39**	*i* P	**Pg**	**14 00 51.0**	**-0.8**
NDIM				*e*S	**Sg**	**14 00 52.8**	**0.0**
NDIM				AML	AML		
	comp=E,30300μm,0.6s						
NDIM				AML	AML		
	comp=N,24050μm,0.5s						
NDIM				AML	AML		
	comp=E,31250μm,0.6s						
NDIM				AML	AML		
	comp=N,23350μm,0.5s						
T0828	**Loc. Fossoli,**	**0.06**	**166**	⇑*i*P	**Pg**	**14 00 51.5**	**-0.6**
T0828				*i* S	**Sg**	**14 00 53.0**	**-0.4**
T0828	**Loc. Fossoli,**	**0.06**	**166**	*i* P	**Pg**	**14 00 51.5**	**-0.6**
T0828				*i* S	**Sg**	**14 00 54.0**	**+0.6**
T0827	**Moglia (MN)**	**0.06**	**26**	⇑*e*P	**Pg**	**14 00 51.0**	**-1.2**
T0827				*e*S	**Sg**	**14 00 54.8**	**+1.3**
T0827	**Moglia (MN)**	**0.06**	**26**	*e*P	**Pg**	**14 00 52.0**	**-0.2**
T0827				*e*S	**Sg**	**14 00 54.8**	**+1.3**
T0814	**Loc. Cortile,**	**0.10**	**150**	⇓*i*P	**Pg**	**14 00 52.3**	**-0.5**
T0814				*i* S	**Sg**	**14 00 55.5**	**+1.0**
T0814	**Loc. Cortile,**	**0.10**	**150**	*i* P	**Pg**	**14 00 52.3**	**-0.5**
T0814				*i* S	**Sg**	**14 00 55.5**	**+1.0**
T0818	**Loc. Fossa, Co**	**0.11**	**62**	⇓*i*P	**Pg**	**14 00 52.6**	**-0.3**
T0818				*e*S	**Sg**	**14 00 55.9**	**+1.3**
T0818	**Loc. Fossa, Co**	**0.11**	**62**	*i* P	**Pg**	**14 00 52.6**	**-0.3**
T0818				*e*S	**Sg**	**14 00 55.9**	**+1.3**
T0824	**Loc. Limidi di**	**0.13**	**169**	⇓*i*P	**Pg**	**14 00 52.9**	**-0.3**
T0824				*e*S	**Sg**	**14 00 56.5**	**+1.4**
T0824	**Loc. Limidi di**	**0.13**	**169**	*i* P	**Pg**	**14 00 52.9**	**-0.3**
T0824				*e*S	**Sg**	**14 00 56.5**	**+1.5**
NOVE	**Novellara**	**0.15**	**236**	⇓*i*P	**Pg**	**14 00 53.6**	**0.0**
NOVE	**Novellara**	**0.15**	**236**	*i* P	**Pg**	**14 00 53.6**	**0.0**
NOVE				AML	AML		
	comp=E,2970μm,0.3s						
NOVE				AML	AML		
	comp=N,2465μm,0.2s						
NOVE				AML	AML		
	comp=N,2465μm,0.2s						
NOVE				AML	AML		
	comp=E,2970μm,0.3s						
SBPO	**S.Benedetto Po**	**0.17**	**6**	*e*P	**Pg**	**14 00 54.3**	**+0.4**
SBPO	**S.Benedetto Po**	**0.17**	**6**	*e*P	**Pg**	**14 00 54.3**	**+0.4**
RAVA	**Ravarino**	**0.20**	**129**	*e*P	**Pg**	**14 00 54.2**	**-0.3**
RAVA	**Ravarino**	**0.20**	**129**	*e*P	**Pg**	**14 00 54.2**	**-0.3**
RAVA				AML	AML		
	comp=E,1330μm,0.3s						
RAVA				AML	AML		
	comp=N,1285μm,0.1s						
RAVA				AML	AML		
	comp=N,1285μm,0.1s						
RAVA				AML	AML		
	comp=E,1330μm,0.3s						
T0802	**SanFelice sul**	**0.20**	**92**	*e*P	**Pg**	**14 00 54.1**	**-0.4**
T0802				*e*S	**Sg**	**14 00 58.6**	**+1.3**
T0802	**SanFelice sul**	**0.20**	**92**	*e*P	**Pg**	**14 00 54.1**	**-0.4**
T0802				*e*S	**Sg**	**14 00 58.6**	**+1.3**
T0813	**Massa Finalese**	**0.22**	**92**	⇑*i*P	**Pg**	**14 00 54.2**	**-0.5**
T0813				*e*S

MARN	**Marana (Italy)**	**0.79**	**16**	*e*Pg	**Pg**	**14 01 06.1**	**+0.6**
BALD	**Monte Baldo**	**0.80**	**356⇑**	*e*Pg	**Pb**	**14 01 06.8**	**+0.1**
BALD				*e*Sg	**Sn**	**14 01 19.5**	**-0.9**
BALD	**Monte Baldo**	**0.80**	**356**	*e*Pg	**Pb**	**14 01 06.8**	**+0.1**
BALD				*e*Sg	**Sn**	**14 01 19.5**	**-0.9**
DOSS	**Dosso del Somm**	**1.02**	**12⇑**	*e*Pg	**Pg**	**14 01 09.7**	**-0.3**
DOSS	**Dosso del Somm**	**1.02**	**12**	*e*Pg	**Pg**	**14 01 09.7**	**-0.3**
PANI	**Panarotta**	**1.21**	**15⇑**	*e*Pg	**Pg**	**14 01 11.2**	**-2.3**
PANI				*e*Sg	**Sg**	**14 01 28.1**	**-1.2**

IDC 09 14:03:47.4±1.4, 3°.68S×128°.73E, h0km, mb3.5/3, mb1 3.7/5, mb1mx3.4/57, mbtmp3.5/5, ML3.0/2, Error ellipse: s-maj=38.5km s-min=24.7km az=87.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.77**	**42**	Pn	Pn	14 04 47.0	+0.1
	2.2nm,0.3s,baz=225,slow=19,SNR=9.3						
SIJI				Sn	Sn	14 05 31.9	-0.2
	0.9nm,0.3s,baz=97,slow=21,SNR=3.1						
WRA	**Warramunga Arr**	**17.06**	**162**	Pn	Pn	14 07 45.4	-2.1
	0.0nm,0.3s,baz=342,slow=13,SNR=3.4						
ASAR	**Alice Springs**	**20.49**	**166**	P	P	14 08 27.9	+0.8
	3.3nm,0.8s,baz=350,slow=12,SNR=33						
MKAR	**Makanchi Array**	**64.78**	**327**	P	P	14 14 27.4	-0.5
	0.1nm,0.5s,baz=120,slow=8.5,SNR=2.5						
KURBB	**Kurchatov Arra**	**69.04**	**328**	P	P	14 14 55.4	+0.5
	0.6nm,1.0s,baz=124,slow=6.8,SNR=3.6						

MEX 09 14:11:42.5±0.8, 16°.57N×94°.80W, h139km±28km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.49**	**238**	*e*P	Pn	14 12 09.4	-1.7
HUIG				*i* S	Sn	14 12 31.3	-1.7
TGIG		**1.62**	**82**	*i* P	Pn	14 12 12.1	-0.5
TGIG				*i* S	Sn	14 12 33.3	-2.3
PCIG		**1.74**	**119**	*e*P	Pn	14 12 13.0	-1.0
PCIG				*i* S	Sn	14 12 36.5	-1.5
VHO	**Vista Hermosa**	**1.92**	**285**	*i* P	Pn	14 12 14.9	-1.3
VHO				*e*S	Sn	14 12 40.3	-1.8

*IDC **09** 14:13:04.8±1.2, 63°.67S×168°.28W, h0km, mb4.1/7, mb1 4.2/8, mb1mx4.1/39, mbtmp4.1/8, ML3.5/1, MS4.3/11, Ms1 4.3/11, ms1mx4.0/36, Error ellipse: s-maj=39.0km s-min=21.5km az=50.0*

*GCMT **09** 14:13:04.0±0.4, 63°.95S×169°.05W, h15km±1km, MW4.9/57, Moment Tensor Solution. s23,c26; s57,c74; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=-2.49±.21; $M_{\theta\theta}$=1.28±.15; $M_{\phi\phi}$=1.20±.14; $M_{r\theta}$=1.57±.43; $M_{\theta\phi}$=0.89±.15; M_{rr}=-0.72±.26; Best double couple: M_0=7.6400×10^{16} NP1:ϕ_s=254.00000°, δ59.00000°, λ-64.00000°. NP2: ϕ_s=30.00000°, δ39.00000°, λ-126.00000°. Principal axes: T 2.2520, Plg11.0000°, Azm325.0000°; N 1.0130, Plg22.0000°, Azm60.0000°; P -3.2750, Plg65.0000°, Azm211.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*ISCJB **09** 14:13:05.0±1.1, 63°.7S±0°.1×168°.5W±0°.4, h10km, mb4.0/7, MS4.3/10 Error ellipse: s-maj=27.7km s-min=16.1km az=153.6*

ISC 09 14:13:06.6±1.3, 63°.8S±0°.2×168°.4W±0°.2, h10km, n20, σ1§08/10, mb4.1/7, MS4.3/10, 1C, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**16.59**	**202**	Pn	**P**	**14 17 00.8**	**-0.5**
	0.2nm,0.3s,baz=65,slow=16,SNR=17						
VNDA				LR	LR	14 21 57.1	
	comp=Z,495nm,18.8s,baz=54,slow=32						
QSPA	**South Pole Qui**	**26.33**	**180**	P	**P**	**14 18 42.8**	**+0.5**
	2.4nm,1.0s,baz=55,slow=5.2,SNR=3.5						
QSPA				LR	LR	14 27 38.8	
	comp=Z,474nm,18.8s,baz=52,slow=33						
URZ	**Urewera**	**26.99**	**334**	LR	LR	14 27 25.2	
	comp=Z,701nm,20.9s,baz=183,slow=32						
PMSA	**Palmer Station**	**40.34**	**140**	LR	LR	14 35 27.5	
	comp=Z,450nm,18.0s,baz=228,slow=33						
TBI	**Tubuai**	**42.33**	**26**	*e*LR	LR	14 32 52.8	
	324nm,26.8s						
RAR	**Rarotonga**	**42.94**	**12**	LR	LR	14 34 36.6	
	comp=Z,180nm,20.9s,baz=178,slow=30						
MAW	**Mawson**	**43.86**	**206**	P	**P**	**14 21 14.6**	**+2.3**
	2.4nm,0.9s,baz=142,slow=14,SNR=3.9						
MAW				LR	LR	14 38 39.4	
	comp=Z,314nm,18.1s,baz=197,slow=35						
STKA	**Stephens Creek**	**44.45**	**291**	P	**P**	**14 21 17.3**	**-0.2**
	1.4nm,0.5s,baz=147,slow=11,SNR=4.2						
STKA				LR	LR	14 35 54.7	
	comp=Z,529nm,21.6s,baz=148,slow=31						
SNAA	**Sanae**	**44.46**	**174**	P	**P**	**14 21 16.3**	**-0.9**
	4.7nm,1.2s,baz=180,slow=7.1,SNR=6.1						
SNAA				LR	LR	14 38 37.5	
	comp=Z,481nm,20.9s,baz=176,slow=34						
SYO	**Syowa Base**	**46.02**	**194⇑**	*e*P	**P**	**14 21 28.6**	**-0.9**
H01W1	**Cape Leeuwin H**	**53.87**	**263**	T	T	15 20 52.4	
	baz=148,slow=76,SNR=4.9						
H01W2	**Cape Leeuwin H**	**53.88**	**263**	T	T	15 20 55.8	
	baz=148,slow=76,SNR=5.8						
H01W3	**Cape Leeuwin H**	**53.89**	**263**	T	T	15 20 53.7	
	baz=148,slow=76,SNR=4.7						
ASAR	**Alice Springs**	**54.88**	**289**	P	**P**	**14 22 36.5**	**-0.5**
	2.5nm,1.0s,baz=149,slow=7.4,SNR=14						
PLCA	**Paso Flores**	**57.58**	**117**	LR	LR	14 43 44.2	
	comp=Z,288nm,18.7s,baz=231,slow=32						
WRA	**Warramunga Arr**	**58.01**	**291**	P	**P**	**14 22 59.5**	**+0.2**
	2.6nm,1.2s,baz=154,slow=6.1,SNR=5.6						
BATI	**Baumata**	**71.21**	**286**	LR	LR	14 55 47.9	
	comp=Z,144nm,18.1s,baz=45,slow=36						
CPUP	**Villa Florida**	**75.41**	**120**	LR	LR	14 53 41.4	
	comp=Z,261nm,20.5s,baz=204,slow=32						
LPAZ	**La Paz**	**80.00**	**106**	P	**P**	**14 25 17.3**	**+0.6**
	1.0nm,0.6s,baz=193,slow=4.6,SNR=5.0						
BRTR	**Keskin Array B**	**152.61**	**219**	PKPbc	**PKPbc**	**14 33 02.0**	**-0.5**
	1.8nm,0.9s,baz=163,slow=4.7,SNR=8.5						

JMA 09 14:14:58.6, 36°.49N×136°.31E, h16km±1km, M0.9, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKG	**Kaga**	**0.21**	**175**	P	Pg	14 15 03.6	+0.1
JKG				S	Sg	14 15 06.9	+0.1
JJH	**Hakui**	**0.58**	**41**	P	Pg	14 15 09.5	-0.5
JJH				S	Sg	14 15 17.5	-0.2
JGN	**Niukaw**	**0.85**	**108**	P	Pb	14 15 14.6	-0.5
JGN				S	Sb	14 15 25.6	-0.7

*BJI **09** 14:23:13.6, 48°.90N×155°.48E, h37km, mb5.1/80, mB5.1/65, Ms5.1/87, Ms7 4.9/81*

*KRSC **09** 14:23:17.6±1.5, 48°.65N×155°.37E, h105km±24km, ML6.0*

*SKHL **09** 14:23:18.2±0.3, 48°.53N×155°.52E, h69km±1km, mb5.9/9, Ms5.2/9, msh5.7/5*

SKHL Felt (II) at Severo-Kurilsk(241km).

*MOS **09** 14:23:18.4±1.1, 48°.81N×154°.94E, h51km, mb5.4/117, MS5.0/32, Error ellipse: s-maj=6.5km s-min=2.7km az=74.8*

MOS Felt (II) at Severo-Kuril'sk.

*ISCJB **09** 14:23:18.6±0.3, 48°.79N±0°.02×155°.02E±0°.02, h52km±2km, mb5.2/421, MS5.0/88, Error ellipse: s-maj=3.3km s-min=1.6km az=151.6*

*IDC **09** 14:23:18.6±1.8, 48°.89N×154°.86E, h33km±12km, mb4.8/51, mb1 4.9/54, mb1mx4.8/77, mbtmp5.0/54, ML5.2/3, MS4.8/58, Ms1 4.8/58, ms1mx4.7/69, Error ellipse: s-maj=9.7km s-min=7.8km az=114.0*

*NEIC **09** 14:23:20.1±0.6, 48°.85N×154°.85E, h49km±4km, mb5.2/255, MW5.4, Error ellipse: s-maj=4.0km s-min=2.3km az=152.0, Moment Tensor Solution. s68 Moment tensor: Scale 10^{17}Nm; M_{rr}=1.36; $M_{\theta\theta}$-1.08; $M_{\phi\phi}$-0.28; $M_{r\theta}$1.04; $M_{\theta\phi}$-0.54; M_{rr}0.37; Best double couple: M_0=1.70000×10^{17} NP1: ϕ_s=239.00000°, δ26.00000°, λ82.00000°. NP2:ϕ_s=68.00000°, δ65.00000°, λ94.00000°. Principal axes: T 1.7500, Plg70.0000°, Azm346.0000°; N -0.0200, Plg3.0000°, Azm246.0000°; P -1.7300, Plg20.0000°, Azm155.0000°;*

*GCMT **09** 14:23:20.1±0.1, 48°.73N×155°.24E, h44km, MW5.6/133, Moment Tensor Solution. s118,c224; s133,c262; Duration: 1s5 Moment tensor: Scale 10^{17}Nm; M_{rr}=2.47±.04; $M_{\theta\theta}$-1.40±.03; $M_{\phi\phi}$-1.07±.03; $M_{r\theta}$1.12±.03; $M_{\theta\phi}$-1.28±.02; $M_{\phi r}$0.45±.03; Best double couple: M_0=2.77400×10^{17} NP1:ϕ_s=57.00000°, δ58.00000°, λ99.00000°. NP2:ϕ_s=220.00000°, δ33.00000°, λ76.00000°. Principal axes: T 2.7740, Plg75.0000°, Azm353.0000°; N 0.0010, Plg8.0000°, Azm232.0000°; P -2.7750, Plg12.0000°, Azm140.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*PDG **09** 14:23:21.5, 48°.95N×154°.97E, h60km, mb5.5/6*

ISC 09 14:23:20.5±0.4, 48°.80N±0°.03×155°.02E±0°.03, h54km±3km, h54km:pP-P, n1542, σ1§23/1636, mb5.2/433, MS5.0/91, 73C-24D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.02**	**20**	*i* P	**Pn**	**14 23 51.5**	**-0.6**
SKR				AMB	AMB	14 23 52.7	
	10μm,5.0s						
SKR				AMB	AMB	14 23 54.1	
	674nm,0.5s						
SKR				*e*S	**Sn**	**14 24 16.3**	**+0.2**
SKR				A	A	14 24 22.4	
	23μm,0.5s						
SKR				A	A	14 24 22.4	
	24μm,0.5s						
SKR				AMS	AMS	14 24 40.2	
	49μm,9.0s						
SKR				AMS	AMS	14 24 40.2	
	47μm,9.0s						
SKR				AMS	AMS	14 24 40.2	
	41μm,9.0s						
SKR	**Severo-Kuril's**	**2.02**	**20**	*e*P	**Pn**	**14 23 51.9**	**-0.2**
SKR				*e*S	**Sn**	**14 24 17.5**	**+1.4**
SKR	**Severo-Kuril's**	**2.02**	**20⇓**	*i*PN	**Pn**	**14 23 51.5**	**-0.6**
SKR				*i* S	**Sn**	**14 24 16.6**	**+0.5**
SKR				pmax	pmax		
	comp=Z,10μm,5.4s						
SKR				pmax	pmax		
	comp=Z,2μm,4.7s						
SKR				pmax	pmax		
	comp=Z,7μm,0.5s						
SKR				smax	smax		
	comp=E,23μm,0.5s						
SKR				smax	smax		
	comp=N,37μm,0.8s						
SKR				MLR	MLR		
	comp=Z,33μm,12.0s						
SKR				MLR	MLR		
	comp=Z,45μm,15.0s						
PAU	**Pauzhetka**	**2.91**	**23**	*e*P	**Pn**	**14 24 04.7**	**+0.4**
PAU				AMB	AMB	14 24 06.8	
	comp=Z,2μm,0.6s						
PAU				*e*S	**Sn**	**14 24 39.8**	**+1.8**
PAU				A	A	14 24 45.0	
	comp=Z,20μm,0.5s						
PAU				A	A	14 24 45.0	
	comp=Z,28μm,0.5s						
PAU	**Pauzhetka**	**2.91**	**23**	*e*P	**Pn**	**14 24 04.2**	**-0.1**
PAU				*e*S	**Sn**	**14 24 39.1**	**+1.1**
PAU	**Pauzhetka**	**2.91**	**23**	PN	**Pn**	**14 24 04.2**	**-0.1**
PAU				S	**Sn**	**14 24 39.1**	**+1.1**
KDTR	**Khodutka, Kamc**	**3.60**	**32**	*e*P	**Pn**	**14 24 12.8**	**-0.9**
KDTR				*e*S	**Sn**	**14 24 54.0**	**-0.8**
MIPR	**Malaya Ipel'ka**	**3.66**	**17**	*e*P	**Pn**	**14 24 14.9**	**+0.4**
MIPR				*e*S	**Sn**	**14 24 57.5**	**+1.1**
MIPR	**Malaya Ipel'ka**	**3.66**	**17**	PN	**Pn**	**14 24 14.9**	**+0.4**
MIPR				S	**Sn**	**14 24 57.5**	**+1.1**
ASAK	**Asacha**	**4.03**	**26**	*e*P	**Pn**	**14 24 20.4**	**+0.7**
ASAK	**Asacha**	**4.03**	**26**	PN	**Pn**	**14 24 20.4**	**+0.7**
MTVR	**Mutnovka**	**4.21**	**27**	*e*P	**Pn**	**14 24 22.9**	**+0.7**
MTVR				*e*S	**Sn**	**14 25 10.8**	**+0.8**
MTVR	**Mutnovka**	**4.21**	**27**	PN	**Pn**	**14 24 22.9**	**+0.7**
MTVR				S	**Sn**	**14 25 10.8**	**+0.8**
GRL	**Gorelyy**	**4.23**	**26**	*e*P	**Pn**	**14 24 23.7**	**+1.2**
GRL	**Gorelyy**	**4.23**	**26**	PN	**Pn**	**14 24 23.7**	**+1.2**
RUS	**Russkaya**	**4.27**	**30**	*e*P	**Pn**	**14 24 22.2**	**-0.7**
RUS				*e*S	**Sn**	**14 25 10.9**	**-0.4**
RUS	**Russkaya**	**4.27**	**30**	PN	**Pn**	**14 24 22.2**	**-0.7**
RUS				S	**Sn**	**14 25 10.9**	**-0.4**
APC	**Apacha**	**4.35**	**17**	*e*P	**Pn**	**14 24 25.6**	**+1.6**
APC				*e*S	**Sn**	**14 25 15.3**	**+2.0**
APC	**Apacha**	**4.35**	**17**	PN	**Pn**	**14 24 25.6**	**+1.6**
APC				S	**Sn**	**14 25 15.3**	**+2.0**
KRMR	**Karymshinskiy**	**4.50**	**25**	*e*P	**Pn**	**14 24 27.0**	**+1.0**
KRMR				*e*S	**Sn**	**14 25 17.8**	**+0.9**
KRMR	**Karymshinskiy**	**4.50**	**25**	PN	**Pn**	**14 24 27.0**	**+1.0**
KRMR				S	**Sn**	**14 25 17.8**	**+0.9**
PEA0B	**Petropavlovsk-**	**4.64**	**20**	*e*Pn	**Pn**	**14 24 29.7**	**+1.8**
PETK	**Petropavlovsk-**	**4.64**	**20**	Pn	**Pn**	**14 24 29.6**	**+1.7**
	comp=Z,147nm,0.3s,baz=179,slow=11,SNR=2246						
PETK				Sn	**Sn**	**14 25 25.7**	**+5.2**
	comp=Z,30nm,0.3s,baz=166,slow=12,SNR=2.2						
PETK				LR	LR	14 26 33.9	
	comp=Z,25μm,20.8s,baz=184,slow=43						
PETK	**Petropavlovsk-**	**4.64**	**20**	*e*Pn	**Pn**	**14 24 29.2**	**+1.3**
PETK				Sn	**Sn**	**14 25 25.6**	**+5.2**
PET	**Petropavlovsk**	**4.82**	**27**	*e*P	**Pn**	**14 24 30.4**	**0.0**
PET				AMB	AMB	14 24 35.4	
	comp=Z,1μm,2.0s						
PET				*e*S	**Sn**	**14 25 24.8**	**0.0**
PET				A	A	14 25 27.5	
	comp=Z,4μm,2.0s						
PET				A	A	14 25 27.5	
	comp=Z,8μm,2.0s						
PET				AMS	AMS	14 26 43.0	
	comp=Z,8μm,10.0s						
PET				AMS	AMS	14 26 43.0	
	comp=Z,12μm,10.0s						
PET				AMS	AMS	14 26 43.0	
	comp=Z,7μm,10.0s						
PET	**Petropavlovsk**	**4.82**	**27**	*e*Pn	**Pn**	**14 24 30.8**	**+0.4**
PET	**Petropavlovsk**	**4.82**	**27⇑**	*i*PN	**Pn**	**14 24 30.8**	**+0.4**
PET				*e*S	**Sn**	**14 25 25.7**	**+0.9**
PET				pmax	pmax		
	comp=Z,1μm,2.3s						
PET				pmax	pmax		
	comp=Z,962nm,0.4s						
PET				pmax	pmax		
	comp=Z,500nm,4.3s						
PET				smax	smax		
	comp=E,8μm,0.8s						
PET				smax	smax		
	comp=N,7μm,0.7s						
PET				MLR	MLR		
	comp=Z,8μm,14.0s						
PET				MLR	MLR		
	comp=Z,11μm,15.0s						
DALK	**Dalny**	**4.85**	**28**	*i* P	**Pn**	**14 24 31.1**	**+0.2**
DALK				*e*S	**Sn**	**14 25 26.1**	**+0.4**
DALK	**Dalny**	**4.85**	**28**	PN	**Pn**	**14 24 31.1**	**+0.2**
DALK				S	**Sn**	**14 25 26.1**	**+0.4**
UGLR	**Uglovaya**	**5.03**	**27**	*e*P	**Pn**	**14 24 34.6**	**+1.2**
UGLR	**Uglovaya**	**5.03**	**27**	PN	**Pn**	**14 24 34.6**	**+1.2**
KOK	**Koryaka**	**5.05**	**26**	*e*P	**Pn**	**14 24 34.6**	**+1.0**
KOK	**Koryaka**	**5.05**	**26**	*e*P	**Pn**	**14 24 35.4**	**+1.8**
KOK	**Koryaka**	**5.05**	**26**	PN	**Pn**	**14 24 35.4**	**+1.8**
AVH	**Avacha**	**5.05**	**26**	*e*P	**Pn**	**14 24 35.2**	**+1.5**
AVH	**Avacha**	**5.05**	**26**	PN	**Pn**	**14 24 35.2**	**+1.5**
KRER	**Koryakskii**	**5.09**	**26**	*e*P	**Pn**	**14 24 35.1**	**+0.8**
KRER	**Koryakskii**	**5.09**	**26**	PN	**Pn**	**14 24 35.1**	**+0.8**
SDLR	**Sedlovina**	**5.11**	**27**	*e*P	**Pn**	**14 24 34.8**	**+0.3**
SDLR	**Sedlovina**	**5.11**	**27**	PN	**Pn**	**14 24 34.8**	**+0.3**
KRX	**Arik**	**5.11**	**25**	*e*P	**Pn**	**14 24 35.7**	**+1.2**
KRX				*e*S	**Sn**	**14 25 32.9**	**+0.7**
KRX	**Arik**	**5.11**	**25**	PN	**Pn**	**14 24 35.7**	**+1.2**
KRX				S	**Sn**	**14 25 32.9**	**+0.7**
NLC	**Nalytchevo**	**5.16**	**30**	*e*P	**Pn**	**14 24 33.9**	**-1.2**
NLC				*e*S	**Sn**	**14 25 30.9**	**-2.4**
NLC	**Nalytchevo**	**5.16**	**30**	PN	**Pn**	**14 24 33.9**	**-1.2**
GNL	**Ganaly**	**5.24**	**19**	*e*P	**Pn**	**14 24 38.1**	**+1.8**
GNL	**Ganaly**	**5.24**	**19**	PN	**Pn**	**14 24 38.1**	**+1.8**
SPN	**Mys Shipunski**	**5.34**	**34**	*e*P	**Pn**	**14 24 36.5**	**-1.1**
SPN				*e*S	**Sn**	**14 25 36.2**	**-1.5**
SPN	**Mys Shipunski**	**5.34**	**34**	PN	**Pn**	**14 24 36.5**	**-1.1**
KII	**Karymskiy**	**5.93**	**26**	*e*P	**Pn**	**14 24 47.1**	**+1.3**
KII				*e*S	**Sn**	**14 25 52.5**	**+0.1**
KII	**Karymskiy**	**5.93**	**26**	PN	**Pn**	**14 24 47.1**	**+1.3**
KII				S	**Sn**	**14 25 52.5**	**+0.1**
KUR	**Kuril'sk**	**6.05**	**237**	*i* P	**Pn**	**14 24 48.8**	**+1.5**
KUR				AMB	AMB	14 24 52.0	
	comp=Z,2μm,2.0s						
KUR				AMB	AMB	14 25 03.7	
	comp=Z,89nm,0.5s						
KUR				*i* S	**Sn**	**14 25 55.5**	**+0.4**
KUR				A	A	14 25 59.9	
	comp=Z,8μm,3.0s						
KUR				A	A	14 25 59.9	
	comp=Z,6μm,3.0s						
KUR				A	A	14 26 06.7	
	comp=Z,632nm,0.5s						
KUR				A	A	14 26 06.7	
	comp=Z,2μm,0.5s						
KUR				AMS	AMS	14 26 59.7	
	comp=Z,8μm,16.0s						
KUR				AMS	AMS	14 26 59.7	
	comp=Z,14μm,16.0s						
KUR				AMS	AMS	14 26 59.7	
	comp=Z,8μm,16.0s						
KUR	**Kuril'sk**	**6.05**	**237**	*d*PN	**Pn**	**14 24 49.1**	**+1.8**
KUR				*i* S	**Sn**	**14 26 00.0**	**+4.9**
KUR				pmax	pmax		
	comp=Z,891nm,0.5s						
KUR				pmax	pmax		
	comp=N,558nm,0.4s						
KUR				pmax	pmax		
	comp=E,268nm,0.6s						
KUR				pmax	pmax		
	comp=Z,4μm,4.3s						
KUR				smax	smax		
	comp=E,2μm,0.8s						
KUR				smax	smax		
	comp=N,632nm,0.4s						
KUR				smax	smax		
	comp=N,14μm,2.0s						
KUR				smax	smax		
	comp=E,13μm,1.8s						
KUR				MLR	MLR		
	comp=Z,7μm,16.0s						
KUR				MLR	MLR		
	comp=N,8μm,13.0s						
KUR				MLR	MLR		
	comp=E,7μm,13.0s						
KZV	**Kizimen**	**7.12**	**25**	*e*P	**Pn**	**14 25 02.5**	**+0.5**
KZV	**Kizimen**	**7.12**	**25**	PN	**Pn**	**14 25 02.5**	**+0.5**
MKZ	**Mys Kozlova**	**7.12**	**33**	*e*P	**Pn**	**14 25 00.1**	**-1.8**
MKZ	**Mys Kozlova**	**7.12**	**33**	PN	**Pn**	**14 25 00.1**	**-1.8**
TUMD	**Tumrok D**	**7.22**	**25**	*e*P	**Pn**	**14 25 03.2**	**-0.2**
TUMR	**Tumrok**	**7.22**	**24**	*e*P	**Pn**	**14 25 04.2**	**+0.7**
TUMR	**Tumrok**	**7.22**	**24**	PN	**Pn**	**14 25 04.2**	**+0.7**
ESO	**Esso**	**7.49**	**16**	*e*P	**Pn**	**14 25 08.7**	**+1.7**
ESO	**Esso**	**7.49**	**16**	PN	**Pn**	**14 25 08.7**	**+1.7**
SHO	**Shikotan**	**7.51**	**232**	*e*P	**Pn**	**14 25 04.7**	**-2.6**
SHO				AMB	AMB	14 25 21.7	
	comp=E,260nm,0.3s						
SHO				*i* S	**Sn**	**14 26 26.6**	**-4.3**
SHO				AMS	AMS	14 27 47.5	
	comp=E,5μm,12.0s						
SHO				AMS	AMS	14 27 47.5	
	comp=E,3μm,12.0s						
SHO	**Shikotan**	**7.51**	**232**	*e*PN	**Pn**	**14 25 04.7**	**-2.6**
SHO				pmax	pmax		
	comp=E,163nm,0.3s						
SHO				pmax	pmax		
	comp=Z,264nm,0.3s						
SHO				pmax	pmax		
	comp=N,134nm,0.4s						
SHO				MLR	MLR		
	comp=N,5μm,12.0s						
SHO				MLR	MLR		
	comp=Z,3μm,12.0s						
KMNR	**Kamenistaya**	**7.67**	**23**	*e*P	**Pn**	**14 25 10.4**	**+0.9**
KMNR	**Kamenistaya**	**7.67**	**23**	PN	**Pn**	**14 25 10.4**	**+0.9**
KOZ	**Kozyrevsk**	**7.85**	**20**	*e*P	**Pn**	**14 25 11.8**	**-0.2**
KOZ	**Kozyrevsk**	**7.85**	**20**	PN	**Pn**	**14 25 11.8**	**-0.2**
KPT	**Kopyto**	**7.85**	**22**	*e*P	**Pn**	**14 25 11.9**	**-0.1**
KPT	**Kopyto**	**7.85**	**22**	PN	**Pn**	**14 25 11.9**	**-0.1**
KIRR	**Kirishev**	**7.87**	**22**	*e*P	**Pn**	**14 25 14.2**	**+1.9**
KIRR	**Kirishev**	**7.87**	**22**	PN	**Pn**	**14 25 14.2**	**+1.9**
BZMR	**Bezymyannaya**	**7.89**	**23**	*e*P	**Pn**	**14 25 13.6**	**+1.0**
BZMR	**Bezymyannaya**	**7.89**	**23**	PN	**Pn**	**14 25 13.6**	**+1.0**
YUK	**Yuzh-Kuril'sk**	**7.92**	**236**	*i* P	**Pn**	**14 25 13.2**	**+0.3**
YUK				AMB	AMB	14 25 20.2	
	comp=Z,329nm,0.6s						
YUK				AMB	AMB	14 25 20.2	
	comp=Z,912nm,0.6s						
YUK				AMB	AMB	14 25 20.2	
	comp=Z,146nm,0.6s						
YUK				*e*S	**Sn**	**14 26 40.0**	**-0.9**
YUK				AMS	AMS	14 27 50.0	
	comp=Z,4μm,13.0s						
YUK				AMS	AMS	14 27 50.0	
	comp=Z,12μm,13.0s						
YUK				AMS	AMS	14 27 50.0	
	comp=Z,6μm,13.0s						
YUK	**Yuzh-Kuril'sk**	**7.92**	**236**	*c*PN	**Pn**	**14 25 13.2**	**+0.3**
YUK				pmax	pmax		
	comp=Z,1μm,0.7s						
YUK				pmax	pmax		
	comp=E,912nm,0.5s						
YUK				pmax	pmax		
	comp=N,329nm,0.6s						
YUK				MLR	MLR		
	comp=Z,4μm,15.0s						
YUK				MLR	MLR		
	comp=N,5μm,12.0s						
BZWR	**Bezymyannyi-We**	**7.92**	**23**	*e*P	**Pn**	**14 25 14.6**	**+1.6**
BZWR	**Bezymyannyi-We**	**7.92**	**23**	PN	**Pn**	**14 25 14.6**	**+1.6**
LAGR	**Lagunnoye**	**7.94**	**237**	*i* P	**Pn**	**14 25 13.9**	**+0.7**
LAGR				AMB	AMB	14 25 25.6	
	comp=N,103nm,0.7s						
LAGR				*i* S	**Sn**	**14 26 43.4**	**+1.8**
LAGR	**Lagunnoye**	**7.94**	**237⇑**	*i*PN	**Pn**	**14 25 13.9**	**+0.7**
LAGR				*i* S	**Sn**	**14 26 43.4**	**+1.8**
LAGR				pmax	pmax		
	comp=Z,1μm,0.7s						
LAGR				pmax	pmax		
	comp=E,511nm,0.3s						
LAGR				pmax	pmax		
	comp=N,4μm,0.5s						
GRPR	**Tuman**	**7.99**	**236**	*e*P	**Pn**	**14 25 14.3**	**+0.4**
GRPR				AMB	AMB	14 25 19.6	
	comp=N,69nm,0.4s						
GRPR				*i* S	**Sn**	**14 26 43.6**	**+0.8**
GRPR	**Tuman**	**7.99**	**236**	*e*PN	**Pn**	**14 25 14.3**	**+0.4**
GRPR				pmax	pmax		
	comp=Z,689nm,0.4s						
GRPR				pmax	pmax		
	comp=E,977nm,0.7s						
GRPR				pmax	pmax		
	comp=N,757nm,0.3s						
ZLN	**Zelenaya**	**8.05**	**24**	*e*P	**Pn**	**14 25 16.3**	**+1.6**
ZLN	**Zelenaya**	**8.05**	**24**	PN	**Pn**	**14 25 16.3**	**+1.6**

comp=E,46nm,0.2s
GLVR *i* S **Sn** **14 26 49.1 -1.2**
GLVR Golovnino 8.30 236⇓ *i* PN **Pn** **14 25 17.5 -0.6**
GLVR pmax pmax
comp=Z,46nm,0.2s
GLVR pmax pmax
comp=E,812nm,0.5s
GLVR pmax pmax
comp=N,425nm,0.3s
YSS Yuzh-Sakhalins 8.45 262 *e*P **Pn** **14 25 23.2 +3.1**
YSS AMB AMB 14 25 24.5
comp=N,150nm,0.5s
YSS AMB AMB 14 25 24.5
comp=N,260nm,0.5s
YSS AMB AMB 14 25 24.5
comp=N,290nm,0.5s
YSS AMB AMB 14 25 26.6
comp=N,1μm,4.0s
YSS AMS AMS 14 30 02.0
comp=N,3μm,17.0s
YSS Yuzh-Sakhalins 8.45 262 *e*Pn **Pn** **14 25 23.5 +3.4**
YSS Yuzh-Sakhalins 8.45 262⇑ *e*PN **Pn** **14 25 23.2 +3.1**
YSS pmax pmax
comp=N,150nm,0.5s
YSS pmax pmax
comp=E,260nm,0.5s
YSS pmax pmax
comp=Z,290nm,0.5s
YSS pmax pmax
comp=E,2μm,4.0s
YSS pmax pmax
comp=Z,1μm,4.0s
YSS MLR MLR
comp=E,2μm,16.0s
UGL Uglegorsk 8.53 277 *e*P **Pn** **14 25 25.2 +3.9**
UGL AMB AMB 14 25 28.6
comp=E,720nm,1.0s
UGL *e*S **Sn** **14 26 58.0 +2.0**
UGL A A 14 27 00.1
comp=E,299nm,1.0s
UGL AMS AMS 14 28 43.0
comp=E,8μm,17.0s
UGL AMS AMS 14 28 43.0
comp=E,8μm,17.0s
BDR Baidarnaya 8.64 23 *e*P **Pn** **14 25 22.8 0.0**
BDR Baidarnaya 8.64 23 PN **Pn** **14 25 22.8 0.0**
SRKR Sorokina 8.71 23 *e*P **Pn** **14 25 24.3 +0.6**
SRKR Sorokina 8.71 23 PN **Pn** **14 25 24.3 +0.6**
SMKR Semkarok 8.72 24 *e*P **Pn** **14 25 23.1 -0.8**
SMKR Semkarok 8.72 24 PN **Pn** **14 25 23.1 -0.8**
KBTR Krutoberegovo 8.81 30 *e*P **Pn** **14 25 23.7 -1.4**
KBTR Krutoberegovo 8.81 30 PN **Pn** **14 25 23.7 -1.4**
OKH Okha 8.96 307 *i* P **Pn** **14 25 31.7 +4.7**
OKH AMB AMB 14 25 33.7
comp=E,320nm,4.0s
OKH *e*S **Sn** **14 27 12.9 +6.6**
OKH AMS AMS 14 28 51.0
comp=E,8μm,17.0s
OKH AMS AMS 14 28 51.0
comp=E,11μm,17.0s
OKH AMS AMS 14 28 51.0
comp=E,8μm,17.0s
OKH Okha 8.96 307⇑ *i* PN **Pn** **14 25 28.1 +1.1**
OKH *e*S **Sn** **14 27 12.9 +6.6**
OKH pmax pmax
comp=Z,700nm,9.3s
OKH smax smax
comp=N,1μm,12.0s
BKI Bering 9.31 42 *e*P **Pn** **14 25 29.7 -2.2**
BKI Bering 9.31 42 PN **Pn** **14 25 29.7 -2.2**
JMP Maruseppu 9.37 244 P **Pn** **14 25 34.1 +1.3**
JWK2 Keihoku 9.61 254 P Pn 14 25 41.7 +5.7
JKA Kamikawa-asahi 9.76 246 *e*P **Pn** **14 25 41.1 +3.0**
ASAJ Asahikawa 9.76 246 Pn **Pn** **14 25 41.1 +3.0**
comp=N,53nm,0.3s,baz=86,slow=16,SNR=213
ASAJ Sn **Sn** **14 27 33.0 +6.8**
baz=60,slow=11,SNR=1.1
ASAJ LR LR 14 29 11.4
comp=N,5μm,19.6s,baz=64,slow=36
ASAJ Asahikawa 9.76 246 P **Pn** **14 25 40.8 +2.7**
NKL Nikolayevsk 10.03 301 *e*P **Pn** **14 25 45.0 +3.2**
NKL AMB AMB 14 25 47.0
comp=N,2μm,6.0s
NKL AMB AMB 14 25 48.4
comp=N,110nm,1.0s
NKL AMB AMB 14 25 48.4
comp=N,290nm,1.0s
NKL AMB AMB 14 25 48.4
comp=N,440nm,1.0s
NKL *e*S **Sn** **14 27 38.0 +5.3**
NKL A A 14 27 48.0
comp=N,2μm,11.0s
NKL A A 14 27 48.0
comp=N,2μm,11.0s
NKL AMS AMS 14 29 49.0
comp=N,4μm,17.0s
NKL AMS AMS 14 29 49.0
comp=N,5μm,17.0s
NKL AMS AMS 14 29 49.0
comp=N,8μm,17.0s
NKL Nikolayevsk 10.03 301 *e*PN **Pn** **14 25 44.0 +2.2**
NKL *e*S **Sn** **14 27 38.0 +5.3**
NKL pmax pmax
comp=N,600nm,4.0s
NKL pmax pmax
comp=E,2μm,4.0s
NKL pmax pmax
comp=Z,2μm,8.0s
NKL pmax pmax
comp=N,110nm,1.1s
NKL pmax pmax
comp=E,290nm,1.1s
NKL pmax pmax
comp=Z,440nm,1.1s
NKL smax smax
comp=N,2μm,11.0s
NKL smax smax
comp=E,2μm,11.0s
NKL smax smax
comp=Z,2μm,11.0s
PALN Palana 10.71 14 *e*P **Pn** **14 25 51.4 +0.4**
PALN Palana 10.71 14 PN **Pn** **14 25 51.4 +0.4**
ERM Erimo 10.74 235 *e*Pn **Pn** **14 25 50.0 -1.5**
ERM Erimo 10.74 235⇑ *e*PN **Pn** **14 25 50.4 -1.1**
MA2 Magadan 11.08 349 Pn **Pn** **14 25 57.5 +1.5**
comp=Z,10nm,0.3s,baz=160,slow=10,SNR=77
MA2 LR LR 14 30 50.4
comp=Z,6μm,19.2s,baz=182,slow=41
MA2 Magadan 11.08 349 *e*P **Pn** **14 25 57.7 +1.7**
MA2 Magadan 11.08 349 *e*Pn **Pn** **14 25 57.1 +1.0**
MA2 Magadan 11.08 349 *e*PN **Pn** **14 25 57.7 +1.7**
MA2 pmax pmax
comp=Z,182nm,1.3s
JEW Eniwo 11.18 243 P **Pn** **14 25 58.8 +1.3**
OSSR Ossora 11.48 21 *e*P **Pn** **14 26 02.3 +0.8**
OSSR Ossora 11.48 21 PN **Pn** **14 26 02.3 +0.8**
JSH Shimam 12.13 245 P **Pn** **14 26 10.3 -0.1**
GRNR Gornyy 12.18 286 *e*P **Pn** **14 26 13.0 +1.9**
GRNR AMB AMB 14 26 17.7
comp=Z,130nm,1.0s
GRNR Gornyy 12.18 286 *e*PN Pn 14 26 16.0 +4.9
GRNR pmax pmax
comp=E,130nm,1.0s
GRNR pmax pmax
comp=Z,130nm,1.0s
JOT Ohata 12.33 238 P **Pn** **14 26 09.5 -3.7**
JTM Tenmabayashi 12.72 236 P Pn 14 26 13.5 -5.1
TEY Ternei 13.13 260 *e*P **Pn** **14 26 25.0 +0.9**
TEY AMB AMB 14 26 31.1
comp=Z,127nm,1.0s
TEY AMB AMB 14 26 31.1
comp=Z,212nm,1.0s
TEY AMB AMB 14 26 31.1
comp=Z,1μm,3.0s
TEY Ternei 13.13 260 *e*PN **P** **14 26 30.5 -2.2**
TEY pmax pmax
comp=Z,1μm,3.0s
TEY pmax pmax
comp=E,127nm,1.4s
TEY pmax pmax
comp=Z,212nm,1.4s
TILK Tilichiki 13.31 25 *e*P **Pn** **14 26 23.4 -3.0**
TILK Tilichiki 13.31 25 PN **Pn** **14 26 23.4 -3.0**
SEY Seymchan 14.24 355 Pn **Pn** **14 26 39.8 +0.7**
comp=Z,1.9nm,0.3s,baz=160,slow=11,SNR=53
SEY LR LR 14 32 24.8
comp=Z,6μm,21.5s,baz=160,slow=39
SEY Seymchan 14.24 355 *ce*P **Pn** **14 26 40.2 +1.2**
EKMR Ekimchan 14.54 295 *e*P **Pn** **14 26 44.0 +1.0**
EKMR AMB AMB 14 26 54.0
comp=Z,74nm,0.9s
EKMR AMB AMB 14 26 54.0
comp=Z,210nm,0.9s
EKMR AMB AMB 14 26 54.0
comp=Z,300nm,0.9s
KMSK Kamenskaya 15.05 20 *e*P **Pn** **14 26 47.4 -2.1**
KMSK Kamenskaya 15.05 20 P **Pn** **14 26 47.4 -2.1**
KLR Kul'dur 15.26 280 Pn **P** **14 26 55.1 -1.2**
comp=Z,0.5nm,0.3s,baz=78,slow=9.8,SNR=37
KLR LR LR 14 32 47.8
comp=Z,614nm,22.0s,baz=84,slow=38
KLR Kul'dur 15.26 280 *ce*P **Pn** **14 26 54.2 +1.8**
USRK Ussuriysk Ar. 16.49 262 Pn **Pn** **14 27 08.5 +0.6**
comp=Z,7.6nm,0.3s,baz=65,slow=13,SNR=60
USRK LR LR 14 33 03.2
comp=Z,1μm,19.9s,baz=61,slow=36
BMKR Bomnak 17.19 300 *e*P **Pn** **14 27 16.0 -0.7**
BMKR AMB AMB 14 27 24.5
comp=Z,122nm,0.9s
MJB9 Matsu-Tunnel 17.35 231 *e*Pn **Pn** **14 27 15.7 -3.1**
comp=Z,147nm,0.8s
MAJO Matsushiro 17.35 231 *e*P **Pn** **14 27 17.0 -1.8**
MAJO Matsushiro 17.35 231 *e*Pn **Pn** **14 27 15.4 -3.4**
comp=Z,144nm,0.8s
MAJO Matsushiro 17.35 231 *ce*P **Pn** **14 27 17.0 -1.8**
MAT Matsushiro 17.35 231 P **Pn** **14 27 17.2 -1.6**
MAT Matsushiro 17.35 231 P **Pn** **14 27 16.1 -2.7**
MAT S **Sn** **14 30 31.9 +0.9**
MJAR Matsushiro Arr 17.35 231 P **Pn** **14 27 16.6 -2.3**
comp=Z,1.0nm,0.3s,baz=26,slow=13,SNR=44
MJAR LR LR 14 34 45.6
comp=Z,2μm,20.2s,baz=65,slow=40
MSHR Mys Shultsa 17.75 258⇑ *e*P **Pn** **14 27 22.5 -1.1**
MDJ Mudanjiang 17.90 266 P **Pn** **14 27 21.8 -3.6**
MDJ pP P 14 27 29.7 +4.2
MDJ sP pP 14 27 34.3 -3.1
MDJ S **Sn** **14 30 42.2 -1.8**
MDJ sS S 14 30 52.6 +4.6
MDJ pmax pmax
comp=Z,96nm,1.2s
MDJ LR LR
comp=Z,3μm,19.5s
MDJ LR LR
comp=Z,2μm,21.9s
MDJ LR LR
comp=Z,3μm,27.1s
ZEA Zeya 18.00 296 *e*P **Pn** **14 27 28.0 +1.4**
ZEA AMB AMB 14 27 34.0
comp=Z,1μm,7.0s
ZEA AMB AMB 14 27 43.0
comp=Z,100nm,2.0s
ZEA AMB AMB 14 27 43.0
comp=Z,380nm,2.0s
ZEA *e*S **S** **14 30 51.0 +1.0**
ZEA A A 14 30 56.0
comp=Z,1μm,10.0s
ZEA A A 14 30 56.0
comp=Z,800nm,10.0s
ZEA AMS AMS 14 34 28.0
comp=Z,2μm,18.0s
ZEA AMS AMS 14 34 28.0
comp=Z,5μm,18.0s
ZEA AMS AMS 14 34 28.0
comp=Z,7μm,18.0s
ZEA Zeya 18.00 296 *e*P **Pn** **14 27 27.2 +0.6**
ZEA pmax pmax
comp=Z,1μm,7.0s
ZEA MLR MLR
comp=N,2μm,16.0s
JGN Niukaw 18.06 232 P **P** **14 27 27.1 -0.3**
KROS Kirovskiy 18.23 299 *e*P **P** **14 27 26.0 -3.1**
KROS AMB AMB 14 27 40.8
comp=N,9.0nm,0.8s
KROS AMB AMB 14 27 40.8
comp=N,27nm,0.8s
KROS AMB AMB 14 27 40.8
comp=N,24nm,0.8s
JGF Kuroka 18.52 231 P **Pn** **14 27 33.8 +0.8**
INU Inuyama 18.89 231 *e*P **P** **14 27 33.3 -3.0**
comp=N,177nm,1.3s
JHJ Hachijo jima 2 19.37 222 P **Pn** **14 27 46.4 +3.2**
comp=N,4.7nm,0.3s,baz=254,slow=15,SNR=3.5
JHJ LR LR 14 37 59.7
comp=N,592nm,18.7s,baz=54,slow=46
YAK Yakutsk 19.38 323 *e*P **P** **14 27 42.2 +0.7**
YAK Yakutsk 19.38 323 *e*P **P** **14 27 39.9 -1.7**
comp=N,223nm,0.8s
YAK Yakutsk 19.38 323 *c i*P **P** **14 27 42.2 +0.7**
YAK *e*S **S** **14 31 17.8 +0.2**
YAK pmax pmax
comp=Z,250nm,1.1s
YAK pmax pmax
comp=N,61nm,1.1s
YAK pmax pmax
comp=E,123nm,1.1s
YAK smax smax
comp=N,514nm,3.0s
YAK smax smax
comp=E,405nm,2.5s
YAK MLR MLR
comp=Z,2μm,15.0s
YAK MLR MLR
comp=E,388nm,13.0s
YAK MLR MLR
comp=N,1μm,14.0s
CLNS Chul'man 19.77 305 *e*P **Pn** **14 27 49.0 +1.2**
CLNS *e*S **S** **14 31 27.3 +1.7**
CLNS pmax pmax
comp=Z,122nm,0.9s
CLNS pmax pmax
comp=E,86nm,1.0s
CLNS pmax pmax
comp=N,85nm,1.1s
CLNS smax smax
comp=E,1μm,9.4s
CLNS smax smax
comp=N,2μm,12.6s
CLNS MLR MLR
comp=Z,7μm,20.0s
CLNS MLR MLR
comp=E,5μm,21.0s
CLNS MLR MLR
comp=N,2μm,15.0s
JWT Wachi 19.79 234 P **P** **14 27 46.6 +0.4**
BILL Bilibino 20.11 12 *e*P **P** **14 27 46.9 -2.6**
comp=N,129nm,0.9s
BILL Bilibino 20.11 12 *c i*P **P** **14 27 47.7 -1.8**
BILL *i* 14 28 06.4
BILL *i* S **S** **14 31 30.7 -1.4**
BILL pmax pmax
comp=Z,101nm,0.9s
BILL MLR MLR
comp=Z,6μm,18.0s
JAD Aida 20.71 236 P **P** **14 27 56.7 +0.5**
CN2 Changchun 20.96 267 *e*P **P** **14 27 56.2 -2.6**
CN2 *es*P pP 14 28 09.4 -1.5
CN2 *e*S **S** **14 31 41.5 -7.7**
CN2 pmax pmax
comp=Z,20nm,1.0s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=Z,2μm,16.0s
CN2 LR LR
comp=Z,1μm,16.0s
CN2 LR LR
comp=Z,2μm,18.0s
JWZ Kozaga 20.98 230 P **P** **14 28 00.3 +1.2**
JHS Saijyo 21.25 238 P **P** **14 28 02.3 +0.3**
KSRS Korea Array 22.67 250 P **P** **14 28 16.9 -0.3**
comp=Z,50nm,0.7s,baz=44,slow=10,SNR=141
KSRS LR LR 14 35 46.6
comp=Z,1μm,21.7s,baz=60,slow=33
KS01 Wonju Array Si 22.67 250 *e*P **P** **14 28 16.0 -1.2**
KS15 Wonju Array Si 22.70 250 *e*P **P** **14 28 16.8 -0.7**
KSAR Wonju Array Be 22.70 250 P **P** **14 28 16.9 -0.6**
KSAR Wonju Array Be 22.70 250 P **P** **14 28 16.9 -0.6**
SNY Shenyang 23.06 264 ⇑P **P** **14 28 20.8 -0.4**
SNY S **S** **14 32 22.2 -5.7**
SNY pmax pmax
comp=Z,37nm,1.3s
SNY pmax pmax
comp=Z,420nm,9.6s
SNY LR LR
comp=Z,2μm,18.6s
SNY LR LR
comp=Z,3μm,17.2s
INCN Inchon 23.46 252 *e*P **P** **14 28 25.0 0.0**
comp=Z,129nm,1.1s
INCN Inchon 23.46 252 P **P** **14 28 25.8 +0.7**
SNR=11
INCN Inchon 23.46 252 P **P** **14 28 25.8 +0.7**
SNR=11
TJN Taejon 23.70 249 *ce*P **P** **14 28 27.9 +0.6**
JNU Nakatsue 23.88 238 P **P** **14 28 29.9 +0.9**
comp=Z,170nm,1.1s,baz=46,slow=6.3,SNR=25
JNU LR LR 14 38 01.8
comp=Z,1μm,21.2s,baz=46,slow=37
JNU Nakatsue 23.88 238 *e*P **P** **14 28 29.4 +0.4**
comp=Z,227nm,1.1s
JNU Nakatsue 23.88 238 P **P** **14 28 29.9 +0.8**
JSU Suzuyama 25.34 236 P **P** **14 28 43.3 +1.0**
BOD Bodaibo 25.75 306 *e*P **P** **14 28 44.5 -1.2**
BOD *e* 14 29 00.5
DL2 Dalian 25.84 260⇑ *i*P **P** **14 28 46.3 -0.4**
DL2 S **S** **14 33 14.7 +2.2**
DL2 pmax pmax
comp=Z,47nm,1.2s
DL2 pmax pmax
comp=Z,290nm,5.4s
DL2 LR LR
comp=Z,820nm,19.2s
DL2 LR LR
comp=Z,1μm,19.4s
DL2 LR LR
comp=Z,2μm,28.6s
TIXI Tiksi 25.90 341 P **P** **14 28 45.6 -1.3**
comp=Z,69nm,0.9s,baz=132,slow=9.2,SNR=134
TIXI LR LR 14 40 13.6
comp=Z,3μm,18.8s,baz=130,slow=39
TIXI Tiksi 25.90 341 *e*P **P** **14 28 45.2 -1.7**
comp=Z,130nm,0.8s
TIXI Tiksi 25.90 341 *c i*P **P** **14 28 45.3 -1.7**
TIXI pmax pmax
comp=Z,78nm,1.0s
TIXI MLR MLR
comp=Z,2μm,17.0s
CIT Chita 26.36 293 *e*P **P** **14 28 50.6 -0.8**
CIT Chita 26.36 293 *e*P **P** **14 28 50.6 -0.8**
CIT *e* 14 29 06.6
CIT *e* 14 29 34.2
RDOG Red Dog Mine 28.40 32 *e*P **P** **14 29 07.0 -2.4**
comp=Z,102nm,1.3s
BJI Beijing 28.82 267 P **P** **14 29 11.6 -1.8**
BJI S **S** **14 34 02.9 +3.5**
BJI pmax pmax
comp=Z,19nm,2.1s
BJI LR LR
comp=Z,2μm,20.0s
BJI LR LR
comp=Z,2μm,20.0s
BJI LR LR
comp=Z,3μm,17.8s
SVW2 Sparrevohn 30.15 47 *e*P **P** **14 29 22.5 -2.5**
comp=Z,24nm,0.8s
JOW Kunigami 30.18 233 P **P** **14 29 26.5 +1.0**
comp=Z,88nm,0.9s,baz=39,slow=6.6,SNR=14
JOW LR LR 14 42 02.9
comp=Z,1μm,21.5s,baz=89,slow=37
JOW Kunigami 30.18 233 *e*P **P** **14 29 23.1 -2.4**
comp=Z,129nm,1.0s
TIA Tai'an 30.32 260 P **P** **14 29 27.2 +0.5**
TIA pmax pmax
comp=Z,8.0nm,1.3s
TIA pmax pmax
comp=Z,98nm,11.0s
TIA LR LR
comp=Z,390nm,18.6s
TIA LR LR
comp=Z,200nm,14.3s
TIA LR LR
comp=Z,320nm,21.3s
H11N2 WAKE ISLAND Hy 30.54 158 T T 15 01 21.8
baz=345,slow=76,SNR=386
H11N1 WAKE ISLAND Hy 30.55 158 T T 15 01 22.5
baz=345,slow=76,SNR=624
H11N3 WAKE ISLAND Hy 30.55 158 T T 15 01 19.5
baz=345,slow=76,SNR=466
IM3 Indian Mountai 31.36 38 *e*P **P** **14 29 34.9 -0.7**
HHC Hu-ho-hao-te 31.47 272 *e*P **P** **14 29 36.8 -0.1**
HHC sP pP 14 29 49.9 -0.6
HHC PP **PnPn** **14 30 41.1 -0.3**
HHC S **S** **14 34 41.2 +0.1**
HHC sS sS 14 34 56.8 -7.3
HHC SS **SnSn** **14 36 31.8 +2.2**
HHC pmax pmax
comp=Z,32nm,1.1s
HHC pmax pmax
comp=Z,75nm,4.1s
HHC LR LR
comp=Z,2μm,18.1s
HHC LR LR
comp=Z,2μm,19.0s
HHC LR LR
comp=Z,2μm,18.1s
ULN Ulaanbaatar 31.49 287 *e*P **P** **14 29 36.0 -1.1**
ULN Ulaanbaatar 31.49 287 *e*P **P** **14 29 35.3 -1.8**
comp=Z,20nm,1.4s
ULN Ulaanbaatar 31.49 287 P **P** **14 29 36.5 -0.6**
SNR=7.1
ULN Ulaanbaatar 31.49 287 P **P** **14 29 36.5 -0.6**
SNR=7.1
ULN Ulaanbaatar 31.49 287 *c i*P **P** **14 29 36.0 -1.1**
ULN pmax pmax
comp=Z,14nm,1.2s
OHAK Old Harbor 31.52 55 *e*P **P** **14 29 34.9 -2.2**
comp=Z,29nm,1.0s
RSO Redoubt South 31.54 48 *e*P **P** **14 29 36.5 -1.0**
H11S1 WAKE ISLAND Hy 31.66 159 T T 15 02 42.1
baz=344,slow=74
H11S3 WAKE ISLAND Hy 31.67 159 T T 15 02 50.7
baz=344,slow=74
H11S2 WAKE ISLAND Hy 31.68 159 T T 15 02 47.7
baz=344
PPLA Purkeypile 31.79 44 *e*P **P** **14 29 40.4 +0.8**
comp=Z,45nm,1.1s
KDAK Kodiak Island 31.83 54 *e*P **P** **14 29 37.8 -2.0**
comp=Z,62nm,1.4s
KDAK Kodiak Island 31.83 54 *e*P **P** **14 29 37.8 -2.0**
KDAK pmax pmax
comp=Z,62nm,1.4s
NJ2 Nanjing 31.84 252 *e*P **P** **14 29 41.0 +0.9**
NJ2 sP **pP** **14 29 54.6 +0.9**
NJ2 S **S** **14 34 45.9 -0.9**
NJ2 sS **sS** **14 35 07.4 -2.4**
NJ2 pmax pmax
comp=Z,43nm,1.0s
NJ2 pmax pmax
comp=Z,380nm,11.9s
NJ2 LR LR
comp=Z,1μm,16.3s
NJ2 LR LR
comp=Z,1μm,16.3s
NJ2 LR LR
comp=Z,2μm,17.4s
SPU Mount Spurr 31.86 47 *e*P **P** **14 29 39.8 -0.3**
SONA1 Songino Array 31.90 287 *e*P **P** **14 29 38.2 -2.6**
IRK Irkutsk 31.91 296 *e*P **P** **14 29 39.8 -0.8**
IRK Irkutsk 31.91 296 *e*P **P** **14 29 39.8 -0.8**
IRK pmax pmax
comp=Z,41nm,2.6s
SONM Songino Array 31.91 287 P **P** **14 29 39.8 -1.0**
comp=Z,1.3nm,0.3s,baz=74,slow=8.9,SNR=14
SONM PcP **PcP** **14 32 30.0 0.0**
comp=Z,9.8nm,0.7s,baz=103,slow=1.8,SNR=16
SONM LR LR 14 43 55.7
comp=Z,6μm,18.1s,baz=74,slow=39
SKT Skwentna 32.09 46 *e*P **P** **14 29 42.0 -0.1**
comp=Z,30nm,0.8s
BPAW Bear Paw Mtn. 32.37 42 *e*P **P** **14 29 44.5 0.0**
comp=Z,49nm,1.0s
TLY Talaya 32.43 295 *e*P **P** **14 29 44.7 -0.5**
TLY Talaya 32.43 295 *e*P **P** **14 29 44.7 -0.5**
comp=Z,22nm,0.8s
TLY Talaya 32.43 295 P **P** **14 29 45.2 +0.1**
SNR=17
TLY Talaya 32.43 295 P **P** **14 29 45.2 +0.1**
SNR=17

TLY	**Talaya**	**32.43**	**295**	*c iP*	**P**	**14 29 44.7**	**-0.5**
TLY				*e*PPP	PPP	14 31 13.8	
TLY				*e*		14 32 32.1	
TLY				*e*S	**S**	**14 34 55.5**	**-0.2**
TLY				*e*SS	**SnSn**	**14 36 57.7**	**+5.2**
TLY				*e*SSS	SSS	14 37 19.2	
TLY				pmax	pmax		
	comp=Z,32nm,1.1s						
TLY				MLR	MLR		
	comp=Z,3μm,19.0s						
SUA	**Susitna One**	**32.48**	**47**	*e*P	**P**	**14 29 43.9**	**-1.7**
	comp=Z,45nm,1.0s						
BRLK	**Bradley Lake**	**32.52**	**50**	*e*P	**P**	**14 29 44.7**	**-1.1**
	comp=Z,23nm,0.6s						
MLY	**Manley**	**32.52**	**40**	*e*P	**P**	**14 29 45.1**	**-0.7**
	comp=Z,44nm,1.0s						
TIY	**Taiyuan**	**32.53**	**266**	*e*P	**P**	**14 29 47.5**	**+1.2**
TIY				pP	**pP**	**14 30 01.1**	**+1.2**
TIY				PP	**PP**	**14 30 59.6**	**-0.8**
TIY				S	**S**	**14 34 56.8**	**-0.9**
TIY				pmax	pmax		
	comp=Z,200nm,1.4s						
TIY				pmax	pmax		
	comp=Z,230nm,4.3s						
TIY				LR	LR		
	comp=Z,590nm,10.2s						
TIY				LR	LR		
	comp=Z,1μm,18.0s						
TIY				LR	LR		
	comp=Z,1μm,16.3s						
TRF	**Thorofare Moun**	**32.66**	**43**	*e*P	**P**	**14 29 47.1**	**-0.1**
	comp=Z,49nm,1.0s						
RC01	**Rabbit Creek A**	**32.98**	**47**	*e*P	**P**	**14 29 49.3**	**-0.5**
	comp=Z,26nm,0.8s						
ZAK	**Zakamensk**	**33.02**	**293**	*e*P	**P**	**14 29 49.4**	**-1.1**
ZAK	**Zakamensk**	**33.02**	**293**	*e*P	**P**	**14 29 49.4**	**-1.1**
ZAK				*e*		14 32 31.9	
ZAK				pmax	pmax		
	comp=Z,19nm,1.2s						
BWN	**Browne**	**33.03**	**41**	*e*P	**P**	**14 29 51.2**	**+0.9**
	comp=Z,216nm,1.0s						
SEW	**Seward**	**33.20**	**49**	*e*P	**P**	**14 29 50.7**	**-1.1**
	comp=Z,40nm,1.0s						
PMR	**Palmer**	**33.24**	**46**	*e*P	**P**	**14 29 50.4**	**-1.7**
	comp=Z,19nm,0.8s						
PMR	**Palmer**	**33.24**	**46**	*e*P	**P**	**14 29 50.4**	**-1.7**
PMR				pmax	pmax		
	comp=Z,19nm,0.8s						
MCK	**McKinley**	**33.27**	**42**	*e*P	**P**	**14 29 51.6**	**-0.7**
MCK	**McKinley**	**33.27**	**42**	*e*P	**P**	**14 29 51.6**	**-0.7**
	comp=Z,82nm,1.0s						
MCK	**McKinley**	**33.27**	**42**	*e*P	**P**	**14 29 51.6**	**-0.7**
MCK				pmax	pmax		
	comp=Z,82nm,1.0s						
RND	**Reindeer**	**33.30**	**43**	*e*P	**P**	**14 29 52.1**	**-0.6**
	comp=Z,83nm,1.0s						
RND	**Reindeer**	**33.30**	**43**	*e*P	**P**	**14 29 52.1**	**-0.6**
RND				pmax	pmax		
	comp=Z,83nm,1.0s						
TOLK	**Toolik Lake Re**	**33.33**	**33**	P	**P**	**14 29 53.1**	**+0.3**
	baz=262						
TOLK	**Toolik Lake Re**	**33.33**	**33**	*e*P	**P**	**14 29 52.8**	**-0.1**
	comp=Z,49nm,0.8s						
GHO	**Glory Hole Cre**	**33.33**	**46**	*e*P	**P**	**14 29 52.9**	**-0.1**
	comp=Z,28nm,0.8s						
SML	**Sawmill**	**33.61**	**46**	*e*P	**P**	**14 29 55.4**	**0.0**
	comp=Z,175nm,0.8s						
SML	**Sawmill**	**33.61**	**46**	*e*P	**P**	**14 29 55.4**	**0.0**
SML				pmax	pmax		
	comp=Z,175nm,0.8s						
WRH	**Wood River Hil**	**33.63**	**41**	*e*P	**P**	**14 29 55.6**	**+0.1**
	comp=Z,32nm,0.7s						
COLA	**College**	**33.74**	**40**	*e*P	**P**	**14 29 57.0**	**+0.7**
COLA	**College**	**33.74**	**40**	*e*P	**P**	**14 29 57.0**	**+0.7**
	comp=Z,137nm,1.0s						
COLA	**College**	**33.74**	**40**	*e*P	**P**	**14 29 57.0**	**+0.7**
COLA				pmax	pmax		
	comp=Z,137nm,1.0s						
CCB	**Clear Creek Bu**	**33.76**	**41**	*e*P	**P**	**14 29 56.8**	**+0.2**
	comp=Z,42nm,0.9s						
DHY	**Denali Highway**	**33.98**	**43**	*e*P	**P**	**14 29 58.4**	**-0.4**
	comp=Z,86nm,1.4s						
MOY	**Mondy**	**34.02**	**296**	*e*P	**P**	**14 29 58.9**	**-0.2**
MOY				pmax	pmax		
	comp=Z,26nm,2.7s						
SCM	**Sheep Creek Mo**	**34.09**	**46**	*e*P	**P**	**14 30 00.0**	**+0.5**
	comp=Z,86nm,0.9s						
SCM	**Sheep Creek Mo**	**34.09**	**46**	*e*P	**P**	**14 30 00.0**	**+0.5**
SCM				pmax	pmax		
	comp=Z,86nm,0.9s						
IL1	**Eielson Array**	**34.15**	**40**	*e*P	**P**	**14 29 58.8**	**-1.2**
ILAR	**Eielson Array**	**34.15**	**40**	P	**P**	**14 29 60.0**	**0.0**
	comp=Z,19nm,0.8s,baz=255,slow=7.6,SNR=140						
ILAR				PcP	**PcP**	**14 32 35.8**	**+0.1**
	comp=Z,3.8nm,0.9s,baz=280,slow=3.9,SNR=4.5						
ILAR				LR	LR	14 46 41.2	
	comp=Z,917nm,18.0s,baz=280,slow=41						
ILAR	**Eielson Array**	**34.15**	**40**	*e*P	**P**	**14 30 00.0**	**0.0**
ILB	**Eielson Array**	**34.15**	**40**	*e*P	**P**	**14 29 59.9**	**-0.1**
KLU	**Klutina**	**34.79**	**46**	*e*P	**P**	**14 30 05.9**	**+0.3**
	comp=Z,47nm,1.0s						
HARP	**HAARP**	**35.05**	**45**	*e*P	**P**	**14 30 08.9**	**+1.1**
	comp=Z,56nm,0.7s						
RIDG	**Independ'e Rid**	**35.08**	**42**	*e*P	**P**	**14 30 07.5**	**-0.6**
	comp=Z,63nm,0.9s						
DOT	**Dot Lake**	**35.44**	**42**	*e*P	**P**	**14 30 10.4**	**-0.7**
	comp=Z,85nm,0.8s						
WHN	**Wuhan**	**35.70**	**254**	⇓P	**P**	**14 30 14.0**	**+0.3**
WHN				pmax	pmax		
	comp=Z,140nm,0.6s						
WHN				LR	LR		
	comp=Z,380nm,6.2s						
WHN				LR	LR		
	comp=Z,2μm,14.7s						
WHN				LR	LR		
	comp=Z,2μm,20.0s						
GUMO	**Guam**	**36.09**	**197**	LR	LR	14 44 01.3	
	comp=Z,711nm,20.0s,baz=31,slow=34						
CRQM	**Cirque**	**36.22**	**47**	*e*P	**P**	**14 30 19.0**	**+1.0**
	comp=Z,99nm,0.8s						
XAN	**Xi'an**	**36.99**	**264**	P	**P**	**14 30 24.6**	**-0.1**
XAN				pP	pP	14 30 34.2	-4.3
XAN				sP	sP	14 30 38.5	-6.3
XAN				PP	**PnPn**	**14 31 52.6**	**+2.3**
XAN				S	**S**	**14 36 04.2**	**-2.0**
XAN				pmax	pmax		
	comp=Z,18nm,1.3s						
XAN				pmax	pmax		
	comp=Z,230nm,6.1s						
XAN				LR	LR		
	comp=Z,1μm,18.6s						
XAN				LR	LR		
	comp=Z,840nm,19.4s						
XAN				LR	LR		
	comp=Z,1μm,20.8s						
QZH	**Quanzhou**	**37.10**	**243**	⇑*iP*	**P**	**14 30 26.6**	**+1.0**
QZH				S	**S**	**14 36 09.9**	**+2.0**
QZH				sS	**ScP**	**14 36 27.6**	**+0.3**
QZH				pmax	pmax		
	comp=Z,310nm,4.7s						
QZH				LR	LR		
	comp=Z,430nm,13.4s						
QZH				LR	LR		
	comp=Z,590nm,19.1s						
QZH				LR	LR		
	comp=Z,780nm,16.9s						
DAWY	**Dawson**	**37.45**	**41**	*e*P	**P**	**14 30 28.5**	**+0.2**
	comp=Z,18nm,0.9s						
NRIK	**Noril'sk**	**37.69**	**328**	P	**P**	**14 30 29.5**	**-0.6**
	comp=Z,7.2nm,0.8s,baz=105,slow=6.6,SNR=13						
NRIK				LR	LR	14 46 49.1	
	comp=Z,1μm,20.5s,baz=69,slow=38						
HVS	**Khovu-Aksy**	**38.51**	**297**	⇓*eP*	**P**	**14 30 38.2**	**+0.8**
HVS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LZH	**Lanzhou**	**39.13**	**271**	⇑P	**P**	**14 30 43.0**	**+0.2**
LZH				pP	pP	14 30 52.7	-4.0
LZH				sP	sP	14 30 57.4	-5.6
LZH				PP	**PnPn**	**14 32 17.8**	**+1.7**
LZH				*e*S	**S**	**14 36 37.4**	**-1.4**
LZH				sS	sS	14 36 57.0	-5.2
LZH				SS	**SS**	**14 39 25.5**	**-7.3**
LZH				pmax	pmax		
	comp=Z,82nm,1.1s						
LZH				pmax	pmax		
	comp=Z,540nm,6.0s						
LZH				LR	LR		
	comp=Z,2μm,14.3s						
LZH				LR	LR		
	comp=Z,2μm,15.3s						
LZH				LR	LR		
	comp=Z,3μm,17.0s						
INK	**Inuvik**	**39.23**	**34**	*e*P	**P**	**14 30 43.8**	**+0.7**
INK	**Inuvik**	**39.23**	**34**	*e*P	**P**	**14 30 43.8**	**+0.7**
	comp=Z,50nm,1.0s						
INK	**Inuvik**	**39.23**	**34**	*e*P	**P**	**14 30 43.8**	**+0.7**
INK				pmax	pmax		
	comp=Z,50nm,1.0s						
GTA	**Gaotai**	**39.94**	**278**	⇑P	**P**	**14 30 49.3**	**-0.2**
GTA				pP	pP	14 30 57.5	-5.9
GTA				sP	sP	14 31 02.9	-6.8
GTA				PP	**PnPn**	**14 32 24.8**	**-0.9**
GTA				PcP	**PcP**	**14 32 55.5**	**+1.5**
GTA				PcS	**PcS**	**14 36 46.1**	**+1.7**
GTA				S	**S**	**14 36 53.8**	**+2.9**
GTA				SS	**SS**	**14 39 47.8**	**-1.1**
GTA				ScS	**ScS**	**14 40 52.2**	**+0.7**
GTA				pmax	pmax		
	comp=Z,26nm,1.4s						
GTA				pmax	pmax		
	comp=Z,190nm,8.2s						
GTA				LR	LR		
	comp=Z,1μm,15.1s						
GTA				LR	LR		
	comp=Z,1μm,16.5s						
GTA				LR	LR		
	comp=Z,3μm,16.5s						
GZH	**Guangzhou**	**41.64**	**247**	P	**P**	**14 30 59.4**	**-4.1**
GZH				S	**S**	**14 37 10.4**	**-5.7**
GZH				LR	LR		
	comp=Z,850nm,17.3s						
GZH				LR	LR		
	comp=Z,940nm,15.4s						
CD2	**Chengdu**	**42.34**	**264**	P	**P**	**14 31 09.2**	**0.0**
CD2				sP	pP	14 31 22.9	-0.3
CD2				PP	**PP**	**14 32 47.4**	**-0.6**
CD2				S	**S**	**14 37 25.0**	**-1.5**
CD2				sS	sS	14 37 44.3	-5.8
CD2				SS	**SS**	**14 40 38.1**	**+1.6**
CD2				pmax	pmax		
	comp=Z,60nm,0.9s						
CD2				pmax	pmax		
	comp=Z,370nm,5.9s						
CD2				LR	LR		
	comp=Z,1μm,18.0s						
CD2				LR	LR		
	comp=Z,1μm,16.2s						
ZALV	**Zalesovo Beam**	**42.48**	**305**	P	**P**	**14 31 08.1**	**-1.9**
	comp=Z,2.1nm,0.4s,baz=51,slow=7.6,SNR=8.6						
ZALV				PcP	**PcP**	**14 33 02.0**	**+0.2**
	comp=Z,37nm,1.1s,baz=90,slow=1.5,SNR=16						
ZALV				ScP	**ScP**	**14 36 49.6**	**+1.8**
	comp=Z,0.8nm,0.6s,baz=67,slow=3.7,SNR=3.6						
ZALV				LR	LR	14 49 34.1	
	comp=Z,2μm,20.1s,baz=62,slow=37						
NVS	**Novosibirsk**	**42.99**	**306**	*e*P	**P**	**14 31 12.8**	**-1.2**
NVS	**Novosibirsk**	**42.99**	**306**	*e*P	**P**	**14 31 12.8**	**-1.2**
NVS				*e*		14 33 01.6	
NVS				pmax	pmax		
	comp=E,34nm,1.7s						
NVS				pmax	pmax		
	comp=Z,47nm,1.7s						
NVS				pmax	pmax		
	comp=N,20nm,2.0s						
DLBC	**Dease Lake**	**43.26**	**48**	*e*P	**P**	**14 31 18.4**	**+2.0**
	comp=N,57nm,1.0s						
GYA	**Guiyang**	**43.42**	**257**	⇑*iP*	**P**	**14 31 16.5**	**-1.5**
GYA				pP	pP	14 31 28.4	-3.7
GYA				PP	**PP**	**14 33 01.8**	**+2.1**
GYA				ScP	**ScP**	**14 36 55.0**	**+2.8**
GYA				S	**S**	**14 37 43.2**	**+0.7**
GYA				sS	sS	14 37 59.4	-6.7
GYA				SS	**SS**	**14 40 50.0**	**-7.8**
GYA				pmax	pmax		
	comp=N,130nm,1.0s						
GYA				pmax	pmax		
	comp=N,150nm,5.0s						
GYA				LR	LR		
	comp=N,640nm,17.8s						
GYA				LR	LR		
	comp=N,560nm,18.2s						
GYA				LR	LR		
	comp=N,620nm,18.4s						
WMQ	**Urumqi**	**45.40**	**290**	P	**P**	**14 31 32.5**	**-1.1**
WMQ				pP	pP	14 31 43.5	-4.2
WMQ				PP	**PP**	**14 33 21.1**	**+0.7**
WMQ				pmax	pmax		
	comp=N,130nm,1.1s						
WMQ				pmax	pmax		
	comp=N,230nm,3.8s						
WMQ				LR	LR		
	comp=N,4μm,17.7s						
WMQ				LR	LR		
	comp=N,4μm,17.7s						
WMQ				LR	LR		
	comp=N,4μm,23.3s						
QIZ	**Qiongzhong**	**46.83**	**247**	P	**P**	**14 31 44.7**	**-0.3**
QIZ				S	**S**	**14 38 34.1**	**+2.4**
QIZ				pmax	pmax		
	comp=N,18nm,1.6s						
QIZ				pmax	pmax		
	comp=N,320nm,3.6s						
QIZ				LR	LR		
	comp=N,500nm,21.6s						
QIZ				LR	LR		
	comp=N,570nm,18.6s						
QIZ				LR	LR		
	comp=N,670nm,18.1s						
KMI	**Kunming**	**46.88**	**259**	P	**P**	**14 31 44.8**	**-0.9**
KMI				pP	pP	14 31 55.8	-4.0
KMI				sP	sP	14 32 00.1	-5.9
KMI				PP	**PP**	**14 33 36.7**	**+0.4**
KMI				S	**S**	**14 38 28.6**	**-4.1**
KMI				sS	sS	14 38 48.0	-8.6
KMI				pmax	pmax		
	comp=N,95nm,1.3s						
KMI				pmax	pmax		
	comp=N,460nm,5.6s						
KMI				LR	LR		
	comp=N,770nm,18.1s						
KMI				LR	LR		
	comp=N,730nm,17.4s						
KMI				LR	LR		
	comp=N,710nm,33.0s						
MK31	**Makanchi Array**	**47.16**	**297**	*e*P	**P**	**14 31 46.2**	**-1.0**
MK31	**Makanchi Array**	**47.16**	**297**	*e*P	**P**	**14 31 46.3**	**-1.0**
MKAR	**Makanchi Array**	**47.16**	**297**	P	**P**	**14 31 46.4**	**-1.0**
	comp=N,5.2nm,0.6s,baz=69,slow=8.1,SNR=37						
MKAR				PcP	**PcP**	**14 33 17.4**	**-0.8**
	comp=N,6.7nm,0.7s,baz=62,slow=5.8,SNR=4.7						
MKAR				ScP	**ScP**	**14 37 08.8**	**+1.6**
	comp=N,1.3nm,0.9s,baz=64,slow=3.4,SNR=3.2						
MKAR				LR	LR	14 52 53.3	
	comp=N,3μm,20.7s,baz=50,slow=38						
MKAR	**Makanchi Array**	**47.16**	**297**	*e*P	**P**	**14 31 46.2**	**-1.0**
	comp=N,57nm,0.6s						
MKAR				PcP	**PcP**	**14 33 17.4**	**-0.8**
MKAR				ScP	**ScP**	**14 37 08.8**	**+1.6**
MK01	**Makanchi Array**	**47.16**	**296**	*e*P	**P**	**14 31 46.1**	**-1.3**
KURK	**Kurchatov**	**47.32**	**303**	*e*P	**P**	**14 31 47.0**	**-1.4**
KURK	**Kurchatov**	**47.32**	**303**	P	**P**	**14 31 48.4**	**0.0**
KURK				PcP	**PcP**	**14 33 19.3**	**+0.8**
KURK				ScP	**ScP**	**14 37 09.2**	**+1.5**
KURK	**Kurchatov**	**47.32**	**303**	P	**P**	**14 31 47.9**	**-0.6**
	SNR=10						
KURK	**Kurchatov**	**47.32**	**303**	P	**P**	**14 31 47.9**	**-0.6**
	SNR=10						
KURK	**Kurchatov**	**47.32**	**303**	*ceP*	**P**	**14 31 47.0**	**-1.4**
KURK				*i* *PP	**pP**	**14 32 04.7**	**+2.1**
KURK				pmax	pmax		
	comp=Z,28nm,1.2s						
KURBB	**Kurchatov Arra**	**47.41**	**303**	P	**P**	**14 31 48.4**	**-0.7**
	comp=Z,10nm,0.8s,baz=64,slow=8.2,SNR=29						
KURBB				PcP	**PcP**	**14 33 19.3**	**+0.4**
	comp=Z,14nm,1.0s,baz=59,slow=3.2,SNR=11						
KURBB				ScP	**ScP**	**14 37 09.2**	**+1.1**
	comp=Z,0.7nm,0.2s,baz=58,slow=3.9,SNR=4.2						
DAV	**Davao City (W)**	**48.45**	**221**	LR	LR	14 49 13.4	
	comp=Z,268nm,21.2s,baz=20,slow=32						
YKW3	**Yellowknife Ar**	**48.48**	**38**	*e*P	**P**	**14 31 57.4**	**+0.1**
	comp=Z,49nm,1.0s						
RES	**Resolute Bay**	**48.48**	**19**	P	**P**	**14 31 57.3**	**+0.2**
	comp=Z,35nm,0.8s,baz=307,slow=7.6,SNR=81						
RES				LR	LR	14 54 26.1	
	comp=Z,2μm,20.6s,baz=312,slow=39						
RES	**Resolute Bay**	**48.48**	**19**	*e*P	**P**	**14 31 57.3**	**+0.2**
	comp=Z,55nm,1.0s						
RES	**Resolute Bay**	**48.48**	**19**	*e*P	**P**	**14 31 57.3**	**+0.2**
RES				pmax	pmax		
	comp=Z,55nm,1.0s						
YKA	**Yellowknife Ar**	**48.52**	**38**	P	**P**	**14 31 58.0**	**+0.4**
	comp=Z,33nm,0.8s,baz=298,slow=7.7,SNR=92						
YKA				PcP	**PcP**	**14 33 22.9**	**+0.2**
	comp=Z,7.6nm,0.9s,baz=308,slow=3.6,SNR=5.4						
YKA	**Yellowknife Ar**	**48.52**	**38**	*e*P	**P**	**14 31 58.0**	**+0.4**
BVAR	**Borovoye Array**	**50.56**	**309**	P	**P**	**14 32 11.7**	**-1.6**
	comp=Z,10nm,0.5s,baz=46,slow=7.7,SNR=22						
BVAR				PcP	**PcP**	**14 33 30.8**	**+0.5**
	comp=Z,12nm,0.8s,baz=66,slow=3.6,SNR=10						
BRVK	**Borovoye**	**50.60**	**309**	*e*P	**P**	**14 32 12.7**	**-0.8**
	comp=Z,8.9nm,0.7s						
BRVK	**Borovoye**	**50.60**	**309**	*ceP*	**P**	**14 32 12.0**	**-1.5**
BRVK				*i* *PP	**pP**	**14 32 26.1**	**-1.7**
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KBS	**Kingsbay**	**50.67**	**351**	*e*P	**P**	**14 32 12.7**	**-1.0**
	comp=Z,28nm,1.0s						
KBS	**Kingsbay**	**50.67**	**351**	*e*P	**P**	**14 32 12.7**	**-1.0**
KBS				pmax	pmax		
	comp=Z,28nm,1.0s						
PDGK	**Podgornoye**	**50.69**	**294**	P	**P**	**14 32 14.3**	**-0.2**
PDGK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SPITS	**Spitsbergen Ar**	**50.82**	**350**	P	**P**	**14 32 12.9**	**-2.0**
	comp=Z,7.8nm,0.5s,baz=28,slow=9.4,SNR=58						
SPITS				PcP	**PcP**	**14 33 32.1**	**+1.2**
	comp=Z,6.3nm,0.6s,baz=24,slow=6.4,SNR=5.1						
SPITS				LR	LR	14 53 34.7	
	comp=Z,1μm,21.4s,baz=25,slow=36						
LSA	**Lhasa**	**51.45**	**273**	P	**P**	**14 32 21.5**	**+0.7**
LSA	**Lhasa**	**51.45**	**273**	*i* P	**P**	**14 32 21.7**	**+0.9**
	SNR=8.4						
A04D	**Lummi Island**	**51.62**	**57**	P	**P**	**14 32 21.4**	**+0.2**
	baz=304						
NONG	**Nongkai**	**51.71**	**252**	P	**P**	**14 32 23.1**	**+0.8**
	comp=Z,69nm,1.2s						
TULEG	**Thule**	**51.86**	**12**	*e*P	**P**	**14 32 21.4**	**-1.3**
	comp=Z,56nm,0.9s						
HSPB	**Hornsund (broa**	**51.91**	**349**	*e*P	**P**	**14 32 22.8**	**-0.2**
OTUK	**Ortayu**	**52.10**	**303**	P	**P**	**14 32 25.1**	**+0.2**
OTUK				pmax	pmax		
	comp=Z,10.0nm,1.2s						
B05A	**Bryant**	**52.21**	**57**	P	**P**	**14 32 25.9**	**+0.3**
	baz=304,SNR=5.4						
CMAI	**Chiengmai2**	**52.96**	**258**	P	**P**	**14 32 32.5**	**+0.8**
	comp=Z,678nm,1.1s,comp=Z,17μm						
SVE	**Sverdlovsk**	**53.21**	**317**	⇓*eP*	**P**	**14 32 28.8**	**-4.1**
SVE				pmax	pmax		
	comp=Z,16nm,0.9s						
SVE				MLR	MLR		
	comp=Z,1μm,22.0s						
LAMP	**Lampang**	**53.61**	**256**	P	**P**	**14 32 37.3**	**+1.0**
	comp=Z,54nm,1.0s,comp=Z,406nm						
SHL	**Shillong**	**53.71**	**268**	*e*P	**P**	**14 32 37.0**	**-0.2**
CHTO	**Chiang Mai**	**53.84**	**257**	P	**P**	**14 32 38.2**	**+0.3**
	comp=Z,766nm,1.1s,comp=Z,7μm						
CHTO	**Chiang Mai**	**53.84**	**257**	*e*P	**P**	**14 32 38.3**	**+0.3**
CHTO	**Chiang Mai**	**53.84**	**257**	*e*P	**P**	**14 32 38.3**	**+0.3**
	comp=Z,152nm,0.9s						
CHTO	**Chiang Mai**	**53.84**	**257**	P	**P**	**14 32 38.3**	**+0.3**
	SNR=49						
CHTO	**Chiang Mai**	**53.84**	**257**	P	**P**	**14 32 38.3**	**+0.3**
	SNR=49						
CHTO	**Chiang Mai**	**53.84**	**257**	*e*P	**P**	**14 32 38.3**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,152nm,0.9s						
FRU	**Bishkek**	**53.89**	**296**	*e*P	**P**	**14 32 36.0**	**-2.2**
FRU				*e*		14 34 40.0	
CHAI	**Chaiyaphum**	**54.06**	**252**	P	**P**	**14 32 39.8**	**+0.2**
	comp=Z,35nm,1.0s,comp=Z,284nm						
AAK	**Ala-Archa**	**54.08**	**296**	P	**P**	**14 32 39.0**	**-0.7**
	comp=Z,2.2nm,0.4s,baz=107,slow=3.9,SNR=9.4						
AAK	**Ala-Archa**	**54.08**	**296**	*e*P	**P**	**14 32 39.9**	**+0.2**
AAK	**Ala-Archa**	**54.08**	**296**	P	**P**	**14 32 39.9**	**+0.2**
	SNR=6.5						
AAK	**Ala-Archa**	**54.08**	**296**	P	**P**	**14 32 39.9**	**+0.2**
	SNR=6.5						
AAK	**Ala-Archa**	**54.08**	**296**	P	**P**	**14 32 39.6**	**-0.1**
AAK	**Ala-Archa**	**54.08**	**296**	*d iP*	**P**	**14 32 39.9**	**+0.2**
AAK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
PHIT	**Phitsanulok**	**54.09**	**254**	P	**P**	**14 32 41.3**	**+1.5**
	comp=Z,48nm,1.1s,comp=Z,374nm						
CMAR	**Chiang Mai Arr**	**54.10**	**256**	P	**P**	**14 32 40.4**	**+0.5**
	comp=Z,87nm,1.0s,baz=33,slow=7.0,SNR=194						
CMAR				ScP	**ScP**	**14 37 38.9**	**+1.4**
	comp=Z,1.3nm,0.9s,baz=19,slow=3.8,SNR=4.0						
I03D	**Drain, OR**	**54.11**	**62**	P	**P**	**14 32 40.4**	**+0.7**
	baz=306						
CM01	**Chiang Mai Arr**	**54.12**	**256**	*e*P	**P**	**14 32 40.3**	**+0.3**
PBKT	**Sadao Pong**	**54.20**	**253**	P	**P**	**14 32 40.7**	**+0.1**
	comp=Z,39nm,1.3s,comp=Z,733nm						
ARU	**Arti**	**54.38**	**317**	P	**P**	**14 32 40.2**	**-1.2**
	comp=Z,20nm,0.5s,baz=63,slow=4.3,SNR=38						
ARU				PcP	**PcP**	**14 33 45.0**	**+0.4**
	comp=Z,10nm,0.6s,baz=12,slow=5.3,SNR=4.2						
ARU				LR	LR	14 57 56.7	
	comp=Z,1μm,19.8s,slow=38						
ARU	**Arti**	**54.38**	**317**	*e*P	**P**	**14 32 39.5**	**-1.9**
	comp=Z,28nm,0.7s						
ARU				PcP	**PcP**	**14 33 45.0**	**+0.4**
ARU	**Arti**	**54.38**	**317**	*d iP*	**P**	**14 32 39.3**	**-2.1**
ARU				*PP	**pP**	**14 32 55.7**	**-0.2**
ARU						14 33 39.4	
ARU				S	**S**	**14 40 13.7**	**-1.6**
ARU				SS	**SKiKP**	**14 43 51.2**	**+5.1**
ARU				pmax	pmax		
	comp=Z,48nm,1.2s						
ARU				MLR	MLR		
	comp=Z,1μm,20.0s						
G05D	**Wamic, OR**	**54.38**	**60**	P	**P**	**14 32 41.5**	**-0.2**
	baz=306						
I04A	**Tendick Farm,**	**54.60**	**62**	P	**P**	**14 32 44.0**	**+0.7**
	baz=307						
DAG	**Danmarks Havn**	**54.64**	**358**	⇑*iP*	**P**	**14 32 41.3**	**-1.8**
	comp=Z,7.8nm,1.0s						
DAG	**Danmarks Havn**	**54.64**	**358**	⇑*iP*	**P**	**14 32 41.3**	**-1.8**
DAG				pmax	pmax		
	comp=Z,8.0nm,1.0s						
I05D	**Terrebonne, OR**	**54.90**	**61**	P	**P**	**14 32 46.2**	**+0.8**
	baz=307						
NEW	**Newport**	**54.93**	**55**	P	**P**	**14 32 45.8**	**+0.2**
	baz=306						
KULLO	**Kullorsuaq**	**55.03**	**10**	⇑*iP*	**P**	**14 32 44.8**	**-1.1**
	comp=Z,138nm,0.8s						
KULLO	**Kullorsuaq**	**55.03**	**10**	⇑*iP*	**P**	**14 32 44.8**	**-1.1**
KULLO				pmax	pmax		
	comp=Z,140nm,0.8s						
KSH	**Kashi**	**55.06**	**292**	P	**P**	**14 32 50.4**	**+3.6**
KSH				pP	pP	14 33 02.4	+1.1
KSH				PP	**PP**	**14 34 55.8**	**+5.7**
KSH				S	**S**	**14 40 25.7**	**+0.3**
KSH				sS	sS	14 40 47.1	-2.6
KSH				ScS	**ScS**	**14

comp=Z,8.3nm,0.8s,baz=343,slow=6.5,SNR=21
YBH LR LR 14 53 05.5
K04D Chiloquin, OR 55.69 63 P P 14 32 52.2 +0.9
baz=308
M02C Callahan 55.79 64 P P 14 32 53.0 +1.1
baz=308
ODAN Odare 55.81 273 *eP* **P 14 32 53.8 +1.4**
APA Apatity 55.96 337⇑ *iP* P 14 32 44.0 -8.7
APA *i* 14 35 07.0
APA pmax pmax
comp=Z,11nm,0.9s
JIRN Jiri 56.06 274 *eP* **P 14 32 54.4 0.0**
comp=Z,102nm,0.5s
GUN Gumba 56.10 275 *eP* **P 14 32 54.6 -0.1**
comp=Z,61nm,0.6s
N02D Trinity Center 56.13 65 P P 14 32 55.4 +1.0
baz=308
M04C Macdoel 56.15 63 P P 14 32 55.8 +1.2
baz=308,SNR=6.3
CHBT CHBT 56.25 249 P P 14 33 00.8 +5.4
comp=Z,939nm,0.8s,comp=Z,208μm
SFK Sufi-Kurgan 56.26 294 P P 14 32 55.9 +0.4
RAMN Ramite 56.27 274 *eP* **P 14 32 55.7 0.0**
comp=Z,144nm,0.8s
ARCES ARCESS Array B 56.34 341 P P 14 32 54.5 -0.8
comp=Z,3.6nm,0.5s,baz=38,slow=7.5,SNR=27
ARCES PcP **PcP 14 33 53.5 +1.5**
comp=Z,4.2nm,0.7s,baz=34,slow=4.5,SNR=4.4
ARCES LR LR 15 00 35.1
comp=Z,3μm,21.6s,baz=38,slow=40
PRGR Permogore 56.34 327 *eP* **P 14 32 54.0 -1.4**
PRGR *e**PP **pP 14 33 07.8 -2.1**
PRGR pmax pmax
comp=Z,54nm,1.1s
SANI Sanana 56.55 216 P P 14 32 56.3 -1.2
comp=Z,62nm,0.9s,comp=Z,652nm
KKN Kakani 56.58 275 *eP* **P 14 32 58.2 +0.3**
comp=Z,157nm,1.0s
PKIN Phulchoki 56.64 275 *eP* **P 14 32 59.0 +0.6**
comp=Z,81nm,1.0s
DMN Daman 56.81 275 *eP* **P 14 32 59.9 +0.3**
comp=Z,204nm,1.0s
GKN Gorkha 56.86 276 *eP* **P 14 32 59.8 0.0**
comp=Z,117nm,0.9s
BMO Blue Mountains 56.88 58 *eP* **P 14 33 00.6 +0.9**
comp=Z,11nm,0.8s
BMO Blue Mountains 56.88 58 *eP* **P 14 33 00.6 +0.9**
BMO pmax pmax
comp=Z,11nm,0.8s
LUWI Luwuk 56.93 220 P P 14 32 58.5 -1.7
comp=Z,67nm,0.9s
MPSI Mapaga 56.96 223 P P 14 32 59.5 -0.9
comp=Z,13nm,0.8s,comp=Z,278nm
O03D Paynes Creek 57.09 65 P P 14 33 01.3 +0.1
baz=309,SNR=7.8
TMCR Tamitsa 57.12 332 *eP* **P 14 32 59.6 -1.3**
TMCR pmax pmax
comp=Z,28nm,0.5s
DANN Dangsing 57.20 277 *eP* **P 14 33 02.1 -0.3**
comp=Z,41nm,0.6s
AAI Ambon 57.25 212 P P 14 33 02.9 +0.5
comp=Z,54nm,1.3s
APSI Ampana 57.29 221 P P 14 33 01.5 -1.2
comp=Z,67nm,1.0s,comp=Z,576nm
MSO Missoula 57.51 54 P P 14 33 04.5 +0.3
baz=309,SNR=22
MSO Missoula 57.51 54 *eP* **P 14 33 04.6 +0.5**
comp=Z,34nm,1.2s
KOLN Koldanda 57.70 276 *eP* **P 14 33 05.1 -0.7**
comp=Z,67nm,0.9s
SGF Sodankyl 57.77 339 *eP* **P 14 33 04.0 -1.5**
PHET Kaeng Krachan 57.81 251 P P 14 33 08.5 +2.1
comp=Z,27nm,0.8s,comp=Z,246nm
PYUN Piuthan 57.88 277 *eP* **P 14 33 07.3 +0.2**
comp=Z,281nm,1.1s
PCI Palu 58.09 223 P P 14 33 07.4 -0.9
comp=Z,64nm,0.9s,comp=Z,600nm
PCI Palu 58.09 223 P P 14 33 07.9 -0.4
HNR Honiara 58.14 174 LR LR 14 54 46.3
comp=Z,1μm,21.8s,baz=347,slow=32
AKTO Aktyubinsk 58.32 312 P P 14 33 09.1 -0.5
comp=Z,3.9nm,0.5s,baz=44,slow=5.0,SNR=9.1
AKTO LR LR 15 00 44.4
comp=Z,874nm,18.4s,baz=47,slow=39
FFC Flin Flon 58.35 42 *eP* **P 14 33 10.2 +0.5**
FFC Flin Flon 58.35 42 *eP* **P 14 33 10.2 +0.5**
comp=Z,34nm,0.8s
FFC Flin Flon 58.35 42 *eP* **P 14 33 10.2 +0.5**
FFC pmax pmax
comp=Z,34nm,0.8s
PMG Port Moresby 58.36 189 P P 14 33 11.7 +1.5
comp=Z,7.8nm,0.8s,baz=23,slow=7.0,SNR=2.7
PMG LR LR 14 54 27.4
comp=Z,674nm,21.6s,baz=0.5,slow=32
SUMG Summit 58.56 5⇑ *iP* **P 14 33 11.3 -0.1**
comp=Z,111nm,0.9s
SUMG Summit 58.56 5 *eP* **P 14 33 10.0 -1.4**
comp=Z,155nm,1.0s
SUMG Summit 58.56 5 *eP* **P 14 33 10.0 -1.4**
SUMG pmax pmax
comp=Z,155nm,1.0s
FCC Fort Churchill 58.85 35 *eP* **P 14 33 13.0 -0.1**
comp=Z,77nm,1.4s
FCC Fort Churchill 58.85 35 *eP* **P 14 33 13.0 -0.1**
FCC pmax pmax
comp=Z,77nm,1.4s
EGMT Eagleton 58.97 51 P P 14 33 14.5 +0.3
baz=310,SNR=8.2
KLMR Klimovskoe 59.02 329 *eP* **P 14 33 11.8 -2.4**
KLMR *e**PP **pP 14 33 27.8 -1.0**
KLMR S S 14 41 07.0 -9.4
KLMR pmax pmax
comp=Z,80nm,1.2s
KLMR MLR MLR
comp=Z,1μm,15.0s
KLMR Klimovskoe 59.02 329 *eP* **P 14 33 11.9 -2.3**
KLMR *eP* **P 14 33 11.9 -2.3**
KLMR *eP* **P 14 33 11.9 -2.3**
KLMR AMP 14 33 15.9
comp=Z,80nm,1.2s
KLMR *e*pP **pP 14 33 27.8 -1.0**
KLMR S S 14 41 07.1 -9.3
KLMR S S 14 41 07.1 -9.3
KLMR LQ LQ 14 54 22.1
KLMR LQ LQ 14 54 22.1
KLMR LR LR 14 54 44.3
KLMR AMP 15 02 33.7
comp=Z,1μm,15.0s
HLID Hailey 59.31 58 P P 14 33 17.5 +0.7
baz=310,SNR=18
HLID Hailey 59.31 58 *eP* **P 14 33 17.7 +0.9**
comp=Z,11nm,0.9s
MCMT McKenzie Canyo 59.37 56 *eP* **P 14 33 17.8 +0.5**
CMB Columbia Colle 59.37 66 *eP* **P 14 33 18.2 +1.1**
comp=Z,12nm,1.3s
CMB Columbia Colle 59.37 66 *eP* **P 14 33 18.2 +1.1**
CMB pmax pmax
comp=Z,12nm,1.3s
YERR Yerington 59.45 64 *eP* **P 14 33 19.1 +1.2**
comp=Z,17nm,0.9s
BOZ Bozeman (W) 59.53 54 P P 14 33 19.2 +0.9
baz=310,SNR=49
BOZ Bozeman (W) 59.53 54 *eP* **P 14 33 19.3 +1.0**
comp=Z,23nm,0.8s
BOZ Bozeman (W) 59.53 54 *eP* **P 14 33 19.3 +1.0**
BOZ pmax pmax
comp=Z,23nm,0.8s
BMN Battle Mountai 59.71 62 *eP* **P 14 33 20.8 +1.2**
comp=Z,15nm,0.7s
BMN Battle Mountai 59.71 62 *eP* **P 14 33 20.8 +1.2**
BMN pmax pmax
comp=Z,15nm,0.7s
OUL Oulu 59.81 338 P P 14 33 18.9 -0.7
OUL pmax pmax
comp=Z,20nm,1.5s
TTSI Tana Toraja 60.00 222 P P 14 33 21.2 -0.3
comp=Z,13nm,1.3s
JOF Joensuu 60.06 334 P P 14 33 21.3 -0.1
JOF pmax pmax
comp=Z,20nm,1.1s
KVN Kaiserville 60.09 64 *eP* **P 14 33 23.1 +0.9**
comp=Z,16nm,0.9s
KVN Kaiserville 60.09 64 *eP* **P 14 33 23.1 +0.9**
KVN pmax pmax
comp=Z,17nm,0.9s
NV01 Mina Array Sit 60.37 64 *eP* **P 14 33 24.1 -0.1**
NVAR Mina Array Bea 60.37 64 P P 14 33 25.1 +0.9
comp=Z,9.9nm,0.7s,baz=292,slow=7.5,SNR=69
NVAR LR LR 14 55 35.7
comp=Z,368nm,21.6s,baz=59,slow=32
MTKI Muara Teweh, K 60.44 228 P P 14 33 24.9 +0.3
comp=Z,80nm,1.1s
GCMT Greycliff 60.46 53 *eP* **P 14 33 24.8 +0.2**
NIL Nilore 60.48 288 *eP* **P 14 33 24.7 0.0**
comp=Z,52nm,1.0s
NIL Nilore 60.48 288 *eP* **P 14 33 24.7 0.0**
NIL pmax pmax
comp=Z,52nm,1.0s
MLAC Mammoth, Mammo 60.57 65 P P 14 33 26.8 +1.2
baz=311
ILULI Ilulissat 60.74 10 *iP* **P 14 33 24.9 -1.0**
comp=Z,110nm,0.9s
ILULI Ilulissat 60.74 10 *iP* **P 14 33 24.9 -1.0**
ILULI pmax pmax
comp=Z,110nm,0.9s
SPSI Sidrap Palu 60.84 221 P P 14 33 26.6 -0.7
comp=Z,21nm,1.1s
H17A Grant Village 60.88 55 P P 14 33 29.5 +1.9
baz=311,SNR=8.0
SCO Scoresbysund 61.01 359 *iP* **P 14 33 28.1 +0.4**
SCO Scoresbysund 61.01 359 *eP* **P 14 33 28.1 +0.4**
IMW Indian Meadow 61.01 56 *eP* **P 14 33 30.2 +1.6**
comp=Z,15nm,0.9s
RLMT Red Lodge 61.11 54 P P 14 33 30.4 +1.3
baz=312,SNR=22
TPAW Teton Pass 61.27 56 *eP* **P 14 33 31.8 +1.4**
comp=Z,24nm,0.8s
TIN Tinemaha, Big 61.31 66 P P 14 33 31.0 +0.5
baz=311
LOHW Long Hollow 61.38 56 *eP* **P 14 33 32.5 +1.5**
comp=Z,22nm,1.1s
SMMC Simmler 61.38 68 P P 14 33 32.7 +1.8
baz=312
HVU Hansel Valley 61.39 58 *eP* **P 14 33 32.5 +1.5**
comp=Z,13nm,0.9s
HVU Hansel Valley 61.39 58 *eP* **P 14 33 32.5 +1.5**
HVU pmax pmax
comp=Z,13nm,0.9s
REDW Red Top Meadow 61.41 56 *eP* **P 14 33 32.8 +1.6**
comp=Z,20nm,0.8s
DGMT Dagmar 61.47 48 P P 14 33 31.8 +0.5
baz=312,SNR=7.8
VES Vestal, Richgr 61.59 67 P P 14 33 31.7 -0.5
baz=312
SKLT Songkhla 61.64 246 P P 14 33 34.0 +1.3
comp=Z,33nm,1.2s
LAO LASA Array 61.65 51 P P 14 33 33.5 +0.9
baz=312
AHID Auburn Hatcher 61.67 57 *eP* **P 14 33 34.0 +1.1**
comp=Z,36nm,1.4s
KRAB Krabi 61.69 248 P P 14 33 35.0 +1.9
comp=Z,47nm,0.7s
BGU Big Grassy Mou 61.81 59 *eP* **P 14 33 35.1 +1.3**
comp=Z,4.9nm,0.8s
CWC Cottonwood Cre 61.81 66 P P 14 33 34.4 +0.5
baz=312
GRAC Grapevine Rang 61.87 65 P P 14 33 34.9 +0.7
baz=312,SNR=18
SPUT South Promonto 61.88 59 *eP* **P 14 33 36.3 +2.0**
comp=Z,31nm,1.0s
R11A Troy Canyon, C 62.03 63 P P 14 33 35.7 +0.3
baz=312,SNR=36
R11A Troy Canyon, C 62.03 63 *eP* **P 14 33 35.8 +0.4**
comp=Z,12nm,0.8s
DUG Dugway, Tooele 62.41 60 P P 14 33 38.7 +0.8
baz=312,SNR=25
DUG Dugway, Tooele 62.41 60 *eP* **P 14 33 39.0 +1.1**
comp=Z,22nm,0.8s
DUG Dugway, Tooele 62.41 60 *eP* **P 14 33 39.0 +1.1**
DUG pmax pmax
comp=Z,22nm,0.8s
MPMC Manual Prospec 62.42 66 P P 14 33 38.3 +0.3
baz=312,SNR=13
KBL Kabul 62.50 292 P P 14 33 39.2 +0.6
KBL pmax pmax
comp=Z,15nm,1.0s
BW06 Boulder Array 62.52 56 P P 14 33 39.3 +0.6
baz=312,SNR=26
PD31 Pinedale Array 62.52 56 *eP* **P 14 33 39.4 +0.8**
PDAR Pinedale Array 62.52 56 P P 14 33 39.3 +0.7
comp=Z,26nm,0.8s,baz=292,slow=2.1,SNR=169
FURC Furnace Creek, 62.52 65 P P 14 33 39.1 +0.7
baz=312,SNR=5.2
TPNV Topopah Spring 62.57 64 P P 14 33 39.4 +0.4
baz=312,SNR=22
LRMC Laurel Mtn Rad 62.69 67 P P 14 33 39.7 0.0
baz=312
FIA1 FINESS Array S 62.73 335 *eP* **P 14 33 38.1 -1.2**
FINES FINESS Array B 62.73 335 P P 14 33 38.1 -1.3
comp=Z,9.5nm,0.6s,baz=35,slow=7.8,SNR=66
FINES PcP **PcP 14 34 17.5 -0.1**
comp=Z,5.7nm,0.6s,baz=49,slow=3.8,SNR=6.3
FINES LR LR 15 03 28.0
comp=Z,3μm,21.3s,baz=32,slow=38
EDW2 Edwards Air Fo 62.90 67 P P 14 33 41.1 0.0
baz=312
SFJD Kangerlussuaq 62.90 11 P P 14 33 40.1 -0.4
comp=Z,33nm,0.4s,baz=330,slow=4.1,SNR=41
SFJD LR LR 15 02 51.5
comp=Z,1μm,20.3s,baz=350,slow=38
SFJD Kangerlussuaq 62.90 11⇑ *iP* **P 14 33 39.7 -0.8**
comp=Z,47nm,0.5s
SFJD Kangerlussuaq 62.90 11⇑ *iP* **P 14 33 39.7 -0.8**
SFJD pmax pmax
comp=Z,47nm,0.5s
SNCC San Nicolas Is 63.05 70 P P 14 33 42.4 +0.4
baz=313
DECC Green Verdugo 63.11 68 P P 14 33 42.4 0.0
baz=312
SHOC Shoshone, Teco 63.25 65 P P 14 33 43.3 -0.1
baz=312
GSC Goldstone, Bar 63.34 66 P P 14 33 44.2 +0.2
baz=312,SNR=9.5
MOS Moscow 63.47 326 *eP* P 14 33 39.2 -5.2
MOS *e* 14 33 54.2
MOS pmax pmax
comp=Z,35nm,1.1s
MOS MLR MLR
comp=Z,2μm,21.0s
IPM Ipoh 63.53 244 *eP* **P 14 33 46.4 +1.0**
comp=Z,48nm,1.2s
BFSC Mount Baldy Ra 63.53 68 P P 14 33 45.0 -0.4
baz=313
PBKI Pangkalan Bun 63.57 230 P P 14 33 46.0 +0.5
comp=Z,166nm,1.1s
CIS Catalina Islan 63.63 69 P P 14 33 46.1 +0.3
baz=313
TUQ Turquoise Moun 63.78 66 P P 14 33 47.3 +0.3
baz=313
TMUT Trail Mountain 63.93 60 *eP* **P 14 33 49.1 +1.0**
comp=Z,25nm,0.8s
HEC Hector,Ludlow 63.94 66 P P 14 33 48.4 +0.4
baz=313,SNR=5.9
MMRI Maumere 64.03 217 P P 14 33 48.2 -0.4
comp=Z,64nm,1.2s
P17A Butcher Ranch, 64.08 59 *eP* **P 14 33 50.0 +1.1**
comp=Z,18nm,0.8s
MDND Maddock 64.13 46 P P 14 33 49.1 +0.2
baz=315
MDND Maddock 64.13 46 *eP* **P 14 33 50.3 +1.4**
comp=Z,141nm,1.4s
ULM Lac du Bonnet 64.14 42 P P 14 33 49.2 +0.3
comp=Z,21nm,0.8s,baz=312,slow=7.0,SNR=41
ULM LR LR 15 02 30.7
comp=Z,810nm,20.9s,baz=326,slow=37
ULM Lac du Bonnet 64.14 42 *eP* **P 14 33 47.8 -1.1**
comp=Z,24nm,0.8s
ULM Lac du Bonnet 64.14 42 *eP* **P 14 33 47.8 -1.1**
ULM pmax pmax
comp=Z,24nm,0.8s
MTPU Mount Pierson 64.22 61 *eP* **P 14 33 51.9 +1.7**
comp=Z,18nm,0.8s
K22A Casper 64.24 54 P P 14 33 50.1 +0.2
baz=314,SNR=7.6
K22A Casper 64.24 54 *eP* **P 14 33 50.7 +0.8**
comp=Z,15nm,0.8s
MURC Murrieta 64.25 68 P P 14 33 49.6 -0.3
baz=313
SOEI Soe 64.29 214 P P 14 33 49.0 -1.4
comp=Z,41nm,1.0s
LCMT Little Creek M 64.31 63 *eP* **P 14 33 51.5 +1.1**
comp=Z,26nm,0.7s
OBN Obninsk 64.34 326 P P 14 33 50.0 -0.1
comp=Z,20nm,0.6s,baz=106,slow=22,SNR=4.3
OBN LR LR 15 04 20.7
comp=Z,1μm,20.5s,baz=42,slow=38
OBN Obninsk 64.34 326 *eP* **P 14 33 49.2 -0.9**
OBN Obninsk 64.34 326 *iP* **P 14 33 48.2 -1.9**
OBN *i* 14 34 23.8
OBN *i* S **S 14 42 19.6 -4.2**
OBN pmax pmax
comp=Z,20nm,1.0s
OBN MLR MLR
comp=Z,1μm,20.0s
TPRI Tanjung Pinang 64.37 239 P P 14 33 51.5 +0.7
comp=Z,35nm,0.7s,comp=Z,7μm
GMRC Granite Mounta 64.38 66 P P 14 33 51.2 +0.3
baz=313,SNR=13
SRU San Rafael Swe 64.45 59 *eP* **P 14 33 52.2 +0.9**
comp=Z,58nm,0.7s
SRU San Rafael Swe 64.45 59 *eP* **P 14 33 52.3 +0.9**
SRU pmax pmax
comp=Z,58nm,0.7s
RSSD Black Hills 64.53 52 P P 14 33 52.2 +0.3
baz=314
RSSD Black Hills 64.53 52 *eP* **P 14 33 52.2 +0.3**
comp=Z,38nm,0.6s
RSSD Black Hills 64.53 52 *eP* **P 14 33 52.2 +0.3**
RSSD pmax pmax
comp=Z,37nm,0.6s
KNB Kanab 64.55 62 *eP* **P 14 33 53.3 +1.2**
comp=Z,28nm,0.9s
KNB Kanab 64.55 62 *eP* **P 14 33 53.3 +1.2**
KNB pmax pmax
comp=Z,28nm,0.9s
B31A Greenbush Farm 64.64 45 P P 14 33 52.5 +0.3
baz=316,SNR=5.9
PFO Pinyon Flats O 64.69 67 P P 14 33 52.8 -0.2
baz=313
BELC Belle Mtn. Jos 64.70 67 P P 14 33 52.8 -0.2
baz=313,SNR=6.0
109C Camp Elliot, M 64.78 68 P P 14 33 53.4 0.0
baz=313
CPE Camp Elliot 64.78 68 *eP* **P 14 33 54.3 +0.9**
comp=Z,12nm,0.8s
A32A Rocking H Ranc 64.82 44 P P 14 33 53.3 -0.1
baz=316,SNR=7.9
MTN Manton Dam 64.91 206 *eP* **P 14 33 54.6 +0.4**
comp=Z,42nm,0.8s
BATI Baumata 64.93 214 P P 14 33 54.7 +0.3
comp=Z,26nm,0.8s,baz=320,slow=8.0,SNR=4.0
VSU Vasula 64.98 333⇑ *eP* **P 14 33 54.3 +0.1**
VSU pmax pmax
comp=Z,67nm,1.2s
O20A White River Ci 65.03 57 P P 14 33 55.4 +0.2
baz=314,SNR=6.4
O20A White River Ci 65.03 57 *eP* **P 14 33 56.0 +0.9**
comp=Z,18nm,0.8s
C31A Landman Farms, 65.05 45 P P 14 33 54.9 0.0
baz=316,SNR=10
IRM Iron Mountain 65.11 66 P P 14 33 55.9 +0.3
baz=313,SNR=18
B32A Ashes, Strandq 65.18 44 P P 14 33 55.6 -0.1
baz=316,SNR=15
BAR Barrett 65.19 68 *eP* **P 14 33 56.6 +0.5**
comp=Z,14nm,1.2s
MONP2 Monument Peak 65.20 68 P P 14 33 56.4 0.0
baz=314
W13A Hualapai Mount 65.23 65 *eP* **P 14 33 57.0 +0.5**
comp=Z,8.4nm,0.8s
U15A North Rim 65.26 63 *eP* **P 14 33 57.8 +0.9**
comp=Z,14nm,0.8s
A33A Warroad 65.31 43 P P 14 33 56.5 -0.1
baz=317,SNR=22
ANGG Ammassalik, Gr 65.50 6 *eP* **P 14 33 56.9 -0.6**
comp=Z,71nm,0.8s
SWSC Sam W. Stewart 65.55 67 P P 14 33 58.3 0.0
baz=314
AGMN Agassiz Nation 65.56 44 P P 14 33 57.9 -0.3
baz=317,SNR=20
AGMN Agassiz Nation 65.56 44 *eP* **P 14 33 58.1 -0.1**
comp=Z,34nm,1.1s
IKP In-Ko-Pah, Jac 65.56 68 P P 14 33 58.1 -0.4
baz=314
C32A Crookston 65.59 45 P P 14 33 58.1 -0.3
baz=317
D31A Mcclaflin, Tow 65.59 46 P P 14 33 58.0 -0.4
baz=316
PDMCI Parker Dam,Lak 65.62 65 P P 14 33 58.9 +0.2
baz=314,SNR=9.0
PV09 Paradox Valley 65.66 59 *eP* **P 14 34 00.5 +1.1**
N23A Red Feather La 65.77 55 P P 14 34 00.8 +0.8
baz=314,SNR=12
N23A Red Feather La 65.77 55 *eP* **P 14 34 00.9 +1.0**
comp=Z,14nm,0.8s
Y12C Blythe 65.77 66 P P 14 33 59.7 -0.1
baz=314
Y12C Blythe 65.77 66 *eP* **P 14 34 00.6 +0.9**
comp=Z,19nm,0.9s
PV10 Paradox Valley 65.80 59 *eP* **P 14 34 01.7 +1.5**
comp=Z,69nm,0.8s
PV04 Paradox Valley 65.86 59 *eP* **P 14 34 01.7 +1.2**
comp=Z,37nm,0.8s
D32A Dogwood Acres, 65.86 45 P P 14 33 60.0 -0.2
baz=317,SNR=5.4
E31A Nome 65.87 46 P P 14 34 00.1 -0.1
baz=316,SNR=8.8
PV05 Paradox Valley 65.97 59 *eP* **P 14 34 02.6 +1.3**
comp=Z,65nm,0.8s
B34A Aery, Baudette 65.97 43 P P 14 34 00.4 -0.5
baz=318,SNR=15
PV07 Paradox Valley 65.98 59 *eP* **P 14 34 02.3 +1.0**
comp=Z,38nm,1.3s
PV03 Paradox Valley 65.99 59 *eP* **P 14 34 02.2 +0.8**
comp=Z,25nm,0.8s
C33A Trail 65.99 44 P P 14 34 00.4 -0.5
baz=317
GLA Glamis 66.07 67 P P 14 34 02.2 +0.4
baz=314,SNR=6.4
GLA Glamis 66.07 67 *eP* **P 14 34 02.8 +1.0**
comp=Z,15nm,0.7s
GLA Glamis 66.07 67 *eP* **P 14 34 02.8 +1.0**
GLA pmax pmax
comp=Z,15nm,0.7s
PV02 Paradox Valley 66.08 59 *eP* **P 14 34 03.1 +1.0**
comp=Z,16nm,0.8s
PSI Prapat 66.12 245 P P 14 34 03.5 +1.1
comp=Z,22nm,0.7s,baz=360,slow=4.7,SNR=6.3
PSI Prapat 66.12 245 *eP* **P 14 34 02.8 +0.5**
comp=Z,39nm,1.1s
PSI Prapat 66.12 245 *eP* **P 14 34 02.8 +0.5**
PSI pmax pmax
comp=Z,39nm,1.1s
PV15 Paradox Valley 66.14 59 *eP* **P 14 34 03.4 +1.0**
comp=Z,37nm,0.9s
PV01 Paradox Valley 66.23 59 *eP* **P 14 34 03.7 +0.8**
comp=Z,20nm,1.1s
VSR Storozhevoye 66.30 322 *eP* **P 14 34 01.8 -1.1**
VSR pmax pmax
comp=Z,10.0nm,1.0s
SMCO Snowmass 66.40 57 *eP* **P 14 34 04.7 +0.4**
comp=Z,25nm,0.8s
D33A AnnSam, Waubun 66.41 45 P P 14 34 03.1 -0.6
baz=317
WUAZ Wupatki 66.43 63 P P 14 34 05.0 +0.8
baz=314,SNR=10.0
WUAZ Wupatki 66.43 63 *eP* **P 14 34 05.6 +1.4**
comp=Z,13nm,0.8s
VORD Divnogorie 66.44 322 *eP* **P 14 34 02.3 -1.5**
VORD pmax pmax
comp=Z,10.0nm,0.7s
C34A RKJ Ranch, Bem 66.47 44 P P 14 34 02.9 -1.1
baz=318
B35A Bob, Littlefor 66.48 43 P P 14 34 03.6 -0.5
baz=318,SNR=27
NC303 NORSAR Array S 66.49 342 *eP* **P 14 34 03.8 -0.2**
NC405 NORSAR Array S 66.52 342 *eP* **P 14 34 02.7 -1.5**
Y14A Wickenburg 66.55 65 *eP* **P 14 34 05.5 +0.7**
comp=Z,13nm,0.8s
NC204 NORSAR Array S 66.57 342 *eP* **P 14 34 04.0 -0.6**
GEYT Alibeck 66.65 301 LR LR 15 05 43.4
comp=Z,1μm,18.4s,baz=20,slow=38
GYA0B ALIBECK ARRAY 66.65 301 *eP* **P 14 34 07.8 +2.5**
comp=Z,7.4nm,0.8s
NB201 NORSAR Array S 66.67 342 *eP* **P 14 34 03.6 -1.5**
G31A Conde 66.68 47 P P 14 34 04.7 -0.8
baz=317
NB2 NORSAR Subarra 66.69 342 P P 14 34 03.9 -1.4
comp=Z,18nm,1.2s,baz=26,slow=6.5
NOA NORSAR Array B 66.69 342 P P 14 34 04.3 -1.0
comp=Z,15nm,0.9s,baz=275,slow=19,SNR=20

NOA LR LR 15 07 13.7
comp=Z,1µm,21.0s,baz=30,slow=40
ISCO Idaho Springs 66.71 56 P **P 14 34 07.2 +1.1**
baz=315,SNR=32
ISCO Idaho Springs 66.71 56 *e*P **P 14 34 07.2 +1.1**
comp=Z,21nm,0.8s
ISCO Idaho Springs 66.71 56 *e*P **P 14 34 07.3 +1.1**
ISCO pmax pmax
comp=Z,21nm,0.8s
F32A Veblen 66.73 46 P **P 14 34 04.8 -1.0**
baz=317
D34A Park Rapids 66.75 44 P **P 14 34 05.6 -0.2**
baz=318,SNR=10
BORG Borgarnes 66.76 358 *e*P **P 14 34 08.1 +2.5**
comp=Z,90nm,1.0s
BORG Borgarnes 66.76 358 *e*P **P 14 34 08.1 +2.5**
BORG pmax pmax
comp=Z,90nm,1.0s
E33A Westby DABS, E 66.80 45 P **P 14 34 06.2 0.0**
baz=317
BKNI Bangkinang 66.85 242 P **P 14 34 07.5 +0.6**
comp=Z,185nm,1.1s,comp=Z,3µm
BKNI Bangkinang 66.85 242 *e*P **P 14 34 07.8 +0.9**
comp=Z,150nm,0.9s
C35A Jirik Farms, M 66.86 43 P **P 14 34 05.8 -0.8**
baz=318,SNR=13
SUSD Miller 66.88 48 P **P 14 34 06.2 -0.6**
baz=316
113A Mohawk Valley, 66.91 66 *e*P **P 14 34 07.5 +0.5**
comp=Z,6.3nm,0.8s
MVCO Mesa Verde 66.92 60 P **P 14 34 07.9 +0.6**
baz=315,SNR=24
MVCO Mesa Verde 66.92 60 *e*P **P 14 34 08.0 +0.6**
comp=Z,23nm,0.8s
NAO01 NORSAR Array S 66.94 342 *e*P **P 14 34 06.2 -0.7**
HFS Hagfors 66.98 340 P **P 14 34 06.3 -0.8**
comp=Z,5.6nm,0.3s,baz=40,slow=4.3,SNR=52
HFS LR LR 15 07 07.9
comp=Z,1µm,20.2s,baz=22,slow=39
G32A Webster 67.00 47 P **P 14 34 06.9 -0.6**
baz=317
X16A Lo Mia Camp, P 67.15 64 *e*P **P 14 34 10.0 +1.2**
comp=Z,19nm,0.8s
E34A Wadena 67.19 45 P **P 14 34 08.1 -0.5**
baz=318
D35A Remer 67.28 44 P **P 14 34 08.7 -0.5**
baz=318,SNR=8.4
C36A Pine Crest Far 67.33 43 P **P 14 34 09.1 -0.4**
baz=319,SNR=9.4
MNSI Mandailing Nat 67.33 243 P **P 14 34 11.4 +1.5**
comp=Z,32nm,0.7s
S22A 4UR Ranch, Cre 67.48 58 P **P 14 34 12.1 +1.1**
baz=315,SNR=39
S22A 4UR Ranch, Cre 67.48 58 *e*P **P 14 34 12.2 +1.2**
comp=Z,19nm,0.8s
E35A Pequot Lakes 67.51 44 P **P 14 34 10.1 -0.5**
baz=318
G33A Ortonville 67.56 46 P **P 14 34 10.5 -0.5**
baz=318
Q24A Divide 67.56 56 P **P 14 34 12.1 +0.6**
baz=315,SNR=5.7
Q24A Divide 67.56 56 *e*P **P 14 34 12.5 +1.0**
comp=Z,9.9nm,0.9s
ISAL Salakas 67.56 331 *e*P **P 14 34 11.2 +0.4**
ISAL IAmb IAmb 14 34 14.6
comp=Z,15nm,1.0s
H32A Carlson Farm, 67.58 48 P **P 14 34 10.5 -0.7**
baz=317
IDID Didziasalis 67.58 331 *e*P **P 14 34 11.1 +0.2**
IDID IAmb IAmb 14 34 15.6
comp=Z,13nm,1.0s
D36A Goodland 67.61 43 P **P 14 34 10.7 -0.7**
baz=319,SNR=6.9
C37A Embarrass 67.64 42 P **P 14 34 11.1 -0.4**
baz=319,SNR=9.4
W18A Petrified Fore 67.67 62 P **P 14 34 12.3 +0.2**
baz=315
F34A Alexandria 67.67 45 P **P 14 34 11.0 -0.7**
baz=318
IIGN Ignalina 67.72 331 *e*P **P 14 34 11.7 -0.1**
IIGN IAmb IAmb 14 34 15.6
comp=Z,13nm,0.6s
EYMN Ely 67.78 42 P **P 14 34 12.0 -0.3**
baz=319,SNR=22
EYMN Ely 67.78 42 *e*P **P 14 34 12.1 -0.3**
comp=Z,37nm,0.9s
H33A Prehn Over Nor 67.79 47 P **P 14 34 12.3 -0.2**
baz=318,SNR=5.2
OGNE Ogallala 67.82 53 P **P 14 34 12.7 -0.2**
baz=316,SNR=5.3
OGNE Ogallala 67.82 53 *e*P **P 14 34 14.4 +1.5**
comp=Z,58nm,0.8s
MICGM Minsk 67.88 330 *e* **P 14 34 12.0 -0.8**
MICGM *e*LR LR 15 00 10.0
MICGM LRM MLR 15 06 28.0
comp=Z,1.8nm,20.0s
MNK Minsk 67.88 330 *e*P **P 14 34 12.0 -0.8**
G34A Benson 67.90 46 P **P 14 34 13.1 0.0**
baz=318,SNR=5.9
F35A Swanville 67.95 45 P **P 14 34 13.1 -0.4**
baz=318
X18A Snowflake 67.95 63 *e*P **P 14 34 15.3 +1.4**
comp=Z,12nm,0.8s
D37A Cotton 67.96 43 P **P 14 34 12.6 -0.9**
baz=319
214A Organ Pipe Nat 68.05 66 P **P 14 34 14.7 +0.4**
baz=315
C38A Sawbill Land. 68.05 42 P **P 14 34 13.5 -0.6**
baz=320,SNR=14
E36A McGregor 68.07 44 P **P 14 34 14.0 -0.2**
baz=319,SNR=13
GSI Gunungsitoli 68.12 245 *e*P **P 14 34 15.0 +0.1**
comp=Z,61nm,0.9s
HYB Hyderabad 68.23 272 *i*P **P 14 34 16.5 +0.9**
SDCO Great Sand Dun 68.23 57 P **P 14 34 16.4 +0.7**
baz=316,SNR=7.2
SDCO Great Sand Dun 68.23 57 *e*P **P 14 34 16.4 +0.7**
comp=Z,8.2nm,1.0s
E37A Wrenshall 68.42 43 P **P 14 34 15.8 -0.6**
baz=319
F36A Milaca 68.43 44 P **P 14 34 15.8 -0.6**
baz=319,SNR=7.1
G35A Watkins 68.47 45 P **P 14 34 16.6 -0.1**
baz=318
C39A Grand Marais 68.48 41 P **P 14 34 15.7 -1.0**
baz=320,SNR=9.9
ECSD EROS Data Cent 68.55 48 P **P 14 34 16.9 -0.3**
baz=318,SNR=31
ECSD EROS Data Cent 68.55 48 *e*P **P 14 34 17.1 -0.2**
comp=Z,21nm,0.7s
H35A Sunnyside Ranc 68.69 46 P **P 14 34 18.3 +0.2**
baz=318,SNR=10
MAK Makhachkala 68.69 311 *e*P P 14 34 12.1 -6.0
MAK *e*S **S 14 43 10.3 -6.6**
MAK pmax pmax
comp=Z,126nm,0.9s
E38A The Farm, Brul 68.77 43 P **P 14 34 17.9 -0.7**
baz=320,SNR=15
IVI Ivigtut 68.77 12 *e*P **P 14 34 18.2 0.0**
comp=Z,59nm,0.7s
G36A St. Michael 68.80 45 P **P 14 34 18.5 -0.3**
baz=319
C40A Isle Royale Na 68.82 40 P **P 14 34 17.8 -1.1**
baz=321
KSCO Kaye Shedlock' 68.90 55 P **P 14 34 19.5 -0.2**
baz=316
F37A Hinrichs Farm, 68.95 44 P **P 14 34 19.1 -0.6**
baz=319
CTA Charters Tower 69.02 189 P **P 14 34 20.2 -0.1**
comp=Z,5.9nm,0.5s,baz=6.3,slow=8.7,SNR=14
CTA LR LR 14 58 44.2
comp=Z,357nm,21.8s,baz=342,slow=31
TUC Tucson 69.02 65 P **P 14 34 20.8 +0.4**
baz=315
TUC Tucson 69.02 65 *e*P **P 14 34 21.0 +0.5**
comp=Z,8.3nm,0.8s
TUC Tucson 69.02 65 *e*P **P 14 34 21.0 +0.5**
TUC pmax pmax
comp=Z,8.0nm,0.8s
F38A Pierce - Schro 69.12 43 P **P 14 34 20.7 -0.1**
baz=320,SNR=37
H36A Jessenland, He 69.21 46 P **P 14 34 21.4 +0.1**
baz=319
SPMN Marine on St. 69.25 44 P **P 14 34 20.9 -0.6**
baz=319,SNR=5.4
SPMN Marine on St. 69.25 44 *e*P **P 14 34 21.8 +0.3**
comp=Z,24nm,0.8s
T25A Trinidad 69.27 57 P **P 14 34 22.5 +0.4**
baz=316,SNR=6.7
T25A Trinidad 69.27 57 *e*P **P 14 34 23.1 +1.0**
comp=Z,23nm,1.2s
GOF Gofitskoye 69.28 315⇑*e*P **P 14 34 21.4 -0.3**
GOF pmax pmax
comp=Z,27nm,0.8s
DBJI Dramaga 69.37 232 P **P 14 34 21.8 -0.8**
comp=Z,66nm,1.1s,comp=Z,6µm
E39A Mellen 69.39 42 P **P 14 34 21.8 -0.6**
baz=320,SNR=23
BGNE Belgrade 69.50 50 P **P 14 34 22.5 -0.7**
baz=318
LWLI Liwa 69.53 236 P **P 14 34 22.5 -1.2**
comp=Z,57nm,0.9s
F39A Loretta 69.58 43 P **P 14 34 23.2 -0.4**
baz=320,SNR=12
I36A Fitzsimmons Fa 69.59 46 P **P 14 34 23.1 -0.5**
baz=319
E40A Wakefield 69.63 42 P **P 14 34 23.9 0.0**
baz=320,SNR=34
LAZ Ladron 69.68 61 *e*P **P 14 34 25.8 +1.2**
H37A Dierke Farm, C 69.68 45 P **P 14 34 24.3 0.0**
baz=319,SNR=8.5
TASM ASL Pad, Albuq 69.68 60 P **P 14 34 25.3 +0.7**
baz=316
ANMO Albuquerque 69.68 60 P **P 14 34 25.6 +0.9**
comp=Z,16nm,0.8s,baz=313,slow=7.5,SNR=63
ANMO LR LR 15 02 13.5
comp=Z,250nm,21.3s,baz=325,slow=34
ANMO Albuquerque 69.68 60 P **P 14 34 25.4 +0.7**
baz=316
ANMO Albuquerque 69.68 60 *e*P **P 14 34 25.5 +0.9**
comp=Z,17nm,0.8s
ANMO Albuquerque 69.68 60*c i*P **P 14 34 25.4 +0.7**
ANMO pmax pmax
comp=Z,16nm,0.8s
TASL Snake Pit, Alb 69.68 60 P **P 14 34 25.5 +0.8**
baz=316
KASI Kota Agung 69.71 235 P **P 14 34 22.9 -1.8**
comp=Z,42nm,1.1s
G38A Ridgeland 69.73 44 P **P 14 34 23.6 -0.9**
baz=320,SNR=11
D41A Chassel 69.74 41 P **P 14 34 24.4 -0.1**
baz=321,SNR=8.4
I37A Lemond, Waseca 69.88 46 P **P 14 34 25.7 +0.2**
baz=319,SNR=18
H38A Maiden Rock 69.91 44 P **P 14 34 25.0 -0.6**
baz=320
F40A Park Falls 69.94 42 P **P 14 34 25.1 -0.7**
baz=320,SNR=17
G39A Holcombe 69.95 43 P **P 14 34 25.1 -0.8**
baz=320,SNR=10
J36A Seneca 1, Swea 69.95 47 P **P 14 34 24.8 -1.2**
baz=319
CGJI Cibinong 69.98 233 P **P 14 34 23.5 -2.8**
comp=Z,62nm,1.0s
E41A Kenton 70.03 41 P **P 14 34 25.9 -0.4**
baz=321,SNR=15
LPM Los Pinos Moun 70.04 61 *e*P **P 14 34 28.1 +1.3**
Y22D IRIS PASSCAL I 70.04 61 P **P 14 34 27.2 +0.4**
baz=316
Y22E IRIS PASSCAL I 70.04 61 P **P 14 34 27.2 +0.4**
baz=316
BNM Barren Site 70.15 61 *e*P **P 14 34 28.6 +1.0**
KLNR Kaliningrad 70.18 334⇓*e*P **P 14 34 26.8 -0.3**
KLNR pmax pmax
comp=Z,27nm,0.9s
NCK Nalchik 70.20 314⇓*e*P **P 14 34 27.4 0.0**
NCK pmax pmax
comp=Z,12nm,1.4s
COWI Conover 70.23 42 *e*P **P 14 34 27.3 -0.3**
comp=Z,45nm,1.4s
KVAR Kislovodsk Arr 70.27 315 P **P 14 34 26.9 -1.1**
comp=Z,8.2nm,0.8s,baz=330,slow=9.0,SNR=3.5
KIV Kislovodsk 70.28 315 *e*P **P 14 34 28.2 +0.2**
KIV Kislovodsk 70.28 315 *e*P **P 14 34 28.2 +0.2**
KIV *e*S **S 14 43 35.9 +0.1**
KIV pmax pmax
comp=Z,17nm,1.1s
KIV MLR MLR
comp=Z,987nm,18.0s
J37A Redenius Farm, 70.34 46 P **P 14 34 28.2 -0.1**
baz=319
KBZ Khabaz 70.35 315 P **P 14 34 28.6 +0.3**
comp=Z,5.2nm,0.5s,baz=129,slow=1.1,SNR=14
KBZ LR LR 15 08 48.9
comp=Z,1µm,21.8s,baz=32,slow=39
H39A Augusta 70.36 44 P **P 14 34 27.8 -0.6**
baz=320,SNR=5.6
I38A Scanlan Farm, 70.37 45 P **P 14 34 28.0 -0.4**
baz=320,SNR=7.2
G40A Rib Lake 70.40 43 P **P 14 34 28.1 -0.5**
baz=321,SNR=12
K36A Gilmore City 70.42 47 P **P 14 34 27.8 -1.0**
baz=319
E42A Champion 70.51 41 P **P 14 34 28.8 -0.5**
baz=322,SNR=16
F41A Three Lakes 70.53 42 P **P 14 34 29.0 -0.4**
baz=321,SNR=14
AKASG Malin Array Be 70.55 327 P **P 14 34 28.2 -1.2**
comp=Z,6.3nm,0.5s,baz=32,slow=6.2,SNR=17
AKBB Malin Array Si 70.55 327 *e*P **P 14 34 28.2 -1.1**
comp=Z,10.0nm,0.8s
AKBB Malin Array Si 70.55 327 *e*P **P 14 34 28.3 -1.1**
AKBB pmax pmax
comp=Z,10.0nm,0.8s
KIEV Kiev 70.56 327 *e*P **P 14 34 28.9 -0.5**
KIEV Kiev 70.56 327 *e*P **P 14 34 28.2 -1.2**
comp=Z,10nm,0.8s
KIEV Kiev 70.56 327 *i*P **P 14 34 29.6 +0.2**
SNR=7.2
KIEV Kiev 70.56 327⇓*e*P **P 14 34 28.9 -0.5**
KIEV pmax pmax
comp=Z,11nm,0.8s
319A Douglas 70.58 64 *e*P **P 14 34 31.0 +0.9**
comp=Z,60nm,0.8s
CBKS Cedar Bluff 70.58 53 P **P 14 34 28.6 -1.3**
baz=318
AK11 Malin Array Si 70.58 327 *e*P **P 14 34 29.1 -0.5**
ZEI Tsey 70.59 313 *e*P **P 14 34 27.7 -2.4**
ZEI pmax pmax
comp=Z,13nm,1.1s
121A Cookes Peak, D 70.64 63 P **P 14 34 31.4 +0.9**
baz=316,SNR=7.1
K37A Belmond 70.71 47 P **P 14 34 29.9 -0.7**
baz=320,SNR=6.1
L36A Harm Buss Farm 70.72 48 P **P 14 34 29.8 -0.8**
baz=319
NEY Neytrino 70.80 314 *i*P **P 14 34 35.0 +3.7**
NEY pmax pmax
comp=Z,3.0nm,0.8s
H40A Chili 70.81 43 P **P 14 34 30.8 -0.3**
baz=321,SNR=13
J38A Wedel Dairy, R 70.85 46 P **P 14 34 30.3 -1.1**
baz=320
WRAB Tennant Creek 70.86 201 *e*P **P 14 34 30.7 -0.9**
comp=Z,81nm,1.4s
WRAB Tennant Creek 70.86 201*c e*P **P 14 34 31.3 -0.3**
WRAB pmax pmax
comp=Z,29nm,1.0s
WB2 Warramunga Arr 70.87 201 *e*P **P 14 34 31.3 -0.4**
WRA Warramunga Arr 70.87 201 P **P 14 34 30.9 -0.7**
comp=Z,19nm,0.9s,baz=27,slow=7.5,SNR=82
I39A Houston 70.88 45 P **P 14 34 30.8 -0.8**
baz=320,SNR=15
G41A Antigo 70.90 42 P **P 14 34 31.0 -0.7**
baz=321
SCHQ Schefferville 70.92 24 P **P 14 34 32.9 +1.2**
comp=Z,25nm,0.4s,baz=326,slow=4.6,SNR=18
SCHQ LR LR 15 10 46.0
comp=Z,526nm,18.7s,baz=338,slow=40
F42A Maple Grove Fa 70.94 41 P **P 14 34 31.9 0.0**
baz=322
E43A Lone Tree Farm 70.95 40 P **P 14 34 31.3 -0.6**
baz=322,SNR=11
M36A Felix, Anita 71.14 48 P **P 14 34 32.8 -0.4**
baz=319
L37A Phoenix Point, 71.14 47 P **P 14 34 31.9 -1.3**
baz=320,SNR=9.5
H41A Junction City 71.15 43 P **P 14 34 32.3 -0.9**
baz=321,SNR=9.4
H41A Junction City 71.15 43 *e*P **P 14 34 32.9 -0.4**
comp=Z,75nm,1.4s
BSD Bornholm Skovb 71.18 337 *i*P **P 14 34 31.8 -1.3**
comp=Z,19nm,0.8s
comp=Z,2µm,21.0s
BSD Bornholm Skovb 71.18 337 *e*P **P 14 34 31.8 -1.3**
BSD pmax pmax
comp=Z,19nm,0.8s
BSD MLR MLR
comp=Z,2µm,21.0s
J39A Decorah 71.20 45 P **P 14 34 32.4 -1.1**
baz=320,SNR=11
E44A Grand Marais A 71.21 40 P **P 14 34 33.2 -0.3**
baz=323
G42A Mountain 71.21 42 P **P 14 34 32.9 -0.6**
baz=322,SNR=5.3
G42A Mountain 71.21 42 *e*P **P 14 34 33.3 -0.3**
comp=Z,14nm,0.8s
K38A Parkersburg 71.22 46 P **P 14 34 32.9 -0.7**
baz=320
I40A Norwalk 71.27 44 P **P 14 34 33.4 -0.6**
baz=321,SNR=8.7
DZM Mont Dzumac 71.28 169 *e*LR LR 14 34 25.2
comp=Z,607nm,22.4s
DZM Mont Dzumac 71.28 169 *e*LR LR 14 56 26.5
comp=Z,2µm,24.1s
DZM Mont Dzumac 71.28 169 P **P 14 34 35.2 +1.1**
comp=Z,8.4nm,0.8s,baz=117,slow=22,SNR=3.7
DZM LR LR 15 01 18.4
comp=Z,721nm,21.3s,baz=12,slow=32
F43A Flat Rock, Esc 71.30 41 P **P 14 34 33.6 -0.4**
baz=322,SNR=9.7
I41A Arkdale 71.49 44 P **P 14 34 34.7 -0.5**
baz=321
F44A Big Bay de Noc 71.51 40 P **P 14 34 34.8 -0.5**
baz=322,SNR=7.9
L38A Oak Wood Farm, 71.52 47 P **P 14 34 34.8 -0.6**
baz=320,SNR=6.3
G43A Wallace 71.53 41 P **P 14 34 34.9 -0.5**
baz=322,SNR=11
G43A Wallace 71.53 41 *e*P **P 14 34 34.9 -0.5**
comp=Z,42nm,0.8s
N36A Muff Farm, Cla 71.54 49 P **P 14 34 35.1 -0.6**
baz=319
M37A Trindle Farm, 71.54 48 P **P 14 34 35.4 -0.2**
baz=320
SCIA State Center 71.57 47 P **P 14 34 35.8 0.0**
baz=320,SNR=12
SCIA State Center 71.57 47 *e*P **P 14 34 36.3 +0.5**
comp=Z,74nm,0.9s
K39A Oelwein 71.59 46 P **P 14 34 34.8 -1.1**
baz=320,SNR=9.7
J40A Soldiers Grove 71.60 44 P **P 14 34 34.9 -1.0**
baz=321
E45A Wooded Hills, 71.73 39 P **P 14 34 35.9 -0.7**
baz=323,SNR=6.0
H42A Shiocton 71.74 42 P **P 14 34 35.9 -0.8**
baz=322
H42A Shiocton 71.74 42 *e*P **P 14 34 36.8 0.0**
comp=Z,21nm,0.9s
EPT El Paso 71.94 62 *e*P **P 14 34 39.7 +1.4**
comp=Z,16nm,0.8s
SOC Sochi 71.94 316 *e*P **P 14 34 36.5 -1.4**
SOC *e**PP **pP 14 34 52.6 -0.3**
SOC *e* 14 37 13.7
SOC *e*PPP PPP 14 39 02.3
SOC *e*S **S 14 43 52.2 -2.6**
SOC *e*SS **SS 14 48 31.4 +0.2**
SOC *e*SSS SSS 14 51 45.0
SOC pmax pmax
comp=Z,17nm,0.5s
SOC MLR MLR
comp=Z,628nm,18.0s
K40A Colesburg 71.95 45 P **P 14 34 37.2 -0.8**
baz=321,SNR=11
M38A Pleasantville 71.95 47 P **P 14 34 37.7 -0.4**
baz=320,SNR=6.5
N37A Lee Faris, Mou 71.96 48 P **P 14 34 37.6 -0.6**
baz=320
J41A Loganville 71.96 44 P **P 14 34 37.2 -0.8**
baz=321,SNR=6.9
L39A Vinton 71.99 46 P **P 14 34 37.7 -0.6**
baz=320,SNR=16
KSU1 Kansas State U 72.00 51 P **P 14 34 36.9 -1.5**
baz=319
ANN Anapa 72.01 318 *e*P **P 14 34 37.0 -1.3**
ANN pmax pmax
comp=Z,36nm,1.2s
ANN MLR MLR
comp=Z,773nm,18.0s
ANN MLR MLR
comp=N,1µm,18.0s
I42A Draeger Farm, 72.05 43 P **P 14 34 38.1 -0.5**
baz=322,SNR=6.7
I42A Draeger Farm, 72.05 43 *e*P **P 14 34 38.6 0.0**
comp=N,19nm,0.8s
H43A Windswept, Lux 72.11 42 P **P 14 34 38.5 -0.4**
baz=322,SNR=5.5
H43A Windswept, Lux 72.11 42 *e*P **P 14 34 39.1 +0.1**
comp=N,58nm,1.1s
F45A CMU Biological 72.12 40 P **P 14 34 37.9 -1.1**
baz=323
GNI Garni 72.17 311 LR LR 15 09 03.3
comp=N,1µm,21.7s,baz=20,slow=38
GNI Garni 72.17 311 *i*P **P 14 34 42.4 +2.8**
JFWS Jewell Farm 72.20 44 P **P 14 34 38.2 -1.4**
baz=321
JFWS Jewell Farm 72.20 44 *e*P **P 14 34 39.0 -0.5**
comp=N,35nm,1.4s
JFWS Jewell Farm 72.20 44 *e*P **P 14 34 39.0 -0.5**
JFWS pmax pmax
comp=Z,35nm,1.4s
F46A Macinaw City C 72.37 39 P **P 14 34 39.9 -0.6**
baz=323,SNR=6.3
M39A Webster 72.40 47 P **P 14 34 40.3 -0.4**
baz=320,SNR=8.9
I43A Langenfeld Bro 72.40 43 P **P 14 34 40.1 -0.6**
baz=322,SNR=5.2
J42A Columbus 72.40 44 P **P 14 34 40.1 -0.6**
baz=322,SNR=10
L40A Anamosa 72.40 46 P **P 14 34 40.0 -0.8**
baz=321,SNR=14
N38A Joes South For 72.41 48 P **P 14 34 40.1 -0.8**
baz=320
K41A Shullsburg 72.41 45 P **P 14 34 40.0 -0.8**
baz=321
BEL Belsk 72.41 332 *e*P **P 14 34 42.0 +1.4**
BEL Belsk 72.41 332 *e*P **P 14 34 42.0 +1.4**
AMTX Amarillo 72.42 57 P **P 14 34 41.2 +0.1**
baz=318
AMTX Amarillo 72.42 57 *e*P **P 14 34 42.0 +0.9**
comp=Z,33nm,1.0s
O37A Wolven Farm, M 72.44 49 P **P 14 34 40.2 -0.8**
baz=320
MSTX Muleshoe 72.48 58 P **P 14 34 41.5 0.0**
baz=318,SNR=12
MSTX Muleshoe 72.48 58 *e*P **P 14 34 42.1 +0.6**
comp=Z,31nm,0.9s
MNTX Cornudas Mount 72.65 62 P **P 14 34 42.8 +0.4**
baz=317,SNR=26
MNTX Cornudas Mount 72.65 62 *e*P **P 14 34 43.1 +0.7**
comp=Z,41nm,1.5s
J43A Natural Harves 72.67 43 P **P 14 34 41.3 -1.0**
baz=322
N39A Derby Farms, D 72.70 47 P **P 14 34 42.0 -0.5**
baz=320
K42A Prairie Point, 72.72 44 P **P 14 34 41.9 -0.7**
baz=322,SNR=8.5
L41A Preston 72.73 45 P **P 14 34 41.9 -0.8**
baz=321,SNR=10.0
MDO Dochfour 72.76 348 *e*P **P 14 34 42.7 +0.1**
M40A Post Highland 72.77 46 P **P 14 34 42.3 -0.6**
baz=321,SNR=12
P37A Lathrop 72.78 49 P **P 14 34 42.1 -0.9**
baz=320,SNR=9.7
O38A Galt 72.81 48 P **P 14 34 42.7 -0.4**
baz=320,SNR=7.9
SORM Soroca 72.99 326⇑*i*P **P 14 34 44.2 +0.1**
KPL Plockton 73.02 349 *e*P **P 14 34 44.6 +0.5**
LVV L'vov 73.10 329 *e*P **P 14 34 46.0 +1.2**
LVV *e* 14 35 01.4
N40A Mertquake, Sal 73.14 47 P **P 14 34 44.8 -0.3**
baz=321,SNR=8.4
P38A Dawn 73.16 49 P **P 14 34 44.7 -0.6**
baz=320,SNR=9.7
O39A Kirksville 73.16 48 P **P 14 34 44.9 -0.3**
baz=321
L42A Oliver, Polo 73.18 45 P **P 14 34 44.1 -1.3**
baz=322
K43A Burlington 73.24 43 P **P 14 34 45.1 -0.6**
baz=322,SNR=6.8
M41A Milan 73.26 46 P **P 14 34 44.8 -1.0**
baz=321

Q37A	Longview Farm,	73.27	50	P	P	14 34 44.9	-1.1
	baz=320						
SIM	Simferopol'	73.32	320	*c*eP	P	14 34 45.4	-0.7
SIM				PPP	PPP	14 39 22.4	
SIM				S	S	14 44 09.6	-0.9
SIM				pmax	pmax		
	comp=Z,12nm,0.9s						
L43A	Garden Prairie	73.47	44	P	P	14 34 45.7	-1.3
	baz=322						
M42A	Sheffield	73.56	45	P	P	14 34 46.7	-0.9
	baz=322						
O40A	La Belle	73.59	47	P	P	14 34 47.4	-0.4
	baz=321,SNR=18						
Q38A	Cooks Store, C	73.62	49	P	P	14 34 47.3	-0.7
	baz=320,SNR=20						
N41A	Harden Midland	73.63	46	P	P	14 34 47.3	-0.7
	baz=321						
P39B	Salisbury	73.65	48	P	P	14 34 47.7	-0.4
	baz=321,SNR=9.2						
KWP	Kalwaria Pacla	73.71	330	*e*P	P	14 34 49.9	+1.5
KWP	Kalwaria Pacla	73.71	330	*e*P	P	14 34 49.9	+1.5
KIS	Kishinev	73.76	325	*e*P	P	14 34 48.0	-0.7
KIS				*ep*P	pP	14 34 55.0	-8.7
KIS	Kishinev	73.76	325	*e*PcP	PcP	14 35 03.0	-1.1
KIS	Kishinev	73.76	325	*e*PS		14 44 46.0	
KIS				*e*L	L	15 01 00.0	
KIS				LRM	MLR	15 16 34.0	
	comp=Z,1μm,18.0s						
KIS	Kishinev	73.76	325	*e*P	P	14 34 48.0	-0.7
KIS				*e*		14 35 03.0	
KIS				*e*PPP	PPP	14 39 27.0	
KIS				*e*S	SKiKP	14 44 13.0	+0.2
KIS				*e*PS	PnS	14 44 46.0	-7.9
L44A	Lake County Fo	73.85	44	P	P	14 34 48.8	-0.4
	baz=322						
Q39A	Willow Grove F	73.88	49	P	P	14 34 49.1	-0.3
	baz=321,SNR=16						
N42A	Yates City	73.92	46	P	P	14 34 49.2	-0.5
	baz=322,SNR=11						
M43A	Waltham Townsh	73.95	45	P	P	14 34 49.1	-0.8
	baz=322,SNR=5.4						
P40A	Paris	73.96	48	P	P	14 34 49.8	-0.1
	baz=321,SNR=20						
EAB	Aberfoyle	73.97	348	*e*P	P	14 34 50.1	+0.4
R38A	Fenwick Farm,	74.07	50	P	P	14 34 49.1	-1.6
	baz=320,SNR=11						
O41A	Passleys Farm,	74.07	47	P	P	14 34 50.3	-0.3
	baz=321,SNR=22						
WMOK	Wichita Mounta	74.12	55	P	P	14 34 51.1	+0.1
	baz=319,SNR=14						
WMOK	Wichita Mounta	74.12	55	*e*P	P	14 34 51.2	+0.1
	comp=Z,18nm,0.9s						
WMOK	Wichita Mounta	74.12	55	*e*P	P	14 34 51.2	+0.2
WMOK				pmax	pmax		
	comp=Z,19nm,0.9s						
OJC	Ojcow	74.13	332	*e*P	P	14 34 49.0	-1.8
OJC	Ojcow	74.13	332	*e*P	P	14 34 49.0	-1.8
OJC	Ojcow	74.13	332	*e*P	P	14 34 50.8	0.0
	comp=Z,48nm,1.1s						
OJC	Ojcow	74.13	332	*e*P	P	14 34 49.0	-1.8
PALK	Pallekele	74.23	263	P	P	14 34 52.8	+0.8
	comp=Z,28nm,1.1s,baz=156,slow=1.2,SNR=4.6						
PALK	Pallekele	74.23	263	*i*P	P	14 34 53.7	+1.8
N43A	Stutzman Famil	74.24	45	P	P	14 34 50.8	-0.8
	baz=322						
P41A	Barry, Barry	74.33	47	P	P	14 34 52.0	-0.1
	baz=321,SNR=14						
PGBU	Glenifferbraes	74.36	348	*e*P	P	14 34 52.2	+0.2
PGBU				IAmb	IAmb	14 34 53.5	
	comp=Z,161nm,1.0s						
Q40A	Laux Farm, Aux	74.36	48	P	P	14 34 52.3	0.0
	baz=321						
O42A	Bath	74.40	46	P	P	14 34 52.1	-0.4
	baz=322						
R39A	Chumby, Stover	74.41	49	P	P	14 34 51.8	-0.9
	baz=321,SNR=24						
M44A	Midewin, Midew	74.41	44	P	P	14 34 51.9	-0.7
	baz=322						
HDIL	Hopedale	74.49	45	P	P	14 34 52.5	-0.5
	baz=322,SNR=6.7						
S38A	Stockton	74.50	50	P	P	14 34 51.9	-1.2
	baz=320,SNR=7.1						
AS01	Alice Springs	74.55	200	*e*P	P	14 34 53.0	-0.4
AS31	Alice Springs	74.56	200	*e*P	P	14 34 53.8	+0.3
	comp=Z,4.7nm,0.6s						
ASAR	Alice Springs	74.56	200	P	P	14 34 54.1	+0.6
	comp=Z,13nm,0.6s,baz=13,slow=5.2,SNR=245						
BUR04	Bucovina Ar. S	74.57	327	*e*P	P	14 34 52.6	-0.9
BURAR	Bucovina Array	74.57	327	⇑*i*P	P	14 34 53.4	-0.1
KSP	Ksiaz	74.63	334	*e*P	P	14 34 53.0	-0.6
KSP	Ksiaz	74.63	334	*e*P	P	14 34 53.0	-0.6
EKA	Eskdalemuir Ar	74.64	347	P	P	14 34 53.7	+0.1
	comp=Z,15nm,0.6s,baz=21,slow=5.4,SNR=68						
EKA				LR	LR	15 09 25.5	
	comp=Z,317nm,18.6s,baz=15,slow=37						
ESK	Eskdalemuir	74.66	347	*e*P	P	14 34 54.9	+1.1
	comp=Z,21nm,0.8s						
ESK	Eskdalemuir	74.66	347	*e*P	P	14 34 54.9	+1.1
ESK				pmax	pmax		
	comp=Z,21nm,0.8s						
NIE	Niedzica	74.67	331	*e*P	P	14 34 53.5	-0.5
NIE	Niedzica	74.67	331	*e*P	P	14 34 53.5	-0.5
O43A	Sugar Creek Fa	74.69	46	P	P	14 34 53.1	-1.1
	baz=322						
UZH	Uzhgorod	74.71	330	⇑*i*P	P	14 34 54.1	0.0
UZH				*e*		14 35 08.7	
UZH				*e*		14 35 14.1	
S39A	Bolivar	74.75	50	P	P	14 34 53.4	-1.2
	baz=321,SNR=11						
P42A	Winchester	74.75	47	P	P	14 34 54.0	-0.5
	baz=322,SNR=9.6						
CRVS	Cervenica-Dubn	74.75	330	*e*P	P	14 34 54.0	-0.4
CRVS				pmax	pmax		
	comp=Z,22nm,1.4s						
CRVS	Cervenica-Dubn	74.75	330	*e*P	P	14 34 54.0	-0.4
T38A	Diamond	74.75	51	P	P	14 34 54.0	-0.6
	baz=320,SNR=23						
M45A	Boilermakers S	74.78	44	P	P	14 34 53.6	-1.1
	baz=323						
ECK	Cauldkaine Hil	74.78	347	*e*P	P	14 34 54.5	0.0
Q41A	Truxton	74.81	48	P	P	14 34 54.8	-0.1
	baz=321,SNR=20						
R40A	Maddies Statio	74.81	49	P	P	14 34 54.3	-0.6
	baz=321,SNR=22						
TUL1	Leonard	74.84	53	P	P	14 34 54.9	-0.3
	baz=320,SNR=7.9						
TUL1	Leonard	74.84	53	*e*P	P	14 34 55.3	+0.2
	comp=Z,22nm,0.8s						
N44A	Piper City	74.84	45	P	P	14 34 54.5	-0.5
	baz=323,SNR=7.9						
OKC	Ostrava-Krasne	74.97	333	AMS	AMS	15 10 00.0	
	comp=Z,2μm,22.9s						
TESR	Tescani	74.98	326	⇑*i*P	P	14 34 55.9	+0.1
UPC	Upice	75.01	334	*e*P	P	14 34 56.8	+0.9
UPC				*ex*	x	14 35 04.4	
UPC				AMS	AMS	15 11 20.0	
	comp=Z,2μm,19.0s						
UPC	Upice	75.01	334	*e*P	P	14 34 56.8	+0.9
UPC				*e*		14 35 04.4	
UPC				MLR	MLR		
	comp=Z,2μm,19.0s						
TRPA	Tarpa	75.06	329	⇓*i*P	P	14 34 56.6	+0.4
DPC	Dobruska-Polom	75.06	334	*e*P	P	14 34 56.8	+0.6
DPC				*ex*	x	14 35 04.9	
DPC				AMS	AMS	15 10 50.0	
	comp=Z,2μm,21.2s						
DPC	Dobruska-Polom	75.06	334	*e*P	P	14 34 56.8	+0.6
DPC				*e*		14 35 04.9	
DPC				MLR	MLR		
	comp=Z,2μm,21.2s						
N45A	Kentland	75.09	44	P	P	14 34 56.2	-0.3
	baz=323						
P43A	Skaggs, Pawnee	75.10	46	P	P	14 34 56.0	-0.6
	baz=322,SNR=8.2						
CLL	Collm	75.12	336	⇓*i*P	P	14 34 56.4	0.0
	comp=Z,57nm,1.3s						
CLL				*i*		14 35 02.9	
CLL				*i*		14 35 21.5	
CLL				*e*PP	PP	14 37 42.0	-2.3
CLL				*e*PPP	PPP	14 39 42.0	
CLL				*e*S	S	14 44 24.0	-6.4
CLL				*e*PS	PnS	14 45 12.0	+0.8
CLL				*e*SS	SS	14 49 18.0	-1.0
CLL				*e*SSS	SSS	14 52 42.0	
CLL				Lm	MLR	15 11 00.0	
	comp=N,1μm,21.1s						
CLL				Lm	MLR	15 11 00.0	
	comp=E,500nm,20.7s						
CLL				Lm	MLR	15 11 00.0	
	comp=Z,2μm,20.7s						
CLL	Collm	75.12	336	*e*P	P	14 34 56.5	0.0
	comp=Z,39nm,1.1s						
CLL	Collm	75.12	336	⇓*i*P	P	14 34 56.4	0.0
CLL				*i*		14 35 02.9	
CLL				*e*S	SKiKP	14 44 21.0	+6.3
CLL				pmax	pmax		
	comp=Z,57nm,1.3s						
CLL				MLR	MLR		
	comp=Z,2μm,20.7s						
M46A	Old House Fiel	75.17	43	P	P	14 34 56.4	-0.5
	baz=323						
KRLC	Kraliky	75.17	334	*e*P	P	14 34 57.4	+0.5
KRLC	Kraliky	75.17	334	*e*P	P	14 34 57.4	+0.5
LANS	Liptovska Anna	75.17	332	*e*P	P	14 34 58.2	+1.3
LANS	Liptovska Anna	75.17	332	*e*P	P	14 34 58.2	+1.3
Q42A	Golden Eagle	75.18	47	P	P	14 34 57.1	0.0
	baz=322,SNR=12						
O44A	Mansfield	75.19	45	P	P	14 34 56.6	-0.5
	baz=322						
MORC	Moravsky Berou	75.21	333	*e*P	P	14 34 57.0	-0.1
S40A	Lebanon	75.23	49	P	P	14 34 56.5	-0.8
	baz=321,SNR=15						
T39A	Clever	75.23	50	P	P	14 34 56.4	-1.0
	baz=321						
ABTX	Abilene, Hawle	75.23	57	P	P	14 34 57.1	-0.4
	baz=319						
ABTX	Abilene, Hawle	75.23	57	*e*P	P	14 34 58.2	+0.7
	comp=Z,21nm,0.9s						
R41A	Rosebud	75.25	48	P	P	14 34 57.0	-0.5
	baz=321,SNR=11						
BRG	Berggiesshubel	75.26	336	*i*P	P	14 34 57.7	+0.4
	comp=Z,36nm,1.5s						
BRG				*e*		14 35 04.1	
	comp=Z,14nm,1.2s						
BRG				*e*		14 35 23.7	
	comp=Z,26nm,1.6s						
	comp=Z,2μm,22.2s						
	comp=N,2μm,20.1s						
	comp=E,580nm,20.1s						
BRG	Berggiesshubel	75.26	336	*i*P	P	14 34 57.7	+0.4
BRG				*e*		14 35 04.1	
BRG				*e*		14 35 23.7	
BRG				pmax	pmax		
	comp=Z,36nm,1.5s						
BRG				MLR	MLR		
	comp=Z,2μm,22.2s						
BRG				MLR	MLR		
	comp=N,2μm,20.1s						
BRG				MLR	MLR		
	comp=E,580nm,20.1s						
KESW	Keswick, Cumbr	75.35	347	*e*P	P	14 34 58.6	+0.8
KESW				IAmb	IAmb	14 34 59.2	
	comp=Z,181nm,1.2s						
TX31	Lajitas Ar. Si	75.38	62	*e*P	P	14 34 59.0	+0.5
TXAR	Lajitas Array	75.39	62	P	P	14 34 59.0	+0.5
	comp=Z,29nm,0.7s,baz=297,slow=4.3,SNR=331						
TXAR	Lajitas Array	75.39	62	P	P	14 34 59.0	+0.5
PVCC	Panska Ves	75.40	335	*e*P	P	14 34 59.4	+1.3
PVCC				*ex*	x	14 35 02.4	
PVCC				AMS	AMS	15 10 50.0	
	comp=Z,3μm,21.3s						
PVCC	Panska Ves	75.40	335	*e*P	P	14 34 59.4	+1.3
PVCC				MLR	MLR		
	comp=Z,3μm,21.3s						
N46A	Monticello	75.41	44	P	P	14 34 57.5	-0.8
	baz=323						
KECS	Kecovo	75.43	331	*e*P	P	14 34 59.9	+1.6
KECS	Kecovo	75.43	331	*e*P	P	14 34 59.9	+1.6
O45A	Potomac	75.46	45	P	P	14 34 58.3	-0.4
	baz=323,SNR=14						
SADO	Sadowa	75.48	37	*e*P	P	14 34 58.1	-0.6
	comp=Z,26nm,1.3s						
VRI	Vrincioaia	75.50	325	⇓*i*P	P	14 34 58.9	+0.1
CCM	Cathedral Cave	75.50	48	P	P	14 34 58.1	-0.8
	baz=322						
CCM	Cathedral Cave	75.50	48	*e*P	P	14 34 58.3	-0.6
	comp=Z,47nm,1.4s						
CCM	Cathedral Cave	75.50	48	*e*P	P	14 34 58.3	-0.6
CCM				pmax	pmax		
	comp=Z,47nm,1.4s						
HHAR	Hobbs	75.52	51	*e*P	P	14 34 58.6	-0.5
	comp=Z,21nm,0.9s						
R42A	Luebbering	75.55	48	P	P	14 34 58.8	-0.3
	baz=322,SNR=7.8						
Q43A	New Douglas	75.56	47	P	P	14 34 58.7	-0.5
	baz=322						
T40A	Mansfield	75.57	50	P	P	14 34 58.3	-1.0
	baz=321						
S41A	Jillco Farms,	75.62	49	P	P	14 34 59.0	-0.6
	baz=321,SNR=10						
AAM	Ann Arbor	75.64	41	P	P	14 34 58.7	-0.9
	baz=325						
AAM	Ann Arbor	75.64	41	*e*P	P	14 35 00.3	+0.7
	comp=Z,35nm,0.8s						
AAM	Ann Arbor	75.64	41	*e*P	P	14 35 00.3	+0.7
AAM				pmax	pmax		
	comp=Z,35nm,0.8s						
SFIN	Lafayette	75.65	44	P	P	14 34 59.1	-0.6
	baz=323,SNR=9.4						
SFIN	Lafayette	75.65	44	*e*P	P	14 34 59.4	-0.4
	comp=Z,66nm,1.4s						
P44A	Sand Creek, Wi	75.66	46	P	P	14 34 59.5	-0.3
	baz=322,SNR=20						
U39A	Green Forest	75.67	51	P	P	14 34 59.3	-0.7
	baz=321,SNR=39						
HPK	Haverah Park	75.73	346	*e*P	P	14 35 00.4	+0.5
HPK				IAmb	IAmb	14 35 00.9	
	comp=Z,172nm,1.1s						
PRA	Prague	75.85	335	AMS	AMS	15 11 20.0	
	comp=Z,3μm,21.2s						
GOPC	GO Pecny, Ondr	75.89	335	*e*P	P	14 35 01.7	+0.8
GOPC				AMS	AMS	15 11 00.0	
	comp=Z,2μm,21.7s						
GOPC	GO Pecny, Ondr	75.89	335	*e*P	P	14 35 01.7	+0.8
GOPC				MLR	MLR		
	comp=Z,2μm,21.7s						
PRU	Pruhonice	75.89	335	*e*P	P	14 35 02.3	+1.4
PRU				*ex*	x	14 35 04.7	
PRU				AMS	AMS	15 11 20.0	
	comp=Z,3μm,21.0s						
PRU	Pruhonice	75.89	335	*e*P	P	14 35 02.3	+1.4
PRU				MLR	MLR		
	comp=Z,3μm,21.0s						
VRAC	Vranov	75.91	333	*e*P	P	14 35 01.8	+0.7
Q44A	Meyer Farm, Va	75.92	46	P	P	14 35 00.8	-0.4
	baz=322						
S42A	Caledonia	75.95	48	P	P	14 35 01.1	-0.4
	baz=322,SNR=21						
VYHS	Vyhne	75.95	332	*e*P	P	14 35 01.8	+0.5
VYHS				pmax	pmax		
	comp=Z,18nm,1.2s						
VYHS	Vyhne	75.95	332	*e*P	P	14 35 01.8	+0.5
FVM	French Village	75.96	48	*e*P	P	14 35 01.6	+0.1
	comp=Z,16nm,0.8s						
FVM	French Village	75.96	48	*e*P	P	14 35 01.7	+0.1
FVM				pmax	pmax		
	comp=Z,16nm,0.8s						
HPIG		75.97	65	*e*P	P	14 35 02.5	+0.5
	comp=Z,25nm,0.8s						
R43A	Red Bud	75.97	47	P	P	14 35 00.2	-1.4
	baz=322						
TRQ	Mont Tremblant	75.98	33	*e*P	P	14 35 01.1	-0.6
JAVC	Velka Javorina	75.99	333	*e*P	P	14 35 03.3	+1.7
WIM	Isle of Man	76.01	348	*e*P	P	14 35 01.6	+0.1
V39A	Pettigrew	76.01	51	P	P	14 35 01.3	-0.6
	baz=321,SNR=24						
U40A	Yellville	76.01	50	P	P	14 35 01.2	-0.7
	baz=321,SNR=35						
P45A	Graceland, Par	76.03	45	P	P	14 35 01.5	-0.4
	baz=323,SNR=7.2						
T41A	Mountain View	76.03	49	P	P	14 35 01.1	-0.8
	baz=322,SNR=12						
TIRR	Tirgusor	76.04	324	⇓*i*P	P	14 35 02.0	+0.2
TIRR	Tirgusor	76.04	324	*e*P	P	14 35 02.2	+0.4
	comp=Z,26nm,0.9s						
TIRR	Tirgusor	76.04	324	*e*P	P	14 35 02.2	+0.4
TIRR				pmax	pmax		
	comp=Z,26nm,0.9s						
TIRR	Tirgusor	76.04	324	⇓*i*P	P	14 35 02.0	+0.2
PLVO	Plevna	76.05	35	*e*P	P	14 35 01.6	-0.3
	comp=Z,34nm,0.9s						
TLB	Topalu	76.08	324	⇑*i*P	P	14 35 02.3	+0.3
TLB	Topalu	76.08	324	⇑*i*P	P	14 35 02.3	+0.3
MLR	Muntele Rosu	76.11	326	P	P	14 35 03.4	+1.0
	comp=Z,2.2nm,0.5s,baz=343,slow=5.5,SNR=25						
MLR				LR	LR	15 14 05.0	
	comp=Z,266nm,18.8s,baz=30,slow=40						
MLR	Muntele Rosu	76.11	326	⇓*i*P	P	14 35 03.5	+1.0
MLR	Muntele Rosu	76.11	326	*e*P	P	14 35 02.7	+0.3
	comp=Z,56nm,1.4s						
MLR	Muntele Rosu	76.11	326	*e*P	P	14 35 02.7	+0.3
MLR				pmax	pmax		
	comp=Z,56nm,1.4s						
PSZ	Piszkesteto	76.12	331	⇑*i*P	P	14 35 01.9	-0.5
PSZ	Piszkesteto	76.12	331	⇑*e*P	P	14 35 02.8	+0.5
PSZ	Piszkesteto	76.12	331	*e*P	P	14 35 02.8	+0.5
	comp=Z,36nm,1.2s						
PSZ	Piszkesteto	76.12	331	*e*P	P	14 35 02.8	+0.5
PSZ				pmax	pmax		
	comp=Z,36nm,1.2s						
DRGR		76.16	328	⇑*i*P	P	14 35 02.5	-0.1
O47A	Sheridan	76.19	44	P	P	14 35 01.2	-1.6
	baz=324						
KRUC	Moravsky	76.19	333	*e*P	P	14 35 03.1	+0.5
ISR	Istrita	76.20	325	⇓*i*P	P	14 35 03.6	+0.8
P46A	Rosedale	76.21	45	P	P	14 35 02.6	-0.3
	baz=323,SNR=6.0						
NKC	Novy Kostel	76.24	336	*e*P	P	14 35 03.7	+0.8
NKC				AMS	AMS	15 11 50.0	
	comp=Z,2μm,21.5s						
NKC	Novy Kostel	76.24	336	*e*P	P	14 35 03.7	+0.8
NKC				MLR	MLR		
	comp=Z,2μm,21.5s						
Q45A	Warren Harvey,	76.33	46	P	P	14 35 03.6	-0.1
	baz=323,SNR=16						
BANOM	Banah	76.35	294	P	P	14 35 03.7	-0.3
SHME	Shamm	76.36	294	P	P	14 35 03.6	-0.4
T42A	Van Buren	76.38	49	P	P	14 35 03.0	-0.9
	baz=322,SNR=6.9						
R44A	Waltonville	76.41	47	P	P	14 35 03.3	-0.7
	baz=322,SNR=9.1						
MBWA	Marble Bar	76.43	214	*e*P	P	14 35 04.4	+0.2
	comp=Z,50nm,1.4s						
W39A	Magazine	76.43	52	P	P	14 35 03.7	-0.5
	baz=321,SNR=9.5						
W39A	Magazine	76.43	52	*e*P	P	14 35 04.2	-0.1
	comp=Z,14nm,0.8s						
S43A	Fulton Ridge,	76.45	48	P	P	14 35 03.7	-0.6
	baz=322,SNR=11						
V40A	Witts Springs	76.46	51	P	P	14 35 03.6	-0.8
	baz=321,SNR=13						
V40A	Witts Springs	76.46	51	*e*P	P	14 35 03.9	-0.6
	comp=Z,30nm,1.0s						
VOIR		76.49	326	⇑*i*P	P	14 35 05.0	+0.5
OLIL	Olney	76.49	46	*e*P	P	14 35 04.9	+0.4
	comp=Z,33nm,0.9s						
U41A	Viola	76.50	50	P	P	14 35 03.9	-0.7
	baz=322,SNR=8.2						
MODS	Modra-Piesok	76.54	333	*e*P	P	14 35 04.8	+0.1
MODS				pmax	pmax		
	comp=Z,37nm,1.2s						
MODS	Modra-Piesok	76.54	333	*e*P	P	14 35 04.8	+0.1
WACR	West Acre	76.54	344	*e*P	P	14 35 05.5	+1.0
WACR				IAmb	IAmb	14 35 05.9	
	comp=Z,203nm,1.0s						
Q46A	CEJHS Indians,	76.61	45	P	P	14 35 04.5	-0.6
	baz=323						
ARR	Arges	76.70	327	⇑*i*P	P	14 35 06.8	+1.1
T43A	Greenville	76.73	48	P	P	14 35 05.6	-0.3
	baz=322,SNR=6.1						
P47A	Martinsville	76.75	44	P	P	14 35 05.3	-0.6
	baz=324,SNR=6.1						
ZST	Bratislava	76.75	333	*e*P	P	14 35 06.6	+0.8
ZST				pmax	pmax		
	comp=Z,5.0nm,1.4s						
ZST	Bratislava	76.75	333	*e*P	P	14 35 06.6	+0.8
R45A	Skylar, Fairfi	76.75	46	P	P	14 35 05.7	-0.3
	baz=323						
JCT	Junction City	76.75	59	P	P	14 35 06.1	-0.1
	baz=319						
JCT	Junction City	76.75	59	*e*P	P	14 35 06.7	+0.5
	comp=Z,45nm,1.3s						
JCT	Junction City	76.75	59	*e*P	P	14 35 06.7	+0.5
JCT				pmax	pmax		
	comp=Z,45nm,1.3s						
S44A	Carbondale	76.76	47	P	P	14 35 05.9	-0.2
	baz=322,SNR=6.4						
WPM1	Penmaenmawr	76.76	347	*e*P	P	14 35 05.8	0.0
X39A	Fountain Ranch	76.79	52	P	P	14 35 06.3	0.0
	baz=321,SNR=22						
W40A	Ferguson Farm,	76.81	51	P	P	14 35 06.2	-0.2
	baz=321,SNR=11						
W40A	Ferguson Farm,	76.81	51	*e*P	P	14 35 06.7	+0.3
	comp=Z,47nm,0.9s						
V41A	Mountainview	76.81	50	P	P	14 35 05.6	-0.8
	baz=322,SNR=16						
MDH	Madha	76.81	293	P	P	14 35 06.3	-0.2
U42A	Revenden	76.83	49	P	P	14 35 05.7	-0.8
	baz=322						
MSFE	Esma-Masafi	76.85	293	P	P	14 35 06.4	-0.4
WSAR	Wadi Sarin	76.90	290	LR	LR	15 13 28.4	
	comp=Z,1μm,21.0s,baz=62,slow=39						
PBMO	Poplar Bluff	76.90	49	*e*P	P	14 35 08.7	+1.9
	comp=Z,50nm,1.3s						
WHTX	Lake Whitney,	76.92	56	P	P	14 35 07.1	+0.1
	baz=320,SNR=5.8						
WHTX	Lake Whitney,	76.92	56	*e*P	P	14 35 07.7	+0.7
	comp=Z,49nm,1.3s						
KHC	Kasperske Hory	76.94	335	*e*P	P	14 35 07.8	+0.9
KHC				*es*P	sP	14 35 28.2	+0.2
KHC				AMS	AMS	15 12 00.0	
	comp=Z,3μm,20.0s						
KHC	Kasperske Hory	76.94	335	*e*P	P	14 35 07.8	+0.9
KHC	Kasperske Hory	76.94	335	*e*P	P	14 35 07.0	+0.1
	comp=Z,13nm,1.0s						
KHC	Kasperske Hory	76.94	335	*e*P	P	14 35 07.8	+0.9
KHC				*e*		14 35 28.2	
KHC				MLR	MLR		
	comp=Z,3μm,20.0s						
SIRR	Siria	76.97	329	⇓*i*P	P	14 35 07.6	+0.5
MIAR	Mount Ida	77.04	52	P	P	14 35 07.7	0.0
	baz=321,SNR=23						
MIAR	Mount Ida	77.04	52	*e*P	P	14 35 07.7	0.0
	comp=Z,28nm,0.8s						
MIAR	Mount Ida	77.04	52	*e*P	P	14 35 07.7	0.0
MIAR				pmax	pmax		
	comp=Z,28nm,0.8s						
GRFO	Grafenberg	77.06	337	*e*P	P	14 35 07.6	+0.1
	comp=Z,32nm,0.9s						
GRFO	Grafenberg	77.06	337	*e*P	P	14 35 07.6	+0.1
GRFO				pmax	pmax		
	comp=Z,33nm,0.9s						
T44A	Benton	77.08	48	P	P	14 35 07.5	-0.4
	baz=322,SNR=5.6						
S45A	Carrier Mills	77.10	47	P	P	14 35 07.5	-0.4
	baz=323						
Q47A	Bedord North L	77.11	45	P	P	14 35 07.7	-0.4
	baz=324,SNR=7.4						
DSB	Dublin	77.11	349	*e*P	P	14 35 07.3	-0.5
	comp=Z,63nm,0.7s						
LLW	Llanuwychllyn	77.12	347	*e*P	P	14 35 08.1	+0.3
WHAR	Wooly Hollow	77.13	51	*e*P	P	14 35 08.2	0.0
	comp=Z,40nm,

HLM1 **Long Mynd** 77.32 346 eP P 14 35 09.3 +0.3
ERPA **Erie** 77.34 39 P P 14 35 08.4 -0.8
baz=326
ERPA **Erie** 77.34 39 eP P 14 35 09.6 +0.4
comp=Z,50nm,1.0s
LONY **Lake Ozonia** 77.35 34 P P 14 35 08.3 -0.9
baz=329,SNR=9.8
LONY **Lake Ozonia** 77.35 34 eP P 14 35 08.7 -0.6
comp=Z,16nm,0.8s
CONA **Conrad Observa** 77.36 333 i P P 14 35 10.4 +1.0
comp=Z,49nm,1.5s,SNR=25
SOP **Sopron** 77.37 333⇑ eP P 14 35 10.1 +0.8
SOP **Sopron** 77.37 333 P P 14 35 10.7 +1.4
MEM **Membach** 77.47 340 ⇑P P 14 35 10.2 +0.5
comp=Z,53nm,1.1s
MEM **Membach** 77.47 340 P P 14 35 10.3 +0.5
MEM pmax pmax
comp=Z,82nm,1.0s
X40A **Basin Creek Fa** 77.47 52 P P 14 35 09.9 -0.2
baz=321,SNR=5.9
X40A **Basin Creek Fa** 77.47 52 eP P 14 35 10.4 +0.3
comp=Z,21nm,1.2s
U44A **Portageville** 77.49 48 P P 14 35 09.7 -0.4
baz=322
PRD **Provadia** 77.49 324 eP P 14 35 09.0 -1.0
S46A **Don Dixon Farm** 77.51 46 P P 14 35 09.8 -0.5
baz=323
FRNY **Flat Rock** 77.52 33 eP P 14 35 09.6 -0.6
W42A **Bald Knob** 77.53 50 P P 14 35 09.5 -0.9
baz=322
BZS **Buzias** 77.56 329 ⇓i P P 14 35 10.2 -0.2
BZS **Buzias** 77.56 329 P P 14 35 10.2 -0.2
BZS pmax pmax
comp=Z,37nm,1.1s
R47A **Wooly Knot Far** 77.58 45 P P 14 35 10.5 -0.1
baz=324,SNR=16
T45A **Paducah** 77.59 47 P P 14 35 10.1 -0.6
baz=323
Y40A **Okolona** 77.61 52 P P 14 35 10.4 -0.4
baz=321
ACSO **Alum Creek Sta** 77.62 42 P P 14 35 10.0 -0.9
baz=325,SNR=6.3
ACSO **Alum Creek Sta** 77.62 42 eP P 14 35 11.1 +0.3
comp=Z,67nm,1.4s
V43A **Jonesboro** 77.63 49 P P 14 35 11.3 +0.4
baz=322
X41A **Kaden, Bauxite** 77.63 51 P P 14 35 10.7 -0.3
baz=322
ALLY **Alegheny Colle** 77.67 39 eP P 14 35 11.3 +0.2
comp=Z,69nm,1.2s
MMNY **Mt. Morris Dam** 77.67 37 eP P 14 35 10.9 -0.2
comp=Z,43nm,1.0s
SSW **Stow on the Wo** 77.69 346 eP P 14 35 11.4 +0.4
WCI **Wyandotte Cave** 77.74 45 P P 14 35 11.3 -0.3
baz=324
WCI **Wyandotte Cave** 77.74 45 eP P 14 35 11.7 +0.2
comp=Z,50nm,0.8s
WCI **Wyandotte Cave** 77.74 45 eP P 14 35 11.7 +0.2
WCI pmax pmax
comp=Z,51nm,0.8s
BRTR **Keskin Array B** 77.76 318 P P 14 35 11.7 -0.1
comp=Z,7.2nm,0.8s,baz=64,slow=3.4,SNR=3.5
BRTR LR LR 15 14 49.1
comp=Z,446nm,19.1s,baz=34,slow=40
435B **Jarrell** 77.77 57 P P 14 35 11.5 -0.3
baz=320
U44B **Burton Farm, H** 77.78 48 P P 14 35 12.0 +0.2
baz=323
BCLA **Clavier** 77.80 341 ⇑P P 14 35 12.0 +0.4
comp=Z,44nm,1.5s
R48A **Northridge Ran** 77.80 45 P P 14 35 11.9 0.0
baz=324,SNR=9.1
MCH1 **Michaelchurch** 77.85 346 eP P 14 35 11.8 -0.1
MCH1 IAmb IAmb 14 35 12.8
comp=Z,37nm,0.9s
ASUD **Al Ashush, Dub** 77.90 293 P P 14 35 13.3 +0.7
MOA **Molln** 77.90 334 eP P 14 35 13.0 +0.7
comp=Z,26nm,1.1s
V44A **Blytheville** 77.92 49 P P 14 35 12.1 -0.4
baz=322
STRD **Stroud** 77.93 346 eP P 14 35 12.7 +0.3
STRD IAmb IAmb 14 35 13.8
comp=Z,305nm,1.1s
SNF **Seneffe** 77.93 341 ⇑P P 14 35 12.9 +0.6
comp=Z,23nm,0.8s
T46A **Princeton** 77.93 47 P P 14 35 12.8 +0.2
baz=323,SNR=24
MONM **Monmouth** 77.97 346 eP P 14 35 12.7 +0.1
MONM IAmb IAmb 14 35 14.1
comp=Z,126nm,0.9s
M54A **Oil Creek Stat** 77.98 39 P P 14 35 12.6 -0.3
baz=327,SNR=12
M54A **Oil Creek Stat** 77.98 39 eP P 14 35 13.1 +0.2
comp=Z,48nm,1.1s
SZH **Strazhica** 78.00 325 eP P 14 35 12.0 -0.9
MORH **M¨‡¨gy, Hung** 78.02 331⇑ eP P 14 35 12.3 -0.7
NCB **Newcomb** 78.03 34 eP P 14 35 12.9 -0.2
comp=Z,27nm,0.9s
X42A **Stuttgart** 78.04 51 P P 14 35 12.7 -0.6
baz=322
Y41A **Eaglette Beard** 78.06 52 P P 14 35 12.6 -0.8
baz=322
U45A **Rockin P Farm,** 78.06 48 P P 14 35 12.8 -0.5
baz=323
ALNE **Al Ain** 78.07 293 P P 14 35 13.7 +0.1
ARSA **Arzberg** 78.07 333 i P P 14 35 14.1 +0.8
comp=Z,32nm,1.5s,SNR=9.1
W43A **Forest City** 78.09 50 P P 14 35 12.8 -0.7
baz=322
Z40A **Long Farm, Mag** 78.13 53 P P 14 35 14.1 +0.3
baz=321,SNR=5.2
HGH **Gray Hill** 78.16 346 eP P 14 35 13.9 +0.3
WOL **Wolverton** 78.22 345 eP P 14 35 14.0 +0.1
WOL IAmb IAmb 14 35 15.2
comp=Z,124nm,0.7s
MDVR **Moldovita** 78.25 328 ⇓i P P 14 35 14.0 -0.3
DOU **Dourbes** 78.26 341 ⇑P P 14 35 14.6 +0.4
comp=Z,20nm,1.2s
VT1 **Waterbury** 78.26 33 eP P 14 35 14.6 +0.3
comp=Z,31nm,0.8s
N54A **Moraine State** 78.31 39 P P 14 35 14.5 -0.2
baz=327,SNR=8.9
N54A **Moraine State** 78.31 39 eP P 14 35 15.0 +0.3
comp=Z,45nm,1.0s
S48A **Wiedeman Farm,** 78.31 45 P P 14 35 14.5 -0.3
baz=324,SNR=12
WLF **Walferdange** 78.32 340 ⇓P P 14 35 16.9 +2.4
WLF **Walferdange** 78.32 340 eP P 14 35 17.1 +2.6
comp=Z,49nm,1.4s
WLF **Walferdange** 78.32 340 eP P 14 35 17.1 +2.6
WLF pmax pmax
comp=Z,49nm,1.4s
U46A **Springville** 78.34 47 P P 14 35 14.5 -0.4
baz=323
T47A **Sharon Grove** 78.36 46 P P 14 35 15.2 +0.2
baz=324,SNR=8.3
BAIF **Baives** 78.37 341 eP P 14 35 14.0 -0.8
BAIF pmax pmax
comp=Z,14nm,1.2s
FUR **Furstenfeldbru** 78.44 336 P P 14 35 15.7 +0.4
FUR pmax pmax
comp=Z,41nm,1.1s
V45A **Humboldt** 78.45 48 P P 14 35 15.3 -0.2
baz=323
X43A **Marvell** 78.45 50 P P 14 35 15.8 +0.3
baz=322
CCAR **Cane Creek** 78.47 51 eP P 14 35 17.2 +1.6
comp=Z,30nm,0.9s
W44A **Shelby Farms P** 78.50 49 P P 14 35 15.9 +0.1
baz=323
140A **Cam and Jess,** 78.52 53 P P 14 35 16.1 +0.2
baz=321
Y42A **Garnett, Star** 78.52 51 P P 14 35 15.5 -0.4
baz=322
T48A **Bowling Green** 78.60 46 P P 14 35 16.2 -0.1
baz=324,SNR=6.3
833A **Chaparral WMA,** 78.61 60 P P 14 35 16.8 +0.3
baz=320
833A **Chaparral WMA,** 78.61 60 eP P 14 35 19.2 +2.7
comp=Z,17nm,1.0s
H06N1 **SOCORRO T-PHAS** 78.61 74 T T 16 02 20.8
SNR=28
NATX **Nacogdoches** 78.62 55 P P 14 35 17.0 +0.5
baz=321,SNR=5.1
NATX **Nacogdoches** 78.62 55 eP P 14 35 17.7 +1.2
comp=Z,59nm,0.8s
LBNH **Lisbon** 78.63 32 P P 14 35 16.2 -0.2
baz=331,SNR=5.3
LBNH **Lisbon** 78.63 32 eP P 14 35 16.9 +0.5
comp=Z,15nm,0.8s
LBNH **Lisbon** 78.63 32 eP P 14 35 16.9 +0.5
LBNH pmax pmax
comp=Z,15nm,0.8s
PKME **Peaks-Kenny Pk** 78.64 30 P P 14 35 16.0 -0.4
baz=332
PKME **Peaks-Kenny Pk** 78.64 30 eP P 14 35 17.2 +0.8
comp=Z,24nm,1.0s
WVT **Waverly** 78.69 47 P P 14 35 16.9 0.0
baz=323
WVT **Waverly** 78.69 47 eP P 14 35 17.3 +0.5
comp=Z,15nm,1.0s
WVT **Waverly** 78.69 47 eP P 14 35 17.3 +0.5
WVT pmax pmax
comp=Z,15nm,1.0s
U47A **Clarksville** 78.70 47 P P 14 35 17.1 +0.2
baz=324
SOKA **Soboth** 78.73 333 i P P 14 35 17.6 +0.6
comp=Z,65nm,1.3s,SNR=32
ACCN **Adirondack Com** 78.75 34 eP P 14 35 16.9 -0.1
comp=Z,32nm,1.0s
PERS **Pernice** 78.75 333 i P P 14 35 17.6 +0.5
MPEP **Malo Peshtene** 78.75 326 eP P 14 35 17.7 +0.6
W45A **Hickory Valley** 78.80 49 P P 14 35 17.1 -0.4
baz=323
V46A **Holladay** 78.81 48 P P 14 35 17.3 -0.2
baz=323,SNR=6.7
X44A **Crenshaw** 78.84 50 P P 14 35 17.7 +0.1
baz=322
VAL **Valentia** 78.86 351 ⇓i P P 14 35 18.9 +1.5
KBA **Koelnbreinsper** 78.86 334 i P P 14 35 19.0 +1.1
comp=Z,109nm,1.2s,SNR=38
KBA **Koelnbreinsper** 78.86 334 P P 14 35 18.5 +0.7
KBA pmax pmax
comp=Z,77nm,1.0s
Z42A **Norrel Spur, H** 78.88 52 P P 14 35 17.9 0.0
baz=322
BINY **Binghamton** 78.88 36 P P 14 35 17.3 -0.5
baz=329
BINY **Binghamton** 78.88 36 eP P 14 35 18.2 +0.4
comp=Z,18nm,1.0s
240A **Hunter Patters** 78.89 54 P P 14 35 18.1 +0.2
baz=321
141A **Papa Simpson,** 78.90 53 P P 14 35 18.5 +0.5
baz=322
Y43A **Makayla and Ka** 78.90 51 P P 14 35 18.3 +0.3
baz=322
ARMA **Armidale** 78.92 183 eP P 14 35 19.3 +1.4
comp=Z,37nm,1.3s
HNH **Hanover** 78.97 33 eP P 14 35 18.7 +0.5
comp=Z,19nm,0.8s
T49A **Edmonton** 79.01 45 P P 14 35 18.1 -0.4
baz=324
U48A **Cassie Pea, Po** 79.01 46 P P 14 35 18.5 -0.1
baz=324,SNR=8.6
OBKA **Obir** 79.03 333 i P P 14 35 19.3 +0.7
comp=Z,36nm,1.1s,SNR=10
HTL **Hartland** 79.05 347 eP P 14 35 17.8 -0.7
HTL IAmb IAmb 14 35 20.0
comp=Z,53nm,0.9s
V47A **Nunnelly** 79.08 47 P P 14 35 18.8 -0.2
baz=324,SNR=6.9
WVL **Waterville** 79.14 31 eP P 14 35 19.6 +0.5
comp=Z,31nm,0.9s
WTTA **Wattenberg** 79.17 336 i P P 14 35 20.7 +1.1
comp=Z,82nm,1.2s,SNR=24
MYKA **Terra Mystica** 79.19 334 i P P 14 35 19.6 +0.2
comp=Z,32nm,1.6s,SNR=7.6
OXF **Oxford** 79.20 49 P P 14 35 19.5 -0.2
baz=323,SNR=8.1
OXF **Oxford** 79.20 49 eP P 14 35 19.6 0.0
comp=Z,52nm,1.1s
OXF **Oxford** 79.20 49 eP P 14 35 19.6 0.0
OXF pmax pmax
comp=Z,52nm,1.1s
RETA **Reutte** 79.20 336 i P P 14 35 20.3 +0.7
comp=Z,50nm,1.9s,SNR=9.7
W46A **Michie** 79.22 48 P P 14 35 19.2 -0.5
baz=323
CDF **Champ du Feu** 79.23 339 eP P 14 35 18.7 -1.0
CDF pmax pmax
comp=Z,48nm,1.1s
Y44A **Strider, Charl** 79.23 50 P P 14 35 19.8 0.0
baz=323
MOTA **Moosalm** 79.24 336 i P P 14 35 18.6 -1.3
comp=Z,86nm,1.2s,SNR=41
X45A **UM Field Stati** 79.28 49 P P 14 35 19.7 -0.4
baz=323
PGB **Panagyurishte** 79.29 325 eP P 14 35 19.5 -0.6
Z43A **Armstrong Fami** 79.29 51 P P 14 35 20.1 0.0
baz=322
TRY **Troy** 79.31 34 eP P 14 35 20.4 +0.4
comp=Z,30nm,1.1s
241A **Mo Tay, Goldon** 79.35 53 P P 14 35 21.0 +0.6
baz=322,SNR=5.7
U49A **Red Boiling Sp** 79.37 46 P P 14 35 20.3 -0.3
baz=324
T50A **Nancy** 79.40 45 P P 14 35 20.2 -0.5
baz=325
ABTA **Abfaltersbach** 79.40 335 i P P 14 35 20.9 +0.3
comp=Z,43nm,1.3s,SNR=15
ECH **Echery** 79.44 339 eP P 14 35 20.6 -0.1
comp=Z,52nm,1.1s
ECH **Echery** 79.44 339 eP P 14 35 20.6 -0.1
ECH pmax pmax
comp=Z,52nm,1.1s
DIVS **Divibare** 79.44 329 eP P 14 35 20.3 -0.6
comp=Z,35nm,1.0s
SSPA **Standing Stone** 79.45 38 P P 14 35 20.4 -0.5
baz=328
SSPA **Standing Stone** 79.45 38 eP P 14 35 20.7 -0.2
comp=Z,46nm,1.4s
142A **Monroe** 79.45 52 P P 14 35 20.9 -0.1
baz=322
MCWV **Mont Chateau** 79.45 40 P P 14 35 21.0 0.0
baz=327,SNR=6.4
MCWV **Mont Chateau** 79.45 40 eP P 14 35 21.6 +0.7
comp=Z,42nm,1.2s
LJU **Ljubljana** 79.46 333 i P P 14 35 20.7 -0.2
PLD **Plovdiv** 79.47 325 P P 14 35 23.0 +2.0
S51A **Beattyville** 79.47 44 P P 14 35 20.9 -0.2
baz=325
O56A **Blue Knob Stat** 79.48 39 P P 14 35 20.8 -0.3
baz=328,SNR=7.7
O56A **Blue Knob Stat** 79.48 39 eP P 14 35 21.0 -0.1
comp=Z,20nm,0.8s
PLAL **Pickwick Lake** 79.49 48 eP P 14 35 21.0 -0.2
comp=Z,9.3nm,0.6s
V48A **Smith Brothers** 79.49 47 P P 14 35 20.8 -0.4
baz=324,SNR=5.8
W47A **Westpoint** 79.51 48 P P 14 35 20.9 -0.4
baz=324
KSPA **Keystone Colle** 79.51 36 eP P 14 35 21.4 +0.2
comp=Z,17nm,0.9s
CADS **Cadrg** 79.52 334 i P P 14 35 20.6 -0.7
SLE **Schleitheim** 79.53 338 eP P 14 35 21.9 +0.6
SLE pmax pmax
comp=Z,39nm,1.4s
X46A **Booneville** 79.58 49 P P 14 35 20.9 -0.8
baz=323
KDZ **Kurdzhali** 79.58 324 eP P 14 35 21.6 0.0
143A **Socs Landing,** 79.61 52 P P 14 35 21.5 -0.4
baz=322
VTS **Vitosha** 79.61 326 ⇑i P P 14 35 21.2 -0.7
VTS **Vitosha** 79.61 326 eP P 14 35 22.0 0.0
VTS **Vitosha** 79.61 326 P P 14 35 21.9 0.0
DAVA **Damuels** 79.62 337 i P P 14 35 22.6 +0.7
comp=Z,39nm,1.1s,SNR=11
FETA **Feichten** 79.64 336 i P P 14 35 23.1 +1.0
comp=Z,61nm,1.7s,SNR=18
Y45A **Yeager Farm, C** 79.64 50 P P 14 35 22.0 0.0
baz=323
Z44A **Pea Ridge, Bel** 79.66 51 P P 14 35 21.8 -0.4
baz=323
S52A **Salyersville** 79.67 43 P P 14 35 21.8 -0.4
baz=325
242A **Grayson** 79.72 53 P P 14 35 22.6 +0.1
baz=322
BOJS **Bojanci** 79.73 333 i P P 14 35 22.4 +0.1
341A **Kurthwood** 79.75 54 P P 14 35 22.9 +0.2
baz=322
341A **Kurthwood** 79.75 54 eP P 14 35 23.8 +1.1
comp=Z,45nm,1.3s
BLY **Banja Luka** 79.80 331 ⇑i P P 14 35 22.2 -0.5
HAU **Haudompre** 79.83 339 eP P 14 35 21.8 -1.1
HAU pmax pmax
comp=Z,90nm,1.4s
HINF **Hinteralfeld** 79.89 339 eP P 14 35 22.0 -1.2
HINF pmax pmax
comp=Z,43nm,1.3s
V49A **McMinnville** 79.91 46 P P 14 35 22.9 -0.6
baz=324
W48A **Pulaski** 79.92 47 P P 14 35 23.3 -0.3
baz=324,SNR=11
Z45A **Winona** 79.96 50 P P 14 35 24.0 +0.2
baz=323
X47A **Russelville** 79.97 48 P P 14 35 23.1 -0.7
baz=324
Y46A **Houston** 79.98 49 P P 14 35 23.5 -0.3
baz=323,SNR=5.8
N59A **State Game Lan** 80.06 37 P P 14 35 23.5 -0.7
baz=329,SNR=11
N59A **State Game Lan** 80.06 37 eP P 14 35 24.3 +0.1
comp=Z,48nm,1.2s
342A **Flagon Creek P** 80.17 53 P P 14 35 25.3 +0.4
baz=322
144A **Alexander Plac** 80.17 51 P P 14 35 25.2 +0.3
baz=323
T52A **Hallie** 80.18 43 P P 14 35 24.6 -0.3
baz=326
QUA2 **Belchertown** 80.19 34 eP P 14 35 24.9 +0.1
comp=Z,22nm,1.2s
441A **DeRidder** 80.19 54 P P 14 35 25.0 -0.1
baz=322
243A **Waterproof** 80.21 52 P P 14 35 25.0 -0.1
baz=322
W49A **Belvidere** 80.26 47 P P 14 35 24.8 -0.6
baz=324
PAGS **Pennsylvania G** 80.27 38 eP P 14 35 25.2 -0.1
comp=Z,30nm,1.1s
HRV **Adam Dziewonsk** 80.28 33 P P 14 35 25.0 -0.3
baz=331
HRV **Adam Dziewonsk** 80.28 33 eP P 14 35 25.8 +0.5
comp=Z,35nm,1.1s
HRV **Adam Dziewonsk** 80.28 33 eP P 14 35 25.8 +0.5
HRV pmax pmax
comp=Z,35nm,1.1s
MMB **Musomiste** 80.28 325 eP P 14 35 24.9 -0.5
KKB **Krupnik** 80.28 326 eP P 14 35 24.6 -0.8
PLE **Pljevlja** 80.33 329 ⇑i P P 14 35 25.8 +0.1
SWET **Sewanee** 80.34 47 eP P 14 35 25.8 -0.1
comp=Z,67nm,1.4s
V50A **Pikeville** 80.37 46 P P 14 35 25.6 -0.4
baz=325
TZTN **Tazewell** 80.39 44 P P 14 35 25.9 -0.2
baz=325
TZTN **Tazewell** 80.39 44 eP P 14 35 26.4 +0.4
comp=Z,13nm,0.8s
JRS **Jersey** 80.41 345 eP P 14 35 26.3 +0.4
X48A **Hartselle** 80.42 48 P P 14 35 25.7 -0.5
baz=324
NVR **Nevrokopi** 80.44 325 P P 14 35 26.5 +0.2
145A **Houston Renfro** 80.45 51 P P 14 35 26.3 -0.1
baz=323
VBMS **Vicksburg** 80.45 51 P P 14 35 26.6 +0.2
baz=323
Y47A **UCPARC, Winfie** 80.46 49 P P 14 35 25.9 -0.6
baz=324,SNR=8.3
Z46A **Louisville** 80.48 50 P P 14 35 26.3 -0.3
baz=323
LUPA **Lehigh Univers** 80.49 36 eP P 14 35 27.0 +0.5
comp=Z,2.7nm,1.2s
244A **Avery, Jackson** 80.50 52 P P 14 35 27.3 +0.6
baz=323
RAR **Rarotonga** 80.52 138 LR LR 15 04 54.8
comp=Z,534nm,20.9s,baz=317,slow=31
TUE **Stuetta** 80.52 337 eP P 14 35 27.2 +0.4
comp=Z,63nm,0.9s
IVA **Berane** 80.56 328 ⇑i P P 14 35 27.1 +0.1
BCX **Boston College** 80.56 33 eP P 14 35 27.4 +0.6
comp=Z,37nm,1.1s
UPM **Unac-Piva** 80.60 329 ⇑i P P 14 35 26.6 -0.7
MVL **Millersville** 80.61 37 eP P 14 35 27.7 +0.6
comp=Z,17nm,0.9s
TAOE **Nuku Hiva Isla** 80.61 115 eS S 14 45 35.1 +4.4
comp=Z,730nm,31.4s
TAOE **Nuku Hiva Isla** 80.61 115 eLR LR 15 00 30.3
comp=Z,3µm,22.8s,baz=324
343A **Vidalia** 80.61 53 P P 14 35 27.8 +0.5
baz=322
V51A **Loudon** 80.62 45 P P 14 35 27.2 -0.1
baz=325
442A **Mamou** 80.63 54 P P 14 35 28.6 +1.2
baz=322
LDF **La Druitiere** 80.64 344 eP P 14 35 26.1 -1.1
LDF pmax pmax
comp=Z,52nm,1.0s
W50A **Signal Mountai** 80.65 46 P P 14 35 27.1 -0.5
baz=325
PAL **Palisades** 80.70 35 P P 14 35 26.9 -0.7
baz=330
PAL **Palisades** 80.70 35 eP P 14 35 27.7 +0.1
comp=Z,21nm,0.8s
PAL **Palisades** 80.70 35 eP P 14 35 27.7 +0.1
PAL pmax pmax
comp=Z,21nm,0.8s
KOME **Kolasin** 80.71 329 ⇑i P P 14 35 27.2 -0.6
X49A **Woodville** 80.72 47 P P 14 35 27.5 -0.4
baz=324,SNR=10
BRNJ **Basking Ridge** 80.73 36 eP P 14 35 28.8 +1.0
comp=Z,22nm,0.9s
541A **Lake Charles** 80.73 55 P P 14 35 28.7 +0.8
baz=322
SRS **Serrai** 80.74 325 P P 14 35 27.7 -0.2
PVY **Plav** 80.78 328 ⇑i P P 14 35 27.8 -0.4
Y48A **Jasper** 80.79 48 P P 14 35 27.6 -0.6
baz=324
BRYW **Bryant College** 80.80 33 eP P 14 35 28.3 +0.2
comp=Z,26nm,0.8s
CPCT **Cooper Cave** 80.83 45 eP P 14 35 28.6 +0.2
comp=Z,36nm,1.3s
146A **Union** 80.87 50 P P 14 35 28.9 +0.2
baz=323
SDMD **Soldier's Deli** 80.91 38 eP P 14 35 29.4 +0.6
comp=Z,15nm,1.0s
Z47A **Carrollton** 80.92 49 P P 14 35 28.7 -0.2
baz=324,SNR=8.8
245A **Little AP, Sta** 80.92 51 P P 14 35 29.0 +0.1
baz=323
443A **Delano Plantat** 80.93 53 P P 14 35 28.9 -0.1
baz=322
V52A **Sevierville** 80.94 45 P P 14 35 28.9 -0.1
baz=325
BCI **Bajram Curri** 80.94 328 i P P 14 35 31.4 +2.5
ZAIG **Zacatecas** 80.94 66 eP P 14 35 30.7 +1.1
comp=Z,16nm,1.2s
344A **Westbrook Farm** 80.94 52 P P 14 35 29.9 +0.9
baz=323
VAY **Valandovo** 80.95 326 P P 14 35 29.1 +0.2
VAY **Valandovo** 80.95 326 P P 14 35 29.8 +0.9
KNT **Kendrikon** 80.96 325 P P 14 35 29.3 +0.2
NKME **Niksic** 80.97 329 ⇑i P P 14 35 28.3 -0.8
U53A **Fall Branch** 80.98 44 P P 14 35 28.8 -0.4
baz=326
BRY **Bratogost** 80.99 329 ⇑i P P 14 35 28.4 -1.0
PSUB **Penn St. - Bra** 81.03 37 eP P 14 35 29.2 -0.2
comp=Z,15nm,0.9s
Z48A **Northport** 81.03 49 P P 14 35 29.0 -0.5
baz=324
SOH **Sokhos** 81.09 325 P P 14 35 30.4 +0.6
X50B **Fort Payne** 81.09 47 P P 14 35 29.5 -0.4
baz=324,SNR=6.3
PMOR **Pomariorio Ree** 81.13 125 eT T 16 04 43.8
comp=Z,26nm,0.2s
SENIN **Lac Senin/Sane** 81.14 338 eP P 14 35 30.4 +0.2
comp=Z,26nm,0.9s
PDG **Podgorica** 81.17 328 ⇑i P P 14 35 29.7 -0.4
TTG **Podgorica** 81.17 328 ⇑i P P 14 35 29.7 -0.4
LNIG **Linares** 81.17 62 eP P 14 35 29.8 -0.7
comp=Z,16nm,1.1s
CEME **Cevo** 81.18 329 ⇑i P P 14 35 29.5 -0.8
STKA **Stephens Creek** 81.20 192 P P 14 35 30.9 +0.8
comp=Z,8.8nm,0.8s,baz=348,slow=7.1,SNR=13
STKA LR LR 15 11 57.8
comp=Z,279nm,20.2s,baz=30,slow=36
STKA **Stephens Creek** 81.20 192 eP P 14 35 30.5 +0.4
comp=Z,1.9nm,0.8s
Y49A **Blount Mountai** 81.21 48 P P 14 35 30.2 -0.3
baz=324
147A **Livingston** 81.24 50 P P 14 35 30.6 0.0
baz=324,SNR=5.1
BLA **Blacksburg** 81.24 42 P P 14 35 30.3 -0.4

baz=327
BLA Blacksburg 81.24 42 *e*P **P 14 35 31.4 +0.7**
comp=Z,33nm,1.0s
BLA Blacksburg 81.24 42 *e*P **P 14 35 31.4 +0.7**
BLA pmax pmax
comp=Z,33nm,1.0s
PUK Puka 81.29 328 *i*P **P 14 35 31.2 +0.3**
246A Jackson Lee, B 81.33 51 P **P 14 35 31.2 +0.1**
baz=323
GRG Griva 81.33 326 P **P 14 35 30.9 -0.1**
GRG Griva 81.33 326 *e*P **P 14 35 31.1 +0.1**
GRG pmax pmax
comp=Z,34nm,1.3s
HORT Hortiatis 81.38 325 P **P 14 35 30.4 -1.0**
X51A Calhoun 81.39 46 P **P 14 35 31.0 -0.4**
baz=325
W52A Murphy 81.39 45 P **P 14 35 31.2 -0.2**
baz=325
BUM Brajici-Budva 81.41 329⇑ *i*P **P 14 35 30.8 -0.7**
DRME Dracevica, Mon 81.41 328⇑ *i*P **P 14 35 31.2 -0.2**
PHP Peshkopia 81.41 327 P **P 14 35 30.7 -0.8**
PHP Peshkopia 81.41 327 *i*P **P 14 35 30.5 -0.9**
HCY Herceg Novi 81.41 329⇑ *i*P **P 14 35 30.3 -1.1**
HCY Herceg Novi 81.41 329 *e*P **P 14 35 29.9 -1.5**
345A Thompson Farm, 81.42 52 P **P 14 35 32.7 +1.0**
baz=323
543A St. Martinvill 81.43 54 P **P 14 35 32.7 +1.0**
baz=322
M65A Busby, Falmout 81.43 33 P **P 14 35 30.8 -0.7**
baz=332
PLG Polygyros 81.44 325 P **P 14 35 31.1 -0.5**
V53A Saluda 81.44 44 P **P 14 35 31.5 -0.2**
baz=326
IP04 Greensprings 81.51 40 *e*P **P 14 35 33.1 +1.1**
comp=Z,38nm,1.1s
Y50A Piedmont 81.51 47 P **P 14 35 31.7 -0.4**
baz=325,SNR=6.2
444A Pine Grove 81.52 53 P **P 14 35 32.7 +0.6**
baz=323
247A Quitman 81.56 50 P **P 14 35 33.1 +0.7**
baz=323
LRAL Lakeview Retre 81.58 49 P **P 14 35 31.8 -0.7**
baz=324,SNR=6.1
LRAL Lakeview Retre 81.58 49 *e*P **P 14 35 32.3 -0.2**
comp=Z,9.1nm,0.8s
ULC Ulcinj 81.58 328⇑ *i*P **P 14 35 31.6 -0.7**
IP03 Louisa 81.60 40 *e*P **P 14 35 33.0 +0.6**
comp=Z,41nm,1.3s
148A Greensboro 81.61 49 P **P 14 35 32.2 -0.4**
baz=324
CVRD Centerville Ro 81.65 39 *e*P **P 14 35 32.9 +0.2**
comp=Z,45nm,1.1s
346A Big Creek Wild 81.65 51 P **P 14 35 32.8 -0.1**
baz=323
AVF Avril sur Loir 81.65 341 *e*P **P 14 35 31.8 -0.8**
AVF pmax pmax
comp=Z,72nm,1.0s
SPRD Spring Road, M 81.66 40 *e*P **P 14 35 33.3 +0.5**
comp=Z,26nm,1.1s
IP07 Quail 81.68 40 *e*P **P 14 35 33.5 +0.7**
comp=Z,29nm,1.0s
SMF Signal de Mont 81.68 340 *e*P **P 14 35 32.0 -0.8**
SMF pmax pmax
comp=Z,125nm,1.1s
Z49A Columbiana 81.69 48 P **P 14 35 32.5 -0.5**
baz=324,SNR=7.1
IP06 Yanceyville 81.69 40 *e*P **P 14 35 33.9 +1.0**
comp=Z,18nm,1.0s
W53A Cullowhee 81.69 45 P **P 14 35 33.2 0.0**
baz=326,SNR=5.5
IP01 Cuckoo 81.70 40 *e*P **P 14 35 33.4 +0.4**
comp=Z,30nm,1.4s
CBN Corbin Frederi 81.71 39 P **P 14 35 32.8 -0.3**
baz=328
PAIG Paliouri 81.74 324 P **P 14 35 32.6 -0.5**
PAIG Paliouri 81.74 324 *e*P **P 14 35 32.6 -0.5**
544A White Castle 81.78 53 P **P 14 35 34.1 +0.6**
baz=323
X52A Dahlonega 81.81 46 P **P 14 35 33.8 +0.1**
baz=325,SNR=6.9
QUIF Quistinic 81.83 345 *e*P **P 14 35 32.8 -0.7**
QUIF pmax pmax
comp=Z,40nm,1.0s
Y51A Rockmart 81.83 47 P **P 14 35 33.3 -0.5**
baz=325,SNR=12
FNA Florina 81.86 326 P **P 14 35 33.2 -0.7**
FNA Florina 81.86 326 P **P 14 35 33.7 -0.2**
IP05 Hopewell Churc 81.87 40 *e*P **P 14 35 34.6 +0.7**
comp=Z,32nm,1.3s
TIR Tirane 81.91 328 P **P 14 35 34.4 +0.4**
Z50A Ashland 81.94 48 P **P 14 35 34.1 -0.3**
baz=324,SNR=20
BG3 Lake Jocassee 81.94 45 *e*P **P 14 35 34.9 +0.6**
comp=Z,51nm,1.3s
248A Dixon Mills 81.97 50 P **P 14 35 34.1 -0.4**
baz=324
149A Jones 82.04 49 P **P 14 35 34.7 -0.1**
baz=324
LIT Litokhoron 82.04 325 *e*P **P 14 35 34.4 -0.4**
comp=Z,32nm,1.1s
LIT Litokhoron 82.04 325 *e*P **P 14 35 34.4 -0.4**
LIT pmax pmax
comp=Z,32nm,1.1s
LPL La Plagne 82.07 338 *e*P **P 14 35 34.9 -0.2**
LPL pmax pmax
comp=Z,61nm,0.7s
LPG La Plagne 82.08 338 *e*P **P 14 35 35.2 0.0**
LPG pmax pmax
comp=Z,74nm,0.8s
347A Saraland 82.12 51 P **P 14 35 36.3 +1.1**
baz=324
KZN Kozani 82.13 326 P **P 14 35 34.5 -0.8**
X53A Estanollee 82.17 45 P **P 14 35 35.4 -0.1**
baz=326
URVA University of 82.18 40 *e*P **P 14 35 36.0 +0.4**
KBN Korca 82.21 327 *i*P **P 14 35 35.5 -0.2**
Z51A Franklin 82.25 47 P **P 14 35 35.1 -0.8**
baz=325
NEST Nestorio 82.30 326 P **P 14 35 35.9 -0.3**
Y52A Lilburn 82.34 46 P **P 14 35 36.2 -0.2**
baz=325
ASF Jabal al Asfar 82.34 311 LR LR 15 15 47.5
comp=Z,648nm,21.6s,baz=342,slow=38
PPT Papeete 82.35 128 LR LR 15 04 48.9
comp=Z,838nm,19.6s,baz=314,slow=30
PPT2 Papeete2 82.37 128 *e*LR LR 14 35 19.5
comp=Z,358nm,26.2s
PPT2 Papeete2 82.37 128 *e*LR LR 15 01 25.1
comp=Z,2μm,22.2s
PPT2 Papeete2 82.37 128 *e*T T 16 06 15.9
comp=Z,8.3nm,0.3s
VLC Villacollemand 82.37 335 *e*P **P 14 35 37.7 +1.2**
comp=Z,71nm,1.1s
249A Camden 82.37 49 P **P 14 35 37.1 +0.5**
baz=324,SNR=8.7
TCF Toulx Ste Croi 82.38 341 *e*P **P 14 35 35.8 -0.6**
TCF pmax pmax
comp=Z,58nm,1.1s
MMAI Mount Meron Ar 82.40 313 P **P 14 35 37.8 +0.9**
comp=Z,16nm,0.5s,baz=16,slow=7.3,SNR=10
MMAI LR LR 15 16 23.5
comp=Z,407nm,20.2s,baz=20,slow=39
XOR Xorichti 82.41 324 P **P 14 35 35.8 -0.9**
150A Eclectic 82.41 48 P **P 14 35 36.5 -0.3**
baz=324,SNR=7.2
PAE Paea 82.43 128 *e*T T 16 06 19.6
comp=Z,2.6nm,0.2s
348A Jackson 82.43 50 P **P 14 35 37.5 +0.6**
baz=324
PENT Pentalofos 82.46 326 P **P 14 35 36.6 -0.5**
FYTO Fytoko, Volos 82.47 325 P **P 14 35 36.4 -0.6**
NCAT North Carolina 82.47 42 *e*P **P 14 35 37.1 +0.1**
comp=Z,21nm,0.9s
BNI Bardonecchia 82.52 338 *e*P **P 14 35 38.1 +0.7**
comp=Z,42nm,1.1s
BNI Bardonecchia 82.52 338 *e*P **P 14 35 38.1 +0.7**
BNI pmax pmax
comp=Z,42nm,1.1s
MFF Saint Martin d 82.55 343 *e*P **P 14 35 36.8 -0.5**
MFF pmax pmax
comp=Z,117nm,1.3s
KMSC Kings Mountain 82.56 43 P **P 14 35 37.2 -0.3**
baz=326
KMSC Kings Mountain 82.56 43 *e*P **P 14 35 37.9 +0.3**
comp=Z,42nm,1.4s
Y53A Monroe 82.57 46 P **P 14 35 37.7 +0.1**
baz=326

KPRO Kipourio 82.59 326 P **P 14 35 36.6 -1.1**
Z52A Williamson 82.72 47 P **P 14 35 38.0 -0.4**
baz=325,SNR=6.1
250A Grady 82.80 49 P **P 14 35 39.1 +0.2**
baz=324,SNR=6.8
FORT Forrest 82.80 203 *e*P **P 14 35 38.5 -0.1**
comp=Z,86nm,0.7s
151A Opelika 82.82 48 P **P 14 35 38.6 -0.3**
baz=325
SSB Saint Sauveur 82.82 339 *e*P **P 14 35 39.2 +0.4**
comp=Z,56nm,0.9s
SSB Saint Sauveur 82.82 339 *e*P **P 14 35 39.1 +0.4**
SSB pmax pmax
comp=Z,57nm,0.9s
448A Bay Minette 82.84 50 P **P 14 35 39.5 +0.4**
baz=324
349A Repton 82.84 50 P **P 14 35 39.6 +0.5**
baz=324
HODGE Hodges 82.88 45 *e*P **P 14 35 39.8 +0.5**
comp=Z,15nm,1.0s
Y54A Tignall 82.99 45 P **P 14 35 40.0 +0.2**
baz=326
GOGA Godfrey 82.99 46 P **P 14 35 39.7 -0.1**
baz=326
GOGA Godfrey 82.99 46 *e*P **P 14 35 40.3 +0.5**
comp=Z,5.8nm,0.9s
GOGA Godfrey 82.99 46 *e*P **P 14 35 40.3 +0.5**
GOGA pmax pmax
comp=Z,6.0nm,0.9s
152A Waverly Hall 83.00 47 P **P 14 35 39.1 -0.8**
baz=325
Z53A Monticello 83.05 46 P **P 14 35 39.7 -0.4**
baz=326,SNR=8.6
LKR Lokris 83.10 324 P **P 14 35 39.0 -1.3**
251A Midway 83.13 48 P **P 14 35 40.0 -0.5**
baz=325
AQU L'Aquila 83.14 332 *e*P **P 14 35 40.9 +0.4**
comp=Z,79nm,1.1s
AQU L'Aquila 83.14 332 *e*P **P 14 35 40.9 +0.4**
AQU pmax pmax
comp=Z,79nm,1.1s
VIVF Saint-Julien-l 83.19 339 *e*P **P 14 35 40.4 -0.3**
VIVF pmax pmax
comp=Z,61nm,1.1s
350A Dozier 83.22 49 P **P 14 35 40.3 -0.6**
baz=324
JSC Jenkinsville 83.30 44 *e*P **P 14 35 42.2 +0.8**
comp=Z,26nm,1.2s
JSC Jenkinsville 83.30 44 *e*P **P 14 35 42.2 +0.8**
JSC pmax pmax
comp=Z,26nm,1.2s
SGD Sagiada 83.30 326 P **P 14 35 41.0 -0.3**
KEK Kerkira 83.37 327 P **P 14 35 40.9 -0.8**
DSL Palaion Diasel 83.41 326 P **P 14 35 41.2 -0.7**
Z54A Sparta 83.43 46 P **P 14 35 41.8 -0.3**
baz=326,SNR=6.1
SBF Sospel 83.44 337 *e*P **P 14 35 41.0 -1.0**
SBF pmax pmax
comp=Z,38nm,1.0s
153A Fort Valley 83.44 47 P **P 14 35 41.9 -0.3**
baz=326
RJF Les Rejaudoux 83.46 342 *e*P **P 14 35 41.5 -0.5**
RJF pmax pmax
comp=Z,98nm,1.2s
252A Lumpkin 83.54 48 P **P 14 35 41.8 -0.8**
baz=325
MATE Matera 83.62 329⇑ *i*P **P 14 35 41.9 -1.0**
LTK Loutraki 83.66 324 P **P 14 35 41.2 -2.0**
351A Pinckard 83.70 49 P **P 14 35 42.8 -0.6**
baz=325
Z55A Blythe 83.78 45 P **P 14 35 43.7 -0.1**
baz=326
253A Americus 83.78 47 P **P 14 35 44.0 +0.1**
baz=325
154A Montrose 83.82 46 P **P 14 35 44.4 +0.3**
baz=326
PDO Prodromos 83.84 325 P **P 14 35 43.5 -0.6**
LAKA Lakka 83.85 325 P **P 14 35 43.4 -0.8**
352A Blakely 83.86 48 P **P 14 35 44.6 +0.2**
baz=325
LKD2 Lefkada island 83.87 326 P **P 14 35 43.6 -0.7**
FRF La Foret Royal 83.92 337 *e*P **P 14 35 43.5 -0.9**
FRF pmax pmax
comp=Z,111nm,1.4s
KLV Kalavryta, Ach 83.96 324 P **P 14 35 43.6 -1.2**
GUR Goura 83.98 324 P **P 14 35 43.7 -1.3**
155A Kite 84.11 46 P **P 14 35 45.2 -0.4**
baz=326
451A Vernon 84.16 49 P **P 14 35 46.1 +0.3**
baz=325
FSK Fiskardo 84.20 326 P **P 14 35 44.7 -1.2**
RLS Riolos of Patr 84.21 325 P **P 14 35 45.7 -0.3**
452A Marianna 84.25 49 P **P 14 35 46.6 +0.3**
baz=325
353A Camilla 84.32 48 P **P 14 35 46.5 -0.2**
baz=325
KFL Anninata 84.42 325 P **P 14 35 46.6 -0.4**
VLS Valsamata 84.44 326 P **P 14 35 46.5 -0.6**
156A Sylvania 84.55 45 P **P 14 35 48.0 +0.3**
baz=327
RAYN Ar Rayn 84.55 300 *e*P **P 14 35 47.5 -0.5**
comp=Z,131nm,1.5s
RAYN Ar Rayn 84.55 300 *i*P **P 14 35 47.6 -0.4**
SNR=42
TIGA Tifton 84.55 47 P **P 14 35 48.5 +0.6**
baz=326
453A Whigham 84.67 48 P **P 14 35 49.3 +0.9**
baz=325
255A Hazlehurst 84.69 46 P **P 14 35 48.8 +0.4**
baz=326
NHSC New Hope 84.78 44 P **P 14 35 48.5 -0.4**
baz=327
552A Lynn Haven 84.78 49 P **P 14 35 48.8 -0.1**
baz=325
256A Glennville 84.92 46 P **P 14 35 49.9 +0.3**
baz=326
PYL PYLOS 85.12 324 P **P 14 35 48.8 -1.8**
454A Quitman 85.13 48 P **P 14 35 50.7 0.0**
baz=326
553A Crawfordville 85.16 48 P **P 14 35 51.8 +0.9**
baz=325
IDI Anoyia 85.25 321 LR LR 15 18 49.9
comp=Z,280nm,19.8s,baz=24,slow=39
455A Stateville 85.40 47 P **P 14 35 52.3 +0.3**
baz=326
456A Hilliard 85.90 46 P **P 14 35 55.0 +0.5**
baz=326
555A McAlpin 85.94 47 P **P 14 35 55.1 +0.4**
baz=326
655A Horseshoe Beac 86.30 48 P **P 14 35 57.1 +0.6**
baz=326
556A Lake Butler 86.31 47 P **P 14 35 57.4 +0.8**
baz=326
TOO Toolangi 86.41 188 *e*P **P 14 35 58.3 +1.7**
TOO pmax pmax
comp=Z,26nm,1.4s
557A Orange Park 86.62 47 P **P 14 35 58.7 +0.6**
baz=327
656A Willston 86.77 48 P **P 14 35 59.6 +0.8**
baz=326
TBI Tubuai 87.23 131 *e*S **S 14 46 37.9 +1.5**
comp=Z,850nm,33.2s
TBI Tubuai 87.23 131 *e*LR LR 15 03 40.6
comp=Z,2μm,25.2s,baz=330
TBI Tubuai 87.23 131 *e*T T 16 12 18.1
comp=Z,9.5nm,0.3s
VAE Valguarnera 87.25 330 LR LR 15 19 37.8
comp=Z,911nm,19.0s,baz=26,slow=39
757A Oxford 87.35 47 P **P 14 36 02.3 +0.6**
baz=326
758A Lake Helen 87.75 47 P **P 14 36 04.1 +0.6**
baz=327
857A Zephyrhills 87.83 48 P **P 14 36 04.8 +0.8**
baz=326
NWAO Narrogin (SRO) 88.07 211 P **P 14 36 05.0 +0.3**
comp=Z,23nm,0.9s,baz=241,slow=5.2,SNR=7.7
NWAO LR LR 15 14 12.2
comp=Z,167nm,21.9s,baz=273,slow=35
NWAO Narrogin (SRO) 88.07 211 P **P 14 36 05.0 +0.3**
DWPF Disney Wildern 88.35 47 P **P 14 36 07.0 +0.6**
baz=327
PBRG Braganca 88.36 346 *e*P **P 14 36 05.7 -0.6**
comp=Z,25nm,1.6s
PGAV Gavieira, Arco 88.43 348 *e*LR LR 15 06 43.8
comp=Z,465nm,20.0s
859A Kempfer Cattle 88.65 47 P **P 14 36 08.6 +0.7**
baz=327

POLO Lamas de Olo 88.94 347 *e*P **P 14 36 08.0 -1.1**
comp=Z,18nm,1.5s
PVRL Vila Real 89.02 347 *e*P **P 14 36 09.5 0.0**
comp=Z,52nm,1.8s
MVO Moncorvo 89.03 347 *e*LR LR 15 06 55.0
comp=Z,757nm,20.0s
058A Arcadia 89.04 48 P **P 14 36 09.7 0.0**
baz=327
959A Okeechobee 89.11 47 P **P 14 36 10.7 +0.7**
baz=327
MTE Manteigas 89.85 347 *e*P **P 14 36 13.1 -0.3**
comp=Z,29nm,1.3s
MTE Manteigas 89.85 347 *e*LR LR 15 07 17.8
comp=Z,697nm,20.0s
ES19 SONSECA Array 89.92 344 *e*P **P 14 36 12.7 -1.0**
ESDC Sonseca Array 89.96 344 P **P 14 36 13.4 -0.5**
comp=Z,4.7nm,0.8s,baz=14,slow=4.2,SNR=28
ESDC LR LR 15 21 40.1
comp=Z,1μm,20.6s,baz=15,slow=39
ESLA Sonseca Array 89.96 344 *e*P **P 14 36 13.4 -0.5**
comp=Z,16nm,1.3s
PAB San Pablo 90.16 344 *e*P **P 14 36 14.8 -0.1**
comp=Z,7.0nm,1.0s
PAB San Pablo 90.16 344 *e*P **P 14 36 14.8 -0.1**
PAB pmax pmax
comp=Z,7.0nm,1.0s
060Z West Palm Beac 90.20 48 P **P 14 36 15.8 +0.6**
baz=327
PCBR Castelo Branco 90.39 347 *e*P **P 14 36 16.1 +0.3**
comp=Z,18nm,2.2s
KEST Kesra 90.47 333 P **P 14 36 16.6 +0.3**
comp=Z,18nm,0.9s,baz=313,slow=3.3,SNR=14
KEST LR LR 15 21 57.3
comp=Z,1μm,20.0s,baz=343,slow=39
061Z Ochoppi 90.48 48 P **P 14 36 17.4 +1.0**
baz=327
PMRV Marv??o 90.78 346 *e*LR LR 15 08 10.4
comp=Z,1μm,18.0s
PBAR Barrancos 91.95 346 *e*P **P 14 36 22.8 -0.3**
comp=Z,26nm,1.5s
PCVE Castro Verde 92.64 347 *e*P **P 14 36 26.4 +0.1**
comp=Z,26nm,1.5s
PVAQ Vaqueiros 92.81 346 *e*LR LR 15 08 42.5
comp=Z,1μm,20.0s
RKT Rikitea 94.86 120 *e*LR LR 15 06 51.1
comp=Z,946nm,35.8s,baz=315
ATD Arta Tunnel 95.48 294 LR LR 15 25 09.6
comp=Z,1μm,20.2s,baz=32,slow=39
MDT Midelt 96.74 343 LR LR 15 25 04.8
comp=Z,386nm,21.6s,baz=26,slow=38
PMOZ Porto Moniz, M 98.45 353 *e*LR LR 15 10 22.8
comp=Z,216nm,20.0s
TORD Torodi Ar. Bea 113.95 331 PKiKP **PKiKP 14 41 53.2 -0.4**
comp=Z,2.7nm,0.6s,baz=1.5,slow=1.4,SNR=12
TORD PP **PP 14 42 46.4 -0.6**
comp=Z,3.0nm,1.1s,baz=16,slow=9.3,SNR=3.7
DBIC Dimbokro 122.02 336 PKP **PKPdf 14 42 09.6 +0.5**
comp=Z,14nm,0.9s,baz=314,slow=1.2,SNR=7.8
TIC Toumodi 122.08 336 *e*PKP1 **PKPdf 14 42 09.2 -0.1**
KIC Kosan Boka 122.28 336 *e*PKP1 **PKPdf 14 42 09.4 -0.3**
comp=Z,17nm,0.9s
LIC Lamto 122.49 336 *e*PKP1 **PKPdf 14 42 10.0 -0.1**
comp=Z,76nm,1.4s
LSZ Lusaka 125.38 289 *e*PKPdf **PKPdf 14 42 15.8 +0.2**
LSZ Lusaka 125.38 289 *e*PKiKP **PKPdf 14 42 15.8 +0.2**
VNDA Vanda 126.11 178 PKP **PKPdf 14 42 15.2 +0.2**
comp=Z,2.2nm,0.8s,baz=315,slow=5.1,SNR=17
VNDA Vanda 126.11 178 *e*PKPdf **PKPdf 14 42 14.9 -0.1**
MATP Matopo 129.00 284 PKP **PKPdf 14 42 22.8 +0.4**
comp=Z,11nm,0.9s,baz=36,slow=1.5,SNR=19
SAML Samuel 129.00 52 *e*PKPdf **PKPdf 14 42 22.5 0.0**
LPAZ La Paz 132.25 63 PKP **PKPdf 14 42 29.9 +0.6**
comp=Z,4.6nm,0.8s,baz=355,slow=3.4,SNR=13
MNMC Minye Minye 133.59 66 *e*PKPdf **PKPdf 14 42 31.4 +0.1**
MAW Mawson 134.62 213 PKP **PKPdf 14 42 31.9 +0.5**
comp=Z,3.4nm,0.7s,baz=314,slow=2.1,SNR=6.8
TSUM Tsumeb 134.87 296 *e*PKPdf **PKPdf 14 42 34.4 +0.8**
PB01 IPOC Station P 135.10 68 *e*PKPdf **PKPdf 14 42 35.0 +1.1**
BOSA Boshof 136.82 279 PKP **PKPdf 14 42 38.0 +1.1**
comp=Z,5.5nm,0.6s,baz=61,slow=1.9,SNR=8.7
BOSA Boshof 136.82 279 PKiKP **PKPdf 14 42 38.0 +1.1**
QSPA South Pole Qui 138.53 180 PKhKP PKPpre 14 42 28.9
comp=Z,1.9nm,0.6s,baz=232,slow=0.9,SNR=11
QSPA PKP **PKiKP 14 42 40.0 -1.0**
comp=Z,4.5nm,0.4s,baz=274,slow=0.3,SNR=26
SYO Syowa Base 143.33 213⇑ *e*PKPdf PKPab 14 42 42.0 -1.3
CPUP Villa Florida 146.33 60 PKPbc **PKPbc 14 42 54.8 -0.3**
comp=Z,25nm,0.8s,baz=324,slow=3.1,SNR=41
PLCA Paso Flores 147.08 93 PKPbc **PKPbc 14 42 57.1 +0.2**
comp=Z,19nm,0.9s,baz=320,slow=3.0,SNR=18
NVL N'lazarevskaya 152.03 205⇑ *i*PKiKP **PKPbc 14 43 06.8 -1.3**
SNAA Sanae 154.88 196 P **PKPab 14 43 30.1 +0.1**
SNAA Sanae 154.88 196 PKPbc **PKPbc 14 43 13.8 -0.7**
comp=Z,4.7nm,0.9s,baz=206,slow=5.1,SNR=16
SNAA PKPab **PKPab 14 43 30.7 +0.7**
comp=Z,18nm,0.9s,baz=161,slow=3.3,SNR=22
VNA2 Neumayer--Watz 156.31 194 P **PKPab 14 43 36.1 +0.1**
baz=139,slow=3.0
VNA3 Neumayer Olymp 156.37 192 P **PKPab 14 43 35.1 -1.3**
VNA1 Neumayer--Stat 156.69 194 P **PKPab 14 43 37.0 -0.6**

TRN 09 14:32:24.1, 18.°06N×63.°36W, h98km, MD3.8, 1C-1D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMRT	**St. Maarten**	**0.27**	**92**⇓	*i*P	Pn	14 32 40.2	+1.8
SMRT				*e*S	Sn	14 32 51.5	+2.4
SABA	**Saba**	**0.45**	**166**	*e*P	Pn	14 32 40.3	+0.9
SABA				*e*S	Sn	14 32 52.0	+1.1
SEUS	**St. Eustatius**	**0.67**	**148**	*e*P	Pn	14 32 42.0	+0.8
SEUS				*e*S	Sn	14 32 54.5	+0.7
BSK	**Brimstone Hill**	**0.87**	**145**	*e*P	Pn	14 32 45.1	+2.0
BSK				*e*S	Sn	14 32 59.4	+2.2
NVRH	**Round Hill, Ne**	**1.14**	**140**	*e*P	Pn	14 32 47.9	+1.9
NVRH				*e*S	Sn	14 33 04.2	+1.8
NVBH	**Bath Hotel, Ne**	**1.18**	**143**	*e*P	Pn	14 32 48.2	+1.8
NVBH				*e*S	Sn	14 33 05.4	+2.1
NEV	**Hard Times**	**1.19**	**141**	*e*P	Pn	14 32 48.6	+2.0
NEV				*e*S	Sn	14 33 05.0	+1.5
ANWB	**Willy Bob**	**1.55**	**104**	*e*P	Pn	14 32 52.1	+1.2
ANWB				*e*S	Sn	14 33 12.2	+0.9
MBWH		**1.72**	**139**⇑	*i*P	Pn	14 32 54.0	+0.9
MBWH				*e*S	Sn	14 33 15.9	+0.7
BPA	**Boggy Peak**	**1.75**	**125**	*e*P	Pn	14 32 55.4	+1.9
BPA				*e*S	Sn	14 33 16.6	+0.7
TBG	**Guadaloupe-3**	**2.74**	**143**	*e*P	Pn	14 33 07.2	+0.8
TBG				*e*S	Sn	14 33 41.1	+2.2
MGG	**Marie-Galante**	**2.89**	**137**	*e*P	Pn	14 33 09.2	+0.8
MGG				*e*S	Sn	14 33 43.9	+1.4
MDVC	**Dominica, Viel**	**3.07**	**142**	*e*P	Pn	14 33 11.6	+0.7
MDVC				*e*S	Sn	14 33 48.3	+1.6
MDPO	**Dominica; Chan**	**3.07**	**143**	*e*P	Pn	14 33 11.5	+0.6
BBL	**Barber's Block**	**3.10**	**144**	*e*P	Pn	14 33 11.9	+0.7
MDN	**Morne-Daniel**	**3.32**	**145**	*e*P	Pn	14 33 16.6	+2.4
MCLT	**Moule a Chique**	**4.91**	**151**	*e*P	Pn	14 33 38.1	+2.4
MCLT	**Moule a Chique**	**4.91**	**151**	*e*S	Sn	14 34 29.8	-1.6

ISK ***09*** *14:33:11.8, 37.°06N×28.°54E, h5km, ML4.2/13*
IDC ***09*** *14:33:12.8±0.7, 37.°03N×28.°60E, h0km, mb4.0/12, mb1 4.1/17, mb1mx3.9/57, mbtmp4.0/17, ML4.0/5, MS3.4/1, Ms1 3.4/1, ms1mx2.6/60, Error ellipse: s-maj=19.4km s-min=12.6km az=155.0*
NEIC ***09*** *14:33:12.0±0.0, 37.°05N×28.°55E, h3km, ML3.9(ATH), ML4.2(ISK), After ISK.*
ISCJB ***09*** *14:33:12.5±0.3, 37.°03N±0.°01×28.°56E±0.°02, h7km±2km, mb3.8/13, Error ellipse: s-maj=2.4km s-min=2.0km az=22.0*
ATH ***09*** *14:33:12.9, 37.°11N×28.°57E, h23km±1km, ML3.9/5, Error ellipse: s-maj=2.5km s-min=1.2km az=185.0*
DDA ***09*** *14:33:12.3, 37.°04N×28.°48E, h21km, Ml4.2*
CSEM ***09*** *14:33:13.1±0.1, 37.°04N×28.°55E, h5km, ML3.9, Error ellipse: s-maj=2.3km s-min=1.8km az=37.0*
THE ***09*** *14:33:14.2, 37.°01N×28.°45E, h0km±1km, ML3.9/5, Error ellipse: s-maj=1.7km s-min=1.1km az=76.0*
NIC ***09*** *14:33:15.5±0.3, 36.°42N×28.°00E, h66km, mb4.7, ML4.5*
GII ***09*** *14:33:16.3±0.0, 36.°77N×28.°75E, h1km, mb4.4/1, MD4.4/1*
ISC 09 14:33:14.6±0.8, 37.°04N±0.°01×28.°51E±0.°01, h12km±5km, n277, σ1§61/369, mb3.9/13, 16C-5D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TURN	**Turunc**	**0.18**	**157**	PG	**Pb**	**14 33 20.2**	**+0.4**
TURN				SG	**Sb**	**14 33 25.8**	**+4.3**
TURN	**Turunc**	**0.18**	**157**	⇑*i*P	**Pb**	**14 33 20.3**	**+0.4**
TURN				*i* S	**Sb**	**14 33 25.2**	**+3.7**
TURN	**Turunc**	**0.18**	**157**	P	**Pb**	**14 33 20.3**	**+0.4**
YER	**Yerkesik**	**0.21**	**297**	PG	**Pg**	**14 33 17.8**	**-1.4**
YER				SG	**Sg**	**14 33 21.7**	**-0.5**
YER	**Yerkesik**	**0.21**	**297**	P	**Pg**	**14 33 17.8**	**-1.4**
YER				S	**Sg**	**14 33 21.8**	**-0.5**
YER	**Yerkesik**	**0.21**	**297**	P	**Pg**	**14 33 17.8**	**-1.4**
YER				S	**Sg**	**14 33 21.8**	**-0.5**
DALY	**Dalyan (Mu¨la**	**0.25**	**153**	PG	**Pg**	**14 33 17.9**	**-1.9**
DALY				SG	**Sg**	**14 33 22.8**	**-0.5**
DALY	**Dalyan (Mu¨la**	**0.25**	**153**	⇑*i*P	**Pg**	**14 33 18.4**	**-1.4**
DALY				*i* S	**Sg**	**14 33 23.1**	**-0.2**
DALY	**Dalyan (Mu¨la**	**0.25**	**153**	*e*Pg	**Pg**	**14 33 17.9**	**-1.9**
DALY	**Dalyan (Mu¨la**	**0.25**	**153**	P	**Pg**	**14 33 18.4**	**-1.4**
DALY				*e*Sg	**Sg**	**14 33 22.8**	**-0.5**
DALY				S		14 33 23.1	
MRSB	**Marmaris-Mugla**	**0.41**	**218**	PG	**Pg**	**14 33 21.4**	**-1.4**
MRSB	**Marmaris-Mugla**	**0.41**	**218**	*e*Pg	**Pg**	**14 33 21.4**	**-1.4**
TAVA	**DENIZLI_Tavas**	**0.53**	**37**	⇑*i*P	**Pg**	**14 33 22.4**	**-2.6**
TAVA	**DENIZLI_Tavas**	**0.53**	**37**	P	**Pg**	**14 33 22.4**	**-2.6**
FETY	**Fethiye**	**0.61**	**131**	PG	**Pg**	**14 33 23.7**	**-2.8**
FETY	**Fethiye**	**0.61**	**131**	P	**Pg**	**14 33 23.1**	**-3.4**
FETY	**Fethiye**	**0.61**	**131**	*e*Pg	**Pg**	**14 33 23.7**	**-2.8**
FETY				S	**Sg**	**14 33 32.6**	**-2.0**
MLSB	**Milas**	**0.64**	**294**	PG	**Pg**	**14 33 25.5**	**-1.6**
MLSB	**Milas**	**0.64**	**294**	*e*Pg	**Pg**	**14 33 25.5**	**-1.6**
DATC	**Datca-Mugla**	**0.74**	**248**	PG	**Pg**	**14 33 27.1**	**-1.8**
DATC	**Datca-Mugla**	**0.74**	**248**	*e*Pg	**Pg**	**14 33 27.1**	**-1.8**
DNZL	**Cakiroluk**	**0.78**	**33**	⇑*i*P	**Pg**	**14 33 26.7**	**-3.0**
DNZL				*i* S	**Sg**	**14 33 40.6**	**+0.7**
DNZL	**Cakiroluk**	**0.78**	**33**	P	**Pg**	**14 33 26.7**	**-3.0**
DNZL				S	**Sg**	**14 33 40.6**	**+0.7**
GLHS	**Glhisar (BURDU**	**0.80**	**81**	PG	**Pg**	**14 33 27.6**	**-2.5**
GLHS	**Glhisar (BURDU**	**0.80**	**81**	*e*Pg	**Pg**	**14 33 27.6**	**-2.5**
AYDN	**Tasoluk**	**0.80**	**321**	⇑*i*P	**Pg**	**14 33 28.6**	**-1.5**
AYDN				*i* S	**Sg**	**14 33 38.8**	**-1.8**
AYDN	**Tasoluk**	**0.80**	**321**	P	**Pg**	**14 33 28.6**	**-1.5**
AYDN				S	**Sg**	**14 33 38.8**	**-1.8**
DAT	**Datca**	**0.81**	**248**	PG	**Pg**	**14 33 28.6**	**-1.8**
DAT	**Datca**	**0.81**	**248**	⇑*i*P	**Pg**	**14 33 28.5**	**-1.8**
DAT				*i* S	**Sb**	**14 33 42.3**	**+0.6**
DAT	**Datca**	**0.81**	**248**	*e*Pg	**Pg**	**14 33 28.6**	**-1.8**
DAT				S	**Sb**	**14 33 42.3**	**+0.6**
DENT	**Denizli**	**0.82**	**30**	PG	**Pg**	**14 33 27.7**	**-2.9**
DENT	**Denizli**	**0.82**	**30**	*e*Pg	**Pg**	**14 33 27.7**	**-2.9**
BDRM	**Kayabasi**	**0.86**	**272**	⇓*i*P	**Pb**	**14 33 29.2**	**-2.2**
BDRM				*i* S	**Sn**	**14 33 44.3**	**-0.7**
BDRM	**Kayabasi**	**0.86**	**272**	P	**Pb**	**14 33 29.2**	**-2.2**
BDRM				S	**Sn**	**14 33 44.3**	**-0.7**
GOLH	**Golhisar**	**0.86**	**77**	*i* P	**Pb**	**14 33 27.9**	**-3.7**
GOLH				*i* S	**Sg**	**14 33 43.0**	**+0.5**
GOLH	**Golhisar**	**0.86**	**77**	P	**Pb**	**14 33 27.9**	**-3.7**
GOLH				S	**Sg**	**14 33 43.0**	**+0.5**
ARG	**Arkhangelos**	**0.88**	**201**	PG	**Pb**	**14 33 30.2**	**-1.6**
ARG	**Arkhangelos**	**0.88**	**201**	P	**Pb**	**14 33 30.6**	**-1.2**
ARG				S	**Sn**	**14 33 45.3**	**-0.2**
ARG	**Arkhangelos**	**0.88**	**201**	P	**Pb**	**14 33 30.3**	**-1.6**
ARG				S	**Sb**	**14 33 43.6**	**+0.1**
ARG	**Arkhangelos**	**0.88**	**201**	*e*Pg	**Pb**	**14 33 30.2**	**-1.6**
ARG				S	**Sb**	**14 33 43.6**	**+0.1**
BODT	**Bodrum**	**0.96**	**272**	PG	**Pb**	**14 33 30.9**	**-2.4**
BODT	**Bodrum**	**0.96**	**272**	P	**Pb**	**14 33 30.9**	**-2.4**
BODT				S	**Sb**	**14 33 46.3**	**+0.4**
BODT	**Bodrum**	**0.96**	**272**	P	**Pb**	**14 33 30.9**	**-2.4**
BODT				S	**Sb**	**14 33 46.3**	**+0.4**
YKAV	**Yalikavak-Bodr**	**0.99**	**275**	PG	**Pb**	**14 33 32.3**	**-1.4**
YKAV	**Yalikavak-Bodr**	**0.99**	**275**	*e*Pg	**Pb**	**14 33 32.3**	**-1.4**
AYDB	**Zeytinkoy-Aydi**	**1.03**	**331**	PG	**Pb**	**14 33 32.7**	**-1.8**
AYDB	**Zeytinkoy-Aydi**	**1.03**	**331**	*e*Pg	**Pb**	**14 33 32.7**	**-1.8**
DIDI	**Didim-Aydin**	**1.07**	**289**	PN	**Pb**	**14 33 33.7**	**-1.4**
DIDI	**Didim-Aydin**	**1.07**	**289**	*e*Pn	**Pb**	**14 33 33.7**	**-1.4**
ELL	**Elmali**	**1.16**	**104**	PN	**Pb**	**14 33 35.3**	**-1.3**
ELL	**Elmali**	**1.16**	**104**	*e*Pn	**Pb**	**14 33 35.3**	**-1.3**
NISR	**Nisiros**	**1.19**	**249**	P	**Pn**	**14 33 36.6**	**-0.4**
NISR				S	**Sg**	**14 33 54.9**	**+1.9**
NISR				AML	AML	14 33 59.1	
	comp=N,11254μm,0.5s						
NISR				AML	AML	14 33 59.9	
	comp=E,22934μm,0.5s						
NISR	**Nisiros**	**1.19**	**249**	P	**Pn**	**14 33 36.2**	**-0.9**
NISR				S	**Sb**	**14 33 52.7**	**+0.2**
NISR	**Nisiros**	**1.19**	**249**	P	**Pn**	**14 33 36.7**	**-0.4**
NISR				S	**Sb**	**14 33 52.7**	**+0.2**
AKAS	**Kas**	**1.19**	**132**	PN	**Pn**	**14 33 35.2**	**-2.0**
AKAS	**Kas**	**1.19**	**132**	⇑*i*P	**Pn**	**14 33 34.7**	**-2.6**
AKAS				*i* S	**Sg**	**14 33 53.7**	**+0.6**
AKAS	**Kas**	**1.19**	**132**	P	**Pn**	**14 33 34.7**	**-2.6**
AKAS	**Kas**	**1.19**	**132**	*e*Pn	**Pn**	**14 33 35.2**	**-2.0**
AKAS				S	**Sg**	**14 33 53.7**	**+0.6**
KSL	**Kastellorizon**	**1.24**	**136**	P	**Pn**	**14 33 37.5**	**-0.2**
KSL				S	**Sb**	**14 33 53.7**	**-0.1**
KSL				AML	AML	14 34 00.5	
	comp=N,11358μm,0.5s						
KSL				AML	AML	14 34 01.9	
	comp=E,17118μm,0.6s						
KSL	**Kastellorizon**	**1.24**	**136**	P	**Pn**	**14 33 36.8**	**-0.9**
BRDR	**BURDUR-Merkez**	**1.40**	**62**	*i* P	**Pn**	**14 33 39.1**	**-0.9**
BRDR				*i* S	**Sb**	**14 33 59.6**	**+1.1**
BRDR	**BURDUR-Merkez**	**1.40**	**62**	P	**Pn**	**14 33 39.1**	**-0.9**
BRDR				S	**Sb**	**14 33 59.6**	**+1.1**
MANT	**Manisa**	**1.45**	**1**	⇑*i*P	**Pn**	**14 33 39.8**	**-1.1**
MANT				*i* S	**Sn**	**14 33 58.5**	**-1.4**
MANT	**Manisa**	**1.45**	**1**	P	**Pn**	**14 33 39.8**	**-1.1**
MANT				S	**Sn**	**14 33 58.5**	**-1.4**
KORT	**Korkueli**	**1.47**	**91**	PN	**Pn**	**14 33 40.0**	**-1.1**
KORT	**Korkueli**	**1.47**	**91**	*i* P	**Pn**	**14 33 41.8**	**+0.7**
KORT				*i* S	**Sg**	**14 34 04.1**	**+2.1**
KORT	**Korkueli**	**1.47**	**91**	*e*Pn	**Pn**	**14 33 40.0**	**-1.1**
KORT	**Korkueli**	**1.47**	**91**	P	**Pn**	**14 33 41.8**	**+0.7**
KULA	**Kula-Manisa**	**1.48**	**4**	PN	**Pn**	**14 33 40.3**	**-0.8**
KULA	**Kula-Manisa**	**1.48**	**4**	*e*Pn	**Pn**	**14 33 40.3**	**-0.8**
SMG	**Samos**	**1.49**	**297**	P	**Pn**	**14 33 40.7**	**-0.6**
SMG				S	**Sn**	**14 34 00.3**	**-0.4**
SMG				AML	AML	14 34 08.0	
	comp=N,6548μm,0.9s						
SMG				AML	AML	14 34 09.4	
	comp=E,5982μm,0.5s						
SMG	**Samos**	**1.49**	**297**	P	**Pn**	**14 33 40.4**	**-0.9**
SMG				S	**Sn**	**14 34 00.9**	**+0.2**
SMG	**Samos**	**1.49**	**297**	P	**Pn**	**14 33 40.6**	**-0.6**
SMG				S	**Sn**	**14 34 00.9**	**+0.2**
KHL	**Karahalli**	**1.51**	**32**	PN	**Pn**	**14 33 40.2**	**-1.4**
KHL	**Karahalli**	**1.51**	**32**	*e*Pn	**Pn**	**14 33 40.2**	**-1.4**
KHAL	**Karahalli**	**1.54**	**30**	⇑*i*P	**Pn**	**14 33 39.2**	**-2.8**
KHAL				*i* S	**Sn**	**14 33 58.5**	**-3.4**
KHAL	**Karahalli**	**1.54**	**30**	P	**Pn**	**14 33 39.2**	**-2.8**
KHAL				S	**Sn**	**14 33 58.5**	**-3.4**
DGB	**¨zmir**	**1.64**	**308**	⇓*i*P	**Pn**	**14 33 42.3**	**-1.0**
ANTB	**Antalya**	**1.72**	**94**	PN	**Pn**	**14 33 43.9**	**-0.5**
ANTB	**Antalya**	**1.72**	**94**	*e*Pn	**Pn**	**14 33 43.9**	**-0.5**
KZIL	**AFYON_Kizioren**	**1.77**	**46**	*i* P	**Pn**	**14 33 46.1**	**+0.9**
KZIL	**AFYON_Kizioren**	**1.77**	**46**	P	**Pn**	**14 33 46.1**	**+0.9**
ISP	**Isparta**	**1.78**	**63**	PN	**Pn**	**14 33 44.4**	**-0.9**
ISP	**Isparta**	**1.78**	**63**	⇑*i*P	**Pn**	**14 33 46.3**	**+1.0**
ISP	**Isparta**	**1.78**	**63**	P	**Pn**	**14 33 45.9**	**+0.6**
ISP				S	**Sb**	**14 34 10.4**	**+0.8**
ISP	**Isparta**	**1.78**	**63**	Pn	**Pn**	**14 33 45.6**	**+0.3**
ISP	**Isparta**	**1.78**	**63**	*e*Pn	**Pn**	**14 33 44.4**	**-0.9**
ISP	**Isparta**	**1.78**	**63**	P	**Pn**	**14 33 45.9**	**+0.6**
KARP	**Karpathos**	**1.85**	**217**	PN	**Pn**	**14 33 45.7**	**-0.5**
KARP	**Karpathos**	**1.85**	**217**	P	**Pn**	**14 33 46.0**	**-0.1**
KARP				S	**Sb**	**14 34 11.5**	**+0.1**
KARP				AML	AML	14 34 17.1	
	comp=N,3230μm,0.8s						
KARP				AML	AML	14 34 18.1	
	comp=E,3385μm,0.4s						
KARP	**Karpathos**	**1.85**	**217**	P	**Pn**	**14 33 46.3**	**+0.1**
KARP				S	**Sn**	**14 34 08.4**	**-1.1**
KARP	**Karpathos**	**1.85**	**217**	*e*Pn	**Pn**	**14 33 45.7**	**-0.5**
KARP	**Karpathos**	**1.85**	**217**	P	**Pn**	**14 33 46.3**	**+0.1**
KARP				S	**Sb**	**14 34 11.3**	**-0.1**
AKHS	**Akhisar**	**1.92**	**343**	*i* P	**Pn**	**14 33 46.1**	**-1.0**
AKHS	**Akhisar**	**1.92**	**343**	P	**Pn**	**14 33 46.1**	**-1.0**
AKS	**Akhisar**	**1.92**	**343**	PN	**Pn**	**14 33 46.5**	**-0.6**
AKS	**Akhisar**	**1.92**	**343**	*e*Pn	**Pn**	**14 33 46.5**	**-0.6**
ZEY	**¨zmir**	**1.99**	**307**	⇓*i*P	**Pn**	**14 33 47.1**	**-1.1**
ZEY				*i* S	**Sn**	**14 34 12.7**	**-0.3**
DEMI	**Demirci**	**2.00**	**5**	*i* P	**Pn**	**14 33 47.6**	**-0.8**
DEMI				*i* S	**Sn**	**14 34 14.1**	**+0.7**
DEMI	**Demirci**	**2.00**	**5**	P	**Pn**	**14 33 47.6**	**-0.8**
DEMI				S	**Sn**	**14 34 14.1**	**+0.7**
URLA	**Izmir**	**2.01**	**311**	PN	**Pn**	**14 33 48.1**	**-0.3**
URLA	**Izmir**	**2.01**	**311**	*i* P	**Pn**	**14 33 46.3**	**-2.1**
URLA	**Izmir**	**2.01**	**311**	P	**Pn**	**14 33 46.3**	**-2.1**
URLA	**Izmir**	**2.01**	**311**	*e*Pn	**Pn**	**14 33 48.1**	**-0.3**
BAGO	**Egridir - ISPA**	**2.04**	**62**	*i* P	**Pn**	**14 33 50.2**	**+1.3**
BAGO				*i* S	**Sb**	**14 34 16.9**	**-0.2**
SHAP	**Saphane-Kutahy**	**2.06**	**16**	PN	**Pn**	**14 33 48.1**	**-1.0**
SHAP	**Saphane-Kutahy**	**2.06**	**16**	*e*Pn	**Pn**	**14 33 48.1**	**-1.0**
SIMA	**Simav-Kutahya**	**2.07**	**10**	PN	**Pn**	**14 33 48.5**	**-0.8**
SIMA	**Simav-Kutahya**	**2.07**	**10**	*e*Pn	**Pn**	**14 33 48.5**	**-0.8**
GEDZ	**Gediz**	**2.12**	**19**	PN	**Pn**	**14 33 49.3**	**-0.7**
GEDZ	**Gediz**	**2.12**	**19**	*e*Pn	**Pn**	**14 33 49.3**	**-0.7**
FOCM	**Fo¨§a**	**2.19**	**320**	PN	**Pn**	**14 33 50.6**	**-0.2**
FOCM	**Fo¨§a**	**2.19**	**320**	*e*Pn	**Pn**	**14 33 50.6**	**-0.2**
KRBN	**Karaburun**	**2.19**	**316**	PN	**Pn**	**14 33 50.6**	**-0.3**
KRBN	**Karaburun**	**2.19**	**316**	*e*Pn	**Pn**	**14 33 50.6**	**-0.3**
CHOS	**Chios island**	**2.37**	**305**	PN	**Pn**	**14 33 52.7**	**-0.7**
CHOS	**Chios island**	**2.37**	**305**	P	**Pn**	**14 33 53.5**	**+0.1**
CHOS	**Chios island**	**2.37**	**305**	*e*Pn	**Pn**	**14 33 52.7**	**-0.7**
CHOS	**Chios island**	**2.37**	**305**	P	**Pn**	**14 33 53.5**	**+0.1**
APE	**Apeiranthos**	**2.39**	**272**	PN	**Pn**	**14 33 53.2**	**-0.4**
APE	**Apeiranthos**	**2.39**	**272**	⇑*i*P	**Pn**	**14 33 53.2**	**-0.4**
APE	**Apeiranthos**	**2.39**	**272**	P	**Pn**	**14 33 53.1**	**-0.5**
APE				S	**Sn**	**14 34 22.5**	**-0.3**
APE	**Apeiranthos**	**2.39**	**272**	*e*Pn	**Pn**	**14 33 53.2**	**-0.4**
APE				S	**Sn**	**14 34 22.5**	**-0.3**
DKL	**Dikili**	**2.39**	**328**	PN	**Pn**	**14 33 53.6**	**0.0**
DKL	**Dikili**	**2.39**	**328**	*e*Pn	**Pn**	**14 33 53.6**	**0.0**
STEP	**BALIKESIR_Sava**	**2.42**	**345**	⇓*i*P	**Pn**	**14 33 53.1**	**-0.9**
STEP	**BALIKESIR_Sava**	**2.42**	**345**	P	**Pn**	**14 33 53.1**	**-0.9**
KEPZ	**Antalya-Kepez**	**2.48**	**92**	*i* P	**Pn**	**14 33 57.2**	**+2.4**
KEPZ				*i* S	**Sb**	**14 34 28.6**	**-1.0**
KEPZ	**Antalya-Kepez**	**2.48**	**92**	P	**Pn**	**14 33 57.2**	**+2.4**
TVSB	**Tavsanli**	**2.52**	**17**	PN	**Pn**	**14 33 53.9**	**-1.6**
TVSB	**Tavsanli**	**2.52**	**17**	*e*Pn	**Pn**	**14 33 53.9**	**-1.6**
SANT	**Santorini**	**2.54**	**256**	PN	**Pn**	**14 33 55.8**	**+0.1**
SANT	**Santorini**	**2.54**	**256**	⇑*i*P	**Pb**	**14 34 00.7**	**+0.5**
SANT	**Santorini**	**2.54**	**256**	*e*Pn	**Pn**	**14 33 55.8**	**+0.1**
BOLV	**Bolvadin**	**2.55**	**48**	*i* P	**Pn**	**14 33 56.5**	**+0.5**
BOLV	**Bolvadin**	**2.55**	**48**	P	**Pn**	**14 33 56.5**	**+0.5**
DURS	**Dursunbey**	**2.56**	**359**	*i* P	**Pn**	**14 33 55.5**	**-0.5**
DURS	**Dursunbey**	**2.56**	**359**	P	**Pn**	**14 33 55.5**	**-0.5**
KUTH	**Kutahya**	**2.63**	**26**	PN	**Pn**	**14 33 56.6**	**-0.5**
KUTH	**Kutahya**	**2.63**	**26**	*e*Pn	**Pn**	**14 33 56.6**	**-0.5**
BALB	**Balikesir**	**2.64**	**349**	PN	**Pn**	**14 33 57.1**	**0.0**
BALB	**Balikesir**	**2.64**	**349**	*e*Pn	**Pn**	**14 33 57.1**	**0.0**
ZKR	**Zakros**	**2.67**	**225**	P	**Pn**	**14 33 58.8**	**+1.3**
ZKR				S	**Sn**	**14 34 31.2**	**+1.4**
ZKR				AML	AML	14 34 39.7	
	comp=N,822μm,0.8s						
ZKR				AML	AML	14 34 42.0	
	comp=E,1599μm,0.8s						
ZKR	**Zakros**	**2.67**	**225**	P	**Pn**	**14 33 58.5**	**+1.0**
ZKR				S	**Sn**	**14 34 31.2**	**+1.4**
AYVA	**Ayvalik**	**2.68**	**328**	*i* P	**Pn**	**14 33 57.0**	**-0.6**
AYVA				*i* S	**Sg**	**14 34 40.7**	**-0.1**
AYVA	**Ayvalik**	**2.68**	**328**	P	**Pn**	**14 33 57.0**	**-0.6**
BALY	**Balya**	**2.79**	**346**	*i* P	**Pn**	**14 33 57.5**	**-1.6**
BALY	**Balya**	**2.79**	**346**	P	**Pn**	**14 33 57.5**	**-1.6**
NPS	**Neapolis**	**2.94**	**234**	P	**Pn**	**14 34 01.3**	**+0.1**
NPS	**Neapolis**	**2.94**	**234**	P	**Pn**	**14 34 01.3**	**+0.1**
ESKT	**Eskisehir**	**3.08**	**36**	*i* P	**Pn**	**14 34 01.6**	**-1.6**
SEYT	**Eskypehyr**	**3.08**	**36**	P	**Pn**	**14 34 01.6**	**-1.6**
LAST	**Lasithi**	**3.09**	**234**	P	**Pn**	**14 34 03.8**	**+0.4**
LAST	**Lasithi**	**3.09**	**234**	P	**Pn**	**14 34 03.9**	**+0.6**
AUBOZ	**BOZOYUK**	**3.10**	**22**	*i* P	**Pn**	**14 34 03.2**	**-0.2**
AUBOZ	**BOZOYUK**	**3.10**	**22**	P	**Pn**	**14 34 03.2**	**-0.2**
BAYC	**CANAKKALE_Bayr**	**3.11**	**331**	*i* P	**Pn**	**14 34 02.7**	**-0.8**
BAYC	**CANAKKALE_Bayr**	**3.11**	**331**	P	**Pn**	**14 34 02.7**	**-0.8**
AUKUT	**KUTAHYA**	**3.14**	**22**	*i* P	**Pn**	**14 34 01.7**	**-2.3**
AUKUT	**KUTAHYA**	**3.14**	**22**	P	**Pn**	**14 34 01.7**	**-2.3**
GAZI	**Gazipasa**	**3.16**	**104**	*i* P	**Pn**	**14 34 05.1**	**+0.9**
GAZI	**Gazipasa**	**3.16**	**104**	P	**Pn**	**14 34 05.1**	**+0.9**
KDHN	**Kadinhani**	**3.21**	**62**	*i* P	**Pn**	**14 34 05.6**	**+0.6**
KDHN	**Kadinhani**	**3.21**	**62**	P	**Pn**	**14 34 05.6**	**+0.6**
BORA	**Eskisehir**	**3.22**	**28**	*i* P	**Pn**	**14 34 05.5**	**+0.4**
BORA				*i* S	**Sg**	**14 34 56.8**	**-1.2**
BORA	**Eskisehir**	**3.22**	**28**	P	**Pn**	**14 34 05.5**	**+0.4**
IDI	**Anoyia**	**3.41**	**240**	Pn	**Pn**	**14 34 08.5**	**+0.8**
	comp=E,7.6nm,0.3s,baz=57,slow=13,SNR=42						
IDI				Sn	**Sn**	**14 34 51.2**	**+3.0**
	comp=E,19nm,0.3s,baz=329,slow=21,SNR=6.4						
IDI	**Anoyia**	**3.41**	**240**	⇑*i*P	**Pn**	**14 34 08.0**	**+0.3**
IDI	**Anoyia**	**3.41**	**240**	⇑*i*P	**Pn**	**14 34 08.0**	**+0.3**
ERMK	**Ermenek**	**3.55**	**95**	*i* P	**Pn**	**14 34 12.3**	**+2.6**
ERMK				*i* S	**Sn**	**14 34 56.1**	**+4.3**
ERMK	**Ermenek**	**3.55**	**95**	P	**Pn**	**14 34 12.4**	**+2.6**
AUMIH	**MIHALICIK**	**3.66**	**39**	*i* P	**Pb**	**14 34 22.0**	**+2.7**
AUMIH				*i* S	**Sg**	**14 35 14.9**	**+2.7**
AKMC	**Akamas**	**3.69**	**122**	P	**Pn**	**14 34 12.2**	**+0.7**
	baz=292						
AKMC	**Akamas**	**3.69**	**122**	P	**Pn**	**14 34 12.2**	**+0.7**
GEYV	**SAKARYA_Geyve**	**3.71**	**22**	*i* P	**Pb**	**14 34 21.4**	**+1.4**
PPCY	**Paphos**	**3.78**	**124**	P	**Pn**	**14 34 13.5**	**+0.8**
	baz=294						
PPCY	**Paphos**	**3.78**	**124**	P	**Pn**	**14 34 13.5**	**+0.8**
ALFC	**Alefka**	**3.81**	**118**	P	**Pn**	**14 34 14.0**	**+0.9**
	baz=289						
ALFC				S	**Sn**	**14 35 00.9**	**+3.1**
ALFC	**Alefka**	**3.81**	**118**	P	**Sn**	**14 34 14.0**	**+0.9**
ALFC				S	**Sn**	**14 35 00.9**	**+3.1**
LIA	**Limnos Island**	**3.87**	**319**	P	**Pn**	**14 34 13.8**	**-0.1**
LIA	**Limnos Island**	**3.87**	**319**	P	**Pn**	**14 34 13.8**	**-0.1**
LEF	**Lefka**	**4.03**	**117**	P	**Pn**	**14 34 14.4**	**-1.7**
SMTH	**Samothraki Isl**	**4.14**	**327**	P	**Pn**	**14 34 17.0**	**-0.7**
SMTH	**Samothraki Isl**	**4.14**	**327**	P	**Pn**	**14 34 17.0**	**-0.7**
SZAC	**Souni**	**4.22**	**121**	P	**Pn**	**14 34 19.6**	**+0.9**
	baz=294						
SZAC				S	**Sn**	**14 35 09.6**	**+1.7**
SZAC	**Souni**	**4.22**	**121**	P	**Pn**	**14 34 19.6**	**+0.9**
SZAC				S	**Sn**	**14 35 09.6**	**+1.7**
SAHE	**Sakarya_HENDEK**	**4.22**	**25**	*i* P	**Pn**	**14 34 18.7**	**-0.1**
SAHE	**Sakarya_HENDEK**	**4.22**	**25**	P	**Pn**	**14 34 18.7**	**-0.1**
KAND	**Kocaeli-Kandir**	**4.25**	**17**	*i* P	**Pb**	**14 34 27.9**	**-1.5**
ALN	**Alexandroupoli**	**4.30**	**334**	P	**Pn**	**14 34 19.4**	**-0.5**
ALN	**Alexandroupoli**	**4.30**	**334**	P	**Pn**	**14 34 19.4**	**-0.5**
ANTO	**Ankara**	**4.39**	**49**	⇑*i*P	**Pn**	**14 34 22.4**	**+1.3**
ANTO	**Ankara**	**4.39**	**49**	⇑*i*P	**Pn**	**14 34 22.4**	**+1.3**
CSS	**Mathiatis**	**4.42**	**117**	P	**Pn**	**14 34 23.7**	**+2.1**
	baz=290						
CSS				S	**Sn**	**14 35 16.4**	**+3.4**
CSS	**Mathiatis**	**4.42**	**117**	P	**Pn**	**14 34 22.1**	**+0.5**
CSS	**Mathiatis**	**4.42**	**117**	Pn	**Pn**	**14 34 20.5**	**-1.1**
CSS				Sn	**Sn**	**14 35 10.6**	**-2.4**
CSS	**Mathiatis**	**4.42**	**117**	Pn	**Pn**	**14 34 20.5**	**-1.1**
CSS	**Mathiatis**	**4.42**	**117**	P	**Pn**	**14 34 22.1**	**+0.5**
CSS				Sn	**Sn**	**14 35 10.6**	**-2.4**
CSS				S	**Sn**	**14 35 16.4**	**+3.4**
KERG	**Konya-Eregli**	**4.49**	**84**	*i* P	**Pn**	**14 34 25.5**	**+2.8**
KERG	**Konya-Eregli**	**4.49**	**84**	P	**Pn**	**14 34 25.5**	**+2.8**
BCAM	**Yenicaga**	**4.68**	**35**	*i* P	**Pn**	**14 34 25.8**	**+0.7**
BCAM	**Yenicaga**	**4.68**	**35**	P	**Pn**	**14 34 25.8**	**+0.7**
BRTR	**Keskin Array B**	**4.84**	**55**	Pn	**Pn**	**14 34 28.4**	**+1.1**
	comp=E,6.0nm,0.3s,baz=240,slow=17,SNR=133						
BRTR				Sn	**Sn**	**14 35 24.5**	**+1.1**
	comp=E,2.2nm,0.3s,baz=244,slow=30,SNR=8.3						
GULE	**Gulek**	**5.01**	**85**	*i* P	**Pn**	**14 34 32.8**	**+3.0**
GULE	**Gulek**	**5.01**	**85**	P	**Pn**	**14 34 32.8**	**+3.0**
ELDT	**Eldivan**	**5.16**	**47**	*i* P	**Pn**	**14 34 31.7**	**-0.1**
ELDT	**Eldivan**	**5.16**	**47**	P	**Pn**	**14 34 31.7**	**-0.1**
CDAG	**Cicekdag**	**5.28**	**59**	*i* P	**Pn**	**14 34 34.4**	**+1.0**
CDAG	**Cicekdag**	**5.28**	**59**	P	**Pn**	**14 34 34.4**	**+1.0**
BTIN	**Bart¨–n**	**5.43**	**31**	*i* P	**Pn**	**14 34 35.9**	**+0.6**
BTIN	**Bart¨–n**	**5.43**	**31**	P	**Pn**	**14 34 35.9**	**+0.6**
YAYL	**Yayladag**	**6.20**	**97**	*i* P	**Pn**	**14 34 47.8**	**+1.7**
HNTI	**Hanita**	**6.74**	**124**	Pn	**Pn**	**14 34 52.5**	**-0.9**
HNTI				Sn	**Sn**	**14 36 07.0**	**-3.1**
HNTI	**Hanita**	**6.74**	**124**	Pn	**Pn**	**14 34 52.5**	**-0.9**
HNTI				Sn	**Sn**	**14 36 07.0**	**-3.1**
STIP	**Stip**	**6.75**	**315**	*e*Pn	**Pn**	**14 34 52.9**	**-0.6**
OFRI	**'Ofer**	**6.91**	**128**	Pn	**Pn**	**14 34 54.7**	**-1.1**
OFRI				Sn	**Sn**	**14 36 11.3**	**-3.0**
OFRI	**'Ofer**	**6.91**	**128**	Pn	**Pn**	**14 34 54.7**	**-1.1**
OFRI				Sn	**Sn**	**14 36 11.3**	**-3.0**
MMA0B	**Mount Meron ar**	**6.93**	**123**	Pn	**Pn**	**14 34 55.2**	**-0.9**
MMA0B				Sn	**Sn**	**14 36 12.3**	**-2.6**
MMA0B	**Mount Meron ar**	**6.93**	**123**	Pn	**Pn**	**14 34 55.2**	**-0.9**
MMA0B				Sn	**Sn**	**14 36 12.3**	**-2.6**
MMAI	**Mount Meron Ar**	**6.93**	**123**	Pn	**Pn**	**14 34 55.0**	**-1.0**
	comp=E,17nm,0.3s,baz=304,slow=12,SNR=58						
MMAI				Sn	**Sn**	**14 36 11.5**	**-3.4**
	comp=E,13nm,0.3s,baz=306,slow=27,SNR=6.2						
BLGI	**Bet Lehem HaGe**	**6.97**	**126**	Pn	**Pn**	**14 34 55.4**	**-1.1**
BLGI				Sn	**Sn**	**14 36 13.4**	**-2.3**
BLGI	**Bet Lehem HaGe**	**6.97**	**126**	Pn	**Pn**	**14 34 55.4**	**-1.1**
BLGI				Sn	**Sn**	**14 36 13.4**	**-2.3**
KSDI	**Kefar Szold**	**7.00**	**121**	Pn	**Pn**	**14 34 56.2**	**-0.8**
KSDI				Sn	**Sn**	**14 36 13.9**	**-2.6**
KSDI	**Kefar Szold**	**7.00**	**121**	Pn	**Pn**	**14 34 56.2**	**-0.8**
KSDI				Sn	**S

I26DE FREYUNG INFRAS21.89 286 *i* 16 50 00.0
baz=82,slow=318,SNR=0.7

PRU 09 14:42:43.9, 49°.75N×18°.45E, h0km, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.21**	**294**	*e*PG	Pg	14 42 47.6	-0.4
OKC				*e*SG	Sg	14 42 50.9	+0.1

comp=Z,7.3nm,0.3s

DJA 09 14:57:19.9±1.5, 2°S±3°×12°1E±°, h18km±14km, M4.0/10, mb4.7/1, MLv3.7/10, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTSI	**Tana Toraja**	**1.25**	**234**	P	Pn	14 57 41.4	-1.1
TTSI				S	Sb	14 57 58.9	0.0
APSI	**Ampana**	**1.61**	**30**	P	Pn	14 57 47.5	+0.1
APSI				S	Sb	14 58 09.9	+0.8
PCI	**Palu**	**1.72**	**324**	P	Pn	14 57 49.2	+0.2
SPSI	**Sidrap Palu**	**1.96**	**213**	P	Pn	14 57 52.0	-0.3
BNSI	**Bone**	**2.20**	**199**	P	Pn	14 57 55.8	+0.2
LUWI	**Luwuk**	**2.31**	**57**	P	Pn	14 57 56.2	-0.8
KDI	**Kendari**	**2.42**	**133**	P	Pn	14 57 58.8	+0.3
MPSI	**Mapaga**	**2.79**	**340**	P	Pn	14 58 04.3	+0.6
MRSI	**Marisa**	**2.98**	**22**	P	Pn	14 58 05.9	-0.4
MRSI				S	Sn	14 58 41.4	-0.2
BKSI	**Bulukumba**	**3.08**	**193**	P	Pn	14 58 08.7	+1.1
LBMI	**Labuha**	**6.86**	**76**	P	Pn	14 58 58.7	-1.0

*UCR **09** 14:58:09.8±2.1, 9°.16N×84°.17W, h23km±6km, MD3.3*
*ISCJB **09** 14:58:10.4±0.5, 9°.17N±0°.04×84°.14W±0°.04, h39km±6km, mb4.0/9, MS3.7/3, Error ellipse: s-maj=9.3km s-min=3.4km az=41.2*
*IDC **09** 14:58:12.4±1.7, 9°.30N×84°.05W, h42km±17km, mb3.6/8, mb1 3.9/13, mb1mx3.7/47, mbtmp4.0/13, ML3.5/5, MS3.8/7, Ms1 3.8/7, ms1mx3.4/48, Error ellipse: s-maj=26.0km s-min=10.9km az=47.0*
ISC 09 14:58:11.1±1.0, 9°.21N±0°.05×84°.11W±0°.04, h31km±7km, n45, σ0°88/57, mb3.9/9, MS3.5/3, 1C-11D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QCR1	**Quepos**	**0.22**	**345**	⇑*i*P	Pb	14 58 17.0	-0.7
EDDO	**Dominical**	**0.24**	**80**	⇓*e*P	Pb	14 58 17.5	-0.4
EDDO				*e*S	Sn	14 58 23.3	-0.1
BUS	**Buena Vista**	**0.49**	**45**	⇓*i*P	Pb	14 58 21.0	-0.6
EDLM	**Las Mercedes**	**0.52**	**82**	⇓*e*P	Pb	14 58 21.4	-0.5
EDLM				*e*S	Sn	14 58 30.1	-0.1
EDPN	**Palmar Norte**	**0.69**	**111**	*e*P	Pn	14 58 23.8	-0.9
EDPN				*e*S	Sb	14 58 33.6	-0.3
URSC	**Urasca**	**0.70**	**28**	⇓*i*P	Pn	14 58 24.5	-0.6
SJS	**Escuela Geolog**	**0.73**	**4**	⇓*e*P	Pn	14 58 24.6	-0.8
SJS				*e*S	Sn	14 58 35.3	-0.3
HDC	**Heredia**	**0.79**	**360**	⇓*i*P	Pn	14 58 25.7	-0.5
HDC				*e*S	Sb	14 58 36.9	+0.1
EDBA	**Buenos Aires**	**0.82**	**93**	⇓*e*P	Pn	14 58 25.4	-1.2
EDBA				*e*S	Sb	14 58 38.2	+0.5
CGA2	**Cerro Gallo 2**	**0.88**	**336**	⇓*e*P	Pn	14 58 26.6	-0.8
CVTR	**Volcan Turrial**	**0.88**	**23**	⇓*i*P	Pn	14 58 27.2	-0.5
CVTR				*e*S	Sb	14 58 40.5	+0.8
SRA1	**San Ram˜‡n**	**0.94**	**337**	⇓*e*P	Pn	14 58 26.6	-1.8
SRA1				*e*S	Sn	14 58 39.8	-1.1
PTJ1	**Puerto Jim˜"ne**	**1.04**	**130**	*e*P	Pn	14 58 27.9	-1.7
ACR	**Cerro Adams**	**1.08**	**121**	⇓*e*P	Pn	14 58 28.8	-1.4
ACR				*e*S	Sn	14 58 44.1	0.0
EDSV	**San Vito**	**1.19**	**109**	*e*P	Pb	14 58 33.4	+0.3
JTS	**JuntasAbangare**	**1.36**	**322**	P	Pn	14 58 33.0	-1.0
	112nm,0.3s,baz=147,slow=6.5,SNR=189						
JTS				S	Sn	14 58 51.1	+0.1
	246nm,0.3s,baz=131,slow=19,SNR=24						
JTS	**JuntasAbangare**	**1.36**	**322**	*e*P	Pn	14 58 33.0	-1.0
BRU2	**Volcan**	**1.46**	**106**	*e*P	Pn	14 58 35.4	0.0
BRU2				*e*S	Sb	14 58 55.6	-0.4
CUI	**Cuipilapa**	**1.78**	**324**	*e*S	Sn	14 59 00.3	-1.1
MESS	**Mesas**	**1.86**	**325**	*e*P	Pn	14 58 41.1	+0.1
MESS				*e*S	Sn	14 59 04.0	+0.6
GPS2	**Hotel Rinc˜‡n**	**1.96**	**321**	*e*P	Pn	14 58 42.1	-0.3
GPS2				*e*S	Sn	14 59 07.3	+1.3
ESPN	**Las Esperanzas**	**2.97**	**356**	*e*P	Pn	14 58 56.3	+0.1
BCIP	**Isla Barro Col**	**4.22**	**90**	*e*P	Pn	14 59 13.4	+0.1
UPA	**Univ. de Panam**	**4.52**	**93**	*e*P	Pn	14 59 18.7	+1.2
FLAM	**Flamenco Islan**	**4.52**	**93**	*e*P	Pn	14 59 18.9	+1.4
APG	**El Apazote**	**8.47**	**313**	P	Pn	15 00 13.6	+1.6
	0.5nm,0.3s,baz=124,slow=8.7,SNR=5.6						
ROSC	**El Rosal**	**10.64**	**113**	LR	LR	15 04 35.2	
	comp=Z,220nm,21.3s,baz=270,slow=36						
CMIG	**Matias Romero**	**13.09**	**308**	P	Pn	15 01 17.0	+2.0
	0.4nm,0.3s,baz=102,slow=11,SNR=4.1						
SDV	**Santo Domingo**	**13.31**	**98**	P	Pn	15 01 18.9	+0.6
	0.3nm,0.3s,baz=276,slow=19,SNR=2.8						
SDV				LR	LR	15 07 21.0	
	comp=Z,386nm,20.4s,baz=309,slow=41						
ATAH	**Atahualpa**	**17.20**	**160**	P	P	15 02 12.6	+1.6
	0.3nm,0.3s,baz=70,slow=14,SNR=2.5						
ATAH				LR	LR	15 07 58.3	
	comp=Z,497nm,20.1s,baz=329,slow=34						
SJG	**San Juan**	**19.55**	**61**	P	P	15 02 35.8	-0.7
	0.4nm,0.3s,baz=279,slow=19,SNR=3.2						
SJG				LR	LR	15 09 12.0	
	comp=Z,333nm,20.6s,baz=244,slow=34						
NNA	**Nana**	**22.26**	**161**	P	P	15 03 05.7	-0.1
	5.2nm,0.4s,baz=286,slow=6.9,SNR=1.8						
NNA				LR	LR	15 11 04.2	
	comp=Z,157nm,20.5s,baz=140,slow=35						
PTGA	**Pitinga**	**25.99**	**111**	P	P	15 03 42.3	+0.8
	5.3nm,0.9s,baz=289,slow=13,SNR=6.0						
PTGA				LR	LR	15 15 41.1	
	comp=Z,123nm,18.1s,baz=222,slow=40						
TXAR	**Lajitas Array**	**27.15**	**320**	P	P	15 03 52.3	+0.4
	0.2nm,0.6s,baz=131,slow=11,SNR=2.7						
LPIG	**La Paz**	**29.06**	**304**	P	P	15 04 09.6	+0.7
	55nm,0.3s,baz=200,slow=2.5,SNR=3.8						
PDAR	**Pinedale Array**	**40.18**	**331**	PcP	PcP	15 07 49.0	+0.2
	0.2nm,0.4s,baz=133,slow=6.3,SNR=3.7						
NVAR	**Mina Array Bea**	**42.29**	**319**	P	P	15 06 03.0	+0.7
	0.5nm,0.5s,baz=123,slow=6.6,SNR=4.2						
PLCA	**Paso Flores**	**51.24**	**167**	P	P	15 07 12.3	+0.3
	9.0nm,0.8s,baz=4.3,slow=8.2,SNR=16						
SFJD	**Kangerlussuaq**	**61.98**	**14**	LR	LR	15 36 57.6	
	comp=Z,177nm,18.2s,baz=230,slow=38						
ILAR	**Eielson Array**	**70.29**	**336**	P	P	15 09 20.2	-1.1
	0.2nm,0.6s,baz=115,slow=4.8,SNR=6.5						
ESDC	**Sonseca Array**	**76.61**	**51**	P	P	15 09 58.5	-0.6
	0.2nm,0.4s,baz=286,slow=6.0,SNR=4.1						
TORD	**Torodi Ar. Bea**	**83.90**	**78**	P	P	15 10 37.6	-1.1
	0.8nm,0.8s,baz=266,slow=2.9,SNR=4.3						
ASAR	**Alice Springs**	**140.96**	**244**	PKP	PKPdf	15 17 38.2	-0.9
	1.1nm,0.9s,baz=131,slow=2.3,SNR=7.0						
WRA	**Warramunga Arr**	**141.38**	**250**	PKP	PKPdf	15 17 39.0	-0.9
	1.4nm,0.9s,baz=88,slow=1.7,SNR=6.9						
CMAR	**Chiang Mai Arr**	**152.34**	**354**	PKPbc	PKPbc	15 18 04.3	-0.7
	1.3nm,0.9s,baz=332,slow=2.1,SNR=6.1						
CMAR				PKPab	PKPab	15 18 14.1	-0.7
	0.8nm,0.7s,baz=342,slow=4.0,SNR=4.1						

IDC 09 15:01:34.2±1.8, 6.73S×129°.30E, h0km, mb3.4/1, mb1 3.5/4, mb1mx3.2/55, mbtmp3.4/4, ML3.3/3, Error ellipse: s-maj=65.6km s-min=28.9km az=80.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.15**	**19**	Pn	Pn	15 03 06.2	-0.2
	0.3nm,0.3s,baz=207,slow=20,SNR=4.1						
SIJI				Sn	Sn	15 04 11.6	-5.8
	1.1nm,0.3s,baz=118,slow=23,SNR=7.5						
WRA	**Warramunga Arr**	**14.01**	**160**	Pn	Pn	15 04 53.6	-0.6
	0.2nm,0.3s,baz=338,slow=14,SNR=12						
WRA				Sn	Sn	15 07 17.7	-13
	0.5nm,0.3s,baz=331,slow=23,SNR=12						
ASAR	**Alice Springs**	**17.41**	**166**	P	Pn	15 05 39.0	+0.3
	0.1nm,0.3s,baz=348,slow=11,SNR=16						
ASAR				S	Sn	15 08 41.4	-12
	0.2nm,0.3s,baz=351,slow=27,SNR=7.4						
MKAR	**Makanchi Array**	**67.62**	**327**	P	P	15 12 33.1	+0.1
	0.2nm,0.5s,baz=126,slow=5.7,SNR=4.1						

KRSC 09 15:02:06.5±1.3, 48°.76N×156°.30E, h6km±23km, ML3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.93**	**357**	*e*P	Pn	15 02 40.0	+0.2
SKR				*e*S	Sn	15 03 04.7	+0.3
PAU	**Pauzhetka**	**2.73**	**7**	*e*S	Sb	15 03 27.4	-2.0
KDTR	**Khodutka, Kamc**	**3.26**	**20**	*e*P	Pn	15 03 01.4	+3.3
KDTR				*e*S	Sb	15 03 41.9	-2.7
RUS	**Russkaya**	**3.94**	**20**	*e*P	Pn	15 03 11.1	+3.6
RUS				*e*S	Sn	15 03 58.7	+4.7
UGLR	**Uglovaya**	**4.73**	**19**	*e*P	Pn	15 03 22.9	+4.4
KRER	**Koryakskii**	**4.80**	**18**	*e*P	Pn	15 03 23.8	+4.2
SDLR	**Sedlovina**	**4.81**	**19**	*e*P	Pn	15 03 22.8	+3.2
GNL	**Ganaly**	**5.05**	**11**	*e*P	Pn	15 03 27.6	+4.8

*DDA **09** 15:08:36.6, 37°.29N×29°.60E, h8km, Ml2.7*
*CSEM **09** 15:08:36.3±0.2, 37°.33N×29°.62E, h5km, ML2.7, Error ellipse: s-maj=4.3km s-min=3.8km az=175.0*
*ISK **09** 15:08:36.9, 37°.25N×29°.59E, h14km, ML2.3/3*
*ISCJB **09** 15:08:37.0±0.5, 37°.26N±0°.04×29°.58E±0°.04, h12km±5km, Error ellipse: s-maj=6.1km s-min=5.2km az=173.7*
ISC 09 15:08:36.4±1.0, 37°.32N±0°.03×29°.61E±0°.02, h8km±8km, n28, σ0°67/37, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.09**	**207**	*i* P	Pg	15 08 38.5	-0.2
GOLH	**Golhisar**	**0.09**	**207**	P	Pg	15 08 38.5	-0.2
GLHS	**Glhisar (BURDU**	**0.18**	**210**	PG	Pg	15 08 40.6	+0.4
GLHS				SG	Sg	15 08 43.0	+0.2
GLHS	**Glhisar (BURDU**	**0.18**	**210**	*e*Pg	Pg	15 08 40.6	+0.4
GLHS				*e*Sg	Sg	15 08 43.0	+0.2
BRDR	**BURDUR-Merkez**	**0.52**	**43**	*i* P	Pg	15 08 44.8	-1.8
BRDR				*i* S	Sb	15 08 57.6	+2.0
BRDR	**BURDUR-Merkez**	**0.52**	**43**	P	Pg	15 08 44.8	-1.8
TAVA	**DENIZLI_Tavas**	**0.58**	**285**	*i* P	Pg	15 08 47.9	+0.3
TAVA				*i* S	Sb	15 08 56.7	-0.5
TAVA	**DENIZLI_Tavas**	**0.58**	**285**	P	Pg	15 08 47.9	+0.3
TAVA				S	Sb	15 08 56.7	-0.5
ELL	**Elmali**	**0.61**	**157**	PG	Pg	15 08 48.3	0.0
ELL	**Elmali**	**0.61**	**157**	*e*Pg	Pg	15 08 48.3	0.0
KORT	**Korkueli**	**0.67**	**118**	PG	Pb	15 08 50.3	-0.1
KORT	**Korkueli**	**0.67**	**118**	*i* P	Pg	15 08 49.7	+0.4
KORT				*i* S	Sb	15 09 00.2	+0.3
KORT	**Korkueli**	**0.67**	**118**	P	Pg	15 08 49.7	+0.4
KORT	**Korkueli**	**0.67**	**118**	*e*Pg	Pb	15 08 50.3	-0.1
KORT				S	Sb	15 09 00.2	+0.3
FETY	**Fethiye**	**0.80**	**212**	PG	Pg	15 08 51.6	-0.2
FETY				SG	Sb	15 09 02.5	-1.1
FETY	**Fethiye**	**0.80**	**212**	*e*Pg	Pg	15 08 51.6	-0.2
FETY				*e*Sg	Sb	15 09 02.5	-1.1
DALY	**Dalyan (Mu˜la**	**0.91**	**237**	PG	Pg	15 08 53.9	-0.1
DALY	**Dalyan (Mu˜la**	**0.91**	**237**	*e*Pg	Pg	15 08 53.9	-0.1
KHAL	**Karahalli**	**1.06**	**355**	*i* P	Pg	15 08 57.2	+0.5
KHAL	**Karahalli**	**1.06**	**355**	P	Pg	15 08 57.2	+0.5
AKAS	**Kas**	**1.08**	**180**	PG	Pg	15 08 56.8	-0.4
AKAS	**Kas**	**1.08**	**180**	*e*Pg	Pg	15 08 56.8	-0.4
SUTC	**Sutluce-Ispart**	**1.12**	**81**	PN	Pn	15 08 58.8	+0.3
SUTC	**Sutluce-Ispart**	**1.12**	**81**	*e*Pn	Pn	15 08 58.8	+0.3
AYDN	**Tasoluk**	**1.42**	**285**	*i* P	Pb	15 09 03.2	0.0
AYDN	**Tasoluk**	**1.42**	**285**	P	Pb	15 09 03.2	0.0
DAT	**Datca**	**1.73**	**251**	PN	Pn	15 09 06.9	0.0
DAT	**Datca**	**1.73**	**251**	*e*Pn	Pn	15 09 06.9	0.0

*IDC **09** 15:09:46.4±1.1, 35°.11N×141°.15E, h0km, mb3.5/6, mb1 3.6/9, mb1mx3.4/67, mbtmp3.5/9, ML3.0/3, Error ellipse: s-maj=26.4km s-min=16.5km az=85.0*
*ISCJB **09** 15:09:47.5±1.1, 35°.16N±0°.04×141°.34E±0°.08, h24km±6km, mb3.6/6, Error ellipse: s-maj=11.3km s-min=6.9km az=169.9*
*JMA **09** 15:09:49.0±0.1, 35°.19N×141°.23E, h31km±3km, M2.8*
ISC 09 15:09:48.2±1.7, 35°.10N±0°.06×141°.14E±0°.08, h11km±11km, n16, σ1°08/21, mb3.6/6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.46**	**197**	P	Pn	15 10 00.2	0.0
BSO1				*e*X		15 10 07.6	
BSO3	**Boso 3**	**0.59**	**241**	P	Pn	15 10 02.4	+0.1
CHOJ	**Chosi**	**0.65**	**339**	P	Pg	15 10 00.7	-0.1
CHOJ				*e*S	Sg	15 10 09.4	+0.1
BSO4	**Boso 4**	**0.67**	**261**	P	Pn	15 10 03.6	+0.2
BSO4				*e*X		15 10 13.3	
KTR	**Katsuura**	**0.68**	**275**	P	Pn	15 10 03.2	-0.4
JCN	**Nagara**	**0.83**	**293**	P	Pb	15 10 05.2	+0.6
JCN				S	Sb	15 10 16.6	+0.8
JHJ	**Hachijo jima 2**	**2.27**	**210**	Pn	Pn	15 10 25.2	-0.4
	5.3nm,0.3s,baz=79,slow=21,SNR=3.8						
JHJ				Sn	Sb	15 10 55.8	-1.4
	12nm,0.3s,baz=91,slow=20,SNR=4.5						
MJAR	**Matsushiro Arr**	**2.78**	**302**	Pn	Pn	15 10 32.9	+0.2
	1.4nm,0.3s,baz=114,slow=6.4,SNR=21						
MJAR				Sn	Sn	15 11 06.9	+0.6
	0.7nm,0.3s,baz=123,slow=11,SNR=5.6						
MAT	**Matsushiro**	**2.79**	**302**	P	Pn	15 10 34.7	+2.0
MAT				*e*S	Sb	15 11 09.8	-2.3
ASAJ	**Asahikawa**	**9.08**	**7**	Pn	Pn	15 11 56.9	-2.2
	0.4nm,0.3s,baz=253,slow=12,SNR=6.5						
ZALV	**Zalesovo Beam**	**43.08**	**314**	P	P	15 17 47.8	-0.1
	0.8nm,0.6s,baz=104,slow=6.1,SNR=3.3						
MKAR	**Makanchi Array**	**44.98**	**304**	P	P	15 18 03.2	-0.1
	0.3nm,0.6s,baz=91,slow=8.4,SNR=3.5						
KURBB	**Kurchatov Arra**	**47.04**	**309**	P	P	15 18 18.9	-0.6
	0.7nm,0.6s,baz=83,slow=7.8,SNR=5.9						
ILAR	**Eielson Array**	**51.25**	**32**	P	P	15 18 52.1	+0.6
	0.4nm,1.1s,baz=262,slow=6.3,SNR=3.1						
WRA	**Warramunga Arr**	**55.11**	**188**	P	P	15 19 19.6	-0.7
	0.9nm,0.6s,baz=5.3,slow=7.5,SNR=17						
ASAR	**Alice Springs**	**58.84**	**188**	P	P	15 19 47.6	+0.8
	0.4nm,0.7s,baz=4.2,slow=7.0,SNR=5.5						

*ISCJB **09** 15:10:23.0±0.5, 48°.67N±0°.05×155°.31E±0°.09, h35km, mb3.7/18, Error ellipse: s-maj=11.1km s-min=3.1km az=39.8*
*KRSC **09** 15:10:23.2±1.8, 48°.59N×155°.85E, h80km±31km, ML4.5*
*SKHL **09** 15:10:24.5±0.9, 48°.56N×155°.61E, h70km±6km, mb4.4/5*
*MOS **09** 15:10:25.6±0.8, 48°.79N×155°.33E, h73km, mb4.0/10, Error ellipse: s-maj=14.8km s-min=4.2km az=75.5*
*IDC **09** 15:10:29.4±2.1, 48°.85N×154°.99E, h80km±17km, mb3.4/18, mb1 3.6/24, mb1mx3.4/72, mbtmp3.8/24, MS3.2/1, Ms1 3.2/1, ms1mx2.5/48, Error ellipse: s-maj=19.6km s-min=10.5km az=131.0*
ISC 09 15:10:23.6±0.7, 48°.60N±0°.08×155°.52E±0°.08, h35km, n97, σ1°88/115, mb3.6/18, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.12**	**10**	*e*P	Pn	15 10 57.3	+0.8
SKR				AMB	AMB	15 10 58.8	
	130nm,0.4s						
SKR				*e*S	Sn	15 11 21.4	-0.2
SKR				A	A	15 11 23.4	
	267nm,0.4s						
SKR				A	A	15 11 23.4	
	685nm,0.4s						
SKR	**Severo-Kuril's**	**2.12**	**10**	*e*P	Pn	15 10 56.9	+0.4
SKR				*e*S	Sn	15 11 21.4	-0.2
SKR	**Severo-Kuril's**	**2.12**	**10**	*e*PN	Pn	15 10 57.3	+0.8
SKR				*e*S	Sn	15 11 21.4	-0.2
SKR				pmax	pmax		
	comp=Z,129nm,0.4s						
SKR				smax	smax		
	comp=E,685nm,0.5s						
SKR				smax	smax		
	comp=N,268nm,0.3s						
PAU	**Pauzhetka**	**2.99**	**16**	*e*P	Pn	15 11 09.6	+1.2
PAU				*e*S	Sn	15 11 44.4	+1.4
PAU	**Pauzhetka**	**2.99**	**16**	*e*P	Pn	15 11 09.6	+1.2
PAU				*e*S	Sn	15 11 44.4	+1.4
PAU	**Pauzhetka**	**2.99**	**16**	PN	Pn	15 11 09.6	+1.2
PAU				S	Sn	15 11 44.4	+1.4
KDTR	**Khodutka, Kamc**	**3.61**	**26**	*e*P	Pn	15 11 18.3	+1.4
KDTR				*e*S	Sn	15 11 58.9	+0.6
MIPR	**Malaya Ipel'ka**	**3.77**	**12**	*e*P	Pn	15 11 20.3	+1.2
MIPR	**Malaya Ipel'ka**	**3.77**	**12**	PN	Pn	15 11 20.3	+1.2
ASAK	**Asacha**	**4.08**	**21**	*e*P	Pn	15 11 25.3	+1.8
ASAK	**Asacha**	**4.08**	**21**	PN	Pn	15 11 25.3	+1.8
MTVR	**Mutnovka**	**4.24**	**23**	*e*P	Pn	15 11 28.2	+2.4
MTVR				*e*S	Sn	15 12 15.7	+1.6
MTVR	**Mutnovka**	**4.24**	**23**	PN	Pn	15 11 28.2	+2.4
MTVR				S	Sn	15 12 15.7	+1.6
RUS	**Russkaya**	**4.29**	**25**	*e*P	Pn	15 11 27.9	+1.6
RUS	**Russkaya**	**4.29**	**25**	*e*P	Pn	15 11 27.9	+1.6
RUS				*e*S	Sn	15 12 14.5	-0.5
RUS	**Russkaya**	**4.29**	**25**	PN	Pn	15 11 27.9	+1.6
RUS				S	Sn	15 12 14.5	-0.5
APC	**Apacha**	**4.46**	**13**	*e*P	Pn	15 11 31.7	+3.1
APC	**Apacha**	**4.46**	**13**	PN	Pn	15 11 31.7	+3.1
KRMR	**Karymshinskiy**	**4.55**	**20**	*e*P	Pn	15 11 33.1	+3.2
KRMR				*e*S	Sn	15 12 22.8	+1.4
KRMR	**Karymshinskiy**	**4.55**	**20**	PN	Pn	15 11 33.1	+3.2
KRMR				S	Sn	15 12 22.8	+1.4
PETK	**Petropavlovsk-**	**4.72**	**16**	P	Pn	15 11 35.2	+3.0
	comp=N,5.5nm,0.3s,baz=180,slow=11,SNR=59						
PETK				S	Sn	15 12 29.1	+3.4
	comp=N,0.2nm,0.3s,baz=227,slow=22,SNR=2.1						
PETK				LR	LR	15 13 37.9	
	comp=N,247nm,18.0s,baz=143,slow=41						
PET	**Petropavlovsk**	**4.86**	**23**	*e*P	Pn	15 11 36.0	+1.9
PET				AMB	AMB	15 11 38.2	
	comp=N,27nm,0.5s						
PET				*e*S	Sn	15 12 29.3	+0.3
PET				A	A	15 12 40.1	
	comp=N,111nm,0.8s						
PET				A	A	15 12 40.1	
	comp=N,110nm,0.8s						
PET	**Petropavlovsk**	**4.86**	**23**	*e*PN	Pn	15 11 36.0	+1.9
PET				*e*S	Sn	15 12 29.3	+0.3
PET				pmax	pmax		
	comp=Z,27nm,0.5s						
PET				smax	smax		
	comp=E,108nm,0.6s						
PET				smax	smax		
	comp=N,111nm,1.1s						
DALK	**Dalny**	**4.89**	**24**	*e*P	Pn	15 11 36.7	+2.2
DALK				*e*S	Sn	15 12 30.8	+1.0
DALK	**Dalny**	**4.89**	**24**	PN	Pn	15 11 36.7	+2.2
DALK				S	Sn	15 12 30.8	+1.0
UGLR	**Uglovaya**	**5.07**	**23**	*e*P	Pn	15 11 39.8	+2.7
UGLR	**Uglovaya**	**5.07**	**23**	PN	Pn	15 11 39.8	+2.7
AVH	**Avacha**	**5.09**	**22**	*e*P	Pn	15 11 38.5	+1.0
AVH	**Avacha**	**5.09**	**22**	*e*P	Pn	15 11 38.5	+1.0
AVH	**Avacha**	**5.09**	**22**	PN	Pn	15 11 38.5	+1.0
KOK	**Koryaka**	**5.09**	**22**	*e*P	Pn	15 11 40.3	+2.8
KOK	**Koryaka**	**5.09**	**22**	*e*P	Pn	15 11 40.3	+2.8
KOK	**Koryaka**	**5.09**	**22**	PN	Pn	15 11 40.3	+2.8
KRER	**Koryakskii**	**5.13**	**22**	*e*P	Pn	15 11 40.3	+2.2
KRER	**Koryakskii**	**5.13**	**22**	PN	Pn	15 11 40.3	+2.2
SDLR	**Sedlovina**	**5.14**	**23**	*e*P	Pn	15 11 39.9	+1.7
SDLR	**Sedlovina**	**5.14**	**23**	PN	Pn	15 11 39.9	+1.7
KRX	**Arik**	**5.16**	**21**	*e*P	Pn	15 11 39.8	+1.4
KRX	**Arik**	**5.16**	**21**	PN	Pn	15 11 39.8	+1.4
NLC	**Nalytchevo**	**5.18**	**26**	*e*P	Pn	15 11 40.7	+2.2
NLC	**Nalytchevo**	**5.18**	**26**	*e*P	Pn	15 11 40.7	+2.2
NLC				*e*S	Sn	15 12 36.1	-0.8
NLC	**Nalytchevo**	**5.18**	**26**	PN	Pn	15 11 40.7	+2.2
NLC				S	Sn	15 12 36.1	-0.8
GNL	**Ganaly**	**5.33**	**16**	*e*P	Pn	15 11 43.2	+2.5
GNL	**Ganaly**	**5.33**	**16**	PN	Pn	15 11 43.2	+2.5
SPN	**Mys Shipunski**	**5.33**	**31**	*e*P	Pn	15 11 42.2	+1.6
SPN	**Mys Shipunski**	**5.33**	**31**	*e*P	Pn	15 11 42.2	+1.6
SPN				*e*S	Sn	15 12 40.1	-0.6
SPN	**Mys Shipunski**	**5.33**	**31**	PN	Pn	15 11 42.2	+1.6
SPN				S	Sn	15 12 40.1	-0.6
KUR	**Kuril'sk**	**6.23**	**240**	*e*P	Pn	15 11 54.9	+1.9
KUR				AMB	AMB	15 12 11.7	
	comp=N,12nm,0.7s						
KUR				AMB	AMB	15 12 11.7	
	comp=N,10.0nm,0.7s						
KUR				AMB	AMB	15 12 11.7	
	comp=N,24nm,0.7s						
KUR				*e*S	Sn	15 13 02.6	-0.3
KUR				A	A	15 13 11.1	
	comp=N,63nm,0.8s						
KUR				A	A	15 13 11.1	
	comp=N,37nm,0.8s						
KUR	**Kuril'sk**	**6.23**	**240**	*e*PN	Pn	15 11 56.4	+3.4
KUR				*i* S	Sn	15 13 04.4	+1.5
KUR				pmax	pmax		
	comp=Z,16nm,0.5s						
KUR				pmax	pmax		
	comp=N,12nm,0.3s						
KUR				pmax	pmax		
	comp=E,6.0nm,0.3s						
KUR				smax	smax		
	comp=E,31nm,0.8s	

comp=N,3.1nm,0.8s,baz=31,slow=17,SNR=4.5
CMAR Chiang Mai Arr 54.38 257 P **P** 15 19 46.6 -0.4
comp=N,1.5nm,0.9s,baz=23,slow=7.3,SNR=6.4
SFJD Kangerlussuaq 63.03 11 P **P** 15 20 45.8 -0.7
comp=N,2.5nm,0.5s,baz=277,slow=5.5,SNR=3.2
FINES FINESS Array B 63.05 335 P **P** 15 20 43.9 -2.8
comp=N,0.9nm,0.7s,baz=27,slow=9.4,SNR=8.4
NOA NORSAR Array B 66.99 342 P **P** 15 21 10.5 -1.8
comp=N,0.5nm,0.5s,baz=30,slow=6.6,SNR=2.5
HFS Hagfors 67.28 340 P **P** 15 21 12.6 -1.5
comp=N,1.3nm,0.8s,baz=66,slow=7.0,SNR=3.7
WRA Warramunga Arr 70.81 201 P **P** 15 21 36.9 +0.5
comp=N,0.7nm,1.1s,baz=12,slow=6.1,SNR=3.5
ASAR Alice Springs 74.50 201 P **P** 15 21 59.8 +1.5
comp=N,0.4nm,0.9s,baz=15,slow=5.3,SNR=5.1
EKA Eskdalemuir Ar 74.90 348 P **P** 15 21 59.4 -1.0
comp=N,0.8nm,0.6s,baz=21,slow=4.6,SNR=4.2
EKA Eskdalemuir Ar 74.90 348 P **P** 15 21 59.4 -1.0
EKA pmax pmax
comp=Z,2.0nm,0.8s
TXAR Lajitas Array 75.18 63 P **P** 15 22 04.5 +1.9
comp=Z,0.4nm,0.6s,baz=305,slow=4.4,SNR=6.6

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*ISN **09** 15:16:52.2±1.1, 37.22N×42.69E, h0km±5km, ML3.2*
*CSEM **09** 15:16:53.8±0.3, 37.25N×42.76E, h2km, ML2.8, Error ellipse: s-maj=8.4km s-min=4.4km az=62.0*
*DDA **09** 15:16:54.4, 37.26N×42.66E, h5km, Ml3.2*
*ISK **09** 15:16:56.6, 37.35N×42.50E, h6km, ML2.8/2*
ISC 09 15:16:53.6±1.6, 37.24N±0.04×42.69E±0.05, h3km±10km, n31, σ1§14/48, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SIRT	**Sirnak**	**0.33**	**323**		PG		**Pg**	**15 17 00.0**	**0.0**
SIRT					SG		**Sg**	15 17 02.9	-1.5
SIRT	**Sirnak**	**0.33**	**323**	*i* P	g		**Pg**	**15 17 00.0**	**0.0**
SIRT				*e*	Sg		**Sg**	15 17 02.9	-1.5
SIRN	**S¨–rnak**	**0.34**	**320**	*i* P			**Pg**	**15 17 00.3**	**+0.1**
SIRN				*i* S			**Sg**	15 17 05.0	+0.4
SIRN	**S¨–rnak**	**0.34**	**320**	P			**Pg**	**15 17 00.3**	**+0.1**
SRTM	**Siirt_Merkez**	**0.97**	**321**	*i* P			**Pb**	15 17 12.4	-0.7
SRTM				*i* S			**Sn**	15 17 26.5	-2.0
SRTM	**Siirt_Merkez**	**0.97**	**321**	P			**Pb**	15 17 12.4	-0.7
SRTM				S			**Sn**	15 17 26.5	-2.0
GEVA	**Gevas**	**1.11**	**15**	*i* P			**Pg**	15 17 15.3	+0.4
GEVA				*i* S			**Sb**	15 17 31.2	+0.6
GEVA	**Gevas**	**1.11**	**15**	P			**Pg**	15 17 15.3	+0.4
GEVA				S			**Sb**	15 17 31.2	+0.6
BTMN	**Batman**	**1.30**	**301**	*i* P			**Pn**	15 17 19.5	+0.7
BTMN				*i* S			**Sn**	15 17 38.1	+1.3
BTMN	**Batman**	**1.30**	**301**	P			**Pn**	15 17 19.5	+0.7
BTMN				S			**Sn**	15 17 38.1	+1.3
GURO	**Guroymak-BITLI**	**1.41**	**339**	PN			**Pg**	15 17 21.3	+0.6
GURO				SN			**Sn**	15 17 38.7	-0.8
GURO	**Guroymak-BITLI**	**1.41**	**339**	*e* P			**Pg**	15 17 21.3	+0.6
GURO				*e* S			**Sn**	15 17 38.7	-0.8
SVAN	**Silvan-Diyarba**	**1.50**	**308**	PN			**Pg**	15 17 22.1	-0.1
SVAN	**Silvan-Diyarba**	**1.50**	**308**	*i* P			**Pg**	15 17 22.2	0.0
SVAN				*i* S			**Sg**	15 17 42.6	+1.0
SVAN	**Silvan-Diyarba**	**1.50**	**308**	P			**Pg**	15 17 22.2	0.0
SVAN				S			**Sg**	15 17 42.6	+1.0
MARD	**Mardin**	**1.53**	**273**	*i* P			**Pb**	15 17 22.4	-0.2
MARD				*i* S			**Sg**	15 17 44.3	+1.7
MAZI	**Mazidag**	**1.80**	**278**	PN			**Pb**	15 17 26.9	-0.4
MAZI	**Mazidag**	**1.80**	**278**	*e* P			**Pb**	15 17 26.9	-0.4
HANI	**Diyarbakir_Han**	**2.16**	**304**	*i* P			**Pg**	15 17 33.6	-1.4
HANI				*i* S			**Sg**	15 18 03.5	+0.4
HANI	**Diyarbakir_Han**	**2.16**	**304**	P			**Pg**	15 17 33.6	-1.4
HANI				S			**Sg**	15 18 03.5	+0.4
BNGB	**Bing¨¶l**	**2.36**	**318**	PN			**Pb**	15 17 34.8	-2.1
BINT	**Bingol**	**2.39**	**314**	*e* P			**Pn**	15 17 34.8	+1.1
SVRC	**Sivrice-ELAZID**	**2.91**	**294**	PN			**Pn**	15 17 41.6	+0.6
SVRC	**Sivrice-ELAZID**	**2.91**	**294**	*e* P			**Pn**	15 17 41.6	+0.6
PTK	**Pertek**	**3.08**	**303**	PN			**Pn**	15 17 44.8	+1.4
PTK	**Pertek**	**3.08**	**303**	*e* P			**Pn**	15 17 44.8	+1.4
URFA	**Urfa**	**3.09**	**275**	PN			**Pn**	15 17 44.8	+1.5
URFA	**Urfa**	**3.09**	**275**	*e* P			**Pn**	15 17 44.8	+1.5
MALT	**Malatya**	**3.54**	**289**	PN			**Pn**	15 17 50.8	+1.2
MALT	**Malatya**	**3.54**	**289**	*e* P			**Pn**	15 17 50.8	+1.2
RTB	**Rutbah**	**4.63**	**206**	*e* P			**Pn**	15 18 05.5	+1.0
	SNR=3.0								
RTB				*e* S			**Sn**	15 18 56.0	-2.7
	SNR=3.0								

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*ECX **09** 15:41:52.8±0.5, 32.09N×115.72W, h6km, MD2.9, ML3.1*
*MEX **09** 15:41:53.7±0.6, 32.13N×115.74W, h5km, MD3.8*
ISC 09 15:41:50.0±1.6, 32.10N±0.03×115.70W±0.03, h8km±13km, n23, σ0§58/34, 3C, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CPBX	**Cerro Prieto**	**0.46**	**47**	*e* P			**Pb**	**15 42 01.5**	**+1.1**
CPBX				IAML				15 42 11.6	
	comp=N,5μm,0.5s								
MBIG	**Mexicali**	**0.52**	**54**	*i* P			**Pn**	**15 42 03.1**	**-0.7**
MBIG				*i* S			**Sn**	15 42 11.9	-0.9
SGL	**Mount Signal**	**0.55**	**358**	*e* P			**Pb**	15 42 02.5	+0.7
YUH	**Yuha Desert**	**0.58**	**341**	*e* P			**Pb**	15 42 02.8	+0.5
RMX	**La Rumorosa**	**0.59**	**327**	*e* P			**Pb**	**15 42 02.7**	**0.0**
RMX				IAML				15 42 09.9	
	comp=N,567nm,0.3s								
IKP	**In-Ko-Pah, Jac**	**0.65**	**328**	P			**Pb**	**15 42 04.2**	**+0.6**
	baz=140								
IKP				S			**Sb**	**15 42 12.4**	**-0.4**
	baz=140								
IKP	**In-Ko-Pah, Jac**	**0.65**	**328**	⇑ *e* P			**Pb**	**15 42 04.2**	**+0.6**
CBX	**Cerro Bola**	**0.84**	**285**	*e* P			**Pb**	**15 42 07.6**	**+0.6**
CBX				*e* S			**Sb**	15 42 19.1	+0.7
SWSC	**Sam W. Stewart**	**0.84**	**354**	P			**Pn**	**15 42 08.3**	**+0.1**
	baz=172								
ECNX	**Esteban Cantu**	**0.88**	**240**	⇑ *e* P			**Pn**	**15 42 08.2**	**-0.6**
ECNX				⇑ *e* P			**Pb**	15 42 07.2	-0.3
TJIG	**Tijuana**	**0.89**	**292**	*e* P			**Pb**	15 42 08.1	+0.5
TJIG	**Tijuana**	**0.89**	**292**	*e* P			**Pb**	15 42 08.2	+0.6
TJIG				*i* S			**Sb**	15 42 19.5	-0.1
PBX	**Punta Banda**	**0.94**	**248**	*e* P			**Pb**	15 42 09.1	+0.6
MONP2	**Monument Peak**	**1.00**	**322**	P			**Pn**	**15 42 10.5**	**+0.1**
	baz=137								
MONP2				S			**Sb**	**15 42 23.3**	**+0.3**
	baz=137								
BAR	**Barrett**	**1.00**	**305**	*e* P			**Pb**	15 42 10.3	+0.7
SPIG	**San Pedro Mart**	**1.07**	**169**	*e* P			**Pn**	15 42 12.0	+0.4
SPIG				*e* S			**Sn**	15 42 26.2	-0.6
SPIG	**San Pedro Mart**	**1.07**	**169**	*e* P			**Pn**	15 42 12.2	+0.6
SPIG				*i* S			**Sn**	15 42 26.4	-0.4
SPX	**San Pedro Mart**	**1.07**	**169**	*e* P			**Pn**	15 42 12.3	+0.6
SPX				*i* S			**Sn**	15 42 26.6	-0.3
GLA	**Glamis**	**1.20**	**38**	P			**Pb**	15 42 13.1	+0.1
	baz=221								
GLA				S			**Sg**	**15 42 28.1**	**-0.5**
	baz=221								
SDRC	**San Diego Road**	**1.23**	**301**	*e* P			**Pn**	15 42 13.7	+0.3
109C	**Camp Elliot, M**	**1.42**	**304**	P			**Pg**	15 42 17.3	0.0
	baz=119								
109C				S			**Sb**	**15 42 35.3**	**+0.3**
	baz=119								
PFO	**Pinyon Flats O**	**1.64**	**337**	P			**Pn**	15 42 19.7	+0.5
	baz=155								
MURC	**Murrieta**	**1.95**	**320**	Sb			**Sg**	**15 42 51.9**	**-0.9**
	baz=137								

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*ISCJB **09** 15:45:46.5±0.5, 6.83N±0.04×73.12W±0.04, h153km±4km, mb3.5/5, Error ellipse: s-maj=7.8km s-min=5.0km az=32.9*
*IDC **09** 15:45:47.2±0.7, 6.74N×72.95W, h157km±9km, mb3.3/5, mb1 3.6/8, mb1mx3.3/45, mbtmp3.8/8, Error ellipse: s-maj=26.4km s-min=7.3km az=132.0*
*RSNC **09** 15:45:48.6±0.9, 6.80N×73.13W, h141km±6km, ML3.5, Mw3.5*
ISC 09 15:45:47.1±0.8, 6.83N±0.04×73.11W±0.05, h149km±6km, n25, σ0§83/38, mb3.4/5, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.24**	**198**	*i* P			**Pn**	**15 46 08.0**	**+0.3**
BARC				*i*				15 46 08.6	
	comp=Z,904nm,0.2s								
BARC				*e* S			**Sn**	**15 46 22.6**	**-0.7**
PAMC	**Pamplona, Colo**	**0.65**	**38**	*e* P			**Pn**	**15 46 10.9**	**+1.1**
PAMC				*e* S			**Sn**	**15 46 27.3**	**+0.2**
PAMC				*i*				15 46 30.0	
	comp=Z,644nm,0.4s								
RUSC	**La Rusia**	**0.93**	**179**	*e* P			**Pn**	**15 46 12.0**	**+0.1**
RUSC				*e* S			**Sn**	**15 46 30.1**	**-0.5**
RUSC				*i*				15 46 32.2	
	comp=Z,559nm,0.3s								
PTBC	**PUERTO BERRIO,**	**1.37**	**258**	*e* P			**Pn**	**15 46 14.7**	**-0.6**
PTBC				*e* S			**Sn**	**15 46 35.3**	**-1.5**
PTBC				*i*				15 46 40.2	
	comp=Z,259nm,0.2s								
OCAC	**Ocana**	**1.42**	**351**	*e* P			**Pn**	**15 46 16.1**	**+0.1**
OCAC				*e* S			**Sn**	**15 46 37.5**	**-0.5**
OCAC				*i*				15 46 41.2	
	comp=Z,911nm,0.2s								
ZARC	**Zaragoza, Cauc**	**1.86**	**291**	*e* P			**Pn**	**15 46 20.9**	**+0.3**
ZARC				*e* S			**Sn**	**15 46 46.4**	**+0.1**
ZARC				*i*				15 46 52.3	
	comp=Z,548nm,0.4s								
NORC	**Norcasia**	**2.15**	**234**	*e* P			**Pn**	**15 46 24.3**	**+0.2**
NORC				*e* S			**Sn**	**15 46 52.8**	**+0.3**
CHIC	**Chingaza**	**2.27**	**196**	*e* P			**Pn**	**15 46 26.3**	**+0.5**
CHIC				*e* S			**Sn**	**15 46 54.7**	**-0.9**
CHIC				*i*				15 46 59.2	
	comp=Z,150nm,0.2s								
ROSC	**El Rosal**	**2.31**	**212**	P			**Pn**	**15 46 28.1**	**+1.8**
	comp=Z,26nm,0.3s,baz=121,slow=22,SNR=49								
ROSC				S			**Sn**	**15 46 58.0**	**+1.5**
	comp=Z,56nm,0.3s,baz=116,slow=20,SNR=15								
ROSC	**El Rosal**	**2.31**	**212**	*e* S			**Sn**	**15 46 55.1**	**-1.4**
ROSC				*i*				15 47 02.8	
	comp=Z,298nm,0.4s								
HELC	**Santa Helena**	**2.49**	**255**	*e* P			**Pn**	**15 46 28.5**	**+0.1**
HELC				*e* S			**Sn**	**15 47 00.4**	**+0.3**
HELC				*i*				15 47 06.5	
	comp=Z,184nm,0.4s								
VILC	**Villavicencio,**	**2.76**	**192**	*e* P			**Pn**	**15 46 32.1**	**+0.5**
VILC				*e* S			**Sn**	**15 47 04.6**	**-1.3**
VILC				*i*				15 47 15.6	
	comp=Z,150nm,0.4s								
DBBC	**Dabeiba**	**3.09**	**274**	*e* P			**Pn**	**15 46 36.1**	**+0.4**
TOLC	**Tolima**	**3.13**	**225**	*e* P			**Pn**	**15 46 37.4**	**+0.9**
SDV	**Santo Domingo**	**3.19**	**50**	P			**Pn**	**15 46 37.6**	**+0.5**
	comp=Z,46nm,0.3s,baz=209,slow=6.8,SNR=96								
SDV				S			**Sn**	**15 47 15.2**	**-0.6**
	comp=Z,24nm,0.3s,baz=254,slow=22,SNR=21								
PRAC	**Prado**	**3.56**	**210**	*e* P			**Pn**	**15 46 41.8**	**0.0**
PRAC				*e* S			**Sn**	**15 47 23.7**	**-0.4**
YOTC	**Yotoco, Valle**	**4.29**	**229**	*e* P			**Pn**	**15 46 51.0**	**-0.3**
YOTC				*i*				15 46 55.5	
	comp=Z,36nm,0.3s								
PCRV	**Puerto La Cruz**	**9.01**	**68**	P			**Pn**	**15 47 54.4**	**+0.2**
	comp=Z,0.8nm,0.3s,baz=243,slow=1.2,SNR=6.4								
TXAR	**Lajitas Array**	**36.47**	**312**	P			**P**	**15 52 38.6**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=129,slow=8.7,SNR=8.0								
ULM	**Lac du Bonnet**	**47.28**	**340**	P			**P**	**15 54 05.0**	**-0.4**
	comp=Z,1.3nm,0.3s,baz=111,slow=1.8,SNR=3.2								
PDAR	**Pinedale Array**	**48.08**	**324**	P			**P**	**15 54 12.6**	**+0.6**
	comp=Z,0.3nm,0.4s,baz=118,slow=7.2,SNR=3.0								
NVAR	**Mina Array Bea**	**51.49**	**315**	P			**P**	**15 54 39.1**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=112,slow=7.2,SNR=2.4								
YKA	**Yellowknife Ar**	**63.26**	**340**	P			**P**	**15 55 59.2**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=132,slow=6.5,SNR=7.8								
ASAR	**Alice Springs**	**149.12**	**234**	PKPbc			**PKPbc**	**16 05 17.5**	**-1.3**
	comp=Z,0.4nm,0.5s,baz=122,slow=3.7,SNR=11								
WRA	**Warramunga Arr**	**150.35**	**241**	PKPbc			**PKPbc**	**16 05 20.7**	**-1.2**
	comp=Z,0.4nm,0.4s,baz=109,slow=2.6,SNR=18								

KRSC 09 15:50:52.9±1.3, 48.66N×156.09E, h16km±20km, ML3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.02**	**0**	*e* P			Pn	15 51 27.2	+0.9
SKR				*e* S			Sn	15 51 52.0	+0.7
PAU	**Pauzhetka**	**2.84**	**9**	*e* P			Pn	15 51 39.6	+2.0
PAU				*e* S			Sb	15 52 15.1	-2.7
KDTR	**Khodutka, Kamc**	**3.40**	**21**	*e* P			Pb	15 51 49.2	-3.5
KDTR				*e* S			Sb	15 52 29.8	-3.9
MIPR	**Malaya Ipel'ka**	**3.64**	**6**	*e* P			Pn	15 51 51.0	+2.4
ASAK	**Asacha**	**3.90**	**17**	*e* P			Pn	15 51 56.7	+4.5
RUS	**Russkaya**	**4.08**	**21**	*e* P			Pn	15 51 57.9	+3.3
RUS				*e* S			Sn	15 52 46.2	+4.3
DALK	**Dalny**	**4.69**	**20**	*e* P			Pn	15 52 08.0	+5.1
DALK				*e* S			Sn	15 53 02.6	+5.7
UGLR	**Uglovaya**	**4.87**	**20**	*e* P			Pn	15 52 10.9	+5.4
KRER	**Koryakskii**	**4.94**	**19**	*e* P			Pn	15 52 11.3	+4.7
SDLR	**Sedlovina**	**4.95**	**20**	*e* P			Pn	15 52 10.7	+4.1
SPN	**Mys Shipunski**	**5.09**	**28**	*e* P			Pn	15 52 11.9	+3.4
GNL	**Ganaly**	**5.17**	**12**	*e* P			Pn	15 52 13.8	+4.1
MKZ	**Mys Kozlova**	**6.86**	**29**	*e* P			Pn	15 52 37.6	+4.8

RSNC 09 15:55:57.1±0.6, 10.08N×73.45W, h94km±4km, ML3.5, Mw3.8, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CODC	**Agust¨n Codaz**	**0.14**	**179**	*e* P			Pn	15 56 10.4	0.0
CODC				*e* S			Sn	15 56 20.4	+0.1
SJCC	**San Jacinto, C**	**1.71**	**264**	*e* P			Pn	15 56 25.1	-0.8
SJCC				*e* S			Sn	15 56 47.3	-0.4
SJCC				*i*				15 56 55.6	
	comp=Z,751nm,0.7s								
OCAC	**Ocana**	**1.83**	**176**	*e* P			Pn	15 56 26.8	-0.7
OCAC				*e* S			Sn	15 56 50.0	-0.6
PAMC	**Pamplona, Colo**	**2.82**	**165**	*e* P			Pn	15 56 40.7	-0.1
PAMC				*e* S			Sn	15 57 14.1	-0.3
PAMC				*i*				15 57 18.1	
	comp=Z,192nm,0.3s								
ZARC	**Zaragoza, Cauc**	**2.92**	**209**	*e* P			Pn	15 56 41.5	-0.3
ZARC				*e* S			Sn	15 57 16.3	+0.2
ZARC				*i*				15 57 32.1	
	comp=Z,167nm,0.4s								
SDV	**Santo Domingo**	**3.02**	**113**	*e* P			Pn	15 56 43.0	-0.1
SDV				*i*				15 57 18.8	
	comp=Z,50nm,0.3s								
BARC	**Barichara**	**3.48**	**176**	*e* P			Pn	15 56 49.2	-0.2
BARC				*e* S			Sn	15 57 28.5	-1.2
BARC				*i*				15 57 33.6	
	comp=Z,326nm,0.4s								
PTBC	**PUERTO BERRIO,**	**3.66**	**196**	*e* P			Pn	15 56 51.6	0.0
PTBC				*e* S			Sn	15 57 32.8	-1.0
PTBC				*i*				15 57 41.9	
	comp=Z,84nm,0.2s								
DBBC	**Dabeiba**	**4.09**	**222**	*e* P			Pn	15 56 56.6	-1.0
HELC	**Santa Helena**	**4.38**	**208**	*e* S			Sn	15 57 50.9	-0.9
HELC				*i*				15 58 03.8	
	comp=Z,55nm,0.5s								
NORC	**Norcasia**	**4.70**	**198**	*e* P			Pn	15 57 05.9	+0.1

MEX 09 16:09:00.4±0.7, 16.16N×98.19W, h16km±31km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.44**	**346**	*i* P			Pn	16 09 22.2	-3.7
TLIG				*i* S			Sn	16 09 39.5	-5.2
VHO	**Vista Hermosa**	**1.67**	**57**	*e* P			Pn	16 09 25.9	-3.3
VHO				*e* S			Sn	16 09 45.6	-4.8
HUIG	**Huatulco**	**2.04**	**101**	*i* P			Pn	16 09 29.0	-5.2
HUIG				*e* S			Sn	16 10 00.4	+1.1

GUC 09 16:11:14.4±0.5, 18.07S×70.19W, h67km±4km, ML3.7, 4C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PB12	**IPOC Station P**	**0.56**	**194**	⇑ *i* P			Pn	16 11 27.9	+0.1
PB12				*i* S			Sn	16 11 38.2	+0.7
PB12				IAML				16 11 39.5	
	comp=E,12μm,0.2s								
PB16	**IPOC Station P**	**0.70**	**113**	⇓ *i* P			Pn	16 11 30.9	+1.1
PB16				*i* S			Sn	16 11 42.9	+1.9
PB16				IAML				16 11 44.3	
	comp=E,3μm,0.6s								
MNMC	**Minye Minye**	**1.20**	**152**	⇑ *i* P			Pn	16 11 36.1	+0.5
MNMC				*i* S			Sn	16 11 52.8	+1.4
MNMC				IAML				16 11 55.0	
	comp=N,3μm,0.5s								
PSGC	**Pisagua**	**1.52**	**178**	⇑ *i* P			Pn	16 11 39.0	-0.7
PSGC				*i* S			Sn	16 11 58.4	-0.3
PB08	**IPOC Station P**	**2.28**	**155**	⇑ *i* P			Pn	16 11 51.0	+0.8
PB08				*i* S			Sn	16 12 18.8	+1.3
PB08				IAML				16 12 24.9	
	comp=E,490nm,0.4s								

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*ISK **09** 16:17:36.1, 36.99N×27.56E, h5km, ML2.4/4*
*ISCJB **09** 16:17:37.4±0.4, 36.98N±0.03×27.54E±0.04, h10km, Error ellipse: s-maj=4.6km s-min=3.4km az=141.9*
*CSEM **09** 16:17:37.4±0.1, 36.99N×27.56E, h5km, ML2.9, Error ellipse: s-maj=3.0km s-min=2.4km az=55.0*
*DDA **09** 16:17:37.0, 37.02N×27.59E, h7km, Ml2.9*
ISC 09 16:17:37.2±0.8, 37.01N±0.02×27.66E±0.02, h10km, n38, σ1§40/54, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.18**	**288**	*i* P			**Pg**	**16 17 40.5**	**-0.6**
BDRM				*i* S			**Sg**	**16 17 42.8**	**-0.9**
BDRM	**Kayabasi**	**0.18**	**288**	P			**Pg**	**16 17 40.5**	**-0.6**
BDRM				S			**Sg**	**16 17 42.8**	**-0.9**
DATC	**Datca-Mugla**	**0.25**	**180**	PG			**Pg**	16 17 41.9	-0.4
DATC				SG			**Sg**	16 17 46.2	+0.4
DATC	**Datca-Mugla**	**0.25**	**180**	*e* Pg			**Pg**	16 17 41.9	-0.4
DATC				*e* Sg			**Sg**	16 17 46.2	+0.4
BODT	**Bodrum**	**0.28**	**280**	PG			**Pg**	16 17 41.1	-1.9
BODT				SG			**Sg**	16 17 45.1	-1.7
BODT	**Bodrum**	**0.28**	**280**	*e* Pg			**Pg**	16 17 41.1	-1.9
BODT				*e* Sg			**Sg**	16 17 45.1	-1.7
DAT	**Datca**	**0.29**	**193**	PG			**Pg**	16 17 42.5	-0.6
DAT	**Datca**	**0.29**	**193**	*i* P			**Pg**	16 17 42.5	-0.6
DAT				*i* S			**Sg**	16 17 47.1	+0.2
DAT	**Datca**	**0.29**	**193**	P			**Pg**	16 17 42.5	-0.6
DAT				S			**Sg**	16 17 47.2	+0.2
MLSB	**Milas**	**0.30**	**18**	PG			**Pb**	16 17 44.4	-0.3
MLSB	**Milas**	**0.30**	**18**	*e* Pg			**Pb**	16 17 44.4	-0.3
YER	**Yerkesik**	**0.52**	**76**	PG			**Pb**	16 17 48.6	+0.2
YER	**Yerkesik**	**0.52**	**76**	*e* Pg			**Pb**	16 17 48.6	+0.2
MRSB	**Marmaris-Mugla**	**0.52**	**124**	PG			**Pb**	16 17 48.4	-0.1
MRSB	**Marmaris-Mugla**	**0.52**	**124**	*e* Pg			**Pb**	16 17 48.4	-0.1
AYDN	**Tasoluk**	**0.67**	**15**	*i* P			**Pg**	16 17 50.7	+0.5
AYDN				*i* S			**Sb**	16 18 01.4	+0.9
AYDN	**Tasoluk**	**0.67**	**15**	P			**Pg**	16 17 50.7	+0.5
AYDN				S			**Sb**	16 18 01.4	+0.9
TURN	**Turunc**	**0.77**	**100**	PG			**Pg**	16 17 48.9	-3.2
TURN	**Turunc**	**0.77**	**100**	*i* P			**Pg**	16 17 48.5	-3.5
TURN				*i* S			**Sg**	16 17 57.0	-5.1
TURN	**Turunc**	**0.77**	**100**	*e* Pg			**Pg**	16 17 48.9	-3.2
DALY	**Dalyan (Mu¨la**	**0.82**	**103**	PG			**Pn**	16 17 54.7	-0.1
DALY	**Dalyan (Mu¨la**	**0.82**	**103**	*i* P			**Pn**	16 17 55.0	+0.2
DALY				*i* S			**Sn**	16 18 07.2	+0.2
DALY	**Dalyan (Mu¨la**	**0.82**	**103**	*e* Pg			**Pn**	16 17 54.7	-0.1
DALY	**Dalyan (Mu¨la**	**0.82**	**103**	P			**Pn**	16 17 55.0	+0.2
DALY				S			**Sn**	16 18 07.2	+0.2
ARG	**Arkhangelos**	**0.88**	**154**	PG			**Pb**	16 17 54.5	-0.1
ARG	**Arkhangelos**	**0.88**	**154**	*e* Pg			**Pb**	16 17 54.5	-0.1
AYDB	**Zeytinkoy-Aydi**	**0.95**	**11**	PG			**Pb**	16 17 56.2	+0.3
AYDB	**Zeytinkoy-Aydi**	**0.95**	**11**	*e* Pg			**Pb**	16 17 56.2	+0.3
TAVA	**DENIZLI_Tavas**	**1.10**	**65**	*i* P			**Pn**	16 17 59.0	+0.2
TAVA				*i* S			**Sn**	16 18 16.6	+2.5
TAVA	**DENIZLI_Tavas**	**1.10**	**65**	P			**Pn**	16 17 59.0	+0.2
TAVA				S			**Sn**	16 18 16.6	+2.5
FETY	**Fethiye**	**1.20**	**108**	PN			**Pg**	16 18 01.7	+1.4
FETY	**Fethiye**	**1.20**	**108**	*e* Pn			**Pg**	16 18 01.7	+1.4
FETY				S			**Sn**	16 18 18.7	+2.2
URLA	**Izmir**	**1.59**	**328**	PN			**Pb**	16 18 06.4	-0.3
URLA	**Izmir**	**1.59**	**328**	*e* Pn			**Pb**	16 18 06.4	-0.3
KULA	**Kula-Manisa**	**1.70**	**28**	PN			**Pb**	16 18 09.3	+0.7
KULA	**Kula-Manisa**	**1.70**	**28**	*e* Pn			**Pb**	16 18 09.3	+0.7
AKAS	**Kas**	**1.75**	**116**	PN			**Pb**	16 18 09.7	+0.2
**

MDSI Maura Dua 18.79 254 P **Pn 16 35 07.1 -0.6**
IPM Ipoh 21.61 281 *e*P **P 16 35 34.2 -2.4**
comp=Z,31nm,1.0s
YULB Yu-li 22.72 358 *e*P **P 16 35 45.1 -3.1**
comp=Z,45nm,1.6s
PSI Prapat 23.47 276 P **P 16 35 55.8 +0.2**
comp=Z,21nm,0.7s,baz=5.0,slow=0.5,SNR=6.1
PSI LR LR 16 45 43.4
comp=Z,84nm,18.6s,baz=91,slow=38
WRAB Tennant Creek 23.54 151 *e*P **P 16 35 55.3 -0.6**
comp=Z,27nm,1.2s
WRAB Tennant Creek 23.54 151 *e*P **P 16 35 55.3 -0.6**
WRAB pmax pmax
comp=Z,27nm,1.2s
WRA Warramunga Arr 23.54 151 P **P 16 35 55.3 -0.6**
comp=Z,14nm,0.8s,baz=329,slow=10,SNR=126
WRA pP **pP 16 36 15.8 -0.8**
comp=Z,4.3nm,0.8s,baz=327,slow=10,SNR=3.5
WRA ScP **ScP 16 43 07.4 -0.8**
comp=Z,1.7nm,0.8s,baz=328,slow=3.2,SNR=8.1
WRA Warramunga Arr 23.54 151 *i* P **P 16 35 55.5 -0.5**
WRA pmax pmax
comp=Z,15nm,0.7s
WB2 Warramunga Arr 23.55 151 *e*P **P 16 35 55.2 -0.8**
GSI Gunungsitoli 24.74 272 *e*P **P 16 36 06.3 -0.5**
comp=Z,57nm,0.7s
CHAI Chaiyaphum 25.19 308 P **P 16 36 13.8 +2.9**
comp=Z,9.8nm,0.7s
COEN Coen 25.20 126 *e*P **P 16 36 10.2 -0.9**
comp=Z,15nm,1.0s
NONG Nongkai 25.64 314 P **P 16 36 18.1 +3.2**
AS31 Alice Springs 26.58 156 *e*P **P 16 36 22.6 -0.9**
comp=Z,1.5nm,0.6s
ASAR Alice Springs 26.58 156 P **P 16 36 23.7 +0.2**
comp=Z,3.9nm,0.8s,baz=344,slow=14,SNR=52
ASAR pP **pP 16 36 44.8 -0.7**
comp=Z,2.4nm,0.7s,baz=335,slow=12,SNR=5.1
ASAR PcP **PcP 16 39 45.4 -0.2**
comp=Z,1.5nm,0.6s,baz=339,slow=2.2,SNR=10
ASAR S **S 16 40 50.5 -0.6**
comp=Z,1.1nm,1.1s,baz=338,slow=22,SNR=3.1
ASAR ScP **ScP 16 43 16.1 -0.7**
comp=Z,1.3nm,0.7s,baz=343,slow=2.8,SNR=14
AS01 Alice Springs 26.60 156 *e*P **P 16 36 23.0 -0.7**
PMG Port Moresby 26.66 112 P **P 16 36 24.6 +0.4**
comp=Z,8.5nm,0.8s,baz=187,slow=4.2,SNR=3.4
CM01 Chiang Mai Arr 29.00 309 *e*P **P 16 36 45.0 -0.1**
CMAR Chiang Mai Arr 29.03 309 P **P 16 36 47.3 +2.0**
comp=Z,3.2nm,1.0s,baz=142,slow=8.0,SNR=14
CMAR PcP **PcP 16 39 52.0 +0.4**
comp=Z,1.3nm,0.8s,baz=179,slow=2.6,SNR=7.9
CMAR ScP **ScP 16 43 25.2 +0.9**
comp=Z,1.7nm,1.0s,baz=171,slow=3.1,SNR=7.8
CMAR LR LR 16 49 08.1
comp=Z,22nm,18.3s,baz=125,slow=38
CHTO Chiang Mai 29.23 310 *e*P **P 16 36 46.6 -0.5**
comp=Z,18nm,1.2s
CHTO Chiang Mai 29.23 310 *e*P **P 16 36 46.7 -0.5**
CHTO pmax pmax
comp=Z,18nm,1.2s
KMI Kunming 30.89 324 P **P 16 37 04.6 +2.7**
KMI pmax pmax
comp=Z,11nm,1.1s
NJ2 Nanjing 31.50 354 *e*P **P 16 37 06.2 -0.7**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
NWAO Narrogin (SRO) 33.64 188 P **P 16 37 25.8 +0.1**
comp=Z,9.5nm,0.8s,baz=232,slow=11,SNR=4.0
CD2 Chengdu 34.94 331 P **P 16 37 36.4 -0.6**
CD2 pmax pmax
comp=Z,30nm,0.5s
KSAR Wonju Array Be 37.07 7 P **P 16 37 56.2 +1.3**
KSAR pP **pP 16 38 17.4 -0.2**
KSAR Wonju Array Be 37.07 7 P **P 16 37 56.2 +1.3**
KSAR *PP **pP 16 38 17.4 -0.2**
STKA Stephens Creek 37.07 152 P **P 16 37 55.3 +0.2**
comp=Z,7.9nm,0.8s,baz=324,slow=8.8,SNR=17
STKA ScP **ScP 16 43 51.6 -0.4**
comp=Z,3.7nm,0.9s,baz=278,slow=3.6,SNR=5.2
KSRS Korea Array 37.08 7 P **P 16 37 56.2 +1.2**
comp=Z,0.6nm,0.5s,baz=186,slow=8.9,SNR=5.2
KSRS pP **pP 16 38 17.4 -0.4**
comp=Z,0.4nm,0.8s,baz=189,slow=9.9,SNR=1.7
MJAR Matsushiro Arr 38.73 21 P **P 16 38 08.6 -0.3**
comp=Z,1.3nm,0.9s,baz=192,slow=9.9,SNR=4.1
HNR Honiara 38.77 106 LR LR 16 55 06.5
comp=Z,55nm,18.8s,baz=156,slow=38
LZH Lanzhou 39.29 336 ⇑P **P 16 38 15.5 +1.6**
LZH pP sP 16 38 43.0 -5.1
LZH sP pP 16 38 57.3 +21
LZH PP **PnPn 16 39 52.7 +3.0**
LZH pmax pmax
comp=Z,21nm,1.1s
LZH pmax pmax
comp=Z,78nm,5.3s
LZH LR LR
comp=Z,180nm,13.0s
LZH LR LR
comp=Z,190nm,13.3s
LZH LR LR
comp=Z,230nm,16.8s
HHC Hu-ho-hao-te 41.28 348 *e*P **P 16 38 30.6 +0.5**
HHC pmax pmax
comp=Z,10.0nm,0.8s
HHC pmax pmax
comp=Z,36nm,4.9s
PALK Pallekele 42.01 280 P **P 16 38 37.2 +0.8**
comp=Z,11nm,0.9s,baz=117,slow=9.3,SNR=4.3
PALK LR LR 16 55 59.5
comp=Z,80nm,19.3s,baz=245,slow=36
ODAN Odare 42.54 311 *e*P **P 16 38 42.3 +1.5**
comp=Z,19nm,0.7s
TAPN Taplejung 42.56 312 *e*P **P 16 38 42.8 +1.8**
MSHR Mys Shultsa 42.59 10⇑*e*P **P 16 38 38.6 -2.0**
RAMN Ramite 43.18 310 *e*P **P 16 38 47.8 +1.8**
comp=Z,47nm,0.7s
GTA Gaotai 43.79 335 ⇑P **P 16 38 52.4 +1.9**
GTA pP pP 16 39 15.7 +1.9
GTA sP sP 16 39 28.7 +3.7
GTA PcP **PcP 16 40 36.2 +0.7**
GTA S **S 16 45 18.4 +4.4**
GTA SS **SS 16 48 33.3 -0.4**
GTA pmax pmax
comp=Z,11nm,1.2s
GTA pmax pmax
comp=Z,98nm,5.8s
GTA LR LR
comp=Z,87nm,19.6s
GTA LR LR
comp=Z,89nm,18.9s
GTA LR LR
comp=Z,86nm,15.5s
JIRN Jiri 43.87 311 *e*P **P 16 38 53.2 +1.6**
comp=Z,60nm,0.7s
GUN Gumba 44.23 311 *e*P **P 16 38 56.1 +1.6**
comp=Z,35nm,0.4s
USRK Ussuriysk Ar. 44.30 10 P **P 16 38 54.6 +0.3**
comp=Z,2.6nm,0.6s,baz=150,slow=5.5,SNR=5.7
PKIN Phulchoki 44.42 310 *e*P **P 16 38 57.5 +1.6**
comp=Z,11nm,0.6s
KKN Kakani 44.62 311 *e*P **P 16 38 58.7 +1.2**
comp=Z,20nm,0.7s
DMN Daman 44.66 310 *e*P **P 16 38 59.3 +1.5**
comp=Z,26nm,0.6s
GKN Gorkha 45.22 310 *e*P **P 16 39 03.4 +1.3**
comp=Z,34nm,0.7s
KOLN Koldanda 45.90 310 *e*P **P 16 39 09.0 +1.5**
comp=Z,39nm,0.8s
DANN Dangsing 46.06 310 *e*P **P 16 39 10.4 +1.5**
comp=Z,46nm,0.6s
PYUN Piuthan 46.53 310 *e*P **P 16 39 14.2 +1.7**
comp=Z,130nm,1.0s
ASAJ Asahikawa 46.98 20 P **P 16 39 16.1 +0.6**
comp=Z,1.8nm,0.4s,baz=213,slow=10,SNR=11
ASAJ pP **pP 16 39 40.2 +1.2**
comp=Z,3.5nm,0.6s,baz=192,slow=12,SNR=2.8
DZM Mont Dzumac 48.54 120 LR LR 16 59 56.0
comp=Z,100nm,20.6s,baz=194,slow=36
ULN Ulaanbaatar 48.95 346⇓*e*P **P 16 39 31.8 +1.0**
ULN pmax pmax
comp=Z,5.0nm,1.5s
SONM Songino Array 49.08 346 P **P 16 39 33.0 +1.3**
comp=Z,1.0nm,0.4s,baz=157,slow=8.0,SNR=7.3
SONM pP **pP 16 39 56.9 +1.5**
comp=Z,2.6nm,0.7s,baz=168,slow=9.9,SNR=6.8
SONM PcP **PcP 16 40 53.5 -0.5**
comp=Z,1.9nm,0.7s,baz=168,slow=4.8,SNR=5.1
SONM ScP **ScP 16 44 41.6 +1.3**
comp=Z,0.4nm,0.5s,baz=114,slow=44,SNR=2.8
WMQ Urumqi 52.96 329 P **P 16 40 02.2 +1.4**
WMQ pP pP 16 40 25.3 +0.5
WMQ sP sP 16 40 42.7 +6.8
WMQ pmax pmax
comp=Z,37nm,0.7s
WMQ pmax pmax
comp=Z,130nm,6.1s
WMQ LR LR
comp=Z,67nm,31.7s
WMQ LR LR
comp=Z,62nm,25.5s
WMQ LR LR
comp=Z,85nm,33.3s
KSH Kashi 57.30 318 P **P 16 40 34.4 +2.2**
KSH pP sP 16 41 03.1 -4.4
KSH PP **PP 16 42 43.6 +3.1**
KSH S **S 16 48 19.1 -2.0**
KSH sS sS 16 49 11.5 +8.8
KSH pmax pmax
comp=Z,34nm,0.6s
KSH pmax pmax
comp=Z,190nm,5.4s
KSH LR LR
comp=Z,140nm,4.9s
KSH LR LR
comp=Z,140nm,4.3s
KSH LR LR
comp=Z,320nm,4.8s
MK01 Makanchi Array 57.76 329 *e*P **P 16 40 35.9 +0.7**
MK31 Makanchi Array 57.78 329 *e*P **P 16 40 35.4 +0.2**
MKAR Makanchi Array 57.78 329 P **P 16 40 36.7 +1.4**
comp=Z,10nm,0.6s,baz=122,slow=9.1,SNR=137
MKAR pP **pP 16 41 01.3 +1.7**
comp=Z,1.4nm,0.5s,baz=121,slow=7.3,SNR=2.0
MKAR PcP **PcP 16 41 27.3 +0.4**
comp=Z,1.6nm,0.6s,baz=141,slow=5.1,SNR=3.6
MKAR ScP **ScP 16 45 17.9 -0.2**
comp=Z,0.8nm,0.9s,baz=106,slow=3.9,SNR=4.7
MKAR Makanchi Array 57.78 329*e*P **P 16 40 36.5 +1.2**
MKAR pmax pmax
comp=Z,10.0nm,0.6s
MAKZ Makanchi 57.95 328 *e*P **P 16 40 34.8 -1.7**
comp=Z,7.8nm,0.5s
MAKZ Makanchi 57.95 328 *e*P **P 16 40 34.8 -1.7**
MAKZ pmax pmax
comp=Z,8.0nm,0.5s
TKM2 Tokmak 2 59.32 322 P **P 16 40 47.9 +1.5**
SNR=14
KBK Karagaybulak 59.59 321 P **P 16 40 50.4 +2.3**
SNR=8.3
UCH Uchtor 59.64 320 P **P 16 40 50.7 +1.9**
SNR=7.8
AAK Ala-Archa 59.86 321 LR LR 17 07 13.9
comp=Z,50nm,20.7s,baz=218,slow=36
AAK Ala-Archa 59.86 321 P **P 16 40 53.2 +3.2**
SNR=6.9
AAK Ala-Archa 59.86 321*de*P **P 16 40 51.9 +1.9**
AAK pmax pmax
comp=Z,5.0nm,0.8s
KBL Kabul 60.05 310 P **P 16 40 49.9 -1.6**
KBL pmax pmax
comp=Z,35nm,0.7s
PETK Petropavlovsk- 60.06 24 P **P 16 40 51.8 +0.9**
comp=Z,1.8nm,0.6s,baz=199,slow=4.2,SNR=9.1
AML Almayashu 60.12 320 P **P 16 40 53.7 +1.7**
SNR=7.8
USP Ospenovka 60.19 321 P **P 16 40 53.0 +0.9**
SNR=7.0
EKS2 Erkin-Say 60.33 321 P **P 16 40 51.4 -1.7**
SNR=7.1
ZALV Zalesovo Beam 61.52 336 P **P 16 41 00.9 +0.1**
comp=Z,7.0nm,0.7s,baz=122,slow=5.8,SNR=35
ZALV pP **pP 16 41 25.6 +0.2**
comp=Z,2.2nm,0.8s,baz=142,slow=6.4,SNR=2.3
YAK Yakutsk 61.58 4 *e*P **P 16 41 00.9 0.0**
YAK pmax pmax
comp=Z,7.0nm,0.8s
RPZ Rata Peaks 61.87 142 P **P 16 41 03.6 +0.2**
comp=Z,6.9nm,0.8s,baz=243,slow=7.4,SNR=2.6
KURBB Kurchatov Arra 62.14 330 P **P 16 41 05.9 +1.0**
comp=Z,8.3nm,0.8s,baz=124,slow=5.7,SNR=71
KURBB pP **pP 16 41 29.4 -0.1**
comp=Z,2.7nm,0.8s,baz=125,slow=6.4,SNR=3.1
KURK Kurchatov 62.15 330 P **P 16 41 05.9 +0.9**
KURK pP **pP 16 41 29.4 -0.2**
KURK Kurchatov 62.15 330*c i* P **P 16 41 05.7 +0.7**
KURK *i* *PP **pP 16 41 33.2 +3.5**
KURK pmax pmax
comp=Z,25nm,0.8s
KK31 Karatay Array 62.64 320 *e*P **P 16 41 10.1 +1.6**
KK31 Karatay Array 62.64 320 *e*P **P 16 41 10.1 +1.6**
KKAR Karatay Array 62.64 320 *e*P **P 16 41 10.1 +1.6**
KKAR Karatay Array 62.64 320 *e*P **P 16 41 10.1 +1.6**
NVS Novosibirsk 62.81 336 *e*P **P 16 41 07.7 -1.6**
NVS *e* 16 41 37.6
NVS pmax pmax
comp=E,6.0nm,0.7s
NVS pmax pmax
comp=Z,8.0nm,0.7s
NVS pmax pmax
comp=N,6.0nm,0.8s
WSAR Wadi Sarin 65.69 295 P **P 16 41 28.9 +0.1**
comp=N,6.2nm,0.7s,baz=103,slow=8.0,SNR=4.8
BVAR Borovoye Array 67.65 329 P **P 16 41 41.3 +0.6**
comp=N,7.1nm,0.7s,baz=132,slow=8.6,SNR=49
BRVK Borovoye 67.72 329 *e*P **P 16 41 39.8 -1.3**
comp=N,21nm,1.2s
BRVK Borovoye 67.72 329*c i*P **P 16 41 41.5 +0.4**
BRVK pmax pmax
comp=Z,20nm,1.2s
GEYT Alibeck 69.50 311 P **P 16 41 53.1 +0.5**
comp=Z,106nm,0.6s,baz=117,slow=5.0,SNR=4.1
GYA0B ALIBECK ARRAY 69.50 311 *e*P **P 16 41 50.7 -1.9**
comp=Z,13nm,0.8s
TIXI Tiksi 71.11 2⇓*e*P **P 16 42 00.5 -1.1**
TIXI pmax pmax
comp=Z,5.0nm,1.2s
ABKAR Akbulak array 71.87 322 *e*P **P 16 42 07.0 +0.4**
AKTO Aktyubinsk 73.45 323 P **P 16 42 16.4 +0.3**
comp=Z,8.8nm,0.6s,baz=106,slow=7.2,SNR=31
SVE Sverdlovsk 74.40 330 *e*P **P 16 42 18.3 -3.1**
SVE pmax pmax
comp=Z,13nm,0.9s
ARU Arti 75.30 329 *e*P **P 16 42 25.9 -0.6**
ARU Arti 75.30 329*d i*P **P 16 42 25.7 -0.9**
ARU *PP **pP 16 42 50.5 -1.5**
ARU S **S 16 51 57.2 -0.7**
ARU SS **SS 16 56 45.9 -3.9**
ARU pmax pmax
comp=Z,8.0nm,1.0s
ABPO Ambohimpanom 76.08 250 *i* P **P 16 42 31.4 -0.6**
LKRN Lenkeran, Azer 76.83 310 P **P 16 42 33.6 -2.0**
RAYN Ar Rayn 77.68 294 *e*P **P 16 42 40.2 -0.6**
RAYN Ar Rayn 77.68 294 P **P 16 42 40.1 -0.6**
SEKA Sheki 78.45 312 P **P 16 42 42.1 -2.6**
MNGR Mingechevir, A 78.46 311 P **P 16 42 42.6 -2.1**
ZKTA Zakatala 78.95 312 P **P 16 42 45.0 -2.4**
GANJ Ganja 79.02 311 P **P 16 42 46.0 -1.8**
NAX Nakhchivan 79.43 310 P **P 16 42 48.0 -2.1**
VNDA Vanda 80.89 172 P **P 16 42 56.8 -0.3**
comp=Z,0.9nm,0.8s,baz=319,slow=7.4,SNR=6.4
ZEI Tsey 81.11 313 *e*P **P 16 42 58.2 -1.0**
ZEI pmax pmax
comp=Z,9.0nm,0.6s
KBZ Khabaz 81.96 314 P **P 16 43 03.8 +0.4**
comp=Z,2.8nm,0.8s,baz=142,slow=4.4,SNR=6.2
PRGR Permogore 83.19 332 *e*P **P 16 43 07.8 -1.6**
PRGR pmax pmax
comp=Z,12nm,0.6s
VORD Divnogorie 85.16 321 *e*P **P 16 43 18.9 -0.7**
VORD pmax pmax
comp=Z,10.0nm,0.9s
VSR Storozhevoye 85.26 321 *e*P **P 16 43 19.2 -0.9**
VSR pmax pmax
comp=Z,20nm,0.9s
ASF Jabal al Asfar 85.81 302 P **P 16 43 20.3 -3.1**
comp=Z,2.4nm,0.8s,baz=106,slow=7.4,SNR=3.4
KLMR Klimovskoe 85.99 331 *e*P P 16 43 17.6 -5.9
KLMR pmax pmax
comp=Z,27nm,1.5s
KLMR Klimovskoe 85.99 331 *e*P P 16 43 17.7 -5.8
KLMR AMP 16 43 23.0
comp=Z,27nm,1.5s
MMAI Mount Meron Ar 87.10 303 P **P 16 43 31.6 +1.9**
comp=Z,1.3nm,0.6s,baz=97,slow=7.8,SNR=3.1
OBN Obninsk 87.10 325⇑*i*P **P 16 43 28.6 -0.4**
OBN pmax pmax
comp=Z,6.0nm,1.0s
BRTR Keskin Array B 88.62 310 P **P 16 43 36.8 -0.1**
comp=Z,1.8nm,0.8s,baz=111,slow=5.4,SNR=10
BRTR PP **PP 16 47 06.0 -0.6**
comp=Z,1.3nm,1.0s,baz=124,slow=7.9,SNR=4.7
BRTR Keskin Array B 88.62 310 *i* P **P 16 43 36.5 -0.3**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
SCM Sheep Creek Mo 89.69 28 *e*P **P 16 43 45.1 +3.8**
SCM Sheep Creek Mo 89.69 28 *e*P **P 16 43 45.1 +3.8**
EYAK Cordova Ski Ar 90.48 30 *e*P **P 16 43 42.3 -2.5**
AKASG Malin Array Be 91.53 321 P **P 16 43 47.4 -2.5**
comp=Z,0.3nm,0.4s,baz=74,slow=4.9,SNR=4.1
AKASG Malin Array Be 91.53 321 *i* P **P 16 43 49.5 -0.4**
KIEV Kiev 91.54 321⇓*e*P **P 16 43 51.9 +1.9**
KIEV pmax pmax
comp=Z,3.0nm,1.0s
ARCES ARCESS Array B 91.87 340 P **P 16 43 49.6 -1.5**
comp=Z,2.1nm,0.8s,baz=93,slow=6.1,SNR=5.5
FINES FINESS Array B 92.50 331 P **P 16 43 52.7 -1.5**
comp=Z,1.5nm,0.6s,baz=140,slow=9.2,SNR=6.8
FINES FINESS Array B 92.50 331 *i* P **P 16 43 53.7 -0.5**
FINES pmax pmax
comp=Z,1.0nm,0.6s
SPITS Spitsbergen Ar 92.70 349 P **P 16 43 54.1 -0.8**
comp=Z,9.1nm,0.7s,baz=76,slow=8.0,SNR=9.9
MATP Matopo 93.76 250 P **P 16 43 59.4 -1.7**
comp=Z,1.8nm,0.6s,baz=69,slow=3.3,SNR=6.3
BUR04 Bucovina Ar. S 94.38 318 *e*P **P 16 44 03.0 -0.3**
NVAR Mina Array Bea 112.30 48 PKiKP **PKiKP 16 49 20.0 +0.6**
comp=Z,0.6nm,0.5s,baz=251,slow=2.8,SNR=3.9
TORD Torodi Ar. Bea 119.59 285 PKP **PKPdf 16 49 32.6 -1.1**
comp=Z,1.5nm,0.6s,baz=73,slow=2.0,SNR=9.3
TORD PP **PP 16 50 59.1 +1.8**
comp=Z,1.5nm,1.1s,baz=83,slow=6.0,SNR=3.0
ANMO Albuquerque 122.41 47 PKP **PKPdf 16 49 40.1 +1.2**
comp=Z,1.2nm,0.8s,baz=198,slow=3.2,SNR=4.2
KOWA Kowa 124.84 288 PKP **PKPdf 16 49 43.7 -0.1**
comp=Z,0.6nm,0.3s,baz=77,slow=4.2,SNR=2.7
DBIC Dimbokro 126.79 279 PKP **PKPdf 16 49 47.7 +0.1**
comp=Z,2.0nm,0.6s,baz=296,slow=2.3,SNR=3.3
TXAR Lajitas Array 127.03 52 PKP **PKPdf 16 49 48.2 +0.4**
comp=Z,0.4nm,0.7s,baz=290,slow=1.3,SNR=7.7

IDC 09 16:36:21.2±1.7, 6°48S×129°32E, h0km, mb3.3/1, mb1 3.5/4, mb1mx3.2/52, mbtmp3.4/4, ML3.3/3, Error ellipse: s-maj=61.5km s-min=28.7km az=80.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.90**	**19**	Pn	Pn	16 37 49.9	-0.2
	1.2nm,0.3s,baz=110,slow=1.6,SNR=11						
WRA	**Warramunga Arr**	**14.24**	**160**	Pn	Pn	16 39 43.7	-0.7
	0.1nm,0.3s,baz=339,slow=14,SNR=4.4						
WRA				Sn	Sn	16 42 10.3	-13
	0.2nm,0.3s,baz=335,slow=25,SNR=7.3						
ASAR	**Alice Springs**	**17.65**	**166**	P	Pn	16 40 29.1	+0.3
	0.1nm,0.3s,baz=350,slow=10,SNR=5.1						
ASAR				S	Sn	16 43 33.6	-13
	0.0nm,0.3s,baz=359,slow=27,SNR=2.6						
MKAR	**Makanchi Array**	**67.42**	**327**	P	P	16 47 18.8	+0.1
	0.2nm,0.5s,baz=121,slow=8.3,SNR=3.7						

IDC 09 16:37:59.5±49.0, 23°16S×174°30W, h0km, mb3.7/3, mb1 3.8/3, mb1mx3.4/46, mbtmp3.7/3, Error ellipse: s-maj=919.3km s-min=178.1km az=87.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.84**	**248**	P	P	16 45 34.5	-0.4
	0.7nm,0.4s,baz=82,slow=14,SNR=3.1						
ASAR	**Alice Springs**	**47.31**	**259**	P	P	16 46 35.0	-0.2
	0.2nm,0.3s,baz=95,slow=8.0,SNR=11						
WRA	**Warramunga Arr**	**47.68**	**264**	P	P	16 46 38.2	+0.1
	0.6nm,0.5s,baz=103,slow=8.1,SNR=13						

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*ISCJB **09** 16:52:00.4±1.3, 33°01S±0°07×70°31W±0°06, h113km±10km, Error ellipse: s-maj=11.1km s-min=8.4km az=166.4*
*SJA **09** 16:52:00.2±0.7, 33°03S×70°28W, h107km±5km, ML2.7, MW2.9*
*GUC **09** 16:52:00.5±0.5, 32°91S×70°27W, h98km±10km, ML2.8*
ISC 09 16:52:01.1±2.5, 33°02S±0°08×70°31W±0°06, h108km±18km, n12, σ0°59/19, 3C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PEL	**Peldehue**	**0.34**	**248**⇑*i*P		**Pn**	**16 52 16.2**	**-0.7**
PEL				*i* S	**Sn**	**16 52 28.1**	**-0.6**
PEL				IAML		16 52 29.8	
	comp=N,664nm,0.4s						
ROCH	**El Roble**	**0.59**	**274**⇑*i*P		**Pn**	**16 52 18.7**	**+0.1**
ROCH				*i* S	**Sn**	**16 52 31.8**	**0.0**
ROCH				IAML		16 52 32.9	
	comp=N,536nm,0.2s						
ROC1	**El Roble**	**0.59**	**274**	*e*P	**Pn**	**16 52 18.8**	**+0.1**
ROC1				*e*S	**Sn**	**16 52 32.2**	**+0.3**
LMEL	**Las Melosas**	**0.84**	**174**⇑*i*P		**Pn**	**16 52 20.7**	**0.0**
LMEL				*i* S	**Sn**	**16 52 36.6**	**+1.1**
LMEL				IAML		16 52 42.0	
	comp=N,318nm,0.2s						
AUSP	**Uspallata**	**1.11**	**45**	*e*P	**Pn**	**16 52 23.5**	**-0.1**
ARCO	**CERRO ARCO**	**1.18**	**82**	*e*P	**Pn**	**16 52 24.0**	**-0.2**
ARCO				*e*S	**Sn**	**16 52 41.2**	**-0.4**
ARCO				IAML		16 52 44.2	
	comp=Z,98nm,0.4s						
AAGR	**Agrelo**	**1.25**	**94**	*e*P	**Pn**	**16 52 25.0**	**0.0**
ASAL	**Salagasta**	**1.32**	**72**	*e*P	**Pn**	**16 52 25.5**	**-0.2**
ASAL				*e*S	**Sn**	**16 52 43.8**	**-0.6**
RTLS	**Leoncito**	**1.49**	**36**	*e*P	**Pn**	**16 52 28.6**	**+0.6**
RTLS				*e*S	**Sn**	**16 52 49.4**	**+1.2**
ACAN	**Cantantal**	**2.74**	**75**	*e*P	**Pn**	**16 52 43.1**	**-0.5**
TLL	**Tololo Astrono**	**2.87**	**351**	*e*P	**Pn**	**16 52 44.9**	**-0.7**
TLL				*i* S	Sn	16 53 09.6	-10
TLL				IAML		16 53 46.5	
	comp=N,28nm,0.3s						
AGUA	**GUANDACOL**	**3.85**	**24**	*e*P	**Pn**	**16 52 58.6**	**+0.2**

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*ISCJB **09** 17:08:56.8±0.9, 6°25S±0°08×130°5E±0°1, h124km, mb3.3/2, Error ellipse: s-maj=15.5km s-min=10.6km az=29.0*
*IDC **09** 17:08:58.3±2.4, 6°21S×130°60E, h123km±24km, mb3.1/2, mb1 3.0/6, mb1mx2.9/50, mbtmp3.4/6, Error ellipse: s-maj=42.3km s-min=22.3km az=91.0*
ISC 09 17:08:57.6±1.1, 6°18S±0°09×130°5E±0°1, h124km, n6, σ2°34/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.33**	**8**	P	**Pn**	**17 10 16.2**	**+1.1**
	0.5nm,0.3s,baz=170,slow=18,SNR=12						
SIJI				S	**Sn**	**17 11 12.2**	**-3.3**
	1.3nm,0.3s,baz=221,slow=19,SNR=8.1						
BATI	**Baumata**	**7.89**	**239**	P	**Pn**	**17 10 51.0**	**+1.4**
	1.4nm,0.3s,baz=67,slow=7.7,SNR=2.6						
BATI				S	**Sn**	**17 12 14.7**	**-2.7**
	1.0nm,0.3s,baz=127,slow=20,SNR=2.0						
WRA	**Warramunga Arr**	**14.17**	**165**	P	**Pn**	**17 12 11.2**	**-1.6**
	0.0nm,0.3s,baz=348,slow=13,SNR=3.1						
WRA				S	Sn	17 14 36.8	-13
	0.2nm,0.3s,baz=342,slow=22,SNR=5.4						
ASAR	**Alice Springs**	**17.68**	**170**	P	**Pn**	**17 12 57.2**	**+1.0**
	0.0nm,0.3s,baz=355,slow=10,SNR=4.8						
MKAR	**Makanchi Array**	**67.84**	**326**	P	**P**	**17 19 43.8**	**+1.3**
	0.3nm,0.5s,baz=115,slow=8.0,SNR=4.7						
KURBB	**Kurchatov Arra**	**72.10**	**328**	P	**P**	**17 20 09.4**	**+1.0**
	0.2nm,0.5s,baz=131,slow=4.5,SNR=2.6						

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*DDA **09** 17:13:20.7, 39°07N×29°15E, h7km, Ml2.7*
*ISK **09** 17:13:20.9, 39°12N×29°12E, h7km, ML2.2/4*
*ISCJB **09** 17:13:21.2±0.4, 39°08N±0°03×29°12E±0°03, h10km±3km, Error ellipse: s-maj=5.3km s-min=4.2km az=19.3*

*CSEM **09** 17:13:21.1±0.1,39.°09N×29.°12E,h10km,ML2.2,Error ellipse: s-maj=2.8km s-min=2.6km az=38.0*
ISC 09 17:13:21.1±0.8,**39.°10N**±0.°03×**29.°12E**±0.°02,**h13**km±5km, **n36**,σ0§47/52,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIMA	**Simav-Kutahya**	**0.11**	**261**	PG	**Pg**	**17 13 23.9**	**-0.3**
SIMA				SG	**Sg**	**17 13 25.9**	**-0.6**
SIMA	**Simav-Kutahya**	**0.11**	**261**	*e*Pg	**Pg**	**17 13 23.9**	**-0.3**
SIMA				*e*Sg	**Sg**	**17 13 25.9**	**-0.6**
SMAA	**Simav-Kutahya**	**0.11**	**270**	PG	**Pg**	**17 13 24.1**	**-0.1**
SMAA	**Simav-Kutahya**	**0.11**	**270**	*e*Pg	**Pg**	**17 13 24.1**	**-0.1**
SHAP	**Saphane-Kutahy**	**0.11**	**134**	PG	**Pg**	**17 13 24.2**	**-0.1**
SHAP				SG	**Sg**	**17 13 26.3**	**-0.3**
SHAP	**Saphane-Kutahy**	**0.11**	**134**	*e*Pg	**Pg**	**17 13 24.2**	**-0.1**
SHAP				*e*Sg	**Sg**	**17 13 26.3**	**-0.3**
GEDZ	**Gediz**	**0.23**	**104**	PG	**Pg**	**17 13 26.5**	**+0.4**
GEDZ				SG	**Sg**	**17 13 30.1**	**+0.6**
GEDZ	**Gediz**	**0.23**	**104**	*e*Pg	**Pg**	**17 13 26.5**	**+0.4**
GEDZ				*e*Sg	**Sg**	**17 13 30.1**	**+0.6**
DEMI	**Demirci**	**0.32**	**260**	*i* P	**Pg**	**17 13 27.8**	**+0.1**
DEMI				*i* S	**Sg**	**17 13 32.3**	**+0.3**
DEMI	**Demirci**	**0.32**	**260**	P	**Pg**	**17 13 27.8**	**+0.1**
DEMI				S	**Sg**	**17 13 32.3**	**+0.3**
TVSB	**Tavsanli**	**0.44**	**37**	PG	**Pg**	**17 13 28.7**	**-1.1**
TVSB	**Tavsanli**	**0.44**	**37**	*e*Pg	**Pg**	**17 13 28.7**	**-1.1**
KULA	**Kula-Manisa**	**0.69**	**212**	PG	**Pg**	**17 13 33.9**	**-0.5**
KULA	**Kula-Manisa**	**0.69**	**212**	*e*Pg	**Pg**	**17 13 33.9**	**-0.5**
DURS	**Dursunbey**	**0.71**	**315**	*i* P	**Pg**	**17 13 34.9**	**+0.1**
DURS				*i* S	**Sn**	**17 13 47.0**	**-0.7**
DURS	**Dursunbey**	**0.71**	**315**	P	**Pg**	**17 13 34.9**	**+0.1**
DURS				S	**Sn**	**17 13 47.0**	**-0.7**
MANT	**Manisa**	**0.75**	**216**	*i* P	**Pg**	**17 13 35.9**	**+0.2**
MANT				*i* S	**Sg**	**17 13 45.5**	**-0.1**
MANT	**Manisa**	**0.75**	**216**	P	**Pg**	**17 13 35.9**	**+0.2**
MANT				S	**Sg**	**17 13 45.5**	**-0.1**
KHAL	**Karahalli**	**0.79**	**158**	*i* P	**Pg**	**17 13 35.9**	**-0.4**
KHAL				*i* S	**Sg**	**17 13 45.9**	**-0.7**
KHAL	**Karahalli**	**0.79**	**158**	P	**Pg**	**17 13 35.9**	**-0.4**
KHAL				S	**Sg**	**17 13 45.9**	**-0.7**
BALB	**Balikesir**	**1.10**	**300**	PN	**Pb**	**17 13 42.3**	**+0.3**
BALB	**Balikesir**	**1.10**	**300**	*e*Pn	**Pb**	**17 13 42.3**	**+0.3**
CAVI	**Cavuskoy**	**1.23**	**27**	PN	**Pn**	**17 13 44.3**	**+0.2**
CAVI	**Cavuskoy**	**1.23**	**27**	*e*Pn	**Pn**	**17 13 44.3**	**+0.2**
MDNY	**Mudanya-Bursa**	**1.28**	**352**	PN	**Pb**	**17 13 45.4**	**+0.4**
MDNY	**Mudanya-Bursa**	**1.28**	**352**	*e*Pn	**Pb**	**17 13 45.4**	**+0.4**
BORA	**Eskisehir**	**1.29**	**53**	PN	**Pb**	**17 13 45.7**	**+0.4**
BORA	**Eskisehir**	**1.29**	**53**	*e*Pn	**Pb**	**17 13 45.7**	**+0.4**
KCTX	**Karacabey (Bur**	**1.30**	**333**	PN	**Pb**	**17 13 45.9**	**+0.4**
KCTX	**Karacabey (Bur**	**1.30**	**333**	*e*Pn	**Pb**	**17 13 45.9**	**+0.4**
BALY	**Balya**	**1.33**	**299**	*i* P	**Pn**	**17 13 45.3**	**0.0**
BALY				*i* S	**Sg**	**17 14 03.9**	**+0.1**
BALY	**Balya**	**1.33**	**299**	P	**Pn**	**17 13 45.3**	**0.0**
BALY				S	**Sg**	**17 14 03.9**	**+0.1**
ARMT	**Armutlu**	**1.48**	**352**	PN	**Pb**	**17 13 48.5**	**+0.1**
ARMT	**Armutlu**	**1.48**	**352**	*e*Pn	**Pb**	**17 13 48.5**	**+0.1**
YLV	**Yalova**	**1.48**	**8**	PN	**Pn**	**17 13 48.4**	**+0.9**
YLV	**Yalova**	**1.48**	**8**	*e*Pn	**Pn**	**17 13 48.4**	**+0.9**

*ISCJB **09** 17:52:18.4±0.5,38.°82N×0.°02×26.°46E±0.°05,h8km±4km, Error ellipse: s-maj=6.2km s-min=3.8km az=177.6*
*CSEM **09** 17:52:18.8±0.1,38.°82N×26.°48E,h10km,ML2.2,Error ellipse: s-maj=3.5km s-min=2.3km az=89.0*
*ISK **09** 17:52:18.3,38.°82N×26.°48E,h9km,ML2.2/2*
*DDA **09** 17:52:18.1,38.°82N×26.°48E,h7km,Ml2.8*
ISC 09 17:52:18.3±0.9,**38.°82N**±0.°02×**26.°46E**±0.°03,**h18**km±7km, **n43**,σ0§38/58,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FOCM	**Fo˜§a**	**0.24**	**117**	PG	**Pg**	**17 52 23.7**	**-0.1**
FOCM	**Fo˜§a**	**0.24**	**117**	*e*Pg	**Pg**	**17 52 23.7**	**-0.1**
KRBN	**Karaburun**	**0.24**	**162**	PG	**Pg**	**17 52 23.9**	**+0.1**
KRBN	**Karaburun**	**0.24**	**162**	*e*Pg	**Pg**	**17 52 23.9**	**+0.1**
DKL	**Dikili**	**0.43**	**54**	PG	**Pg**	**17 52 27.2**	**+0.2**
DKL				SG	**Sg**	**17 52 33.1**	**+0.1**
DKL	**Dikili**	**0.43**	**54**	*e*Pg	**Pg**	**17 52 27.2**	**+0.2**
DKL				*e*Sg	**Sg**	**17 52 33.1**	**+0.1**
URLA	**Izmir**	**0.47**	**167**	PG	**Pg**	**17 52 27.4**	**-0.5**
URLA				SG	**Sb**	**17 52 34.8**	**-0.1**
URLA	**Izmir**	**0.47**	**167**	*i* P	**Pg**	**17 52 27.3**	**-0.5**
URLA				*i* S	**Sb**	**17 52 34.7**	**-0.1**
URLA	**Izmir**	**0.47**	**167**	*e*Pg	**Pg**	**17 52 27.4**	**-0.5**
URLA				S	**Sb**	**17 52 34.7**	**-0.1**
AYVA	**Ayvalik**	**0.52**	**20**	*i* P	**Pg**	**17 52 28.4**	**-0.2**
AYVA				*i* S	**Sg**	**17 52 35.5**	**-0.2**
AYVA	**Ayvalik**	**0.52**	**20**	P	**Pg**	**17 52 28.5**	**-0.2**
AYVA				S	**Sg**	**17 52 35.5**	**-0.2**
CHOS	**Chios island**	**0.54**	**216**	PG	**Pb**	**17 52 29.4**	**+0.1**
CHOS	**Chios island**	**0.54**	**216**	*e*Pg	**Pb**	**17 52 29.4**	**+0.1**
SIGR	**SIGRI**	**0.61**	**310**	PG	**Pb**	**17 52 30.9**	**+0.4**
SIGR	**SIGRI**	**0.61**	**310**	*e*Pg	**Pb**	**17 52 30.9**	**+0.4**
DGB	**˜zmir**	**0.84**	**156**	*i* P	**Pb**	**17 52 34.0**	**-0.3**
DGB				*i* S	**Sg**	**17 52 45.8**	**+0.1**
BAYC	**CANAKKALE_Bayr**	**0.92**	**4**	*i* P	**Pb**	**17 52 35.8**	**0.0**
BAYC				*i* S	**Sn**	**17 52 49.3**	**+0.1**
BAYC	**CANAKKALE_Bayr**	**0.92**	**4**	P	**Pb**	**17 52 35.8**	**0.0**
BAYC				S	**Sn**	**17 52 49.3**	**+0.1**
EZN	**Ezine**	**1.01**	**354**	PG	**Pg**	**17 52 38.0**	**+0.1**
EZN	**Ezine**	**1.01**	**354**	*e*Pg	**Pg**	**17 52 38.0**	**+0.1**
BOZC	**Bozcaada**	**1.07**	**343**	*i* P	**Pn**	**17 52 38.8**	**+0.4**
BOZC				*i* S	**Sg**	**17 52 53.0**	**0.0**
STEP	**BALIKESIR_Sava**	**1.13**	**60**	*i* P	**Pg**	**17 52 40.0**	**-0.1**
STEP				*i* S	**Sg**	**17 52 54.9**	**0.0**
STEP	**BALIKESIR_Sava**	**1.13**	**60**	P	**Pg**	**17 52 40.0**	**-0.1**
STEP				S	**Sg**	**17 52 54.9**	**0.0**
BALY	**Balya**	**1.29**	**44**	*i* P	**Pn**	**17 52 41.5**	**0.0**
BALY				*i* S	**Sb**	**17 52 58.4**	**+0.1**
BALY	**Balya**	**1.29**	**44**	P	**Pn**	**17 52 41.5**	**0.0**
BALY				S	**Sb**	**17 52 58.4**	**+0.1**
BALB	**Balikesir**	**1.37**	**53**	PN	**Pb**	**17 52 43.7**	**+0.2**
BALB	**Balikesir**	**1.37**	**53**	*e*Pn	**Pb**	**17 52 43.7**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**1.43**	**127**	PN	**Pb**	**17 52 44.8**	**+0.4**
AYDB	**Zeytinkoy-Aydi**	**1.43**	**127**	*e*Pn	**Pb**	**17 52 44.8**	**+0.4**
GADA	**Gvkgeada**	**1.43**	**343**	PN	**Pb**	**17 52 44.4**	**-0.1**
GADA	**Gvkgeada**	**1.43**	**343**	*e*Pn	**Pb**	**17 52 44.4**	**-0.1**
LPK	**Lapseki**	**1.57**	**8**	PN	**Pb**	**17 52 46.5**	**-0.3**
LPK	**Lapseki**	**1.57**	**8**	*e*Pn	**Pb**	**17 52 46.5**	**-0.3**
GELI	**Tayfur-Gelibol**	**1.57**	**0**	PN	**Pb**	**17 52 47.5**	**+0.6**
GELI	**Tayfur-Gelibol**	**1.57**	**0**	*e*Pn	**Pb**	**17 52 47.5**	**+0.6**
KRBG	**Karabiga-Canak**	**1.70**	**22**	PN	**Pb**	**17 52 48.8**	**-0.2**
KRBG	**Karabiga-Canak**	**1.70**	**22**	*e*Pn	**Pb**	**17 52 48.8**	**-0.2**
ERIK	**Erikli-Kesan**	**1.85**	**1**	PN	**Pb**	**17 52 51.3**	**-0.3**
ERIK	**Erikli-Kesan**	**1.85**	**1**	*e*Pn	**Pb**	**17 52 51.3**	**-0.3**
RKY	**Sarkoy-Tekirda**	**1.94**	**16**	PN	**Pb**	**17 52 52.5**	**-0.8**
RKY	**Sarkoy-Tekirda**	**1.94**	**16**	*e*Pn	**Pb**	**17 52 52.5**	**-0.8**
ALN	**Alexandroupoli**	**2.10**	**351**	PN	**Pb**	**17 52 54.5**	**-1.3**
ALN	**Alexandroupoli**	**2.10**	**351**	*e*Pn	**Pb**	**17 52 54.5**	**-1.3**

*ATH **09** 17:52:40.9,36.°31N×23.°42E,h28km±1km,ML3.7/8,Error ellipse: s-maj=2.2km s-min=1.2km az=218.0*
*NEIC **09** 17:52:41.8±0.0,36.°33N×23.°43E,h13km,mb4.3/2, ML3.6(THE),ML3.8(CSEM),After THE.*
*THE **09** 17:52:41.8,36.°33N×23.°43E,h13km±1km,ML3.6/21,Error ellipse: s-maj=1.5km s-min=0.5km az=215.0*
*IDC **09** 17:52:41.6±6.5,36.°33N×23.°46E,h29km±52km,mb3.8/8, mb1 3.7/10,mb1mx3.5/60,mbtmp3.8/10,ML3.8/2,Error ellipse: s-maj=22.5km s-min=17.9km az=42.0*
*CSEM **09** 17:52:42.2±0.1,36.°27N×23.°40E,h30km,ML3.7,Error ellipse: s-maj=4.0km s-min=2.5km az=43.0*
ISC 09 17:52:41.2±0.8,**36.°31N**±0.°02×**23.°41E**±0.°02,**h30**km±6km, **n210**,σ1§51/270,**mb3.7**/10,**11C-5D,Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**0.30**	**262**	P	**Pb**	**17 52 49.0**	**+0.5**
KYTH				S	**Sb**	**17 52 52.1**	**-1.5**
KYTH				AML	AML	17 52 54.0	
	comp=N,46701μm,0.4s						
KYTH				AML	AML	17 52 54.2	
	comp=E,55032μm,0.4s						
KYTH	**Kithira**	**0.30**	**262**	P	**Pb**	**17 52 48.7**	**+0.1**
KYTH				S	**Sb**	**17 52 52.8**	**-0.8**
KYTH	**Kithira**	**0.30**	**262**	P	**Pb**	**17 52 48.7**	**+0.1**
KYTH				S	**Sb**	**17 52 52.8**	**-0.8**
KYTH	**Kithira**	**0.30**	**262**	P	**Pb**	**17 52 48.7**	**+0.1**
KYTH				S	**Sb**	**17 52 53.0**	**-0.6**
ANKY	**Antikythira Is**	**0.45**	**191**	P	**Pb**	**17 52 51.8**	**+1.1**
ANKY				S	**Sb**	**17 52 56.2**	**-1.0**
ANKY				AML	AML	17 52 57.6	
	comp=N,19657μm,0.6s						
ANKY				AML	AML	17 52 59.6	
	comp=E,11393μm,0.3s						
ANKY	**Antikythira Is**	**0.45**	**191**	P	**Pb**	**17 52 51.2**	**+0.5**
ANKY				S	**Sb**	**17 52 56.8**	**-0.4**
ANKY	**Antikythira Is**	**0.45**	**191**	P	**Pb**	**17 52 51.2**	**+0.5**
ANKY				S	**Sb**	**17 52 56.8**	**-0.4**
ANKY	**Antikythira Is**	**0.45**	**191**	P	**Pb**	**17 52 51.2**	**+0.5**
ANKY				S	**Sb**	**17 52 56.8**	**-0.4**
MNVA	**Monemvasia**	**0.48**	**322**	P	**Pn**	**17 52 52.2**	**+0.1**
MNVA				S	**Sb**	**17 52 57.3**	**-0.9**
MNVA				AML	AML	17 52 58.6	
	comp=N,12550μm,0.3s						
MNVA				AML	AML	17 52 58.6	
	comp=E,37183μm,0.4s						
MNVA	**Monemvasia**	**0.48**	**322**	P	**Pb**	**17 52 51.6**	**+0.3**
MNVA				S	**Sb**	**17 52 58.0**	**-0.3**
VLI	**Veliai**	**0.56**	**317**	P	**Pb**	**17 52 53.0**	**+0.4**
VLI				S	**Sb**	**17 52 58.5**	**-1.8**
VLI				AML	AML	17 53 00.9	
	comp=N,10636μm,0.3s						
VLI				AML	AML	17 53 02.9	
	comp=E,11069μm,0.6s						
VLI	**Veliai**	**0.56**	**317**	P	**Pb**	**17 52 52.6**	**0.0**
VLI				S	**Sb**	**17 52 59.6**	**-0.8**
VLI	**Veliai**	**0.56**	**317**	P	**Pb**	**17 52 52.7**	**+0.1**
VLI				S	**Sb**	**17 52 59.6**	**-0.8**
MHLO	**Agia Marina, M**	**0.89**	**64**	P	**Pb**	**17 52 59.9**	**+1.9**
MHLO				S	**Sb**	**17 53 08.9**	**-0.6**
MHLO				AML	AML	17 53 13.4	
	comp=E,17883μm,0.5s						
MHLO				AML	AML	17 53 18.2	
	comp=N,23098μm,0.6s						
MHLO	**Agia Marina, M**	**0.89**	**64**	P	**Pb**	**17 52 58.6**	**+0.6**
MHLO				S	**Sn**	**17 53 10.6**	**+1.1**
MHLO	**Agia Marina, M**	**0.89**	**64**	P	**Pb**	**17 52 58.6**	**+0.6**
MHLO				S	**Sn**	**17 53 10.6**	**+1.1**
IMMV	**Iera Moni Meta**	**0.96**	**151**	P	**Pn**	**17 52 58.7**	**0.0**
IMMV				S	**Sn**	**17 53 12.2**	**+0.9**
IMMV				AML	AML	17 53 16.2	
	comp=N,8171μm,0.3s						
IMMV				AML	AML	17 53 18.7	
	comp=E,6628μm,0.6s						
IMMV	**Iera Moni Meta**	**0.96**	**151**	P	**Pn**	**17 52 59.1**	**+0.4**
IMMV	**Iera Moni Meta**	**0.96**	**151**	P	**Pn**	**17 52 59.1**	**+0.4**
IMMV				S	**Sn**	**17 53 12.7**	**+1.3**
DYR	**Agios Nikonas**	**0.98**	**298**	P	**Pb**	**17 53 00.1**	**+0.5**
DYR	**Agios Nikonas**	**0.98**	**298**	P	**Pb**	**17 52 59.9**	**+0.3**
DYR	**Agios Nikonas**	**0.98**	**298**	P	**Pb**	**17 52 59.9**	**+0.3**
YDRA	**Hydra**	**1.04**	**2**	P	**Pb**	**17 53 01.8**	**+1.1**
YDRA	**Hydra**	**1.04**	**2**	P	**Pb**	**17 53 01.3**	**+0.7**
KRND	**KRANIDI**	**1.10**	**349**	P	**Pb**	**17 53 01.7**	**+0.2**
KRND				S	**Sb**	**17 53 17.3**	**+1.8**
KRND				AML	AML	17 53 19.7	
	comp=N,8407μm,0.3s						
KRND				AML	AML	17 53 20.2	
	comp=E,10115μm,0.4s						
KRND	**KRANIDI**	**1.10**	**349**	P	**Pb**	**17 53 01.5**	**0.0**
KRND				S	**Sb**	**17 53 16.9**	**+1.4**
KRND	**KRANIDI**	**1.10**	**349**	P	**Pb**	**17 53 01.7**	**+0.2**
KRND				S	**Sb**	**17 53 16.9**	**+1.4**
VAM	**Vamos**	**1.10**	**144**	P	**Pn**	**17 53 01.3**	**+0.7**
VAM	**Vamos**	**1.10**	**144**	P	**Pn**	**17 53 01.3**	**+0.7**
DID	**Didima**	**1.21**	**353**	P	**Pn**	**17 53 02.8**	**+0.6**
DID				S	**Sb**	**17 53 18.8**	**+0.1**
DID				AML	AML	17 53 21.7	
	comp=N,4959μm,0.4s						
DID				AML	AML	17 53 23.8	
	comp=E,7112μm,0.3s						
DID	**Didima**	**1.21**	**353**	P	**Pb**	**17 53 03.0**	**-0.4**
DID				S	**Sb**	**17 53 19.4**	**+0.7**
DID	**Didima**	**1.21**	**353**	P	**Pb**	**17 53 03.1**	**-0.4**
DID				S	**Sb**	**17 53 19.4**	**+0.7**
SERI	**Serifos**	**1.21**	**45**	P	**Pb**	**17 53 02.9**	**-0.7**
SERI				S	**Sb**	**17 53 18.4**	**-0.5**
SERI	**Serifos**	**1.21**	**45**	P	**Pb**	**17 53 02.9**	**-0.7**
SERI				S	**Sb**	**17 53 18.4**	**-0.5**
VLX	**Vlachokerasia**	**1.35**	**322**	P	**Pb**	**17 53 05.2**	**-0.6**
VLX	**Vlachokerasia**	**1.35**	**322**	P	**Pb**	**17 53 05.5**	**-0.4**
VLX				S	**Sb**	**17 53 23.0**	**+0.2**
VLX	**Vlachokerasia**	**1.35**	**322**	P	**Pb**	**17 53 05.5**	**-0.4**
VLX				S	**Sb**	**17 53 23.0**	**+0.2**
PYL	**PYLOS**	**1.47**	**294**	P	**Pb**	**17 53 09.1**	**+1.3**
PYL	**PYLOS**	**1.47**	**294**	P	**Pb**	**17 53 08.1**	**+0.3**
PYL				S	**Sb**	**17 53 27.4**	**+1.3**
PYL	**PYLOS**	**1.47**	**294**	P	**Pb**	**17 53 08.1**	**+0.3**
PYL				S	**Sb**	**17 53 27.4**	**+1.3**
ITM	**Ithomi**	**1.48**	**307**	*e*Pn	**Pb**	**17 53 08.5**	**+0.5**
ITM	**Ithomi**	**1.48**	**307**	P	**Pb**	**17 53 08.3**	**+0.3**
ITM	**Ithomi**	**1.48**	**307**	P	**Pb**	**17 53 08.3**	**+0.3**
SAP3	**Santorini-Thir**	**1.57**	**85**	P	**Pb**	**17 53 08.5**	**-1.0**
SAP3	**Santorini-Thir**	**1.57**	**85**	P	**Pb**	**17 53 08.5**	**-1.0**
THR5	**Thira Island,**	**1.57**	**85**	P	**Pb**	**17 53 08.4**	**-1.1**
THR5	**Thira Island,**	**1.57**	**85**	P	**Pb**	**17 53 08.4**	**-1.1**
IDI	**Anoyia**	**1.57**	**130**	Pn	**Pn**	**17 53 07.4**	**+0.2**
	comp=E,37nm,0.3s,baz=314,slow=5.2,SNR=140						
IDI				LR	LR	17 53 26.1	
	comp=E,27nm,19.7s,baz=255,slow=29						
IDI				Sn	**Sn**	**17 53 28.1**	**+1.5**
	comp=E,118nm,0.3s,baz=305,slow=12,SNR=13						
IDI	**Anoyia**	**1.57**	**130**	⇑*i*P	**Pn**	**17 53 08.1**	**+0.9**
IDI	**Anoyia**	**1.57**	**130**	*e*Pn	**Pn**	**17 53 07.2**	**0.0**
IDI	**Anoyia**	**1.57**	**130**	⇑*i*P	**Pn**	**17 53 08.1**	**+0.9**
IDI				*e*Sn	**Sn**	**17 53 26.2**	**-0.4**
IDI				S	**Sb**	**17 53 30.3**	**+1.1**
VLY	**Voula,Athens**	**1.57**	**11**	P	**Pn**	**17 53 08.0**	**+0.9**
VLY	**Voula,Athens**	**1.57**	**11**	P	**Pn**	**17 53 08.0**	**+0.9**
SAP1	**Santorini-Akro**	**1.60**	**88**	P	**Pb**	**17 53 09.1**	**-1.0**
SAP1	**Santorini-Akro**	**1.60**	**88**	P	**Pb**	**17 53 09.1**	**-1.0**
THR3	**Thira Island,**	**1.61**	**86**	P	**Pb**	**17 53 09.1**	**-1.1**
THR3	**Thira Island,**	**1.61**	**86**	P	**Pb**	**17 53 09.1**	**-1.1**
THR2	**Thira island,**	**1.64**	**84**	P	**Pn**	**17 53 09.3**	**+1.3**
THR2	**Thira island,**	**1.64**	**84**	P	**Pn**	**17 53 09.3**	**+1.3**
SANT	**Santorini**	**1.66**	**87**	⇑*i*P	**Pb**	**17 53 09.7**	**-1.3**
SANT	**Santorini**	**1.66**	**87**	*e*Pn	**Pn**	**17 53 09.5**	**+1.3**
SANT	**Santorini**	**1.66**	**87**	P	**Pb**	**17 53 09.7**	**-1.3**
SANT	**Santorini**	**1.66**	**87**	P	**Pb**	**17 53 09.7**	**-1.3**
ATH	**Athens Observa**	**1.68**	**8**	P	**Pb**	**17 53 10.2**	**-1.3**
ATH	**Athens Observa**	**1.68**	**8**	P	**Pb**	**17 53 10.2**	**-1.3**
LOUT	**Loutraki**	**1.71**	**348**	P	**Pn**	**17 53 10.4**	**+1.3**
LOUT				S	**Sb**	**17 53 31.5**	**-1.7**
LOUT	**Loutraki**	**1.71**	**348**	P	**Pn**	**17 53 10.4**	**+1.3**
LOUT				S	**Sb**	**17 53 31.5**	**-1.7**
SIVA	**Sivas**	**1.72**	**138**	P	**Pb**	**17 53 11.5**	**-0.6**
SIVA	**Sivas**	**1.72**	**138**	P	**Pb**	**17 53 11.5**	**-0.6**
LTK	**Loutraki**	**1.75**	**348**	P	**Pn**	**17 53 10.6**	**+1.1**
LTK	**Loutraki**	**1.75**	**348**	P	**Pn**	**17 53 11.0**	**+1.4**
LTK				S	**Sn**	**17 53 32.1**	**+1.2**
LTK	**Loutraki**	**1.75**	**348**	P	**Pn**	**17 53 11.0**	**+1.4**
LTK				S	**Sn**	**17 53 32.1**	**+1.2**
PTL	**Penteli**	**1.78**	**12**	P	**Pn**	**17 53 11.1**	**+1.1**
PTL	**Penteli**	**1.78**	**12**	P	**Pn**	**17 53 11.1**	**+1.1**
THAL	**Thalero**	**1.83**	**341**	P	**Pn**	**17 53 12.1**	**+1.5**
THAL				S	**Sn**	**17 53 34.4**	**+1.6**
THAL	**Thalero**	**1.83**	**341**	P	**Pn**	**17 53 12.1**	**+1.5**
THAL				S	**Sn**	**17 53 34.4**	**+1.6**
GUR	**Goura**	**1.84**	**333**	P	**Pn**	**17 53 11.4**	**+0.5**
GUR	**Goura**	**1.84**	**333**	P	**Pn**	**17 53 11.9**	**+1.1**
GUR				S	**Sb**	**17 53 35.3**	**-1.5**
GUR	**Goura**	**1.84**	**333**	P	**Pn**	**17 53 12.0**	**+1.1**
GUR				S	**Sb**	**17 53 35.3**	**-1.5**
APE	**Apeiranthos**	**1.87**	**65**	⇓*i*P	**Pb**	**17 53 13.0**	**-1.7**
APE	**Apeiranthos**	**1.87**	**65**	S	**Sb**	**17 53 43.2**	**+5.6**
APE	**Apeiranthos**	**1.87**	**65**	P	**Pn**	**17 53 12.6**	**+1.4**
APE	**Apeiranthos**	**1.87**	**65**	P	**Pn**	**17 53 12.6**	**+1.4**
PROD	**Prodromos**	**1.99**	**348**	P	**Pn**	**17 53 14.2**	**+1.3**
PROD	**Prodromos**	**1.99**	**348**	P	**Pn**	**17 53 14.2**	**+1.3**
KLV	**Kalavryta, Ach**	**2.01**	**330**	P	**Pn**	**17 53 14.2**	**+1.1**
KLV				S	**Sb**	**17 53 39.6**	**-2.0**
LAST	**Lasithi**	**2.03**	**124**	P	**Pn**	**17 53 14.6**	**+1.1**
LAST				S	**Sn**	**17 53 38.8**	**+0.8**
EREA	**Eretria**	**2.15**	**11**	P	**Pn**	**17 53 16.7**	**+1.6**
EREA				S	**Sn**	**17 53 42.1**	**+1.3**
EREA	**Eretria**	**2.15**	**11**	P	**Pn**	**17 53 16.7**	**+1.6**
EREA				S	**Sn**	**17 53 42.1**	**+1.3**
ALIK	**Aliki, Aigiali**	**2.21**	**332**	P	**Pn**	**17 53 17.8**	**+2.0**
ALIK	**Aliki, Aigiali**	**2.21**	**332**	P	**Pn**	**17 53 17.8**	**+2.0**
DSF	**Desfina**	**2.22**	**342**	P	**Pn**	**17 53 17.3**	**+1.3**
DSF				S	**Sn**	**17 53 43.9**	**+1.5**
DSF	**Desfina**	**2.22**	**342**	P	**Pn**	**17 53 17.3**	**+1.3**
LAKA	**Lakka**	**2.24**	**330**	P	**Pn**	**17 53 17.8**	**+1.4**
LAKA				S	**Sn**	**17 53 45.0**	**+1.9**
LAKA	**Lakka**	**2.24**	**330**	P	**Pn**	**17 53 17.8**	**+1.4**
LAKA				S	**Sn**	**17 53 45.0**	**+1.9**
KALE	**Kalithea**	**2.31**	**334**	P	**Pn**	**17 53 18.5**	**+1.1**
KALE	**Kalithea**	**2.31**	**334**	P	**Pn**	**17 53 18.5**	**+1.1**
TRIZ	**Trizonia**	**2.32**	**333**	P	**Pn**	**17 53 18.4**	**+1.1**
TRIZ	**Trizonia**	**2.32**	**333**	P	**Pn**	**17 53 18.4**	**+1.1**
LKR	**Lokris**	**2.36**	**352**	P	**Pn**	**17 53 19.3**	**+1.3**
LKR				S	**Sn**	**17 53 47.5**	**+1.5**
LKR	**Lokris**	**2.36**	**352**	P	**Pn**	**17 53 19.3**	**+1.3**
LKR				S	**Sn**	**17 53 47.5**	**+1.5**
EFP	**Efpalio**	**2.43**	**331**	P	**Pn**	**17 53 20.7**	**+1.8**
EFP	**Efpalio**	**2.43**	**331**	P	**Pn**	**17 53 20.7**	**+1.8**
ANX	**Ano Chora**	**2.57**	**333**	P	**Pn**	**17 53 22.5**	**+1.6**
ANX				S	**Sn**	**17 53 52.8**	**+1.5**
ANX	**Ano Chora**	**2.57**	**333**	P	**Pn**	**17 53 22.5**	**+1.6**
ANX				S	**Sn**	**17 53 52.8**	**+1.5**
SMIA	**Simia**	**2.57**	**357**	P	**Pn**	**17 53 22.8**	**+1.9**
SMIA				S	**Sn**	**17 53 52.9**	**+1.7**
SMIA	**Simia**	**2.57**	**357**	P	**Pn**	**17 53 22.8**	**+1.9**
SMIA				S	**Sn**	**17 53 52.9**	**+1.7**
AGG	**Agios Georgios**	**2.84**	**343**	*e*Pn	**Pn**	**17 53 26.4**	**+1.7**
AGG	**Agios Georgios**	**2.84**	**343**	P	**Pn**	**17 53 26.3**	**+1.7**
AGG	**Agios Georgios**	**2.84**	**343**	P	**Pn**	**17 53 26.3**	**+1.7**
EVR	**Evrytania**	**2.90**	**334**	P	**Pn**	**17 53 27.4**	**+2.0**
EVR	**Evrytania**	**2.90**	**334**	P	**Pn**	**17 53 27.4**	**+2.0**
XOR	**Xorichti**	**3.06**	**357**	P	**Pn**	**17 53 29.0**	**+1.4**
XOR	**Xorichti**	**3.06**	**357**	P	**Pn**	**17 53 29.0**	**+1.4**
KARP	**Karpathos**	**3.14**	**103**	*e*Pn	**Pn**	**17 53 30.4**	**+1.8**
KARP				*e*Sn	**Sn**	**17 54 05.6**	**+0.5**
KARP	**Karpathos**	**3.14**	**103**	P	**Pn**	**17 53 30.3**	**+1.7**
KARP	**Karpathos**	**3.14**	**103**	P	**Pn**	**17 53 30.3**	**+1.7**
KARP				*e*Sn	**Sn**	**17 54 05.6**	**+0.5**
BODT	**Bodrum**	**3.23**	**75**	P	**Pn**	**17 53 31.1**	**+1.3**
BODT	**Bodrum**	**3.23**	**75**	P	**Pn**	**17 53 31.1**	**+1.3**
THL	**Klokotos Trika**	**3.44**	**342**	P	**Pn**	**17 53 34.5**	**+1.8**
THL	**Klokotos Trika**	**3.44**	**342**	P	**Pn**	**17 53 34.5**	**+1.8**
LIT	**Litokhoron**	**3.86**	**349**	*e*Pn	**Pn**	**17 53 40.0**	**+1.5

ellipse: s-maj=172.2km s-min=24.8km az=68.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.23**	**161**	P	Pn	18 12 29.0	-0.4
	0.1nm,0.3s,baz=343,slow=12,SNR=5.0						
ASAR	**Alice Springs**	**20.63**	**166**	P	P	18 13 08.5	+0.2
	1.7nm,0.7s,baz=349,slow=11,SNR=25						
MKAR	**Makanchi Array**	**64.54**	**327**	P	P	18 19 06.4	+0.3
	0.1nm,0.5s,baz=126,slow=7.4,SNR=3.2						
KURBB	**Kurchatov Arra**	**68.81**	**329**	P	P	18 19 32.9	-0.3
	0.1nm,0.4s,baz=136,slow=6.2,SNR=3.3						

*IDC **09** 18:08:49.2±1.6, 3°.72N×92°.61E, h0km, mb3.6/4, mb1 3.8/7, mb1mx3.5/65, mbtmp3.7/7, ML3.4/3, Error ellipse: s-maj=47.2km s-min=23.4km az=38.0*
*ISCJB **09** 18:08:50.4±1.0, 3°.7N±0°.2×92°.6E±0°.1, h24km, mb3.5/4, Error ellipse: s-maj=23.2km s-min=13.1km az=20.8*
ISC 09 18:08:52.3±1.1, 3.7N±0°.2×92.75E±0°.10, h24km, n13, σ2§32/8, mb3.4/4, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**6.23**	**98**	Pn	**Pn**	**18 10 24.6**	**+1.6**
	2.8nm,0.3s,baz=348,slow=0.4,SNR=8.8						
PSI				Sn	**Sn**	**18 11 29.3**	**-4.3**
	0.5nm,0.3s,baz=360,slow=19,SNR=2.9						
PALK	**Pallekele**	**12.50**	**287**	Pn	**Pn**	**18 11 47.3**	**-1.6**
	0.3nm,0.3s,baz=114,slow=5.7,SNR=5.9						
PALK				Sn	Sn	18 13 53.2	-14
	2.0nm,0.3s,baz=116,slow=13,SNR=9.9						
CMAR	**Chiang Mai Arr**	**15.87**	**22**	Pn	**Pn**	**18 12 35.3**	**+0.9**
	0.0nm,0.3s,baz=216,slow=12,SNR=3.8						
H08S2	**Diego Garcia H**	**23.14**	**241**	T	T	18 39 30.4	
	baz=60,slow=74,SNR=5.0						
H08S3	**Diego Garcia H**	**23.14**	**241**	T	T	18 39 27.8	
	baz=60,slow=74,SNR=14						
H08S1	**Diego Carcia H**	**23.15**	**241**	T	T	18 39 20.3	
	baz=60,slow=74,SNR=16						
H01W3	**Cape Leeuwin H**	**43.33**	**154**	T	T	19 03 42.3	
	baz=325						
H01W2	**Cape Leeuwin H**	**43.34**	**154**	T	T	19 03 56.8	
	baz=325						
H01W1	**Cape Leeuwin H**	**43.34**	**154**	T	T	19 03 37.3	
	baz=325						
MKAR	**Makanchi Array**	**43.88**	**350**	P	**P**	**18 16 56.7**	**-0.2**
	0.4nm,0.7s,baz=173,slow=8.4,SNR=5.6						
WRA	**Warramunga Arr**	**47.13**	**122**	P	**P**	**18 17 24.5**	**+1.5**
	0.4nm,0.9s,baz=295,slow=9.9,SNR=14						
ZALV	**Zalesovo Beam**	**50.51**	**354**	P	**P**	**18 17 48.4**	**0.0**
	0.8nm,0.4s,baz=170,slow=8.8,SNR=4.3						
GERES	**GERESS Array B**	**80.01**	**319**	P	**P**	**18 21 00.3**	**+0.3**
	0.1nm,0.3s,baz=108,slow=4.3,SNR=3.9						

MEX 09 18:17:07.6±1.4, 14°.11N×93°.14W, h16km±548km, MD4.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.16**	**47**	*e*P	Pn	18 17 23.3	-6.0
THIG				*e*S	Sb	18 17 38.2	-6.1
PCIG		**1.59**	**357**	*e*P	Pn	18 17 30.7	-4.4
PCIG				*i* S	Sn	18 17 50.4	-4.9
TGIG		**2.65**	**0**	*e*P	Pn	18 17 48.4	-1.5
TGIG				*e*S	Sn	18 18 19.8	-1.9

MAN 09 18:22:10.0, 11°.03N×121°.45E, h87km, mb4.6, ML3.5, MS3.3, 1D, Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAP	**San Jose, Anti**	**0.57**	**120**	⇓*e*P	Pn	18 22 21.6	-3.5
GUIM	**Jordan**	**1.20**	**110**	*e*P	Pn	18 22 31.9	0.0
GUIM				*e*S	Sn	18 22 49.8	+1.5
SJMP	**San Jose**	**1.45**	**347**	*e*P	Pn	18 22 36.1	+1.1
SJMP				*e*S	Sn	18 22 54.6	+0.7
BUSP	**Coron**	**1.56**	**308**	*e*P	Pn	18 22 39.7	+3.3
BUSP				*e*S	Sn	18 23 04.3	+8.0
ENPP	**El Nido**	**1.99**	**275**	*e*P	Pn	18 22 42.5	+0.5
ENPP				*e*S	Sn	18 23 06.6	+0.2

IDC 09 18:27:39.3±3.3, 1°.94N×92°.32E, h0km, mb3.3/2, mb1 3.5/3, mb1mx3.1/68, mbtmp3.2/3, MS3.2/1, Ms1 3.2/1, ms1mx2.5/34, Error ellipse: s-maj=102.5km s-min=31.4km az=61.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**17.65**	**21**	P	P	18 31 48.0	+0.2
	baz=214,slow=14,SNR=3.0						
H08S2	**Diego Garcia H**	**21.95**	**244**	T	T	18 54 14.0	
	baz=65						
H08S3	**Diego Garcia H**	**21.95**	**244**	T	T	18 54 07.7	
	baz=65,slow=74						
H08S1	**Diego Carcia H**	**21.97**	**244**	T	T	18 54 09.3	
	baz=65,slow=74						
MKAR	**Makanchi Array**	**45.52**	**350**	P	P	18 36 00.3	-0.3
	0.4nm,0.7s,baz=158,slow=8.4,SNR=3.4						
WRA	**Warramunga Arr**	**46.60**	**120**	P	P	18 36 09.3	-0.3
	0.3nm,0.8s,baz=300,slow=8.6,SNR=2.7						
GEYT	**Alibeck**	**47.60**	**323**	LR	LR	18 57 38.7	
	comp=Z,27nm,18.9s,baz=30,slow=38						

*ISCJB **09** 18:46:35.4±0.8, 36°.35N±0°.08×71°.1E±0°.1, h188km, mb3.4/6, Error ellipse: s-maj=14.7km s-min=8.5km az=31.3*
*IDC **09** 18:46:35.4±5.3, 36°.24N×71°.19E, h182km±49km, mb3.2/6, mb1 3.2/11, mb1mx2.9/72, mbtmp3.6/11, Error ellipse: s-maj=42.5km s-min=18.7km az=33.0*
*NNC **09** 18:46:39.7±3.6, 36°.94N×70°.61E, h0km, mb4.5, mpv4.1, Error ellipse: s-maj=29.9km s-min=26.1km az=127.0*
ISC 09 18:46:36.7±1.1, 36°.45N±0°.10×71°.1E±0°.1, h188km, n26, σ1§46/31, mb3.4/6, 6C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**4.04**	**27**	⇓Pn	**Pn**	**18 47 40.6**	**+1.8**
	7.5nm,0.3s						
SFK				⇑Sn	**Sn**	**18 48 27.7**	**+0.2**
	16nm,0.3s						
AML	**Almayashu**	**6.03**	**19**	P	**Pn**	**18 48 05.7**	**+1.2**
	SNR=57						
MNAS	**Manas**	**6.13**	**10**	⇓Pn	**Pn**	**18 48 06.8**	**+1.1**
	9.5nm,0.4s						
MNAS				⇑Sn	**Sn**	**18 49 14.1**	**-1.7**
	3.7nm,0.5s						
UCH	**Uchtor**	**6.36**	**24**	P	**Pn**	**18 48 09.9**	**+1.1**
	SNR=18						
KZA	**Kyzart**	**6.49**	**29**	P	**Pn**	**18 48 11.2**	**+0.7**
	SNR=10						
EKS2	**Erkin-Say**	**6.55**	**18**	P	**Pn**	**18 48 12.6**	**+1.6**
	SNR=11						
KK31	**Karatay Array**	**6.66**	**356**	⇑Pn	**Pn**	**18 48 13.4**	**+1.0**
	4.5nm,0.3s,baz=181,slow=13,SNR=168						
KK31				⇑Sn	**Sn**	**18 49 23.9**	**-4.2**
	3.1nm,0.4s,baz=186,slow=20,SNR=8.9						
AAK	**Ala-Archa**	**6.72**	**22**	P	**Pn**	**18 48 14.4**	**+1.1**
	6.1nm,0.3s,baz=190,slow=5.9,SNR=32						
AAK				S	**Sn**	**18 49 28.0**	**-1.7**
	0.2nm,0.3s,baz=127,slow=20,SNR=7.0						
AAK	**Ala-Archa**	**6.72**	**22**	⇑Pn	**Pn**	**18 48 14.4**	**+1.1**
	8.6nm,0.4s						
AAK				⇓Sn	**Sn**	**18 49 29.0**	**-0.8**
	2.9nm,0.5s						
AAK	**Ala-Archa**	**6.72**	**22**	P	**Pn**	**18 48 14.6**	**+1.3**
	SNR=14						
KBK	**Karagaybulak**	**6.88**	**25**	P	**Pn**	**18 48 17.6**	**+2.1**
	SNR=10						
ULHL	**Ulahol**	**7.04**	**33**	P	**Pn**	**18 48 18.3**	**+0.8**
	SNR=6.8						
CHMS	**Chumysh**	**7.13**	**22**	P	**Pn**	**18 48 19.6**	**+1.1**
	SNR=8.6						
USP	**Ospenovka**	**7.30**	**20**	P	**Pn**	**18 48 21.5**	**+0.7**
	SNR=8.2						
TKM2	**Tokmak 2**	**7.34**	**27**	⇑Pn	**Pn**	**18 48 22.5**	**+1.0**
	15nm,0.8s						
TKM2	**Tokmak 2**	**7.34**	**27**	P	**Pn**	**18 48 22.7**	**+1.2**
	SNR=11						
MKAR	**Makanchi Array**	**13.30**	**36**	P	**Pn**	**18 49 38.5**	**+0.3**
	0.2nm,0.3s,baz=212,slow=12,SNR=12						
KURBB	**Kurchatov Arra**	**15.15**	**18**	P	**Pn**	**18 50 00.3**	**-0.8**
	0.0nm,0.3s,baz=203,slow=10,SNR=3.2						
BVAR	**Borovoye Array**	**16.59**	**359**	P	**Pn**	**18 50 19.2**	**+0.8**
	0.2nm,0.3s,baz=149,slow=8.5,SNR=4.1						
AKTO	**Aktyubinsk**	**16.86**	**330**	P	**Pn**	**18 50 22.8**	**+1.1**
	0.2nm,0.3s,baz=118,slow=8.4,SNR=4.3						
FINES	**FINESS Array B**	**37.56**	**326**	P	**P**	**18 53 33.6**	**+1.1**
	2.2nm,1.0s,baz=109,slow=11,SNR=6.0						
ARCES	**ARCESS Array B**	**41.22**	**338**	P	**P**	**18 54 03.9**	**+1.2**
	1.9nm,0.9s,baz=104,slow=8.9,SNR=5.2						
NOA	**NORSAR Array B**	**44.46**	**323**	P	**P**	**18 54 29.3**	**+0.5**
	0.8nm,0.6s,baz=107,slow=6.6,SNR=2.7						
TORD	**Torodi Ar. Bea**	**65.78**	**269**	P	**P**	**18 57 01.6**	**-0.3**
	0.3nm,0.5s,baz=59,slow=6.7,SNR=2.9						
WRA	**Warramunga Arr**	**81.91**	**122**	P	**P**	**18 58 33.9**	**-1.5**
	0.3nm,0.8s,baz=326,slow=4.8,SNR=3.5						
ASAR	**Alice Springs**	**84.17**	**125**	P	**P**	**18 58 45.2**	**-1.8**
	0.2nm,0.6s,baz=325,slow=4.7,SNR=4.9						

*CSEM **09** 18:50:37.3, 44°.89N×11°.24E, h4km, ML2.1/4*
ROM 09 18:50:37.4±0.0, 44°.885N±0°.001×11°.240E±0°.001, h4km, ML2.1/1, 6D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0813	**Massa Finalese**	**0.03**	**256**	⇓*i*P	Pg	18 50 38.8	+0.6
T0813				*i* S	Sg	18 50 40.6	+1.8
T0813	**Massa Finalese**	**0.03**	**256**	*i* P	Pg	18 50 38.8	+0.6
T0813				*i* S	Sg	18 50 40.6	+1.8
T0800	**Massa Finalese**	**0.04**	**172**	⇓*i*P	Pg	18 50 38.8	+0.5
T0800				*i* S	Sg	18 50 40.8	+1.9
T0800	**Massa Finalese**	**0.04**	**172**	*i* P	Pg	18 50 38.8	+0.5
T0800				*i* S	Sg	18 50 40.8	+1.9
T0802	**SanFelice sul**	**0.04**	**256**	*e*P	Pg	18 50 39.4	+1.0
T0802				*i* S	Sg	18 50 41.1	+2.0
T0802	**SanFelice sul**	**0.04**	**256**	*e*P	Pg	18 50 39.4	+1.0
T0802				*i* S	Sg	18 50 41.1	+2.0
T0805	**Bondeno (FE)**	**0.07**	**60**	⇓*e*P	Pg	18 50 39.5	+0.7
T0805				*i* S	Sg	18 50 42.1	+2.3
T0805	**Bondeno (FE)**	**0.07**	**60**	*e*P	Pg	18 50 39.5	+0.7
T0805				*i* S	Sg	18 50 42.1	+2.3
T0812	**Loc. Stoppiaro**	**0.08**	**329**	*e*P	Pg	18 50 39.0	0.0
T0812				*i* S	Sg	18 50 42.6	+2.4
T0812	**Loc. Stoppiaro**	**0.08**	**329**	*e*P	Pg	18 50 40.0	+0.9
T0812				*i* S	Sg	18 50 42.6	+2.4
T0822	**Casumaru (Bond**	**0.09**	**125**	*e*P	Pg	18 50 39.9	+0.7
T0822				*i* S	Sg	18 50 42.9	+2.5
T0822	**Casumaru (Bond**	**0.09**	**125**	*e*P	Pg	18 50 39.9	+0.7
T0822				*i* S	Sg	18 50 42.9	+2.4
T0811	**Palata Pepoli**	**0.10**	**186**	⇓*i*P	Pg	18 50 40.1	+0.7
T0811				*i* S	Sg	18 50 43.3	+2.5
T0811	**Palata Pepoli**	**0.10**	**186**	*i* P	Pg	18 50 40.1	+0.7
T0811				*i* S	Sg	18 50 43.3	+2.5
SERM	**Sermide**	**0.13**	**18**	*e*P	Pg	18 50 40.0	0.0
SERM	**Sermide**	**0.13**	**18**	*e*P	Pg	18 50 41.0	+1.0
SERM				AML	AML		
	comp=E,439μm,0.4s						
SERM				AML	AML		
	comp=N,472μm,1.3s						
SERM				AML	AML		
	comp=E,439μm,0.4s						
SERM				AML	AML		
	comp=N,472μm,1.3s						
T0803	**Dosso, Cento (**	**0.14**	**146**	⇓*e*P	Pg	18 50 41.0	+0.9
T0803				*i* S	Sg	18 50 45.1	+3.1
T0803	**Dosso, Cento (**	**0.14**	**146**	*e*P	Pg	18 50 41.0	+0.9
T0803				*i* S	Sg	18 50 45.1	+3.1
RAVA	**Ravarino**	**0.16**	**214**	⇓*i*P	Pg	18 50 41.5	+1.1
RAVA				*i* S	Sg	18 50 45.9	+3.5
RAVA	**Ravarino**	**0.16**	**214**	*i* P	Pg	18 50 41.5	+1.1
RAVA				*i* S	Sg	18 50 45.9	+3.5
RAVA				AML	AML		
	comp=E,900μm,1.1s						
RAVA				AML	AML		
	comp=N,1270μm,0.2s						
RAVA				AML	AML		
	comp=N,1270μm,0.2s						
RAVA				AML	AML		
	comp=E,900μm,1.1s						
T0818	**Loc. Fossa, Co**	**0.16**	**288**	*e*P	Pg	18 50 41.5	+1.1
T0818				*i* S	Sg	18 50 45.8	+3.3
T0818	**Loc. Fossa, Co**	**0.16**	**288**	*e*P	Pg	18 50 41.5	+1.0
T0818				*i* S	Sg	18 50 45.8	+3.2
T0817	**Loc. Veratica,**	**0.19**	**55**	*e*P	Pg	18 50 41.8	+0.8
T0817	**Loc. Veratica,**	**0.19**	**55**	*e*P	Pg	18 50 41.8	+0.8
T0823	**Castello D'Arg**	**0.20**	**172**	*e*P	Pg	18 50 42.5	+1.3
T0823				*i* S	Sg	18 50 47.6	+3.7
T0823	**Castello D'Arg**	**0.20**	**172**	*e*P	Pg	18 50 42.5	+1.3
T0823				*i* S	Sg	18 50 47.6	+3.7
T0814	**Loc. Cortile,**	**0.21**	**245**	*e*P	Pg	18 50 42.7	+1.2
T0814				*i* S	Sg	18 50 47.0	+2.7
T0814	**Loc. Cortile,**	**0.21**	**245**	*e*P	Pg	18 50 42.6	+1.2
T0814				*i* S	Sg	18 50 48.0	+3.7
T0828	**Loc. Fossoli,**	**0.24**	**257**	*e*P	Pg	18 50 41.0	-0.9
T0828				*i* S	Sg	18 50 44.6	-0.5
T0828	**Loc. Fossoli,**	**0.24**	**257**	*e*P	Pg	18 50 42.0	0.0
T0828				*i* S	Sg	18 50 44.6	-0.5

*ISCJB **09** 18:51:15.5±0.3, 44°.30N±0°.02×11°.94E±0°.06, h22km±4km, Error ellipse: s-maj=7.1km s-min=2.9km az=161.1*
*ROM **09** 18:51:15.4±0.2, 44°.28N±0°.01×11°.89E±0°.02, h21km±2km, ML2.4/26*
*CSEM **09** 18:51:15.2±0.1, 44°.30N×11°.97E, h10km, ML2.4, Error ellipse: s-maj=4.9km s-min=2.3km az=79.0*
ISC 09 18:51:15.3±1.0, 44°.30N±0°.02×11°.94E±0°.03, h16km±8km, n83, σ0§98/105, 1C-2D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMOL	**Imola, Italy**	**0.15**	**295**	P	**Pb**	**18 51 19.9**	**+0.1**
IMOL				S	**Sb**	**18 51 24.3**	**+1.6**
IMOL	**Imola, Italy**	**0.15**	**295**	P	**Pb**	**18 51 19.9**	**+0.1**
IMOL				S	**Sb**	**18 51 24.4**	**+1.6**
IMOL				AML	AML		
	comp=E,6380μm,0.3s						
IMOL				AML	AML		
	comp=N,5350μm,0.3s						
IMOL				AML	AML		
	comp=E,498μm,0.3s						
IMOL				AML	AML		
	comp=N,788μm,0.3s						
IMOL				AML	AML		
	comp=E,6380μm,0.4s						
IMOL				AML	AML		
	comp=N,5355μm,0.3s						
IMOL				AML	AML		
	comp=E,498μm,0.3s						
IMOL				AML	AML		
	comp=N,790μm,0.3s						
IMOL				AML	AML		
	comp=E,6375μm,0.4s						
IMOL				AML	AML		
	comp=N,5355μm,0.3s						
IMOL				AML	AML		
	comp=E,499μm,0.3s						
IMOL				AML	AML		
	comp=N,787μm,0.3s						
IMOL				AML	AML		
	comp=E,499μm,0.3s						
IMOL				AML	AML		
	comp=N,787μm,0.3s						
IMOL				AML	AML		
	comp=E,6375μm,0.4s						
IMOL				AML	AML		
	comp=N,5355μm,0.3s						
CMPO	**Campotto Po**	**0.30**	**342**	P	**Pb**	**18 51 22.1**	**-0.1**
CMPO				S	**Sb**	**18 51 26.8**	**-0.1**
CMPO	**Campotto Po**	**0.30**	**342**	P	**Pb**	**18 51 22.1**	**-0.1**
CMPO				S	**Sb**	**18 51 26.8**	**-0.1**
CMPO				AML	AML		
	comp=E,1685μm,1.0s						
CMPO				AML	AML		
	comp=N,1360μm,0.8s						
CMPO				AML	AML		
	comp=E,1685μm,1.0s						
CMPO				AML	AML		
	comp=N,1360μm,0.8s						
CMPO				AML	AML		
	comp=E,1680μm,1.0s						
CMPO				AML	AML		
	comp=N,1355μm,0.8s						
CMPO				AML	AML		
	comp=E,1680μm,1.0s						
MTRZ	**Monterenzio**	**0.35**	**284**	P	**Pb**	**18 51 23.3**	**+0.2**
MTRZ	**Monterenzio**	**0.35**	**284**	P	**Pb**	**18 51 23.3**	**+0.2**
MTRZ				AML	AML		
	comp=E,462μm,0.3s						
MTRZ				AML	AML		
	comp=N,654μm,0.3s						
MTRZ				AML	AML		
	comp=E,462μm,0.3s						
MTRZ				AML	AML		
	comp=N,654μm,0.3s						
MTRZ				AML	AML		
	comp=E,462μm,0.3s						
MTRZ				AML	AML		
	comp=N,654μm,0.3s						
MTRZ				AML	AML		
	comp=E,462μm,0.3s						
SFI	**Santa Sofia**	**0.40**	**190**	P	**Pg**	**18 51 22.7**	**-0.7**
SFI				S	**Sb**	**18 51 29.3**	**-0.4**
SFI	**Santa Sofia**	**0.40**	**190**	P	**Pg**	**18 51 22.7**	**-0.7**
SFI				S	**Sb**	**18 51 29.4**	**-0.4**
SFI				AML	AML		
	comp=E,929μm,0.7s						
SFI				AML	AML		
	comp=N,1830μm,0.5s						
SFI				AML	AML		
	comp=E,968μm,0.7s						
SFI				AML	AML		
	comp=N,1845μm,0.5s						
SFI				AML	AML		
	comp=E,929μm,0.7s						
SFI				AML	AML		
	comp=N,1830μm,0.5s						
SFI				AML	AML		
	comp=E,970μm,0.7s						
SFI				AML	AML		
	comp=N,1845μm,0.5s						
SFI				AML	AML		
	comp=E,927μm,0.7s						
SFI				AML	AML		
	comp=N,1830μm,0.5s						
SFI				AML	AML		
	comp=E,972μm,0.7s						
SFI				AML	AML		
	comp=N,1845μm,0.5s						
SFI				AML	AML		
	comp=E,927μm,0.7s						
SFI				AML	AML		
	comp=E,972μm,0.7s						
SFI				AML	AML		
	comp=N,1830μm,0.5s						
SFI				AML	AML		
	comp=N,1845μm,0.5s						
ASQU	**Asqua**	**0.51**	**192**	⇓P	**Pg**	**18 51 24.6**	**-0.9**
ASQU				S	**Sb**	**18 51 32.6**	**-0.4**
ASQU	**Asqua**	**0.51**	**192**	P	**Pg**	**18 51 24.6**	**-0.9**
ASQU				S	**Sb**	**18 51 32.6**	**-0.4**
ASQU				AML	AML		
	comp=E,612μm,0.4s						
ASQU				AML	AML		
	comp=N,536μm,0.2s						
ASQU				AML	AML		
	comp=E,612μm,0.4s						
ASQU				AML	AML		
	comp=N,536μm,0.2s						
ASQU				AML	AML		
	comp=E,612μm,0.4s						
ASQU				AML	AML		
	comp=N,536μm,0.2s						
CPGN	**Carpegna, Ital**	**0.57**	**151**	P	**Pb**	**18 51 26.9**	**0.0**
CPGN				S	**Sg**	**18 51 34.3**	**+0.2**
CPGN	**Carpegna, Ital**	**0.57**	**151**	P	**Pb**	**18 51 26.9**	**0.0**
CPGN				S	**Sg**	**18 51 34.3**	**+0.2**
CRE	**Caprese Michel**	**0.68**	**179**	P	**Pg**	**18 51 27.6**	**-0.9**
CRE				S	**Sb**	**18 51 38.1**	**+0.3**
CRE	**Caprese Michel**	**0.68**	**179**	P	**Pg**	**18 51 27.6**	**-0.9**
CRE				S	**Sb**	**18 51 38.1**	**+0.3**
CRE				AML	AML		
	comp=E,346μm,0.6s						
CRE				AML	AML		
	comp=N,684μm,0.4s						
CRE				AML	AML		
	comp=E,346μm,0.6s						
CRE				AML	AML		
	comp=N,684μm,0.4s						
CRE				AML	AML		
	comp=E,346μm,0.6s						
CRE				AML	AML		
	comp=N,684μm,0.4s						
CRE				AML	AML		
	comp=E,346μm,0.6s						
CRE				AML	AML		
	comp=N,684μm,0.4s						
PARC	**Parchiule**	**0.68**	**161**	P	**Pg**	**18 51 28.1**	**-0.5**
PARC				S	**Sb**	**18 51 39.2**	**+1.2**
PARC	**Parchiule**	**0.68**	**161**	P	**Pg**	**18 51 28.1**	**-0.5**
PARC				S	**Sb**	**18 51 39.2**	**+1.2**
PARC				AML	AML		
	comp=E,198μm,0.4s						
PARC				AML	AML		
	comp=N,216μm,1.2s						
PARC				AML	AML		
	comp=E,197μm,0.4s						
PARC				AML	AML		
	comp=N,216μm,1.2s						
PARC				AML	AML		
	comp=E,197μm,0.4s						
PARC				AML	AML		
	comp=N,216μm,1.2s						
PARC				AML	AML		
	comp=E,197μm,0.4s						
PARC				AML	AML		
	comp=N,216μm,1.2s						
PESA	**Pesaro**	**0.74**	**118**	P	**Pb**	**18 51 30.2**	**+0.5**
PESA	**Pesaro**	**0.74**	**118**	P	**Pb**	**18 51 30.2**	**+0.5**
PESA				AML	AML		
	comp=E,502μm,0.2s						
PESA				AML	AML		
	comp=N,494μm,0.3s						
PESA				AML	AML		
	comp=E,502μm,0.2s						
PESA				AML	AML		
	comp=N,494μm,0.3s						
PESA				AML	AML		
	comp=N,494μm,0.3s						
PESA				AML	AML		
	comp=E,502μm,0.2s						
BADI	**Badiali**	**0.82**	**164**	P	**Pg**	**18 51 30.3**	**-0.9**
BADI	**Badiali**	**0.82**	**164**	P	**Pg**	**18 51 30.3**	**-0.9**
BADI				AML	AML		
	comp=E,316μm,0.7s						
BADI				AML	AML		
	comp=N,290μm,0.3s						
BADI				AML	AML		
	comp=E,316μm,0.7s						
BADI				AML	AML		
	comp=N,290μm,0.3s						
BADI				AML	AML		
	comp=N,290μm,0.3s						
BADI				AML	AML		
	comp=E,316μm,0.7s						
NARO	**Abbazia di Nar**	**0.83**	**146**	P	**Pb**	**18 51 31.1**	**-0.1**
NARO	**Abbazia di Nar**	**0.83**	**146**	P	**Pb**	**18 51 31.1**	**-0.1**
NARO				AML	AML		
	comp=E,138μm,0.6s						
NARO				AML	AML		
	comp=N,148μm,0.9s						
NARO				AML	AML		
	comp=E,138μm,0.6s						
NARO				AML	AML		
	comp=N,148μm,0.9s						
FSSB	**Fossombrone**	**0.85**	**135**	P	**Pn**	**18 51 32.7**	**+0.1**
FSSB	**Fossombrone**	**0.85**	**135**	P	**Pn**	**18 51 32.7**	**+0.1**
FSSB				AML	AML		
	comp=E,386μm,0.6s						
FSSB				AML	AML		
	comp=N,520μm,1.5s						
FSSB				AML	AML		
	comp=E,385μm,0.6s						
FSSB				AML	AML		
	comp=N,521μm,1.5s						
FSSB				AML	AML		

	comp=E,385μm,0.6s					
FSSB			AML	AML		
	comp=N,521μm,1.5s					
CRMI	**Carmignano**	**0.86 234**	AML	AML		
	comp=N,179μm,0.5s					
CRMI			AML	AML		
	comp=E,181μm,0.7s					
CRMI			AML	AML		
	comp=N,179μm,0.5s					
CRMI			AML	AML		
	comp=E,181μm,0.7s					
CRMI			AML	AML		
	comp=N,179μm,0.5s					
CRMI			AML	AML		
	comp=E,181μm,0.7s					
ATMC	**Monte Cedrone**	**0.87 168**	P	**Pb**	**18 51 31.5**	**-0.4**
ATMC	**Monte Cedrone**	**0.87 168**	P	**Pb**	**18 51 31.5**	**-0.4**
ATMC			AML	AML		
	comp=E,357μm,0.8s					
ATMC			AML	AML		
	comp=N,330μm,0.9s					
ATMC			AML	AML		
	comp=E,358μm,0.8s					
ATMC			AML	AML		
	comp=N,329μm,0.9s					
ATMC			AML	AML		
	comp=E,358μm,0.8s					
ATMC			AML	AML		
	comp=N,330μm,0.9s					
ATMC			AML	AML		
	comp=N,330μm,0.9s					
ATMC			AML	AML		
	comp=E,358μm,0.8s					
PIEI	**Pieia**	**0.87 150**	P	**Pb**	**18 51 31.4**	**-0.6**
PIEI	**Pieia**	**0.87 150**	P	**Pb**	**18 51 31.4**	**-0.6**
PIEI			AML	AML		
	comp=E,413μm,0.3s					
PIEI			AML	AML		
	comp=N,170μm,0.5s					
PIEI			AML	AML		
	comp=E,413μm,0.3s					
PIEI			AML	AML		
	comp=N,170μm,0.5s					
PIEI			AML	AML		
	comp=N,170μm,0.5s					
PIEI			AML	AML		
	comp=E,413μm,0.3s					
MPAG	**Monte Paganucc**	**0.89 138**	P	**Pb**	**18 51 32.3**	**-0.1**
MPAG	**Monte Paganucc**	**0.89 138**	P	**Pb**	**18 51 32.3**	**-0.1**
MPAG			AML	AML		
	comp=E,190μm,0.3s					
MPAG			AML	AML		
	comp=N,213μm,0.4s					
MPAG			AML	AML		
	comp=E,190μm,0.3s					
MPAG			AML	AML		
	comp=N,213μm,0.4s					
MPAG			AML	AML		
	comp=E,190μm,0.3s					
MPAG			AML	AML		
	comp=N,213μm,0.4s					
ATPC	**Poggio Castell**	**0.90 155**	P	**Pb**	**18 51 32.1**	**-0.3**
ATPC	**Poggio Castell**	**0.90 155**	P	**Pb**	**18 51 32.1**	**-0.3**
ATPC			AML	AML		
	comp=E,341μm,0.6s					
ATPC			AML	AML		
	comp=N,291μm,0.8s					
ATPC			AML	AML		
	comp=E,341μm,0.6s					
ATPC			AML	AML		
	comp=N,291μm,0.8s					
ATPC			AML	AML		
	comp=N,291μm,0.8s					
ATPC			AML	AML		
	comp=E,341μm,0.6s					
ATBU	**Serra di Buran**	**0.93 151**	P	**Pb**	**18 51 32.9**	**-0.2**
ATBU	**Serra di Buran**	**0.93 151**	P	**Pb**	**18 51 32.9**	**-0.2**
ATBU			AML	AML		
	comp=E,620μm,0.3s					
ATBU			AML	AML		
	comp=N,662μm,0.4s					
ATBU			AML	AML		
	comp=E,620μm,0.3s					
ATBU			AML	AML		
	comp=N,662μm,0.4s					
ATBU			AML	AML		
	comp=E,620μm,0.3s					
ATBU			AML	AML		
	comp=N,662μm,0.4s					
CAFI	**Castiglion Fio**	**0.97 179**	P	**Pb**	**18 51 33.7**	**+0.1**
CAFI	**Castiglion Fio**	**0.97 179**	P	**Pb**	**18 51 33.7**	**+0.1**
CAFI			AML	AML		
	comp=E,176μm,0.5s					
CAFI			AML	AML		
	comp=N,180μm,0.6s					
CAFI			AML	AML		
	comp=E,176μm,0.5s					
CAFI			AML	AML		
	comp=N,180μm,0.6s					
CAFI			AML	AML		
	comp=N,180μm,0.6s					
CAFI			AML	AML		
	comp=E,176μm,0.5s					
ATVO	**AVT- Monte Val**	**0.97 159**	P	**Pb**	**18 51 33.2**	**-0.5**
ATVO	**AVT- Monte Val**	**0.97 159**	P	**Pb**	**18 51 33.2**	**-0.5**
ATVO			AML	AML		
	comp=E,257μm,1.6s					
ATVO			AML	AML		
	comp=N,200μm,0.4s					
ATVO			AML	AML		
	comp=E,257μm,1.6s					
ATVO			AML	AML		
	comp=N,200μm,0.4s					
ATVO			AML	AML		
	comp=E,257μm,1.6s					
ATVO			AML	AML		
	comp=N,200μm,0.4s					
BDI	**Bagni Di Lucca**	**0.99 257**	AML	AML		
	comp=E,146μm,0.7s					
BDI			AML	AML		
	comp=E,146μm,0.7s					
BDI			AML	AML		
	comp=N,152μm,0.6s					
BDI			AML	AML		
	comp=E,154μm,0.5s					
BDI			AML	AML		
	comp=N,151μm,0.6s					
BDI			AML	AML		
	comp=E,146μm,0.7s					
BDI			AML	AML		
	comp=N,152μm,0.6s					
BDI			AML	AML		
	comp=E,154μm,0.5s					
BDI			AML	AML		
	comp=N,151μm,0.6s					
BDI			AML	AML		
	comp=N,152μm,0.6s					
BDI			AML	AML		
	comp=N,151μm,0.6s					
BDI			AML	AML		
	comp=E,154μm,0.5s					
ATVA	**AVT- Monte Val**	**1.05 166**	P	**Pg**	**18 51 35.4**	**-0.1**
ATVA	**AVT- Monte Val**	**1.05 166**	P	**Pg**	**18 51 35.4**	**-0.1**
ATVA			AML	AML		
	comp=E,92μm,0.6s					
ATVA			AML	AML		
	comp=N,90μm,0.9s					
ATVA			AML	AML		
	comp=E,92μm,0.6s					
ATVA			AML	AML		
	comp=N,90μm,0.9s					
ATVA			AML	AML		
	comp=N,90μm,0.9s					
ATVA			AML	AML		
	comp=E,92μm,0.6s					
SSFR	**Montelago di S**	**1.05 144**	AML	AML		
	comp=N,404μm,0.2s					
SSFR			AML	AML		
	comp=E,468μm,0.2s					
SSFR			AML	AML		
	comp=N,404μm,0.2s					
SSFR			AML	AML		
	comp=E,468μm,0.2s					
SSFR			AML	AML		
	comp=N,404μm,0.2s					
SSFR			AML	AML		
	comp=E,468μm,0.2s					
ARVD	**Arcevia**	**1.08 137**	P	**Pg**	**18 51 36.5**	**+0.4**
ARVD	**Arcevia**	**1.08 137**	P	**Pg**	**18 51 36.5**	**+0.4**
ARVD			AML	AML		
	comp=E,80μm,1.3s					
ARVD			AML	AML		
	comp=N,112μm,0.2s					
ARVD			AML	AML		
	comp=E,80μm,1.3s					
ARVD			AML	AML		
	comp=N,112μm,0.2s					
ARVD			AML	AML		
	comp=N,112μm,0.2s					
ARVD			AML	AML		
	comp=E,80μm,1.3s					
TEOL	**Teolo**	**1.08 350**	*e*Pg	**Pb**	**18 51 34.9**	**-0.7**
TEOL			*e*Sg	**Sg**	**18 51 50.3**	**-0.1**
TEOL	**Teolo**	**1.08 350**	*e*Pg	**Pb**	**18 51 34.9**	**-0.7**
TEOL			*e*Sg	**Sg**	**18 51 50.3**	**-0.1**
MAIM	**Mastiano**	**1.11 250**	AML	AML		
	comp=N,81μm,1.1s					
MAIM			AML	AML		
	comp=E,73μm,1.0s					
MAIM			AML	AML		
	comp=E,73μm,1.0s					
MAIM			AML	AML		
	comp=N,81μm,1.1s					
MAIM			AML	AML		
	comp=N,81μm,1.1s					
MAIM			AML	AML		
	comp=E,73μm,1.0s					
MGAB	**Montegabbione**	**1.39 175**	P	**Pb**	**18 51 40.7**	**-0.1**
MGAB	**Montegabbione**	**1.39 175**	P	**Pb**	**18 51 40.6**	**-0.1**
MGAB			AML	AML		
	comp=E,139μm,0.5s					
MGAB			AML	AML		
	comp=N,137μm,0.7s					
MGAB			AML	AML		
	comp=E,139μm,0.5s					
MGAB			AML	AML		
	comp=N,137μm,0.7s					
MGAB			AML	AML		
	comp=N,137μm,0.7s					
MGAB			AML	AML		
	comp=E,139μm,0.5s					
MARN	**Marana (Italy)**	**1.44 339**	⇓*e*Pg	**Pn**	**18 51 40.0**	**-0.7**
MARN	**Marana (Italy)**	**1.44 339**	*e*Pg	**Pn**	**18 51 40.0**	**-0.7**
SACS	**San Casciano d**	**1.45 181**	P	**Pn**	**18 51 40.4**	**-0.4**
SACS			AML	AML		
	comp=E,74μm,1.1s					
SACS			AML	AML		
	comp=N,86μm,1.0s					
SACS			AML	AML		
	comp=E,74μm,1.1s					
SACS			AML	AML		
	comp=N,86μm,1.0s					
SACS			AML	AML		
	comp=N,86μm,1.0s					
SACS			AML	AML		
	comp=E,74μm,1.1s					
FDMO	**Fiordimonte**	**1.51 146**	P	**Pg**	**18 51 43.9**	**-0.4**
FDMO	**Fiordimonte**	**1.51 146**	P	**Pg**	**18 51 43.9**	**-0.4**
FDMO			AML	AML		
	comp=E,59μm,0.4s					
FDMO			AML	AML		
	comp=N,47μm,1.2s					
FDMO			AML	AML		
	comp=E,59μm,0.4s					
FDMO			AML	AML		
	comp=N,47μm,1.2s					
FDMO			AML	AML		
	comp=E,59μm,0.4s					
FDMO			AML	AML		
	comp=N,47μm,1.2s					
CGRP	**Cima Grappa**	**1.59 357**	⇑*e*Pg	**Pn**	**18 51 42.0**	**-0.8**
CGRP			*e*Sg	**Sn**	**18 52 02.4**	**-0.7**
CGRP	**Cima Grappa**	**1.59 357**	*e*Pg	**Pn**	**18 51 42.0**	**-0.8**
CGRP			*e*Sg	**Sn**	**18 52 02.4**	**-0.7**
DOSS	**Dosso del Somm**	**1.67 342**	*e*Pg	**Pn**	**18 51 43.2**	**-0.8**
DOSS			*e*Sg	**Sn**	**18 52 05.3**	**+0.1**
DOSS	**Dosso del Somm**	**1.67 342**	*e*Pg	**Pn**	**18 51 43.2**	**-0.8**
DOSS			*e*Sg	**Sn**	**18 52 05.3**	**+0.1**
MLNI	**Malnisio**	**1.92 14**	*e*Pg	**Pn**	**18 51 46.3**	**-0.9**
MLNI			*e*Sg	**Sn**	**18 52 10.8**	**-0.2**
MABI	**Malga Bissina**	**2.03 331**	AML	AML		
	comp=N,30μm,0.5s					
MABI			AML	AML		
	comp=E,25μm,0.5s					
MABI			AML	AML		
	comp=N,30μm,0.5s					
MABI			AML	AML		
	comp=E,25μm,0.5s					
NVLJ	**Novalja**	**2.12 82**	*e*Pn	**Pn**	**18 51 50.0**	**+0.1**
NVLJ			Sn	**Sn**	**18 52 15.5**	**-0.4**
NVLJ	**Novalja**	**2.12 82**	*e*Pn	**Pn**	**18 51 50.0**	**+0.1**
NVLJ			Sn	**Sn**	**18 52 15.4**	**-0.4**
ABTA	**Abfaltersbach**	**2.48 9**	*e*Pn	**Pn**	**18 51 55.6**	**+0.5**
	comp=E,0.2nm,0.1s					
ABTA	**Abfaltersbach**	**2.48 9**	Pn	**Pn**	**18 51 55.6**	**+0.5**
	comp=E,0.2nm,0.1s					
FETA	**Feichten**	**2.85 343**	*e*Pn	**Pn**	**18 52 01.8**	**+1.6**
	comp=E,0.3nm,0.2s					
FETA	**Feichten**	**2.85 343**	Pn	**Pn**	**18 52 01.8**	**+1.6**
	comp=E,0.3nm,0.2s					
OBKA	**Obir**	**2.88 39**	Pn	**Pn**	**18 52 01.9**	**+1.4**
OBKA	**Obir**	**2.88 39**	Pn	**Pn**	**18 52 01.9**	**+1.4**
KBA	**Koelnbreinsper**	**2.95 19**	*e*Pn	**Pn**	**18 52 02.0**	**+0.4**
KBA	**Koelnbreinsper**	**2.95 19**	Pn	**Pn**	**18 52 02.0**	**+0.4**
MOTA	**Moosalm**	**3.10 349**	*e*Pn	**Pn**	**18 52 04.9**	**+1.2**
	comp=E,0.1nm,0.1s					
MOTA	**Moosalm**	**3.10 349**	Pn	**Pn**	**18 52 04.9**	**+1.2**
	comp=E,0.1nm,0.1s					
SOKA	**Soboth**	**3.23 41**	*e*Pn	**Pn**	**18 52 04.9**	**-0.4**
	comp=E,0.2nm,0.2s					
SOKA	**Soboth**	**3.23 41**	Pn	**Pn**	**18 52 04.9**	**-0.4**
	comp=E,0.2nm,0.2s					
RETA	**Reutte**	**3.30 346**	*e*Pn	**Pn**	**18 52 07.7**	**+1.4**
	comp=E,1.1nm,0.3s					
RETA	**Reutte**	**3.30 346**	Pn	**Pn**	**18 52 07.7**	**+1.4**
	comp=E,1.1nm,0.3s					
DAVA	**Damuels**	**3.32 335**	*e*Pn	**Pn**	**18 52 08.5**	**+1.9**
	comp=E,1.0nm,0.3s					
DAVA	**Damuels**	**3.32 335**	Pn	**Pn**	**18 52 08.5**	**+1.9**
	comp=E,1.0nm,0.3s					
MOA	**Molln**	**3.91 24**	*e*Pn	**Pn**	**18 52 15.0**	**+0.4**
	comp=E,0.4nm,0.1s					
MOA	**Molln**	**3.91 24**	Pn	**Pn**	**18 52 15.0**	**+0.4**
	comp=E,0.4nm,0.1s					
KHC	**Kasperske Hory**	**4.97 13**	*e*PG	**Pg**	**18 52 48.0**	**-2.3**
KHC			*e*SN	**Sn**	**18 53 24.2**	**-2.0**
KHC			*e*SG	**Sg**	**18 53 58.4**	**+3.8**
KHC	**Kasperske Hory**	**4.97 13**	Pg	**Pg**	**18 52 48.0**	**-2.3**
KHC			Sn	**Sn**	**18 53 24.2**	**-2.0**
KHC			Sg	**Sg**	**18 53 58.4**	**+3.8**

*JMA **09** 19:08:39.5±0.9, 45°.43N×150°.13E, h30km, M3.9*
SKHL 09 19:08:40.7±0.8, 45°.05N×150°.22E, h39km±2km, mb4.2/3, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.68**	**277**	*i* P	Pn	19 09 06.5	-1.0
KUR				AMB	AMB	19 09 07.5	
	55nm,0.1s						
KUR				AMB	AMB	19 09 07.5	
	21nm,0.1s						
KUR				AMB	AMB	19 09 07.5	
	12nm,0.1s						
KUR				*i* S	Sn	19 09 26.0	-1.7
KUR				A	A	19 09 26.9	
	110nm,0.2s						
KUR				A	A	19 09 26.9	
	175nm,0.2s						
SHO	**Shikotan**	**2.70**	**245**	*e*P	Pn	19 09 21.7	+0.2
SHO				AMB	AMB	19 09 24.2	
	13nm,0.2s						
SHO				*i* S	Sn	19 09 53.0	+0.1
SHO				A	A	19 10 01.0	
	52nm,0.3s						
SHO				A	A	19 10 01.0	
	63nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**3.28**	**253**	*e*P	Pn	19 09 30.5	+1.0
YUK				AMB	AMB	19 09 37.4	
	25nm,0.3s						
YUK				AMB	AMB	19 09 37.4	
	20nm,0.3s						
YUK				AMB	AMB	19 09 37.4	
	60nm,0.3s						
YUK				*e*S	Sn	19 10 07.0	-0.2
YUK				A	A	19 10 13.1	
	77nm,0.3s						
YUK				A	A	19 10 13.1	
	93nm,0.3s						
LAGR	**Lagunnoye**	**3.32**	**254**	*e*P	Pn	19 09 32.8	+2.7
LAGR				*i* S	Sn	19 10 11.9	+3.6
NEM2	**Nemuro 2**	**3.63**	**244**	P	Pn	19 09 34.3	-0.1
NEM2				*e*S	Sn	19 10 15.2	-0.7
JRA	**Rausu**	**3.81**	**255**	P	Pn	19 09 38.4	+1.6
JNK	**Nakash**	**4.21**	**252**	P	Pn	19 09 43.4	+1.1
JNK				*e*S	Sn	19 10 32.0	+1.8
JAK	**Akkeshi**	**4.48**	**245**	P	Pn	19 09 45.9	-0.1
JTKR	**Abashiri--Toko**	**4.64**	**259**	P	Pn	19 09 50.4	+2.2
JAR	**Ashorobuto**	**4.96**	**252**	P	Pn	19 09 54.6	+2.0
JAR				*e*S	Sn	19 10 51.1	+2.4
JOB	**Onbets**	**5.08**	**247**	P	Pn	19 09 55.3	+1.0
JKK2	**Kamakawa 2**	**5.48**	**260**	P	Pn	19 10 02.1	+2.4
JCH	**Churui**	**5.53**	**246**	P	Pn	19 10 01.0	+0.6
MYR	**Moyori**	**5.74**	**244**	*e*P	Pn	19 10 04.4	+1.2
JFR	**Furan**	**5.81**	**254**	P	Pn	19 10 08.1	+3.9
JNBK	**Urakawa-nobuka**	**6.08**	**246**	P	Pn	19 10 08.1	+0.1
JKB	**Kayabe**	**7.39**	**248**	P	Pn	19 10 26.4	+0.4
JKB				*e*S	Sn	19 11 45.7	-2.8

*KRNET **09** 19:12:30.0±0.1, 41°.27N×79°.53E, mb3.4*
*SOME **09** 19:12:33.2, 41°.22N×79°.48E, h25km*
*NNC **09** 19:12:34.8±1.9, 41°.41N×79°.52E, h0km, mb3.5, mpv3.2,*
Error ellipse: s-maj=16.4km s-min=9.3km az=149.0
ISC 09 19:12:31.2±2.2, 41°.28N±0°.08×79°.51E±0°.05, h1km±11km, n39, σ1950/69, 22C-11D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.36**	**290**	⇑*i*P	Pn	**19 12 56.0**	**-1.6**
	baz=90						
TARG				⇑*i*S	Sn	**19 13 15.3**	**-1.2**
	baz=90						
PRZ	**Przheval'sk**	**1.46**	**326**	⇑*i*P	Pn	**19 12 57.3**	**-1.6**
	baz=26						
PRZ				⇑*i*S	Sg	**19 13 17.9**	**-0.2**
	baz=26						
SHLS	**Shalkode**	**1.88**	**359**	*e*P	Pg	**19 13 08.2**	**+1.0**
	123nm,0.5s						
SHLS				*e*S	Sg	**19 13 33.5**	**+2.1**
	675nm,0.6s						
UZB	**Uzynbulak**	**1.90**	**349**	*e*P	Pg	**19 13 08.1**	**+0.5**
	14nm,0.3s						
UZB				*e*S	Sg	**19 13 33.4**	**+1.2**
	66nm,0.5s						
SATY	**Saty**	**1.96**	**336**	*e*P	Pb	**19 13 08.1**	**+0.4**
	46nm,0.5s						
SATY				*e*S	Sg	**19 13 33.2**	**-0.9**
	91nm,0.2s						
PDGK	**Podgornoye**	**2.05**	**360**	⇓Pn	Pb	**19 13 08.7**	**-0.6**
	29nm,0.5s						
PDGK				⇑Lg	Lg	19 13 37.7	
	244nm,0.7s						
PDGK	**Podgornoye**	**2.05**	**360**	⇑*i*P	Pb	**19 13 08.0**	**-1.2**
	baz=59						
PDGK				⇑*i*S	Sb	**19 13 35.2**	**-0.1**
	baz=59						
ZHN	**Zhinishke**	**2.05**	**337**	*e*P	Pb	**19 13 09.4**	**+0.1**
	34nm,0.2s						
ZHN				*e*S	Sb	**19 13 35.3**	**0.0**
	181nm,0.2s						
KTMS	**Ketmen**	**2.25**	**16**	*e*P	Pb	**19 13 12.2**	**-0.5**
	27nm,0.4s						
KTMS				*e*S	Sb	**19 13 40.6**	**-0.6**
	112nm,0.5s						
KPKS	**Kokpek**	**2.27**	**345**	*e*P	Pb	**19 13 12.2**	**-0.8**
	64nm,0.3s						
KPKS				*e*S	Sb	**19 13 40.6**	**-1.0**
	132nm,0.4s						
KURS	**Kuram**	**2.42**	**336**	⇑*i*P	Pb	**19 13 14.8**	**-0.7**
	16nm,0.6s						
KURS				*e*S	Sb	**19 13 45.0**	**-0.9**
	41nm,0.6s						
TNSS	**Tian-Shan**	**2.59**	**314**	*e*P	Pg	**19 13 21.6**	**+0.8**
	38nm,0.4s						
TNSS				*e*S	Sg	**19 13 56.4**	**+2.0**
	95nm,1.1s						
MDOK	**Medeo**	**2.62**	**317**	⇓Pn	Pb	**19 13 18.2**	**-0.9**
	25nm,0.7s						
MDOK				⇓Lg	Lg	19 13 53.6	
	52nm,0.6s						
MDOK	**Medeo**	**2.62**	**317**	*e*P	Pb	**19 13 18.8**	**-0.3**
	21nm,0.4s						
MDOK				*e*S	Sb	**19 13 51.9**	**+0.1**
	54nm,0.7s						
ULHL	**Ulahol**	**2.63**	**293**	⇓*i*P	Pn	**19 13 16.1**	**+1.2**
	baz=93						
ULHL				⇓*i*S	Sb	**19 13 49.1**	**-2.9**
	baz=93						
KOTS	**Kotyrbulak**	**2.64**	**318**	*e*P	Pb	**19 13 18.6**	**-0.8**
	11nm,0.5s						
KOTS				*e*S	Sb	**19 13 51.7**	**-0.7**
	39nm,0.9s						
NRN	**Naryn**	**2.65**	**274**	⇓*i*P	Pn	**19 13 16.5**	**+1.2**
	baz=74						
NRN				⇓*i*S	Sb	**19 13 50.4**	**-2.3**
	baz=74						
AAA	**Alma-Ata**	**2.73**	**316**	*e*P	Pb	**19 13 20.9**	**+0.1**
	18nm,0.1s						
AAA				*e*S	Sb	**19 13 55.3**	**+0.7**
	62nm,0.2s						
IZV	**Izvestkoviy**	**2.78**	**310**	*e*P	Pb	**19 13 23.0**	**+1.3**
	33nm,0.9s						
IZV				*e*S	Sg	**19 13 58.6**	**-1.8**
	145nm,0.5s						
MNBS	**Baschi**	**2.91**	**344**	*e*P	Pb	**19 13 23.1**	**-0.9**
	30nm,0.4s						
MNBS				*e*S	Sb	**19 13 59.0**	**-1.1**
	68nm,0.4s						
BOOM	**Boomskoye usch**	**2.93**	**296**	⇑*e*P	Pn	**19 13 19.9**	**+0.9**
	baz=96						
BOOM				⇑*e*S	Sn	**19 13 56.6**	**+1.7**
	baz=96						
MTBS	**Maitube**	**2.94**	**310**	*e*P	Pb	**19 13 25.6**	**+1.1**
	16nm,0.6s						
MTBS				*e*S	Sb	**19 14 03.0**	**+2.0**
	42nm,0.7s						
DJR	**Jarkent**	**3.06**	**4**	*e*P	Pb	**19 13 24.2**	**-2.2**
	4.9nm,0.4s						
DJR				*e*S	Sb	**19 14 00.6**	**-3.6**
	41nm,0.5s						
KST	**Kastek**	**3.17**	**305**	*e*P	Pb	**19 13 27.0**	**-1.4**
	15nm,0.3s						
KST				⇑*i*S	Sb	**19 14 05.7**	**-1.9**
	86nm,0.6s						
CHKK	**Chushkaly**	**3.17**	**325**	*e*P	Pb	**19 13 29.0**	**+0.6**
	17nm,0.3s						
CHKK				*e*S	Sb	**19 14 09.2**	**+1.6**
	81nm,0.4s						
ARXS	**Arharly**	**3.18**	**338**	*e*P	Pb	**19 13 26.4**	**-2.2**
	10.0nm,0.5s						
ARXS				*e*S	Sb	**19 14 04.5**	**-3.4**
	27nm,0.5s						
KTBS	**Karatobe**	**3.21**	**320**	*e*P	Pb	**19 13 27.4**	**-1.5**
	9.3nm,0.5s						
KTBS				*e*S	Sb	**19 14 06.2**	**-2.3**
	34nm,0.4s						
KZA	**Kyzart**	**3.29**	**285**	⇑*i*P	Pn	**19 13 25.2**	**+1.0**
	baz=86						
KZA				⇑*i*S	Sn	**19 14 05.3**	**+1.1**
	baz=86						
TKM2	**Tokmak 2**	**3.34**	**301**	⇑Pn	Pb	**19 13 28.0**	**-3.3**
	2.4nm,0.3s						
TKM2				⇓Lg	Lg	19 14 20.6	
	17nm,0.6s						
TKM2	**Tokmak 2**	**3.34**	**301**	⇑*i*P	Pn	**19 13 25.9**	**+1.2**
	baz=1.0						
TKM2				⇑*i*S	Sn	**19 14 06.9**	**+1.7**
	baz=1.0						
DGS	**Degeres**	**3.40**	**306**	*e*P	Pb	**19 13 30.8**	**-1.4**
	5.0nm,0.5s						
DGS				*e*S	Sb	**19 14 12.2**	**-1.9**
	46nm,0.8s						
KUU	**Kurty**	**3.51**	**319**	*e*P	Pb	**19 13 34.0**	**0.0**
	4.2nm,0.6s						
KUU				*e*S	Sb	**19 14 18.2**	**+1.1**
	24nm,0.7s						
TDK	**Taldyqorghan**	**3.81**	**348**	*e*P	Pb	**19 13 38.8**	**-0.4**
	37nm,0.4s						

TDK				*e*S		**Sb**	**19 14 26.3 +0.5**
	53nm,0.7s						
AAK	**Ala-Archa**	**3.98 292**	⇓Pg			**Pb**	**19 13 44.6 +2.4**
	2.7nm,0.4s						
AAK			⇑Lg			Lg	19 14 37.8
	9.1nm,0.6s						
KAPS	**Kapalarasan**	**4.00 358**	*e*P			**Pg**	**19 13 47.0 -0.9**
	6.4nm,0.5s						
KAPS				*e*S		**Sg**	**19 14 40.0 +0.2**
	34nm,0.9s						
MK31	**Makanchi Array**	**5.87 19**	⇓Pn			**Pn**	**19 14 01.3 +2.0**
	0.1nm,0.2s,baz=202,slow=14,SNR=25						
MK31			⇑Sn			**Sn**	**19 15 07.2 +0.1**
	1.4nm,0.5s,baz=199,slow=25,SNR=8.2						
MK31			⇑Lg			Lg	19 15 34.7
	3.5nm,0.8s,baz=209,slow=25,SNR=7.9						
KK31	**Karatay Array**	**6.93 288**	⇑Pg			**Pg**	**19 14 42.9 -0.9**
	0.6nm,0.6s,baz=101,slow=15,SNR=3.5						
KK31			⇑Lg			Lg	19 16 11.8
	1.0nm,0.6s,baz=98,slow=26,SNR=4.8						
KURBB	**Kurchatov Arra**	**9.37 356**	⇑Lg			Lg	19 17 29.9
	11nm,1.0s						
KURK	**Kurchatov**	**9.46 357**	⇓Lg			Lg	19 17 29.3
	5.5nm,1.1s						

NIED ***09*** *19:18:00,33°.20N×141°.10E,h47km,Mw4.1 Best double couple: M₀1.80000×10¹⁵ NP1:φ₁329.00000°,δ57.00000°, λ28.00000°. NP2:φ₂223.00000°,δ67.00000°,λ144.00000°.*
IDC ***09*** *19:18:36.1±0.7,33°.12N×141°.18E,h0km,mb4.1/17, mb1 4.2/19,mb1mx4.0/65,mbtmp4.1/19,ML4.2/2,MS3.0/8, Ms1 3.0/8,ms1mx2.7/67,Error ellipse: s-maj=21.6km s-min=13.1km az=75.0*
MOS ***09*** *19:18:38.5±1.4,33°.22N×141°.55E,h44km,mb4.7/13,Error ellipse: s-maj=15.4km s-min=7.1km az=110.8*
ISCJB ***09*** *19:18:40.1±0.6,33°.14N±0°.03×141°.19E±0°.05,h48km±5km, mb4.6/36,Error ellipse: s-maj=7.3km s-min=4.6km az=162.3*
NEIC ***09*** *19:18:41.3±0.7,33°.13N×141°.23E,h40km±6km,mb4.9/21, Error ellipse: s-maj=7.5km s-min=4.6km az=78.0*
JMA ***09*** *19:18:41.5±0.2,33°.20N×141°.11E,h49km,M4.2*

ISC 09 19:18:36.9±1.5,33°.17N±0°.04×141°.31E±0°.05,h11km±9km, n113,σ1°60/123,mb4.6/36,2D,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**1.25 268**		*e*Pn	**Pg**	**19 19 00.8**	**-0.1**
JHJ2	**Mitsune**	**1.25 268**		P	**Pg**	**19 19 00.8**	**-0.1**
JHCJ	**Hachijojimakas**	**1.27 266**		P	**Pg**	**19 19 00.9**	**-0.4**
JHJ	**Hachijo jima 2**	**1.28 268**		Pn	**Pg**	**19 19 00.9**	**-0.6**
	689nm,0.3s,baz=165,slow=20,SNR=785						
JHJ				LR	LR	19 19 09.3	
	comp=Z,83nm,20.0s,baz=325,slow=29						
JHJ				Sn	**Sb**	**19 19 14.8**	**-2.8**
	877nm,0.3s,baz=90,slow=20,SNR=19						
BSO1	**Boso 1**	**1.51 350**		P	**Pg**	**19 19 06.3**	**+0.5**
BSO1				*e*X		19 19 25.8	
BSO3	**Boso 3**	**1.76 338**		P	**Pb**	**19 19 09.1**	**0.0**
BSO3				S	**Sn**	**19 19 29.2**	**-0.3**
BSO4	**Boso 4**	**1.99 336**		P	**Pb**	**19 19 12.9**	**-0.2**
JNIO	**Niijimaoohara**	**2.07 306**		P	**Pn**	**19 19 12.6**	**+1.0**
JNIO				S	**Sn**	**19 19 35.2**	**-2.2**
JKO	**Kozu shima**	**2.08 300**		P	**Pn**	**19 19 12.9**	**+1.1**
JKO				S	**Sn**	**19 19 36.0**	**-1.6**
JIM2	**Oshima 3**	**2.20 315**		P	**Pn**	**19 19 14.3**	**+0.9**
JIM2				S	**Sn**	**19 19 38.2**	**-2.5**
JIZS	**Izushimoda**	**2.54 308**		P	**Pn**	**19 19 19.7**	**+1.5**
JIZS				S	**Sn**	**19 19 47.7**	**-1.5**
JOD2	**Odawara 2**	**2.79 319**		P	**Pn**	**19 19 22.7**	**+1.2**
JOD2				S	**Sn**	**19 19 52.5**	**-2.7**
TK02	**Tokai 2**	**3.07 286**		P	**Pn**	**19 19 26.9**	**+1.8**
TK02				*e*X		19 20 01.8	
TK04	**Tokai 4**	**3.11 294**		P	**Pn**	**19 19 27.9**	**+2.1**
SHZ3	**Shizuoka 3**	**3.19 307**		P	**Pn**	**19 19 29.7**	**+2.5**
SHZ3				*e*S	**Sn**	**19 20 04.9**	**-0.4**
INU	**Inuyama**	**4.17 303**		*e*Pn	**Pn**	**19 19 42.6**	**+2.1**
MJAR	**Matsushiro Arr**	**4.22 324**		Pn	**Pn**	**19 19 43.8**	**+2.5**
	10nm,0.3s,baz=162,slow=13,SNR=181						
MJAR				Sn	**Sn**	**19 20 30.0**	**-0.6**
	7.4nm,0.3s,baz=144,slow=25,SNR=7.0						
MJAR				LR	LR	19 21 27.5	
	comp=Z,149nm,21.2s,baz=130,slow=41						
MAJO	**Matsushiro**	**4.22 324**		*e*Pn	**Pn**	**19 19 44.2**	**+2.9**
MAJO				*e*Sn	**Sn**	**19 20 29.6**	**-1.0**
MAJO				*e*		19 20 30.0	
MAJO	**Matsushiro**	**4.22 324**		*e*P	**Pn**	**19 19 44.2**	**+2.9**
MAJO				*e*		19 20 30.0	
MAT	**Matsushiro**	**4.22 324**		P	**Pn**	**19 19 44.1**	**+2.8**
MAT				S	**Sn**	**19 20 31.0**	**+0.3**
MJB9	**Matsu-Tunnel**	**4.23 324**		*e*Pn	**Pn**	**19 19 44.2**	**+2.8**
MJB9				*e*Sn	**Sn**	**19 20 30.1**	**-0.7**
CBIJ	**Chichi jima**	**6.10 173**		*e*Pn	**Pn**	**19 20 08.1**	**+1.1**
CBIJ				*e*Sn	**Sn**	**19 21 11.9**	**-5.0**
JCJ	**Chichijima**	**6.10 173**		Pn	**Pn**	**19 20 08.5**	**+1.4**
	24nm,0.3s,baz=348,slow=9.3,SNR=12						
JCJ				Sn	**Sn**	**19 21 13.1**	**-3.8**
	7.4nm,0.3s,baz=270,slow=20,SNR=3.0						
JCJ				LR	LR	19 22 23.9	
	comp=Z,146nm,20.7s,baz=68,slow=38						
JNU	**Nakatsue**	**8.75 273**		Pn	**Pn**	**19 20 45.6**	**+2.1**
	0.7nm,0.3s,baz=99,slow=6.3,SNR=6.4						
JNU				Sn	**Sn**	**19 22 24.1**	**+2.0**
	0.2nm,0.3s,baz=3.2,slow=18,SNR=1.9						
JNU				LR	LR	19 24 07.6	
	comp=Z,81nm,18.7s,baz=116,slow=38						
JNU	**Nakatsue**	**8.75 273**		*e*Pn	**Pn**	**19 20 45.0**	**+1.5**
JNU				Sn	**Sn**	**19 22 24.1**	**+2.0**
ASAJ	**Asahikawa**	**10.98 5**		Pn	**Pn**	**19 21 14.7**	**+0.7**
	1.1nm,0.3s,baz=228,slow=11,SNR=17						
ASAJ				Sn	Sn	19 23 07.0	-10
	0.2nm,0.3s,baz=173,slow=17,SNR=2.4						
ASAJ				LR	LR	19 26 25.5	
	comp=Z,42nm,21.3s,baz=167,slow=42						
ASAJ	**Asahikawa**	**10.98 5**		*e*Pn	**Pn**	**19 21 14.2**	**+0.2**
ASAJ				Sn	Sn	19 23 07.0	-10
YUK	**Yuzh-Kuril'sk**	**11.42 17**		P	**Pn**	**19 21 19.1**	**-0.8**
YUK				S	**Sn**	**19 23 19.9**	**-7.6**
SHO	**Shikotan**	**11.53 20**		*e*P	**Pn**	**19 21 20.5**	**-0.9**
SHO				*i* S	Sn	19 23 19.8	-10
SHO				pmax	pmax		
	comp=Z,3.0nm,0.4s						
SHO				pmax	pmax		
	comp=E,7.0nm,0.7s						
SHO				pmax	pmax		
	comp=N,5.0nm,0.3s						
KSRS	**Korea Array**	**11.74 295**		LR	LR	19 25 51.6	
	comp=N,66nm,18.6s,baz=98,slow=37						
KS15	**Wonju Array Si**	**11.77 295**		*e*Pn	**Pn**	**19 21 26.3**	**+1.6**
KS01	**Wonju Array Si**	**11.77 295**		*e*Pn	**Pn**	**19 21 25.1**	**+0.3**
KLR	**Kul'dur**	**17.56 339**		P	**Pn**	**19 22 39.0**	**-2.7**
	comp=N,0.0nm,0.3s,baz=206,slow=7.3,SNR=6.0						
KLR	**Kul'dur**	**17.56 339**		P	**Pn**	**19 22 39.0**	**-2.7**
ZEA	**Zeya**	**22.88 338**		*e*P	**P**	**19 23 40.4**	**+0.1**
ZEA				pmax	pmax		
	comp=Z,20nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**26.45 114**		T	T	19 53 21.2	
	baz=306,slow=75,SNR=74						
H11N1	**WAKE ISLAND Hy**	**26.45 114**		T	T	19 53 21.8	
	baz=306,slow=75,SNR=103						
H11N3	**WAKE ISLAND Hy**	**26.46 114**		T	T	19 53 22.5	
	baz=307,slow=75,SNR=100						
H11S3	**WAKE ISLAND Hy**	**27.02 116**		T	T	19 53 51.8	
	baz=307,slow=75,SNR=9.8						
H11S1	**WAKE ISLAND Hy**	**27.02 116**		T	T	19 53 55.9	
	baz=307,slow=75,SNR=5.4						
H11S2	**WAKE ISLAND Hy**	**27.04 116**		T	T	19 53 54.7	
	baz=307,slow=75,SNR=5.6						
ULN	**Ulaanbaatar**	**29.61 310**		*e*P	**P**	**19 24 42.9**	**+0.6**
	comp=Z,4.8nm,0.7s						
ULN	**Ulaanbaatar**	**29.61 310**		*de*P	**P**	**19 24 42.8**	**+0.5**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SONA1	**Songino Array**	**30.03 310**		*e*P	**P**	**19 24 45.8**	**-0.1**
SONA0	**Songino Array**	**30.03 310**		*e*P	**P**	**19 24 46.8**	**+0.8**
SONM	**Songino Array**	**30.03 310**		P	**P**	**19 24 46.8**	**+0.8**
	comp=Z,3.7nm,0.9s,baz=116,slow=9.1,SNR=13						
SONM				LR	LR	19 36 23.5	
	comp=Z,54nm,19.9s,baz=78,slow=36						
KIWB	**Kanaga Island**	**35.27 45**		*e*P	**P**	**19 25 32.5**	**+1.0**
TIXI	**Tiksi**	**39.12 354**		P	**P**	**19 26 06.1**	**+2.1**
	comp=Z,0.6nm,0.5s,baz=184,slow=2.6,SNR=5.7						
TIXI	**Tiksi**	**39.12 354**		*e*P	**P**	**19 26 06.8**	**+2.9**
	comp=Z,9.9nm,2.0s						
TIXI				*e*S	**S**	**19 32 04.6**	**+1.5**
TIXI	**Tiksi**	**39.12 354**		*e*P	**P**	**19 26 06.8**	**+2.9**
TIXI				*e*S	**S**	**19 32 04.6**	**+1.5**
TIXI				pmax	pmax		
	comp=Z,10.0nm,2.0s						
CMAR	**Chiang Mai Arr**	**40.57 260**		P	**P**	**19 26 17.3**	**+0.6**
	comp=Z,0.5nm,0.8s,baz=54,slow=8.1,SNR=3.7						
CMAR				LR	LR	19 44 14.4	
	comp=Z,13nm,18.2s,baz=210,slow=38						
SAUI	**Saumlaki**	**42.01 195**		*e*P	**P**	**19 26 27.3**	**-1.1**
	comp=Z,530nm,1.0s						
ZAA1	**Zalesovo Array**	**44.53 315**		*e*P	**P**	**19 26 48.0**	**-0.4**
ZALV	**Zalesovo Beam**	**44.53 315**		P	**P**	**19 26 48.0**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=96,slow=5.8,SNR=3.0						
SDPT	**Sand Point**	**45.63 43**		*e*P	**P**	**19 26 57.8**	**+0.7**
	comp=Z,109nm,1.4s						
SOEI	**Soe**	**45.66 204**		*e*P	**P**	**19 26 57.6**	**-0.4**
	comp=Z,25nm,1.1s						
HNR	**Honiara**	**45.93 154**		*e*P	**P**	**19 26 58.9**	**-1.0**
	comp=Z,42nm,1.0s						
HNR	**Honiara**	**45.93 154**		*e*P	**P**	**19 26 58.9**	**-1.0**
HNR				pmax	pmax		
	comp=Z,42nm,1.0s						
MK01	**Makanchi Array**	**46.18 305**		*e*P	**P**	**19 27 00.6**	**-1.1**
MK31	**Makanchi Array**	**46.19 305**		*e*P	**P**	**19 27 00.5**	**-1.3**
MK31	**Makanchi Array**	**46.19 305**		*e*P	**P**	**19 27 00.5**	**-1.3**
MK32	**Makanchi Array**	**46.19 305**		*e*P	**P**	**19 27 01.2**	**-0.6**
MKAR	**Makanchi Array**	**46.19 305**		P	**P**	**19 27 01.2**	**-0.6**
	comp=Z,0.9nm,0.5s,baz=87,slow=10,SNR=17						
MKAR	**Makanchi Array**	**46.19 305**		*e*P	**P**	**19 27 00.9**	**-0.8**
	comp=Z,9.6nm,0.6s						
MAKZ	**Makanchi**	**46.40 305**		*e*P	**P**	**19 27 02.1**	**-1.3**
	comp=Z,7.7nm,1.7s						
MAKZ	**Makanchi**	**46.40 305**		*e*P	**P**	**19 27 02.2**	**-1.3**
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.7s						
MTN	**Manton Dam**	**46.77 194**		*e*P	**P**	**19 27 06.9**	**+0.4**
	comp=Z,58nm,1.8s						
COEN	**Coen**	**46.89 178**		*e*P	**P**	**19 27 07.6**	**+0.2**
	comp=Z,31nm,1.6s						
RDOG	**Red Dog Mine**	**47.01 25**		*e*P	**P**	**19 27 08.4**	**+0.5**
	comp=Z,46nm,1.9s						
KURK	**Kurchatov**	**48.32 311**		*e*P	**P**	**19 27 17.7**	**-0.6**
KURK	**Kurchatov**	**48.32 311**		P	**P**	**19 27 17.9**	**-0.4**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KURBB	**Kurchatov Arra**	**48.38 311**		P	**P**	**19 27 17.9**	**-0.8**
	comp=Z,1.5nm,0.7s,baz=89,slow=7.3,SNR=19						
FITZ	**Fitzroy Crossi**	**53.13 199**		*e*P	**P**	**19 27 55.2**	**+0.4**
	comp=Z,17nm,1.5s						
BVAR	**Borovoye Array**	**53.16 314**		P	**P**	**19 27 54.4**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=86,slow=8.2,SNR=6.0						
WRAB	**Tennant Creek**	**53.22 188**		*e*P	**P**	**19 27 55.4**	**0.0**
	comp=Z,7.0nm,0.6s						
WRAB	**Tennant Creek**	**53.22 188**		*de*P	**P**	**19 27 55.5**	**0.0**
WRAB				pmax	pmax		
	comp=Z,25nm,2.5s						
WB2	**Warramunga Arr**	**53.23 188**		*e*P	**P**	**19 27 54.5**	**-1.0**
WR1	**Warramunga Arr**	**53.23 188**		*e*P	**P**	**19 27 55.1**	**-0.4**
	comp=Z,17nm,1.2s						
WRA	**Warramunga Arr**	**53.23 188**		P	**P**	**19 27 55.1**	**-0.4**
	comp=Z,8.4nm,0.6s,baz=3.1,slow=7.6,SNR=78						
WRA	**Warramunga Arr**	**53.23 188**		*i* P	**P**	**19 27 53.0**	**-2.5**
WRA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
WC3	**Warramunga Arr**	**53.24 188**		*e*P	**P**	**19 27 55.6**	**0.0**
	comp=Z,12nm,0.9s						
KK31	**Karatay Array**	**55.05 302**		*e*P	**P**	**19 28 08.1**	**-0.7**
KK31	**Karatay Array**	**55.05 302**		*e*P	**P**	**19 28 08.1**	**-0.7**
KKAR	**Karatay Array**	**55.05 302**		*e*P	**P**	**19 28 07.7**	**-1.1**
KKAR	**Karatay Array**	**55.05 302**		*e*P	**P**	**19 28 07.7**	**-1.1**
NIL	**Nilore**	**55.82 291**		*e*P	**P**	**19 28 13.6**	**-0.9**
	comp=Z,4.9nm,0.9s						
NIL	**Nilore**	**55.82 291**		*e*P	**P**	**19 28 13.6**	**-0.9**
NIL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
AS01	**Alice Springs**	**56.95 188**		*e*P	**P**	**19 28 21.9**	**-0.4**
AS31	**Alice Springs**	**56.95 188**		*e*P	**P**	**19 28 23.0**	**+0.6**
	comp=Z,1.6nm,0.6s						
ASAR	**Alice Springs**	**56.95 188**		P	**P**	**19 28 22.6**	**+0.1**
	comp=Z,3.3nm,0.7s,baz=17,slow=12,SNR=41						
MBWA	**Marble Bar**	**57.81 204**		*e*P	**P**	**19 28 28.4**	**-0.1**
	comp=Z,66nm,1.8s						
ARU	**Arti**	**59.23 320**		*e*P	**P**	**19 28 37.5**	**-0.5**
	comp=Z,15nm,1.7s						
ARU	**Arti**	**59.23 320**		*e*P	**P**	**19 28 37.5**	**-0.5**
ARU				pmax	pmax		
	comp=Z,15nm,1.7s						
AKTO	**Aktyubinsk**	**61.23 314**		P	**P**	**19 28 53.0**	**+1.1**
	comp=Z,1.7nm,0.6s,baz=67,slow=12,SNR=6.5						
STKA	**Stephens Creek**	**64.69 180**		P	**P**	**19 29 15.5**	**+0.6**
	comp=Z,2.3nm,0.8s,baz=6.5,slow=8.8,SNR=4.1						
STKA	**Stephens Creek**	**64.69 180**		*e*P	**P**	**19 29 15.3**	**+0.4**
	comp=Z,4.4nm,1.6s						
FORT	**Forrest**	**64.82 193**		*e*P	**P**	**19 29 16.1**	**+0.4**
	comp=Z,35nm,1.1s						
NWAO	**Narrogin (SRO)**	**69.54 201**		P	**P**	**19 29 45.7**	**0.0**
	comp=Z,5.9nm,0.5s,baz=250,slow=6.6,SNR=13						
WTV	**Waterville**	**71.61 45**		*e*P	**P**	**19 29 56.8**	**-1.7**
FIA0	**FINESS Array S**	**72.20 333**		*e*P	**P**	**19 30 01.9**	**+0.3**
FIA0	**FINESS Array S**	**72.20 333**		*e*P	**P**	**19 30 01.9**	**+0.3**
FINES	**FINESS Array B**	**72.20 333**		P	**P**	**19 30 01.9**	**+0.3**
	comp=Z,1.9nm,0.9s,baz=64,slow=4.6,SNR=6.6						
KBZ	**Khabaz**	**73.38 312**		P	**P**	**19 30 09.5**	**+0.6**
	comp=Z,0.9nm,0.5s,baz=45,slow=11,SNR=2.5						
AKASG	**Malin Array Be**	**77.31 323**		P	**P**	**19 30 32.4**	**+1.0**
	comp=Z,0.7nm,0.5s,baz=47,slow=6.2,SNR=5.8						
AKBB	**Malin Array Si**	**77.31 323**		*e*P	**P**	**19 30 31.8**	**+0.4**
	comp=Z,17nm,1.8s						
AKBB	**Malin Array Si**	**77.31 323**		*e*P	**P**	**19 30 31.8**	**+0.4**
AKBB				pmax	pmax		
	comp=Z,17nm,1.8s						
KIEV	**Kiev**	**77.32 323**		*i* P	P	19 30 42.0	+11
HFS	**Hagfors**	**77.58 336**		P	**P**	**19 30 34.0**	**+1.3**
	comp=Z,2.5nm,0.9s,baz=3.8,slow=4.3,SNR=4.7						
NOA	**NORSAR Array B**	**77.72 338**		LR	LR	20 09 18.5	
	comp=Z,10.0nm,18.5s,baz=305,slow=39						
BAKC	**Calstate**	**78.50 55**		*e*P	**P**	**19 30 38.9**	**+0.5**
BUR04	**Bucovina Ar. S**	**81.30 322**		*e*P	**P**	**19 30 53.6**	**+0.2**
TXAR	**Lajitas Array**	**92.55 52**		P	**P**	**19 31 50.6**	**+1.8**
	comp=Z,0.7nm,0.8s,baz=279,slow=2.4,SNR=6.3						
LPAZ	**La Paz**	**148.57 65**		PKPbc	**PKPbc**	**19 38 27.0**	**+1.7**
	comp=Z,1.4nm,0.6s,baz=347,slow=2.7,SNR=6.8						

ISN ***09*** *19:20:14.8±0.3,34°.54N×47°.25E,h14km±2km, ML2.9*
CSEM ***09*** *19:20:20.4,34°.84N×47°.54E,h14km,ML2.9*

TEH 09 19:20:17.2,34°.59N×47°.38E,h27km,ML2.9,Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKOM	**Komasi**	**0.43 165**		*e*Pg	Pb	19 20 26.4	-0.1
IKOM				*e*		19 20 34.7	
	comp=Z,99nm,0.1s						
IVIS	**Veis**	**0.44 262**		*e*Pg	Pb	19 20 26.4	-0.2
IVIS				*e*		19 20 34.8	
	comp=Z,43μm,0.1s						
ILIN	**Lien**	**0.47 314**		*e*Pg	Pb	19 20 27.0	-0.2
ILIN				*e*Sg	Sb	19 20 34.1	0.0
ILIN				*e*		19 20 35.4	
	comp=Z,34μm,0.1s						
SNGE	**Sanandaj**	**0.50 357**		*e*Pg	Pb	19 20 26.9	-0.8
HAGD	**Aghdareh**	**1.47 81**		*e*Pg	Pb	19 20 43.8	-0.2
HAGD				*e*		19 20 44.8	
	comp=Z,99nm,0.1s						
HKZM	**Kohzaman**	**1.48 58**		*e*Pg	Pb	19 20 44.4	+0.2
HKZM				*e*		19 21 07.3	
	comp=Z,99nm,0.2s						
ASAO	**Ashtian**	**2.19 90**		*e*Pn	Pb	19 20 56.9	+0.7
KHMZ	**Khomeyn**	**2.30 111**		*e*Pn	Pb	19 20 59.9	+1.7
KHMZ				*e*Sg	Sb	19 21 32.3	+6.0
GHVR	**GHOM**	**3.24 91**		*e*Pn	Pb	19 21 10.6	-3.4

SJA ***09*** *19:20:17.2±0.5,24°.00S×66°.80W,h243km±4km,ML2.9, MW3.7*
GUC ***09*** *19:20:17.7±0.4,24°.11S×67°.03W,h220km,ML4.5*
ISCJB ***09*** *19:20:19.4±0.4,24°.04S±0°.04×66°.89W±0°.04,h213km±4km, mb3.4/5,Error ellipse: s-maj=6.9km s-min=5.4km az=136.3*
IDC ***09*** *19:20:20.7±2.5,23°.90S×66°.61W,h203km±23km,mb3.2/5, mb1 3.4/8,mb1mx3.1/44,mbtmp3.7/8,Error ellipse: s-maj=28.2km s-min=16.3km az=69.0*

ISC 09 19:20:20.1±0.7,23°.99S±0°.05×66°.87W±0°.05,h208km±7km, n26,σ1°32/37,mb3.6/5,5C-1D,Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**1.44 121**		*i* P	**Pn**	**19 20 54.4**	**+0.3**
SLA				IAML		19 21 01.0	
	comp=Z,48nm,0.7s						
SLA				*i* S	**S**	**19 21 22.5**	**+2.1**
SLA	**San Lorenzo**	**1.44 121**		⇓*e*P	**Pn**	**19 20 54.7**	**+0.6**
YJA	**Yavi**	**2.19 35**		*i* P	**Pn**	**19 21 02.4**	**+0.7**
YJA				*i* S	**S**	**19 21 35.0**	**+1.4**
YJA				IAML		19 21 35.2	
	comp=E,21nm,0.7s						
PB15	**IPOC Station P**	**2.51 287**		⇑*i*P	**Pn**	**19 21 05.7**	**+0.8**
PB15				*i* S	**S**	**19 21 39.2**	**-0.1**
GO02	**Mina Guanaco**	**2.74 244**		⇑*i*P	**Pn**	**19 21 08.1**	**+0.6**
GO02				*i* S	**S**	**19 21 44.5**	**+0.5**
GO02				IAML		19 21 44.7	
	comp=N,984nm,0.2s						
PB06	**IPOC Station P**	**2.80 297**		⇑*i*P	**Pn**	**19 21 08.7**	**+0.7**
PB06				*i* S	**S**	**19 21 44.6**	**-0.2**
PB06				IAML		19 21 46.1	
	comp=N,928nm,0.4s						
AHML	**Horco Molle**	**3.11 154**		*i* P	**Pn**	**19 21 10.6**	**-0.9**
AHML				IAML		19 21 11.9	
	comp=Z,40nm,0.8s						
AHML				*i* S	**S**	**19 21 49.9**	**-1.4**
PB14	**IPOC Station P**	**3.29 258**		*i* P	**Pn**	**19 21 13.7**	**-0.1**
PB14				*i* S	**S**	**19 21 56.0**	**+0.5**
PB14	**IPOC Station P**	**3.29 258**		*e*P	**Pn**	**19 21 13.9**	**0.0**
PB14				*i* S	**S**	**19 21 53.9**	**-1.5**
PB10	**IPOC Station P**	**3.41 277**		⇑*i*P	**Pn**	**19 21 15.3**	**+0.2**
PB04	**IPOC Station P**	**3.44 298**		⇑*i*P	**Pn**	**19 21 15.7**	**+0.1**
PB04				*i* S	**S**	**19 21 56.6**	**-1.9**
PB07	**IPOC Station P**	**3.58 308**		*e*P	**Pn**	**19 21 17.4**	**+0.2**
PB07				*e*S	**S**	**19 21 59.6**	**-2.0**
PB08	**IPOC Station P**	**4.38 331**		*e*P	**Pn**	**19 21 29.1**	**+1.8**
ACLC	**CERRO LA CRUZ**	**5.42 181**		*i* P	**Pn**	**19 21 38.8**	**-1.3**
APLL	**PUNTA DE LOS L**	**6.39 177**		*i* P	**Pn**	**19 21 50.6**	**-1.9**
AMOG	**MOGNA**	**7.07 191**		*i* P	**Pn**	**19 21 59.3**	**-2.0**
LPAZ	**La Paz**	**7.75 351**		P	**Pn**	**19 22 11.0**	**+0.2**
	comp=Z,1.3nm,0.3s,baz=173,slow=6.9,SNR=15						
LPAZ				S	**S**	**19 23 37.2**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=100,slow=18,SNR=3.0						
CPUP	**Villa Florida**	**8.95 107**		P	**Pn**	**19 22 23.9**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=287,slow=10,SNR=4.4						
SIV	**San Ignacio**	**9.64 35**		P	**Pn**	**19 22 32.2**	**-2.5**
	comp=Z,0.2nm,0.3s,baz=223,slow=14,SNR=6.2						
SNAA	**Sanae**	**59.32 161**		P	**P**	**19 30 00.8**	**+1.0**
	comp=Z,1.2nm,1.1s,baz=288,slow=14,SNR=3.2						
TXAR	**Lajitas Array**	**63.74 324**		P	**P**	**19 30 31.4**	**+1.5**
	comp=Z,0.2nm,0.7s,baz=138,slow=11,SNR=3.3						
QSPA	**South Pole Qui**	**66.22 180**		P	**P**	**19 30 47.1**	**+1.7**
	comp=Z,0.6nm,0.5s,baz=143,slow=5.1,SNR=5.3						
TORD	**Torodi Ar. Bea**	**76.45 69**		P	**P**	**19 31 47.0**	**-0.3**
	comp=Z,0.6nm,0.4s,baz=256,slow=4.6,SNR=9.7						
YKA	**Yellowknife Ar**	**94.16 340**		P	**P**	**19 33 15.5**	**+0.9**
	comp=Z,0.3nm,0.5s,baz=146,slow=4.5,SNR=3.3						
WRA	**Warramunga Arr**	**131.69 207**		PKP	**PKPdf**	**19 39 10.2**	**+1.2**
	comp=Z,0.2nm,0.4s,baz=154,slow=1.8,SNR=7.5						
MKAR	**Makanchi Array**	**146.44 40**		PKPbc	**PKPab**	**19 39 36.5**	**-1.5**
	comp=Z,0.5nm,0.6s,baz=288,slow=4.2,SNR=6.6						

ISCJB ***09*** *19:20:31.9±0.7,2°.3N±0°.1×89°.79E±0°.06,h10km,mb4.2/13, Error ellipse: s-maj=15.3km s-min=7.9km az=17.9*
IDC ***09*** *19:20:32.6±1.2,2°.33N×89°.74E,h0km,mb4.0/12, mb1 4.1/14,mb1mx3.7/71,mbtmp4.0/14,ML3.4/2,Error ellipse: s-maj=34.0km s-min=23.6km az=27.0*
NEIC ***09*** *19:20:33.7±0.4,2°.26N×89°.74E,h10km,mb4.7/5,Error ellipse: s-maj=10.4km s-min=5.2km az=197.0*

ISC 09 19:20:33.6±1.0,2°.2N±0°.2×89°.74E±0°.10,h10km,n46, σ0°71/39,mb4.2/13,1C,North Indian Ocean

| Code | Station Name | Δ° | AZ° | Phase ID Op | IS

1.3nm,0.3s,baz=217,slow=15,SNR=13
SIJI Sn Sn 19 26 47.4 -4.3
2.7nm,0.3s,baz=176,slow=23,SNR=8.3
WRA Warramunga Arr 17.14 161 P Pn 19 29 04.1 -1.3
baz=343,slow=13,SNR=3.0
ASAR Alice Springs 20.55 166 P P 19 29 45.3 +0.6
1.4nm,0.6s,baz=350,slow=11,SNR=14
KSRS Korea Array 40.91 359 LR LR 19 50 08.3
comp=Z,20nm,18.7s,baz=178,slow=37
MKAR Makanchi Array 64.65 327 P P 19 35 43.9 -0.1
0.2nm,0.6s,baz=123,slow=5.3,SNR=2.9
KURBB Kurchatov Arra 68.92 328 P P 19 36 11.1 +0.1
0.4nm,0.8s,baz=122,slow=5.6,SNR=2.8

*NEIC **09** 19:30:01.2±0.0,41°.51S×173°.36E,h74km,ML3.8(WEL), After WEL.*
NEIC Felt in Nelson.
WEL 09 19:30:01.4,42°S±2°×17°3E±°,h65km±3km,ML3.6/7,South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNZ	**Nelson**	**0.29**	**8**	Pn	Pn	19 30 12.4	+0.4
NNZ				Sn	Sn	19 30 20.2	+0.5
NNZ	**Nelson**	**0.29**	**8**	P	Pn	19 30 12.4	+0.4
NNZ				S	Sn	19 30 20.3	+0.6
THZ	**Tophouse**	**0.40**	**231**	Pn	Pn	19 30 13.3	+0.4
THZ	**Tophouse**	**0.40**	**231**	P	Pn	19 30 13.4	+0.4
THZ				S	Sn	19 30 22.3	+0.9
BSWZ	**Blackbirch Sta**	**0.46**	**117**	Pn	Pn	19 30 14.0	+0.6
BSWZ				Sn	Sn	19 30 23.6	+1.4
BSWZ	**Blackbirch Sta**	**0.46**	**117**	P	Pn	19 30 14.0	+0.6
BSWZ				S	Sn	19 30 23.5	+1.3
TUWZ	**Tuamarina**	**0.47**	**80**	Pn	Pn	19 30 13.8	+0.4
TUWZ				Sn	Sn	19 30 22.5	+0.2
TUWZ	**Tuamarina**	**0.47**	**80**	P	Pn	19 30 13.9	+0.4
TUWZ				S	Sn	19 30 22.5	+0.2
CMWZ	**Cape Campbell**	**0.71**	**110**	Pn	Pn	19 30 16.6	+0.6
CMWZ	**Cape Campbell**	**0.71**	**110**	P	Pn	19 30 16.7	+0.6
TCW	**Tory Channel**	**0.78**	**68**	Pn	Pn	19 30 17.5	+0.6
DUWZ	**D'Urville Isla**	**0.84**	**33**	Pn	Pn	19 30 18.4	+0.8
QRZ	**Quartz Range**	**0.91**	**318**	Pn	Pn	19 30 19.1	+0.6
QRZ	**Quartz Range**	**0.91**	**318**	P	Pn	19 30 19.1	+0.6
KHZ	**Kahutara**	**0.92**	**170**	Pn	Pn	19 30 19.0	+0.4
KHZ	**Kahutara**	**0.92**	**170**	P	Pn	19 30 19.0	+0.4
KHZ				S	Sn	19 30 31.7	+0.4
SNZO	**South Karori**	**1.06**	**80**	*e*Pn	Pn	19 30 20.1	-0.2
SNZO				*e*Sn	Sn	19 30 34.8	+0.4
WEL	**Wellington**	**1.11**	**79**	Pn	Pn	19 30 21.0	0.0
DSZ	**Denniston Nort**	**1.17**	**258**	Pn	Pn	19 30 22.2	+0.4
DSZ	**Denniston Nort**	**1.17**	**258**	P	Pn	19 30 22.3	+0.5
DSZ				P	Pn	19 30 22.3	+0.5
BHW	**Baring Head**	**1.17**	**86**	Pn	Pn	19 30 21.3	-0.4
BHW	**Baring Head**	**1.17**	**86**	P	Pn	19 30 21.3	-0.4
BHW				S	Sn	19 30 36.2	-0.7
KIW	**Kapiti Island**	**1.36**	**62**	Pn	Pn	19 30 24.6	+0.3
KIW	**Kapiti Island**	**1.36**	**62**	P	Pn	19 30 24.6	+0.3
CAW	**Cannon Point**	**1.37**	**74**	Pn	Pn	19 30 24.1	-0.4
CAW	**Cannon Point**	**1.37**	**74**	P	Pn	19 30 24.1	-0.3
MSWZ	**Moikau Station**	**1.45**	**87**	Pn	Pn	19 30 24.6	-0.9
MSWZ	**Moikau Station**	**1.45**	**87**	P	Pn	19 30 24.6	-0.9
PLWZ	**Palliser**	**1.45**	**93**	Pn	Pn	19 30 24.4	-1.1
PLWZ	**Palliser**	**1.45**	**93**	P	Pn	19 30 24.4	-1.1
LTZ	**Lake Taylor**	**1.49**	**211**	Pn	Pn	19 30 25.6	-0.6
LTZ	**Lake Taylor**	**1.49**	**211**	P	Pn	19 30 26.2	+0.1
OGWZ	**Otaki Gorge**	**1.56**	**64**	Pn	Pn	19 30 26.7	-0.2
OGWZ	**Otaki Gorge**	**1.56**	**64**	P	Pn	19 30 26.8	-0.1
PAWZ	**Paruwai Farm**	**1.58**	**86**	Pn	Pn	19 30 26.1	-1.3
PAWZ	**Paruwai Farm**	**1.58**	**86**	P	Pn	19 30 26.1	-1.3
MTW	**Mount Morrison**	**1.68**	**79**	Pn	Pn	19 30 27.4	-1.2
MTW	**Mount Morrison**	**1.68**	**79**	P	Pn	19 30 27.4	-1.2
HOWZ	**Holdsworth Sta**	**1.76**	**70**	Pn	Pn	19 30 28.6	-1.1
HOWZ	**Holdsworth Sta**	**1.76**	**70**	P	Pn	19 30 28.7	-1.0
TRWZ	**Traveller**	**1.78**	**87**	Pn	Pn	19 30 28.5	-1.4
TRWZ	**Traveller**	**1.78**	**87**	P	Pn	19 30 28.6	-1.3
INZ	**Inchbonnie**	**1.85**	**228**	P	Pn	19 30 31.3	+0.4
MRZ	**Mangatainoka R**	**1.90**	**64**	Pn	Pn	19 30 30.7	-0.9
MRZ	**Mangatainoka R**	**1.90**	**64**	P	Pn	19 30 30.7	-0.8
TMWZ	**Te Maipa**	**1.97**	**79**	Pn	Pn	19 30 31.0	-1.6
TMWZ	**Te Maipa**	**1.97**	**79**	P	Pn	19 30 31.0	-1.6
OHWZ	**Ohakea**	**1.99**	**50**	P	Pn	19 30 34.6	+1.8
EYCZ	**Eyrewell**	**2.04**	**200**	P	Pn	19 30 32.6	-0.8
OXZ	**Oxford**	**2.05**	**207**	Pn	Pn	19 30 32.2	-1.4
OXZ	**Oxford**	**2.05**	**207**	P	Pn	19 30 32.3	-1.3
TIWZ	**Tintock**	**2.07**	**70**	Pn	Pn	19 30 32.4	-1.4
TIWZ	**Tintock**	**2.07**	**70**	P	Pn	19 30 32.5	-1.3
CRLZ	**Canterbury Las**	**2.13**	**194**	P	Pn	19 30 34.2	-0.4
CRLZ				P		19 30 34.3	
NMEZ	**Namu Road**	**2.14**	**12**	Pn	Pn	19 30 42.8	+8.0
NMEZ	**Namu Road**	**2.14**	**12**	P	Pn	19 30 42.9	+8.2
POWZ	**Post Office Ro**	**2.16**	**60**	P	Pn	19 30 34.8	-0.3
WAZ	**Wanganui**	**2.16**	**36**	Pn	Pn	19 30 37.2	+2.1
WAZ	**Wanganui**	**2.16**	**36**	P	Pn	19 30 37.0	+1.9
LREZ	**Lake Rotokare**	**2.21**	**22**	P	Pn	19 30 38.0	+2.3
PRWZ	**Pori Road**	**2.22**	**65**	Pn	Pn	19 30 34.7	-1.1
PRWZ	**Pori Road**	**2.22**	**65**	P	Pn	19 30 34.8	-1.1
OKCZ	**Okains Bay**	**2.22**	**185**	P	Pn	19 30 34.8	-1.2
CPWZ	**Castlepoint**	**2.25**	**76**	Pn	Pn	19 30 35.3	-0.9
MQZ	**McQueen's Vall**	**2.25**	**193**	Pn	Pn	19 30 34.2	-2.1
MQZ	**McQueen's Vall**	**2.25**	**193**	P	Pn	19 30 34.2	-2.1
PREZ	**Palmer Road**	**2.26**	**17**	Pn	Pn	19 30 38.3	+1.8
PREZ	**Palmer Road**	**2.26**	**17**	P	Pn	19 30 38.3	+1.9
NWEZ	**Newall Road**	**2.27**	**11**	Pn	Pn	19 30 38.6	+2.0
KHEZ	**Kahui Hut**	**2.27**	**14**	Pn	Pn	19 30 38.2	+1.5
NEZ	**North Egmont**	**2.31**	**15**	Pn	Pn	19 30 38.6	+1.3
BFZ	**Birch Farm**	**2.36**	**70**	P	Pn	19 30 35.9	-1.8
PKE	**Pukeiti**	**2.37**	**13**	Pn	Pn	19 30 39.7	+1.7
PKE	**Pukeiti**	**2.37**	**13**	P	Pn	19 30 39.7	+1.8
DVHZ	**Dannevirke**	**2.47**	**62**	Pn	Pn	19 30 37.6	-1.7
DVHZ	**Dannevirke**	**2.47**	**62**	P	Pn	19 30 37.6	-1.7
TSZ	**Takapari Road**	**2.47**	**55**	Pn	Pn	19 30 38.4	-0.9
TSZ	**Takapari Road**	**2.47**	**55**	P	Pn	19 30 38.5	-0.8
WVZ	**Waitaha Valley**	**2.48**	**230**	Pn	Pn	19 30 39.5	+0.1
WVZ	**Waitaha Valley**	**2.48**	**230**	P	Pn	19 30 39.7	+0.3
MHEZ	**Mangahewa**	**2.55**	**18**	P	Pn	19 30 42.1	+1.8
ANWZ	**Angora Road**	**2.60**	**67**	P	Pn	19 30 39.2	-1.9
VRZ	**Vera Road**	**2.62**	**25**	Pn	Pn	19 30 43.1	+1.7
VRZ	**Vera Road**	**2.62**	**25**	P	Pn	19 30 43.2	+1.9
MTVZ	**Mangateitei**	**2.68**	**38**	Pn	Pn	19 30 43.2	+1.0
MTVZ	**Mangateitei**	**2.68**	**38**	P	Pn	19 30 43.7	+1.4
PKVZ	**Pokaka**	**2.70**	**35**	Pn	Pn	19 30 43.9	+1.4
PKVZ	**Pokaka**	**2.70**	**35**	P	Pn	19 30 43.9	+1.4
PNHZ	**Pukenui**	**2.70**	**55**	P	Pn	19 30 41.1	-1.5
RPZ	**Rata Peaks**	**2.77**	**217**	Pn	Pn	19 30 42.0	-1.4
RPZ	**Rata Peaks**	**2.77**	**217**	P	Pn	19 30 42.8	-0.6
TRVZ	**Turoa**	**2.78**	**38**	Pn	Pn	19 30 44.6	+0.9
TRVZ	**Turoa**	**2.78**	**38**	P	Pn	19 30 44.9	+1.1
WNVZ	**Wahianoa**	**2.79**	**39**	Pn	Pn	19 30 44.8	+1.1
PRHZ	**Porangahau**	**2.80**	**65**	Pn	Pn	19 30 41.7	-2.1
PRHZ	**Porangahau**	**2.80**	**65**	P	Pn	19 30 41.7	-2.0
MOVZ	**Moawhango**	**2.80**	**42**	Pn	Pn	19 30 43.7	-0.1
MOVZ	**Moawhango**	**2.80**	**42**	P	Pn	19 30 43.7	-0.1
WHVZ	**Whangaehu Hut**	**2.82**	**39**	Pn	Pn	19 30 45.7	+1.5
WHVZ	**Whangaehu Hut**	**2.82**	**39**	P	Pn	19 30 45.8	+1.6
FWVZ	**Far West T-bar**	**2.82**	**38**	Pn	Pn	19 30 45.6	+1.3
FWVZ	**Far West T-bar**	**2.82**	**38**	P	Pn	19 30 45.9	+1.6
TUVZ	**Tukino**	**2.86**	**39**	Pn	Pn	19 30 45.4	+0.7
TUVZ	**Tukino**	**2.86**	**39**	P	Pn	19 30 45.9	+1.2
COVZ	**Chateau Observ**	**2.86**	**37**	P	Pn	19 30 45.5	+0.8
BHHZ	**Black Hill Sta**	**2.90**	**47**	Pn	Pn	19 30 44.7	-0.5
BHHZ	**Black Hill Sta**	**2.90**	**47**	P	Pn	19 30 45.1	-0.1
NGZ	**Ngauruhoe**	**2.91**	**37**	Pn	Pn	19 30 46.8	+1.4
NGZ	**Ngauruhoe**	**2.91**	**37**	P	Pn	19 30 47.1	+1.7
TWVZ	**Taurewa**	**2.92**	**34**	Pn	Pn	19 30 47.1	+1.5
TWVZ	**Taurewa**	**2.92**	**34**	P	Pn	19 30 47.1	+1.6
OTVZ	**Oturere**	**2.95**	**38**	Pn	Pn	19 30 46.6	+0.6
WTVZ	**West Tongariro**	**2.95**	**37**	Pn	Pn	19 30 47.1	+1.1
WTVZ	**West Tongariro**	**2.95**	**37**	P	Pn	19 30 47.2	+1.2
KRHZ	**Kereru**	**2.98**	**52**	P	Pn	19 30 50.0	+3.8
KRVZ	**Karewarewa**	**2.99**	**37**	P	Pn	19 30 48.7	+2.1
PXZ	**Pawanui**	**3.06**	**62**	Pn	Pn	19 30 45.2	-2.1
PXZ	**Pawanui**	**3.06**	**62**	P	Pn	19 30 45.3	-2.0
KWHZ	**Kaweka Forest**	**3.15**	**50**	P	Pn	19 30 49.3	+0.7
KAHZ	**Kahuranaki**	**3.20**	**59**	Pn	Pn	19 30 47.4	-1.9
KAHZ	**Kahuranaki**	**3.20**	**59**	P	Pn	19 30 47.5	-1.7
HIZ	**Hauiti**	**3.21**	**22**	P	Pn	19 30 50.5	+1.1
RATZ	**Rangitukua**	**3.24**	**36**	P	Pn	19 30 53.6	+3.8
FOZ	**Fox Glacier**	**3.29**	**231**	Pn	Pn	19 30 49.9	-0.6
FOZ	**Fox Glacier**	**3.29**	**231**	P	Pn	19 30 50.0	-0.4
MCHZ	**McNeill Hill**	**3.30**	**52**	P	Pn	19 30 53.0	+2.4
WATZ	**Wairara**	**3.35**	**34**	P	Pn	19 30 54.5	+3.1
BKZ	**Black Stump Fm**	**3.37**	**47**	P	Pn	19 30 57.8	+6.3
KUTZ	**Kaahu Road**	**3.57**	**33**	P	Pn	19 30 56.8	+2.4
NMHZ	**Naumai**	**3.59**	**49**	P	Pn	19 30 53.7	-0.9
TLZ	**Tolley Road**	**3.60**	**29**	Pn	Pn	19 30 55.8	+1.0
TLZ	**Tolley Road**	**3.60**	**29**	P	Pn	19 30 55.9	+1.1
LBZ	**Lake Benmore**	**3.69**	**218**	Pn	Pn	19 30 54.0	-1.8
LBZ	**Lake Benmore**	**3.69**	**218**	P	Pn	19 30 54.5	-1.4
MTHZ	**Maungataniwha**	**3.78**	**47**	P	Pn	19 30 56.6	-0.6
MTHZ				P	Pn	19 30 56.6	-0.7
RTZ	**Ruatahuna**	**4.03**	**45**	P	Pn	19 31 02.9	+2.3
ODZ	**Otahua Downs**	**4.04**	**208**	Pn	Pn	19 30 59.1	-1.5
ODZ	**Otahua Downs**	**4.04**	**208**	P	Pn	19 30 59.2	-1.5
TOZ	**Tahuroa Road**	**4.13**	**25**	Pn	Pn	19 30 59.9	-2.1
TOZ	**Tahuroa Road**	**4.13**	**25**	P	Pn	19 31 03.0	+1.0
JCZ	**Jackson Bay**	**4.21**	**231**	Pn	Pn	19 31 02.2	-1.0
JCZ	**Jackson Bay**	**4.21**	**231**	P	Pn	19 31 02.2	-0.9
PRGZ	**Paritu Road**	**4.34**	**55**	P	Pn	19 31 02.8	-2.1
MWZ	**Matawai**	**4.53**	**47**	Pn	Pn	19 31 05.7	-1.7
MWZ	**Matawai**	**4.53**	**47**	P	Pn	19 31 05.6	-1.8
AWAZ	**Awhitu Peninsu**	**4.56**	**13**	P	Pn	19 31 09.0	+1.3
KBAZ	**Karaka Road Bo**	**4.57**	**16**	Pn	Pn	19 31 09.4	+1.4
KBAZ	**Karaka Road Bo**	**4.57**	**16**	P	Pn	19 31 09.4	+1.4
MKAZ	**Moumakai**	**4.62**	**19**	Pn	Pn	19 31 09.6	+0.9
MKAZ	**Moumakai**	**4.62**	**19**	P	Pn	19 31 09.7	+1.0
WTAZ	**Waiatarua**	**4.67**	**12**	Pn	Pn	19 31 10.8	+1.4
WTAZ	**Waiatarua**	**4.67**	**12**	P	Pn	19 31 11.1	+1.7
ETAZ	**East Tamaki Re**	**4.72**	**16**	Pn	Pn	19 31 11.0	+1.0
ETAZ	**East Tamaki Re**	**4.72**	**16**	P	Pn	19 31 11.2	+1.2
RVAZ	**Riverhead Bore**	**4.83**	**12**	Pn	Pn	19 31 12.7	+1.2
RUGZ	**Raukumara Rang**	**4.88**	**45**	P	Pn	19 31 10.1	-2.1
TWGZ	**Tauwhareparae**	**4.89**	**49**	P	Pn	19 31 11.3	-1.1
WIAZ	**Waiheke Island**	**4.92**	**17**	P	Pn	19 31 14.0	+1.3
ABAZ	**Army Bay**	**5.04**	**14**	P	Pn	19 31 15.6	+1.2
KUZ	**Kuaotunu**	**5.11**	**22**	Pn	Pn	19 31 15.8	+0.5
KUZ	**Kuaotunu**	**5.11**	**22**	P	Pn	19 31 15.8	+0.5
TUZ	**Tuapeka**	**5.19**	**210**	Pn	Pn	19 31 15.2	-1.1
WCZ	**Waipu Caves**	**5.62**	**8**	Pn	Pn	19 31 23.6	+1.3
OUZ	**Omahuta**	**6.28**	**2**	Pn	Pn	19 31 33.2	+1.8

DJA 09 19:31:18.4±0.5,0°S±3°×12°3E±°,h12km±5km,M3.6/7, mb3.7/1,MLv3.5/7,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.85**	**39**	P	Pg	19 31 34.1	-0.8
KMSI				S	Sn	19 31 48.7	0.0
LUWI	**Luwuk**	**1.16**	**215**	P	Pg	19 31 40.7	0.0
LUWI				S	Sb	19 31 55.5	+0.1
MRSI	**Marisa**	**1.60**	**291**	P	Pn	19 31 44.4	-2.1
MRSI				S	Sb	19 32 08.2	+0.1
APSI	**Ampana**	**1.97**	**246**	P	Pn	19 31 51.8	+0.2
APSI				Sg	Sg	19 32 24.1	+2.3
TTSI	**Tana Toraja**	**4.66**	**231**	P	Pn	19 32 28.1	-0.5
TTSI				S	Sn	19 33 24.8	+2.1
SPSI	**Sidrap Palu**	**5.32**	**224**	P	Pn	19 32 36.8	-0.9

*ISCJB **09** 19:56:53.4±0.4,39°.23N±0°.03×29°.44E±0°.03,h8km±4km, Error ellipse: s-maj=5.4km s-min=3.4km az=44.5*
*CSEM **09** 19:56:53.6±0.1,39°.24N×29°.44E,h10km,ML2.3,Error ellipse: s-maj=3.1km s-min=1.9km az=137.0*
*ISK **09** 19:56:53.3,39°.27N×29°.40E,h5km,ML2.3/5*
*DDA **09** 19:56:53.1,39°.23N×29°.42E,h7km,Ml2.8*
ISC 09 19:56:53.5±0.9,39°.24N±0°.02×29°.43E±0°.02,h13km±7km, n41,σ0°54/57,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEDZ	**Gediz**	**0.20**	**185**	PG	**Pg**	**19 56 58.6**	**+0.6**
GEDZ	**Gediz**	**0.20**	**185**	*e*Pg	**Pg**	**19 56 58.6**	**+0.6**
TVSB	**Tavsanli**	**0.21**	**6**	PG	**Pg**	**19 56 57.6**	**-0.6**
TVSB				SG	**Sg**	**19 57 00.5**	**-0.9**
TVSB	**Tavsanli**	**0.21**	**6**	*e*Pg	**Pg**	**19 56 57.6**	**-0.6**
TVSB				*e*Sg	**Sg**	**19 57 00.5**	**-0.9**
SHAP	**Saphane-Kutahy**	**0.28**	**217**	PG	**Pb**	**19 56 59.7**	**-0.6**
SHAP				SG	**Sg**	**19 57 03.6**	**+0.4**
SHAP	**Saphane-Kutahy**	**0.28**	**217**	*e*Pg	**Pb**	**19 56 59.7**	**-0.6**
SHAP				*e*Sg	**Sg**	**19 57 03.6**	**+0.4**
SIMA	**Simav-Kutahya**	**0.39**	**246**	PG	**Pb**	**19 57 01.7**	**-0.5**
SIMA				SG	**Sg**	**19 57 06.9**	**+0.4**
SIMA	**Simav-Kutahya**	**0.39**	**246**	*e*Pg	**Pb**	**19 57 01.7**	**-0.5**
SIMA				*e*Sg	**Sg**	**19 57 06.9**	**+0.4**
KUTH	**Kutahya**	**0.48**	**71**	PG	**Pb**	**19 57 03.7**	**-0.1**
KUTH	**Kutahya**	**0.48**	**71**	*e*Pg	**Pb**	**19 57 03.7**	**-0.1**
DEMI	**Demirci**	**0.59**	**251**	*i* P	**Pb**	**19 57 05.3**	**-0.4**
DEMI				*i* S	**Sg**	**19 57 13.2**	**+0.2**
DEMI	**Demirci**	**0.59**	**251**	P	**Pb**	**19 57 05.3**	**-0.4**
DEMI				S	**Sg**	**19 57 13.2**	**+0.2**
AUBOZ	**BOZOYUK**	**0.81**	**35**	PG	**Pg**	**19 57 08.6**	**-0.6**
AUBOZ	**BOZOYUK**	**0.81**	**35**	*e*Pg	**Pg**	**19 57 08.6**	**-0.6**
DURS	**Dursunbey**	**0.82**	**296**	*i* P	**Pg**	**19 57 09.2**	**-0.2**
DURS				*i* S	**Sb**	**19 57 21.2**	**+0.5**
DURS	**Dursunbey**	**0.82**	**296**	P	**Pg**	**19 57 09.2**	**-0.2**
DURS				S	**Sb**	**19 57 21.2**	**+0.5**
KHAL	**Karahalli**	**0.87**	**177**	*i* P	**Pg**	**19 57 09.5**	**-0.9**
KHAL				*i* S	**Sg**	**19 57 20.4**	**-1.4**
KULA	**Kula-Manisa**	**0.94**	**220**	PG	**Pg**	**19 57 11.5**	**-0.2**
KULA	**Kula-Manisa**	**0.94**	**220**	*e*Pg	**Pg**	**19 57 11.5**	**-0.2**
BORA	**Eskisehir**	**1.01**	**51**	PG	**Pg**	**19 57 12.7**	**-0.3**
BORA	**Eskisehir**	**1.01**	**51**	*i* P	**Pg**	**19 57 13.1**	**+0.1**
BORA				*i* S	**Sb**	**19 57 27.3**	**+1.1**
BORA	**Eskisehir**	**1.01**	**51**	*e*Pg	**Pg**	**19 57 12.7**	**-0.3**
BORA	**Eskisehir**	**1.01**	**51**	P	**Pg**	**19 57 13.1**	**+0.1**
BORA				S	**Sb**	**19 57 27.3**	**+1.1**
MANT	**Manisa**	**1.02**	**223**	*i* P	**Pg**	**19 57 12.9**	**-0.2**
MANT				*i* S	**Sg**	**19 57 25.7**	**-0.7**
MANT	**Manisa**	**1.02**	**223**	P	**Pg**	**19 57 12.9**	**-0.2**
ESKT	**Eskisehir**	**1.13**	**75**	*i* P	**Pg**	**19 57 15.0**	**-0.3**
ESKT				*i* S	**Sg**	**19 57 29.7**	**-0.4**
SEYT	**Eskypehyr**	**1.13**	**75**	P	**Pg**	**19 57 15.0**	**-0.3**
SEYT				S	**Sg**	**19 57 29.7**	**-0.4**
MDNY	**Mudanya-Bursa**	**1.20**	**340**	PN	**Pg**	**19 57 16.0**	**-0.6**
MDNY	**Mudanya-Bursa**	**1.20**	**340**	*e*Pn	**Pg**	**19 57 16.0**	**-0.6**
ADVT	**Abdulvahap**	**1.21**	**11**	PN	**Pb**	**19 57 16.6**	**+0.4**
ADVT	**Abdulvahap**	**1.21**	**11**	*e*Pn	**Pb**	**19 57 16.6**	**+0.4**
BALB	**Balikesir**	**1.27**	**289**	PN	**Pg**	**19 57 17.7**	**-0.1**
BALB	**Balikesir**	**1.27**	**289**	*e*Pn	**Pg**	**19 57 17.7**	**-0.1**
KCTX	**Karacabey (Bur**	**1.32**	**321**	PN	**Pb**	**19 57 18.3**	**+0.3**
KCTX	**Karacabey (Bur**	**1.32**	**321**	*e*Pn	**Pb**	**19 57 18.3**	**+0.3**
YLV	**Yalova**	**1.32**	**358**	PN	**Pg**	**19 57 18.7**	**-0.2**
YLV	**Yalova**	**1.32**	**358**	*e*Pn	**Pg**	**19 57 18.7**	**-0.2**
ARMT	**Armutlu**	**1.39**	**342**	PN	**Pg**	**19 57 19.8**	**-0.4**
ARMT	**Armutlu**	**1.39**	**342**	*e*Pn	**Pg**	**19 57 19.8**	**-0.4**
GULT	**Gulveren**	**1.45**	**35**	PN	**Pb**	**19 57 20.8**	**+0.4**
GULT	**Gulveren**	**1.45**	**35**	*e*Pn	**Pb**	**19 57 20.8**	**+0.4**

*IDC **09** 19:58:26.4±1.3,30°.53S×69°.53W,h0km,mb3.5/3, mb1 3.9/5,mb1mx3.6/40,mbtmp3.5/5,ML3.6/2,MS3.2/2, Ms1 3.2/2,ms1mx2.7/30,Error ellipse: s-maj=50.2km s-min=35.4km az=15.0*
*SJA **09** 19:58:30.4±0.6,30°.31S×69°.42W,h10km±2km,ML4.1, MW4.1,Fault plane solution: NP1:φs340.09000°, δ39.22000°,λ-49.96000°.*
*ISCJB **09** 19:58:32.3±0.5,30°.27S±0°.03×69°.40W±0°.03,h15km±6km, mb3.5/3,MS3.1/1,Error ellipse: s-maj=4.6km s-min=4.3km az=157.0*
*GUC **09** 19:58:34.5±1.0,30°.21S×69°.53W,h100km±19km,ML4.0*
ISC 09 19:58:30.9±1.0,30°.33S±0°.02×69°.50W±0°.03,h18km±3km, n32,σ1°51/45,mb3.5/3,9C-11D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AROD	**Rodeo**	**0.16**	**7**	⇑*i*P	**Pg**	**19 58 37.0**	**+1.4**
ACDV	**Cuesta del Vie**	**0.36**	**64**	⇑*i*P	**Pg**	**19 58 38.4**	**-0.2**
AMOG	**MOGNA**	**1.06**	**125**	⇓*e*P	**Pg**	**19 58 49.9**	**-1.5**
GO04	**Tololo Observa**	**1.14**	**278**	⇓*i*P	**Pn**	**19 58 53.7**	**+1.6**
GO04				*i* S	**Sn**	**19 59 10.0**	**+2.6**
GO04				IAML		19 59 13.9	
	comp=N,7μm,0.6s						
TLL	**Tololo Astrono**	**1.14**	**278**	⇓*i*P	**Pn**	**19 58 53.8**	**+1.6**
TLL				*i* S	**Sn**	**19 59 09.8**	**+2.3**
TLL				IAML		19 59 11.5	
	comp=N,2μm,0.3s						
AGUA	**GUANDACOL**	**1.21**	**46**	⇓*e*P	**Pb**	**19 58 52.4**	**-0.9**
AGUA				*i* S	**Sb**	**19 59 08.2**	**-0.4**
RTLL	**Cerro Villicun**	**1.33**	**139**	⇑*e*P	**Pn**	**19 58 54.6**	**0.0**
RTLL				IAML		19 59 13.1	
	comp=Z,20μm,0.2s						
RTLL				*i* S	**Sb**	**19 59 13.5**	**+1.5**
ZON	**Zonda**	**1.40**	**150**	⇓*i*P	**Pn**	**19 58 56.6**	**+1.0**
ZON				*i* S	**Sn**	**19 59 15.5**	**+1.9**
SJA	**San Juan**	**1.44**	**146**	⇓*i*P	**Pn**	**19 58 57.3**	**+1.2**
RTLS	**Leoncito**	**1.48**	**173**	⇑*e*P	**Pg**	**19 58 59.0**	**-0.4**
RTLS				IAML		19 59 26.6	
	comp=Z,550nm,0.3s						
LCO	**Las Campanas**	**1.68**	**321**	⇓*i*P	**Pg**	**19 59 02.1**	**-1.2**
LCO				*i* S	**Sg**	**19 59 26.2**	**+1.0**
LCO	**Las Campanas**	**1.68**	**321**	⇓*i*P	**Pg**	**19 59 02.0**	**-1.3**
LCO				*e*S	**Sg**	**19 59 23.8**	**-1.4**
LCO				IAML		19 59 25.4	
	comp=E,2μm,0.4s						
RTCV	**Cerro Valdivia**	**1.73**	**152**	⇑*e*P	**Pb**	**19 59 02.2**	**0.0**
RTCV				*i* S	**Sb**	**19 59 26.1**	**+2.4**
AUSP	**Uspallata**	**1.89**	**177**	⇑*i*P	**Pb**	**19 59 06.2**	**+1.1**
AUSP				*i* S	**Sg**	**19 59 32.0**	**+0.1**
VCA	**Vinchina**	**1.95**	**36**	⇓*e*P	**Pb**	**19 59 05.4**	**-0.5**
VCA				⇓*e*P	**Pb**	**19 59 05.4**	**-0.5**
VCA				IAML		19 59 38.9	
	comp=Z,1μm,0.4s						
VCA	**Vinchina**	**1.95**	**36**	*e*P	**Pb**	**19 59 05.4**	**-0.5**
VCA				*i* S	**Sb**	**19 59 29.4**	**-0.4**
ROCH	**El Roble**	**2.93**	**206**	*e*P	**Pb**	**19 59 21.3**	**-1.5**
ROCH				*i* S	**Sb**	**19 59 57.0**	**-1.4**
ROCH				IAML		20 00 13.7	
	comp=N,468nm,0.8s						
ROC1	**El Roble**	**2.94**	**206**	⇑*i*P	**Pb**	**19 59 21.3**	**-1.6**
PEL	**Peldehue**	**2.98**	**200**	*e*P	**Pb**	**19 59 21.6**	**-1.9**
FCH	**Farellones**	**3.06**	**193**	⇑*i*P	**Pb**	**19 59 23.9**	**-1.1**
FCH				*i* S	**Sb**	**20 00 01.1**	**-1.1**
CYA	**Choya**	**3.73**	**61**	⇑*e*P	**Pn**	**19 59 28.4**	**+0.8**
MRA	**San Martin**	**3.84**	**124**	⇓*e*P	**Pn**	**19 59 30.4**	**+1.1**
CPUP	**Villa Florida**	**

T0825			AML	AML		
	comp=E,5295μm,0.6s					
T0825			AML	AML		
	comp=E,5295μm,0.6s					
T0825			AML	AML		
	comp=N,5355μm,0.3s					
SBPO	**S.Benedetto Po**	**0.16 335**	P	Pg	20 03 18.5	+2.0
SBPO	**S.Benedetto Po**	**0.16 335**	P	Pg	20 03 18.5	+2.0
SBPO			AML	AML		
	comp=E,2740μm,0.1s					
SBPO			AML	AML		
	comp=N,1610μm,0.6s					
SBPO			AML	AML		
	comp=N,1610μm,0.6s					
SBPO			AML	AML		
	comp=E,2740μm,0.1s					
T0826	**Rio Saliceto (**	**0.16 245**	P	Pg	20 03 18.6	+2.1
T0826			S	Sg	20 03 22.6	+3.8
T0826	**Rio Saliceto (**	**0.16 245**	P	Pg	20 03 18.6	+2.0
T0826			S	Sg	20 03 22.6	+3.8
RAVA	**Ravarino**	**0.17 154**	P	Pg	20 03 18.8	+2.2
RAVA			S	Sg	20 03 22.0	+3.0
RAVA	**Ravarino**	**0.17 154**	P	Pg	20 03 18.8	+2.2
RAVA			S	Sg	20 03 23.0	+4.0
RAVA			AML	AML		
	comp=E,1350μm,0.3s					
RAVA			AML	AML		
	comp=N,1785μm,0.1s					
RAVA			AML	AML		
	comp=E,1350μm,0.3s					
RAVA			AML	AML		
	comp=N,1785μm,0.1s					
T0800	**Massa Finalese**	**0.17 110**	P	Pg	20 03 19.1	+2.3
T0800			S	Sg	20 03 23.5	+4.3
T0800	**Massa Finalese**	**0.17 110**	P	Pg	20 03 19.1	+2.3
T0800			S	Sg	20 03 23.5	+4.3
T0800			AML	AML		
	comp=E,2205μm,0.3s					
T0800			AML	AML		
	comp=N,2635μm,0.3s					
T0800			AML	AML		
	comp=E,2325μm,0.3s					
T0800			AML	AML		
	comp=N,2185μm,0.3s					
T0800			AML	AML		
	comp=E,2325μm,0.3s					
T0800			AML	AML		
	comp=N,2635μm,0.3s					
T0800			AML	AML		
	comp=N,2185μm,0.3s					
T0800			AML	AML		
	comp=E,2205μm,0.3s					
T0805	**Bondeno (FE)**	**0.22 87**	P	Pg	20 03 19.0	+1.4
T0805	**Bondeno (FE)**	**0.22 87**	P	Pg	20 03 20.0	+2.4
NOVE	**Novellara**	**0.24 243**	P	Pg	20 03 20.6	+2.6
NOVE			S	Sg	20 03 25.8	+4.6
NOVE	**Novellara**	**0.24 243**	P	Pg	20 03 20.6	+2.6
NOVE			S	Sg	20 03 25.8	+4.6
NOVE			AML	AML		
	comp=E,694μm,1.3s					
NOVE			AML	AML		
	comp=N,484μm,0.9s					
NOVE			AML	AML		
	comp=N,484μm,0.9s					
NOVE			AML	AML		
	comp=E,694μm,1.3s					
T0822	**Casumaru (Bond**	**0.25 108**	P	Pg	20 03 20.4	+2.3
T0822			S	Sg	20 03 25.9	+4.5
T0822	**Casumaru (Bond**	**0.25 108**	P	Pg	20 03 20.4	+2.3
T0822			S	Sg	20 03 25.9	+4.5

MEX 09 20:04:12.8±1.2, 15°.70N×92°.13W, h199km±17km, MD3.7, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCIG	**Comitan**	**0.58**	**360**	*i* P	Pn	20 04 39.9	-0.5
CCIG				*i* S	Sn	20 04 58.1	-3.8
PCIG		**1.04**	**270**	*e*P	Pn	20 04 40.7	-2.1
PCIG				*e*S	Sn	20 05 03.0	-2.9
TGIG		**1.43**	**319**	*e*P	Pn	20 04 45.3	-0.6
TGIG				*i* S	Sn	20 05 10.6	-1.0

KRSC 09 20:07:55.5±2.4, 48°.77N×156°.64E, h48km±30km, ML3.8, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.95**	**350**	*e*P	Pn	20 08 26.1	0.0
SKR				*e*S	Sn	20 08 49.8	+0.5
PAU	**Pauzhetka**	**2.70**	**2**	*e*P	Pn	20 08 41.3	+4.9
PAU				*e*S	Sn	20 09 13.0	+5.1
KDTR	**Khodutka, Kamc**	**3.18**	**16**	*e*P	Pn	20 08 47.0	+4.0
KDTR				*e*S	Sn	20 09 24.4	+4.8
MIPR	**Malaya Ipel'ka**	**3.51**	**1**	*e*P	Pn	20 08 50.4	+2.8
ASAK	**Asacha**	**3.71**	**12**	*e*P	Pn	20 08 54.4	+4.1
RUS	**Russkaya**	**3.86**	**17**	*e*P	Pn	20 08 56.1	+3.9
RUS				*e*S	Sn	20 09 41.3	+5.1
UGLR	**Uglovaya**	**4.65**	**16**	*e*P	Pn	20 09 07.0	+3.7
KRER	**Koryakskii**	**4.73**	**16**	*e*P	Pn	20 09 09.9	+5.5
SDLR	**Sedlovina**	**4.73**	**17**	*e*P	Pn	20 09 08.1	+3.7
GNL	**Ganaly**	**5.00**	**9**	*e*P	Pn	20 09 12.1	+4.1
MKZ	**Mys Kozlova**	**6.60**	**27**	*e*P	Pn	20 09 33.3	+3.5

*ISCJB **09** 20:25:24.3±0.4, 61°.06S±0°.07×23°.3W±0°.2, h10km, mb4.6/17, Error ellipse: s-maj=13.7km s-min=7.9km az=143.8*
*IDC **09** 20:25:25.8±0.9, 60°.81S×23°.26W, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.9/30, mbtmp3.9/7, Error ellipse: s-maj=32.7km s-min=23.4km az=85.0*
*NEIC **09** 20:25:26.7±0.4, 60°.88S×23°.24W, h10km, mb5.0/8, Error ellipse: s-maj=12.9km s-min=9.5km az=45.0*
ISC 09 20:25:26.7±0.6, 60°.89S±0°.09×23°.2W±0°.1, h10km, n35, σ1§35/32, mb4.9/17, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**11.51**	**155**	P	**Pn**	**20 28 09.0**	**-1.7**
VNA3	**Neumayer Olymp**	**11.71**	**158**	P	**Pn**	**20 28 11.2**	**-2.3**
VNA3				S	Sn	20 30 08.4	-16
VNA2	**Neumayer--Watz**	**11.90**	**154**	P	**Pn**	**20 28 14.2**	**-2.0**
	baz=314,slow=16						
VNA2				S	Sn	20 30 15.9	-13
SNAA	**Sanae**	**13.46**	**152**	P	**Pn**	**20 28 35.3**	**-2.1**
SNAA				S	Sn	20 30 56.7	-10
SNAA	**Sanae**	**13.46**	**152**	Pn	**Pn**	**20 28 35.3**	**-2.1**
	1.7nm,0.3s,baz=316,slow=15,SNR=130						
SNAA				Sn	Sn	20 30 53.6	-13
	0.3nm,0.3s,baz=343,slow=19,SNR=3.5						
SNAA	**Sanae**	**13.46**	**152**	*e*Pn	**Pn**	**20 28 34.8**	**-2.6**
SNAA				*e*Sn	Sn	20 30 54.2	-13
QSPA	**South Pole Qui**	**29.34**	**180**	P	**P**	**20 31 30.7**	**+1.4**
	1.3nm,0.9s,baz=172,slow=5.1,SNR=3.2						
TRQA	**Tornquist**	**33.25**	**296**	*e*P	**P**	**20 32 03.1**	**-0.7**
	45nm,1.8s						
ROC1	**El Roble**	**41.54**	**290**	*e*P	**P**	**20 33 13.2**	**-1.1**
	20nm,0.8s						
VNDA	**Vanda**	**41.80**	**182**	P	**P**	**20 33 17.4**	**+1.7**
	0.9nm,0.7s,baz=178,slow=6.0,SNR=6.4						
VNDA	**Vanda**	**41.80**	**182**	*e*P	**P**	**20 33 17.6**	**+1.9**
CRZF	**Crozet Islands**	**44.17**	**106**	*e*P	**P**	**20 33 35.5**	**+0.3**
	464nm,2.0s						
LCO	**Las Campanas**	**44.75**	**293**	*e*P	**P**	**20 33 40.9**	**+0.6**
	28nm,0.7s						
BOSA	**Boshof**	**45.51**	**67**	P	**P**	**20 33 47.1**	**+0.9**
	1.6nm,0.7s,baz=192,slow=9.7,SNR=3.3						
GO02	**Mina Guanaco**	**47.59**	**297**	*e*P	**P**	**20 34 02.3**	**-0.5**
	25nm,1.7s						
CASY	**Casey**	**48.62**	**157**	*e*P	**P**	**20 34 10.2**	**+0.3**
	17nm,1.5s						
LBTB	**Lobatse**	**48.77**	**65**	*e*P	**P**	**20 34 11.7**	**+0.1**
	36nm,1.8s						
TSUM	**Tsumeb**	**50.57**	**53**	*e*P	**P**	**20 34 25.2**	**-0.2**
	25nm,1.7s						
SIV	**San Ignacio**	**52.41**	**312**	P	**P**	**20 34 38.3**	**-0.9**
	0.6nm,0.7s,baz=165,slow=16,SNR=3.5						
MNMC	**Minye Minye**	**52.92**	**301**	*e*P	**P**	**20 34 42.2**	**-1.0**
	25nm,1.9s						
ASCN	**Ascension**	**53.26**	**11**	*e*P	**P**	**20 34 44.7**	**-0.6**
	222nm,1.3s						
LPAZ	**La Paz**	**54.87**	**304**	P	**P**	**20 34 58.6**	**+0.9**
	0.8nm,0.4s,baz=173,slow=8.1,SNR=3.5						
LPAZ	**La Paz**	**54.87**	**304**	*e*P	**P**	**20 34 58.0**	**+0.2**
TOA0	**Torodi Ar. Sit**	**76.41**	**25**	*e*P	**P**	**20 37 16.2**	**+0.2**
TORD	**Torodi Ar. Bea**	**76.41**	**25**	P	**P**	**20 37 16.6**	**+0.5**
	1.5nm,0.5s,baz=198,slow=6.2,SNR=13						
TOA1	**Torodi Ar. Sit**	**76.42**	**25**	*e*P	**P**	**20 37 16.6**	**+0.5**
ASAR	**Alice Springs**	**93.71**	**159**	P	**P**	**20 38 43.7**	**+0.2**
	0.4nm,0.7s,baz=193,slow=4.7,SNR=4.0						
TCUT	**Toone Canyon**	**124.06**	**294**	*e*PKPdf	**PKPdf**	**20 44 27.1**	**+2.5**
F10A	**Beach Ranch, E**	**130.48**	**294**	*e*PKPpre	PKPpre	20 44 25.5	
BEND	**Bend**	**130.88**	**289**	*e*PKPdf	**PKPdf**	**20 44 37.2**	**-0.1**
MARYW	**Marymoor Park**	**133.96**	**292**	*e*PKPpre	PKPpre	20 44 31.1	
KDKW	**Coast Env Seat**	**134.01**	**292**	*e*PKPpre	PKPpre	20 44 36.3	
SONA0	**Songino Array**	**148.71**	**91**	*e*PKPbc	**PKPbc**	**20 45 13.4**	**+0.2**
SONM	**Songino Array**	**148.71**	**91**	PKPbc	**PKPbc**	**20 45 13.4**	**+0.2**
	0.3nm,0.5s,baz=204,slow=3.0,SNR=2.3						
HDA	**Harding Lake**	**154.66**	**302**	*e*PKPbc	**PKPbc**	**20 45 24.3**	**-1.9**

*ISCJB **09** 20:27:46.4±0.6, 6°.36N±0°.08×93°.88E±0°.07, h35km, mb4.0/11, Error ellipse: s-maj=12.9km s-min=6.9km az=35.4*
*IDC **09** 20:27:54.4±3.0, 6°.62N×94°.35E, h86km±27km, mb3.6/11, mb1 3.7/14, mb1mx3.4/66, mbtmp4.0/14, Error ellipse: s-maj=32.4km s-min=13.5km az=55.0*
ISC 09 20:27:48.9±0.7, 6°.46N±0°.10×93°.88E±0°.08, h35km, n29, σ1§36/29, mb4.0/11, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**6.21**	**126**	P	**Pn**	**20 29 21.1**	**+2.9**
	1.2nm,0.3s,baz=360,slow=9.1,SNR=5.3						
PSI				S	**Sn**	**20 30 28.2**	**+0.1**
	0.8nm,0.3s,baz=180,slow=20,SNR=2.5						
CMAR	**Chiang Mai Arr**	**12.90**	**22**	P	**Pn**	**20 30 52.1**	**+2.2**
	0.3nm,0.3s,baz=211,slow=15,SNR=9.1						
PALK	**Pallekele**	**13.10**	**274**	P	**P**	**20 31 02.1**	**-0.4**
	0.3nm,0.3s,baz=117,slow=15,SNR=3.9						
PALK				S	**Sn**	**20 33 18.1**	**+0.7**
	1.1nm,0.3s,baz=117,slow=15,SNR=11						
ODAN	**Odare**	**21.20**	**344**	*e*P	**P**	**20 32 31.3**	**-0.6**
RAMN	**Ramite**	**21.52**	**342**	*e*P	**P**	**20 32 35.6**	**+0.3**
TAPN	**Taplejung**	**21.58**	**345**	*e*P	**P**	**20 32 34.7**	**-1.3**
	8.9nm,0.4s						
JIRN	**Jiri**	**22.31**	**342**	*e*P	**P**	**20 32 42.8**	**-1.1**
	14nm,0.5s						
PKIN	**Phulchoki**	**22.49**	**340**	*e*P	**P**	**20 32 44.8**	**-0.9**
	3.5nm,0.4s						
DMN	**Daman**	**22.62**	**339**	*e*P	**P**	**20 32 47.1**	**0.0**
GUN	**Gumba**	**22.64**	**341**	*e*P	**P**	**20 32 46.3**	**-1.1**
	13nm,0.5s						
KKN	**Kakani**	**22.73**	**340**	*e*P	**P**	**20 32 47.2**	**-1.0**
	3.9nm,0.3s						
GKN	**Gorkha**	**23.14**	**339**	*e*P	**P**	**20 32 52.2**	**-0.2**
KOLN	**Koldanda**	**23.33**	**336**	*e*P	**P**	**20 32 55.0**	**+0.7**
	6.6nm,0.3s						
DANN	**Dangsing**	**23.78**	**337**	*e*P	**P**	**20 32 58.8**	**0.0**
	6.5nm,0.3s						
PYUN	**Piuthan**	**23.87**	**336**	*e*P	**P**	**20 33 00.5**	**+1.0**
	16nm,0.3s						
H08S3	**Diego Garcia H**	**25.52**	**237**	T	T	20 59 55.9	
	baz=56,slow=75,SNR=25						
H08S2	**Diego Garcia H**	**25.52**	**237**	T	T	20 59 58.0	
	baz=56,slow=75,SNR=36						
H08S1	**Diego Carcia H**	**25.54**	**237**	T	T	20 59 57.2	
	baz=56,slow=75,SNR=33						
MKAR	**Makanchi Array**	**41.40**	**348**	P	**P**	**20 35 31.3**	**-0.6**
	1.2nm,0.4s,baz=158,slow=9.5,SNR=27						
SONM	**Songino Array**	**42.59**	**12**	P	**P**	**20 35 39.4**	**-2.3**
	0.3nm,0.6s,baz=187,slow=5.8,SNR=2.6						
KURBB	**Kurchatov Arra**	**45.84**	**346**	P	**P**	**20 36 07.4**	**-0.1**
	1.0nm,0.4s,baz=172,slow=6.9,SNR=14						
WRA	**Warramunga Arr**	**47.67**	**124**	P	**P**	**20 36 19.6**	**-2.8**
	1.6nm,0.4s,baz=300,slow=10,SNR=56						
ZALV	**Zalesovo Beam**	**47.91**	**353**	P	**P**	**20 36 22.9**	**-0.7**
	1.2nm,0.3s,baz=172,slow=7.1,SNR=11						
ASAR	**Alice Springs**	**49.23**	**129**	P	**P**	**20 36 32.1**	**-2.2**
	1.6nm,0.4s,baz=299,slow=7.9,SNR=67						
ASAR				PcP	**PcP**	**20 37 56.1**	**-1.1**
	0.5nm,0.9s,baz=313,slow=2.6,SNR=2.6						
BVAR	**Borovoye Array**	**50.23**	**342**	P	**P**	**20 36 41.2**	**-0.3**
	0.4nm,0.5s,baz=128,slow=9.3,SNR=4.0						
BRTR	**Keskin Array B**	**63.15**	**311**	P	**P**	**20 38 16.1**	**+2.4**
	0.4nm,0.6s,baz=104,slow=7.8,SNR=4.3						
FINES	**FINESS Array B**	**73.83**	**332**	P	**P**	**20 39 19.5**	**-0.3**
	1.2nm,0.4s,baz=118,slow=5.9,SNR=16						
ARCES	**ARCESS Array B**	**76.50**	**340**	P	**P**	**20 39 35.1**	**+0.1**
	2.1nm,1.0s,baz=95,slow=6.8,SNR=2.7						
HFS	**Hagfors**	**79.53**	**330**	P	**P**	**20 39 52.7**	**+0.6**
	0.8nm,0.7s,baz=79,slow=3.1,SNR=2.9						

*ISK **09** 20:27:48.4, 38°.74N×43°.20E, h22km, ML2.0/2*
*ISCJB **09** 20:27:49.9±0.7, 38°.71N±0°.04×43°.23E±0°.05, h25km±6km, Error ellipse: s-maj=6.9km s-min=6.0km az=163.8*
*CSEM **09** 20:27:49.4±0.3, 38°.73N×43°.23E, h20km, ML2.0, Error ellipse: s-maj=7.1km s-min=6.0km az=9.0*
*DDA **09** 20:27:49.8, 38°.76N×43°.21E, h7km, Ml2.8*
ISC 09 20:27:49.5±0.9, 38°.77N±0°.05×43°.26E±0°.03, h24km±9km, n20, σ1§26/37, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.20**	**150**	PG	**Pb**	**20 27 55.2**	**0.0**
VANB				SG	**Sb**	**20 28 00.4**	**+1.3**
VANB	**Van**	**0.20**	**150**	*e*Pg	**Pb**	**20 27 55.2**	**0.0**
VANB				*e*Sg	**Sb**	**20 28 00.4**	**+1.3**
TVAN	**Van**	**0.26**	**154**	*i* P	**Pb**	**20 27 55.3**	**-0.8**
TVAN				*i* S	**Sb**	**20 28 00.3**	**-0.3**
TVAN	**Van**	**0.26**	**154**	P	**Pb**	**20 27 55.3**	**-0.8**
TVAN				S	**Sb**	**20 28 00.3**	**-0.3**
VMUR	**Van-Muradiye**	**0.33**	**47**	*i* P	**Pn**	**20 27 57.9**	**-1.1**
VMUR				*i* S	**Sn**	**20 28 04.6**	**-0.4**
VMUR	**Van-Muradiye**	**0.33**	**47**	P	**Pn**	**20 27 57.8**	**-1.1**
VMUR				S	**Sn**	**20 28 04.6**	**-0.4**
ADCV	**BITLIS_Adilcev**	**0.42**	**276**	*i* P	**Pb**	**20 27 57.5**	**-1.0**
ADCV				*i* S	**Sb**	**20 28 04.4**	**-0.3**
ADCV	**BITLIS_Adilcev**	**0.42**	**276**	P	**Pb**	**20 27 57.5**	**-1.0**
ADCV				S	**Sb**	**20 28 04.4**	**-0.3**
CLDR	**Caldiran**	**0.64**	**54**	PG	**Pb**	**20 28 01.8**	**-0.3**
CLDR	**Caldiran**	**0.64**	**54**	*e*Pg	**Pb**	**20 28 01.8**	**-0.3**
AGRB	**Hanur-Agry**	**0.83**	**346**	PG	**Pn**	**20 28 05.5**	**-0.4**
AGRB				SG	**Sn**	**20 28 17.9**	**+0.4**
AGRB	**Hanur-Agry**	**0.83**	**346**	*e*Pg	**Pn**	**20 28 05.5**	**-0.4**
AGRB				*e*Sg	**Sn**	**20 28 17.9**	**+0.4**
GURO	**Guroymak-BITLI**	**0.99**	**258**	PG	**Pb**	**20 28 06.4**	**-1.6**
GURO				SG	**Sb**	**20 28 20.0**	**-0.6**
GURO	**Guroymak-BITLI**	**0.99**	**258**	*e*Pg	**Pb**	**20 28 06.4**	**-1.6**
GURO				*e*Sg	**Sb**	**20 28 20.0**	**-0.6**
EKAR	**Karacoban**	**1.05**	**298**	*e*P	**Pb**	**20 28 07.8**	**-1.4**
EKAR				*i* S	**Sn**	**20 28 24.1**	**+1.1**
EKAR	**Karacoban**	**1.05**	**298**	P	**Pb**	**20 28 07.8**	**-1.4**
EKAR				S	**Sn**	**20 28 24.0**	**+1.1**
EATA	**Eleskirt**	**1.25**	**332**	*i* P	**Pb**	**20 28 12.9**	**+0.4**
EATA				*i* S	**Sn**	**20 28 31.0**	**+3.1**
EATA	**Eleskirt**	**1.25**	**332**	P	**Pb**	**20 28 12.9**	**+0.4**
EATA				S	**Sn**	**20 28 31.0**	**+3.1**
SRTM	**Siirt_Merkez**	**1.31**	**234**	*i* P	**Pb**	**20 28 13.6**	**+0.2**
SRTM				*i* S	**Sb**	**20 28 32.9**	**+3.1**
SRTM	**Siirt_Merkez**	**1.31**	**234**	P	**Pb**	**20 28 13.6**	**+0.2**

*BJI **09** 20:43:46.0, 38°.20N×147°.10E, h15km, mb4.2/10, mB4.5/4*
*NIED **09** 20:44:00, 39°.50N×143°.80E, h14km, Mw4.0 Best double couple: $M_0$1.03000×10^15 NP1:ϕ_s175.00000°, δ35.00000°, λ48.00000°. NP2:ϕ_s42.00000°, δ65.00000°, λ115.00000°.*
*IDC **09** 20:44:09.8±0.8, 39°.44N×143°.71E, h0km, mb3.9/15, mb1 4.1/19, mb1mx3.9/69, mbtmp4.0/19, ML3.3/4, MS2.7/4, Ms1 2.7/4, ms1mx2.4/84, Error ellipse: s-maj=20.5km s-min=15.2km az=98.0*
*JMA **09** 20:44:09.3±0.2, 39°.52N×143°.76E, h13km±4km, M4.3*
*ISCJB **09** 20:44:09.5±0.4, 39°.51N±0°.03×143°.75E±0°.05, h11km, mb4.0/20, Error ellipse: s-maj=6.0km s-min=3.0km az=37.7*
*MOS **09** 20:44:14.7±1.5, 39°.60N×143°.69E, h53km, mb4.5/6, Error ellipse: s-maj=12.0km s-min=6.3km az=87.2*
*NEIC **09** 20:44:15.1±0.7, 39°.46N×143°.65E, h37km±5km, mb4.4/6, Error ellipse: s-maj=9.1km s-min=4.8km az=112.0*
ISC 09 20:44:10.6±0.6, 39°.43N±0°.05×143°.88E±0°.06, h11km, n86, σ1§84/95, mb4.2/20, 1C, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**1.60**	**276**	P	**Pn**	**20 44 36.2**	**-2.6**
MIYJ				S	**Sn**	**20 44 55.3**	**-4.2**
JTH	**Tanohata**	**1.64**	**289**	P	**Pn**	**20 44 36.4**	**-2.9**
JTH				*e*S	**Sn**	**20 44 56.6**	**-3.8**
OFUJ	**Ofunato**	**1.75**	**259**	P	**Pn**	**20 44 38.8**	**-2.1**
JOM	**Ohasama**	**2.01**	**272**	P	**Pn**	**20 44 42.5**	**-1.9**
JANG	**Nango**	**2.05**	**298**	P	**Pn**	**20 44 41.8**	**-3.2**
JMK	**Ichinoseki**	**2.12**	**258**	P	**Pn**	**20 44 44.2**	**-1.8**
JRG	**Rokugo**	**2.52**	**270**	P	**Pn**	**20 44 49.6**	**-1.8**
JTM	**Tenmabayashi**	**2.55**	**303**	P	**Pn**	**20 44 50.0**	**-1.8**
JAH	**Hinai**	**2.61**	**288**	P	**Pn**	**20 44 51.1**	**-1.6**
ERM	**Erimo**	**2.64**	**348**	*e*Pn	**Pn**	**20 44 53.5**	**+0.4**
ERM	**Erimo**	**2.64**	**348**	*e*P	**Pn**	**20 44 53.5**	**+0.4**
JOU	**Okura**	**2.73**	**248**	P	**Pn**	**20 44 53.0**	**-1.3**
JOU				*e*S	**Sn**	**20 45 24.9**	**-2.4**
JYK	**Kaneyama**	**2.79**	**261**	P	**Pn**	**20 44 53.8**	**-1.3**
JOT	**Ohata**	**2.91**	**313**	P	**Pn**	**20 44 54.8**	**-2.0**
JNBK	**Urakawa-nobuka**	**2.97**	**344**	P	**Pn**	**20 44 57.4**	**-0.3**
JNBK				S	**Sn**	**20 45 31.1**	**-2.2**
JCH	**Churui**	**3.21**	**353**	P	**Pn**	**20 45 00.0**	**-0.9**
JCH				*e*S	**Sn**	**20 45 35.8**	**-3.3**
JKB	**Kayabe**	**3.27**	**319**	P	**Pn**	**20 45 01.3**	**-0.5**
JFT	**Otama**	**3.38**	**237**	P	**Pn**	**20 45 02.4**	**-0.8**
JAK	**Akkeshi**	**3.62**	**10**	P	**Pn**	**20 45 06.1**	**-0.4**
JAR	**Ashorobuto**	**3.86**	**359**	P	**Pn**	**20 45 08.9**	**-1.0**
JEW	**Eniwo**	**3.87**	**332**	P	**Pn**	**20 45 10.5**	**+0.5**
GLVR	**Golovnino**	**4.48**	**15**	P	**Pn**	**20 45 19.4**	**+1.1**
GLVR				*e*S	**Sn**	**20 46 08.1**	**-2.3**
GLVR				pmax	pmax		
	comp=N,36nm,0.4s						
GLVR				pmax	pmax		
	comp=Z,71nm,0.4s						
GLVR				pmax	pmax		
	comp=E,50nm,0.2s						
GLVR				smax	smax		
	comp=N,374nm,0.3s						
GLVR				smax	smax		
	comp=E,370nm,0.4s						
GRPR	**Tuman**	**4.77**	**17**	*e*P	**Pn**	**20 45 22.0**	**-0.4**
GRPR				*e*S	**Sn**	**20 46 13.9**	**-3.8**
GRPR				pmax	pmax		
	comp=Z,117nm,0.4s						
GRPR				pmax	pmax		
	comp=E,64nm,0.3s						
GRPR				pmax	pmax		
	comp=N,54nm,0.1s						
GRPR				smax	smax		
	comp=E,243nm,0.3s						
GRPR				smax	smax		
	comp=N,419nm,0.4s						
ASAJ	**Asahikawa**	**4.78**	**349**	Pn	**Pn**	**20 45 22.4**	**-0.1**
	comp=N,2.0nm,0.3s,baz=186,slow=11,SNR=23						
ASAJ				Sn	**Sn**	**20 46 14.9**	**-2.9**
	comp=N,1.8nm,0.3s,baz=90,slow=20,SNR=2.7						
ASAJ	**Asahikawa**	**4.78**	**349**	*e*Pn	**Pn**	**20 45 23.1**	**+0.6**
ASAJ				Sn	**Sn**	**20 46 14.9**	**-2.9**
YUK	**Yuzh-Kuril'sk**	**4.83**	**17**	*e*P	**Pn**	**20 45 23.3**	**+0.1**
YUK				*i* S	**Sn**	**20 46 16.1**	**-3.1**
YUK				pmax	pmax		
	comp=N,105nm,0.4s						
YUK				pmax	pmax		
	comp=Z,125nm,0.4s						
YUK				pmax	pmax		
	comp=E,52nm,0.2s						
YUK				smax	smax		
	comp=N,204nm,0.4s						
YUK				smax	smax		
	comp=E,521nm,0.6s						
LAGR	**Lagunnoye**	**4.84**	**17**	P	**Pn**	**20 45 24.2**	**+0.9**
LAGR				*e*S	**Sn**	**20 46 16.6**	**-2.6**
LAGR				smax	smax		
	comp=N,337nm,0.4s						
LAGR				smax	smax		
	comp=E,644nm,0.5s						
SHO	**Shikotan**	**4.96**	**26⇑**	*i* P	**Pn**	**20 45 24.4**	**-0.5**
SHO				*i* S	**Sn**	**20 46 18.3**	**-3.9**
SHO				pmax	pmax		
	comp=E,9.0nm,0.4s						
SHO				pmax	pmax		
	comp=Z,11nm,0.4s						
SHO				pmax	pmax		
	comp=N,23nm,0.5s						
SHO				smax	smax		
	comp=N,135nm,0.4s						
SHO				smax	smax		
	comp=E,161nm,0.5s						
MAJO	**Matsushiro**	**5.33**	**239**	*e*Pn	**Pn**	**20 45 30.3**	**+0.2**
MAJO	**Matsushiro**	**5.33**	**239**	*e*P	**Pn**	**20 45 30.3**	**+0.2**
MAT	**Matsushiro**	**5.33**	**239**	P	**Pn**	**20 45 30.2**	**+0.1**
MAT				*e*S	**Sn**	**20 46 34.8**	**+3.3**
MJAR	**Matsushiro Arr**	**5.33**	**239**	Pn	**Pn**	**20 45 30.4**	**+0.3**
	comp=E,1.8nm,0.3s,baz=36,slow=13,SNR=80						
MJAR				Sn	**Sn**	**20 46 32.3**	**+0.8**
	baz=53,slow=20,SNR=2.1						
MJAR				LR	LR	20 47 00.2	
	comp=E,27nm,20.8s,baz=5.0,slow=33						
MJB9	**Matsu-Tunnel**	**5.33**	**239**	*e*Pn	**Pn**	**20 45 30.4**	**+0.3**
KUR	**Kuril'sk**	**6.51**	**26**	P	**Pn**	**20 45 48.7**	**+2.5**
KUR				*i* S	**Sn**	**20 46 58.4**	**-2.0**
KUR				pmax	pmax		
	comp=Z,29nm,0.4s						
KUR				pmax	pmax		
	comp=N,12nm,0.1s						
KUR				smax	smax		
	comp=E,68nm,0.5s						
INU	**Inuyama**	**6.82**	**235**	*e*Pn	**Pn**	**20 45 51.1**	**+0.6**
JHJ	**Hachijo jima 2**	**7.11**	**209**	Pn	**Pn**	**20 45 54.9**	**+0.3**
	comp=E,1.8nm,0.3s,baz=40,slow=19,SNR=3.5						
JHJ				Sn	**Sn**	**20 47 07.2**	**-8.2**
	comp=E,2.5nm,0.3s,baz=12,slow=20,SNR=3.5						
YSS	**Yuzh-Sakhalins**	**7.56**	**354**	*e*Pn	**Pn**	**20 46 02.7**	**+2.0**
YSS	**Yuzh-Sakhalins**	**7.56**	**354**	*e*P

MK31	**Makanchi Array**	**44.54 300**	*eP*	**P**	**20 52 21.3**	**-0.9**
MK32	**Makanchi Array**	**44.54 300**	*eP*	**P**	**20 52 21.7**	**-0.5**
MKAR	**Makanchi Array**	**44.54 300**	P	**P**	**20 52 21.7**	**-0.5**
	comp=Z,2.1nm,0.7s,baz=82,slow=9.6,SNR=26					
MKAR	**Makanchi Array**	**44.54 300**	*eP*	**P**	**20 52 21.6**	**-0.7**
	comp=Z,15nm,0.6s					
MAKZ	**Makanchi**	**44.74 301**	*eP*	**P**	**20 52 23.1**	**-0.7**
	comp=Z,3.0nm,0.8s					
MAKZ	**Makanchi**	**44.74 301**	*eP*	**P**	**20 52 23.2**	**-0.7**
MAKZ			pmax	pmax		
	comp=Z,3.0nm,0.8s					
KURK	**Kurchatov**	**46.02 307**	*eP*	**P**	**20 52 33.0**	**-0.9**
	comp=Z,7.0nm,1.0s					
KURK	**Kurchatov**	**46.02 307**	P	**P**	**20 52 33.7**	**-0.2**
KURK			pmax	pmax		
	comp=Z,5.0nm,0.7s					
KURBB	**Kurchatov Arra**	**46.10 307**	P	**P**	**20 52 33.7**	**-0.8**
	comp=Z,4.9nm,0.7s,baz=80,slow=8.6,SNR=45					
ILAR	**Eielson Array**	**46.43 34**	P	**P**	**20 52 39.0**	**+2.1**
	comp=Z,0.4nm,0.6s,baz=259,slow=7.0,SNR=5.9					
BVAR	**Borovoye Array**	**50.43 311**	P	**P**	**20 53 07.6**	**-0.3**
	comp=Z,2.9nm,0.8s,baz=69,slow=8.5,SNR=18					
BRVK	**Borovoye**	**50.48 311**	*eP*	**P**	**20 53 08.1**	**-0.2**
	comp=Z,3.6nm,1.0s					
BRVK	**Borovoye**	**50.48 311**	*eP*	**P**	**20 53 08.1**	**-0.2**
BRVK			pmax	pmax		
	comp=Z,4.0nm,1.0s					
ARU	**Arti**	**55.87 318**	*eP*	**P**	**20 53 47.7**	**-0.2**
	comp=Z,4.7nm,0.8s					
ARU	**Arti**	**55.87 318**	*eP*	**P**	**20 53 47.8**	**-0.1**
WRA	**Warramunga Arr**	**59.73 190**	P	**P**	**20 54 15.6**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=7.5,slow=6.8,SNR=4.4					
RES	**Resolute Bay**	**59.79 15**	P	**P**	**20 54 16.4**	**+1.3**
	comp=Z,1.7nm,0.9s,baz=293,slow=7.7,SNR=3.6					
ASAR	**Alice Springs**	**63.46 190**	P	**P**	**20 54 41.8**	**+1.3**
	comp=Z,0.2nm,0.7s,baz=15,slow=4.8,SNR=3.0					
FINES	**FINESS Array B**	**67.59 333**	P	**P**	**20 55 06.8**	**-0.1**
	comp=Z,2.6nm,0.9s,baz=85,slow=6.3,SNR=7.0					
KBZ	**Khabaz**	**70.81 311**	P	**P**	**20 55 28.2**	**+1.2**
	comp=Z,1.8nm,0.8s,baz=43,slow=1.4,SNR=4.3					
HFS	**Hagfors**	**72.69 336**	P	**P**	**20 55 38.6**	**+0.5**
	comp=Z,2.6nm,0.9s,baz=32,slow=8.5,SNR=5.5					
TXAR	**Lajitas Array**	**87.13 54**	P	**P**	**20 56 57.8**	**+0.9**
	comp=Z,0.1nm,0.4s,baz=297,slow=4.0,SNR=4.1					
SNAA	**Sanae**	**143.60 197**	PKP	PKPbc	21 03 42.5	+0.7
	comp=Z,0.4nm,0.6s,baz=90,slow=6.1,SNR=3.7					

MEX 09 20:45:50.3±0.5, 16°.16N×97°.52W, h8km±10km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**1.18**	**39**	*eP*	Pg	20 46 09.7	-3.3
VHO				*eS*	Sg	20 46 24.6	-3.8
HUIG	**Huatulco**	**1.41**	**106**	*eP*	Pn	20 46 12.6	-3.7
HUIG				*eS*	Sb	20 46 32.9	-2.2
TLIG	**Tlapa**	**1.72**	**325**	*eP*	Pn	20 46 17.4	-3.3
TLIG				*eS*	Sn	20 46 38.3	-4.7

NIED ***09*** *21:00:00, 24°.40N×122°.30E, h74km, Mw5.9 Best double couple: M0 7.63000×10^17 NP1:φs52.00000°, δ50.00000°, λ169.00000°. NP2:φs149.00000°, δ82.00000°, λ41.00000°.*
BJI ***09*** *21:00:15.5, 24°.48N×122°.37E, h60km, mb5.7/76, mB5.9/62, Ms5.7/86, Ms7 5.5/81*
ISCJB ***09*** *21:00:17.5±0.1, 24°.512N±0°.008×122°.303E±0°.009, h78km, mb5.8/347, Error ellipse: s-maj=1.4km s-min=1.3km az=137.5*
MOS ***09*** *21:00:17.2±0.8, 24°.63N×122°.45E, h79km, mb6.3/126, MS5.2/47, Error ellipse: s-maj=5.7km s-min=3.5km az=115.3*
JMA ***09*** *21:00:17.7±0.1, 24°.42N×122°.27E, h70km±2km, M6.0*
JMA Felt III J1.
GCMT ***09*** *21:00:18.1±0.1, 24°.48N×122°.20E, h81km, MW5.9/147, Moment Tensor Solution. s142,c298; s147,c434; Duration: 2≥1 Moment tensor: Scale 10^18 Nm; Mrr0.50±.01; Mθθ0.17±.01; Mφφ-0.66±.01; Mrθ0.37±.00; Mθφ-0.28±.01; Mφr-0.33±.01; Best double couple: M0 0.82100×10^18 NP1:φs165.00000°, δ64.00000°, λ51.00000°. NP2:φs47.00000°, δ46.00000°, λ143.00000°. Principal axes: T 0.8550, Plg53.0000°, Azm27.0000°; N -0.0680, Plg35.0000°, Azm184.0000°; P -0.7860, Plg11.0000°, Azm282.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
TAP ***09*** *21:00:18.2, 24°.46N×122°.31E, h70km, ML6.6, B*
NEIC ***09*** *21:00:18.1±0.1, 24°.57N×122°.25E, h70km, mb6.0/124, ME5.9, MW5.9, MW5.9, MW5.9, ML6.5(TAP), Error ellipse: s-maj=2.7km s-min=2.6km az=133.0, Moment Tensor Solution. s50 Moment tensor: Scale 10^17 Nm; Mrr5.82; Mθθ0.03; Mφφ-5.85; Mrθ3.69; Mθφ-2.33; Mφr-2.72; Best double couple: M0 7.80000×10^17 NP1:φs44.00000°, δ45.00000°, λ133.00000°. NP2:φs171.00000°, δ59.00000°, λ55.00000°. Principal axes: T 8.4500, Plg60.0000°, Azm28.0000°; N -1.6100, Plg29.0000°, Azm191.0000°; P -6.8400, Plg8.0000°, Azm285.0000°; Broadband fault plane solution: P waves. NP1:φs45.00000°, δ45.00000°, λ126.00000°. NP2:φs180.00000°, δ55.00000°, λ60.00000°. Principal axes: T Plg65.0000°, Azm33.0000°; N Plg0.0000°, Azm0.0000°; P Plg6.0000°, Azm291.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt [IV] at Taipei and [III] at Taichung. Felt in much of Taiwan. Also felt at Chuangshan and Fuzhou, Fujian. Recorded [5 TAP] in Hualien and Yilan; [3 TAP] in Changhua, Chiayi, Hsinchu, Miaoli, Nantou, Taitung, Taoyuan and Yunlin; [1 TAP] in Lienchiang, Penghu and Pingtung, Taiwan. Recorded [3 JMA] on Yonaguni-jima, Ryukyu Islands.
NEIC ***09*** *21:00:18.0±0.0, 24°.52N×122°.34E, h70km, Moment Tensor Solution. s32 Moment tensor: Scale 10^17 Nm; Mrr5.07; Mθθ-0.50; Mφφ-4.57; Mrθ5.66; Mθφ-1.59; Mφr-3.06; Best double couple: M0 8.20000×10^17 NP1:φs156.00000°, δ68.00000°, λ59.00000°. NP2:φs34.00000°, δ38.00000°, λ142.00000°. Principal axes: T 9.4400, Plg55.0000°, Azm25.0000°; N -3.9800, Plg28.0000°, Azm168.0000°; P -5.4600, Plg17.0000°, Azm268.0000°;*
IDC ***09*** *21:00:19.8±0.9, 24°.58N×122°.41E, h85km±7km, mb5.5/68, mb1 5.5/73, mb1mx5.5/75, mbtmp5.8/73, MS5.0/55, Ms1 5.0/55, ms1mx4.9/66 Error ellipse: s-maj=7.5km s-min=5.3km az=66.0*
NEIC ***09*** *21:00:29.2±0.0, 24°.13N×122°.29E, h62km, Moment Tensor Solution. s17 Moment tensor: Scale 10^17 Nm; Mrr4.93; Mθθ2.12; Mφφ-7.05; Mrθ4.15; Mθφ-1.56; Mφr-4.57; Best double couple: M0 8.90000×10^17 NP1:φs157.00000°, δ70.00000°, λ57.00000°. NP2:φs39.00000°, δ38.00000°, λ146.00000°. Principal axes: T 9.2300, Plg53.0000°, Azm28.0000°; N -0.6300, Plg30.0000°, Azm170.0000°; P -8.6000, Plg18.0000°, Azm271.0000°;*

ISC 09 21:00:18.0±0.2, 24°.53N±0°.02×122°.33E±0°.02, h74km±1km, h74km; pP-P, n2239, σ1°.85/2644, mb5.9/382, 298C-116D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.18**	**277**	⇑P	**Pn**	**21 00 29.1**	**+0.2**
	baz=305						
EOS1				*eS*	**Sn**	**21 00 37.1**	**+0.1**
	baz=305						
TWC	**Suao**	**0.44**	**281**	⇓*iP*	**Pn**	**21 00 30.3**	**-0.3**
	baz=293						
TWC				*eS*	**Sn**	**21 00 39.0**	**-1.0**
	baz=293						
ENAH	**Nanao**	**0.48**	**261**	⇑P	**Pn**	**21 00 30.6**	**-0.4**
	baz=266						
ENAH				*eS*	**Sn**	**21 00 39.9**	**-0.7**
	baz=266						
EGS		**0.48**	**311**	⇓*iP*	**Pn**	**21 00 31.1**	**+0.1**
	baz=319						
EGS				S	**Sn**	**21 00 40.5**	**-0.1**
	baz=319						
NANB	**Nanao**	**0.54**	**259**	⇑*iP*	**Pn**	**21 00 31.2**	**-0.3**
	baz=263						
NANB				S	**Sn**	**21 00 40.2**	**-1.3**
	baz=263						
ENA	**Nanao**	**0.54**	**260**	⇑*iP*	**Pn**	**21 00 31.2**	**-0.4**
	baz=263						
ENA				*eS*	**Sn**	**21 00 41.0**	**-0.6**
	baz=263						
NTC	**Toucheng**	**0.56**	**306**	*eP*	**Pn**	**21 00 31.8**	**+0.1**
	baz=318						
NTC				*eS*	**Sn**	**21 00 41.1**	**-0.8**
	baz=318						
JYNG	**Yonaguni jima**	**0.57**	**98**	P	**Pn**	**21 00 31.9**	**+0.1**
JYNG				S	**Sn**	**21 00 41.8**	**-0.2**
ILA	**Ilan**	**0.58**	**294**	⇓*iP*	**Pn**	**21 00 32.2**	**+0.3**
	baz=305						
ILA				S	**Sn**	**21 00 42.6**	**+0.3**
	baz=305						
YOJ	**Yonaguni jima**	**0.63**	**96**	⇓P	**Pn**	**21 00 32.6**	**+0.2**
	baz=89						
YOJ				S	**Sn**	**21 00 42.7**	**-0.3**
	baz=89						
YOJ	**Yonaguni jima**	**0.63**	**96**	*e*Pn	**Pn**	**21 00 32.6**	**+0.2**
YOJ	**Yonaguni jima**	**0.63**	**96**	⇑P	**Pn**	**21 00 32.5**	**+0.2**
YOJ				S	**Sn**	**21 00 42.8**	**-0.3**
YOJ	**Yonaguni jima**	**0.63**	**96**	*e*P	**Pn**	**21 00 32.6**	**+0.2**
TWE	**Neicheng**	**0.63**	**288**	⇓*iP*	**Pn**	**21 00 32.7**	**+0.2**
	baz=296						
TWE				*eS*	**Sn**	**21 00 42.8**	**-0.4**
	baz=296						
TIPB	**Shuangxi**	**0.64**	**314**	⇓*eP*	**Pn**	**21 00 31.6**	**-0.9**
	baz=319						
TIPB				*eS*	**Sn**	**21 00 41.2**	**-2.1**
	baz=319						
ENTT	**Nioudou**	**0.70**	**279**	⇓*iP*	**Pn**	**21 00 33.8**	**+0.5**
	baz=289						
ENTT				*eS*	**Sn**	**21 00 44.9**	**+0.4**
	baz=289						
NWF	**Wu-fen Shan**	**0.73**	**318**	⇓*iP*	**Pn**	**21 00 34.1**	**+0.4**
	baz=315						
NWF				*eS*	**Sn**	**21 00 45.4**	**+0.1**
	baz=315						
WFSB	**Wu-fen Shan**	**0.73**	**318**	⇓*iP*	**Pn**	**21 00 34.0**	**+0.5**
	baz=315						
WFSB				*eS*	**Sn**	**21 00 45.5**	**+0.4**
	baz=315						
NACB	**Ninganchiao**	**0.76**	**242**	⇓P	**Pn**	**21 00 32.8**	**-1.0**
	baz=240						
NACB				*eS*	**Sn**	**21 00 43.7**	**-1.9**
	baz=240						
NACB	**Ninganchiao**	**0.76**	**242**	*e*Pn	**Pn**	**21 00 33.0**	**-0.8**
NWLT	**Wulai**	**0.79**	**288**	⇓*eP*	**Pn**	**21 00 34.8**	**+0.6**
	baz=297						
NWLT				S	**Sn**	**21 00 46.7**	**+0.3**
	baz=297						
TWD	**Chiawan**	**0.80**	**236**	⇑*iP*	**Pn**	**21 00 33.5**	**-0.8**
	baz=232						
TWD				S	**Sn**	**21 00 45.0**	**-1.5**
	baz=232						
HWA	**Hwalien**	**0.86**	**230**	⇑*iP*	**Pn**	**21 00 34.5**	**-0.4**
	baz=226						
HWA				*eS*	**Sn**	**21 00 46.3**	**-1.3**
	baz=226						
NNSB	**Datong**	**0.87**	**264**	⇓*iP*	**Pn**	**21 00 35.1**	**-0.2**
	baz=261						
NNSB				*eS*	**Sn**	**21 00 46.7**	**-1.3**
	baz=261						
NNSH	**Datong**	**0.87**	**264**	*eP*	**Pn**	**21 00 35.0**	**-0.2**
	baz=261						
NNSH				*eS*	**Sn**	**21 00 47.1**	**-1.0**
	baz=261						
NNS	**Nan Shan**	**0.87**	**264**	⇓*iP*	**Pn**	**21 00 35.1**	**-0.2**
	baz=261						
NNS				*eS*	**Sn**	**21 00 47.1**	**-1.1**
	baz=261						
YHNB	**Yeheng**	**0.88**	**279**	⇓*iP*	**Pn**	**21 00 35.8**	**+0.5**
	baz=283						
YHNB				S	**Sn**	**21 00 48.5**	**+0.3**
	baz=283						
YHNB	**Yeheng**	**0.88**	**279**	*e*Pn	**Pn**	**21 00 36.1**	**+0.8**
TATO	**Taipei**	**0.88**	**300**	*eP*	**Pn**	**21 00 35.1**	**-0.2**
	baz=314						
TATO				S	**Sn**	**21 00 48.3**	**+0.2**
	baz=314						
TATO	**Taipei**	**0.88**	**300**	*e*Pn	**Pn**	**21 00 35.7**	**+0.4**
NSK	**Sanguang**	**0.90**	**280**	⇓*iP*	**Pn**	**21 00 35.9**	**+0.4**
	baz=284						
NSK				S	**Sn**	**21 00 48.7**	**+0.1**
	baz=284						
TAP	**Taipei**	**0.90**	**304**	⇓*eP*	**Pn**	**21 00 35.9**	**+0.3**
	baz=308						
TAP				*eS*	**Sn**	**21 00 48.8**	**+0.2**
	baz=308						
ENLB	**Shoufeng**	**0.91**	**227**	⇑*iP*	**Pn**	**21 00 34.9**	**-0.7**
	baz=224						
ENLB				*eS*	**Sn**	**21 00 47.4**	**-1.3**
	baz=224						
YM07	**YM07**	**0.91**	**315**	⇓*eP*	**Pn**	**21 00 34.9**	**-0.7**
	baz=310						
YM07				S	**Sn**	**21 00 48.0**	**-0.8**
	baz=310						
YM11	**YM11**	**0.93**	**313**	⇓*iP*	**Pn**	**21 00 37.2**	**+1.2**
	baz=316						
YM11				S	**Sn**	**21 00 50.1**	**+0.7**
	baz=316						
YM10	**YM10**	**0.94**	**312**	⇓*iP*	**Pn**	**21 00 36.2**	**+0.2**
	baz=315						
YM08	**YM08**	**0.94**	**315**	⇓P	**Pn**	**21 00 36.0**	**0.0**
	baz=309						
YM08				*eS*	**Sn**	**21 00 48.5**	**-0.8**
	baz=309						
YM12	**YM12**	**0.95**	**314**	⇓P	**Pn**	**21 00 36.2**	**+0.1**
	baz=308						
YM12				*eS*	**Sn**	**21 00 49.5**	**-0.1**
	baz=308						
YM04	**YM04**	**0.95**	**311**	⇓P	**Pn**	**21 00 36.3**	**+0.2**
	baz=314						
YM04				S	**Sn**	**21 00 49.5**	**-0.2**
	baz=314						
YM03	**YM03**	**0.97**	**312**	⇓*iP*	**Pn**	**21 00 36.4**	**+0.1**
	baz=315						
YM03				S	**Sn**	**21 00 50.5**	**+0.5**
	baz=315						
TWY	**Chenhua**	**1.00**	**319**	⇓P	**Pn**	**21 00 37.4**	**+0.7**
	baz=313						
TWY				*eS*	**Sn**	**21 00 50.9**	**+0.4**
	baz=313						
TWS1	**Kuangyinshan**	**1.00**	**305**	⇓*iP*	**Pn**	**21 00 37.3**	**+0.6**
	baz=316						
TWS1				S	**Sn**	**21 00 51.7**	**+0.9**
	baz=316						
NTST	**Danshui**	**1.02**	**309**	*eP*	**Pn**	**21 00 37.5**	**+0.5**
	baz=311						
NTST				*eS*	**Sn**	**21 00 51.5**	**+0.4**
	baz=311						
ESL	**Shilin**	**1.08**	**229**	⇑*iP*	**Pn**	**21 00 36.7**	**-1.1**
	baz=224						
ESL				*eS*	**Sn**	**21 00 49.7**	**-2.8**
	baz=224						
TWT	**Tachien**	**1.08**	**256**	⇓P	**Pn**	**21 00 38.4**	**+0.5**
	baz=254						
TWT				S	**Sn**	**21 00 52.2**	**-0.6**
	baz=254						
TDCB	**Techi**	**1.10**	**256**	⇓*iP*	**Pn**	**21 00 38.4**	**+0.3**
	baz=254						
TDCB				S	**Sn**	**21 00 52.0**	**-1.1**
	baz=254						
NCU	**National Centr**	**1.13**	**293**	⇓*iP*	**Pn**	**21 00 39.2**	**+1.0**
	baz=296						
NCU				S	**Sn**	**21 00 54.6**	**+1.1**
	baz=296						
NCUH	**Zhongli**	**1.13**	**293**	⇓P	**Pn**	**21 00 39.3**	**+1.0**
	baz=296						
NCUH				S	**Sn**	**21 00 54.3**	**+0.8**
	baz=296						
CHGB	**Renai**	**1.15**	**246**	⇓P	**Pn**	**21 00 38.8**	**0.0**
	baz=241						
CHGB				S	**Sn**	**21 00 52.9**	**-1.5**
	baz=241						
EGFH	**Guangfu**	**1.19**	**224**	*eP*	**Pn**	**21 00 38.0**	**-1.1**
	baz=219						
EGFH				*eS*	**Sn**	**21 00 52.7**	**-2.1**
	baz=219						
LIOB	**Emei**	**1.20**	**276**	⇓P	**Pn**	**21 00 40.0**	**+0.8**
	baz=279						
LIOB				*eS*	**Sn**	**21 00 55.6**	**+0.5**
	baz=279						
NSTT	**Nanjuang**	**1.21**	**275**	⇓*iP*	**Pn**	**21 00 40.0**	**+0.6**
	baz=278						
NSTT				S	**Sn**	**21 00 55.6**	**+0.2**
	baz=278						
SBCB	**Hsinchu**	**1.25**	**282**	⇓P	**Pn**	**21 00 40.6**	**+0.8**
	baz=285						
SBCB				*eS*	**Sn**	**21 00 55.2**	**-1.0**
	baz=285						
HSN	**Hsinchu**	**1.27**	**283**	*eP*	**Pn**	**21 00 40.3**	**+0.3**
	baz=287						
HSN				*eS*	**Sn**	**21 00 56.2**	**-0.4**
	baz=287						
IRIF	**Iriomote-Funau**	**1.29**	**98**	⇓P	**Pn**	**21 00 40.6**	**+0.2**
IRIF				S	**Sn**	**21 00 57.5**	**+0.3**
HGSD	**Ruisui**	**1.32**	**219**	⇑P	**Pn**	**21 00 39.9**	**-0.9**
	baz=220						
HGSD				*eS*	**Sn**	**21 00 55.2**	**-2.7**
	baz=220						
VWDT	**VWDT**	**1.33**	**235**	⇓P	**Pn**	**21 00 40.8**	**-0.1**
	baz=230						
VWDT				S	**Sn**	**21 00 56.4**	**-1.7**
	baz=230						
EHY	**Hungye**	**1.37**	**222**	⇑*iP*	**Pn**	**21 00 40.1**	**-1.3**
	baz=230						
NMLH	**Miaoli**	**1.40**	**271**	*eP*	**Pn**	**21 00 42.6**	**+0.8**
	baz=273						
NMLH				*eS*	**Sn**	**21 01 00.5**	**+0.8**
	baz=273						
HATJ	**Hateruma jima**	**1.43**	**109**	⇓P	**Pn**	**21 00 42.8**	**+0.7**
HATJ				*eS*	**Sn**	**21 01 01.2**	**+0.9**
TWQ1	**Liyutan**	**1.43**	**263**	⇓*iP*	**Pn**	**21 00 42.9**	**+0.7**
	baz=265						
TWQ1				*eS*	**Sn**	**21 01 00.8**	**+0.4**
	baz=265						
NSY	**Sanyi**	**1.43**	**266**	⇓*iP*	**Pn**	**21 00 43.2**	**+0.9**
	baz=268						
NSY				*eS*	**Sn**	**21 01 00.9**	**+0.4**
	baz=268						
SMLT	**Sun Moon Lake**	**1.45**	**244**	⇓*eP*	**Pn**	**21 00 42.8**	**+0.3**
	baz=240						
SMLT				*eS*	**Sn**	**21 01 01.3**	**+0.2**
	baz=240						
SSLB	**Suanglung**	**1.46**	**240**	⇓P	**Pn**	**21 00 42.4**	**-0.2**
	baz=237						
SSLB				*eS*	**Sn**	**21 00 58.2**	**-2.9**
	baz=237						
SSLB	**Suanglung**	**1.46**	**240**	*e*Pn	**Pn**	**21 00 43.1**	**+0.6**
YULB	**Yu-li**	**1.47**	**220**	⇑*iP*	**Pn**	**21 00 41.4**	**-1.3**
	baz=221						
YULB				*eS*	**Sn**	**21 00 57.1**	**-4.3**
	baz=221						
YULB	**Yu-li**	**1.47**	**220**	*e*Pn	**Pn**	**21 00 41.5**	**-1.2**
TYC	**Yuchr**	**1.48**	**245**	⇓*eP*	**Pn**	**21 00 43.1**	**+0.3**
	baz=242						
TYC				*eS*	**Sn**	**21 01 01.6**	**+0.1**
	baz=242						
TWF1	**Yuli**	**1.50**	**219**	⇑*iP*	**Pn**	**21 00 41.9**	**-1.2**
	baz=229						
TCU	**Taichung**	**1.55**	**256**	⇓*eP*	**Pn**	**21 00 44.7**	**+1.0**
	baz=258						
JKRS	**Kuro-shima**	**1.56**	**100**	⇓P	**Pn**	**21 00 44.6**	**+0.7**
JKRS				S	**Sn**	**21 01 04.4**	**+1.0**
WJS	**Zhushan**	**1.62**	**245**	⇓*eP*	**Pn**	**21 00 46.1**	**+1.4**
	baz=238						
WJS				*eS*	**Sn**	**21 01 06.7**	**+1.8**
	baz=238						
FULB	**Fuli**	**1.63**	**216**	⇑P	**Pn**	**21 00 43.7**	**-1.1**
	baz=208						
FULB				*eS*	**Sn**	**21 01 02.1**	**-3.0**
	baz=208						
JIJ	**Ishigaki jima**	**1.66**	**95**	⇓P	**Pn**	**21 00 45.4**	**+0.2**
JIJ				S	**Sn**	**21 01 05.8**	**-0.1**
CHKT	**Chengkung**	**1.67**	**212**	⇑*iP*	**Pn**	**21 00 43.8**	**-1.6**
	baz=205						
CHKT				*eS*	**Sn**	**21 01 02.0**	**-4.1**
	baz=205						
WCHH	**Zhanghua**	**1.68**	**255**	*eP*	**Pn**	**21 00 46.0**	**+0.6**
	baz=256						
ALS	**Alishan**	**1.72**	**234**	*eP*	**Pn**	**21 00 46.8**	**+0.5**
	baz=228						
ALS				*eS*	**Sn**	**21 01 07.2**	**-0.5**
	baz=228						
ELDTW	**Lidau**	**1.79**	**222**	⇑P	**Pn**	**21 00 46.0**	**-1.1**
	baz=219						
ELDTW				*eS*	**Sn**	**21 01 06.3**	**-2.9**
	baz=219						
JISG	**Ishigakijimahi**	**1.81**	**88**	P	**Pn**	**21 00 47.6**	**+0.5**
JISG				S	**Sn**	**21 01 11.2**	**+1.9**
WGK	**Gukeng**	**1.82**	**243**	⇓P	**Pn**	**21 00 48.4**	**+1.1**
	baz=244						
WGK				S	**Sn**	**21 01 11.3**	**+1.8**
	baz=244						
WDLH	**Douliu**	**1.84**	**243**	⇓*eP*	**Pn**	**21 00 48.8**	**+1.2**
	baz=258						
WDLH				*eS*	**Sn**	**21 01 12.1**	**+2.1**
	baz=258						
RLNB	**Erlin**	**1.91**	**251**	⇓P	**Pn**	**21 00 49.0**	**+0.6**
	baz=263						
RLNB				*eS*	**Sn**	**21 01 09.8**	**-1.8**
	baz=263						
TWH	**Lutao**	**1.97**	**203**	⇑*eP*	**Pn**	**21 00 47.9**	**-1.4**
	baz=202						
TWH				*eS*	**Sn**	**21 01 09.8**	**-3.4**
	baz=202						
TPUB	**Ta-pu**	**1.98**	**232**	⇓P	**Pn**	**21 00 50.4**	**+0.9**
	baz=225						
TPUB				S	**Sn**	**21 01 13.4**	**0.0**
	baz=225						
TPUB	**Ta-pu**	**1.98**	**232**	*e*Pn	**Pn**	**21 00 50.1**	**+0.6**
STYT	**Tauyuan**	**1.98**	**227**	⇑*iP*	**Pn**	**21 00 50.0**	**+0.5**
	baz=222						
STYT				*eS*	**Sn**	**21 01 13.0**	**-0.5**
	baz=222						
WTCT	**Ta-ch'eng**	**1.98**	**251**	⇓P	**Pn**	**21 00 49.8**	**+0.4**
	baz=263						
WTCT				S	**Sn**	**21 01 13.6**	**+0.1**
	baz=263						
CHY	**Chiayi**	**2.02**	**240**	⇓*eP*	**Pn**	**21 00 51.2**	**+1.2**
	baz=253						
CHY				S	**Sn**	**21 01 15.1**	**+0.7**
	baz=253						
WTP	**Ta-pu**	**2.02**	**231**	⇓*iP*	**Pn**	**21 00 50.9**	**+0.8**
	baz=232						
WTP				S	**Sn**	**21 01 14.5**	**0.0**
	baz=232						
TWGBT	**Beinan**	**2.05**	**214**	⇑*eP*	**Pn**	**21 00 48.9**	**-1.6**
	baz=220						
TWGBT				*eS*	**Sn**	**21 01 11.4**	**-3.7**
	baz=220						
TWG	**Pinlang**	**2.05**	**214**	⇑P	**Pn**	**21 00 48.8**	**-1.6**
	baz=220						
TWG				*eS*	**Sn**	**21 01 11.8**	**-3.4**
	baz=220						
TWG	**Pinlang**	**2.05**	**214**	*e*Pn	**Pn**	**21 00 49.5**	**-1.0**
TTN	**Taitung**	**2.07**	**212**	*eP*	**Pn**	**21 00 50.1**	**-0.6**
	baz=220						
TTN				S	**Sn**	**21 01 14.2**	**-1.4**
	baz=220						
TWK	**Hsinying**	**2.10**	**234**	⇓*iP*	**Pn**	**21 00 52.0**	**+0.9**
	baz=234						
TWK				S	**Sn**	**21 01 17.2**	**+0.8**
	baz=234						
WSF	**Szhu**	**2.12**	**246**	⇓*eP*	**Pn**	**21 00 51.9**	**+0.6**
	baz=257						
WSF				S	**Sn**	**21 01 17.4**	**+0.7**
	baz=257						
CHN1	**Nanshi**	**2.12**	**231**	⇓P	**Pn**	**21 00 52.2**	**+0.8**
	baz=232						
CHN1				S	**Sn**	**21 01 17.5**	**+0.6**
	baz=232						
WLGB	**Puzi**	**2.13**	**241**	⇓*iP*	**Pn**	**21 00 52.2**	**+0.8**
	baz=242						
WLGB				*eS*	**Sn**	**21 01 17.1**	**+0.1**
	baz=242						
SGST	**Jiashian**	**2.15**	**228**	⇓*eP*	**Pn**	**21 00 52.9**	**+1.1**
	baz=221						
SGST				S	**Sn**	**21 01 19.0**	**+1.4**
	baz=221						
JTJ	**Tarama**	**2.17**	**87**	⇓P	**Pn**	**21 00 52.9**	**+1.0**
JTJ				*eS*	**Sn**	**21 01 19.3**	**+1.4**
SLGT	**Liugui**	**2.17**	**226**	*eP*	**Pn**	**21

baz=213
SSD S **Sn** **21 01 23.1 +0.5**
baz=213
SCLT Jiali 2.37 236 *e*P **Pn** **21 00 55.5 +0.7**
baz=236
SCLT S **Sn** **21 01 23.7 +0.8**
baz=236
TAI1 Yung-k'ang 2.43 233⇓*e*P **Pn** **21 00 56.8 +1.3**
baz=233
TAI1 *e*S **Sn** **21 01 24.9 +0.8**
baz=233
MASBT Mashibuluo 2.46 220⇑*e*P **Pn** **21 00 56.1 +0.1**
baz=219
MASBT *e*S **Sn** **21 01 24.0 -1.0**
baz=219
SGLT Jiouru 2.46 224⇓*e*P **Pn** **21 00 58.0 +2.1**
baz=223
SGLT *e*S **Sn** **21 01 28.2 +3.2**
baz=223
TAI Tainan 2.48 232 P **Pn** **21 00 58.3 +2.1**
TAI S **Sn** **21 01 26.1 +0.7**
TAW Tawu 2.53 212 *e*P **Pn** **21 00 55.4 -1.5**
baz=211
TAW S **Sn** **21 01 23.0 -3.7**
baz=211
EAST Anshuo 2.53 213⇑*i*P **Pn** **21 00 55.8 -1.2**
baz=207
EAST *e*S **Sn** **21 01 24.1 -2.7**
baz=207
LAY Lan-yu 2.58 196 *e*P **Pn** **21 00 55.6 -2.0**
baz=195
LAY *e*S **Sn** **21 01 22.9 -5.1**
baz=195
SSPT Xinbi 2.60 219 *e*P **Pn** **21 00 59.2 +1.4**
baz=218
SSPT *e*S **Sn** **21 01 29.7 +1.4**
baz=218
JIRB Irabujima 2.61 83 P **Pn** **21 00 58.9 +1.0**
JIRB S **Sn** **21 01 30.3 +1.8**
VWUC VWUC 2.66 281 ⇓P **Pn** **21 00 58.5 -0.1**
baz=281
SCZT Fangliau 2.66 217 *e*P **Pn** **21 00 58.7 +0.1**
baz=229
SCZT *e*S **Sn** **21 01 30.1 +0.3**
baz=229
JIKM Ikemajima 2.69 81 P **Pn** **21 01 00.4 +1.5**
JIKM S **Sn** **21 01 32.2 +1.8**
KAU Kaohsiung 2.69 224 *e*P **Pn** **21 01 00.8 +1.7**
baz=238
MATB Ma-tsu 2.69 307⇓*e*P **Pn** **21 00 59.5 +0.4**
baz=307
PNG Penghu 2.71 250 ⇓P **Pn** **21 00 58.6 -0.7**
baz=250
PNG *e*S **Sn** **21 01 28.6 -2.4**
baz=250
JMJ Miyako jima 2 2.71 83⇓*e*P **Pn** **21 01 00.8 +1.4**
baz=83
JMJ *e*S **Sn** **21 01 32.4 +1.3**
baz=83
JMJ Miyako jima 2 2.71 83 ⇓P **Pn** **21 01 00.7 +1.4**
JMJ S **Sn** **21 01 32.6 +1.5**
PHUB P'eng-hu 2.71 249⇓*e*P **Pn** **21 00 58.7 -0.7**
baz=249
PHUB *e*S **Sn** **21 01 27.7 -3.5**
baz=249
WDGT Dungji 2.75 243⇓*e*P **Pn** **21 00 59.7 -0.1**
baz=244
WDGT *e*S **Sn** **21 01 29.9 -2.1**
baz=244
WLCH Liuqiu 2.81 220 ⇓P **Pn** **21 01 02.5 +1.9**
baz=220
JOGS Gusukube 2.81 85 ⇓P **Pn** **21 01 02.2 +1.5**
JOGS S **Sn** **21 01 35.4 +1.9**
TWP Hsiaoliuchiu 2.82 220 *e*P **Pn** **21 01 02.4 +1.5**
baz=220
HEN Hengchun 2.91 211 *e*P **Pn** **21 01 02.3 +0.3**
baz=223
HEN *e*S **Sn** **21 01 33.9 -2.0**
baz=223
TSEB Hengchuen, Pin 2.93 207⇑*e*P **Pn** **21 01 02.1 -0.1**
baz=207
TSEB *e*S **Sn** **21 01 34.6 -1.7**
baz=207
TWKBT Hengchun 2.93 209 *e*P **Pn** **21 01 01.9 -0.4**
baz=208
TWKBT *e*S **Sn** **21 01 32.9 -3.5**
baz=208
TWK1 Hengchun 2.93 209⇑*e*P **Pn** **21 01 01.7 -0.6**
baz=208
TWK1 *e*S **Sn** **21 01 34.5 -1.9**
baz=208
VCHM Qimei 2.96 244 ⇓P **Pn** **21 01 02.4 -0.3**
baz=245
VCHM *e*S **Sn** **21 01 35.9 -1.3**
baz=245
QZH Quanzhou 3.42 278⇓*i*P **Pn** **21 01 08.7 -0.3**
QZH S **Sn** **21 01 45.4 -3.0**
QZH LR LR
comp=N,103μm,6.5s
QZH LR LR
comp=E,50μm,4.6s
QZH LR LR
comp=Z,92μm,7.6s
KNM Kinmen 3.55 269⇓*e*P **Pn** **21 01 11.8 +1.1**
baz=269
KNMB Chin-men Tao 3.59 270⇓*e*P **Pn** **21 01 10.6 -0.7**
baz=270
JOW Kunigami 5.83 66 P **Pn** **21 01 42.2 +0.3**
296nm,0.3s,baz=262,slow=5.6,SNR=484
JOW S **Sn** **21 02 46.0 -1.5**
155nm,0.3s,baz=345,slow=20,SNR=2.8
JOW LR LR 21 03 58.6
comp=Z,33μm,21.6s,baz=256,slow=38
JOW Kunigami 5.83 66⇓*e*P **Pn** **21 01 42.1 +0.1**
baz=66
SGCP Mt. Cagua 6.26 182 *e*P **Pn** **21 01 46.7 -1.1**
SGCP *e*S **Sn** **21 02 53.0 -4.9**
JOKE Okinoerabujima 6.29 62 P **Pn** **21 01 47.9 -0.2**
VDOS Pratas Island 6.42 235 ⇓P **Pn** **21 01 50.9 +1.0**
baz=233
SSE Sheshan 6.62 351 P **Pn** **21 01 54.0 +1.4**
SSE S **Sn** **21 03 08.3 +1.7**
APYP Conner 6.71 189 *e*P **Pn** **21 01 54.2 +0.3**
APYP *e*S **Sn** **21 03 07.8 -1.1**
ABRA Dolores 7.01 193 *e*P **Pn** **21 01 59.2 +1.2**
ABRA *e*S **Sn** **21 03 17.2 +1.0**
CAUP Cauayan 7.56 184 *e*P **Pn** **21 02 07.4 +1.9**
CAUP *e*S **Sn** **21 03 34.4 +4.7**
HKC Hong Kong Obse 7.81 255 ⇑P **Pn** **21 02 10.0 +1.1**
NJ2 Nanjing 8.10 339 *e*P **Pn** **21 02 12.5 -0.3**
NJ2 sP 21 02 31.1
NJ2 S **Sn** **21 03 41.6 -1.1**
NJ2 pmax pmax
comp=Z,250nm,0.9s
NJ2 LR LR
comp=N,17μm,6.0s
NJ2 LR LR
comp=E,34μm,4.9s
NJ2 LR LR
comp=Z,20μm,6.3s
GZH Guangzhou 8.35 262 P Pn 21 02 11.4 -4.9
GZH S **Sn** **21 03 44.5 -4.5**
GZH LR LR
comp=N,44μm,11.1s
GZH LR LR
comp=E,58μm,13.7s
MCO Taipa Grande 8.41 255 P **Pn** **21 02 17.0 -0.1**
BOLP Bolinao 8.41 196 *e*P **Pn** **21 02 19.0 +1.8**
BOLP *e*S **Sn** **21 03 47.4 -3.3**
BALP Baler 8.77 185 *e*P **Pn** **21 02 22.1 0.0**
BALP *e*S **Sn** **21 03 57.5 -1.9**
PCPH Palayan 8.99 188⇑*e*P **Pn** **21 02 26.4 +1.2**
SCZP Santa Cruz 9.00 195 *e*P **Pn** **21 02 26.1 +0.9**
SCZP *e*S **Sn** **21 04 07.4 +2.5**
WHN Wuhan 9.27 312 ⇓P **Pn** **21 02 29.0 +0.1**
WHN S **Sn** **21 04 09.6 -1.9**
WHN LR LR
comp=E,30μm,5.8s
WHN LR LR
comp=E,69μm,6.5s
WHN LR LR
comp=E,62μm,7.6s
LQP Lukban 10.39 184⇑*e*P Pn 21 02 54.8 +10
NGSJ Nagasakinomoza 10.40 37 P Pn 21 02 49.2 +4.9
TGY Tagaytay City 10.45 187 P **Pn** **21 02 47.0 +1.9**
comp=E,61nm,0.3s,baz=146,slow=6.6,SNR=3.4
TGY S **Sn** **21 04 43.3 +2.6**
comp=E,54nm,0.3s,baz=299,slow=19,SNR=2.1
TGY LR LR 21 07 11.7
comp=E,7μm,18.5s,baz=26,slow=39
GQP Guinayangan 10.57 179⇓*e*P **Pn** **21 02 48.1 +1.5**
JUR Ureshino 10.84 36 P Pn 21 02 55.3 +5.1
LUBP Lubang 10.91 191 *e*P **Pn** **21 02 51.3 -0.1**
LUBP *e*S **Sn** **21 04 52.0 +0.2**
PVCP Virac 11.01 171 *e*P **Pn** **21 02 51.7 -0.9**
BOAC Boac 11.02 182 *e*P **Pn** **21 02 53.8 +1.0**
BOAC *e*S **Sn** **21 04 52.1 -2.3**
AUQP San Andres 11.15 178 *e*P **Pn** **21 02 55.6 +1.1**
AUQP *e*S **Sn** **21 04 56.5 -1.0**
JNU Nakatsue 11.38 39 P **Pn** **21 03 01.2 +3.6**
comp=E,11nm,0.3s,baz=193,slow=5.6,SNR=111
JNU Nakatsue 11.38 39 *e*Pn **Pn** **21 03 00.4 +2.9**
SJMP San Jose 12.06 186 *e*P **Pn** **21 03 08.1 +1.2**
SJMP *e*S **Sn** **21 05 26.9 +7.3**
CNP Catarman 12.16 169 *e*P **Pn** **21 03 11.6 +3.3**
CNP *e*S **Sn** **21 05 18.1 -4.0**
TIA Tai'an 12.48 340 P **Pn** **21 03 13.8 +1.2**
TIA PP **P** **21 03 24.0 +2.5**
TIA S **Sn** **21 05 36.9 +7.2**
TIA pmax pmax
comp=E,1μm,3.5s
TIA LR LR
comp=E,4μm,11.3s
TIA LR LR
comp=E,4μm,7.6s
TIA LR LR
comp=E,4μm,7.9s
BUSP Coron 12.62 190 *e*P **Pn** **21 03 14.7 +0.1**
ENH Enshi 12.76 299 *e*Pn **Pn** **21 03 17.9 +1.4**
comp=E,0.3nm,0.6s
QIZ Qiongzhong 12.82 247 P **Pn** **21 03 16.7 -0.6**
QIZ S **Sn** **21 05 37.4 -0.8**
QIZ pmax pmax
comp=E,330nm,1.6s
QIZ pmax pmax
comp=E,3μm,10.0s
QIZ LR LR
comp=E,21μm,18.1s
QIZ LR LR
comp=E,18μm,18.6s
QIZ LR LR
comp=E,21μm,20.6s
QIZ Qiongzhong 12.82 247 *e*Pn **Pn** **21 03 17.1 -0.2**
comp=E,1μm,1.7s
RCP Roxas 12.90 178⇓*e*P **Pn** **21 03 22.1 +3.7**
INCN Inchon 13.43 15 *e*Pn **Pn** **21 03 28.5 +3.2**
INCN Inchon 13.43 15 Pn **P** **21 03 29.4 -2.7**
SNR=165
INCN Inchon 13.43 15 P **P** **21 03 29.4 -2.7**
SNR=165
PLP Palo 13.53 169⇓*e*P **Pn** **21 03 28.5 +1.7**
ENPP El Nido 13.53 192 *e*P **Pn** **21 03 23.1 -3.7**
ENPP *e*S **S** **21 06 13.5 -0.9**
KS15 Wonju Array Si 13.72 19 *e*Pn **P** **21 03 32.4 -2.9**
KSAR Wonju Array Be 13.72 19 P **P** **21 03 32.8 -2.5**
KSAR Wonju Array Be 13.72 19 P **P** **21 03 32.8 -2.5**
KSRS Korea Array 13.74 19 P **P** **21 03 32.8 -2.7**
comp=E,8.5nm,0.3s,baz=200,slow=11,SNR=609
KSRS LR LR 21 09 56.1
comp=E,6μm,18.6s,baz=198,slow=42
KS01 Wonju Array Si 13.76 19 *e*Pn **Pn** **21 03 31.5 +1.9**
GUIM Jordan 13.83 179 *e*P **Pn** **21 03 32.4 +1.7**
LLP Lapu-Lapu 14.22 173⇓*e*P **Pn** **21 03 36.6 +0.8**
LLP *e*S **Sn** **21 06 07.1 -5.1**
GYA Guiyang 14.28 281⇓*i*P **Pn** **21 03 37.6 +1.0**
GYA pP P 21 03 48.0 +6.3
GYA S **Sn** **21 06 14.2 +0.5**
GYA sS S 21 06 32.8 +3.0
GYA pmax pmax
comp=E,820nm,1.2s
GYA pmax pmax
comp=E,5μm,7.2s
GYA LR LR
comp=E,34μm,7.8s
GYA LR LR
comp=E,11μm,7.2s
GYA LR LR
comp=E,13μm,6.5s
DL2 Dalian 14.35 358⇑*i*P **P** **21 03 41.0 -1.2**
DL2 S **Sn** **21 06 22.1 +7.0**
DL2 pmax pmax
comp=E,160nm,1.4s
DL2 pmax pmax
comp=E,3μm,4.2s
DL2 LR LR
comp=E,6μm,19.2s
DL2 LR LR
comp=E,8μm,16.1s
DL2 LR LR
comp=E,9μm,29.6s
MSLP Maasin 14.52 170 *e*P **Pn** **21 03 40.8 +1.1**
XAN Xi'an 15.04 312 P **Pn** **21 03 47.3 +0.9**
XAN pP P 21 03 56.2 +6.1
XAN sP pP 21 04 02.8 -2.1
XAN S **Sn** **21 06 32.6 +0.5**
XAN sS S 21 06 45.7 +0.5
XAN SS **SnSn** **21 06 50.0 +4.2**
XAN PcP **PcP** **21 08 52.9 +2.8**
XAN pmax pmax
comp=E,890nm,1.4s
XAN pmax pmax
comp=E,7μm,3.8s
XAN LR LR
comp=E,12μm,6.5s
XAN LR LR
comp=E,18μm,9.2s
XAN LR LR
comp=E,11μm,11.8s
TIY Taiyuan 15.62 330 *e*P **P** **21 03 57.9 +1.4**
TIY sP **sP** **21 04 16.9 -3.9**
TIY S **S** **21 06 52.1 -5.0**
TIY pmax pmax
comp=E,790nm,1.4s
TIY pmax pmax
comp=E,2μm,5.2s
TIY LR LR
comp=E,9μm,5.5s
TIY LR LR
comp=E,4μm,4.0s
TIY LR LR
comp=E,8μm,24.8s
BUTP Butuan 15.79 168 *e*P **P** **21 03 59.6 +1.2**
BJT Baijiatuau 16.29 343 *e*Pn **P** **21 04 04.9 +1.1**
comp=E,532nm,1.1s
BJT Baijiatuau 16.29 343 *e*P **P** **21 04 04.9 +1.1**
BJT pmax pmax
comp=Z,532nm,1.1s
BJI Beijing 16.31 343 P **P** **21 04 04.6 +0.6**
BJI S **S** **21 07 08.0 -3.0**
BJI pmax pmax
comp=Z,380nm,1.8s
BJI pmax pmax
comp=Z,9μm,4.3s
BJI LR LR
comp=Z,2μm,13.7s
BJI LR LR
comp=Z,5μm,15.5s
PAGZ Pagadian 16.62 176 *e*P **Pn** **21 04 06.0 -0.3**
INU Inuyama 16.66 46 *e*Pn **P** **21 04 07.6 -0.4**
comp=Z,127nm,0.8s
BUKP Musuan 16.76 171 *e*P **P** **21 04 10.2 +0.9**
JYZW Yoshizawa 16.94 48 P **P** **21 04 11.7 +0.7**
SNY Shenyang 17.29 3⇑P **P** **21 04 16.7 +1.9**
SNY pP **pP** **21 04 23.7 -6.0**
SNY sP sP 21 04 28.2 -11
SNY S **S** **21 07 32.1 +1.7**
SNY PcP **PcP** **21 08 55.6 +2.4**
SNY ScS **ScS** **21 15 58.6 -2.9**
SNY pmax pmax
comp=Z,960nm,1.0s
SNY pmax pmax
comp=Z,14μm,4.5s
SNY LR LR
comp=Z,6μm,12.2s
SNY LR LR
comp=Z,6μm,10.4s
SNY LR LR
comp=Z,10μm,15.2s
CTBH Cotabato--PC H 17.31 174⇑*e*P **P** **21 04 17.4 +2.2**
CTBH *i*S **pP** **21 04 33.1 +3.0**
SHZ3 Shizuoka 3 17.31 49 P **P** **21 04 15.2 0.0**
JHJ Hachijo jima 2 17.51 57 P **P** **21 04 21.1 +3.7**
comp=Z,155nm,0.3s,baz=72,slow=22,SNR=49
JHJ LR LR 21 10 44.6
comp=Z,5μm,21.2s,baz=270,slow=36
JHJ2 Mitsune 17.53 57 *e*Pn **P** **21 04 19.2 +1.6**
comp=Z,3μm,1.0s
JHJ2 Mitsune 17.53 57 P **P** **21 04 21.4 +3.8**
CD2 Chengdu 17.62 295 P **P** **21 04 19.5 +0.9**
CD2 pP pP 21 04 34.3 +0.7
CD2 S **Sn** **21 07 30.1 -4.3**
CD2 SS **SnSn** **21 07 57.0 +7.9**
CD2 pmax pmax
comp=Z,910nm,1.0s
CD2 pmax pmax
comp=Z,8μm,9.5s
CD2 LR LR
comp=Z,33μm,6.6s
CD2 LR LR
comp=Z,30μm,5.4s
DAV Davao City (W) 17.64 169 P **Pn** **21 04 21.9 +3.1**
comp=Z,29nm,0.3s,baz=22,slow=5.2,SNR=7.0
DAV LR LR 21 10 55.5
comp=Z,9μm,19.9s,baz=1.0,slow=36
DAV Davao City (W) 17.64 169⇓*i*P **Pn** **21 04 19.9 +1.0**
DAV Davao City (W) 17.64 169 P **Pn** **21 04 22.3 +3.5**
SNR=11
DAV Davao City (W) 17.64 169 P **Pn** **21 04 22.3 +3.5**
SNR=11
JYN Shimob 17.77 48 P **Pn** **21 04 21.3 +0.8**
KMI Kunming 17.79 276 P **Pn** **21 04 22.9 +1.9**
KMI pP pP 21 04 31.0 -4.7
KMI sP sP 21 04 35.6 -10
KMI PP **PnPn** **21 04 39.7 +5.9**
KMI S **Sn** **21 07 35.8 -3.2**
KMI sS S 21 07 48.6 +7.8
KMI SS **SnSn** **21 08 01.1 +7.5**
KMI pmax pmax
comp=Z,330nm,1.2s
KMI pmax pmax
comp=Z,9μm,5.7s
KMI LR LR
comp=Z,14μm,8.4s
KMI LR LR
comp=Z,30μm,9.5s
KMI LR LR
comp=Z,31μm,12.3s
JIM2 Oshima 3 17.98 52 P **Pn** **21 04 24.6 +1.6**
JOD2 Odawara 2 18.02 50 P **P** **21 04 23.0 0.0**
JHHJ Haha-jima-NKT 18.03 79 P **Pn** **21 04 25.2 +1.6**
SKMP Bagumbayan, Su 18.03 173 *e*P **Pn** **21 04 24.9 +1.2**
SKMP *e*S **Sn** **21 07 42.9 -1.6**
CBIJ Chichi jima 18.06 78 *e*P **Pn** **21 04 24.0 +0.1**
comp=Z,3μm,1.5s
CBIJ S **S** **21 07 47.6 +1.9**
CBIJ *e*Sn Sn 21 07 56.8 +12
CBIJ Chichi jima 18.06 78 P **Pn** **21 04 24.5 +0.5**
JCJ Chichijima 18.06 78 P **Pn** **21 04 24.4 +0.5**
baz=270,slow=4.4
JCJ S **S** **21 07 47.6 +1.9**
comp=Z,1.8nm,0.3s,baz=292,slow=19,SNR=2.5
JCJ LR LR 21 10 47.5
comp=Z,5μm,21.2s,baz=279,slow=35
MAJO Matsushiro 18.15 45 *e*P **P** **21 04 23.6 -0.8**
comp=Z,217nm,1.1s
MAJO Matsushiro 18.15 45 *c e*P **P** **21 04 23.2 -1.2**
MAT Matsushiro 18.15 45 P **P** **21 04 23.6 -0.8**
MAT S **Sn** **21 07 44.8 -2.3**
MJB9 Matsu-Tunnel 18.15 45 *e*P **P** **21 04 23.8 -0.6**
comp=Z,211nm,1.1s
MJAR Matsushiro Arr 18.15 45 P **P** **21 04 23.9 -0.5**
comp=Z,5.2nm,0.3s,baz=239,slow=10,SNR=72
MJAR PcP **PcP** **21 08 55.0 +0.1**
baz=239,slow=4.8,SNR=5.2
MJAR ScP **ScP** **21 12 23.0 -0.7**
comp=Z,0.1nm,0.3s,baz=230,slow=3.2,SNR=8.6
MJAR PKiKP **PKiKP** **21 16 44.5 -1.6**
baz=153,slow=3.1,SNR=4.3
HHC Hu-ho-hao-te 18.60 334 *e*P **Pn** **21 04 33.0 +2.5**
HHC pP pP 21 04 46.2 +1.8
HHC PP **sP** **21 04 51.8 -2.0**
HHC S **S** **21 07 55.8 -1.3**
HHC sS sS 21 08 15.7 -6.4
HHC pmax pmax
comp=Z,250nm,1.2s
HHC pmax pmax
comp=Z,3μm,5.1s
HHC LR LR
comp=Z,12μm,8.2s
HHC LR LR
comp=Z,12μm,8.6s
HHC LR LR
comp=Z,12μm,10.8s
SKNT Sakolnakorn 18.72 250 P **Pn** **21 04 32.5 +0.6**
comp=Z,138nm,2.2s,comp=Z,7μm
BSO4 Boso 4 18.77 52 P **P** **21 04 31.6 +0.6**
BTO Baotou 19.06 330 *e*P **Pn** **21 04 36.6 +0.7**
BTO pmax pmax
comp=Z,76nm,1.0s
KKM Kota Kinabalu 19.29 199 *e*P **Pn** **21 04 38.3 -0.5**
comp=Z,511nm,1.4s
CN2 Changchun 19.40 7⇑P **Pn** **21 04 39.3 -0.4**
CN2 *e s*P sP 21 05 04.0 +1.6
CN2 *e*S **S** **21 08 09.0 -4.4**
CN2 pmax pmax
comp=Z,5μm,9.0s
CN2 LR LR
comp=Z,6μm,10.0s
CN2 LR LR
comp=Z,4μm,10.0s
CN2 LR LR
comp=Z,4μm,10.0s
MSHR Mys Shultsa 19.43 20 *c i*P **Pn** **21 04 39.6 -0.5**
MYLDM Lahad Datu 19.59 191 *e*P **Pn** **21 04 41.9 -0.3**
comp=Z,1μm,1.4s
LZH Lanzhou 19.64 310⇑P **Pn** **21 04 44.5 +1.6**
LZH pP pP 21 04 57.0 +1.0
LZH sP sP 21 05 05.4 0.0
LZH S **S** **21 08 17.5 -1.3**
LZH sS sS 21 08 35.6 -7.8
LZH SS **SnSn** **21 08 48.0 +9.1**
LZH pmax pmax
comp=Z,1μm,1.1s
LZH pmax pmax
comp=Z,6μm,5.7s
LZH LR LR
comp=Z,19μm,11.5s
LZH LR LR
comp=Z,17μm,12.7s
LZH LR LR
comp=Z,24μm,15.5s
MDJ Mudanjiang 20.90 15 P **P** **21 04 52.0 -2.2**
MDJ pP pP 21 05 06.6 -2.8
MDJ sP sP 21 05 15.5 -3.3
MDJ S **S** **21 08 41.8 -1.1**
MDJ pmax pmax
comp=Z,220nm,1.1s
MDJ pmax pmax
comp=Z,5μm,3.6s
MDJ LR LR
comp=Z,4μm,12.4s
MDJ LR LR
comp=Z,5μm,10.0s
MDJ LR LR
comp=Z,15μm,14.7s
MDJ Mudanjiang 20.90 15 *e*P **P** **21 04 55.0 +0.8**
comp=Z,215nm,1.1s
CHAI Chaiyaphum 20.91 250 P Pn 21 04 56.2 -1.6
comp=Z,169nm,1.1s,comp=Z,2μm
SGSI Sangihe 20.95 171 P **P** **21 04 55.9 +0.9**
comp=Z,1μm,0.8s,comp=Z,10μm
USRK Ussuriysk Ar. 21.15 20 P **P** **21 04 57.5 +0.6**
comp=Z,335nm,0.9s,baz=204,slow=9.3,SNR=275
USRK PcP **PcP** **21 08 59.9 -0.1**
comp=Z,16nm,0.9s,baz=249,slow=2.6,SNR=4.1
USRK LR LR 21 13 34.1
comp=Z,5μm,19.3s,baz=185,slow=38
PBKT Sadao Pong 21.49 252 P **P** **21 05 01.7 +1.0**
comp=Z,621nm,1.3s,comp=Z,7μm
PBKT Sadao Pong 21.49 252 *e*P **P** **21 05 02.0 +1.3**
comp=Z,750nm,1.2s
PBKT *e*S Sn 21 09 01.8 -5.7
PHIT Phitsanulok 21.72 255 P **P** **21 05 05.1 +1.9**
comp=Z,574nm,1.1s,comp=Z,4μm
SRAK Srakaew 21.79 245 P **P** **21 05 01.1 -2.8**
comp=Z,2μm,1.5s,comp=Z,15μm
LAMP Lampang 21.93 259 P **P** **21 05 07.6 +2.2**

comp=Z,88nm,1.0s,comp=Z,848nm
CMAI Chiengmai2 22.02 263 P **P** **21 05 08.8 +2.2**
comp=Z,3μm,1.1s
CHTO Chiang Mai 22.45 260 P **P** **21 05 12.3 +1.2**
comp=Z,2μm,1.5s,comp=Z,32μm
CHTO Chiang Mai 22.45 260 *e*P **P** **21 05 12.5 +1.5**
comp=Z,541nm,1.1s
CHTO *e*PcP **PcP** **21 09 04.7 +1.7**
CHTO Chiang Mai 22.45 260 P **P** **21 05 13.0 +1.9**
SNR=116
CHTO Chiang Mai 22.45 260 P **P** **21 05 13.0 +1.9**
SNR=116
CHTO Chiang Mai 22.45 260 *e*P **P** **21 05 12.5 +1.5**
CHTO *e* 21 09 04.7
CHTO pmax pmax
comp=Z,541nm,1.1s
CM01 Chiang Mai Arr 22.56 259 *e*P **P** **21 05 11.9 -0.4**
CM01 *e*pP **P** **21 05 13.1 +0.8**
CM31 Chiang Mai Arr 22.57 259 *e*P **P** **21 05 12.9 +0.6**
CMAR Chiang Mai Arr 22.57 259 P **P** **21 05 13.9 +1.6**
comp=Z,92nm,0.9s,baz=62,slow=8.0,SNR=233
CMAR PcP **PcP** **21 09 04.7 +1.4**
comp=Z,34nm,0.8s,baz=44,slow=1.1,SNR=25
CMAR ScP **ScP** **21 12 34.1 -0.3**
comp=Z,20nm,1.2s,baz=52,slow=0.6,SNR=5.2
CMAR LR LR 21 14 39.2
comp=Z,10μm,20.0s,baz=79,slow=38
CMAR PKiKP **PKiKP** **21 16 48.5 -0.1**
comp=Z,3.8nm,0.9s,baz=287,slow=1.4,SNR=8.2
CMAR P3KPbc 21 38 51.6
comp=Z,1.8nm,0.9s,baz=250,slow=5.2,SNR=7.9
CMAR P3KP 21 39 34.5
comp=Z,8.8nm,1.2s,baz=313,slow=3.9,SNR=7.6
TEY Ternei 23.51 26 *e*P **P** **21 05 19.2 -2.1**
TEY MLR MLR
comp=E,4μm,15.0s
TEY MLR MLR
comp=Z,3μm,12.0s
KMSI Cibinong 23.87 176 P **P** **21 05 24.8 +0.1**
comp=Z,271nm,0.8s,comp=Z,4μm
GUMO Guam 23.89 113 P **P** **21 05 25.2 +0.3**
comp=Z,2μm,1.2s,baz=262,slow=2.1,SNR=69
GUMO LR LR 21 13 08.2
comp=Z,5μm,21.8s,baz=298,slow=32
GUMO Guam 23.89 113 *e*P **P** **21 05 25.5 +0.6**
comp=Z,3μm,1.3s
GUMO Guam 23.89 113 *e*P **P** **21 05 25.5 +0.6**
GUMO pmax pmax
comp=Z,3μm,1.3s
MRSI Marisa 23.91 181 P **P** **21 05 26.3 +1.2**
comp=Z,178nm,1.0s,comp=Z,4μm
LKP Lekhapani 23.96 282 *e*P **P** **21 05 26.8 +1.3**
SBUM Sibu 24.02 206 *e*P **P** **21 05 25.2 -0.9**
comp=Z,158nm,0.8s
SBUM *e*PcP **PcP** **21 09 08.2 +1.8**
SRDT SRDT 24.08 249 P **P** **21 05 27.9 +1.3**
comp=Z,349nm,1.5s,comp=Z,6μm
GTA Gaotai 24.09 313 ⇑P **P** **21 05 27.8 +1.0**
GTA pP pP 21 05 38.3 -5.6
GTA sP sP 21 05 44.5 -8.3
GTA PcP **PcP** **21 09 08.1 +1.8**
GTA S **S** **21 09 45.4 +6.2**
GTA sS sS 21 10 05.4 -3.5
GTA ScP **ScP** **21 12 39.5 +1.1**
GTA PcS **PcS** **21 12 45.8 -0.4**
GTA ScS **ScS** **21 16 24.2 -1.5**
GTA pmax pmax
comp=Z,170nm,1.0s
GTA pmax pmax
comp=Z,2μm,7.4s
GTA LR LR
comp=Z,5μm,14.6s
GTA LR LR
comp=Z,7μm,11.4s
GTA LR LR
comp=Z,8μm,11.7s
TNTI Ternate 24.11 168 *e*P **P** **21 05 27.8 +0.8**
comp=Z,1μm,1.2s
MPSI Mapaga 24.16 186 P **P** **21 05 28.1 +0.8**
comp=Z,119nm,1.3s,comp=Z,2μmcomp=Z,3μm
PHET Kaeng Krachan 24.36 246 P **P** **21 05 31.5 +2.3**
comp=Z,74nm,1.1s,comp=Z,618nm
ERM Erimo 24.54 40 *e*P **P** **21 05 28.1 -2.4**
comp=Z,156nm,0.7s
ERM Erimo 24.54 40*de*P **P** **21 05 28.3 -2.3**
ERM pmax pmax
comp=Z,145nm,0.7s
HIA Hailar 24.78 356 *e*P **P** **21 05 32.8 0.0**
comp=Z,301nm,0.8s
HIA Hailar 24.78 356*c i*P **P** **21 05 32.2 -0.5**
HIA pmax pmax
comp=Z,548nm,1.2s
MOKO MOKOCHONG 25.16 280 *e*P **P** **21 05 36.1 -0.5**
APSI Ampana 25.30 182 P **P** **21 05 39.0 +1.3**
comp=Z,432nm,1.4s,comp=Z,3μm
SMKI Samarinda 25.32 192 P **P** **21 05 41.6 +3.7**
comp=Z,232nm,0.9s,comp=Z,4μm
SGKI Sangatta, Kali 25.33 191 P P 21 05 47.4 +9.4
PCI Palu 25.40 186 P **P** **21 05 39.9 +1.3**
comp=Z,306nm,1.1s,comp=Z,5μm
PCI Palu 25.40 186 P **P** **21 05 39.9 +1.3**
PCI pmax pmax
comp=Z,306nm,1.1s
LUWI Luwuk 25.42 179 P **P** **21 05 39.8 +1.0**
comp=Z,742nm,1.2s,comp=Z,8μm
LUWI Luwuk 25.42 179 *e*P **P** **21 05 38.9 +0.1**
comp=Z,953nm,1.2s
LBMI Labuha 25.51 168 P **P** **21 05 40.6 +0.9**
comp=Z,1μm,1.0s,comp=Z,14μm
ASAJ Asahikawa 25.61 35 P **P** **21 05 39.7 -0.6**
comp=Z,64nm,0.3s,baz=235,slow=9.7,SNR=272
ASAJ LR LR 21 17 12.7
comp=Z,5μm,18.1s,baz=237,slow=40
ASAJ Asahikawa 25.61 35 *e*P **P** **21 05 38.6 -1.7**
comp=Z,144nm,1.0s
KSM Kuching 25.70 209 *e*P **P** **21 05 41.6 +0.3**
comp=Z,210nm,1.0s
KSM *e*PcP **PcP** **21 09 10.4 +0.3**
ZIRO ZIRO 25.74 283 *e*P **P** **21 05 42.0 +0.1**
KLR Kul'dur 25.74 14 P **P** **21 05 41.4 -0.1**
comp=Z,16nm,0.9s,baz=209,slow=8.9,SNR=134
KLR PcP **PcP** **21 09 10.5 +0.9**
comp=Z,5.4nm,0.7s,baz=234,slow=2.6,SNR=19
KLR ScP **ScP** **21 12 41.1 -1.5**
baz=208,slow=2.6
KLR Kul'dur 25.74 14*c i*P **P** **21 05 40.9 -0.5**
IMP Imphal 25.77 277 *e*P **P** **21 05 41.6 -0.5**
IMP IAmb IAmb 21 05 50.9
comp=Z,80nm,1.0s
BKB Balikpapan 26.17 192 P **P** **21 05 47.7 +2.1**
comp=Z,420nm,1.1s,comp=Z,6μm
ULN Ulaanbaatar 26.25 336 *e*P **P** **21 05 46.9 +0.7**
comp=Z,614nm,0.9s
ULN Ulaanbaatar 26.25 336 P **P** **21 05 47.5 +1.2**
SNR=393
ULN Ulaanbaatar 26.25 336 P **P** **21 05 47.5 +1.2**
SNR=393
ULN Ulaanbaatar 26.25 336*c i*P **P** **21 05 47.0 +0.7**
ULN pmax pmax
comp=Z,1μm,1.7s
MTKI Muara Teweh, K 26.32 197 P **P** **21 05 47.6 +0.6**
comp=Z,533nm,1.1s,comp=Z,8μm
SONM Songino Array 26.47 335 P **P** **21 05 49.1 +0.8**
comp=Z,852nm,0.9s,baz=149,slow=9.1,SNR=2427
SONM PcP **PcP** **21 09 12.8 +1.3**
comp=Z,25nm,0.4s,baz=173,slow=3.9,SNR=46
SONM ScP **ScP** **21 12 44.3 -0.7**
comp=Z,33nm,1.1s,baz=159,slow=2.8,SNR=11
SONM ScS **ScS** **21 16 35.3 0.0**
comp=Z,4.4nm,0.9s,baz=194,slow=0.6,SNR=4.8
SONM PKiKP **PKiKP** **21 16 49.5 -0.6**
comp=Z,3.6nm,0.7s,baz=216,slow=1.4,SNR=5.1
SONM LR LR 21 17 01.9
comp=Z,5μm,21.7s,baz=145,slow=38
SONM P3KPbc 21 38 33.1
comp=Z,5.3nm,1.2s,baz=318,slow=3.0,SNR=14
SONA1 Songino Array 26.48 336 *e*P **P** **21 05 48.8 +0.5**
STKI Sintang 26.49 205 P **P** **21 05 50.2 +1.7**
comp=Z,182nm,1.5s,comp=Z,11μm
SANI Sanana 26.66 172 P **P** **21 05 49.8 -0.2**
comp=Z,297nm,1.0s,comp=Z,3μm
TEZP TEZPUR 26.69 281 *e*P **P** **21 05 51.5 +1.3**
SIJI Sorong 26.69 160 P **P** **21 05 50.4 +0.1**
comp=Z,103nm,0.8s,baz=9.6,slow=6.9,SNR=20
SIJI PcP **PcP** **21 09 13.2 +0.8**
comp=Z,29nm,0.8s,baz=23,slow=2.2,SNR=4.4
SIJI S **S** **21 10 16.4 -4.2**
comp=Z,6.7nm,0.4s,baz=288,slow=20,SNR=4.8
SAIH SAIHA 26.96 272 *e*P **P** **21 05 52.3 -0.6**
SKLT Songkhla 27.02 234 P **P** **21 05 53.8 +0.6**
comp=Z,115nm,1.1s,comp=Z,2μm
SURT Suratani 27.27 239 P **P** **21 05 56.5 +1.0**
comp=Z,188nm,1.1s,comp=Z,2μm
YUK Yuzh-Kuril'sk 27.35 39 *e*P **P** **21 05 54.1 -1.8**
YUK *i* S **S** **21 10 29.7 -0.7**
YUK pmax pmax
comp=Z,532nm,1.2s
YUK pmax pmax
comp=E,165nm,0.8s
YUK pmax pmax
comp=N,328nm,0.9s
YUK MLR MLR
comp=Z,5μm,21.0s
YUK MLR MLR
comp=N,2μm,17.0s
TTSI Tana Toraja 27.52 185 P **P** **21 05 57.6 -0.1**
comp=N,103nm,0.9s,comp=N,2μm
SHL Shillong 27.57 279 *e*P **P** **21 05 59.1 +0.7**
SHL *e*P **P** **21 06 00.0 +1.6**
SHL IAmb IAmb 21 06 06.7
comp=Z,3μm,2.2s
SHL *e*S **S** **21 10 35.0 +0.3**
SHL Shillong 27.57 279 *e*P **P** **21 05 59.1 +0.7**
comp=Z,581nm,1.0s
SHL Shillong 27.57 279 *e*P **P** **21 05 59.1 +0.7**
SHL pmax pmax
comp=Z,581nm,1.0s
YSS Yuzh-Sakhalins 27.69 31 *e*P **P** **21 05 57.9 -1.1**
comp=Z,448nm,1.1s
YSS *e*PcP **PcP** **21 09 15.5 +1.3**
YSS Yuzh-Sakhalins 27.69 31*αe*P **P** **21 05 57.3 -1.7**
YSS *e* 21 06 26.3
YSS *e* 21 09 15.6
YSS *e*S **S** **21 10 32.1 -3.6**
YSS pmax pmax
comp=Z,2μm,3.8s
YSS pmax pmax
comp=Z,300nm,1.0s
YSS pmax pmax
comp=N,110nm,1.1s
YSS pmax pmax
comp=E,110nm,0.9s
GUWA GUWAHATI 27.70 280 *e*P **P** **21 05 59.8 +0.4**
GUWA IAmb IAmb 21 06 02.9
comp=Z,299nm,0.5s
LSA Lhasa 28.18 287 P **P** **21 06 06.2 +2.1**
LSA S **S** **21 10 44.9 +0.2**
LSA pmax pmax
comp=Z,51nm,0.9s
LSA LR LR
comp=Z,4μm,14.8s
LSA LR LR
comp=Z,4μm,21.6s
LSA LR LR
comp=Z,10μm,20.4s
LSA Lhasa 28.18 287 *e*P **P** **21 06 05.5 +1.5**
comp=Z,281nm,1.3s
LSA Lhasa 28.18 287 P **P** **21 06 04.9 +0.9**
LSA Lhasa 28.18 287 *e*P **P** **21 06 05.6 +1.5**
LSA pmax pmax
comp=Z,281nm,1.3s
BELO BELONIA 28.24 274 *e*P **P** **21 06 05.8 +1.7**
BELO IAmb IAmb 21 06 25.6
comp=Z,4μm,2.4s
CIT Chita 28.26 349 *e*P **P** **21 06 04.1 0.0**
CIT *e* 21 06 19.3
CIT *e* 21 06 26.8
CIT *e* 21 06 55.3
CIT pmax pmax
comp=Z,650nm,1.7s
PKDT Phuket 28.28 238 P **P** **21 06 05.6 +1.1**
comp=Z,190nm,1.0s,comp=Z,2μm
KULM Kulim 28.28 231 *e*P **P** **21 06 05.5 +1.0**
comp=Z,100nm,1.0s
KULM *e*PcP **PcP** **21 09 17.5 +1.3**
RKPI Ransiki, Papua 28.32 154 P **P** **21 06 06.2 +1.3**
comp=Z,277nm,1.5s,comp=Z,4μm
AGT Agartala 28.32 275 *e*P **P** **21 06 04.7 -0.2**
AGT IAmb IAmb 21 06 08.5
comp=Z,227nm,0.6s
GRNR Gornyy 28.37 19 *e*P **P** **21 06 05.0 0.0**
GRNR *e* 21 09 17.2
GRNR pmax pmax
comp=Z,84nm,1.0s
SPSI Sidrap Palu 28.43 185 P **P** **21 06 05.8 0.0**
comp=Z,34nm,1.0s,comp=Z,925nm
MSAI Masohi 28.44 166 P **P** **21 06 08.2 +2.3**
comp=Z,70nm,1.5s,comp=Z,1μm
IPM Ipoh 28.59 229 *e*P **P** **21 06 07.2 -0.1**
comp=Z,144nm,0.9s
IPM *e*PcP **PcP** **21 09 18.2 +1.2**
AAI Ambon 28.62 168 P **P** **21 06 08.5 +1.0**
comp=Z,302nm,1.0s,comp=Z,3μm
MYKOM Kota Tinggi 28.81 221 *e*P **P** **21 06 10.4 +1.2**
comp=Z,73nm,0.9s
MYKOM *e*PcP **PcP** **21 09 18.7 +1.2**
FAKI Fak Fak 28.94 159 P **P** **21 06 10.9 +0.6**
comp=Z,200nm,1.6s,comp=Z,3μm
FAKI Fak Fak 28.94 159 *e*P **P** **21 06 10.5 +0.2**
comp=Z,937nm,1.9s
TURI Tura 28.97 279 *e*P **P** **21 06 11.3 +0.7**
TPRI Tanjung Pinang 29.11 219 P **P** **21 06 13.0 +1.1**
comp=Z,131nm,1.3s,comp=Z,2μm
KUR Kuril'sk 29.21 39*c i*P **P** **21 06 10.0 -2.5**
KUR *e* 21 07 13.9
KUR S **S** **21 11 01.6 +1.9**
KUR pmax pmax
comp=Z,747nm,9.5s
KUR pmax pmax
comp=Z,214nm,1.1s
KUR MLR MLR
comp=Z,4μm,22.0s
KUR MLR MLR
comp=N,2μm,15.0s
KUR MLR MLR
comp=E,2μm,19.0s
DHUB DHUBRI 29.24 280 *e*P **P** **21 06 12.6 -0.4**
ZEA Zeya 29.41 6*ce*P **P** **21 06 14.4 +0.3**
ZEA *e* 21 06 44.0
ZEA *e* 21 07 27.0
ZEA *e* 21 13 04.0
ZEA pmax pmax
comp=N,230nm,1.2s
ZEA pmax pmax
comp=E,86nm,1.2s
ZEA pmax pmax
comp=Z,400nm,1.2s
ZEA pmax pmax
comp=Z,3μm,12.0s
ZEA pmax pmax
comp=N,1μm,5.0s
ZEA MLR MLR
comp=N,7μm,16.0s
ZEA MLR MLR
comp=Z,8μm,16.0s
ZEA MLR MLR
comp=E,2μm,15.0s
KAPI Kappang 29.47 185 *e*P **P** **21 06 14.4 -0.7**
comp=E,81nm,1.1s
SRPI Serui, Papua 29.51 151 P **P** **21 06 16.5 +1.0**
comp=E,550nm,1.1s,comp=E,7μm
ZAK Zakamensk 29.74 335 *e*P **P** **21 06 16.9 -0.3**
ZAK pmax pmax
comp=Z,156nm,1.1s
BKSI Bulukumba 29.75 184 P **P** **21 06 18.1 +0.6**
comp=Z,24nm,0.8s,comp=Z,460nm
BNDI Bandanaira 29.80 165 P **P** **21 06 18.7 +0.7**
comp=Z,642nm,1.4s,comp=Z,9μm
GTK Tadong 30.41 283 *e*P **P** **21 06 25.8 +2.3**
TYV Tymovskoe 30.62 26 *e*P **P** **21 06 24.7 -0.1**
TYV *e*S **S** **21 11 21.7 +0.1**
TYV pmax pmax
comp=Z,66nm,1.0s
TYV smax smax
comp=E,500nm,5.8s
TLY Talaya 30.66 337 *e*P **P** **21 06 25.9 +0.7**
comp=E,522nm,0.9s
TLY Talaya 30.66 337*c i*P **P** **21 06 26.1 +0.8**
TLY *e* 21 07 41.7
TLY *e* 21 09 22.6
TLY *e*S **S** **21 11 19.3 -3.0**
TLY pmax pmax
comp=Z,769nm,1.3s
TLY MLR MLR
comp=Z,3μm,18.0s
IRK Irkutsk 30.91 338 *e*P **P** **21 06 28.1 +0.7**
IRK *e* 21 09 23.3
IRK *e* 21 16 51.0
IRK pmax pmax
comp=Z,1μm,1.6s
TSI Tuntungan 31.01 231 P **P** **21 06 30.8 +2.1**
comp=Z,257nm,0.9s
LHMI Lhok Sumawe 31.03 236 P **P** **21 06 33.6 +4.7**
LHMI Lhok Sumawe 31.03 236 *e*P **P** **21 06 30.6 +1.7**
comp=Z,283nm,0.9s
TAPN Taplejung 31.20 283 *e*P **P** **21 06 32.9 +2.2**
comp=Z,512nm,1.1s
PSI Prapat 31.25 230 P **P** **21 06 31.9 +1.0**
comp=Z,138nm,0.8s,baz=0.1,slow=5.0,SNR=54
PSI PcP **PcP** **21 09 24.7 +0.7**
comp=Z,66nm,1.0s,baz=180,slow=1.5,SNR=11
PSI LR LR 21 18 53.3
comp=Z,6μm,21.6s,baz=90,slow=35
ODAN Odare 31.51 282 *e*P **P** **21 06 34.9 +1.6**
comp=Z,511nm,1.1s
KCSI Kotacane, Aceh 31.56 232 P **P** **21 06 34.6 +1.0**
comp=Z,47nm,0.8s
MOY Mondy 31.64 334 *e*P **P** **21 06 34.4 +0.4**
MOY pmax pmax
comp=Z,591nm,2.6s
BKNI Bangkinang 31.68 224 P **P** **21 06 35.9 +1.3**
comp=Z,188nm,1.1s,comp=Z,2μm
BKNI Bangkinang 31.68 224 *e*P **P** **21 06 35.6 +1.0**
comp=Z,260nm,1.2s
NKL Nikolayevsk 31.76 21 *i* P **P** **21 06 34.0 -0.9**
NKL *e* 21 07 52.0
NKL *e* 21 09 26.0
NKL pmax pmax
comp=Z,250nm,1.3s
NKL pmax pmax
comp=N,600nm,16.0s
NKL pmax pmax
comp=E,500nm,16.0s
NKL pmax pmax
comp=Z,2μm,16.0s
NKL MLR MLR
comp=N,3μm,14.0s
NKL MLR MLR
comp=E,2μm,14.0s
NKL MLR MLR
comp=Z,5μm,14.0s
GENI Genyem 32.05 145 P **P** **21 06 39.2 +1.4**
comp=Z,258nm,1.2s,comp=Z,4μm
MLSI Meulaboh, Aceh 32.07 235 P **P** **21 06 39.0 +1.0**
comp=Z,340nm,0.8s,comp=Z,5μm
BSI Banda Aceh 32.12 238 P **P** **21 06 39.9 +1.4**
comp=Z,373nm,1.3s,comp=Z,5μm
RAMN Ramite 32.21 282 *e*P **P** **21 06 40.9 +1.4**
comp=Z,351nm,1.0s
MNSI Mandailing Nat 32.27 226 P **P** **21 06 40.1 +0.4**
comp=Z,263nm,1.0s,comp=Z,3μm
JAY Jayapura 32.27 144 P **P** **21 06 40.2 +0.4**
comp=Z,15nm,0.6s,baz=276,slow=7.1,SNR=15
JAY PcP **PcP** **21 09 27.9 +1.2**
comp=Z,61nm,0.9s,baz=294,slow=3.5,SNR=9.5
JAY Jayapura 32.27 144 P **P** **21 06 40.8 +1.0**
comp=Z,645nm,1.8s,comp=Z,10μm
CLNS Chul'man 32.33 3 *e*P **P** **21 06 39.0 -0.9**
CLNS *e* 21 07 45.3
CLNS *e* 21 09 24.7
CLNS *e*S **S** **21 11 53.5 +5.2**
CLNS pmax pmax
comp=E,37nm,1.0s
CLNS pmax pmax
comp=Z,85nm,1.0s
CLNS pmax pmax
comp=N,79nm,1.2s
CLNS pmax pmax
comp=Z,29nm,1.2s
CLNS pmax pmax
comp=N,21nm,1.1s
CLNS pmax pmax
comp=E,15nm,0.8s
CLNS smax smax
comp=E,348nm,12.1s
CLNS smax smax
comp=N,440nm,10.4s
CLNS MLR MLR
comp=N,1μm,9.0s
CLNS MLR MLR
comp=Z,2μm,10.0s
CLNS MLR MLR
comp=E,1μm,13.0s
JIRN Jiri 32.53 283 *e*P **P** **21 06 43.9 +1.4**
comp=E,454nm,1.0s
GUN Gumba 32.80 284 *e*P **P** **21 06 46.3 +1.6**
comp=E,490nm,1.1s
MMRI Maumere 32.96 180 P **P** **21 06 46.1 +0.3**
comp=E,265nm,1.4s,comp=E,4μm
MMRI Maumere 32.96 180 *e*P **P** **21 06 45.7 -0.1**
comp=E,512nm,1.4s
PDSI Padang 33.00 223 P **P** **21 06 46.8 +0.6**
comp=E,36nm,1.7s,comp=E,5μm
EDFI Ende, Flores 33.08 181 P **P** **21 06 46.0 -0.9**
comp=E,245nm,1.0s,comp=E,3μm
SRBI Singaraja 33.15 193 P **P** **21 06 49.9 +2.5**
comp=E,93nm,1.1s,comp=E,1μm
BLJI Banyuglugur 33.19 196 P **P** **21 06 48.7 +1.0**
comp=E,271nm,1.0s,comp=E,3μm
BOK Bokaro 33.20 276 *e*P **P** **21 06 49.9 +2.0**
BOK IAmb IAmb 21 06 51.1
comp=Z,167nm,0.6s
PKIN Phulchoki 33.24 283 *e*P **P** **21 06 50.5 +2.0**
comp=Z,202nm,0.9s
GSI Gunungsitoli 33.25 230 P **P** **21 06 48.8 +0.4**
comp=Z,120nm,0.9s
GSI Gunungsitoli 33.25 230 *e*P **P** **21 06 47.8 -0.6**
comp=Z,78nm,0.7s
GSI *e*PcP **PcP** **21 09 31.0 +1.6**
KRJI Kerinci 33.33 220 P **P** **21 06 50.3 +1.2**
comp=Z,391nm,1.0s,comp=Z,5μm
KKN Kakani 33.33 284 *e*P **P** **21 06 50.4 +1.2**
comp=Z,337nm,1.1s
NGJI Ngawi 33.43 200 P **P** **21 06 52.3 +2.5**
comp=Z,229nm,1.2s,comp=Z,3μm
PLAI Plampang 33.45 188 P **P** **21 06 50.7 +0.7**
comp=Z,103nm,0.8s,comp=Z,2μm
SMRI Semarang 33.46 202 P **P** **21 06 52.7 +2.6**
comp=Z,149nm,1.0s,comp=Z,4μm
SMRI Semarang 33.46 202 *e*P **P** **21 06 51.6 +1.5**
comp=Z,145nm,1.0s
SAUI Saumlaki 33.48 164 *e*P **P** **21 06 50.0 -0.3**
comp=Z,1μm,1.0s
DMN Daman 33.50 283 *e*P **P** **21 06 51.9 +1.2**
comp=Z,424nm,1.1s
DNP Denpasar 33.73 193 P **P** **21 06 54.1 +1.7**
comp=Z,858nm,1.4s,comp=Z,14μm
MASI Maura Aman, Be 33.73 218 P **P** **21 06 53.8 +1.3**
comp=Z,254nm,1.0s,comp=Z,4μm
GMJI Gumukmas 33.73 196 P **P** **21 06 54.9 +2.4**
comp=Z,89nm,1.0s,comp=Z,2μm
JAGI Jajag, Banyuwa 33.75 195 P **P** **21 06 54.6 +1.9**
comp=Z,70nm,1.0s
JAGI Jajag, Banyuwa 33.75 195 *e*P **P** **21 06 54.1 +1.4**
comp=Z,67nm,1.0s
BOD Bodaibo 33.80 352 ⇑*i*P **P** **21 06 52.2 -0.4**
BOD *e* 21 09 30.1
BOD pmax pmax
comp=Z,94nm,1.6s
KLI Kotabumi 33.80 213 P **P** **21 06 55.1 +2.0**
comp=Z,174nm,1.2s,comp=Z,3μm
MDSI Maura Dua 33.82 214 P **P** **21 06 53.7 +0.5**
comp=Z,100nm,1.0s,comp=Z,1μm
IGBI Denpasar 33.88 193 P **P** **21 06 54.8 +1.1**
comp=Z,360nm,1.3s,comp=Z,5μm
GKN Gorkha 33.89 284 *e*P **P** **21 06 55.1 +1.1**
comp=Z,525nm,1.0s
BWNR Bhubaneshwar 33.96 270 *e*P **P** **21 06 56.5 +2.0**
BLSI Bandar Lampung 34.05 211 P P 21 07 06.8 +11
SOEI Soe 34.13 177 P P 21 07 04.6 +8.6
SOEI Soe 34.13 177 *e*P **P** **21 06 54.2 -1.9**
comp=Z,109nm,0.8s
WMQ Urumqi 34.18 313 P **P** **21 06 58.6 +2.4**
WMQ pP pP 21 07 15.8 +1.9
WMQ sP sP 21 07 22.6 0.0
WMQ PP **PnPn** **21 08 08.9 -3.5**
WMQ S **S** **21 12 19.0 +1.7**
WMQ ScP **ScP** **21 13 11.7 +1.5**
WMQ pmax pmax
comp=Z,660nm,0.9s

WMQ pmax pmax
comp=Z,3μm,3.8s
WMQ LR LR
comp=Z,9μm,13.3s
WMQ LR LR
comp=Z,10μm,12.5s
WMQ LR LR
comp=Z,4μm,32.7s
SISI Saibi 34.19 225 P **P 21 06 56.9 +0.4**
comp=Z,137nm,0.9s
UGM Wanagama 34.24 201 P **P 21 06 59.2 +2.3**
comp=Z,292nm,1.7s,comp=Z,5μm
UGM Wanagama 34.24 201 *e*P **P 21 06 57.8 +0.9**
comp=Z,494nm,1.3s
KPJI Karang Pucung 34.26 204 P **P 21 06 58.8 +1.8**
comp=Z,161nm,1.4s,comp=Z,3μm
PCJI Pacitan 34.29 200 P pP 21 07 14.0 -1.0
LEM Lembang 34.30 207 P **P 21 06 59.7 +2.1**
comp=Z,128nm,0.9s,baz=60,slow=7.5,SNR=28
LEM S **S 21 12 24.2 +4.3**
comp=Z,11nm,0.7s,baz=295,slow=20,SNR=6.1
SBJI Serang 34.31 209 P **P 21 06 59.5 +2.0**
comp=Z,216nm,1.5s,comp=Z,6μm
LWLI Liwa 34.33 214 P **P 21 06 58.5 +0.7**
comp=Z,138nm,0.7s
MNAI Manna 34.35 216 *e*P **P 21 06 58.0 +0.1**
comp=Z,238nm,1.0s
DBJI Dramaga 34.42 208 P **P 21 07 00.5 +2.0**
comp=Z,271nm,1.3s,comp=Z,4μm
HVS Khovu-Aksy 34.48 328*d i*P **P 21 06 59.3 +0.5**
HVS pmax pmax
comp=Z,379nm,1.1s
BATI Baumata 34.55 178 P **P 21 06 57.9 -1.7**
comp=Z,39nm,0.4s,baz=168,slow=0.9,SNR=10
BATI PcP **PcP 21 09 34.4 +1.4**
comp=Z,195nm,1.0s,baz=271,slow=2.6,SNR=7.2
BATI Baumata 34.55 178 P **P 21 07 00.4 +0.9**
comp=Z,58nm,0.8s,comp=Z,644nm
KASI Kota Agung 34.55 213 P **P 21 07 00.2 +0.6**
comp=Z,126nm,0.8s
DANN Dangsing 34.65 285 *e*P **P 21 07 02.0 +1.3**
comp=Z,393nm,1.0s
KOLN Koldanda 34.82 284 *e*P **P 21 07 03.4 +1.3**
comp=Z,186nm,1.0s
CGJI Cibinong 34.94 210 P **P 21 07 03.4 +0.5**
comp=Z,78nm,0.8s,comp=Z,955nm
PYUN Piuthan 35.34 284 *e*P **P 21 07 08.1 +1.5**
comp=Z,502nm,1.0s
MANU Manus Island 35.90 134 *e*P **P 21 07 12.6 +1.4**
comp=Z,150nm,0.9s
CHLP Challavanipeta 36.02 268 *e*P **P 21 07 13.9 +1.6**
CHLP IAmb IAmb 21 07 15.7
comp=Z,285nm,1.0s
CHLP *e*S **S 21 12 47.1 +1.1**
SKR Severo-Kuril's 36.86 36 *e*P P 21 07 11.8 -7.2
SKR *e**SP pP 21 07 38.0 +1.2
SKR *e* 21 08 42.2
SKR *e*PPP PPP 21 09 08.4
SKR *e*SS SS 21 15 26.6 -13
SKR pmax pmax
comp=Z,700nm,8.2s
SKR pmax pmax
comp=Z,600nm,12.7s
SKR pmax pmax
comp=Z,151nm,1.1s
SKR MLR MLR
comp=Z,1μm,19.0s
VIS Vishakhapatnam 36.91 267 *i*P **P 21 07 19.8 0.0**
VIS *i*x x 21 13 04.9
ZSN Zaisan 37.45 317⇑*i*P **P 21 07 24.7 +0.6**
comp=Z,13nm,0.9s
ZSN *i*S **S 21 13 07.4 +0.1**
ZSN *e*SS **SS 21 15 54.2 +1.5**
YAK Yakutsk 37.82 6 *e*P **P 21 07 26.3 -0.7**
comp=Z,748nm,1.1s
YAK *e*PcP **PcP 21 09 42.5 +0.5**
YAK Yakutsk 37.82 6 *e*P **P 21 07 26.4 -0.5**
YAK *e**PP **pP 21 07 43.5 -1.3**
YAK *e* 21 08 55.7
YAK *e* 21 09 41.1
YAK *e*S **S 21 13 13.6 +1.3**
YAK *e**SS **sS 21 13 41.4 -1.5**
YAK *e*SSS SSS 21 16 19.7
YAK *e* 21 17 24.7
YAK pmax pmax
comp=Z,633nm,1.0s
YAK pmax pmax
comp=E,102nm,1.1s
YAK pmax pmax
comp=N,345nm,1.1s
YAK pmax pmax
comp=Z,458nm,1.8s
YAK pmax pmax
comp=N,473nm,2.0s
YAK pmax pmax
comp=E,62nm,2.1s
YAK smax smax
comp=N,712nm,1.5s
YAK smax smax
comp=E,197nm,1.3s
YAK MLR MLR
comp=Z,5μm,12.0s
YAK MLR MLR
comp=E,987nm,11.0s
YAK MLR MLR
comp=N,5μm,13.0s
MTN Manton Dam 38.12 166 *e*P **P 21 07 29.1 -0.9**
comp=N,2μm,1.8s
PVM Polavaram 38.60 267 *e*P **P 21 07 34.4 +0.3**
PVM IAmb IAmb 21 07 36.9
comp=Z,138nm,0.9s
PVM *e*S **S 21 13 25.0 -0.2**
PATS Pohnpei 38.68 111 *e*P **P 21 07 34.6 -0.2**
comp=Z,753nm,1.3s
MK01 Makanchi Array 38.81 315 *e*P **P 21 07 35.4 -0.2**
MK31 Makanchi Array 38.82 315 *e*P **P 21 07 36.7 +1.0**
MK31 Makanchi Array 38.82 315*ce*P **P 21 07 36.3 +0.6**
MK31 pmax pmax
comp=Z,239nm,0.6s
MKAR Makanchi Array 38.82 315 P **P 21 07 36.5 +0.8**
comp=Z,185nm,0.5s,baz=101,slow=11,SNR=2567
MKAR PcP **PcP 21 09 45.8 +0.2**
comp=Z,171nm,1.1s,baz=106,slow=3.9,SNR=8.8
MKAR ScP **ScP 21 13 27.0 -0.2**
comp=Z,18nm,0.8s,baz=108,slow=4.1,SNR=12
MKAR PKiKP **PKiKP 21 16 58.0 -0.8**
comp=Z,5.4nm,1.0s,baz=248,slow=2.0,SNR=5.0
MKAR ScS **ScS 21 17 36.5 -1.7**
comp=Z,6.8nm,1.1s,baz=96,slow=11,SNR=4.8
MKAR LR LR 21 25 02.4
comp=Z,3μm,18.5s,baz=98,slow=38
MKAR Makanchi Array 38.82 315 *e*P **P 21 07 36.5 +0.8**
comp=Z,2μm,0.6s
MKAR PcP **PcP 21 09 45.8 +0.2**
MKAR ScP **ScP 21 13 27.0 -0.2**
MKAR PKiKP **PKiKP 21 16 58.0 -0.8**
MKAR Makanchi Array 38.82 315 *e*P **P 21 07 36.5 +0.8**
MKAR 21 09 45.8
MKAR 21 13 27.0
MKAR *i* 21 16 58.0
MKAR pmax pmax
comp=Z,2μm,0.6s
PEA0B Petropavlovsk- 39.00 34 *e*P **P 21 07 36.9 -0.1**
comp=Z,49nm,1.2s
PETK Petropavlovsk- 39.00 34 P **P 21 07 36.0 -1.0**
comp=Z,8.1nm,0.7s,baz=224,slow=5.6,SNR=23
PETK PcP **PcP 21 09 46.2 +0.3**
comp=Z,38nm,1.0s,baz=180,slow=2.4,SNR=7.3
PETK ScP **ScP 21 13 27.2 -0.6**
comp=Z,7.2nm,0.9s,baz=226,slow=7.8,SNR=4.1
PETK PKiKP **PKiKP 21 16 57.6 -1.1**
comp=Z,6.4nm,1.0s,baz=119,slow=8.6,SNR=3.7
PETK LR LR 21 23 34.6
comp=Z,5μm,21.8s,baz=227,slow=36
PETK Petropavlovsk- 39.00 34 *e*P **P 21 07 35.7 -1.3**
PETK PcP **PcP 21 09 46.2 +0.3**
PETK ScP **ScP 21 13 27.2 -0.6**
PETK PKiKP **PKiKP 21 16 57.6 -1.1**
PETK Petropavlovsk- 39.00 34 P **P 21 07 36.0 -1.0**
PETK 21 09 46.2
PETK 21 13 27.2
PETK *i* 21 16 57.7
PETK pmax pmax
comp=Z,17nm,0.8s
PETK MLR MLR
comp=Z,5μm,21.8s

MAKZ Makanchi 39.03 315 *e*P **P 21 07 38.3 +0.9**
MAKZ Makanchi 39.03 315 *i*P **P 21 07 38.4 +1.0**
MAKZ pmax pmax
comp=Z,405nm,0.8s
PET Petropavlovsk 39.44 34 *e*P **P 21 07 38.9 -1.7**
comp=Z,115nm,1.1s
PET *e*PcP **PcP 21 09 47.8 +0.6**
PET Petropavlovsk 39.44 34*c i*P **P 21 07 39.1 -1.5**
PET *e**SP **sP 21 08 05.6 -1.6**
PET *e* 21 09 46.7
PET *e*S **S 21 13 37.8 +0.8**
PET pmax pmax
comp=Z,900nm,7.8s
PET pmax pmax
comp=Z,103nm,0.9s
PET pmax pmax
comp=Z,800nm,12.0s
PET MLR MLR
comp=Z,6μm,22.0s
DDI Dehra Dun 39.53 288 *e*P **P 21 07 41.4 -0.4**
SHLS Shalkode 39.66 309⇑*i*P **P 21 07 41.9 -0.9**
comp=Z,254nm,0.8s
SHLS *i*S **S 21 13 39.1 -1.7**
PDGK Podgornoye 39.68 309 *i*P **P 21 07 43.6 +0.6**
PDGK pmax pmax
comp=Z,997nm,0.8s
NGP Nagpur 39.91 274 *e*P **P 21 07 45.1 +0.1**
NGP IAmb IAmb 21 07 48.3
comp=Z,3μm,3.1s
NGP *ex* x 21 13 39.8
UZB Uzynbulak 39.97 309 *i*P **P 21 07 47.0 +1.6**
comp=Z,235nm,1.3s
UZB *i*S **S 21 13 48.1 +2.6**
UZB *e*SS **SnSn 21 16 49.5 -2.8**
RPR Rampur 40.26 271 *e*P **P 21 07 48.4 +0.5**
RPR IAmb IAmb 21 07 50.5
comp=Z,189nm,0.9s
RPR *e*S **S 21 13 51.3 +1.2**
SMLA Simla 40.26 290 *e*P **P 21 07 47.6 -0.1**
SMLA IAmb IAmb 21 07 52.6
comp=Z,2μm,2.4s
SMLA IAMs_20 IAMs_20 21 49 17.5
comp=Z,414nm,9.9s
PRZ Przheval'sk 40.27 307 *e*P **P 21 07 50.4 +2.5**
comp=Z,460nm,0.9s
PRZ Przheval'sk 40.27 307 *e*P **P 21 07 50.4 +2.5**
PRZ pmax pmax
comp=Z,460nm,0.9s
MA2 Magadan 40.27 22 P **P 21 07 46.6 -0.9**
comp=Z,33nm,0.9s,baz=206,slow=9.7,SNR=10
MA2 PcP **PcP 21 09 49.9 +0.1**
comp=Z,87nm,1.1s,baz=180,slow=2.9,SNR=7.0
MA2 ScP **ScP 21 13 31.5 -1.0**
comp=Z,17nm,0.8s,baz=183,slow=1.5,SNR=6.6
MA2 Magadan 40.27 22 *e*P **P 21 07 46.0 -1.5**
comp=Z,65nm,1.1s
MA2 PcP **PcP 21 09 49.9 +0.1**
MA2 ScP **ScP 21 13 31.5 -1.0**
MA2 Magadan 40.27 22 *i*P **P 21 07 46.7 -0.8**
MA2 pmax pmax
comp=Z,53nm,0.8s
KPKS Kokpek 40.28 309 *i*P **P 21 07 49.4 +1.5**
comp=Z,246nm,0.9s
KPKS *i*S **S 21 13 52.7 +2.6**
KPKS *e*SS **SS 21 16 55.2 +4.2**
KPKS LR LR 21 27 10.5
comp=Z,454nm,9.7s
NDI New Delhi 40.37 286 *e*P **P 21 07 49.0 +0.3**
SATY Saty 40.39 308 *i*P **P 21 07 50.7 +1.9**
comp=Z,285nm,1.0s
SATY *i*S **S 21 13 54.8 +3.1**
SATY *i*SS **SnSn 21 16 57.9 -4.4**
ZHN Zhinishke 40.39 308⇑*i*P **P 21 07 50.7 +1.9**
comp=Z,125nm,1.1s
ZHN LR LR 21 27 11.9
comp=Z,380nm,10.9s
ZAA0 Zalesovo Array 40.53 326 *e*P **P 21 07 49.5 -0.2**
comp=Z,517nm,0.9s
ZALV Zalesovo Beam 40.53 326 P **P 21 07 49.5 -0.2**
comp=Z,375nm,0.8s,baz=113,slow=7.7,SNR=1303
ZALV PcP **PcP 21 09 50.5 -0.3**
comp=Z,38nm,0.6s,baz=100,slow=4.3,SNR=7.7
ZALV ScP **ScP 21 13 32.2 -1.4**
comp=Z,18nm,0.8s,baz=122,slow=3.1,SNR=12
ZALV PKiKP **PKiKP 21 16 58.9 -1.1**
comp=Z,3.8nm,0.7s,baz=156,slow=1.4,SNR=6.3
ZALV ScS **ScS 21 17 38.8 -9.1**
comp=Z,2.9nm,0.9s,baz=95,slow=11,SNR=4.1
ZALV LR LR 21 26 01.5
comp=Z,3μm,18.6s,baz=130,slow=38
ZALV Zalesovo Beam 40.53 326 *e*P **P 21 07 48.4 -1.3**
ZALV PcP **PcP 21 09 50.5 -0.3**
ZALV ScP **ScP 21 13 32.2 -1.4**
ZALV PKiKP **PKiKP 21 16 58.9 -1.1**
ZALV Zalesovo Beam 40.53 326 P **P 21 07 49.5 -0.2**
ZALV 21 09 50.5
ZALV 21 17 38.8
ZALV pmax pmax
comp=Z,374nm,0.8s
ZALV MLR MLR
comp=Z,3μm,18.6s
ADKI Addanki 40.55 266 *e*P **P 21 07 51.4 +1.1**
ADKI IAmb IAmb 21 07 53.5
comp=Z,146nm,0.9s
ADKI *e*S **S 21 13 55.7 +1.2**
RABL Rabaul 40.71 130 *e*P **P 21 07 53.5 +1.9**
comp=Z,472nm,0.9s
NJS Nagarjunasagar 40.93 267 *e*P **P 21 07 53.6 +0.2**
NJS IAmb IAmb 21 07 56.1
comp=Z,128nm,1.0s
NJS *e*S **S 21 13 59.2 -0.8**
BHPL Bhopal 40.94 278 *e*P **P 21 07 52.7 -0.8**
BHPL IAmb IAmb 21 07 54.4
comp=Z,90nm,1.0s
DHRM DHARAMSHALA 40.97 292 *e*P **P 21 07 53.8 -0.1**
DHRM IAmb IAmb 21 07 58.7
comp=Z,200nm,1.1s
SRSP Sriramsagar 41.11 271 *e*P **P 21 07 55.2 +0.3**
SRSP IAmb IAmb 21 07 57.3
comp=Z,145nm,0.9s
SRSP *e*S **S 21 14 01.4 -1.3**
WAKE Wake Island 41.33 88 *e*P **P 21 07 57.7 +1.0**
comp=Z,675nm,1.4s
HYB Hyderabad 41.35 269 *i*P **P 21 07 59.0 +2.1**
HYB *e*S **S 21 14 09.0 +2.7**
HYB Hyderabad 41.35 269 *e*P **P 21 07 57.1 +0.2**
HYB IAmb IAmb 21 07 58.5
comp=Z,164nm,1.1s
HYBB Hyderabad (bro 41.35 269 *e*P **P 21 07 58.1 +1.2**
HYBB IAmb IAmb 21 07 59.5
comp=Z,166nm,1.1s
HYBB *e*S **S 21 14 05.6 -0.8**
MDOK Medeo 41.38 308 *i*P **P 21 07 59.1 +2.1**
comp=Z,2μm,0.7s
MDOK *i*S **S 21 14 09.8 +3.3**
MDOK *i*SS **SS 21 17 18.1 +5.3**
MDOK LR LR 21 28 03.3
comp=Z,1μm,11.8s
SEM Semipalatinsk 41.42 320⇑*i*P **P 21 07 57.5 +0.1**
comp=Z,392nm,1.2s
SEM *e*S **S 21 14 08.2 +1.1**
H11N1 WAKE ISLAND Hy 41.43 88 P **P 21 07 53.3 -4.0**
baz=272,slow=9.0,SNR=4.9
H11N1 T T 21 53 50.2
baz=283,slow=75,SNR=22
H11N2 WAKE ISLAND Hy 41.43 88 P **P 21 07 58.9 +1.6**
baz=272,slow=9.0,SNR=5.4
H11N2 T T 21 53 49.7
baz=283,slow=75,SNR=26
H11N3 WAKE ISLAND Hy 41.44 88 P **P 21 07 58.8 +1.4**
baz=272,slow=9.0,SNR=12
H11N3 T T 21 53 43.7
baz=283,slow=75,SNR=20
SRLM Srisailam 41.45 267 *e*P **P 21 07 57.7 0.0**
SRLM IAmb IAmb 21 08 00.2
comp=Z,152nm,1.1s
SRLM *e*S **S 21 14 09.6 +1.8**
AAA Alma-Ata 41.48 308 *i*P **P 21 08 00.2 +2.4**
AAA *e*S **S 21 14 11.1 +3.2**
AAA pmax pmax
comp=Z,400nm,1.9s
AAA smax smax
comp=E,2μm,10.3s
AAA MLR MLR
comp=Z,2μm,13.0s

SKHT Srikalahasti 41.52 263 *e*P **P 21 07 59.5 +1.2**
SKHT IAmb IAmb 21 08 01.5
comp=Z,133nm,0.8s
SKHT *e*S **S 21 14 09.5 +0.7**
PMG Port Moresby 41.53 141 P **P 21 07 59.5 +1.2**
comp=Z,339nm,0.9s,baz=350,slow=6.6,SNR=100
PMG LR LR 21 24 44.6
comp=Z,2μm,19.7s,baz=330,slow=35
PMG Port Moresby 41.53 141 *e*P **P 21 07 59.5 +1.2**
comp=Z,542nm,1.0s
PMG Port Moresby 41.53 141 *e*P **P 21 07 59.5 +1.2**
PMG pmax pmax
comp=Z,542nm,1.0s
H11S3 WAKE ISLAND Hy 41.57 89 P **P 21 07 57.5 -1.0**
baz=242,slow=8.9,SNR=3.6
H11S3 T T 21 53 34.4
baz=284,slow=75,SNR=169
H11S1 WAKE ISLAND Hy 41.58 89 P **P 21 07 59.7 +1.2**
baz=242,slow=8.9,SNR=3.5
H11S1 T T 21 53 59.4
baz=284,slow=75,SNR=39
H11S2 WAKE ISLAND Hy 41.59 89 P **P 21 07 59.9 +1.3**
baz=242,slow=8.9,SNR=3.2
H11S2 T T 21 53 50.8
baz=284,slow=75,SNR=35
KSH Kashi 41.59 303⇑*i*P P 21 08 03.6 +4.8
KSH pP sP 21 08 21.6 -3.9
KSH PcP **PcP 21 09 56.7 +2.0**
KSH ScP **ScP 21 13 39.9 +1.5**
KSH PcS **PcS 21 13 46.7 +0.4**
KSH S **S 21 14 15.4 +5.7**
KSH SS **SS 21 17 17.0 -0.1**
KSH ScS **ScS 21 17 54.2 -1.0**
KSH pmax pmax
comp=Z,680nm,1.2s
KSH LR LR
comp=Z,6μm,12.7s
KSH LR LR
comp=Z,6μm,12.5s
KSH LR LR
comp=Z,11μm,15.5s
NVS Novosibirsk 41.78 327⇓*i*P **P 21 08 00.8 +0.9**
NVS *i* 21 09 55.2
NVS *e*S **S 21 14 11.6 -0.2**
NVS *e* 21 17 50.1
NVS pmax pmax
comp=Z,284nm,1.0s
NVS pmax pmax
comp=N,152nm,1.1s
NVS pmax pmax
comp=E,227nm,1.1s
NVS smax smax
comp=E,427nm,2.2s
ULHL Ulahol 41.79 307 P **P 21 08 03.4 +2.9**
SNR=52
NRN Naryn 41.83 305 *e*P **P 21 08 03.0 +2.1**
comp=E,894nm,1.2s
NRN Naryn 41.83 305 *e*P **P 21 08 03.1 +2.1**
NRN pmax pmax
comp=Z,894nm,1.2s
KUU Kurty 42.03 309⇑*i*P **P 21 08 03.9 +1.6**
comp=Z,270nm,0.8s
KUU *i*S **S 21 14 18.6 +2.7**
KUU *e*SS **SS 21 17 30.6 +5.1**
TKM2 Tokmak 2 42.38 307 P **P 21 08 07.1 +1.8**
SNR=458
TKM2 Tokmak 2 42.38 307 *i*P **P 21 08 07.4 +2.1**
TKM2 pmax pmax
comp=Z,501nm,0.8s
KZA Kyzart 42.49 306 P **P 21 08 09.2 +2.9**
SNR=214
KURK Kurchatov 42.50 319 *e*P **P 21 08 06.3 +0.5**
comp=Z,873nm,1.2s
KURK PcP **PcP 21 09 57.6 +0.3**
KURK ScP **ScP 21 13 40.8 -0.7**
KURK Kurchatov 42.50 319 P **P 21 08 06.5 +0.7**
SNR=359
KURK Kurchatov 42.50 319 P **P 21 08 06.5 +0.7**
SNR=359
KURK Kurchatov 42.50 319*c i*P **P 21 08 06.1 +0.2**
KURK pmax pmax
comp=Z,907nm,1.2s
KURBB Kurchatov Arra 42.52 319 P **P 21 08 06.5 +0.4**
comp=Z,326nm,1.0s,baz=113,slow=7.4,SNR=624
KURBB PcP **PcP 21 09 57.6 +0.2**
comp=Z,61nm,1.0s,baz=102,slow=4.1,SNR=6.4
KURBB ScP **ScP 21 13 40.8 -0.8**
comp=Z,11nm,0.7s,baz=117,slow=3.4,SNR=12
KURBB ScS **ScS 21 17 56.6 -3.5**
comp=Z,1.1nm,0.2s,baz=118,slow=4.4,SNR=4.6
KBK Karagaybulak 42.80 307 P **P 21 08 10.8 +2.2**
SNR=178
KLRI Killari 42.94 271 *e*P **P 21 08 10.0 +0.1**
KLRI IAmb IAmb 21 08 12.2
comp=Z,403nm,0.8s
KLRI *e*S **S 21 14 29.2 -0.6**
CHMS Chumysh 43.00 307 P **P 21 08 11.9 +1.8**
SNR=272
UCH Uchtor 43.05 306 P **P 21 08 13.6 +2.6**
SNR=671
FRU Bishkek 43.07 307 *e*P **P 21 08 12.0 +1.3**
FRU *e* 21 14 36.0
FRU *i* 21 18 00.0
FRU pmax pmax
comp=Z,80nm,1.6s
FRU MLR MLR
comp=E,3μm,14.0s
AAK Ala-Archa 43.13 307 LR LR 21 28 08.2
comp=E,1μm,18.4s,baz=80,slow=39
AAK Ala-Archa 43.13 307 P **P 21 08 13.4 +2.1**
SNR=98
AAK Ala-Archa 43.13 307 *e*P **P 21 08 13.2 +1.9**
comp=E,186nm,1.0s
AAK Ala-Archa 43.13 307 P **P 21 08 13.4 +2.1**
SNR=108
AAK Ala-Archa 43.13 307 P **P 21 08 13.4 +2.1**
SNR=108
AAK Ala-Archa 43.13 307 *i*P **P 21 08 13.1 +1.8**
SNR=117
AAK Ala-Archa 43.13 307*c i*P **P 21 08 12.9 +1.6**
AAK pmax pmax
comp=Z,233nm,1.2s
USP Ospenovka 43.23 308 P **P 21 08 13.6 +1.7**
SNR=126
SEY Seymchan 43.30 20 P **P 21 08 12.5 +0.4**
comp=Z,21nm,0.8s,baz=215,slow=5.3,SNR=30
SEY PcP **PcP 21 10 00.4 +0.7**
comp=Z,102nm,0.8s,baz=224,slow=4.8,SNR=21
URV Uravakonda 43.31 266 *e*P **P 21 08 13.3 +0.4**
URV IAmb IAmb 21 08 15.5
comp=Z,119nm,0.7s
URV *e*S **S 21 14 37.2 +1.9**
COEN Coen 43.33 150 *e*P **P 21 08 14.3 +1.4**
comp=Z,519nm,0.8s
PALK Pallekele 43.34 254 P **P 21 08 15.1 +2.0**
comp=Z,70nm,1.0s,baz=116,slow=4.9,SNR=13
PALK LR LR 21 26 26.5
comp=Z,2μm,21.4s,baz=125,slow=36
PALK Pallekele 43.34 254 *e*P **P 21 08 15.8 +2.7**
comp=Z,162nm,1.2s
PALK Pallekele 43.34 254 *i*P **P 21 08 13.9 +0.8**
SNR=8.9
PALK Pallekele 43.34 254 *e*P **P 21 08 15.8 +2.7**
PALK pmax pmax
comp=Z,162nm,1.2s
NIL Nilore 43.50 294 *e*P **P 21 08 15.4 +1.2**
comp=Z,459nm,0.9s
NIL Nilore 43.50 294 *e*P **P 21 08 15.4 +1.2**
NIL pmax pmax
comp=Z,459nm,0.9s
SFK Sufi-Kurgan 43.54 303 *i*P **P 21 08 16.5 +1.8**
SFK pmax pmax
comp=Z,375nm,1.2s
AML Almayashu 43.64 306 P **P 21 08 18.1 +2.4**
SNR=254
EKS2 Erkin-Say 43.66 307 P **P 21 08 17.4 +2.0**
SNR=99
BTLS Baital 43.87 310⇑*i*P **P 21 08 18.3 +1.3**
comp=Z,136nm,0.9s
BTLS *i*SS SS 21 18 05.6 +4.3
MNAS Manas 44.56 306 *i*P **P 21 08 24.6 +1.8**
MNAS pmax pmax
comp=Z,691nm,1.3s
POO Poona 45.31 272 *e*P **P 21 08 25.8 -3.0**
POO IAmb IAmb 21 08 27.0
comp=Z,113μm,9.7s

MBWA Marble Bar 45.48 183 *eP* **P 21 08 29.0 -1.0**
comp=Z,132nm,1.0s
WRAB Tennant Creek 45.72 164 *eP* **P 21 08 32.5 +0.7**
comp=Z,983nm,0.8s
WRAB Tennant Creek 45.72 164*c i*P **P 21 08 32.3 +0.5**
WRAB pmax pmax
comp=Z,957nm,0.9s
WRA Warramunga Arr 45.72 164 P **P 21 08 32.6 +0.8**
comp=Z,700nm,0.7s,baz=347,slow=8.6,SNR=708
WRA PcP **PcP 21 10 09.0 +0.3**
comp=Z,80nm,1.0s,baz=344,slow=3.5,SNR=6.6
WRA S **S 21 15 07.3 -2.6**
comp=Z,11nm,1.1s,baz=339,slow=12,SNR=14
WRA PKP2ab 21 41 04.8
comp=Z,7.7nm,1.2s,baz=174,slow=3.7,SNR=6.2
WRA P4KPbc 21 46 20.8
comp=Z,3.0nm,0.8s,baz=348,slow=4.9,SNR=12
WRA Warramunga Arr 45.72 164 *i* P **P 21 08 29.5 -2.4**
WRA pmax pmax
comp=Z,700nm,0.7s
WB2 Warramunga Arr 45.73 164 *eP* **P 21 08 32.6 +0.7**
BRZS Berezniki 45.90 317⇑*i*P **P 21 08 34.0 +1.0**
BRZS LR LR 21 29 14.5
comp=Z,226nm,0.9s
comp=Z,282nm,10.4s
KK31 Karatay Array 46.09 307 *eP* **P 21 08 36.0 +1.3**
KK31 Karatay Array 46.09 307*ceP* **P 21 08 36.4 +1.7**
KK31 pmax pmax
comp=Z,72nm,0.7s
KKAR Karatay Array 46.09 307 *eP* **P 21 08 36.0 +1.3**
KKAR Karatay Array 46.09 307 *eP* **P 21 08 36.0 +1.3**
CHM Chimkent 46.68 306⇑*i*P **P 21 08 41.3 +2.0**
comp=Z,154nm,1.4s
CHM *e*S **S 21 15 26.7 +3.3**
KBL Kabul 46.96 295 *eP* **P 21 08 43.1 +1.3**
comp=Z,967nm,1.6s
KBL Kabul 46.96 295 *eP* **P 21 08 43.1 +1.3**
KBL pmax pmax
comp=Z,967nm,1.6s
TIXI Tiksi 47.30 3 ScP **ScP 21 13 59.8 -1.1**
comp=Z,10.0nm,0.9s,baz=134,slow=6.1,SNR=4.7
TIXI S **S 21 15 28.9 -2.3**
comp=Z,12nm,1.1s,baz=358,slow=16,SNR=3.6
TIXI Tiksi 47.30 3 *eP* **P 21 08 43.0 -0.6**
TIXI ScP **ScP 21 13 59.8 -1.1**
TIXI S **S 21 15 28.9 -2.3**
TIXI Tiksi 47.30 3*c i*P **P 21 08 42.5 -1.1**
TIXI pmax pmax
comp=Z,720nm,1.2s
TIXI MLR MLR
comp=Z,4μm,16.0s
SMY Shemya 47.90 40 *eP* **P 21 08 49.5 +1.0**
comp=Z,233nm,1.1s
SMY Shemya 47.90 40 *eP* **P 21 08 49.5 +1.0**
SMY pmax pmax
comp=Z,233nm,1.1s
BHJ Bhuj 47.93 280 *eP* **P 21 08 50.7 +1.5**
BHJ IAmb IAmb 21 08 54.7
comp=Z,254nm,1.2s
BVAR Borovoye Array 48.07 320 P **P 21 08 50.9 +1.0**
comp=Z,138nm,0.6s,baz=105,slow=7.9,SNR=507
BVAR PcP **PcP 21 10 17.2 +0.6**
comp=Z,19nm,0.4s,baz=100,slow=6.5,SNR=5.0
BVAR ScP **ScP 21 14 04.0 -0.6**
comp=Z,36nm,1.1s,baz=98,slow=4.5,SNR=9.9
BVAR S **S 21 15 41.4 -1.4**
comp=Z,4.6nm,0.9s,baz=124,slow=13,SNR=4.7
BVAR ScS **ScS 21 18 33.2 -2.6**
comp=Z,3.9nm,0.9s,baz=89,slow=7.7,SNR=4.3
BVAR LR LR 21 30 11.4
comp=Z,2μm,19.4s,baz=100,slow=37
BRVK Borovoye 48.14 320 *eP* **P 21 08 51.1 +0.6**
BRVK Borovoye 48.14 320 P **P 21 08 51.2 +0.8**
SNR=250
BRVK Borovoye 48.14 320 P **P 21 08 51.2 +0.8**
SNR=250
BRVK Borovoye 48.14 320*c i*P **P 21 08 50.9 +0.5**
BRVK pmax pmax
comp=Z,766nm,1.2s
AS31 Alice Springs 49.20 166 *eP* **P 21 08 59.6 +0.7**
comp=Z,98nm,0.8s
ASAR Alice Springs 49.21 166 P **P 21 08 59.8 +0.9**
comp=Z,336nm,0.8s,baz=344,slow=7.0,SNR=1056
ASAR PcP **PcP 21 10 21.8 +0.7**
comp=Z,68nm,0.8s,baz=348,slow=3.2,SNR=7.4
ASAR ScP **ScP 21 14 08.7 -1.1**
comp=Z,4.8nm,0.9s,baz=347,slow=3.4,SNR=5.2
ASAR S **S 21 15 59.6 +0.3**
comp=Z,9.4nm,1.1s,baz=349,slow=23,SNR=9.4
ASAR LR LR 21 31 49.8
comp=Z,258nm,19.0s,baz=334,slow=38
ASAR PKPPKP P'P'df 21 39 35.6 -19
comp=Z,5.5nm,1.0s,baz=130,slow=2.9,SNR=11
ASAR PKP2ab 21 40 47.8
comp=Z,6.7nm,1.1s,baz=161,slow=4.1,SNR=4.7
ASAR P4KPbc 21 46 35.5
comp=Z,7.4nm,0.8s,baz=347,slow=4.2,SNR=61
AS01 Alice Springs 49.22 166 *eP* **P 21 08 57.8 -1.1**
NRIK Noril'sk 49.35 345 P **P 21 08 58.9 -0.5**
comp=Z,181nm,1.0s,baz=129,slow=7.4,SNR=180
NRIK PcP **PcP 21 10 21.5 +0.6**
comp=Z,216nm,1.0s,baz=122,slow=3.0,SNR=14
NRIK ScP **ScP 21 14 08.2 -1.4**
comp=Z,15nm,0.8s,baz=170,slow=6.5,SNR=3.9
NRIK LR LR 21 31 49.4
comp=Z,2μm,20.0s,baz=142,slow=38
HNR Honiara 49.86 128 *eP* **P 21 09 04.0 0.0**
HNR Honiara 49.86 128 P **P 21 09 05.2 +1.2**
comp=Z,83nm,0.9s,baz=150,slow=6.6,SNR=17
HNR LR LR 21 28 51.6
comp=Z,956nm,20.1s,baz=288,slow=34
HNR Honiara 49.86 128 *eP* **P 21 09 05.0 +0.9**
comp=Z,311nm,1.1s
CTA Charters Tower 50.09 150 P **P 21 09 07.2 +1.5**
comp=Z,287nm,1.1s,baz=331,slow=9.7,SNR=112
CTA PcP **PcP 21 10 24.8 +0.4**
comp=Z,59nm,1.0s,baz=291,slow=2.4,SNR=3.3
CTA LR LR 21 30 15.1
comp=Z,986nm,19.0s,baz=336,slow=36
CTAO Charters Tower 50.09 150 *eP* **P 21 09 07.2 +1.5**
comp=Z,443nm,1.1s
CTAO Charters Tower 50.09 150 *eP* **P 21 09 07.2 +1.5**
CTAO pmax pmax
comp=Z,443nm,1.1s
BILL Bilibino 51.01 20 *eP* **P 21 09 11.5 -0.5**
comp=Z,223nm,1.1s
BILL Bilibino 51.01 20*c i*P **P 21 09 11.1 -0.9**
BILL *i* 21 09 32.1
BILL *i* 21 10 27.0
BILL *i* S **S 21 16 27.2 +3.9**
BILL *i* SS **SS 21 19 53.0 -5.8**
BILL pmax pmax
comp=Z,91nm,1.2s
BILL MLR MLR
comp=Z,3μm,19.0s
MIDW Midway 53.67 72 *eP* **P 21 09 32.9 +0.6**
comp=Z,294nm,1.0s
AB31 Akbulak array 53.95 314*ceP* **P 21 09 34.8 +0.8**
AB31 pmax pmax
comp=Z,237nm,0.6s
ABKAR Akbulak array 53.95 314 *eP* **P 21 09 35.1 +1.1**
SVE Sverdlovsk 54.39 323*d i*P **P 21 09 34.7 -2.4**
SVE *e*S **S 21 17 04.6 -5.0**
SVE *e* 21 20 46.6
SVE pmax pmax
comp=Z,543nm,1.3s
SVE MLR MLR
comp=Z,2μm,17.0s
AKTO Aktyubinsk 55.26 315 P **P 21 09 44.1 +0.6**
comp=Z,119nm,1.0s,baz=91,slow=8.8,SNR=182
AKTO ScP **ScP 21 14 35.3 -0.5**
comp=Z,12nm,0.8s,baz=104,slow=4.0,SNR=4.6
AKTO LR LR 21 34 21.4
comp=Z,2μm,21.8s,baz=97,slow=37
AKTO Aktyubinsk 55.26 315 *i* P **P 21 09 43.9 +0.4**
AKTO pmax pmax
comp=Z,290nm,1.2s
FORT Forrest 55.27 174 *eP* **P 21 09 43.7 +0.1**
comp=Z,380nm,0.9s
ARU Arti 55.46 323 P **P 21 09 44.6 -0.2**
comp=Z,103nm,0.6s,baz=97,slow=3.9,SNR=306
ARU ScP **ScP 21 14 35.1 -1.4**
comp=Z,5.2nm,0.6s,baz=75,slow=0.7,SNR=4.3
ARU LR LR 21 35 54.9
comp=Z,1μm,19.3s,baz=92,slow=38
ARU PKPPKP **P'P'df 21 39 49.7 -1.6**
comp=Z,1.0nm,0.5s,baz=282,slow=20,SNR=3.3
ARU Arti 55.46 323 *eP* **P 21 09 44.6 -0.2**
comp=Z,544nm,1.2s
ARU ScP **ScP 21 14 35.1 -1.4**
ARU P'P' 21 39 49.8
ARU Arti 55.46 323*c i*P **P 21 09 44.5 -0.3**
ARU *PP **pP 21 10 01.0 -2.7**
ARU 21 10 43.6
ARU 21 11 47.6
ARU *e*S **S 21 17 23.6 -0.5**
ARU *SS **sS 21 17 50.9 -5.3**
ARU 21 19 20.3
ARU SS **SS 21 21 05.2 -4.2**
ARU SSS SSS 21 23 21.8
ARU pmax pmax
comp=Z,747nm,1.7s
ARU MLR MLR
comp=Z,3μm,28.0s
GEYT Alibeck 55.52 300 P **P 21 09 47.6 +1.9**
comp=Z,177nm,1.0s,baz=72,slow=4.8,SNR=13
GEYT LR LR 21 37 39.0
comp=Z,3μm,20.7s,baz=45,slow=40
GYA0B ALIBECK ARRAY 55.52 300 *eP* **P 21 09 47.9 +2.2**
comp=Z,434nm,1.1s
SOKR Solikamsk 56.82 326*c i*P P 21 09 59.3 +4.9
SOKR S **S 21 17 45.3 +3.5**
SOKR SS **SS 21 21 36.3 +5.8**
SOKR pmax pmax
comp=Z,347nm,1.5s
SOKR MLR MLR
comp=Z,3μm,23.0s
EIDS Eidsvold 56.87 149 *eP* **P 21 09 55.9 +0.7**
comp=Z,97nm,1.0s
NWAO Narrogin (SRO) 57.34 185 P **P 21 09 58.3 0.0**
comp=Z,104nm,1.0s,baz=243,slow=6.4,SNR=42
NWAO LR LR 21 35 00.5
comp=Z,324nm,20.9s,baz=231,slow=36
NWAO Narrogin (SRO) 57.34 185 *eP* **P 21 09 57.7 -0.6**
comp=Z,118nm,0.9s
NWAO *ep*P **pP 21 10 17.7 +0.4**
NWAO Narrogin (SRO) 57.34 185 P **P 21 09 58.8 +0.4**
SNR=6.6
WBK Wadi Bani Khal 57.64 282 P **P 21 10 05.0 +4.1**
SNR=7.4
WBK Wadi Bani Khal 57.64 282 P **P 21 10 05.0 +4.1**
SNR=7.4
WSAR Wadi Sarin 57.78 283 P **P 21 10 03.5 +1.7**
comp=Z,78nm,0.9s,baz=96,slow=10.0,SNR=30
WSAR LR LR 21 37 14.4
comp=Z,2μm,21.7s,baz=98,slow=38
NIKH Nikolski High 58.14 42 *eP* **P 21 10 04.7 +0.8**
comp=Z,158nm,0.9s
BIDO Bidbid 58.15 283 P **P 21 10 08.0 +3.6**
SNR=10.0
BIDO Bidbid 58.15 283 P **P 21 10 08.0 +3.6**
SNR=10.0
SMDO Samad 58.34 283 P P 21 10 14.0 +8.1
SNR=15
BBOO Buckleboo 58.50 166 *eP* **P 21 10 07.2 +0.7**
comp=Z,565nm,0.9s
HOQ Hoqain 58.86 284 P **P 21 10 13.0 +3.6**
SNR=15
HOQ Hoqain 58.86 284 P **P 21 10 13.0 +3.6**
SNR=15
STKA Stephens Creek 59.03 161 P **P 21 10 10.9 +0.7**
comp=Z,147nm,0.8s,baz=336,slow=7.4,SNR=237
STKA LR LR 21 38 35.8
comp=Z,674nm,18.8s,baz=346,slow=39
STKA PKPPKP **P'P'df 21 39 42.5 +2.3**
comp=Z,1.7nm,0.7s,baz=154,slow=6.0,SNR=3.2
STKA PKP2bc 21 39 53.4
comp=Z,17nm,1.2s,baz=280,slow=0.5,SNR=6.5
STKA Stephens Creek 59.03 161 *eP* **P 21 10 10.9 +0.7**
comp=Z,48nm,0.9s
STKA P'P' 21 39 42.5
STKA ⇑*e* 21 39 53.4
STKA Stephens Creek 59.03 161 *eP* **P 21 10 10.9 +0.7**
STKA pmax pmax
comp=Z,48nm,0.9s
BANOM Banah 59.15 287 *i* P **P 21 10 12.5 +1.1**
SNR=9.4
BSY Bisya 59.18 283 P P 21 10 18.0 +6.4
SNR=22
BSY Bisya 59.18 283 P P 21 10 18.0 +6.4
SNR=22
SHME Shamm 59.26 287 *i* P **P 21 10 13.5 +1.3**
SNR=7.7
MDH Madha 59.31 286 *i* P **P 21 10 12.9 +0.5**
SNR=5.5
SOHO SOHO 59.40 285 *i* P **P 21 10 13.9 +0.9**
SNR=37
MSFE Esma-Masafi 59.42 286 *i* P **P 21 10 14.8 +1.6**
SNR=14
UOSS Minazif 59.48 286 *eP* **P 21 10 14.9 +1.3**
comp=Z,37nm,1.0s
UOSS Minazif 59.48 286 P **P 21 10 13.8 +0.2**
HATD Hatta, Dubai 59.58 285 P **P 21 10 17.1 +2.8**
SNR=9.4
HATD Hatta, Dubai 59.58 285 P **P 21 10 17.1 +2.8**
SNR=9.4
HATD Hatta, Dubai 59.58 285 *i* P **P 21 10 15.8 +1.5**
SNR=25
ARQ Araqi 59.62 284 P P 21 10 21.0 +6.3
SNR=17
ARQ Araqi 59.62 284 P P 21 10 21.0 +6.3
SNR=17
UMQ Umm Al-Quwin 59.81 286 P **P 21 10 18.7 +2.9**
NAZ Nazwa, Dubai 59.95 286 P **P 21 10 20.0 +3.2**
SNR=8.8
NAZ Nazwa, Dubai 59.95 286 P **P 21 10 20.0 +3.2**
SNR=8.8
NAZ Nazwa, Dubai 59.95 286 *i* P **P 21 10 18.3 +1.5**
SNR=16
ALNE Al Ain 60.11 285 *i* P **P 21 10 20.1 +2.2**
SNR=39
ASUD Al Ashush, Dub 60.33 285 P **P 21 10 23.0 +3.5**
SNR=7.8
ASUD Al Ashush, Dub 60.33 285 P **P 21 10 23.0 +3.5**
SNR=7.8
ASUD Al Ashush, Dub 60.33 285 *i* P **P 21 10 21.4 +2.0**
SNR=11
AJN Ajban 60.65 285 *i* P **P 21 10 22.9 +1.3**
SNR=5.5
ARMA Armidale 61.44 151 *eP* **P 21 10 28.7 +1.9**
comp=Z,116nm,1.0s
RDOG Red Dog Mine 61.80 24 *eP* **P 21 10 29.2 +0.5**
comp=Z,152nm,1.2s
SHAO Shalim 61.98 278 *i* P **P 21 10 30.9 +0.2**
SNR=5.4
MZR Muzera 62.40 284 *i* P **P 21 10 34.5 +1.0**
SNR=38
PRGR Permogore 62.43 328⇑*i*P **P 21 10 32.4 -0.6**
PRGR *e* 21 11 07.7
PRGR *e*S **S 21 18 51.1 -3.0**
PRGR pmax pmax
comp=Z,216nm,0.8s
MAK Makhachkala 62.91 307 *eP* **P 21 10 36.9 +0.4**
MAK *e**PP **pP 21 10 52.2 -3.5**
MAK *e**SP **sP 21 11 02.0 -2.0**
MAK *i* S **S 21 19 01.5 +0.9**
MAK *e**SS **sS 21 19 32.1 -1.3**
MAK pmax pmax
comp=Z,283nm,2.0s
MAK MLR MLR
comp=Z,1μm,19.0s
AKT Akhty 62.99 306⇑*i*P **P 21 10 38.0 +0.8**
AKT *e* 21 11 12.8
AKT *e* 21 12 59.4
AKT *e*S **S 21 19 02.4 +0.4**
AKT *e* 21 20 20.3
AKT pmax pmax
comp=Z,156nm,0.9s
SDPT Sand Point 62.99 39 *eP* **P 21 10 36.4 -0.4**
comp=Z,192nm,0.7s
DZM Mont Dzumac 63.11 134 *eP* **P 21 10 39.7 +1.6**
comp=Z,447nm,1.6s
DZM *e*S **S 21 19 02.8 -0.9**
comp=Z,994nm,23.6s
DZM *e*LQ LQ 21 26 30.6
comp=Z,5μm,29.4s
DZM *e*LR LR 21 29 11.6
comp=Z,8μm,25.4s
DZM Mont Dzumac 63.11 134 P **P 21 10 39.7 +1.6**
comp=Z,89nm,0.9s,baz=345,slow=5.4,SNR=25
DZM LR LR 21 33 58.1
comp=Z,1μm,21.1s,baz=310,slow=32
DZM Mont Dzumac 63.11 134 *eP* **P 21 10 38.9 +0.8**
comp=Z,185nm,1.1s
RBK Rabkut 63.43 278 P **P 21 10 44.0 +3.6**
SNR=8.9
RBK Rabkut 63.43 278 P **P 21 10 44.0 +3.6**
SNR=8.9
JOHN Johnston Islan 63.70 83 *eP* **P 21 10 43.8 +1.7**
comp=Z,560nm,1.1s
CHGN Chignik 64.06 38 *eP* **P 21 10 42.8 -1.1**
comp=Z,82nm,1.2s
GROC Groznyy 64.11 308 *eP* **P 21 10 43.7 -0.7**
GROC *e* 21 11 20.9
GROC *e* 21 13 06.8
GROC *e*S **S 21 19 15.9 +0.4**
GROC pmax pmax
comp=Z,287nm,1.3s
DDFL Dedoflistskaro 64.19 306 P **P 21 10 47.8 +2.8**
ABTO Aybut 64.30 278 P **P 21 10 50.0 +3.9**
SNR=7.7
ABTO Aybut 64.30 278 P **P 21 10 50.0 +3.9**
SNR=7.7
CAN Canberra 64.66 156 *eP* **P 21 10 48.2 +0.2**
comp=Z,112nm,1.0s
CAN Canberra 64.66 156 *eP* **P 21 10 48.2 +0.2**
CAN pmax pmax
comp=Z,112nm,1.0s
SVW2 Sparrevohn 65.06 32 *eP* **P 21 10 51.6 +1.3**
comp=Z,149nm,1.2s
DUS Dusheti 65.10 307 P **P 21 10 52.7 +1.7**
DUS Dusheti 65.10 307 *eP* **P 21 10 52.7 +1.7**
TBLG Delisi 65.15 306 P **P 21 10 52.3 +1.0**
TBLG Delisi 65.15 306 *eP* **P 21 10 52.8 +1.6**
comp=Z,131nm,1.3s
TBLG Delisi 65.15 306 *eP* **P 21 10 52.8 +1.6**
TBLG pmax pmax
comp=Z,131nm,1.3s
GUDG Gudauri 65.19 307 P **P 21 10 53.9 +2.2**
IM3 Indian Mountai 65.41 27 *eP* **P 21 10 51.5 -0.9**
KLMR Klimovskoe 65.43 328*c i*P **P 21 10 52.3 -0.3**
KLMR *e*S **S 21 19 24.1 -7.1**
KLMR SSS SSS 21 26 37.4
KLMR pmax pmax
comp=Z,522nm,1.2s
KLMR pmax pmax
comp=Z,369nm,1.2s
KLMR MLR MLR
comp=Z,2μm,14.0s
KLMR Klimovskoe 65.43 328⇑*i*P **P 21 10 52.4 -0.2**
KLMR ⇓*i*P **P 21 10 52.4 -0.2**
KLMR ⇓*i*P **P 21 10 52.4 -0.2**
KLMR AMP 21 10 53.4
comp=Z,522nm,1.2s
KLMR AMP 21 10 53.8
comp=Z,369nm,1.2s
KLMR *e*S **S 21 19 24.1 -7.1**
KLMR *e*S **S 21 19 24.1 -7.1**
KLMR ⇓SSS SSS 21 26 37.5
KLMR ⇓SSS SSS 21 26 37.5
KLMR LQ LQ 21 33 07.4
KLMR LQ LQ 21 33 07.4
KLMR LR LR 21 34 30.3
KLMR AMP 21 41 39.8
comp=Z,2μm,14.2s
GNI Garni 65.47 305 P **P 21 10 55.5 +2.0**
comp=Z,146nm,1.2s,baz=154,slow=2.7,SNR=24
GNI PKPPKP **P'P'df 21 39 33.8 -2.2**
comp=Z,16nm,1.2s,baz=7.5,slow=19,SNR=3.2
GNI LR LR 21 43 13.3
comp=Z,767nm,21.6s,baz=87,slow=39
GNI Garni 65.47 305 *eP* **P 21 10 55.5 +2.0**
comp=Z,392nm,1.4s
GNI P'P' 21 39 33.8
GNI Garni 65.47 305 P **P 21 10 56.1 +2.6**
SNR=16
GNI Garni 65.47 305 P **P 21 10 56.1 +2.6**
SNR=16
GNI Garni 65.47 305 *i* P **P 21 10 55.3 +1.8**
SNR=29
GNI Garni 65.47 305*c i*P **P 21 10 55.0 +1.5**
GNI pmax pmax
comp=Z,544nm,1.3s
ZEI Tsey 65.55 308 *eP* **P 21 10 50.9 -3.1**
ZEI *e*S **S 21 19 32.5 -1.2**
ZEI pmax pmax
comp=Z,114nm,0.8s
NCK Nalchik 65.63 308*ceP* **P 21 10 55.0 +0.7**
NCK pmax pmax
comp=Z,59nm,1.1s
GOF Gofitskoye 65.72 310⇑*i*P **P 21 10 55.7 +0.9**
GOF *e*S **S 21 19 37.3 +2.0**
GOF pmax pmax
comp=Z,223nm,1.0s
GOF smax smax
comp=N,64nm,1.7s
TMCR Tamitsa 65.75 331 *eP* **P 21 10 52.1 -2.5**
TMCR pmax pmax
comp=Z,252nm,1.0s
LHI Lord Howe Isla 65.88 146 *eP* **P 21 10 58.3 +2.4**
comp=Z,386nm,1.5s
ONI Oni 65.91 307 P **P 21 10 58.0 +1.7**
ONI Oni 65.91 307 *eP* **P 21 10 57.9 +1.7**
IGDI IGDIR 66.03 304⇑*i*P **P 21 10 58.4 +1.5**
KBZ Khabaz 66.08 309 P **P 21 10 58.0 +0.9**
comp=Z,94nm,1.0s,baz=78,slow=7.2,SNR=146
KBZ PKPPKP **P'P'df 21 39 29.3 -5.4**
comp=Z,2.8nm,0.9s,baz=286,slow=2.9,SNR=4.3
KBZ LR LR 21 43 19.8
comp=Z,1μm,20.7s,baz=68,slow=39
BGD Bogdanovka 66.08 306 P **P 21 10 59.4 +1.9**
AKH Akhalkalaki 66.13 306 P **P 21 10 59.6 +1.9**
AKH Akhalkalaki 66.13 306 *eP* **P 21 10 59.8 +2.1**
comp=Z,488nm,1.4s
AKH Akhalkalaki 66.13 306 *eP* **P 21 10 59.8 +2.1**
AKH pmax pmax
comp=Z,488nm,1.4s
KVAR Kislovodsk Arr 66.18 309 P **P 21 10 59.5 +1.6**
comp=Z,348nm,1.2s,baz=279,slow=2.6,SNR=156
KVAR LR LR 21 43 22.2
comp=Z,2μm,19.5s,baz=55,slow=39
KIV Kislovodsk 66.18 309 *eP* **P 21 10 59.1 +1.2**
comp=Z,596nm,1.3s
KIV Kislovodsk 66.18 309 P **P 21 10 59.5 +1.5**
SNR=112
KIV Kislovodsk 66.18 309 P **P 21 10 59.5 +1.5**
SNR=112
KIV Kislovodsk 66.18 309 *i* P **P 21 10 59.2 +1.3**
SNR=94
KIV Kislovodsk 66.18 309 *eP* **P 21 10 59.0 +1.1**
KIV *e* 21 11 28.7
KIV *e*S **S 21 19 43.3 +2.1**
KIV *e*SS **SS 21 24 01.5 +3.6**
KIV pmax pmax
comp=Z,375nm,1.1s
KIV pmax pmax
comp=Z,228nm,3.2s
KIV MLR MLR
comp=Z,2μm,17.0s
EAK Akyaka 66.20 305⇑*i*P **P 21 10 59.0 +0.8**
NEY Neytrino 66.30 308⇓*eP* **P 21 10 59.7 +0.9**
NEY pmax pmax
comp=Z,11nm,0.7s
CLDR Caldiran 66.31 304⇑*i*P **P 21 10 59.4 +0.4**
SII Sitkinak Islan 66.36 37 *eP* **P 21 10 59.8 +1.0**
YOVA Hakkari_Y`…kse 66.38 302⇑*i*P **P 21 11 00.5 +1.1**
DYDN Diyadin 66.39 304⇑*i*P **P 21 11 01.2 +1.7**
CAST Castle Rocks 66.41 29 *eP* **P 21 11 01.0 +2.0**
DIGO Kars 66.43 305⇑*i*P **P 21 11 00.5 +0.6**
PPLA Purkeypile 66.43 30 *eP* **P 21 11 00.5 +1.2**
RSO Redoubt South 66.51 33 *eP* **P 21 11 00.3 +0.4**
VMUR Van-Muradiye 66.60 304⇑*i*P **P 21 11 02.4 +1.6**
LVZ Lovozero 66.67 336 *eP* **P 21 11 00.5 0.0**
comp=Z,186nm,1.2s
LVZ Lovozero 66.67 336*c i*P **P 21 11 00.2 -0.3**
LVZ pmax pmax
comp=Z,265nm,1.7s
EPOS Posof 66.67 306⇑*i*P **P 21 11 01.1 -0.1**
TOLK Toolik Lake Re 66.72 23 P **P 21 11 01.4 +0.5**
baz=278,SNR=6.4
TOLK S **S 21 19 48.0 +1.2**
baz=278
TOLK Toolik Lake Re 66.72 23 *eP* **P 21 11 02.1 +1.2**
comp=Z,206nm,0.9s
OHAK Old Harbor 66.74 36 *eP* **P 21 10 59.9 -1.2**
comp=Z,116nm,1.0s
MLY Manley 66.77 27 *eP* **P 21 11 02.0 +0.7**
BPAW Bear Paw Mtn. 66.80 28 *eP* **P 21 11 02.0 +0.6**
TVAN Van 66.84 303⇑*i*P **P 21 11 03.6 +1.2**

SKT Skwentna 66.87 31 *eP* **P 21 11 00.9 -1.0**
VORR Voronezh 66.99 318 *eP* **P 21 11 02.0 -0.8**
VORR pmax pmax
comp=Z,250nm,1.0s
VORR pmax pmax
comp=Z,500nm,1.4s
KDAK Kodiak Island 67.02 35 P **P 21 11 02.7 -0.2**
comp=Z,105nm,0.8s,baz=291,slow=3.0,SNR=68
KDAK Kodiak Island 67.02 35 *eP* **P 21 11 02.6 -0.2**
comp=Z,444nm,1.4s
KDAK Kodiak Island 67.02 35 *i* P **P 21 11 02.9 0.0**
VORD Divnogorie 67.07 317 *eP* **P 21 11 03.1 -0.2**
VORD pmax pmax
comp=Z,200nm,1.3s
TUTA Tutak 67.08 304⇑*iP* **P 21 11 05.7 +1.8**
VSR Storozhevoye 67.10 317 *eP* **P 21 11 03.1 -0.4**
VSR *eS* **S 21 19 49.8 -1.9**
VSR pmax pmax
comp=Z,210nm,1.2s
VSR pmax pmax
comp=Z,480nm,1.7s
VSR smax smax
comp=N,90nm,1.5s
GEVA Gevas 67.15 303⇑*iP* **P 21 11 05.1 +0.8**
MOS Moscow 67.17 322 *eP* **P 21 11 01.2 -2.6**
MOS *e* 21 11 30.0
MOS *eS* **S 21 19 49.7 -2.7**
MOS *e* 21 20 51.1
MOS pmax pmax
comp=Z,1μm,2.3s
MOS pmax pmax
comp=Z,395nm,1.4s
MOS smax smax
comp=N,2μm,4.1s
MOS MLR MLR
comp=Z,2μm,19.0s
APA Apatity 67.18 335⇑*iP* **P 21 11 03.3 -0.4**
APA *i* 21 11 24.0
APA *i* 21 13 30.0
APA *i* S **S 21 19 48.0 -4.2**
APA *i* 21 20 28.0
APA *i* SSS SSS 21 27 12.0
APA pmax pmax
comp=Z,158nm,1.1s
HOM Homer 67.19 33 *eP* **P 21 11 05.6 +1.7**
TRF Thorofare Moun 67.20 29 *eP* **P 21 11 04.5 +0.3**
EATA Eleskirt 67.22 305⇑*iP* **P 21 11 06.7 +1.8**
ADCV BITLIS_Adilcev 67.29 304⇑*iP* **P 21 11 07.1 +1.9**
SUA Susitna One 67.32 31 *eP* **P 21 11 05.0 +0.1**
BWN Browne 67.44 28 *eP* **P 21 11 06.9 +1.4**
DBOC Borcka 67.48 306⇑*iP* **P 21 11 07.0 +0.8**
DDEM Demirkent 67.53 306⇑*iP* **P 21 11 07.2 +0.7**
BRLK Bradley Lake 67.55 33 *eP* **P 21 11 05.9 -0.3**
HOMI Horasan 67.61 305⇑*iP* **P 21 11 07.9 +0.6**
EKAR Karacoban 67.68 304⇑*iP* **P 21 11 09.0 +1.2**
MCK McKinley 67.75 29 *eP* **P 21 11 07.9 +0.5**
MCK McKinley 67.75 29 *eP* **P 21 11 07.9 +0.5**
MDM Murphy Dome 67.83 27 *eP* **P 21 11 08.2 +0.3**
RND Reindeer 67.85 29 *eP* **P 21 11 07.6 -0.5**
RND Reindeer 67.85 29 *eP* **P 21 11 07.6 -0.5**
SIRN S¨–rnak 67.85 302⇑*iP* **P 21 11 09.5 +0.9**
RC01 Rabbit Creek A 67.87 32 *eP* **P 21 11 08.2 0.0**
OBN Obninsk 67.88 322 P **P 21 11 08.3 0.0**
comp=Z,44nm,0.4s,baz=60,slow=1.7,SNR=49
OBN Obninsk 67.88 322 *eP* **P 21 11 07.8 -0.6**
comp=Z,2μm,1.8s
OBN Obninsk 67.88 322*c iP* **P 21 11 07.6 -0.7**
OBN *i* 21 11 34.1
OBN pmax pmax
comp=Z,134nm,1.5s
OBN MLR MLR
comp=Z,1μm,19.0s
WRH Wood River Hil 67.98 28 *eP* **P 21 11 09.1 +0.2**
COLA College 68.00 27 *eP* **P 21 11 09.8 +0.9**
comp=Z,115nm,0.8s
COLA College 68.00 27 *eP* **P 21 11 09.8 +0.9**
COLA pmax pmax
comp=Z,115nm,0.8s
ERZM Erzurum 68.05 305⇑*iP* **P 21 11 10.5 +0.5**
PMR Palmer 68.06 31 *eP* **P 21 11 09.3 0.0**
comp=Z,186nm,1.2s
PMR Palmer 68.06 31 *eP* **P 21 11 09.3 0.0**
PMR pmax pmax
comp=Z,186nm,1.2s
CCB Clear Creek Bu 68.07 28 *eP* **P 21 11 09.1 -0.3**
comp=Z,63nm,1.1s
SRTM Siirt_Merkez 68.10 303⇑*iP* **P 21 11 11.4 +1.2**
GHO Glory Hole Cre 68.12 31 *eP* **P 21 11 10.2 +0.3**
VRTB Varto-Mus 68.16 304⇑*iP* **P 21 11 12.0 +1.4**
SEW Seward 68.20 33 *eP* **P 21 11 09.7 -0.5**
SOC Sochi 68.36 309*c iP* **P 21 11 12.0 +0.4**
SOC *e**PP **pP 21 11 30.1 -1.0**
SOC *e**SP **sP 21 11 38.2 -1.1**
SOC *e*PPP PPP 21 15 21.2
SOC *i* S **S 21 20 07.8 +0.7**
SOC *e**SS **sS 21 20 42.9 +2.6**
SOC *eSS* **SS 21 24 30.4 -1.0**
SOC *eSSS* SSS 21 27 36.5
SOC pmax pmax
comp=Z,120nm,0.8s
SOC MLR MLR
comp=Z,1μm,18.0s
SML Sawmill 68.39 31 *eP* **P 21 11 11.9 +0.4**
SML Sawmill 68.39 31 *eP* **P 21 11 11.9 +0.4**
IL1 Eielson Array 68.43 27 *eP* **P 21 11 09.9 -1.8**
ILAR Eielson Array 68.43 27 P **P 21 11 11.2 -0.4**
comp=Z,35nm,0.9s,baz=281,slow=5.4,SNR=96
ILAR PKPPKP **P'P'df 21 39 23.7 -6.5**
comp=Z,8.1nm,1.1s,baz=134,slow=2.1,SNR=23
ILAR LR LR 21 44 24.5
comp=Z,758nm,18.4s,baz=286,slow=39
ILB Eielson Array 68.43 27 *eP* **P 21 11 11.2 -0.4**
BNGL BINGOL 68.44 304⇑*iP* **P 21 11 14.3 +1.9**
DHY Denali Highway 68.57 29 *eP* **P 21 11 12.9 +0.2**
SVAN Silvan-Diyarba 68.61 303⇑*iP* **P 21 11 14.3 +0.9**
BTMN Batman 68.62 303⇑*iP* **P 21 11 14.6 +1.1**
KOPT Kop Dagi 68.67 305⇑*iP* **P 21 11 15.4 +1.5**
BGOL Bingol 68.80 304⇑*iP* **P 21 11 15.8 +1.3**
SCM Sheep Creek Mo 68.85 31 *eP* **P 21 11 15.0 +0.6**
SCM Sheep Creek Mo 68.85 31 *eP* **P 21 11 15.0 +0.6**
KEV Kevo 69.05 338 *eP* **P 21 11 15.7 +0.3**
comp=Z,233nm,1.0s
KEV Kevo 69.05 338 *eP* **P 21 11 15.7 +0.3**
KEV pmax pmax
comp=Z,233nm,1.0s
HANI Diyarbakir_Han 69.15 304⇑*iP* **P 21 11 17.7 +1.0**
MARD Mardin 69.15 302⇑*iP* **P 21 11 16.9 +0.1**
RAYN Ar Rayn 69.24 287 *eP* **P 21 11 18.4 +0.9**
comp=Z,381nm,1.4s
RAYN Ar Rayn 69.24 287 *i* P **P 21 11 18.4 +0.9**
SNR=208
RAYN Ar Rayn 69.24 287 P **P 21 11 18.3 +0.9**
RAYN pmax pmax
comp=Z,380nm,1.3s
EUZM Uzumlu 69.34 305⇑*iP* **P 21 11 19.5 +1.5**
SPA0 Spitsbergen Ar 69.37 348 *eP* **P 21 11 17.9 +0.6**
SPITS Spitsbergen Ar 69.37 348 P **P 21 11 17.6 +0.2**
comp=Z,312nm,1.0s,baz=81,slow=6.3,SNR=112
SPITS LR LR 21 45 41.5
comp=Z,1μm,20.0s,baz=25,slow=39
PAX Paxson 69.44 29 *eP* **P 21 11 18.0 0.0**
PAX Paxson 69.44 29 *eP* **P 21 11 18.0 0.0**
KNTN Kanton 69.46 103 *eP* **P 21 11 20.1 +1.3**
comp=Z,993nm,1.4s
DIYA Diyarbakir 69.49 303 *i* P **P 21 11 20.2 +1.4**
KELT Kelkit 69.55 306⇑*iP* **P 21 11 20.4 +1.1**
KLU Klutina 69.58 31 *eP* **P 21 11 19.1 +0.2**
ARCES ARCESS Array B 69.61 338 P **P 21 11 19.2 +0.3**
comp=Z,180nm,1.1s,baz=75,slow=5.1,SNR=111
ARCES ScP 21 15 38.5
comp=Z,9.4nm,0.8s,baz=66,slow=4.1,SNR=5.5
ARCES LR LR 21 46 32.8
comp=Z,817nm,18.1s,baz=75,slow=40
ARCES ARCESS Array B 69.61 338 *eP* **P 21 11 19.0 +0.1**
ARE0 ARCESS Array S 69.61 338 *eP* **P 21 11 19.2 +0.3**
TNCL Tunceli-Merkez 69.61 305⇑*iP* **P 21 11 20.8 +1.2**
ANN Anapa 69.66 311*c iP* **P 21 11 19.4 -0.2**
ANN *e**PP **pP 21 11 38.0 -1.2**
ANN *e* 21 11 48.4
ANN *e* 21 13 59.1
ANN *eS* **S 21 20 21.9 -0.5**
ANN *e**SS **sS 21 20 57.4 +1.8**
ANN *eSS* **SS 21 24 47.5 -3.7**
ANN *eSSS* SSS 21 28 02.5
ANN pmax pmax
comp=E,101nm,1.4s
ANN pmax pmax
comp=N,161nm,1.4s
ANN pmax pmax
comp=Z,671nm,5.9s
ANN pmax pmax
comp=N,173nm,4.2s
ANN pmax pmax
comp=Z,471nm,4.2s
ANN smax smax
comp=N,550nm,6.3s
HARP HAARP 69.71 30 *eP* **P 21 11 21.0 +1.4**
DIV Divide 69.74 31 *eP* **P 21 11 20.7 +0.8**
DOT Dot Lake 69.89 28 *eP* **P 21 11 20.2 -0.5**
EYAK Cordova Ski Ar 69.89 32 *eP* **P 21 11 21.8 +1.1**
KBS Kingsbay 69.90 349 *eP* **P 21 11 20.9 +0.4**
comp=N,161nm,1.0s
KBS Kingsbay 69.90 349 *eP* **P 21 11 20.9 +0.4**
KBS pmax pmax
comp=Z,161nm,1.0s
HAMF Hammerfest 69.91 339 *eP* **P 21 11 20.8 +0.2**
HSPB Hornsund (broa 69.97 347 *eP* **P 21 11 21.1 +0.2**
HSPB MLR MLR
comp=Z,3μm,27.0s
GRSN GIRESUNGRSN 70.07 307 *i* P **P 21 11 20.9 -1.4**
REFA Refahiye_ERZ¨ 70.12 305⇑*iP* **P 21 11 23.5 +0.7**
PUL Pulkovo 70.13 327⇓*eP* **P 21 11 22.9 +0.7**
PUL pmax pmax
comp=Z,370nm,1.7s
ELZG Elazig 70.20 304⇑*iP* **P 21 11 24.9 +1.6**
SUSE Susehri 70.31 306⇑*iP* **P 21 11 23.8 -0.2**
BMRM Bremner River 70.33 31 *eP* **P 21 11 23.6 +0.1**
KEMA Kemaliye 70.36 305⇑*iP* **P 21 11 25.1 +1.0**
RAGM Ragged Mountai 70.45 32 *eP* **P 21 11 25.0 +0.8**
SANL SANLIURFA_Merk 70.56 303⇑*iP* **P 21 11 26.6 +1.2**
CUZAR Zara_SIVAS 70.72 306⇑*iP* **P 21 11 27.3 +0.9**
KEKH Kekaha 70.73 74 *eP* **P 21 11 29.1 +2.5**
comp=Z,590nm,1.2s
EGAK Eagle 70.81 27 *eP* **P 21 11 26.1 -0.1**
comp=Z,125nm,1.0s
HEKM Malatya_Hekimh 70.86 305⇑*iP* **P 21 11 28.2 +0.8**
SURC SANLIURFA_SURC 70.94 303⇑*iP* **P 21 11 28.7 +1.1**
TAU Tasmania Unive 70.95 161 *eP* **P 21 11 28.8 +1.6**
comp=Z,425nm,1.0s
TAU Tasmania Unive 70.95 161 *eP* **P 21 11 28.8 +1.6**
TAU pmax pmax
comp=Z,425nm,1.0s
ATAB Bozova 71.01 303⇑*iP* **P 21 11 29.5 +1.5**
AKCD Akcadag 71.06 304⇑*iP* **P 21 11 30.0 +1.5**
CRQM Cirque 71.08 31 *eP* **P 21 11 28.9 +0.7**
CUKAN kangal_SIVAS 71.11 305⇑*iP* **P 21 11 29.7 +0.9**
SCER sogukcermik 71.20 306⇑*iP* **P 21 11 30.7 +1.4**
TGL Tana Glacier 71.22 31 *eP* **P 21 11 29.8 +0.8**
ERBA Erbaa 71.24 307⇑*iP* **P 21 11 29.6 +0.2**
CUGUR Gurin_S¨VAS 71.42 305⇑*iP* **P 21 11 32.2 +1.6**
SAMS Samsun-Alacam 71.46 308⇑*iP* **P 21 11 31.6 +0.9**
TOKA Tokat 71.55 306⇑*iP* **P 21 11 32.2 +0.9**
ELBS KAHRAMANMARAS 71.64 304⇑*iP* **P 21 11 33.4 +1.4**
CUALT Altinyayla-SIV 71.65 305⇑*iP* **P 21 11 33.5 +1.4**
FIA1 FINESS Array S 71.67 330 *eP* **P 21 11 31.4 -0.1**
FINES FINESS Array B 71.68 330 P **P 21 11 31.9 +0.3**
comp=Z,37nm,0.6s,baz=53,slow=5.1,SNR=162
FINES PKPPKP **P'P'df 21 39 17.4 -7.3**
comp=Z,4.7nm,1.0s,baz=200,slow=16,SNR=5.1
FINES LR LR 21 45 52.9
comp=Z,2μm,21.1s,baz=74,slow=38
DAWY Dawson 71.75 27 *eP* **P 21 11 32.4 +0.3**
TRO Tromso 71.77 339 *eP* **P 21 11 31.9 0.0**
HAVZ Havza 71.89 307⇑*iP* **P 21 11 34.1 +0.9**
SIM Simferopol' 71.89 312*ceP* **P 21 11 33.4 +0.2**
SIM S **S 21 20 41.5 -6.8**
SIM PS **PnS 21 21 23.0 -4.3**
SIM pmax pmax
comp=Z,150nm,0.8s
SINO SINOP_Merkez 71.98 308⇑*iP* **P 21 11 34.1 +0.3**
CUSAR Sarkisla-SIVAS 71.98 306⇑*iP* **P 21 11 34.9 +0.9**
KUZU Kuzuini 72.14 303⇑*iP* **P 21 11 35.9 +1.0**
VSU Vasula 72.27 327*c iP* **P 21 11 35.1 0.0**
VSU pmax pmax
comp=Z,852nm,1.7s
OPA Opana 72.32 74 *eP* **P 21 11 38.5 +2.4**
OPA Opana 72.32 74 *eP* **P 21 11 38.5 +2.4**
BOYT Boyabat 72.37 308⇑*iP* **P 21 11 36.4 +0.3**
KIP Kipapa 72.41 74 *eP* **P 21 11 38.3 +1.6**
KIP Kipapa 72.41 74*ceP* **P 21 11 37.8 +1.2**
KIP pmax pmax
comp=Z,1μm,1.1s
HON Honolulu 72.45 74 *eP* **P 21 11 39.8 +2.9**
HON Honolulu 72.45 74 *eP* **P 21 11 39.8 +2.9**
ANDN Andirin 72.46 304⇑*iP* **P 21 11 37.8 +1.0**
INK Inuvik 72.52 22 P **P 21 11 36.4 -0.1**
comp=Z,96nm,0.9s,baz=296,slow=7.0,SNR=86
INK LR LR 21 47 08.1
comp=Z,845nm,19.2s,baz=284,slow=39
SAIM ADANA 72.54 304⇑*iP* **P 21 11 38.5 +1.2**
COAL Corum-Alaca 72.66 307⇑*iP* **P 21 11 38.5 +0.6**
CTAK Corum_Osmancik 72.68 307⇑*iP* **P 21 11 39.0 +0.7**
MICGM Minsk 72.89 323⇑*eP* **P 21 11 38.0 -0.9**
MICGM ⇑*eP* **P 21 11 38.0 -0.9**
MICGM PM 21 11 40.0
comp=Z,0.6nm,1.2s
MICGM PM 21 11 40.0
comp=E,0.4nm,1.1s
MICGM *ep*P **pP 21 12 02.0 +3.4**
MICGM *eS*P **sP 21 12 07.0 +0.2**
MICGM *e*PP PP 21 14 38.0 +16
MICGM *eS* **S 21 21 01.0 +1.6**
MICGM *eS*S **SKSac 21 21 36.0 -1.7**
MICGM *eP*S **PnS 21 21 54.0 +14**
MICGM *eL*Q LQ 21 37 22.0
MICGM *eL*R LR 21 43 44.0
MICGM LRM MLR 21 51 30.0
comp=Z,2.8nm,20.0s
MNK Minsk 72.89 323*ceP* **P 21 11 38.0 -0.9**
MNK *e**PP **pP 21 12 02.0 +3.4**
MNK *e**SP **sP 21 12 07.0 +0.2**
MNK *eS* **S 21 21 01.0 +1.6**
MNK *e**SS **SKSac 21 21 36.0 -1.7**
MNK *eP*S **PnS 21 21 54.0 +14**
MNK pmax pmax
comp=E,420nm,1.1s
MNK pmax pmax
comp=Z,590nm,1.2s
YAHY KAYSERI_Yahyal 73.04 305⇑*iP* **P 21 11 41.3 +1.0**
KAST KASTAMONU 73.05 308⇑*iP* pP 21 12 00.6 +0.7
YAYL Yayladag 73.11 302⇑*iP* **P 21 11 41.6 +0.8**
AVNS Nevsehir-Avano 73.20 305⇑*iP* **P 21 11 41.6 +0.4**
YURE YUREGIR 73.23 303⇑*iP* **P 21 11 42.3 +1.0**
IDID Didziasalis 73.26 324 *eP* **P 21 11 41.4 +0.3**
IDID IAmb IAmb 21 11 43.5
comp=Z,72nm,1.1s
DAMY Dhamar 73.29 279 *eP* **P 21 11 44.4 +2.0**
CDAG Cicekdag 73.30 306⇑*iP* **P 21 11 42.0 +0.2**
AKASG Malin Array Be 73.31 318 P **P 21 11 41.2 -0.2**
comp=Z,21nm,0.6s,baz=59,slow=6.0,SNR=171
AKASG PP **PP 21 14 22.5 -2.7**
comp=Z,10nm,0.9s,baz=54,slow=9.0,SNR=4.7
AKASG PKiKP **PKiKP 21 17 38.6 -0.1**
comp=Z,0.2nm,0.3s,baz=94,slow=0.9,SNR=4.5
AKASG Malin Array Be 73.31 318*ceP* **P 21 11 40.5 -0.9**
AKASG pmax pmax
comp=Z,25nm,0.6s
AKBB Malin Array Si 73.31 318 *eP* **P 21 11 40.9 -0.5**
AKBB Malin Array Si 73.31 318 *eP* **P 21 11 40.9 -0.5**
KIEV Kiev 73.32 318 *eP* **P 21 11 40.7 -0.8**
KIEV Kiev 73.32 318 *i* P **P 21 11 41.0 -0.5**
SNR=16
KIEV Kiev 73.32 318*c iP* **P 21 11 40.5 -1.0**
KIEV pmax pmax
comp=Z,100nm,1.4s
ILGA Ilgaz 73.33 308⇑*iP* **P 21 11 42.8 +0.7**
ILGA Ilgaz 73.33 308 *eP* **P 21 11 43.3 +1.2**
NACGM Naroch 73.37 323 *eP* **P 21 11 41.0 -0.7**
NACGM PM 21 11 43.0
comp=Z,0.4nm,1.0s
NACGM *eS* **S 21 21 05.0 +0.2**
NACGM *eP*S **PnS 21 21 38.0 -8.2**
NACGM *eL*Q LQ 21 36 20.0
NACGM *eL*R LR 21 40 15.0
IZAR Zarasai 73.38 324 *eP* **P 21 11 42.2 +0.4**
IZAR IAmb IAmb 21 11 44.3
comp=Z,85nm,1.3s
ISAL Salakas 73.51 324 *eP* **P 21 11 42.9 +0.4**
ISAL IAmb IAmb 21 11 45.0
comp=Z,70nm,1.2s
IIGN Ignalina 73.53 324 *eP* **P 21 11 42.9 +0.3**
IIGN IAmb IAmb 21 11 45.1
comp=Z,58nm,1.2s
STEI Steigen 73.67 338 *eP* **P 21 11 43.2 -0.1**
ELDT Eldivan 73.72 307⇑*iP* **P 21 11 44.8 +0.5**
ASF Jabal al Asfar 73.72 298 P **P 21 11 45.9 +1.5**
comp=Z,145nm,1.1s,baz=294,slow=0.4,SNR=146
ASF LR LR 21 49 03.5
comp=Z,639nm,20.9s,baz=24,slow=40
GULE Gulek 73.74 304⇑*iP* **P 21 11 45.6 +1.1**
HWQ Hawqa 73.80 301 *eP* **P 21 11 45.7 +0.9**
BR131 Keskin Array S 73.81 307 *eP* **P 21 11 45.2 +0.4**
BRTR Keskin Array B 73.81 307 P **P 21 11 45.1 +0.3**
comp=Z,222nm,1.1s,baz=104,slow=5.2,SNR=533
BRTR PKPPKP **P'P'df 21 39 18.2 -3.4**
comp=Z,1.3nm,1.0s,baz=122,slow=1.6,SNR=6.4
KHLH Kahului Airpor 73.98 74 *eP* **P 21 11 48.8 +2.9**
AKSY AKSARAY - Alti 74.06 306⇑*iP* **P 21 11 46.8 +0.5**
RCY Rachaya 74.14 300 *eP* **P 21 11 48.3 +1.4**
BHL Bhannes 74.15 300 *eP* **P 21 11 47.6 +0.8**
LOF Lofoten 74.17 338 *eP* **P 21 11 45.5 -0.6**
KERG Konya-Eregli 74.19 304⇑*iP* **P 21 11 47.0 -0.1**
BTIN Bart¨–n 74.20 309⇑*iP* **P 21 11 46.8 0.0**
QRWL Qaraoun 74.24 300 *eP* **P 21 11 48.5 +1.2**
BBAL Bala 74.24 307⇑*iP* **P 21 11 47.6 +0.2**
SHBL Chebaa 74.26 300 *eP* **P 21 11 48.8 +1.3**
DQRL Deir Qamar 74.28 300 *eP* **P 21 11 48.6 +1.0**
ANTO Ankara 74.38 307⇑*iP* **P 21 11 49.0 +1.0**
ANTO Ankara 74.38 307 *eP* **P 21 11 48.9 +0.8**
ANTO Ankara 74.38 307 P **P 21 11 49.1 +1.0**
SNR=77
ANTO Ankara 74.38 307 P **P 21 11 49.1 +1.0**
SNR=77
ANTO Ankara 74.38 307 *eP* **P 21 11 48.9 +1.0**
BR231 Keskin MP Arra 74.40 307 *eP* **P 21 11 49.5 +1.2**
CMDR Camlidere-ANKA 74.41 308⇑*iP* **P 21 11 48.9 +0.6**
KIZK Mersin 74.48 303⇑*iP* **P 21 11 48.5 -0.1**
KKUL Konya-Kulu 74.52 306⇑*iP* **P 21 11 49.2 +0.3**
BCAM Yenicaga 74.59 308⇑*iP* **P 21 11 49.2 -0.1**
MMAI Mount Meron Ar 74.64 300 P **P 21 11 51.1 +1.4**
comp=Z,122nm,1.1s,baz=76,slow=6.1,SNR=83
MMAI LR LR 21 50 50.1
comp=Z,1μm,21.8s,baz=80,slow=41
SORM Soroca 74.68 316⇑*iP* **P 21 11 49.4 -0.1**
SORM Soroca 74.68 316 P **P 21 11 48.8 -0.7**
MOR8 Moi Rana 74.72 336 *eP* **P 21 11 48.6 -0.8**
KIS Kishinev 74.76 315 *i* P **P 21 11 49.0 -1.0**
comp=Z,300nm,2.0s
KIS Kishinev 74.76 315 *e*PcP **PcP 21 12 02.0 -1.8**
KIS *ep*P **pP 21 12 10.0 +0.2**
KIS *eS* **S 21 21 15.0 -5.7**
KIS *eS*S **SKSac 21 21 51.0 -1.1**
KIS Kishinev 74.76 315α *iP* **P 21 11 49.0 -1.0**
KIS *e* 21 12 02.0
KIS *e**PP **pP 21 12 10.0 +0.2**
KIS *eS* **S 21 21 15.0 -5.7**
KIS *e**SS **SKSac 21 21 51.0 -1.1**
KIS *eP*S **PnS 21 22 03.0 -1.5**
KIS *eSS* **SS 21 26 08.0 -1.1**
KIS *eSSS* SSS 21 29 24.0
KIS pmax pmax
comp=Z,290nm,2.0s
KIS pmax pmax
comp=Z,700nm,7.0s
AFI Afiamalu 74.78 113 P **P 21 11 51.9 +1.3**
comp=Z,205nm,1.1s,baz=324,slow=6.8,SNR=20
AFI LR LR 21 41 46.5
comp=Z,709nm,19.2s,baz=296,slow=33
AFI Afiamalu 74.78 113 *eP* **P 21 11 52.6 +2.0**
AFI Afiamalu 74.78 113 *eP* **P 21 11 52.6 +2.0**
KHLU Kahalu'u 74.91 75 *eP* **P 21 11 53.9 +2.5**
KONS Konsvik 75.05 337 *eP* **P 21 11 50.8 -0.5**
PHNC Paralimni 75.05 302 P **P 21 11 52.6 +0.7**
POHA Pohakuloa 75.17 75 *eP* **P 21 11 55.1 +2.0**
SKAG Skagway 75.20 31 *eP* **P 21 11 53.3 +1.0**
MLOA Mauna Loa Obse 75.21 75 *eP* **P 21 11 56.2 +2.6**
MWH Moku'aweowe 75.21 75 *eP* **P 21 11 56.2 +2.6**
HMH Humu'ula Sheep 75.26 75 *eP* **P 21 11 56.0 +2.3**
KHU Kahuku 75.28 75 *eP* **P 21 11 56.8 +3.1**
KHU Kahuku 75.28 75 *eP* **P 21 11 56.8 +3.1**
LEOM Leova 75.31 315⇑*iP* **P 21 11 54.1 +1.0**
KDHN Kadinhani 75.32 306⇑*iP* **P 21 11 53.2 -0.4**
AUMIH MIHALICIK 75.33 307⇑*iP* **P 21 11 53.5 -0.1**
KONT Konya--Tatoy 75.33 305⇑*iP* **P 21 11 52.3 -1.2**
ERMK Ermenek 75.36 304⇑*iP* **P 21 11 54.2 +0.3**
AIN Ainahou 75.37 75 *eP* **P 21 11 56.7 +2.5**
TLCR 75.38 313⇓*iP* **P 21 11 54.5 +0.9**
TLCR 75.38 313⇓*iP* **P 21 11 54.5 +0.9**
KMER Konya-Meram 75.39 305⇑*iP* **P 21 11 53.7 -0.3**
MLH Mauna Loa 75.39 75 *eP* **P 21 11 57.1 +2.7**
MLH Mauna Loa 75.39 75 *eP* **P 21 11 57.1 +2.7**
AUSIV SIVRIHISAR 75.43 307⇑*iP* **P 21 11 53.3 -0.9**
BTAS Taskesti 75.44 308⇑*iP* **P 21 11 53.5 -0.7**
SAHE Sakarya_HENDEK 75.45 308⇑*iP* **P 21 11 54.1 0.0**
IAS Iasi 75.50 315⇑*iP* **P 21 11 55.0 +0.7**
HLP Hilina Pali 75.53 75 *eP* **P 21 11 57.5 +2.6**
PUH Pauahi 75.58 75 *eP* **P 21 11 57.5 +2.2**
CSS Mathiatis 75.61 302 *eP* **P 21 11 55.5 +0.4**
CSS Mathiatis 75.61 302 P **P 21 11 56.0 +0.9**
CSS Mathiatis 75.61 302 P **P 21 11 55.5 +0.4**
MAMC Mammari 75.62 302 P **P 21 11 56.2 +1.0**
SUW Suwalki 75.65 323 *eP* **P 21 11 54.6 -0.3**
SUW LMZ LR 21 42 24.8
comp=Z,2μm,31.9s
SUW Suwalki 75.65 323 *eP* **P 21 11 55.0 0.0**
SUW Suwalki 75.65 323 *eP* **P 21 11 55.0 0.0**
STCH Steam Cracks 75.66 75 *eP* **P 21 11 58.4 +2.7**
BESE Bessie Mountai 75.77 32 *eP* **P 21 11 56.8 +1.1**
HULD Heiheiahulu Di 75.78 75 *eP* **P 21 11 58.5 +2.1**
DOGA KONYA_Doganhis 75.79 306⇑*iP* **P 21 11 56.2 -0.1**
ATD Arta Tunnel 75.82 276 P **P 21 11 58.8 +2.1**
comp=Z,104nm,1.0s,baz=64,slow=3.7,SNR=27
ATD LR LR 21 45 04.1
comp=Z,789nm,21.2s,baz=66,slow=35
ATD Arta Tunnel 75.82 276 *eP* **P 21 11 58.6 +1.9**
KAND Kocaeli-Kandir 75.84 309⇑*iP* **P 21 11 55.4 -0.9**
KAND Kocaeli-Kandir 75.84 309 P **P 21 11 55.4 -0.9**
TIRR Tirgusor 75.90 313⇓*iP* **P 21 11 56.8 +0.2**
TIRR Tirgusor 75.90 313 *eP* **P 21 11 56.9 +0.3**
TIRR Tirgusor 75.90 313 *eP* **P 21 11 56.9 +0.3**
ESKT Eskisehir 75.91 307⇑*iP* **P 21 11 55.7 -1.2**
GAZI Gazipasa 75.95 304⇑*iP* **P 21 11 56.6 -0.5**
GEYV SAKARYA_Geyve 75.97 308⇑*iP* **P 21 11 56.9 -0.2**
GEYV SAKARYA_Geyve 75.97 308 P **P 21 11 56.9 -0.2**
SZAC Souni 76.02 302 P **P 21 11 58.5 +1.0**
BORA Eskisehir 76.07 308⇑*iP* **P 21 11 57.5 -0.3**
BORA Eskisehir 76.07 308 P **P 21 11 57.5 -0.3**
ALFC Alefka 76.10 302 P **P 21 11 58.2 +0.2**
TLB Topalu 76.10 313⇓*iP* **P 21 11 58.8 +1.1**
BOLV Bolvadin 76.11 306⇑*iP* **P 21 11 58.5 +0.4**
JIS Juneau Island 76.12 32 *eP* **P 21 11 59.0 +1.5**
HARR Harsova 76.14 313⇑*iP* **P 21 11 59.0 +1.1**
DAG Danmarks Havn 76.19 351⇑*iP* **P 21 11 57.1 -0.5**
comp=Z,229nm,1.1s
DAG Danmarks Havn 76.19 351⇑*iP* **P 21 11 57.1 -0.5**
DAG pmax pmax
comp=Z,230nm,1.1s
PETR Petresti 76.24 314⇑*iP* **P 21 12 00.3 +1.9**
KEPZ Antalya-Kepez 76.26 304⇑*iP* **P 21 11 57.9 -1.0**
PRAR RASCA 76.29 316⇑*iP* **P 21 11 59.4 +0.6**
PSN Preselentsi 76.33 312 *i* P **P 21 11 59.5 +0.5**
TESR Tescani 76.33 315⇓*iP* **P 21 11 59.3 +0.3**
ODBI Odobesti 76.34 314⇑*iP* **P 21 12 01.2 +2.2**
AKMC Akamas 76.36 302 P **P 21 11 59.9 +0.5**
AUKUT KUTAHYA 76.36 308⇑*iP* **P 21 12 01.0 +1.6**
AUBOZ BOZOYUK 76.36 308⇑*iP* **P 21 11 59.0 -0.4**
PPCY Paphos 76.39 302 P **P 21 12 00.0 +0.5**
NSS Namsos 76.40 335 *eP* **P 21 11 58.2 -0.7**
ICOR Ion Corvin 76.43 312⇑*iP* **P 21 12 01.1 +1.5**
BAGO Egridir - ISPA 76.48 306⇑*iP* **P 21 12 00.4 +0.2**
VRI Vrincioaia 76.51 314⇑*iP* **P 21 12 01.3 +1.2**
VRI Vrincioaia 76.51 314 P **P 21 12 00.9 +0.8**
AMRR Amara 76.57 313⇓*iP* **P 21 12 02.3 +2.0**
PLOR Plostina 76.57 314⇑*iP* **P 21 12 01.5 +1.1**
PGOR Pogoanele 76.69 313⇓*iP* **P 21 12 03.0 +2.0**
OUZ Omahuta 76.73 139 *eP* **P 21 12 04.2 +3.0**
LVV L'vov 76.74 319 *eP* **P 21 12 01.0 -0.2**

LVV *i* S **S** **21 21 41.0 -1.4**
LVV pmax pmax
comp=Z,200nm,10.0s
ISP Isparta 76.74 306⇑ *i*P **P** **21 12 01.9 +0.3**
ISP Isparta 76.74 306 *e*P **P** **21 12 01.6 0.0**
ISP Isparta 76.74 306 P **P** **21 12 00.9 -0.7**
ISP Isparta 76.74 306 *c i*P **P** **21 12 01.3 -0.3**
ISP pmax pmax
comp=Z,282nm,1.2s
BUR08 Bucovina Ar. S 76.84 316 *e*P **P** **21 12 02.2 +0.3**
BUR04 Bucovina Ar. S 76.84 316 *e*P **P** **21 12 01.4 -0.6**
KZIL AFYON_Kizioren 76.87 306⇑ *i*P **P** **21 12 01.7 -0.6**
ISR Istrita 76.91 314⇓ *i*P **P** **21 12 03.9 +1.5**
KLNR Kaliningrad 77.03 324 *c e*P **P** **21 12 02.5 -0.2**
KLNR pmax pmax
comp=Z,125nm,1.2s
PRD Provadia 77.03 312 *i*P **P** **21 12 03.0 0.0**
BRDR BURDUR-Merkez 77.13 306⇑ *i*P **P** **21 12 03.2 -0.6**
KORT Korkueli 77.16 305⇑ *i*P **P** **21 12 03.1 -1.0**
MLR Muntele Rosu 77.16 314 P **P** **21 12 04.5 +0.6**
comp=Z,15nm,1.0s,baz=51,slow=5.5
MLR LR LR 21 51 22.1
comp=Z,122nm,21.2s,baz=67,slow=40
MLR Muntele Rosu 77.16 314⇑ *i*P **P** **21 12 04.7 +0.8**
MLR Muntele Rosu 77.16 314 *e*P **P** **21 12 03.8 0.0**
SECR 77.25 314⇓ *i*P **P** **21 12 06.2 +2.0**
SULR 77.26 313⇓ *i*P **P** **21 12 05.1 +0.9**
KHAL Karahalli 77.30 306⇑ *i*P **P** **21 12 03.7 -1.1**
DOPR Dopca 77.34 315⇓ *i*P **P** **21 12 05.6 +0.8**
ARCR ARCALIA 77.58 316⇓ *i*P **P** **21 12 07.8 +1.8**
DURS Dursunbey 77.60 308⇑ *i*P **P** **21 12 05.9 -0.5**
KWP Kalwaria Pacla 77.60 319 *e*P **P** **21 12 06.6 +0.5**
KWP *e*S **S** **21 21 49.0 -2.8**
KWP LMZ LR 21 47 15.6
comp=Z,2μm,23.4s
KWP Kalwaria Pacla 77.60 319 *e*P **P** **21 12 06.4 +0.3**
KWP Kalwaria Pacla 77.60 319⇑ *e*P **P** **21 12 06.6 +0.5**
KWP *e*S **S** **21 21 49.0 -2.8**
KWP MLR MLR
comp=Z,2μm,23.4s
SGRR Singureni 77.62 313⇑ *i*P **P** **21 12 08.1 +1.9**
DEMI Demirci 77.62 307⇑ *i*P **P** **21 12 06.5 0.0**
GOLH Golhisar 77.66 305⇑ *i*P **P** **21 12 05.3 -1.5**
GOLH Golhisar 77.66 305 P **P** **21 12 05.3 -1.5**
TBLU Trondheim 77.68 335 *e*P **P** **21 12 04.9 -1.4**
VOIR 77.77 314⇓ *i*P **P** **21 12 08.0 +0.8**
HFS Hagfors 77.78 331 P **P** **21 12 06.9 +0.1**
comp=Z,57nm,0.6s,baz=76,slow=6.3,SNR=121
HFS PP **PP** **21 15 05.6 +3.0**
comp=Z,29nm,0.9s,baz=76,slow=6.3,SNR=7.0
HFS LR LR 21 49 54.7
comp=Z,2μm,19.9s,baz=63,slow=38
BEL Belsk 77.84 322 *e*P **P** **21 12 07.9 +0.6**
BEL LMZ LR 21 46 07.2
comp=Z,1μm,26.7s
BEL Belsk 77.84 322⇑ *e*P **P** **21 12 07.9 +0.6**
BEL MLR MLR
comp=Z,1μm,26.7s
JMB Yambol 77.86 311 *i*P **P** **21 12 08.0 +0.3**
DNZL Cakiroluk 77.88 306⇑ *i*P **P** **21 12 08.0 -0.1**
BMR Baia Mare 77.89 317⇓ *i*P **P** **21 12 09.0 +1.3**
WRAK Wrangell Islan 77.91 33 *e*P **P** **21 12 08.7 +1.1**
CRAG Craig 77.93 34 *e*P **P** **21 12 08.9 +1.1**
MANT Manisa 77.94 307⇑ *i*P **P** **21 12 08.4 -0.1**
MANT Manisa 77.94 307 *e*P **P** **21 12 09.2 +0.7**
AKAS Kas 78.00 304⇑ *i*P **P** **21 12 06.3 -2.4**
SZH Strazhica 78.00 312 *i*P **P** **21 12 08.5 +0.1**
KNL Bal¨–kesir 78.03 309⇑ *i*P **P** **21 12 08.5 -0.1**
KSL Kastellorizon 78.04 304 P **P** **21 12 07.6 -1.2**
KSL Kastellorizon 78.04 304 P **P** **21 12 07.6 -1.2**
TAVA DENIZLI_Tavas 78.06 306⇑ *i*P **P** **21 12 08.4 -0.6**
ARR Arges 78.06 314⇑ *i*P **P** **21 12 09.2 +0.4**
DLBC Dease Lake 78.12 31 P **P** **21 12 10.3 +1.4**
comp=Z,177nm,1.2s,baz=307,slow=5.1,SNR=124
DLBC PKKPbc **PKKPbc** **21 31 06.7 -1.9**
comp=Z,3.2nm,0.9s,baz=138,slow=3.9,SNR=3.4
RES Resolute Bay 78.16 9 P **P** **21 12 08.6 -0.1**
comp=Z,67nm,1.0s,baz=345,slow=5.0,SNR=125
RES Resolute Bay 78.16 9 *e*P **P** **21 12 08.3 -0.3**
BALY Balya 78.16 308⇑ *i*P **P** **21 12 07.8 -1.7**
HUMR Humele 78.16 314⇑ *i*P **P** **21 12 09.6 +0.3**
CJR Cluj-Napoca 78.20 316⇑ *i*P **P** **21 12 11.1 +1.6**
STEP BALIKESIR_Sava 78.22 308⇑ *i*P **P** **21 12 09.4 -0.4**
ZIMR 78.24 313⇑ *i*P **P** **21 12 10.6 +0.9**
FETY Fethiye 78.24 305 P **P** **21 12 08.1 -1.8**
FETY Fethiye 78.24 305 P **P** **21 12 08.1 -1.8**
UZH Uzhgorod 78.25 318 *e*P **P** **21 12 08.3 -1.4**
UZH *e* 21 12 15.3
UZH *e* 21 12 28.7
TRPA Tarpa 78.30 318⇑ *e*P **P** **21 12 10.2 +0.2**
AKHS Akhisar 78.34 307⇑ *i*P **P** **21 12 10.1 -0.3**
NB2 NORSAR Subarra 78.41 332 P **P** **21 12 09.8 -0.6**
comp=Z,205nm,1.1s,baz=61,slow=5.6
NB2 NORSAR Subarra 78.41 332 P **P** **21 12 09.8 -0.6**
baz=61,slow=5.6
NOA NORSAR Array B 78.41 332 P **P** **21 12 10.8 +0.4**
comp=Z,232nm,1.1s,baz=60,slow=7.0,SNR=86
NOA LR LR 21 49 56.3
comp=Z,1μm,18.6s,baz=65,slow=38
KESN Edirne-Kesan 78.41 310⇑ *i*P **P** **21 12 10.8 -0.4**
RIZ Raoul Island 78.44 130 P **P** **21 12 10.4 -0.5**
DALY Dalyan (Mu¨la 78.49 305⇑ *i*P **P** **21 12 10.5 -0.8**
TURN Turunc 78.51 305⇑ *i*P **P** **21 12 13.1 +1.8**
LOT Lotru 78.59 315⇑ *i*P **P** **21 12 12.6 +0.8**
CRVS Cervenica-Dubn 78.64 319 *e*P **P** **21 12 12.7 +0.8**
CRVS pmax pmax
comp=Z,287nm,2.3s
CRVS Cervenica-Dubn 78.64 319 *e*P **P** **21 12 12.7 +0.8**
CRVS *e*S **S** **21 21 59.7 -3.3**
CRVS *e*L L 21 48 01.1
YER Yerkesik 78.65 306 P **P** **21 12 12.6 +0.4**
YER Yerkesik 78.65 306 P **P** **21 12 12.6 +0.4**
YER Yerkesik 78.65 306 P **P** **21 12 12.6 +0.4**
DRGR 78.73 316⇑ *i*P **P** **21 12 13.2 +0.7**
DRGR 78.73 316 P **P** **21 12 13.2 +0.7**
AYDN Tasoluk 78.75 306⇑ *i*P **P** **21 12 13.3 +0.6**
JMIC Jan Mayen 78.77 345 P **P** **21 12 13.1 +1.0**
comp=Z,317nm,0.9s,baz=127,slow=11,SNR=27
DOMB Dombas 78.78 334 *e*P **P** **21 12 12.5 +0.1**
ALN Alexandroupoli 78.83 310 *e*P **P** **21 12 13.2 +0.2**
ALN Alexandroupoli 78.83 310 P **P** **21 12 12.8 -0.2**
ALN Alexandroupoli 78.83 310 *e*P **P** **21 12 13.2 +0.2**
BAYC CANAKKALE_Bayr 78.92 309⇑ *i*P **P** **21 12 13.3 -0.3**
TULEG Thule 78.93 3 *e*P **P** **21 12 13.0 +0.1**
DEV Deva 78.97 315⇑ *i*P **P** **21 12 14.9 +1.2**
AYVA Ayvalik 78.98 308⇑ *i*P **P** **21 12 13.5 -0.4**
LTVH L¨tav¨rtes, 79.00 317⇑ *e*P **P** **21 12 15.0 +1.2**
EZN Ezine 79.05 309 P **P** **21 12 14.2 0.0**
EZN Ezine 79.05 309 P **P** **21 12 14.2 0.0**
EZN Ezine 79.05 309 P **P** **21 12 14.2 0.0**
OJC Ojcow 79.08 320 *e*P **P** **21 12 14.6 +0.4**
OJC *e*S **S** **21 22 05.6 -2.0**
OJC LMZ LR 21 46 17.3
comp=Z,1μm,30.3s
OJC Ojcow 79.08 320 *e*P **P** **21 12 14.2 0.0**
OJC Ojcow 79.08 320⇑ *e*P **P** **21 12 14.6 +0.4**
OJC *e*S **S** **21 22 05.6 -2.0**
RDO Rodhopi 79.09 310 P **P** **21 12 13.9 -0.5**
RDO Rodhopi 79.09 310 P **P** **21 12 13.9 -0.5**
MOL Molde 79.10 335 *e*P **P** **21 12 13.8 -0.2**
ARG Arkhangelos 79.11 305 P **P** **21 12 14.7 0.0**
ARG Arkhangelos 79.11 305 P **P** **21 12 14.7 0.0**
ARG Arkhangelos 79.11 305 P **P** **21 12 14.7 0.0**
NIE Niedzica 79.12 319 *e*P **P** **21 12 15.4 +0.9**
NIE *e*S **S** **21 22 06.9 -1.3**
NIE LMZ LR 21 47 14.2
comp=Z,800nm,22.8s
NIE Niedzica 79.12 319⇑ *e*P **P** **21 12 15.4 +0.9**
NIE *e*S **S** **21 22 06.9 -1.3**
NIE MLR MLR
comp=Z,800nm,22.8s
OSL Oslo 79.17 332 *e*P **P** **21 12 14.8 +0.3**
GKP Gorka Klasztor 79.19 324 *e*P **P** **21 12 14.9 +0.2**
GKP *e*S **S** **21 22 06.4 -2.1**
GKP LMZ LR 21 44 23.4
comp=Z,2μm,31.7s
GKP Gorka Klasztor 79.19 324⇑ *e*P **P** **21 12 14.9 +0.2**
GKP *e*S **S** **21 22 06.4 -2.1**
GKP MLR MLR
comp=Z,2μm,31.7s
GADA Gvkgeada 79.21 309 P **P** **21 12 15.1 0.0**
GADA Gvkgeada 79.21 309 P **P** **21 12 15.1 0.0**

BOZC Bozcaada 79.23 309⇑ *i*P **P** **21 12 14.8 -0.4**
DIB Dawson Inlet, 79.27 36 *e*P **P** **21 12 16.3 +1.1**
PLD Plovdiv 79.29 311 *i*P **P** **21 12 16.0 +0.5**
PLD Plovdiv 79.29 311 P **P** **21 12 16.1 +0.5**
BDRM Kayabasi 79.30 306⇑ *i*P **P** **21 12 15.6 -0.1**
PRK Paraskevi 79.31 308 P **P** **21 12 15.5 -0.2**
PRK Paraskevi 79.31 308 P **P** **21 12 15.5 -0.2**
PRK Paraskevi 79.31 308 P **P** **21 12 15.5 -0.2**
DAT Datca 79.33 305⇑ *i*P **P** **21 12 15.1 -0.9**
DGB ¨zmir 79.33 307⇑ *i*P **P** **21 12 15.5 -0.2**
SMTH Samothraki Isl 79.36 310 P **P** **21 12 14.8 -1.1**
SMTH Samothraki Isl 79.36 310 P **P** **21 12 14.8 -1.1**
BODT Bodrum 79.40 306 P **P** **21 12 14.9 -1.3**
BODT Bodrum 79.40 306 P **P** **21 12 14.9 -1.3**
KECS Kecovo 79.41 319 *e*P **P** **21 12 16.7 +0.7**
KECS pmax pmax
comp=Z,42nm,1.4s
KECS Kecovo 79.41 319 *e*P **P** **21 12 16.7 +0.7**
KECS *e*PP **PP** **21 15 16.3 -0.3**
URLA Izmir 79.42 307⇑ *i*P **P** **21 12 14.9 -1.4**
RZN Rozhen 79.44 311 *i*P **P** **21 12 16.5 -0.1**
PGB Panagyurishte 79.48 312 *i*P **P** **21 12 17.0 +0.4**
SMG Samos 79.50 307 P **P** **21 12 16.4 -0.3**
SMG Samos 79.50 307 P **P** **21 12 16.4 -0.3**
BSD Bornholm Skovb 79.56 326⇑ *i*P **P** **21 12 16.2 -0.5**
comp=Z,298nm,1.4s
BSD Bornholm Skovb 79.56 326⇑ *i*P **P** **21 12 16.2 -0.5**
BSD pmax pmax
comp=Z,300nm,1.4s
TOZ Tahuroa Road 79.56 140 P S 21 21 53.1 -20
SIRR Siria 79.61 316⇑ *i*P **P** **21 12 17.9 +0.7**
SIGR SIGRI 79.62 308 P **P** **21 12 17.1 -0.3**
SIGR SIGRI 79.62 308 P **P** **21 12 17.1 -0.3**
NISR Nisiros 79.70 305 P **P** **21 12 17.4 -0.5**
NISR Nisiros 79.70 305 P **P** **21 12 17.4 -0.5**
HIZ Hauiti 79.71 141 *e*P **P** **21 12 20.4 +2.8**
LANS Liptovska Anna 79.73 319 *e*P **P** **21 12 18.9 +1.1**
LANS *e* 21 15 20.2
LANS Liptovska Anna 79.73 319 *e*P **P** **21 12 18.9 +1.1**
LANS *e*PP **PP** **21 15 20.2 +0.9**
CHOS Chios island 79.80 307 P **P** **21 12 18.2 -0.3**
CHOS Chios island 79.80 307 P **P** **21 12 18.2 -0.3**
KONO Kongsberg 79.81 332 *e*P **P** **21 12 18.3 +0.3**
KONO Kongsberg 79.81 332 *e*P **P** **21 12 18.3 +0.3**
LIA Limnos Island 79.83 309 P **P** **21 12 17.8 -0.7**
LIA Limnos Island 79.83 309 P **P** **21 12 17.8 -0.7**
BZS Buzias 79.91 316⇑ *i*P **P** **21 12 18.9 +0.1**
BZS Buzias 79.91 316 P **P** **21 12 18.6 -0.2**
PSZ Piszkesteto 80.00 318⇓ *i*P **P** **21 12 20.2 +0.8**
PSZ Piszkesteto 80.00 318⇑ *e*P **P** **21 12 19.8 +0.4**
PSZ Piszkesteto 80.00 318 *e*P **P** **21 12 19.8 +0.4**
PSZ Piszkesteto 80.00 318 *e*P **P** **21 12 19.8 +0.4**
VRZ Vera Road 80.06 141 P **P** **21 12 20.8 +1.3**
RAC Raciborz 80.07 321 *e*P **P** **21 12 20.7 +1.1**
RAC *e*S **S** **21 22 17.6 -0.4**
RAC MLR MLR
comp=Z,1μm,23.0s
KARP Karpathos 80.09 304 *e*P **P** **21 12 20.4 +0.4**
KARP Karpathos 80.09 304 P **P** **21 12 19.8 -0.3**
VTS Vitosha 80.11 312⇑ *i*P **P** **21 12 21.1 +0.9**
VTS Vitosha 80.11 312 *e*P **P** **21 12 20.7 +0.6**
VTS Vitosha 80.11 312 *i*P **P** **21 12 20.5 +0.3**
VTS Vitosha 80.11 312 P **P** **21 12 20.2 0.0**
VTS Vitosha 80.11 312 *e*P **P** **21 12 20.7 +0.6**
MMB Musomiste 80.16 311 *i*P **P** **21 12 19.5 -0.8**
NVR Nevrokopi 80.17 311 P **P** **21 12 20.0 -0.4**
NVR Nevrokopi 80.17 311 P **P** **21 12 20.0 -0.4**
OKC Ostrava-Krasne 80.20 320 *e*P **P** **21 12 21.1 +0.8**
OKC *e*pP **pP** **21 12 37.2 -3.1**
OKC *e*S **S** **21 22 17.2 -2.2**
OKC AMS AMS 21 55 30.0
comp=Z,900nm,15.3s
OKC Ostrava-Krasne 80.20 320 *e*P **P** **21 12 21.1 +0.8**
OKC *e* 21 12 37.2
OKC *e*S **S** **21 22 17.2 -2.2**
OKC MLR MLR
comp=Z,900nm,15.3s
UTU Utuhina 80.26 140 P **P** **21 12 24.5 +3.9**
VYHS Vyhne 80.39 319 *e*P **P** **21 12 22.0 +0.6**
VYHS pmax pmax
comp=Z,94nm,1.2s
VYHS Vyhne 80.39 319 *e*P **P** **21 12 22.0 +0.6**
VYHS *e*PP **PP** **21 15 25.4 +0.6**
VYHS *e*S **S** **21 22 20.3 -1.2**
HYA Hoyanger 80.41 334 *e*P **P** **21 12 22.6 +1.4**
SRS Serrai 80.45 311 P **P** **21 12 21.1 -0.7**
SRS Serrai 80.45 311 P **P** **21 12 21.1 -0.7**
SRS Serrai 80.45 311 P **P** **21 12 21.1 -0.7**
KKB Krupnik 80.49 312 *i*P **P** **21 12 21.5 -0.5**
OUR Ouranopolis 80.50 310 P **P** **21 12 21.8 -0.2**
OUR Ouranopolis 80.50 310 P **P** **21 12 21.8 -0.2**
OUR Ouranopolis 80.50 310 P **P** **21 12 21.8 -0.2**
WHRZ Whale Island 80.51 139 P **P** **21 12 22.9 +0.9**
COP Copenhagen 80.52 327⇑ *i*P **P** **21 12 22.1 +0.3**
comp=Z,185nm,1.3s
COP Copenhagen 80.52 327⇑ *i*P **P** **21 12 22.1 +0.3**
COP pmax pmax
comp=Z,190nm,1.3s
FOZ Fox Glacier 80.54 147 *e*P **P** **21 12 23.4 +1.4**
MORC Moravsky Berou 80.58 321 *e*P **P** **21 12 22.8 +0.4**
MORC Moravsky Berou 80.58 321 *e*P **P** **21 12 22.8 +0.4**
MORC Moravsky Berou 80.58 321 *e*P **P** **21 12 22.7 +0.3**
MORC *e*S **S** **21 22 18.7 -4.8**
MORC *e*PKKP **PKKPbc** **21 31 02.8 -0.1**
SKY Skiros Island 80.69 308 P **P** **21 12 23.0 -0.1**
SKY Skiros Island 80.69 308 P **P** **21 12 23.0 -0.1**
DCZ Deep Cove 80.72 150 *e*P **P** **21 12 24.3 +1.4**
BUD Budapest 80.72 318⇑ *e*P **P** **21 12 23.7 +0.6**
BUD Budapest 80.72 318 P **P** **21 12 24.0 +0.9**
SOH Sokhos 80.73 311 P **P** **21 12 22.7 -0.7**
SOH Sokhos 80.73 311 P **P** **21 12 22.7 -0.7**
SOH Sokhos 80.73 311 P **P** **21 12 22.7 -0.7**
LLD Lille Linde 80.80 327 *i*P **P** **21 12 22.3 -1.1**
LLD Lille Linde 80.80 327 *i*P **P** **21 12 22.3 -1.1**
KSP Ksiaz 80.81 322 *e*P **P** **21 12 24.0 +0.5**
KSP *e*S **S** **21 22 22.5 -3.2**
KSP LMZ LR 21 43 56.1
comp=Z,2μm,31.0s
KSP Ksiaz 80.81 322⇑ *e*P **P** **21 12 24.0 +0.5**
KSP *e*S **S** **21 22 22.5 -3.2**
KSP MLR MLR
comp=Z,2μm,31.0s
PLG Polygyros 80.86 310 P **P** **21 12 23.4 -0.6**
PLG Polygyros 80.86 310 P **P** **21 12 23.4 -0.6**
PLG Polygyros 80.86 310 P **P** **21 12 23.4 -0.6**
URZ Urewera 80.86 139 P **P** **21 12 24.3 +0.5**
comp=Z,25nm,0.7s,baz=14,slow=1.8,SNR=12
URZ Urewera 80.86 139 P **P** **21 12 23.5 -0.3**
THZ Tophouse 80.86 144 *e*P **P** **21 12 24.1 +0.2**
PAIG Paliouri 80.87 310 P **P** **21 12 23.6 -0.5**
PAIG Paliouri 80.87 310 P **P** **21 12 23.6 -0.5**
PAIG Paliouri 80.87 310 P **P** **21 12 23.6 -0.5**
KRLC Kraliky 80.88 321 *e*P **P** **21 12 24.9 +0.9**
KRLC *e*x x 21 12 38.6
KRLC *e*PP **PP** **21 15 28.6 -0.2**
KRLC Kraliky 80.88 321 *e*P **P** **21 12 24.9 +0.9**
KRLC *e* 21 15 28.6
KNT Kendrikon 80.91 311 P **P** **21 12 23.6 -0.7**
KNT Kendrikon 80.91 311 P **P** **21 12 23.6 -0.7**
KNT Kendrikon 80.91 311 P **P** **21 12 23.6 -0.7**
JAVC Velka Javorina 80.92 320 *e*P **P** **21 12 25.8 +1.5**
JAVC *e*S **S** **21 22 24.4 -2.7**
JAVC *e*PKKP **PKKPbc** **21 31 03.4 +1.3**
ODD1 Odda 80.93 333 *e*P **P** **21 12 25.0 +0.9**
ZKR Zakros 80.97 304 P **P** **21 12 24.9 +0.2**
ZKR Zakros 80.97 304 P **P** **21 12 24.9 +0.2**
HORT Hortiatis 81.00 310 P **P** **21 12 24.2 -0.7**
HORT Hortiatis 81.00 310 P **P** **21 12 24.2 -0.7**
THR8 Santorini-Mono 81.01 306 P **P** **21 12 24.0 -0.8**
RTZ Ruatahuna 81.01 140 P **P** **21 12 25.2 +0.4**
DPC Dobruska-Polom 81.02 321 *e*P **P** **21 12 25.9 +1.2**
DPC *e*x x 21 12 36.5
DPC *e*x x 21 12 40.1
DPC *e*PP **PP** **21 15 30.2 +0.3**
DPC *e*S **S** **21 22 27.3 -0.8**
DPC *e*PKKP **PKKPbc** **21 31 02.9 +1.0**
DPC AMS AMS 21 49 00.0
comp=Z,1μm,20.4s
DPC Dobruska-Polom 81.02 321 *e*P **P** **21 12 25.9 +1.2**
DPC *e* 21 15 30.2
DPC *e*S **S** **21 22 27.3 -0.8**

DPC *e* 21 31 02.9
DPC MLR MLR
comp=Z,1μm,20.4s
SANT Santorini 81.03 306⇓ *i*P **P** **21 12 24.9 -0.2**
SANT Santorini 81.03 306 *e*P **P** **21 12 24.3 -0.8**
SANT Santorini 81.03 306 P **P** **21 12 23.7 -1.4**
SUE Sulen 81.05 334 *e*P **P** **21 12 25.0 +0.5**
THT1 Athinios (Pele 81.05 306 P **P** **21 12 23.7 -1.4**
THR3 Thira Island, 81.06 306 P **P** **21 12 24.5 -0.7**
THR3 Thira Island, 81.06 306 P **P** **21 12 24.5 -0.7**
VAY Valandovo 81.07 311 P **P** **21 12 24.8 -0.3**
VAY Valandovo 81.07 311 P **P** **21 12 24.8 -0.3**
VAY Valandovo 81.07 311 *i*P **P** **21 12 25.1 0.0**
VAY Valandovo 81.07 311 P **P** **21 12 24.8 -0.3**
THE Thessaloniki 81.08 311 P **P** **21 12 24.2 -1.0**
THE Thessaloniki 81.08 311 P **P** **21 12 24.2 -1.0**
THE Thessaloniki 81.08 311 P **P** **21 12 24.2 -1.0**
THR6 Thira Island, 81.09 306 P **P** **21 12 24.6 -0.7**
THR6 Thira Island, 81.09 306 P **P** **21 12 24.6 -0.7**
MTHZ Maungataniwha 81.09 140 P **P** **21 12 25.3 +0.2**
SAP1 Santorini-Akro 81.09 306 P **P** **21 12 24.2 -1.1**
MLZ Mavora Lakes 81.09 149 *e*P **P** **21 12 26.1 +1.1**
SAP3 Santorini-Thir 81.09 306 P **P** **21 12 23.6 -1.7**
THR5 Thira Island, 81.10 306 P **P** **21 12 24.5 -0.9**
KARY Karystos 81.11 308 P **P** **21 12 24.9 -0.5**
WKZ Wanaka 81.11 148 *e*P **P** **21 12 26.9 +1.8**
UPC Upice 81.12 322 *e*P **P** **21 12 26.2 +1.0**
UPC *e*pP **pP** **21 12 40.7 -4.5**
UPC *e*PP **PP** **21 15 28.6 -2.1**
UPC *e*S **S** **21 22 28.4 -0.6**
UPC AMS AMS 21 53 20.0
comp=Z,1μm,14.3s
UPC Upice 81.12 322 *e*P **P** **21 12 26.2 +1.0**
UPC *e* 21 15 28.6
UPC *e*S **S** **21 22 28.4 -0.6**
UPC MLR MLR
comp=Z,1μm,14.3s
KULLO Kullorsuaq 81.14 360⇑ *i*P **P** **21 12 24.7 -0.1**
comp=Z,302nm,1.0s
KULLO Kullorsuaq 81.14 360⇑ *i*P **P** **21 12 24.7 -0.1**
KULLO pmax pmax
comp=Z,300nm,1.0s
MWZ Matawai 81.15 139 P **S** **21 22 22.1 -7.4**
STIP Stip 81.17 312 *i*P **P** **21 12 24.3 -1.4**
RAGZ Rawiri 81.19 139 P **P** **21 12 25.8 +0.1**
BER Bergen 81.20 333 *e*P **P** **21 12 26.1 +0.8**
SMOL Smolenice 81.22 319 *e*P **P** **21 12 26.7 +0.9**
SMOL Smolenice 81.22 319 *e*P **P** **21 12 26.7 +0.9**
CSKK Cs¨‡kako 81.24 318⇑ *e*P **P** **21 12 26.5 +0.6**
LTZ Lake Taylor 81.25 145 *e*P **P** **21 12 27.1 +1.3**
RAHZ Arahi 81.27 140 P **P** **21 12 26.8 +0.7**
BLS5 Blasjo 81.28 332 *e*P **P** **21 12 26.8 +0.9**
RPZ Rata Peaks 81.29 147 P **P** **21 12 26.4 +0.4**
comp=Z,265nm,0.9s,baz=332,slow=0.5,SNR=58
RPZ Rata Peaks 81.29 147 *e*P **P** **21 12 26.9 +0.9**
EREA Eretria 81.31 308 P **P** **21 12 25.4 -1.1**
TWGZ Tauwhareparae 81.32 139 P **P** **21 12 27.2 +0.8**
SNGZ Shannon Statio 81.33 140 P **P** **21 12 26.5 +0.2**
GRG Griva 81.33 311 P **P** **21 12 25.9 -0.7**
GRG Griva 81.33 311 P **P** **21 12 25.9 -0.7**
GRG Griva 81.33 311 P **P** **21 12 25.9 -0.7**
SKIA Skiathos 81.34 309 P **P** **21 12 25.7 -0.9**
VRAC Vranov 81.35 320 P **P** **21 12 27.4 +1.0**
VRAC Vranov 81.35 320 *e*P **P** **21 12 26.8 +0.4**
VRAC Vranov 81.35 320 *e*S **S** **21 22 28.7 -2.7**
VRAC *e*PKKP 21 31 00.8
LBZ Lake Benmore 81.35 147 *e*P **P** **21 12 27.8 +1.4**
NPS Neapolis 81.37 305 P **P** **21 12 26.7 -0.1**
NPS Neapolis 81.37 305 P **P** **21 12 26.7 -0.1**
NPS Neapolis 81.37 305 P **P** **21 12 26.7 -0.1**
MODS Modra-Piesok 81.37 319 *e*P **P** **21 12 26.5 -0.1**
MODS pmax pmax
comp=Z,122nm,1.5s
MODS Modra-Piesok 81.37 319 *e*P **P** **21 12 26.5 -0.1**
MODS Modra-Piesok 81.37 319 *e*S **S** **21 22 30.5 -1.3**
MODS *e*L L 21 48 40.7
WHZ Wether Hill Ro 81.40 150 *e*P **P** **21 12 27.4 +0.9**
TKGZ Te Karaka 81.41 139 P **P** **21 12 26.9 +0.2**
PUZ Puketiti 81.42 139 P **P** **21 12 25.9 -0.9**
SERI Serifos 81.43 307 P **P** **21 12 25.2 -1.9**
XOR Xorichti 81.45 309 P **P** **21 12 25.7 -1.5**
XOR Xorichti 81.45 309 P **P** **21 12 25.7 -1.5**
NEO Neokhori 81.45 309 P **P** **21 12 25.6 -1.6**
NEO Neokhori 81.45 309 P **P** **21 12 25.6 -1.6**
LAST Lasithi 81.51 305 P **P** **21 12 27.7 0.0**
LAST Lasithi 81.51 305 P **P** **21 12 27.7 0.0**
OXZ Oxford 81.52 146 *e*P **P** **21 12 27.6 +0.4**
PTL Penteli 81.52 308 P **P** **21 12 26.2 -1.4**
PTL Penteli 81.52 308 P **P** **21 12 26.2 -1.4**
MORH M¨‡r ¡gy, Hung 81.52 317⇑ *e*P **P** **21 12 27.5 +0.1**
RIGZ Rimuhau 81.53 139 P **P** **21 12 27.9 +0.4**
SNART Snartemo 81.56 331 *e*P **P** **21 12 27.8 +0.5**
SKO Skopje 81.56 312 P **P** **21 12 28.0 +0.3**
SKO Skopje 81.56 312 P **P** **21 12 28.0 +0.3**
SKO Skopje 81.56 312 *i*P **P** **21 12 28.7 +1.0**
SKO Skopje 81.56 312 P **P** **21 12 28.0 +0.3**
ZST Bratislava 81.56 319 *e*P **P** **21 12 26.9 -0.7**
ZST pmax pmax
comp=Z,34nm,2.8s
ZST Bratislava 81.56 319 *e*P **P** **21 12 26.9 -0.7**
KRUC Moravsky 81.58 320 *e*P **P** **21 12 28.0 +0.4**
KRUC Moravsky 81.58 320 *e*S **S** **21 22 30.7 -3.1**
KRUC *e*PKKP 21 31 00.2
DIVS Divibare 81.60 315 *e*P **P** **21 12 27.6 -0.4**
ATHU Athens Univers 81.61 308 P **P** **21 12 25.0 -3.0**
ATHU Athens Univers 81.61 308 P **P** **21 12 25.0 -3.0**
FYTO Fytoko, Volos 81.61 309 P **P** **21 12 27.1 -0.9**
FYTO Fytoko, Volos 81.61 309 P **P** **21 12 27.1 -0.9**
LIT Litokhoron 81.63 310 *e*P **P** **21 12 27.6 -0.6**
LIT Litokhoron 81.63 310 P **P** **21 12 27.2 -1.0**
LIT Litokhoron 81.63 310 *e*P **P** **21 12 27.6 -0.6**
SMIA Simia 81.64 309 P **P** **21 12 27.4 -0.8**
VLY Voula,Athens 81.65 308 P **P** **21 12 26.6 -1.6**
VLY Voula,Athens 81.65 308 P **P** **21 12 26.6 -1.6**
ATH Athens Observa 81.65 308 P **P** **21 12 26.9 -1.3**
ATH Athens Observa 81.65 308 P **P** **21 12 26.9 -1.3**
ATH Athens Observa 81.65 308 P **P** **21 12 26.9 -1.3**
KHZ Kahutara 81.66 144 *e*P **P** **21 12 27.7 -0.2**
MHLO Agia Marina, M 81.68 306 P **P** **21 12 26.7 -1.7**
MUD Monsted U'grnd 81.69 329⇑ *i*P **P** **21 12 28.4 +0.4**
comp=Z,142nm,1.1s
MUD Monsted U'grnd 81.69 329⇑ *i*P **P** **21 12 28.4 +0.4**
MUD pmax pmax
comp=Z,140nm,1.1s
KTI Kastanea 81.77 311 P **P** **21 12 28.2 -0.8**
STAV Stavanger 81.88 332 *e*P **P** **21 12 29.7 +0.7**
LKR Lokris 81.88 309 P **P** **21 12 28.0 -1.5**
LKR Lokris 81.88 309 P **P** **21 12 28.0 -1.5**
IDI Anoyia 81.90 305 P **P** **21 12 28.7 -1.0**
comp=Z,65nm,1.0s,baz=146,slow=11,SNR=26
IDI LR LR 21 56 34.6
comp=Z,283nm,19.2s,baz=66,slow=41
IDI Anoyia 81.90 305 *e*P **P** **21 12 29.1 -0.6**
KMY Karmoy 81.91 332 *e*P **P** **21 12 28.9 -0.2**
PVCC Panska Ves 81.92 322 *e*P **P** **21 12 30.6 +1.2**
PVCC *e*pP **pP** **21 12 46.5 -3.0**
PVCC *e*PP **PP** **21 15 35.2 -2.1**
PVCC *e*S **S** **21 22 34.5 -2.8**
PVCC *e*PKKP **PKKPbc** **21 31 01.0 +1.2**
PVCC AMS AMS 21 52 30.0
comp=Z,1μm,15.9s
PVCC Panska Ves 81.92 322 *e*P **P** **21 12 30.6 +1.2**
PVCC *e* 21 15 35.2
PVCC *e*S **S** **21 22 34.5 -2.8**
PVCC MLR MLR
comp=Z,1μm,15.9s
SCO Scoresbysund 81.94 349⇑ *i*P **P** **21 12 29.6 +0.5**
comp=Z,325nm,1.3s
comp=Z,2μm,24.0s
SCO Scoresbysund 81.94 349 *e*P **P** **21 12 29.4 +0.4**
SCO Scoresbysund 81.94 349⇑ *i*P **P** **21 12 29.6 +0.5**
SCO pmax pmax
comp=Z,330nm,1.3s
SCO MLR MLR
comp=Z,2μm,24.0s
KRUS Krusevo 81.95 312 *e*P **P** **21 12 30.1 +0.2**
CRLZ Canterbury Las 81.99 146 *e*P **P** **21 12 32.2 +2.5**
KZN Kozani 82.05 311 P **P** **21 12 29.6 -0.8**
KZN Kozani 82.05 311 P **P** **21 12 29.6 -0.8**
KZN Kozani 82.05 311 P **P** **21 12 29.6 -0.8**
BIA Bitola 82.05 311 *e*P **P** **21 12 30.7 +0.4**

SIVA Sivas 82.07 305 P **P** 21 12 30.6 +0.1
SIVA Sivas 82.07 305 P **P** 21 12 30.6 +0.1
BBB Bella Bella 82.09 36 P **P** 21 12 29.6 -0.7
comp=Z,63nm,1.1s,baz=273,slow=5.9,SNR=9.9
BBB Bella Bella 82.09 36 *e*P **P** 21 12 31.3 +1.1
GOPC GO Pecny, Ondr 82.10 322 *e*P **P** 21 12 31.3 +0.9
GOPC *e*pP **pP** 21 12 45.9 -4.6
GOPC *e*PP **PP** 21 15 36.9 -1.9
GOPC *e*S **S** 21 22 38.5 -0.6
GOPC *e*PKKP **PKKPbc** 21 31 00.5 +1.1
GOPC AMS AMS 21 52 20.0
comp=Z,1μm,17.2s
GOPC GO Pecny, Ondr 82.10 322 *e*P **P** 21 12 31.3 +0.9
GOPC *e* 21 15 36.9
GOPC *e*S **S** 21 22 38.5 -0.6
GOPC MLR MLR
comp=Z,1μm,17.2s
MQZ McQueen's Vall 82.10 146 *e*P **P** 21 12 31.4 +1.2
BRG Berggiesshubel 82.10 323 *i* P **P** 21 12 30.7 +0.3
comp=Z,79nm,1.2s
BRG *e* 21 12 46.5
comp=Z,22nm,0.9s
BRG *e* 21 15 23.4
comp=Z,24nm,1.4s
BRG PP **PP** 21 15 38.4 -0.4
comp=Z,23nm,1.1s
BRG S **S** 21 22 37.0 -2.1
BRG *i* PKKP **PKKPbc** 21 30 59.7 +0.3
comp=Z,15nm,1.1s
comp=Z,2μm,27.7s
comp=N,2μm,24.0s
comp=E,1μm,24.0s
BRG Berggiesshubel 82.10 323 *i* P **P** 21 12 30.7 +0.3
BRG 21 15 38.4
BRG S **S** 21 22 37.0 -2.1
BRG pmax pmax
comp=Z,79nm,1.2s
BRG pmax pmax
comp=Z,23nm,1.1s
BRG MLR MLR
comp=Z,2μm,27.7s
BRG MLR MLR
comp=N,2μm,24.0s
BRG MLR MLR
comp=E,1μm,24.0s
FNA Florina 82.11 311 *e*P **P** 21 12 30.4 -0.3
FNA Florina 82.11 311 P **P** 21 12 29.5 -1.2
FNA Florina 82.11 311 *e*P **P** 21 12 30.4 -0.3
SOP Sopron 82.12 319⇑ *e*P **P** 21 12 30.6 +0.1
SOP Sopron 82.12 319 P **P** 21 12 31.2 +0.7
LTK Loutraki 82.17 308 P **P** 21 12 28.6 -2.4
LTK Loutraki 82.17 308 P **P** 21 12 28.6 -2.4
LOUT Loutraki 82.18 308 P **P** 21 12 28.8 -2.2
THL Klokotos Trika 82.19 310 P **P** 21 12 29.2 -1.8
DID Didima 82.19 308 P **P** 21 12 28.4 -2.8
DID Didima 82.19 308 P **P** 21 12 28.4 -2.8
PRU Pruhonice 82.20 322 *e*P **P** 21 12 31.8 +0.9
PRU *ex* x 21 12 44.2
PRU *e*PP **PP** 21 15 40.1 +0.5
PRU *e*S **S** 21 22 39.2 -0.9
PRU *e*PKKP **PKKPbc** 21 31 00.1 +0.9
PRU AMS AMS 21 52 20.0
comp=E,1μm,14.8s
PRU Pruhonice 82.20 322 *e*P **P** 21 12 31.8 +0.9
PRU *e* 21 15 40.1
PRU *e*S **S** 21 22 39.2 -0.9
PRU MLR MLR
comp=Z,1μm,14.8s
AGG Agios Georgios 82.20 309 *e*P **P** 21 12 29.8 -1.4
AGG Agios Georgios 82.20 309 P **P** 21 12 29.6 -1.6
AGG Agios Georgios 82.20 309 *e*P **P** 21 12 29.8 -1.4
PRA Prague 82.22 322 *e*P **P** 21 12 32.1 +1.1
PRA *e*S **S** 21 22 40.7 +0.4
PRA AMS AMS 21 54 00.0
comp=Z,1μm,19.6s
PRA Prague 82.22 322 *e*P **P** 21 12 32.1 +1.1
PRA *e*S **S** 21 22 40.7 +0.4
PRA MLR MLR
comp=Z,1μm,19.6s
YKA Yellowknife Ar 82.25 23 P **P** 21 12 30.6 -0.2
comp=Z,185nm,1.0s,baz=313,slow=4.9,SNR=21
YKA PKKPbc **PKKPbc** 21 30 56.8 -2.6
comp=Z,2.2nm,0.7s,baz=126,slow=2.4,SNR=10
YKA PKPPKP **P'P'df** 21 39 03.5 -2.0
comp=Z,1.6nm,0.9s,baz=127,slow=1.9,SNR=5.1
YKA LR LR 21 51 41.6
comp=Z,99nm,21.7s,baz=308,slow=38
SUMG Summit 82.27 354⇑ *i*P **P** 21 12 31.6 +0.3
comp=Z,275nm,1.0s
SUMG Summit 82.27 354 *e*P **P** 21 12 31.4 +0.1
SUMG Summit 82.27 354⇑ *i*P **P** 21 12 31.6 +0.3
SUMG pmax pmax
comp=Z,280nm,1.0s
KRND KRANIDI 82.31 307 P **P** 21 12 29.4 -2.3
BCI Bajram Curri 82.31 313 *i* P pP 21 12 47.7 -4.0
DSF Desfina 82.32 309 P **P** 21 12 29.6 -2.2
DSF Desfina 82.32 309 P **P** 21 12 29.6 -2.2
PHP Peshkopia 82.36 312 P **P** 21 12 31.5 -0.5
PHP Peshkopia 82.36 312 P **P** 21 12 31.5 -0.5
PHP Peshkopia 82.36 312 *i* P **P** 21 12 28.9 -3.1
PHP Peshkopia 82.36 312 P **P** 21 12 31.5 -0.5
VAM Vamos 82.36 305 P **P** 21 12 31.4 -0.6
VAM Vamos 82.36 305 P **P** 21 12 31.4 -0.6
VAM Vamos 82.36 305 P **P** 21 12 31.4 -0.6
OHR Ohrid 82.36 312 *i* P **P** 21 12 31.4 -0.6
THAL Thalero 82.38 308 P **P** 21 12 29.6 -2.5
CLL Collm 82.41 323⇑ *i*P **P** 21 12 31.7 -0.2
comp=Z,119nm,1.2s
CLL *i* (pP) **pP** 21 12 48.1 -3.9
CLL *i* 21 12 53.2
CLL *e*sP **sP** 21 13 00.0 -0.1
CLL *i* PP **PP** 21 15 42.3 +1.1
comp=Z,87nm,1.2s
CLL *e*sPP 21 16 06.0
CLL *e*sPPP 21 18 00.0
CLL *e*S **S** 21 22 41.0 -1.1
CLL *e*PS **PnS** 21 23 42.0 +1.7
CLL *e*(SS) 21 27 54.0
CLL *e* 21 29 18.0
CLL *i* PKKPbc **PKKPbc** 21 30 58.8 +0.1
comp=Z,20nm,1.1s
CLL *e*sPKKPbc 21 31 22.0
CLL *e* 21 33 42.0
CLL *e* 21 38 56.0
CLL *e*PKPPKPd **P'P'df** 21 39 03.0 -2.6
CLL LmV 21 56 00.0
comp=Z,1μm,19.3s
CLL Collm 82.41 323 *e*P **P** 21 12 31.4 -0.5
CLL Collm 82.41 323⇑ *i*P **P** 21 12 31.7 -0.2
CLL *i* *PP **pP** 21 12 48.1 -3.9
CLL *i* 21 15 42.3
CLL *e*S **S** 21 22 41.0 -1.1
CLL pmax pmax
comp=Z,119nm,1.2s
CLL pmax pmax
comp=Z,87nm,1.2s
CONA Conrad Observa 82.42 319 *e*P **P** 21 12 32.7 +0.5
comp=Z,125nm,1.7s,SNR=68
CONA PP **PP** 21 15 40.0 -1.6
comp=Z,41nm,1.8s
CONA *e*PKKPbc **PKKPbc** 21 30 59.0 +0.3
comp=Z,9.5nm,1.6s,SNR=5.5
KPRO Kipourio 82.48 310 P **P** 21 12 31.2 -1.4
NEST Nestorio 82.50 311 P **P** 21 12 31.8 -1.0
IMMV Iera Moni Meta 82.50 305 P **P** 21 12 31.8 -1.0
PENT Pentalofos 82.53 311 P **P** 21 12 31.9 -1.1
BEHE Becsehely 82.56 318⇑ *e*P **P** 21 12 33.0 +0.2
PUK Puka 82.57 313 *i* P **P** 21 12 35.5 +2.4
KBN Korca 82.58 311 P **P** 21 12 32.3 -0.9
KBN Korca 82.58 311 P **P** 21 12 32.3 -0.9
KBN Korca 82.58 311 *i* P P 21 12 27.4 -5.8
KBN Korca 82.58 311 P **P** 21 12 32.3 -0.9
KALE Kalithea 82.60 309 P **P** 21 12 31.5 -1.8
KALE Kalithea 82.60 309 P **P** 21 12 31.5 -1.8
EVR Evrytania 82.61 309 P **P** 21 12 32.1 -1.3
EVR Evrytania 82.61 309 P **P** 21 12 32.1 -1.3
GUR Goura 82.65 308 P **P** 21 12 31.7 -1.9
GUR Goura 82.65 308 P **P** 21 12 31.7 -1.9
SERG Sergoula 82.65 309 P **P** 21 12 32.0 -1.5
TRIZ Trizonia 82.66 309 P **P** 21 12 31.7 -1.8
ANX Ano Chora 82.67 309 P **P** 21 12 32.7 -1.0
GVD Gavdhos 82.68 305 P **P** 21 12 33.3 -0.4
GVD Gavdhos 82.68 305 P **P** 21 12 33.3 -0.4

VLI Veliai 82.74 307 P **P** 21 12 31.5 -2.5
VLI Veliai 82.74 307 P **P** 21 12 31.5 -2.5
KLV Kalavryta, Ach 82.75 308 P **P** 21 12 32.3 -1.8
KLV Kalavryta, Ach 82.75 308 P **P** 21 12 32.3 -1.8
EFP Efpalio 82.75 309 P **P** 21 12 32.9 -1.1
LAKA Lakka 82.78 309 P **P** 21 12 32.8 -1.4
LAKA Lakka 82.78 309 P **P** 21 12 32.8 -1.4
PDG Podgorica 82.82 313⇑ *i*P **P** 21 12 34.8 +0.6
PDG Podgorica 82.82 313 P **P** 21 12 34.2 0.0
TTG Podgorica 82.82 313 *e*P **P** 21 12 34.2 0.0
TTG Podgorica 82.82 313 *e*P **P** 21 12 34.2 0.0
ANKY Antikythira Is 82.83 306 P **P** 21 12 33.1 -1.4
ANKY Antikythira Is 82.83 306 P **P** 21 12 33.1 -1.4
KYTH Kithira 82.85 307 P **P** 21 12 33.4 -1.2
KYTH Kithira 82.85 307 P **P** 21 12 33.4 -1.2
VLX Vlachokerasia 82.87 308 P **P** 21 12 33.2 -1.6
VLX Vlachokerasia 82.87 308 P **P** 21 12 33.2 -1.6
TRIP Tripoli 82.88 308 P **P** 21 12 33.5 -1.3
KOGS Kog 82.89 318⇑ *i*P **P** 21 12 34.5 0.0
TIR Tirane 82.89 312⇓ *i*P **P** 21 12 35.5 +0.8
TIR Tirane 82.89 312 *e*P **P** 21 12 34.9 +0.2
TIR Tirane 82.89 312 P **P** 21 12 34.6 -0.1
TIR Tirane 82.89 312 *e*P **P** 21 12 34.9 +0.2
PVO Paravola 82.94 309 P **P** 21 12 34.2 -0.8
ARSA Arzberg 82.94 319 *e*P **P** 21 12 35.2 +0.3
comp=Z,38nm,1.3s,SNR=28
ARSA PP **PP** 21 15 45.8 0.0
comp=Z,14nm,1.4s
ARSA *e*PKKPbc **PKKPbc** 21 30 58.1 +0.7
comp=Z,8.7nm,1.3s
JAN Janina 82.96 310 P **P** 21 12 34.4 -0.7
JAN Janina 82.96 310 P **P** 21 12 34.4 -0.7
JAN Janina 82.96 310 P **P** 21 12 34.4 -0.7
DSL Palaion Diasel 83.02 310 P **P** 21 12 34.3 -1.1
DSL Palaion Diasel 83.02 310 P **P** 21 12 34.3 -1.1
DRO Drossia 83.10 308 P **P** 21 12 35.2 -0.6
BLY Banja Luka 83.10 316⇑ *i*P **P** 21 12 36.6 +0.9
BLY Banja Luka 83.10 316 *e*P **P** 21 12 36.1 +0.5
DYR Agios Nikonas 83.16 307 P **P** 21 12 34.9 -1.3
KHC Kasperske Hory 83.17 321 *e*P **P** 21 12 36.8 +0.8
KHC *e*pP **pP** 21 12 51.2 -4.9
KHC *e*PP **PP** 21 15 45.1 -2.5
KHC *e*S **S** 21 22 49.9 -0.2
KHC *e*SS **SS** 21 28 11.5 -3.5
KHC *e*PKKP **PKKPbc** 21 30 57.5 +0.5
KHC AMS AMS 21 53 00.0
comp=Z,1μm,14.7s
KHC Kasperske Hory 83.17 321 *e*P **P** 21 12 36.1 +0.1
KHC Kasperske Hory 83.17 321 *e*P **P** 21 12 36.8 +0.8
KHC *e* 21 15 45.1
KHC *e*S **S** 21 22 49.9 -0.2
KHC *e*SS **SS** 21 28 11.5 -3.5
KHC MLR MLR
comp=Z,1μm,14.7s
PDO Prodromos 83.19 309 P **P** 21 12 35.2 -1.1
RLS Riolos of Patr 83.23 309 P **P** 21 12 35.9 -0.5
RLS Riolos of Patr 83.23 309 P **P** 21 12 35.9 -0.5
GEC2 GERESS Array S 83.24 321 *e*P **P** 21 12 36.8 +0.4
GEC2 GERESS Array S 83.24 321 *e*P **P** 21 12 36.8 +0.4
GERES GERESS Array B 83.24 321 P **P** 21 12 37.1 +0.7
comp=Z,22nm,0.8s,baz=57,slow=4.9,SNR=132
GERES PP **PP** 21 15 48.5 +0.3
comp=Z,7.9nm,1.1s,baz=60,slow=7.9,SNR=4.3
GERES PKKP **PKKPdf** 21 30 42.4 -4.5
comp=Z,0.5nm,0.9s,baz=224,slow=3.7,SNR=3.8
GERES PKKPbc **PKKPbc** 21 30 57.3 +0.4
comp=Z,8.4nm,0.9s,baz=215,slow=1.6,SNR=36
GERES PKPPKP **P'P'df** 21 38 58.1 -6.1
comp=Z,1.9nm,1.1s,baz=241,slow=2.7,SNR=8.3
GEA0 GERESS Array S 83.24 321 *e*P **P** 21 12 35.9 -0.6
NKC Novy Kostel 83.25 323 *e*P **P** 21 12 37.1 +0.7
NKC *e*PP **PP** 21 15 48.1 -0.1
NKC AMS AMS 21 57 30.0
comp=Z,1μm,22.9s
NKC Novy Kostel 83.25 323 *e*P **P** 21 12 37.1 +0.7
NKC *e* 21 15 48.1
NKC MLR MLR
comp=Z,1μm,22.9s
ITM Ithomi 83.28 308 *e*P **P** 21 12 35.9 -0.9
ITM Ithomi 83.28 308 P **P** 21 12 35.6 -1.2
AMT Artemida-Makis 83.28 308 P **P** 21 12 36.0 -0.8
GROS Grobnik 83.34 318 *i* P **P** 21 12 36.7 -0.2
MOA Molln 83.40 320 *e*P **P** 21 12 37.6 +0.4
comp=Z,164nm,1.8s,SNR=36
MOA PP **PP** 21 15 48.9 -0.6
comp=Z,35nm,1.5s
MOA *e*PKKPbc **PKKPbc** 21 30 56.8 +0.4
comp=Z,10nm,1.2s,SNR=7.7
SGD Sagiada 83.41 311 P **P** 21 12 36.5 -0.9
SRN Sarande 83.45 311 P **P** 21 12 36.7 -0.9
SRN Sarande 83.45 311 P **P** 21 12 36.7 -0.9
LKD2 Lefkada island 83.48 310 P **P** 21 12 36.8 -1.0
LKD2 Lefkada island 83.48 310 P **P** 21 12 36.8 -1.0
PERS Pernice 83.48 319⇑ *i*P **P** 21 12 37.6 -0.1
PERS *e*S **S** 21 22 46.3 -7.2
PERS *e*SS **SS** 21 28 18.8 -1.1
SOKA Soboth 83.52 319 *e*P **P** 21 12 38.0 +0.1
comp=Z,59nm,1.1s,SNR=52
SOKA *i* PP **PP** 21 15 51.1 +0.5
SOKA *e*PKKPbc **PKKPbc** 21 30 56.8 +0.7
comp=Z,3.2nm,0.9s
PYL PYLOS 83.53 308 P **P** 21 12 36.3 -1.8
PYL PYLOS 83.53 308 P **P** 21 12 36.3 -1.8
WET Wettzell 83.56 321 P **P** 21 12 38.5 +0.5
STON Ston 83.64 314 P **P** 21 12 36.5 -1.9
KEK Kerkira 83.67 311 P **P** 21 12 37.8 -0.9
KEK Kerkira 83.67 311 P **P** 21 12 37.8 -0.9
KFL Anninata 83.69 309 P **P** 21 12 38.1 -0.7
FSK Fiskardo 83.69 309 P **P** 21 12 37.7 -1.1
OZLJ Ozalj 83.76 317 P **P** 21 12 39.5 +0.5
VLS Valsamata 83.80 309 P **P** 21 12 38.5 -0.9
VLS Valsamata 83.80 309 P **P** 21 12 38.5 -0.9
VLS Valsamata 83.80 309 P **P** 21 12 38.5 -0.9
PDKS Podkum 83.83 318 *i* P **P** 21 12 39.4 -0.1
OBKA Obir 83.89 319 *e*P **P** 21 12 40.1 +0.2
comp=Z,55nm,1.1s,SNR=27
OBKA PP **PP** 21 15 54.2 +0.6
comp=Z,22nm,1.2s
OBKA *e*PKKPbc **PKKPbc** 21 30 56.2 +0.9
comp=Z,6.9nm,0.8s,SNR=6.2
LRW Lerwick 83.93 335 *e*P **P** 21 12 39.1 -0.4
LRW IAmb IAmb 21 12 41.3
comp=Z,336nm,1.1s
BOJS Bojanci 83.95 317⇑ *i*P **P** 21 12 40.3 +0.3
BOJS *e*PP **PP** 21 15 56.0 +2.0
BOJS *e*S **S** 21 22 51.8 -6.2
UDBI Udbina 84.10 316 P **P** 21 12 41.0 +0.1
LJU Ljubljana 84.13 318⇑ *e*P **P** 21 12 40.5 -0.4
LJU *e*PP **PP** 21 15 58.0 +2.6
LJU *e* 21 16 17.3
LJU *e*S **S** 21 22 51.6 -8.2
GRF Grafenberg Arr 84.21 322 P **P** 21 12 42.6 +1.3
GRFO Grafenberg 84.21 322 *e*P **P** 21 12 42.0 +0.8
GRFO Grafenberg 84.21 322 *e*P **P** 21 12 42.0 +0.8
KBA Koelnbreinsper 84.33 319 *e*P **P** 21 12 42.1 -0.1
comp=Z,56nm,1.0s,SNR=35
KBA PP **PP** 21 15 57.3 +0.1
comp=Z,54nm,1.3s
KBA Koelnbreinsper 84.33 319 P **P** 21 12 42.0 -0.1
MYKA Terra Mystica 84.37 319 *i* P **P** 21 12 42.5 +0.3
comp=Z,59nm,1.5s,SNR=16
MYKA *e*PKKPbc **PKKPbc** 21 30 54.6 +0.4
comp=Z,2.1nm,0.5s
CADS Cadrg 84.52 319⇑ *i*P **P** 21 12 41.9 -1.0
NVLJ Novalja 84.64 317 *i*P **P** 21 12 43.1 -0.4
ROBS Robic 84.64 319 *i*P **P** 21 12 42.8 -0.8
SKDS Skadanscina 84.69 318 *i*P **P** 21 12 42.8 -1.0
TRI Trieste 84.76 318 *e*P **P** 21 12 44.0 -0.1
TRI Trieste 84.76 318 *e*P **P** 21 12 44.0 -0.1
MCQ Macquarie Isla 84.78 160 *e*P **P** 21 12 45.7 +2.0
MCQ Macquarie Isla 84.78 160 *e*P **P** 21 12 45.7 +2.0
OPO Ambohidratompo 84.78 247 P **P** 21 12 46.4 +1.5
comp=Z,108nm,1.0s,baz=63,slow=6.7,SNR=61
OPO LR LR 21 46 24.3
comp=Z,2μm,21.8s,baz=55,slow=33
ABPO Ambohimpanom 84.96 247 *e*P **P** 21 12 46.9 +1.2
ABPO Ambohimpanom 84.96 247 *e*P **P** 21 12 46.9 +1.2
FUR Furstenfeldbru 84.97 321 P **P** 21 12 46.0 +0.8
ABTA Abfaltersbach 84.98 320 *e*P **P** 21 12 44.6 -0.7
comp=Z,107nm,1.3s,SNR=41
ABTA PP **PP** 21 16 03.6 +1.1
comp=Z,5.2nm,0.8s

ABTA *e*PKKPbc **PKKPbc** 21 30 53.2 +0.5
comp=Z,10.0nm,1.0s,SNR=5.9
WTTA Wattenberg 85.23 320 *e*PcP **P** 21 12 47.1 +0.4
comp=Z,112nm,1.3s,SNR=33
WTSB Winterswijk 85.33 326 *e*P **P** 21 12 46.7 0.0
comp=Z,347nm,1.4s
MATE Matera 85.34 313⇑ *i*P **P** 21 12 47.2 +0.1
MOTA Moosalm 85.50 321 *e*P **P** 21 12 47.0 -0.9
comp=Z,62nm,1.2s,SNR=39
MOTA *e*PP **PP** 21 16 07.5 +0.7
comp=Z,56nm,1.1s,SNR=6.1
MOTA *i* PKKPbc **PKKPbc** 21 30 51.5 -0.2
comp=Z,4.3nm,0.6s,SNR=8.0
RETA Reutte 85.62 321 *i* P **P** 21 12 48.8 +0.3
comp=Z,18nm,1.0s,SNR=9.5
RETA PP **PP** 21 16 07.4 -0.2
comp=Z,22nm,1.0s
RETA *e*PKKPbc **PKKPbc** 21 30 52.0 +0.7
comp=Z,3.7nm,0.6s
LODK Lodwar 85.84 272 *e*P **P** 21 12 51.9 +1.7
FETA Feichten 85.89 320 *e*P **P** 21 12 50.0 +0.1
comp=Z,79nm,1.2s,SNR=33
FETA *e*PP **PP** 21 16 11.2 +1.3
comp=Z,71nm,1.3s,SNR=8.1
FETA *e*PKKPbc **PKKPbc** 21 30 51.5 +0.7
comp=Z,12nm,0.9s
TIP Timpagrande 86.00 311⇑ *i*P **P** 21 12 50.8 +0.3
TIP Timpagrande 86.00 311 *e*P **P** 21 12 50.9 +0.4
TIP Timpagrande 86.00 311 P **P** 21 12 50.6 +0.1
DAVA Damuels 86.24 321 *e*P **P** 21 12 51.5 -0.2
comp=Z,61nm,1.3s,SNR=14
DAVA PP **PP** 21 16 11.2 -1.5
comp=Z,66nm,1.1s,SNR=8.4
DAVA *e*PKKPbc **PKKPbc** 21 30 51.1 +1.1
comp=Z,7.6nm,0.8s
CUC Castrocucco 86.25 312 *e*P **P** 21 12 51.3 -0.4
FUORN Ofenpass-Fuorn 86.37 320 *e*P **P** 21 12 52.8 +0.3
ILULI Ilulissat 86.41 358⇑ *i*P **P** 21 12 51.6 -0.2
comp=Z,365nm,1.2s
ILULI Ilulissat 86.41 358⇑ *i*P **P** 21 12 51.6 -0.2
ILULI pmax pmax
comp=Z,370nm,1.2s
MCD Coleburn Disti 86.42 334 *e*P **P** 21 12 51.1 -1.0
HGN Heimansgroeve 86.46 325 *e*P **P** 21 12 51.8 -0.6
comp=Z,90nm,0.6s
HGN *e*PP **PP** 21 16 18.7 +4.6
HGN *e*SKS **S** 21 23 16.2 -6.3
HGN *e*SS SS 21 28 21.5 -42
PGC Sidney 86.49 37 *e*P **P** 21 12 53.9 +1.3
comp=Z,484nm,1.3s
MEM Membach 86.51 325 ⇓P **P** 21 12 53.4 +0.7
comp=Z,65nm,1.5s
MEM ⇓PP **PP** 21 16 16.5 +1.9
MEM Membach 86.51 325 P **P** 21 12 53.6 +0.9
BEBN Eben Emael 86.57 325 ⇑P **P** 21 12 53.2 +0.2
AQU L'Aquila 86.67 315 *e*P **P** 21 12 54.4 +0.7
AQU L'Aquila 86.67 315 *e*P **P** 21 12 54.4 +0.7
A04D Lummi Island 86.86 37 P **P** 21 12 55.9 +1.5
baz=304,SNR=16
NLWA Neilton Lookou 86.95 39 *e*P **P** 21 12 57.3 +2.3
WLF Walferdange 86.98 324 ⇓P **P** 21 12 55.5 +0.5
comp=Z,167nm,1.5s
WLF Walferdange 86.98 324 *e*P **P** 21 12 55.8 +0.8
WLF Walferdange 86.98 324 *e*P **P** 21 12 55.8 +0.8
TUE Stuetta 86.98 320 *e*P **P** 21 12 55.3 -0.1
BCLA Clavier 86.99 325 ⇑P **P** 21 12 54.9 -0.1
comp=Z,72nm,1.7s
BCLA ⇑PP **PP** 21 16 19.9 +1.5
EDU Dundee 87.02 333 *e*P **P** 21 12 55.1 +0.1
CEL Celeste 87.03 311 *e*P **P** 21 12 56.0 +0.4
CDF Champ du Feu 87.08 323 P **P** 21 12 53.9 -1.7
CDF pmax pmax
comp=Z,249nm,1.4s
UCC Uccle 87.25 326 ⇑P **P** 21 12 55.7 -0.5
UCC Uccle 87.25 326 *e*P **P** 21 12 56.9 +0.6
UCC Uccle 87.25 326 *e*P **P** 21 12 56.9 +0.6
ECH Echery 87.26 323 P **P** 21 12 56.8 +0.4
ESY Stoneypath 87.28 332 *e*P **P** 21 12 55.7 -0.6
GIVF Givet 87.42 325 *e*P **P** 21 12 56.6 -0.5
GIVF pmax pmax
comp=Z,137nm,1.4s
B05A Bryant 87.45 37 P **P** 21 12 58.6 +1.3
baz=305,SNR=66
SNF Seneffe 87.46 326 ⇑P **P** 21 12 57.5 +0.3
comp=Z,60nm,1.7s
KPL Plockton 87.54 335 *e*P **P** 21 12 56.5 -1.0
KPL IAmb IAmb 21 12 58.1
comp=Z,104nm,1.3s
DOU Dourbes 87.55 325 ⇓P **P** 21 12 58.3 +0.6
E03A Lebam 87.60 39 *e*P **P** 21 12 59.5 +1.6
VLC Villacollemand 87.61 318 *e*P **P** 21 12 59.7 +1.5
B06A Marblemount 87.64 37 *e*P **P** 21 12 59.3 +1.1
HINF Hinteralfeld 87.65 322 *e*P **P** 21 12 57.5 -0.8
HINF pmax pmax
comp=Z,109nm,1.5s
BAIF Baives 87.77 325 *e*P **P** 21 12 58.3 -0.5
BAIF pmax pmax
comp=Z,73nm,1.3s
EAB Aberfoyle 87.81 333⇑ *e*P **P** 21 12 57.9 -1.0
HAU Haudompre 87.82 323 P **P** 21 12 58.3 -0.8
EKA Eskdalemuir Ar 87.90 332 P **P** 21 12 59.5 +0.2
comp=Z,20nm,0.7s,baz=44,slow=2.9,SNR=40
EKA PP **PP** 21 16 26.0 +0.4
comp=Z,8.2nm,1.0s,baz=46,slow=7.2,SNR=4.4
EKA LR LR 21 56 36.1
comp=Z,1μm,19.6s,baz=45,slow=38
ESK Eskdalemuir 87.93 332 *e*P **P** 21 12 59.7 +0.3
ESK Eskdalemuir 87.93 332 *e*P **P** 21 12 59.7 +0.3
F03A Seaside 87.94 40 *e*P **P** 21 13 00.9 +1.2
ECK Cauldkaine Hil 87.99 332⇑ *e*P **P** 21 12 59.5 -0.3
BHH Howats Hill 88.08 332⇑ *e*P **P** 21 13 00.0 -0.1
PGBU Glenifferbraes 88.13 333 *e*P **P** 21 13 00.2 -0.1
PGBU IAmb IAmb 21 13 00.3
comp=Z,94nm,0.9s
D05A Enumclaw 88.13 38 *e*P **P** 21 13 02.5 +2.0
HPK Haverah Park 88.14 331 *e*P **P** 21 13 00.3 -0.2
F04D Rainier, OR 88.17 39 P **P** 21 13 02.3 +1.5
baz=304,SNR=26
SENIN Lac Senin/Sane 88.22 321 *e*P **P** 21 13 01.6 +0.2
RAR Rarotonga 88.30 114 P **P** 21 13 01.6 -0.1
comp=Z,13nm,0.4s,baz=315,slow=3.6,SNR=8.3
RAR LR LR 21 45 27.5
comp=Z,762nm,22.0s,baz=306,slow=31
RAR Rarotonga 88.30 114 *e*P **P** 21 13 04.6 +2.9
RAR Rarotonga 88.30 114 *e*P **P** 21 13 04.6 +2.9
C06D Leavenworth 88.31 37 P **P** 21 13 02.6 +1.2
baz=306
KESW Keswick, Cumbr 88.37 332 *e*P **P** 21 13 01.7 +0.1
KESW IAmb IAmb 21 13 04.1
comp=Z,159nm,1.4s
VAE Valguarnera 88.44 311 P **P** 21 13 03.4 +1.1
comp=Z,13nm,0.9s,baz=127,slow=5.1,SNR=6.1
LON Longmire 88.48 38 *e*P **P** 21 13 03.3 +1.0
LON Longmire 88.48 38 *e*P **P** 21 13 03.3 +1.0
G03D McMinnville, O 88.51 40 P **P** 21 13 03.8 +1.4
baz=304,SNR=28
SFJD Kangerlussuaq 88.61 357 P **P** 21 13 01.8 -0.6
comp=Z,98nm,1.0s,baz=9.1,slow=6.0,SNR=62
SFJD PP **PP** 21 16 29.4 -1.4
comp=Z,30nm,1.0s,baz=354,slow=8.9,SNR=7.3
SFJD Kangerlussuaq 88.61 357⇑ *i*P **P** 21 13 01.9 -0.5
comp=Z,158nm,1.1s
SFJD Kangerlussuaq 88.61 357⇑ *i*P **P** 21 13 01.9 -0.5
SFJD pmax pmax
comp=Z,160nm,1.1s
LTY Liberty 88.82 37 *e*P **P** 21 13 04.8 +0.9
ANGG Ammassalik, Gr 88.83 352 *e*P **P** 21 13 03.3 -0.2
COR Corvallis 88.84 41 *e*P **P** 21 13 06.7 +2.8
COR Corvallis 88.84 41 *e*P **P** 21 13 06.7 +2.8
GAL1 Galloway 88.87 333 *e*P **P** 21 13 03.6 -0.2
GAL1 IAmb IAmb 21 13 04.6
comp=Z,50nm,1.1s
B08A Colville Reser 88.90 36 *e*P **P** 21 13 05.5 +1.3
LPG La Plagne 89.03 321 *e*P **P** 21 13 04.8 -0.4
LPG pmax pmax
comp=Z,54nm,0.8s
LPL La Plagne 89.03 321 *e*P **P** 21 13 04.7 -0.4
LPL pmax pmax
comp=Z,51nm,0.8s
KEBM Edson Butte 89.16 42 *e*P **P** 21 13 08.1 +2.5
CLTB Caltabellotta 89.21 311 *e*P **P** 21 13 07.0 +1.0
I03D Drain, OR 89.31 41 P **P** 21 13 07.8 +1.6
baz=304
BNI Bardonecchia 89.33 320 *e*P **P** 21 13 06.9 +0.5
BNI Bardonecchia 89.33 320 *e*P **P** 21 13 06.9 +0.5

PGF **Pioggiola** 89.33 317 *e*P P 21 13 07.1 +0.6
PGF pmax pmax
comp=Z,195nnm,1.4s
WIM **Isle of Man** 89.35 332 *e*P P 21 13 06.1 -0.1
H04A **Detroit Lake** 89.44 40 *e*P P 21 13 08.0 +1.2
SSW **Stow on the Wo** 89.55 329⇑*e*P P 21 13 07.1 0.0
SBF **Sospel** 89.56 319 *e*P P 21 13 07.5 +0.1
SBF pmax pmax
comp=Z,87nm,1.0s
FOEL **Foel Wylfa** 89.56 330 *e*P P 21 13 05.9 -1.2
FOEL IAmb IAmb 21 13 07.4
comp=Z,107nm,1.1s
KBO **Bosley Butte** 89.59 43 *e*P P 21 13 10.0 +2.3
WPM1 **Penmaenmawr** 89.62 331⇑*e*P P 21 13 07.0 -0.4
G05D **Wamic, OR** 89.63 39 P P 21 13 09.3 +1.6
baz=306,SNR=38
HLM1 **Long Mynd** 89.66 330 *e*P P 21 13 06.8 -0.8
HLM1 IAmb IAmb 21 13 10.2
comp=Z,101nm,1.2s
E07A **Sunnyside** 89.69 38 *e*P P 21 13 10.2 +2.3
WME **Myndd Eilian** 89.70 331⇑*e*P P 21 13 07.8 0.0
WPS **Cemaes, Angles** 89.79 331 *e*P P 21 13 08.0 -0.1
WPS IAmb IAmb 21 13 08.4
comp=Z,208nm,1.5s
LLW **Llanuwychllyn** 89.79 331 *e*P P 21 13 07.9 -0.3
C09A **Chrisman Ranch** 89.80 36 *e*P P 21 13 09.8 +1.3
I04A **Tendick Farm,** 89.81 41 P P 21 13 09.9 +1.3
baz=305,SNR=108
WLF1 **Llynfaes** 89.82 331⇑*e*P P 21 13 08.0 -0.3
WLF1 IAmb IAmb 21 13 09.4
comp=Z,299nm,1.0s
YLL **Llanberis** 89.82 331⇑*e*P P 21 13 08.2 -0.2
STRD **Stroud** 89.83 329⇑*e*P P 21 13 07.3 -1.1
STRD IAmb IAmb 21 13 11.4
comp=Z,258nm,1.2s
GMM **Mts of Mourne** 89.83 333⇑*e*P P 21 13 07.7 -0.7
ORIF **Oris-en-Rattie** 89.87 320 *e*P P 21 13 08.4 -0.5
ORIF pmax pmax
comp=Z,88nm,1.4s
D08A **Wollman Farm,** 89.90 37 *e*P P 21 13 10.3 +1.4
YRC **Rhoscolyn** 89.92 331⇑*e*P P 21 13 08.5 -0.3
SSF **Saint Saulge** 89.94 323 *e*P P 21 13 08.2 -0.9
SSF pmax pmax
comp=Z,73nm,1.3s
HAWA **Hanford** 89.96 38 *e*P P 21 13 10.8 +1.7
L02D **Cave Junction,** 90.01 43 P P 21 13 11.0 +1.5
baz=304,SNR=23
G06A **Carlson Farm,** 90.02 39 *e*P P 21 13 11.2 +1.6
F07A **Phinny Hill Vi** 90.04 38 *e*P P 21 13 11.4 +1.8
MCH1 **Michaelchurch** 90.06 330⇑*e*P P 21 13 08.2 -1.3
MCH1 IAmb IAmb 21 13 11.5
comp=Z,145nm,1.0s
MONM **Monmouth** 90.08 330 *e*P P 21 13 09.8 +0.2
MONM IAmb IAmb 21 13 11.2
comp=Z,157nm,1.3s
NEW **Newport** 90.13 35 P P 21 13 11.2 +1.3
comp=Z,353nm,1.0s,baz=303,slow=4.3,SNR=217
NEW **Newport** 90.13 35 P P 21 13 11.2 +1.3
baz=308
I05D **Terrebonne, OR** 90.14 40 P P 21 13 11.7 +1.6
baz=306,SNR=78
HUMO **Hull Mountain** 90.16 42 *e*P P 21 13 11.8 +1.6
E08A **Dider Farm, El** 90.17 37 *e*P P 21 13 11.8 +1.7
AVF **Avril sur Loir** 90.19 323 *e*P P 21 13 08.3 -1.9
AVF pmax pmax
comp=Z,970nm,1.0s
HGH **Gray Hill** 90.22 329⇑*e*P P 21 13 09.9 -0.3
J04D **Umpqua Nationa** 90.31 41 P P 21 13 12.6 +1.5
baz=305,SNR=93
JCC **Jacoby Creek,** 90.48 44 *e*P P 21 13 14.0 +2.3
VIVF **Saint-Julien-l** 90.60 321 *e*P P 21 13 09.4 -2.8
VIVF pmax pmax
comp=Z,93nm,1.4s
KHMM **Horse Mountain** 90.64 44 *e*P P 21 13 14.9 +2.3
E09A **Wood Farm, Sta** 90.66 37 *e*P P 21 13 14.2 +1.8
PINE **Pine Mountain** 90.69 40 *e*P P 21 13 14.8 +1.9
YBH **Yreka Blue Hor** 90.80 43 P P 21 13 14.9 +1.6
comp=Z,163nm,1.1s,baz=22,slow=2.2,SNR=134
YBH LR LR 21 48 41.3
comp=Z,201nm,20.9s,baz=304,slow=32
YBH **Yreka Blue Hor** 90.80 43 *e*P P 21 13 11.3 -2.0
J05D **Fort Rock, OR** 90.81 41 P P 21 13 15.0 +1.6
baz=306,SNR=139
K04D **Chiloquin, OR** 90.88 42 P P 21 13 15.2 +1.5
baz=305,SNR=38
LDF **La Druitiere** 90.90 326 *e*P P 21 13 14.4 +0.9
LDF pmax pmax
comp=Z,32nm,1.1s
M02C **Callahan** 90.90 43 P P 21 13 15.2 +1.4
baz=304,SNR=56
G08A **Pilot Rock** 90.94 38 *e*P P 21 13 15.3 +1.4
CASY **Casey** 90.97 185 *e*P P 21 13 13.6 +0.5
FLN **La Foliniere** 90.97 326 *e*P P 21 13 14.5 +0.7
FLN pmax pmax
comp=Z,161nm,2.1s
KMRM **Mail Ridge** 91.02 44 *e*P P 21 13 16.4 +2.1
TCF **Toulx Ste Croi** 91.12 323 *e*P P 21 13 15.4 +0.8
TCF pmax pmax
comp=Z,180nm,1.5s
N02D **Trinity Center** 91.23 43 P P 21 13 16.5 +1.2
baz=304,SNR=27
WALA **Waterton Lakes** 91.26 33 *e*P P 21 13 16.5 +1.2
comp=Z,720nm,1.2s
M04C **Macdoel** 91.31 42 P P 21 13 16.8 +1.1
baz=305,SNR=178
K05A **Summer Lake** 91.33 41 *e*P P 21 13 17.7 +1.8
I07A **Izee** 91.36 39 *e*P P 21 13 17.6 +1.8
KCPM **Cahto Peak** 91.39 45 *e*P P 21 13 18.1 +2.0
GRR **Gorron** 91.41 326 *e*P P 21 13 16.8 +1.0
GRR pmax pmax
comp=Z,44nm,1.2s
F10A **Beach Ranch, E** 91.49 37 *e*P P 21 13 17.6 +1.2
WDC **Whiskeytown Da** 91.55 44 *e*P P 21 13 17.8 +1.1
WDC **Whiskeytown Da** 91.55 44 *e*P P 21 13 17.8 +1.1
FRB **Frobisher Bay** 91.61 5 P P 21 13 16.0 -0.4
comp=Z,265nm,1.1s,baz=345,slow=5.1,SNR=101
MBAR **Mbarara** 91.69 270 *e*P P 21 13 19.1 +1.1
MBAR **Mbarara** 91.69 270 *e*P P 21 13 19.1 +1.1
FCC **Fort Churchill** 91.70 18 *e*P P 21 13 16.9 0.0
comp=Z,479nm,1.1s
FCC **Fort Churchill** 91.70 18 *e*P P 21 13 16.9 0.0
FCC pmax pmax
comp=Z,479nm,1.1s
JTMT **Jette** 91.93 34 *e*P P 21 13 20.1 +1.6
CAF **Calviac** 92.04 322 *e*P P 21 13 17.7 -1.2
HOPS **Hopland Field** 92.11 45 *e*P P 21 13 21.0 +1.7
RJF **Les Rejaudoux** 92.11 323 *e*P P 21 13 19.2 0.0
RJF pmax pmax
comp=Z,280nm,1.3s
BMO **Blue Mountains** 92.14 38 *e*P P 21 13 20.4 +1.0
BMO **Blue Mountains** 92.14 38 *e*P P 21 13 20.4 +1.0
MOD **Modoc Plateau** 92.17 42 *e*P P 21 13 21.0 +1.3
O03D **Paynes Creek** 92.18 44 P P 21 13 20.0 +0.3
baz=305,SNR=46
MFF **Saint Martin d** 92.19 324 *e*P P 21 13 21.9 +2.4
MFF pmax pmax
comp=Z,211nm,2.3s
GDXM **Geysers** 92.39 45 *e*P P 21 13 22.0 +1.3
FFC **Flin Flon** 92.40 24 *e*P P 21 13 20.3 0.0
FFC **Flin Flon** 92.40 24 *e*P P 21 13 20.3 0.0
MSO **Missoula** 92.70 35 P P 21 13 22.4 +0.4
baz=311,SNR=168
MSO **Missoula** 92.70 35 *e*P P 21 13 22.7 +0.6
ORV **Oroville** 92.79 44 *e*P P 21 13 22.8 +0.4
ORV **Oroville** 92.79 44 *e*P P 21 13 22.8 +0.4
KEST **Kesra** 92.83 311 P P 21 13 23.6 +0.8
comp=Z,48nm,1.0s,baz=329,slow=1.7,SNR=24
KEST LR LR 22 01 58.2
comp=Z,559nm,18.4s,baz=356,slow=40
WVOR **Wild Horse Val** 92.85 40 *e*P P 21 13 24.2 +1.5
WVOR **Wild Horse Val** 92.85 40 *e*P P 21 13 24.3 +1.5
QUIF **Quistinic** 92.88 327 *e*P P 21 13 23.4 +0.8
QUIF pmax pmax
comp=Z,42nm,1.0s
VAL **Valentia** 93.28 333⇓*i*P P 21 13 25.0 +0.6
VAL **Valentia** 93.28 333 *e*P PP 21 17 12.6 +4.5
VAL *i*S S 21 24 25.1 -0.5
BEKR **Beckworth** 93.33 43 *e*P P 21 13 23.3 -1.8
MIR **Mirnyy** 93.47 191 *e*P P 21 13 26.0 +1.4
MIR *e* 21 13 57.0
MIR pmax pmax
comp=Z,135nm,1.5s
AFDM **Forest Hills D** 93.48 44 *e*P P 21 13 26.3 +0.6
CMAH **Djebel Manchou** 93.63 313 P P 21 13 26.8 +0.3

HRY **Holter Researc** 93.87 34 *e*P P 21 13 28.6 +1.2
MFID **Camas Ranch** 93.87 38 *e*P P 21 13 28.7 +1.2
comp=Z,303nm,1.2s
CAEH **'Ain El Ouahch** 93.92 313 P P 21 13 28.2 +0.5
EGMT **Eagleton** 94.00 32 P P 21 13 28.5 +0.6
baz=314
EGMT **Eagleton** 94.00 32 *e*P P 21 13 28.2 +0.2
comp=Z,241nm,1.1s
PAHR **Pah Rah Range** 94.03 43 *e*P P 21 13 29.4 +1.1
NRS **Narsarsuaq** 94.04 354⇑*i*P P 21 13 26.7 -1.0
comp=Z,226nm,1.4s
NRS **Narsarsuaq** 94.04 354⇑*i*P P 21 13 26.7 -1.0
NRS pmax pmax
comp=Z,230nm,1.4s
VCNR **Virginia City** 94.11 43 *e*P P 21 13 30.0 +1.2
LRM **Limekiln Ridge** 94.14 35 *e*P P 21 13 29.7 +0.8
EPF **Esparros** 94.19 321 *e*P P 21 13 26.8 -2.1
EPF pmax pmax
comp=Z,83nm,1.8s
PNTR **Pine Nut** 94.26 44 *e*P P 21 13 30.9 +1.4
DLMT **Dillon** 94.37 35 *e*P P 21 13 30.9 +1.1
CMB **Columbia Colle** 94.38 45 *e*P P 21 13 30.5 +0.6
CMB **Columbia Colle** 94.38 45 *e*P P 21 13 30.5 +0.6
SAO **San Andreas Ge** 94.43 46 *e*P P 21 13 30.4 +0.4
comp=Z,132nm,1.5s
SAO **San Andreas Ge** 94.43 46 *e*P P 21 13 30.5 +0.4
SAO pmax pmax
comp=Z,132nm,1.5s
CASM **Ain Smara** 94.46 313 P P 21 13 30.3 +0.1
YERR **Yerington** 94.55 43 *e*P P 21 13 31.9 +1.1
HLID **Hailey** 94.57 38 P P 21 13 32.2 +1.5
baz=310
HLID **Hailey** 94.57 38 *e*P P 21 13 32.1 +1.3
MCMT **McKenzie Canyo** 94.59 36 *e*P P 21 13 31.8 +0.9
CTEI **Djebel Teioual** 94.63 313 P P 21 13 31.7 +0.6
BOZ **Bozeman (W)** 94.72 35 P P 21 13 32.1 +0.7
baz=312,SNR=126
BOZ **Bozeman (W)** 94.72 35 *e*P P 21 13 32.1 +0.7
BOZ **Bozeman (W)** 94.72 35 *e*P P 21 13 32.1 +0.7
BMN **Battle Mountai** 94.91 41 *e*P P 21 13 33.5 +1.1
comp=Z,274nm,1.3s
BMN **Battle Mountai** 94.91 41 *e*P P 21 13 33.5 +1.1
BMN pmax pmax
comp=Z,275nm,1.3s
PMPB **Monarch Peak** 95.17 46 *e*P P 21 13 35.3 +1.8
RYN **Ryan** 95.21 43 *e*P P 21 13 35.5 +1.7
CKHR **Kef el Ahmar** 95.25 313 P P 21 13 34.8 +0.9
QLMT **Earthquake Lak** 95.34 35 *e*P P 21 13 35.8 +1.5
PPT **Papeete** 95.45 107 LR LR 21 48 50.1
comp=Z,958nm,21.8s,baz=310,slow=30
PPT2 **Papeete2** 95.46 107 *e*S S 21 24 42.8 -3.0
comp=Z,1μm,23.8s
PPT2 **Papeete2** 95.46 107 *e*PS PS 21 26 06.0 -7.2
comp=Z,1μm,30.5s
PPT2 **Papeete2** 95.46 107 *e*LR LR 21 43 58.3
comp=Z,5μm,26.0s,baz=286
NVAR **Mina Array Bea** 95.47 43 P P 21 13 36.2 +1.2
comp=Z,57nm,0.9s,baz=287,slow=4.6,SNR=122
NVAR PKKPbc **PKKPdf** 21 30 22.6 -3.5
comp=Z,1.1nm,0.5s,baz=102,slow=14,SNR=4.3
NVAR LR LR 21 50 56.0
comp=Z,282nm,21.2s,baz=70,slow=32
OMMB **Old Mammoth Mi** 95.52 44 *e*P P 21 13 36.8 +1.4
GCMT **Greycliff** 95.59 34 *e*P P 21 13 36.7 +1.4
MLAC **Mammoth, Mammo** 95.61 44 P P 21 13 36.8 +1.1
baz=307
YHH **Holmes Hill** 95.67 35 *e*P P 21 13 37.6 +1.7
ELK **Elko** 95.90 40 P P 21 13 40.9 +3.9
comp=Z,56nm,1.2s,baz=348,slow=3.3,SNR=82
ELK PKKPbc **PKKPbc** 21 30 27.6 +2.0
comp=Z,3.9nm,0.8s,baz=289,slow=1.5,SNR=10.0
PMOR **Pomariorio Ree** 95.90 104 *e*T T 23 00 47.3
comp=Z,2.1nm,0.2s
H17A **Grant Village** 96.08 35 P P 21 13 40.2 +2.4
baz=313,SNR=16
SMMC **Simmler** 96.22 47 P P 21 13 39.2 +0.9
baz=306,SNR=5.4
DGMT **Dagmar** 96.25 29 P P 21 13 38.6 +0.5
baz=318
DGMT **Dagmar** 96.25 29 *e*P P 21 13 38.8 +0.6
RLMT **Red Lodge** 96.26 34 P P 21 13 39.3 +0.8
baz=314,SNR=14
TIN **Tinemaha, Big** 96.34 45 P P 21 13 40.1 +1.2
baz=307
VES **Vestal, Richgr** 96.51 46 P P 21 13 39.3 -0.3
baz=307,SNR=11
PKM **Mcpherson Peak** 96.59 47 P P 21 13 41.3 +1.1
baz=306,SNR=15
LAO **LASA Array** 96.64 31 P P 21 13 40.6 +0.7
baz=317
CWC **Cottonwood Cre** 96.81 45 P P 21 13 41.6 +0.5
baz=307
AHID **Auburn Hatcher** 96.91 37 *e*P P 21 13 42.4 +0.9
comp=Z,29nm,1.2s
GRAC **Grapevine Rang** 96.93 44 P P 21 13 42.4 +1.0
baz=306
ISA **Isabella, Lake** 97.02 46 P P 21 13 41.3 -0.6
baz=307,SNR=6.4
ARVC **Arvin** 97.11 46 P Pdif 21 13 42.7 +0.4
baz=307
R11A **Troy Canyon, C** 97.20 42 P Pdif 21 13 43.7 +0.8
baz=309
DAC **Darwin (Calif)** 97.22 45 *e*P Pdif 21 13 43.2 +0.2
comp=Z,117nm,1.4s
DAC **Darwin (Calif)** 97.22 45 *e*P Pdif 21 13 43.3 +0.2
DAC pmax pmax
comp=Z,117nm,1.4s
SCZ2 **Santa Cruz Isl** 97.23 48 P Pdif 21 13 43.6 +0.6
baz=306
MPMC **Manual Prospec** 97.42 45 P Pdif 21 13 44.5 +0.5
baz=308,SNR=53
HWUT **Hardware Ranch** 97.44 38 *e*P Pdif 21 13 45.0 +1.0
comp=Z,80nm,1.4s
OSI **Osito Audit: C** 97.48 47 P Pdif 21 13 44.7 +0.6
baz=307
BLG **Laguna Peak, P** 97.55 47 P Pdif 21 13 44.6 +0.3
baz=306
FURC **Furnace Creek,** 97.57 44 P Pdif 21 13 45.2 +0.9
baz=308,SNR=32
LRMC **Laurel Mtn Rad** 97.64 45 P Pdif 21 13 45.2 +0.3
baz=308,SNR=5.2
TPNV **Topopah Spring** 97.66 44 P Pdif 21 13 45.7 +0.7
baz=309
DUG **Dugway, Tooele** 97.66 39 P Pdif 21 13 46.0 +1.1
baz=311
DUG **Dugway, Tooele** 97.66 39 *e*P Pdif 21 13 45.8 +0.8
comp=Z,69nm,1.4s
DUG **Dugway, Tooele** 97.66 39 *e*P Pdif 21 13 45.8 +0.9
DUG pmax pmax
comp=Z,69nm,1.4s
BW06 **Boulder Array** 97.74 36 P P 21 13 45.3 0.0
baz=314
PDAR **Pinedale Array** 97.74 36 P Pdif 21 13 45.4 +0.1
comp=Z,18nm,1.1s,baz=349,slow=1.8,SNR=22
PDAR PKKPbc **PKKPbc** 21 30 19.1 -1.6
comp=Z,3.3nm,1.0s,baz=157,slow=4.2,SNR=4.0
EDW2 **Edwards Air Fo** 97.80 46 P Pdif 21 13 46.3 +0.8
baz=307
TBI **Tubuai** 97.85 112 *e*S S 21 25 04.7 -1.3
comp=Z,1μm,26.8s
TBI **Tubuai** 97.85 112 *e*PS PS 21 26 39.7 +0.7
comp=Z,591nm,27.5s
TBI **Tubuai** 97.85 112 *e*LQ LQ 21 41 03.3
comp=Z,2μm,32.0s
TBI *e*LR LR 21 45 11.3
comp=Z,2μm,25.8s,baz=292
DECC **Green Verdugo** 97.95 47 P Pdif 21 13 46.2 +0.1
baz=307
ULM **Lac du Bonnet** 98.22 24 P P 21 13 46.1 -0.8
comp=Z,41nm,1.0s,baz=330,slow=5.2,SNR=34
ULM PKKP **PKKPbc** 21 30 17.0 -2.3
comp=Z,5.1nm,0.8s,baz=173,slow=3.4,SNR=4.3
ULM LR LR 22 02 48.3
comp=Z,292nm,18.8s,baz=346,slow=38
SHOC **Shoshone, Teco** 98.29 44 P Pdif 21 13 47.9 +0.2
baz=308,SNR=12
FMP **Fort Macarthur** 98.30 47 P Pdif 21 13 48.2 +0.5
baz=307
GSC **Goldstone, Bar** 98.32 45 P Pdif 21 13 48.3 +0.4
baz=308,SNR=20
CIS **Catalina Islan** 98.41 48 Pdiff Pdif 21 13 48.3 +0.1
baz=307
BFSC **Mount Baldy Ra** 98.41 46 P Pdif 21 13 48.4 +0.1
baz=307
RRX **Edison Barstow** 98.46 46 Pdiff Pdif 21 13 49.1 +0.8
baz=308
SCI2 **San Clemente I** 98.57 48 Pdiff Pdif 21 13 49.5 +0.6
baz=307

MDND **Maddock** 98.70 27 Pdiff Pdif 21 13 49.3 +0.1
baz=322
TUQ **Turquoise Moun** 98.81 45 Pdiff Pdif 21 13 50.6 +0.5
baz=309
ESDC **Sonseca Array** 98.83 321 P P 21 13 49.7 -0.3
comp=Z,1.6nm,0.8s,baz=29,slow=4.0,SNR=9.7
ESDC PP PP 21 17 46.2 -5.3
comp=Z,12nm,1.2s,baz=48,slow=7.4,SNR=7.9
ESDC PKKP **PKKPdf** 21 30 19.0 -0.8
comp=Z,7.8nm,1.0s,baz=249,slow=2.1,SNR=20
HEC **Hector,Ludlow** 98.92 45 Pdiff Pdif 21 13 51.3 +0.8
baz=308
PBRG **Braganca** 98.92 324 *e*Pdif Pdif 21 13 50.7 +0.4
PBRG **Braganca** 98.92 324 *e*PP PP 21 17 53.6 +1.5
B31A **Greenbush Farm** 99.03 26 Pdiff **Pdif** 21 13 50.0 -0.6
baz=324
A32A **Rocking H Ranc** 99.08 25 Pdiff **Pdif** 21 13 50.3 -0.5
baz=325
MURC **Murrieta** 99.10 47 Pdiff **Pdif** 21 13 51.8 +0.5
baz=308
GMRC **Granite Mounta** 99.38 45 Pdiff **Pdif** 21 13 53.4 +0.8
baz=309
K22A **Casper** 99.41 34 Pdiff **Pdif** 21 13 52.1 -0.5
baz=316
A33A **Warroad** 99.48 24 Pdiff **Pdif** 21 13 51.9 -0.6
baz=326
C31A **Landman Farms,** 99.51 26 Pdiff **Pdif** 21 13 52.3 -0.4
baz=324
MVO **Moncorvo** 99.52 324 *e*Pdif **Pdif** 21 13 53.5 +0.5
MVO **Moncorvo** 99.52 324 *e*PP PP 21 17 57.7 +1.0
MVO *e*SKS S 21 25 03.3 -17
MVO **Moncorvo** 99.52 324 *e*LR LR 21 49 33.2
comp=Z,805nm,22.0s
RSSD **Black Hills** 99.57 32 Pdiff **Pdif** 21 13 53.0 -0.4
baz=318
PFO **Pinyon Flats O** 99.58 46 Pdiff **Pdif** 21 13 53.9 +0.3
baz=308
PFO **Pinyon Flats O** 99.58 46 *e*Pdif **Pdif** 21 13 54.5 +1.0
comp=Z,101nm,1.4s
PFO **Pinyon Flats O** 99.58 46 *e*P **Pdif** 21 13 54.6 +1.0
PFO pmax pmax
comp=Z,101nm,1.4s
109C **Camp Elliot, M** 99.59 47 Pdiff **Pdif** 21 13 53.9 +0.5
baz=308
PGAV **Gavieira, Arco** 99.61 325 *e*Pdif **Pdif** 21 13 54.0 +0.5
PGAV **Gavieira, Arco** 99.61 325 *e*PP PP 21 17 59.0 +1.6
PGAV **Gavieira, Arco** 99.61 325 *e*LR LR 21 52 26.7
comp=Z,975nm,22.0s
BELC **Belle Mtn. Jos** 99.64 46 Pdiff **Pdif** 21 13 54.1 +0.3
baz=308
PCAB **Cabril** 99.67 325 *e*Pdif **Pdif** 21 13 54.5 +0.9
POLO **Lamas de Olo** 99.78 324 *e*Pdif **Pdif** 21 13 54.8 +0.6
POLO **Lamas de Olo** 99.78 324 *e*PP PP 21 17 59.7 +1.0
PVRL **Vila Real** 99.81 324 *e*Pdif **Pdif** 21 13 54.7 +0.4
AGMN **Agassiz Nation** 99.83 25 Pdiff **Pdif** 21 13 53.2 -0.9
baz=325
AGMN **Agassiz Nation** 99.83 25 *e*Pdif **Pdif** 21 13 53.9 -0.3
comp=Z,24nm,1.0s
LSZ **Lusaka** 99.88 258 PKKP 21 30 15.9
comp=Z,6.4nm,1.0s,baz=94,slow=1.8,SNR=8.7
LSZ **Lusaka** 99.88 258 *e*Pdif **Pdif** 21 13 54.7 -0.4
comp=Z,74nm,1.1s
LSZ PKKP **PKKPbc** 21 30 15.9 +1.7
LSZ **Lusaka** 99.88 258 Pdiff **Pdif** 21 13 55.2 +0.1
SNR=6.2
LSZ **Lusaka** 99.88 258 P **Pdif** 21 13 55.2 +0.1
SNR=6.2
LSZ **Lusaka** 99.88 258 *e*P **Pdif** 21 13 54.7 -0.4
LSZ pmax pmax
comp=Z,74nm,1.1s
MONP2 **Monument Peak** 100.05 47 Pdiff **Pdif** 21 13 56.3 +0.5
baz=308
NEE2 **Needles Airpor** 100.06 44 Pdiff **Pdif** 21 13 55.8 +0.3
baz=309
IRM **Iron Mountain** 100.10 45 Pdiff **Pdif** 21 13 56.7 +1.0
baz=309
D31A **Mcclaflin, Tow** 100.11 27 Pdiff **Pdif** 21 13 54.9 -0.5
baz=324
B34A **Aery, Baudette** 100.13 24 Pdiff **Pdif** 21 13 54.9 -0.6
baz=326
O20A **White River Ci** 100.28 37 Pdiff **Pdif** 21 13 55.8 -0.8
baz=315
C33A **Trail** 100.31 25 Pdiff **Pdif** 21 13 55.6 -0.7
baz=325
D32A **Dogwood Acres,** 100.33 26 Pdiff **Pdif** 21 13 54.7 -1.7
baz=324
MTE **Manteigas** 100.33 323 *e*Pdif **Pdif** 21 13 55.7 -1.0
MTE **Manteigas** 100.33 323 *e*PP PP 21 18 03.8 +0.9
MTE *e*SKS 21 24 23.2
MTE **Manteigas** 100.33 323 *e*LR LR 21 49 57.6
comp=Z,863nm,22.0s
IKP **In-Ko-Pah, Jac** 100.40 47 Pdiff **Pdif** 21 13 56.6 -0.6
baz=308
SWSC **Sam W. Stewart** 100.42 47 Pdiff **Pdif** 21 13 57.3 +0.1
baz=308
TAOE **Nuku Hiva Isla** 100.43 95 *e*PS PS 21 26 58.7 -8.4
comp=Z,480nm,34.1s
TAOE **Nuku Hiva Isla** 100.43 95 *e*LR LR 21 46 23.9
comp=Z,2μm,30.8s
E31A **Nome** 100.44 27 Pdiff **Pdif** 21 13 56.5 -0.4
baz=323
B35A **Bob, Littlefor** 100.57 24 Pdiff **Pdif** 21 13 57.0 -0.4
baz=327
SCHQ **Schefferville** 100.58 5 P **Pdif** 21 13 56.8 -0.6
comp=Z,34nm,1.0s,baz=6.6,slow=4.8,SNR=14
PDMCI **Parker Dam,Lak** 100.66 45 Pdiff **Pdif** 21 13 58.5 +0.3
baz=310
PCBR **Castelo Branco** 100.69 323 *e*Pdif **Pdif** 21 13 59.5 +1.3
PCBR **Castelo Branco** 100.69 323 *e*PP PP 21 18 08.2 +2.7
C34A **RKJ Ranch, Bem** 100.73 25 Pdiff **Pdif** 21 13 57.5 -0.7
baz=326
Y12C **Blythe** 100.76 45 Pdiff **Pdif** 21 13 59.7 +1.1
baz=309
D33A **AnnSam, Waubun** 100.79 25 Pdiff **Pdif** 21 13 57.3 -1.1
baz=325
PMRV **Marv??o** 100.93 323 *e*Pdif **Pdif** 21 14 00.4 +1.1
PMRV **Marv??o** 100.93 323 *e*PP PP 21 18 10.2 +2.8
PMRV *e*SKS 21 24 33.2
PMRV **Marv??o** 100.93 323 *e*LR LR 21 53 44.3
comp=Z,604nm,18.0s
N23A **Red Feather La** 100.97 35 Pdiff **Pdif** 21 14 00.1 +0.4
baz=316
GLA **Glamis** 101.00 46 Pdiff **Pdif** 21 14 00.6 +0.9
baz=309
C35A **Jirik Farms, M** 101.03 24 Pdiff **Pdif** 21 13 58.6 -0.9
baz=327
D34A **Park Rapids** 101.08 25 Pdiff **Pdif** 21 13 59.1 -0.7
baz=326
PCAS **Casmilo, Conde** 101.10 324 *e*Pdif **Pdif** 21 13 59.0 -1.0
E33A **Westby DABS, E** 101.24 26 Pdiff **Pdif** 21 13 59.8 -0.7
baz=325
F32A **Veblen** 101.30 27 Pdiff **Pdif** 21 14 00.2 -0.6
baz=324
G31A **Conde** 101.37 28 Pdiff **Pdif** 21 14 00.5 -0.6
baz=323
C36A **Pine Crest Far** 101.40 23 Pdiff **Pdif** 21 14 00.6 -0.6
baz=328
PESTR **Estremoz** 101.44 322 *e*Pdif **Pdif** 21 14 02.5 +1.0
PESTR **Estremoz** 101.44 322 *e*PP PP 21 17 57.2 -14
D35A **Remer** 101.52 24 Pdiff **Pdif** 21 14 01.1 -0.6
baz=327
MATP **Matopo** 101.55 253 P **Pdif** 21 14 01.9 -0.5
comp=Z,15nm,0.9s,baz=51,slow=5.6,SNR=16
E34A **Wadena** 101.56 25 Pdiff **Pdif** 21 14 01.5 -0.4
baz=326
WUAZ **Wupatki** 101.60 42 Pdiff **Pdif** 21 14 02.9 +0.4
baz=312
WUAZ **Wupatki** 101.60 42 *e*Pdif **Pdif** 21 14 04.0 +1.4
comp=Z,44nm,1.1s
PBAR **Barrancos** 101.61 322 *e*Pdif **Pdif** 21 14 03.5 +1.2
PBAR **Barrancos** 101.61 322 *e*PP PP 21 18 13.9 +1.4
G32A **Webster** 101.64 28 Pdiff **Pdif** 21 14 02.4 +0.1
baz=324
PMTG **Montargil** 101.64 323 *e*Pdif **Pdif** 21 14 02.8 +0.4
PMTG **Montargil** 101.64 323 *e*PP PP 21 18 13.0 +0.3
C37A **Embarrass** 101.66 23 Pdiff **Pdif** 21 14 01.8 -0.5
baz=328
SUSD **Miller** 101.67 29 Pdiff **Pdif** 21 14 00.7 -1.7
baz=322
EYMN **Ely** 101.72 22 Pdiff **Pdif** 21 14 00.8 -1.7
baz=329
EYMN **Ely** 101.72 22 *e*Pdif **Pdif** 21 14 02.2 -0.4
comp=Z,26nm,1.0s
MAW **Mawson** 101.77 200 P **Pdif** 21 14 01.6 -0.5
comp=Z,5.2nm,0.8s,baz=18,slow=3.7,SNR=7.9
MAW PKiKP **PKiKP** 21 18 25.0 +0.2

comp=Z,7.4nm,1.1s,baz=349,slow=4.4,SNR=5.8
MAW PKKPbc **PKKPbc** 21 30 08.3 -2.1
comp=Z,6.5nm,1.0s,baz=254,slow=4.1,SNR=6.4
D36A Goodland 101.77 24 Pdiff **Pdif** 21 14 01.9 -0.9
baz=328
E35A Pequot Lakes 101.83 25 Pdiff **Pdif** 21 14 02.3 -0.8
baz=326
EVO Evora 101.91 322 *e*PP PP 21 18 11.7 -3.0
ISCO Idaho Springs 101.94 36 Pdiff **Pdif** 21 14 04.4 +0.2
baz=316
C38A Sawbill Land. 101.99 22 Pdiff **Pdif** 21 14 03.1 -0.7
baz=329
D37A Cotton 102.06 23 Pdiff **Pdif** 21 14 03.1 -1.0
baz=328
F34A Alexandria 102.12 26 Pdiff **Pdif** 21 14 03.7 -0.8
baz=326
G33A Ortonville 102.14 27 Pdiff **Pdif** 21 14 03.5 -1.0
baz=324
MVCO Mesa Verde 102.17 39 Pdiff **Pdif** 21 14 05.2 +0.1
baz=314
MVCO Mesa Verde 102.17 39 *e*Pdif **Pdif** 21 14 06.1 +1.0
comp=Z,27nm,1.3s
PBEJ Beja 102.18 322 *e*Pdif **Pdif** 21 14 05.7 +0.9
H32A Carlson Farm, 102.27 28 Pdiff **Pdif** 21 14 04.6 -0.6
baz=324
E36A McGregor 102.29 24 Pdiff **Pdif** 21 14 04.9 -0.3
baz=327
C39A Grand Marais 102.30 22 Pdiff **Pdif** 21 14 03.9 -1.2
baz=330
PMAFR Mafra 102.30 323 *e*Pdif **Pdif** 21 14 06.7 +1.3
PMAFR Mafra 102.30 323 *e*PP PP 21 18 17.5 -0.1
F35A Swanville 102.34 25 Pdiff **Pdif** 21 14 04.9 -0.5
baz=326
G34A Benson 102.42 26 Pdiff **Pdif** 21 14 05.6 -0.2
baz=325
H33A Prehn Over Nor 102.42 27 Pdiff **Pdif** 21 14 05.7 -0.1
baz=324
PNCL Nicolau / Gran 102.49 322 *e*Pdif **Pdif** 21 14 07.7 +1.5
PNCL Nicolau / Gran 102.49 322 *e*PP PP 21 18 20.0 +1.0
MESJ Messejana 102.51 322 *e*P **Pdif** 21 14 05.6 -0.7
MESJ *e*PP **PP** 21 18 19.9 +0.8
MESJ *e*SKS 21 24 39.3
MESJ AMS AMS 21 57 15.0
comp=E,654nm,18.5s
MESJ Messejana 102.51 322 *e*Pdif **Pdif** 21 14 05.6 -0.7
MESJ Messejana 102.51 322 *e*PP PP 21 18 20.5 +1.3
MESJ Messejana 102.51 322 *e*P **Pdif** 21 14 05.6 -0.7
MESJ *e* 21 18 19.9
MESJ *e* 21 24 39.3
PVAQ Vaqueiros 102.53 321 *e*Pdif **Pdif** 21 14 07.2 +0.8
PVAQ Vaqueiros 102.53 321 *e*PP PP 21 18 23.1 +3.7
PVAQ *e*SKS 21 25 49.3
PVAQ Vaqueiros 102.53 321 A A 22 08 44.8
comp=E,652nm,20.0s
C40A Isle Royale Na 102.54 21 Pdiff **Pdif** 21 14 05.7 -0.5
baz=331
PCVE Castro Verde 102.55 322 *e*Pdif **Pdif** 21 14 06.7 +0.2
E37A Wrenshall 102.57 24 Pdiff **Pdif** 21 14 05.8 -0.6
baz=328
S22A 4UR Ranch, Cre 102.74 38 Pdiff **Pdif** 21 14 07.5 -0.2
baz=315
F36A Milaca 102.74 25 Pdiff **Pdif** 21 14 06.6 -0.6
baz=327
PBDV Barranco-do-Ve 102.76 321 *e*PP PP 21 18 24.7 +3.5
E38A The Farm, Brul 102.84 23 Pdiff **Pdif** 21 14 07.4 -0.2
baz=329
W18A Petrified Fore 102.86 42 Pdiff **Pdif** 21 14 09.2 +1.0
baz=313
G35A Watkins 102.90 26 Pdiff **Pdif** 21 14 07.9 0.0
baz=326
OGNE Ogallala 102.93 33 Pdiff **Pdif** 21 14 08.5 +0.3
baz=319
214A Organ Pipe Nat 103.01 46 Pdiff **Pdif** 21 14 07.3 -1.3
baz=310
G36A St. Michael 103.18 25 Pdiff **Pdif** 21 14 08.8 -0.3
baz=327
H35A Sunnyside Ranc 103.20 26 Pdiff **Pdif** 21 14 09.4 +0.2
baz=326
F37A Hinrichs Farm, 103.20 24 Pdiff **Pdif** 21 14 08.9 -0.3
baz=328
ECSD EROS Data Cent 103.25 28 Pdiff **Pdif** 21 14 08.8 -0.7
baz=324
ECSD EROS Data Cent 103.25 28 *e*Pdif **Pdif** 21 14 09.7 +0.2
comp=E,42nm,1.4s
F38A Pierce - Schro 103.28 24 Pdiff **Pdif** 21 14 09.6 0.0
baz=328
PFVI Vila Bisbo 103.35 322 *e*PP PP 21 18 34.0 +8.5
E39A Mellen 103.39 23 Pdiff **Pdif** 21 14 09.5 -0.5
baz=330
D41A Chassel 103.48 21 Pdiff **Pdif** 21 14 10.0 -0.4
baz=331
SDCO Great Sand Dun 103.48 37 Pdiff **Pdif** 21 14 11.3 +0.3
baz=316
SPMN Marine on St. 103.55 25 Pdiff **Pdif** 21 14 10.1 -0.7
baz=328
E40A Wakefield 103.57 22 Pdiff **Pdif** 21 14 10.6 -0.2
baz=330
H36A Jessenland, He 103.66 26 Pdiff **Pdif** 21 14 11.5 +0.3
baz=326
F39A Loretta 103.66 23 Pdiff **Pdif** 21 14 11.0 -0.3
baz=329
MDT Midelt 103.78 316 PP PP 21 18 25.2 -3.9
comp=E,17nm,1.1s,baz=55,slow=8.0,SNR=4.2
E41A Kenton 103.87 22 Pdiff **Pdif** 21 14 11.6 -0.6
baz=331
F40A Park Falls 103.94 23 Pdiff **Pdif** 21 14 12.2 -0.4
baz=330
G38A Ridgeland 103.96 24 Pdiff **Pdif** 21 14 12.1 -0.5
baz=328
H37A Dierke Farm, C 104.05 25 Pdiff **Pdif** 21 14 12.9 -0.1
baz=327
KSCO Kaye Shedlock' 104.08 35 Pdiff **Pdif** 21 14 13.3 -0.2
baz=319
TUC Tucson 104.08 44 Pdiff **Pdif** 21 14 12.7 -0.9
baz=312
TUC Tucson 104.08 44 *e*Pdif **Pdif** 21 14 14.7 +1.2
comp=E,25nm,1.5s
TUC Tucson 104.08 44 *e*P **Pdif** 21 14 14.7 +1.2
TUC pmax pmax
comp=Z,25nm,1.5s
I36A Fitzsimmons Fa 104.09 26 Pdiff **Pdif** 21 14 12.9 -0.3
baz=326
G39A Holcombe 104.11 24 Pdiff **Pdif** 21 14 12.7 -0.6
baz=329
H38A Maiden Rock 104.22 25 Pdiff **Pdif** 21 14 13.5 -0.2
baz=328
E42A Champion 104.25 21 Pdiff **Pdif** 21 14 13.7 -0.2
baz=332
I37A Lemond, Waseca 104.34 26 Pdiff **Pdif** 21 14 13.6 -0.7
baz=327
BGNE Belgrade 104.43 30 Pdiff **Pdif** 21 14 13.7 -1.1
baz=323
F41A Three Lakes 104.45 22 Pdiff **Pdif** 21 14 14.3 -0.5
baz=331
G40A Rib Lake 104.48 23 Pdiff **Pdif** 21 14 14.8 -0.1
baz=330
VNDA Vanda 104.48 172 Pdiff **Pdif** 21 14 13.7 -0.3
comp=Z,2.3nm,1.0s,baz=300,slow=6.1,SNR=8.9
VNDA PKiKP **PKiKP** 21 18 30.6 +1.0
comp=Z,26nm,1.2s,baz=310,slow=9.2,SNR=18
VNDA PKKPbc **PKKPbc** 21 30 00.5 -2.0
comp=Z,14nm,1.1s,baz=187,slow=1.8,SNR=24
T25A Trinidad 104.52 37 Pdiff **Pdif** 21 14 15.7 +0.2
baz=317
J36A Seneca 1, Swea 104.53 27 Pdiff **Pdif** 21 14 14.9 -0.3
baz=326
H39A Augusta 104.59 24 Pdiff **Pdif** 21 14 15.1 -0.3
baz=329
E43A Lone Tree Farm 104.59 21 Pdiff **Pdif** 21 14 14.9 -0.5
baz=333
E44A Grand Marais A 104.71 20 Pdiff **Pdif** 21 14 15.1 -0.8
baz=334
I38A Scanlan Farm, 104.73 25 Pdiff **Pdif** 21 14 15.8 -0.3
baz=328
F42A Maple Grove Fa 104.76 22 Pdiff **Pdif** 21 14 15.7 -0.4
baz=332
J37A Redenius Farm, 104.86 26 Pdiff **Pdif** 21 14 16.2 -0.5
baz=327
G41A Antigo 104.89 22 Pdiff **Pdif** 21 14 16.3 -0.4
baz=331
TASM ASL Pad, Albuq 104.93 40 Pdiff **Pdif** 21 14 18.1 +0.7
baz=315
ANMO Albuquerque 104.93 40 Pdiff **Pdif** 21 14 16.8 -0.6
comp=Z,4.5nm,0.9s,baz=316,slow=4.2,SNR=12
ANMO PKiKP **PKiKP** 21 18 33.3 +1.2
comp=Z,5.6nm,1.0s,baz=225,slow=2.1,SNR=7.3
ANMO Albuquerque 104.93 40 Pdiff **Pdif** 21 14 18.0 +0.6
baz=315
ANMO Albuquerque 104.93 40 *e*Pdif **Pdif** 21 14 18.6 +1.2
ANMO PKiKP **PKiKP** 21 18 33.3 +1.2
ANMO Albuquerque 104.93 40 *e*P **Pdif** 21 14 18.6 +1.2
ANMO *i* 21 18 33.3
TASL Snake Pit, Alb 104.93 40 Pdiff **Pdif** 21 14 14.9 -2.5
baz=315
H40A Chili 104.97 24 Pdiff **Pdif** 21 14 16.3 -0.7
baz=330
F43A Flat Rock, Esc 105.02 21 Pdiff **Pdif** 21 14 16.5 -0.8
baz=332
K36A Gilmore City 105.05 27 Pdiff **Pdif** 21 14 16.9 -0.7
baz=326
G42A Mountain 105.12 22 Pdiff **Pdif** 21 14 16.9 -0.8
baz=331
F44A Big Bay de Noc 105.13 20 Pdiff **Pdif** 21 14 16.6 -1.1
baz=333
E45A Wooded Hills, 105.17 19 Pdiff **Pdif** 21 14 17.1 -0.8
baz=334
I39A Houston 105.20 25 Pdiff **Pdif** 21 14 17.0 -1.2
baz=328
H41A Junction City 105.24 23 Pdiff **Pdif** 21 14 17.8 -0.5
baz=330
Y22D IRIS PASSCAL I 105.27 41 PKiKP **PKiKP** 21 18 27.2 -5.5
baz=315
Y22E IRIS PASSCAL I 105.27 41 PKiKP **PKiKP** 21 18 27.2 -5.5
baz=315
K37A Belmond 105.28 27 Pdiff **Pdif** 21 14 17.6 -0.9
baz=326
J38A Wedel Dairy, R 105.28 26 Pdiff **Pdif** 21 14 11.6 -7.0
baz=328
G43A Wallace 105.36 21 PKiKP **PKiKP** 21 18 28.0 -4.3
baz=332
L36A Harm Buss Farm 105.40 28 PKiKP **PKiKP** 21 18 29.4 -3.1
baz=326
SBA Scott Base 105.41 171 *e*PKP **PKiKP** 21 18 32.6 +1.3
I40A Norwalk 105.51 24 PKiKP **PKiKP** 21 18 28.9 -3.8
baz=329
J39A Decorah 105.57 25 PKiKP **PKiKP** 21 18 30.2 -2.6
baz=328
I41A Arkdale 105.64 24 PKiKP **PKiKP** 21 18 31.0 -1.8
baz=330
F45A CMU Biological 105.67 20 PKiKP **PKiKP** 21 18 29.9 -3.0
baz=334
CBKS Cedar Bluff 105.70 33 PKiKP **PKiKP** 21 18 30.4 -2.8
baz=321
H42A Shiocton 105.72 22 PKiKP **PKiKP** 21 18 30.7 -2.3
baz=331
K38A Parkersburg 105.73 26 PKiKP **PKiKP** 21 18 30.7 -2.4
baz=327
L37A Phoenix Point, 105.77 27 PKiKP **PKiKP** 21 18 32.0 -1.1
baz=326
121A Cookes Peak, D 105.81 42 PKiKP **PKiKP** 21 18 30.7 -3.0
baz=314
F46A Macinaw City C 105.83 19 PKiKP **PKiKP** 21 18 30.6 -2.5
baz=335
M36A Felix, Anita 105.88 28 PKiKP **PKiKP** 21 18 29.2 -4.2
baz=325
H43A Windswept, Lux 106.02 22 PKiKP **PKiKP** 21 18 29.2 -4.3
baz=332
K39A Oelwein 106.03 26 PKiKP **PKiKP** 21 18 30.2 -3.4
baz=328
L38A Oak Wood Farm, 106.08 27 PKiKP **PKiKP** 21 18 31.9 -1.9
baz=327
I42A Draeger Farm, 106.13 23 PKiKP **PKiKP** 21 18 31.0 -2.8
baz=331
SCIA State Center 106.17 27 PKiKP **PKiKP** 21 18 31.3 -2.6
baz=327
J41A Loganville 106.19 24 PKiKP **PKiKP** 21 18 32.3 -1.6
baz=330
M37A Trindle Farm, 106.24 28 PKiKP **PKiKP** 21 18 31.9 -2.1
baz=326
K40A Colesburg 106.33 25 PKiKP **PKiKP** 21 18 31.6 -2.6
baz=329
N36A Muff Farm, Cla 106.33 29 PKiKP **PKiKP** 21 18 30.9 -3.4
baz=325
L39A Vinton 106.48 26 PKiKP **PKiKP** 21 18 30.7 -3.8
baz=328
JFWS Jewell Farm 106.49 24 PKiKP **PKiKP** 21 18 29.7 -4.7
baz=329
J42A Columbus 106.55 23 PKiKP **PKiKP** 21 18 30.4 -4.2
baz=330
N37A Lee Faris, Mou 106.70 28 PKiKP **PKiKP** 21 18 31.3 -3.6
baz=326
L40A Anamosa 106.84 25 PKiKP **PKiKP** 21 18 32.9 -2.3
baz=328
M39A Webster 106.95 26 PKiKP **PKiKP** 21 18 30.1 -5.3
baz=328
KSU1 Kansas State U 106.97 31 PKiKP **PKiKP** 21 18 31.1 -4.4
baz=323
L41A Preston 107.11 25 PKiKP **PKiKP** 21 18 30.7 -4.9
baz=329
O37A Wolven Farm, M 107.22 28 PKiKP **PKiKP** 21 18 31.1 -4.8
baz=326
M40A Post Highland 107.28 26 PKiKP **PKiKP** 21 18 30.9 -5.0
baz=328
N39A Derby Farms, D 107.33 27 PKiKP **PKiKP** 21 18 30.4 -5.7
baz=327
K43A Burlington 107.37 23 PKiKP **PKiKP** 21 18 31.6 -4.6
baz=331
L42A Oliver, Polo 107.49 24 PKiKP **PKiKP** 21 18 31.0 -5.3
baz=330
O38A Galt 107.55 28 PKiKP **PKiKP** 21 18 34.2 -2.3
baz=326
P37A Lathrop 107.61 29 PKiKP **PKiKP** 21 18 32.4 -4.2
baz=325
AMTX Amarillo 107.67 37 PKiKP **PKiKP** 21 18 31.4 -5.6
baz=319
AMTX Amarillo 107.67 37 *e*Pdif **Pdif** 21 14 30.6 +1.2
comp=Z,17nm,1.1s
L43A Garden Prairie 107.68 24 PKiKP **PKiKP** 21 18 32.7 -4.0
baz=331
M41A Milan 107.69 25 PKiKP **PKiKP** 21 18 34.0 -2.8
baz=329
N40A Mertquake, Sal 107.69 26 PKiKP **PKiKP** 21 18 32.2 -4.6
baz=328
MSTX Muleshoe 107.74 38 PKiKP **PKiKP** 21 18 32.8 -4.4
baz=318
O39A Kirksville 107.83 27 PKiKP **PKiKP** 21 18 32.4 -4.6
baz=327
MNTX Cornudas Mount 107.85 41 *e*Pdif **Pdif** 21 14 31.7 +1.5
comp=Z,5.6nm,0.9s
M42A Sheffield 107.93 25 PKiKP **PKiKP** 21 18 30.7 -6.5
baz=330
L44A Lake County Fo 107.98 23 PKiKP **PKiKP** 21 18 30.4 -6.8
baz=331
Q37A Longview Farm, 108.14 29 PKiKP **PKiKP** 21 18 36.1 -1.6
baz=325
M43A Waltham Townsh 108.25 24 PKiKP **PKiKP** 21 18 35.9 -1.8
baz=330
SADO Sadowa 108.30 16 PKiKP **PKiKP** 21 18 37.6 -0.2
comp=Z,2.3nm,0.5s,baz=321,slow=4.6,SNR=6.2
Q38A Cooks Store, C 108.44 29 PKiKP **PKiKP** 21 18 35.3 -2.9
baz=326
O41A Passleys Farm, 108.63 26 PKiKP **PKiKP** 21 18 35.7 -2.8
baz=328
P40A Paris 108.64 27 PKiKP **PKiKP** 21 18 35.8 -2.8
baz=327
Q39A Willow Grove F 108.65 28 PKiKP **PKiKP** 21 18 35.8 -2.8
baz=326
HDIL Hopedale 108.88 25 PKiKP **PKiKP** 21 18 36.5 -2.5
baz=330
O43A Sugar Creek Fa 109.10 25 PKiKP **PKiKP** 21 18 36.5 -2.9
baz=330
P42A Winchester 109.30 26 PKiKP **PKiKP** 21 18 36.5 -3.3
baz=329
WMOK Wichita Mounta 109.33 35 PKiKP **PKiKP** 21 18 36.6 -3.4
baz=321
S38A Stockton 109.41 30 PKiKP **PKiKP** 21 18 36.3 -3.8
baz=325
Q41A Truxton 109.47 27 PKiKP **PKiKP** 21 18 35.7 -4.4
baz=328
LONY Lake Ozonia 109.47 13 PKiKP **PKiKP** 21 18 35.0 -5.0
baz=344
N46A Monticello 109.53 23 PKiKP **PKiKP** 21 18 34.7 -5.5
baz=332
P43A Skaggs, Pawnee 109.58 26 PKiKP **PKiKP** 21 18 35.3 -5.0
baz=330
R40A Maddies Statio 109.59 28 PKiKP **PKiKP** 21 18 37.4 -2.9
baz=327
S39A Bolivar 109.62 29 PKiKP **PKiKP** 21 18 35.4 -5.1
baz=326
O45A Potomac 109.74 24 PKiKP **PKiKP** 21 18 34.6 -6.0
baz=331
SYO Syowa Base 110.10 202 *e*PKiKP **PKiKP** 21 18 39.4 -0.8
Q43A New Douglas 110.11 26 PKiKP **PKiKP** 21 18 37.1 -4.2
baz=329
T39A Clever 110.14 30 PKiKP **PKiKP** 21 18 38.2 -3.3
baz=326
RKT Rikitea 110.21 107 *e*PS PS 21 28 42.2 -5.5
comp=Z,1μm,35.2s
RKT Rikitea 110.21 107 *e*LR LR 21 50 53.5
comp=Z,3μm,27.2s,baz=294
CCM Cathedral Cave 110.22 28 PKiKP **PKiKP** 21 18 37.8 -3.8
baz=328
S41A Jillco Farms, 110.40 28 PKiKP **PKiKP** 21 18 38.6 -3.3
baz=327
Q44A Meyer Farm, Va 110.41 26 PKiKP **PKiKP** 21 18 38.6 -3.3
baz=330
T40A Mansfield 110.43 29 PKiKP **PKiKP** 21 18 38.2 -3.8
baz=326
TXAR Lajitas Array 110.57 42 Pdiff **Pdif** 21 14 43.7 +1.3
comp=Z,3.0nm,1.0s,baz=302,slow=2.8,SNR=22
TXAR PKiKP **PKiKP** 21 18 43.1 +0.5
comp=Z,9.6nm,0.8s,baz=245,slow=1.1,SNR=29
TXAR PKKPbc **PKKPbc** 21 29 42.8 +0.8
comp=Z,2.8nm,0.9s,baz=151,slow=6.1,SNR=13
TXAR PKKP **PKKPab** 21 29 52.4 -2.6
comp=Z,2.2nm,0.9s,baz=145,slow=6.8,SNR=6.3
R43A Red Bud 110.58 27 PKiKP **PKiKP** 21 18 36.3 -6.0
baz=329
U39A Green Forest 110.63 30 PKiKP **PKiKP** 21 18 36.0 -6.4
baz=326
TSUM Tsumeb 110.73 258 PKKPbc PKKPbc 21 29 41.6 +0.4
comp=Z,9.7nm,1.0s,baz=322,slow=2.7,SNR=6.0
Q45A Warren Harvey, 110.75 25 PKiKP **PKiKP** 21 18 36.2 -6.3
baz=331
T41A Mountain View 110.85 29 PKiKP **PKiKP** 21 18 37.2 -5.6
baz=327
U40A Yellville 110.93 30 PKiKP **PKiKP** 21 18 37.2 -5.9
baz=326
Q46A CEJHS Indians, 110.95 24 PKiKP **PKiKP** 21 18 37.1 -5.8
baz=331
R44A Waltonville 110.95 26 PKiKP **PKiKP** 21 18 38.7 -4.3
baz=330
TORD Torodi Ar. Bea 111.03 296 Pdiff **Pdif** 21 14 44.4 -0.1
comp=Z,2.3nm,1.2s,baz=76,slow=3.0,SNR=4.4
TORD PKiKP **PKiKP** 21 18 43.3 -0.4
comp=Z,13nm,0.9s,baz=20,slow=2.7,SNR=31
TORD PKKPbc **PKKPbc** 21 29 37.6 -2.4
comp=Z,1.6nm,0.6s,baz=248,slow=4.4,SNR=3.8
TORD PKKPab **PKKPab** 21 29 52.2 +0.3
comp=Z,26nm,1.1s,baz=254,slow=3.4,SNR=32
TORD PKPPKP **P'P'df** 21 38 08.3 -3.7
comp=Z,2.0nm,1.1s,baz=112,slow=0.5,SNR=3.8
S43A Fulton Ridge, 111.12 27 PKiKP **PKiKP** 21 18 39.0 -4.3
baz=329
PMOZ Porto Moniz, M 111.14 324 *e*LR LR 21 55 23.6
comp=Z,415nm,24.0s
M54A Oil Creek Stat 111.21 18 PKiKP **PKiKP** 21 18 40.6 -2.8
baz=339
R45A Skylar, Fairfi 111.23 25 PKiKP **PKiKP** 21 18 40.1 -3.3
baz=330
S44A Carbondale 111.36 26 PKiKP **PKiKP** 21 18 40.0 -3.7
baz=329
U41A Viola 111.36 29 PKiKP **PKiKP** 21 18 41.4 -2.4
baz=327
Q47A Bedord North L 111.37 24 PKiKP **PKiKP** 21 18 40.0 -3.7
baz=332
ACSO Alum Creek Sta 111.39 21 PKiKP **PKiKP** 21 18 41.8 -1.9
baz=335
ACSO Alum Creek Sta 111.39 21 *e*PKP **PKiKP** 21 18 41.9 -1.9
V40A Witts Springs 111.40 30 PKiKP **PKiKP** 21 18 40.9 -3.1
baz=326
W39A Magazine 111.45 31 PKiKP **PKiKP** 21 18 40.2 -3.8
baz=325
BINY Binghamton 111.48 15 *e*PKP **PKiKP** 21 18 43.2 -0.7
S45A Carrier Mills 111.64 26 PKiKP **PKiKP** 21 18 42.3 -2.0
baz=330
T44A Benton 111.74 27 PKiKP **PKiKP** 21 18 41.6 -2.9
baz=329
X39A Fountain Ranch 111.85 32 PKiKP **PKiKP** 21 18 41.8 -3.0
baz=325
R47A Wooly Knot Far 111.89 24 PKiKP **PKiKP** 21 18 42.8 -1.9
baz=332
S46A Don Dixon Farm 111.98 25 PKiKP **PKiKP** 21 18 42.7 -2.2
baz=331
JCT Junction City 112.01 39 PKiKP **PKiKP** 21 18 44.5 -0.8
baz=319
JCT Junction City 112.01 39 *e*PKP **PKiKP** 21 18 45.6 +0.4
JCT Junction City 112.01 39 *e*PKIKP **PKiKP** 21 18 45.6 +0.4
WCI Wyandotte Cave 112.04 24 PKiKP **PKiKP** 21 18 42.1 -3.0
baz=332
V42A Cord 112.05 29 PKiKP **PKiKP** 21 18 43.1 -2.0
baz=327
W42A Bald Knob 112.43 30 PKiKP **PKiKP** 21 18 42.3 -3.6
baz=327
SSPA Standing Stone 112.50 17 *e*PKP **PKiKP** 21 18 45.0 -0.9
X41A Kaden, Bauxite 112.62 31 PKiKP **PKiKP** 21 18 40.6 -5.7
baz=326
O56A Blue Knob Stat 112.66 17 PKiKP **PKiKP** 21 18 41.5 -4.7
baz=340
U45A Rockin P Farm, 112.71 27 PKiKP **PKiKP** 21 18 42.2 -4.1
baz=330
N59A State Game Lan 112.75 15 PKiKP **PKiKP** 21 18 42.8 -3.6
baz=342
T47A Sharon Grove 112.82 25 PKiKP **PKiKP** 21 18 43.7 -2.9
baz=331
U46A Springville 112.94 26 PKiKP **PKiKP** 21 18 43.4 -3.3
baz=330
X42A Stuttgart 112.98 30 PKiKP **PKiKP** 21 18 43.5 -3.4
baz=327
T48A Bowling Green 112.99 25 PKiKP **PKiKP** 21 18 44.0 -2.9
baz=332
435B Jarrell 113.02 37 PKiKP **PKiKP** 21 18 44.2 -2.9
baz=321
PAL Palisades 113.08 13 PKiKP **PKiKP** 21 18 43.6 -3.3
baz=344
Z40A Long Farm, Mag 113.22 32 PKiKP **PKiKP** 21 18 43.8 -3.6
baz=325
WVT Waverly 113.28 26 PKiKP **PKiKP** 21 18 43.5 -4.0
baz=330
T49A Edmonton 113.31 24 PKiKP **PKiKP** 21 18 43.7 -3.8
baz=333
X43A Marvell 113.35 30 PKiKP **PKiKP** 21 18 44.4 -3.2
baz=327
V46A Holladay 113.45 27 PKiKP **PKiKP** 21 18 44.0 -3.8
baz=330
U48A Cassie Pea, Po 113.46 25 PKiKP **PKiKP** 21 18 44.9 -2.9
baz=332
S51A Beattyville 113.53 22 PKiKP **PKiKP** 21 18 46.4 -1.5
baz=334
W45A Hickory Valley 113.55 28 PKiKP **PKiKP** 21 18 45.1 -2.9
baz=329
140A Cam and Jess, 113.63 33 PKiKP **PKiKP** 21 18 43.4 -4.8
baz=325
V47A Nunnelly 113.67 26 PKiKP **PKiKP** 21 18 43.0 -5.2
baz=330
833A Chaparral WMA, 113.86 40 PKiKP **PKiKP** 21 18 43.9 -4.8
baz=319
W46A Michie 113.91 27 PKiKP **PKiKP** 21 18 44.3 -4.4
baz=330
OXF Oxford 114.01 28 PKiKP **PKiKP** 21 18 45.7 -3.2
baz=329
OXF Oxford 114.01 28 *e*PKP PKPdf 21 18 48.5 -0.4
OXF Oxford 114.01 28 *e*PKIKP PKPdf 21 18 48.5 -0.4
V48A Smith Brothers 114.02 26 PKiKP **PKiKP** 21 18 45.5 -3.4
baz=331
240A Hunter Patters 114.03 33 PKiKP **PKiKP** 21 18 45.2 -3.8
baz=324
X45A UM Field Stati 114.09 28 PKiKP **PKiKP** 21 18 45.4 -3.6
baz=329
W47A Westpoint 114.14 27 PKiKP **PKiKP** 21 18 46.6 -2.5
baz=330
QSPA South Pole Qui 114.32 180 PKP PKPdf 21 18 48.2 -0.2
comp=Z,19nm,1.1s,baz=312,slow=1.6,SNR=15
QSPA South Pole Qui 114.32 180 *e*PKP PKPdf 21 18 48.4 -0.1
V49A McMinnville 114.36 25 PKiKP **PKiKP** 21 18 46.9 -2.7
baz=332
Y45A Yeager Farm, C 114.50 29 PKiKP **PKiKP** 21 18 45.8 -4.0
baz=328
W48A Pulaski 114.50 26 PKiKP **PKiKP** 21 18 45.6 -4.2
baz=331
TZTN Tazewell 114.53 23 PKiKP **PKiKP** 21 18 46.2 -3.6
baz=334
TZTN Tazewell 114.53 23 *e*PKP PKPdf 21 18 48.1 -1.8
Z44A Pea Ridge, Bel 114.59 30 PKiKP **PKiKP** 21 18 46.4 -3.6
baz=327
HKT Hockley 114.61 36 *e*PKP PKPdf 21 18 50.7 +0.6
HKT Hockley 114.61 36 *e*PKIKP PKPdf 21 18 50.7 +0.6
X47A Russelville 114.66 27 PKiKP **PKiKP** 21 18 47.7 -2.5
baz=330
V50A Pikevile 114.75 24 PKiKP **PKiKP** 21 18 47.8 -2.5
baz=333
Y46A Houston 114.78 28 PKiKP **PKiKP** 21 18 47.0 -3.4
baz=329

W49A	Belvidere	114.78	26	PKiKP	PKiKP	21 18 48.3	-2.0
	baz=332						
242A	Grayson	114.80	32	PKiKP	PKiKP	21 18 49.3	-1.1
	baz=326						
KOWA	Kowa	114.84	301	PKP	PKPdf	21 18 50.7	-0.2
	comp=Z,12nm,0.5s,baz=23,slow=2.5,SNR=38						
KOWA				PKKPbc	PKKPbc	21 29 28.7	+1.4
	comp=Z,4.4nm,0.9s,baz=225,slow=3.8,SNR=6.8						
Z45A	Winona	114.85	29	PKiKP	PKiKP	21 18 48.0	-2.5
	baz=328						
341A	Kurthwood	114.89	33	PKiKP	PKiKP	21 18 49.1	-1.6
	baz=325						
CBN	Corbin Frederi	114.92	17	PKiKP	PKiKP	21 18 48.5	-2.0
	baz=340						
CBN	Corbin Frederi	114.92	17	*e*PKP	PKPdf	21 18 50.7	+0.2
BLA	Blacksburg	114.96	20	PKiKP	PKiKP	21 18 48.2	-2.5
	baz=337						
BLA	Blacksburg	114.96	20	*e*PKP	PKPdf	21 18 50.1	-0.6
BLA	Blacksburg	114.96	20	*e*PKIKP	PKPdf	21 18 50.1	-0.6
X48A	Hartselle	115.05	27	PKiKP	PKiKP	21 18 48.4	-2.5
	baz=331						
W50A	Signal Mountai	115.08	25	PKiKP	PKiKP	21 18 47.5	-3.5
	baz=332						
144A	Alexander Plac	115.14	30	PKiKP	PKiKP	21 18 49.5	-1.6
	baz=327						
V52A	Sevierville	115.14	23	PKiKP	PKiKP	21 18 48.6	-2.5
	baz=334						
Y47A	UCPARC, Winfie	115.19	28	PKiKP	PKiKP	21 18 49.1	-2.0
	baz=330						
243A	Waterproof	115.27	32	PKiKP	PKiKP	21 18 48.5	-2.9
	baz=326						
X49A	Woodville	115.29	26	PKiKP	PKiKP	21 18 48.5	-2.9
	baz=331						
Z46A	Louisville	115.33	29	PKiKP	PKiKP	21 18 48.0	-3.4
	baz=329						
441A	DeRidder	115.35	34	PKiKP	PKiKP	21 18 48.8	-2.7
	baz=324						
244A	Avery, Jackson	115.51	31	PKiKP	PKiKP	21 18 48.6	-3.3
	baz=327						
V53A	Saluda	115.58	23	PKiKP	PKiKP	21 18 48.1	-3.9
	baz=335						
X50B	Fort Payne	115.60	25	PKiKP	PKiKP	21 18 49.8	-2.2
	baz=332						
343A	Vidalia	115.69	32	PKiKP	PKiKP	21 18 48.0	-4.2
	baz=326						
W52A	Murphy	115.69	24	PKiKP	PKiKP	21 18 48.7	-3.5
	baz=334						
Z47A	Carrollton	115.70	28	PKiKP	PKiKP	21 18 48.9	-3.3
	baz=329						
146A	Union	115.75	29	PKiKP	PKiKP	21 18 49.6	-2.7
	baz=328						
245A	Little AP, Sta	115.88	30	PKiKP	PKiKP	21 18 49.6	-3.0
	baz=328						
W53A	Cullowhee	115.90	23	PKiKP	PKiKP	21 18 50.5	-2.2
	baz=334						
541A	Lake Charles	115.91	34	PKiKP	PKiKP	21 18 49.2	-3.5
	baz=324						
344A	Westbrook Farm	115.98	31	PKiKP	PKiKP	21 18 48.1	-4.6
	baz=327						
147A	Livingston	116.07	29	PKiKP	PKiKP	21 18 48.8	-4.0
	baz=329						
542A	Morse	116.18	34	PKiKP	PKPdf	21 18 48.9	-4.2
	baz=325						
246A	Jackson Lee, B	116.25	30	PKiKP	PKPdf	21 18 49.8	-3.5
	baz=328						
LRAL	Lakeview Retre	116.30	27	PKiKP	PKPdf	21 18 49.5	-3.9
	baz=330						
LRAL	Lakeview Retre	116.30	27	*e*PKP	PKPdf	21 18 53.0	-0.3
Y51A	Rockmart	116.32	25	PKiKP	PKPdf	21 18 49.9	-3.5
	baz=332						
Z49A	Columbiana	116.35	27	PKiKP	PKPdf	21 18 50.4	-3.0
	baz=331						
148A	Greensboro	116.39	28	PKiKP	PKPdf	21 18 51.0	-2.5
	baz=330						
345A	Thompson Farm,	116.43	31	PKiKP	PKPdf	21 18 52.9	-0.7
	baz=327						
X53A	Estanollee	116.45	24	PKiKP	PKPdf	21 18 52.4	-1.2
	baz=334						
KMSC	Kings Mountain	116.56	22	PKiKP	PKPdf	21 18 52.8	-1.0
	baz=336						
Y52A	Lilburn	116.74	24	PKiKP	PKPdf	21 18 52.0	-2.2
	baz=333						
149A	Jones	116.76	27	PKiKP	PKPdf	21 18 51.5	-2.7
	baz=330						
Z51A	Franklin	116.79	26	PKiKP	PKPdf	21 18 51.4	-2.9
	baz=332						
Y53A	Monroe	116.93	24	PKiKP	PKPdf	21 18 52.4	-2.2
	baz=334						
150A	Eclectic	117.07	27	PKiKP	PKPdf	21 18 51.7	-3.1
	baz=331						
Z52A	Williamson	117.20	25	PKiKP	PKPdf	21 18 51.2	-3.9
	baz=333						
Y54A	Tignall	117.25	23	PKiKP	PKPdf	21 18 52.2	-2.9
	baz=334						
GOGA	Godfrey	117.37	24	PKiKP	PKPdf	21 18 51.5	-3.9
	baz=334						
GOGA	Godfrey	117.37	24	*e*PKPdf	PKPdf	21 18 55.5	+0.1
GOGA	Godfrey	117.37	24	*e*PKIKP	PKPdf	21 18 55.5	+0.1
151A	Opelika	117.43	26	PKiKP	PKPdf	21 18 53.0	-2.6
	baz=332						
Z53A	Monticello	117.44	24	PKiKP	PKPdf	21 18 52.4	-3.1
	baz=334						
250A	Grady	117.52	27	PKiKP	PKPdf	21 18 53.1	-2.6
	baz=331						
152A	Waverly Hall	117.54	26	PKiKP	PKPdf	21 18 54.1	-1.7
	baz=332						
448A	Bay Minette	117.73	29	PKiKP	PKPdf	21 18 51.3	-4.9
	baz=329						
Z54A	Sparta	117.75	24	PKiKP	PKPdf	21 18 53.6	-2.6
	baz=334						
251A	Midway	117.77	27	PKiKP	PKPdf	21 18 54.1	-2.1
	baz=332						
252A	Lumpkin	118.13	26	PKiKP	PKPdf	21 18 53.0	-3.9
	baz=332						
154A	Montrose	118.21	24	PKiKP	PKPdf	21 18 54.0	-3.0
	baz=334						
155A	Kite	118.44	24	PKiKP	PKPdf	21 18 54.9	-2.6
	baz=334						
156A	Sylvania	118.76	23	PKiKP	PKPdf	21 18 55.1	-3.0
	baz=335						
NHSC	New Hope	118.81	22	PKiKP	PKPdf	21 18 55.2	-2.9
	baz=337						
DBIC	Dimbokro	119.94	294	PKP	PKPdf	21 19 00.8	0.0
	comp=Z,40nm,1.0s,baz=28,slow=2.4,SNR=21						
DBIC				PKKPab	PKKPbc	21 29 10.1	+1.0
	comp=Z,9.8nm,0.8s,baz=207,slow=3.3,SNR=9.2						
KIC	Kosan Boka	120.02	294	*e*PKIKP	PKPdf	21 19 00.7	-0.3
	comp=Z,193nm,1.1s						
KIC	Kosan Boka	120.02	294	*e*PKP2	PKKPbc	21 29 10.5	+1.7
	comp=Z,57nm,1.0s						
TIC	Toumodi	120.09	294	*e*PKIKP	PKPdf	21 19 00.8	-0.3
TIC	Toumodi	120.09	294	*e*PKP2	PKKPbc	21 29 10.5	+1.9
LIC	Lamto	120.33	294	*e*PKIKP	PKPdf	21 19 01.2	-0.3
	comp=Z,223nm,1.1s						
LIC	Lamto	120.33	294	*e*PKP2	PKKPbc	21 29 09.3	+1.6
	comp=Z,104nm,1.5s						
959A	Okeechobee	123.62	25	PKiKP	PKPdf	21 19 04.3	-3.2
	baz=335						
SNAA	Sanae	123.89	198	P	PKPdf	21 19 07.0	+0.2
SNAA	Sanae	123.89	198	PKP	PKPdf	21 19 06.7	0.0
	comp=Z,27nm,1.0s,baz=80,slow=4.2,SNR=45						
SNAA				PKKPbc	PKKPab	21 28 53.0	+1.5
	comp=Z,19nm,1.0s,baz=292,slow=4.2,SNR=33						
SNAA				SKKPbc	SKKPbc	21 32 37.6	-3.5
	comp=Z,12nm,1.1s,baz=333,slow=7.6,SNR=6.4						
059A	Moore Haven	124.02	25	PKiKP	PKPdf	21 19 05.2	-3.1
	baz=334						
060A	Indiantown	124.25	25	PKiKP	PKPdf	21 19 05.6	-3.1
	baz=335						
059Z	Ave Maria	124.46	26	PKiKP	PKPdf	21 19 07.8	-1.4
	baz=334						
VNA2	Neumayer--Watz	125.54	198	P	PKPdf	21 19 10.1	+0.3
	baz=84,slow=1.8						
VNA1	Neumayer--Stat	125.93	198	P	PKPdf	21 19 10.9	+0.4
VNA3	Neumayer Olymp	126.00	197	P	PKPdf	21 19 11.0	+0.3
SACV	Santiago Islan	128.56	316	*e*PKPdf	PKPdf	21 19 18.2	+0.9
APG	El Apazote	129.32	43	PKP	PKPdf	21 19 18.6	-0.4
	comp=Z,53nm,1.1s,baz=303,slow=7.1,SNR=24						
RPN	Rapa Nui	133.69	105	PKP	PKPdf	21 19 27.9	+1.3
	comp=Z,91nm,1.1s,baz=326,slow=3.7,SNR=4.1						
JTS	JuntasAbangare	136.33	41	PKhKP	PKPpre	21 19 20.4	
	comp=Z,9.5nm,0.5s,baz=18,slow=5.8,SNR=10						
JTS				PKP	PKPdf	21 19 30.9	-1.1
	comp=Z,29nm,0.9s,baz=42,slow=22,SNR=3.5						
SJG	San Juan	136.82	12	PKP	PKPdf	21 19 31.7	-1.0
	comp=Z,9.2nm,0.3s,baz=10,slow=6.5,SNR=6.8						
SMRT	St. Maarten	137.35	8	*e*	PKPdf	21 19 32.7	-1.0
BPA	Boggy Peak	138.48	6	*e*	PKPpre	21 19 27.6	
DEG	La Desirade	139.27	5	*e*	PKPpre	21 19 28.8	
BBL	Barber's Block	140.02	6	*e*	PKPdf	21 19 38.2	-0.5
PCM	Pelee Case Pet	140.75	5	*e*P	PKPpre	21 19 32.3	
PCM	Pelee Case Pet	140.75	5	*e*P	PKPpre	21 19 34.6	
BAMF	Morne Balai	140.75	5	*e*P	PKPpre	21 19 34.2	
CXM	Morne La Croix	140.75	5	*e*P	PKPpre	21 19 34.2	
PML	Morne Lenard	140.78	5	*e*P	PKPpre	21 19 34.8	
FDF	Fort de France	140.83	5	*e*P	PKPpre	21 19 34.2	
FDF	Fort de France	140.83	5	*e*	PKPpre	21 19 36.5	
ZAM	Aeronautique	141.00	5	*e*P	PKPpre	21 19 35.6	
LPMF	Morne Lapointe	141.00	5	*e*P	PKPpre	21 19 33.8	
MVM	Montagne Vaucl	141.03	5	*e*P	PKPpre	21 19 33.9	
TRMF	Trois Ilets	141.03	5	*e*P	PKPpre	21 19 33.7	
CODC	Agust´›n Codaz	142.45	26	*e*P	PKPpre	21 19 38.0	
MOTC	Monteria, Cord	142.53	30	*e*P	PKPpre	21 19 37.9	
GRGR	Grenville	143.36	7	*e*PKPdf	PKPab	21 19 41.3	+0.6
GRGR	Grenville	143.36	7	*e*	PKPab	21 19 39.7	-1.0
ZARC	Zaragoza, Cauc	144.03	30	*e*P	PKPab	21 19 41.7	-1.7
OCAC	Ocana	144.03	27	*e*P	PKPab	21 19 42.7	-0.8
TOSP	Speyside	144.28	5	*e*	PKPbc	21 19 45.0	+0.4
SDV	Santo Domingo	144.46	22	PKP	PKPbc	21 19 45.4	-0.1
	comp=Z,446nm,1.0s,baz=337,slow=2.9,SNR=178						
SDV				SKPbc	SKPbc	21 23 18.4	-1.2
	comp=Z,27nm,0.7s,baz=34,slow=4.5,SNR=4.0						
SDV	Santo Domingo	144.46	22	*e*P	PKPab	21 19 44.7	-0.5
PCRV	Puerto La Cruz	144.84	12	PKP	PKPab	21 19 45.8	-0.7
	comp=Z,200nm,0.7s,baz=348,slow=1.8,SNR=58						
TRN	Trinidad (W)	144.85	6	*e*	PKPbc	21 19 46.6	+0.2
HELC	Santa Helena	144.86	32	*e*P	PKPab	21 19 46.4	-0.6
TBH	Brigand Hill	145.04	6	*e*	PKPdf	21 19 48.9	+1.2
PTBC	PUERTO BERRIO	145.06	30	*e*P	PKPbc	21 19 46.4	-0.8
PAMC	Pamplona, Colo	145.10	27	*e*P	PKPbc	21 19 47.6	-0.3
BARC	Barichara	145.57	28	*e*P	PKPab	21 19 49.4	0.0
NORC	Norcasia	145.72	31	*e*P	PKPdf	21 19 48.5	-0.4
MALC	Bahia Malaga	145.78	37	*e*P	PKPab	21 19 50.9	+1.0
RREF	El Recreo	146.06	33	*e*P	PKPdf	21 19 50.3	+0.1
RUSC	La Rusia	146.24	28	*e*P	PKPdf	21 19 48.5	-1.9
YOTC	Yotoco, Valle	146.34	35	*e*P	PKPdf	21 19 50.0	-0.1
HOPE	Hope Point	146.34	202	*e*PKPbc	PKPbc	21 19 50.1	+0.2
TOLC	Tolima	146.35	33	*e*P	PKPdf	21 19 50.6	+0.3
ANIL	Santa Ana	146.39	33	*e*P	PKPdf	21 19 50.3	0.0
HORQ	Saladito	146.61	36	*e*P	PKPdf	21 19 51.5	+0.8
ROSC	El Rosal	146.61	31	PKPbc	PKPbc	21 19 52.0	-0.4
	comp=Z,165nm,0.9s,baz=110,slow=0.9,SNR=74						
ROSC	El Rosal	146.61	31	*e*P	PKPbc	21 19 51.8	-0.6
TUMC	Tumaco	146.78	41	*e*P	PKPbc	21 19 51.5	-0.9
CHIC	Chingaza	147.07	30	*e*P	PKPdf	21 19 51.3	-0.3
PRAC	Prado	147.31	33	*e*P	PKPdf	21 19 51.3	-0.3
MARP	Paez Belalcaza	147.50	36	*e*P	PKPdf	21 19 52.7	+0.5
VILC	Villavicencio,	147.54	31	*e*P	PKPdf	21 19 52.6	+0.5
PCON	Cinco Dias	147.70	37	*e*P	PKPdf	21 19 54.2	+1.3
SOTA	Rioblanco	147.74	37	*e*P	PKPdf	21 19 53.5	+0.7
BETC	Betania	147.91	35	*e*P	PKPbc	21 19 54.5	-1.1
CRUC	La Cruz	148.02	39	*e*P	PKPbc	21 19 57.6	+1.3
GCUF	Volcan Galeras	148.07	40	*e*P	PKPdf	21 19 54.2	+0.8
SJAC	San Juan de Ar	148.16	32	*e*P	PKPbc	21 19 55.2	-1.1
OTAV	Otavalo	148.20	42	*e*P	PKPdf	21 19 54.5	+1.0
FLOC	Florencia	148.72	36	*e*P	PKPdf	21 19 55.1	+1.2
RCBR	Riachuelo	152.03	308	PKPbc	PKPbc	21 20 06.6	+0.9
	comp=Z,160nm,0.6s,baz=23,slow=0.3,SNR=34						
RCBR	Riachuelo	152.03	308	*e*PKPdf	PKPdf	21 19 58.4	-0.6
RCBR				*e*PKPbc	PKiKP	21 20 06.7	+0.7
EFI	East Falkland	152.89	179	*e*PKPdf	PKPdf	21 20 00.4	+1.4
EFI				*e*PKPbc	PKiKP	21 20 07.1	+0.6
EFI				*e*PKPab	PKPab	21 20 18.4	+0.8
EFI	East Falkland	152.89	179	*e*PKIKP	PKPdf	21 20 00.4	+1.4
EFI				*e*		21 20 18.4	
ATAH	Atahualpa	153.68	52	PKP	PKPdf	21 20 03.9	+2.0
	comp=Z,71nm,1.1s,baz=343,slow=2.0,SNR=55						
ATAH				PKPbc	PKiKP	21 20 11.2	+1.4
	comp=Z,181nm,1.0s,baz=81,slow=1.6,SNR=32						
PTGA	Pitinga	156.24	6	PKP	PKPdf	21 20 04.8	-0.1
	comp=Z,39nm,1.1s,baz=344,slow=2.8,SNR=37						
PTGA				PKPab	PKPab	21 20 32.8	0.0
	comp=Z,200nm,1.0s,baz=359,slow=5.7,SNR=30						
PTGA				PP	PP	21 24 08.5	-0.4
	comp=Z,10nm,0.8s,baz=346,slow=16,SNR=4.1						
NNA	Nana	157.97	59	PKP	PKPdf	21 20 06.9	-0.2
	comp=Z,48nm,1.2s,baz=313,slow=6.0,SNR=7.4						
NNA				PKPab	PKPab	21 20 41.0	+0.5
	comp=Z,30nm,0.7s,baz=308,slow=5.1,SNR=8.3						
NNA	Nana	157.97	59	*e*PKPdf	PKPdf	21 20 08.2	+1.1
NNA				PKPab	PKPab	21 20 41.0	+0.5
NNA	Nana	157.97	59	*e*PKIKP	PKPdf	21 20 08.2	+1.1
NNA						21 20 41.0	
PLCA	Paso Flores	160.57	149	PKP	PKPdf	21 20 10.0	+0.6
	comp=Z,26nm,1.2s,baz=286,slow=0.8,SNR=12						
PLCA				PKPab	PKPab	21 20 52.5	+1.4
	comp=Z,20nm,0.8s,baz=255,slow=5.2,SNR=11						
SAML	Samuel	163.64	20	*e*PKPdf	PKPdf	21 20 13.4	+0.2
TRQA	Tornquist	166.02	166	*e*PKPdf	PKPdf	21 20 15.6	+1.0
AVIZ	Vizcacheras	166.99	136	*e*P	PKPdf	21 20 15.8	+0.3
AAGR	Agrelo	167.03	134	*e*P	PKPdf	21 20 15.5	-0.1
AUSP	Uspallata	167.16	129	*e*P	PKPdf	21 20 16.1	+0.1
LPAZ	La Paz	167.23	52	PKP	PKPdf	21 20 18.1	+1.2
	comp=Z,136nm,1.1s,baz=12,slow=2.8,SNR=190						
LPAZ				PKPab	PKPab	21 21 21.2	-0.5
	comp=Z,43nm,0.9s,baz=320,slow=2.2,SNR=10						
LPAZ				PP	PP	21 25 07.3	-2.4
	comp=Z,25nm,1.3s,baz=359,slow=4.1,SNR=6.8						
LPAZ	La Paz	167.23	52	*e*P	PKPdf	21 20 16.1	-0.7
ASAL	Salagasta	167.33	132	*e*P	PKPdf	21 20 15.6	-0.2
RTLS	Leoncito	167.45	128	*e*P	PKPdf	21 20 16.3	+0.1
LCO	Las Campanas	167.53	114	*e*PKPdf	PKPdf	21 20 17.9	+1.6
RTCV	Cerro Valdivia	167.95	130	*e*P	PKPdf	21 20 15.8	-0.4
ACDV	Cuesta del Vie	168.38	121	*e*P	PKPdf	21 20 16.5	-0.2
AMOG	MOGNA	168.49	126	*e*P	PKPdf	21 20 16.4	-0.3
ACAN	Cantantal	168.62	135	*e*P	PKPdf	21 20 16.4	-0.3
AGUA	GUANDACOL	169.16	119	*e*P	PKPdf	21 20 16.8	-0.4
SUCO	SUCO	169.19	146	*e*P	PKPdf	21 20 16.5	-0.5
VCA	Vinchina	169.69	116	*e*P	PKPdf	21 20 17.1	-0.4
APLL	PUNTA DE LOS L	170.20	129	*e*P	PKPdf	21 20 17.4	-0.3
ACLC	CERRO LA CRUZ	170.39	123	*e*P	PKPdf	21 20 17.7	-0.3
SIV	San Ignacio	170.93	21	PKP	PKPdf	21 20 19.1	+0.7
	comp=Z,106nm,1.0s,baz=51,slow=0.3,SNR=257						
SIV				PKPab	PKPab	21 21 36.6	-0.6
	comp=Z,57nm,0.9s,baz=1.1,slow=3.0,SNR=19						
SIV				PP	PP	21 25 25.7	-0.8
	comp=Z,19nm,1.1s,baz=359,slow=5.9,SNR=12						
CYA	Choya	171.74	120	*e*P	PKPdf	21 20 18.2	-0.3
YJA	Yavi	172.42	74	*e*P	PKPdf	21 20 19.6	+0.1
HJA	Humahuaca	172.80	81	*e*P	PKPdf	21 20 19.6	0.0
SLA	San Lorenzo	172.87	93	*e*P	PKPdf	21 20 18.7	-0.6
CPUP	Villa Florida	178.18	190	PKP	PKPdf	21 20 28.0	+0.4
	comp=Z,44nm,1.2s,baz=44,slow=1.6,SNR=29						
CPUP				PKPab	PKPab	21 22 08.7	
	comp=Z,14nm,1.0s,baz=159,slow=4.3,SNR=5.5						
CPUP				PP	PP	21 26 01.3	+0.1
	comp=Z,5.7nm,1.1s,baz=162,slow=6.4,SNR=3.9						

TAP 09 21:03:29.6, 24°.39N×122°.26E, h71km, ML4.1, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.20	323	P	Pn	21 03 40.6	+0.4
	baz=323						
EOS1				S	Sn	21 03 48.6	+0.6
	baz=323						
ENAH	Nanao	0.41	278	P	Pn	21 03 42.0	+0.4
	baz=277						
ENAH				S	Sn	21 03 51.2	+0.7
	baz=277						
TWC	Suao	0.43	300	P	Pn	21 03 41.8	0.0
	baz=300						
TWC				*e*S	Sn	21 03 49.8	-1.0
	baz=300						
NANB	Nanao	0.46	274	*e*P	Pn	21 03 42.7	+0.6
	baz=274						
NANB				*e*S	Sn	21 03 51.9	+0.6
	baz=274						
ENA	Nanau	0.47	274	P	Pn	21 03 42.5	+0.3
	baz=274						
ENA				S	Sn	21 03 52.0	+0.6
	baz=274						
ILA	Ilan	0.59	309	*e*P	Pn	21 03 43.8	+0.4
	baz=309						
ILA				*e*S	Sn	21 03 53.1	-0.4
	baz=309						
NTC	Toucheng	0.60	320	*e*P	Pn	21 03 43.3	-0.2
	baz=319						
NTC				*e*S	Sn	21 03 52.8	-0.9
	baz=319						
TWE	Neicheng	0.63	302	P	Pn	21 03 44.2	+0.4
	baz=301						
TWE				*e*S	Sn	21 03 52.9	-1.3
	baz=301						
NACB	Ninganchiao	0.64	250	*e*P	Pn	21 03 44.3	+0.4
	baz=250						
ENTT	Nioudou	0.68	292	*e*P	Pn	21 03 45.0	+0.7
	baz=291						
ENTT				*e*S	Sn	21 03 55.5	+0.3
	baz=291						
TWD	Chiawan	0.68	243	*e*P	Pn	21 03 44.7	+0.4
	baz=242						
TWD				*e*S	Sn	21 03 55.8	+0.6
	baz=242						
NWLT	Wulai	0.79	299	*e*P	Pn	21 03 46.3	+0.8
	baz=299						
NWLT				*e*S	Sn	21 03 58.4	+1.0
	baz=299						
NNS	Nan Shan	0.81	274	*e*P	Pn	21 03 46.6	+0.7
	baz=273						
NNS				*e*S	Sn	21 03 59.0	+1.0
	baz=273						
YHNB	Yeheng	0.85	289	*e*P	Pn	21 03 46.9	+0.6
	baz=288						
YHNB				*e*S	Sn	21 03 59.0	+0.2
	baz=288						
NSK	Sanguang	0.87	289	*e*P	Pn	21 03 47.1	+0.6
	baz=289						
NSK				*e*S	Sn	21 03 59.5	+0.4
	baz=289						
ESL	Shilin	0.95	233	*e*P	Pn	21 03 47.8	+0.3
	baz=232						
TWT	Tachien	1.00	262	*e*P	Pn	21 03 49.6	+1.4
	baz=261						
TWT				*e*S	Sn	21 04 03.4	+1.3
	baz=261						
EGFH	Guangfu	1.05	227	*e*P	Pn	21 03 49.4	+0.7
	baz=226						
EHY	Hungye	1.23	224	*e*P	Pn	21 03 51.1	0.0
	baz=223						
EHY				*e*S	Sn	21 04 07.2	+0.1
	baz=223						
WJS	Zhushan	1.51	248	*e*P	Pn	21 03 57.4	+2.7
	baz=247						

*SKO **09** 21:10:09.1, 41°.32N×20°.87E, h22km, M1.7, ML2.1*
*CSEM **09** 21:10:10.5±0.1, 41°.29N×20°.91E, h2km, ML1.9, Error ellipse: s-maj=3.8km s-min=3.0km az=52.0*
*BEO **09** 21:10:11.9±0.4, 41°.34N×20°.95E, h0km±3km*

ATH 09 21:10:09.2, 41°.38N×20°.92E, h19km±1km, ML1.9/6, 3C, Error ellipse: s-maj=2.2km s-min=1.2km az=198.0, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRUS	Krusevo	0.25	92	↑*i*Pg	Pg	21 10 15.8	+0.7
KRUS				*i* Sg	Sg	21 10 19.9	+0.9
OHR	Ohrid	0.28	199	↑*i*Pg	Pg	21 10 14.9	-0.6
OHR				*e*Lg	Lg	21 10 19.0	
	comp=N,340nm,0.3s						
OHR				*i* Sg	Sg	21 10 19.0	-0.8
OHR				*e*Lg	Lg	21 10 19.1	
	comp=E,364nm,0.4s						
BIA	Bitola	0.47	139	↑*i*Pg	Pb	21 10 19.1	+0.1
BIA				*i* Sg	Sb	21 10 27.1	+1.5
FNA	Florina	0.69	150	P	Pb	21 10 22.1	-0.5
FNA				S	Sg	21 10 32.2	+0.3
FNA				AML	AML	21 10 35.9	
	comp=E,562μm,0.2s						
FNA				AML	AML	21 10 37.5	
	comp=N,438μm,0.2s						
FNA	Florina	0.69	150	P	Pb	21 10 22.3	-0.3
FNA				S	Sg	21 10 32.3	+0.4
SKO	Skopje	0.71	33	*e*Pg	Pn	21 10 25.7	+1.4
SKO				*e*Sg	Sn	21 10 34.7	0.0
SKO	Skopje	0.71	33	*e*Pg	Pn	21 10 24.8	+0.5
SKO				*i* Sg	Sn	21 10 35.1	+0.4
SKO	Skopje	0.71	33	*e*Pg	Pn	21 10 25.7	+1.4
SKO				*e*Sg	Sn	21 10 34.7	0.0
TIR	Tirane	0.79	268	*e*Pg	Pn	21 10 26.1	+0.7
TIR				*e*Sg	Sn	21 10 37.8	+1.0
TIR	Tirane	0.79	268	P	Pg	21 10 24.7	0.0
TIR				S	Sn	21 10 36.2	-0.5
TIR				AML	AML	21 10 38.7	
	comp=N,261μm,0.2s						
TIR				AML	AML	21 10 43.8	
	comp=E,173μm,0.5s						
TIR	Tirane	0.79	268	P	Pg	21 10 24.6	-0.1
TIR	Tirane	0.79	268	*e*Pg	Pn	21 10 26.1	+0.7
TIR				S	Sg	21 10 35.9	+0.6
TIR				*e*Sg	Sn	21 10 37.8	+1.0
NEST	Nestorio	0.97	174	P	Pb	21 10 26.8	-0.6
NEST				S	Sn	21 10 41.6	+0.5
N

AGG	**Agios Georgios**	**2.59 155**	P	Pn	21 10 52.2	+2.1
AGG	**Agios Georgios**	**2.59 155**	P	Pn	21 10 52.4	+2.3
ZAGS	**Zajecar**	**2.62 21**	*e*Pn	Pb	21 10 56.6	+1.1
ZAGS	**Zajecar**	**2.62 21**	*e*Pn	Pb	21 10 56.6	+1.1
XOR	**Xorichti**	**2.66 138**	P	Pn	21 10 52.6	+1.5
XOR	**Xorichti**	**2.66 138**	P	Pn	21 10 53.1	+2.0
STON	**Ston**	**2.82 303**	*e*Pn	Pn	21 10 56.1	+2.8
STON			Sn	Sb	21 11 31.4	-1.7
STON	**Ston**	**2.82 303**	*e*Pn	Pn	21 10 56.0	+2.7
STON			Sn	Sb	21 11 31.3	-1.8

*ISCJB **09** 21:10:24.6±1.0, 33°.29S±0°.05×179°.6E±0°.2, h300km, mb3.5/3, Error ellipse: s-maj=21.2km s-min=7.0km az=6.8*
*IDC **09** 21:10:27.6±6.1, 33°.34S×179°.54E, h302km±63km, mb3.4/3, mb1 3.7/5, mb1mx3.3/50, mbtmp4.4/5, Error ellipse: s-maj=73.4km s-min=44.9km az=10.0*
ISC 09 21:10:26.5±1.7, 33°.49S±0°.09×179°.8E±0°.2, h300km, n48, σ1§83/56, mb3.5/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.24 196**		P	**Pn**	**21 11 36.1**	**+1.0**
MXZ				S	**S**	**21 12 33.3**	**+3.0**
HAZ	**Te Kaha**	**4.55 200**		P	**Pn**	**21 11 39.7**	**+1.0**
HAZ				S	**S**	**21 12 40.4**	**+3.6**
PKGZ	**Pakihiroa**	**4.60 197**		P	**S**	**21 12 36.0**	**-1.8**
KUZ	**Kuaotunu**	**4.64 224**		P	**Pn**	**21 11 43.6**	**+3.9**
GLKZ	**Green Lake**	**4.66 26**		P	Pn	21 11 27.3	-13
RAO	**Raoul Island**	**4.67 26**		S	S	21 12 19.0	-20
	90nm,0.3s,baz=101,slow=18,SNR=6.6						
PUZ	**Puketitti**	**4.73 194**		P	**Pn**	**21 11 41.7**	**+0.8**
PUZ				S	**S**	**21 12 43.7**	**+3.1**
URZ	**Urewera**	**5.22 203**		P	**Pn**	**21 11 49.5**	**+3.1**
	18nm,0.3s,baz=14,slow=19,SNR=121						
URZ				S	**S**	**21 12 53.3**	**+2.5**
	33nm,0.3s,baz=108,slow=20,SNR=10						
TOZ	**Tahuroa Road**	**5.47 218**		P	Pn	21 11 54.8	+5.5
RTZ	**Ruatahuna**	**5.59 203**		P	**Pn**	**21 11 50.9**	**0.0**
RTZ				S	**S**	**21 12 59.4**	**+0.6**
KNZ	**Kokohu**	**5.77 196**		P	**Pn**	**21 11 55.2**	**+2.3**
KNZ				S	**S**	**21 13 05.9**	**+3.3**
TLZ	**Tolley Road**	**5.92 214**		P	Pn	21 11 59.6	+4.9
BKZ	**Black Stump Fm**	**6.25 204**		P	**Pn**	**21 11 59.3**	**+0.5**
BKZ				S	**S**	**21 13 15.5**	**+2.4**
HIZ	**Hauiti**	**6.40 217**		P	Pn	21 12 05.7	+5.3
KRHZ	**Kereru**	**6.72 203**		P	**Pn**	**21 12 03.8**	**-0.6**
VRZ	**Vera Road**	**6.92 214**		P	**Pn**	**21 12 10.9**	**+4.1**
PXZ	**Pawanui**	**6.93 199**		P	**Pn**	**21 12 07.6**	**+0.7**
PXZ				S	**S**	**21 13 29.4**	**+1.3**
TSZ	**Takapari Road**	**7.23 204**		P	**Pn**	**21 12 10.6**	**+0.1**
TSZ				P	**S**	**21 13 33.5**	**-1.2**
WAZ	**Wanganui**	**7.34 210**		P	**Pn**	**21 12 14.3**	**+2.4**
WAZ				S	**S**	**21 13 39.5**	**+2.4**
NEZ	**North Egmont**	**7.36 217**		P	Pn	21 12 17.1	+4.9
BFZ	**Birch Farm**	**7.71 200**		P	**Pn**	**21 12 16.1**	**-0.3**
BFZ	**Birch Farm**	**7.71 200**		P	**Pn**	**21 12 16.1**	**-0.3**
BFZ				S	**S**	**21 13 44.7**	**-0.7**
MRZ	**Mangatainoka R**	**7.90 204**		P	**Pn**	**21 12 17.7**	**-1.0**
MRZ	**Mangatainoka R**	**7.90 204**		P	**Pn**	**21 12 17.7**	**-1.0**
MRZ				S	**S**	**21 13 47.5**	**-2.1**
HOWZ	**Holdsworth Sta**	**8.13 203**		P	**Pn**	**21 12 21.2**	**-0.3**
OGWZ	**Otaki Gorge**	**8.18 205**		P	**Pn**	**21 12 21.0**	**-1.1**
TMWZ	**Te Maipa**	**8.20 201**		P	**Pn**	**21 12 22.4**	**-0.1**
KIW	**Kapiti Island**	**8.31 206**		P	**Pn**	**21 12 23.5**	**-0.3**
KIW	**Kapiti Island**	**8.31 206**		P	**Pn**	**21 12 23.5**	**-0.3**
KIW				S	**S**	**21 13 55.6**	**-3.4**
MTW	**Mount Morrison**	**8.37 203**		P	**Pn**	**21 12 24.4**	**-0.1**
MTW	**Mount Morrison**	**8.37 203**		P	**Pn**	**21 12 24.4**	**-0.1**
MTW				S	**S**	**21 13 58.4**	**-1.9**
CAW	**Cannon Point**	**8.47 205**		P	**Pn**	**21 12 25.0**	**-0.7**
CAW	**Cannon Point**	**8.47 205**		P	**Pn**	**21 12 25.0**	**-0.7**
CAW				S	**S**	**21 14 00.7**	**-1.8**
TRWZ	**Traveller**	**8.53 201**		P	**Pn**	**21 12 27.2**	**+0.7**
PAWZ	**Paruwai Farm**	**8.60 202**		P	**Pn**	**21 12 28.1**	**+0.8**
MSWZ	**Moikau Station**	**8.69 203**		P	**Pn**	**21 12 28.7**	**+0.4**
BHW	**Baring Head**	**8.81 205**		P	**Pn**	**21 12 29.9**	**+0.1**
PLWZ	**Palliser**	**8.82 203**		P	**Pn**	**21 12 30.2**	**+0.1**
TUWZ	**Tuamarina**	**9.17 209**		P	**Pn**	**21 12 33.7**	**-0.6**
BSWZ	**Blackbirch Sta**	**9.44 208**		P	**Pn**	**21 12 38.5**	**+0.9**
KHZ	**Kahutara**	**10.17 207**		P	**Pn**	**21 12 47.5**	**+0.9**
RPZ	**Rata Peaks**	**12.26 211**		P	**Pn**	**21 13 12.1**	**+0.1**
	1.0nm,0.3s,baz=291,slow=2.8,SNR=5.3						
RPZ				S	**S**	**21 15 23.8**	**-4.4**
	1.7nm,0.3s,baz=293,slow=21,SNR=9.5						
CTA	**Charters Tower**	**32.59 286**		P	**P**	**21 16 29.8**	**-0.8**
	3.8nm,0.8s,baz=122,slow=16,SNR=3.2						
ASAR	**Alice Springs**	**41.16 271**		P	**P**	**21 17 42.1**	**-0.2**
	1.0nm,0.7s,baz=111,slow=7.9,SNR=7.6						
WRA	**Warramunga Arr**	**42.43 277**		P	**P**	**21 17 51.7**	**-0.9**
	1.0nm,0.3s,baz=115,slow=7.7,SNR=16						
FINES	**FINESS Array B**	**147.30 337**		PKPbc	**PKPbc**	**21 29 33.4**	**-0.5**
	1.3nm,0.9s,baz=132,slow=2.1,SNR=3.8						
LANS	**Liptovska Anna**	**158.55 323**		*e*PKP	pPKPdf	21 31 05.6	+2.2
VYHS	**Vyhne**	**159.29 322**		*e*PKP	pPKPdf	21 31 03.9	-0.4

*NEIC **09** 21:13:03.8±0.0, 16°.31N×98°.28W, h16km, MD4.1(MEX), After MEX.*
MEX 09 21:13:03.8±0.6, 16°.31N×98°.28W, h16km, MD4.1, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.27 348**		*e*P	Pn	21 13 23.5	-3.6
TLIG				*e*S	Sb	21 13 39.1	-4.5
TLIG	**Tlapa**	**1.27 348**		*e*P	Pn	21 13 23.5	-3.6
TLIG				*e*S	Sb	21 13 39.1	-4.5
ACX	**Acapulco**	**1.61 290**		*e*P	Pn	21 13 30.1	-1.5
ACX				*e*S	Sn	21 13 49.8	-2.3
ACX	**Acapulco**	**1.61 290**		*e*P	Pn	21 13 30.1	-1.5
ACX				*e*S	Sn	21 13 49.8	-2.3
VHO	**Vista Hermosa**	**1.66 63**		*e*P	Pn	21 13 29.2	-3.3
VHO				*e*S	Sn	21 13 48.7	-4.9
VHO	**Vista Hermosa**	**1.66 63**		*e*P	Pn	21 13 29.2	-3.3
VHO				*e*S	Sn	21 13 48.7	-4.9
CAIG	**El Cayaco**	**2.04 291**		*e*P	Pn	21 13 33.7	-3.8
CAIG				*i* S	Sn	21 13 57.3	-5.3
CAIG	**El Cayaco**	**2.04 291**		*e*P	Pn	21 13 33.7	-3.8
CAIG				*i* S	Sn	21 13 57.3	-5.3
HUIG	**Huatulco**	**2.16 104**		*e*P	Pn	21 13 35.7	-3.5
HUIG				*e*S	Sn	21 14 00.9	-4.7
HUIG	**Huatulco**	**2.16 104**		*e*P	Pn	21 13 35.7	-3.5
HUIG				*e*S	Sn	21 14 00.9	-4.7
ARIG	**Puente Sto Nin**	**2.78 315**		*e*P	Pn	21 13 47.8	+0.1
ARIG				*e*S	Sn	21 14 20.2	-0.7
ARIG	**Puente Sto Nin**	**2.78 315**		*e*P	Pn	21 13 47.8	+0.1
ARIG				*e*S	Sn	21 14 20.2	-0.7
ZIIG	**Zihuatanejo**	**3.31 293**		*e*P	Pb	21 13 59.1	-3.0
ZIIG	**Zihuatanejo**	**3.31 293**		*e*P	Pb	21 13 59.1	-3.0
LVIG	**Laguna Verde**	**3.83 27**		*e*P	Pn	21 13 58.7	-3.4
LVIG	**Laguna Verde**	**3.83 27**		*e*P	Pn	21 13 58.7	-3.4

*SOME **09** 21:22:30.5, 43°.98N×82°.20E, h5km*
*BJI **09** 21:22:33.0, 43°.79N×82°.40E, h8km, ML3.4/8*
*NNC **09** 21:22:36.1±1.6, 44°.07N×81°.80E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=18.9km s-min=6.0km az=125.0*
ISC 09 21:22:29.7±1.7, 43°.71N±0°.06×82°.64E±0°.04, h19km±4km, n31, σ2§00/58, 19C-12D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.68 262**		*e*P	**Pn**	**21 22 59.2**	**+1.0**
	303nm,0.2s						
KTMS				*e*S	**Sn**	**21 23 19.1**	**-0.2**
	688nm,0.2s						
DJR	**Jarkent**	**2.15 288**		*e*P	**Pn**	**21 23 06.3**	**+1.7**
	142nm,0.4s						
DJR				*e*S	**Sn**	**21 23 31.1**	**+0.5**
	494nm,0.5s						
PDGK	**Podgornoye**	**2.32 262**		⇑Pn	**Pn**	**21 23 07.7**	**+0.7**
	97nm,0.4s						
PDGK				⇓Lg	Lg	21 23 36.9	
	227nm,0.5s						
SHLS	**Shalkode**	**2.38 258**		*e*P	**Pn**	**21 23 06.0**	**-1.7**
	1μm,0.3s						
SHLS				*e*S	**Sn**	**21 23 31.5**	**-5.0**
	3μm,0.3s						
UZB	**Uzynbulak**	**2.69 259**		*e*P	**Pb**	**21 23 15.8**	**-1.5**
	52nm,0.2s						
UZB				*e*S	**Sb**	**21 23 48.3**	**-1.7**
	131nm,0.5s						
KAPS	**Kapalarasan**	**2.83 305**		*e*P	**Pn**	**21 23 16.2**	**+2.4**
	16nm,0.2s						
KAPS				*e*S	**Sn**	**21 23 47.9**	**+0.5**
	121nm,0.3s						
KPKS	**Kokpek**	**2.88 266**		*e*P	**Pb**	**21 23 19.5**	**-1.0**
	66nm,0.2s						
KPKS				*e*S	**Sb**	**21 23 53.4**	**-2.1**
	276nm,0.4s						
MNBS	**Baschi**	**3.08 278**		*e*P	**Pb**	**21 23 22.6**	**-1.4**
	86nm,0.4s						
MNBS				*e*S	**Sb**	**21 23 59.3**	**-2.0**
	217nm,0.4s						
MK31	**Makanchi Array**	**3.09 356**		⇓Pn	**Pn**	**21 23 20.0**	**+2.5**
	0.3nm,0.2s,baz=186,slow=13,SNR=891						
MK31				⇓Pg	**Pg**	**21 23 27.8**	**-1.1**
	7.4nm,0.2s,baz=179,slow=17,SNR=142						
MK31				⇓Lg	Lg	21 24 04.8	
	83nm,0.6s,baz=192,slow=27,SNR=4.5						
MAKZ	**Makanchi**	**3.13 352**		⇑Pn	**Pn**	**21 23 20.7**	**+2.7**
	1.4nm,0.2s						
MAKZ				⇑Pg	**Pg**	**21 23 29.1**	**-0.6**
	10nm,0.3s						
MAKZ				⇑Sn	**Sn**	**21 23 56.1**	**+1.2**
	19nm,0.4s						
MAKZ				⇓Lg	Lg	21 24 06.0	
	36nm,0.5s						
SATY	**Saty**	**3.15 260**		*e*P	**Pb**	**21 23 24.1**	**-1.1**
	25nm,0.2s						
SATY				⇑*i*S	**Sb**	**21 24 01.9**	**-1.4**
	188nm,0.2s						
KURS	**Kuram**	**3.25 268**		*e*P	**Pb**	**21 23 25.8**	**-1.0**
	30nm,0.4s						
KURS				⇓*i*S	**Sb**	**21 24 05.1**	**-0.9**
	50nm,0.4s						
TDK	**Taldyqorghan**	**3.30 294**		*e*P	**Pn**	**21 23 22.6**	**+2.4**
	43nm,0.2s						
TDK				*e*S	**Sn**	**21 23 59.5**	**+0.6**
	122nm,0.6s						
ARXS	**Arharly**	**3.51 280**		*e*P	**Pb**	**21 23 29.7**	**-1.5**
	11nm,0.2s						
ARXS				*e*S	**Sb**	**21 24 11.5**	**-1.9**
	113nm,0.5s						
WMQ	**Urumqi**	**3.67 87**		Pn	**Pb**	**21 23 33.0**	**-0.8**
WMQ				Sn	**Sb**	**21 24 19.2**	**+1.3**
WMQ				smax	smax		
	comp=N,86nm,0.9s						
WMQ				smax	smax		
	comp=E,95nm,0.9s						
KOTS	**Kotyrbulak**	**4.05 265**		*e*P	**Pb**	**21 23 41.0**	**+0.6**
	35nm,0.5s						
KOTS				*e*S	**Sb**	**21 24 29.7**	**+0.6**
	43nm,0.6s						
ZSN	**Zaisan**	**4.05 22**		⇑*i*P	**Pg**	**21 23 46.9**	**-0.4**
	5.6nm,0.3s						
ZSN				⇓*i*S	**Sg**	**21 24 39.5**	**-0.3**
	27nm,0.5s						
CHKK	**Chushkaly**	**4.09 274**		*e*P	**Pb**	**21 23 40.7**	**-0.4**
	20nm,0.2s						
CHKK				⇑*e*S	**Sb**	**21 24 29.3**	**-0.9**
	77nm,0.3s						
MDOK	**Medeo**	**4.11 264**		⇓Pn	**Pn**	**21 23 31.9**	**+0.3**
	3.4nm,0.3s						
MDOK				⇑Pg	**Pb**	**21 23 41.8**	**+0.4**
	11nm,0.4s						
MDOK				⇑Lg	Lg	21 24 32.2	
	50nm,0.6s						
MDOK	**Medeo**	**4.11 264**		*e*P	**Pb**	**21 23 43.2**	**+1.8**
	21nm,0.4s						
MDOK				*e*S	**Sb**	**21 24 34.9**	**+4.1**
	47nm,0.5s						
KNDC	**Almaty**	**4.16 265**		⇑Pg	**Pb**	**21 23 43.6**	**+1.4**
	42nm,0.5s						
KNDC				⇓Lg	Lg	21 24 31.6	
	70nm,0.5s						
KTBS	**Karatobe**	**4.32 272**		*e*P	**Pb**	**21 23 44.6**	**-0.4**
	7.4nm,0.4s						
KTBS				*e*S	**Sb**	**21 24 36.5**	**-0.2**
	33nm,0.7s						
MTBS	**Maitube**	**4.56 265**		*e*P	**Pb**	**21 23 50.3**	**+1.2**
	19nm,0.3s						
MTBS				*e*S	**Sb**	**21 24 46.5**	**+2.8**
	51nm,0.5s						
KUU	**Kurty**	**4.56 274**		*e*P	**Pb**	**21 23 49.5**	**+0.4**
	12nm,0.5s						
KUU				*e*S	**Sb**	**21 24 45.6**	**+1.9**
	68nm,0.4s						
KST	**Kastek**	**4.91 264**		*e*P	**Pb**	**21 23 57.4**	**+2.3**
	24nm,1.0s						
KST				*e*S	**Sb**	**21 24 58.3**	**+4.4**
	43nm,0.7s						
DGS	**Degeres**	**5.02 267**		*e*P	**Pb**	**21 23 57.7**	**+0.8**
	8.2nm,0.7s						
DGS				*e*S	**Sb**	**21 24 59.3**	**+2.5**
	54nm,0.7s						
TKM2	**Tokmak 2**	**5.20 264**		⇑Pn	**Pn**	**21 23 48.8**	**+2.2**
	10nm,0.9s						
TKM2				⇑Lg	Lg	21 25 05.8	
	14nm,0.5s						
AAK	**Ala-Archa**	**6.05 263**		⇓Pn	**Pn**	**21 24 00.3**	**+2.1**
	1.1nm,0.3s						
AAK				⇑Pg	**Pb**	**21 24 17.0**	**+2.5**
	3.1nm,0.3s						
AAK				⇓Lg	Lg	21 25 32.1	
	15nm,0.8s						
KURBB	**Kurchatov Arra**	**7.46 339**		⇑Pn	**Pn**	**21 24 17.9**	**+0.5**
	5.6nm,0.9s						
KURBB				⇑Sn	**Sn**	**21 25 36.9**	**-4.4**
	20nm,0.7s						
KURBB				⇑Lg	Lg	21 26 17.5	
	46nm,0.8s						
MNAS	**Manas**	**7.52 264**		⇓Lg	Lg	21 26 18.8	
	8.6nm,1.3s						
KURK	**Kurchatov**	**7.52 340**		⇑Pn	**Pn**	**21 24 19.0**	**+0.8**
	4.9nm,1.0s						
KURK				⇑Sn	**Sn**	**21 25 38.6**	**-4.3**
	8.5nm,0.5s						
KURK				⇑Lg	Lg	21 26 20.8	
	19nm,0.7s						

TAP 09 21:23:49.2, 24°.46N×122°.30E, h69km, ML3.8, 1C, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.18 300**		*e*P	Pn	21 24 00.1	+0.5
	baz=300						
EOS1				*e*S	Sn	21 24 08.2	+0.9
	baz=300						
TWC	**Suao**	**0.44 290**		⇑P	Pn	21 24 01.3	-0.1
	baz=294						
TWC				S	Sn	21 24 10.0	-0.3
	baz=294						
ENAH	**Nanao**	**0.45 269**		*e*P	Pn	21 24 01.4	0.0
	baz=266						
ENAH				*e*S	Sn	21 24 10.7	+0.2
	baz=266						
NANB	**Nanao**	**0.51 267**		*e*P	Pn	21 24 02.1	+0.1
	baz=264						
NANB				*e*S	Sn	21 24 11.9	+0.5
	baz=264						
ENA	**Nanau**	**0.51 267**		P	Pn	21 24 02.1	0.0
	baz=267						
ENA				*e*S	Sn	21 24 11.8	+0.3
	baz=267						
EGS	**Suo**	**0.51 319**		*e*P	Pn	21 24 02.1	0.0
	baz=319						
EGS				*e*S	Sn	21 24 11.2	-0.3
	baz=319						
NTC	**Toucheng**	**0.58 313**		*e*P	Pn	21 24 03.0	+0.2
	baz=319						
NTC				*e*S	Sn	21 24 13.0	+0.2
	baz=319						
ILA	**Ilan**	**0.59 301**		P	Pn	21 24 03.3	+0.4
	baz=306						
ILA				*e*S	Sn	21 24 13.2	+0.3
	baz=306						
TWE	**Neicheng**	**0.64 295**		P	Pn	21 24 03.7	+0.4
	baz=297						
TWE				*e*S	Sn	21 24 14.0	+0.2
	baz=297						
YOJ	**Yonaguni jima**	**0.65 89**		P	Pn	21 24 03.5	0.0
	baz=89						
YOJ				*e*S	Sn	21 24 13.6	-0.3
	baz=89						
TIPB	**Shuangxi**	**0.67 320**		P	Pn	21 24 02.7	-1.1
	baz=319						
TIPB				S	Sn	21 24 12.7	-1.9
	baz=319						
ENTT	**Nioudou**	**0.70 285**		P	Pn	21 24 04.8	+0.7
	baz=289						
ENTT				S	Sn	21 24 15.7	+0.8
	baz=289						
NACB	**Ninganchiao**	**0.70 247**		*e*P	Pn	21 24 03.7	-0.4
	baz=241						
NACB				*e*S	Sn	21 24 14.5	-0.6
	baz=241						
TWD	**Chiawan**	**0.75 240**		*e*P	Pn	21 24 04.3	-0.3
	baz=232						
TWD				S	Sn	21 24 15.4	-0.5
	baz=232						
NWF	**Wu-fen Shan**	**0.78 322**		P	Pn	21 24 05.1	+0.1
	baz=315						
NWF				S	Sn	21 24 16.1	-0.6
	baz=315						
WFSB	**Wu-fen Shan**	**0.78 322**		*e*P	Pn	21 24 05.1	+0.2
	baz=315						
WFSB				*e*S	Sn	21 24 15.9	-0.6
	baz=315						
HWA	**Hwalien**	**0.80 233**		P	Pn	21 24 05.3	+0.2
	baz=226						
HWA				*e*S	Sn	21 24 17.8	+0.8
	baz=226						
NWLT	**Wulai**	**0.80 294**		*e*P	Pn	21 24 05.9	+0.7
	baz=297						
NWLT				*e*S	Sn	21 24 17.8	+0.7
	baz=297						
NNSB	**Datong**	**0.84 268**		*e*P	Pn	21 24 06.1	+0.3
	baz=261						
NNSB				*e*S	Sn	21 24 18.2	+0.1
	baz=261						
NNSH	**Datong**	**0.84 268**		*e*P	Pn	21 24 06.2	+0.4
	baz=262						
NNSH				*e*S	Sn	21 24 18.0	-0.1
	baz=262						
ENLB	**Shoufeng**	**0.84 229**		P	Pn	21 24 05.9	+0.1
	baz=224						
ENLB				S	Sn	21 24 18.5	+0.6
	baz=224						
NNS	**Nan Shan**	**0.85 269**		*e*P	Pn	21 24 06.1	+0.2
	baz=261						
NNS				*e*S	Sn	21 24 18.4	+0.1
	baz=261						
YHNB	**Yeheng**	**0.87 284**		*e*P	Pn	21 24 06.8	+0.7
	baz=284						
YHNB				*e*S	Sn	21 24 19.3	+0.6
	baz=284						
NSK	**Sanguang**	**0.89 284**		P	Pn	21 24 07.0	+0.6
	baz=284						
NSK				*e*S	Sn	21 24 19.3	+0.3
	baz=284						
TATO	**Taipei**	**0.90 305**		*e*P	Pn	21 24 06.6	+0.1
	baz=314						
TATO				*e*S	Sn	21 24 18.5	-0.7
	baz=314						
TAP	**Taipei**	**0.93 309**		*e*P	Pn	21 24 06.8	+0.1
	baz=308						
TAP				*e*S	Sn	21 24 19.6	-0.2
	baz=308						
YM07	**YM07**	**0.95 319**		*e*P	Pn	21 24 06.0	-1.1
	baz=310						
YM07				*e*S	Sn	21 24 18.8	-1.6
	baz=310						
YM10	**YM10**	**0.97 316**		*e*P	Pn	21 24 07.4	+0.1
	baz=315						
YM10				*e*S	Sn	21 24 20.1	-0.7
	baz=315						
YM11	**YM11**	**0.97 317**		*e*P	Pn	21 24 08.3	+0.9
	baz=316						
YM11				*e*S	Sn	21 24 21.1	+0.3
	baz=316						
YM08	**YM08**	**0.97 318**		*e*P	Pn	21 24 07.1	-0.3
	baz=310						
YM08				*e*S	Sn	21 24 19.6	-1.3
	baz=310						
YM12	**YM12**	**0.98 317**		*e*P	Pn	21 24 07.3	-0.2
	baz=317						
YM12				*e*S	Sn	21 24 19.9	-1.1
	baz=317						
YM04	**YM04**	**0.98 315**		P	Pn	21 24 07.5	+0.1
	baz=314						
YM04				*e*S	Sn	21 24 20.5	-0.6
	baz=314						
YM03	**YM03**	**1.00 316**		*e*P	Pn	21 24 07.6	-0.1
	baz=316						
YM03				*e*S	Sn	21 24 20.6	-0.9
	baz=316						
ESL	**Shilin**	**1.02 231**		P	Pn	21 24 07.5	-0.4
	baz=224						
ESL				*e*S	Sn	21 24 21.2	-0.6
	baz=224						
TWS1	**Kuangyinshan**	**1.03 309**		P	Pn	21 24 08.4	+0.4
	baz=316						
TWS1				*e*S	Sn	21 24 22.2	+0.2
	baz=316						
TWY	**Chenhua**	**1.04 322**		*e*P	Pn	21 24 08.5	+0.4
	baz=313						
TWY				S	Sn	21 24 22.6	+0.4
	baz=313						
NTST	**Danshui**	**1.05 312**		P	Pn	21 24 08.8	+0.5
	baz=312						
NTST				*e*S	Sn	21 24 23.4	+0.9
	baz=312						
TDCB	**Techi**	**1.06 259**		P	Pn	21 24 09.4	+0.8
	baz=255						
TDCB				*e*S	Sn	21 24 23.0	0.0
	baz=255						
CHGB	**Renai**	**1.10 249**		*e*P	Pn	21 24 09.7	+0.5
	baz=241						
CHGB				*e*S	Sn	21 24 23.5	-0.5
	baz=241						
EGFH	**Guangfu**	**1.12 226**		*e*P	Pn	21 24 08.9	-0.3
	baz=219						
EGFH				*e*S	Sn	21 24 23.1	-1.0
	baz=219						
NCU	**National Centr**	**1.14 297**		*e*P	Pn	21 24 10.3	+0.9
	baz=296						
NCU				*e*S	Sn	21 24 25.4	+0.9
	baz=296						
NCUH	**Zhongli**	**1.14 297**		*e*P	Pn	21 24 10.4	+1.0
	baz=296						
NCUH				*e*S	Sn	21 24 25.6	+1.1
	baz=296						
LIOB	**Emei**	**1.19 279**		*e*P	Pn	21 24 11.0	+1.0
	baz=279						
LIOB				*e*S	Sn	21 24 26.9	+1.2
	baz=279						
NSTT	**Nanjuang**	**1.20 279**		*e*P	Pn	21 24 10.8	+0.6
	baz=278						
NSTT				S	Sn	21 24 26.9	+1.0
	baz=278						
SBCB	**Hsinchu**	**1.25 286**		*e*P	Pn	21 24 11.4	+0.6
	baz=285						
SBCB				*e*S	Sn	21 24 28.3	+1.4
	baz=285						
HGSD	**Ruisui**	**1.25 220**		*e*P	Pn	21 24 10.6	-0.3
	baz=216						
HGSD				*e*S	Sn	21 24 27.0	-0.1
	baz=216						
VWDT	**VWDT**	**1.27 237**		*e*P	Pn	21 24 11.7	+0.6
	baz=230						
VWDT				*e*S	Sn	21 24 27.4	-0.1
	baz=230						
EHY	**Hungye**	**1.30 224**		*e*P	Pn	21 24 11.0	-0.6
	baz=223						
EHY				*e*S	Sn	21 24 26.8	-1.5
	baz=

NSY	**Sanyi**	**1.41 269**	*e*P	Pn	21 24 14.4	+1.5
	baz=268					
NSY			*e*S	Sn	21 24 32.8	+2.0
	baz=268					
TWF1	**Yuli**	**1.43 220**	*e*P	Pn	21 24 12.8	-0.5
	baz=228					
TWF1			*e*S	Sn	21 24 29.9	-1.5
	baz=228					
TCU	**Taichung**	**1.52 259**	*e*P	Pn	21 24 15.8	+1.5
	baz=270					
TCU			*e*S	Sn	21 24 35.5	+2.2
	baz=270					
FULB	**Fuli**	**1.56 217**	*e*P	Pn	21 24 14.7	-0.3
	baz=208					
FULB			*e*S	Sn	21 24 33.5	-0.8
	baz=208					
WJS	**Zhushan**	**1.57 247**	*e*P	Pn	21 24 17.5	+2.4
	baz=238					
WJS			*e*S	Sn	21 24 37.6	+2.9
	baz=238					
CHKT	**Chengkung**	**1.60 213**	P	Pn	21 24 14.7	-0.8
	baz=205					
CHKT			*e*S	Sn	21 24 32.7	-2.6
	baz=205					
WCHH	**Zhanghua**	**1.64 257**	*e*P	Pn	21 24 17.2	+1.2
	baz=268					
WCHH			*e*S	Sn	21 24 37.3	+1.1
	baz=268					
ELDTW	**Lidau**	**1.73 223**	*e*P	Pn	21 24 17.0	-0.2
	baz=219					
ELDTW			*e*S	Sn	21 24 37.4	-1.1
	baz=219					
WGK	**Gukeng**	**1.77 245**	*e*P	Pn	21 24 20.2	+2.5
	baz=244					
WGK			*e*S	Sn	21 24 42.1	+2.9
	baz=244					
WDLH	**Douliu**	**1.79 245**	*e*P	Pn	21 24 19.3	+1.3
	baz=258					
WDLH			*e*S	Sn	21 24 43.0	+3.2
	baz=258					
RLNB	**Erlin**	**1.86 253**	*e*P	Pn	21 24 19.7	+0.8
	baz=263					
RLNB			*e*S	Sn	21 24 43.1	+1.5
	baz=263					
TWH	**Lutao**	**1.90 204**	*e*P	Pn	21 24 19.0	-0.4
	baz=202					
TWH			*e*S	Sn	21 24 41.2	-1.2
	baz=202					
STYT	**Tauyuan**	**1.91 228**	*e*P	Pn	21 24 20.8	+1.1
	baz=222					
STYT			*e*S	Sn	21 24 44.0	+1.0
	baz=222					
TPUB	**Ta-pu**	**1.92 233**	*e*P	Pn	21 24 21.7	+2.0
	baz=225					
TPUB			*e*S	Sn	21 24 45.1	+2.1
	baz=225					
WTP	**Ta-pu**	**1.96 232**	*e*P	Pn	21 24 21.8	+1.4
	baz=232					
WTP			*e*S	Sn	21 24 46.3	+2.2
	baz=232					
TWGBT	**Beinan**	**1.98 215**	*e*P	Pn	21 24 20.0	-0.5
	baz=220					
TWGBT			*e*S	Sn	21 24 42.6	-1.9
	baz=220					
TWG	**Pinlang**	**1.98 215**	*e*P	Pn	21 24 19.9	-0.7
	baz=220					
TWG			*e*S	Sn	21 24 43.1	-1.4
	baz=220					
TWK	**Hsinying**	**2.04 235**	*e*P	Pn	21 24 23.0	+1.5
	baz=234					
TWK			*e*S	Sn	21 24 48.7	+2.7
	baz=234					
CHN1	**Nanshi**	**2.06 232**	*e*P	Pn	21 24 23.6	+1.9
	baz=232					
CHN1			*e*S	Sn	21 24 48.6	+2.1
	baz=232					
WSF	**Szhu**	**2.07 247**	*e*P	Pn	21 24 23.2	+1.5
	baz=257					
WSF			*e*S	Sn	21 24 47.9	+1.3
	baz=257					
WLGB	**Puzi**	**2.08 242**	*e*P	Pn	21 24 23.9	+2.1
	baz=242					
WLGB			*e*S	Sn	21 24 49.6	+2.9
	baz=242					
SGST	**Jiashian**	**2.09 229**	*e*P	Pn	21 24 25.1	+3.1
	baz=221					
SGST			*e*S	Sn	21 24 50.0	+2.9
	baz=221					
CHN8	**Yiju**	**2.21 240**	*e*P	Pn	21 24 25.5	+1.8
	baz=240					
CHN8			*e*S	Sn	21 24 53.2	+3.2
	baz=240					
SSD	**Sandimen**	**2.29 222**	*e*P	Pn	21 24 27.3	+2.5
	baz=213					
SSD			*e*S	Sn	21 24 54.8	+2.9
	baz=213					
SCLT	**Jiali**	**2.31 237**	*e*P	Pn	21 24 27.8	+2.7
	baz=236					
SCLT			*e*S	Sn	21 24 55.1	+2.6
	baz=236					
MASBT	**Mashibuluo**	**2.39 220**	*e*P	Pn	21 24 27.3	+1.2
	baz=219					
MASBT			*e*S	Sn	21 24 56.8	+2.4
	baz=219					
EAST	**Anshuo**	**2.46 213**	*e*P	Pn	21 24 27.1	0.0
	baz=206					
EAST			*e*S	Sn	21 24 55.2	-0.9
	baz=206					
VWUC	**VWUC**	**2.65 282**	*e*P	Pn	21 24 29.6	0.0
	baz=281					
VWUC			*e*S	Sn	21 24 58.2	-2.5
	baz=281					
PNG	**Penghu**	**2.66 251**	*e*P	Pn	21 24 29.7	-0.1
	baz=251					
PNG			*e*S	Sn	21 24 59.8	-1.3
	baz=251					
PHUB	**P'eng-hu**	**2.67 250**	*e*P	Pn	21 24 29.8	-0.1
	baz=250					
PHUB			*e*S	Sn	21 24 59.3	-1.9
	baz=250					
WDGT	**Dungji**	**2.70 244**	*e*P	Pn	21 24 31.1	+0.8
	baz=244					
WDGT			*e*S	Sn	21 25 00.7	-1.1
	baz=244					
MATB	**Ma-tsu**	**2.72 309**	*e*P	Pn	21 24 30.8	+0.2
	baz=299					
MATB			*e*S	Sn	21 25 01.0	-1.4
	baz=299					
KNMB	**Chin-men Tao**	**3.57 271**	*e*P	Pn	21 24 41.7	-0.4
	baz=270					

DJA 09 21:28:52.6±1.1, 1°S±8°×13°3E±°, h25km±15km, M4.3/7, mb4.7/3, MLv4.1/7, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**1.12**	**130**	P	Pn	21 29 12.8	0.0
RKPI				S	Sb	21 29 28.0	+0.4
FAKI	**Fak Fak**	**2.37**	**207**	P	Pn	21 29 29.4	-0.5
FAKI				S	Sn	21 29 58.3	+0.2
AAI	**Ambon**	**5.87**	**241**	P	Pn	21 30 18.7	+0.7
	67nm,0.6s,0.3nm						

IDC ***09*** *21:34:09.8±1.4, 24°.47N×122°.29E, h0km, mb3.6/3, mb1 3.7/4, mb1mx3.4/63, mbtmp3.7/4, ML2.9/1, Error ellipse: s-maj=36.0km s-min=25.2km az=83.0*

ISCJB ***09*** *21:34:17.8±0.2, 24°.46N±0°.02×122°.32E±0°.01, h69km±3km, mb3.5/3, Error ellipse: s-maj=3.0km s-min=2.0km az=163.3*

JMA ***09*** *21:34:17.9±0.1, 24°.42N×122°.29E, h69km±2km, M3.3*

TAP ***09*** *21:34:18.5, 24°.46N×122°.27E, h69km, ML4.0, B*

ISC 09 21:34:18.2±0.9, 24°.45N±0°.03×122°.31E±0°.02, h65km±5km, n113, σ1.9 03/198, mb3.5/3, 9C-24D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.20**	**301**	⇑P	**Pn**	**21 34 29.1**	**+0.8**
	baz=306						
EOS1				*e*S	**Sn**	**21 34 37.0**	**+1.5**
	baz=306						
TWC	**Suao**	**0.45**	**291**	⇓P	**Pn**	**21 34 30.3**	**+0.2**
	baz=296						
TWC				S	**Sn**	**21 34 38.7**	**-0.2**
	baz=296						
ENAH	**Nanao**	**0.46**	**270**	*e*P	**Pn**	**21 34 30.3**	**+0.1**
	baz=266						
ENAH				*e*S	**Sn**	**21 34 39.4**	**+0.5**
	baz=266						
NANB	**Nanao**	**0.51**	**268**	⇑P	**Pn**	**21 34 31.1**	**+0.3**
	baz=267						
NANB				*e*S	**Sn**	**21 34 40.4**	**+0.5**
	baz=267						
ENA	**Nanau**	**0.52**	**268**	P	**Pn**	**21 34 31.1**	**+0.2**
	baz=266						
ENA				*e*S	**Sn**	**21 34 40.5**	**+0.5**
	baz=266						
EGS		**0.53**	**319**	⇓*e*P	**Pn**	**21 34 31.0**	**+0.1**
	baz=322						
EGS				*e*S	**Sn**	**21 34 39.9**	**-0.3**
	baz=322						
JYNG	**Yonagunijimaku**	**0.58**	**90**	P	**Pn**	**21 34 31.9**	**+0.5**
JYNG				S	**Sn**	**21 34 41.3**	**+0.2**
NTC	**Toucheng**	**0.60**	**313**	*e*P	**Pn**	**21 34 31.8**	**+0.2**
	baz=319						
NTC				*e*S	**Sn**	**21 34 41.9**	**+0.4**
	baz=319						
ILA	**Ilan**	**0.60**	**302**	P	**Pn**	**21 34 32.2**	**+0.5**
	baz=308						
ILA				S	**Sn**	**21 34 42.5**	**+0.9**
	baz=308						
YOJ	**Yonaguni jima**	**0.64**	**89**	⇓P	**Pn**	**21 34 32.5**	**+0.4**
	baz=89						
YOJ				*e*S	**Sn**	**21 34 41.9**	**-0.3**
	baz=89						
YOJ	**Yonaguni jima**	**0.64**	**89**	P	**Pn**	**21 34 32.5**	**+0.4**
YOJ				S	**Sn**	**21 34 42.6**	**+0.3**
TWE	**Neicheng**	**0.65**	**295**	⇓*i*P	**Pn**	**21 34 32.6**	**+0.4**
	baz=298						
TWE				*e*S	**Sn**	**21 34 42.5**	**0.0**
	baz=298						
TIPB	**Shuangxi**	**0.68**	**320**	⇓*e*P	**Pn**	**21 34 31.7**	**-1.0**
	baz=324						
TIPB				*e*S	**Sn**	**21 34 41.0**	**-2.3**
	baz=324						
ENTT	**Nioudou**	**0.70**	**286**	⇓*i*P	**Pn**	**21 34 33.8**	**+0.9**
	baz=290						
ENTT				S	**Sn**	**21 34 44.6**	**+0.9**
	baz=290						
NACB	**Ninganchiao**	**0.71**	**247**	⇑P	**Pn**	**21 34 32.8**	**-0.1**
	baz=239						
NACB				*e*S	**Sn**	**21 34 43.4**	**-0.3**
	baz=239						
TWD	**Chiawan**	**0.75**	**241**	⇑*i*P	**Pn**	**21 34 33.4**	**0.0**
	baz=233						
TWD				*e*S	**Sn**	**21 34 44.3**	**-0.2**
	baz=233						
NWF	**Wu-fen Shan**	**0.79**	**322**	⇓*i*P	**Pn**	**21 34 34.1**	**+0.2**
	baz=324						
NWF				S	**Sn**	**21 34 45.1**	**-0.4**
	baz=324						
WFSB	**Wu-fen Shan**	**0.79**	**322**	⇓P	**Pn**	**21 34 34.1**	**+0.3**
	baz=324						
WFSB				S	**Sn**	**21 34 45.0**	**-0.4**
	baz=324						
HWA	**Hwalien**	**0.80**	**234**	*e*P	**Pn**	**21 34 34.3**	**+0.4**
	baz=224						
HWA				*e*S	**Sn**	**21 34 45.8**	**+0.2**
	baz=224						
NWLT	**Wulai**	**0.81**	**294**	*e*P	**Pn**	**21 34 34.6**	**+0.5**
	baz=298						
NWLT				*e*S	**Sn**	**21 34 46.2**	**+0.4**
	baz=298						
ENLB	**Shoufeng**	**0.84**	**230**	⇑*i*P	**Pn**	**21 34 34.9**	**+0.3**
	baz=223						
ENLB				*e*S	**Sn**	**21 34 47.1**	**+0.5**
	baz=223						
NNSB	**Datong**	**0.85**	**269**	⇓P	**Pn**	**21 34 35.0**	**+0.3**
	baz=261						
NNSB				*e*S	**Sn**	**21 34 46.8**	**-0.1**
	baz=261						
NNSH	**Datong**	**0.85**	**269**	*e*P	**Pn**	**21 34 35.0**	**+0.3**
	baz=261						
NNSH				*e*S	**Sn**	**21 34 46.9**	**0.0**
	baz=261						
NNS	**Nan Shan**	**0.85**	**270**	*e*P	**Pn**	**21 34 35.1**	**+0.3**
	baz=262						
NNS				*e*S	**Sn**	**21 34 47.3**	**+0.2**
	baz=262						
YHNB	**Yeheng**	**0.88**	**285**	⇓P	**Pn**	**21 34 35.8**	**+0.7**
	baz=284						
YHNB				*e*S	**Sn**	**21 34 48.0**	**+0.5**
	baz=284						
NSK	**Sanguang**	**0.90**	**285**	⇓*i*P	**Pn**	**21 34 35.9**	**+0.6**
	baz=277						
NSK				*e*S	**Sn**	**21 34 47.9**	**0.0**
	baz=277						
TATO	**Taipei**	**0.92**	**305**	*e*P	**Pn**	**21 34 35.4**	**0.0**
	baz=315						
TATO				*e*S	**Sn**	**21 34 48.6**	**+0.4**
	baz=315						
YM07	**YM07**	**0.96**	**319**	⇓P	**Pn**	**21 34 35.0**	**-1.1**
	baz=320						
YM07				S	**Sn**	**21 34 47.4**	**-1.9**
	baz=320						
YM10	**YM10**	**0.98**	**316**	⇓*e*P	**Pn**	**21 34 36.4**	**0.0**
	baz=317						
YM10				*e*S	**Sn**	**21 34 49.1**	**-0.7**
	baz=317						
YM11	**YM11**	**0.98**	**317**	*e*P	**Pn**	**21 34 37.1**	**+0.8**
	baz=318						
YM11				*e*S	**Sn**	**21 34 49.7**	**-0.1**
	baz=318						
YM08	**YM08**	**0.99**	**318**	*e*P	**Pn**	**21 34 36.0**	**-0.4**
	baz=319						
YM08				*e*S	**Sn**	**21 34 48.4**	**-1.4**
	baz=319						
YM12	**YM12**	**0.99**	**317**	⇓P	**Pn**	**21 34 36.2**	**-0.2**
	baz=318						
YM12				*e*S	**Sn**	**21 34 48.7**	**-1.3**
	baz=318						
YM04	**YM04**	**0.99**	**315**	*e*P	**Pn**	**21 34 36.5**	**0.0**
	baz=316						
YM04				*e*S	**Sn**	**21 34 49.1**	**-0.9**
	baz=316						
YM03	**YM03**	**1.01**	**316**	⇓P	**Pn**	**21 34 36.5**	**-0.3**
	baz=317						
YM03				*e*S	**Sn**	**21 34 49.4**	**-1.0**
	baz=317						
ESL	**Shilin**	**1.02**	**232**	⇑*i*P	**Pn**	**21 34 36.5**	**-0.3**
	baz=223						
ESL				*e*S	**Sn**	**21 34 49.9**	**-0.6**
	baz=223						
TWS1	**Kuangyinshan**	**1.04**	**309**	⇓*i*P	**Pn**	**21 34 37.4**	**+0.4**
	baz=317						
TWS1				*e*S	**Sn**	**21 34 51.1**	**+0.2**
	baz=317						
TWY	**Chenhua**	**1.05**	**322**	*e*P	**Pn**	**21 34 37.5**	**+0.3**
	baz=323						
TWY				*e*S	**Sn**	**21 34 51.2**	**+0.1**
	baz=323						
NTST	**Danshui**	**1.06**	**312**	*e*P	**Pn**	**21 34 37.5**	**+0.2**
	baz=320						
NTST				*e*S	**Sn**	**21 34 51.5**	**+0.1**
	baz=320						
TDCB	**Techi**	**1.07**	**260**	⇓P	**Pn**	**21 34 38.4**	**+0.9**
	baz=256						
TDCB				*e*S	**Sn**	**21 34 52.0**	**+0.1**
	baz=256						
CHGB	**Renai**	**1.11**	**250**	*e*P	**Pn**	**21 34 38.7**	**+0.6**
	baz=241						
CHGB				*e*S	**Sn**	**21 34 51.9**	**-1.0**
	baz=241						
EGFH	**Guangfu**	**1.12**	**226**	*e*P	**Pn**	**21 34 38.0**	**0.0**
	baz=219						
NCU	**National Centr**	**1.15**	**297**	⇓P	**Pn**	**21 34 39.3**	**+0.9**
	baz=297						
NCU				*e*S	**Sn**	**21 34 54.2**	**+0.8**
	baz=297						
NCUH	**Zhongli**	**1.15**	**297**	⇓*i*P	**Pn**	**21 34 39.3**	**+0.9**
	baz=297						
NCUH				*e*S	**Sn**	**21 34 54.3**	**+0.9**
	baz=297						
LIOB	**Emei**	**1.20**	**280**	⇓*i*P	**Pn**	**21 34 40.0**	**+1.0**
	baz=279						
LIOB				*e*S	**Sn**	**21 34 55.6**	**+0.9**
	baz=279						
NSTT	**Nanjuang**	**1.21**	**279**	*e*P	**Pn**	**21 34 40.0**	**+0.8**
	baz=278						
NSTT				*e*S	**Sn**	**21 34 55.6**	**+0.7**
	baz=278						
HGSD	**Ruisui**	**1.25**	**221**	⇑P	**Pn**	**21 34 39.6**	**-0.2**
	baz=219						
HGSD				*e*S	**Sn**	**21 34 55.0**	**-0.9**
	baz=219						
SBCB	**Hsinchu**	**1.25**	**286**	*e*P	**Pn**	**21 34 40.5**	**+0.7**
	baz=286						
HSN	**Hsinchu**	**1.27**	**286**	*e*P	**Pn**	**21 34 40.1**	**+0.1**
	baz=288						
HSN				*e*S	**Sn**	**21 34 57.3**	**+1.0**
	baz=288						
VWDT	**VWDT**	**1.27**	**237**	⇓P	**Pn**	**21 34 40.7**	**+0.7**
	baz=229						
VWDT				S	**Sn**	**21 34 56.4**	**0.0**
	baz=229						
IRIF	**Iriomote-Funau**	**1.30**	**95**	P	**Pn**	**21 34 40.5**	**+0.1**
IRIF				S	**Sn**	**21 34 57.0**	**0.0**
EHY	**Hungye**	**1.30**	**224**	*e*P	**Pn**	**21 34 40.0**	**-0.5**
	baz=231						
NMLH	**Miaoli**	**1.39**	**274**	*e*P	**Pn**	**21 34 42.9**	**+1.3**
	baz=273						
NMLH				*e*S	**Sn**	**21 34 59.8**	**+0.7**
	baz=273						
YULB	**Yu-li**	**1.40**	**222**	⇑P	**Pn**	**21 34 41.3**	**-0.5**
	baz=229						
SSLB	**Suanglung**	**1.40**	**242**	*e*P	**Pn**	**21 34 42.7**	**+0.8**
	baz=235						
TWQ1	**Liyutan**	**1.41**	**266**	*e*P	**Pn**	**21 34 42.8**	**+1.0**
	baz=265						
TWQ1				*e*S	**Sn**	**21 35 01.5**	**+1.9**
	baz=265						
SMLT	**Sun Moon Lake**	**1.41**	**247**	*e*P	**Pn**	**21 34 42.9**	**+0.9**
	baz=240						
SMLT				*e*S	**Sn**	**21 34 59.8**	**+0.1**
	baz=240						
NSY	**Sanyi**	**1.41**	**269**	⇓P	**Pn**	**21 34 43.1**	**+1.2**
	baz=268						
NSY				*e*S	**Sn**	**21 35 00.9**	**+1.2**
	baz=268						
HATJ	**Hateruma jima**	**1.42**	**106**	P	**Pn**	**21 34 43.0**	**+1.0**
TWF1	**Yuli**	**1.43**	**221**	⇑*i*P	**Pn**	**21 34 41.8**	**-0.4**
	baz=227						
TWF1				*e*S	**Sn**	**21 34 58.7**	**-1.5**
	baz=227						
TYC	**Yuchr**	**1.44**	**248**	*e*P	**Pn**	**21 34 43.3**	**+1.1**
	baz=241						
TYC				*e*S	**Sn**	**21 35 01.4**	**+1.2**
	baz=241						
TCU	**Taichung**	**1.52**	**259**	*e*P	**Pn**	**21 34 44.3**	**+0.9**
	baz=258						
FULB	**Fuli**	**1.55**	**217**	*e*P	**Pn**	**21 34 43.5**	**-0.3**
	baz=207						
FULB				*e*S	**Sn**	**21 35 02.2**	**-1.0**
	baz=207						
JKRS	**Kuro-shima**	**1.56**	**97**	P	**Pn**	**21 34 44.6**	**+0.7**
JKRS				S	**Sn**	**21 35 04.2**	**+0.9**
WJS	**Zhushan**	**1.57**	**247**	*e*P	**Pn**	**21 34 46.2**	**+2.1**
	baz=238						
WJS				*e*S	**Sn**	**21 35 06.0**	**+2.4**
	baz=238						
CHKT	**Chengkung**	**1.60**	**213**	⇓*e*P	**Pn**	**21 34 43.6**	**-0.8**
	baz=204						
CHKT				*e*S	**Sn**	**21 35 01.8**	**-2.3**
	baz=204						
WCHH	**Zhanghua**	**1.64**	**257**	*e*P	**Pn**	**21 34 45.9**	**+1.0**
	baz=268						
WCHH				*e*S	**Sn**	**21 35 06.4**	**+1.3**
	baz=268						
ALS	**Alishan**	**1.66**	**236**	*e*P	**Pn**	**21 34 46.8**	**+1.2**
	baz=228						
JIJ	**Ishigaki jima**	**1.67**	**93**	P	**Pn**	**21 34 45.3**	**-0.1**
JIJ				S	**Sn**	**21 35 05.6**	**-0.3**
ELDTW	**Lidau**	**1.73**	**224**	*e*P	**Pn**	**21 34 45.9**	**-0.3**
	baz=218						
ELDTW				*e*S	**Sn**	**21 35 05.9**	**-1.5**
	baz=218						
WGK	**Gukeng**	**1.77**	**245**	*e*P	**Pn**	**21 34 48.4**	**+1.7**
	baz=244						
WGK				*e*S	**Sn**	**21 35 10.6**	**+2.3**
	baz=244						
WDLH	**Douliu**	**1.79**	**245**	*e*P	**Pn**	**21 34 48.6**	**+1.7**
	baz=257						
WDLH				*e*S	**Sn**	**21 35 10.9**	**+2.2**
	baz=257						
JISG	**Ishigakijimahi**	**1.83**	**85**	P	**Pn**	**21 34 47.5**	**+0.1**
JISG				*e*S	**Sn**	**21 35 10.2**	**+0.6**
RLNB	**Erlin**	**1.87**	**253**	*e*P	**Pn**	**21 34 48.9**	**+0.9**
	baz=264						
RLNB				*e*S	**Sn**	**21 35 12.3**	**+1.7**
	baz=264						
TWH	**Lutao**	**1.89**	**204**	*e*P	**Pn**	**21 34 47.8**	**-0.5**
	baz=202						
TWH				*e*S	**Sn**	**21 35 09.4**	**-1.8**
	baz=202						
CHN2	**Minshiung**	**1.91**	**242**	*e*P	**Pn**	**21 34 50.8**	**+2.2**
	baz=254						
CHN2				*e*S	**Sn**	**21 35 15.0**	**+3.4**
	baz=254						
STYT	**Tauyuan**	**1.91**	**228**	*e*P	**Pn**	**21 34 49.9**	**+1.2**
	baz=221						
STYT				*e*S	**Sn**	**21 35 13.0**	**+1.2**
	baz=221						
TPUB	**Ta-pu**	**1.92**	**234**	*e*P	**Pn**	**21 34 49.0**	**+0.3**
	baz=224						
TPUB				*e*S	**Sn**	**21 35 13.2**	**+1.3**
	baz=224						
WTCT	**Ta-ch'eng**	**1.94**	**253**	*e*P	**Pn**	**21 34 49.2**	**+0.1**
	baz=263						
WTCT				*e*S	**Sn**	**21 35 13.8**	**+1.4**
	baz=263						
WTP	**Ta-pu**	**1.96**	**233**	*e*P	**Pn**	**21 34 50.8**	**+1.5**
	baz=231						
CHY	**Chiayi**	**1.97**	**242**	*e*P	**Pn**	**21 34 50.5**	**+1.1**
	baz=254						
TWGBT	**Beinan**	**1.98**	**215**	*e*P	**Pn**	**21 34 48.6**	**-1.0**
	baz=213						
TWGBT				*e*S	**Sn**	**21 35 10.0**	**-3.3**
	baz=213						
TWG	**Pinlang**	**1.98**	**215**	*e*P	**Pn**	**21 34 48.9**	**-0.6**
	baz=213						
TWG				*e*S	**Sn**	**21 35 11.0**	**-2.3**
	baz=213						
TTN	**Taitung**	**2.00**	**213**	*e*P	**Pn**	**21 34 50.0**	**+0.3**
	baz=218						
TWK	**Hsinying**	**2.04**	**235**	*e*P	**Pn**	**21 34 51.9**	**+1.5**
	baz=234						
TWK				*e*S	**Sn**	**21 35 16.6**	**+1.6**
	baz=234						
CHN1	**Nanshi**	**2.06**	**233**	*e*P	**Pn**	**21 34 51.5**	**+0.8**
	baz=232						
WSF	**Szhu**	**2.07**	**248**	*e*P	**Pn**	**21 34 51.5**	**+0.7**
	baz=257						
WSF				*e*S	**Sn**	**21 35 17.2**	**+1.6**
	baz=257						
WLGB	**Puzi**	**2.08**	**243**	*e*P	**Pn**	**21 34 50.8**	**0.0**
	baz=242						
SGST	**Jiashian**	**2.09**	**230**	*e*P	**Pn**	**21 34 52.7**	**+1.7**
	baz=228						
SLGT	**Liugui**	**2.10**	**227**	*e*P	**Pn**	**21 34 52.8**	**+1.5**
	baz=226						
JTJ	**Tarama**	**2.19**	**84**	P	**Pn**	**21 34 53.1**	**+0.8**
JTJ				*e*S	**Sn**	**21 35 19.1**	**+0.8**
CHN8	**Yiju**	**2.21**	**241**	*e*P	**Pn**	**21 34 53.8**	**+1.1**
	baz=240						
CHN8				*e*S	**Sn**	**21 35 21.1**	**+2.1**
	baz=240						
ECL	**Taimali**	**2.22**	**214**	*e*P	**Pn**	**21 34 52.3**	**-0.5**
	baz=213						
SSD	**Sandimen**	**2.29**	**223**	*e*P	**Pn**	**21 34 55.2**	**+1.4**
	baz=211						
SSD				*e*S	**Sn**	**21 35 22.7**	**+1.8**
	baz=211						
SCLT	**Jiali**	**2.32**	**237**	*e*P	**Pn**	**21 34 55.1**	**+1.0**
	baz=236						
SCLT				*e*S	**Sn**	**21 35 23.4**	**+1.9**
	baz=236						
MASBT	**Mashibuluo**	**2.39**	**220**	*e*P	**Pn**	**21 34 55.5**	**+0.4**
	baz=219						
MASBT				*e*S	**Sn**	**21 35 25.0**	**+1.7**
	baz=219						
EAST	**Anshuo**	**2.46**	**213**	*e*P	**Pn**	**21 34 55.7**	**-0.4**
	baz=206						
JIRB	**Irabujima**	**2.63**	**81**	P	**Pn**	**21 34 59.2**	**+0.8**
JIRB				*e*S	**Sn**	**21 35 29.7**	**+0.5**
VWUC	**VWUC**	**2.66**	**282**	⇓*e*P	**Pn**	**21 34 58.5**	**-0.3**
	baz=281						
VWUC				*e*S	**Sn**	**21 35 27.3**	**-2.5**
	baz=281						
PNG	**Penghu**	**2.67**	**251**	*e*P	**Pn**	**21 34 58.0**	**-0.8**
	baz=250						
PHUB	**P'eng-hu**	**2.67**	**250**	*e*P	**Pn**	**21 34 58.0**	**-1.0**
	baz=250						

PHUB				*e*S		**Sn**	**21 35 28.8 -1.4**
	baz=250						
JIKM	**Ikemajima**	**2.71 79**		P		**Pn**	**21 34 59.7 +0.2**
JIKM				*e*S		**Sn**	**21 35 32.2 +1.0**
MATB	**Ma-tsu**	**2.73 309**		*e*P		**Pn**	**21 34 59.4 -0.3**
	baz=308						
JMJ	**Miyako jima 2**	**2.74 82**		P		**Pn**	**21 35 01.6 +1.8**
JMJ				*e*S		**Sn**	**21 35 32.1 +0.3**
JOGS	**Gusukube**	**2.83 83**		P		**Pn**	**21 35 02.4 +1.3**
TWKBT	**Hengchun**	**2.85 209**		*e*P		**Pn**	**21 35 00.9 -0.5**
	baz=208						
VCHM	**Qimei**	**2.91 246**		*e*P		**Pn**	**21 35 01.3 -0.9**
	baz=245						
VCHM				*e*S		**Sn**	**21 35 35.4 -0.7**
	baz=245						
KNM	**Kinmen**	**3.54 270**		*e*P		**Pn**	**21 35 11.8 +1.1**
	baz=270						
KNMB	**Chin-men Tao**	**3.58 271**		*e*P		**Pn**	**21 35 10.5 -0.7**
	baz=270						
JOW	**Kunigami**	**5.88 65**		Pn		Pn	21 35 38.0 -4.8
	0.8nm,0.3s,baz=307,slow=20,SNR=3.2						
JOW				Sn		**Sn**	**21 36 49.2 +0.3**
	1.1nm,0.3s,baz=288,slow=20,SNR=3.9						
JOW	**Kunigami**	**5.88 65**		*e*P		**Pn**	**21 35 42.5 -0.3**
	baz=67						
SONM	**Songino Array**	**26.54 336**		P		**P**	**21 39 49.0 -0.9**
	1.0nm,0.6s,baz=149,slow=8.1,SNR=3.3						
WRA	**Warramunga Arr**	**45.65 164**		P		**P**	**21 42 31.9 -0.6**
	0.6nm,0.5s,baz=347,slow=8.7,SNR=6.2						
ASAR	**Alice Springs**	**49.13 166**		P		**P**	**21 42 59.9 +0.3**
	0.3nm,0.6s,baz=354,slow=7.6,SNR=3.7						

*IDC **09** 21:36:53.9±1.0, 43.°50N×82.°11E, h0km, mb3.8/6, mb1 3.7/13, mb1mx3.5/69, mbtmp3.6/13, ML2.9/6, MS3.5/2, Ms1 3.5/2, ms1mx3.0/70, Error ellipse: s-maj=16.3km s-min=11.9km az=87.0*
*SOME **09** 21:36:57.2, 43.°57N×82.°15E, h0km*
*BJI **09** 21:36:59.1, 43.°62N×82.°37E, h7km, ML3.5/8*
*NNC **09** 21:37:00.0±1.6, 43.°75N×82.°06E, h0km, mb4.1, mpv3.8, Error ellipse: s-maj=17.1km s-min=5.7km az=130.0*
ISC 09 21:36:56.0±1.4, 43.°68N±0.°04×82.°18E±0.°04, h8km±9km, n49, σ1°89/79, mb3.7/6, 13C-15D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.35 261**		*e*P	**Pb**	**21 37 24.8**	**+3.2**
	62nm,0.3s						
KTMS				*e*S	**Sn**	**21 37 44.1**	**+4.7**
	517nm,0.3s						
DJR	**Jarkent**	**1.84 292**		*e*P	**Pg**	**21 37 32.2**	**+1.0**
	365nm,0.3s						
DJR				*e*S	**Sg**	**21 37 57.8**	**+2.7**
	1μm,0.3s						
PDGK	**Podgornoye**	**1.99 261**		⇓Pn	**Pg**	**21 37 33.7**	**-0.4**
	93nm,0.7s						
PDGK				⇓Lg	Lg	21 38 01.7	
	355nm,0.4s						
SHLS	**Shalkode**	**2.05 256**		⇓*i*P	**Pn**	**21 37 31.6**	**+0.8**
	364nm,0.3s						
SHLS				⇑*i*S	**Sn**	**21 37 56.3**	**-0.4**
	5μm,0.5s						
UZB	**Uzynbulak**	**2.36 258**		*e*P	**Pg**	**21 37 40.4**	**-0.7**
	30nm,0.2s						
UZB				*e*S	**Sg**	**21 38 12.2**	**+0.4**
	258nm,0.6s						
KPKS	**Kokpek**	**2.55 266**		*e*P	**Pb**	**21 37 42.9**	**+0.8**
	33nm,0.1s						
KPKS				*e*S	**Sg**	**21 38 15.5**	**-2.3**
	438nm,0.5s						
KAPS	**Kapalarasan**	**2.58 309**		*e*P	**Pb**	**21 37 43.4**	**+0.8**
	37nm,0.6s						
KAPS				*e*S	**Sg**	**21 38 16.8**	**-2.0**
	254nm,0.7s						
MNBS	**Baschi**	**2.76 280**		*e*P	**Pg**	**21 37 46.9**	**-1.9**
	13nm,0.1s						
MNBS				*e*S	**Sg**	**21 38 23.3**	**-1.3**
	186nm,0.4s						
ZHN	**Zhinishke**	**2.77 261**		⇑*i*P	**Pg**	**21 37 48.1**	**-1.0**
	21nm,0.2s						
ZHN				⇓*i*S	**Sg**	**21 38 24.1**	**-1.0**
	468nm,0.2s						
SATY	**Saty**	**2.82 259**		*e*P	**Pg**	**21 37 48.3**	**-1.6**
	68nm,0.3s						
SATY				⇓*i*S	**Sg**	**21 38 25.1**	**-1.4**
	320nm,0.2s						
KURS	**Kuram**	**2.92 268**		*e*P	**Pg**	**21 37 51.3**	**-0.6**
	14nm,0.8s						
KURS				*e*S	**Sg**	**21 38 30.2**	**+0.5**
	73nm,0.5s						
TDK	**Taldyqorghan**	**3.01 297**		*e*P	**Pg**	**21 37 54.1**	**+0.4**
	48nm,0.4s						
TDK				*e*S	**Sg**	**21 38 35.2**	**+2.5**
	431nm,0.8s						
MKAR	**Makanchi Array**	**3.12 1**		Pn	**Pn**	**21 37 48.0**	**+2.5**
	1.4nm,0.3s,baz=192,slow=14,SNR=54						
MKAR				Pg	**Pg**	**21 37 54.5**	**-1.1**
	8.5nm,0.3s,baz=180,slow=16,SNR=75						
MKAR				Sn	**Sb**	**21 38 26.9**	**-3.0**
	15nm,0.3s,baz=185,slow=24,SNR=9.3						
MKAR				Lg	Lg	21 38 38.7	
	15nm,0.3s,baz=245,slow=30,SNR=7.2						
MKAR				LR	LR	21 38 42.4	
	comp=Z,198nm,20.0s,baz=54,slow=33						
MK31	**Makanchi Array**	**3.12 1**		⇑Pn	**Pn**	**21 37 48.5**	**+3.0**
	1.7nm,0.3s,baz=187,slow=13,SNR=737						
MK31				⇑Pg	**Pg**	**21 37 56.3**	**+0.7**
	14nm,0.5s,baz=185,slow=14,SNR=46						
MK31				⇓Lg	Lg	21 38 38.0	
	331nm,0.7s,baz=194,slow=28,SNR=5.8						
MAKZ	**Makanchi**	**3.13 357**		⇑Pn	**Pb**	**21 37 49.2**	**-2.7**
	6.4nm,0.5s						
MAKZ				⇑Pg	**Pg**	**21 37 58.5**	**+2.5**
	90nm,0.9s						
MAKZ				⇑Lg	Lg	21 38 39.2	
	54nm,0.6s						
ARXS	**Arharly**	**3.19 281**		*e*P	**Pg**	**21 37 56.1**	**-0.9**
	11nm,0.3s						
ARXS				*e*S	**Sg**	**21 38 38.2**	**-0.1**
	283nm,0.5s						
KOTS	**Kotyrbulak**	**3.71 265**		*e*P	**Pg**	**21 38 05.5**	**-1.6**
	27nm,0.4s						
KOTS				*e*S	**Sg**	**21 38 54.8**	**-0.5**
	84nm,0.5s						
CHKK	**Chushkaly**	**3.76 274**		*e*P	**Pg**	**21 38 06.6**	**-1.4**
	22nm,0.4s						
CHKK				*e*S	**Sg**	**21 38 56.4**	**-0.4**
	129nm,0.2s						
MDOK	**Medeo**	**3.77 264**		⇓Pn	**Pn**	**21 37 58.2**	**+3.6**
	12nm,0.5s						
MDOK				Pg	**Pg**	**21 38 07.2**	**-1.0**
	12nm,0.4s						
MDOK				⇓Lg	Lg	21 38 59.8	
	102nm,0.6s						
MDOK	**Medeo**	**3.77 264**		*e*P	**Pg**	**21 38 07.2**	**-1.0**
	14nm,0.5s						
MDOK				*e*S	**Sg**	**21 38 57.5**	**+0.4**
	109nm,0.7s						
KNDC	**Almaty**	**3.82 265**		⇓Pg	**Pg**	**21 38 08.6**	**-0.5**
	31nm,0.5s						
KNDC				⇓Lg	Lg	21 39 00.9	
	110nm,0.6s						
TNSS	**Tian-Shan**	**3.87 262**		*e*P	**Pg**	**21 38 09.8**	**-0.2**
	14nm,0.8s						
TNSS				*e*S	**Sg**	**21 39 02.1**	**+1.9**
	136nm,0.7s						
KTBS	**Karatobe**	**3.99 272**		*e*P	**Pg**	**21 38 10.4**	**-1.9**
	11nm,0.7s						
KTBS				*e*S	**Sg**	**21 39 03.4**	**-0.5**
	161nm,0.7s						
WMQ	**Urumqi**	**4.00 86**		Pn	**Pn**	**21 38 00.2**	**+2.5**
WMQ				Sn	**Sn**	**21 38 47.0**	**+2.2**
WMQ				smax	smax		
	comp=N,170nm,1.1s						
WMQ				smax	smax		
	comp=E,140nm,0.7s						
IZV	**Izvestkoviy**	**4.11 263**		*e*P	**Pg**	**21 38 13.0**	**-1.7**
	29nm,0.7s						
IZV				*e*S	**Sg**	**21 39 07.5**	**-0.3**
	127nm,0.5s						
ZSN	**Zaisan**	**4.22 26**		*e*P	**Pg**	**21 38 15.6**	**-1.1**
	10.0nm,0.8s						
ZSN				*e*S	**Sg**	**21 39 11.7**	**+0.3**
	103nm,0.8s						
MTBS	**Maitube**	**4.22 265**		*e*P	**Pg**	**21 38 15.7**	**-1.2**
	11nm,0.4s						
MTBS				*e*S	**Sg**	**21 39 12.0**	**+0.4**
	60nm,0.7s						
KUU	**Kurty**	**4.23 275**		*e*P	**Pg**	**21 38 13.7**	**-3.4**
	9.1nm,0.9s						
KUU				*e*S	**Sg**	**21 39 09.3**	**-2.5**
	73nm,0.3s						
KST	**Kastek**	**4.58 264**		*e*P	**Pg**	**21 38 22.1**	**-1.5**
	26nm,0.8s						
KST				*e*S	**Sg**	**21 39 23.1**	**+0.2**
	39nm,0.6s						
DGS	**Degeres**	**4.68 267**		*e*P	**Pb**	**21 38 21.5**	**+3.1**
	7.1nm,0.8s						
DGS				*e*S	**Sg**	**21 39 22.2**	**-4.2**
	86nm,0.6s						
TKM2	**Tokmak 2**	**4.86 263**		⇓Pn	Pn	21 38 15.1	+5.4
	9.2nm,0.8s						
TKM2				⇑Lg	Lg	21 39 30.9	
	25nm,0.5s						
AAK	**Ala-Archa**	**5.72 262**		Pn	**Pn**	**21 38 20.6**	**-0.7**
	0.3nm,0.3s,baz=71,slow=8.2,SNR=1.9						
AAK				Lg	Lg	21 39 51.8	
	1.1nm,0.3s,baz=320,slow=23,SNR=4.1						
AAK	**Ala-Archa**	**5.72 262**		⇑Pg	**Pg**	**21 38 44.8**	**-0.6**
	5.4nm,0.6s						
AAK				Lg	Lg	21 39 59.5	
	58nm,1.0s						
MNAS	**Manas**	**7.18 264**		⇓Lg	Lg	21 40 43.8	
	10.0nm,0.7s						
KURBB	**Kurchatov Arra**	**7.38 342**		Pn	**Pn**	**21 38 45.9**	**+2.0**
	0.3nm,0.3s,baz=164,slow=13,SNR=25						
KURBB				Sn	**Sn**	**21 40 07.2**	**-0.6**
	0.4nm,0.3s,baz=155,slow=23,SNR=9.3						
KURBB				Lg	Lg	21 40 52.4	
	0.6nm,0.3s,baz=217,slow=28,SNR=5.0						
KURBB	**Kurchatov Arra**	**7.38 342**		⇓Pn	**Pn**	**21 38 45.6**	**+1.7**
	8.8nm,0.8s						
KURBB				⇓Sn	**Sn**	**21 40 10.2**	**+2.4**
	35nm,0.7s						
KURBB				⇑Lg	Lg	21 40 49.5	
	63nm,0.6s						
KURK	**Kurchatov**	**7.44 342**		⇑Pn	**Pn**	**21 38 47.0**	**+2.1**
	4.9nm,0.8s						
KURK				⇑Sn	**Sn**	**21 40 12.6**	**+3.2**
	19nm,0.8s						
KURK				⇓Lg	Lg	21 40 52.0	
	38nm,0.8s						
KK31	**Karatay Array**	**8.52 270**		⇑Lg	Lg	21 41 27.1	
	6.4nm,0.6s						
ZALV	**Zalesovo Beam**	**10.42 9**		Pn	**Pn**	**21 39 27.2**	**+1.6**
	0.2nm,0.3s,baz=188,slow=13,SNR=2.8						
ZALV				Sn	**Sn**	**21 41 18.1**	**-4.5**
	0.6nm,0.3s,baz=195,slow=23,SNR=5.1						
ZALV				Lg	Lg	21 42 29.7	
	0.3nm,0.3s,baz=196,slow=26,SNR=6.3						
BVAR	**Borovoye Array**	**12.19 324**		Pn	**Pn**	**21 39 49.6**	**-0.2**
	baz=143,slow=14,SNR=3.7						
BVAR				Sn	**Sn**	**21 42 03.3**	**-2.5**
	0.1nm,0.3s,baz=131,slow=18,SNR=3.0						
BVAR				Lg	Lg	21 43 23.1	
	0.1nm,0.3s,baz=137,slow=28,SNR=3.2						
SONM	**Songino Array**	**17.38 68**		P	**Pn**	**21 40 58.5**	**-0.4**
	0.2nm,0.3s,baz=277,slow=13,SNR=2.8						
ARU	**Arti**	**19.69 319**		P	**P**	**21 41 25.9**	**+0.5**
	0.0nm,0.3s,baz=106,slow=14,SNR=3.0						
FINES	**FINESS Array B**	**37.06 319**		P	**P**	**21 44 06.5**	**+0.4**
	2.3nm,0.9s,baz=92,slow=7.7,SNR=3.0						
ARCES	**ARCESS Array B**	**38.33 332**		P	**P**	**21 44 18.3**	**+1.4**
	1.4nm,0.8s,baz=96,slow=9.2,SNR=5.8						
ASAJ	**Asahikawa**	**42.66 68**		LR	LR	22 02 28.8	
	comp=Z,202nm,19.9s,baz=340,slow=36						
ESDC	**Sonseca Array**	**61.62 299**		P	**P**	**21 47 13.9**	**-0.3**
	0.3nm,0.5s,baz=52,slow=7.0,SNR=3.3						
TORD	**Torodi Ar. Bea**	**74.19 273**		P	**P**	**21 48 32.5**	**-1.0**
	0.6nm,0.5s,baz=50,slow=5.5,SNR=7.4						
WRA	**Warramunga Arr**	**79.32 131**		P	**P**	**21 49 00.7**	**-1.6**
	0.5nm,0.8s,baz=332,slow=4.9,SNR=3.1						
ASAR	**Alice Springs**	**82.11 133**		P	**P**	**21 49 16.2**	**-0.9**
	0.6nm,1.1s,baz=346,slow=5.7,SNR=3.6						

*ISCJB **09** 21:47:15.9±0.4, 24.°45N±0.°02×122.°33E±0.°02, h70km±4km, Error ellipse: s-maj=3.5km s-min=2.6km az=179.2*
*JMA **09** 21:47:15.8±0.1, 24.°40N×122.°31E, h71km±2km, M2.3*
*TAP **09** 21:47:16.1, 24.°45N×122.°31E, h72km, ML2.9, C*
ISC 09 21:47:15.9±1.3, 24.°45N±0.°03×122.°32E±0.°02, h73km±7km, n62, σ0°81/122, 4C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.20 298**		*e*P	**Pn**	**21 47 27.2**	**+0.4**
	baz=302						
EOS1				*e*S	**Sn**	**21 47 35.4**	**+0.7**
	baz=302						
TWC	**Suao**	**0.46 290**		⇑*i*P	**Pn**	**21 47 28.5**	**-0.1**
	baz=295						
TWC				S	**Sn**	**21 47 37.2**	**-0.8**
	baz=295						
ENAH	**Nanao**	**0.47 269**		P	**Pn**	**21 47 28.9**	**+0.2**
	baz=267						
ENAH				*e*S	**Sn**	**21 47 37.9**	**-0.2**
	baz=267						
NANB	**Nanao**	**0.52 267**		P	**Pn**	**21 47 29.3**	**+0.2**
	baz=268						
NANB				S	**Sn**	**21 47 39.1**	**+0.2**
	baz=268						
EGS	**Nanao**	**0.53 318**		*e*P	**Pn**	**21 47 29.4**	**+0.1**
	baz=319						
EGS				*e*S	**Sn**	**21 47 38.5**	**-0.5**
	baz=319						
ENA	**Nanau**	**0.53 267**		P	**Pn**	**21 47 29.4**	**+0.1**
	baz=268						
ENA				S	**Sn**	**21 47 38.9**	**-0.2**
	baz=268						
JYNG	**Yonagunijimaku**	**0.57 90**		P	**Pn**	**21 47 29.7**	**+0.1**
JYNG				*e*S	**Sn**	**21 47 39.5**	**-0.2**
NTC	**Toucheng**	**0.60 312**		*e*P	**Pn**	**21 47 30.3**	**+0.3**
	baz=319						
NTC				*e*S	**Sn**	**21 47 40.6**	**+0.3**
	baz=319						
YOJ	**Yonaguni jima**	**0.63 89**		*e*P	**Pn**	**21 47 30.4**	**+0.1**
	baz=88						
YOJ				*e*S	**Sn**	**21 47 40.7**	**-0.1**
	baz=88						
YOJ	**Yonaguni jima**	**0.63 89**		P	**Pn**	**21 47 30.3**	**+0.1**
YOJ				*e*S	**Sn**	**21 47 40.4**	**-0.4**
TWE	**Neicheng**	**0.65 294**		⇑*i*P	**Pn**	**21 47 30.9**	**+0.3**
	baz=297						
TWE				S	**Sn**	**21 47 41.7**	**+0.5**
	baz=297						
TIPB	**Shuangxi**	**0.69 319**		⇑P	**Pn**	**21 47 29.8**	**-1.1**
	baz=319						
TIPB				*e*S	**Sn**	**21 47 40.5**	**-1.5**
	baz=319						
ENTT	**Nioudou**	**0.71 285**		⇑*i*P	**Pn**	**21 47 31.9**	**+0.7**
	baz=290						
ENTT				S	**Sn**	**21 47 43.1**	**+0.6**
	baz=290						
NACB	**Ninganchiao**	**0.72 247**		P	**Pn**	**21 47 30.8**	**-0.5**
	baz=241						
NACB				S	**Sn**	**21 47 41.9**	**-0.7**
	baz=241						
TWD	**Chiawan**	**0.76 241**		P	**Pn**	**21 47 31.4**	**-0.3**
	baz=233						
TWD				S	**Sn**	**21 47 42.6**	**-0.7**
	baz=233						
NWF	**Wu-fen Shan**	**0.79 321**		*e*P	**Pn**	**21 47 32.3**	**+0.2**
	baz=315						
NWF				*e*S	**Sn**	**21 47 43.6**	**-0.4**
	baz=315						
WFSB	**Wu-fen Shan**	**0.79 321**		*e*P	**Pn**	**21 47 32.3**	**+0.3**
	baz=315						
WFSB				*e*S	**Sn**	**21 47 43.8**	**-0.1**
	baz=315						
HWA	**Hwalien**	**0.81 234**		*e*P	**Pn**	**21 47 32.2**	**0.0**
	baz=227						
HWA				*e*S	**Sn**	**21 47 44.9**	**+0.6**
	baz=227						
NWLT	**Wulai**	**0.81 293**		*e*P	**Pn**	**21 47 33.0**	**+0.7**
	baz=297						
NWLT				*e*S	**Sn**	**21 47 45.3**	**+0.8**
	baz=297						
ENLB	**Shoufeng**	**0.86 230**		*e*P	**Pn**	**21 47 32.8**	**0.0**
	baz=225						
ENLB				*e*S	**Sn**	**21 47 45.6**	**+0.2**
	baz=225						
NNSB	**Datong**	**0.86 268**		*e*P	**Pn**	**21 47 33.1**	**+0.2**
	baz=262						
NNSB				*e*S	**Sn**	**21 47 45.3**	**-0.3**
	baz=262						
NNSH	**Datong**	**0.86 268**		*e*P	**Pn**	**21 47 33.2**	**+0.3**
	baz=262						
NNSH				*e*S	**Sn**	**21 47 46.3**	**+0.7**
	baz=262						
NNS	**Nan Shan**	**0.87 269**		P	**Pn**	**21 47 33.4**	**+0.3**
	baz=263						
NNS				S	**Sn**	**21 47 45.8**	**0.0**
	baz=263						
YHNB	**Yeheng**	**0.89 284**		P	**Pn**	**21 47 33.9**	**+0.6**
	baz=284						
YHNB				S	**Sn**	**21 47 46.7**	**+0.5**
	baz=284						
NSK	**Sanguang**	**0.91 284**		P	**Pn**	**21 47 34.0**	**+0.6**
	baz=284						
NSK				*e*S	**Sn**	**21 47 46.7**	**+0.1**
	baz=284						
TATO	**Taipei**	**0.92 304**		*e*P	**Pn**	**21 47 33.8**	**+0.2**
	baz=314						
TATO				*e*S	**Sn**	**21 47 46.2**	**-0.5**
	baz=314						
TAP1	**Taipei**	**0.93 309**		*e*P	**Pn**	**21 47 34.1**	**+0.5**
	baz=309						
TAP1				*e*S	**Sn**	**21 47 47.0**	**+0.1**
	baz=309						
YM07	**YM07**	**0.96 318**		*e*P	**Pn**	**21 47 33.1**	**-1.0**
	baz=311						
YM07				*e*S	**Sn**	**21 47 46.0**	**-1.6**
	baz=311						
YM11	**YM11**	**0.98 316**		*e*P	**Pn**	**21 47 35.5**	**+1.1**
	baz=316						
YM11				*e*S	**Sn**	**21 47 48.7**	**+0.5**
	baz=316						
YM10	**YM10**	**0.98 315**		P	**Pn**	**21 47 34.5**	**+0.1**
	baz=316						
YM10				S	**Sn**	**21 47 47.4**	**-0.8**
	baz=316						
YM08	**YM08**	**0.99 318**		*e*P	**Pn**	**21 47 34.0**	**-0.4**
	baz=310						
YM08				*e*S	**Sn**	**21 47 46.9**	**-1.3**
	baz=310						
YM04	**YM04**	**1.00 314**		*e*P	**Pn**	**21 47 34.7**	**+0.1**
	baz=315						
YM04				*e*S	**Sn**	**21 47 47.6**	**-0.8**
	baz=315						
YM03	**YM03**	**1.01 316**		*e*P	**Pn**	**21 47 34.8**	**0.0**
	baz=316						
YM03				*e*S	**Sn**	**21 47 48.5**	**-0.4**
	baz=316						
ESL	**Shilin**	**1.03 232**		*e*P	**Pn**	**21 47 34.6**	**-0.4**
	baz=225						
ESL				*e*S	**Sn**	**21 47 48.1**	**-1.1**
	baz=225						
TWS1	**Kuangyinshan**	**1.04 308**		P	**Pn**	**21 47 35.5**	**+0.4**
	baz=316						
TWS1				S	**Sn**	**21 47 49.6**	**+0.2**
	baz=316						
TWY	**Chenhua**	**1.05 321**		*e*P	**Pn**	**21 47 35.6**	**+0.5**
	baz=313						
TWY				*e*S	**Sn**	**21 47 50.1**	**+0.6**
	baz=313						
NTST	**Danshui**	**1.06 312**		*e*P	**Pn**	**21 47 35.4**	**+0.1**
	baz=312						
NTST				*e*S	**Sn**	**21 47 50.5**	**+0.7**
	baz=312						
TWT	**Tachien**	**1.07 259**		P	**Pn**	**21 47 36.6**	**+1.0**
	baz=259						
TWT				*e*S	**Sn**	**21 47 50.4**	**+0.2**
	baz=259						
TDCB	**Techi**	**1.08 260**		P	**Pn**	**21 47 36.5**	**+0.8**
	baz=256						
TDCB				*e*S	**Sn**	**21 47 50.3**	**-0.2**
	baz=256						
CHGB	**Renai**	**1.12 250**		*e*P	**Pn**	**21 47 36.8**	**+0.5**
	baz=242						
CHGB				*e*S	**Sn**	**21 47 51.0**	**-0.5**
	baz=242						
NCU	**National Centr**	**1.16 297**		P	**Pn**	**21 47 37.5**	**+1.0**
	baz=297						
NCU				S	**Sn**	**21 47 53.0**	**+1.2**
	baz=297						
LIOB	**Emei**	**1.21 279**		*e*P	**Pn**	**21 47 38.2**	**+1.0**
	baz=279						
LIOB				*e*S	**Sn**	**21 47 54.1**	**+1.0**
	baz=279						
NSTT	**Nanjuang**	**1.22 279**		*e*P	**Pn**	**21 47 38.4**	**+1.1**
	baz=278						
NSTT				*e*S	**Sn**	**21 47 54.0**	**+0.6**
	baz=278						
HGSD	**Ruisui**	**1.26 221**		*e*P	**Pn**	**21 47 39.1**	**+1.3**
	baz=218						
HGSD				*e*S	**Sn**	**21 47 52.6**	**-1.7**
	baz=218						
VWDT	**VWDT**	**1.29 237**		P	**Pn**	**21 47 38.7**	**+0.5**
	baz=230						
VWDT				S	**Sn**	**21 47 54.5**	**-0.4**
	baz=230						
IRIF	**Iriomote-Funau**	**1.29 95**		P	**Pn**	**21 47 38.4**	**+0.2**
IRIF				S	**Sn**	**21 47 54.6**	**-0.3**
NMLH	**Miaoli**	**1.40 274**		*e*P	**Pn**	**21 47 39.8**	**+0.1**
	baz=273						
NMLH				*e*S	**Sn**	**21 47 59.3**	**+1.7**
	baz=273						
HATJ	**Hateruma jima**	**1.41 106**		*e*S	**Sn**	**21 47 58.3**	**+0.6**
YULB	**Yu-li**	**1.41 222**		*e*P	**Pn**	**21 47 39.3**	**-0.6**
	baz=229						
YULB				*e*S	**Sn**	**21 47 55.9**	**-2.0**
	baz=229						
SSLB	**Suanglung**	**1.42 242**		*e*P	**Pn**	**21 47 40.6**	**+0.7**
	baz=238						
SSLB				*e*S	**Sn**	**21 47 58.2**	**+0.2**
	baz=238						
TWQ1	**Liyutan**	**1.42 266**		*e*P	**Pn**	**21 47 40.4**	**+0.5**
	baz=266						
TWQ1				*e*S	**Sn**	**21 47 59.5**	**+1.5**
	baz=266						
SMLT	**Sun Moon Lake**	**1.42 247**		*e*P	**Pn**	**21 47 41.2**	**+1.2**
	baz=241						
SMLT				*e*S	**Sn**	**21 47 59.8**	**+1.6**
	baz=241						
TWF1	**Yuli**	**1.45 221**		*e*P	**Pn**	**21 47 39.7**	**-0.6**
	baz=228						
TWF1				*e*S	**Sn**	**21 47 56.9**	**-1.7**
	baz=228						
TYC	**Yuchr**	**1.45 248**		*e*P	**Pn**	**21 47 41.5**	**+1.2**
	baz=242						
TYC				*e*S	**Sn**	**21 48 00.1**	**+1.5**
	baz=242						
JKRS	**Kuro-shima**	**1.55 98**		P	**Pn**	**21 47 42.4**	**+0.8**
JKRS				*e*S	**Sn**	**21 48 01.9**	**+0.8**
FULB	**Fuli**	**1.57 217**		*e*P	**Pn**	**21 47 41.7**	**-0.1**
	baz=209						
FULB				*e*S	**Sn**	**21 48 00.4**	**-1.0**
	baz=209						
JIJ	**Ishigaki jima**	**1.66 93**		P	**Pn**	**21 47 43.3**	**+0.2**
JIJ				S	**Sn**	**21 48 03.2**	**-0.5**
JISG	**Ishigakijimahi**	**1.81 85**		P	**Pn**	**21 47 45.4**	**+0.3**
JISG				*e*S	**Sn**	**21 48 07.2**	**-0.1**
RLNB	**Erlin**	**1.88 253**		*e*P	**Pn**	**21 47 47.2**	**+1.3**
	baz=264						
RLNB				*e*S	**Sn**	**21 48 09.7**	**+0.8**
	baz=264						
JTJ	**Tarama**	**2.17 85**		S	**Sn**	**21 48 16.4**	**+0.5**
VWUC	**VWUC**	**2.67 282**		*e*P	**Pn**	**21 47 54.7**	**-1.9**
	baz=281						
VWUC				*e*S	**Sn**	**21 48 25.2**	**-2.7**
	baz=281						
MATB	**Ma-tsu**	**2.74 309**		*e*P	**Pn**	**21 47 57.5**	**0.0**
	baz=299						
MATB				*e*S	**Sn**	**21 48 28.1**	**-1.5**

*JMA **09** 21:54:19.5±0.1, 24°.41N×122°.28E, h71km±2km, M4.3*
*TAP **09** 21:54:20.5, 24°.49N×122°.22E, h70km, ML5.1, B*
*IDC **09** 21:54:21.4±0.7, 24°.59N×122°.43E, h90km±7km, mb4.0/25, mb1 4.0/28, mb1mx3.9/64, mbtmp4.3/28, MS3.8/2, Ms1 3.8/2, ms1mx2.9/64, Error ellipse: s-maj=12.6km s-min=10.8km az=91.0*
ISC 09 21:54:19.8±0.5, 24°.51N±0°.03×122°.30E±0°.02, h73km±3km, n260, σ1°10/371, mb4.4/54, 26C-39D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1** baz=307	**0.16**	**284**	⇑P	**Pn**	**21 54 30.8**	**+0.2**
EOS1	baz=307			S	**Sn**	**21 54 38.7**	**+0.2**
TWC	**Suao** baz=294	**0.42**	**284**	⇑*i*P	**Pn**	**21 54 31.9**	**-0.3**
TWC	baz=294			S	**Sn**	**21 54 40.3**	**-1.1**
ENAH	**Nanao** baz=261	**0.45**	**262**	*e*P	**Pn**	**21 54 32.1**	**-0.4**
ENAH	baz=261			*e*S	**Sn**	**21 54 41.3**	**-0.5**
EGS	**Nanao** baz=324	**0.47**	**315**	*i* P	**Pn**	**21 54 32.9**	**+0.2**
EGS	baz=324			*i* S	**Sn**	**21 54 41.1**	**-1.0**
NANB	**Nanao** baz=259	**0.51**	**261**	⇑P	**Pn**	**21 54 32.8**	**-0.3**
NANB	baz=259			S	**Sn**	**21 54 42.2**	**-0.5**
ENA	**Nanau** baz=259	**0.52**	**261**	*e*P	**Pn**	**21 54 32.9**	**-0.2**
ENA	baz=259			*e*S	**Sn**	**21 54 42.1**	**-0.8**
NTC	**Toucheng** baz=321	**0.55**	**309**	*e*P	**Pn**	**21 54 33.5**	**+0.1**
NTC	baz=321			S	**Sn**	**21 54 43.0**	**-0.4**
ILA	**Ilan** baz=306	**0.56**	**297**	⇓P	**Pn**	**21 54 33.8**	**+0.3**
ILA	baz=306			S	**Sn**	**21 54 43.8**	**+0.1**
JYNG	**Yonagunijimaku**	**0.59**	**96**	P	**Pn**	**21 54 33.7**	**-0.1**
JYNG				S	**Sn**	**21 54 43.6**	**-0.6**
TWE	**Neicheng** baz=295	**0.61**	**290**	P	**Pn**	**21 54 34.3**	**+0.3**
TWE	baz=295			*e*S	**Sn**	**21 54 43.7**	**-0.9**
TIPB	**Shuangxi** baz=326	**0.63**	**317**	⇓*e*P	**Pn**	**21 54 33.2**	**-1.1**
TIPB	baz=326			S	**Sn**	**21 54 43.1**	**-1.9**
YOJ	**Yonaguni jima** baz=91	**0.65**	**94**	⇓*e*P	**Pn**	**21 54 34.4**	**-0.1**
YOJ	baz=91			*e*S	**Sn**	**21 54 44.6**	**-0.6**
YOJ	**Yonaguni jima**	**0.65**	**94**	*e*Pn	**Pn**	**21 54 34.2**	**-0.2**
YOJ	**Yonaguni jima**	**0.65**	**94**	P	**Pn**	**21 54 34.3**	**-0.1**
YOJ				S	**Sn**	**21 54 44.6**	**-0.6**
YOJ	**Yonaguni jima**	**0.65**	**94**	*e*P	**Pn**	**21 54 34.2**	**-0.2**
ENTT	**Nioudou** baz=289	**0.68**	**281**	⇓P	**Pn**	**21 54 35.3**	**+0.6**
ENTT	baz=289			*e*S	**Sn**	**21 54 46.0**	**+0.2**
NACB	**Ninganchiao** baz=241	**0.72**	**243**	⇑P	**Pn**	**21 54 34.5**	**-0.8**
NACB	baz=241			S	**Sn**	**21 54 44.9**	**-1.8**
NACB	**Ninganchiao**	**0.72**	**243**	*e*Pn	**Pn**	**21 54 34.5**	**-0.8**
NWF	**Wu-fen Shan** baz=325	**0.73**	**320**	⇓*i*P	**Pn**	**21 54 35.6**	**+0.2**
NWF	baz=325			S	**Sn**	**21 54 46.3**	**-0.6**
WFSB	**Wu-fen Shan** baz=325	**0.73**	**320**	⇓P	**Pn**	**21 54 35.6**	**+0.3**
WFSB	baz=325			S	**Sn**	**21 54 46.5**	**-0.3**
TWD	**Chiawan** baz=228	**0.77**	**236**	⇑*i*P	**Pn**	**21 54 35.1**	**-0.7**
TWD	baz=228			S	**Sn**	**21 54 46.3**	**-1.3**
NWLT	**Wulai** baz=298	**0.77**	**290**	*e*P	**Pn**	**21 54 36.5**	**+0.7**
NWLT	baz=298			*e*S	**Sn**	**21 54 47.7**	**0.0**
HWA	**Hwalien** baz=220	**0.83**	**230**	⇑*e*P	**Pn**	**21 54 36.0**	**-0.4**
HWA	baz=220			*e*S	**Sn**	**21 54 48.2**	**-0.5**
NNSB	**Datong** baz=259	**0.84**	**265**	⇓P	**Pn**	**21 54 36.7**	**0.0**
NNSB	baz=259			*e*S	**Sn**	**21 54 48.5**	**-0.7**
NNSH	**Datong** baz=260	**0.84**	**265**	*e*P	**Pn**	**21 54 36.8**	**+0.1**
NNS	**Nan Shan** baz=259	**0.85**	**265**	*e*P	**Pn**	**21 54 36.8**	**0.0**
NNS	baz=259			*e*S	**Sn**	**21 54 48.6**	**-0.8**
YHNB	**Yeheng** baz=283	**0.85**	**281**	⇓P	**Pn**	**21 54 37.4**	**+0.5**
YHNB	baz=283			*e*S	**Sn**	**21 54 49.8**	**+0.4**
YHNB	**Yeheng**	**0.85**	**281**	*e*Pn	**Pn**	**21 54 37.2**	**+0.5**
YHNB				*e*Sn	**Sn**	**21 54 50.2**	**+0.8**
TATO	**Taipei** baz=315	**0.87**	**302**	⇓P	**Pn**	**21 54 37.1**	**+0.2**
TATO	baz=315			S	**Sn**	**21 54 48.7**	**-1.0**
TATO	**Taipei**	**0.87**	**302**	*e*Pn	**Pn**	**21 54 37.2**	**+0.2**
TATO				*e*Sn	**Sn**	**21 54 49.4**	**-0.2**
NSK	**Sanguang** baz=283	**0.87**	**281**	⇓P	**Pn**	**21 54 37.5**	**+0.4**
NSK	baz=283			*e*S	**Sn**	**21 54 49.7**	**-0.1**
ENLB	**Shoufeng** baz=219	**0.88**	**227**	⇑*i*P	**Pn**	**21 54 36.6**	**-0.4**
ENLB	baz=219			*e*S	**Sn**	**21 54 49.1**	**-0.7**
TAP1	**Taipei** baz=310	**0.88**	**307**	⇓*i*P	**Pn**	**21 54 37.3**	**+0.3**
TAP1	baz=310			*i* S	**Sn**	**21 54 49.4**	**-0.4**
YM07	**YM07** baz=321	**0.91**	**317**	⇓*e*P	**Pn**	**21 54 36.5**	**-0.9**
YM07	baz=321			*e*S	**Sn**	**21 54 48.9**	**-1.5**
YM11	**YM11** baz=319	**0.93**	**315**	⇓P	**Pn**	**21 54 38.8**	**+1.0**
YM11	baz=319			*e*S	**Sn**	**21 54 51.1**	**+0.2**
YM10	**YM10** baz=318	**0.93**	**314**	⇓P	**Pn**	**21 54 37.8**	**+0.1**
YM10	baz=318			*e*S	**Sn**	**21 54 50.2**	**-0.7**
YM08	**YM08** baz=320	**0.93**	**316**	⇓P	**Pn**	**21 54 37.5**	**-0.2**
YM08	baz=320			S	**Sn**	**21 54 49.7**	**-1.3**
YM12	**YM12** baz=319	**0.94**	**315**	⇓P	**Pn**	**21 54 37.8**	**0.0**
YM12	baz=319			*e*S	**Sn**	**21 54 50.2**	**-1.0**
YM04	**YM04** baz=317	**0.94**	**313**	⇓P	**Pn**	**21 54 37.9**	**+0.1**
YM04	baz=317			S	**Sn**	**21 54 49.9**	**-1.4**
YM03	**YM03** baz=318	**0.96**	**314**	⇓*i*P	**Pn**	**21 54 38.0**	**-0.1**
YM03	baz=318			*e*S	**Sn**	**21 54 51.0**	**-0.6**
TWY	**Chenhua** baz=324	**0.99**	**320**	⇓*i*P	**Pn**	**21 54 38.8**	**+0.4**
TWY	baz=324			*e*S	**Sn**	**21 54 52.0**	**-0.2**
TWS1	**Kuangyinshan** baz=317	**0.99**	**306**	⇓*i*P	**Pn**	**21 54 38.9**	**+0.5**
TWS1	baz=317			S	**Sn**	**21 54 52.2**	**-0.1**
NTST	**Danshui** baz=321	**1.01**	**310**	*e*P	**Pn**	**21 54 39.0**	**+0.4**
NTST	baz=321			*e*S	**Sn**	**21 54 52.6**	**0.0**
ESL	**Shilin** baz=237	**1.05**	**229**	⇑P	**Pn**	**21 54 38.2**	**-0.9**
ESL	baz=237			*e*S	**Sn**	**21 54 51.5**	**-2.0**
TWT	**Tachien** baz=253	**1.06**	**256**	P	**Pn**	**21 54 40.2**	**+0.8**
TWT	baz=253			*e*S	**Sn**	**21 54 53.6**	**-0.3**
TDCB	**Techi** baz=253	**1.07**	**256**	⇓P	**Pn**	**21 54 40.0**	**+0.5**
TDCB	baz=253			*e*S	**Sn**	**21 54 53.7**	**-0.5**
NCU	**National Centr** baz=297	**1.11**	**295**	P	**Pn**	**21 54 40.7**	**+0.8**
NCU	baz=297			S	**Sn**	**21 54 56.0**	**+1.1**
NCUH	**Zhongli** baz=297	**1.11**	**294**	⇓P	**Pn**	**21 54 40.8**	**+0.9**
NCUH	baz=297			*e*S	**Sn**	**21 54 56.0**	**+1.1**
CHGB	**Renai** baz=239	**1.12**	**247**	⇑P	**Pn**	**21 54 40.3**	**+0.1**
CHGB	baz=239			S	**Sn**	**21 54 54.4**	**-1.0**
EGFH	**Guangfu** baz=215	**1.16**	**224**	*e*P	**Pn**	**21 54 39.6**	**-0.8**
LIOB	**Emei** baz=278	**1.18**	**277**	⇓P	**Pn**	**21 54 41.5**	**+0.8**
LIOB	baz=278			*e*S	**Sn**	**21 54 56.6**	**+0.2**
NSTT	**Nanjuang** baz=277	**1.19**	**276**	⇓P	**Pn**	**21 54 41.5**	**+0.7**
NSTT	baz=277			*e*S	**Sn**	**21 54 56.8**	**+0.2**
SBCB	**Hsinchu** baz=285	**1.23**	**283**	⇓P	**Pn**	**21 54 42.1**	**+0.8**
SBCB	baz=285			*e*S	**Sn**	**21 54 57.0**	**-0.5**
HSN	**Hsinchu** baz=287	**1.24**	**284**	*e*P	**Pn**	**21 54 41.8**	**+0.3**
HSN	baz=287			*e*S	**Sn**	**21 54 57.4**	**-0.4**
HGSD	**Ruisui** baz=210	**1.29**	**218**	⇑P	**Pn**	**21 54 41.3**	**-0.9**
HGSD	baz=210			*e*S	**Sn**	**21 54 57.5**	**-1.5**
VWDT	**VWDT** baz=233	**1.30**	**235**	⇑P	**Pn**	**21 54 42.4**	**+0.1**
VWDT	baz=233			*e*S	**Sn**	**21 54 57.1**	**-2.0**
IRIF	**Iriomote-Funau**	**1.32**	**97**	P	**Pn**	**21 54 42.3**	**-0.2**
IRIF				S	**Sn**	**21 54 59.2**	**-0.3**
EHY	**Hungye** baz=228	**1.34**	**222**	*e*P	**Pn**	**21 54 41.5**	**-1.3**
NMLH	**Miaoli** baz=272	**1.37**	**271**	*e*P	**Pn**	**21 54 44.2**	**+1.0**
NMLH	baz=272			*e*S	**Sn**	**21 55 01.4**	**+0.5**
TWQ1	**Liyutan** baz=264	**1.40**	**264**	⇓*i*P	**Pn**	**21 54 44.3**	**+0.7**
TWQ1	baz=264			*e*S	**Sn**	**21 55 02.7**	**+1.2**
NSY	**Sanyi** baz=267	**1.40**	**266**	⇓*i*P	**Pn**	**21 54 44.7**	**+1.0**
NSY	baz=267			*e*S	**Sn**	**21 55 03.0**	**+1.3**
SMLT	**Sun Moon Lake** baz=238	**1.42**	**244**	*e*P	**Pn**	**21 54 44.9**	**+0.9**
SMLT	baz=238			*e*S	**Sn**	**21 55 03.0**	**+0.8**
SSLB	**Suanglung** baz=235	**1.42**	**240**	*e*P	**Pn**	**21 54 43.9**	**0.0**
SSLB	baz=235			*e*S	**Sn**	**21 55 00.9**	**-1.2**
SSLB	**Suanglung**	**1.42**	**240**	*e*Pn	**Pn**	**21 54 44.0**	**0.0**
SSLB				*e*Sn	**Sn**	**21 55 01.5**	**-0.6**
YULB	**Yu-li** baz=226	**1.44**	**220**	⇑P	**Pn**	**21 54 43.0**	**-1.2**
YULB	**Yu-li**	**1.44**	**220**	*e*Pn	**Pn**	**21 54 42.3**	**-1.9**
HATJ	**Hateruma jima**	**1.45**	**108**	P	**Pn**	**21 54 44.5**	**+0.3**
HATJ				S	**Sn**	**21 55 03.7**	**+1.1**
TYC	**Yuchr** baz=239	**1.45**	**246**	*e*P	**Pn**	**21 54 45.6**	**+1.4**
TYC	baz=239			*e*S	**Sn**	**21 55 03.1**	**+0.5**
TWF1	**Yuli** baz=225	**1.47**	**219**	⇑P	**Pn**	**21 54 43.4**	**-1.1**
TCU	**Taichung** baz=256	**1.52**	**257**	*e*P	**Pn**	**21 54 46.0**	**+0.8**
JKRS	**Kuro-shima**	**1.58**	**100**	P	**Pn**	**21 54 46.3**	**+0.3**
JKRS				S	**Sn**	**21 55 06.3**	**+0.5**
WJS	**Zhushan** baz=257	**1.59**	**245**	*e*P	**Pn**	**21 54 47.8**	**+1.7**
WJS	baz=257			*e*S	**Sn**	**21 55 07.6**	**+1.7**
FULB	**Fuli** baz=205	**1.60**	**215**	*e*P	**Pn**	**21 54 45.4**	**-0.8**
FULB	baz=205			*e*S	**Sn**	**21 55 04.7**	**-1.5**
CHKT	**Chengkung** baz=201	**1.65**	**212**	⇑P	**Pn**	**21 54 45.4**	**-1.4**
CHKT	baz=201			*e*S	**Sn**	**21 55 03.6**	**-3.6**
WCHH	**Zhanghua** baz=266	**1.65**	**255**	*e*P	**Pn**	**21 54 47.5**	**+0.7**
WCHH	baz=266			*e*S	**Sn**	**21 55 07.8**	**+0.5**
JIJ	**Ishigaki jima**	**1.69**	**95**	P	**Pn**	**21 54 47.1**	**-0.3**
JIJ				S	**Sn**	**21 55 07.5**	**-0.7**
ELDTW	**Lidau** baz=215	**1.76**	**222**	⇑*e*P	**Pn**	**21 54 47.5**	**-1.1**
WGK	**Gukeng** baz=232	**1.79**	**243**	*e*P	**Pn**	**21 54 50.1**	**+1.4**
WGK	baz=232			*e*S	**Sn**	**21 55 12.3**	**+1.7**
WDLH	**Douliu** baz=255	**1.81**	**243**	*e*P	**Pn**	**21 54 50.4**	**+1.5**
WDLH	baz=255			*e*S	**Sn**	**21 55 14.1**	**+3.0**
JISG	**Ishigakijimahi**	**1.83**	**87**	P	**Pn**	**21 54 49.3**	**0.0**
JISG				S	**Sn**	**21 55 11.4**	**-0.3**
RLNB	**Erlin** baz=262	**1.88**	**251**	⇓P	**Pn**	**21 54 50.5**	**+0.6**
RLNB	baz=262			*e*S	**Sn**	**21 55 13.3**	**+0.6**
CHN2	**Minshiung** baz=252	**1.93**	**240**	*e*P	**Pn**	**21 54 52.2**	**+1.6**
CHN2	baz=252			*e*S	**Sn**	**21 55 17.0**	**+2.9**
TWH	**Lutao** baz=200	**1.94**	**203**	*e*P	**Pn**	**21 54 49.6**	**-1.2**
TWH	baz=200			*e*S	**Sn**	**21 55 10.9**	**-3.5**
TPUB	**Ta-pu** baz=224	**1.94**	**232**	*e*P	**Pn**	**21 54 51.7**	**+0.8**
TPUB	baz=224			*e*S	**Sn**	**21 55 15.0**	**+0.6**
TPUB	**Ta-pu**	**1.94**	**232**	*e*Pn	**Pn**	**21 54 51.9**	**+1.0**
STYT	**Tauyuan** baz=218	**1.95**	**227**	⇑P	**Pn**	**21 54 51.4**	**+0.5**
STYT	baz=218			*e*S	**Sn**	**21 55 14.4**	**-0.2**
WTCT	**Ta-ch'eng** baz=261	**1.95**	**251**	⇓P	**Pn**	**21 54 51.3**	**+0.4**
WTCT	baz=261			*e*S	**Sn**	**21 55 14.8**	**+0.3**
CHY	**Chiayi** baz=252	**1.99**	**240**	*e*P	**Pn**	**21 54 52.8**	**+1.4**
CHY	baz=252			*e*S	**Sn**	**21 55 16.9**	**+1.5**
WTP	**Ta-pu** baz=230	**1.99**	**231**	*e*P	**Pn**	**21 54 52.4**	**+0.9**
WTP	baz=230			*e*S	**Sn**	**21 55 16.3**	**+0.8**
TWGBT	**Beinan** baz=212	**2.02**	**214**	⇑P	**Pn**	**21 54 50.3**	**-1.6**
TWG	**Pinlang** baz=212	**2.02**	**214**	*e*P	**Pn**	**21 54 50.5**	**-1.4**
TWG	**Pinlang**	**2.02**	**214**	*e*Pn	**Pn**	**21 54 50.5**	**-1.4**
TTN	**Taitung** baz=216	**2.04**	**211**	*e*P	**Pn**	**21 54 50.4**	**-1.7**
TWK	**Hsinying** baz=232	**2.07**	**234**	⇓P	**Pn**	**21 54 53.6**	**+1.0**
TWK	baz=232			*e*S	**Sn**	**21 55 18.8**	**+1.3**
WSF	**Szhu** baz=255	**2.09**	**246**	*e*P	**Pn**	**21 54 53.4**	**+0.7**
WSF	baz=255			*e*S	**Sn**	**21 55 18.5**	**+0.7**
CHN1	**Nanshi** baz=230	**2.09**	**231**	*e*P	**Pn**	**21 54 53.5**	**+0.7**
WLGB	**Puzi** baz=252	**2.10**	**241**	*e*P	**Pn**	**21 54 53.6**	**+0.8**
WLGB	baz=252			*e*S	**Sn**	**21 55 19.4**	**+1.3**
SGST	**Jiashian** baz=220	**2.12**	**228**	*e*P	**Pn**	**21 54 54.4**	**+1.2**
SGST	baz=220			*e*S	**Sn**	**21 55 19.1**	**+0.4**
SLGT	**Liugui** baz=224	**2.14**	**225**	*e*P	**Pn**	**21 54 54.6**	**+1.2**
SLGT	baz=224			*e*S	**Sn**	**21 55 19.8**	**+0.7**
JTJ	**Tarama**	**2.19**	**86**	P	**Pn**	**21 54 54.8**	**+0.7**
JTJ				*e*S	**Sn**	**21 55 20.9**	**+0.6**
CHN8	**Yiju** baz=238	**2.23**	**239**	*e*P	**Pn**	**21 54 55.0**	**+0.3**
ECL	**Taimali** baz=211	**2.27**	**213**	*e*P	**Pn**	**21 54 53.7**	**-1.5**
SSD	**Sandimen** baz=220	**2.33**	**221**	*e*P	**Pn**	**21 54 56.9**	**+0.9**
SSD	baz=220			*e*S	**Sn**	**21 55 23.5**	**-0.2**
SCLT	**Jiali** baz=235	**2.34**	**236**	*e*P	**Pn**	**21 54 56.5**	**+0.3**
SCLT	baz=235			*e*S	**Sn**	**21 55 24.9**	**+0.9**
TAI1	**Yung-k'ang** baz=232	**2.40**	**233**	*e*P	**Pn**	**21 54 58.5**	**+1.7**
MASBT	**Mashibuluo** baz=218	**2.43**	**219**	*e*P	**Pn**	**21 54 57.6**	**+0.2**
MASBT	baz=218			*e*S	**Sn**	**21 55 27.2**	**+1.1**
SGLT	**Jiouru** baz=222	**2.43**	**223**	*e*P	**Pn**	**21 54 59.4**	**+2.0**
TAW	**Tawu** baz=209	**2.50**	**211**	*e*P	**Pn**	**21 54 57.2**	**-1.1**
EAST	**Anshuo** baz=205	**2.50**	**212**	⇓P	**Pn**	**21 54 57.6**	**-0.8**
LAY	**Lan-yu** baz=193	**2.56**	**196**	*e*P	**Pn**	**21 54 57.3**	**-1.8**
SSPT	**Xinbi** baz=217	**2.57**	**219**	*e*P	**Pn**	**21 55 01.2**	**+2.0**
SCZT	**Fangliau** baz=214	**2.63**	**216**	*e*P	**Pn**	**21 55 00.8**	**+0.7**
SCZT	baz=214			*e*S	**Sn**	**21 55 31.9**	**+1.0**
JIRB	**Irabujima**	**2.63**	**83**	P	**Pn**	**21 55 00.9**	**+0.8**
JIRB				S	**Sn**	**21 55 31.5**	**+0.5**
VWUC	**VWUC** baz=281	**2.63**	**281**	⇓P	**Pn**	**21 54 60.0**	**-0.1**
PNG	**Penghu** baz=250	**2.68**	**250**	⇓P	**Pn**	**21 55 00.1**	**-0.6**
PNG	baz=250			*e*S	**Sn**	**21 55 30.3**	**-1.8**
MATB	**Ma-tsu** baz=308	**2.68**	**308**	⇓*e*P	**Pn**	**21 55 00.7**	**-0.1**
PHUB	**P'eng-hu** baz=260	**2.68**	**249**	⇓P	**Pn**	**21 54 60.0**	**-0.8**
PHUB	baz=260			*e*S	**Sn**	**21 55 30.0**	**-2.3**
JIKM	**Ikemajima**	**2.71**	**81**	P	**Pn**	**21 55 02.3**	**+1.1**
JIKM				S	**Sn**	**21 55 33.6**	**+0.6**
WDGT	**Dungji** baz=243	**2.72**	**243**	*e*P	**Pn**	**21 55 01.2**	**0.0**
JMJ	**Miyako jima 2** baz=84	**2.74**	**83**	*e*P	**Pn**	**21 55 02.9**	**+1.3**
JMJ	**Miyako jima 2**	**2.74**	**83**	P	**Pn**	**21 55 03.1**	**+1.5**
JMJ				*e*S	**Sn**	**21 55 34.7**	**+1.1**
JOGS	**Gusukube**	**2.84**	**84**	P	**Pn**	**21 55 04.2**	**+1.3**
JOGS				S	**Sn**	**21 55 37.0**	**+1.0**
HEN	**Hengchun** baz=221	**2.88**	**210**	*e*P	**Pn**	**21 55 04.0**	**+0.6**
TSEB	**Hengchuen, Pin** baz=205	**2.90**	**207**	*e*P	**Pn**	**21 55 03.2**	**-0.5**
TWKBT	**Hengchun** baz=201	**2.90**	**208**	*e*P	**Pn**	**21 55 03.8**	**0.0**
TWK1	**Hengchun** baz=201	**2.90**	**209**	*e*P	**Pn**	**21 55 03.7**	**-0.1**
VCHM	**Qimei** baz=244	**2.93**	**244**	*e*P	**Pn**	**21 55 03.8**	**-0.3**
VCHM	baz=244			*e*S	**Sn**	**21 55 36.4**	**-1.8**
QZH	**Quanzhou**	**3.40**	**278**	⇓*i*P	**Pn**	**21 55 10.2**	**-0.3**
QZH				S	**Sn**	**21 55 46.5**	**-3.1**
QZH	comp=N,300nm,0.4s			smax	smax		
QZH	comp=E,210nm,0.4s			smax	smax		
KNM	**Kinmen** baz=269	**3.52**	**269**	*e*P	**Pn**	**21 55 13.3**	**+1.1**
KNMB	**Chin-men Tao** baz=270	**3.56**	**270**	⇓*e*P	**Pn**	**21 55 12.1**	**-0.6**
JOW	**Kunigami** 13nm,0.3s,baz=287,slow=25,SNR=31	**5.87**	**66**	P	**Pn**	**21 55 44.0**	**-0.2**
JOW	4.8nm,0.3s,baz=306,slow=19,SNR=2.9			S	**Sn**	**21 56 48.7**	**-1.4**
NJ2	**Nanjing**	**8.10**	**339**	*e*P	**Pn**	**21 56 15.4**	**+0.7**
NJ2	comp=Z,10.0nm,0.6s			pmax	pmax		
GZH	**Guangzhou**	**8.32**	**262**	P	**Pn**	**21 56 13.1**	**-4.7**
GZH				S	Sn	21 57 40.3	-10
GZH	comp=N,160nm,0.8s			smax	smax		
GZH	comp=E,110nm,1.0s			smax	smax		
WHN	**Wuhan**	**9.27**	**312**	⇑P	**Pn**	**21 56 30.9**	**+0.3**
WHN				S	**Sn**	**21 58 13.0**	**-0.2**
WHN	comp=Z,44nm,0.5s			pmax	pmax		
JNU	**Nakatsue** 0.4nm,0.3s,baz=302,slow=2.2,SNR=5.1	**11.40**	**39**	P	**Pn**	**21 57 01.3**	**+1.5**
ENH	**Enshi** 6.7nm,0.6s	**12.74**	**300**	*e*Pn	**Pn**	**21 57 19.9**	**+1.9**
KS15	**Wonju Array Si**	**13.75**	**19**	*e*Pn	**Pn**	**21 57 33.5**	**+2.1**
KSAR	**Wonju Array Be**	**13.75**	**19**	P	**P**	**21 57 35.0**	**-2.5**
KSAR	**Wonju Array Be**	**13.75**	**19**	P	**P**	**21 57 35.0**	**-2.5**
KSRS	**Korea Array** 0.7nm,0.3s,baz=201,slow=13,SNR=51	**13.77**	**19**	P	**P**	**21 57 35.0**	**-2.7**
KS01	**Wonju Array Si**	**13.78**	**19**	*e*Pn	**Pn**	**21 57 32.9**	**+1.1**
GYA	**Guiyang**	**14.25**	**281**	⇑*i*P	**Pn**	**21 57 40.2**	**+2.0**
GYA				pP	P	21 57 50.3	+6.9
GYA				PP	**PnPn**	**21 57 52.8**	**+5.7**
GYA				S	**Sn**	**22 00 16.4**	**+1.4**
GYA				SS	**S**	**22 00 35.3**	**+4.0**
GYA	comp=Z,10.0nm,0.6s			pmax	pmax		
GYA	comp=N,1μm,7.8s			LR	LR		
GYA	comp=E,1μm,8.2s			LR	LR		
GYA	comp=Z,1μm,8.4s			LR	LR		
XAN	**Xi'an**	**15.03**	**312**	P	**P**	**21 57 50.6**	**-1.3**
XAN	comp=Z,5.0nm,0.6s			pmax	pmax		
XAN	comp=Z,190nm,9.1s			pmax	pmax		
CD2	**Chengdu**	**17.60**	**295**	P	**Pn**	**21 58 19.2**	**-1.1**
CD2	comp=Z,20nm,0.5s			pmax	pmax		
KMI	**Kunming**	**17.77**	**276**	P	**Pn**	**21 58 23.7**	**+1.1**
KMI				pP	pP	21 58 32.8	-4.4
KMI				sP	sP	21 58 35.5	-11
KMI	comp=Z,9.0nm,0.8s			pmax	pmax		
KMI	comp=Z,150nm,5.8s			pmax	pmax		
MJAR	**Matsushiro Arr** 0.2nm,0.3s,baz=238,slow=9.3,SNR=8.4	**18.18**	**45**	P	**P**	**21 58 25.6**	**-1.1**
HHC	**Hu-ho-hao-te**	**18.60**	**334**	*e*P	**Pn**	**21 58 32.5**	**+0.1**
HHC	comp=Z,10.0nm,0.8s			pmax	pmax		
HHC	comp=Z,42nm,6.4s			pmax	pmax		
CN2	**Changchun**	**19.42**	**7**	*e*P	**Pn**	**21 58 41.4**	**-0.5**
CN2	comp=Z,20nm,1.0s			pmax	pmax		
MSHR	**Mys Shultsa**	**19.45**	**20**	⇑*e*P	**Pn**	**21 58 41.7**	**-0.6**
LZH	**Lanzhou**	**19.64**	**310**	*e*P	**Pn**	**21 58 45.4**	**+0.7**
LZH				pP	pP	21 58 53.9	-3.8
LZH				PP	**sP**	**21 59 05.8**	**-1.2**
LZH	comp=Z,23nm,1.0s			pmax	pmax		
LZH	comp=Z,86nm,4.9s			pmax	pmax		
LZH				LR	LR		

comp=N,360nm,11.6s
LZH LR LR
comp=E,370nm,12.0s
LZH LR LR
comp=Z,460nm,14.3s
USRK Ussuriysk Ar. 21.18 20 P **P 21 58 59.0 -0.1**
6.6nm,0.7s,baz=198,slow=11,SNR=17
PBKT Sadao Pong 21.46 252 *eP* **P 21 59 03.2 +0.9**
9.1nm,1.2s
CMAR Chiang Mai Arr 22.54 259 P **P 21 59 15.4 +1.5**
0.5nm,0.3s,baz=56,slow=8.6,SNR=4.4
CMAR PcP **PcP 22 03 05.7 +0.5**
0.7nm,0.6s,baz=46,slow=1.4,SNR=4.6
GUMO Guam 23.90 113 LR LR 22 07 51.1
comp=Z,38nm,19.0s,baz=81,slow=34
GTA Gaotai 24.09 313 P **P 21 59 29.5 +0.9**
GTA pP pP 21 59 40.8 -4.8
GTA sP sP 21 59 46.6 -7.8
GTA pmax pmax
comp=Z,9.0nm,0.8s
ASAJ Asahikawa 25.64 35 P **P 21 59 40.7 -1.8**
2.6nm,0.3s,baz=226,slow=14,SNR=7.4
KLR Kul'dur 25.76 14 P **P 21 59 42.8 -0.8**
0.2nm,0.5s,baz=212,slow=8.7,SNR=12
KLR PcP **PcP 22 03 11.2 -0.4**
0.2nm,0.6s,baz=241,slow=0.3,SNR=9.5
KLR Kul'dur 25.76 14 *ceP* **P 21 59 43.5 -0.1**
ULN Ulaanbaatar 26.26 336 *eP* **P 21 59 48.4 +0.1**
14nm,0.6s
ULN Ulaanbaatar 26.26 336 *c iP* **P 21 59 48.5 +0.2**
ULN pmax pmax
comp=Z,15nm,0.8s
SONM Songino Array 26.48 336 P **P 21 59 50.5 +0.3**
comp=Z,21nm,0.7s,baz=151,slow=10.0,SNR=100
SONM PcP **PcP 22 03 13.2 -0.3**
comp=Z,0.8nm,0.6s,baz=163,slow=4.7,SNR=4.1
SONA1 Songino Array 26.48 336 *eP* **P 21 59 50.1 -0.2**
ZAK Zakamensk 29.74 335 *eP* **P 22 00 18.4 -0.8**
ZAK pmax pmax
comp=Z,2.0nm,1.0s
TLY Talaya 30.66 337 *eP* **P 22 00 27.1 -0.1**
TLY pmax pmax
comp=Z,11nm,0.6s
WMQ Urumqi 34.17 313 P **P 22 00 59.2 +1.1**
WMQ pmax pmax
comp=Z,32nm,0.7s
WMQ pmax pmax
comp=Z,410nm,5.7s
YAK Yakutsk 37.84 6⇑ *eP* **P 22 01 28.3 -0.7**
YAK pmax pmax
comp=Z,11nm,1.1s
MTN Manton Dam 38.12 166 *eP* **P 22 01 30.5 -1.4**
comp=Z,52nm,1.6s
MK01 Makanchi Array 38.80 315 *eP* **P 22 01 37.6 +0.2**
MK01 *e*PcP **PcP 22 03 47.2 -0.2**
MK31 Makanchi Array 38.82 315 *eP* **P 22 01 37.9 +0.3**
MK31 Makanchi Array 38.82 315 *eP* **P 22 01 37.9 +0.3**
MKAR Makanchi Array 38.82 315 P **P 22 01 37.9 +0.3**
comp=Z,7.5nm,0.5s,baz=101,slow=10,SNR=148
MKAR PcP **PcP 22 03 46.6 -0.8**
comp=Z,1.3nm,0.9s,baz=93,slow=6.4,SNR=4.1
MKAR Makanchi Array 38.82 315 *eP* **P 22 01 37.9 +0.3**
comp=Z,65nm,0.6s
MKAR PcP **PcP 22 03 46.6 -0.8**
MKAR Makanchi Array 38.82 315 *eP* **P 22 01 37.9 +0.3**
MKAR 22 03 46.6
MKAR pmax pmax
comp=Z,65nm,0.6s
MAKZ Makanchi 39.02 315 *eP* **P 22 01 39.9 +0.6**
comp=Z,15nm,1.0s
MAKZ Makanchi 39.02 315 *eP* **P 22 01 39.9 +0.6**
MAKZ pmax pmax
comp=Z,15nm,1.0s
ZAA0 Zalesovo Array 40.53 326 *eP* **P 22 01 50.9 -0.8**
comp=Z,11nm,0.8s
ZALV Zalesovo Beam 40.53 326 P **P 22 01 50.9 -0.7**
comp=Z,10nm,0.7s,baz=111,slow=8.1,SNR=47
ZALV PcP **PcP 22 03 51.4 -1.3**
comp=Z,0.7nm,0.5s,baz=97,slow=2.2,SNR=2.9
KSH Kashi 41.58 303 P P 22 02 05.6 +5.0
KSH pP pP 22 02 22.8 +4.3
KSH pmax pmax
comp=Z,140nm,4.6s
NVS Novosibirsk 41.78 327 *eP* **P 22 02 01.5 -0.4**
NRN Naryn 41.82 305 *eP* **P 22 02 04.5 +1.6**
comp=Z,11nm,0.8s
NRN Naryn 41.82 305 *eP* **P 22 02 04.5 +1.6**
NRN pmax pmax
comp=Z,11nm,0.8s
KURK Kurchatov 42.50 319 *eP* **P 22 02 07.6 -0.2**
comp=Z,11nm,1.0s
KURK Kurchatov 42.50 319 *deP* **P 22 02 07.8 0.0**
KURK pmax pmax
comp=Z,9.0nm,0.8s
KURBB Kurchatov Arra 42.52 319 P **P 22 02 07.5 -0.4**
comp=Z,5.3nm,0.9s,baz=109,slow=9.7,SNR=38
AAK Ala-Archa 43.12 307 *eP* **P 22 02 14.3 +1.1**
comp=Z,2.7nm,0.8s
AAK Ala-Archa 43.12 307⇑ *eP* **P 22 02 13.8 +0.7**
AAK pmax pmax
comp=Z,4.0nm,0.9s
WRAB Tennant Creek 45.71 164 *eP* **P 22 02 33.8 +0.1**
comp=Z,11nm,0.6s
WRAB Tennant Creek 45.71 164 *eP* **P 22 02 33.8 +0.1**
WRAB pmax pmax
comp=Z,11nm,0.6s
WRA Warramunga Arr 45.71 164 P **P 22 02 34.0 +0.2**
comp=Z,13nm,0.8s,baz=346,slow=8.7,SNR=48
WRA pP **pP 22 02 54.6 +2.7**
comp=Z,4.8nm,0.7s,baz=345,slow=8.5,SNR=6.3
WB2 Warramunga Arr 45.72 164 *eP* **P 22 02 32.9 -0.9**
WB2 *e*P **P 22 02 34.0 +0.2**
KK31 Karatay Array 46.08 307 *eP* **P 22 02 37.5 +1.0**
KK31 Karatay Array 46.08 307 *eP* **P 22 02 37.6 +1.0**
KKAR Karatay Array 46.08 307 *eP* **P 22 02 37.5 +1.0**
KKAR Karatay Array 46.08 307 *eP* **P 22 02 37.6 +1.0**
KBL Kabul 46.94 295 *eP* **P 22 02 43.9 +0.2**
comp=Z,5.7nm,0.8s
KBL Kabul 46.94 295 *eP* **P 22 02 43.9 +0.2**
KBL pmax pmax
comp=Z,6.0nm,0.8s
TIXI Tiksi 47.32 3 *eP* **P 22 02 44.1 -1.6**
comp=Z,7.9nm,0.9s
TIXI Tiksi 47.32 3 *c iP* **P 22 02 44.0 -1.6**
TIXI pmax pmax
comp=Z,8.0nm,0.8s
BVAR Borovoye Array 48.07 320 P **P 22 02 52.0 +0.2**
comp=Z,5.2nm,0.6s,baz=114,slow=8.7,SNR=50
BVAR Borovoye Array 48.07 320 P **P 22 02 52.0 +0.2**
BRVK Borovoye 48.14 320 *eP* **P 22 02 52.4 +0.1**
comp=Z,12nm,0.9s
BRVK Borovoye 48.14 320 *deP* **P 22 02 51.8 -0.6**
BRVK pmax pmax
comp=Z,11nm,0.8s
ASAR Alice Springs 49.20 166 P **P 22 03 01.5 +0.7**
comp=Z,3.0nm,0.6s,baz=343,slow=6.9,SNR=26
ASAR pP **pP 22 03 21.7 +2.6**
comp=Z,2.2nm,0.8s,baz=342,slow=8.7,SNR=5.4
AS01 Alice Springs 49.20 166 *eP* **P 22 03 01.2 +0.3**
NRIK Noril'sk 49.36 345 P **P 22 03 00.5 -1.0**
comp=Z,2.3nm,0.4s,baz=135,slow=7.7,SNR=4.4
BILL Bilibino 51.03 20 *i P* **P 22 03 14.6 +0.5**
BILL *i* 22 04 28.9
BILL pmax pmax
comp=Z,2.0nm,0.9s
SVE Sverdlovsk 54.38 323 *eP* **P 22 03 36.3 -2.7**
AKTO Aktyubinsk 55.25 315 P **P 22 03 45.7 +0.3**
comp=Z,2.1nm,0.9s,baz=90,slow=9.2,SNR=6.8
ARU Arti 55.46 323 LR LR 22 31 14.0
comp=Z,495nm,19.9s,baz=198,slow=40
ARU Arti 55.46 323 *eP* **P 22 03 46.3 -0.4**
comp=Z,8.2nm,1.1s
ARU Arti 55.46 323 *c iP* **P 22 03 46.0 -0.8**
ARU 22 04 39.4
ARU 22 05 50.1
ARU S **S 22 11 27.3 +1.2**
ARU pmax pmax
comp=Z,7.0nm,1.0s
STKA Stephens Creek 59.03 161 P **P 22 04 11.9 -0.1**
comp=Z,1.7nm,0.5s,baz=323,slow=8.3,SNR=4.7
STKA Stephens Creek 59.03 161 P **P 22 04 12.0 -0.1**
PRGR Permogore 62.44 328 *eP* **P 22 04 33.7 -1.2**
PRGR pmax pmax
comp=Z,7.0nm,0.6s
KLMR Klimovskoe 65.43 328 *eP* **P 22 04 52.7 -1.9**
KLMR pmax pmax
comp=Z,9.0nm,1.2s
KLMR Klimovskoe 65.43 328 *eP* **P 22 04 52.7 -1.9**
KLMR AMP 22 04 54.5
comp=Z,9.0nm,1.2s
IM3 Indian Mountai 65.44 27 *eP* **P 22 04 54.7 +0.1**
IM3 *e*PcP **PcP 22 05 26.3 +0.3**
KBZ Khabaz 66.07 309 P **P 22 04 59.1 +0.1**
comp=Z,2.3nm,1.0s,baz=122,slow=3.8,SNR=5.1
MLY Manley 66.79 27 *eP* **P 22 05 03.7 +0.3**
comp=Z,2.7nm,0.8s
KDAK Kodiak Island 67.05 35 *i P* **P 22 05 07.4 +2.4**
MDM Murphy Dome 67.86 27 *eP* **P 22 05 10.2 +0.1**
comp=Z,4.8nm,0.8s
RND Reindeer 67.87 29 *eP* **P 22 05 09.5 -0.8**
comp=Z,7.2nm,0.7s
RND Reindeer 67.87 29 *eP* **P 22 05 09.5 -0.8**
RND pmax pmax
comp=Z,7.0nm,0.7s
ILAR Eielson Array 68.46 27 P **P 22 05 12.1 -1.7**
comp=Z,0.5nm,0.6s,baz=299,slow=7.7,SNR=9.9
ILAR pP **PcP 22 05 37.4 -1.2**
comp=Z,0.6nm,0.8s,baz=293,slow=3.9,SNR=3.5
SPITS Spitsbergen Ar 69.38 348 P **P 22 05 18.4 -0.9**
comp=Z,1.3nm,0.5s,baz=32,slow=8.5,SNR=7.7
ARCES ARCESS Array B 69.62 338 P **P 22 05 20.3 -0.6**
comp=Z,1.4nm,0.8s,baz=49,slow=5.5,SNR=4.2
DOT Dot Lake 69.92 28 *eP* **P 22 05 22.1 -0.8**
FINES FINESS Array B 71.68 330 P **P 22 05 32.9 -0.6**
comp=Z,1.6nm,0.6s,baz=71,slow=5.9,SNR=13
DAWY Dawson 71.78 27 *eP* **P 22 05 34.0 -0.2**
comp=Z,2.1nm,0.7s
ASF Jabal al Asfar 73.71 298 P **P 22 05 46.5 +0.2**
comp=Z,0.7nm,0.5s,baz=324,slow=19,SNR=3.7
BR131 Keskin Array S 73.80 307 *eP* **P 22 05 46.6 -0.1**
BRTR Keskin Array B 73.80 307 P **P 22 05 47.0 +0.3**
comp=Z,2.6nm,0.8s,baz=105,slow=6.5,SNR=19
BRTR Keskin Array B 73.80 307 P **P 22 05 47.0 +0.3**
CSS Mathiatis 75.59 302 *eP* **P 22 05 57.1 +0.1**
comp=Z,1.8nm,0.8s
MLR Muntele Rosu 77.15 314 P **P 22 06 05.9 +0.1**
comp=Z,0.3nm,0.6s,baz=66,slow=3.9,SNR=4.1
HFS Hagfors 77.78 331 P **P 22 06 08.2 -0.6**
comp=Z,1.8nm,0.7s,baz=96,slow=4.5,SNR=5.9
NB2 NORSAR Subarra 78.41 332 P **P 22 06 11.6 -0.8**
comp=Z,4.8nm,1.2s,baz=58,slow=5.3
NOA NORSAR Array B 78.41 332 P **P 22 06 11.2 -1.1**
comp=Z,1.2nm,0.8s,baz=67,slow=6.0,SNR=4.1
VTS Vitosha 80.10 312 *eP* **P 22 06 21.3 -0.8**
comp=Z,2.3nm,0.8s
VTS Vitosha 80.10 312 *eP* **P 22 06 21.3 -0.8**
VTS pmax pmax
comp=Z,2.0nm,0.8s
VYHS Vyhne 80.39 319 *eP* **P 22 06 23.8 +0.5**
VYHS Vyhne 80.39 319 *eP* **P 22 06 23.8 +0.5**
YKA Yellowknife Ar 82.27 23 P **P 22 06 32.3 -0.7**
comp=Z,2.4nm,0.9s,baz=312,slow=5.3,SNR=9.4
CLL Collm 82.40 323 *eP* **P 22 06 34.0 +0.1**
GERES GERESS Array B 83.23 321 P **P 22 06 38.4 0.0**
comp=Z,0.6nm,0.8s,baz=53,slow=5.2,SNR=6.7
B05A Bryant 87.48 37 P **P 22 07 00.0 +0.6**
baz=305
B08A Colville Reser 88.93 36 *eP* **P 22 07 07.1 +0.8**
NEW Newport 90.16 35 P **P 22 07 11.6 -0.4**
baz=308
NEW Newport 90.16 35 *eP* **P 22 07 12.9 +0.9**
NEW Newport 90.16 35 *eP* **P 22 07 13.0 +0.9**
YBH Yreka Blue Hor 90.83 43 *eP* **P 22 07 16.8 +1.4**
YBH Yreka Blue Hor 90.83 43 *eP* **P 22 07 16.8 +1.4**
J05D Fort Rock, OR 90.84 41 P **P 22 07 16.4 +0.9**
baz=305
M04C Macdoel 91.34 42 P **P 22 07 18.6 +0.8**
baz=305
BMO Blue Mountains 92.17 38 *eP* **P 22 07 21.5 -0.1**
BMO Blue Mountains 92.17 38 *eP* **P 22 07 21.5 -0.1**
FFC Flin Flon 92.42 24 *eP* **P 22 07 21.7 -0.7**
comp=Z,5.5nm,0.9s
FFC Flin Flon 92.42 24 *eP* **P 22 07 21.7 -0.7**
FFC pmax pmax
comp=Z,6.0nm,0.9s
HLID Hailey 94.60 38 P **P 22 07 33.9 +1.1**
baz=310
BOZ Bozeman (W) 94.75 35 P **P 22 07 34.0 +0.5**
baz=312

*IDC **09** 22:05:28.9±0.8, 2°.43N×92°.34E, h0km, mb3.8/15, mb1 4.0/19, mb1mx3.8/72, mbtmp3.9/19, ML4.3/4, MS3.7/6, Ms1 3.7/6, ms1mx3.2/71, Error ellipse: s-maj=23.3km s-min=15.1km az=42.0*
*NEIC **09** 22:05:30.5±0.4, 2°.50N×92°.37E, h10km, mb4.2/3, Error ellipse: s-maj=10.1km s-min=7.0km az=215.0*
*ISCJB **09** 22:05:31.8±0.5, 2°.48N±0°.05×92°.51E±0°.04, h33km, mb3.9/17, MS3.8/5, Error ellipse: s-maj=8.0km s-min=4.8km az=34.9*
*DJA **09** 22:05:34.1±1.9, 2°N±4°×9°3E±1°0, h24km±19km, M5.0/13, mb5.1/13, mB5.5/3, MLv5.0/10, Mw(mB)5.0/3*
ISC 09 22:05:33.9±0.6, **2°.49N**±0°.08×**92°.42E**±0°.07, **h35**km, **n61**, σ**1**°**22**/57, **mb4.0**/20, **MS3.7**/5, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**4.14**	**44**	P	**Pn**	**22 06 34.0**	**-0.7**
MLSI	**Meulaboh, Aceh**	**4.35**	**66**	P	**Pn**	**22 06 36.8**	**-0.8**
LHMI	**Lhok Sumawe**	**5.27**	**59**	P	**Pn**	**22 06 50.0**	**-0.2**
GSI	**Gunungsitoli**	**5.28**	**103**	P	**Pn**	**22 06 48.8**	**-1.6**
KCSI	**Kotacane, Aceh**	**5.44**	**79**	P	**Pn**	**22 06 51.1**	**-1.5**
TSI	**Tuntungan**	**6.21**	**81**	P	**Pn**	**22 07 01.9**	**-1.3**
PSI	**Prapat**	**6.50**	**87**	Pn	**Pn**	**22 07 06.5**	**-0.8**
	3.3nm,0.3s,baz=354,slow=0.4,SNR=16						
PSI				Sn	**Sn**	**22 08 19.3**	**-1.1**
	5.8nm,0.3s,baz=360,slow=7.6,SNR=4.1						
MNSI	**Mandailing Nat**	**7.35**	**103**	P	**Pn**	**22 07 17.2**	**-1.6**
SISI	**Saibi**	**7.67**	**120**	P	**Pn**	**22 07 22.2**	**-1.0**
	57nm,0.7s,0.5nm						
PKDT	**Phuket**	**7.96**	**47**	P	**Pn**	**22 07 26.3**	**-1.0**
	108nm,0.7s,0.4nm						
PDSI	**Padang**	**8.72**	**113**	P	**Pn**	**22 07 36.7**	**-1.0**
TRTT	**Trang**	**8.98**	**53**	P	**Pn**	**22 07 40.2**	**-1.0**
	34nm,0.8s						
SURT	**Suratani**	**9.03**	**44**	P	**Pn**	**22 07 41.2**	**-0.6**
	46nm,0.8s,0.1nm						
PPSI	**Pulau Pagai**	**9.21**	**124**	P	**Pn**	**22 07 43.5**	**-0.8**
SKLT	**Songkhla**	**9.40**	**60**	P	**Pn**	**22 07 46.0**	**-0.9**
	92nm,1.0s,0.4nm						
KRJI	**Kerinci**	**10.12**	**117**	P	Pn	22 08 03.9	+7.0
MASI	**Maura Aman, Be**	**11.29**	**120**	P	**Pn**	**22 08 11.8**	**-1.2**
PALK	**Pallekele**	**12.61**	**293**	Pn	**Pn**	**22 08 28.7**	**-2.2**
	1.1nm,0.3s,baz=113,slow=12,SNR=6.7						
PALK				Sn	Sn	22 10 37.3	-13
	4.3nm,0.3s,baz=116,slow=10,SNR=5.6						
MDSI	**Maura Dua**	**13.64**	**121**	P	**Pn**	**22 08 44.0**	**-1.0**
CHAI	**Chaiyaphum**	**16.32**	**35**	P	**Pn**	**22 09 21.4**	**+0.8**
	6.1nm,1.1s						
PBKT	**Sadao Pong**	**16.32**	**30**	P	**Pn**	**22 09 19.4**	**-1.2**
	20nm,0.9s						
PHIT	**Phitsanulok**	**16.59**	**28**	P	**P**	**22 09 27.7**	**+1.6**
	22nm,1.0s						
CMAR	**Chiang Mai Arr**	**17.11**	**21**	Pn	**Pn**	**22 09 28.7**	**-1.8**
	1.2nm,0.3s,baz=215,slow=14,SNR=18						
CMAR				LR	LR	22 17 05.5	
	comp=Z,160nm,18.4s,baz=234,slow=40						
CHTO	**Chiang Mai**	**17.43**	**21**	*e*Pn	**Pn**	**22 09 33.5**	**-1.1**
	10nm,1.0s						
LEM	**Lembang**	**17.77**	**121**	P	**P**	**22 09 39.7**	**+0.3**
	0.4nm,0.3s,baz=287,slow=19,SNR=1.7						
BWNR	**Bhubaneshwar**	**18.84**	**340**	*e*P	**P**	**22 09 49.3**	**-1.6**
SAIH	**SAIHA**	**19.89**	**2**	*e*P	**P**	**22 10 01.4**	**-1.1**
SAIH				IAmb	IAmb	22 10 11.3	
	comp=Z,7.5nm,0.7s						
BOK	**Bokaro**	**22.11**	**344**	*e*P	**P**	**22 10 26.2**	**-0.2**
NGP	**Nagpur**	**22.66**	**326**	*e*P	**P**	**22 10 31.4**	**-1.0**
NGP				IAmb	IAmb	22 10 43.2	
	comp=Z,9.2nm,0.8s						
SHL	**Shillong**	**22.95**	**359**	*e*P	**P**	**22 10 31.8**	**-3.7**
SHL				IAmb	IAmb	22 10 35.6	
	comp=Z,12nm,1.6s						
TURI	**Tura**	**23.02**	**355**	*e*P	**P**	**22 10 33.3**	**-2.7**
MOKO	**MOKOCHONG**	**23.78**	**5**	*e*P	**P**	**22 10 42.4**	**-1.2**
MOKO				IAmb	IAmb	22 10 44.2	
	comp=Z,5.5nm,0.8s						
TEZP	**TEZPUR**	**23.99**	**1**	*e*P	**P**	**22 10 45.9**	**+0.5**
ITAN	**ITANAGAR**	**24.55**	**3**	*e*P	**P**	**22 10 52.5**	**+2.0**
LKP	**Lekhapani**	**24.92**	**7**	*e*P	**P**	**22 10 54.5**	**+0.6**
ZIRO	**ZIRO**	**24.93**	**3**	*e*P	**P**	**22 10 55.0**	**+0.8**
LSA	**Lhasa**	**27.09**	**358**	*e*P	**P**	**22 11 14.6**	**+0.6**
	comp=Z,9.1nm,0.7s						
SMLA	**Simla**	**31.93**	**335**	*e*P	**P**	**22 11 57.1**	**+0.8**
NWAO	**Narrogin (SRO)**	**42.33**	**148**	LR	LR	22 29 13.1	
	comp=Z,90nm,21.3s,baz=169,slow=34						
MKAR	**Makanchi Array**	**45.00**	**350**	P	**P**	**22 13 46.7**	**+0.7**
	comp=Z,0.9nm,0.4s,baz=170,slow=8.8,SNR=17						
SONM	**Songino Array**	**46.76**	**13**	P	**P**	**22 14 00.7**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=180,slow=8.3,SNR=7.1						
WRA	**Warramunga Arr**	**46.78**	**120**	P	**P**	**22 14 00.8**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=301,slow=8.7,SNR=12						
KSAR	**Wonju Array Be**	**47.64**	**39**	P	**P**	**22 14 08.2**	**+1.4**
KSRS	**Korea Array**	**47.67**	**39**	P	**P**	**22 14 08.2**	**+1.2**
	comp=Z,1.0nm,0.7s,baz=224,slow=9.7,SNR=7.2						
KSRS				LR	LR	22 35 15.2	
	comp=Z,34nm,18.2s,baz=280,slow=37						
ASAR	**Alice Springs**	**48.01**	**125**	P	**P**	**22 14 09.9**	**0.0**
	comp=Z,0.4nm,0.6s,baz=294,slow=7.3,SNR=4.7						
KURBB	**Kurchatov Arra**	**49.38**	**348**	P	**P**	**22 14 20.4**	**+0.4**
	comp=Z,0.8nm,0.8s,baz=173,slow=7.3,SNR=8.1						
KURK	**Kurchatov**	**49.45**	**348**	P	**P**	**22 14 20.4**	**-0.2**
ZALV	**Zalesovo Beam**	**51.67**	**354**	P	**P**	**22 14 37.8**	**+0.6**
	comp=Z,2.2nm,0.5s,baz=185,slow=8.7,SNR=12						
BVAR	**Borovoye Array**	**53.57**	**344**	P	**P**	**22 14 50.7**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=142,slow=7.4,SNR=3.8						
MJAR	**Matsushiro Arr**	**54.08**	**45**	P	**P**	**22 14 56.8**	**+1.4**
	comp=Z,0.7nm,0.6s,baz=240,slow=7.2,SNR=5.0						
STKA	**Stephens Creek**	**57.79**	**130**	P	**P**	**22 15 22.6**	**+0.6**
	comp=Z,1.2nm,0.7s,baz=315,slow=17,SNR=1.8						
KVAR	**Kislovodsk Arr**	**60.25**	**321**	LR	LR	22 44 58.3	
	comp=Z,47nm,18.1s,baz=310,slow=39						
MMAI	**Mount Meron Ar**	**61.29**	**307**	P	**P**	**22 15 46.9**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=108,slow=7.2,SNR=2.7						
BRTR	**Keskin Array B**	**64.74**	**313**	P	**P**	**22 16 09.0**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=132,slow=8.0,SNR=3.6						
MATP	**Matopo**	**66.61**	**247**	P	**P**	**22 16 20.8**	**-0.8**
	comp=Z,1.2nm,0.8s,baz=135,slow=11,SNR=2.0						
TIXI	**Tiksi**	**72.81**	**11**	*e*P	**P**	**22 16 58.3**	**-0.3**
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	**76.68**	**333**	P	**P**	**22 17 22.2**	**+1.1**
	comp=Z,1.8nm,0.8s,baz=102,slow=7.3,SNR=2.2						
GERES	**GERESS Array B**	**80.71**	**319**	P	**P**	**22 17 45.3**	**+1.6**
	comp=Z,0.3nm,0.5s,baz=111,slow=5.4,SNR=3.1						
SPITS	**Spitsbergen Ar**	**84.73**	**348**	LR	LR	23 01 56.2	
	comp=Z,48nm,19.6s,baz=285,slow=40						
DBIC	**Dimbokro**	**96.94**	**277**	LR	LR	23 03 47.7	
	comp=Z,90nm,18.2s,baz=227,slow=36						
TXAR	**Lajitas Array**	**144.80**	**25**	PKP	**PKPdf**	**22 25 08.2**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=237,slow=1.2,SNR=15						

*ISCJB **09** 22:06:42.6±0.5, 34°.03N±0°.04×25°.96E±0°.02, h75km±7km, mb3.6/4, Error ellipse: s-maj=7.1km s-min=3.4km az=4.4*
*ATH **09** 22:06:43.3, 34°.16N×25°.88E, h27km±1km, ML2.7/7, Error ellipse: s-maj=2.6km s-min=1.1km az=351.0*
*CSEM **09** 22:06:44.7±0.5, 34°.17N×25°.91E, h20km, ML2.7, Error ellipse: s-maj=10.7km s-min=3.7km az=175.0*
*IDC **09** 22:06:47.9±1.7, 34°.33N×25°.81E, h88km±16km, mb3.6/4, mb1 3.4/7, mb1mx3.1/59, mbtmp3.7/7, Error ellipse: s-maj=25.3km s-min=21.4km az=103.0*
ISC 09 22:06:44.9±0.8, **34°.08N**±0°.05×**25°.94E**±0°.02, **h71**km±8km, **n99**, σ**1**°**45**/124, **mb3.5**/4, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**1.06**	**12**	P	**Pn**	**22 07 02.2**	**-2.0**
ZKR				S	**Sn**	**22 07 16.5**	**-2.2**
ZKR				AML	AML	22 07 28.3	
	comp=E,869μm,0.6s						
ZKR				AML	AML	22 07 30.1	
	comp=N,341μm,0.5s						
ZKR	**Zakros**	**1.06**	**12**	P	**Pn**	**22 07 02.5**	**-1.7**
ZKR	**Zakros**	**1.06**	**12**	P	**Pn**	**22 07 02.3**	**-2.0**
ZKR				S	**Sn**	**22 07 16.4**	**-2.2**
LAST	**Lasithi**	**1.15**	**341**	P	**Pn**	**22 07 03.2**	**-2.2**
LAST	**Lasithi**	**1.15**	**341**	P	**Pn**	**22 07 03.2**	**-2.2**
LAST	**Lasithi**	**1.15**	**341**	P	**Pn**	**22 07 03.4**	**-2.0**
NPS	**Neapolis**	**1.21**	**347**	P	**Pn**	**22 07 05.2**	**-1.0**
NPS	**Neapolis**	**1.21**	**347**	P	**Pn**	**22 07 05.0**	**-1.2**
NPS	**Neapolis**	**1.21**	**347**	P	**Pn**	**22 07 05.0**	**-1.2**
SIVA	**Sivas**	**1.32**	**315**	P	**Pn**	**22 07 06.9**	**-0.6**
SIVA				S	**Sn**	**22 07 22.9**	**-1.8**
SIVA				AML	AML	22 07 33.2	
	comp=E,1406μm,0.5s						
SIVA				AML	AML	22 07 38.9	
	comp=N,865μm,0.7s						
SIVA	**Sivas**	**1.32**	**315**	P	**Pn**	**22 07 06.6**	**-1.0**
SIVA	**Sivas**	**1.32**	**315**	P	**Pn**	**22 07 06.7**	**-0.9**
SIVA				S	**Sn**	**22 07 23.2**	**-1.4**
IDI	**Anoyia**	**1.49**	**325**	P	**Pn**	**22 07 09.9**	**+0.2**
	comp=N,1.8nm,0.3s,baz=101,slow=15,SNR=18						
IDI				S	**Sn**	**22 07 30.4**	**+1.8**
	comp=N,10nm,0.3s,baz=330,slow=13,SNR=9.9						
IDI	**Anoyia**	**1.49**	**325**	PG	**Pn**	**22 07 08.6**	**-1.2**
IDI				SG	**Sn**	**22 07 28.5**	**-0.1**
GVD	**Gavdhos**	**1.71**	**297**	P	**Pn**	**22 07 11.7**	**-1.0**
GVD	**Gavdhos**	**1.71**	**297**	P	**Pn**	**22 07 12.7**	**0.0**
GVD	**Gavdhos**	**1.71**	**297**	P	**Pn**	**22 07 12.0**	**-0.7**
KARP	**Karpathos**	**1.78**	**34**	PG	**Pn**	**22 07 12.7**	**-0.9**
KARP	**Karpathos**	**1.78**	**34**	P	**Pn**	**22 07 14.1**	**+0.5**
KARP				S	**Sn**	**22 07 36.9**	**+1.5**
KARP				AML	AML	22 07 50.6	
	comp=N,227μm,0.7s						
KARP				AML	AML	22 07 57.7	
	comp=E,224μm,0.8s						
KARP	**Karpathos**	**1.78**	**34**	P	Pn	22 07 14.7	+1.1
KARP	**Karpathos**	**1.78**	**34**	P	**Pn**	**22 07 13.9**	**+0.3**
KARP				S	**Sn**	**22 07 36.5**	**+1.1**
VAM	**Vamos**	**1.95**	**313**	P	**Pn**	**22 07 16.1**	**+0.2**
VAM				S	**Sn**	**22 07 38.4**	**-1.2**
VAM				AML	AML	22 07 52.0	
	comp=N,257μm,0.5s						
VAM				AML	AML	22 07 52.7	
	comp=E,236μm,0.4s						
VAM	**Vamos**	**1.95**	**313**	P	**Pn**	**22 07 16.1**	**+0.2**
VAM	**Vamos**	**1.95**	**313**	P	**Pn**	**22 07 15.8**	**-0.1**
VAM				S	**Sn**	**22 07 38.8**	**-0.8**
IMMV	**Iera Moni Meta**	**2.12**	**311**	P	**Pn**	**22 07 18.9**	**+0.6**
IMMV	**Iera Moni Meta**	**2.12**	**311**	P	**Pn**	**22 07 18.3**	**+0.1**
IMMV	**Iera Moni Meta**	**2.12**	**311**	P	**Pn**	**22 07 18.4**	**+0.2**
SANT	**Santorini**	**2.32**	**350**	*e*PG	**Pn**	**22 07 20.2**	**-0.8**
ARG	**Arkhangelos**	**2.78**	**39**	*e*PG	**Pn**	**22 07 26.7**	**-0.5**
ARG	**Arkhangelos**	**2.78**	**39**	P	Pn	22 07 28.8	+1.6
ARG				S	**Sn**	**22 08 01.3**	**+1.6**
ARG	**Arkhangelos**	**2.78**	**39**	P	Pn	22 07 28.4	+1.2
ARG				S	**Sn**	**22 08 01.0**	**+1.3**
ANKY	**Antikythira Is**	**2.81**	**310**	P	**Pn**	**22 07 28.2**	**+0.7**
ANKY				S	**Sn**	**22 08 00.3**	**+0.1**
ANKY	**Antikythira Is**	**2.81**	**310**	P	**Pn**	**22 07 27.7**	**+0.2**
ANKY	**Antikythira Is**	**2.81**	**310**	P	**Pn**	**22 07 27.9**	**+0.4**
ANKY				S	**Sn**	**22 08 00.2**	**-0.1**
DAT	**Datca**	**2.96**	**26**	*e*PG	**Pn**	**22 07 29.3**	**-0.4**
DAT	**Datca**	**2.96**	**26**	*i* P	**Pn**	**22 07 28.9**	**-0.7**
DAT				*i* S	**Sn**	**22 08 05.7**	**+1.5**
DAT	**Datca**	**2.96**	**26**	P	**Pn**	**22 07 29.0**	**-0.7**
DAT				S	**Sn**	**22 08 05.7**	**+1.5**
APE

comp=E,52μm,0.5s
VLI Veliai 3.60 318 P **Pn 22 07 37.5 -0.8**
VLI S **Sn 22 08 19.0 -0.6**
FETY Fethiye 3.62 44 *e*PG **Pn 22 07 37.4 -1.2**
FETY Fethiye 3.62 44 P **Pn 22 07 35.7 -2.9**
FETY S **Sn 22 08 19.2 -0.9**
KSL Kastellorizon 3.63 54 P Pn 22 07 39.6 +1.0
KSL S **Sn 22 08 21.0 +0.7**
KSL AML AML 22 08 29.5
comp=N,54μm,0.5s
KSL AML AML 22 08 29.8
comp=E,111μm,0.5s
AKAS Kas 3.69 53 *e*PG **Pn 22 07 39.1 -0.5**
AKAS Kas 3.69 53 *i* P **Pn 22 07 38.8 -0.8**
AKAS *i* S **Sn 22 08 21.9 -0.1**
AKAS Kas 3.69 53 P **Pn 22 07 38.8 -0.8**
AKAS S **Sn 22 08 21.9 -0.1**
DYR Agios Nikonas 3.98 313 P Pn 22 07 45.3 +1.8
DYR Agios Nikonas 3.98 313 P Pn 22 07 44.7 +1.2
DID Didima 4.07 328 P **Pn 22 07 43.5 -1.2**
DID Didima 4.07 328 P **Pn 22 07 43.5 -1.2**
ELL Elmali 4.19 49 *e*PG **Pn 22 07 46.9 +0.4**
DION Dionisos Attik 4.31 338 P **Pn 22 07 47.3 -0.7**
DION Dionisos Attik 4.31 338 P **Pn 22 07 48.0 0.0**
GOLH Golhisar 4.31 42 *i* P **Pn 22 07 48.8 +0.7**
GOLH *i* S **Sn 22 08 36.6 -0.6**
GOLH Golhisar 4.31 42 P **Pn 22 07 48.8 +0.7**
GOLH S **Sn 22 08 36.6 -0.6**
PYL PYLOS 4.43 311 P **Pn 22 07 48.9 -0.7**
PYL PYLOS 4.43 311 P **Pn 22 07 49.7 +0.1**
ITM Ithomi 4.50 315 *e*PG **Pn 22 07 50.6 0.0**
KORT Korkueli 4.63 50 *i* P Pn 22 07 55.4 +3.0
KORT *i* S **Sn 22 08 49.6 +4.7**
KORT Korkueli 4.63 50 P Pn 22 07 55.4 +3.0
KORT S **Sn 22 08 49.6 +4.7**
GUR Goura 4.83 324 P **Pn 22 07 53.8 -1.4**
GUR Goura 4.83 324 P **Pn 22 07 54.9 -0.3**
AMT Artemida-Makis 4.87 316 P **Pn 22 07 54.8 -0.9**
AMT Artemida-Makis 4.87 316 P **Pn 22 07 55.7 +0.1**
KLV Kalavryta, Ach 5.01 323 P **Pn 22 07 56.2 -1.4**
KLV Kalavryta, Ach 5.01 323 P **Pn 22 07 57.4 -0.2**
KEPZ Antalya-Kepez 5.41 57 *i* P **Pn 22 08 03.1 +0.1**
KEPZ *i* S **Sn 22 09 02.6 -1.4**
GAZI Gazipasa 5.65 66 *i* P **Pn 22 08 05.2 -1.0**
GAZI *i* S **Sn 22 09 06.8 -2.9**
AGG Agios Georgios 5.73 331 *e*PG Pn 22 08 09.1 +1.8
AGG Agios Georgios 5.73 331 P **Pn 22 08 08.2 +0.8**
AGG Agios Georgios 5.73 331 P **Pn 22 08 08.4 +1.1**
LEF Lefka 5.82 78 *e*PG **Pn 22 08 07.7 -0.9**
CSS Mathiatis 6.16 80 *e*PG **Pn 22 08 12.7 -0.6**
AKKU Akkuyu-Mersin 6.57 69 *e*PG **Pn 22 08 18.4 -0.4**
KDHN Kadinhani 6.67 47 *i* P Pn 22 08 21.7 +1.4
KDHN *i* S **Sn 22 09 36.3 +1.4**
IKL Isikli 6.70 69 *e*PG **Pn 22 08 19.8 -0.8**
KIZK Mersin 7.12 68 *e*PG **Pn 22 08 25.7 -0.7**
KZIT Kziot 7.81 112 *e*PG **Pn 22 08 33.1 -2.7**
MMAI Mount Meron Ar 7.97 95 P **Pn 22 08 35.8 -2.2**
comp=E,1.2nm,0.3s,baz=282,slow=13,SNR=14
MMAI S **Sn 22 10 03.9 -2.8**
comp=E,1.3nm,0.3s,baz=267,slow=27,SNR=5.7
BRTR Keskin Array B 8.35 45 P Pn 22 08 44.6 +1.3
comp=E,0.1nm,0.3s,baz=232,slow=14,SNR=2.6
HRFI Mount Harif 8.71 115 *e*PG **Pn 22 08 45.1 -3.0**
EIL Elat 8.83 117 P Pn 22 08 55.5 +5.8
comp=E,0.6nm,0.3s,baz=294,slow=5.3,SNR=7.5
EIL S **Sn 22 10 29.7 +2.0**
comp=E,0.3nm,0.3s,baz=41,slow=20,SNR=3.5
KEST Kesra 13.72 282 P **P 22 10 04.5 +2.0**
comp=E,0.1nm,0.3s,baz=55,slow=12,SNR=2.8
AKASG Malin Array Be 16.79 7 P **Pn 22 10 36.1 +0.9**
comp=E,0.6nm,0.3s,baz=195,slow=10,SNR=3.3
GERES GERESS Array B 17.34 332 P **Pn 22 10 40.4 -1.8**
comp=E,0.6nm,0.3s,baz=146,slow=13,SNR=8.5
HFS Hagfors 27.27 347 P **P 22 12 20.9 -1.4**
comp=E,1.1nm,0.8s,baz=148,slow=14,SNR=2.5
FINES FINESS Array B 27.38 0 P **P 22 12 21.6 -1.5**
comp=E,0.6nm,0.4s,baz=156,slow=11,SNR=9.5
TORD Torodi Ar. Bea 30.32 232 P **P 22 12 51.7 +2.1**
comp=E,0.8nm,0.7s,baz=38,slow=8.6,SNR=4.8
ARCES ARCESS Array B 35.51 360 P **P 22 13 34.8 +0.4**
comp=E,1.7nm,0.9s,baz=183,slow=7.9,SNR=3.0

*KRNET **09** 22:32:16.1±0.1, 41°.28N×79°.63E, mb3.0*
*SOME **09** 22:32:17.3, 41°.35N×79°.45E, h10km*
*NNC **09** 22:32:19.5±2.8, 41°.39N×79°.58E, h0km, mb3.4, mpv3.0,*
Error ellipse: s-maj=25.0km s-min=16.0km az=146.0
ISC 09 22:32:17.1±1.9, 41°.31N±0°.08×79°.56E±0°.05, h10km, n30,
σ1§50/57, 18C-8D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.38**	**288**	⇑*i*P	**Pn**	**22 32 42.6**	**-0.2**
TARG	baz=89			⇑*i*S	**Sg**	**22 33 02.2**	**+0.6**
PRZ	**Przheval'sk**	**1.46**	**324**	⇑*i*P	**Pb**	**22 32 43.9**	**-0.5**
PRZ	baz=23			⇑*i*S	**Sg**	**22 33 04.5**	**+0.5**
SHLS	**Shalkode**	**1.85**	**358**	⇑*i*P	**Pg**	**22 32 51.5**	**-1.1**
SHLS	60nm,0.6s			⇑*i*S	**Sg**	**22 33 16.0**	**-0.6**
UZB	**Uzynbulak**	**1.88**	**348**	*e*P	**Pb**	**22 32 51.3**	**-0.3**
UZB	8.3nm,0.4s			⇓*i*S	**Sg**	**22 33 15.6**	**-1.9**
SATY	**Saty**	**1.95**	**334**	*e*P	**Pg**	**22 32 53.3**	**-1.1**
SATY	10nm,0.4s			*e*S	**Sg**	**22 33 18.9**	**-0.8**
PDGK	**Podgornoye**	**2.02**	**359**	⇓Pn	**Pb**	**22 32 53.9**	**-0.1**
PDGK	16nm,0.5s			⇓Lg	Lg	22 33 23.3	
PDGK	**Podgornoye**	**2.02**	**359**	⇑*e*P	**Pb**	**22 32 52.9**	**-1.1**
PDGK	baz=57			⇑*i*S	**Sb**	**22 33 19.4**	**+0.2**
ZHN	**Zhinishke**	**2.04**	**336**	*e*P	**Pb**	**22 32 53.1**	**-1.2**
ZHN	14nm,0.1s			*e*S	**Sb**	**22 33 18.8**	**-0.9**
KTMS	**Ketmen**	**2.22**	**15**	*e*P	**Pb**	**22 32 57.5**	**+0.2**
KTMS	19nm,0.4s			*e*S	**Sg**	**22 33 26.2**	**-2.1**
KPKS	**Kokpek**	**2.25**	**344**	*e*P	**Pb**	**22 32 57.6**	**-0.3**
KPKS	24nm,0.3s			*e*S	**Sg**	**22 33 27.0**	**-2.4**
KURS	**Kuram**	**2.41**	**335**	*e*P	**Pb**	**22 32 59.7**	**-0.9**
KURS	9.2nm,0.6s			*e*S	**Sb**	**22 33 30.5**	**+0.1**
TNSS	**Tian-Shan**	**2.60**	**313**	*e*P	**Pb**	**22 33 03.1**	**-0.9**
TNSS	23nm,0.7s			*e*S	**Sb**	**22 33 36.0**	**-0.1**
MDOK	**Medeo**	**2.63**	**316**	Pn	**Pb**	**22 33 03.4**	**-1.0**
MDOK	12nm,0.7s			⇓Lg	Lg	22 33 38.9	
MDOK	**Medeo**	**2.63**	**316**	*e*P	**Pb**	**22 33 04.0**	**-0.3**
MDOK	25nm,0.6s			*e*S	**Sb**	**22 33 38.0**	**+1.3**
KOTS	**Kotyrbulak**	**2.65**	**317**	*e*P	**Pb**	**22 33 03.8**	**-0.8**
KOTS	4.8nm,0.3s			*e*S	**Sb**	**22 33 37.3**	**+0.1**
ULHL	**Ulahol**	**2.65**	**292**	⇑*i*P	**Pn**	**22 33 02.2**	**+2.1**
ULHL	19nm,0.9s			⇑*i*S	**Sb**	**22 33 35.8**	**-1.7**
NRN	**Naryn**	**2.68**	**274**	⇑*i*P	**Pn**	**22 33 02.9**	**+2.3**
NRN	baz=74			⇑*i*S	**Sb**	**22 33 36.8**	**-1.6**
IZV	**Izvestkoviy**	**2.79**	**309**	*e*P	**Pb**	**22 33 06.0**	**-1.1**
IZV	11nm,0.6s			*e*S	**Sb**	**22 33 41.3**	**-0.1**
MNBS	**Baschi**	**2.90**	**343**	*e*P	**Pb**	**22 33 08.0**	**-0.9**
MNBS	9.7nm,0.6s			*e*S	**Sb**	**22 33 44.6**	**+0.1**
BOOM	**Boomskoye usch**	**2.95**	**295**	⇑*i*P	**Pn**	**22 33 06.1**	**+2.0**
BOOM	35nm,0.4s			⇑*i*S	**Sb**	**22 33 43.0**	**-3.0**
MTBS	**Maitube**	**2.95**	**309**	*e*P	**Pb**	**22 33 10.0**	**+0.1**
MTBS	7.1nm,0.4s			*e*S	**Sb**	**22 33 47.6**	**+1.6**
DJR	**Jarkent**	**3.03**	**3**	*e*P	**Pb**	**22 33 10.6**	**-0.6**
DJR	20nm,0.5s			*e*S	**Sb**	**22 33 48.9**	**+0.7**
CHKK	**Chushkaly**	**3.17**	**324**	*e*P	**Pb**	**22 33 14.2**	**+0.6**
CHKK	9.1nm,0.3s			⇓*e*S	**Sb**	**22 33 55.0**	**+2.6**
KST	**Kastek**	**3.19**	**304**	*e*P	**Pb**	**22 33 12.4**	**-1.4**
KST	46nm,0.3s			*e*S	**Sb**	**22 33 51.7**	**-1.0**
KTBS	**Karatobe**	**3.21**	**319**	*e*P	**Pb**	**22 33 15.0**	**+0.8**
KTBS	42nm,0.6s			*e*S	**Sg**	**22 33 56.6**	**-3.5**
TKM2	**Tokmak 2**	**3.36**	**300**	⇓Pn	**Pb**	**22 33 13.4**	**-3.4**
TKM2	1.8nm,0.4s			⇓Lg	Lg	22 34 02.9	
TKM2	**Tokmak 2**	**3.36**	**300**	⇑*e*P	**Pn**	**22 33 11.9**	**+2.1**
TKM2	baz=0.0			⇑*i*S	**Sn**	**22 33 52.4**	**+2.5**
DGS	**Degeres**	**3.41**	**306**	*e*P	**Pb**	**22 33 17.9**	**+0.2**
DGS	9.1nm,0.7s			*e*S	**Sb**	**22 34 01.1**	**+1.9**
KUU	**Kurty**	**3.51**	**318**	*e*P	**Pb**	**22 33 19.6**	**+0.4**
KUU	3.3nm,0.7s			*e*S	**Sb**	**22 34 04.7**	**+2.8**
MK31	**Makanchi Array**	**5.83**	**19**	⇑Pn	**Pn**	**22 33 43.6**	**0.0**
MK31	0.1nm,0.3s,baz=202,slow=13,SNR=8.4			⇑Sn	**Sn**	**22 34 52.6**	**+2.2**
MK31	0.7nm,0.5s,baz=197,slow=25,SNR=6.3			⇓Lg	Lg	22 35 19.9	
	1.3nm,0.6s						

IDC 09 22:40:58.2±25.0, 18°.52S×173°.95W, h0km, mb4.2/4,
mb1 4.4/4, mb1mx3.8/46, mbtmp4.2/4, Error ellipse:
s-maj=469.9km s-min=156.6km az=73.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**37.53**	**261**	P	P	22 48 15.3	+1.0
	3.7nm,0.4s,baz=86,slow=11,SNR=7.4						
STKA	**Stephens Creek**	**42.09**	**243**	P	P	22 48 52.0	0.0
	0.8nm,0.5s,baz=110,slow=12,SNR=3.8						
WRA	**Warramunga Arr**	**48.69**	**259**	P	P	22 49 44.0	-0.7
	1.0nm,0.4s,baz=97,slow=8.0,SNR=37						
ASAR	**Alice Springs**	**48.71**	**254**	P	P	22 49 44.2	-0.6
	2.3nm,0.4s,baz=88,slow=8.2,SNR=46						

*ISCJB **09** 22:58:03.6±0.3, 2°.61N±0°.05×123°.74E±0°.06, h400km,*
mb3.7/14, Error ellipse: s-maj=8.2km s-min=5.7km
az=157.0
*DJA **09** 22:58:06.4±0.6, 2°.N±8°.×12°.4E±°., h382km±11km, M4.3/9,*
mb4.2/5, mbB4.6/3, MLv4.4/9, Mw(mB)3.8/3
*IDC **09** 22:58:06.8±3.9, 2°.62N×123°.81E, h420km±50km, mb3.3/13,*
mb1 3.4/14, mb1mx3.2/54, mbtmp4.2/14, Error ellipse:
s-maj=28.6km s-min=12.6km az=86.0
ISC 09 22:58:05.0±0.5, 2°.58N±0°.07×123°.71E±0°.07, h400km, n38,
σ1§39/40, mb3.7/14, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**2.74**	**220**	P	**Pn**	**22 59 05.5**	**-0.7**
LUWI	**Luwuk**	**3.72**	**195**	P	**Pn**	**22 59 13.0**	**-1.5**
LUWI				S	**S**	**23 00 06.2**	**-4.6**
APSI	**Ampana**	**4.03**	**211**	P	**Pn**	**22 59 16.3**	**-1.2**
MPSI	**Mapaga**	**4.42**	**240**	P	**Pn**	**22 59 20.4**	**-0.8**
LBMI	**Labuha**	**4.96**	**130**	P	**Pn**	**22 59 26.3**	**-0.3**
LBMI				S	**S**	**23 00 31.3**	**-1.6**
SANI	**Sanana**	**5.13**	**154**	P	**Pn**	**22 59 27.0**	**-1.4**
PCI	**Palu**	**5.20**	**228**	P	**Pn**	**22 59 27.9**	**-1.2**
	154nm,0.6s,3μm						
TTSI	**Tana Toraja**	**6.81**	**215**	P	**P**	**22 59 48.9**	**+1.7**
SMKI	**Samarinda**	**7.16**	**245**	P	**P**	**22 59 52.3**	**+1.1**
SPSI	**Sidrap Palu**	**7.60**	**211**	P	**Pn**	**22 59 54.3**	**-1.2**
MSAI	**Masohi**	**7.86**	**138**	P	**Pn**	**22 59 55.9**	**-2.6**
SIJI	**Sorong**	**8.29**	**114**	P	**P**	**23 00 05.2**	**+1.5**
	5.6nm,0.3s,baz=329,slow=17,SNR=9.9						
BKSI	**Bulukumba**	**8.63**	**205**	P	**P**	**23 00 08.5**	**+1.0**
BATI	**Baumata**	**12.70**	**180**	P	**Pn**	**23 00 58.5**	**+4.0**
	2.6nm,0.3s,baz=264,slow=19,SNR=3.2						
WRA	**Warramunga Arr**	**24.69**	**155**	P	**P**	**23 02 51.7**	**-0.3**
	0.8nm,0.3s,baz=334,slow=9.7,SNR=19						
ASAR	**Alice Springs**	**27.91**	**160**	P	**P**	**23 03 20.9**	**+0.3**
	0.3nm,0.3s,baz=339,slow=8.6,SNR=6.2						
JCJ	**Chichijima**	**30.12**	**34**	P	**P**	**23 03 38.7**	**-1.2**
	49nm,0.4s,baz=279,slow=16,SNR=7.7						
MJAR	**Matsushiro Arr**	**36.35**	**20**	P	**P**	**23 04 31.9**	**-1.1**
	2.4nm,0.6s,baz=199,slow=9.8,SNR=10						
STKA	**Stephens Creek**	**38.25**	**155**	P	**P**	**23 04 50.0**	**+1.2**
	0.9nm,0.3s,baz=343,slow=6.9,SNR=4.0						
ODAN	**Odare**	**42.34**	**308**	*e*P	**P**	**23 05 21.5**	**-0.8**
RAMN	**Ramite**	**43.01**	**308**	*e*P	**P**	**23 05 28.1**	**+0.5**
	7.4nm,0.6s						
JIRN	**Jiri**	**43.66**	**309**	*e*P	**P**	**23 05 33.0**	**+0.1**
	10nm,0.6s						
GUN	**Gumba**	**44.02**	**309**	*e*P	**P**	**23 05 35.4**	**-0.3**
	14nm,0.7s						
PKIN	**Phulchoki**	**44.25**	**308**	*e*P	**P**	**23 05 37.5**	**+0.2**
	5.9nm,0.5s						
KKN	**Kakani**	**44.44**	**308**	*e*P	**P**	**23 05 38.7**	**-0.1**
	6.9nm,0.7s						
ASAJ	**Asahikawa**	**44.62**	**19**	P	**P**	**23 05 39.7**	**+0.1**
	4.3nm,0.6s,baz=119,slow=19,SNR=6.9						
GKN	**Gorkha**	**45.04**	**308**	*e*P	**P**	**23 05 43.8**	**+0.4**
KOLN	**Koldanda**	**45.76**	**307**	*e*P	**P**	**23 05 49.3**	**+0.3**
	12nm,0.6s						
DANN	**Dangsing**	**45.88**	**308**	*e*P	**P**	**23 05 50.1**	**0.0**
	18nm,0.6s						
PYUN	**Piuthan**	**46.38**	**307**	*e*P	**P**	**23 05 53.9**	**+0.1**
	15nm,0.6s						
SONM	**Songino Array**	**47.50**	**344**	P	**P**	**23 06 02.5**	**+0.6**
	0.4nm,0.4s,baz=170,slow=10,SNR=3.1						
MKAR	**Makanchi Array**	**56.83**	**327**	P	**P**	**23 07 09.8**	**+0.3**
	2.5nm,0.4s,baz=124,slow=7.7,SNR=64						
PETK	**Petropavlovsk-**	**57.65**	**24**	P	**P**	**23 07 14.9**	**-0.2**
	1.6nm,0.6s,baz=186,slow=3.8,SNR=4.2						
ZALV	**Zalesovo Beam**	**60.29**	**335**	P	**P**	**23 07 32.1**	**-0.8**
	0.6nm,0.4s,baz=112,slow=4.2,SNR=4.3						
KURBB	**Kurchatov Arra**	**61.12**	**329**	P	**P**	**23 07 38.5**	**0.0**
	2.5nm,0.7s,baz=133,slow=6.4,SNR=31						
BVAR	**Borovoye Array**	**66.67**	**328**	P	**P**	**23 08 14.0**	**-0.2**
	0.8nm,0.5s,baz=232,slow=38,SNR=5.8						
NRIK	**Noril'sk**	**70.85**	**347**	P	**P**	**23 08 40.0**	**+0.7**
	1.9nm,0.5s,baz=124,slow=6.9,SNR=5.2						
AKTO	**Aktyubinsk**	**72.70**	**322**	P	**P**	**23 08 50.2**	**-0.4**
	1.8nm,0.7s,baz=118,slow=12,SNR=6.2						

MEX 09 23:02:39.2±0.9, 14°.18N×93°.16W, h16km±999km, MD3.9,
Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.52**	**358**	*e*P	Pn	23 03 01.2	-4.5
PCIG				*i* S	Sn	23 03 19.9	-5.2
TGIG		**2.59**	**1**	*e*P	Pn	23 03 18.3	-2.1
TGIG				*e*S	Sn	23 03 47.2	-4.3

KRSC 09 23:06:48.5±2.7, 48°.74N×156°.66E, h10km±48km, ML3.9,
East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.98**	**350**	*e*P	Pn	23 07 20.8	-1.2
SKR				*e*S	Sn	23 07 45.7	-1.1
PAU	**Pauzhetka**	**2.73**	**2**	*e*P	Pb	23 07 34.9	-2.5
PAU				*e*S	Sb	23 08 08.2	-2.7
KDTR	**Khodutka, Kamc**	**3.20**	**16**	*e*P	Pb	23 07 42.5	-2.9
KDTR				*e*S	Sb	23 08 22.6	-1.9
ASAK	**Asacha**	**3.73**	**12**	*e*P	Pn	23 07 49.5	+3.3
MTVR	**Mutnovka**	**3.87**	**14**	*e*P	Pn	23 07 52.3	+4.1
RUS	**Russkaya**	**3.88**	**17**	*e*P	Pn	23 07 51.8	+3.6
RUS				*e*S	Sb	23 08 39.4	-4.6
UGLR	**Uglovaya**	**4.68**	**16**	*e*P	Pn	23 08 03.4	+4.2
KRER	**Koryakskii**	**4.75**	**15**	*e*P	Pn	23 08 05.3	+4.9
SDLR	**Sedlovina**	**4.75**	**16**	*e*P	Pn	23 08 04.1	+3.8
KRX	**Arik**	**4.79**	**14**	P	Pn	23 08 06.5	+5.7
SPN	**Mys Shipunski**	**4.85**	**25**	*e*P	Pn	23 08 06.5	+5.0
SPN				*e*S	Sn	23 09 04.4	+6.7
GNL	**Ganaly**	**5.03**	**9**	*e*P	Pn	23 08 09.0	+5.0
MKZ	**Mys Kozlova**	**6.62**	**27**	P	Pn	23 08 29.3	+3.5

*NNC **09** 23:23:48.1±1.7, 38°.82N×70°.38E, h0km, mb3.9, mpv3.5,*
Error ellipse: s-maj=13.0km s-min=10.3km az=47.0
ISC 09 23:23:47.1±4.3, 38°.6N±0°.2×70°.2E±0°.2, h17km, n14,
σ0§72/18, 7C-5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**2.92**	**61**	⇑Pn	**Pn**	**23 24 33.2**	**+0.2**
SFK	12nm,0.5s			⇓Lg	Lg	23 25 11.5	
MNAS	**Manas**	**4.24**	**24**	⇑Pn	**Pn**	**23 24 50.8**	**-0.3**
MNAS	3.2nm,0.4s			⇑Sn	**Sn**	**23 25 39.7**	**-0.5**
AML	**Almayashu**	**4.41**	**36**	P	**Pn**	**23 24 53.1**	**-0.5**
KK31	SNR=21 **Karatay Array**	**4.48**	**3**	⇑Pn	**Pn**	**23 24 54.1**	**-0.1**
KK31	2.1nm,0.5s,baz=180,slow=11,SNR=57			⇓Sn	**Sn**	**23 25 46.4**	**+0.5**
KK31	3.3nm,0.4s,baz=178,slow=16,SNR=3.8			⇓Lg	Lg	23 26 02.3	
EKS2	3.6nm,0.3s,baz=180,slow=34,SNR=6.9 **Erkin-Say**	**4.87**	**33**	P	**Pn**	**23 25 00.0**	**+0.4**
UCH	SNR=12 **Uchtor**	**4.88**	**41**	P	**Pn**	**23 24 58.1**	**-2.0**
AAK	SNR=17 **Ala-Archa**	**5.17**	**38**	⇓Pn	**Pn**	**23 25 03.7**	**-0.2**
AAK	6.2nm,0.5s			⇑Sn	**Sn**	**23 26 04.3**	**+1.0**
AAK	8.8nm,0.9s **Ala-Archa**	**5.17**	**38**	P	**Pn**	**23 25 04.1**	**+0.2**
KZA	SNR=11 **Kyzart**	**5.18**	**47**	P	**Pn**	**23 25 04.5**	**+0.3**
KBK	SNR=8.4 **Karagaybulak**	**5.41**	**40**	P	**Pn**	**23 25 08.2**	**+1.0**
CHMS	SNR=33 **Chumysh**	**5.57**	**37**	P	**Pn**	**23 25 09.8**	**+0.6**
USP	SNR=6.8 **Ospenovka**	**5.67**	**34**	P	**Pn**	**23 25 10.4**	**-0.2**
TKM2	SNR=15 **Tokmak 2**	**5.94**	**42**	⇑Pn	**Pn**	**23 25 14.0**	**-0.4**
TKM2	6.0nm,0.4s			⇑Sn	**Sn**	**23 26 21.6**	**-0.6**
TKM2	4.8nm,0.5s			⇓Lg	Lg	23 26 47.6	
TKM2	5.0nm,0.7s **Tokmak 2**	**5.94**	**42**	P	**Pn**	**23 25 14.3**	**-0.1**
	SNR=16						

IDC 09 23:23:52.4±1.8, 5°.43S×130°.37E, h0km, mb3.8/2,
mb1 3.7/4, mb1mx3.4/49, mbtmp3.6/4, ML3.6/2, MS4.0/3,
Ms1 4.0/3, ms1mx2.9/50, Error ellipse: s-maj=130.8km
s-min=27.9km az=73.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.94**	**165**	Pn	Pn	23 27 23.4	-1.6
	0.2nm,0.3s,baz=348,slow=14,SNR=7.7						
WRA				Sn	Sn	23 30 06.7	-4.6
	0.3nm,0.3s,baz=354,slow=23,SNR=6.5						
ASAR	**Alice Springs**	**18.45**	**170**	P	P	23 28 10.2	+0.4
	0.2nm,0.3s,baz=352,slow=9.8,SNR=9.1						
ASAR				S	Sn	23 31 33.2	-3.5
	0.1nm,0.3s,baz=351,slow=24,SNR=4.3						
SONM	**Songino Array**	**57.08**	**341**	P	P	23 33 40.5	-0.1
	0.7nm,0.4s,baz=160,slow=5.8,SNR=3.6						
SONM				LR	LR	23 59 24.1	
	comp=Z,101nm,21.0s,baz=352,slow=37						
MKAR	**Makanchi Array**	**67.13**	**326**	P	P	23 34 48.0	0.0
	0.4nm,0.5s,baz=116,slow=8.3,SNR=6.3						
RAR	**Rarotonga**	**69.28**	**111**	LR	LR	00 02 34.9	
	comp=Z,84nm,19.4s,baz=202,slow=34						
ASF	**Jabal al Asfar**	**95.80**	**302**	LR	LR	00 27 31.7	
	comp=Z,130nm,19.7s,baz=208,slow=40						

*IDC **09** 23:31:10.2±1.2, 7°.64S×147°.18E, h0km, mb3.8/7,*
mb1 3.9/9, mb1mx3.8/43, mbtmp3.8/9, ML3.7/2, Error
ellipse: s-maj=51.6km s-min=16.7km az=92.0
*NEIC **09** 23:31:11.6±0.5, 7°.68S×147°.17E, h10km, mb4.1/4, Error*
ellipse: s-maj=17.7km s-min=6.6km az=97.0
*ISCJB **09** 23:31:13.6±0.7, 7°.75S±0°.06×147°.0E±0°.1, h32km, mb3.9/9,*
Error ellipse: s-maj=19.2km s-min=8.5km az=13.1
ISC 09 23:31:15.3±0.8, 7°.75S±0°.06×147°.0E±0°.2, h32km, n17,
σ1§31/20, mb3.8/9, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**1.66**	**173**	Pn	**Pn**	**23 31 41.5**	**-0.7**
	64nm,0.3s,baz=9.3,slow=6.1,SNR=91						
PMG				Sn	**Sb**	**23 32 05.9**	**+0.2**
	53nm,0.3s,baz=54,slow=23,SNR=19						
PMG	**Port Moresby**	**1.66**	**173**	*e*Pn	**Pn**	**23 31 41.5**	**-0.7**
PMG				*e*Sg	**Sb**	**23 32 06.6**	**+0.8**
CTA	**Charters Tower**	**12.29**	**183**	Pn	**Pn**	**23 34 08.2**	**0.0**
	0.2nm,0.3s,baz=349,slow=16,SNR=2.6						
WRAB	**Tennant Creek**	**17.20**	**224**	*e*Pn	**Pn**	**23 35 14.4**	**+1.0**
	0.8nm,0.3s						
WRA	**Warramunga Arr**	**17.22**	**224**	P	**Pn**	**23 35 14.3**	**+0.8**
	0.3nm,0.3s,baz=52,slow=12,SNR=8.8						
WRA				S	**Sn**	**23 38 20.3**	**-3.9**
	0.1nm,0.3s,baz=49,slow=27,SNR=3.7						
ASAR	**Alice Springs**	**20.18**	**217**	P	**P**	**23 35 49.2**	**+1.9**
	2.7nm,0.7s,baz=28,slow=13,SNR=25						
MAJO	**Matsushiro**	**44.82**	**350**	P	**P**	**23 39 25.3**	**-1.1**
	1.1nm,0.5s						
CHTO	**Chiang Mai**	**54.20**	**300**	P	**P**	**23 40 39.7**	**+1.5**
	0.7nm,0.4s						
SONM	**Songino Array**	**65.91**	**331**	P	**P**	**23 41 57.5**	**-0.7**
	0.5nm,0.4s,baz=127,slow=9.2,SNR=3.3						
TLY	**Talaya**	**69.87**	**333**	P	**P**	**23 42 22.6**	**-0.3**
	2.5nm,0.8s						
MKAR	**Makanchi Array**	**78.81**	**321**	P	**P**	**23 43 14.8**	**-0.3**
	0.6nm,0.6s,baz=105,slow=7.1,SNR=7.7						
ZALV	**Zalesovo Beam**	**80.46**	**328**	P	**P**	**23 43 24.0**	**+0.1**
	0.5nm,0.5s,baz=98,slow=5.1,SNR=2.4						
KURK	**Kurchatov**	**82.58**	**323**	P	**P**	**23 43 36.0**	**+0.9**
KURBB	**Kurchatov Arra**	**82.60**	**323**	P	**P**	**23 43 36.0**	**+0.8**
	0.3nm,0.3s,baz=128,slow=3.8,SNR=3.4						
ILAR	**Eielson Array**	**87.10**	**23**	P	**P**	**23 43 56.5**	**-1.0**
	0.4nm,0.6s,baz=249,slow=5.3,SNR=5.5						
BVAR	**Borovoye Array**	**88.15**	**324**	P	**P**	**23 44 03.4**	**+0.5**
	0.2nm,0.4s,baz=151,slow=3.3,SNR=3.2						
TORD	**Torodi Ar. Bea**	**145.44**	**282**	PKPbc	**PKPab**	**23 50 52.0**	**+0.6**
	1.8nm,0.6s,baz=75,slow=3.4,SNR=35						

*ISCJB **09** 23:40:23.9±0.5, 38°.13N±0°.03×27°.51E±0°.03, h6km±6km,*
Error ellipse: s-maj=4.8km s-min=4.2km az=5.6
*DDA **

AYDN	Tasoluk	0.56	147	P	Pb	23 40 35.4	-0.5
AYDN				S	Sg	23 40 42.6	+0.1
URLA	Izmir	0.74	288	PG	Pg	23 40 37.9	-0.5
URLA	Izmir	0.74	288	*e*Pg	Pg	23 40 37.9	-0.5
ZEY	˜zmir	0.79	278	*i* P	Pb	23 40 39.7	0.0
ZEY				*i* S	Sb	23 40 51.0	+0.7
MLSB	Milas	0.87	165	PG	Pb	23 40 41.0	-0.1
MLSB	Milas	0.87	165	*e*Pg	Pb	23 40 41.0	-0.1
MANT	Manisa	0.91	67	*i* P	Pb	23 40 42.4	+0.5
MANT				*i* S	Sg	23 40 52.1	-1.3
MANT	Manisa	0.91	67	P	Pb	23 40 42.4	+0.5
MANT				S	Sg	23 40 52.1	-1.3
KULA	Kula-Manisa	0.99	67	PG	Pb	23 40 43.6	+0.4
KULA	Kula-Manisa	0.99	67	*e*Pg	Pb	23 40 43.6	+0.4
DKL	Dikili	1.04	334	PG	Pn	23 40 44.6	+0.2
DKL	Dikili	1.04	334	*e*Pg	Pn	23 40 44.6	+0.2
BDRM	Kayabasi	1.07	182	*i* P	Pb	23 40 44.5	0.0
BDRM				*i* S	Sb	23 40 58.4	-0.1
BDRM	Kayabasi	1.07	182	P	Pb	23 40 44.5	0.0
BDRM				S	Sb	23 40 58.4	-0.1
BODT	Bodrum	1.08	188	PG	Pb	23 40 44.7	0.0
BODT	Bodrum	1.08	188	*e*Pg	Pb	23 40 44.7	0.0
CHOS	Chios island	1.16	283	PN	Pn	23 40 46.7	+0.5
CHOS	Chios island	1.16	283	*e*Pn	Pn	23 40 46.7	+0.5
STEP	BALIKESIR_Sava	1.25	8	*i* P	Pn	23 40 47.8	+0.4
STEP				*i* S	Sg	23 41 04.7	+0.4
STEP	BALIKESIR_Sava	1.25	8	P	Pn	23 40 47.8	+0.4
STEP				S	Sg	23 41 04.7	+0.4
DEMI	Demirci	1.32	46	*i* P	Pb	23 40 49.1	+0.4
DEMI				*i* S	Sb	23 41 04.5	-1.1
DEMI	Demirci	1.32	46	P	Pb	23 40 49.1	+0.4
DEMI				S	Sb	23 41 04.5	-1.1
DAT	Datca	1.41	177	PN	Pn	23 40 49.9	+0.3
DAT	Datca	1.41	177	*e*Pn	Pn	23 40 49.9	+0.3

MEX 09 23:43:13.6±0.7, 15°.31N×93°.03W, h90km±14km, MD3.5, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		0.43	335	*e*P	Pn	23 43 26.4	-1.4
PCIG				*i* S	Sn	23 43 36.7	-1.6
THIG		0.84	118	*i* P	Pn	23 43 30.8	-0.7
THIG				*i* S	Sn	23 43 42.5	-2.3

*IDC **09** 23:43:28.2±0.7, 17°.42S×167°.32E, h0km, mb4.1/11, mb1 4.4/13, mb1mx4.1/54, mbtmp4.3/13, ML4.9/2, MS3.4/2, Ms1 3.4/2, ms1mx2.8/43, Error ellipse: s-maj=22.4km s-min=17.8km az=116.0*
*ISCJB **09** 23:43:29.5±0.6, 17°.43S±0°.06×167°.2E±0°.1, h19km, mb4.1/11, Error ellipse: s-maj=15.0km s-min=8.5km az=179.5*
*NEIC **09** 23:43:32.1±3.5, 17°.42S×167°.30E, h25km±24km, mb4.5/1, Error ellipse: s-maj=14.4km s-min=9.3km az=73.0*
ISC 09 23:43:31.2±0.6, 17°.43S±0°.08×167°.3E±0°.1, h19km, n17, σ0°70/19, mb4.2/11, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.68	189	Pn	Pn	23 44 42.2	+1.3
21nm,0.3s,baz=311,slow=2.9,SNR=403							
DZM				Sn	Sn	23 45 33.9	-0.9
20nm,0.3s,baz=310,slow=22,SNR=8.5							
DZM				LR	LR	23 46 22.3	
comp=Z,379nm,18.7s,baz=198,slow=37							
HNR	Honiara	10.68	317	Pn	Pn	23 46 03.3	+0.1
24nm,0.3s,baz=16,slow=1.3,SNR=8.0							
HNR				LR	LR	23 48 54.7	
comp=Z,208nm,20.1s,baz=102,slow=30							
CTA	Charters Tower	20.07	259	P	Pn	23 48 05.4	-0.1
3.6nm,0.7s,baz=99,slow=12,SNR=5.2							
URZ	Urewera	22.47	159	P	P	23 48 28.7	-0.6
2.6nm,0.6s,baz=0.0,slow=3.0,SNR=2.0							
STKA	Stephens Creek	27.32	233	P	P	23 49 14.1	-0.9
2.5nm,0.7s,baz=80,slow=11,SNR=6.0							
WRA	Warramunga Arr	31.27	260	P	P	23 49 49.8	-0.4
1.8nm,0.9s,baz=89,slow=7.8,SNR=6.1							
ASAR	Alice Springs	31.80	253	P	P	23 49 55.3	+0.4
2.1nm,0.6s,baz=80,slow=8.6,SNR=35							
MJAR	Matsushiro Arr	60.30	333	P	P	23 53 38.6	-0.1
2.2nm,1.0s,baz=165,slow=6.5,SNR=4.8							
PETK	Petropavlovsk-	70.73	354	P	P	23 54 45.8	0.0
3.6nm,0.9s,baz=160,slow=5.4,SNR=3.1							
QSPA	South Pole Qui	72.61	180	P	P	23 54 57.0	-0.3
5.8nm,1.1s							
NVAR	Mina Array Bea	89.03	49	P	P	23 56 24.7	-0.7
0.8nm,0.3s,baz=226,slow=7.9,SNR=4.4							
ILAR	Eielson Array	89.08	18	P	P	23 56 24.5	-0.3
1.3nm,0.6s,baz=234,slow=5.3,SNR=17							
SNAA	Sanae	90.86	183	P	P	23 56 33.7	+0.4
1.0nm,0.8s,baz=207,slow=14,SNR=4.4							
TXAR	Lajitas Array	97.56	62	P	P	23 57 05.2	+0.5
0.3nm,0.9s,baz=251,slow=2.8,SNR=3.3							
ARCES	ARCESS Array B	122.85	345	PKP	PKPdf	00 02 24.4	-1.0
0.8nm,0.5s,baz=70,slow=1.4,SNR=8.4							
ESDC	Sonseca Array	156.57	343	PKPab	PKPab	00 03 55.0	+0.9
0.1nm,0.4s,baz=26,slow=3.8,SNR=5.1							
TORD	Torodi Ar. Bea	165.45	255	PKP	PKPdf	00 03 36.4	+0.9
0.7nm,0.9s,baz=346,slow=3.3,SNR=3.0							
TORD				PKPab	PKPab	00 04 33.9	+0.3

IDC 09 23:54:20.0±3.5, 7°.79S×147°.80E, h0km, mb2.8/1, mb1 3.2/2, mb1mx3.1/49, mbtmp2.9/2, ML2.9/1, Error ellipse: s-maj=114.3km s-min=31.1km az=105.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	1.73	201	Pn	Pn	23 54 51.9	+0.6
7.5nm,0.3s,baz=348,slow=6.4,SNR=11							
PMG				Sn	Sg	23 55 17.1	+1.5
5.6nm,0.3s,baz=51,slow=18,SNR=7.6							
WRA	Warramunga Arr	17.78	226	P	Pn	23 58 27.2	-1.9
0.0nm,0.3s,baz=54,slow=12,SNR=2.7							
ASAR	Alice Springs	20.66	219	P	P	23 59 00.2	-1.4
0.4nm,0.7s,baz=27,slow=12,SNR=4.0							
TORD	Torodi Ar. Bea	146.26	282	PKPbc	PKPbc	00 14 03.5	-0.2
0.3nm,0.7s,baz=77,slow=4.2,SNR=3.0							

*IDC **09** 23:57:45.6±1.0, 4°.64S×102°.56E, h0km, mb4.1/13, mb1 4.2/13, mb1mx3.9/61, mbtmp4.1/13, Error ellipse: s-maj=49.3km s-min=14.7km az=50.0*
*NEIC **09** 23:57:51.0±0.4, 4°.60S×102°.62E, h35km, mb4.2/6, Error ellipse: s-maj=14.6km s-min=6.1km az=50.0*
*ISCJB **09** 23:57:51.5±0.5, 4°.68S±0°.07×102°.59E±0°.05, h56km, mb4.1/18, Error ellipse: s-maj=11.0km s-min=5.7km az=31.1*
*DJA **09** 23:57:54.9±0.5, 5°.S±4°.×10°.3E±°, h35km±8km, M4.2/8, MLv4.2/8*
ISC 09 23:57:53.5±0.7, 4°.65S±0°.08×102°.71E±0°.07, h56km, n33, σ1°07/32, mb4.2/18, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	Manna	0.38	41	P	Pn	23 58 04.8	+0.9
MNAI				S	Sn	23 58 11.2	-0.2
LWLI	Liwa	1.39	105	P	Pn	23 58 17.9	+1.1
MDSI	Maura Dua	1.47	84	P	Pn	23 58 18.8	+1.1
MDSI				S	Sn	23 58 37.6	+1.6
MASI	Maura Aman, Be	1.57	343	P	Pn	23 58 20.8	+1.7
KASI	Kota Agung	1.98	116	P	Pn	23 58 25.8	+1.1
KASI				S	Sn	23 58 48.7	+0.3
KRJI	Kerinci	2.83	334	P	Pn	23 58 45.6	+9.2
PPSI	Pulau Pagai	3.28	305	P	Pn	23 58 44.5	+2.0
CGJI	Cibinong	3.55	123	P	Pn	23 58 47.1	+0.9
PDSI	Padang	4.34	329	P	Pn	23 58 59.0	+2.0
CMAR	Chiang Mai Arr	23.26	351	P	P	00 02 55.8	-0.5
0.9nm,0.5s,baz=187,slow=7.6,SNR=7.1							
CHTO	Chiang Mai	23.61	351	P	P	00 02 57.9	-1.7
0.7nm,0.3s							
H01W3	Cape Leeuwin H	31.89	162	T	T	00 38 06.7	
baz=339,slow=76,SNR=11							
H01W2	Cape Leeuwin H	31.91	162	T	T	00 38 06.9	
baz=339,slow=76,SNR=15							
H01W1	Cape Leeuwin H	31.91	162	T	T	00 38 07.9	
baz=339,slow=76,SNR=12							
WRA	Warramunga Arr	34.34	119	P	P	00 04 35.6	+0.4
0.7nm,0.5s,baz=298,slow=9.7,SNR=2.8							
WRAB	Tennant Creek	34.34	119	P	P	00 04 35.6	+0.3
1.5nm,0.6s							
ASAR	Alice Springs	35.52	125	P	P	00 04 45.5	+0.2
0.5nm,0.3s,baz=294,slow=7.7,SNR=5.3							
CTA	Charters Tower	45.05	114	P	P	00 06 04.3	+0.2
2.5nm,0.6s,baz=315,slow=11,SNR=3.3							
CTAO	Charters Tower	45.05	114	P	P	00 06 04.6	+0.5
7.0nm,0.7s							
STKA	Stephens Creek	45.38	131	P	P	00 06 07.0	+0.3
1.4nm,0.4s,baz=309,slow=9.8,SNR=3.6							
GUMO	Guam	45.60	66	P	P	00 06 09.1	+0.5
11nm,0.4s							
SONM	Songino Array	52.36	3	P	P	00 06 59.8	-0.2
3.2nm,0.6s,baz=184,slow=9.5,SNR=17							
ULN	Ulaanbaatar	52.43	4	P	P	00 07 00.1	-0.4
1.1nm,0.6s							
MKAR	Makanchi Array	54.32	343	P	P	00 07 13.0	-1.2
1.2nm,0.4s,baz=154,slow=9.2,SNR=25							
KURBB	Kurchatov Arra	58.86	342	P	P	00 07 45.0	-1.3
1.2nm,0.6s,baz=160,slow=7.1,SNR=8.4							
KURK	Kurchatov	58.91	342	P	P	00 07 45.0	-1.7
ZALV	Zalesovo Beam	60.28	348	P	P	00 07 55.0	-1.0
3.2nm,0.4s,baz=167,slow=5.2,SNR=14							
BVAR	Borovoye Array	63.60	339	P	P	00 08 17.1	-1.3
1.2nm,0.5s,baz=132,slow=8.0,SNR=6.0							
BRTR	Keskin Array B	77.09	312	P	P	00 09 40.5	-0.7
0.5nm,0.6s,baz=128,slow=5.7,SNR=4.5							
IDI	Anoyia	82.78	306	P	P	00 10 12.3	+0.3
1.9nm,0.7s,baz=326,slow=3.6,SNR=3.5							
TSUM	Tsumeb	83.89	251	P	P	00 10 17.9	-0.3
1.7nm,1.0s							
FINES	FINESS Array B	87.70	332	P	P	00 10 35.5	-0.4
1.4nm,0.8s,baz=133,slow=12,SNR=4.9							
TXAR	Lajitas Array	144.98	43	PKPbc	PKPab	00 17 24.8	+0.1
1.0nm,0.6s,baz=280,slow=1.4,SNR=17							

IDC 10 00:00:20.7±3.5, 26°.74S×133°.32E, h0km, mb1 3.0/3, mb1mx3.0/44, mbtmp2.8/3, ML2.8/3, Error ellipse: s-maj=33.2km s-min=21.7km az=68.0, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	3.11	10	Pn	Pn	00 01 11.7	+0.6
0.2nm,0.3s,baz=188,slow=14,SNR=13							
ASAR				Pg	Pb	00 01 18.4	+1.5
0.7nm,0.3s,baz=193,slow=15,SNR=18							
ASAR				Sn	Sn	00 01 51.0	+2.0
1.2nm,0.3s,baz=192,slow=22,SNR=11							
ASAR				Lg	Lg	00 01 59.0	
4.8nm,0.3s,baz=190,slow=26,SNR=29							
WRA	Warramunga Arr	6.83	8	Pn	Pn	00 02 01.9	-0.4
0.2nm,0.3s,baz=191,slow=14,SNR=11							
WRA				Sn	Sn	00 03 17.4	-3.5
0.8nm,0.3s,baz=186,slow=25,SNR=9.6							
WRA				Lg	Lg	00 03 56.2	
0.9nm,0.3s,baz=185,slow=31,SNR=5.0							
STKA	Stephens Creek	8.85	127	Pn	Pn	00 02 29.2	-0.7
0.1nm,0.3s,baz=309,slow=14,SNR=2.0							
STKA				Sn	Sn	00 04 04.5	-5.9
0.3nm,0.3s,baz=308,slow=12,SNR=3.2							

NEIC 10 00:18:41.0±0.0, 51°.78N×176°.29E, h26km, ML3.5(AEIC), After AEIC., Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSSA	Little Sitkin	1.39	82	P	Pn	00 19 04.5	-0.2
LSNW	Little Sitkin	1.39	81	P	Pn	00 19 04.4	-0.3
LSNW				S	Sn	00 19 22.4	+0.1
LSPA	Little Sitkin	1.43	82	P	Pn	00 19 05.1	-0.1
LSPA				S	Sn	00 19 23.4	+0.3
SMY	Shemya	1.65	306	P	Pn	00 19 08.2	0.0
SMY				S	Sn	00 19 29.0	+0.5
AMKA	Amchitka	1.92	101	P	Pn	00 19 11.8	-0.2
AMKA				S	Sn	00 19 36.0	+0.7
CETU	Semis' Tuman	2.00	83	P	Pn	00 19 13.3	+0.3
CEAP	Semis' Anvil P	2.05	83	P	Pn	00 19 13.9	+0.1

IDC 10 00:28:32.6±1.6, 5°.67S×130°.52E, h0km, mb3.5/2, mb1 3.8/5, mb1mx3.5/48, mbtmp3.7/5, ML3.8/3, Error ellipse: s-maj=77.4km s-min=26.6km az=79.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	4.83	9	Pn	Pn	00 29 47.2	+0.5
8.2nm,0.3s,baz=127,slow=5.1,SNR=11							
SIJI				Sn	Sn	00 30 33.9	-9.4
4.6nm,0.3s,baz=124,slow=24,SNR=8.9							
WRA	Warramunga Arr	14.66	166	Pn	Pn	00 32 00.6	-1.0
0.3nm,0.3s,baz=349,slow=13,SNR=12							
WRA				Sn	Sn	00 34 34.8	-10
0.3nm,0.3s,baz=357,slow=24,SNR=5.9							
ASAR	Alice Springs	18.19	170	P	P	00 32 47.3	+0.2
0.3nm,0.3s,baz=352,slow=11,SNR=15							
ASAR				S	Sn	00 36 02.6	-8.0
0.1nm,0.3s,baz=354,slow=28,SNR=4.2							
MKAR	Makanchi Array	67.41	326	P	P	00 39 30.7	+0.6
0.4nm,0.4s,baz=114,slow=7.6,SNR=6.8							
KURBB	Kurchatov Arra	71.66	328	P	P	00 39 55.1	-1.1
0.2nm,0.5s,baz=119,slow=5.3,SNR=1.8							

MEX 10 00:35:57.5±0.5, 16°.08N×98°.69W, h18km±999km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	Tlapa	1.48	4	*e*P	Pn	00 36 20.4	-3.1
TLIG				*e*S	Sn	00 36 37.6	-4.8
VHO	Vista Hermosa	2.12	62	*e*P	Pn	00 36 29.3	-3.0
VHO				*e*S	Sn	00 36 54.6	-3.6
HUIG	Huatulco	2.50	97	*e*P	Pn	00 36 34.1	-3.2
HUIG				*e*S	Sn	00 37 02.7	-4.6
TPIG	Tehuac#an	2.65	28	*e*P	Pb	00 36 42.7	-1.9
TPIG				*e*S	Sn	00 37 13.5	+2.2
LVIG	Laguna Verde	4.22	30	*i* S	Sb	00 38 03.4	+1.5

*ISCJB **10** 00:41:48.6±0.6, 24°.60N±0°.04×122°.14E±0°.03, h69km±6km, Error ellipse: s-maj=5.9km s-min=3.9km az=175.2*
*JMA **10** 00:41:48.7±0.2, 24°.54N×122°.13E, h69km±3km*
*TAP **10** 00:41:48.2, 24°.67N×122°.08E, h72km±1km, ML2.6, C*
ISC 10 00:41:48.9±1.5, 24°.61N±0°.04×122°.13E±0°.03, h69km±9km, n32, σ0°55/56, 2C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.06	181	*i* P	Pn	00 41 59.1	+0.3
baz=158							
EOS1				S	Sn	00 42 07.0	+0.9
baz=158							
TWC	Suao	0.26	271	⇑P	Pn	00 41 59.5	-0.1
baz=253							
TWC				*e*S	Sn	00 42 08.1	+0.6
baz=253							
NTC	Toucheng	0.37	312	*e*P	Pn	00 42 00.5	+0.1
baz=309							
NANB	Nanao	0.39	243	P	Pn	00 42 00.6	0.0
baz=231							
NANB				S	Sn	00 42 09.2	+0.1
baz=231							
ENA	Nanau	0.40	244	*e*P	Pn	00 42 00.7	0.0
baz=231							
ENA				*e*S	Sn	00 42 09.3	+0.1
baz=231							
TIPB	Shuangxi	0.46	323	⇑*i*P	Pn	00 42 00.2	-1.0
baz=322							
TIPB				*e*S	Sn	00 42 09.2	-1.1
baz=322							
ENTT	Nioudou	0.51	274	*e*P	Pn	00 42 02.3	+0.6
baz=266							
ENTT				*e*S	Sn	00 42 12.0	+0.8
baz=266							
WFSB	Wu-fen Shan	0.56	326	*e*P	Pn	00 42 02.5	+0.3
baz=326							
WFSB				*e*S	Sn	00 42 12.2	+0.2
baz=326							
NWLT	Wulai	0.60	287	*e*S	Sn	00 42 13.6	+0.9
baz=281							
NACB	Ninganchiao	0.65	229	*e*P	Pn	00 42 02.6	-0.5
baz=221							
NACB				*e*S	Sn	00 42 12.7	-0.9
baz=221							
YHNB	Yeheng	0.69	276	*e*P	Pn	00 42 04.0	+0.3
baz=270							
YHNB				*e*S	Sn	00 42 14.8	+0.2
baz=270							
NNSB	Datong	0.70	256	*e*P	Pn	00 42 03.8	0.0
baz=249							
NNSB				*e*S	Sn	00 42 14.6	-0.3
baz=249							
NNSH	Datong	0.70	256	*e*P	Pn	00 42 03.5	-0.4
baz=249							
NSK	Sanguang	0.71	276	*e*P	Pn	00 42 04.3	+0.4
baz=270							
NSK				*e*S	Sn	00 42 15.1	+0.2
baz=270							
NNS	Nan Shan	0.71	257	*e*P	Pn	00 42 04.0	0.0
baz=250							
NNS				*e*S	Sn	00 42 14.8	-0.2
baz=250							
TWD	Chiawan	0.71	223	*e*P	Pn	00 42 03.4	-0.5
baz=216							
TWD				*e*S	Sn	00 42 14.5	-0.4
baz=216							
YM07	YM07	0.73	321	*e*P	Pn	00 42 03.1	-1.0
baz=320							
YM07				*e*S	Sn	00 42 14.3	-1.1
baz=320							
YM10	YM10	0.75	317	*e*P	Pn	00 42 04.4	0.0
baz=315							
JYNG	Yonagunijimaku	0.76	101	P	Pn	00 42 04.3	-0.1
JYNG				S	Sn	00 42 15.7	-0.1
YM04	YM04	0.77	316	*e*P	Pn	00 42 04.5	0.0
baz=314							
YM04				*e*S	Sn	00 42 15.8	-0.2
baz=314							
YOJ	Yonaguni jima	0.81	100	*e*P	Pn	00 42 05.0	0.0
baz=103							
YOJ				*e*S	Sn	00 42 16.6	-0.4
baz=103							
YOJ	Yonaguni jima	0.81	100	P	Pn	00 42 05.0	0.0
YOJ				*e*S	Sn	00 42 16.6	-0.4
ENLB	Shoufeng	0.85	215	*e*P	Pn	00 42 05.1	-0.4
baz=209							
ENLB				*e*S	Sn	00 42 17.6	-0.1
baz=209							
LIOB	Emei	1.01	273	*e*P	Pn	00 42 08.3	+0.8
baz=268							
LIOB				*e*S	Sn	00 42 22.3	+0.9
baz=268							
CHGB	Renai	1.03	238	*e*P	Pn	00 42 07.7	-0.2
baz=233							
CHGB				*e*S	Sn	00 42 21.2	-0.8
baz=233							
OWD	Renai	1.08	234	*e*P	Pn	00 42 08.4	-0.1
baz=229							
VWDT	VWDT	1.24	227	*e*P	Pn	00 42 10.2	-0.2
baz=223							
VWDT				*e*S	Sn	00 42 25.9	-0.5
baz=223							
HGSD	Ruisui	1.28	210	*e*P	Pn	00 42 11.2	+0.2
baz=207							
SSLB	Suanglung	1.35	233	*e*P	Pn	00 42 12.7	+0.8
baz=229							
IRIF	Iriomote-Funau	1.48	100	*e*S	Sn	00 42 31.9	-0.3
JIJ	Ishigaki jima	1.85	97	P	Pn	00 42 19.8	+1.3
JIJ				S	Sn	00 42 41.0	0.0
JISG	Ishigakijimahi	1.98	90	P	Pn	00 42 20.2	-0.1
JISG				S	Sn	00 42 44.0	-0.2

*JMA **10** 00:42:23.8±0.2, 24°.42N×122°.29E, h70km±3km, M2.3*
*ISCJB **10** 00:42:24.2±0.5, 24°.44N±0°.03×122°.31E±0°.02, h65km±6km, Error ellipse: s-maj=4.9km s-min=2.8km az=171.1*
*TAP **10** 00:42:24.5, 24°.39N×122°.30E, h61km±1km, ML3.3, C*
ISC 10 00:42:24.5±1.3, 24°.44N±0°.04×122°.31E±0°.02, h65km±8km, n45, σ0°69/79, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.20	305	P	Pn	00 42 35.0	+0.4
baz=316							
EOS1				*e*S	Sn	00 42 43.0	+1.2
baz=316							
TWC	Suao	0.45	293	P	Pn	00 42 36.2	-0.3
baz=298							
TWC				*e*S	Sn	00 42 44.2	-1.0
baz=298							
NANB	Nanao	0.51	269	*e*P	Pn	00 42 37.1	+0.1
baz=274							
NANB				*e*S	Sn	00 42 46.2	+0.1
baz=274							
ENA	Nanau	0.52	269	P	Pn	00 42 37.1	0.0
baz=274							
ENA				*e*S	Sn	00 42 45.8	-0.5
baz=274							
JYNG	Yonagunijimaku	0.58	88	P	Pn	00 42 37.9	+0.1
JYNG				S	Sn	00 42 47.6	+0.2
NTC	Toucheng	0.60	314	*e*S	Sn	00 42 46.5	-1.4
baz=317							
ILA	Ilan	0.61	303	*e*S	Sn	00 42 48.6	+0.6
baz=307							
YOJ	Yonaguni jima	0.64	88	*e*P	Pn	00 42 38.6	+0.2
baz=82							
YOJ				*e*S	Sn	00 42 48.7	+0.1
baz=82							
YOJ	Yonaguni jima	0.64	88	P	Pn	00 42 38.5	+0.1
YOJ				S	Sn	00 42 48.6	0.0
TWE	Neicheng	0.65	296	*e*P	Pn	00 42 38.8	+0.2
baz=300							
TIPB	Shuangxi	0.69	321	*e*P	Pn	00 42 40.0	+1.0
baz=323							
TIPB				*e*S	Sn	00 42 47.7	-2.0
baz=323							
NACB	Ninganchiao	0.70	248	P	Pn	00 42 38.9	-0.2
baz=251							
NACB				*e*S	Sn	00 42 49.7	-0.1
baz=251							
ENTT	Nioudou	0.71	287	P	Pn	00 42 39.9	+0.7
baz=290							
ENTT				*e*S	Sn	00 42 50.0	0.0
baz=290							
TWD	Chiawan	0.74	242	P	Pn	00 42 39.3	-0.3
baz=244							
TWD				*e*S	Sn	00 42 50.5	-0.1
baz=244							
NWF	Wu-fen Shan	0.79	323	*e*S	Sn	00 42 50.9	-1.1
baz=325							
WFSB	Wu-fen Shan	0.79	323	*e*S	Sn	00 42 50.9	-0.9
baz=325							
NWLT	Wulai	0.81	295	P	Pn	00 42 41.2	+0.7
baz=298							
NWLT				*e*S	Sn	00 42 52.6	+0.4
baz=298							
ENLB	Shoufeng	0.83	231	P	Pn	00 42 40.8	+0.1
baz=232							
ENLB				*e*S	Sn	00 42 53.4	+0.7
baz=232							
NNSB	Datong	0.84	270	*e*P	Pn	00 42 41.2	+0.2
baz=272							
NNSB				*e*S	Sn	00 42 52.6	-0.5
baz=272							
NNSH	Datong	0.84	270	P	Pn	00 42 41.0	0.0
baz=272							
NNS	Nan Shan	0.85	270	P	Pn	00 42 41.2	+0.1
baz=273							
NNS				*e*S	Sn	00 42 53.6	+0.3
baz=273							
YHNB	Yeheng	0.88	286	*e*P	Pn	00 42 41.6	+0.2
baz=288							
YHNB				*e*S	Sn	00 42 53.9	0.0
baz=288							
NSK	Sanguang	0.90	286	P	Pn	00 42 41.8	+0.2
baz=288							
NSK				*e*S	Sn	00 42 54.6	+0.4

	baz=324								
CHGB	**Renai**	**1.10**	**250**	*e*P		**Pn**	**00 42 44.6**	**+0.3**
	baz=252								
CHGB				*e*S		**Sn**	**00 42 59.3**	**+0.3**
	baz=252								
EGFH	**Guangfu**	**1.11**	**227**	*e*P		**Pn**	**00 42 44.3**	**0.0**
	baz=228								
EGFH				*e*S		**Sn**	**00 42 59.1**	**+0.3**
	baz=228								
OWD	**Renai**	**1.14**	**245**	*e*P		**Pn**	**00 42 45.0**	**+0.2**
	baz=247								
OWD				*e*S		**Sn**	**00 42 59.0**	**-0.8**
	baz=247								
LIOB	**Emei**	**1.20**	**280**	P		**Pn**	**00 42 46.0**	**+0.6**
	baz=282								
LIOB				*e*S		**Sn**	**00 43 01.6**	**+0.6**
	baz=282								
NSTT	**Nanjuang**	**1.21**	**280**	P		**Pn**	**00 42 45.6**	**+0.1**
	baz=281								
NSTT				S		**Sn**	**00 43 01.9**	**+0.8**
	baz=281								
HGSD	**Ruisui**	**1.24**	**221**	*e*P		**Pn**	**00 42 45.5**	**-0.4**
	baz=221								
VWDT	**VWDT**	**1.27**	**238**	P		**Pn**	**00 42 46.4**	**+0.1**
	baz=239								
VWDT				*e*S		**Sn**	**00 43 02.1**	**-0.3**
	baz=239								
EHY	**Hungye**	**1.29**	**225**	*e*P		**Pn**	**00 42 45.9**	**-0.8**
	baz=225								
EHY				*e*S		**Sn**	**00 43 01.8**	**-1.3**
	baz=225								
IRIF	**Iriomote-Funau**	**1.30**	**94**	P		**Pn**	**00 42 46.5**	**-0.2**
IRIF				*e*S		**Sn**	**00 43 03.1**	**-0.2**
SSLB	**Suanglung**	**1.40**	**243**	*e*P		**Pn**	**00 42 49.2**	**+1.2**
	baz=244								
SSLB				*e*S		**Sn**	**00 43 06.0**	**+0.3**
	baz=244								
SMLT	**Sun Moon Lake**	**1.40**	**247**	*e*P		**Pn**	**00 42 49.0**	**+0.8**
	baz=248								
SMLT				*e*S		**Sn**	**00 43 05.8**	**0.0**
	baz=248								
TWF1	**Yuli**	**1.42**	**221**	*e*P		**Pn**	**00 42 47.9**	**-0.5**
	baz=221								
TYC	**Yuchr**	**1.43**	**249**	*e*P		**Pn**	**00 42 49.5**	**+1.1**
	baz=249								
TYC				*e*S		**Sn**	**00 43 06.0**	**-0.3**
	baz=249								
JKRS	**Kuro-shima**	**1.56**	**97**	P		**Pn**	**00 42 50.3**	**+0.1**
JKRS				*e*S		**Sn**	**00 43 10.2**	**+0.6**
JIJ	**Ishigaki jima**	**1.67**	**92**	P		**Pn**	**00 42 51.3**	**-0.4**
JIJ				*e*S		**Sn**	**00 43 11.8**	**-0.4**
JISG	**Ishigakijimahi**	**1.83**	**85**	*e*S		**Sn**	**00 43 15.3**	**-0.7**
JTJ	**Tarama**	**2.19**	**84**	P		**Pn**	**00 42 59.1**	**+0.5**
JTJ				S		**Sn**	**00 43 24.9**	**+0.2**
JIRB	**Irabujima**	**2.63**	**81**	*e*S		**Sn**	**00 43 35.6**	**0.0**

SJA 10 00:55:38.5±0.5, 33.10S×67.31W, h14km±2km, ML3.4, MW3.7, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACAN	**Cantantal**	**0.83**	**7**	*e*P	Pb	00 55 54.7	0.0
ACAN				*e*S	Sb	00 56 06.4	+0.7
AVIZ	**Vizcacheras**	**1.08**	**249**	*e*P	Pn	00 55 59.2	0.0
AAGR	**Agrelo**	**1.27**	**270**	*e*P	Pb	00 56 02.6	+0.3
ARCO	**CERRO ARCO**	**1.39**	**280**	*e*P	Pb	00 56 04.7	+0.4
ARCO				*e*S	Sg	00 56 24.3	+1.0
ARCO				IAML		00 56 27.7	
	comp=Z,600nm,0.6s						
MRA	**San Martin**	**1.50**	**64**	*e*P	Pb	00 56 06.8	+0.6
MRA				IAML		00 56 30.0	
	comp=Z,488nm,0.2s						
RTCV	**Cerro Valdivia**	**1.61**	**320**	*e*P	Pb	00 56 08.5	+0.4
AUSP	**Uspallata**	**1.96**	**296**	*e*P	Pb	00 56 14.2	+0.1
RTLL	**Cerro Villicun**	**2.02**	**330**	*e*P	Pb	00 56 14.7	-0.3
RTLS	**Leoncito**	**2.12**	**307**	*e*P	Pb	00 56 16.5	-0.4
AMOG	**MOGNA**	**2.37**	**335**	*e*P	Pb	00 56 19.6	-1.4
ACDV	**Cuesta del Vie**	**3.30**	**332**	*e*P	Pn	00 56 32.5	+2.5

IDC 10 01:12:54.0±2.2, 6.49S×129.19E, h0km, mb3.5/1, mb1 3.4/3, mb1mx3.2/54, mbtmp3.2/3, ML3.2/2, Error ellipse: s-maj=123.3km s-min=32.4km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.28**	**160**	Pn	Pn	01 16 18.4	+0.8
	0.1nm,0.3s,baz=339,slow=13,SNR=5.4						
WRA				Sn	Sn	01 18 46.2	-11
	0.1nm,0.3s,baz=336,slow=26,SNR=3.3						
ASAR	**Alice Springs**	**17.67**	**166**	P	Pn	01 17 01.2	-0.5
	0.1nm,0.3s,baz=350,slow=10,SNR=3.0						
MKAR	**Makanchi Array**	**67.36**	**327**	P	P	01 23 51.1	0.0
	0.2nm,0.4s,baz=112,slow=8.3,SNR=4.3						

ISCJB ***10*** *01:16:44.7±0.2, 51.55N±0.01×16.13E±0.02, h0km, mb3.6/4, Error ellipse: s-maj=2.0km s-min=1.8km az=26.7*
CSEM ***10*** *01:16:46.6±0.1, 51.56N×16.10E, h2km, ML3.9/20, Error ellipse: s-maj=2.6km s-min=2.2km az=59.0*
IPEC ***10*** *01:16:46.3±0.3, 51.60N×16.21E, h0km, ML3.4/4, Error ellipse: s-maj=3.0km s-min=1.5km az=66.0*
LDG ***10*** *01:16:47.5±0.2, 51.48N×16.08E, h2km, Ml4.2/10, Error ellipse: s-maj=3.7km s-min=2.3km az=16.0*
NEIC ***10*** *01:16:47.5±1.0, 51.54N×15.92E, h5km, mb4.0/1, ML3.9(CSEM), Error ellipse: s-maj=12.7km s-min=7.9km az=29.0*
IDC ***10*** *01:16:48.0±0.7, 51.54N×16.06E, h0km, mb3.5/3, mb1 3.6/8, mb1mx3.3/63, mbtmp3.4/8, ML3.0/5, MS2.4/1, Ms1 2.5/1, ms1mx1.8/51, Error ellipse: s-maj=12.5km s-min=6.3km az=119.0*
PRU ***10*** *01:16:48.3, 51.52N×16.13E, h0km, M4.0*
BGR ***10*** *01:16:48.1±0.4, 51.53N×16.12E, h1km, ML3.6/17, Error ellipse: s-maj=5.6km s-min=2.2km az=8.0*
VIE ***10*** *01:16:50.0±0.7, 51.34N×15.97E, h0km, mb2.9/11, ml3.1/12, Error ellipse: s-maj=5.5km s-min=4.3km az=38.0*
78 km WNW of Wroclaw Suspected Mining induced.
BNS ***10*** *01:16:51.1±0.4, 51.72N×15.92E, h10km, ML3.1*
UPP ***10*** *01:16:51.1±2.7, 51.78N×15.49E, h3km, ML2.0*

ISC 10 01:16:45.5±0.5, 51.61N±0.03×16.09E±0.02, h0km, n197, σ1§83/305, mb3.7/4, 10D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.78**	**171**	*i* Pg	**Pg**	**01 17 01.3**	**+1.0**
KSP				*i* Sg	**Sg**	**01 17 11.1**	**+0.8**
KSP				*e*		01 17 14.5	
KSP	**Ksiaz**	**0.78**	**171**	*e*Pg	**Pg**	**01 17 01.3**	**+1.0**
KSP	**Ksiaz**	**0.78**	**171**	P	**Pb**	**01 17 01.9**	**+0.1**
KSP	**Ksiaz**	**0.78**	**171**	Pg	**Pg**	**01 17 01.3**	**+1.0**
KSP	**Ksiaz**	**0.78**	**171**	P	**Pb**	**01 17 01.9**	**+0.1**
KSP				*i* Sg	**Sg**	**01 17 11.1**	**+0.8**
UPC	**Upice**	**1.10**	**183‖**	*e*PG	**Pb**	**01 17 07.4**	**0.0**
UPC				*e*SG	**Sg**	**01 17 21.4**	**+0.6**
	comp=Z,346nm,0.3s						
UPC	**Upice**	**1.10**	**183**	P	**Pg**	**01 17 07.3**	**+0.7**
UPC	**Upice**	**1.10**	**183**	P	**Pg**	**01 17 07.3**	**+0.7**
UPC				Sg	**Sg**	**01 17 21.4**	**+0.6**
	346nm,0.3s						
DPC	**Dobruska-Polom**	**1.27**	**173**	*e*Pg	**Pg**	**01 17 10.1**	**+0.3**
DPC				*e*Sg	**Sg**	**01 17 25.9**	**-0.2**
DPC	**Dobruska-Polom**	**1.27**	**173‖**	*e*PG	**Pg**	**01 17 10.2**	**+0.5**
DPC				*e*SG	**Sg**	**01 17 26.1**	**0.0**
	comp=Z,370nm,0.8s						
DPC	**Dobruska-Polom**	**1.27**	**173**	P	**Pg**	**01 17 10.0**	**+0.3**
DPC	**Dobruska-Polom**	**1.27**	**173**	P	**Pg**	**01 17 10.0**	**+0.3**
DPC				Sg	**Sg**	**01 17 25.9**	**-0.2**
PVCC	**Panska Ves**	**1.45**	**222‖**	*e*PG	**Pb**	**01 17 13.8**	**+0.5**
PVCC				*e*SG	**Sn**	**01 17 33.7**	**+1.1**
	comp=Z,523nm,0.2s						
PVCC	**Panska Ves**	**1.45**	**222**	P	**Pb**	**01 17 13.6**	**+0.3**
PVCC	**Panska Ves**	**1.45**	**222**	Pg	**Pb**	**01 17 13.8**	**+0.5**
PVCC				Sg	**Sn**	**01 17 33.7**	**+1.1**
	523nm,0.2s						
BRG	**Berggiesshubel**	**1.54**	**242**	PN	**Pn**	**01 17 14.6**	**+0.4**
BRG				PG	**Pg**	**01 17 16.6**	**+1.6**
BRG				SG	**Sg**	**01 17 36.7**	**+1.9**
	381nm,0.5s						
BRG	**Berggiesshubel**	**1.54**	**242**	*e*Pn	**Pb**	**01 17 14.9**	**+0.1**
BRG				*e*Sg	**Sg**	**01 17 36.6**	**+1.7**
BRG	**Berggiesshubel**	**1.54**	**242**	P	**Pg**	**01 17 15.4**	**+0.5**
BRG	**Berggiesshubel**	**1.54**	**242**	Pn	**Pb**	**01 17 14.9**	**+0.1**
BRG	**Berggiesshubel**	**1.54**	**242**	P	**Pg**	**01 17 15.4**	**+0.5**
BRG				Sg	**Sg**	**01 17 36.6**	**+1.7**
KRLC	**Kraliky**	**1.59**	**164‖**	*e*PG	**Pn**	**01 17 15.3**	**+0.3**
KRLC				*e*SG	**Sn**	**01 17 36.0**	**-0.3**
	comp=Z,34nm,0.2s						
KRLC	**Kraliky**	**1.59**	**164**	Pg	**Pn**	**01 17 15.3**	**+0.3**
KRLC				Sg	**Sn**	**01 17 36.0**	**-0.3**
	34nm,0.2s						
FBE	**Freiberg**	**1.85**	**249**	*e*Sg	**Sg**	**01 17 46.4**	**+1.5**
FBE	**Freiberg**	**1.85**	**249**	Sg	**Sg**	**01 17 46.4**	**+1.5**
PRA	**Prague**	**1.86**	**215‖**	*e*PN	**Pn**	**01 17 19.5**	**+0.9**
PRA				*e*PG	**Pg**	**01 17 21.3**	**+0.1**
PRA				*e*SG	**Sg**	**01 17 45.2**	**-0.1**
	comp=Z,303nm,0.8s						
PRA	**Prague**	**1.86**	**215**	Pn	**Pn**	**01 17 19.5**	**+0.9**
GOPC	**GO Pecny, Ondr**	**1.89**	**207‖**	*e*PN	**Pn**	**01 17 19.4**	**+0.4**
GOPC				*e*PG	**Pb**	**01 17 21.5**	**+0.7**
GOPC				*e*SG	**Sb**	**01 17 44.6**	**-0.3**
	comp=Z,184nm,0.7s						
GOPC	**GO Pecny, Ondr**	**1.89**	**207**	Pn	**Pn**	**01 17 19.4**	**+0.4**
PRU	**Pruhonice**	**1.90**	**212‖**	*e*PN	**Pn**	**01 17 19.6**	**+0.5**
PRU				*e*PG	**Pg**	**01 17 22.2**	**+0.4**
PRU				*e*SG	**Sg**	**01 17 46.1**	**-0.2**
	comp=Z,179nm,0.6s						
PRU	**Pruhonice**	**1.90**	**212**	Pn	**Pn**	**01 17 19.6**	**+0.5**
CLL	**Collm**	**1.96**	**262**	*e*Pn	**Pn**	**01 17 20.5**	**+0.6**
CLL				*e*Sg	**Sg**	**01 17 50.4**	**+2.0**
CLL	**Collm**	**1.96**	**262**	*e*Pn	**Pn**	**01 17 21.0**	**+1.1**
CLL				*e*Pg	**Pg**	**01 17 24.0**	**+1.0**
CLL				*e*		01 17 28.0	
CLL				*e*Sg	**Sg**	**01 17 50.0**	**+1.7**
	comp=Z,108nm,0.8s						
CLL	**Collm**	**1.96**	**262**	Pn	**Pn**	**01 17 20.5**	**+0.6**
CLL				Sg	**Sg**	**01 17 50.3**	**+2.0**
RAC	**Raciborz**	**2.02**	**138**	*e*Sg	**Sg**	**01 17 51.3**	**+0.8**
MORC	**Moravsky Berou**	**2.05**	**153**	*e*Pn	**Pn**	**01 17 21.4**	**+0.1**
MORC	**Moravsky Berou**	**2.05**	**153**	Pn	**Pn**	**01 17 21.4**	**+0.1**
MORC				*e*Sg	**Sb**	**01 17 49.4**	**-0.3**
	comp=Z,173nm,0.6s						
MORC	**Moravsky Berou**	**2.05**	**153**	*e*PN	**Pn**	**01 17 21.4**	**+0.1**
MORC				*e*SG	**Sb**	**01 17 49.4**	**-0.3**
MORC	**Moravsky Berou**	**2.05**	**153**	*e*Pn	**Pn**	**01 17 21.4**	**+0.1**
	baz=336						
MORC				*e*Sg	**Sb**	**01 17 49.4**	**-0.3**
	comp=Z,173nm,0.6s,baz=336						
OKC	**Ostrava-Krasne**	**2.20**	**143**	*e*Pn	**Pn**	**01 17 23.0**	**-0.3**
OKC	**Ostrava-Krasne**	**2.20**	**143‖**	*e*PN	**Pn**	**01 17 23.5**	**+0.2**
OKC				*e*PG	**Pg**	**01 17 27.4**	**-0.2**
OKC				*e*SG	**Sb**	**01 17 54.6**	**+0.7**
OKC	**Ostrava-Krasne**	**2.20**	**143**	Pn	**Pn**	**01 17 23.0**	**-0.3**
CHZP	**Chorzow**	**2.26**	**125**	*e*Pg	**Pg**	**01 17 29.6**	**+0.8**
CHZP				*e*Sg	**Sg**	**01 17 58.8**	**+0.8**
VRAC	**Vranov**	**2.32**	**172**	*e*Pn	**Pn**	**01 17 25.5**	**+0.6**
VRAC				*e*Sg	**Sb**	**01 17 58.4**	**+1.0**
	comp=Z,180nm,0.8s						
VRAC	**Vranov**	**2.32**	**172**	*e*PN	**Pn**	**01 17 25.6**	**+0.6**
VRAC				*e*SG	**Sb**	**01 17 58.5**	**+1.0**
VRAC	**Vranov**	**2.32**	**172**	*e*Pn	**Pn**	**01 17 25.5**	**+0.6**
	baz=354						
VRAC				*e*Sg	**Sb**	**01 17 58.4**	**+1.0**
	comp=Z,180nm,0.8s,baz=354						
KRUC	**Moravsky**	**2.56**	**176**	*e*Pn	**Pn**	**01 17 28.8**	**+0.6**
KRUC				*e*Sg	**Sb**	**01 18 05.8**	**+1.7**
	comp=Z,173nm,0.9s						
KRUC	**Moravsky**	**2.56**	**176**	*e*PN	**Pn**	**01 17 28.9**	**+0.7**
KRUC				*e*SG	**Sb**	**01 18 05.9**	**+1.8**
KRUC	**Moravsky**	**2.56**	**176**	*e*Pn	**Pn**	**01 17 28.8**	**+0.6**
	baz=357						
KRUC				*e*Sg	**Sb**	**01 18 05.8**	**+1.7**
	comp=Z,173nm,0.9s,baz=357						
TANN	**Tannenbergstha**	**2.58**	**244**	*e*Pn	**Pn**	**01 17 29.7**	**+1.1**
TANN				*e*Sg	**Sg**	**01 18 09.4**	**+0.9**
TANN	**Tannenbergstha**	**2.58**	**244**	Pn	**Pn**	**01 17 29.7**	**+1.1**
TANN				Sg	**Sg**	**01 18 09.4**	**+0.9**
WERD	**Werda**	**2.66**	**246**	*e*Pn	**Pn**	**01 17 30.6**	**+1.0**
WERD	**Werda**	**2.66**	**246**	Pn	**Pn**	**01 17 30.6**	**+1.0**
NKC	**Novy Kostel**	**2.69**	**241‖**	*e*PN	**Pn**	**01 17 31.4**	**+1.4**
NKC				*e*PG	**Pg**	**01 17 38.0**	**+1.1**
NKC				*e*SG	**Sg**	**01 18 13.5**	**+1.8**
	comp=Z,283nm,0.5s						
NKC	**Novy Kostel**	**2.69**	**241**	Pn	**Pn**	**01 17 31.4**	**+1.4**
OJC	**Ojcow**	**2.73**	**119**	*e*Pn	**Pn**	**01 17 29.7**	**-0.8**
OJC				*e*Pg	**Pg**	**01 17 38.4**	**+0.7**
OJC				*e*Sn	**Sn**	**01 18 01.8**	**-2.3**
OJC				*e*Sg	**Sg**	**01 18 13.4**	**+0.4**
OJC	**Ojcow**	**2.73**	**119**	*e*Pn	**Pn**	**01 17 29.8**	**-0.7**
OJC				*e*Sg	**Sg**	**01 18 13.8**	**+0.8**
OJC	**Ojcow**	**2.73**	**119**	Pn	**Pn**	**01 17 29.8**	**-0.7**
JAVC	**Velka Javorina**	**2.93**	**159**	*e*Pn	**Pn**	**01 17 33.8**	**+0.4**
JAVC				*e*Sg	**Sb**	**01 18 17.0**	**+2.0**
	comp=Z,174nm,0.9s						
JAVC	**Velka Javorina**	**2.93**	**159**	*e*PN	**Pn**	**01 17 33.9**	**+0.5**
JAVC				*e*SG	**Sb**	**01 18 17.0**	**+2.0**
JAVC	**Velka Javorina**	**2.93**	**159**	*e*Pn	**Pn**	**01 17 33.8**	**+0.4**
	baz=342						
JAVC				*e*Sg	**Sb**	**01 18 17.0**	**+2.0**
	comp=Z,174nm,0.9s,baz=342						
KHC	**Kasperske Hory**	**2.96**	**214‖**	*e*PN	**Pn**	**01 17 34.4**	**+0.7**
KHC				*e*PG	**Pb**	**01 17 40.7**	**+1.7**
KHC				*e*SN	**Sn**	**01 18 09.8**	**-0.1**
KHC				*e*SG	**Sg**	**01 18 19.5**	**-0.9**
	comp=Z,53nm,0.5s						
KHC	**Kasperske Hory**	**2.96**	**214**	Pn	**Pn**	**01 17 34.4**	**+0.7**
MOX	**Moxa**	**2.98**	**253**	*e*Pn	**Pn**	**01 17 35.0**	**+1.0**
MOX				*e*Sg	**Sg**	**01 18 23.3**	**+2.1**
MOX	**Moxa**	**2.98**	**253**	Pn	**Pn**	**01 17 35.0**	**+1.0**
MOX				Sg	**Sg**	**01 18 23.3**	**+2.1**
MANZ	**Manzenberg**	**3.00**	**239**	*e*Pn	**Pn**	**01 17 35.8**	**+1.4**
MANZ	**Manzenberg**	**3.00**	**239**	Pn	**Pn**	**01 17 35.8**	**+1.4**
ROTZ	**Rotzenmuhle**	**3.08**	**235**	*e*Pn	**Pn**	**01 17 36.4**	**+1.0**
ROTZ				*e*Sg	**Sg**	**01 18 23.1**	**-1.3**
ROTZ	**Rotzenmuhle**	**3.08**	**235**	Pn	**Pn**	**01 17 36.4**	**+1.0**
ROTZ				Sg	**Sg**	**01 18 23.1**	**-1.3**
GEC2	**GERESS Array S**	**3.16**	**210**	*e*Pn	**Pn**	**01 17 37.8**	**+1.2**
GEC2	**GERESS Array S**	**3.16**	**210**	Pn	**Pn**	**01 17 37.8**	**+1.2**
GERES	**GERESS Array B**	**3.16**	**210**	Pn	**Pn**	**01 17 37.9**	**+1.2**
	comp=Z,2.8nm,0.3s,baz=29,slow=13,SNR=71						
GERES				Pg	**Pg**	**01 17 44.8**	**-1.3**
	comp=Z,6.6nm,0.3s,baz=25,slow=16,SNR=30						
GERES				Sn	**Sn**	**01 18 15.2**	**+0.2**
	comp=Z,4.0nm,0.3s,baz=25,slow=21,SNR=7.5						
GERES				Lg	Lg	01 18 26.2	
	comp=Z,12nm,0.3s,baz=33,slow=28,SNR=20						
WET	**Wettzell**	**3.21**	**221**	*e*Pn	**Pn**	**01 17 38.2**	**+1.0**
WET	**Wettzell**	**3.21**	**221**	Pn	**Pn**	**01 17 38.2**	**+1.0**
SMOL	**Smolenice**	**3.21**	**164**	*e*	**Pn**	**01 17 39.4**	**+2.2**
SMOL	**Smolenice**	**3.21**	**164**	*e*PG	**Pg**	**01 17 47.5**	**+0.5**
SMOL				*e*SG	**Sg**	**01 18 28.8**	**+0.1**
SMOL	**Smolenice**	**3.21**	**164**	*e*Pg	**Pg**	**01 17 47.5**	**+0.5**
SMOL				*e*Sg	**Sg**	**01 18 28.8**	**+0.1**
LANS	**Liptovska Anna**	**3.27**	**137**	*e*	**Pn**	**01 17 39.3**	**+1.2**
LANS	**Liptovska Anna**	**3.27**	**137**	*e*PG	**Pg**	**01 17 48.6**	**+0.4**
LANS				*e*SG	**Sg**	**01 18 29.4**	**-1.1**
LANS	**Liptovska Anna**	**3.27**	**137**	*e*Pg	**Pg**	**01 17 48.6**	**+0.4**
LANS				*e*Sg	**Sg**	**01 18 29.5**	**-1.1**
MODS	**Modra-Piesok**	**3.33**	**166**	*e*PN	Pn	01 17 32.8	-6.0
MODS				*e*PG	**Pg**	**01 17 48.0**	**-1.2**
MODS				*e*SG	**Sg**	**01 18 29.7**	**-2.6**
MODS				*e*LG	Lg	01 18 41.1	
NIE	**Niedzica**	**3.46**	**128**	*e*Pn	**Pn**	**01 17 42.2**	**+1.5**
NIE				*e*Pg	**Pg**	**01 17 52.5**	**+0.6**
NIE				*e*Sg	**Sg**	**01 18 37.3**	**+0.5**
NIE	**Niedzica**	**3.46**	**128**	*e*Pn	**Pn**	**01 17 42.2**	**+1.5**
ZST	**Bratislava**	**3.48**	**169**	*e*PG	**Pg**	**01 17 51.8**	**-0.3**
ZST				*e*SG	**Sg**	**01 18 34.9**	**-2.2**
ZST				*e*LG	Lg	01 18 42.2	
ZST	**Bratislava**	**3.48**	**169**	*e*Pg	**Pg**	**01 17 51.8**	**-0.3**
ZST				*e*Sg	**Sg**	**01 18 34.9**	**-2.2**
CLZ	**Clausthal**	**3.56**	**276**	*e*Pn	**Pn**	**01 17 44.2**	**+2.1**
CLZ	**Clausthal**	**3.56**	**276**	Pn	**Pn**	**01 17 44.2**	**+2.1**
VYHS	**Vyhne**	**3.58**	**149**	*e*	**Pn**	**01 17 42.5**	**+0.2**
VYHS	**Vyhne**	**3.58**	**149**	*e*PG	**Pg**	**01 17 55.6**	**+1.5**
VYHS				*e*SG	**Sg**	**01 18 37.6**	**-2.9**
VYHS				*e*LG	Lg	01 19 06.0	
VYHS	**Vyhne**	**3.58**	**149**	*e*Pg	**Pg**	**01 17 55.6**	**+1.5**
VYHS				*e*Sg	**Sg**	**01 18 37.6**	**-2.9**
BSD	**Bornholm Skovb**	**3.58**	**349**	*i* P	**Pn**	**01 17 43.3**	**+1.0**
BSD				*i* S	**Sn**	**01 18 23.3**	**-2.0**
BSD	**Bornholm Skovb**	**3.58**	**349**	*i* P	**Pn**	**01 17 43.4**	**+1.1**
	SNR=49						
BSD				*i* S	**Sn**	**01 18 23.3**	**-2.0**
GRA1	**Grafenberg Arr**	**3.64**	**240**	Pn	**Pn**	**01 17 44.6**	**+1.5**
GRA1				Sg	**Sg**	**01 18 43.5**	**+1.0**
GRF	**Grafenberg Arr**	**3.64**	**240**	*e*Pn	**Pn**	**01 17 44.6**	**+1.5**
GRF				*e*Sg	**Sg**	**01 18 43.5**	**+1.0**
GRFO	**Grafenberg**	**3.65**	**240**	*e*Pn	**Pn**	**01 17 44.4**	**+1.3**
GRFO				*e*Sg	**Sg**	**01 18 39.9**	**-2.6**
CONA	**Conrad Observa**	**3.69**	**182**	*e*Pn	**Pn**	**01 17 44.8**	**+1.0**
	comp=Z,0.1nm,0.1s,SNR=11						
CONA				*e*Pg	**Pg**	**01 17 55.2**	**-0.9**
	comp=Z,5.5nm,0.2s						
CONA				Sg	**Sg**	**01 18 42.9**	**-0.9**
	comp=Z,102nm,0.7s						
CONA	**Conrad Observa**	**3.69**	**182**	Pn	**Pn**	**01 17 44.8**	**+1.0**
	comp=Z,0.1nm,0.1s,SNR=11						
SOP	**Sopron**	**3.94**	**175**	*e*Pn	**Pn**	**01 17 48.2**	**+1.0**
SOP				*ex*	x	01 18 49.8	
MOA	**Molln**	**3.94**	**198**	*e*Pn	**Pn**	**01 17 48.3**	**+1.0**
	comp=Z,3.5nm,0.2s,SNR=14						
MOA				Sg	**Sg**	**01 18 51.3**	**-0.8**
	comp=Z,80nm,0.6s						
MOA	**Molln**	**3.94**	**198**	Pn	**Pn**	**01 17 48.3**	**+1.0**
	comp=Z,3.5nm,0.2s,SNR=14						
MOA				Sg	**Sg**	**01 18 51.3**	**-0.8**
	comp=Z,80nm,0.6s						
KECS	**Kecovo**	**4.22**	**136**	*e*	**Pn**	**01 17 51.5**	**+0.5**
KECS	**Kecovo**	**4.22**	**136**	*e*PG	**Pg**	**01 18 08.5**	**+2.2**
KECS	**Kecovo**	**4.22**	**136**	*e*Pg	**Pg**	**01 18 08.5**	**+2.2**
LUNU	**Lund**	**4.33**	**340**	P	**Pn**	**01 17 52.6**	**+0.1**
LUNU				S	**Sn**	**01 18 41.8**	**-1.9**
LUNU	**Lund**	**4.33**	**340**	P	**Pn**	**01 17 52.6**	**+0.1**
LUNU				S	**Sn**	**01 18 41.8**	**-1.9**
ARSA	**Arzberg**	**4.38**	**185**	*e*Pn	**Pn**	**01 17 54.7**	**+1.5**
	comp=Z,0.3nm,0.2s						
ARSA				Pg	**Pg**	**01 18 08.6**	**-0.7**
	comp=Z,1.9nm,0.2s						
ARSA				Sg	**Sg**	**01 19 06.4**	**+0.4**
	comp=Z,54nm,0.8s						
ARSA	**Arzberg**	**4.38**	**185**	Pn	**Pn**	**01 17 54.7**	**+1.5**
	comp=Z,0.3nm,0.2s						
CRVS	**Cervenica-Dubn**	**4.38**	**126**	*e*	**Pn**	**01 17 54.7**	**+1.4**
CRVS	**Cervenica-Dubn**	**4.38**	**126**	*e*PG	**Pg**	**01 18 10.9**	**+1.5**
CRVS				*e*SG	**Sg**	**01 19 05.8**	**-0.3**
CRVS				*e*LG	Lg	01 19 19.7	
CRVS	**Cervenica-Dubn**	**4.38**	**126**	*e*Pg	**Pg**	**01 18 10.9**	**+1.5**
CRVS				*e*Sg	**Sg**	**01 19 05.8**	**-0.3**
BJUU	**Bjuv**	**4.83**	**339**	P	**Pn**	**01 17 59.9**	**+0.5**
BJUU				S	**Sn**	**01 18 52.9**	**-3.1**
BJUU	**Bjuv**	**4.83**	**339**	P	**Pn**	**01 17 59.9**	**+0.5**
BJUU				S	**Sn**	**01 18 52.9**	**-3.1**
KBA	**Koelnbreinsper**	**4.88**	**203**	*e*Pn	**Pn**	**01 18 01.7**	**+1.5**
	comp=Z,3.7nm,0.3s,SNR=6.8						
KBA				Sg	**Sg**	**01 19 21.4**	**-0.6**
	comp=Z,47nm,0.8s						
KBA	**Koelnbreinsper**	**4.88**	**203**	Pn	**Pn**	**01 18 01.7**	**+1.5**
	comp=Z,3.7nm,0.3s,SNR=6.8						
KBA				Sg	**Sg**	**01 19 21.4**	**-0.6**
	comp=Z,47nm,0.8s						
SOKA	**Soboth**	**4.98**	**188**	*e*Pn	**Pn**	**01 18 03.6**	**+2.0**
	comp=Z,0.4nm,0.3s						
SOKA				Pg	**Pg**	**01 18 21.4**	**+0.5**
	comp=Z,3.5nm,0.6s						
SOKA				Sg	**Sg**	**01 19 23.9**	**-1.6**
	comp=Z,15nm,0.7s						
SOKA	**Soboth**	**4.98**	**188**	Pn	**Pn**	**01 18 03.6**	**+2.0**
	comp=Z,0.4nm,0.3s						
PERS	**Pernice**	**5.02**	**188**	*e*Pn	**Pn**	**01 18 04.2**	**+2.2**
PERS	**Pernice**	**5.02**	**188**	*e*Pn	**Pn**	**01 18 04.2**	**+2.2**
DEL	**Delary**	**5.05**	**346**	P	**Pn**	**01 18 03.5**	**+1.2**
DEL		

CABF La Chapelle 8.25 237 *e*Sg **Sg 01 21 02.1 -8.1**
KIEV Kiev 8.30 91 *e*Pn **Pn 01 18 48.1 +1.1**
comp=Z,4.0nm,0.8s
KIEV Kiev 8.30 91 *e*Pn **Pn 01 18 48.1 +1.1**
comp=Z,4.0nm,0.8s
AKASG Malin Array Be 8.31 91 Pn **Pn 01 18 46.1 -1.0**
comp=Z,1.1nm,0.3s,baz=283,slow=12,SNR=6.4
AKASG Sn **Sn 01 20 17.0 -4.6**
comp=Z,0.9nm,0.3s,baz=277,slow=24,SNR=2.4
AKASG Lg Lg 01 21 15.8
baz=276,slow=27,SNR=1.6
HFS Hagfors 8.65 352 Pn **Pn 01 18 52.7 +0.9**
comp=Z,0.1nm,0.3s,baz=171,slow=19,SNR=2.4
HFS Sn **Sn 01 20 27.6 -2.4**
comp=Z,0.2nm,0.3s,baz=169,slow=26,SNR=1.6
HFS Lg Lg 01 21 25.9
comp=Z,0.1nm,0.3s,baz=174,slow=28,SNR=1.7
LOR Lormes 9.07 246 *e*Pn **Pn 01 18 56.3 -1.4**
LOR Lormes 9.07 246 *e*Pg Pn 01 19 33.4 +36
LOR *e*Sg Sn 01 21 30.4 +50
comp=Z,57nm,1.4s
LOR Lormes 9.07 246 *e*Pn **Pn 01 18 56.3 -1.4**
LOR *e*Pg 01 19 33.4
LOR *e*Sg Sn 01 21 30.4 +50
LOR Lormes 9.07 246 *e*Pn **Pn 01 18 56.3 -1.4**
SMF Signal de Mont 9.44 243 *e*Pn **Pn 01 19 01.6 -1.0**
SMF *e*Sg Sn 01 21 41.9 +52
comp=Z,75nm,1.4s
SMF Signal de Mont 9.44 243 *e*Pn **Pn 01 19 01.6 -1.0**
SMF *e*Sg Sn 01 21 41.9 +52
HYF Humbligny 9.78 249 *e*Pn **Pn 01 19 05.8 -1.5**
HYF Humbligny 9.78 249 *e*Pn **Pn 01 19 05.8 -1.5**
HYF Humbligny 9.78 249 *e*Pn **Pn 01 19 05.8 -1.5**
NOA NORSAR Array B 9.83 346 LR LR 01 23 26.4
comp=Z,21nm,19.1s,baz=40,slow=40
FINES FINESS Array B 11.28 25 Pn **Pn 01 19 27.1 -0.6**
comp=Z,0.2nm,0.3s,baz=217,slow=11,SNR=10
FINES Sn **Sn 01 21 28.0 -6.4**
comp=Z,0.4nm,0.3s,baz=219,slow=20,SNR=5.5
FINES Lg Lg 01 22 48.5
comp=Z,0.1nm,0.3s,baz=217,slow=21,SNR=1.2
EKA Eskdalemuir Ar 12.05 296 Pn **Pn 01 19 35.9 -2.5**
baz=103,slow=14,SNR=5.7
ARCES ARCESS Array B 18.53 10 Pn **P 01 21 01.4 -1.7**
comp=Z,0.1nm,0.3s,baz=196,slow=13,SNR=6.6
ARU Arti 25.10 62 *e*P **P 01 22 14.1 +2.5**
comp=Z,2.8nm,0.8s
KURBB Kurchatov Arra 38.15 66 P **P 01 24 08.1 +2.0**
comp=Z,0.1nm,0.3s,baz=301,slow=9.4,SNR=2.5
SONM Songino Array 54.87 55 P **P 01 26 19.3 +1.8**
comp=Z,0.3nm,0.5s,baz=308,slow=7.1,SNR=1.8
YKA Yellowknife Ar 59.77 336 P **P 01 26 54.0 +2.3**
comp=Z,0.7nm,0.8s,baz=28,slow=7.9,SNR=4.0

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*ISCJB **10** 01:29:07.7±0.6, 50°.00N×0°.05×88°.17E±0°.07, h11km, mb4.2/1, Error ellipse: s-maj=8.7km s-min=5.0km az=147.0*
*MOS **10** 01:29:07.2±1.5, 49°.97N×88°.18E, h10km, mb4.4/1, Error ellipse: s-maj=18.3km s-min=11.3km az=139.3*
*NNC **10** 01:29:09.8±1.2, 50°.00N×88°.04E, h0km, mb4.1, mpv3.8, Error ellipse: s-maj=11.0km s-min=5.8km az=104.0*
ISC 10 01:29:09.2±1.0, 50°.04N±0°.05×88°.24E±0°.07, h11km, n22, σ1§48/37, 19C-13D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HVS	**Khovu-Aksy**	**3.65**	**70**	⇑*e*PN	**Pn**	**01 30 05.2**	**-0.4**
ABNR	**Abakan**	**4.19**	**27**	⇑*e*PN	**Pn**	**01 30 15.3**	**+2.4**
KZLR	**Kyzyl**	**4.28**	**65**	*i* PN	**Pn**	**01 30 15.2**	**+1.0**
ZAA0	**Zalesovo Array**	**4.45**	**333**	⇓Pn	**Pn**	**01 30 17.9**	**+1.5**
	3.6nm,0.5s						
ZAA0				⇑Pg	**Pb**	**01 30 29.6**	**+2.5**
	4.2nm,0.5s						
ZAA0				⇑Lg	Lg	01 31 30.3	
	17nm,0.4s						
MK31	**Makanchi Array**	**5.12**	**233**	⇑Pn	**Pn**	**01 30 27.2**	**+1.4**
	3.5nm,0.2s,baz=53,slow=13,SNR=346						
MK31				⇑Pg	**Pb**	**01 30 39.4**	**+0.6**
	11nm,0.5s,baz=57,slow=18,SNR=8.5						
MK31				⇓Sn	**Sn**	**01 31 26.2**	**+1.3**
	8.8nm,0.5s,baz=58,slow=21,SNR=6.2						
MK31				⇓Lg	Lg	01 31 48.7	
	29nm,0.6s,baz=55,slow=30,SNR=10						
MK31	**Makanchi Array**	**5.12**	**233**	PN	**Pn**	**01 30 27.2**	**+1.4**
MK31				S	**Sn**	**01 31 26.2**	**+1.3**
MK31				pmax	pmax		
	comp=Z,4.0nm,0.3s						
MK31				smax	smax		
	comp=N,9.0nm,0.5s						
MAKZ	**Makanchi**	**5.28**	**235**	⇑Pn	**Pn**	**01 30 29.3**	**+1.4**
	comp=N,16nm,0.6s						
MAKZ				⇑Pg	**Pb**	**01 30 42.2**	**+0.9**
	comp=N,6.1nm,0.4s						
MAKZ				⇑Sn	**Sn**	**01 31 29.3**	**+0.6**
	comp=N,8.9nm,0.5s						
MAKZ				⇓Lg	Lg	01 31 51.1	
	comp=N,70nm,0.9s						
MAKZ	**Makanchi**	**5.28**	**235**	PN	**Pn**	**01 30 29.3**	**+1.4**
MAKZ				S	**Sn**	**01 31 29.3**	**+0.6**
MAKZ				pmax	pmax		
	comp=Z,16nm,0.6s						
MAKZ				smax	smax		
	comp=N,9.0nm,0.5s						
NVS	**Novosibirsk**	**5.70**	**329**	*e*PN	**Pg**	**01 30 54.4**	**-3.7**
NVS				*e*		01 31 41.4	
KURK	**Kurchatov**	**6.19**	**280**	⇓Pn	**Pn**	**01 30 41.8**	**+1.4**
	comp=N,6.4nm,0.8s						
KURK				⇓Sn	**Sn**	**01 31 52.4**	**+1.3**
	comp=N,14nm,0.6s						
KURK				⇑Lg	Lg	01 32 22.9	
	comp=N,36nm,0.6s						
KURK	**Kurchatov**	**6.19**	**280**	*de*PN	**Pn**	**01 30 42.0**	**+1.6**
KURBB	**Kurchatov Arra**	**6.24**	**279**	⇑Pn	**Pn**	**01 30 42.6**	**+1.5**
	comp=N,4.9nm,0.4s						
KURBB				⇑Sn	**Sn**	**01 31 52.7**	**+0.3**
	comp=N,42nm,0.7s						
KURBB				⇑Lg	Lg	01 32 22.7	
	comp=N,61nm,0.6s						
PDGK	**Podgornoye**	**9.01**	**225**	⇑Pn	**Pn**	**01 31 17.9**	**-1.3**
	comp=N,2.8nm,0.4s						
PDGK				⇓Sn	**Sn**	**01 33 00.9**	**+0.2**
	comp=N,4.1nm,0.7s						
PDGK				⇓Lg	Lg	01 33 53.6	
	comp=N,15nm,0.9s						
PDGK	**Podgornoye**	**9.01**	**225**	P	**Pn**	**01 31 17.9**	**-1.3**
PDGK				S	**Sn**	**01 33 00.9**	**+0.2**
PDGK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
PDGK				smax	smax		
	comp=N,4.0nm,0.7s						
OTUK	**Ortayu**	**10.57**	**266**	⇓Pn	**Pn**	**01 31 40.7**	**+0.2**
	comp=N,1.7nm,0.4s						
OTUK				⇑Sn	**Sn**	**01 33 39.0**	**+0.1**
	comp=N,1.5nm,0.5s						
OTUK				⇓Lg	Lg	01 34 41.8	
	comp=N,10nm,0.8s						
OTUK	**Ortayu**	**10.57**	**266**	P	**Pn**	**01 31 40.7**	**+0.2**
OTUK				S	**Sn**	**01 33 39.0**	**+0.1**
OTUK				pmax	pmax		
	comp=Z,2.0nm,0.4s						
OTUK				smax	smax		
	comp=N,2.0nm,0.5s						
BRVK	**Borovoye**	**11.57**	**292**	⇑*e*P	**Pn**	**01 31 54.5**	**+0.3**
AAK	**Ala-Archa**	**12.03**	**237**	⇓*e*P	**Pn**	**01 32 00.4**	**-0.2**
KK31	**Karatay Array**	**14.01**	**247**	⇑Pn	**Pn**	**01 32 25.0**	**-2.5**
	comp=N,0.3nm,0.3s,baz=54,slow=11,SNR=11						
KK31				⇑Sn	**Sn**	**01 35 04.6**	**+1.7**
	comp=N,0.3nm,0.4s,baz=92,slow=20,SNR=2.7						
KK31	**Karatay Array**	**14.01**	**247**	P	**Pn**	**01 32 25.0**	**-2.5**
KK31				S	**Sn**	**01 35 04.6**	**+1.7**
KK31				pmax	pmax		
	comp=Z,3.0nm,0.3s						
KK31				smax	smax		
	comp=N,3.0nm,0.4s						
ARU	**Arti**	**18.77**	**301**	⇑*e*P	**P**	**01 33 28.6**	**+0.6**
ARU				pmax	pmax		
	comp=Z,1.0nm,1.0s						
OBN	**Obninsk**	**31.20**	**300**	⇑*e*P	**P**	**01 35 27.4**	**-0.6**
OBN				pmax	pmax		
	comp=Z,3.0nm,0.7s						

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*SKO **10** 01:33:26.5, 41°.28N×20°.81E, h21km, M1.5, ML2.0*
*ATH **10** 01:33:27.7, 41°.29N×20°.88E, h14km±2km, ML1.8/9, Error ellipse: s-maj=2.1km s-min=1.1km az=74.0*
*TIR **10** 01:33:27.3, 41°.28N×20°.91E, h6km, Md2.6/6*
*THE **10** 01:33:28.1, 41°.30N×20°.92E, h0km±2km, ML1.7/9, Error ellipse: s-maj=2.0km s-min=0.6km az=327.0*
*CSEM **10** 01:33:28.6±0.1, 41°.26N×20°.89E, h2km, ML2.6, Error ellipse: s-maj=3.5km s-min=2.4km az=57.0*
*BEO **10** 01:33:29.0±0.6, 41°.18N×20°.91E, h0km*
ISC 10 01:33:28.2±1.0, 41°.27N±0°.01×20°.89E±0°.02, h6km±8km, n67, σ0§80/124, 6C, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHR	**Ohrid**	**0.17**	**204**	⇑*i*Pg	**Pg**	**01 33 31.6**	**-0.1**
OHR				*i* Sg	**Sg**	**01 33 34.7**	**+0.6**
OHR				*e*Lg	Lg	01 33 34.7	
	comp=E,840nm,0.4s						
OHR				*e*Lg	Lg	01 33 34.8	
	comp=N,450nm,0.3s						
KRUS	**Krusevo**	**0.29**	**69**	⇑*i*Pg	**Pg**	**01 33 34.1**	**+0.2**
KRUS				*i* Sg	**Sb**	**01 33 38.9**	**-2.0**
KRUS				*e*Lg	Lg	01 33 39.5	
	comp=E,94nm,0.3s						
KRUS				*e*Lg	Lg	01 33 39.6	
	comp=N,84nm,0.3s						
BIA	**Bitola**	**0.41**	**127**	P	**Pg**	**01 33 36.6**	**+0.4**
BIA				S	**Sb**	**01 33 43.0**	**-1.4**
BIA	**Bitola**	**0.41**	**127**	⇑*i*Pg	**Pg**	**01 33 36.5**	**+0.4**
BIA				*i* Sg	**Sb**	**01 33 43.1**	**-1.3**
BIA				*e*Lg	Lg	01 33 43.6	
	comp=N,57nm,0.3s						
BIA				*e*Lg	Lg	01 33 43.6	
	comp=E,94nm,0.2s						
BIA	**Bitola**	**0.41**	**127**	P	**Pg**	**01 33 36.6**	**+0.4**
BIA				S	**Sb**	**01 33 43.0**	**-1.4**
PHP	**Peshkopia**	**0.54**	**321**	P	**Pg**	**01 33 37.8**	**-0.8**
PHP				S	**Sg**	**01 33 46.0**	**+0.4**
PHP	**Peshkopia**	**0.54**	**321**	*i* PG	**Pg**	**01 33 38.0**	**-0.6**
PHP				*i* SG	**Sg**	**01 33 46.4**	**+0.8**
PHP	**Peshkopia**	**0.54**	**321**	*i* Pg	**Pg**	**01 33 38.0**	**-0.6**
PHP				S	**Sg**	**01 33 46.0**	**+0.4**
FNA	**Florina**	**0.61**	**143**	P	**Pg**	**01 33 39.5**	**-0.5**
FNA				S	**Sb**	**01 33 49.6**	**-0.4**
FNA				AML	AML	01 33 50.1	
	comp=N,943μm,0.2s						
FNA				AML	AML	01 33 50.5	
	comp=E,387μm,0.3s						
FNA	**Florina**	**0.61**	**143**	P	**Pg**	**01 33 39.6**	**-0.3**
FNA				S	**Sg**	**01 33 48.6**	**+0.8**
FNA	**Florina**	**0.61**	**143**	P	**Pg**	**01 33 39.7**	**-0.2**
FNA				S	**Sg**	**01 33 48.6**	**+0.8**
KBN	**Korca**	**0.65**	**187**	P	**Pg**	**01 33 40.5**	**-0.2**
KBN				S	**Sb**	**01 33 50.6**	**-0.6**
KBN	**Korca**	**0.65**	**187**	*i* PG	**Pg**	**01 33 40.7**	**0.0**
KBN				*i* SG	**Sb**	**01 33 50.9**	**-0.4**
KBN	**Korca**	**0.65**	**187**	*i* Pg	**Pg**	**01 33 40.7**	**0.0**
KBN				S	**Sb**	**01 33 50.6**	**-0.6**
TIR	**Tirane**	**0.78**	**276**	*e*Pg	**Pg**	**01 33 42.8**	**-0.4**
TIR				*e*Sg	**Sb**	**01 33 54.5**	**-0.4**
TIR	**Tirane**	**0.78**	**276**	P	**Pg**	**01 33 43.1**	**-0.1**
TIR				S	**Sg**	**01 33 51.9**	**-1.4**
TIR				AML	AML	01 33 56.2	
	comp=E,330μm,0.2s						
TIR				AML	AML	01 33 56.6	
	comp=N,232μm,0.2s						
TIR	**Tirane**	**0.78**	**276**	P	**Pg**	**01 33 42.8**	**-0.4**
TIR				S	**Sb**	**01 33 54.8**	**-0.1**
TIR	**Tirane**	**0.78**	**276**	*i* PG	**Pg**	**01 33 42.7**	**-0.4**
TIR				*i* SG	**Sb**	**01 33 54.7**	**-0.1**
TIR	**Tirane**	**0.78**	**276**	P	**Pg**	**01 33 42.7**	**-0.4**
TIR				S	**Sg**	**01 33 52.4**	**-0.8**
TIR				*e*Sg	**Sb**	**01 33 54.5**	**-0.4**
SKO	**Skopje**	**0.82**	**30**	*e*Pg	**Pb**	**01 33 44.8**	**0.0**
SKO				*e*Sg	**Sb**	**01 33 55.7**	**-0.4**
SKO	**Skopje**	**0.82**	**30**	⇑*i*Pg	**Pg**	**01 33 42.9**	**-1.0**
SKO				*i* Sg	**Sb**	**01 33 55.2**	**-0.8**
SKO				*e*Lg	Lg	01 33 55.5	
	comp=N,18nm,0.3s						
SKO				*e*Lg	Lg	01 33 55.5	
	comp=E,9.5nm,0.2s						
SKO	**Skopje**	**0.82**	**30**	*e*Pg	**Pb**	**01 33 44.8**	**0.0**
SKO				*e*Sg	**Sb**	**01 33 55.7**	**-0.4**
NEST	**Nestorio**	**0.86**	**172**	P	**Pg**	**01 33 44.2**	**-0.5**
NEST				S	**Sg**	**01 33 55.9**	**0.0**
NEST				AML	AML	01 34 02.1	
	comp=E,116μm,0.4s						
NEST				AML	AML	01 34 04.6	
	comp=N,82μm,0.2s						
NEST	**Nestorio**	**0.86**	**172**	P	**Pg**	**01 33 44.3**	**-0.5**
NEST				S	**Sb**	**01 33 58.2**	**+0.8**
NEST	**Nestorio**	**0.86**	**172**	P	**Pg**	**01 33 44.3**	**-0.5**
NEST				S	**Sg**	**01 33 56.3**	**+0.4**
STIP	**Stip**	**1.06**	**66**	⇑*i*Pg	**Pn**	**01 33 51.1**	**+1.4**
STIP				*i* Sg	**Sn**	**01 34 09.1**	**+4.4**
STIP				*e*Lg	Lg	01 34 09.3	
	comp=N,14nm,0.3s						
STIP				*e*Lg	Lg	01 34 09.5	
	comp=E,14nm,0.4s						
PUK	**Puka**	**1.08**	**316**	*i* PG	**Pg**	**01 33 48.0**	**-0.9**
PUK				*i* SG	**Sn**	**01 34 04.6**	**-0.6**
PUK	**Puka**	**1.08**	**316**	*i* Pg	**Pg**	**01 33 48.0**	**-0.9**
PUK				*i* Sg	**Sn**	**01 34 04.6**	**-0.6**
PENT	**Pentalofos**	**1.09**	**170**	P	**Pg**	**01 33 49.3**	**+0.2**
PENT				S	**Sg**	**01 34 02.8**	**-0.4**
PENT				AML	AML	01 34 08.2	
	comp=E,49μm,0.6s						
PENT				AML	AML	01 34 14.2	
	comp=N,75μm,0.5s						
PENT	**Pentalofos**	**1.09**	**170**	P	**Pg**	**01 33 48.9**	**-0.1**
PENT				S	**Sn**	**01 34 06.2**	**+0.8**
PENT	**Pentalofos**	**1.09**	**170**	P	**Pg**	**01 33 49.0**	**-0.1**
PENT				S	**Sg**	**01 34 03.4**	**+0.2**
KZN	**Kozani**	**1.17**	**145**	P	**Pg**	**01 33 50.0**	**-0.6**
KZN				S	**Sn**	**01 34 07.1**	**-0.3**
KZN				AML	AML	01 34 10.6	
	comp=N,96μm,0.5s						
KZN				AML	AML	01 34 14.1	
	comp=E,121μm,0.5s						
KZN	**Kozani**	**1.17**	**145**	P	**Pg**	**01 33 50.1**	**-0.6**
KZN				S	**Sn**	**01 34 08.1**	**+0.7**
KZN	**Kozani**	**1.17**	**145**	P	**Pg**	**01 33 50.2**	**-0.5**
KZN				S	**Sn**	**01 34 07.0**	**-0.4**
GRG	**Griva**	**1.18**	**105**	P	**Pg**	**01 33 50.1**	**-0.8**
GRG	**Griva**	**1.18**	**105**	P	**Pg**	**01 33 50.2**	**-0.8**
GRG				S	**Sb**	**01 34 06.7**	**+0.1**
GRG	**Griva**	**1.18**	**105**	P	**Pg**	**01 33 50.2**	**-0.8**
GRG				S	**Sb**	**01 34 06.7**	**+0.1**
BCI	**Bajram Curri**	**1.26**	**331**	*i* PN	**Pn**	**01 33 52.6**	**+0.2**
BCI				*i* SN	**Sn**	**01 34 10.4**	**+0.8**
BCI	**Bajram Curri**	**1.26**	**331**	*i* Pn	**Pn**	**01 33 52.6**	**+0.2**
BCI				*i* Sn	**Sn**	**01 34 10.4**	**+0.8**
VAY	**Valandovo**	**1.27**	**87**	*e*Pg	**Pg**	**01 33 51.8**	**-0.7**
VAY				*e*Sg	**Sn**	**01 34 09.1**	**-0.6**
VAY	**Valandovo**	**1.27**	**87**	P	**Pg**	**01 33 51.8**	**-0.7**
VAY				S	**Sn**	**01 34 09.6**	**-0.1**
VAY	**Valandovo**	**1.27**	**87**	⇑*i*Pg	**Pg**	**01 33 51.7**	**-0.9**
VAY				*i* Sg	**Sn**	**01 34 09.3**	**-0.4**
VAY				*e*Lg	Lg	01 34 09.6	
	comp=N,12nm,0.5s						
VAY				*e*Lg	Lg	01 34 09.9	
	comp=E,13nm,0.4s						
VAY	**Valandovo**	**1.27**	**87**	P	**Pg**	**01 33 51.8**	**-0.7**
VAY				*e*Sg	**Sn**	**01 34 09.1**	**-0.6**
KPRO	**Kipourio**	**1.36**	**164**	P	**Pn**	**01 33 53.9**	**+0.1**
KPRO				S	**Sn**	**01 34 12.3**	**+0.2**
KPRO				AML	AML	01 34 20.4	
	comp=E,53μm,0.6s						
KPRO				AML	AML	01 34 23.5	
	comp=N,68μm,0.6s						
KPRO	**Kipourio**	**1.36**	**164**	P	**Pg**	**01 33 54.4**	**+0.1**
KPRO				S	**Sn**	**01 34 14.5**	**+2.4**
KPRO	**Kipourio**	**1.36**	**164**	P	**Pn**	**01 33 53.8**	**+0.1**
KPRO				S	**Sn**	**01 34 12.5**	**+0.4**
KNT	**Kendrikon**	**1.52**	**93**	P	**Pb**	**01 33 56.6**	**-0.1**
KNT				S	**Sg**	**01 34 16.5**	**-0.6**
KNT				AML	AML	01 34 22.4	
	comp=E,21μm,0.3s						
KNT				AML	AML	01 34 22.6	
	comp=N,30μm,0.6s						
KNT	**Kendrikon**	**1.52**	**93**	P	**Pb**	**01 33 56.3**	**-0.5**
KNT				S	**Sg**	**01 34 16.6**	**-0.4**
KNT	**Kendrikon**	**1.52**	**93**	P	**Pb**	**01 33 56.5**	**-0.3**
KNT				S	**Sg**	**01 34 16.9**	**-0.1**
LIT	**Litokhoron**	**1.69**	**133**	P	**Pb**	**01 33 59.0**	**-0.7**
LIT	**Litokhoron**	**1.69**	**133**	P	**Pb**	**01 33 59.1**	**-0.5**
PDG	**Podgorica**	**1.69**	**314**	*e*Pn	**Pg**	**01 34 00.9**	**+0.4**
PDG				*e*Sn	**Sg**	**01 34 24.2**	**+1.8**
PDG	**Podgorica**	**1.69**	**314**	*e*Pn	**Pg**	**01 34 00.9**	**+0.4**
PDG				*e*Sn	**Sg**	**01 34 24.2**	**+1.8**
BARS	**Barje**	**1.69**	**24**	*e*Pg	**Pg**	**01 34 01.2**	**+0.5**
BARS	**Barje**	**1.69**	**24**	*e*Pg	**Pg**	**01 34 01.2**	**+0.5**
KEK	**Kerkira**	**1.76**	**209**	P	**Pb**	**01 34 01.1**	**+0.1**
KEK				S	**Sb**	**01 34 23.1**	**-0.2**
KEK				AML	AML	01 34 31.5	
	comp=E,27μm,0.5s						
KEK				AML	AML	01 34 37.0	
	comp=N,18μm,0.5s						
KEK	**Kerkira**	**1.76**	**209**	P	**Pb**	**01 34 00.6**	**-0.3**
KEK				S	**Sb**	**01 34 23.5**	**+0.3**
THL	**Klokotos Trika**	**1.91**	**153**	P	**Pb**	**01 34 02.8**	**-0.6**
THL				S	**Sb**	**01 34 27.9**	**+0.5**
THL				AML	AML	01 34 36.9	
	comp=E,17μm,0.4s						
THL				AML	AML	01 34 37.9	
	comp=N,16μm,0.6s						
THL	**Klokotos Trika**	**1.91**	**153**	P	**Pb**	**01 34 02.5**	**-0.8**
THL				S	**Sb**	**01 34 27.8**	**+0.4**
SELS	**Selova**	**1.96**	**5**	*e*Pn	**Pb**	**01 34 04.2**	**-0.1**
SELS				*e*Sn	**Sg**	**01 34 31.6**	**+0.4**
SJES	**Sjenica**	**2.10**	**341**	*e*Pn	**Pb**	**01 34 05.9**	**-0.9**
SJES				*e*Sn	**Sg**	**01 34 35.1**	**-0.8**
DSL	**Palaion Diasel**	**2.14**	**176**	P	**Pb**	**01 34 06.6**	**-0.7**
DSL	**Palaion Diasel**	**2.14**	**176**	P	**Pb**	**01 34 06.1**	**-1.2**
SCTE	**Santa Cesarea**	**2.19**	**238**	P	**Pn**	**01 34 04.8**	**-0.4**
SCTE	**Santa Cesarea**	**2.19**	**238**	P	**Pn**	**01 34 05.5**	**+0.3**
AGG	**Agios Georgios**	**2.50**	**153**	P	**Pn**	**01 34 10.3**	**+0.9**
AGG	**Agios Georgios**	**2.50**	**153**	P	**Pn**	**01 34 10.5**	**+1.1**

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*IDC **10** 01:39:27.1±0.8, 57°.71S×25°.47W, h0km, mb4.0/8, mb1 4.2/9, mb1mx4.0/29, mbtmp4.1/9, ML4.7/1, MS3.4/2, Ms1 3.4/2, ms1mx3.0/28, Error ellipse: s-maj=28.9km s-min=17.9km az=65.0*
*ISCJB **10** 01:39:31.5±0.5, 57°.81S±0°.08×25°.5W±0°.2, h49km, mb4.1/12, MS3.4/2, Error ellipse: s-maj=16.3km s-min=8.6km az=151.0*
*NEIC **10** 01:39:37.4±2.1, 57°.85S×25°.41W, h86km±19km, mb4.3/3, Error ellipse: s-maj=19.5km s-min=11.4km az=53.0*
ISC 10 01:39:33.4±0.6, 57°.8S±0°.1×25°.4W±0°.1, h49km, n27, σ0§96/20, mb4.0/12, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.13**	**295**	Pn	Pn	01 41 20.9	+6.0
VNA1	**Neumayer--Stat**	**14.82**	**157**	P	**Pn**	**01 42 58.4**	**-1.1**
VNA3	**Neumayer Olymp**	**15.03**	**160**	P	**Pn**	**01 43 00.4**	**-1.9**
VNA2	**Neumayer--Watz**	**15.21**	**157**	P	**Pn**	**01 43 03.5**	**-1.2**
	baz=322,slow=14						
SNAA	**Sanae**	**16.76**	**155**	P	**Pn**	**01 43 23.8**	**-0.5**
SNAA	**Sanae**	**16.76**	**155**	Pn	**Pn**	**01 43 24.1**	**-0.2**
	3.0nm,0.3s,baz=318,slow=15,SNR=161						
SNAA				Sn	Sn	01 46 15.9	-13
	0.1nm,0.3s,baz=63,slow=9.1,SNR=2.4						
PMSA	**Palmer Station**	**19.56**	**233**	*e*P	**P**	**01 43 56.2**	**-0.6**
QSPA	**South Pole Qui**	**32.46**	**180**	P	**P**	**01 45 59.8**	**+1.0**
	1.0nm,0.5s,baz=202,slow=7.2,SNR=5.2						
PLCA	**Paso Flores**	**33.28**	**281**	P	**P**	**01 46 06.0**	**-0.1**
	2.2nm,0.9s,baz=129,slow=13,SNR=2.7						
MAW	**Mawson**	**38.18**	**142**	P	**P**	**01 46 47.8**	**+0.3**
	1.2nm,0.6s,baz=257,slow=14,SNR=2.6						
CPUP	**Villa Florida**	**38.69**	**311**	P	**P**	**01 46 51.1**	**-1.1**
	1.1nm,0.4s,baz=165,slow=9.1,SNR=7.5						
VNDA	**Vanda**	**44.88**	**182**	P	**P**	**01 47 43.0**	**+0.8**
	0.8nm,0.7s,baz=172,slow=14,SNR=5.3						
VNDA				LR	LR	02 05 09.0	
	comp=Z,50nm,21.5s,baz=149,slow=34						
H10S2	**ASCENSION HYDR**	**49.42**	**14**	T	T	02 42 05.1	
	baz=187						
H10S3	**ASCENSION HYDR**	**49.42**	**14**	T	T	02 42 06.8	
	baz=187						
H10S1	**ASCENSION HYDR**	**49.43**	**14**	T	T	02 42 07.3	
	baz=187						
H10N1	**ASCENSION HYDR**	**50.53**	**14**	T	T	02 43 24.2	
	baz=189						
H10N3	**ASCENSION HYDR**	**50.54**	**14**	T	T	02 43 29.1	
	baz=189						
H10N2	**ASCENSION HYDR**	**50.55**	**14**	T	T	02 43 31.1	
	baz=189						
LPAZ	**La Paz**	**52.17**	**304**	P	**P**	**01 48 39.4**	**-0.2**
	1.0nm,0.3s,baz=161,slow=7.9,SNR=14						
LPAZ				LR	LR	02 12 48.9	
	comp=Z,28nm,18.6s,baz=167,slow=38						
SAML	**Samuel**	**56.71**	**314**	*e*P	**P**	**01 49 11.1**	**-0.8**
	1.7nm,0.4s						
LSZ	**Lusaka**	**58.14**	**66**	*e*P	**P**	**01 49 21.1**	**-1.0**
	1.4nm,0.4s						
OTAV	**Otavalo**	**71.42**	**303**	*e*P	**P**	**01 50 49.1**	**+0.1**
	1.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**74.12**	**27**	P	**P**	**01 51 04.7**	**+0.4**
	2.1nm,0.6s,baz=200,slow=6.5,SNR=35						
KOWA	**Kowa**	**74.16**	**22**	P	**P**	**01 51 05.2**	**+0.7**
	0.9nm,0.5s,baz=180,slow=8.1,SNR=3.9						
PCRV	**Puerto La Cruz**	**74.91**	**320**	P	**P**	**01 51 09.6**	**+0.6**
	11nm,0.5s,baz=170,slow=6.1,SNR=10						
YKA	**Yellowknife Ar**	**138.11**	**316**	PKP	**PKPdf**	**01 58 52.9**	**+1.8**
	0.3nm,0.4s,baz=137,slow=2.1,SNR=4.1						
ILAR	**Eielson Array**	**151.98**	**309**	PKPbc	**PKPbc**	**01 59 21.6**	**+0.1**
	0.5nm,0.4s,baz=138,slow=1.8,SNR=5.7						

DJA 10 01:47:40.6±0.7, 0°S±6°×12°4E±°, h108km±14km, M3.6/7, MLv3.6/7, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.75**	**18**	P	Pn	01 48 01.2	+2.0
LUWI	**Luwuk**	**1.33**	**228**	P	Pn	01 48

SIGR				AML	AML	01 48 08.8	
	comp=E,193μm,0.2s						
SIGR				AML	AML	01 48 08.9	
	comp=N,126μm,0.5s						
SIGR	**SIGRI**	**0.64**	**218**	P	**Pg**	**01 47 59.1**	**-0.5**
SIGR	**SIGRI**	**0.64**	**218**	*e*Pg	**Pg**	**01 47 59.3**	**-0.3**
SIGR				S	**Sg**	**01 48 07.7**	**-0.3**
SIGR				*e*Sg	**Sg**	**01 48 08.4**	**+0.4**
GELI	**Tayfur-Gelibol**	**0.69**	**8**	PG	**Pg**	**01 48 00.9**	**+0.3**
GELI	**Tayfur-Gelibol**	**0.69**	**8**	*e*Pg	**Pg**	**01 48 00.9**	**+0.3**
DKL	**Dikili**	**0.77**	**146**	PG	**Pg**	**01 48 02.6**	**+0.4**
DKL	**Dikili**	**0.77**	**146**	*e*Pg	**Pg**	**01 48 02.6**	**+0.4**
CAND	**Candarli**	**0.84**	**155**	PG	**Pb**	**01 48 04.1**	**+0.3**
LIA	**Limnos Island**	**0.92**	**282**	P	**Pg**	**01 48 04.9**	**-0.2**
LIA				S	**Sb**	**01 48 17.3**	**-0.2**
LIA				AML	AML	01 48 20.7	
	comp=N,95μm,0.4s						
LIA				AML	AML	01 48 21.1	
	comp=E,64μm,0.4s						
LIA	**Limnos Island**	**0.92**	**282**	P	**Pg**	**01 48 04.7**	**-0.4**
LIA				S	**Sb**	**01 48 17.3**	**-0.2**
ERIK	**Erikli-Kesan**	**0.96**	**7**	PG	**Pg**	**01 48 05.6**	**-0.2**
ERIK	**Erikli-Kesan**	**0.96**	**7**	*e*Pg	**Pg**	**01 48 05.6**	**-0.2**
BALY	**Balya**	**0.97**	**88**	*i* P	**Pg**	**01 48 04.5**	**-1.6**
BALY				*i* S	**Sg**	**01 48 17.6**	**-1.2**
BALY	**Balya**	**0.97**	**88**	P	**Pg**	**01 48 04.5**	**-1.6**
BALY				S	**Sg**	**01 48 17.6**	**-1.2**
SMTH	**Samothraki Isl**	**0.98**	**320**	P	**Pg**	**01 48 06.0**	**-0.3**
SMTH				S	**Sb**	**01 48 19.3**	**-0.1**
SMTH				AML	AML	01 48 23.2	
	comp=E,133μm,0.4s						
SMTH				AML	AML	01 48 23.3	
	comp=N,109μm,0.4s						
SMTH	**Samothraki Isl**	**0.98**	**320**	P	**Pg**	**01 48 06.0**	**-0.3**
SMTH				S	**Sb**	**01 48 19.6**	**+0.2**
KRBG	**Karabiga-Canak**	**0.99**	**47**	PG	**Pn**	**01 48 07.3**	**+0.2**
KRBG	**Karabiga-Canak**	**0.99**	**47**	*e*Pg	**Pn**	**01 48 07.3**	**+0.2**
ENEZ	**Enez**	**1.03**	**351**	PG	**Pg**	**01 48 06.9**	**-0.2**
ENEZ	**Enez**	**1.03**	**351**	*e*Pg	**Pg**	**01 48 06.9**	**-0.2**
STEP	**BALIKESIR_Sava**	**1.11**	**107**	*i* P	**Pn**	**01 48 09.4**	**+0.6**
STEP				*i* S	**Sb**	**01 48 23.9**	**+1.0**
STEP	**BALIKESIR_Sava**	**1.11**	**107**	P	**Pn**	**01 48 09.4**	**+0.6**
STEP				S	**Sb**	**01 48 23.9**	**+1.0**
KESN	**Edirne-Kesan**	**1.14**	**13**	*i* P	**Pn**	**01 48 09.7**	**+0.2**
KESN				*i* S	**Sn**	**01 48 25.8**	**+0.5**
KESN	**Edirne-Kesan**	**1.14**	**13**	P	**Pn**	**01 48 09.7**	**+0.2**
KESN				S	**Sn**	**01 48 25.8**	**+0.5**
RKY	**Sarkoy-Tekirda**	**1.16**	**33**	PN	**Pb**	**01 48 09.2**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.16**	**33**	*e*Pn	**Pb**	**01 48 09.2**	**-0.1**
BALB	**Balikesir**	**1.18**	**93**	PN	**Pg**	**01 48 10.8**	**+0.8**
BALB	**Balikesir**	**1.18**	**93**	*e*Pn	**Pg**	**01 48 10.8**	**+0.8**
ALN	**Alexandroupoli**	**1.20**	**349**	PN	**Pn**	**01 48 10.1**	**0.0**
ALN	**Alexandroupoli**	**1.20**	**349**	P	**Pg**	**01 48 10.7**	**+0.3**
ALN				S	**Sn**	**01 48 26.2**	**-0.2**
ALN				AML	AML	01 48 28.1	
	comp=E,33μm,0.3s						
ALN				AML	AML	01 48 29.4	
	comp=N,40μm,0.6s						
ALN	**Alexandroupoli**	**1.20**	**349**	*e*Pn	**Pn**	**01 48 10.1**	**0.0**
ALN	**Alexandroupoli**	**1.20**	**349**	P	**Pg**	**01 48 10.5**	**+0.1**
ALN				S	**Sn**	**01 48 26.7**	**+0.3**
EDC	**Edincik**	**1.32**	**61**	PN	**Pb**	**01 48 12.2**	**+0.1**
EDC	**Edincik**	**1.32**	**61**	*e*Pn	**Pb**	**01 48 12.2**	**+0.1**
CHOS	**Chios island**	**1.35**	**190**	PN	**Pb**	**01 48 12.9**	**+0.3**
CHOS	**Chios island**	**1.35**	**190**	P	**Pn**	**01 48 12.1**	**0.0**
CHOS	**Chios island**	**1.35**	**190**	P	**Pn**	**01 48 12.1**	**0.0**
CHOS	**Chios island**	**1.35**	**190**	*e*Pn	**Pb**	**01 48 12.9**	**+0.3**
RDO	**Rodhopi**	**1.56**	**337**	PN	**Pb**	**01 48 15.7**	**-0.5**
RDO	**Rodhopi**	**1.56**	**337**	P	**Pn**	**01 48 14.9**	**-0.1**
RDO	**Rodhopi**	**1.56**	**337**	P	**Pn**	**01 48 15.3**	**+0.3**
RDO	**Rodhopi**	**1.56**	**337**	*e*Pn	**Pb**	**01 48 15.7**	**-0.5**
KCTX	**Karacabey (Bur**	**1.63**	**70**	PN	**Pb**	**01 48 17.1**	**-0.3**
KCTX	**Karacabey (Bur**	**1.63**	**70**	*e*Pn	**Pb**	**01 48 17.1**	**-0.3**
DURS	**Dursunbey**	**1.64**	**93**	*i* P	**Pb**	**01 48 17.7**	**+0.1**
DURS				*i* S	**Sg**	**01 48 40.1**	**0.0**
DURS	**Dursunbey**	**1.64**	**93**	P	**Pb**	**01 48 17.7**	**+0.1**
DURS				S	**Sg**	**01 48 40.1**	**0.0**
ARMT	**Armutlu**	**2.10**	**65**	PN	**Pb**	**01 48 24.5**	**-0.9**
ARMT	**Armutlu**	**2.10**	**65**	*e*Pn	**Pb**	**01 48 24.5**	**-0.9**
AYDB	**Zeytinkoy-Aydi**	**2.14**	**145**	PN	**Pb**	**01 48 25.0**	**-1.1**
AYDB	**Zeytinkoy-Aydi**	**2.14**	**145**	*e*Pn	**Pb**	**01 48 25.0**	**-1.1**
EDRB	**Edirne**	**2.15**	**8**	PN	**Pn**	**01 48 23.9**	**+0.8**
EDRB	**Edirne**	**2.15**	**8**	*e*Pn	**Pn**	**01 48 23.9**	**+0.8**
KULA	**Kula-Manisa**	**2.16**	**123**	PN	**Pb**	**01 48 25.2**	**-1.2**
KULA	**Kula-Manisa**	**2.16**	**123**	*e*Pn	**Pb**	**01 48 25.2**	**-1.2**
CTKS	**Kestanelik-??a**	**2.23**	**47**	PN	**Pb**	**01 48 26.4**	**-1.3**
CTKS	**Kestanelik-??a**	**2.23**	**47**	*e*Pn	**Pb**	**01 48 26.4**	**-1.3**

*HEL **10** 02:06:44.4±0.6, 67°.59N×33°.83E, h0km, ML1.9, Explosion*
*IDC **10** 02:06:48.7±2.6, 67°.55N×32°.96E, h0km, mb1 3.3/3, mb1mx2.9/9, mbtmp3.2/3, ML2.5/3, Error ellipse: s-maj=28.7km s-min=9.4km az=78.0*

ISC 10 02:06:42.0±2.3, 67°.58N±0°.05×33°.9E±0°.1, h0km, n15, σ1§61/24, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRF	**Varrio**	**1.66**	**278**	PG	**Pg**	**02 07 13.6**	**-0.2**
	baz=92						
VRF				MSG		02 07 32.9	
	comp=Z,12nm,0.2s						
VRF				SG	**Sn**	**02 07 34.2**	**-0.1**
KU6	**Riekki**	**2.24**	**228**	PG	**Pg**	**02 07 24.1**	**-0.7**
	baz=43						
KU6				MSG		02 07 50.0	
	comp=Z,4.1nm,0.2s						
MSF	**Maaselka**	**2.56**	**231**	PG	**Pb**	**02 07 29.1**	**+0.2**
	baz=51						
MSF				SG	**Sg**	**02 08 05.2**	**+1.0**
SGF	**Sodankyl**	**2.85**	**271**	PG	**Pb**	**02 07 34.2**	**+0.6**
SGF				SG	**Sb**	**02 08 08.8**	**-0.3**
RNF	**Rovaniemi**	**3.25**	**256**	PN	**Pn**	**02 07 36.7**	**+2.6**
ARCES	**ARCESS Array B**	**3.66**	**306**	Pn	**Pn**	**02 07 41.6**	**+1.8**
	comp=Z,1.0nm,0.3s,baz=123,slow=15,SNR=16						
ARCES				Pg	**Pg**	**02 07 50.2**	**-1.9**
	comp=Z,0.7nm,0.3s,baz=120,slow=15,SNR=9.6						
ARCES				Sn	**Sn**	**02 08 22.8**	**-0.9**
	comp=Z,0.7nm,0.3s,baz=122,slow=26,SNR=6.6						
ARCES				Lg	Lg	02 08 33.4	
	comp=Z,1.4nm,0.3s,baz=120,slow=30,SNR=8.6						
ARE0	**ARCESS Array S**	**3.66**	**306**	PN	**Pn**	**02 07 41.6**	**+1.8**
ARE0				SN	**Sn**	**02 08 23.3**	**-0.4**
HEF	**Hetta**	**3.95**	**287**	PN	**Pn**	**02 07 45.6**	**+1.8**
TOF	**Tornio**	**4.08**	**253**	PG	**Pb**	**02 07 56.0**	**+1.3**
OUL	**Oulu**	**4.09**	**236**	PB	**Pb**	**02 07 54.1**	**-0.7**
KALU	**Kalix**	**4.54**	**253**	PG	**Pg**	**02 08 07.0**	**-1.8**
LANU	**Lannavaara**	**4.55**	**281**	PN	**Pn**	**02 07 53.0**	**+0.9**
LANU				SN	**Sn**	**02 08 45.4**	**-0.2**
ERTU	**Ertsjaerv**	**4.71**	**263**	PN	**Pn**	**02 07 55.8**	**+1.7**
ERTU				SN	**Sn**	**02 08 49.4**	**0.0**
FINES	**FINESS Array B**	**7.03**	**212**	Pn	**Pn**	**02 08 27.8**	**+1.9**
	comp=Z,0.1nm,0.3s,baz=28,slow=14,SNR=4.3						
FINES				Sn	**Sn**	**02 09 45.7**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=23,slow=23,SNR=1.5						
FINES				Lg	Lg	02 10 21.6	
	comp=Z,0.4nm,0.3s,baz=25,slow=23,SNR=3.4						
NOA	**NORSAR Array B**	**11.78**	**247**	Pn	**Pn**	**02 09 26.8**	**-4.2**
	comp=Z,0.1nm,0.3s,baz=52,slow=9.9,SNR=3.3						

IDC 10 02:07:11.8±5.6, 4°.23S×150°.47E, h99km±52km, mb3.2/3, mb1 3.5/4, mb1mx3.1/44, mbtmp3.6/4, Error ellipse: s-maj=136.7km s-min=34.2km az=125.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.11**	**212**	P	Pn	02 08 41.5	+1.9
	1.1nm,0.3s,baz=29,slow=13,SNR=2.1						
PMG				S	Sn	02 09 48.2	+0.1
	15nm,0.3s,baz=191,slow=21,SNR=13						
WRA	**Warramunga Arr**	**22.16**	**224**	P	P	02 11 60.0	0.0
	1.4nm,0.7s,baz=50,slow=10,SNR=16						
ASAR	**Alice Springs**	**25.09**	**218**	P	P	02 12 27.4	-0.1
	0.6nm,0.4s,baz=50,slow=8.8,SNR=14						
ILAR	**Eielson Array**	**82.52**	**23**	P	P	02 19 23.1	-0.3
	0.2nm,0.6s,baz=258,slow=4.5,SNR=2.3						

*ISCJB **10** 02:08:18.3±0.6, 34°.76N±0°.03×33°.03E±0°.04, h13km±3km, Error ellipse: s-maj=5.9km s-min=5.0km az=13.8*

*CSEM **10** 02:08:18.6±0.3, 34°.77N×33°.01E, h12km, ML3.3, Error ellipse: s-maj=7.0km s-min=5.0km az=2.0*
*NIC **10** 02:08:18.3±0.2, 34°.76N×33°.04E, h15km, ML3.3*
*ISK **10** 02:08:18.0, 34°.80N×32°.99E, h20km, ML3.1/3*
*DDA **10** 02:08:47.6, 34°.99N×32°.96E, h10km, Ml2.9*

ISC 10 02:08:18.8±0.9, 34°.82N±0°.03×33°.00E±0°.02, h16km±7km, n60, σ0§82/83, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SZAC	**Souni**	**0.11**	**236**	P	**Pg**	**02 08 22.1**	**-0.2**
	baz=89						
SZAC				S	**Sb**	**02 08 25.1**	**-0.1**
SZAC	**Souni**	**0.11**	**236**	P	**Pg**	**02 08 22.1**	**-0.2**
SZAC				S	**Sb**	**02 08 25.1**	**-0.1**
CSS	**Mathiatis**	**0.31**	**62**	PG	**Pb**	**02 08 25.9**	**-0.1**
CSS				SG	**Sb**	**02 08 30.9**	**0.0**
CSS	**Mathiatis**	**0.31**	**62**	P	**Pg**	**02 08 25.4**	**+0.1**
	baz=228						
CSS				S	**Sg**	**02 08 30.0**	**+0.2**
CSS	**Mathiatis**	**0.31**	**62**	P	**Pg**	**02 08 25.4**	**+0.1**
CSS	**Mathiatis**	**0.31**	**62**	*e*Pg	**Pb**	**02 08 25.9**	**-0.1**
CSS				S	**Sg**	**02 08 30.0**	**+0.2**
LEF	**Lefka**	**0.31**	**344**	PG	**Pg**	**02 08 25.4**	**0.0**
LEF				SG	**Sb**	**02 08 31.3**	**+0.3**
LEF	**Lefka**	**0.31**	**344**	*e*Pg	**Pg**	**02 08 25.4**	**0.0**
LEF				*e*Sg	**Sb**	**02 08 31.3**	**+0.3**
LEF				S	**Sn**	**02 08 33.1**	**-2.0**
MAMC	**Mammari**	**0.40**	**27**	P	**Pb**	**02 08 27.4**	**-0.1**
	baz=199						
MAMC	**Mammari**	**0.40**	**27**	P	**Pb**	**02 08 27.4**	**-0.1**
AKIN	**Ak¨-nc¨-lar- K**	**0.43**	**63**	PG	**Pg**	**02 08 27.4**	**-0.1**
AKIN	**Ak¨-nc¨-lar- K**	**0.43**	**63**	*e*Pg	**Pg**	**02 08 27.4**	**-0.1**
AKDN	**Akdeniz- K¨-br**	**0.48**	**357**	PG	**Pg**	**02 08 28.2**	**-0.2**
AKDN				SG	**Sb**	**02 08 36.2**	**+0.5**
AKDN	**Akdeniz- K¨-br**	**0.48**	**357**	*e*Pg	**Pg**	**02 08 28.2**	**-0.2**
AKDN				*e*Sg	**Sb**	**02 08 36.2**	**+0.5**
PPCY	**Paphos**	**0.54**	**277**	P	**Pb**	**02 08 30.1**	**+0.2**
	baz=102						
PPCY	**Paphos**	**0.54**	**277**	P	**Pb**	**02 08 30.1**	**+0.2**
AKMC	**Akamas**	**0.59**	**291**	P	**Pb**	**02 08 30.6**	**-0.1**
	baz=114						
AKMC	**Akamas**	**0.59**	**291**	P	**Pb**	**02 08 30.6**	**-0.1**
EREN	**Erenkoy**	**1.20**	**53**	PN	**Pn**	**02 08 40.2**	**-0.7**
EREN	**Erenkoy**	**1.20**	**53**	*e*Pn	**Pn**	**02 08 40.2**	**-0.7**
AKKU	**Akkuyu-Mersin**	**1.41**	**19**	PN	**Pn**	**02 08 43.2**	**-0.7**
AKKU	**Akkuyu-Mersin**	**1.41**	**19**	*e*Pn	**Pn**	**02 08 43.2**	**-0.7**
GAZI	**Gazipasa**	**1.52**	**339**	*i* P	**Pn**	**02 08 45.6**	**+0.2**
GAZI				*i* S	**Sg**	**02 09 07.8**	**0.0**
GAZI	**Gazipasa**	**1.52**	**339**	P	**Pn**	**02 08 45.6**	**+0.2**
GAZI				S	**Sg**	**02 09 07.8**	**0.0**
IKL	**Isikli**	**1.53**	**21**	PN	**Pn**	**02 08 45.1**	**-0.3**
IKL				SN	**Sn**	**02 09 04.8**	**-0.2**
IKL	**Isikli**	**1.53**	**21**	*e*Pn	**Pn**	**02 08 45.1**	**-0.3**
IKL				*e*Sn	**Sn**	**02 09 04.8**	**-0.2**
TEVE	**Tevekalti-Mers**	**1.66**	**13**	PN	**Pn**	**02 08 47.4**	**+0.1**
TEVE	**Tevekalti-Mers**	**1.66**	**13**	*e*Pn	**Pn**	**02 08 47.4**	**+0.1**
ERMK	**Ermenek**	**1.82**	**358**	*i* P	**Pn**	**02 08 50.1**	**+0.4**
ERMK				*i* S	**Sb**	**02 09 16.1**	**+1.5**
ERMK	**Ermenek**	**1.82**	**358**	P	**Pn**	**02 08 50.1**	**+0.4**
ERMK				S	**Sb**	**02 09 16.1**	**+1.5**
KIZK	**Mersin**	**1.91**	**29**	PN	**Pn**	**02 08 50.4**	**-0.2**
KIZK	**Mersin**	**1.91**	**29**	*i* P	**Pb**	**02 08 53.5**	**+0.3**
KIZK				*i* S	**Sb**	**02 09 16.9**	**+0.1**
KIZK	**Mersin**	**1.91**	**29**	P	**Pb**	**02 08 53.5**	**+0.3**
KIZK				S	**Sb**	**02 09 16.9**	**+0.1**
KEPZ	**Antalya-Kepez**	**2.37**	**332**	*i* P	**Pn**	**02 08 58.0**	**+0.9**
KEPZ				*i* S	**Sb**	**02 09 29.5**	**-0.6**
KEPZ	**Antalya-Kepez**	**2.37**	**332**	P	**Pn**	**02 08 58.0**	**+0.9**
KEPZ				S	**Sb**	**02 09 29.5**	**-0.6**
MERS	**Mersin**	**2.39**	**31**	PN	**Pn**	**02 08 57.5**	**+0.1**
MERS	**Mersin**	**2.39**	**31**	*e*Pn	**Pn**	**02 08 57.5**	**+0.1**
HWQ	**Hawqa**	**2.49**	**102**	*e*P	**Pn**	**02 08 58.5**	**-0.3**
SHBL	**Chebaa**	**2.71**	**122**	*e*P	**Pn**	**02 09 02.9**	**+1.1**
KERG	**Konya-Eregli**	**2.75**	**19**	*i* P	**Pb**	**02 09 05.9**	**-1.8**
KERG				*i* S	**Sb**	**02 09 42.6**	**+1.4**
KERG	**Konya-Eregli**	**2.75**	**19**	P	**Pb**	**02 09 05.9**	**-1.8**
YAYL	**Yayladag**	**2.82**	**64**	PN	**Pn**	**02 09 03.2**	**-0.1**
YAYL	**Yayladag**	**2.82**	**64**	*e*Pn	**Pn**	**02 09 03.2**	**-0.1**
GULE	**Gulek**	**2.85**	**30**	*i* P	**Pn**	**02 09 06.4**	**+2.5**
GULE				*i* S	**Sb**	**02 09 46.0**	**+1.8**
GULE	**Gulek**	**2.85**	**30**	P	**Pn**	**02 09 06.4**	**+2.5**
YESY	**Yesilyurt**	**3.02**	**11**	PN	**Pn**	**02 09 06.4**	**+0.3**
YESY	**Yesilyurt**	**3.02**	**11**	*e*Pn	**Pn**	**02 09 06.4**	**+0.3**
TAHT	**Tahtakopru-Hat**	**3.03**	**58**	PN	**Pn**	**02 09 06.4**	**+0.3**
TAHT	**Tahtakopru-Hat**	**3.03**	**58**	*e*Pn	**Pn**	**02 09 06.4**	**+0.3**
KORT	**Korkueli**	**3.06**	**316**	PN	**Pn**	**02 09 06.9**	**+0.3**
KORT	**Korkueli**	**3.06**	**316**	*e*Pn	**Pn**	**02 09 06.9**	**+0.3**
SUTC	**Sutluce-Ispart**	**3.11**	**329**	PN	**Pn**	**02 09 08.1**	**+0.8**
SUTC	**Sutluce-Ispart**	**3.11**	**329**	*e*Pn	**Pn**	**02 09 08.1**	**+0.8**
MMLI	**Mount Malkishu**	**3.12**	**139**	PN	**Pn**	**02 09 07.9**	**+0.5**
MMLI	**Mount Malkishu**	**3.12**	**139**	*e*Pn	**Pn**	**02 09 07.9**	**+0.5**
KONT	**Konya--Tatoy**	**3.16**	**351**	PN	**Pn**	**02 09 09.2**	**+1.2**
KONT	**Konya--Tatoy**	**3.16**	**351**	*i* P	**Pn**	**02 09 10.2**	**+2.2**
KONT				*i* S	**Sb**	**02 09 51.5**	**-1.5**
KONT	**Konya--Tatoy**	**3.16**	**351**	*e*Pn	**Pn**	**02 09 09.2**	**+1.2**
DALY	**Dalyan (Mu¨la**	**4.05**	**301**	PN	**Pn**	**02 09 20.5**	**+0.3**
DALY	**Dalyan (Mu¨la**	**4.05**	**301**	*e*Pn	**Pn**	**02 09 20.5**	**+0.3**

IDC 10 02:31:37.2±4.2, 15°.66S×167°.90E, h0km, mb3.9/3, mb1 4.0/4, mb1mx3.7/45, mbtmp3.8/4, ML3.8/1, Error ellipse: s-maj=82.1km s-min=36.7km az=87.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.53**	**192**	Pn	Pn	02 33 14.5	-0.1
	1.8nm,0.3s,baz=0.0,slow=18,SNR=20						
DZM				Sn	Sn	02 34 29.4	-0.4
	0.9nm,0.3s,baz=127,slow=20,SNR=2.0						
WRA	**Warramunga Arr**	**32.20**	**257**	P	P	02 38 07.2	-0.2
	1.1nm,0.9s,baz=88,slow=9.6,SNR=8.2						
ASAR	**Alice Springs**	**32.92**	**251**	P	P	02 38 13.9	+0.3
	1.2nm,0.8s,baz=75,slow=9.1,SNR=16						
MKAR	**Makanchi Array**	**98.29**	**316**	P	P	02 45 16.4	-0.4
	0.1nm,0.5s,baz=116,slow=3.4,SNR=3.0						

*DJA **10** 02:47:07.9±2.4, 1°.N±36°.×12°.8E±3°.2, h19km±64km, M3.1/3, MLv3.1/3*
*IDC **10** 02:47:07.2±2.3, 1°.35N×127°.82E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.3/59, mbtmp3.4/4, Error ellipse: s-maj=220.2km s-min=23.6km az=68.0*
*ISCJB **10** 02:47:14.2±1.4, 1°.1N±0°.1×127°.4E±0°.6, h69km, mb3.3/4, Error ellipse: s-maj=81.9km s-min=12.0km az=167.5*

ISC 10 02:47:15.9±1.9, 1°.0N±0°.2×127°.4E±0°.8, h69km, n5, σ2§03/6, mb3.3/4, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**1.65**	**175**	P	**Pn**	**02 47 40.6**	**-2.2**
LBMI				S	**Sn**	**02 48 05.0**	**+1.8**
WRA	**Warramunga Arr**	**21.92**	**162**	P	**P**	**02 52 03.9**	**+0.1**
	0.6nm,0.7s,baz=341,slow=10,SNR=4.6						
ASAR	**Alice Springs**	**25.34**	**166**	P	**P**	**02 52 38.5**	**+1.9**
	0.4nm,0.7s,baz=356,slow=13,SNR=3.0						
MKAR	**Makanchi Array**	**60.14**	**326**	P	**P**	**02 57 17.1**	**+0.7**
	0.4nm,0.5s,baz=123,slow=7.3,SNR=4.3						
KURBB	**Kurchatov Arra**	**64.35**	**328**	P	**P**	**02 57 44.1**	**-0.3**
	0.4nm,0.6s,baz=125,slow=5.3,SNR=6.7						

*ISCJB **10** 02:54:19.1±0.5, 4°.09N±0°.04×76°.71W±0°.04, h80km±5km, mb3.2/3, Error ellipse: s-maj=7.9km s-min=5.3km az=30.6*
*IDC **10** 02:54:19.2±5.4, 3°.96N×76°.83W, h85km±47km, mb3.2/3, mb1 3.5/4, mb1mx3.1/45, mbtmp3.5/4, ML2.3/1, Error ellipse: s-maj=51.5km s-min=44.2km az=173.0*
*RSNC **10** 02:54:21.0±1.1, 4°.08N×76°.68W, h60km±6km, ML3.2, Mw3.1*

ISC 10 02:54:19.0±0.9, 4°.07N±0°.04×76°.71W±0°.05, h72km±7km, n27, σ1§52/37, mb3.5/3, 2C-1D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOTC	**Yotoco, Valle**	**0.38**	**103**	*i* P	**Pn**	**02 54 31.2**	**+0.1**
YOTC				*e*S	**Sn**	**02 54 40.0**	**0.0**
YOTC				*i*		02 54 44.5	
	comp=Z,1μm,0.2s						
HORQ	**Saladito**	**0.59**	**171**	*i* P	**Pn**	**02 54 33.4**	**+0.2**
HORQ				*e*S	**Sn**	**02 54 43.7**	**+0.1**
HORQ				*i*		02 54 44.9	
	comp=Z,692nm,0.1s						
PLMC	**San Jos¨ del**	**0.94**	**27**	*e*P	**Pn**	**02 54 37.2**	**+0.2**
PLMC				*e*S	**Sn**	**02 54 50.2**	**-0.1**
ANIL	**Santa Ana**	**1.37**	**72**	*i* P	**Pn**	**02 54 42.6**	**0.0**
ANIL				*e*S	**Sn**	**02 55 00.8**	**+0.4**
ANIL				*i*		02 55 02.7	
	comp=Z,1μm,0.4s						
MARP	**Paez Belalcaza**	**1.43**	**148**	*e*P	**Pn**	**02 54 44.4**	**+1.0**
MARP				*e*S	**Sn**	**02 55 02.4**	**+0.6**
MARP				*i*		02 55 05.5	
	comp=Z,268nm,0.3s						
TOLC	**Tolima**	**1.48**	**70**	*e*P	**Pn**	**02 54 44.6**	**+0.5**
POPC	**Popayan, Colom**	**1.52**	**179**	*e*P	**Pn**	**02 54 45.9**	**+1.4**
POPC				*e*S	**Sn**	**02 55 06.1**	**+2.4**
POPC				*i*		02 55 09.7	
	comp=Z,346nm,0.3s						
RREF	**El Recreo**	**1.59**	**59**	*e*P	**Pn**	**02 54 47.5**	**+1.6**
RREF				*i*		02 55 15.7	
	comp=Z,108nm,0.1s						
PCON	**Cinco Dias**	**1.75**	**170**	*e*P	**Pn**	**02 54 50.0**	**+2.1**
PCON				*i*		02 55 15.5	
	comp=Z,155nm,0.3s						
GRGC	**Isla de Gorgon**	**1.79**	**234**	*e*P	**Pn**	**02 54 48.9**	**+1.0**
PRAC	**Prado**	**1.86**	**101**	*i* P	**Pn**	**02 54 49.0**	**+0.2**
PRAC				*e*S	**Sn**	**02 55 11.6**	**+0.1**
BETC	**Betania**	**1.87**	**137**	*e*P	**Pn**	**02 54 49.5**	**+0.5**
SOTA	**Rioblanco**	**1.92**	**177**	*e*P	**Pn**	**02 54 51.7**	**+1.6**
SOTA				*i*		02 55 20.9	
	comp=Z,125nm,0.4s						
SOLC	**Bahia Solano**	**2.25**	**342**	*e*P	**Pn**	**02 54 56.6**	**+2.4**
NORC	**Norcasia**	**2.36**	**51**	*e*P	**Pn**	**02 54 57.2**	**+1.5**
CRUC	**La Cruz**	**2.49**	**185**	*e*P	**Pn**	**02 54 59.9**	**+2.1**
ROSC	**El Rosal**	**2.51**	**72**	P	**Pn**	**02 55 00.1**	**+2.2**
	comp=Z,12nm,0.3s,baz=252,slow=3.2,SNR=35						
ROSC				S	**Sn**	**02 55 32.4**	**+4.7**
	comp=Z,8.3nm,0.3s,baz=77,slow=20,SNR=11						
ROSC	**El Rosal**	**2.51**	**72**	*e*P	**Pn**	**02 54 60.0**	**+2.1**
ROSC				*i*		02 55 34.1	
	comp=Z,58nm,0.6s						
FLOC	**Florencia**	**2.69**	**157**	*e*P	**Pn**	**02 55 00.7**	**+0.7**
FLOC				*i*		02 55 34.3	
	comp=Z,94nm,0.4s						
SJAC	**San Juan de Ar**	**2.87**	**106**	*i* P	**Pn**	**02 55 02.9**	**+0.4**
SJAC				*i*		02 55 36.5	
	comp=Z,251nm,0.6s						
VILC	**Villavicencio,**	**3.01**	**89**	*e*P	**Pn**	**02 55 05.8**	**+1.2**
VILC				*e*S	**Sn**	**02 55 40.3**	**+0.6**
VILC				*i*		02 55 43.5	
	comp=Z,111nm,0.6s						
CHIC	**Chingaza**	**3.02**	**79**	*e*P	**Pn**	**02 55 06.3**	**+1.3**
CHIC				*e*S	**Sn**	**02 55 41.5**	**+1.2**
CHIC				*i*		02 55 43.5	
	comp=Z,65nm,0.4s						
YKA	**Yellowknife Ar**	**64.67**	**342**	P	**P**	**03 04 48.6**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=134,slow=6.5,SNR=5.5						
ESDC	**Sonseca Array**	**74.15**	**50**	P	**P**	**03 05 47.6**	**-0.5**
	comp=Z,0.1nm,0.4s,baz=273,slow=6.5,SNR=2.1						
ILAR	**Eielson Array**	**77.96**	**336**	P	**P**	**03 06 07.7**	**-1.4**
	comp=Z,0.3nm,0.6s,baz=113,slow=3.7,SNR=6.9						
ASAR	**Alice Springs**	**144.61**	**234**	PKP	**PKPab**	**03 13 46.6**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=114,slow=3.5,SNR=9.7						
WRA	**Warramunga Arr**	**145.88**	**240**	PKPbc	**PKPdf**	**03 13 48.5**	**-2.0

baz=305
HGSD Ruisui 1.09 245 *e*P **Pn 03 10 50.2 +0.3**
baz=240
HGSD *e*S **Sb 03 11 03.1 -0.8**
baz=240
NNSB Datong 1.12 294 P **Pn 03 10 50.4 0.0**
baz=290
NNSB *e*S **Sn 03 11 04.9 -0.2**
baz=290
NNSH Datong 1.12 294 *e*P **Pn 03 10 50.4 0.0**
baz=290
NNSH *e*S **Sb 03 11 04.5 -0.3**
baz=290
EHY Hungye 1.17 247 *e*P **Pn 03 10 51.1 +0.1**
baz=243
EHY *e*S **Sn 03 11 05.8 -0.5**
baz=243
TIPB Shuangxi 1.18 329 *e*P **Pn 03 10 51.0 0.0**
baz=326
TIPB *e*S **Sn 03 11 06.2 -0.2**
baz=326
IRIF Iriomote-Funau 1.18 72 P **Pb 03 10 51.6 0.0**
IRIF *e*S **Sn 03 11 06.8 +0.3**
HATJ Hateruma jima 1.20 85 S **Sb 03 11 07.4 +0.5**
OWD Renai 1.21 270 P **Pn 03 10 51.4 -0.2**
baz=265
NWLT Wulai 1.22 312 P **Pb 03 10 52.0 -0.2**
baz=308
NWLT S **Sb 03 11 07.9 +0.4**
baz=308
CHGB Renai 1.22 275 *e*P **Pn 03 10 51.5 -0.3**
baz=270
CHGB *e*S **Sn 03 11 07.3 -0.4**
baz=270
YHNB Yeheng 1.24 305 P **Pb 03 10 52.3 -0.4**
baz=288
YHNB S **Sb 03 11 08.7 +0.4**
baz=288
YULB Yu-li 1.24 243 P **Pn 03 10 51.6 -0.3**
baz=239
YULB *e*S **Sn 03 11 07.2 -0.8**
baz=239
TWT Tachien 1.24 284 *e*S **Sb 03 11 09.7 +1.2**
baz=266
TDCB Techi 1.26 283 *e*P **Pn 03 10 52.3 0.0**
baz=266
TDCB *e*S **Sb 03 11 08.8 0.0**
baz=266
TWF1 Yuli 1.26 241 *e*P **Pn 03 10 52.1 -0.1**
baz=237
TWF1 *e*S **Sn 03 11 08.6 +0.1**
baz=237
VWDT VWDT 1.26 261 *e*P **Pn 03 10 52.3 +0.1**
baz=256
VWDT *e*S **Sn 03 11 08.1 -0.4**
baz=256
WFSB Wu-fen Shan 1.28 329 *e*S **Sb 03 11 09.9 +0.6**
baz=327
FULB Fuli 1.34 236 *e*P **Pb 03 10 54.6 +0.1**
baz=220
FULB *e*S **Sn 03 11 10.7 +0.1**
baz=220
TATO Taipei 1.36 318 *e*P **Pb 03 10 54.9 +0.2**
baz=315
TATO *e*S **Sb 03 11 12.7 +1.0**
baz=315
JKRS Kuro-shima 1.41 79 P **Pn 03 10 54.5 +0.3**
JKRS *e*S **Sb 03 11 13.3 +0.4**
SSLB Suanglung 1.43 263 *e*P **Pb 03 10 56.7 +0.8**
baz=259
YM07 YM07 1.45 327 *e*P **Pn 03 10 55.2 +0.4**
baz=324
YM07 *e*S **Sb 03 11 14.7 +0.6**
baz=324
SMLT Sun Moon Lake 1.47 267 *e*P **Pn 03 10 55.6 +0.5**
baz=263
LIOB Emei 1.51 297 *e*P **Pb 03 10 57.5 +0.2**
baz=293
LIOB *e*S **Sb 03 11 16.2 +0.1**
baz=293
JIJ Ishigaki jima 1.55 75 P **Pn 03 10 56.5 +0.3**
JIJ *e*S **Sn 03 11 16.0 +0.4**
ELDTW Lidau 1.57 241 *e*P **Pn 03 10 57.3 +0.8**
baz=237
JISG Ishigakijimahi 1.76 69 P **Pn 03 10 59.0 -0.1**
JISG *e*S **Sn 03 11 20.2 -0.7**
JTJ Tarama 2.12 71 *e*S **Sn 03 11 29.6 0.0**

*ISCJB **10** 03:22:33.8±0.7, 38.°30N±0.°05×38.°82E±0.°07, h10km±10km, Error ellipse: s-maj=10.3km s-min=6.3km az=38.2*
*CSEM **10** 03:22:33.6±0.2, 38.°33N×38.°82E, h15km, ML2.6, Error ellipse: s-maj=4.1km s-min=3.1km az=167.0*
*ISK **10** 03:22:33.5, 38.°33N×38.°81E, h14km±2km, ML1.8/2*
*DDA **10** 03:22:34.8, 38.°41N×38.°75E, h7km, Ml2.6*
ISC 10 03:22:33.7±1.2, 38.°34N±0.°04×38.°81E±0.°03, h15km±10km, n16, σ0°39/28, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.20**	**41**	*i* P			**Pb**	**03 22 39.1**	**-0.1**
ELZG				*i* S			**Sb**	**03 22 42.8**	**-0.2**
ELZG	**Elazig**	**0.20**	**41**	P			**Pb**	**03 22 39.1**	**-0.1**
ELZG				S			**Sb**	**03 22 42.8**	**-0.2**
MALT	**Malatya**	**0.30**	**265**	PG			**Pg**	**03 22 40.2**	**+0.1**
MALT	**Malatya**	**0.30**	**265**	*e*Pg			**Pg**	**03 22 40.2**	**+0.1**
SVRC	**Sivrice-ELAZID**	**0.39**	**85**	PG			**Pg**	**03 22 41.7**	**0.0**
SVRC				SG			**Sb**	**03 22 47.9**	**-0.3**
SVRC	**Sivrice-ELAZID**	**0.39**	**85**	*e*Pg			**Pg**	**03 22 41.7**	**0.0**
SVRC				*e*Sg			**Sb**	**03 22 47.9**	**-0.3**
AKCD	**Akcadag**	**0.70**	**266**	*i* P			**Pb**	**03 22 47.5**	**-0.2**
AKCD				*i* S			**Sb**	**03 22 57.6**	**+0.5**
AKCD	**Akcadag**	**0.70**	**266**	P			**Pb**	**03 22 47.5**	**-0.2**
AKCD				S			**Sb**	**03 22 57.7**	**+0.5**
PTK	**Pertek**	**0.71**	**39**	PG			**Pb**	**03 22 47.9**	**0.0**
PTK				SG			**Sb**	**03 22 58.4**	**+0.8**
PTK	**Pertek**	**0.71**	**39**	*e*Pg			**Pb**	**03 22 47.9**	**0.0**
PTK				*e*Sg			**Sb**	**03 22 58.4**	**+0.8**
HEKM	**Malatya_Hekimh**	**0.86**	**309**	*i* P			**Pg**	**03 22 50.3**	**0.0**
HEKM				*i* S			**Sn**	**03 23 03.3**	**-0.4**
HEKM	**Malatya_Hekimh**	**0.86**	**309**	P			**Pg**	**03 22 50.3**	**0.0**
HEKM				S			**Sn**	**03 23 03.3**	**-0.4**
URFA	**Urfa**	**0.90**	**180**	PG			**Pg**	**03 22 51.2**	**+0.1**
URFA	**Urfa**	**0.90**	**180**	*e*Pg			**Pg**	**03 22 51.2**	**+0.1**
KEMA	**Kemaliye**	**0.96**	**345**	*i* P			**Pb**	**03 22 51.5**	**-0.5**
KEMA				*i* S			**Sn**	**03 23 06.5**	**+0.4**
KEMA	**Kemaliye**	**0.96**	**345**	P			**Pb**	**03 22 51.5**	**-0.5**
KEMA				S			**Sn**	**03 23 06.5**	**+0.4**

*IDC **10** 03:29:39.4±2.8, 36.°05N×70.°96E, h103km±25km, mb4.1/38, mb1 4.2/43, mb1mx4.1/69, mbtmp4.5/43, MS3.2/5, Ms1 3.3/5, ms1mx2.7/60, Error ellipse: s-maj=13.2km s-min=7.8km az=180.0*
*ISCJB **10** 03:29:39.1±0.1, 36.°23N±0.°02×71.°12E±0.°02, h102km, mb4.5/110, Error ellipse: s-maj=3.1km s-min=2.2km az=137.4*
*MOS **10** 03:29:39.9±1.1, 36.°24N×71.°09E, h109km, mb4.6/36, Error ellipse: s-maj=5.6km s-min=3.8km az=97.2*
*NEIC **10** 03:29:40.6±0.6, 36.°24N×71.°03E, h107km±5km, mb4.5/38, Error ellipse: s-maj=5.6km s-min=4.2km az=180.0*
*BJI **10** 03:29:40.3, 36.°31N×71.°05E, h106km, mb4.8/41, mB4.7/21*
*NNC **10** 03:29:43.5±2.7, 36.°56N×70.°59E, h141km±28km, mb4.5, mpv5.2, Error ellipse: s-maj=24.2km s-min=15.2km az=172.0*
ISC 10 03:29:39.7±0.3, 36.°22N±0.°04×70.°91E±0.°03, h102km, n331, σ2°50/367, mb4.5/109, 30C-27D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.27**	**223**	*e*Pn			**Pn**	**03 30 16.8**	**+0.8**
KBL	**Kabul**	**2.27**	**223**	*e*PN			**Pn**	**03 30 16.8**	**+0.8**
CEP	**Cherat**	**2.53**	**161**	P			**Pn**	**03 30 21.2**	**+1.9**
CEP				S			**Sn**	**03 30 51.0**	**+1.3**
CHCP	**Chirah Chowk**	**3.20**	**142**	P			**Pn**	**03 30 30.1**	**+1.9**
NIL	**Nilore**	**3.20**	**142**	*e*Pn			**Pn**	**03 30 30.4**	**+2.2**
NIL	**Nilore**	**3.20**	**142**	*e*PN			**Pn**	**03 30 30.4**	**+2.2**
THW	**Thamme Wali**	**3.48**	**168**	P			**Pn**	**03 30 33.0**	**+1.0**
SFK	**Sufi-Kurgan**	**4.30**	**28**	⇑P			**Pn**	**03 30 45.9**	**+2.7**
SFK	256nm,0.3s								
SFK				⇓S			**Sn**	**03 31 34.8**	**+2.4**
	465nm,0.3s								
SFK	**Sufi-Kurgan**	**4.30**	**28**	PN			**Pn**	**03 30 45.8**	**+2.7**
SFK				S			**Sn**	**03 31 34.8**	**+2.4**
SFK				pmax			pmax		
	comp=Z,255nm,0.3s								
SFK				smax			smax		
	comp=N,465nm,0.3s								
SARP	**Sargodha**	**4.53**	**161**	P			**Pn**	**03 30 47.0**	**+1.0**
KSH	**Kashi**	**5.18**	**49**	P			**Pn**	**03 30 52.0**	**-3.0**
KSH				S			Sn	03 31 43.9	-10
KSH				smax			smax		
	comp=N,7μm,0.5s								
KSH				smax			smax		
	comp=N,6μm,0.7s								
TAS	**Tashkent**	**5.26**	**347**	⇑P			**Pn**	**03 30 56.0**	**+0.1**
	comp=N,88nm,0.5s								
TAS				⇑S			**Sn**	**03 31 53.2**	**-2.0**
	comp=N,749nm,0.4s								
TAS	**Tashkent**	**5.26**	**347**	PN			**Pn**	**03 30 56.0**	**+0.1**
TAS				pmax			pmax		
	comp=Z,88nm,0.5s								
DHRM	**DHARAMSHALA**	**5.96**	**130**	*e*P			**Pn**	**03 31 05.1**	**-0.6**
DHRM				*e*S			**Sn**	**03 32 09.6**	**-3.2**
DHRM				IAML				03 32 12.6	
	comp=N,1μm,0.1s								
DHRM				IAML				03 32 13.2	
	comp=E,1μm,0.3s								
AML	**Almayashu**	**6.29**	**19**	P			**Pn**	**03 31 11.0**	**+0.8**
	SNR=209								
MNAS	**Manas**	**6.38**	**11**	⇓P			**Pn**	**03 31 12.5**	**+1.3**
	comp=E,84nm,0.4s								
MNAS				⇓S			**Sn**	**03 32 19.9**	**-2.8**
	comp=E,286nm,0.4s								
MNAS	**Manas**	**6.38**	**11**	PN			**Pn**	**03 31 12.5**	**+1.3**
MNAS				pmax			pmax		
	comp=Z,84nm,0.4s								
NRN	**Naryn**	**6.55**	**36**	*e*Pn			**Pn**	**03 31 14.1**	**+0.4**
NRN	**Naryn**	**6.55**	**36**	*e*PN			**Pn**	**03 31 14.1**	**+0.4**
UCH	**Uchtor**	**6.62**	**24**	P			**Pn**	**03 31 15.5**	**+0.8**
	SNR=241								
KZA	**Kyzart**	**6.75**	**29**	P			**Pn**	**03 31 17.2**	**+0.7**
	SNR=115								
EKS2	**Erkin-Say**	**6.80**	**18**	P			**Pn**	**03 31 18.1**	**+1.1**
	SNR=103								
KK31	**Karatay Array**	**6.88**	**358**	⇓P			**Pn**	**03 31 18.0**	**+0.1**
	comp=Z,41nm,0.4s,baz=181,slow=13,SNR=974								
KK31				⇓S			**Sn**	**03 32 31.2**	**-3.5**
	comp=Z,63nm,0.3s,baz=130,slow=55,SNR=3.8								
KK31	**Karatay Array**	**6.88**	**358**	*e*Pn			**Pn**	**03 31 18.1**	**+0.1**
KK31	**Karatay Array**	**6.88**	**358**	*e*PN			**Pn**	**03 31 18.0**	**+0.1**
KK31				pmax			pmax		
	comp=Z,41nm,0.4s								
KKAR	**Karatay Array**	**6.88**	**358**	*e*Pn			**Pn**	**03 31 18.1**	**+0.2**
KKAR	**Karatay Array**	**6.88**	**358**	*e*PN			**Pn**	**03 31 18.1**	**+0.2**
AAK	**Ala-Archa**	**6.98**	**22**	P			**Pn**	**03 31 20.5**	**+1.1**
	comp=Z,40nm,0.3s,baz=180,slow=5.2,SNR=133								
AAK				S			**Sn**	**03 32 34.5**	**-2.9**
	comp=Z,17nm,0.3s,baz=336,slow=20,SNR=9.8								
AAK	**Ala-Archa**	**6.98**	**22**	P			**Pn**	**03 31 20.6**	**+1.1**
	SNR=101								
AAK	**Ala-Archa**	**6.98**	**22**	*e*Pn			**Pn**	**03 31 20.5**	**+1.1**
AAK				*e*Sn			**Sn**	**03 32 33.5**	**-3.9**
AAK	**Ala-Archa**	**6.98**	**22**	*c i*PN			**Pn**	**03 31 20.4**	**+1.0**
KBK	**Karagaybulak**	**7.15**	**25**	P			**Pn**	**03 31 22.9**	**+1.2**
	SNR=107								
FRU	**Bishkek**	**7.20**	**22**	*e*PN			**Pn**	**03 31 22.0**	**-0.2**
FRU				pmax			pmax		
	comp=Z,120nm,1.3s								
SMLA	**Simla**	**7.28**	**132**	*e*P			**Pn**	**03 31 22.3**	**-1.0**
SMLA				*e*S			**Sn**	**03 32 41.0**	**-3.3**
SMLA				IAML				03 32 49.4	
	comp=E,518nm,0.1s								
SMLA				IAML				03 32 51.3	
	comp=N,680nm,0.3s								
ULHL	**Ulahol**	**7.30**	**33**	P			**Pn**	**03 31 25.3**	**+1.5**
	SNR=80								
CHMS	**Chumysh**	**7.39**	**22**	P			**Pn**	**03 31 25.8**	**+1.0**
	SNR=51								
USP	**Ospenovka**	**7.56**	**20**	P			**Pn**	**03 31 28.1**	**+1.0**
	SNR=43								
TKM2	**Tokmak 2**	**7.61**	**27**	⇑P			**Pn**	**03 31 28.9**	**+0.9**
	comp=N,271nm,0.8s								
TKM2				⇓S			**Sn**	**03 32 48.7**	**-3.9**
	comp=N,97nm,0.7s								
TKM2	**Tokmak 2**	**7.61**	**27**	P			**Pn**	**03 31 28.8**	**+0.9**
	SNR=18								
TKM2	**Tokmak 2**	**7.61**	**27**	PN			**Pn**	**03 31 28.8**	**+0.9**
TKM2				pmax			pmax		
	comp=Z,271nm,0.8s								
AAA	**Alma-Ata**	**8.37**	**32**	*e*PN			**Pn**	**03 31 40.9**	**+2.7**
AAA				pmax			pmax		
	comp=Z,300nm,0.9s								
AAA				MLR			MLR		
	comp=Z,100nm,3.0s								
DDI	**Dehra Dun**	**8.38**	**132**	*e*P			**Pn**	**03 31 37.6**	**-0.9**
PRZ	**Przheval'sk**	**8.53**	**41**	*e*Pn			**Pn**	**03 31 42.1**	**+1.7**
PRZ	**Przheval'sk**	**8.53**	**41**	*e*PN			**Pn**	**03 31 42.2**	**+1.7**
NDI	**New Delhi**	**9.21**	**143**	*e*P			**Pn**	**03 31 48.0**	**-1.6**
NDI				*e*S			**Sn**	**03 33 24.0**	**-7.4**
PDGK	**Podgornoye**	**9.69**	**40**	⇑P			**Pn**	**03 31 55.9**	**-0.3**
	comp=Z,125nm,1.0s								
PDGK	**Podgornoye**	**9.69**	**40**	P			**Pn**	**03 31 55.9**	**-0.3**
PDGK				pmax			pmax		
	comp=Z,125nm,1.0s								
GEYT	**Alibeck**	**10.37**	**283**	P			**Pn**	**03 32 02.6**	**-2.7**
	comp=Z,10nm,0.3s,baz=113,slow=12,SNR=4.2								
GEYT				S			**Sn**	**03 33 51.6**	**-7.9**
	comp=Z,22nm,0.3s,baz=90,slow=18,SNR=11								
GYA0B	**ALIBECK ARRAY**	**10.37**	**283**	⇑P			**Pn**	**03 32 02.3**	**-3.0**
	comp=Z,19nm,0.5s								
GYA0B				⇓S			**Sn**	**03 33 52.0**	**-7.5**
	comp=Z,66nm,0.5s								
OTUK	**Ortayu**	**12.06**	**5**	⇑P			**Pn**	**03 32 26.7**	**-1.4**
	comp=Z,9.7nm,0.5s								
OTUK	**Ortayu**	**12.06**	**5**	P			**Pn**	**03 32 26.6**	**-1.4**
OTUK				S			**Sn**	**03 34 33.7**	**-6.9**
OTUK				pmax			pmax		
	comp=Z,10.0nm,0.5s								
OTUK				smax			smax		
	comp=N,107nm,0.8s								
PYUN	**Piuthan**	**13.04**	**125**	*e*P			**Pn**	**03 32 37.2**	**-4.0**
	comp=N,151nm,0.5s								
DANN	**Dangsing**	**13.40**	**122**	*e*P			**Pn**	**03 32 42.7**	**-3.3**
	comp=N,91nm,0.3s								
MAKZ	**Makanchi**	**13.43**	**35**	⇓P			**Pn**	**03 32 44.6**	**-1.3**
	comp=N,57nm,0.8s								
MAKZ	**Makanchi**	**13.43**	**35**	*e*Pn			**Pn**	**03 32 45.0**	**-0.9**
MAKZ	**Makanchi**	**13.43**	**35**	*e*P			**Pn**	**03 32 45.0**	**-0.9**
MK01	**Makanchi Array**	**13.55**	**35**	*e*Pn			**Pn**	**03 32 46.0**	**-1.5**
MK31	**Makanchi Array**	**13.56**	**35**	⇓P			**Pn**	**03 32 46.5**	**-1.2**
	comp=N,18nm,0.5s,baz=210,slow=10,SNR=208								
MK31	**Makanchi Array**	**13.56**	**35**	*e*Pn			**Pn**	**03 32 46.8**	**-0.9**
MK31	**Makanchi Array**	**13.56**	**35**	*e*P			**Pn**	**03 32 46.8**	**-0.9**
MKAR	**Makanchi Array**	**13.56**	**35**	P			**Pn**	**03 32 47.1**	**-0.6**
	comp=N,2.2nm,0.3s,baz=223,slow=13,SNR=70								
MKAR	**Makanchi Array**	**13.56**	**35**	*e*Pn			**Pn**	**03 32 46.8**	**-0.9**
MKAR	**Makanchi Array**	**13.56**	**35**	*i* P			**Pn**	**03 32 47.2**	**-0.5**
MKAR				pmax			pmax		
	comp=Z,32nm,0.7s								
KOLN	**Koldanda**	**13.66**	**124**	*e*P			**Pn**	**03 32 45.2**	**-4.1**
	comp=Z,50nm,0.4s								
BHPL	**Bhopal**	**14.11**	**155**	*e*P			**Pn**	**03 32 51.1**	**-3.9**
BHPL				IAmb			IAmb	03 32 51.6	
	comp=Z,33nm,0.6s								
BHPL				*ex*			x	03 35 17.5	
BHPL				IAML				03 35 21.8	
	comp=N,32nm,0.7s								
BHPL				IAML				03 35 23.6	
	comp=E,48nm,0.6s								
GKN	**Gorkha**	**14.22**	**121**	*e*P			**Pn**	**03 32 53.0**	**-3.4**
	comp=E,131nm,0.5s								
DMN	**Daman**	**14.79**	**121**	*e*P			**Pn**	**03 33 00.7**	**-3.1**
	comp=E,93nm,0.4s								
KKN	**Kakani**	**14.79**	**121**	*e*P			**Pn**	**03 33 00.9**	**-3.0**
	comp=E,145nm,0.6s								
WMQ	**Urumqi**	**14.92**	**54**	P			**Pn**	**03 33 04.8**	**-0.4**
WMQ				pmax			pmax		
	comp=E,65nm,0.9s								
WMQ				pmax			pmax		
	comp=E,160nm,3.8s								
PKIN	**Phulchoki**	**15.01**	**121**	*e*P			**Pn**	**03 33 03.7**	**-2.9**
	comp=E,111nm,0.5s								
GUN	**Gumba**	**15.14**	**119**	*e*P			**Pn**	**03 33 05.3**	**-3.1**
	comp=E,108nm,0.5s								
AB31	**Akbulak array**	**15.30**	**332**	⇑P			**Pn**	**03 33 08.2**	**-1.6**
	comp=E,61nm,0.5s,baz=141,slow=10,SNR=1480								
AB31				⇑S			**Sn**	**03 35 48.2**	**-10**
	comp=E,44nm,0.8s,baz=134,slow=24,SNR=9.6								
AB31	**Akbulak array**	**15.30**	**332**	*i* P			**Pn**	**03 33 08.2**	**-1.6**
AB31				S			**Sn**	**03 35 49.6**	**-9.1**
AB31				pmax			pmax		
	comp=Z,61nm,0.5s								
AB31				smax			smax		
	comp=N,38nm,0.7s								
ABKAR	**Akbulak array**	**15.30**	**332**	*e*Pn			**Pn**	**03 33 08.1**	**-1.7**
KURBB	**Kurchatov Arra**	**15.41**	**19**	P			**Pn**	**03 33 10.8**	**-0.5**
	comp=N,0.4nm,0.3s,baz=210,slow=10,SNR=36								
KURBB				S			**Sn**	**03 35 55.1**	**-6.3**
	baz=217,slow=27,SNR=2.5								
JIRN	**Jiri**	**15.51**	**119**	*e*P			**Pn**	**03 33 10.6**	**-2.5**
	comp=N,342nm,0.4s								
KURK	**Kurchatov**	**15.52**	**19**	⇑P			**Pn**	**03 33 11.8**	**-0.8**
	comp=N,62nm,1.0s								
KURK	**Kurchatov**	**15.52**	**19**	*e*Pn			**Pn**	**03 33 09.9**	**-2.7**
KURK				S			**Sn**	**03 35 55.1**	**-8.9**
KURK	**Kurchatov**	**15.52**	**19**	*c e*P			**Pn**	**03 33 11.4**	**-1.2**
KURK				pmax			pmax		
	comp=Z,18nm,1.2s								
RAMN	**Ramite**	**16.23**	**120**	*e*P			**Pn**	**03 33 19.1**	**-2.9**
	comp=Z,62nm,0.4s								
TAPN	**Taplejung**	**16.78**	**117**	*e*P			**Pn**	**03 33 26.9**	**-1.9**
	comp=Z,65nm,0.4s								
BVA0	**Borovoye Array**	**16.81**	**359**	P			**Pn**	**03 33 28.7**	**+0.1**
	comp=Z,18nm,0.9s,baz=165,slow=13,SNR=128								
BVA0				S			**Sn**	**03 36 25.4**	**-10**
	comp=Z,16nm,1.2s,baz=170,slow=25,SNR=4.2								
BVA0	**Borovoye Array**	**16.81**	**359**	P			**Pn**	**03 33 28.7**	**+0.1**
BVA0				S			**Sn**	**03 36 25.4**	**-10**
BVA0				pmax			pmax		
	comp=Z,18nm,1.0s								
BVA0				smax			smax		
	comp=Z,16nm,1.3s								
BVAR	**Borovoye Array**	**16.81**	**359**	P			**Pn**	**03 33 28.6**	**0.0**
	comp=Z,3.8nm,0.3s,baz=160,slow=13,SNR=45								
BVAR				S			**Sn**	**03 36 29.3**	**-5.8**
	comp=Z,1.0nm,0.3s,baz=165,slow=22,SNR=4.2								
BRVK	**Borovoye**	**16.84**	**359**	*e*Pn			**P**	**03 33 29.3**	**-0.2**
	comp=Z,26nm,1.1s								
BRVK	**Borovoye**	**16.84**	**359**	*c e*P			**P**	**03 33 29.1**	**-0.3**
BRVK				pmax			pmax		
	comp=Z,50nm,1.7s								
ODAN	**Odare**	**16.84**	**119**	*e*P			**Pn**	**03 33 27.4**	**-2.1**
	comp=Z,89nm,0.5s								
AKTO	**Aktyubinsk**	**16.99**	**331**	P			**P**	**03 33 31.0**	**-0.1**
	comp=Z,4.3nm,0.3s,baz=145,slow=14,SNR=83								
AKTO				S			Sn	03 36 26.1	-13
	comp=Z,0.7nm,0.3s,baz=142,slow=19,SNR=6.2								
AKTO				LR			LR	03 41 50.2	
	comp=Z,14nm,18.2s,baz=179,slow=43								
AKTO	**Aktyubinsk**	**16.99**	**331**	⇑P			**Pn**	**03 33 30.7**	**-0.1**
	comp=Z,58nm,0.8s								
AKTO				⇑S			Sn	03 36 27.9	-12
	comp=Z,74nm,1.4s								
AKTO	**Aktyubinsk**	**16.99**	**331**	P			**Pn**	**03 33 30.7**	**-0.1**
AKTO				S			Sn	03 36 27.8	-12
AKTO				pmax			pmax		
	comp=Z,59nm,0.8s								
AKTO				smax			smax		
	comp=N,74nm,1.5s								
BOK	**Bokaro**	**17.90**	**130**	*e*P			**P**	**03 33 41.6**	**+0.3**
BOK				IAmb			IAmb	03 33 43.3	
	comp=Z,14nm,0.7s								
LSA	**Lhasa**	**18.17**	**105**	*e*P			**P**	**03 33 44.5**	**-0.2**
	comp=Z,18nm,0.6s								
LSA	**Lhasa**	**18.17**	**105**	*e*P			**P**	**03 33 44.6**	**-0.2**
LSA				pmax			pmax		
	comp=Z,18nm,0.6s								
SRSP	**Sriramsagar**	**18.43**	**157**	*e*P			**Pn**	**03 33 48.5**	**+0.1**
KLRI	**Killari**	**18.77**	**163**	*e*P			**Pn**	**03 33 52.9**	**+0.4**
AKT	**Akhty**	**18.78**	**293**	*e*P			**Pn**	**03 33 52.7**	**+0.1**
AKT				*e*S			**Sn**	**03 37 22.0**	**-0.9**
AKT				pmax			pmax		
	comp=Z,12nm,0.5s								
AKT				smax			smax		
	comp=N,16nm,0.6s								
AKT				smax			smax		
	comp=E,12nm,0.4s								
RPR	**Rampur**	**18.81**	**155**	*e*P			**P**	**03 33 52.1**	**+0.8**
HYBB	**Hyderabad (bro**	**19.91**	**158**	*e*P			**P**	**03 34 04.7**	**+1.3**
HYB	**Hyderabad**	**19.91**	**158**	*i* P			**P**	**03 34 04.0**	**+0.6**
HYB				*e*S			**S**	**03 37 34.0**	**-8.0**
HYB	**Hyderabad**	**19.91**	**158**	*e*P			**P**	**03 34 03.8**	**+0.4**
HYB				IAmb			IAmb	03 34 05.9	
	comp=Z,11nm,0.7s								
ZAA0	**Zalesovo Array**	**20.20**	**24**	⇑P			**P**	**03 34 06.6**	**+0.5**
	comp=Z,129nm,0.7s								
ZALV	**Zalesovo Beam**	**20.20**	**24**	P			**P**	**03 34 06.3**	**+0.2**
	comp=Z,150nm,0.5s,baz=219,slow=11,SNR=191								
ZALV	**Zalesovo Beam**	**20.20**	**24**	*e*P			**P**	**03 34 06.6**	**+0.5**
ZALV	**Zalesovo Beam**	**20.20**	**24**	*e*P			**P**	**03 34 06.6**	**+0.5**
NVS	**Novosibirsk**	**20.47**	**21**	⇑*i*P			**P**	**03 34 09.6**	**+0.6**
NVS				*e*S			**S**	**03 37 52.8**	**+0.6**
NVS				pmax			pmax		
	comp=N,77nm,0.7s								
NVS				pmax			pmax		
	comp=E,12nm,0.7s								
NVS				pmax			pmax		
	comp=Z,82nm,0.7s								
NVS				smax			smax		
	comp=N,8.0nm,0.8s								
NVS				smax			smax		
	comp=E,2.0nm,0.8s								
GROC	**Groznyy**	**20.50**	**298**	*e*P			**P**	**03 34 09.3**	**-0.1**
GROC				*e**SP			**sP**	**03 34 43.2**	**+1.6**
GROC				*e*S			**S**	**03 37 54.5**	**+1.5**
GROC				*e**SS			**sS**	**03 38 30.2**	**+5.0**
GROC				pmax			pmax		
	comp=Z,65nm,1.2s								
SHL	**Shillong**	**20.85**	**115**	*e*P			**P**	**03 34 13.0**	**-0.6**
SHL				*e*P			Pn	03 34 14.6	-2.4
SHL				IAmb			IAmb	03 34 17.3	
	comp=Z,19nm,0.3s								
SHL				*ex*			x	03 37 54.5	
SHL	**Shillong**	**20.85**	**115**	P			**P**	**03 34 14.8**	**+1.2**
GNI	**Garni**	**20.91**	**289**	P			**P**	**03 34 14.9**	**+0.8**
	comp=Z,43nm,0.9s,baz=138,slow=1.6,SNR=20								
GNI	**Garni**	**20.91**	**289**	*e*P			Pn	03 34 17.2	-0.4
GNI	**Garni**	**20.91**	**289**	*de*P			Pn	03 34 16.6	-1.0
GNI				pmax			pmax		
	comp=Z,140nm,0.8s								
TEZP	**TEZPU

KIV	**Kislovodsk**	**22.86 298**	*e*P	**P**	**03 34 36.8 +2.4**
KIV			*e*S	**S**	**03 38 39.2 +3.1**
KIV			pmax	pmax	
	comp=Z,15nm,1.0s				
KIV			MLR	MLR	
	comp=Z,34nm,14.0s				
GTA	**Gaotai**	**23.01 73**	P	**P**	**03 34 37.6 +1.6**
GTA			pP	pP	03 35 00.7 +4.5
GTA			sP	sP	03 35 14.8 +5.9
GTA			S	**S**	**03 38 41.4 +2.7**
GTA			pmax	pmax	
	comp=Z,31nm,0.7s				
GTA			pmax	pmax	
	comp=Z,95nm,5.1s				
GTA			LR	LR	
	comp=Z,95nm,16.8s				
GTA			LR	LR	
	comp=Z,85nm,16.8s				
GTA			LR	LR	
	comp=Z,82nm,15.5s				
SOKR	**Solikamsk**	**25.12 343**	*e*P	**P**	**03 35 00.8 +6.1**
SOKR			pmax	pmax	
	comp=Z,8.0nm,0.8s				
RAYN	**Ar Rayn**	**25.32 247**	*e*P	**P**	**03 34 58.0 +0.9**
	comp=Z,5.5nm,0.7s				
MOY	**Mondy**	**26.36 45**	*e*P	**P**	**03 35 09.6 +3.4**
LZH	**Lanzhou**	**26.52 80**	*e*P	**P**	**03 35 10.0 +2.1**
LZH			pP	pP	03 35 34.6 +4.2
LZH			sP	sP	03 35 49.2 +6.9
LZH			*e*PP	**PnPn**	**03 35 58.3 +4.0**
LZH			pmax	pmax	
	comp=Z,23nm,1.0s				
LZH			pmax	pmax	
	comp=Z,87nm,4.7s				
LZH			LR	LR	
	comp=Z,260nm,12.3s				
LZH			LR	LR	
	comp=Z,290nm,12.5s				
LZH			LR	LR	
	comp=Z,350nm,15.7s				
ANN	**Anapa**	**26.71 299**	*e*P	**P**	**03 35 07.3 -1.9**
ANN			*e**PP	**pP**	**03 35 32.9 +1.2**
ANN			*e*S	**S**	**03 39 38.4 +1.3**
ANN			pmax	pmax	
	comp=Z,10.0nm,0.5s				
VORD	**Divnogorie**	**26.98 313**	*e*P	**P**	**03 35 15.5 +3.9**
VORD			pmax	pmax	
	comp=Z,5.0nm,0.4s				
VSR	**Storozhevoye**	**27.14 314**	*e*P	**P**	**03 35 14.8 +1.7**
VSR			pmax	pmax	
	comp=Z,10.0nm,0.8s				
ZAK	**Zakamensk**	**27.23 49**	*e*P	**P**	**03 35 14.3 +0.3**
ZAK			pmax	pmax	
	comp=Z,3.0nm,0.8s				
CD2	**Chengdu**	**27.80 91**	P	**P**	**03 35 17.4 -1.8**
CD2			pmax	pmax	
	comp=Z,30nm,0.5s				
ASF	**Jabal al Asfar**	**28.34 272**	P	**P**	**03 35 25.5 +1.4**
	comp=Z,1.0nm,0.5s,baz=27,slow=2.3,SNR=2.8				
SONM	**Songino Array**	**28.55 55**	P	**P**	**03 35 27.3 +1.5**
	comp=Z,4.3nm,0.8s,baz=235,slow=11,SNR=9.9				
SONA1	**Songino Array**	**28.56 55**	*e*P	**P**	**03 35 27.1 +1.2**
ULN	**Ulaanbaatar**	**29.00 55**	*e*P	**P**	**03 35 31.3 +1.5**
	comp=Z,2.9nm,0.8s				
ULN	**Ulaanbaatar**	**29.00 55**	*e*P	**P**	**03 35 31.3 +1.5**
ULN			pmax	pmax	
	comp=Z,3.0nm,0.8s				
KMI	**Kunming**	**29.40 103**	P	**P**	**03 35 35.5 +1.8**
KMI			pmax	pmax	
	comp=Z,14nm,0.5s				
KMI			pmax	pmax	
	comp=Z,78nm,4.5s				
BR131	**Keskin Array S**	**29.45 288**	*e*P	**P**	**03 35 35.4 +1.5**
BRTR	**Keskin Array B**	**29.45 288**	P	**P**	**03 35 34.8 +0.8**
	comp=Z,2.5nm,0.8s,baz=103,slow=8.2,SNR=17				
OBN	**Obninsk**	**30.11 320⇑**	*e*P	**P**	**03 35 41.2 +1.9**
OBN			*e*		03 36 42.5
OBN			pmax	pmax	
	comp=Z,10.0nm,0.6s				
CHTO	**Chiang Mai**	**30.15 118**	*e*P	**P**	**03 35 41.0 +0.9**
	comp=Z,3.5nm,0.6s				
CHTO	**Chiang Mai**	**30.15 118**	*e*P	**P**	**03 35 41.0 +0.9**
CHTO			pmax	pmax	
	comp=Z,4.0nm,0.6s				
CMAR	**Chiang Mai Arr**	**30.38 118**	P	**P**	**03 35 41.6 -0.6**
	comp=Z,2.7nm,0.5s,baz=299,slow=8.4,SNR=8.4				
CMAR			LR	LR	03 50 54.5
	comp=Z,62nm,18.9s,baz=185,slow=42				
HHC	**Hu-ho-hao-te**	**31.93 69**	*e*P	**P**	**03 35 55.3 -0.4**
HHC			pmax	pmax	
	comp=Z,18nm,0.7s				
HHC			pmax	pmax	
	comp=Z,50nm,4.3s				
AKASG	**Malin Array Be**	**33.07 309**	P	**P**	**03 36 07.0 +1.7**
	comp=Z,4.0nm,0.6s,baz=80,slow=7.5,SNR=19				
AKBB	**Malin Array Si**	**33.07 309**	*e*P	**P**	**03 36 07.3 +2.0**
	comp=Z,8.6nm,0.9s				
AKBB	**Malin Array Si**	**33.07 309**	*e*P	**P**	**03 36 07.3 +2.0**
AKBB			pmax	pmax	
	comp=Z,9.0nm,0.9s				
KIEV	**Kiev**	**33.08 309**	*e*P	**P**	**03 36 06.8 +1.4**
	comp=Z,8.3nm,0.9s				
KIEV	**Kiev**	**33.08 309**	*d i*P	**P**	**03 36 06.8 +1.4**
KIEV			pmax	pmax	
	comp=Z,6.0nm,0.6s				
PBKT	**Sadao Pong**	**33.08 118**	P	**P**	**03 36 06.6 +0.9**
	comp=Z,18nm,0.8s				
AK11	**Malin Array Si**	**33.10 309**	*e*P	**P**	**03 36 07.2 +1.7**
SORM	**Soroca**	**33.30 304**	‖ *i*P	**P**	**03 36 09.2 +1.8**
SORM	**Soroca**	**33.30 304**	P	**P**	**03 36 09.2 +1.8**
NONG	**Nongkai**	**33.69 114**	P	**P**	**03 36 12.5 +1.4**
	comp=Z,36nm,0.7s				
CHAI	**Chaiyaphum**	**34.25 118**	P	**P**	**03 36 17.8 +1.9**
	comp=Z,8.0nm,0.7s				
VRI	**Vrincioaia**	**34.31 300**	‖ *i*P	**P**	**03 36 19.0 +2.8**
VRI	**Vrincioaia**	**34.31 300**	P	**P**	**03 36 19.0 +2.8**
PLOR	**Plostina**	**34.36 300**	‖ *i*P	**P**	**03 36 20.3 +3.6**
PLOR	**Plostina**	**34.36 300**	P	**P**	**03 36 20.3 +3.6**
TESR	**Tescani**	**34.37 301**	⇑ *i*P	**P**	**03 36 18.8 +2.1**
NRIK	**Noril'sk**	**34.41 10**	P	**P**	**03 36 18.2 +1.4**
	comp=Z,18nm,0.8s,baz=202,slow=7.0,SNR=14				
NRIK			LR	LR	03 52 13.2
	comp=Z,34nm,19.1s,baz=146,slow=39				
MLR	**Muntele Rosu**	**34.86 300**	P	**P**	**03 36 23.4 +2.3**
	comp=Z,4.2nm,0.8s,baz=108,slow=5.9,SNR=52				
MLR	**Muntele Rosu**	**34.86 300**	⇑ *i*P	**P**	**03 36 24.6 +3.5**
MLR	**Muntele Rosu**	**34.86 300**	P	**P**	**03 36 24.6 +3.5**
SKNT	**Sakolnakorn**	**35.00 114**	P	**P**	**03 36 22.4 0.0**
PUL	**Pulkovo**	**35.10 325**	*de*P	**P**	**03 36 23.9 +1.1**
PUL			pmax	pmax	
	comp=Z,103nm,0.5s				
DOPR	**Dopca**	**35.24 300**	‖ *i*P	**P**	**03 36 27.4 +3.2**
BURAR	**Bucovina Array**	**35.38 303**	‖ *i*P	**P**	**03 36 28.2 +2.7**
BUR04	**Bucovina Ar. S**	**35.38 303**	*e*P	**P**	**03 36 27.8 +2.2**
BUR08	**Bucovina Ar. S**	**35.39 303**	*e*P	**P**	**03 36 28.4 +2.8**
VOIR		**35.49 299**	‖ *i*P	**P**	**03 36 29.4 +3.0**
VOIR		**35.49 299**	P	**P**	**03 36 29.4 +3.0**
BJI	**Beijing**	**35.52 70**	‖ *e*P	**P**	**03 36 28.3 +1.7**
BJI			pmax	pmax	
	comp=Z,12nm,0.5s				
ARR	**Arges**	**35.78 299**	‖ *i*P	**P**	**03 36 31.8 +2.9**
LVV	**L'vov**	**36.27 307**	*e*P	**P**	**03 36 35.7 +2.8**
LOT	**Lotru**	**36.39 300**	⇑ *i*P	**P**	**03 36 36.7 +2.6**
VTS	**Vitosha**	**37.01 295**	⇑ *i*P	**P**	**03 36 42.4 +2.9**
VTS	**Vitosha**	**37.01 295**	P	**P**	**03 36 42.4 +2.9**
IDI	**Anoyia**	**37.09 283**	P	**P**	**03 36 39.6 -0.5**
	comp=Z,3.6nm,0.6s,baz=90,slow=9.1,SNR=6.2				
KWP	**Kalwaria Pacla**	**37.12 307**	*e*P	**P**	**03 36 43.2 +3.1**
KWP	**Kalwaria Pacla**	**37.12 307**	*e*P	**P**	**03 36 43.2 +3.1**
TRPA	**Tarpa**	**37.19 304**	⇑ *i*P	**P**	**03 36 44.1 +3.4**
FIA1	**FINESS Array S**	**37.68 326**	*e*P	**P**	**03 36 45.1 +0.4**
FINES	**FINESS Array B**	**37.68 326**	P	**P**	**03 36 45.6 +0.9**
	comp=Z,2.8nm,0.6s,baz=103,slow=8.4,SNR=16				
FINES	**FINESS Array B**	**37.68 326**	*i* P	**P**	**03 36 47.0 +2.3**
FINES			pmax	pmax	
	comp=Z,3.0nm,0.5s				
MDVR	**Moldovita**	**37.88 299**	‖ *i*P	**P**	**03 36 49.7 +3.0**
BZS	**Buzias**	**37.89 300**	⇑ *i*P	**P**	**03 36 49.8 +3.1**
BZS	**Buzias**	**37.89 300**	P	**P**	**03 36 49.9 +3.2**
FNA	**Florina**	**38.62 292**	*e*P	**P**	**03 36 55.2 +2.3**
	comp=Z,3.9nm,0.8s				
FNA	**Florina**	**38.62 292**	*e*P	**P**	**03 36 55.3 +2.3**
FNA			pmax	pmax	
	comp=Z,4.0nm,0.8s				
NIE	**Niedzica**	**38.68 306**	*e*P	**P**	**03 36 57.0 +3.7**
NIE	**Niedzica**	**38.68 306**	*e*P	**P**	**03 36 57.0 +3.7**
OJC	**Ojcow**	**39.02 307**	*e*P	**P**	**03 36 58.7 +2.6**
OJC	**Ojcow**	**39.02 307**	*e*P	**P**	**03 36 57.5 +1.4**
	comp=Z,6.1nm,0.7s				
OJC	**Ojcow**	**39.02 307**	*e*P	**P**	**03 36 58.7 +2.6**
DIVS	**Divibare**	**39.17 298**	*e*P	**P**	**03 36 58.8 +1.3**
	comp=Z,3.2nm,0.7s				
NJ2	**Nanjing**	**39.59 82**	*e*P	**P**	**03 37 01.2 +0.2**
NJ2			pmax	pmax	
	comp=Z,12nm,0.8s				
VYHS	**Vyhne**	**39.66 305**	*e*PP	PP	03 38 32.7 -1.6
TTG	**Podgorica**	**39.93 295**	*e*P	**P**	**03 37 04.4 +0.7**
	comp=Z,11nm,1.3s				
TTG	**Podgorica**	**39.93 295**	*e*P	**P**	**03 37 04.4 +0.7**
TTG			pmax	pmax	
	comp=Z,11nm,1.3s				
JAVC	**Velka Javorina**	**40.42 305**	*e*P	**P**	**03 37 11.0 +3.2**
MORC	**Moravsky Berou**	**40.47 307**	P	**P**	**03 37 11.1 +2.9**
MORC			pmax	pmax	
	comp=Z,24nm,0.8s				
MORC	**Moravsky Berou**	**40.47 307**	*e*P	**P**	**03 37 11.0 +2.9**
GKP	**Gorka Klasztor**	**40.71 312**	*e*P	**P**	**03 37 12.8 +2.8**
GKP	**Gorka Klasztor**	**40.71 312**	*e*P	**P**	**03 37 12.8 +2.8**
KRLC	**Kraliky**	**40.96 307**	*e*P	**P**	**03 37 15.4 +3.2**
KRLC	**Kraliky**	**40.96 307**	*e*P	**P**	**03 37 15.4 +3.2**
VRAC	**Vranov**	**41.11 306**	*e*P	**P**	**03 37 16.5 +3.1**
SOP	**Sopron**	**41.23 304**	P	P	03 37 20.0 +5.7
SOP			pmax	pmax	
	comp=Z,8.0nm,0.9s				
DPC	**Dobruska-Polom**	**41.25 308**	*e*P	**P**	**03 37 18.2 +3.7**
DPC			*ex*	x	03 37 24.4
DPC	**Dobruska-Polom**	**41.25 308**	*e*P	**P**	**03 37 18.2 +3.7**
KRUC	**Moravsky**	**41.25 306**	*e*P	**P**	**03 37 17.4 +2.9**
KSP	**Ksiaz**	**41.25 308**	P	**P**	**03 37 19.3 +4.8**
KSP			pmax	pmax	
	comp=Z,4.0nm,0.8s				
ARCES	**ARCESS Array B**	**41.38 338**	P	**P**	**03 37 16.8 +1.5**
	comp=Z,3.4nm,0.6s,baz=112,slow=8.2,SNR=29				
ARCES	**ARCESS Array B**	**41.38 338**	*e*P	**P**	**03 37 15.2 -0.1**
UPC	**Upice**	**41.44 308**	*e*P	**P**	**03 37 19.5 +3.4**
UPC	**Upice**	**41.44 308**	*e*P	**P**	**03 37 19.5 +3.4**
CONA	**Conrad Observa**	**41.68 304**	*e*P	**P**	**03 37 21.0 +2.9**
	comp=Z,7.4nm,0.8s,SNR=9.9				
CN2	**Changchun**	**41.80 62**	*e*P	**P**	**03 37 20.1 +1.0**
CN2			pmax	pmax	
	comp=Z,10.0nm,0.6s				
PSI	**Prapat**	**42.13 136**	LR	LR	03 57 39.6
	comp=Z,143nm,18.1s,baz=254,slow=40				
BSD	**Bornholm Skovb**	**42.16 315**	*i* P	**P**	**03 37 23.3 +1.5**
BSD	**Bornholm Skovb**	**42.16 315**	*i* P	**P**	**03 37 23.3 +1.5**
SOKA	**Soboth**	**42.36 302**	*e*P	**P**	**03 37 26.6 +2.9**
	comp=Z,9.4nm,0.8s,SNR=9.9				
PRU	**Pruhonice**	**42.40 307**	*e*P	**P**	**03 37 26.7 +2.8**
PRU	**Pruhonice**	**42.40 307**	*e*P	**P**	**03 37 26.7 +2.8**
BRG	**Berggiesshubel**	**42.74 308**	⇑ *i*P	**P**	**03 37 29.6 +3.0**
	comp=Z,8.1nm,0.7s				
BRG			*e*		03 37 54.6
	comp=Z,6.3nm,1.2s				
BRG			*e*		03 39 17.1
	comp=Z,11nm,1.4s				
BRG	**Berggiesshubel**	**42.74 308**	⇑ *i*P	**P**	**03 37 29.6 +3.0**
BRG			*e*		03 37 54.6
BRG			*e*		03 39 17.1
BRG			pmax	pmax	
	comp=Z,8.0nm,0.7s				
MOA	**Molln**	**42.75 304**	*e*P	**P**	**03 37 29.5 +2.7**
	comp=Z,0.5nm,0.6s				
CUC	**Castrocucco**	**42.94 292**	*e*P	**P**	**03 37 30.3 +1.9**
	comp=Z,11nm,0.8s				
GEA0	**GERESS Array S**	**43.03 306**	*e*P	**P**	**03 37 31.0 +1.9**
GERES	**GERESS Array B**	**43.03 306**	P	**P**	**03 37 30.2 +1.1**
	comp=Z,1.1nm,0.8s,baz=87,slow=8.1,SNR=11				
GERES			PP	**PP**	**03 39 10.6 -0.2**
	comp=Z,1.2nm,0.8s,baz=72,slow=8.6,SNR=7.1				
KHC	**Kasperske Hory**	**43.09 306**	*e*P	**P**	**03 37 33.5 +4.0**
KHC			*ex*	x	03 37 56.5
KHC			*e*PP	**PP**	**03 39 13.7 +2.4**
KHC	**Kasperske Hory**	**43.09 306**	*e*P	**P**	**03 37 33.5 +4.0**
KHC			*e*		03 37 56.5
KHC			*e*		03 39 13.7
HFS	**Hagfors**	**43.24 322**	P	**P**	**03 37 31.0 +0.4**
	comp=Z,4.8nm,0.5s,baz=99,slow=8.9,SNR=37				
HFS			PP	**PP**	**03 39 15.2 +2.5**
	comp=Z,3.2nm,0.6s,baz=96,slow=8.9,SNR=2.5				
CLL	**Collm**	**43.31 309**	*i* P	**P**	**03 37 33.6 +2.4**
	comp=Z,5.0nm,0.8s				
CLL			*e*PP	**PP**	**03 39 14.0 +0.4**
CLL	**Collm**	**43.31 309**	*e*P	**P**	**03 37 33.6 +2.4**
	comp=Z,3.7nm,0.7s				
CLL	**Collm**	**43.31 309**	*e*P	**P**	**03 37 33.6 +2.4**
CLL			pmax	pmax	
	comp=Z,4.0nm,0.7s				
MYKA	**Terra Mystica**	**43.31 302**	*e*P	**P**	**03 37 34.0 +2.6**
	comp=Z,0.8nm,0.3s				
KBA	**Koelnbreinsper**	**43.46 303**	*e*P	**P**	**03 37 35.5 +2.8**
	comp=Z,2.9nm,0.6s				
YAK	**Yakutsk**	**44.24 35**	*e*P	**P**	**03 37 38.3 -0.1**
	comp=Z,22nm,0.6s				
YAK	**Yakutsk**	**44.24 35**	*e*P	**P**	**03 37 38.3 -0.1**
YAK			pmax	pmax	
	comp=Z,22nm,0.6s				
NB2	**NORSAR Subarra**	**44.56 323**	P	**P**	**03 37 41.1 0.0**
	comp=Z,1.7nm,0.5s,baz=99,slow=7.9				
NB2	**NORSAR Subarra**	**44.56 323**	P	**P**	**03 37 41.5 +0.4**
NB2			pmax	pmax	
	comp=Z,3.0nm,0.5s				
NOA	**NORSAR Array B**	**44.56 323**	P	**P**	**03 37 41.3 +0.2**
	comp=Z,2.5nm,0.4s,baz=106,slow=7.3,SNR=9.6				
NOA			LR	LR	03 59 58.2
	comp=Z,20nm,20.9s,baz=100,slow=41				
MOTA	**Moosalm**	**44.94 304**	*e*P	**P**	**03 37 45.1 +0.7**
	comp=Z,4.7nm,0.7s,SNR=4.4				
KS01	**Wonju Array Si**	**45.01 71**	*e*P	**P**	**03 37 45.2 +0.2**
KS15	**Wonju Array Si**	**45.01 71**	*e*P	**P**	**03 37 45.8 +0.8**
KSAR	**Wonju Array Be**	**45.01 71**	P	**P**	**03 37 44.9 -0.1**
KSAR	**Wonju Array Be**	**45.01 71**	P	**P**	**03 37 44.9 -0.1**
KSRS	**Korea Array**	**45.04 71**	P	**P**	**03 37 44.9 -0.2**
	comp=Z,5.6nm,0.5s,baz=271,slow=7.2,SNR=58				
KLR	**Kul'dur**	**45.37 54**	P	**P**	**03 37 47.4 -0.2**
	comp=Z,0.2nm,0.5s,baz=289,slow=7.9,SNR=9.2				
KLR	**Kul'dur**	**45.37 54**	*de*P	**P**	**03 37 48.4 +0.8**
DAVA	**Damuels**	**45.77 304**	*e*P	**P**	**03 37 53.0 +2.0**
	comp=Z,10nm,0.7s				
TIXI	**Tiksi**	**46.06 22**	P	**P**	**03 37 53.2 +0.5**
	comp=Z,7.3nm,0.3s,baz=268,slow=4.6,SNR=32				
USRK	**Ussuriysk Ar.**	**46.37 60**	P	**P**	**03 37 54.7 -0.8**
	comp=Z,1.5nm,0.5s,baz=258,slow=4.3,SNR=3.7				
SENIN	**Lac Senin/Sane**	**47.68 303**	*e*P	**P**	**03 38 08.3 +2.3**
	comp=Z,5.8nm,0.8s				
SPITS	**Spitsbergen Ar**	**47.75 347**	P	**P**	**03 38 07.8 +1.9**
	comp=Z,1.2nm,0.4s,baz=64,slow=6.6,SNR=14				
GRNR	**Gornyy**	**48.14 51**	*e*P	**P**	**03 38 10.2 +1.0**
JNU	**Nakatsue**	**48.73 75**	P	**P**	**03 38 14.8 +0.8**
	comp=Z,16nm,0.9s,baz=322,slow=3.9,SNR=8.8				
KEST	**Kesra**	**49.06 289**	P	**P**	**03 38 16.7 +0.1**
	comp=Z,3.7nm,0.9s,baz=292,slow=1.1,SNR=4.0				
EKA	**Eskdalemuir Ar**	**52.44 316**	P	**P**	**03 38 42.6 +1.1**
	comp=Z,3.0nm,0.9s,baz=78,slow=7.7,SNR=7.8				
YSS	**Yuzh-Sakhalins**	**53.05 55**	*e*P	**P**	**03 38 46.3 +0.2**
	comp=Z,17nm,0.6s				
YSS	**Yuzh-Sakhalins**	**53.05 55**	*e*P	**P**	**03 38 46.7 +0.6**
YSS			*e*		03 39 26.9
YSS			*e*		03 49 52.0
MAJO	**Matsushiro**	**53.12 68**	*e*P	**P**	**03 38 46.2 -0.7**
	comp=Z,6.7nm,0.7s				
MAJO	**Matsushiro**	**53.12 68**	‖ *e*P	**P**	**03 38 46.6 -0.3**
MAJO			pmax	pmax	
	comp=Z,13nm,1.1s				
MAT	**Matsushiro**	**53.12 68**	P	**P**	**03 38 46.7 -0.2**
MJAR	**Matsushiro Arr**	**53.12 68**	P	**P**	**03 38 47.3 +0.4**
	comp=Z,6.9nm,1.0s,baz=288,slow=9.8,SNR=20				
SEY	**Seymchan**	**54.69 34**	‖ *e*P	**P**	**03 38 58.6 +0.8**
DAG	**Danmarks Havn**	**54.98 344**	*i* P	**P**	**03 39 00.5 +0.8**
	comp=Z,4.6nm,0.9s				
DAG	**Danmarks Havn**	**54.98 344**	*i* P	**P**	**03 39 00.5 +0.8**
DAG			pmax	pmax	
	comp=Z,5.0nm,0.9s				
ESDC	**Sonseca Array**	**57.52 298**	P	**P**	**03 39 18.7 +0.2**
	comp=Z,0.9nm,0.6s,baz=61,slow=7.6,SNR=11				
BILL	**Bilibino**	**58.89 26**	*e*P	**P**	**03 39 27.9 +0.5**
BILL	**Bilibino**	**58.89 26**	‖ *i*P	**P**	**03 39 27.1 -0.3**
BILL			*i* *PP	**pP**	**03 39 50.8 -1.6**
BILL			*i*		03 41 40.5
BILL			pmax	pmax	
	comp=Z,6.0nm,0.8s				
SKR	**Severo-Kuril's**	**60.20 47**	*e*P	P	03 39 41.3 +4.6
SKR			*e*S	**PnS**	**03 48 19.8 +9.0**
SKR			pmax	pmax	
	comp=Z,600nm,2.7s				
SKR			pmax	pmax	
	comp=Z,200nm,3.5s				
SKR			pmax	pmax	
	comp=Z,82nm,1.1s				
SKR			MLR	MLR	
	comp=Z,200nm,15.0s				
SUMG	**Summit**	**61.30 341**	*i* P	**P**	**03 39 45.6 +1.3**
	comp=Z,5.8nm,0.7s				
SUMG	**Summit**	**61.30 341**	*e*P	**P**	**03 39 46.1 +1.8**
	comp=Z,5.8nm,0.7s				
SUMG	**Summit**	**61.30 341**	*e*P	**P**	**03 39 46.1 +1.8**
SUMG			pmax	pmax	
	comp=Z,6.0nm,0.7s				
TORD	**Torodi Ar. Bea**	**65.64 269**	P	**P**	**03 40 11.3 -1.9**
	comp=Z,3.2nm,0.5s,baz=48,slow=5.9,SNR=47				
RES	**Resolute Bay**	**68.97 356**	P	**P**	**03 40 34.3 +1.0**
	comp=Z,1.9nm,0.8s,baz=7,slow=7.2,SNR=5.9				
MATP	**Matopo**	**69.15 223**	P	**P**	**03 40 35.9 +0.6**
	comp=Z,2.0nm,0.7s,baz=38,slow=8.9,SNR=5.9				
KOWA	**Kowa**	**69.51 273**	P	**P**	**03 40 36.6 -0.9**
	comp=Z,3.5nm,0.5s,baz=64,slow=9.7,SNR=15				
KOWA	**Kowa**	**69.51 273**	*e*P	**P**	**03 40 36.7 -0.9**
	comp=Z,4.8nm,0.6s				
COLD	**Coldfoot**	**72.26 16**	*e*P	**P**	**03 40 53.2 -0.2**
	comp=Z,5.0nm,0.7s				
IM3	**Indian Mountai**	**72.46 18**	*e*P	**P**	**03 40 52.7 -1.9**
MLY	**Manley**	**73.97 17**	*e*P	**P**	**03 41 04.2 +0.6**
	comp=Z,3.6nm,0.6s				
INK	**Inuvik**	**74.19 9**	*e*P	**P**	**03 41 05.8 +1.1**
INK	**Inuvik**	**74.19 9**	*e*P	**P**	**03 41 05.8 +1.1**
MDM	**Murphy Dome**	**74.61 16**	*e*P	**P**	**03 41 07.5 +0.3**
	comp=Z,6.6nm,0.8s				
DBIC	**Dimbokro**	**74.61 267**	P	**P**	**03 41 07.0 -1.0**
	comp=Z,6.3nm,1.1s,baz=45,slow=6.6,SNR=4.6				
BPAW	**Bear Paw Mtn.**	**74.68 18**	*e*P	**P**	**03 41 07.7 0.0**
	comp=Z,3.6nm,0.8s				
CCB	**Clear Creek Bu**	**74.97 16**	*e*P	**P**	**03 41 09.1 -0.2**
	comp=Z,5.3nm,1.4s				
WRH	**Wood River Hil**	**75.06 16**	*e*P	**P**	**03 41 09.6 -0.2**
	comp=Z,11nm,1.6s				
IL1	**Eielson Array**	**75.07 16**	*e*P	**P**	**03 41 09.1 -0.8**
ILAR	**Eielson Array**	**75.07 16**	P	**P**	**03 41 09.2 -0.7**
	comp=Z,3.0nm,0.8s,baz=355,slow=4.3,SNR=20				
ILAR			PP	**PP**	**03 43 53.8 -4.7**
	comp=Z,0.9nm,1.1s,baz=312,slow=4.3,SNR=2.6				
ILB	**Eielson Array**	**75.07 16**	*e*P	**P**	**03 41 09.5 -0.3**
PPLA	**Purkeypile**	**75.37 19**	*e*P	**P**	**03 41 11.9 +0.1**
	comp=Z,5.7nm,0.6s				
EGAK	**Eagle**	**76.24 14**	*e*P	**P**	**03 41 16.1 -0.4**
	comp=Z,3.5nm,1.0s				
SKT	**Skwentna**	**76.31 19**	*e*P	**P**	**03 41 16.7 -0.3**
	comp=Z,14nm,1.2s				
DOT	**Dot Lake**	**76.66 15**	*e*P	**P**	**03 41 18.4 -0.6**
	comp=Z,7.7nm,0.6s				
PAX	**Paxson**	**76.95 16**	*e*P	**P**	**03 41 20.9 +0.2**
	comp=Z,4.9nm,0.7s				
PAX	**Paxson**	**76.95 16**	*e*P	**P**	**03 41 20.9 +0.2**
PAX			pmax	pmax	
	comp=Z,5.0nm,0.7s				
DAWY	**Dawson**	**77.21 13**	*e*P	**P**	**03 41 22.2 +0.2**
	comp=Z,4.7nm,0.8s				
BOSA	**Boshof**	**77.49 220**	P	**P**	**03 41 21.4 -2.7**
	comp=Z,6.7nm,1.1s,baz=48,slow=2.8,SNR=4.2				
BOSA	**Boshof**	**77.49 220**	P	**P**	**03 41 21.4 -2.7**
BOSA			pmax	pmax	
	comp=Z,2.0nm,0.7s				
RC01	**Rabbit Creek A**	**77.53 19**	*e*P	**P**	**03 41 22.7 -1.1**
	comp=Z,11nm,1.1s				
KDAK	**Kodiak Island**	**79.48 22**	P	**P**	**03 41 34.3 -0.2**
	comp=Z,5.9nm,0.7s,baz=318,slow=2.8,SNR=8.0				
KDAK	**Kodiak Island**	**79.48 22**	*i* P	**P**	**03 41 34.7 +0.1**
YKA	**Yellowknife Ar**	**81.53 3**	P	**P**	**03 41 45.5 +0.1**
	comp=Z,4.9nm,0.7s,baz=349,slow=5.4,SNR=24				
WRA	**Warramunga Arr**	**81.90 122**	P	**P**	**03 41 47.0 -1.1**
	comp=Z,2.4nm,0.4s,baz=324,slow=4.9,SNR=45				
WRAB	**Tennant Creek**	**81.91 122**	*e*P	**P**	**03 41 46.7 -1.4**
	comp=Z,4.2nm,0.6s				
WRAB	**Tennant Creek**	**81.91 122**	‖ *e*P	**P**	**03 41 47.4 -0.7**
WRAB			pmax	pmax	
	comp=Z,25nm,2.3s				
ASAR	**Alice Springs**	**84.15 125**	P	**P**	**03 41 58.8 -0.8**
	comp=Z,3.7nm,0.8s,baz=310,slow=5.1,SNR=32				
AS01	**Alice Springs**	**84.18 125**	*e*P	**P**	**03 41 58.6 -1.2**
FCC	**Fort Churchill**	**84.55 352**	*e*P	**P**	**03 42 00.8 -0.3**
	comp=Z,1.5nm,0.6s				
FCC	**Fort Churchill**	**84.55 352**	*e*P	**P**	**03 42 00.8 -0.3**
FCC			pmax	pmax	
	comp=Z,2.0nm,0.6s				
FFC	**Flin Flon**	**89.21 356**	*e*P	**P**	**03 42 24.3 +0.5**
	comp=Z,2.5nm,0.6s				
FFC	**Flin Flon**	**89.21 356**	*e*P	**P**	**03 42 24.3 +0.5**
FFC			pmax	pmax	
	comp=Z,3.0nm,0.6s				
CTA	**Charters Tower**	**90.49 115**	P	**P**	**03 42 28.8 -1.5**
	comp=Z,5.1nm,0.7s,baz=293,slow=7.7,SNR=7.5				
CTAO	**Charters Tower**	**90.49 115**	*e*P	**P**	**03 42 28.6 -1.6**
CTAO	**Charters Tower**	**90.49 115**	*e*P	**P**	**03 42 28.6 -1.6**

DJA 10 03:38:30.8±0.2, 1°N±1°×10°0E±°, h11km, M4.2/17, MLv4.2/17, Northern Sumatera

| Code |

ISC 10 03:48:15.8±0.8, 39°.11N±0°.03×29°.06E±0°.03, h11km±4km, n30, σ0°51/46, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMAA	Simav-Kutahya	0.07	262	PG	Pg	03 48 18.2	0.0
SMAA				SG	Sg	03 48 19.8	-0.2
SMAA	Simav-Kutahya	0.07	262	*e*Pg	Pg	03 48 18.2	0.0
SMAA				*e*Sg	Sg	03 48 19.8	-0.2
SIMA	Simav-Kutahya	0.07	247	PG	Pg	03 48 18.1	-0.2
SIMA				SG	Sg	03 48 19.6	-0.5
SIMA	Simav-Kutahya	0.07	247	*e*Pg	Pg	03 48 18.1	-0.2
SIMA				*e*Sg	Sg	03 48 19.6	-0.5
SHAP	Saphane-Kutahy	0.15	125	PG	Pg	03 48 19.9	+0.5
SHAP				SG	Sg	03 48 22.2	+0.3
SHAP	Saphane-Kutahy	0.15	125	*e*Pg	Pg	03 48 19.9	+0.5
SHAP				*e*Sg	Sg	03 48 22.2	+0.3
DEMI	Demirci	0.28	256	*i* P	Pg	03 48 21.8	+0.2
DEMI				*i* S	Sg	03 48 25.6	+0.2
DEMI	Demirci	0.28	256	P	Pg	03 48 21.8	+0.2
DEMI				S	Sg	03 48 25.6	+0.2
TVSB	Tavsanli	0.46	42	PG	Pg	03 48 23.9	-1.0
TVSB	Tavsanli	0.46	42	*e*Pg	Pg	03 48 23.9	-1.0
DURS	Dursunbey	0.67	317	*i* P	Pb	03 48 29.4	-0.2
DURS				*i* S	Sb	03 48 38.8	-0.1
DURS	Dursunbey	0.67	317	P	Pb	03 48 29.4	-0.2
DURS				S	Sb	03 48 38.8	-0.1
KULA	Kula-Manisa	0.67	208	PG	Pb	03 48 28.9	-0.7
KULA	Kula-Manisa	0.67	208	*e*Pg	Pb	03 48 28.9	-0.7
MANT	Manisa	0.73	213	*i* P	Pg	03 48 29.9	-0.1
MANT				*i* S	Sg	03 48 39.5	-0.2
MANT	Manisa	0.73	213	P	Pg	03 48 29.9	-0.1
MANT				S	Sg	03 48 39.5	-0.2
KHAL	Karahalli	0.81	156	*i* P	Pg	03 48 31.1	-0.4
KHAL				*i* S	Sg	03 48 41.4	-0.7
KHAL	Karahalli	0.81	156	P	Pg	03 48 31.1	-0.4
KHAL				S	Sg	03 48 41.4	-0.7
MDNY	Mudanya-Bursa	1.27	354	PN	Pn	03 48 38.9	-0.5
MDNY	Mudanya-Bursa	1.27	354	*e*Pn	Pn	03 48 38.9	-0.5
KCTX	Karacabey (Bur	1.28	335	PN	Pn	03 48 39.9	+0.3
KCTX	Karacabey (Bur	1.28	335	*e*Pn	Pn	03 48 39.9	+0.3
BORA	Eskisehir	1.32	54	PN	Pn	03 48 40.5	+0.2
BORA	Eskisehir	1.32	54	*i* P	Pg	03 48 41.0	-0.2
BORA				*i* S	Sn	03 48 59.1	+1.2
BORA	Eskisehir	1.32	54	*e*Pn	Pn	03 48 40.5	+0.2
BORA	Eskisehir	1.32	54	P	Pg	03 48 41.0	-0.2
BORA				S	Sn	03 48 59.1	+1.2
ARMT	Armutlu	1.46	354	PN	Pn	03 48 42.8	+0.7
ARMT	Armutlu	1.46	354	*e*Pn	Pn	03 48 42.8	+0.7
YLV	Yalova	1.47	9	PN	Pn	03 48 42.8	+0.4
YLV	Yalova	1.47	9	*e*Pn	Pn	03 48 42.8	+0.4

IDC 10 03:50:42.9±1.8, 8°.43S×124°.39E, h0km, mb3.4/1, mb1 3.5/3, mb1mx3.3/49, mbtmp3.4/3, ML3.3/2, Error ellipse: s-maj=56.1km s-min=26.2km az=77.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	1.91	202	Pn	Pn	03 51 16.5	-0.3
	14nm,0.3s,baz=211,slow=5.9,SNR=16						
BATI				Sn	Sn	03 51 32.3	-9.2
	23nm,0.3s,baz=131,slow=20,SNR=10						
WRA	Warramunga Arr	14.96	141	Pn	Pn	03 54 16.2	+0.3
	0.2nm,0.3s,baz=316,slow=13,SNR=6.8						
WRA				Sn	Sn	03 56 51.4	-11
	0.2nm,0.3s,baz=308,slow=26,SNR=6.6						
ASAR	Alice Springs	17.69	150	P	Pn	03 54 51.1	+0.2
	0.1nm,0.3s,baz=324,slow=12,SNR=9.9						
MKAR	Makanchi Array	66.51	330	P	P	04 01 34.6	0.0
	0.2nm,0.5s,baz=120,slow=8.5,SNR=3.3						

NIED ***10*** *04:10:00, 39°.10N×142°.40E, h32km, Mw3.6 Best double couple: M0 3.04000×10^14 NP1:φs 357.00000°, δ29.00000°, λ-107.00000°. NP2:φs 196.00000°, δ63.00000°, λ-81.00000°.*
ISCJB ***10*** *04:10:53.4±1.1, 39°.05N±0°.03×142°.44E±0°.07, h24km±6km, mb3.7/6, Error ellipse: s-maj=9.0km s-min=5.3km az=16.3*
JMA ***10*** *04:10:54.7±0.1, 39°.08N×142°.39E, h32km±1km, M3.7*
JMA Felt I J1.
IDC ***10*** *04:10:58.7±2.9, 39°.01N×142°.35E, h58km±26km, mb3.5/6, mb1 3.6/9, mb1mx3.3/63, mbtmp3.7/9, ML3.1/3, MS2.5/2, Ms1 2.5/2, ms1mx2.2/48, Error ellipse: s-maj=27.9km s-min=18.3km az=93.0*

ISC 10 04:10:53.3±1.8, 39°.06N±0°.04×142°.38E±0°.07, h10km±10km, n27, σ1°38/31, mb3.9/6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.56	273	P	Pb	04 11 06.0	+0.9
OFUJ				S	Sb	04 11 13.8	+0.6
MIYJ	Miyakonagasawa	0.68	320	P	Pb	04 11 07.4	+0.2
MIYJ				S	Sg	04 11 16.1	+0.7
JMK	Ichinoseki	0.91	264	P	Pb	04 11 11.4	+0.2
JMK				S	Sg	04 11 23.2	+0.5
JOM	Ohasama	0.94	297	P	Pb	04 11 11.9	+0.2
JOM				*e*S	Sg	04 11 24.1	+0.3
JTH	Tanohata	0.97	336	P	Pb	04 11 11.6	-0.6
JTH				S	Sg	04 11 24.1	-0.5
JIO	Ouri	1.01	234	P	Pg	04 11 12.1	-0.5
JIO				S	Sg	04 11 24.5	-1.2
JKZ	Kuzumaki	1.23	319	P	Pn	04 11 16.3	-0.4
JKZ				S	Sg	04 11 31.6	-1.5
JRG	Rokugo	1.40	285	P	Pn	04 11 19.0	+0.1
JRG				*e*S	Sn	04 11 37.4	0.0
JANG	Nango	1.48	333	P	Pn	04 11 19.9	0.0
JANG				*e*S	Sn	04 11 38.2	-1.1
JOU	Okura	1.51	243	P	Pn	04 11 20.7	+0.3
JOU				*e*S	Sn	04 11 39.6	-0.6
MAT	Matsushiro	4.15	234	P	Pn	04 11 59.9	+3.2
MAT				*e*S	Sn	04 12 46.6	+1.3
MJAR	Matsushiro Arr	4.15	234	P	Pn	04 11 58.4	+1.7
	2.0nm,0.3s,baz=33,slow=13,SNR=35						
MJAR				LR	LR	04 13 39.1	
	comp=Z,46nm,20.1s,baz=90,slow=39						
ASAJ	Asahikawa	5.06	2	P	Pn	04 12 12.2	+3.0
	1.0nm,0.3s,baz=222,slow=13,SNR=9.1						
USRK	Ussuriysk Ar.	9.32	307	P	Pn	04 13 11.5	+3.8
	0.3nm,0.3s,baz=112,slow=16,SNR=3.4						
KSRS	Korea Array	11.48	267	LR	LR	04 17 33.7	
	comp=Z,27nm,19.9s,baz=35,slow=34						
H11N2	WAKE ISLAND Hy 28.61	125		T	T	04 47 11.7	
	baz=318,slow=75,SNR=260						
H11N1	WAKE ISLAND Hy 28.61	125		T	T	04 47 10.9	
	baz=318,slow=75,SNR=289						
H11N3	WAKE ISLAND Hy 28.62	125		T	T	04 47 14.3	
	baz=318,slow=75,SNR=265						
H11S1	WAKE ISLAND Hy 29.39	127		T	T	04 48 09.5	
	baz=319,slow=76,SNR=20						
H11S3	WAKE ISLAND Hy 29.39	127		T	T	04 48 11.7	
	baz=319,slow=76,SNR=37						
H11S2	WAKE ISLAND Hy 29.41	127		T	T	04 48 09.6	
	baz=319,slow=76,SNR=25						
ZALV	Zalesovo Beam	41.15	311	P	P	04 18 37.2	-0.2
	0.9nm,0.4s,baz=77,slow=6.2,SNR=3.8						
MKAR	Makanchi Array	43.73	300	P	P	04 18 57.7	-0.9
	0.7nm,0.8s,baz=88,slow=9.3,SNR=5.7						
KURBB	Kurchatov Arra	45.39	307	P	P	04 19 10.8	-0.9
	1.3nm,0.5s,baz=81,slow=8.2,SNR=10						
ILAR	Eielson Array	47.38	33	P	P	04 19 27.0	-0.2
	0.8nm,0.7s,baz=267,slow=6.8,SNR=10						
WRA	Warramunga Arr	59.17	189	P	P	04 20 52.6	-1.7
	0.7nm,0.5s,baz=5.8,slow=6.9,SNR=21						
ASAR	Alice Springs	62.90	189	P	P	04 21 19.4	-0.2
	0.3nm,0.7s,baz=11,slow=16,SNR=4.3						

NIED ***10*** *04:21:00, 36°.20N×141°.00E, h20km, Mw3.8 Best double couple: M0 5.17000×10^14 NP1:φs 49.00000°, δ30.00000°, λ-65.00000°. NP2:φs 201.00000°, δ63.00000°, λ-104.00000°.*
IDC ***10*** *04:21:48.3±0.7, 36°.18N×141°.04E, h0km, mb3.8/9, mb1 4.0/12, mb1mx3.7/64, mbtmp3.8/12, ML3.4/3, MS3.1/4, Ms1 3.1/4, ms1mx2.6/64, Error ellipse: s-maj=19.2km s-min=16.7km az=109.0*
ISCJB ***10*** *04:21:50.0±0.8, 36°.25N±0°.03×141°.14E±0°.05, h26km±5km, mb3.8/11, MS3.3/2, Error ellipse: s-maj=7.3km s-min=5.3km az=6.4*
JMA ***10*** *04:21:51.1, 36°.22N×141°.02E, h38km±1km, M3.9*
JMA Felt II J1.
NEIC ***10*** *04:21:53.1±0.6, 36°.26N×141°.03E, h35km, mb4.1/2, Error ellipse: s-maj=14.0km s-min=11.7km az=137.0*

ISC 10 04:21:50.0±1.8, 36°.26N±0°.04×141°.09E±0°.05, h14km±11km, n35, σ0°94/34, mb4.0/11, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	Hitachi	0.55	310	P	Pb	04 22 02.1	+0.7
CHOJ	Chosi	0.59	199	P	Pb	04 22 02.1	+0.1
CHOJ				S	Sb	04 22 10.1	-0.1
JYT	Yasato	0.73	268	P	Pb	04 22 04.1	-0.3
JYT				S	Sb	04 22 13.8	-0.5
ONAJ	Iwakimizuishiy	0.87	344	P	Pg	04 22 07.0	+0.1
JFK	Kawauchi	1.12	351	P	Pb	04 22 10.4	-0.8
JAG	Ashikaga	1.33	278	P	Pn	04 22 13.0	-1.2
JFT	Otama	1.40	334	P	Pn	04 22 15.8	+0.7
JFT				S	Sn	04 22 33.2	-0.2
MJAR	Matsushiro Arr	2.34	278	Pn	Pn	04 22 27.8	-0.3
	9.9nm,0.3s,baz=106,slow=7.6,SNR=98						
MJAR				Sn	Sn	04 22 56.2	-0.6
	21nm,0.3s,baz=83,slow=14,SNR=7.8						
MAJO	Matsushiro	2.34	278	*e*Pn	Pn	04 22 27.9	-0.2
MAT	Matsushiro	2.34	278	P	Pn	04 22 28.5	+0.3
MAT				S	Sn	04 22 57.4	+0.6
JHJ	Hachijo jima 2	3.31	199	Pn	Pn	04 22 41.2	-0.2
	12nm,0.3s,baz=344,slow=19,SNR=9.5						
JHJ				Sn	Sn	04 23 20.8	+0.2
	39nm,0.3s,baz=105,slow=22,SNR=6.1						
ERM	Erimo	5.97	15	*e*Pn	Pn	04 23 18.6	+0.8
ERM				*e*Sn	Sn	04 24 24.4	-1.6
ASAJ	Asahikawa	7.93	8	Pn	Pn	04 23 44.2	-0.7
	0.6nm,0.3s,baz=225,slow=7.6,SNR=4.6						
ASAJ				Sn	Sn	04 25 13.3	-1.1
	0.1nm,0.3s,baz=67,slow=18,SNR=2.4						
JNU	Nakatsue	8.97	253	LR	LR	04 27 45.3	
	comp=Z,78nm,20.2s,baz=108,slow=40						
KSRS	Korea Array	10.62	280	LR	LR	04 28 19.9	
	comp=Z,68nm,18.4s,baz=143,slow=37						
H11N2	WAKE ISLAND Hy 27.98	119		T	T	04 57 02.2	
	baz=312,slow=75,SNR=90						
H11N1	WAKE ISLAND Hy 27.99	119		T	T	04 56 53.7	
	baz=312,slow=75,SNR=104						
H11N3	WAKE ISLAND Hy 28.00	119		T	T	04 57 02.3	
	baz=312,slow=75,SNR=104						
H11S1	WAKE ISLAND Hy 28.67	121		T	T	04 57 45.9	
	baz=314,slow=76,SNR=517						
H11S3	WAKE ISLAND Hy 28.67	121		T	T	04 57 48.8	
	baz=314,slow=76,SNR=211						
H11S2	WAKE ISLAND Hy 28.68	121		T	T	04 57 52.7	
	baz=314,slow=76,SNR=252						
ZALV	Zalesovo Beam	42.25	313	P	P	04 29 43.8	+1.2
	0.8nm,0.5s,baz=90,slow=7.6,SNR=4.4						
MKAR	Makanchi Array	44.32	303	P	P	04 29 59.9	+0.5
	0.4nm,0.7s,baz=89,slow=7.8,SNR=4.8						
KURK	Kurchatov	46.21	309	P	P	04 30 14.9	+0.6
KURBB	Kurchatov Arra	46.28	309	P	P	04 30 14.9	0.0
	0.6nm,0.4s,baz=75,slow=7.0,SNR=8.6						
ILAR	Eielson Array	50.29	32	P	P	04 30 46.9	+1.2
	1.3nm,0.8s,baz=252,slow=4.7,SNR=5.5						
WRAB	Tennant Creek	56.25	188	*e*P	P	04 31 28.9	-1.0
	1.2nm,0.6s						
WRA	Warramunga Arr	56.26	188	P	P	04 31 29.4	-0.6
	0.8nm,0.4s,baz=5.5,slow=7.4,SNR=19						
ASAR	Alice Springs	59.99	188	P	P	04 31 55.6	-0.5
	0.4nm,0.7s,baz=16,slow=6.1,SNR=6.7						
FFC	Flin Flon	74.50	32	*e*P	P	04 33 25.0	-2.8
	1.4nm,0.5s						
NOA	NORSAR Array B	74.80	337	LR	LR	05 08 32.0	
	comp=Z,9.8nm,21.1s,baz=240,slow=38						
NVAR	Mina Array Bea	75.66	53	P	P	04 33 36.2	+1.1
	1.1nm,0.8s,baz=316,slow=6.2,SNR=5.0						
PDAR	Pinedale Array	78.39	45	P	P	04 33 51.5	+1.0
	0.4nm,0.6s,baz=270,slow=3.0,SNR=4.7						
TXAR	Lajitas Array	90.80	52	P	P	04 34 54.2	+1.0
	0.3nm,0.7s,baz=328,slow=3.3,SNR=4.5						
TXAR				LR	LR	05 14 27.1	
	comp=Z,18nm,18.1s,baz=0.0,slow=35						
LPAZ	La Paz	147.30	60	PKPbc	PKPbc	04 41 35.3	+0.9
	1.1nm,0.6s,baz=311,slow=2.1,SNR=9.5						

ISCJB ***10*** *04:33:57.9±0.3, 34°.95N±0°.01×116°.72W±0°.01, h3km±2km, Error ellipse: s-maj=2.1km s-min=1.9km az=177.9*
NEIC ***10*** *04:33:58.9±0.0, 34°.95N×116°.72W, h2km, ML3.1 (PAS), After PAS.*
NEIC Felt at Landers and Newberry Springs.

ISC 10 04:33:59.0±0.9, 34°.96N±0°.01×116°.71W±0°.01, h12km±7km, n95, σ1°29/157, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RRX	Edison Barstow	0.26	250	P	Pg	04 34 03.8	-0.5
	baz=72,SNR=92						
RRX				S	Sg	04 34 07.7	-0.2
	baz=72						
FLSC	Flash Two Peak	0.27	271	*e*Pg	Pg	04 34 04.0	-0.6
FLSC				*e*Sg	Sg	04 34 07.9	-0.7
HEC	Hector,Ludlow	0.33	114	P	Pg	04 34 05.6	-0.1
	baz=290,SNR=67						
HEC				S	Sg	04 34 10.6	+0.4
	baz=290						
HEC	Hector,Ludlow	0.33	114	*e*Pg	Pg	04 34 05.8	+0.1
GSC	Goldstone, Bar	0.35	346	P	Pg	04 34 06.0	0.0
	baz=170,SNR=712						
GSC				S	Sg	04 34 11.1	+0.4
	baz=170						
GSC	Goldstone, Bar	0.35	346	*e*Pg	Pg	04 34 05.9	-0.1
GSC				*e*Sg	Sg	04 34 10.8	+0.1
BLKC	Black Mountain	0.44	286	*e*Pg	Pg	04 34 07.4	-0.3
DSCC	Desert Studies	0.53	70	*e*Pg	Pg	04 34 09.3	+0.1
DSCC				*e*Sg	Sg	04 34 17.1	+0.8
VTV	Victorville	0.65	232	*e*Pg	Pg	04 34 11.5	-0.2
VTV				*e*Sg	Sg	04 34 20.0	-0.3
BBRC	Big Bear Solar	0.72	194	P	Pg	04 34 12.2	-0.8
	baz=13,SNR=38						
BBRC				S	Sg	04 34 22.1	-0.5
	baz=13						
BBRC	Big Bear Solar	0.72	194	*e*Pg	Pg	04 34 12.4	-0.6
BBRC				*e*Sg	Sg	04 34 22.2	-0.3
TUQ	Turquoise Moun	0.79	53	P	Pg	04 34 14.1	-0.3
	baz=234,SNR=68						
TUQ				S	Sg	04 34 25.0	+0.2
	baz=234						
TUQ	Turquoise Moun	0.79	53	*e*Pg	Pb	04 34 15.4	+0.6
TUQ				*e*Sg	Sg	04 34 25.1	+0.2
EL2	El Mirage 2	0.81	238	*e*Pg	Pb	04 34 15.1	0.0
GMRC	Granite Mounta	0.88	101	P	Pg	04 34 15.2	-0.8
	baz=281,SNR=94						
GMRC				S	Sg	04 34 27.4	-0.1
	baz=281						
GMRC	Granite Mounta	0.88	101	*e*Pg	Pb	04 34 16.6	+0.4
SVD	Seven Oaks Dam	0.92	201	*e*Pg	Pg	04 34 16.1	-0.5
SVD				*e*Sn	Sg	04 34 28.3	-0.3
LRMC	Laurel Mtn Rad	0.95	303	P	Pg	04 34 16.4	-0.9
	baz=124,SNR=107						
LRMC				S	Sg	04 34 29.5	-0.3
	baz=124						
SHOC	Shoshone, Teco	1.00	21	P	Pg	04 34 17.7	-0.5
	baz=201,SNR=10						
TPC	Twentynine Pal	1.01	147	*e*Pg	Pg	04 34 17.8	-0.7
EDW2	Edwards Air Fo	1.06	266	P	Pg	04 34 18.2	-1.3
	baz=86,SNR=33						
EDW2				S	Sg	04 34 31.6	-1.7
	baz=86						
EDW2	Edwards Air Fo	1.06	266	*e*Pg	Pg	04 34 18.6	-0.8
EDW2				*e*Sg	Sg	04 34 32.4	-0.9
BBSC	Beaumont Base	1.06	192	*e*Pg	Pg	04 34 19.3	-0.2
BBSC				*e*Sn	Sb	04 34 33.4	+0.1
HOLC	Holcomb Ridge	1.07	242	*e*Pg	Pg	04 34 18.2	-1.3
BFSC	Mount Baldy Ra	1.07	228	P	Pg	04 34 18.2	-1.4
	baz=47,SNR=40						
BFSC				S	Sg	04 34 32.1	-1.4
	baz=47						
BFSC	Mount Baldy Ra	1.07	228	*e*Pg	Pg	04 34 18.6	-1.0
BFSC				*e*Sg	Sg	04 34 32.5	-1.0
SSK	Sunset Peak	1.11	228	*e*Pg	Pg	04 34 19.1	-1.2
SSK				*e*Sn	Sg	04 34 34.2	-0.6
RVR	Riverside	1.12	210	*e*Pg	Pg	04 34 19.2	-1.3
RVR				*e*Sg	Sg	04 34 33.6	-1.4
CLC	China Lake	1.12	320	*e*Pg	Pg	04 34 19.5	-1.0
BELC	Belle Mtn. Jos	1.12	149	P	Pg	04 34 19.6	-1.0
	baz=328,SNR=68						
BELC				S	Sg	04 34 34.5	-0.8
	baz=328						
BELC	Belle Mtn. Jos	1.12	149	*e*Pg	Pg	04 34 19.8	-0.9
BELC				*e*Sn	Sb	04 34 35.7	+0.6
DANC	Danby, Needles	1.14	106	*e*Pg	Pg	04 34 20.7	-0.1
JNH	Juniper Hills	1.15	244	*e*Pg	Pg	04 34 19.8	-1.4
LRRC	Littlerock Res	1.17	248	*e*Pg	Pg	04 34 20.7	-0.8
PEM	Pine Mountain	1.25	231	*e*Pg	Pg	04 34 21.6	-1.4
RCWM	Renegade Canyo	1.25	322	*e*Pg	Pg	04 34 22.0	-0.9
TPO	Tropico Hills	1.25	267	*e*Pg	Pg	04 34 21.2	-1.9
CHFC	Chilao Flat St	1.26	240	*e*Pg	Pg	04 34 21.6	-1.6
CHFC				*e*Sn	Sg	04 34 38.0	-1.6
PSRC	Puddingstone R	1.26	227	*e*Pg	Pg	04 34 22.0	-1.2
PSRC				*e*Sn	Sg	04 34 38.7	-0.8
MPMC	Manual Prospec	1.27	330	Pb	Pg	04 34 21.9	-1.4
	baz=151,SNR=43						
MPMC				Sb	Sg	04 34 39.1	-0.7
	baz=151						
HMTC	Hemet	1.28	191	*e*Pg	Pg	04 34 22.2	-1.3
HMTC				*e*Sn	Sg	04 34 38.8	-1.3
LDFC	Landfair	1.31	85	*e*Pg	Pg	04 34 20.9	-3.4
LDFC				*e*Sg	Sg	04 34 37.8	-3.5
LDFC				*e*Sn	Sb	04 34 39.5	-1.0
DGR	Domenigoni Val	1.33	191	*e*Pg	Pg	04 34 23.3	-1.4
DGR				*e*Sn	Sg	04 34 40.5	-1.5
MWC	Mount Wilson	1.34	237	*e*Pg	Pg	04 34 22.7	-2.0
MWC				*e*Sg	Sg	04 34 40.6	-1.5
PFO	Pinyon Flats O	1.36	171	Pb	Pg	04 34 23.1	-2.1
	baz=351,SNR=13						
PFO				Sb	Sg	04 34 41.4	-1.5
	baz=351						
PFO	Pinyon Flats O	1.36	171	*e*Pn	Pg	04 34 23.4	-1.8
PFO				*e*Sg	Sg	04 34 40.7	-2.2
PFO				*e*Sn	Sb	04 34 41.6	-0.4
WWPM	Walker Pass	1.37	305	*e*Pn	Pg	04 34 24.4	-0.9
CRY	Cary Ranch	1.40	181	*e*Pn	Pn	04 34 25.3	+0.9
CRY				*e*Sn	Sg	04 34 42.8	-1.2
DUR	Dunn Ranch,Anz	1.40	177	*e*Pn	Pn	04 34 25.2	+0.9
MURC	Murrieta	1.42	197	Pb	Pn	04 34 24.1	-0.5
	baz=16,SNR=28						
MURC				S	Sg	04 34 42.0	-2.7
	baz=16						
PASC	Pasadena Art C	1.46	237	*e*Pn	Pn	04 34 25.3	+0.3
PASC				*e*Sg	Sg	04 34 43.4	-2.4
PASC				*e*Sn	Sb	04 34 44.0	-0.5
CTW	Cottonwood Mou	1.46	152	*e*Pn	Pb	04 34 26.5	+0.5
CTW				*e*Sn	Sn	04 34 46.4	+2.2
FRD	Ford Ranch, An	1.47	177	*e*Pn	Pn	04 34 26.4	+1.0
DAC	Darwin (Calif)	1.50	331	*e*Pn	Pn	04 34 25.4	-0.5
DAC				*e*Sn	Sg	04 34 45.5	-1.7
DECC	Green Verdugo	1.52	243	Pb	Pn	04 34 26.1	+0.2
	baz=62						
IRM	Iron Mountain	1.52	122	P	Pn	04 34 24.5	-1.5
	baz=302,SNR=47						
IRM				Sb	Sn	04 34 46.5	+0.8
	baz=302						
IRM	Iron Mountain	1.52	122	*e*Pn	Pn	04 34 26.5	+0.5
IRM				*e*Sn	Sn	04 34 47.5	+1.8
ISA	Isabella, Lake	1.60	296	Pb	Pn	04 34 28.3	+1.1
	baz=116						
ISA				Sb	Sn	04 34 49.4	+1.5
	baz=116						
ISA	Isabella, Lake	1.60	296	*e*Pn	Pn	04 34 28.6	+1.4
ISA				*e*Sn	Sn	04 34 48.6	+0.7
PLM	Palomar	1.61	185	*e*Pn	Pn	04 34 28.8	+1.4
PLM				*e*Sn	Sn	04 34 49.8	+1.5
TJR	Tejon Ranch	1.67	273	*e*Pn	Pn	04 34 29.6	+1.5
OSI	Osito Audit: C	1.70	259	Pb	Pn	04 34 29.6	+1.1
	baz=78						
OSI				Sb	Sn	04 34 51.9	+1.8
	baz=78						
OSI	Osito Audit: C	1.70	259	*e*Pn	Pn	04 34 29.9	+1.5
OSI				*e*Sn	Sn	04 34 50.6	+0.4
ARVC	Arvin	1.75	276	Pb	Pb	04 34 31.1	0.0
	baz=95						
ARVC				Sb	Sb	04 34 53.5	+0.5
	baz=95						
FRK	Frink	1.79	150	*e*Pn	Pb	04 34 32.6	+0.9
FMP	Fort Macarthur	1.81	227	Sb	Sn	04 34 54.6	+1.8
	baz=46						
HWB	Hans Werner Br	1.94	186	*e*Sn	Sn	04 34 58.4	+2.2
DPP	Dos Picos Cty	1.97	186	*e*Pn	Pn	04 34 34.1	+1.9
DPP				*e*Sn	Sn	04 34 59.2	+2.4
SHPR	Sheep Range	1.99	39	*e*Pn	Pb	04 34 35.2	+0.1
SHPR				*e*Sn	Sn	04 34 57.4	-0.1
TPNV	Topopah Spring	2.01	10	Pb	Pb	04 34 36.1	+0.4
	baz=191						
TPNV	Topopah Spring	2.01	10	*e*Pn	Pb	04 34 36.4	+0.7
MONP2	Monument Peak	2.08	173	Pb	Pb	04 34 36.7	0.0
	baz=353						
109C	Camp Elliot, M	2.10	189	Pb	Pn	04 34 36.0	+2.1
	baz=8.5						
109C				Sb	Sb	04 35 02.6	-0.3
	baz=8.5						
CPE	Camp Elliot	2.10	189	*e*Pn	Pn	04 34 36.1	+2.2
CPE				*e*Sn	Sn	04 35 02.1	+2.2
CIS	Catalina Islan	2.11	223	Pb	Pn	04 34 36.3	+2.2
	baz=42						
CIS				Sb	Sb	04 35 03.3	+0.1
	baz=42						
BLG	Laguna Peak, P	2.13	247	Pb	Pn	04 34 36.5	+2.2
	baz=66						
BLG				Sb	Sb	04 35 03.8	0.0
	baz=66						
VES	Vestal, Richgr	2.

	baz=266						
ENA				*e*S	**Sn**	**04 52 55.2**	**+0.4**
	baz=266						
EGS		**0.54**	**319**	*e*P	**Pn**	**04 52 45.2**	**-0.3**
	baz=319						
EGS				*e*S	**Sn**	**04 52 55.2**	**+0.3**
	baz=319						
JYNG	**Yonagunijimaku**	**0.57**	**88**	P	**Pn**	**04 52 46.1**	**+0.2**
JYNG				*e*S	**Sn**	**04 52 55.8**	**+0.2**
NTC	**Toucheng**	**0.61**	**313**	*e*P	**Pn**	**04 52 45.9**	**-0.4**
	baz=316						
NTC				*e*S	**Sn**	**04 52 56.2**	**0.0**
	baz=316						
ILA	**Ilan**	**0.61**	**302**	*e*S	**Sn**	**04 52 56.4**	**0.0**
	baz=305						
YOJ	**Yonaguni jima**	**0.63**	**88**	*i* P	**Pn**	**04 52 46.7**	**+0.1**
	baz=90						
YOJ				S	**Sn**	**04 52 57.0**	**+0.2**
	baz=90						
YOJ	**Yonaguni jima**	**0.63**	**88**	P	**Pn**	**04 52 46.7**	**+0.1**
YOJ				S	**Sn**	**04 52 57.0**	**+0.2**
TWE	**Neicheng**	**0.66**	**296**	P	**Pn**	**04 52 46.8**	**-0.1**
	baz=296						
TWE				*e*S	**Sn**	**04 52 56.7**	**-0.5**
	baz=296						
TIPB	**Shuangxi**	**0.70**	**320**	P	**Pn**	**04 52 45.8**	**-1.5**
	baz=319						
TIPB				*e*S	**Sn**	**04 52 57.0**	**-1.1**
	baz=319						
NACB	**Ninganchiao**	**0.71**	**249**	P	**Pn**	**04 52 46.9**	**-0.6**
	baz=240						
NACB				*e*S	**Sn**	**04 52 58.4**	**+0.1**
	baz=240						
ENTT	**Nioudou**	**0.71**	**287**	P	**Pn**	**04 52 47.8**	**+0.3**
	baz=288						
ENTT				*e*S	**Sn**	**04 52 58.8**	**+0.3**
	baz=288						
TWD	**Chiawan**	**0.75**	**242**	*e*P	**Pn**	**04 52 47.1**	**-0.8**
	baz=233						
TWD				*e*S	**Sn**	**04 52 59.6**	**+0.5**
	baz=233						
NWF	**Wu-fen Shan**	**0.80**	**322**	*e*P	**Pn**	**04 52 49.0**	**+0.4**
	baz=313						
NWF				*e*S	**Sn**	**04 52 59.0**	**-1.4**
	baz=313						
WFSB	**Wu-fen Shan**	**0.80**	**322**	*e*P	**Pn**	**04 52 49.2**	**+0.7**
	baz=315						
WFSB				*e*S	**Sn**	**04 52 59.2**	**-1.0**
	baz=315						
NWLT	**Wulai**	**0.81**	**295**	*e*P	**Pn**	**04 52 48.9**	**+0.2**
	baz=296						
NWLT				*e*S	**Sn**	**04 53 00.6**	**0.0**
	baz=296						
ENLB	**Shoufeng**	**0.84**	**231**	*e*P	**Pn**	**04 52 48.8**	**-0.2**
	baz=224						
ENLB				*e*S	**Sn**	**04 53 00.7**	**-0.4**
	baz=224						
NNSB	**Datong**	**0.85**	**270**	P	**Pn**	**04 52 49.2**	**-0.1**
	baz=261						
NNSB				*e*S	**Sn**	**04 53 01.6**	**+0.1**
	baz=261						
NNSH	**Datong**	**0.85**	**270**	*e*P	**Pn**	**04 52 49.0**	**-0.2**
	baz=261						
NNSH				*e*S	**Sn**	**04 53 01.9**	**+0.4**
	baz=261						
TWA	**Mucha**	**0.86**	**309**	*e*P	**Pn**	**04 52 49.4**	**+0.1**
	baz=316						
NNS	**Nan Shan**	**0.86**	**270**	*e*P	**Pn**	**04 52 49.5**	**+0.1**
	baz=261						
NNS				*e*S	**Sn**	**04 53 01.8**	**+0.1**
	baz=261						
YHNB	**Yeheng**	**0.89**	**285**	P	**Pn**	**04 52 49.8**	**+0.1**
	baz=283						
YHNB				*e*S	**Sn**	**04 53 02.4**	**+0.1**
	baz=283						
NSK	**Sanguang**	**0.91**	**285**	P	**Pn**	**04 52 50.1**	**+0.2**
	baz=283						
NSK				*e*S	**Sn**	**04 53 02.6**	**0.0**
	baz=283						
TATO	**Taipei**	**0.93**	**306**	*e*P	**Pn**	**04 52 51.2**	**+1.1**
	baz=314						
TATO				*e*S	**Sn**	**04 53 02.9**	**-0.1**
	baz=314						
YM07	**YM07**	**0.97**	**319**	*e*P	**Pn**	**04 52 50.3**	**-0.4**
	baz=310						
YM07				S	**Sn**	**04 53 03.2**	**-0.8**
	baz=310						
ESL	**Shilin**	**1.02**	**233**	*e*P	**Pn**	**04 52 50.9**	**-0.3**
	baz=223						
ESL				*e*S	**Sn**	**04 53 04.2**	**-0.8**
	baz=223						
TWT	**Tachien**	**1.06**	**260**	*e*P	**Pn**	**04 52 52.2**	**+0.3**
	baz=255						
TWT				*e*S	**Sn**	**04 53 06.4**	**+0.2**
	baz=255						
TWY	**Chenhua**	**1.06**	**322**	*e*S	**Sn**	**04 53 06.1**	**+0.1**
	baz=313						
TDCB	**Techi**	**1.07**	**260**	P	**Pn**	**04 52 52.5**	**+0.4**
	baz=255						
TDCB				*e*S	**Sn**	**04 53 06.8**	**+0.3**
	baz=255						
CHGB	**Renai**	**1.11**	**250**	P	**Pn**	**04 52 52.7**	**+0.1**
	baz=241						
CHGB				*e*S	**Sn**	**04 53 07.8**	**+0.3**
	baz=241						
EGFH	**Guangfu**	**1.12**	**227**	*e*P	**Pn**	**04 52 52.0**	**-0.5**
	baz=220						
EGFH				*e*S	**Sn**	**04 53 07.6**	**+0.3**
	baz=220						
OWD	**Renai**	**1.15**	**246**	*e*P	**Pn**	**04 52 52.8**	**-0.2**
	baz=237						
OWD				*e*S	**Sn**	**04 53 07.6**	**-0.6**
	baz=237						
LIOB	**Emei**	**1.20**	**280**	P	**Pn**	**04 52 54.2**	**+0.5**
	baz=278						
LIOB				*e*S	**Sn**	**04 53 09.9**	**+0.5**
	baz=278						
HGSD	**Ruisui**	**1.25**	**221**	*e*P	**Pn**	**04 52 55.3**	**+1.1**
	baz=219						
HGSD				*e*S	**Sn**	**04 53 10.4**	**+0.2**
	baz=219						
VWDT	**VWDT**	**1.27**	**238**	*e*P	**Pn**	**04 52 54.9**	**+0.4**
	baz=230						
VWDT				*e*S	**Sn**	**04 53 10.3**	**-0.5**
	baz=230						
EHY	**Hungye**	**1.30**	**225**	*e*P	**Pn**	**04 52 54.1**	**-0.8**
	baz=223						
EHY				*e*S	**Sn**	**04 53 10.3**	**-1.2**
	baz=223						
YULB	**Yu-li**	**1.40**	**222**	*e*P	**Pn**	**04 52 55.3**	**-0.9**
	baz=220						
YULB				*e*S	**Sn**	**04 53 13.2**	**-0.7**
	baz=220						
SSLB	**Suanglung**	**1.40**	**243**	*e*P	**Pn**	**04 52 56.6**	**+0.3**
	baz=237						
SSLB				*e*S	**Sn**	**04 53 15.1**	**+1.0**
	baz=237						
SMLT	**Sun Moon Lake**	**1.41**	**247**	*e*P	**Pn**	**04 52 57.5**	**+1.1**
	baz=241						
SMLT				*e*S	**Sn**	**04 53 15.8**	**+1.5**
	baz=241						
TWF1	**Yuli**	**1.43**	**221**	*e*P	**Pn**	**04 52 55.9**	**-0.7**
	baz=228						
TWF1				*e*S	**Sn**	**04 53 13.2**	**-1.4**
	baz=228						
FULB	**Fuli**	**1.55**	**217**	*e*P	**Pn**	**04 52 58.5**	**+0.3**
	baz=209						
FULB				*e*S	**Sn**	**04 53 17.8**	**+0.3**
	baz=209						
JIJ	**Ishigaki jima**	**1.67**	**92**	P	**Pn**	**04 52 59.8**	**0.0**
JIJ				S	**Sn**	**04 53 19.9**	**-0.3**
JISG	**Ishigakijimahi**	**1.82**	**85**	P	**Pn**	**04 53 01.9**	**+0.1**
JISG				S	**Sn**	**04 53 24.0**	**0.0**

*ISCJB **10** 05:14:54.1±0.7,36°.29N±0°.04×140°.07E±0°.06,h87km±5km, mb3.2/3,Error ellipse: s-maj=8.6km s-min=5.9km az=35.3*
*IDC **10** 05:14:54.2±4.3,36°.43N×140°.22E,h83km±31km,mb3.0/3, mb1 3.2/4,mb1mx2.9/63,mbtmp3.4/4,Error ellipse: s-maj=52.4km s-min=18.5km az=52.0*
*JMA **10** 05:14:55.9±0.1,36°.31N×140°.02E,h73km±1km,M3.0*
ISC 10 05:14:54.9±1.0,36°.29N±0°.05×140°.06E±0°.05,h80km±7km, n16,σ0s75/27,mb3.3/3,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.13**	**121**	P	**Pn**	**05 15 06.8**	**+0.4**
JYT				S	**Sn**	**05 15 14.9**	**0.0**
JAG	**Ashikaga**	**0.51**	**285**	P	**Pn**	**05 15 08.7**	**0.0**
JAG				S	**Sn**	**05 15 18.1**	**-0.8**
JKT	**Katashina**	**0.81**	**306**	P	**Pn**	**05 15 11.9**	**+0.1**
JKT				S	**Sn**	**05 15 24.4**	**0.0**
JRY	**Ryogami san**	**0.98**	**254**	P	**Pn**	**05 15 14.1**	**+0.4**
JRY				S	**Sn**	**05 15 27.8**	**+0.1**
JFT	**Otama**	**1.24**	**10**	P	**Pn**	**05 15 17.8**	**+0.8**
JFT				S	**Sn**	**05 15 34.3**	**+0.8**
JFK	**Kawauchi**	**1.26**	**31**	P	**Pn**	**05 15 17.8**	**+0.6**
JFK				S	**Sn**	**05 15 34.1**	**+0.3**
JHK	**Hiroka**	**1.27**	**319**	P	**Pn**	**05 15 17.8**	**+0.5**
JHK				S	**Sn**	**05 15 34.3**	**+0.2**
JOD2	**Odawara 2**	**1.30**	**218**	P	**Pn**	**05 15 18.1**	**+0.5**
JOD2				S	**Sn**	**05 15 34.3**	**-0.4**
JYN	**Shimob**	**1.46**	**238**	P	**Pn**	**05 15 20.9**	**+1.1**
JYN				S	**Sn**	**05 15 39.8**	**+1.2**
MJAR	**Matsushiro Arr**	**1.51**	**280**	P	**Pn**	**05 15 20.8**	**+0.4**
	7.8nm,0.3s,baz=94,slow=14,SNR=95						
MJAR				S	**Sn**	**05 15 41.1**	**+1.5**
	4.2nm,0.3s,baz=131,slow=8.4,SNR=9.2						
MAT	**Matsushiro**	**1.51**	**280**	P	**Pn**	**05 15 21.2**	**+0.8**
MAT	**Matsushiro**	**1.51**	**280**	P	**Pn**	**05 15 21.1**	**+0.7**
MAT				S	**Sn**	**05 15 39.7**	**0.0**
JHJ	**Hachijo jima 2**	**3.17**	**184**	P	**Pn**	**05 15 43.1**	**+0.5**
	4.8nm,0.3s,baz=234,slow=19,SNR=2.4						
MKAR	**Makanchi Array**	**43.59**	**303**	P	**P**	**05 22 50.5**	**-0.6**
	0.2nm,0.5s,baz=80,slow=7.1,SNR=1.1						
KURBB	**Kurchatov Arra**	**45.60**	**308**	P	**P**	**05 23 05.2**	**-1.7**
	0.3nm,0.5s,baz=82,slow=8.0,SNR=3.3						
WRA	**Warramunga Arr**	**56.19**	**186**	P	**P**	**05 24 26.9**	**+0.2**
	0.2nm,0.7s,baz=0.7,slow=7.5,SNR=5.6						

MEX 10 05:26:08.3±0.4,16°.21N×98°.26W,h10km±59km,MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.37**	**348**	*e*P	Pn	05 26 30.0	-3.7
TLIG				*e*S	Sb	05 26 47.4	-4.5
VHO	**Vista Hermosa**	**1.69**	**60**	*e*P	Pn	05 26 34.8	-3.3
VHO				*e*S	Sn	05 26 55.0	-5.0
HUIG	**Huatulco**	**2.12**	**102**	*e*P	Pn	05 26 45.1	+1.4
HUIG				*e*S	Sn	05 27 01.8	-8.3

*ISCJB **10** 05:41:09.0±1.2,30°.68S±0°.05×71°.98W±0°.09,h12km,Error ellipse: s-maj=12.2km s-min=5.7km az=18.7*
*GUC **10** 05:41:09.9±0.4,30°.92S×70°.08W,h24km±3km,ML3.1*
*SJA **10** 05:41:11.6±0.5,30°.77S×71°.89W,h66km±7km,ML3.2*
ISC 10 05:41:07.7±1.7,30°.80S±0°.05×71°.79W±0°.10,h12km,n15, σ1s38/19,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO04	**Tololo Observa**	**1.06**	**54**	*i* P	**Pn**	**05 41 28.9**	**+0.4**
GO04				*i* S	**Sn**	**05 41 43.1**	**-0.2**
GO04				IAML		05 41 46.6	
	comp=E,2μm,0.4s						
TLL	**Tololo Astrono**	**1.06**	**54**	*i* P	**Pn**	**05 41 29.0**	**+0.4**
TLL				*i* S	**Sn**	**05 41 43.6**	**+0.3**
TLL				IAML		05 41 46.1	
	comp=N,755nm,0.3s						
AROD	**Rodeo**	**2.10**	**73**	*e*P	**Pg**	**05 41 47.7**	**-0.2**
AROD				*e*S	**Sg**	**05 42 15.0**	**-0.1**
ROCH	**El Roble**	**2.27**	**163**	*i* P	**Pb**	**05 41 48.2**	**-0.5**
ROCH				*i* S	**Sb**	**05 42 17.3**	**+0.4**
ROCH				IAML		05 42 24.9	
	comp=N,114nm,0.5s						
RTLS	**Leoncito**	**2.36**	**116**	*e*P	**Pg**	**05 41 52.0**	**-0.9**
RTLS				IAML		05 42 01.1	
	comp=Z,96nm,0.8s						
ACDV	**Cuesta del Vie**	**2.39**	**76**	*e*P	**Pb**	**05 41 51.9**	**+1.2**
ACDV				*e*S	**Sb**	**05 42 21.5**	**+1.3**
AUSP	**Uspallata**	**2.50**	**125**	*e*P	**Pb**	**05 41 53.8**	**+1.1**
AMOG	**MOGNA**	**2.84**	**94**	*e*P	**Pb**	**05 41 58.2**	**-0.2**
RTCV	**Cerro Valdivia**	**2.98**	**112**	*e*P	**Pb**	**05 41 59.9**	**-0.8**
AGUA	**GUANDACOL**	**3.14**	**66**	*e*P	**Pb**	**05 42 02.4**	**-1.1**
AAGR	**Agrelo**	**3.40**	**133**	*e*P	**Pb**	**05 42 05.7**	**-2.2**
GO03	**Copiap**	**3.47**	**23**	*i* P	**Pn**	**05 42 03.0**	**+1.5**
GO03				*i* S	**Sn**	**05 42 43.7**	**+1.1**
GO03				IAML		05 42 59.1	
	comp=N,35nm,0.5s						
VCA	**Vinchina**	**3.73**	**58**	*e*P	**Pb**	**05 42 09.8**	**-3.8**
VCA				IAML		05 43 13.2	
	comp=Z,39nm,0.3s						
ACAN	**Cantantal**	**4.20**	**112**	*e*P	Pb	05 42 16.6	-4.8
ACLC	**CERRO LA CRUZ**	**4.41**	**73**	*e*P	Pn	05 42 19.3	+4.7

*ISCJB **10** 05:42:29.7±0.4,24°.43N±0°.03×122°.32E±0°.02,h65km±5km, Error ellipse: s-maj=4.3km s-min=2.9km az=169.9*
*TAP **10** 05:42:29.3,24°.44N×122°.30E,h69km±1km,ML3.3,B*
*JMA **10** 05:42:29.9±0.1,24°.41N×122°.30E,h66km±3km,M2.4*
ISC 10 05:42:30.0±1.3,24°.44N±0°.04×122°.31E±0°.02,h65km±8km, n57,σ0s74/97,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.20**	**304**	*e*P	**Pn**	**05 42 40.6**	**+0.6**
	baz=304						
EOS1				S	**Sn**	**05 42 48.5**	**+1.2**
	baz=304						
TWC	**Suao**	**0.46**	**292**	*e*P	**Pn**	**05 42 41.9**	**-0.1**
	baz=292						
TWC				*e*S	**Sn**	**05 42 50.3**	**-0.4**
	baz=292						
ENAH	**Nanao**	**0.46**	**272**	*e*P	**Pn**	**05 42 41.9**	**-0.1**
	baz=271						
NANB	**Nanao**	**0.51**	**269**	P	**Pn**	**05 42 42.8**	**+0.3**
	baz=268						
NANB				*e*S	**Sn**	**05 42 52.3**	**+0.6**
	baz=268						
ENA	**Nanau**	**0.52**	**269**	*e*P	**Pn**	**05 42 43.0**	**+0.3**
	baz=268						
ENA				*e*S	**Sn**	**05 42 50.1**	**-1.7**
	baz=268						
EGS		**0.53**	**320**	*e*P	**Pn**	**05 42 42.7**	**0.0**
	baz=320						
EGS				*e*S	**Sn**	**05 42 51.7**	**-0.3**
	baz=320						
JYNG	**Yonagunijimaku**	**0.58**	**89**	P	**Pn**	**05 42 43.4**	**+0.2**
JYNG				S	**Sn**	**05 42 53.0**	**+0.2**
NTC	**Toucheng**	**0.60**	**313**	P	**Pn**	**05 42 43.3**	**-0.2**
	baz=313						
NTC				S	**Sn**	**05 42 52.8**	**-0.6**
	baz=313						
ILA	**Ilan**	**0.61**	**303**	*e*P	**Pn**	**05 42 43.8**	**+0.3**
	baz=302						
ILA				S	**Sn**	**05 42 53.8**	**+0.3**
	baz=302						
YOJ	**Yonaguni jima**	**0.64**	**88**	P	**Pn**	**05 42 44.1**	**+0.2**
	baz=87						
YOJ				*e*S	**Sn**	**05 42 53.2**	**-0.8**
	baz=87						
YOJ	**Yonaguni jima**	**0.64**	**88**	P	**Pn**	**05 42 44.0**	**+0.2**
YOJ				S	**Sn**	**05 42 53.9**	**-0.1**
TWE	**Neicheng**	**0.65**	**296**	P	**Pn**	**05 42 44.3**	**+0.2**
	baz=296						
TWE				*e*S	**Sn**	**05 42 54.8**	**+0.5**
	baz=296						
TIPB	**Shuangxi**	**0.69**	**320**	P	**Pn**	**05 42 43.3**	**-1.2**
	baz=320						
TIPB				*e*S	**Sn**	**05 42 53.5**	**-1.8**
	baz=320						
NACB	**Ninganchiao**	**0.70**	**248**	P	**Pn**	**05 42 44.5**	**-0.2**
	baz=247						
NACB				*e*S	**Sn**	**05 42 54.6**	**-0.7**
	baz=247						
ENTT	**Nioudou**	**0.71**	**287**	*e*P	**Pn**	**05 42 45.4**	**+0.7**
	baz=286						
ENTT				*e*S	**Sn**	**05 42 56.6**	**+1.1**
	baz=286						
TWD	**Chiawan**	**0.74**	**242**	P	**Pn**	**05 42 45.0**	**-0.1**
	baz=240						
TWD				S	**Sn**	**05 42 56.1**	**-0.1**
	baz=240						
WFSB	**Wu-fen Shan**	**0.79**	**323**	P	**Pn**	**05 42 45.6**	**-0.1**
	baz=322						
WFSB				*e*S	**Sn**	**05 42 56.4**	**-0.9**
	baz=322						
NWLT	**Wulai**	**0.81**	**295**	P	**Pn**	**05 42 46.4**	**+0.5**
	baz=294						
NWLT				*e*S	**Sn**	**05 42 57.9**	**+0.2**
	baz=294						
ENLB	**Shoufeng**	**0.84**	**231**	*e*P	**Pn**	**05 42 46.2**	**-0.1**
	baz=230						
ENLB				*e*S	**Sn**	**05 42 58.9**	**+0.6**
	baz=230						
NNSB	**Datong**	**0.85**	**270**	P	**Pn**	**05 42 46.6**	**+0.1**
	baz=269						
NNSB				*e*S	**Sn**	**05 42 58.3**	**-0.4**
	baz=269						
NNSH	**Datong**	**0.85**	**270**	P	**Pn**	**05 42 46.6**	**+0.1**
	baz=269						
NNSH				*e*S	**Sn**	**05 42 58.5**	**-0.1**
	baz=269						
TWA	**Mucha**	**0.85**	**309**	P	**Pn**	**05 42 46.5**	**0.0**
	baz=309						
TWA				*e*S	**Sn**	**05 42 58.2**	**-0.4**
	baz=309						
NNS	**Nan Shan**	**0.86**	**270**	P	**Pn**	**05 42 46.8**	**+0.1**
	baz=269						
NNS				*e*S	**Sn**	**05 42 58.9**	**0.0**
	baz=269						
YHNB	**Yeheng**	**0.88**	**285**	P	**Pn**	**05 42 47.4**	**+0.5**
	baz=285						
YHNB				*e*S	**Sn**	**05 42 59.7**	**+0.3**
	baz=285						
NSK	**Sanguang**	**0.90**	**285**	*e*P	**Pn**	**05 42 47.6**	**+0.5**
	baz=285						
NSK				*e*S	**Sn**	**05 43 00.2**	**+0.5**
	baz=285						
TATO	**Taipei**	**0.92**	**306**	*e*P	**Pn**	**05 42 47.1**	**-0.2**
	baz=305						
YM07	**YM07**	**0.97**	**320**	P	**Pn**	**05 42 46.6**	**-1.3**
	baz=319						
YM10	**YM10**	**0.99**	**316**	P	**Pn**	**05 42 48.0**	**-0.3**
	baz=316						
YM11	**YM11**	**0.99**	**317**	*e*P	**Pn**	**05 42 48.8**	**+0.6**
	baz=317						
YM08	**YM08**	**0.99**	**319**	*e*P	**Pn**	**05 42 47.7**	**-0.5**
	baz=318						
YM04	**YM04**	**1.00**	**315**	P	**Pn**	**05 42 48.0**	**-0.4**
	baz=315						
YM04				*e*S	**Sn**	**05 43 01.0**	**-0.9**
	baz=315						
ESL	**Shilin**	**1.01**	**232**	P	**Pn**	**05 42 48.2**	**-0.3**
	baz=231						
ESL				*e*S	**Sn**	**05 43 01.5**	**-0.6**
	baz=231						
TWS1	**Kuangyinshan**	**1.05**	**309**	*e*P	**Pn**	**05 42 48.9**	**0.0**
	baz=309						
TWT	**Tachien**	**1.05**	**260**	*e*P	**Pn**	**05 42 49.3**	**+0.2**
	baz=259						
TWT				*e*S	**Sn**	**05 43 04.2**	**+0.9**
	baz=259						
TDCB	**Techi**	**1.07**	**260**	P	**Pn**	**05 42 50.0**	**+0.7**
	baz=259						
TDCB				*e*S	**Sn**	**05 43 03.9**	**+0.3**
	baz=259						
CHGB	**Renai**	**1.10**	**250**	P	**Pn**	**05 42 50.6**	**+0.7**
	baz=249						
CHGB				S	**Sn**	**05 43 04.6**	**0.0**
	baz=249						
EGFH	**Guangfu**	**1.11**	**227**	*e*S	**Sn**	**05 43 03.6**	**-0.8**
	baz=226						
OWD	**Renai**	**1.14**	**245**	*e*S	**Sn**	**05 43 05.0**	**-0.4**
	baz=244						
NCUH	**Zhongli**	**1.15**	**297**	*e*P	**Pn**	**05 42 50.7**	**+0.5**
	baz=297						
LIOB	**Emei**	**1.20**	**280**	P	**Pn**	**05 42 51.6**	**+0.7**
	baz=280						
NSTT	**Nanjuang**	**1.21**	**279**	*e*P	**Pn**	**05 42 51.6**	**+0.6**
	baz=279						
NSTT				*e*S	**Sn**	**05 43 07.3**	**+0.7**
	baz=279						
HGSD	**Ruisui**	**1.24**	**221**	*e*P	**Pn**	**05 42 51.1**	**-0.3**
	baz=220						
HGSD				*e*S	**Sn**	**05 43 06.0**	**-1.4**
	baz=220						
VWDT	**VWDT**	**1.27**	**238**	P	**Pn**	**05 42 52.3**	**+0.5**
	baz=237						
VWDT				S	**Sn**	**05 43 07.9**	**-0.1**
	baz=237						
EHY	**Hungye**	**1.30**	**225**	P	**Pn**	**05 42 51.5**	**-0.7**
	baz=223						
YULB	**Yu-li**	**1.40**	**222**	*e*P	**Pn**	**05 42 52.6**	**-0.9**
	baz=221						
SSLB	**Suanglung**	**1.40**	**243**	*e*P	**Pn**	**05 42 55.6**	**+2.0**
	baz=242						
SSLB				*e*S	**Sn**	**05 43 11.0**	**-0.2**
	baz=242						
SMLT	**Sun Moon Lake**	**1.40**	**247**	*e*P	**Pn**	**05 42 55.2**	**+1.5**
	baz=246						
SMLT				*e*S	**Sn**	**05 43 13.3**	**+1.9**
	baz=246						
TWQ1	**Liyutan**	**1.41**	**267**	*e*S	**Sn**	**05 43 12.9**	**+1.6**
	baz=266						
HATJ	**Hateruma jima**	**1.42**	**105**	P	**Pn**	**05 42 54.7**	**+1.0**
HATJ				S	**Sn**	**05 43 12.1**	**+0.6**
TWF1	**Yuli**	**1.43**	**221**	P	**Pn**	**05 42 53.2**	**-0.7**
	baz=220						
JKRS	**Kuro-shima**	**1.56**	**97**	P	**Pn**	**05 42 56.4**	**+0.8**
JKRS				*e*S	**Sn**	**05 43 15.6**	**+0.6**
JIJ	**Ishigaki jima**	**1.67**	**92**	P	**Pn**	**05 42 57.1**	**0.0**
ELDTW	**Lidau**	**1.72**	**224**	*e*P	**Pn**	**05 42 57.8**	**-0.1**
	baz=223						
ELDTW				*e*S	**Sn**	**05 43 18.0**	**-1.0**
	baz=223						
JISG	**Ishigakijimahi**	**1.83**	**85**	P	**Pn**	**05 42 59.1**	**-0.1**
JISG				S	**Sn**	**05 43 19.8**	**-1.6**
TWH	**Lutao**	**1.88**	**204**	*e*P	**Pn**	**05 42 59.2**	**-0.8**
	baz=203						
TWH				*e*S	**Sn**	**05 43 21.6**	**-1.1**
	baz=203						
JTJ	**Tarama**	**2.19**	**84**	P	**Pn**	**05 43 04.8**	**+0.7**
JTJ				S	**Sn**	**05 43 30.8**	**+0.7**
MATB	**Ma-tsu**	**2.74**	**309**	*e*P	**Pn**	**05 43 11.1**	**-0.5**
	baz=308						

IDC 10 06:10:09.6±3.3,30°.46N×141°.12E,h0km,mb3.2/3, mb1 3.4/5,mb1mx3.1/67,mbtmp3.3/5,ML2.7/2,Error ellipse: s-maj=138.0km s-min=21.3km az=75.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**2.88**	**337**	Pn	Pn	06 10 55.7	-1.1
	1.1nm,0.3s,baz=72,slow=20,SNR=4.1						
JHJ				Sn	Sn	06 11 29.8	-2.4
	5.3nm,0.3s,baz=253,slow=19,SNR=3.5						
JCJ	**Chichijima**	**3.48**	**164**	Sn	Sn	06 11 44.8	-2.2
	5.5nm,0.3s,baz=287,slow=19,SNR=5.2						
MJAR	**Matsushiro Arr**	**6.53**	**339**	Pn	Pn	06 11 47.1	+0.1
	0.4nm,0.3s,baz=158,slow=12,SNR=5.4						
MKAR	**Makanchi Array**	**47.66**	**307**	P	P	06 18 47.9	+0.2
	0.1nm,0.4s,baz=99,slow=7.7,SNR=2.0						
WRA	**Warramunga Arr**	**50.54**	**188**	P	P	06 19 10.0	+0.1
	0.2nm,0.4s,baz=5.5,slow=7.5,SNR=8.9						
ASAR	**Alice Springs**	**54.26**	**188**	P	P	06 19 37.1	-0.5
	0.2nm,0.5s,baz=2.6,slow=4.8,SNR=4.2						

IDC 10 06:12:25.6±7.8,18°.51S×177°.07W,h0km,mb3.7/3, mb1 4.0/3,mb1mx3.5/48,mbtmp3.7/3,Error ellipse: s-maj=344.0km s-min=36.2km az=143.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.78**	**260**	P	P	06 20 48.9	-0.5
	0.2nm,0.3s,baz=96,slow=7.3,SNR=7.3						
ASAR	**Alice Springs**	**45.86**	**255**	P	P	06 20 50.1	+0.2
	2.2nm,0.5s,baz=90,slow=8.5,SNR=42						
ILAR	**Eielson Array**	**86.19**	**12**	P	P	06 25 08.4	0.0
	0.2nm,0.5s,baz=228,slow=3.5,SNR=3.9						

*NIED **10** 06

Ms1 3.4/17, ms1mx3.2/55, Error ellipse: s-maj=23.9km s-min=13.9km az=64.0
*NEIC **10** 06:23:29.0±0.4, 23°.85N×121°.67E, h43km±4km, mb4.6/11, ML4.8(TAP), Error ellipse: s-maj=6.1km s-min=5.0km az=117.0*
NEIC Felt at Taipei. Recorded [3 TAP] in Hualien; [2 TAP] in Changhua, Taitung, Yilan and Yunlin; [1 TAP] in Chiayi, Miaoli and Nantou.
*TAP **10** 06:23:29.1, 23°.91N×121°.67E, h40km, ML4.8, B*
*BJI **10** 06:23:29.2, 23°.99N×121°.56E, h28km, mb4.3/26, mB4.4/15, ML4.4/10, Ms4.0/14, Ms7 3.7/13*
ISC 10 06:23:29.1±0.5, 23°.89N±0°.02×121°.70E±0°.02, h36km±1km, n201, σ1§49/297, mb4.3/26, MS3.5/14, 12C-36D, Taiwan

Code	Station Name	Δ° AZ°	Phase	Op	ISC	Time h m s	Res ISC
ENLB	**Shoufeng** baz=265	**0.09 278**	⇑*iP*		Pn	06 23 35.8	+0.7
ENLB	baz=265		S		Sn	06 23 41.2	+1.9
HWA	**Hwalien** baz=322	**0.12 314**	⇑P		Pn	06 23 36.0	-3.0
HWA	baz=322		*e*S		Sn	06 23 41.1	-6.8
TWD	**Chiawan** baz=334	**0.21 333**	⇑*iP*		**Pn**	**06 23 36.2**	**-1.1**
TWD	baz=334		S		**Sn**	**06 23 41.6**	**-2.8**
ESL	**Shilin** baz=254	**0.26 253**	⇓*iP*		**Pn**	**06 23 36.5**	**-0.5**
ESL	baz=254		*e*S		**Sn**	**06 23 41.6**	**-2.1**
NACB	**Ninganchiao** baz=334	**0.30 341**	⇓P		**Pn**	**06 23 37.0**	**-0.1**
NACB	baz=334		S		**Sn**	**06 23 42.5**	**-1.1**
NACB	**Ninganchiao**	**0.30 341**	*e*Pn		**Pn**	**06 23 37.0**	**-0.1**
NACB			*e*Sn		**Sn**	**06 23 42.7**	**-0.9**
EGFH	**Guangfu** baz=234	**0.34 229**	⇓*iP*		**Pn**	**06 23 37.5**	**+0.1**
EGFH	baz=234		*e*S		**Sn**	**06 23 43.4**	**-0.4**
HGSD	**Ruisui** baz=221	**0.47 213**	⇓P		**Pn**	**06 23 39.9**	**+0.7**
HGSD	baz=221		S		**Sn**	**06 23 48.1**	**+1.7**
CHGB	**Renai** baz=288	**0.51 289**	⇓P		**Pn**	**06 23 39.9**	**-0.2**
CHGB	baz=288		S		**Sn**	**06 23 47.4**	**-0.3**
EHY	**Hungye** baz=218	**0.52 222**	⇓*iP*		**Pn**	**06 23 39.2**	**-0.8**
EHY	baz=218		*e*S		**Sn**	**06 23 46.4**	**-1.2**
VWDT	**VWDT** baz=247	**0.53 255**	⇓*iP*		**Pn**	**06 23 40.2**	**0.0**
VWDT	baz=247		S		**Sn**	**06 23 47.1**	**-0.8**
ENA	**Nanau** baz=16	**0.54 4**	*e*P		**Pn**	**06 23 40.3**	**0.0**
ENA	baz=16		*e*S		**Sn**	**06 23 48.5**	**+0.5**
NANB	**Nanao** baz=16	**0.54 5**	⇑P		**Pn**	**06 23 40.0**	**-0.2**
NANB	baz=16		S		**Sn**	**06 23 48.0**	**-0.1**
ENAH	**Nanao** baz=12	**0.56 10**	*e*P		**Pn**	**06 23 40.7**	**0.0**
ENAH	baz=12		*e*S		**Sn**	**06 23 49.0**	**+0.2**
TWT	**Tachien** baz=311	**0.60 307**	⇓*iP*		**Pn**	**06 23 41.3**	**-0.1**
TWT	baz=311		S		**Sn**	**06 23 49.1**	**-0.8**
NNSB	**Datong** baz=328	**0.61 332**	⇓P		**Pn**	**06 23 41.0**	**-0.4**
NNSB	baz=328		*e*S		**Sn**	**06 23 48.9**	**-1.2**
NNSH	**Datong** baz=329	**0.61 332**	P		**Pn**	**06 23 40.9**	**-0.6**
NNSH	baz=329		S		**Sn**	**06 23 48.5**	**-1.5**
TDCB	**Techi** baz=311	**0.61 306**	⇓P		**Pn**	**06 23 41.4**	**-0.2**
TDCB	baz=311		S		**Sn**	**06 23 48.8**	**-1.4**
YULB	**Yu-li** baz=223	**0.62 217**	⇓P		**Pn**	**06 23 40.5**	**-1.0**
YULB	baz=223		*e*S		**Sn**	**06 23 48.7**	**-1.4**
YULB	**Yu-li**	**0.62 217**	*e*Pn		**Pn**	**06 23 40.6**	**-0.8**
YULB			*e*Sn		**Sn**	**06 23 48.7**	**-1.4**
NNS	**Nan Shan** baz=333	**0.62 331**	⇓*iP*		**Pn**	**06 23 41.2**	**-0.4**
NNS	baz=333		S		**Sn**	**06 23 49.5**	**-0.9**
TWF1	**Yuli** baz=222	**0.65 215**	⇓*iP*		**Pn**	**06 23 41.1**	**-0.9**
TWF1	baz=222		*e*S		**Sn**	**06 23 49.2**	**-1.7**
SSLB	**Suanglung** baz=265	**0.69 262**	⇓P		**Pn**	**06 23 42.1**	**-0.3**
SSLB	baz=265		*e*S		**Sn**	**06 23 50.4**	**-1.6**
SSLB	**Suanglung**	**0.69 262**	*e*Pn		**Pn**	**06 23 42.2**	**-0.3**
SSLB			*e*Sn		**Sn**	**06 23 51.4**	**-0.5**
TWC	**Suao** baz=20	**0.73 11**	*e*P		**Pn**	**06 23 43.3**	**+0.4**
TWC	baz=20		S		**Sn**	**06 23 53.7**	**+0.9**
SMLT	**Sun Moon Lake** baz=268	**0.73 270**	⇓*iP*		**Pn**	**06 23 42.9**	**-0.1**
SMLT	baz=268		*e*S		**Sn**	**06 23 53.0**	**0.0**
ENTT	**Nioudou** baz=352	**0.76 351**	⇓P		**Pn**	**06 23 43.2**	**-0.1**
ENTT	baz=352		*e*S		**Sn**	**06 23 53.0**	**-0.5**
EOS1	**EOS1** baz=47	**0.76 31**	*e*P		**Pn**	**06 23 44.5**	**+1.3**
EOS1	baz=47		*e*S		**Sn**	**06 23 55.7**	**+2.2**
TYC	**Yuchr** baz=274	**0.77 271**	⇓*iP*		**Pn**	**06 23 43.4**	**-0.1**
TYC	baz=274		S		**Sn**	**06 23 53.7**	**-0.1**
TWE	**Neicheng** baz=351	**0.83 358**	⇓*iP*		**Pn**	**06 23 44.3**	**+0.1**
TWE	baz=351		*e*S		**Sn**	**06 23 55.1**	**-0.1**
YHNB	**Yeheng** baz=339	**0.83 339**	⇓P		**Pn**	**06 23 44.4**	**+0.1**
YHNB	baz=339		S		**Sn**	**06 23 54.5**	**-1.0**
YHNB	**Yeheng**	**0.83 339**	*e*Pn		**Pn**	**06 23 44.5**	**+0.1**
YHNB			*e*Sn		**Sn**	**06 23 55.5**	**+0.1**
NSK	**Sanguang** baz=338	**0.84 338**	⇓*iP*		**Pn**	**06 23 44.5**	**0.0**
NSK	baz=338		S		**Sn**	**06 23 54.6**	**-1.1**
CHKT	**Chengkung** baz=189	**0.85 201**	*e*P		**Pn**	**06 23 44.4**	**-0.1**
CHKT	baz=189		*e*S		**Sn**	**06 23 56.5**	**+0.9**
ILA	**Ilan** baz=353	**0.87 3**	*e*P		**Pn**	**06 23 45.0**	**+0.1**
ILA	baz=353		*e*S		**Sn**	**06 23 57.4**	**+1.1**
WJS	**Zhushan** baz=265	**0.89 266**	*e*P		**Pn**	**06 23 46.0**	**+0.8**
WJS	baz=265		*e*S		**Sn**	**06 23 57.7**	**+0.8**
NWLT	**Wulai** baz=342	**0.90 348**	*e*P		**Pn**	**06 23 45.2**	**-0.1**
NWLT	baz=342		*e*S		**Sn**	**06 23 56.1**	**-1.0**
ALS	**Alishan** baz=238	**0.91 245**	⇓*iP*		**Pn**	**06 23 45.9**	**+0.4**
ALS	baz=238		S		**Sn**	**06 23 57.6**	**0.0**
ELDTW	**Lidau** baz=215	**0.94 222**	⇓*e*P		**Pn**	**06 23 45.1**	**-0.7**
ELDTW	baz=215		*e*S		**Sn**	**06 23 57.4**	**-0.7**
TWQ1	**Liyutan** baz=297	**0.96 298**	⇓*iP*		**Pn**	**06 23 47.1**	**+1.0**
TWQ1	baz=297		*e*S		**Sn**	**06 23 59.2**	**+0.6**
NTC	**Toucheng** baz=355	**0.97 7**	*e*P		**Pn**	**06 23 46.6**	**+0.5**
NTC	baz=355		*e*S		**Sn**	**06 24 00.2**	**+1.6**
TCU	**Taichung** baz=285	**0.97 285**	P		**Pn**	**06 23 47.4**	**+1.2**
TCU	baz=285		*e*S		**Sn**	**06 24 00.2**	**+1.4**
EGS	baz=20	**0.97 12**	*e*P		**Pn**	**06 23 47.7**	**+1.5**
EGS	baz=20		*e*S		**Sn**	**06 24 00.6**	**+1.8**
NSTT	**Nanjuang** baz=305	**0.98 319**	⇓P		**Pn**	**06 23 47.4**	**+1.1**
NSTT	baz=305		*e*S		**Sn**	**06 23 59.1**	**+0.2**
LIOB	**Emei** baz=306	**0.98 320**	⇓*iP*		**Pn**	**06 23 47.6**	**+1.3**
LIOB	baz=306		S		**Sn**	**06 23 59.4**	**+0.4**
NSY	**Sanyi** baz=301	**1.01 302**	⇓*iP*		**Pn**	**06 23 47.8**	**+1.1**
NSY	baz=301		*e*S		**Sn**	**06 24 00.9**	**+1.3**
NMLH	**Miaoli** baz=307	**1.05 308**	*e*P		**Pn**	**06 23 48.2**	**+0.9**
NMLH	baz=307		*e*S		**Sn**	**06 24 02.1**	**+1.4**
WCHH	**Zhanghua** baz=279	**1.06 280**	*e*P		**Pn**	**06 23 48.7**	**+1.3**
WCHH	baz=279		*e*S		**Sn**	**06 24 02.7**	**+1.7**
TIPB	**Shuangxi** baz=356	**1.08 6**	⇓*iP*		**Pn**	**06 23 47.5**	**-0.3**
TIPB	baz=356		S		**Sn**	**06 24 02.3**	**+0.8**
WDLH	**Douliu** baz=250	**1.08 260**	*e*P		**Pn**	**06 23 48.8**	**+1.1**
WDLH	baz=250		*e*S		**Sn**	**06 24 03.9**	**+2.4**
TWA	**Mucha** baz=354	**1.09 354**	⇓P		**Pn**	**06 23 48.5**	**+0.6**
TWA	baz=354		*e*S		**Sn**	**06 24 02.0**	**+0.3**
TATO	**Taipei** baz=349	**1.10 350**	⇓P		**Pn**	**06 23 48.4**	**+0.5**
TATO	baz=349		*e*S		**Sn**	**06 24 01.2**	**-0.6**
TATO	**Taipei**	**1.10 350**	*e*Pn		**Pn**	**06 23 48.5**	**+0.5**
SBCB	**Hsinchu** baz=323	**1.11 324**	P		**Pn**	**06 23 49.3**	**+1.2**
SBCB	baz=323		*e*S		**Sn**	**06 24 03.6**	**+1.4**
HSN	**Hsinchu** baz=325	**1.13 324**	*e*P		**Pn**	**06 23 49.3**	**+0.9**
HSN	baz=325		S		**Sn**	**06 24 04.0**	**+1.4**
STYT	**Tauyuan** baz=226	**1.13 230**	⇑*e*P		**Pn**	**06 23 49.2**	**+0.8**
STYT	baz=226		*e*S		**Sn**	**06 24 04.0**	**+1.3**
TPUB	**Ta-pu** baz=238	**1.15 239**	*e*P		**Pn**	**06 23 49.7**	**+1.1**
TPUB	baz=238		*e*S		**Sn**	**06 24 04.3**	**+1.2**
TPUB	**Ta-pu**	**1.15 239**	*e*Pn		**Pn**	**06 23 50.0**	**+1.4**
TAP1	**Taipei** baz=350	**1.16 352**	*e*P		**Pn**	**06 23 49.1**	**+0.4**
TAP1	baz=350		*e*S		**Sn**	**06 24 03.8**	**+0.5**
TAP	**Taipei** baz=351	**1.16 351**	*e*P		**Pn**	**06 23 49.6**	**+0.9**
NCUH	**Zhongli** baz=336	**1.17 336**	*e*P		**Pn**	**06 23 49.7**	**+0.8**
NCU	**National Centr** baz=335	**1.17 337**	*e*P		**Pn**	**06 23 49.7**	**+0.8**
NCU	baz=335		*e*S		**Sn**	**06 24 05.1**	**+1.4**
NWF	**Wu-fen Shan** baz=351	**1.18 4**	*e*P		**Pn**	**06 23 49.8**	**+0.7**
NWF	baz=351		*e*S		**Sn**	**06 24 05.6**	**+1.6**
WFSB	**Wu-fen Shan** baz=350	**1.18 4**	*e*P		**Pn**	**06 23 49.8**	**+0.8**
WFSB	baz=350		*e*S		**Sn**	**06 24 05.0**	**+1.2**
CHN2	**Minshiung** baz=253	**1.18 253**	P		**Pn**	**06 23 50.6**	**+1.5**
CHN2	baz=253		S		**Sn**	**06 24 06.6**	**+2.7**
WTP	**Ta-pu** baz=238	**1.19 237**	⇓*e*P		**Pn**	**06 23 50.4**	**+1.2**
WTP	baz=238		*e*S		**Sn**	**06 24 05.6**	**+1.5**
TWH	**Lutao** baz=182	**1.19 190**	*e*P		**Pn**	**06 23 48.9**	**-0.4**
TWH	baz=182		*e*S		**Sn**	**06 24 03.6**	**-0.6**
TWG	**Pinlang** baz=200	**1.21 209**	*e*P		**Pn**	**06 23 48.3**	**-1.2**
TWG	baz=200		*e*S		**Sn**	**06 24 06.0**	**+1.3**
TWG	**Pinlang**	**1.21 209**	*e*Pn		**Pn**	**06 23 48.7**	**-0.8**
TWGBT	**Beinan** baz=200	**1.21 208**	⇓*e*P		**Pn**	**06 23 48.3**	**-1.2**
TWGBT	baz=200		*e*S		**Sn**	**06 24 05.2**	**+0.5**
RLNB	**Erlin** baz=281	**1.23 270**	⇑P		**Pn**	**06 23 50.8**	**+1.1**
RLNB	baz=281		S		**Sn**	**06 24 06.9**	**+1.8**
TWS1	**Kuangyinshan** baz=356	**1.23 348**	*e*P		**Pn**	**06 23 50.4**	**+0.6**
TWS1	baz=356		*e*S		**Sn**	**06 24 06.8**	**+1.6**
CHY	**Chiayi** baz=252	**1.23 252**	*e*P		**Pn**	**06 23 51.1**	**+1.3**
CHY	baz=252		*e*S		**Sn**	**06 24 07.3**	**+2.0**
TTN	**Taitung** baz=206	**1.24 204**	*e*P		**Pn**	**06 23 49.7**	**-0.2**
TTN	baz=206		*e*S		**Sn**	**06 24 06.5**	**+1.1**
JYNG	**Yonagunijimaku**	**1.27 64**	P		**Pn**	**06 23 51.1**	**+0.9**
JYNG			S		**Sn**	**06 24 07.2**	**+1.2**
YM04	**YM04** baz=353	**1.27 353**	*e*P		**Pn**	**06 23 50.4**	**+0.1**
YM10	**YM10** baz=354	**1.27 354**	*e*P		**Pn**	**06 23 50.2**	**-0.1**
TWK	**Hsinying** baz=242	**1.27 241**	⇑*iP*		**Pn**	**06 23 51.6**	**+1.2**
TWK	baz=242		*e*S		**Sn**	**06 24 07.9**	**+1.6**
YM11	**YM11** baz=354	**1.27 355**	*e*P		**Pn**	**06 23 51.3**	**+0.8**
YM07	**YM07** baz=356	**1.28 357**	*e*P		**Pn**	**06 23 49.5**	**-1.0**
CHN1	**Nanshi** baz=238	**1.29 237**	⇑P		**Pn**	**06 23 51.8**	**+1.3**
CHN1	baz=238		*e*S		**Sn**	**06 24 09.1**	**+2.5**
NTST	**Danshui** baz=349	**1.29 350**	*e*P		**Pn**	**06 23 51.0**	**+0.5**
YM12	**YM12** baz=354	**1.29 355**	*e*P		**Pn**	**06 23 51.4**	**+0.8**
YM03	**YM03** baz=353	**1.29 353**	*e*P		**Pn**	**06 23 50.7**	**0.0**
YM08	**YM08** baz=355	**1.29 356**	*e*P		**Pn**	**06 23 50.5**	**-0.2**
WTCT	**Ta-ch'eng** baz=279	**1.30 269**	*e*P		**Pn**	**06 23 51.6**	**+0.9**
WTCT	baz=279		*e*S		**Sn**	**06 24 09.2**	**+2.4**
SGST	**Jiashian** baz=233	**1.30 232**	P		**Pn**	**06 23 52.5**	**+1.7**
SGST	baz=233		S		**Sn**	**06 24 09.4**	**+2.4**
SLGT	**Liugui** baz=229	**1.32 228**	*e*P		**Pn**	**06 23 52.7**	**+1.7**
SLGT	baz=229		*e*S		**Sn**	**06 24 10.0**	**+2.7**
YOJ	**Yonaguni jima** baz=68	**1.32 64**	⇓*iP*		**Pn**	**06 23 51.9**	**+0.9**
YOJ	baz=68		*e*S		**Sn**	**06 24 08.4**	**+1.0**
YOJ	**Yonaguni jima**	**1.32 64**	*e*Pn		**Pn**	**06 23 52.0**	**+0.9**
YOJ	**Yonaguni jima**	**1.32 64**	P		**Pn**	**06 23 51.9**	**+0.9**
YOJ			*e*S		**Sn**	**06 24 08.5**	**+1.0**
WLGB	**Puzi** baz=253	**1.35 253**	*e*P		**Pn**	**06 23 52.5**	**+1.1**
WLGB	baz=253		*e*S		**Sn**	**06 24 10.4**	**+2.3**
WSF	**Szhu** baz=260	**1.38 260**	P		**Pn**	**06 23 53.0**	**+1.2**
WSF	baz=260		*e*S		**Sn**	**06 24 11.2**	**+2.4**
TWY	**Chenhua** baz=356	**1.38 356**	*e*P		**Pn**	**06 23 52.5**	**+0.7**
ECL	**Taimali** baz=201	**1.46 208**	*e*P		**Pn**	**06 23 52.5**	**-0.5**
CHN3	**Shinhua** baz=239	**1.47 237**	*e*P		**Pn**	**06 23 54.5**	**+1.5**
CHN3	baz=239		S		**Sn**	**06 24 14.7**	**+3.6**
CHN8	**Yiju** baz=250	**1.47 249**	P		**Pn**	**06 23 54.1**	**+1.0**
CHN8	baz=250		S		**Sn**	**06 24 13.0**	**+2.0**
SSD	**Sandimen** baz=223	**1.50 221**	*e*P		**Pn**	**06 23 54.6**	**+1.1**
SSD	baz=223		*e*S		**Sn**	**06 24 13.9**	**+2.0**
SCLT	**Jiali** baz=245	**1.56 243**	P		**Pn**	**06 23 55.7**	**+1.5**
SCLT	baz=245		*e*S		**Sn**	**06 24 15.0**	**+1.9**
TAI1	**Yung-k'ang** baz=241	**1.60 238**	*e*P		**Pn**	**06 23 55.9**	**+1.2**
TAI1	baz=241		*e*S		**Sn**	**06 24 16.3**	**+2.2**
MASBT	**Mashibuluo** baz=221	**1.61 218**	⇓*e*P		**Pn**	**06 23 55.7**	**+0.8**
MASBT	baz=221		*e*S		**Sn**	**06 24 16.3**	**+1.8**
SGLT	**Jiouru** baz=227	**1.61 224**	*e*P		**Pn**	**06 23 57.9**	**+2.9**
SGLT	baz=227		*e*S		**Sn**	**06 24 19.5**	**+5.1**
EAST	**Anshuo** baz=202	**1.69 208**	*e*P		**Pn**	**06 23 55.2**	**-0.9**
SSPT	**Xinbi** baz=206	**1.75 217**	*e*P		**Pn**	**06 23 59.2**	**+2.4**
SCZT	**Fangliau** baz=231	**1.81 214**	*e*P		**Pn**	**06 23 58.9**	**+1.1**
SCZT	baz=231		*e*S		**Sn**	**06 24 21.4**	**+1.9**
LAY	**Lan-yu** baz=176	**1.85 184**	*e*P		**Pn**	**06 23 57.5**	**-0.8**
IRIF	**Iriomote-Funau**	**1.91 76**	P		**Pn**	**06 24 00.1**	**+1.1**
IRIF			*e*S		**Sn**	**06 24 22.6**	**+0.8**
HATJ	**Hateruma jima**	**1.93 85**	P		**Pn**	**06 24 00.6**	**+1.2**
HATJ			S		**Sn**	**06 24 24.6**	**+2.2**
WLCH	**Liuqiu** baz=220	**1.96 219**	*e*P		**Pn**	**06 24 03.4**	**+3.6**
TWP	**Hsiaoliuchiu** baz=221	**1.97 219**	*e*P		**Pn**	**06 24 04.0**	**+4.1**
WDGT	**Dungji** baz=254	**1.98 252**	⇓P		**Pn**	**06 24 00.6**	**+0.6**
WDGT	baz=254		*e*S		**Sn**	**06 24 23.7**	**+0.2**
PHUB	**P'eng-hu** baz=261	**1.99 260**	P		**Pn**	**06 24 00.5**	**+0.3**
PHUB	baz=261		*e*S		**Sn**	**06 24 23.7**	**-0.1**
PNG	**Penghu** baz=263	**1.99 261**	*e*P		**Pn**	**06 24 00.4**	**+0.2**
PNG	baz=263		*e*S		**Sn**	**06 24 23.9**	**-0.1**
HEN	**Hengchun** baz=201	**2.08 206**	*e*P		**Pn**	**06 24 03.2**	**+1.8**
TWK1	**Hengchun** baz=195	**2.11 203**	*e*P		**Pn**	**06 24 03.1**	**+1.3**
TWK1	baz=195		*e*S		**Sn**	**06 24 28.7**	**+1.9**
TWKBT	**Hengchun** baz=195	**2.11 203**	*e*P		**Pn**	**06 24 01.8**	**0.0**
TWKBT	baz=195		*e*S		**Sn**	**06 24 28.4**	**+1.6**
TSEB	**Hengchuen, Pin** baz=194	**2.12 201**	*e*P		**Pn**	**06 24 03.5**	**+1.6**
JKRS	**Kuro-shima**	**2.14 80**	P		**Pn**	**06 24 03.9**	**+1.7**
JKRS			S		**Sn**	**06 24 29.3**	**+1.8**
VCHM	**Qimei** baz=255	**2.19 252**	P		**Pn**	**06 24 03.4**	**+0.4**
VCHM	baz=255		*e*S		**Sn**	**06 24 28.6**	**-0.3**
JIJ	**Ishigaki jima**	**2.28 78**	P		**Pn**	**06 24 05.0**	**+0.8**
JIJ			S		**Sn**	**06 24 32.1**	**+1.1**
VWUC	**VWUC** baz=296	**2.33 299**	*e*P		**Pn**	**06 24 04.1**	**-0.7**
VWUC	baz=296		*e*S		**Sn**	**06 24 29.6**	**-2.6**
JISG	**Ishigakijimahi**	**2.48 73**	P		**Pn**	**06 24 07.6**	**+0.7**
JISG			S		**Sn**	**06 24 36.0**	**0.0**
MATB	**Ma-tsu** baz=322	**2.76 325**	*e*P		**Pn**	**06 24 10.1**	**-0.7**
JTJ	**Tarama**	**2.84 74**	P		**Pn**	**06 24 12.9**	**+1.0**
JTJ			S		**Sn**	**06 24 45.0**	**+0.2**
QZH	**Quanzhou**	**3.02 291**	⇑*iP*n		**Pn**	**06 24 13.8**	**-0.6**
QZH			Sn		**Sn**	**06 24 46.2**	**-3.1**
QZH	comp=N,14μm,0.2s		smax		smax		
QZH	comp=E,11μm,0.2s		smax		smax		
KNM	**Kinmen** baz=279	**3.03 281**	⇓*e*P		**Pn**	**06 24 15.7**	**+1.2**
KNMB	**Chin-men Tao** baz=280	**3.08 281**	⇓*e*P		**Pn**	**06 24 14.7**	**-0.5**
JIRB	**Irabujima**	**3.30 73**	P		**Pn**	**06 24 19.0**	**+0.8**
JIRB			S		**Sn**	**06 24 57.0**	**+0.8**
JIKM	**Ikemajima**	**3.39 72**	P		**Pn**	**06 24 20.7**	**+1.2**
JIKM			S		**Sn**	**06 24 59.5**	**+1.0**
JMJ	**Miyako jima 2** baz=77	**3.40 74**	*e*P		**Pn**	**06 24 20.2**	**+0.6**
JMJ	**Miyako jima 2**	**3.40 74**	P		**Pn**	**06 24 21.0**	**+1.4**
JMJ			S		**Sn**	**06 25 00.5**	**+1.8**
JOGS	**Gusukube**	**3.49 75**	P		**Pn**	**06 24 22.4**	**+1.6**
JOGS			*e*S		**Sn**	**06 25 02.3**	**+1.4**
VDOS	**Pratas Island** baz=236	**5.59 236**	*e*P		**Pn**	**06 24 50.6**	**+0.9**
JOW	**Kunigami** 9.0nm,0.3s,baz=323,slow=21,SNR=32	**6.63 62**	P		**Pn**	**06 25 03.3**	**-0.6**
JOW	baz=317,slow=19,SNR=2.0		S		**Sn**	**06 26 14.8**	**-3.5**
JOW	**Kunigami** baz=65	**6.63 62**	*e*P		**Pn**	**06 25 03.4**	**-0.5**
GZH	**Guangzhou**	**7.71 266**	Pn		**Pn**	**06 25 14.8**	**-4.1**
GZH	comp=N,410nm,0.8s		smax		smax		
GZH	comp=E,240nm,0.9s		smax		smax		
NJ2	**Nanjing**	**8.51 343**	*e*P		**Pn**	**06 25 30.1**	**+0.3**
NJ2			pP			06 25 37.2	
NJ2			sP			06 25 43.4	
NJ2			S		**Sn**	**06 27 04.5**	**0.0**
NJ2	comp=Z,19nm,0.6s		pmax		pmax		
NJ2	comp=N,68nm,0.8s		smax		smax		
NJ2	comp=E,49nm,0.9s		smax		smax		
NJ2	comp=N,230nm,4.6s		LR		LR		
NJ2	comp=E,230nm,4.9s		LR		LR		
NJ2	comp=Z,330nm,7.9s		LR		LR		
WHN	**Wuhan**	**9.31 317**	⇑P		**Pn**	**06 25 43.2**	**+2.4**
WHN			S		**Sn**	**06 27 19.9**	**-4.3**
WHN	comp=N,970nm,6.2s		LR		LR		
WHN	comp=E,700nm,5.8s		LR		LR		
WHN	comp=Z,710nm,9.2s		LR		LR		
TGY	**Tagaytay City** comp=Z,92nm,19.6s,baz=50,slow=38	**9.76 184**	LR		LR	06 29 35.9	
JNU	**Nakatsue** comp=Z,111nm,19.0s,baz=248,slow=43	**12.23 39**	LR		LR	06 32 07.0	
GYA	**Guiyang**	**13.86 284**	⇑*iP*		**Pn**	**06 26 45.7**	**+2.6**
GYA			pP		P	06 26 52.0	+1.1
GYA			S		**Sn**	**06 29 16.8**	**+1.0**
GYA			SS		**S**	**06 29 34.3**	**-2.7**

GYA pmax pmax
comp=Z,10.0nm,0.6s
GYA LR LR
comp=N,1μm,7.8s
GYA LR LR
comp=E,1μm,8.2s
GYA LR LR
comp=Z,1μm,8.4s
KS15 Wonju Array Si 14.51 20 *e*P **P 06 26 58.5 +0.5**
KSRS Korea Array 14.53 20 LR LR 06 33 22.1
comp=Z,104nm,18.3s,baz=214,slow=41
BJI Beijing 16.76 345⇑ *e*P **P 06 27 25.9 +2.9**
BJI pmax pmax
comp=Z,8.0nm,0.4s
KMI Kunming 17.30 278 P **P 06 27 31.9 +2.6**
KMI pP pP 06 27 34.4 -4.2
KMI sP Pn 06 27 35.7 +7.5
KMI pmax pmax
comp=Z,14nm,0.5s
KMI pmax pmax
comp=Z,90nm,4.4s
KMI LR LR
comp=N,99nm,8.8s
KMI LR LR
comp=E,230nm,7.9s
KMI LR LR
comp=Z,190nm,15.0s
CD2 Chengdu 17.39 298 P **Pn 06 27 27.2 -1.8**
CD2 pmax pmax
comp=Z,20nm,0.7s
JHJ Hachijo jima 2 18.34 56 LR LR 06 34 44.2
comp=Z,74nm,19.7s,baz=247,slow=37
HHC Hu-ho-hao-te 18.93 336 *e*P **Pn 06 27 48.6 +0.8**
HHC pmax pmax
comp=Z,9.0nm,0.5s
HHC pmax pmax
comp=Z,34nm,6.1s
MJAR Matsushiro Arr 19.00 45 P **Pn 06 27 50.2 +1.5**
0.2nm,0.3s,baz=236,slow=9.9,SNR=5.0
MJAR LR LR 06 35 17.7
comp=Z,76nm,21.1s,baz=190,slow=37
LZH Lanzhou 19.63 312 *e*P **Pn 06 27 57.3 +0.9**
LZH pP pP 06 28 06.9 +2.8
LZH sP sP 06 28 12.2 +3.5
LZH PP **PnPn 06 28 15.8 +5.5**
LZH *e*S **S 06 31 30.2 -4.3**
LZH sS sS 06 31 44.8 -4.6
LZH SS **SnSn 06 31 58.9 +8.5**
LZH pmax pmax
comp=Z,25nm,1.0s
LZH pmax pmax
comp=Z,190nm,4.7s
LZH LR LR
comp=N,300nm,12.0s
LZH LR LR
comp=E,320nm,12.6s
LZH LR LR
comp=Z,420nm,15.4s
CN2 Changchun 20.10 8 *e*P Pn 06 28 02.5 +0.9
CN2 pmax pmax
comp=Z,10.0nm,0.5s
CMAR Chiang Mai Arr 21.89 260 LR LR 06 36 24.8
comp=Z,84nm,18.9s,baz=89,slow=35
GTA Gaotai 24.13 315 *e*P **P 06 28 42.3 +0.5**
GTA pP pP 06 28 53.5 +1.6
GTA sP sP 06 28 59.2 +2.9
GTA S **S 06 32 57.9 +0.6**
GTA pmax pmax
comp=Z,6.0nm,0.9s
GTA pmax pmax
comp=Z,52nm,4.9s
GTA LR LR
comp=N,89nm,15.5s
GTA LR LR
comp=E,160nm,18.9s
GTA LR LR
comp=Z,130nm,15.1s
GUMO Guam 24.18 111 LR LR 06 37 32.5
comp=Z,57nm,19.5s,baz=28,slow=35
ASAJ Asahikawa 26.45 35 LR LR 06 40 01.1
comp=Z,81nm,18.2s,baz=287,slow=38
KLR Kul'dur 26.50 15 P **P 06 29 02.5 -0.4**
0.1nm,0.5s,baz=242,slow=8.2,SNR=4.2
ULN Ulaanbaatar 26.61 338 *e*P **P 06 29 03.7 -0.6**
5.8nm,0.8s
SONM Songino Array 26.82 337 P **P 06 29 06.1 0.0**
2.4nm,0.6s,baz=164,slow=10,SNR=5.5
SONM LR LR 06 41 02.4
comp=Z,77nm,18.5s,baz=56,slow=39
SONA1 Songino Array 26.83 337 *e*P **P 06 29 05.9 -0.3**
SHL Shillong 27.11 280 *e*P **P 06 29 06.5 -2.5**
11nm,0.4s
WMQ Urumqi 34.20 314 P **P 06 30 12.8 +1.6**
WMQ pmax pmax
comp=Z,16nm,0.7s
WMQ pmax pmax
comp=Z,100nm,3.6s
WMQ LR LR
comp=N,130nm,30.7s
WMQ LR LR
comp=Z,70nm,20.5s
MK01 Makanchi Array 38.86 316 *e*P **P 06 30 50.5 -0.4**
MK31 Makanchi Array 38.88 316 *e*P **P 06 30 50.6 -0.4**
MKAR Makanchi Array 38.88 316 P **P 06 30 50.7 -0.3**
2.3nm,0.8s,baz=104,slow=10,SNR=16
MKAR PcP **PcP 06 33 00.1 -1.4**
0.4nm,0.7s,baz=101,slow=5.0,SNR=3.3
MKAR LR LR 06 48 14.8
comp=Z,80nm,19.5s,baz=52,slow=38
MKAR Makanchi Array 38.88 316 *e*P **P 06 30 50.5 -0.5**
14nm,0.7s
MKAR PcP **PcP 06 33 00.1 -1.4**
MAKZ Makanchi 39.08 316 *e*P **P 06 30 51.8 -1.0**
3.7nm,0.6s
ZAA0 Zalesovo Array 40.75 327 *e*P **P 06 31 05.3 -1.0**
4.7nm,0.8s
ZALV Zalesovo Beam 40.75 327 P **P 06 31 05.0 -1.4**
4.8nm,0.8s,baz=116,slow=7.7,SNR=16
ZALV LR LR 06 49 05.3
comp=Z,44nm,19.4s,baz=163,slow=38
ZALV Zalesovo Beam 40.75 327 *e*P **P 06 31 04.9 -1.4**
KSH Kashi 41.45 303 P **P 06 31 13.5 +0.9**
KSH pP sP 06 31 27.3 0.0
KSH PP **PnPn 06 32 53.7 +0.2**
KSH S **S 06 37 26.5 +0.9**
KSH sS sS 06 37 47.4 +4.6
KSH SS **SS 06 40 28.4 -2.2**
KSH pmax pmax
comp=Z,180nm,4.0s
KSH LR LR
comp=E,730nm,9.0s
KSH LR LR
comp=Z,280nm,6.0s
H11N1 WAKE ISLAND Hy 42.03 87 T T 07 16 36.6
baz=283,slow=75,SNR=43
H11N2 WAKE ISLAND Hy 42.03 87 T T 07 16 29.6
baz=283,slow=75,SNR=42
H11N3 WAKE ISLAND Hy 42.05 87 T T 07 16 27.3
baz=283,slow=75,SNR=34
H11S3 WAKE ISLAND Hy 42.15 88 T T 07 16 43.2
baz=284,slow=74,SNR=77
H11S1 WAKE ISLAND Hy 42.16 88 T T 07 16 38.3
baz=284,slow=74,SNR=44
H11S2 WAKE ISLAND Hy 42.17 88 T T 07 16 42.9
baz=284,slow=74,SNR=49
KURK Kurchatov 42.62 320 P **P 06 31 21.5 -0.3**
KURBB Kurchatov Arra 42.64 320 P **P 06 31 21.5 -0.4**
0.9nm,0.5s,baz=109,slow=9.8,SNR=7.3
WRA Warramunga Arr 45.28 163 P **P 06 31 41.6 -1.8**
1.3nm,0.6s,baz=345,slow=8.9,SNR=16
WB2 Warramunga Arr 45.28 163 *e*P **P 06 31 42.2 -1.2**
BVAR Borovoye Array 48.20 321 P **P 06 32 05.6 -0.4**
0.8nm,0.6s,baz=101,slow=7.8,SNR=3.9
BVAR PcP **PcP 06 33 31.1 -1.7**
0.5nm,0.7s,baz=96,slow=4.3,SNR=2.6
BRVK Borovoye 48.27 321 *e*P **P 06 32 05.9 -0.6**
3.6nm,1.1s
ASAR Alice Springs 48.74 165 P **P 06 32 09.6 -0.8**
0.9nm,0.7s,baz=341,slow=6.5,SNR=11
AKTO Aktyubinsk 55.31 316 LR LR 06 58 29.2
comp=Z,38nm,19.3s,baz=108,slow=38
GEYT Alibeck 55.35 301 LR LR 07 01 17.2
comp=Z,42nm,19.0s,baz=190,slow=41
STKA Stephens Creek 58.63 160 P **P 06 33 21.1 -1.5**
0.9nm,0.4s,baz=357,slow=6.5,SNR=5.5
IM3 Indian Mountai 66.23 26 *e*P **P 06 34 13.4 +0.3**

BPAW Bear Paw Mtn. 67.63 28 *e*P **P 06 34 21.6 -0.4**
14nm,1.6s
MDM Murphy Dome 68.66 27 *e*P **P 06 34 28.4 -0.1**
5.5nm,0.8s
RND Reindeer 68.68 29 *e*P **P 06 34 28.4 -0.3**
6.5nm,0.7s
ILAR Eielson Array 69.26 27 P **P 06 34 30.6 -1.6**
0.6nm,0.6s,baz=296,slow=7.8,SNR=10
SCM Sheep Creek Mo 69.69 30 *e*P **P 06 34 33.9 -1.1**
21nm,1.6s
ARCES ARCESS Array B 69.99 338 LR LR 07 09 21.3
comp=Z,31nm,18.1s,baz=202,slow=39
EGAK Eagle 71.63 27 *e*P **P 06 34 46.4 -0.2**
3.1nm,0.7s
FINES FINESS Array B 71.94 330 LR LR 07 09 22.4
comp=Z,43nm,18.0s,baz=158,slow=38
DAWY Dawson 72.58 27 *e*P **P 06 34 52.0 -0.4**
3.7nm,0.8s
BRTR Keskin Array B 73.73 307 P **P 06 34 59.3 -0.5**
0.2nm,0.4s,baz=103,slow=6.4,SNR=3.2
HFS Hagfors 78.05 331 LR LR 07 12 17.4
comp=Z,58nm,20.6s,baz=127,slow=38
NOA NORSAR Array B 78.70 332 LR LR 07 13 33.7
comp=Z,33nm,20.1s,baz=70,slow=38
YKA Yellowknife Ar 83.05 23 P **P 06 35 49.6 -1.0**
1.2nm,0.5s,baz=310,slow=4.7,SNR=16
GERES GERESS Array B 83.37 321 P **P 06 35 51.6 -1.1**
0.8nm,1.0s,baz=330,slow=4.6,SNR=4.1

*NAO **10** 06:30:55.5±3.8, 70°.70N×6°.67W, ML3.4*
*BER **10** 06:30:58.0±1.7, 70°.74N×6°.81W, h9km±42km, ML3.5, ML3.4(NAO)*
ISC 10 06:30:56.0±2.2, 70°.7N±0°.2×6°.87W±0°.07, h10km, n12, σ1º00/16, 1C, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNE	**Jan Mayen East**	**0.58**	**307**	*e*P	**Pg**	**06 31 08.2**	**+0.9**
JNE				*e*S	**Sg**	**06 31 15.5**	**+0.7**
JNE				IAML		06 31 18.5	
	comp=Z,4μm,0.3s						
JMIC	**Jan Mayen**	**0.64**	**303**	Pg	**Pg**	**06 31 09.0**	**+0.8**
JMIC				Lg	Lg	06 31 17.1	
JMIC	**Jan Mayen**	**0.64**	**303⇑**	*i*P	**Pg**	**06 31 09.0**	**+0.8**
JMIC				*e*S	**Sg**	**06 31 16.4**	**-0.2**
JMIC				IAML		06 31 21.3	
	comp=Z,2μm,0.3s						
JNW	**Jan Mayen West**	**0.64**	**307**	*e*P	**Pg**	**06 31 08.8**	**+0.5**
JNW				*e*S	**Sg**	**06 31 16.7**	**0.0**
JNW				IAML		06 31 16.9	
	comp=Z,7μm,0.2s						
JMI	**Jan Mayen**	**0.68**	**295**	*e*P	**Pb**	**06 31 10.6**	**+0.8**
JMI				*e*S	**Sb**	**06 31 19.1**	**-0.1**
JMI				IAML		06 31 22.1	
	comp=Z,1μm,0.4s						
DAG	**Danmarks Havn**	**6.97**	**337**	*i*P	**Pn**	**06 32 35.1**	**-2.7**
	comp=Z,4.1nm,0.6s						
KBS	**Kingsbay**	**9.59**	**22**	Pn	**Pn**	**06 33 13.2**	**-0.6**
KBS	**Kingsbay**	**9.59**	**22**	Pn	**Pn**	**06 33 13.2**	**-0.6**
SPA0	**Spitsbergen Ar**	**9.70**	**29**	Pn	**Pn**	**06 33 16.0**	**+0.7**
	baz=236,slow=14						
SPA0	**Spitsbergen Ar**	**9.70**	**29**	Pn	**Pn**	**06 33 16.0**	**+0.7**
	baz=236,slow=14						
ARA0	**ARCESS Array S**	**11.01**	**80**	Pn	**Pn**	**06 33 32.7**	**-0.6**
	baz=297,slow=12						
ARA0	**ARCESS Array S**	**11.01**	**80**	Pn	**Pn**	**06 33 32.7**	**-0.6**
	baz=297,slow=12						

IDC 10 06:46:17.9±0.9, 20°.56N×145°.28E, h0km, mb3.7/8, mb1 3.8/8, mb1mx3.6/60, mbtmp3.7/8, Error ellipse: s-maj=36.5km s-min=20.9km az=91.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11S3	**WAKE ISLAND Hy**	**20.28**	**92**	T	T	07 12 01.4	
	baz=276,slow=74,SNR=6.1						
H11S1	**WAKE ISLAND Hy**	**20.29**	**92**	T	T	07 11 53.5	
	baz=276,slow=74,SNR=4.0						
H11S2	**WAKE ISLAND Hy**	**20.30**	**92**	T	T	07 12 03.8	
	baz=276,slow=74,SNR=4.8						
WRA	**Warramunga Arr**	**41.66**	**196**	P	P	06 54 07.8	-0.4
	0.4nm,0.7s,baz=7.0,slow=8.6,SNR=7.8						
STKA	**Stephens Creek**	**52.26**	**184**	P	P	06 55 31.2	+0.2
	0.9nm,0.7s,baz=315,slow=14,SNR=2.3						
MKAR	**Makanchi Array**	**56.90**	**313**	P	P	06 56 05.4	+0.7
	0.3nm,0.6s,baz=94,slow=8.6,SNR=5.0						
KURBB	**Kurchatov Arra**	**59.68**	**317**	P	P	06 56 23.8	-0.3
	0.5nm,0.4s,baz=92,slow=7.6,SNR=5.3						
ILAR	**Eielson Array**	**62.16**	**27**	P	P	06 56 40.7	+0.1
	0.3nm,0.6s,baz=261,slow=6.0,SNR=4.1						
BVAR	**Borovoye Array**	**64.80**	**320**	P	P	06 56 58.7	+0.3
	0.8nm,0.5s,baz=94,slow=6.5,SNR=7.7						
YKA	**Yellowknife Ar**	**76.53**	**28**	P	P	06 58 09.9	+0.3
	0.2nm,0.4s,baz=288,slow=5.8,SNR=2.9						
FINES	**FINESS Array B**	**85.03**	**335**	P	P	06 58 53.5	-1.6
	1.6nm,0.8s,baz=126,slow=9.7,SNR=3.8						

*NEIC **10** 06:55:47.2±0.0, 41°.00N×124°.89W, h2km, MW3.6(BRK), After NCEDC.*
NEIC Felt at Arcata and Eureka.
*IDC **10** 06:55:50.2±2.5, 40°.84N×124°.40W, h0km, mb2.6/1, mb1 3.4/3, mb1mx3.2/61, mbtmp2.9/3, ML3.5/2, Error ellipse: s-maj=25.2km s-min=13.2km az=110.0*
ISC 10 06:55:47.4±1.6, 41°.01N±0°.03×124°.86W±0°.07, h16km±9km, n50, σ1º79/69, Near coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCC	**Jacoby Creek,**	**0.65**	**106**	*e*Pg	**Pb**	**06 56 01.4**	**+1.0**
KHMM	**Horse Mountain**	**0.86**	**98**	*e*Pg	**Pg**	**06 56 04.8**	**+0.6**
KHMM				*e*Sg	**Sg**	**06 56 16.7**	**+1.1**
KMRM	**Mail Ridge**	**1.17**	**131**	*e*Pn	**Pb**	**06 56 10.5**	**+1.2**
KMRM				*e*Sg	**Sg**	**06 56 23.9**	**-1.4**
KBO	**Bosley Butte**	**1.29**	**21**	*e*Pn	**Pg**	**06 56 11.0**	**-1.4**
KBO				*e*Sn	**Sg**	**06 56 26.3**	**-3.0**
L02D	**Cave Junction,**	**1.49**	**39**	P	**Pn**	**06 56 13.6**	**+0.1**
	baz=218,SNR=182						
L02D				S	**Sb**	**06 56 31.2**	**-2.1**
	baz=218						
M02C	**Callahan**	**1.56**	**75**	P	**Pn**	**06 56 14.6**	**0.0**
	baz=255,SNR=438						
M02C				S	**Sn**	**06 56 32.3**	**-2.1**
	baz=255						
N02D	**Trinity Center**	**1.63**	**90**	P	**Pn**	**06 56 15.5**	**0.0**
	baz=271,SNR=87						
N02D				S	**Sn**	**06 56 33.9**	**-2.2**
	baz=271						
KCPM	**Cahto Peak**	**1.64**	**143**	*e*Pn	**Pn**	**06 56 15.8**	**+0.2**
KCPM				*e*Sn	**Sn**	**06 56 34.5**	**-1.9**
YBH	**Yreka Blue Hor**	**1.77**	**65**	Pn	**Pn**	**06 56 18.3**	**+0.9**
	18nm,0.3s,baz=253,slow=14,SNR=449						
YBH				Lg	Lg	06 56 39.5	
	39nm,0.3s,baz=114,slow=20,SNR=22						
YBH	**Yreka Blue Hor**	**1.77**	**65**	*e*Pn	**Pn**	**06 56 18.1**	**+0.7**
YBH				*e*Sn	**Sn**	**06 56 38.7**	**-1.0**
WDC	**Whiskeytown Da**	**1.81**	**103**	*e*Pn	**Pn**	**06 56 18.3**	**+0.5**
WDC				*e*Sn	**Sn**	**06 56 39.2**	**-1.3**
KEBM	**Edson Butte**	**1.91**	**12**	*e*Pn	**Pn**	**06 56 19.7**	**+0.4**
KEBM				*e*Sn	**Sn**	**06 56 40.7**	**-2.3**
HUMO	**Hull Mountain**	**2.14**	**41**	*e*Pn	**Pn**	**06 56 23.4**	**+0.9**
HUMO				*e*Sn	**Sn**	**06 56 48.6**	**-0.1**
M04C	**Macdoel**	**2.40**	**70**	P	**Pn**	**06 56 27.5**	**+1.4**
	baz=251,SNR=41						
M04C				S	**Sn**	**06 56 53.5**	**-1.8**
	baz=251						
O03D	**Paynes Creek**	**2.43**	**106**	P	**Pn**	**06 56 26.6**	**+0.1**
	baz=288,SNR=155						
O03D				S	**Sn**	**06 56 54.0**	**-1.9**
	baz=288						
HOPS	**Hopland Field**	**2.43**	**145**	*e*Pn	**Pn**	**06 56 26.6**	**+0.1**
HOPS				*e*Sn	**Sn**	**06 56 52.5**	**-3.3**
GDXM	**Geysers**	**2.71**	**143**	*e*Pn	**Pn**	**06 56 31.5**	**+1.2**
K04D	**Chiloquin, OR**	**2.83**	**54**	P	**Pn**	**06 56 32.2**	**+0.2**
	baz=235						
K04D				S	**Sn**	**06 57 04.9**	**-0.9**
	baz=235						
I03D	**Drain, OR**	**2.91**	**22**	P	**Pn**	**06 56 34.1**	**+1.1**
	baz=202						
I03D				S	**Sn**	**06 57 06.8**	**-0.9**
	baz=202						
ORV	**Oroville**	**2.95**	**118**	*e*Pn	**Pn**	**06 56 34.0**	**+0.5**
ORV				*e*Sn	**Sn**	**06 57 04.6**	**-3.9**

J04D Umpqua Nationa 3.03 42 S **Sn 06 57 08.1 -2.7**
baz=223
MCCM Marconi Confer 3.24 151 *e*Pn **Pn 06 56 37.8 +0.3**
I04A Tendick Farm, 3.32 32 P **Pn 06 56 41.4 +2.6**
baz=213
I04A S **Sn 06 57 17.1 -0.8**
baz=213
K05A Summer Lake 3.42 59 *e*Pn **Pn 06 56 41.8 +1.6**
J05D Fort Rock, OR 3.53 49 P **Pn 06 56 43.3 +1.7**
baz=230,SNR=7.4
J05D S **Sn 06 57 21.3 -1.7**
baz=230
MOD Modoc Plateau 3.54 74 *e*Pn **Pn 06 56 42.5 +0.8**
BEKR Beckworth 3.62 107 *e*Pn **Pn 06 56 44.2 +1.3**
AFDM Forest Hills D 3.62 123 *e*Pn **Pn 06 56 43.9 +1.0**
COR Corvallis 3.76 17 *e*Pn **Pn 06 56 47.4 +2.7**
PINE Pine Mountain 4.02 45 *e*Pn **Pn 06 56 50.0 +1.5**
H04A Detroit Lake 4.17 27 *e*Pn **Pn 06 56 53.3 +3.0**
VCNR Virginia City 4.34 111 *e*Pn **Pn 06 56 54.6 +1.7**
G03D McMinnville, O 4.36 15 S **Sn 06 57 42.9 -0.6**
baz=196
PAHR Pah Rah Range 4.38 105 *e*Pn **Pn 06 56 54.6 +1.3**
PNTR Pine Nut 4.46 114 *e*Pn **Pn 06 56 56.6 +2.0**
CMB Columbia Colle 4.55 129 *e*Pn **Pn 06 56 56.9 +1.3**
YERR Yerington 4.76 113 *e*Pn **Pn 06 57 00.5 +1.8**
WAKR Walker 4.87 119 *e*Pn **Pn 06 57 01.6 +1.5**
WVOR Wild Horse Val 4.87 71 *e*Pn **Pn 06 57 00.1 +0.1**
SAO San Andreas Ge 5.00 147 *e*Pn **Pn 06 57 02.3 +0.5**
RYN Ryan 5.42 114 *e*Pn **Pn 06 57 09.1 +1.4**
KVN Kaiserville 5.54 108 *e*Pn **Pn 06 57 10.7 +1.4**
NV01 Mina Array Sit 5.67 115 *e*Pn **Pn 06 57 12.6 +1.5**
NVAR Mina Array Bea 5.67 115 Pn **Pn 06 57 13.1 +2.0**
baz=289,slow=14,SNR=18
NVAR Lg Lg 06 58 32.2
baz=316,slow=26,SNR=3.0
NV11 Mina Array Sit 5.77 114 *e*Pn **Pn 06 57 13.1 +0.6**
BMO Blue Mountains 6.74 53 *e*Pn **Pn 06 57 28.6 +2.8**
ISA Isabella, Lake 7.32 135 *e*Pn **Pn 06 57 37.4 +3.7**
HLID Hailey 8.15 68 *e*Pn **Pn 06 57 49.3 +4.1**
PDAR Pinedale Array 11.54 76 Pn **Pn 06 58 34.7 +3.1**
0.1nm,0.3s,baz=265,slow=18,SNR=2.3
TXAR Lajitas Array 20.81 117 P **P 07 00 29.7 +1.5**
0.3nm,0.7s,baz=296,slow=6.9,SNR=4.1

*NEIC **10** 06:58:06.2±0.0, 14°.33N×93°.22W, h10km, mb3.7/3, MD4.0(MEX), After MEX.*
MEX 10 06:58:06.2±0.3, 14°.33N×93°.22W, h10km, MD4.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.08**	**58**	*e*P	Pb	06 58 23.7	-3.3
THIG				*i*S	Sg	06 58 37.2	-3.9
THIG		**1.08**	**58**	*e*P	Pb	06 58 23.7	-3.3
THIG				*i*S	Sg	06 58 37.2	-3.9
PCIG		**1.36**	**360**	*i*P	Pn	06 58 27.7	-3.6
PCIG				*i*S	Sb	06 58 44.3	-5.0
PCIG		**1.36**	**360**	*i*P	Pn	06 58 27.7	-3.6
PCIG				*i*S	Sb	06 58 44.3	-5.0
CCIG	**Comitan**	**2.20**	**28**	*e*Pn	Pn	06 58 42.1	-0.9
TGIG		**2.43**	**2**	*e*P	Pn	06 58 44.8	-1.3
TGIG				*i*S	Sn	06 59 15.8	-0.1
TGIG		**2.43**	**2**	*e*P	Pn	06 58 44.8	-1.3
TGIG				*i*S	Sn	06 59 15.8	-0.1
MNTX	**Cornudas Mount**	**20.56**	**329**	*e*P	P	07 02 43.2	-2.0
	4.7nm,1.7s						
ROSC	**El Rosal**	**20.86**	**115**	*e*P	P	07 02 45.6	-3.4
	2.9nm,0.7s						
WMOK	**Wichita Mounta**	**20.93**	**347**	*e*P	P	07 02 45.9	-3.2
	3.3nm,0.9s						
BBRC	**Big Bear Solar**	**29.20**	**317**	*e*P	P	07 04 02.9	-5.5
BBRC				*e*S	S	07 09 00.2	-0.9
RCWM	**Renegade Canyo**	**30.70**	**319**	*e*P	P	07 04 16.5	-4.9
RCWM				*e*S	S	07 09 20.4	-3.9
MBW	**Mount Baker**	**41.68**	**331**	*e*P	P	07 05 50.6	-4.5

*IDC **10** 07:09:19.8±1.6, 34°.24S×178°.77W, h0km, mb4.5/2, mb1 4.6/4, mb1mx4.0/44, mbtmp4.4/4, ML4.0/2, Error ellipse: s-maj=41.9km s-min=31.0km az=118.0*
*ISCJB **10** 07:09:21.1±1.0, 34°.45S±0°.08×178°.2W±0°.2, h51km, mb4.4/2, Error ellipse: s-maj=20.9km s-min=6.6km az=30.1*
*WEL **10** 07:09:22.9±1.0, 34°S±13°×17°.8W±1°.4, h136km±54km*
ISC 10 07:09:25.3±1.5, 34°.5S±0°.1×178°.4W±0°.2, h51km, n35, σ1º32/54, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.08**	**220**	P	**Pn**	**07 10 24.2**	**-0.9**
WMGZ	**Waiomatatini S**	**4.23**	**216**	P	**Pn**	**07 10 26.9**	**-0.3**
WMGZ				S	**Sn**	**07 11 17.8**	**+2.6**
PKGZ	**Pakihiroa**	**4.45**	**219**	P	**Pn**	**07 10 29.1**	**-1.2**
PKGZ				S	**Sn**	**07 11 21.9**	**+1.1**
PUZ	**Puketiti**	**4.50**	**216**	P	**Pn**	**07 10 29.3**	**-1.6**
PUZ				S	**Sn**	**07 11 22.0**	**0.0**
HAZ	**Te Kaha**	**4.51**	**222**	P	**Pn**	**07 10 30.4**	**-0.6**
HAZ				S	**Sn**	**07 11 24.5**	**+2.4**
RUGZ	**Raukumara Rang**	**4.72**	**221**	P	**Pn**	**07 10 33.3**	**-0.7**
RUGZ				S	**Sn**	**07 11 29.3**	**+1.8**
TWGZ	**Tauwhareparae**	**4.72**	**217**	P	**Pn**	**07 10 32.7**	**-1.2**
TWGZ				S	**Sn**	**07 11 28.9**	**+1.5**
CNGZ	**Carnagh Statio**	**4.86**	**213**	P	**Pn**	**07 10 34.8**	**-0.9**
CNGZ				S	**Sn**	**07 11 32.7**	**+2.0**
TKGZ	**Te Karaka**	**4.99**	**216**	P	**Pn**	**07 10 37.4**	**-0.2**
TKGZ				S	**Sn**	**07 11 35.2**	**+1.3**
MWZ	**Matawai**	**5.07**	**219**	P	**Pn**	**07 10 37.4**	**-1.4**
MWZ				S	**Sn**	**07 11 36.6**	**+0.6**
URZ	**Urewera**	**5.24**	**222**	Pn	**Pn**	**07 10 39.8**	**-1.3**
	8.5nm,0.3s,baz=245,slow=2.1,SNR=45						
URZ				Sn	**Sn**	**07 11 38.8**	**-1.3**
	4.1nm,0.3s,baz=126,slow=19,SNR=5.0						
URZ	**Urewera**	**5.24**	**222**	P	**Pn**	**07 10 39.4**	**-1.6**
URZ				S	**Sn**	**07 11 39.7**	**-0.4**
RIGZ	**Rimuhau**	**5.24**	**215**	P	**Pn**	**07 10 40.4**	**-0.7**
RIGZ				S	**Sn**	**07 11 40.7**	**+0.5**
RAGZ	**Rawiri**	**5.25**	**219**	P	**Pn**	**07 10 40.8**	**-0.4**
RAGZ				S	**Sn**	**07 11 40.4**	**-0.1**
OPRZ	**Ohinepanea**	**5.29**	**229**	P	**Pn**	**07 10 40.4**	**-1.3**
OPRZ				S	**Sn**	**07 11 42.5**	**+1.1**
KUZ	**Kuaotunu**	**5.29**	**243**	P	**Pn**	**07 10 41.0**	**-0.7**
PRGZ	**Paritu Road**	**5.36**	**213**	P	**Pn**	**07 10 41.7**	**-1.0**
PRGZ				S	**Sn**	**07 11 42.5**	**-0.7**
SNGZ	**Shannon Statio**	**5.50**	**217**	P	**Pn**	**07 10 43.9**	**-0.9**
SNGZ				S	**Sn**	**07 11 48.3**	**+1.6**
MHGZ	**Mahia Peninsul**	**5.54**	**211**	P	**Pn**	**07 10 43.5**	**-1.7**
RTZ	**Ruatahuna**	**5.57**	**220**	P	**Pn**	**07 10 44.8**	**-0.8**
MUGZ	**Murupara**	**5.58**	**223**	P	**Pn**	**07 10 44.6**	**-1.1**
RRRZ	**Republican Roa**	**5.63**	**225**	P	**Pn**	**07 10 45.7**	**-0.8**
RAHZ	**Arahi**	**5.74**	**218**	P	**Pn**	**07 10 48.0**	**+0.1**
RAHZ				S	**Sn**	**07 11 52.6**	**+0.3**
MTHZ	**Maungataniwha**	**5.81**	**220**	P	**Pn**	**07 10 49.3**	**+0.4**
MTHZ				S	**Sn**	**07 11 54.7**	**+0.3**
MKAZ	**Moumakai**	**5.85**	**241**	P	**Pn**	**07 10 49.3**	**-0.1**
TOZ	**Tahuroa Road**	**5.91**	**235**	P	**Pn**	**07 10 50.5**	**+0.3**
NMHZ	**Naumai**	**6.01**	**218**	P	**Pn**	**07 10 51.5**	**-0.3**
MRHZ	**Matea Rd**	**6.03**	**222**	P	**Pn**	**07 10 49.9**	**-2.0**
ARHZ	**Aropaoanui**	**6.05**	**216**	P	**Pn**	**07 10 51.3**	**-0.8**
BKZ	**Black Stump Fm**	**6.23**	**219**	P	**Pn**	**07 10 53.1**	**-1.6**
RPZ	**Rata Peaks**	**12.34**	**218**	Pn	**Pn**	**07 12 14.6**	**-3.6**
	0.5nm,0.3s,baz=115,slow=14,SNR=3.1						
RPZ				Sn	Sn	07 14 21.6	-13
	0.5nm,0.3s,baz=72,slow=20,SNR=4.4						
ASAR	**Alice Springs**	**42.70**	**272**	P	**P**	**07 17 16.6**	**-0.8**
	4.0nm,0.7s,baz=114,slow=7.4,SNR=59						
ASAR				PcP	**PcP**	**07 19 08.6**	**+0.1**
	0.5nm,0.5s,baz=115,slow=3.7,SNR=5.0						
WRA	**Warramunga Arr**	**44.05**	**277**	P	**P**	**07 17 27.1**	**-1.2**
	6.5nm,0.6s,baz=117,slow=7.8,SNR=111						
FINES	**FINESS Array B**	**148.78**	**337**	PKPbc	**PKPbc**	**07 29 06.7**	**+0.5**
	3.3nm,0.9s,baz=46,slow=3.3,SNR=13						
TORD	**Torodi Ar. Bea**	**158.79**	**180**	PKPab	**PKPab**	**07 29 56.6**	**+3.0**
	0.6nm,0.9s,baz=189,slow=5.4,SNR=3.2						

*ISCJB **10** 07:14:42.9±0.6, 24°.51N±0°.04×122°.29E±0°.02, h69km±6km, Error ellipse: s-maj=6.3km s-min=3.4km az=178.5*
*TAP **10** 07:14:42.9, 24°.52N×122°.28E, h72km±1km, ML2.9, B*
*JMA **10** 07:14:42.9±0.1, 24°.41N×122°.29E, h71km±1km, M1.9*
ISC 10 07:14:43.2±1.4, 24°.53N±0°.05×122°.29E±0°.03, h69km±9km,

n34,σ0§65/55, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.15**	**280**	**P**	**Pn**	**07 14 53.8**	**+0.5**
	baz=282						
EOS1				S	**Sn**	**07 15 01.9**	**+1.1**
	baz=282						
TWC	**Suao**	**0.41**	**282**	*eP*	**Pn**	**07 14 54.7**	**-0.3**
TWC	baz=282			*eS*	**Sn**	**07 15 03.2**	**-0.5**
NANB	**Nanao**	**0.50**	**259**	P	**Pn**	**07 14 55.9**	**+0.1**
NANB	baz=259			*eS*	**Sn**	**07 15 05.1**	**0.0**
ENA	**Nanau**	**0.51**	**259**	*eS*	**Sn**	**07 15 05.4**	**+0.1**
NTC	baz=259 **Toucheng**	**0.53**	**308**	*eS*	**Sn**	**07 15 05.8**	**+0.1**
ILA	baz=309 **Ilan**	**0.55**	**296**	*eS*	**Sn**	**07 15 06.6**	**+0.7**
TWE	baz=296 **Neicheng**	**0.60**	**289**	P	**Pn**	**07 14 57.2**	**+0.4**
JYNG	baz=289 **Yonagunijimaku**	**0.60**	**97**	P	**Pn**	**07 14 56.8**	**-0.1**
JYNG				S	**Sn**	**07 15 06.9**	**-0.1**
TIPB	**Shuangxi**	**0.61**	**317**	P	**Pn**	**07 14 56.3**	**-0.8**
TIPB	baz=317			S	**Sn**	**07 15 06.3**	**-0.9**
YOJ	baz=317 **Yonaguni jima**	**0.66**	**95**	P	**Pn**	**07 14 57.6**	**+0.1**
YOJ	baz=94			*eS*	**Sn**	**07 15 07.8**	**-0.3**
YOJ	baz=94 **Yonaguni jima**	**0.66**	**95**	P	**Pn**	**07 14 57.5**	**0.0**
YOJ				*eS*	**Sn**	**07 15 08.2**	**+0.1**
ENTT	**Nioudou**	**0.67**	**280**	P	**Pn**	**07 14 58.2**	**+0.6**
NWF	baz=280 **Wu-fen Shan**	**0.71**	**320**	*eS*	**Sn**	**07 15 09.2**	**-0.1**
NACB	baz=320 **Ninganchiao**	**0.72**	**241**	*eS*	**Sn**	**07 15 08.2**	**-1.1**
NWLT	baz=241 **Wulai**	**0.76**	**290**	P	**Pn**	**07 14 59.3**	**+0.6**
NWLT	baz=289			*eS*	**Sn**	**07 15 10.6**	**+0.5**
TWD	**Chiawan**	**0.77**	**235**	*eP*	**Pn**	**07 14 58.3**	**-0.5**
TWD	baz=234			*eS*	**Sn**	**07 15 09.0**	**-1.3**
NNSB	baz=234 **Datong**	**0.83**	**264**	P	**Pn**	**07 14 59.6**	**0.0**
NNSB	baz=263			*eS*	**Sn**	**07 15 11.4**	**-0.4**
NNSH	baz=263 **Datong**	**0.83**	**264**	*eP*	**Pn**	**07 14 59.3**	**-0.3**
NNSH	baz=263			*eS*	**Sn**	**07 15 11.3**	**-0.5**
NNS	baz=263 **Nan Shan**	**0.84**	**264**	*eP*	**Pn**	**07 14 59.3**	**-0.5**
NNS	baz=264			*eS*	**Sn**	**07 15 12.1**	**+0.2**
YHNB	baz=264 **Yeheng**	**0.84**	**280**	P	**Pn**	**07 15 00.2**	**+0.5**
YHNB	baz=280			*eS*	**Sn**	**07 15 12.7**	**+0.8**
NSK	baz=280 **Sanguang**	**0.86**	**280**	*eP*	**Pn**	**07 15 00.5**	**+0.6**
NSK	baz=280			*eS*	**Sn**	**07 15 12.7**	**+0.4**
ENLB	baz=280 **Shoufeng**	**0.88**	**225**	*eS*	**Sn**	**07 15 12.4**	**-0.2**
YM07	baz=225 **YM07**	**0.89**	**317**	*eP*	**Pn**	**07 14 59.2**	**-1.0**
YM07	baz=317			*eS*	**Sn**	**07 15 11.7**	**-1.2**
YM04	baz=317 **YM04**	**0.93**	**313**	P	**Pn**	**07 15 00.8**	**+0.1**
YM04	baz=313			*eS*	**Sn**	**07 15 13.9**	**+0.2**
TWT	baz=313 **Tachien**	**1.05**	**255**	*eS*	**Sn**	**07 15 16.9**	**+0.2**
CHGB	baz=255 **Renai**	**1.12**	**246**	*eS*	**Sn**	**07 15 17.6**	**-0.6**
LIOB	baz=245 **Emei**	**1.16**	**276**	*eP*	**Pn**	**07 15 04.8**	**+1.1**
HGSD	baz=276 **Ruisui**	**1.30**	**218**	*eP*	**Pn**	**07 15 05.7**	**+0.3**
VWDT	baz=217 **VWDT**	**1.30**	**234**	*eS*	**Sn**	**07 15 20.9**	**-1.2**
IRIF	baz=233 **Iriomote-Funau**	**1.33**	**98**	P	**Pn**	**07 15 05.8**	**0.0**
IRIF				*eS*	**Sn**	**07 15 22.7**	**-0.1**
SSLB	**Suanglung**	**1.42**	**239**	*eP*	**Pn**	**07 15 08.7**	**+1.6**
SSLB	baz=238			*eS*	**Sn**	**07 15 23.9**	**-1.2**
JKRS	baz=238 **Kuro-shima**	**1.60**	**100**	P	**Pn**	**07 15 09.7**	**+0.4**
JKRS				S	**Sn**	**07 15 29.8**	**+0.7**
JIJ	**Ishigaki jima**	**1.70**	**95**	P	**Pn**	**07 15 10.7**	**0.0**
JIJ				S	**Sn**	**07 15 30.9**	**-0.7**
JISG	**Ishigakijimahi**	**1.84**	**88**	P	**Pn**	**07 15 12.6**	**-0.1**
JISG				*eS*	**Sn**	**07 15 35.5**	**+0.4**

*IDC **10** 07:16:31.7±1.6, 34°.29S×178°.68W, h0km, mb4.4/2, mb1 4.6/3, mb1mx3.8/46, mbtmp4.4/3, ML4.1/1, Error ellipse: s-maj=42.4km s-min=34.9km az=128.0*
*WEL **10** 07:16:35.9±1.1, 34°S±23°×17°8W±2°8, h142km±46km*
ISC 10 07:16:37.8±1.5, 34°.4S±0°.1×178°.5W±0°.2, h51km, n34,
σ1§18/47, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.08**	**219**	P	**Pn**	**07 17 36.7**	**-0.9**
MXZ				S	**Sn**	**07 18 24.1**	**+0.1**
WMGZ	**Waiomatatini S**	**4.22**	**215**	P	**Pn**	**07 17 40.9**	**+1.3**
PKGZ	**Pakihiroa**	**4.44**	**218**	P	**Pn**	**07 17 41.8**	**-0.9**
PKGZ				S	**Sn**	**07 18 34.3**	**+1.1**
HAZ	**Te Kaha**	**4.50**	**221**	P	**Pn**	**07 17 42.8**	**-0.6**
HAZ				S	**Sn**	**07 18 36.9**	**+2.6**
PUZ	**Puketiti**	**4.50**	**215**	P	**Pn**	**07 17 41.7**	**-1.7**
PUZ				S	**Sn**	**07 18 35.7**	**+1.2**
RUGZ	**Raukumara Rang**	**4.71**	**220**	P	**Pn**	**07 17 45.7**	**-0.7**
RUGZ				S	**Sn**	**07 18 40.6**	**+0.9**
TWGZ	**Tauwhareparae**	**4.72**	**216**	P	**Pn**	**07 17 45.2**	**-1.1**
TWGZ				S	**Sn**	**07 18 41.6**	**+1.8**
CNGZ	**Carnagh Statio**	**4.86**	**212**	P	**Pn**	**07 17 47.2**	**-1.0**
TKGZ	**Te Karaka**	**4.99**	**215**	P	**Pn**	**07 17 49.6**	**-0.4**
TKGZ				S	**Sn**	**07 18 46.4**	**+0.1**
MWZ	**Matawai**	**5.06**	**218**	P	**Pn**	**07 17 49.7**	**-1.4**
MWZ				S	**Sn**	**07 18 48.8**	**+0.3**
URZ	**Urewera**	**5.23**	**221**	Pn	**Pn**	**07 17 51.6**	**-1.7**
	7.1nm,0.3s,baz=276,slow=2.5,SNR=38						
URZ				Sn	**Sn**	**07 18 52.3**	**-0.1**
	4.0nm,0.3s,baz=245,slow=5.0,SNR=7.8						
URZ	**Urewera**	**5.23**	**221**	P	**Pn**	**07 17 51.9**	**-1.5**
URZ				S	**Sn**	**07 18 52.2**	**-0.1**
RIGZ	**Rimuhau**	**5.24**	**214**	P	**Pn**	**07 17 53.0**	**-0.6**
RIGZ				S	**Sn**	**07 18 52.9**	**+0.2**
RAGZ	**Rawiri**	**5.24**	**218**	P	**Pn**	**07 17 53.2**	**-0.4**
RAGZ				S	**Sn**	**07 18 52.4**	**-0.4**
PRGZ	**Paritu Road**	**5.36**	**212**	P	**Pn**	**07 17 53.7**	**-1.6**
SNGZ	**Shannon Statio**	**5.50**	**216**	P	**Pn**	**07 17 56.4**	**-0.8**
SNGZ				S	**Sn**	**07 18 60.0**	**+0.9**
MHGZ	**Mahia Peninsul**	**5.54**	**210**	P	**Pn**	**07 17 55.8**	**-2.0**
RTZ	**Ruatahuna**	**5.56**	**220**	P	**Pn**	**07 17 57.4**	**-0.6**
MUGZ	**Murupara**	**5.57**	**222**	P	**Pn**	**07 17 57.2**	**-0.9**
RRRZ	**Republican Roa**	**5.62**	**224**	P	**Pn**	**07 17 58.0**	**-0.8**
RAHZ	**Arahi**	**5.73**	**217**	P	**Pn**	**07 18 00.3**	**0.0**
MTHZ	**Maungataniwha**	**5.81**	**219**	P	**Pn**	**07 18 01.5**	**+0.1**
NMHZ	**Naumai**	**6.01**	**217**	P	**Pn**	**07 18 03.5**	**-0.6**
BKZ	**Black Stump Fm**	**6.22**	**219**	P	**Pn**	**07 18 05.8**	**-1.3**
MCHZ	**McNeill Hill**	**6.33**	**216**	P	**Pn**	**07 18 07.7**	**-0.8**
KAHZ	**Kahuranaki**	**6.52**	**213**	P	**Pn**	**07 18 07.9**	**-3.3**
PXZ	**Pawanui**	**6.72**	**212**	P	**Pn**	**07 18 12.5**	**-1.4**
MOVZ	**Moawhango**	**6.79**	**221**	P	**Pn**	**07 18 13.5**	**-1.4**
BHW	**Baring Head**	**8.73**	**215**	P	**Pn**	**07 18 41.1**	**-0.2**
RPZ	**Rata Peaks**	**12.33**	**218**	Sn	Sn	07 21 33.1	-13
	0.5nm,0.3s,baz=49,slow=18,SNR=3.7						
ASAR	**Alice Springs**	**42.63**	**272**	P	**P**	**07 24 29.0**	**-0.4**
	2.7nm,0.7s,baz=113,slow=7.4,SNR=38						
ASAR				PcP	**PcP**	**07 26 20.9**	**+0.1**
	0.2nm,0.6s,baz=118,slow=4.0,SNR=4.8						
WRA	**Warramunga Arr**	**43.98**	**277**	P	**P**	**07 24 39.2**	**-1.0**
	3.5nm,0.4s,baz=116,slow=7.8,SNR=94						
FINES	**FINESS Array B**	**148.71**	**337**	PKPbc	**PKPbc**	**07 36 19.8**	**+1.3**
	3.8nm,0.9s,baz=60,slow=4.6,SNR=9.9						
TORD	**Torodi Ar. Bea**	**158.84**	**181**	PKPab	**PKPab**	**07 37 07.3**	**+1.0**
	0.3nm,0.6s,baz=183,slow=2.2,SNR=3.5						

*DJA **10** 07:25:55.9±0.9, 4°N±6°×12°9E±°, h22km±11km, M4.6/12, mb4.5/8, mB5.0/5, MLv4.7/12, Mw(mB)4.4/5*
*ISCJB **10** 07:25:56.3±0.4, 3°.92N±0°.03×128°.69E±0°.04, h46km, mb4.3/17, Error ellipse: s-maj=6.1km s-min=4.0km az=160.7*
*IDC **10** 07:25:58.0±3.6, 4°.01N×128°.66E, h48km±36km, mb3.9/10, mb1 4.0/11, mb1mx3.6/66, mbtmp4.1/11, ML4.0/1, MS3.0/5, Ms1 3.0/5, ms1mx2.7/61, Error ellipse: s-maj=33.5km s-min=15.3km az=71.0*
*NEIC **10** 07:25:59.8±1.1, 3°.99N×128°.74E, h68km±10km, mb4.4/5, Error ellipse: s-maj=13.3km s-min=5.7km az=63.0*
ISC 10 07:25:58.2±0.5, 3°.94N±0°.05×128°.71E±0°.07, h46km, n46,
σ1§31/50, mb4.3/17, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**3.18**	**266**	P	**Pn**	**07 26 44.5**	**-1.2**
SGSI				S	**Sn**	**07 27 22.0**	**-0.4**
DAV	**Davao City (W)**	**4.40**	**315**	*ePn*	**Pn**	**07 27 03.3**	**+0.9**
DAV				*eSn*	**Sn**	**07 27 55.6**	**+3.2**
LBMI	**Labuha**	**4.71**	**195**	P	**Pn**	**07 27 04.9**	**-1.8**
LBMI				S	**Sn**	**07 28 01.1**	**+1.0**
SIJI	**Sorong**	**5.42**	**152**	P	**Pn**	**07 27 18.4**	**+1.9**
	4.1nm,0.3s,baz=246,slow=23,SNR=18						
SIJI				S	**Sn**	**07 28 16.9**	**-0.8**
	14nm,0.3s,baz=330,slow=22,SNR=21						
SIJI				LR	LR	07 29 18.2	
	comp=Z,188nm,20.4s,baz=4.0,slow=36						
KMSI	**Cibinong**	**5.79**	**235**	P	**Pn**	**07 27 20.0**	**-1.5**
KMSI				S	**Sn**	**07 28 26.9**	**+0.2**
SANI	**Sanana**	**6.54**	**205**	P	**Pn**	**07 27 31.0**	**-0.9**
MSAI	**Masohi**	**7.24**	**178**	P	**Pn**	**07 27 41.8**	**+0.3**
MSAI				S	**Sn**	**07 29 04.3**	**+1.8**
NLAI	**Namlea**	**7.31**	**193**	P	**Pn**	**07 27 41.4**	**-1.1**
NLAI				S	**Sn**	**07 29 05.5**	**+1.3**
MRSI	**Marisa**	**7.59**	**243**	P	**Pn**	**07 27 46.9**	**+0.7**
FAKI	**Fak Fak**	**7.68**	**153**	*ePn*	**Pn**	**07 27 50.0**	**+2.5**
LUWI	**Luwuk**	**7.73**	**230**	P	**Pn**	**07 27 46.8**	**-1.3**
MYLDM	**Lahad Datu**	**10.25**	**277**	*ePn*	**Pn**	**07 28 25.3**	**+2.6**
JAY	**Jayapura**	**13.60**	**118**	LR	LR	07 34 01.4	
	comp=Z,67nm,20.2s,baz=287,slow=35						
SBUM	**Sibu**	**16.53**	**265**	*eP*	**P**	**07 29 49.0**	**+0.1**
	18nm,1.0s						
MTN	**Manton Dam**	**16.85**	**172**	*ePn*	**Pn**	**07 29 51.2**	**+0.3**
	79nm,1.8s						
GUMO	**Guam**	**18.61**	**58**	LR	LR	07 36 13.5	
	comp=Z,69nm,19.4s,baz=224,slow=33						
JOW	**Kunigami**	**22.76**	**359**	LR	LR	07 38 42.5	
	comp=Z,49nm,19.5s,baz=212,slow=34						
WRAB	**Tennant Creek**	**24.37**	**167**	*eP*	**P**	**07 31 12.2**	**+0.1**
	7.7nm,0.6s						
WRA	**Warramunga Arr**	**24.37**	**167**	P	**P**	**07 31 12.1**	**-0.1**
	7.4nm,0.7s,baz=345,slow=11,SNR=44						
WB2	**Warramunga Arr**	**24.38**	**167**	*eP*	**P**	**07 31 12.1**	**-0.1**
AS31	**Alice Springs**	**27.91**	**170**	*eP*	**P**	**07 31 42.7**	**-1.4**
	1.2nm,0.8s						
ASAR	**Alice Springs**	**27.91**	**170**	P	**P**	**07 31 44.5**	**+0.4**
	1.6nm,0.6s,baz=355,slow=8.1,SNR=34						
AS01	**Alice Springs**	**27.91**	**170**	*eP*	**P**	**07 31 44.0**	**-0.1**
CMAR	**Chiang Mai Arr**	**32.48**	**299**	P	**P**	**07 32 24.2**	**-0.5**
	1.0nm,0.3s,baz=119,slow=7.3,SNR=3.9						
KSRS	**Korea Array**	**33.36**	**359**	LR	LR	07 45 35.6	
	comp=Z,16nm,20.8s,baz=230,slow=35						
MJAR	**Matsshiro Arr**	**33.60**	**14**	P	**P**	**07 32 31.4**	**-2.8**
	1.3nm,0.7s,baz=173,slow=9.3,SNR=4.2						
FORT	**Forrest**	**34.53**	**181**	*eP*	**P**	**07 32 42.7**	**+0.4**
	31nm,1.0s						
STKA	**Stephens Creek**	**37.67**	**162**	P	**P**	**07 33 09.1**	**0.0**
	3.7nm,0.7s,baz=331,slow=7.9,SNR=11						
NWAO	**Narrogin (SRO)**	**38.25**	**196**	*eP*	**P**	**07 33 13.3**	**-0.6**
	115nm,0.8s						
LZH	**Lanzhou**	**39.35**	**328**	*eP*	**P**	**07 33 23.7**	**+0.3**
LZH				pP	sP	07 33 39.1	-2.1
LZH				sP	pP	07 33 46.3	+10
LZH				*ePP*	**PnPn**	**07 34 59.8**	**+2.4**
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
LZH				pmax	pmax		
	comp=Z,43nm,5.4s						
LZH				LR	LR		
	comp=N,75nm,13.3s						
LZH				LR	LR		
	comp=E,82nm,13.5s						
LZH				LR	LR		
	comp=Z,97nm,15.8s						
HHC	**Hu-ho-hao-te**	**39.85**	**340**	*eP*	**P**	**07 33 29.4**	**+2.0**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,48nm,4.3s						
SHL	**Shillong**	**41.35**	**305**	*eP*	**P**	**07 33 40.0**	**-0.2**
SHL	**Shillong**	**41.35**	**305**	*eP*	**P**	**07 33 39.0**	**-1.1**
	comp=Z,14nm,1.0s						
GTA	**Gaotai**	**43.95**	**327**	*eP*	**P**	**07 34 01.8**	**+0.8**
GTA				pP	sP	07 34 17.4	-1.6
GTA				sP	pP	07 34 28.0	+14
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
WMQ	**Urumqi**	**53.70**	**324**	P	**P**	**07 35 17.0**	**+1.4**
MK01	**Makanchi Array**	**58.50**	**324**	*eP*	**P**	**07 35 49.1**	**-0.7**
MK31	**Makanchi Array**	**58.52**	**324**	*eP*	**P**	**07 35 48.4**	**-1.5**
MKAR	**Makanchi Array**	**58.52**	**324**	P	**P**	**07 35 49.0**	**-1.0**
	comp=Z,0.8nm,0.4s,baz=117,slow=8.0,SNR=19						
MKAR	**Makanchi Array**	**58.52**	**324**	*eP*	**P**	**07 35 48.6**	**-1.3**
	comp=Z,7.7nm,0.7s						
KURK	**Kurchatov**	**62.63**	**327**	P	**P**	**07 36 16.7**	**-1.1**
KURBB	**Kurchatov Arra**	**62.64**	**327**	P	**P**	**07 36 16.7**	**-1.1**
	comp=Z,0.7nm,0.3s,baz=123,slow=6.8,SNR=6.3						
TIXI	**Tiksi**	**67.62**	**0**	*eP*	**P**	**07 36 49.3**	**-0.5**
KDAK	**Kodiak Island**	**80.66**	**32**	P	**P**	**07 38 07.0**	**+1.0**
	comp=Z,3.7nm,0.8s,baz=346,slow=4.2,SNR=4.4						
VNDA	**Vanda**	**83.39**	**173**	P	**P**	**07 38 19.8**	**-0.3**
	comp=Z,0.7nm,0.8s,baz=347,slow=7.4,SNR=4.2						
ILAR	**Eielson Array**	**84.07**	**25**	P	**P**	**07 38 23.9**	**+0.1**
	comp=Z,0.4nm,0.9s,baz=231,slow=5.6,SNR=4.2						
TORD	**Torodi Ar. Bea**	**124.72**	**289**	PKP	**PKPdf**	**07 44 53.1**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=54,slow=3.4,SNR=4.6						

*ISCJB **10** 07:27:57.6±0.9, 22°.01N±0°.05×121°.79E±0°.04, h15km±7km, Error ellipse: s-maj=8.5km s-min=5.5km az=148.1*
*TAP **10** 07:27:57.7, 21°.99N×121°.73E, h17km, ML3.4, C*
*JMA **10** 07:28:01.8±0.2, 22°.38N×121°.86E, h0km, M3.3*
ISC 10 07:27:53.4±1.6, 22°.00N±0°.05×121°.95E±0°.04, h6km±12km,
n54, σ1§12/65, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.37**	**277**	⇑*iP*	**Pb**	**07 28 02.2**	**-0.2**
	baz=287						
LAY				*i* S	**Sg**	**07 28 05.4**	**0.0**
	baz=287						
TWH	**Lutao**	**0.83**	**329**	P	**Pn**	**07 28 11.6**	**0.0**
	baz=351						
TWH				S	**Sb**	**07 28 21.0**	**-0.7**
	baz=351						
TSEB	**Hengchuen, Pin**	**0.98**	**265**	*eP*	**Pb**	**07 28 13.4**	**+0.8**
	baz=265						
TSEB				*eS*	**Sg**	**07 28 23.6**	**-1.2**
	baz=265						
TAW	**Tawu**	**1.04**	**290**	*eP*	**Pg**	**07 28 13.5**	**+0.2**
	baz=296						
TAW				*eS*	**Sg**	**07 28 24.7**	**-2.1**
	baz=296						
TWKBT	**Hengchun**	**1.05**	**267**	*eP*	**Pg**	**07 28 13.7**	**+0.1**
	baz=283						
TTN	**Taitung**	**1.06**	**316**	*eP*	**Pn**	**07 28 17.5**	**+2.8**
	baz=337						
TWK1	**Hengchun**	**1.06**	**267**	*eP*	**Pg**	**07 28 13.5**	**-0.2**
	baz=283						
EAST	**Anshuo**	**1.09**	**291**	*eP*	**Pg**	**07 28 14.3**	**0.0**
	baz=297						
ECL	**Taimali**	**1.10**	**303**	*eP*	**Pn**	**07 28 15.7**	**+0.5**
	baz=297						
HEN	**Hengchun**	**1.12**	**271**	*eP*	**Pg**	**07 28 14.8**	**-0.1**
	baz=285						
TWGBT	**Hengchun**	**1.15**	**316**	*eP*	**Pn**	**07 28 17.0**	**+1.1**
	baz=309						
TWG	**Pinlang**	**1.15**	**316**	*eP*	**Pn**	**07 28 16.8**	**+0.8**
	baz=334						
TWG				*eS*	**Sg**	**07 28 29.6**	**-0.9**
	baz=334						
CHKT	**Chengkung**	**1.22**	**334**	P	**Pn**	**07 28 18.3**	**+1.3**
	baz=343						
CHKT				*eS*	**Sn**	**07 28 33.4**	**-0.4**
	baz=343						
SCZT	**Fangliau**	**1.28**	**287**	*eP*	**Pg**	**07 28 17.8**	**-0.2**
	baz=301						
MASBT	**Mashibuluo**	**1.36**	**297**	*eP*	**Pb**	**07 28 21.2**	**+2.0**
	baz=303						
SSD	**Sandimen**	**1.43**	**302**	*eP*	**Pg**	**07 28 22.5**	**+1.8**
	baz=308						
ELDTW	**Lidau**	**1.47**	**324**	*eP*	**Pg**	**07 28 22.2**	**+0.8**
	baz=339						
TWF1	**Yuli**	**1.48**	**336**	*eP*	**Pg**	**07 28 22.4**	**+0.7**
	baz=354						
YULB	**Yu-li**	**1.51**	**337**	*eP*	**Pg**	**07 28 22.3**	**-0.1**
	baz=354						
SLGT	**Liugui**	**1.56**	**310**	*eP*	**Pg**	**07 28 24.6**	**+1.3**
	baz=323						
HGSD	**Ruisui**	**1.56**	**342**	*eP*	**Pg**	**07 28 23.9**	**+0.6**
STYT	**Tauyuan**	**1.60**	**317**	*eP*	**Pg**	**07 28 25.1**	**+1.1**
	baz=335						
EHY	**Hungye**	**1.61**	**339**	*eP*	**Pg**	**07 28 25.2**	**+0.9**
	baz=355						
SGST	**Jiashian**	**1.66**	**311**	*eP*	**Pg**	**07 28 26.3**	**+1.1**
	baz=323						
WTP	**Ta-pu**	**1.75**	**316**	*eP*	**Pg**	**07 28 27.7**	**+0.8**
	baz=331						
CHN1	**Nanshi**	**1.77**	**312**	*eP*	**Pg**	**07 28 28.1**	**+0.8**
	baz=328						
TPUB	**Ta-pu**	**1.78**	**317**	*eP*	**Pg**	**07 28 28.4**	**+0.9**
	baz=332						
ALS	**Alishan**	**1.84**	**325**	*eP*	**Pg**	**07 28 29.6**	**+1.0**
	baz=332						
TWK	**Hsinying**	**1.85**	**313**	*eP*	**Pg**	**07 28 29.0**	**+0.2**
	baz=306						
VWDT	**VWDT**	**1.90**	**337**	*eP*	**Pg**	**07 28 30.2**	**+0.4**
	baz=353						
SSLB	**Suanglung**	**2.00**	**333**	*eP*	**Pg**	**07 28 32.5**	**+0.7**
	baz=350						
SMLT	**Sun Moon Lake**	**2.11**	**333**	*eP*	**Pg**	**07 28 33.8**	**-0.1**
	baz=349						
TYC	**Yuchr**	**2.15**	**332**	*eP*	**Pg**	**07 28 34.4**	**-0.1**
	baz=348						
CHGB	**Renai**	**2.17**	**341**	*eP*	**Pb**	**07 28 32.7**	**-0.5**
	baz=356						
NACB	**Ninganchiao**	**2.19**	**352**	*eP*	**Pb**	**07 28 33.6**	**+0.2**
	baz=6.0						
TDCB	**Techi**	**2.36**	**342**	*eP*	**Pb**	**07 28 36.5**	**+0.1**
	baz=348						
NNSB	**Datong**	**2.48**	**348**	*eP*	**Pb**	**07 28 38.3**	**0.0**
	baz=2.0						
NNSH	**Datong**	**2.48**	**348**	*eP*	**Pb**	**07 28 38.7**	**+0.4**
	baz=2.0						
TWQ1	**Liyutan**	**2.58**	**335**	*eP*	**Pb**	**07 28 38.3**	**-1.7**
	baz=323						
VCHM	**Qimei**	**2.62**	**298**	*eP*	**Pn**	**07 28 36.7**	**+0.5**
	baz=301						
YOJ	**Yonaguni jima**	**2.64**	**22**	*eP*	**Pb**	**07 28 42.2**	**+1.1**
	baz=25						
YOJ				*eS*	**Sb**	**07 29 13.9**	**+0.1**
	baz=25						
YOJ	**Yonaguni jima**	**2.64**	**22**	P	**Pb**	**07 28 42.7**	**+1.6**
ENTT	**Nioudou**	**2.66**	**353**	*eP*	**Pb**	**07 28 40.5**	**-0.8**
	baz=357						
PHUB	**P'eng-hu**	**2.66**	**305**	*eP*	**Pn**	**07 28 37.8**	**+1.1**
	baz=298						
YHNB	**Yeheng**	**2.71**	**349**	*eP*	**Pb**	**07 28 42.9**	**+0.6**
	baz=2.0						
NSK	**Sanguang**	**2.72**	**349**	*eP*	**Pb**	**07 28 43.4**	**+0.9**
	baz=2.0						
NWLT	**Wulai**	**2.80**	**352**	*eP*	**Pb**	**07 28 43.4**	**-0.4**
	baz=356						
IRIF	**Iriomote-Funau**	**2.85**	**35**	P	**Pb**	**07 28 45.8**	**+1.2**
JKRS	**Kuro-shima**	**2.93**	**40**	P	**Pb**	**07 28 47.3**	**+1.3**
JKRS				*eS*	**Sb**	**07 29 23.2**	**+1.1**
TIPB	**Shuangxi**	**2.96**	**358**	*eP*	**Pb**	**07 28 46.0**	**-0.6**
	baz=11						
JIJ	**Ishigaki jima**	**3.10**	**40**	P	**Pb**	**07 28 49.4**	**+0.4**
JIJ				S	**Sb**	**07 29 26.1**	**-1.0**
JISG	**Ishigakijimahi**	**3.37**	**40**	P	**Pb**	**07 28 54.1**	**+0.6**
JISG				S	**Sb**	**07 29 33.4**	**-1.4**
JTJ	**Tarama**	**3.65**	**43**	P	**Pb**	**07 28 58.0**	**-0.3**
JTJ				S	**Sb**	**07 29 40.7**	**-2.2**
JIRB	**Irabujima**	**4.09**	**46**	S	**Sb**	**07 29 51.4**	**-4.1**

*DJA **10** 07:48:49.7±0.8, 5°S±7°×14°5E±°, h127km±6km, M4.9/11, mB6.4/2, mb4.9/11, MLv4.9/4, Mw(mB)6.1/2*
*IDC **10** 07:48:49.8±2.1, 4°.70S×144°.38E, h79km±20km, mb4.2/13, mb1 4.2/17, mb1mx4.0/48, mbtmp4.5/17, MS2.9/3, Ms1 2.9/3, ms1mx2.6/44, Error ellipse: s-maj=22.1km s-min=13.4km az=58.0*
*ISCJB **10** 07:48:50.2±0.2, 4°.85S±0°.04×144°.31E±0°.04, h100km, mb4.6/43, Error ellipse: s-maj=5.2km s-min=4.7km az=41.9*
*NEIC **10** 07:48:52.5±0.6, 4°.82S×144°.27E, h109km±5km, mb4.5/23, Error ellipse: s-maj=6.4km s-min=5.0km az=131.0*
ISC 10 07:48:52.0±0.4, 4°.81S±0°.06×144°.31E±0°.06, h100km, n93,
σ1§40/94, mb4.6/43, 1C, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**4.11**	**48**	*ePn*	**Pn**	**07 49 54.5**	**+1.9**
JAY	**Jayapura**	**4.26**	**302**	P	**Pn**	**07 49 52.6**	**-2.2**
	1.6nm,0.3s,baz=104,slow=8.3,SNR=6.9						
JAY	**Jayapura**	**4.26**	**302**	P	**Pn**	**07 49 54.9**	**+0.1**
JAY				S	**Sn**	**07 50 45.9**	**+2.4**
GENI	**Genyem**	**4.69**	**298**	P	**Pn**	**07 50 00.3**	**-0.2**
GENI				S	**Sn**	**07 50 56.5**	**+2.7**
PMG	**Port Moresby**	**5.37**	**148**	P	**Pn**	**07 50 10.0**	**+0.3**
	4.5nm,0.3s,baz=30,slow=3.1,SNR=10						
PMG				S	**Sn**	**07 51 09.4**	**-0.8**
	8.1nm,0.3s,baz=296,slow=20,SNR=5.5					

NJ2 Nanjing 43.94 328 *eP* **P 07 56 48.0 -1.1**
NJ2 pmax pmax
comp=Z,17nm,0.5s
KSRS Korea Array 44.74 341 LR LR 08 12 38.3
comp=Z,12nm,20.8s,baz=210,slow=32
KS01 Wonju Array Si 44.77 341 *eP* **P 07 56 55.3 -0.3**
CMAR Chiang Mai Arr 50.34 299 P **P 07 57 39.0 -0.1**
comp=Z,1.4nm,0.3s,baz=108,slow=5.8,SNR=5.4
CN2 Changchun 51.30 343 *eP* P 07 57 53.0 +7.2
CN2 pmax pmax
comp=Z,10.0nm,0.6s
HHC Hu-ho-hao-te 54.45 330 *eP* **P 07 58 10.7 +1.5**
HHC pmax pmax
comp=Z,5.0nm,0.8s
HHC pmax pmax
comp=Z,49nm,5.2s
LZH Lanzhou 55.58 320 ⇑P **P 07 58 19.8 +2.2**
LZH pP pP 07 58 47.0 +5.1
LZH sP sP 07 59 00.3 +7.3
LZH PP **PP 08 00 27.5 +4.7**
LZH pmax pmax
comp=Z,21nm,1.3s
LZH pmax pmax
comp=Z,66nm,6.7s
LZH LR LR
comp=N,100nm,15.0s
LZH LR LR
comp=E,110nm,15.3s
LZH LR LR
comp=Z,150nm,18.5s
PEA0B Petropavlovsk- 58.80 9 *eP* **P 07 58 40.1 +0.4**
comp=Z,92nm,1.5s
PETK Petropavlovsk- 58.80 9 P **P 07 58 40.0 +0.4**
comp=Z,5.1nm,0.7s,baz=151,slow=6.3,SNR=3.9
WMQ Urumqi 70.16 320 P **P 07 59 54.7 +0.7**
VNDA Vanda 73.26 176 P **P 08 00 13.1 +1.2**
comp=Z,0.7nm,0.7s,baz=322,slow=4.0,SNR=4.4
MK01 Makanchi Array 74.88 321 *eP* **P 08 00 21.9 +0.1**
MK31 Makanchi Array 74.89 321 *eP* **P 08 00 21.6 -0.4**
MKAR Makanchi Array 74.89 321 P **P 08 00 22.0 +0.1**
comp=Z,1.5nm,0.4s,baz=95,slow=8.4,SNR=27
MKAR Makanchi Array 74.89 321 *eP* **P 08 00 21.5 -0.5**
comp=Z,46nm,0.3s
ZAA0 Zalesovo Array 76.60 328 *eP* **P 08 00 30.8 -0.7**
ZALV Zalesovo Beam 76.60 328 P **P 08 00 30.7 -0.7**
comp=Z,3.7nm,0.6s,baz=111,slow=6.0,SNR=14
ZALV Zalesovo Beam 76.60 328 *eP* **P 08 00 30.4 -1.0**
KSH Kashi 76.60 312 P **P 08 00 32.6 +0.6**
AAK Ala-Archa 78.61 315 P **P 08 00 43.1 0.0**
comp=Z,0.9nm,0.4s,baz=178,slow=6.3,SNR=3.8
KURK Kurchatov 78.67 324 *eP* **P 08 00 42.5 -0.5**
comp=Z,7.7nm,1.4s
KURBB Kurchatov Arra 78.69 324 P **P 08 00 43.0 -0.1**
comp=Z,0.6nm,0.4s,baz=115,slow=4.4,SNR=7.3
SVW2 Sparrevohn 80.31 25 *eP* **P 08 00 52.1 +0.3**
comp=Z,6.4nm,1.0s
PMR Palmer 83.32 26 *eP* **P 08 01 06.5 -0.9**
comp=Z,3.0nm,0.6s
NRIK Noril'sk 83.34 343 P **P 08 01 07.3 -0.1**
comp=Z,2.6nm,0.5s,baz=114,slow=4.7,SNR=5.9
IM3 Indian Mountai 83.35 21 *eP* **P 08 01 07.5 0.0**
TRF Thorofare Moun 83.57 24 *eP* **P 08 01 08.4 -0.6**
comp=Z,4.6nm,0.6s
SML Sawmill 83.75 26 *eP* **P 08 01 09.5 -0.3**
comp=Z,9.8nm,0.7s
MLY Manley 84.05 23 *eP* **P 08 01 11.1 -0.2**
comp=Z,6.0nm,0.8s
RND Reindeer 84.15 25 *eP* **P 08 01 10.7 -1.1**
comp=Z,13nm,0.7s
MCK McKinley 84.24 24 *eP* **P 08 01 11.2 -1.0**
comp=Z,15nm,1.0s
BVAR Borovoye Array 84.25 324 P **P 08 01 12.6 +0.2**
comp=Z,6.4nm,0.6s,baz=108,slow=6.8,SNR=39
BRVK Borovoye 84.32 324 *eP* **P 08 01 12.6 -0.2**
comp=Z,7.6nm,1.0s
DIV Divide 84.65 27 *eP* **P 08 01 14.5 +0.1**
comp=Z,6.6nm,0.8s
KLU Klutina 84.71 27 *eP* **P 08 01 14.1 -0.6**
comp=Z,7.4nm,1.0s
WRH Wood River Hil 84.87 24 *eP* **P 08 01 14.4 -0.9**
comp=Z,6.2nm,0.7s
CCB Clear Creek Bu 85.05 24 *eP* **P 08 01 15.3 -0.9**
comp=Z,9.6nm,0.7s
PAX Paxson 85.42 26 *eP* **P 08 01 18.1 -0.1**
comp=Z,3.0nm,0.6s
ILAR Eielson Array 85.46 24 P **P 08 01 16.9 -1.4**
comp=Z,6.5nm,0.7s,baz=253,slow=5.1,SNR=67
ILB Eielson Array 85.46 24 *eP* **P 08 01 16.8 -1.4**
IL1 Eielson Array 85.46 24 *eP* **P 08 01 16.8 -1.5**
CRQM Cirque 85.75 28 *eP* **P 08 01 19.6 -0.4**
CRQM epP **sP 08 01 52.0 -4.9**
RIDG Independ'e Rid 85.94 25 *eP* **P 08 01 20.5 -0.2**
comp=Z,9.3nm,0.9s
TOLK Toolik Lake Re 85.97 20 *eP* **P 08 01 20.8 +0.1**
comp=Z,21nm,2.0s
DOT Dot Lake 86.24 25 *eP* **P 08 01 21.7 -0.5**
comp=Z,25nm,0.8s
SCRK Sand Creek 86.38 25 *eP* **P 08 01 22.6 -0.3**
comp=Z,2.6nm,0.8s
EGAK Eagle 87.79 24 *eP* **P 08 01 29.3 -0.2**
comp=Z,3.6nm,0.8s
DAWY Dawson 88.34 25 *eP* **P 08 01 32.5 +0.2**
comp=Z,5.5nm,0.9s
ABKAR Akbulak array 89.94 319 *eP* **P 08 01 38.5 -1.5**
KRLC Kraliky 117.06 325 *e*PKP **PKPdf 08 07 27.2 +1.8**
DPC Dobruska-Polom 117.19 325 *e*PKP **PKPdf 08 07 27.5 +1.9**
KHC Kasperske Hory 119.34 325 *e*PKP **PKPdf 08 07 30.5 +0.7**
GERES GERESS Array B 119.41 325 PKP **PKPdf 08 07 30.0 0.0**
comp=Z,0.9nm,0.6s,baz=107,slow=1.6,SNR=8.8
EKA Eskdalemuir Ar 123.26 338 PKP **PKPdf 08 07 36.7 -0.3**
comp=Z,0.9nm,0.5s,baz=32,slow=3.0,SNR=11
PLCA Paso Flores 124.55 148 PKP **PKPdf 08 07 41.0 +0.9**
comp=Z,1.9nm,0.8s,baz=159,slow=4.3,SNR=4.6
LPAZ La Paz 141.67 124 PKhKP PKPpre 08 08 09.3
comp=Z,1.2nm,0.6s,baz=293,slow=1.2,SNR=5.9
TORD Torodi Ar. Bea 142.20 285 PKhKP PKPpre 08 08 09.1
comp=Z,1.3nm,1.1s,baz=68,slow=2.5,SNR=5.0
CPUP Villa Florida 142.61 147 PKP **PKPdf 08 08 12.2 -1.9**
comp=Z,2.0nm,0.8s,baz=141,slow=6.5,SNR=2.4
KOWA Kowa 147.37 289 PKPbc **PKPbc 08 08 25.9 +0.7**
comp=Z,4.8nm,0.4s,baz=67,slow=6.2,SNR=16

MEX 10 07:55:59.4±0.4, 17°.33N×100°.76W, h30km±25km, MD3.6, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.55**	**121**	*eP*	Pb	07 56 08.6	-2.0
CAIG				*eP*	Pn	07 56 08.6	-2.5
CAIG				*eS*	Sb	07 56 16.2	-2.1
ZIIG	**Zihuatanejo**	**0.73**	**292**	*eP*	Pb	07 56 11.4	-2.2
ZIIG				*eS*	Sb	07 56 20.5	-2.8
ACX	**Acapulco**	**0.97**	**118**	*eP*	Pn	07 56 15.7	-1.3
ACX				*i* S	Sn	07 56 27.4	-2.5
ARIG	**Puente Sto Nin**	**1.02**	**22**	*eP*	Pn	07 56 15.5	-2.2
ARIG				*eS*	Sn	07 56 28.8	-2.3
MEIG	**Mezcala**	**1.23**	**61**	*eP*	Pn	07 56 19.0	-1.7
MEIG				*eS*	Sn	07 56 34.2	-2.2

*SOME **10** 08:02:01.9, 43°.22N×83°.02E, h15km*
*NNC **10** 08:02:06.1±1.1, 42°.92N×82°.67E, h0km, mb3.9, mpv3.6,*
Error ellipse: s-maj=10.4km s-min=4.0km az=129.0
ISC 10 08:02:07.6±1.8, 42°.92N±0°.08×82°.47E±0°.07, h10km, n30, σ2§28/54, 16C-11D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**1.64**	**290**	*eP*	**Pg**	**08 02 38.7**	**-0.3**
	148nm,0.4s						
KTMS				*eS*	**Sg**	**08 03 05.1**	**+4.8**
	427nm,0.4s						
SHLS	**Shalkode**	**2.22**	**277**	*eP*	**Pn**	**08 02 43.4**	**-1.2**
	356nm,0.3s						
SHLS				*eS*	**Sn**	**08 03 12.9**	**+0.7**
	1μm,0.4s						
PDGK	**Podgornoye**	**2.22**	**282**	⇑Pn	**Pb**	**08 02 47.5**	**-0.4**
	33nm,0.5s						
PDGK				⇓Lg	Lg	08 03 20.0	
	299nm,0.6s						
DJR	**Jarkent**	**2.41**	**307**	*eP*	**Pb**	**08 02 49.9**	**-1.2**
	84nm,0.6s						
DJR				*eS*	**Sg**	**08 03 24.7**	**-0.3**
	238nm,0.5s						
UZB	**Uzynbulak**	**2.54**	**276**	*eP*	**Pb**	**08 02 52.9**	**-0.5**
	30nm,0.2s						
UZB				*eS*	**Sg**	**08 03 29.2**	**0.0**
	164nm,0.3s						
KPKS	**Kokpek**	**2.82**	**283**	*eP*	**Pb**	**08 02 58.7**	**+0.5**
	84nm,0.2s						
KPKS				*eS*	**Sg**	**08 03 39.7**	**+1.4**
	456nm,0.5s						
ZHN	**Zhinishke**	**2.97**	**276**	*eP*	**Pb**	**08 03 01.1**	**+0.4**
	28nm,0.3s						
ZHN				*eS*	**Sg**	**08 03 43.3**	**+0.3**
	402nm,0.3s						
SATY	**Saty**	**2.99**	**274**	*eP*	**Pb**	**08 02 59.3**	**-1.6**
	39nm,0.7s						
SATY				*eS*	**Sb**	**08 03 40.6**	**+3.1**
	177nm,0.3s						
MNBS	**Baschi**	**3.18**	**293**	*eP*	**Pb**	**08 03 00.8**	**-3.4**
	25nm,0.7s						
MNBS				*eS*	**Sb**	**08 03 43.4**	**+0.2**
	151nm,0.5s						
KURS	**Kuram**	**3.20**	**282**	*eP*	**Pb**	**08 03 04.8**	**+0.4**
	18nm,0.6s						
KURS				*eS*	**Sg**	**08 03 50.2**	**-0.1**
	37nm,0.6s						
KAPS	**Kapalarasan**	**3.26**	**318**	*eP*	**Pn**	**08 03 00.6**	**+1.7**
	20nm,0.3s						
KAPS				*eS*	**Sb**	**08 03 42.9**	**-2.5**
	107nm,0.4s						
ARXS	**Arharly**	**3.62**	**293**	*eP*	**Pb**	**08 03 08.2**	**-3.4**
	32nm,0.4s						
ARXS				*eS*	**Sb**	**08 03 55.9**	**+0.3**
	150nm,0.8s						
MK31	**Makanchi Array**	**3.88**	**358**	⇑Pn	**Pn**	**08 03 06.1**	**-1.2**
	0.9nm,0.3s,baz=178,slow=14,SNR=51						
MK31				Pg	**Pb**	**08 03 17.7**	**+1.6**
	2.7nm,0.3s,baz=180,slow=16,SNR=13						
MK31				⇓Sn	**Sn**	**08 03 54.8**	**+1.9**
	19nm,0.5s,baz=178,slow=28,SNR=6.8						
MK31				Lg	Lg	08 04 09.6	
	15nm,0.5s,baz=170,slow=24,SNR=4.9						
MAKZ	**Makanchi**	**3.91**	**355**	⇑Pn	**Pn**	**08 03 06.4**	**-1.3**
	4.1nm,0.5s						
MAKZ				⇑Sn	**Sn**	**08 03 55.7**	**+2.1**
	6.2nm,0.5s						
MAKZ				⇑Lg	Lg	08 04 09.6	
	8.8nm,0.5s						
KOTS	**Kotyrbulak**	**3.94**	**276**	*eP*	**Pg**	**08 03 19.8**	**-3.2**
	14nm,0.4s						
KOTS				*eS*	**Sg**	**08 04 15.8**	**+1.7**
	89nm,0.5s						
MDOK	**Medeo**	**3.98**	**275**	⇑Pn	**Pn**	**08 03 09.6**	**+0.7**
	4.0nm,0.5s						
MDOK				⇑Pg	**Pg**	**08 03 22.0**	**-1.9**
	11nm,0.4s						
MDOK				⇓Lg	Lg	08 04 15.9	
	45nm,0.6s						
MDOK	**Medeo**	**3.98**	**275**	*eP*	**Pg**	**08 03 22.4**	**-1.5**
	18nm,0.5s						
MDOK				*eS*	**Sg**	**08 04 20.2**	**+4.7**
	41nm,0.6s						
KNDC	**Almaty**	**4.04**	**276**	⇑Pg	**Pg**	**08 03 22.0**	**-3.0**
	37nm,0.7s						
KNDC				⇓Lg	Lg	08 04 17.3	
	26nm,0.6s						
CHKK	**Chushkaly**	**4.11**	**285**	*eP*	**Pg**	**08 03 22.7**	**-3.5**
	6.2nm,0.3s						
CHKK				*eS*	**Sg**	**08 04 20.5**	**+1.2**
	89nm,0.5s						
KTBS	**Karatobe**	**4.30**	**283**	*eP*	**Pg**	**08 03 27.6**	**-2.3**
	8.3nm,0.7s						
KTBS				*eS*	**Sg**	**08 04 29.3**	**+3.7**
	100nm,0.6s						
IZV	**Izvestkoviy**	**4.30**	**274**	*eP*	**Pg**	**08 03 26.8**	**-3.1**
	26nm,0.4s						
IZV				*eS*	**Sg**	**08 04 27.8**	**+2.2**
	54nm,0.5s						
KUU	**Kurty**	**4.57**	**284**	*eP*	**Pg**	**08 03 30.9**	**-4.3**
	6.8nm,0.7s						
KUU				*eS*	**Sg**	**08 04 34.8**	**+0.5**
	57nm,0.7s						
ZSN	**Zaisan**	**4.84**	**20**	*eP*	**Pn**	**08 03 21.0**	**+0.6**
	1.5nm,0.3s						
ZSN				*eS*	**Sn**	**08 04 18.2**	**+1.7**
	12nm,0.8s						
DGS	**Degeres**	**4.92**	**276**	*eP*	**Pb**	**08 03 36.5**	**+2.6**
	8.5nm,0.9s						
DGS				*eS*	**Sg**	**08 04 44.5**	**-1.0**
	33nm,0.5s						
TKM2	**Tokmak 2**	**5.05**	**272**	⇓Pn	**Pn**	**08 03 25.5**	**+2.0**
	1.7nm,0.4s						
TKM2				⇑Pg	**Pg**	**08 03 40.9**	**-3.4**
	6.7nm,0.5s						
TKM2				⇑Lg	Lg	08 04 53.5	
	24nm,0.7s						
AAK	**Ala-Archa**	**5.88**	**270**	⇓Pg	Pg	08 03 54.9	-5.2
	4.2nm,0.6s						
AAK				⇑Lg	Lg	08 05 18.2	
	12nm,0.6s						
MNAS	**Manas**	**7.36**	**270**	⇑Pg	**Pg**	**08 04 24.1**	**-4.2**
	4.1nm,1.1s						
MNAS				⇓Lg	Lg	08 06 03.9	
	8.7nm,1.0s						
KURBB	**Kurchatov Arra**	**8.17**	**342**	⇓Pn	**Pn**	**08 04 04.9**	**-1.2**
	2.9nm,0.6s						
KURBB				⇓Sn	**Sn**	**08 05 41.6**	**+3.2**
	13nm,0.6s						
KURBB				⇑Lg	Lg	08 06 26.0	
	18nm,0.7s						
KURK	**Kurchatov**	**8.24**	**343**	⇓Pn	**Pn**	**08 04 06.5**	**-0.6**
KURK				⇑Sn	**Sn**	**08 05 41.6**	**+1.6**
	9.2nm,0.8s						
KURK				⇓Lg	Lg	08 06 28.1	
	14nm,0.7s						
KK31	**Karatay Array**	**8.77**	**275**	⇑Pg	Pg	08 04 48.8	-6.5
	0.3nm,0.3s,baz=88,slow=18,SNR=4.6						
KK31				⇑Lg	Lg	08 06 49.6	
	1.9nm,0.5s,baz=0.0,slow=0.1,SNR=5.1						

*ISCJB **10** 08:05:13.5±0.4, 7°.03S±0°.04×126°.20E±0°.03, h300km,*
mb3.2/3, Error ellipse: s-maj=6.2km s-min=3.6km
az=142.8
*IDC **10** 08:05:14.3±7.0, 7°.47S×126°.29E, h335km±81km, mb2.9/3,*
mb1 2.7/5, mb1mx2.5/54, mbtmp3.4/5, Error ellipse:
s-maj=128.6km s-min=21.8km az=48.0
*DJA **10** 08:05:15.5±0.4, 7°S±2°×12°6E±°, h265km±6km, M4.2/12,*
mB4.6/1, mb4.3/6, MLv4.2/12, Mw(mB)3.8/1
ISC 10 08:05:12.7±0.8, 7°.06S±0°.05×126°.24E±0°.06, h300km, n21, σ1§80/36, mb3.3/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**3.31**	**216**	P	**Pn**	**08 06 12.3**	**+0.5**
SOEI				S	**S**	**08 06 57.7**	**-1.3**
AAI	**Ambon**	**3.87**	**30**	P	**Pn**	**08 06 18.8**	**+1.2**
AAI				S	**S**	**08 07 09.3**	**-0.3**
NLAI	**Namlea**	**3.89**	**13**	P	**Pn**	**08 06 18.3**	**+0.6**
NLAI				S	**S**	**08 07 09.5**	**-0.3**
BATI	**Baumata**	**4.03**	**219**	P	**Pn**	**08 06 20.7**	**+1.4**
	29nm,0.3s,baz=78,slow=3.4,SNR=18						
BATI				S	**S**	**08 07 12.8**	**+0.1**
	23nm,0.3s,baz=264,slow=19,SNR=13						
BATI	**Baumata**	**4.03**	**219**	P	**Pn**	**08 06 20.0**	**+0.7**
BATI				S	**S**	**08 07 12.1**	**-0.6**
MMRI	**Maumere**	**4.26**	**248**	S	**S**	**08 07 16.7**	**-0.5**
BNDI	**Bandanaira**	**4.43**	**56**	S	**S**	**08 07 21.5**	**+0.7**
MSAI	**Masohi**	**4.56**	**36**	P	**Pn**	**08 06 26.8**	**+1.6**
MSAI				S	**S**	**08 07 24.1**	**+0.7**
KDI	**Kendari**	**4.74**	**310**	P	**Pn**	**08 06 28.0**	**+0.8**
KDI				S	**S**	**08 07 26.2**	**-0.9**
EDFI	**Ende, Flores**	**4.81**	**249**	P	**Pn**	**08 06 29.1**	**+1.0**
EDFI				S	**S**	**08 07 28.3**	**-0.4**
SANI	**Sanana**	**4.98**	**357**	P	**Pn**	**08 06 31.9**	**+1.9**
SANI				S	**S**	**08 07 32.3**	**+0.1**
SAUI	**Saumlaki**	**5.11**	**101**	P	**Pn**	**08 06 33.9**	**+2.4**
SAUI				S	**S**	**08 07 36.9**	**+2.1**
BSSI	**Bau Bau, Buton**	**5.78**	**279**	P	**Pn**	**08 06 40.4**	**+1.0**
BSSI				S	**S**	**08 07 48.7**	**-0.6**
BKSI	**Bulukumba**	**6.32**	**285**	P	**Pn**	**08 06 47.0**	**+1.1**
BKSI				S	**S**	**08 08 01.0**	**0.0**
BASI	**Baing, Sumba**	**6.42**	**240**	P	**Pn**	**08 06 48.7**	**+1.7**
BASI				S	**S**	**08 08 04.1**	**+0.9**
WSI	**Waingapu**	**6.42**	**246**	P	**Pn**	**08 06 48.7**	**+1.6**
WSI				S	**S**	**08 08 04.0**	**+0.7**
WRA	**Warramunga Arr**	**15.03**	**149**	P	**P**	**08 08 24.1**	**-6.1**
	0.1nm,0.3s,baz=330,slow=13,SNR=5.3						
WRA				S	**S**	**08 11 18.1**	**+3.9**
	0.1nm,0.3s,baz=337,slow=21,SNR=3.3						
ASAR	**Alice Springs**	**18.09**	**157**	P	**P**	**08 08 59.2**	**-4.2**
	0.1nm,0.3s,baz=329,slow=10,SNR=8.5						
MKAR	**Makanchi Array**	**66.28**	**329**	P	**P**	**08 15 29.4**	**+0.2**
	0.2nm,0.5s,baz=120,slow=5.7,SNR=3.6						
KURBB	**Kurchatov Arra**	**70.65**	**330**	P	**P**	**08 15 56.4**	**+0.5**
	0.3nm,0.5s,baz=130,slow=5.4,SNR=8.7						
BVAR	**Borovoye Array**	**76.15**	**329**	P	**P**	**08 16 28.6**	**+0.7**
	0.4nm,0.5s,baz=137,slow=6.9,SNR=3.8						

*IDC **10** 08:12:00.2±1.1, 37°.68N×142°.52E, h0km, mb3.7/7,*
mb1 3.8/12, mb1mx3.6/69, mbtmp3.8/12, ML3.4/5, MS3.0/4,
Ms1 3.0/4, ms1mx2.5/76, Error ellipse: s-maj=26.2km
s-min=17.7km az=85.0
*NIED **10** 08:12:00, 37°.80N×142°.20E, h26km, Mw3.7 Best double*
couple: M0=4.13000×10^14 NP1:φs=358.00000°, δ57.00000°,
λ-140.00000°. NP2:φs=244.00000°, δ58.00000°,
λ-40.00000°.
*JMA **10** 08:12:04.5±0.2, 37°.77N×142°.16E, h35km±2km, M3.9*
ISC 10 08:12:02.3±2.7, 37°.75N±0°.05×142°.25E±0°.07, h11km±16km, n32, σ1§66/32, mb3.7/7, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIO	**Ouri**	**1.00**	**315**	P	**Pb**	**08 12 21.6**	**-0.1**
JIO				S	**Sg**	**08 12 33.3**	**-1.4**
JFK	**Kawauchi**	**1.16**	**251**	P	**Pb**	**08 12 23.6**	**-0.8**
JMM	**Marumori**	**1.16**	**276**	P	**Pb**	**08 12 23.7**	**-0.7**
JMM				*eS*	**Sb**	**08 12 37.7**	**-1.8**
JOU	**Okura**	**1.40**	**297**	P	**Pn**	**08 12 27.7**	**-0.1**
JOU				*eS*	**Sn**	**08 12 44.2**	**-2.1**
JMK	**Ichinoseki**	**1.45**	**326**	P	**Pn**	**08 12 28.1**	**-0.4**
JMK				*eS*	**Sn**	**08 12 45.5**	**-2.1**
JFT	**Otama**	**1.54**	**262**	P	**Pn**	**08 12 30.0**	**+0.3**
JFT				S	**Sn**	**08 12 48.6**	**-1.1**
JOM	**Ohasama**	**1.88**	**337**	P	**Pn**	**08 12 34.5**	**0.0**
JYK	**Kaneyama**	**1.89**	**309**	P	**Pn**	**08 12 34.6**	**0.0**
JFY	**Yanaizu**	**2.05**	**261**	P	**Pn**	**08 12 37.4**	**+0.6**
JFY				*eS*	**Sn**	**08 13 01.5**	**-0.9**
JRG	**Rokugo**	**2.08**	**323**	P	**Pn**	**08 12 37.8**	**+0.6**
JYA	**Atsumi**	**2.17**	**294**	P	**Pn**	**08 12 38.8**	**+0.4**
MJAR	**Matsushiro Arr**	**3.44**	**251**	**Pn**	**Pn**	**08 12 58.0**	**+2.0**
	4.6nm,0.3s,baz=80,slow=14,SNR=33						
MJAR				LR	LR	08 13 58.5	
	comp=Z,25nm,18.7s,baz=60,slow=33						
MAT	**Matsushiro**	**3.45**	**251**	P	**Pn**	**08 12 58.2**	**+2.2**
MAT				S	**Sn**	**08 13 37.2**	**+0.4**
JHJ	**Hachijo jima 2**	**5.04**	**204**	Pn	**Pn**	**08 13 17.6**	**-0.2**
	29nm,0.3s,baz=346,slow=18,SNR=15						
JHJ				Sn	**Sn**	**08 14 13.4**	**-2.6**
	20nm,0.3s,baz=90,slow=20,SNR=3.4						
ASAJ	**Asahikawa**	**6.37**	**2**	Pn	**Pn**	**08 13 37.4**	**+1.3**
	1.1nm,0.3s,baz=216,slow=11,SNR=8.4						
ASAJ				LR	LR	08 16 30.8	
	comp=Z,72nm,21.4s,baz=168,slow=42						
USRK	**Ussuriysk Ar.**	**10.08**	**313**	Pn	**Pn**	**08 14 31.0**	**+4.0**
	0.4nm,0.3s,baz=124,slow=12,SNR=5.3						
KSRS	**Korea Array**	**11.37**	**273**	Pn	**Pn**	**08 14 48.6**	**+3.9**
	0.1nm,0.3s,baz=86,slow=13,SNR=5.9						
H11N2	**WAKE ISLAND Hy 27.96**	**123**		T	T	08 47 02.8	
	baz=316,slow=75,SNR=234						
H11N1	**WAKE ISLAND Hy 27.97**	**123**		T	T	08 47 01.6	
	baz=316,slow=75,SNR=151						
H11N3	**WAKE ISLAND Hy 27.98**	**123**		T	T	08 47 02.3	
	baz=316,slow=75,SNR=210						
H11S1	**WAKE ISLAND Hy 28.70**	**125**		T	T	08 47 56.5	
	baz=317,slow=76,SNR=58						
H11S3	**WAKE ISLAND Hy 28.70**	**125**		T	T	08 48 03.0	
	baz=317,slow=76,SNR=49						
H11S2	**WAKE ISLAND Hy 28.72**	**125**		T	T	08 48 06.7	
	baz=317,slow=76,SNR=50						
ZALV	**Zalesovo Beam**	**41.93**	**312**	P	**P**	**08 19 55.4**	**+2.6**
	0.8nm,0.5s,baz=86,slow=7.1,SNR=2.6						
MKAR	**Makanchi Array**	**44.31**	**302**	P	**P**	**08 20 13.5**	**+1.3**
	0.4nm,0.5s,baz=88,slow=9.6,SNR=5.1						
KURBB	**Kurchatov Arra**	**46.09**	**308**	P	**P**	**08 20 25.6**	**-0.6**
	1.3nm,0.4s,baz=81,slow=8.0,SNR=8.5						
ILAR	**Eielson Array**	**48.54**	**33**	P	**P**	**08 20 44.5**	**-0.7**
	0.2nm,0.7s,baz=264,slow=6.3,SNR=3.1						
HNR	**Honiara**	**49.77**	**157**	LR	LR	08 41 17.0	
	comp=Z,28nm,18.8s,baz=0.0,slow=35						
BVAR	**Borovoye Array**	**50.59**	**312**	P	**P**	**08 21 00.4**	**-0.5**
	0.2nm,0.5s,baz=99,slow=4.5,SNR=2.5						
WRA	**Warramunga Arr**	**57.86**	**189**	P	**P**	**08 21 53.6**	**-0.5**
	2.5nm,0.6s,baz=5.6,slow=7.3,SNR=13						
ASAR	**Alice Springs**	**61.59**	**189**	P	**P**	**08 22 19.1**	**-0.7**
	0.8nm,0.7s,baz=14,slow=9.4,SNR=5.9						
ATD	**Arta Tunnel**	**90.34**	**285**	LR	LR	09 08 59.7	
	comp=Z,38nm,18.2s,baz=14,slow=38						

IDC 10 08:15:41.3±8.1, 5°.07S×151°.65E, h112km±55km, mb3.1/2, mb1 3.3/3, mb1mx2.9/48, mbtmp3.5/3, Error ellipse: s-maj=121.8km s-min=52.0km az=122.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.20**	**226**	P	Pn	08 17 11.0	+0.6
	0.8nm,0.3s,baz=83,slow=8.1,SNR=3.2						
PMG				S	Sn	08 18 20.6	+0.7
	3.3nm,0.3s,baz=156,slow=8.6,SNR=7.4						
WRA	**Warramunga Arr**	**22.41**	**227**	P	P	08 20 30.4	-0.5
	0.6nm,0.4s,baz=52,slow=9.6,SNR=8.8						
ASAR	**Alice Springs**	**25.19**	**221**	P	P	08 20 56.9	+0.2
	0.8nm,0.7s,baz=53,slow=9.4,SNR=10						
TORD	**Torodi Ar. Bea**	**149.30**	**287**	PKPbc	PKPbc	08 35 17.5	-0.6
	0.3nm,0.5s,baz=91,slow=3.4,SNR=3.0						

*ISCJB **10** 08:18:02.3±1.3, 55°.99S±0°.05×27°.57W±0°.10,*
h104km±12km, mb5.0/42, Error ellipse: s-maj=9.8km
s-min=7.0km az=144.7
*IDC **10** 08:18:04.5±0.5, 56°.00S×27°.72W, h110km±4km, mb4.6/21,*
mb1 4.6/22, mb1mx4.6/30, mbtmp5.0/22, MS3.8/11,
Ms1 3.8/11, ms1mx3.7/24, Error ellipse: s-maj=11.2km
s-min=9.3km az=42.0
*NEIC **10** 08:18:05.8±0.9, 55°.98S×27°.67W, h122km±8km, mb5.1/30,*
Error ellipse: s-maj=7.1km s-min=5.8km az=222.0
*GCMT **10** 08:18:05.8±0.2, 56°.11S×27°.28W, h107km±2km,*
MW5.1/100, Moment Tensor Solution. s61,c77;
s100,c158; Duration: 0 Moment tensor: Scale 10^16Nm;
Mrr3.02±.14; Mθθ-2.92±.18; Mφφ-0.09±.16; Mrθ-3.45±.11;
Mrφ3.56±.14; Mθφ-0.88±.10; Best double couple:
M0=5.83900×10^16 NP1:φs=272.00000°, δ70.00000°,
λ52.00000°. NP2:φs=158.00000°, δ42.00000°, λ149.00000°.
Principal axes: T 5.6600, Plg50.0000°, Azm139.0000°;
N 0.3610, Plg35.0000°, Azm287.0000°; P -6.0170,
Plg16.0000°, Azm29.0000°; nsta1 refers to body waves,
cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
*BJI **10** 08:18:05.5, 55°.90S×27°.50W, h121km, mB5.2/6*

SNAA PcP **PcP** 08 26 37.7 +1.2
SNAA ScP **ScP** 08 30 01.2 -0.6
PMSA Palmer Station 19.64 229 P **Pn** 08 22 27.3 +1.4
3.9nm,0.3s,baz=70,slow=7.9,SNR=12
PMSA Palmer Station 19.64 229 *e*P **Pn** 08 22 26.8 +1.0
85nm,0.8s
TRIS Tristan da Cun 21.69 35 *e*P **P** 08 22 43.6 -2.1
431nm,1.5s
PLCA Paso Flores 31.71 281 P **P** 08 24 17.3 +0.3
1.8nm,0.8s,baz=179,slow=6.4,SNR=4.4
PLCA pP **pP** 08 24 38.8 -2.3
2.0nm,0.8s,baz=125,slow=9.2,SNR=3.2
PLCA PcP **PcP** 08 27 06.7 +0.7
3.3nm,0.8s,baz=155,slow=11,SNR=4.8
PLCA ScP **ScP** 08 30 36.6 -2.3
3.6nm,0.8s,baz=183,slow=5.9,SNR=4.9
PLCA LR LR 08 36 35.6
comp=Z,152nm,18.3s,baz=156,slow=35
PLCA Paso Flores 31.71 281 *e*P **P** 08 24 18.8 +1.8
47nm,1.9s
PLCA pP **pP** 08 24 38.8 -2.3
PLCA PcP **PcP** 08 27 06.7 +0.7
PLCA ScP **ScP** 08 30 36.6 -2.3
SYO Syowa Base 31.74 141 ||*i*P **P** 08 24 16.1 -0.7
SYO Syowa Base 31.74 141 *e*SH **S** 08 29 17.0 -1.2
QSPA South Pole Qui 34.15 180 P **P** 08 24 40.4 +2.2
40nm,0.6s,baz=202,slow=2.8,SNR=120
QSPA ScP **ScP** 08 30 45.3 -1.7
5.3nm,0.8s,baz=263,slow=2.8,SNR=5.2
QSPA South Pole Qui 34.15 180 *e*P **P** 08 24 40.5 +2.4
152nm,1.2s
QSPA ScP **ScP** 08 30 45.3 -1.7
CPUP Villa Florida 36.61 312 P **P** 08 24 59.9 +0.6
13nm,0.8s,baz=150,slow=7.6,SNR=24
CPUP pP **pP** 08 25 20.9 -2.9
14nm,1.0s,baz=151,slow=7.1,SNR=5.8
CPUP PcP **PcP** 08 27 20.6 +0.6
6.8nm,0.6s,baz=188,slow=0.6,SNR=9.5
CPUP ScP **ScP** 08 30 54.2 -2.1
3.0nm,0.7s,baz=184,slow=4.6,SNR=3.8
CPUP LR LR 08 40 23.3
comp=Z,116nm,18.2s,baz=152,slow=37
MAW Mawson 40.29 144 P **P** 08 25 31.1 +1.5
44nm,0.7s,baz=232,slow=8.0,SNR=69
MAW PcP **PcP** 08 27 32.7 +1.8
15nm,0.8s,baz=241,slow=7.1,SNR=4.4
MAW ScP **ScP** 08 31 09.7 -0.1
10nm,0.8s,baz=293,slow=12,SNR=12
MAW LR LR 08 39 45.6
comp=Z,104nm,21.4s,baz=238,slow=32
MAW Mawson 40.29 144 *e*P **P** 08 25 31.1 +1.5
12nm,0.8s
MAW PcP **PcP** 08 27 32.7 +1.8
MAW ScP **ScP** 08 31 09.7 -0.1
SUR Sutherland 40.95 75 P **P** 08 25 37.1 +1.4
1.1nm,1.1s,baz=187,slow=4.5,SNR=2.9
SUR pP **pP** 08 26 01.9 +1.3
1.3nm,0.9s,baz=210,slow=7.6,SNR=5.1
SUR LR LR 08 39 28.7
comp=Z,17nm,18.7s,baz=214,slow=31
SBA Scott Base 46.01 184 *e*P **P** 08 26 18.4 +2.9
143nm,1.5s
BOSA Boshof 46.28 76 P **P** 08 26 17.9 -0.4
6.2nm,1.0s,baz=208,slow=12,SNR=4.2
BOSA pP **pP** 08 26 42.5 -1.3
5.3nm,0.7s,baz=191,slow=7.4,SNR=2.9
BOSA PcP **PcP** 08 27 52.5 +0.5
5.6nm,1.0s,baz=164,slow=6.9,SNR=3.2
BOSA LR LR 08 42 54.2
comp=Z,237nm,18.5s,baz=222,slow=32
VNDA Vanda 46.51 183 P **P** 08 26 21.9 +2.4
18nm,0.6s,baz=187,slow=6.6,SNR=180
VNDA ScP **ScP** 08 31 34.3 -0.6
2.7nm,0.8s,baz=180,slow=4.1,SNR=4.0
VNDA Vanda 46.51 183 *e*P **P** 08 26 21.8 +2.4
176nm,1.7s
VNDA ScP **ScP** 08 31 34.3 -0.6
PB01 IPOC Station P 46.67 301 *e*P **P** 08 26 22.7 +1.3
PB01 epP **pP** 08 26 49.7 +2.8
SIV San Ignacio 47.39 314 PcP **PcP** 08 27 57.3 +1.4
7.6nm,0.8s,baz=139,slow=2.4,SNR=6.8
SIV ScP **ScP** 08 31 38.4 -1.1
3.7nm,0.9s,baz=170,slow=6.3,SNR=8.1
H10S2 ASCENSION HYDR 48.13 17 T T 09 18 40.2
baz=190,slow=75,SNR=14
H10S3 ASCENSION HYDR 48.14 17 T T 09 18 44.3
baz=190,slow=75,SNR=13
H10S1 ASCENSION HYDR 48.15 17 T T 09 18 21.0
baz=190,slow=75,SNR=9.9
MNMC Minye Minye 48.36 302 *e*P **P** 08 26 36.2 +1.4
53nm,0.8s
H10N1 ASCENSION HYDR 49.25 17 T T 09 20 05.9
baz=189,slow=75,SNR=4.3
H10N3 ASCENSION HYDR 49.25 17 T T 09 19 59.4
baz=189,slow=75,SNR=9.6
H10N2 ASCENSION HYDR 49.27 17 T T 09 20 05.1
baz=189,slow=75,SNR=6.1
LBTB Lobatse 49.31 74 P **P** 08 26 42.0 +0.2
9.1nm,1.1s,baz=202,slow=9.6,SNR=4.9
LBTB pP **pP** 08 27 05.8 -1.6
8.9nm,0.9s,baz=229,slow=8.6,SNR=3.6
LPAZ La Paz 50.15 306 P **P** 08 26 50.0 +1.2
18nm,0.6s,baz=133,slow=5.2,SNR=124
LPAZ pP **pP** 08 27 13.3 -1.2
25nm,0.8s,baz=144,slow=6.6,SNR=7.3
LPAZ ScP **ScP** 08 31 50.4 -1.6
3.5nm,1.0s,baz=140,slow=5.0,SNR=5.6
LPAZ LR LR 08 49 52.2
comp=Z,66nm,18.8s,baz=140,slow=38
LPAZ La Paz 50.15 306 *e*P **P** 08 26 49.7 +0.9
30nm,0.8s
LPAZ pP **pP** 08 27 13.3 -1.2
LPAZ ScP **ScP** 08 31 50.4 -1.6
CASY Casey 53.97 161 *e*P **P** 08 27 17.6 +1.9
95nm,0.9s
MATP Matopo 54.59 73 P **P** 08 27 20.4 -0.6
4.4nm,0.6s,baz=211,slow=9.0,SNR=7.0
SAML Samuel 54.62 315 *e*P **P** 08 27 21.4 +0.3
18nm,0.9s
LSZ Lusaka 58.67 69 *e*P **P** 08 27 49.8 -0.1
20nm,1.3s
PTGA Pitinga 61.02 322 *e*P **P** 08 28 05.6 -0.1
8.5nm,1.0s
LIC Lamto 64.87 25 *e*P **P** 08 28 31.5 +0.4
45nm,1.0s
KIC Kosan Boka 65.07 25 *e*P **P** 08 28 32.7 +0.2
65nm,1.5s
TIC Toumodi 65.27 25 *e*P **P** 08 28 34.1 +0.3
DBIC Dimbokro 65.34 25 P **P** 08 28 35.0 +0.8
9.1nm,0.9s,baz=194,slow=7.9,SNR=7.7
DBIC LR LR 08 50 58.2
comp=Z,114nm,19.5s,baz=134,slow=30
OPO Ambohidratompo 66.39 88 P **P** 08 28 43.5 +2.2
2.8nm,0.3s,baz=240,slow=6.3,SNR=3.7
OTAV Otavalo 69.43 304 *e*P **P** 08 29 01.5 +0.9
14nm,0.9s
PRAC Prado 70.91 309 *e*P **P** 08 29 09.6 +0.4
PRAC epP **pP** 08 29 34.2 -2.2
ROSC El Rosal 71.68 310 P **P** 08 29 15.1 +0.9
5.8nm,0.7s,baz=103,slow=18,SNR=5.3
ROSC LR LR 09 03 45.3
comp=Z,51nm,18.9s,baz=166,slow=38
ROSC El Rosal 71.68 310 *e*P **P** 08 29 14.0 -0.1
7.7nm,0.9s
RUSC La Rusia 72.10 312 *e*P **P** 08 29 16.5 -0.3
8.4nm,1.1s
RUSC epP **pP** 08 29 41.0 -3.1
PCRV Puerto La Cruz 72.80 322 P **P** 08 29 21.2 +0.9
32nm,0.6s,baz=170,slow=4.4,SNR=23
KOWA Kowa 73.09 24 P **P** 08 29 23.1 +1.2
3.5nm,0.8s,baz=140,slow=8.9,SNR=6.0
KOWA LR LR 08 56 35.5
comp=Z,124nm,19.4s,baz=192,slow=32
KOWA Kowa 73.09 24 *e*P **P** 08 29 21.3 -0.6
KOWA epP **pP** 08 29 53.2 +3.9
TOA0 Torodi Ar. Sit 73.25 30 *e*P **P** 08 29 23.6 +0.7
14nm,0.8s
TORD Torodi Ar. Bea 73.25 30 P **P** 08 29 23.7 +0.8
10nm,0.6s,baz=200,slow=6.5,SNR=57
TORD pP **pP** 08 29 48.8 -1.5
12nm,0.8s,baz=198,slow=6.1,SNR=8.4
TORD LR LR 08 56 07.0
comp=Z,134nm,21.5s,baz=240,slow=31
HELC Santa Helena 73.41 310 *e*P **P** 08 29 23.3 -1.0
9.9nm,0.7s
RPZ Rata Peaks 79.30 194 P **P** 08 29 58.1 +1.1
24nm,0.9s,baz=20,slow=2.8,SNR=5.8

LTZ Lake Taylor 80.05 195 *e*P **P** 08 30 01.7 +0.7
64nm,1.1s
TAU Tasmania Unive 81.28 176 *e*P **P** 08 30 08.0 +0.5
46nm,0.8s
JTS JuntasAbangare 81.28 303 P **P** 08 30 08.9 +1.1
10nm,0.8s,baz=276,slow=5.9,SNR=7.5
JTS JuntasAbangare 81.28 303 *e*P **P** 08 30 08.2 +0.4
13nm,0.9s
URZ Urewera 83.66 199 P **P** 08 30 21.0 +1.1
18nm,0.9s,baz=315,slow=1.4,SNR=5.4
URZ Urewera 83.66 199 *e*P **P** 08 30 20.9 +0.9
29nm,1.1s
NWAO Narrogin (SRO) 86.44 151 P **P** 08 30 34.1 +0.2
22nm,1.0s,baz=74,slow=2.8,SNR=9.5
OUZ Omahuta 87.24 197 *e*P **P** 08 30 38.3 +0.6
30nm,1.0s
APG El Apazote 87.99 301 P **P** 08 30 42.1 +0.4
25nm,0.8s,baz=253,slow=3.6,SNR=19
APG pP **pP** 08 31 08.8 -1.2
17nm,0.9s,baz=190,slow=1.7,SNR=4.9
BBOO Buckleboo 90.37 166 *e*P **P** 08 30 52.9 +0.4
53nm,1.4s
MDT Midelt 90.73 19 LR LR 09 06 44.0
comp=Z,75nm,19.8s,baz=200,slow=32
STKA Stephens Creek 91.91 171 P **P** 08 31 00.5 +0.8
8.4nm,0.8s,baz=159,slow=7.3,SNR=19
STKA PP **PP** 08 34 39.9 +0.6
2.0nm,0.8s,baz=138,slow=6.0,SNR=4.4
STKA Stephens Creek 91.91 171 *e*P **P** 08 31 00.1 +0.4
2.1nm,0.9s
STKA PP **PP** 08 34 39.9 +0.6
TLIG Tlapa 94.18 295 *e*P **P** 08 31 11.0 +0.7
10nm,1.1s
ASAR Alice Springs 99.04 163 P **Pdif** 08 31 32.4 0.0
12nm,0.8s,baz=188,slow=4.1,SNR=75
ASAR PP **PP** 08 35 30.4 -4.3
4.7nm,0.9s,baz=189,slow=6.3,SNR=13
ASAR PKKPbc **PKKPdf** 08 47 56.8 -0.5
0.3nm,0.4s,baz=12,slow=2.5,SNR=5.4
AS31 Alice Springs 99.04 163 *e*P **Pdif** 08 31 32.1 -0.2
4.4nm,0.9s
AS01 Alice Springs 99.05 163 *e*P **Pdif** 08 31 32.0 -0.3
WRA Warramunga Arr 102.75 163 P **Pdif** 08 31 48.7 -0.2
2.2nm,0.7s,baz=197,slow=4.3,SNR=22
WRA PP **PP** 08 35 56.0 -6.7
1.5nm,0.7s,baz=191,slow=6.0,SNR=5.1
WRA PKKPbc **PKKPbc** 08 47 46.5 +2.2
0.5nm,0.4s,baz=356,slow=3.0,SNR=31
TXAR Lajitas Array 106.54 298 PKKPbc PKKPbc 08 47 34.6 +1.0
0.4nm,0.8s,baz=245,slow=1.7,SNR=4.8
TXAR PKKP **PKKPab** 08 47 48.8 0.0
0.7nm,0.9s,baz=297,slow=4.0,SNR=7.3
TXAR PKPPKP P'P'df 08 55 49.4 -10
0.4nm,0.8s,baz=270,slow=1.8,SNR=5.0
CLL Collm 112.22 26 *e*PS PS 08 46 49.0 +2.6
CLL *e*SSS SSS 08 56 54.0
CLL *e*SSSS 09 00 48.0
ANMO Albuquerque 112.47 299 PKKPbc PKKPbc 08 47 18.0 +3.2
1.7nm,0.6s,baz=298,slow=4.0,SNR=8.2
TUC Tucson 112.53 294 P **PKiKP** 08 36 27.4 +0.7
baz=143
J39A Decorah 112.76 315 P **PKiKP** 08 36 26.4 -0.2
baz=147
H39A Augusta 113.72 316 P **PKiKP** 08 36 28.1 -0.3
baz=147
F41A Three Lakes 113.78 318 P **PKiKP** 08 36 28.2 -0.3
baz=148
S22A 4UR Ranch, Cre 114.89 301 P PKPdf 08 36 31.5 +0.2
baz=143
ECSD EROS Data Cent 115.10 312 P **PKPdf** 08 36 30.5 -0.7
baz=145
F36A Milaca 115.58 315 P **PKPdf** 08 36 30.9 -1.1
baz=145
MONP2 Monument Peak 115.90 291 P **PKPdf** 08 36 33.6 +0.3
baz=142
ISCO Idaho Springs 115.94 303 P **PKPdf** 08 36 33.8 +0.5
baz=142
E36A McGregor 116.02 316 P **PKPdf** 08 36 32.3 -0.5
baz=145
D37A Cotton 116.23 317 P **PKPdf** 08 36 32.9 -0.3
baz=146
AKASG Malin Array Be 116.42 37 PKP **PKPdf** 08 36 35.3 +1.9
0.2nm,0.3s,baz=236,slow=1.0,SNR=4.8
PFO Pinyon Flats O 116.48 291 P **PKPdf** 08 36 33.2 -1.1
baz=141
N23A Red Feather La 116.96 304 P **PKPdf** 08 36 35.2 0.0
baz=142
GMRC Granite Mounta 116.98 293 P **PKPdf** 08 36 35.9 +0.7
baz=141
O20A White River Ci 117.45 302 P **PKPdf** 08 36 35.9 -0.1
baz=142
D33A AnnSam, Wauburn 117.55 314 P **PKPdf** 08 36 35.3 -0.5
baz=144
GSC Goldstone, Bar 117.97 292 P **PKPdf** 08 36 37.7 +0.6
baz=141
B34A Aery, Baudette 118.17 316 P **PKPdf** 08 36 35.9 -1.0
baz=144
EDW2 Edwards Air Fo 118.27 291 P **PKPdf** 08 36 38.6 +1.0
baz=140
AGMN Agassiz Nation 118.50 315 P **PKPdf** 08 36 36.7 -0.8
baz=144
AGMN Agassiz Nation 118.50 315 *e*PKPdf **PKPdf** 08 36 36.6 -0.9
K22A Casper 118.60 304 P **PKPdf** 08 36 37.8 -0.4
baz=141
RSSD Black Hills 118.62 307 P **PKPdf** 08 36 37.6 -0.6
baz=142
RSSD Black Hills 118.62 307 *e*PKPdf **PKPdf** 08 36 37.9 -0.3
RSSD *e*SKPdf **SKPdf** 08 40 03.0 -0.2
A33A Warroad 118.83 316 P **PKPdf** 08 36 37.7 -0.4
baz=144
MPMC Manual Prospec 118.91 292 P **PKPdf** 08 36 39.7 +0.7
baz=140
TPNV Topopah Spring 118.95 294 P **PKPdf** 08 36 39.8 +0.8
baz=140
A32A Rocking H Ranc 119.25 315 P **PKPdf** 08 36 38.3 -0.6
baz=143
CWC Cottonwood Cre 119.51 292 P **PKPdf** 08 36 40.9 +0.9
baz=140
R11A Troy Canyon, C 119.68 295 P **PKPdf** 08 36 41.3 +0.9
baz=140
DUG Dugway, Tooele 119.71 299 P **PKPdf** 08 36 40.8 +0.5
baz=140
DUG Dugway, Tooele 119.71 299 *e*PKPdf **PKPdf** 08 36 40.7 +0.4
ULM Lac du Bonnet 120.07 316 PKP **PKPdf** 08 36 39.8 -0.7
5.1nm,0.6s,baz=166,slow=1.4,SNR=10
ULM PKKPab **PKKPbc** 08 46 49.6 +1.3
1.5nm,0.4s,baz=8.1,slow=2.8,SNR=3.9
PDAR Pinedale Array 120.11 303 PKP **PKPdf** 08 36 40.0 -1.1
1.0nm,0.5s,baz=137,slow=4.5,SNR=13
PDAR SKP 08 40 04.3
0.1nm,0.4s,baz=122,slow=4.4,SNR=3.8
PDAR PKKPab **PKKPab** 08 46 49.5 +0.5
0.6nm,0.8s,baz=315,slow=0.1,SNR=5.5
HWUT Hardware Ranch 120.18 300 *e*PKPdf **PKPdf** 08 36 41.1 -0.1
HFS Hagfors 120.45 23 PKP **PKPdf** 08 36 39.3 -1.5
1.2nm,0.6s,baz=101,slow=7.5,SNR=3.3
HFS PKKPbc **PKKPbc** 08 46 47.8 +0.7
1.6nm,0.7s,baz=343,slow=3.0,SNR=3.6
NB2 NORSAR Subarra 120.76 21 PKPdf **PKPdf** 08 36 41.6 +0.1
comp=Z,0.8nm,0.8s,baz=204,slow=1.9
NOA NORSAR Array B 120.76 21 PKP **PKPdf** 08 36 42.1 +0.6
comp=Z,4.2nm,0.8s,baz=113,slow=0.4,SNR=5.4
NVAR Mina Array Bea 121.13 293 PKP **PKPdf** 08 36 44.4 +1.2
comp=Z,2.7nm,0.7s,baz=142,slow=3.2,SNR=25
NVAR SKP 08 40 07.5
comp=Z,0.3nm,0.6s,baz=191,slow=4.1,SNR=3.9
NVAR PKKPbc **PKKPab** 08 46 46.6 +1.6
comp=Z,0.9nm,0.9s,baz=308,slow=4.4,SNR=4.6
LAO LASA Array 121.58 308 P **PKPdf** 08 36 43.6 0.0
baz=140
RLMT Red Lodge 121.77 305 P **PKPdf** 08 36 44.4 +0.2
baz=139
CMB Columbia Colle 121.91 292 *e*PKPdf **PKPdf** 08 36 45.2 +0.7
DGMT Dagmar 122.06 310 P **PKPdf** 08 36 44.4 0.0
baz=140
DGMT Dagmar 122.06 310 *e*PKPdf **PKPdf** 08 36 44.4 0.0
BMN Battle Mountai 122.09 296 *e*PKPdf **PKPdf** 08 36 45.5 +0.6
HLID Hailey 123.03 300 P **PKPdf** 08 36 47.6 +1.0
baz=138
NIL Nilore 123.09 78 *e*PKPdf **PKPdf** 08 36 47.0 +0.2
BOZ Bozeman (W) 123.22 303 P **PKPdf** 08 36 47.8 +0.9
baz=138
MFID Camas Ranch 123.61 299 *e*PKPdf **PKPdf** 08 36 48.5 +0.8
EGMT Eagleton 124.17 307 P **PKPdf** 08 36 49.3 +0.8
baz=138
EGMT Eagleton 124.17 307 *e*PKPdf **PKPdf** 08 36 49.2 +0.6
WVOR Wild Horse Val 124.29 296 *e*PKPdf **PKPdf** 08 36 50.0 +1.0

O03D Paynes Creek 124.33 293 P **PKPdf** 08 36 49.6 +0.5
baz=137
FINES FINESS Array B 124.57 28 PKP **PKPdf** 08 36 48.5 -0.2
comp=Z,6.1nm,0.7s,baz=159,slow=1.6,SNR=21
FINES pPKP **pPKPdf** 08 37 15.7 -2.6
comp=Z,5.3nm,0.8s,baz=157,slow=5.4,SNR=4.1
MOD Modoc Plateau 124.74 295 *e*PKPdf **PKPdf** 08 36 51.0 +1.0
MSO Missoula 125.22 303 P **PKPdf** 08 36 51.0 +0.4
baz=137
N02D Trinity Center 125.29 292 P **PKPdf** 08 36 52.3 +1.4
baz=137
CMAR Chiang Mai Arr 125.34 111 PKP **PKPdf** 08 36 52.1 +0.6
comp=Z,9.6nm,0.8s,baz=236,slow=3.7,SNR=26
BMO Blue Mountains 125.39 299 *e*PKPdf **PKPdf** 08 36 51.2 +0.2
M04C Macdoel 125.44 294 P **PKPdf** 08 36 52.5 +1.3
baz=137
M02C Callahan 125.67 293 P **PKPdf** 08 36 52.8 +1.1
baz=137
YBH Yreka Blue Hor 125.85 293 PKP **PKPdf** 08 36 51.7 -0.3
comp=Z,3.0nm,0.7s,baz=121,slow=12,SNR=5.6
J05D Fort Rock, OR 126.21 295 P **PKPdf** 08 36 54.0 +1.3
baz=136
HUMO Hull Mountain 126.61 294 *e*PKPdf **PKPdf** 08 36 54.5 +1.2
L02D Cave Junction, 126.61 293 P **PKPdf** 08 36 54.7 +1.3
baz=136
J04D Umpqua Nationa 126.63 295 P **PKPdf** 08 36 54.6 +1.0
baz=136
I05D Terrebonne, OR 127.02 296 P **PKPdf** 08 36 55.3 +1.2
baz=136
AKTO Aktyubinsk 127.60 54 PKP **PKPdf** 08 36 55.5 +0.5
comp=Z,6.5nm,0.9s,baz=187,slow=4.8,SNR=14
KSH Kashi 128.88 75 PKP **PKPdf** 08 36 58.2 +0.3
KSH PKS **PKSdf** 08 40 28.5 -5.9
KSH SKKS 08 45 40.8
KSH SS SS 08 56 03.7 -13
KSH AMB AMB
comp=Z,260nm,5.2s
KSH LR LR
comp=Z,1μm,11.5s
KSH LR LR
comp=Z,2μm,16.2s
KSH LR LR
comp=Z,180nm,7.4s
B05A Bryant 130.14 299 P **PKPdf** 08 37 00.9 +1.2
baz=133
ARCES ARCESS Array B 131.10 22 PKP **PKPdf** 08 37 01.6 +0.6
comp=Z,6.0nm,0.8s,baz=220,slow=2.4,SNR=14
ARCES SKPbc **SKPbc** 08 40 12.6 -2.8
comp=Z,5.6nm,0.8s,baz=333,slow=1.9,SNR=7.0
KMI Kunming 132.80 110 PKP **PKPdf** 08 37 05.9 0.0
BRVK Borovoye 135.03 58 *e*PKPdf **PKPdf** 08 37 10.2 +1.3
BVAR Borovoye Array 135.06 58 PKP **PKPdf** 08 37 09.5 +0.5
comp=Z,5.5nm,0.8s,baz=199,slow=1.7,SNR=26
BVAR SKPbc **SKPbc** 08 40 27.2 -2.1
comp=Z,1.9nm,0.8s,baz=101,slow=2.9,SNR=6.9
BBB Bella Bella 135.63 300 SKPbc **SKPbc** 08 40 29.5 -1.5
comp=Z,21nm,1.2s,baz=216,slow=4.1,SNR=3.7
GYA Guiyang 135.93 113 *e*Pdif **Pdif** 08 34 16.0 -0.2
GYA PKP **PKPdf** 08 37 11.6 0.0
GYA PP **PP** 08 39 56.4 +4.6
GYA AMB AMB
comp=Z,120nm,8.0s
YKA Yellowknife Ar 136.00 318 PKhKP PKPpre 08 37 00.1
comp=Z,0.5nm,0.6s,baz=123,slow=3.3,SNR=4.1
YKA PKP **PKPdf** 08 37 10.8 +0.5
comp=Z,9.0nm,0.6s,baz=129,slow=2.3,SNR=39
YKA pPKP pPKPdf 08 37 37.4 -2.5
comp=Z,1.5nm,0.6s,baz=131,slow=2.4,SNR=2.1
YKA SKPbc **SKPbc** 08 40 29.4 -2.4
comp=Z,0.9nm,0.6s,baz=130,slow=4.0,SNR=7.3
SPITS Spitsbergen Ar 136.67 12 PKP **PKPdf** 08 37 11.9 +0.7
comp=Z,3.3nm,0.7s,baz=300,slow=5.8,SNR=5.8
MKAR Makanchi Array 137.19 72 PKhKP PKPpre 08 37 02.4
comp=Z,0.8nm,0.8s,baz=232,slow=4.0,SNR=6.7
MKAR PKP **PKPdf** 08 37 13.1 -0.1
comp=Z,2.5nm,0.7s,baz=245,slow=2.1,SNR=15
MKAR SKPbc **SKPbc** 08 40 33.9 -2.2
comp=Z,2.5nm,1.0s,baz=277,slow=2.0,SNR=8.2
KURBB Kurchatov Arra 137.60 65 PKhKP PKPpre 08 37 05.2
comp=Z,0.8nm,0.5s,baz=230,slow=3.8,SNR=6.0
KURBB PKP **PKiKP** 08 37 15.3 -0.4
comp=Z,2.9nm,0.8s,baz=233,slow=2.8,SNR=9.4
KURBB SKPbc **SKPbc** 08 40 35.4 -1.7
comp=Z,3.3nm,0.9s,baz=229,slow=3.5,SNR=11
KURK Kurchatov 137.70 65 PKPpre PKPpre 08 37 05.2
KURK PKP **PKiKP** 08 37 15.3 -0.6
KURK SKPbc **SKPbc** 08 40 35.4 -1.9
RES Resolute Bay 137.79 339 PKhKP PKPpre 08 37 05.8
comp=Z,1.5nm,0.8s,baz=85,slow=1.0,SNR=4.2
RES PKP **PKPdf** 08 37 13.7 +0.3
comp=Z,13nm,1.0s,baz=91,slow=1.3,SNR=18
RES SKPbc **SKPbc** 08 40 35.1 -1.8
comp=Z,4.6nm,1.1s,baz=338,slow=5.3,SNR=4.0
CD2 Chengdu 137.94 106 PKP **PKPdf** 08 37 14.8 -0.3
WMQ Urumqi 138.22 79 PKP **PKPdf** 08 37 15.6 +0.4
WMQ LR LR
comp=Z,130nm,35.3s
WMQ LR LR
comp=Z,50nm,22.9s
DLBC Dease Lake 140.10 307 PKhKP PKPpre 08 37 13.5
comp=Z,3.9nm,1.0s,baz=180,slow=4.2,SNR=3.2
DLBC SKPbc **SKPbc** 08 40 42.8 -1.1
comp=Z,3.4nm,0.7s,baz=256,slow=4.1,SNR=5.3
ENH Enshi 140.47 113 *e*PKPdf **PKPdf** 08 37 21.8 +2.1
GTA Gaotai 142.03 93 *e*PKP **PKPdf** 08 37 18.8 -3.5
ZALV Zalesovo Beam 142.66 64 PKhKP PKPpre 08 37 18.3
comp=Z,3.3nm,0.5s,baz=232,slow=3.5,SNR=12
ZALV SKPbc **SKPbc** 08 40 47.2 -3.2
comp=Z,1.5nm,0.8s,baz=236,slow=1.6,SNR=3.4
XAN Xi'an 143.12 108 PKP PKPbc 08 37 21.5 -0.1
XAN PP **PP** 08 40 35.9 -0.1
XAN AMB AMB
comp=Z,130nm,5.8s
XAN LR LR
comp=Z,520nm,14.0s
XAN LR LR
comp=Z,360nm,15.5s
XAN LR LR
comp=Z,560nm,14.4s
INK Inuvik 145.64 321 PKPbc **PKPab** 08 37 28.8 +0.2
comp=Z,52nm,0.7s,baz=98,slow=3.9,SNR=76
INK SKPbc **SKPbc** 08 40 54.4 -2.6
comp=Z,12nm,1.1s,baz=112,slow=4.9,SNR=3.2
JOW Kunigami 146.03 139 PKPbc **PKPab** 08 37 31.5 +0.3
comp=Z,64nm,0.8s,baz=256,slow=3.3,SNR=14
NJ2 Nanjing 146.58 122 *e*PKPbc **PKPbc** 08 37 32.3 +0.3
TIA Tai'an 149.06 115 PKPbc **PKPbc** 08 37 38.9 +0.4
NRIK Noril'sk 149.24 39 PKPbc **PKPbc** 08 37 38.8 +0.9
comp=Z,11nm,0.9s,baz=34,slow=1.3,SNR=14
NRIK pPKPbc **pPKPdf** 08 38 04.1 +1.0
comp=Z,4.6nm,0.5s,baz=188,slow=1.0,SNR=2.1
HHC Hu-ho-hao-te 149.53 103 *e*PKPbc **PKPdf** 08 37 32.5 -2.5
ILAR Eielson Array 149.92 312 PKP **PKPdf** 08 37 32.5 -2.2
comp=Z,3.2nm,0.8s,baz=311,slow=1.0,SNR=43
ILAR PKPbc **PKPbc** 08 37 39.9 +0.2
comp=Z,77nm,0.8s,baz=132,slow=1.8,SNR=367
ILAR PKKP PKKPdf 08 46 08.8 -15
comp=Z,0.2nm,0.6s,baz=258,slow=3.5,SNR=4.4
CBIJ Chichi jima 150.12 162 PKPbc **PKPbc** 08 37 41.0 -0.4
JCJ Chichijima 150.12 162 PKPbc **PKPbc** 08 37 41.0 -0.4
comp=Z,85nm,0.5s,baz=266,slow=13,SNR=7.7
SONM Songino Array 151.04 87 PKP **PKPdf** 08 37 37.6 +0.5
comp=Z,2.1nm,0.6s,baz=207,slow=1.7,SNR=4.1
SONM PKPbc **PKPbc** 08 37 43.1 +0.1
comp=Z,48nm,0.7s,baz=224,slow=2.7,SNR=62
BJT Baijiatuau 151.43 109 *e*PKPbc **PKPbc** 08 37 44.3 +0.2
BJT *e*PKPab **PKPab** 08 37 53.0 +0.2
BJI Beijing 151.45 109 *e*PKPbc **PKPbc** 08 37 44.4 +0.4
BJI pPKP **pPKPbc** 08 38 14.6 +1.1
TLY Talaya 151.49 78 *e*PKPbc **PKPbc** 08 37 44.4 +0.5
TOLK Toolik Lake Re 151.51 319 P **PKPbc** 08 37 44.1 +0.7
baz=93
JNU Nakatsue 152.66 138 PKPbc **PKPbc** 08 37 47.2 +0.1
comp=Z,18nm,0.8s,baz=117,slow=3.6,SNR=14
KSAR Wonju Array Be 155.18 128 PKP **PKPdf** 08 37 43.3 0.0
KSRS Korea Array 155.21 129 PKP **PKPdf** 08 37 43.3 0.0
comp=Z,1.1nm,0.8s,baz=208,slow=1.8,SNR=7.7
MJAR Matsushiro Arr 158.25 148 PKP **PKPdf** 08 37 46.6 -0.7
comp=Z,1.9nm,1.0s,baz=95,slow=1.3,SNR=4.4
MJAR PKPab **PKPab** 08 38 22.6 +0.6
comp=Z,7.6nm,0.8s,baz=195,slow=5.4,SNR=15
TIXI Tiksi 161.53 23 PKPab **PKPab** 08 38 36.3 +0.9
comp=Z,0.9nm,0.5s,baz=46,slow=2.7,SNR=3.9
USRK Ussuriysk Ar. 162.46 124 PKPab **PKPab** 08 38 39.5 -0.6
comp=Z,5.2nm,0.8s,baz=225,slow=5.1,SNR=8.7
KLR Kul'dur 165.81 110 PKP **PKPdf** 08 37 53.1 -1.4
comp=Z,0.2nm,0.7s,baz=328,slow=4.7,SNR=6.5

KLR PKPab **PKPab** **08 38 54.5 -0.3**
comp=Z,0.9nm,1.0s,baz=277,slow=4.1,SNR=14
PETK **Petropavlovsk-** **175.65 229** PKP **PKPdf** **08 37 59.1 -0.5**
comp=Z,5.8nm,0.9s,baz=112,slow=6.6,SNR=5.6
PETK PKPab **PKPab** **08 39 38.8 +0.5**
comp=Z,5.0nm,0.9s,baz=120,slow=4.8,SNR=4.0

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*BJI **10** 08:34:53.2, 7.°40S×126.°51E, h455km, mb4.3/26, mB4.5/13*
*IDC **10** 08:34:56.2±0.8, 7.°17S×126.°18E, h446km±9km, mb3.8/12, mb1 3.8/17, mb1mx3.5/58, mbtmp4.7/17, Error ellipse: s-maj=13.1km s-min=8.6km az=60.0*
*NEIC **10** 08:34:56.7±0.3, 7.°24S×126.°17E, h454km±4km, mb4.6/11, Error ellipse: s-maj=6.8km s-min=4.8km az=222.0*
*DJA **10** 08:34:56.8±0.3, 7.°3S×126.°6E±.°, h444km±3km, M4.4/17, mb4.5/17, mB4.9/12, MLv4.7/13, Mw(mB)4.2/12*
*ISCJB **10** 08:34:57.0±0.3, 7.°41S±0.°04×126.°05E±0.°04, h488km, mb4.2/24, Error ellipse: s-maj=5.7km s-min=4.6km az=36.4*
ISC 10 08:34:58.2±0.4, 7.°51S±0.°06×126.°01E±0.°06, h488km, n90, σ2$43/96, mb4.3/25, 1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**2.81**	**218**	P	**P**	**08 36 05.4**	**-1.7**
SOEI				S	**S**	**08 36 59.9**	**-3.2**
SOEI	**Soe**	**2.81**	**218**	*e*P	**P**	**08 36 05.5**	**-1.6**
SOEI				*e*S	**S**	**08 36 58.9**	**-4.2**
BATI	**Baumata**	**3.54**	**221**	P	**P**	**08 36 11.6**	**-0.6**
	224nm,0.3s,baz=57,slow=0.6,SNR=155						
BATI				S	**S**	**08 37 10.0**	**-2.4**
	120nm,0.3s,baz=103,slow=22,SNR=10						
BATI	**Baumata**	**3.54**	**221**	P	**P**	**08 36 11.4**	**-0.8**
BATI				S	**S**	**08 37 08.8**	**-3.6**
MMRI	**Maumere**	**3.90**	**253**	P	**P**	**08 36 11.7**	**-3.3**
MMRI				S	**S**	**08 37 12.1**	**-5.3**
MMRI	**Maumere**	**3.90**	**253**	*e*P	**P**	**08 36 12.2**	**-2.7**
AAI	**Ambon**	**4.38**	**30**	P	P	08 36 13.0	-6.1
NLAI	**Namlea**	**4.38**	**14**	P	P	08 36 12.9	-6.2
NLAI				S	S	08 37 13.9	-11
EDFI	**Ende, Flores**	**4.45**	**254**	P	**P**	**08 36 17.1**	**-2.6**
EDFI				S	**S**	**08 37 21.0**	**-5.1**
KDI	**Kendari**	**4.88**	**316**	P	P	08 36 18.3	-5.2
BNDI	**Bandanaira**	**4.88**	**53**	S	S	08 37 25.0	-8.0
MSAI	**Masohi**	**5.06**	**35**	P	P	08 36 19.4	-5.7
MSAI				S	S	08 37 26.8	-9.2
SAUI	**Saumlaki**	**5.27**	**95**	*e*P	**P**	**08 36 22.7**	**-4.4**
BASI	**Baing, Sumba**	**6.00**	**243**	P	**P**	**08 36 33.0**	**-1.0**
	424nm,0.5s,5μm1.7nm						
BASI				S	**S**	**08 37 50.4**	**-1.9**
	424nm,0.5s,5μm1.7nm						
BKSI	**Bulukumba**	**6.24**	**290**	P	**P**	**08 36 35.2**	**-1.2**
	54nm,0.8s,464nm0.2nm						
BKSI				S	**S**	**08 37 49.3**	**-7.4**
	54nm,0.8s,464nm0.2nm						
WBSI	**Waikabubak, Su**	**6.88**	**252**	P	**P**	**08 36 41.2**	**-1.6**
	417nm,0.9s,4μm1.4nm						
WBSI				S	**S**	**08 38 01.3**	**-7.1**
	417nm,0.9s,4μm1.4nm						
SPSI	**Sidrap Palu**	**7.14**	**299**	P	P	08 36 52.5	+7.1
LUWI	**Luwuk**	**7.19**	**333**	*e*P	**P**	**08 36 42.9**	**-3.1**
MTN	**Manton Dam**	**7.32**	**137**	*e*P	**P**	**08 36 46.2**	**-1.1**
TTSI	**Tana Toraja**	**7.59**	**305**	P	P	08 36 59.3	+9.2
FAKI	**Fak Fak**	**7.71**	**54**	P	P	08 36 45.0	-6.3
	428nm,0.8s,4μm1.2nm						
FAKI	**Fak Fak**	**7.71**	**54**	*e*P	P	08 36 45.1	-6.3
FAKI				*e*S	S	08 38 05.3	-19
PLAI	**Plampang**	**8.25**	**260**	P	**P**	**08 36 55.0**	**-2.0**
	134nm,0.7s,1μm						
TNTI	**Ternate**	**8.34**	**9**	*e*P	**P**	**08 36 54.5**	**-3.5**
TNTI				*e*S	S	08 38 23.6	-13
SIJI	**Sorong**	**8.43**	**39**	P	P	08 36 54.2	-4.7
	35nm,0.3s,baz=191,slow=9.9,SNR=86						
SIJI				S	S	08 38 26.3	-12
	3.3nm,0.3s,baz=84,slow=19,SNR=6.2						
MRSI	**Marisa**	**8.91**	**333**	P	P	08 36 59.7	-4.3
TWSI	**Taliwang, Sumb**	**9.12**	**262**	P	**P**	**08 37 04.8**	**-1.3**
	21nm,0.5s,1μm						
MPSI	**Mapaga**	**9.89**	**322**	P	**P**	**08 37 11.9**	**-2.5**
RKPI	**Ransiki, Papua**	**10.09**	**54**	P	**P**	**08 37 12.9**	**-3.6**
KBKI	**Kotabaru**	**10.65**	**293**	P	**P**	**08 37 19.9**	**-2.6**
JAGI	**Jajag, Banyuwa**	**11.78**	**265**	*e*P	**P**	**08 37 33.7**	**-0.8**
JAGI				*e*S	**S**	**08 39 43.7**	**+0.3**
BAKI	**Biak**	**11.87**	**59**	P	**P**	**08 37 32.8**	**-2.7**
WRAB	**Tennant Creek**	**14.76**	**148**	*e*P	**P**	**08 38 06.8**	**+0.7**
WRA	**Warramunga Arr**	**14.76**	**148**	P	**P**	**08 38 06.8**	**+0.6**
	5.3nm,0.3s,baz=325,slow=12,SNR=159						
WRA				S	**S**	**08 40 38.5**	**-2.7**
	0.8nm,0.3s,baz=328,slow=20,SNR=5.0						
WB2	**Warramunga Arr**	**14.77**	**148**	*e*P	**P**	**08 38 06.7**	**+0.5**
JAY	**Jayapura**	**15.46**	**72**	P	**P**	**08 38 09.1**	**-4.5**
	1.0nm,0.3s,baz=269,slow=5.6,SNR=6.6						
KPJI	**Karang Pucung**	**16.93**	**269**	P	**P**	**08 38 32.7**	**+3.7**
AS31	**Alice Springs**	**17.76**	**156**	*e*P	**P**	**08 38 38.8**	**+1.8**
	4.6nm,1.0s						
ASAR	**Alice Springs**	**17.76**	**156**	P	**P**	**08 38 38.4**	**+1.4**
	1.9nm,0.3s,baz=331,slow=10,SNR=79						
ASAR				S	**S**	**08 41 41.8**	**+5.9**
	0.4nm,0.3s,baz=337,slow=18,SNR=13						
ASAR				ScP	**ScP**	**08 45 41.3**	**+5.3**
	0.1nm,0.3s,baz=328,slow=1.6,SNR=6.3						
AS01	**Alice Springs**	**17.78**	**155**	*e*P	**P**	**08 38 38.6**	**+1.4**
KSM	**Kuching**	**18.02**	**299**	*e*P	**P**	**08 38 40.1**	**+0.6**
	25nm,0.9s						
COEN	**Coen**	**18.04**	**112**	*e*P	**P**	**08 38 38.7**	**-1.0**
	24nm,0.7s						
LEM	**Lembang**	**18.26**	**271**	P	**P**	**08 38 43.9**	**+2.0**
	3.3nm,0.3s,baz=351,slow=23,SNR=5.3						
TPI	**Tanjungpandan**	**18.88**	**284**	P	**P**	**08 38 47.3**	**-0.1**
CBJI	**Citeko**	**19.05**	**272**	P	**P**	**08 38 48.6**	**-0.3**
CGJI	**Cibinong**	**20.18**	**271**	P	**P**	**08 38 59.8**	**+0.5**
PMG	**Port Moresby**	**21.01**	**97**	P	**P**	**08 39 06.2**	**-0.6**
	15nm,0.6s,baz=256,slow=2.6,SNR=8.1						
PMG	**Port Moresby**	**21.01**	**97**	*e*P	**P**	**08 39 06.4**	**-0.3**
	16nm,0.6s						
MANU	**Manus Island**	**21.96**	**77**	*e*P	**P**	**08 39 14.8**	**-0.7**
	26nm,0.9s						
STKA	**Stephens Creek**	**28.26**	**151**	P	**P**	**08 40 14.2**	**+3.0**
	1.0nm,0.5s,baz=326,slow=8.2,SNR=6.7						
STKA				pP	**pP**	**08 41 30.3**	**-3.9**
	9.0nm,0.7s,baz=313,slow=10,SNR=18						
PSI	**Prapat**	**28.90**	**290**	P	**P**	**08 40 17.6**	**+0.6**
	8.5nm,0.7s,baz=180,slow=4.5,SNR=3.6						
CMAR	**Chiang Mai Arr**	**37.13**	**314**	P	**P**	**08 41 27.6**	**+0.8**
	2.9nm,0.5s,baz=135,slow=6.5,SNR=9.0						
KMI	**Kunming**	**39.57**	**326**	P	**P**	**08 41 49.0**	**+2.2**
KMI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KMI				pmax	pmax		
	comp=Z,110nm,4.2s						
NJ2	**Nanjing**	**39.93**	**351**	*e*P	**P**	**08 41 49.2**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,16nm,0.7s						
CD2	**Chengdu**	**43.75**	**332**	P	**P**	**08 42 18.8**	**-0.9**
CD2				pmax	pmax		
	comp=Z,20nm,0.9s						
XAN	**Xi'an**	**44.38**	**340**	P	**P**	**08 42 22.9**	**-1.7**
XAN				pmax	pmax		
	comp=Z,13nm,0.6s						
XAN				pmax	pmax		
	comp=Z,78nm,4.5s						
LZH	**Lanzhou**	**48.11**	**336**	⇓P	**P**	**08 42 54.1**	**+1.0**
LZH				pP	pP	08 44 23.2	-3.1
LZH				PP	**PP**	**08 44 53.5**	**+1.9**
LZH				sP	sP	08 45 12.8	-7.6
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,68nm,6.2s						
HHC	**Hu-ho-hao-te**	**49.92**	**346**	*e*P	**P**	**08 43 09.0**	**+2.6**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,33nm,6.1s						
ODAN	**Odare**	**50.67**	**314**	*e*P	**P**	**08 43 12.7**	**+0.4**
	20nm,0.5s						
RAMN	**Ramite**	**51.30**	**313**	*e*P	**P**	**08 43 17.7**	**+0.8**
	57nm,0.6s						
JIRN	**Jiri**	**52.01**	**314**	*e*P	**P**	**08 43 22.7**	**+0.5**
	23nm,0.6s						
GUN	**Gumba**	**52.38**	**314**	*e*P	**P**	**08 43 25.2**	**+0.4**
	42nm,0.6s						
PKIN	**Phulchoki**	**52.53**	**313**	*e*P	**P**	**08 43 26.7**	**+0.9**
	20nm,0.5s						
GTA	**Gaotai**	**52.62**	**335**	*e*P	**P**	**08 43 26.2**	**+0.2**
GTA				pP	pP	08 44 56.7	-4.8
GTA				sP	PP	08 45 43.5	+12
GTA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KKN	**Kakani**	**52.74**	**313**	*e*P	**P**	**08 43 27.8**	**+0.6**
	12nm,0.5s						
DMN	**Daman**	**52.76**	**313**	*e*P	**P**	**08 43 27.9**	**+0.5**
	6.3nm,0.3s						
GKN	**Gorkha**	**53.32**	**313**	*e*P	**P**	**08 43 31.9**	**+0.5**
	22nm,0.4s						
KOLN	**Koldanda**	**53.95**	**312**	*e*P	**P**	**08 43 36.5**	**+0.7**
	28nm,0.7s						
DANN	**Dangsing**	**54.16**	**313**	*e*P	**P**	**08 43 37.8**	**+0.4**
	16nm,0.6s						
PYUN	**Piuthan**	**54.58**	**312**	*e*P	**P**	**08 43 40.7**	**+0.4**
	45nm,0.8s						
ULN	**Ulaanbaatar**	**57.63**	**345**	*e*P	**P**	**08 44 01.2**	**+0.2**
	8.5nm,0.9s						
SONM	**Songino Array**	**57.77**	**344**	P	**P**	**08 44 00.9**	**-1.0**
	5.0nm,0.6s,baz=158,slow=8.4,SNR=6.1						
SONA1	**Songino Array**	**57.78**	**345**	*e*P	**P**	**08 44 01.4**	**-0.6**
WMQ	**Urumqi**	**61.74**	**329**	P	**P**	**08 44 30.5**	**+2.0**
KSH	**Kashi**	**65.77**	**319**	P	**P**	**08 44 57.4**	**+2.9**
KSH				pP	pP	08 46 32.6	-3.2
KSH				PP	**PP**	**08 47 30.4**	**+2.9**
KSH				S	**S**	**08 52 58.7**	**-3.6**
KSH				ScS	**ScS**	**08 54 04.3**	**+1.7**
KSH				pmax	pmax		
	comp=Z,120nm,4.9s						
MK01	**Makanchi Array**	**66.52**	**329**	*e*P	**P**	**08 44 59.4**	**+0.5**
MK31	**Makanchi Array**	**66.55**	**329**	*e*P	**P**	**08 44 59.5**	**+0.5**
MKAR	**Makanchi Array**	**66.55**	**329**	P	**P**	**08 44 59.6**	**+0.5**
	5.9nm,0.8s,baz=128,slow=7.7,SNR=36						
MKAR	**Makanchi Array**	**66.55**	**329**	*e*P	**P**	**08 44 59.5**	**+0.5**
	48nm,0.9s						
MAKZ	**Makanchi**	**66.72**	**329**	*e*P	**P**	**08 45 00.5**	**+0.4**
	8.0nm,1.0s						
ZAA0	**Zalesovo Array**	**70.35**	**336**	*e*P	**P**	**08 45 21.7**	**-0.2**
	14nm,0.9s						
ZALV	**Zalesovo Beam**	**70.35**	**336**	P	**P**	**08 45 21.6**	**-0.3**
	11nm,0.4s,baz=139,slow=5.3,SNR=42						
KURBB	**Kurchatov Arra**	**70.93**	**330**	P	**P**	**08 45 26.1**	**+0.7**
	6.0nm,0.6s,baz=134,slow=5.0,SNR=34						
KURK	**Kurchatov**	**70.94**	**330**	*e*P	**P**	**08 45 26.1**	**+0.5**
	24nm,0.9s						
VNDA	**Vanda**	**72.45**	**172**	P	P	08 45 39.1	+5.2
	0.5nm,0.8s,baz=345,slow=4.1,SNR=2.6						
WSAR	**Wadi Sarin**	**72.55**	**297**	P	**P**	**08 45 37.0**	**+1.4**
	4.6nm,0.7s,baz=143,slow=5.6,SNR=3.7						
BVAR	**Borovoye Array**	**76.42**	**329**	P	**P**	**08 45 57.6**	**+0.8**
	3.0nm,0.5s,baz=119,slow=8.1,SNR=17						
AKTO	**Aktyubinsk**	**82.08**	**323**	P	**P**	**08 46 27.8**	**+0.9**
	2.9nm,0.5s,baz=99,slow=11,SNR=7.9						
RAYN	**Ar Rayn**	**84.34**	**295**	*e*P	**P**	**08 46 40.7**	**+1.8**
	4.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**125.02**	**281**	PKP	**PKPdf**	**08 53 05.2**	**+1.8**
	0.5nm,0.6s,baz=56,slow=2.8,SNR=3.5						

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*ISCJB **10** 08:37:59.9±0.5, 38.°66N±0.°03×142.°15E±0.°05, h47km±3km, mb4.5/91, MS4.0/35, Error ellipse: s-maj=7.4km s-min=3.9km az=28.6*
*MOS **10** 08:37:59.2±1.1, 38.°71N×142.°15E, h41km, mb4.9/37, Error ellipse: s-maj=8.0km s-min=5.4km az=97.7*
*IDC **10** 08:38:00.8±0.4, 38.°67N×142.°09E, h38km±3km, mb4.0/26, mb1 4.2/30, mb1mx4.0/73, mbtmp4.3/30, ML4.0/4, MS3.8/31, Ms1 3.8/31, ms1mx3.6/69, Error ellipse: s-maj=13.2km s-min=9.5km az=110.0*
*JMA **10** 08:38:00.2±0.1, 38.°64N×142.°17E, h41km±1km, M4.5*
JMA Felt II J1.
*NIED **10** 08:38:00, 38.°60N×142.°20E, h44km, Mw4.6 Best double couple: M0=9.57000×10^15 NP1:φ=205.00000°, δ22.00000°, λ87.00000°. NP2:φ=29.00000°, δ68.00000°, λ91.00000°.*
*NEIC **10** 08:38:02.0±0.6, 38.°74N×142.°12E, h49km±4km, mb4.7/27, Error ellipse: s-maj=7.5km s-min=4.5km az=125.0*
NEIC Recorded [2 JMA] in Iwate and Miyagi.
*BJI **10** 08:38:03.0, 38.°74N×141.°37E, h35km, mb4.7/42, mB4.8/26, Ms4.2/22, Ms7 3.9/19*
ISC 10 08:38:00.2±0.4, 38.°69N±0.°04×142.°17E±0.°04, h41km±3km, h41km:pP-P, n241, σ1$85/239, mb4.6/91, MS4.0/35, 9C-2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.55**	**315**	P	**Pn**	**08 38 12.2**	**+0.6**
OFUJ				*e*S	**Sn**	**08 38 20.4**	**+0.7**
JIO	**Ouri**	**0.68**	**250**	P	**Pn**	**08 38 13.2**	**-0.2**
JIO				*e*S	**Sn**	**08 38 21.9**	**-1.0**
JMK	**Ichinoseki**	**0.78**	**290**	P	**Pn**	**08 38 15.3**	**+0.5**
JMK				*e*S	**Sn**	**08 38 25.9**	**+0.6**
JOM	**Ohasama**	**1.03**	**319**	P	**Pn**	**08 38 19.2**	**+1.0**
JOM				*e*S	**Sn**	**08 38 33.2**	**+1.7**
JOU	**Okura**	**1.22**	**255**	P	**Pn**	**08 38 21.1**	**+0.3**
JOU				*e*S	**Sn**	**08 38 36.5**	**+0.3**
JTH	**Tanohata**	**1.27**	**349**	P	**Pn**	**08 38 22.1**	**+0.7**
JMM	**Marumori**	**1.36**	**233**	P	**Pn**	**08 38 22.2**	**-0.5**
JMM				*e*S	**Sn**	**08 38 38.2**	**-1.3**
JRG	**Rokugo**	**1.38**	**301**	P	**Pn**	**08 38 24.1**	**+1.1**
JYK	**Kaneyama**	**1.43**	**280**	P	**Pn**	**08 38 24.4**	**+0.7**
JFK	**Kawauchi**	**1.67**	**218**	P	**Pn**	**08 38 26.3**	**-0.7**
JFK				*e*S	**Sn**	**08 38 45.6**	**-1.7**
ERM	**Erimo**	**3.40**	**13**	*e*Pn	**Pn**	**08 38 48.4**	**-2.3**
ERM				*e*Sn	**Sn**	**08 39 33.0**	**+3.2**
ERM	**Erimo**	**3.40**	**13**	*i* P	**Pn**	**08 38 51.9**	**+1.2**
MAJO	**Matsushiro**	**3.81**	**237**	*e*Pn	**Pn**	**08 38 58.5**	**+2.2**
MAJO	**Matsushiro**	**3.81**	**237**	*c i*P	**Pn**	**08 38 58.0**	**+1.7**
MAT	**Matsushiro**	**3.81**	**237**	P	**Pn**	**08 38 58.2**	**+1.9**
MAT				*e*S	**Sn**	**08 39 36.9**	**-3.0**
MJAR	**Matsushiro Arr**	**3.81**	**237**	Pn	**Pn**	**08 38 57.8**	**+1.4**
	20nm,0.3s,baz=39,slow=11,SNR=117						
MJAR				LR	LR	08 40 46.1	
	comp=Z,1μm,18.6s,baz=50,slow=44						
MJB9	**Matsu-Tunnel**	**3.81**	**237**	*e*Pn	**Pn**	**08 38 58.5**	**+2.2**
INU	**Inuyama**	**5.30**	**233**	*e*Pn	**Pn**	**08 39 19.4**	**+2.5**
ASAJ	**Asahikawa**	**5.43**	**3**	Pn	**Pn**	**08 39 20.1**	**+1.5**
	3.9nm,0.3s,baz=218,slow=18,SNR=15						
ASAJ				Sn	**Sn**	**08 40 20.3**	**+0.6**
	2.0nm,0.3s,baz=205,slow=15,SNR=2.5						
ASAJ	**Asahikawa**	**5.43**	**3**	*e*Pn	**Pn**	**08 39 20.6**	**+2.0**
ASAJ				Sn	**Sn**	**08 40 20.3**	**+0.6**
JHJ	**Hachijo jima 2**	**5.89**	**200**	Pn	**Pn**	**08 39 24.2**	**-0.7**
	23nm,0.3s,baz=310,slow=22,SNR=22						
JHJ				Sn	**Sn**	**08 40 24.7**	**-6.4**
	24nm,0.3s,baz=240,slow=20,SNR=3.9						
JHJ				LR	LR	08 41 45.1	
	comp=Z,398nm,20.5s,baz=348,slow=38						
YUK	**Yuzh-Kuril'sk**	**6.02**	**26**	*c i*P	**Pn**	**08 39 26.7**	**+0.1**
YUK				*i* S	**Sn**	**08 40 30.6**	**-3.6**
YUK				pmax	pmax		
	comp=N,79nm,0.3s						
YUK				pmax	pmax		
	comp=Z,174nm,0.3s						
YUK				pmax	pmax		
	comp=E,40nm,0.2s						
YUK				smax	smax		
	comp=N,720nm,0.6s						
YUK				smax	smax		
	comp=E,492nm,0.6s						
SHO	**Shikotan**	**6.25**	**33**	*e*P	**Pn**	**08 39 28.7**	**-1.1**
SHO				*i* S	**Sn**	**08 40 33.9**	**-6.0**
SHO				pmax	pmax		
	comp=N,15nm,0.3s						
SHO				pmax	pmax		
	comp=Z,50nm,0.3s						
SHO				smax	smax		
	comp=N,328nm,0.4s						
SHO				smax	smax		
	comp=E,279nm,0.5s						
TEY	**Ternei**	**7.57**	**329**	*e*P	Pn	08 39 53.8	+5.8
KUR	**Kuril'sk**	**7.79**	**31**	*e*P	**Pn**	**08 39 52.3**	**+1.4**
KUR				*e*S	**Sn**	**08 41 15.2**	**-2.6**
KUR				pmax	pmax		
	comp=E,22nm,0.5s						
KUR				pmax	pmax		
	comp=Z,40nm,0.5s						
KUR				pmax	pmax		
	comp=N,15nm,0.2s						
KUR				smax	smax		
	comp=N,128nm,0.4s						
KUR				smax	smax		
	comp=E,157nm,0.4s						
YSS	**Yuzh-Sakhalins**	**8.27**	**3**	*e*Pn	**Pn**	**08 39 59.3**	**+1.8**
YSS	**Yuzh-Sakhalins**	**8.27**	**3**	*e*P	**Pn**	**08 40 00.1**	**+2.6**
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS				MLR	MLR		
	comp=Z,400nm,14.0s						
USRK	**Ussuriysk Ar.**	**9.41**	**309**	Pn	**Pn**	**08 40 16.4**	**+3.2**
	comp=Z,1.3nm,0.3s,baz=121,slow=13,SNR=34						
USRK				LR	LR	08 43 43.8	
	comp=Z,722nm,19.3s,baz=124,slow=37						
JNU	**Nakatsue**	**10.71**	**242**	Pn	**Pn**	**08 40 32.8**	**+1.8**
	comp=Z,0.5nm,0.3s,baz=49,slow=4.3,SNR=11						
JNU				LR	LR	08 44 57.4	
	comp=Z,706nm,20.7s,baz=54,slow=39						
MDJ	**Mudanjiang**	**11.11**	**306**	P	Pn	08 40 24.2	-12
MDJ				sP		08 40 34.6	
MDJ				S	Sn	08 42 20.1	-19
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,40nm,2.8s						
MDJ				LR	LR		
	comp=N,340nm,19.1s						
MDJ				LR	LR		
	comp=E,580nm,18.7s						
MDJ				LR	LR		
	comp=Z,870nm,16.3s						
KSRS	**Korea Array**	**11.30**	**268**	Pn	**Pn**	**08 40 42.7**	**+3.7**
	comp=Z,0.4nm,0.3s,baz=83,slow=13,SNR=28						
KSRS				LR	LR	08 44 39.3	
	comp=Z,475nm,20.6s,baz=84,slow=35						
KSAR	**Wonju Array Be**	**11.33**	**268**	Pn	**Pn**	**08 40 42.7**	**+3.3**
KSAR	**Wonju Array Be**	**11.33**	**268**	P	**Pn**	**08 40 42.7**	**+3.3**
JCJ	**Chichijima**	**11.57**	**180**	Sn	Sn	08 42 40.1	-10
	baz=270,slow=20						
TJN	**Taejon**	**11.98**	**263**	*i* P	**Pn**	**08 40 48.9**	**+0.6**
KLR	**Kul'dur**	**12.92**	**328**	Pn	**Pn**	**08 41 01.6**	**+0.5**
	comp=Z,0.0nm,0.3s,baz=135,slow=11,SNR=4.0						
KLR				LR	LR	08 45 57.5	
	comp=Z,62nm,19.5s,baz=140,slow=37						
KLR	**Kul'dur**	**12.92**	**328**	*i* P	**Pn**	**08 40 57.7**	**-3.4**
CN2	**Changchun**	**13.57**	**297**	*e*P	Pn	08 41 04.5	-5.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SNY	**Shenyang**	**14.53**	**288**	⇑P	Pn	08 41 14.9	-8.2
SNY				S	Sn	08 43 34.9	-28
SNY				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SNY				pmax	pmax		
	comp=Z,10μm,3.8s						
SNY				LR	LR		
	comp=N,200nm,18.6s						
SNY				LR	LR		
	comp=E,560nm,18.4s						
SNY				LR	LR		
	comp=Z,750nm,21.0s						
JOW	**Kunigami**	**16.60**	**229**	LR	LR	08 48 17.9	
	comp=Z,92nm,21.7s,baz=304,slow=37						
PETK	**Petropavlovsk-**	**17.96**	**32**	LR	LR	08 50 13.3	
	comp=Z,80nm,18.4s,baz=217,slow=41						
ZEA	**Zeya**	**18.19**	**331**	*e*P	**P**	**08 42 08.8**	**-0.5**
ZEA				pmax	pmax		
	comp=N,35nm,1.0s						
ZEA				pmax	pmax		
	comp=E,24nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,41nm,1.0s						
ZEA				MLR	MLR		
	comp=E,400nm,16.0s						
ZEA				MLR	MLR		
	comp=Z,600nm,16.0s						
TIA	**Tai'an**	**20.02**	**271**	P	**P**	**08 42 28.7**	**-0.8**
TIA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TIA				LR	LR		
	comp=Z,96nm,17.6s						
TIA				LR	LR		
	comp=Z,95nm,22.5s						
TIA				LR	LR		
	comp=Z,120nm,22.0s						
NJ2	**Nanjing**	**20.10**	**258**	*e*P	**P**	**08 42 27.9**	**-2.5**
NJ2				pmax	pmax		
	comp=Z,26nm,0.7s						
BJI	**Beijing**	**20.12**	**282**	⇑*e*P	Pn	08 42 32.0	-0.6
BJI				pmax	pmax		
	comp=Z,16nm,0.5s						
BJI				pmax	pmax		
	comp=Z,41nm,4.7s						
BJI				LR	LR		
	comp=Z,260nm,12.9s						
BJI				LR	LR		
	comp=Z,560nm,17.1s						
MA2	**Magadan**	**21.61**	**12**	P	**P**	**08 42 48.0**	**+1.6**
	comp=Z,3.5nm,0.6s,baz=197,slow=11,SNR=4.5						
MA2	**Magadan**	**21.61**	**12**	*e*P	**P**	**08 42 48.1**	**+1.7**
	comp=Z,26nm,1.2s						
MA2	**Magadan**	**21.61**	**12**	*i* P	**P**	**08 42 47.3**	**+0.9**
HHC	**Hu-ho-hao-te**	**23.56**	**285**	*e*P	**P**	**08 43 03.9**	**-3.1**
HHC				S	S	08 47 01.3	-17
HHC				pmax	pmax		
	comp=Z,11nm,0.5s						
HHC				pmax	pmax		
	comp=Z,39nm,5.2s						
HHC				LR	LR		
	comp=Z,2μm,10.8s						
HHC				LR	LR		
	comp=Z,2μm,14.3s						
HHC				LR	LR		
	comp=Z,2μm,15.1s						
YAK	**Yakutsk**	**24.59**	**346**	*e*P	**P**	**08 43 16.1**	**-0.1**
	comp=Z,21nm,0.7s						
YAK	**Yakutsk**	**24.59**	**346**	*e*P	**P**	**08 43 15.6**	**-0.5**
YAK				*e**PP	**pP**	**08 43 23.8**	**-3.5**
YAK				*e*PPP	PPP	08 43 55.2	
YAK				*e*		08 46 59.4	
YAK				*e*S	**S**	**08 47 27.7**	**-6.5**
YAK				*e**SS	**sS**	**08 47 46.5**	**-6.2**
YAK				*e*SSS	SSS	08 48 23.3	
YAK				*e*		08 54 19.3	
YAK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.1s						
YAK				pmax	pmax		
	com

LZH sP sP 08 44 25.2 +0.3
LZH *e*PP **PnPn** **08 45 03.5 -4.7**
LZH pmax pmax
comp=Z,22nm,1.3s
LZH pmax pmax
comp=Z,85nm,5.0s
LZH LR LR
comp=Z,380nm,13.0s
LZH LR LR
comp=Z,390nm,13.2s
LZH LR LR
comp=Z,470nm,15.6s
GYA Guiyang 32.11 258⇑ *i*P **P** **08 44 24.3 +0.6**
GYA pP pP 08 44 35.2 +0.2
GYA PP **PnPn** **08 45 27.0 -3.3**
GYA S S 08 49 24.5 -9.0
GYA sS sS 08 49 43.6 -8.7
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,110nm,5.0s
GYA LR LR
comp=Z,440nm,17.0s
GYA LR LR
comp=Z,410nm,17.2s
GYA LR LR
comp=Z,420nm,17.4s
BILL Bilibino 32.27 17 *i*P **P** **08 44 25.6 +1.1**
BILL *i* 08 44 44.8
BILL pmax pmax
comp=Z,4.0nm,1.1s
CD2 Chengdu 32.30 268 P **P** **08 44 22.8 -2.4**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
GTA Gaotai 32.68 285 P **P** **08 44 29.4 +0.8**
GTA pP pP 08 44 38.0 -1.9
GTA sP sP 08 44 42.2 -2.6
GTA S **S** **08 49 33.4 -8.7**
GTA sS sS 08 49 50.5 -10
GTA pmax pmax
comp=Z,6.0nm,1.1s
GTA pmax pmax
comp=Z,64nm,6.5s
GTA LR LR
comp=Z,160nm,18.2s
GTA LR LR
comp=Z,400nm,18.9s
GTA LR LR
comp=Z,510nm,18.5s
TIXI Tiksi 33.72 352 P **P** **08 44 36.8 -0.3**
comp=Z,1.0nm,0.3s,baz=209,slow=5.5,SNR=4.4
TIXI Tiksi 33.72 352 *e*P **P** **08 44 37.3 +0.2**
comp=Z,2.1nm,0.6s
TIXI Tiksi 33.72 352 *i*P **P** **08 44 37.1 0.0**
TIXI pmax pmax
comp=Z,2.0nm,1.0s
KMI Kunming 35.82 260 P **P** **08 44 55.8 -0.3**
KMI pmax pmax
comp=Z,11nm,1.1s
KMI pmax pmax
comp=Z,79nm,3.7s
SIJI Sorong 40.63 197 P **P** **08 45 37.1 +0.9**
comp=Z,4.6nm,0.3s,baz=197,slow=19,SNR=3.1
SIJI pP **pP** **08 45 47.8 0.0**
comp=Z,7.6nm,0.7s,baz=17,slow=6.0,SNR=2.9
WMQ Urumqi 40.65 295 P **P** **08 45 37.5 +1.2**
WMQ pP pP 08 45 44.3 -3.5
WMQ sP sP 08 45 49.6 -3.1
WMQ pmax pmax
comp=Z,45nm,1.3s
WMQ pmax pmax
comp=Z,160nm,3.7s
WMQ LR LR
comp=Z,100nm,22.1s
WMQ LR LR
comp=Z,190nm,34.7s
WMQ LR LR
comp=Z,230nm,26.9s
ZAA0 Zalesovo Array 41.26 311 *e*P **P** **08 45 41.1 +0.1**
comp=Z,5.5nm,0.8s
ZALV Zalesovo Beam 41.26 311 P **P** **08 45 42.0 +1.0**
comp=Z,4.3nm,0.5s,baz=86,slow=7.5,SNR=8.8
ZALV LR LR 09 03 34.2
comp=Z,237nm,18.5s,baz=62,slow=37
NRIK Noril'sk 42.02 334 P **P** **08 45 47.7 +0.6**
comp=Z,1.9nm,0.5s,baz=111,slow=7.6,SNR=6.2
NRIK LR LR 09 04 12.1
comp=Z,293nm,19.3s,baz=112,slow=37
CMAR Chiang Mai Arr 42.51 254 P **P** **08 45 51.9 +0.2**
comp=Z,0.6nm,0.3s,baz=50,slow=8.4,SNR=3.9
CMAR LR LR 09 03 07.7
comp=Z,69nm,18.4s,baz=134,slow=36
MK01 Makanchi Array 43.76 301 *e*P **P** **08 46 01.8 +0.2**
MK31 Makanchi Array 43.76 301 *e*P **P** **08 46 01.8 +0.2**
MK31 Makanchi Array 43.76 301 *e*P **P** **08 46 01.8 +0.2**
MKAR Makanchi Array 43.76 301 P **P** **08 46 02.1 +0.5**
comp=Z,6.1nm,0.7s,baz=86,slow=8.3,SNR=23
MKAR LR LR 09 04 59.6
comp=Z,104nm,18.6s,baz=66,slow=37
MKAR Makanchi Array 43.76 301 *e*P **P** **08 46 02.0 +0.4**
comp=Z,48nm,0.9s
SVW2 Sparrevohn 43.85 38 *e*P P 08 46 11.9 +10
comp=Z,12nm,1.4s
MAKZ Makanchi 43.97 301 *e*P **P** **08 46 03.9 +0.7**
comp=Z,8.0nm,1.0s
MAKZ *e*pP **sP** **08 46 17.7 -2.0**
MAKZ Makanchi 43.97 301 *e*P **P** **08 46 03.9 +0.7**
MAKZ *e**PP **sP** **08 46 17.7 -2.0**
MAKZ pmax pmax
comp=Z,8.0nm,1.0s
KURK Kurchatov 45.40 307 *e*P **P** **08 46 14.6 +0.1**
comp=Z,24nm,0.9s
KURK Kurchatov 45.40 307 *i*P **P** **08 46 13.2 -1.3**
KURK pmax pmax
comp=Z,21nm,0.9s
KURBB Kurchatov Arra 45.47 307 P **P** **08 46 15.7 +0.6**
comp=Z,13nm,0.8s,baz=82,slow=8.3,SNR=53
KDAK Kodiak Island 45.47 43 P **P** **08 46 16.3 +1.3**
comp=Z,1.9nm,0.7s,baz=284,slow=4.2,SNR=3.3
MLY Manley 46.13 33 *e*P P 08 46 29.9 +10
comp=Z,8.1nm,0.9s
PDGK Podgornoye 46.54 297 P **P** **08 46 25.0 +1.2**
PDGK pmax pmax
comp=Z,9.0nm,1.0s
ODAN Odare 46.92 272 *e*P **P** **08 46 28.6 +1.5**
comp=Z,22nm,0.8s
RND Reindeer 46.98 35 P P 08 46 40.3 +13
RND pmax pmax
comp=Z,24nm,1.4s
JIRN Jiri 47.48 274 *e*P **P** **08 46 32.7 +1.1**
comp=Z,14nm,0.5s
RAMN Ramite 47.50 273 *e*P **P** **08 46 32.3 +0.7**
comp=Z,49nm,0.9s
GUN Gumba 47.60 275 *e*P **P** **08 46 33.0 +0.5**
comp=Z,9.1nm,0.3s
ILAR Eielson Array 47.78 33 P **P** **08 46 34.2 +1.2**
comp=Z,0.9nm,0.8s,baz=271,slow=6.0,SNR=11
ILAR pP **pP** **08 46 44.7 +0.1**
comp=Z,4.4nm,0.9s,baz=268,slow=6.2,SNR=15
KKN Kakani 48.12 275 *e*P **P** **08 46 37.2 +0.8**
comp=Z,23nm,0.7s
PKI Pulchoki 48.13 274 *e*P **P** **08 46 37.0 +0.4**
comp=Z,0.6nm,0.6s
PKIN Phulchoki 48.14 274 *e*P **P** **08 46 37.4 +0.8**
comp=Z,14nm,0.6s
DMN Daman 48.35 275 *e*P **P** **08 46 38.6 +0.4**
comp=Z,53nm,1.4s
GKN Gorkha 48.53 275 *e*P **P** **08 46 40.0 +0.6**
comp=Z,14nm,0.6s
DANN Dangsing 49.05 276 *e*P **P** **08 46 44.2 +0.6**
comp=Z,43nm,0.6s
KOLN Koldanda 49.44 276 *e*P **P** **08 46 47.4 +0.9**
comp=Z,5.7nm,0.4s
PYUN Piuthan 49.76 276 *e*P **P** **08 46 49.1 +0.2**
comp=Z,52nm,1.1s
BVAR Borovoye Array 49.91 311 P **P** **08 46 50.3 +0.8**
comp=Z,1.3nm,0.5s,baz=70,slow=9.7,SNR=5.6
BVAR LR LR 09 08 52.9
comp=Z,132nm,19.1s,baz=86,slow=37
OTUK Ortayu 49.95 305 P **P** **08 46 50.9 +1.0**
OTUK pmax pmax
comp=Z,5.0nm,0.7s
BRVK Borovoye 49.96 311 *i*P **P** **08 46 49.4 -0.5**
BRVK pmax pmax
comp=Z,4.0nm,1.0s
AAK Ala-Archa 50.24 297 *i*P **P** **08 46 52.0 -0.3**
AAK pmax pmax
comp=Z,2.0nm,0.8s
KSH Kashi 50.29 293 P **P** **08 46 57.1 +4.4**
KSH pP sP 08 47 06.8 -2.5
KSH pmax pmax
comp=Z,140nm,5.0s
HNR Honiara 50.66 157 LR LR 09 06 30.6
comp=Z,101nm,21.6s,baz=326,slow=34
MNAS Manas 51.67 298 P **P** **08 47 03.9 +0.8**
MNAS pmax pmax
comp=Z,5.0nm,0.8s
SFK Sufi-Kurgan 51.87 295 P **P** **08 47 06.2 +1.5**
SFK pmax pmax
comp=Z,5.0nm,1.1s
KK31 Karatay Array 52.82 299 *e*P **P** **08 47 12.0 +0.6**
KK31 *e*pP **pP** **08 47 23.9 +0.6**
KK31 Karatay Array 52.82 299 *e*P **P** **08 47 12.0 +0.6**
KK31 *e**PP **pP** **08 47 23.9 +0.6**
KKAR Karatay Array 52.82 299 *e*P **P** **08 47 11.9 +0.5**
KKAR *e*pP **pP** **08 47 23.9 +0.6**
KKAR Karatay Array 52.82 299 *e*P **P** **08 47 11.9 +0.5**
KKAR *e**PP **pP** **08 47 23.9 +0.6**
SMRI Semarang 54.22 220 *e*P **P** **08 47 26.5 +4.6**
comp=Z,70nm,0.5s
SVE Sverdlovsk 54.31 318⇓ *e*P **P** **08 47 20.0 -2.1**
SVE pmax pmax
comp=Z,15nm,0.9s
NIL Nilore 54.67 287 *e*P **P** **08 47 24.6 -0.6**
comp=Z,17nm,1.0s
NIL Nilore 54.67 287 *e*P **P** **08 47 24.6 -0.6**
NIL pmax pmax
comp=Z,17nm,1.0s
ARU Arti 55.52 318 *e*P **P** **08 47 30.9 +0.1**
ARU *e*pP **pP** **08 47 42.0 -0.8**
ARU Arti 55.52 318 *d i*P **P** **08 47 30.7 -0.1**
ARU 08 48 28.6
ARU S **S** **08 55 06.1 -6.9**
ARU pmax pmax
comp=Z,13nm,1.2s
ARU MLR MLR
comp=Z,256nm,18.0s
ABKAR Akbulak array 57.34 310 *e*P **P** **08 47 44.2 +0.4**
AKTO Aktyubinsk 58.02 311 P **P** **08 47 49.1 +0.5**
comp=Z,3.0nm,0.8s,baz=67,slow=10,SNR=6.4
AKTO pP **pP** **08 48 01.3 +0.7**
comp=Z,3.0nm,0.7s,baz=62,slow=11,SNR=3.9
WRAB Tennant Creek 58.78 189 *e*P **P** **08 47 54.4 +0.3**
comp=Z,8.4nm,0.8s
WRAB Tennant Creek 58.78 189 *e*P **P** **08 47 54.4 +0.3**
WRAB pmax pmax
comp=Z,8.0nm,0.8s
WRA Warramunga Arr 58.79 189 P **P** **08 47 54.1 -0.1**
comp=Z,5.1nm,0.8s,baz=7.1,slow=7.3,SNR=23
WRA pP **pP** **08 48 05.5 -0.7**
comp=Z,12nm,0.9s,baz=7.1,slow=7.0,SNR=22
PRGR Permogore 59.70 327 *e*P **P** **08 48 00.7 +0.6**
PRGR pmax pmax
comp=Z,13nm,0.8s
YKA Yellowknife Ar 62.08 31 P **P** **08 48 17.0 +0.8**
comp=Z,1.1nm,1.0s,baz=290,slow=6.7,SNR=4.2
YKA pP **pP** **08 48 27.9 -0.3**
comp=Z,0.8nm,0.6s,baz=301,slow=6.4,SNR=5.3
YKA Yellowknife Ar 62.08 31 *i*P **P** **08 48 17.8 +1.6**
YKA pmax pmax
comp=Z,1.0nm,1.0s
ASAR Alice Springs 62.51 189 P **P** **08 48 19.9 +0.4**
comp=Z,1.7nm,0.8s,baz=5.4,slow=5.6,SNR=9.0
ASAR pP **pP** **08 48 31.4 -0.3**
comp=Z,4.2nm,0.8s,baz=18,slow=5.5,SNR=16
ARCES ARCESS Array B 62.66 339 LR LR 09 18 52.9
comp=Z,47nm,22.0s,baz=73,slow=39
KLMR Klimovskoe 62.68 327 *e*P **P** **08 48 18.2 -2.1**
KLMR pmax pmax
comp=Z,9.0nm,1.2s
KLMR Klimovskoe 62.68 327 *e*P **P** **08 48 18.2 -2.1**
KLMR AMP 08 48 24.4
comp=Z,9.0nm,1.2s
DAG Danmarks Havn 64.17 355 *i*P **P** **08 48 30.4 +0.5**
comp=Z,5.5nm,1.1s
DAG Danmarks Havn 64.17 355 *i*P **P** **08 48 30.4 +0.5**
DAG pmax pmax
comp=Z,6.0nm,1.1s
DZM Mont Dzumac 64.59 155 *e*LR LR 09 08 22.4
comp=Z,251nm,26.5s
DZM Mont Dzumac 64.59 155 LR LR 09 15 38.4
comp=Z,113nm,19.1s,baz=82,slow=35
FIA1 FINESS Array S 67.62 332 *e*P **P** **08 48 53.0 +0.7**
FINES FINESS Array B 67.63 332 P **P** **08 48 52.9 +0.6**
comp=Z,6.8nm,0.9s,baz=59,slow=7.4,SNR=14
FINES pP **pP** **08 49 04.9 +0.4**
comp=Z,4.1nm,0.7s,baz=45,slow=11,SNR=6.2
FINES LR LR 09 20 36.8
comp=Z,79nm,18.4s,baz=62,slow=38
AFI Afiamalu 67.75 131 LR LR 09 11 25.4
comp=Z,54nm,20.4s,baz=163,slow=30
SUMG Summit 69.03 0 *i*P **P** **08 49 03.1 +1.6**
comp=Z,7.1nm,1.0s
SUMG Summit 69.03 0 *i*P **P** **08 49 03.1 +1.6**
SUMG pmax pmax
comp=Z,7.0nm,1.0s
VSU Vasula 69.33 330 *i*P **P** **08 49 03.2 +0.2**
VSU pmax pmax
comp=Z,19nm,0.9s
GOF Gofitskoye 69.44 312 *c e*P **P** **08 49 01.5 -2.5**
NCK Nalchik 69.99 310 *i*P **P** **08 49 08.3 +0.9**
NCK pmax pmax
comp=Z,8.0nm,0.7s
KIV Kislovodsk 70.27 311 *e*P **P** **08 49 09.2 -0.1**
comp=Z,29nm,1.2s
KIV Kislovodsk 70.27 311 *e*P **P** **08 49 09.0 -0.2**
KIV pmax pmax
comp=Z,22nm,1.1s
KIV MLR MLR
comp=Z,48nm,17.0s
KBZ Khabaz 70.28 311 P **P** **08 49 09.8 +0.8**
comp=Z,6.4nm,0.9s,baz=47,slow=2.8,SNR=14
KBZ LR LR 09 24 47.3
comp=Z,87nm,18.3s,baz=70,slow=40
NEY Neytrino 70.66 310 *i*P **P** **08 49 11.2 -0.5**
NEY pmax pmax
comp=Z,1.0nm,0.9s
GNI Garni 71.19 307 *i*P **P** **08 49 14.4 -0.6**
GNI pmax pmax
comp=Z,35nm,1.0s
HFS Hagfors 72.82 336 P **P** **08 49 24.9 +0.7**
comp=Z,4.0nm,0.8s,baz=28,slow=6.7,SNR=6.2
HFS LR LR 09 24 20.6
comp=Z,137nm,18.0s,baz=72,slow=38
NB2 NORSAR Subarra 72.89 337 P **P** **08 49 24.9 +0.3**
comp=Z,1.4nm,0.8s,baz=37,slow=5.9
NOA NORSAR Array B 72.89 337 P **P** **08 49 25.4 +0.7**
comp=Z,4.3nm,0.9s,baz=34,slow=3.1,SNR=4.6
NOA LR LR 09 24 03.5
comp=Z,111nm,21.8s,baz=55,slow=38
KVN Kaiserville 73.28 53 P pP 08 49 42.0 +2.2
AKASG Malin Array Be 73.35 322 P **P** **08 49 27.6 +0.1**
comp=Z,3.8nm,0.8s,baz=39,slow=8.5,SNR=15
AKASG LR LR 09 24 38.1
comp=Z,129nm,18.2s,baz=235,slow=38
AKBB Malin Array Si 73.35 322 *e*P **P** **08 49 27.7 +0.2**
comp=Z,9.2nm,0.9s
AKBB Malin Array Si 73.35 322 *e*P **P** **08 49 27.7 +0.2**
AKBB pmax pmax
comp=Z,9.0nm,0.9s
KIEV Kiev 73.36 322 *e*P **P** **08 49 27.6 +0.1**
comp=Z,8.3nm,0.9s
KIEV Kiev 73.36 322 *c i*P **P** **08 49 27.3 -0.2**
KIEV pmax pmax
comp=Z,8.0nm,1.0s
NVAR Mina Array Bea 73.52 54 P **P** **08 49 31.3 +2.3**
comp=Z,0.2nm,0.5s,baz=294,slow=6.8,SNR=2.9
NVAR pP **pP** **08 49 42.6 +1.3**
comp=Z,3.6nm,0.9s,baz=289,slow=5.6,SNR=12
NVAR LR LR 09 14 33.6
comp=Z,24nm,21.6s,baz=292,slow=30
SFJD Kangerlussuaq 74.18 5 LR LR 09 22 36.7
comp=Z,93nm,20.9s,baz=80,slow=36
KLNR Kaliningrad 74.61 329 *i*P **P** **08 49 35.2 +0.5**
KLNR pmax pmax
comp=Z,19nm,1.1s
DUG Dugway, Tooele 75.83 50 P **pP** **08 49 54.5 0.0**
DUG pmax pmax
comp=Z,4.0nm,0.8s
PDAR Pinedale Array 76.08 46 P **P** **08 49 45.0 +1.3**
comp=Z,0.8nm,0.6s,baz=234,slow=1.1,SNR=8.0
PDAR pP **pP** **08 49 56.5 +0.4**
comp=Z,1.5nm,0.6s,baz=263,slow=3.5,SNR=12
BUR08 Bucovina Ar. S 77.37 322 *e*P **P** **08 49 51.8 +1.1**
BUR04 Bucovina Ar. S 77.38 322 *e*P **P** **08 49 51.5 +0.7**
KNB Kanab 77.82 52 P **pP** **08 50 09.3 +3.4**
KNB pmax pmax
comp=Z,9.0nm,1.3s
VRI Vrincioaia 77.85 320 P **P** **08 49 56.1 +2.8**
VRI pmax pmax
comp=Z,52nm,1.5s
OJC Ojcow 77.99 326 *e*P **P** **08 49 55.3 +1.2**
OJC Ojcow 77.99 326 *e*P **P** **08 49 55.2 +1.2**
comp=Z,10nm,1.0s
OJC Ojcow 77.99 326 *e*P **P** **08 49 55.3 +1.2**
BRTR Keskin Array B 78.20 312 P **P** **08 49 56.0 +0.4**
comp=Z,0.9nm,0.7s,baz=111,slow=5.4,SNR=7.3
BRTR Keskin Array B 78.20 312 *i*P **P** **08 49 56.4 +0.9**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
NIE Niedzica 78.36 326 *e*P **P** **08 49 57.5 +1.4**
NIE Niedzica 78.36 326 *e*P **P** **08 49 57.5 +1.4**
OKC Ostrava-Krasne 78.99 327 AMS AMS 09 27 50.0
KSP Ksiaz 79.00 328 *e*P **P** **08 50 00.9 +1.3**
KSP Ksiaz 79.00 328 *e*P **P** **08 50 00.9 +1.3**
MORC Moravsky Berou 79.29 327 *e*P **P** **08 50 02.6 +1.3**
comp=Z,18nm,1.0s
MORC Moravsky Berou 79.29 327 *e*P **P** **08 50 02.6 +1.3**
MORC pmax pmax
comp=Z,18nm,1.0s
MORC Moravsky Berou 79.29 327 *e*P **P** **08 50 02.1 +0.8**
DPC Dobruska-Polom 79.37 328 *e*P **P** **08 50 03.7 +2.0**
DPC Dobruska-Polom 79.37 328 *e*P **P** **08 50 03.7 +2.0**
UPC Upice 79.38 328 AMS AMS 09 27 50.0
comp=Z,100nm,18.4s
BRG Berggiesshubel 79.93 330 *e*P **P** **08 50 05.2 +0.6**
comp=Z,4.3nm,1.0s
BRG *e* 08 50 20.2
comp=Z,3.3nm,0.8s
BRG Berggiesshubel 79.93 330 *e*P **P** **08 50 05.2 +0.6**
BRG *e* 08 50 20.2
BRG pmax pmax
comp=Z,4.0nm,1.0s
JAVC Velka Javorina 79.93 326 *e*P **P** **08 50 06.7 +1.9**
CLL Collm 79.95 330⇑ *i*P **P** **08 50 05.2 +0.5**
comp=Z,6.0nm,0.9s
CLL *e*pPcP 08 50 29.0
CLL Collm 79.95 330 *e*P **P** **08 50 05.2 +0.5**
comp=Z,5.9nm,0.9s
CLL Collm 79.95 330 *e*P **P** **08 50 05.3 +0.5**
CLL pmax pmax
comp=Z,6.0nm,0.9s
VRAC Vranov 80.05 327 *e*P **P** **08 50 06.4 +1.1**
KRUC Moravsky 80.32 327 *e*P **P** **08 50 07.7 +0.9**
GOPC GO Pecny, Ondr 80.33 329 AMS AMS 09 28 30.0
comp=Z,100nm,13.4s
RAR Rarotonga 80.66 127 LR LR 09 23 03.6
comp=Z,56nm,19.6s,baz=253,slow=34
CONA Conrad Observa 81.42 327 *e*P **P** **08 50 14.4 +1.6**
comp=Z,3.5nm,1.0s
KHC Kasperske Hory 81.44 329 *e*P **P** **08 50 13.9 +1.1**
KHC *e*pP **pP** **08 50 27.4 +2.2**
KHC *e*sP **sP** **08 50 33.5 +3.6**
KHC Kasperske Hory 81.44 329 *e*P **P** **08 50 13.9 +1.1**
comp=Z,4.1nm,1.2s
KHC Kasperske Hory 81.44 329 *e*P **P** **08 50 13.9 +1.1**
KHC pmax pmax
comp=Z,4.0nm,1.2s
MMAI Mount Meron Ar 81.49 306 LR LR 09 29 25.5
comp=Z,62nm,21.8s,baz=165,slow=38
GERES GERESS Array B 81.61 328 P **P** **08 50 14.1 +0.3**
comp=Z,1.6nm,0.9s,baz=40,slow=4.4,SNR=12
EKA Eskdalemuir Ar 81.77 341 LR LR 09 30 38.9
comp=Z,55nm,19.4s,baz=250,slow=39
VTS Vitosha 81.95 319 *e*P **P** **08 50 17.1 +1.3**
comp=Z,5.9nm,0.9s
VTS Vitosha 81.95 319 *e*P **P** **08 50 17.1 +1.3**
VTS pmax pmax
comp=Z,6.0nm,0.9s
ARSA Arzberg 82.09 327 *e*P **P** **08 50 17.5 +1.2**
comp=Z,4.6nm,1.2s
ECSD EROS Data Cent 82.25 39 *e*P **P** **08 50 17.9 +0.8**
comp=Z,2.7nm,0.8s
DIVS Divibare 82.44 322 *e*P **P** **08 50 19.0 +0.8**
comp=Z,7.6nm,1.2s
SOKA Soboth 82.75 326 *e*P **P** **08 50 20.5 +0.7**
comp=Z,12nm,1.1s
ANMO Albuquerque 83.07 50 *e*P **P** **08 50 23.0 +1.2**
comp=Z,3.6nm,1.1s
ANMO Albuquerque 83.07 50 *e*P **P** **08 50 23.0 +1.2**
ANMO pmax pmax
comp=Z,4.0nm,1.1s
MOTA Moosalm 83.86 329 *e*P **P** **08 50 25.2 -0.4**
comp=Z,6.2nm,1.1s
RETA Reutte 83.89 329 *e*P **P** **08 50 26.4 +0.8**
comp=Z,12nm,1.3s
TTG Podgorica 84.05 321 *e*P **P** **08 50 27.1 +0.7**
comp=Z,13nm,1.0s
TTG Podgorica 84.05 321 *e*P **P** **08 50 27.1 +0.7**
TTG pmax pmax
comp=Z,13nm,1.0s
LIT Litokhoron 84.13 318 *e*P **P** **08 50 27.7 +0.8**
comp=Z,9.1nm,0.9s
LIT Litokhoron 84.13 318 *e*P **P** **08 50 27.7 +0.8**
LIT pmax pmax
comp=Z,9.0nm,0.9s
FETA Feichten 84.28 329 *e*P **P** **08 50 28.1 +0.4**
comp=Z,9.6nm,1.3s
PMOR Pomariorio Ree 84.31 114 *e*T T 10 23 17.6
comp=Z,13nm,0.2s
DAVA Damuels 84.40 330 *e*P **P** **08 50 28.9 +0.6**
comp=Z,7.3nm,1.2s
FUORN Ofenpass-Fuorn 84.79 329 *e*P **P** **08 50 31.6 +1.1**
comp=Z,9.9nm,1.0s
PPT Papeete 84.85 117 LR LR 09 29 53.4
comp=Z,69nm,18.2s,baz=52,slow=37
PPT2 Papeete2 84.86 117 *e*LR LR 09 18 07.4
comp=Z,128nm,24.2s
PPT2 Papeete2 84.86 117 *e*T T 10 23 59.7
comp=Z,4.8nm,0.3s
AGG Agios Georgios 85.00 317 *e*P **P** **08 50 33.8 +2.4**
comp=Z,20nm,1.2s
AGG Agios Georgios 85.00 317 *e*P **P** **08 50 33.8 +2.4**
AGG pmax pmax
comp=Z,20nm,1.2s
TIAR Tiarei 85.00 117 *e*T T 10 24 09.4
comp=Z,1.5nm,0.3s
TAOE Nuku Hiva Isla 86.00 105 *e*S S 09 01 34.5 +27
comp=Z,90nm,28.1s
TAOE Nuku Hiva Isla 86.00 105 *e*LR LR 09 18 11.2
comp=Z,112nm,25.9s
IDI Anoyia 86.29 313 P **P** **08 50 39.2 +1.4**
comp=Z,2.4nm,0.6s,baz=23,slow=7.7,SNR=3.5
TXAR Lajitas Array 88.64 53 P **P** **08 50 50.8 +1.5**
comp=Z,0.4nm,0.7s,baz=290,slow=3.6,SNR=7.9
TXAR pP **pP** **08 51 02.9 +1.0**
comp=Z,1.8nm,0.7s,baz=288,slow=3.3,SNR=14
TBI Tubuai 88.87 121 *e*T T 10 28 58.4
comp=Z,27nm,0.3s
MIAR Mount Ida 90.70 43 *e*P **P** **08 51 00.0 +1.3**
comp=Z,3.6nm,0.9s
MIAR Mount Ida 90.70 43 *e*P **P** **08 51 00.0 +1.3**
MIAR pmax pmax
comp=Z,4.0nm,0.9s
ESDC Sonseca Array 96.06 334 LR LR 09 39 40.8
comp=Z,80nm,18.1s,baz=70,slow=38
SNAA Sanae 142.51 197 PKhKP PKPpre 08 57 24.5
comp=Z,0.9nm,0.8s,baz=180,slow=4.0,SNR=5.3
LPAZ La Paz 145.33 58 PKPbc **PKPab** **08 57 35.9 +1.2**
comp=Z,0.8nm,0.5s,baz=22,slow=2.3,SNR=6.4
LPAZ pPKPbc pPKPbc 08 57 47.4 -0.1
comp=Z,2.0nm,0.7s,baz=356,slow=1.1,SNR=4.5

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*IDC **10** 08:39:07.5±1.0, 55°.92S×27°.57W, h0km, mb3.9/4, mb1 4.1/5, mb1mx3.9/29, mbtmp4.0/5, ML4.7/1, Error ellipse: s-maj=45.8km s-min=22.0km az=80.0*
*ISCJB **10** 08:39:19.5±1.0, 56°.1S±0°.1×27°.3W±0°.5, h112km, mb3.7/4, Error ellipse: s-maj=39.6km s-min=15.4km az=159.0*
ISC 10 08:39:21.0±1.0, 56°.1S±0°.2×27°.5W±0°.3, h112km, n9, σ0°70/9, mb3.7/4, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA3	Neumayer Olymp	17.03	160	P	P	08 43 11.0	-0.9
VNA2	Neumayer--Watz baz=316,slow=13	17.24	158	P	P	08 43 14.2	0.0
SNAA	Sanae	18.79	156	P	P	08 43 30.6	-0.6
SNAA	Sanae	18.79	156	P	P	08 43 30.6	-0.6

2.4nm,0.3s,baz=309,slow=15,SNR=99
QSPA South Pole Qui 34.18 180 P **P 08 45 55.6 +0.3**
1.3nm,0.4s,baz=154,slow=5.9,SNR=13
VNDA Vanda 46.55 183 P **P 08 47 37.2 +0.6**
1.3nm,0.6s,baz=191,slow=7.6,SNR=14
LPAZ La Paz 50.26 306 P **P 08 48 06.2 -0.1**
0.6nm,0.9s,baz=170,slow=8.1,SNR=5.7
TORD Torodi Ar. Bea 73.15 30 P **P 08 50 39.5 +0.4**
0.3nm,0.4s,baz=210,slow=6.1,SNR=2.4
ILAR Eielson Array 150.01 312 PKPbc **PKPbc 08 58 55.9 -0.8**
0.9nm,0.6s,baz=121,slow=1.8,SNR=11

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*CSEM **10** 08:47:24.7, 43°.32N×12°.48E, h8km, MD1.5/3*
ROM 10 08:47:24.7±0.1, 43°.317N±0°.002×12°.476E±0°.004, h8km, Md1.5/3, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MURB	**Monte Urbino**	**0.07**	**147**	P	Pg	08 47 26.9	+0.2
MURB				S	Sg	08 47 28.5	+0.4
MURB	**Monte Urbino**	**0.07**	**147**	P	Pg	08 47 26.9	+0.2
MURB				S	Sg	08 47 28.5	+0.4
MURB				END			
MURB				END			
ATVO	**AVT- Monte Val**	**0.08**	**322**	P	Pg	08 47 27.2	+0.3
ATVO				S	Sg	08 47 29.1	+0.6
ATVO	**AVT- Monte Val**	**0.08**	**322**	P	Pg	08 47 27.1	+0.2
ATVO				S	Sg	08 47 29.1	+0.6
ATVO				END			
ATVO				END			
ATVA	**AVT- Monte Val**	**0.14**	**255**	P	Pg	08 47 28.0	+0.2
ATVA				S	Sg	08 47 32.1	+2.1
ATVA	**AVT- Monte Val**	**0.14**	**255**	P	Pg	08 47 29.0	+1.2
ATVA				S	Sg	08 47 32.1	+2.1
ATPC	**Poggio Castell**	**0.16**	**355**	P	Pg	08 47 28.7	+0.5
ATPC				S	Sg	08 47 31.6	+1.0
ATPC	**Poggio Castell**	**0.16**	**355**	P	Pg	08 47 28.7	+0.6
ATPC				S	Sg	08 47 31.6	+1.0
ATPC				END			
ATPC				END			
PIEI	**Pieia**	**0.22**	**11**	P	Pg	08 47 29.6	+0.4
PIEI				S	Sg	08 47 32.9	+0.6
PIEI	**Pieia**	**0.22**	**11**	P	Pg	08 47 29.6	+0.4
PIEI				S	Sg	08 47 32.9	+0.6

DJA 10 08:55:16.3±0.4, 4°S±6°×12°8E±°, h13km±3km, M3.8/11, mB5.8/2, mb4.8/4, MLv3.3/11, Mw(mB)5.4/2, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.27**	**104**	P	Pb	08 55 23.1	0.0
AAI				S	Sb	08 55 28.0	+0.4
NLAI	**Namlea**	**0.91**	**295**	P	Pb	08 55 34.0	0.0
MSAI	**Masohi**	**1.03**	**75**	P	Pb	08 55 35.4	-0.7
BNDI	**Bandanaira**	**2.16**	**115**	P	Pn	08 55 52.8	+0.7
SANI	**Sanana**	**2.49**	**309**	P	Pn	08 55 57.2	+0.7
LBMI	**Labuha**	**2.99**	**352**	P	Pn	08 56 02.8	-0.7
FAKI	**Fak Fak**	**4.37**	**81**	P	Pn	08 56 22.2	-0.2
KDI	**Kendari**	**5.31**	**266**	P	Pn	08 56 34.7	-0.7
	35nm,0.9s,0.2nm						
LUWI	**Luwuk**	**5.75**	**296**	P	Pn	08 56 41.7	+0.2
KMPI	**Kaimana, Papua**	**5.76**	**91**	P	Pn	08 56 41.9	+0.3

MEX 10 09:10:07.1±0.3, 15°.91N×95°.95W, h6km, MD3.8, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.20**	**228**	*i* P	Pg	09 10 10.8	-0.3
HUIG				*e*S	Sg	09 10 13.7	-0.1
VHO	**Vista Hermosa**	**1.38**	**327**	*e*P	Pn	09 10 29.4	-3.8
VHO				*e*S	Sb	09 10 46.2	-5.3

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*ISCJB **10** 09:14:00.9±1.0, 36°.0S±0°.1×104°.1W±0°.3, h10km, mb3.8/6, MS3.5/1, Error ellipse: s-maj=34.2km s-min=18.0km az=162.1*
*IDC **10** 09:14:01.1±1.3, 36°.01S×103°.98W, h0km, mb3.9/6, mb1 4.3/6, mb1mx3.9/34, mbtmp3.9/6, MS3.5/1, Ms1 3.6/1, ms1mx2.9/31, Error ellipse: s-maj=44.7km s-min=23.6km az=61.0*
ISC 10 09:14:03.0±1.3, 36°.0S±0°.2×103°.9W±0°.3, h10km, n9, σ0561/9, mb3.9/6, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**26.51**	**110**	P	**P**	**09 19 41.6**	**+1.0**
	2.5nm,0.9s,baz=280,slow=6.2,SNR=4.0						
LPAZ	**La Paz**	**37.36**	**68**	P	**P**	**09 21 16.0**	**-0.6**
	1.8nm,1.1s,baz=248,slow=5.4,SNR=4.0						
LPAZ				LR	LR	09 32 21.9	
	comp=Z,72nm,19.8s,baz=198,slow=29						
VNA3	**Neumayer Olymp**	**57.73**	**158**	P	**P**	**09 23 53.4**	**-0.1**
VNA2	**Neumayer--Watz**	**58.54**	**157**	P	**P**	**09 23 59.4**	**+0.2**
	baz=269,slow=6.1						
SNAA	**Sanae**	**59.64**	**159**	P	**P**	**09 24 06.4**	**-0.5**
SNAA	**Sanae**	**59.64**	**159**	P	**P**	**09 24 06.1**	**-0.8**
	0.8nm,0.7s,baz=231,slow=6.5,SNR=5.8						
TXAR	**Lajitas Array**	**64.96**	**0**	P	**P**	**09 24 43.0**	**0.0**
	0.7nm,0.8s,baz=181,slow=9.6,SNR=10						
NVAR	**Mina Array Bea**	**75.22**	**348**	P	**P**	**09 25 46.0**	**+0.1**
	1.4nm,0.8s,baz=183,slow=9.3,SNR=9.1						
PDAR	**Pinedale Array**	**78.53**	**356**	P	**P**	**09 26 04.7**	**+0.3**
	0.9nm,0.7s,baz=155,slow=6.3,SNR=9.0						

JMA 10 09:15:23.5±0.5, 34°.79N×142°.70E, h76km, M3.4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**1.43**	**265**	P	Pn	09 15 47.6	+0.5
BSO1				*e*S	Sn	09 16 06.2	+1.1
CHOJ	**Chosi**	**1.76**	**302**	P	Pn	09 15 53.2	+1.1
BSO3	**Boso 3**	**1.80**	**271**	P	Pn	09 15 53.8	+1.4
BSO4	**Boso 4**	**1.95**	**277**	P	Pn	09 15 56.2	+1.7
JYT	**Yasato**	**2.50**	**306**	P	Pn	09 16 02.5	+0.6
JHO	**Hitachi**	**2.51**	**317**	P	Pn	09 16 01.8	-0.4
JFK	**Kawauchi**	**2.97**	**331**	P	Pn	09 16 07.5	-0.8
JFK				S	Sn	09 16 40.6	-2.3
JOD2	**Odawara 2**	**3.00**	**280**	S	Sn	09 16 44.0	+0.3
JAG	**Ashikaga**	**3.11**	**303**	P	Pn	09 16 11.3	+1.1
JFT	**Otama**	**3.33**	**326**	P	Pn	09 16 13.8	+0.6
JFT				S	Sn	09 16 50.7	-0.9
JYN	**Shimob**	**3.48**	**283**	P	Pn	09 16 16.7	+1.4
JYN				S	Sn	09 16 56.2	+0.8
JMK	**Ichinoseki**	**4.32**	**344**	S	Sn	09 17 13.6	-2.2

MEX 10 09:25:53.2±0.5, 16°.45N×98°.23W, h20km±32km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.15**	**344**	*e*P	Pn	09 26 11.2	-3.1
TLIG				*i* S	Sb	09 26 24.8	-4.4
VHO	**Vista Hermosa**	**1.56**	**66**	*i* P	Pn	09 26 17.0	-3.0
VHO				*e*S	Sn	09 26 35.7	-4.1
HUIG	**Huatulco**	**2.15**	**108**	*e*P	Pn	09 26 17.1	-11
HUIG				*e*S	Sn	09 26 46.8	-7.2

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*NIED **10** 09:28:00, 20°.50N×121°.40E, h35km, Mw4.5 Best double couple: M0:7.11000×10^15 NP1:φ=11.00000°, δ=32.00000°, λ=96.00000°. NP2:φ=184.00000°, δ=59.00000°, λ=86.00000°.*
*ISCJB **10** 09:28:14.0±0.1, 20°.09N±0°.01×121°.57E±0°.03, h40km, mb4.6/111, MS3.9/34, Error ellipse: s-maj=3.7km s-min=1.9km az=13.6*
*MOS **10** 09:28:14.4±1.0, 20°.09N×121°.49E, h45km, mb4.7/27, Error ellipse: s-maj=11.0km s-min=5.8km az=99.5*
*MAN **10** 09:28:14.1, 20°.18N×121°.38E, h30km, mb5.2, ML4.2, MS4.4*
*NEIC **10** 09:28:16.0±0.5, 20°.03N×121°.53E, h45km±4km, mb4.7/60, Error ellipse: s-maj=5.4km s-min=3.4km az=90.0*
NEIC Felt [II PIVS] at Uyugan and [I PIVS] at Basco.
*IDC **10** 09:28:15.1±2.9, 20°.02N×121°.53E, h40km±26km, mb4.1/30, mb1 4.2/33, mb1mx4.1/70, mbtmp4.3/33, ML4.1/3, MS3.8/30, Ms1 3.8/30, ms1mx3.6/62, Error ellipse: s-maj=15.7km s-min=8.8km az=76.0*
*BJI **10** 09:28:19.6, 20°.45N×121°.05E, h46km, mb4.4/34, mB4.5/25, ML3.8/2, Ms4.1/30, Ms7 4.0/29*
ISC 10 09:28:15.6±0.3, 20°.12N±0°.03×121°.50E±0°.04, h40km, n293, σ1947/301, mb4.6/109, MS3.9/34, 9C-3D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGCP	**Mt. Cagua**	**1.94**	**164**	*e*P	**Pn**	**09 28 46.9**	**+0.8**
SGCP				*e*S	**Sn**	**09 29 11.8**	**+2.6**
ABRA	**Dolores**	**2.57**	**197**	*e*P	**Pn**	**09 28 54.3**	**-0.5**
ABRA				*e*S	**Sn**	**09 29 25.3**	**+0.6**
TWG	**Pinlang**	**2.71**	**352**	*e*Pn	**Pn**	**09 28 58.3**	**+1.6**
CAUP	**Cauayan**	**3.17**	**174**	*e*P	**Pn**	**09 29 04.6**	**+1.6**
CAUP				*e*S	Sn	09 29 55.7	+16
YULB	**Yu-li**	**3.26**	**357**	*e*Pn	**Pn**	**09 29 05.7**	**+1.5**
TPUB	**Ta-pu**	**3.27**	**346**	*e*Pn	**Pn**	**09 29 05.1**	**+0.8**
SSLB	**Suanglung**	**3.68**	**352**	*e*Pn	**Pn**	**09 29 11.0**	**+0.9**
BOLP	**Bolinao**	**4.01**	**202**	*e*P	**Pn**	**09 29 14.9**	**+0.4**
BOLP				*e*S	**Sn**	**09 29 58.2**	**-2.2**
NACB	**Ninganchiao**	**4.03**	**1**	*e*Pn	**Pn**	**09 29 15.9**	**+1.0**
BALP	**Baler**	**4.36**	**179**	*e*P	**Pn**	**09 29 20.7**	**+1.3**
BALP				*e*S	**Sn**	**09 30 11.5**	**+2.7**
HATJ	**Hateruma jima**	**4.46**	**28**	P	**Pn**	**09 29 21.5**	**+0.8**
HATJ				S	**Sn**	**09 30 10.0**	**-1.4**
JYNG	**Yonagunijimaku**	**4.51**	**17**	P	**Pn**	**09 29 21.8**	**+0.4**
JYNG				*e*S	**Sn**	**09 30 12.8**	**+0.1**
YHNB	**Yeheng**	**4.53**	**359**	*e*Pn	**Pn**	**09 29 23.1**	**+1.3**
YOJ	**Yonaguni jima**	**4.54**	**18**	*e*Pn	**Pn**	**09 29 22.9**	**+1.1**
YOJ	**Yonaguni jima**	**4.54**	**18**	P	**Pn**	**09 29 22.9**	**+1.1**
YOJ				S	**Sn**	**09 30 11.5**	**-1.9**
YOJ	**Yonaguni jima**	**4.54**	**18**	*e*P	**Pn**	**09 29 22.9**	**+1.1**
PCPH	**Palayan**	**4.55**	**185**	*e*P	**Pn**	**09 29 23.1**	**+1.2**
PCPH				*e*S	**Sn**	**09 30 17.3**	**+3.7**
SCZP	**Santa Cruz**	**4.58**	**200**	*e*P	**Pn**	**09 29 24.3**	**+2.0**
SCZP				*e*S	**Sn**	**09 30 16.3**	**+2.0**
IRIF	**Iriomote-Funau**	**4.67**	**26**	P	**Pn**	**09 29 24.1**	**+0.4**
IRIF				*e*S	**Sn**	**09 30 16.3**	**-0.4**
JKRS	**Kuro-shima**	**4.71**	**29**	P	**Pn**	**09 29 25.8**	**+1.6**
JKRS				*e*S	**Sn**	**09 30 18.0**	**+0.4**
TATO	**Taipei**	**4.83**	**360**	*e*Pn	**Pn**	**09 29 30.2**	**+4.4**
JIJ	**Ishigaki jima**	**4.88**	**30**	P	**Pn**	**09 29 27.0**	**+0.5**
JIJ				*e*S	**Sn**	**09 30 19.6**	**-2.2**
JISG	**Ishigakijimahi**	**5.15**	**30**	P	**Pn**	**09 29 30.6**	**+0.4**
JISG				S	**Sn**	**09 30 25.5**	**-2.9**
JTJ	**Tarama**	**5.39**	**33**	P	**Pn**	**09 29 34.7**	**+1.3**
JTJ				*e*S	**Sn**	**09 30 33.0**	**-1.2**
QZH	**Quanzhou**	**5.50**	**331**	P	**Pn**	**09 29 32.1**	**-2.9**
QZH				S	**Sn**	**09 30 29.6**	**-7.4**
QZH				LR	LR		
	comp=N,990nm,11.8s						
QZH				LR	LR		
	comp=E,850nm,17.0s						
QZH				LR	LR		
	comp=Z,900nm,10.6s						
JIRB	**Irabujima**	**5.79**	**35**	P	**Pn**	**09 29 40.8**	**+1.9**
JIRB				*e*S	**Sn**	**09 30 42.6**	**-1.5**
JOGS	**Gusukube**	**5.86**	**37**	P	**Pn**	**09 29 42.9**	**+2.9**
JOGS				*e*S	**Sn**	**09 30 47.1**	**+1.1**
JIKM	**Ikemajima**	**5.90**	**35**	S	**Sn**	**09 30 46.3**	**-0.6**
TGY	**Tagaytay City**	**6.01**	**185**	Pn	**Pn**	**09 29 42.8**	**+0.7**
	101nm,0.3s,baz=43,slow=19,SNR=2.3						
TGY				LR	LR	09 32 36.0	
	comp=Z,643nm,18.4s,baz=16,slow=44						
GQP	**Guinayangan**	**6.25**	**172**	*e*P	**Pn**	**09 29 47.2**	**+1.9**
JKE	**Kume jima 2**	**7.86**	**37**	P	**Pn**	**09 30 09.1**	**+1.7**
JKE				*e*S	**Sn**	**09 31 33.3**	**-1.8**
GZH	**Guangzhou**	**8.14**	**293**	P	Pn	09 30 06.3	-4.9
JOW	**Kunigami**	**9.12**	**42**	Pn	**Pn**	**09 30 23.4**	**-1.4**
	14nm,0.3s,baz=344,slow=12,SNR=85						
JOW	**Kunigami**	**9.12**	**42**	*e*Pn	**Pn**	**09 30 23.9**	**-0.8**
JOW	**Kunigami**	**9.12**	**42**	P	**Pn**	**09 30 25.9**	**+1.1**
JTK	**Tokunoshima**	**10.23**	**40**	P	**Pn**	**09 30 42.0**	**+2.2**
QIZ	**Qiongzhong**	**11.04**	**266**	P	**Pn**	**09 30 51.7**	**+0.7**
QIZ				S	**Sn**	**09 32 55.6**	**+2.3**
QIZ				LR	LR		
	comp=N,470nm,13.7s						
QIZ				LR	LR		
	comp=E,560nm,15.7s						
QIZ				LR	LR		
	comp=Z,650nm,18.6s						
NJ2	**Nanjing**	**12.12**	**349**	*e*P	**Pn**	**09 31 06.0**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
NJ2				LR	LR		
	comp=N,410nm,14.1s						
NJ2				LR	LR		
	comp=E,410nm,16.8s						
NJ2				LR	LR		
	comp=Z,620nm,16.8s						
WHN	**Wuhan**	**12.22**	**330**	P	Pn	09 31 12.2	+5.1
WHN				LR	LR		
	comp=N,2μm,15.7s						
WHN				LR	LR		
	comp=E,550nm,11.7s						
WHN				LR	LR		
	comp=Z,2μm,14.2s						
DAV	**Davao City (W)**	**13.56**	**162**	LR	LR	09 37 05.9	
	comp=Z,505nm,20.6s,baz=347,slow=39						
KKM	**Kota Kinabalu**	**14.90**	**201**	*e*Pn	**P**	**09 31 49.9**	**+1.1**
GYA	**Guiyang**	**15.01**	**298**	P	**Pn**	**09 31 43.5**	**-1.7**
GYA				pP	pP	09 31 56.0	-3.9
GYA				PP	**sP**	**09 32 00.2**	**-4.8**
GYA				S	**Sn**	**09 34 32.6**	**+2.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GYA				LR	LR		
	comp=N,460nm,13.0s						
GYA				LR	LR		
	comp=E,440nm,14.2s						
GYA				LR	LR		
	comp=Z,480nm,14.4s						
JNU	**Nakatsue**	**15.41**	**31**	Pn	**Pn**	**09 31 51.0**	**+0.7**
	0.2nm,0.3s,baz=164,slow=17,SNR=3.0						
JNU				LR	LR	09 37 52.7	
	comp=Z,196nm,20.2s,baz=147,slow=37						
JNU	**Nakatsue**	**15.41**	**31**	*e*Pn	**P**	**09 31 53.2**	**-1.1**
	27nm,0.9s						
TJN	**Taejon**	**16.99**	**16**	*ce*P	**P**	**09 32 11.4**	**-0.3**
XAN	**Xi'an**	**17.80**	**324**	P	**Pn**	**09 32 19.2**	**-1.1**
XAN				pmax	pmax		
	comp=Z,10.0nm,1.4s						
XAN				pmax	pmax		
	comp=Z,110nm,5.0s						
KMI	**Kunming**	**18.01**	**290**	P	**P**	**09 32 29.7**	**+6.3**
KMI				pP	pP	09 32 32.0	-1.3
KMI				S	**S**	**09 35 49.8**	**+1.6**
KMI				sP	PcP	09 36 02.8	-54
KMI				LR	LR		
	comp=N,230nm,12.9s						
KMI				LR	LR		
	comp=E,520nm,16.1s						
KMI				LR	LR		
	comp=Z,520nm,15.6s						
KS15	**Wonju Array Si**	**18.13**	**17**	*e*P	**Pn**	**09 32 25.1**	**+0.7**
KSAR	**Wonju Array Be**	**18.13**	**17**	P	**Pn**	**09 32 25.2**	**+0.9**
KSAR	**Wonju Array Be**	**18.13**	**17**	P	**Pn**	**09 32 25.3**	**+0.9**
KSRS	**Korea Array**	**18.16**	**17**	P	**Pn**	**09 32 25.2**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=196,slow=12,SNR=12						
KS01	**Wonju Array Si**	**18.17**	**17**	*e*P	**Pn**	**09 32 25.5**	**+0.7**
CD2	**Chengdu**	**19.25**	**307**	P	**Pn**	**09 32 39.6**	**+1.6**
CD2				pP	sP	09 32 50.8	-1.0
CD2				pmax	pmax		
	comp=Z,40nm,0.9s						
CD2				pmax	pmax		
	comp=Z,180nm,7.9s						
CD2				LR	LR		
	comp=Z,800nm,15.6s						
CD2				LR	LR		
	comp=Z,950nm,16.7s						
MRSI	**Marisa**	**19.53**	**179**	P	**P**	**09 32 39.2**	**-0.6**
KMSI	**Cibinong**	**19.58**	**173**	P	**P**	**09 32 40.3**	**0.0**
MPSI	**Mapaga**	**19.72**	**185**	P	**P**	**09 32 41.8**	**-0.1**
SBUM	**Sibu**	**19.76**	**208**	*e*P	**P**	**09 32 41.9**	**-0.5**
	comp=Z,46nm,1.3s						
PBKT	**Sadao Pong**	**19.80**	**263**	*e*P	**P**	**09 32 43.0**	**+0.2**
	comp=Z,7.8nm,0.9s						
BJI	**Beijing**	**20.37**	**348**	*e*P	**P**	**09 32 49.5**	**+0.7**
BJI				pP	**pP**	**09 33 00.5**	**+1.7**
BJI				S	**S**	**09 36 35.8**	**+1.0**
BJI				pmax	pmax		
	comp=Z,22nm,0.8s						
BJI				LR	LR		
	comp=Z,440nm,18.6s						
BJI				LR	LR		
	comp=Z,390nm,16.4s						
INU	**Inuyama**	**20.42**	**39**	*e*P	**P**	**09 32 49.7**	**+0.3**
	comp=Z,19nm,0.9s						
JHJ	**Hachijo jima 2**	**20.81**	**48**	LR	LR	09 39 47.0	
	comp=Z,122nm,20.7s,baz=336,slow=33						
SMKI	**Samarinda**	**20.87**	**192**	P	**P**	**09 32 54.5**	**+0.2**
SGKI	**Sangatta, Kali**	**20.88**	**191**	P	**P**	**09 32 55.1**	**+0.7**
APSI	**Ampana**	**20.90**	**180**	P	**P**	**09 32 54.6**	**-0.1**
PCI	**Palu**	**20.96**	**185**	P	**P**	**09 32 56.3**	**+1.0**
	comp=Z,69nm,0.9s						
LUWI	**Luwuk**	**21.07**	**176**	P	**P**	**09 32 55.0**	**-1.5**
CMAR	**Chiang Mai Arr**	**21.35**	**269**	P	**P**	**09 32 59.5**	**-0.1**
	comp=Z,2.9nm,0.7s,baz=73,slow=9.1,SNR=9.0						
CMAR				PcP	**PcP**	**09 37 02.8**	**0.0**
	comp=Z,0.5nm,0.3s,baz=42,slow=0.9,SNR=4.5						
CMAR				LR	LR	09 41 10.4	
	comp=Z,242nm,20.6s,baz=76,slow=36						
LBMI	**Labuha**	**21.45**	**163**	P	**P**	**09 32 59.6**	**-1.0**
KSM	**Kuching**	**21.52**	**212**	*e*P	**P**	**09 32 59.7**	**-1.7**
	comp=Z,20nm,0.5s						
BKB	**Balikpapan**	**21.72**	**193**	P	**P**	**09 33 02.4**	**-1.1**
MTKI	**Muara Teweh, K**	**21.91**	**198**	P	**P**	**09 33 06.8**	**+1.3**
MAJO	**Matsushiro**	**21.94**	**38**	*i* P	**P**	**09 33 07.5**	**+1.7**
MAJO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MAT	**Matsushiro**	**21.94**	**38**	P	**P**	**09 33 08.7**	**+2.9**
MJAR	**Matsushiro Arr**	**21.94**	**38**	P	**P**	**09 33 06.7**	**+0.9**
	comp=Z,1.3nm,0.6s,baz=136,slow=26,SNR=6.5						
LZH	**Lanzhou**	**22.20**	**319**	*e*P	**P**	**09 33 09.0**	**+0.3**
LZH				pP	pP	09 33 19.5	+0.7
LZH				sP	sP	09 33 25.9	+2.0
LZH				PP	**PnPn**	**09 33 37.5**	**+5.5**
LZH				*e*S	**S**	**09 37 06.2**	**-4.8**
LZH				pmax	pmax		
	comp=Z,26nm,1.0s						
LZH				pmax	pmax		
	comp=Z,90nm,4.9s						
LZH				LR	LR		
	comp=Z,680nm,11.9s						
LZH				LR	LR		
	comp=Z,690nm,12.1s						
LZH				LR	LR		
	comp=Z,850nm,14.0s						
HHC	**Hu-ho-hao-te**	**22.33**	**340**	*e*P	**P**	**09 33 12.8**	**+2.8**
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,5.8s						
HHC				LR	LR		
	comp=Z,2μm,15.1s						
HHC				LR	LR		
	comp=Z,1μm,18.2s						
HHC				LR	LR		
	comp=Z,2μm,15.5s						
SANI	**Sanana**	**22.47**	**168**	P	**P**	**09 33 10.6**	**-0.9**
SIJI	**Sorong**	**22.95**	**154**	P	**P**	**09 33 15.2**	**-1.4**
	comp=Z,27nm,0.5s,baz=329,slow=20,SNR=12						
SIJI				LR	LR	09 44 19.0	
	comp=Z,99nm,18.5s,baz=220,slow=42						
TTSI	**Tana Toraja**	**23.08**	**184**	P	**P**	**09 33 18.1**	**+0.2**
NLAI	**Namlea**	**23.86**	**166**	P	**P**	**09 33 23.4**	**-2.0**
	comp=Z,90nm,0.9s						
SPSI	**Sidrap Palu**	**24.00**	**184**	P	**P**	**09 33 25.8**	**-0.9**
	comp=Z,19nm,1.0s						
FAKI	**Fak Fak**	**25.21**	**154**	*e*P	**P**	**09 33 36.7**	**-1.1**
	comp=Z,28nm,0.9s						
BKSI	**Bulukumba**	**25.32**	**183**	P	**P**	**09 33 37.8**	**-0.9**
	comp=Z,18nm,0.7s						
MDJ	**Mudanjiang**	**25.34**	**14**	P	**P**	**09 33 39.6**	**+1.0**
MDJ				S	**S**	**09 38 05.0**	**+2.8**
MDJ				sS	sS	09 38 25.5	+5.1
MDJ				ScP	**ScP**	**09 40 44.9**	**-1.9**
MDJ				ScS	**ScS**	**09 44 33.0**	**-2.5**
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.8s						
MDJ				pmax	pmax		
	comp=Z,110nm,5.3s						
MDJ				LR	LR		
	comp=Z,280nm,15.9s						
MDJ				LR	LR		
	comp=Z,120nm,11.1s						
MDJ				LR	LR		
	comp=Z,380nm,17.1s						
USRK	**Ussuriysk Ar.**	**25.55**	**18**	P	**P**	**09 33 41.3**	**+0.7**
	comp=Z,3.8nm,0.8s,baz=215,slow=8.5,SNR=4.1						
BAKI	**Biak**	**25.57**	**144**	P	**P**	**09 33 39.6**	**-1.4**
GTA	**Gaotai**	**26.78**	**321**	*e*P	**P**	**09 33 54.8**	**+2.8**
GTA				pP	pP	09 34 05.2	+2.3
GTA				sP	sP	09 34 09.3	+1.5
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,91nm,5.1s						
GTA				LR	LR		
	comp=Z,250nm,16.1s						
GTA				LR	LR		
	comp=Z,290nm,21.0s						
GTA				LR	LR		
	comp=Z,280nm,19.9s						
UWJI	**Ujung Watu**	**28.34**	**203**	P	**P**	**09 34 06.7**	**+0.8**
	comp=Z,33nm,1.3s,comp=Z,5um						
KCSI	**Kotacane, Aceh**	**28.41**	**238**	P	**P**	**09 34 08.7**	**+2.1**
MMRI	**Maumere**	**28.59**	**178**	P	**P**	**09 34 08.2**	**+0.1**
EDFI	**Ende, Flores**	**28.69**	**180**	P	**P**	**09 34 08.3**	**-0.8**
SRBI	**Singaraja**	**28.70**	**193**	P	**P**	**09 34 09.2**	**+0.1**
BLJI	**Banyuglugur**	**28.76**	**196**	P	**P**	**09 34 10.4**	**+0.8**
MNSI	**Mandailing Nat**	**28.79**	**231**	P	**P**	**09 34 11.4**	**+1.5**
PLAI	**Plampang**	**29.00**	**188**	P	**P**	**09 34 12.1**	**+0.3**
TWSI	**Taliwang, Sumb**	**29.04**	**189**	P	**P**	**09 34 12.1**	**0.0**
	comp=Z,14nm,0.7s						
NGJI	**Ngawi**	**29.05**	**201**	P	**P**	**09 34 12.2**	**0.0**
HIA	**Hailar**	**29.11**	**358**	*i* P	**P**	**09 34 13.5**	**+1.0**
HIA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
JAY	**Jayapura**	**29.35**	**138**	LR	LR	09 44 08.4	
	comp=Z,264nm,21.1s,baz=326,slow=33						
WBSI	**Waikabubak, Su**	**29.65**	**184**	P	**P**	**09 34 17.4**	**-0.2**
WOJI	**Wonogiri, Jawa**	**29.67**	**202**	P	**P**	**09 34 17.4**	**-0.3**
ASAJ	**Asahikawa**	**29.69**	**32**	P	**P**	**09 34 18.3**	**+0.6**
	comp=Z,5.2nm,0.9s,baz=257,slow=18,SNR=2.4						
ULN	**Ulaanbaatar**	**30.05**	**340**	*ce*P	**P**	**09 34 21.6**	**+0.6**
ULN				pmax	pmax		
	comp=Z,7.0nm,1.7s						
KLR	**Kul'dur**	**30.18**	**13**	P	**P**	**09 34 22.4**	**+0.4**
	comp=Z,0.2nm,0.7s,baz=222,slow=7.1,SNR=6.6						
KLR				LR	LR	09 48 51.0	
	comp=Z,26nm,18.1s,baz=202,slow=41						
KLR	**Kul'dur**	**30.18**	**13**	*

MK31 Makanchi Array 41.52 319 *eP* **P 09 35 59.6 +0.6**
MKAR Makanchi Array 41.52 319 P **P 09 35 59.5 +0.5**
comp=Z,3.4nm,0.8s,baz=113,slow=9.5,SNR=20
MKAR LR LR 09 55 25.1
comp=Z,144nm,18.6s,baz=111,slow=39
MKAR Makanchi Array 41.52 319 *eP* **P 09 35 59.8 +0.8**
comp=Z,28nm,0.8s
MKAR Makanchi Array 41.52 319*c i P* **P 09 35 59.5 +0.5**
MKAR pmax pmax
comp=Z,4.0nm,0.7s
MAKZ Makanchi 41.72 319 *eP* **P 09 36 01.6 +1.0**
comp=Z,4.5nm,0.8s
MAKZ Makanchi 41.72 319 *eP* **P 09 36 01.6 +1.0**
MAKZ pmax pmax
comp=Z,5.0nm,0.8s
WRAB Tennant Creek 41.75 162 *eP* **P 09 35 59.4 -1.7**
comp=Z,31nm,0.8s
WRAB Tennant Creek 41.75 162*c i P* **P 09 35 57.5 -3.6**
WRAB pmax pmax
comp=Z,33nm,0.8s
WRA Warramunga Arr 41.76 162 P **P 09 35 59.1 -2.1**
comp=Z,23nm,0.4s,baz=342,slow=9.1,SNR=308
WRA Warramunga Arr 41.76 162 *i P* **P 09 35 56.5 -4.7**
WRA pmax pmax
comp=Z,23nm,0.4s
WB2 Warramunga Arr 41.76 162 *eP* **P 09 35 59.6 -1.6**
comp=Z,38nm,0.7s
PDGK Podgornoye 41.98 313 P **P 09 36 03.9 +0.9**
PDGK pmax pmax
comp=Z,5.0nm,0.9s
H11N1 WAKE ISLAND Hy 42.58 82 T T 10 21 35.0
baz=278,slow=75,SNR=104
H11N2 WAKE ISLAND Hy 42.58 82 T T 10 21 33.9
baz=278,slow=75,SNR=72
H11S3 WAKE ISLAND Hy 42.58 84 T T 10 21 25.4
baz=280,slow=75,SNR=80
H11S1 WAKE ISLAND Hy 42.59 84 T T 10 21 26.2
baz=280,slow=75,SNR=102
H11N3 WAKE ISLAND Hy 42.59 82 T T 10 21 30.0
baz=278,slow=75,SNR=65
H11S2 WAKE ISLAND Hy 42.60 84 T T 10 21 26.7
baz=280,slow=75,SNR=90
PEA0B Petropavlovsk- 43.11 31 *eP* **P 09 36 13.3 +1.5**
comp=Z,51nm,1.4s
PETK Petropavlovsk- 43.11 31 P **P 09 36 11.1 -0.8**
comp=Z,3.1nm,0.7s,baz=266,slow=4.0,SNR=9.7
PETK LR LR 09 54 21.3
comp=Z,65nm,20.9s,baz=233,slow=36
PETK Petropavlovsk- 43.11 31 *eP* **P 09 36 12.3 +0.5**
PETK Petropavlovsk- 43.11 31 *eP* **P 09 36 12.3 +0.5**
KSH Kashi 43.45 307 P P 09 36 19.9 +5.0
KSH pP sP 09 36 33.0 +2.0
KSH pmax pmax
comp=Z,200nm,4.2s
ZALV Zalesovo Beam 43.84 329 P **P 09 36 17.8 +0.2**
comp=Z,5.6nm,0.8s,baz=122,slow=7.9,SNR=4.9
ZALV LR LR 09 55 56.5
comp=Z,111nm,19.4s,baz=65,slow=38
ZALV Zalesovo Beam 43.84 329 *eP* **P 09 36 17.4 -0.3**
ZALV Zalesovo Beam 43.84 329 *eP* **P 09 36 17.4 -0.3**
NRN Naryn 43.89 309 *eP* **P 09 36 21.6 +2.9**
comp=Z,11nm,1.1s
NRN Naryn 43.89 309 *eP* **P 09 36 21.6 +2.9**
NRN pmax pmax
comp=Z,11nm,1.1s
AS31 Alice Springs 45.17 164 *eP* **P 09 36 28.0 -0.7**
comp=Z,16nm,0.4s
ASAR Alice Springs 45.17 164 P **P 09 36 27.7 -1.0**
comp=Z,22nm,0.4s,baz=346,slow=6.9,SNR=596
AS01 Alice Springs 45.18 164 *eP* **P 09 36 28.1 -0.7**
MNAS Manas 46.67 310 P **P 09 36 41.7 +1.2**
MNAS pmax pmax
comp=Z,4.0nm,0.9s
CTA Charters Tower 46.74 147 P **P 09 36 39.3 -1.8**
comp=Z,11nm,0.8s,baz=328,slow=9.9,SNR=11
CTAO Charters Tower 46.74 147 *eP* **P 09 36 40.7 -0.4**
comp=Z,11nm,0.9s
CTAO Charters Tower 46.74 147 *eP* **P 09 36 40.7 -0.4**
CTAO pmax pmax
comp=Z,11nm,0.9s
HNR Honiara 47.90 124 LR LR 09 57 17.6
comp=Z,96nm,18.5s,baz=306,slow=36
OTUK Ortayu 48.31 317 P **P 09 36 54.5 +1.5**
OTUK pmax pmax
comp=Z,5.0nm,0.9s
FORT Forrest 51.00 173 *eP* **P 09 37 13.5 -0.1**
comp=Z,154nm,0.6s
BVAR Borovoye Array 51.03 323 P **P 09 37 14.3 +0.7**
comp=Z,1.3nm,0.7s,baz=108,slow=9.5,SNR=6.9
BVAR PcP **PcP 09 38 28.6 -0.6**
comp=Z,1.6nm,0.5s,baz=109,slow=4.0,SNR=4.8
BRVK Borovoye 51.10 323 *eP* **P 09 37 15.0 +0.8**
comp=Z,4.1nm,0.8s
BRVK Borovoye 51.10 323*ceP* **P 09 37 14.3 +0.2**
BRVK pmax pmax
comp=Z,4.0nm,0.8s
TIXI Tiksi 51.72 3 P **P 09 37 18.2 -0.2**
comp=Z,3.4nm,0.7s,baz=175,slow=4.2,SNR=8.2
TIXI Tiksi 51.72 3 *eP* **P 09 37 18.7 +0.3**
comp=Z,4.7nm,0.9s
TIXI Tiksi 51.72 3*ceP* **P 09 37 17.2 -1.2**
TIXI pmax pmax
comp=Z,8.0nm,1.2s
NWAO Narrogin (SRO) 52.91 184 P **P 09 37 25.8 -1.9**
comp=Z,20nm,0.7s,baz=235,slow=7.8,SNR=13
NWAO Narrogin (SRO) 52.91 184 *eP* **P 09 37 27.3 -0.4**
comp=Z,87nm,1.5s
NWAO Narrogin (SRO) 52.91 184 *eP* **P 09 37 27.3 -0.4**
NWAO pmax pmax
comp=Z,87nm,1.5s
NRIK Noril'sk 53.39 346 P **P 09 37 31.6 +0.7**
comp=Z,9.8nm,0.7s,baz=123,slow=7.9,SNR=6.6
NRIK LR LR 10 02 16.1
comp=Z,196nm,20.1s,baz=176,slow=38
EIDS Eidsvold 53.59 146 *eP* **P 09 37 32.6 -0.3**
comp=Z,13nm,0.6s
BBOO Buckleboo 54.44 165 *eP* **P 09 37 39.4 +0.4**
comp=Z,12nm,0.9s
STKA Stephens Creek 55.17 159 P **P 09 37 43.5 -0.8**
comp=Z,6.4nm,0.6s,baz=341,slow=5.8,SNR=26
STKA Stephens Creek 55.17 159 *eP* **P 09 37 44.1 -0.2**
comp=Z,1.6nm,0.7s
STKA Stephens Creek 55.17 159 *eP* **P 09 37 44.1 -0.2**
STKA pmax pmax
comp=Z,2.0nm,0.7s
BILL Bilibino 55.40 19 *eP* **P 09 37 45.5 0.0**
comp=Z,6.0nm,0.7s
BILL Bilibino 55.40 19*c i P* **P 09 37 45.1 -0.4**
BILL *i* 09 38 43.6
BILL pmax pmax
comp=Z,4.0nm,0.8s
ABKAR Abkulak array 56.52 316 *eP* **P 09 37 56.0 +2.2**
GEYT Alibeck 57.16 303 LR LR 10 06 24.3
comp=Z,82nm,19.4s,baz=85,slow=40
SVE Sverdlovsk 57.51 325⇓*eP* **P 09 37 59.3 -1.3**
SVE pmax pmax
comp=Z,12nm,1.2s
AKTO Aktyubinsk 57.91 318 LR LR 10 04 39.3
comp=Z,104nm,18.6s,baz=101,slow=38
ARU Arti 58.54 325 P **P 09 38 08.2 +0.3**
comp=Z,2.5nm,0.4s,baz=121,slow=1.0,SNR=6.1
ARU Arti 58.54 325 *eP* **P 09 38 08.9 +1.0**
comp=Z,15nm,1.4s
ARU Arti 58.54 325 *i P* **P 09 38 06.4 -1.5**
ARU pmax pmax
comp=Z,4.0nm,0.9s
DZM Mont Dzumac 60.71 131 P **P 09 38 22.4 -1.0**
comp=Z,6.1nm,1.0s,baz=284,slow=14,SNR=4.8
DZM LR LR 10 00 30.0
comp=Z,114nm,21.5s,baz=81,slow=32
TOO Toolangi 61.67 158 P **P 09 38 30.7 +1.1**
TOO pmax pmax
comp=Z,30nm,0.9s
SDPT Sand Point 66.92 37 *eP* **P 09 39 02.4 -1.3**
comp=Z,80nm,1.4s
TAU Tasmania Unive 67.08 160 *eP* **P 09 39 06.9 +2.2**
comp=Z,33nm,1.4s
TAU Tasmania Unive 67.08 160 *eP* **P 09 39 06.9 +2.2**
TAU pmax pmax
comp=Z,33nm,1.4s
GNI Garni 67.38 306 LR LR 10 13 16.1
comp=Z,54nm,18.4s,baz=64,slow=40
CHGN Chignik 68.03 36 *eP* **P 09 39 09.6 -1.1**
comp=Z,7.7nm,0.8s
KBZ Khabaz 68.27 310 LR LR 10 13 22.8
comp=Z,82nm,18.3s,baz=112,slow=40
KIV Kislovodsk 68.39 310 *eP* **P 09 39 09.0 -4.4**
KIV pmax pmax
comp=Z,12nm,1.0s
KIV MLR MLR
comp=Z,70nm,17.0s
KLMR Klimovskoe 68.75 329 *eP* **P 09 39 14.1 -1.0**
KLMR pmax pmax
comp=Z,12nm,1.1s
KLMR Klimovskoe 68.75 329 *eP* **P 09 39 14.2 -0.9**
KLMR AMP 09 39 31.4
comp=Z,12nm,1.1s
SVW2 Sparrevohn 69.20 31 *eP* **P 09 39 19.1 +1.2**
IM3 Indian Mountai 69.68 26 *eP* **P 09 39 21.1 +0.3**
RAYN Ar Rayn 69.85 288 *eP* **P 09 39 23.7 +1.0**
comp=Z,5.4nm,1.1s
RAYN Ar Rayn 69.85 288 *eP* **P 09 39 23.7 +1.0**
RAYN pmax pmax
comp=Z,5.0nm,1.1s
PPLA Purkeypile 70.63 29 *eP* **P 09 39 25.9 -1.0**
OHAK Old Harbor 70.76 35 *eP* **P 09 39 27.2 -0.4**
MLY Manley 71.02 27 *eP* **P 09 39 30.7 +1.5**
comp=Z,5.5nm,0.8s
BPAW Bear Paw Mtn. 71.03 28 *eP* **P 09 39 30.1 +1.0**
comp=Z,4.8nm,0.8s
SKT Skwentna 71.04 30 *eP* **P 09 39 29.1 -0.1**
TOLK Toolik Lake Re 71.06 23 *eP* **P 09 39 30.6 +1.3**
KDAK Kodiak Island 71.06 34 P **P 09 39 29.0 -0.3**
comp=Z,9.8nm,0.7s,baz=118,slow=2.1,SNR=18
KDAK Kodiak Island 71.06 34 *eP* **P 09 39 29.4 +0.1**
KDAK Kodiak Island 71.06 34 *eP* **P 09 39 29.4 +0.1**
TRF Thorofare Moun 71.42 28 *eP* **P 09 39 32.6 +0.9**
comp=Z,4.1nm,0.8s
SUA Susitna One 71.48 30 *eP* **P 09 39 32.3 +0.3**
comp=Z,9.1nm,0.8s
CNPM China Poot 71.51 32 *eP* **P 09 39 32.7 +0.6**
comp=Z,8.7nm,0.8s
BRLK Bradley Lake 71.66 32 *eP* **P 09 39 33.4 +0.4**
comp=Z,11nm,0.8s
MCK McKinley 71.98 28 *eP* **P 09 39 34.8 -0.1**
comp=Z,9.4nm,1.0s
MCK McKinley 71.98 28 *eP* **P 09 39 34.8 -0.1**
MCK pmax pmax
comp=Z,9.0nm,1.0s
RC01 Rabbit Creek A 72.02 31 *eP* **P 09 39 35.0 -0.2**
comp=Z,5.3nm,1.0s
RND Reindeer 72.06 28 *eP* **P 09 39 35.6 +0.1**
comp=Z,9.4nm,0.8s
RND Reindeer 72.06 28 *eP* **P 09 39 35.6 +0.1**
RND pmax pmax
comp=Z,9.0nm,0.8s
MDM Murphy Dome 72.09 27 *eP* **P 09 39 36.5 +1.0**
comp=Z,6.1nm,0.9s
WRH Wood River Hil 72.22 27 *eP* **P 09 39 36.6 +0.3**
comp=Z,4.4nm,0.8s
PMR Palmer 72.23 30 *eP* **P 09 39 36.3 0.0**
comp=Z,4.6nm,0.8s
PMR Palmer 72.23 30 *eP* **P 09 39 36.3 0.0**
PMR pmax pmax
comp=Z,5.0nm,0.8s
SEW Seward 72.32 32 *eP* **P 09 39 36.9 +0.1**
comp=Z,6.2nm,1.1s
SML Sawmill 72.56 30 *eP* **P 09 39 39.0 +0.6**
comp=Z,6.1nm,0.8s
IL1 Eielson Array 72.69 27 *eP* **P 09 39 38.0 -1.1**
ILAR Eielson Array 72.69 27 P **P 09 39 38.1 -0.9**
comp=Z,1.0nm,0.6s,baz=265,slow=4.7,SNR=17
DHY Denali Highway 72.78 28 *eP* **P 09 39 40.4 +0.6**
comp=Z,3.0nm,0.8s
KEV Kevo 72.84 339 *eP* **P 09 39 41.0 +1.1**
comp=Z,23nm,1.4s
KEV Kevo 72.84 339 *eP* **P 09 39 41.0 +1.1**
KEV pmax pmax
comp=Z,23nm,1.4s
SCM Sheep Creek Mo 73.03 30 *eP* **P 09 39 42.0 +0.8**
comp=Z,9.8nm,0.8s
SCM Sheep Creek Mo 73.03 30 *eP* **P 09 39 42.0 +0.8**
SCM pmax pmax
comp=Z,10.0nm,0.8s
ARCES ARCESS Array B 73.40 339 P **P 09 39 44.1 +0.9**
comp=Z,3.3nm,0.8s,baz=63,slow=8.7,SNR=6.6
ARCES LR LR 10 16 24.7
comp=Z,38nm,20.0s,baz=114,slow=39
SPA0 Spitsbergen Ar 73.50 348 *eP* **P 09 39 44.6 +0.9**
SPITS Spitsbergen Ar 73.50 348 P **P 09 39 44.0 +0.4**
comp=Z,2.6nm,0.7s,baz=108,slow=12,SNR=6.9
SPITS LR LR 10 17 11.5
comp=Z,70nm,18.8s,baz=20,slow=40
KLU Klutina 73.75 30 *eP* **P 09 39 46.3 +0.8**
comp=Z,7.3nm,1.3s
DIV Divide 73.90 30 *eP* **P 09 39 48.2 +1.8**
comp=Z,4.5nm,0.8s
HARP HAARP 73.91 29 *eP* **P 09 39 47.5 +1.2**
comp=Z,7.4nm,0.6s
SCRK Sand Creek 74.08 27 *eP* **P 09 39 47.4 -0.1**
comp=Z,6.0nm,1.4s
BMRM Bremner River 74.49 30 *eP* **P 09 39 51.4 +1.7**
comp=Z,6.9nm,0.8s
RAGM Ragged Mountai 74.59 31 *eP* **P 09 39 51.2 +0.8**
comp=Z,7.7nm,0.9s
EGAK Eagle 75.08 26 *eP* **P 09 39 52.9 -0.1**
comp=Z,3.7nm,0.7s
FIA1 FINESS Array S 75.09 330 *eP* **P 09 39 53.7 +0.6**
FINES FINESS Array B 75.09 330 P **P 09 39 54.0 +0.9**
comp=Z,4.0nm,0.8s,baz=66,slow=4.8,SNR=13
TGL Tana Glacier 75.39 30 *eP* **P 09 39 55.4 +0.4**
comp=Z,5.2nm,0.7s
VSU Vasula 75.53 327 *i P* **P 09 39 55.7 0.0**
VSU pmax pmax
comp=Z,21nm,1.0s
BRTR Keskin Array B 75.83 307 P **P 09 39 57.0 -1.1**
comp=Z,0.4nm,0.6s,baz=93,slow=2.5,SNR=3.6
BRTR Keskin Array B 75.83 307*ceP* **P 09 39 58.0 0.0**
DAWY Dawson 76.01 27 *eP* **P 09 39 58.7 +0.2**
comp=Z,3.4nm,0.8s
AKASG Malin Array Be 76.10 319 P **P 09 39 58.5 -0.6**
comp=Z,0.7nm,0.5s,baz=59,slow=6.3,SNR=4.3
AKASG LR LR 10 16 59.6
comp=Z,44nm,19.4s,baz=60,slow=38
KIEV Kiev 76.11 319 *i P* **P 09 39 58.7 -0.5**
KIEV pmax pmax
comp=Z,2.0nm,1.1s
MMAI Mount Meron Ar 76.16 300 LR LR 10 18 07.5
comp=Z,60nm,20.6s,baz=260,slow=39
INK Inuvik 76.87 22 LR LR 10 17 18.2
comp=Z,30nm,19.1s,baz=271,slow=38
URZ Urewera 78.06 138 LR LR 10 13 49.5
comp=Z,38nm,18.5s,baz=284,slow=35
BKZ Black Stump Fm 78.23 139 *eP* **P 09 40 10.8 -0.4**
comp=Z,32nm,1.5s
KHZ Kahutara 78.57 143 *eP* **P 09 40 12.2 -0.6**
comp=Z,24nm,1.2s
ISP Isparta 78.69 306 *i P* **P 09 40 13.0 -1.0**
ISP pmax pmax
comp=Z,3.0nm,0.9s
SUW Suwalki 78.71 323 *eP* **P 09 40 14.7 +1.1**
SUW Suwalki 78.71 323 *eP* **P 09 40 14.7 +1.1**
BFZ Birch Farm 79.02 141 *eP* **P 09 40 15.3 -0.2**
comp=Z,29nm,0.9s
BUR08 Bucovina Ar. S 79.50 317 *eP* **P 09 40 18.6 +0.3**
BUR04 Bucovina Ar. S 79.50 317 *eP* **P 09 40 17.9 -0.4**
MLR Muntele Rosu 79.68 315 LR LR 10 22 00.9
comp=Z,17nm,19.1s,baz=149,slow=40
HFS Hagfors 81.24 331 P **P 09 40 27.4 +0.2**
comp=Z,2.0nm,0.6s,baz=140,slow=4.9,SNR=7.0
HFS LR LR 10 20 09.6
comp=Z,112nm,18.2s,baz=66,slow=38
NB2 NORSAR Subarra 81.94 333 P **P 09 40 29.5 -1.5**
comp=Z,7.8nm,1.4s,baz=62,slow=5.6
NOA NORSAR Array B 81.94 333 P **P 09 40 29.9 -1.1**
comp=Z,2.0nm,0.7s,baz=86,slow=1.3,SNR=4.1
NOA LR LR 10 19 27.4
comp=Z,109nm,21.6s,baz=70,slow=37
NIE Niedzica 81.96 320 *eP* **P 09 40 32.2 +0.9**
NIE Niedzica 81.96 320 *eP* **P 09 40 32.2 +0.9**
OJC Ojcow 81.97 321 *eP* **P 09 40 31.3 0.0**
OJC Ojcow 81.97 321 *eP* **P 09 40 31.3 0.0**
VTS Vitosha 82.50 313 *eP* **P 09 40 34.3 -0.1**
comp=Z,6.2nm,0.9s
VTS Vitosha 82.50 313 *eP* **P 09 40 34.3 -0.1**
VTS pmax pmax
comp=Z,6.0nm,0.9s
VYHS Vyhne 83.20 319 *eP* **P 09 40 38.2 +0.4**
VYHS Vyhne 83.20 319 *eP* **P 09 40 38.2 +0.4**
MORC Moravsky Berou 83.49 321 *eP* **P 09 40 39.8 +0.6**
JAVC Velka Javorina 83.77 320 *eP* **P 09 40 42.6 +1.8**
KSP Ksiaz 83.79 322 *eP* **P 09 40 41.4 +0.7**
KSP Ksiaz 83.79 322 *eP* **P 09 40 41.4 +0.7**
VRAC Vranov 84.24 321 *eP* **P 09 40 43.8 +0.7**
KRUC Moravsky 84.46 320 *eP* **P 09 40 44.1 -0.1**
BRG Berggiesshubel 85.12 323 *eP* **P 09 40 47.5 +0.1**
comp=Z,5.1nm,1.1s
BRG *e* 09 41 02.9
comp=Z,4.4nm,1.0s
BRG Berggiesshubel 85.12 323 *eP* **P 09 40 47.5 +0.1**
BRG *e* 09 41 02.9
BRG pmax pmax
comp=Z,5.0nm,1.1s
CLL Collm 85.46 323 *i* P **P 09 40 48.9 -0.2**
comp=Z,7.0nm,1.4s
CLL *e*(pP) **pP 09 41 00.0 -1.4**
CLL Collm 85.46 323 *i* P **P 09 40 48.9 -0.2**
CLL *e* 09 41 00.0
CLL pmax pmax
comp=Z,7.0nm,1.4s
GERES GERESS Array B 86.16 321 P **P 09 40 52.4 -0.4**
comp=Z,0.5nm,0.8s,baz=63,slow=6.6,SNR=4.9
GEA0 GERESS Array S 86.16 321 *eP* **P 09 40 53.0 +0.2**
YKW3 Yellowknife Ar 86.54 23 *eP* **P 09 40 54.9 +0.7**
comp=Z,4.4nm,0.8s
YKA Yellowknife Ar 86.59 23 P **P 09 40 54.4 0.0**
comp=Z,2.1nm,0.5s,baz=308,slow=4.7,SNR=25
EKA Eskdalemuir Ar 91.42 332 P **P 09 41 16.9 -0.5**
comp=Z,0.5nm,0.7s,baz=54,slow=3.6,SNR=3.2
EKA LR LR 10 28 09.1
comp=Z,68nm,18.1s,baz=165,slow=39
BEKR Beckworth 97.05 43 *eP* Pdif 09 41 45.1 +1.2
comp=Z,2.3nm,0.9s
NVAR Mina Array Bea 99.18 43 P **Pdif 09 41 53.5 0.0**
comp=Z,0.7nm,0.8s,baz=268,slow=6.9,SNR=5.2
TXAR Lajitas Array 114.32 43 PKP PKPdf 09 46 51.2 -0.6
comp=Z,0.2nm,0.8s,baz=90,slow=0.9,SNR=3.3
KOWA Kowa 116.34 298 PKP **PKPdf 09 46 55.1 -0.6**
comp=Z,1.3nm,0.4s,baz=92,slow=2.7,SNR=4.0
KOWA Kowa 116.34 298 *e*PKPdf **PKPdf 09 46 55.3 -0.5**
SNAA Sanae 119.48 197 PKP **PKPdf 09 46 59.0 -1.2**
comp=Z,0.9nm,0.9s,baz=153,slow=2.3,SNR=5.7
SNAA Sanae 119.48 197 *e*PKPdf **PKPdf 09 46 59.5 -0.7**
SNAA Sanae 119.48 197 *e*PKIKP **PKPdf 09 46 59.5 -0.7**
BCIP Isla Barro Col 144.11 38 *e*PKPdf **PKPab 09 47 45.4 -0.1**
PRAC Prado 151.36 36 *e*PKPbc **PKPbc 09 48 05.4 -0.7**
PLCA Paso Flores 157.02 156 PKPab **PKPab 09 48 36.9 -0.6**
comp=Z,2.7nm,0.8s,baz=299,slow=5.4,SNR=4.7
LPAZ La Paz 170.09 69 PKP **PKPdf 09 48 19.2 -1.5**
comp=Z,2.8nm,1.2s,baz=14,slow=1.5,SNR=4.7
LPAZ PKPab **PKPab 09 49 36.7 +0.5**
comp=Z,0.9nm,0.7s,baz=284,slow=4.2,SNR=3.9

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*CSEM **10** 09:29:08.1±0.3,27°.07N×33°.91E,h10km,MD4.0,Error ellipse: s-maj=29.0km s-min=6.3km az=107.0*
*GII **10** 09:29:09.0±0.2,27°.15N×33°.90E,h10km,mb4.2/2, MD4.0/2*
*JSO **10** 09:29:20.4±0.3,27°.32N×35°.91E,h15km,MD4.3*
SGS 10 09:29:19.8,27°.73N×34°.19E,h20km,Red Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSHS		**0.79**	**43**	P	Pb	09 29 34.2	-0.6
BDAS	**Al Bad'**	**1.07**	**49**	P	Pb	09 29 38.2	-1.5
HAQS	**Haql**	**1.47**	**26**	P	Pn	09 29 43.6	-1.7
JLOS		**1.53**	**49**	P	Pn	09 29 45.2	-0.9
JLOS				S	Sn	09 30 03.9	-1.7
HQLS		**1.75**	**26**	P	Pn	09 29 47.6	-1.5
EIL	**Elat**	**2.05**	**19**	*i* P	Pg	09 30 05.5	+6.2
EIL				*e*S	Sg	09 30 36.5	+11
EIL	**Elat**	**2.05**	**19**	Pn	Pn	09 29 51.7	-1.5
EIL				Sn	Sg	09 30 24.8	-1.1
EIL	**Elat**	**2.05**	**19**	Pn	Pn	09 29 51.7	-1.5
EIL				Sn	Sg	09 30 24.8	-1.1
AQBJ	**Aqaba**	**2.13**	**21**	*i* P	Pg	09 29 59.9	-1.0
AQBJ				*i* P	Pb	09 30 00.2	+2.4
AQBJ				*e*S	Sg	09 30 28.9	+0.3
AQBJ				*e*S	Sb	09 30 30.6	+6.7
MBRI	**Mt Berech**	**2.16**	**17**	Pn	Pn	09 29 53.7	-1.1
MBRI				Sn	Sg	09 30 27.7	-1.7
MBRI	**Mt Berech**	**2.16**	**17**	Pn	Pn	09 29 53.7	-1.1
MBRI				Sn	Sg	09 30 27.7	-1.7
HRFI	**Mount Harif**	**2.42**	**18**	*i* P	Pb	09 30 01.8	-0.9
HRFI	**Mount Harif**	**2.42**	**18**	Pn	Pn	09 29 57.2	-1.1
HRFI				Sn	Sb	09 30 34.5	+2.3
HRFI	**Mount Harif**	**2.42**	**18**	Pn	Pn	09 29 57.2	-1.1
HRFI				Sn	Sb	09 30 34.5	+2.3
KRMI	**Paran Flat**	**2.43**	**11**	Pn	Pn	09 29 57.2	-1.3
KRMI				Sn	Sb	09 30 34.7	+2.2
KRMI	**Paran Flat**	**2.43**	**11**	Pn	Pn	09 29 57.2	-1.3
KRMI				Sn	Sb	09 30 34.7	+2.2
HITJ	**Hittiya**	**2.48**	**35**	*i* P	Pn	09 29 58.7	-0.5
PRNI	**Paran**	**2.71**	**15**	Pn	Pn	09 30 01.2	-1.2
PRNI				Sn	Sb	09 30 41.9	+1.3
PRNI	**Paran**	**2.71**	**15**	Pn	Pn	09 30 01.2	-1.2
PRNI				Sn	Sb	09 30 41.9	+1.3
RMNI	**Mount Ramon**	**2.91**	**10**	Pn	Pn	09 30 04.0	-1.1
RMNI	**Mount Ramon**	**2.91**	**10**	Pn	Pn	09 30 04.0	-1.1
ZFRI	**Zfri**	**2.95**	**17**	Pn	Pn	09 30 04.7	-0.8
ZFRI				Sn	Sb	09 30 46.8	-0.5
ZFRI	**Zfri**	**2.95**	**17**	Pn	Pn	09 30 04.7	-0.8
ZFRI				Sn	Sb	09 30 46.8	-0.5
KZIT	**Kziot**	**3.17**	**3**	*i* P	Pn	09 30 08.1	-0.6
JDRJ	**Daraweish**	**3.26**	**23**	*i* P	Pn	09 30 11.6	+1.7
BYRJ	**Bayer**	**3.54**	**34**	*i* P	Pn	09 30 13.2	-0.6
LISJ	**El Lisan**	**3.68**	**18**	*i* P	Pb	09 30 26.2	+2.0
LISJ				*e*S	Sg	09 31 19.8	+1.7
YTIR	**Yattir**	**3.71**	**12**	Pn	Pn	09 30 15.0	-1.2
YTIR	**Yattir**	**3.71**	**12**	Pn	Pn	09 30 15.0	-1.2
MZDA	**Masada**	**3.72**	**16**	Pn	Pn	09 30 15.5	-0.6
MZDA	**Masada**	**3.72**	**16**	Pn	Pn	09 30 15.5	-0.6
AMAZ	**Amatzia**	**3.85**	**9**	*i* P	Pn	09 30 18.8	+0.9
AMAZ	**Amatzia**	**3.85**	**9**	Pn	Pn	09 30 16.1	-1.8
AMAZ	**Amatzia**	**3.85**	**9**	Pn	Pn	09 30 16.1	-1.8
SLTI	**Sal'it**	**4.56**	**9**	Pn	Pn	09 30 26.7	-1.0
SLTI				Sn	Sb	09 31 27.1	-6.6
SLTI	**Sal'it**	**4.56**	**9**	Pn	Pn	09 30 26.7	-1.0
SLTI				Sn	Sb	09 31 27.1	-6.6
AJLJ	**Ajlon**	**4.78**	**16**	*i* P	Pg	09 30 49.4	-1.9
MMLI	**Mount Malkishu**	**4.82**	**13**	Pn	Pn	09 30 29.8	-1.5
MMLI	**Mount Malkishu**	**4.82**	**13**	Pn	Pn	09 30 29.8	-1.5

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*NNC **10** 09:32:58.0±2.2,53°.65N×87°.87E,h0km,mb3.9,mpv3.5, Error ellipse: s-maj=19.5km s-min=15.0km az=32.0*
IDC 10 09:32:59.4±2.4,53°.52N×87°.82E,h0km,mb1 3.7/3, mb1mx3.2/74,mbtmp3.7/3,ML3.4/3,4C-6D,Error ellipse: s-maj=22.8km s-min=15.5km az=56.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.83**	**285**	*i*		09 44 00.0	
	baz=107,slow=338,SNR=5.4						
ZAA0	**Zalesovo Array**	**1.83**	**285**	⇑Pn	Pn	09 33 30.3	-1.8
	13nm,0.6s						
ZAA0				⇑Lg	Lg	09 33 57.7	
	35nm,0.6s						
ZALV	**Zalesovo Beam**	**1.83**	**285**	Pn	Pn	09 33 30.5	-1.6
	8.3nm,0.3s,baz=102,slow=17,SNR=61						
ZALV				Lg	Lg	09 33 55.6	
	11nm,0.3s,baz=102,slow=24,SNR=15						
KURK	**Kurchatov**	**6.32**	**247**	⇓Pn	Pn	09 34 34.0	+0.3
	2.4nm,0.5s						
KURK				⇓Sn	Sn	09 35 48.1	+1.5
	2.2nm,0.5s						
KURK				⇓Lg	Lg	09 36 21.7	
	6.5nm,0.8s						
KURBB	**Kurchatov Arra**	**6.42**	**247**	Pn	Pn	09 34 35.0	-0.1
	0.5nm,0.3s,baz=62,slow=14,SNR=31						
KURBB				Sn	Sn	09 35 50.4	+1.4
	0.1nm,0.3s,baz=65,slow=30,SNR=3.1						
KURBB				Lg	Lg	09 36 23.8	
	0.1nm,0.3s,baz=61,slow=31,SNR=4.6						
KURBB	**Kurchatov Arra**	**6.42**	**247**	⇓Pn	Pn	09 34 34.8	-0.3
	8.9nm,0.6s						
KURBB				⇑Sn	Sn	09 35 48.6	-0.4
	4.4nm,0.6s						
KURBB				⇓Lg	Lg	09 36 25.5	
	10nm,0.6s						
MK31	**Makanchi Array**	**7.61**	**210**	⇑Pn	Pn	09 34 53.3	+1.8
	0.7nm,0.4s,baz=26,slow=13,SNR=24						
MK31				⇓Lg	Lg	09 37 05.2	
	2.4nm,0.7s,baz=24,slow=33						
MKAR	**Makanchi Array**	**7.61**	**210**	Pn	Pn	09 34 52.6	+1.1

0.6nm,0.3s,baz=28,slow=13,SNR=24
BVAR Borovoye Array 10.45 274 Pn Pn 09 35 30.1 -0.3
0.5nm,0.3s,baz=77,slow=14,SNR=9.2

DJA 10 09:35:32.8±0.3,4°S±3°×12°8E±°,h11km,M4.4/9,mb5.3/1, MLv4.0/9,Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.25**	**284**	P	Pb	09 35 39.3	-0.1
AAI				S	Sg	09 35 42.2	+0.7
MSAI	**Masohi**	**0.63**	**51**	P	Pb	09 35 46.2	+0.3
MSAI				S	Sg	09 35 53.1	-0.3
NLAI	**Namlea**	**1.43**	**291**	P	Pn	09 35 58.6	-0.1
NLAI				S	Sn	09 36 17.2	-0.3
BNDI	**Bandanaira**	**1.65**	**118**	P	Pn	09 36 01.6	-0.1
BNDI				S	Sn	09 36 23.3	+0.4
SANI	**Sanana**	**2.98**	**305**	P	Pn	09 36 19.7	-0.3
SANI				S	Sn	09 36 57.2	+1.5
LBMI	**Labuha**	**3.23**	**343**	P	Pn	09 36 24.3	+0.8
LBMI				S	Sn	09 37 03.2	+1.2
FAKI	**Fak Fak**	**3.89**	**78**	P	Pn	09 36 33.2	+0.6
FAKI				S	Sn	09 37 19.6	+1.3
SAUI	**Saumlaki**	**5.08**	**146**	P	Pn	09 36 48.4	-0.5

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*ISCJB **10** 09:36:32.7±0.1,2°93N±0°02×125°61E±0°02,h129km, mb4.5/90,Error ellipse: s-maj=3.1km s-min=2.4km az=13.8*
*IDC **10** 09:36:33.8±1.4,2°75N×125°08E,h140km±12km,mb4.1/32, mb1 4.1/35,mb1mx4.0/65,mbtmp4.5/35,MS3.4/3, Ms1 3.5/3,ms1mx2.8/57,Error ellipse: s-maj=16.4km s-min=7.5km az=72.0*
*BJI **10** 09:36:34.1,2°90N×125°50E,h150km,mb4.7/35,mB4.7/22*
*DJA **10** 09:36:34.6±0.2,3°N±2°×12°6E±°,h128km±3km,M4.6/47, mb4.8/47,mB5.1/18,MLv5.1/15,Mw(mB)4.5/18*
*GCMT **10** 09:36:35.9±0.4,2°91N×125°50E,h145km±4km,MW5.0/69, Moment Tensor Solution. s21,c23; s69,c84; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.02±.17; Mθθ-0.31±.16; Mφφ0.33±.22; Mrθ-0.19±.10; Mθφ-0.24±.15; Mφr-3.47±.13; Best double couple: M0 3.49000×10^16 NP1:φs4.00000°,δ89.00000°,λ-85.00000°. NP2: φs109.00000°,δ5.00000°,λ-164.00000°. Principal axes: T 3.6300, Plg44.0000°, Azm89.0000°; N -0.2810, Plg5.0000°, Azm183.0000°; P -3.3500, Plg46.0000°, Azm278.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **10** 09:36:35.9±0.7,2°88N×125°44E,h152km±7km,mb4.7/57 Error ellipse: s-maj=7.0km s-min=4.8km az=63.0*

ISC 10 09:36:33.7±0.3,2°85N±0°03×125°54E±0°04,h129km,n213, σ1§95/242,mb4.6/89,3C-2D,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**0.83**	**359**	P	**Pn**	**09 36 57.0**	**+2.0**
KMSI	**Cibinong**	**2.75**	**215**	P	**Pn**	**09 37 18.6**	**+1.6**
KMSI				S	**Sn**	**09 37 53.5**	**+3.1**
TNTI	**Ternate**	**2.75**	**139**	*e*Pn	**Pn**	**09 37 18.2**	**+1.1**
TNTI				*e*Sn	**Sn**	**09 37 53.5**	**+3.0**
GSPH	**General Santos**	**3.27**	**350**	⇑*i*P	**Pn**	**09 37 25.7**	**+1.7**
GSPH				*i* S	**Sn**	**09 38 04.7**	**+2.0**
SKMP	**Bagumbayan, Su**	**3.78**	**345**	*e*P	**Pn**	**09 37 31.7**	**+1.1**
SKMP				*e*S	**Sn**	**09 38 16.5**	**+1.9**
LBMI	**Labuha**	**3.98**	**151**	P	**Pn**	**09 37 33.6**	**+0.4**
LBMI				S	**Sn**	**09 38 19.3**	**0.0**
MATI	**Mati**	**4.13**	**10**	*e*P	**Pn**	**09 37 34.6**	**-0.5**
MATI				*e*S	**Sn**	**09 38 27.8**	**+4.9**
DAV	**Davao City (W)**	**4.19**	**0**	P	**Pn**	**09 37 38.0**	**+2.0**
87nm,0.3s,baz=239,slow=3.7,SNR=6.6							
DAV				S	**Sn**	**09 38 29.8**	**+5.4**
207nm,0.3s,baz=307,slow=22,SNR=6.9							
DMPH	**Davao City--Mi**	**4.21**	**360**	‖*e*P	**Pn**	**09 37 40.4**	**+4.2**
DMPH				*e*S	**Sn**	**09 38 27.9**	**+3.2**
MRSI	**Marisa**	**4.30**	**237**	P	**Pn**	**09 37 39.0**	**+1.5**
MRSI				S	**Sn**	**09 38 29.9**	**+2.9**
LUWI	**Luwuk**	**4.76**	**216**	P	**Pn**	**09 37 46.2**	**+2.7**
LUWI				S	**Sn**	**09 38 40.9**	**+3.0**
LUWI	**Luwuk**	**4.76**	**216**	*e*Pn	**Pn**	**09 37 46.4**	**+2.9**
SANI	**Sanana**	**4.89**	**175**	P	**Pn**	**09 37 43.7**	**-1.6**
BUKP	**Musuan**	**5.02**	**355**	*e*P	**Pn**	**09 37 48.0**	**+0.9**
BUKP				*e*S	**Sn**	**09 38 39.6**	**-4.6**
APSI	**Ampana**	**5.40**	**226**	P	**Pn**	**09 37 54.0**	**+1.9**
APSI				S	**Sn**	**09 38 55.8**	**+2.6**
PAGZ	**Pagadian**	**5.41**	**337**	*e*P	**Pn**	**09 37 52.6**	**+0.3**
PAGZ				*e*S	**Sn**	**09 38 59.6**	**+6.0**
BUTP	**Butuan**	**6.08**	**1**	*e*P	**Pn**	**09 38 03.2**	**+1.9**
BUTP				*e*S	**Sn**	**09 39 18.3**	**+8.6**
MPSI	**Mapaga**	**6.17**	**246**	P	**Pn**	**09 38 03.7**	**+1.2**
MPSI				S	**Sn**	**09 39 14.0**	**+2.1**
NLAI	**Namlea**	**6.25**	**166**	P	**Pn**	**09 38 03.0**	**-0.5**
SIJI	**Sorong**	**6.81**	**123**	P	**Pn**	**09 38 14.1**	**+3.0**
3.5nm,0.3s,baz=329,slow=18,SNR=3.1							
PCI	**Palu**	**6.82**	**237**	P	**Pn**	**09 38 12.7**	**+1.5**
PCI				S	**Sn**	**09 39 30.6**	**+3.1**
AAI	**Ambon**	**7.01**	**158**	P	**Pn**	**09 38 15.7**	**+1.8**
MSAI	**Masohi**	**7.02**	**151**	P	**Pn**	**09 38 15.7**	**+1.7**
KDI	**Kendari**	**7.37**	**203**	P	**Pn**	**09 38 19.9**	**+1.3**
54nm,1.1s,1μm0.2nm							
MYLDM	**Lahad Datu**	**7.40**	**288**	*e*Pn	**Pn**	**09 38 22.3**	**+3.3**
TTSI	**Tana Toraja**	**8.19**	**224**	P	**Pn**	**09 38 31.7**	**+2.0**
FAKI	**Fak Fak**	**8.82**	**130**	P	**Pn**	**09 38 39.7**	**+1.5**
FAKI	**Fak Fak**	**8.82**	**130**	*e*Pn	**Pn**	**09 38 40.5**	**+2.3**
SPSI	**Sidrap Palu**	**8.89**	**220**	P	**Pn**	**09 38 40.9**	**+1.7**
24nm,0.7s,323nm							
KKM	**Kota Kinabalu**	**9.83**	**289**	*e*Pn	**Pn**	**09 38 54.2**	**+2.4**
KBKI	**Kotabaru**	**11.19**	**237**	P	**Pn**	**09 39 12.4**	**+2.4**
MTKI	**Muara Teweh, K**	**11.29**	**251**	P	**Pn**	**09 39 14.2**	**+2.8**
MMRI	**Maumere**	**11.88**	**196**	P	**Pn**	**09 39 21.1**	**+2.0**
TGY	**Tagaytay City**	**12.07**	**338**	P	**Pn**	**09 39 20.4**	**-1.3**
29nm,0.3s,baz=122,slow=1.9,SNR=3.2							
TGY				LR	LR	09 46 03.4	
comp=Z,126nm,18.4s,baz=28,slow=48							
EDFI	**Ende, Flores**	**12.15**	**198**	P	**Pn**	**09 39 25.2**	**+2.5**
SAUI	**Saumlaki**	**12.20**	**152**	P	**Pn**	**09 39 24.6**	**+1.3**
BATI	**Baumata**	**13.11**	**188**	P	**Pn**	**09 39 35.4**	**+0.3**
SBUM	**Sibu**	**13.32**	**269**	*e*Pn	**Pn**	**09 39 39.5**	**+1.7**
WBSI	**Waikabubak, Su**	**13.84**	**206**	P	**P**	**09 39 47.1**	**-1.5**
BASI	**Baing, Sumba**	**13.89**	**201**	P	**Pn**	**09 39 46.4**	**+1.2**
PLAI	**Plampang**	**13.95**	**214**	P	**Pn**	**09 39 46.5**	**+0.6**
STKI	**Sintang**	**14.33**	**259**	P	**P**	**09 39 53.4**	**-0.6**
TWSI	**Taliwang, Sumb**	**14.39**	**217**	P	**P**	**09 39 54.1**	**-0.6**
49nm,1.1s,910nm							
PBKI	**Pangkalan Bun**	**14.93**	**248**	P	**P**	**09 40 00.7**	**0.0**
SRBI	**Singaraja**	**14.97**	**223**	P	**P**	**09 40 02.1**	**+1.0**
KSM	**Kuching**	**15.29**	**265**	*e*Pn	**P**	**09 40 06.8**	**+2.1**
196nm,1.0s							
DNP	**Denpasar**	**15.40**	**222**	P	**P**	**09 40 06.3**	**+0.4**
IGBI	**Denpasar**	**15.55**	**222**	P	**P**	**09 40 08.9**	**+1.4**
GENI	**Genyem**	**15.59**	**110**	P	**Pn**	**09 40 06.4**	**-0.1**
BLJI	**Banyuglugur**	**15.90**	**228**	P	**P**	**09 40 13.5**	**+2.0**
JAGI	**Jajag, Banyuwa**	**15.98**	**225**	P	**P**	**09 40 13.8**	**+1.4**
JAGI	**Jajag, Banyuwa**	**15.98**	**225**	*e*Pn	**P**	**09 40 13.6**	**+1.2**
52nm,1.1s							
JAY	**Jayapura**	**16.07**	**109**	P	**P**	**09 40 15.4**	**+2.1**
0.8nm,0.3s,baz=275,slow=8.5,SNR=5.7							
JAY	**Jayapura**	**16.07**	**109**	P	**P**	**09 40 13.0**	**-0.3**
GRJI	**Gresik**	**16.25**	**233**	P	**P**	**09 40 17.5**	**+2.2**
GMJI	**Gumukmas**	**16.36**	**227**	P	**P**	**09 40 17.5**	**+1.0**
UWJI	**Ujung Watu**	**17.24**	**238**	P	**Pn**	**09 40 27.8**	**+1.1**
NGJI	**Ngawi**	**17.34**	**234**	P	**Pn**	**09 40 30.1**	**+2.2**
PWJI	**Pagerwojo**	**17.45**	**232**	P	**Pn**	**09 40 30.1**	**+0.9**
SMRI	**Semarang**	**18.00**	**237**	P	**Pn**	**09 40 35.8**	**0.0**
WOJI	**Wonogiri, Jawa**	**18.04**	**234**	P	**Pn**	**09 40 36.5**	**+0.2**
PCJI	**Pacitan**	**18.05**	**232**	P	**Pn**	**09 40 36.9**	**+0.5**
UGM	**Wanagama**	**18.41**	**234**	P	**P**	**09 40 39.7**	**+0.6**
UGM	**Wanagama**	**18.41**	**234**	*e*P	**Pn**	**09 40 40.0**	**-0.7**
89nm,1.2s							
KPJI	**Karang Pucung**	**19.42**	**239**	P	**P**	**09 40 50.9**	**+0.8**
PPBI	**Pangkal Pinang**	**20.03**	**256**	P	Pn	09 41 00.0	+0.3
LEM	**Lembang**	**20.31**	**242**	P	**P**	**09 40 58.6**	**-1.2**
7.4nm,0.3s,baz=315,slow=20,SNR=3.0							
LEM	**Lembang**	**20.31**	**242**	P	**P**	**09 41 01.1**	**+1.2**
CBJI	**Citeko**	**20.81**	**244**	P	Pn	09 41 08.7	-0.2
YULB	**Yu-li**	**20.83**	**349**	*e*P	**P**	**09 41 03.6**	**-1.5**
22nm,1.3s							
DBJI	**Dramaga**	**20.96**	**243**	P	Pn	09 41 09.3	-1.4
SBJI	**Serang**	**21.34**	**245**	P	**P**	**09 41 13.4**	**+2.7**
NACB	**Ninganchiao**	**21.54**	**350**	*e*P	**P**	**09 41 13.9**	**+1.1**
17nm,1.1s							
CGJI	**Cibinong**	**21.93**	**245**	P	**P**	**09 41 17.4**	**+0.4**
QIZ	**Qiongzhong**	**22.24**	**317**	P	**P**	**09 41 21.6**	**+1.5**
QIZ				S	**S**	**09 45 17.0**	**+1.0**
QIZ				pmax	pmax		
comp=Z,300nm,3.4s							
QIZ				LR	LR		
comp=N,420nm,22.1s							
QIZ				LR	LR		
comp=E,410nm,17.6s							
QIZ				LR	LR		
comp=Z,260nm,29.4s							
MANU	**Manus Island**	**22.35**	**102**	*e*P	**P**	**09 41 21.6**	**+0.3**
59nm,1.0s							
MDSI	**Maura Dua**	**22.56**	**251**	P	**P**	**09 41 25.4**	**+2.1**
KASI	**Kota Agung**	**22.61**	**248**	P	**P**	**09 41 24.1**	**+0.3**
LWLI	**Liwa**	**22.84**	**250**	P	**P**	**09 41 27.4**	**+1.2**
JOW	**Kunigami**	**23.99**	**6**	P	**P**	**09 41 37.3**	**+0.9**
29nm,0.5s,baz=60,slow=3.7,SNR=12							
JOW	**Kunigami**	**23.99**	**6**	*e*P	**P**	**09 41 37.3**	**+0.9**
102nm,1.4s							
COEN	**Coen**	**24.18**	**134**	*e*P	**P**	**09 41 38.8**	**+0.5**
21nm,0.9s							
WRAB	**Tennant Creek**	**24.24**	**159**	*e*P	**P**	**09 41 38.5**	**-0.3**
42nm,0.8s							
WRA	**Warramunga Arr**	**24.24**	**159**	P	**P**	**09 41 38.4**	**-0.4**
20nm,0.4s,baz=335,slow=11,SNR=160							
WRA				S	**S**	**09 45 43.8**	**-4.4**
5.3nm,1.1s,baz=332,slow=16,SNR=4.8							
WRA				ScP	**ScP**	**09 48 40.0**	**-2.8**
3.9nm,0.9s,baz=338,slow=3.1,SNR=14							
WB2	**Warramunga Arr**	**24.25**	**159**	*e*P	**P**	**09 41 38.4**	**-0.4**
49nm,0.8s							
WB2				*e*S	**S**	**09 45 53.8**	**+5.5**
IPM	**Ipoh**	**24.52**	**275**	*e*P	**P**	**09 41 43.2**	**+1.8**
63nm,1.2s							
PMG	**Port Moresby**	**24.74**	**120**	P	**P**	**09 41 45.8**	**+2.4**
23nm,0.8s,baz=323,slow=6.0,SNR=8.5							
PMG	**Port Moresby**	**24.74**	**120**	*e*P	**P**	**09 41 46.9**	**+3.5**
32nm,0.9s							
KULM	**Kulim**	**24.95**	**276**	*e*P	**P**	**09 41 47.8**	**+2.5**
26nm,1.0s							
MNSI	**Mandailing Nat**	**26.03**	**266**	P	**P**	**09 41 56.0**	**+0.9**
CHAI	**Chaiyaphum**	**26.57**	**301**	P	**P**	**09 42 02.3**	**+2.4**
4.4nm,0.7s							
PSI	**Prapat**	**26.59**	**271**	P	**P**	**09 41 57.6**	**-2.6**
10.0nm,0.6s,baz=180,slow=7.2,SNR=3.2							
RABL	**Rabaul**	**27.50**	**105**	*e*P	**P**	**09 42 10.6**	**+2.3**
123nm,0.9s							
AS31	**Alice Springs**	**27.58**	**163**	*e*P	**P**	**09 42 08.8**	**-0.1**
3.9nm,0.3s							
ASAR	**Alice Springs**	**27.59**	**163**	P	**P**	**09 42 08.8**	**-0.1**
2.8nm,0.3s,baz=340,slow=6.8,SNR=34							
ASAR				S	**S**	**09 46 37.9**	**-3.2**
2.2nm,1.0s,baz=350,slow=21,SNR=6.2							
ASAR				ScP	**ScP**	**09 48 49.6**	**-2.8**
2.1nm,0.9s,baz=12,slow=0.9,SNR=8.1							
AS01	**Alice Springs**	**27.60**	**163**	*e*P	**P**	**09 42 09.1**	**0.0**
PBKT	**Sadao Pong**	**27.74**	**301**	*e*P	**P**	**09 42 10.2**	**-0.1**
15nm,1.5s							
GSI	**Gunungsitoli**	**27.99**	**267**	P	**P**	**09 42 14.6**	**+1.9**
GSI	**Gunungsitoli**	**27.99**	**267**	*e*P	**P**	**09 42 11.6**	**-1.0**
51nm,1.0s							
CBIJ	**Chichi jima**	**28.90**	**32**	*e*P	**P**	**09 42 20.9**	**+0.4**
95nm,0.9s							
NANT	**Nan**	**29.02**	**305**	P	**P**	**09 42 23.3**	**+1.5**
5.0nm,0.7s							
NJ2	**Nanjing**	**29.72**	**348**	*e*P	**P**	**09 42 29.2**	**+1.5**
NJ2				pmax	pmax		
comp=Z,15nm,0.5s							
CMAR	**Chiang Mai Arr**	**30.32**	**303**	P	**P**	**09 42 29.5**	**-3.8**
0.7nm,0.3s,baz=97,slow=7.4,SNR=2.5							
CMAR				PcP	**PcP**	**09 45 30.0**	**-0.6**
0.7nm,0.3s,baz=205,slow=2.6,SNR=4.1							
CMAR				LR	LR	09 55 32.4	
comp=Z,61nm,18.2s,baz=122,slow=38							
JNU	**Nakatsue**	**30.53**	**9**	P	**P**	**09 42 35.6**	**+0.7**
6.6nm,0.8s,baz=231,slow=4.8,SNR=5.7							
JNU	**Nakatsue**	**30.53**	**9**	*e*P	**P**	**09 42 34.8**	**-0.1**
11nm,1.0s							
CTA	**Charters Tower**	**30.54**	**139**	P	**P**	**09 42 35.8**	**+0.6**
8.9nm,0.8s,baz=323,slow=13,SNR=7.6							
CTAO	**Charters Tower**	**30.54**	**139**	*e*P	**P**	**09 42 37.4**	**+2.3**
14nm,0.9s							
KMI	**Kunming**	**31.19**	**317**	P	**P**	**09 42 44.0**	**+3.0**
KMI				S	**S**	**09 47 42.4**	**+4.4**
KMI				pmax	pmax		
comp=Z,13nm,0.7s							
KMI				pmax	pmax		
comp=Z,140nm,12.3s							
KMI				LR	LR		
comp=N,240nm,14.2s							
KMI				LR	LR		
comp=E,180nm,15.3s							
KMI				LR	LR		
comp=Z,120nm,16.3s							
FORT	**Forrest**	**33.53**	**176**	*e*P	**P**	**09 43 00.8**	**-0.3**
50nm,1.2s							
KSAR	**Wonju Array Be**	**34.49**	**3**	P	**P**	**09 43 09.4**	**0.0**
KSRS	**Korea Array**	**34.51**	**3**	P	**P**	**09 43 09.4**	**-0.1**
4.2nm,0.9s,baz=180,slow=9.9,SNR=23							
KS01	**Wonju Array Si**	**34.53**	**3**	*e*P	**P**	**09 43 09.7**	**+0.1**
CD2	**Chengdu**	**34.68**	**326**	P	**P**	**09 43 11.5**	**+0.4**
CD2				pmax	pmax		
comp=Z,10.0nm,0.5s							
XAN	**Xi'an**	**34.69**	**335**	P	P	09 43 05.1	-6.1
XAN				pP	pP	09 43 36.6	-2.8
XAN				sP	sP	09 43 51.0	-3.3
XAN				pmax	pmax		
comp=Z,5.0nm,0.7s							
XAN				pmax	pmax		
comp=Z,120nm,6.1s							
MAJO	**Matsushiro**	**35.51**	**18**	*e*P	**P**	**09 43 18.4**	**+0.3**
comp=Z,8.2nm,0.8s							
MJAR	**Matsushiro Arr**	**35.51**	**18**	P	**P**	**09 43 18.2**	**+0.1**
comp=Z,6.2nm,0.8s,baz=200,slow=9.9,SNR=20							
MJB9	**Matsu-Tunnel**	**35.51**	**18**	*e*P	**P**	**09 43 18.6**	**+0.5**
comp=Z,8.3nm,0.8s							
HNR	**Honiara**	**36.39**	**110**	*e*P	**P**	**09 43 23.9**	**-2.0**
comp=Z,47nm,0.6s							
BBOO	**Buckleboo**	**36.84**	**165**	*e*P	**P**	**09 43 29.1**	**-0.3**
comp=Z,32nm,1.4s							
EIDS	**Eidsvold**	**37.41**	**140**	*e*P	**P**	**09 43 35.2**	**+0.7**
comp=Z,27nm,1.4s							
STKA	**Stephens Creek**	**37.75**	**157**	P	**P**	**09 43 37.6**	**+0.5**
comp=Z,3.3nm,0.3s,baz=328,slow=8.6,SNR=34							
BJI	**Beijing**	**37.98**	**348**	‖*e*P	**P**	**09 43 38.4**	**-0.6**
BJI				pP	**pP**	**09 44 10.4**	**+2.8**
BJI				pmax	pmax		
comp=Z,20nm,0.9s							
LZH	**Lanzhou**	**38.68**	**331**	⇑P	**P**	**09 43 44.5**	**-0.6**
LZH				pP	pP	09 44 16.4	+2.6
LZH				sP	sP	09 44 32.7	+4.2
LZH				PP	**PnPn**	**09 45 20.6**	**+0.7**
LZH				pmax	pmax		
comp=Z,25nm,1.3s							
LZH				pmax	pmax		
comp=Z,92nm,5.2s							
LZH				LR	LR		
comp=Z,260nm,13.0s							
LZH				LR	LR		
comp=Z,270nm,13.2s							
LZH				LR	LR		
comp=Z,320nm,15.6s							
SHL	**Shillong**	**39.46**	**308**	*e*P	**P**	**09 43 51.9**	**+0.1**
comp=Z,9.8nm,0.6s							
HHC	**Hu-ho-hao-te**	**39.88**	**343**	*e*P	**P**	**09 43 57.4**	**+2.5**
HHC				pmax	pmax		
comp=Z,12nm,0.5s							
HHC				pmax	pmax		
comp=Z,38nm,5.2s							
ARMA	**Armidale**	**41.41**	**145**	*e*P	**P**	**09 44 09.4**	**+1.8**
comp=Z,20nm,1.1s							
USRK	**Ussuriysk Ar.**	**41.57**	**7**	P	**P**	**09 44 09.4**	**+0.8**
comp=Z,3.5nm,0.6s,baz=184,slow=9.2,SNR=11							
MDJ	**Mudanjiang**	**41.75**	**4**	P	**P**	**09 44 08.0**	**-2.0**
MDJ				S	**S**	**09 50 17.4**	**-0.2**
MDJ				pmax	pmax		
comp=Z,21nm,0.7s							
MDJ				pmax	pmax		
comp=Z,72nm,3.7s							
MDJ				LR	LR		
comp=Z,120nm,5.6s							
MDJ				LR	LR		
comp=Z,100nm,5.4s							
MDJ				LR	LR		
comp=Z,140nm,11.1s							
ERM	**Erimo**	**42.07**	**20**	*e*P	**P**	**09 44 14.6**	**+1.9**
comp=Z,34nm,1.4s							
GTA	**Gaotai**	**43.26**	**331**	*e*P	**P**	**09 44 20.9**	**-1.6**
GTA				pP	pP	09 44 52.7	+1.0
GTA				sP	sP	09 45 09.4	+3.1
GTA				PcP	**PcP**	**09 46 09.7**	**+0.3**
GTA				S	**S**	**09 50 38.8**	**-1.4**
GTA				pmax	pmax		
comp=Z,6.0nm,0.9s							
GTA				pmax	pmax		
comp=Z,76nm,5.1s							
GTA				LR	LR		
comp=Z,190nm,17.2s							
GTA				LR	LR		
comp=Z,200nm,17.9s							
GTA				LR	LR		
comp=Z,110nm,14.8s							
ASAJ	**Asahikawa**	**43.78**	**18**	P	**P**	**09 44 27.4**	**+0.9**
comp=Z,6.9nm,0.7s,baz=237,slow=11,SNR=8.8							
ASAJ	**Asahikawa**	**43.78**	**18**	*e*P	**P**	**09 44 27.9**	**+1.4**
comp=Z,22nm,1.4s							
CAN	**Canberra**	**43.88**	**152**	*e*P	**P**	**09 44 29.1**	**+1.7**
comp=Z,20nm,1.2s							
RAMN	**Ramite**	**44.30**	**307**	*e*P	**P**	**09 44 31.0**	**-0.2**
comp=Z,39nm,1.0s							
JIRN	**Jiri**	**44.94**	**307**	*e*P	**P**	**09 44 35.6**	**-0.9**
comp=Z,31nm,0.6s							
GUN	**Gumba**	**45.30**	**307**	*e*P	**P**	**09 44 38.4**	**-0.8**
comp=Z,43nm,0.7s							
PKIN	**Phulchoki**	**45.54**	**307**	*e*P	**P**	**09 44 40.3**	**-0.7**
comp=Z,11nm,0.6s							
KKN	**Kakani**	**45.72**	**307**	*e*P	**P**	**09 44 41.5**	**-0.9**
comp=Z,8.5nm,0.4s							
DMN	**Daman**	**45.78**	**307**	*e*P	**P**	**09 44 42.2**	**-0.8**
comp=Z,49nm,1.3s							
GKN	**Gorkha**	**46.33**	**307**	*e*P	**P**	**09 44 46.0**	**-1.1**
comp=Z,9.4nm,0.4s							
KLR	**Kul'dur**	**46.51**	**6**	P	**P**	**09 44 48.2**	**+0.2**
comp=Z,0.6nm,0.5s,baz=195,slow=7.0,SNR=34							
KOLN	**Koldanda**	**47.06**	**306**	*e*P	**P**	**09 44 51.5**	**-1.4**
comp=Z,40nm,0.7s							
DANN	**Dangsing**	**47.18**	**307**	*e*P	**P**	**09 44 52.4**	**-1.5**
comp=Z,46nm,0.7s							
ULN	**Ulaanbaatar**	**47.60**	**343**	*e*P	**P**	**09 44 55.2**	**-1.4**
comp=Z,7.8nm,1.3s							
SONM	**Songino Array**	**47.76**	**343**	P	**P**	**09 44 56.6**	**-1.3**
comp=Z,2.0nm,0.6s,baz=163,slow=11,SNR=4.4							
SONA1	**Songino Array**	**47.77**	**343**	*e*P	**P**	**09 44 56.0**	**-2.0**
WMQ	**Urumqi**	**52.78**	**326**	P	**P**	**09 45 37.9**	**+2.3**
WMQ				pmax	pmax		
comp=Z,26nm,0.7s							
WMQ				pmax	pmax		
comp=Z,140nm,3.7s							
WMQ				LR	LR		
comp=Z,220nm,23.7s							
WMQ				LR	LR		
comp=Z,73nm,23.7s							
PEA0B	**Petropavlovsk-**	**56.69**	**23**	*e*P	**P**	**09 46 04.9**	**+1.3**
comp=Z,20nm,1.2s							
PETK	**Petropavlovsk-**	**56.69**	**23**	P	**P**	**09 46 05.1**	**+1.5**
comp=Z,4.0nm,0.6s,baz=190,slow=3.2,SNR=12							
MK01	**Makanchi Array**	**57.59**	**326**	*e*P	**P**	**09 46 08.0**	**-2.1**
MK31	**Makanchi Array**	**57.61**	**326**	*e*P	**P**	**09 46 08.5**	**-1.7**
MKAR	**Makanchi Array**	**57.61**	**326**	P	**P**	**09 46 08.5**	**-1.7**
comp=Z,1.2nm,0.3s,baz=125,slow=7.9,SNR=24							
MKAR				PcP	**PcP**	**09 47 00.8**	**-1.3**
comp=Z,6.8nm,0.7s,baz=122,slow=4.6,SNR=18							
MKAR				ScP	**ScP**	**09 50 47.0**	**-3.1**
comp=Z,1.7nm,0.7s,baz=124,slow=4.6,SNR=8.0							
MKAR	**Makanchi Array**	**57.61**	**326**	*e*P	**P**	**09 46 08.4**	**-1.8**
comp=Z,20nm,0.6s							
MKAR				PcP	**PcP**	**09 47 00.8**	**-1.3**
MKAR				ScP	**ScP**	**09 50 47.0**	**-3.1**
TARG	**Taragay, Kyrgy**	**57.62**	**319**	*e*P	**P**	**09 46 10.2**	**-0.7**
comp=Z,5.0nm,0.9s							
MAKZ	**Makanchi**	**57.79**	**326**	*e*P	**P**	**09 46 10.0**	**-1.5**
comp=Z,12nm,1.3s							
KSH	**Kashi**	**57.84**	**316**	P	**P**	**09 46 14.9**	**+2.8**
KSH				pP	pP	09 46 48.6	+5.8
KSH				pmax	pmax		
comp=Z,220nm,5.9s							
NRN	**Naryn**	**58.68**	**318**	*e*P	**P**	**09 46 16.6**	**-1.5**
comp=Z,11nm,1.4s							
KZA	**Kyzart**	**59.47**	**318**	⇑P	**P**	**09 46 22.6**	**-1.1**
comp=Z,2.0nm,0.7s,SNR=6.3							
TKM2	**Tokmak 2**	**59.63**	**319**	P	**P**	**09 46 23.5**	**-1.0**
SNR=5.6							
MA2	**Magadan**	**59.84**	**15**	P	**P**	**09 46 26.7**	**+1.3**
comp=Z,12nm,0.8s,baz=205,slow=7.0,SNR=10							
MA2	**Magadan**	**59.84**	**15**	*e*P	**P**	**09 46 26.0**	**+0.7**
comp=Z,13nm,0.8s							
UCH	**Uchtor**	**60.03**	**318**	P	**P**	**09 46 27.1**	**-0.4**
SNR=8.3							
AML	**Almayashu**	**60.53**	**318**	P	**P**	**09 46 30.2**	**-0.7**
SNR=6.2							
EKS2	**Erkin-Say**	**60.71**	**318**	P	**P**	**09 46 31.0**

FIA1	FINESS Array S	92.04	332	eP	P	09 49 25.4	-2.4
FINES	FINESS Array B	92.04	332	P	P	09 49 25.7	-2.2
	comp=Z,2.4nm,0.7s,baz=60,slow=4.8,SNR=11						
QSPA	South Pole Qui	92.76	180	eP	P	09 49 31.8	+0.5
	comp=Z,4.7nm,1.3s						
BUR04	Bucovina Ar. S	94.87	318	eP	P	09 49 39.4	-1.9
BUR08	Bucovina Ar. S	94.87	318	eP	P	09 49 39.8	-1.6
HFS	Hagfors	98.24	332	P	P	09 49 53.0	-3.2
	comp=Z,1.5nm,0.7s,baz=43,slow=2.6,SNR=9.6						
NB2	NORSAR Subarra	99.04	333	P	Pdif	09 49 57.2	-2.6
	comp=Z,2.7nm,0.9s,baz=68,slow=4.8						
CLL	Collm	101.65	324	ePKiKP	PKiKP	09 54 33.0	-1.5
TORD	Torodi Ar. Bea	122.06	287	PKP	PKPdf	09 55 12.2	-1.9
	comp=Z,1.2nm,0.3s,baz=73,slow=1.9,SNR=31						
TX31	Lajitas Ar. Si	123.07	52	ePKPdf	PKPdf	09 55 16.6	+0.8
TXAR	Lajitas Array	123.07	52	PKP	PKPdf	09 55 16.0	+0.2
	comp=Z,0.1nm,0.4s,baz=221,slow=1.0,SNR=4.5						
MTDJ	Mount Denham	149.09	46	ePKPdf	PKPdf	09 56 01.8	-1.9
BCIP	Isla Barro Col	152.03	64	ePKPbc	PKPbc	09 56 15.0	+0.2

MAN 10 09:48:06.1, 9°.77N×123°.18E, h20km, mb4.5, ML3.4, MS3.2, 3C-1D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	Sibulan	0.43	172⇑	iP	Pb	09 48 14.8	-0.3
SNPH				i S	Sb	09 48 21.9	+0.8
TBP	Tagbilaran	0.68	97	eP	Pb	09 48 16.7	-2.6
LLP	Lapu-Lapu	0.94	55⇑	eP	Pb	09 48 21.3	-2.5
LLP				eS	Sb	09 48 33.2	-2.7
GUIM	Jordan	1.03	326	eP	Pb	09 48 24.9	-0.3
GUIM				eS	Sn	09 48 39.3	+0.1
DCPH	Dipolog City	1.20	172⇑	eP	Pn	09 48 26.1	-1.6
DCPH				eS	Sb	09 48 42.5	-0.6
MSLP	Maasin	1.69	78	eP	Pn	09 48 34.0	-0.6
MSLP				eS	Sb	09 48 56.7	-0.8
RCP	Roxas	1.83	347⇓	eP	Pb	09 48 37.8	-1.0
RCP				eS	Sb	09 49 02.4	+1.1
PAGZ	Pagadian	1.92	174	eP	Pn	09 48 38.0	+0.3
PAGZ				eS	Sb	09 49 04.0	-0.1

WEL 10 10:04:22.2, 44°S±1°×17°3E±°, h10km±1km, ML3.5/4, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MQZ	McQueen's Vall	0.16	211	P	Pg	10 04 27.3	+1.6
MQZ				S	Sg	10 04 30.3	+2.2
OKCZ	Okains Bay	0.26	126	P	Pb	10 04 28.9	-0.2
OKCZ				S	Sb	10 04 32.6	-1.1
EYCZ	Eyrewell	0.33	296	P	Pb	10 04 30.6	+0.3
EYCZ				S	Sb	10 04 36.3	+0.6
OXZ	Oxford	0.58	294	P	Pb	10 04 35.1	+0.5
OXZ				S	Sb	10 04 44.2	+1.2
LTZ	Lake Taylor	0.87	335	P	Pn	10 04 40.3	-0.3
LTZ				S	Sn	10 04 52.6	-0.7
RPZ	Rata Peaks	1.25	263	P	Pg	10 04 46.7	+0.4
RPZ				S	Sn	10 05 03.7	+0.9
KHZ	Kahutara	1.28	26	P	Pn	10 04 45.6	-0.7
INZ	Inchbonnie	1.28	311	P	Pg	10 04 47.0	+0.1
INZ				S	Sg	10 05 05.2	+1.6
WVZ	Waitaha Valley	1.56	288	P	Pg	10 04 52.2	0.0
THZ	Tophouse	1.81	3	P	Pn	10 04 53.5	0.0
DSZ	Denniston Nort	1.96	338	P	Pn	10 04 56.2	+0.6
BSWZ	Blackbirch Sta	2.02	24	P	Pn	10 04 56.5	+0.1
LBZ	Lake Benmore	2.04	245	P	Pn	10 04 58.0	+1.3
ODZ	Otahua Downs	2.12	225	P	Pn	10 04 58.8	+1.0
FOZ	Fox Glacier	2.15	270	P	Pb	10 05 00.5	-0.7
TUWZ	Tuamarina	2.31	23	P	Pn	10 05 00.2	-0.2
NNZ	Nelson	2.39	11	P	Pn	10 05 02.0	+0.4
BHW	Baring Head	2.66	36	P	Pn	10 05 04.4	-0.8
QRZ	Quartz Range	2.75	356	P	Pn	10 05 07.1	+0.7
MSWZ	Moikau Station	2.83	41	P	Pn	10 05 06.1	-1.4
JCZ	Jackson Bay	2.93	259	P	Pb	10 05 11.0	-3.6
JCZ				P	Pn	10 05 10.9	+2.0
WKZ	Wanaka	2.98	244	P	Pn	10 05 10.9	+1.4
EAZ	Earnscleugh	2.98	235	P	Pn	10 05 10.6	+1.0
CAW	Cannon Point	2.99	35	P	Pn	10 05 08.8	-1.0
MTW	Mount Morrison	3.15	41	P	Pn	10 05 10.4	-1.5
TUZ	Tuapeka	3.27	222	P	Pn	10 05 14.7	+1.1
OGWZ	Otaki Gorge	3.28	34	P	Pn	10 05 12.9	-0.8
MRZ	Mangatainoka R	3.58	37	P	Pn	10 05 16.5	-1.4
BFZ	Birch Farm	3.88	43	P	Pn	10 05 20.4	-1.5
VRZ	Vera Road	4.69	19	P	Pn	10 05 34.2	+1.1
TRVZ	Turoa	4.75	27	P	Pn	10 05 35.0	+0.9
HIZ	Hauiti	5.29	18	P	Pn	10 05 41.9	+0.6

*ISCJB **10** 10:07:07.2±0.3, 24°.46N±0°.02×122°.29E±0°.01, h70km±3km,*
Error ellipse: s-maj=2.7km s-min=2.0km az=159.7
*JMA **10** 10:07:07.2±0.2, 24°.43N×122°.29E, h74km±3km, M3.5*
*TAP **10** 10:07:07.1, 24°.48N×122°.28E, h71km±1km, ML4.0, B*
ISC 10 10:07:07.6±1.2, 24°.46N±0°.03×122°.29E±0°.02, h70km±6km, n113, σ1§12/208, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.17	301	P	Pn	10 07 18.6	+0.6
	baz=296						
EOS1				eS	Sn	10 07 26.7	+1.1
	baz=296						
TWC	Suao	0.42	290	i P	Pn	10 07 19.7	0.0
	baz=288						
TWC				eS	Sn	10 07 28.0	-0.6
	baz=288						
ENAH	Nanao	0.43	268	eP	Pn	10 07 19.8	0.0
	baz=265						
ENAH				eS	Sn	10 07 29.5	+0.8
	baz=265						
NANB	Nanao	0.49	266	i P	Pn	10 07 20.4	+0.1
	baz=263						
NANB				eS	Sn	10 07 30.1	+0.4
	baz=263						
ENA	Nanau	0.50	266	P	Pn	10 07 20.5	+0.1
	baz=263						
ENA				eS	Sn	10 07 30.4	+0.7
	baz=263						
NTC	Toucheng	0.57	313	eP	Pn	10 07 20.9	-0.2
	baz=312						
NTC				eS	Sn	10 07 30.6	-0.4
	baz=312						
ILA	Ilan	0.57	302	eP	Pn	10 07 21.1	-0.1
	baz=300						
ILA				eS	Sn	10 07 31.2	+0.1
	baz=300						
JYNG	Yonagunijimaku	0.60	91	P	Pn	10 07 21.5	+0.1
JYNG				eS	Sn	10 07 32.0	+0.4
TWE	Neicheng	0.62	295	i P	Pn	10 07 21.9	+0.3
	baz=293						
TWE				eS	Sn	10 07 31.8	-0.1
	baz=293						
TIPB	Shuangxi	0.66	321	i P	Pn	10 07 20.8	-1.3
	baz=319						
TIPB				eS	Sn	10 07 30.8	-1.9
	baz=319						
YOJ	Yonaguni jima	0.66	90	P	Pn	10 07 22.1	+0.1
	baz=91						
YOJ				eS	Sn	10 07 32.5	-0.2
	baz=91						
YOJ	Yonaguni jima	0.66	90	P	Pn	10 07 22.1	+0.1
YOJ				S	Sn	10 07 32.9	+0.2
ENTT	Nioudou	0.68	285	i P	Pn	10 07 22.9	+0.6
	baz=283						
ENTT				eS	Sn	10 07 33.6	+0.5
	baz=283						
NACB	Ninganchiao	0.69	246	P	Pn	10 07 22.0	-0.4
	baz=243						
NACB				eS	Sn	10 07 33.0	-0.3
	baz=243						
TWD	Chiawan	0.74	239	P	Pn	10 07 22.5	-0.4
	baz=237						
TWD				eS	Sn	10 07 33.9	-0.3
	baz=237						
WFSB	Wu-fen Shan	0.76	323	i P	Pn	10 07 23.3	+0.1
	baz=322						
WFSB				eS	Sn	10 07 34.3	-0.4
	baz=322						
NWLT	Wulai	0.78	294	eS	Sn	10 07 35.5	+0.4
	baz=292						
HWA	Hwalien	0.79	232	eP	Pn	10 07 23.6	+0.1
	baz=230						
HWA				eS	Sn	10 07 35.6	+0.4
	baz=230						
TWA	Mucha	0.82	309	P	Pn	10 07 23.9	0.0
	baz=308						
TWA				eS	Sn	10 07 35.3	-0.7
	baz=308						
NNSB	Datong	0.82	268	P	Pn	10 07 24.2	+0.1
	baz=266						
NNSB				S	Sn	10 07 36.2	0.0
	baz=266						
NNSH	Datong	0.82	268	i P	Pn	10 07 24.1	0.0
	baz=266						
NNSH				eS	Sn	10 07 35.4	-0.9
	baz=266						
NNS	Nan Shan	0.83	269	eP	Pn	10 07 24.3	+0.1
	baz=266						
NNS				eS	Sn	10 07 36.2	-0.2
	baz=266						
ENLB	Shoufeng	0.84	228	P	Pn	10 07 24.2	+0.1
	baz=227						
ENLB				eS	Sn	10 07 36.2	-0.1
	baz=227						
YHNB	Yeheng	0.85	284	P	Pn	10 07 24.9	+0.5
	baz=282						
YHNB				eS	Sn	10 07 37.0	+0.2
	baz=282						
NSK	Sanguang	0.87	284	i P	Pn	10 07 25.0	+0.4
	baz=282						
NSK				eS	Sn	10 07 37.6	+0.5
	baz=282						
TATO	Taipei	0.89	305	P	Pn	10 07 24.6	-0.1
	baz=304						
TATO				eS	Sn	10 07 36.7	-0.7
	baz=304						
TAP1	Taipei	0.90	310	eP	Pn	10 07 24.9	0.0
	baz=308						
TAP1				eS	Sn	10 07 37.2	-0.4
	baz=308						
TAP	Taipei	0.91	309	eS	Sn	10 07 37.4	-0.5
	baz=308						
YM07	YM07	0.93	320	P	Pn	10 07 24.1	-1.2
	baz=319						
YM07				eS	Sn	10 07 36.7	-1.7
	baz=319						
YM11	YM11	0.95	317	eP	Pn	10 07 26.4	+0.8
	baz=316						
YM11				S	Sn	10 07 38.9	-0.1
	baz=316						
YM10	YM10	0.95	316	P	Pn	10 07 25.4	-0.2
	baz=315						
YM10				eS	Sn	10 07 37.8	-1.2
	baz=315						
YM08	YM08	0.96	319	eP	Pn	10 07 25.1	-0.6
	baz=318						
YM08				eS	Sn	10 07 37.7	-1.3
	baz=318						
YM12	YM12	0.97	318	eP	Pn	10 07 25.3	-0.4
	baz=317						
YM12				eS	Sn	10 07 37.8	-1.3
	baz=317						
YM04	YM04	0.97	315	P	Pn	10 07 25.5	-0.3
	baz=314						
YM04				eS	Sn	10 07 38.2	-1.0
	baz=314						
ESL	Shilin	1.01	231	P	Pn	10 07 25.8	-0.5
	baz=229						
ESL				eS	Sn	10 07 39.2	-1.0
	baz=229						
TWS1	Kuangyinshan	1.01	309	P	Pn	10 07 26.4	+0.2
	baz=308						
TWS1				eS	Sn	10 07 40.0	-0.1
	baz=308						
TWY	Chenhua	1.02	323	P	Pn	10 07 26.6	+0.2
	baz=322						
TWY				eS	Sn	10 07 40.0	-0.3
	baz=322						
NTST	Danshui	1.03	313	eP	Pn	10 07 26.5	0.0
	baz=312						
NTST				eS	Sn	10 07 40.1	-0.5
	baz=312						
TDCB	Techi	1.05	259	i P	Pn	10 07 27.6	+0.7
	baz=257						
TDCB				eS	Sn	10 07 41.1	-0.1
	baz=257						
CHGB	Renai	1.09	249	i P	Pn	10 07 28.0	+0.5
	baz=247						
CHGB				eS	Sn	10 07 42.0	-0.2
	baz=247						
EGFH	Guangfu	1.11	225	P	Pn	10 07 27.1	-0.5
	baz=223						
EGFH				eS	Sn	10 07 41.5	-0.9
	baz=223						
NCU	National Centr	1.12	297	P	Pn	10 07 28.3	+0.6
	baz=296						
NCU				eS	Sn	10 07 43.4	+0.9
	baz=296						
NCUH	Zhongli	1.12	297	P	Pn	10 07 28.1	+0.5
	baz=295						
NCUH				eS	Sn	10 07 42.4	-0.2
	baz=295						
LIOB	Emei	1.17	279	eP	Pn	10 07 29.0	+0.7
	baz=278						
LIOB				eS	Sn	10 07 43.6	-0.1
	baz=278						
NSTT	Nanjuang	1.18	278	eP	Pn	10 07 29.1	+0.7
	baz=277						
NSTT				eS	Sn	10 07 44.7	+0.7
	baz=277						
SBCB	Hsinchu	1.23	286	eP	Pn	10 07 29.1	+0.1
	baz=284						
SBCB				eS	Sn	10 07 45.7	+0.7
	baz=284						
HSN	Hsinchu	1.25	286	eS	Sn	10 07 45.6	+0.2
	baz=286						
HGSD	Ruisui	1.25	219	eP	Pn	10 07 29.0	-0.3
	baz=218						
HGSD				eS	Sn	10 07 45.2	-0.3
	baz=218						
VWDT	VWDT	1.26	236	P	Pn	10 07 29.9	+0.5
	baz=235						
VWDT				eS	Sn	10 07 45.4	-0.4
	baz=235						
EHY	Hungye	1.30	223	P	Pn	10 07 29.2	-0.7
	baz=221						
EHY				eS	Sn	10 07 45.0	-1.7
	baz=221						
IRIF	Iriomote-Funau	1.32	95	P	Pn	10 07 30.0	-0.2
IRIF				S	Sn	10 07 47.1	-0.1
NMLH	Miaoli	1.36	273	eP	Pn	10 07 31.9	+1.2
	baz=272						
NMLH				eS	Sn	10 07 48.8	+0.6
	baz=272						
SSLB	Suanglung	1.39	241	P	Pn	10 07 31.5	+0.3
	baz=240						
SSLB				eS	Sn	10 07 49.7	+0.8
	baz=240						
NSY	Sanyi	1.39	268	eP	Pn	10 07 32.6	+1.4
	baz=267						
NSY				eS	Sn	10 07 50.1	+1.2
	baz=267						
SMLT	Sun Moon Lake	1.39	246	eP	Pn	10 07 32.0	+0.7
	baz=244						
SMLT				eS	Sn	10 07 50.1	+1.1
	baz=244						
YULB	Yu-li	1.40	221	P	Pn	10 07 30.5	-0.8
	baz=219						
YULB				eS	Sn	10 07 47.4	-1.6
	baz=219						
TYC	Yuchr	1.42	247	P	Pn	10 07 32.5	+1.0
	baz=246						
TYC				eS	Sn	10 07 51.6	+2.2
	baz=246						
TWF1	Yuli	1.43	220	i P	Pn	10 07 31.0	-0.7
	baz=218						
TWF1				eS	Sn	10 07 48.0	-1.7
	baz=218						
HATJ	Hateruma jima	1.44	106	P	Pn	10 07 32.5	+0.7
HATJ				eS	Sn	10 07 51.1	+1.0
TCU	Taichung	1.50	258	eP	Pn	10 07 33.9	+1.3
	baz=257						
TCU				eS	Sn	10 07 53.4	+1.9
	baz=257						
WJS	Zhushan	1.56	246	eP	Pn	10 07 35.1	+1.7
	baz=245						
WJS				eS	Sn	10 07 54.8	+2.0
	baz=245						
JKRS	Kuro-shima	1.59	98	P	Pn	10 07 34.2	+0.5
JKRS				eS	Sn	10 07 53.9	+0.4
CHKT	Chengkung	1.60	212	eP	Pn	10 07 32.9	-1.0
	baz=211						
CHKT				eS	Sn	10 07 50.9	-2.8
	baz=211						
WCHH	Zhanghua	1.62	257	eP	Pn	10 07 35.5	+1.3
	baz=255						
WCHH				eS	Sn	10 07 54.8	+0.5
	baz=255						
JIJ	Ishigaki jima	1.70	93	P	Pn	10 07 34.9	-0.3
JIJ				S	Sn	10 07 55.1	-1.0
ELDTW	Lidau	1.72	223	eP	Pn	10 07 35.0	-0.7
	baz=221						
ELDTW				eS	Sn	10 07 54.2	-2.6
	baz=221						
WGK	Gukeng	1.75	244	eP	Pn	10 07 37.5	+1.6
	baz=243						
WGK				eS	Sn	10 08 00.1	+2.6
	baz=243						
WDLH	Douliu	1.77	245	eP	Pn	10 07 38.0	+1.7
	baz=243						
WDLH				eS	Sn	10 07 58.9	+1.0
	baz=243						
JISG	Ishigakijimahi	1.85	86	P	Pn	10 07 37.1	-0.1
JISG				S	Sn	10 07 59.1	-0.6
RLNB	Erlin	1.85	252	eP	Pn	10 07 38.2	+1.0
	baz=251						
RLNB				eS	Sn	10 07 59.8	+0.1
	baz=251						
TWH	Lutao	1.90	203	P	Pn	10 07 37.4	-0.5
	baz=202						
TWH				eS	Sn	10 07 59.1	-1.7
	baz=202						
STYT	Tauyuan	1.91	228	P	Pn	10 07 38.9	+0.8
	baz=226						
STYT				eS	Sn	10 08 01.7	+0.5
	baz=226						
TPUB	Ta-pu	1.91	233	P	Pn	10 07 39.8	+1.7
	baz=232						
TPUB				S	Sn	10 08 01.9	+0.7
	baz=232						
WTCT	Ta-ch'eng	1.93	252	eS	Sn	10 08 02.5	+1.0
	baz=251						
WTP	Ta-pu	1.95	232	eP	Pn	10 07 40.0	+1.3
	baz=230						
WTP				eS	Sn	10 08 04.1	+1.8
	baz=230						
CHY	Chiayi	1.96	241	eP	Pn	10 07 40.0	+1.4
	baz=239						
CHY				eS	Sn	10 08 04.6	+2.4
	baz=239						
TWGBT	Beinan	1.98	214	P	Pn	10 07 38.0	-1.0
	baz=213						
TWGBT				eS	Sn	10 08 00.4	-2.4
	baz=213						
TWG	Pinlang	1.98	214	P	Pn	10 07 37.9	-1.1
	baz=213						
TWG				eS	Sn	10 08 00.6	-2.2
	baz=213						
TTN	Taitung	2.00	212	eP	Pn	10 07 39.4	+0.2
	baz=210						
TTN				eS	Sn	10 08 02.9	-0.4
	baz=210						
TWK	Hsinying	2.03	234	eP	Pn	10 07 40.8	+1.1
	baz=233						
TWK				eS	Sn	10 08 05.9	+1.6
	baz=233						
CHN1	Nanshi	2.05	232	eP	Pn	10 07 41.3	+1.3
	baz=231						
CHN1				eS	Sn	10 08 06.6	+1.9
	baz=231						
WSF	Szhu	2.06	247	eS	Sn	10 08 05.9	+1.1
	baz=245						
WLGB	Puzi	2.06	242	eS	Sn	10 08 07.5	+2.6
	baz=241						
SGST	Jiashian	2.08	229	eS	Sn	10 08 07.2	+1.9
	baz=227						
SLGT	Liugui	2.10	226	eP	Pn	10 07 42.3	+1.7
	baz=225						
SLGT				eS	Sn	10 08 07.6	+1.8
	baz=225						
CHN8	Yiju	2.20	240	eP	Pn	10 07 43.0	+1.0
	baz=239						
CHN8				eS	Sn	10 08 09.8	+1.5
	baz=239						
JTJ	Tarama	2.21	85	P	Pn	10 07 42.5	+0.4
JTJ				S	Sn	10 08 08.5	+0.1
ECL	Taimali	2.22	214	eP	Pn	10 07 42.9	+0.6
	baz=212						
ECL				eS	Sn	10 08 05.7	-3.1
	baz=212						
CHN3	Shinhua	2.24	232	eS	Sn	10 08 08.5	-0.6
	baz=231						
SSD	Sandimen	2.29	222	eP	Pn	10 07 44.5	+1.3
	baz=221						
SSD				eS	Sn	10 08 11.9	+1.6
	baz=221						
SCLT	Jiali	2.31	237	eS	Sn	10 08 13.2	+2.4
	baz=235						
MASBT	Mashibuluo	2.39	220	eP	Pn	10 07 45.5	+1.0
	baz=219						
MASBT				eS	Sn	10 08 12.6	-0.2
	baz=219						
TAW	Tawu	2.45	212	eS	Sn	10 08 12.7	-1.7
	baz=210						
EAST	Anshuo	2.46	213	eP	Pn	10 07 45.3	-0.2
	baz=212						
EAST				eS	Sn	10 08 13.4	-1.1
	baz=212						
LAY	Lan-yu	2.51	196	eS	Sn	10 08 13.4	-2.2
	baz=195						
SCZT	Fangliau	2.58	217	eP	Pn	10 07 47.8	+0.6
	baz=215						
SCZT				eS	Sn	10 08 17.4	-0.1
	baz=215						
VWUC	VWUC	2.63	282	P	Pn	10 07 47.5	-0.3
	baz=281						
VWUC				eS	Sn	10 08 16.0	-2.7
	baz=281						
JIRB	Irabujima	2.65	82	P	Pn	10 07 48.7	+0.6
JIRB				S	Sn	10 08 19.5	+0.3
PNG	Penghu	2.65	251	eP	Pn	10 07 48.5	+0.4
	baz=249						
PNG				eS	Sn	10 08 18.1	-1.1
	baz=249						
PHUB	P'eng-hu	2.66	250	eP	Pn	10 07 48.9	+0.8
	baz=248						
PHUB				eS	Sn	10 08 17.3	-2.0
	baz=248						
WDGT	Dungji	2.69	244	P	Pn	10 07 48.8	+0.2
	baz=243						
WDGT				eS	Sn	10 08 19.0	-1.0
	baz=243						
MATB	Ma-tsu	2.70	309	eP	Pn	10 07 48.4	-0.4
	baz=308						
MATB				eS	Sn	10 08 18.5	-2.0
	baz=308						
JIKM	Ikemajima	2.73	80	S	Sn	10 08 22.2	+1.1
JMJ	Miyako jima 2	2.76	82	eS	Sn	10 08 23.0	+1.2
HEN	Hengchun	2.83	211	eP	Pn	10 07 51.4	+0.8
	baz=209						
HEN				eS	Sn	10 08 23.2	-0.3
	baz=209						
TSEB	Hengchuen, Pin	2.85	207	eS	Sn	10 08 23.3	-0.7
	baz=207						
TWKBT	Hengchun	2.85	209	eS	Sn	10 08 22.3	-1.8
	baz=208						
TWK1	Hengchun	2.85	209	eS	Sn	10 08 22.5	-1.6
	baz=208						
JOGS	Gusukube	2.85	83	P	Pn	10 07 53.0	+2.1
VCHM	Qimei	2.90	245	eP	Pn	10 07 52.4	+0.9
	baz=244						
VCHM				eS	Sn	10 08 24.2	-1.0
	baz=244						
KNM	Kinmen	3.51	270	eP	Pn	10 08 01.3	+1.5
	baz=268						
KNM				eS	Sn	10 08 39.6	-0.6
	baz=268						
KNMB	Chin-men Tao	3.55	271	eP	Pn	10 07 59.7	-0.7
	baz=269						
KNMB				eS	Sn	10 08 37.1	-4.0
	baz=269						
JOW	Kunigami	5.90	65	eP	Pn	10 08 31.2	-1.2
	baz=66						

KRSC 10 10:38:34.0±1.6, 53°.02N×157°.60E, h286km±13km, ML3.6, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRL	**Gorelyy**	**0.55**	**148**	*eP*	Pn	10 39 12.5	+1.2
ASAK	**Asacha**	**0.66**	**164**	*eP*	Pn	10 39 13.2	+1.6
DALK	**Dalny**	**0.70**	**89**	*eP*	Pn	10 39 13.2	+1.7
DALK				*eS*	S	10 39 42.4	+1.2
GNL	**Ganaly**	**0.71**	**17**	*eP*	Pn	10 39 12.2	+0.5
KRER	**Koryakskii**	**0.75**	**67**	*eP*	Pn	10 39 14.0	+2.0
UGLR	**Uglovaya**	**0.76**	**75**	*eP*	Pn	10 39 14.4	+2.5
RUS	**Russkaya**	**0.81**	**136**	*eP*	Pn	10 39 13.5	+1.5
SDLR	**Sedlovina**	**0.82**	**71**	*eP*	Pn	10 39 14.0	+1.9
KDTR	**Khodutka, Kamc**	**1.25**	**166**	*eP*	Pn	10 39 15.1	+0.9
KDTR				*eS*	S	10 39 45.6	-0.5
SPN	**Mys Shipunski**	**1.47**	**86**	*eP*	Pn	10 39 17.4	+2.0
SPN				*eS*	S	10 39 49.7	+1.3
MKZ	**Mys Kozlova**	**2.89**	**56**	*eS*	S	10 40 09.8	-0.5

*ISCJB **10** 10:55:34.2±0.3, 17.°73S±0.°07×178.°75W±0.°06, h550km, mb4.2/56, Error ellipse: s-maj=11.1km s-min=5.6km az=142.7*
*NEIC **10** 10:55:34.4±0.9, 17.°77S×178.°67W, h543km±11km, mb4.3/43, Error ellipse: s-maj=12.0km s-min=6.1km az=142.0*
*IDC **10** 10:55:34.9±1.9, 17.°73S×178.°69W, h546km±22km, mb3.6/16, mb1 3.8/18, mb1mx3.5/46, mbtmp4.5/18, Error ellipse: s-maj=19.3km s-min=10.7km az=151.0*
ISC 10 10:55:34.9±0.5, 17.°79S±0.°09×178.°62W±0.°09, h550km, n79, σ1§20/81, mb4.2/56, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.63**	**61**	P	**P**	**10 57 28.5**	**-0.7**
	9.1nm,0.3s,baz=26,slow=5.9,SNR=13						
AFI	**Afiamalu**	**7.63**	**61**	*eP*	**P**	**10 57 28.7**	**-0.5**
DZM	**Mont Dzumac**	**14.68**	**251**	P	**P**	**10 58 40.3**	**-0.9**
	1.7nm,0.3s,baz=117,slow=17,SNR=9.6						
DZM	**Mont Dzumac**	**14.68**	**251**	*eP*	**P**	**10 58 40.8**	**-0.4**
KNTN	**Kanton**	**16.38**	**25**	*eP*	**P**	**10 58 57.0**	**-1.2**
	169nm,1.4s						
OUZ	**Omahuta**	**18.70**	**200**	*eP*	**P**	**10 59 22.8**	**+3.8**
	41nm,1.4s						
URZ	**Urewera**	**20.74**	**190**	*eP*	**P**	**10 59 38.4**	**+0.9**
	9.9nm,1.1s						
BFZ	**Birch Farm**	**23.24**	**190**	*eP*	**P**	**10 59 58.0**	**-1.9**
	56nm,1.4s						
MQZ	**McQueen's Vall**	**26.87**	**194**	*eP*	**P**	**11 00 29.4**	**-2.5**
	36nm,1.3s						
EIDS	**Eidsvold**	**29.12**	**250**	*eP*	**P**	**11 00 51.0**	**-0.9**
	17nm,1.1s						
MLZ	**Mavora Lakes**	**29.65**	**199**	*eP*	**P**	**11 00 56.5**	**+0.4**
	84nm,1.5s						
ARMA	**Armidale**	**29.83**	**240**	*eP*	**P**	**11 00 58.7**	**+0.6**
	9.5nm,0.6s						
CTA	**Charters Tower**	**33.27**	**260**	P	**P**	**11 01 26.9**	**-0.6**
	8.2nm,0.6s,baz=92,slow=9.4,SNR=12						
CTAO	**Charters Tower**	**33.27**	**260**	*eP*	**P**	**11 01 27.0**	**-0.6**
	8.6nm,0.8s						
CAN	**Canberra**	**33.62**	**232**	*eP*	**P**	**11 01 30.9**	**+0.7**
	8.1nm,1.1s						
PMG	**Port Moresby**	**34.24**	**280**	P	**P**	**11 01 35.9**	**+0.3**
	22nm,0.8s,baz=68,slow=6.8,SNR=7.3						
PMG	**Port Moresby**	**34.24**	**280**	*eP*	**P**	**11 01 36.2**	**+0.6**
	22nm,0.8s						
MANU	**Manus Island**	**36.87**	**291**	*eP*	**P**	**11 01 57.8**	**+0.3**
	12nm,0.6s						
COEN	**Coen**	**36.91**	**270**	*eP*	**P**	**11 01 57.8**	**0.0**
	11nm,0.6s						
STKA	**Stephens Creek**	**38.52**	**241**	P	**P**	**11 02 11.2**	**+0.6**
	8.4nm,0.4s,baz=92,slow=10,SNR=52						
STKA	**Stephens Creek**	**38.52**	**241**	*eP*	**P**	**11 02 11.2**	**+0.6**
	4.1nm,1.1s						
JAY	**Jayapura**	**42.68**	**286**	P	**P**	**11 02 44.2**	**+0.1**
	5.5nm,0.4s,baz=168,slow=7.0,SNR=9.5						
BBOO	**Buckleboo**	**43.29**	**241**	*eP*	**P**	**11 02 48.7**	**+0.1**
	22nm,0.8s						
WB2	**Warramunga Arr**	**44.45**	**259**	*eP*	**P**	**11 02 56.4**	**-1.3**
	8.2nm,0.6s						
WRAB	**Tennant Creek**	**44.45**	**259**	*eP*	**P**	**11 02 56.1**	**-1.6**
	6.9nm,0.6s						
WRA	**Warramunga Arr**	**44.46**	**259**	P	**P**	**11 02 56.3**	**-1.5**
	6.3nm,0.5s,baz=96,slow=6.9,SNR=214						
AS01	**Alice Springs**	**44.59**	**254**	*eP*	**P**	**11 02 58.0**	**-0.8**
AS01				*ePcP*	**PcP**	**11 04 29.4**	**-0.4**
AS31	**Alice Springs**	**44.63**	**254**	*eP*	**P**	**11 02 58.6**	**-0.5**
	16nm,0.6s						
ASAR	**Alice Springs**	**44.63**	**254**	P	**P**	**11 02 58.6**	**-0.5**
	55nm,0.6s,baz=88,slow=8.1,SNR=926						
MTN	**Manton Dam**	**48.60**	**268**	*eP*	**P**	**11 03 27.9**	**-1.3**
FORT	**Forrest**	**49.88**	**245**	*eP*	**P**	**11 03 37.6**	**-0.8**
	20nm,0.6s						
SOEI	**Soe**	**55.87**	**270**	*eP*	**P**	**11 04 22.4**	**+0.9**
	27nm,0.8s						
JAGI	**Jajag, Banyuwa**	**65.84**	**269**	*eP*	**P**	**11 05 25.3**	**-1.6**
	16nm,1.0s						
CASY	**Casey**	**66.17**	**205**	*eP*	**P**	**11 05 24.6**	**-3.3**
	9.4nm,1.4s						
UGM	**Wanagama**	**69.45**	**268**	*eP*	**P**	**11 05 48.3**	**-0.7**
	119nm,1.5s						
QSPA	**South Pole Qui**	**72.27**	**180**	P	**P**	**11 06 05.6**	**+1.0**
	2.3nm,0.7s,baz=135,slow=3.3,SNR=6.3						
LEM	**Lembang**	**72.52**	**268**	P	**P**	**11 06 06.7**	**-0.4**
	16nm,0.6s,baz=138,slow=23,SNR=4.2						
PETK	**Petropavlovsk-**	**73.51**	**345**	P	**P**	**11 06 11.2**	**-0.5**
	3.3nm,0.8s,baz=117,slow=9.0,SNR=4.0						
PETK	**Petropavlovsk-**	**73.51**	**345**	*eP*	**P**	**11 06 11.4**	**-0.3**
OHAK	**Old Harbor**	**77.66**	**14**	*eP*	**P**	**11 06 34.5**	**-0.1**
	8.7nm,1.1s						
KDAK	**Kodiak Island**	**78.33**	**14**	*eP*	**P**	**11 06 37.2**	**-0.9**
	22nm,1.4s						
YBH	**Yreka Blue Hor**	**78.56**	**39**	P	**P**	**11 06 41.0**	**+1.1**
	2.4nm,0.8s,baz=211,slow=5.9,SNR=5.1						
YBH	**Yreka Blue Hor**	**78.56**	**39**	*eP*	**P**	**11 06 41.6**	**+1.7**
	8.2nm,1.5s						
OMMB	**Old Mammoth Mi**	**78.57**	**44**	*eP*	**P**	**11 06 41.4**	**+1.1**
	4.9nm,1.2s						
HUMO	**Hull Mountain**	**78.93**	**38**	*eP*	**P**	**11 06 42.5**	**+0.7**
	7.8nm,1.4s						
PNTR	**Pine Nut**	**78.98**	**43**	*eP*	**P**	**11 06 43.5**	**+1.1**
	5.8nm,0.8s						
YERR	**Yerington**	**79.16**	**43**	*eP*	**P**	**11 06 44.2**	**+0.9**
	2.3nm,0.6s						
NV01	**Mina Array Sit**	**79.47**	**44**	*eP*	**P**	**11 06 45.9**	**+0.9**
NVAR	**Mina Array Bea**	**79.47**	**44**	P	**P**	**11 06 46.0**	**+1.0**
	1.3nm,0.7s,baz=225,slow=8.8,SNR=13						
NV11	**Mina Array Sit**	**79.57**	**44**	*eP*	**P**	**11 06 46.2**	**+0.8**
	0.1nm,0.8s						
KVN	**Kaiserville**	**79.94**	**44**	*eP*	**P**	**11 06 48.1**	**+0.7**
	2.2nm,0.7s						
MOD	**Modoc Plateau**	**80.12**	**40**	*eP*	**P**	**11 06 48.9**	**+0.7**
	2.6nm,0.6s						
CNPM	**China Poot**	**80.21**	**14**	*eP*	**P**	**11 06 48.0**	**-0.2**
	7.9nm,1.2s						
K05A	**Summer Lake**	**80.23**	**39**	*eP*	**P**	**11 06 48.9**	**0.0**
	3.9nm,1.3s						
BRLK	**Bradley Lake**	**80.50**	**14**	*eP*	**P**	**11 06 48.6**	**-1.1**
	7.1nm,1.2s						
WVOR	**Wild Horse Val**	**81.44**	**40**	*eP*	**P**	**11 06 53.8**	**-1.3**
	4.2nm,0.6s						
U15A	**North Rim**	**82.58**	**48**	*eP*	**P**	**11 07 02.8**	**+1.6**
	2.6nm,0.6s						
GHO	**Glory Hole Cre**	**82.74**	**14**	*eP*	**P**	**11 07 00.3**	**-0.7**
	4.9nm,0.8s						
SML	**Sawmill**	**82.90**	**14**	*eP*	**P**	**11 07 03.0**	**+1.2**
	6.6nm,1.0s						
SCM	**Sheep Creek Mo**	**83.16**	**14**	*eP*	**P**	**11 07 02.8**	**-0.3**
	6.9nm,0.8s						
MAW	**Mawson**	**83.91**	**200**	P	**P**	**11 07 07.2**	**+0.4**
	0.9nm,0.3s,baz=219,slow=6.5,SNR=3.3						
MAW	**Mawson**	**83.91**	**200**	*eP*	**P**	**11 07 07.5**	**+0.7**
	0.7nm,1.0s						
DHY	**Denali Highway**	**84.23**	**14**	*eP*	**P**	**11 07 06.2**	**-2.3**
	5.7nm,1.2s						
CCB	**Clear Creek Bu**	**85.51**	**13**	*eP*	**P**	**11 07 13.4**	**-1.1**
	1.6nm,0.8s						
IL1	**Eielson Array**	**85.81**	**13**	*eP*	**P**	**11 07 15.0**	**-1.0**
ILAR	**Eielson Array**	**85.81**	**13**	P	**P**	**11 07 14.7**	**-1.3**
	0.7nm,0.4s,baz=225,slow=5.2,SNR=14						
TXAR	**Lajitas Array**	**86.10**	**58**	P	**P**	**11 07 19.6**	**+1.3**
	1.0nm,0.7s,baz=220,slow=6.2,SNR=13						
HHC	**Hu-ho-hao-te**	**87.05**	**315**	*eP*	**P**	**11 07 25.6**	**+3.1**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,36nm,5.2s						
PD31	**Pinedale Array**	**87.40**	**44**	*eP*	**P**	**11 07 24.7**	**+0.4**
PDAR	**Pinedale Array**	**87.40**	**44**	P	**P**	**11 07 24.4**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=208,slow=4.1,SNR=12						
RWWY	**Rawlins**	**88.49**	**45**	*eP*	**P**	**11 07 30.7**	**+1.2**
	comp=Z,27nm,0.8s						
LZH	**Lanzhou**	**90.66**	**308**	⇓P	**P**	**11 07 40.0**	**+0.5**
LZH				pP	pP	11 09 44.5	+4.2
LZH				sP	sP	11 10 39.8	+4.3
LZH				PP	**PP**	**11 11 28.1**	**+3.1**
LZH				pmax	pmax		
	comp=Z,16nm,1.4s						
LZH				pmax	pmax		
	comp=Z,45nm,9.5s						
SNAA	**Sanae**	**90.72**	**179**	P	**P**	**11 07 38.8**	**-0.3**
SNAA	**Sanae**	**90.72**	**179**	P	**P**	**11 07 38.6**	**-0.5**
	comp=Z,0.6nm,0.5s,baz=196,slow=14,SNR=20						
SNAA	**Sanae**	**90.72**	**179**	*eP*	**P**	**11 07 39.0**	**-0.1**
	comp=Z,3.1nm,1.3s						
VNA3	**Neumayer Olymp**	**90.87**	**176**	P	**P**	**11 07 39.8**	**+0.1**
VNA2	**Neumayer--Watz**	**91.31**	**177**	P	**P**	**11 07 42.2**	**+0.5**
	baz=182,slow=2.0						
YKA	**Yellowknife Ar**	**94.30**	**25**	P	**P**	**11 07 54.2**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=268,slow=5.0,SNR=3.7						
BRTR	**Keskin Array B**	**144.56**	**315**	PKP	**PKPdf**	**11 14 09.2**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=15,slow=5.1,SNR=4.7						

*JMA **10** 11:09:49.9±0.2, 43.°57N×147.°70E, h16km, M3.5*
*SKHL **10** 11:09:49.0±0.3, 43.°67N×148.°01E, h43km±2km, mb4.2/6*
ISC 10 11:09:45.3±2.2, 43.°75N±0.°08×147.°85E±0.°10, h5km±13km, n17, σ1§52/32, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.75**	**279**	*i* P	**Pn**	**11 10 04.0**	**+1.5**
SHO				AMB	AMB	11 10 05.0	
	38nm,0.2s						
SHO				*i* S	**Sn**	**11 10 15.0**	**+0.8**
SHO				A	A	11 10 16.0	
	687nm,0.2s						
SHO				A	A	11 10 16.0	
	418nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.47**	**282**	*i* P	**Pg**	**11 10 14.2**	**+0.8**
YUK				AMB	AMB	11 10 15.0	
	75nm,0.3s						
YUK				AMB	AMB	11 10 15.0	
	147nm,0.3s						
YUK				*i* S	**Sn**	**11 10 31.0**	**-0.8**
YUK				A	A	11 10 32.0	
	420nm,0.3s						
YUK				A	A	11 10 32.0	
	666nm,0.3s						
KUR	**Kuril'sk**	**1.48**	**0**	*eP*	**Pg**	**11 10 14.0**	**+0.3**
KUR				AMB	AMB	11 10 15.0	
	7.0nm,0.2s						
KUR				AMB	AMB	11 10 15.0	
	36nm,0.2s						
KUR				*i* S	**Sn**	**11 10 31.0**	**-1.2**
KUR				A	A	11 10 33.0	
	317nm,0.3s						
KUR				A	A	11 10 33.0	
	276nm,0.3s						
GRPR	**Tuman**	**1.52**	**280**	*eP*	**Pg**	**11 10 15.0**	**+0.6**
GRPR				AMB	AMB	11 10 18.0	
	77nm,0.3s						
GRPR				*i* S	**Sn**	**11 10 32.0**	**-1.3**
GRPR				A	A	11 10 34.0	
	524nm,0.3s						
GRPR				A	A	11 10 34.0	
	412nm,0.3s						
LAGR	**Lagunnoye**	**1.52**	**282**	*eP*	**Pb**	**11 10 14.0**	**0.0**
LAGR				AMB	AMB	11 10 17.0	
	63nm,0.3s						
LAGR				AMB	AMB	11 10 17.0	
	126nm,0.3s						
LAGR				*eS*	**Sn**	**11 10 33.0**	**-0.3**
LAGR				A	A	11 10 36.0	
	487nm,0.3s						
LAGR				A	A	11 10 36.0	
	400nm,0.3s						
NEM2	**Nemuro 2**	**1.58**	**256**	P	**Pg**	**11 10 15.8**	**+0.2**
NEM2				*eS*	**Sn**	**11 10 34.1**	**-0.6**
GLVR	**Golovnino**	**1.69**	**270**	*eP*	**Pg**	**11 10 18.0**	**+0.4**
GLVR				AMB	AMB	11 10 19.0	
	80nm,0.2s						
GLVR				*i* S	**Sb**	**11 10 38.0**	**-0.3**
GLVR				A	A	11 10 43.0	
	425nm,0.4s						
GLVR				A	A	11 10 43.0	
	512nm,0.4s						
JRA	**Rausu**	**1.98**	**276**	P	**Pb**	**11 10 22.1**	**+0.3**
JRA				*eS*	**Sb**	**11 10 46.2**	**-0.6**
JNK	**Nakash**	**2.28**	**267**	P	**Pb**	**11 10 26.1**	**-0.8**
JNK				*eS*	**Sn**	**11 10 53.2**	**+1.3**
JAK	**Akkeshi**	**2.42**	**253**	P	**Pb**	**11 10 27.5**	**-1.8**
JAK				*eS*	**Sn**	**11 10 55.3**	**-0.1**
JTKR	**Abashiri--Toko**	**2.86**	**276**	P	**Pb**	**11 10 34.9**	**-1.8**
JTKR				*eS*	**Sb**	**11 11 10.6**	**-1.4**
JAR	**Ashorobuto**	**3.00**	**263**	P	**Pb**	**11 10 36.6**	**-2.6**
JAR				*eS*	**Sn**	**11 11 10.6**	**+0.8**
JOB	**Onbets**	**3.05**	**255**	P	**Pb**	**11 10 37.2**	**-2.8**
JOB				*eS*	**Sn**	**11 11 11.5**	**+0.5**
JMP	**Maruseppu**	**3.26**	**276**	P	**Pb**	**11 10 41.0**	**-2.5**
HRK	**Horoka**	**3.44**	**267**	*eP*	**Pb**	**11 10 43.6**	**-3.1**
JCH	**Churui**	**3.47**	**252**	P	**Pn**	**11 10 42.6**	**+2.7**
JCH				*eS*	**Sn**	**11 11 21.1**	**-0.3**
JNBK	**Urakawa-nobuka**	**4.02**	**250**	P	**Pn**	**11 10 49.7**	**+2.3**
JNBK				*eS*	**Sn**	**11 11 33.8**	**-1.0**

*SOME **10** 11:15:01.0, 44.°65N×82.°13E, h5km*
*NNC **10** 11:15:04.0±1.4, 44.°73N×81.°78E, h0km, mb3.1, mpv2.6, Error ellipse: s-maj=19.1km s-min=7.6km az=120.0*
ISC 10 11:15:01.6±1.8, 44.°65N±0.°07×82.°07E±0.°10, h10km, n8, σ1§35/15, 5C-1D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPS	**Kapalarasan**	**2.03**	**289**	*eP*	**Pg**	**11 15 39.6**	**-0.7**
	1.3nm,0.2s						
KAPS				*eS*	**Sg**	**11 16 07.3**	**+0.6**
	4.1nm,0.3s						
MK31	**Makanchi Array**	**2.15**	**4**	⇓Pn	**Pb**	**11 15 40.1**	**-0.5**
	3.1nm,0.3s,baz=187,slow=16,SNR=93						
MK31				⇑Sn	**Sb**	**11 16 08.2**	**+0.9**
	1.2nm,0.3s,baz=192,slow=27,SNR=9.6						
MAKZ	**Makanchi**	**2.16**	**358**	⇑Pn	**Pb**	**11 15 39.8**	**-1.0**
	3.2nm,0.5s						
MAKZ				⇑Sn	**Sb**	**11 16 08.5**	**+0.8**
	2.0nm,0.3s						
PDGK	**Podgornoye**	**2.28**	**236**	⇑Pg	**Pb**	**11 15 43.5**	**+0.7**
	1.3nm,0.6s						
PDGK				⇑Lg	Lg	11 16 14.3	
	4.4nm,0.5s						
SHLS	**Shalkode**	**2.40**	**233**	*eP*	**Pn**	**11 15 42.9**	**+1.9**
	8.2nm,0.2s						
SHLS				*eS*	**Sb**	**11 16 12.7**	**-1.9**
	13nm,0.4s						
MNBS	**Baschi**	**2.69**	**259**	*eP*	**Pg**	**11 15 51.5**	**-1.6**
	1.4nm,0.2s						
MNBS				*eS*	**Sg**	**11 16 27.7**	**-0.3**
	4.2nm,0.2s						
KPKS	**Kokpek**	**2.71**	**245**	*eP*	**Pb**	**11 15 51.1**	**+0.9**
	3.8nm,0.1s						
KPKS				*eS*	**Sg**	**11 16 27.1**	**-1.5**
	13nm,0.4s						
ARXS	**Arharly**	**3.07**	**263**	*eP*	**Pb**	**11 15 57.9**	**+1.6**
	1.7nm,0.2s						
ARXS				*eS*	**Sg**	**11 16 38.7**	**-1.4**
	4.3nm,0.4s						

*ISCJB **10** 11:16:40.1±1.1, 38.°9S±0.°2×78.°4E±0.°2, h10km, mb4.0/6, MS3.8/17, Error ellipse: s-maj=34.1km s-min=17.3km az=138.0*
*IDC **10** 11:16:40.7±1.2, 38.°85S×78.°42E, h0km, mb3.9/6, mb1 4.1/6, mb1mx3.6/60, mbtmp3.9/6, MS3.8/17, Ms1 3.7/17, ms1mx3.4/55, Error ellipse: s-maj=37.1km s-min=26.9km az=132.0*
ISC 10 11:16:41.9±1.1, 38.°9S±0.°2×78.°3E±0.°2, h10km, n26, σ1§21/9, mb4.0/6, MS3.8/17, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAW	**Mawson**	**30.06**	**192**	LR	LR	11 32 17.1	
	comp=Z,97nm,19.1s,baz=62,slow=31						
H08S2	**Diego Garcia H**	**31.52**	**349**	T	T	11 55 54.3	
	baz=171,slow=77,SNR=271						
H08S1	**Diego Garcia H**	**31.52**	**349**	T	T	11 55 54.5	
	baz=171,slow=77,SNR=128						
H08S3	**Diego Garcia H**	**31.54**	**349**	T	T	11 55 57.5	
	baz=171,slow=77,SNR=607						
NWAO	**Narrogin (SRO)**	**31.90**	**91**	LR	LR	11 32 48.5	
	comp=Z,221nm,21.6s,baz=132,slow=30						
LEM	**Lembang**	**41.41**	**47**	LR	LR	11 38 28.9	
	comp=Z,108nm,20.2s,baz=238,slow=32						
BOSA	**Boshof**	**44.76**	**267**	LR	LR	11 39 48.8	
	comp=Z,87nm,18.3s,baz=67,slow=31						
PALK	**Pallekele**	**45.95**	**3**	LR	LR	11 39 31.5	
	comp=Z,92nm,20.0s,baz=121,slow=30						
MATP	**Matopo**	**46.44**	**279**	LR	LR	11 41 10.3	
	comp=Z,128nm,18.5s,baz=172,slow=32						
ASAR	**Alice Springs**	**49.15**	**89**	P	**P**	**11 25 29.6**	**-0.4**
	1.1nm,0.7s,baz=240,slow=5.7,SNR=14						
ASAR				LR	LR	11 44 53.6	
	comp=Z,90nm,18.2s,baz=225,slow=34						
SNAA	**Sanae**	**50.90**	**204**	P	**P**	**11 25 44.1**	**+1.3**
	1.2nm,0.8s,baz=82,slow=2.3,SNR=5.1						
VNDA	**Vanda**	**51.02**	**164**	LR	LR	11 45 35.9	
	comp=Z,107nm,19.3s,baz=272,slow=34						
STKA	**Stephens Creek**	**51.16**	**103**	P	**P**	**11 25 46.1**	**+1.0**
	1.2nm,0.6s,baz=288,slow=9.6,SNR=4.2						
STKA				LR	LR	11 43 02.0	
	comp=Z,112nm,20.9s,baz=206,slow=31						
QSPA	**South Pole Qui**	**51.30**	**180**	P	**P**	**11 25 45.1**	**-0.8**
	3.0nm,0.9s,baz=232,slow=1.3,SNR=4.8						
QSPA				LR	LR	11 46 16.9	
	comp=Z,192nm,18.1s,baz=266,slow=35						
WRA	**Warramunga Arr**	**51.50**	**85**	P	**P**	**11 25 47.1**	**-0.8**
	1.2nm,0.7s,baz=236,slow=7.6,SNR=16						
VNA2	**Neumayer--Watz**	**52.46**	**204**	P	**P**	**11 25 55.5**	**+1.2**
	baz=93,slow=8.9						
VNA3	**Neumayer Olymp**	**53.12**	**204**	P	**P**	**11 25 57.6**	**-1.6**
DAV	**Davao City (W)**	**63.28**	**55**	LR	LR	11 56 51.7	
	comp=Z,24nm,18.0s,baz=178,slow=38						
PMG	**Port Moresby**	**67.69**	**84**	LR	LR	11 55 34.3	
	comp=Z,48nm,18.6s,baz=222,slow=34						
HNR	**Honiara**	**77.64**	**92**	LR	LR	11 59 20.0	
	comp=Z,64nm,21.1s,baz=230,slow=33						
GUMO	**Guam**	**81.01**	**65**	LR	LR	12 06 00.3	
	comp=Z,32nm,18.1s,baz=182,slow=37						
RAO	**Raoul Island**	**81.86**	**121**	LR	LR	11 57 28.1	
	comp=Z,78nm,20.3s,baz=171,slow=30						
MKAR	**Makanchi Array**	**85.35**	**3**	P	**P**	**11 29 18.4**	**-0.4**
	0.7nm,0.8s,baz=189,slow=8.3,SNR=3.3						
DBIC	**Dimbokro**	**88.86**	**279**	LR	LR	12 05 19.3	
	comp=Z,40nm,18.4s,baz=118,slow=33						
ZALV	**Zalesovo Beam**	**92.61**	**4**	LR	LR	12 08 28.4	
	comp=Z,24nm,22.0s,baz=266,slow=34						
INK	**Inuvik**	**145.75**	**20**	PKPbc	**PKPab**	**11 36 21.1**	**+0.8**
	1.6nm,0.7s,baz=350,slow=6.1,SNR=3.6						

*ISCJB **10** 12:06:09.3±0.7, 21.°15S±0.°05×68.°5W±0.°1, h129km±8km, mb3.6/5, Error ellipse: s-maj=18.1km s-min=7.4km az=10.8*
*IDC **10** 12:06:09.3±3.3, 21.°17S×68.°23W, h109km±29km, mb3.5/5, mb1 3.7/7, mb1mx3.4/40, mbtmp4.0/7, Error ellipse: s-maj=31.5km s-min=22.9km az=84.0*
*GUC **10** 12:06:11.1±0.8, 21.°11S×68.°67W, h127km±7km, ML3.7*
ISC 10 12:06:10.3±0.9, 21.°11S±0.°06×68.°5W±0.°1, h124km±9km, n18, σ1§10/26, mb3.8/5, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.92**	**274**	*eP*	**Pn**	**12 06 32.0**	**0.0**
PB01				*i* S	**Sn**	**12 06 48.3**	**-0.3**
PB01				IAML		12 06 51.9	
	comp=E,2μm,0.2s						
PB09	**IPOC Station P**	**0.97**	**225**	*eP*	**Pn**	**12 06 33.3**	**+0.6**
PB09				*i* S	**Sn**	**12 06 50.1**	**+0.6**
PB09				IAML		12 06 51.6	
	comp=E,1μm,0.6s						
PB08	**IPOC Station P**	**1.14**	**328**	*eP*	**Pn**	**12 06 35.4**	**+0.9**
PB08				*i* S	**Sn**	**12 06 53.9**	**+1.1**
PB08				IAML		12 06 54.9	
	comp=E,2μm,0.2s						
PB02	**IPOC Station P**	**1.31**	**261**	*eP*	**Pn**	**12 06 36.1**	**+0.1**
PB02				*i* S	**Sn**	**12 06 55.2**	**-0.4**
PB07	**IPOC Station P**	**1.43**	**244**	*eP*	**Pn**	**12 06 37.3**	**-0.1**
PB07				*i* S	**Sn**	**12 06 57.2**	**-0.8**
PB07				IAML		12 06 57.6	
	comp=N,2μm,0.4s						
PB04	**IPOC Station P**	**1.96**	**231**	*eP*	**Pn**	**12 06 43.2**	**-0.5**
PB04				*i* S	**Sn**	**12 07 07.3**	**-1.8**
PB04				IAML		12 07 08.9	
	comp=E,869nm,0.4s						
PSGC	**Pisagua**	**2.14**	**314**	*eP*	**Pn**	**12 06 45.1**	**-0.8**
PSGC				*i* S	**Sn**	**12 07 11.2**	**-1.8**
PSGC				IAML		12 07 13.7	
	comp=N,523nm,0.7s						
MNMC	**Minye Minye**	**2.22**	**332**	*eP*	**Pn**	**12 06 47.5**	**+0.5**
MNMC				*i* S	**Sn**	**12 07 16.1**	**+1.0**
LPAZ	**La Paz**	**4.81**	**4**	P	**Pn**	**12 07 22.5**	**+1.1**
	comp=N,6.0nm,0.3s,baz=168,slow=7.7,SNR=152						
SIV	**San Ignacio**	**8.69**	**55**	P	**Pn**	**12 08 10.5**	**-2.7**
	comp=N,2.3nm,0.3s,baz=273,slow=9.2,SNR=45						
PTGA	**Pitinga**	**21.90**	**23**	P	**P**	**12 10 52.2**	**-1.4**
	comp=N,2.6nm,0.6s,baz=195,slow=18,SNR=2.7						
SNAA	**Sanae**	**62.52**	**161**	P	**P**	**12 16 20.3**	**-0.2**
	comp=N,0.8nm,0.8s,baz=285,slow=9.0,SNR=5.4

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Garcia H**	**20.79**	**18**	T	T	12 38 41.4	
	baz=196,slow=76,SNR=5.9						
H08S2	**Diego Garcia H**	**20.79**	**18**	T	T	12 38 53.3	
	baz=196,slow=76,SNR=14						
H08S3	**Diego Garcia H**	**20.80**	**18**	T	T	12 39 10.8	
	baz=196,slow=76,SNR=11						
MATP	**Matopo**	**34.92**	**274**	LR	LR	12 32 40.9	
	comp=Z,184nm,21.7s,baz=260,slow=35						
BOSA	**Boshof**	**35.86**	**259**	LR	LR	12 30 24.6	
	comp=Z,130nm,19.2s,baz=237,slow=30						
LSZ	**Lusaka**	**37.16**	**281**	P	**P**	**12 19 45.7**	**-0.3**
	1.3nm,0.2s,baz=110,slow=5.7,SNR=4.4						
LSZ	**Lusaka**	**37.16**	**281**	*e*P	**P**	**12 19 44.9**	**-1.1**
	7.7nm,1.2s						
CM01	**Chiang Mai Arr**	**55.79**	**39**	*e*P	**P**	**12 22 11.1**	**-0.9**
CM31	**Chiang Mai Arr**	**55.81**	**39**	*e*P	**P**	**12 22 12.4**	**+0.2**
CMAR	**Chiang Mai Arr**	**55.81**	**39**	P	**P**	**12 22 13.2**	**+1.0**
	1.3nm,0.7s,baz=238,slow=6.5,SNR=6.9						
CHTO	**Chiang Mai**	**56.10**	**38**	*e*P	**P**	**12 22 14.8**	**+0.5**
	6.3nm,1.4s						
SNAA	**Sanae**	**57.41**	**201**	P	**P**	**12 22 23.5**	**+0.5**
	1.0nm,0.6s,baz=91,slow=6.4,SNR=22						
SNAA	**Sanae**	**57.41**	**201**	*e*P	**P**	**12 22 23.5**	**+0.5**
	2.6nm,1.0s						
ASAR	**Alice Springs**	**60.62**	**103**	P	**P**	**12 22 46.0**	**-0.1**
	1.1nm,0.8s,baz=251,slow=6.0,SNR=9.8						
AS31	**Alice Springs**	**60.63**	**103**	*e*P	**P**	**12 22 46.0**	**-0.1**
	1.0nm,1.2s						
AS01	**Alice Springs**	**60.67**	**103**	*e*P	**P**	**12 22 46.5**	**+0.1**
WR1	**Warramunga Arr**	**62.30**	**99**	*e*P	**P**	**12 22 57.2**	**-0.2**
	6.3nm,1.3s						
WRA	**Warramunga Arr**	**62.30**	**99**	P	**P**	**12 22 57.2**	**-0.2**
	0.9nm,0.9s,baz=248,slow=6.6,SNR=3.2						
QSPA	**South Pole Qui**	**62.52**	**180**	P	**P**	**12 22 59.3**	**+1.0**
	2.7nm,1.1s,baz=191,slow=0.6,SNR=3.8						
TAU	**Tasmania Unive**	**65.69**	**127**	*e*P	**P**	**12 23 18.9**	**-0.5**
	22nm,1.1s						
KK31	**Karatay Array**	**70.50**	**3**	*e*P	**P**	**12 23 49.7**	**+0.5**
KKAR	**Karatay Array**	**70.50**	**3**	*e*P	**P**	**12 23 49.6**	**+0.4**
BR101	**Keskin Array S**	**73.48**	**334**	*e*P	**P**	**12 24 07.8**	**+0.3**
BRTR	**Keskin Array B**	**73.48**	**334**	P	**P**	**12 24 07.8**	**+0.3**
	0.5nm,0.5s,baz=198,slow=3.5,SNR=5.9						
TORD	**Torodi Ar. Bea**	**74.33**	**294**	P	**P**	**12 24 13.4**	**+0.7**
	0.3nm,0.6s,baz=100,slow=4.7,SNR=2.4						
TOA1	**Torodi Ar. Sit**	**74.33**	**294**	*e*P	**P**	**12 24 13.4**	**+0.7**
ILGA	**Ilgaz**	**74.61**	**335**	*e*P	**P**	**12 24 13.2**	**-0.9**
	36nm,0.6s						
MK01	**Makanchi Array**	**75.49**	**11**	*e*P	**P**	**12 24 18.8**	**+0.1**
MK32	**Makanchi Array**	**75.51**	**11**	*e*P	**P**	**12 24 18.7**	**-0.2**
MKAR	**Makanchi Array**	**75.51**	**11**	P	**P**	**12 24 18.7**	**-0.2**
	0.7nm,0.6s,baz=198,slow=7.4,SNR=3.7						
ABKAR	**Akbulak array**	**76.72**	**356**	*e*P	**P**	**12 24 25.2**	**-0.4**
KURBB	**Kurchatov Arra**	**78.68**	**8**	P	**P**	**12 24 35.9**	**-0.6**
	0.9nm,0.6s,baz=205,slow=6.4,SNR=6.3						
KURK	**Kurchatov**	**78.78**	**8**	*e*P	**P**	**12 24 37.5**	**+0.3**
	2.5nm,0.9s						
BVAR	**Borovoye Array**	**80.39**	**3**	P	**P**	**12 24 45.7**	**-0.1**
	1.5nm,0.7s,baz=168,slow=7.4,SNR=12						
BRVK	**Borovoye**	**80.42**	**3**	*e*P	**P**	**12 24 46.3**	**+0.3**
	1.7nm,0.7s						
OXZ	**Oxford**	**82.14**	**135**	*e*P	**P**	**12 24 55.1**	**-0.6**
	8.7nm,0.7s						
ZAA0	**Zalesovo Array**	**82.84**	**11**	*e*P	**P**	**12 24 59.0**	**+0.2**
	2.8nm,0.8s						
ZALV	**Zalesovo Beam**	**82.84**	**11**	P	**P**	**12 24 58.9**	**+0.1**
	3.3nm,0.7s,baz=198,slow=4.5,SNR=14						
ZALV	**Zalesovo Beam**	**82.84**	**11**	*e*P	**P**	**12 24 58.7**	**0.0**
ZAA1	**Zalesovo Array**	**82.85**	**11**	*e*P	**P**	**12 24 58.9**	**+0.1**
HIZ	**Hauiti**	**86.48**	**132**	*e*P	**P**	**12 25 16.6**	**-1.2**
	106nm,1.3s						
KS15	**Wonju Array Si**	**86.91**	**45**	*e*P	**P**	**12 25 20.4**	**+0.7**
KSAR	**Wonju Array Be**	**86.91**	**45**	P	**P**	**12 25 20.4**	**+0.7**
KS01	**Wonju Array Si**	**86.93**	**45**	*e*P	**P**	**12 25 20.3**	**+0.5**
KSRS	**Korea Array**	**86.94**	**45**	P	**P**	**12 25 20.4**	**+0.6**
	0.8nm,0.8s,baz=241,slow=4.1,SNR=4.7						
KHLU	**Kahalu'u**	**140.91**	**93**	*e*PKPdf	**PKPdf**	**12 32 04.8**	**-0.8**
CRQM	**Cirque**	**141.46**	**23**	*e*PKPdf	**PKPdf**	**12 32 07.3**	**+1.8**
YKA	**Yellowknife Ar**	**145.12**	**1**	PKPbc	**PKPbc**	**12 32 10.8**	**-0.3**
	0.8nm,0.5s,baz=344,slow=3.3,SNR=13						
IP01	**Cuckoo**	**148.16**	**298**	*e*PKPdf	**PKPdf**	**12 32 15.6**	**-1.9**

SOME ***10*** *12:16:47.7, 42°.27N×83°.35E, h10km*
NNC ***10*** *12:16:50.1±10.0, 42°.16N×83°.05E, h0km, mb2.8, mpv2.4, Error ellipse: s-maj=80.4km s-min=39.6km az=153.0*
ISC 10 12:16:47.5±3.5, 42°.1N±0°.2×83°.4E±0°.1, h10km, n7, σ0§83/10, 5C, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**2.57**	**301**	*e*P	**Pb**	**12 17 33.0**	**-0.7**
	4.9nm,0.2s						
KTMS				*e*S	**Sb**	**12 18 05.7**	**+0.3**
	15nm,0.2s						
SHLS	**Shalkode**	**3.05**	**291**	*e*P	**Pn**	**12 17 36.3**	**+0.5**
	2.5nm,0.3s						
SHLS				*e*S	**Sn**	**12 18 11.4**	**-1.1**
	24nm,0.5s						
PDGK	**Podgornoye**	**3.09**	**294**	⇑Pg	**Pb**	**12 17 42.1**	**-0.5**
	0.6nm,0.4s						
PDGK				⇑Lg	Lg	12 18 20.2	
	5.4nm,0.5s						
UZB	**Uzynbulak**	**3.35**	**289**	*e*P	**Pb**	**12 17 46.7**	**-0.4**
	4.6nm,0.7s						
UZB				*e*S	**Sb**	**12 18 29.2**	**+1.2**
	4.5nm,0.3s						
DJR	**Jarkent**	**3.40**	**311**	*e*P	**Pb**	**12 17 47.0**	**-0.9**
	2.2nm,0.4s						
DJR				*e*S	**Sb**	**12 18 29.9**	**+0.5**
	7.5nm,0.4s						
MK31	**Makanchi Array**	**4.71**	**351**	⇑Pg	**Pg**	**12 18 18.1**	**+0.4**
	0.4nm,0.5s,baz=170,slow=16,SNR=6.6						
MK31				⇑Lg	Lg	12 19 16.7	
	1.2nm,0.6s,baz=170,slow=27,SNR=3.5						
MAKZ	**Makanchi**	**4.77**	**349**	⇑Lg	Lg	12 19 17.8	
	0.9nm,0.5s						

NDI ***10*** *12:23:40.8±2.1, 25°.00N×95°.02E, h20km, ML3.2*
ISCJB ***10*** *12:23:41.2±0.7, 24°.94N±0°.05×94°.98E±0°.06, h104km, mb3.5/5, Error ellipse: s-maj=7.7km s-min=6.4km az=138.3*
IDC ***10*** *12:23:43.3±4.3, 24°.26N×94°.26E, h104km±39km, mb3.4/5, mb1 3.4/6, mb1mx3.0/75, mbtmp3.6/6, Error ellipse: s-maj=155.8km s-min=16.6km az=58.0*
ISC 10 12:23:43.5±1.0, 24°.91N±0°.06×94°.95E±0°.08, h104km, n13, σ1§92/19, mb3.6/5, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**0.91**	**265**	*e*P	**Pn**	**12 24 02.1**	**-1.2**
IMP				*e*S	**Sn**	**12 24 18.0**	**-0.4**
IMP				IAML		12 24 20.5	
	comp=E,389nm,0.2s						
IMP				IAML		12 24 20.5	
	comp=N,2μm,0.2s						
AZL	**Aizawl**	**2.37**	**241**	*e*P	**Pn**	**12 24 20.2**	**-0.8**
AZL				*e*S	**Sn**	**12 24 49.5**	**-0.3**
AZL				IAML		12 24 52.5	
	comp=N,53nm,0.3s						
AZL				IAML		12 24 52.5	
	comp=E,41nm,0.3s						
ZIRO	**ZIRO**	**2.79**	**340**	*e*S	**Sn**	**12 24 56.0**	**-3.9**
SHL	**Shillong**	**2.85**	**284**	*e*P	**Pn**	**12 24 27.4**	**-0.1**
SHL				*e*S	**Sn**	**12 24 59.5**	**-1.9**
SHL				IAML		12 25 01.1	
	comp=N,234nm,0.1s						
SHL				IAML		12 25 01.1	
	comp=E,202nm,0.1s						
SAIH	**SAIHA**	**3.00**	**217**	*e*P	**Pn**	**12 24 29.2**	**-0.3**
SAIH				*e*S	**Sn**	**12 25 03.7**	**-1.2**
SAIH				IAML		12 25 08.7	
	comp=E,133nm,0.3s						
SAIH				IAML		12 25 08.9	
	comp=N,113nm,0.4s						
GUWA	**GUWAHATI**	**3.21**	**294**	*e*P	**Pn**	**12 24 31.7**	**-0.4**
GUWA				*e*S	**Sn**	**12 25 07.3**	**-2.2**
GUWA				IAML		12 25 08.9	
	comp=E,136nm,0.1s						
GUWA				IAML		12 25 09.0	
	comp=N,158nm,0.1s						
TURI	**Tura**	**4.23**	**280**	*e*P	**Pn**	**12 24 45.5**	**-0.3**
TURI				*e*S	**Sn**	**12 25 32.6**	**-1.5**
CMAR	**Chiang Mai Arr**	**7.42**	**149**	P	**Pn**	**12 25 26.5**	**-2.6**
	comp=N,0.1nm,0.3s,baz=317,slow=12,SNR=4.7						
MKAR	**Makanchi Array**	**24.07**	**338**	P	**P**	**12 28 52.5**	**+3.5**
	comp=N,2.8nm,0.5s,baz=150,slow=9.2,SNR=26						
KURBB	**Kurchatov Arra**	**28.63**	**338**	P	**P**	**12 29 32.4**	**+2.4**
	comp=N,0.1nm,0.3s,baz=145,slow=9.2,SNR=4.7						
FINES	**FINESS Array B**	**58.36**	**328**	P	**P**	**12 33 29.2**	**+1.7**
	comp=N,2.7nm,1.0s,baz=90,slow=4.2,SNR=3.6						
WRA	**Warramunga Arr**	**58.79**	**136**	P	**P**	**12 33 30.1**	**-1.0**
	comp=N,0.5nm,1.0s,baz=314,slow=4.9,SNR=5.1						
ASAR	**Alice Springs**	**61.30**	**139**	P	**P**	**12 33 47.9**	**-0.3**
	comp=N,0.2nm,0.7s,baz=318,slow=6.8,SNR=2.9						

IDC ***10*** *12:37:27.9±2.7, 23°.08N×11°.49W, h0km, mb3.7/5, mb1 3.8/7, mb1mx3.5/66, mbtmp3.7/7, ML3.4/2, MS4.4/1, Ms1 4.4/1, ms1mx3.0/69, Error ellipse: s-maj=78.9km s-min=26.6km az=74.0*
ISC 10 12:37:25.9±2.3, 22°.8N±0°.2×11°.9W±0°.3, h10km, n10, σ1§59/11, mb3.8/5, Mauritania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOWA	**Kowa**	**11.16**	**136**	Pn	**Pn**	**12 40 06.1**	**+0.3**
	0.4nm,0.3s,baz=325,slow=12,SNR=6.8						
KOWA				Sn	**Sn**	**12 42 09.6**	**-1.1**
	0.3nm,0.3s,baz=158,slow=12,SNR=4.9						
TORD	**Torodi Ar. Bea**	**16.13**	**124**	Pn	**P**	**12 41 15.0**	**-1.2**
	0.1nm,0.3s,baz=309,slow=13,SNR=6.9						
TORD				Sn	**Sn**	**12 44 13.9**	**+2.0**
	0.1nm,0.3s,baz=313,slow=22,SNR=2.7						
GERES	**GERESS Array B**	**32.98**	**32**	P	**P**	**12 43 59.0**	**-2.0**
	0.3nm,0.5s,baz=221,slow=10,SNR=3.7						
HFS	**Hagfors**	**41.41**	**19**	P	**P**	**12 45 11.9**	**-0.3**
	1.6nm,0.7s,baz=212,slow=14,SNR=5.3						
FINES	**FINESS Array B**	**46.59**	**24**	P	**P**	**12 45 54.5**	**+0.8**
	0.6nm,0.5s,baz=243,slow=8.4,SNR=4.6						
FRB	**Frobisher Bay**	**55.17**	**333**	LR	LR	13 04 46.5	
	comp=Z,343nm,18.2s,baz=132,slow=30						
KURBB	**Kurchatov Arra**	**73.01**	**42**	P	**P**	**12 48 57.5**	**+1.6**
	0.4nm,0.5s,baz=286,slow=6.7,SNR=3.4						
MKAR	**Makanchi Array**	**76.51**	**45**	P	**P**	**12 49 18.1**	**+1.8**
	0.3nm,0.5s,baz=306,slow=5.1,SNR=4.3						
WRA	**Warramunga Arr**	**148.51**	**91**	PKPbc	**PKPbc**	**12 57 14.9**	**+1.2**
	0.4nm,0.7s,baz=288,slow=2.6,SNR=5.6						
ASAR	**Alice Springs**	**148.65**	**98**	PKPbc	**PKPab**	**12 57 16.4**	**-1.3**
	0.4nm,0.7s,baz=282,slow=1.8,SNR=7.4						

BEO ***10*** *12:44:10.7±0.9, 36°.15N×29°.91E, h33km*
BJI ***10*** *12:44:13.7, 36°.51N×28°.67E, h41km, mb5.6/84, mB5.9/65, Ms6.0/94, MS7 5.9/83*
MOS ***10*** *12:44:14.7±1.2, 36°.38N×28°.96E, h33km, mb5.9/99, MS5.7/90, Error ellipse: s-maj=3.6km s-min=2.2km az=105.8*
NSSC ***10*** *12:44:14.8±0.4, 36°.32N×28°.95E, h174km±208km, ML5.5*
NIC ***10*** *12:44:14.2±0.4, 36°.46N×28°.61E, h28km Felt I=II MM at Pafos, Lemesos and Lefkosia.*
NIC Felt II MM at Pafos, lemesos and lefkosia.
ISCJB ***10*** *12:44:15.8±0.1, 36°.35N±0°.01×28°.947E±0°.009, h46km±1km, mb5.7/470, MS5.8/477, Error ellipse: s-maj=1.8km s-min=1.2km az=16.7*
IDC ***10*** *12:44:15.3±2.1, 36°.46N×28°.97E, h23km±13km, mb5.2/57, mb1 5.3/69, mb1mx5.2/80, mbtmp5.4/69, ML4.9/9, MS5.6/56, Ms1 5.6/56, ms1mx5.6/67, Error ellipse: s-maj=7.6km s-min=7.3km az=110.0*
ISK ***10*** *12:44:16.3, 36°.45N×28°.92E, h21km, ML6.0/19*
NEIC ***10*** *12:44:16.6±0.0, 36°.42N×28°.88E, h35km, mb5.8/299, MS5.9/298, MW5.8, MW6.0, ML5.8(ATH), ML5.9(THE), ML6.0(ISK), Moment Tensor Solution. s31 Moment tensor: Scale 10^{17}Nm; M_{rr}1.00; $M_{\theta\theta}$-4.50; $M_{\phi\phi}$3.50; $M_{r\theta}$3.20; $M_{\theta\phi}$-4.77; $M_{\phi r}$-1.73; Best double couple: $M_0$7.30000×10^{17} NP1:ϕ_s108.00000°, δ83.00000°, λ149.00000°. NP2:ϕ_s202.00000°, δ60.00000°, λ8.00000°. Principal axes: T 7.1900, Plg26.0000°, Azm61.0000°; N 0.1500, Plg59.0000°, Azm276.0000°; P -7.3400, Plg16.0000°, Azm159.0000°; After ATH.*
NEIC At least 6 people injured and several buildings damaged in Mugla, Turkey. Felt [VI] at Fethiye; [V] at Dalaman; [IV] at Alanya, Marmaris and Ortaca; [III] at Antalya, Bodrum, Izmir, Kas and Koycegiz. Felt [IV] at Kos and Rodos, [III] at Lardos and [II] at Irakleio, Greece. Felt [II] at Nicosia, Cyprus and at Cairo, Egypt. Felt in much of southwestern Turkey and the Dodecanese Islands, Greece and in parts of Cyprus, northeastern Egypt and western Lebanon.
DDA ***10*** *12:44:16.9, 36°.53N×28°.91E, h34km, Ml6.0*
ATH ***10*** *12:44:16.6, 36°.42N×28°.88E, h35km±1km, ML5.8/13, Error ellipse: s-maj=1.6km s-min=0.5km az=132.0*
CSEM ***10*** *12:44:16.1±0.1, 36°.36N×28°.99E, h30km, mb5.8/99, Ms5.9, Mw5.8, Error ellipse: s-maj=2.6km s-min=1.9km az=5.0*
PDG ***10*** *12:44:16.5±0.6, 36°.44N×28°.92E, h28km±1km, ML5.7/11, Error ellipse: s-maj=0.9km s-min=0.8km az=90.0*
GCMT ***10*** *12:44:16.6±0.1, 36°.28N×29°.06E, h28km, MW6.1/136, Moment Tensor Solution. s129,c270; s136,c467; Duration: 2s9 Moment tensor: Scale 10^{18}Nm; M_{rr}0.24±.01; $M_{\theta\theta}$-1.66±.01; $M_{\phi\phi}$1.42±.01; $M_{r\theta}$0.88±.03; $M_{\theta\phi}$-1.05±.01; $M_{\phi r}$0.12±.03; Best double couple: $M_0$2.02400×10^{18} NP1:ϕ_s299.00000°, δ81.00000°, λ-162.00000°. NP2:ϕ_s206.00000°, δ72.00000°, λ-9.00000°. Principal axes: T 1.7610, Plg6.0000°, Azm71.0000°; N 0.5300, Plg70.0000°, Azm324.0000°; P -2.2880, Plg19.0000°, Azm164.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
PDA ***10*** *12:44:17.8, 36°.44N×28°.92E, h40km, Mw6.0*
NEIC ***10*** *12:44:17.0±0.0, 36°.34N×28°.67E, h40km Best double couple: NP1:ϕ_s295.00000°, δ79.00000°, λ-165.00000°. NP2:ϕ_s203.00000°, δ75.00000°, λ-11.00000°. Principal axes: T 1.0800, Plg2.0000°, Azm68.0000°; N 0.3700, Plg71.0000°, Azm330.0000°; P -1.4500, Plg18.0000°, Azm159.0000°;*
SFS ***10*** *12:44:17.0, 36°.30N×28°.90E, h43km, ML6.0*
THE ***10*** *12:44:17.3, 36°.44N×28°.90E, h12km±1km, ML5.9/5, Error ellipse: s-maj=1.4km s-min=0.5km az=117.0*
GII ***10*** *12:44:20.5±0.0, 36°.23N×29°.34E, h30km±1km, mb5.6/1, MD5.9/1*
CNRM ***10*** *12:44:21.1, 37°.74N×28°.84E, h50km, ML5.3*
ISC 10 12:44:16.4±0.3, 36°.39N±0°.02×28°.97E±0°.01, h32km±1km, h32km: pP-P, n2602, σ1§79/2690, mb5.7/479, MS5.9/495, 116C-106D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.27**	**20**	PG	**Pb**	**12 44 22.0**	**-1.6**
FETY	**Fethiye**	**0.27**	**20**	*e*Pg	**Pb**	**12 44 22.1**	**-1.6**
FETY	**Fethiye**	**0.27**	**20**	P	**Pb**	**12 44 22.1**	**-1.6**
FETY	**Fethiye**	**0.27**	**20**	*i* Pg	**Pb**	**12 44 22.0**	**-1.6**
FETY				S	**Sb**	**12 44 27.5**	**-1.1**
DALY	**Dalyan (Mu¨la**	**0.50**	**330**	PG	**Pb**	**12 44 25.7**	**-1.2**
DALY				SG	**Sb**	**12 44 32.5**	**-1.6**
DALY	**Dalyan (Mu¨la**	**0.50**	**330**	⇓*i*P	**Pb**	**12 44 25.9**	**-1.0**
DALY				*i* S	**Sb**	**12 44 33.1**	**-0.9**
DALY	**Dalyan (Mu¨la**	**0.50**	**330**	*i* Pg	**Pb**	**12 44 25.7**	**-1.2**
DALY				*e*Sg	**Sb**	**12 44 32.5**	**-1.6**
DALY				S	**Sb**	**12 44 33.2**	**-0.9**
AKAS	**Kas**	**0.54**	**106**	PG	**Pn**	**12 44 28.5**	**+0.6**
AKAS				SG	**Sn**	**12 44 37.8**	**+1.9**
AKAS	**Kas**	**0.54**	**106**	⇓*i*P	**Pn**	**12 44 28.4**	**+0.6**
AKAS				*i* S	**Sn**	**12 44 41.5**	**+5.6**
AKAS	**Kas**	**0.54**	**106**	*i* Pg	**Pn**	**12 44 28.5**	**+0.6**
AKAS				*e*Sg	**Sn**	**12 44 37.8**	**+1.9**
KSL	**Kastellorizon**	**0.55**	**115**	P	**Pn**	**12 44 29.5**	**+1.5**
KSL				S	**Sn**	**12 44 39.9**	**+3.8**
KSL	**Kastellorizon**	**0.55**	**115**	*e*Pn	**Pn**	**12 44 29.7**	**+1.7**
KSL				*e*Sn	**Sn**	**12 44 38.6**	**+2.6**
KSL	**Kastellorizon**	**0.55**	**115**	P	**Pn**	**12 44 29.7**	**+1.7**
KSL				S	**Sn**	**12 44 38.6**	**+2.6**
TURN	**Turunc**	**0.57**	**329**	PG	**Pn**	**12 44 29.2**	**+1.0**
TURN				SG	**Sn**	**12 44 38.7**	**+2.2**
TURN	**Turunc**	**0.57**	**329**	⇓*i*P	**Pn**	**12 44 29.2**	**+1.0**
TURN				*i* S	**Sn**	**12 44 38.3**	**+1.7**
TURN	**Turunc**	**0.57**	**329**	*i* Pg	**Pn**	**12 44 29.2**	**+1.0**
TURN				*e*Sg	**Sn**	**12 44 38.7**	**+2.2**
ARG	**Arkhangelos**	**0.70**	**256**	PG	**Pb**	**12 44 29.9**	**-0.2**
ARG				SG	**Sn**	**12 44 40.3**	**+0.5**
ARG	**Arkhangelos**	**0.70**	**256**	P	**Pn**	**12 44 30.6**	**+0.5**
ARG				S	**Sb**	**12 44 39.5**	**0.0**
ARG				AML	AML	12 44 44.5	
ARG				AML	AML	12 44 47.6	
ARG	**Arkhangelos**	**0.70**	**256**	*e*Pn	**Pb**	**12 44 30.0**	**-0.2**
ARG				*e*Sn	**Sn**	**12 44 40.9**	**+1.1**
ARG	**Arkhangelos**	**0.70**	**256**	P	**Pb**	**12 44 30.0**	**-0.2**
ARG				S	**Sn**	**12 44 40.9**	**+1.1**
ARG	**Arkhangelos**	**0.70**	**256**	*e*P	**Pb**	**12 44 30.0**	**-0.2**
ARG				*e*		12 44 40.9	
ARG	**Arkhangelos**	**0.70**	**256**	*e*Pg	**Pb**	**12 44 29.9**	**-0.2**
ARG	**Arkhangelos**	**0.70**	**256**	P	**Pn**	**12 44 30.2**	**+0.2**
ARG				S	**Sb**	**12 44 39.6**	**0.0**
ARG				*e*Sg	**Sn**	**12 44 40.3**	**+0.5**
MRSB	**Marmaris-Mugla**	**0.70**	**298**	PG	**Pb**	**12 44 29.8**	**-0.4**
MRSB	**Marmaris-Mugla**	**0.70**	**298**	*i* Pg	**Pb**	**12 44 29.8**	**-0.4**
ELL	**Elmali**	**0.84**	**64**	PG	**Pn**	**12 44 33.4**	**+1.3**
ELL	**Elmali**	**0.84**	**64**	P	**Pn**	**12 44 33.3**	**+1.2**
ELL	**Elmali**	**0.84**	**64**	*e*Pg	**Pn**	**12 44 33.4**	**+1.3**
GLHS	**Glhisar (BURDU**	**0.88**	**29**	PG	**Pb**	**12 44 32.9**	**-0.4**
GLHS	**Glhisar (BURDU**	**0.88**	**29**	*e*Pg	**Pb**	**12 44 32.9**	**-0.4**
YER	**Yerkesik**	**0.93**	**324**	PG	**Pb**	**12 44 33.3**	**-0.7**
YER	**Yerkesik**	**0.93**	**324**	*e*Pn	**Pb**	**12 44 33.1**	**-0.9**
YER				*e*Sn	**Sn**	**12 44 46.4**	**+0.9**
YER	**Yerkesik**	**0.93**	**324**	P	**Pb**	**12 44 33.1**	**-0.9**
YER				S	**Sn**	**12 44 46.4**	**+0.9**
YER	**Yerkesik**	**0.93**	**324**	*e*P	**Pb**	**12 44 33.1**	**-0.9**
YER				*e*		12 44 46.4	
YER	**Yerkesik**	**0.93**	**324**	*e*Pg	**Pb**	**12 44 33.3**	**-0.7**
YER				S	**Sn**	**12 44 46.4**	**+0.9**
GOLH	**Golhisar**	**0.97**	**29**	⇑*i*P	**Pb**	**12 44 33.7**	**-0.2**
GOLH				*i* S	**Sb**	**12 44 47.2**	**-0.3**
GOLH	**Golhisar**	**0.97**	**29**	P	**Pn**	**12 44 33.7**	**-0.2**
GOLH				S	**Sb**	**12 44 47.2**	**-0.3**
TAVA	**DENIZLI_Tavas**	**1.08**	**358**	⇓*i*P	**Pn**	**12 44 36.0**	**+0.6**
TAVA				*i* S	**Sn**	**12 44 50.6**	**+1.3**
TAVA	**DENIZLI_Tavas**	**1.08**	**358**	P	**Pn**	**12 44 36.0**	**+0.6**
TAVA				S	**Sn**	**12 44 50.6**	**+1.3**
DATC	**Datca-Mugla**	**1.12**	**290**	PG	**Pb**	**12 44 36.6**	**-0.5**
DATC	**Datca-Mugla**	**1.12**	**290**	*e*Pg	**Pb**	**12 44 36.6**	**-0.5**
DAT	**Datca**	**1.17**	**287**	PN	**Pb**	**12 44 37.5**	**-0.6**
DAT	**Datca**	**1.17**	**287**	⇑*i*P	**Pb**	**12 44 37.5**	**-0.6**
DAT				*i* S	**Sb**	**12 44 52.7**	**-0.3**
DAT	**Datca**	**1.17**	**287**	*e*Pn	**Pb**	**12 44 37.5**	**-0.6**
DAT				S	**Sb**	**12 44 52.7**	**-0.3**
KORT	**Korkueli**	**1.27**	**61**	PN	**Pb**	**12 44 40.1**	**+0.3**
KORT	**Korkueli**	**1.27**	**61**	⇑*i*P	**Pb**	**12 44 40.8**	**+1.0**
KORT	**Korkueli**	**1.27**	**61**	*e*Pn	**Pb**	**12 44 40.1**	**+0.3**
KORT	**Korkueli**	**1.27**	**61**	P	**Pb**	**12 44 40.8**	**+1.0**
DNZL	**Cakiroluk**	**1.30**	**3**	⇓*i*P	**Pb**	**12 44 39.6**	**+1.1**
DNZL				*i* S	**Sn**	**12 44 55.7**	**+0.7**
DNZL	**Cakiroluk**	**1.30**	**3**	P	**Pn**	**12 44 39.6**	**+1.1**
DNZL				S	**Sn**	**12 44 55.7**	**+0.7**
MLSB	**Milas**	**1.32**	**314**	PN	**Pn**	**12 44 38.9**	**+0.3**
MLSB	**Milas**	**1.32**	**314**	*e*Pn	**Pn**	**12 44 38.9**	**+0.3**
DENT	**Denizli**	**1.37**	**2**	PN	**Pn**	**12 44 39.8**	**+0.5**
DENT	**Denizli**	**1.37**	**2**	*e*Pn	**Pn**	**12 44 39.8**	**+0.5**
BDRM	**Kayabasi**	**1.40**	**299**	*i* P	**Pn**	**12 44 40.7**	**+1.0**
BDRM				*i* S	**Sb**	**12 44 59.3**	**-0.2**
BDRM	**Kayabasi**	**1.40**	**299**	P	**Pn**	**12 44 40.7**	**+1.0**
BDRM				S	**Sb**	**12 44 59.3**	**-0.2**
ANTB	**Antalya**	**1.45**	**69**	PN	**Pb**	**12 44 43.6**	**+0.9**
ANTB	**Antalya**	**1.45**	**69**	*e*Pn	**Pb**	**12 44 43.6**	**+0.9**
BODT	**Bodrum**	**1.49**	**297**	PN	**Pn**	**12 44 41.4**	**+0.4**
BODT	**Bodrum**	**1.49**	**297**	*e*Pn	**Pn**	**12 44 40.9**	**-0.1**
BODT				*e*Sn	**Sn**	**12 44 59.1**	**-0.3**
BODT	**Bodrum**	**1.49**	**297**	P	**Pn**	**12 44 40.9**	**-0.1**
BODT				S	**Sn**	**12 44 59.1**	**-0.3**
BODT	**Bodrum**	**1.49**	**297**	P	**Pn**	**12 44 40.9**	**-0.1**
BODT	**Bodrum**	**1.49**	**297**	*e*Pn	**Pn**	**12 44 41.4**	**+0.4**
BODT				S	**Sn**	**12 44 59.1**	**-0.3**
NISR	**Nisiros**	**1.50**	**279**	P	**Pn**	**12 44 42.1**	**+1.1**
NISR				S	**Sn**	**12 44 59.9**	**+0.4**
NISR				AML	AML	12 45 08.8	
NISR				AML	AML	12 45

AKS	**Akhisar**	**2.65 340**	PN	**Pn**	**12 44 56.6**	**-0.3**
AKS	**Akhisar**	**2.65 340**	*e*Pn	**Pn**	**12 44 56.6**	**-0.3**
DEMI	**Demirci**	**2.66 356**	⇓*i*P	**Pn**	**12 44 57.4**	**+0.3**
DEMI			*i*S	**Sb**	**12 45 41.2**	**+5.5**
DEMI	**Demirci**	**2.66 356**	P	**Pn**	**12 44 57.4**	**+0.3**
GEDZ	**Gediz**	**2.68 7**	PN	**Pn**	**12 44 57.9**	**+0.6**
GEDZ	**Gediz**	**2.68 7**	*e*Pn	**Pn**	**12 44 57.9**	**+0.6**
SIMA	**Simav-Kutahya**	**2.69 0**	PN	**Pn**	**12 44 57.9**	**+0.3**
SIMA	**Simav-Kutahya**	**2.69 0**	*e*Pn	**Pn**	**12 44 57.9**	**+0.3**
ZEY	**˙zmir**	**2.70 314**	⇓*i*P	**Pn**	**12 44 57.9**	**+0.3**
ZEY			*i*S	**Sn**	**12 45 30.3**	**+1.2**
GAZI	**Gazipasa**	**2.71 92**	⇓*i*P	**Pn**	**12 44 59.1**	**+1.4**
GAZI			*i*S	**Sn**	**12 45 29.9**	**+0.5**
GAZI	**Gazipasa**	**2.71 92**	P	**Pn**	**12 44 59.1**	**+1.4**
GAZI			S	**Sn**	**12 45 29.9**	**+0.5**
SMAA	**Simav-Kutahya**	**2.71 0**	PN	**Pn**	**12 44 58.5**	**+0.7**
SMAA	**Simav-Kutahya**	**2.71 0**	*e*Pn	**Pn**	**12 44 58.5**	**+0.7**
URLA	**Izmir**	**2.73 317**	PN	**Pn**	**12 44 58.4**	**+0.4**
URLA	**Izmir**	**2.73 317**	⇓*i*P	**Pn**	**12 44 57.2**	**-0.8**
URLA			*i*S	**Sn**	**12 45 29.0**	**-0.9**
URLA	**Izmir**	**2.73 317**	P	**Pn**	**12 44 57.2**	**-0.8**
URLA	**Izmir**	**2.73 317**	*e*Pn	**Pn**	**12 44 58.4**	**+0.4**
URLA			S	**Sn**	**12 45 29.0**	**-0.9**
DOGA	**KONYA_Doganhis**	**2.76 51**	⇑*i*P	**Pn**	**12 45 01.1**	**+2.6**
DOGA			*i*S	**Sb**	**12 45 34.9**	**-3.6**
DOGA	**KONYA_Doganhis**	**2.76 51**	P	**Pn**	**12 45 01.1**	**+2.6**
BOLV	**Bolvadin**	**2.81 33**	⇑*i*P	**Pn**	**12 45 01.2**	**+2.0**
BOLV			*i*S	**Sn**	**12 45 31.1**	**-1.0**
BOLV	**Bolvadin**	**2.81 33**	P	**Pn**	**12 45 01.2**	**+2.0**
BOLV			S	**Sn**	**12 45 31.1**	**-1.0**
SANT	**Santorini**	**2.83 271**	⇑*i*P	**Pn**	**12 45 00.4**	**+1.0**
SANT	**Santorini**	**2.83 271**	S	Sb	12 45 50.3	+10
SANT	**Santorini**	**2.83 271**	P	**Pn**	**12 45 00.1**	**+0.7**
SANT			AML	AML	12 45 55.3	
SANT			AML	AML	12 45 60.0	
	comp=N,87136µm,1.2s					
SANT	**Santorini**	**2.83 271**	*e*Pn	**Pn**	**12 45 00.1**	**+0.7**
SANT	**Santorini**	**2.83 271**	P	**Pn**	**12 45 00.0**	**+0.7**
SANT	**Santorini**	**2.83 271**	*e*Pn	**Pn**	**12 45 00.1**	**+0.7**
SANT	**Santorini**	**2.83 271**	P	**Pn**	**12 45 00.4**	**+1.0**
SAP2K	**Karterados**	**2.84 272**	P	**Pn**	**12 45 00.3**	**+0.8**
APE	**Apeiranthos**	**2.84 285**	⇓*i*P	**Pn**	**12 45 00.1**	**+0.5**
APE	**Apeiranthos**	**2.84 285**	P	**Pn**	**12 44 59.4**	**-0.2**
APE	**Apeiranthos**	**2.84 285**	*c i*P	**Pn**	**12 44 59.6**	**0.0**
APE	**Apeiranthos**	**2.84 285**	⇓*i*P	**Pn**	**12 45 00.1**	**+0.5**
APE			S	**Sn**	**12 45 33.4**	**+0.6**
APE			*e*Lg	Lg	12 46 00.0	
THR2	**Thira island,**	**2.85 272**	*e*Pn	**Pn**	**12 45 00.1**	**+0.5**
THR2	**Thira island,**	**2.85 272**	P	**Pn**	**12 45 00.1**	**+0.5**
THR2	**Thira island,**	**2.85 272**	P	**Pn**	**12 45 00.1**	**+0.5**
THR7	**Fira-Santorini**	**2.85 272**	P	**Pn**	**12 45 00.8**	**+1.1**
THR7	**Fira-Santorini**	**2.85 272**	P	**Pn**	**12 45 00.8**	**+1.1**
THR3	**Thira Island,**	**2.88 272**	*e*Pn	**Pn**	**12 45 00.2**	**+0.2**
THR3	**Thira Island,**	**2.88 272**	P	**Pn**	**12 45 00.2**	**+0.2**
THR3	**Thira Island,**	**2.88 272**	P	**Pn**	**12 45 00.2**	**+0.2**
THR6	**Thira Island,**	**2.88 270**	*e*Pn	**Pn**	**12 45 00.3**	**+0.3**
THR6	**Thira Island,**	**2.88 270**	P	**Pn**	**12 45 00.3**	**+0.3**
THR6	**Thira Island,**	**2.88 270**	P	**Pn**	**12 45 00.3**	**+0.3**
SAP1	**Santorini-Akro**	**2.88 271**	P	**Pn**	**12 45 00.9**	**+0.8**
SAP1	**Santorini-Akro**	**2.88 271**	P	**Pn**	**12 45 00.9**	**+0.8**
SAP4	**Santorini-Oia**	**2.90 273**	P	**Pn**	**12 45 01.2**	**+0.9**
SAP4	**Santorini-Oia**	**2.90 273**	P	**Pn**	**12 45 01.2**	**+0.9**
THR5	**Thira Island,**	**2.92 272**	P	**Pn**	**12 45 00.4**	**-0.2**
THR5	**Thira Island,**	**2.92 272**	P	**Pn**	**12 45 00.4**	**-0.2**
SAP3	**Santorini-Thir**	**2.92 272**	P	**Pn**	**12 45 01.5**	**+0.9**
SAP3	**Santorini-Thir**	**2.92 272**	P	**Pn**	**12 45 01.5**	**+0.9**
NPS	**Neapolis**	**2.95 249**	P	**Pn**	**12 45 01.9**	**+0.9**
NPS			S	**Sn**	**12 45 36.6**	**+1.3**
NPS			AML	AML	12 45 38.2	
NPS			AML	AML	12 45 39.7	
NPS	**Neapolis**	**2.95 249**	*e*Pn	**Pn**	**12 45 01.6**	**+0.6**
NPS			*e*Sn	**Sn**	**12 45 35.5**	**+0.2**
NPS	**Neapolis**	**2.95 249**	P	**Pn**	**12 45 01.6**	**+0.6**
NPS			S	**Sn**	**12 45 35.5**	**+0.2**
NPS	**Neapolis**	**2.95 249**	*e*P	**Pn**	**12 45 01.6**	**+0.6**
NPS			*e*		12 45 35.5	
NPS	**Neapolis**	**2.95 249**	P	**Pn**	**12 45 01.6**	**+0.6**
NPS			S	**Sn**	**12 45 36.5**	**+1.3**
IOSP	**Ios island**	**2.98 278**	P	**Pn**	**12 45 02.3**	**+0.9**
IOSP	**Ios island**	**2.98 278**	P	**Pn**	**12 45 02.0**	**+0.6**
IOSP	**Ios island**	**2.98 278**	P	**Pn**	**12 45 02.0**	**+0.6**
KMER	**Konya-Meram**	**3.05 62**	⇑*i*P	**Pn**	**12 45 05.7**	**+3.2**
KMER			*i*S	**Sb**	**12 45 43.6**	**-3.3**
KMER	**Konya-Meram**	**3.05 62**	P	**Pn**	**12 45 05.7**	**+3.2**
AKMC	**Akamas**	**3.05 115**	P	**Pn**	**12 45 03.4**	**+1.0**
	baz=296					
AKMC	**Akamas**	**3.05 115**	P	**Pn**	**12 45 03.4**	**+1.0**
CHOS	**Chios island**	**3.06 312**	P	**Pn**	**12 45 04.0**	**+1.4**
CHOS	**Chios island**	**3.06 312**	*e*Pn	**Pn**	**12 45 03.4**	**+0.8**
CHOS			*e*Sn	**Sn**	**12 45 38.9**	**+0.7**
CHOS	**Chios island**	**3.06 312**	P	**Pn**	**12 45 03.4**	**+0.8**
CHOS			S	**Sn**	**12 45 38.9**	**+0.7**
CHOS	**Chios island**	**3.06 312**	P	**Pn**	**12 45 04.0**	**+1.4**
CHOS			S	**Sn**	**12 45 38.9**	**+0.7**
LAST	**Lasithi**	**3.09 248**	P	**Pn**	**12 45 04.6**	**+1.7**
LAST			AML	AML	12 45 51.8	
	comp=E,76343µm,1.1s					
LAST			AML	AML	12 45 52.2	
	comp=N,95941µm,1.0s					
LAST	**Lasithi**	**3.09 248**	*e*Pn	**Pn**	**12 45 03.9**	**+0.9**
LAST	**Lasithi**	**3.09 248**	P	**Pn**	**12 45 03.9**	**+0.9**
LAST	**Lasithi**	**3.09 248**	P	**Pn**	**12 45 04.7**	**+1.7**
KONT	**Konya--Tatoy**	**3.13 59**	⇑*i*P	**Pn**	**12 45 06.5**	**+3.0**
KONT			*i*S	Sb	12 45 58.6	+10
PPCY	**Paphos**	**3.13 118**	P	**Pn**	**12 45 04.8**	**+1.3**
	baz=298					
PPCY			S	**Sn**	**12 45 43.3**	**+3.5**
PPCY	**Paphos**	**3.13 118**	P	**Pn**	**12 45 04.8**	**+1.3**
PPCY			S	**Sn**	**12 45 43.3**	**+3.5**
STEP	**BALIKESIR_Sava**	**3.15 342**	⇓*i*P	**Pn**	**12 45 03.7**	**0.0**
STEP			*i*S	**Sb**	**12 45 53.9**	**+4.4**
STEP	**BALIKESIR_Sava**	**3.15 342**	P	**Pn**	**12 45 03.7**	**0.0**
ERMK	**Ermenek**	**3.19 84**	⇑*i*P	**Pn**	**12 45 08.1**	**+3.6**
ERMK			*i*S	**Sb**	**12 45 47.0**	**-3.9**
ERMK	**Ermenek**	**3.19 84**	P	**Pn**	**12 45 08.1**	**+3.6**
ALFC	**Alefka**	**3.20 111**	P	**Pn**	**12 45 04.7**	**+0.3**
	baz=293					
ALFC	**Alefka**	**3.20 111**	P	**Pn**	**12 45 04.7**	**+0.3**
DURS	**Dursunbey**	**3.23 353**	⇓*i*P	**Pn**	**12 45 05.3**	**+0.3**
DURS			*i*S	**Sb**	**12 45 55.5**	**+3.4**
DURS	**Dursunbey**	**3.23 353**	P	**Pn**	**12 45 05.3**	**+0.3**
TNSA	**Tinos**	**3.26 292**	P	**Pn**	**12 45 05.7**	**+0.5**
TNSA	**Tinos**	**3.26 292**	P	**Pn**	**12 45 06.2**	**+1.0**
KDHN	**Kadinhani**	**3.29 49**	⇑*i*P	**Pn**	**12 45 07.8**	**+2.0**
KDHN			*i*S	**Sb**	**12 46 02.0**	**+8.3**
KDHN	**Kadinhani**	**3.29 49**	P	**Pn**	**12 45 07.8**	**+2.0**
IACM	**Heraklion**	**3.34 252**	P	**Pn**	**12 45 07.4**	**+1.0**
IACM	**Heraklion**	**3.34 252**	P	**Pn**	**12 45 07.0**	**+0.6**
IACM	**Heraklion**	**3.34 252**	P	**Pn**	**12 45 07.0**	**+0.6**
AYVA	**Ayvalik**	**3.43 329**	⇓*i*P	**Pn**	**12 45 07.7**	**+0.1**
AYVA			*i*S	Sb	12 46 08.8	+11
AYVA	**Ayvalik**	**3.43 329**	P	**Pn**	**12 45 07.7**	**+0.1**
LEF	**Lefka**	**3.43 110**	P	**Pn**	**12 45 07.4**	**-0.2**
PSRA	**Psara**	**3.46 310**	P	**Pn**	**12 45 10.6**	**+2.6**
PSRA	**Psara**	**3.46 310**	P	**Pn**	**12 45 10.0**	**+2.0**
ESKT	**Eskisehir**	**3.47 25**	⇑*i*P	**Pn**	**12 45 08.1**	**-0.1**
SEYT	**Eskypehyr**	**3.47 25**	P	**Pn**	**12 45 08.1**	**-0.1**
IDI	**Anoyia**	**3.49 253**	Pn	**Pn**	**12 45 08.7**	**+0.3**
	comp=N,568nm,0.3s,baz=76,slow=6.3,SNR=1344					
IDI			Sn	**Sn**	**12 45 47.7**	**-1.0**
	comp=N,1µm,0.3s,baz=295,slow=15,SNR=7.9					
IDI	**Anoyia**	**3.49 253**	⇑*i*P	**Pn**	**12 45 09.3**	**+0.8**
IDI	**Anoyia**	**3.49 253**	*e*Pn	**Pn**	**12 45 08.9**	**+0.4**
IDI	**Anoyia**	**3.49 253**	⇑*i*P	**Pn**	**12 45 09.3**	**+0.8**
IDI			Sn	**Sn**	**12 45 47.7**	**-1.0**
IDI			S	Sb	12 45 49.8	-10
BALY	**Balya**	**3.52 343**	⇓*i*P	**Pn**	**12 45 08.1**	**-0.7**
BALY			*i*S	**Sb**	**12 46 05.3**	**+5.2**
BALY	**Balya**	**3.52 343**	P	**Pn**	**12 45 08.1**	**-0.7**
PRK	**Paraskevi**	**3.57 324**	P	**Pn**	**12 45 09.2**	**-0.3**
PRK			AML	AML	12 46 15.9	
PRK			AML	AML	12 46 25.6	
PRK	**Paraskevi**	**3.57 324**	*e*Pn	**Pn**	**12 45 09.8**	**+0.4**
PRK	**Paraskevi**	**3.57 324**	P	**Pn**	**12 45 09.8**	**+0.4**
PRK	**Paraskevi**	**3.57 324**	*e*P	**Pn**	**12 45 09.8**	**+0.4**
PRK	**Paraskevi**	**3.57 324**	P	**Pn**	**12 45 09.8**	**+0.4**
SZAC	**Souni**	**3.58 116**	P	**Pn**	**12 45 10.9**	**+1.2**
	baz=297					
SZAC	**Souni**	**3.58 116**	P	**Pn**	**12 45 10.9**	**+1.2**
AUBOZ	**BOZOYUK**	**3.62 13**	⇓*i*P	**Pn**	**12 45 11.2**	**+0.9**
AUBOZ			*i*S	**Sb**	**12 46 07.8**	**+4.7**
AUBOZ	**BOZOYUK**	**3.62 13**	P	**Pn**	**12 45 11.1**	**+0.9**
SIVA	**Sivas**	**3.65 249**	P	**Pn**	**12 45 13.3**	**+2.7**
SIVA			S	**Sn**	**12 45 52.7**	**+0.2**
SIVA			AML	AML	12 46 18.6	
SIVA			AML	AML	12 46 19.8	
SIVA	**Sivas**	**3.65 249**	*e*Pn	**Pn**	**12 45 12.2**	**+1.6**
SIVA	**Sivas**	**3.65 249**	P	**Pn**	**12 45 12.2**	**+1.6**
SIVA	**Sivas**	**3.65 249**	P	**Pn**	**12 45 12.9**	**+2.3**
SIVA			S	**Sn**	**12 45 53.0**	**+0.5**
AUKUT	**KUTAHYA**	**3.66 13**	⇑*i*P	Pn	12 45 04.7	-6.1
AUKUT			*i*S	**Sn**	**12 45 53.9**	**+0.9**
MAMC	**Mammari**	**3.66 108**	P	**Pn**	**12 45 11.3**	**+0.5**
	baz=290					
MAMC	**Mammari**	**3.66 108**	P	**Pn**	**12 45 11.3**	**+0.5**
AUSIV	**SIVRIHISAR**	**3.67 33**	⇑*i*P	**Pn**	**12 45 11.3**	**+0.4**
AUSIV			*i*S	**Sb**	**12 46 05.6**	**+1.1**
AUSIV	**SIVRIHISAR**	**3.67 33**	P	**Pn**	**12 45 11.4**	**+0.4**
MHLA	**Plaka, Milos I**	**3.68 277**	P	**Pn**	**12 45 12.0**	**+1.1**
MHLA	**Plaka, Milos I**	**3.68 277**	P	**Pn**	**12 45 12.3**	**+1.3**
BORA	**Eskisehir**	**3.68 18**	⇑*i*P	**Pn**	**12 45 12.2**	**+1.1**
BORA			*i*S	**Sn**	**12 45 54.0**	**+0.5**
BORA	**Eskisehir**	**3.68 18**	P	**Pn**	**12 45 12.2**	**+1.1**
BORA			S	**Sn**	**12 45 54.0**	**+0.5**
SERI	**Serifos**	**3.68 283**	P	**Pn**	**12 45 10.7**	**-0.3**
SERI	**Serifos**	**3.68 283**	P	**Pn**	**12 45 11.5**	**+0.4**
SERI	**Serifos**	**3.68 283**	P	**Pn**	**12 45 11.5**	**+0.4**
MHLO	**Agia Marina, M**	**3.69 276**	P	**Pn**	**12 45 13.9**	**+2.7**
MHLO	**Agia Marina, M**	**3.69 276**	P	**Pn**	**12 45 12.4**	**+1.2**
MHLO	**Agia Marina, M**	**3.69 276**	P	**Pn**	**12 45 12.4**	**+1.2**
GULN	**MERSIN_Gulnar**	**3.70 92**	⇓*i*P	**Pn**	**12 45 13.0**	**+1.7**
GULN			*i*S	**Sn**	**12 45 56.5**	**+2.7**
GULN	**MERSIN_Gulnar**	**3.70 92**	P	**Pn**	**12 45 13.0**	**+1.7**
GULN			S	**Sn**	**12 45 56.5**	**+2.7**
SIGR	**SIGRI**	**3.75 320**	P	**Pn**	**12 45 12.0**	**+0.1**
SIGR	**SIGRI**	**3.75 320**	*e*Pn	**Pn**	**12 45 12.2**	**+0.3**
SIGR	**SIGRI**	**3.75 320**	P	**Pn**	**12 45 12.2**	**+0.3**
SIGR	**SIGRI**	**3.75 320**	P	**Pn**	**12 45 12.2**	**+0.3**
CSS	**Mathiatis**	**3.83 111**	*e*Pn	**Pn**	**12 45 13.5**	**+0.5**
CSS	**Mathiatis**	**3.83 111**	P	**Pn**	**12 45 13.6**	**+0.5**
	baz=292					
CSS	**Mathiatis**	**3.83 111**	Pn	**Pn**	**12 45 12.9**	**-0.1**
CSS	**Mathiatis**	**3.83 111**	P	**Pn**	**12 45 13.6**	**+0.5**
BAYC	**CANAKKALE_Bayr**	**3.86 331**	⇓*i*P	**Pn**	**12 45 13.5**	**0.0**
BAYC			*i*S	Sb	12 46 19.9	+10
BAYC	**CANAKKALE_Bayr**	**3.86 331**	P	**Pn**	**12 45 13.5**	**0.0**
KARY	**Karystos**	**3.97 296**	P	**Pn**	**12 45 16.0**	**+0.9**
KARY	**Karystos**	**3.97 296**	P	**Pn**	**12 45 16.2**	**+1.1**
KARY	**Karystos**	**3.97 296**	P	**Pn**	**12 45 16.4**	**+1.4**
VAM	**Vamos**	**3.99 257**	P	**Pn**	**12 45 16.7**	**+1.4**
VAM	**Vamos**	**3.99 257**	*e*Pn	**Pn**	**12 45 15.2**	**-0.1**
VAM	**Vamos**	**3.99 257**	P	**Pn**	**12 45 15.2**	**-0.1**
VAM	**Vamos**	**3.99 257**	*e*P	**Pn**	**12 45 15.2**	**-0.1**
VAM	**Vamos**	**3.99 257**	P	**Pn**	**12 45 17.0**	**+1.7**
AUMIH	**MIHALICIK**	**4.00 29**	⇑*i*P	**Pn**	**12 45 17.1**	**+1.5**
AUMIH			*i*S	Sb	12 46 23.3	+9.0
AUMIH	**MIHALICIK**	**4.00 29**	P	**Pn**	**12 45 17.1**	**+1.5**
EZN	**Ezine**	**4.02 330**	*e*Pn	**Pn**	**12 45 15.5**	**-0.1**
EZN	**Ezine**	**4.02 330**	P	**Pn**	**12 45 15.5**	**-0.1**
EZN	**Ezine**	**4.02 330**	*e*P	**Pn**	**12 45 15.5**	**-0.1**
EZN	**Ezine**	**4.02 330**	P	**Pn**	**12 45 15.5**	**-0.1**
KNL	**Bal˙–kesir**	**4.04 344**	⇓*i*P	**Pn**	**12 45 16.1**	**+0.1**
KNL			*i*S	Sb	12 46 29.6	+14
IMMV	**Iera Moni Meta**	**4.15 259**	P	**Pn**	**12 45 19.0**	**+1.5**
IMMV	**Iera Moni Meta**	**4.15 259**	P	**Pn**	**12 45 18.0**	**+0.5**
IMMV	**Iera Moni Meta**	**4.15 259**	P	**Pn**	**12 45 19.2**	**+1.7**
KKUL	**Konya-Kulu**	**4.19 47**	⇑*i*P	**Pn**	**12 45 20.5**	**+2.4**
KKUL			*i*S	Sb	12 46 34.0	+14
KKUL	**Konya-Kulu**	**4.19 47**	P	**Pn**	**12 45 20.5**	**+2.4**
GEYV	**SAKARYA_Geyve**	**4.22 14**	*i*P	**Pn**	**12 45 19.1**	**+0.6**
GEYV			*i*S	Sb	12 46 35.8	+15
GEYV	**SAKARYA_Geyve**	**4.22 14**	P	**Pn**	**12 45 19.1**	**+0.6**
GVD	**Gavdhos**	**4.26 250**	P	**Pn**	**12 45 20.8**	**+1.8**
GVD	**Gavdhos**	**4.26 250**	P	**Pn**	**12 45 21.0**	**+1.9**
SKY	**Skiros Island**	**4.30 307**	P	**Pn**	**12 45 22.8**	**+3.3**
SKY			AML	AML	12 46 13.5	
	comp=E,51128µm,0.8s					
SKY			AML	AML	12 46 15.6	
	comp=N,55957µm,0.9s					
SKY	**Skiros Island**	**4.30 307**	*e*Pn	**Pn**	**12 45 21.1**	**+1.6**
SKY	**Skiros Island**	**4.30 307**	P	**Pn**	**12 45 21.1**	**+1.6**
SKY	**Skiros Island**	**4.30 307**	P	**Pn**	**12 45 22.1**	**+2.6**
DION	**Dionisos Attik**	**4.36 294**	P	**Pn**	**12 45 21.9**	**+1.5**
DION	**Dionisos Attik**	**4.36 294**	P	**Pn**	**12 45 22.0**	**+1.6**
VLY	**Voula,Athens**	**4.39 291**	P	**Pn**	**12 45 23.2**	**+2.5**
VLY	**Voula,Athens**	**4.39 291**	*e*Pn	**Pn**	**12 45 22.1**	**+1.4**
VLY	**Voula,Athens**	**4.39 291**	P	**Pn**	**12 45 22.1**	**+1.4**
VLY	**Voula,Athens**	**4.39 291**	P	**Pn**	**12 45 22.9**	**+2.2**
PTL	**Penteli**	**4.40 294**	P	**Pn**	**12 45 22.7**	**+1.8**
PTL	**Penteli**	**4.40 294**	*e*Pn	**Pn**	**12 45 22.4**	**+1.5**
PTL	**Penteli**	**4.40 294**	P	**Pn**	**12 45 22.4**	**+1.5**
PTL	**Penteli**	**4.40 294**	P	**Pn**	**12 45 22.7**	**+1.8**
ATHU	**Athens Univers**	**4.43 292**	P	**Pn**	**12 45 20.8**	**-0.5**
ATHU	**Athens Univers**	**4.43 292**	*e*Pn	**Pn**	**12 45 21.5**	**+0.2**
ATHU	**Athens Univers**	**4.43 292**	P	**Pn**	**12 45 21.5**	**+0.2**
ATHU	**Athens Univers**	**4.43 292**	P	**Pn**	**12 45 21.5**	**+0.2**
EFSA	**Agios Efstrati**	**4.45 316**	P	**Pn**	**12 45 22.9**	**+1.3**
EFSA	**Agios Efstrati**	**4.45 316**	P	**Pn**	**12 45 23.2**	**+1.6**
ATH	**Athens Observa**	**4.48 292**	P	**Pn**	**12 45 23.9**	**+1.9**
ATH	**Athens Observa**	**4.48 292**	P	**Pn**	**12 45 23.9**	**+1.9**
EREA	**Eretria**	**4.50 298**	P	**Pn**	**12 45 24.7**	**+2.5**
EREA	**Eretria**	**4.50 298**	P	**Pn**	**12 45 24.0**	**+1.8**
EREA	**Eretria**	**4.50 298**	P	**Pn**	**12 45 24.4**	**+2.1**
GADA	**Gvkgeada**	**4.50 329**	*e*Pn	**Pn**	**12 45 22.7**	**+0.4**
GADA	**Gvkgeada**	**4.50 329**	P	**Pn**	**12 45 22.7**	**+0.4**
GADA	**Gvkgeada**	**4.50 329**	P	**Pn**	**12 45 22.7**	**+0.4**
BR231	**Keskin MP Arra**	**4.58 40**	*e*Pn	**Pn**	**12 45 25.3**	**+1.9**
BR231	**Keskin MP Arra**	**4.58 40**	*e*Pn	**Pn**	**12 45 25.3**	**+1.9**
ANTO	**Ankara**	**4.60 40**	⇑*i*P	**Pn**	**12 45 25.7**	**+1.9**
ANTO	**Ankara**	**4.60 40**	*e*Pn	**Pn**	**12 45 25.7**	**+1.9**
ANTO	**Ankara**	**4.60 40**	P	**Pn**	**12 45 25.8**	**+1.9**
	SNR=703					
ANTO	**Ankara**	**4.60 40**	Pn	**Pn**	**12 45 25.8**	**+1.9**
	SNR=703					
ANTO	**Ankara**	**4.60 40**	*e*P	**Pn**	**12 45 25.7**	**+1.9**
ANTO	**Ankara**	**4.60 40**	*e*Pn	**Pn**	**12 45 25.7**	**+1.9**
LIA	**Limnos Island**	**4.60 321**	P	**Pn**	**12 45 23.6**	**-0.1**
LIA	**Limnos Island**	**4.60 321**	*e*Pn	**Pn**	**12 45 24.6**	**+0.9**
LIA	**Limnos Island**	**4.60 321**	P	**Pn**	**12 45 24.6**	**+0.9**
LIA	**Limnos Island**	**4.60 321**	P	**Pn**	**12 45 24.6**	**+0.9**
ANKY	**Antikythira Is**	**4.62 265**	P	**Pn**	**12 45 24.6**	**+0.8**
ANKY			AML	AML	12 46 36.5	
	comp=E,37016µm,1.1s					
ANKY			AML	AML	12 46 37.2	
	comp=N,22383µm,0.7s					
ANKY	**Antikythira Is**	**4.62 265**	*e*Pn	**Pn**	**12 45 24.4**	**+0.5**
ANKY	**Antikythira Is**	**4.62 265**	P	**Pn**	**12 45 24.4**	**+0.5**
ANKY	**Antikythira Is**	**4.62 265**	P	**Pn**	**12 45 24.4**	**+0.5**
DID	**Didima**	**4.72 285**	P	**Pn**	**12 45 27.0**	**+1.5**
DID	**Didima**	**4.72 285**	*e*Pn	**Pn**	**12 45 26.7**	**+1.3**
DID	**Didima**	**4.72 285**	P	**Pn**	**12 45 26.7**	**+1.3**
DID	**Didima**	**4.72 285**	P	**Pn**	**12 45 27.2**	**+1.8**
KRND	**KRANIDI**	**4.77 284**	P	**Pn**	**12 45 28.0**	**+2.0**
KRND	**KRANIDI**	**4.77 284**	P	**Pn**	**12 45 27.6**	**+1.6**
KRND	**KRANIDI**	**4.77 284**	P	**Pn**	**12 45 28.0**	**+2.0**
KYTH	**Kithira**	**4.78 270**	P	**Pn**	**12 45 28.2**	**+2.0**
KYTH	**Kithira**	**4.78 270**	*e*Pn	**Pn**	**12 45 27.3**	**+1.1**
KYTH	**Kithira**	**4.78 270**	P	**Pn**	**12 45 27.3**	**+1.1**
KYTH	**Kithira**	**4.78 270**	P	**Pn**	**12 45 28.3**	**+2.1**
MNVA	**Monemvasia**	**4.79 275**	P	**Pn**	**12 45 29.3**	**+3.1**
MNVA	**Monemvasia**	**4.79 275**	P	**Pn**	**12 45 28.8**	**+2.6**
VLI	**Veliai**	**4.87 276**	P	**Pn**	**12 45 28.3**	**+2.0**
VLI	**Veliai**	**4.87 276**	*e*Pn	**Pn**	**12 45 28.8**	**+1.5**
VLI	**Veliai**	**4.87 276**	P	**Pn**	**12 45 28.8**	**+1.5**
VLI	**Veliai**	**4.87 276**	P	**Pn**	**12 45 29.3**	**+2.0**
SMTH	**Samothraki Isl**	**4.89 328**	P	**Pn**	**12 45 27.6**	**-0.1**
SMTH	**Samothraki Isl**	**4.89 328**	*e*Pn	**Pn**	**12 45 27.9**	**+0.2**
SMTH	**Samothraki Isl**	**4.89 328**	P	**Pn**	**12 45 27.9**	**+0.2**
SMTH	**Samothraki Isl**	**4.89 328**	P	**Pn**	**12 45 27.9**	**+0.2**
ALNA	**Alonissos**	**4.89 306**	P	**Pn**	**12 45 30.4**	**+2.7**
ALNA	**Alonissos**	**4.89 306**	P	**Pn**	**12 45 30.0**	**+2.3**
BR131	**Keskin Array S**	**4.97 46**	*e*Pn	**Pn**	**12 45 30.5**	**+1.6**
BR131	**Keskin Array S**	**4.97 46**	*e*Pn	**Pn**	**12 45 30.5**	**+1.6**
BRTR	**Keskin Array B**	**4.97 46**	Pn	**Pn**	**12 45 30.4**	**+1.4**
	comp=N,229nm,0.3s,baz=220,slow=15,SNR=2374					
BRTR			Sn	**Sn**	**12 46 25.8**	**+0.4**
	comp=N,288nm,0.3s,baz=215,slow=27,SNR=16					
BRTR	**Keskin Array B**	**4.97 46**	*i*P	**Pn**	**12 45 30.3**	**+1.4**
BRTR			pmax	pmax		
	comp=Z,815nm,0.5s					
BRTR	**Keskin Array B**	**4.97 46**	*i*P	**Pn**	**12 45 30.3**	**+1.4**
	comp=Z,815nm,0.5s					
BRTR			Sn	**Sn**	**12 46 25.8**	**+0.4**
LOUT	**Loutraki**	**5.05 290**	P	**Pn**	**12 45 31.8**	**+2.0**
LOUT	**Loutraki**	**5.05 290**	P	**Pn**	**12 45 31.8**	**+2.0**
ALN	**Alexandroupoli**	**5.05 334**	P	**Pn**	**12 45 30.2**	**+0.4**
ALN	**Alexandroupoli**	**5.05 334**	*e*Pn	**Pn**	**12 45 30.3**	**+0.4**
ALN	**Alexandroupoli**	**5.05 334**	P	**Pn**	**12 45 29.9**	**0.0**
ALN	**Alexandroupoli**	**5.05 334**	*e*P	**Pn**	**12 45 30.3**	**+0.4**
ALN	**Alexandroupoli**	**5.05 334**	P	**Pn**	**12 45 29.9**	**0.0**
ALN	**Alexandroupoli**	**5.05 334**	*e*Pn	**Pn**	**12 45 30.3**	**+0.4**
LTK	**Loutraki**	**5.06 291**	P	**Pn**	**12 45 32.5**	**+2.5**
LTK	**Loutraki**	**5.06 291**	*e*Pn	**Pn**	**12 45 31.8**	**+1.8**
LTK	**Loutraki**	**5.06 291**	P	**Pn**	**12 45 31.8**	**+1.8**
LTK	**Loutraki**	**5.06 291**	P	**Pn**	**12 45 32.3**	**+2.3**
SKIA	**Skiathos**	**5.17 304**	P	**Pn**	**12 45 34.0**	**+2.6**
SKIA	**Skiathos**	**5.17 304**	P	**Pn**	**12 45 33.3**	**+1.8**
SKIA	**Skiathos**	**5.17 304**	P	**Pn**	**12 45 33.8**	**+2.3**
PROD	**Prodromos**	**5.18 293**	P	**Pn**	**12 45 34.0**	**+2.3**
PROD	**Prodromos**	**5.18 293**	P	**Pn**	**12 45 33.9**	**+2.2**
SMIA	**Simia**	**5.21 300**	P	**Pn**	**12 45 35.1**	**+3.1**
SMIA	**Simia**	**5.21 300**	P	**Pn**	**12 45 34.1**	**+2.1**
**SMI

MMLI Sn **Sn** **12 47 01.8 -4.3**
QASN Qassioun 6.64 113 *e*P **Pn** **12 45 53.1 +1.3**
QASN *e*S **Sn** **12 47 03.2 -3.3**
QASN AML AML 12 47 10.6
comp=N,17μm,0.5s
QASN AML AML 12 47 11.6
comp=E,6μm,0.6s
KNT Kendrikon 6.72 317 P **Pn** **12 45 55.6 +2.7**
KNT Kendrikon 6.72 317 P **Pn** **12 45 55.6 +2.7**
KFL Anninata 6.75 287 P **Pn** **12 45 56.7 +3.5**
KFL Anninata 6.75 287 P **Pn** **12 45 56.3 +3.1**
DSL Palaion Diasel 6.81 296 P Pn 12 45 59.8 +5.7
DSL Palaion Diasel 6.81 296 P **Pn** **12 45 58.3 +4.2**
HMDT Nahal Hemdat 6.81 125 Pn **Pn** **12 45 54.1 0.0**
HMDT Sn **Sn** **12 47 06.7 -3.8**
TOTH TOTAH 6.83 114 *e*P **Pn** **12 45 55.4 +1.0**
TOTH *e*S **Sn** **12 47 07.5 -3.6**
TOTH AML AML 12 47 13.0
comp=E,5μm,0.4s
TOTH AML AML 12 47 15.5
comp=N,9μm,0.5s
GRG Griva 6.87 314 P **Pn** **12 45 58.4 +3.5**
GRG Griva 6.87 314 P **Pn** **12 45 57.0 +2.1**
GRG pmax pmax
comp=Z,2μm,1.0s
GRG Griva 6.87 314 P **Pn** **12 45 58.0 +3.1**
KZN Kozani 6.88 307 P **Pn** **12 45 59.6 +4.6**
KZN Kozani 6.88 307 P **Pn** **12 45 58.6 +3.6**
PRD Provadia 6.91 350 P **Pn** **12 45 55.0 -0.4**
AMAZ Amatzia 6.92 133 Pn **Pn** **12 45 55.2 -0.3**
VLS Valsamata 6.92 287 P **Pn** **12 45 57.8 +2.4**
VLS Valsamata 6.92 287 P **Pn** **12 45 58.1 +2.6**
KPRO Kipourio 6.97 303 P **Pn** **12 46 00.2 +3.9**
KPRO Kipourio 6.97 303 P **Pn** **12 45 59.6 +3.3**
VAY Valandovo 7.01 317 *e*Pn **Pn** **12 45 59.5 +2.7**
VAY *e*Sn **Sn** **12 47 22.1 +6.7**
VAY Valandovo 7.01 317 *i* Pn **Pn** **12 45 58.7 +1.9**
VAY *i* Sn **Sn** **12 47 15.7 +0.3**
VAY Valandovo 7.01 317 P **Pn** **12 45 59.5 +2.7**
VAY Valandovo 7.01 317 *e*Pn **Pn** **12 45 59.5 +2.7**
VAY *e*Sn **Sn** **12 47 22.1 +6.7**
LKD2 Lefkada island 7.02 292 P Pn 12 46 02.8 +5.9
LKD2 Lefkada island 7.02 292 P **Pn** **12 46 01.3 +4.4**
KZIT Kziot 7.09 139 Pn **Pn** **12 45 58.1 +0.1**
KZIT Sn **Sn** **12 47 13.2 -4.3**
KKB Krupnik 7.13 322 P **Pn** **12 45 59.0 +0.5**
YTIR Yattir 7.16 133 Pn **Pn** **12 45 59.1 +0.2**
DSI Dead Sea 7.17 130 Pn **Pn** **12 45 58.8 -0.2**
DSI Sn **Sn** **12 47 15.1 -4.2**
JAN Janina 7.19 299 P Pn 12 46 04.5 +5.3
JAN Janina 7.19 299 P **Pn** **12 46 03.4 +4.1**
PENT Pentalofos 7.24 304 P **Pn** **12 46 04.4 +4.4**
PENT Pentalofos 7.24 304 P **Pn** **12 46 03.6 +3.6**
SLMH Al Salmeh 7.24 89 *e*P **Pn** **12 46 00.8 +0.8**
SLMH *e*S **Sn** **12 47 17.8 -3.2**
SLMH AML AML 12 47 38.9
comp=N,4μm,0.7s
SLMH AML AML 12 47 39.0
comp=E,4μm,0.9s
SZH Strazhica 7.26 342 P **Pn** **12 46 00.4 +0.2**
PSN Preselentsi 7.31 356 P **Pn** **12 46 00.0 -0.9**
MZDA Masada 7.34 132 Pn **Pn** **12 46 01.3 0.0**
MZDA Sn **Sn** **12 47 19.3 -4.2**
FNA Florina 7.39 309 *e*Pn **Pn** **12 46 05.2 +3.1**
FNA Florina 7.39 309 P Pn 12 46 07.0 +5.0
FNA Florina 7.39 309 *e*Pn **Pn** **12 46 05.2 +3.1**
FNA Florina 7.39 309 *e*P **Pn** **12 46 05.2 +3.1**
FNA Florina 7.39 309 *e*Pn **Pn** **12 46 05.2 +3.1**
FNA Florina 7.39 309 P **Pn** **12 46 05.9 +3.9**
NEST Nestorio 7.41 305 P Pn 12 46 08.5 +6.2
NEST Nestorio 7.41 305 P **Pn** **12 46 06.8 +4.5**
STIP Stip 7.48 317 *i* Pn **Pn** **12 46 03.6 +0.4**
STIP *i* Sn Sn 12 47 18.2 -8.7
RMNI Mount Ramon 7.53 138 Pn **Pn** **12 46 03.9 -0.1**
BIA Bitola 7.56 310 *i* Pn Pn 12 46 10.2 +5.9
BIA *i* Sn **Sn** **12 47 26.7 -2.2**
VTS Vitosha 7.63 326 *e*Pn **Pn** **12 46 07.6 +2.2**
VTS Vitosha 7.63 326 ||*i*P **Pn** **12 46 07.3 +1.9**
VTS Vitosha 7.63 326 *e*Pn **Pn** **12 46 06.9 +1.5**
VTS Vitosha 7.63 326 P **Pn** **12 46 06.5 +1.1**
VTS Vitosha 7.63 326 *e*P **Pn** **12 46 06.9 +1.5**
VTS Vitosha 7.63 326 *e*Pn **Pn** **12 46 06.9 +1.5**
VTS Vitosha 7.63 326 ||*i*P **Pn** **12 46 07.3 +1.9**
EFOR EFORIE 7.69 358 ||*i*P **Pn** **12 46 07.9 +1.8**
ZIMR 7.77 340 ⇑*i*P **Pn** **12 46 08.0 +0.8**
ICOR Ion Corvin 7.78 354 ⇑*i*P **Pn** **12 46 08.1 +0.9**
ASF Jabal al Asfar 7.79 120 Pn **Pn** **12 46 08.2 +0.6**
comp=E,149nm,0.3s,baz=254,slow=7.1,SNR=248
ASF Sn **Sn** **12 47 30.1 -4.7**
comp=E,66nm,0.3s,baz=298,slow=11,SNR=3.4
ASF LR LR 12 49 47.9
comp=E,37μm,20.9s,baz=258,slow=42
ZFRI Zfri 7.79 136 Pn **Pn** **12 46 06.8 -0.7**
PRNI Paran 7.85 138 Pn **Pn** **12 46 07.9 -0.5**
KRMI Paran Flat 7.89 141 Pn **Pn** **12 46 08.1 -0.8**
KRMI Sn **Sn** **12 47 33.2 -4.0**
OHR Ohrid 7.94 309 *i* Pn **Pn** **12 46 12.9 +3.4**
OHR *i* Sn Sn 12 47 22.2 -16
CVDA Cernavoda 7.97 355 ||*i*P **Pn** **12 46 11.6 +1.7**
TIRR Tirgusor 8.08 357 ⇑*i*P **Pn** **12 46 12.3 +0.9**
TIRR Tirgusor 8.08 357 *e*Pn **Pn** **12 46 12.3 +0.9**
TIRR Tirgusor 8.08 357 *e*P **Pn** **12 46 12.3 +0.9**
TIRR Tirgusor 8.08 357 ⇑*i*P **Pn** **12 46 12.3 +0.9**
SKO Skopje 8.08 316 *e*Pn **Pn** **12 46 15.2 +3.8**
SKO *e*Sn **Sn** **12 47 47.8 +6.2**
SKO Skopje 8.08 316 *i* Pn **Pn** **12 46 13.7 +2.2**
SKO *i* Sn Sn 12 47 30.9 -11
SKO Skopje 8.08 316 *e*Pn **Pn** **12 46 15.2 +3.8**
SKO *e*Sn **Sn** **12 47 47.8 +6.2**
HRFI Mount Harif 8.12 140 Pn **Pn** **12 46 11.6 -0.4**
HRFI Sn **Sn** **12 47 38.4 -4.3**
SGRR Singureni 8.16 345 ||*i*P **Pn** **12 46 13.9 +1.5**
TLB Topalu 8.22 355 ⇑*i*P **Pn** **12 46 14.3 +0.9**
MBRI Mt Berech 8.25 141 Pn **Pn** **12 46 13.3 -0.6**
MBRI Sn **Sn** **12 47 42.1 -3.9**
MBH Mount Berech 8.25 141 Pn **Pn** **12 46 13.4 -0.5**
AMRR Amara 8.31 352 ||*i*P **Pn** **12 46 15.0 +0.4**
HARR Harsova 8.33 355 ||*i*P **Pn** **12 46 15.4 +0.5**
HARR Harsova 8.33 355 P **Pn** **12 46 15.4 +0.5**
HARR Harsova 8.33 355 ||*i*P **Pn** **12 46 15.4 +0.5**
EIL Elat 8.37 141 Pn **Pn** **12 46 17.1 +1.6**
comp=E,270nm,0.3s,baz=326,slow=6.1,SNR=332
EIL Sn **Sn** **12 47 48.2 -0.6**
comp=E,281nm,0.3s,baz=232,slow=7.8,SNR=7.6
EIL Elat 8.37 141 Pn **Pn** **12 46 14.7 -0.8**
ZAPS Zavoj 8.43 327 *e*Pn **Pn** **12 46 18.8 +2.5**
BARS Barje 8.47 322 *e*Pn **Pn** **12 46 18.9 +2.1**
BARS Barje 8.47 322 *e*Pn **Pn** **12 46 18.9 +2.1**
SULR 8.54 347 ||*i*P **Pn** **12 46 18.9 +1.2**
PGOR Pogoanele 8.65 351 ||*i*P **Pn** **12 46 21.3 +2.1**
TIR Tirane 8.66 308 ||*i*P **Pn** **12 46 23.5 +4.2**
TIR Tirane 8.66 308 *e*Pn **Pn** **12 46 23.6 +4.2**
TIR Tirane 8.66 308 *e*P **Pn** **12 46 23.6 +4.2**
TIR Tirane 8.66 308 *e*Pn **Pn** **12 46 23.6 +4.2**
HUMR Humele 8.68 341 ||*i*P **Pn** **12 46 20.2 +0.5**
HQLS 8.73 142 P **Pn** **12 46 20.4 0.0**
HQLS S **Sn** **12 47 52.5 -5.2**
TLCR 8.79 359 ⇑*i*P **Pn** **12 46 22.4 +1.2**
PLAR PLOIESTI 8.81 346 ||*i*P **Pn** **12 46 23.3 +1.9**
HAQS Haql 8.87 144 P **Pn** **12 46 22.2 -0.1**
SEV Sevastopol' 8.90 22 ||*e*P **Pn** **12 46 20.5 -2.2**
SEV *e*S **Sn** **12 47 57.0 -4.8**
SEV pmax pmax
comp=Z,580nm,0.6s
SEV smax smax
comp=N,124nm,0.4s
SEV smax smax
comp=E,390nm,0.5s
ISR Istrita 8.92 349 ⇑*i*P **Pn** **12 46 24.6 +1.7**
SECR 8.92 347 ⇑*i*P **Pn** **12 46 24.7 +1.8**
GOLR 8.98 341 ⇑*i*P **Pn** **12 46 26.4 +2.7**
YAL Yalta 9.01 24 ⇑*e*P **Pn** **12 46 24.3 +0.2**
YAL *e*S **Sn** **12 48 02.8 -1.5**
YAL pmax pmax
comp=Z,1μm,1.0s
YAL smax smax
comp=N,215nm,0.5s
YAL smax smax
comp=E,435nm,0.4s
ZAGS Zajecar 9.03 327 *e*Pn **Pn** **12 46 25.9 +1.4**
ZAGS Zajecar 9.03 327 *e*Pn **Pn** **12 46 25.9 +1.4**

SELS Selova 9.11 321 *e*Pn **Pn** **12 46 27.3 +1.7**
SELS Selova 9.11 321 *e*Pn **Pn** **12 46 27.9 +2.3**
SELS *e*Sn **Sn** **12 48 12.1 +5.1**
GRER 9.11 351 ⇑*i*P **Pn** **12 46 28.8 +3.2**
ALU Alushta 9.26 25 *e*P **Pn** **12 46 28.4 +0.8**
ALU *e*S **Sn** **12 48 10.4 -0.2**
ALU pmax pmax
comp=Z,257nm,0.5s
ALU smax smax
comp=N,403nm,0.5s
ALU smax smax
comp=E,597nm,0.4s
MTUR Matau 9.31 343 ||*i*P **Pn** **12 46 30.2 +1.8**
PVY Plav 9.32 314 ⇑*i*Pn **Pn** **12 46 30.8 +2.2**
PVY *e*Sn **Sn** **12 48 09.6 -2.7**
SRE Strehaia 9.36 334 ||*i*P **Pn** **12 46 29.5 +0.6**
SRE Strehaia 9.36 334 P **Pn** **12 46 29.5 +0.6**
SRE Strehaia 9.36 334 ||*i*P **Pn** **12 46 29.5 +0.6**
MLR Muntele Rosu 9.38 347 Pn **Pn** **12 46 30.5 +1.1**
comp=E,2.3nm,0.3s,baz=162,slow=2.0,SNR=254
MLR LR LR 12 50 50.1
comp=E,20μm,22.0s,baz=166,slow=42
MLR Muntele Rosu 9.38 347 ||*i*P **Pn** **12 46 31.2 +1.8**
MLR Muntele Rosu 9.38 347 *e*Pn **Pn** **12 46 30.7 +1.3**
MLR Muntele Rosu 9.38 347 *e*P **Pn** **12 46 30.7 +1.3**
MLR Muntele Rosu 9.38 347 *e*Pn **Pn** **12 46 30.7 +1.3**
MLR Muntele Rosu 9.38 347 ||*i*P **Pn** **12 46 31.2 +1.8**
ULC Ulcinj 9.38 309 ||*i*Pn **Pn** **12 46 31.2 +1.9**
ULC *e*Sn **Sn** **12 48 11.2 -2.4**
JLOS 9.40 142 P **Pn** **12 46 29.6 -0.2**
JLOS S Sn 12 48 03.1 -11
SIM Simferopol' 9.40 23 *c* *i*P **Pn** **12 46 31.3 +1.7**
SIM *e*S **Sn** **12 48 14.0 -0.2**
SIM pmax pmax
comp=Z,2μm,0.4s
SIM smax smax
comp=N,717nm,0.6s
PETR Petresti 9.42 353 ||*i*P **Pn** **12 46 33.1 +3.3**
RSHS 9.45 147 P **Pn** **12 46 29.7 -0.5**
BDAS Al Bad' 9.47 145 P **Pn** **12 46 30.0 -0.6**
ODBI Odobesti 9.48 352 ⇑*i*P **Pn** **12 46 32.8 +2.2**
VOIR 9.52 343 ⇑*i*P **Pn** **12 46 32.0 +0.8**
VOIR 9.52 343 P **Pn** **12 46 32.0 +0.8**
VOIR 9.52 343 ⇑*i*P **Pn** **12 46 32.0 +0.8**
IVA Berane 9.53 316 ⇑*i*Pn **Pn** **12 46 34.3 +2.9**
IVA *e*Sn **Sn** **12 48 14.9 -2.6**
DRME Dracevica, Mon 9.54 310 ||*i*Pn **Pn** **12 46 34.0 +2.5**
DRME *e*Sn **Sn** **12 48 15.2 -2.3**
ARR Arges 9.55 341 ||*i*P **Pn** **12 46 31.8 +0.1**
PLOR Plostina 9.62 350 ||*i*P **Pn** **12 46 33.7 +1.2**
PLOR Plostina 9.62 350 P **Pn** **12 46 33.6 +1.1**
PLOR Plostina 9.62 350 ||*i*P **Pn** **12 46 33.7 +1.2**
VRI Vrincioaia 9.62 351 ||*i*P **Pn** **12 46 33.7 +1.1**
VRI Vrincioaia 9.62 351 P **Pn** **12 46 33.2 +0.6**
VRI Vrincioaia 9.62 351 ||*i*P **Pn** **12 46 33.7 +1.1**
PDG Podgorica 9.64 312 *e*Pn **Pn** **12 46 36.3 +3.5**
PDG Podgorica 9.64 312 ||*i*P **Pn** **12 46 36.4 +3.7**
PDG Podgorica 9.64 312 *e*Pn **Pn** **12 46 36.3 +3.5**
TTG Podgorica 9.64 312 ||*i*Pn **Pn** **12 46 35.6 +2.9**
TTG *e*Sn **Sn** **12 48 16.9 -2.9**
TTG Podgorica 9.64 312 *e*Pn **Pn** **12 46 36.2 +3.5**
TTG Podgorica 9.64 312 *e*P **Pn** **12 46 36.2 +3.5**
TTG Podgorica 9.64 312 *e*Pn **Pn** **12 46 36.2 +3.5**
SUDU Sudak 9.65 26 *e*P **Pn** **12 46 33.9 +1.0**
SUDU *e*S **Sn** **12 48 19.4 -0.8**
SUDU pmax pmax
comp=Z,417nm,0.6s
SUDU smax smax
comp=N,314nm,0.7s
SUDU smax smax
comp=E,599nm,0.5s
KOME Kolasin 9.74 314 ⇑*i*Pn **Pn** **12 46 37.0 +2.8**
KOME *e*Sn **Sn** **12 48 20.3 -2.2**
SJES Sjenica 9.74 318 *e*Pn **Pn** **12 46 37.3 +3.0**
KUBS Kucevo 9.75 328 *e*Pn **Pn** **12 46 35.8 +1.4**
KUBS Kucevo 9.75 328 *e*Pn **Pn** **12 46 35.8 +1.4**
BUM Brajici-Budva 9.78 310 ⇑*i*Pn **Pn** **12 46 37.4 +2.6**
BUM *e*Sn **Sn** **12 48 21.4 -2.2**
GRUS Gruza 9.80 322 *e*Pn **Pn** **12 46 37.1 +2.1**
GRUS Gruza 9.80 322 *e*Pn **Pn** **12 46 37.1 +2.1**
SVIS Svilajnac 9.84 325 *e*Pn **Pn** **12 46 37.8 +2.2**
LOT Lotru 9.87 338 ⇑*i*P **Pn** **12 46 36.1 0.0**
FEO Feodosiya 9.90 27 *e*P **Pn** **12 46 40.3 +3.9**
FEO *e*S **Sn** **12 48 33.1 +6.7**
FEO pmax pmax
comp=Z,522nm,1.0s
FEO smax smax
comp=N,510nm,1.0s
FEO smax smax
comp=E,270nm,0.8s
CEME Cevo 9.91 311 ||*i*Pn **Pn** **12 46 39.0 +2.5**
CEME *e*Sn **Sn** **12 48 24.2 -2.4**
DOPR Dopca 9.95 345 ||*i*P **Pn** **12 46 37.7 +0.7**
NKME Niksic 10.01 313 ||*i*Pn **Pn** **12 46 40.8 +2.8**
NKME *e*Sn **Sn** **12 48 26.9 -2.3**
NKY Niksic 10.02 313 ⇑*i*Pn **Pn** **12 46 41.2 +3.1**
NKY *e*Sn **Sn** **12 48 26.3 -3.1**
MDVR Moldovita 10.04 329 ⇑*i*P **Pn** **12 46 39.2 +0.9**
TIP Timpagrande 10.06 290 ⇑*i*P **Pn** **12 46 39.7 +1.1**
TIP Timpagrande 10.06 290 *e*Pn **Pn** **12 46 39.2 +0.6**
TIP Timpagrande 10.06 290 *e*Pn **Pn** **12 46 39.2 +0.6**
HCY Herceg Novi 10.11 310 ⇑*i*Pn **Pn** **12 46 41.2 +1.9**
HCY *e*Sn **Sn** **12 48 28.9 -2.6**
HCY Herceg Novi 10.11 310 *e*Pn **Pn** **12 46 39.7 +0.4**
PLE Pljevlja 10.11 316 ⇑*i*Pn **Pn** **12 46 41.5 +2.1**
PLE *e*Sn **Sn** **12 48 29.3 -2.4**
TRUS Trudelj 10.20 323 *e*Pn **Pn** **12 46 42.0 +1.6**
TRUS Trudelj 10.20 323 *e*Pn **Pn** **12 46 42.0 +1.6**
TESR Tescani 10.27 351 ⇑*i*P **Pn** **12 46 41.5 +0.1**
UPM Unac-Piva 10.30 314 ⇑*i*Pn **Pn** **12 46 44.9 +2.8**
UPM *e*Sn **Sn** **12 48 33.8 -2.8**
DIVS Divibare 10.31 321 *e*Pn **Pn** **12 46 44.2 +2.1**
DIVS Divibare 10.31 321 *e*Pn **Pn** **12 46 43.1 +1.0**
DIVS Divibare 10.31 321 ||*i*Pn **Pn** **12 46 42.9 +0.8**
MDB Medias 10.34 342 ||*i*P **Pn** **12 46 43.6 +1.2**
BRY Bratogost 10.34 312 *e*Pn **Pn** **12 46 44.5 +2.0**
BRY *e*Sn **Sn** **12 48 34.0 -3.3**
BRY Bratogost 10.34 312 *e*Pn **Pn** **12 46 45.0 +2.5**
BBLS Lazići 10.46 319 *e*Pn **Pn** **12 46 47.0 +3.0**
BBLS Lazići 10.46 319 ||*i*Pn **Pn** **12 46 46.1 +2.1**
MATE Matera 10.51 298 ⇑*i*P **Pn** **12 46 45.1 +0.4**
DEV Deva 10.53 336 ⇑*i*P **Pn** **12 46 46.5 +1.5**
DEV Deva 10.53 336 P **Pn** **12 46 46.7 +1.7**
DEV pmax pmax
comp=Z,425nm,0.9s
DEV Deva 10.53 336 ⇑*i*P **Pn** **12 46 46.5 +1.5**
KERU Kerch 10.56 30 *e*P **Pn** **12 46 49.1 +3.7**
KERU pmax pmax
comp=Z,109nm,0.8s
CEL Celeste 10.58 284 *e*Pn **Pn** **12 46 45.6 -0.2**
CEL Celeste 10.58 284 *e*Pn **Pn** **12 46 45.6 -0.2**
ANN Anapa 10.58 35 *e*P **Pn** **12 46 46.6 +0.9**
ANN *e*S **Sn** **12 48 43.7 +0.7**
ANN pmax pmax
comp=Z,960nm,3.2s
ANN MLR MLR
comp=Z,25μm,10.0s
BEO Beograd 10.60 325 *e*Pn **Pn** **12 46 46.8 +0.8**
BEO Beograd 10.60 325 *e*P **Pn** **12 46 46.8 +0.8**
KIS Kishinev 10.61 359 ||*i*P **Pn** **12 46 45.0 -1.0**
comp=Z,3μm,3.5s
KIS *i* S **Sn** **12 48 48.0 +4.4**
KIS *i* Li 12 49 40.0
KIS *i* LQ LQ 12 50 44.0
KIS LRM MLR 12 51 23.0
comp=Z,42μm,16.0s
KIS Kishinev 10.61 359 α *i*P **Pn** **12 46 45.0 -1.0**
KIS *i* S **Sn** **12 48 48.0 +4.4**
KIS pmax pmax
comp=Z,3μm,3.5s
KIS pmax pmax
comp=N,7μm,10.0s
KIS pmax pmax
comp=Z,5μm,10.0s
KIS pmax pmax
comp=E,600nm,3.0s
KIS MLR MLR
comp=N,42μm,16.0s
KIS MLR MLR
comp=Z,56μm,16.0s
KIS MLR MLR
comp=E,21μm,13.0s

KIS MLR MLR
comp=Z,53μm,18.0s
BZS Buzias 10.76 331 *e*Pn **Pn** **12 46 47.9 -0.2**
BZS Buzias 10.76 331 ||*i*P **Pn** **12 46 47.8 -0.3**
BZS Buzias 10.76 331 *e*Pn **Pn** **12 46 47.9 -0.2**
BANR Banloc 10.76 329 ⇑*i*P **Pn** **12 46 50.0 +1.9**
STON Ston 10.83 310 *e*Pn **Pn** **12 46 51.4 +2.3**
STON Ston 10.83 310 *e*Pn **Pn** **12 46 49.0 -0.2**
STON Sn **Sn** **12 48 53.4 +4.2**
STON Ston 10.83 310 ||*i*Pn **Pn** **12 46 49.3 +0.2**
HAPS Han Pijesak,BI 10.85 318 *e*Pn **Pn** **12 46 51.7 +2.3**
HAPS Han Pijesak,BI 10.85 318 *e*Pn **Pn** **12 46 50.6 +1.2**
IAS Iasi 10.85 355 ⇑*i*P **Pn** **12 46 50.8 +1.4**
TEKS Tekeris 10.87 322 *e*Pn **Pn** **12 46 52.1 +2.5**
TEKS Tekeris 10.87 322 *e*Pn **Pn** **12 46 51.6 +2.0**
SOC Sochi 10.93 46 *i* P **Pn** **12 46 51.7 +1.2**
SOC *e* 12 48 50.5
SOC pmax pmax
comp=Z,436nm,2.7s
SOC MLR MLR
comp=Z,26μm,12.0s
CUC Castrocucco 10.96 293 *e*Pn **Pn** **12 46 51.4 +0.4**
CUC Castrocucco 10.96 293 *e*Pn **Pn** **12 46 51.4 +0.4**
CJR Cluj-Napoca 11.07 340 ⇑*i*P **Pn** **12 46 53.7 +1.2**
PRAR RASCA 11.16 350 ⇑*i*P **Pn** **12 46 57.1 +3.5**
FGSL Fruska Gora 11.17 324 *e*Pn **Pn** **12 46 55.3 +1.5**
FRGS Fruska Gora 11.17 324 *e*Pn **Pn** **12 46 55.3 +1.5**
ARCR ARCALIA 11.23 344 ||*i*P **Pn** **12 46 55.2 +0.6**
SIRR Siria 11.29 333 ⇑*i*P **Pn** **12 46 56.5 +1.1**
DRGR 11.40 338 *e*Pn **Pn** **12 46 57.3 +0.3**
DRGR 11.40 338 ||*i*P **Pn** **12 46 57.7 +0.8**
DRGR 11.40 338 P **Pn** **12 46 57.6 +0.7**
DRGR 11.40 338 *e*Pn **Pn** **12 46 57.3 +0.3**
DRGR 11.40 338 ||*i*P **Pn** **12 46 57.7 +0.8**
BURAR Bucovina Array 11.56 347 ||*i*P **Pn** **12 46 59.0 -0.2**
BUR04 Bucovina Ar. S 11.56 347 *e*Pn **Pn** **12 46 59.6 +0.4**
BUR04 Bucovina Ar. S 11.56 347 *e*Pn **Pn** **12 46 59.6 +0.4**
BUR08 Bucovina Ar. S 11.59 347 *e*Pn **Pn** **12 46 59.9 +0.3**
BUR08 Bucovina Ar. S 11.59 347 *e*Pn **Pn** **12 46 59.9 +0.3**
BIDS Bi'r al Bayda' 11.67 142 P **Pn** **12 47 01.0 +0.3**
WDD Wied Dalam 11.70 272 *e*Pn **Pn** **12 46 57.6 -3.4**
WDD Wied Dalam 11.70 272 *e*Pn **Pn** **12 46 57.6 -3.4**
VAE Valguarnera 11.70 280 Pn **Pn** **12 47 00.8 -0.3**
comp=Z,9.6nm,0.3s,baz=240,slow=1.1,SNR=72
VAE Sn **Sn** **12 49 06.5 -4.1**
comp=Z,48nm,0.3s,baz=263,slow=8.1,SNR=5.4
CHVG Ch'k'valeri 11.93 54 ⇑*i*P **Pn** **12 47 07.8 +3.6**
BMR Baia Mare 11.99 342 ||*i*P **Pn** **12 47 07.2 +2.3**
LTVH L"tav"rtes, 12.18 337 ||*e*SKKPbc **Pn** **12 47 09.5 +2.0**
BLY Banja Luka 12.24 317 ||*i*P **Pn** **12 47 09.9 +1.6**
BLY Banja Luka 12.24 317 *e*Pn **Pn** **12 47 10.0 +1.6**
BLY Banja Luka 12.24 317 ||*i*Pn **Pn** **12 47 09.9 +1.6**
AKH Akhalkalaki 12.38 62 ||*i*P **Pn** **12 47 13.8 +3.4**
AKH Akhalkalaki 12.38 62 *e*Pn **Pn** **12 47 13.5 +3.1**
AKH Akhalkalaki 12.38 62 *e*P **Pn** **12 47 13.5 +3.1**
AKH Akhalkalaki 12.38 62 *e*Pn **Pn** **12 47 13.5 +3.1**
AKH Akhalkalaki 12.38 62 ||*i*P **Pn** **12 47 13.8 +3.4**
MORH M¨ŧr¨ŷgy, Hung 12.51 325 ||*e*SKKPbc **Pn** **12 47 13.1 +1.1**
NEY Neytrino 12.59 53 *c* *i*P **Pn** **12 47 16.2 +2.8**
CLTB Caltabellotta 12.65 280 *e*Pn **Pn** **12 47 14.7 +0.5**
CLTB Caltabellotta 12.65 280 *e*Pn **Pn** **12 47 14.7 +0.5**
TRPA Tarpa 12.66 340 ||*i*P **Pn** **12 47 14.5 +0.4**
TRPA Tarpa 12.66 340 ||*ex* **Pn** **12 47 13.4 -0.7**
TRPA Tarpa 12.66 340 ||*i*P **Pn** **12 47 14.5 +0.4**
UDBI Udbina 12.92 313 *i* Pn **Pn** **12 47 19.5 +1.8**
UDBI Sn **Sn** **12 49 46.4 +6.0**
KIV Kislovodsk 12.92 50 *e*Pn **Pn** **12 47 19.7 +1.9**
KIV Kislovodsk 12.92 50 P **Pn** **12 47 20.1 +2.3**
SNR=126
KIV Kislovodsk 12.92 50 Pn **Pn** **12 47 20.1 +2.3**
SNR=126
KIV Kislovodsk 12.92 50 *i* P **Pn** **12 47 19.7 +1.9**
SNR=128
KIV Kislovodsk 12.92 50 *e*P **Pn** **12 47 19.5 +1.7**
KIV *e*S **Sn** **12 49 42.6 +2.2**
KIV pmax pmax
comp=Z,206nm,1.1s
KIV MLR MLR
comp=Z,9μm,9.0s
KBZ Khabaz 12.94 51 Pn **Pn** **12 47 20.3 +2.4**
comp=Z,0.7nm,0.3s,baz=248,slow=12,SNR=57
KBZ LR LR 12 52 48.2
comp=Z,26μm,19.2s,baz=238,slow=40
GNI Garni 12.95 68 Pn **Pn** **12 47 21.0 +2.7**
comp=Z,1.5nm,0.3s,baz=264,slow=5.6,SNR=81
GNI LR LR 12 53 28.3
comp=Z,113μm,21.4s,baz=270,slow=43
GNI Garni 12.95 68 *e*Pn **Pn** **12 47 22.2 +3.9**
GNI Garni 12.95 68 P **Pn** **12 47 22.5 +4.2**
SNR=156
GNI Garni 12.95 68 Pn **Pn** **12 47 22.5 +4.2**
SNR=156
GNI Garni 12.95 68 *i* P **Pn** **12 47 22.0 +3.7**
SNR=39
GNI Garni 12.95 68 *e*P **Pn** **12 47 22.2 +3.9**
GNI Garni 12.95 68 *e*Pn **Pn** **12 47 22.2 +3.9**
ZEI Tsey 13.17 56 *e*P **Pn** **12 47 20.3 -0.9**
ZEI pmax pmax
comp=Z,207nm,0.7s
UZH Uzhgorod 13.18 340 *e*P **Pn** **12 47 23.6 +2.4**
UZH *e*S **Sn** **12 49 49.6 +3.0**
UZH MLR MLR
comp=Z,6μm,9.0s
NCK Nalchik 13.27 53 *c* *i*P **Pn** **12 47 25.7 +3.2**
BUD Budapest 13.32 329 ||*e*Pn **Pn** **12 47 24.3 +1.2**
BUD Budapest 13.32 329 P **Pn** **12 47 25.3 +2.2**
BUD pmax pmax
comp=Z,94nm,0.7s
PSZ Piszkesteto 13.33 333 ||*i*P **Pn** **12 47 24.5 +1.1**
PSZ Piszkesteto 13.33 333 ||*e*Pn **Pn** **12 47 23.9 +0.5**
PSZ Piszkesteto 13.33 333 *e*Pn **Pn** **12 47 24.1 +0.8**
PSZ Piszkesteto 13.33 333 *e*P **Pn** **12 47 24.2 +0.8**
PSZ Piszkesteto 13.33 333 *e*Pn **Pn** **12 47 24.1 +0.8**
PSZ Piszkesteto 13.33 333 ||*i*P **Pn** **12 47 24.5 +1.1**
TBLG Delisi 13.36 62 *e*Pn **Pn** **12 47 26.7 +3.0**
TBLG Delisi 13.36 62 *e*P **Pn** **12 47 26.7 +3.0**
TBLG Delisi 13.36 62 *e*Pn **Pn** **12 47 26.7 +3.0**
AQU L'Aquila 13.43 301 *e*Pn **Pn** **12 47 25.7 +1.0**
AQU L'Aquila 13.43 301 *e*P **Pn** **12 47 25.7 +1.0**
AQU L'Aquila 13.43 301 *e*Pn **Pn** **12 47 25.7 +1.0**
NVLJ Novalja 13.47 312 *e*Pn **Pn** **12 47 25.0 -0.2**
NVLJ Sn **Sn** **12 49 58.1 +4.4**
CSKK Cs˘ŧkako 13.55 327 ||*e*Pn **Pn** **12 47 27.5 +1.3**
BEHE Becsehely 13.59 322 ||*e*Pn **Pn** **12 47 27.9 +1.1**
KECS Kecovo 13.60 335 *e*P **Pn** **12 47 28.2 +1.2**
KECS Kecovo 13.60 335 *e*PN **Pn** **12 47 28.1 +1.1**
CRVS Cervenica-Dubn 13.66 339 *e*P **Pn** **12 47 28.6 +0.8**
CRVS Cervenica-Dubn 13.66 339 *e*PN **Pn** **12 47 28.6 +0.8**
OZLJ Ozalj 13.73 316 *e*Pn **Pn** **12 47 29.9 +1.2**
GOF Gofitskoye 13.73 47 ⇑*i*P **Pn** **12 47 29.7 +1.0**
GOF pmax pmax
comp=Z,290nm,1.0s
BOJS Bojanci 13.78 316 *e*Pn **Pn** **12 47 30.0 +0.5**
BOJS *e*Sn **Sn** **12 50 04.2 +2.9**
comp=Z,50μm,9.9s
SRO2 Moca 13.80 329 *e*P **Pn** **12 47 30.2 +0.6**
SRO2 Moca 13.80 329 *e*PN **Pn** **12 47 30.2 +0.6**
LVV L'vov 13.90 347 *e*P **Pn** **12 47 32.4 +1.4**
LVV MLR MLR
comp=E,10μm,16.0s
LVV MLR MLR
comp=N,21μm,14.0s
LVV MLR MLR
comp=Z,24μm,15.0s
KWP Kalwaria Pacla 14.00 343 *e*P **Pn** **12 47 33.0 +0.6**
KWP *e*S **S** **12 50 26.7 -0.7**
KWP LMZ LR 12 54 11.3
comp=Z,83μm,19.0s
KWP Kalwaria Pacla 14.00 343 *e*Pn **Pn** **12 47 33.7 +1.3**
KWP Kalwaria Pacla 14.00 343 *e*P **Pn** **12 47 33.7 +1.3**
KWP Kalwaria Pacla 14.00 343 *e*Pn **Pn** **12 47 33.7 +1.3**
VISS Visnje 14.19 316 *e*Pn **Pn** **12 47 38.2 +3.2**
VYHS Vyhne 14.21 332 *e*P **Pn** **12 47 34.9 -0.4**
VYHS *e* 12 50 18.4
VYHS Vyhne 14.21 332 *e*PN **Pn** **12 47 34.9 -0.4**
VYHS Vyhne 14.21 332 *e*SN **Sn** **12 50 18.4 +6.7**
VYHS *e*SG 12 51 47.8
AK11 Malin Array Si 14.29 1 *e*Pn **Pn** **12 47 34.9 -1.4**
AK11 Malin Array Si 14.29 1 *e*Pn **Pn** **12 47 34.9 -1.4**
KIEV Kiev 14.31 1 *e*Pn **Pn** **12 47 35.4 -1.1**
KIEV Kiev 14.31 1 *i* P **Pn** **12 47 33.9 -2.6**
SNR=6.5

KIEV	**Kiev**	14.31	1	*d iP*	**Pn**	**12 47 34.3**	**-2.2**
KIEV	**Kiev**	14.31	1	*e*Pn	**Pn**	**12 47 35.4**	**-1.1**
AKASG	**Malin Array Be**	14.31	1	Pn	**Pn**	**12 47 34.9**	**-1.7**
	comp=Z,6.3nm,0.3s,baz=181,slow=12,SNR=25						
AKASG				LR	LR	12 53 56.7	
	comp=Z,44μm,18.9s,baz=175,slow=41						
AKASG				ScP	**ScP**	**12 56 22.5**	**-1.0**
	baz=93,slow=1.1,SNR=5.0						
AKBB	**Malin Array Si**	14.31	1	*e*Pn	**Pn**	**12 47 35.5**	**-1.1**
AKBB	**Malin Array Si**	14.31	1	*e*P	**Pn**	**12 47 35.5**	**-1.1**
AKBB	**Malin Array Si**	14.31	1	*e*Pn	**Pn**	**12 47 35.5**	**-1.1**
NIE	**Niedzica**	14.48	337	*e*P	**Pn**	**12 47 39.7**	**+0.8**
NIE				*e*S	**S**	**12 50 41.5**	**+4.3**
NIE				LMZ	LR	12 53 16.8	
	comp=Z,16μm,21.3s						
NIE	**Niedzica**	14.48	337	*e*P	**Pn**	**12 47 39.7**	**+0.8**
NIE				MLR	MLR		
	comp=Z,16μm,21.3s						
LANS	**Liptovska Anna**	14.52	334	*e*P	**Pn**	**12 47 40.9**	**+1.3**
LANS	**Liptovska Anna**	14.52	334	*e*PN	**Pn**	**12 47 40.9**	**+1.3**
LANS	**Liptovska Anna**	14.52	334	*e*P	**P**	**12 47 49.7**	**+3.9**
SOP	**Sopron**	14.55	325⇓	*e*Pn	**Pn**	**12 47 40.9**	**+1.0**
GROC	**Groznyy**	14.61	57	*e*P	**Pn**	**12 47 43.2**	**+2.5**
GROC				pmax	pmax		
	comp=Z,213nm,0.8s						
SOKA	**Soboth**	14.63	319	*e*Pn	**Pn**	**12 47 41.2**	**+0.2**
	comp=Z,8.5nm,1.1s,SNR=32						
SOKA				Sn	**Sn**	**12 50 22.6**	**+0.6**
	comp=Z,7.5nm,0.5s						
SOKA	**Soboth**	14.63	319	Pn	**Pn**	**12 47 41.2**	**+0.2**
	comp=Z,8.5nm,1.1s,SNR=32						
SOKA				Sn	**Sn**	**12 50 22.6**	**+0.6**
	comp=Z,7.5nm,0.5s						
JAVS	**Javornik**	14.69	315	*i* Pn	**Pn**	**12 47 42.3**	**+0.5**
ZST	**Bratislava**	14.69	327	*e*P	**Pn**	**12 47 40.6**	**-1.1**
ZST				*e*		12 50 33.1	
ZST	**Bratislava**	14.69	327	*e*PN	**Pn**	**12 47 40.6**	**-1.1**
ZST	**Bratislava**	14.69	327	*e*SN	Sn	12 50 33.1	+10
MODS	**Modra-Piesok**	14.75	328	*e*P	**Pn**	**12 47 40.8**	**-1.8**
MODS	**Modra-Piesok**	14.75	328	*e*PN	**Pn**	**12 47 40.8**	**-1.8**
MODS	**Modra-Piesok**	14.75	328	*e*P	**P**	**12 47 48.8**	**+0.6**
MODS	**Modra-Piesok**	14.75	328	*e*SN	**S**	**12 50 35.5**	**-7.2**
MODS				*e*SG		12 52 02.9	
ARSA	**Arzberg**	14.75	322	*e*Pn	**Pn**	**12 47 43.3**	**+0.6**
	comp=Z,62nm,0.8s,SNR=26						
ARSA				Sn	**Sn**	**12 50 28.3**	**+3.3**
	comp=Z,13nm,0.7s						
ARSA	**Arzberg**	14.75	322	Pn	**Pn**	**12 47 43.3**	**+0.6**
	comp=Z,62nm,0.8s,SNR=26						
TRI	**Trieste**	14.76	314	*e*Pn	**Pn**	**12 47 42.1**	**-0.6**
TRI	**Trieste**	14.76	314	*e*P	**Pn**	**12 47 42.1**	**-0.6**
TRI	**Trieste**	14.76	314	*e*Pn	**Pn**	**12 47 42.1**	**-0.6**
OBKA	**Obir**	14.78	318	*e*P	**Pn**	**12 47 45.6**	**+2.4**
	comp=Z,16nm,0.5s,SNR=13						
OBKA				Sn	**Sn**	**12 50 31.8**	**+6.0**
	comp=Z,68nm,0.8s						
SMOL	**Smolenice**	14.79	329	*e*P	P	12 47 58.0	+9.3
SMOL	**Smolenice**	14.79	329	*e*	P	12 47 58.0	+9.3
VOJS	**Vojsko**	14.87	315	*i* Pn	**Pn**	**12 47 43.8**	**-0.5**
VOJS				*e*Sn	**Sn**	**12 50 35.2**	**+7.3**
JAVC	**Velka Javorina**	14.96	330⇓	*i*PN	**Pn**	**12 47 45.5**	**0.0**
JAVC	**Velka Javorina**	14.96	330	*e*SN	Sn	12 50 39.5	+9.4
CONA	**Conrad Observa**	15.06	324	*e*Pn	**Pn**	**12 47 47.5**	**+0.7**
	comp=Z,21nm,0.9s,SNR=27						
CONA	**Conrad Observa**	15.06	324	Pn	**Pn**	**12 47 47.5**	**+0.7**
	comp=Z,21nm,0.9s,SNR=27						
OJC	**Ojcow**	15.34	337	*e*P	**Pn**	**12 47 49.4**	**-0.9**
OJC				*e*S	S	12 51 05.8	+11
OJC				LMZ	LR	12 55 26.0	
	comp=Z,32μm,20.3s						
OJC	**Ojcow**	15.34	337	*e*Pn	**Pn**	**12 47 49.6**	**-0.8**
	comp=Z,329nm,1.2s						
OJC	**Ojcow**	15.34	337	*e*P	**Pn**	**12 47 49.6**	**-0.8**
OJC				pmax	pmax		
	comp=Z,329nm,1.2s						
OJC	**Ojcow**	15.34	337	*e*Pn	**Pn**	**12 47 49.6**	**-0.8**
	comp=Z,329nm,1.2s						
MYKA	**Terra Mystica**	15.36	317	*e*P	**Pn**	**12 47 53.5**	**+2.8**
	comp=Z,32nm,0.8s						
MYKA	**Terra Mystica**	15.36	317	P	**Pn**	**12 47 53.5**	**+2.8**
	comp=Z,32nm,0.8s						
AKT	**Akhty**	15.46	65⇑	*i*P	**Pn**	**12 47 53.3**	**+1.2**
AKT				*e*S	**Sn**	**12 50 48.3**	**+6.1**
AKT				pmax	pmax		
	comp=Z,50nm,1.0s						
AKT				smax	smax		
	comp=E,32nm,1.2s						
AKT				smax	smax		
	comp=N,40nm,1.5s						
OKC	**Ostrava-Krasne**	15.57	333	*e*P	**Pn**	**12 47 54.3**	**+0.9**
OKC				*e*x	x	12 47 59.6	
OKC				*e*S	**S**	**12 50 54.2**	**-5.3**
OKC				AMS	AMS	12 54 50.0	
	comp=N,41μm,16.7s						
KRUC	**Moravsky**	15.65	328⇓	*i*PN	**Pn**	**12 47 53.2**	**-1.2**
KRUC	**Moravsky**	15.65	328	*e*SN	**Sn**	**12 50 45.8**	**-0.9**
MAK	**Makhachkala**	15.70	60	*c iP*	**P**	**12 47 57.5**	**-1.3**
MAK				*e*S	**Sn**	**12 50 51.5**	**+3.6**
MAK				pmax	pmax		
	comp=Z,4μm,1.0s						
MAK				MLR	MLR		
	comp=Z,21μm,13.0s						
MORC	**Moravsky Berou**	15.75	332	*e*Pn	**Pn**	**12 47 55.7**	**0.0**
	comp=Z,1μm,1.4s						
MORC	**Moravsky Berou**	15.75	332	*e*P	**Pn**	**12 47 55.7**	**0.0**
MORC				pmax	pmax		
	comp=Z,1μm,1.4s						
MORC	**Moravsky Berou**	15.75	332	*e*Pn	**Pn**	**12 47 55.7**	**0.0**
	comp=Z,1μm,1.4s						
MORC	**Moravsky Berou**	15.75	332⇓	*i*PN	**Pn**	**12 47 55.0**	**-0.7**
MORC	**Moravsky Berou**	15.75	332	*e*SN	**Sn**	**12 50 55.7**	**+6.6**
VRAC	**Vranov**	15.76	329⇓	*i*PN	**Pn**	**12 47 54.8**	**-1.0**
VRAC	**Vranov**	15.76	329	*e*SN	**Sn**	**12 50 56.4**	**+7.1**
RAC	**Raciborz**	15.76	334	*e*P	**Pn**	**12 47 55.2**	**-0.6**
RAC				MLR	MLR		
	comp=Z,48μm,17.0s						
KBA	**Koelnbreinsper**	15.79	317	*e*Pn	**Pn**	**12 47 57.6**	**+1.2**
	comp=Z,65nm,0.8s,SNR=48						
KBA	**Koelnbreinsper**	15.79	317	P	**Pn**	**12 47 57.7**	**+1.3**
KBA				pmax	pmax		
	comp=Z,398nm,1.1s						
KBA	**Koelnbreinsper**	15.79	317	Pn	**Pn**	**12 47 57.6**	**+1.2**
	comp=Z,65nm,0.8s,SNR=48						
MOA	**Molln**	15.79	321	*e*Pn	**Pn**	**12 47 57.3**	**+1.1**
	comp=Z,33nm,0.8s,SNR=35						
MOA				Sn	**Sn**	**12 50 49.1**	**-1.0**
	comp=Z,25nm,0.8s						
MOA	**Molln**	15.79	321	Pn	**Pn**	**12 47 57.3**	**+1.1**
	comp=Z,33nm,0.8s,SNR=35						
MOA				Sn	**Sn**	**12 50 49.1**	**-1.0**
	comp=Z,25nm,0.8s						
KEST	**Kesra**	15.88	273	Pn	**Pn**	**12 47 56.3**	**-1.3**
	comp=Z,1.4nm,0.3s,baz=28,slow=2.1,SNR=66						
KEST				LR	LR	12 54 58.5	
	comp=Z,19μm,21.6s,baz=26,slow=40						
KEST	**Kesra**	15.88	273	*e*Pn	**Pn**	**12 47 56.4**	**-1.3**
	comp=Z,985nm,0.9s						
KEST	**Kesra**	15.88	273	*e*Pn	**Pn**	**12 47 56.4**	**-1.3**
	comp=Z,985nm,0.9s						
I48TN	**KESRA INFRASON**	15.89	274	*i*		14 13 50.0	
	baz=80,slow=316,SNR=0.6						
ABTA	**Abfaltersbach**	16.06	315	*e*P	**P**	**12 48 02.3**	**-0.6**
	comp=Z,41nm,0.7s,SNR=27						
VLC	**Villacollemand**	16.15	304	*e*Pn	**Pn**	**12 48 01.4**	**+0.5**
	comp=Z,270nm,1.0s						
VLC	**Villacollemand**	16.15	304	*e*Pn	**Pn**	**12 48 01.4**	**+0.5**
	comp=Z,270nm,1.0s						
SMPL	**Sampolo**	16.27	297	P	**Pn**	**12 48 02.7**	**+0.3**
KRLC	**Kraliky**	16.28	331	*e*P	**P**	**12 48 05.0**	**-0.3**
KRLC				*e*x	x	12 48 08.8	
KRLC				*e*pP	**sP**	**12 48 15.2**	**-2.6**
KRLC				*e*S	**S**	**12 51 10.7**	**-3.4**
KRLC				AMS	AMS	12 55 50.0	
	comp=Z,10μm,15.8s						
KRLC	**Kraliky**	16.28	331	*e*P	**P**	**12 48 05.0**	**-0.3**
KRLC				*e*S	**S**	**12 51 10.7**	**-3.4**
KRLC				MLR	MLR		
	comp=Z,10μm,15.8s						
KRLC	**Kraliky**	16.28	331	P	**P**	**12 48 05.0**	**-0.3**
VORD	**Divnogorie**	16.35	24	*e*P	**Pn**	**12 48 02.2**	**-1.2**
VORD				pmax	pmax		
	comp=Z,420nm,1.0s						
BEL	**Belsk**	16.51	342	*e*P	**Pn**	**12 48 05.6**	**+0.3**
BEL				*e*S	**S**	**12 51 17.9**	**-0.7**
BEL				LMZ	LR	12 54 42.7	
	comp=Z,21μm,26.4s						
BEL	**Belsk**	16.51	342	*e*P	**Pn**	**12 48 05.6**	**+0.3**
BEL				MLR	MLR		
	comp=Z,21μm,26.4s						
VSR	**Storozhevoye**	16.53	23	*e*P	**Pn**	**12 48 04.5**	**-1.1**
VSR				*e*S	**S**	**12 51 16.1**	**-2.9**
VSR				pmax	pmax		
	comp=Z,290nm,0.7s						
VSR				smax	smax		
	comp=E,910nm,1.5s						
VSR				MLR	MLR		
	comp=Z,5μm,8.0s						
PGF	**Pioggiola**	16.59	298	*e*P	**Pn**	**12 48 06.7**	**+0.2**
PGF				pmax	pmax		
	comp=Z,118nm,1.0s						
DPC	**Dobruska-Polom**	16.68	331	*e*P	**Pn**	**12 48 08.2**	**+0.6**
DPC				*e*x	x	12 48 14.4	
DPC				*e*pP	**sP**	**12 48 18.7**	**-3.5**
DPC				*e*S	**S**	**12 51 20.7**	**-1.5**
DPC				AMS	AMS	12 57 20.0	
	comp=Z,29μm,11.4s						
DPC	**Dobruska-Polom**	16.68	331	*e*P	**Pn**	**12 48 08.2**	**+0.6**
DPC				MLR	MLR		
	comp=Z,29μm,11.4s						
DPC	**Dobruska-Polom**	16.68	331	P	**Pn**	**12 48 08.2**	**+0.6**
GEA0	**GERESS Array S**	16.73	323	*e*Pn	**Pn**	**12 48 09.7**	**+1.4**
GEA0	**GERESS Array S**	16.73	323	*e*Pn	**Pn**	**12 48 09.6**	**+1.4**
I26DE	**FREYUNG INFRAS**	16.73	323	*i*		14 20 00.0	
	baz=130,slow=321,SNR=1.8						
GEC2	**GERESS Array S**	16.73	323	*e*Pn	**Pn**	**12 48 08.7**	**+0.4**
	comp=Z,404nm,1.1s						
GEC2	**GERESS Array S**	16.73	323	*e*P	**Pn**	**12 48 08.7**	**+0.4**
GEC2				pmax	pmax		
	comp=Z,404nm,1.1s						
GEC2	**GERESS Array S**	16.73	323	*e*Pn	**Pn**	**12 48 08.7**	**+0.4**
	comp=Z,404nm,1.1s						
GERES	**GERESS Array B**	16.73	323	Pn	**Pn**	**12 48 09.7**	**+1.4**
	comp=Z,1.4nm,0.3s,baz=133,slow=13,SNR=92						
GERES				LR	LR	12 54 55.0	
	comp=Z,32μm,18.6s,baz=136,slow=38						
GERES				ScP	**ScP**	**12 56 28.2**	**0.0**
	baz=110,slow=2.0,SNR=5.6						
WTTA	**Wattenberg**	16.84	316	*e*Pn	**P**	**12 48 12.5**	**+0.8**
	comp=Z,35nm,0.6s,SNR=31						
WTTA	**Wattenberg**	16.84	316	Pn	**P**	**12 48 12.5**	**+0.8**
	comp=Z,35nm,0.6s,SNR=31						
UPC	**Upice**	16.93	331	*e*P	**Pn**	**12 48 10.9**	**+0.3**
UPC				*e*pP	**pP**	**12 48 19.5**	**-1.3**
UPC				*e*S	**S**	**12 51 25.2**	**-2.0**
UPC				AMS	AMS	12 57 20.0	
	comp=Z,31μm,12.3s						
UPC	**Upice**	16.93	331	*e*P	**Pn**	**12 48 10.9**	**+0.3**
UPC				*e*S	**S**	**12 51 25.2**	**-2.0**
UPC				MLR	MLR		
	comp=Z,31μm,12.3s						
UPC	**Upice**	16.93	331	P	**Pn**	**12 48 10.9**	**+0.3**
VORR	**Voronezh**	16.94	22	*e*P	**Pn**	**12 48 10.0**	**-0.7**
VORR				pmax	pmax		
	comp=Z,250nm,1.2s						
GOPC	**GO Pecny, Ondr**	16.98	327	*e*P	**Pn**	**12 48 11.5**	**+0.1**
GOPC				*e*x	x	12 48 16.4	
GOPC				*e*S	**Sn**	**12 51 24.2**	**+5.1**
GOPC				AMS	AMS	12 55 50.0	
	comp=Z,35μm,14.1s						
GOPC	**GO Pecny, Ondr**	16.98	327	*e*P	**Pn**	**12 48 11.5**	**+0.1**
GOPC				*e*S	**Sn**	**12 51 24.2**	**+5.1**
GOPC				MLR	MLR		
	comp=Z,35μm,14.1s						
GOPC	**GO Pecny, Ondr**	16.98	327	P	**Pn**	**12 48 11.5**	**+0.1**
KHC	**Kasperske Hory**	16.99	323	*e*P	**P**	**12 48 13.2**	**+0.1**
KHC				*e*x	x	12 48 17.3	
KHC				*e*sP	**sP**	**12 48 24.6**	**-1.0**
KHC				*e*S	**Sn**	**12 51 22.1**	**+2.9**
KHC				AMS	AMS	12 55 40.0	
	comp=Z,54μm,12.1s						
KHC	**Kasperske Hory**	16.99	323	*e*Pn	**Pn**	**12 48 11.6**	**+0.2**
	comp=Z,133nm,1.1s						
KHC	**Kasperske Hory**	16.99	323	*e*P	**P**	**12 48 13.2**	**+0.1**
KHC				*e*S	**Sn**	**12 51 22.1**	**+2.9**
KHC				MLR	MLR		
	comp=Z,54μm,12.1s						
KHC	**Kasperske Hory**	16.99	323	*e*Pn	**Pn**	**12 48 11.6**	**+0.2**
	comp=Z,133nm,1.1s						
KHC	**Kasperske Hory**	16.99	323	P	**P**	**12 48 13.2**	**+0.1**
KSP	**Ksiaz**	17.08	332	*e*P	**Pn**	**12 48 12.6**	**-0.1**
KSP				*e*S	**S**	**12 51 31.2**	**+0.9**
KSP				LMZ	LR	12 54 49.8	
	comp=Z,31μm,19.5s						
KSP	**Ksiaz**	17.08	332	*e*P	**Pn**	**12 48 12.5**	**-0.1**
KSP				MLR	MLR		
	comp=Z,31μm,19.5s						
PRU	**Pruhonice**	17.15	327	*e*P	**Pn**	**12 48 13.6**	**+0.2**
PRU				*e*x	x	12 48 19.8	
PRU				*e*pP	**sP**	**12 48 24.7**	**-2.6**
PRU				*e*S	**Sn**	**12 51 28.4**	**+5.4**
PRU				AMS	AMS	12 56 00.0	
	comp=Z,32μm,11.9s						
PRU	**Pruhonice**	17.15	327	*e*P	**Pn**	**12 48 13.6**	**+0.2**
PRU				*e*S	**Sn**	**12 51 28.4**	**+5.4**
PRU				MLR	MLR		
	comp=Z,32μm,11.9s						
PRU	**Pruhonice**	17.15	327	P	**Pn**	**12 48 13.6**	**+0.2**
MOTA	**Moosalm**	17.19	315	*e*P	**Pn**	**12 48 14.4**	**+0.3**
	comp=Z,141nm,1.0s,SNR=78						
FETA	**Feichten**	17.23	314	*e*Pn	**P**	**12 48 16.7**	**+0.8**
	comp=Z,275nm,1.1s,SNR=167						
PRA	**Prague**	17.25	327	*e*P	**Pn**	**12 48 15.8**	**+1.1**
PRA				*e*x	x	12 48 18.2	
PRA				*e*x	x	12 48 21.0	
PRA				*e*S	**Sn**	**12 51 28.9**	**+3.3**
PRA				AMS	AMS	12 56 00.0	
	comp=Z,33μm,13.0s						
PRA	**Prague**	17.25	327	*e*P	**Pn**	**12 48 15.8**	**+1.1**
PRA				*e*S	**Sn**	**12 51 28.9**	**+3.3**
PRA				MLR	MLR		
	comp=Z,33μm,13.0s						
PRA	**Prague**	17.25	327	P	**Pn**	**12 48 15.8**	**+1.1**
FUORN	**Ofenpass-Fuorn**	17.30	312	*e*Pn	**Pn**	**12 48 16.2**	**+0.6**
	comp=Z,542nm,1.1s						
FUORN	**Ofenpass-Fuorn**	17.30	312	*e*Pn	**Pn**	**12 48 16.2**	**+0.6**
	comp=Z,542nm,1.1s						
ABSA	**Djebel Ababsia**	17.32	276	P	**Pn**	**12 48 15.5**	**-0.2**
ABSA	**Djebel Ababsia**	17.32	276	P	**Pn**	**12 48 15.5**	**-0.2**
CMAH	**Djebel Manchou**	17.33	277	P	**Pn**	**12 48 14.5**	**-1.3**
CMAH	**Djebel Manchou**	17.33	277	P	**Pn**	**12 48 14.5**	**-1.3**
RETA	**Reutte**	17.46	315	*e*P	**Pn**	**12 48 18.2**	**+0.8**
	comp=Z,12nm,0.3s,SNR=17						
PVCC	**Panska Ves**	17.54	328	*e*P	**P**	**12 48 19.5**	**+0.4**
PVCC				*e*x	x	12 48 21.8	
PVCC				*e*x	x	12 48 31.2	
PVCC				*e*S	**S**	**12 51 39.2**	**-0.4**
PVCC				AMS	AMS	12 56 30.0	
	comp=Z,43μm,16.0s						
PVCC	**Panska Ves**	17.54	328	*e*P	**P**	**12 48 19.5**	**+0.4**
PVCC				*e*S	**S**	**12 51 39.2**	**-0.4**
PVCC				MLR	MLR		
	comp=Z,43μm,16.0s						
PVCC	**Panska Ves**	17.54	328	P	**P**	**12 48 19.5**	**+0.4**
FUR	**Furstenfeldbru**	17.56	318	P	**Pn**	**12 48 19.0**	**+0.5**
FUR				pmax	pmax		
	comp=Z,364nm,0.9s						
CAEH	**'Ain El Ouahch**	17.77	278	P	**Pn**	**12 48 20.2**	**-1.0**
CAEH	**'Ain El Ouahch**	17.77	278	P	**Pn**	**12 48 20.2**	**-1.0**
TUE	**Stuetta**	17.79	311	*e*Pn	**Pn**	**12 48 22.5**	**+0.9**
	comp=Z,1μm,1.6s						
TUE	**Stuetta**	17.79	311	*e*Pn	**Pn**	**12 48 22.5**	**+0.9**
	comp=Z,1μm,1.6s						
DAVA	**Damuels**	17.87	313	*e*P	**Pn**	**12 48 22.5**	**0.0**
	comp=Z,44nm,0.4s,SNR=20						
CKFL	**Kef-Lekhel**	17.91	277	P	**Pn**	**12 48 22.0**	**-1.1**
CKFL	**Kef-Lekhel**	17.91	277	P	**Pn**	**12 48 22.0**	**-1.1**
MON	**Monaco**	18.02	301	P	**Pn**	**12 48 24.9**	**+0.7**
SBF	**Sospel**	18.05	301	*e*P	**Pn**	**12 48 23.8**	**-0.9**
SBF				pmax	pmax		
	comp=Z,169nm,0.8s						
BRG	**Berggiesshubel**	18.06	328⇓	*i*P	**Pn**	**12 48 24.8**	**+0.1**
	comp=Z,147nm,1.2s						
BRG				*e*		12 48 31.0	
	comp=Z,835nm,1.8s						
BRG				S	**Sn**	**12 51 47.0**	**+2.0**
	comp=Z,54μm,16.1s						
	comp=N,38μm,19.1s						
	comp=E,55μm,19.1s						
BRG	**Berggiesshubel**	18.06	328⇓	*i*P	**Pn**	**12 48 24.8**	**+0.1**
BRG				S	**Sn**	**12 51 47.0**	**+2.0**
BRG				pmax	pmax		
	comp=Z,147nm,1.2s						
BRG				MLR	MLR		
	comp=Z,54μm,16.1s						
BRG				MLR	MLR		
	comp=N,38μm,19.1s						
BRG				MLR	MLR		
	comp=E,55μm,19.1s						
SUW	**Suwalki**	18.08	349	*e*P	**Pn**	**12 48 22.6**	**-2.3**
SUW				*e*S	S	12 52 02.7	+12
SUW				LMZ	LR	12 55 09.1	
	comp=E,17μm,25.6s						
SUW	**Suwalki**	18.08	349	*e*Pn	**Pn**	**12 48 22.9**	**-2.0**
	comp=E,3μm,1.6s						
SUW	**Suwalki**	18.08	349	*e*P	**Pn**	**12 48 22.9**	**-2.0**
SUW				pmax	pmax		
	comp=Z,3μm,1.6s						
SUW	**Suwalki**	18.08	349	*e*Pn	**Pn**	**12 48 22.9**	**-2.0**
	comp=Z,3μm,1.6s						
CASM	**Ain Smara**	18.11	276	P	**Pn**	**12 48 24.6**	**-0.9**
CASM	**Ain Smara**	18.11	276	P	**Pn**	**12 48 24.6**	**-0.9**
MICGM	**Minsk**	18.13	358⇓	*e*P	**Pn**	**12 48 22.0**	**-3.5**
MICGM				*e*PPP	PPP	12 18 57.0	
MICGM			⇓	*e*P	**Pn**	**12 48 22.0**	**-3.5**
MICGM				PM		12 48 29.0	
	comp=Z,1.3nm,1.2s						
MICGM				PM		12 48 30.0	
	comp=N,1.8nm,1.4s						
MICGM				PM		12 48 42.0	
	comp=Z,28nm,12.0s						
MICGM				*e*S	Sn	12 51 36.0	-11
MICGM				*e*SS	**SnSn**	**12 52 02.0**	**+1.4**
MICGM				*e*LQ	LQ	12 53 35.0	
MICGM				*e*LR	LR	12 54 57.0	
MICGM				LRM	MLR	12 56 26.0	
	comp=Z,54nm,12.0s						
MICGM				LRM	MLR	12 56 30.0	
	comp=N,39nm,14.0s						
MNK	**Minsk**	18.13	358	*de*P	**Pn**	**12 48 22.0**	**-3.5**
MNK				*e*S	Sn	12 51 36.0	-11
MNK				pmax	pmax		
	comp=Z,28μm,12.0s						
MNK				MLR	MLR		
	comp=Z,54μm,12.0s						
MNK				MLR	MLR		
	comp=N,39μm,14.0s						
CTEI	**Djebel Teioual**	18.20	276	P	**Pn**	**12 48 25.8**	**-0.9**
CTEI	**Djebel Teioual**	18.20	276	P	**Pn**	**12 48 25.8**	**-0.9**
NKC	**Novy Kostel**	18.27	324	*e*P	**P**	**12 48 28.4**	**+1.1**
NKC				*e*x	x	12 48 31.7	
NKC				*e*sP	sP	12 48 40.2	+0.4
NKC				*e*S	**Sn**	**12 51 51.7**	**+1.4**
NKC				AMS	AMS	12 56 30.0	
	comp=N,35μm,13.6s						
NKC	**Novy Kostel**	18.27	324	*e*P	**P**	**12 48 28.4**	**+1.1**
NKC				*e*S	**Sn**	**12 51 51.7**	**+1.4**
NKC				MLR	MLR		
	comp=Z,35μm,13.6s						
CALF	**Calern**	18.38	300	P	**P**	**12 48 28.0**	**-0.5**
GRF	**Grafenberg Arr**	18.52	321	P	**P**	**12 48 29.7**	**-0.2**
GRF				pmax	pmax		
	comp=Z,530nm,1.1s						
GRFO	**Grafenberg**	18.52	321	*e*P	**P**	**12 48 29.6**	**-0.3**
	comp=Z,394nm,1.0s						
GRFO	**Grafenberg**	18.52	321	*e*P	**P**	**12 48 29.6**	**-0.3**
GRFO				pmax	pmax		
	comp=Z,394nm,1.0s						
GRFO	**Grafenberg**	18.52	321	*e*P	**P**	**12 48 29.6**	**-0.3**
	comp=Z,394nm,1.0s						
DFRA	**Djebel Bou Aff**	18.57	277	P	**P**	**12 48 30.4**	**-0.3**
DFRA	**Djebel Bou Aff**	18.57	277	P	**P**	**12 48 30.4**	**-0.3**
NACGM	**Naroch**	18.58	356	*e*P	**P**	**12 48 28.0**	**-2.6**
NACGM				*e*P	**Pn**	**12 48 29.0**	**-2.0**
NACGM				PM		12 48 32.0	
	comp=Z,1.6nm,1.0s						
NACGM				*e*S	**Sn**	**12 51 48.0**	**-10**
NACGM				*e*LQ	LQ	12 53 40.0	
NACGM				*e*LR	LR	12 54 52.0	
NACGM				LRM	MLR	12 56 16.0	
	comp=Z,30nm,17.0s						
SURF	**Saint Ours**	18.66	302	P	**P**	**12 48 31.8**	**0.0**
GKP	**Gorka Klasztor**	18.78	338	*e*P	**P**	**12 48 32.4**	**-0.3**
GKP				*e*S	**S**	**12 52 05.2**	**+0.8**
GKP				LMZ	LR	12 56 29.4	
	comp=Z,39μm,24.2s						
GKP	**Gorka Klasztor**	18.78	338	*e*P	**P**	**12 48 32.4**	**-0.3**
GKP				*e*S	**S**	**12 52 05.2**	**+0.8**
GKP				MLR	MLR		
	comp=Z,39μm,24.2s						
CLL	**Collm**	18.78	328	*e*P	**Pn**	**12 48 34.0**	**+0.6**
	comp=Z,75nm,0.9s						
CLL				*e*		12 48 38.0	
CLL				*e*pP	**sP**	**12 48 42.0**	**-3.3**
CLL				*i* sP	pP	12 48 44.9	+3.7
	comp=Z,542nm,1.4s						
CLL				*e*		12 49 15.0	
CLL				*e*S	**Sn**	**12 52 04.0**	**+1.5**
CLL				LmH		12 56 00.0	
	comp=N,27μm,21.9s						
CLL				LmH		12 56 00.0	
	comp=E,44μm,20.8s						
CLL				Lmax		12 57 00.0	
CLL	**Collm**	18.78	328	*e*P	**Pn**	**12 48 33.8**	**+0.4**
	comp=E,417nm,1.2s						
CLL	**Collm**	18.78	328	*e*P	**Pn**	**12 48 34.0**	**+0.6**
CLL				*e*S	**Sn**	**12 52 04.0

comp=Z,18nm,0.3s,baz=206,slow=5.0,SNR=69
OBN LR LR 12 56 56.8
comp=Z,23μm,21.0s,baz=202,slow=39
OBN Obninsk 19.45 13 eP P 12 48 39.4 -0.5
comp=Z,1μm,1.0s
OBN Obninsk 19.45 13c iP P 12 48 39.5 -0.5
OBN i S S 12 52 18.6 +0.8
OBN pmax pmax
comp=Z,816nm,2.0s
OBN MLR MLR
comp=Z,22μm,18.0s
IZAR Zarasai 19.46 355 eP P 12 48 40.1 0.0
IZAR IAmb IAmb 12 48 44.0
comp=Z,110nm,1.1s
IZAR Zarasai 19.46 355 eP P 12 48 40.1 0.0
CABF La Chapelle 19.89 308 eP P 12 48 43.1 -1.9
CABF pmax pmax
comp=Z,128nm,0.7s
ECH Echery 19.92 313 eP P 12 48 45.3 0.0
comp=Z,262nm,1.1s
ECH Echery 19.92 313 eP P 12 48 45.3 0.0
ECH pmax pmax
comp=Z,262nm,1.1s
ATAF Djebel Tarf 19.94 276 P P 12 48 44.3 -1.4
ATAF Djebel Tarf 19.94 276 P P 12 48 44.3 -1.4
AKET Djebel Ketaf 20.23 277 P P 12 48 47.6 -1.3
AKET Djebel Ketaf 20.23 277 P P 12 48 47.6 -1.3
MOS Moscow 20.24 14α iP P 12 48 48.3 -0.3
MOS e 12 49 03.5
MOS i S S 12 52 30.2 -3.6
MOS i 12 52 42.4
MOS pmax pmax
comp=Z,960nm,1.6s
MOS pmax pmax
comp=N,552nm,1.4s
MOS pmax pmax
comp=E,181nm,1.4s
MOS pmax pmax
comp=Z,3μm,2.2s
MOS pmax pmax
comp=N,3μm,3.2s
MOS pmax pmax
comp=E,1μm,3.2s
MOS smax smax
comp=N,7μm,5.0s
MOS smax smax
comp=E,13μm,5.4s
MOS MLR MLR
comp=N,20μm,18.0s
MOS MLR MLR
comp=E,15μm,18.0s
MOS MLR MLR
comp=Z,23μm,18.0s
HAU Haudompre 20.31 312 eP P 12 48 49.0 -0.5
HAU pmax pmax
comp=Z,174nm,1.2s
SSB Saint Sauveur 20.45 303 eP P 12 48 49.7 -1.4
comp=Z,136nm,1.1s
SSB LR LR
comp=Z,18μm,18.0s
SSB Saint Sauveur 20.45 303 eP P 12 48 49.7 -1.4
SSB pmax pmax
comp=Z,136nm,1.1s
SSB MLR MLR
comp=Z,18μm,18.0s
SSB Saint Sauveur 20.45 303 eP P 12 48 49.7 -1.4
comp=Z,136nm,1.1s
ABMS Boumerdes 20.46 279 P P 12 48 46.0 -5.2
ABMS Boumerdes 20.46 279 P P 12 48 46.0 -5.2
ADJB Djebel Djouab 20.57 277 P P 12 48 51.2 -1.4
ADJB Djebel Djouab 20.57 277 P P 12 48 51.2 -1.4
ABA Alger-Bouzarea 20.81 279 P P 12 48 52.2 -2.9
ABA Alger-Bouzarea 20.81 279 P P 12 48 52.2 -2.9
EMHD Djebel Mahouad 20.95 277 P P 12 48 54.9 -1.8
EMHD Djebel Mahouad 20.95 277 P P 12 48 54.9 -1.8
BSD Bornholm Skovb 21.07 337 iP P 12 48 55.9 -1.7
BSD Bornholm Skovb 21.07 337 iP P 12 48 55.9 -1.7
RGN Rugen 21.13 334 eP P 12 48 58.1 -0.2
comp=Z,557nm,1.0s
RGN LR LR
comp=Z,26μm,21.0s
RGN Rugen 21.13 334 eP P 12 48 58.1 -0.2
comp=Z,557nm,1.0s
WLF Walferdange 21.21 316 ⇑P P 12 48 59.9 +0.7
comp=Z,343nm,1.7s
WLF Walferdange 21.21 316 eP P 12 48 59.9 +0.7
comp=Z,523nm,1.2s
WLF LR LR
comp=Z,29μm,18.0s
WLF Walferdange 21.21 316 eP P 12 48 59.9 +0.7
WLF pmax pmax
comp=Z,523nm,1.2s
WLF MLR MLR
comp=Z,29μm,18.0s
WLF Walferdange 21.21 316 eP P 12 48 59.9 +0.7
comp=Z,523nm,1.2s
AVF Avril sur Loir 21.71 307 eP P 12 49 02.6 -2.0
AVF pmax pmax
comp=Z,76nm,0.9s
MEM Membach 21.78 318 ⇓P P 12 49 04.7 -0.6
comp=Z,171nm,1.0s
MEM Membach 21.78 318 P P 12 49 05.2 -0.1
MEM pmax pmax
comp=Z,256nm,1.0s
HGN Heimansgroeve 21.90 318 ePn P 12 49 05.3 -1.3
comp=Z,116nm,1.5s
HGN eX 12 49 17.1
comp=Z,475nm,1.5s
HGN eS S 12 53 04.7 -1.9
HGN eL L 12 58 15.7
comp=Z,22μm,19.1s
BGF Bois d'Agland 21.96 306 eP P 12 49 05.1 -2.2
BGF pmax pmax
comp=Z,64nm,0.7s
BEBN Eben Emael 22.05 318 ⇓P P 12 49 07.3 -0.9
BCLA Clavier 22.06 317 ⇑P P 12 49 07.8 -0.5
comp=Z,303nm,1.1s
EBNR Beni Rached 22.08 278 P P 12 49 12.4 +3.7
EBNR Beni Rached 22.08 278 P P 12 49 12.4 +3.7
WTSB Winterswijk 22.13 322 ePn P 12 49 07.4 -1.6
comp=Z,164nm,1.1s
WTSB eX 12 49 18.8
VSU Vasula 22.14 357d iP P 12 49 08.9 -0.1
VSU pmax pmax
comp=Z,1μm,1.0s
LLD Lille Linde 22.15 334 iP P 12 49 11.5 +2.3
LLD Lille Linde 22.15 334 eP P 12 49 11.5 +2.3
ECHA Ech Chlef 22.23 278 P P 12 49 11.0 +0.7
ECHA Ech Chlef 22.23 278 P P 12 49 11.0 +0.7
DOU Dourbes 22.30 316 ⇑P P 12 49 09.2 -1.7
comp=Z,96nm,0.9s
TCF Toulx Ste Croi 22.30 305 eP P 12 49 08.5 -2.5
TCF pmax pmax
comp=Z,78nm,1.1s
COP Copenhagen 22.35 335 iP P 12 49 13.3 +1.9
COP Copenhagen 22.35 335 iP P 12 49 13.3 +1.9
ETRT Tiaret 22.41 276 P P 12 49 14.2 +1.8
ETRT Tiaret 22.41 276 P P 12 49 14.2 +1.8
EANR 'Ain N'Sour 22.48 277 P P 12 49 10.9 -2.1
EANR 'Ain N'Sour 22.48 277 P P 12 49 10.9 -2.1
MONQ Montcuq 22.53 299 P P 12 49 12.8 -0.7
SNF Seneffe 22.67 316 ⇑P P 12 49 13.7 -1.1
comp=Z,232nm,1.3s
UCC Uccle 22.77 317 ⇓P P 12 49 14.8 -1.1
UCC Uccle 22.77 317 eP P 12 49 14.4 -1.5
comp=Z,226nm,1.0s
UCC LR LR
comp=Z,20μm,19.0s
UCC Uccle 22.77 317 eP P 12 49 14.4 -1.5
UCC pmax pmax
comp=Z,226nm,1.0s
UCC MLR MLR
comp=Z,20μm,19.0s
OKGL Djebel Kef Gue 22.83 278 P P 12 49 17.0 +0.3
OKGL Djebel Kef Gue 22.83 278 P P 12 49 17.0 +0.3
OJGS Djebel Guires 22.83 276 P P 12 49 14.0 -2.8
OJGS Djebel Guires 22.83 276 P P 12 49 14.0 -2.8
LFF La Frestale 22.96 301 eP P 12 49 16.8 -1.2
LFF pmax pmax
comp=Z,50nm,0.8s
OJBR Djebel Berber 23.14 277 P P 12 49 19.0 -1.0
OJBR Djebel Berber 23.14 277 P P 12 49 19.0 -1.0
GEYT Alibeck 23.25 77 P P 12 49 20.3 -0.7
comp=Z,112nm,0.3s,baz=232,slow=49,SNR=16
GEYT LR LR 13 00 48.6
comp=Z,15μm,20.4s,baz=260,slow=43
GYA0B ALIBECK ARRAY 23.25 77 eP P 12 49 20.5 -0.5
comp=Z,810nm,1.0s
GYA0B ALIBECK ARRAY 23.25 77 eP P 12 49 20.5 -0.5
comp=Z,810nm,1.0s
PUL Pulkovo 23.41 2ce P 12 49 23.4 +1.1
PUL pmax pmax
comp=Z,504nm,1.7s
ODJA Bouhanifia 23.59 276 P P 12 49 20.0 -4.3
ODJA Bouhanifia 23.59 276 P P 12 49 20.0 -4.3
USTO Oran 23.83 277 P P 12 49 27.0 +0.4
CART Cartagena 23.93 282 eP P 12 49 28.3 +0.9
comp=Z,80nm,0.9s
CART Cartagena 23.93 282 eP P 12 49 28.3 +0.9
comp=Z,80nm,0.9s
CART i S S 12 53 37.9 -3.9
MFF Saint Martin d 23.95 304 eP P 12 49 25.3 -2.3
MFF pmax pmax
comp=Z,116nm,1.0s
MUD Monsted U'grnd 24.11 333 iP P 12 49 31.0 +2.1
MUD Monsted U'grnd 24.11 333 iP P 12 49 31.0 +2.1
TAM Tamanrasset 24.40 243 eP P 12 49 32.9 +0.8
comp=Z,514nm,1.4s
TAM Tamanrasset 24.40 243 eP P 12 49 32.9 +0.8
TAM pmax pmax
comp=Z,514nm,1.4s
TAM Tamanrasset 24.40 243 eP P 12 49 32.9 +0.8
comp=Z,514nm,1.4s
LDF La Druitiere 24.52 309 eP P 12 49 30.8 -2.0
LDF pmax pmax
comp=Z,38nm,0.6s
OLHC Oulhaca 24.62 276 P P 12 49 26.0 -7.9
OLHC Oulhaca 24.62 276 P P 12 49 26.0 -7.9
FLN La Foliniere 24.80 309 eP P 12 49 33.4 -1.9
FLN pmax pmax
comp=Z,14nm,0.3s
GRR Gorron 24.92 308 eP P 12 49 33.1 -3.3
GRR pmax pmax
comp=Z,114nm,1.0s
MZR Muzera 25.04 115 iP P 12 49 39.1 +1.4
SNR=18
FINES FINESS Array B 25.15 357 P P 12 49 38.2 -0.1
comp=Z,94nm,0.7s,baz=157,slow=10,SNR=201
FINES LR LR 13 00 25.7
comp=Z,22μm,18.8s,baz=172,slow=39
FIA1 FINESS Array S 25.15 357 eP P 12 49 38.6 +0.3
comp=Z,541nm,1.0s
AKTO Aktyubinsk 25.15 47 P P 12 49 37.6 -0.8
comp=Z,75nm,0.7s,baz=246,slow=8.9,SNR=108
UMQ Umm Al-Quwin 25.25 108 iP P 12 49 41.2 +1.6
SNR=24
AJN Ajban 25.25 111 iP P 12 49 40.5 +1.0
SNR=17
SHME Shamm 25.34 106 iP P 12 49 40.6 +0.1
SNR=46
KLMR Klimovskoe 25.40 12c iP P 12 49 40.2 -0.3
KLMR S S 12 54 04.3 -0.6
KLMR pmax pmax
comp=Z,715nm,1.4s
KLMR pmax pmax
comp=Z,1μm,1.2s
KLMR MLR MLR
comp=Z,19μm,16.0s
KLMR Klimovskoe 25.40 12⇑iP P 12 49 40.2 -0.3
KLMR eP P 12 49 40.2 -0.3
KLMR eP P 12 49 40.2 -0.3
KLMR AMP 12 49 44.3
comp=Z,715nm,1.4s
KLMR AMP 12 49 57.4
comp=Z,1μm,1.2s
KLMR S S 12 54 04.3 -0.6
KLMR S S 12 54 04.3 -0.6
KLMR LQ LQ 12 56 29.8
KLMR LQ LQ 12 56 29.8
KLMR LR LR 12 57 38.4
KLMR AMP 13 00 48.1
comp=Z,19μm,15.5s
ASUD Al Ashush, Dub 25.47 110 P P 12 49 44.0 +2.3
SNR=16
ASUD Al Ashush, Dub 25.47 110 P P 12 49 44.0 +2.3
SNR=16
ASUD Al Ashush, Dub 25.47 110 iP P 12 49 42.9 +1.3
SNR=18
UCM Universidad Co 25.49 289 iP P 12 49 39.9 -1.8
UCM i S S 12 54 03.3 -3.6
NAZ Nazwa, Dubai 25.53 109 P P 12 49 44.0 +1.8
SNR=56
NAZ Nazwa, Dubai 25.53 109 P P 12 49 44.0 +1.8
SNR=56
NAZ Nazwa, Dubai 25.53 109 iP P 12 49 42.7 +0.5
SNR=106
BANOM Banah 25.53 106 P P 12 49 43.7 +1.5
SNR=32
BANOM Banah 25.53 106 P P 12 49 43.7 +1.5
SNR=32
BANOM Banah 25.53 106 iP P 12 49 42.6 +0.4
SNR=65
FAQ Al Faqa, Dubai 25.61 109 P P 12 49 43.0 +0.1
SNR=13
FAQ Al Faqa, Dubai 25.61 109 P P 12 49 43.0 +0.1
SNR=13
MSFE Esma-Masafi 25.71 108 iP P 12 49 44.0 +0.1
SNR=61
HOMB Homborsund 25.72 335 eP P 12 49 39.9 -3.6
HFS Hagfors 25.72 342 P P 12 49 43.2 -0.3
comp=Z,14nm,0.5s,baz=153,slow=10.0,SNR=42
HFS LR LR 13 01 30.9
comp=Z,32μm,19.6s,baz=162,slow=40
DAMY Dhamar 25.73 144 eP P 12 49 47.5 +3.2
comp=Z,380nm,1.1s
WACR West Acre 25.74 318 eP P 12 49 43.0 -0.8
WACR IAMs_20 IAMs_20 13 01 23.3
comp=Z,19μm,17.1s
MELI Melilla 25.83 277 iP P 12 49 44.2 -0.5
MELI i S S 12 54 11.0 -1.2
MDH Madha 25.85 108 iP P 12 49 45.4 +0.3
SNR=59
AB31 Akbulak array 25.91 51 iP P 12 49 44.5 -0.8
AB31 pmax pmax
comp=Z,29nm,0.5s
ABKAR Akbulak array 25.91 51 eP P 12 49 44.8 -0.5
UOSS Minazif 25.97 108 eP P 12 49 46.2 +0.1
comp=Z,964nm,1.2s
UOSS Minazif 25.97 108 iP P 12 49 46.1 0.0
SNR=93
UOSS Minazif 25.97 108 eP P 12 49 46.2 +0.1
comp=Z,964nm,1.2s
HATD Hatta, Dubai 25.98 109 P P 12 49 47.0 +0.7
SNR=70
HATD Hatta, Dubai 25.98 109 P P 12 49 47.0 +0.7
SNR=70
HATD Hatta, Dubai 25.98 109 iP P 12 49 46.5 +0.3
SNR=115
ES19 SONSECA Array 26.02 287 eP P 12 49 45.1 -1.4
ES19 SONSECA Array 26.02 287 eP P 12 49 45.1 -1.4
ESDC Sonseca Array 26.07 287 P P 12 49 45.5 -1.5
comp=Z,186nm,1.2s,baz=80,slow=9.7,SNR=105
ESLA Sonseca Array 26.07 287 eP P 12 49 45.6 -1.3
comp=Z,224nm,0.9s
ESLA Sonseca Array 26.07 287 eP P 12 49 45.7 -1.3
comp=Z,224nm,0.9s
ALNE Al Ain 26.11 111 iP P 12 49 48.0 +0.5
SNR=25
WOL Wolverton 26.16 314 eP P 12 49 46.0 -1.6
WOL IAMs_20 IAMs_20 13 01 27.8
comp=Z,23μm,13.8s
SNART Snartemo 26.22 334 eP P 12 49 49.1 +1.0
QUIF Quistinic 26.27 306 eP P 12 49 48.4 -0.3
QUIF pmax pmax
comp=Z,24nm,0.6s
OSL Oslo 26.34 339 eP P 12 49 56.7 +7.6
PAB San Pablo 26.37 287 eP P 12 49 48.5 -1.2
comp=Z,206nm,1.2s
PAB San Pablo 26.37 287 eP P 12 49 48.5 -1.2
PAB pmax pmax
comp=Z,206nm,1.2s
PAB San Pablo 26.37 287 eP P 12 49 48.5 -1.2
comp=Z,206nm,1.2s
KONO Kongsberg 26.44 338 eP P 12 49 50.0 -0.1
comp=Z,238nm,1.1s
KONO LR LR
comp=Z,20μm,21.0s
KONO Kongsberg 26.44 338ce P P 12 49 50.4 +0.4
KONO pmax pmax
comp=Z,122nm,1.2s
KONO MLR MLR
comp=Z,23μm,16.0s
SWN1 Swindon 26.57 314 eP P 12 49 50.9 -0.4
SWN1 IAMs_20 IAMs_20 13 01 32.6
comp=Z,18μm,14.9s
SWN1 Swindon 26.57 314 eP P 12 49 50.9 -0.4
SOHO SOHO 26.66 110 iP P 12 49 52.2 -0.2
SNR=9.9
EMAL Malaga-Limoner 26.75 281 iP P 12 49 51.9 -1.2
EMAL i S S 12 54 54.7 +28
NC602 NORSAR Array S 26.79 341 eP P 12 49 54.4 +1.2
NC602 NORSAR Array S 26.79 341 eP P 12 49 52.5 -0.6
BDHA Al Bayda' 26.82 142 eP P 12 49 56.1 +2.0
STRD Stroud 26.88 315 eP P 12 49 53.4 -0.8
STRD IAMs_20 IAMs_20 13 04 03.9
comp=Z,14μm,11.5s
STRD Stroud 26.88 315 eP P 12 49 53.3 -0.8
PVLZ Peæn de 26.95 277 iP P 12 49 53.9 -0.9
PVLZ i S S 12 54 39.4 +10
NAO01 NORSAR Array S 27.05 340 eP P 12 49 55.8 +0.3
NC405 NORSAR Array S 27.06 342 eP P 12 49 55.2 -0.4
ARQ Araqi 27.10 111 P P 12 50 04.1 +7.7
SNR=32
NB201 NORSAR Array S 27.12 341 eP P 12 49 56.0 -0.1
NB2 NORSAR Subarra 27.13 341 P P 12 49 55.4 -0.9
comp=Z,97nm,1.1s,baz=148,slow=9.3
NB2 NORSAR Subarra 27.13 341 P P 12 49 55.4 -0.9
baz=148,slow=9.3
NOA NORSAR Array B 27.13 341 P P 12 49 55.0 -1.3
comp=Z,13nm,0.8s,baz=114,slow=21,SNR=20
NOA LR LR 13 02 10.6
comp=Z,19μm,20.5s,baz=140,slow=40
NOA NORSAR Array B 27.13 341 P P 12 49 55.0 -1.3
STAV Stavanger 27.20 333 eP P 12 49 59.5 +2.6
NBO00 NORSAR Array S 27.24 341 eP P 12 49 57.5 +0.3
NC303 NORSAR Array S 27.25 341 eP P 12 49 57.6 +0.3
BLS5 Blasjo 27.29 335 eP P 12 49 57.2 -0.5
PRGR Permogore 27.36 17⇑iP P 12 49 57.5 -0.8
PRGR pmax pmax
comp=Z,259nm,1.1s
MCH1 Michaelchurch 27.44 315 eP P 12 49 59.7 +0.5
MCH1 IAMs_20 IAMs_20 13 02 00.1
comp=Z,14μm,12.9s
NC204 NORSAR Array S 27.45 341 eP P 12 50 00.8 +1.7
HPK Haverah Park 27.51 319 eP P 12 50 00.0 +0.3
HPK IAMs_20 IAMs_20 13 01 54.3
comp=Z,25μm,18.7s
HOQ Hoqain 27.56 110 P P 12 50 06.0 +5.5
SNR=14
ODD1 Odda 27.59 336 eP P 12 50 02.5 +2.0
CEU Ceuta 27.65 279 iP P 12 49 56.9 -4.3
CEU i S S 12 54 45.7 +4.7
ATD Arta Tunnel 27.74 150 P P 12 50 02.8 +0.7
comp=Z,15nm,0.9s,baz=309,slow=4.6,SNR=6.7
ATD LR LR 13 02 16.0
comp=Z,3μm,19.9s,baz=356,slow=39
ATD Arta Tunnel 27.74 150 eP P 12 50 02.9 +0.7
comp=Z,189nm,1.2s
ALJ Aljibe 27.76 281 eP P 12 50 16.0 +14
MDT Midelt 27.79 273 P P 12 50 02.2 -0.4
comp=Z,90nm,0.9s,baz=91,slow=11,SNR=55
MDT LR LR 13 03 15.0
comp=Z,11μm,21.4s,baz=71,slow=41
FOEL Foel Wylfa 27.90 316 eP P 12 50 01.5 -1.7
FOEL IAMs_20 IAMs_20 13 02 08.5
comp=Z,14μm,18.2s
BSY Bisya 27.95 111 P P 12 50 12.0 +8.0
SNR=23
PBRG Braganca 28.10 292 eP P 12 50 03.8 -1.4
comp=Z,277nm,1.8s
PBRG Braganca 28.10 292 eP P 12 50 03.8 -1.4
SFS San Fernando 28.21 281 PFAKE 12 50 20.0 +14
SFS LR LR
comp=Z,7μm,18.0s
SFS San Fernando 28.21 281 iP P 12 50 03.8 -2.3
SFS i S S 12 55 16.0 +26
BIDO Bidbid 28.21 109 P P 12 50 11.0 +4.7
SNR=12
BIDO Bidbid 28.21 109 P P 12 50 11.0 +4.7
SNR=12
ARU Arti 28.25 35 P P 12 50 05.4 -0.9
comp=Z,7.7nm,0.3s,baz=241,slow=8.2,SNR=22
ARU LR LR 13 04 20.2
comp=Z,15μm,18.0s,baz=232,slow=43
ARU Arti 28.25 35 eP P 12 50 05.2 -1.0
comp=Z,279nm,0.9s
ARU Arti 28.25 35c iP P 12 50 04.7 -1.6
ARU PPP PPP 12 51 02.6
ARU eS S 12 54 50.4 +0.4
ARU SSS SSS 12 56 29.5
ARU pmax pmax
comp=Z,92nm,2.5s
ARU MLR MLR
comp=Z,16μm,18.0s
MUKL Al Mukalla 28.25 135 eP P 12 50 08.3 +1.7
MVO Moncorvo 28.33 291 eP P 12 50 05.8 -1.5
comp=Z,302nm,1.6s
MVO eLR LR 12 55 35.7
comp=Z,6μm,18.0s
MVO Moncorvo 28.33 291 eP P 12 50 05.8 -1.5
TMCR Tamitsa 28.35 8 eP P 12 50 06.6 -0.5
BER Bergen 28.38 335 eP P 12 50 10.8 +3.4
SMDO Samad 28.41 110 P P 12 50 10.0 +1.8
SNR=8.9
SMDO Samad 28.41 110 P P 12 50 10.0 +1.8
SNR=8.9
DOMB Dombas 28.54 340 eP P 12 50 08.8 -0.1
KESW Keswick, Cumbr 28.57 320 eP P 12 50 09.2 +0.1
KESW IAMs_20 IAMs_20 13 02 37.1
comp=Z,19μm,16.8s
PBAR Barrancos 28.60 285 eP P 12 50 08.0 -1.6
comp=Z,703nm,1.4s
PBAR Barrancos 28.60 285 eP P 12 50 08.0 -1.6
AAE Adis Abeba 28.65 159 iP P 12 50 11.1 +0.5
AAE i S S 12 55 11.4 +14
AAE Adis Abeba 28.65 159 iP P 12 50 12.4 +1.8
AAE i S S 12 55 07.4 +10
AAE Adis Abeba 28.65 159 iP P 12 50 12.4 +1.8
AAE i S S 12 55 07.4 +10
ABTO Aybut 28.68 125 P P 12 50 16.0 +5.4
SNR=6.7
ABTO Aybut 28.68 125 P P 12 50 16.0 +5.4
SNR=6.7
WLF1 Llynfaes 28.72 317 eP P 12 50 10.3 -0.2
WLF1 IAMs_20 IAMs_20 13 02 44.2
comp=Z,28μm,15.5s
PMRV Marv??o 28.73 287 eP P 12 50 08.8 -2.0
comp=Z,215nm,1.6s
PMRV eLR LR 12 55 27.5
comp=Z,9μm,18.0s
PMRV Marv??o 28.73 287 eP P 12 50 08.8 -2.0
WSAR Wadi Sarin 28.75 109 P P 12 50 10.2 -0.9
comp=Z,33nm,0.9s,baz=322,slow=9.9,SNR=16
WSAR LR LR 13 05 35.1
comp=Z,10μm,19.3s,baz=314,slow=44
PCBR Castelo Branco 28.76 288 eP P 12 50 09.8 -1.2
comp=Z,150nm,1.3s
PCBR Castelo Branco 28.76 288 eP P 12 50 09.8 -1.2
MTE Manteigas 28.77 289 eP P 12 50 09.7 -1.5
comp=Z,287nm,1.4s
MTE eLR LR 12 55 28.4
comp=Z,15μm,20.0s
MTE Manteigas 28.77 289 eP P 12 50 09.1 -2.0
comp=Z,175nm,1.2s
MTE LR LR
comp=Z,17μm,20.0s
MTE Manteigas 28.77 289 eP P 12 50 09.7 -1.5
YRC Rhoscolyn 28.81 316 eP P 12 50 08.8 -2.4
JMDO Jabal Madar 28.84 111 P P 12 50 16.0 +4.0
SNR=10
JMDO Jabal Madar 28.84 111 P P 12 50 16.0 +4.0
SNR=10
ECK Cauldkaine Hil 28.85 321 eP P 12 50 08.6 -3.0
PVRL Vila Real 28.85 291 eP P 12 50 10.7 -1.2
comp=Z,120nm,1.4s
PVRL Vila Real 28.85 291 eP P 12 50 10.7 -1.2
BHH Howats Hill 28.85 321 eP P 12 50 08.3 -3.4
POLO Lamas de Olo 28.90 291 eP P 12 50 10.7 -1.7
comp=Z,72nm,1.2s
POLO Lamas de Olo 28.90 291 eP P 12 50 10.7 -1.7
EKA Eskdalemuir Ar 28.93 321 P P 12 50 10.9 -1.5
comp=Z,16nm,0.9s,baz=118,slow=9.9,SNR=23
EKA PcP **PcP 12 53 21.6 +1.0**
comp=Z,6.7nm,0.6s,baz=119,slow=2.7,SNR=6.7
EKA ScP **ScP 12 57 00.0 +0.3**
comp=Z,2.4nm,0.6s,baz=101,slow=4.3,SNR=5.0

EKA LR LR 13 03 18.4
comp=Z,19µm,18.4s,baz=115,slow=40
ESY Stoneypath 28.94 322 *e*P **P 12 50 11.9 -0.5**
PESTR Estremoz 28.94 286 *e*P **P 12 50 10.7 -2.0**
comp=Z,156nm,1.0s
PESTR Estremoz 28.94 286 *e*P **P 12 50 10.7 -2.0**
comp=Z,58nm,0.9s
PESTR LR LR
comp=Z,6µm,18.0s
PESTR Estremoz 28.94 286 *e*P **P 12 50 10.7 -2.0**
ESK Eskdalemuir 28.95 321 *e*P **P 12 50 11.4 -1.1**
comp=Z,162nm,1.3s
ESK LR LR
comp=Z,20µm,18.0s
ESK Eskdalemuir 28.95 321 *e*P **P 12 50 11.4 -1.1**
ESK pmax pmax
comp=Z,162nm,1.3s
ESK MLR MLR
comp=Z,20µm,18.0s
PVIS Viseu 29.01 290 *e*P **P 12 50 12.4 -0.9**
comp=Z,162nm,1.2s
PVIS Viseu 29.01 290 *e*P **P 12 50 12.4 -0.9**
PCAB Cabril 29.07 292 *e*P P 12 50 18.6 +4.8
comp=Z,244nm,1.5s
SUE Sulen 29.07 336 *e* **P 12 50 15.0 +1.6**
WIM Isle of Man 29.21 318 *e*P **P 12 50 14.0 -0.9**
EDI Edinburgh 29.22 322 *e*P **P 12 50 11.9 -3.0**
EDI IAMs_20 IAMs_20 13 04 45.3
comp=Z,25µm,15.0s
AKN Aaknes 29.23 339 *e*P **P 12 50 19.3 +4.4**
PGAV Gavieira, Arco 29.24 292 *e*P **P 12 50 14.5 -0.9**
comp=Z,162nm,1.7s
PGAV *e*LR LR 12 55 49.3
comp=Z,9µm,20.0s
PGAV Gavieira, Arco 29.24 292 *e*P **P 12 50 14.5 -0.9**
PVAQ Vaqueiros 29.24 283 *e*P **P 12 50 13.6 -1.7**
comp=Z,220nm,1.2s
PVAQ *e*LR LR 12 55 31.9
comp=Z,6µm,18.0s
PVAQ Vaqueiros 29.24 283 *e*P **P 12 50 13.6 -1.7**
TBLU Trondheim 29.25 343 *e*P P 12 50 27.2 +12
PBEJ Beja 29.26 284 *e*P **P 12 50 13.8 -1.7**
comp=Z,321nm,1.7s
PBEJ Beja 29.26 284 *e*P **P 12 50 13.8 -1.7**
EVO Evora 29.31 285 *e*P **P 12 50 14.4 -1.5**
comp=Z,185nm,1.6s
EVO Evora 29.31 285 *e*P **P 12 50 14.4 -1.5**
EVO *i* S S 12 55 17.7 +11
WBK Wadi Bani Khal 29.36 110 P P 12 50 24.0 +7.4
SNR=12
SOKR Solikamsk 29.37 29*c i*P P 12 50 22.4 +6.3
SOKR S **S 12 55 13.3 +5.9**
SOKR pmax pmax
comp=Z,36nm,0.9s
SOKR MLR MLR
comp=Z,10µm,16.0s
PMTG Montargil 29.41 287 *e*P **P 12 50 14.9 -1.9**
comp=Z,80nm,2.0s
PMTG Montargil 29.41 287 *e*P **P 12 50 14.9 -1.9**
SVE Sverdlovsk 29.43 36*d i*P **P 12 50 13.2 -3.6**
SVE *e*S **S 12 55 03.2 -5.4**
SVE pmax pmax
comp=Z,380nm,1.4s
SVE MLR MLR
comp=Z,15µm,18.0s
PBDV Barranco-do-Ve 29.44 283 *e*P **P 12 50 15.6 -1.5**
comp=Z,353nm,1.3s
PBDV Barranco-do-Ve 29.44 283 *e*P **P 12 50 15.6 -1.5**
EDU Dundee 29.44 323 *e*P **P 12 50 13.7 -3.2**
PCVE Castro Verde 29.46 284 *e*P **P 12 50 15.6 -1.7**
comp=Z,102nm,1.6s
PCVE Castro Verde 29.46 284 *e*P **P 12 50 15.6 -1.7**
PTOM Tomar 29.49 288 *e*P **P 12 50 16.9 -0.6**
comp=Z,128nm,1.0s
PTOM Tomar 29.49 288 *e*P **P 12 50 16.9 -0.6**
PCAS Casmilo, Conde 29.52 289 *e*P **P 12 50 16.2 -1.6**
comp=Z,133nm,1.7s
PCAS Casmilo, Conde 29.52 289 *e*P **P 12 50 16.2 -1.6**
PTO Porto 29.52 291 *e*P **P 12 50 16.7 -1.1**
PTO Porto 29.52 291 *e*P **P 12 50 16.7 -1.1**
MESJ Messejana 29.57 284 *e*P **P 12 50 16.5 -1.7**
MESJ *e*S **S 12 55 08.9 -2.2**
MESJ AMS AMS 13 05 05.6
comp=N,14µm,17.4s
MESJ Messejana 29.57 284 *e*P **P 12 50 16.7 -1.5**
comp=N,166nm,1.1s
MESJ Messejana 29.57 284 *e*P **P 12 50 16.5 -1.7**
MESJ *e*S **S 12 55 08.9 -2.2**
MESJ Messejana 29.57 284 *e*P **P 12 50 16.7 -1.5**
ALMR Almeirim 29.67 287 *e*P **P 12 50 16.9 -2.2**
ALMR AMS AMS 13 04 53.1
comp=N,11µm,18.7s
ALMR Almeirim 29.67 287 *e*P P 12 50 26.6 +7.5
comp=N,201nm,1.0s
ALMR Almeirim 29.67 287 *e*P **P 12 50 16.9 -2.2**
ALMR Almeirim 29.67 287 *e*P P 12 50 26.6 +7.5
PNCL Nicolau / Gran 29.77 285 *e*P **P 12 50 18.6 -1.4**
comp=N,101nm,1.5s
PNCL Nicolau / Gran 29.77 285 *e*P **P 12 50 18.6 -1.4**
DSB Dublin 29.81 316 *e*P **P 12 50 20.1 -0.1**
comp=N,70nm,1.2s
DSB LR LR
comp=Z,10µm,20.0s
PGBU Glenifferbraes 29.82 321 *e*P **P 12 50 18.8 -1.4**
PGBU IAMs_20 IAMs_20 13 03 30.1
comp=Z,19µm,17.9s
INVG Invergeldie, C 29.89 323 *e*P **P 12 50 18.1 -2.8**
INVG IAMs_20 IAMs_20 13 04 35.0
comp=Z,21µm,15.4s
AVE Averroes 29.91 275 *e*P P 12 50 16.0 -5.3
AVE *i* S **S 12 55 15.4 -1.2**
EAB Aberfoyle 29.92 322 *e*P **P 12 50 17.9 -3.2**
NSS Namsos 29.98 345 *e*P **P 12 50 22.6 +1.1**
MORF Marmelete 29.99 283 *e*P **P 12 50 20.0 -2.0**
MORF *e*S **S 12 55 15.5 -2.4**
MORF AMS AMS 13 06 13.3
comp=E,12µm,17.5s
MORF Marmelete 29.99 283 *e*P **P 12 50 22.4 +0.4**
comp=E,106nm,1.6s
MORF Marmelete 29.99 283 *e*P **P 12 50 20.0 -2.0**
MORF *e*S **S 12 55 15.5 -2.4**
MORF Marmelete 29.99 283 *e*P **P 12 50 22.4 +0.4**
PTEO Sao Teotonio 30.01 284 *e*P **P 12 50 19.7 -2.4**
comp=E,200nm,1.1s
PTEO Sao Teotonio 30.01 284 *e*P **P 12 50 19.7 -2.4**
PFVI Vila Bisbo 30.16 283 *e*P **P 12 50 25.2 +1.7**
comp=E,99nm,1.3s
PFVI Vila Bisbo 30.16 283 *e*P **P 12 50 24.6 +1.2**
comp=E,118nm,1.1s
PFVI Vila Bisbo 30.16 283 *e*P **P 12 50 24.6 +1.2**
comp=E,118nm,1.1s
LIS Lisbon 30.17 286 *e*P **P 12 50 21.5 -2.1**
LIS Lisbon 30.17 286 *e*P **P 12 50 21.4 -2.1**
PMST Lisbon--Monsan 30.19 286 *e*P P 12 50 36.5 +13
comp=E,273nm,1.6s
PMST Lisbon--Monsan 30.19 286 *e*P P 12 50 36.5 +13
PMAFR Mafra 30.24 287 *e*P **P 12 50 26.2 +2.0**
comp=E,189nm,2.2s
PMAFR Mafra 30.24 287 *e*P **P 12 50 26.2 +2.0**
SAN1 Sandwick 30.57 330 *e*P **P 12 50 25.1 -1.7**
LRW Lerwick 30.62 330 *e*P **P 12 50 25.6 -1.6**
LRW IAMs_20 IAMs_20 13 05 36.4
comp=Z,17µm,17.4s
MOR8 Moi Rana 31.01 349 *e*P **P 12 50 31.8 +1.1**
KPL Plockton 31.09 323 *e*P **P 12 50 29.6 -1.8**
KPL IAMs_20 IAMs_20 13 05 46.5
comp=Z,22µm,16.8s
APA Apatity 31.33 3⇑*i*P **P 12 50 32.5 -1.0**
APA *i* S **S 12 55 32.0 -6.2**
APA pmax pmax
comp=Z,91nm,1.1s
DZET Dzherino 31.50 73 P **P 12 50 35.3 -0.2**
DZET pmax pmax
comp=Z,253nm,1.0s
KONS Konsvik 31.53 348 *e*P **P 12 50 34.9 -0.3**
VAL Valentia 31.69 312 *e*P P 12 50 44.9 +8.2
VAL *e*S **S 12 55 43.4 -0.6**
CHM Chimkent 31.75 67 LR LR 13 05 15.3
comp=Z,3µm,18.9s
IUG Iuzhnay 32.08 67 *e*P **P 12 50 39.9 -0.6**
comp=Z,127nm,2.5s
KK31 Karatay Array 32.38 65 *e*P **P 12 50 42.1 -0.9**
KK31 Karatay Array 32.38 65 *e*P **P 12 50 42.1 -0.9**
KK31 Karatay Array 32.38 65 *e*P **P 12 50 42.1 -0.9**
KKAR Karatay Array 32.38 65 *e*P **P 12 50 42.3 -0.7**
KKAR Karatay Array 32.38 65 *e*P **P 12 50 42.3 -0.7**
KBL Kabul 32.53 81 *e*P **P 12 50 44.8 +0.1**
comp=Z,128nm,1.2s
KBL LR LR
comp=Z,4µm,20.0s
KBL Kabul 32.53 81 *e*P **P 12 50 44.8 +0.1**
KBL pmax pmax
comp=Z,128nm,1.2s
KBL MLR MLR
comp=Z,4µm,20.0s
KBL Kabul 32.53 81 *e*P **P 12 50 44.8 +0.1**
comp=Z,128nm,1.2s
STEI Steigen 32.53 350 *e*P **P 12 50 44.5 +0.5**
LOF Lofoten 32.96 349 *e*P **P 12 50 47.8 +0.1**
BRVK Borovoye 33.20 47 *e*P **P 12 50 49.9 -0.1**
comp=Z,308nm,1.3s
BRVK LR LR
comp=Z,8µm,22.0s
BRVK Borovoye 33.20 47 P **P 12 50 50.4 +0.4**
SNR=26
BRVK Borovoye 33.20 47 P **P 12 50 50.4 +0.4**
SNR=26
BRVK Borovoye 33.20 47*d i*P **P 12 50 49.2 -0.8**
BRVK pmax pmax
comp=Z,40nm,1.0s
BRVK MLR MLR
comp=Z,18µm,20.0s
BVA0 Borovoye Array 33.26 47 P **P 12 50 49.5 -1.0**
BVA0 pmax pmax
comp=Z,103nm,1.2s
BVAR Borovoye Array 33.26 47 P **P 12 50 50.1 -0.4**
comp=Z,38nm,1.0s,baz=256,slow=6.0,SNR=101
BVAR LR LR 13 07 47.5
comp=Z,19µm,20.6s,baz=264,slow=42
ARCES ARCESS Array B 33.26 358 P **P 12 50 50.3 -0.1**
comp=Z,9.2nm,0.5s,baz=173,slow=8.5,SNR=46
ARCES LR LR 13 05 07.7
comp=Z,18µm,20.2s,baz=178,slow=38
ARCES ARCESS Array B 33.26 358 *e*P **P 12 50 50.5 +0.2**
ARCES ARCESS Array B 33.26 358 *e*P **P 12 50 50.5 +0.2**
ARE0 ARCESS Array S 33.26 358 *e*P **P 12 50 50.5 +0.1**
comp=Z,132nm,1.0s
ARE0 LR LR
comp=Z,17µm,21.0s
ARE0 ARCESS Array S 33.26 358 *e*P **P 12 50 50.9 +0.6**
LODK Lodwar 33.33 168 *i*P **P 12 50 53.6 +2.1**
LODK *e* 12 50 57.8
baz=342,slow=18
LODK *e*S **S 12 56 05.0 -5.3**
LODK 12 56 16.6
LODK AMP 13 05 16.4
comp=E,7µm,9.3s
LODK AMP 13 05 55.5
comp=N,3µm,11.3s
KEV Kevo 33.45 359 *e*P **P 12 50 52.2 +0.3**
comp=N,459nm,1.9s
KEV LR LR
comp=Z,19µm,18.0s
KEV Kevo 33.45 359 *e*P **P 12 50 52.2 +0.3**
KEV pmax pmax
comp=Z,459nm,1.9s
KEV MLR MLR
comp=Z,19µm,18.0s
TORD Torodi Ar. Bea 33.68 234 P **P 12 50 54.1 -0.4**
comp=Z,146nm,0.6s,baz=40,slow=9.3,SNR=334
TORD LR LR 13 06 54.7
comp=Z,25µm,19.5s,baz=30,slow=40
TRO Tromso 33.75 354 *e*P **P 12 50 55.8 +1.2**
OTUK Ortayu 33.76 56 P **P 12 50 54.8 -0.2**
OTUK pmax pmax
comp=Z,166nm,0.8s
MNAS Manas 33.88 66 P **P 12 50 55.9 -0.4**
MNAS pmax pmax
comp=Z,44nm,1.5s
BRZS Berezniki 34.15 53⇑*i*P **P 12 50 57.8 -0.5**
comp=Z,411nm,3.1s
BRZS *i* S **S 12 56 22.3 0.0**
BRZS *e*SS **SnSn 12 58 32.7 +1.2**
HAMF Hammerfest 34.44 357 *e*P **P 12 51 03.7 +3.2**
AML Almayashu 34.80 67 P **P 12 51 02.9 -1.6**
SNR=11
EKS2 Erkin-Say 34.81 66 P **P 12 51 04.6 +0.3**
SNR=15
BTLS Baital 34.86 61⇑*i*P **P 12 51 04.2 -0.4**
comp=Z,163nm,3.1s
SFK Sufi-Kurgan 34.91 70 P **P 12 51 05.2 -0.1**
SFK pmax pmax
comp=Z,191nm,0.8s
USP Ospenovka 35.29 64 P **P 12 51 07.5 -0.8**
SNR=8.2
AAK Ala-Archa 35.34 66 P **P 12 51 09.1 +0.2**
comp=Z,47nm,0.8s,baz=234,slow=5.9,SNR=12
AAK LR LR 13 08 42.1
comp=Z,13µm,21.6s,baz=272,slow=42
AAK Ala-Archa 35.34 66 P **P 12 51 09.0 +0.2**
SNR=19
AAK Ala-Archa 35.34 66 *e*P **P 12 51 08.8 0.0**
comp=Z,227nm,1.4s
AAK Ala-Archa 35.34 66 P **P 12 51 09.1 +0.2**
SNR=28
AAK Ala-Archa 35.34 66 P **P 12 51 09.1 +0.2**
SNR=28
AAK Ala-Archa 35.34 66 *i*P **P 12 51 08.7 -0.1**
SNR=42
AAK Ala-Archa 35.34 66 *e*P **P 12 51 08.9 0.0**
comp=Z,227nm,1.4s
UCH Uchtor 35.39 66 P **P 12 51 09.5 -0.1**
SNR=24
FRU Bishkek 35.41 65 *e*P **P 12 51 08.0 -1.3**
FRU *i* 12 51 26.0
FRU *e*PPP PPP 12 52 32.0
FRU *e*S **S 12 56 42.0 0.0**
FRU pmax pmax
comp=Z,730nm,2.4s
CHMS Chumysh 35.49 65 P **P 12 51 10.0 0.0**
SNR=15
KBK Karagaybulak 35.67 65 P **P 12 51 11.9 +0.2**
SNR=22
KZA Kyzart 35.95 66 P **P 12 51 15.1 +0.7**
SNR=24
TKM2 Tokmak 2 36.12 65 P **P 12 51 15.9 +0.3**
SNR=21
TKM2 Tokmak 2 36.12 65 P **P 12 51 14.9 -0.7**
TKM2 pmax pmax
comp=Z,77nm,1.3s
NIL Nilore 36.13 81 *e*P **P 12 51 16.3 +0.6**
comp=Z,362nm,0.8s
NIL Nilore 36.13 81 *e*P **P 12 51 16.3 +0.6**
NIL pmax pmax
comp=Z,362nm,0.8s
NIL Nilore 36.13 81 *e*P **P 12 51 16.3 +0.6**
comp=Z,362nm,0.8s
KUU Kurty 36.57 63⇑*i*P **P 12 51 19.3 +0.1**
comp=Z,754nm,3.3s
KUU *i* PP **PnPn 12 52 42.6 +0.1**
KUU *e*S **S 12 57 00.2 +0.5**
NRN Naryn 36.59 67 *e*P **P 12 51 20.1 +0.3**
comp=Z,364nm,1.3s
NRN Naryn 36.59 67 *e*P **P 12 51 20.1 +0.3**
NRN pmax pmax
comp=Z,364nm,1.3s
KOWA Kowa 36.63 242 P **P 12 51 19.6 -0.3**
comp=Z,75nm,0.8s,baz=44,slow=7.1,SNR=111
KOWA Kowa 36.63 242 *e*P **P 12 51 19.6 -0.3**
comp=Z,148nm,0.9s
MBAR Mbarara 36.84 177 P **P 12 51 21.6 -0.2**
comp=Z,80nm,1.0s,baz=90,slow=20,SNR=44
MBAR LR LR 13 08 10.3
comp=Z,9µm,18.1s,baz=3.5,slow=39
MBAR Mbarara 36.84 177 *e*P **P 12 51 23.6 +1.7**
comp=Z,126nm,1.0s
MBAR Mbarara 36.84 177 *e*P **P 12 51 23.6 +1.7**
MBAR pmax pmax
comp=Z,126nm,1.0s
KSH Kashi 36.87 71⇑*i*P **P 12 51 20.2 -1.8**
KSH pP pP 12 51 28.1 -3.2
KSH PP **PP 12 52 46.3 +0.1**
KSH S **S 12 57 01.3 -3.3**
KSH SS **SnSn 12 59 30.9 -7.0**
KSH pmax pmax
comp=Z,130nm,0.6s
KSH LR LR
comp=Z,32µm,17.1s
KSH LR LR
comp=Z,13µm,14.4s
KSH LR LR
comp=Z,21µm,18.3s
AAA Alma-Ata 37.05 64 *e*P **P 12 51 23.7 +0.3**
comp=Z,511nm,2.6s
AAA *e*PP **PP 12 52 48.6 +0.6**
AAA LR LR 13 10 30.3
comp=Z,3µm,14.3s
AAA Alma-Ata 37.05 64 *e*P **P 12 51 22.5 -0.9**
AAA *e*S **S 12 57 06.0 -1.1**
AAA pmax pmax
comp=Z,700nm,5.4s
AAA smax smax
comp=E,5µm,11.2s
PMPS Porto Santo 37.12 278 *e*P **P 12 51 23.5 -0.5**
comp=E,408nm,1.4s
PMPS Porto Santo 37.12 278 *e*P **P 12 51 23.5 -0.5**
MDOK Medeo 37.15 64 *i*P **P 12 51 24.2 -0.1**
comp=E,1µm,2.9s
MDOK *i* PP **PP 12 52 49.2 0.0**
MDOK *e*S **S 12 57 09.2 +0.4**
MDOK LR LR 13 10 21.8
comp=E,5µm,14.7s
BHJ Bhuj 37.38 99 *e*P **P 12 51 27.0 +0.8**
PMAR Madeira 37.69 278 *e*P **P 12 51 29.0 -0.1**
comp=E,548nm,1.1s
PMAR Madeira 37.69 278 *e*P **P 12 51 29.0 -0.1**
TARG Taragay, Kyrgy 37.89 67 *e*P **P 12 51 31.4 +0.5**
comp=E,139nm,1.1s
TARG LR LR
comp=Z,19µm,22.0s
TARG Taragay, Kyrgy 37.89 67 *e*P **P 12 51 31.4 +0.5**
comp=Z,139nm,1.1s
PMOZ Porto Moniz, M 37.89 279 *e*P **P 12 51 30.7 +0.1**
comp=Z,336nm,1.0s
PMOZ *e*LR LR 12 57 34.9
comp=Z,2µm,22.0s
PMOZ Porto Moniz, M 37.89 279 *e*P **P 12 51 30.7 +0.1**
KURBB Kurchatov Arra 37.94 52 P **P 12 51 30.3 -0.3**
comp=Z,108nm,0.8s,baz=276,slow=8.9,SNR=499
TDK Taldygorghan 37.95 61 *e*P **P 12 51 30.8 -0.1**
comp=Z,638nm,2.9s
TDK LR LR 13 08 43.3
comp=Z,10µm,17.6s
KURK Kurchatov 38.00 52 *e*P **P 12 51 30.8 -0.4**
comp=Z,404nm,0.9s
KURK Kurchatov 38.00 52 P **P 12 51 31.0 -0.2**
SNR=65
KURK Kurchatov 38.00 52 P **P 12 51 31.0 -0.2**
SNR=65
KURK Kurchatov 38.00 52*d i*P **P 12 51 30.0 -1.2**
KURK pmax pmax
comp=Z,117nm,0.8s
KURK MLR MLR
comp=Z,14µm,21.0s
SATY Saty 38.15 64 *e*P **P 12 51 32.9 +0.1**
comp=Z,652nm,3.5s
ZHN Zhinishke 38.16 64⇑*e*P **P 12 51 32.8 0.0**
comp=Z,214nm,3.5s
ZHN *e*S **S 12 57 24.4 +0.3**
PRZ Przheval'sk 38.22 65 *e*P **P 12 51 34.2 +0.8**
comp=Z,131nm,1.0s
PRZ Przheval'sk 38.22 65 *e*P **P 12 51 34.2 +0.8**
PRZ pmax pmax
comp=Z,131nm,1.0s
KPKS Kokpek 38.30 64⇑*i*P **P 12 51 33.6 -0.4**
comp=Z,262nm,3.0s
KPKS *e*S **S 12 57 26.1 -0.1**
BJO Bjornoya 38.50 356 *e*P P 12 51 43.2 +8.1
UZB Uzynbulak 38.59 64⇑*i*P **P 12 51 36.0 -0.4**
comp=Z,113nm,2.6s
UZB *e*S **S 12 57 30.9 +0.3**
UZB *e*SS **SnSn 13 00 20.3 +1.0**
UZB LR LR 13 10 55.8
comp=Z,2µm,18.4s
PDGK Podgornoye 38.90 64 P **P 12 51 37.9 -1.2**
PDGK pmax pmax
comp=Z,33nm,1.1s
SHLS Shalkode 38.91 64 *i*P **P 12 51 41.5 +2.4**
comp=Z,190nm,3.3s
SHLS *e*S **S 12 57 40.2 +4.9**
SHLS *e*SS **SS 13 00 34.8 +7.5**
MACI Morro de la Ar 38.99 271 *e*P **P 12 51 39.4 -0.6**
comp=Z,446nm,1.0s
MACI Morro de la Ar 38.99 271 *e*P **P 12 51 39.4 -0.6**
comp=Z,446nm,1.0s
DHRM DHARAMSHALA 39.01 82 *e*P **P 12 51 39.5 -0.7**
SEM Semipalatinsk 39.03 52⇑*i*P **P 12 51 41.4 +1.2**
comp=Z,241nm,2.6s
SEM *i* PP **PP 12 53 11.5 +1.8**
SEM *i* S **S 12 57 38.6 +1.4**
SEM LR LR 13 10 52.4
comp=Z,3µm,17.1s
BHK Bhakra 39.38 83 *e*P **P 12 51 42.8 -0.3**
BHK *ex* x 12 52 07.8
JMIC Jan Mayen 39.84 342 *e*P **P 12 51 47.6 +1.3**
SMLA Simla 40.09 83 *e*P **P 12 51 48.9 0.0**
MAKZ Makanchi 40.29 58 *e*P **P 12 51 50.3 -0.2**
comp=Z,163nm,1.2s
MAKZ Makanchi 40.29 58 *e*P **P 12 51 50.3 -0.2**
MAKZ pmax pmax
comp=Z,163nm,1.2s
MK31 Makanchi Array 40.51 58 *e*P **P 12 51 52.1 -0.2**
MK31 Makanchi Array 40.51 58 *e*P **P 12 51 52.1 -0.2**
MKAR Makanchi Array 40.51 58 P **P 12 51 51.9 -0.4**
comp=Z,77nm,0.7s,baz=280,slow=6.5,SNR=603
MKAR LR LR 13 10 44.0
comp=Z,8µm,21.3s,baz=280,slow=39
MKAR Makanchi Array 40.51 58 *e*P **P 12 51 51.9 -0.4**
comp=Z,669nm,0.8s
MKAR Makanchi Array 40.51 58 *e*P **P 12 51 51.9 -0.4**
MKAR pmax pmax
comp=Z,669nm,0.8s
MK01 Makanchi Array 40.52 58 *e*P **P 12 51 52.1 -0.2**
BORG Borgarnes 41.01 330 *e*P **P 12 51 55.0 -1.1**
comp=Z,454nm,1.4s
BORG LR LR
comp=Z,15µm,21.0s
BORG Borgarnes 41.01 330 *e*P **P 12 51 55.0 -1.1**
BORG pmax pmax
comp=Z,454nm,1.4s
BORG MLR MLR
comp=Z,15µm,21.0s
NVS Novosibirsk 41.03 46⇑*i*P **P 12 51 56.4 0.0**
NVS *e*S **S 12 58 06.2 -0.3**
NVS *e* 13 01 58.9
NVS pmax pmax
comp=N,79nm,1.4s
NVS pmax pmax
comp=E,174nm,1.4s
NVS pmax pmax
comp=Z,429nm,1.4s
NVS smax smax
comp=N,208nm,2.2s
NVS smax smax
comp=E,215nm,2.2s
NDI New Delhi 41.05 87 *e*P **P 12 51 58.0 +1.1**
NDI *e*S **S 12 58 08.0 +0.5**
DDI Dehra Dun 41.09 84 *e*P **P 12 51 57.3 0.0**
HSPB Hornsund (broa 41.15 355 *e*P P 12 52 10.9 +14
HSPB *e* 12 53 36.4
HSPB *e* 12 53 55.1
HSPB MLR MLR
comp=Z,20µm,22.8s
HSPB Hornsund (broa 41.15 355 *e*P **P 12 51 57.0 -0.1**
ZAA0 Zalesovo Array 41.91 47 *e*P **P 12 52 02.6 -1.0**
comp=Z,111nm,1.0s
ZALV Zalesovo Beam 41.91 47 P **P 12 52 02.5 -1.1**
comp=Z,16nm,0.6s,baz=266,slow=9.6,SNR=71
ZALV LR LR 13 13 10.7
comp=Z,6µm,21.3s,baz=277,slow=42
ZSN Zaisan 42.20 57⇑*i*P **P 12 52 06.1 -0.1**
comp=Z,73nm,2.9s
ZSN *i* S **S 12 58 24.2 +0.1**
SPA0 Spitsbergen Ar 42.24 356 *e*P **P 12 52 06.4 +0.4**
SPA0 Spitsbergen Ar 42.24 356 *e*P **P 12 52 05.9 -0.1**
SPITS Spitsbergen Ar 42.24 356 P **P 12 52 05.3 -0.8**
comp=Z,4.0nm,0.4s,baz=151,slow=7.1,SNR=28
BART Pico Bartolome 42.70 289 *e*P P 12 52 15.6 +5.2
comp=Z,59nm,0.5s
DBIC Dimbokro 42.77 235 P **P 12 52 10.6 -0.5**
comp=Z,90nm,0.9s,baz=22,slow=8.6,SNR=73
DBIC LR LR 13 12 10.3
comp=Z,15µm,18.9s,baz=26,slow=39
DBIC Dimbokro 42.77 235 *e*P **P 12 52 10.6 -0.5**
comp=Z,152nm,1.0s
DBIC Dimbokro 42.77 235 *e*P **P 12 52 10.6 -0.5**

DBIC					pmax	pmax		
	comp=Z,153nm,1.0s							
PSMN	**Pico do Norte,**	**42.83**	**288**	*e*P	P		12 52 16.3	+4.9
	comp=Z,41nm,0.8s							
PSMA	**Santa Maria**	**42.88**	**288**	*e*P	P		12 52 17.4	+5.6
	comp=Z,15nm,0.7s							
TIC	**Toumodi**	**42.90**	**235**	*e*P	**P**		**12 52 09.6**	**-2.5**
KIC	**Kosan Boka**	**42.93**	**234**	*e*P	**P**		**12 52 11.2**	**-1.1**
	comp=Z,450nm,0.9s							
CMLA	**Cha da Macela**	**42.98**	**289**	*e*P	**P**		**12 52 15.0**	**+2.5**
	comp=Z,18nm,0.5s							
CMLA	**Cha da Macela**	**42.98**	**289**		PFAKE		12 52 20.0	+7.5
CMLA					LR	LR		
	comp=Z,5μm,19.0s							
PSET	**Sete Cidades**	**43.11**	**289**	*e*P	P		12 52 20.2	+6.6
	comp=Z,64nm,0.5s							
POO	**Poona**	**43.19**	**102**	*e*P	**P**		**12 52 15.0**	**+0.5**
POO					IAmb	IAmb	12 52 17.7	
	comp=Z,103nm,0.3s							
LIC	**Lamto**	**43.22**	**234**	*e*P	**P**		**12 52 13.3**	**-1.4**
	comp=Z,511nm,1.0s							
KBS	**Kingsbay**	**43.23**	**355**	*e*P	**P**		**12 52 14.6**	**+0.6**
	comp=Z,132nm,1.0s							
KBS	**Kingsbay**	**43.23**	**355**	*e*P	**P**		**12 52 14.6**	**+0.6**
KBS					pmax	pmax		
	comp=Z,132nm,1.0s							
SCO	**Scoresbysund**	**43.34**	**338**	*i* P	**P**		**12 52 15.4**	**+0.4**
SCO	**Scoresbysund**	**43.34**	**338**	*e*P	**P**		**12 52 15.6**	**+0.6**
	comp=Z,148nm,1.0s							
SCO					LR	LR		
	comp=Z,11μm,20.0s							
SCO	**Scoresbysund**	**43.34**	**338**	*e*P	**P**		**12 52 15.6**	**+0.6**
SCO					pmax	pmax		
	comp=Z,148nm,1.0s							
SCO					MLR	MLR		
	comp=Z,11μm,20.0s							
BHPL	**Bhopal**	**43.62**	**94**	*e*P	**P**		**12 52 17.2**	**-0.7**
PSCM	**Serra do Cume**	**43.94**	**291**	*e*P	**P**		**12 52 21.3**	**+1.0**
	comp=Z,24nm,0.3s							
ADH	**Angra Heroismo**	**44.04**	**291**	*e*P	**P**		**12 52 25.7**	**+4.6**
	comp=Z,17nm,0.3s							
PGRA	**Graciosa**	**44.50**	**291**	*e*P	**P**		**12 52 26.7**	**+1.9**
	comp=Z,25nm,0.4s							
PMAN	**Manadas**	**44.69**	**291**	*e*P	**P**		**12 52 23.1**	**-3.2**
	comp=Z,100nm,1.0s							
WMQ	**Urumqi**	**44.71**	**62**	P	**P**		**12 52 26.8**	**+0.4**
WMQ				pP	sP		12 52 40.9	+1.1
WMQ				sP	pP		12 52 43.5	+7.6
WMQ				PP	**PP**		**12 54 14.5**	**+3.6**
WMQ				S	**S**		**12 59 00.9**	**-0.1**
WMQ				pmax	pmax			
	comp=Z,200nm,1.5s							
WMQ				pmax	pmax			
	comp=Z,4μm,5.1s							
WMQ				LR	LR			
	comp=Z,31μm,21.5s							
WMQ				LR	LR			
	comp=Z,25μm,21.5s							
WMQ				LR	LR			
	comp=Z,25μm,19.9s							
ROSA	**Rosais**	**44.78**	**291**	*e*P	**P**		**12 52 27.6**	**+0.6**
	comp=Z,137nm,1.2s							
PCAN	**Candelaria**	**45.03**	**291**	*e*P	**P**		**12 52 31.9**	**+2.8**
	comp=Z,101nm,0.9s							
PCED	**Cedros**	**45.15**	**291**	*e*P	**P**		**12 52 32.3**	**+2.3**
	comp=Z,21nm,0.3s							
NRIK	**Noril'sk**	**45.46**	**25**	P	**P**		**12 52 32.7**	**+0.8**
	comp=Z,32nm,0.7s,baz=252,slow=6.3,SNR=21							
NRIK					LR	LR	13 14 54.4	
	comp=Z,5μm,18.7s,baz=250,slow=40							
DAG	**Danmarks Havn**	**45.57**	**346**	*i* P	**P**		**12 52 33.0**	**+0.3**
DAG	**Danmarks Havn**	**45.57**	**346**	*i* P	**P**		**12 52 33.0**	**+0.3**
KLRI	**Killari**	**45.62**	**100**	*e*P	**P**		**12 52 34.1**	**+0.2**
KLRI					IAmb	IAmb	12 52 36.1	
	comp=Z,492nm,1.4s							
KLRI				*e*S	**S**		**12 59 13.9**	**-0.7**
KLRI					IVMs_BB	IVMs_BB	13 16 02.6	
	comp=Z,4μm,18.0s							
PYUN	**Piuthan**	**45.93**	**84**	*e*P	**P**		**12 52 37.1**	**+0.6**
	comp=Z,200nm,0.6s							
NGP	**Nagpur**	**45.96**	**95**	*e*P	**P**		**12 52 37.2**	**+0.7**
NGP				*e*S	**S**		**12 59 19.1**	**-0.3**
DANN	**Dangsing**	**46.44**	**84**	*e*P	**P**		**12 52 41.2**	**+0.6**
	comp=Z,2μm,0.9s							
SRSP	**Sriramsagar**	**46.55**	**98**	*e*P	**P**		**12 52 41.1**	**0.0**
SRSP					IAmb	IAmb	12 52 43.2	
	comp=Z,523nm,0.8s							
SRSP				*e*S	**S**		**12 59 26.1**	**-1.7**
SRSP					IVMs_BB	IVMs_BB	13 20 34.0	
	comp=Z,2μm,17.4s							
KOLN	**Koldanda**	**46.56**	**84**	*e*P	**P**		**12 52 41.8**	**+0.4**
	comp=Z,160nm,0.5s							
H07N1	**FLORES T-PHASE**	**46.67**	**293**	*e*P	**P**		**12 52 40.6**	**-1.3**
H07S1	**FLORES T-PHASE**	**46.82**	**293**	*e*P	**P**		**12 52 44.5**	**+1.4**
GKN	**Gorkha**	**47.29**	**84**	*e*P	**P**		**12 52 47.1**	**0.0**
	comp=Z,390nm,0.8s							
HVS	**Khovu-Aksy**	**47.49**	**51***d*	*i* P	**P**		**12 52 48.7**	**+0.4**
HVS					pmax	pmax		
	comp=Z,63nm,0.9s							
HYBB	**Hyderabad (bro**	**47.53**	**100**	*e*P	**P**		**12 52 48.8**	**-0.1**
HYBB					IAmb	IAmb	12 52 50.9	
	comp=Z,359nm,0.8s							
HYBB				*e*S	**S**		**12 59 40.4**	**-1.6**
HYBB					IVMs_BB	IVMs_BB	13 16 46.2	
	comp=Z,3μm,20.1s							
HYB	**Hyderabad**	**47.53**	**100**	⇓*i* P	**P**		**12 52 50.0**	**+1.1**
	comp=Z,1μm,1.0s							
HYB				*e*S	**S**		**12 59 42.0**	**0.0**
DMN	**Daman**	**47.84**	**84**	*e*P	**P**		**12 52 51.9**	**+0.4**
	comp=Z,510nm,0.8s							
KKN	**Kakani**	**47.90**	**83**	*e*P	**P**		**12 52 51.9**	**0.0**
	comp=Z,263nm,0.6s							
ANGG	**Ammassalik, Gr**	**47.91**	**329**	PFAKE			12 53 00.0	+8.9
ANGG					LR	LR		
	comp=Z,12μm,19.0s							
URV	**Uravakonda**	**47.91**	**103**	*e*P	**P**		**12 52 51.7**	**-0.1**
URV					IAmb	IAmb	12 52 53.5	
	comp=Z,174nm,1.1s							
URV				*e*S	**S**		**12 59 44.6**	**-2.7**
URV					IVMs_BB	IVMs_BB	13 19 05.2	
	comp=Z,2μm,12.9s							
PKIN	**Phulchoki**	**48.08**	**84**	*e*P	**P**		**12 52 53.6**	**+0.2**
	comp=Z,313nm,0.8s							
GUN	**Gumba**	**48.33**	**83**	*e*P	**P**		**12 52 55.3**	**-0.1**
	comp=Z,335nm,0.7s							
SRLM	**Srisailam**	**48.53**	**101**	*e*P	**P**		**12 52 56.7**	**0.0**
SRLM					IAmb	IAmb	12 52 59.3	
	comp=Z,545nm,0.9s							
SRLM				*e*S	**S**		**12 59 54.3**	**-1.9**
SRLM					IVMs_BB	IVMs_BB	13 17 32.0	
	comp=Z,2μm,18.6s							
NJS	**Nagarjunasagar**	**48.61**	**100**	*e*P	**P**		**12 52 57.0**	**-0.2**
NJS					IAmb	IAmb	12 52 59.0	
	comp=Z,457nm,1.0s							
NJS				*e*S	**S**		**12 59 55.2**	**-2.0**
NJS					IVMs_BB	IVMs_BB	13 17 27.4	
	comp=Z,2μm,20.3s							
JIRN	**Jiri**	**48.68**	**83**	*e*P	**P**		**12 52 58.2**	**+0.1**
	comp=Z,399nm,0.7s							
SUMG	**Summit**	**48.97**	**338**	*i* P	**P**		**12 52 58.5**	**-1.2**
SUMG	**Summit**	**48.97**	**338**	*e*P	**P**		**12 52 59.5**	**-0.2**
	comp=Z,171nm,1.1s							
SUMG					LR	LR		
	comp=Z,11μm,20.0s							
SUMG	**Summit**	**48.97**	**338**	*e*P	**P**		**12 52 59.5**	**-0.2**
SUMG					pmax	pmax		
	comp=Z,171nm,1.1s							
SUMG					MLR	MLR		
	comp=Z,11μm,20.0s							
RAMN	**Ramite**	**49.32**	**84**	*e*P	**P**		**12 53 02.5**	**-0.4**
	comp=Z,874nm,1.1s							
ADKI	**Addanki**	**49.53**	**101**	*e*P	**P**		**12 53 03.9**	**-0.4**
ADKI					IAmb	IAmb	12 53 06.0	
	comp=Z,277nm,0.8s							
ADKI				*e*S	**S**		**13 00 08.1**	**-2.1**
ADKI					IVMs_BB	IVMs_BB	13 13 48.4	
	comp=Z,2μm,27.3s							
ODAN	**Odare**	**49.99**	**84**	*e*P	**P**		**12 53 07.7**	**-0.3**
	comp=Z,779nm,1.6s							
TAPN	**Taplejung**	**50.03**	**83**	*e*P	**P**		**12 53 08.4**	**0.0**
	comp=Z,9.9nm,0.3s							
PVM	**Polavaram**	**50.07**	**98**	*e*P	**P**		**12 53 08.4**	**+0.1**
PVM					IAmb	IAmb	12 53 10.5	
	comp=Z,181nm,0.9s							
PVM				*e*S	**S**		**13 00 16.0**	**-1.7**
PVM					IVMs_BB	IVMs_BB	13 19 13.9	
	comp=Z,2μm,14.3s							
BOK	**Bokaro**	**50.18**	**88**	*e*P	**P**		**12 53 08.9**	**-0.3**
SKHT	**Srikalahasti**	**50.53**	**103**	*e*P	**P**		**12 53 11.6**	**-0.3**
SKHT					IAmb	IAmb	12 53 14.3	
	comp=Z,306nm,0.9s							
SKHT				*e*S	**S**		**13 00 22.5**	**-1.6**
SKHT					IVMs_BB	IVMs_BB	13 18 53.3	
	comp=Z,2μm,17.0s							
GTK	**Tadong**	**50.76**	**82**	*e*P	**P**		**12 53 13.9**	**+0.2**
VIS	**Vishakhapatnam**	**51.18**	**96**	*e*P	**P**		**12 53 17.2**	**+0.5**
VIS				*i* x	x		13 00 31.0	
SACV	**Santiago Islan**	**51.28**	**260**	*e*P	**P**		**12 53 17.4**	**-0.1**
	comp=Z,274nm,1.1s							
CHLP	**Challavanipeta**	**51.35**	**95**	*e*P	**P**		**12 53 18.0**	**0.0**
CHLP					IAmb	IAmb	12 53 19.7	
	comp=Z,314nm,0.9s							
CHLP				*e*S	**S**		**13 00 33.0**	**-2.3**
LSZ	**Lusaka**	**51.38**	**181**	P	**P**		**12 53 20.4**	**+2.1**
	comp=Z,35nm,0.9s,baz=11,slow=8.2,SNR=45							
LSZ	**Lusaka**	**51.38**	**181**	*e*P	**P**		**12 53 19.9**	**+1.7**
	comp=Z,101nm,1.2s							
LSZ					LR	LR		
	comp=Z,6μm,18.0s							
LSZ	**Lusaka**	**51.38**	**181**	P	**P**		**12 53 21.7**	**+3.5**
	SNR=13							
LSZ	**Lusaka**	**51.38**	**181**	P	**P**		**12 53 21.7**	**+3.5**
	SNR=13							
NRS	**Narsarsuaq**	**51.55**	**323**		PFAKE		12 53 30.0	+11
NRS					LR	LR		
	comp=Z,8μm,19.0s							
LSA	**Lhasa**	**51.77**	**78**	P	**P**		**12 53 22.8**	**+1.2**
LSA					S	**S**	**13 00 38.9**	**-3.1**
LSA					pmax	pmax		
	comp=Z,1μm,9.3s							
LSA					LR	LR		
	comp=Z,3μm,28.3s							
LSA					LR	LR		
	comp=Z,2μm,25.6s							
LSA					LR	LR		
	comp=Z,9μm,24.2s							
LSA	**Lhasa**	**51.77**	**78**	*e*P	**P**		**12 53 21.7**	**+0.1**
	comp=Z,119nm,0.9s							
LSA					LR	LR		
	comp=Z,4μm,18.0s							
LSA	**Lhasa**	**51.77**	**78**	P	**P**		**12 53 21.7**	**+0.1**
LSA	**Lhasa**	**51.77**	**78**	*e*P	**P**		**12 53 21.7**	**+0.1**
LSA					pmax	pmax		
	comp=Z,119nm,0.9s							
LSA					MLR	MLR		
	comp=Z,4μm,18.0s							
BWNR	**Bhubaneshwar**	**51.83**	**92**	*e*P	**P**		**12 53 20.3**	**-1.3**
MOY	**Mondy**	**51.89**	**49**	*e*P	**P**		**12 53 21.7**	**-0.1**
MOY					pmax	pmax		
	comp=Z,193nm,2.6s							
DHUB	**DHUBRI**	**52.45**	**83**	*e*P	**P**		**12 53 25.4**	**-0.7**
IVI	**Ivigtut**	**52.86**	**324**	*e*P	**P**		**12 53 29.4**	**+0.8**
	comp=Z,196nm,1.1s							
IVI					LR	LR		
	comp=Z,9μm,19.0s							
TURI	**Tura**	**52.94**	**83**	*e*P	**P**		**12 53 28.1**	**-1.7**
ILULI	**Ilulissat**	**53.03**	**334**	*e*P	**P**		**12 53 29.4**	**-0.4**
	comp=Z,207nm,1.5s							
ILULI					LR	LR		
	comp=Z,9μm,19.0s							
ILULI	**Ilulissat**	**53.03**	**334**	*e*P	**P**		**12 53 29.4**	**-0.4**
ILULI					pmax	pmax		
	comp=Z,207nm,1.5s							
ILULI					MLR	MLR		
	comp=Z,9μm,19.0s							
SFJD	**Kangerlussuaq**	**53.10**	**331**	P	**P**		**12 53 30.1**	**-0.2**
	comp=Z,7.9nm,0.5s,baz=111,slow=5.2,SNR=9.1							
SFJD					LR	LR	13 18 03.6	
	comp=Z,4μm,19.5s,baz=89,slow=38							
SFJD	**Kangerlussuaq**	**53.10**	**331**	*i* P	**P**		**12 53 30.7**	**+0.4**
SFJD	**Kangerlussuaq**	**53.10**	**331**	*e*P	**P**		**12 53 29.9**	**-0.4**
	comp=Z,78nm,1.0s							
SFJD	**Kangerlussuaq**	**53.10**	**331**	*i* P	**P**		**12 53 30.7**	**+0.4**
TLY	**Talaya**	**53.49**	**48**	*e*P	**P**		**12 53 33.9**	**+0.5**
	comp=Z,133nm,1.0s							
TLY					LR	LR		
	comp=Z,8μm,20.0s							
TLY	**Talaya**	**53.49**	**48**	P	**P**		**12 53 33.8**	**+0.3**
	SNR=47							
TLY	**Talaya**	**53.49**	**48**	P	**P**		**12 53 33.8**	**+0.3**
	SNR=47							
TLY	**Talaya**	**53.49**	**48***c*	*i* P	**P**		**12 53 34.1**	**+0.6**
TLY				*e*S	**S**		**13 01 03.8**	**-0.2**
TLY					pmax	pmax		
	comp=Z,190nm,1.3s							
TLY					MLR	MLR		
	comp=Z,5μm,15.0s							
ZAK	**Zakamensk**	**53.60**	**50**	*e*P	**P**		**12 53 34.6**	**+0.2**
ZAK					pmax	pmax		
	comp=Z,107nm,1.1s							
IRK	**Irkutsk**	**53.73**	**48**	⇑*i* P	**P**		**12 53 34.5**	**-0.7**
IRK				*e*S	**S**		**13 01 06.2**	**-0.9**
IRK					pmax	pmax		
	comp=Z,195nm,2.9s							
GUWA	**GUWAHATI**	**53.73**	**82**	*e*P	**P**		**12 53 34.0**	**-1.6**
SHL	**Shillong**	**54.17**	**83**	*e*P	**P**		**12 53 37.9**	**-1.1**
SHL	**Shillong**	**54.17**	**83**	*e*P	**P**		**12 53 38.2**	**-0.8**
	comp=Z,797nm,1.8s							
SHL					LR	LR		
	comp=Z,7μm,20.0s							
SHL	**Shillong**	**54.17**	**83**	*e*P	**P**		**12 53 38.2**	**-0.8**
SHL					pmax	pmax		
	comp=Z,797nm,1.8s							
SHL					MLR	MLR		
	comp=Z,7μm,20.0s							
SHL	**Shillong**	**54.17**	**83**	*e*P	**P**		**12 53 38.2**	**-0.8**
	comp=Z,797nm,1.8s							
TEZP	**TEZPUR**	**54.42**	**81**	*e*P	**P**		**12 53 39.4**	**-1.2**
AGT	**Agartala**	**54.45**	**85**	*e*P	**P**		**12 53 41.5**	**+0.7**
AGT					IAmb	IAmb	12 53 43.6	
	comp=Z,100nm,0.9s							
GTA	**Gaotai**	**54.65**	**64**	⇑P	**P**		**12 53 42.2**	**-0.1**
GTA				pP	sP		12 53 53.0	-2.8
GTA				sP	pP		12 53 58.5	+6.5
GTA				S	**S**		**13 01 20.3**	**+0.1**
GTA				sS	sS		13 01 41.3	+5.1
GTA				SS	**SS**		**13 05 05.0**	**+2.1**
GTA				pmax	pmax			
	comp=Z,45nm,1.2s							
GTA				pmax	pmax			
	comp=Z,1μm,6.1s							
GTA				LR	LR			
	comp=Z,6μm,18.9s							
GTA				LR	LR			
	comp=Z,6μm,16.1s							
GTA				LR	LR			
	comp=Z,7μm,18.2s							
ZIRO	**ZIRO**	**54.85**	**80**	*e*P	**P**		**12 53 43.9**	**0.0**
BELO	**BELONIA**	**54.92**	**85**	*e*P	**P**		**12 53 44.1**	**-0.1**
PALK	**Pallekele**	**55.25**	**109**	P	**P**		**12 53 46.8**	**0.0**
	comp=Z,104nm,0.8s,baz=296,slow=9.1,SNR=26							
PALK	**Pallekele**	**55.25**	**109**	*e*P	**P**		**12 53 47.0**	**+0.3**
	comp=Z,155nm,0.9s							
PALK					LR	LR		
	comp=Z,7μm,20.0s							
PALK	**Pallekele**	**55.25**	**109**	P	**P**		**12 53 48.3**	**+1.5**
	SNR=6.5							
PALK	**Pallekele**	**55.25**	**109**	P	**P**		**12 53 48.3**	**+1.5**
	SNR=6.5							
PALK	**Pallekele**	**55.25**	**109**	*i* P	**P**		**12 53 46.4**	**-0.3**
	SNR=13							
PALK	**Pallekele**	**55.25**	**109**	*i* P	**P**		**12 53 47.7**	**+1.0**
JORH	**JORHAT**	**55.52**	**80**	*e*P	**P**		**12 53 48.6**	**+0.1**
JORH					IAmb	IAmb	12 53 50.2	
AZL	**Aizawl**	**55.68**	**84**	*e*P	**P**		**12 53 50.1**	**+0.3**
AZL					IAmb	IAmb	12 53 52.3	
	comp=Z,117nm,1.2s							
MOKO	**MOKOCHONG**	**55.93**	**81**	*e*P	**P**		**12 53 51.6**	**0.0**
IMP	**Imphal**	**56.17**	**82**	*e*P	**P**		**12 53 53.6**	**+0.3**
SONM	**Songino Array**	**56.30**	**52**	P	**P**		**12 53 53.9**	**-0.1**
	comp=Z,25nm,0.8s,baz=283,slow=8.6,SNR=62							
SONM					LR	LR	13 21 03.1	
	comp=Z,7μm,18.9s,baz=295,slow=39							
SONA1	**Songino Array**	**56.30**	**52**	*e*P	**P**		**12 53 53.8**	**-0.2**
TSUM	**Tsumeb**	**56.32**	**193**	P	**P**		**12 53 54.9**	**+0.6**
	comp=Z,51nm,0.9s,baz=5.3,slow=11,SNR=52							
TSUM	**Tsumeb**	**56.32**	**193**	*e*P	**P**		**12 53 55.5**	**+1.2**
	comp=Z,85nm,1.1s							
TSUM					LR	LR		
	comp=Z,19μm,19.0s							
MATP	**Matopo**	**56.50**	**181**	P	**P**		**12 53 56.2**	**+0.6**
	comp=Z,112nm,0.9s,baz=357,slow=9.6,SNR=101							
MATP					LR	LR	13 19 36.4	
	comp=Z,9μm,18.8s,baz=6.5,slow=38							
LKP	**Lekhapani**	**56.52**	**79**	*e*P	**P**		**12 53 55.9**	**+0.2**
SAIH	**SAIHA**	**56.53**	**85**	*e*P	**P**		**12 53 56.1**	**+0.2**
ULN	**Ulaanbaatar**	**56.71**	**52**	*e*P	**P**		**12 53 56.8**	**-0.2**
	comp=Z,81nm,1.0s							
ULN					LR	LR		
	comp=Z,8μm,22.0s							
ULN	**Ulaanbaatar**	**56.71**	**52**	P	**P**		**12 53 57.2**	**+0.2**
	SNR=46							
ULN	**Ulaanbaatar**	**56.71**	**52**	P	**P**		**12 53 57.2**	**+0.2**
	SNR=46							
ULN	**Ulaanbaatar**	**56.71**	**52***c*	*i* P	**P**		**12 53 56.9**	**-0.1**
ULN					pmax	pmax		
	comp=Z,173nm,2.5s							
ULN					MLR	MLR		
	comp=Z,6μm,18.0s							
TULEG	**Thule**	**56.73**	**344**	*e*P	**P**		**12 53 56.8**	**+0.3**
	comp=Z,195nm,1.0s							
TULEG					LR	LR		
	comp=Z,8μm,22.0s							
OPO	**Ambohidratompo**	**57.31**	**159**	P	**P**		**12 54 02.0**	**+0.6**
	comp=Z,87nm,0.9s,baz=324,slow=6.1,SNR=40							
OPO					LR	LR	13 19 54.2	
	comp=Z,7μm,18.9s,baz=347,slow=37							
BOD	**Bodaibo**	**57.57**	**39**	*e*P	**P**		**12 54 01.7**	**-0.9**
BOD					pmax	pmax		
	comp=Z,205nm,1.4s							
ABPO	**Ambohimpanom**	**57.74**	**159**	*e*P	**P**		**12 54 06.0**	**+1.5**
	comp=Z,100nm,1.2s							
ABPO					LR	LR		
	comp=Z,7μm,19.0s							
ABPO	**Ambohimpanom**	**57.74**	**159**	*e*P	**P**		**12 54 06.0**	**+1.5**
ABPO					pmax	pmax		
	comp=Z,100nm,1.2s							
ABPO					MLR	MLR		
	comp=Z,7μm,19.0s							
LZH	**Lanzhou**	**58.88**	**66**	⇑P	**P**		**12 54 12.5**	**+0.1**
LZH				pP	sP		12 54 24.5	-1.4
LZH				sP	pP		12 54 29.2	+7.1
LZH				PP	**PP**		**12 56 23.1**	**+0.6**
LZH				S	**S**		**13 02 14.8**	**-1.4**
LZH				sS	sS		13 02 33.3	+1.0
LZH				pmax	pmax			
	comp=Z,160nm,1.1s							
LZH				pmax	pmax			
	comp=Z,2μm,6.8s							
LZH				LR	LR			
	comp=Z,13μm,17.5s							
LZH				LR	LR			
	comp=Z,12μm,17.3s							
LZH				LR	LR			
	comp=Z,23μm,19.5s							
TIXI	**Tiksi**	**58.92**	**21**	*e*P	**P**		**12 54 12.1**	**+0.3**
	comp=Z,60nm,0.9s							
TIXI					LR	LR		
	comp=Z,11μm,21.0s							
TIXI	**Tiksi**	**58.92**	**21***c*	*i* P	**P**		**12 54 11.9**	**+0.1**
TIXI					pmax	pmax		
	comp=Z,72nm,1.0s							
TIXI					MLR	MLR		
	comp=Z,9μm,19.0s							
CIT	**Chita**	**59.24**	**46**	*e*P	P		12 54 06.4	-8.1
CIT				*e*			12 54 15.2	
DGAR	**Diego Garcia**	**59.67**	**128**	PFAKE			12 54 30.0	+12
DGAR					LR	LR		
	comp=Z,5μm,21.0s							
DGAR	**Diego Garcia**	**59.67**	**128**	*i* P	**P**		**12 54 17.5**	**-0.3**
ASCN	**Ascension**	**59.97**	**232**	PFAKE			12 54 30.0	+10
ASCN					LR	LR		
	comp=Z,5μm,21.0s							
CD2	**Chengdu**	**61.06**	**71**	P	**P**		**12 54 26.4**	**-0.9**
CD2				PP	**PP**		**12 56 40.7**	**-1.1**
CD2				S	**S**		**13 02 42.4**	**-1.8**
CD2				SS	**SS**		**13 06 44.8**	**+1.0**
CD2				pmax	pmax			
	comp=Z,450nm,0.9s							
CD2				pmax	pmax			
	comp=Z,1μm,7.3s							
CD2				LR	LR			
	comp=Z,7μm,21.6s							
CD2				LR	LR			
	comp=Z,8μm,21.6s							
LBTB	**Lobatse**	**61.15**	**183**	P	**P**		**12 54 28.5**	**+0.7**
	comp=Z,150nm,0.8s,baz=358,slow=8.6,SNR=72							
FRB	**Frobisher Bay**	**61.18**	**330**	P	**P**		**12 54 26.5**	**-1.0**
	comp=Z,12nm,0.6s,baz=78,slow=7.1,SNR=18							
BTO	**Baotou**	**61.41**	**59**	*e*P	**P**		**12 54 29.0**	**-0.6**
BTO					pmax	pmax		
	comp=Z,26nm,2.7s							
SHEL	**Horse Pasture**	**61.53**	**219**	PFAKE			12 54 40.0	+10
SHEL					LR	LR		
	comp=Z,2μm,20.0s							
PBA	**Port Blair**	**62.10**	**96**	*e*P	P		12 54 33.7	-0.7
	comp=Z,594nm,1.3s							
HHC	**Hu-ho-hao-te**	**62.37**	**58**	*e*P	**P**		**12 54 36.6**	**+0.5**
HHC				S	**S**		**13 03 01.3**	**+0.7**
HHC				pmax	pmax			
	comp=Z,70nm,0.8s							
HHC				pmax	pmax			
	comp=Z,660nm,7.1s							
HHC				LR	LR			
	comp=Z,4μm,20.6s							
HHC				LR	LR			
	comp=Z,2μm,21.6s							
HHC				LR	LR			
	comp=Z,3μm,20.7s							
CMAI	**Chiengmai2**	**62.69**	**85**	P	**P**		**12 54 38.2**	**-0.3**
	comp=Z,768nm,1.3s,comp=Z,135μm							
KMI	**Kunming**	**63.01**	**78**	P	**P**		**12 54 40.4**	**-0.3**
KMI				pP	sP		12 54 54.3	0.0
KMI				sP	pP		12 55 01.2	+11
KMI				S	S		13 03 00.8	-8.5
KMI				sS	sS		13 03 24.0	-1.5
KMI				SKS	**ScS**		**13 04 24.6**	**-7.0**
KMI				pmax	pmax			
	comp=Z,210nm,0.8s							
KMI				pmax	pmax			
	comp=Z,1μm,5.5s							
KMI				LR	LR			
	comp=Z,7μm,23.9s							
KMI				LR	LR			
	comp=Z,4μm,23.9s							
KMI				LR	LR			
	comp=Z,5μm,24.8s							
CHTO	**Chiang Mai**	**63.19**	**86**	P	**P**		**12 54 41.3**	**-0.4**
	comp=Z,699nm,1.1s,comp=Z,13μm							
CHTO	**Chiang Mai**	**63.19**	**86**	*e*P	**P**		**12 54 41.5**	**-0.1**
	comp=Z,144nm,0.9s							
CHTO				*e*S	**S**		**13 03 09.3**	**-1.9**

YAK				MLR	MLR		
	comp=N,10μm,17.0s						
YAK				MLR	MLR		
	comp=E,5μm,18.0s						
RES	**Resolute Bay**	**63.26**	**346**	P	**P**	**12 54 41.6**	**+0.4**
	comp=E,5.2nm,0.6s,baz=44,slow=8.0,SNR=19						
RES	**Resolute Bay**	**63.26**	**346**	*e*P	**P**	**12 54 41.4**	**+0.2**
	comp=E,54nm,1.0s						
RES				LR	LR		
	comp=Z,7μm,22.0s						
CM31	**Chiang Mai Arr**	**63.38**	**86**	*e*P	**P**	**12 54 43.1**	**+0.2**
CMAR	**Chiang Mai Arr**	**63.38**	**86**	P	**P**	**12 54 42.9**	**0.0**
	comp=Z,156nm,0.8s,baz=298,slow=8.0,SNR=278						
CMAR				S	S	13 03 22.6	+9.1
	comp=Z,1.3nm,0.8s,baz=291,slow=17,SNR=4.6						
CMAR				LR	LR	13 27 45.0	
	comp=Z,3μm,20.6s,baz=294,slow=41						
CLNS	**Chul'man**	**63.41**	**38**	*e*P	**P**	**12 54 41.6**	**-1.0**
CLNS				*e**PP	**pP**	**12 54 51.1**	**-1.3**
CLNS				*e*		12 55 17.8	
CLNS				*e*		12 57 01.9	
CLNS				*e*PPP	PPP	12 58 29.3	
CLNS				*e*S	**S**	**13 03 11.3**	**-1.6**
CLNS				*e*		13 04 34.9	
CLNS				pmax	pmax		
	comp=Z,54nm,0.9s						
CLNS				pmax	pmax		
	comp=E,22nm,0.9s						
CLNS				pmax	pmax		
	comp=N,15nm,0.9s						
CLNS				pmax	pmax		
	comp=N,32nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,23nm,1.1s						
CLNS				pmax	pmax		
	comp=E,24nm,0.9s						
CLNS				smax	smax		
	comp=E,1μm,10.9s						
CLNS				smax	smax		
	comp=N,924nm,14.1s						
CLNS				MLR	MLR		
	comp=Z,6μm,16.0s						
CLNS				MLR	MLR		
	comp=N,3μm,15.0s						
CLNS				MLR	MLR		
	comp=E,5μm,17.0s						
CM01	**Chiang Mai Arr**	**63.41**	**86**	*e*P	**P**	**12 54 42.5**	**-0.6**
XAN	**Xi'an**	**63.51**	**66**	P	**P**	**12 54 43.4**	**-0.3**
XAN				pP	sP	12 54 56.4	-0.9
XAN				sP	pP	12 55 01.3	+7.8
XAN				PcP	**PcP**	**12 55 20.8**	**+0.7**
XAN				PP	**PP**	**12 57 03.8**	**+0.5**
XAN				PcS		12 59 22.5	
XAN				S	**S**	**13 03 08.7**	**-6.3**
XAN				sS	sS	13 03 29.4	-1.8
XAN				ScS	**SKKSac**	**13 04 28.4**	**-6.4**
XAN				SS	**SS**	**13 07 17.5**	**-4.5**
XAN				pmax	pmax		
	comp=E,63nm,1.2s						
XAN				pmax	pmax		
	comp=E,970nm,7.8s						
XAN				LR	LR		
	comp=E,5μm,22.1s						
XAN				LR	LR		
	comp=E,6μm,17.2s						
XAN				LR	LR		
	comp=E,6μm,21.6s						
HIA	**Hailar**	**63.95**	**47**	*e*P	**P**	**12 54 46.7**	**+0.4**
	comp=E,422nm,1.4s						
HIA				LR	LR		
	comp=Z,4μm,20.0s						
HIA	**Hailar**	**63.95**	**47***c*	*i*P	**P**	**12 54 46.6**	**+0.3**
HIA				pmax	pmax		
	comp=Z,81nm,1.0s						
HIA				MLR	MLR		
	comp=Z,3μm,20.0s						
SCHQ	**Schefferville**	**64.24**	**320**	P	**P**	**12 54 47.5**	**-0.6**
	comp=Z,9.8nm,0.6s,baz=54,slow=7.9,SNR=5.4						
SCHQ				LR	LR	13 22 34.1	
	comp=Z,4μm,18.3s,baz=72,slow=36						
SCHQ	**Schefferville**	**64.24**	**320**	*e*P	**P**	**12 54 48.1**	**0.0**
	comp=Z,215nm,1.6s						
TIY	**Taiyuan**	**64.37**	**61**	*e*P	**P**	**12 54 49.4**	**+0.1**
TIY				S	**S**	**13 03 25.9**	**+0.4**
TIY				LR	LR		
	comp=Z,3μm,12.2s						
TIY				LR	LR		
	comp=Z,2μm,13.0s						
TIY				LR	LR		
	comp=Z,6μm,17.6s						
NANT	**Nan**	**64.61**	**85**	P	**P**	**12 54 50.5**	**-0.5**
	comp=Z,54nm,0.9s,comp=Z,479nm						
BOSA	**Boshof**	**64.75**	**184**	P	**P**	**12 54 53.5**	**+1.9**
	comp=Z,100nm,1.0s,baz=5.5,slow=7.4,SNR=60						
BOSA				LR	LR	13 25 15.9	
	comp=Z,4μm,18.4s,baz=1.0,slow=38						
BOSA	**Boshof**	**64.75**	**184**	*i*P	**P**	**12 54 52.7**	**+1.0**
BOSA	**Boshof**	**64.75**	**184**	*e*P	**P**	**12 54 53.6**	**+1.9**
	comp=Z,117nm,0.9s						
BOSA	**Boshof**	**64.75**	**184**	*i*P	**P**	**12 54 52.7**	**+1.0**
BOSA	**Boshof**	**64.75**	**184**	*e*P	**P**	**12 54 53.6**	**+1.9**
BOSA				pmax	pmax		
	comp=Z,117nm,0.9s						
PHIT	**Phitsanulok**	**65.24**	**86**	P	**P**	**12 54 55.4**	**+0.3**
	comp=Z,220nm,0.9s,comp=Z,2μm						
GYA	**Guiyang**	**65.42**	**74⇑**	*i*P	**P**	**12 54 55.6**	**-0.8**
GYA				pP	sP	12 55 10.3	+0.3
GYA				PP	**PP**	**12 57 24.0**	**+3.7**
GYA				ScP		12 59 28.4	
GYA				S	**S**	**13 03 35.6**	**-3.3**
GYA				sS	sS	13 03 57.5	+2.3
GYA				SKS	**SKSac**	**13 04 46.0**	**-3.7**
GYA				SS	**SS**	**13 07 52.2**	**-0.1**
GYA				pmax	pmax		
	comp=Z,270nm,1.0s						
GYA				pmax	pmax		
	comp=Z,310nm,6.8s						
GYA				LR	LR		
	comp=Z,8μm,17.0s						
GYA				LR	LR		
	comp=Z,8μm,18.2s						
GYA				LR	LR		
	comp=Z,8μm,18.4s						
ENH	**Enshi**	**65.72**	**69**	*e*P	**P**	**12 54 58.0**	**-0.1**
	comp=Z,207nm,0.8s						
ENH				*e*S	**S**	**13 03 43.0**	**+0.8**
ENH	**Enshi**	**65.72**	**69**	*e*P	**P**	**12 54 58.0**	**-0.1**
	comp=Z,207nm,0.8s						
ENH				*e*S	**S**	**13 03 43.0**	**+0.8**
SRDT	**SRDT**	**65.73**	**90**	P	**P**	**12 54 58.0**	**-0.3**
	comp=Z,181nm,1.9s,comp=Z,5μm						
BJI	**Beijing**	**65.88**	**57⇑**	*e*P	**P**	**12 54 59.2**	**+0.3**
BJI				sP	sP	12 55 13.4	+0.9
BJI				PP	**PP**	**12 57 24.5**	**+0.7**
BJI				S	**S**	**13 03 45.2**	**+1.4**
BJI				SS	**SS**	**13 07 56.7**	**-1.7**
BJI				pmax	pmax		
	comp=Z,230nm,0.9s						
BJI				LR	LR		
	comp=Z,3μm,24.8s						
BJT	**Baijiatuau**	**65.89**	**57**	*e*P	**P**	**12 54 59.0**	**0.0**
	comp=Z,149nm,0.9s						
BJT				LR	LR		
	comp=Z,8μm,22.0s						
BJT	**Baijiatuau**	**65.89**	**57**	*e*P	**P**	**12 54 59.0**	**0.0**
BJT				pmax	pmax		
	comp=Z,149nm,0.9s						
BJT				MLR	MLR		
	comp=Z,8μm,22.0s						
PBKT	**Sadao Pong**	**66.02**	**87**	P	**P**	**12 54 58.9**	**-1.2**
	comp=Z,192nm,1.6s,comp=Z,3μm						
PBKT	**Sadao Pong**	**66.02**	**87**	*e*P	**P**	**12 54 59.1**	**-0.9**
	comp=Z,160nm,1.0s						
ZEA	**Zeya**	**66.04**	**40**	*e*P	**P**	**12 55 00.5**	**+0.8**
ZEA				*e*S	**S**	**13 03 43.0**	**-2.4**
ZEA				pmax	pmax		
	comp=Z,52nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,400nm,8.0s						
ZEA				smax	smax		
	comp=E,2μm,8.0s						
ZEA				smax	smax		
	comp=N,200nm,7.0s						
PHET	**Kaeng Krachan**	**66.94**	**91**	P	**P**	**12 55 06.4**	**+0.4**
	comp=N,48nm,0.8s,comp=N,419nm						
NONG	**Nongkai**	**66.96**	**84**	P	**P**	**12 55 05.4**	**-0.8**
	comp=N,128nm,0.9s,comp=N,2μm						
CHAI	**Chaiyaphum**	**67.19**	**87**	P	**P**	**12 55 07.4**	**-0.3**
	comp=N,84nm,0.9s,comp=N,583nm						
SKNT	**Sakolnakorn**	**68.22**	**85**	P	**P**	**12 55 12.6**	**-1.5**
	comp=N,116nm,0.9s						
TIA	**Tai'an**	**68.38**	**60**	P	**P**	**12 55 15.0**	**+0.1**
TIA				PcS		12 59 44.3	
TIA				S	**S**	**13 04 10.6**	**-3.5**
TIA				pmax	pmax		
	comp=N,54nm,0.9s						
TIA				pmax	pmax		
	comp=N,510nm,5.0s						
TIA				LR	LR		
	comp=N,3μm,24.6s						
TIA				LR	LR		
	comp=N,3μm,25.9s						
TIA				LR	LR		
	comp=N,1μm,32.4s						
SUR	**Sutherland**	**68.83**	**187**	*e*P	**P**	**12 55 19.4**	**+1.7**
	comp=N,79nm,0.9s						
SUR				LR	LR		
	comp=Z,12μm,18.0s						
PQI	**Presque Isle**	**68.86**	**313**	*e*P	**P**	**12 55 16.9**	**-0.7**
	comp=Z,102nm,1.1s						
CHBT	**CHBT**	**69.21**	**89**	P	**P**	**12 55 24.5**	**+4.2**
	comp=Z,107nm,0.6s						
LHMI	**Lhok Sumawe**	**69.22**	**99**	PFAKE		12 55 30.0	+10
LHMI				LR	LR		
	comp=Z,3μm,18.0s						
WHN	**Wuhan**	**69.22**	**67⇑**	P	**P**	**12 55 20.5**	**+0.3**
WHN				S	**S**	**13 04 20.2**	**-4.0**
WHN				pmax	pmax		
	comp=Z,210nm,0.8s						
WHN				LR	LR		
	comp=Z,11μm,18.1s						
WHN				LR	LR		
	comp=Z,4μm,12.9s						
WHN				LR	LR		
	comp=Z,15μm,20.1s						
MLSI	**Meulaboh, Aceh**	**69.36**	**100**	P	**P**	**12 55 20.0**	**-1.2**
EMMW	**East Machias**	**69.53**	**311**	*e*P	**P**	**12 55 22.3**	**+0.5**
	comp=Z,131nm,1.0s						
TRTT	**Trang**	**69.88**	**95**	P	**P**	**12 55 23.7**	**-0.8**
	comp=Z,60nm,0.8s,comp=Z,1μm						
CN2	**Changchun**	**70.04**	**50⇑**	P	**P**	**12 55 25.0**	**0.0**
CN2				*e*S	**S**	**13 04 31.7**	**-1.7**
CN2				pmax	pmax		
	comp=Z,40nm,1.0s						
CN2				pmax	pmax		
	comp=Z,1μm,5.0s						
CN2				LR	LR		
	comp=Z,11μm,21.0s						
CN2				LR	LR		
	comp=Z,8μm,21.0s						
CN2				LR	LR		
	comp=Z,8μm,19.0s						
DL2	**Dalian**	**70.11**	**56**	P	**P**	**12 55 24.9**	**-0.6**
DL2				S	**S**	**13 04 33.5**	**-0.9**
DL2				pmax	pmax		
	comp=Z,130nm,0.9s						
DL2				pmax	pmax		
	comp=Z,790nm,5.8s						
DL2				LR	LR		
	comp=Z,5μm,18.1s						
DL2				LR	LR		
	comp=Z,3μm,18.7s						
DL2				LR	LR		
	comp=Z,7μm,17.7s						
PKME	**Peaks-Kenny Pk**	**70.35**	**312**	P	**P**	**12 55 25.8**	**-1.1**
	baz=58						
PKME	**Peaks-Kenny Pk**	**70.35**	**312**	*e*P	**P**	**12 55 25.0**	**-1.8**
	comp=Z,105nm,1.2s						
PKME				LR	LR		
	comp=Z,5μm,21.0s						
TPTI		**70.59**	**101**	P	**P**	**12 55 27.6**	**-1.1**
KLR	**Kul'dur**	**70.79**	**43***c*	*i*P	**P**	**12 55 29.7**	**+0.2**
KCSI	**Kotacane, Aceh**	**70.90**	**100**	P	**P**	**12 55 29.1**	**-1.6**
SKLT	**Songkhla**	**71.02**	**95**	P	**P**	**12 55 30.2**	**-1.2**
	comp=Z,193nm,0.8s,comp=Z,3μm						
BILL	**Biilibino**	**71.08**	**16**	*e*P	**P**	**12 55 31.2**	**+0.2**
	comp=Z,135nm,1.3s						
BILL				LR	LR		
	comp=Z,6μm,21.0s						
BILL	**Biilibino**	**71.08**	**16**	*e*P	**P**	**12 55 31.7**	**+0.7**
BILL				pmax	pmax		
	comp=Z,37nm,1.3s						
SEY	**Seymchan**	**71.22**	**24**	LR	LR	13 32 13.5	
	comp=Z,7μm,18.6s,baz=316,slow=40						
SEY	**Seymchan**	**71.22**	**24***c*	*i*P	**P**	**12 55 33.0**	**+1.1**
TSI	**Tuntungan**	**71.54**	**100**	P	**P**	**12 55 34.2**	**-0.3**
	comp=Z,180nm,0.9s						
NJ2	**Nanjing**	**71.74**	**63**	*e*P	**P**	**12 55 35.7**	**+0.2**
NJ2				pP	sP	12 55 48.6	-0.6
NJ2				sP	**PcP**	**12 55 51.9**	**-2.6**
NJ2				S	**S**	**13 04 50.2**	**-3.3**
NJ2				sS	**SKiKP**	**13 05 12.2**	**+0.7**
NJ2				SKS	**SKSac**	**13 05 34.7**	**-2.3**
NJ2				SS	**SS**	**13 09 34.2**	**+5.0**
NJ2				pmax	pmax		
	comp=Z,190nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,680nm,4.6s						
NJ2				LR	LR		
	comp=Z,4μm,23.9s						
NJ2				LR	LR		
	comp=Z,3μm,22.8s						
NJ2				LR	LR		
	comp=Z,4μm,23.3s						
QIZ	**Qiongzhong**	**71.79**	**80**	P	**P**	**12 55 37.1**	**+1.1**
QIZ				pP	**sP**	**12 55 46.1**	**-3.6**
QIZ				S	**S**	**13 04 54.9**	**+0.4**
QIZ				pmax	pmax		
	comp=Z,130nm,0.8s						
QIZ				LR	LR		
	comp=Z,3μm,30.4s						
QIZ				LR	LR		
	comp=Z,4μm,22.6s						
QIZ				LR	LR		
	comp=Z,3μm,25.5s						
QIZ	**Qiongzhong**	**71.79**	**80**	*e*P	**P**	**12 55 36.6**	**+0.6**
	comp=Z,124nm,0.9s						
GSI	**Gunungsitoli**	**72.08**	**102**	P	**P**	**12 55 38.8**	**+1.0**
GSI	**Gunungsitoli**	**72.08**	**102**	*e*P	**P**	**12 55 38.3**	**+0.4**
	comp=Z,166nm,0.9s						
MDJ	**Mudanjiang**	**72.11**	**48**	P	**P**	**12 55 33.8**	**-3.8**
MDJ				S	**S**	**13 04 52.9**	**-4.5**
MDJ				sS	sS	13 05 12.2	-1.7
MDJ				pmax	pmax		
	comp=Z,48nm,1.7s						
MDJ				pmax	pmax		
	comp=Z,820nm,3.8s						
MDJ				LR	LR		
	comp=Z,7μm,17.9s						
MDJ				LR	LR		
	comp=Z,6μm,17.1s						
MDJ				LR	LR		
	comp=Z,8μm,18.3s						
MDJ	**Mudanjiang**	**72.11**	**48**	*e*P	**P**	**12 55 37.4**	**-0.1**
	comp=Z,75nm,1.3s						
MDJ				LR	LR		
	comp=Z,7μm,20.0s						
KULM	**Kulim**	**72.14**	**97**	*e*P	**P**	**12 55 37.8**	**-0.4**
	comp=Z,155nm,0.9s						
KULM				LR	LR		
	comp=Z,2μm,21.0s						
PSI	**Prapat**	**72.25**	**100**	P	**P**	**12 55 38.0**	**-0.9**
	comp=Z,101nm,0.8s,baz=360,slow=6.6,SNR=34						
PSI				LR	LR	13 32 24.5	
	comp=Z,2μm,19.1s,baz=271,slow=40						
PSI	**Prapat**	**72.25**	**100**	*e*P	**P**	**12 55 39.0**	**+0.1**
	comp=Z,407nm,1.3s						
PSI	**Prapat**	**72.25**	**100**	*e*P	**P**	**12 55 39.0**	**+0.1**
PSI				pmax	pmax		
	comp=Z,407nm,1.3s						
GZH	**Guangzhou**	**72.36**	**74**	P	**P**	**12 55 39.6**	**+0.3**
GZH				PcP	**PcP**	**12 55 58.0**	**+0.8**
GZH				PP	**PP**	**12 58 20.3**	**+0.1**
GZH				S	**S**	**13 05 00.1**	**-0.7**
GZH				ScS	**SKSac**	**13 05 42.0**	**+0.1**
GZH				LR	LR		
	comp=Z,4μm,27.8s						
GZH				LR	LR		
	comp=Z,7μm,25.5s						
GRNR	**Gornyy**	**72.39**	**39⇑**	*i*P	**P**	**12 55 39.5**	**+0.4**
GRNR				pmax	pmax		
	comp=E,84nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,180nm,1.0s						
LBNH	**Lisbon**	**72.48**	**312**	P	**P**	**12 55 38.0**	**-1.8**
	baz=56						
LBNH	**Lisbon**	**72.48**	**312**	*e*P	**P**	**12 55 39.9**	**+0.1**
	comp=Z,131nm,1.1s						
LBNH				LR	LR		
	comp=Z,5μm,18.0s						
LBNH	**Lisbon**	**72.48**	**312**	*e*P	**P**	**12 55 39.9**	**+0.1**
LBNH				pmax	pmax		
	comp=Z,131nm,1.1s						
LBNH				MLR	MLR		
	comp=Z,5μm,18.0s						
TRQ	**Mont Tremblant**	**72.90**	**315**	*e*P	**P**	**12 55 41.8**	**-0.5**
IPM	**Ipoh**	**72.92**	**97**	*e*P	**P**	**12 55 42.1**	**-0.7**
	comp=Z,84nm,0.9s						
IPM				LR	LR		
	comp=Z,3μm,19.0s						
HNH	**Hanover**	**73.00**	**312**	*e*P	**P**	**12 55 42.5**	**-0.3**
	comp=Z,118nm,1.0s						
MA2	**Magadan**	**73.02**	**27**	*e*P	**P**	**12 55 43.1**	**+0.4**
	comp=Z,260nm,1.2s						
MA2				LR	LR		
	comp=Z,8μm,19.0s						
MA2	**Magadan**	**73.02**	**27**	*i*P	**P**	**12 55 43.7**	**+1.0**
MA2				pmax	pmax		
	comp=Z,142nm,1.0s						
MA2				MLR	MLR		
	comp=Z,5μm,19.4s						
MCO	**Taipa Grande**	**73.04**	**75**	P	**P**	**12 55 46.0**	**+2.6**
NKL	**Nikolayevsk**	**73.04**	**36**	*i*P	**P**	**12 55 43.0**	**+0.1**
NKL				*e*S	**S**	**13 05 06.0**	**-1.7**
NKL				*e*		13 06 01.0	
NKL				*e*		13 13 04.0	
NKL				pmax	pmax		
	comp=E,500nm,6.0s						
NKL				pmax	pmax		
	comp=Z,1μm,8.0s						
NKL				pmax	pmax		
	comp=N,43nm,1.0s						
NKL				pmax	pmax		
	comp=E,68nm,1.0s						
NKL				pmax	pmax		
	comp=Z,260nm,1.0s						
NKL				smax	smax		
	comp=E,3μm,10.0s						
NKL				smax	smax		
	comp=Z,900nm,10.0s						
NKL				MLR	MLR		
	comp=Z,10μm,16.0s						
BCX	**Boston College**	**73.08**	**310**	*e*P	**P**	**12 55 42.9**	**-0.4**
	comp=Z,160nm,1.3s						
FRNY	**Flat Rock**	**73.13**	**313**	*e*P	**P**	**12 55 43.0**	**-0.5**
	comp=Z,101nm,1.2s						
WES	**Weston**	**73.15**	**310**	*e*P	**P**	**12 55 43.1**	**-0.7**
	comp=Z,192nm,1.3s						
WES	**Weston**	**73.15**	**310**	*e*P	**P**	**12 55 43.1**	**-0.7**
WES				pmax	pmax		
	comp=Z,192nm,1.3s						
M65A	**Busby, Falmout**	**73.19**	**309**	P	**P**	**12 55 43.1**	**-0.8**
	baz=56						
HRV	**Adam Dziewonsk**	**73.23**	**311**	P	**P**	**12 55 43.2**	**-1.0**
	baz=56						
HRV	**Adam Dziewonsk**	**73.23**	**311**	PFAKE		12 56 00.0	+16
HRV				LR	LR		
	comp=Z,5μm,19.0s						
HRV	**Adam Dziewonsk**	**73.23**	**311**	P	**P**	**12 55 46.6**	**+2.4**
HRV				pmax	pmax		
	comp=Z,76nm,1.1s						
BRYW	**Bryant College**	**73.54**	**310**	*e*P	**P**	**12 55 45.6**	**-0.5**
	comp=Z,147nm,1.3s						
RCBR	**Riachuelo**	**73.66**	**250**	*e*P	**P**	**12 55 47.4**	**+0.2**
	comp=Z,59nm,1.1s						
RCBR				LR	LR		
	comp=Z,11μm,21.0s						
USRK	**Ussuriysk Ar.**	**73.77**	**47**	P	**P**	**12 55 47.2**	**-0.1**
	comp=Z,160nm,0.9s,baz=296,slow=4.8,SNR=118						
USRK				LR	LR	13 34 18.4	
	comp=Z,4μm,18.2s,baz=297,slow=41						
LONY	**Lake Ozonia**	**73.83**	**314**	P	**P**	**12 55 46.4**	**-1.3**
	baz=55,SNR=7.0						
LONY	**Lake Ozonia**	**73.83**	**314**	*e*P	**P**	**12 55 46.5**	**-1.3**
	comp=Z,134nm,1.1s						
LONY				LR	LR		
	comp=Z,6μm,18.0s						
QUA2	**Belchertown**	**73.84**	**311**	*e*P	**P**	**12 55 47.9**	**+0.1**
	comp=Z,119nm,1.4s						
MNSI	**Mandailing Nat**	**73.98**	**101**	P	**P**	**12 55 48.9**	**-0.1**
NCB	**Newcomb**	**74.00**	**313**	*e*P	**P**	**12 55 48.6**	**-0.1**
	comp=Z,95nm,1.8s						
ACCN	**Adirondack Com**	**74.00**	**312**	*e*P	**P**	**12 55 48.4**	**-0.4**
	comp=Z,155nm,1.3s						
FCC	**Fort Churchill**	**74.06**	**333**	*e*P	**P**	**12 55 49.1**	**+0.4**
	comp=Z,111nm,1.3s						
FCC				LR	LR		
	comp=Z,8μm,19.0s						
FCC	**Fort Churchill**	**74.06**	**333**	*e*P	**P**	**12 55 49.1**	**+0.4**
FCC				pmax	pmax		
	comp=Z,111nm,1.3s						
FCC				MLR	MLR		
	comp=Z,8μm,19.0s						
MSHR	**Mys Shultsa**	**74.20**	**49***c*	*e*P	**P**	**12 55 49.8**	**-0.1**
INCN	**Inchon**	**74.20**	**55**	*e*P	**P**	**12 55 50.0**	**-0.1**
	comp=Z,103nm,0.8s						
INCN				LR	LR		
	comp=Z,11μm,22.0s						
INCN	**Inchon**	**74.20**	**55**	P	**P**	**12 55 50.5**	**+0.5**
	SNR=13						
INCN	**Inchon**	**74.20**	**55**	P	**P**	**12 55 50.5**	**+0.5**
	SNR=13						
TRY	**Troy**	**74.38**	**312**	*e*P	**P**	**12 55 50.7**	**-0.2**
	comp=Z,87nm,1.3s						
YLE	**Yale**	**74.75**	**310**	*e*pP	**pP**	**12 56 08.3**	**+5.2**
YLE				LR	LR		
	comp=Z,6μm,20.0s						
INK	**Inuvik**	**74.80**	**353**	P	**P**	**12 55 52.9**	**0.0**
	comp=Z,28nm,1.0s,baz=14,slow=9.1,SNR=22						
INK				LR	LR	13 34 04.4	
	comp=Z,2μm,19.5s,baz=16,slow=40						
INK	**Inuvik**	**74.80**	**353**	*e*P	**P**	**12 55 52.9**	**0.0**
	comp=Z,95nm,1.2s						
INK	**Inuvik**	**74.80**	**353**	*e*P	**P**	**12 55 52.9**	**0.0**
INK				pmax	pmax		
	comp=Z,95nm,1.2s						
SISI	**Saibi**	**74.89**	**103**	P	**P**	**12 55 54.9**	**+0.6**
PLVO	**Plevna**	**75.02**	**315**	*e*P	**P**	**12 55 53.6**	**-1.1**
	comp=Z,150nm,1.3s						
PLVO				LR	LR		
	comp=Z,5μm,20.0s						
KS01	**Wonju Array Si**	**75.03**	**54**	*e*P	**P**	**12 55 55.2**	**+0.4**
KS15	**Wonju Array Si**	**75.05**	**54**	*e*P	**P**	**12 55 55.2**	**+0.2**
KSAR	**Wonju Array Be**	**75.05**	**54**	P	**P**	**12 55 55.1**	**+0.2**
KSAR	**Wonju Array Be**	**75.05**	**54**	P	**P**	**12 55 55.1**	**+0.2**
KSRS	**Korea Array**	**75.07**	**54**	P	**P**	**12 55 55.1**	**+0.1**
	comp=Z,81nm,0.8s,baz=298,slow=5.1,SNR=275						
KSRS				LR	LR	13 32 13.5	
	comp=Z,7μm,20.5s,baz=310,slow=38						
KSRS	**Korea Array**	**75.07**	**54**	P	**P**	**12 55 55.1**	**+0.1**
KSRS				pmax	pmax		
	comp=Z,80nm,0.8s						
KSRS				MLR	MLR		
	comp=Z,7μm,20.5s						
TOLK	**Toolik Lake Re**	**75.28**	**359**	P	**P**	**12 55 55.1**	**-0.7**
	baz=1.3,SNR=26						
TOLK	**Toolik Lake Re**	**75.28**	**359**	*e*P	**P**	**12 55 56.8**	**+1.0**
	comp=Z,89nm,1.0s						
TOLK				LR	LR		
	comp=Z,3μm,20.0s						
TJN	**Taejon**	**75.31**	**56***c*	*i*P	**P**	**12 55 56.1**	**-0.3**
QZH	**Quanzhou**	**75.37**	**70⇑**	*i*P	**P**	**12 55 55.0**	**-2.0**
QZH				pP	**PcP**	**12 56 10.7**	**+0.6**
QZH				S	**S**	**13 05 28.4**	**-6.4**
QZH				pmax	pmax		
	comp=Z,580nm,6.1s						
QZH				LR	LR		
	comp=Z,3μm,23.8s						
QZH				LR	LR		
	comp=Z,3μm,20.5s						
QZH				LR	LR		
	comp=Z,4μm,20.0s						
BKNI	**Bangkinang**	**75.42**	**101**	PFAKE		12 56 10.0	+13
BKNI				LR	LR		
	comp=Z,4μm,21.0s						
TYV	**Tymovskoe**	**75.44**	**37**	*e*P	**P**	**12 55 57.3**	**+0.4**
TYV				*e*S	**S**	**13 05 35.6**	**+0.9**
TYV				pmax	pmax		
	comp=Z,33nm,0.9s						

TYV				pmax	pmax		
	comp=Z,1μm,3.5s						
TYV				smax	smax		
	comp=E,11nm,1.9s						
TYV				smax	smax		
	comp=E,2μm,10.2s						
RDOG	**Red Dog Mine**	**75.49**	**5**	*e*P	**P**	**12 55 57.3**	**+0.3**
	comp=E,132nm,1.3s						
RDOG				LR	LR		
	comp=Z,5μm,22.0s						
PAL	**Palisades**	**75.53**	**310**	P	**P**	**12 55 56.3**	**-1.3**
	baz=54						
PAL	**Palisades**	**75.53**	**310**	*e*P	**P**	**12 55 57.2**	**-0.4**
	comp=Z,44nm,1.0s						
PAL				LR	LR		
	comp=Z,6μm,19.0s						
PAL	**Palisades**	**75.53**	**310**	*e*P	**P**	**12 55 57.2**	**-0.4**
PAL				pmax	pmax		
	comp=Z,44nm,1.0s						
PAL				MLR	MLR		
	comp=Z,6μm,19.0s						
CPNY	**Central Park**	**75.68**	**310**	PFAKE		12 56 10.0	+12
CPNY				LR	LR		
	comp=Z,7μm,22.0s						
TEY	**Ternei**	**75.93**	**44**	*e*P	**P**	**12 56 01.4**	**+1.6**
TEY				pmax	pmax		
	comp=Z,1μm,6.0s						
TEY				pmax	pmax		
	comp=Z,77nm,1.0s						
BINY	**Binghamton**	**76.08**	**312**	P	**P**	**12 55 59.9**	**-0.9**
	baz=53						
BINY	**Binghamton**	**76.08**	**312**	*e*P	**P**	**12 56 00.3**	**-0.5**
	comp=Z,123nm,1.1s						
BINY				LR	LR		
	comp=Z,4μm,20.0s						
BRNJ	**Basking Ridge**	**76.12**	**310**	*e*P	**P**	**12 56 00.6**	**-0.4**
	comp=Z,161nm,1.5s						
KSPA	**Keystone Colle**	**76.33**	**312**	*e*P	**P**	**12 56 01.0**	**-1.2**
	comp=Z,90nm,1.0s						
SADO	**Sadowa**	**76.36**	**316**	P	**P**	**12 56 03.4**	**+1.1**
	comp=Z,3.1nm,0.6s,baz=82,slow=6.3,SNR=8.4						
SADO	**Sadowa**	**76.36**	**316**	*e*P	**P**	**12 56 01.3**	**-1.0**
	comp=Z,90nm,1.4s						
SADO				LR	LR		
	comp=Z,5μm,21.0s						
LUPA	**Lehigh Univers**	**76.66**	**311**	*e*P	**P**	**12 56 03.4**	**-0.7**
	comp=Z,15nm,1.9s						
COLD	**Coldfoot**	**76.71**	**360**	*e*P	**P**	**12 56 04.1**	**+0.2**
	comp=Z,131nm,1.3s						
N59A	**State Game Lan**	**76.72**	**311**	P	**P**	**12 56 03.0**	**-1.4**
	baz=53						
N59A				S	**S**	**13 05 48.4**	**-0.8**
	baz=53						
N59A	**State Game Lan**	**76.72**	**311**	*e*P	**P**	**12 56 03.1**	**-1.3**
	comp=Z,46nm,0.8s						
N59A				LR	LR		
	comp=Z,6μm,20.0s						
MYKOM	**Kota Tinggi**	**76.78**	**98**	*e*P	**P**	**12 56 04.6**	**-0.5**
	comp=Z,78nm,1.1s						
MYKOM				LR	LR		
	comp=Z,4μm,21.0s						
MMNY	**Mt. Morris Dam**	**76.89**	**314**	*e*P	**P**	**12 56 05.0**	**-0.3**
	comp=Z,112nm,1.2s						
PSUB	**Penn St. - Bra**	**77.11**	**310**	*e*P	**P**	**12 56 05.3**	**-1.3**
	comp=Z,80nm,1.4s						
PSUB				LR	LR		
	comp=Z,6μm,19.0s						
YKW3	**Yellowknife Ar**	**77.14**	**344**	*e*P	**P**	**12 56 05.6**	**-0.7**
	comp=Z,145nm,1.3s						
YKA	**Yellowknife Ar**	**77.19**	**344**	P	**P**	**12 56 06.1**	**-0.6**
	comp=Z,5.4nm,0.6s,baz=30,slow=5.4,SNR=30						
YKA				PKPPKP	**P'P'df**	**13 23 28.5**	**+7.2**
	comp=Z,0.6nm,0.8s,baz=219,slow=0.8,SNR=3.3						
YKA				LR	LR	13 31 30.9	
	comp=Z,586nm,20.9s,baz=41,slow=37						
YKA	**Yellowknife Ar**	**77.19**	**344**	*ce*P	**P**	**12 56 06.0**	**-0.6**
YKA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
FYU	**Fort Yukon**	**77.28**	**358**	*e*P	**P**	**12 56 07.8**	**+0.8**
	comp=Z,124nm,1.2s						
TATO	**Taipei**	**77.54**	**68**	*e*P	**P**	**12 56 11.0**	**+1.8**
	comp=Z,259nm,1.1s						
TATO	**Taipei**	**77.54**	**68**	*e*P	**P**	**12 56 11.0**	**+1.8**
	comp=Z,259nm,1.1s						
MVL	**Millersville**	**77.62**	**311**	*e*P	**P**	**12 56 08.4**	**-1.0**
	comp=Z,96nm,1.1s						
YHNB	**Yeheng**	**77.62**	**69**	*e*P	**P**	**12 56 11.9**	**+2.0**
	comp=Z,302nm,1.3s						
YHNB	**Yeheng**	**77.62**	**69**	*e*P	**P**	**12 56 11.9**	**+2.0**
	comp=Z,302nm,1.3s						
PAGS	**Pennsylvania G**	**77.71**	**311**	*e*P	**P**	**12 56 09.7**	**-0.2**
	comp=Z,44nm,1.1s						
PAGS				LR	LR		
	comp=Z,6μm,19.0s						
SSLB	**Suanglung**	**77.80**	**69**	*e*P	**P**	**12 56 12.7**	**+1.9**
	comp=Z,79nm,1.1s						
SSLB				LR	LR		
	comp=Z,4μm,20.0s						
SSLB	**Suanglung**	**77.80**	**69**	*e*P	**P**	**12 56 12.7**	**+1.9**
	comp=Z,79nm,1.1s						
TPUB	**Ta-pu**	**77.83**	**70**	PFAKE		12 56 20.0	+9.0
TPUB				LR	LR		
	comp=Z,3μm,21.0s						
IM3	**Indian Mountai**	**77.94**	**1**	*e*P	**P**	**12 56 11.1**	**+0.3**
YSS	**Yuzh-Sakhalins**	**78.03**	**40**	*e*P	**P**	**12 56 12.3**	**+0.7**
	comp=Z,230nm,1.0s						
YSS				LR	LR		
	comp=Z,3μm,20.0s						
YSS	**Yuzh-Sakhalins**	**78.03**	**40‖**	*e*P	**P**	**12 56 11.0**	**-0.6**
YSS				*e*		12 56 20.9	
YSS				*e**SP	**sP**	**12 56 28.8**	**+3.4**
YSS				*e*PPP	PPP	13 00 59.4	
YSS				*e*S	**S**	**13 06 00.0**	**-3.2**
YSS				*e*SS	**SS**	**13 11 12.7**	**+8.9**
YSS				pmax	pmax		
	comp=Z,1μm,2.8s						
YSS				pmax	pmax		
	comp=Z,180nm,0.9s						
YSS				smax	smax		
	comp=E,2μm,7.3s						
NACB	**Ninganchiao**	**78.07**	**69**	*e*P	**P**	**12 56 12.3**	**+0.1**
	comp=E,154nm,1.2s						
NACB				*e*pP	**sP**	**12 56 24.3**	**-1.7**
NACB				LR	LR		
	comp=Z,4μm,21.0s						
NACB	**Ninganchiao**	**78.07**	**69**	*e*P	**P**	**12 56 12.3**	**+0.1**
	comp=Z,154nm,1.2s						
NACB				*e*pP	**sP**	**12 56 24.3**	**-1.7**
SSPA	**Standing Stone**	**78.17**	**312**	P	**P**	**12 56 11.4**	**-1.1**
	baz=52						
SSPA	**Standing Stone**	**78.17**	**312**	*e*P	**P**	**12 56 12.0**	**-0.6**
	comp=Z,130nm,1.3s						
SSPA				LR	LR		
	comp=Z,5μm,20.0s						
SDMD	**Soldier's Deli**	**78.28**	**310**	*e*P	**P**	**12 56 13.2**	**+0.1**
	comp=Z,74nm,1.2s						
YULB	**Yu-li**	**78.29**	**70**	*e*P	**P**	**12 56 13.9**	**+0.4**
	comp=Z,81nm,0.9s						
YULB				LR	LR		
	comp=Z,3μm,21.0s						
YULB	**Yu-li**	**78.29**	**70**	*e*P	**P**	**12 56 13.9**	**+0.4**
	comp=Z,81nm,0.9s						
TWG	**Pinlang**	**78.44**	**70**	*e*P	**P**	**12 56 15.4**	**+1.1**
	comp=Z,794nm,1.3s						
TWG				LR	LR		
	comp=Z,8μm,20.0s						
TWG	**Pinlang**	**78.44**	**70**	*e*P	**P**	**12 56 15.4**	**+1.1**
	comp=Z,794nm,1.3s						
ERPA	**Erie**	**78.49**	**314**	P	**P**	**12 56 12.7**	**-1.5**
	baz=51						
ERPA	**Erie**	**78.49**	**314**	*e*P	**P**	**12 56 13.7**	**-0.5**
	comp=Z,148nm,1.0s						
ERPA				LR	LR		
	comp=Z,5μm,19.0s						
E45A	**Wooded Hills,**	**78.61**	**320**	P	**P**	**12 56 13.1**	**-1.8**
	baz=49						
M54A	**Oil Creek Stat**	**78.68**	**313**	P	**P**	**12 56 13.4**	**-2.0**
	baz=51,SNR=15						
M54A	**Oil Creek Stat**	**78.68**	**313**	*e*P	**P**	**12 56 14.3**	**-1.1**
	comp=Z,118nm,1.1s						
M54A				LR	LR		
	comp=Z,7μm,21.0s						
ANM	**Nome**	**78.75**	**6**	*e*P	**P**	**12 56 15.3**	**0.0**
	comp=Z,76nm,0.9s						
ANM	**Nome**	**78.75**	**6**	*e*P	**P**	**12 56 15.3**	**0.0**
ANM				pmax	pmax		
	comp=Z,76nm,0.9s						
F46A	**Macinaw City C**	**78.78**	**319**	P	**P**	**12 56 14.2**	**-1.5**
	baz=49						
O56A	**Blue Knob Stat**	**78.80**	**312**	P	**P**	**12 56 15.1**	**-0.9**
	baz=52						
O56A	**Blue Knob Stat**	**78.80**	**312**	*e*P	**P**	**12 56 15.3**	**-0.8**
	comp=Z,101nm,1.1s						
O56A				LR	LR		
	comp=Z,5μm,20.0s						
E44A	**Grand Marais A**	**78.82**	**320**	P	**P**	**12 56 14.9**	**-1.1**
	baz=48						
ALLY	**Alegheny Colle**	**78.87**	**314**	*e*P	**P**	**12 56 15.9**	**-0.5**
	comp=Z,100nm,1.3s						
ALLY				LR	LR		
	comp=Z,7μm,21.0s						
EGAK	**Eagle**	**78.87**	**356**	*e*P	**P**	**12 56 16.5**	**+0.5**
	comp=Z,82nm,1.2s						
EGAK				LR	LR		
	comp=Z,4μm,21.0s						
MLY	**Manley**	**78.92**	**360**	*e*P	**P**	**12 56 17.0**	**+0.8**
	comp=Z,49nm,0.8s						
MLY				LR	LR		
	comp=Z,3μm,20.0s						
MDM	**Murphy Dome**	**78.96**	**359**	*e*P	**P**	**12 56 17.0**	**+0.5**
	comp=Z,138nm,1.2s						
YOJ	**Yonaguni jima**	**78.97**	**68**	PFAKE		12 56 30.0	+13
YOJ				LR	LR		
	comp=Z,2μm,20.0s						
COLA	**College**	**79.04**	**359**	*e*P	**P**	**12 56 17.3**	**+0.5**
	comp=Z,83nm,1.2s						
COLA	**College**	**79.04**	**359**	*e*P	**P**	**12 56 17.3**	**+0.5**
COLA				pmax	pmax		
	comp=Z,83nm,1.2s						
IL1	**Eielson Array**	**79.12**	**358**	*e*P	**P**	**12 56 17.8**	**+0.5**
ILAR	**Eielson Array**	**79.12**	**358**	P	**P**	**12 56 17.8**	**+0.4**
	comp=Z,20nm,0.8s,baz=345,slow=3.1,SNR=101						
ILAR				PKKPbc	**PKKPbc**	**13 15 09.7**	**+0.9**
	comp=Z,0.5nm,0.9s,baz=235,slow=5.0,SNR=4.2						
ILAR				PKPPKP	P'P'df	13 23 04.0	-14
	comp=Z,0.5nm,0.9s,baz=185,slow=2.2,SNR=4.7						
ILB	**Eielson Array**	**79.12**	**358**	*e*P	**P**	**12 56 17.7**	**+0.4**
N54A	**Moraine State**	**79.21**	**313**	P	**P**	**12 56 17.2**	**-1.1**
	baz=51,SNR=5.4						
N54A	**Moraine State**	**79.21**	**313**	*e*P	**P**	**12 56 17.7**	**-0.6**
	comp=Z,92nm,1.1s						
N54A				LR	LR		
	comp=Z,7μm,18.0s						
F45A	**CMU Biological**	**79.24**	**320**	P	**P**	**12 56 16.7**	**-1.5**
	baz=48						
CCB	**Clear Creek Bu**	**79.27**	**359**	*e*P	**P**	**12 56 18.1**	**0.0**
	comp=Z,55nm,0.9s						
CBN	**Corbin Frederi**	**79.34**	**310**	P	**P**	**12 56 17.8**	**-1.2**
	baz=52						
CBN	**Corbin Frederi**	**79.34**	**310**	*e*P	**P**	**12 56 18.5**	**-0.5**
	comp=Z,114nm,1.3s						
CBN				LR	LR		
	comp=Z,5μm,19.0s						
WRH	**Wood River Hil**	**79.45**	**359**	*e*P	**P**	**12 56 18.9**	**-0.2**
	comp=Z,89nm,0.9s						
DAWY	**Dawson**	**79.46**	**355**	*e*P	**P**	**12 56 19.6**	**+0.3**
	comp=Z,112nm,1.3s						
HDA	**Harding Lake**	**79.49**	**358**	*e*P	**P**	**12 56 19.2**	**-0.1**
	comp=Z,84nm,0.9s						
F44A	**Big Bay de Noc**	**79.52**	**320**	P	**P**	**12 56 17.6**	**-2.2**
	baz=48						
E43A	**Lone Tree Farm**	**79.54**	**321**	P	**P**	**12 56 18.7**	**-1.2**
	baz=48						
JNU	**Nakatsue**	**79.55**	**57**	P	**P**	**12 56 19.6**	**-0.7**
	comp=Z,27nm,0.8s,baz=129,slow=3.3,SNR=18						
JNU				LR	LR	13 37 13.6	
	comp=Z,4μm,19.2s,baz=306,slow=40						
JNU	**Nakatsue**	**79.55**	**57**	*e*P	**P**	**12 56 20.7**	**+0.4**
	comp=Z,425nm,1.7s						
PTRD	**Partlow Road**	**79.55**	**310**	PFAKE		12 56 30.0	+10
PTRD				LR	LR		
	comp=Z,6μm,20.0s						
C40A	**Isle Royale Na**	**79.56**	**323**	P	**P**	**12 56 18.9**	**-1.1**
	baz=46						
CVRD	**Centerville Ro**	**79.70**	**310**	*e*P	**P**	**12 56 20.2**	**-0.7**
	comp=Z,47nm,1.0s						
CVRD				LR	LR		
	comp=Z,5μm,20.0s						
BWN	**Browne**	**79.77**	**359**	*e*P	**P**	**12 56 23.7**	**+2.9**
	comp=Z,70nm,0.9s						
SPRD	**Spring Road, M**	**79.77**	**310**	*e*P	**P**	**12 56 20.3**	**-1.0**
	comp=Z,40nm,1.0s						
SPRD				LR	LR		
	comp=Z,5μm,20.0s						
MNAI	**Manna**	**79.78**	**103**	PFAKE		12 56 30.0	+8.3
MNAI				LR	LR		
	comp=Z,3μm,21.0s						
IP05	**Hopewell Churc**	**79.81**	**310**	*e*P	**P**	**12 56 20.7**	**-0.9**
	comp=Z,51nm,1.0s						
IP05				LR	LR		
	comp=Z,5μm,19.0s						
SCRK	**Sand Creek**	**79.82**	**357**	*e*P	**P**	**12 56 21.3**	**0.0**
	comp=Z,105nm,1.2s						
ASAJ	**Asahikawa**	**79.82**	**42**	P	**P**	**12 56 21.1**	**-0.4**
	comp=Z,18nm,0.7s,baz=356,slow=3.6,SNR=17						
ASAJ				LR	LR	13 38 36.8	
	comp=Z,8μm,18.2s,baz=317,slow=41						
ASAJ	**Asahikawa**	**79.82**	**42**	*e*P	**P**	**12 56 22.1**	**+0.6**
	comp=Z,195nm,1.3s						
IP01	**Cuckoo**	**79.83**	**310**	*e*P	**P**	**12 56 20.6**	**-1.0**
	comp=Z,73nm,1.2s						
IP01				LR	LR		
	comp=Z,5μm,20.0s						
URVA	**University of**	**79.84**	**309**	*e*P	**P**	**12 56 21.1**	**-0.6**
BPAW	**Bear Paw Mtn.**	**79.85**	**360**	*e*P	**P**	**12 56 21.1**	**-0.2**
	comp=Z,63nm,0.9s						
BPAW				LR	LR		
	comp=Z,4μm,22.0s						
IP03	**Louisa**	**79.86**	**310**	*e*P	**P**	**12 56 21.1**	**-0.7**
	comp=Z,76nm,1.2s						
IP04	**Greensprings**	**79.86**	**310**	*e*P	**P**	**12 56 20.9**	**-1.0**
	comp=Z,51nm,1.2s						
D41A	**Chassel**	**79.86**	**322**	P	**P**	**12 56 20.3**	**-1.4**
	baz=47						
IP06	**Yanceyville**	**79.89**	**310**	*e*P	**P**	**12 56 20.9**	**-1.1**
	comp=Z,75nm,1.2s						
IP07	**Quail**	**79.93**	**310**	*e*P	**P**	**12 56 21.6**	**-0.6**
	comp=Z,102nm,1.2s						
MCWV	**Mont Chateau**	**79.95**	**312**	P	**P**	**12 56 21.2**	**-1.1**
	baz=51						
MCWV	**Mont Chateau**	**79.95**	**312**	*e*P	**P**	**12 56 21.8**	**-0.5**
	comp=Z,154nm,1.1s						
MCWV				LR	LR		
	comp=Z,5μm,20.0s						
FFC	**Flin Flon**	**79.96**	**334**	*e*P	**P**	**12 56 21.4**	**-0.7**
	comp=Z,81nm,1.1s						
FFC				LR	LR		
	comp=Z,6μm,19.0s						
FFC	**Flin Flon**	**79.96**	**334**	*e*P	**P**	**12 56 21.4**	**-0.7**
FFC				pmax	pmax		
	comp=Z,81nm,1.1s						
FFC				MLR	MLR		
	comp=Z,6μm,19.0s						
E42A	**Champion**	**79.97**	**321**	P	**P**	**12 56 21.5**	**-0.7**
	baz=47						
JSRW	**J. Sargeant Re**	**79.97**	**310**	*e*P	**P**	**12 56 21.6**	**-0.8**
F43A	**Flat Rock, Esc**	**80.00**	**320**	P	**P**	**12 56 21.2**	**-1.2**
	baz=47						
COCO	**West Island**	**80.02**	**113**	PFAKE		12 56 30.0	+7.1
COCO				LR	LR		
	comp=Z,7μm,21.0s						
RIDG	**Independ'e Rid**	**80.09**	**357**	*e*P	**P**	**12 56 22.8**	**+0.1**
	comp=Z,137nm,1.1s						
C39A	**Grand Marais**	**80.10**	**323**	P	**P**	**12 56 21.1**	**-1.9**
	baz=46						
MCK	**McKinley**	**80.21**	**359**	*e*P	**P**	**12 56 23.4**	**+0.1**
	comp=Z,94nm,1.0s						
MCK	**McKinley**	**80.21**	**359**	*e*P	**P**	**12 56 23.4**	**+0.1**
MCK				pmax	pmax		
	comp=Z,94nm,1.0s						
ANWB	**Willy Bob**	**80.33**	**285**	PFAKE		12 56 40.0	+15
ANWB				LR	LR		
	comp=Z,3μm,22.0s						
PEA0B	**Petropavlovsk-**	**80.40**	**28**	*e*P	**P**	**12 56 23.6**	**-0.9**
	comp=Z,155nm,1.4s						
PEA0B				LR	LR		
	comp=Z,6μm,19.0s						
PETK	**Petropavlovsk-**	**80.40**	**28**	P	**P**	**12 56 23.8**	**-0.7**
	comp=Z,27nm,0.8s,baz=345,slow=2.8,SNR=30						
PETK				PKKPbc	**PKKPbc**	**13 15 08.1**	**+2.5**
	comp=Z,1.9nm,0.7s,baz=99,slow=3.0,SNR=5.0						
PETK				SKKPbc	SKKPbc	13 18 40.3	+4.1
	comp=Z,7.2nm,1.1s,baz=110,slow=8.5,SNR=3.7						
PETK				LR	LR	13 38 20.7	
	comp=Z,6μm,18.8s,baz=312,slow=40						
AAM	**Ann Arbor**	**80.46**	**316**	P	**P**	**12 56 22.4**	**-2.6**
	baz=49						
AAM	**Ann Arbor**	**80.46**	**316**	*e*P	**P**	**12 56 24.6**	**-0.4**
	comp=Z,87nm,1.2s						
AAM				LR	LR		
	comp=Z,5μm,22.0s						
AAM	**Ann Arbor**	**80.46**	**316**	*e*P	**P**	**12 56 24.6**	**-0.4**
AAM				pmax	pmax		
	comp=Z,87nm,1.2s						
AAM				MLR	MLR		
	comp=Z,5μm,22.0s						
E41A	**Kenton**	**80.47**	**322**	P	**P**	**12 56 22.2**	**-2.8**
	baz=46						
TRF	**Thorofare Moun**	**80.50**	**360**	*e*P	**P**	**12 56 24.9**	**-0.1**
	comp=Z,62nm,0.8s						
RND	**Reindeer**	**80.53**	**359**	*e*P	**P**	**12 56 24.2**	**-0.9**
	comp=Z,49nm,1.0s						
RND	**Reindeer**	**80.53**	**359**	*e*P	**P**	**12 56 24.2**	**-0.9**
RND				pmax	pmax		
	comp=Z,49nm,1.0s						
F42A	**Maple Grove Fa**	**80.54**	**321**	P	**P**	**12 56 23.9**	**-1.5**
	baz=47						
G43A	**Wallace**	**80.65**	**320**	P	**P**	**12 56 24.7**	**-1.2**
	baz=47						
G43A	**Wallace**	**80.65**	**320**	*e*P	**P**	**12 56 28.4**	**+2.4**
	comp=Z,106nm,1.3s						
G43A				LR	LR		
	comp=Z,7μm,19.0s						
EYMN	**Ely**	**80.67**	**324**	P	**P**	**12 56 24.1**	**-1.9**
	baz=45						
EYMN	**Ely**	**80.67**	**324**	*e*P	**P**	**12 56 23.8**	**-2.3**
	comp=Z,98nm,1.5s						
EYMN				LR	LR		
	comp=Z,5μm,21.0s						
C38A	**Sawbill Land.**	**80.72**	**324**	P	**P**	**12 56 23.8**	**-2.6**
	baz=45						
COWI	**Conover**	**80.81**	**322**	*e*P	**P**	**12 56 25.1**	**-1.7**
	comp=Z,68nm,0.9s						
COWI				LR	LR		
	comp=Z,6μm,22.0s						
PET	**Petropavlovsk**	**80.83**	**28**	PFAKE		12 56 40.0	+13
PET				LR	LR		
	comp=Z,6μm,19.0s						
PET	**Petropavlovsk**	**80.83**	**28**	*e*P	**P**	**12 56 26.5**	**-0.2**
PET				*e*		12 59 30.2	
PET				*e*S	**S**	**13 06 30.0**	**-2.5**
PET				*e*PS	**PnS**	**13 07 17.1**	**-3.9**
PET				*e*PPS	PPS	13 07 34.4	
PET				*e*SS	**SS**	**13 11 45.2**	**+0.1**
PET				pmax	pmax		
	comp=Z,200nm,12.6s						
PET				pmax	pmax		
	comp=Z,56nm,1.5s						
PET				pmax	pmax		
	comp=Z,300nm,13.4s						
PET				smax	smax		
	comp=E,1μm,18.1s						
DHY	**Denali Highway**	**80.83**	**358**	*e*P	**P**	**12 56 26.8**	**0.0**
	comp=E,77nm,0.8s						
PAX	**Paxson**	**80.88**	**357**	*e*P	**P**	**12 56 26.8**	**-0.2**
	comp=E,40nm,1.1s						
PAX				LR	LR		
	comp=Z,2μm,19.0s						
PAX	**Paxson**	**80.88**	**357**	*e*P	**P**	**12 56 26.8**	**-0.2**
PAX				pmax	pmax		
	comp=Z,40nm,1.1s						
PAX				MLR	MLR		
	comp=Z,2μm,19.0s						
E40A	**Wakefield**	**80.95**	**322**	P	**P**	**12 56 25.6**	**-1.9**
	baz=46						
ULM	**Lac du Bonnet**	**80.97**	**328**	P	**P**	**12 56 26.0**	**-1.6**
	comp=Z,7.1nm,0.6s,baz=29,slow=4.1,SNR=13						
ULM				LR	LR	13 33 59.5	
	comp=Z,6μm,18.5s,baz=43,slow=37						
ULM	**Lac du Bonnet**	**80.97**	**328**	*e*P	**P**	**12 56 26.1**	**-1.5**
	comp=Z,93nm,1.4s						
ULM	**Lac du Bonnet**	**80.97**	**328**	*e*P	**P**	**12 56 26.1**	**-1.5**
ULM				pmax	pmax		
	comp=Z,93nm,1.4s						
G42A	**Mountain**	**81.04**	**321**	P	**P**	**12 56 26.5**	**-1.6**
	baz=46						
G42A	**Mountain**	**81.04**	**321**	*e*P	**P**	**12 56 29.0**	**+0.9**
	comp=Z,78nm,1.1s						
G42A				LR	LR		
	comp=Z,8μm,19.0s						
F41A	**Three Lakes**	**81.05**	**321**	P	**P**	**12 56 26.4**	**-1.7**
	baz=46,SNR=6.6						
PPLA	**Purkeypile**	**81.05**	**1**	*e*P	**P**	**12 56 28.1**	**+0.1**
	comp=Z,142nm,1.2s						
GDHS	**Morne Mazeau,**	**81.11**	**284**	*e*P	**P**	**12 56 27.0**	**-1.9**
ABRA	**Dolores**	**81.11**	**75**	*e*P	**P**	**12 56 28.7**	**-0.1**
SMRT	**St. Maarten**	**81.11**	**286**	PFAKE		12 56 40.0	+11
SMRT				LR	LR		
	comp=Z,2μm,21.0s						
C37A	**Embarrass**	**81.15**	**324**	P	**P**	**12 56 26.2**	**-2.4**
	baz=44						
H43A	**Windswept, Lux**	**81.23**	**320**	P	**P**	**12 56 27.6**	**-1.5**
	baz=47						
H43A	**Windswept, Lux**	**81.23**	**320**	*e*PcP	**PcP**	**12 56 36.4**	**+1.1**
H43A				LR	LR		
	comp=Z,6μm,19.0s						
E39A	**Mellen**	**81.32**	**322**	P	**P**	**12 56 27.4**	**-2.1**
	baz=45						
B35A	**Bob, Littlefor**	**81.41**	**325**	P	**P**	**12 56 28.1**	**-1.8**
	baz=43,SNR=6.3						
ACSO	**Alum Creek Sta**	**81.43**	**314**	P	**P**	**12 56 28.9**	**-1.3**
	baz=49						
ACSO	**Alum Creek Sta**	**81.43**	**314**	*e*P	**P**	**12 56 29.4**	**-0.8**
	comp=Z,108nm,1.1s						
ACSO				LR	LR		
	comp=Z,6μm,20.0s						
F40A	**Park Falls**	**81.43**	**322**	P	**P**	**12 56 29.3**	**-0.9**
	baz=45						
C36A	**Pine Crest Far**	**81.43**	**325**	P	**P**	**12 56 28.5**	**-1.6**
	baz=44						
HARP	**HAARP**	**81.44**	**357**	*e*P	**P**	**12 56 29.7**	**-0.2**
	comp=Z,144nm,1.1s						
G41A	**Antigo**	**81.45**	**321**	P	**P**	**12 56 28.9**	**-1.4**
	baz=46						
JOW	**Kunigami**	**81.46**	**63**	P	**P**	**12 56 30.5**	**-0.1**
	comp=Z,71nm,0.9s,baz=256,slow=4.2,SNR=16						
JOW				LR	LR	13 36 55.0	
	comp=Z,2μm,21.6s,baz=330,slow=39						
JOW	**Kunigami**	**81.46**	**63**	*e*P	**P**	**12 56 30.6**	**0.0**
	comp=Z,443nm,1.4s						
SABA	**Saba**	**81.49**	**286**	PFAKE		12 56 40.0	+9.1
SABA				LR	LR		
	comp=Z,2μm,20.0s						
CNNC	**Cliffs of the**	**81.51**	**308**	P	**P**	**12 56 29.6**	**-1.1**
	baz=51						
CNNC	**Cliffs of the**	**81.51**	**308**	PFAKE		12 56 40.0	+9.3
CNNC				LR	LR		
	comp=Z,6μm,20.0s						
FDF	**Fort de France**	**81.51**	**282**	PFAKE		12 56 40.0	+9.0
FDF				LR	LR		
	comp=Z,2μm,20.0s						
ERM	**Erimo**	**81.52**	**43**	*e*P	**P**	**12 56 32.1**	**+1.6**
	comp=Z,348nm,1.3s						
ERM				LR	LR		
	comp=Z,6μm,19.0s						
ERM	**Erimo**	**81.52**	**43**	*i* P	**P**	**12 56 32.2**	**+1.6**
ERM				pmax	pmax		
	comp=Z,38nm,1.1s						
H42A	**Shiocton**	**81.60**	**320**	PFAKE		12 56 40.0	+9.0
H42A				LR	LR		
	comp=Z,7μm,19.0s						
YUK	**Yuzh-Kuril'sk**	**81.61**	**41**	*d i*P	**P**	**12 56 31.6**	**+0.5**
YUK				*i*		12 56 37.2	
YUK				*i

E38A	The Farm, Brul	81.65 323	P	P	12 56 29.9	-1.4
	baz=45					
D37A	Cotton	81.67 324	P	P	12 56 29.7	-1.7
	baz=44					
ABVI	Anegada Island	81.69 287	PFAKE		12 56 40.0	+8.1
ABVI			LR	LR		
	comp=Z,1µm,20.0s					
A33A	Warroad	81.74 327	P	P	12 56 30.0	-1.7
	baz=42					
B34A	Aery, Baudette	81.74 326	P	P	12 56 29.9	-1.8
	baz=43					
KUR	Kuril'sk	81.81 39	*d iP*	P	12 56 32.3	+0.2
KUR			*i* S	S	13 06 43.2	+0.2
KUR			pmax	pmax		
	comp=Z,831nm,5.3s					
KUR			pmax	pmax		
	comp=Z,274nm,1.3s					
KUR			pmax	pmax		
	comp=N,198nm,1.4s					
KUR			pmax	pmax		
	comp=E,74nm,1.3s					
KUR			MLR	MLR		
	comp=Z,3µm,16.0s					
KUR			MLR	MLR		
	comp=N,2µm,18.0s					
KUR			MLR	MLR		
	comp=E,1µm,15.0s					
F39A	Loretta	81.83 322	P	P	12 56 30.7	-1.5
	baz=45,SNR=7.2					
I43A	Langenfeld Bro	81.83 319	P	P	12 56 30.4	-1.9
	baz=46					
BLA	Blacksburg	81.85 310	P	P	12 56 31.2	-1.3
	baz=50					
BLA	Blacksburg	81.85 310	*e*P	P	12 56 35.0	+2.5
	comp=E,70nm,1.3s					
BLA			LR	LR		
	comp=Z,5µm,20.0s					
BLA	Blacksburg	81.85 310	*e*P	P	12 56 35.0	+2.5
BLA			pmax	pmax		
	comp=Z,70nm,1.3s					
BLA			MLR	MLR		
	comp=Z,5µm,20.0s					
G40A	Rib Lake	81.93 321	P	P	12 56 30.9	-1.8
	baz=45,SNR=8.4					
SKT	Skwentna	81.98 0	*e*P	P	12 56 32.5	-0.2
	comp=Z,92nm,1.1s					
C35A	Jirik Farms, M	82.00 325	P	P	12 56 31.4	-1.7
	baz=43					
D36A	Goodland	82.01 324	P	P	12 56 31.7	-1.4
	baz=44,SNR=6.2					
SCM	Sheep Creek Mo	82.08 358	*e*P	P	12 56 33.1	-0.2
	comp=Z,145nm,0.9s					
SCM	Sheep Creek Mo	82.08 358	*e*P	P	12 56 33.1	-0.2
SCM			pmax	pmax		
	comp=Z,145nm,0.9s					
E37A	Wrenshall	82.08 324	P	P	12 56 32.1	-1.5
	baz=44					
H41A	Junction City	82.11 321	P	P	12 56 32.2	-1.5
	baz=46					
H41A	Junction City	82.11 321	*e*P	P	12 56 33.7	0.0
	comp=Z,50nm,1.0s					
H41A			LR	LR		
	comp=Z,9µm,20.0s					
SML	Sawmill	82.13 359	*e*P	P	12 56 33.8	+0.3
	comp=Z,98nm,1.0s					
SML	Sawmill	82.13 359	*e*P	P	12 56 33.8	+0.3
SML			pmax	pmax		
	comp=Z,98nm,1.0s					
KSM	Kuching	82.15 94	*e*P	P	12 56 34.9	+0.5
	comp=Z,103nm,1.0s					
NCAT	North Carolina	82.17 309	*e*P	P	12 56 33.3	-0.8
	comp=Z,59nm,1.2s					
GHO	Glory Hole Cre	82.17 359	*e*P	P	12 56 33.9	+0.1
	comp=Z,125nm,0.8s					
GHO			LR	LR		
	comp=Z,2µm,22.0s					
MJB9	Matsu-Tunnel	82.18 50	*e*P	P	12 56 35.0	+0.7
	comp=Z,142nm,1.2s					
MAJO	Matsushiro	82.18 50	*e*P	P	12 56 34.9	+0.7
	comp=Z,148nm,1.3s					
MAJO			LR	LR		
	comp=Z,4µm,20.0s					
MAJO	Matsushiro	82.18 50	*c iP*	P	12 56 34.1	-0.2
MAT	Matsushiro	82.18 50	P	P	12 56 34.0	-0.3
MAT			S	S	13 06 44.0	-3.3
MJAR	Matsushiro Arr	82.19 50	P	P	12 56 34.9	+0.6
	comp=Z,51nm,0.8s,baz=304,slow=4.4,SNR=108					
MJAR			LR	LR	13 37 45.0	
	comp=Z,3µm,19.2s,baz=335,slow=39					
INU	Inuyama	82.20 52	*e*P	P	12 56 34.2	-0.1
	comp=Z,70nm,1.1s					
INU			LR	LR		
	comp=Z,6µm,22.0s					
I42A	Draeger Farm,	82.23 320	P	P	12 56 32.7	-1.7
	baz=46					
I42A	Draeger Farm,	82.23 320	*e*P	P	12 56 34.8	+0.5
	comp=Z,72nm,1.3s					
I42A			LR	LR		
	comp=Z,6µm,19.0s					
A32A	Rocking H Ranc	82.24 327	P	P	12 56 32.5	-1.8
	baz=42					
F38A	Pierce - Schro	82.27 323	P	P	12 56 32.8	-1.7
	baz=44,SNR=8.9					
J43A	Natural Harves	82.32 319	P	P	12 56 32.7	-2.1
	baz=46					
PMR	Palmer	82.36 359	*e*P	P	12 56 34.5	-0.2
	comp=Z,70nm,1.0s					
PMR	Palmer	82.36 359	*e*P	P	12 56 34.5	-0.2
PMR			pmax	pmax		
	comp=Z,70nm,1.0s					
KLU	Klutina	82.38 358	*e*P	P	12 56 35.3	+0.4
	comp=Z,87nm,1.0s					
KLU			LR	LR		
	comp=Z,2µm,22.0s					
CAUP	Cauayan	82.38 75	*e*P	P	12 56 35.9	+0.4
G39A	Holcombe	82.40 322	P	P	12 56 33.7	-1.5
	baz=45,SNR=11					
AGMN	Agassiz Nation	82.42 326	P	P	12 56 34.1	-1.2
	baz=42					
AGMN	Agassiz Nation	82.42 326	*e*P	P	12 56 33.7	-1.6
	comp=Z,98nm,1.5s					
AGMN			LR	LR		
	comp=Z,6µm,19.0s					
SVB	Belmont	82.43 281	PFAKE		12 56 50.0	+14
SVB			LR	LR		
	comp=Z,1µm,20.0s					
C34A	RKJ Ranch, Bem	82.47 326	P	P	12 56 33.7	-1.8
	baz=42					
H40A	Chili	82.48 321	P	P	12 56 34.3	-1.4
	baz=45,SNR=6.1					
D35A	Remer	82.49 325	P	P	12 56 34.6	-1.1
	baz=43					
SUA	Susitna One	82.50 360	*e*P	P	12 56 35.7	+0.1
	comp=Z,128nm,0.8s					
E36A	McGregor	82.53 324	P	P	12 56 34.5	-1.4
	baz=44					
A31A	Linda, St. Vin	82.53 328	P	P	12 56 34.7	-1.1
	baz=41					
M46A	Old House Fiel	82.56 317	P	P	12 56 34.2	-1.9
	baz=47					
CDVI	St. Croix	82.59 286	*e*P	P	12 56 36.2	-0.4
	comp=Z,169nm,0.8s					
I41A	Arkdale	82.61 320	P	P	12 56 33.9	-2.4
	baz=45					
DIV	Divide	82.74 357	*e*P	P	12 56 36.6	-0.1
	comp=Z,75nm,1.3s					
J42A	Columbus	82.74 320	P	P	12 56 35.0	-2.0
	baz=46					
K43A	Burlington	82.74 319	P	P	12 56 35.2	-1.9
	baz=46					
C33A	Trail	82.78 326	P	P	12 56 36.4	-0.8
	baz=42					
SVW2	Sparrevohn	82.79 2	*e*P	P	12 56 37.6	+0.6
	comp=Z,60nm,1.0s					
F37A	Hinrichs Farm,	82.80 323	P	P	12 56 35.7	-1.6
	baz=44					
G38A	Ridgeland	82.82 322	P	P	12 56 35.6	-1.8
	baz=44,SNR=7.5					
BMRM	Bremner River	82.85 357	*e*P	P	12 56 37.1	-0.2
	comp=Z,137nm,1.3s					
RC01	Rabbit Creek A	82.87 359	*e*P	P	12 56 37.6	+0.2
	comp=Z,85nm,0.9s					
L44A	Lake County Fo	82.88 318	P	P	12 56 37.0	-0.8
	baz=46					
H39A	Augusta	82.89 322	P	P	12 56 36.1	-1.7
	baz=45,SNR=8.3					
CHI	Chicago-Loyola	82.92 318	PFAKE		12 56 50.0	+12
CHI			LR	LR		
	comp=Z,4µm,22.0s					
TGL	Tana Glacier	82.97 356	*e*P	P	12 56 38.7	+0.6
	comp=Z,61nm,1.0s					
CRQM	Cirque	82.99 356	*e*P	P	12 56 38.5	+0.3
	comp=Z,208nm,1.2s					
MTP	Monte Pirata	83.00 287	PFAKE		12 56 50.0	+11
MTP			LR	LR		
	comp=Z,2µm,21.0s					
LUBP	Lubang	83.00 78	*e*P	P	12 56 38.7	-0.1
D34A	Park Rapids	83.02 325	P	P	12 56 36.4	-2.1
	baz=42					
E35A	Pequot Lakes	83.04 325	P	P	12 56 36.8	-1.7
	baz=43					
M45A	Boilermakers S	83.06 317	P	P	12 56 37.2	-1.5
	baz=47					
C32A	Crookston	83.07 326	P	P	12 56 37.0	-1.6
	baz=41					
I40A	Norwalk	83.11 321	P	P	12 56 37.4	-1.5
	baz=45					
B31A	Greenbush Farm	83.11 327	P	P	12 56 36.8	-2.0
	baz=41					
N46A	Monticello	83.12 317	P	P	12 56 37.3	-1.8
	baz=47					
SBUM	Sibu	83.12 92	*e*P	P	12 56 40.1	+0.7
	comp=Z,132nm,1.1s					
CBYP	Canovanas	83.13 288	*e*P	P	12 56 38.7	-0.8
	comp=Z,94nm,1.3s					
CBYP			LR	LR		
	comp=Z,2µm,22.0s					
F36A	Milaca	83.13 324	P	P	12 56 37.1	-1.9
	baz=43,SNR=11					
S52A	Salyersville	83.16 312	P	P	12 56 38.3	-1.0
	baz=49					
J41A	Loganville	83.17 320	P	P	12 56 36.9	-2.3
	baz=45,SNR=8.2					
HUMP	Col San Antoni	83.20 287	*e*P	P	12 56 39.6	-0.2
	comp=Z,172nm,1.3s					
K42A	Prairie Point,	83.23 319	P	P	12 56 38.4	-1.1
	baz=46					
SPMN	Marine on St.	83.25 323	P	P	12 56 37.7	-1.9
	baz=44					
SPMN	Marine on St.	83.25 323	*e*P	P	12 56 38.5	-1.1
	comp=Z,86nm,1.1s					
O47A	Sheridan	83.25 316	P	P	12 56 37.9	-1.9
	baz=47					
D33A	AnnSam, Waubun	83.28 326	P	P	12 56 37.9	-1.8
	baz=42					
L43A	Garden Prairie	83.32 319	P	P	12 56 38.4	-1.7
	baz=46					
TGY	Tagaytay City	83.33 77	LR	LR	13 37 43.2	
	comp=Z,2µm,21.8s,baz=300,slow=38					
H38A	Maiden Rock	83.39 322	P	P	12 56 38.4	-1.9
	baz=44					
E34A	Wadena	83.43 325	P	P	12 56 38.3	-2.3
	baz=42					
RAGM	Ragged Mountai	83.44 357	*e*P	P	12 56 41.2	+0.8
	comp=Z,94nm,1.1s					
SJG	San Juan	83.45 288	P	P	12 56 42.3	+1.2
	comp=Z,11nm,0.8s,baz=78,slow=6.5,SNR=5.7					
SJG	San Juan	83.45 288	*e*P	P	12 56 38.8	-2.3
	comp=Z,20nm,1.0s					
SJG			LR	LR		
	comp=Z,2µm,22.0s					
T52A	Hallie	83.47 312	P	P	12 56 38.7	-2.3
	baz=49					
S51A	Beattyville	83.49 312	P	P	12 56 39.5	-1.5
	baz=48					
RSO	Redoubt South	83.49 1	*e*P	P	12 56 40.3	-0.5
M44A	Midewin, Midew	83.50 318	P	P	12 56 39.2	-1.8
	baz=46					
J40A	Soldiers Grove	83.52 320	P	P	12 56 39.3	-1.8
	baz=45,SNR=5.7					
N45A	Kentland	83.58 317	P	P	12 56 39.3	-2.1
	baz=46					
I39A	Houston	83.59 321	P	P	12 56 39.5	-1.9
	baz=44					
JFWS	Jewell Farm	83.61 320	P	P	12 56 39.7	-1.8
	baz=45					
JFWS	Jewell Farm	83.61 320	*e*P	P	12 56 39.5	-2.0
	comp=Z,88nm,1.1s					
JFWS			LR	LR		
	comp=Z,5µm,19.0s					
JFWS	Jewell Farm	83.61 320	*e*P	P	12 56 39.5	-2.0
JFWS			pmax	pmax		
	comp=Z,88nm,1.1s					
JFWS			MLR	MLR		
	comp=Z,5µm,19.0s					
SKAG	Skagway	83.62 352	*e*P	P	12 56 40.5	-0.7
	comp=Z,51nm,1.1s					
C31A	Landman Farms,	83.63 327	P	P	12 56 39.7	-1.8
	baz=41					
F35A	Swanville	83.64 324	P	P	12 56 39.5	-2.1
	baz=42					
SFIN	Lafayette	83.67 316	P	P	12 56 40.1	-1.7
	baz=47					
SFIN	Lafayette	83.67 316	*e*P	P	12 56 40.8	-1.1
	comp=Z,207nm,1.8s					
SFIN			LR	LR		
	comp=Z,8µm,21.0s					
G36A	St. Michael	83.70 323	P	P	12 56 40.3	-1.6
	baz=43					
U53A	Fall Branch	83.71 311	P	P	12 56 40.8	-1.4
	baz=49					
KMSC	Kings Mountain	83.74 309	P	P	12 56 40.8	-1.6
	baz=50					
KMSC	Kings Mountain	83.74 309	*e*P	P	12 56 41.7	-0.6
	comp=Z,75nm,1.3s					
KMSC			LR	LR		
	comp=Z,4µm,19.0s					
H37A	Dierke Farm, C	83.77 322	P	P	12 56 40.5	-1.8
	baz=44					
AOPR	Arecibo Observ	83.78 288	*e*P	P	12 56 41.7	-1.1
	comp=Z,79nm,1.1s					
AOPR			LR	LR		
	comp=Z,2µm,22.0s					
AOPR	Arecibo Observ	83.78 288	*e*P	P	12 56 41.7	-1.1
	comp=Z,79nm,1.1s					
D32A	Dogwood Acres,	83.81 326	P	P	12 56 40.7	-1.7
	baz=41					
P47A	Martinsville	83.81 315	P	P	12 56 40.5	-2.1
	baz=47,SNR=8.5					
E33A	Westby DABS, E	83.82 325	P	P	12 56 40.3	-2.3
	baz=42					
K41A	Shullsburg	83.85 320	P	P	12 56 41.1	-1.7
	baz=45					
SEW	Seward	83.85 359	*e*P	P	12 56 42.6	+0.2
	comp=Z,101nm,0.8s					
SEW			LR	LR		
	comp=Z,3µm,21.0s					
I38A	Scanlan Farm,	83.87 322	P	P	12 56 41.3	-1.5
	baz=44					
DLBC	Dease Lake	83.91 349	*e*P	P	12 56 42.9	0.0
	comp=Z,82nm,1.5s					
L42A	Oliver, Polo	83.94 319	P	P	12 56 41.7	-1.6
	baz=45					
N44A	Piper City	83.95 317	P	P	12 56 40.9	-2.4
	baz=46					
M43A	Waltham Townsh	83.96 318	P	P	12 56 41.4	-2.0
	baz=46					
BUSP	Coron	83.97 80	*e*P	P	12 56 43.3	-0.5
F34A	Alexandria	84.00 324	P	P	12 56 41.5	-2.0
	baz=42					
J39A	Decorah	84.06 321	P	P	12 56 41.8	-2.0
	baz=44,SNR=9.9					
G35A	Watkins	84.06 324	P	P	12 56 42.2	-1.6
	baz=42					
O45A	Potomac	84.11 317	P	P	12 56 43.2	-0.9
	baz=46					
MPR	Mayaguez	84.15 288	*e*P	P	12 56 43.4	-1.3
	comp=Z,44nm,1.1s					
BLO	Bloomington	84.17 315	*e*P	P	12 56 43.1	-1.4
	comp=Z,287nm,1.6s					
BLO			LR	LR		
	comp=Z,4µm,20.0s					
BLO	Bloomington	84.17 315	*e*P	P	12 56 43.1	-1.4
BLO			pmax	pmax		
	comp=Z,287nm,1.6s					
BLO			MLR	MLR		
	comp=Z,4µm,20.0s					
TZTN	Tazewell	84.19 312	P	P	12 56 42.7	-2.0
	baz=48					
TZTN	Tazewell	84.19 312	*e*P	P	12 56 45.1	+0.4
	comp=Z,121nm,1.4s					
TZTN			LR	LR		
	comp=Z,4µm,20.0s					
D31A	Mcclaflin, Tow	84.19 327	P	P	12 56 42.5	-1.9
	baz=40					
BRLK	Bradley Lake	84.20 360	*e*P	P	12 56 44.2	0.0
	comp=Z,42nm,0.8s					
BRLK			LR	LR		
	comp=Z,3µm,21.0s					
K40A	Colesburg	84.22 320	P	P	12 56 42.8	-1.9
	baz=44					
KKM	Kota Kinabalu	84.24 87	PFAKE		12 57 00.0	+15
KKM			LR	LR		
	comp=Z,2µm,21.0s					
P46A	Rosedale	84.25 316	P	P	12 56 43.0	-1.9
	baz=47					
PAULI	Pauline	84.25 309	*e*P	P	12 56 44.5	-0.4
	comp=Z,86nm,1.2s					
JSC	Jenkinsville	84.25 309	*e*P	P	12 56 43.7	-1.3
	comp=Z,92nm,1.4s					
JSC	Jenkinsville	84.25 309	*e*P	P	12 56 43.7	-1.3
JSC			pmax	pmax		
	comp=Z,92nm,1.4s					
H36A	Jessenland, He	84.27 323	P	P	12 56 42.9	-1.9
	baz=43					
Q47A	Bedord North L	84.27 315	P	P	12 56 43.6	-1.4
	baz=47					
HOM	Homer	84.31 0	*e*P	P	12 56 45.1	+0.4
	comp=Z,222nm,1.0s					
V53A	Saluda	84.31 311	P	P	12 56 43.2	-2.1
	baz=49					
R48A	Northridge Ran	84.32 314	P	P	12 56 43.6	-1.6
	baz=47					
NHSC	New Hope	84.32 307	P	P	12 56 43.8	-1.5
	baz=50					
NHSC	New Hope	84.32 307	*e*P	P	12 56 45.1	-0.2
	comp=Z,120nm,1.1s					
NHSC			LR	LR		
	comp=Z,7µm,21.0s					
L41A	Preston	84.33 319	P	P	12 56 43.4	-1.8
	baz=45,SNR=6.1					
M42A	Sheffield	84.38 319	P	P	12 56 44.0	-1.4
	baz=45					
MDND	Maddock	84.40 328	P	P	12 56 43.7	-1.7
	baz=39					
MDND	Maddock	84.40 328	*e*P	P	12 56 44.9	-0.5
	comp=Z,379nm,1.4s					
MDND			LR	LR		
	comp=Z,6µm,20.0s					
I37A	Lemond, Waseca	84.42 322	P	P	12 56 44.4	-1.3
	baz=43					
N43A	Stutzman Famil	84.42 318	P	P	12 56 43.9	-1.8
	baz=46					
BESE	Bessie Mountai	84.43 352	*e*P	P	12 56 46.9	+1.4
	comp=Z,63nm,1.2s					
SJMP	San Jose	84.43 79	*e*P	P	12 56 46.6	+0.5
J38A	Wedel Dairy, R	84.46 321	P	P	12 56 43.9	-1.9
	baz=44					
O44A	Mansfield	84.58 317	P	P	12 56 45.0	-1.5
	baz=46					
G34A	Benson	84.59 324	P	P	12 56 45.2	-1.3
	baz=42					
K39A	Oelwein	84.60 321	P	P	12 56 44.4	-2.2
	baz=44,SNR=6.0					
H35A	Sunnyside Ranc	84.61 323	P	P	12 56 45.2	-1.4
	baz=42					
P45A	Graceland, Par	84.61 316	P	P	12 56 44.6	-2.1
	baz=46,SNR=9.3					
E31A	Nome	84.64 326	P	P	12 56 45.0	-1.7
	baz=40					
T50A	Nancy	84.64 313	P	P	12 56 45.8	-1.1
	baz=48					
JIS	Juneau Island	84.67 351	*e*P	P	12 56 46.5	0.0
	comp=Z,53nm,1.1s					
JIS			LR	LR		
	comp=Z,4µm,20.0s					
WCI	Wyandotte Cave	84.68 314	P	P	12 56 45.7	-1.3
	baz=47					
WCI	Wyandotte Cave	84.68 314	*e*P	P	12 56 46.0	-1.0
	comp=Z,139nm,1.1s					
WCI			LR	LR		
	comp=Z,7µm,20.0s					
WCI	Wyandotte Cave	84.68 314	*e*P	P	12 56 46.0	-1.0
WCI			pmax	pmax		
	comp=Z,139nm,1.1s					
WCI			MLR	MLR		
	comp=Z,7µm,20.0s					
V52A	Sevierville	84.68 311	P	P	12 56 45.1	-2.0
	baz=48					
I36A	Fitzsimmons Fa	84.72 323	P	P	12 56 45.5	-1.6
	baz=43					
L40A	Anamosa	84.72 320	P	P	12 56 45.5	-1.7
	baz=44,SNR=9.5					
Q46A	CEJHS Indians,	84.74 315	P	P	12 56 45.0	-2.4
	baz=46					
HDIL	Hopedale	84.76 318	P	P	12 56 45.3	-2.1
	baz=46					
HDIL	Hopedale	84.76 318	PFAKE		12 57 00.0	+13
HDIL			LR	LR		
	comp=Z,5µm,19.0s					
R47A	Wooly Knot Far	84.77 315	P	P	12 56 46.0	-1.5
	baz=47,SNR=6.6					
F32A	Veblen	84.81 325	P	P	12 56 45.8	-1.8
	baz=41					
BG3	Lake Jocassee	84.83 310	*e*P	P	12 56 47.2	-0.7
	comp=Z,92nm,1.2s					
M41A	Milan	84.85 319	P	P	12 56 45.9	-2.0
	baz=45					
W53A	Cullowhee	84.86 310	P	P	12 56 46.4	-1.8
	baz=48					
HODGE	Hodges	84.91 309	*e*P	P	12 56 47.9	-0.4
S48A	Wiedeman Farm,	84.93 314	P	P	12 56 45.7	-2.6
	baz=47,SNR=9.2					
LEM	Lembang	84.95 102	P	P	12 56 49.1	+0.2
	comp=Z,11nm,0.4s,baz=285,slow=20,SNR=4.3					
LEM			LR	LR	13 39 53.3	
	comp=Z,4µm,18.7s,baz=302,slow=39					
O43A	Sugar Creek Fa	84.95 317	P	P	12 56 46.7	-1.7
	baz=45					
N42A	Yates City	84.96 318	P	P	12 56 46.3	-2.1
	baz=45,SNR=6.9					
CRZF	Crozet Islands	84.97 164	PFAKE		12 57 00.0	+12
CRZF			LR	LR		
	comp=Z,5µm,20.0s					
T49A	Edmonton	85.00 313	P	P	12 56 47.4	-1.3
	baz=47					
G33A	Ortonville	85.00 325	P	P	12 56 46.7	-1.8
	baz=41					
J37A	Redenius Farm,	85.01 322	P	P	12 56 46.6	-2.0
	baz=43,SNR=6.6					
L39A	Vinton	85.08 320	P	P	12 56 46.9	-2.1
	baz=44,SNR=7.6					
K38A	Parkersburg	85.10 321	P	P	12 56 47.6	-1.5
	baz=44					
P44A	Sand Creek, Wi	85.14 316	P	P	12 56 47.9	-1.4
	baz=46					
V51A	Loudon	85.16 311	P	P	12 56 48.6	-1.0
	baz=48					
GRTK	Grand Turk	85.21 293	PFAKE		12 57 00.0	+10
GRTK			LR	LR		
	comp=Z,3µm,22.0s					
Q45A	Warren Harvey,	85.28 316	P	P	12 56 48.3	-1.7
	baz=46,SNR=6.9					
M40A	Post Highland	85.34 319	P	P	12 56 48.1	-2.2
	baz=44					
OLIL	Olney	85.36 316	*e*P	P	12 56 49.4	-1.1
	comp=Z,189nm,1.1s					
OLIL			LR	LR		
	comp=Z,4µm,20.0s					
W52A	Murphy	85.38 311	P	P	12 56 49.5	-1.1
	baz=48					
JHJ	Hachijo jima 2	85.38 52	LR	LR	13 39 58.0	
	comp=Z,3µm,18.5s,baz=319,slow=39					
J36A	Seneca 1, Swea	85.38 322	P	P	12 56 48.8	-1.7
	baz=42					
X53A	Estanollee	85.38 310	P	P	12 56 49.6	-1.1
	baz=48					
R46A	Gibon Southern	85.39 315	P	P	12 56 48.0	-2.6
	baz=46,SNR=6.8					
SPIA	Saint Paul Isl	85.39 10	PFAKE		12 57 00.0	+10
SPIA			LR	LR		
	comp=Z,4µm,20.0s					
Y54A	Tignall	85.42 309	P	P	12 56 49.0	-1.9
	baz=49					
O42A	Bath	85.44 318	P	P	12 56 48.8	-2.0
	baz=45					
K37A	Belmond	85.45 322	P	P	12 56 48.8	-2.0
	baz=43					
G32A	Webster	85.45 325	P	P	12 56 49.2	-1.6
	baz=41					
156A	Sylvania	85.46 308	P	P	12 56 48.2	-2.8
	baz=49					
N41A	Harden Midland	85.49 319	P	P	12 56 49.1	-2.0
	baz=44,SNR=7.1					

T48A	Bowling Green	85.50	314	P	P	12 56 49.5	-1.6
	baz=47,SNR=29						
Z55A	Blythe	85.50	308	P	P	12 56 49.3	-1.9
	baz=49						
CPCT	Cooper Cave	85.50	311	eP	P	12 56 51.1	-0.1
	comp=Z,210nm,1.1s						
P43A	Skaggs, Pawnee	85.52	317	P	P	12 56 49.9	-1.3
	baz=45,SNR=8.1						
H33A	Prehn Over Nor	85.53	324	P	P	12 56 48.9	-2.4
	baz=41						
U49A	Red Boiling Sp	85.54	313	P	P	12 56 49.9	-1.5
	baz=47						
L38A	Oak Wood Farm,	85.56	321	P	P	12 56 48.5	-2.9
	baz=43,SNR=8.0						
M39A	Webster	85.63	320	P	P	12 56 50.5	-1.3
	baz=44						
USIN	University of	85.65	315	eP	P	12 56 50.7	-1.2
	comp=Z,152nm,1.2s						
USIN				LR	LR		
	comp=Z,5µm,18.0s						
X52A	Dahlonega	85.68	310	P	P	12 56 51.1	-1.1
	baz=48,SNR=22						
V50A	Pikevile	85.70	312	P	P	12 56 51.1	-1.1
	baz=48						
N40A	Mertquake, Sal	85.75	319	P	P	12 56 50.5	-1.9
	baz=44						
Q44A	Meyer Farm, Va	85.76	316	P	P	12 56 50.8	-1.6
	baz=46						
R45A	Skylar, Fairfi	85.77	315	P	P	12 56 51.0	-1.5
	baz=46,SNR=13						
DGMT	Dagmar	85.79	331	P	P	12 56 50.8	-1.7
	baz=36						
DGMT	Dagmar	85.79	331	eP	P	12 56 51.1	-1.3
	comp=Z,257nm,1.6s						
DGMT				LR	LR		
	comp=Z,6µm,18.0s						
G31A	Conde	85.80	326	P	P	12 56 50.8	-1.7
	baz=40						
SCIA	State Center	85.86	321	P	P	12 56 51.1	-1.8
	baz=43						
SCIA	State Center	85.86	321	PFAKE		12 57 00.0	+7.1
SCIA				LR	LR		
	comp=Z,7µm,20.0s						
S46A	Don Dixon Farm	85.87	315	P	P	12 56 51.1	-1.8
	baz=46						
O41A	Passleys Farm,	85.92	318	P	P	12 56 51.5	-1.8
	baz=44,SNR=8.0						
Z54A	Sparta	85.93	309	P	P	12 56 52.5	-0.9
	baz=49,SNR=5.4						
K36A	Gilmore City	85.95	322	P	P	12 56 51.4	-1.9
	baz=42						
L37A	Phoenix Point,	85.97	321	P	P	12 56 51.3	-2.1
	baz=43						
Y53A	Monroe	85.99	310	P	P	12 56 52.5	-1.2
	baz=48						
H32A	Carlson Farm,	85.99	325	P	P	12 56 51.2	-2.3
	baz=41						
U48A	Cassie Pea, Po	85.99	313	P	P	12 56 52.0	-1.6
	baz=47,SNR=7.0						
T47A	Sharon Grove	86.00	314	P	P	12 56 52.1	-1.5
	baz=46,SNR=7.8						
P42A	Winchester	86.01	318	P	P	12 56 52.2	-1.4
	baz=45,SNR=6.9						
155A	Kite	86.10	308	P	P	12 56 53.5	-0.7
	baz=49						
Q43A	New Douglas	86.11	317	P	P	12 56 53.2	-1.0
	baz=45,SNR=7.2						
V49A	McMinnville	86.12	312	P	P	12 56 52.9	-1.4
	baz=47						
SDD	Santo Domingo	86.12	290	PFAKE		12 57 10.0	+15
SDD				LR	LR		
	comp=Z,400nm,19.0s						
W50A	Signal Mountai	86.15	312	P	P	12 56 53.2	-1.2
	baz=47						
256A	Glennville	86.15	307	P	P	12 56 52.4	-2.1
	baz=49						
PVCP	Virac	86.16	76	eP	P	12 56 58.9	+4.2
KDAK	Kodiak Island	86.18	1	eP	P	12 56 54.6	+0.5
	comp=Z,59nm,0.8s						
KDAK				LR	LR		
	comp=Z,4µm,20.0s						
KDAK	Kodiak Island	86.18	1	eP	P	12 56 54.6	+0.5
KDAK				pmax	pmax		
	comp=Z,59nm,0.8s						
KDAK				MLR	MLR		
	comp=Z,4µm,20.0s						
ECSD	EROS Data Cent	86.19	324	P	P	12 56 52.8	-1.7
	baz=41						
ECSD	EROS Data Cent	86.19	324	eP	P	12 56 53.5	-1.0
	comp=Z,65nm,1.2s						
ECSD				LR	LR		
	comp=Z,6µm,22.0s						
WRAK	Wrangell Islan	86.20	350	eP	P	12 56 54.6	+0.3
	comp=Z,78nm,1.1s						
WRAK				LR	LR		
	comp=Z,3µm,22.0s						
SMY	Shemya	86.20	20	PFAKE		12 57 10.0	+16
SMY				LR	LR		
	comp=Z,4µm,22.0s						
M38A	Pleasantville	86.21	320	P	P	12 56 52.8	-1.8
	baz=43,SNR=8.2						
GOGA	Godfrey	86.21	309	P	P	12 56 53.8	-0.9
	baz=48,SNR=20						
GOGA	Godfrey	86.21	309	eP	P	12 56 54.1	-0.7
	comp=Z,136nm,1.1s						
GOGA				LR	LR		
	comp=Z,4µm,21.0s						
GOGA	Godfrey	86.21	309	eP	P	12 56 54.1	-0.7
GOGA				pmax	pmax		
	comp=Z,136nm,1.1s						
GOGA				MLR	MLR		
	comp=Z,4µm,21.0s						
N39A	Derby Farms, D	86.24	320	P	P	12 56 52.9	-1.9
	baz=44						
RCP	Roxas	86.25	79‖	eP	P	12 56 56.4	+1.2
357A	Townsend	86.25	307	P	P	12 56 53.5	-1.5
	baz=49						
R44A	Waltonville	86.25	316	P	P	12 56 53.1	-1.7
	baz=45						
Y52A	Lilburn	86.28	310	P	P	12 56 54.5	-0.6
	baz=48,SNR=24						
X51A	Calhoun	86.30	311	P	P	12 56 54.1	-1.1
	baz=48,SNR=5.9						
P41A	Barry, Barry	86.34	318	P	P	12 56 53.5	-1.8
	baz=44,SNR=5.7						
Z53A	Monticello	86.36	309	P	P	12 56 52.9	-2.6
	baz=48,SNR=16						
S45A	Carrier Mills	86.37	315	P	P	12 56 53.4	-2.1
	baz=46,SNR=6.7						
T46A	Princeton	86.42	314	P	P	12 56 53.8	-1.9
	baz=46						
O40A	La Belle	86.45	319	P	P	12 56 54.1	-1.8
	baz=44,SNR=6.9						
L36A	Harm Buss Farm	86.45	322	P	P	12 56 54.6	-1.2
	baz=42						
U47A	Clarksville	86.48	314	P	P	12 56 54.4	-1.6
	baz=46,SNR=8.6						
154A	Montrose	86.51	308	P	P	12 56 55.1	-1.1
	baz=48						
SWET	Sewanee	86.51	312	eP	P	12 56 54.7	-1.6
	comp=Z,43nm,1.1s						
255A	Hazlehurst	86.56	308	P	P	12 56 55.4	-1.1
	baz=49						
MYLDM	Lahad Datu	86.59	86	eP	P	12 56 56.5	-0.4
	comp=Z,307nm,1.3s						
Q42A	Golden Eagle	86.59	317	P	P	12 56 54.3	-2.2
	baz=45						
SLM	Saint Louis	86.62	317	eP	P	12 56 55.8	-0.9
	comp=Z,291nm,1.4s						
SLM				LR	LR		
	comp=Z,7µm,20.0s						
SLM	Saint Louis	86.62	317	eP	P	12 56 55.8	-0.9
SLM				pmax	pmax		
	comp=Z,291nm,1.4s						
SLM				MLR	MLR		
	comp=Z,7µm,20.0s						
M37A	Trindle Farm,	86.66	321	P	P	12 56 54.7	-2.1
	baz=43						
N38A	Joes South For	86.68	320	P	P	12 56 54.9	-2.0
	baz=43						
V48A	Smith Brothers	86.68	313	P	P	12 56 55.5	-1.5
	baz=47,SNR=5.8						
R43A	Red Bud	86.71	316	P	P	12 56 56.1	-1.0
	baz=45,SNR=10						
O39A	Kirksville	86.71	319	P	P	12 56 55.0	-2.1
	baz=44						
356A	Blackshear	86.73	307	P	P	12 56 54.8	-2.6
	baz=49						
OHAK	Old Harbor	86.73	1	eP	P	12 56 57.5	+0.6
	comp=Z,46nm,0.9s						
S44A	Carbondale	86.74	316	P	P	12 56 56.1	-1.2
	baz=45,SNR=7.1						
SUSD	Miller	86.74	326	P	P	12 56 55.2	-2.0
	baz=40						
W49A	Belvidere	86.78	312	P	P	12 56 55.4	-2.2
	baz=47						
457A	Yulee	86.82	306	P	P	12 56 55.4	-2.4
	baz=49						
X50B	Fort Payne	86.85	311	P	P	12 56 56.8	-1.1
	baz=47						
T45A	Paducah	86.86	315	P	P	12 56 56.3	-1.6
	baz=46						
Y51A	Rockmart	86.87	310	P	P	12 56 57.1	-1.0
	baz=48,SNR=24						
PCRV	Puerto La Cruz	86.92	280	LR	LR	13 34 51.7	
	comp=Z,827nm,19.5s,baz=54,slow=35						
153A	Fort Valley	86.94	309	P	P	12 56 55.7	-2.7
	baz=48						
Q41A	Truxton	86.94	318	P	P	12 56 57.1	-1.1
	baz=44,SNR=17						
Z52A	Williamson	86.95	310	P	P	12 56 56.4	-2.0
	baz=48,SNR=20						
P40A	Paris	86.97	318	P	P	12 56 56.9	-1.5
	baz=44						
M36A	Felix, Anita	87.00	321	P	P	12 56 56.2	-2.4
	baz=42						
WVT	Waverly	87.01	314	P	P	12 56 56.5	-2.2
	baz=46						
WVT	Waverly	87.01	314	eP	P	12 56 56.8	-1.8
	comp=Z,79nm,1.3s						
WVT				LR	LR		
	comp=Z,5µm,21.0s						
WVT	Waverly	87.01	314	eP	P	12 56 56.8	-1.8
WVT				pmax	pmax		
	comp=Z,79nm,1.3s						
WVT				MLR	MLR		
	comp=Z,5µm,21.0s						
V47A	Nunnelly	87.03	313	P	P	12 56 56.9	-1.8
	baz=46,SNR=8.1						
U46A	Springville	87.05	314	P	P	12 56 56.7	-2.1
	baz=46						
456A	Hilliard	87.06	306	P	P	12 56 58.1	-0.9
	baz=49						
254A	Abbeville	87.07	308	P	P	12 56 58.1	-0.9
	baz=48						
W48A	Pulaski	87.16	312	P	P	12 56 57.8	-1.6
	baz=46,SNR=7.7						
R42A	Luebbering	87.18	317	P	P	12 56 58.2	-1.2
	baz=44,SNR=8.5						
355A	Pearson	87.19	307	P	P	12 56 58.6	-1.0
	baz=48						
FVM	French Village	87.19	316	eP	P	12 56 58.7	-0.8
	comp=Z,210nm,1.5s						
FVM				LR	LR		
	comp=Z,6µm,20.0s						
FVM	French Village	87.19	316	eP	P	12 56 58.7	-0.8
FVM				pmax	pmax		
	comp=Z,210nm,1.5s						
FVM				MLR	MLR		
	comp=Z,6µm,20.0s						
N37A	Lee Faris, Mou	87.21	320	P	P	12 56 57.9	-1.6
	baz=42						
X49A	Woodville	87.22	312	P	P	12 56 58.8	-1.0
	baz=47,SNR=14						
CRAG	Craig	87.23	350	PFAKE		12 57 10.0	+11
CRAG				LR	LR		
	comp=Z,4µm,21.0s						
S43A	Fulton Ridge,	87.29	316	P	P	12 56 59.1	-0.9
	baz=45,SNR=39						
Y50A	Piedmont	87.29	311	P	P	12 56 59.2	-0.9
	baz=47,SNR=11						
O38A	Galt	87.30	320	P	P	12 56 58.1	-1.9
	baz=43						
SMRI	Semarang	87.32	101	PFAKE		12 57 10.0	+10
SMRI				LR	LR		
	comp=Z,3µm,21.0s						
557A	Orange Park	87.33	306	P	P	12 56 57.9	-2.3
	baz=49						
Z51A	Franklin	87.33	310	P	P	12 56 59.1	-1.2
	baz=47						
T44A	Benton	87.36	315	P	P	12 56 58.5	-1.7
	baz=45						
Q40A	Laux Farm, Aux	87.37	318	P	P	12 56 59.2	-1.1
	baz=44						
SII	Sitkinak Islan	87.38	2	PFAKE		12 57 10.0	+10
SII				LR	LR		
	comp=Z,4µm,22.0s						
P39B	Salisbury	87.38	319	P	P	12 56 58.9	-1.5
	baz=43,SNR=8.5						
U45A	Rockin P Farm,	87.40	314	P	P	12 56 59.1	-1.4
	baz=46						
V46A	Holladay	87.40	314	P	P	12 56 58.4	-2.1
	baz=46,SNR=5.7						
CHGN	Chignik	87.46	4	eP	P	12 56 59.4	-1.0
	comp=Z,63nm,1.0s						
CHGN				LR	LR		
	comp=Z,4µm,20.0s						
W47A	Westpoint	87.48	313	P	P	12 56 59.7	-1.2
	baz=46,SNR=6.2						
152A	Waverly Hall	87.49	309	P	P	12 57 00.1	-0.9
	baz=48,SNR=24						
R41A	Rosebud	87.49	317	P	P	12 56 59.6	-1.3
	baz=44,SNR=18						
253A	Americus	87.52	309	P	P	12 56 59.6	-1.6
	baz=48						
S42A	Caledonia	87.55	316	P	P	12 56 59.7	-1.6
	baz=44,SNR=15						
N36A	Muff Farm, Cla	87.55	321	P	P	12 56 59.3	-1.9
	baz=42						
CCM	Cathedral Cave	87.59	317	P	P	12 56 59.8	-1.6
	baz=44						
CCM	Cathedral Cave	87.59	317	eP	P	12 57 00.3	-1.1
	comp=Z,60nm,0.7s						
CCM				LR	LR		
	comp=Z,6µm,19.0s						
CCM	Cathedral Cave	87.59	317	eP	P	12 57 00.3	-1.1
CCM				pmax	pmax		
	comp=Z,60nm,0.7s						
CCM				MLR	MLR		
	comp=Z,6µm,19.0s						
TIGA	Tifton	87.59	308	P	P	12 56 60.0	-1.5
	baz=48						
TIGA	Tifton	87.59	308	PFAKE		12 57 10.0	+8.5
TIGA				LR	LR		
	comp=Z,5µm,20.0s						
O37A	Wolven Farm, M	87.61	320	P	P	12 56 59.9	-1.6
	baz=42						
758A	Lake Helen	87.67	305	P	P	12 56 60.0	-1.9
	baz=49						
P38A	Dawn	87.69	319	P	P	12 57 00.1	-1.8
	baz=43						
X48A	Hartselle	87.70	312	P	P	12 57 00.2	-1.8
	baz=46,SNR=5.8						
Y49A	Blount Mountai	87.72	311	P	P	12 57 00.7	-1.4
	baz=47						
U44B	Burton Farm, H	87.74	315	P	P	12 57 00.1	-2.0
	baz=45						
T43A	Greenville	87.75	316	P	P	12 57 01.2	-1.0
	baz=45,SNR=17						
556A	Lake Butler	87.78	306	P	P	12 57 00.8	-1.6
	baz=49						
Q39A	Willow Grove F	87.82	319	P	P	12 57 01.1	-1.3
	baz=43						
U44A	Portageville	87.82	315	P	P	12 57 01.3	-1.2
	baz=45						
Z50A	Ashland	87.84	310	P	P	12 57 01.5	-1.2
	baz=47						
PVMO	Portageville	87.89	315	PFAKE		12 57 10.0	+7.1
PVMO				LR	LR		
	comp=Z,4µm,19.0s						
UGM	Wanagama	87.90	101	PFAKE		12 57 10.0	+6.8
UGM				LR	LR		
	comp=Z,2µm,20.0s						
V45A	Humboldt	87.94	314	P	P	12 57 01.5	-1.6
	baz=45						
PLAL	Pickwick Lake	87.95	313	eP	P	12 57 00.7	-2.4
	comp=Z,39nm,0.9s						
PLAL				LR	LR		
	comp=Z,6µm,20.0s						
252A	Lumpkin	87.95	309	P	P	12 57 02.2	-1.0
	baz=48,SNR=8.3						
151A	Opelika	87.96	310	P	P	12 57 01.7	-1.6
	baz=47						
R40A	Maddies Statio	87.98	318	P	P	12 57 02.2	-1.1
	baz=44,SNR=7.4						
W46A	Michie	88.02	313	P	P	12 57 01.4	-2.1
	baz=46						
LAO	LASA Array	88.03	331	P	P	12 57 01.8	-1.6
	baz=35						
LAO	LASA Array	88.03	331	eP	P	12 57 03.3	-0.2
	comp=Z,145nm,1.0s						
LAO				LR	LR		
	comp=Z,7µm,19.0s						
PBMO	Poplar Bluff	88.05	316	eP	P	12 57 02.6	-1.0
	comp=Z,124nm,1.3s						
PBMO				LR	LR		
	comp=Z,5µm,22.0s						
859A	Kempfer Cattle	88.05	304	P	P	12 57 03.2	-0.5
	baz=49						
353A	Camilla	88.06	308	P	P	12 57 02.5	-1.2
	baz=48						
555A	McAlpin	88.07	306	P	P	12 57 02.6	-1.2
	baz=48						
454A	Quitman	88.10	307	P	P	12 57 02.3	-1.6
	baz=48						
X47A	Russelville	88.14	313	P	P	12 57 02.9	-1.2
	baz=46						
Y48A	Jasper	88.14	312	P	P	12 57 02.2	-1.9
	baz=46						
P37A	Lathrop	88.14	320	P	P	12 57 02.5	-1.6
	baz=42						
S41A	Jillco Farms,	88.20	317	P	P	12 57 03.2	-1.1
	baz=44						
Q38A	Cooks Store, C	88.22	319	P	P	12 57 02.9	-1.5
	baz=43,SNR=6.9						
T42A	Van Buren	88.24	316	P	P	12 57 03.0	-1.5
	baz=44,SNR=21						
EGMT	Eagleton	88.24	334	P	P	12 57 03.1	-1.3
	baz=32						
EGMT	Eagleton	88.24	334	eP	P	12 57 03.8	-0.6
	comp=Z,126nm,1.1s						
EGMT				LR	LR		
	comp=Z,6µm,20.0s						
Z49A	Columbiana	88.25	311	P	P	12 57 03.5	-1.2
	baz=47						
858A	St. Cloud	88.26	304	P	P	12 57 03.9	-0.8
	baz=49						
SDPT	Sand Point	88.27	5	eP	P	12 57 04.6	+0.3
SDPT	comp=Z,93nm,0.6s						
SDPT				LR	LR		
	comp=Z,4µm,22.0s						
251A	Midway	88.30	309	P	P	12 57 04.0	-0.9
	baz=47,SNR=17						
U43A	Rector	88.32	315	P	P	12 57 02.7	-2.3
	baz=45						
150A	Eclectic	88.34	310	P	P	12 57 03.8	-1.3
	baz=47,SNR=8.6						
060A	Indiantown	88.35	303	P	P	12 57 03.6	-1.6
	baz=50						
DWPF	Disney Wildern	88.38	304	eP	P	12 57 05.7	+0.4
	comp=Z,88nm,0.8s						
DWPF				LR	LR		
	comp=Z,2µm,21.0s						
R39A	Chumby, Stover	88.38	318	P	P	12 57 03.2	-2.0
	baz=43,SNR=10						
W45A	Hickory Valley	88.48	314	P	P	12 57 03.5	-2.2
	baz=45						
FALS	False Pass	88.50	7	PFAKE		12 57 20.0	+15
FALS				LR	LR		
	comp=Z,3µm,20.0s						
X46A	Booneville	88.54	313	P	P	12 57 04.0	-2.0
	baz=46						
Y47A	UCPARC, Winfie	88.56	312	P	P	12 57 04.0	-2.1
	baz=46						
T41A	Mountain View	88.61	317	P	P	12 57 05.3	-0.9
	baz=44,SNR=25						
S40A	Lebanon	88.61	317	P	P	12 57 05.0	-1.2
	baz=43,SNR=8.8						
LRAL	Lakeview Retre	88.64	311	P	P	12 57 05.2	-1.3
	baz=46,SNR=6.0						
LRAL	Lakeview Retre	88.64	311	eP	P	12 57 05.7	-0.8
	comp=Z,39nm,1.0s						
LRAL				LR	LR		
	comp=Z,7µm,18.0s						
BGNE	Belgrade	88.69	323	P	P	12 57 05.5	-1.1
	baz=40						
BGNE	Belgrade	88.69	323	eP	P	12 57 05.6	-1.0
	comp=Z,207nm,0.8s						
Q37A	Longview Farm,	88.72	319	P	P	12 57 05.1	-1.7
	baz=42						
Z48A	Northport	88.75	312	P	P	12 57 06.3	-0.6
	baz=46						
WALA	Waterton Lakes	88.76	337	eP	P	12 57 05.9	-1.0
	comp=Z,42nm,1.1s						
WALA				LR	LR		
	comp=Z,6µm,20.0s						
857A	Zephyrhills	88.80	305	P	P	12 57 06.7	-0.6
	baz=49						
U42A	Revenden	88.81	316	P	P	12 57 06.0	-1.2
	baz=44,SNR=19						
V43A	Jonesboro	88.82	315	P	P	12 57 06.2	-1.1
	baz=44						
250A	Grady	88.92	310	P	P	12 57 07.1	-0.7
	baz=47						
MET	Memphis--Engin	88.94	314	PFAKE		12 57 20.0	+12
MET				LR	LR		
	comp=Z,5µm,21.0s						
R38A	Fenwick Farm,	88.94	319	P	P	12 57 06.3	-1.5
	baz=43						
T40A	Mansfield	88.95	317	P	P	12 57 06.4	-1.5
	baz=43,SNR=8.4						
AKUT	Akutan	88.95	9	PFAKE		12 57 20.0	+13
AKUT				LR	LR		
	comp=Z,5µm,21.0s						
351A	Pinckard	88.98	309	P	P	12 57 07.3	-0.8
	baz=47						
S39A	Bolivar	88.99	318	P	P	12 57 07.2	-0.8
	baz=43,SNR=7.2						
OXF	Oxford	89.06	313	P	P	12 57 06.1	-2.4
	baz=45						
OXF	Oxford	89.06	313	PFAKE		12 57 20.0	+12
OXF				LR	LR		
	comp=Z,7µm,20.0s						
X45A	UM Field Stati	89.11	313	P	P	12 57 07.2	-1.5
	baz=45						
UNV	Unalaska Valle	89.14	9	PFAKE		12 57 20.0	+12
UNV				LR	LR		
	comp=Z,8µm,21.0s						
Y46A	Houston	89.17	313	P	P	12 57 07.0	-1.9
	baz=45,SNR=5.1						
Z47A	Carrollton	89.18	312	P	P	12 57 08.5	-0.5
	baz=46						
U41A	Viola	89.20	316	P	P	12 57 08.1	-0.9
	baz=44						
RSSD	Black Hills	89.23	328	P	P	12 57 08.6	-0.8
	baz=36						
RSSD	Black Hills	89.23	328	eP	P	12 57 08.3	-1.1
	comp=Z,31nm,1.1s						
RSSD				LR	LR		
	comp=Z,6µm,20.0s						
RSSD	Black Hills	89.23	328	eP	P	12 57 08.3	-1.1
RSSD				pmax	pmax		
	comp=Z,31nm,1.1s						
RSSD				MLR	MLR		
	comp=Z,6µm,20.0s						
V42A	Cord	89.28	315	P	P	12 57 08.8	-0.7
	baz=44						
DIB	Dawson Inlet,	89.33	349	PFAKE		12 57 20.0	+11
DIB				LR	LR		
	comp=Z,5µm,20.0s						
S38A	Stockton	89.35	318	P	P	12 57 09.5	-0.3
	baz=43						
061Z	Ochoppi	89.48	302	P	P	12 57 09.9	-0.6
	baz=49						
ATKA	Atka Island	89.49	14	PFAKE		12 57 20.0	+10
ATKA				LR	LR		
	comp=Z,4µm,22.0s						
X44A	Crenshaw	89.50	314	P	P	12 57 09.9	-0.5
	baz=45						
T39A	Clever	89.51	317	P	P	12 57 09.5	-1.0
	baz=43						
BBB	Bella Bella	89.55	346	PFAKE		12 57 20.0	+10
BBB				LR	LR		
	comp=Z,4µm,21.0s						
PTGA	Pitinga	89.57	269	P	P	12 57 11.8	+0.7
	comp=Z,14nm,0.8s,baz=34,slow=6.3,SNR=16						
PTGA	Pitinga	89.57	269	eP	P	12 57 11.0	-0.1
	comp=Z,74nm,1.3s						
PTGA				LR	LR		
	comp=Z,2µm,20.0s						
LLLB	Lillooet	89.65	342	eP	P	12 57 10.3	-0.6
	comp=Z,87nm,1.8s						
LLLB				epP	sP	12 57 22.8	-2.0
LLLB				LR	LR		

	comp=Z,6μm,21.0s					
KSU1	**Kansas State U**	**89.67**	**321**	*e*P	**P**	**12 57 13.0 +1.8**
	comp=Z,55nm,1.1s					
KSU1				LR	LR	
	comp=Z,7μm,20.0s					
U40A	**Yellville**	**89.71**	**317**	P	**P**	**12 57 09.9 -1.6**
	baz=43					
V41A	**Mountainview**	**89.73**	**316**	P	**P**	**12 57 10.2 -1.4**
	baz=44					
X43A	**Marvell**	**89.91**	**314**	PFAKE		12 57 20.0 +7.6
X43A				LR	LR	
	comp=Z,4μm,21.0s					
BRAL	**Brewton**	**89.96**	**310**	PFAKE		12 57 20.0 +7.3
BRAL				LR	LR	
	comp=Z,3μm,20.0s					
T38A	**Diamond**	**90.00**	**318**	P	**P**	**12 57 11.4 -1.4**
	baz=42					
JTMT	**Jette**	**90.03**	**336**	*e*P	**P**	**12 57 13.0 +0.1**
	comp=Z,76nm,1.3s					
U39A	**Green Forest**	**90.03**	**317**	P	**P**	**12 57 11.4 -1.6**
	baz=43,SNR=7.4					
V40A	**Witts Springs**	**90.09**	**316**	P	**P**	**12 57 12.0 -1.3**
	baz=43					
V40A	**Witts Springs**	**90.09**	**316**	*e*P	**P**	**12 57 11.8 -1.5**
	comp=Z,70nm,1.5s					
V40A				LR	LR	
	comp=Z,6μm,20.0s					
HRY	**Holter Researc**	**90.10**	**334**	*e*P	**P**	**12 57 12.1 -1.1**
WHAR	**Wooly Hollow**	**90.16**	**316**	*e*P	**P**	**12 57 14.0 +0.5**
	comp=Z,45nm,1.1s					
W41B	**Gary Mavity, V**	**90.22**	**316**	P	**P**	**12 57 12.6 -1.2**
	baz=44					
W41B	**Gary Mavity, V**	**90.22**	**316**	*e*P	**P**	**12 57 12.7 -1.2**
	comp=Z,30nm,0.9s					
W41B				LR	LR	
	comp=Z,5μm,20.0s					
NEW	**Newport**	**90.46**	**338**	P	**P**	**12 57 14.9 +0.1**
	comp=Z,15nm,0.8s,baz=50,slow=4.7,SNR=12					
NEW	**Newport**	**90.46**	**338**	P	**P**	**12 57 13.8 -1.0**
	baz=27					
NEW	**Newport**	**90.46**	**338**	*e*P	**P**	**12 57 14.5 -0.3**
	comp=Z,49nm,1.1s					
NEW				LR	LR	
	comp=Z,7μm,19.0s					
RLMT	**Red Lodge**	**90.52**	**332**	P	**P**	**12 57 13.7 -1.6**
	baz=32					
RLMT	**Red Lodge**	**90.52**	**332**	*e*P	**P**	**12 57 13.8 -1.6**
	comp=Z,94nm,1.5s					
RLMT				LR	LR	
	comp=Z,5μm,19.0s					
V39A	**Pettigrew**	**90.52**	**317**	P	**P**	**12 57 14.2 -1.1**
	baz=43					
W40A	**Ferguson Farm,**	**90.67**	**316**	P	**P**	**12 57 14.8 -1.1**
	baz=43					
W40A	**Ferguson Farm,**	**90.67**	**316**	*e*P	**P**	**12 57 15.9 -0.1**
	comp=Z,39nm,1.0s					
W40A				LR	LR	
	comp=Z,5μm,21.0s					
MSO	**Missoula**	**90.72**	**336**	P	**P**	**12 57 14.4 -1.7**
	baz=29					
MSO	**Missoula**	**90.72**	**336**	*e*P	**P**	**12 57 15.3 -0.8**
	comp=Z,35nm,1.2s					
MSO				LR	LR	
	comp=Z,8μm,20.0s					
OGNE	**Ogallala**	**90.89**	**325**	PFAKE		12 57 30.0 +13
OGNE				LR	LR	
	comp=Z,4μm,20.0s					
CBIJ	**Chichi jima**	**90.92**	**55**	PFAKE		12 57 30.0 +13
CBIJ				LR	LR	
	comp=Z,4μm,20.0s					
BOZ	**Bozeman (W)**	**90.99**	**334**	P	**P**	**12 57 14.8 -2.6**
	baz=31					
BOZ	**Bozeman (W)**	**90.99**	**334**	PFAKE		12 57 30.0 +13
BOZ				LR	LR	
	comp=Z,5μm,19.0s					
B08A	**Colville Reser**	**91.02**	**339**	*e*P	**P**	**12 57 16.6 -0.7**
	comp=Z,50nm,1.5s					
B08A				LR	LR	
	comp=Z,7μm,21.0s					
X40A	**Basin Creek Fa**	**91.05**	**315**	P	**P**	**12 57 16.6 -1.2**
	baz=43					
X40A	**Basin Creek Fa**	**91.05**	**315**	*e*P	**P**	**12 57 16.5 -1.2**
	comp=Z,18nm,0.9s					
X40A				LR	LR	
	comp=Z,4μm,20.0s					
W39A	**Magazine**	**91.07**	**316**	P	**P**	**12 57 16.5 -1.2**
	baz=43					
W39A	**Magazine**	**91.07**	**316**	*e*P	**P**	**12 57 17.9 +0.1**
	comp=Z,120nm,1.9s					
W39A				LR	LR	
	comp=Z,6μm,19.0s					
JAGI	**Jajag, Banyuwa**	**91.11**	**100**	PFAKE		12 57 30.0 +12
JAGI				LR	LR	
	comp=Z,3μm,21.0s					
DAV	**Davao City (W)**	**91.15**	**80**	LR	LR	13 45 25.8
	comp=Z,3μm,18.7s,baz=357,slow=40					
C09A	**Chrisman Ranch**	**91.22**	**339**	*e*P	**P**	**12 57 18.4 +0.1**
	comp=Z,82nm,1.3s					
C09A				LR	LR	
	comp=Z,8μm,22.0s					
VBMS	**Vicksburg**	**91.33**	**312**	PFAKE		12 57 30.0 +11
VBMS				LR	LR	
	comp=Z,6μm,20.0s					
Y41A	**Eaglette Beard**	**91.36**	**315**	P	**P**	**12 57 18.3 -0.9**
	baz=43					
YNR	**Norris Junctio**	**91.39**	**332**	PFAKE		12 57 30.0 +11
YNR				LR	LR	
	comp=Z,3μm,20.0s					
YHH	**Holmes Hill**	**91.39**	**333**	*e*P	**P**	**12 57 19.8 +0.3**
	comp=Z,60nm,1.4s					
LKWY	**Lake**	**91.42**	**332**	PFAKE		12 57 30.0 +10
LKWY				LR	LR	
	comp=Z,5μm,21.0s					
MIAR	**Mount Ida**	**91.43**	**316**	P	**P**	**12 57 18.4 -1.0**
	baz=43,SNR=7.8					
MIAR	**Mount Ida**	**91.43**	**316**	*e*P	**P**	**12 57 18.6 -0.9**
	comp=Z,100nm,1.4s					
MIAR				LR	LR	
	comp=Z,6μm,20.0s					
MIAR	**Mount Ida**	**91.43**	**316**	*e*P	**P**	**12 57 18.6 -0.9**
MIAR				pmax	pmax	
	comp=Z,101nm,1.4s					
MIAR				MLR	MLR	
	comp=Z,6μm,20.0s					
CBKS	**Cedar Bluff**	**91.46**	**322**	*e*P	**P**	**12 57 19.7 +0.1**
	comp=Z,75nm,1.3s					
CBKS				LR	LR	
	comp=Z,6μm,20.0s					
CBKS	**Cedar Bluff**	**91.46**	**322**	*e*P	**P**	**12 57 19.7 +0.1**
CBKS				pmax	pmax	
	comp=Z,75nm,1.3s					
CBKS				MLR	MLR	
	comp=Z,6μm,20.0s					
B06A	**Marblemount**	**91.47**	**341**	PFAKE		12 57 30.0 +11
B06A				LR	LR	
	comp=Z,4μm,22.0s					
K22A	**Casper**	**91.48**	**329**	P	**P**	**12 57 18.6 -1.2**
	baz=34					
K22A	**Casper**	**91.48**	**329**	*e*P	**P**	**12 57 18.3 -1.5**
	comp=Z,54nm,1.1s					
K22A				LR	LR	
	comp=Z,6μm,19.0s					
DLMT	**Dillon**	**91.53**	**334**	*e*P	**P**	**12 57 18.9 -1.1**
	comp=Z,62nm,1.5s					
DLMT				LR	LR	
	comp=Z,4μm,21.0s					
YMR	**Madison River**	**91.54**	**333**	*e*P	**P**	**12 57 20.0 -0.1**
YHB	**Horse Butte**	**91.55**	**333**	PFAKE		12 57 30.0 +10
YHB				LR	LR	
	comp=Z,5μm,21.0s					
244A	**Avery, Jackson**	**91.56**	**312**	P	**P**	**12 57 19.1 -1.0**
	baz=44					
H17A	**Grant Village**	**91.63**	**332**	P	**P**	**12 57 19.6 -1.0**
	baz=32					
H17A	**Grant Village**	**91.63**	**332**	PFAKE		12 57 30.0 +9.4
H17A				LR	LR	
	comp=Z,7μm,19.0s					
TUL1	**Leonard**	**91.64**	**318**	P	**P**	**12 57 19.5 -1.0**
	baz=42					
TUL1	**Leonard**	**91.64**	**318**	*e*P	**P**	**12 57 21.7 +1.3**
	comp=Z,49nm,0.9s					
TUL1				LR	LR	
	comp=Z,4μm,22.0s					
YFT	**Old Faithful**	**91.68**	**332**	*e*P	**P**	**12 57 23.9 +3.1**
	comp=Z,64nm,1.2s					
X39A	**Fountain Ranch**	**91.75**	**316**	P	**P**	**12 57 20.1 -1.0**
	baz=42,SNR=9.8					
PGC	**Sidney**	**91.85**	**342**	PFAKE		12 57 30.0 +8.9
PGC				LR	LR	
	comp=Z,5μm,22.0s					
B05A	**Bryant**	**91.86**	**341**	P	**P**	**12 57 19.8 -1.4**
	baz=23					
MTDJ	**Mount Denham**	**91.96**	**294**	PFAKE		12 57 30.0 +7.7
MTDJ				LR	LR	
	comp=Z,2μm,20.0s					
D08A	**Wollman Farm,**	**92.08**	**339**	PFAKE		12 57 30.0 +7.7
D08A				LR	LR	
	comp=Z,7μm,18.0s					
MCMT	**McKenzie Canyo**	**92.09**	**334**	*e*P	**P**	**12 57 22.7 0.0**
PHWY	**Pilot Hill**	**92.13**	**327**	PFAKE		12 57 30.0 +7.0
PHWY				LR	LR	
	comp=Z,5μm,20.0s					
IMW	**Indian Meadow**	**92.19**	**332**	*e*P	**P**	**12 57 23.3 +0.1**
	comp=Z,30nm,1.0s					
IMW				LR	LR	
	comp=Z,5μm,22.0s					
MOOW	**Moose Ponds**	**92.24**	**332**	*e*P	**P**	**12 57 23.3 -0.1**
	comp=Z,25nm,1.3s					
LOHW	**Long Hollow**	**92.30**	**332**	*e*P	**P**	**12 57 23.5 -0.2**
	comp=Z,19nm,1.1s					
LOHW				*e*pP	**sP**	**12 57 36.3 -1.3**
LOHW				LR	LR	
	comp=Z,4μm,21.0s					
LTY	**Liberty**	**92.40**	**340**	PFAKE		12 57 30.0 +6.2
LTY				LR	LR	
	comp=Z,5μm,22.0s					
SDV	**Santo Domingo**	**92.43**	**283**	P	**P**	**12 57 24.1 -0.5**
	comp=Z,13nm,0.6s,baz=12,slow=0.5,SNR=6.6					
SDV				LR	LR	13 38 21.4
	comp=Z,781nm,18.7s,baz=54,slow=35					
FXWY	**Fox Creek**	**92.44**	**332**	*e*P	**P**	**12 57 24.5 +0.2**
	comp=Z,21nm,1.0s					
SNOW	**Snow King Moun**	**92.49**	**332**	*e*P	**P**	**12 57 24.7 +0.2**
	comp=Z,16nm,0.9s					
SNOW				LR	LR	
	comp=Z,5μm,21.0s					
TPAW	**Teton Pass**	**92.54**	**332**	*e*P	**P**	**12 57 24.2 -0.7**
	comp=Z,29nm,1.0s					
TPAW				LR	LR	
	comp=Z,3μm,20.0s					
F10A	**Beach Ranch, E**	**92.54**	**337**	*e*P	**P**	**12 57 24.2 -0.4**
	comp=Z,39nm,1.3s					
F10A				LR	LR	
	comp=Z,5μm,20.0s					
RWWY	**Rawlins**	**92.56**	**329**	PFAKE		12 57 40.0 +15
RWWY				LR	LR	
	comp=Z,8μm,20.0s					
REDW	**Red Top Meadow**	**92.61**	**332**	*e*P	**P**	**12 57 24.5 -0.6**
	comp=Z,21nm,1.1s					
REDW				LR	LR	
	comp=Z,6μm,20.0s					
BW06	**Boulder Array**	**92.62**	**331**	P	**P**	**12 57 23.5 -1.6**
	baz=32					
BW06	**Boulder Array**	**92.62**	**331**	*e*P	**P**	**12 57 23.9 -1.2**
	comp=Z,27nm,1.3s					
BW06				LR	LR	
	comp=Z,6μm,18.0s					
PD31	**Pinedale Array**	**92.62**	**331**	*e*P	**P**	**12 57 23.9 -1.2**
PDAR	**Pinedale Array**	**92.62**	**331**	P	**P**	**12 57 23.8 -1.4**
	comp=Z,4.4nm,0.8s,baz=54,slow=4.0,SNR=26					
PDAR				LR	LR	13 41 29.4
	comp=Z,6μm,18.2s,baz=34,slow=37					
PDAR	**Pinedale Array**	**92.62**	**331**	*e*P	**P**	**12 57 23.5 -1.6**
E08A	**Dider Farm, El**	**92.63**	**339**	PFAKE		12 57 40.0 +15
E08A				LR	LR	
	comp=Z,8μm,18.0s					
N23A	**Red Feather La**	**92.68**	**327**	P	**P**	**12 57 24.5 -1.0**
	baz=35					
N23A	**Red Feather La**	**92.68**	**327**	*e*P	**P**	**12 57 25.1 -0.4**
	comp=Z,55nm,1.4s					
N23A				LR	LR	
	comp=Z,5μm,20.0s					
KSCO	**Kaye Shedlock'**	**92.70**	**324**	PFAKE		12 57 40.0 +15
KSCO				LR	LR	
	comp=Z,6μm,21.0s					
E07A	**Sunnyside**	**92.81**	**339**	PFAKE		12 57 40.0 +14
E07A				LR	LR	
	comp=Z,7μm,20.0s					
140A	**Cam and Jess,**	**92.82**	**315**	PFAKE		12 57 40.0 +14
140A				LR	LR	
	comp=Z,5μm,20.0s					
D05A	**Enumclaw**	**92.82**	**341**	*e*P	**P**	**12 57 26.1 +0.4**
	comp=Z,65nm,1.3s					
D05A				LR	LR	
	comp=Z,5μm,21.0s					
HAWA	**Hanford**	**92.86**	**339**	*e*P	**P**	**12 57 26.1 +0.2**
	comp=Z,46nm,1.1s					
HAWA				LR	LR	
	comp=Z,7μm,18.0s					
NLWA	**Neilton Lookou**	**93.12**	**342**	PFAKE		12 57 40.0 +13
NLWA				LR	LR	
	comp=Z,7μm,22.0s					
LON	**Longmire**	**93.18**	**340**	*e*P	**P**	**12 57 27.0 -0.4**
	comp=Z,22nm,1.2s					
LON				LR	LR	
	comp=Z,7μm,22.0s					
LON	**Longmire**	**93.18**	**340**	*e*P	**P**	**12 57 27.0 -0.4**
LON				pmax	pmax	
	comp=Z,22nm,1.2s					
LON				MLR	MLR	
	comp=Z,7μm,22.0s					
AHID	**Auburn Hatcher**	**93.22**	**332**	*e*P	**P**	**12 57 26.6 -1.3**
	comp=Z,19nm,0.8s					
AHID				LR	LR	
	comp=Z,6μm,19.0s					
240A	**Hunter Patters**	**93.37**	**314**	PFAKE		12 57 40.0 +12
240A				LR	LR	
	comp=Z,4μm,22.0s					
ISCO	**Idaho Springs**	**93.43**	**327**	P	**P**	**12 57 27.6 -1.5**
	baz=35					
ISCO	**Idaho Springs**	**93.43**	**327**	*e*P	**P**	**12 57 27.3 -1.7**
	comp=Z,12nm,1.0s					
ISCO				LR	LR	
	comp=Z,6μm,20.0s					
ISCO	**Idaho Springs**	**93.43**	**327**	*e*P	**P**	**12 57 27.3 -1.7**
ISCO				pmax	pmax	
	comp=Z,12nm,1.0s					
ISCO				MLR	MLR	
	comp=Z,6μm,20.0s					
F07A	**Phinny Hill Vi**	**93.43**	**339**	PFAKE		12 57 40.0 +12
F07A				LR	LR	
	comp=Z,8μm,18.0s					
SPB	**Sao Paulo**	**93.50**	**243**	PFAKE		12 57 40.0 +11
SPB				LR	LR	
	comp=Z,8μm,21.0s					
341A	**Kurthwood**	**93.54**	**313**	PFAKE		12 57 40.0 +11
341A				LR	LR	
	comp=Z,6μm,21.0s					
BMO	**Blue Mountains**	**93.57**	**337**	*e*P	**P**	**12 57 27.6 -1.7**
	comp=Z,26nm,0.9s					
BMO				LR	LR	
	comp=Z,5μm,20.0s					
BMO	**Blue Mountains**	**93.57**	**337**	*e*P	**P**	**12 57 27.6 -1.7**
BMO				pmax	pmax	
	comp=Z,26nm,0.9s					
BMO				MLR	MLR	
	comp=Z,5μm,20.0s					
KAPI	**Kappang**	**93.57**	**94**	PFAKE		12 57 40.0 +10
KAPI				LR	LR	
	comp=Z,3μm,22.0s					
LUWI	**Luwuk**	**93.68**	**89**	PFAKE		12 57 40.0 +10
LUWI				LR	LR	
	comp=Z,2μm,22.0s					
G08A	**Pilot Rock**	**93.69**	**338**	*e*P	**P**	**12 57 28.8 -1.1**
	comp=Z,24nm,1.3s					
G08A				*e*pP	**sP**	**12 57 43.0 -0.8**
HLID	**Hailey**	**93.74**	**334**	P	**P**	**12 57 28.7 -1.6**
	baz=29					
HLID	**Hailey**	**93.74**	**334**	PFAKE		12 57 40.0 +10
HLID				LR	LR	
	comp=Z,6μm,22.0s					
E03A	**Lebam**	**93.83**	**341**	*e*pP	pP	12 57 44.5 +4.0
E03A				LR	LR	
	comp=Z,4μm,21.0s					
Q24A	**Divide**	**93.90**	**326**	P	**P**	**12 57 29.2 -2.0**
	baz=35					
Q24A	**Divide**	**93.90**	**326**	*e*P	**P**	**12 57 33.6 +2.3**
Q24A				LR	LR	
	comp=Z,4μm,18.0s					
NATX	**Nacogdoches**	**94.09**	**315**	PFAKE		12 57 40.0 +8.2
NATX				LR	LR	
	comp=Z,5μm,19.0s					
WMOK	**Wichita Mounta**	**94.12**	**319**	P	**P**	**12 57 29.4 -2.6**
	baz=40,SNR=5.1					
WMOK	**Wichita Mounta**	**94.12**	**319**	PFAKE		12 57 40.0 +8.1
WMOK				LR	LR	
	comp=Z,4μm,20.0s					
G06A	**Carlson Farm,**	**94.23**	**339**	*e*P	**P**	**12 57 36.0 +3.8**
	comp=Z,35nm,1.1s					
O20A	**White River Ci**	**94.29**	**329**	*e*P	**P**	**12 57 35.0 +2.2**
	comp=Z,28nm,1.3s					
O20A				LR	LR	
	comp=Z,7μm,22.0s					
MFID	**Camas Ranch**	**94.36**	**335**	*e*P	**P**	**12 57 32.8 -0.2**
	comp=Z,33nm,1.2s					
HWUT	**Hardware Ranch**	**94.39**	**331**	*e*P	**P**	**12 57 32.0 -1.2**
	comp=Z,34nm,1.0s					
HWUT				LR	LR	
	comp=Z,7μm,20.0s					
HVU	**Hansel Valley**	**94.70**	**332**	*e*P	**P**	**12 57 34.2 -0.4**
	comp=Z,25nm,1.0s					
HVU				LR	LR	
	comp=Z,5μm,22.0s					
HVU	**Hansel Valley**	**94.70**	**332**	*e*P	**P**	**12 57 34.2 -0.4**
HVU				pmax	pmax	
	comp=Z,25nm,1.0s					
HVU				MLR	MLR	
	comp=Z,5μm,22.0s					
TCUT	**Toone Canyon**	**94.74**	**331**	*e*P	**P**	**12 57 35.9 +0.9**
	comp=Z,35nm,1.1s					
I07A	**Izee**	**94.95**	**338**	*e*P	**P**	**12 57 36.9 +1.3**
	comp=Z,19nm,1.1s					
I07A				*e*pP	**sP**	**12 57 47.3 -2.3**
I07A				LR	LR	
	comp=Z,6μm,20.0s					
SPUT	**South Promonto**	**94.98**	**332**	PFAKE		12 57 50.0 +14
SPUT				LR	LR	
	comp=Z,6μm,18.0s					
T25A	**Trinidad**	**95.04**	**324**	P	**P**	**12 57 34.8 -1.6**
	baz=36					
T25A	**Trinidad**	**95.04**	**324**	*e*P	**P**	**12 57 35.0 -1.4**
	comp=Z,21nm,1.0s					
T25A				LR	LR	
	comp=Z,5μm,21.0s					
SDCO	**Great Sand Dun**	**95.05**	**325**	P	**P**	**12 57 34.9 -1.6**
	baz=35					
SDCO	**Great Sand Dun**	**95.05**	**325**	*e*P	**P**	**12 57 34.8 -1.7**
	comp=Z,11nm,1.0s					
SDCO				LR	LR	
	comp=Z,5μm,21.0s					
H04A	**Detroit Lake**	**95.18**	**340**	PFAKE		12 57 50.0 +13
H04A				LR	LR	
	comp=Z,8μm,19.0s					
JLU	**Jordanelle**	**95.20**	**331**	*e*P	**P**	**12 57 35.7 -1.4**
	comp=Z,17nm,1.0s					
JLU				LR	LR	
	comp=Z,6μm,20.0s					
CTU	**Camp Tracy**	**95.24**	**331**	*e*P	**P**	**12 57 35.8 -1.3**
	comp=Z,19nm,1.2s					
CTU				*e*pP	**sP**	**12 57 50.9 -0.1**
CTU				LR	LR	
	comp=Z,6μm,20.0s					
WHTX	**Lake Whitney,**	**95.49**	**317**	PFAKE		12 57 50.0 +12
WHTX				LR	LR	
	comp=Z,6μm,20.0s					
AMTX	**Amarillo**	**95.50**	**321**	PFAKE		12 57 50.0 +12
AMTX				LR	LR	
	comp=Z,4μm,20.0s					
BGU	**Big Grassy Mou**	**95.53**	**332**	*e*P	**P**	**12 57 37.8 -0.7**
BGU				LR	LR	
	comp=Z,6μm,18.0s					
P18A	**Preston Nutter**	**95.55**	**330**	*e*P	**P**	**12 57 37.8 -0.9**
	comp=Z,21nm,1.2s					
P18A				LR	LR	
	comp=Z,7μm,19.0s					
COR	**Corvallis**	**95.58**	**340**	PFAKE		12 57 50.0 +12
COR				LR	LR	
	comp=Z,5μm,21.0s					
PINE	**Pine Mountain**	**95.64**	**339**	*e*P	**P**	**12 57 38.1 -0.9**
	comp=Z,63nm,1.3s					
PINE				LR	LR	
	comp=Z,6μm,18.0s					
S22A	**4UR Ranch, Cre**	**95.66**	**326**	P	**P**	**12 57 37.9 -1.3**
	baz=34					
S22A	**4UR Ranch, Cre**	**95.66**	**326**	*e*P	**P**	**12 57 38.4 -0.9**
	comp=Z,8.3nm,1.0s					
S22A				LR	LR	
	comp=Z,4μm,18.0s					
MPU	**Maple Canyon**	**95.78**	**331**	*e*pP	pP	12 57 52.4 +2.6
MPU				LR	LR	
	comp=Z,6μm,19.0s					
PV07	**Paradox Valley**	**95.88**	**328**	*e*P	**P**	**12 57 39.9 -0.3**
	comp=Z,17nm,1.2s					
P17A	**Butcher Ranch,**	**95.88**	**330**	PFAKE		12 57 50.0 +10
P17A				LR	LR	
	comp=Z,8μm,20.0s					
PV15	**Paradox Valley**	**95.89**	**328**	*e*P	**P**	**12 57 38.6 -1.6**
	comp=Z,9.7nm,0.8s					
NLU	**North Lily Min**	**96.00**	**331**	PFAKE		12 57 50.0 +9.3
NLU				LR	LR	
	comp=Z,9μm,19.0s					
PV04	**Paradox Valley**	**96.03**	**328**	PFAKE		12 57 50.0 +9.2
PV04				LR	LR	
	comp=Z,7μm,22.0s					
PV09	**Paradox Valley**	**96.03**	**328**	*e*P	**P**	**12 57 40.2 -0.7**
DUG	**Dugway, Tooele**	**96.08**	**332**	P	**P**	**12 57 40.1 -0.8**
	baz=30					
DUG	**Dugway, Tooele**	**96.08**	**332**	*e*P	**P**	**12 57 40.2 -0.8**
	comp=Z,10nm,0.9s					
DUG				LR	LR	
	comp=Z,6μm,19.0s					
DUG	**Dugway, Tooele**	**96.08**	**332**	*e*P	**P**	**12 57 40.2 -0.8**
DUG				pmax	pmax	
	comp=Z,10.0nm,0.9s					
DUG				MLR	MLR	
	comp=Z,6μm,19.0s					
PV01	**Paradox Valley**	**96.10**	**328**	*e*P	**P**	**12 57 40.5 -0.7**
	comp=Z,9.4nm,1.0s					
SRU	**San Rafael Swe**	**96.10**	**329**	*e*P	**P**	**12 57 40.2 -0.9**
	comp=Z,10nm,0.8s					
SRU				LR	LR	
	comp=Z,7μm,19.0s					
SRU	**San Rafael Swe**	**96.10**	**329**	*e*P	**P**	**12 57 40.2 -0.9**
SRU				pmax	pmax	
	comp=Z,11nm,0.8s					
SRU				MLR	MLR	
	comp=Z,7μm,19.0s					
HKT	**Hockley**	**96.10**	**314**	PFAKE		12 57 50.0 +9.1
HKT				LR	LR	
	comp=Z,6μm,21.0s					
PV02	**Paradox Valley**	**96.11**	**328**	*e*P	**P**	**12 57 40.1 -1.2**
	comp=Z,45nm,1.8s					
PV03	**Paradox Valley**	**96.12**	**328**	*e*P	**P**	**12 57 40.6 -0.6**
	comp=Z,54nm,1.9s					
RUSC	**La Rusia**	**96.16**	**282**	PFAKE		12 57 50.0 +7.9
RUSC				LR	LR	
	comp=Z,500nm,20.0s					
WVOR	**Wild Horse Val**	**96.16**	**336**	*e*P	**P**	**12 57 41.1 -0.2**
	comp=Z,21nm,1.0s					
WVOR				LR	LR	
	comp=Z,6μm,20.0s					
WVOR	**Wild Horse Val**	**96.16**	**336**	*e*P	**P**	**12 57 41.1 -0.2**
WVOR				pmax	pmax	
	comp=Z,21nm,1.0s					
WVOR				MLR	MLR	
	comp=Z,6μm,20.0s					
J05D	**Fort Rock, OR**	**96.19**	**339**	P	**P**	**12 57 40.6 -0.8**
	baz=24					
ABTX	**Abilene, Hawle**	**96.20**	**318**	PFAKE		12 57 50.0 +8.5
ABTX				LR	LR	
	comp=Z,4μm,19.0s					
TMUT	**Trail Mountain**	**96.22**	**330**	*e*P	**P**	**12 57 40.8 -1.0**
	comp=Z,7.1nm,0.8s					
TMUT				LR	LR	
	comp=Z,7μm,21.0s					
I03D	**Drain, OR**	**96.41**	**340**	P	**P**	**12 57 41.2 -1.0**
	baz=22					
435B	**Jarrell**	**96.48**	**316**	PFAKE		12 57 50.0 +7.3
435B				LR	LR	
	comp=Z,4μm,19.0s					
K05A	**Summer Lake**	**96.60**	**338**	*e*P	**P**	**12 57 41.7 -1.6**
	comp=Z,90nm,1.4s					
K05A				LR	LR	
	comp=Z,6μm,19.0s					
MSTX	**Muleshoe**	**96.78**	**321**	*e*pP	pP	12 58 00.9 +6.5
MSTX				LR	LR	
	comp=Z,5μm,20.0s					
MVCO	**Mesa Verde**	**96.84**	**327**	PFAKE		12 58 00.0 +15
MVCO				LR	LR	
	comp=Z,6μm,20.0s					
SAML	**Samuel**	**96.96**	**264**	PFAKE		12 58 00.0 +15
SAML				LR	LR	

comp=Z,3μm,21.0s
MOD Modoc Plateau 97.17 337 *e*P **P 12 57 45.2 -0.6**
comp=Z,25nm,1.0s
MOD LR LR

comp=Z,7μm,20.0s
MSU Marysvale 97.28 330 *e*P **P 12 57 45.6 -0.9**
MSU Marysvale 97.28 330 *e*P **P 12 57 45.6 -0.9**
HUMO Hull Mountain 97.31 339 *e*P **P 12 57 45.2 -1.1**
comp=Z,50nm,1.6s
HUMO LR LR

comp=Z,4μm,19.0s
KEBM Edson Butte 97.45 341 PFAKE 12 58 00.0 +13
KEBM LR LR

comp=Z,6μm,22.0s
BMN Battle Mountai 97.48 335 *e*P Pdif 12 57 50.8 +3.4
BMN LR LR

comp=Z,6μm,22.0s
BMN Battle Mountai 97.48 335 *e*P Pdif 12 57 50.8 +3.4
BMN MLR MLR

comp=Z,6μm,22.0s
MMRI Maumere 97.68 95 PFAKE 12 58 00.0 +12
MMRI LR LR

comp=Z,2μm,21.0s
MTPU Mount Pierson 97.69 330 *e*P **P 12 57 47.8 -0.7**
comp=Z,12nm,1.1s
MTPU LR LR

comp=Z,6μm,20.0s
M04C Macdoel 97.75 338 P **P 12 57 47.7 -0.7**
baz=23
ROSC El Rosal 97.78 282 LR LR 13 39 09.1
comp=Z,1μm,21.7s,baz=48,slow=34
ANMO Albuquerque 97.78 324 PFAKE 12 58 00.0 +11
ANMO LR LR

comp=Z,6μm,19.0s
ANMO Albuquerque 97.78 324 *i* P Pdif 12 57 50.1 +1.2
ANMO MLR MLR

comp=Z,5μm,18.0s
HELC Santa Helena 97.91 284 PFAKE 12 58 00.0 +10
HELC LR LR

comp=Z,2μm,21.0s
PSUT Pine Spring 97.92 331 *e*P Pdif 12 57 52.8 +3.3
PSUT LR LR

comp=Z,6μm,18.0s
JCT Junction City 97.94 317 PFAKE 12 58 00.0 +11
JCT LR LR

comp=Z,4μm,20.0s
KBO Bosley Butte 98.03 340 PFAKE 12 58 00.0 +10
KBO LR LR

comp=Z,7μm,18.0s
YBH Yreka Blue Hor 98.05 339 LR LR 13 46 00.6
comp=Z,5μm,18.3s,baz=14,slow=38
PKCU Pink Cliffs 98.25 330 PFAKE 12 58 00.0 +8.9
PKCU LR LR

comp=Z,6μm,20.0s
TEIG Tepich 98.27 302 PFAKE 12 58 00.0 +9.0
TEIG LR LR

comp=Z,2μm,21.0s
SZCU Shurtz Canyon 98.43 330 PFAKE 12 58 00.0 +8.3
SZCU LR LR

comp=Z,8μm,19.0s
CCUT Cedar City 98.58 331 PFAKE 12 58 00.0 +7.6
CCUT LR LR

comp=Z,8μm,19.0s
R11A Troy Canyon, C 98.74 333 P **P 12 57 52.1 -0.9**
baz=28
R11A Troy Canyon, C 98.74 333 *e*P **P 12 57 52.9 -0.1**
comp=Z,31nm,1.9s
R11A LR LR

comp=Z,5μm,20.0s
MYIG MOrida 98.76 304 PFAKE 12 58 00.0 +6.9
MYIG LR LR

comp=Z,4μm,20.0s
KNB Kanab 98.83 330 PFAKE 12 58 00.0 +6.6
KNB LR LR

comp=Z,6μm,20.0s
PAHR Pah Rah Range 98.86 336 PFAKE 12 58 00.0 +6.5
PAHR LR LR

comp=Z,5μm,20.0s
PRAC Prado 98.91 281 PFAKE 12 58 00.0 +6.0
PRAC LR LR

comp=Z,2μm,22.0s
KVN Kaiserville 99.02 335 *e*pP pP 12 58 07.7 +3.1
KVN LR LR

comp=Z,7μm,22.0s
BEKR Beckworth 99.04 337 *e*pP pP 12 58 08.1 +3.5
BEKR LR LR

comp=Z,5μm,20.0s
WDC Whiskeytown Da 99.06 338 PFAKE 12 58 00.0 +5.8
WDC LR LR

comp=Z,6μm,20.0s
KVTX Kingsville 99.10 314 PFAKE 12 58 10.0 +15
KVTX LR LR

comp=Z,4μm,19.0s
O03D Paynes Creek 99.10 338 Pdiff **Pdif 12 57 52.7 -1.8**
baz=24
U15A North Rim 99.12 329 *e*P **Pdif 12 57 53.6 -1.3**
comp=Z,6.3nm,1.0s
U15A LR LR

comp=Z,6μm,20.0s
KHMM Horse Mountain 99.13 339 PFAKE 12 58 10.0 +15
KHMM LR LR

comp=Z,7μm,19.0s
W18A Petrified Fore 99.14 327 PFAKE 12 58 10.0 +15
W18A LR LR

comp=Z,6μm,19.0s
JCC Jacoby Creek, 99.27 340 PFAKE 12 58 10.0 +15
JCC LR LR

comp=Z,6μm,19.0s
VCNR Virginia City 99.32 336 PFAKE 12 58 10.0 +14
VCNR LR LR

comp=Z,5μm,21.0s
SIV San Ignacio 99.34 257 P **Pdif 12 57 57.6 +1.9**
comp=Z,1.5nm,0.6s,baz=73,slow=5.2,SNR=10
833A Chaparral WMA, 99.37 316 PFAKE 12 58 10.0 +14
833A LR LR

comp=Z,5μm,19.0s
YERR Yerington 99.47 335 PFAKE 12 58 10.0 +14
YERR LR LR

comp=Z,6μm,21.0s
WUAZ Wupatki 99.51 328 *e*P **Pdif 12 57 56.6 +0.1**
WUAZ LR LR

comp=Z,4μm,21.0s
RYN Ryan 99.55 335 PFAKE 12 58 10.0 +13
RYN LR LR

comp=Z,5μm,20.0s
NV11 Mina Array Sit 99.59 334 *e*P **Pdif 12 57 56.6 -0.2**
comp=Z,0.7nm,1.1s
NV11 LR LR

comp=Z,400nm,22.0s
NV01 Mina Array Sit 99.65 334 *e*Pdif **Pdif 12 57 56.3 -0.8**
NVAR Mina Array Bea 99.65 334 P **Pdif 12 57 57.3 +0.2**
comp=Z,1.0nm,0.7s,baz=50,slow=4.0,SNR=8.3
NVAR PP **PP 13 01 57.4 -2.8**
comp=Z,2.1nm,1.1s,baz=52,slow=5.8,SNR=3.9
NVAR PKKPbc **PKKPbc 13 14 19.6 +1.7**
comp=Z,0.6nm,0.6s,baz=201,slow=4.8,SNR=5.7
NVAR LR LR 13 44 53.5

comp=Z,4μm,20.7s,baz=330,slow=37
ORV Oroville 99.68 337 PFAKE 12 58 10.0 +13
ORV LR LR

comp=Z,4μm,20.0s
RUBR Rubicon Trail 99.71 336 PFAKE 12 58 10.0 +13
RUBR LR LR

comp=Z,4μm,18.0s
X18A Snowflake 99.72 327 PFAKE 12 58 10.0 +13
X18A LR LR

comp=Z,5μm,20.0s
BATI Baumata 99.73 96 LR LR 13 49 52.1
comp=Z,1μm,19.6s,baz=324,slow=40
KMRM Mail Ridge 99.73 339 PFAKE 12 58 10.0 +13
KMRM LR LR

comp=Z,10μm,19.0s
MNTX Cornudas Mount 99.90 322 Pdiff **Pdif 12 57 56.9 -1.3**
baz=36
MNTX Cornudas Mount 99.90 322 *e*Pdif **Pdif 12 57 55.9 -2.2**
comp=Z,6.2nm,0.9s
MNTX LR LR

comp=Z,5μm,20.0s
SOEI Soe 99.96 95 PFAKE 12 58 10.0 +11
SOEI LR LR

comp=Z,3μm,20.0s
WAKR Walker 99.97 335 PFAKE 12 58 10.0 +11
WAKR LR LR

comp=Z,8μm,21.0s
KCPM Cahto Peak 100.19 339 PFAKE 12 58 10.0 +11
KCPM LR LR

comp=Z,5μm,19.0s
TPNV Topopah Spring 100.22 332 PFAKE 12 58 10.0 +10
TPNV LR LR

comp=Z,5μm,21.0s
EPT El Paso 100.40 323 PFAKE 12 58 10.0 +10
EPT LR LR

comp=Z,8μm,20.0s
X16A Lo Mia Camp, P 100.47 328 PFAKE 12 58 10.0 +9.2
X16A LR LR

comp=Z,6μm,21.0s
OMMB Old Mammoth Mi 100.62 335 PFAKE 12 58 10.0 +8.4
OMMB LR LR

comp=Z,7μm,22.0s
MDPB Devils Postpil 100.63 335 PFAKE 12 58 10.0 +8.4
MDPB LR LR

comp=Z,6μm,22.0s
HOPS Hopland Field 100.68 338 PFAKE 12 58 10.0 +8.6
HOPS LR LR

comp=Z,5μm,22.0s
CMB Columbia Colle 100.71 336 PFAKE 12 58 10.0 +8.4
CMB LR LR

comp=Z,3μm,20.0s
GDXM Geysers 100.77 338 PFAKE 12 58 10.0 +8.1
GDXM LR LR

comp=Z,6μm,18.0s
W13A Hualapai Mount 100.91 330 PFAKE 12 58 10.0 +7.2
W13A LR LR

comp=Z,6μm,21.0s
TXAR Lajitas Array 100.92 319 P **Pdif 12 58 02.2 -0.5**
comp=Z,1.6nm,0.9s,baz=56,slow=3.9,SNR=13
TXAR PKKPbc **PKKPbc 13 14 15.7 +1.8**
comp=Z,0.5nm,0.9s,baz=204,slow=4.0,SNR=3.7
DAC Darwin (Calif) 101.31 333 PFAKE 12 58 20.0 +15
DAC LR LR

comp=Z,5μm,22.0s
MCCM Marconi Confer 101.40 338 PFAKE 12 58 20.0 +15
MCCM LR LR

comp=Z,3μm,18.0s
LDFC Landfair 101.42 331 PFAKE 12 58 20.0 +15
LDFC LR LR

comp=Z,8μm,19.0s
MPMC Manual Prospec 101.47 333 Pdiff **Pdif 12 58 04.0 -1.2**
baz=27
Y14A Wickenburg 101.55 328 PFAKE 12 58 20.0 +15
Y14A LR LR

comp=Z,5μm,20.0s
TGUH Tegucigalpa,Un 101.75 297 PFAKE 12 58 20.0 +13
TGUH LR LR

comp=Z,2μm,22.0s
GSC Goldstone, Bar 101.89 332 PFAKE 12 58 20.0 +13
GSC LR LR

comp=Z,6μm,18.0s
TUC Tucson 101.97 326 PFAKE 12 58 20.0 +13
TUC LR LR

comp=Z,5μm,20.0s
LNIG Linares 102.02 313 PFAKE 12 58 20.0 +12
LNIG LR LR

comp=Z,2μm,19.0s
319A Douglas 102.06 324 PFAKE 12 58 20.0 +12
319A LR LR

comp=Z,4μm,21.0s
HDC Heredia 102.11 292 PFAKE 12 58 20.0 +12
HDC LR LR

comp=Z,2μm,20.0s
ISA Isabella, Lake 102.18 333 PFAKE 12 58 20.0 +12
ISA LR LR

comp=Z,3μm,20.0s
SAO San Andreas Ge 102.21 336 PFAKE 12 58 20.0 +12
SAO LR LR

comp=Z,4μm,19.0s
CPUP Villa Florida 102.34 246 PKiKP **PKiKP 13 02 32.4 +1.8**
comp=Z,9.9nm,1.1s,baz=77,slow=6.7,SNR=4.0
Y12C Blythe 102.34 330 PFAKE 12 58 20.0 +11
Y12C LR LR

comp=Z,6μm,19.0s
PMPB Monarch Peak 102.50 335 PFAKE 12 58 20.0 +10
PMPB LR LR

comp=Z,5μm,20.0s
PAGB Antelope Grade 102.75 335 PFAKE 12 58 20.0 +9.3
PAGB LR LR

comp=Z,5μm,20.0s
MBWA Marble Bar 102.83 107 PFAKE 12 58 20.0 +8.9
MBWA LR LR

comp=Z,3μm,21.0s
113A Mohawk Valley, 102.88 328 PFAKE 12 58 20.0 +8.7
113A LR LR

comp=Z,4μm,20.0s
GLA Glamis 103.08 329 PFAKE 12 58 20.0 +7.8
GLA LR LR

comp=Z,3μm,19.0s
PFO Pinyon Flats O 103.24 331 PFAKE 12 58 20.0 +6.9
PFO LR LR

comp=Z,6μm,21.0s
MWC Mount Wilson 103.31 332 PFAKE 12 58 20.0 +6.5
MWC LR LR

comp=Z,4μm,19.0s
PASC Pasadena Art C 103.41 332 PFAKE 12 58 20.0 +6.4
PASC LR LR

comp=Z,5μm,20.0s
CCIG Comitan 103.64 302 PFAKE 12 58 30.0 +15
CCIG LR LR

comp=Z,3μm,22.0s
OTAV Otavalo 103.83 281 PFAKE 12 58 30.0 +14
OTAV LR LR

comp=Z,1μm,21.0s
HPIG 103.89 319 PFAKE 12 58 30.0 +14
HPIG LR LR

comp=Z,4μm,18.0s
LVIG Laguna Verde 104.01 308 PFAKE 12 58 30.0 +13
LVIG LR LR

comp=Z,1μm,22.0s
CPE Camp Elliot 104.13 331 PFAKE 12 58 30.0 +13
CPE LR LR

comp=Z,5μm,20.0s
BAR Barrett 104.15 331 PFAKE 12 58 30.0 +13
BAR LR LR

comp=Z,5μm,21.0s
SNCC San Nicolas Is 104.73 333 PFAKE 12 58 30.0 +10
SNCC LR LR

comp=Z,3μm,20.0s
HSIG 104.81 324 PFAKE 12 58 30.0 +10
HSIG LR LR

comp=Z,3μm,21.0s
LPAZ La Paz 105.09 261 PKiKP **PKiKP 13 02 38.4 +1.8**
comp=Z,5.1nm,1.1s,baz=0.0,slow=3.0,SNR=6.9
ZAIG Zacatecas 105.46 314 PFAKE 13 02 50.0
ZAIG LR LR

comp=Z,4μm,20.0s
UNM Universidad Na 106.04 309 PFAKE 13 02 50.0
UNM LR LR

comp=Z,600nm,21.0s
HOPE Hope Point 106.37 214 PFAKE 13 02 50.0
HOPE LR LR

comp=Z,4μm,22.0s
MAW Mawson 106.79 167 PFAKE 13 02 50.0
MAW LR LR

comp=Z,700nm,21.0s
SRIG Santa Rosalia 106.86 324 PFAKE 13 02 50.0
SRIG LR LR

comp=Z,3μm,18.0s
TLIG Tlapa 106.97 308 PFAKE 13 02 50.0
TLIG LR LR

comp=Z,2μm,22.0s
MOIG Morelia 107.02 311 PFAKE 13 02 50.0
MOIG LR LR

comp=Z,2μm,21.0s
MNMC Minye Minye 107.82 259 PFAKE 13 02 50.0
MNMC LR LR

comp=Z,3μm,22.0s
SLBS Sierra La Lagu 108.76 320 PFAKE 13 02 50.0
SLBS LR LR

comp=Z,3μm,19.0s
PB01 IPOC Station P 108.76 257 PFAKE 13 02 50.0
PB01 LR LR

comp=Z,3μm,19.0s
NNA Nana 109.69 269 PFAKE 13 03 00.0
NNA LR LR

comp=Z,3μm,22.0s
PB04 IPOC Station P 109.97 257 PFAKE 13 03 00.0
PB04 LR LR

comp=Z,2μm,19.0s
SNAA Sanae 110.08 190 P **Pdif 12 58 49.3 +7.1**
SNAA Sanae 110.08 190 PFAKE 13 03 00.0
SNAA LR LR

comp=Z,4μm,20.0s
VNA2 Neumayer--Watz 110.13 192 P **Pdif 12 58 49.3 +6.9**
VNA3 Neumayer Olymp 110.79 192 P **Pdif 12 58 53.5 +8.2**
PB10 IPOC Station P 110.91 256 PFAKE 13 03 00.0
PB10 LR LR

comp=Z,3μm,21.0s
GO02 Mina Guanaco 111.01 254 PFAKE 13 03 00.0
GO02 LR LR

comp=Z,4μm,21.0s
GO03 Copiap 112.75 252 PFAKE 13 03 00.0
GO03 LR LR

comp=Z,3μm,18.0s
MIR Mirnyy 113.58 157 *e*PKiKP PKiKP 13 03 04.0 +14
MIR pmax pmax

comp=Z,20nm,1.0s
WRA Warramunga Arr 113.67 98 Pdiff **Pdif 12 58 59.9 +0.5**
comp=Z,0.4nm,0.8s,baz=319,slow=4.2,SNR=3.1
WRA PKiKP **PKiKP 13 02 52.2 +0.3**
comp=Z,4.7nm,0.8s,baz=315,slow=1.5,SNR=24
WRA PKKPbc **PKKPbc 13 13 35.2 +1.2**
comp=Z,1.3nm,0.6s,baz=117,slow=3.3,SNR=9.6
WRAB Tennant Creek 113.67 98 PFAKE 13 03 00.0
WRAB LR LR

comp=Z,2μm,22.0s
WRAB Tennant Creek 113.67 98 *i* PKiKP **PKiKP 13 02 53.0 +1.1**
LCO Las Campanas 113.81 251 PFAKE 13 03 00.0
LCO LR LR

comp=Z,5μm,21.0s
MANU Manus Island 113.86 74 PFAKE 13 03 00.0
MANU LR LR

comp=Z,1μm,22.0s
FORT Forrest 114.23 111 PFAKE 13 03 00.0 +7.4
FORT LR LR

comp=Z,4μm,21.0s
GO04 Tololo Observa 114.45 250 PFAKE 13 03 00.0 +6.6
GO04 LR LR

comp=Z,3μm,20.0s
ASAR Alice Springs 115.24 102 PKP **PKPdf 13 02 54.6 -0.2**
comp=Z,5.9nm,0.7s,baz=326,slow=1.4,SNR=36
ASAR PKKPbc **PKKPbc 13 13 30.1 +1.3**
comp=Z,1.4nm,0.6s,baz=120,slow=3.4,SNR=19
AS31 Alice Springs 115.24 102 *e*PKPdf **PKPdf 13 02 54.6 -0.3**
AS01 Alice Springs 115.28 102 *e*PKPdf **PKPdf 13 02 54.0 -0.9**
COEN Coen 117.57 87 *e*PKPdf **PKPdf 13 02 59.9 +0.4**
COEN LR LR

comp=Z,1μm,21.0s
PMG Port Moresby 118.17 81 PFAKE 13 03 10.0 +9.3
PMG LR LR

comp=Z,1μm,20.0s
PLCA Paso Flores 119.03 239 PKP **PKPdf 13 03 03.1 +1.5**
comp=Z,1.5nm,0.5s,baz=34,slow=7.8,SNR=4.7
PLCA Paso Flores 119.03 239 *e*PKPdf **PKPdf 13 03 01.3 -0.3**
PLCA PKP **PKPdf 13 03 03.1 +1.5**
CASY Casey 119.49 153 PFAKE 13 03 10.0 +8.4
CASY LR LR

comp=Z,4μm,22.0s
BBOO Buckleboo 121.21 110 *e*PKPdf **PKPdf 13 03 06.1 +0.1**
BBOO LR LR

comp=Z,5μm,22.0s
KIP Kipapa 122.13 8 *i* PKiKP **PKPdf 13 03 08.2 0.0**
CHRN Cochrane 122.85 233 PFAKE 13 03 20.0 +11
CHRN LR LR

comp=Z,100nm,21.0s
CTA Charters Tower 123.32 91 PKP **PKPdf 13 03 11.2 +0.8**
comp=Z,19nm,0.8s,baz=294,slow=2.6,SNR=24
CTAO Charters Tower 123.32 91 *e*PKPdf **PKPdf 13 03 10.2 -0.2**
CTAO LR LR

comp=Z,2μm,19.0s
CTAO Charters Tower 123.32 91 *e*PKiKP **PKPdf 13 03 10.3 -0.2**
CTAO MLR MLR

comp=Z,2μm,19.0s
HPAH Hawaii Prepara 123.72 5 PFAKE 13 03 20.0 +8.6
HPAH LR LR

comp=Z,2μm,20.0s
KHLU Kahalu'u 124.14 6 PFAKE 13 03 20.0 +7.7
KHLU LR LR

comp=Z,3μm,21.0s
SBLHI Steaming Bluff 124.35 5 PFAKE 13 03 20.0 +7.3
SBLHI LR LR

comp=Z,3μm,19.0s
KKO Keanakako'i 124.38 5 PFAKE 13 03 20.0 +7.2
KKO LR LR

comp=Z,2μm,20.0s
STKA Stephens Creek 125.07 106 PKP **PKPdf 13 03 14.2 +0.8**
comp=Z,14nm,0.8s,baz=337,slow=3.1,SNR=20
STKA Stephens Creek 125.07 106 *e*PKPdf **PKPdf 13 03 11.3 -2.1**
STKA PKP **PKPdf 13 03 14.2 +0.8**
STKA LR LR

comp=Z,600nm,20.0s
QSPA South Pole Qui 126.23 180 PKP **PKPdf 13 03 15.4 +0.7**
comp=Z,8.1nm,0.7s,baz=187,slow=1.4,SNR=13
QSPA South Pole Qui 126.23 180 *e*PKPdf **PKPdf 13 03 15.3 +0.7**
QSPA LR LR

comp=Z,4μm,20.0s
EIDS Eidsvold 129.77 94 PFAKE 13 03 30.0 +7.4
EIDS LR LR

comp=Z,3μm,21.0s
CAN Canberra 132.08 107 *e*PKPdf **PKPdf 13 03 28.4 +1.6**
CAN LR LR

comp=Z,2μm,22.0s
CAN Canberra 132.08 107 *e*PKiKP **PKPdf 13 03 28.4 +1.6**
CAN MLR MLR

comp=Z,2μm,22.0s
ARMA Armidale 132.36 100 PFAKE 13 03 40.0 +12
ARMA LR LR

comp=Z,3μm,22.0s
VNDA Vanda 134.10 167 PKP **PKPdf 13 03 30.6 +1.3**
comp=Z,0.5nm,0.5s,baz=265,slow=3.6,SNR=2.7
SBA Scott Base 134.73 168 PFAKE 13 03 40.0 +10
SBA LR LR

comp=Z,5μm,21.0s
DZM Mont Dzumac 140.56 81 *e*LR LR 13 49 28.1
comp=Z,4μm,23.1s
DZM Mont Dzumac 140.56 81 PKP **PKPdf 13 03 44.8 +1.8**
comp=Z,16nm,1.0s,baz=7.3,slow=19,SNR=3.1
PYZ Puysegur Point 147.09 121 *e*PKPbc **PKPab 13 03 57.7 +0.3**
DCZ Deep Cove 147.44 119 *e*PKPbc **PKPbc 13 03 58.1 +1.5**
WHZ Wether Hill Ro 147.99 120 *e*PKPbc **PKPbc 13 03 59.5 +1.4**
MLZ Mavora Lakes 148.12 119 *e*PKPbc **PKPbc 13 03 59.6 +1.0**
WKZ Wanaka 148.78 118 *e*PKPbc **PKPbc 13 04 02.9 +2.6**
FOZ Fox Glacier 149.37 116 *e*PKPbc **PKPbc 13 04 03.3 +1.6**
LBZ Lake Benmore 149.62 117 *e*PKPbc **PKPbc 13 04 03.2 +0.9**
ODZ Otahua Downs 149.92 119 *e*PKPbc **PKPbc 13 04 05.3 +2.3**
RPZ Rata Peaks 150.27 116 *e*PKPbc **PKPbc 13 04 05.8 +1.9**
TAOE Nuku Hiva Isla 150.86 337 *e*PKiKP **PKPbc 13 04 05.5 -0.8**
comp=Z,235nm,1.0s
TAOE Nuku Hiva Isla 150.86 337 *e*SS SS 13 27 07.8 +7.0
comp=Z,1μm,27.9s
TAOE Nuku Hiva Isla 150.86 337 *e*LR LR 13 54 13.3
comp=Z,4μm,36.2s
TAOE Nuku Hiva Isla 150.86 337 *e*PKPbc **PKPbc 13 04 07.0 +0.6**
AFI Afiamalu 150.91 45 PKPbc **PKPbc 13 04 07.9 +1.6**
comp=Z,144nm,0.9s,baz=235,slow=3.4,SNR=16
AFI Afiamalu 150.91 45 *e*PKPbc **PKPbc 13 04 06.4 +0.1**
AFI Afiamalu 150.91 45 *e*PKiKP **PKPbc 13 04 06.4 +0.1**
OXZ Oxford 150.99 115 *e*PKPbc **PKPbc 13 04 07.2 +1.5**
OXZ LR LR

comp=Z,1μm,18.0s
LTZ Lake Taylor 151.17 114 *e*PKPbc **PKPbc 13 04 07.7 +1.5**
OUZ Omahuta 151.38 98 *e*PKPbc **PKPbc 13 04 08.0 +1.2**
CRLZ Canterbury Las 151.41 116 *e*PKPbc **PKPbc 13 04 09.5 +3.0**
MQZ McQueen's Vall 151.43 116 *e*PKPbc **PKPbc 13 04 07.8 +1.2**
THZ Tophouse 151.63 112 *e*PKPbc **PKPbc 13 04 07.7 +0.4**
KHZ Kahutara 152.11 113 *e*PKPbc **PKPbc 13 04 09.3 +1.2**
HIZ Hauiti 152.92 105 *e*PKPbc **PKPbc 13 04 11.2 +1.0**
SNZO South Karori 152.98 111 *e*PKPbc **PKPbc 13 04 10.1 0.0**
SNZO LR LR

comp=Z,2μm,20.0s
BFZ Birch Farm 154.13 110 *e*PKPbc **PKPbc 13 04 13.4 +0.6**
BFZ LR LR

comp=Z,2μm,20.0s
BKZ Black Stump Fm 154.25 106 *e*PKPbc **PKPbc 13 04 14.1 +1.0**
URZ Urewera 154.66 104 PKPbc **PKPbc 13 04 12.6 -1.3**
comp=Z,22nm,0.9s,baz=8.3,slow=4.1,SNR=2.8
URZ Urewera 154.66 104 *e*PKPbc **PKPbc 13 04 13.5 -0.4**
URZ LR LR

comp=Z,2μm,21.0s
MXZ Matakaoa Point 155.53 102 PFAKE 13 04 20.0 -13
MXZ LR LR

comp=Z,2μm,20.0s
RKT Rikitea 160.82 309 *e*SS SS 13 28 50.8 +1.3
comp=Z,1μm,35.2s
RKT Rikitea 160.82 309 *e*LR LR 13 58 59.3
comp=Z,1μm,26.0s
PPT2 Papeete2 161.23 356 *e*LR LR 13 59 07.7
comp=Z,3μm,25.8s

TBI	Tubuai	166.94 354	eSS	SS	13 29 59.2 +8.6
	comp=Z,1μm,32.0s				
TBI	Tubuai	166.94 354	eLR	LR	14 01 44.6
	comp=Z,4μm,26.2s				

CSEM ***10*** *12:48:52.1,36°.42N×28°.97E,h19km, ML4.1*
ISK 10 12:48:52.1,36°.42N×28°.97E,h19km,ML4.1/6,
Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.24**	**23**	PG	Pg	12 48 57.7	-0.1
FETY				SG	Sg	12 49 02.5	+0.8
FETY	**Fethiye**	**0.24**	**23**	*e*Pg	Pg	12 48 57.7	-0.1
FETY				*e*Sg	Sg	12 49 02.5	+0.8
DALY	**Dalyan (Mu¨la**	**0.47**	**328**	PG	Pb	12 49 02.2	+0.4
DALY				SG	Sb	12 49 09.6	+1.2
DALY	**Dalyan (Mu¨la**	**0.47**	**328**	*e*Pg	Pb	12 49 02.2	+0.4
DALY				*e*Sg	Sb	12 49 09.6	+1.2
TURN	**Turunc**	**0.54**	**327**	PG	Pn	12 49 05.8	+1.0
TURN	**Turunc**	**0.54**	**327**	*e*Pg	Pn	12 49 05.8	+1.0
AKAS	**Kas**	**0.55**	**109**	PG	Pg	12 49 03.5	+0.4
AKAS	**Kas**	**0.55**	**109**	*e*Pg	Pg	12 49 03.5	+0.4
MRSB	**Marmaris-Mugla**	**0.69**	**296**	PG	Pn	12 49 06.7	-0.1
MRSB	**Marmaris-Mugla**	**0.69**	**296**	*e*Pg	Pn	12 49 06.7	-0.1
ARG	**Arkhangelos**	**0.71**	**254**	PG	Pn	12 49 07.2	+0.1
ARG				SG	Sn	12 49 16.9	-0.5
ARG	**Arkhangelos**	**0.71**	**254**	*e*Pg	Pn	12 49 07.2	+0.1
ARG				*e*Sg	Sn	12 49 16.9	-0.5
ELL	**Elmali**	**0.83**	**66**	PG	Pn	12 49 08.7	-0.1
ELL	**Elmali**	**0.83**	**66**	*e*Pg	Pn	12 49 08.7	-0.1
GLHS	**Glhisar (BURDU**	**0.85**	**30**	PG	Pb	12 49 08.4	+0.1
GLHS	**Glhisar (BURDU**	**0.85**	**30**	*e*Pg	Pb	12 49 08.4	+0.1
YER	**Yerkesik**	**0.90**	**323**	PG	Pn	12 49 10.9	+1.1
YER	**Yerkesik**	**0.90**	**323**	*e*Pg	Pn	12 49 10.9	+1.1
DATC	**Datca-Mugla**	**1.11**	**288**	PN	Pg	12 49 13.2	-0.4
DATC	**Datca-Mugla**	**1.11**	**288**	*e*Pn	Pg	12 49 13.2	-0.4
DAT	**Datca**	**1.16**	**286**	PN	Pb	12 49 13.6	0.0
DAT	**Datca**	**1.16**	**286**	*e*Pn	Pb	12 49 13.6	0.0
KORT	**Korkueli**	**1.25**	**62**	PN	Pg	12 49 16.1	-0.3
KORT	**Korkueli**	**1.25**	**62**	*e*Pn	Pg	12 49 16.1	-0.3
MLSB	**Milas**	**1.30**	**313**	PN	Pb	12 49 16.3	+0.4
MLSB	**Milas**	**1.30**	**313**	*e*Pn	Pb	12 49 16.3	+0.4
DENT	**Denizli**	**1.34**	**2**	PN	Pb	12 49 16.5	-0.1
DENT	**Denizli**	**1.34**	**2**	*e*Pn	Pb	12 49 16.5	-0.1
ANTB	**Antalya**	**1.44**	**70**	PN	Pb	12 49 18.1	-0.2
ANTB	**Antalya**	**1.44**	**70**	*e*Pn	Pb	12 49 18.1	-0.2
BODT	**Bodrum**	**1.48**	**296**	PN	Pn	12 49 17.5	-0.2
BODT	**Bodrum**	**1.48**	**296**	*e*Pn	Pn	12 49 17.5	-0.2
YKAV	**Yalikavak-Bodr**	**1.53**	**298**	PN	Pn	12 49 18.8	+0.5
YKAV	**Yalikavak-Bodr**	**1.53**	**298**	*e*Pn	Pn	12 49 18.8	+0.5
KARP	**Karpathos**	**1.70**	**240**	PN	Pn	12 49 21.3	+0.5
KARP	**Karpathos**	**1.70**	**240**	*e*Pn	Pn	12 49 21.3	+0.5
AYDB	**Zeytinkoy-Aydi**	**1.75**	**331**	PN	Pn	12 49 21.5	-0.1
AYDB	**Zeytinkoy-Aydi**	**1.75**	**331**	*e*Pn	Pn	12 49 21.5	-0.1

CSEM ***10*** *12:49:35.9±0.1,36°.36N×29°.10E,h20km,mb4.9/42, Error ellipse: s-maj=3.2km s-min=2.4km az=20.0*
ISCJB ***10*** *12:49:36.0±0.2,36°.33N±0°.02×29°.07E±0°.02,h42km±2km, mb4.8/64, Error ellipse: s-maj=2.7km s-min=2.2km az=19.7*
MOS ***10*** *12:49:35.2±1.0,36°.45N×29°.03E,h15km,mb5.2/18, Error ellipse: s-maj=7.5km s-min=5.1km az=105.4*
ISK ***10*** *12:49:36.8,36°.47N×28°.91E,h22km, ML4.9/15*
NEIC ***10*** *12:49:36.6±0.0,36°.41N×28°.91E,h39km,mb4.8/50, ML4.8(THE),ML4.9(ISK),ML5.0(ATH), After ATH.*
ATH ***10*** *12:49:36.7,36°.41N×28°.91E,h39km±1km,ML5.0/12, Error ellipse: s-maj=1.4km s-min=0.5km az=138.0*
DDA ***10*** *12:49:36.8,36°.48N×28°.93E,h27km, Ml5.0*
IDC ***10*** *12:49:37.0±2.5,36°.53N×28°.90E,h37km±21km,mb4.5/26, mb1 4.5/30,mb1mx4.3/70,mbtmp4.7/30,ML4.5/4, Error ellipse: s-maj=12.1km s-min=9.4km az=129.0*
THE ***10*** *12:49:37.5,36°.44N×28°.91E,h10km±1km,ML4.8/5, Error ellipse: s-maj=1.2km s-min=0.4km az=101.0*
HLW ***10*** *12:49:40.0,35°.96N×29°.35E,h10km±32km,Md4.5, Ml4.6*
GII ***10*** *12:49:42.1±0.0,36°.28N×29°.51E,h30km,mb4.4/5, MD4.2/5*
ISC 10 12:49:36.9±0.6,36°.41N±0°.02×28°.98E±0°.02,h30km±4km,
n555,σ1°.71/627,mb4.8/64,4C-6D,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.24**	**20**	PG	Pb	12 49 42.1	-1.7
FETY				SG	Sb	12 49 47.4	-0.9
FETY	**Fethiye**	**0.24**	**20**	*e*Pn	Pb	12 49 42.0	-1.7
FETY				*e*Sn	Sb	12 49 46.9	-1.4
FETY	**Fethiye**	**0.24**	**20**	P	Pb	12 49 42.0	-1.7
FETY				S	Sb	12 49 46.9	-1.4
FETY	**Fethiye**	**0.24**	**20**	*e*Pg	Pb	12 49 42.1	-1.7
FETY				S	Sb	12 49 46.9	-1.4
FETY				*e*Sg	Sb	12 49 47.4	-0.9
DALY	**Dalyan (Mu¨la**	**0.49**	**327**	PG	Pb	12 49 46.3	-0.8
DALY				SG	Sb	12 49 52.3	-1.8
DALY	**Dalyan (Mu¨la**	**0.49**	**327**	⇑*i*P	Pb	12 49 46.3	-0.8
DALY				*i* S	Sb	12 49 53.0	-1.2
DALY	**Dalyan (Mu¨la**	**0.49**	**327**	*e*Pg	Pb	12 49 46.3	-0.8
DALY				*e*Sg	Sb	12 49 52.3	-1.8
AKAS	**Kas**	**0.53**	**109**	PG	Pn	12 49 48.8	+0.3
AKAS	**Kas**	**0.53**	**109**	⇓*i*P	Pb	12 49 48.2	+0.3
AKAS				*i* S	Sn	12 49 58.6	+2.0
AKAS	**Kas**	**0.53**	**109**	P	Pb	12 49 48.2	+0.3
AKAS	**Kas**	**0.53**	**109**	*e*Pg	Pn	12 49 48.8	+0.3
KSL	**Kastellorizon**	**0.55**	**118**	P	Pn	12 49 49.3	+0.7
KSL				S	Sn	12 49 58.6	+1.9
KSL				AML	AML	12 50 00.6	
KSL				AML	AML	12 50 03.1	
KSL	**Kastellorizon**	**0.55**	**118**	*e*Pn	Pn	12 49 49.3	+0.7
KSL				*e*Sn	Sn	12 49 59.1	+2.4
KSL	**Kastellorizon**	**0.55**	**118**	P	Pn	12 49 49.3	+0.7
KSL				S	Sn	12 49 59.1	+2.4
TURN	**Turunc**	**0.56**	**327**	PG	Pn	12 49 49.9	+1.2
TURN	**Turunc**	**0.56**	**327**	⇑*i*P	Pn	12 49 49.9	+1.2
TURN				*i* S	Sn	12 49 59.2	+2.2
TURN	**Turunc**	**0.56**	**327**	P	Pn	12 49 49.9	+1.2
TURN				S	Sn	12 49 59.2	+2.2
MRSB	**Marmaris-Mugla**	**0.70**	**296**	PG	Pb	12 49 49.9	-0.8
MRSB	**Marmaris-Mugla**	**0.70**	**296**	*e*Pg	Pb	12 49 49.9	-0.8
ARG	**Arkhangelos**	**0.72**	**255**	PG	Pn	12 49 50.8	-0.1
ARG				SG	Sn	12 50 00.6	-0.3
ARG	**Arkhangelos**	**0.72**	**255**	P	Pb	12 49 50.6	-0.3
ARG				S	Sb	12 50 00.2	-0.2
ARG				AML	AML	12 50 02.6	
ARG				AML	AML	12 50 04.5	
ARG	**Arkhangelos**	**0.72**	**255**	*e*Pn	Pb	12 49 50.6	-0.3
ARG	**Arkhangelos**	**0.72**	**255**	P	Pb	12 49 50.6	-0.3
ARG				S	Sn	12 50 01.3	+0.4
ARG	**Arkhangelos**	**0.72**	**255**	*e*P	Pb	12 49 50.6	-0.3
ARG	**Arkhangelos**	**0.72**	**255**	*e*Pg	Pn	12 49 50.8	-0.1
ARG				*e*Sg	Sn	12 50 00.6	-0.3
ARG				S	Sn	12 50 01.3	+0.4
ELL	**Elmali**	**0.82**	**65**	PG	Pb	12 49 54.7	+2.0
ELL	**Elmali**	**0.82**	**65**	P	Pn	12 49 51.8	-0.7
ELL	**Elmali**	**0.82**	**65**	P	Pn	12 49 51.8	-0.7
ELL	**Elmali**	**0.82**	**65**	*e*Pg	Pb	12 49 54.7	+2.0
GLHS	**Glhisar (BURDU**	**0.86**	**29**	PG	Pn	12 49 52.9	-0.1
GLHS	**Glhisar (BURDU**	**0.86**	**29**	*e*Pg	Pn	12 49 52.9	-0.1
YER	**Yerkesik**	**0.92**	**323**	PG	Pn	12 49 53.3	-0.5
YER	**Yerkesik**	**0.92**	**323**	*e*Pn	Pn	12 49 53.9	+0.1
YER	**Yerkesik**	**0.92**	**323**	P	Pn	12 49 53.9	+0.1
YER				S	Sb	12 50 06.5	+0.2
YER	**Yerkesik**	**0.92**	**323**	*e*P	Pn	12 49 53.9	+0.1
YER	**Yerkesik**	**0.92**	**323**	*e*Pg	Pn	12 49 53.3	-0.5
YER	**Yerkesik**	**0.92**	**323**	P	Pn	12 49 53.9	+0.1
YER				S	Sb	12 50 06.5	+0.2
GOLH	**Golhisar**	**0.95**	**29**	⇓*i*P	Pn	12 49 53.9	-0.3
GOLH				*i* S	Sb	12 50 08.8	+1.6
GOLH	**Golhisar**	**0.95**	**29**	P	Pn	12 49 53.9	-0.3
GOLH				S	Sb	12 50 08.8	+1.6
TAVA	**DENIZLI_Tavas**	**1.06**	**357**	⇓*i*P	Pn	12 49 56.0	+0.2
TAVA				*i* S	Sb	12 50 10.1	-0.2
TAVA	**DENIZLI_Tavas**	**1.06**	**357**	P	Pn	12 49 56.0	+0.2
TAVA				S	Sb	12 50 10.1	-0.2
DATC	**Datca-Mugla**	**1.12**	**289**	PG	Pb	12 49 57.3	-0.4
DATC	**Datca-Mugla**	**1.12**	**289**	*e*Pg	Pb	12 49 57.3	-0.4
DAT	**Datca**	**1.18**	**286**	PN	Pb	12 49 58.3	-0.4
DAT	**Datca**	**1.18**	**286**	⇑*i*P	Pb	12 49 58.3	-0.4
DAT				*i* S	Sb	12 50 12.9	-0.7
DAT	**Datca**	**1.18**	**286**	P	Pb	12 49 58.3	-0.4
DAT				S	Sb	12 50 12.9	-0.7
KORT	**Korkueli**	**1.25**	**61**	PN	Pb	12 49 59.6	-0.3
KORT	**Korkueli**	**1.25**	**61**	⇑*i*P	Pb	12 50 01.0	+1.1
KORT				*i* S	Sb	12 50 18.9	+3.1
KORT	**Korkueli**	**1.25**	**61**	*e*Pn	Pb	12 49 59.6	-0.3
DNZL	**Cakiroluk**	**1.28**	**2**	⇓*i*P	Pn	12 49 59.6	+0.7
DNZL				*i* S	Sb	12 50 16.9	+0.1
DNZL	**Cakiroluk**	**1.28**	**2**	P	Pn	12 49 59.6	+0.7
DNZL				S	Sb	12 50 16.9	+0.1
MLSB	**Milas**	**1.31**	**313**	PN	Pn	12 49 59.9	+0.7
MLSB	**Milas**	**1.31**	**313**	*e*Pn	Pn	12 49 59.9	+0.7
DENT	**Denizli**	**1.35**	**2**	PN	Pn	12 49 59.7	+0.1
DENT	**Denizli**	**1.35**	**2**	*e*Pn	Pn	12 49 59.7	+0.1
BDRM	**Kayabasi**	**1.40**	**299**	*i* P	Pb	12 50 01.5	-0.9
BDRM				*i* S	Sb	12 50 20.1	+0.2
BDRM	**Kayabasi**	**1.40**	**299**	P	Pb	12 50 01.5	-0.9
BDRM				S	Sb	12 50 20.1	+0.2
ANTB	**Antalya**	**1.43**	**69**	PN	Pb	12 50 04.2	+1.3
ANTB	**Antalya**	**1.43**	**69**	*e*Pn	Pb	12 50 04.2	+1.3
BODT	**Bodrum**	**1.49**	**297**	PN	Pn	12 50 01.3	-0.3
BODT	**Bodrum**	**1.49**	**297**	*e*Pn	Pn	12 50 01.3	-0.3
BODT				*e*Sn	Sn	12 50 20.0	-0.1
BODT	**Bodrum**	**1.49**	**297**	P	Pn	12 50 01.3	-0.3
BODT				S	Sn	12 50 20.0	-0.1
BODT	**Bodrum**	**1.49**	**297**	P	Pn	12 50 01.3	-0.3
BODT				S	Sn	12 50 20.0	-0.1
NISR	**Nisiros**	**1.51**	**278**	P	Pn	12 50 01.6	-0.1
NISR				AML	AML	12 50 31.1	
	comp=N,56571μm,0.9s						
NISR				AML	AML	12 50 31.2	
	comp=E,97282μm,0.8s						
NISR	**Nisiros**	**1.51**	**278**	*e*Pn	Pn	12 50 02.6	+0.8
NISR	**Nisiros**	**1.51**	**278**	P	Pn	12 50 02.6	+0.8
NISR	**Nisiros**	**1.51**	**278**	P	Pn	12 50 02.6	+0.8
AYDN	**Tasoluk**	**1.53**	**325**	*i* P	Pb	12 50 03.8	-0.9
AYDN				*i* S	Sb	12 50 22.4	-1.3
AYDN	**Tasoluk**	**1.53**	**325**	P	Pb	12 50 03.8	-0.9
AYDN				S	Sb	12 50 22.4	-1.3
YKAV	**Yalikavak-Bodr**	**1.54**	**298**	PN	Pn	12 50 03.0	+0.7
YKAV	**Yalikavak-Bodr**	**1.54**	**298**	*e*Pn	Pn	12 50 03.0	+0.7
BRDR	**BURDUR-Merkez**	**1.55**	**34**	*i* P	Pb	12 50 04.3	-0.7
BRDR				*i* S	Sb	12 50 24.8	+0.5
BRDR	**BURDUR-Merkez**	**1.55**	**34**	P	Pb	12 50 04.3	-0.7
KARP	**Karpathos**	**1.71**	**240**	PN	Pn	12 50 05.9	+1.3
KARP	**Karpathos**	**1.71**	**240**	P	Pn	12 50 05.7	+1.1
KARP				S	Sn	12 50 24.7	-0.7
KARP				AML	AML	12 50 27.9	
	comp=N,46013μm,0.6s						
KARP				AML	AML	12 50 28.1	
	comp=E,28722μm,0.3s						
KARP	**Karpathos**	**1.71**	**240**	*e*Pn	Pn	12 50 05.5	+1.0
KARP	**Karpathos**	**1.71**	**240**	P	Pn	12 50 05.4	+0.8
KARP				S	Sn	12 50 26.2	+0.8
KARP	**Karpathos**	**1.71**	**240**	P	Pn	12 50 05.4	+0.8
KARP				S	Sn	12 50 26.2	+0.8
AYDB	**Zeytinkoy-Aydi**	**1.77**	**331**	PN	Pn	12 50 06.2	+0.7
AYDB	**Zeytinkoy-Aydi**	**1.77**	**331**	*e*Pn	Pn	12 50 06.2	+0.7
ISP	**Isparta**	**1.88**	**41**	PN	Pb	12 50 08.9	-1.6
ISP	**Isparta**	**1.88**	**41**	*e*Pn	Pb	12 50 08.8	+1.8
ISP				*e*Sn	Sb	12 50 32.7	-0.9
ISP	**Isparta**	**1.88**	**41**	P	Pn	12 50 08.8	+1.8
ISP				S	Sb	12 50 32.7	-0.9
ISP	**Isparta**	**1.88**	**41**	Pn	Pb	12 50 09.7	-0.8
ISP				Sn	Sn	12 50 31.6	+1.9
ISP	**Isparta**	**1.88**	**41**	*e*P	Pn	12 50 08.8	+1.8
ISP				*e*		12 50 32.7	
ISP	**Isparta**	**1.88**	**41**	P	Pn	12 50 08.8	+1.8
ISP				Sn	Sn	12 50 31.6	+1.9
ISP				S	Sb	12 50 32.7	-0.9
SUTC	**Sutluce-Ispart**	**1.94**	**56**	PN	Pn	12 50 09.6	+1.7
SUTC	**Sutluce-Ispart**	**1.94**	**56**	*e*Pn	Pn	12 50 09.6	+1.7
KHL	**Karahalli**	**1.96**	**13**	PN	Pn	12 50 09.2	+1.1
KHL	**Karahalli**	**1.96**	**13**	*e*Pn	Pn	12 50 09.2	+1.1
MANT	**Manisa**	**2.11**	**351**	*i* P	Pn	12 50 10.2	-0.1
MANT	**Manisa**	**2.11**	**351**	*e*Pn	Pn	12 50 10.1	-0.1
MANT	**Manisa**	**2.11**	**351**	P	Pn	12 50 10.2	-0.1
KULA	**Kula-Manisa**	**2.12**	**353**	PN	Pn	12 50 10.1	-0.2
KULA	**Kula-Manisa**	**2.12**	**353**	*e*Pn	Pn	12 50 10.1	-0.2
SMG	**Samos**	**2.15**	**308**	P	Pn	12 50 11.8	+1.1
SMG				S	Sn	12 50 36.7	+0.4
SMG				AML	AML	12 50 39.3	
	comp=E,73108μm,0.3s						
SMG				AML	AML	12 50 39.8	
	comp=N,76692μm,0.4s						
SMG	**Samos**	**2.15**	**308**	*e*Pn	Pn	12 50 11.4	+0.7
SMG				*e*Sn	Sn	12 50 36.8	+0.4
SMG	**Samos**	**2.15**	**308**	P	Pn	12 50 11.4	+0.7
SMG				S	Sn	12 50 36.8	+0.4
SMG	**Samos**	**2.15**	**308**	P	Pn	12 50 11.5	+0.7
SMG				S	Sn	12 50 36.8	+0.4
DGB	**¨zmir**	**2.35**	**315**	*i* P	Pn	12 50 13.8	+0.4
DGB				*i* S	Sn	12 50 39.4	-1.7
ZKR	**Zakros**	**2.59**	**241**	P	Pn	12 50 18.7	+2.0
ZKR				S	Sn	12 50 46.9	-0.2
ZKR				AML	AML	12 50 51.4	
	comp=E,14564μm,0.7s						
ZKR				AML	AML	12 50 51.9	
	comp=N,9049μm,0.6s						
ZKR	**Zakros**	**2.59**	**241**	*e*Pn	Pn	12 50 18.1	+1.4
ZKR				*e*Sn	Sn	12 50 48.5	+1.3
ZKR	**Zakros**	**2.59**	**241**	P	Pn	12 50 18.1	+1.4
ZKR				S	Sn	12 50 48.5	+1.3
ZKR	**Zakros**	**2.59**	**241**	P	Pn	12 50 18.1	+1.4
ZKR				S	Sn	12 50 48.5	+1.3
SHAP	**Saphane-Kutahy**	**2.62**	**4**	PN	Pn	12 50 17.3	+0.1
SHAP	**Saphane-Kutahy**	**2.62**	**4**	*e*Pn	Pn	12 50 17.3	+0.1
AKS	**Akhisar**	**2.64**	**340**	PN	Pn	12 50 16.6	-0.8
AKS	**Akhisar**	**2.64**	**340**	*e*Pn	Pn	12 50 16.6	-0.8
GEDZ	**Gediz**	**2.66**	**7**	PN	Pn	12 50 18.3	+0.6
GEDZ	**Gediz**	**2.66**	**7**	*e*Pn	Pn	12 50 18.3	+0.6
SIMA	**Simav-Kutahya**	**2.67**	**0**	PN	Pn	12 50 17.7	-0.2
SIMA	**Simav-Kutahya**	**2.67**	**0**	*e*Pn	Pn	12 50 17.7	-0.2
SMAA	**Simav-Kutahya**	**2.69**	**360**	PN	Pn	12 50 18.3	+0.2
SMAA	**Simav-Kutahya**	**2.69**	**360**	*e*Pn	Pn	12 50 18.3	+0.2
URLA	**Izmir**	**2.72**	**316**	PN	Pn	12 50 19.3	+0.7
URLA	**Izmir**	**2.72**	**316**	*i* P	Pn	12 50 18.8	+0.2
URLA				*i* S	Sn	12 50 49.8	-0.7
URLA	**Izmir**	**2.72**	**316**	P	Pn	12 50 18.8	+0.2
URLA	**Izmir**	**2.72**	**316**	*e*Pn	Pn	12 50 19.3	+0.7
SANT	**Santorini**	**2.84**	**270**	P	Pn	12 50 21.1	+0.9
SANT	**Santorini**	**2.84**	**270**	*e*Pn	Pn	12 50 21.6	+1.4
SANT	**Santorini**	**2.84**	**270**	P	Pn	12 50 21.6	+0.8
SANT	**Santorini**	**2.84**	**270**	*e*Pn	Pn	12 50 21.6	+1.4
APE	**Apeiranthos**	**2.85**	**284**	P	Pn	12 50 19.8	-0.5
APE	**Apeiranthos**	**2.85**	**284**	P	Pn	12 50 20.5	+0.2
THT2	**Imerovigli**	**2.87**	**272**	P	Pn	12 50 21.6	+1.0
THT2	**Imerovigli**	**2.87**	**272**	P	Pn	12 50 21.6	+1.0
SAP1	**Santorini-Akro**	**2.89**	**270**	P	Pn	12 50 21.8	+0.9
SAP1	**Santorini-Akro**	**2.89**	**270**	P	Pn	12 50 21.8	+0.9
NPS	**Neapolis**	**2.97**	**248**	P	Pn	12 50 22.2	+0.4
NPS				AML	AML	12 50 58.1	
	comp=E,20664μm,0.4s						
NPS				AML	AML	12 51 00.4	
	comp=N,14290μm,0.4s						
NPS	**Neapolis**	**2.97**	**248**	*e*Pn	Pn	12 50 22.9	+1.0
NPS	**Neapolis**	**2.97**	**248**	P	Pn	12 50 22.9	+1.0
NPS	**Neapolis**	**2.97**	**248**	*e*P	Pn	12 50 22.9	+1.0
NPS	**Neapolis**	**2.97**	**248**	P	Pn	12 50 22.9	+1.0
IOSP	**Ios island**	**2.99**	**277**	P	Pn	12 50 22.3	+0.1
IOSP	**Ios island**	**2.99**	**277**	P	Pn	12 50 22.6	+0.4
IOSP	**Ios island**	**2.99**	**277**	P	Pn	12 50 22.6	+0.4
CHOS	**Chios island**	**3.06**	**311**	P	Pn	12 50 23.7	+0.6
CHOS				AML	AML	12 51 02.9	
	comp=N,17108μm,0.4s						
CHOS				AML	AML	12 51 03.3	
	comp=E,20250μm,0.3s						
CHOS	**Chios island**	**3.06**	**311**	*e*Pn	Pn	12 50 24.1	+0.9
CHOS	**Chios island**	**3.06**	**311**	P	Pn	12 50 24.1	+0.9
CHOS	**Chios island**	**3.06**	**311**	P	Pn	12 50 24.1	+0.9
LAST	**Lasithi**	**3.11**	**247**	P	Pn	12 50 24.8	+0.9
LAST	**Lasithi**	**3.11**	**247**	*e*Pn	Pn	12 50 24.7	+0.8
LAST	**Lasithi**	**3.11**	**247**	P	Pn	12 50 24.7	+0.8
LAST	**Lasithi**	**3.11**	**247**	P	Pn	12 50 24.8	+0.9
TNSA	**Tinos**	**3.26**	**291**	P	Pn	12 50 28.0	+2.1
TNSA	**Tinos**	**3.26**	**291**	P	Pn	12 50 27.4	+1.5
IACM	**Heraklion**	**3.36**	**252**	P	Pn	12 50 27.9	+0.7
IACM	**Heraklion**	**3.36**	**252**	P	Pn	12 50 28.1	+0.8
IACM	**Heraklion**	**3.36**	**252**	P	Pn	12 50 28.1	+0.8
PSRA	**Psara**	**3.46**	**309**	P	Pn	12 50 30.8	+2.3
PSRA	**Psara**	**3.46**	**309**	P	Pn	12 50 30.2	+1.6
IDI	**Anoyia**	**3.51**	**253**	Pn	Pn	12 50 28.2	-1.1
	comp=E,60nm,0.3s,baz=60,slow=18,SNR=9.9						
IDI				Sn	Sn	12 51 08.7	-1.1
	comp=E,216nm,0.3s,baz=301,slow=20,SNR=9.0						
IDI	**Anoyia**	**3.51**	**253**	*e*Pn	Pn	12 50 29.5	+0.2
IDI				Sn	Sn	12 51 08.7	-1.1
IDI	**Anoyia**	**3.51**	**253**	*e*Pn	Pn	12 50 29.5	+0.2
IDI				Sn	Sn	12 51 08.7	-1.1
PRK	**Paraskevi**	**3.56**	**324**	P	Pn	12 50 29.7	-0.2
PRK				AML	AML	12 51 35.5	
	comp=N,11932μm,0.9s						
PRK				AML	AML	12 51 46.6	
	comp=E,15979μm,1.1s						
PRK	**Paraskevi**	**3.56**	**324**	*e*Pn	Pn	12 50 30.5	+0.6
PRK	**Paraskevi**	**3.56**	**324**	P	Pn	12 50 30.5	+0.6
PRK	**Paraskevi**	**3.56**	**324**	*e*P	Pn	12 50 30.5	+0.6
PRK	**Paraskevi**	**3.56**	**324**	*e*P	Pn	12 50 30.5	+0.6
SIVA	**Sivas**	**3.67**	**249**	P	Pn	12 50 33.9	+2.4
SIVA				AML	AML	12 51 20.1	
	comp=N,10116μm,0.6s						
SIVA				AML	AML	12 51 40.0	
	comp=E,12645μm,0.7s						
SIVA	**Sivas**	**3.67**	**249**	*e*Pn	Pn	12 50 33.4	+1.9
SIVA	**Sivas**	**3.67**	**249**	P	Pn	12 50 33.4	+1.9
SIVA	**Sivas**	**3.67**	**249**	P	Pn	12 50 33.2	+1.7
MHLA	**Plaka, Milos I**	**3.69**	**277**	P	Pn	12 50 33.8	+2.0
MHLA	**Plaka, Milos I**	**3.69**	**277**	P	Pn	12 50 33.3	+1.5
MHLO	**Agia Marina, M**	**3.70**	**276**	P	Pn	12 50 31.6	-0.4
MHLO	**Agia Marina, M**	**3.70**	**276**	P	Pn	12 50 32.3	+0.4
SIGR	**SIGRI**	**3.74**	**319**	P	Pn	12 50 32.5	0.0
SIGR	**SIGRI**	**3.74**	**319**	P	Pn	12 50 33.1	+0.6
CSS	**Mathiatis**	**3.82**	**111**	*e*Pn	Pn	12 50 33.9	+0.3
CSS	**Mathiatis**	**3.82**	**111**	Pn	Pn	12 50 33.3	-0.3
CSS	**Mathiatis**	**3.82**	**111**	Pn	Pn	12 50 33.3	-0.3
VAM	**Vamos**	**4.01**	**257**	P	Pn	12 50 39.2	+3.0
VAM	**Vamos**	**4.01**	**257**	P	Pn	12 50 39.5	+3.3
VAM	**Vamos**	**4.01**	**257**	P	Pn	12 50 38.3	+2.1
IMMV	**Iera Moni Meta**	**4.17**	**258**	P	Pn	12 50 40.3	+2.0
IMMV				AML	AML	12 51 32.0	
	comp=N,7678μm,0.5s						
IMMV				AML	AML	12 51 36.5	
	comp=E,8479μm,0.6s						
IMMV	**Iera Moni Meta**	**4.17**	**258**	P	Pn	12 50 40.0	+1.6
GVD	**Gavdhos**	**4.28**	**250**	P	Pn	12 50 40.4	+0.4
GVD				AML	AML	12 51 30.7	
	comp=E,12023μm,0.5s						
GVD				AML	AML	12 51 31.0	
	comp=N,10083μm,0.5s						
GVD	**Gavdhos**	**4.28**	**250**	P	Pn	12 50 40.8	+0.8
SKY	**Skiros Island**	**4.30**	**306**	P	Pn	12 50 43.0	+2.9
SKY	**Skiros Island**	**4.30**	**306**	P	Pn	12 50 42.3	+2.2
DION	**Dionisos Attik**	**4.36**	**294**	P	Pn	12 50 42.5	+1.4
DION	**Dionisos Attik**	**4.36**	**294**	P	Pn	12

RLS	Riolos of Patr	6.22 288	P	Pn	12 51 09.2	+2.7
HORT	Hortiatis	6.23 314	P	Pn	12 51 08.5	+1.8
HORT	Hortiatis	6.23 314	P	Pn	12 51 08.7	+1.9
OFRI	'Ofer	6.23 126	Pn	Pn	12 51 06.1	-0.7
OFRI	'Ofer	6.23 126	Pn	Pn	12 51 06.1	-0.7
SOH	Sokhos	6.23 317	P	Pn	12 51 09.1	+2.3
SOH	Sokhos	6.23 317	P	Pn	12 51 09.0	+2.3
MMAI	Mount Meron Ar	6.28 121	Pn	Pn	12 51 07.0	-0.4
	comp=N,92nm,0.3s,baz=307,slow=12,SNR=7.8					
MMAI			Sn	Sn	12 52 14.9	-3.3
	comp=N,188nm,0.3s,baz=302,slow=26,SNR=6.5					
MMA0B	Mount Meron ar	6.28 121	Pn	Pn	12 51 06.4	-1.0
MMA0B			Sn	Sn	12 52 12.4	-5.8
MMA0B	Mount Meron ar	6.28 121	Pn	Pn	12 51 06.4	-1.0
BLGI	Bet Lehem HaGe	6.30 124	Pn	Pn	12 51 06.8	-0.8
BLGI			Sn	Sn	12 52 13.4	-5.1
BLGI	Bet Lehem HaGe	6.30 124	Pn	Pn	12 51 06.8	-0.8
LIT	Litokhoron	6.30 308	P	Pn	12 51 10.7	+3.0
LIT	Litokhoron	6.30 308	ePn	Pn	12 51 10.6	+2.9
LIT	Litokhoron	6.30 308	eP	Pn	12 51 10.6	+2.9
LIT	Litokhoron	6.30 308	P	Pn	12 51 10.2	+2.5
LIT	Litokhoron	6.30 308	ePn	Pn	12 51 10.6	+2.9
SRS	Serrai	6.31 320	P	Pn	12 51 10.3	+2.4
SRS	Serrai	6.31 320	P	Pn	12 51 10.1	+2.2
THE	Thessaloniki	6.33 314	P	Pn	12 51 10.1	+2.0
THE	Thessaloniki	6.33 314	P	Pn	12 51 10.1	+2.0
THL	Klokotos Trika	6.34 302	P	Pn	12 51 12.5	+4.3
THL	Klokotos Trika	6.34 302	P	Pn	12 51 11.4	+3.2
NVR	Nevrokopi	6.35 323	P	Pn	12 51 10.8	+2.4
NVR	Nevrokopi	6.35 323	P	Pn	12 51 10.7	+2.3
KSDI	Kefar Szold	6.36 118	Pn	Pn	12 51 07.9	-0.6
KSDI			Sn	Sn	12 52 15.7	-4.4
KSDI	Kefar Szold	6.36 118	Pn	Pn	12 51 07.9	-0.6
SLTI	Sal'it	6.51 128	Pn	Pn	12 51 09.9	-0.7
SLTI			Sn	Sn	12 52 18.4	-5.4
SLTI	Sal'it	6.51 128	Pn	Pn	12 51 09.9	-0.7
KSHT	Keshet	6.58 119	Pn	Pn	12 51 10.7	-0.9
KSHT	Keshet	6.58 119	Pn	Pn	12 51 10.7	-0.9
MMLI	Mount Malkishu	6.63 125	Pn	Pn	12 51 11.2	-1.1
MMLI			Sn	Sn	12 52 21.7	-5.1
MMLI	Mount Malkishu	6.63 125	Pn	Pn	12 51 11.2	-1.1
RSH		6.71 143	P	Pn	12 51 12.7	-0.7
	baz=142					
RSH			S	Sn	12 52 19.5	-9.4
	baz=142					
RSH		6.71 143	P	Pn	12 51 12.7	-0.7
KNT	Kendrikon	6.72 317	P	Pn	12 51 14.6	+1.2
KNT	Kendrikon	6.72 317	P	Pn	12 51 15.1	+1.7
SQR	Saqqara	6.77 163	P	Pn	12 51 10.4	-3.7
	baz=165					
HMDT	Nahal Hemdat	6.81 126	Pn	Pn	12 51 14.3	-0.5
HMDT			Sn	Sn	12 52 27.4	-3.9
HMDT	Nahal Hemdat	6.81 126	Pn	Pn	12 51 14.3	-0.5
HMDT			Sn	Sn	12 52 27.4	-3.9
GRG	Griva	6.87 313	P	Pn	12 51 17.7	+2.2
GRG	Griva	6.87 313	P	Pn	12 51 17.7	+2.2
KZN	Kozani	6.88 307	P	Pn	12 51 20.2	+4.6
KZN	Kozani	6.88 307	P	Pn	12 51 19.0	+3.4
KOT	Kottamia	6.89 159	P	Pn	12 51 14.0	-1.8
	baz=160					
VLS	Valsamata	6.92 287	P	Pn	12 51 21.3	+5.1
VLS	Valsamata	6.92 287	P	Pn	12 51 19.9	+3.7
AMAZ	Amatzia	6.92 133	Sn	Sn	12 52 28.7	-5.3
HHAG	Hagoal	6.95 157	P	Pn	12 51 15.1	-1.5
	baz=158					
HHAG			AMP		12 52 00.0	
	baz=158					
HHAG	Hagoal	6.95 157	P	Pn	12 51 15.1	-1.5
KPRO	Kipourio	6.97 303	P	Pn	12 51 20.5	+3.6
KPRO	Kipourio	6.97 303	P	Pn	12 51 19.8	+2.9
LKD2	Lefkada island	7.02 292	P	Pn	12 51 25.3	+7.7
KZIT	Kziot	7.10 139	Pn	Pn	12 51 18.4	-0.3
KZIT	Kziot	7.10 139	Pn	Pn	12 51 18.4	-0.3
HSAF	As Saff	7.10 162	P	Pn	12 51 17.5	-1.3
	baz=163					
HSAF	As Saff	7.10 162	P	Pn	12 51 17.5	-1.3
YTIR	Yattir	7.16 133	Pn	Pn	12 51 19.0	-0.6
YTIR	Yattir	7.16 133	Pn	Pn	12 51 19.0	-0.6
DSI	Dead Sea	7.17 130	Pn	Pn	12 51 18.6	-1.1
DSI			Sn	Sn	12 52 35.8	-4.4
DSI	Dead Sea	7.17 130	Pn	Pn	12 51 18.6	-1.1
GLL	Jalalah	7.18 161	P	Pn	12 51 19.5	-0.4
	baz=162					
GLL	Jalalah	7.18 161	P	Pn	12 51 19.5	-0.4
JAN	Janina	7.19 299	P	Pn	12 51 23.6	+3.7
JAN	Janina	7.19 299	P	Pn	12 51 23.0	+3.1
PENT	Pentalofos	7.24 304	P	Pn	12 51 25.4	+4.8
PENT	Pentalofos	7.24 304	P	Pn	12 51 24.2	+3.6
MZDA	Masada	7.35 132	Pn	Pn	12 51 21.1	-0.9
MZDA	Masada	7.35 132	Pn	Pn	12 51 21.1	-0.9
FNA	Florina	7.39 309	P	Pn	12 51 27.4	+4.8
FNA	Florina	7.39 309	ePn	Pn	12 51 26.7	+4.0
FNA	Florina	7.39 309	eP	Pn	12 51 26.7	+4.0
FNA	Florina	7.39 309	P	Pn	12 51 26.2	+3.6
NEST	Nestorio	7.40 305	P	Pn	12 51 26.1	+3.3
NEST	Nestorio	7.40 305	P	Pn	12 51 25.7	+2.8
VTS	Vitosha	7.62 326	ePn	Pn	12 51 30.3	+4.4
VTS	Vitosha	7.62 326	eP	Pn	12 51 30.3	+4.4
ZNM	Zenema	7.74 154	AMP		12 52 00.0	
	baz=154					
KRMI	Paran Flat	7.90 141	Pn	Pn	12 51 29.3	-0.4
KRMI	Paran Flat	7.90 141	Pn	Pn	12 51 29.3	-0.4
KEK	Kerkira	7.96 297	P	Pn	12 51 34.2	+3.8
KEK	Kerkira	7.96 297	P	Pn	12 51 33.6	+3.1
TIRR	Tirgusor	8.05 357	ePn	Pn	12 51 32.5	+0.8
TIRR	Tirgusor	8.05 357	eP	Pn	12 51 32.5	+0.8
TIRR	Tirgusor	8.05 357	eP	Pn	12 51 32.5	+0.8
HRFI	Mount Harif	8.13 140	Pn	Pn	12 51 32.4	-0.4
HRFI	Mount Harif	8.13 140	Pn	Pn	12 51 32.4	-0.4
HBST	Basata	8.65 144	P	Pn	12 51 38.4	-1.5
	baz=144					
HBST	Basata	8.65 144	P	Pn	12 51 38.4	-1.5
TIR	Tirane	8.65 308	ePn	Pn	12 51 47.0	+7.0
TIR	Tirane	8.65 308	eP	Pn	12 51 47.0	+7.1
SEV	Sevastopol'	8.88 22	eP	Pn	12 51 44.4	+1.4
SEV			eS	Sn	12 53 23.4	+1.5
SEV			pmax	pmax		
	comp=Z,61nm,0.3s					
SEV			smax	smax		
	comp=N,21nm,0.3s					
SEV			smax	smax		
	comp=E,21nm,0.3s					
SEV	Sevastopol'	8.88 22	eP	Pn	12 51 44.4	+1.4
	comp=E,61nm,0.3s					
SEV			eS	Sn	12 53 23.4	+1.5
	comp=E,21nm,0.3s					
YAL	Yalta	8.98 24	⇓eP	Pn	12 51 45.8	+1.4
YAL			eS	Sn	12 53 27.5	+3.0
YAL			pmax	pmax		
	comp=Z,85nm,0.4s					
YAL			smax	smax		
	comp=N,42nm,0.3s					
YAL			smax	smax		
	comp=E,47nm,0.4s					
YAL	Yalta	8.98 24	eP	Pn	12 51 45.8	+1.4
	comp=E,85nm,0.4s					
MLR	Muntele Rosu	9.36 347	ePn	Pn	12 51 53.9	+4.1
MLR	Muntele Rosu	9.36 347	eP	Pn	12 51 53.9	+4.1
SIM	Simferopol'	9.38 23	⇓eP	Pn	12 51 51.8	+1.9
SIM			eS	Sn	12 53 34.3	0.0
SIM			pmax	pmax		
	comp=Z,298nm,0.4s					
SIM			smax	smax		
	comp=E,82nm,0.9s					
SIM	Simferopol'	9.38 23	eP	Pn	12 51 51.8	+1.9
	comp=E,298nm,0.4s					
SIM			eS	Sn	12 53 34.3	0.0
SUDU	Sudak	9.63 26	eP	Pn	12 51 55.6	+2.3
SUDU			eS	Sn	12 53 40.4	+0.1
SUDU			pmax	pmax		
	comp=Z,23nm,0.4s					
SUDU			smax	smax		
	comp=N,26nm,0.5s					
SUDU			smax	smax		
	comp=E,36nm,0.5s					
SUDU	Sudak	9.63 26	eP	Pn	12 51 55.6	+2.3
	comp=E,23nm,0.4s					
SUDU			eS	Sn	12 53 40.4	+0.1
	comp=E,26nm,0.5s					
TTG	Podgorica	9.63 312	ePn	Pn	12 51 59.5	+6.2
TTG	Podgorica	9.63 312	eP	Pn	12 51 59.5	+6.2
TIP	Timpagrande	10.06 290	ePn	Pn	12 52 02.1	+2.7
TIP	Timpagrande	10.06 290	ePn	Pn	12 52 02.1	+2.7
BAI	Bari	10.55 300	eP	Pn	12 52 09.1	+3.2
SG1	Sgolgore (BA)	10.59 298	eP	Pn	12 52 09.8	+3.2
CUC	Castrocucco	10.96 293	ePn	Pn	12 52 13.6	+2.0
CUC	Castrocucco	10.96 293	ePn	Pn	12 52 13.6	+2.0
BUR08	Bucovina Ar. S	11.57 347	ePn	Pn	12 52 26.2	+6.2
WDD	Wied Dalam	11.71 271	ePn	Pn	12 52 21.9	+0.1
WDD	Wied Dalam	11.71 271	ePn	Pn	12 52 21.9	+0.1
VAE	Valguarnera	11.71 280	Sn	Sn	12 54 22.1	-10
	comp=E,7.5nm,0.3s,baz=180,slow=9.1,SNR=5.9					
CLTB	Caltabellotta	12.66 280	ePn	Pn	12 52 36.4	+1.4
CLTB	Caltabellotta	12.66 280	ePn	Pn	12 52 36.3	+1.4
KIEV	Kiev	14.29 1	ePn	Pn	12 52 57.8	+0.9
KIEV	Kiev	14.29 1	eP	Pn	12 52 57.8	+0.9
KIEV	Kiev	14.29 1	eP	Pn	12 52 57.8	+0.9
KIEV	Kiev	14.29 1	ePn	Pn	12 52 57.8	+0.9
AKBB	Malin Array Si	14.29 1	ePn	Pn	12 52 57.6	+0.6
AKBB	Malin Array Si	14.29 1	eP	Pn	12 52 57.6	+0.6
AKBB	Malin Array Si	14.29 1	ePn	Pn	12 52 57.6	+0.6
KEST	Kesra	15.90 273	ePn	P	12 53 22.1	+0.3
	comp=E,105nm,1.3s					
GERES	GERESS Array B	16.72 323	Pn	Pn	12 53 28.2	-0.7
	comp=E,0.4nm,0.3s,baz=130,slow=12,SNR=3.0					
GOPC	GO Pecny, Ondr	16.97 327	eP	P	12 53 36.4	+2.8
GOPC			eSP	sP	12 53 48.9	+3.3
GOPC	GO Pecny, Ondr	16.97 327	eP	P	12 53 36.4	+2.8
GOPC	GO Pecny, Ondr	16.97 327	eP	P	12 53 36.4	+2.8
KHC	Kasperske Hory	16.98 323	eP	P	12 53 35.4	+1.7
KHC			ex	x	12 53 45.6	
KHC	Kasperske Hory	16.98 323	eP	P	12 53 34.3	+0.7
	comp=E,15nm,1.1s					
KHC	Kasperske Hory	16.98 323	eP	P	12 53 34.3	+0.7
KHC			pmax	pmax		
	comp=Z,15nm,1.1s					
KHC	Kasperske Hory	16.98 323	eP	P	12 53 34.3	+0.7
	comp=Z,15nm,1.1s					
SUW	Suwalki	18.06 349	ePn	P	12 53 46.9	+1.3
	comp=Z,124nm,0.9s					
SUW	Suwalki	18.06 349	eP	P	12 53 46.9	+1.3
SUW			pmax	pmax		
	comp=Z,124nm,0.9s					
NKC	Novy Kostel	18.26 324	eP	Pn	12 53 50.6	+2.7
NKC	Novy Kostel	18.26 324	eP	Pn	12 53 50.6	+2.7
GRFO	Grafenberg	18.51 321	eP	Pn	12 53 51.2	+0.4
	comp=Z,136nm,1.5s					
GRFO	Grafenberg	18.51 321	eP	Pn	12 53 51.2	+0.4
GRFO			pmax	pmax		
	comp=Z,136nm,1.5s					
GRFO	Grafenberg	18.51 321	eP	Pn	12 53 51.2	+0.4
	comp=Z,136nm,1.5s					
CLL	Collm	18.77 328	e(P)	Pn	12 53 55.0	+1.0
BNI	Bardonecchia	18.94 304	eP	Pn	12 53 57.1	+1.0
	comp=Z,21nm,1.0s					
BNI	Bardonecchia	18.94 304	eP	Pn	12 53 57.2	+1.0
BNI			pmax	pmax		
	comp=Z,21nm,1.0s					
BNI	Bardonecchia	18.94 304	eP	Pn	12 53 57.2	+1.0
	comp=Z,21nm,1.0s					
SENIN	Lac Senin/Sane	19.02 308	eP	P	12 53 56.1	-0.2
	comp=Z,36nm,0.8s					
SENIN	Lac Senin/Sane	19.02 308	eP	P	12 53 56.1	-0.2
	comp=Z,36nm,0.8s					
WLF	Walferdange	21.20 316	eP	P	12 54 19.4	-0.4
	comp=Z,71nm,1.4s					
WLF	Walferdange	21.20 316	eP	P	12 54 19.4	-0.4
WLF			pmax	pmax		
	comp=Z,71nm,1.4s					
WLF	Walferdange	21.20 316	eP	P	12 54 19.4	-0.4
	comp=Z,71nm,1.4s					
GYA0B	ALBECK ARRAY	23.23 77	eP	P	12 54 43.7	+2.3
	comp=Z,126nm,1.3s					
FINES	FINESS Array B	25.13 357	P	P	12 54 58.3	-0.5
	comp=Z,22nm,0.8s,baz=161,slow=9.7,SNR=5.5					
FIA1	FINESS Array S	25.13 357	eP	P	12 54 59.9	+1.0
	comp=Z,104nm,1.5s					
HFS	Hagfors	25.70 342	P	P	12 55 02.8	-1.3
	comp=Z,12nm,0.9s,baz=111,slow=11,SNR=4.2					
ES19	SONSECA Array	26.02 287	eP	P	12 55 07.0	-0.3
ES19	SONSECA Array	26.02 287	eP	P	12 55 07.0	-0.3
ESDC	Sonseca Array	26.07 287	P	P	12 55 06.6	-1.1
	comp=Z,2.6nm,0.5s,baz=84,slow=9.4,SNR=10					
ESLA	Sonseca Array	26.07 287	eP	P	12 55 07.2	-0.5
	comp=Z,14nm,1.0s					
ESLA	Sonseca Array	26.07 287	eP	P	12 55 07.2	-0.5
	comp=Z,14nm,1.0s					
PAB	San Pablo	26.38 287	eP	P	12 55 11.2	+0.7
	comp=Z,32nm,1.5s					
PAB	San Pablo	26.38 287	eP	P	12 55 11.2	+0.7
PAB			pmax	pmax		
	comp=Z,32nm,1.5s					
PAB	San Pablo	26.38 287	eP	P	12 55 11.2	+0.7
	comp=Z,32nm,1.5s					
EKA	Eskdalemuir Ar	28.92 321	P	P	12 55 29.5	-3.5
	comp=Z,0.4nm,0.3s,baz=135,slow=8.1,SNR=2.1					
EKA			PcP	PcP	12 58 39.4	-2.0
	comp=Z,2.1nm,0.6s,baz=108,slow=2.7,SNR=6.1					
TORD	Torodi Ar. Bea	33.70 234	P	P	12 56 14.4	-1.0
	comp=Z,30nm,0.5s,baz=35,slow=8.9,SNR=30					
TORD			PcP	PcP	12 58 53.8	-1.0
	comp=Z,6.7nm,0.9s,baz=35,slow=2.7,SNR=3.0					
KOWA	Kowa	36.65 242	P	P	12 56 40.1	-0.7
	comp=Z,12nm,0.6s,baz=59,slow=9.6,SNR=4.1					
KOWA	Kowa	36.65 242	eP	P	12 56 41.3	+0.4
	comp=Z,17nm,0.8s					
MBAR	Mbarara	36.86 177	eP	P	12 56 43.8	+1.1
	comp=Z,8.8nm,0.8s					
MBAR	Mbarara	36.86 177	eP	P	12 56 43.8	+1.1
MBAR			pmax	pmax		
	comp=Z,9.0nm,0.8s					
KURBB	Kurchatov Arra	37.91 52	P	P	12 56 50.5	-0.7
	comp=Z,8.6nm,0.8s,baz=276,slow=8.9,SNR=6.3					
KURK	Kurchatov	37.98 52	eP	P	12 56 50.8	-0.9
	comp=Z,41nm,1.0s					
KURK	Kurchatov	37.98 52	eP	P	12 56 50.8	-0.9
KURK			pmax	pmax		
	comp=Z,41nm,1.0s					
MK31	Makanchi Array	40.49 58	eP	P	12 57 12.1	-0.7
MK31	Makanchi Array	40.49 58	eP	P	12 57 12.1	-0.7
MKAR	Makanchi Array	40.49 58	P	P	12 57 12.1	-0.7
	comp=Z,5.7nm,0.7s,baz=282,slow=7.6,SNR=6.4					
MKAR	Makanchi Array	40.49 58	eP	P	12 57 12.0	-0.7
	comp=Z,77nm,0.7s					
MK01	Makanchi Array	40.50 58	eP	P	12 57 12.5	-0.4
ZALV	Zalesovo Beam	41.89 47	P	P	12 57 23.5	-0.6
	comp=Z,6.0nm,0.6s,baz=266,slow=7.2,SNR=4.8					
ZALV	Zalesovo Beam	41.89 47	eP	P	12 57 25.3	+1.1
ZALV	Zalesovo Beam	41.89 47	eP	P	12 57 25.3	+1.1
SPA0	Spitsbergen Ar	42.22 356	eP	P	12 57 27.0	+0.4
SPITS	Spitsbergen Ar	42.22 356	P	P	12 57 25.5	-1.1
	comp=Z,3.4nm,0.6s,baz=152,slow=7.5,SNR=5.3					
DBIC	Dimbokro	42.80 235	P	P	12 57 30.9	-1.0
	comp=Z,20nm,0.7s,baz=26,slow=7.0,SNR=14					
DBIC	Dimbokro	42.80 235	eP	P	12 57 30.8	-1.2
	comp=Z,19nm,0.6s					
DBIC	Dimbokro	42.80 235	P	P	12 57 31.0	-1.0
DBIC			pmax	pmax		
	comp=Z,20nm,0.7s					
TIC	Toumodi	42.92 235	eP	P	12 57 31.6	-1.4
KIC	Kosan Boka	42.95 234	eP	P	12 57 31.6	-1.6
	comp=Z,48nm,0.6s					
KBS	Kingsbay	43.21 355	eP	P	12 57 35.9	+1.3
	comp=Z,17nm,1.0s					
KBS	Kingsbay	43.21 355	eP	P	12 57 35.9	+1.3
KBS			pmax	pmax		
	comp=Z,17nm,1.0s					
LIC	Lamto	43.24 234	eP	P	12 57 34.2	-1.4
	comp=Z,92nm,0.7s					
SCO	Scoresbysund	43.33 338	eP	P	12 57 36.9	+1.3
	comp=Z,24nm,1.2s					
SCO	Scoresbysund	43.33 338	eP	P	12 57 36.9	+1.3
SCO			pmax	pmax		
	comp=Z,24nm,1.2s					
SUMG	Summit	48.95 338	eP	P	12 58 21.0	+0.7
	comp=Z,36nm,1.4s					
SUMG	Summit	48.95 338	eP	P	12 58 21.0	+0.7
SUMG			pmax	pmax		
	comp=Z,36nm,1.4s					
LSZ	Lusaka	51.41 181	P	P	12 58 39.3	+0.1
	comp=Z,6.5nm,0.6s,baz=16,slow=7.0,SNR=5.1					
LSZ	Lusaka	51.41 181	eP	P	12 58 40.5	+1.3
	comp=Z,32nm,1.5s					
LSZ	Lusaka	51.41 181	eP	P	12 58 40.5	+1.3
LSZ			pmax	pmax		
	comp=Z,32nm,1.5s					
LSA	Lhasa	51.76 78	eP	P	12 58 43.6	+1.4
	comp=Z,20nm,1.1s					
LSA	Lhasa	51.76 78	eP	P	12 58 43.6	+1.4
LSA			pmax	pmax		
	comp=Z,20nm,1.1s					
LSA	Lhasa	51.76 78	eP	P	12 58 43.6	+1.4
	comp=Z,20nm,1.1s					
PALK	Pallekele	55.24 109	P	P	12 59 06.9	-0.5
	comp=Z,7.4nm,0.6s,baz=294,slow=18,SNR=3.5					
PALK	Pallekele	55.24 109	eP	P	12 59 07.5	+0.1
	comp=Z,62nm,1.5s					
PALK	Pallekele	55.24 109	eP	P	12 59 07.5	+0.1
PALK			pmax	pmax		
	comp=Z,62nm,1.5s					
SONM	Songino Array	56.28 52	P	P	12 59 14.4	-0.2
	comp=Z,5.1nm,0.9s,baz=286,slow=6.9,SNR=4.3					
SONA1	Songino Array	56.28 52	eP	P	12 59 14.4	-0.2
TSUM	Tsumeb	56.35 193	P	P	12 59 15.4	+0.2
	comp=Z,8.0nm,0.8s,baz=356,slow=10.0,SNR=5.3					
TSUM	Tsumeb	56.35 193	eP	P	12 59 16.0	+0.8
	comp=Z,10.0nm,0.9s					
MATP	Matopo	56.52 181	P	P	12 59 16.7	+0.3
	comp=Z,22nm,0.7s,baz=0.4,slow=12,SNR=25					
OPO	Ambohidratompo	57.33 159	P	P	12 59 23.7	+1.5
	comp=Z,15nm,0.7s,baz=323,slow=6.2,SNR=11					
ABPO	Ambohimpanom	57.76 160	eP	P	12 59 27.2	+1.9
	comp=Z,9.1nm,1.0s					
ABPO	Ambohimpanom	57.76 160	eP	P	12 59 27.2	+1.9
ABPO			pmax	pmax		
	comp=Z,9.0nm,1.0s					
LBTB	Lobatse	61.17 184	P	P	12 59 49.9	+1.2
	comp=Z,28nm,0.6s,baz=355,slow=9.9,SNR=29					
LBTB	Lobatse	61.17 184	eP	P	12 59 50.3	+1.7
	comp=Z,33nm,0.7s					
LBTB	Lobatse	61.17 184	eP	P	12 59 50.3	+1.7
LBTB			pmax	pmax		
	comp=Z,33nm,0.7s					
CMAR	Chiang Mai Arr	63.36 86	P	P	13 00 02.9	-0.6
	comp=Z,6.2nm,0.8s,baz=299,slow=8.6,SNR=4.8					
BOSA	Boshof	64.77 184	P	P	13 00 13.2	+0.7
	comp=Z,16nm,0.7s,baz=348,slow=7.2,SNR=15					
BOSA	Boshof	64.77 184	eP	P	13 00 13.2	+0.7
	comp=Z,18nm,0.7s					
SUR	Sutherland	68.85 187	eP	P	13 00 39.6	+1.0
KULM	Kulim	72.13 97	eP	P	13 00 57.3	-1.6
	comp=Z,9.4nm,0.9s					
PSI	Prapat	72.24 100	P	P	13 00 58.2	-1.4
	comp=Z,8.2nm,0.7s,baz=360,slow=5.8,SNR=4.1					
PSI	Prapat	72.24 100	eP	P	13 00 58.4	-1.2
	comp=Z,9.2nm,0.7s					
PSI	Prapat	72.24 100	eP	P	13 00 58.4	-1.2
PSI			pmax	pmax		
	comp=Z,9.0nm,0.7s					
IPM	Ipoh	72.91 97	eP	P	13 01 01.5	-2.0
	comp=Z,6.0nm,0.7s					
MA2	Magadan	73.00 27	eP	P	13 01 03.8	+0.5
	comp=Z,17nm,1.0s					
MA2	Magadan	73.00 27	eP	P	13 01 03.8	+0.5
MA2			pmax	pmax		
	comp=Z,17nm,1.0s					
RCBR	Riachuelo	73.67 250	P	P	13 01 06.7	-1.3
	comp=Z,118nm,0.4s,baz=235,slow=0.0,SNR=6.6					
USRK	Ussuriysk Ar.	73.74 47	P	P	13 01 06.3	-1.6
	comp=Z,3.4nm,0.5s,baz=274,slow=6.3,SNR=4.2					
KS01	Wonju Array Si	75.01 54	eP	P	13 01 14.9	-0.6
PLVO	Plevna	75.02 315	eP	P	13 01 15.3	-0.1
	comp=Z,9.6nm,1.2s					
KSAR	Wonju Array Be	75.03 54	P	P	13 01 14.8	-0.7
KSAR	Wonju Array Be	75.03 54	P	P	13 01 14.8	-0.7
KSRS	Korea Array	75.05 54	P	P	13 01 14.8	-0.8
	comp=Z,3.7nm,0.7s,baz=297,slow=4.8,SNR=6.4					
TOLK	Toolik Lake Re	75.26 359	eP	P	13 01 17.1	+0.7
	comp=Z,12nm,1.3s					
COLD	Coldfoot	76.69 360	eP	P	13 01 24.1	-0.4
	comp=Z,12nm,1.2s					
YKA	Yellowknife Ar	77.18 344	P	P	13 01 25.8	-1.5
	comp=Z,0.8nm,0.5s,baz=33,slow=4.8,SNR=4.9					
IM3	Indian Mountai	77.92 1	eP	P	13 01 31.0	-0.4
EGAK	Eagle	78.85 356	eP	P	13 01 36.2	-0.3
	comp=Z,19nm,1.5s					
MLY	Manley	78.89 360	eP	P	13 01 36.8	-0.1
	comp=Z,4.7nm,0.7s					
MDM	Murphy Dome	78.94 359	eP	P	13 01 36.8	-0.3
	comp=Z,17nm,1.4s					
IL1	Eielson Array	79.10 358	eP	P	13 01 37.1	-0.8
ILAR	Eielson Array	79.10 358	P	P	13 01 36.5	-1.5
	comp=Z,1.9nm,0.8s,baz=342,slow=3.8,SNR=7.5					
ILB	Eielson Array	79.10 358	eP	P	13 01 37.2	-0.8
CCB	Clear Creek Bu	79.25 359	eP	P	13 01 37.8	-0.9
	comp=Z,8.2nm,1.2s					
WRH	Wood River Hil	79.43 359	eP	P	13 01 38.9	-0.8
	comp=Z,6.6nm,0.8s					
DAWY	Dawson	79.44 355	eP	P	13 01 39.4	-0.5
	comp=Z,11nm,1.3s					
HDA	Harding Lake	79.47 358	eP	P	13 01 38.9	-1.0
	comp=Z,16nm,1.3s					
ASAJ	Asahikawa	79.80 42	eP	P	13 01 42.5	+0.4
	comp=Z,11nm,0.9s					
SCRK	Sand Creek	79.80 357	eP	P	13 01 41.7	-0.2
	comp=Z,5.7nm,1.2s					
BPAW	Bear Paw Mtn.	79.83 360	eP	P	13 01 40.8	-1.2
	comp=Z,10nm,1.1s					
DOT	Dot Lake	80.13 357	eP	P	13 01 43.2	-0.4
	comp=Z,19nm,1.0s					
PETK	Petropavlovsk-	80.37 28	PKKPbc	PKKPbc	13 20 25.9	-0.6
	comp=Z,1.5nm,0.7s,baz=148,slow=3.3,SNR=4.8					
PETK	Petropavlovsk-	80.37 28	eP	P	13 01 43.7	-1.3
PETK			PKKPbc	PKKPbc	13 20 25.9	-0.6
PETK	Petropavlovsk-	80.37 28	eP	P	13 01 43.7	-1.3
PETK					13 20 25.9	
TRF	Thorofare Moun	80.48 360	eP	P	13 01 45.1	-0.6
	comp=Z,14nm,1.3s					
MJAR	Matsushiro Arr	82.16 50	P	P	13 01 53.9	-1.0
	com

DALY				*i* S		**Sb**	12 51 12.0	-0.2
DALY	**Dalyan (Mu˘la**	**0.47**	**324**	P		**Pb**	12 51 05.5	-0.2
DALY				S		**Sb**	12 51 12.0	-0.2
AKAS	**Kas**	**0.54**	**112**	*i* P		**Pb**	12 51 06.9	0.0
AKAS				*i* S		**Sn**	12 51 16.8	+0.2
AKAS	**Kas**	**0.54**	**112**	P		**Pb**	12 51 06.9	0.0
AKAS				S		**Sn**	12 51 16.8	+0.2
TURN	**Turunc**	**0.54**	**324**	*i* P		**Pn**	12 51 08.7	+0.5
TURN				*i* S		**Sn**	12 51 17.9	+1.5
TURN	**Turunc**	**0.54**	**324**	P		**Pn**	12 51 08.7	+0.5
TURN				S		**Sn**	12 51 17.9	+1.5
MRSB	**Marmaris-Mugla**	**0.70**	**294**	PG		**Pb**	12 51 09.5	-0.1
MRSB				SG		**Sn**	12 51 19.8	-0.7
MRSB	**Marmaris-Mugla**	**0.70**	**294**	*e*Pg		**Pb**	12 51 09.5	-0.1
MRSB				*e*Sg		**Sn**	12 51 19.8	-0.7
ARG	**Arkhangelos**	**0.73**	**253**	PG		**Pb**	12 51 10.2	0.0
ARG				SG		**Sn**	12 51 21.1	-0.2
ARG	**Arkhangelos**	**0.73**	**253**	*e*Pg		**Pb**	12 51 10.2	0.0
ARG				*e*Sg		**Sn**	12 51 21.1	-0.2
GOLH	**Golhisar**	**0.92**	**30**	*i* P		**Pb**	12 51 12.1	-1.3
GOLH				*i* S		**Sn**	12 51 27.4	+1.3
GOLH	**Golhisar**	**0.92**	**30**	P		**Pb**	12 51 12.1	-1.3
GOLH				S		**Sn**	12 51 27.4	+1.3
TAVA	**DENIZLI_Tavas**	**1.03**	**356**	*i* P		**Pb**	12 51 14.5	-0.8
TAVA				*i* S		**Sb**	12 51 28.2	-0.2
TAVA	**DENIZLI_Tavas**	**1.03**	**356**	P		**Pb**	12 51 14.5	-0.8
TAVA				S		**Sb**	12 51 28.2	-0.2
DATC	**Datca-Mugla**	**1.12**	**287**	PN		**Pn**	12 51 15.7	-0.5
DATC	**Datca-Mugla**	**1.12**	**287**	*e*Pn		**Pn**	12 51 15.7	-0.5
DNZL	**Cakiroluk**	**1.25**	**2**	*i* P		**Pb**	12 51 18.8	-0.3
DNZL				*i* S		**Sn**	12 51 35.2	+0.8
DNZL	**Cakiroluk**	**1.25**	**2**	P		**Pb**	12 51 18.8	-0.3
DNZL				S		**Sn**	12 51 35.2	+0.8
DENT	**Denizli**	**1.31**	**1**	PN		**Pn**	12 51 18.3	-0.6
DENT				SN		**Sb**	12 51 36.4	-0.1
DENT	**Denizli**	**1.31**	**1**	*e*Pn		**Pn**	12 51 18.3	-0.6
DENT				*e*Sn		**Sb**	12 51 36.4	-0.1
YKAV	**Yalikavak-Bodr**	**1.54**	**297**	PN		**Pn**	12 51 22.1	+0.2
YKAV	**Yalikavak-Bodr**	**1.54**	**297**	*e*Pn		**Pn**	12 51 22.1	+0.2
KHL	**Karahalli**	**1.93**	**13**	PN		**Pn**	12 51 27.5	+0.1
KHL	**Karahalli**	**1.93**	**13**	*e*Pn		**Pn**	12 51 27.5	+0.1

*ATH **10** 13:01:41.6, 36˚.42N×29˚.24E, h36km±2km, ML2.8/2, Error ellipse: s-maj=3.4km s-min=1.1km az=139.0*
*ISCJB **10** 13:01:41.7±0.4, 36˚.36N±0˚.02×29˚.19E±0˚.02, h13km±3km, Error ellipse: s-maj=3.7km s-min=3.1km az=18.5*
*ISK **10** 13:01:41.8, 36˚.39N×29˚.17E, h12km, ML3.6/7*
*DDA **10** 13:01:42.5, 36˚.48N×29˚.22E, h7km, Ml4.0*
*CSEM **10** 13:01:42.2±0.1, 36˚.38N×29˚.21E, h15km, ML4.0, Error ellipse: s-maj=3.1km s-min=2.4km az=6.0*
*NIC **10** 13:01:45.4±0.3, 36˚.29N×29˚.35E, h25km, ML3.4*
ISC 10 13:01:42.0±0.9, **36˚.38N**±0˚.02×**29˚.23E**±0˚.02, **h15**km±7km, **n100,** σ0°.94/136, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.28**	**335**	PG	**Pg**	**13 01 47.4**	**-0.6**
FETY				SG	**Sg**	**13 01 51.9**	**-0.1**
FETY	**Fethiye**	**0.28**	**335**	*e*Pg	**Pg**	**13 01 47.4**	**-0.6**
FETY				S	**Sg**	**13 01 52.1**	**+0.1**
AKAS	**Kas**	**0.34**	**116**	PG	**Pg**	**13 01 49.6**	**+0.6**
AKAS				SG	**Sb**	**13 01 55.8**	**+0.7**
AKAS	**Kas**	**0.34**	**116**	*i* P	**Pg**	**13 01 49.4**	**+0.4**
AKAS				*i* S	**Sb**	**13 01 56.7**	**+1.6**
AKAS	**Kas**	**0.34**	**116**	P	**Pg**	**13 01 49.4**	**+0.4**
AKAS				*e*Sg	**Sb**	**13 01 55.8**	**+0.7**
AKAS				S	**Sb**	**13 01 56.7**	**+1.6**
KSL	**Kastellorizon**	**0.37**	**129**	P	**Pb**	**13 01 50.7**	**+0.4**
KSL				S	**Sn**	**13 01 58.3**	**-1.4**
KSL				AML	AML	13 02 02.0	
	comp=N,2756μm,0.6s						
KSL				AML	AML	13 02 05.0	
	comp=E,4326μm,0.8s						
KSL	**Kastellorizon**	**0.37**	**129**	P	**Pb**	**13 01 50.9**	**+0.7**
KSL				S	**Sb**	**13 01 57.7**	**+1.9**
DALY	**Dalyan (Mu˘la**	**0.64**	**313**	PG	**Pg**	**13 01 53.8**	**-0.6**
DALY				SG	**Sg**	**13 02 02.7**	**-0.2**
DALY	**Dalyan (Mu˘la**	**0.64**	**313**	*i* P	**Pg**	**13 01 53.8**	**-0.6**
DALY				*i* S	**Sg**	**13 02 03.1**	**+0.2**
DALY	**Dalyan (Mu˘la**	**0.64**	**313**	P	**Pg**	**13 01 53.8**	**-0.6**
DALY				*e*Sg	**Sg**	**13 02 02.7**	**-0.2**
DALY				S	**Sg**	**13 02 03.1**	**+0.2**
ELL	**Elmali**	**0.66**	**56**	PG	**Pb**	**13 01 55.5**	**+0.2**
ELL	**Elmali**	**0.66**	**56**	*e*Pg	**Pb**	**13 01 55.5**	**+0.2**
TURN	**Turunc**	**0.70**	**314**	PG	**Pn**	**13 01 58.4**	**+1.0**
TURN	**Turunc**	**0.70**	**314**	*i* P	**Pn**	**13 01 59.7**	**+2.3**
TURN				*i* S	**Sn**	**13 02 11.4**	**+3.4**
TURN	**Turunc**	**0.70**	**314**	*e*Pg	**Pn**	**13 01 58.4**	**+1.0**
GLHS	**Glhisar (BURDU**	**0.80**	**16**	PG	**Pg**	**13 01 57.0**	**-0.6**
GLHS	**Glhisar (BURDU**	**0.80**	**16**	*e*Pg	**Pg**	**13 01 57.0**	**-0.6**
GOLH	**Golhisar**	**0.89**	**17**	*i* P	**Pb**	**13 01 57.8**	**-1.5**
GOLH				*i* S	**Sb**	**13 02 10.9**	**-0.2**
GOLH	**Golhisar**	**0.89**	**17**	P	**Pb**	**13 01 57.8**	**-1.5**
GOLH				S	**Sb**	**13 02 10.9**	**-0.2**
MRSB	**Marmaris-Mugla**	**0.90**	**292**	PG	**Pg**	**13 01 59.5**	**+0.1**
MRSB	**Marmaris-Mugla**	**0.90**	**292**	*e*Pg	**Pg**	**13 01 59.5**	**+0.1**
ARG	**Arkhangelos**	**0.91**	**260**	PG	**Pb**	**13 01 59.0**	**-0.4**
ARG	**Arkhangelos**	**0.91**	**260**	P	**Pb**	**13 01 59.6**	**+0.2**
ARG				S	**Sg**	**13 02 12.2**	**+0.8**
ARG				AML	AML	13 02 16.6	
	comp=E,1195μm,0.4s						
ARG				AML	AML	13 02 22.8	
	comp=N,967μm,0.7s						
ARG	**Arkhangelos**	**0.91**	**260**	P	**Pg**	**13 02 00.0**	**+0.4**
ARG				S	**Sb**	**13 02 11.0**	**-0.3**
ARG	**Arkhangelos**	**0.91**	**260**	*e*Pg	**Pb**	**13 01 59.0**	**-0.4**
ARG	**Arkhangelos**	**0.91**	**260**	P	**Pb**	**13 01 59.5**	**+0.1**
ARG				S	**Sg**	**13 02 12.3**	**+0.8**
YER	**Yerkesik**	**1.07**	**315**	PG	**Pb**	**13 02 01.9**	**-0.3**
YER	**Yerkesik**	**1.07**	**315**	*e*Pg	**Pb**	**13 02 01.9**	**-0.3**
KORT	**Korkueli**	**1.09**	**55**	PN	**Pg**	**13 02 04.1**	**+1.0**
KORT	**Korkueli**	**1.09**	**55**	*i* P	**Pg**	**13 02 03.6**	**+0.5**
KORT				*i* S	**Sn**	**13 02 21.0**	**+3.2**
KORT	**Korkueli**	**1.09**	**55**	P	**Pg**	**13 02 03.6**	**+0.5**
KORT	**Korkueli**	**1.09**	**55**	*e*Pn	**Pg**	**13 02 04.1**	**+1.0**
TAVA	**DENIZLI_Tavas**	**1.11**	**347**	*i* P	**Pb**	**13 02 02.5**	**-0.5**
TAVA				*i* S	**Sb**	**13 02 16.6**	**-0.7**
TAVA	**DENIZLI_Tavas**	**1.11**	**347**	P	**Pb**	**13 02 02.5**	**-0.5**
TAVA				S	**Sb**	**13 02 16.6**	**-0.7**
ANTB	**Antalya**	**1.26**	**65**	PN	**Pg**	**13 02 08.4**	**+0.2**
ANTB	**Antalya**	**1.26**	**65**	*e*Pn	**Pg**	**13 02 06.4**	**+0.2**
DNZL	**Cakiroluk**	**1.31**	**354**	*i* P	**Pn**	**13 02 06.1**	**+0.1**
DNZL				*i* S	**Sn**	**13 02 23.6**	**+0.2**
DNZL	**Cakiroluk**	**1.31**	**354**	P	**Pn**	**13 02 06.1**	**+0.1**
DNZL				S	**Sn**	**13 02 23.6**	**+0.2**
DATC	**Datca-Mugla**	**1.32**	**287**	PN	**Pn**	**13 02 05.6**	**-0.3**
DATC	**Datca-Mugla**	**1.32**	**287**	*e*Pn	**Pn**	**13 02 05.6**	**-0.3**
DAT	**Datca**	**1.37**	**285**	PN	**Pn**	**13 02 06.7**	**-0.1**
DAT	**Datca**	**1.37**	**285**	*e*Pn	**Pn**	**13 02 06.7**	**-0.1**
DENT	**Denizli**	**1.38**	**354**	PN	**Pn**	**13 02 06.5**	**-0.3**
DENT	**Denizli**	**1.38**	**354**	*e*Pn	**Pn**	**13 02 06.5**	**-0.3**
BRDR	**BURDUR-Merkez**	**1.47**	**27**	*i* P	**Pn**	**13 02 08.3**	**+0.2**
BRDR				*i* S	**Sb**	**13 02 28.4**	**+0.8**
BRDR	**BURDUR-Merkez**	**1.47**	**27**	P	**Pn**	**13 02 08.3**	**+0.2**
BRDR				S	**Sb**	**13 02 28.4**	**+0.8**
MLSB	**Milas**	**1.48**	**308**	PN	**Pn**	**13 02 08.4**	**+0.3**
MLSB	**Milas**	**1.48**	**308**	*e*Pn	**Pn**	**13 02 08.4**	**+0.3**
BODT	**Bodrum**	**1.68**	**294**	PN	**Pn**	**13 02 11.1**	**+0.2**
BODT	**Bodrum**	**1.68**	**294**	*e*Pn	**Pn**	**13 02 11.1**	**+0.2**
NISR	**Nisiros**	**1.71**	**278**	P	**Pn**	**13 02 11.2**	**-0.1**
NISR	**Nisiros**	**1.71**	**278**	P	**Pn**	**13 02 11.0**	**-0.2**
YKAV	**Yalikavak-Bodr**	**1.73**	**296**	PN	**Pn**	**13 02 12.0**	**+0.4**
YKAV	**Yalikavak-Bodr**	**1.73**	**296**	*e*Pn	**Pn**	**13 02 12.0**	**+0.4**
ISP	**Isparta**	**1.77**	**35**	PN	**Pb**	**13 02 13.6**	**-0.6**
ISP	**Isparta**	**1.77**	**35**	*e*Pn	**Pb**	**13 02 13.6**	**-0.6**
SUTC	**Sutluce-Ispart**	**1.79**	**52**	PN	**Pb**	**13 02 14.1**	**-0.5**
SUTC	**Sutluce-Ispart**	**1.79**	**52**	*e*Pn	**Pb**	**13 02 14.1**	**-0.5**
KARP	**Karpathos**	**1.87**	**244**	PN	**Pn**	**13 02 13.6**	**0.0**
KARP	**Karpathos**	**1.87**	**244**	P	**Pn**	**13 02 13.9**	**+0.4**
KARP				S	**Sn**	**13 02 36.2**	**-0.8**
KARP	**Karpathos**	**1.87**	**244**	P	**Pn**	**13 02 13.8**	**+0.2**
KARP				S	**Sn**	**13 02 36.4**	**-0.6**
KARP	**Karpathos**	**1.87**	**244**	*e*Pn	**Pn**	**13 02 13.6**	**0.0**
KARP				S	**Sn**	**13 02 36.4**	**-0.6**
AYDB	**Zeytinkoy-Aydi**	**1.89**	**326**	PN	**Pn**	**13 02 14.5**	**+0.6**
AYDB	**Zeytinkoy-Aydi**	**1.89**	**326**	*e*Pn	**Pn**	**13 02 14.5**	**+0.6**
KHL	**Karahalli**	**1.95**	**7**	PN	**Pn**	**13 02 15.6**	**+0.9**
KHL	**Karahalli**	**1.95**	**7**	*e*Pn	**Pn**	**13 02 15.6**	**+0.9**
KULA	**Kula-Manisa**	**2.17**	**348**	PN	**Pn**	**13 02 18.1**	**+0.3**
KULA	**Kula-Manisa**	**2.17**	**348**	*e*Pn	**Pn**	**13 02 18.1**	**+0.3**
SMG	**Samos**	**2.33**	**305**	P	**Pn**	**13 02 19.7**	**-0.1**
SMG	**Samos**	**2.33**	**305**	P	**Pn**	**13 02 19.5**	**-0.3**
SMG				S	**Sn**	**13 02 47.9**	**-0.2**
SMG	**Samos**	**2.33**	**305**	P	**Pn**	**13 02 19.5**	**-0.3**
SMG				S	**Sn**	**13 02 47.9**	**-0.2**
SHAP	**Saphane-Kutahy**	**2.64**	**360**	PN	**Pn**	**13 02 24.7**	**+0.6**
SHAP	**Saphane-Kutahy**	**2.64**	**360**	*e*Pn	**Pn**	**13 02 24.7**	**+0.6**
GEDZ	**Gediz**	**2.66**	**3**	PN	**Pn**	**13 02 26.3**	**+1.9**
GEDZ	**Gediz**	**2.66**	**3**	*e*Pn	**Pn**	**13 02 26.3**	**+1.9**
ZKR	**Zakros**	**2.76**	**244**	P	**Pn**	**13 02 25.8**	**+0.1**
ZKR				S	**Sn**	**13 02 59.3**	**+0.6**
ZKR	**Zakros**	**2.76**	**244**	P	**Pn**	**13 02 26.3**	**+0.6**
ZKR	**Zakros**	**2.76**	**244**	P	**Pn**	**13 02 25.8**	**+0.1**
ZKR				S	**Sn**	**13 02 58.8**	**+0.1**
AKMC	**Akamas**	**2.86**	**117**	P	**Pn**	**13 02 26.4**	**-0.8**
	baz=298						
AKMC	**Akamas**	**2.86**	**117**	P	**Pn**	**13 02 26.4**	**-0.8**
PPCY	**Paphos**	**2.94**	**120**	P	**Pn**	**13 02 27.2**	**-1.0**
	baz=300						
PPCY	**Paphos**	**2.94**	**120**	P	**Pn**	**13 02 27.2**	**-1.0**
ALFC	**Alefka**	**3.00**	**113**	P	**Pn**	**13 02 28.1**	**-1.0**
	baz=294						
ALFC				S	**Sn**	**13 03 01.9**	**-2.9**
ALFC	**Alefka**	**3.00**	**113**	P	**Pn**	**13 02 28.1**	**-1.0**
ALFC				S	**Sn**	**13 03 01.9**	**-2.9**
APE	**Apeiranthos**	**3.05**	**284**	P	**Pn**	**13 02 28.3**	**-1.5**
APE	**Apeiranthos**	**3.05**	**284**	P	**Pn**	**13 02 29.0**	**-0.7**
NPS	**Neapolis**	**3.15**	**250**	P	**Pn**	**13 02 30.3**	**-0.7**
NPS	**Neapolis**	**3.15**	**250**	P	**Pn**	**13 02 30.8**	**-0.2**
LAST	**Lasithi**	**3.28**	**249**	P	**Pn**	**13 02 32.7**	**-0.3**
LAST	**Lasithi**	**3.28**	**249**	P	**Pn**	**13 02 33.0**	**0.0**
SZAC	**Souni**	**3.39**	**118**	P	**Pn**	**13 02 34.0**	**-0.4**
	baz=299						
SZAC				S	**Sn**	**13 03 12.0**	**-2.4**
SZAC	**Souni**	**3.39**	**118**	P	**Pn**	**13 02 34.0**	**-0.4**
SZAC				S	**Sn**	**13 03 12.0**	**-2.4**
CSS	**Mathiatis**	**3.63**	**112**	P	**Pn**	**13 02 37.6**	**-0.1**
	baz=293						
CSS	**Mathiatis**	**3.63**	**112**	P	**Pn**	**13 02 37.6**	**-0.1**
SIVA	**Sivas**	**3.85**	**251**	P	**Pn**	**13 02 41.3**	**+0.7**
SIVA	**Sivas**	**3.85**	**251**	P	**Pn**	**13 02 41.2**	**+0.6**
IMMV	**Iera Moni Meta**	**4.36**	**259**	P	**Pn**	**13 02 46.6**	**-1.1**
IMMV	**Iera Moni Meta**	**4.36**	**259**	P	**Pn**	**13 02 47.5**	**-0.2**
DION	**Dionisos Attik**	**4.55**	**293**	P	**Pn**	**13 02 52.4**	**+2.0**
DION	**Dionisos Attik**	**4.55**	**293**	P	**Pn**	**13 02 51.6**	**+1.2**

*ATH **10** 13:07:33.4, 36˚.45N×28˚.83E, h27km±2km, ML2.5/2, Error ellipse: s-maj=3.7km s-min=1.2km az=176.0*
*CSEM **10** 13:07:33.6±0.1, 36˚.47N×28˚.88E, h15km, ML3.3, Error ellipse: s-maj=2.6km s-min=1.9km az=3.0*
*THE **10** 13:07:33.5, 36˚.48N×28˚.87E, h0km±1km, Error ellipse: s-maj=2.0km s-min=0.8km az=172.0*
*ISK **10** 13:07:33.1, 36˚.47N×28˚.88E, h14km, ML3.2/12*
*DDA **10** 13:07:34.7, 36˚.56N×28˚.94E, h7km, Ml3.3*
*ISCJB **10** 13:07:34.0±0.4, 36˚.45N±0˚.03×28˚.86E±0˚.03, h20km±5km, Error ellipse: s-maj=4.8km s-min=3.8km az=3.9*
ISC 10 13:07:33.6±0.9, **36˚.48N**±0˚.02×**28˚.88E**±0˚.02, **h15**km±7km, **n79,** σ0°.51/104, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.23**	**46**	PG	**Pg**	**13 07 38.5**	**-0.2**
FETY				SG	**Sg**	**13 07 42.4**	**+0.2**
FETY	**Fethiye**	**0.23**	**46**	P	**Pg**	**13 07 38.5**	**-0.2**
FETY				S	**Sb**	**13 07 43.5**	**0.0**
FETY	**Fethiye**	**0.23**	**46**	P	**Pg**	**13 07 38.5**	**-0.2**
FETY				*e*Sg	**Sg**	**13 07 42.4**	**+0.2**
FETY				S	**Sb**	**13 07 43.3**	**-0.2**
DALY	**Dalyan (Mu˘la**	**0.39**	**332**	PG	**Pg**	**13 07 41.4**	**0.0**
DALY				SG	**Sg**	**13 07 47.1**	**+0.4**
DALY	**Dalyan (Mu˘la**	**0.39**	**332**	*i* P	**Pb**	**13 07 41.8**	**-0.4**
DALY				*i* S	**Sb**	**13 07 47.7**	**-0.3**
DALY	**Dalyan (Mu˘la**	**0.39**	**332**	*e*Pg	**Pg**	**13 07 41.4**	**0.0**
DALY	**Dalyan (Mu˘la**	**0.39**	**332**	P	**Pb**	**13 07 41.8**	**-0.4**
DALY				*e*Sg	**Sg**	**13 07 47.1**	**+0.4**
TURN	**Turunc**	**0.45**	**331**	PG	**Pn**	**13 07 45.2**	**-0.4**
TURN	**Turunc**	**0.45**	**331**	*i* P	**Pn**	**13 07 45.9**	**+0.3**
TURN				*i* S	**Sn**	**13 07 55.6**	**+2.1**
TURN	**Turunc**	**0.45**	**331**	*e*Pg	**Pn**	**13 07 45.2**	**-0.4**
MRSB	**Marmaris-Mugla**	**0.60**	**294**	PG	**Pg**	**13 07 45.2**	**-0.2**
MRSB	**Marmaris-Mugla**	**0.60**	**294**	*e*Pg	**Pg**	**13 07 45.2**	**-0.2**
AKAS	**Kas**	**0.63**	**112**	PG	**Pg**	**13 07 45.6**	**-0.5**
AKAS				SG	**Sb**	**13 07 55.2**	**0.0**
AKAS	**Kas**	**0.63**	**112**	*i* P	**Pg**	**13 07 45.2**	**-0.9**
AKAS				*i* S	**Sb**	**13 07 56.4**	**+1.2**
AKAS	**Kas**	**0.63**	**112**	P	**Pg**	**13 07 45.2**	**-0.9**
AKAS	**Kas**	**0.63**	**112**	*e*Pg	**Pg**	**13 07 45.6**	**-0.5**
AKAS				*e*Sg	**Sb**	**13 07 55.2**	**0.0**
AKAS				S	**Sb**	**13 07 56.4**	**+1.2**
KSL	**Kastellorizon**	**0.66**	**120**	P	**Pb**	**13 07 46.7**	**-0.1**
KSL				S	**Sn**	**13 07 57.5**	**-0.9**
KSL				AML	AML	13 08 05.2	
	comp=N,543μm,0.4s						
KSL				AML	AML	13 08 06.2	
	comp=E,1301μm,0.5s						
KSL	**Kastellorizon**	**0.66**	**120**	P	**Pb**	**13 07 46.8**	**+0.1**
ARG	**Arkhangelos**	**0.66**	**247**	PG	**Pg**	**13 07 46.4**	**-0.1**
ARG	**Arkhangelos**	**0.66**	**247**	P	**Pg**	**13 07 45.9**	**-0.6**
ARG				S	**Sg**	**13 07 54.9**	**-0.3**
ARG				AML	AML	13 08 05.4	
	comp=N,961μm,0.4s						
ARG				AML	AML	13 08 06.4	
	comp=E,1612μm,0.7s						
ARG	**Arkhangelos**	**0.66**	**247**	P	**Pb**	**13 07 47.0**	**+0.1**
ARG	**Arkhangelos**	**0.66**	**247**	*e*Pg	**Pg**	**13 07 46.4**	**-0.1**
ARG	**Arkhangelos**	**0.66**	**247**	P	**Pb**	**13 07 47.0**	**+0.1**
ARG				S	**Sg**	**13 07 55.0**	**-0.3**
YER	**Yerkesik**	**0.81**	**324**	PG	**Pb**	**13 07 49.5**	**0.0**
YER	**Yerkesik**	**0.81**	**324**	P	**Pn**	**13 07 50.1**	**-0.5**
YER				S	**Sn**	**13 08 01.9**	**-0.6**
YER	**Yerkesik**	**0.81**	**324**	*e*Pg	**Pb**	**13 07 49.5**	**0.0**
YER	**Yerkesik**	**0.81**	**324**	P	**Pn**	**13 07 50.1**	**-0.5**
YER				S	**Sn**	**13 08 01.9**	**-0.6**
GLHS	**Glhisar (BURDU**	**0.84**	**36**	PG	**Pg**	**13 07 49.8**	**-0.2**
GLHS	**Glhisar (BURDU**	**0.84**	**36**	*e*Pg	**Pg**	**13 07 49.8**	**-0.2**
ELL	**Elmali**	**0.87**	**72**	PG	**Pb**	**13 07 50.7**	**+0.2**
ELL	**Elmali**	**0.87**	**72**	*e*Pg	**Pb**	**13 07 50.7**	**+0.2**
GOLH	**Golhisar**	**0.94**	**36**	*i* P	**Pb**	**13 07 50.3**	**-1.3**
GOLH				*i* S	**Sn**	**13 08 05.6**	**0.0**
GOLH	**Golhisar**	**0.94**	**36**	P	**Pb**	**13 07 50.3**	**-1.3**
GOLH				S	**Sn**	**13 08 05.6**	**0.0**
TAVA	**DENIZLI_Tavas**	**0.99**	**2**	*i* P	**Pb**	**13 07 52.2**	**-0.3**
TAVA				*i* S	**Sg**	**13 08 06.3**	**+0.6**
TAVA	**DENIZLI_Tavas**	**0.99**	**2**	P	**Pb**	**13 07 52.2**	**-0.3**
TAVA				S	**Sg**	**13 08 06.3**	**+0.6**
DATC	**Datca-Mugla**	**1.02**	**286**	PG	**Pg**	**13 07 53.1**	**-0.2**
DATC	**Datca-Mugla**	**1.02**	**286**	*e*Pg	**Pg**	**13 07 53.1**	**-0.2**
DAT	**Datca**	**1.08**	**284**	PG	**Pn**	**13 07 54.2**	**-0.1**
DAT	**Datca**	**1.08**	**284**	*e*Pg	**Pn**	**13 07 54.2**	**-0.1**
MLSB	**Milas**	**1.20**	**313**	PN	**Pb**	**13 07 56.3**	**+0.1**
MLSB	**Milas**	**1.20**	**313**	*e*Pn	**Pb**	**13 07 56.3**	**+0.1**
DNZL	**Cakiroluk**	**1.22**	**6**	*i* P	**Pn**	**13 07 56.2**	**-0.1**
DNZL				*i* S	**Sg**	**13 08 13.4**	**+0.4**
DNZL	**Cakiroluk**	**1.22**	**6**	P	**Pn**	**13 07 56.2**	**-0.1**
DNZL				S	**Sg**	**13 08 13.4**	**+0.4**
DENT	**Denizli**	**1.28**	**5**	PN	**Pn**	**13 07 56.9**	**-0.2**
DENT	**Denizli**	**1.28**	**5**	*e*Pn	**Pn**	**13 07 56.9**	**-0.2**
KORT	**Korkueli**	**1.29**	**66**	PN	**Pg**	**13 07 58.2**	**-0.3**
KORT	**Korkueli**	**1.29**	**66**	*e*Pn	**Pg**	**13 07 58.2**	**-0.3**
BODT	**Bodrum**	**1.39**	**295**	PN	**Pn**	**13 07 57.9**	**-0.5**
BODT	**Bodrum**	**1.39**	**295**	P	**Pn**	**13 07 58.0**	**-0.5**
BODT				S	**Sg**	**13 08 18.1**	**-0.3**
BODT	**Bodrum**	**1.39**	**295**	P	**Pn**	**13 07 58.0**	**-0.5**
BODT				S	**Sg**	**13 08 18.1**	**-0.3**
YKAV	**Yalikavak-Bodr**	**1.44**	**297**	PN	**Pn**	**13 07 59.2**	**+0.1**
YKAV	**Yalikavak-Bodr**	**1.44**	**297**	*e*Pn	**Pn**	**13 07 59.2**	**+0.1**
ANTB	**Antalya**	**1.49**	**73**	PN	**Pn**	**13 08 00.2**	**+0.4**
ANTB	**Antalya**	**1.49**	**73**	*e*Pn	**Pn**	**13 08 00.2**	**+0.4**
AYDB	**Zeytinkoy-Aydi**	**1.67**	**332**	PN	**Pn**	**13 08 02.5**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**1.67**	**332**	*e*Pn	**Pn**	**13 08 02.5**	**+0.1**
KARP	**Karpathos**	**1.67**	**237**	PN	**Pn**	**13 08 02.5**	**+0.1**
KARP	**Karpathos**	**1.67**	**237**	P	**Pn**	**13 08 02.5**	**+0.1**
KARP	**Karpathos**	**1.67**	**237**	P	**Pn**	**13 08 02.7**	**+0.3**
KARP	**Karpathos**	**1.67**	**237**	*e*Pn	**Pn**	**13 08 02.5**	**+0.1**
ISP	**Isparta**	**1.88**	**44**	PN	**Pn**	**13 08 05.5**	**+0.2**
ISP	**Isparta**	**1.88**	**44**	*e*Pn	**Pn**	**13 08 05.5**	**+0.2**
SUTC	**Sutluce-Ispart**	**1.97**	**59**	PN	**Pn**	**13 08 07.3**	**+0.7**
SUTC	**Sutluce-Ispart**	**1.97**	**59**	*e*Pn	**Pn**	**13 08 07.3**	**+0.7**
KULA	**Kula-Manisa**	**2.04**	**355**	PN	**Pn**	**13 08 07.4**	**-0.1**
KULA	**Kula-Manisa**	**2.04**	**355**	*e*Pn	**Pn**	**13 08 07.4**	**-0.1**
SMG	**Samos**	**2.04**	**308**	P	**Pn**	**13 08 08.6**	**+1.1**
SMG	**Samos**	**2.04**	**308**	P	**Pn**	**13 08 08.3**	**+0.8**
ZKR	**Zakros**	**2.56**	**239**	P	**Pn**	**13 08 15.5**	**+1.0**
ZKR	**Zakros**	**2.56**	**239**	P	**Pn**	**13 08 15.1**	**+0.6**
ZKR	**Zakros**	**2.56**	**239**	P	**Pn**	**13 08 15.1**	**+0.6**
APE	**Apeiranthos**	**2.75**	**283**	P	**Pn**	**13 08 17.9**	**+0.6**
APE	**Apeiranthos**	**2.75**	**283**	P	**Pn**	**13 08 17.8**	**+0.6**
NPS	**Neapolis**	**2.92**	**246**	P	**Pn**	**13 08 18.6**	**-0.9**
NPS	**Neapolis**	**2.92**	**246**	P	**Pn**	**13 08 19.2**	**-0.3**
CHOS	**Chios island**	**2.95**	**311**	P	**Pn**	**13 08 20.0**	**0.0**
CHOS	**Chios island**	**2.95**	**311**	P	**Pn**	**13 08 20.4**	**+0.4**
LAST	**Lasithi**	**3.06**	**246**	P	**Pn**	**13 08 21.2**	**-0.3**
LAST	**Lasithi**	**3.06**	**246**	P	**Pn**	**13 08 21.5**	**0.0**

*ISCJB **10** 13:32:53.2±0.7, 18˚.74N±0˚.03×145˚.62E±0˚.03, h142km±6km, mb4.8/244, Error ellipse: s-maj=4.3km s-min=4.1km az=155.7*
*MOS **10** 13:32:54.1±0.9, 18˚.70N×145˚.50E, h156km, mb4.8/53, Error ellipse: s-maj=8.1km s-min=5.1km az=92.4*
*IDC **10** 13:32:54.9±0.5, 18˚.69N×145˚.58E, h150km±4km, mb4.3/39, mb1 4.3/44, mb1mx4.2/68, mbtmp4.7/44, Error ellipse: s-maj=9.8km s-min=6.6km az=87.0*
*NEIC **10** 13:32:55.7±0.1, 18˚.69N×145˚.62E, mb5.0/184, Error ellipse: s-maj=3.5km s-min=3.1km az=124.0*
*BJI **10** 13:32:55.5, 18˚.81N×145˚.80E, h172km, mb4.6/34, mB5.1/15*
ISC 10 13:32:55.5±0.4, **18˚.70N**±0˚.04×**145˚.70E**±0˚.05, **h155**km±3km, **h155**km:**pP-P, n457,** σ1°.25/491, **mb4.9**/243, **15C-4D, Mariana Islands**

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

KLR	Kul'dur	32.47 343	*c*	*i*P	P	13 39 11.2 +0.1
COEN	Coen	32.55 185		*e*P	P	13 39 11.2 -0.9
	comp=Z,20nm,0.8s					
GRNR	Gornyy	32.84 349		*e*P	P	13 39 16.0 +1.6
GRNR				pmax	pmax	
	comp=Z,14nm,0.7s					
BJI	Beijing	33.14 316⇑		*e*P	P	13 39 15.0 -2.0
BJI				pP	pP	13 39 54.1 +4.2
BJI				pmax	pmax	
	comp=Z,9.0nm,0.5s					
MTN	Manton Dam	34.48 206		*e*P	P	13 39 28.6 -0.2
	comp=Z,51nm,0.7s					
NKL	Nikolayevsk	34.60 355		*e*P	P	13 39 31.0 +1.5
NKL				pmax	pmax	
	comp=N,20nm,0.9s					
NKL				pmax	pmax	
	comp=Z,40nm,0.9s					
PETK	Petropavlovsk-	35.59 12		P	P	13 39 39.6 +1.6
	comp=Z,9.6nm,0.6s,baz=194,slow=7.3,SNR=36					
PETK	Petropavlovsk-	35.59 12		*e*P	P	13 39 39.3 +1.3
PETK	Petropavlovsk-	35.59 12		*e*P	P	13 39 39.3 +1.3
PET	Petropavlovsk	35.71 13		*e*P	P	13 39 40.9 +1.9
PET				pmax	pmax	
	comp=Z,12nm,0.8s					
SBUM	Sibu	36.55 248		*e*P	P	13 39 48.3 +1.7
	comp=Z,24nm,0.8s					
HHC	Hu-ho-hao-te	36.60 314		*e*P	P	13 39 48.3 +1.3
HHC				pmax	pmax	
	comp=Z,6.0nm,0.6s					
HHC				pmax	pmax	
	comp=Z,460nm,5.2s					
GYA	Guiyang	36.76 289⇑		*i*P	P	13 39 50.9 +2.5
GYA				pP	pP	13 40 26.4 +4.6
GYA				sP	sP	13 40 47.0 +7.6
GYA				PP	PnPn	13 41 19.8 +2.4
GYA				S	S	13 45 17.6 -3.4
GYA				sS	sS	13 46 24.4 +5.0
GYA				pmax	pmax	
	comp=Z,20nm,1.0s					
GYA				pmax	pmax	
	comp=Z,120nm,5.2s					
HIA	Hailar	36.96 332		*e*P	P	13 39 48.5 -1.2
HIA				*e*pP	pP	13 40 24.4 +1.3
HIA	Hailar	36.96 332		*i*P	P	13 39 48.6 -1.2
HIA				pmax	pmax	
	comp=Z,4.0nm,1.0s					
ZEA	Zeya	37.77 342		*e*P	P	13 39 59.4 +3.0
ZEA				pmax	pmax	
	comp=Z,17nm,1.0s					
CTA	Charters Tower	38.55 179		P	P	13 40 03.1 -0.2
	comp=Z,3.9nm,0.5s,baz=3.6,slow=8.4,SNR=13					
SKNT	Sakolnakorn	39.69 274		P	P	13 40 15.3 +2.3
	comp=Z,5.9nm,1.0s					
CD2	Chengdu	39.75 296		P	P	13 40 11.6 -1.8
CD2				pmax	pmax	
	comp=Z,30nm,0.5s					
WRAB	Tennant Creek	39.98 197		*e*P	P	13 40 14.8 -0.3
	comp=Z,106nm,1.0s					
WRAB	Tennant Creek	39.98 197	*ce*	P	P	13 40 15.3 +0.1
WRAB				pmax	pmax	
	comp=Z,143nm,1.2s					
WB2	Warramunga Arr	39.98 197		*e*P	P	13 40 14.8 -0.4
WRA	Warramunga Arr	39.99 197		P	P	13 40 15.0 -0.2
	comp=Z,75nm,0.9s,baz=19,slow=9.1,SNR=120					
WRA				ScP	ScP	13 45 50.0 -2.1
	comp=Z,2.3nm,0.8s,baz=15,slow=4.3,SNR=6.4					
WRA				S	S	13 46 08.2 -1.2
	comp=Z,6.7nm,1.1s,baz=20,slow=16,SNR=6.7					
KMI	Kunming	40.24 287		P	P	13 40 17.9 +0.2
KMI				pP	pP	13 40 56.3 +4.8
KMI				sP	sP	13 41 15.6 +6.6
KMI				pmax	pmax	
	comp=Z,5.0nm,0.6s					
KMI				LR	LR	
	comp=Z,630nm,14.5s					
KMI				LR	LR	
	comp=Z,570nm,16.8s					
KMI				LR	LR	
	comp=Z,600nm,15.4s					
LZH	Lanzhou	40.65 304		⇓P	P	13 40 22.6 +1.8
LZH				pP	pP	13 40 59.3 +4.6
LZH				sP	sP	13 41 21.7 +10
LZH				PP	PnPn	13 42 03.0 -0.2
LZH				pmax	pmax	
	comp=Z,21nm,1.3s					
LZH				pmax	pmax	
	comp=Z,85nm,5.4s					
MA2	Magadan	40.99 4		P	P	13 40 23.3 +0.3
	comp=Z,17nm,0.8s,baz=158,slow=7.0,SNR=20					
MA2	Magadan	40.99 4		*e*P	P	13 40 24.0 +1.0
	comp=Z,18nm,0.7s					
MA2	Magadan	40.99 4⇑		*e*P	P	13 40 23.6 +0.6
MA2				pmax	pmax	
	comp=Z,18nm,0.7s					
CHAI	Chaiyaphum	41.76 273		P	P	13 40 32.9 +3.0
	comp=Z,4.2nm,1.0s					
ULN	Ulaanbaatar	42.77 322	*ce*	P	P	13 40 37.7 -0.2
ULN				pmax	pmax	
	comp=Z,7.0nm,1.7s					
SONM	Songino Array	43.15 321		P	P	13 40 40.3 -0.6
	comp=Z,2.6nm,0.6s,baz=133,slow=8.2,SNR=12					
SONM				pP	pP	13 41 14.6 -0.5
	comp=Z,4.9nm,0.9s,baz=124,slow=7.9,SNR=3.9					
SONM				ScP	ScP	13 46 01.2 -3.3
	comp=Z,0.7nm,0.8s,baz=131,slow=4.1,SNR=4.6					
SONA1	Songino Array	43.15 321		*e*P	P	13 40 40.3 -0.6
UGM	Wanagama	43.62 236		*e*P	P	13 40 45.2 +0.3
	comp=Z,76nm,1.2s					
AS01	Alice Springs	43.64 196		*e*P	P	13 40 45.0 0.0
AS31	Alice Springs	43.65 196		*e*P	P	13 40 45.0 0.0
	comp=Z,8.0nm,0.6s					
ASAR	Alice Springs	43.65 196		P	P	13 40 45.4 +0.3
	comp=Z,20nm,0.8s,baz=25,slow=8.9,SNR=181					
ASAR				PP	PcP	13 42 29.2 -0.4
	comp=Z,4.1nm,0.8s,baz=21,slow=7.2,SNR=4.0					
ASAR				ScP	ScP	13 46 04.3 -2.4
	comp=Z,1.7nm,0.8s,baz=16,slow=4.1,SNR=6.3					
ASAR				S	S	13 47 02.3 -0.9
	comp=Z,8.3nm,1.1s,baz=18,slow=23,SNR=20					
CM01	Chiang Mai Arr	44.21 277		*e*P	P	13 40 50.9 +1.2
CM31	Chiang Mai Arr	44.22 278		*e*P	P	13 40 50.6 +0.8
CMAR	Chiang Mai Arr	44.22 278		P	P	13 40 49.9 +0.2
	comp=Z,6.8nm,0.8s,baz=66,slow=6.6,SNR=31					
MYKOM	Kota Tinggi	44.31 253		*e*P	P	13 40 52.5 +2.1
	comp=Z,41nm,0.8s					
SEY	Seymchan	44.44 4		P	P	13 40 52.0 +1.2
	comp=Z,6.3nm,0.6s,baz=179,slow=14,SNR=26					
SEY	Seymchan	44.44 4	*ce*	P	P	13 40 51.9 +1.2
GTA	Gaotai	44.55 308		*e*P	P	13 40 55.1 +2.9
GTA				pP	pP	13 41 25.0 -1.6
GTA				pmax	pmax	
	comp=Z,3.0nm,1.2s					
YAK	Yakutsk	44.72 349		*e*P	P	13 40 52.4 -0.5
	comp=Z,34nm,0.7s					
YAK	Yakutsk	44.72 349		*e*P	P	13 40 51.9 -1.1
YAK				*e**PP	pP	13 41 23.1 -4.3
YAK				*e*		13 42 41.9
YAK				*e*PPP	PPP	13 43 22.8
YAK				*e*S	S	13 47 18.3 +0.6
YAK				*e*		13 50 25.2
YAK				pmax	pmax	
	comp=Z,25nm,0.9s					
YAK				pmax	pmax	
	comp=N,3.0nm,0.9s					
YAK				pmax	pmax	
	comp=E,3.0nm,0.9s					
YAK				pmax	pmax	
	comp=Z,203nm,6.3s					
YAK				pmax	pmax	
	comp=N,196nm,7.9s					
YAK				pmax	pmax	
	comp=E,265nm,7.6s					
DZM	Mont Dzumac	45.31 152		P	P	13 40 58.9 +0.7
	comp=E,20nm,0.7s,baz=8.4,slow=8.6,SNR=14					
DZM	Mont Dzumac	45.31 152		*e*P	P	13 40 58.5 +0.2
	comp=E,25nm,0.8s					
LEM	Lembang	45.32 239		P	P	13 40 58.6 +0.1
	comp=E,23nm,0.6s,baz=307,slow=20,SNR=8.3					
IPM	Ipoh	45.84 258		*e*P	P	13 41 04.2 +1.7
	comp=E,19nm,1.0s					
ZAK	Zakamensk	46.15 323		*e*P	P	13 41 03.7 -0.9
ZAK				*e*		13 41 39.6
ZAK				pmax	pmax	
	comp=Z,3.0nm,1.3s					
STKA	Stephens Creek	50.44 185		P	P	13 41 37.0 -0.4
	comp=Z,5.6nm,0.8s,baz=5.2,slow=10,SNR=11					
STKA	Stephens Creek	50.44 185		*e*P	P	13 41 36.3 -1.1
	comp=Z,1.4nm,0.8s					
STKA	Stephens Creek	50.44 185		*e*P	P	13 41 36.3 -1.1
STKA				pmax	pmax	
	comp=Z,1.0nm,0.8s					
LSA	Lhasa	50.55 293		*e*pP	pP	13 42 18.4 +4.2
BILL	Bilibino	51.02 10		*e*P	P	13 41 42.1 +0.8
	comp=Z,81nm,1.2s					
BILL	Bilibino	51.02 10	*d*	*i*P	P	13 41 41.5 +0.2
BILL				*i* *PP	pP	13 42 14.0 -2.6
BILL				*i*		13 42 56.3
BILL				*i*		13 43 37.9
BILL				pmax	pmax	
	comp=Z,69nm,1.2s					
FORT	Forrest	52.04 199		*e*P	P	13 41 49.7 +0.4
	comp=Z,50nm,0.9s					
BBOO	Buckleboo	52.04 190		*e*P	P	13 41 49.7 +0.3
	comp=Z,24nm,0.7s					
KIP	Kipapa	52.70 77	*ce*	P	P	13 41 56.0 +1.5
KIP				pmax	pmax	
	comp=Z,823nm,2.5s					
FALS	False Pass	52.71 34		*e*P	P	13 41 54.9 +0.9
	comp=Z,84nm,0.6s					
TIXI	Tiksi	53.87 353		*e*P	P	13 42 01.3 -0.9
	comp=Z,3.4nm,0.7s					
TIXI	Tiksi	53.87 353	*ce*	P	P	13 42 00.7 -1.5
TIXI				pmax	pmax	
	comp=Z,3.0nm,0.6s					
ODAN	Odare	53.99 290		*e*P	P	13 42 05.3 +1.1
WMQ	Urumqi	54.31 311		P	P	13 42 07.4 +1.4
WMQ				pP	pP	13 42 45.6 +3.9
WMQ				sP	sP	13 43 02.9 +4.2
WMQ				pmax	pmax	
	comp=Z,21nm,1.1s					
WMQ				pmax	pmax	
	comp=Z,4μm,11.8s					
WMQ				LR	LR	
	comp=Z,550nm,21.1s					
WMQ				LR	LR	
	comp=Z,650nm,20.3s					
WMQ				LR	LR	
	comp=Z,530nm,23.7s					
SDPT	Sand Point	54.47 35		*e*P	P	13 42 07.3 +0.5
	comp=Z,98nm,0.8s					
RAMN	Ramite	54.68 290		*e*P	P	13 42 10.2 +1.0
MHA	Mahukona	54.83 78		*e*P	P	13 42 11.1 +1.0
MHA	Mahukona	54.83 78		*e*P	P	13 42 11.1 +1.0
JIRN	Jiri	54.99 291		*e*P	P	13 42 13.0 +1.4
	comp=Z,30nm,0.7s					
HPAH	Hawaii Prepara	55.05 78		*e*P	P	13 42 13.2 +1.5
	comp=Z,135nm,0.8s					
GUN	Gumba	55.25 291		*e*P	P	13 42 14.4 +1.0
	comp=Z,40nm,1.0s					
KHU	Kahuku	55.26 79		*e*P	P	13 42 15.4 +2.1
	comp=Z,249nm,1.1s					
KHU	Kahuku	55.26 79		*e*P	P	13 42 15.5 +2.1
KHU				pmax	pmax	
	comp=Z,249nm,1.1s					
AIN	Ainahou	55.38 79		*e*P	P	13 42 15.9 +1.7
	comp=Z,504nm,1.4s					
HULD	Heiheiahulu Di	55.82 79		*e*P	P	13 42 16.9 -0.3
	comp=Z,187nm,1.1s					
CHGN	Chignik	55.88 34		*e*P	P	13 42 16.8 -0.1
	comp=Z,58nm,1.1s					
ANM	Nome	56.20 23		*e*P	P	13 42 20.2 +1.1
	comp=Z,30nm,0.9s					
ANM	Nome	56.20 23		*e*P	P	13 42 20.2 +1.1
ANM				pmax	pmax	
	comp=Z,30nm,0.9s					
GKN	Gorkha	56.34 292		*e*P	P	13 42 21.8 +0.9
	comp=Z,47nm,1.1s					
DANN	Dangsing	57.08 292		*e*P	P	13 42 27.1 +0.8
	comp=Z,25nm,0.6s					
KOLN	Koldanda	57.27 291		*e*P	P	13 42 28.9 +1.4
	comp=Z,5.2nm,0.7s					
ZALV	Zalesovo Beam	58.02 322		P	P	13 42 30.8 -1.2
	comp=Z,2.1nm,0.6s,baz=104,slow=7.4,SNR=7.3					
ZALV	Zalesovo Beam	58.02 322		*e*P	P	13 42 30.2 -1.8
ZALV	Zalesovo Beam	58.02 322		*e*P	P	13 42 30.2 -1.8
MK01	Makanchi Array	58.46 314		*e*P	P	13 42 34.4 -0.9
MK31	Makanchi Array	58.47 314		*e*P	P	13 42 34.4 -0.9
MK31	Makanchi Array	58.47 314		*i*P	P	13 42 34.7 -0.6
MK31				pmax	pmax	
	comp=Z,5.0nm,0.8s					
MKAR	Makanchi Array	58.47 314		P	P	13 42 35.0 -0.3
	comp=Z,4.1nm,0.7s,baz=92,slow=9.1,SNR=34					
MKAR				pP	pP	13 43 08.4 -3.1
	comp=Z,4.6nm,0.9s,baz=96,slow=8.7,SNR=6.0					
MKAR	Makanchi Array	58.47 314		*e*P	P	13 42 34.5 -0.8
	comp=Z,73nm,1.1s					
MKAR				pP	pP	13 43 08.4 -3.1
MAKZ	Makanchi	58.68 314		*e*P	P	13 42 36.2 -0.6
	comp=Z,26nm,1.1s					
MAKZ	Makanchi	58.68 314		P	P	13 42 36.5 -0.3
MAKZ				pmax	pmax	
	comp=Z,7.0nm,0.9s					
SVW2	Sparrevohn	58.82 29		*e*P	P	13 42 38.7 +1.2
	comp=Z,31nm,0.8s					
OHAK	Old Harbor	58.85 34		*e*P	P	13 42 38.8 +1.1
	comp=Z,52nm,0.9s					
NVS	Novosibirsk	59.11 323		*e*P	P	13 42 49.2 +10
NVS				pmax	pmax	
	comp=N,7.0nm,1.5s					
NVS				pmax	pmax	
	comp=E,15nm,1.5s					
NVS				pmax	pmax	
	comp=Z,20nm,1.5s					
KDAK	Kodiak Island	59.35 33		P	P	13 42 41.6 +0.4
	comp=Z,26nm,0.8s,baz=235,slow=2.3,SNR=20					
KDAK	Kodiak Island	59.35 33		*e*P	P	13 42 42.2 +1.1
	comp=Z,35nm,0.9s					
KDAK	Kodiak Island	59.35 33		*i*P	P	13 42 42.2 +1.1
RSO	Redoubt South	59.96 30		*e*P	P	13 42 45.9 +0.3
PDGK	Podgornoye	60.21 310		P	P	13 42 46.5 -1.0
PDGK				pmax	pmax	
	comp=Z,7.0nm,0.8s					
HOM	Homer	60.29 31		*e*P	P	13 42 47.9 +0.3
	comp=Z,83nm,0.8s					
BRLK	Bradley Lake	60.69 31		*e*P	P	13 42 50.4 +0.1
	comp=Z,38nm,0.8s					
PPLA	Purkeypile	60.90 28		*e*P	P	13 42 52.5 +0.7
	comp=Z,24nm,0.9s					
SKT	Skwentna	60.94 29		*e*P	P	13 42 52.1 +0.2
	comp=Z,36nm,0.8s					
SUA	Susitna One	61.17 29		*e*P	P	13 42 54.0 +0.4
	comp=Z,25nm,0.7s					
IM3	Indian Mountai	61.22 24		*e*P	P	13 42 54.6 +0.9
KURK	Kurchatov	61.27 318		*e*P	P	13 42 52.9 -1.4
	comp=Z,52nm,1.3s					
KURK				pP	pP	13 43 28.5 -2.3
KURK	Kurchatov	61.27 318		⇑*i*P	P	13 42 53.5 -0.9
KURK				pmax	pmax	
	comp=Z,5.0nm,0.7s					
KURBB	Kurchatov Arra	61.32 318		P	P	13 42 53.8 -0.9
	comp=Z,8.4nm,0.7s,baz=97,slow=7.2,SNR=61					
KURBB				pP	pP	13 43 28.5 -2.6
	comp=Z,18nm,1.1s,baz=98,slow=6.6,SNR=6.4					
SEW	Seward	61.47 31		*e*P	P	13 42 55.7 +0.2
	comp=Z,58nm,0.9s					
RC01	Rabbit Creek A	61.55 30		*e*P	P	13 42 56.4 +0.3
	comp=Z,49nm,0.8s					
NRIK	Noril'sk	61.61 340		P	P	13 42 56.4 +0.1
	comp=Z,8.4nm,0.5s,baz=104,slow=9.0,SNR=4.8					
BPAW	Bear Paw Mtn.	61.75 26		*e*P	P	13 42 58.2 +0.8
	comp=Z,68nm,0.8s					
TRF	Thorofare Moun	61.88 27		*e*P	P	13 42 58.6 +0.1
	comp=Z,53nm,0.9s					
PMR	Palmer	61.95 29		*e*P	P	13 42 58.9 +0.2
	comp=Z,39nm,0.9s					
PMR	Palmer	61.95 29		*e*P	P	13 42 58.9 +0.2
PMR				pmax	pmax	
	comp=Z,39nm,0.9s					
GHO	Glory Hole Cre	62.09 29		*e*P	P	13 42 59.8 +0.1
	comp=Z,46nm,0.8s					
MLY	Manley	62.12 25		*e*P	P	13 43 00.5 +0.7
	comp=Z,41nm,0.8s					
SML	Sawmill	62.37 29		*e*P	P	13 43 01.9 +0.4
	comp=Z,134nm,0.8s					
SML	Sawmill	62.37 29		*e*P	P	13 43 01.9 +0.4
SML				pmax	pmax	
	comp=Z,134nm,0.8s					
BWN	Browne	62.42 27		*e*P	P	13 43 02.7 +0.9
	comp=Z,95nm,1.0s					
RND	Reindeer	62.49 27		*e*P	P	13 43 02.2 -0.2
	comp=Z,29nm,0.7s					
RND	Reindeer	62.49 27		*e*P	P	13 43 02.2 -0.2
RND				pmax	pmax	
	comp=Z,29nm,0.7s					
MCK	McKinley	62.53 27		*e*P	P	13 43 02.6 0.0
	comp=Z,30nm,1.1s					
MCK	McKinley	62.53 27		*e*P	P	13 43 02.6 0.0
MCK				pmax	pmax	
	comp=Z,30nm,1.1s					
SCM	Sheep Creek Mo	62.84 29		*e*P	P	13 43 05.6 +0.9
	comp=Z,117nm,0.8s					
SCM	Sheep Creek Mo	62.84 29		*e*P	P	13 43 05.6 +0.9
SCM				pmax	pmax	
	comp=Z,117nm,0.8s					
KSH	Kashi	62.87 305		P	P	13 43 09.2 +3.8
KSH				pP	PcP	13 43 48.7 +6.4
KSH				PP	PP	13 45 35.0 +10
KSH				S	S	13 51 23.2 +0.2
KSH				sS	sS	13 52 34.6 +8.3
KSH				SS	SS	13 55 32.1 +1.4
KSH				pmax	pmax	
	comp=Z,250nm,5.6s					
KSH				LR	LR	
	comp=Z,740nm,13.5s					
KSH				LR	LR	
	comp=Z,800nm,13.1s					
KSH				LR	LR	
	comp=Z,710nm,16.6s					
TKM2	Tokmak 2	63.05 309		P	P	13 43 06.4 -0.3
TKM2				pmax	pmax	
	comp=Z,4.0nm,0.8s					
WRH	Wood River Hil	63.07 26		*e*P	P	13 43 06.0 0.0
	comp=Z,22nm,0.8s					
DHY	Denali Highway	63.07 28		*e*P	P	13 43 06.6 +0.3
	comp=Z,13nm,0.8s					
MDM	Murphy Dome	63.13 26		*e*P	P	13 43 07.3 +0.8
	comp=Z,32nm,0.7s					
CCB	Clear Creek Bu	63.23 26		*e*P	P	13 43 06.8 -0.3
	comp=Z,9.2nm,0.9s					
COLA	College	63.26 26		*e*P	P	13 43 07.1 -0.2
	comp=Z,25nm,0.8s					
COLA	College	63.26 26		*e*P	P	13 43 07.1 -0.2
COLA				pmax	pmax	
	comp=Z,25nm,0.8s					
KLU	Klutina	63.44 30		*e*P	P	13 43 09.8 +1.2
	comp=Z,37nm,0.8s					
DIV	Divide	63.45 30		*e*P	P	13 43 09.7 +1.0
	comp=Z,28nm,0.8s					
TOLK	Toolik Lake Re	63.59 22		P	P	13 43 11.0 +1.5
	baz=253					
TOLK	Toolik Lake Re	63.59 22		*e*P	P	13 43 10.8 +1.3
	comp=Z,34nm,0.7s					
IL1	Eielson Array	63.64 26		*e*P	P	13 43 09.1 -0.8
ILAR	Eielson Array	63.64 26		P	P	13 43 09.3 -0.5
	comp=Z,25nm,0.8s,baz=258,slow=5.0,SNR=224					
ILB	Eielson Array	63.64 26		*e*P	P	13 43 09.1 -0.7
RAGM	Ragged Mountai	63.86 31		*e*P	P	13 43 11.0 -0.4
	comp=Z,31nm,0.7s					
AAK	Ala-Archa	63.87 309		P	P	13 43 11.1 -0.8
	comp=Z,1.2nm,0.3s,baz=128,slow=7.1,SNR=3.5					
AAK				pP	pP	13 43 47.5 -1.2
	comp=Z,4.8nm,0.8s,baz=101,slow=7.8,SNR=2.9					
AAK	Ala-Archa	63.87 309		*i*P	P	13 43 11.0 -1.0
AAK				pmax	pmax	
	comp=Z,2.0nm,1.2s					
PAX	Paxson	63.90 28		*e*P	P	13 43 12.4 +0.7
	comp=Z,26nm,0.8s					
PAX	Paxson	63.90 28		*e*P	P	13 43 12.4 +0.7
PAX				pmax	pmax	
	comp=Z,26nm,0.8s					
HARP	HAARP	63.95 29		*e*P	P	13 43 13.0 +1.1
	comp=Z,80nm,0.8s					
BMRM	Bremner River	63.98 31		*e*P	P	13 43 13.4 +1.2
	comp=Z,75nm,1.1s					
RIDG	Independ'e Rid	64.32 28		*e*P	P	13 43 14.5 +0.2
	comp=Z,50nm,0.9s					
BKZ	Black Stump Fm	64.37 154		*e*P	P	13 43 13.6 -1.4
	comp=Z,77nm,1.8s					
DOT	Dot Lake	64.64 28		*e*P	P	13 43 16.6 +0.2
	comp=Z,80nm,0.7s					
CRQM	Cirque	64.66 31		*e*P	P	13 43 18.0 +1.2
	comp=Z,62nm,0.8s					
SCRK	Sand Creek	64.73 27		*e*P	P	13 43 17.3 +0.2
	comp=Z,32nm,0.8s					
SFK	Sufi-Kurgan	64.75 306		P	P	13 43 18.3 +0.5
TGL	Tana Glacier	64.81 31		*e*P	P	13 43 18.2 +0.6
	comp=Z,44nm,1.0s					
NIL	Nilore	65.53 299		*e*P	P	13 43 21.5 -1.3
NIL				*e*pP	pP	13 44 02.5 +2.9
NIL	Nilore	65.53 299		*e*P	P	13 43 21.5 -1.3
NIL				*e**PP	pP	13 44 02.5 +2.9
EGAK	Eagle	66.06 27		*e*P	P	13 43 26.1 +0.6
	comp=Z,11nm,0.8s					
BVA0	Borovoye Array	66.48 320		*i*P	P	13 43 27.1 -1.3
BVA0				pmax	pmax	
	comp=Z,15nm,1.3s					
BVAR	Borovoye Array	66.48 320		P	P	13 43 27.0 -1.4
	comp=Z,7.2nm,0.6s,baz=92,slow=7.5,SNR=38					
BVAR				pP	pP	13 44 03.0 -2.3
	comp=Z,12nm,0.8s,baz=99,slow=7.7,SNR=1.9					
BRVK	Borovoye	66.54 320		*e*P	P	13 43 27.4 -1.3
	comp=Z,25nm,0.9s					
BRVK	Borovoye	66.54 320	*d*	*i*P	P	13 43 27.8 -1.0
BRVK				pmax	pmax	
	comp=Z,8.0nm,0.8s					
DAWY	Dawson	66.75 28		*e*P	P	13 43 30.9 +0.9
	comp=Z,18nm,0.8s					
KK31	Karatay Array	66.77 310		*e*P	P	13 43 29.2 -1.2
KK31	Karatay Array	66.77 310		P	P	13 43 29.6 -0.8
KK31				pmax	pmax	
	comp=Z,6.0nm,0.8s					
KKAR	Karatay Array	66.77 310		*e*P	P	13 43 29.1 -1.3
KKAR	Karatay Array	66.77 310		*e*P	P	13 43 29.2 -1.3
SKAG	Skagway	68.49 33		*e*P	P	13 43 41.0 +0.2
	comp=Z,25nm,1.0s					
BESE	Bessie Mountai	68.75 34		*e*P	P	13 43 44.2 +1.6
	comp=Z,36nm,1.0s					
KBL	Kabul	68.88 301		*e*P	P	13 43 43.1 -0.9
	comp=Z,19nm,0.8s					
KBL	Kabul	68.88 301		*e*P	P	13 43 43.1 -0.9
KBL				pmax	pmax	
	comp=Z,19nm,0.8s					
JIS	Juneau Island	69.01 34		*e*P	P	13 43 45.6 +1.6
	comp=Z,40nm,1.1s					
INK	Inuvik	69.37 23		P	P	13 43 46.3 +0.1
	comp=Z,23nm,0.8s,baz=285,slow=4.5,SNR=29					
INK	Inuvik	69.37 23		*e*P	P	13 43 46.2 +0.1
	comp=Z,27nm,0.9s					
INK	Inuvik	69.37 23		*e*P	P	13 43 46.2 +0.1
INK				pmax	pmax	
	comp=Z,27nm,0.9s					
DLBC	Dease Lake	71.29 34		*e*P	P	13 43 59.9 +1.8
	comp=Z,33nm,1.0s					
SVE	Sverdlovsk	71.88 325		*e*P	P	13 43 57.9 -3.6
ARU	Arti	73.07 325		P	P	13 44 06.8 -1.7
	comp=Z,2.4nm,0.4s,baz=112,slow=4.4,SNR=6.9					
ARU	Arti	73.07 325		*e*P	P	13 44 06.4 -2.2
	comp=Z,8.9nm,1.0s					
ARU	Arti	73.07 325	*c*	*i*P	P	13 44 08.2 -0.4
ARU				*PP	pP	13 44 46.4 +0.2
ARU						13 46 48.3
ARU				S	SKiKP	13 53 25.8 +0.6
ARU				SS	SS	13 58 06.5 -0.3
ARU				pmax	pmax	
	comp=Z,6.0nm,1.0s					
AB31	Akbulak array	73.34 317		*i*P	P	13 44 08.3 -2.0
AB31				pmax	pmax	
	comp=Z,3.0nm,0.7s					
ABKAR	Akbulak array	73.34 317		*e*P	P	13 44 08.6 -1.8
AKTO	Aktyubinsk	74.37 318		P	P	13 44 14.4 -1.9
	comp=Z,1.8nm,0.6s,baz=95,slow=7.2,SNR=6.6					
NLWA	Neilton Lookou	76.76 44		*e*P	P	13 44 31.1 +1.1
	comp=Z,35nm,1.1s					
E03A	Lebam	77.16 45		*e*P	P	13 44 33.9 +1.7
	comp=Z,30nm,1.1s					
B05A	Bryant	77.72 43		P	P	13 44 36.7 +1.5
	baz=284					
YKW3	Yellowknife Ar	77.96 28		*e*P	P	13 44 36.3 0.0
	comp=Z,18nm,1.0s					
YKA	Yellowknife Ar	77.99 28		P	P

LON	Longmire	78.28	45	eP	P	13 44 39.4 +0.9
	comp=Z,9.1nm,1.0s					
LON	Longmire	78.28	45	eP	P	13 44 39.4 +0.9
LON				pmax	pmax	
	comp=Z,9.0nm,1.0s					
PRGR	Permogore	78.42	331	eP	P	13 44 37.2 -1.6
PRGR				e		13 44 42.7
PRGR				pmax	pmax	
	comp=Z,11nm,0.6s					
HUMO	Hull Mountain	78.55	49	eP	P	13 44 41.3 +1.3
	comp=Z,15nm,1.0s					
H04A	Detroit Lake	78.56	47	eP	P	13 44 40.8 +0.7
	comp=Z,22nm,1.1s					
I04A	Tendick Farm,	78.63	48	P	P	13 44 41.7 +1.3
	baz=285					
LTY	Liberty	78.90	44	eP	P	13 44 42.6 +0.7
	comp=Z,13nm,0.9s					
M02C	Callahan	78.93	50	P	P	13 44 44.0 +1.8
	baz=285					
YBH	Yreka Blue Hor	78.95	50	P	P	13 44 43.0 +0.7
	comp=Z,11nm,1.0s,baz=3.9,slow=4.0,SNR=14					
YBH	Yreka Blue Hor	78.95	50	eP	P	13 44 43.1 +0.8
	comp=Z,28nm,1.4s					
YBH	Yreka Blue Hor	78.95	50	eP	P	13 44 43.1 +0.8
YBH				pmax	pmax	
	comp=Z,28nm,1.4s					
J04D	Umpqua Nationa	78.98	48	P	P	13 44 43.9 +1.3
	baz=285					
I05D	Terrebonne, OR	79.23	47	P	P	13 44 45.0 +1.3
	baz=286					
RES	Resolute Bay	79.42	14	eP	P	13 44 44.6 +0.6
	comp=Z,15nm,0.9s					
RES	Resolute Bay	79.42	14	eP	P	13 44 44.7 +0.6
RES				pmax	pmax	
	comp=Z,15nm,0.9s					
B08A	Colville Reser	79.47	43	eP	P	13 44 45.6 +0.7
	comp=Z,14nm,0.8s					
M04C	Macdoel	79.56	49	P	P	13 44 46.9 +1.2
	baz=286					
J05D	Fort Rock, OR	79.59	48	P	P	13 44 47.3 +1.5
	baz=286					
PINE	Pine Mountain	79.65	47	eP	P	13 44 47.6 +1.4
	comp=Z,34nm,0.9s					
K05A	Summer Lake	79.98	48	eP	P	13 44 49.2 +1.2
	comp=Z,24nm,0.8s					
C09A	Chrisman Ranch	80.31	43	eP	P	13 44 49.6 +0.2
	comp=Z,11nm,0.7s					
ORV	Oroville	80.42	52	eP	P	13 44 50.7 +0.5
	comp=Z,17nm,1.1s					
ORV	Oroville	80.42	52	eP	P	13 44 50.7 +0.5
ORV				pmax	pmax	
	comp=Z,17nm,1.1s					
G08A	Pilot Rock	80.59	45	eP	P	13 44 51.9 +0.8
	comp=Z,16nm,1.4s					
MOD	Modoc Plateau	80.63	49	eP	P	13 44 52.2 +0.7
	comp=Z,30nm,1.4s					
NEW	Newport	80.91	42	P	P	13 44 53.5 +0.8
	baz=288					
NEW	Newport	80.91	42	eP	P	13 44 53.5 +0.8
	comp=Z,14nm,0.9s					
NEW	Newport	80.91	42	eP	P	13 44 53.5 +0.8
NEW				pmax	pmax	
	comp=Z,14nm,0.9s					
AFDM	Forest Hills D	80.99	52	eP	P	13 44 54.1 +0.9
	comp=Z,12nm,1.1s					
BEKR	Beckworth	81.18	51	eP	P	13 44 54.9 +0.5
	comp=Z,17nm,0.8s					
F10A	Beach Ranch, E	81.55	44	eP	P	13 44 56.8 +0.6
	comp=Z,13nm,1.3s					
WVOR	Wild Horse Val	81.66	48	eP	P	13 44 57.1 +0.3
	comp=Z,11nm,1.0s					
WVOR	Wild Horse Val	81.66	48	eP	P	13 44 57.1 +0.3
WVOR				pmax	pmax	
	comp=Z,11nm,1.0s					
CMB	Columbia Colle	81.69	53	eP	P	13 44 57.2 +0.2
	comp=Z,18nm,1.1s					
CMB	Columbia Colle	81.69	53	eP	P	13 44 57.2 +0.2
CMB				pmax	pmax	
	comp=Z,18nm,1.1s					
BMO	Blue Mountains	81.84	45	eP	P	13 44 58.3 +0.6
	comp=Z,20nm,1.3s					
BMO	Blue Mountains	81.84	45	eP	P	13 44 58.3 +0.6
BMO				pmax	pmax	
	comp=Z,20nm,1.3s					
VCNR	Virginia City	81.87	51	eP	P	13 44 58.6 +0.5
	comp=Z,12nm,0.9s					
PAHR	Pah Rah Range	81.94	51	eP	P	13 44 58.9 +0.5
	comp=Z,17nm,1.1s					
PNTR	Pine Nut	81.97	52	eP	P	13 44 59.5 +0.9
	comp=Z,21nm,0.7s					
WAKR	Walker	82.27	52	eP	P	13 45 01.1 +0.9
	comp=Z,8.8nm,0.7s					
YERR	Yerington	82.27	52	eP	P	13 45 01.2 +1.0
	comp=Z,16nm,0.8s					
ARCES	ARCESS Array B	82.49	342	P	P	13 44 59.2 -1.3
	comp=Z,2.3nm,0.5s,baz=64,slow=7.4,SNR=25					
WALA	Waterton Lakes	82.67	41	eP	P	13 45 03.0 +1.1
	comp=Z,20nm,1.3s					
TULEG	Thule	82.71	8	eP	P	13 45 01.8 +0.3
	comp=Z,24nm,0.9s					
RYN	Ryan	82.91	52	eP	P	13 45 04.2 +0.7
	comp=Z,16nm,0.9s					
PKM	Mcpherson Peak	83.08	56	P	P	13 45 05.5 +1.1
	baz=288					
KVN	Kaiserville	83.09	51	eP	P	13 45 05.2 +0.8
	comp=Z,16nm,0.7s					
KVN	Kaiserville	83.09	51	eP	P	13 45 05.2 +0.8
KVN				pmax	pmax	
	comp=Z,16nm,0.7s					
NV01	Mina Array Sit	83.14	52	eP	P	13 45 05.5 +0.8
NVAR	Mina Array Bea	83.14	52	P	P	13 45 05.9 +1.2
	comp=Z,20nm,0.8s,baz=263,slow=6.2,SNR=118					
NVAR				pP	pP	13 45 41.2 -2.0
	comp=Z,6.0nm,0.7s,baz=272,slow=5.9,SNR=2.8					
NV11	Mina Array Sit	83.24	52	eP	P	13 45 06.0 +0.9
	comp=Z,1.0nm,0.8s					
BMN	Battle Mountai	83.30	50	eP	P	13 45 06.0 +0.7
	comp=Z,14nm,1.4s					
BMN	Battle Mountai	83.30	50	eP	P	13 45 06.1 +0.7
BMN				pmax	pmax	
	comp=Z,14nm,1.4s					
HLID	Hailey	84.23	46	P	P	13 45 11.1 +1.0
	baz=290					
HLID	Hailey	84.23	46	eP	P	13 45 10.8 +0.7
	comp=Z,11nm,1.1s					
DAC	Darwin (Calif)	84.36	54	eP	P	13 45 11.4 +0.5
	comp=Z,11nm,1.3s					
DAC	Darwin (Calif)	84.36	54	eP	P	13 45 11.4 +0.5
DAC				pmax	pmax	
	comp=Z,11nm,1.3s					
EDW2	Edwards Air Fo	84.50	55	P	P	13 45 12.6 +1.1
	baz=289					
MPMC	Manual Prospec	84.51	54	P	P	13 45 12.4 +0.7
	baz=289					
MWC	Mount Wilson	84.66	56	eP	P	13 45 12.7 +0.2
	comp=Z,15nm,1.3s					
MWC	Mount Wilson	84.66	56	eP	P	13 45 12.7 +0.2
MWC				pmax	pmax	
	comp=Z,15nm,1.3s					
LRM	Limekiln Ridge	84.74	43	eP	P	13 45 13.3 +0.6
DLMT	Dillon	84.81	44	eP	P	13 45 12.6 -0.4
	comp=Z,5.7nm,0.9s					
HRY	Holter Researc	84.81	42	eP	P	13 45 13.3 +0.4
MCMT	McKenzie Canyo	84.83	44	eP	P	13 45 13.6 +0.4
TPNV	Topopah Spring	85.16	53	P	P	13 45 15.7 +0.8
	baz=290					
TPNV	Topopah Spring	85.16	53	eP	P	13 45 15.5 +0.6
	comp=Z,16nm,0.7s					
TPNV	Topopah Spring	85.16	53	eP	P	13 45 15.5 +0.6
TPNV				pmax	pmax	
	comp=Z,16nm,0.7s					
R11A	Troy Canyon, C	85.18	51	P	P	13 45 15.8 +0.9
	baz=290					
R11A	Troy Canyon, C	85.18	51	eP	P	13 45 15.3 +0.4
	comp=Z,15nm,1.3s					
GSC	Goldstone, Bar	85.28	54	P	P	13 45 15.8 +0.4
	baz=290					
GSC	Goldstone, Bar	85.28	54	eP	P	13 45 14.8 -0.6
	comp=Z,16nm,1.4s					
GSC	Goldstone, Bar	85.28	54	eP	P	13 45 14.8 -0.6
GSC				pmax	pmax	
	comp=Z,16nm,1.4s					
BOZ	Bozeman (W)	85.35	43	P	P	13 45 16.3 +0.6
	baz=292					
BOZ	Bozeman (W)	85.35	43	eP	P	13 45 15.3 -0.4
	comp=Z,8.5nm,0.7s					
BOZ	Bozeman (W)	85.35	43	eP	P	13 45 15.3 -0.4
BOZ				pmax	pmax	
	comp=Z,9.0nm,0.7s					
EGMT	Eagleton	85.62	41	P	P	13 45 17.2 +0.3
	baz=293					
EGMT	Eagleton	85.62	41	eP	P	13 45 15.8 -1.0
	comp=Z,14nm,1.0s					
QLMT	Earthquake Lak	85.77	44	eP	P	13 45 19.0 +1.2
ZEI	Tsey	85.82	314	eP	P	13 45 11.8 -6.3
YHB	Horse Butte	85.96	44	eP	P	13 45 20.0 +1.2
	comp=Z,23nm,0.8s					
HVU	Hansel Valley	85.99	47	eP	P	13 45 19.7 +0.8
	comp=Z,21nm,1.1s					
HVU	Hansel Valley	85.99	47	eP	P	13 45 19.7 +0.8
HVU				pmax	pmax	
	comp=Z,21nm,1.1s					
PFO	Pinyon Flats O	86.12	56	P	P	13 45 20.4 +0.8
	baz=290					
PFO	Pinyon Flats O	86.12	56	eP	P	13 45 19.1 -0.5
	comp=Z,12nm,1.4s					
PFO	Pinyon Flats O	86.12	56	eP	P	13 45 19.1 -0.5
PFO				pmax	pmax	
	comp=Z,13nm,1.4s					
BGU	Big Grassy Mou	86.12	48	eP	P	13 45 19.9 +0.3
	comp=Z,6.9nm,1.0s					
TPFO	Pinon Flats	86.12	56	P	P	13 45 20.3 +0.7
	baz=290					
SHPR	Sheep Range	86.13	53	eP	P	13 45 20.0 +0.3
	comp=Z,9.2nm,0.9s					
YMR	Madison River	86.14	44	eP	P	13 45 21.0 +1.3
	comp=Z,23nm,0.8s					
KBZ	Khabaz	86.15	315	P	P	13 45 18.6 -0.7
	comp=Z,2.8nm,0.9s,baz=150,slow=2.6,SNR=5.9					
YHH	Holmes Hill	86.17	44	eP	P	13 45 20.9 +1.0
	comp=Z,8.2nm,0.9s					
KIV	Kislovodsk	86.20	315	eP	P	13 45 18.7 -1.1
KIV				pmax	pmax	
	comp=Z,4.0nm,1.0s					
KIV				MLR	MLR	
	comp=Z,406nm,19.0s					
YFT	Old Faithful	86.31	44	eP	P	13 45 22.6 +2.1
	comp=Z,13nm,1.0s					
GMRC	Granite Mounta	86.34	55	P	P	13 45 21.4 +0.7
	baz=290					
MONP2	Monument Peak	86.39	57	P	P	13 45 21.9 +0.8
	baz=290					
PSUT	Pine Spring	86.39	51	eP	P	13 45 21.6 +0.6
	comp=Z,16nm,0.9s					
IMW	Indian Meadow	86.45	45	eP	P	13 45 21.5 +0.2
	comp=Z,8.8nm,0.8s					
FXWY	Fox Creek	86.49	45	eP	P	13 45 22.5 +1.0
	comp=Z,10nm,1.3s					
DUG	Dugway, Tooele	86.54	49	P	P	13 45 22.4 +0.8
	baz=292					
DUG	Dugway, Tooele	86.54	49	eP	P	13 45 22.1 +0.5
	comp=Z,13nm,0.8s					
DUG	Dugway, Tooele	86.54	49	eP	P	13 45 22.1 +0.5
DUG				pmax	pmax	
	comp=Z,13nm,0.8s					
TPAW	Teton Pass	86.60	45	eP	P	13 45 22.1 +0.1
	comp=Z,17nm,1.6s					
MOOW	Moose Ponds	86.64	45	eP	P	13 45 21.6 -0.5
	comp=Z,5.2nm,0.9s					
REDW	Red Top Meadow	86.72	45	eP	P	13 45 22.4 -0.1
	comp=Z,18nm,1.6s					
AHID	Auburn Hatcher	86.78	46	eP	P	13 45 23.1 +0.3
	comp=Z,11nm,0.9s					
FIA1	FINESS Array S	86.89	335	eP	P	13 45 20.8 -1.7
FINES	FINESS Array B	86.89	335	P	P	13 45 21.1 -1.5
	comp=Z,4.5nm,0.5s,baz=74,slow=4.7,SNR=77					
HWUT	Hardware Ranch	86.89	47	eP	P	13 45 23.5 +0.1
	comp=Z,18nm,0.9s					
RLMT	Red Lodge	87.07	43	P	P	13 45 25.5 +1.4
	baz=294					
RLMT	Red Lodge	87.07	43	eP	P	13 45 23.4 -0.8
	comp=Z,9.9nm,0.8s					
FFC	Flin Flon	87.09	33	eP	P	13 45 24.0 +0.2
	comp=Z,24nm,1.0s					
FFC	Flin Flon	87.09	33	eP	P	13 45 24.0 +0.2
FFC				pmax	pmax	
	comp=Z,24nm,1.0s					
CTU	Camp Tracy	87.11	48	eP	P	13 45 24.4 +0.1
	comp=Z,9.4nm,0.8s					
NEE2	Needles Airpor	87.15	54	P	P	13 45 25.6 +1.1
	baz=291					
TCUT	Toone Canyon	87.19	48	eP	P	13 45 25.0 +0.2
	comp=Z,18nm,0.7s					
SZCU	Shurtz Canyon	87.29	51	eP	P	13 45 26.1 +0.7
	comp=Z,9.6nm,0.8s					
JLU	Jordanelle	87.36	48	eP	P	13 45 26.3 +0.6
	comp=Z,15nm,0.9s					
LCMT	Little Creek M	87.39	52	eP	P	13 45 25.9 +0.2
	comp=Z,11nm,0.9s					
MPU	Maple Canyon	87.45	49	eP	P	13 45 26.2 +0.1
	comp=Z,12nm,1.1s					
W13A	Hualapai Mount	87.59	54	eP	P	13 45 26.2 -0.7
	comp=Z,8.9nm,0.8s					
MSU	Marysvale	87.62	50	eP	P	13 45 27.6 +0.7
MSU	Marysvale	87.62	50	eP	P	13 45 27.6 +0.7
PDMCI	Parker Dam,Lak	87.68	55	P	P	13 45 28.3 +1.3
	baz=291					
KNB	Kanab	87.70	52	eP	P	13 45 28.3 +1.0
	comp=Z,32nm,1.0s					
KNB	Kanab	87.70	52	eP	P	13 45 28.3 +1.0
KNB				pmax	pmax	
	comp=Z,32nm,1.0s					
MTPU	Mount Pierson	87.79	51	eP	P	13 45 28.9 +0.9
	comp=Z,6.9nm,0.8s					
PD31	Pinedale Array	87.82	45	eP	P	13 45 26.9 -0.9
PDAR	Pinedale Array	87.82	45	P	P	13 45 26.6 -1.2
	comp=Z,0.8nm,0.4s,baz=210,slow=2.1,SNR=9.1					
PDAR				pP	pP	13 46 06.2 -0.6
	comp=Z,1.1nm,0.8s,baz=204,slow=2.9,SNR=2.7					
TMUT	Trail Mountain	88.03	49	eP	P	13 45 29.6 +0.6
	comp=Z,9.2nm,0.9s					
P17A	Butcher Ranch,	88.29	49	eP	P	13 45 30.9 +0.8
	comp=Z,11nm,1.0s					
U15A	North Rim	88.31	52	eP	P	13 45 31.2 +0.9
	comp=Z,15nm,0.8s					
SRU	San Rafael Swe	88.59	49	eP	P	13 45 31.5 +0.1
	comp=Z,14nm,0.8s					
SRU	San Rafael Swe	88.59	49	eP	P	13 45 31.5 +0.1
SRU				pmax	pmax	
	comp=Z,14nm,0.8s					
FCC	Fort Churchill	88.66	27	eP	P	13 45 30.3 -0.7
	comp=Z,24nm,1.2s					
Y14A	Wickenburg	88.69	55	eP	P	13 45 32.6 +0.7
	comp=Z,19nm,0.7s					
SUMG	Summit	88.91	1	i P	P	13 45 33.0 +0.5
	comp=Z,7.2nm,1.1s					
SUMG	Summit	88.91	1	eP	P	13 45 32.6 +0.1
SUMG				epP	pP	13 46 13.8 +2.3
SUMG	Summit	88.91	1	eP	P	13 45 32.6 +0.1
SUMG				e*PP	pP	13 46 13.8 +2.3
WUAZ	Wupatki	89.35	53	P	P	13 45 36.7 +1.7
	baz=293					
WUAZ	Wupatki	89.35	53	eP	P	13 45 35.9 +0.9
	comp=Z,22nm,0.9s					
214A	Organ Pipe Nat	89.58	56	P	P	13 45 37.3 +1.3
	baz=292					
O20A	White River Ci	89.79	47	P	P	13 45 37.9 +0.8
	baz=294					
PV09	Paradox Valley	89.83	49	eP	P	13 45 37.9 +0.5
PV10	Paradox Valley	89.94	49	eP	P	13 45 38.2 +0.3
	comp=Z,25nm,0.9s					
PV04	Paradox Valley	90.03	49	eP	P	13 45 38.1 -0.1
	comp=Z,18nm,0.9s					
PV03	Paradox Valley	90.13	49	eP	P	13 45 38.9 +0.2
	comp=Z,15nm,0.8s					
PV07	Paradox Valley	90.20	49	eP	P	13 45 39.1 +0.1
	comp=Z,10nm,1.4s					
PV02	Paradox Valley	90.23	49	eP	P	13 45 39.0 -0.1
	comp=Z,16nm,0.8s					
PV15	Paradox Valley	90.36	49	eP	P	13 45 38.9 -0.9
	comp=Z,7.4nm,0.9s					
PV01	Paradox Valley	90.38	49	eP	P	13 45 39.6 -0.3
	comp=Z,14nm,0.7s					
MVCO	Mesa Verde	90.81	50	P	P	13 45 42.8 +0.9
	baz=294					
MVCO	Mesa Verde	90.81	50	eP	P	13 45 42.2 +0.3
	comp=Z,14nm,1.3s					
RSSD	Black Hills	90.88	43	P	P	13 45 42.1 0.0
	baz=297					
RSSD	Black Hills	90.88	43	eP	P	13 45 41.9 -0.1
	comp=Z,3.8nm,0.6s					
RSSD	Black Hills	90.88	43	eP	P	13 45 41.9 -0.1
RSSD				pmax	pmax	
	comp=Z,4.0nm,0.6s					
N23A	Red Feather La	91.06	46	P	P	13 45 44.0 +1.0
	baz=296					
N23A	Red Feather La	91.06	46	eP	P	13 45 43.7 +0.7
	comp=Z,15nm,1.0s					
RAYN	Ar Rayn	91.58	295	epP	pP	13 46 25.9 +1.4
ISCO	Idaho Springs	91.76	47	P	P	13 45 46.9 +0.5
	baz=296					
ISCO	Idaho Springs	91.76	47	eP	P	13 45 46.9 +0.5
	comp=Z,4.0nm,1.0s					
ISCO	Idaho Springs	91.76	47	eP	P	13 45 46.9 +0.5
ISCO				pmax	pmax	
	comp=Z,4.0nm,1.0s					
MDND	Maddock	91.79	38	P	P	13 45 45.9 0.0
	baz=301					
S22A	4UR Ranch, Cre	91.79	49	P	P	13 45 47.4 +0.8
	baz=295					
S22A	4UR Ranch, Cre	91.79	49	eP	P	13 45 46.9 +0.3
	comp=Z,7.2nm,0.9s					
HFS	Hagfors	92.39	338	P	P	13 45 46.5 -1.9
	comp=Z,1.3nm,0.6s,baz=93,slow=6.2,SNR=12					
ULM	Lac du Bonnet	92.60	34	P	P	13 45 49.1 -0.5
	comp=Z,8.8nm,1.1s,baz=336,slow=3.8,SNR=4.4					
ULM	Lac du Bonnet	92.60	34	eP	P	13 45 48.8 -0.8
	comp=Z,8.1nm,1.0s					
ULM	Lac du Bonnet	92.60	34	eP	P	13 45 48.8 -0.8
ULM				pmax	pmax	
	comp=Z,8.0nm,1.0s					
B31A	Greenbush Farm	92.61	37	P	P	13 45 49.9 +0.3
	baz=302					
SDCO	Great Sand Dun	92.74	49	P	P	13 45 51.2 +0.3
	baz=296					
SDCO	Great Sand Dun	92.74	49	eP	P	13 45 51.2 +0.3
	comp=Z,8.2nm,1.5s					
C31A	Landman Farms,	92.89	37	P	P	13 45 50.9 -0.1
	baz=302					
A32A	Rocking H Ranc	92.99	36	P	P	13 45 51.6 +0.2
	baz=303					
TASM	ASL Pad, Albuq	93.26	52	P	P	13 45 54.3 +1.1
	baz=296					
ANMO	Albuquerque	93.26	52	P	P	13 45 53.5 +0.2
	comp=Z,4.6nm,1.1s,baz=299,slow=13,SNR=8.9					
ANMO	Albuquerque	93.26	52	P	P	13 45 54.1 +0.9
	baz=296					
ANMO	Albuquerque	93.26	52	eP	P	13 45 53.4 +0.2
	comp=Z,7.0nm,1.1s					
ANMO	Albuquerque	93.26	52	eP	P	13 45 53.4 +0.2
ANMO				pmax	pmax	
	comp=Z,7.0nm,1.1s					
TASL	Snake Pit, Alb	93.26	52	P	P	13 45 53.6 +0.4
	baz=296					
E31A	Nome	93.45	38	P	P	13 45 53.4 -0.2
	baz=302					
OGNE	Ogallala	93.67	45	P	P	13 45 55.9 +1.0
	baz=299					
T25A	Trinidad	93.79	49	eP	P	13 45 57.4 +1.7
	comp=Z,7.5nm,1.4s					
BRTR	Keskin Array B	94.11	314	P	P	13 45 55.0 -2.0
	comp=Z,1.4nm,0.8s,baz=90,slow=3.8,SNR=5.3					
BRTR	Keskin Array B	94.11	314	ceP	P	13 45 55.0 -2.0
BRTR				pmax	pmax	
	comp=Z,2.0nm,0.9s					
KWP	Kalwaria Pacla	95.37	327	eP	P	13 46 01.7 -0.6
	comp=Z,468nm,0.8s					
KWP	Kalwaria Pacla	95.37	327	eP	P	13 46 01.7 -0.6
MNTX	Cornudas Mount	95.47	54	P	P	13 46 04.2 +1.0
	baz=296					
MNTX	Cornudas Mount	95.47	54	eP	P	13 46 03.7 +0.6
	comp=Z,2.6nm,0.8s					
F38A	Pierce - Schro	97.25	36	P	Pdif	13 46 10.9 0.0
	baz=306					
TXAR	Lajitas Array	97.83	56	P	Pdif	13 46 14.5 +0.5
	comp=Z,0.3nm,0.7s,baz=262,slow=6.3,SNR=3.4					
TXAR				PP	PP	13 50 14.6 +0.6
	comp=Z,0.7nm,1.1s,baz=268,slow=6.1,SNR=3.8					
TXAR				PKKPbc	PKKPdf	14 02 49.1 -0.9
	comp=Z,0.4nm,0.9s,baz=159,slow=3.8,SNR=3.9					
SNAA	Sanae	123.92	191	PKP	PKPdf	13 51 32.9 -1.8
	comp=Z,1.1nm,0.7s,baz=167,slow=2.5,SNR=12					
PLCA	Paso Flores	142.00	133	PKhKP	PKPpre	13 52 05.0
	comp=Z,4.6nm,1.1s,baz=258,slow=5.2,SNR=4.7					
PLCA	Paso Flores	142.00	133	PKIKP	PKPpre	13 52 05.0
LCO	Las Campanas	145.28	114	ePKPdf	PKPab	13 52 16.3 +0.2
LCO	Las Campanas	145.28	114	PKP2	PKPab	13 52 16.3 +0.2
PB10	IPOC Station P	145.90	104	ePKPdf	PKPdf	13 52 16.8 +0.2
PB04	IPOC Station P	146.28	102	ePKPdf	PKPdf	13 52 16.9 -0.6
PB04				ePKPbc	PKPbc	13 52 19.0 +0.1
MNMC	Minye Minye	146.64	97	ePKPdf	PKPdf	13 52 16.9 -1.4
LPAZ	La Paz	147.67	91	PKP	PKPdf	13 52 20.4 -0.2
	comp=Z,20nm,1.0s,baz=325,slow=2.9,SNR=38					
LPAZ				PKPbc	PKPbc	13 52 23.4 -0.1
	comp=Z,20nm,1.0s,baz=347,slow=4.5,SNR=41					
LPAZ	La Paz	147.67	91	ePKPdf	PKPdf	13 52 19.2 -1.4
LPAZ				ePKPbc	PKPbc	13 52 23.2 -0.3
LPAZ	La Paz	147.67	91	ePKIKP	PKPdf	13 52 19.2 -1.4
LPAZ				e		13 52 23.2
PTGA	Pitinga	149.12	58	ePKPbc	PKPbc	13 52 26.2 -0.4
SAML	Samuel	150.37	75	ePKPbc	PKPbc	13 52 28.8 -0.8
CPUP	Villa Florida	157.43	114	PKPab	PKPab	13 53 06.6 +0.4
	comp=Z,5.5nm,0.9s,baz=256,slow=5.8,SNR=7.9					

*CSEM **10** 13:36:26.7±0.5, 36°.77N×29°.19E, h1km, ML2.7, Error ellipse: s-maj=11.6km s-min=7.4km az=161.0, Suspected Mining explosion.*
*ISCJB **10** 13:36:28.9±0.5, 37°.09N±0°.03×29°.02E±0°.03, h0km, Error ellipse: s-maj=4.9km s-min=3.4km az=149.8*
*DDA **10** 13:36:28.5, 37°.08N×29°.05E, h7km, Ml2.7, Suspected Mining explosion.*
*ISK **10** 13:36:28.9, 37°.05N×29°.02E, h8km, ML2.4/5*

ISC 10 13:36:28.3±0.8, 37°.02N±0°.03×29°.15E±0°.02, h0km, n45, σ1§28/55, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.31	63	PG	Pb	13 36 36.7	-0.2
GLHS				SG	Sb	13 36 43.6	+1.0
GLHS	Glhisar (BURDU	0.31	63	PG	Pb	13 36 36.7	-0.2
GLHS				SG	Sb	13 36 43.6	+1.0
GLHS	Glhisar (BURDU	0.31	63	ePg	Pb	13 36 36.7	-0.2
GLHS				eSg	Sb	13 36 43.6	+1.0
GOLH	Golhisar	0.40	56	i P	Pg	13 36 36.3	+0.4
GOLH				i S	Sb	13 36 44.6	-0.4
GOLH	Golhisar	0.40	56	P	Pg	13 36 36.3	+0.4
GOLH				S	Sb	13 36 44.6	-0.4
DALY	Dalyan (Mu¨la	0.44	244	PG	Pg	13 36 36.1	-0.7
DALY				SG	Sg	13 36 43.0	+0.5
DALY	Dalyan (Mu¨la	0.44	244	PG	Pg	13 36 36.5	-0.3
DALY				SG	Sg	13 36 43.0	+0.5
DALY	Dalyan (Mu¨la	0.44	244	i P	Pg	13 36 36.7	-0.1
DALY				i S	Sg	13 36 43.2	+0.7
DALY	Dalyan (Mu¨la	0.44	244	ePg	Pg	13 36 36.1	-0.7
DALY	Dalyan (Mu¨la	0.44	244	P	Pg	13 36 36.7	-0.1
DALY				eSg	Sg	13 36 43.0	+0.5
TURN	Turunc	0.46	252	PG	Pn	13 36 42.5	+0.4
TURN	Turunc	0.46	252	PG	Pn	13 36 42.2	+0.1
TAVA	DENIZLI_Tavas	0.49	337	i P	Pg	13 36 36.4	-1.3
TAVA				i S	Sg	13 36 41.8	-2.2
ELL	Elmali	0.67	113	PG	Pg	13 36 39.1	-2.0
ELL	Elmali	0.67	113	ePg	Pg	13 36 39.1	-2.0
DNZL	Cakiroluk	0.68	353

AYDB	**Zeytinkoy-Aydi**	**1.36**	**313**	PN	**Pn**	**13 36 57.0**	**+2.2**
AYDB	**Zeytinkoy-Aydi**	**1.36**	**313**	PN	**Pg**	**13 36 53.7**	**-0.8**
AYDB	**Zeytinkoy-Aydi**	**1.36**	**313**	*e*Pn	**Pn**	**13 36 57.0**	**+2.2**
KHAL	**Karahalli**	**1.38**	**11**	*i* P	**Pg**	**13 36 52.9**	**-1.9**
KHAL				*i* S	**Sg**	**13 37 11.4**	**-1.3**
BODT	**Bodrum**	**1.47**	**272**	PN	**Pn**	**13 36 55.5**	**-0.6**
BODT	**Bodrum**	**1.47**	**272**	PN	**Pn**	**13 36 54.6**	**-1.5**
BODT	**Bodrum**	**1.47**	**272**	*e*Pn	**Pn**	**13 36 55.5**	**-0.6**
MANT	**Manisa**	**1.54**	**343**	*i* P	**Pn**	**13 36 56.1**	**-1.3**
MANT	**Manisa**	**1.54**	**343**	P	**Pn**	**13 36 56.1**	**-1.3**

*ISCJB **10** 13:41:30.3±0.6, 18°.58N±0°.05×145°.8E±0°.2, h150km, mb3.9/15, Error ellipse: s-maj=20.5km s-min=7.4km az=177.3*
*IDC **10** 13:41:33.5±0.8, 18°.50N×145°.66E, h161km±7km, mb3.6/15, mb1 3.7/18, mb1mx3.5/66, mbtmp4.1/18, Error ellipse: s-maj=17.5km s-min=8.5km az=89.0*

ISC 10 13:41:32.7±0.6, 18°.52N±0°.07×145°.7E±0°.1, h150km, n24, σ1°29/23, mb3.9/17, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.97**	**189**	P	**Pn**	**13 42 47.4**	**+1.7**
	9.1nm,0.3s,baz=94,slow=7.2,SNR=5.3						
GUMO				S	**Sn**	**13 43 43.7**	**+1.0**
	24nm,0.3s,baz=177,slow=22,SNR=7.1						
JOW	**Kunigami**	**18.04**	**300**	P	**Pn**	**13 45 34.0**	**-0.1**
	0.8nm,0.3s,baz=102,slow=14,SNR=3.4						
MJAR	**Matsushiro Arr**	**19.12**	**341**	P	**P**	**13 45 44.9**	**+0.8**
	0.3nm,0.3s,baz=165,slow=9.3,SNR=6.0						
H11S3	**WAKE ISLAND Hy**	**19.93**	**87**	T	T	14 06 48.6	
	baz=275,slow=74,SNR=4.8						
H11S1	**WAKE ISLAND Hy**	**19.94**	**87**	T	T	14 06 50.7	
	baz=275,slow=74,SNR=6.0						
H11S2	**WAKE ISLAND Hy**	**19.95**	**87**	T	T	14 07 00.5	
	baz=275,slow=74,SNR=5.2						
JAY	**Jayapura**	**21.47**	**194**	P	**P**	**13 46 08.6**	**-0.9**
	15nm,1.0s,baz=350,slow=4.1,SNR=5.6						
KSRS	**Korea Array**	**24.44**	**324**	pP	pP	13 47 09.8	+1.7
	1.6nm,0.7s,baz=150,slow=8.7,SNR=3.3						
PMG	**Port Moresby**	**27.79**	**177**	P	**P**	**13 47 06.5**	**-1.3**
	4.0nm,0.4s,baz=39,slow=4.3,SNR=6.6						
CTA	**Charters Tower**	**38.38**	**179**	P	**P**	**13 48 39.2**	**-0.2**
	2.2nm,0.6s,baz=354,slow=9.8,SNR=7.0						
WRA	**Warramunga Arr**	**39.81**	**197**	P	**P**	**13 48 50.6**	**-0.8**
	4.6nm,0.4s,baz=19,slow=8.1,SNR=146						
SONM	**Songino Array**	**43.26**	**322**	pP	pP	13 49 54.0	+1.3
	0.8nm,0.7s,baz=70,slow=1.7,SNR=1.8						
ASAR	**Alice Springs**	**43.48**	**196**	P	**P**	**13 49 20.8**	**-0.4**
	1.8nm,0.3s,baz=13,slow=6.3,SNR=94						
CMAR	**Chiang Mai Arr**	**44.22**	**278**	P	**P**	**13 49 28.1**	**+0.8**
	0.8nm,0.4s,baz=66,slow=7.0,SNR=5.5						
STKA	**Stephens Creek**	**50.26**	**185**	P	**P**	**13 50 12.2**	**-1.6**
	1.4nm,0.4s,baz=14,slow=6.2,SNR=12						
ZALV	**Zalesovo Beam**	**58.14**	**323**	P	**P**	**13 51 10.2**	**-0.3**
	0.6nm,0.3s,baz=97,slow=4.8,SNR=2.7						
MKAR	**Makanchi Array**	**58.56**	**314**	P	**P**	**13 51 13.3**	**-0.3**
	0.1nm,0.4s,baz=126,slow=5.0,SNR=4.0						
MKAR				pP	**pP**	**13 51 50.4**	**+1.6**
	0.4nm,0.8s,baz=88,slow=8.6,SNR=2.4						
KURBB	**Kurchatov Arra**	**61.43**	**318**	P	**P**	**13 51 32.5**	**-0.5**
	0.3nm,0.3s,baz=92,slow=7.4,SNR=5.9						
KURBB				pP	**pP**	**13 52 09.4**	**+0.9**
	1.5nm,0.9s,baz=92,slow=7.6,SNR=2.3						
ILAR	**Eielson Array**	**63.81**	**26**	P	**P**	**13 51 46.8**	**-1.8**
	0.5nm,0.5s,baz=253,slow=6.1,SNR=12						
BVAR	**Borovoye Array**	**66.59**	**320**	P	**P**	**13 52 05.8**	**-1.0**
	0.5nm,0.5s,baz=116,slow=9.8,SNR=3.8						
YKA	**Yellowknife Ar**	**78.16**	**28**	P	**P**	**13 53 15.3**	**+0.2**
	0.8nm,0.7s,baz=287,slow=5.9,SNR=3.6						
NVAR	**Mina Array Bea**	**83.27**	**52**	P	**P**	**13 53 43.9**	**+0.9**
	1.2nm,0.7s,baz=270,slow=5.7,SNR=9.6						
NVAR				pP	**pP**	**13 54 23.7**	**+3.2**
	1.1nm,0.7s,baz=261,slow=6.2,SNR=4.8						
FINES	**FINESS Array B**	**87.03**	**335**	P	**P**	**13 53 59.3**	**-1.6**
	0.4nm,0.3s,baz=80,slow=4.5,SNR=6.3						
LPAZ	**La Paz**	**147.70**	**91**	PKPbc	**PKPbc**	**14 01 02.0**	**+0.8**
	1.2nm,0.6s,baz=287,slow=3.7,SNR=5.7						

SJA 10 13:54:50.3±0.6, 31°.91S×70°.59W, h78km±6km, ML2.6, MW3.7, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUSP	**Uspallata**	**1.07**	**108**	*e*P	Pn	13 55 11.6	+1.3
AUSP				*e*S	Sn	13 55 27.5	+2.2
RTLS	**Leoncito**	**1.11**	**85**	*e*P	Pn	13 55 12.5	+1.7
RTLS				*e*S	Sn	13 55 28.7	+2.6
RTLS				IAML		13 55 30.1	
	comp=Z,105nm,0.2s						
ASAL	**Salagasta**	**1.64**	**115**	*e*P	Pn	13 55 19.1	+1.7
ASAL				*e*S	Sn	13 55 40.5	+2.5
ARCO	**CERRO ARCO**	**1.69**	**124**	*e*P	Pn	13 55 19.4	+1.2
ARCO				IAML		13 55 21.0	
	comp=Z,58nm,0.1s						
RTCV	**Cerro Valdivia**	**1.75**	**89**	*e*P	Pn	13 55 20.0	+1.2
RTCV				*e*S	Sn	13 55 42.4	+1.9
AAGR	**Agrelo**	**1.90**	**129**	*e*P	Pn	13 55 22.7	+1.8
AROD	**Rodeo**	**1.98**	**29**	*e*S	Sn	13 55 49.6	+3.2
AMOG	**MOGNA**	**2.04**	**62**	*e*P	Pn	13 55 24.3	+1.6
AGUA	**GUANDACOL**	**3.01**	**37**	*e*P	Pn	13 55 37.6	+1.7
ACLC	**CERRO LA CRUZ**	**3.99**	**53**	*e*P	Pn	13 55 50.8	+1.6

NNC 10 14:03:51.5±3.0, 36°.80N×70°.51E, h0km, mb3.5, mpv3.2, 4C-2D, Error ellipse: s-maj=24.3km s-min=22.2km az=131.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.98**	**35**	⇓P	Pn	14 04 53.8	-0.2
	1.9nm,0.4s						
SFK				⇑S	Sn	14 05 43.2	+1.8
	1.8nm,0.4s						
MNAS	**Manas**	**5.88**	**15**	⇑P	Pn	14 05 20.2	+0.2
	1.0nm,0.6s						
MNAS				⇑S	Sn	14 06 28.5	+0.2
	0.8nm,0.3s						
KK31	**Karatay Array**	**6.29**	**0**	P	Pn	14 05 26.9	+1.4
	0.5nm,0.3s,baz=175,slow=12,SNR=24						
KK31				⇓S	Sn	14 06 39.5	+1.4
	0.5nm,0.4s,baz=189,slow=23,SNR=4.4						
AAK	**Ala-Archa**	**6.59**	**27**	⇑P	Pn	14 05 28.4	-1.4
	1.2nm,0.4s						

SJA 10 14:06:01.7±0.5, 32°.32S×70°.64W, h100km±5km, ML3.5, MW4.0, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROC1	**El Roble**	**0.72**	**206**	*i* P	Pn	14 06 20.5	+0.8
ROC1				*i* S	Sn	14 06 34.4	+1.3
AUSP	**Uspallata**	**1.06**	**85**	*i* P	Pn	14 06 24.1	+1.0
RTLS	**Leoncito**	**1.25**	**66**	*i* P	Pn	14 06 26.7	+1.4
RTLS				IAML		14 06 26.9	
	comp=Z,459nm,0.3s						
RTLS				*i* S	Sn	14 06 45.1	+2.0
ARCO	**CERRO ARCO**	**1.53**	**110**	*i* P	Pn	14 06 29.7	+1.2
ARCO				*i* S	Sn	14 06 50.3	+1.5
ARCO				IAML		14 06 51.8	
	comp=Z,633nm,0.5s						
ASAL	**Salagasta**	**1.54**	**100**	*i* P	Pn	14 06 29.9	+1.3
AAGR	**Agrelo**	**1.70**	**117**	*i* P	Pn	14 06 31.7	+1.1
ZON	**Zonda**	**1.83**	**66**	*i* P	Pn	14 06 33.3	+1.1
RTCV	**Cerro Valdivia**	**1.84**	**76**	*i* P	Pn	14 06 33.2	+1.3
RTCV				*i* S	Sn	14 06 56.8	+1.3
RTLL	**Cerro Villicun**	**2.09**	**62**	*i* P	Pn	14 06 36.5	+1.0
RTLL				*i* S	Sn	14 07 03.0	+1.7
AMOG	**MOGNA**	**2.29**	**53**	*i* P	Pn	14 06 39.1	+1.0
ACDV	**Cuesta del Vie**	**2.51**	**32**	*i* P	Pn	14 06 42.9	+1.8
AGUA	**GUANDACOL**	**3.38**	**34**	*i* P	Pn	14 06 54.1	+1.5

*ISK **10** 14:06:13.8, 36°.42N×28°.93E, h19km, ML3.3/8*
*ISCJB **10** 14:06:14.0±0.3, 36°.41N±0°.02×28°.90E±0°.02, h14km, Error ellipse: s-maj=3.3km s-min=2.6km az=176.4*
*ATH **10** 14:06:14.1, 36°.39N×28°.94E, h39km±2km, ML2.7/3, Error ellipse: s-maj=3.3km s-min=1.1km az=169.0*
*CSEM **10** 14:06:14.6±0.1, 36°.43N×28°.94E, h20km, ML3.5, Error ellipse: s-maj=3.0km s-min=2.3km az=170.0*
*DDA **10** 14:06:14.4, 36°.49N×28°.97E, h7km, Ml3.5*

*THE **10** 14:06:14.9, 36°.43N×28°.93E, h15km±1km, ML2.8/5, Error ellipse: s-maj=1.9km s-min=0.6km az=77.0*

ISC 10 14:06:13.9±0.8, 36°.44N±0°.02×28°.94E±0°.02, h14km, n86, σ0°.70/121, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.23**	**30**	PG	**Pb**	**14 06 19.6**	**-0.3**
FETY				SG	**Sb**	**14 06 24.5**	**+0.6**
FETY	**Fethiye**	**0.23**	**30**	P	**Pb**	**14 06 19.7**	**-0.2**
FETY				S	**Sb**	**14 06 25.0**	**+1.1**
FETY	**Fethiye**	**0.23**	**30**	*e*Pg	**Pb**	**14 06 19.6**	**-0.3**
FETY				*e*Sg	**Sb**	**14 06 24.5**	**+0.6**
FETY				S	**Sb**	**14 06 25.0**	**+1.1**
DALY	**Dalyan (Mu¨la**	**0.45**	**329**	PG	**Pb**	**14 06 23.8**	**+0.3**
DALY				SG	**Sb**	**14 06 30.8**	**+0.8**
DALY	**Dalyan (Mu¨la**	**0.45**	**329**	*i* P	**Pb**	**14 06 23.6**	**+0.1**
DALY				*i* S	**Sb**	**14 06 30.2**	**+0.2**
DALY	**Dalyan (Mu¨la**	**0.45**	**329**	P	**Pb**	**14 06 23.6**	**+0.1**
DALY				S	**Sb**	**14 06 30.2**	**+0.2**
TURN	**Turunc**	**0.51**	**328**	PG	**Pn**	**14 06 27.6**	**+0.8**
TURN	**Turunc**	**0.51**	**328**	*i* P	**Pn**	**14 06 27.2**	**+0.4**
TURN				*i* S	**Sn**	**14 06 36.7**	**+1.3**
TURN	**Turunc**	**0.51**	**328**	P	**Pn**	**14 06 27.2**	**+0.4**
TURN	**Turunc**	**0.51**	**328**	*e*Pg	**Pn**	**14 06 27.6**	**+0.8**
AKAS	**Kas**	**0.57**	**110**	PG	**Pg**	**14 06 25.2**	**0.0**
AKAS	**Kas**	**0.57**	**110**	*i* P	**Pg**	**14 06 25.0**	**-0.2**
AKAS				*i* S	**Sb**	**14 06 34.2**	**+0.3**
AKAS	**Kas**	**0.57**	**110**	*e*Pg	**Pg**	**14 06 25.2**	**0.0**
AKAS				S	**Sb**	**14 06 34.2**	**+0.3**
KSL	**Kastellorizon**	**0.59**	**119**	P	**Pb**	**14 06 25.9**	**-0.1**
KSL				S	**Sn**	**14 06 36.0**	**-1.3**
KSL				AML	AML	14 06 37.4	
	comp=E,3290μm,0.5s						
KSL				AML	AML	14 06 38.1	
	comp=N,1416μm,0.3s						
KSL	**Kastellorizon**	**0.59**	**119**	P	**Pb**	**14 06 26.1**	**+0.1**
KSL				S	**Sn**	**14 06 36.0**	**-1.3**
MRSB	**Marmaris-Mugla**	**0.66**	**295**	PG	**Pb**	**14 06 27.3**	**+0.1**
MRSB	**Marmaris-Mugla**	**0.66**	**295**	*e*Pg	**Pb**	**14 06 27.3**	**+0.1**
ARG	**Arkhangelos**	**0.69**	**252**	PG	**Pb**	**14 06 28.0**	**+0.2**
ARG				SG	**Sb**	**14 06 37.6**	**+0.4**
ARG	**Arkhangelos**	**0.69**	**252**	P	**Pb**	**14 06 28.0**	**+0.2**
ARG				S	**Sb**	**14 06 38.4**	**+1.2**
ARG				AML	AML	14 06 39.0	
	comp=N,1017μm,0.8s						
ARG				AML	AML	14 06 41.2	
	comp=E,1660μm,0.3s						
ARG	**Arkhangelos**	**0.69**	**252**	P	**Pb**	**14 06 27.9**	**+0.2**
ARG				S	**Sn**	**14 06 38.9**	**-0.9**
ARG	**Arkhangelos**	**0.69**	**252**	P	**Pb**	**14 06 27.9**	**+0.2**
ARG				*e*Sg	**Sb**	**14 06 37.6**	**+0.4**
ARG				S	**Sb**	**14 06 38.3**	**+1.2**
ELL	**Elmali**	**0.84**	**68**	PG	**Pn**	**14 06 31.2**	**-0.2**
ELL	**Elmali**	**0.84**	**68**	*e*Pg	**Pn**	**14 06 31.2**	**-0.2**
GLHS	**Glhisar (BURDU**	**0.85**	**32**	PG	**Pb**	**14 06 30.6**	**+0.1**
GLHS	**Glhisar (BURDU**	**0.85**	**32**	*e*Pg	**Pb**	**14 06 30.6**	**+0.1**
YER	**Yerkesik**	**0.88**	**323**	PG	**Pb**	**14 06 31.2**	**+0.3**
YER	**Yerkesik**	**0.88**	**323**	P	**Pg**	**14 06 30.5**	**-0.4**
YER				S	**Sb**	**14 06 43.6**	**+1.1**
YER	**Yerkesik**	**0.88**	**323**	P	**Pg**	**14 06 30.5**	**-0.4**
YER	**Yerkesik**	**0.88**	**323**	*e*Pg	**Pb**	**14 06 31.2**	**+0.3**
YER				S	**Sb**	**14 06 43.6**	**+1.1**
GOLH	**Golhisar**	**0.94**	**32**	*i* P	**Pb**	**14 06 31.0**	**-1.1**
GOLH				*i* S	**Sg**	**14 06 45.4**	**+0.9**
GOLH	**Golhisar**	**0.94**	**32**	P	**Pb**	**14 06 31.0**	**-1.1**
GOLH				S	**Sg**	**14 06 45.4**	**+0.9**
TAVA	**DENIZLI_Tavas**	**1.03**	**359**	*i* P	**Pb**	**14 06 33.0**	**-0.5**
TAVA				*i* S	**Sb**	**14 06 46.2**	**-0.8**
TAVA	**DENIZLI_Tavas**	**1.03**	**359**	P	**Pb**	**14 06 33.0**	**-0.5**
TAVA				S	**Sb**	**14 06 46.2**	**-0.8**
DATC	**Datca-Mugla**	**1.08**	**288**	PN	**Pb**	**14 06 34.4**	**+0.1**
DATC	**Datca-Mugla**	**1.08**	**288**	*e*Pn	**Pb**	**14 06 34.4**	**+0.1**
DAT	**Datca**	**1.14**	**285**	PN	**Pn**	**14 06 35.5**	**0.0**
DAT	**Datca**	**1.14**	**285**	*e*Pn	**Pn**	**14 06 35.5**	**0.0**
DNZL	**Cakiroluk**	**1.25**	**4**	*i* P	**Pn**	**14 06 36.7**	**-0.5**
DNZL				*i* S	**Sb**	**14 06 53.5**	**-0.1**
DNZL	**Cakiroluk**	**1.25**	**4**	P	**Pn**	**14 06 36.7**	**-0.5**
DNZL				S	**Sb**	**14 06 53.5**	**-0.1**
KORT	**Korkueli**	**1.27**	**63**	PN	**Pn**	**14 06 37.5**	**+0.2**
KORT	**Korkueli**	**1.27**	**63**	*i* P	**Pb**	**14 06 37.7**	**+0.1**
KORT				*i* S	**Sg**	**14 06 56.8**	**+2.0**
KORT	**Korkueli**	**1.27**	**63**	*e*Pn	**Pn**	**14 06 37.5**	**+0.2**
MLSB	**Milas**	**1.27**	**313**	PN	**Pn**	**14 06 37.2**	**0.0**
MLSB	**Milas**	**1.27**	**313**	*e*Pn	**Pn**	**14 06 37.2**	**0.0**
DENT	**Denizli**	**1.32**	**3**	PN	**Pn**	**14 06 37.5**	**-0.4**
DENT	**Denizli**	**1.32**	**3**	*e*Pn	**Pn**	**14 06 37.5**	**-0.4**
BODT	**Bodrum**	**1.45**	**296**	PN	**Pn**	**14 06 39.4**	**-0.3**
BODT	**Bodrum**	**1.45**	**296**	P	**Pn**	**14 06 39.2**	**-0.5**
BODT				S	**Sn**	**14 06 57.1**	**-1.5**
BODT	**Bodrum**	**1.45**	**296**	*e*Pn	**Pn**	**14 06 39.4**	**-0.3**
BODT				S	**Sn**	**14 06 57.1**	**-1.5**
ANTB	**Antalya**	**1.45**	**71**	PN	**Pb**	**14 06 40.6**	**-0.1**
ANTB	**Antalya**	**1.45**	**71**	*e*Pn	**Pb**	**14 06 40.6**	**-0.1**
NISR	**Nisiros**	**1.47**	**277**	P	**Pn**	**14 06 40.0**	**+0.1**
NISR	**Nisiros**	**1.47**	**277**	P	**Pn**	**14 06 39.9**	**0.0**
YKAV	**Yalikavak-Bodr**	**1.50**	**298**	PN	**Pn**	**14 06 39.9**	**-0.5**
YKAV	**Yalikavak-Bodr**	**1.50**	**298**	*e*Pn	**Pn**	**14 06 39.9**	**-0.5**
KARP	**Karpathos**	**1.69**	**239**	PN	**Pn**	**14 06 43.0**	**-0.1**
KARP	**Karpathos**	**1.69**	**239**	P	**Pn**	**14 06 42.5**	**-0.6**
KARP				S	**Sn**	**14 07 02.7**	**-1.9**
KARP				AML	AML	14 07 04.6	
	comp=E,270μm,0.3s						
KARP				AML	AML	14 07 05.2	
	comp=N,310μm,0.2s						
KARP	**Karpathos**	**1.69**	**239**	P	**Pn**	**14 06 42.6**	**-0.5**
KARP				S	**Sn**	**14 07 02.8**	**-1.8**
KARP	**Karpathos**	**1.69**	**239**	P	**Pn**	**14 06 42.6**	**-0.5**
KARP	**Karpathos**	**1.69**	**239**	*e*Pn	**Pn**	**14 06 43.0**	**-0.1**
KARP				S	**Sn**	**14 07 03.0**	**-1.6**
AYDB	**Zeytinkoy-Aydi**	**1.73**	**331**	PN	**Pn**	**14 06 44.1**	**+0.5**
AYDB	**Zeytinkoy-Aydi**	**1.73**	**331**	*e*Pn	**Pn**	**14 06 44.1**	**+0.5**
ISP	**Isparta**	**1.88**	**42**	PN	**Pn**	**14 06 46.6**	**+0.9**
ISP	**Isparta**	**1.88**	**42**	*e*Pn	**Pn**	**14 06 46.6**	**+0.9**
SUTC	**Sutluce-Ispart**	**1.95**	**57**	PN	**Pn**	**14 06 47.6**	**+0.9**
SUTC	**Sutluce-Ispart**	**1.95**	**57**	*e*Pn	**Pn**	**14 06 47.6**	**+0.9**
KULA	**Kula-Manisa**	**2.09**	**354**	PN	**Pn**	**14 06 47.7**	**-0.8**
KULA	**Kula-Manisa**	**2.09**	**354**	*e*Pn	**Pn**	**14 06 47.7**	**-0.8**
SMG	**Samos**	**2.11**	**308**	P	**Pn**	**14 06 49.1**	**+0.4**
SMG	**Samos**	**2.11**	**308**	P	**Pn**	**14 06 48.9**	**+0.1**
SMG				S	**Sn**	**14 07 13.7**	**-1.1**
SMG	**Samos**	**2.11**	**308**	P	**Pn**	**14 06 48.9**	**+0.1**
SMG				S	**Sn**	**14 07 13.7**	**-1.1**
ZKR	**Zakros**	**2.58**	**240**	P	**Pn**	**14 06 55.8**	**+0.6**
ZKR	**Zakros**	**2.58**	**240**	P	**Pn**	**14 06 55.5**	**+0.3**
ZKR	**Zakros**	**2.58**	**240**	P	**Pn**	**14 06 55.4**	**+0.3**
URLA	**Izmir**	**2.68**	**317**	PN	**Pn**	**14 06 56.7**	**+0.1**
URLA	**Izmir**	**2.68**	**317**	*e*Pn	**Pn**	**14 06 56.7**	**+0.1**
APE	**Apeiranthos**	**2.81**	**284**	P	**Pn**	**14 06 59.2**	**+0.7**
APE	**Apeiranthos**	**2.81**	**284**	P	**Pn**	**14 06 59.0**	**+0.6**
CHOS	**Chios island**	**3.01**	**311**	P	**Pn**	**14 07 01.7**	**+0.4**
CHOS	**Chios island**	**3.01**	**311**	P	**Pn**	**14 07 01.3**	**+0.1**
CHOS				S	**Sn**	**14 07 35.9**	**-1.3**
CHOS	**Chios island**	**3.01**	**311**	P	**Pn**	**14 07 01.3**	**+0.1**
CHOS				S	**Sn**	**14 07 35.9**	**-1.3**
LAST	**Lasithi**	**3.09**	**247**	P	**Pn**	**14 07 01.9**	**-0.4**
LAST	**Lasithi**	**3.09**	**247**	P	**Pn**	**14 07 02.2**	**-0.1**
LAST	**Lasithi**	**3.09**	**247**	P	**Pn**	**14 07 02.2**	**-0.1**
GVD	**Gavdhos**	**4.26**	**249**	P	**Pn**	**14 07 18.4**	**+0.1**
GVD	**Gavdhos**	**4.26**	**249**	P	**Pn**	**14 07 18.7**	**+0.4**

IGQ 10 14:14:26.2±1.0, 0°.N±4°.×8°.0W±°, h8km±4km, MLv4.1/6, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAG1	**Magdalena**	**0.42**	**110**	P	Pb	14 14 36.3	+0.3
ASDO	**Santo Domingo**	**1.10**	**108**	P	Pg	14 14 45.6	-1.8
ASDO				S	Sg	14 15 00.7	-1.0
PINO	**Pino**	**1.58**	**98**	P	Pn	14 14 53.6	-1.6
YANA	**Yana**	**1.61**	**97**	P	Pn	14 14 54.2	-1.3
ILLI	**Illinizas Sur**	**1.64**	**118**	P	Pn	14 14 53.9	-2.0
ILLI				S	Sn	14 15 16.6	-0.9
OTAV	**Otavalo**	**1.73**	**84**	P	Pn	14 14 55.5	-1.6
CUIC	**Cuicocha-Domo**	**1.82**	**83**	P	Pn	14 14 57.3	-1.1
BNAS	**Cotopaxi Volca**	**1.84**	**114**	P	Pn	14 14 59.2	+0.5
NAS2	**Nasa**	**1.84**	**113**	P	Pn	14 14 59.5	+0.8
PITA	**Cotopaxi Volc**	**1.85**	**110**	P	Pn	14 14 58.4	-0.3
BREF	**Cotopaxi Volca**	**1.88**	**113**	P	Pn	14 14 59.3	0.0
BVC2	**Cotopaxi Volca**	**1.90**	**112**	P	Pn	14 14 59.3	-0.3
VC1	**Cotopaxi 1**	**1.90**	**112**	P	Pn	14 14 59.6	+0.1
BTAM	**Cotopaxi Volca**	**1.92**	**113**	P	Pn	14 14 59.6	-0.3
LITE1	**Lita**	**1.95**	**68**	P	Pn	14 14 58.7	-1.1
URCU	**Urcuqui**	**1.95**	**79**	P	Pn	14 14 59.3	-0.8
COV1	**Cotopaxi Volc**	**1.97**	**112**	P	Pn	14 14 59.6	-0.9
IMBA	**Imbabura, San**	**1.98**	**84**	P	Pn	14 15 00.7	+0.1
ANTS	**Antisana-Sarah**	**2.08**	**106**	P	Pn	14 15 02.0	0.0
PISA	**Pisayambo**	**2.11**	**122**	P	Pn	14 15 02.1	-0.3
POND	**Pondoa**	**2.27**	**131**	P	Pn	14 15 04.6	+0.2
RETU	**Refugio**	**2.29**	**131**	P	Pn	14 15 04.6	-0.3
BRUN	**Tungurahua Vol**	**2.30**	**130**	P	Pn	14 15 05.1	+0.2
BMAS	**Trigal station**	**2.30**	**133**	P	Pn	14 15 04.9	0.0
BULB	**Ulba Tungurahu**	**2.31**	**130**	P	Pn	14 15 05.4	+0.4
ARRY	**Arrayan**	**2.32**	**132**	P	Pn	14 15 05.3	+0.1
BPAT	**Tungurahua Vol**	**2.34**	**132**	P	Pn	14 15 05.9	+0.4
RIOE1	**Riobamba**	**2.38**	**139**	P	Pn	14 15 06.0	+0.1
MILO	**Milagro-Astudi**	**2.41**	**165**	P	Pn	14 15 02.9	-3.1
COHC	**Cochancay**	**2.68**	**160**	P	Pn	14 15 07.4	-2.4

MEX 10 14:20:10.7±0.4, 16°.07N×94°.57W, h84km±9km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.35**	**105**	*e*P	Pn	14 20 33.0	-1.2
PCIG				*e*S	Sn	14 20 50.3	-1.7
HUIG	**Huatulco**	**1.51**	**259**	*i* P	Pn	14 20 34.9	-1.4
HUIG				*i* S	Sn	14 20 54.2	-1.4
TGIG		**1.56**	**63**	*i* P	Pn	14 20 35.8	-1.2
TGIG				*e*S	Sn	14 20 55.5	-1.4

*CSEM **10** 14:23:13.8, 36°.92N×29°.23E, h31km, ML2.2*

ISK 10 14:23:13.8, 36°.92N×29°.23E, h31km, ML2.2/7, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.31**	**202**	PG	Pn	14 23 22.1	-0.1
FETY				SG	Sn	14 23 28.0	+0.3
FETY	**Fethiye**	**0.31**	**202**	PG	Pn	14 23 22.4	+0.2
FETY				SG	Sn	14 23 27.8	+0.1
FETY	**Fethiye**	**0.31**	**202**	*e*Pg	Pn	14 23 22.1	-0.1
FETY				*e*Sg	Sn	14 23 28.0	+0.3
DALY	**Dalyan (Mu¨la**	**0.47**	**257**	PG	Pn	14 23 24.5	+0.1
DALY				SG	Sn	14 23 32.2	+0.6
DALY	**Dalyan (Mu¨la**	**0.47**	**257**	PG	Pn	14 23 25.4	+1.0
DALY				SG	Sn	14 23 32.2	+0.6
DALY	**Dalyan (Mu¨la**	**0.47**	**257**	*e*Pg	Pn	14 23 24.5	+0.1
DALY				*e*Sg	Sn	14 23 32.2	+0.6
TURN	**Turunc**	**0.50**	**264**	PG	Pn	14 23 29.2	+4.4
TURN	**Turunc**	**0.50**	**264**	PG	Pn	14 23 29.4	+4.6
TURN	**Turunc**	**0.50**	**264**	*e*Pg	Pn	14 23 29.2	+4.4
AKAS	**Kas**	**0.75**	**156**	PG	Pn	14 23 28.4	0.0
AKAS				SG	Sn	14 23 39.2	+0.3
AKAS	**Kas**	**0.75**	**156**	PG	Pn	14 23 28.4	0.0
AKAS				SG	Sb	14 23 38.5	-0.1
AKAS	**Kas**	**0.75**	**156**	*e*Pg	Pn	14 23 28.4	0.0
AKAS				*e*Sg	Sn	14 23 39.2	+0.3
MRSB	**Marmaris-Mugla**	**0.85**	**256**	PG	Pb	14 23 30.1	0.0
MRSB	**Marmaris-Mugla**	**0.85**	**256**	*e*Pg	Pb	14 23 30.1	0.0
KORT	**Kor

DENT	**Denizli**	**1.28 4**	*e*Pn	**Pn**	**14 30 26.5**	**-0.5**
BDRM	**Kayabasi**	**1.32 297**	*i* P	**Pn**	**14 30 27.3**	**-0.2**
BDRM			*i* S	**Sn**	**14 30 44.6**	**0.0**
BDRM	**Kayabasi**	**1.32 297**	P	**Pn**	**14 30 27.3**	**-0.2**
BDRM			S	**Sn**	**14 30 44.6**	**0.0**
BODT	**Bodrum**	**1.41 295**	PN	**Pn**	**14 30 27.4**	**-1.4**
BODT	**Bodrum**	**1.41 295**	P	**Pn**	**14 30 27.6**	**-1.2**
BODT			S	**Sn**	**14 30 46.9**	**-0.1**
BODT	**Bodrum**	**1.41 295**	P	**Pn**	**14 30 27.6**	**-1.2**
BODT			S	**Sn**	**14 30 46.9**	**-0.1**
AYDN	**Tasoluk**	**1.44 325**	*i* P	**Pb**	**14 30 30.4**	**+0.1**
AYDN			*i* S	**Sb**	**14 30 49.2**	**+0.8**
AYDN	**Tasoluk**	**1.44 325**	P	**Pb**	**14 30 30.4**	**+0.1**
AYDN			S	**Sb**	**14 30 49.2**	**+0.8**
YKAV	**Yalikavak-Bodr**	**1.46 297**	PN	**Pn**	**14 30 28.5**	**-1.0**
YKAV	**Yalikavak-Bodr**	**1.46 297**	*e*Pn	**Pn**	**14 30 28.5**	**-1.0**
AYDB	**Zeytinkoy-Aydi**	**1.68 331**	PN	**Pn**	**14 30 32.1**	**-0.5**
AYDB	**Zeytinkoy-Aydi**	**1.68 331**	*e*Pn	**Pn**	**14 30 32.1**	**-0.5**
KARP	**Karpathos**	**1.70 237**	P	**Pn**	**14 30 32.0**	**-0.8**
KARP	**Karpathos**	**1.70 237**	P	**Pn**	**14 30 32.0**	**-0.8**
KHAL	**Karahalli**	**1.94 14**	*i* P	**Pn**	**14 30 34.2**	**-2.1**
KHAL			*i* S	**Sn**	**14 30 57.2**	**-3.1**
KHAL	**Karahalli**	**1.94 14**	P	**Pn**	**14 30 34.2**	**-2.1**
KHAL			S	**Sn**	**14 30 57.2**	**-3.1**
SUTC	**Sutluce-Ispart**	**1.95 59**	PN	**Pn**	**14 30 35.9**	**-0.4**
SUTC	**Sutluce-Ispart**	**1.95 59**	*e*Pn	**Pn**	**14 30 35.9**	**-0.4**
SMG	**Samos**	**2.06 307**	P	**Pn**	**14 30 37.8**	**0.0**
SMG			S	**Sn**	**14 31 03.4**	**+0.3**
SMG	**Samos**	**2.06 307**	P	**Pn**	**14 30 37.8**	**0.0**
SMG			S	**Sn**	**14 31 03.4**	**+0.3**

*IDC **10** 14:52:26.8±0.9, 16°.67N×147°.60E, h0km, mb3.6/12, mb1 3.8/13, mb1mx3.7/64, mbtmp3.7/13, ML3.9/1, MS3.1/2, Ms1 3.1/2, ms1mx2.8/65, Error ellipse: s-maj=27.6km s-min=17.0km az=102.0*
*ISCJB **10** 14:52:30.1±0.8, 16°.70N±0°.09×147°.5E±0°.2, h33km, mb3.6/12, MS3.4/1, Error ellipse: s-maj=22.9km s-min=8.7km az=24.2*
ISC 10 14:52:32.1±1.0, 16°.7N±0°.1×147°.6E±0°.2, h35km, n14, σ0§80/14, mb3.6/12, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.03**	**221**	Pn	**Pn**	**14 53 31.4**	**+0.1**
	7.1nm,0.3s,baz=43,slow=6.9,SNR=6.8						
GUMO				Sn	**Sn**	**14 54 17.1**	**-0.1**
	6.9nm,0.3s,baz=171,slow=19,SNR=3.7						
GUMO				LR	LR	14 55 01.8	
	comp=Z,164nm,19.6s,baz=86,slow=38						
MJAR	**Matsushiro Arr**	**21.46**	**339**	P	**P**	**14 57 15.6**	**-1.9**
	1.9nm,0.8s,baz=174,slow=11,SNR=6.1						
WRA	**Warramunga Arr**	**38.64**	**200**	P	**P**	**14 59 51.4**	**-1.0**
	0.6nm,0.8s,baz=23,slow=9.0,SNR=5.1						
ASAR	**Alice Springs**	**42.26**	**199**	P	**P**	**15 00 22.0**	**-0.3**
	0.2nm,0.8s,baz=19,slow=8.8,SNR=3.8						
SONM	**Songino Array**	**45.83**	**322**	P	**P**	**15 00 51.0**	**+0.2**
	0.3nm,0.4s,baz=116,slow=8.8,SNR=2.6						
CMAR	**Chiang Mai Arr**	**46.28**	**280**	P	**P**	**15 00 55.6**	**+1.0**
	1.5nm,0.8s,baz=68,slow=5.9,SNR=6.7						
ZALV	**Zalesovo Beam**	**60.70**	**323**	P	**P**	**15 02 40.4**	**+0.6**
	0.2nm,0.3s,baz=119,slow=8.4,SNR=2.6						
MKAR	**Makanchi Array**	**61.14**	**315**	P	**P**	**15 02 43.7**	**+0.6**
	0.2nm,0.5s,baz=99,slow=8.9,SNR=3.0						
RAR	**Rarotonga**	**63.91**	**124**	LR	LR	15 25 20.1	
	comp=Z,26nm,21.2s,baz=148,slow=31						
KURBB	**Kurchatov Arra**	**64.01**	**319**	P	**P**	**15 03 01.9**	**-0.2**
	2.1nm,0.8s,baz=97,slow=6.8,SNR=17						
NRIK	**Noril'sk**	**64.11**	**340**	P	**P**	**15 03 02.5**	**+0.1**
	3.2nm,1.1s,baz=112,slow=8.4,SNR=5.4						
ILAR	**Eielson Array**	**64.68**	**26**	P	**P**	**15 03 06.3**	**+0.1**
	0.3nm,0.9s,baz=240,slow=5.1,SNR=3.2						
BVAR	**Borovoye Array**	**69.16**	**321**	P	**P**	**15 03 34.2**	**-0.7**
	0.8nm,0.6s,baz=90,slow=8.6,SNR=8.3						
NVAR	**Mina Array Bea**	**82.97**	**52**	P	**P**	**15 04 54.8**	**+0.6**
	0.4nm,0.8s,baz=308,slow=7.4,SNR=3.3						

*GUC **10** 14:53:15.2±0.6, 32°.91S×71°.58W, h15km±5km, ML2.6*
*SJA **10** 14:53:17.3±0.7, 32°.50S×71°.33W, h11km, ML2.1, MW2.7*
ISC 10 14:53:16.2±3.0, 32°.89S±0°.06×71°.5W±0°.1, h23km±14km, n14, σ0§92/21, 4C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROCH	**El Roble**	**0.45**	**101**	⇑*i*P	**Pb**	**14 53 25.4**	**-0.3**
ROCH				*i* S	**Sb**	**14 53 33.3**	**+1.3**
ROCH				IAML		14 53 34.2	
	comp=E,1μm,0.7s						
PEL	**Peldehue**	**0.76**	**110**	⇑*i*P	**Pb**	**14 53 30.1**	**-0.6**
PEL				*i* S	**Sn**	**14 53 42.0**	**-0.3**
CLCH	**Cerro Calan**	**0.98**	**122**	⇓*i*P	**Pb**	**14 53 34.0**	**-0.6**
CLCH				*i* S	**Sb**	**14 53 47.4**	**+0.3**
CLCH				IAML		14 53 53.2	
	comp=N,229nm,0.7s						
ANTU	**Antumapu**	**1.02**	**132**	*i* S	**Sb**	**14 53 48.9**	**+0.7**
ANTU				IAML		14 53 53.5	
	comp=N,313nm,0.4s						
FCH	**Farellones**	**1.13**	**113**	⇑*i*P	**Pn**	**14 53 35.9**	**-1.0**
FCH				*i* S	**Sn**	**14 53 52.4**	**+0.5**
LMEL	**Las Melosas**	**1.47**	**131**	⇑*i*P	**Pn**	**14 53 41.8**	**+0.4**
LMEL				*i* S	**Sb**	**14 54 02.1**	**+0.8**
AUSP	**Uspallata**	**1.93**	**71**	*e*P	**Pn**	**14 53 48.5**	**+0.6**
AUSP				*e*S	**Sn**	**14 54 12.3**	**+0.8**
RTLS	**Leoncito**	**2.18**	**61**	*e*P	**Pn**	**14 53 51.6**	**+0.3**
RTLS				IAML		14 54 32.8	
	comp=Z,15nm,0.6s						
ARCO	**CERRO ARCO**	**2.19**	**90**	*e*P	**Pb**	**14 53 54.0**	**-1.2**
ARCO				IAML		14 53 54.8	
	comp=Z,19nm,0.4s						
ARCO				*e*S	**Sb**	**14 54 21.7**	**-0.2**
AAGR	**Agrelo**	**2.28**	**96**	*e*P	**Pb**	**14 53 56.0**	**-0.8**
ASAL	**Salagasta**	**2.29**	**83**	*e*P	**Pb**	**14 53 54.7**	**-2.2**
RTCV	**Cerro Valdivia**	**2.73**	**69**	*e*P	**Pn**	**14 53 59.4**	**+0.7**
AMOG	**MOGNA**	**3.23**	**54**	*e*P	**Pn**	**14 54 06.2**	**+0.6**
AGUA	**GUANDACOL**	**4.27**	**38**	*e*P	**Pn**	**14 54 20.2**	**+0.3**

*IDC **10** 15:02:40.2±1.0, 36°.29N×28°.96E, h49km±16km, mb3.3/4, mb1 3.5/10, mb1mx3.2/61, mbtmp3.5/10, ML3.4/6, Error ellipse: s-maj=13.8km s-min=8.8km az=171.0*
*CSEM **10** 15:02:40.9±0.1, 36°.44N×28°.96E, h20km, ML3.8, Error ellipse: s-maj=3.3km s-min=2.3km az=178.0*
*ATH **10** 15:02:40.5, 36°.45N×28°.89E, h37km±2km, ML3.4/9, Error ellipse: s-maj=2.3km s-min=0.8km az=149.0*
*ISK **10** 15:02:40.1, 36°.47N×28°.90E, h21km, ML3.8/20*
*DDA **10** 15:02:41.0, 36°.54N×28°.92E, h7km, Ml3.8*
*THE **10** 15:02:41.1, 36°.45N×28°.89E, h10km±1km, ML3.4/6, Error ellipse: s-maj=1.4km s-min=0.5km az=105.0*
*NIC **10** 15:02:44.0±0.3, 36°.12N×29°.02E, h25km, mb4.1, ML3.6*
ISC 10 15:02:39.7±0.7, 36°.43N±0°.02×28°.93E±0°.02, h20km±2km, n202, σ1§54/251, mb3.5/4, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.24**	**30**	PG	**Pb**	**15 02 45.9**	**+0.2**
FETY				SG	**Sb**	**15 02 50.3**	**+0.4**
FETY	**Fethiye**	**0.24**	**30**	P	**Pb**	**15 02 45.9**	**+0.2**
FETY				S	**Sb**	**15 02 50.9**	**+1.0**
FETY	**Fethiye**	**0.24**	**30**	P	**Pb**	**15 02 45.9**	**+0.2**
FETY				*e*Sg	**Sb**	**15 02 50.3**	**+0.4**
DALY	**Dalyan (Mu¨la**	**0.45**	**330**	PG	**Pb**	**15 02 49.6**	**+0.6**
DALY				SG	**Sb**	**15 02 55.3**	**+0.1**
DALY	**Dalyan (Mu¨la**	**0.45**	**330**	*i* P	**Pb**	**15 02 49.5**	**+0.6**
DALY				*i* S	**Sb**	**15 02 56.3**	**+1.1**
DALY	**Dalyan (Mu¨la**	**0.45**	**330**	*i* Pg	**Pb**	**15 02 49.6**	**+0.6**
DALY				*e*Sg	**Sb**	**15 02 55.3**	**+0.1**
DALY				S	**Sb**	**15 02 56.3**	**+1.1**
TURN	**Turunc**	**0.52**	**329**	PG	**Pn**	**15 02 52.6**	**+0.6**
TURN	**Turunc**	**0.52**	**329**	*i* P	**Pn**	**15 02 53.1**	**+1.1**
TURN				*i* S	**Sn**	**15 03 02.2**	**+2.0**
TURN	**Turunc**	**0.52**	**329**	*e*Pg	**Pn**	**15 02 52.6**	**+0.6**
TURN	**Turunc**	**0.52**	**329**	P	**Pn**	**15 02 53.1**	**+1.1**
AKAS	**Kas**	**0.57**	**109**	PG	**Pb**	**15 02 52.2**	**+1.0**
AKAS				SG	**Sb**	**15 03 02.1**	**+2.9**
AKAS	**Kas**	**0.57**	**109**	*i* P	**Pb**	**15 02 52.3**	**+1.0**
AKAS				*i* S	**Sb**	**15 03 02.0**	**+2.9**
AKAS	**Kas**	**0.57**	**109**	P	**Pb**	**15 02 52.3**	**+1.0**
AKAS				S	**Sb**	**15 03 02.0**	**+2.9**
KSL	**Kastellorizon**	**0.59**	**118**	P	**Pb**	**15 02 53.1**	**+1.6**
KSL				S	**Sn**	**15 03 04.0**	**+2.0**
KSL				AML	AML	15 03 04.5	
	comp=E,23194μm,0.5s						
KSL				AML	AML	15 03 05.5	
	comp=N,5894μm,0.7s						
KSL	**Kastellorizon**	**0.59**	**118**	P	**Pb**	**15 02 53.2**	**+1.7**
KSL				S	**Sn**	**15 03 03.4**	**+1.4**
MRSB	**Marmaris-Mugla**	**0.66**	**296**	PG	**Pb**	**15 02 52.9**	**+0.3**
MRSB	**Marmaris-Mugla**	**0.66**	**296**	*e*Pg	**Pb**	**15 02 52.9**	**+0.3**
ARG	**Arkhangelos**	**0.69**	**252**	PG	**Pb**	**15 02 54.1**	**+1.1**
ARG	**Arkhangelos**	**0.69**	**252**	P	**Pb**	**15 02 53.6**	**+0.6**
ARG				S	**Sn**	**15 03 04.3**	**0.0**
ARG				AML	AML	15 03 06.3	
	comp=N,3381μm,0.3s						
ARG				AML	AML	15 03 07.5	
	comp=E,7449μm,0.3s						
ARG	**Arkhangelos**	**0.69**	**252**	P	**Pb**	**15 02 53.8**	**+0.8**
ARG				S	**Sn**	**15 03 04.3**	**0.0**
ARG	**Arkhangelos**	**0.69**	**252**	P	**Pb**	**15 02 53.8**	**+0.8**
ARG	**Arkhangelos**	**0.69**	**252**	*e*Pg	**Pb**	**15 02 54.1**	**+1.1**
ARG				S	**Sn**	**15 03 04.2**	**-0.1**
ELL	**Elmali**	**0.85**	**67**	PG	**Pn**	**15 02 57.5**	**+0.9**
ELL	**Elmali**	**0.85**	**67**	*e*Pg	**Pn**	**15 02 57.5**	**+0.9**
GLHS	**Glhisar (BURDU**	**0.86**	**32**	PG	**Pb**	**15 02 56.9**	**+0.9**
GLHS	**Glhisar (BURDU**	**0.86**	**32**	*e*Pg	**Pb**	**15 02 56.9**	**+0.9**
YER	**Yerkesik**	**0.88**	**324**	PG	**Pb**	**15 02 56.7**	**+0.3**
YER	**Yerkesik**	**0.88**	**324**	P	**Pb**	**15 02 56.9**	**+0.5**
YER				S	**Sn**	**15 03 09.5**	**+0.3**
YER	**Yerkesik**	**0.88**	**324**	P	**Pb**	**15 02 56.9**	**+0.5**
YER				S	**Sn**	**15 03 09.5**	**+0.3**
GOLH	**Golhisar**	**0.95**	**32**	*i* P	**Pb**	**15 02 57.9**	**+0.2**
GOLH				*i* S	**Sn**	**15 03 12.6**	**+1.5**
GOLH	**Golhisar**	**0.95**	**32**	P	**Pb**	**15 02 57.8**	**+0.2**
GOLH				S	**Sn**	**15 03 12.6**	**+1.5**
TAVA	**DENIZLI_Tavas**	**1.04**	**359**	*i* P	**Pb**	**15 02 59.8**	**+0.7**
TAVA				*i* S	**Sn**	**15 03 14.2**	**+1.0**
TAVA	**DENIZLI_Tavas**	**1.04**	**359**	P	**Pb**	**15 02 59.8**	**+0.7**
TAVA				S	**Sn**	**15 03 14.2**	**+1.0**
DATC	**Datca-Mugla**	**1.08**	**288**	PG	**Pn**	**15 02 59.9**	**+0.3**
DATC	**Datca-Mugla**	**1.08**	**288**	*e*Pg	**Pn**	**15 02 59.9**	**+0.3**
DAT	**Datca**	**1.13**	**286**	PN	**Pn**	**15 03 00.9**	**+0.4**
DAT	**Datca**	**1.13**	**286**	*i* P	**Pn**	**15 03 01.8**	**+1.1**
DAT				*i* S	**Sn**	**15 03 17.6**	**+2.1**
DAT	**Datca**	**1.13**	**286**	*e*Pn	**Pn**	**15 03 00.9**	**+0.4**
DAT	**Datca**	**1.13**	**286**	P	**Pb**	**15 03 01.8**	**+1.1**
DAT				S	**Sn**	**15 03 17.6**	**+2.1**
MLSB	**Milas**	**1.27**	**313**	PN	**Pb**	**15 03 03.6**	**+0.6**
MLSB	**Milas**	**1.27**	**313**	*e*Pn	**Pb**	**15 03 03.6**	**+0.6**
KORT	**Korkueli**	**1.27**	**63**	PN	**Pb**	**15 03 04.1**	**+1.0**
KORT	**Korkueli**	**1.27**	**63**	*i* P	**Pb**	**15 03 04.8**	**+1.7**
KORT				*i* S	**Sb**	**15 03 24.1**	**+5.0**
KORT	**Korkueli**	**1.27**	**63**	*e*Pn	**Pb**	**15 03 04.1**	**+1.0**
KORT	**Korkueli**	**1.27**	**63**	P	**Pb**	**15 03 04.8**	**+1.7**
DENT	**Denizli**	**1.33**	**3**	PN	**Pn**	**15 03 03.5**	**+0.3**
DENT	**Denizli**	**1.33**	**3**	*e*Pn	**Pn**	**15 03 03.5**	**+0.3**
BODT	**Bodrum**	**1.45**	**296**	PN	**Pn**	**15 03 04.8**	**0.0**
BODT	**Bodrum**	**1.45**	**296**	P	**Pn**	**15 03 04.6**	**-0.2**
BODT				S	**Sn**	**15 03 24.1**	**+0.9**
BODT	**Bodrum**	**1.45**	**296**	*e*Pn	**Pn**	**15 03 04.8**	**0.0**
BODT				S	**Sn**	**15 03 24.1**	**+0.9**
ANTB	**Antalya**	**1.46**	**71**	PN	**Pn**	**15 03 06.3**	**+1.4**
ANTB	**Antalya**	**1.46**	**71**	*e*Pn	**Pn**	**15 03 06.3**	**+1.4**
NISR	**Nisiros**	**1.47**	**278**	P	**Pb**	**15 03 06.6**	**+0.4**
NISR				S	**Sn**	**15 03 24.3**	**+0.7**
NISR				AML	AML	15 03 31.9	
	comp=E,2219μm,0.3s						
NISR				AML	AML	15 03 33.2	
	comp=N,1320μm,0.3s						
NISR	**Nisiros**	**1.47**	**278**	P	**Pb**	**15 03 06.7**	**+0.4**
NISR	**Nisiros**	**1.47**	**278**	P	**Pn**	**15 03 06.2**	**+1.2**
NISR				S	**Sn**	**15 03 24.2**	**+0.7**
YKAV	**Yalikavak-Bodr**	**1.50**	**298**	PN	**Pn**	**15 03 06.3**	**+0.8**
YKAV	**Yalikavak-Bodr**	**1.50**	**298**	*e*Pn	**Pn**	**15 03 06.3**	**+0.8**
BRDR	**BURDUR-Merkez**	**1.56**	**35**	*i* P	**Pb**	**15 03 08.3**	**+0.5**
BRDR				*i* S	**Sb**	**15 03 28.4**	**+1.3**
BRDR	**BURDUR-Merkez**	**1.56**	**35**	P	**Pb**	**15 03 08.4**	**+0.5**
BRDR				S	**Sb**	**15 03 28.5**	**+1.3**
KARP	**Karpathos**	**1.68**	**239**	PN	**Pn**	**15 03 09.3**	**+1.3**
KARP	**Karpathos**	**1.68**	**239**	P	**Pn**	**15 03 08.9**	**+0.9**
KARP				S	**Sn**	**15 03 28.8**	**-0.2**
KARP				AML	AML	15 03 36.6	
	comp=N,1354μm,0.3s						
KARP				AML	AML	15 03 43.7	
	comp=E,1432μm,0.5s						
KARP	**Karpathos**	**1.68**	**239**	P	**Pn**	**15 03 09.0**	**+0.9**
KARP				S	**Sn**	**15 03 29.7**	**+0.7**
KARP	**Karpathos**	**1.68**	**239**	P	**Pn**	**15 03 09.0**	**+0.9**
KARP	**Karpathos**	**1.68**	**239**	*e*Pn	**Pn**	**15 03 09.3**	**+1.3**
KARP				S	**Sn**	**15 03 29.7**	**+0.7**
AYDB	**Zeytinkoy-Aydi**	**1.73**	**332**	PN	**Pn**	**15 03 09.0**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**1.73**	**332**	*e*Pn	**Pn**	**15 03 09.0**	**+0.2**
ISP	**Isparta**	**1.89**	**42**	PN	**Pn**	**15 03 12.4**	**+1.5**
ISP	**Isparta**	**1.89**	**42**	P	**Pn**	**15 03 12.2**	**+1.3**
ISP				S	**Sn**	**15 03 35.6**	**+1.5**
ISP	**Isparta**	**1.89**	**42**	P	**Pn**	**15 03 12.2**	**+1.3**
ISP				S	**Sn**	**15 03 35.6**	**+1.5**
KHL	**Karahalli**	**1.95**	**14**	PN	**Pn**	**15 03 12.9**	**+1.1**
KHL	**Karahalli**	**1.95**	**14**	*e*Pn	**Pn**	**15 03 12.9**	**+1.1**
SUTC	**Sutluce-Ispart**	**1.96**	**57**	PN	**Pn**	**15 03 13.4**	**+1.5**
SUTC	**Sutluce-Ispart**	**1.96**	**57**	*e*Pn	**Pn**	**15 03 13.4**	**+1.5**
KULA	**Kula-Manisa**	**2.10**	**354**	PN	**Pn**	**15 03 13.9**	**+0.1**
KULA	**Kula-Manisa**	**2.10**	**354**	*e*Pn	**Pn**	**15 03 13.9**	**+0.1**
SMG	**Samos**	**2.11**	**308**	P	**Pn**	**15 03 14.6**	**+0.8**
SMG				AML	AML	15 03 42.3	
	comp=N,4762μm,0.3s						
SMG				AML	AML	15 03 43.4	
	comp=E,3225μm,0.3s						
SMG	**Samos**	**2.11**	**308**	P	**Pn**	**15 03 14.7**	**+0.8**
SMG				S	**Sn**	**15 03 40.0**	**+0.5**
SMG	**Samos**	**2.11**	**308**	P	**Pn**	**15 03 14.7**	**+0.8**
SMG				S	**Sn**	**15 03 40.0**	**+0.5**
ZKR	**Zakros**	**2.57**	**240**	P	**Pn**	**15 03 22.1**	**+1.9**
ZKR				AML	AML	15 04 06.8	
	comp=N,224μm,0.7s						
ZKR				AML	AML	15 04 07.6	
	comp=E,432μm,0.4s						
ZKR	**Zakros**	**2.57**	**240**	P	**Pn**	**15 03 21.7**	**+1.5**
ZKR	**Zakros**	**2.57**	**240**	P	**Pn**	**15 03 21.7**	**+1.5**
SHAP	**Saphane-Kutahy**	**2.60**	**5**	PN	**Pn**	**15 03 20.2**	**-0.5**
SHAP	**Saphane-Kutahy**	**2.60**	**5**	*e*Pn	**Pn**	**15 03 20.2**	**-0.5**
AKS	**Akhisar**	**2.60**	**340**	PN	**Pn**	**15 03 20.8**	**+0.1**
AKS	**Akhisar**	**2.60**	**340**	*e*Pn	**Pn**	**15 03 20.8**	**+0.1**
GEDZ	**Gediz**	**2.64**	**8**	PN	**Pn**	**15 03 22.4**	**+1.2**
GEDZ	**Gediz**	**2.64**	**8**	*e*Pn	**Pn**	**15 03 22.4**	**+1.2**
SIMA	**Simav-Kutahya**	**2.65**	**1**	PN	**Pn**	**15 03 21.1**	**-0.3**
SIMA	**Simav-Kutahya**	**2.65**	**1**	*e*Pn	**Pn**	**15 03 21.1**	**-0.3**
SMAA	**Simav-Kutahya**	**2.67**	**1**	PN	**Pn**	**15 03 22.7**	**+1.1**
SMAA	**Simav-Kutahya**	**2.67**	**1**	*e*Pn	**Pn**	**15 03 22.7**	**+1.1**
URLA	**Izmir**	**2.68**	**317**	PN	**Pn**	**15 03 22.9**	**+1.1**
URLA	**Izmir**	**2.68**	**317**	*e*Pn	**Pn**	**15 03 22.9**	**+1.1**
SANT	**Santorini**	**2.80**	**270**	PN	**Pn**	**15 03 24.5**	**+1.1**
SANT	**Santorini**	**2.80**	**270**	P	**Pn**	**15 03 24.5**	**+1.1**
SANT	**Santorini**	**2.80**	**270**	P	**Pn**	**15 03 24.6**	**+1.1**
APE	**Apeiranthos**	**2.81**	**284**	PN	**Pn**	**15 03 24.6**	**+1.1**
APE	**Apeiranthos**	**2.81**	**284**	P	**Pn**	**15 03 25.3**	**+1.8**
APE				AML	AML	15 03 59.7	
	comp=E,170μm,0.3s						
APE				AML	AML	15 03 59.9	
	comp=N,210μm,0.2s						
APE	**Apeiranthos**	**2.81**	**284**	P	**Pn**	**15 03 23.8**	**+0.3**
APE				S	**Sn**	**15 03 57.6**	**+0.8**
APE	**Apeiranthos**	**2.81**	**284**	*e*Pn	**Pn**	**15 03 24.6**	**+1.1**
APE	**Apeiranthos**	**2.81**	**284**	P	**Pn**	**15 03 25.0**	**+1.5**
APE				S	**Sn**	**15 03 57.6**	**+0.8**
CESE	**ˆe¨me**	**2.83**	**313**	PN	**Pn**	**15 03 25.0**	**+1.2**
CESE	**ˆe¨me**	**2.83**	**313**	*e*Pn	**Pn**	**15 03 25.0**	**+1.2**
KRBN	**Karaburun**	**2.88**	**320**	PN	**Pn**	**15 03 25.0**	**+0.6**
KRBN	**Karaburun**	**2.88**	**320**	*e*Pn	**Pn**	**15 03 25.0**	**+0.6**
FOCM	**Fo¸§a**	**2.88**	**323**	PN	**Pn**	**15 03 25.4**	**+1.0**
FOCM	**Fo¸§a**	**2.88**	**323**	*e*Pn	**Pn**	**15 03 25.4**	**+1.0**
NPS	**Neapolis**	**2.94**	**248**	P	**Pn**	**15 03 26.1**	**+0.8**
NPS	**Neapolis**	**2.94**	**248**	P	**Pn**	**15 03 26.4**	**+1.1**
IOSP	**Ios island**	**2.95**	**277**	P	**Pn**	**15 03 25.3**	**-0.1**
IOSP	**Ios island**	**2.95**	**277**	P	**Pn**	**15 03 26.0**	**+0.6**
CHOS	**Chios island**	**3.01**	**311**	PN	**Pn**	**15 03 27.9**	**+1.5**
CHOS	**Chios island**	**3.01**	**311**	P	**Pn**	**15 03 27.0**	**+0.6**
CHOS				S	**Sn**	**15 04 01.9**	**0.0**
CHOS				AML	AML	15 04 05.4	
	comp=N,904μm,0.3s						
CHOS				AML	AML	15 04 06.1	
	comp=E,1010μm,0.3s						
CHOS	**Chios island**	**3.01**	**311**	P	**Pn**	**15 03 27.2**	**+0.9**
CHOS				S	**Sn**	**15 04 02.1**	**+0.2**
CHOS	**Chios island**	**3.01**	**311**	P	**Pn**	**15 03 27.3**	**+0.9**
CHOS	**Chios island**	**3.01**	**311**	*e*Pn	**Pn**	**15 03 27.9**	**+1.5**
CHOS				S	**Sn**	**15 04 02.1**	**+0.2**
CAND	**Candarli**	**3.04**	**327**	PN	**Pn**	**15 03 27.2**	**+0.6**
TVSB	**Tavsanli**	**3.05 8**	PN	**Pn**	**15 03 26.2**	**-0.6**
TVSB	**Tavsanli**	**3.05 8**	*e*Pn	**Pn**	**15 03 26.2**	**-0.6**
LAST	**Lasithi**	**3.08**	**247**	P	**Pn**	**15 03 28.3**	**+1.0**
LAST	**Lasithi**	**3.08**	**247**	P	**Pn**	**15 03 28.6**	**+1.3**
LAST	**Lasithi**	**3.08**	**247**	P	**Pn**	**15 03 28.5**	**+1.3**
KUTH	**Kutahya**	**3.09 16**	PN	**Pn**	**15 03 27.7**	**+0.3**
KUTH	**Kutahya**	**3.09 16**	*e*Pn	**Pn**	**15 03 27.7**	**+0.3**
AKMC	**Akamas**	**3.10**	**116**	P	**Pn**	**15 03 27.4**	**0.0**
	baz=293						
AKMC	**Akamas**	**3.10**	**116**	P	**Pn**	**15 03 27.4**	**0.0**
KONT	**Konya--Tatoy**	**3.13 60**	PN	**Pn**	**15 03 30.1**	**+2.2**
KONT	**Konya--Tatoy**	**3.13 60**	*e*Pn	**Pn**	**15 03 30.1**	**+2.2**
PPCY	**Paphos**	**3.17**	**118**	P	**Pn**	**15 03 28.3**	**-0.2**
	baz=295						
PPCY	**Paphos**	**3.17**	**118**	P	**Pn**	**15 03 28.3**	**-0.2**
TNSA	**Tinos**	**3.22**	**291**	P	**Pn**	**15 03 31.3**	**+2.3**
TNSA	**Tinos**	**3.22**	**291**	P	**Pn**	**15 03 30.8**	**+1.7**
ALFC	**Alefka**	**3.24**	**112**	P	**Pn**	**15 03 29.4**	**0.0**
	baz=289						
ALFC				S	**Sn**	**15 04 06.0**	**-1.4**
ALFC	**Alefka**	**3.24**	**112**	P	**Pn**	**15 03 29.4**	**0.0**
ALFC				S	**Sn**	**15 04 06.0**	**-1.4**
LADK	**Ladik-KONYA**	**3.26 56**	PN	**Pn**	**15 03 30.0**	**+0.2**
LADK	**Ladik-KONYA**	**3.26 56**	*e*Pn	**Pn**	**15 03 30.0**	**+0.2**
IDI	**Anoyia**	**3.48**	**252**	P	**Pn**	**15 03 33.0**	**+0.3**
	comp=E,3.5nm,0.3s,baz=45,slow=7.5,SNR=32						
IDI				S	**Sn**	**15 04 11.0**	**-2.3**
	comp=E,6.9nm,0.3s,baz=294,slow=20,SNR=5.2						
PRK	**Paraskevi**	**3.52**	**324**	P	**Pn**	**15 03 32.6**	**-0.6**
PRK	**Paraskevi**	**3.52**	**324**	P	**Pn**	**15 03 34.3**	**+1.1**
PRK	**Paraskevi**	**3.52**	**324**	P	**Pn**	**15 03 34.3**	**+1.1**
SZAC	**Souni**	**3.62**	**116**	P	**Pn**	**15 03 35.1**	**+0.4**
	baz=294						
SZAC	**Souni**	**3.62**	**116**	P	**Pn**	**15 03 35.1**	**+0.4**
SIVA	**Sivas**	**3.64**	**248**	P	**Pn**	**15 03 37.3**	**+2.4**
SIVA	**Sivas**	**3.64**	**248**	P	**Pn**	**15 03 36.9**	**+2.0**
MHLO	**Agia Marina, M**	**3.66**	**275**	P	**Pn**	**15 03 38.8**	**+3.6**
MHLO	**Agia Marina, M**	**3.66**	**275**	P	**Pn**	**15 03 37.7**	**+2.6**
SIGR	**SIGRI**	**3.70**	**320**	P	**Pn**	**15 03 35.9**	**+0.3**
SIGR	**SIGRI**	**3.70**	**320**	P	**Pn**	**15 03 36.4**	**+0.8**
SIGR	**SIGRI**	**3.70**	**320**	P	**Pn**

MRSB	**Marmaris-Mugla**	**0.64 298**	PG	**Pb**	**15 07 47.5**	**-0.1**
MRSB	**Marmaris-Mugla**	**0.64 298**	*e*Pg	**Pb**	**15 07 47.5**	**-0.1**
ARG	**Arkhangelos**	**0.65 252**	PG	**Pb**	**15 07 48.2**	**+0.4**
ARG	**Arkhangelos**	**0.65 252**	P	**Pb**	**15 07 48.2**	**+0.4**
ARG			S	**Sn**	**15 07 59.0**	**+0.1**
ARG			AML	AML	15 08 01.5	
	comp=E,1634μm,0.3s					
ARG			AML	AML	15 08 02.0	
	comp=N,891μm,0.3s					
ARG	**Arkhangelos**	**0.65 252**	*e*Pg	**Pb**	**15 07 48.2**	**+0.4**
ARG			S	**Sn**	**15 07 58.6**	**-0.3**
YER	**Yerkesik**	**0.87 326**	PG	**Pb**	**15 07 51.3**	**-0.2**
YER	**Yerkesik**	**0.87 326**	*e*Pg	**Pb**	**15 07 51.3**	**-0.2**
ELL	**Elmali**	**0.88 68**	PG	**Pn**	**15 07 52.7**	**+0.2**
ELL	**Elmali**	**0.88 68**	*e*Pg	**Pn**	**15 07 52.7**	**+0.2**
GLHS	**Glhisar (BURDU**	**0.88 33**	PG	**Pb**	**15 07 52.1**	**+0.3**
GLHS	**Glhisar (BURDU**	**0.88 33**	*e*Pg	**Pb**	**15 07 52.1**	**+0.3**
GOLH	**Golhisar**	**0.98 33**	*i* P	**Pb**	**15 07 52.3**	**-1.2**
GOLH			*i* S	**Sb**	**15 08 06.3**	**+0.3**
GOLH	**Golhisar**	**0.98 33**	P	**Pb**	**15 07 52.3**	**-1.2**
GOLH			S	**Sb**	**15 08 06.3**	**+0.3**
TAVA	**DENIZLI_Tavas**	**1.05 1**	*i* P	**Pn**	**15 07 54.2**	**-0.6**
TAVA			*i* S	**Sb**	**15 08 07.8**	**-0.1**
TAVA	**DENIZLI_Tavas**	**1.05 1**	P	**Pn**	**15 07 54.2**	**-0.6**
TAVA			S	**Sb**	**15 08 07.8**	**-0.1**
DATC	**Datca-Mugla**	**1.05 289**	PG	**Pn**	**15 07 54.5**	**-0.2**
DATC	**Datca-Mugla**	**1.05 289**	*e*Pg	**Pn**	**15 07 54.5**	**-0.2**
DAT	**Datca**	**1.10 287**	PN	**Pn**	**15 07 55.4**	**-0.1**
DAT	**Datca**	**1.10 287**	*e*Pn	**Pn**	**15 07 55.4**	**-0.1**
MLSB	**Milas**	**1.25 315**	PN	**Pn**	**15 07 57.5**	**0.0**
MLSB	**Milas**	**1.25 315**	*e*Pn	**Pn**	**15 07 57.5**	**0.0**
KORT	**Korkueli**	**1.31 63**	PN	**Pn**	**15 07 58.9**	**+0.5**
KORT	**Korkueli**	**1.31 63**	*e*Pn	**Pn**	**15 07 58.9**	**+0.5**
DENT	**Denizli**	**1.34 5**	PN	**Pn**	**15 07 58.9**	**+0.2**
DENT	**Denizli**	**1.34 5**	*e*Pn	**Pn**	**15 07 58.9**	**+0.2**
BODT	**Bodrum**	**1.43 297**	PN	**Pn**	**15 07 59.9**	**0.0**
BODT	**Bodrum**	**1.43 297**	*e*Pn	**Pn**	**15 07 59.9**	**0.0**
YKAV	**Yalikavak-Bodr**	**1.48 299**	PN	**Pn**	**15 08 00.7**	**+0.2**
YKAV	**Yalikavak-Bodr**	**1.48 299**	*e*Pn	**Pn**	**15 08 00.7**	**+0.2**
ANTB	**Antalya**	**1.50 71**	PN	**Pn**	**15 08 01.3**	**+0.5**
ANTB	**Antalya**	**1.50 71**	*e*Pn	**Pn**	**15 08 01.3**	**+0.5**
KARP	**Karpathos**	**1.65 239**	PN	**Pn**	**15 08 02.8**	**-0.2**
KARP	**Karpathos**	**1.65 239**	P	**Pn**	**15 08 03.0**	**0.0**
KARP			S	**Sn**	**15 08 22.5**	**-1.1**
KARP			AML	AML	15 08 30.2	
	comp=N,269μm,0.4s					
KARP			AML	AML	15 08 30.2	
	comp=E,218μm,0.3s					
KARP	**Karpathos**	**1.65 239**	P	**Pn**	**15 08 03.0**	**0.0**
KARP			S	**Sn**	**15 08 22.9**	**-0.7**
AYDB	**Zeytinkoy-Aydi**	**1.72 333**	PN	**Pn**	**15 08 04.3**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**1.72 333**	*e*Pn	**Pn**	**15 08 04.3**	**+0.2**
ISP	**Isparta**	**1.91 42**	PN	**Pn**	**15 08 06.9**	**+0.2**
ISP	**Isparta**	**1.91 42**	*e*Pn	**Pn**	**15 08 06.9**	**+0.2**
SUTC	**Sutluce-Ispart**	**1.99 57**	PN	**Pn**	**15 08 08.4**	**+0.6**
SUTC	**Sutluce-Ispart**	**1.99 57**	*e*Pn	**Pn**	**15 08 08.4**	**+0.6**
SMG	**Samos**	**2.09 309**	P	**Pn**	**15 08 08.7**	**-0.3**
SMG			S	**Sn**	**15 08 34.2**	**-0.2**
SMG			AML	AML	15 08 35.6	
	comp=E,337μm,0.3s					
SMG			AML	AML	15 08 36.2	
	comp=N,381μm,0.3s					
SMG	**Samos**	**2.09 309**	P	**Pn**	**15 08 08.8**	**-0.3**
SMG			S	**Sn**	**15 08 34.0**	**-0.4**
KULA	**Kula-Manisa**	**2.10 355**	PN	**Pn**	**15 08 09.9**	**+0.7**
KULA	**Kula-Manisa**	**2.10 355**	*e*Pn	**Pn**	**15 08 09.9**	**+0.7**
ZKR	**Zakros**	**2.54 240**	P	**Pn**	**15 08 16.4**	**+1.3**
ZKR			S	**Sn**	**15 08 46.3**	**+0.9**
ZKR			AML	AML	15 08 47.1	
	comp=E,64μm,0.5s					
ZKR			AML	AML	15 08 48.4	
	comp=N,35μm,0.8s					
ZKR	**Zakros**	**2.54 240**	P	**Pn**	**15 08 15.9**	**+0.8**
ZKR			S	**Sn**	**15 08 45.6**	**+0.2**
URLA	**Izmir**	**2.67 317**	PN	**Pn**	**15 08 17.7**	**+0.7**
URLA	**Izmir**	**2.67 317**	*e*Pn	**Pn**	**15 08 17.7**	**+0.7**
NPS	**Neapolis**	**2.90 248**	P	**Pn**	**15 08 20.0**	**-0.2**
NPS			S	**Sn**	**15 08 53.1**	**-1.4**
NPS			AML	AML	15 08 54.8	
	comp=N,90μm,0.3s					
NPS			AML	AML	15 08 55.8	
	comp=E,125μm,0.5s					
NPS	**Neapolis**	**2.90 248**	P	**Pn**	**15 08 20.3**	**+0.1**
NPS			S	**Sn**	**15 08 53.5**	**-1.0**
CHOS	**Chios island**	**3.00 312**	P	**Pn**	**15 08 21.7**	**+0.2**
CHOS			S	**Sn**	**15 08 55.9**	**-0.9**
CHOS			AML	AML	15 08 58.9	
	comp=E,96μm,0.2s					
CHOS			AML	AML	15 08 59.7	
	comp=N,78μm,0.4s					
CHOS	**Chios island**	**3.00 312**	P	**Pn**	**15 08 21.7**	**+0.2**
CHOS			S	**Sn**	**15 08 56.0**	**-0.9**
LAST	**Lasithi**	**3.04 247**	P	**Pn**	**15 08 22.0**	**-0.2**
LAST			S	**Sn**	**15 08 57.2**	**-0.9**
LAST			AML	AML	15 09 00.2	
	comp=N,34μm,0.4s					
LAST			AML	AML	15 09 13.4	
	comp=E,39μm,0.8s					
LAST	**Lasithi**	**3.04 247**	P	**Pn**	**15 08 22.3**	**+0.1**
LAST			S	**Sn**	**15 08 57.2**	**-0.9**

*ISK **10** 15:10:59.9, 36.°46N×28.°92E, h21km, ML3.5/21*
*ATH **10** 15:10:59.9, 36.°43N×28.°92E, h38km±1km, ML3.1/8, Error ellipse: s-maj=2.2km s-min=0.7km az=158.0*
*DDA **10** 15:11:00.4, 36.°50N×28.°95E, h7km, Ml3.8*
*CSEM **10** 15:11:00.3±0.2, 36.°42N×28.°95E, h22km±1km, ML3.8, Error ellipse: s-maj=3.2km s-min=2.2km az=4.0*
*THE **10** 15:11:00.7, 36.°44N×28.°91E, h10km±1km, ML3.1/6, Error ellipse: s-maj=1.4km s-min=0.5km az=100.0*
*ISCJB **10** 15:11:00.2±0.3, 36.°40N±0.°02×28.°93E±0.°02, h30km±3km, Error ellipse: s-maj=3.9km s-min=2.8km az=173.1*
*NIC **10** 15:11:02.4±0.2, 36.°40N×29.°09E, h25km, mb4.1, ML3.7*
ISC 10 15:10:59.7±1.0, 36.°41N±0.°02×28.°94E±0.°01, h18km±5km, n120, σ0°973/177, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.25**	**26**	PG	**Pg**	**15 11 05.3**	**-0.2**
FETY				SG	**Sb**	**15 11 10.2**	**+0.4**
FETY	**Fethiye**	**0.25**	**26**	P	**Pg**	**15 11 05.4**	**-0.1**
FETY				S	**Sb**	**15 11 10.4**	**+0.6**
FETY	**Fethiye**	**0.25**	**26**	*e*Pg	**Pg**	**15 11 05.3**	**-0.2**
FETY				*e*Sg	**Sb**	**15 11 10.2**	**+0.4**
DALY	**Dalyan (Mu¨la**	**0.47 330**		PG	**Pg**	**15 11 09.1**	**-0.2**
DALY				SG	**Sg**	**15 11 15.7**	**0.0**
DALY	**Dalyan (Mu¨la**	**0.47 330**		*i* P	**Pg**	**15 11 09.3**	**0.0**
DALY				*i* S	**Sg**	**15 11 16.0**	**+0.3**
DALY	**Dalyan (Mu¨la**	**0.47 330**		P	**Pg**	**15 11 09.3**	**0.0**
DALY				*e*Sg	**Sg**	**15 11 15.7**	**0.0**
DALY				S	**Sg**	**15 11 16.0**	**+0.3**
TURN	**Turunc**	**0.54 330**		PG	**Pn**	**15 11 12.9**	**+0.4**
TURN	**Turunc**	**0.54 330**		*i* P	**Pn**	**15 11 12.9**	**+0.4**
TURN				*i* S	**Sn**	**15 11 23.1**	**+1.9**
TURN	**Turunc**	**0.54 330**		P	**Pn**	**15 11 12.9**	**+0.4**
AKAS	**Kas**	**0.56 108**		PG	**Pb**	**15 11 11.4**	**+0.3**
AKAS				SG	**Sn**	**15 11 21.8**	**-0.1**
AKAS	**Kas**	**0.56 108**		*i* P	**Pg**	**15 11 11.0**	**0.0**
AKAS				*i* S	**Sn**	**15 11 21.2**	**-0.7**
AKAS	**Kas**	**0.56 108**		P	**Pg**	**15 11 11.0**	**0.0**
AKAS	**Kas**	**0.56 108**		*e*Pg	**Pb**	**15 11 11.4**	**+0.3**
AKAS				S	**Sn**	**15 11 21.2**	**-0.7**
KSL	**Kastellorizon**	**0.58 116**		P	**Pb**	**15 11 12.4**	**+1.1**
KSL				S	**Sn**	**15 11 22.2**	**0.0**
KSL	**Kastellorizon**	**0.58 116**		P	**Pn**	**15 11 12.5**	**-0.6**
KSL				S	**Sn**	**15 11 22.1**	**0.0**
MRSB	**Marmaris-Mugla**	**0.68 297**		PG	**Pb**	**15 11 12.8**	**-0.2**
MRSB	**Marmaris-Mugla**	**0.68 297**		*e*Pg	**Pb**	**15 11 12.8**	**-0.2**
ARG	**Arkhangelos**	**0.69 254**		PG	**Pg**	**15 11 13.9**	**+0.6**
ARG				SG	**Sn**	**15 11 24.4**	**-0.4**
ARG	**Arkhangelos**	**0.69 254**		P	**Pg**	**15 11 13.8**	**+0.5**
ARG				S	**Sn**	**15 11 24.1**	**-0.8**
ARG				AML	AML	15 11 25.3	
	comp=E,3661μm,0.4s						
ARG				AML	AML	15 11 25.9	
	comp=N,2682μm,0.2s						
ARG	**Arkhangelos**	**0.69 254**		P	**Pg**	**15 11 13.9**	**+0.6**
ARG				S	**Sn**	**15 11 24.4**	**-0.4**
ARG	**Arkhangelos**	**0.69 254**		P	**Pg**	**15 11 13.8**	**+0.5**
ARG				S	**Sn**	**15 11 24.0**	**-0.8**
ELL	**Elmali**	**0.85 66**		PG	**Pg**	**15 11 16.6**	**+0.3**
ELL	**Elmali**	**0.85 66**		*e*Pg	**Pg**	**15 11 16.6**	**+0.3**
GLHS	**Glhisar (BURDU**	**0.87 31**		PG	**Pb**	**15 11 15.9**	**-0.5**
GLHS	**Glhisar (BURDU**	**0.87 31**		*e*Pg	**Pb**	**15 11 15.9**	**-0.5**
YER	**Yerkesik**	**0.90 324**		PG	**Pb**	**15 11 16.8**	**-0.1**
YER	**Yerkesik**	**0.90 324**		P	**Pb**	**15 11 16.8**	**-0.1**
YER				S	**Sg**	**15 11 29.0**	**-0.2**
YER	**Yerkesik**	**0.90 324**		P	**Pb**	**15 11 16.8**	**-0.1**
YER				S	**Sg**	**15 11 29.0**	**-0.2**
GOLH	**Golhisar**	**0.96 31**		*i* P	**Pb**	**15 11 16.9**	**-1.1**
GOLH				*i* S	**Sn**	**15 11 32.7**	**+0.9**
GOLH	**Golhisar**	**0.96 31**		P	**Pb**	**15 11 16.9**	**-1.1**
GOLH				S	**Sn**	**15 11 32.7**	**+0.9**
TAVA	**DENIZLI_Tavas**	**1.06 359**		*i* P	**Pb**	**15 11 19.2**	**-0.3**
TAVA				*i* S	**Sb**	**15 11 32.5**	**-0.6**
TAVA	**DENIZLI_Tavas**	**1.06 359**		P	**Pb**	**15 11 19.2**	**-0.3**
TAVA				S	**Sb**	**15 11 32.5**	**-0.6**
DATC	**Datca-Mugla**	**1.09 289**		PG	**Pb**	**15 11 19.9**	**-0.2**
DATC	**Datca-Mugla**	**1.09 289**		*e*Pg	**Pb**	**15 11 19.9**	**-0.2**
DAT	**Datca**	**1.15 287**		PN	**Pn**	**15 11 21.1**	**+0.1**
DAT	**Datca**	**1.15 287**		*i* P	**Pn**	**15 11 21.0**	**+0.1**
DAT				*i* S	**Sg**	**15 11 37.1**	**+0.2**
DAT	**Datca**	**1.15 287**		*e*Pn	**Pn**	**15 11 21.1**	**+0.1**
DAT				S	**Sg**	**15 11 37.1**	**+0.2**
KORT	**Korkueli**	**1.28 62**		PN	**Pb**	**15 11 23.6**	**+0.3**
KORT	**Korkueli**	**1.28 62**		*i* P	**Pg**	**15 11 24.4**	**0.0**
KORT				*i* S	**Sg**	**15 11 42.5**	**+1.3**
KORT	**Korkueli**	**1.28 62**		*e*Pn	**Pb**	**15 11 23.6**	**+0.3**
KORT	**Korkueli**	**1.28 62**		P	**Pg**	**15 11 24.4**	**0.0**
MLSB	**Milas**	**1.29 314**		PN	**Pn**	**15 11 23.3**	**+0.4**
MLSB	**Milas**	**1.29 314**		*e*Pn	**Pn**	**15 11 23.3**	**+0.4**
DENT	**Denizli**	**1.35 3**		PN	**Pn**	**15 11 23.1**	**-0.6**
DENT	**Denizli**	**1.35 3**		*e*Pn	**Pn**	**15 11 23.1**	**-0.6**
ANTB	**Antalya**	**1.46 70**		PN	**Pn**	**15 11 25.9**	**+0.7**
ANTB	**Antalya**	**1.46 70**		*e*Pn	**Pn**	**15 11 25.9**	**+0.7**
BODT	**Bodrum**	**1.47 297**		PN	**Pn**	**15 11 24.6**	**-0.7**
BODT	**Bodrum**	**1.47 297**		P	**Pn**	**15 11 24.4**	**-0.9**
BODT				S	**Sn**	**15 11 43.3**	**-0.8**
BODT	**Bodrum**	**1.47 297**		*e*Pn	**Pn**	**15 11 24.6**	**-0.7**
BODT				S	**Sn**	**15 11 43.3**	**-0.8**
NISR	**Nisiros**	**1.48 278**		P	**Pn**	**15 11 26.0**	**+0.6**
NISR				S	**Sn**	**15 11 43.8**	**-0.4**
NISR	**Nisiros**	**1.48 278**		P	**Pn**	**15 11 25.8**	**+0.3**
NISR				S	**Sb**	**15 11 45.1**	**0.0**
NISR	**Nisiros**	**1.48 278**		P	**Pn**	**15 11 25.7**	**+0.3**
NISR				S	**Sn**	**15 11 44.0**	**-0.3**
YKAV	**Yalikavak-Bodr**	**1.52 299**		PN	**Pn**	**15 11 25.7**	**-0.3**
YKAV	**Yalikavak-Bodr**	**1.52 299**		*e*Pn	**Pn**	**15 11 25.7**	**-0.3**
BRDR	**BURDUR-Merkez**	**1.57 34**		*i* P	**Pn**	**15 11 27.1**	**+0.3**
BRDR				*i* S	**Sb**	**15 11 48.1**	**+0.3**
BRDR	**BURDUR-Merkez**	**1.57 34**		P	**Pn**	**15 11 27.1**	**+0.3**
BRDR				S	**Sb**	**15 11 48.1**	**+0.3**
KARP	**Karpathos**	**1.68 240**		PN	**Pn**	**15 11 28.7**	**+0.4**
KARP	**Karpathos**	**1.68 240**		P	**Pn**	**15 11 28.9**	**+0.6**
KARP				S	**Sn**	**15 11 49.7**	**+0.3**
KARP	**Karpathos**	**1.68 240**		P	**Pn**	**15 11 28.7**	**+0.4**
KARP				S	**Sn**	**15 11 49.7**	**+0.3**
KARP	**Karpathos**	**1.68 240**		P	**Pn**	**15 11 28.7**	**+0.4**
KARP				S	**Sn**	**15 11 49.7**	**+0.3**
AYDB	**Zeytinkoy-Aydi**	**1.75 332**		PN	**Pn**	**15 11 28.8**	**-0.5**
AYDB	**Zeytinkoy-Aydi**	**1.75 332**		*e*Pn	**Pn**	**15 11 28.8**	**-0.5**
ISP	**Isparta**	**1.89 41**		PN	**Pn**	**15 11 31.8**	**+0.5**
ISP	**Isparta**	**1.89 41**		P	**Pn**	**15 11 32.0**	**+0.7**
ISP				S	**Sn**	**15 11 55.7**	**+0.9**
ISP	**Isparta**	**1.89 41**		*e*Pn	**Pn**	**15 11 31.8**	**+0.5**
ISP				S	**Sn**	**15 11 55.7**	**+0.9**
SUTC	**Sutluce-Ispart**	**1.96 56**		PN	**Pn**	**15 11 33.2**	**+0.9**
SUTC	**Sutluce-Ispart**	**1.96 56**		*e*Pn	**Pn**	**15 11 33.2**	**+0.9**
KHL	**Karahalli**	**1.97 13**		PN	**Pn**	**15 11 32.6**	**+0.3**
KHL	**Karahalli**	**1.97 13**		*e*Pn	**Pn**	**15 11 32.6**	**+0.3**
KULA	**Kula-Manisa**	**2.12 354**		PN	**Pn**	**15 11 33.4**	**-0.9**
KULA	**Kula-Manisa**	**2.12 354**		*e*Pn	**Pn**	**15 11 33.4**	**-0.9**
SMG	**Samos**	**2.13 308**		P	**Pn**	**15 11 34.7**	**+0.3**
SMG				S	**Sn**	**15 12 00.0**	**-0.3**
SMG				AML	AML	15 12 02.5	
	comp=N,2314μm,0.3s						
SMG				AML	AML	15 12 02.6	
	comp=E,1923μm,0.3s						
SMG	**Samos**	**2.13 308**		P	**Pn**	**15 11 34.6**	**+0.2**
SMG				S	**Sn**	**15 12 00.1**	**-0.3**
SMG	**Samos**	**2.13 308**		P	**Pn**	**15 11 34.6**	**+0.2**
SMG				S	**Sn**	**15 11 59.9**	**-0.5**
ZKR	**Zakros**	**2.56 241**		P	**Pn**	**15 11 41.8**	**+1.4**
ZKR				S	**Sn**	**15 12 11.8**	**+0.6**
ZKR				AML	AML	15 12 27.4	
	comp=E,307μm,0.6s						
ZKR				AML	AML	15 12 29.5	
	comp=N,102μm,0.9s						
ZKR	**Zakros**	**2.56 241**		P	**Pn**	**15 11 41.4**	**+1.0**
ZKR	**Zakros**	**2.56 241**		P	**Pn**	**15 11 41.4**	**+1.0**
ZKR				S	**Sn**	**15 12 11.4**	**+0.2**
URLA	**Izmir**	**2.70 317**		PN	**Pn**	**15 11 41.9**	**-0.4**
URLA	**Izmir**	**2.70 317**		*e*Pn	**Pn**	**15 11 41.9**	**-0.4**
SANT	**Santorini**	**2.81 270**		PN	**Pn**	**15 11 45.1**	**+1.3**
SANT	**Santorini**	**2.81 270**		*e*Pn	**Pn**	**15 11 45.1**	**+1.3**
APE	**Apeiranthos**	**2.82 285**		PN	**Pn**	**15 11 44.9**	**+0.9**
APE	**Apeiranthos**	**2.82 285**		P	**Pn**	**15 11 43.0**	**-0.9**
APE				S	**Sn**	**15 12 18.2**	**+0.7**
APE				AML	AML	15 12 20.1	
	comp=E,84μm,0.3s						
APE				AML	AML	15 12 20.1	
	comp=N,139μm,0.5s						
APE	**Apeiranthos**	**2.82 285**		P	**Pn**	**15 11 43.7**	**-0.3**
APE	**Apeiranthos**	**2.82 285**		*e*Pn	**Pn**	**15 11 44.9**	**+0.9**
NPS	**Neapolis**	**2.94 248**		P	**Pn**	**15 11 45.0**	**-0.6**
NPS				S	**Sn**	**15 12 18.5**	**-1.9**
NPS				AML	AML	15 12 27.4	
	comp=E,255μm,0.4s						
NPS				AML	AML	15 12 27.5	
	comp=N,218μm,0.5s						
NPS	**Neapolis**	**2.94 248**		P	**Pn**	**15 11 45.0**	**-0.6**
NPS	**Neapolis**	**2.94 248**		P	**Pn**	**15 11 45.6**	**0.0**
NPS				S	**Sn**	**15 12 19.3**	**-1.1**
CHOS	**Chios island**	**3.03 312**		PN	**Pn**	**15 11 47.1**	**+0.2**
CHOS	**Chios island**	**3.03 312**		P	**Pn**	**15 11 46.9**	**0.0**
CHOS				S	**Sn**	**15 12 21.9**	**-0.9**
CHOS				AML	AML	15 12 25.9	
	comp=E,392μm,0.2s						
CHOS				AML	AML	15 12 26.5	
	comp=N,345μm,0.4s						
CHOS	**Chios island**	**3.03 312**		P	**Pn**	**15 11 47.5**	**+0.6**
CHOS				S	**Sn**	**15 12 21.9**	**-0.9**
CHOS	**Chios island**	**3.03 312**		P	**Pn**	**15 11 47.1**	**+0.2**
CHOS				S	**Sn**	**15 12 21.9**	**-0.9**
LAST	**Lasithi**	**3.08 247**		P	**Pn**	**15 11 46.9**	**-0.7**
LAST				S	**Sn**	**15 12 22.0**	**-2.0**
LAST				AML	AML	15 12 34.1	
	comp=N,91μm,0.5s						
LAST				AML	AML	15 12 37.1	
	comp=E,113μm,0.8s						
LAST	**Lasithi**	**3.08 247**		P	**Pn**	**15 11 47.4**	**-0.2**
LAST	**Lasithi**	**3.08 247**		P	**Pn**	**15 11 47.6**	**0.0**
LAST				S	**Sn**	**15 12 22.7**	**-1.3**
AKMC	**Akamas**	**3.08 116**		P	**Pn**	**15 11 46.6**	**-0.9**
	baz=298						
AKMC	**Akamas**	**3.08 116**		P	**Pn**	**15 11 46.6**	**-0.9**
KONT	**Konya--Tatoy**	**3.13 60**		PN	**Pn**	**15 11 49.5**	**+1.3**
KONT	**Konya--Tatoy**	**3.13 60**		*e*Pn	**Pn**	**15 11 49.5**	**+1.3**
PPCY	**Paphos**	**3.16 118**		P	**Pn**	**15 11 48.1**	**-0.5**
	baz=300						
PPCY	**Paphos**	**3.16 118**		P	**Pn**	**15 11 48.1**	**-0.5**
ALFC	**Alefka**	**3.22 112**		P	**Pn**	**15 11 48.7**	**-0.8**
	baz=294						
ALFC				S	**Sn**	**15 12 25.0**	**-2.5**
ALFC	**Alefka**	**3.22 112**		P	**Pn**	**15 11 48.7**	**-0.8**
ALFC				S	**Sn**	**15 12 25.0**	**-2.5**
SZAC	**Souni**	**3.61 116**		P	**Pn**	**15 11 53.9**	**-0.9**
	baz=299						
SZAC	**Souni**	**3.61 116**		P	**Pn**	**15 11 53.9**	**-0.9**
CSS	**Mathiatis**	**3.85 111**		P	**Pn**	**15 11 57.7**	**-0.4**
	baz=293						
CSS	**Mathiatis**	**3.85 111**		P	**Pn**	**15 11 57.7**	**-0.4**
IMMV	**Iera Moni Meta**	**4.14 258**		P	**Pn**	**15 12 02.4**	**+0.4**
IMMV	**Iera Moni Meta**	**4.14 258**		P	**Pn**	**15 12 02.8**	**+0.7**
IMMV	**Iera Moni Meta**	**4.14 258**		P	**Pn**	**15 12 02.7**	**+0.7**
GVD	**Gavdhos**	**4.25 250**		P	**Pn**	**15 12 03.8**	**+0.2**
GVD				S	**Sn**	**15 12 51.7**	**-1.2**
GVD				AML	AML	15 12 52.9	
	comp=N,105μm,0.6s						
GVD				AML	AML	15 12 53.2	
	comp=E,96μm,0.4s						
GVD	**Gavdhos**	**4.25 250**		P	**Pn**	**15 12 04.3**	**+0.7**
GVD				S	**Sn**	**15 12 51.9**	**-0.9**
ANKY	**Antikythira Is**	**4.60 265**		P	**Pn**	**15 12 09.2**	**+0.8**
ANKY	**Antikythira Is**	**4.60 265**		P	**Pn**	**15 12 09.3**	**+0.9**
VLI	**Veliai**	**4.84 275**		P	**Pn**	**15 12 13.1**	**+1.3**
VLI	**Veliai**	**4.84 275**		P	**Pn**	**15 12 13.0**	**+1.3**
SMTH	**Samothraki Isl**	**4.86 328**		P	**Pn**	**15 12 12.6**	**+0.6**
SMTH	**Samothraki Isl**	**4.86 328**		P	**Pn**	**15 12 12.1**	**+0.1**
SMTH				S	**Sn**	**15 13 06.6**	**-1.2**
SMTH	**Samothraki Isl**	**4.86 328**		P	**Pn**	**15 12 12.1**	**+0.1**
SMTH				S	**Sn**	**15 13 06.6**	**-1.2**

*BJI **10** 15:12:03.4, 4.°26N×95.°97E, h10km, mb4.5/29, mB4.7/18, Ms4.1/14, Ms7 3.8/12*
*IDC **10** 15:12:05.0±0.6, 4.°69N×96.°02E, h0km, mb4.1/23, mb1 4.2/25, mb1mx4.0/68, mbtmp4.1/25, ML4.1/2, MS3.7/1, Ms1 3.7/1, ms1mx2.9/65, Error ellipse: s-maj=24.2km s-min=10.5km az=44.0*
*ISCJB **10** 15:12:07.5±0.9, 4.°75N±0.°03×96.°05E±0.°04, h27km±7km, mb4.4/42, MS4.1/6, Error ellipse: s-maj=7.8km s-min=4.9km az=156.8*
*NEIC **10** 15:12:08.1±1.7, 4.°75N×96.°11E, h20km±10km, mb4.7/5, Error ellipse: s-maj=9.9km s-min=5.0km az=55.0*
NEIC Felt [II] at Banda Aceh.
*DJA **10** 15:12:09.0±0.3, 5.°N±2.°×9.°6E±.°, h10km, M4.8/13, mb4.8/7, mB5.6/4, MLv4.7/13, Mw(mB)5.0/4*
ISC 10 15:12:09.2±1.2, 4.°71N±0.°04×96.°06E±0.°04, h26km±9km, n106, σ1°968/108, mb4.5/51, MS4.1/6, 1C, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSI	**Meulaboh, Aceh**	**0.56 142**		P	**Pb**	**15 12 19.1**	**-1.4**
MLSI				S	**Sb**	**15 12 27.5**	**-0.7**
LHMI	**Lhok Sumawe**	**1.03 60**		P	**Pn**	**15 12 25.4**	**-2.5**
LHMI				S	**Sn**	**15 12 39.7**	**-1.8**
LHMI	**Lhok Sumawe**	**1.03 60**		*e*Pg	**Pn**	**15 12 26.1**	**-1.8**
BSI	**Banda Aceh**	**1.09 316**		P	**Pn**	**15 12 28.7**	**-0.1**
BSI				S	**Sb**	**15 12 46.9**	**+3.6**
TPTI		**1.82 142**		P	**Pn**	**15 12 39.3**	**+0.4**
TPTI				S	**Sb**	**15 13 04.7**	**+0.3**
KCSI	**Kotacane, Aceh**	**2.08 124**		P	**Pb**	**15 12 46.3**	**0.0**
KCSI				S	**Sb**	**15 13 12.9**	**+1.2**
TSI	**Tuntungan**	**2.78 116**		P	**Pb**	**15 12 58.1**	**-0.1**
TSI				S	**Sb**	**15 13 35.3**	**+3.5**
PSI	**Prapat**	**3.43 123**		Pn	**Pn**	**15 13 02.7**	**+1.6**
	25nm,0.3s,baz=360,slow=10,SNR=37						
PSI				Lg	Lg	15 13 55.7	
	21nm,0.3s,baz=0.0,slow=20,SNR=3.3						
PSI	**Prapat**	**3.43 123**		*e*Pn	**Pn**	**15 13 02.2**	**+1.1**
PSI				Lg	Lg	15 13 55.7	
GSI	**Gunungsitoli**	**3.71 156**		P	**Pn**	**15 13 06.3**	**+1.5**
GSI	**Gunungsitoli**	**3.71 156**		*e*Pn	**Pn**	**15 13 05.7**	**+0.8**
KULM	**Kulim**	**4.61 83**		*e*Pn	**Pn**	**15 13 16.5**	**-0.8**
TRTT	**Trang**	**4.77 49**		P	Pn	15 13 24.8	+5.4
IPM	**Ipoh**	**4.96 92**		*e*Pn	**Pn**	**15 13 19.9**	**-2.2**
MNSI	**Mandailing Nat**	**5.24 138**		P	**Pn**	**15 13 29.0**	**+3.0**
BKNI	**Bangkinang**	**6.61 131**		*e*Pn	**Pn**	**15 13 42.7**	**-2.1**
SISI	**Saibi**	**6.72 153**		P	**Pn**	**15 13 48.8**	**+2.6**
PDSI	**Padang**	**7.11 142**		P	**Pn**	**15 13 53.2**	**+1.6**
	37nm,0.8s,3μm0.2nm						
MYKOM	**Kota Tinggi**	**8.30 110**		*e*Pn	**Pn**	**15 14 06.6**	**-1.4**
KRJI	**Kerinci**	**8.65 141**		P	**Pn**	**15

comp=Z,170nm,22.3s
XAN LR LR
comp=Z,170nm,19.8s
XAN LR LR
comp=Z,200nm,23.0s
SMLA Simla 31.72 328 *e*P **P 15 18 30.2 -0.8**
SMLA IAmb IAmb 15 18 32.5
comp=Z,5.0nm,0.9s
LZH Lanzhou 32.04 12 *e*P **P 15 18 36.1 +2.1**
LZH pP pP 15 18 39.2 -2.6
LZH sP sP 15 18 40.8 -4.2
LZH *e*PP **PP 15 19 43.2 -3.5**
LZH pmax pmax
comp=Z,22nm,1.1s
LZH pmax pmax
comp=Z,87nm,4.9s
LZH LR LR
comp=Z,380nm,13.1s
LZH LR LR
comp=Z,400nm,13.4s
LZH LR LR
comp=Z,470nm,15.7s
DHRM DHARAMSHALA 33.06 328 *e*P **P 15 18 41.6 -1.4**
DHRM IAmb IAmb 15 18 43.4
comp=Z,12nm,0.7s
NJ2 Nanjing 34.59 35 *e*P **P 15 18 57.1 +1.1**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
GTA Gaotai 34.71 5 P **P 15 19 01.4 +4.2**
GTA pP pP 15 19 05.8 +0.8
GTA sP sP 15 19 08.4 +0.1
GTA S S 15 24 38.1 +12
GTA sS sS 15 24 45.4 +6.6
GTA pmax pmax
comp=Z,6.0nm,1.4s
GTA pmax pmax
comp=Z,85nm,7.5s
GTA LR LR
comp=Z,89nm,18.9s
GTA LR LR
comp=Z,100nm,17.2s
GTA LR LR
comp=Z,180nm,21.0s
NIL Nilore 35.77 326 *e*P **P 15 19 05.5 -0.8**
comp=Z,22nm,0.6s
HHC Hu-ho-hao-te 38.59 19 *e*P **P 15 19 30.0 -0.2**
HHC S **S 15 25 26.5 +1.6**
HHC pmax pmax
comp=Z,4.0nm,0.5s
HHC pmax pmax
comp=Z,59nm,6.9s
HHC LR LR
comp=Z,530nm,14.8s
HHC LR LR
comp=Z,510nm,14.3s
HHC LR LR
comp=Z,510nm,13.0s
KSH Kashi 39.13 335 P **P 15 19 35.4 +0.7**
KSH pmax pmax
comp=Z,180nm,4.4s
BJI Beijing 39.58 24⇑ *e*P **P 15 19 41.0 +2.7**
BJI pmax pmax
comp=Z,17nm,1.0s
WMQ Urumqi 39.65 351 P **P 15 19 39.4 +0.5**
WMQ pP pP 15 19 43.3 -3.6
WMQ pmax pmax
comp=Z,14nm,0.7s
WMQ pmax pmax
comp=Z,280nm,4.7s
WMQ LR LR
comp=Z,130nm,24.7s
WMQ LR LR
comp=Z,260nm,23.5s
WMQ LR LR
comp=Z,250nm,25.9s
WSAR Wadi Sarin 40.53 301 P **P 15 19 46.2 -0.3**
comp=Z,4.8nm,0.8s,baz=150,slow=8.1,SNR=2.2
MK01 Makanchi Array 43.56 346 *e*P **P 15 20 09.7 -1.2**
MK31 Makanchi Array 43.59 346 *e*P **P 15 20 10.7 -0.4**
MKAR Makanchi Array 43.59 346 P **P 15 20 10.4 -0.7**
comp=Z,2.0nm,0.7s,baz=157,slow=7.4,SNR=7.2
MKAR Makanchi Array 43.59 346 *e*P **P 15 20 10.6 -0.5**
comp=Z,13nm,0.6s
KSAR Wonju Array Be 43.67 37 P **P 15 20 13.6 +1.7**
KSRS Korea Array 43.70 37 P **P 15 20 13.6 +1.4**
comp=Z,1.5nm,0.7s,baz=223,slow=8.6,SNR=3.1
SONM Songino Array 43.88 10 P **P 15 20 13.7 +0.1**
comp=Z,2.4nm,0.8s,baz=186,slow=7.8,SNR=8.7
SONA1 Songino Array 43.89 10 *e*P **P 15 20 13.0 -0.7**
WRA Warramunga Arr 44.90 124 P **P 15 20 21.6 -0.4**
comp=Z,2.5nm,0.6s,baz=301,slow=9.3,SNR=24
WRAB Tennant Creek 44.90 124 *e*P **P 15 20 21.8 -0.2**
comp=Z,6.1nm,0.6s
WB2 Warramunga Arr 44.91 124 *e*P **P 15 20 21.6 -0.5**
comp=Z,59nm,2.0s
ASAR Alice Springs 46.45 129 P **P 15 20 34.3 +0.1**
comp=Z,4.2nm,0.6s,baz=297,slow=8.0,SNR=85
AS31 Alice Springs 46.45 129 *e*P **P 15 20 34.2 0.0**
comp=Z,2.5nm,0.5s
AS01 Alice Springs 46.48 129 *e*P **P 15 20 34.0 -0.5**
CN2 Changchun 46.77 29 *e*P **P 15 20 37.5 +1.1**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
GEYT Alibeck 47.82 319 P **P 15 20 45.5 +0.7**
comp=Z,21nm,0.4s,baz=103,slow=12,SNR=3.0
KURBB Kurchatov Arra 48.07 345 P **P 15 20 45.2 -1.2**
comp=Z,0.5nm,0.5s,baz=168,slow=7.2,SNR=3.8
KURK Kurchatov 48.13 345 P **P 15 20 45.2 -1.7**
ZALV Zalesovo Beam 49.94 351 P **P 15 20 59.6 -1.0**
comp=Z,0.9nm,0.5s,baz=188,slow=8.3,SNR=4.2
ZALV Zalesovo Beam 49.94 351 *e*P **P 15 20 59.9 -0.8**
RAYN Ar Rayn 52.15 296 *e*P **P 15 21 17.4 -0.6**
comp=Z,3.4nm,0.9s
BVAR Borovoye Array 52.58 341 P **P 15 21 19.5 -1.0**
comp=Z,0.9nm,0.7s,baz=165,slow=6.2,SNR=6.2
ABKAR Akbulak array 53.90 331 *e*P **P 15 21 29.5 -0.8**
CTA Charters Tower 55.12 118 P **P 15 21 38.1 -1.6**
comp=Z,3.3nm,0.8s,baz=294,slow=14,SNR=3.2
AKTO Aktyubinsk 55.62 331 P **P 15 21 43.2 +0.5**
comp=Z,1.3nm,0.7s,baz=111,slow=12,SNR=4.6
STKA Stephens Creek 56.56 133 P **P 15 21 50.0 +0.2**
comp=Z,4.0nm,0.8s,baz=298,slow=8.0,SNR=12
KBZ Khabaz 60.70 318 P **P 15 22 19.5 +1.1**
comp=Z,1.5nm,0.6s,baz=120,slow=7.8,SNR=5.2
BRTR Keskin Array B 65.93 312 P **P 15 22 52.6 -0.8**
comp=Z,1.3nm,0.6s,baz=128,slow=7.3,SNR=9.7
AKASG Malin Array Be 71.80 322 P **P 15 23 27.7 -1.8**
comp=Z,0.9nm,0.6s,baz=85,slow=6.2,SNR=2.8
IDI Anoyia 71.93 305 P **P 15 23 30.9 +0.2**
comp=Z,3.8nm,0.8s,baz=107,slow=6.4,SNR=3.6
MLR Muntele Rosu 72.75 316 P **P 15 23 35.2 -0.3**
comp=Z,0.4nm,0.7s,baz=249,slow=3.9,SNR=3.9
BUR04 Bucovina Ar. S 73.66 318 *e*P **P 15 23 40.0 -0.8**
FINES FINESS Array B 76.38 332 P **P 15 23 55.8 -0.2**
comp=Z,0.7nm,0.6s,baz=96,slow=8.5,SNR=3.6
ARCES ARCESS Array B 78.87 340 P **P 15 24 08.8 -1.0**
comp=Z,2.5nm,0.9s,baz=70,slow=11,SNR=3.6
GERES GERESS Array B 81.44 319 P **P 15 24 23.5 -0.7**
comp=Z,0.6nm,0.6s,baz=72,slow=4.3,SNR=5.6
HFS Hagfors 82.13 330 P **P 15 24 28.4 +0.9**
comp=Z,2.2nm,0.9s,baz=70,slow=8.4,SNR=4.4
SPITS Spitsbergen Ar 83.31 348 P **P 15 24 35.2 +1.9**
comp=Z,1.6nm,0.7s,baz=57,slow=5.3,SNR=3.6
TORD Torodi Ar. Bea 93.17 283 P **P 15 25 23.4 +1.5**
comp=Z,1.1nm,0.6s,baz=89,slow=5.8,SNR=7.4
MDPB Devils Postpil 126.69 35 *e*PKPdf **PKPdf 15 31 08.2 -3.0**
TXAR Lajitas Array 141.21 28 PKP **PKPdf 15 31 38.5 +0.1**
comp=Z,0.2nm,0.7s,baz=270,slow=1.8,SNR=3.3

*ISCJB **10** 15:21:39.4±0.3, 6°.84N±0°.03×73°.10W±0°.04, h159km±3km, mb3.9/15, Error ellipse: s-maj=6.4km s-min=4.4km az=29.5*
*IDC **10** 15:21:40.2±0.7, 6°.72N×72°.95W, h164km±9km, mb3.5/8, mb1 3.9/11, mb1mx3.4/50, mbtmp4.1/11, Error ellipse: s-maj=23.5km s-min=7.3km az=134.0*
*NEIC **10** 15:21:40.9±0.6, 6°.79N×73°.20W, h156km±7km, mb4.2/8, Error ellipse: s-maj=11.8km s-min=9.8km az=91.0*
*RSNC **10** 15:21:41.6±0.9, 6°.82N×73°.12W, h146km±5km, ML4.0, Mw3.8*
ISC 10 15:21:40.1±0.7, **6°.84N**±0°.04×**73°.10W**±0°.05, **h154**km±6km, **n47**, σ0°.89/63, **mb4.2**/15, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.26**	**199**	*e*P	**Pn**	**15 22 01.9**	**+0.5**
BARC				*e*S	**Sn**	**15 22 16.8**	**-0.8**
BARC				*i*		15 22 18.6	
	comp=Z,1μm,0.2s						
RUSC	**La Rusia**	**0.94**	**179**	*e*Pn	**Pn**	**15 22 05.7**	**+0.3**
RUSC				*e*Sn	**Sn**	**15 22 23.9**	**-0.8**
RUSC	**La Rusia**	**0.94**	**179**	*e*P	**Pn**	**15 22 05.7**	**+0.3**
RUSC				*e*S	**Sn**	**15 22 23.9**	**-0.8**
PTBC	**PUERTO BERRIO,**	**1.38**	**258**	*e*P	**Pn**	**15 22 08.4**	**-0.4**
PTBC				*e*S	**Sn**	**15 22 29.4**	**-1.4**
PTBC				*i*		15 22 37.5	
	comp=Z,867nm,0.4s						
OCAC	**Ocana**	**1.41**	**351**	*e*P	**Pn**	**15 22 09.9**	**+0.7**
OCAC				*e*S	**Sn**	**15 22 31.9**	**+0.2**
OCAC				*i*		15 22 37.9	
	comp=Z,1μm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.87**	**290**	*e*P	**Pn**	**15 22 14.2**	**+0.2**
ZARC				*e*S	**Sn**	**15 22 39.8**	**-0.2**
ZARC				*i*		15 22 46.3	
	comp=Z,1μm,0.2s						
NORC	**Norcasia**	**2.17**	**234**	*e*P	**Pn**	**15 22 17.7**	**+0.1**
NORC				*e*S	**Sn**	**15 22 46.1**	**-0.4**
CHIC	**Chingaza**	**2.29**	**196**	*e*P	**Pn**	**15 22 19.9**	**+0.5**
CHIC				*e*S	**Sn**	**15 22 49.0**	**-0.5**
CHIC				*i*		15 22 55.3	
	comp=Z,286nm,0.5s						
ROSC	**El Rosal**	**2.33**	**212**	P	**Pn**	**15 22 21.6**	**+1.7**
	comp=Z,107nm,0.3s,baz=356,slow=5.0,SNR=114						
ROSC				S	**Sn**	**15 22 51.0**	**+0.6**
	comp=Z,98nm,0.3s,baz=290,slow=23,SNR=9.3						
ROSC	**El Rosal**	**2.33**	**212**	*e*Pn	**Pn**	**15 22 21.4**	**+1.5**
ROSC				*e*Sn	**Sn**	**15 22 48.2**	**-2.2**
ROSC	**El Rosal**	**2.33**	**212**	*e*P	**Pn**	**15 22 21.4**	**+1.5**
ROSC				*i*		15 22 59.7	
	comp=Z,962nm,0.4s						
HELC	**Santa Helena**	**2.50**	**255**	*e*Pn	**Pn**	**15 22 21.6**	**-0.3**
HELC	**Santa Helena**	**2.50**	**255**	*e*P	**Pn**	**15 22 21.9**	**0.0**
HELC				*e*S	**Sn**	**15 22 54.2**	**+0.2**
HELC				*i*		15 23 00.8	
	comp=Z,502nm,0.3s						
VILC	**Villavicencio,**	**2.77**	**192**	*e*P	**Pn**	**15 22 24.9**	**-0.2**
CODC	**Agust`>n Codaz**	**3.10**	**354**	*e*P	**Pn**	**15 22 29.2**	**+0.4**
CODC				*e*S	**Sn**	**15 23 06.8**	**+0.1**
DBBC	**Dabeiba**	**3.10**	**273**	*e*P	**Pn**	**15 22 29.4**	**+0.4**
TOLC	**Tolima**	**3.15**	**225**	*e*P	**Pn**	**15 22 31.2**	**+1.3**
TOLC				*e*S	**Sn**	**15 23 09.3**	**+0.9**
SDV	**Santo Domingo**	**3.18**	**50**	P	**Pn**	**15 22 31.1**	**+1.0**
	comp=Z,99nm,0.3s,baz=211,slow=3.6,SNR=43						
SDV				S	**Sn**	**15 23 09.1**	**+0.3**
	comp=Z,62nm,0.3s,baz=64,slow=20,SNR=18						
SDV	**Santo Domingo**	**3.18**	**50**	*e*Pn	**Pn**	**15 22 30.9**	**+0.8**
PRAC	**Prado**	**3.58**	**210**	*e*Pn	**Pn**	**15 22 34.6**	**-0.6**
PRAC	**Prado**	**3.58**	**210**	*e*P	**Pn**	**15 22 35.1**	**-0.1**
PRAC				*e*S	**Sn**	**15 23 17.3**	**-0.6**
SJAC	**San Juan de Ar**	**3.64**	**194**	*e*P	**Pn**	**15 22 35.6**	**-0.4**
SJAC				*i*		15 23 23.6	
	comp=Z,508nm,0.4s						
YOTC	**Yotoco, Valle**	**4.30**	**229**	*e*P	**Pn**	**15 22 44.3**	**-0.3**
BCIP	**Isla Barro Col**	**7.07**	**290**	*e*Pn	**Pn**	**15 23 19.1**	**-2.0**
PCRV	**Puerto La Cruz**	**9.00**	**68**	P	**Pn**	**15 23 45.9**	**-1.1**
	comp=Z,1.6nm,0.3s,baz=349,slow=4.3,SNR=11						
PCRV				S	**Sn**	**15 25 25.8**	**-1.1**
	comp=Z,0.7nm,0.3s,baz=125,slow=16,SNR=2.1						
MTDJ	**Mount Denham**	**12.12**	**339**	*e*Pn	**Pn**	**15 24 28.7**	**+0.8**
CBYP	**Canovanas**	**13.38**	**31**	*e*P	**P**	**15 24 48.4**	**+0.2**
SAML	**Samuel**	**18.54**	**148**	*e*P	**P**	**15 25 44.1**	**-0.9**
	comp=Z,15nm,1.9s						
LPAZ	**La Paz**	**23.50**	**168**	*e*P	**P**	**15 26 38.1**	**+1.2**
	comp=Z,2.4nm,0.8s						
WVT	**Waverly**	**32.12**	**337**	*e*P	**P**	**15 27 53.7**	**+0.8**
	comp=Z,4.4nm,1.0s						
CCM	**Cathedral Cave**	**35.16**	**335**	*e*P	**P**	**15 28 19.7**	**+0.4**
	comp=Z,7.7nm,0.7s						
SFIN	**Lafayette**	**35.67**	**342**	*e*P	**P**	**15 28 24.3**	**+0.7**
	comp=Z,11nm,0.5s						
TXAR	**Lajitas Array**	**36.47**	**312**	P	**P**	**15 28 31.4**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=128,slow=9.2,SNR=14						
TX31	**Lajitas Ar. Si**	**36.47**	**312**	*e*P	**P**	**15 28 31.2**	**+0.6**
SADO	**Sadowa**	**38.15**	**353**	P	**P**	**15 28 45.3**	**+0.9**
	comp=Z,1.2nm,0.5s,baz=141,slow=6.5						
JFWS	**Jewell Farm**	**38.99**	**340**	*e*P	**P**	**15 28 51.0**	**-0.4**
	comp=Z,6.8nm,0.6s						
SDCO	**Great Sand Dun**	**42.55**	**321**	*e*P	**P**	**15 29 22.3**	**+1.3**
	comp=Z,1.4nm,0.8s						
ULM	**Lac du Bonnet**	**47.28**	**340**	P	**P**	**15 29 57.0**	**-0.8**
	comp=Z,2.3nm,0.4s,baz=148,slow=7.4,SNR=6.6						
PDAR	**Pinedale Array**	**48.08**	**324**	P	**P**	**15 30 05.0**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=121,slow=8.8,SNR=5.8						
PFO	**Pinyon Flats O**	**48.12**	**310**	P	**P**	**15 30 06.1**	**+1.3**
	comp=Z,9.1nm,0.6s,baz=113,slow=6.5,SNR=12						
REDW	**Red Top Meadow**	**49.19**	**324**	*e*P	**P**	**15 30 13.5**	**+0.5**
	comp=Z,3.0nm,0.6s						
NVAR	**Mina Array Bea**	**51.49**	**315**	P	**P**	**15 30 29.2**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=136,slow=5.7,SNR=4.2						
LRM	**Limekiln Ridge**	**51.58**	**326**	*e*P	**P**	**15 30 30.9**	**+0.1**
YKA	**Yellowknife Ar**	**63.26**	**340**	P	**P**	**15 31 51.9**	**-0.1**
	comp=Z,1.8nm,0.6s,baz=133,slow=6.6,SNR=21						
ILAR	**Eielson Array**	**76.96**	**335**	P	**P**	**15 33 14.8**	**-0.7**
	comp=Z,0.2nm,0.4s,baz=120,slow=5.4,SNR=4.4						
ASAR	**Alice Springs**	**149.14**	**234**	PKPbc	**PKPbc**	**15 41 09.8**	**-1.4**
	comp=Z,0.5nm,0.5s,baz=118,slow=3.8,SNR=7.1						
WRA	**Warramunga Arr**	**150.37**	**241**	PKPbc	**PKPbc**	**15 41 13.1**	**-1.2**
	comp=Z,0.7nm,0.4s,baz=108,slow=2.7,SNR=16						

*ISCJB **10** 15:26:27.1±0.9, 6°.45S±0°.08×102°.66E±0°.07, h35km, mb3.8/6, Error ellipse: s-maj=12.0km s-min=8.8km az=145.1*
*IDC **10** 15:26:27.7±4.3, 5°.55S×103°.63E, h0km, mb3.6/6, mb1 3.7/6, mb1mx3.4/62, mbtmp3.6/6, Error ellipse: s-maj=222.0km s-min=20.3km az=49.0*
*DJA **10** 15:26:29.5±2.1, 6°.5±11°×10°.3E±1°.1, h11km±27km, M3.6/4, MLv3.6/4*
ISC 10 15:26:29.5±1.3, **6°.41S**±0°.10×**102°.7E**±0°.1, **h35**km, **n18**, σ0°.55/15, **mb3.8/6, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LWLI	**Liwa**	**1.91**	**44**	P	**Pn**	**15 27 00.2**	**+0.5**
LWLI				S	**Sn**	**15 27 22.9**	**+0.3**
KASI	**Kota Agung**	**1.96**	**63**	P	**Pn**	**15 26 59.5**	**-0.8**
KASI				S	**Sn**	**15 27 23.3**	**-0.4**
MNAI	**Manna**	**2.05**	**6**	P	**Pn**	**15 27 02.0**	**+0.5**
MDSI	**Maura Dua**	**2.39**	**37**	P	**Pn**	**15 27 06.9**	**+0.7**
MDSI				S	**Sn**	**15 27 34.3**	**0.0**
CGJI	**Cibinong**	**2.95**	**94**	P	**Pn**	**15 27 14.8**	**+1.0**
H08S2	**Diego Garcia H**	**30.03**	**266**	T	T	16 04 05.3	
	baz=89,slow=74,SNR=60						
H08S3	**Diego Garcia H**	**30.04**	**266**	T	T	16 04 03.2	
	baz=89,slow=74,SNR=117						
H08S1	**Diego Carcia H**	**30.05**	**266**	T	T	16 04 02.6	
	baz=89,slow=74,SNR=57						
H01W3	**Cape Leeuwin H**	**30.22**	**161**	T	T	16 04 26.2	
	baz=338,slow=76,SNR=7.2						
H01W2	**Cape Leeuwin H**	**30.24**	**161**	T	T	16 04 21.5	
	baz=338,slow=76,SNR=9.4						
H01W1	**Cape Leeuwin H**	**30.24**	**161**	T	T	16 04 20.9	
	baz=338,slow=76,SNR=9.0						
WRA	**Warramunga Arr**	**33.50**	**117**	P	**P**	**15 33 05.7**	**-0.2**
	0.3nm,0.5s,baz=304,slow=8.5,SNR=6.5						
ASAR	**Alice Springs**	**34.52**	**123**	P	**P**	**15 33 14.9**	**+0.1**
	0.4nm,1.0s,baz=298,slow=7.9,SNR=3.7						
MKAR	**Makanchi Array**	**56.00**	**343**	P	**P**	**15 36 04.6**	**0.0**
	0.8nm,0.7s,baz=145,slow=7.1,SNR=6.0						
KURBB	**Kurchatov Arra**	**60.53**	**343**	P	**P**	**15 36 35.6**	**-0.5**
	0.5nm,0.6s,baz=154,slow=6.4,SNR=3.5						
ZALV	**Zalesovo Beam**	**62.00**	**348**	P	**P**	**15 36 45.6**	**-0.4**
	0.7nm,0.4s,baz=160,slow=7.7,SNR=3.5						
BVAR	**Borovoye Array**	**65.24**	**339**	P	**P**	**15 37 06.8**	**-0.6**
	0.7nm,0.5s,baz=136,slow=9.0,SNR=5.5						
TXAR	**Lajitas Array**	**146.24**	**44**	PKPbc	**PKPab**	**15 46 08.1**	**+0.2**
	0.4nm,0.6s,baz=243,slow=1.0,SNR=6.1						

*ISK **10** 15:27:00.3, 36°.44N×28°.92E, h21km, ML3.2/10*
*DDA **10** 15:27:00.4, 36°.46N×28°.91E, h26km, Ml3.4*
*ATH **10** 15:27:00.7, 36°.41N×28°.92E, h39km±1km, ML2.7/6, Error ellipse: s-maj=2.4km s-min=0.8km az=160.0*
*CSEM **10** 15:27:01.0±0.1, 36°.44N×28°.93E, h20km, ML3.4, Error ellipse: s-maj=3.5km s-min=2.5km az=168.0*
*ISCJB **10** 15:27:01.1±0.4, 36°.41N±0°.02×28°.91E±0°.03, h27km±3km, Error ellipse: s-maj=4.1km s-min=3.3km az=160.6*
*THE **10** 15:27:01.2, 36°.45N×28°.92E, h12km±1km, ML2.9/3, Error ellipse: s-maj=1.6km s-min=0.6km az=81.0*
ISC 10 15:27:00.8±1.0, **36°.44N**±0°.02×**28°.93E**±0°.02, **h18**km±4km, **n93**, σ0°.78/144, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.23**	**32**	PG	**Pg**	**15 27 05.9**	**-0.3**
FETY				SG	**Sg**	**15 27 10.8**	**+0.8**
FETY	**Fethiye**	**0.23**	**32**	P	**Pg**	**15 27 06.0**	**-0.3**
FETY				S	**Sg**	**15 27 10.1**	**+0.1**
FETY	**Fethiye**	**0.23**	**32**	*e*Pg	**Pg**	**15 27 05.9**	**-0.3**
FETY				*e*Sg	**Sg**	**15 27 10.8**	**+0.8**
DALY	**Dalyan (Mu¨la**	**0.44**	**330**	PG	**Pb**	**15 27 10.0**	**0.0**
DALY				SG	**Sb**	**15 27 16.6**	**+0.3**
DALY	**Dalyan (Mu¨la**	**0.44**	**330**	*i* P	**Pb**	**15 27 10.0**	**0.0**
DALY				*i* S	**Sb**	**15 27 16.8**	**+0.5**
DALY	**Dalyan (Mu¨la**	**0.44**	**330**	P	**Pb**	**15 27 10.0**	**0.0**
DALY				*e*Sg	**Sb**	**15 27 16.6**	**+0.3**
TURN	**Turunc**	**0.51**	**329**	PG	**Pn**	**15 27 13.5**	**+0.4**
TURN				SG	**Sn**	**15 27 22.9**	**+1.6**
TURN	**Turunc**	**0.51**	**329**	*e*Pg	**Pn**	**15 27 13.5**	**+0.4**
TURN				*e*Sg	**Sn**	**15 27 22.9**	**+1.6**
AKAS	**Kas**	**0.58**	**110**	PG	**Pg**	**15 27 11.9**	**-0.5**
AKAS				SG	**Sb**	**15 27 21.8**	**+1.4**
AKAS	**Kas**	**0.58**	**110**	*i* P	**Pg**	**15 27 11.9**	**-0.6**
AKAS				*i* S	**Sn**	**15 27 22.5**	**-0.9**
AKAS	**Kas**	**0.58**	**110**	*e*Pg	**Pg**	**15 27 11.9**	**-0.5**
AKAS				*e*Sg	**Sb**	**15 27 21.8**	**+1.4**
AKAS				S	**Sn**	**15 27 22.5**	**-0.9**
KSL	**Kastellorizon**	**0.60**	**118**	P	**Pg**	**15 27 12.8**	**+0.2**
KSL				S	**Sn**	**15 27 23.1**	**-0.6**
KSL	**Kastellorizon**	**0.60**	**118**	P	**Pg**	**15 27 13.0**	**+0.3**
KSL				S	**Sn**	**15 27 22.9**	**-0.7**
MRSB	**Marmaris-Mugla**	**0.65**	**295**	PG	**Pb**	**15 27 13.5**	**-0.1**
MRSB	**Marmaris-Mugla**	**0.65**	**295**	*e*Pg	**Pb**	**15 27 13.5**	**-0.1**
ARG	**Arkhangelos**	**0.69**	**251**	PG	**Pg**	**15 27 14.3**	**0.0**
ARG	**Arkhangelos**	**0.69**	**251**	P	**Pg**	**15 27 14.5**	**+0.2**
ARG				S	**Sn**	**15 27 24.8**	**-0.9**
ARG				AML	AML	15 27 27.5	
	comp=N,1277μm,0.2s						
ARG				AML	AML	15 27 27.8	
	comp=E,1595μm,0.5s						
ARG	**Arkhangelos**	**0.69**	**251**	P	**Pg**	**15 27 14.4**	**+0.1**
ARG				S	**Sn**	**15 27 24.9**	**-0.9**
ARG	**Arkhangelos**	**0.69**	**251**	*e*Pg	**Pg**	**15 27 14.3**	**0.0**
ARG				S	**Sn**	**15 27 24.8**	**-0.9**
ELL	**Elmali**	**0.85**	**68**	PG	**Pb**	**15 27 17.1**	**+0.1**
ELL	**Elmali**	**0.85**	**68**	*e*Pg	**Pb**	**15 27 17.1**	**+0.1**
GLHS	**Glhisar (BURDU**	**0.85**	**32**	PG	**Pb**	**15 27 16.6**	**-0.4**
GLHS	**Glhisar (BURDU**	**0.85**	**32**	*e*Pg	**Pb**	**15 27 16.6**	**-0.4**
YER	**Yerkesik**	**0.87**	**323**	PG	**Pb**	**15 27 17.5**	**+0.2**
YER	**Yerkesik**	**0.87**	**323**	P	**Pb**	**15 27 17.5**	**+0.2**
YER				S	**Sg**	**15 27 29.6**	**+0.4**
YER	**Yerkesik**	**0.87**	**323**	P	**Pb**	**15 27 17.5**	**+0.2**
YER				S	**Sg**	**15 27 29.6**	**+0.4**
GOLH	**Golhisar**	**0.94**	**32**	*i* P	**Pb**	**15 27 17.6**	**-1.1**
GOLH				*i* S	**Sn**	**15 27 33.2**	**+0.9**
GOLH	**Golhisar**	**0.94**	**32**	P	**Pb**	**15 27 17.6**	**-1.1**
GOLH				S	**Sn**	**15 27 33.2**	**+0.9**
TAVA	**DENIZLI_Tavas**	**1.02**	**359**	*i* P	**Pb**	**15 27 19.8**	**-0.2**
TAVA				*i* S	**Sg**	**15 27 33.8**	**-0.4**
TAVA	**DENIZLI_Tavas**	**1.02**	**359**	P	**Pb**	**15 27 19.8**	**-0.2**
TAVA				S	**Sg**	**15 27 33.8**	**-0.4**
DATC	**Datca-Mugla**	**1.07**	**288**	PG	**Pb**	**15 27 20.7**	**0.0**
DATC	**Datca-Mugla**	**1.07**	**288**	*e*Pg	**Pb**	**15 27 20.7**	**0.0**
DAT	**Datca**	**1.13**	**285**	PN	**Pn**	**15 27 21.6**	**-0.1**
DAT	**Datca**	**1.13**	**285**	*i* P	**Pb**	**15 27 22.1**	**+0.3**
DAT				*i* S	**Sg**	**15 27 37.8**	**+0.4**
DAT	**Datca**	**1.13**	**285**	*e*Pn	**Pn**	**15 27 21.6**	**-0.1**
DAT	**Datca**	**1.13**	**285**	P	**Pb**	**15 27 22.0**	**+0.3**
DAT				S	**Sg**	**15 27 37.8**	**+0.4**
DNZL	**Cakiroluk**	**1.25**	**4**	*i* P	**Pn**	**15 27 23.3**	**-0.2**
DNZL				*i* S	**Sn**	**15 27 40.5**	**+0.5**
DNZL	**Cakiroluk**	**1.25**	**4**	P	**Pn**	**15 27 23.3**	**-0.2**
DNZL				S	**Sn**	**15 27 40.5**	**+0.5**
MLSB	**Milas**	**1.26**	**313**	PN	**Pb**	**15 27 23.9**	**-0.1**
MLSB	**Milas**	**1.26**	**313**	*e*Pn	**Pb**	**15 27 23.9**	**-0.1**
KORT	**Korkueli**	**1.27**	**63**	PN	**Pb**	**15 27 24.2**	**-0.1**
KORT	**Korkueli**	**1.27**	**63**	*i* P	**Pb**	**15 27 24.3**	**+0.1**
KORT				*i* S	**Sg**	**15 27 43.5**	**+1.5**
KORT	**Korkueli**	**1.27**	**63**	*e*Pn	**Pb**	**15 27 24.2**	**-0.1**
DENT	**Denizli**	**1.32**	**4**	PN	**Pn**	**15 27 23.3**	**-1.0**
DENT	**Denizli**	**1.32**	**4**	*e*Pn	**Pn**	**15 27 23.3**	**-1.0**
BDRM	**Kayabasi**	**1.35**	**298**	*i* P	**Pb**	**15 27 25.1**	**-0.4**
BDRM				*i* S	**Sb**	**15 27 43.4**	**+1.0**
BDRM	**Kayabasi**	**1.35**	**298**	P	**Pb**	**15 27 25.1**	**-0.4**
BDRM				S	**Sb**	**15 27 43.4**	**+1.0**
BODT	**Bodrum**	**1.44**	**296**	PN	**Pn**	**15 27 25.5**	**-0.5**
BODT	**Bodrum**	**1.44**	**296**	P	**Pn**	**15 27 25.1**	**-0.9**
BODT				S	**Sn**	**15 27 43.6**	**-0.9**
BODT	**Bodrum**	**1.44**	**296**	P	**Pn**	**15 27 25.1**	**-0.9**
BODT	**Bodrum**	**1.44**	**296**	*e*Pn	**Pn**	**15 27 25.5**	**-0.5**
BODT				S	**Sn**	**15 27 43.6**	**-0.9**
ANTB	**Antalya**	**1.46**	**71**	PN	**Pn**	**15 27 26.4**	**+0.2**
ANTB	**Antalya**	**1.46**	**71**	*e*Pn	**Pn**	**15 27 26.4**	**+0.2**
AYDN	**Tasoluk**	**1.48**	**326**	*i* P	**Pb**	**15 27 27.8**	**0.0**
AYDN				*i* S	**Sb**	**15 27 46.6**	**+0.3**
AYDN	**Tasoluk**	**1.48**	**326**	P	**Pb**	**15 27 27.8**	**0.0**
AYDN				S	**Sb**	**15 27 46.6**	**+0.3**
YKAV	**Yalikavak-Bodr**	**1.49**	**298**	PN	**Pn**	**15 27 26.1**	**-0.5**
YKAV	**Yalikavak-Bodr**	**1.49**	**298**	*e*Pn	**Pn**	**15 27 26.1**	**-0.5**
BRDR	**BURDUR-Merkez**	**1.55**	**35**	*i* P	**Pn**	**15 27 28.0**	**+0.5**
BRDR				*i* S	**Sg**	**15 27 49.6**	**-1.2**
BRDR	**BURDUR-Merkez**	**1.55**	**35**	P	**Pn**	**15 27 28.0**	**+0.5**
BRDR				S	**Sg**	**15 27 49.6**	**-1.2**
KARP	**Karpathos**	**1.69**	**239**	PN	**Pn**	**15 27 29.2**	**-0.2**
KARP	**Karpathos**	**1.69**

CHOS				S	Sn	15 28 22.7	-0.4
LAST	Lasithi	3.08	247	P	Pn	15 27 48.1	-0.5
LAST				S	Sn	15 28 23.1	-1.9
LAST	comp=N,40μm,0.7s			AML	AML	15 28 25.4	
LAST	comp=E,40μm,0.6s			AML	AML	15 28 32.8	
LAST	Lasithi	3.08	247	P	Pn	15 27 48.4	-0.2
LAST				S	Sn	15 28 23.5	-1.5
IMMV	Iera Moni Meta	4.13	258	P	Pn	15 28 05.6	+2.7
IMMV	Iera Moni Meta	4.13	258	P	Pn	15 28 04.6	+1.6
GVD	Gavdhos	4.25	249	P	Pn	15 28 04.1	-0.6
GVD	Gavdhos	4.25	249	P	Pn	15 28 04.7	+0.1

*ISCJB **10** 15:33:09.6±0.4,0°.19S±0°.04×123°.03E±0°.03,h100km, mb3.8/8,Error ellipse: s-maj=5.8km s-min=4.3km az=177.6*
*DJA **10** 15:33:11.4±0.3,0°.S±3°×12°.3E±°,h75km±7km,M4.7/12, mB4.9/2,mb4.9/4,MLv4.6/12,Mw(mB)4.2/2*
*IDC **10** 15:33:13.8±7.3,0°.12S×123°.17E,h122km±72km,mb3.5/8, mb1 3.6/9,mb1mx3.4/58,mbtmp3.9/9,Error ellipse: s-maj=53.6km s-min=14.7km az=76.0*

ISC 10 15:33:11.9±0.9,0°.29S±0°.07×123°.06E±0°.04,h100km,n24, σ1°65/26,mb3.9/8,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	Luwuk	0.81	201	P	Pn	15 33 27.8	-2.5
LUWI				S	Sn	15 33 43.8	-0.3
KMSI	Cibinong	1.26	47	P	Pn	15 33 33.2	-2.0
KMSI				S	Sn	15 33 51.5	-1.3
MRSI	Marisa	1.35	304	P	Pn	15 33 32.3	-4.0
MRSI				S	Sn	15 33 49.0	-5.8
APSI	Ampana	1.54	246	P	Pn	15 33 36.7	-1.9
APSI				S	Sn	15 34 00.9	+1.9
MPSI	Mapaga	3.22	281	P	Pn	15 33 59.5	-1.1
MPSI				S	Sn	15 34 36.3	-1.9
PCI	Palu	3.28	259	P	Pn	15 34 02.2	+0.8
SANI	Sanana	3.41	121	P	Pn	15 34 00.8	-2.4
SANI				S	Sn	15 34 38.7	-4.1
KDI	Kendari	3.67	187	P	Pn	15 34 05.8	-0.9
TTSI	Tana Toraja	4.24	230	P	Pn	15 34 13.2	-1.2
LBMI	Labuha	4.46	95	P	Pn	15 34 19.1	+1.8
SPSI	Sidrap Palu	4.92	222	P	Pn	15 34 23.0	-0.5
SPSI				S	Sn	15 35 19.5	+0.3
NLAI	Namlea 107nm,0.6s,5μm	4.99	126	P	Pn	15 34 24.4	-0.1
NLAI				S	Sn	15 35 20.5	-0.6
BNSI	Bone	5.04	216	P	Pn	15 34 27.1	+1.9
BKSI	Bulukumba	5.80	210	P	Pn	15 34 34.9	-0.6
AAI	Ambon	6.14	123	P	Pn	15 34 41.8	+1.6
SIJI	Sorong 2.5nm,0.3s,baz=239,slow=23,SNR=9.0	8.23	94	P	Pn	15 35 09.8	+1.2
SIJI				S	Sn	15 36 39.5	-0.3
WRA	Warramunga Arr 1.5nm,0.3s,baz=131,slow=19,SNR=3.5	22.44	151	P	P	15 38 02.5	-0.3
ASAR	Alice Springs 2.4nm,0.7s,baz=332,slow=10,SNR=24	25.52	156	P	P	15 38 32.2	+0.9
STKA	Stephens Creek 1.1nm,0.5s,baz=328,slow=8.3,SNR=5.6	35.98	153	P	P	15 40 04.8	+1.6
MJAR	Matsushiro Arr 1.9nm,0.8s,baz=197,slow=8.7,SNR=5.7	39.25	19	P	P	15 40 28.9	-1.9
SONM	Songino Array 1.9nm,0.7s,baz=164,slow=8.6,SNR=8.3	50.07	345	P	P	15 41 55.1	-1.6
MKAR	Makanchi Array 0.4nm,0.3s,baz=130,slow=8.3,SNR=13	58.88	328	P	P	15 42 59.8	-0.6
ZALV	Zalesovo Beam 0.5nm,0.4s,baz=134,slow=8.4,SNR=2.2	62.59	336	P	P	15 43 24.1	-1.3
KURBB	Kurchatov Arra 0.2nm,0.3s,baz=134,slow=5.3,SNR=3.6	63.24	330	P	P	15 43 28.4	-1.3

*IDC **10** 15:41:30.3±1.5,33°.98N×138°.44E,h0km,mb3.3/2, mb1 3.5/3,mb1mx3.2/64,mbtmp3.2/3,ML2.9/1,Error ellipse: s-maj=33.9km s-min=20.2km az=67.0*
*ISCJB **10** 15:41:31.4±0.7,34°.60N±0°.04×140°.36E±0°.06,h66km±7km, mb3.3/2,Error ellipse: s-maj=8.4km s-min=6.8km az=153.6*
*JMA **10** 15:41:31.8±0.2,34°.60N×140°.38E,h60km±2km,M2.9*

ISC 10 15:41:32.4±1.1,34°.60N±0°.05×140°.37E±0°.06,h56km±11km, n15,σ0°69/23,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO3	Boso 3	0.23	30	P	Pn	15 41 41.4	+0.1
BSO3				X		15 41 49.0	
BSO4	Boso 4	0.39	356	P	Pn	15 41 43.1	+0.3
BSO4				eX		15 41 52.2	
BSO1	Boso 1	0.51	84	P	Pn	15 41 43.5	0.0
BSO1				eX		15 41 50.5	
KTR	Katsuura	0.55	355	P	Pn	15 41 44.5	-0.1
KTR				S	Sn	15 41 53.3	-0.2
TATJ	Tateyama 2	0.58	318	P	Pn	15 41 45.5	+0.5
TATJ				S	Sn	15 41 55.7	+1.5
JIM2	Oshima 3	0.78	279	P	Pn	15 41 47.4	-0.1
JIM2				S	Sn	15 41 57.9	-0.6
JKO	Kozu shima	1.10	248	P	Pn	15 41 52.5	+0.9
KTJJ	Kamata 2	1.12	287	P	Pn	15 41 51.9	0.0
KTJJ				S	Sn	15 42 05.3	-1.1
JIZS	Izushimoda	1.23	276	P	Pn	15 41 53.5	+0.1
JIZS				S	Sn	15 42 08.5	-0.6
JOD2	Odawara 2	1.24	303	P	Pn	15 41 53.4	-0.2
JOD2				S	Sn	15 42 08.4	-0.9
JHJ2	Mitsune	1.55	197	S	Sn	15 42 16.8	0.0
JHJ	Hachijo jima 2 17nm,0.3s,baz=112,slow=19,SNR=33	1.55	198	Pn	Pn	15 41 58.5	+0.7
JHJ				Sn	Sn	15 42 16.7	-0.1
MJAR	62nm,0.3s,baz=49,slow=19,SNR=20 Matsushiro Arr 2.1nm,0.3s,baz=173,slow=14,SNR=27	2.62	318	Pn	Pn	15 42 13.4	+1.1
MJAR				Sn	Sn	15 42 43.7	+0.8
WRA	2.9nm,0.3s,baz=197,slow=25,SNR=11 Warramunga Arr 0.3nm,0.7s,baz=2.8,slow=7.8,SNR=5.1	54.54	187	P	P	15 50 54.4	-0.4
ASAR	Alice Springs 0.2nm,0.7s,baz=20,slow=10,SNR=2.9	58.27	187	P	P	15 51 21.0	-0.3

DJA 10 15:42:46.3±1.0,8°S±6°×10°4E±°,h10km,M3.8/6,MLv3.8/6, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGJI	Cibinong	1.81	52	P	Pn	15 43 17.8	+0.2
CGJI				S	Sn	15 43 40.3	-0.3
KASI	Kota Agung	2.21	6	P	Pn	15 43 23.4	+0.4
KASI				S	Sn	15 43 51.4	+1.0
SBJI	Serang	2.46	50	P	Pg	15 43 33.2	-0.3
LWLI	Liwa	2.70	356	P	Pn	15 43 30.4	+0.5
LWLI				S	Sb	15 44 05.7	-2.4
MDSI	Maura Dua	3.22	359	P	Pn	15 43 38.2	+1.2
MDSI				S	Sn	15 44 17.2	+1.7
MNAI	Manna	3.59	339	P	Pn	15 43 41.4	-0.6
MNAI				S	Sn	15 44 24.5	0.0

NNC 10 15:45:15.1±6.0,38°.20N×72°.63E,h0km,mb3.6,mpv3.2, 3C-2D,Error ellipse: s-maj=51.4km s-min=36.5km az=135.0,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan 8.7nm,0.3s	1.94	20	⇑P	Pn	15 45 49.2	-0.2
SFK				⇑S	Sb	15 46 16.0	-0.1
MNAS	29nm,0.5s Manas 1.4nm,0.3s	4.28	359	⇑P	Pn	15 46 20.7	-0.9
MNAS				⇓S	Sn	15 47 11.0	-1.4
KK31	11nm,0.7s Karatay Array 1.0nm,0.3s,baz=132,slow=11,SNR=16	5.16	342	⇓P	Pn	15 46 35.2	+1.7
KK31				S	Sn	15 47 36.3	+2.6

*ATH **10** 16:12:43.4,36°.43N×28°.92E,h35km±3km,ML2.2/4,Error ellipse: s-maj=3.4km s-min=0.9km az=135.0*
*ISCJB **10** 16:12:43.6±0.3,36°.43N±0°.02×28°.89E±0°.02,h14km,Error ellipse: s-maj=3.3km s-min=2.5km az=166.9*
*ISK **10** 16:12:43.2,36°.45N×28°.92E,h18km,ML2.7/10*
*DDA **10** 16:12:44.2,36°.51N×28°.93E,h7km,Ml3.2*
*THE **10** 16:12:44.2,36°.43N×28°.92E,h12km±1km,ML2.3/5,Error ellipse: s-maj=1.6km s-min=0.5km az=83.0*
*CSEM **10** 16:12:44.0±0.1,36°.44N×28°.93E,h20km,ML3.2,Error ellipse: s-maj=2.8km s-min=2.1km az=168.0*

ISC 10 16:12:43.6±0.8,36°.45N±0°.02×28°.92E±0°.02,h14km,n78, σ0°62/118,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	Fethiye	0.23	36	PG	Pg	16 12 49.1	+0.5
FETY				SG	Sb	16 12 53.7	+0.2
FETY	Fethiye	0.23	36	P	Pg	16 12 49.0	+0.5
FETY				S	Sb	16 12 54.2	+0.7
FETY	Fethiye	0.23	36	ePg	Pg	16 12 49.1	+0.5
FETY				eSg	Sb	16 12 53.7	+0.2
FETY				S	Sb	16 12 54.2	+0.7
DALY	Dalyan (Mu¨la	0.42	330	PG	Pb	16 12 52.8	0.0
DALY				SG	Sb	16 12 59.1	0.0
DALY	Dalyan (Mu¨la	0.42	330	i P	Pb	16 12 53.0	+0.2
DALY				i S	Sb	16 13 00.3	+1.2
DALY	Dalyan (Mu¨la	0.42	330	P	Pb	16 12 53.0	+0.2
DALY				S	Sb	16 13 00.3	+1.2
TURN	Turunc	0.49	329	PG	Pn	16 12 55.7	-0.5
TURN	Turunc	0.49	329	i P	Pn	16 12 56.8	+0.6
TURN				i S	Sn	16 13 06.2	+1.6
TURN	Turunc	0.49	329	ePg	Pn	16 12 55.7	-0.5
AKAS	Kas	0.59	111	PG	Pg	16 12 54.8	-0.5
AKAS	Kas	0.59	111	i P	Pg	16 12 54.8	-0.5
AKAS				i S	Sb	16 13 04.4	+0.3
AKAS	Kas	0.59	111	P	Pg	16 12 54.8	-0.5
AKAS				S	Sb	16 13 04.4	+0.3
KSL	Kastellorizon	0.61	119	P	Pb	16 12 55.9	-0.2
KSL				S	Sb	16 13 05.4	+0.9
KSL	Kastellorizon	0.61	119	P	Pb	16 12 55.8	-0.2
KSL				S	Sb	16 13 05.6	+1.0
MRSB	Marmaris-Mugla	0.64	295	PG	Pg	16 12 55.9	-0.2
MRSB	Marmaris-Mugla	0.64	295	ePg	Pg	16 12 55.9	-0.2
ARG	Arkhangelos	0.68	250	PG	Pb	16 12 57.7	+0.5
ARG				SG	Sb	16 13 07.3	+0.8
ARG	Arkhangelos	0.68	250	P	Pb	16 12 57.2	0.0
ARG				S	Sb	16 13 07.6	+1.1
ARG				AML	AML	16 13 08.6	
ARG	comp=N,344μm,0.8s			AML	AML	16 13 11.9	
ARG	comp=E,421μm,0.2s						
ARG	Arkhangelos	0.68	250	P	Pb	16 12 57.1	-0.1
ARG				S	Sn	16 13 08.0	-1.2
ARG	Arkhangelos	0.68	250	P	Pb	16 12 57.3	0.0
ARG	Arkhangelos	0.68	250	ePg	Pb	16 12 57.7	+0.5
ARG				eSg	Sb	16 13 07.3	+0.8
GLHS	Glhisar (BURDU	0.84	33	PG	Pg	16 12 59.7	-0.3
GLHS	Glhisar (BURDU	0.84	33	ePg	Pg	16 12 59.7	-0.3
ELL	Elmali	0.85	69	PG	Pb	16 13 00.2	0.0
ELL	Elmali	0.85	69	ePg	Pb	16 13 00.2	0.0
YER	Yerkesik	0.85	323	PG	Pg	16 12 59.9	-0.2
YER	Yerkesik	0.85	323	P	Pg	16 13 00.1	0.0
YER				S	Sn	16 13 13.4	-0.2
YER	Yerkesik	0.85	323	P	Pg	16 13 00.1	0.0
YER				S	Sn	16 13 13.4	-0.2
GOLH	Golhisar	0.94	33	i P	Pb	16 13 00.7	-1.0
GOLH				i S	Sn	16 13 15.4	-0.4
GOLH	Golhisar	0.94	33	P	Pb	16 13 00.7	-1.0
GOLH				S	Sn	16 13 15.4	-0.4
TAVA	DENIZLI_Tavas	1.01	360	i P	Pb	16 13 03.0	0.0
TAVA				i S	Sb	16 13 15.7	-0.6
TAVA	DENIZLI_Tavas	1.01	360	P	Pb	16 13 03.0	0.0
TAVA				S	Sb	16 13 15.6	-0.6
DATC	Datca-Mugla	1.06	287	PG	Pb	16 13 03.4	-0.3
DATC	Datca-Mugla	1.06	287	ePg	Pb	16 13 03.4	-0.3
DAT	Datca	1.11	285	PN	Pb	16 13 04.5	-0.2
DAT	Datca	1.11	285	ePn	Pb	16 13 04.5	-0.2
DNZL	Cakiroluk	1.24	5	i P	Pn	16 13 05.9	-0.8
DNZL				i S	Sb	16 13 22.0	-0.9
DNZL	Cakiroluk	1.24	5	P	Pn	16 13 05.9	-0.8
DNZL				S	Sb	16 13 22.0	-0.9
MLSB	Milas	1.25	313	PN	Pn	16 13 06.3	-0.3
MLSB	Milas	1.25	313	ePn	Pn	16 13 06.3	-0.3
KORT	Korkueli	1.27	64	PN	Pn	16 13 06.9	-0.2
KORT	Korkueli	1.27	64	i P	Pb	16 13 07.7	+0.3
KORT				i S	Sg	16 13 26.1	+1.4
KORT	Korkueli	1.27	64	ePn	Pn	16 13 06.9	-0.2
KORT	Korkueli	1.27	64	P	Pb	16 13 07.7	+0.3
DENT	Denizli	1.30	4	PN	Pn	16 13 07.4	0.0
DENT	Denizli	1.30	4	ePn	Pn	16 13 07.4	0.0
BODT	Bodrum	1.43	296	PN	Pn	16 13 09.0	-0.1
BODT	Bodrum	1.43	296	P	Pn	16 13 08.1	-1.0
BODT				S	Sn	16 13 26.8	-0.9
BODT	Bodrum	1.43	296	P	Pn	16 13 08.1	-1.0
BODT	Bodrum	1.43	296	ePn	Pn	16 13 09.0	-0.1
BODT				S	Sn	16 13 26.8	-0.9
ANTB	Antalya	1.47	72	PN	Pn	16 13 09.5	-0.1
ANTB	Antalya	1.47	72	ePn	Pn	16 13 09.5	-0.1
KARP	Karpathos	1.69	238	PN	Pn	16 13 12.8	+0.2
KARP	Karpathos	1.69	238	P	Pn	16 13 12.1	-0.5
KARP				S	Sn	16 13 32.9	-1.2
KARP				AML	AML	16 13 34.5	
KARP	comp=N,95μm,0.3s			AML	AML	16 13 35.0	
KARP	comp=E,87μm,0.1s						
KARP	Karpathos	1.69	238	P	Pn	16 13 12.2	-0.5
KARP				S	Sn	16 13 33.1	-1.0
KARP	Karpathos	1.69	238	P	Pn	16 13 12.2	-0.5
KARP	Karpathos	1.69	238	ePn	Pn	16 13 12.8	+0.2
KARP				S	Sn	16 13 33.1	-1.0
AYDB	Zeytinkoy-Aydi	1.71	332	PN	Pn	16 13 12.5	-0.5
AYDB	Zeytinkoy-Aydi	1.71	332	ePn	Pn	16 13 12.5	-0.5
ISP	Isparta	1.88	43	PN	Pn	16 13 15.4	+0.1
ISP	Isparta	1.88	43	ePn	Pn	16 13 15.4	+0.1
SUTC	Sutluce-Ispart	1.96	58	PN	Pn	16 13 16.7	+0.2
SUTC	Sutluce-Ispart	1.96	58	ePn	Pn	16 13 16.7	+0.2
KULA	Kula-Manisa	2.07	354	PN	Pn	16 13 17.8	-0.2
KULA	Kula-Manisa	2.07	354	ePn	Pn	16 13 17.8	-0.2
SMG	Samos	2.09	308	P	Pn	16 13 19.1	+1.0
SMG				S	Sn	16 13 43.2	-0.7
SMG				AML	AML	16 13 45.5	
SMG	comp=N,213μm,0.3s			AML	AML	16 13 46.7	
SMG	comp=E,168μm,0.2s						
SMG	Samos	2.09	308	P	Pn	16 13 18.3	+0.2
SMG				S	Sn	16 13 43.5	-0.5
SMG	Samos	2.09	308	P	Pn	16 13 18.3	+0.2
SMG				S	Sn	16 13 43.4	-0.5
ZKR	Zakros	2.57	240	P	Pn	16 13 25.3	+0.5
ZKR				S	Sn	16 13 56.5	+0.7
ZKR				AML	AML	16 13 57.7	
ZKR	comp=N,21μm,0.6s			AML	AML	16 14 03.9	
ZKR	comp=E,34μm,0.6s						
ZKR	Zakros	2.57	240	P	Pn	16 13 25.0	+0.2
ZKR				S	Sn	16 13 55.7	-0.1
URLA	Izmir	2.66	317	PN	Pn	16 13 27.1	+1.1
URLA	Izmir	2.66	317	ePn	Pn	16 13 27.1	+1.1
CHOS	Chios island	2.99	311	P	Pn	16 13 31.6	+0.9
CHOS				S	Sn	16 14 05.4	-0.9
CHOS	Chios island	2.99	311	P	Pn	16 13 30.8	+0.2
CHOS				S	Sn	16 14 05.7	-0.6
CHOS	Chios island	2.99	311	P	Pn	16 13 30.8	+0.2
CHOS				S	Sn	16 14 05.7	-0.6
LAST	Lasithi	3.08	246	P	Pn	16 13 31.6	-0.3
LAST				S	Sn	16 14 06.9	-1.6
LAST	Lasithi	3.08	246	P	Pn	16 13 31.7	-0.1
LAST	Lasithi	3.08	246	P	Pn	16 13 31.7	-0.1
LAST				S	Sn	16 14 07.1	-1.4

*SOME **10** 16:16:01.8,45°.03N×80°.35E,h20km*
*NNC **10** 16:16:01.2±0.7,44°.96N×80°.57E,h0km,mb2.6,mpv2.2, Error ellipse: s-maj=21.6km s-min=4.4km az=117.0*

ISC 10 16:15:59.4±1.3,45°.04N±0°.03×80°.48E±0°.05,h0km±14km, n8,σ0°46/16,3C-3D,Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPS	Kapalarasan 1.7nm,0.3s	0.83	288	eP	Pg	16 16 15.6	+0.3
KAPS	8.5nm,0.2s			eS	Sg	16 16 25.7	-0.5
KTMS	Ketmen 7.1nm,0.1s	1.59	183	eP	Pg	16 16 30.1	+0.2
KTMS	54nm,0.5s			eS	Sg	16 16 50.3	-0.2
MNBS	Baschi 1.6nm,0.3s	1.77	238	eP	Pn	16 16 31.8	+0.5
MNBS	12nm,0.4s			eS	Sn	16 16 53.6	-0.9
PDGK	Podgornoye 1.4nm,0.4s	1.85	203	⇑Pn	Pb	16 16 33.9	-0.2
PDGK	5.7nm,0.5s			⇓Sn	Sg	16 16 58.3	-0.4
KPKS	Kokpek 16nm,0.1s	2.03	220	eP	Pb	16 16 37.5	+0.3
KPKS	29nm,0.4s			eS	Sb	16 17 03.2	+0.2
MAKZ	Makanchi 0.9nm,0.5s	2.06	30	⇑Pn	Pg	16 16 38.8	-0.1
MAKZ	1.5nm,0.2s			⇑Sn	Sg	16 17 05.0	-0.5
UZB	Uzynbulak 4.8nm,0.3s	2.16	210	eP	Pb	16 16 39.4	0.0
UZB	12nm,0.3s			eS	Sb	16 17 06.7	-0.1
MK31	Makanchi Array 0.2nm,0.2s,baz=211,slow=16,SNR=22	2.17	35	⇓Pn	Pb	16 16 39.3	-0.1
MK31	1.8nm,0.2s,baz=215,slow=28,SNR=22			⇓Sn	Sb	16 17 07.5	+0.6

*ISCJB **10** 16:19:47.8±0.9,37°.25N±0°.06×71°.9E±0°.1,h113km,Error ellipse: s-maj=15.5km s-min=6.1km az=160.2*
*NNC **10** 16:19:55.5±1.0,37°.77N×71°.93E,h140km±14km,mb2.8, mpv3.6,Error ellipse: s-maj=10.5km s-min=8.2km az=68.0*

ISC 10 16:19:47.7±1.3,37°.32N±0°.09×71°.8E±0°.1,h113km,n17, σ2°00/23,7C-2D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan 3.1nm,0.2s	2.99	25	⇑P	Pn	16 20 36.7	+2.9
SFK	29nm,0.3s			⇑S	Sn	16 21 09.8	+0.4
AML	Almayashu SNR=34	5.01	16	P	Pn	16 21 03.2	+2.2
MNAS	Manas 7.6nm,0.3s	5.19	6	⇓P	Pn	16 21 05.6	+2.5
MNAS	17nm,0.5s			⇑S	Sn	16 22 00.6	-1.3
UCH	Uchtor SNR=6.8	5.32	22	P	Pn	16 21 07.1	+1.9
EKS2	Erkin-Say SNR=8.1	5.54	15	P	Pn	16 21 10.6	+2.7
AAK	Ala-Archa 4.4nm,0.4s	5.69	20	P	Pn	16 21 11.0	+1.0
AAK	15nm,0.8s			⇑S	Sn	16 22 12.0	-2.1
AAK	Ala-Archa SNR=7.8	5.69	20	P	Pn	16 21 12.4	+2.4
KK31	Karatay Array 10nm,0.6s,baz=166,slow=12,SNR=119	5.86	350	P	Pn	16 21 15.3	+3.2
KK31	2.0nm,0.3s,baz=172,slow=23,SNR=8.7			⇑S	Sn	16 22 16.2	-1.9
CHMS	Chumysh SNR=7.2	6.10	21	P	Pn	16 21 17.5	+2.2
USP	Ospenovka SNR=8.4	6.28	18	P	Pn	16 21 19.5	+1.7
TKM2	Tokmak 2 1.5nm,0.5s	6.29	26	⇑P	Pn	16 21 20.3	+2.1
TKM2	3.6nm,1.1s			⇑S	Sn	16 22 26.9	-1.8
PYUN	Piuthan 6.1nm,0.3s	13.14	131	eP	Pn	16 22 49.5	-0.6
DANN	Dangsing 8.0nm,0.4s	13.43	128	eP	Pn	16 22 53.7	-0.3
KOLN	Koldanda 4.8nm,0.5s	13.74	130	eP	Pn	16 22 57.5	-0.5
GKN	Gorkha 4.2nm,0.3s	14.22	127	eP	Pn	16 23 03.6	-0.5
AB31	Akbulak array 0.3nm,0.3s,baz=141,slow=13,SNR=14	14.71	328	P	P	16 23 12.9	-0.2
AB31	0.7nm,0.6s,baz=162,slow=23,SNR=4.8			⇓S	Sn	16 25 50.6	-1.8
KKN	Kakani 3.8nm,0.5s	14.78	126	eP	Pn	16 23 09.4	-1.9

*DDA **10** 16:24:26.6,36°.47N×28°.91E,h26km,Ml3.3*
*ISK **10** 16:24:26.2,36°.44N×28°.92E,h22km,ML2.9/10*
*ISCJB **10** 16:24:27.5±0.4,36°.46N±0°.03×28°.90E±0°.02,h28km±3km, Error ellipse: s-maj=4.7km s-min=3.2km az=6.2*
*CSEM **10** 16:24:27.1±0.2,36°.45N×28°.91E,h20km,ML3.3,Error ellipse: s-maj=4.8km s-min=3.1km az=1.0*
*THE **10** 16:24:27.2,36°.45N×28°.90E,h13km±1km,ML2.3/3,Error ellipse: s-maj=1.6km s-min=0.5km az=80.0*

ISC 10 16:24:26.8±1.0,36°.46N±0°.02×28°.92E±0°.02,h19km±3km, n75,σ0°74/114,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	Fethiye	0.22	36	PG	Pg	16 24 32.0	-0.2
FETY				SG	Sg	16 24 36.8	+0.8
FETY	Fethiye	0.22	36	P	Pg	16 24 32.3	+0.1
FETY				S	Sg	16 24 36.7	+0.8
FETY	Fethiye	0.22	36	ePg	Pg	16 24 32.0	-0.2
FETY	Fethiye	0.22	36	P	Pg	16 24 32.3	+0.1
FETY				eSg	Sg	16 24 36.8	+0.8
DALY	Dalyan (Mu¨la	0.42	329	PG	Pb	16 24 35.9	+0.3
DALY	Dalyan (Mu¨la	0.42	329	i P	Pb	16 24 36.0	+0.4
DALY				i S	Sb	16 24 42.4	+0.8
DALY	Dalyan (Mu¨la	0.42	329	ePg	Pb	16 24 35.9	+0.3
DALY				S	Sb	16 24 42.4	+0.8
TURN	Turunc	0.49	329	PG	Pn	16 24 39.3	+0.6
TURN	Turunc	0.49	329	i P	Pn	16 24 39.3	+0.6
TURN				i S	Sn	16 24 48.5	+1.9
TURN	Turunc	0.49	329	P	Pn	16 24 39.3	+0.6
AKAS	Kas	0.60	112	PG	Pb	16 24 38.1	-0.5
AKAS	Kas	0.60	112	i P	Pb	16 24 38.3	-0.3
AKAS				i S	Sn	16 24 48.8	-0.8
AKAS	Kas	0.60	112	P	Pb	16 24 38.3	-0.3
AKAS				S	Sn	16 24 48.8	-0.8
KSL	Kastellorizon	0.62	119	P	Pg	16 24 39.5	+0.4
KSL				S	Sn	16 24 49.2	-0.6
MRSB	Marmaris-Mugla	0.64	294	PG	Pg	16 24 39.7	+0.3
MRSB	Marmaris-Mugla	0.64	294	ePg	Pg	16 24 39.7	+0.3
ARG	Arkhangelos	0.68	250	PG	Pb	16 24 40.2	+0.2
ARG				SG	Sg	16 24 50.4	+1.0
ARG	Arkhangelos	0.68	250	P	Pb	16 24 40.4	+0.4
ARG				S	Sg	16 24 50.1	+0.7
ARG	Arkhangelos	0.68	250	ePg	Pb	16 24 40.2	+0.2
ARG				S	Sg	16 24 50.1	+0.7
GLHS	Glhisar (BURDU	0.84	33	PG	Pn	16 24 43.3	-0.4
GLHS	Glhisar (BURDU	0.84	33	ePg	Pn	16 24 43.3	-0.4
ELL	Elmali	0.85	70	PG	Pg	16 24 43.3	-0.1
ELL	Elmali	0.85	70	ePg	Pg	16 24 43.3	-0.1
YER	Yerkesik	0.85	323	PG	Pg	16 24 43.5	+0.1
YER	Yerkesik	0.85	323	P	Pg	16 24 43.2	-0.2
YER				S	Sg	16 24 55.0	+0.3
YER	Yerkesik	0.85	323	P	Pg	16 24 43.2	-0.2
YER	Yerkesik	0.85	323	ePg	Pg	16 24 43.5	+0.1
YER				S	Sg	16 24 55.0	+0.3
GOLH	Golhisar	0.94	33	i P	Pb	16 24 44.3	-0.1
GOLH				i S	S

KORT	Korkueli	1.27	64	P	Pg	16 24 51.7	+0.3
DENT	Denizli	1.30	4	PN	Pn	16 24 49.9	0.0
DENT	Denizli	1.30	4	*e*Pn	Pn	16 24 49.9	0.0
BDRM	Kayabasi	1.33	298	*i* P	Pn	16 24 50.2	-0.1
BDRM				*i* S	Sg	16 25 09.6	-0.4
BDRM	Kayabasi	1.33	298	P	Pn	16 24 50.2	-0.1
BDRM				S	Sg	16 25 09.6	-0.4
BODT	Bodrum	1.43	296	PN	Pn	16 24 50.9	-0.8
BODT	Bodrum	1.43	296	P	Pn	16 24 50.8	-0.9
BODT				S	Sn	16 25 09.5	-0.4
BODT	Bodrum	1.43	296	*e*Pn	Pn	16 24 50.9	-0.8
BODT				S	Sn	16 25 09.5	-0.4
AYDN	Tasoluk	1.46	326	*i* P	Pb	16 24 53.0	-0.4
AYDN				*i* S	Sb	16 25 12.4	+0.8
AYDN	Tasoluk	1.46	326	P	Pb	16 24 53.0	-0.4
AYDN				S	Sb	16 25 12.4	+0.8
YKAV	Yalikavak-Bodr	1.48	297	PN	Pn	16 24 52.7	+0.4
YKAV	Yalikavak-Bodr	1.48	297	*e*Pn	Pn	16 24 52.7	+0.4
BRDR	BURDUR-Merkez	1.54	36	*i* P	Pb	16 24 55.4	+0.7
BRDR				*i* S	Sg	16 25 15.2	-1.3
BRDR	BURDUR-Merkez	1.54	36	P	Pb	16 24 55.4	+0.7
BRDR				S	Sg	16 25 15.2	-1.3
KARP	Karpathos	1.69	238	P	Pn	16 24 55.2	-0.1
KARP				S	Sn	16 25 15.2	-1.2
KARP	Karpathos	1.69	238	P	Pn	16 24 55.2	-0.1
KARP				S	Sn	16 25 15.2	-1.2
AYDB	Zeytinkoy-Aydi	1.70	331	PN	Pn	16 24 54.7	-0.8
AYDB	Zeytinkoy-Aydi	1.70	331	*e*Pn	Pn	16 24 54.7	-0.8
ISP	Isparta	1.87	43	PN	Pn	16 24 58.1	+0.2
ISP	Isparta	1.87	43	*e*Pn	Pn	16 24 58.1	+0.2
SUTC	Sutluce-Ispart	1.95	58	PN	Pn	16 24 59.8	+0.8
SUTC	Sutluce-Ispart	1.95	58	*e*Pn	Pn	16 24 59.8	+0.8
KHAL	Karahalli	1.96	13	*i* P	Pn	16 24 57.1	-2.0
KHAL				*i* S	Sn	16 25 21.7	-1.6
KHAL	Karahalli	1.96	13	P	Pn	16 24 57.2	-2.0
KHAL				S	Sn	16 25 21.7	-1.6
KULA	Kula-Manisa	2.07	354	PN	Pn	16 25 00.4	-0.1
KULA	Kula-Manisa	2.07	354	*e*Pn	Pn	16 25 00.4	-0.1
KEPZ	Antalya-Kepez	2.20	78	*i* P	Pb	16 25 04.2	-1.8
KEPZ				*i* S	Sn	16 25 30.8	+1.7
KEPZ	Antalya-Kepez	2.20	78	P	Pb	16 25 04.2	-1.8
KEPZ				S	Sn	16 25 30.8	+1.7
DGB	˜zmir	2.28	315	*i* P	Pn	16 25 02.9	-0.4
DGB				*i* S	Sn	16 25 30.6	-0.2
ZEY	˜zmir	2.62	313	*i* P	Pn	16 25 08.0	-0.1
ZEY				*i* S	Sn	16 25 38.8	-0.6
URLA	Izmir	2.65	316	PN	Pn	16 25 08.3	-0.2
URLA	Izmir	2.65	316	*i* P	Pn	16 25 08.3	-0.2
URLA				*i* S	Sn	16 25 39.5	-0.7
URLA	Izmir	2.65	316	P	Pn	16 25 08.3	-0.2
URLA				S	Sn	16 25 39.5	-0.7

NIED ***10*** *16:43:00, 30.˚30N×132.˚10E, h5km, Mw4.1 Best double couple: M0 1.76000×10^15 NP1:*ϕ_S*=50.00000°,* δ*28.00000°,* λ*-63.00000°. NP2:*ϕ_S*=200.00000°,* δ*66.00000°,* λ*-103.00000°.*

IDC ***10*** *16:43:36.6±0.6, 30.˚37N×132.˚03E, h0km, mb3.9/19, mb1 4.1/22, mb1mx3.9/63, mbtmp3.9/22, ML3.3/5, MS3.3/8, Ms1 3.4/8, ms1mx2.9/61, Error ellipse: s-maj=19.3km s-min=12.8km az=88.0*

ISCJB ***10*** *16:43:38.2±1.1, 30.˚33N±0.˚03×132.˚09E±0.˚04, h25km±7km, mb3.9/23, MS3.3/8, Error ellipse: s-maj=6.0km s-min=5.1km az=31.3*

JMA ***10*** *16:43:39.0±0.1, 30.˚29N×132.˚08E, h53km±4km, M3.9*

NEIC ***10*** *16:43:40.1±1.7, 30.˚36N×132.˚01E, h22km±12km, mb4.0/2, Error ellipse: s-maj=7.5km s-min=5.4km az=107.0*

ISC 10 16:43:39.9±1.0, 30.˚33N±0.˚05×132.˚06E±0.˚05, h24km±6km, n53, σ1§30/62, mb4.1/23, MS3.4/8, 6C-2D, Southeast of Shikoku

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTN	Tanegashima 3	0.99	290	⇑P	Pn	16 43 57.3	-1.0
JTN				S	Sb	16 44 11.1	+0.2
JTSR	Tashiro 2	1.29	311	⇑P	Pn	16 44 01.3	-1.2
JTSR				S	Sb	16 44 18.4	-1.2
JYAK	Yakushimahirau	1.34	267	P	Pn	16 44 02.0	-1.2
JYAK				S	Sn	16 44 18.9	-1.4
JNAR	Kushima--Naru	1.37	331	⇑P	Pn	16 44 03.1	-0.5
JNAR				S	Sn	16 44 20.5	-0.6
JTZ	Takazaki	1.78	332	⇑P	Pn	16 44 08.7	-0.5
JTZ				S	Sn	16 44 30.7	-0.3
JNN	Nakanoshima	1.95	256	P	Pn	16 44 11.1	-0.5
JNN				*e*S	Sn	16 44 34.5	-0.9
JSJ	Shimokoshiki	2.42	304	⇑P	Pn	16 44 16.1	-1.9
JSJ				S	Sn	16 44 45.3	-1.6
JIU2	Izumi 2	2.45	335	⇑P	Pn	16 44 18.4	-0.1
JIU2				S	Sn	16 44 48.3	+0.6
JTO	Tosashimizu	2.60	14	P	Pn	16 44 18.7	-1.8
JTO				S	Sn	16 44 46.7	-4.7
JTAJ	Takarajima	2.75	245	P	Pn	16 44 22.1	-0.4
JTAJ				*e*S	Sn	16 44 54.6	-0.3
UWA2	Uwa jima 2	2.92	9	⇓P	Pn	16 44 23.7	-1.2
JNU	Nakatsue	2.96	340	Pn	Pn	16 44 25.3	-0.2
	13nm,0.3s,baz=184,slow=10,SNR=248						
JNU				Sn	Sn	16 45 00.1	-0.2
	20nm,0.3s,baz=135,slow=19,SNR=15						
JNA	Nagahama	3.24	6	S	Sn	16 45 03.8	-3.4
JOW	Kunigami	4.82	225	Pn	Pn	16 44 51.4	+0.4
	4.2nm,0.3s,baz=140,slow=13,SNR=17						
JOW				Sn	Sn	16 45 40.6	-5.4
	15nm,0.3s,baz=299,slow=28,SNR=17						
KSRS	Korea Array	7.89	335	Pn	Pn	16 45 32.1	-1.1
	0.1nm,0.3s,baz=160,slow=14,SNR=2.7						
KSAR	Wonju Array Be	7.90	335	Pn	Pn	16 45 32.1	-1.2
MAJO	Matsushiro	8.05	38	*e*Pn	Pn	16 45 35.2	-0.1
MJAR	Matsushiro Arr	8.05	38	Pn	Pn	16 45 36.1	+0.7
	0.5nm,0.3s,baz=230,slow=16,SNR=7.7						
KLR	Kul'dur	18.88	359	P	Pn	16 47 58.6	-0.5
	0.0nm,0.3s,baz=161,slow=6.3,SNR=6.9						
GUMO	Guam	20.43	142	LR	LR	16 54 46.1	
	comp=Z,42nm,19.5s,baz=344,slow=33						
ULN	Ulaanbaatar	25.96	319	*e*P	P	16 49 10.4	-0.3
	2.7nm,0.8s						
SONM	Songino Array	26.32	319	LR	LR	17 00 04.0	
	comp=Z,97nm,21.1s,baz=86,slow=38						
PETK	Petropavlovsk-	29.45	32	LR	LR	17 02 48.2	
	comp=Z,38nm,18.3s,baz=248,slow=39						
MA2	Magadan	31.87	18	P	P	16 50 03.1	+0.2
	1.0nm,0.3s,baz=198,slow=13,SNR=3.5						
MA2	Magadan	31.87	18	*e*P	P	16 50 03.3	+0.4
CMAR	Chiang Mai Arr	32.27	256	P	P	16 50 08.2	+1.2
	0.3nm,0.5s,baz=58,slow=8.6,SNR=2.9						
CMAR				LR	LR	17 04 48.1	
	comp=Z,67nm,18.5s,baz=180,slow=39						
ZALV	Zalesovo Beam	41.22	319	PcP	PcP	16 53 21.0	-0.3
	0.7nm,0.7s,baz=116,slow=3.4,SNR=4.1						
TIXI	Tiksi	41.41	358	P	P	16 51 24.9	+0.9
	0.3nm,0.3s,baz=127,slow=5.3,SNR=2.7						
MKAR	Makanchi Array	41.52	308	P	P	16 51 26.3	+1.0
	0.5nm,0.6s,baz=88,slow=11,SNR=6.2						
MKAR				PcP	PcP	16 53 22.1	-0.4
	0.2nm,0.5s,baz=67,slow=6.7,SNR=4.8						
MKAR				LR	LR	17 10 30.2	
	comp=Z,42nm,18.4s,baz=61,slow=39						
BILL	Bilibino	42.74	18	*e*P	P	16 51 35.7	+0.8
	4.8nm,1.2s						
KURK	Kurchatov	44.34	313	*e*P	P	16 51 47.1	-0.9
KURBB	Kurchatov Arra	44.38	313	P	P	16 51 47.6	-0.8
	0.4nm,0.5s,baz=101,slow=8.8,SNR=6.2						
NRIK	Noril'sk	46.48	340	LR	LR	17 13 03.8	
	comp=Z,59nm,18.7s,baz=157,slow=38						
BVAR	Borovoye Array	49.59	316	P	P	16 52 28.5	-0.6
	0.9nm,0.6s,baz=94,slow=8.9,SNR=8.7						
BVAR				PcP	PcP	16 53 50.8	+0.4
	0.7nm,0.5s,baz=90,slow=5.8,SNR=4.3						
BRVK	Borovoye	49.66	316	*e*P	P	16 52 29.0	-0.5
WRAB	Tennant Creek	50.02	177	*e*P	P	16 52 32.6	+0.1
WRA	Warramunga Arr	50.03	177	P	P	16 52 32.4	-0.2
	1.5nm,0.8s,baz=353,slow=8.4,SNR=10						
PALK	Pallekele	53.21	255	LR	LR	17 20 12.8	
	comp=Z,30nm,19.1s,baz=78,slow=41						
ASAR	Alice Springs	53.71	178	P	P	16 53 01.4	+1.3
	0.7nm,0.6s,baz=10,slow=12,SNR=18						
AKTO	Aktyubinsk	57.43	313	LR	LR	17 19 49.8	
	comp=Z,32nm,21.2s,baz=77,slow=38						
ILAR	Eielson Array	59.23	30	P	P	16 53 39.3	+0.3
	0.4nm,0.7s,baz=282,slow=7.6,SNR=5.7						
STKA	Stephens Creek	62.52	171	P	P	16 54 02.2	+0.7
	2.7nm,0.7s,baz=339,slow=7.3,SNR=8.2						
KBZ	Khabaz	69.19	309	P	P	16 54 45.2	+0.7
	2.4nm,0.8s,baz=88,slow=1.0,SNR=6.4						
FINES	FINESS Array B	70.96	331	P	P	16 54 54.9	-0.2
	1.4nm,0.5s,baz=70,slow=6.0,SNR=18						
YKA	Yellowknife Ar	73.39	26	P	P	16 55 09.8	+0.2
	0.5nm,0.9s,baz=286,slow=7.1,SNR=3.1						
AKASG	Malin Array Be	74.60	320	P	P	16 55 16.6	-0.3
	1.1nm,0.6s,baz=54,slow=6.9,SNR=4.9						
HFS	Hagfors	76.74	333	P	P	16 55 28.8	-0.2
	1.8nm,0.9s,baz=67,slow=8.0,SNR=3.5						
NB2	NORSAR Subarra	77.11	335	P	P	16 55 30.4	-0.7
	comp=Z,0.8nm,0.7s,baz=50,slow=5.9						
BRTR	Keskin Array B	77.16	309	P	P	16 55 32.2	+0.2
	comp=Z,1.8nm,0.8s,baz=102,slow=5.3,SNR=11						
CLL	Collm	82.67	326	⇓P	P	16 56 01.9	+0.5
	comp=Z,4.0nm,1.1s						
CLL				*i* sP	sP	16 56 12.4	+0.6
GERES	GERESS Array B	83.92	324	P	P	16 56 08.1	+0.1
	comp=Z,0.2nm,0.6s,baz=49,slow=6.1,SNR=6.3						
NVAR	Mina Array Bea	85.25	48	P	P	16 56 15.7	+0.6
	comp=Z,0.9nm,0.6s,baz=297,slow=4.6,SNR=8.8						
EKA	Eskdalemuir Ar	86.47	336	P	P	16 56 20.2	-0.2
	comp=Z,1.3nm,0.9s,baz=45,slow=5.1,SNR=3.7						

CSEM ***10*** *16:54:30.9, 38.˚65N×26.˚70E, h9km, ML1.3*

ISK 10 16:54:30.9, 38.˚65N×26.˚70E, h9km±1km, ML1.3/1, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FOCM	Fo˜§a	0.07	22	PG	Pg	16 54 33.6	+0.6
FOCM	Fo˜§a	0.07	22	PG	Pg	16 54 33.3	+0.3
FOCM				SG	Sg	16 54 35.0	+0.5
FOCM	Fo˜§a	0.07	22	*e*Pg	Pg	16 54 33.3	+0.3
FOCM				*e*Sg	Sg	16 54 35.0	+0.5
FOCM	Fo˜§a	0.07	22	*e*Pg	Pg	16 54 33.6	+0.6
KRBN	Karaburun	0.12	245	PG	Pg	16 54 34.9	+1.2
KRBN	Karaburun	0.12	245	PG	Pg	16 54 34.0	+0.3
KRBN				SG	Sg	16 54 36.3	+0.7
KRBN	Karaburun	0.12	245	*e*Pg	Pg	16 54 34.0	+0.3
KRBN				*e*Sg	Sg	16 54 36.3	+0.7
KRBN	Karaburun	0.12	245	*e*Pg	Pg	16 54 34.9	+1.2
URLA	Izmir	0.29	195	PG	Pg	16 54 34.4	-2.4
URLA				SG	Sb	16 54 42.1	-1.3
URLA	Izmir	0.29	195	PG	Pg	16 54 36.7	-0.1
URLA				SG	Sb	16 54 42.1	-1.3
URLA	Izmir	0.29	195	*e*Pg	Pg	16 54 36.7	-0.1
URLA				*e*Sg	Sb	16 54 42.1	-1.3
URLA	Izmir	0.29	195	*e*Pg	Pg	16 54 34.4	-2.4
URLA				*e*Sg	Sb	16 54 42.1	-1.3
CHOS	Chios island	0.56	243	PG	Pb	16 54 42.5	-0.5
CHOS	Chios island	0.56	243	PG	Pb	16 54 42.5	-0.5
CHOS	Chios island	0.56	243	*e*Pg	Pb	16 54 42.5	-0.5
CHOS	Chios island	0.56	243	*e*Pg	Pb	16 54 42.5	-0.5
SIGR	SIGRI	0.87	311	PN	Pn	16 54 49.4	+0.1
SIGR	SIGRI	0.87	311	PG	Pb	16 54 47.9	-0.2
SIGR	SIGRI	0.87	311	*e*Pg	Pb	16 54 47.9	-0.2
SIGR	SIGRI	0.87	311	*e*Pn	Pn	16 54 49.4	+0.1

ISCJB ***10*** *16:56:18.1±1.3, 29.˚39S±0.˚04×71.˚1W±0.˚1, h81km±9km, Error ellipse: s-maj=15.1km s-min=7.0km az=7.7*

GUC ***10*** *16:56:18.1±0.6, 29.˚46S×70.˚44W, h68km±339km, ML2.7*

SJA ***10*** *16:56:18.7±0.3, 29.˚47S×70.˚97W, h72km±5km, ML2.5, MW2.8*

ISC 10 16:56:18.7±2.2, 29.˚38S±0.˚05×71.˚1W±0.˚1, h74km±15km, n13, σ0§48/19, 4C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	Las Campanas	0.51	45	⇑*i*P	Pn	16 56 32.4	+0.1
LCO				*i* S	Sn	16 56 42.8	+0.6
LCO				IAML		16 56 43.4	
	comp=E,457nm,0.2s						
TLL	Tololo Astrono	0.83	161	⇑*i*P	Pn	16 56 35.5	-0.2
TLL				*i* S	Sn	16 56 47.9	-0.2
TLL				IAML		16 56 49.3	
	comp=E,508nm,0.5s						
GO04	Tololo Observa	0.84	161	⇑*i*P	Pn	16 56 35.5	-0.2
GO04				*i* S	Sn	16 56 48.2	-0.1
GO04				IAML		16 56 50.5	
	comp=E,645nm,0.4s						
AROD	Rodeo	1.63	119	*e*P	Pn	16 56 45.6	-0.1
ACDV	Cuesta del Vie	1.90	115	*e*P	Pn	16 56 49.1	-0.2
ACDV				*e*S	Sn	16 57 11.5	-1.1
GO03	Copiap	1.94	24	⇑*i*P	Pn	16 56 49.1	-0.6
GO03				*i* S	Sn	16 57 13.1	-0.1
GO03				IAML		16 57 14.2	
	comp=N,103nm,0.1s						
AGUA	GUANDACOL	2.29	93	*e*P	Pn	16 56 54.7	+0.3
VCA	Vinchina	2.62	77	*e*P	Pn	16 56 59.5	+0.5
VCA				*e*S	Sn	16 57 30.1	+0.2
VCA				IAML		16 57 32.0	
	comp=Z,37nm,0.4s						
AMOG	MOGNA	2.75	125	*e*P	Pn	16 57 00.5	-0.2
RTLS	Leoncito	2.88	147	*e*P	Pn	16 57 03.2	+0.6
RTLS				IAML		16 57 04.2	
	comp=Z,10nm,0.5s						
AUSP	Uspallata	3.20	153	*e*P	Pn	16 57 07.7	+0.8
RTCV	Cerro Valdivia	3.32	139	*e*P	Pn	16 57 08.4	0.0
ASAL	Salagasta	3.75	149	*e*P	Pn	16 57 14.5	+0.3

ISCJB ***10*** *16:57:58.7±0.7, 6.˚83N±0.˚04×73.˚14W±0.˚05, h150km±7km, mb3.4/1, Error ellipse: s-maj=8.7km s-min=5.6km az=33.6*

IDC ***10*** *16:57:59.3±0.8, 6.˚74N×72.˚97W, h167km±10km, mb3.2/1, mb1 3.5/3, mb1mx3.0/40, mbtmp3.7/3, Error ellipse: s-maj=49.1km s-min=8.7km az=131.0*

RSNC ***10*** *16:58:00.2±0.7, 6.˚80N×73.˚14W, h142km±5km, ML3.1*

ISC 10 16:57:58.6±1.0, 6.˚82N±0.˚05×73.˚12W±0.˚05, h150km±7km, n17, σ1§04/30, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.23	195	*e*P	Pn	16 58 19.8	+0.4
BARC				*e*S	Sn	16 58 34.6	-0.5
BARC				*i*		16 58 35.7	
	comp=Z,337nm,0.3s						
RUSC	La Rusia	0.92	178	*e*P	Pn	16 58 23.6	+0.2
RUSC				*e*S	Sn	16 58 41.7	-0.5
RUSC				*i*		16 58 43.0	
	comp=Z,135nm,0.2s						
PTBC	PUERTO BERRIO,	1.35	258	*e*P	Pn	16 58 26.3	-0.4
PTBC				*e*S	Sn	16 58 47.3	-0.9
PTBC				*i*		16 58 50.4	
	comp=Z,93nm,0.1s						
OCAC	Ocana	1.42	352	*e*P	Pn	16 58 28.2	+0.7
OCAC				*e*S	Sn	16 58 49.7	-0.1
OCAC				*i*		16 58 55.7	
	comp=Z,331nm,0.2s						
ZARC	Zaragoza, Cauc	1.85	291	*e*P	Pn	16 58 32.9	+0.9
ZARC				*e*S	Sn	16 58 58.2	+0.6
ZARC				*i*		16 59 06.6	
	comp=Z,127nm,0.3s						
NORC	Norcasia	2.14	234	*e*P	Pn	16 58 35.5	0.0
NORC				*e*S	Sn	16 59 04.2	+0.4
CHIC	Chingaza	2.26	196	*e*P	Pn	16 58 37.6	+0.3
CHIC				*e*S	Sn	16 59 06.2	-0.8
CHIC				*i*		16 59 10.2	
	comp=Z,50nm,0.3s						
ROSC	El Rosal	2.30	211	P	Pn	16 58 39.5	+1.7
	comp=Z,11nm,0.3s,baz=38,slow=20,SNR=15						
ROSC				S	Sn	16 59 10.9	+3.1
	comp=Z,34nm,0.3s,baz=356,slow=23,SNR=20						
ROSC	El Rosal	2.30	211	*e*P	Pn	16 58 38.3	+0.5
ROSC				*e*S	Sn	16 59 08.2	+0.4
ROSC				*i*		16 59 15.8	
	comp=Z,100nm,0.5s						
HELC	Santa Helena	2.47	255	*e*P	Pn	16 58 40.2	+0.5
HELC				*e*S	Sn	16 59 10.9	-0.5
HELC				*i*		16 59 18.7	
	comp=Z,93nm,0.5s						
DBBC	Dabeiba	3.07	274	*e*P	Pn	16 58 48.0	+1.0
TOLC	Tolima	3.12	225	*e*P	Pn	16 58 49.1	+1.3
TOLC				*e*S	Sn	16 59 26.1	+0.3
SDV	Santo Domingo	3.21	50	P	Pn	16 58 49.7	+0.9
	comp=Z,9.7nm,0.3s,baz=236,slow=6.6,SNR=6.2						
SDV				S	Sn	16 59 28.4	+0.8
	comp=Z,2.8nm,0.3s,baz=237,slow=22,SNR=4.1						
PRAC	Prado	3.55	210	*e*P	Pn	16 58 53.6	+0.5
PRAC				*e*S	Sn	16 59 35.9	+0.5
YKA	Yellowknife Ar	63.26	340	P	P	17 08 10.9	+0.1
	comp=Z,0.3nm,0.5s,baz=119,slow=8.5,SNR=4.6						
ASAR	Alice Springs	149.11	234	PKPbc	PKPbc	17 17 28.1	-1.9
	comp=Z,0.2nm,0.5s,baz=121,slow=3.4,SNR=3.7						
WRA	Warramunga Arr	150.34	241	PKPbc	PKPbc	17 17 31.7	-1.4
	comp=Z,0.9nm,1.1s,baz=109,slow=2.6,SNR=4.6						

NEIC ***10*** *17:04:36.2±0.0, 16.˚26N×98.˚09W, h8km, MD4.0(MEX), After MEX.*

MEX 10 17:04:36.2±0.6, 16.˚26N×98.˚09W, h8km±16km, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	Tlapa	1.37	341	*e*P	Pn	17 04 58.0	-3.8
TLIG				*e*S	Sb	17 05 14.9	-5.1
TLIG	Tlapa	1.37	341	*e*P	Pn	17 04 58.0	-3.8
TLIG				*e*S	Sb	17 05 14.9	-5.1
VHO	Vista Hermosa	1.53	58	*e*P	Pn	17 05 00.0	-4.0
VHO				*e*S	Sn	17 05 19.9	-4.4
VHO	Vista Hermosa	1.53	58	*e*P	Pn	17 05 00.0	-4.0
VHO				*e*S	Sn	17 05 19.9	-4.4
HUIG	Huatulco	1.97	104	*e*P	Pn	17 05 07.1	-2.8
HUIG	Huatulco	1.97	104	*e*P	Pn	17 05 07.1	-2.8
MEIG	Mezcala	2.21	319	*e*P	Pn	17 05 11.1	-2.2
MEIG	Mezcala	2.21	319	*e*P	Pn	17 05 11.1	-2.2
CAIG	El Cayaco	2.23	291	*e*P	Pn	17 05 11.1	-2.4
CAIG	El Cayaco	2.23	291	*e*P	Pn	17 05 11.1	-2.4
TPIG	Tehuac#an	2.25	18	*e*P	Pn	17 05 12.0	-2.0
TPIG	Tehuac#an	2.25	18	*e*P	Pn	17 05 12.0	-2.0
PLIG	Platanillo	2.51	328	*e*P	Pn	17 05 15.0	-2.5
PLIG	Platanillo	2.51	328	*e*P	Pn	17 05 15.0	-2.5
YAIG	Yautepec	2.75	340	*e*P	Pn	17 05 21.5	+0.7
YAIG	Yautepec	2.75	340	*e*P	Pn	17 05 21.5	+0.7
ARIG	Puente Sto Nin	2.95	313	*e*P	Pn	17 05 21.1	-2.3
ARIG	Puente Sto Nin	2.95	313	*e*P	Pn	17 05 21.1	-2.3

DJA 10 17:06:21.6±1.0, 0.˚S±6.˚×13.˚1E±.˚, h11km±5km, M3.9/4, MLv3.9/4, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	Fak Fak	2.70	162	P	Pb	17 07 09.0	-1.0
FAKI				S	Sn	17 07 38.8	+1.1
RKPI	Ransiki, Papua	2.99	113	P	Pn	17 07 09.0	+0.1
RKPI				S	Sn	17 07 45.8	+1.0
MSAI	Masohi	3.90	220	P	Pn	17 07 21.5	0.0
LBMI	Labuha	3.94	266	P	Pn	17 07 25.3	+3.2

NIED ***10*** *17:11:00, 31.˚00N×130.˚80E, h59km, Mw4.5 Best double couple: M0 6.13000×10^15 NP1:*ϕ_S*=97.00000°,* δ*32.00000°,* λ*-38.00000°. NP2:*ϕ_S*=220.00000°,* δ*71.00000°,* λ*-116.00000°.*

MOS ***10*** *17:11:28.9±0.8, 30.˚93N×130.˚88E, h72km, mb4.6/25, Error ellipse: s-maj=10.4km s-min=5.5km az=105.4*

ISCJB ***10*** *17:11:29.0±0.2, 30.˚94N±0.˚02×130.˚85E±0.˚03, h71km±2km, mb4.4/68, Error ellipse: s-maj=4.6km s-min=3.2km az=37.0*

BJI ***10*** *17:11:29.6, 30.˚79N×130.˚84E, h77km, mb4.4/47, mB4.6/33, Ms3.8/22, Ms7 3.5/21*

JMA ***10*** *17:11:30.3, 30.˚96N×130.˚81E, h60km±1km, M4.4 Broadband fault plane solution: P waves. NP1:*ϕ_S*=214.00000°,* δ*79.00000°,* λ*-92.00000°. NP2:*ϕ_S*=44.00000°,* δ*11.00000°,* λ*-80.00000°. Principal axes: T Plg34.0000°, Azm306.0000°; N Plg2.0000°, Azm215.0000°; P Plg56.0000°, Azm122.0000°;*

JMA Felt III J1.

NEIC ***10*** *17:11:31.4±0.7, 30.˚97N×130.˚83E, h77km±5km, mb4.7/19 Error ellipse: s-maj=7.2km s-min=6.2km az=161.0*

NEIC Felt at Kanoya. Recorded [3 JMA] in Kagoshima.

IDC ***10*** *17:11:31.1±1.0, 30.˚98N×130.˚80E, h74km±8km, mb4.0/28, mb1 4.2/35, mb1mx4.0/72, mbtmp4.4/35, MS3.4/27, Ms1 3.4/27, ms1mx3.3/65, Error ellipse: s-maj=11.5km s-min=7.5km az=99.0*

ISC 10 17:11:30.3±0.5, 30.˚92N±0.˚04×130.˚82E±0.˚04, h68km±4km, n174, σ1§73/189, mb4.4/68, 16C-9D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTSR	Tashiro 2	0.26	19	⇓P	Pn	17 11 39.8	-1.2
JTSR				S	Sn	17 11 46.8	-2.0
JTN	Tanegashima 3	0.30	153	⇑P	Pn	17 11 40.7	-0.6
JTN				S	Sn	17 11 48.5	-0.7
JSU	Suzuyama	0.66	332	⇓P	Pn	17 11 43.7	-0.9
JSU				S	Sn	17 11 53.7	-1.5
JKC	Kuchinoerabu	0.71	230	⇓P	Pn	17 11 44.8	-0.3
JKC				S	Sn	17 11 55.5	-0.5
JNAR	Kushima--Naru	0.71	33	⇓P	Pn	17 11 44.8	-0.4
JNAR				S	Sn	17 11 55.8	-0.4
JYAK	Yakushimahirau	0.73	202	P	Pn	17 11 45.3	-0.1
JYAK				*e*S	Sn	17 11 56.4	-0.2
JTZ	Takazaki	1.00	13

ASAJ LR LR 17 21 02.8
comp=Z,100nm,21.6s,baz=190,slow=36
KLR Kul'dur 18.30 2 P Pn 17 15 40.0 +0.7
0.1nm,0.3s,baz=182,slow=8.4,SNR=28
KLR LR LR 17 22 34.9
comp=Z,5.0nm,18.4s,baz=162,slow=36
KLR Kul'dur 18.30 2 *i* P **P 17 15 38.2 -0.5**
ENH Enshi 18.38 273 *e*P **Pn 17 15 42.6 +2.1**
11nm,0.7s
ENH *e*Sn **Sn 17 19 04.5 -0.8**
HHC Hu-ho-hao-te 18.45 308 *e*P **Pn 17 15 41.2 -0.1**
HHC pmax pmax
comp=Z,15nm,1.0s
HHC pmax pmax
comp=Z,59nm,4.9s
XAN Xi'an 18.73 285 P **Pn 17 15 45.0 +0.3**
XAN pP pP 17 15 59.1 +1.4
XAN sP sP 17 16 09.0 +2.8
XAN S **S 17 19 05.7 -7.4**
XAN pmax pmax
comp=Z,10.0nm,0.9s
XAN pmax pmax
comp=Z,96nm,5.0s
XAN LR LR
comp=N,190nm,17.2s
XAN LR LR
comp=E,190nm,16.5s
XAN LR LR
comp=Z,150nm,19.8s
BTO Baotou 19.41 306 *e*P **Pn 17 15 52.1 -0.7**
HIA Hailar 20.15 339 *i* P **P 17 15 59.6 +0.7**
HIA pmax pmax
comp=Z,9.0nm,0.9s
GRNR Gornyy 20.26 10 *e*P Pn 17 16 04.1 +1.5
GUMO Guam 21.56 140 LR LR 17 22 59.7
comp=Z,50nm,19.8s,baz=350,slow=32
GYA Guiyang 21.64 264 *e*P **P 17 16 16.3 +1.1**
GYA pP pP 17 16 32.8 +3.2
GYA sP sP 17 16 42.0 +3.9
GYA PP **PnPn 17 16 43.8 +5.1**
GYA S **S 17 20 05.3 -6.1**
GYA sS sS 17 20 32.6 -2.2
GYA pmax pmax
comp=Z,10.0nm,0.8s
ZEA Zeya 22.95 355 *e*P **P 17 16 27.0 -1.7**
ZEA pmax pmax
comp=Z,10.0nm,0.8s
LZH Lanzhou 23.04 290 *e*P **P 17 16 31.1 +1.1**
LZH pP pP 17 16 47.6 +3.0
LZH sP sP 17 16 57.7 +4.7
LZH PP **PnPn 17 17 04.8 +7.0**
LZH *e*S **S 17 20 32.4 -3.3**
LZH sS sS 17 21 01.2 -1.0
LZH pmax pmax
comp=Z,28nm,1.1s
LZH pmax pmax
comp=Z,200nm,5.2s
LZH LR LR
comp=Z,320nm,11.0s
LZH LR LR
comp=Z,370nm,10.5s
LZH LR LR
comp=Z,990nm,14.2s
CD2 Chengdu 23.20 277 P **P 17 16 29.4 -2.1**
CD2 pmax pmax
comp=Z,60nm,0.6s
DAV Davao City (W) 24.23 193 LR LR 17 26 28.5
comp=Z,48nm,20.8s,baz=339,slow=37
ULN Ulaanbaatar 24.82 320 *e*P **P 17 16 44.6 -1.6**
comp=Z,10nm,1.0s
ULN Ulaanbaatar 24.82 320*ce*P **P 17 16 46.5 +0.3**
ULN pmax pmax
comp=Z,10.0nm,0.8s
SONM Songino Array 25.17 319 P **P 17 16 49.7 +0.4**
comp=Z,4.9nm,0.8s,baz=141,slow=10,SNR=15
SONM LR LR 17 27 21.3
comp=Z,106nm,20.7s,baz=93,slow=38
SONA1 Songino Array 25.17 319 *e*P **P 17 16 46.9 -2.5**
KMI Kunming 25.42 264 P **P 17 16 52.3 +0.4**
KMI pmax pmax
comp=Z,7.0nm,0.5s
KMI pmax pmax
comp=Z,130nm,4.9s
GTA Gaotai 26.62 297 *e*P **P 17 17 02.8 +0.2**
GTA pP pP 17 17 18.5 -0.2
GTA S **S 17 21 34.0 +1.2**
GTA SS **SnSn 17 22 52.3 +11**
GTA pmax pmax
comp=Z,3.0nm,1.1s
GTA pmax pmax
comp=Z,48nm,7.3s
GTA LR LR
comp=Z,100nm,13.4s
GTA LR LR
comp=Z,79nm,15.5s
GTA LR LR
comp=Z,110nm,16.5s
PETK Petropavlovsk- 29.53 34 P **P 17 17 27.9 -0.3**
comp=Z,1.3nm,0.7s,baz=194,slow=18,SNR=4.0
PETK LR LR 17 30 28.9
comp=Z,34nm,18.4s,baz=213,slow=39
YAK Yakutsk 31.13 359 *e*P **P 17 17 39.4 -2.7**
comp=Z,11nm,0.4s
YAK Yakutsk 31.13 359 *e*P **P 17 17 40.9 -1.2**
YAK *e**PP **pP 17 17 54.9 -3.5**
YAK *e* 17 18 43.7
YAK *e* 17 20 34.4
YAK *e*S **S 17 22 42.1 -0.5**
YAK *e**SS **sS 17 23 11.3 +0.8**
YAK *e*SS **SnSn 17 24 30.2 -0.1**
YAK *e* 17 28 07.2
YAK pmax pmax
comp=Z,2.0nm,0.8s
YAK pmax pmax
comp=E,2.0nm,1.1s
YAK pmax pmax
comp=Z,25nm,2.6s
YAK pmax pmax
comp=N,10.0nm,2.6s
YAK pmax pmax
comp=E,11nm,2.3s
YAK smax smax
comp=N,11nm,1.5s
YAK smax smax
comp=E,11nm,1.6s
CMAR Chiang Mai Arr 31.40 254 LR LR 17 32 51.5
comp=E,51nm,18.6s,baz=116,slow=41
SIJI Sorong 31.62 179 LR LR 17 28 10.3
comp=E,46nm,19.9s,baz=52,slow=32
MA2 Magadan 31.65 19 P **P 17 17 47.6 +0.9**
comp=E,5.0nm,0.7s,baz=196,slow=11,SNR=8.3
MA2 Magadan 31.65 19 *e*P **P 17 17 49.3 +2.6**
comp=E,7.4nm,0.8s
MA2 Magadan 31.65 19 *i* P **P 17 17 48.1 +1.4**
MA2 pmax pmax
comp=Z,6.0nm,0.9s
H11N2 WAKE ISLAND Hy 34.32 100 T T 17 54 20.9
baz=296,slow=75,SNR=91
H11N1 WAKE ISLAND Hy 34.32 100 T T 17 54 20.2
baz=296,slow=75,SNR=77
H11N3 WAKE ISLAND Hy 34.34 100 T T 17 54 22.2
baz=296,slow=75,SNR=80
H11S3 WAKE ISLAND Hy 34.70 102 T T 17 55 36.3
baz=303,slow=76,SNR=5.7
H11S1 WAKE ISLAND Hy 34.70 102 T T 17 55 19.5
baz=303,slow=76,SNR=5.9
H11S2 WAKE ISLAND Hy 34.72 102 T T 17 55 09.5
baz=303,slow=76,SNR=3.3
SEY Seymchan 34.88 17*ce*P **P 17 18 15.1 +0.3**
WMQ Urumqi 36.22 303 P **P 17 18 27.6 +1.0**
WMQ pP pP 17 18 43.0 -0.2
WMQ sP sP 17 18 54.2 +3.1
WMQ pmax pmax
comp=Z,22nm,0.7s
WMQ pmax pmax
comp=Z,85nm,3.9s
WMQ LR LR
comp=Z,72nm,23.9s
WMQ LR LR
comp=Z,140nm,31.9s
WMQ LR LR
comp=Z,170nm,33.1s
ODAN Odare 38.07 275 *e*P pP 17 18 59.3 0.0
comp=Z,30nm,0.9s
RAMN Ramite 38.72 276 *e*P pP 17 19 04.5 -0.3
comp=Z,52nm,1.7s
JIRN Jiri 38.87 277 *e*P pP 17 19 06.4 +0.1
comp=Z,109nm,1.5s
GUN Gumba 39.07 277 *e*P pP 17 19 07.9 0.0
comp=Z,67nm,0.8s
PKIN Phulchoki 39.57 277 *e*P pP 17 19 12.2 +0.2
comp=Z,22nm,0.8s
KKN Kakani 39.61 277 *e*P pP 17 19 12.9 +0.6
comp=Z,28nm,0.9s
DMN Daman 39.81 277 *e*P pP 17 19 14.1 +0.1
comp=Z,41nm,1.4s
ZALV Zalesovo Beam 40.07 319 P **P 17 18 57.9 -0.9**
comp=Z,1.2nm,0.4s,baz=111,slow=6.1,SNR=11
ZALV PcP **PcP 17 21 02.0 -0.3**
comp=Z,1.3nm,0.8s,baz=99,slow=4.9,SNR=4.0
ZALV ScP **ScP 17 24 43.7 -1.7**
comp=Z,0.3nm,0.3s,baz=114,slow=3.7,SNR=4.4
ZALV LR LR 17 37 05.9
comp=Z,59nm,18.9s,baz=67,slow=38
ZALV Zalesovo Beam 40.07 319 *e*P **P 17 18 57.3 -1.5**
ZALV PcP **PcP 17 21 02.0 -0.3**
ZALV ScP **ScP 17 24 43.7 -1.7**
GKN Gorkha 40.10 278 *e*P pP 17 19 16.0 -0.3
comp=Z,25nm,1.2s
MK01 Makanchi Array 40.30 307 *e*P **P 17 19 00.4 -0.5**
MK31 Makanchi Array 40.31 307 *i* P **P 17 19 00.9 0.0**
MK31 pmax pmax
comp=Z,3.0nm,0.9s
MKAR Makanchi Array 40.31 307 P **P 17 19 01.4 +0.5**
comp=Z,0.9nm,0.5s,baz=95,slow=11,SNR=16
MKAR PcP **PcP 17 21 03.5 +0.2**
comp=Z,0.5nm,0.6s,baz=84,slow=2.1,SNR=4.0
MKAR ScP **ScP 17 24 44.6 -2.0**
comp=Z,1.3nm,0.8s,baz=79,slow=6.3,SNR=8.8
MKAR LR LR 17 37 18.9
comp=Z,64nm,18.3s,baz=66,slow=38
DANN Dangsing 40.75 279 *e*P pP 17 19 22.3 +0.4
comp=Z,20nm,0.8s
TIXI Tiksi 40.79 359 *e*P **P 17 19 03.6 -0.9**
comp=Z,7.2nm,1.3s
TIXI Tiksi 40.79 359*ce*P **P 17 19 02.7 -1.8**
TIXI pmax pmax
comp=Z,3.0nm,0.8s
KOLN Koldanda 41.05 278 *e*P pP 17 19 24.3 +0.1
comp=Z,14nm,1.0s
PYUN Piuthan 41.48 279 *e*P pP 17 19 27.5 -0.3
comp=Z,54nm,1.3s
PDGK Podgornoye 42.15 302 P **P 17 19 15.6 -0.6**
PDGK pmax pmax
comp=Z,6.0nm,1.1s
BILL Bilibino 42.51 19 *e*P **P 17 19 18.1 -0.5**
comp=Z,8.2nm,1.0s
BILL Bilibino 42.51 19 *i* P **P 17 19 20.0 +1.4**
BILL *i* 17 21 10.1
BILL pmax pmax
comp=Z,10.0nm,1.0s
BILL MLR MLR
comp=Z,56nm,18.0s
PMG Port Moresby 43.05 156 LR LR 17 34 55.1
comp=Z,76nm,19.4s,baz=301,slow=33
KURK Kurchatov 43.15 313 *e*P **P 17 19 23.6 -0.4**
comp=Z,9.9nm,0.6s
KURK ScP **ScP 17 24 56.0 -1.8**
KURK Kurchatov 43.15 313*ce*P **P 17 19 24.1 +0.1**
KURK pmax pmax
comp=Z,8.0nm,0.6s
KURBB Kurchatov Arra 43.20 313 P **P 17 19 24.8 +0.4**
comp=Z,5.9nm,0.6s,baz=95,slow=8.3,SNR=55
KURBB ScP **ScP 17 24 56.0 -2.0**
comp=Z,0.3nm,0.7s,baz=97,slow=3.8,SNR=4.4
TKM2 Tokmak 2 45.01 301 P **P 17 19 39.2 -0.1**
TKM2 pmax pmax
comp=Z,5.0nm,0.7s
KSH Kashi 45.03 297 P **P 17 19 42.8 +3.4**
KSH pP sP 17 20 02.6 -1.5
KSH pmax pmax
comp=Z,140nm,4.6s
NRIK Noril'sk 45.56 340 LR LR 17 41 25.5
comp=Z,42nm,19.7s,baz=102,slow=39
AAK Ala-Archa 45.84 301 P **P 17 19 46.6 +0.9**
comp=Z,1.5nm,0.4s,baz=124,slow=6.8,SNR=5.6
AAK Ala-Archa 45.84 301 *e*P **P 17 19 47.3 +1.5**
comp=Z,2.7nm,0.8s
AAK Ala-Archa 45.84 301 ⇑ *i*P **P 17 19 47.0 +1.2**
AAK pmax pmax
comp=Z,2.0nm,0.7s
OTUK Ortayu 47.11 309 P **P 17 19 55.1 -0.4**
OTUK pmax pmax
comp=Z,7.0nm,0.6s
MNAS Manas 47.31 301 P **P 17 19 57.7 +0.4**
MNAS pmax pmax
comp=Z,3.0nm,0.9s
BVA0 Borovoye Array 48.42 315 *i* P **P 17 20 05.6 +0.1**
BVA0 pmax pmax
comp=Z,4.0nm,0.4s
BVAR Borovoye Array 48.42 315 P **P 17 20 06.5 +1.0**
comp=Z,8.5nm,0.3s,baz=95,slow=9.4,SNR=43
BVAR LR LR 17 40 28.3
comp=Z,40nm,22.0s,baz=152,slow=36
BRVK Borovoye 48.48 315*ce*P **P 17 20 06.3 +0.3**
BRVK pmax pmax
comp=Z,10.0nm,0.6s
KK31 Karatay Array 48.71 302 *e*P **P 17 20 07.9 0.0**
KK31 Karatay Array 48.71 302 *i* P **P 17 20 08.8 +0.9**
KK31 pmax pmax
comp=Z,3.0nm,0.7s
KKAR Karatay Array 48.71 302 *e*P **P 17 20 07.9 0.0**
KKAR Karatay Array 48.71 302 *e*P **P 17 20 07.9 0.0**
WRAB Tennant Creek 50.68 176 *i* P **P 17 20 22.8 -0.2**
WRAB pmax pmax
comp=Z,4.0nm,0.9s
WRA Warramunga Arr 50.69 176 P **P 17 20 23.2 +0.2**
comp=Z,2.9nm,0.7s,baz=355,slow=8.2,SNR=22
SVE Sverdlovsk 54.03 320 *e*P **P 17 20 45.3 -2.1**
SVE pmax pmax
comp=Z,15nm,0.8s
ASAR Alice Springs 54.36 177 P **P 17 20 50.9 +0.7**
comp=Z,1.7nm,0.8s,baz=10,slow=12,SNR=21
AS01 Alice Springs 54.36 176 *e*P **P 17 20 50.4 +0.2**
AB31 Akbulak array 55.20 311 *i* P **P 17 20 56.1 +0.1**
AB31 pmax pmax
comp=Z,4.0nm,0.6s
ABKAR Akbulak array 55.20 311 *e*P **P 17 20 54.8 -1.2**
ARU Arti 55.20 320 *e*P **P 17 20 55.4 -0.5**
comp=Z,5.5nm,0.6s
ARU Arti 55.20 320*c i*P **P 17 20 56.1 +0.2**
ARU *PP **pP 17 21 11.7 -1.7**
ARU 17 21 52.9
ARU 17 22 58.4
ARU S **S 17 28 37.3 +3.3**
ARU SS **SS 17 32 21.6 +3.1**
ARU pmax pmax
comp=Z,8.0nm,1.0s
SOKR Solikamsk 55.91 324 *e*P P 17 21 09.3 +8.4
SOKR pmax pmax
comp=Z,5.0nm,0.6s
AKTO Aktyubinsk 56.25 313 P **P 17 21 03.9 +0.4**
comp=Z,3.4nm,0.6s,baz=81,slow=12,SNR=15
AKTO LR LR 17 46 53.5
comp=Z,96nm,18.1s,baz=90,slow=38
PPLA Purkeypile 57.10 32 *e*P **P 17 21 09.6 +0.1**
comp=Z,4.3nm,0.6s
KDAK Kodiak Island 57.42 38*ce*P **P 17 21 11.7 +0.1**
BPAW Bear Paw Mtn. 57.55 31 *e*P **P 17 21 12.0 -0.5**
comp=Z,3.4nm,0.8s
MLY Manley 57.58 30 *e*P **P 17 21 13.1 +0.3**
comp=Z,4.1nm,0.8s
SUA Susitna One 57.91 34 *e*P **P 17 21 16.4 +1.2**
comp=Z,8.8nm,0.8s
RND Reindeer 58.56 31 *e*P **P 17 21 18.7 -0.9**
comp=Z,6.7nm,0.8s
RND Reindeer 58.56 31 *e*P **P 17 21 18.7 -0.9**
RND pmax pmax
comp=Z,7.0nm,0.8s
MDM Murphy Dome 58.65 29 *e*P **P 17 21 20.8 +0.6**
comp=Z,1.5nm,0.8s
CCB Clear Creek Bu 58.87 30 *e*P **P 17 21 22.7 +1.1**
comp=Z,4.2nm,0.9s
ILAR Eielson Array 59.24 30 P **P 17 21 24.1 -0.1**
comp=Z,2.3nm,0.7s,baz=283,slow=5.5,SNR=19
ILB Eielson Array 59.24 30 *e*P **P 17 21 24.4 +0.2**
IL1 Eielson Array 59.24 30 *e*P **P 17 21 24.1 -0.2**
DAWY Dawson 62.57 30 *e*P **P 17 21 46.6 -0.3**
comp=Z,4.2nm,0.8s
DZM Mont Dzumac 62.81 143 LR LR 17 48 03.4
comp=Z,123nm,18.1s,baz=350,slow=35
STKA Stephens Creek 63.29 170 P **P 17 21 52.2 +0.3**
comp=Z,1.8nm,0.6s,baz=0.8,slow=7.3,SNR=8.7
INK Inuvik 63.69 24 P **P 17 21 54.0 -0.1**
comp=Z,3.3nm,0.7s,baz=273,slow=11,SNR=6.6
SPITS Spitsbergen Ar 64.72 348 P **P 17 22 00.8 0.0**
comp=Z,0.9nm,0.4s,baz=32,slow=8.5,SNR=13
SPITS LR LR 17 52 29.6
comp=Z,18nm,19.9s,baz=225,slow=38
ARCES ARCESS Array B 66.49 338 P **P 17 22 11.4 -0.9**
comp=Z,1.5nm,0.4s,baz=63,slow=8.1,SNR=25
ARCES LR LR 17 55 37.7
comp=Z,52nm,18.6s,baz=27,slow=40
OBN Obninsk 67.55 322 *i* P **P 17 22 19.7 +0.5**
OBN pmax pmax
comp=Z,3.0nm,0.5s
KBZ Khabaz 67.99 309 P **P 17 22 22.6 +0.4**
comp=Z,3.6nm,0.7s,baz=52,slow=3.7,SNR=10
KBZ LR LR 17 56 46.5
comp=Z,24nm,18.6s,baz=310,slow=40
KIV Kislovodsk 68.05 309 *e*P **P 17 22 23.2 +0.5**
KIV pmax pmax
comp=Z,9.0nm,1.0s
KIV MLR MLR
comp=Z,37nm,17.0s
FIA1 FINESS Array S 69.92 330 *e*P **P 17 22 32.8 -1.0**
FINES FINESS Array B 69.92 330 P **P 17 22 33.0 -0.8**
comp=Z,5.3nm,0.5s,baz=69,slow=5.5,SNR=60
FINES LR LR 17 56 35.0
comp=Z,60nm,18.8s,baz=73,slow=39
DAG Danmarks Havn 70.91 353 *i* P **P 17 22 38.9 -0.7**
comp=Z,4.4nm,1.1s
DAG Danmarks Havn 70.91 353 *i* P **P 17 22 38.9 -0.7**
DAG pmax pmax
comp=Z,4.0nm,1.1s
YKA Yellowknife Ar 73.32 26 P **P 17 22 54.8 +0.5**
comp=Z,2.0nm,0.7s,baz=305,slow=5.6,SNR=12
YKA Yellowknife Ar 73.32 26*ce*P **P 17 22 56.0 +1.7**
YKA pmax pmax
comp=Z,2.0nm,0.7s
AKASG Malin Array Be 73.45 319 P **P 17 22 54.0 -1.2**
comp=Z,1.4nm,0.3s,baz=57,slow=6.8,SNR=8.8
AKASG LR LR 17 58 11.9
comp=Z,35nm,19.6s,baz=230,slow=38
AKASG Malin Array Be 73.45 319*ce*P **P 17 22 55.2 -0.1**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
KIEV Kiev 73.47 319 *i* P **P 17 22 55.0 -0.3**
KIEV pmax pmax
comp=Z,2.0nm,1.0s
HFS Hagfors 75.72 333 P **P 17 23 07.4 -0.9**
comp=Z,1.0nm,0.3s,baz=57,slow=5.3,SNR=17
HFS LR LR 17 59 43.5
comp=Z,23nm,19.9s,baz=62,slow=38
BRTR Keskin Array B 75.96 308 P **P 17 23 09.3 -0.9**
comp=Z,1.6nm,0.9s,baz=85,slow=4.1,SNR=7.9
BRTR LR LR 18 01 20.9
comp=Z,24nm,19.8s,baz=250,slow=39
BRTR Keskin Array B 75.96 308*ce*P **P 17 23 11.6 +1.4**
BRTR pmax pmax
comp=Z,2.0nm,0.9s
NB2 NORSAR Subarra 76.11 334 P **P 17 23 09.0 -1.5**
comp=Z,0.9nm,0.5s,baz=48,slow=5.6
NB2 NORSAR Subarra 76.11 334 P **P 17 23 09.9 -0.6**
NB2 pmax pmax
comp=Z,1.0nm,0.5s
NOA NORSAR Array B 76.11 334 P **P 17 23 09.0 -1.5**
comp=Z,1.5nm,0.6s,baz=27,slow=3.4,SNR=6.5
NOA LR LR 18 01 02.2
comp=Z,22nm,19.4s,baz=35,slow=39
SUMG Summit 76.51 357 ⇑ *i* P **P 17 23 13.9 +0.9**
comp=Z,6.4nm,0.7s
SUMG Summit 76.51 357 ⇑ *i* P **P 17 23 13.9 +0.9**
SUMG pmax pmax
comp=Z,6.0nm,0.7s
MLR Muntele Rosu 77.98 316 LR LR 17 59 36.4
comp=Z,12nm,21.2s,baz=85,slow=37
VYHS Vyhne 80.34 321 *e*P **P 17 23 34.9 +0.8**
VYHS Vyhne 80.34 321 *e*P **P 17 23 34.9 +0.8**
CLL Collm 81.59 326 *e*P **P 17 23 40.0 -0.6**
comp=Z,6.0nm,1.0s
CLL *e*pP **pP 17 24 02.0 +2.9**
CLL Collm 81.59 326 *e*P **P 17 23 40.0 -0.6**
CLL *e**PP **pP 17 23 56.0 -3.1**
CLL pmax pmax
comp=Z,6.0nm,1.0s
GERES GERESS Array B 82.81 324 P **P 17 23 47.4 +0.2**
comp=Z,0.4nm,0.6s,baz=20,slow=4.3,SNR=6.5
EKA Eskdalemuir Ar 85.49 336 P **P 17 23 59.6 -0.9**
comp=Z,2.9nm,0.8s,baz=50,slow=4.2,SNR=11
NV01 Mina Array Sit 85.64 47 *e*P **P 17 24 01.3 -0.7**
NVAR Mina Array Bea 85.64 47 P **P 17 24 02.9 +0.9**
comp=Z,2.3nm,0.7s,baz=303,slow=5.4,SNR=19
PDAR Pinedale Array 88.10 40 P **P 17 24 13.7 -0.1**
comp=Z,0.6nm,0.7s,baz=325,slow=2.3,SNR=5.4
ULM Lac du Bonnet 89.22 28 P **P 17 24 18.2 -0.4**
comp=Z,5.0nm,0.7s,baz=308,slow=5.2,SNR=10
ULM Lac du Bonnet 89.22 28 *e*P **P 17 24 17.0 -1.6**
comp=Z,5.9nm,0.9s
N23A Red Feather La 91.35 39 *e*P **P 17 24 29.9 +0.8**
comp=Z,4.9nm,0.9s
COWI Conover 95.22 27 *e*P **P 17 24 48.5 +2.0**
ESDC Sonseca Array 98.17 326 LR LR 18 14 58.4
comp=Z,16nm,18.1s,baz=230,slow=39

DDA ***10*** *17:27:56.6, 38.˚66N×26.˚63E, h7km, Ml2.8*
IASPEI ***10*** *17:27:56.9±0.8, 38.˚64N±0.˚02×26.˚70E±0.˚02, h11km±4km, Error ellipse: s-maj=3.6km s-min=2.5km az=103.0, GT5 selection from ISC bulletin GT5 identified by Bond˚¡r and McLaughlin (2009) selection criteria Bond˚¡r and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
ISK ***10*** *17:27:56.7, 38.˚62N×26.˚72E, h4km, ML2.5/5*
THE ***10*** *17:27:57.2, 38.˚64N×26.˚66E, h1km±2km, ML2.2/4, Error ellipse: s-maj=2.3km s-min=0.7km az=73.0*
CSEM ***10*** *17:27:57.2±0.1, 38.˚63N×26.˚71E, h2km, ML2.5, Error ellipse: s-maj=3.5km s-min=2.4km az=107.0*
ISCJB ***10*** *17:27:57.3±0.3, 38.˚65N±0.˚02×26.˚67E±0.˚03, h7km±3km, Error ellipse: s-maj=4.3km s-min=2.9km az=8.5*
ISC 10 17:27:57.0±0.8, 38.˚64N±0.˚02×26.˚71E±0.˚02, h11km±5km, n49, σ0=55/77, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FOCM	**Foˆ§a**	**0.07**	**16**	PG	**Pg**	**17 27 59.4**	**0.0**
FOCM				SG	**Sg**	**17 28 00.9**	**-0.2**
FOCM	**Foˆ§a**	**0.07**	**16**	*e*Pg	**Pg**	**17 27 59.4**	**0.0**
FOCM				*e*Sg	**Sg**	**17 28 00.9**	**-0.2**
KRBN	**Karaburun**	**0.13**	**247**	PG	**Pg**	**17 28 00.1**	**0.0**
KRBN				SG	**Sg**	**17 28 02.4**	**+0.1**
KRBN	**Karaburun**	**0.13**	**247**	*e*Pg	**Pg**	**17 28 00.1**	**0.0**
KRBN				*e*Sg	**Sg**	**17 28 02.4**	**+0.1**
URLA	**Izmir**	**0.29**	**197**	PG	**Pg**	**17 28 02.6**	**-0.4**
URLA				SG	**Sg**	**17 28 07.5**	**+0.5**
URLA	**Izmir**	**0.29**	**197**	*i* P	**Pg**	**17 28 02.2**	**-0.8**
URLA	**Izmir**	**0.29**	**197**	P	**Pg**	**17 28 02.2**	**-0.8**
URLA	**Izmir**	**0.29**	**197**	*e*Pg	**Pg**	**17 28 02.6**	**-0.4**
URLA				*e*Sg	**Sg**	**17 28 07.5**	**+0.5**
CAND	**Candarli**	**0.32**	**14**	PG	**Pg**	**17 28 03.7**	**+0.2**
ZEY	**ˆzmir**	**0.43**	**202**	*i* P	**Pg**	**17 28 05.5**	**0.0**
ZEY				*i* S	**Sb**	**17 28 12.7**	**-0.5**
CESE	**ˆeˆme**	**0.45**	**226**	PG	**Pg**	**17 28 05.3**	**-0.5**
CESE	**ˆeˆme**	**0.45**	**226**	*e*Pg	**Pg**	**17 28 05.3**	**-0.5**
DKL	**Dikili**	**0.46**	**20**	PG	**Pg**	**17 28 06.6**	**+0.7**
DKL	**Dikili**	**0.46**	**20**	*e*Pg	**Pg**	**17 28 06.6**	**+0.7**
CHOS	**Chios island**	**0.57**	**244**	PG	**Pg**	**17 28 08.2**	**+0.1**
CHOS	**Chios island**	**0.57**	**244**	P	**Pg**	**17 28 08.3**	**+0.1**
CHOS				S	**Sg**	**17 28 15.6**	**-0.1**
CHOS	**Chios island**	**0.57**	**244**	P	**Pg**	**17 28 08.3**	**+0.1**
CHOS				S	**Sg**	**17 28 15.6**	**-0.1**
DGB	**ˆzmir**	**0.61**	**167**	*i* P	**Pg**	**17 28 08.7**	**0.0**
AYVA	**Ayvalik**	**0.66**	**359**	*i* P	**Pg**	**17 28 09.8**	**-0.1**
AYVA				*i* S	**Sb**	**17 28 20.2**	**+0.3**
AYVA	**Ayvalik**	**0.66**	**359**	P	**Pg**	**17 28 09.8**	**-0.1**
AYVA				S	**Sb**	**17 28 20.2**	**+0.3**
PRK	**Paraskevi**	**0.69**	**331**	P	**Pg**	**17 28 10.1**	**-0.3**
PRK				S	**Sb**	**17 28 20.9**	**+0.3**
PRK	**Paraskevi**	**0.69**	**331**	P	**Pg**	**17 28 10.1**	**-0.3**
PRK				S	**Sb**	**17 28 20.9**	**+0.3**
SIGR	**SIGRI**	**0.87**	**311**	PG	**Pb**	**17 28 14.9**	**+0.7**
SIGR	**SIGRI**	**0.87**	**311**	P	**Pg**	**17 28 13.5**	**-0.3**
SIGR				S	**Sb**	**17 28 26.1**	**+0.2**
SIGR	**SIGRI**	**0.87**	**311**	P	**Pg**	**17 28 13.5**	**-0.3**

SIGR	**SIGRI**	**0.87**	**311**	*e*Pg	**Pb**	**17 28 14.9**	**+0.7**
SIGR				S	**Sb**	**17 28 26.1**	**+0.2**
AKHS	**Akhisar**	**0.90**	**74**	*i* P	**Pn**	**17 28 15.7**	**0.0**
AKHS				*i* S	**Sn**	**17 28 29.1**	**+0.4**
AKHS	**Akhisar**	**0.90**	**74**	P	**Pn**	**17 28 15.6**	**0.0**
AKHS				S	**Sn**	**17 28 29.0**	**+0.4**
SMG	**Samos**	**0.94**	**174**	P	**Pg**	**17 28 14.7**	**-0.4**
SMG				S	**Sn**	**17 28 29.2**	**-0.4**
SMG	**Samos**	**0.94**	**174**	P	**Pg**	**17 28 14.7**	**-0.4**
SMG				S	**Sn**	**17 28 29.2**	**-0.4**
STEP	**BALIKESIR_Sava**	**1.08**	**47**	*i* P	**Pg**	**17 28 17.6**	**-0.2**
STEP				*i* S	**Sn**	**17 28 33.5**	**+0.4**
STEP	**BALIKESIR_Sava**	**1.08**	**47**	P	**Pg**	**17 28 17.5**	**-0.2**
STEP				S	**Sn**	**17 28 33.5**	**+0.4**
BAYC	**CANAKKALE_Bayr**	**1.10**	**354**	*i* P	**Pb**	**17 28 17.8**	**-0.4**
BAYC				*i* S	**Sg**	**17 28 32.9**	**+0.3**
BAYC	**CANAKKALE_Bayr**	**1.10**	**354**	P	**Pb**	**17 28 17.8**	**-0.4**
BAYC				S	**Sg**	**17 28 32.9**	**+0.3**
BOZC	**Bozcaada**	**1.30**	**337**	*i* P	**Pn**	**17 28 20.6**	**-0.6**
BOZC				*i* S	**Sb**	**17 28 35.6**	**-2.6**
BALY	**Balya**	**1.31**	**33**	*i* P	**Pn**	**17 28 20.2**	**-1.1**
BALY				*i* S	**Sn**	**17 28 39.1**	**+0.4**
BALY	**Balya**	**1.31**	**33**	P	**Pn**	**17 28 20.2**	**-1.1**
BALY				S	**Sn**	**17 28 39.1**	**+0.4**
AYDN	**Tasoluk**	**1.35**	**136**	*i* P	**Pn**	**17 28 21.8**	**-0.1**
AYDN				*i* S	**Sg**	**17 28 40.7**	**+0.3**
AYDN	**Tasoluk**	**1.35**	**136**	P	**Pn**	**17 28 21.8**	**-0.1**
AYDN				S	**Sg**	**17 28 40.7**	**+0.3**
BALB	**Balikesir**	**1.35**	**42**	PN	**Pb**	**17 28 23.0**	**+0.7**
BALB	**Balikesir**	**1.35**	**42**	*e*Pn	**Pb**	**17 28 23.0**	**+0.7**
GADA	**Gvkgeada**	**1.67**	**338**	PN	**Pb**	**17 28 28.2**	**+0.5**
GADA	**Gvkgeada**	**1.67**	**338**	*e*Pn	**Pb**	**17 28 28.2**	**+0.5**
GELI	**Tayfur-Gelibol**	**1.76**	**354**	PN	**Pb**	**17 28 29.6**	**+0.3**
GELI	**Tayfur-Gelibol**	**1.76**	**354**	*e*Pn	**Pb**	**17 28 29.6**	**+0.3**
APE	**Apeiranthos**	**1.83**	**211**	PN	**Pn**	**17 28 29.3**	**+0.9**
APE	**Apeiranthos**	**1.83**	**211**	*e*Pn	**Pn**	**17 28 29.3**	**+0.9**
RKY	**Sarkoy-Tekirda**	**2.07**	**10**	PN	**Pb**	**17 28 33.8**	**-0.9**
RKY	**Sarkoy-Tekirda**	**2.07**	**10**	*e*Pn	**Pb**	**17 28 33.8**	**-0.9**

*DDA **10** 17:28:49.5,38°.66N×26°.60E, h6km, Ml2.8*
*ISK **10** 17:28:49.4,38°.63N×26°.73E, h11km, ML2.4/3*
*ISCJB **10** 17:28:50.2±0.4, 38°.65N±0°.03×26°.66E±0°.04, h8km±4km, Error ellipse: s-maj=6.0km s-min=4.2km az=13.4*
*CSEM **10** 17:28:50.0±0.2, 38°.62N×26°.69E, h10km, ML2.4, Error ellipse: s-maj=4.9km s-min=3.8km az=117.0*

ISC 10 17:28:49.7±0.8,**38°.62N**±0°.02×**26°.71E**±0°.03,**h11**km±5km, **n36**,σ0°**49**/50,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FOCM	**Fo^§a**	**0.09**	**13**	PG	**Pg**	**17 28 52.4**	**+0.1**
FOCM				SG	**Sg**	**17 28 54.1**	**-0.2**
FOCM	**Fo^§a**	**0.09**	**13**	*i* Pg	**Pg**	**17 28 52.4**	**+0.1**
FOCM				*i* Sg	**Sg**	**17 28 54.1**	**-0.2**
KRBN	**Karaburun**	**0.12**	**256**	PG	**Pg**	**17 28 53.0**	**+0.3**
KRBN	**Karaburun**	**0.12**	**256**	*i* Pg	**Pg**	**17 28 53.0**	**+0.3**
URLA	**Izmir**	**0.28**	**198**	PG	**Pg**	**17 28 55.4**	**+0.1**
URLA				SG	**Sb**	**17 29 00.6**	**-0.7**
URLA	**Izmir**	**0.28**	**198**	*i* P	**Pg**	**17 28 54.6**	**-0.7**
URLA	**Izmir**	**0.28**	**198**	P	**Pg**	**17 28 54.6**	**-0.7**
URLA	**Izmir**	**0.28**	**198**	*i* Pg	**Pg**	**17 28 55.4**	**+0.1**
URLA				*i* Sg	**Sb**	**17 29 00.6**	**-0.7**
CAND	**Candarli**	**0.34**	**13**	PG	**Pg**	**17 28 56.5**	**0.0**
ZEY	**¨zmir**	**0.41**	**203**	*i* P	**Pb**	**17 28 58.9**	**-0.2**
ZEY				*i* S	**Sb**	**17 29 05.8**	**+0.5**
CHOS	**Chios island**	**0.56**	**245**	PG	**Pb**	**17 29 01.5**	**-0.1**
CHOS	**Chios island**	**0.56**	**245**	*e*Pg	**Pb**	**17 29 01.5**	**-0.1**
DGB	**¨zmir**	**0.59**	**166**	*i* P	**Pb**	**17 29 02.6**	**+0.7**
SIGR	**SIGRI**	**0.89**	**312**	PG	**Pb**	**17 29 07.3**	**+0.2**
SIGR	**SIGRI**	**0.89**	**312**	*e*Pg	**Pb**	**17 29 07.3**	**+0.2**
AKHS	**Akhisar**	**0.90**	**73**	*i* P	**Pn**	**17 29 08.2**	**-0.1**
AKHS				*i* S	**Sn**	**17 29 21.7**	**+0.3**
AKHS	**Akhisar**	**0.90**	**73**	P	**Pn**	**17 29 08.2**	**-0.1**
AKHS				S	**Sn**	**17 29 21.7**	**+0.3**
STEP	**BALIKESIR_Sava**	**1.09**	**46**	*i* P	**Pn**	**17 29 11.3**	**+0.3**
STEP				*i* S	**Sn**	**17 29 27.5**	**+1.4**
STEP	**BALIKESIR_Sava**	**1.09**	**46**	P	**Pn**	**17 29 11.3**	**+0.3**
STEP				S	**Sn**	**17 29 27.5**	**+1.4**
BAYC	**CANAKKALE_Bayr**	**1.12**	**354**	*i* P	**Pb**	**17 29 11.1**	**0.0**
BAYC				*i* S	**Sb**	**17 29 25.6**	**-0.2**
BAYC	**CANAKKALE_Bayr**	**1.12**	**354**	P	**Pb**	**17 29 11.1**	**0.0**
BAYC				S	**Sb**	**17 29 25.6**	**-0.2**
AYDB	**Zeytinkoy-Aydi**	**1.15**	**125**	PN	**Pb**	**17 29 11.7**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**1.15**	**125**	*e*Pn	**Pb**	**17 29 11.7**	**0.0**
EZN	**Ezine**	**1.24**	**346**	PN	**Pn**	**17 29 12.9**	**0.0**
EZN	**Ezine**	**1.24**	**346**	*e*Pn	**Pn**	**17 29 12.9**	**0.0**
BOZC	**Bozcaada**	**1.32**	**338**	*i* P	**Pb**	**17 29 14.6**	**+0.2**
BOZC				*i* S	**Sb**	**17 29 30.3**	**-1.1**
BALY	**Balya**	**1.32**	**32**	*i* P	**Pn**	**17 29 13.5**	**-0.7**
BALY				*i* S	**Sn**	**17 29 31.7**	**-0.1**
BALY	**Balya**	**1.32**	**32**	P	**Pn**	**17 29 13.5**	**-0.7**
BALY				S	**Sn**	**17 29 31.7**	**-0.1**
AYDN	**Tasoluk**	**1.33**	**136**	*i* P	**Pg**	**17 29 15.3**	**0.0**
AYDN	**Tasoluk**	**1.33**	**136**	P	**Pg**	**17 29 15.3**	**0.0**
BALB	**Balikesir**	**1.37**	**42**	PN	**Pn**	**17 29 14.6**	**-0.1**
BALB	**Balikesir**	**1.37**	**42**	*e*Pn	**Pn**	**17 29 14.6**	**-0.1**
GADA	**Gvkgeada**	**1.69**	**339**	PN	**Pn**	**17 29 19.6**	**+0.5**
GADA	**Gvkgeada**	**1.69**	**339**	*e*Pn	**Pn**	**17 29 19.6**	**+0.5**
GELI	**Tayfur-Gelibol**	**1.78**	**354**	PN	**Pb**	**17 29 21.8**	**-0.5**
GELI	**Tayfur-Gelibol**	**1.78**	**354**	*e*Pn	**Pb**	**17 29 21.8**	**-0.5**

ISC 10 17:31:28.1±1.1,**45°.07N**±0°.04×**15°.13E**±0°.05,**h11**km±16km, **n8**,σ0°**33**/13,**Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOJS	**Bojanci**	**0.44**	**11**	*i* Pg	**Pg**	**17 31 36.9**	**+0.1**
BOJS				*i* Sg	**Sg**	**17 31 42.8**	**+0.2**
GBRS	**Gornja Briga**	**0.51**	**334**	*i* Pg	**Pg**	**17 31 37.6**	**-0.5**
NVLJ	**Novalja**	**0.54**	**200**	*e*Pg	**Pg**	**17 31 38.7**	**+0.1**
NVLJ				Sg	**Sb**	**17 31 47.3**	**0.0**
OZLJ	**Ozalj**	**0.59**	**24**	*e*Pg	**Pb**	**17 31 40.4**	**-0.1**
OZLJ				Sg	**Sg**	**17 31 47.9**	**+0.4**
KNDS	**Knezji Dol**	**0.70**	**311**	*i* Sg	**Sg**	**17 31 51.2**	**+0.5**
UDBI	**Udbina**	**0.71**	**140**	*e*Pg	**Pg**	**17 31 41.4**	**-0.4**
UDBI				Sg	**Sb**	**17 31 52.5**	**+0.3**
VISS	**Visnje**	**0.76**	**345**	*i* Pg	**Pg**	**17 31 42.7**	**-0.1**
VISS				*i* Sg	**Sg**	**17 31 52.6**	**-0.2**
SKDS	**Skadanscina**	**0.92**	**302**	*i* Sg	**Sg**	**17 31 57.8**	**0.0**
	comp=Z,1.0nm,0.1s						

*IDC **10** 17:51:06.5±1.3, 3°.64S×128°.83E, h0km, mb3.6/3, mb1 3.8/5, mb1mx3.5/54, mbtmp3.6/5, ML3.5/2, MS3.1/4, Ms1 3.1/4, ms1mx2.6/47, Error ellipse: s-maj=35.6km s-min=23.9km az=85.0*
*DJA **10** 17:51:07.4±1.2, 4°.S±12°.×12°.9E±°., h10km, M3.6/6, MLv3.6/6*
*ISCJB **10** 17:51:08.3±0.7, 3°.68S±0°.07×128°.69E±0°.06, h35km, mb3.4/2, MS3.2/1, Error ellipse: s-maj=10.9km s-min=7.5km az=154.1*

ISC 10 17:51:10.0±1.2,**3°.7S**±0°.1×**128°.66E**±0°.07,**h35**km,**n13**, σ2°**57**/10,**Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.47**	**276**	P	**Pn**	**17 51 17.7**	**-2.5**
AAI				S	**Sn**	**17 51 25.7**	**-1.5**
MSAI	**Masohi**	**0.47**	**35**	P	Pn	17 51 14.4	-5.9
NLAI	**Namlea**	**1.63**	**288**	P	**Pn**	**17 51 39.8**	**+3.6**
SANI	**Sanana**	**3.15**	**302**	P	**Pn**	**17 51 53.9**	**-3.2**
LBMI	**Labuha**	**3.29**	**339**	P	**Pn**	**17 51 59.9**	**+0.8**
SIJI	**Sorong**	**3.86**	**43**	Pn	**Pn**	**17 52 06.7**	**-0.3**
	4.6nm,0.3s,baz=54,slow=19,SNR=42						
SIJI				Sn	**Sn**	**17 52 48.5**	**-2.7**
	3.5nm,0.3s,baz=200,slow=23,SNR=10						
SIJI				LR	LR	17 54 12.0	
	comp=Z,196nm,18.1s,baz=162,slow=50						
BATI	**Baumata**	**8.12**	**217**	LR	LR	17 56 23.3	
	comp=Z,157nm,18.8s,baz=269,slow=38						
DAV	**Davao City (W)**	**11.17**	**344**	LR	LR	17 58 46.5	
	comp=Z,66nm,19.0s,baz=82,slow=41						
WRA	**Warramunga Arr**	**17.03**	**161**	P	**Pn**	**17 55 05.5**	**-0.1**
	0.2nm,0.3s,baz=344,slow=12,SNR=7.3						
ASAR	**Alice Springs**	**20.45**	**166**	P	Pn	17 55 46.8	-0.2
	4.8nm,0.8s,baz=349,slow=10,SNR=29						
LEM	**Lembang**	**21.17**	**261**	LR	LR	18 05 50.2	
	comp=Z,88nm,18.2s,baz=350,slow=41						
MKAR	**Makanchi Array**	**64.78**	**327**	P	**P**	**18 01 47.0**	**+1.9**
	0.2nm,0.6s,baz=112,slow=10,SNR=3.7						
KURBB	**Kurchatov Arra**	**69.05**	**328**	P	**P**	**18 02 13.9**	**+1.8**
	0.5nm,0.9s,baz=128,slow=5.2,SNR=3.8						

*NEIC **10** 17:52:32.5±0.0, 36°.77S×177°.10E, h215km, ML4.5(WEL), After WEL.*

WEL 10 17:52:33.9±0.9,**37°S**±7°×**17°7E**±°,**h203**km±8km,**Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAZ	**Te Kaha**	**1.10**	**156**	P	Pn	17 53 04.2	-0.4
HAZ				S	S	17 53 29.9	+1.5
MXZ	**Matakaoa Point**	**1.19**	**133**	Pn	Pn	17 53 05.4	+0.1
MXZ	**Matakaoa Point**	**1.19**	**133**	P	Pn	17 53 05.4	+0.2
MXZ				S	S	17 53 31.1	+1.6
KUZ	**Kuaotunu**	**1.20**	**270**	Pn	Pn	17 53 04.6	-0.8
KUZ	**Kuaotunu**	**1.20**	**270**	P	Pn	17 53 04.9	-0.4
OPRZ	**Ohinepanea**	**1.22**	**206**	Pn	Pn	17 53 05.2	-0.2
OPRZ	**Ohinepanea**	**1.22**	**206**	P	Pn	17 53 05.3	-0.1
TGRZ	**Tauranga**	**1.24**	**218**	P	Pn	17 53 05.9	+0.2
RUGZ	**Raukumara Rang**	**1.27**	**163**	P	Pn	17 53 05.2	-0.8
RUGZ				S	S	17 53 30.5	-0.4
MARZ	**Manawahe**	**1.31**	**199**	P	Pn	17 53 07.1	+0.9
PKGZ	**Pakihiroa**	**1.33**	**149**	P	Pn	17 53 07.0	+0.5
WMGZ	**Waiomatatini S**	**1.44**	**139**	Pn	Pn	17 53 07.4	+0.2
WMGZ				Sn	S	17 53 33.9	+1.0
WMGZ	**Waiomatatini S**	**1.44**	**139**	P	Pn	17 53 07.4	+0.2
WMGZ				S	S	17 53 33.9	+1.1
KARZ	**Kaharoa**	**1.49**	**211**	P	Pn	17 53 08.4	+0.7
KMRZ	**Kaimai**	**1.49**	**222**	P	Pn	17 53 07.7	-0.1
GRZ	**Great Barrier**	**1.50**	**289**	P	Pn	17 53 06.9	-0.9
URZ	**Urewera**	**1.51**	**183**	Pn	Pn	17 53 07.3	-0.5
URZ	**Urewera**	**1.51**	**183**	P	Pn	17 53 07.3	-0.5
URZ				S	S	17 53 35.0	+0.9
OMRZ	**Omania**	**1.51**	**206**	P	Pn	17 53 09.2	+1.3
TWGZ	**Tauwhareparae**	**1.55**	**157**	Pn	Pn	17 53 08.8	+0.5
TWGZ				Sn	S	17 53 36.4	+1.5
TWGZ	**Tauwhareparae**	**1.55**	**157**	P	Pn	17 53 08.8	+0.5
TWGZ				S	S	17 53 36.3	+1.5
TWGZ	**Tauwhareparae**	**1.55**	**157**	P	S	17 53 37.1	+2.3
PUZ	**Puketiti**	**1.56**	**148**	Pn	Pn	17 53 08.2	-0.2
PUZ	**Puketiti**	**1.56**	**148**	P	Pn	17 53 08.3	-0.1
PUZ				S	S	17 53 34.8	-0.1
TARZ	**Mount Tarawera**	**1.59**	**201**	Pn	Pn	17 53 09.4	+0.7
TARZ	**Mount Tarawera**	**1.59**	**201**	P	Pn	17 53 09.6	+0.9
MWZ	**Matawai**	**1.60**	**171**	Pn	Pn	17 53 08.4	-0.4
MWZ	**Matawai**	**1.60**	**171**	P	Pn	17 53 08.4	-0.4
MWZ				S	S	17 53 36.3	+0.6
WIAZ	**Waiheke Island**	**1.67**	**268**	P	Pn	17 53 09.2	-0.2
RRRZ	**Republican Roa**	**1.68**	**199**	Pn	Pn	17 53 09.8	+0.3
RRRZ	**Republican Roa**	**1.68**	**199**	P	Pn	17 53 09.9	+0.4
TOZ	**Tahuroa Road**	**1.68**	**234**	P	Pn	17 53 09.9	+0.4
MKAZ	**Moumakai**	**1.68**	**257**	Pn	Pn	17 53 09.2	-0.2
MKAZ	**Moumakai**	**1.68**	**257**	P	Pn	17 53 09.6	+0.1
HSRZ	**Hossack Road**	**1.74**	**208**	P	Pn	17 53 11.3	+1.3
RAGZ	**Rawiri**	**1.75**	**175**	Pn	Pn	17 53 09.9	-0.3
RAGZ	**Rawiri**	**1.75**	**175**	P	Pn	17 53 10.0	-0.3
MUGZ	**Murupara**	**1.76**	**191**	P	Pn	17 53 09.8	-0.4
TKGZ	**Te Karaka**	**1.76**	**164**	Pn	Pn	17 53 10.0	-0.2
TKGZ	**Te Karaka**	**1.76**	**164**	P	Pn	17 53 10.0	-0.2
TKGZ				S	S	17 53 38.3	+0.2
HRRZ	**Handcock Road**	**1.80**	**204**	P	Pn	17 53 11.2	+0.6
GRRZ	**Galatos Road**	**1.82**	**208**	P	Pn	17 53 11.9	+1.1
ETAZ	**East Tamaki Re**	**1.85**	**263**	P	Pn	17 53 11.1	+0.1
PRRZ	**Plateau Road**	**1.87**	**200**	Pn	Pn	17 53 11.1	-0.1
PRRZ	**Plateau Road**	**1.87**	**200**	P	Pn	17 53 11.2	-0.1
KBAZ	**Karaka Road Bo**	**1.90**	**259**	Pn	Pn	17 53 14.5	+3.0
KBAZ	**Karaka Road Bo**	**1.90**	**259**	P	Pn	17 53 11.9	+0.4
CNGZ	**Carnagh Statio**	**1.90**	**156**	P	Pn	17 53 11.8	+0.2
ABAZ	**Army Bay**	**1.92**	**274**	P	Pn	17 53 11.6	-0.2
ALRZ	**Allen Road**	**1.94**	**201**	Pn	Pn	17 53 11.8	-0.1
ALRZ	**Allen Road**	**1.94**	**201**	P	Pn	17 53 12.0	0.0
WPRZ	**Whakapapatarin**	**1.96**	**205**	P	Pn	17 53 12.5	+0.4
EPAZ	**Eden Park BICE**	**1.99**	**266**	P	Pn	17 53 12.6	+0.1
HBAZ	**Herne Bay Bore**	**2.00**	**266**	P	Pn	17 53 12.4	-0.1
RIGZ	**Rimuhau**	**2.00**	**168**	P	Pn	17 53 12.5	-0.2
RIGZ				S	S	17 53 43.1	+0.6
SNGZ	**Shannon Statio**	**2.03**	**177**	Pn	Pn	17 53 11.8	-1.1
SNGZ	**Shannon Statio**	**2.03**	**177**	P	Pn	17 53 11.8	-1.1
SNGZ				S	S	17 53 42.7	-0.2
SNGZ	**Shannon Statio**	**2.03**	**177**	P	S	17 53 43.6	+0.6
KUTZ	**Kaahu Road**	**2.06**	**212**	P	Pn	17 53 13.8	+0.6
TLZ	**Tolley Road**	**2.07**	**220**	P	Pn	17 53 14.1	+0.8
AWAZ	**Awhitu Peninsu**	**2.09**	**261**	P	Pn	17 53 13.2	-0.2
RVAZ	**Riverhead Bore**	**2.12**	**269**	P	Pn	17 53 13.3	-0.5
MTHZ	**Maungataniwha**	**2.12**	**188**	P	Pn	17 53 13.1	-0.8
MTHZ				S	S	17 53 44.8	+0.2
WTAZ	**Waiatarua**	**2.13**	**264**	P	Pn	17 53 13.7	-0.2
RAHZ	**Arahi**	**2.17**	**183**	P	Pn	17 53 14.0	-0.3
RAHZ	**Arahi**	**2.17**	**183**	P	S	17 53 46.6	+1.1
MRHZ	**Matea Rd**	**2.18**	**197**	P	Pn	17 53 13.6	-0.9
PRGZ	**Paritu Road**	**2.23**	**167**	Pn	Pn	17 53 14.5	-0.5
PRGZ	**Paritu Road**	**2.23**	**167**	P	Pn	17 53 14.2	-0.9
PRGZ	**Paritu Road**	**2.23**	**167**	P	S	17 53 43.2	-3.5
WATZ	**Wairara**	**2.28**	**211**	P	Pn	17 53 15.5	0.0
KNZ	**Kokohu**	**2.30**	**171**	Pn	Pn	17 53 14.7	-0.9
KNZ	**Kokohu**	**2.30**	**171**	P	Pn	17 53 14.8	-0.9
KNZ	**Kokohu**	**2.30**	**171**	P	S	17 53 44.4	-3.4
WHHZ	**Waihua**	**2.33**	**180**	P	Pn	17 53 15.4	-0.6
WHHZ	**Waihua**	**2.33**	**180**	P	S	17 53 49.0	+0.6
NMHZ	**Naumai**	**2.37**	**188**	Pn	Pn	17 53 16.1	-0.4
NMHZ	**Naumai**	**2.37**	**188**	P	Pn	17 53 16.1	-0.4
WCZ	**Waipu Caves**	**2.45**	**288**	P	Pn	17 53 16.3	-1.2
MHGZ	**Mahia Peninsul**	**2.46**	**167**	Pn	Pn	17 53 16.7	-0.8
MHGZ	**Mahia Peninsul**	**2.46**	**167**	P	Pn	17 53 16.7	-0.8
RITZ	**Rihia Road**	**2.47**	**205**	P	Pn	17 53 17.3	-0.3
BKZ	**Black Stump Fm**	**2.48**	**193**	Pn	Pn	17 53 16.1	-1.6
BKZ	**Black Stump Fm**	**2.48**	**193**	P	Pn	17 53 16.2	-1.6
ARHZ	**Aropaoanui**	**2.52**	**184**	Pn	Pn	17 53 17.3	-0.8
ARHZ	**Aropaoanui**	**2.52**	**184**	P	Pn	17 53 17.3	-0.7
HIZ	**Hauiti**	**2.57**	**226**	Pn	Pn	17 53 19.0	+0.3
HIZ	**Hauiti**	**2.57**	**226**	P	Pn	17 53 19.1	+0.4
WTVZ	**West Tongariro**	**2.69**	**208**	Pn	Pn	17 53 19.2	-1.0
WTVZ	**West Tongariro**	**2.69**	**208**	P	Pn	17 53 19.3	-0.9
TWVZ	**Taurewa**	**2.71**	**211**	P	Pn	17 53 19.9	-0.5
MCHZ	**McNeill Hill**	**2.72**	**188**	Pn	Pn	17 53 19.4	-1.0
MCHZ	**McNeill Hill**	**2.72**	**188**	P	Pn	17 53 19.4	-1.0
MCHZ				P	Pn	17 53 19.4	-1.0
MCHZ	**McNeill Hill**	**2.72**	**188**	P	S	17 53 57.2	+0.8
NGZ	**Ngauruhoe**	**2.74**	**207**	Pn	Pn	17 53 19.9	-0.9
NGZ	**Ngauruhoe**	**2.74**	**207**	P	Pn	17 53 20.1	-0.6
KWHZ	**Kaweka Forest**	**2.74**	**193**	P	Pn	17 53 19.6	-1.1
KWHZ	**Kaweka Forest**	**2.74**	**193**	P	S	17 53 58.7	+1.8
COVZ	**Chateau Observ**	**2.78**	**208**	P	Pn	17 53 20.3	-0.9
TUVZ	**Tukino**	**2.80**	**206**	Pn	Pn	17 53 20.2	-1.2
TUVZ	**Tukino**	**2.80**	**206**	P	Pn	17 53 20.3	-1.2
FWVZ	**Far West T-bar**	**2.83**	**207**	Pn	Pn	17 53 20.6	-1.2
FWVZ	**Far West T-bar**	**2.83**	**207**	P	Pn	17 53 20.8	-1.1
WHVZ	**Whangaehu Hut**	**2.84**	**206**	Pn	Pn	17 53 20.6	-1.4
WHVZ	**Whangaehu Hut**	**2.84**	**206**	P	Pn	17 53 20.7	-1.2
TRVZ	**Turoa**	**2.87**	**207**	Pn	Pn	17 53 21.0	-1.3
TRVZ	**Turoa**	**2.87**	**207**	P	Pn	17 53 20.9	-1.4
WNVZ	**Wahianoa**	**2.87**	**206**	Pn	Pn	17 53 20.8	-1.5
BHHZ	**Black Hill Sta**	**2.88**	**198**	Pn	Pn	17 53 20.4	-2.0
BHHZ	**Black Hill Sta**	**2.88**	**198**	P	Pn	17 53 20.4	-1.9
MOVZ	**Moawhango**	**2.90**	**203**	Pn	Pn	17 53 20.5	-2.0
MOVZ	**Moawhango**	**2.90**	**203**	P	Pn	17 53 20.5	-1.9
CKHZ	**Cape Kidnapper**	**2.91**	**182**	Pn	Pn	17 53 21.0	-1.5
CKHZ	**Cape Kidnapper**	**2.91**	**182**	P	Pn	17 53 21.0	-1.5
CKHZ	**Cape Kidnapper**	**2.91**	**182**	P	S	17 53 55.1	-5.0
PKVZ	**Pokaka**	**2.94**	**210**	Pn	Pn	17 53 21.7	-1.2
PKVZ	**Pokaka**	**2.94**	**210**	P	Pn	17 53 21.8	-1.2
KRHZ	**Kereru**	**2.97**	**193**	P	Pn	17 53 21.4	-1.9
MTVZ	**Mangateitei**	**2.97**	**207**	Pn	Pn	17 53 22.0	-1.4
MTVZ	**Mangateitei**	**2.97**	**207**	P	Pn	17 53 22.4	-0.9
KAHZ	**Kahuranaki**	**3.05**	**185**	Pn	Pn	17 53 22.7	-1.6
KAHZ	**Kahuranaki**	**3.05**	**185**	P	Pn	17 53 22.7	-1.6
VRZ	**Vera Road**	**3.07**	**219**	Pn	Pn	17 53 24.1	-0.3
VRZ	**Vera Road**	**3.07**	**219**	P	Pn	17 53 24.1	-0.2
PNHZ	**Pukenui**	**3.26**	**194**	Pn	Pn	17 53 24.4	-2.4
PNHZ	**Pukenui**	**3.26**	**194**	P	Pn	17 53 24.4	-2.3
PXZ	**Pawanui**	**3.29**	**185**	Pn	Pn	17 53 24.6	-2.4
PXZ	**Pawanui**	**3.29**	**185**	P	Pn	17 53 24.6	-2.4
PXZ	**Pawanui**	**3.29**	**185**	P	S	17 54 03.9	-4.3
OUZ	**Omahuta**	**3.31**	**296**	P	Pn	17 53 25.7	-1.6
WPHZ	**Waipukurau**	**3.37**	**190**	Pn	Pn	17 53 25.6	-2.4
WPHZ	**Waipukurau**	**3.37**	**190**	P	Pn	17 53 25.5	-2.4
TSZ	**Takapari Road**	**3.45**	**196**	Pn	Pn	17 53 26.2	-2.8
TSZ	**Takapari Road**	**3.45**	**196**	P	Pn	17 53 26.3	-2.7
WAZ	**Wanganui**	**3.48**	**210**	Pn	Pn	17 53 27.3	-2.1
WAZ	**Wanganui**	**3.48**	**210**	P	Pn	17 53 27.6	-1.7
LREZ	**Lake Rotokare**	**3.50**	**218**	P	Pn	17 53 29.0	-0.6
PRHZ	**Porangahau**	**3.54**	**187**	Pn	Pn	17 53 27.5	-2.6
PRHZ	**Porangahau**	**3.54**	**187**	P	Pn	17 53 27.5	-2.6
DVHZ	**Dannevirke**	**3.64**	**193**	Pn	Pn	17 53 28.2	-3.1
DVHZ	**Dannevirke**	**3.64**	**193**	P	Pn	17 53 28.1	-3.2
ANWZ	**Angora Road**	**3.75**	**189**	P	Pn	17 53 30.0	-2.6
POWZ	**Post Office Ro**	**3.81**	**197**	Pn	Pn	17 53 30.4	-3.0
POWZ	**Post Office Ro**	**3.81**	**197**	P	Pn	17 53 30.5	-2.9
PRWZ	**Pori Road**	**3.92**	**194**	Pn	Pn	17 53 31.9	-2.9
PRWZ	**Pori Road**	**3.92**	**194**	P	Pn	17 53 31.9	-2.9
BFZ	**Birch Farm**	**4.00**	**191**	Pn	Pn	17 53 32.8	-2.9
MRZ	**Mangatainoka R**	**4.11**	**198**	Pn	Pn	17 53 33.4	-3.7
MRZ	**Mangatainoka R**	**4.11**	**198**	P	Pn	17 53 33.5	-3.6
TIWZ	**Tintock**	**4.15**	**194**	Pn	Pn	17 53 34.2	-3.5
TIWZ	**Tintock**	**4.15**	**194**	P	Pn	17 53 34.3	-3.4
CPWZ	**Castlepoint**	**4.23**	**190**	Pn	Pn	17 53 35.0	-3.5
CPWZ	**Castlepoint**	**4.23**	**190**	P	Pn	17 53 35.9	-2.7
HOWZ	**Holdsworth Sta**	**4.35**	**197**	Pn	Pn	17 53 35.9	-4.2
HOWZ	**Holdsworth Sta**	**4.35**	**197**	P	Pn	17 53 35.9	-4.2
OGWZ	**Otaki Gorge**	**4.37**	**201**	Pn	Pn	17 53 36.4	-3.9
OGWZ	**Otaki Gorge**	**4.37**	**201**	P	Pn	17 53 36.4	-3.8
TMWZ	**Te Maipa**	**4.47**	**193**	Pn	Pn	17 53 37.6	-4.1
TMWZ	**Te Maipa**	**4.47**	**193**	P	Pn	17 53 37.6	-4

KARP	**Karpathos**	**1.71 240**	P	**Pn**	**17 59 20.0**	**-0.8**
KARP	**Karpathos**	**1.71 240**	*e*Pn	**Pn**	**17 59 21.1**	**+0.4**
KARP			S	**Sn**	**17 59 41.3**	**-0.9**
SMG	**Samos**	**2.15 308**	P	**Pn**	**17 59 26.8**	**+0.1**
SMG			S	**Sn**	**17 59 51.6**	**-1.4**
SMG			AML	AML	17 59 55.1	
	comp=E,69μm,0.2s					
SMG			AML	AML	17 59 55.4	
	comp=N,128μm,0.2s					
SMG	**Samos**	**2.15 308**	P	**Pn**	**17 59 26.5**	**-0.2**
SMG			S	**Sn**	**17 59 51.6**	**-1.4**
ZKR	**Zakros**	**2.59 241**	P	**Pn**	**17 59 33.3**	**+0.4**
ZKR	**Zakros**	**2.59 241**	P	**Pn**	**17 59 32.9**	**0.0**
NPS	**Neapolis**	**2.97 248**	P	**Pn**	**17 59 37.1**	**-0.9**
NPS	**Neapolis**	**2.97 248**	P	**Pn**	**17 59 37.5**	**-0.5**
LAST	**Lasithi**	**3.11 247**	P	**Pn**	**17 59 39.5**	**-0.6**
LAST	**Lasithi**	**3.11 247**	P	**Pn**	**17 59 39.6**	**-0.4**

*ISCJB **10** 17:59:28.7±1.8, 32°.56S±0°.06×71°.8W±0°.2, h8km±22km, Error ellipse: s-maj=23.6km s-min=8.0km az=166.8*
*GUC **10** 17:59:28.4±0.6, 32°.39S×71°.69W, h31km±4km, ML3.2*
*SJA **10** 17:59:32.0±0.5, 32°.31S×71°.50W, h10km, ML2.6, MW3.0*

ISC 10 17:59:26.5±2.6, 32°.37S±0°.04×71°.7W±0°.1, h4km±15km, n15, σ0°.88/22, 1C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROCH	**El Roble**	**0.81**	**137**	⇑*i*P	**Pb**	**17 59 43.8**	**+0.5**
ROCH				*i*S	**Sb**	**17 59 55.6**	**+0.8**
PEL	**Peldehue**	**1.13**	**133**	*e*P	**Pb**	**17 59 48.6**	**0.0**
PEL				*i*S	**Sn**	**18 00 04.9**	**-0.2**
CLCH	**Cerro Calan**	**1.39**	**137**	*e*P	**Pb**	**17 59 52.9**	**-0.2**
CLCH				*i*S	**Sg**	**18 00 11.2**	**-0.1**
CLCH				IAML		18 00 19.3	
	comp=E,393nm,0.5s						
FCH	**Farellones**	**1.50**	**130**	*e*P	**Pg**	**17 59 55.4**	**+0.2**
FCH				*i*S	**Sg**	**18 00 15.1**	**+0.4**
FCH				IAML		18 00 17.3	
	comp=E,320nm,0.1s						
LMEL	**Las Melosas**	**1.92**	**141**	*e*P	**Pb**	**18 00 01.1**	**-1.1**
LMEL				*i*S	**Sb**	**18 00 26.0**	**-0.4**
LMEL				IAML		18 00 33.5	
	comp=N,296nm,0.2s						
AUSP	**Uspallata**	**1.94**	**86**	*e*S	**Sg**	**18 00 30.3**	**+1.6**
RTLS	**Leoncito**	**2.09**	**75**	*e*S	**Sg**	**18 00 34.6**	**+0.9**
RTLS				IAML		18 00 40.1	
	comp=Z,42nm,0.5s						
GO04	**Tololo Observa**	**2.32**	**19**	*e*P	**Pn**	**18 00 06.5**	**+0.8**
GO04				*i*S	**Sb**	**18 00 36.5**	**-1.6**
GO04				IAML		18 00 40.7	
	comp=E,492nm,0.4s						
ARCO	**CERRO ARCO**	**2.35**	**102**	*e*P	**Pg**	**18 00 11.5**	**-0.1**
ARCO				IAML		18 00 52.0	
	comp=Z,40nm,0.5s						
ASAL	**Salagasta**	**2.40**	**96**	*e*P	**Pg**	**18 00 12.1**	**-0.5**
ASAL				*e*S	**Sg**	**18 00 42.0**	**-1.7**
AAGR	**Agrelo**	**2.50**	**107**	*e*P	**Pg**	**18 00 13.8**	**-0.5**
RTCV	**Cerro Valdivia**	**2.70**	**80**	*e*P	**Pb**	**18 00 15.8**	**+0.3**
AROD	**Rodeo**	**2.89**	**41**	*e*P	**Pb**	**18 00 19.7**	**+0.8**
AMOG	**MOGNA**	**3.06**	**63**	*e*P	**Pb**	**18 00 20.8**	**-0.8**
ACDV	**Cuesta del Vie**	**3.09**	**45**	*e*P	**Pb**	**18 00 21.9**	**-0.3**

IDC 10 18:07:40.1±1.6, 18°.32S×174°.48W, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.7/50, mbtmp3.9/4, MS3.1/2, Ms1 3.1/2, ms1mx2.7/47, Error ellipse: s-maj=48.2km s-min=35.6km az=131.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.10**	**31**	LR	LR	18 10 32.4	
	comp=Z,74nm,21.8s,baz=169,slow=34						
WRA	**Warramunga Arr**	**48.23**	**259**	P	P	18 16 22.8	-0.3
	1.3nm,0.6s,baz=97,slow=8.2,SNR=16						
ASAR	**Alice Springs**	**48.27**	**254**	P	P	18 16 23.4	0.0
	4.2nm,0.7s,baz=89,slow=8.0,SNR=39						
ASAR				LR	LR	18 37 36.6	
	comp=Z,49nm,18.2s,baz=143,slow=37						
VNDA	**Vanda**	**60.38**	**186**	P	P	18 17 50.7	0.0
	0.6nm,0.7s,baz=6.5,slow=7.5,SNR=4.2						
ILAR	**Eielson Array**	**85.50**	**11**	P	P	18 20 19.4	0.0
	0.1nm,0.4s,baz=187,slow=6.3,SNR=3.0						

*ISCJB **10** 18:11:50.6±0.5, 24°.47N±0°.03×122°.32E±0°.02, h62km±6km, Error ellipse: s-maj=5.6km s-min=3.0km az=177.5*
*JMA **10** 18:11:50.1±0.2, 24°.49N×122°.30E, h70km±3km, M1.8*
*TAP **10** 18:11:50.7, 24°.46N×122°.27E, h63km±1km, ML2.9, B*

ISC 10 18:11:50.8±1.4, 24°.48N±0°.04×122°.32E±0°.02, h63km±9km, n39, σ0°.61/72, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.18**	**292**	*e*P	**Pn**	**18 12 01.0**	**+0.5**
	baz=303						
EOS1				*e*S	**Sn**	**18 12 09.0**	**+1.6**
	baz=303						
TWC	**Suao**	**0.44**	**287**	P	**Pn**	**18 12 02.4**	**0.0**
	baz=290						
TWC				*e*S	**Sn**	**18 12 09.7**	**-1.2**
	baz=290						
ENAH	**Nanao**	**0.46**	**266**	*e*P	**Pn**	**18 12 02.4**	**-0.2**
	baz=268						
ENAH				*e*S	**Sn**	**18 12 11.7**	**+0.5**
	baz=268						
EGS		**0.50**	**316**	*e*S	**Sn**	**18 12 11.9**	**0.0**
	baz=321						
NANB	**Nanao**	**0.52**	**264**	P	**Pn**	**18 12 03.2**	**0.0**
	baz=265						
NANB				*e*S	**Sn**	**18 12 11.6**	**-0.6**
	baz=265						
ENA	**Nanau**	**0.53**	**264**	*e*P	**Pn**	**18 12 03.5**	**+0.3**
	baz=265						
ENA				S	**Sn**	**18 12 12.4**	**0.0**
	baz=265						
JYNG	**Yonagunijimaku**	**0.57**	**93**	P	**Pn**	**18 12 04.0**	**+0.2**
JYNG				*e*S	**Sn**	**18 12 13.5**	**+0.2**
NTC	**Toucheng**	**0.58**	**310**	*e*P	**Pn**	**18 12 03.6**	**-0.2**
	baz=314						
NTC				*e*S	**Sn**	**18 12 12.5**	**-0.8**
	baz=314						
ILA	**Ilan**	**0.59**	**299**	*e*S	**Sn**	**18 12 14.1**	**+0.6**
	baz=302						
YOJ	**Yonaguni jima**	**0.64**	**92**	*e*P	**Pn**	**18 12 04.4**	**-0.1**
	baz=89						
YOJ				*e*S	**Sn**	**18 12 13.9**	**-0.6**
	baz=89						
YOJ	**Yonaguni jima**	**0.64**	**92**	P	**Pn**	**18 12 04.6**	**+0.1**
YOJ				*e*S	**Sn**	**18 12 14.7**	**+0.2**
TWE	**Neicheng**	**0.64**	**292**	*e*P	**Pn**	**18 12 04.6**	**+0.1**
	baz=295						
TWE				*e*S	**Sn**	**18 12 14.7**	**+0.2**
	baz=295						
TIPB	**Shuangxi**	**0.66**	**318**	*e*P	**Pn**	**18 12 03.9**	**-0.9**
	baz=321						
TIPB				*e*S	**Sn**	**18 12 13.7**	**-1.3**
	baz=321						
ENTT	**Nioudou**	**0.70**	**283**	*e*P	**Pn**	**18 12 05.7**	**+0.4**
	baz=285						
ENTT				*e*S	**Sn**	**18 12 16.3**	**+0.4**
	baz=285						
NACB	**Ninganchiao**	**0.72**	**245**	P	**Pn**	**18 12 05.7**	**+0.1**
	baz=244						
NACB				S	**Sn**	**18 12 15.8**	**-0.6**
	baz=244						
NWF	**Wu-fen Shan**	**0.76**	**321**	*e*S	**Sn**	**18 12 16.8**	**-0.4**
	baz=323						
TWD	**Chiawan**	**0.77**	**239**	*e*P	**Pn**	**18 12 05.2**	**-0.8**
	baz=237						
TWD				*e*S	**Sn**	**18 12 16.4**	**-0.8**
	baz=237						
NWLT	**Wulai**	**0.80**	**292**	*e*P	**Pn**	**18 12 07.0**	**+0.6**
	baz=294						
NWLT				*e*S	**Sn**	**18 12 18.0**	**+0.1**
	baz=294						
TWA	**Mucha**	**0.83**	**307**	P	**Pn**	**18 12 06.6**	**-0.2**
	baz=309						
TWA				*e*S	**Sn**	**18 12 18.6**	**-0.1**
	baz=309						
NNSB	**Datong**	**0.85**	**267**	P	**Pn**	**18 12 07.2**	**0.0**
	baz=267						
NNSB				*e*S	**Sn**	**18 12 19.4**	**+0.1**
	baz=267						
NNSH	**Datong**	**0.85**	**267**	*e*S	**Sn**	**18 12 18.7**	**-0.6**
	baz=267						
NNS	**Nan Shan**	**0.86**	**267**	P	**Pn**	**18 12 07.2**	**-0.1**
	baz=268						
NNS				*e*S	**Sn**	**18 12 19.4**	**-0.1**
	baz=268						
ENLB	**Shoufeng**	**0.87**	**229**	*e*P	**Pn**	**18 12 06.9**	**-0.5**
	baz=227						
ENLB				S	**Sn**	**18 12 19.9**	**+0.4**
	baz=227						
YHNB	**Yeheng**	**0.88**	**283**	P	**Pn**	**18 12 07.6**	**+0.1**
	baz=284						
YHNB				*e*S	**Sn**	**18 12 19.9**	**+0.2**
	baz=284						
NSK	**Sanguang**	**0.89**	**283**	P	**Pn**	**18 12 07.7**	**0.0**
	baz=284						
NSK				*e*S	**Sn**	**18 12 20.1**	**0.0**
	baz=284						
TWS1	**Kuangyinshan**	**1.02**	**307**	P	**Pn**	**18 12 09.1**	**-0.1**
	baz=309						
TWS1				*e*S	**Sn**	**18 12 22.9**	**0.0**
	baz=309						
ESL	**Shilin**	**1.04**	**231**	P	**Pn**	**18 12 09.6**	**+0.1**
	baz=229						
ESL				*e*S	**Sn**	**18 12 22.1**	**-1.4**
	baz=229						
CHGB	**Renai**	**1.12**	**248**	P	**Pn**	**18 12 11.7**	**+0.9**
	baz=248						
CHGB				*e*S	**Sn**	**18 12 25.5**	**-0.1**
	baz=248						
EGFH	**Guangfu**	**1.15**	**225**	P	**Pn**	**18 12 11.2**	**+0.3**
	baz=224						
EGFH				S	**Sn**	**18 12 25.1**	**-0.7**
	baz=224						
LIOB	**Emei**	**1.19**	**278**	P	**Pn**	**18 12 11.4**	**-0.1**
	baz=279						
LIOB				*e*S	**Sn**	**18 12 27.2**	**+0.2**
	baz=279						
NSTT	**Nanjuang**	**1.21**	**277**	P	**Pn**	**18 12 11.9**	**+0.2**
	baz=278						
NSTT				*e*S	**Sn**	**18 12 27.3**	**+0.1**
	baz=278						
VWDT	**VWDT**	**1.29**	**236**	P	**Pn**	**18 12 13.1**	**+0.2**
	baz=235						
VWDT				S	**Sn**	**18 12 28.8**	**-0.5**
	baz=235						
IRIF	**Iriomote-Funau**	**1.30**	**96**	P	**Pn**	**18 12 12.6**	**-0.3**
IRIF				S	**Sn**	**18 12 29.2**	**-0.2**
EHY	**Hungye**	**1.33**	**223**	*e*P	**Pn**	**18 12 11.8**	**-1.5**
	baz=222						
SMLT	**Sun Moon Lake**	**1.42**	**246**	*e*P	**Pn**	**18 12 16.3**	**+1.6**
	baz=245						
SMLT				*e*S	**Sn**	**18 12 33.5**	**+0.9**
	baz=245						
JKRS	**Kuro-shima**	**1.56**	**99**	P	**Pn**	**18 12 16.7**	**+0.3**
JKRS				*e*S	**Sn**	**18 12 36.5**	**+0.7**
JIJ	**Ishigaki jima**	**1.67**	**94**	P	**Pn**	**18 12 17.6**	**-0.3**
JIJ				*e*S	**Sn**	**18 12 37.7**	**-0.6**
WDLH	**Douliu**	**1.81**	**244**	*e*P	**Pn**	**18 12 21.0**	**+1.3**
	baz=244						
JISG	**Ishigakijimahi**	**1.82**	**86**	P	**Pn**	**18 12 19.6**	**-0.3**
JISG				*e*S	**Sn**	**18 12 42.9**	**+0.9**

*MOS **10** 18:12:39.5±3.1, 53°.37N×107°.70E, h10km, mb4.2/1, Error ellipse: s-maj=99.9km s-min=36.0km az=138.9*

BYKL 10 18:12:40.8±0.2, 53°.11N×107°.83E, h15km±3km, 6C-2D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KELR	**Kotokel**	**0.38**	**157**	⇑*i*Pg	Pg	18 12 47.6	-0.9
KELR				*i*Sg	Sg	18 12 52.7	-1.1
OGRR	**Ongureny**	**0.55**	**345**	⇑*i*Pg	Pg	18 12 51.3	-0.4
	68nm,0.4s						
OGRR				⇓*i*Pg	Pg	18 12 51.3	-0.4
	15nm,0.4s						
OGRR				⇑*i*Pg	Pg	18 12 51.3	-0.4
	80nm,0.4s						
OGRR				*e*		18 12 52.6	
OGRR				*e*Sg	Sg	18 12 59.0	-0.1
OGRR				Pmax			
	67nm,0.3s						
OGRR				Smax			
	458nm,0.2s						
MXMB	**Maximikha**	**0.57**	**74**	⇑*i*Pg	Pg	18 12 51.1	-1.0
MXMB				*e*		18 12 52.2	
MXMB				*e*Sg	Sg	18 12 59.7	0.0
ZRHB	**Zarechye**	**0.69**	**217**	*e*Pg	Pg	18 12 53.7	-0.6
ZRHB				*e*Pb	Pn	18 12 56.5	+0.4
ZRHB				*e*Sg	Sg	18 13 03.4	-0.1
ZRHB				max			
	76nm,0.2s						
ZRHB				Smax			
	529nm,0.3s						
TRG	**Tyrgan**	**0.96**	**249**	⇑*i*Pg	Pb	18 12 58.0	-1.2
TRG				*e*Sg	Sg	18 13 11.9	-0.1
TRG				*e*Sb	Sn	18 13 15.2	+1.9
TRG				Pmax			
	62nm,0.1s						
TRG				max			
	863nm,0.4s						
TRG	**Tyrgan**	**0.96**	**249**	⇓*i*PG	Pb	18 12 58.2	-1.0
TRG				*e*		18 13 12.0	
TRG				pmax	pmax		
	comp=Z,61nm,0.1s						
TRG				smax	smax		
	comp=N,862nm,0.3s						
UUDB	**Ulan-Yde**	**1.25**	**185**	⇑*i*Pg	Pn	18 13 03.1	-0.6
UUDB				*e*		18 13 05.1	
UUDB				*e*Sg	Sb	18 13 19.7	-0.3
UUDB				max			
	comp=N,44nm,0.1s						
UUDB				Smax			
	comp=N,437nm,0.5s						
KAB	**Kabansk**	**1.28**	**215**	Pg	Pn	18 13 04.0	-0.2
KAB				*e*Sg	Sn	18 13 21.6	+0.5
KAB				*e*Sb	Sg	18 13 23.9	+1.8
KAB				Pmax			
	comp=N,109nm,0.4s						
KAB				max			
	comp=N,550nm,0.5s						
SYVR	**Suvo**	**1.41**	**66**	*e*Pg	Pn	18 13 05.9	0.0
SYVR				*e*		18 13 13.1	
SYVR				*e*Sg	Sg	18 13 25.9	-0.4
SYVR				max			
	comp=N,30nm,0.2s						
SYVR				Smax			
	comp=N,189nm,0.4s						
HRMR	**Khuramsha**	**1.58**	**200**	Smax		18 13 08.8	
HRMR				*e*Sg	Sb	18 13 30.3	+0.9
HRMR				*e*		18 13 32.5	
BGT	**Bolshoye Golou**	**1.82**	**235**	*e*Pg	Pb	18 13 13.3	-0.5
BGT				*e*Sg	Sg	18 13 38.4	-1.0
BGT				Pmax			
	comp=N,18nm,0.3s						
BGT				Smax			
	comp=N,96nm,0.2s						
LSTR	**Listvyanka**	**2.21**	**237**	*e*Pn	Pn	18 13 16.7	-0.3
LSTR				*e*Pg	Pb	18 13 20.1	-0.4
LSTR				*e*		18 13 45.3	
LSTR				*e*Sg	Sb	18 13 49.4	+1.7
LSTR				Pmax			
	comp=N,8.0nm,0.4s						
LSTR				Smax			
	comp=N,86nm,0.4s						
IRK	**Irkutsk**	**2.33**	**250**	*e*	Pg	18 13 25.8	+0.3
IRK				*e*		18 13 39.0	
IRK				*e*Sg	Sb	18 13 53.1	+1.9
IRK				Smax			
	comp=N,483nm,0.5s						
IRK	**Irkutsk**	**2.33**	**250**	*e*PN	Pb	18 13 21.7	-0.8
IRK				*e*		18 13 52.8	
IRK				pmax	pmax		
	comp=Z,58nm,0.1s						
IRK				smax	smax		
	comp=N,486nm,0.8s						
IVK	**Ivanovka**	**2.47**	**239**	*e*Pn	Pn	18 13 19.9	-0.6
IVK				*e*Pg	Pb	18 13 23.9	-0.9
IVK				*e*Sg	Sb	18 13 56.7	+1.7
IVK				Pmax			
	comp=N,8.0nm,0.2s						
IVK				Smax			
	comp=N,89nm,0.4s						
YLYR	**Ulyunkhan**	**2.65**	**47**	*e*Pn	Pn	18 13 23.5	+0.6
YLYR				*e*Pg	Pb	18 13 27.4	-0.5
YLYR				*e*Sg	Sg	18 14 03.3	-2.5
YLYR				Pmax			
	comp=N,8.0nm,0.4s						
YLYR				Smax			
	comp=N,39nm,0.3s						
NIZ	**Nizh Angarsk**	**2.85**	**20**	*e*	Pn	18 13 27.0	+1.3
NIZ				*e*		18 13 33.6	
NIZ				*e*		18 14 02.5	
NIZ				*e*Sg	Sg	18 14 10.6	-1.7
NIZ				*e*		18 14 12.6	
NIZ				max			
	comp=N,7.0nm,0.4s						
NIZ				max			
	comp=N,39nm,0.3s						
TLY	**Talaya**	**2.94**	**242**	*e*Pn	Pn	18 13 28.2	+1.3
TLY				*e*Pg	Pb	18 13 32.3	-0.5
TLY				*e*Sg	Sb	18 14 11.6	+3.1
TLY				Pmax			
	comp=N,6.0nm,0.3s						
TLY				Smax			
	comp=N,57nm,0.4s						
TLY	**Talaya**	**2.94**	**242**	*e*PN	Pb	18 13 34.2	+1.4
TLY				*e*		18 14 11.0	
TLY				pmax	pmax		
	comp=Z,7.0nm,0.3s						
TLY				smax	smax		
	comp=E,57nm,0.6s						
KMO	**Kumora**	**3.41**	**34**	*e*Pn	Pn	18 13 34.2	+0.8
KMO				*e*Pg	Pb	18 13 40.9	+0.1
KMO				*e*		18 13 52.7	
KMO				*e*Sg	Sg	18 14 26.5	-3.6
KMO				max			
	comp=E,12nm,0.4s						
KMO				Smax			
	comp=E,50nm,1.0s						
ARS	**Arshan**	**3.51**	**252**	*e*Pg	Pb	18 13 43.7	+1.1
ARS				*e*		18 13 43.8	
ARS				*e*Sg	Sg	18 14 30.2	-3.3
ARS				max			
	comp=E,18nm,0.6s						
ARS				Smax			
	comp=E,290nm,0.7s						
ARS	**Arshan**	**3.51**	**252**	*e*PN	Pb	18 13 44.0	+1.4
ARS				*e*		18 14 27.8	
ARS				pmax	pmax		
	comp=Z,19nm,0.5s						
ARS				smax	smax		
	comp=E,289nm,0.8s						
CIT	**Chita**	**3.66**	**105**	*e*Pn	Pn	18 13 37.6	+0.7
CIT				Pg	Pb	18 13 45.7	+0.6
CIT				*e*Sg	Sg	18 14 34.2	-4.0
CIT				Pmax			
	comp=E,22nm,0.1s						
CIT				Smax			
	comp=E,173nm,0.2s						
YOA	**Uoyan**	**3.78**	**35**	*e*	Pb	18 13 48.2	+1.0
YOA				*e*		18 14 17.6	
YOA				*e*Sg	Sg	18 14 39.0	-3.1
YOA				Smax			
	comp=E,125nm,1.1s						
ZAK	**Zakamensk**	**3.93**	**228**	*e*	Pn	18 13 40.3	-0.4
ZAK				*e*Pg	Pb	18 13 51.2	+1.4
ZAK				*e*Sg	Sg	18 14 44.2	-2.8
ZAK				Pmax			
	comp=E,3.0nm,0.4s						
ZAK				Smax			
	comp=E,16nm,0.7s						
MOY	**Mondy**	**4.43**	**254**	*e*Pn	Pn	18 13 48.3	+0.8
MOY				*e*		18 13 56.4	
MOY				*e*		18 14 43.1	
MOY				*e*Sg	Sb	18 14 57.1	+5.5
MOY				max			
	comp=E,5.0nm,0.7s						
MOY				Smax			
	comp=E,56nm,0.9s						
SVKR	**Severomuysk**	**4.49**	**46**	*e*Sg	Sg	18 15 00.1	-4.7
SVKR				*e*		18 15 03.9	
SVKR				max			
	comp=E,84nm,0.9s						
ORL	**Orlik**	**4.90**	**266**	*e*Pn	Pn	18 13 55.9	+1.9
ORL				*e*		18 14 01.4	
ORL				*e*		18 14 04.3	
ORL				*e*		18 14 52.8	
ORL				*e*Sg	Sg	18 15 12.5	-5.4
ORL				max			
	comp=E,1.0nm,0.1s						
ORL				Smax			
	comp=E,21nm,0.9s						
ULN	**Ulaanbaatar**	**5.28**	**186**	*e*	Pb	18 14 16.0	+3.3
ULN				*e*		18 15 11.0	
ULN				*e*Sg	Sg	18 15 23.8	-6.2
ULN				*e*		18 15 27.0	
NLYR	**Nelyaty**	**5.67**	**50**	*e*	Pb	18 14 23.4	+4.0
NLYR				*e*Sg	Sg	18 15 36.2	-6.6
NLYR				max			
	comp=E,3.0nm,0.6s						
NLYR				Smax			
	comp=E,37nm,1.1s						
BOD	**Bodaibo**	**5.88**	**34**	*e*Sg	Sg	18 15 41.7	-7.6
BOD				Smax			
	comp=E,16nm,1.7s						
KNGR	**Kungurtug, Tuv**	**6.86**	**253**	*e*	Pb	18 14 38.8	-0.9
KNGR				*e*		18 15 37.3	
KNGR				*e*		18 15 56.3	
KNGR				*e*Sg	Sg	18 16 13.7	-7.2
KNGR				*e*		18 16 23.0	
CRS	**Chara**	**7.10**	**54**	*e*Sg	Sg	18 16 20.4	-8.1
CRS				Smax			
	comp=E,14nm,0.9s						
TUP	**Tupik**	**7.31**	**75**	*e*	Pb	18 14 49.7	+2.5
TUP				*e*Sg	Sg	18 16 26.1	-9.0
TUP				max			
	comp=E,1.0nm,0.5s						
TUP				Smax			
	comp=E,29nm,1.3s						
TUP	**Tupik**	**7.31**	**75**	*e*PN	Pn	18 14 27.2	+0.3
TUP				*e*		18 14 51.0	
TUP				*e*S	Sn	18 15 48.4	-1.1
TUP				*e*		18 16 25.5	
TUP				pmax	pmax		
	comp=Z,2.0nm,0.4s						
TUP				smax	smax		
	comp=N,28nm,0.9s						

*IDC **10** 18:21:29.4±0.7, 56°.01S×26°.54W, h0km, mb4.2/6, mb1 4.3/7, mb1mx3.9/34, mbtmp4.1/7, ML3.7/1, Error ellipse: s-maj=33.2km s-min=17.9km az=69.0*
*ISCJB **10** 18:21:32.8±0.8, 56°.05S±0°.1×26°.7W±0°.3, h35km, mb4.2/6, Error ellipse: s-maj=24.5km s-min=9.7km az=142.7*
*NEIC **10** 18:21:34.7±0.4, 56°.08S×26°.65W, h35km, mb4.5/1, Error ellipse: s-maj=16.6km s-min=9.3km az=49.0*

ISC 10 18:21:34.7±0.7, 56°.1S±0°.1×26°.7W±0°.2, h35km, n25, σ0°.70/19, mb4.3/6, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.91**	**283**	P	**Pn**	**18 22 59.6**	**0.0**
VNA1	**Neumayer--Stat**	**16.68**	**159**	P	**Pn**	**18 25 25.6**	**+0.4**
VNA3	**Neumayer Olymp**	**16.89**	**161**	P	**Pn**	**18 25 27.6**	**-0.3**
VNA2	**Neumayer--Watz**	**17.07**	**158**	P	**Pn**	**18 25 30.6**	**+0.4**
	baz=319,slow=14						
SNAA	**Sanae**	**18.61**	**156**	P	**Pn**	**18 25 50.0**	**+0.7**
SNAA	**Sanae**	**18.61**	**156**	P	**P**	**18 25 47.9**	**-0.9**
	0.2nm,0.3s,baz=322,slow=14,SNR=14						
QSPA	**South Pole Qui**	**34.20**	**180**	P	**P**	**18 28 16.4**	**-0.1**
	3.7nm,0.5s,baz=131,slow=3.0,SNR=17						
QSPA	**South Pole Qui**	**34.20**	**180**	P	**P**	**18 28 16.3**	**-0.1**
	3.2nm,0.5s						
CPUP	**Villa Florida**	**37.05**	**311**	P	**P**	**18 28 40.9**	**-0.2**
	3.4nm,1.1s,baz=168,slow=11,SNR=3.0						
MAW	**Mawson**	**39.96**	**143**	P	**P**	**18 29 04.9**	**-0.2**
	0.6nm,0.3s,baz=221,slow=11,SNR=3.6						
VNDA	**Vanda**	**46.58**	**183**	P	**P**	**18 29 58.8**	**+0.4**
	1.8nm,0.6s,baz=189,slow=4.1,SNR=16						
H10S2	**ASCENSION HYDR**	**47.92**	**16**	T	T	19 21 44.7	
	baz=189,slow=75,SNR=45						
H10S3	**ASCENSION HYDR**	**47.92**	**16**	T	T	19 21 44.9	
	baz=189,slow=75,SNR=34						
H10S1	**ASCENSION HYDR**	**47.94**	**16**	T	T	19 21 46.0	
	baz=189,slow=75,SNR=31						
H10N1	**ASCENSION HYDR**	**49.04**	**16**	T	T	19 23 07.1	
	baz=188,slow=75,SNR=9.1						
H10N3	**ASCENSION HYDR**	**49.04**	**16**	T	T	19 23 04.8	

baz=188,slow=75,SNR=20
H10N2 ASCENSION HYDR 49.05 16 T T 19 23 03.3
baz=188,slow=75,SNR=11
LPAZ La Paz 50.63 305 P **P 18 30 31.2 +0.3**
2.4nm,0.6s,baz=158,slow=6.2,SNR=14
TORD Torodi Ar. Bea 72.91 29 P **P 18 32 59.8 -0.3**
3.2nm,0.5s,baz=200,slow=6.2,SNR=30
YKA Yellowknife Ar 136.38 318 PKP **PKPdf 18 40 50.5 -0.5**
0.3nm,0.5s,baz=137,slow=1.9,SNR=4.2
MKAR Makanchi Array 136.60 71 PKP **PKPdf 18 40 52.8 +0.8**
0.2nm,0.6s,baz=203,slow=2.4,SNR=2.7
KURBB Kurchatov Arra 137.03 64 PKP **PKPdf 18 40 54.2 +1.6**
0.4nm,0.6s,baz=236,slow=2.0,SNR=3.6
KURK Kurchatov 137.13 64 PKP **PKPdf 18 40 54.2 +1.4**
ILAR Eielson Array 150.35 312 PKPbc **PKPbc 18 41 19.9 -0.7**
1.9nm,0.7s,baz=134,slow=1.9,SNR=17
SONM Songino Array 150.43 86 PKPbc **PKPbc 18 41 21.0 -0.5**
0.8nm,0.4s,baz=212,slow=1.9,SNR=6.4

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*IDC **10** 18:28:28.8±0.8, 36°.41N×29°.00E, h0km, mb3.8/11, mb1 3.9/19, mb1mx3.6/67, mbtmp3.8/19, ML3.8/7, MS3.1/4, Ms1 3.1/4, ms1mx2.6/58, Error ellipse: s-maj=13.9km s-min=13.3km az=132.0*
*MOS **10** 18:28:32.5±1.3, 36°.37N×29°.03E, h28km, mb4.3/7, Error ellipse: s-maj=6.6km s-min=4.6km az=98.5*
*CSEM **10** 18:28:32.6±0.1, 36°.36N×29°.06E, h20km, ML4.5, Error ellipse: s-maj=2.7km s-min=1.9km az=30.0*
*DDA **10** 18:28:33.0, 36°.47N×28°.96E, h29km, Ml4.5*
*ISK **10** 18:28:32.9, 36°.46N×28°.94E, h22km, ML4.5/17*
*NIC **10** 18:28:32.9±0.2, 36°.83N×29°.13E, h25km, mb4.6, ML4.3*
*ATH **10** 18:28:33.0, 36°.46N×28°.93E, h39km±1km, ML4.1/23, Error ellipse: s-maj=1.6km s-min=0.5km az=163.0*
*NEIC **10** 18:28:33.0±0.0, 36°.46N×28°.93E, h39km, ML4.0(THE), ML4.1(ATH), ML4.5(ISK), After ATH.*
*THE **10** 18:28:33.9, 36°.44N×28°.91E, h10km, ML4.1/12, Error ellipse: s-maj=0.7km s-min=0.2km az=100.0*
*HLW **10** 18:28:33.2, 36°.24N×28°.94E, h29km±16km, Md4.2, Ml4.0*
*GII **10** 18:28:36.0±0.0, 36°.04N×29°.35E, h5km, mb4.5/1, MD4.4/1*
ISC 10 18:28:33.8±0.4, **36°.39N**±0°.02×**28°.98E**±0°.02, **h21**km±1km, **n509**, σ1°**82**/615, **mb3.9**/18, **28C-16D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.26**	**18**	PG	**Pb**	**18 28 38.8**	**-1.4**
FETY	**Fethiye**	**0.26**	**18**	P	**Pb**	**18 28 38.7**	**-1.4**
FETY				S	**Sb**	**18 28 43.2**	**-1.3**
FETY	**Fethiye**	**0.26**	**18**	P	**Pb**	**18 28 38.7**	**-1.4**
FETY				S	**Sb**	**18 28 43.2**	**-1.3**
FETY	**Fethiye**	**0.26**	**18**	*i* Pg	**Pb**	**18 28 38.8**	**-1.4**
FETY				S	**Sb**	**18 28 43.2**	**-1.3**
DALY	**Dalyan (Mu¨la**	**0.51**	**329**	PG	**Pb**	**18 28 42.5**	**-1.4**
DALY				SG	**Sb**	**18 28 48.9**	**-2.0**
DALY	**Dalyan (Mu¨la**	**0.51**	**329**	⇑*i*P	**Pb**	**18 28 42.6**	**-1.4**
DALY				*i* S	**Sb**	**18 28 49.5**	**-1.4**
DALY	**Dalyan (Mu¨la**	**0.51**	**329**	P	**Pb**	**18 28 42.6**	**-1.4**
DALY				*i* Sg	**Sb**	**18 28 48.9**	**-2.0**
AKAS	**Kas**	**0.53**	**107**	PG	**Pb**	**18 28 44.7**	**+0.2**
AKAS	**Kas**	**0.53**	**107**	⇑*i*P	**Pb**	**18 28 44.6**	**+0.2**
AKAS				*i* S	**Sn**	**18 28 53.8**	**-0.8**
AKAS	**Kas**	**0.53**	**107**	P	**Pb**	**18 28 44.7**	**+0.2**
KSL	**Kastellorizon**	**0.54**	**116**	P	**Pn**	**18 28 45.6**	**-0.7**
KSL				S	**Sn**	**18 28 55.8**	**+1.1**
KSL				AML	AML	18 28 56.8	
	comp=N,22897μm,0.4s						
KSL				AML	AML	18 28 57.0	
	comp=E,84529μm,0.6s						
KSL	**Kastellorizon**	**0.54**	**116**	P	**Pn**	**18 28 45.8**	**-0.5**
KSL				S	**Sn**	**18 28 55.4**	**+0.7**
KSL	**Kastellorizon**	**0.54**	**116**	P	**Pn**	**18 28 45.8**	**-0.5**
KSL				S	**Sn**	**18 28 55.4**	**+0.7**
TURN	**Turunc**	**0.57**	**328**	PG	**Pn**	**18 28 46.3**	**-0.5**
TURN	**Turunc**	**0.57**	**328**	⇑*i*P	**Pn**	**18 28 46.2**	**-0.5**
TURN				*i* S	**Sn**	**18 28 56.8**	**+1.3**
TURN	**Turunc**	**0.57**	**328**	P	**Pn**	**18 28 46.2**	**-0.5**
TURN				S	**Sn**	**18 28 56.8**	**+1.3**
ARG	**Arkhangelos**	**0.71**	**256**	PG	**Pb**	**18 28 47.4**	**-0.1**
ARG	**Arkhangelos**	**0.71**	**256**	P	**Pb**	**18 28 47.2**	**-0.2**
ARG				S	**Sb**	**18 28 57.8**	**+0.9**
ARG				AML	AML	18 28 58.4	
	comp=N,44679μm,0.4s						
ARG				AML	AML	18 28 58.7	
	comp=E,52837μm,0.3s						
ARG	**Arkhangelos**	**0.71**	**256**	P	**Pb**	**18 28 47.1**	**-0.4**
ARG				S	**Sb**	**18 28 57.4**	**+0.6**
ARG	**Arkhangelos**	**0.71**	**256**	P	**Pb**	**18 28 47.1**	**-0.4**
ARG				S	**Sb**	**18 28 57.4**	**+0.6**
ARG	**Arkhangelos**	**0.71**	**256**	P	**Pb**	**18 28 47.1**	**-0.4**
ARG				S	**Sb**	**18 28 57.4**	**+0.6**
ARG	**Arkhangelos**	**0.71**	**256**	*e*Pg	**Pb**	**18 28 47.4**	**-0.1**
ARG				S	**Sb**	**18 28 57.7**	**+0.9**
MRSB	**Marmaris-Mugla**	**0.71**	**298**	PG	**Pb**	**18 28 46.4**	**-1.1**
MRSB	**Marmaris-Mugla**	**0.71**	**298**	*e*Pg	**Pb**	**18 28 46.4**	**-1.1**
ELL	**Elmali**	**0.83**	**64**	PG	**Pb**	**18 28 49.8**	**+0.2**
ELL	**Elmali**	**0.83**	**64**	P	**Pb**	**18 28 49.8**	**+0.2**
ELL	**Elmali**	**0.83**	**64**	*e*Pg	**Pb**	**18 28 49.8**	**+0.2**
GLHS	**Glhisar (BURDU**	**0.87**	**28**	PG	**Pb**	**18 28 49.4**	**-0.9**
GLHS	**Glhisar (BURDU**	**0.87**	**28**	*e*Pg	**Pb**	**18 28 49.4**	**-0.9**
YER	**Yerkesik**	**0.93**	**323**	PG	**Pb**	**18 28 50.2**	**-1.1**
YER	**Yerkesik**	**0.93**	**323**	P	**Pb**	**18 28 50.1**	**-1.2**
YER	**Yerkesik**	**0.93**	**323**	P	**Pb**	**18 28 50.1**	**-1.2**
YER				S	**Sb**	**18 29 02.6**	**-0.7**
YER	**Yerkesik**	**0.93**	**323**	P	**Pb**	**18 28 50.1**	**-1.2**
YER	**Yerkesik**	**0.93**	**323**	*e*Pg	**Pb**	**18 28 50.2**	**-1.1**
YER				S	**Sb**	**18 29 02.6**	**-0.7**
GOLH	**Golhisar**	**0.97**	**29**	⇓*i*P	**Pb**	**18 28 50.1**	**-1.8**
GOLH				*i* S	**Sn**	**18 29 05.4**	**-0.1**
GOLH	**Golhisar**	**0.97**	**29**	P	**Pb**	**18 28 50.2**	**-1.8**
GOLH				S	**Sn**	**18 29 05.4**	**-0.1**
TAVA	**DENIZLI_Tavas**	**1.08**	**357**	⇓*i*P	**Pb**	**18 28 52.7**	**-1.1**
TAVA				*i* S	**Sb**	**18 29 06.5**	**-1.0**
TAVA	**DENIZLI_Tavas**	**1.08**	**357**	P	**Pb**	**18 28 52.7**	**-1.1**
TAVA				S	**Sb**	**18 29 06.5**	**-1.0**
DATC	**Datca-Mugla**	**1.13**	**290**	PG	**Pn**	**18 28 53.6**	**-0.7**
DATC	**Datca-Mugla**	**1.13**	**290**	*e*Pg	**Pn**	**18 28 53.6**	**-0.7**
DAT	**Datca**	**1.18**	**287**	PN	**Pn**	**18 28 54.3**	**-0.9**
DAT	**Datca**	**1.18**	**287**	⇑*i*P	**Pn**	**18 28 54.4**	**-0.8**
DAT				*i* S	**Sb**	**18 29 10.5**	**+0.1**
DAT	**Datca**	**1.18**	**287**	P	**Pn**	**18 28 54.4**	**-0.8**
DAT				S	**Sb**	**18 29 10.5**	**+0.1**
KORT	**Korkueli**	**1.26**	**60**	PN	**Pn**	**18 28 56.6**	**+0.3**
KORT	**Korkueli**	**1.26**	**60**	⇓*i*P	**Pb**	**18 28 56.9**	**0.0**
KORT				*i* S	**Sb**	**18 29 16.8**	**+4.0**
KORT	**Korkueli**	**1.26**	**60**	*e*Pn	**Pb**	**18 28 56.6**	**+0.3**
KORT	**Korkueli**	**1.26**	**60**	P	**Pb**	**18 28 56.9**	**0.0**
DNZL	**Cakiroluk**	**1.30**	**2**	⇓*i*P	**Pn**	**18 28 56.1**	**-0.8**
DNZL				*i* S	**Sn**	**18 29 12.4**	**-1.4**
DNZL	**Cakiroluk**	**1.30**	**2**	P	**Pn**	**18 28 56.1**	**-0.8**
DNZL				S	**Sn**	**18 29 12.4**	**-1.4**
MLSB	**Milas**	**1.33**	**314**	PN	**Pn**	**18 28 55.9**	**-1.2**
MLSB	**Milas**	**1.33**	**314**	*e*Pn	**Pn**	**18 28 55.9**	**-1.2**
DENT	**Denizli**	**1.37**	**2**	PN	**Pn**	**18 28 56.4**	**-1.3**
DENT	**Denizli**	**1.37**	**2**	*e*Pn	**Pn**	**18 28 56.4**	**-1.3**
BDRM	**Kayabasi**	**1.41**	**299**	⇑*i*P	**Pn**	**18 28 57.6**	**-0.6**
BDRM				*i* S	**Sb**	**18 29 16.7**	**-0.2**
BDRM	**Kayabasi**	**1.41**	**299**	P	**Pn**	**18 28 57.6**	**-0.6**
BDRM				S	**Sb**	**18 29 16.7**	**-0.2**
ANTB	**Antalya**	**1.44**	**69**	PN	**Pn**	**18 28 58.9**	**+0.3**
ANTB	**Antalya**	**1.44**	**69**	*e*Pn	**Pn**	**18 28 58.9**	**+0.3**
BODT	**Bodrum**	**1.50**	**297**	PN	**Pn**	**18 28 57.8**	**-1.7**
BODT	**Bodrum**	**1.50**	**297**	P	**Pn**	**18 28 57.8**	**-1.7**
BODT				S	**Sn**	**18 29 16.9**	**-1.6**
BODT	**Bodrum**	**1.50**	**297**	P	**Pn**	**18 28 57.8**	**-1.7**
BODT				S	**Sn**	**18 29 16.9**	**-1.6**
BODT	**Bodrum**	**1.50**	**297**	P	**Pn**	**18 28 57.8**	**-1.7**
BODT				S	**Sn**	**18 29 16.9**	**-1.6**
NISR	**Nisiros**	**1.51**	**279**	P	**Pn**	**18 28 58.9**	**-0.7**
NISR				S	**Sn**	**18 29 17.0**	**-1.6**
NISR	**Nisiros**	**1.51**	**279**	P	**Pn**	**18 28 58.5**	**-1.1**
NISR	**Nisiros**	**1.51**	**279**	P	**Pn**	**18 28 58.5**	**-1.1**
NISR	**Nisiros**	**1.51**	**279**	P	**Pn**	**18 28 58.7**	**-0.9**
NISR				S	**Sn**	**18 29 17.0**	**-1.6**
AYDN	**Tasoluk**	**1.55**	**326**	⇑*i*P	**Pn**	**18 28 59.3**	**-0.9**
AYDN				*i* S	**Sn**	**18 29 20.0**	**+0.3**
AYDN	**Tasoluk**	**1.55**	**326**	P	**Pn**	**18 28 59.3**	**-0.9**
AYDN				S	**Sn**	**18 29 20.0**	**+0.3**
YKAV	**Yalikavak-Bodr**	**1.55**	**299**	PN	**Pn**	**18 28 59.3**	**-0.9**
YKAV	**Yalikavak-Bodr**	**1.55**	**299**	*e*Pn	**Pn**	**18 28 59.3**	**-0.9**
BRDR	**BURDUR-Merkez**	**1.57**	**33**	⇓*i*P	**Pn**	**18 29 00.8**	**+0.3**
BRDR				*i* S	**Sb**	**18 29 21.9**	**+0.3**
BRDR	**BURDUR-Merkez**	**1.57**	**33**	P	**Pn**	**18 29 00.8**	**+0.3**
KARP	**Karpathos**	**1.70**	**241**	PN	**Pn**	**18 29 02.0**	**-0.2**
KARP	**Karpathos**	**1.70**	**241**	P	**Pn**	**18 29 02.4**	**+0.2**
KARP				AML	AML	18 29 31.1	
	comp=N,8937μm,0.5s						
KARP				AML	AML	18 29 32.6	
	comp=E,7358μm,0.6s						
KARP	**Karpathos**	**1.70**	**241**	P	**Pn**	**18 29 02.0**	**-0.2**
KARP				S	**Sn**	**18 29 22.8**	**-0.5**
KARP	**Karpathos**	**1.70**	**241**	P	**Pn**	**18 29 02.0**	**-0.2**
KARP				S	**Sn**	**18 29 22.8**	**-0.5**
KARP	**Karpathos**	**1.70**	**241**	P	**Pn**	**18 29 02.0**	**-0.2**
KARP				S	**Sn**	**18 29 22.8**	**-0.5**
AYDB	**Zeytinkoy-Aydi**	**1.79**	**331**	PN	**Pn**	**18 29 02.2**	**-1.3**
AYDB	**Zeytinkoy-Aydi**	**1.79**	**331**	*e*Pn	**Pn**	**18 29 02.2**	**-1.3**
ISP	**Isparta**	**1.89**	**40**	PN	**Pn**	**18 29 04.6**	**-0.4**
ISP	**Isparta**	**1.89**	**40**	⇓*i*P	**Pn**	**18 29 05.1**	**+0.1**
ISP	**Isparta**	**1.89**	**40**	P	**Pn**	**18 29 04.9**	**-0.1**
ISP	**Isparta**	**1.89**	**40**	P	**Pn**	**18 29 04.9**	**-0.1**
ISP				S	**Sn**	**18 29 28.4**	**+0.2**
ISP	**Isparta**	**1.89**	**40**	Pn	**Pn**	**18 29 04.8**	**-0.2**
ISP	**Isparta**	**1.89**	**40**	*d i* P	**Pn**	**18 29 04.5**	**-0.4**
ISP	**Isparta**	**1.89**	**40**	*i* P	**Pn**	**18 29 04.5**	**-0.4**
ISP				S	**Sn**	**18 29 28.4**	**+0.2**
SUTC	**Sutluce-Ispart**	**1.95**	**55**	PN	**Pn**	**18 29 05.8**	**0.0**
SUTC	**Sutluce-Ispart**	**1.95**	**55**	*e*Pn	**Pn**	**18 29 05.8**	**0.0**
KHL	**Karahalli**	**1.98**	**12**	PN	**Pn**	**18 29 05.4**	**-0.8**
KHL	**Karahalli**	**1.98**	**12**	*e*Pn	**Pn**	**18 29 05.4**	**-0.8**
KHAL	**Karahalli**	**2.02**	**11**	⇓*i*P	**Pn**	**18 29 04.4**	**-2.4**
KHAL				*i* S	**Sn**	**18 29 28.2**	**-3.3**
KHAL	**Karahalli**	**2.02**	**11**	P	**Pn**	**18 29 04.4**	**-2.4**
KHAL				S	**Sn**	**18 29 28.2**	**-3.3**
KZIL	**AFYON_Kizioren**	**2.08**	**26**	*i* P	**Pn**	**18 29 06.6**	**-1.0**
KZIL				*i* S	**Sn**	**18 29 34.2**	**+1.2**
KZIL	**AFYON_Kizioren**	**2.08**	**26**	P	**Pn**	**18 29 06.6**	**-1.0**
MANT	**Manisa**	**2.13**	**351**	⇓*i*P	**Pn**	**18 29 06.6**	**-1.7**
MANT				*i* S	**Sn**	**18 29 30.8**	**-3.4**
MANT	**Manisa**	**2.13**	**351**	P	**Pn**	**18 29 06.6**	**-1.7**
KULA	**Kula-Manisa**	**2.14**	**353**	PN	**Pn**	**18 29 06.9**	**-1.5**
KULA	**Kula-Manisa**	**2.14**	**353**	*e*Pn	**Pn**	**18 29 06.9**	**-1.5**
BAGO	**Egridir - ISPA**	**2.16**	**41**	⇓*i*P	**Pn**	**18 29 08.7**	**+0.1**
BAGO				*i* S	**Sb**	**18 29 38.5**	**0.0**
SMG	**Samos**	**2.16**	**308**	P	**Pn**	**18 29 07.8**	**-0.8**
SMG				S	**Sn**	**18 29 32.0**	**-2.9**
SMG				AML	AML	18 29 36.1	
	comp=E,27299μm,0.3s						
SMG				AML	AML	18 29 36.1	
	comp=N,27411μm,0.3s						
SMG	**Samos**	**2.16**	**308**	P	**Pn**	**18 29 07.4**	**-1.2**
SMG				S	**Sn**	**18 29 33.3**	**-1.5**
SMG	**Samos**	**2.16**	**308**	P	**Pn**	**18 29 07.5**	**-1.2**
SMG				S	**Sn**	**18 29 33.3**	**-1.5**
KEPZ	**Antalya-Kepez**	**2.17**	**76**	⇑*i*P	**Pn**	**18 29 10.2**	**+1.5**
KEPZ				*i* S	**Sb**	**18 29 37.8**	**-1.1**
DGB	**¨zmir**	**2.36**	**315**	⇑*i*P	**Pn**	**18 29 09.8**	**-1.5**
DGB				*i* S	**Sn**	**18 29 37.5**	**-2.0**
ZKR	**Zakros**	**2.58**	**241**	P	**Pn**	**18 29 15.3**	**+1.0**
ZKR				AML	AML	18 30 01.1	
	comp=E,4084μm,0.6s						
ZKR				AML	AML	18 30 04.7	
	comp=N,1628μm,0.5s						
ZKR	**Zakros**	**2.58**	**241**	P	**Pn**	**18 29 14.8**	**+0.5**
ZKR				S	**Sn**	**18 29 45.4**	**+0.3**
ZKR	**Zakros**	**2.58**	**241**	P	**Pn**	**18 29 14.8**	**+0.5**
ZKR				S	**Sn**	**18 29 45.4**	**+0.3**
ZKR	**Zakros**	**2.58**	**241**	P	**Pn**	**18 29 14.8**	**+0.5**
ZKR				S	**Sn**	**18 29 45.4**	**+0.3**
SHAP	**Saphane-Kutahy**	**2.64**	**4**	PN	**Pn**	**18 29 13.9**	**-1.3**
SHAP	**Saphane-Kutahy**	**2.64**	**4**	*e*Pn	**Pn**	**18 29 13.9**	**-1.3**
AKHS	**Akhisar**	**2.66**	**340**	⇓*i*P	**Pn**	**18 29 13.6**	**-1.8**
AKHS				*i* S	**Sn**	**18 29 43.9**	**-3.0**
AKHS	**Akhisar**	**2.66**	**340**	P	**Pn**	**18 29 13.6**	**-1.8**
AKHS				S	**Sn**	**18 29 43.9**	**-3.0**
AKS	**Akhisar**	**2.66**	**340**	PN	**Pn**	**18 29 13.1**	**-2.3**
AKS	**Akhisar**	**2.66**	**340**	*e*Pn	**Pn**	**18 29 13.1**	**-2.3**
DEMI	**Demirci**	**2.66**	**356**	⇓*i*P	**Pn**	**18 29 14.0**	**-1.5**
DEMI				*i* S	**Sn**	**18 29 44.5**	**-2.7**
DEMI	**Demirci**	**2.66**	**356**	P	**Pn**	**18 29 14.0**	**-1.5**
DEMI				S	**Sn**	**18 29 44.5**	**-2.7**
GEDZ	**Gediz**	**2.68**	**7**	PN	**Pn**	**18 29 15.0**	**-0.7**
GEDZ	**Gediz**	**2.68**	**7**	*e*Pn	**Pn**	**18 29 15.0**	**-0.7**
SIMA	**Simav-Kutahya**	**2.69**	**0**	PN	**Pn**	**18 29 14.5**	**-1.5**
SIMA	**Simav-Kutahya**	**2.69**	**0**	*e*Pn	**Pn**	**18 29 14.5**	**-1.5**
GAZI	**Gazipasa**	**2.70**	**92**	⇑*i*P	**Pn**	**18 29 15.2**	**-0.8**
GAZI				*i* S	**Sn**	**18 29 45.7**	**-2.3**
GAZI	**Gazipasa**	**2.70**	**92**	P	**Pn**	**18 29 15.2**	**-0.8**
GAZI				S	**Sn**	**18 29 45.7**	**-2.3**
ZEY	**¨zmir**	**2.71**	**314**	⇑*i*P	**Pn**	**18 29 14.5**	**-1.6**
ZEY				*i* S	**Sn**	**18 29 46.7**	**-1.5**
SMAA	**Simav-Kutahya**	**2.71**	**0**	PN	**Pn**	**18 29 15.4**	**-0.8**
SMAA	**Simav-Kutahya**	**2.71**	**0**	*e*Pn	**Pn**	**18 29 15.4**	**-0.8**
URLA	**Izmir**	**2.74**	**317**	PN	**Pn**	**18 29 15.6**	**-0.9**
URLA	**Izmir**	**2.74**	**317**	*i* P	**Pn**	**18 29 14.8**	**-1.7**
URLA				*i* S	**Sn**	**18 29 47.0**	**-2.0**
URLA	**Izmir**	**2.74**	**317**	P	**Pn**	**18 29 14.8**	**-1.7**
URLA	**Izmir**	**2.74**	**317**	*e*Pn	**Pn**	**18 29 15.6**	**-0.9**
URLA				S	**Sn**	**18 29 47.0**	**-2.0**
DOGA	**KONYA_Doganhis**	**2.75**	**51**	*i* P	**Pn**	**18 29 17.2**	**+0.4**
DOGA				*i* S	**Sn**	**18 29 49.1**	**-0.3**
DOGA	**KONYA_Doganhis**	**2.75**	**51**	P	**Pn**	**18 29 17.2**	**+0.4**
DOGA				S	**Sn**	**18 29 49.1**	**-0.3**
BOLV	**Bolvadin**	**2.81**	**33**	⇓*i*P	**Pn**	**18 29 17.5**	**-0.1**
BOLV				*i* S	**Sn**	**18 29 48.9**	**-1.9**
BOLV	**Bolvadin**	**2.81**	**33**	P	**Pn**	**18 29 17.5**	**-0.1**
BOLV				S	**Sn**	**18 29 48.9**	**-1.9**
SANT	**Santorini**	**2.84**	**271**	⇑*i*P	**Pn**	**18 29 17.1**	**-0.8**
SANT	**Santorini**	**2.84**	**271**	P	**Pn**	**18 29 16.9**	**-1.0**
SANT	**Santorini**	**2.84**	**271**	P	**Pn**	**18 29 17.1**	**-0.8**
SANT	**Santorini**	**2.84**	**271**	P	**Pn**	**18 29 17.1**	**-0.8**
SANT	**Santorini**	**2.84**	**271**	P	**Pn**	**18 29 17.2**	**-0.7**
APE	**Apeiranthos**	**2.85**	**285**	⇑*i*P	**Pn**	**18 29 17.2**	**-0.9**
APE	**Apeiranthos**	**2.85**	**285**	S	**Sn**	**18 29 53.5**	**+1.6**
APE	**Apeiranthos**	**2.85**	**285**	P	**Pn**	**18 29 16.6**	**-1.6**
APE				AML	AML	18 29 53.8	
	comp=N,1444μm,0.3s						
APE				AML	AML	18 29 55.2	
	comp=E,999μm,0.2s						
APE	**Apeiranthos**	**2.85**	**285**	P	**Pn**	**18 29 16.9**	**-1.2**
APE				S	**Sn**	**18 29 50.7**	**-1.2**

LTK	Loutraki	5.07 291	P	Pn	18 29 49.2	+0.6
LTK	Loutraki	5.07 291	P	Pn	18 29 48.8	+0.2
SKIA	Skiathos	5.17 304	P	Pn	18 29 50.7	+0.7
SKIA			AML	AML	18 30 47.5	
	comp=E,353μm,0.7s					
SKIA			AML	AML	18 30 48.0	
	comp=N,552μm,0.7s					
SKIA	Skiathos	5.17 304	P	Pn	18 29 50.3	+0.3
PROD	Prodromos	5.19 293	P	Pn	18 29 51.1	+0.9
PROD			AML	AML	18 30 49.8	
	comp=E,1507μm,0.3s					
PROD			AML	AML	18 30 52.2	
	comp=N,896μm,0.3s					
PROD	Prodromos	5.19 293	P	Pn	18 29 50.7	+0.4
SMIA	Simia	5.21 300	P	Pn	18 29 52.4	+1.9
SMIA	Simia	5.21 300	P	Pn	18 29 51.4	+0.9
LKR	Lokris	5.26 297	P	Pn	18 29 53.1	+1.9
LKR			AML	AML	18 30 51.4	
	comp=E,225μm,0.3s					
LKR			AML	AML	18 30 54.8	
	comp=N,236μm,0.3s					
LKR	Lokris	5.26 297	P	Pn	18 29 52.1	+0.9
THAL	Thalero	5.30 290	P	Pn	18 29 53.2	+1.5
THAL	Thalero	5.30 290	P	Pn	18 29 52.5	+0.7
DYR	Agios Nikonas	5.36 276	P	Pn	18 29 55.3	+2.7
DYR	Agios Nikonas	5.36 276	P	Pn	18 29 54.1	+1.5
VLX	Vlachokerasia	5.38 282	P	Pn	18 29 53.4	+0.5
VLX	Vlachokerasia	5.38 282	P	Pn	18 29 53.2	+0.3
NEO	Neokhori	5.41 304	P	Pn	18 29 52.6	-0.6
NEO	Neokhori	5.41 304	P	Pn	18 29 52.9	-0.3
XOR	Xorichti	5.46 305	P	Pn	18 29 53.8	-0.2
XOR	Xorichti	5.46 305	P	Pn	18 29 53.9	0.0
XOR	Xorichti	5.46 305	P	Pn	18 29 53.8	-0.2
RDO	Rodhopi	5.46 332	P	Pn	18 29 52.4	-1.5
RDO	Rodhopi	5.46 332	P	Pn	18 29 53.0	-0.9
PAIG	Paliouri	5.47 312	P	Pn	18 29 54.6	+0.6
PAIG	Paliouri	5.47 312	P	Pn	18 29 55.5	+1.5
PAIG	Paliouri	5.47 312	P	Pn	18 29 54.3	+0.3
TRIP	Tripoli	5.49 284	P	Pn	18 29 56.5	+2.1
TRIP	Tripoli	5.49 284	P	Pn	18 29 55.5	+1.1
DSF	Desfina	5.52 293	P	Pn	18 29 57.0	+2.2
DSF			AML	AML	18 30 58.8	
	comp=N,442μm,0.3s					
DSF			AML	AML	18 30 59.0	
	comp=E,434μm,0.3s					
DSF	Desfina	5.52 293	P	Pn	18 29 55.9	+1.1
GUR	Goura	5.52 288	P	Pn	18 29 56.5	+1.6
GUR	Goura	5.52 288	P	Pn	18 29 55.7	+0.8
OUR	Ouranopolis	5.56 317	P	Pn	18 29 54.9	-0.4
OUR	Ouranopolis	5.56 317	P	Pn	18 29 56.3	+1.0
OUR	Ouranopolis	5.56 317	P	Pn	18 29 55.1	-0.2
KLV	Kalavryta, Ach	5.70 289	P	Pn	18 29 58.0	+0.8
KLV	Kalavryta, Ach	5.70 289	P	Pn	18 29 57.7	+0.5
ITM	Ithomi	5.72 280	P	Pn	18 30 00.5	+3.0
ITM	Ithomi	5.72 280	P	Pn	18 29 59.2	+1.8
KVLA	Kavala	5.79 323	P	Pn	18 29 58.8	+0.3
KVLA	Kavala	5.79 323	P	Pn	18 29 58.6	+0.1
SLUM	Salum	5.80 214	P	Pn	18 29 56.8	-1.7
	baz=215					
SLUM			S	Sn	18 30 56.7	-7.8
	baz=215					
SLUM			AMP		18 31 00.0	
	baz=215					
KALE	Kalithea	5.80 292	P	Pn	18 30 00.5	+1.8
KALE			AML	AML	18 31 05.4	
	comp=N,178μm,0.5s					
KALE			AML	AML	18 31 05.8	
	comp=E,126μm,0.3s					
KALE	Kalithea	5.80 292	P	Pn	18 29 59.7	+1.0
PYL	PYLOS	5.84 277	P	Pn	18 29 60.0	+0.8
PYL	PYLOS	5.84 277	P	Pn	18 29 59.8	+0.6
TRIZ	Trizonia	5.84 292	P	Pn	18 30 01.4	+2.3
TRIZ	Trizonia	5.84 292	P	Pn	18 30 00.4	+1.2
LAKA	Lakka	5.88 290	P	Pn	18 30 01.0	+1.3
LAKA	Lakka	5.88 290	P	Pn	18 30 00.5	+0.8
AGG	Agios Georgios	5.89 299	P	Pn	18 30 02.0	+2.1
AGG	Agios Georgios	5.89 299	P	Pn	18 30 01.7	+1.8
AGG			pmax	pmax		
	comp=Z,71nm,0.8s					
AGG	Agios Georgios	5.89 299	P	Pn	18 30 01.0	+1.1
PLG	Polygyros	5.89 314	P	Pn	18 30 00.4	+0.5
PLG	Polygyros	5.89 314	P	Pn	18 30 00.1	+0.2
AMT	Artemida-Makis	5.93 283	P	Pn	18 30 03.1	+2.7
AMT	Artemida-Makis	5.93 283	P	Pn	18 30 02.0	+1.6
EFP	Efpalio	5.99 292	P	Pn	18 30 03.3	+2.1
EFP	Efpalio	5.99 292	P	Pn	18 30 02.4	+1.3
BHL	Bhannes	6.00 112	*e*P	Pn	18 29 58.4	-3.0
DQRL	Deir Qamar	6.03 114	*e*P	Pn	18 29 59.2	-2.7
HNTI	Hanita	6.07 121	Pn	Pn	18 30 00.5	-1.8
HNTI			Sn	Sn	18 31 05.2	-5.9
HNTI	Hanita	6.07 121	Pn	Pn	18 30 00.5	-1.8
HWQ	Hawqa	6.07 108	*e*P	Pn	18 30 00.7	-1.7
QRWL	Qaraoun	6.19 115	*e*P	Pn	18 30 02.5	-1.5
OFRI	'Ofer	6.22 125	Pn	Pn	18 30 00.5	-3.9
OFRI			Sn	Sn	18 31 09.5	-5.3
OFRI	'Ofer	6.22 125	Pn	Pn	18 30 00.5	-3.9
OFRI			Sn	Sn	18 31 09.5	-5.3
RLS	Riolos of Patr	6.22 288	P	Pn	18 30 06.8	+2.4
RLS	Riolos of Patr	6.22 288	P	Pn	18 30 05.8	+1.4
EVR	Evrytania	6.23 296	P	Pn	18 30 06.8	+2.3
EVR	Evrytania	6.23 296	P	Pn	18 30 05.8	+1.3
HORT	Hortiatis	6.24 314	P	Pn	18 30 05.2	+0.4
HORT	Hortiatis	6.24 314	P	Pn	18 30 04.9	+0.2
SOH	Sokhos	6.25 317	P	Pn	18 30 08.8	+4.1
SOH			pmax	pmax		
	comp=Z,9.0nm,0.8s					
MMA0B	Mount Meron ar	6.27 121	Pn	Pn	18 30 02.7	-2.4
MMA0B			Sn	Sn	18 31 11.5	-4.6
MMA0B	Mount Meron ar	6.27 121	Pn	Pn	18 30 02.7	-2.4
MMA0B			Sn	Sn	18 31 11.5	-4.6
MMAI	Mount Meron Ar	6.27 121	Pn	Pn	18 30 03.1	-1.9
	comp=Z,59nm,0.3s,baz=304,slow=12,SNR=192					
MMAI			Sn	Sn	18 31 11.0	-5.1
	comp=Z,27nm,0.3s,baz=309,slow=27,SNR=7.4					
BLGI	Bet Lehem HaGe	6.29 124	Pn	Pn	18 30 02.6	-2.7
BLGI			Sn	Sn	18 31 10.7	-5.8
BLGI	Bet Lehem HaGe	6.29 124	Pn	Pn	18 30 02.6	-2.7
BLGI			Sn	Sn	18 31 10.7	-5.8
LIT	Litokhoron	6.31 308	P	Pn	18 30 04.5	-1.2
LIT	Litokhoron	6.31 308	P	Pn	18 30 07.2	+1.6
LIT			pmax	pmax		
	comp=Z,54nm,0.5s					
LIT	Litokhoron	6.31 308	P	Pn	18 30 05.1	-0.5
RCY	Rachaya	6.32 115	*e*P	Pn	18 30 04.0	-2.0
SRS	Serrai	6.33 320	P	Pn	18 30 05.8	+0.1
SRS	Serrai	6.33 320	P	Pn	18 30 05.9	+0.1
SRS	Serrai	6.33 320	*e*Pn	Pn	18 30 06.8	+1.0
SHBL	Chebaa	6.33 117	*e*P	Pn	18 30 03.9	-2.1
THE	Thessaloniki	6.34 314	P	Pn	18 30 08.3	+2.3
KSDI	Kefar Szold	6.35 118	Pn	Pn	18 30 04.2	-1.9
KSDI			Sn	Sn	18 31 12.7	-5.3
KSDI	Kefar Szold	6.35 118	Pn	Pn	18 30 04.2	-1.9
KSDI			Sn	Sn	18 31 12.7	-5.3
THL	Klokotos Trika	6.35 302	P	Pn	18 30 07.5	+1.4
THL	Klokotos Trika	6.35 302	P	Pn	18 30 07.0	+0.9
NVR	Nevrokopi	6.37 323	P	Pn	18 30 05.5	-0.8
NVR	Nevrokopi	6.37 323	P	Pn	18 30 05.9	-0.5
FKH	Fakeheh	6.44 107	*e*P	Pn	18 30 06.1	-1.3
SLTI	Sal'it	6.50 128	Pn	Pn	18 30 05.2	-3.0
SLTI	Sal'it	6.50 128	Pn	Pn	18 30 05.2	-3.0
KSHT	Keshet	6.57 119	Pn	Pn	18 30 07.8	-1.4
KSHT	Keshet	6.57 119	Pn	Pn	18 30 07.8	-1.4
PLD	Plovdiv	6.61 331	P	Pn	18 30 09.6	0.0
PLD	Plovdiv	6.61 331	P	Pn	18 30 09.6	0.0
PLD	Plovdiv	6.61 331	*e*Pn	Pn	18 30 10.4	+0.8
MMLI	Mount Malkishu	6.62 125	Pn	Pn	18 30 07.4	-2.5
MMLI			Sn	Sn	18 31 18.4	-6.3
MMLI	Mount Malkishu	6.62 125	Pn	Pn	18 30 07.4	-2.5
RSH		6.70 143	P	Pn	18 30 09.4	-1.5
	baz=141					
RSH		6.70 143	P	Pn	18 30 09.4	-1.5
KNT	Kendrikon	6.73 317	P	Pn	18 30 12.3	+0.9
KNT	Kendrikon	6.73 317	P	Pn	18 30 12.0	+0.6
SQR	Saqqara	6.75 163	P	Pn	18 30 09.5	-2.1
	baz=162					
KFL	Anninata	6.76 287	P	Pn	18 30 15.4	-3.6
HMDT	Nahal Hemdat	6.80 125	Pn	Pn	18 30 10.4	-2.0
HMDT			Sn	Sn	18 31 24.7	-4.5
HMDT	Nahal Hemdat	6.80 125	Pn	Pn	18 30 10.4	-2.0
HMDT			Sn	Sn	18 31 24.7	-4.5
DSL	Palaion Diasel	6.82 296	P	Pn	18 30 15.0	+2.4
DSL	Palaion Diasel	6.82 296	P	Pn	18 30 14.1	+1.5
KOT	Kottamia	6.87 159	P	Pn	18 30 12.0	-1.3
	baz=158					
KOT	Kottamia	6.87 159	P	Pn	18 30 12.0	-1.3
GRG	Griva	6.88 314	P	Pn	18 30 14.6	+1.2
GRG			pmax	pmax		
	comp=Z,33nm,0.6s					
GRG	Griva	6.88 314	P	Pn	18 30 14.6	+1.2
	comp=Z,33nm,0.6s					
AMAZ	Amatzia	6.91 133	Pn	Pn	18 30 11.6	-2.2
AMAZ			Sn	Sn	18 31 27.5	-4.3
AMAZ	Amatzia	6.91 133	Pn	Pn	18 30 11.6	-2.2
AMAZ			Sn	Sn	18 31 27.5	-4.3
VLS	Valsamata	6.92 287	P	Pn	18 30 17.6	+3.6
HHAG	Hagoal	6.93 157	P	Pn	18 30 13.1	-1.0
	baz=156					
HHAG	Hagoal	6.93 157	P	Pn	18 30 13.1	-1.0
VAY	Valandovo	7.02 317	*e*Pn	Pn	18 30 17.4	+2.0
VAY	Valandovo	7.02 317	P	Pn	18 30 19.2	+3.9
HSAF	As Saff	7.08 162	P	Pn	18 30 14.0	-2.3
	baz=160					
HSAF	As Saff	7.08 162	P	Pn	18 30 14.0	-2.3
KZIT	Kziot	7.09 139	Pn	Pn	18 30 13.9	-2.4
KZIT			Sn	Sn	18 31 29.2	-7.0
KZIT	Kziot	7.09 139	Pn	Pn	18 30 13.9	-2.4
YTIR	Yattir	7.15 133	Pn	Pn	18 30 13.8	-3.4
YTIR	Yattir	7.15 133	Pn	Pn	18 30 13.8	-3.4
DSI	Dead Sea	7.16 130	Pn	Pn	18 30 14.0	-3.3
DSI	Dead Sea	7.16 130	Pn	Pn	18 30 14.0	-3.3
GLL	Jalalah	7.17 161	P	Pn	18 30 15.8	-1.6
	baz=159					
GLL	Jalalah	7.17 161	P	Pn	18 30 15.8	-1.6
MZDA	Masada	7.33 132	Pn	Pn	18 30 16.4	-3.2
MZDA			Sn	Sn	18 31 35.5	-6.7
MZDA	Masada	7.33 132	Pn	Pn	18 30 16.4	-3.2
FNA	Florina	7.40 309	P	Pn	18 30 23.4	+2.8
FNA			pmax	pmax		
	comp=Z,21nm,0.9s					
BIA	Bitola	7.56 310	*e*Pn	Pn	18 30 25.5	+2.7
VTS	Vitosha	7.64 326 ⇑	*i*P	Pn	18 30 26.5	+2.6
VTS	Vitosha	7.64 326	*e*Pn	Pn	18 30 25.7	+1.8
SWA2		7.71 204	P	Pn	18 30 23.1	-1.8
	baz=204					
SWA2			S	Sn	18 31 40.3	-11
	baz=204					
SWA2			AMP		18 32 00.0	
	baz=204					
SWA2		7.71 204	P	Pn	18 30 23.1	-1.8
ASF	Jabal al Asfar	7.78 120	Pn	Pn	18 30 24.9	-1.0
	comp=Z,2.5nm,0.3s,baz=277,slow=4.9,SNR=15					
ASF			Sn	Sn	18 31 51.3	-2.1
	baz=105,slow=20,SNR=2.3					
PRNI	Paran	7.85 138	Pn	Pn	18 30 24.1	-2.6
PRNI	Paran	7.85 138	Pn	Pn	18 30 24.1	-2.6
OHR	Ohrid	7.94 309	*e*Pn	Pn	18 30 32.7	+4.7
NBNS	Bani Suef	7.98 165	P	Pn	18 30 26.6	-2.0
	baz=164					
NBNS	Bani Suef	7.98 165	P	Pn	18 30 26.6	-2.0
TIRR	Tirgusor	8.08 357 ⇑	*i*P	Pn	18 30 28.6	-1.2
TIRR	Tirgusor	8.08 357 ⇑	*i*P	Pn	18 30 28.6	-1.2
SKO	Skopje	8.09 316	*e*Pn	Pn	18 30 31.2	+1.3
HRFI	Mount Harif	8.11 140	Pn	Pn	18 30 28.0	-2.4
HRFI	Mount Harif	8.11 140	Pn	Pn	18 30 28.0	-2.4
TLB	Topalu	8.22 355 ⇓	*i*P	Pn	18 30 30.0	-1.8
TLB	Topalu	8.22 355 ⇓	*i*P	Pn	18 30 30.0	-1.8
MBRI	Mt Berech	8.24 141	Pn	Pn	18 30 30.0	-2.2
MBRI			Sn	Sn	18 31 58.5	-6.3
MBRI	Mt Berech	8.24 141	Pn	Pn	18 30 30.0	-2.2
EIL	Elat	8.36 142	Pn	Pn	18 30 37.1	+3.4
	comp=Z,2.0nm,0.3s,baz=0.5,slow=2.7,SNR=27					
EIL			Sn	Sn	18 32 08.2	+0.7
	comp=Z,5.4nm,0.3s,baz=93,slow=23,SNR=6.1					
EIL	Elat	8.36 142	Pn	Pn	18 30 31.0	-2.8
EIL	Elat	8.36 142	Pn	Pn	18 30 31.0	-2.8
HBST	Basata	8.63 144	P	Pn	18 30 35.6	-1.9
	baz=143					
HBST	Basata	8.63 144	P	Pn	18 30 35.6	-1.9
TIR	Tirane	8.66 308 ⇑	*i*P	Pn	18 30 39.4	+1.5
TIR	Tirane	8.66 308 ⇑	*i*P	Pn	18 30 39.4	+1.5
NUB		8.75 145	P	Pn	18 30 36.5	-2.6
	baz=144					
TLCR		8.79 359 ⇑	*i*P	Pn	18 30 38.7	-0.9
TLCR		8.79 359 ⇑	*i*P	Pn	18 30 38.7	-0.9
TAMRE	El Minia	8.83 169	P	Pn	18 30 37.0	-3.2
	baz=168					
SEV	Sevastopol'	8.90 22	*e*P	Pn	18 30 38.1	-2.9
SEV			pmax	pmax		
	comp=Z,11nm,0.3s					
HKAT	Jabal Katrina	8.91 150	P	Pn	18 30 39.0	-2.5
	baz=149					
HKAT	Jabal Katrina	8.91 150	P	Pn	18 30 39.0	-2.5
YAL	Yalta	9.00 24	*e*P	Pn	18 30 41.4	-1.0
YAL			pmax	pmax		
	comp=Z,37nm,0.3s					
YAL	Yalta	9.00 24	*e*P	Pn	18 30 41.4	-1.0
	comp=Z,37nm,0.3s					
ZAGS	Zajecar	9.04 327	*e*Pn	Pn	18 30 44.9	+1.9
HFRF	Wahat Farafira	9.23 184	P	Pn	18 30 42.5	-3.1
	baz=184					
HFRF	Wahat Farafira	9.23 184	P	Pn	18 30 42.5	-3.1
ALU	Alushta	9.26 25	*e*P	Pn	18 30 46.7	+0.8
ALU			pmax	pmax		
	comp=Z,10.0nm,0.3s					
MLR	Muntele Rosu	9.38 347	Pn	Pn	18 30 47.4	-0.4
	comp=Z,0.2nm,0.3s,baz=249,slow=3.9,SNR=12					
MLR			Sn	Sn	18 32 31.5	-1.1
	comp=Z,0.0nm,0.3s,baz=115,slow=19,SNR=1.5					
MLR	Muntele Rosu	9.38 347 ⇓	*i*P	Pn	18 30 47.7	-0.1
SIM	Simferopol'	9.40 23	*e*P	Pn	18 30 47.9	0.0
SIM			pmax	pmax		
	comp=Z,125nm,0.3s					
SIM	Simferopol'	9.40 23	*e*P	Pn	18 30 47.9	0.0
	comp=Z,125nm,0.3s					
PLOR	Plostina	9.62 350 ⇑	*i*P	Pn	18 30 53.4	+2.4
VRI	Vrincioaia	9.62 351 ⇑	*i*P	Pn	18 30 51.2	+0.2
VRI	Vrincioaia	9.62 351	P	Pn	18 30 51.1	+0.1
VRI	Vrincioaia	9.62 351	P	Pn	18 30 51.1	+0.1
PDG	Podgorica	9.64 312 ⇑	*i*P	Pn	18 30 55.2	+3.9
SUDU	Sudak	9.64 26	*e*P	Pn	18 30 51.0	-0.3
SUDU			*e*S	Sn	18 32 35.6	-3.3
SUDU			pmax	pmax		
	comp=Z,3.0nm,0.3s					
SUDU			smax	smax		
	comp=N,3.0nm,0.5s					
SUDU			smax	smax		
	comp=E,5.0nm,0.3s					
GRUS	Gruza	9.80 322	*e*Pn	Pn	18 30 55.3	+1.8
HHRG	Al Ghardaqah	9.94 156	P	Pn	18 30 55.0	-0.3
	baz=155					
TIP	Timpagrande	10.07 290 ⇑	*i*P	Pn	18 30 56.0	-1.2
TIP	Timpagrande	10.07 290 ⇑	*i*P	Pn	18 30 56.0	-1.2
MATE	Matera	10.52 298 ⇑	*i*P	Pn	18 31 02.5	-0.7
MATE	Matera	10.52 298 ⇑	*i*P	Pn	18 31 02.5	-0.7
STON	Ston	10.84 310	P	Pn	18 31 08.5	+0.8
STON	Ston	10.84 310	*i*P	Pn	18 31 08.4	+0.8
NEY	Neytrino	12.59 53	*i*P	Pn	18 31 34.3	+2.6
KIV	Kislovodsk	12.91 50	*e*P	Pn	18 31 37.1	+1.0
KIV			pmax	pmax		
	comp=Z,3.0nm,1.1s					
UDBI	Udbina	12.93 313	P	Pn	18 31 40.0	+3.7
KBZ	Khabaz	12.93 51	Pn	Pn	18 31 38.0	+1.9
	comp=Z,0.1nm,0.3s,baz=264,slow=4.1,SNR=3.5					
NCK	Nalchik	13.26 53	*i*P	Pn	18 31 43.2	+2.4
KIEV	Kiev	14.30 1	*i*P	Pn	18 31 55.7	+0.8
AKASG	Malin Array Be	14.31 1	Pn	Pn	18 31 52.0	-3.0
	comp=Z,0.8nm,0.3s,baz=196,slow=12,SNR=4.9					
MODS	Modra-Piesok	14.75 328	*e*P	Pn	18 31 55.5	-5.6
MODS	Modra-Piesok	14.75 328	*e*PN	Pn	18 31 55.5	-5.6
VSR	Storozhevoye	16.52 23	*e*P	Pn	18 32 24.1	0.0
VSR			pmax	pmax		
	comp=Z,8.0nm,0.6s					
DPC	Dobruska-Polom	16.68 331	AMS	AMS	18 38 40.0	
	comp=Z,100nm,9.9s					
GERES	GERESS Array B	16.74 323	Pn	Pn	18 32 27.0	+0.1
	comp=Z,0.1nm,0.3s,baz=128,slow=8.6,SNR=6.0					
GERES	GERESS Array B	16.74 323	P	Pn	18 32 27.0	+0.1
GERES	GERESS Array B	16.74 323	P	Pn	18 32 27.0	+0.1
KHC	Kasperske Hory	16.99 323	*e*P	Pn	18 32 30.3	+0.2
KHC			*es*P	sP	18 32 42.2	+1.7
KHC	Kasperske Hory	16.99 323	*e*P	Pn	18 32 30.3	+0.2
KHC	Kasperske Hory	16.99 323	*e*P	Pn	18 32 30.3	+0.2
WET	Wettzell	17.34 322	P	P	18 32 35.2	-0.5
WET			pmax	pmax		
	comp=Z,7.0nm,1.2s					
WET	Wettzell	17.34 322	P	P	18 32 35.2	-0.5
	comp=Z,7.0nm,1.2s					
CLL	Collm	18.79 328	*e*pP	pP	18 32 58.0	+0.6
CLL			*e*PPP	PPP	18 33 10.0	
CLL	Collm	18.79 328	*e*P	pP	18 32 58.0	+0.6
MOX	Moxa	18.95 324	P	P	18 32 53.3	-0.1
MOX			pmax	pmax		
	comp=Z,9.0nm,1.3s					
MOX	Moxa	18.95 324	P	P	18 32 53.3	-0.1
	comp=Z,9.0nm,1.3s					
OBN	Obninsk	19.44 13	*e*P	Pn	18 33 00.4	+0.5
OBN			pmax	pmax		
	comp=Z,3.0nm,0.9s					
VSU	Vasula	22.14 357	*i*P	P	18 33 28.9	+1.1
VSU			pmax	pmax		
	comp=Z,11nm,0.8s					
GEYT	Alibeck	23.23 77	LR	LR	18 43 07.8	
	comp=Z,22nm,20.4s,baz=125,slow=38					
AKTO	Aktyubinsk	25.14 47	P	P	18 33 55.0	-2.2
	comp=Z,0.5nm,0.3s,baz=230,slow=7.9,SNR=3.2					
FINES	FINESS Array B	25.15 357	P	P	18 33 54.8	-2.4
	comp=Z,1.2nm,0.6s,baz=154,slow=11,SNR=13					
FINES			LR	LR	18 44 44.1	
	comp=Z,24nm,19.8s,baz=224,slow=39					
KLMR	Klimovskoe	25.39 12	*e*P	P	18 33 55.1	-4.3
KLMR			pmax	pmax		
	comp=Z,17nm,1.9s					
KLMR	Klimovskoe	25.39 12	*e*P	P	18 33 55.2	-4.2
KLMR			AMP		18 34 09.4	
	comp=Z,17nm,1.9s					
HFS	Hagfors	25.72 342	P	P	18 33 59.8	-2.6
	comp=Z,1.8nm,0.8s,baz=153,slow=13,SNR=4.8					
ESDC	Sonseca Array	26.07 287	P	P	18 34 03.0	-2.9
	comp=Z,0.3nm,0.4s,baz=85,slow=9.6,SNR=5.6					
PRGR	Permogore	27.36 17	*e*P	P	18 34 21.2	+4.1
PRGR			pmax	pmax		
	comp=Z,3.0nm,0.8s					
ARU	Arti	28.24 35	*c i*P	P	18 34 32.7	+7.6
ARU					18 35 18.7	
ARU					18 37 41.0	
ARU			pmax	pmax		
	comp=Z,9.0nm,2.5s					
BRVK	Borovoye	33.20 47	*i*P	P	18 35 09.8	+1.0
BRVK			pmax	pmax		
	comp=Z,1.0nm,0.9s					
ARCES	ARCESS Array B	33.26 358	P	P	18 35 07.8	-1.4
	comp=Z,3.5nm,0.9s,baz=355,slow=12,SNR=3.9					
TORD	Torodi Ar. Bea	33.69 234	P	P	18 35 11.3	-2.2
	comp=Z,1.2nm,0.4s,baz=33,slow=8.5,SNR=15					
KURBB	Kurchatov Arra	37.93 52	P	P	18 35 46.5	-2.9
	comp=Z,0.7nm,0.7s,baz=276,slow=8.7,SNR=8.0					
KURK	Kurchatov	37.99 52	P	P	18 35 46.5	-3.4
KURK	Kurchatov	37.99 52	*i*P	P	18 35 52.7	+2.7
KURK			pmax	pmax		
	comp=Z,1.0nm,0.9s					
MKAR	Makanchi Array	40.50 58	P	P	18 36 08.4	-2.7
	comp=Z,0.6nm,0.6s,baz=270,slow=8.4,SNR=7.1					
ZALV	Zalesovo Beam	41.91 47	P	P	18 36 21.1	-1.4
	comp=Z,0.7nm,0.6s,baz=256,slow=5.8,SNR=3.9					
DBIC	Dimbokro	42.78 235	LR	LR	18 54 47.5	
	comp=Z,37nm,19.0s,baz=116,slow=37					
MATP	Matopo	56.50 181	P	P	18 38 14.2	-0.3
	comp=Z,1.8nm,0.8s,baz=0.0,slow=6.1,SNR=3.1					
ULN	Ulaanbaatar	56.70 52	*i*P	P	18 38 18.3	+2.4
ULN			pmax	pmax		
	comp=Z,1.0nm,1.1s					
CMAR	Chiang Mai Arr	63.37 86	P	P	18 38 59.1	-2.6
	comp=Z,0.9nm,0.6s,baz=300,slow=8.5,SNR=5.6					
KLR	Kul'dur	70.79 43	*i*P	P	18 39 51.6	+3.1
MA2	Magadan	73.02 27	*i*P	P	18 40 05.1	+3.4
MA2			pmax	pmax		
	comp=Z,6.0nm,1.2s					
PDAR	Pinedale Array	92.62 331	LR	LR	19 29 18.4	
	comp=Z,19nm,19.3s,baz=106,slow=39					

NIED ***10*** *18:31:00,38.°90N×142.°00E,h53km,Mw3.7 Best double couple: M0=4.36000×10^14 NP1:φs=176.00000°,δ25.00000°, λ77.00000°. NP2:φs=10.00000°,δ66.00000°,λ96.00000°.*
IDC ***10*** *18:31:16.6±6.8,39.°36N×141.°97E,h0km,mb3.9/3, mb1 3.7/5,mb1mx3.4/68,mbtmp3.7/5,ML2.4/2,MS2.4/3, Ms1 2.4/3,ms1mx2.2/62,Error ellipse: s-maj=129.6km s-min=25.5km az=115.0*
JMA ***10*** *18:31:21.5±0.1,38.°88N×141.°98E,h49km±1km,M3.6*
JMA Felt II J1.
ISC 10 18:31:13.6±1.9,**38.°94N**±0.°05×**142.°40E**±0.°08,**h12**km±10km, **n23,σ2.9 61/25,mb3.8/3,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.59	284	P		Pn	18 31 30.8	+3.0
OFUJ				S		Sn	18 31 37.1	-0.2
JMK	Ichinoseki	0.92	271	P		Pn	18 31 34.0	+1.6
JMK				*e*S		Sb	18 31 42.8	-0.9
JIO	Ouri	0.96	240	P		Pn	18 31 34.5	+1.7
JIO				S		Sg	18 31 43.3	-1.2
JOM	Ohasama	1.01	302	P		Pn	18 31 36.6	+3.0
JOM				*e*S		Sn	18 31 47.4	-0.4
JRG	Rokugo	1.45	289	P		Pg	18 31 41.6	+0.2
JRG				*e*S		Sb	18 31 56.8	-2.1
JOU	Okura	1.48	248	P		Pg	18 31 41.2	-0.7
JOU				*e*S		Sn	18 31 55.9	-3.4
JANG	Nango	1.58	335	P		Pg	18 31 46.2	+2.2
JYK	Kaneyama	1.59	270	P		Pg	18 31 42.9	-1.2
J

	baz=274						
NANB				eS	Sn	18 38 08.2	+0.2
	baz=274						
ENA	**Nanau**	**0.53**	**271**	P	**Pn**	**18 37 58.7**	**0.0**
	baz=274						
ENA				eS	Sn	18 38 08.2	+0.1
	baz=274						
EGS		**0.55**	**320**	eP	**Pn**	**18 37 59.0**	**0.0**
	baz=322						
JYNG	**Yonagunijimaku**	**0.57**	**86**	P	**Pn**	**18 37 59.2**	**0.0**
JYNG				S	Sn	18 38 09.3	+0.3
NTC	**Toucheng**	**0.62**	**314**	eP	**Pn**	**18 37 59.3**	**-0.5**
	baz=316						
YOJ	**Yonaguni jima**	**0.63**	**86**	P	**Pn**	**18 38 00.2**	**+0.3**
YOJ				S	Sn	18 38 10.2	+0.1
TWE	**Neicheng**	**0.67**	**297**	P	**Pn**	**18 38 00.1**	**-0.1**
	baz=299						
TWE				eS	Sn	18 38 11.0	+0.2
	baz=299						
NACB	**Ninganchiao**	**0.70**	**250**	P	**Pn**	**18 38 00.4**	**-0.3**
	baz=252						
NACB				S	Sn	18 38 11.3	-0.3
	baz=252						
TIPB	**Shuangxi**	**0.71**	**321**	eP	**Pn**	**18 37 59.2**	**-1.7**
	baz=322						
TIPB				eS	Sn	18 38 09.8	-2.0
	baz=322						
ENTT	**Nioudou**	**0.72**	**288**	P	**Pn**	**18 38 01.2**	**+0.3**
	baz=290						
ENTT				eS	Sn	18 38 12.2	+0.3
	baz=290						
TWD	**Chiawan**	**0.74**	**243**	P	**Pn**	**18 38 00.8**	**-0.3**
	baz=245						
TWD				S	Sn	18 38 12.1	-0.2
	baz=245						
HWA	**Hwalien**	**0.79**	**236**	eP	**Pn**	**18 38 02.0**	**+0.3**
	baz=237						
NWF	**Wu-fen Shan**	**0.81**	**323**	eP	**Pn**	**18 38 01.5**	**-0.6**
	baz=324						
WFSB	**Wu-fen Shan**	**0.81**	**323**	eP	**Pn**	**18 38 01.6**	**-0.4**
	baz=324						
NWLT	**Wulai**	**0.82**	**296**	P	**Pn**	**18 38 02.4**	**+0.2**
	baz=297						
NWLT				eS	Sn	18 38 14.7	+0.6
	baz=297						
ENLB	**Shoufeng**	**0.83**	**232**	P	**Pn**	**18 38 02.2**	**0.0**
	baz=233						
ENLB				eS	Sn	18 38 14.2	0.0
	baz=233						
NNSB	**Datong**	**0.85**	**271**	P	**Pn**	**18 38 02.8**	**+0.2**
	baz=272						
NNSB				eS	Sn	18 38 15.1	+0.2
	baz=272						
NNSH	**Datong**	**0.85**	**271**	eP	**Pn**	**18 38 02.5**	**-0.2**
	baz=272						
NNS	**Nan Shan**	**0.86**	**272**	P	**Pn**	**18 38 02.9**	**+0.1**
	baz=273						
NNS				eS	Sn	18 38 15.1	0.0
	baz=273						
TWA	**Mucha**	**0.87**	**310**	eP	**Pn**	**18 38 01.9**	**-0.8**
	baz=311						
YHNB	**Yeheng**	**0.90**	**286**	P	**Pn**	**18 38 03.2**	**+0.1**
	baz=288						
YHNB				eS	Sn	18 38 16.2	+0.5
	baz=288						
NSK	**Sanguang**	**0.91**	**287**	P	**Pn**	**18 38 03.3**	**+0.1**
	baz=288						
NSK				eS	Sn	18 38 16.4	+0.3
	baz=288						
YM10	**YM10**	**1.01**	**317**	eP	**Pn**	**18 38 03.7**	**-0.7**
	baz=317						
ESL	**Shilin**	**1.01**	**234**	P	**Pn**	**18 38 03.8**	**-0.6**
	baz=234						
ESL				eS	Sn	18 38 18.1	0.0
	baz=234						
YM04	**YM04**	**1.02**	**316**	eP	**Pn**	**18 38 03.9**	**-0.7**
	baz=316						
TWS1	**Kuangyinshan**	**1.06**	**310**	eP	**Pn**	**18 38 04.8**	**-0.3**
	baz=311						
TWS1				eS	Sn	18 38 21.0	+1.6
	baz=311						
CHGB	**Renai**	**1.10**	**251**	P	**Pn**	**18 38 06.1**	**+0.3**
	baz=252						
CHGB				eS	Sn	18 38 20.6	0.0
	baz=252						
EGFH	**Guangfu**	**1.10**	**228**	P	**Pn**	**18 38 05.4**	**-0.2**
	baz=228						
EGFH				eS	Sn	18 38 20.4	0.0
	baz=228						
NCU	**National Centr**	**1.17**	**298**	P	**Pn**	**18 38 06.6**	**+0.2**
	baz=299						
NCU				eS	Sn	18 38 22.4	+0.6
	baz=299						
LIOB	**Emei**	**1.21**	**281**	P	**Pn**	**18 38 07.1**	**+0.1**
	baz=282						
LIOB				eS	Sn	18 38 23.3	+0.6
	baz=282						
NSTT	**Nanjuang**	**1.22**	**280**	P	**Pn**	**18 38 07.5**	**+0.4**
	baz=281						
NSTT				eS	Sn	18 38 23.4	+0.4
	baz=281						
VWDT	**VWDT**	**1.26**	**239**	P	**Pn**	**18 38 08.0**	**+0.3**
	baz=239						
VWDT				eS	Sn	18 38 24.1	+0.2
	baz=239						
EHY	**Hungye**	**1.29**	**225**	eP	**Pn**	**18 38 06.7**	**-1.3**
	baz=225						
EHY				S	Sn	18 38 24.3	-0.3
	baz=225						
IRIF	**Iriomote-Funau**	**1.29**	**93**	P	**Pn**	**18 38 07.9**	**-0.1**
IRIF				S	Sn	18 38 24.4	-0.2
YULB	**Yu-li**	**1.38**	**223**	P	**Pn**	**18 38 08.6**	**-0.7**
	baz=223						
YULB				eS	Sn	18 38 26.8	-0.1
	baz=223						
SMLT	**Sun Moon Lake**	**1.40**	**248**	eP	**Pn**	**18 38 10.9**	**+1.3**
	baz=248						
JKRS	**Kuro-shima**	**1.55**	**96**	P	**Pn**	**18 38 12.0**	**+0.5**
JKRS				S	Sn	18 38 31.3	+0.5
JIJ	**Ishigaki jima**	**1.66**	**91**	P	**Pn**	**18 38 13.1**	**+0.1**
JIJ				S	Sn	18 38 32.8	-0.7
JISG	**Ishigakijimahi**	**1.82**	**84**	P	**Pn**	**18 38 15.1**	**0.0**
JISG				eS	Sn	18 38 36.8	-0.5
TWGBT	**Beinan**	**1.96**	**216**	P	**Pn**	**18 38 16.6**	**-0.4**
	baz=216						
TWG	**Pinlang**	**1.96**	**216**	P	**Pn**	**18 38 16.6**	**-0.4**
	baz=216						
JTJ	**Tarama**	**2.18**	**84**	eS	**Sn**	**18 38 46.9**	**+0.9**

*CSEM **10** 18:39:49.8±0.1,36°.45N×28°.94E, h20km, ML3.6, Error ellipse: s-maj=2.8km s-min=2.1km az=167.0*
*ATH **10** 18:39:49.5,36°.42N×28°.92E, h41km±2km, ML2.7/7, Error ellipse: s-maj=2.4km s-min=0.9km az=154.0*
*DDA **10** 18:39:49.8,36°.50N×28°.92E, h7km, Ml3.6*
*ISK **10** 18:39:49.2,36°.45N×28°.94E, h19km, ML3.1/12*
*THE **10** 18:39:50.1,36°.44N×28°.92E, h13km±1km, ML2.6/6, Error ellipse: s-maj=1.5km s-min=0.5km az=82.0*
*ISCJB **10** 18:39:50.0±0.4,36°.43N±0°.03×28°.92E±0°.03, h28km±3km, Error ellipse: s-maj=4.3km s-min=3.8km az=172.9*
ISC 10 18:39:49.8±1.0,**36°.45N**±0°.02×**28°.92E**±0°.02,**h18**km±5km,
n90,σ0°**87**/131,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.23**	**35**	PG	**Pg**	**18 39 54.5**	**-0.8**
FETY	**Fethiye**	**0.23**	**35**	P	**Pg**	**18 39 54.9**	**-0.4**
FETY				S	**Sg**	**18 39 59.8**	**+0.8**
FETY	**Fethiye**	**0.23**	**35**	ePg	**Pg**	**18 39 54.5**	**-0.8**
FETY	**Fethiye**	**0.23**	**35**	P	**Pg**	**18 39 54.9**	**-0.4**
FETY				S	**Sg**	**18 39 59.8**	**+0.8**
DALY	**Dalyan (Mu¨la**	**0.43**	**330**	PG	**Pb**	**18 39 58.6**	**-0.3**
DALY				SG	**Sb**	**18 40 05.1**	**+0.1**
DALY	**Dalyan (Mu¨la**	**0.43**	**330**	i P	**Pb**	**18 39 58.9**	**0.0**
DALY				i S	**Sb**	**18 40 05.8**	**+0.8**
DALY	**Dalyan (Mu¨la**	**0.43**	**330**	ePg	**Pb**	**18 39 58.6**	**-0.3**
DALY	**Dalyan (Mu¨la**	**0.43**	**330**	P	**Pb**	**18 39 58.9**	**0.0**
DALY				eSg	**Sb**	**18 40 05.1**	**+0.1**
TURN	**Turunc**	**0.50**	**330**	PG	**Pn**	**18 40 02.5**	**+0.4**
TURN	**Turunc**	**0.50**	**330**	i P	**Pn**	**18 40 02.4**	**+0.4**
TURN	**Turunc**	**0.50**	**330**	P	**Pn**	**18 40 02.4**	**+0.4**
AKAS	**Kas**	**0.59**	**111**	PG	**Pg**	**18 40 00.8**	**-0.9**
AKAS	**Kas**	**0.59**	**111**	i P	**Pg**	**18 40 00.8**	**-0.9**
AKAS				i S	**Sb**	**18 40 10.9**	**+1.0**
AKAS	**Kas**	**0.59**	**111**	P	**Pg**	**18 40 00.8**	**-0.9**
AKAS				S	**Sb**	**18 40 10.9**	**+1.0**
KSL	**Kastellorizon**	**0.61**	**118**	P	**Pg**	**18 40 01.6**	**-0.4**
KSL				S	**Sn**	**18 40 12.4**	**-0.7**
KSL	**Kastellorizon**	**0.61**	**118**	P	**Pb**	**18 40 01.9**	**-0.1**
KSL				S	**Sb**	**18 40 11.6**	**+1.3**
MRSB	**Marmaris-Mugla**	**0.64**	**295**	PG	**Pb**	**18 40 02.5**	**0.0**
MRSB	**Marmaris-Mugla**	**0.64**	**295**	ePg	**Pb**	**18 40 02.5**	**0.0**
ARG	**Arkhangelos**	**0.68**	**251**	PG	**Pb**	**18 40 03.5**	**+0.4**
ARG	**Arkhangelos**	**0.68**	**251**	P	**Pb**	**18 40 03.3**	**+0.2**
ARG				S	**Sb**	**18 40 14.0**	**+1.8**
ARG				AML	AML	18 40 14.5	
	comp=N,1416μm,0.4s						
ARG				AML	AML	18 40 16.8	
	comp=E,1586μm,0.5s						
ARG	**Arkhangelos**	**0.68**	**251**	P	**Pb**	**18 40 03.0**	**-0.1**
ARG				S	**Sb**	**18 40 13.8**	**+1.6**
ARG	**Arkhangelos**	**0.68**	**251**	P	**Pb**	**18 40 03.0**	**-0.1**
ARG	**Arkhangelos**	**0.68**	**251**	ePg	**Pb**	**18 40 03.5**	**+0.4**
ARG				S	**Sb**	**18 40 13.8**	**+1.6**
GLHS	**Glhisar (BURDU**	**0.85**	**33**	PG	**Pg**	**18 40 05.6**	**-0.8**
GLHS	**Glhisar (BURDU**	**0.85**	**33**	ePg	**Pg**	**18 40 05.6**	**-0.8**
ELL	**Elmali**	**0.85**	**69**	PG	**Pb**	**18 40 06.1**	**-0.1**
ELL	**Elmali**	**0.85**	**69**	ePg	**Pb**	**18 40 06.1**	**-0.1**
YER	**Yerkesik**	**0.86**	**324**	PG	**Pb**	**18 40 06.4**	**+0.2**
YER	**Yerkesik**	**0.86**	**324**	P	**Pb**	**18 40 06.2**	**0.0**
YER				S	**Sb**	**18 40 18.7**	**+1.3**
YER	**Yerkesik**	**0.86**	**324**	ePg	**Pb**	**18 40 06.4**	**+0.2**
YER				S	**Sb**	**18 40 18.7**	**+1.3**
GOLH	**Golhisar**	**0.94**	**33**	i P	**Pg**	**18 40 06.4**	**-1.8**
GOLH	**Golhisar**	**0.94**	**33**	P	**Pg**	**18 40 06.4**	**-1.8**
TAVA	**DENIZLI_Tavas**	**1.02**	**360**	i P	**Pg**	**18 40 08.8**	**-0.8**
TAVA				i S	**Sb**	**18 40 22.6**	**+0.5**
TAVA	**DENIZLI_Tavas**	**1.02**	**360**	P	**Pg**	**18 40 08.8**	**-0.8**
TAVA				S	**Sb**	**18 40 22.6**	**+0.5**
DATC	**Datca-Mugla**	**1.06**	**288**	PG	**Pg**	**18 40 09.7**	**-0.6**
DATC	**Datca-Mugla**	**1.06**	**288**	ePg	**Pg**	**18 40 09.7**	**-0.6**
DAT	**Datca**	**1.11**	**285**	PN	**Pg**	**18 40 10.9**	**-0.5**
DAT	**Datca**	**1.11**	**285**	i P	**Pg**	**18 40 11.0**	**-0.5**
DAT				i S	**Sn**	**18 40 26.6**	**+0.9**
DAT	**Datca**	**1.11**	**285**	ePn	**Pg**	**18 40 10.9**	**-0.5**
DAT				S	**Sn**	**18 40 26.6**	**+0.9**
DNZL	**Cakiroluk**	**1.25**	**5**	i P	**Pn**	**18 40 12.2**	**-0.4**
DNZL				i S	**Sb**	**18 40 29.2**	**+0.4**
DNZL	**Cakiroluk**	**1.25**	**5**	P	**Pn**	**18 40 12.2**	**-0.4**
DNZL				S	**Sb**	**18 40 29.2**	**+0.4**
MLSB	**Milas**	**1.25**	**313**	PN	**Pn**	**18 40 12.8**	**+0.4**
MLSB	**Milas**	**1.25**	**313**	ePn	**Pn**	**18 40 12.8**	**+0.4**
KORT	**Korkueli**	**1.28**	**64**	PN	**Pn**	**18 40 12.7**	**-0.2**
KORT	**Korkueli**	**1.28**	**64**	i P	**Pg**	**18 40 13.8**	**-0.8**
KORT				i S	**Sn**	**18 40 32.8**	**+3.1**
KORT	**Korkueli**	**1.28**	**64**	ePn	**Pn**	**18 40 12.7**	**-0.2**
KORT	**Korkueli**	**1.28**	**64**	P	**Pg**	**18 40 13.8**	**-0.8**
DENT	**Denizli**	**1.31**	**4**	PN	**Pn**	**18 40 12.8**	**-0.5**
DENT	**Denizli**	**1.31**	**4**	ePn	**Pn**	**18 40 12.8**	**-0.5**
BODT	**Bodrum**	**1.43**	**296**	PN	**Pn**	**18 40 14.2**	**-0.7**
BODT	**Bodrum**	**1.43**	**296**	P	**Pn**	**18 40 13.8**	**-1.1**
BODT				S	**Sn**	**18 40 32.4**	**-0.9**
BODT	**Bodrum**	**1.43**	**296**	P	**Pn**	**18 40 13.8**	**-1.1**
BODT	**Bodrum**	**1.43**	**296**	ePn	**Pn**	**18 40 14.2**	**-0.7**
BODT				S	**Sn**	**18 40 32.4**	**-0.9**
ANTB	**Antalya**	**1.47**	**71**	PN	**Pn**	**18 40 15.7**	**+0.3**
ANTB	**Antalya**	**1.47**	**71**	ePn	**Pn**	**18 40 15.7**	**+0.3**
YKAV	**Yalikavak-Bodr**	**1.48**	**298**	PN	**Pn**	**18 40 15.9**	**+0.3**
YKAV	**Yalikavak-Bodr**	**1.48**	**298**	ePn	**Pn**	**18 40 15.9**	**+0.3**
KARP	**Karpathos**	**1.68**	**238**	PN	**Pn**	**18 40 18.5**	**+0.1**
KARP	**Karpathos**	**1.68**	**238**	P	**Pn**	**18 40 18.5**	**+0.1**
KARP				S	**Sn**	**18 40 37.7**	**-1.8**
KARP				AML	AML	18 40 46.8	
	comp=E,204μm,0.4s						
KARP				AML	AML	18 40 46.9	
	comp=N,285μm,0.4s						
KARP	**Karpathos**	**1.68**	**238**	P	**Pn**	**18 40 18.2**	**-0.2**
KARP				S	**Sn**	**18 40 38.3**	**-1.2**
KARP	**Karpathos**	**1.68**	**238**	P	**Pn**	**18 40 18.2**	**-0.2**
KARP	**Karpathos**	**1.68**	**238**	ePn	**Pn**	**18 40 18.5**	**+0.1**
KARP				S	**Sn**	**18 40 38.3**	**-1.2**
AYDB	**Zeytinkoy-Aydi**	**1.71**	**332**	PN	**Pn**	**18 40 18.8**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	**1.71**	**332**	ePn	**Pn**	**18 40 18.8**	**-0.1**
ISP	**Isparta**	**1.88**	**43**	PN	**Pn**	**18 40 20.9**	**-0.3**
ISP	**Isparta**	**1.88**	**43**	ePn	**Pn**	**18 40 20.9**	**-0.3**
KULA	**Kula-Manisa**	**2.08**	**354**	PN	**Pn**	**18 40 23.2**	**-0.7**
KULA	**Kula-Manisa**	**2.08**	**354**	ePn	**Pn**	**18 40 23.2**	**-0.7**
SMG	**Samos**	**2.09**	**308**	P	**Pn**	**18 40 23.7**	**-0.3**
SMG				S	**Sn**	**18 40 49.3**	**-0.1**
SMG				AML	AML	18 40 52.0	
	comp=N,668μm,0.3s						
SMG				AML	AML	18 40 52.1	
	comp=E,471μm,0.3s						
SMG	**Samos**	**2.09**	**308**	P	**Pn**	**18 40 23.9**	**-0.1**
SMG				S	**Sn**	**18 40 49.4**	**-0.1**
SMG	**Samos**	**2.09**	**308**	P	**Pn**	**18 40 23.9**	**-0.1**
SMG				S	**Sn**	**18 40 49.4**	**-0.1**
ZKR	**Zakros**	**2.56**	**240**	P	**Pn**	**18 40 31.5**	**+1.0**
ZKR				S	**Sn**	**18 41 01.5**	**+0.2**
ZKR				AML	AML	18 41 16.8	
	comp=E,120μm,0.6s						
ZKR				AML	AML	18 41 20.7	
	comp=N,52μm,1.0s						
ZKR	**Zakros**	**2.56**	**240**	P	**Pn**	**18 40 31.0**	**+0.5**
ZKR				S	**Sn**	**18 41 00.8**	**-0.5**
SIMA	**Simav-Kutahya**	**2.63**	**1**	PN	**Pn**	**18 40 32.1**	**+0.5**
SIMA	**Simav-Kutahya**	**2.63**	**1**	ePn	**Pn**	**18 40 32.1**	**+0.5**
URLA	**Izmir**	**2.66**	**317**	PN	**Pn**	**18 40 31.7**	**-0.1**
URLA	**Izmir**	**2.66**	**317**	ePn	**Pn**	**18 40 31.7**	**-0.1**
APE	**Apeiranthos**	**2.79**	**284**	P	**Pn**	**18 40 34.7**	**+1.0**
APE				S	**Sn**	**18 41 07.5**	**+0.6**
APE	**Apeiranthos**	**2.79**	**284**	P	**Pn**	**18 40 34.3**	**+0.7**
APE				S	**Sn**	**18 41 06.9**	**0.0**
NPS	**Neapolis**	**2.93**	**247**	P	**Pn**	**18 40 35.1**	**-0.5**
NPS				S	**Sn**	**18 41 07.7**	**-2.7**
NPS				AML	AML	18 41 09.7	
	comp=E,119μm,0.4s						
NPS				AML	AML	18 41 17.0	
	comp=N,96μm,0.4s						
NPS	**Neapolis**	**2.93**	**247**	P	**Pn**	**18 40 35.1**	**-0.5**
NPS	**Neapolis**	**2.93**	**247**	P	**Pn**	**18 40 35.4**	**-0.2**
NPS				S	**Sn**	**18 41 08.5**	**-1.9**
CHOS	**Chios island**	**2.99**	**311**	P	**Pn**	**18 40 36.4**	**0.0**
CHOS				S	**Sn**	**18 41 11.9**	**0.0**
CHOS				AML	AML	18 41 15.9	
	comp=E,165μm,0.6s						
CHOS				AML	AML	18 41 16.1	
	comp=N,95μm,0.5s						
CHOS	**Chios island**	**2.99**	**311**	P	**Pn**	**18 40 36.5**	**0.0**
CHOS				S	**Sn**	**18 41 11.5**	**-0.4**
CHOS	**Chios island**	**2.99**	**311**	P	**Pn**	**18 40 36.5**	**0.0**
CHOS				S	**Sn**	**18 41 11.6**	**-0.4**
LAST	**Lasithi**	**3.07**	**246**	P	**Pn**	**18 40 37.0**	**-0.6**
LAST				S	**Sn**	**18 41 11.2**	**-2.7**
LAST				AML	AML	18 41 18.9	
	comp=N,39μm,0.5s						
LAST				AML	AML	18 41 21.8	
	comp=E,40μm,0.6s						
LAST	**Lasithi**	**3.07**	**246**	P	**Pn**	**18 40 37.0**	**-0.6**
LAST				S	**Sn**	**18 41 12.3**	**-1.7**
LAST	**Lasithi**	**3.07**	**246**	P	**Pn**	**18 40 37.3**	**-0.3**
LAST				S	**Sn**	**18 41 12.3**	**-1.7**
VLI	**Veliai**	**4.82**	**275**	P	**Pn**	**18 41 03.2**	**+1.7**
VLI	**Veliai**	**4.82**	**275**	P	**Pn**	**18 41 02.8**	**+1.3**

*CSEM **10** 18:41:07.9±0.3,36°.39N×28°.69E, h15km, ML2.5, Error ellipse: s-maj=6.2km s-min=3.6km az=153.0*
*ISK **10** 18:41:07.5,36°.47N×28°.70E, h5km, ML2.5/5*
*ISCJB **10** 18:41:09.0±0.8,36°.44N±0°.04×28°.66E±0°.05, h8km±5km, Error ellipse: s-maj=8.7km s-min=4.5km az=139.3*
*DDA **10** 18:41:08.2,36°.45N×28°.65E, h7km, Ml2.7*
ISC 10 18:41:08.1±1.3,**36°.45N**±0°.04×**28°.69E**±0°.03,**h9**km±10km,
n27,σ0°**49**/43,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DALY	**Dalyan (Mu¨la**	**0.37**	**356**	PG	**Pb**	**18 41 16.4**	**-0.4**
DALY				SG	**Sb**	**18 41 21.6**	**-1.0**
DALY	**Dalyan (Mu¨la**	**0.37**	**356**	i P	**Pb**	**18 41 16.5**	**-0.3**
DALY				i S	**Sb**	**18 41 22.2**	**-0.4**
DALY	**Dalyan (Mu¨la**	**0.37**	**356**	P	**Pb**	**18 41 16.5**	**-0.3**
DALY				eSg	**Sb**	**18 41 21.6**	**-1.0**
DALY				S	**Sb**	**18 41 22.2**	**-0.4**
FETY	**Fethiye**	**0.37**	**60**	PG	**Pg**	**18 41 15.2**	**-0.2**
FETY	**Fethiye**	**0.37**	**60**	ePg	**Pg**	**18 41 15.2**	**-0.2**
FETY	**Fethiye**	**0.37**	**60**	P	**Pg**	**18 41 15.8**	**+0.4**
FETY				S	**Sb**	**18 41 22.8**	**+0.1**
TURN	**Turunc**	**0.43**	**351**	PG	**Pb**	**18 41 17.9**	**+0.1**
TURN				SG	**Sb**	**18 41 25.4**	**+1.0**
TURN	**Turunc**	**0.43**	**351**	i P	**Pb**	**18 41 18.2**	**+0.4**
TURN				i S	**Sb**	**18 41 24.7**	**+0.4**
TURN	**Turunc**	**0.43**	**351**	ePg	**Pb**	**18 41 17.9**	**+0.1**
TURN	**Turunc**	**0.43**	**351**	P	**Pb**	**18 41 18.2**	**+0.4**
TURN				S	**Sb**	**18 41 24.7**	**+0.4**
TURN				eSg	**Sb**	**18 41 25.4**	**+1.0**
MRSB	**Marmaris-Mugla**	**0.47**	**304**	PG	**Pg**	**18 41 17.9**	**+0.5**
MRSB	**Marmaris-Mugla**	**0.47**	**304**	ePg	**Pg**	**18 41 17.9**	**+0.5**
ARG	**Arkhangelos**	**0.51**	**243**	PG	**Pb**	**18 41 18.8**	**-0.5**
ARG				SG	**Sb**	**18 41 27.4**	**+0.6**
ARG	**Arkhangelos**	**0.51**	**243**	ePg	**Pb**	**18 41 18.8**	**-0.5**
YER	**Yerkesik**	**0.76**	**335**	PG	**Pb**	**18 41 23.1**	**-0.4**
YER	**Yerkesik**	**0.76**	**335**	ePg	**Pb**	**18 41 23.1**	**-0.4**
DATC	**Datca-Mugla**	**0.88**	**291**	PG	**Pb**	**18 41 25.6**	**0.0**
DATC	**Datca-Mugla**	**0.88**	**291**	ePg	**Pb**	**18 41 25.6**	**0.0**
DAT	**Datca**	**0.94**	**288**	PG	**Pb**	**18 41 26.8**	**+0.2**
DAT	**Datca**	**0.94**	**288**	i P	**Pg**	**18 41 25.2**	**-0.9**
DAT				i S	**Sg**	**18 41 38.3**	**0.0**
DAT	**Datca**	**0.94**	**288**	P	**Pg**	**18 41 25.2**	**-0.9**
DAT	**Datca**	**0.94**	**288**	ePg	**Pb**	**18 41 26.8**	**+0.2**
DAT				S	**Sg**	**18 41 38.3**	**0.0**
TAVA	**DENIZLI_Tavas**	**1.03**	**10**	i P	**Pn**	**18 41 29.0**	**+0.2**
TAVA				i S	**Sn**	**18 41 43.5**	**+0.1**
TAVA	**DENIZLI_Tavas**	**1.03**	**10**	P	**Pn**	**18 41 29.0**	**+0.2**
TAVA				S	**Sn**	**18 41 43.5**	**+0.1**
DNZL	**Cakiroluk**	**1.27**	**13**	i P	**Pn**	**18 41 32.2**	**-0.1**
DNZL				i S	**Sn**	**18 41 49.6**	**+0.1**
DNZL	**Cakiroluk**	**1.27**	**13**	P	**Pn**	**18 41 32.2**	**-0.1**
DNZL				S	**Sn**	**18 41 49.6**	**+0.1**
KARP	**Karpathos**	**1.53**	**234**	PN	**Pg**	**18 41 37.8**	**+0.3**

*NIC **10** 18:42:27.6±0.5,36°.74N×28°.92E, h25km, mb4.1, ML3.5*
*ISK **10** 18:42:28.9,36°.44N×28°.94E, h21km, ML3.6/12*
*ATH **10** 18:42:29.3,36°.42N×28°.93E, h39km±1km, ML3.1/8, Error ellipse: s-maj=2.2km s-min=0.8km az=163.0*
*ISCJB **10** 18:42:29.6±0.3,36°.41N±0°.02×28°.95E±0°.02, h33km±3km, Error ellipse: s-maj=3.9km s-min=2.8km az=11.8*
*CSEM **10** 18:42:29.6±0.2,36°.42N×28°.97E, h24km±1km, ML3.8, Error ellipse: s-maj=3.4km s-min=2.4km az=9.0*
*DDA **10** 18:42:29.1,36°.47N×28°.94E, h29km, Ml3.8*
*THE **10** 18:42:30.2,36°.44N×28°.92E, h14km±1km, ML3.2/5, Error ellipse: s-maj=1.3km s-min=0.5km az=102.0*
ISC 10 18:42:29.3±1.1,**36°.43N**±0°.02×**28°.95E**±0°.02,**h18**km±3km,
n123,σ0°**90**/168,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.23**	**29**	PG	**Pg**	**18 42 34.8**	**+0.1**
FETY	**Fethiye**	**0.23**	**29**	P	**Pg**	**18 42 34.9**	**+0.2**
FETY				S	**Sb**	**18 42 40.0**	**+1.8**
FETY	**Fethiye**	**0.23**	**29**	i Pg	**Pg**	**18 42 34.8**	**+0.1**
FETY				S	**Sb**	**18 42 40.0**	**+1.8**
DALY	**Dalyan (Mu¨la**	**0.45**	**328**	PG	**Pg**	**18 42 39.0**	**+0.6**
DALY	**Dalyan (Mu¨la**	**0.45**	**328**	i P	**Pg**	**18 42 38.8**	**+0.4**
DALY				i S	**Sb**	**18 42 45.7**	**+0.7**
DALY	**Dalyan (Mu¨la**	**0.45**	**328**	i Pg	**Pg**	**18 42 39.0**	**+0.6**
DALY				S	**Sb**	**18 42 45.7**	**+0.7**
TURN	**Turunc**	**0.52**	**328**	PG	**Pn**	**18 42 42.4**	**+0.7**
TURN	**Turunc**	**0.52**	**328**	i P	**Pn**	**18 42 42.4**	**+0.7**
TURN				i S	**Sn**	**18 42 51.9**	**+1.9**
TURN	**Turunc**	**0.52**	**328**	P	**Pn**	**18 42 42.4**	**+0.7**
AKAS	**Kas**	**0.57**	**110**	PG	**Pg**	**18 42 40.7**	**0.0**
AKAS	**Kas**	**0.57**	**110**	i P	**Pg**	**18 42 40.7**	**0.0**
AKAS	**Kas**	**0.57**	**110**	i P	**Pg**	**18 42 40.6**	**-0.1**
AKAS				i S	**Sb**	**18 42 50.7**	**+2.2**
AKAS	**Kas**	**0.57**	**110**	i Pg	**Pg**	**18 42 40.7**	**0.0**
AKAS				S	**Sb**	**18 42 50.7**	**+2.2**
KSL	**Kastellorizon**	**0.59**	**119**	P	**Pg**	**18 42 41.9**	**+0.9**
KSL				S	**Sb**	**18 42 51.3**	**+2.5**
KSL	**Kastellorizon**	**0.59**	**119**	P	**Pg**	**18 42 41.7**	**+0.7**
KSL				S	**Sb**	**18 42 51.7**	**+2.9**
MRSB	**Marmaris-Mugla**	**0.67**	**295**	PG	**Pg**	**18 42 41.9**	**-0.5**
MRSB	**Marmaris-Mugla**	**0.67**	**295**	ePg	**Pg**	**18 42 41.9**	**-0.5**
ARG	**Arkhangelos**	**0.70**	**252**	PG	**Pg**	**18 42 43.2**	**+0.2**
ARG	**Arkhangelos**	**0.70**	**252**	P	**Pg**	**18 42 43.3**	**+0.2**
ARG				S	**Sb**	**18 42 53.5**	**+1.4**
ARG				AML	AML	18 42 54.0	
	comp=N,3834μm,0.6s						
ARG				AML	AML	18 42 56.6	
	comp=E,3429μm,0.7s						
ARG	**Arkhangelos**	**0.70**	**252**	P	**Pg**	**18 42 43.2**	**+0.2**
ARG				S	**Sb**	**18 42 53.7**	**+1.6**
ARG	**Arkhangelos**	**0.70**	**252**	P	**Pg**	**18 42 43.2**	**+0.2**

KHAL	Karahalli	1.98	13	*i* P		Pn	18 43 00.3	-1.7
KHAL	Karahalli	1.98	13	P		Pn	18 43 00.3	-1.7
KZIL	AFYON_Kizioren	2.05	27	*i* P		Pn	18 43 02.7	-0.3
KZIL	AFYON_Kizioren	2.05	27	P		Pn	18 43 02.7	-0.3
MANT	Manisa	2.08	352	*i* P		Pn	18 43 02.5	-0.9
MANT	Manisa	2.08	352	P		Pn	18 43 02.5	-0.9
KULA	Kula-Manisa	2.09	354	PN		Pn	18 43 02.4	-1.0
KULA	Kula-Manisa	2.09	354	*e*Pn		Pn	18 43 02.4	-1.0
SMG	Samos	2.11	308	P		Pn	18 43 03.8	+0.1
SMG				S		Sn	18 43 29.9	+0.5
SMG				AML		AML	18 43 31.6	
	comp=N,2130μm,0.5s							
SMG				AML		AML	18 43 34.5	
	comp=E,1512μm,0.4s							
SMG	Samos	2.11	308	P		Pn	18 43 03.9	+0.2
SMG				S		Sn	18 43 29.4	-0.1
SMG	Samos	2.11	308	P		Pn	18 43 03.9	+0.2
SMG				S		Sn	18 43 29.4	-0.1
ZKR	Zakros	2.58	240	P		Pn	18 43 11.3	+1.2
ZKR				S		Sn	18 43 40.0	-0.9
ZKR				AML		AML	18 43 58.5	
	comp=N,115μm,0.5s							
ZKR				AML		AML	18 43 59.0	
	comp=E,309μm,0.6s							
ZKR	Zakros	2.58	240	P		Pn	18 43 10.7	+0.6
ZKR	Zakros	2.58	240	P		Pn	18 43 10.7	+0.6
ZKR				S		Sn	18 43 40.1	-0.9
GEDZ	Gediz	2.63	8	PN		Pn	18 43 11.4	+0.5
GEDZ	Gediz	2.63	8	*e*Pn		Pn	18 43 11.4	+0.5
SIMA	Simav-Kutahya	2.65	1	PN		Pn	18 43 10.3	-0.8
SIMA	Simav-Kutahya	2.65	1	*e*Pn		Pn	18 43 10.3	-0.8
URLA	Izmir	2.68	316	PN		Pn	18 43 12.2	+0.7
URLA	Izmir	2.68	316	*e*Pn		Pn	18 43 12.2	+0.7
APE	Apeiranthos	2.81	284	P		Pn	18 43 13.5	+0.1
APE				S		Sn	18 43 46.7	-0.2
APE				AML		AML	18 43 49.4	
	comp=N,92μm,0.5s							
APE				AML		AML	18 43 50.2	
	comp=E,75μm,0.4s							
APE	Apeiranthos	2.81	284	P		Pn	18 43 13.6	+0.2
APE				S		Sn	18 43 46.5	-0.4
NPS	Neapolis	2.95	248	P		Pn	18 43 14.0	-1.2
NPS				S		Sn	18 43 49.1	-1.0
NPS				AML		AML	18 44 00.0	
	comp=E,309μm,0.4s							
NPS				AML		AML	18 44 05.5	
	comp=N,215μm,0.4s							
NPS	Neapolis	2.95	248	P		Pn	18 43 14.8	-0.4
NPS	Neapolis	2.95	248	P		Pn	18 43 14.8	-0.4
NPS				S		Sn	18 43 49.2	-0.9
CHOS	Chios island	3.02	311	P		Pn	18 43 16.4	+0.3
CHOS				S		Sn	18 43 51.4	-0.5
CHOS				AML		AML	18 43 55.2	
	comp=E,564μm,0.3s							
CHOS				AML		AML	18 43 55.7	
	comp=N,268μm,0.6s							
CHOS	Chios island	3.02	311	P		Pn	18 43 16.5	+0.3
CHOS				S		Sn	18 43 51.6	-0.2
CHOS	Chios island	3.02	311	P		Pn	18 43 16.5	+0.3
CHOS				S		Sn	18 43 51.6	-0.2
AKMC	Akamas	3.09	116	P		Pn	18 43 15.7	-1.4
	baz=302							
AKMC	Akamas	3.09	116	P		Pn	18 43 15.7	-1.4
LAST	Lasithi	3.09	247	P		Pn	18 43 16.6	-0.6
LAST	Lasithi	3.09	247	P		Pn	18 43 16.9	-0.3
LAST	Lasithi	3.09	247	P		Pn	18 43 17.1	-0.1
PPCY	Paphos	3.17	118	P		Pn	18 43 17.3	-0.9
	baz=304							
PPCY	Paphos	3.17	118	P		Pn	18 43 17.3	-0.9
ALFC	Alefka	3.23	112	P		Pn	18 43 17.3	-1.8
	baz=298							
ALFC				S		Sn	18 43 56.0	-1.1
ALFC	Alefka	3.23	112	P		Pn	18 43 17.3	-1.8
ALFC				S		Sn	18 43 56.0	-1.1
SZAC	Souni	3.62	116	P		Pn	18 43 22.9	-1.5
	baz=302							
SZAC				S		Sn	18 44 07.5	+0.8
SZAC	Souni	3.62	116	P		Pn	18 43 22.9	-1.5
SZAC				S		Sn	18 44 07.5	+0.8
CSS	Mathiatis	3.86	111	P		Pn	18 43 27.0	-0.7
	baz=297							
CSS				S		Sn	18 44 12.5	-0.1
CSS	Mathiatis	3.86	111	P		Pn	18 43 27.0	-0.7
CSS				S		Sn	18 44 12.5	-0.1
DION	Dionisos Attik	4.32	294	P		Pn	18 43 36.7	+2.6
DION				S		Sn	18 44 23.4	-0.6
DION				AML		AML	18 44 26.6	
	comp=E,96μm,0.4s							
DION				AML		AML	18 44 26.9	
	comp=N,108μm,0.4s							
DION	Dionisos Attik	4.32	294	P		Pn	18 43 35.9	+1.8
DION				S		Sn	18 44 23.2	-0.8
LIA	Limnos Island	4.55	321	P		Pn	18 43 39.2	+2.0
LIA	Limnos Island	4.55	321	P		Pn	18 43 38.8	+1.6
ANKY	Antikythira Is	4.60	265	P		Pn	18 43 38.2	+0.3
ANKY	Antikythira Is	4.60	265	P		Pn	18 43 38.5	+0.6
VLI	Veliai	4.84	275	P		Pn	18 43 42.0	+0.8
VLI	Veliai	4.84	275	P		Pn	18 43 42.1	+0.8

*JMA **10** 18:43:38.6±0.3,43°.95N×147°.90E,h52km,M3.6*
*SKHL **10** 18:43:38.1±0.6,44°.23N×147°.87E,h30km±3km,mb4.3/5*
ISC 10 18:43:35.9±2.4,**44°.2N**±0°.1×**147°.8E**±0°.2,**h8**km±20km,**n12,**
σ0°99/19,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.99**	**4**	*i* P	**Pg**	**18 43 54.9**	**0.0**
KUR				AMB	AMB	18 43 55.3	
	24nm,0.4s						
KUR				AMB	AMB	18 43 55.3	
	31nm,0.4s						
KUR				AMB	AMB	18 43 55.3	
	140nm,0.4s						
KUR				*i* S	**Sb**	**18 44 08.0**	**-0.5**
KUR				A	A	18 44 10.4	
	229nm,0.1s						
KUR				A	A	18 44 10.4	
	151nm,0.1s						
YUK	**Yuzh-Kuril'sk**	**1.39**	**262**	*i* P	**Pb**	**18 44 02.0**	**0.0**
YUK				AMB	AMB	18 44 02.0	
	62nm,0.1s						
YUK				AMB	AMB	18 44 02.0	
	87nm,0.1s						
YUK				AMB	AMB	18 44 02.0	
	22nm,0.1s						
YUK				*i* S	**Sn**	**18 44 20.0**	**+0.1**
YUK				A	A	18 44 23.0	
	203nm,0.3s						
YUK				A	A	18 44 23.0	
	440nm,0.3s						
LAGR	**Lagunnoye**	**1.44**	**263**	*e*P	**Pn**	**18 44 02.0**	**-0.1**
LAGR				AMB	AMB	18 44 04.0	
	120nm,0.3s						
LAGR				*e*S	**Sn**	**18 44 20.0**	**-1.2**
LAGR				A	A	18 44 25.0	
	547nm,0.3s						
LAGR				A	A	18 44 25.0	
	242nm,0.3s						
GRPR	**Tuman**	**1.46**	**261**	*e*P	**Pb**	**18 44 03.0**	**-0.2**
GRPR				AMB	AMB	18 44 03.0	
	87nm,0.3s						
GRPR				*e*S	**Sn**	**18 44 21.0**	**-0.7**
GRPR				A	A	18 44 24.0	
	295nm,0.3s						
GRPR				A	A	18 44 24.0	
	325nm,0.3s						
GLVR	**Golovnino**	**1.70**	**253**	*i* P	**Pn**	**18 44 06.0**	**+0.3**
GLVR				AMB	AMB	18 44 07.0	
	80nm,0.2s						
GLVR				*e*S	**Sn**	**18 44 28.0**	**+0.4**
GLVR				A	A	18 44 34.0	
	425nm,0.3s						
GLVR				A	A	18 44 34.0	
	146nm,0.3s						
NEM2	**Nemuro 2**	**1.71**	**240**	P	**Pb**	**18 44 06.1**	**-1.3**
NEM2				*e*S	**Sn**	**18 44 26.9**	**-0.9**
JRA	**Rausu**	**1.93**	**262**	P	**Pb**	**18 44 10.7**	**-0.5**
JNK	**Nakash**	**2.30**	**254**	P	**Pn**	**18 44 15.3**	**+1.3**
JNK				*e*S	**Sn**	**18 44 42.4**	**0.0**
JAK	**Akkeshi**	**2.55**	**242**	P	**Pn**	**18 44 18.1**	**+0.6**
JAR	**Ashorobuto**	**3.04**	**253**	P	**Pn**	**18 44 26.3**	**+2.0**
JKB	**Kayabe**	**5.46**	**247**	P	**Pn**	**18 44 59.1**	**+1.6**

JOT	**Ohata**	**5.71**	**242**	P		**Pn**	**18 45 01.7**	**+0.8**

*ISCJB **10** 18:44:12.3±0.9,4°.49N×0°.05×124°.17E±0°.07,h33km,*
mb3.8/5,MS2.9/1,Error ellipse: s-maj=10.4km
s-min=7.1km az=177.4
*IDC **10** 18:44:12.3±1.0,4°.26N×124°.74E,h0km,mb3.8/5,*
mb1 3.9/6,mb1mx3.5/58,mbtmp3.8/6,ML4.1/1,MS2.8/2,
Ms1 2.8/2,ms1mx2.4/51,Error ellipse: s-maj=47.6km
s-min=17.4km az=75.0
*MAN **10** 18:44:15.4,4°.82N×124°.43E,h15km,mb5.0,ML4.0,MS4.0*
ISC 10 18:44:14.2±1.4,**4°.51N**±0°.08×**124°.20E**±0°.08,**h35**km,**n13,**
σ1°49/16,**mb3.7/5,2C-1D,Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**1.73**	**25**	⇑*i* P	**Pn**	**18 44 41.2**	**-0.8**
GSPH				*i* S	**Sn**	**18 45 02.1**	**-0.8**
SKMP	**Bagumbayan, Su**	**2.02**	**10**	*e*P	**Pn**	**18 44 45.0**	**-0.9**
SKMP				*e*S	**Sn**	**18 45 08.0**	**-1.9**
CTBH	**Cotabato--PC H**	**2.69**	**1**	⇑*e*P	**Pn**	**18 44 55.1**	**0.0**
CTBH				*i* S	**Sn**	**18 45 25.6**	**-0.8**
DAV	**Davao City (W)**	**2.89**	**28**	Pn	**Pn**	**18 44 58.8**	**+1.1**
	24nm,0.3s,baz=124,slow=1.8,SNR=8.1						
DAV				Sn	**Sn**	**18 45 35.0**	**+3.8**
	18nm,0.3s,baz=267,slow=22,SNR=7.6						
DAV				LR	LR	18 46 30.5	
	comp=Z,120nm,20.6s,baz=188,slow=47						
ZMPH	**Zamboanga City**	**3.23**	**319**	⇓⇓*i* P	**Pn**	**18 45 04.2**	**+1.8**
ZMPH				*i* S	**Sn**	**18 45 38.9**	**-0.8**
PAGZ	**Pagadian**	**3.42**	**346**	*e*P	**Pn**	**18 45 05.5**	**+0.5**
PAGZ				*e*S	**Sn**	**18 45 43.7**	**-0.6**
BUKP	**Musuan**	**3.45**	**14**	*e*P	**Pn**	**18 45 05.9**	**+0.4**
BUKP				*e*S	**Sn**	**18 45 46.4**	**+1.1**
WRA	**Warramunga Arr**	**26.26**	**158**	P	**P**	**18 49 45.3**	**-1.1**
	2.6nm,0.5s,baz=331,slow=11,SNR=44						
ASAR	**Alice Springs**	**29.56**	**162**	P	**P**	**18 50 15.7**	**-0.2**
	0.7nm,0.5s,baz=339,slow=7.8,SNR=23						
MJAR	**Matsushiro Arr**	**34.38**	**20**	LR	LR	19 06 33.2	
	comp=Z,19nm,18.1s,baz=215,slow=39						
MKAR	**Makanchi Array**	**55.49**	**326**	P	P	18 53 53.4	+7.7
	0.4nm,0.6s,baz=120,slow=8.9,SNR=5.0						
KURBB	**Kurchatov Arra**	**59.74**	**328**	P	P	18 54 22.4	+7.0
	0.8nm,0.7s,baz=121,slow=6.6,SNR=6.0						
BVAR	**Borovoye Array**	**65.30**	**328**	P	P	18 54 59.3	+6.7
	0.5nm,0.7s,baz=133,slow=8.1,SNR=3.9						

*ISK **10** 18:59:57.9,36°.35N×29°.06E,h21km,ML2.4/3*
*ISCJB **10** 18:59:58.6±0.7,36°.34N±0°.05×29°.04E±0°.05,h14km,Error*
ellipse: s-maj=7.1km s-min=4.9km az=152.7
*DDA **10** 18:59:59.0,36°.42N×29°.04E,h7km,Ml2.7*
*CSEM **10** 18:59:59.1±0.2,36°.37N×29°.05E,h20km,ML2.7,Error*
ellipse: s-maj=5.1km s-min=3.5km az=157.0
ISC 10 18:59:58.5±1.0,**36°.37N**±0°.04×**29°.05E**±0°.03,**h14**km,**n30,**
σ0°45/36,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.27**	**5**	PG	**Pb**	**19 00 04.9**	**-0.3**
FETY				SG	**Sb**	**19 00 10.1**	**+0.5**
FETY	**Fethiye**	**0.27**	**5**	*e*Pg	**Pb**	**19 00 04.9**	**-0.3**
FETY				*e*Sg	**Sb**	**19 00 10.1**	**+0.5**
AKAS	**Kas**	**0.47**	**107**	*i* P	**Pb**	**19 00 08.8**	**+0.2**
AKAS	**Kas**	**0.47**	**107**	P	**Pb**	**19 00 08.8**	**+0.2**
DALY	**Dalyan (Mu¨la**	**0.55**	**324**	PG	**Pb**	**19 00 10.0**	**0.0**
DALY				SG	**Sb**	**19 00 17.9**	**+0.2**
DALY	**Dalyan (Mu¨la**	**0.55**	**324**	*i* P	**Pb**	**19 00 10.0**	**0.0**
DALY	**Dalyan (Mu¨la**	**0.55**	**324**	P	**Pb**	**19 00 10.0**	**0.0**
DALY				*e*Sg	**Sb**	**19 00 17.9**	**+0.2**
TURN	**Turunc**	**0.62**	**324**	*i* P	**Pn**	**19 00 13.8**	**+0.8**
ARG	**Arkhangelos**	**0.77**	**259**	PG	**Pb**	**19 00 13.9**	**+0.3**
ARG				SG	**Sb**	**19 00 24.1**	**+0.2**
ARG	**Arkhangelos**	**0.77**	**259**	*e*Pg	**Pb**	**19 00 13.9**	**+0.3**
ARG				*e*Sg	**Sb**	**19 00 24.1**	**+0.2**
MRSB	**Marmaris-Mugla**	**0.77**	**297**	PG	**Pn**	**19 00 14.5**	**-0.5**
MRSB	**Marmaris-Mugla**	**0.77**	**297**	*e*Pg	**Pn**	**19 00 14.5**	**-0.5**
GLHS	**Glhisar (BURDU**	**0.86**	**24**	PG	**Pb**	**19 00 15.3**	**-0.1**
GLHS	**Glhisar (BURDU**	**0.86**	**24**	*e*Pg	**Pb**	**19 00 15.3**	**-0.1**
GOLH	**Golhisar**	**0.96**	**25**	*i* P	**Pb**	**19 00 16.5**	**-0.5**
GOLH	**Golhisar**	**0.96**	**25**	P	**Pb**	**19 00 16.5**	**-0.5**
TAVA	**DENIZLI_Tavas**	**1.10**	**354**	*i* P	**Pb**	**19 00 19.2**	**-0.2**
TAVA	**DENIZLI_Tavas**	**1.10**	**354**	P	**Pb**	**19 00 19.2**	**-0.2**
DATC	**Datca-Mugla**	**1.19**	**289**	PN	**Pn**	**19 00 20.5**	**-0.2**
DATC	**Datca-Mugla**	**1.19**	**289**	*e*Pn	**Pn**	**19 00 20.5**	**-0.2**
KORT	**Korkueli**	**1.22**	**58**	*i* P	**Pg**	**19 00 22.4**	**+0.4**
KORT	**Korkueli**	**1.22**	**58**	P	**Pg**	**19 00 22.4**	**+0.4**
DAT	**Datca**	**1.24**	**287**	*i* P	**Pn**	**19 00 21.2**	**-0.4**
DAT	**Datca**	**1.24**	**287**	P	**Pn**	**19 00 21.2**	**-0.4**
DNZL	**Cakiroluk**	**1.32**	**360**	*i* P	**Pn**	**19 00 22.3**	**-0.4**
DNZL	**Cakiroluk**	**1.32**	**360**	P	**Pn**	**19 00 22.3**	**-0.4**
DENT	**Denizli**	**1.38**	**359**	PN	**Pn**	**19 00 22.8**	**-0.7**
DENT	**Denizli**	**1.38**	**359**	*e*Pn	**Pn**	**19 00 22.8**	**-0.7**
KARP	**Karpathos**	**1.74**	**242**	PN	**Pn**	**19 00 27.4**	**-1.0**
KARP	**Karpathos**	**1.74**	**242**	*e*Pn	**Pn**	**19 00 27.4**	**-1.0**

*ISK **10** 19:12:03.9,36°.45N×28°.93E,h18km,ML2.9/10*
*ISCJB **10** 19:12:04.8±0.4,36°.45N±0°.03×28°.90E±0°.03,h30km±4km,*
Error ellipse: s-maj=5.6km s-min=4.3km az=170.7
*DDA **10** 19:12:04.1,36°.49N×28°.94E,h7km,Ml2.9*
*CSEM **10** 19:12:04.4±0.1,36°.45N×28°.91E,h20km,ML2.9,Error*
ellipse: s-maj=3.2km s-min=2.2km az=171.0
*ATH **10** 19:12:04.1,36°.42N×28°.90E,h42km±2km,ML2.3/5,Error*
ellipse: s-maj=2.9km s-min=1.0km az=140.0
ISC 10 19:12:04.1±1.2,**36°.44N**±0°.03×**28°.91E**±0°.02,**h18**km±4km,
n64,σ0°59/80,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.24**	**35**	PG	**Pb**	**19 12 09.7**	**-0.1**
FETY	**Fethiye**	**0.24**	**35**	*e*Pg	**Pb**	**19 12 09.7**	**-0.1**
DALY	**Dalyan (Mu¨la**	**0.43**	**331**	PG	**Pg**	**19 12 12.8**	**-0.1**
DALY				SG	**Sb**	**19 12 19.9**	**+0.5**
DALY	**Dalyan (Mu¨la**	**0.43**	**331**	*i* P	**Pb**	**19 12 13.4**	**+0.2**
DALY	**Dalyan (Mu¨la**	**0.43**	**331**	*e*Pg	**Pg**	**19 12 12.8**	**-0.1**
DALY	**Dalyan (Mu¨la**	**0.43**	**331**	P	**Pb**	**19 12 13.4**	**+0.2**
DALY				*e*Sg	**Sb**	**19 12 19.9**	**+0.5**
TURN	**Turunc**	**0.50**	**330**	PG	**Pn**	**19 12 16.9**	**+0.6**
TURN	**Turunc**	**0.50**	**330**	*i* P	**Pn**	**19 12 17.0**	**+0.6**
TURN	**Turunc**	**0.50**	**330**	*e*Pg	**Pn**	**19 12 16.9**	**+0.6**
AKAS	**Kas**	**0.60**	**110**	PG	**Pb**	**19 12 15.9**	**-0.1**
AKAS	**Kas**	**0.60**	**110**	*i* P	**Pb**	**19 12 15.8**	**-0.2**
AKAS	**Kas**	**0.60**	**110**	*e*Pg	**Pb**	**19 12 15.9**	**-0.1**
KSL	**Kastellorizon**	**0.61**	**118**	P	**Pg**	**19 12 16.5**	**+0.2**
KSL				S	**Sn**	**19 12 27.7**	**+0.4**
MRSB	**Marmaris-Mugla**	**0.64**	**296**	PG	**Pb**	**19 12 16.7**	**0.0**
MRSB	**Marmaris-Mugla**	**0.64**	**296**	*e*Pg	**Pb**	**19 12 16.7**	**0.0**
ARG	**Arkhangelos**	**0.67**	**251**	PG	**Pg**	**19 12 17.6**	**+0.3**
ARG				SG	**Sn**	**19 12 28.6**	**-0.2**
ARG	**Arkhangelos**	**0.67**	**251**	P	**Pg**	**19 12 17.6**	**+0.3**
ARG				AML	AML	19 12 28.8	
	comp=N,203μm,0.3s						
ARG				S	**Sn**	**19 12 28.9**	**+0.2**
ARG				AML	AML	19 12 29.9	
	comp=E,338μm,0.2s						
ARG	**Arkhangelos**	**0.67**	**251**	*e*Pg	**Pg**	**19 12 17.6**	**+0.3**
ARG				S	**Sn**	**19 12 28.5**	**-0.2**
GLHS	**Glhisar (BURDU**	**0.86**	**33**	PG	**Pg**	**19 12 20.9**	**0.0**
GLHS	**Glhisar (BURDU**	**0.86**	**33**	*e*Pg	**Pg**	**19 12 20.9**	**0.0**
YER	**Yerkesik**	**0.86**	**324**	PG	**Pb**	**19 12 20.9**	**+0.4**
YER	**Yerkesik**	**0.86**	**324**	*e*Pg	**Pb**	**19 12 20.9**	**+0.4**
ELL	**Elmali**	**0.86**	**69**	PG	**Pg**	**19 12 20.9**	**0.0**
ELL	**Elmali**	**0.86**	**69**	*e*Pg	**Pg**	**19 12 20.9**	**0.0**
GOLH	**Golhisar**	**0.95**	**33**	*i* P	**Pb**	**19 12 21.4**	**-0.7**
GOLH	**Golhisar**	**0.95**	**33**	P	**Pb**	**19 12 21.4**	**-0.7**
TAVA	**DENIZLI_Tavas**	**1.02**	**0**	*i* P	**Pb**	**19 12 23.1**	**-0.3**
TAVA	**DENIZLI_Tavas**	**1.02**	**0**	P	**Pb**	**19 12 23.1**	**-0.3**
DATC	**Datca-Mugla**	**1.06**	**288**	PG	**Pg**	**19 12 24.6**	**0.0**
DATC	**Datca-Mugla**	**1.06**	**288**	*e*Pg	**Pg**	**19 12 24.6**	**0.0**
DAT	**Datca**	**1.11**	**286**	PN	**Pb**	**19 12 25.4**	**+0.6**
DAT	**Datca**	**1.11**	**286**	*i* P	**Pn**	**19 12 24.7**	**-0.2**
DAT	**Datca**	**1.11**	**286**	P	**Pn**	**19 12 24.7**	**-0.2**
DAT	**Datca**	**1.11**	**286**	*e*Pn	**Pb**	**19 12 25.4**	**+0.6**
MLSB	**Milas**	**1.25**	**314**	PN	**Pb**	**19 12 27.2**	**+0.1**
MLSB	**Milas**	**1.25**	**314**	*e*Pn	**Pb**	**19 12 27.2**	**+0.1**
DNZL	**Cakiroluk**	**1.25**	**5**	*i* P	**Pn**	**19 12 26.4**	**-0.5**
DNZL	**Cakiroluk**	**1.25**	**5**	P	**Pn**	**19 12 26.4**	**-0.5**
KORT	**Korkueli**	**1.28**	**64**	PN	**Pn**	**19 12 27.4**	**+0.1**
KORT	**Korkueli**	**1.28**	**64**	*i* P	**Pb**	**19 12 28.0**	**+0.2**
KORT	**Korkueli**	**1.28**	**64**	*e*Pn	**Pn**	**19 12 27.4**	**+0.1**
KORT	**Korkueli**	**1.28**	**64**	P	**Pb**	**19 12 28.0**	**+0.2**
DENT	**Denizli**	**1.32**	**4**	PN	**Pn**	**19 12 26.8**	**-0.8**
DENT	**Denizli**	**1.32**	**4**	*e*Pn	**Pn**	**19 12 26.8**	**-0.8**
BODT	**Bodrum**	**1.43**	**296**	PN	**Pn**	**19 12 28.2**	**-0.9**
BODT	**Bodrum**	**1.43**	**296**	*e*Pn	**Pn**	**19 12 28.2**	**-0.9**
ANTB	**Antalya**	**1.48**	**71**	PN	**Pn**	**19 12 30.1**	**+0.4**
ANTB	**Antalya**	**1.48**	**71**	*e*Pn	**Pn**	**19 12 30.1**	**+0.4**
KARP	**Karpathos**	**1.68**	**238**	PN	**Pn**	**19 12 32.7**	**+0.2**
KARP	**Karpathos**	**1.68**	**238**	P	**Pn**	**19 12 31.9**	**-0.6**
KARP				S	**Sn**	**19 12 52.9**	**-0.7**
KARP				AML	AML	19 12 54.3	
	comp=E,114μm,0.1s						
KARP				AML	AML	19 12 54.4	
	comp=N,106μm,0.3s						
KARP	**Karpathos**	**1.68**	**238**	P	**Pn**	**19 12 32.1**	**-0.4**
KARP	**Karpathos**	**1.68**	**238**	*e*Pn	**Pn**	**19 12 32.7**	**+0.2**
KARP				S	**Sn**	**19 12 52.8**	**-0.7**
AYDB	**Zeytinkoy-Aydi**	**1.71**	**332**	PN	**Pn**	**19 12 33.8**	**+0.7**
AYDB	**Zeytinkoy-Aydi**	**1.71**	**332**	*e*Pn	**Pn**	**19 12 33.8**	**+0.7**
SUTC	**Sutluce-Ispart**	**1.97**	**58**	PN	**Pn**	**19 12 37.5**	**+0.9**
SUTC	**Sutluce-Ispart**	**1.97**	**58**	*e*Pn	**Pn**	**19 12 37.5**	**+0.9**
SMG	**Samos**	**2.09**	**308**	P	**Pn**	**19 12 37.9**	**-0.2**
SMG				S	**Sn**	**19 13 04.1**	**+0.4**
SMG				AML	AML	19 13 05.7	
	comp=N,230μm,0.3s						
SMG				AML	AML	19 13 05.9	
	comp=E,274μm,0.2s						
SMG	**Samos**	**2.09**	**308**	P	**Pn**	**19 12 38.1**	**-0.1**
SMG				S	**Sn**	**19 13 03.7**	**0.0**
ZKR	**Zakros**	**2.56**	**240**	P	**Pn**	**19 12 45.8**	**+1.2**
ZKR				S	**Sn**	**19 13 15.8**	**+0.5**
ZKR				AML	AML	19 13 17.8	
	comp=E,33μm,0.4s						
ZKR				AML	AML	19 13 18.0	
	comp=N,26μm,0.4s						
ZKR	**Zakros**	**2.56**	**240**	P	**Pn**	**19 12 45.2**	**+0.6**
ZKR				S	**Sn**	**19 13 15.1**	**-0.2**
CHOS	**Chios island**	**2.99**	**311**	P	**Pn**	**19 12 51.4**	**+0.7**
CHOS				S	**Sn**	**19 13 26.0**	**-0.2**
CHOS				AML	AML	19 13 29.0	
	comp=E,103μm,0.4s						
CHOS				AML	AML	19 13 29.0	
	comp=N,81μm,0.4s						
CHOS	**Chios island**	**2.99**	**311**	P	**Pn**	**19 12 51.2**	**+0.5**
CHOS				S	**Sn**	**19 13 25.7**	**-0.4**
LAST	**Lasithi**	**3.07**	**246**	P	**Pn**	**19 12 51.0**	**-0.7**
LAST				S	**Sn**	**19 13 25.4**	**-2.6**
LAST	**Lasithi**	**3.07**	**246**	P	**Pn**	**19 12 51.5**	**-0.2**
LAST				S	**Sn**	**19 13 26.1**	**-1.9**

*ISCJB **10** 19:25:51.0±0.3,20°.24S±0°.02×69°.09W±0°.06,h105km±3km,*
mb4.0/14,Error ellipse: s-maj=9.4km s-min=3.5km az=2.7
*IDC **10** 19:25:51.9±3.0,20°.11S×68°.92W,h97km±26km,mb3.9/14,*
mb1 4.0/16,mb1mx3.8/38,mbtmp4.3/16,MS2.5/2,
Ms1 2.6/2,ms1mx2.5/34,Error ellipse: s-maj=19.6km
s-min=13.1km az=80.0
*GUC **10** 19:25:52.5±0.5,20°.26S×69°.19W,h89km±2km,ML4.7*
*NEIC **10** 19:25:52.0±0.0,20°.26S×69°.19W,h89km,mb4.3/2,*
ML4.7(GUC),After GUC.
NEIC Felt [III] at Huara and Pica; [II] at Alto Hospicio, Camina,
Iquique, La Tirana and Mamina.
*SCB **10** 19:25:56.1±0.4,19°.78S×68°.70W,h120km,Ml3.7/1,Error*
ellipse: s-maj=13.6km s-min=3.4km az=58.0
ISC 10 19:25:51.4±0.6,**20°.22S**±0°.03×**69°.15W**±0°.05,**h94**km±5km,
n56,σ1°78/74,**mb4.2**/14,**12C-4D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**0.08**	**358**	⇓⇓*i* P	**Pn**	**19 26 06.3**	**+1.3**
PB08				*i* S	**Sn**	**19 26 16.2**	**+1.0**
PB08				IAML		19 26 17.7	
	comp=E,32μm,0.3s						
PB01	**IPOC Station P**	**0.88**	**201**	*e*Pn	**Pn**	**19 26 11.2**	**+1.0**
PB01				*e*Sn	**Sn**	**19 26 24.8**	**+0.5**
PB01	**IPOC Station P**	**0.88**	**201**	⇑*i* P	**Pn**	**19 26 10.7**	**+0.5**
PB01				*i* S	**Sn**	**19 26 24.7**	**+0.5**
PB01				IAML		19 26 26.1	
	comp=E,47μm,0.3s						
PSGC	**Pisagua**	**1.10**	**304**	⇓⇓*i* P	**Pn**	**19 26 13.5**	**+0.9**
PSGC				*i* S	**Sn**	**19 26 29.9**	**+1.3**
MNMC	**Minye Minye**	**1.16**	**339**	*e*Pn	**Pn**	**19 26 15.6**	**+2.1**
MNMC		

comp=E,1.6nm,0.4s,baz=216,slow=7.1,SNR=8.7
QSPA South Pole Qui 69.97 180 P **P 19 36 53.5 +0.9**
comp=E,3.7nm,0.9s,baz=141,slow=4.3,SNR=5.9
PDAR Pinedale Array 72.89 330 P **P 19 37 10.8 +0.2**
comp=E,0.2nm,0.4s,baz=136,slow=6.9,SNR=2.4
ULM Lac du Bonnet 74.03 343 P **P 19 37 16.2 -0.6**
comp=E,3.3nm,0.6s,baz=144,slow=8.3,SNR=5.9
TORD Torodi Ar. Bea 77.14 71 P **P 19 37 33.6 -1.7**
comp=E,3.1nm,0.5s,baz=255,slow=5.3,SNR=33
VNDA Vanda 78.07 190 P **P 19 37 41.3 +1.9**
comp=E,0.6nm,0.6s,baz=147,slow=4.7,SNR=4.1
MAW Mawson 85.62 163 P **P 19 38 19.4 +0.3**
comp=E,1.0nm,0.5s,baz=214,slow=6.9,SNR=6.2
MATP Matopo 89.89 112 P **P 19 38 40.7 -0.1**
comp=E,1.6nm,0.7s,baz=265,slow=5.4,SNR=5.6
YKA Yellowknife Ar 89.91 341 P **P 19 38 39.6 +0.1**
comp=E,3.5nm,0.8s,baz=135,slow=4.5,SNR=18
ASAR Alice Springs 130.93 208 PKP **PKPdf 19 44 52.1 -0.7**
comp=E,0.9nm,0.9s,baz=129,slow=1.7,SNR=11
WRA Warramunga Arr 133.93 211 PKP **PKPdf 19 44 57.9 -0.7**
comp=E,0.8nm,0.7s,baz=164,slow=1.6,SNR=12
KURK Kurchatov 140.38 32 PKP **PKPdf 19 45 09.2 -0.2**
KURBB Kurchatov Arra 140.39 32 PKP **PKPdf 19 45 09.2 -0.2**
comp=E,0.4nm,0.8s,baz=315,slow=2.8,SNR=3.6
ZALV Zalesovo Beam 140.89 24 PKP **PKPdf 19 45 10.4 +0.2**
comp=E,1.1nm,0.5s,baz=246,slow=1.9,SNR=6.3
ASAJ Asahikawa 144.44 319 PKP **PKPdf 19 45 17.0 +0.2**
comp=E,2.7nm,0.5s,baz=39,slow=6.5,SNR=4.0
MKAR Makanchi Array 144.72 35 PKP **PKPab 19 45 16.2 -0.1**
comp=E,1.0nm,0.4s,baz=322,slow=2.5,SNR=28
KLR Kul'dur 146.57 335 PKPbc **PKPdf 19 45 21.5 +1.1**
comp=E,0.1nm,0.4s,baz=82,slow=2.1,SNR=5.8
MJAR Matsushiro Arr 151.09 310 PKPbc **PKPbc 19 45 33.4 -0.5**
comp=E,0.6nm,0.5s,baz=169,slow=0.7,SNR=6.0
SONM Songino Array 152.22 6 PKPbc **PKPbc 19 45 36.5 +0.1**
comp=E,1.7nm,0.4s,baz=329,slow=1.8,SNR=13

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*IDC **10** 19:28:04.0±1.0,2°.20N×125°.00E,h0km,mb4.0/7,*
mb1 4.2/7,mb1mx3.7/58,mbtmp4.0/7,Error ellipse:
s-maj=157.1km s-min=15.3km az=65.0
*ISCJB **10** 19:28:16.2±0.5,2°.64N±0.03×126°.26E±0°.06,h109km,*
mb4.0/8,Error ellipse: s-maj=8.6km s-min=4.0km
az=174.0
*DJA **10** 19:28:18.7±0.4,3°N±4°×12°6E±°,h112km±5km,M4.7/11,*
mb4.6/9,mB5.5/4,MLv4.7/11,Mw(mB)4.9/4
ISC 10 19:28:17.0±0.7,**2°.61N**±0°.04×**126°.24E**±0°.07,**h109**km,**n25,**
σ2°29/36,mb3.9/8,1D,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.29**	**326**	P	**Pn**	**19 28 42.7**	**+1.4**
KMSI	**Cibinong**	**3.03**	**228**	P	**Pn**	**19 29 04.3**	**+0.9**
KMSI				S	**Sn**	**19 29 44.4**	**+5.2**
LBMI	**Labuha**	**3.46**	**159**	P	**Pn**	**19 29 11.8**	**+2.6**
LBMI				S	**Sn**	**19 29 51.9**	**+2.4**
GSPH	**General Santos**	**3.69**	**340**	*iP*	**Pn**	**19 29 12.1**	**-0.2**
GSPH				*i*S	**Sn**	**19 29 52.5**	**-2.7**
SKMP	**Bagumbayan, Su**	**4.24**	**336**	*e*P	**Pn**	**19 29 19.8**	**+0.2**
SKMP				*e*S	**Sn**	**19 30 07.2**	**-1.0**
MATI	**Mati**	**4.31**	**0**	*e*P	**Pn**	**19 29 21.3**	**+0.7**
MATI				*e*S	**Sn**	**19 30 13.1**	**+3.2**
SANI	**Sanana**	**4.63**	**183**	P	**Pn**	**19 29 23.9**	**-1.0**
SANI				S	**Sn**	**19 30 11.6**	**-6.1**
MRSI	**Marisa**	**4.79**	**244**	P	**Pn**	**19 29 27.7**	**+0.6**
LUWI	**Luwuk**	**5.02**	**224**	P	**Pn**	**19 29 31.9**	**+1.8**
LUWI				S	**Sn**	**19 30 29.4**	**+2.4**
BUKP	**Musuan**	**5.37**	**347**	*e*P	**Pn**	**19 29 35.8**	**+0.8**
BUKP				*e*S	**Sn**	**19 30 37.4**	**+1.8**
APSI	**Ampana**	**5.77**	**233**	P	**Pn**	**19 29 41.3**	**+1.0**
NLAI	**Namlea**	**5.87**	**172**	P	**Pn**	**19 29 42.5**	**+0.8**
NLAI				S	**Sn**	**19 30 44.4**	**-3.3**
PAGZ	**Pagadian**	**5.94**	**331**	*e*P	**Pn**	**19 29 40.6**	**-2.0**
BUTP	**Butuan**	**6.35**	**354**	*e*P	**Pn**	**19 29 49.7**	**+1.5**
BUTP				*e*S	**Sn**	**19 31 04.4**	**+5.1**
AAI	**Ambon**	**6.55**	**163**	P	**Pn**	**19 29 52.3**	**+1.4**
MTKI	**Muara Teweh, K**	**11.88**	**253**	P	**Pn**	**19 31 03.3**	**+0.3**
	17nm,1.1s						
STKI	**Sintang**	**14.98**	**261**	P	**P**	**19 31 46.1**	**+0.1**
	9.0nm,1.5s						
CGJI	**Cibinong**	**22.47**	**246**	P	**P**	**19 33 06.2**	**-1.3**
	51nm,1.1s						
WRA	**Warramunga Arr**	**23.78**	**161**	P	**P**	**19 33 18.9**	**-0.8**
	6.4nm,0.4s,baz=336,slow=10,SNR=260						
ASAR	**Alice Springs**	**27.16**	**164**	P	**P**	**19 33 49.9**	**-0.5**
	0.9nm,0.4s,baz=342,slow=7.6,SNR=44						
ASAR				PcP	**PcP**	**19 37 08.3**	**-0.1**
	0.2nm,0.4s,baz=350,slow=2.2,SNR=4.6						
STKA	**Stephens Creek**	**37.27**	**158**	P	**P**	**19 35 18.7**	**+0.3**
	2.7nm,0.3s,baz=342,slow=8.2,SNR=29						
MKAR	**Makanchi Array**	**58.20**	**326**	P	**P**	**19 37 57.6**	**-2.2**
	0.5nm,0.3s,baz=119,slow=7.9,SNR=19						
ZALV	**Zalesovo Beam**	**61.37**	**334**	P	**P**	**19 38 20.3**	**-1.0**
	0.3nm,0.3s,baz=119,slow=5.8,SNR=3.0						
KURBB	**Kurchatov Arra**	**62.42**	**328**	P	**P**	**19 38 26.0**	**-2.4**
	0.7nm,0.6s,baz=131,slow=6.3,SNR=10						
BVAR	**Borovoye Array**	**67.99**	**327**	P	**P**	**19 39 03.8**	**-0.7**
	0.2nm,0.5s,baz=133,slow=8.1,SNR=2.4						

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*IDC **10** 19:34:59.9±1.5,36°.17N×142°.70E,h0km,mb3.4/6,*
mb1 3.5/9,mb1mx3.3/73,mbtmp3.5/9,ML3.2/3,Error
ellipse: s-maj=37.2km s-min=19.3km az=72.0
*ISCJB **10** 19:35:00.8±0.8,36°.17N±0°.04×142°.61E±0°.06,h18km,*
mb3.3/6,Error ellipse: s-maj=7.6km s-min=6.0km az=14.2
*JMA **10** 19:35:03.5±0.1,36°.18N×142°.45E,h88km±5km,M2.9*
ISC 10 19:35:03.1±1.1,**36°.19N**±0°.05×**142°.48E**±0°.08,**h18**km,**n24,**
σ1°10/26,mb3.4/6,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.40**	**250**	P	**Pn**	**19 35 27.8**	**0.0**
CHOJ				S	**Sn**	**19 35 46.5**	**+0.7**
JHO	**Hitachi**	**1.60**	**286**	P	**Pn**	**19 35 30.3**	**-0.1**
JHO				S	**Sn**	**19 35 50.7**	**+0.1**
ONAJ	**Iwakimizuishiy**	**1.63**	**304**	P	**Pn**	**19 35 30.8**	**-0.1**
JFK	**Kawauchi**	**1.74**	**313**	*e*S	**Sn**	**19 35 53.8**	**-0.5**
JFT	**Otama**	**2.17**	**308**	P	**Pn**	**19 35 38.6**	**+0.3**
JAG	**Ashikaga**	**2.46**	**276**	P	**Pn**	**19 35 42.6**	**+0.3**
JAG				S	**Sn**	**19 36 11.9**	**+0.1**
JRY	**Ryogami san**	**2.90**	**268**	P	**Pn**	**19 35 48.7**	**+0.3**
JMK	**Ichinoseki**	**2.93**	**340**	P	**Pn**	**19 35 48.9**	**+0.1**
JMK				S	**Sn**	**19 36 24.0**	**+0.5**
MJAR	**Matsushiro Arr**	**3.46**	**277**	Pn	**Pn**	**19 35 57.1**	**+0.9**
	1.6nm,0.3s,baz=118,slow=7.9,SNR=27						
MJAR				Sn	**Sb**	**19 36 42.0**	**-3.7**
	0.7nm,0.3s,baz=95,slow=11,SNR=4.2						
MAT	**Matsushiro**	**3.47**	**277**	P	**Pn**	**19 35 57.6**	**+1.4**
MAT				*e*S	**Sn**	**19 36 38.5**	**+1.7**
JHJ	**Hachijo jima 2**	**3.79**	**217**	Pn	**Pn**	**19 36 00.4**	**-0.1**
	4.6nm,0.3s,baz=28,slow=15,SNR=4.6						
JHJ				Sn	**Sn**	**19 36 43.5**	**-1.2**
	17nm,0.3s,baz=72,slow=20,SNR=5.8						
ASAJ	**Asahikawa**	**7.92**	**1**	Pn	**Pn**	**19 36 57.0**	**-0.3**
	0.5nm,0.3s,baz=263,slow=8.1,SNR=5.9						
ASAJ				Sn	**Sn**	**19 38 25.0**	**-1.3**
	0.1nm,0.3s,baz=122,slow=15,SNR=2.4						
H11N2	**WAKE ISLAND Hy 26.98**	**121**		T	T	20 08 53.4	
	baz=312,slow=75,SNR=16						
H11N1	**WAKE ISLAND Hy 26.99**	**121**		T	T	20 08 54.0	
	baz=312,slow=75,SNR=18						
H11N3	**WAKE ISLAND Hy 27.00**	**121**		T	T	20 08 54.7	
	baz=312,slow=75,SNR=14						
H11S1	**WAKE ISLAND Hy 27.68**	**123**		T	T	20 09 47.7	
	baz=314,slow=76,SNR=12						
H11S3	**WAKE ISLAND Hy 27.68**	**123**		T	T	20 09 44.0	
	baz=314,slow=76,SNR=8.9						
H11S2	**WAKE ISLAND Hy 27.70**	**123**		T	T	20 09 47.1	
	baz=314,slow=76,SNR=9.8						
SONM	**Songino Array**	**28.97**	**305**	P	**P**	**19 41 03.2**	**+1.6**
	0.3nm,0.5s,baz=99,slow=8.9,SNR=3.6						
ZALV	**Zalesovo Beam**	**43.12**	**313**	P	**P**	**19 43 02.8**	**+0.8**
	0.3nm,0.4s,baz=87,slow=8.5,SNR=2.4						
MKAR	**Makanchi Array**	**45.29**	**303**	P	**P**	**19 43 20.4**	**+0.7**
	0.3nm,0.6s,baz=92,slow=9.4,SNR=4.5						
KURBB	**Kurchatov Arra**	**47.20**	**309**	P	**P**	**19 43 34.4**	**-0.1**
	0.2nm,0.5s,baz=84,slow=9.2,SNR=3.4						
WRA	**Warramunga Arr**	**56.36**	**189**	P	**P**	**19 44 43.1**	**-0.1**
	0.3nm,0.7s,baz=8.6,slow=8.1,SNR=3.2						
ASAR	**Alice Springs**	**60.08**	**189**	P	**P**	**19 45 08.6**	**-0.6**
	0.3nm,0.8s,baz=3.9,slow=6.8,SNR=3.3						

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*THE **10** 19:40:30.6,36°.34N×29°.22E,h22km±2km,ML2.5/3,Error*
ellipse: s-maj=5.3km s-min=1.5km az=91.0
*DDA **10** 19:40:31.9,36°.43N×29°.00E,h7km,Ml3.1*
*ISK **10** 19:40:32.9,36°.42N×28°.98E,h18km,ML3.0/12*
*CSEM **10** 19:40:33.5±0.2,36°.43N×28°.99E,h20km,ML3.1,Error*
ellipse: s-maj=5.3km s-min=3.8km az=2.0
*ISCJB **10** 19:40:33.7±0.5,36°.43N±0°.03×28°.98E±0°.03,h26km±4km,*
Error ellipse: s-maj=5.7km s-min=4.4km az=0.9
*ATH **10** 19:40:33.7,36°.39N×28°.96E,h39km±2km,ML2.4/5,Error*
ellipse: s-maj=3.4km s-min=1.1km az=168.0
ISC 10 19:40:32.7±1.2,**36°.43N**±0°.02×**28°.96E**±0°.02,**h13**km±9km,
n73,σ0°75/97,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.23**	**26**	PG	**Pg**	**19 40 38.5**	**+0.7**
FETY				SG	**Sb**	**19 40 43.4**	**+0.4**
FETY	**Fethiye**	**0.23**	**26**	P	**Pg**	**19 40 36.8**	**-1.0**
FETY				S	**Sb**	**19 40 43.7**	**+0.7**
FETY	**Fethiye**	**0.23**	**26**	*e*Pg	**Pg**	**19 40 38.5**	**+0.7**
FETY				*e*Sg	**Sb**	**19 40 43.4**	**+0.4**
DALY	**Dalyan (Mu¨la**	**0.46**	**328**	PG	**Pb**	**19 40 42.9**	**+0.2**
DALY				SG	**Sb**	**19 40 49.9**	**+0.4**
DALY	**Dalyan (Mu¨la**	**0.46**	**328**	*i* P	**Pg**	**19 40 41.4**	**-0.5**
DALY	**Dalyan (Mu¨la**	**0.46**	**328**	P	**Pg**	**19 40 41.4**	**-0.5**
DALY	**Dalyan (Mu¨la**	**0.46**	**328**	*e*Pg	**Pb**	**19 40 42.9**	**+0.2**
DALY				*e*Sg	**Sb**	**19 40 49.9**	**+0.4**
TURN	**Turunc**	**0.53**	**328**	PG	**Pn**	**19 40 46.9**	**+0.9**
TURN	**Turunc**	**0.53**	**328**	*i* P	**Pn**	**19 40 46.1**	**+0.1**
TURN	**Turunc**	**0.53**	**328**	P	**Pn**	**19 40 46.1**	**+0.1**
TURN	**Turunc**	**0.53**	**328**	*e*Pg	**Pn**	**19 40 46.9**	**+0.9**
AKAS	**Kas**	**0.56**	**110**	PG	**Pg**	**19 40 43.7**	**0.0**
AKAS	**Kas**	**0.56**	**110**	*i* P	**Pg**	**19 40 42.3**	**-1.4**
AKAS	**Kas**	**0.56**	**110**	P	**Pg**	**19 40 42.3**	**-1.4**
AKAS	**Kas**	**0.56**	**110**	*e*Pg	**Pg**	**19 40 43.7**	**0.0**
KSL	**Kastellorizon**	**0.57**	**118**	P	**Pb**	**19 40 45.2**	**+0.5**
KSL				S	**Sn**	**19 40 55.7**	**-0.2**
MRSB	**Marmaris-Mugla**	**0.68**	**296**	PG	**Pb**	**19 40 46.7**	**+0.2**
MRSB	**Marmaris-Mugla**	**0.68**	**296**	*e*Pg	**Pb**	**19 40 46.7**	**+0.2**
ARG	**Arkhangelos**	**0.70**	**253**	PG	**Pn**	**19 40 48.3**	**-0.1**
ARG				SG	**Sn**	**19 40 58.2**	**-0.9**
ARG	**Arkhangelos**	**0.70**	**253**	P	**Pb**	**19 40 47.3**	**+0.4**
ARG				S	**Sn**	**19 40 59.1**	**0.0**
ARG				AML	AML	19 40 59.7	
	comp=E,640μm,0.3s						
ARG				AML	AML	19 41 03.5	
	comp=N,314μm,0.3s						
ARG	**Arkhangelos**	**0.70**	**253**	P	**Pg**	**19 40 45.9**	**-0.5**
ARG				S	**Sn**	**19 40 58.3**	**-0.9**
ARG	**Arkhangelos**	**0.70**	**253**	P	**Pb**	**19 40 47.6**	**+0.7**
ARG	**Arkhangelos**	**0.70**	**253**	*e*Pg	**Pn**	**19 40 48.3**	**-0.1**
ARG				*e*Sg	**Sn**	**19 40 58.2**	**-0.9**
ELL	**Elmali**	**0.83**	**67**	PG	**Pb**	**19 40 49.4**	**+0.3**
ELL	**Elmali**	**0.83**	**67**	*e*Pg	**Pb**	**19 40 49.4**	**+0.3**
GLHS	**Glhisar (BURDU**	**0.85**	**31**	PG	**Pg**	**19 40 49.4**	**+0.2**
GLHS	**Glhisar (BURDU**	**0.85**	**31**	*e*Pg	**Pg**	**19 40 49.4**	**+0.2**
YER	**Yerkesik**	**0.89**	**323**	PG	**Pn**	**19 40 50.7**	**-0.4**
YER	**Yerkesik**	**0.89**	**323**	P	**Pb**	**19 40 49.5**	**-0.6**
YER				S	**Sn**	**19 41 03.5**	**-0.4**
YER	**Yerkesik**	**0.89**	**323**	P	**Pb**	**19 40 49.5**	**-0.6**
YER	**Yerkesik**	**0.89**	**323**	*e*Pg	**Pn**	**19 40 50.7**	**-0.4**
YER				S	**Sn**	**19 41 03.5**	**-0.4**
GOLH	**Golhisar**	**0.94**	**31**	*i* P	**Pb**	**19 40 49.8**	**-1.2**
GOLH	**Golhisar**	**0.94**	**31**	P	**Pb**	**19 40 49.8**	**-1.2**
TAVA	**DENIZLI_Tavas**	**1.04**	**358**	*i* P	**Pb**	**19 40 51.1**	**-1.6**
TAVA	**DENIZLI_Tavas**	**1.04**	**358**	P	**Pb**	**19 40 51.1**	**-1.6**
DATC	**Datca-Mugla**	**1.10**	**288**	PN	**Pb**	**19 40 53.7**	**+0.1**
DATC	**Datca-Mugla**	**1.10**	**288**	*e*Pn	**Pb**	**19 40 53.7**	**+0.1**
DAT	**Datca**	**1.15**	**286**	PN	**Pg**	**19 40 55.1**	**+0.1**
DAT	**Datca**	**1.15**	**286**	*i* P	**Pb**	**19 40 54.0**	**-0.6**
DAT	**Datca**	**1.15**	**286**	P	**Pb**	**19 40 54.0**	**-0.6**
DAT	**Datca**	**1.15**	**286**	*e*Pn	**Pg**	**19 40 55.1**	**+0.1**
KORT	**Korkueli**	**1.26**	**62**	PN	**Pn**	**19 40 56.2**	**+0.1**
KORT	**Korkueli**	**1.26**	**62**	*i* P	**Pg**	**19 40 57.5**	**+0.5**
KORT	**Korkueli**	**1.26**	**62**	*e*Pn	**Pn**	**19 40 56.2**	**+0.1**
KORT	**Korkueli**	**1.26**	**62**	P	**Pg**	**19 40 57.5**	**+0.5**
DNZL	**Cakiroluk**	**1.26**	**3**	*i* P	**Pn**	**19 40 55.5**	**-0.8**
DNZL	**Cakiroluk**	**1.26**	**3**	P	**Pn**	**19 40 55.5**	**-0.8**
MLSB	**Milas**	**1.29**	**313**	PN	**Pb**	**19 40 57.2**	**+0.4**
MLSB	**Milas**	**1.29**	**313**	*e*Pn	**Pb**	**19 40 57.2**	**+0.4**
DENT	**Denizli**	**1.33**	**3**	PN	**Pn**	**19 40 57.3**	**+0.3**
DENT	**Denizli**	**1.33**	**3**	*e*Pn	**Pn**	**19 40 57.3**	**+0.3**
ANTB	**Antalya**	**1.44**	**70**	PN	**Pn**	**19 40 58.9**	**+0.4**
ANTB	**Antalya**	**1.44**	**70**	*e*Pn	**Pn**	**19 40 58.9**	**+0.4**
BODT	**Bodrum**	**1.47**	**296**	PN	**Pn**	**19 40 58.6**	**-0.3**
BODT	**Bodrum**	**1.47**	**296**	P	**Pn**	**19 40 57.4**	**-1.5**
BODT				S	**Sn**	**19 41 17.9**	**-0.1**
BODT	**Bodrum**	**1.47**	**296**	P	**Pn**	**19 40 57.4**	**-1.5**
BODT	**Bodrum**	**1.47**	**296**	*e*Pn	**Pn**	**19 40 58.6**	**-0.3**
BODT				S	**Sn**	**19 41 17.9**	**-0.1**
YKAV	**Yalikavak-Bodr**	**1.52**	**298**	PN	**Pn**	**19 41 00.0**	**+0.4**
YKAV	**Yalikavak-Bodr**	**1.52**	**298**	*e*Pn	**Pn**	**19 41 00.0**	**+0.4**
KARP	**Karpathos**	**1.70**	**240**	PN	**Pn**	**19 41 02.7**	**+0.6**
KARP	**Karpathos**	**1.70**	**240**	P	**Pn**	**19 41 02.5**	**+0.3**
KARP				S	**Sn**	**19 41 23.1**	**-0.7**
KARP				AML	AML	19 41 25.4	
	comp=N,120μm,0.2s						
KARP				AML	AML	19 41 26.0	
	comp=E,140μm,0.2s						
KARP	**Karpathos**	**1.70**	**240**	P	**Pn**	**19 41 00.3**	**-1.8**
KARP				S	**Sn**	**19 41 23.5**	**-0.3**
KARP	**Karpathos**	**1.70**	**240**	P	**Pn**	**19 41 02.4**	**+0.3**
KARP	**Karpathos**	**1.70**	**240**	*e*Pn	**Pn**	**19 41 02.7**	**+0.6**
KARP				S	**Sn**	**19 41 23.5**	**-0.3**
SUTC	**Sutluce-Ispart**	**1.94**	**57**	PN	**Pn**	**19 41 05.9**	**+0.3**
SUTC	**Sutluce-Ispart**	**1.94**	**57**	*e*Pn	**Pn**	**19 41 05.9**	**+0.3**
SMG	**Samos**	**2.13**	**308**	P	**Pn**	**19 41 08.6**	**+0.6**
SMG				S	**Sn**	**19 41 35.9**	**+1.6**
SMG				AML	AML	19 41 37.5	
	comp=E,226μm,0.3s						
SMG				AML	AML	19 41 38.1	
	comp=N,273μm,0.2s						
SMG	**Samos**	**2.13**	**308**	P	**Pn**	**19 41 06.7**	**-1.3**
SMG				S	**Sn**	**19 41 34.2**	**-0.1**
SMG	**Samos**	**2.13**	**308**	P	**Pn**	**19 41 08.7**	**+0.7**
SMG				S	**Sn**	**19 41 35.2**	**+0.9**
ZKR	**Zakros**	**2.58**	**240**	P	**Pn**	**19 41 15.2**	**+0.9**
ZKR				S	**Sn**	**19 41 44.3**	**-1.2**
ZKR				AML	AML	19 41 47.5	
	comp=E,43μm,0.4s						
ZKR				AML	AML	19 41 48.2	
	comp=N,32μm,0.4s						
ZKR	**Zakros**	**2.58**	**240**	P	**Pn**	**19 41 15.0**	**+0.7**
ZKR				S	**Sn**	**19 41 44.5**	**-1.0**
CHOS	**Chios island**	**3.03**	**311**	P	**Pn**	**19 41 21.9**	**+1.5**
CHOS				S	**Sn**	**19 41 55.6**	**-1.0**
CHOS				AML	AML	19 41 59.8	
	comp=N,44μm,0.3s						
CHOS				AML	AML	19 42 00.2	
	comp=E,86μm,0.2s						
CHOS	**Chios island**	**3.03**	**311**	P	**Pn**	**19 41 21.8**	**+1.3**
CHOS				S	**Sn**	**19 41 56.2**	**-0.4**

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*IDC **10** 19:44:00.9±2.1,53°.83N×171°.66W,h0km,mb3.5/4,*
mb1 3.9/5,mb1mx3.2/80,mbtmp3.6/5,ML3.5/1,MS2.8/1,
Ms1 2.8/1,ms1mx2.3/49,Error ellipse: s-maj=154.8km
s-min=23.4km az=154.0
*NEIC **10** 19:44:07.2±0.0,52°.41N×170°.23W,h30km,ML3.2(AEIC),*
After AEIC.
ISC 10 19:44:03.4±0.7,**53°.18N**±0°.07×**170°.78W**±0°.03,**h10**km,**n34,**
σ1°85/32,mb3.4/4,Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**1.18**	**99**	P	**Pb**	**19 44 24.3**	**-1.5**
NIKH				S	**Sb**	**19 44 37.2**	**-3.9**
OKAK	**Okmok**	**1.50**	**73**	P	**Pg**	**19 44 32.9**	**+0.6**
OKTU	**Okmok Mt. Tuli**	**1.66**	**82**	P	**Pg**	**19 44 34.5**	**-0.6**
OKTU				S	**Sg**	**19 44 55.1**	**-1.5**
OKER	**Okmok East Rim**	**1.66**	**79**	P	**Pg**	**19 44 35.6**	**+0.4**
KOFP	**Korovin Flat P**	**2.21**	**247**	P	**Pg**	**19 44 45.5**	**-0.2**
KOKL	**Mount Kliuchef**	**2.25**	**249**	P	**Pg**	**19 44 46.3**	**-0.2**
ATKA	**Atka Island**	**2.30**	**246**	P	**Pg**	**19 44 45.6**	**-1.8**
ATKA				S	**Sb**	**19 45 13.1**	**-0.2**
MSOM	**Makushin Julie**	**2.38**	**73**	P	**Pb**	**19 44 45.5**	**-0.7**
MGOD	**Makushin Gods**	**2.41**	**74**	P	**Pb**	**19 44 45.9**	**-1.1**
MCIR	**Makushin Cirqu**	**2.44**	**70**	P	**Pb**	**19 44 47.5**	**+0.1**
MSW	**Makushin Switc**	**2.50**	**71**	P	**Pb**	**19 44 46.7**	**-1.6**
MSW				S	**Sb**	**19 45 17.9**	**-1.1**
MTBL	**Makushin Table**	**2.57**	**70**	P	**Pb**	**19 44 49.1**	**-0.5**
UNV	**Unalaska Valle**	**2.64**	**74**	P	**Pb**	**19 44 48.6**	**-2.1**
UNV				S	**Sb**	**19 45 20.9**	**-2.2**
AKMO	**Akutan Morgan**	**2.98**	**70**	P	**Pb**	**19 44 54.9**	**-1.6**
ZRO	**Akutan Zero**	**3.00**	**70**	P	**Pb**	**19 44 55.1**	**-1.8**
AKV	**Akutan Volcano**	**3.02**	**70**	P	**Pb**	**19 44 55.7**	**-1.5**
AKSA	**Akutan Strait**	**3.17**	**70**	P	**Pb**	**19 44 57.5**	**-2.3**
GSMY	**Great Sitkin M**	**3.41**	**253**	P	**Pb**	**19 45 02.5**	**-1.4**
GSTD	**Great Sitkin T**	**3.46**	**253**	P	**Pb**	**19 45 03.1**	**-1.6**
ADAG	**Mount Adagdak**	**3.75**	**254**	P	**Pb**	**19 45 07.8**	**-1.8**
WECS	**Westdahl Cape**	**3.80**	**67**	P	**Pb**	**19 45 06.5**	**-4.0**
SPIA	**Saint Paul Isl**	**4.02**	**4**	P	**Pg**	**19 45 19.1**	**-1.3**
KDAK	**Kodiak Island**	**11.29**	**59**	Pn	**Pn**	**19 46 47.5**	**+2.9**
	0.3nm,0.3s,baz=244,slow=11,SNR=5.4						
H11N2	**WAKE ISLAND Hy 37.58**	**216**		T	T	20 30 45.8	
	baz=24,slow=76,SNR=31						
H11N3	**WAKE ISLAND Hy 37.59**	**216**		T	T	20 30 43.4	
	baz=24,slow=76,SNR=34						
H11N1	**WAKE ISLAND Hy 37.60**	**216**		T	T	20 30 44.4	
	baz=24,slow=76,SNR=30						
H11S1	**WAKE ISLAND Hy 38.78**	**215**		T	T	20 32 15.5	
	baz=23,slow=76,SNR=508						
H11S2	**WAKE ISLAND Hy 38.79**	**215**		T	T	20 32 16.7	
	baz=23,slow=76,SNR=511						
H11S3	**WAKE ISLAND Hy 38.79**	**215**		T	T	20 32 16.9	
	baz=23,slow=76,SNR=453						
PDAR	**Pinedale Array**	**41.09**	**79**	P	**P**	**19 51 49.7**	**+2.4**
	0.5nm,0.6s,baz=306,slow=3.5,SNR=4.8						
KSRS	**Korea Array**	**44.47**	**275**	LR	LR	20 11 50.1	
	comp=Z,9.3nm,18.0s,baz=155,slow=38						
TXAR	**Lajitas Array**	**53.58**	**88**	P	**P**	**19 53 27.1**	**+2.5**
	0.3nm,0.6s,baz=297,slow=5.0,SNR=4.9						
WRA	**Warramunga Arr**	**86.85**	**230**	P	**P**	**19 56 47.1**	**-0.9**
	0.2nm,0.8s,baz=34,slow=5.9,SNR=3.5						
ASAR	**Alice Springs**	**90.27**	**229**	P	**P**	**19 57 03.6**	**-0.5**
	0.2nm,0.6s,baz=26,slow=4.7,SNR=6.2						

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*ISCJB **10** 19:59:32.6±0.4,24°.42N±0°.02×122°.32E±0°.02,h69km±4km,*
Error ellipse: s-maj=3.9km s-min=2.5km az=166.5
*JMA **10** 19:59:32.6±0.2,24°.41N×122°.30E,h69km±3km,M1.9*
*TAP **10** 19:59:32.4,24°.42N×122°.32E,h68km,ML3.0,B*
ISC 10 19:59:33.1±1.3,**24°.42N**±0°.03×**122°.32E**±0°.02,**h67**km±8km,
n62,σ0°45/120,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.22**	**307**	*e*P	**Pn**	**19 59 43.5**	**+0.2**
	baz=307						
EOS1				S	**Sn**	**19 59 51.7**	**+0.9**
	baz=307						
ENAH	**Nanao**	**0.47**	**274**	P	**Pn**	**19 59 45.2**	**0.0**
	baz=273						
ENAH				*e*S	**Sn**	**19 59 53.9**	**-0.2**
	baz=273						
TWC	**Suao**	**0.47**	**294**	*e*P	**Pn**	**19 59 44.9**	**-0.4**
	baz=294						
TWC				S	**Sn**	**19 59 53.7**	**-0.5**
	baz=294						
NANB	**Nanao**	**0.52**	**271**	P	**Pn**	**19 59 45.7**	**-0.1**
	baz=271						
NANB				S	**Sn**	**19 59 55.3**	**+0.2**
	baz=271						
ENA	**Nanau**	**0.53**	**271**	P	**Pn**	**19 59 45.8**	**-0.1**
	baz=270						
ENA				S	**Sn**	**19 59 55.6**	**+0.4**
	baz=270						
EGS		**0.55**	**320**	*e

	baz=251						
EGFH	**Guangfu**	**1.11**	**228**	P	**Pn**	**19 59 52.5**	**-0.3**
	baz=227						
EGFH				*e*S	**Sn**	**20 00 07.9**	**+0.4**
	baz=227						
NCU	**National Centr**	**1.17**	**298**	*e*P	**Pn**	**19 59 53.8**	**+0.3**
	baz=298						
NCU				S	**Sn**	**20 00 09.1**	**+0.3**
	baz=298						
LIOB	**Emei**	**1.21**	**281**	*e*P	**Pn**	**19 59 54.6**	**+0.5**
	baz=280						
LIOB				S	**Sn**	**20 00 10.3**	**+0.4**
	baz=280						
NSTT	**Nanjuang**	**1.22**	**280**	*e*P	**Pn**	**19 59 54.4**	**+0.1**
	baz=280						
NSTT				S	**Sn**	**20 00 10.4**	**+0.3**
	baz=280						
HGSD	**Ruisui**	**1.23**	**222**	*e*P	**Pn**	**19 59 54.2**	**-0.3**
	baz=221						
HGSD				*e*S	**Sn**	**20 00 11.1**	**+0.6**
	baz=221						
VWDT	**VWDT**	**1.27**	**239**	P	**Pn**	**19 59 55.2**	**+0.3**
	baz=238						
VWDT				S	**Sn**	**20 00 10.9**	**-0.2**
	baz=238						
EHY	**Hungye**	**1.29**	**225**	*e*P	**Pn**	**19 59 54.8**	**-0.4**
	baz=224						
EHY				*e*S	**Sn**	**20 00 11.3**	**-0.5**
	baz=224						
IRIF	**Iriomote-Funau**	**1.29**	**93**	P	**Pn**	**19 59 55.0**	**-0.1**
IRIF				S	**Sn**	**20 00 11.5**	**-0.2**
YULB	**Yu-li**	**1.39**	**223**	*e*P	**Pn**	**19 59 55.8**	**-0.7**
	baz=222						
YULB				*e*S	**Sn**	**20 00 14.0**	**-0.1**
	baz=222						
SSLB	**Suanglung**	**1.40**	**244**	*e*P	**Pn**	**19 59 56.8**	**+0.2**
	baz=243						
SSLB				*e*S	**Sn**	**20 00 15.3**	**+0.9**
	baz=243						
HATJ	**Hateruma jima**	**1.40**	**105**	*e*S	**Sn**	**20 00 15.9**	**+1.5**
SMLT	**Sun Moon Lake**	**1.40**	**248**	*e*P	**Pn**	**19 59 56.9**	**+0.1**
	baz=247						
SMLT				*e*S	**Sn**	**20 00 15.2**	**+0.6**
	baz=247						
TWF1	**Yuli**	**1.42**	**222**	*e*P	**Pn**	**19 59 56.3**	**-0.6**
	baz=221						
TWF1				*e*S	**Sn**	**20 00 14.6**	**-0.1**
	baz=221						
NSY	**Sanyi**	**1.42**	**270**	*e*P	**Pn**	**19 59 57.1**	**+0.2**
	baz=269						
NSY				*e*S	**Sn**	**20 00 14.9**	**0.0**
	baz=269						
TYC	**Yuchr**	**1.43**	**249**	*e*P	**Pn**	**19 59 57.0**	**0.0**
	baz=248						
TYC				*e*S	**Sn**	**20 00 15.5**	**+0.4**
	baz=248						
JKRS	**Kuro-shima**	**1.55**	**96**	P	**Pn**	**19 59 59.2**	**+0.6**
JKRS				*e*S	**Sn**	**20 00 18.0**	**+0.1**
WJS	**Zhushan**	**1.57**	**248**	*e*P	**Pn**	**19 59 60.0**	**+1.1**
	baz=247						
WJS				*e*S	**Sn**	**20 00 19.4**	**+1.0**
	baz=247						
CHKT	**Chengkung**	**1.58**	**214**	*e*P	**Pn**	**19 59 58.8**	**-0.2**
	baz=213						
CHKT				*e*S	**Sn**	**20 00 18.4**	**-0.2**
	baz=213						
WCHH	**Zhanghua**	**1.64**	**258**	*e*S	**Sn**	**20 00 20.5**	**+0.4**
	baz=258						
JIJ	**Ishigaki jima**	**1.66**	**92**	P	**Pn**	**20 00 00.1**	**0.0**
JIJ				S	**Sn**	**20 00 19.7**	**-0.9**
ELDTW	**Lidau**	**1.71**	**225**	*e*P	**Pn**	**20 00 00.4**	**-0.5**
	baz=223						
ELDTW				*e*S	**Sn**	**20 00 20.9**	**-1.0**
	baz=223						
WGK	**Gukeng**	**1.77**	**246**	*e*P	**Pn**	**20 00 02.2**	**+0.7**
	baz=245						
WGK				*e*S	**Sn**	**20 00 22.6**	**-0.4**
	baz=245						
JISG	**Ishigakijimahi**	**1.82**	**84**	P	**Pn**	**20 00 02.2**	**-0.1**
JISG				S	**Sn**	**20 00 23.8**	**-0.6**
TWH	**Lutao**	**1.87**	**205**	*e*P	**Pn**	**20 00 03.3**	**+0.3**
	baz=203						
TWH				*e*S	**Sn**	**20 00 25.5**	**-0.1**
	baz=203						
WTCT	**Ta-ch'eng**	**1.94**	**254**	*e*P	**Pn**	**20 00 04.0**	**+0.1**
	baz=253						
WTCT				*e*S	**Sn**	**20 00 26.9**	**-0.4**
	baz=253						
TWGBT	**Beinan**	**1.96**	**216**	*e*P	**Pn**	**20 00 03.8**	**-0.4**
	baz=215						
TWGBT				*e*S	**Sn**	**20 00 27.7**	**-0.1**
	baz=215						
TWG	**Pinlang**	**1.96**	**216**	*e*P	**Pn**	**20 00 04.1**	**-0.1**
	baz=215						
TWG				*e*S	**Sn**	**20 00 27.4**	**-0.4**
	baz=215						
TWK	**Hsinying**	**2.03**	**236**	*e*P	**Pn**	**20 00 05.0**	**-0.2**
	baz=235						
TWK				*e*S	**Sn**	**20 00 29.3**	**-0.3**
	baz=235						
JTJ	**Tarama**	**2.18**	**84**	*e*S	**Sn**	**20 00 33.5**	**+0.4**
CHN3	**Shinhua**	**2.24**	**234**	*e*P	**Pn**	**20 00 08.1**	**+0.2**
	baz=233						
CHN3				*e*S	**Sn**	**20 00 33.1**	**-1.3**
	baz=233						

*DDA **10** 20:07:29.4, 36°.39N×28°.90E, h38km, Ml3.3*
*CSEM **10** 20:07:30.9±0.2, 36°.41N×28°.93E, h23km±2km, ML2.6, Error ellipse: s-maj=4.2km s-min=3.2km az=167.0*
*ISCJB **10** 20:07:30.9±0.4, 36°.41N±0°.03×28°.91E±0°.03, h29km±3km, Error ellipse: s-maj=5.0km s-min=3.9km az=167.7*
*ATH **10** 20:07:30.5, 36°.40N×28°.92E, h40km±1km, ML2.7/6, Error ellipse: s-maj=2.5km s-min=0.8km az=170.0*
*ISK **10** 20:07:30.1, 36°.41N×28°.92E, h21km, ML3.2/13*
*THE **10** 20:07:31.1, 36°.41N×28°.93E, h15km±1km, ML2.6/4, Error ellipse: s-maj=1.4km s-min=0.5km az=77.0*

ISC 10 20:07:30.4±1.1, **36°.39N**±0°.03×**28°.93E**±0°.02, **h21**km±2km, **n91**, σ0°**76**/118, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.27**	**28**	PG	**Pb**	**20 07 36.4**	**-0.4**
FETY				SG	**Sb**	**20 07 41.5**	**+0.2**
FETY	**Fethiye**	**0.27**	**28**	P	**Pb**	**20 07 36.4**	**-0.4**
FETY				S	**Sb**	**20 07 41.4**	**+0.2**
FETY	**Fethiye**	**0.27**	**28**	P	**Pb**	**20 07 36.4**	**-0.4**
FETY				*e*Sg	**Sb**	**20 07 41.5**	**+0.2**
DALY	**Dalyan (Mu¨la**	**0.48**	**333**	PG	**Pb**	**20 07 39.9**	**-0.1**
DALY				SG	**Sb**	**20 07 47.3**	**+0.8**
DALY	**Dalyan (Mu¨la**	**0.48**	**333**	*i* P	**Pb**	**20 07 40.4**	**+0.4**
DALY	**Dalyan (Mu¨la**	**0.48**	**333**	*e*Pg	**Pb**	**20 07 39.9**	**-0.1**
DALY	**Dalyan (Mu¨la**	**0.48**	**333**	P	**Pb**	**20 07 40.4**	**+0.4**
DALY				*e*Sg	**Sb**	**20 07 47.3**	**+0.8**
TURN	**Turunc**	**0.54**	**332**	PG	**Pn**	**20 07 43.3**	**+0.4**
TURN	**Turunc**	**0.54**	**332**	*i* P	**Pn**	**20 07 43.7**	**+0.8**
TURN	**Turunc**	**0.54**	**332**	*e*Pg	**Pn**	**20 07 43.3**	**+0.4**
TURN	**Turunc**	**0.54**	**332**	P	**Pn**	**20 07 43.7**	**+0.8**
AKAS	**Kas**	**0.57**	**106**	PG	**Pb**	**20 07 41.7**	**-0.2**
AKAS	**Kas**	**0.57**	**106**	*i* P	**Pb**	**20 07 41.7**	**-0.2**
AKAS	**Kas**	**0.57**	**106**	P	**Pb**	**20 07 41.7**	**-0.2**
KSL	**Kastellorizon**	**0.58**	**114**	P	**Pn**	**20 07 42.6**	**-0.7**
KSL				S	**Sn**	**20 07 53.0**	**+0.7**
KSL	**Kastellorizon**	**0.58**	**114**	P	**Pn**	**20 07 42.7**	**-0.7**
KSL				S	**Sn**	**20 07 51.3**	**-1.0**
MRSB	**Marmaris-Mugla**	**0.67**	**299**	PG	**Pb**	**20 07 43.1**	**-0.3**
MRSB	**Marmaris-Mugla**	**0.67**	**299**	*e*Pg	**Pb**	**20 07 43.1**	**-0.3**
ARG	**Arkhangelos**	**0.67**	**255**	PG	**Pn**	**20 07 44.0**	**-0.7**
ARG				SG	**Sn**	**20 07 54.6**	**+0.1**
ARG	**Arkhangelos**	**0.67**	**255**	P	**Pn**	**20 07 44.0**	**-0.7**
ARG				S	**Sn**	**20 07 54.8**	**+0.3**
ARG				AML	AML	20 07 55.0	
	comp=N,654μm,0.7s						
ARG				AML	AML	20 07 58.3	
	comp=E,817μm,0.3s						
ARG	**Arkhangelos**	**0.67**	**255**	P	**Pn**	**20 07 43.9**	**-0.7**
ARG				S	**Sn**	**20 07 54.6**	**+0.1**
ARG	**Arkhangelos**	**0.67**	**255**	P	**Pn**	**20 07 43.9**	**-0.7**
ARG				S	**Sn**	**20 07 54.6**	**+0.1**
ELL	**Elmali**	**0.87**	**66**	PG	**Pn**	**20 07 47.8**	**+0.4**
ELL	**Elmali**	**0.87**	**66**	*e*Pg	**Pn**	**20 07 47.8**	**+0.4**
GLHS	**Glhisar (BURDU**	**0.89**	**31**	PG	**Pn**	**20 07 47.3**	**-0.4**
GLHS	**Glhisar (BURDU**	**0.89**	**31**	*e*Pg	**Pn**	**20 07 47.3**	**-0.4**
YER	**Yerkesik**	**0.90**	**325**	PG	**Pn**	**20 07 47.6**	**-0.3**
YER	**Yerkesik**	**0.90**	**325**	P	**Pn**	**20 07 47.5**	**-0.3**
YER				S	**Sn**	**20 07 59.7**	**-0.6**
YER	**Yerkesik**	**0.90**	**325**	*e*Pg	**Pn**	**20 07 47.6**	**-0.3**
YER				S	**Sn**	**20 07 59.7**	**-0.6**
GOLH	**Golhisar**	**0.98**	**31**	*i* P	Pb	20 07 40.1	-8.7
TAVA	**DENIZLI_Tavas**	**1.07**	**359**	*i* P	**Pn**	**20 07 50.3**	**+0.1**
TAVA	**DENIZLI_Tavas**	**1.07**	**359**	P	**Pn**	**20 07 50.3**	**+0.1**
DATC	**Datca-Mugla**	**1.08**	**290**	PG	**Pb**	**20 07 50.2**	**-0.2**
DATC	**Datca-Mugla**	**1.08**	**290**	*e*Pg	**Pb**	**20 07 50.2**	**-0.2**
DAT	**Datca**	**1.14**	**288**	PN	**Pb**	**20 07 51.3**	**-0.1**
DAT	**Datca**	**1.14**	**288**	*i* P	Pn	20 07 45.1	-6.1
DAT	**Datca**	**1.14**	**288**	*e*Pn	**Pb**	**20 07 51.3**	**-0.1**
KORT	**Korkueli**	**1.29**	**62**	PN	**Pb**	**20 07 53.9**	**-0.2**
KORT	**Korkueli**	**1.29**	**62**	*i* P	**Pb**	**20 07 54.8**	**+0.7**
KORT	**Korkueli**	**1.29**	**62**	*e*Pn	**Pb**	**20 07 53.9**	**-0.2**
KORT	**Korkueli**	**1.29**	**62**	P	**Pb**	**20 07 54.8**	**+0.7**
DNZL	**Cakiroluk**	**1.30**	**4**	*i* P	**Pb**	**20 07 53.6**	**-0.6**
DNZL	**Cakiroluk**	**1.30**	**4**	P	**Pb**	**20 07 53.6**	**-0.6**
DENT	**Denizli**	**1.36**	**4**	PN	**Pn**	**20 07 53.9**	**-0.3**
DENT	**Denizli**	**1.36**	**4**	*e*Pn	**Pn**	**20 07 53.9**	**-0.3**
BDRM	**Kayabasi**	**1.37**	**300**	*i* P	**Pb**	**20 07 54.6**	**-0.6**
BDRM	**Kayabasi**	**1.37**	**300**	P	**Pb**	**20 07 54.6**	**-0.6**
BODT	**Bodrum**	**1.46**	**298**	PN	**Pb**	**20 07 55.8**	**-1.0**
BODT	**Bodrum**	**1.46**	**298**	P	**Pn**	**20 07 54.7**	**-0.8**
BODT				S	**Sb**	**20 08 13.9**	**-1.0**
BODT	**Bodrum**	**1.46**	**298**	P	**Pn**	**20 07 54.7**	**-0.8**
BODT	**Bodrum**	**1.46**	**298**	*e*Pn	**Pb**	**20 07 55.8**	**-1.0**
BODT				S	**Sb**	**20 08 13.9**	**-1.0**
YKAV	**Yalikavak-Bodr**	**1.51**	**299**	PN	**Pb**	**20 07 56.6**	**-1.0**
YKAV	**Yalikavak-Bodr**	**1.51**	**299**	*e*Pn	**Pb**	**20 07 56.6**	**-1.0**
AYDN	**Tasoluk**	**1.52**	**327**	*i* P	**Pn**	**20 07 55.1**	**-1.2**
AYDN	**Tasoluk**	**1.52**	**327**	P	**Pn**	**20 07 55.1**	**-1.2**
BRDR	**BURDUR-Merkez**	**1.58**	**35**	*i* P	**Pb**	**20 07 58.4**	**-0.6**
BRDR	**BURDUR-Merkez**	**1.58**	**35**	P	**Pb**	**20 07 58.4**	**-0.6**
KARP	**Karpathos**	**1.66**	**240**	PN	**Pn**	**20 07 58.6**	**+0.3**
KARP	**Karpathos**	**1.66**	**240**	P	**Pn**	**20 07 59.1**	**+0.8**
KARP				S	**Sb**	**20 08 19.9**	**-0.9**
KARP				AML	AML	20 08 29.4	
	comp=N,243μm,0.3s						
KARP				AML	AML	20 08 35.2	
	comp=E,244μm,0.4s						
KARP	**Karpathos**	**1.66**	**240**	P	**Pn**	**20 07 58.9**	**+0.6**
KARP				S	**Sn**	**20 08 19.7**	**+0.7**
KARP	**Karpathos**	**1.66**	**240**	*e*Pn	**Pn**	**20 07 58.6**	**+0.3**
KARP	**Karpathos**	**1.66**	**240**	P	**Pn**	**20 07 58.9**	**+0.6**
KARP				S	**Sn**	**20 08 19.6**	**+0.6**
AYDB	**Zeytinkoy-Aydi**	**1.76**	**332**	PN	**Pn**	**20 07 59.7**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**1.76**	**332**	*e*Pn	**Pn**	**20 07 59.7**	**0.0**
ISP	**Isparta**	**1.91**	**41**	PN	**Pn**	**20 08 01.9**	**+0.1**
ISP	**Isparta**	**1.91**	**41**	*e*Pn	**Pn**	**20 08 01.9**	**+0.1**
SUTC	**Sutluce-Ispart**	**1.98**	**56**	PN	**Pn**	**20 08 03.2**	**+0.4**
SUTC	**Sutluce-Ispart**	**1.98**	**56**	*e*Pn	**Pn**	**20 08 03.2**	**+0.4**
KHAL	**Karahalli**	**2.02**	**13**	*i* P	**Pn**	**20 08 01.9**	**-1.5**
KHAL	**Karahalli**	**2.02**	**13**	P	**Pn**	**20 08 01.9**	**-1.5**
MANT	**Manisa**	**2.11**	**352**	*i* P	**Pn**	**20 08 04.0**	**-0.7**
MANT	**Manisa**	**2.11**	**352**	P	**Pn**	**20 08 04.0**	**-0.7**
SMG	**Samos**	**2.12**	**309**	P	**Pn**	**20 08 05.3**	**+0.7**
SMG				S	**Sn**	**20 08 30.3**	**-0.1**
SMG				AML	AML	20 08 34.0	
	comp=N,611μm,0.2s						
SMG				AML	AML	20 08 34.2	
	comp=E,586μm,0.3s						
SMG	**Samos**	**2.12**	**309**	P	**Pn**	**20 08 05.2**	**+0.6**
SMG				S	**Sn**	**20 08 30.4**	**-0.1**
KULA	**Kula-Manisa**	**2.13**	**354**	PN	**Pn**	**20 08 05.8**	**+1.1**
KULA	**Kula-Manisa**	**2.13**	**354**	*e*Pn	**Pn**	**20 08 05.8**	**+1.1**
ZKR	**Zakros**	**2.55**	**241**	P	**Pn**	**20 08 12.2**	**+1.8**
ZKR				S	**Sn**	**20 08 39.7**	**-1.1**
ZKR				AML	AML	20 08 43.2	
	comp=E,59μm,0.4s						
ZKR				AML	AML	20 08 43.8	
	comp=N,54μm,0.7s						
ZKR	**Zakros**	**2.55**	**241**	P	**Pn**	**20 08 11.7**	**+1.3**
ZKR				S	**Sn**	**20 08 40.2**	**-0.6**
APE	**Apeiranthos**	**2.81**	**285**	P	**Pn**	**20 08 15.7**	**+1.6**
APE				S	**Sn**	**20 08 47.0**	**-0.3**
APE	**Apeiranthos**	**2.81**	**285**	P	**Pn**	**20 08 15.3**	**+1.2**
APE				S	**Sn**	**20 08 47.2**	**-0.2**
NPS	**Neapolis**	**2.92**	**248**	P	**Pn**	**20 08 14.9**	**-0.7**
NPS				S	**Sn**	**20 08 49.3**	**-0.8**
NPS				AML	AML	20 08 50.4	
	comp=E,124μm,0.4s						
NPS				AML	AML	20 08 53.8	
	comp=N,99μm,0.5s						
NPS	**Neapolis**	**2.92**	**248**	P	**Pn**	**20 08 14.3**	**-1.3**
NPS	**Neapolis**	**2.92**	**248**	P	**Pn**	**20 08 15.7**	**+0.1**
NPS				S	**Sn**	**20 08 49.6**	**-0.4**
CHOS	**Chios island**	**3.03**	**312**	P	**Pn**	**20 08 17.8**	**+0.6**
CHOS				S	**Sn**	**20 08 53.7**	**+0.9**
CHOS				AML	AML	20 08 56.0	
	comp=E,160μm,0.2s						
CHOS				AML	AML	20 08 56.0	
	comp=N,153μm,0.5s						
CHOS	**Chios island**	**3.03**	**312**	P	**Pn**	**20 08 17.9**	**+0.7**
CHOS				S	**Sn**	**20 08 53.1**	**+0.3**
CHOS	**Chios island**	**3.03**	**312**	P	**Pn**	**20 08 17.9**	**+0.7**
CHOS				S	**Sn**	**20 08 53.1**	**+0.3**
LAST	**Lasithi**	**3.06**	**247**	P	**Pn**	**20 08 17.6**	**0.0**
LAST	**Lasithi**	**3.06**	**247**	P	**Pn**	**20 08 17.9**	**+0.4**
LAST	**Lasithi**	**3.06**	**247**	P	**Pn**	**20 08 18.0**	**+0.4**
IMMV	**Iera Moni Meta**	**4.12**	**258**	P	**Pn**	**20 08 35.2**	**+3.1**
IMMV	**Iera Moni Meta**	**4.12**	**258**	P	**Pn**	**20 08 34.2**	**+2.1**

IDC 10 20:21:14.2±5.2, **30°.76S**×**178°.22W**, **h147**km±33km, **mb3.5**/3, **mb1 3.7**/3, **mb1mx3.3**/44, **mbtmp4.0**/3, **Error ellipse: s-maj=87.8km s-min=37.6km az=151.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.52**	**10**	P	Pn	20 21 43.8	0.0
	92nm,0.3s,baz=47,slow=21,SNR=10						
RAO				S	Sn	20 22 06.4	0.0
	156nm,0.3s,baz=116,slow=22,SNR=7.2						
CTA	**Charters Tower**	**33.67**	**280**	P	P	20 27 42.3	+1.0
	1.7nm,0.5s,baz=124,slow=7.0,SNR=5.3						
ASAR	**Alice Springs**	**42.90**	**267**	P	P	20 28 58.1	-0.3
	0.6nm,0.5s,baz=103,slow=7.5,SNR=8.4						
WRA	**Warramunga Arr**	**43.92**	**273**	P	P	20 29 05.8	-0.8
	0.8nm,0.4s,baz=110,slow=8.0,SNR=27						
FINES	**FINESS Array B**	**145.42**	**340**	PKPbc	PKPdf	20 40 33.4	-0.5
	0.5nm,0.4s,baz=42,slow=4.1,SNR=7.3						

*ISCJB **10** 20:25:45.7±0.3, 34°.49N±0°.02×119°.11W±0°.02, h24km±3km, Error ellipse: s-maj=3.4km s-min=2.5km az=142.0*
*NEIC **10** 20:25:46.0±0.0, 34°.50N×119°.11W, h7km, ML2.7(PAS), After PAS.*
NEIC Felt at Ojai, Oxnard, Santa Barbara, Santa Paula, Simi Valley and Ventura.

ISC 10 20:25:45.6±0.9, **34°.48N**±0°.02×**119°.10W**±0°.02, **h18**km±7km, **n61**, σ1°**13**/85, **Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RYS	**Reyes Peak**	**0.26**	**309**	*e*Pg	**Pg**	**20 25 51.2**	**-0.4**
OSI	**Osito Audit: C**	**0.34**	**67**	P	**Pg**	**20 25 52.4**	**-0.5**
	baz=250,SNR=51						
OSI				S	**Sg**	**20 25 57.5**	**-0.4**
	baz=250						
OSI	**Osito Audit: C**	**0.34**	**67**	*e*Pg	**Pg**	**20 25 52.4**	**-0.5**
OSI				*e*Sg	**Sg**	**20 25 57.4**	**-0.4**
BLG	**Laguna Peak, P**	**0.37**	**175**	P	**Pg**	**20 25 53.6**	**+0.2**
	baz=355,SNR=15						
BLG				S	**Sg**	**20 25 59.8**	**+1.1**
	baz=355						
ABL	**Mount Abel**	**0.38**	**345**	*e*Pg	**Pg**	**20 25 52.9**	**-0.8**
OAT	**Oat Mountain**	**0.43**	**108**	*e*Pg	**Pb**	**20 25 55.4**	**+0.6**
BLCC	**Black Canyon**	**0.43**	**123**	*e*Pg	**Pb**	**20 25 55.5**	**+0.8**
BTPC	**Burnt Peak**	**0.48**	**65**	*e*Pg	**Pg**	**20 25 55.1**	**-0.3**
BCW	**Bitter Crk WRg**	**0.53**	**331**	*e*Pg	**Pg**	**20 25 55.9**	**-0.3**
BCW				*e*Sg	**Sg**	**20 26 03.6**	**+0.3**
IR2C	**Iron Canyon**	**0.59**	**99**	*e*Pg	**Pg**	**20 25 57.4**	**+0.1**
STTC	**Scott Ranch**	**0.61**	**60**	*e*Pg	**Pg**	**20 25 57.6**	**-0.1**
TJR	**Tejon Ranch**	**0.62**	**28**	*e*Pg	**Pg**	**20 25 56.9**	**-1.1**
DJJ	**Donna J Jenkin**	**0.65**	**125**	*e*Pg	**Pg**	**20 25 58.1**	**-0.4**
DJJ				*e*Sg	**Sg**	**20 26 07.5**	**+0.2**
SCZ2	**Santa Cruz Isl**	**0.65**	**222**	P	**Pg**	**20 25 57.9**	**-0.6**
	baz=41						
SCZ2				S	**Sg**	**20 26 07.6**	**+0.3**
	baz=41						
DECC	**Green Verdugo**	**0.68**	**109**	P	**Pg**	**20 25 58.7**	**-0.2**
	baz=291,SNR=12						
DECC				S	**Sg**	**20 26 08.7**	**+0.7**
	baz=291						
DECC	**Green Verdugo**	**0.68**	**109**	*e*Pg	**Pg**	**20 25 59.0**	**+0.1**
DECC				*e*Sg	**Sg**	**20 26 09.0**	**+1.0**
LEOC	**Leona Valley**	**0.68**	**77**	*e*Pg	**Pg**	**20 25 58.4**	**-0.6**
ARVC	**Arvin**	**0.68**	**19**	P	**Pg**	**20 25 58.1**	**-0.9**
	baz=200,SNR=12						
ARVC				S	**Sg**	**20 26 07.5**	**-0.7**
	baz=200						
ARVC	**Arvin**	**0.68**	**19**	*e*Pg	**Pg**	**20 25 58.2**	**-0.9**
PKM	**Mcpherson Peak**	**0.71**	**305**	P	**Pg**	**20 25 59.3**	**-0.4**
	baz=124,SNR=16						
PKM				S	**Sg**	**20 26 09.3**	**+0.1**
	baz=124						
SYP	**Santa Ynez Pea**	**0.72**	**274**	*e*Pn	**Pb**	**20 26 00.4**	**+0.7**
PASC	**Pasadena Art C**	**0.82**	**112**	*e*Pg	**Pg**	**20 26 00.7**	**-0.9**
PASC				*e*Sg	**Sg**	**20 26 12.4**	**-0.1**
TEJ	**El Tejon**	**0.82**	**24**	*e*Pg	**Pg**	**20 26 01.0**	**-0.7**
TEJ				*e*Sn	**Sg**	**20 26 11.7**	**-0.9**
TPO	**Tropico Hills**	**0.82**	**61**	*e*Pg	**Pg**	**20 26 01.2**	**-0.6**
MWC	**Mount Wilson**	**0.90**	**106**	*e*Pg	**Pg**	**20 26 02.3**	**-0.9**
MWC				*e*Sg	**Sg**	**20 26 15.1**	**0.0**
MWC				*e*Sn	**Sb**	**20 26 15.3**	**+0.8**
CRGC	**Crocker Grade**	**0.92**	**326**	*e*Pg	**Pg**	**20 26 03.0**	**-0.5**
GVRC	**Garvey Reservo**	**0.92**	**118**	*e*Pg	**Pg**	**20 26 02.9**	**-0.7**
EDW2	**Edwards Air Fo**	**1.00**	**66**	P	**Pg**	**20 26 04.0**	**-1.0**
	baz=248,SNR=36						
EDW2				S	**Sg**	**20 26 17.2**	**-1.0**
	baz=248						
EDW2	**Edwards Air Fo**	**1.00**	**66**	*e*Pg	**Pg**	**20 26 04.3**	**-0.7**
EDW2				*e*Sg	**Sg**	**20 26 17.2**	**-1.0**
FMP	**Fort Macarthur**	**1.02**	**138**	S	**Sg**	**20 26 18.0**	**-0.8**
	baz=320						
HOLC	**Holcomb Ridge**	**1.04**	**91**	*e*Pg	**Pg**	**20 26 04.5**	**-1.3**
PEM	**Pine Mountain**	**1.07**	**107**	*e*Pg	**Pg**	**20 26 05.0**	**-1.3**
BCH	**Branch Mountai**	**1.07**	**311**	*e*Pg	**Pg**	**20 26 05.7**	**-0.7**
SMMC	**Simmler**	**1.11**	**319**	S	**Sg**	**20 26 19.9**	**-1.7**
	baz=138						
CCAC	**Calif City Air**	**1.12**	**53**	*e*Pg	**Pg**	**20 26 06.2**	**-1.1**
PSRC	**Puddingstone R**	**1.14**	**109**	*e*Sg	**Sg**	**20 26 21.9**	**-0.8**
SSK	**Sunset Peak**	**1.20**	**103**	*e*Pn	**Pg**	**20 26 07.4**	**-1.4**
CIS	**Catalina Islan**	**1.22**	**152**	Pb	**Pb**	**20 26 07.8**	**-0.3**
	baz=333						
CIS				S	**Sg**	**20 26 22.8**	**-2.3**
	baz=333						
BFSC	**Mount Baldy Ra**	**1.22**	**101**	Pb	**Pg**	**20 26 07.6**	**-1.6**
	baz=283						
BFSC				Sb	**Sg**	**20 26 24.4**	**-0.8**
	baz=283						
SNCC	**San Nicolas Is**	**1.28**	**196**	P	**Pn**	**20 26 07.7**	**-0.8**
	baz=15						
SNCC				Sb	**Sb**	**20 26 26.3**	**+1.1**
	baz=15						
SNCC	**San Nicolas Is**	**1.28**	**196**	*e*Pn	**Pn**	**20 26 05.9**	**-2.6**
ISA	**Isabella, Lake**	**1.29**	**23**	Sb	**Sg**	**20 26 25.3**	**-2.1**
	baz=204						
ISA	**Isabella, Lake**	**1.29**	**23**	*e*Pn	**Pn**	**20 26 09.2**	**+0.4**
ISA				*e*Sg	**Sg**	**20 26 25.0**	**-2.4**
ISA				*e*Sn	**Sb**	**20 26 25.4**	**-0.1**
EL2	**El Mirage 2**	**1.29**	**87**	*e*Pn	**Pn**	**20 26 07.9**	**-0.9**
VES	**Vestal, Richgr**	**1.36**	**1**	Pb	**Pn**	**20 26 09.3**	**-0.4**
	baz=181,SNR=11						
VES				S	**Sb**	**20 26 26.0**	**-1.5**
	baz=181						
WWPM	**Walker Pass**	**1.50**	**33**	*e*Pn	**Pb**	**20 26 13.9**	**+0.9**
PAGB	**Antelope Grade**	**1.56**	**323**	*e*Pn	**Pn**	**20 26 12.1**	**-0.4**
BLKC	**Black Mountain**	**1.67**	**68**	*e*Pn	**Pn**	**20 26 14.5**	**+0.6**
BLKC				*e*Sn	**Sg**	**20 26 40.0**	**+0.7**
MURC	**Murrieta**	**1.81**	**118**	Sb	**Sn**	**20 26 41.3**	**+2.9**
	baz=300						
BBRC	**Big Bear Solar**	**1.82**	**96**	S	**Sn**	**20 26 37.0**	**-1.9**
	baz=278						
MPMC	**Manual Prospec**	**2.06**	**40**	Pb	**Pn**	**20 26 20.1**	**+0.6**
	baz=221						
GSC	**Goldstone, Bar**	**2.06**	**66**	*e*Pn	**Pn**	**20 26 19.6**	**+0.3**
GSC				*e*Sn	**Sn**	**20 26 46.9**	**+2.2**
CWC	**Cottonwood Cre**	**2.13**	**23**	Sb	**Sb**	**20 26 50.5**	**+0.8**
	baz=204						
DAC	**Darwin (Calif)**	**2.18**	**34**	*e*Sn	**Sn**	**20 26 47.2**	**-

ARG				AML	AML	20 32 58.7
	comp=N,631μm,0.3s					
ARG				AML	AML	20 33 00.2
	comp=E,769μm,0.4s					
ARG	**Arkhangelos**	**0.69 252**	P		**Pb**	**20 32 46.7 +0.5**
ARG			S		**Sn**	**20 32 57.0 -1.3**
ARG	**Arkhangelos**	**0.69 252**	*e*Pg		**Pb**	**20 32 46.8 +0.5**
ARG			S		**Sb**	**20 32 56.8 +1.2**
ARG			*e*Sg		**Sn**	**20 32 57.6 -0.7**
ELL	**Elmali**	**0.85 68**	PG		**Pb**	**20 32 49.3 +0.2**
ELL	**Elmali**	**0.85 68**	*e*Pg		**Pb**	**20 32 49.3 +0.2**
GLHS	**Glhisar (BURDU**	**0.85 32**	PG		**Pn**	**20 32 49.6 -0.6**
GLHS	**Glhisar (BURDU**	**0.85 32**	*e*Pg		**Pn**	**20 32 49.6 -0.6**
YER	**Yerkesik**	**0.87 324**	PG		**Pn**	**20 32 49.9 -0.6**
YER	**Yerkesik**	**0.87 324**	P		**Pn**	**20 32 49.8 -0.7**
YER			S		**Sn**	**20 33 02.5 -0.5**
YER	**Yerkesik**	**0.87 324**	P		**Pn**	**20 32 49.8 -0.7**
YER			S		**Sn**	**20 33 02.5 -0.5**
GOLH	**Golhisar**	**0.95 32**	*i* P		**Pb**	**20 32 50.4 -0.4**
GOLH	**Golhisar**	**0.95 32**	P		**Pb**	**20 32 50.4 -0.4**
TAVA	**DENIZLI_Tavas**	**1.03 359**	*i* P		**Pn**	**20 32 52.5 -0.2**
TAVA	**DENIZLI_Tavas**	**1.03 359**	P		**Pn**	**20 32 52.5 -0.2**
DATC	**Datca-Mugla**	**1.07 288**	PG		**Pg**	**20 32 53.1 -0.1**
DATC	**Datca-Mugla**	**1.07 288**	*e*Pg		**Pg**	**20 32 53.1 -0.1**
DAT	**Datca**	**1.13 286**	PN		**Pg**	**20 32 54.6 +0.3**
DAT	**Datca**	**1.13 286**	*i* P		**Pg**	**20 32 54.1 -0.2**
DAT	**Datca**	**1.13 286**	P		**Pg**	**20 32 54.1 -0.2**
DAT	**Datca**	**1.13 286**	*e*Pn		**Pg**	**20 32 54.6 +0.3**
DNZL	**Cakiroluk**	**1.26 4**	*i* P		**Pb**	**20 32 56.0 -0.1**
DNZL	**Cakiroluk**	**1.26 4**	P		**Pb**	**20 32 56.0 -0.1**
MLSB	**Milas**	**1.26 313**	PN		**Pg**	**20 32 56.3 -0.6**
MLSB	**Milas**	**1.26 313**	*e*Pn		**Pg**	**20 32 56.3 -0.6**
KORT	**Korkueli**	**1.27 63**	PN		**Pg**	**20 32 57.6 +0.5**
KORT	**Korkueli**	**1.27 63**	*i* P		**Pg**	**20 32 57.4 +0.3**
KORT	**Korkueli**	**1.27 63**	P		**Pg**	**20 32 57.3 +0.3**
KORT	**Korkueli**	**1.27 63**	*e*Pn		**Pg**	**20 32 57.6 +0.5**
DENT	**Denizli**	**1.32 4**	PN		**Pn**	**20 32 56.4 -0.2**
DENT	**Denizli**	**1.32 4**	*e*Pn		**Pn**	**20 32 56.4 -0.2**
BODT	**Bodrum**	**1.45 296**	PN		**Pn**	**20 32 57.7 -0.6**
BODT	**Bodrum**	**1.45 296**	P		**Pn**	**20 32 57.5 -0.8**
BODT			S		**Sn**	**20 33 16.2 -0.9**
BODT	**Bodrum**	**1.45 296**	*e*Pn		**Pn**	**20 32 57.7 -0.6**
BODT			S		**Sn**	**20 33 16.2 -0.9**
NISR	**Nisiros**	**1.46 278**	P		**Pg**	**20 33 00.1 -0.6**
NISR	**Nisiros**	**1.46 278**	P		**Pb**	**20 32 59.3 -0.2**
KARP	**Karpathos**	**1.69 239**	PN		**Pn**	**20 33 02.3 +0.7**
KARP	**Karpathos**	**1.69 239**	P		**Pn**	**20 33 02.2 +0.6**
KARP			S		**Sn**	**20 33 21.2 -1.8**
KARP			AML	AML		20 33 31.1
	comp=E,151μm,0.4s					
KARP			AML	AML		20 33 34.5
	comp=N,218μm,0.4s					
KARP	**Karpathos**	**1.69 239**	P		**Pn**	**20 33 01.8 +0.2**
KARP	**Karpathos**	**1.69 239**	P		**Pn**	**20 33 01.8 +0.2**
KARP	**Karpathos**	**1.69 239**	*e*Pn		**Pn**	**20 33 02.3 +0.7**
KARP			S		**Sn**	**20 33 21.7 -1.3**
AYDB	**Zeytinkoy-Aydi**	**1.72 332**	PN		**Pn**	**20 33 01.9 -0.3**
AYDB	**Zeytinkoy-Aydi**	**1.72 332**	*e*Pn		**Pn**	**20 33 01.9 -0.3**
ISP	**Isparta**	**1.88 42**	PN		**Pn**	**20 33 04.6 +0.2**
ISP	**Isparta**	**1.88 42**	*e*Pn		**Pn**	**20 33 04.6 +0.2**
SUTC	**Sutluce-Ispart**	**1.96 57**	PN		**Pn**	**20 33 05.5 +0.1**
SUTC	**Sutluce-Ispart**	**1.96 57**	*e*Pn		**Pn**	**20 33 05.5 +0.1**
KULA	**Kula-Manisa**	**2.09 354**	PN		**Pn**	**20 33 06.8 -0.4**
KULA	**Kula-Manisa**	**2.09 354**	*e*Pn		**Pn**	**20 33 06.8 -0.4**
SMG	**Samos**	**2.10 308**	P		**Pn**	**20 33 07.3 0.0**
SMG			S		**Sn**	**20 33 32.5 -0.8**
SMG			AML	AML		20 33 35.3
	comp=N,1265μm,0.3s					
SMG			AML	AML		20 33 36.5
	comp=E,1129μm,0.3s					
SMG	**Samos**	**2.10 308**	P		**Pn**	**20 33 07.5 +0.2**
SMG			S		**Sn**	**20 33 33.0 -0.3**
SMG	**Samos**	**2.10 308**	P		**Pn**	**20 33 07.5 +0.2**
SMG			S		**Sn**	**20 33 33.0 -0.3**
ZKR	**Zakros**	**2.57 240**	P		**Pn**	**20 33 15.1 +1.4**
ZKR			S		**Sn**	**20 33 42.2 -2.6**
ZKR			AML	AML		20 33 43.2
	comp=E,86μm,0.4s					
ZKR			AML	AML		20 33 46.0
	comp=N,38μm,0.5s					
ZKR	**Zakros**	**2.57 240**	P		**Pn**	**20 33 14.6 +0.8**
ZKR	**Zakros**	**2.57 240**	P		**Pn**	**20 33 14.5 +0.8**
ZKR			S		**Sn**	**20 33 43.0 -1.8**
SIMA	**Simav-Kutahya**	**2.65 1**	PN		**Pn**	**20 33 14.4 -0.5**
SIMA	**Simav-Kutahya**	**2.65 1**	*e*Pn		**Pn**	**20 33 14.4 -0.5**
URLA	**Izmir**	**2.67 317**	PN		**Pn**	**20 33 16.0 +0.8**
URLA	**Izmir**	**2.67 317**	*e*Pn		**Pn**	**20 33 16.0 +0.8**
APE	**Apeiranthos**	**2.80 284**	P		**Pn**	**20 33 17.2 +0.2**
APE			S		**Sn**	**20 33 50.8 +0.2**
APE			AML	AML		20 33 53.5
	comp=N,68μm,0.4s					
APE			AML	AML		20 33 53.7
	comp=E,54μm,0.4s					
APE	**Apeiranthos**	**2.80 284**	P		**Pn**	**20 33 17.4 +0.4**
APE			S		**Sn**	**20 33 50.3 -0.3**
NPS	**Neapolis**	**2.94 248**	P		**Pn**	**20 33 17.9 -1.0**
NPS			S		**Sn**	**20 33 54.3 +0.4**
NPS	**Neapolis**	**2.94 248**	P		**Pn**	**20 33 18.6 -0.2**
NPS	**Neapolis**	**2.94 248**	P		**Pn**	**20 33 18.6 -0.2**
NPS			S		**Sn**	**20 33 53.6 -0.3**
CHOS	**Chios island**	**3.01 311**	P		**Pn**	**20 33 19.9 +0.1**
CHOS			S		**Sn**	**20 33 55.6 -0.1**
CHOS			AML	AML		20 33 58.2
	comp=N,242μm,0.4s					
CHOS			AML	AML		20 33 59.0
	comp=E,271μm,0.3s					
CHOS	**Chios island**	**3.01 311**	P		**Pn**	**20 33 20.1 +0.3**
CHOS			S		**Sn**	**20 33 55.4 -0.3**
CHOS	**Chios island**	**3.01 311**	P		**Pn**	**20 33 20.1 +0.3**
CHOS			S		**Sn**	**20 33 55.4 -0.3**
LAST	**Lasithi**	**3.08 247**	P		**Pn**	**20 33 19.6 -1.2**
LAST	**Lasithi**	**3.08 247**	P		**Pn**	**20 33 20.4 -0.4**
LAST	**Lasithi**	**3.08 247**	P		**Pn**	**20 33 20.4 -0.4**
IMMV	**Iera Moni Meta**	**4.13 258**	P		**Pn**	**20 33 34.8 -0.4**
IMMV	**Iera Moni Meta**	**4.13 258**	P		**Pn**	**20 33 35.4 +0.2**

IDC 10 20:33:41.2±24.0, 17°35S×172°82W, h0km, mb4.1/4, mb1 4.2/4, mb1mx3.7/57, mbtmp4.1/4, Error ellipse: s-maj=454.6km s-min=164.4km az=72.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**38.79**	**259**	P	P	20 41 08.7	+0.7
	4.5nm,0.8s,baz=111,slow=9.7,SNR=4.7						
STKA	**Stephens Creek**	**43.58**	**242**	P	P	20 41 47.0	-0.2
	2.3nm,0.9s,baz=75,slow=8.5,SNR=4.4						
WRA	**Warramunga Arr**	**49.97**	**258**	P	P	20 42 37.0	-0.5
	1.0nm,0.4s,baz=96,slow=7.7,SNR=26						
ASAR	**Alice Springs**	**50.06**	**253**	P	P	20 42 37.8	-0.4
	1.0nm,0.4s,baz=86,slow=8.1,SNR=25						

IDC 10 20:34:20.0±1.7, 1°25S×127°08E, h0km, mb3.5/3, mb1 3.6/4, mb1mx3.3/57, mbtmp3.4/4, ML3.0/1, Error ellipse: s-maj=160.7km s-min=22.1km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.89**	**160**	P	P	20 38 53.3	+0.1
	0.0nm,0.3s,baz=338,slow=12,SNR=3.7						
ASAR	**Alice Springs**	**23.25**	**164**	P	P	20 39 29.1	-0.1
	0.6nm,0.8s,baz=338,slow=9.9,SNR=7.4						
MKAR	**Makanchi Array**	**61.85**	**327**	P	P	20 44 41.4	+0.3
	0.6nm,0.6s,baz=121,slow=7.4,SNR=11						
KURBB	**Kurchatov Arra**	**66.12**	**329**	P	P	20 45 08.8	-0.3
	0.5nm,0.6s,baz=136,slow=6.4,SNR=8.2						

*DDA **10** 20:39:07.7, 36°49N×28°94E, h7km, Ml3.4*
*ATH **10** 20:39:07.6, 36°41N×28°91E, h44km±1km, ML2.9/11, Error ellipse: s-maj=1.7km s-min=0.7km az=161.0*
*ISK **10** 20:39:07.2, 36°45N×28°91E, h23km, ML3.4/10*
*ISCJB **10** 20:39:07.4±0.3, 36°40N±0°03×28°94E±0°02, h40km±10km, Error ellipse: s-maj=4.6km s-min=2.8km az=13.2*
*CSEM **10** 20:39:07.8±0.1, 36°41N×28°95E, h26km±1km, ML3.4, Error ellipse: s-maj=3.3km s-min=2.1km az=7.0*
*NIC **10** 20:39:08.5±0.3, 36°75N×29°17E, h25km, ML3.3*
*THE **10** 20:39:08.2, 36°43N×28°89E, h10km±1km, ML3.0/6, Error ellipse: s-maj=1.7km s-min=0.5km az=88.0*

ISC 10 20:39:07.5±0.9, 36°42N±0°02×28°94E±0°02, h24km±7km, n134, σ0670/181, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.24**	**28**	PG	**Pb**	**20 39 13.3**	**-0.4**
FETY				SG	**Sb**	**20 39 18.2**	**+0.3**
FETY	**Fethiye**	**0.24**	**28**	P	**Pb**	**20 39 13.3**	**-0.4**
FETY				S	**Sb**	**20 39 18.2**	**+0.3**
FETY	**Fethiye**	**0.24**	**28**	P	**Pb**	**20 39 13.3**	**-0.4**
FETY				S	**Sb**	**20 39 18.2**	**+0.3**
DALY	**Dalyan (Mu¨la**	**0.46**	**330**	PG	**Pb**	**20 39 16.9**	**-0.1**
DALY				SG	**Sb**	**20 39 23.1**	**-0.3**
DALY	**Dalyan (Mu¨la**	**0.46**	**330**	*i* P	**Pb**	**20 39 16.9**	**-0.1**
DALY	**Dalyan (Mu¨la**	**0.46**	**330**	P	**Pb**	**20 39 16.9**	**-0.1**
DALY				*e*Sg	**Sb**	**20 39 23.1**	**-0.3**
TURN	**Turunc**	**0.53**	**329**	PG	**Pn**	**20 39 20.2**	**+0.7**
TURN	**Turunc**	**0.53**	**329**	*i* P	**Pn**	**20 39 20.6**	**+1.1**
TURN	**Turunc**	**0.53**	**329**	*e*Pg	**Pn**	**20 39 20.2**	**+0.7**
TURN	**Turunc**	**0.53**	**329**	P	**Pn**	**20 39 20.6**	**+1.1**
AKAS	**Kas**	**0.57**	**109**	PG	**Pb**	**20 39 19.3**	**+0.4**
AKAS	**Kas**	**0.57**	**109**	*i* P	**Pb**	**20 39 19.3**	**+0.4**
AKAS	**Kas**	**0.57**	**109**	P	**Pb**	**20 39 19.3**	**+0.4**
KSL	**Kastellorizon**	**0.58**	**117**	P	**Pn**	**20 39 20.5**	**+0.2**
KSL				S	**Sn**	**20 39 30.7**	**+1.6**
KSL	**Kastellorizon**	**0.58**	**117**	P	**Pn**	**20 39 20.3**	**0.0**
KSL				S	**Sn**	**20 39 30.3**	**+1.2**
MRSB	**Marmaris-Mugla**	**0.67**	**297**	PG	**Pb**	**20 39 20.4**	**-0.1**
MRSB	**Marmaris-Mugla**	**0.67**	**297**	*e*Pg	**Pb**	**20 39 20.4**	**-0.1**
ARG	**Arkhangelos**	**0.69**	**253**	PG	**Pb**	**20 39 21.0**	**+0.2**
ARG				SG	**Sn**	**20 39 31.4**	**-0.3**
ARG	**Arkhangelos**	**0.69**	**253**	P	**Pb**	**20 39 21.0**	**+0.2**
ARG				AML	AML	20 39 32.3	
	comp=N,876μm,0.4s						
ARG				S	**Sn**	**20 39 32.6**	**+0.9**
ARG				AML	AML	20 39 34.7	
	comp=E,1180μm,0.3s						
ARG	**Arkhangelos**	**0.69**	**253**	P	**Pb**	**20 39 21.3**	**+0.5**
ARG				S	**Sn**	**20 39 31.4**	**-0.3**
ARG	**Arkhangelos**	**0.69**	**253**	*e*Pg	**Pb**	**20 39 21.0**	**+0.2**
ARG	**Arkhangelos**	**0.69**	**253**	P	**Pb**	**20 39 21.3**	**+0.5**
ARG				S	**Sn**	**20 39 31.4**	**-0.3**
ELL	**Elmali**	**0.85**	**67**	PG	**Pn**	**20 39 24.3**	**+0.3**
ELL	**Elmali**	**0.85**	**67**	*e*Pg	**Pn**	**20 39 24.3**	**+0.3**
GLHS	**Glhisar (BURDU**	**0.86**	**31**	PG	**Pn**	**20 39 24.1**	**-0.1**
GLHS	**Glhisar (BURDU**	**0.86**	**31**	*e*Pg	**Pn**	**20 39 24.1**	**-0.1**
YER	**Yerkesik**	**0.89**	**324**	PG	**Pb**	**20 39 24.1**	**-0.2**
YER	**Yerkesik**	**0.89**	**324**	P	**Pb**	**20 39 24.0**	**-0.2**
YER				S	**Sn**	**20 39 37.5**	**+0.8**
YER	**Yerkesik**	**0.89**	**324**	*e*Pg	**Pb**	**20 39 24.1**	**-0.2**
YER				S	**Sn**	**20 39 37.5**	**+0.8**
GOLH	**Golhisar**	**0.96**	**31**	*i* P	**Pb**	**20 39 24.6**	**-0.8**
GOLH	**Golhisar**	**0.96**	**31**	P	**Pb**	**20 39 24.6**	**-0.8**
TAVA	**DENIZLI_Tavas**	**1.05**	**359**	*i* P	**Pn**	**20 39 26.7**	**0.0**
TAVA	**DENIZLI_Tavas**	**1.05**	**359**	P	**Pn**	**20 39 26.7**	**0.0**
DATC	**Datca-Mugla**	**1.08**	**289**	PG	**Pn**	**20 39 27.3**	**+0.1**
DATC	**Datca-Mugla**	**1.08**	**289**	*e*Pg	**Pn**	**20 39 27.3**	**+0.1**
DAT	**Datca**	**1.14**	**286**	PN	**Pn**	**20 39 28.3**	**+0.3**
DAT	**Datca**	**1.14**	**286**	*i* P	**Pn**	**20 39 28.1**	**+0.1**
DAT	**Datca**	**1.14**	**286**	*e*Pn	**Pn**	**20 39 28.3**	**+0.3**
DNZL	**Cakiroluk**	**1.27**	**4**	*i* P	**Pn**	**20 39 30.0**	**+0.1**
DNZL	**Cakiroluk**	**1.27**	**4**	P	**Pn**	**20 39 30.0**	**+0.1**
KORT	**Korkueli**	**1.27**	**62**	PN	**Pn**	**20 39 30.4**	**+0.5**
KORT	**Korkueli**	**1.27**	**62**	*i* P	**Pb**	**20 39 31.5**	**+0.7**
KORT	**Korkueli**	**1.27**	**62**	*e*Pn	**Pn**	**20 39 30.4**	**+0.5**
KORT	**Korkueli**	**1.27**	**62**	P	**Pb**	**20 39 31.5**	**+0.7**
MLSB	**Milas**	**1.28**	**313**	PN	**Pn**	**20 39 30.0**	**+0.1**
MLSB	**Milas**	**1.28**	**313**	*e*Pn	**Pn**	**20 39 30.0**	**+0.1**
DENT	**Denizli**	**1.33**	**3**	PN	**Pn**	**20 39 30.6**	**-0.1**
DENT	**Denizli**	**1.33**	**3**	*e*Pn	**Pn**	**20 39 30.6**	**-0.1**
ANTB	**Antalya**	**1.46**	**70**	PN	**Pn**	**20 39 32.8**	**+0.5**
ANTB	**Antalya**	**1.46**	**70**	*e*Pn	**Pn**	**20 39 32.8**	**+0.5**
BODT	**Bodrum**	**1.46**	**297**	PN	**Pn**	**20 39 31.6**	**-0.8**
BODT	**Bodrum**	**1.46**	**297**	P	**Pn**	**20 39 31.5**	**-0.8**
BODT				S	**Sb**	**20 39 51.6**	**-0.5**
BODT	**Bodrum**	**1.46**	**297**	*e*Pn	**Pn**	**20 39 31.6**	**-0.8**
BODT				S	**Sb**	**20 39 51.6**	**-0.5**
NISR	**Nisiros**	**1.47**	**278**	P	**Pn**	**20 39 32.6**	**+0.1**
NISR	**Nisiros**	**1.47**	**278**	P	**Pn**	**20 39 32.6**	**+0.1**
YKAV	**Yalikavak-Bodr**	**1.51**	**298**	PN	**Pn**	**20 39 32.4**	**-0.6**
YKAV	**Yalikavak-Bodr**	**1.51**	**298**	*e*Pn	**Pn**	**20 39 32.4**	**-0.6**
KARP	**Karpathos**	**1.69**	**239**	PN	**Pn**	**20 39 35.9**	**+0.4**
KARP	**Karpathos**	**1.69**	**239**	P	**Pn**	**20 39 36.2**	**+0.8**
KARP				S	**Sn**	**20 39 56.7**	**+0.4**
KARP				AML	AML	20 39 58.0	
	comp=N,352μm,0.3s						
KARP				AML	AML	20 39 59.4	
	comp=E,408μm,0.2s						
KARP	**Karpathos**	**1.69**	**239**	P	**Pn**	**20 39 35.9**	**+0.4**
KARP				S	**Sn**	**20 39 56.4**	**+0.1**
KARP	**Karpathos**	**1.69**	**239**	P	**Pn**	**20 39 35.9**	**+0.4**
KARP				S	**Sn**	**20 39 56.4**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**1.74**	**332**	PN	**Pn**	**20 39 36.1**	**-0.2**
AYDB	**Zeytinkoy-Aydi**	**1.74**	**332**	*e*Pn	**Pn**	**20 39 36.1**	**-0.2**
ISP	**Isparta**	**1.89**	**42**	PN	**Pn**	**20 39 38.8**	**+0.5**
ISP	**Isparta**	**1.89**	**42**	*e*Pn	**Pn**	**20 39 38.8**	**+0.5**
SUTC	**Sutluce-Ispart**	**1.96**	**57**	PN	**Pn**	**20 39 40.4**	**+1.1**
SUTC	**Sutluce-Ispart**	**1.96**	**57**	*e*Pn	**Pn**	**20 39 40.4**	**+1.1**
KULA	**Kula-Manisa**	**2.10**	**354**	PN	**Pn**	**20 39 40.6**	**-0.7**
KULA	**Kula-Manisa**	**2.10**	**354**	*e*Pn	**Pn**	**20 39 40.6**	**-0.7**
SMG	**Samos**	**2.12**	**308**	P	**Pn**	**20 39 41.8**	**+0.3**
SMG				S	**Sn**	**20 40 07.9**	**+0.8**
SMG				AML	AML	20 40 09.4	
	comp=N,1470μm,0.4s						
SMG				AML	AML	20 40 09.6	
	comp=E,1257μm,0.2s						
SMG	**Samos**	**2.12**	**308**	P	**Pn**	**20 39 41.7**	**+0.3**
SMG				S	**Sn**	**20 40 06.6**	**-0.4**
SMG	**Samos**	**2.12**	**308**	P	**Pn**	**20 39 41.7**	**+0.3**
SMG				S	**Sn**	**20 40 07.3**	**+0.3**
ZKR	**Zakros**	**2.57**	**240**	P	**Pn**	**20 39 49.5**	**+1.9**
ZKR				S	**Sn**	**20 40 17.7**	**-0.5**
ZKR				AML	AML	20 40 21.5	
	comp=E,128μm,0.6s						
ZKR				AML	AML	20 40 21.6	
	comp=N,132μm,0.4s						
ZKR	**Zakros**	**2.57**	**240**	P	**Pn**	**20 39 48.7**	**+1.1**
ZKR	**Zakros**	**2.57**	**240**	P	**Pn**	**20 39 48.7**	**+1.1**
ZKR				S	**Sn**	**20 40 17.6**	**-0.5**
SANT	**Santorini**	**2.81**	**270**	P	**Pn**	**20 39 50.5**	**-0.4**
SANT	**Santorini**	**2.81**	**270**	P	**Pn**	**20 39 51.0**	**+0.1**
APE	**Apeiranthos**	**2.81**	**284**	P	**Pn**	**20 39 49.8**	**-1.2**
APE				S	**Sn**	**20 40 24.6**	**+0.4**
APE				AML	AML	20 40 27.0	
	comp=E,68μm,0.4s						
APE				AML	AML	20 40 27.1	
	comp=N,57μm,0.4s						
APE	**Apeiranthos**	**2.81**	**284**	P	**Pn**	**20 39 50.7**	**-0.3**
APE				S	**Sn**	**20 40 24.2**	**0.0**
THR2	**Thira island,**	**2.83**	**272**	P	**Pn**	**20 39 51.4**	**+0.2**
THR2	**Thira island,**	**2.83**	**272**	P	**Pn**	**20 39 51.5**	**+0.4**
THR3	**Thira Island,**	**2.85**	**271**	P	**Pn**	**20 39 51.5**	**+0.1**
THR3	**Thira Island,**	**2.85**	**271**	P	**Pn**	**20 39 51.6**	**+0.1**
THR3	**Thira Island,**	**2.85**	**271**	P	**Pn**	**20 39 51.6**	**+0.1**
THR6	**Thira Island,**	**2.86**	**270**	P	**Pn**	**20 39 52.0**	**+0.4**
THR6	**Thira Island,**	**2.86**	**270**	P	**Pn**	**20 39 52.1**	**+0.5**
SAP1	**Santorini-Akro**	**2.86**	**270**	P	**Pn**	**20 39 52.1**	**+0.5**
NPS	**Neapolis**	**2.94**	**248**	P	**Pn**	**20 39 52.2**	**-0.5**
NPS				S	**Sn**	**20 40 25.8**	**-1.5**
NPS				AML	AML	20 40 28.0	
	comp=N,137μm,0.2s						
NPS				AML	AML	20 40 33.0	
	comp=E,182μm,0.3s						
NPS	**Neapolis**	**2.94**	**248**	P	**Pn**	**20 39 52.5**	**-0.2**
NPS	**Neapolis**	**2.94**	**248**	P	**Pn**	**20 39 52.8**	**+0.1**
NPS				S	**Sn**	**20 40 26.3**	**-1.0**
CHOS	**Chios island**	**3.02**	**311**	P	**Pn**	**20 39 54.5**	**+0.6**
CHOS				S	**Sn**	**20 40 29.5**	**+0.1**
CHOS				AML	AML	20 40 32.2	
	comp=E,440μm,0.2s						
CHOS				AML	AML	20 40 32.5	
	comp=N,309μm,0.4s						
CHOS	**Chios island**	**3.02**	**311**	P	**Pn**	**20 39 53.9**	**0.0**
CHOS				S	**Sn**	**20 40 29.2**	**-0.2**
CHOS	**Chios island**	**3.02**	**311**	P	**Pn**	**20 39 53.9**	**0.0**
CHOS				S	**Sn**	**20 40 29.2**	**-0.2**
LAST	**Lasithi**	**3.08**	**247**	P	**Pn**	**20 39 54.1**	**-0.6**
LAST				S	**Sn**	**20 40 28.7**	**-2.1**
LAST				AML	AML	20 40 32.4	
	comp=N,75μm,0.6s						
LAST				AML	AML	20 40 38.3	
	comp=E,51μm,0.4s						
LAST	**Lasithi**	**3.08**	**247**	P	**Pn**	**20 39 54.6**	**-0.1**
LAST	**Lasithi**	**3.08**	**247**	P	**Pn**	**20 39 54.7**	**0.0**
LAST				S	**Sn**	**20 40 29.4**	**-1.5**
AKMC	**Akamas**	**3.09**	**116**	P	**Pn**	**20 39 54.4**	**-0.3**
	baz=304						
AKMC	**Akamas**	**3.09**	**116**	P	**Pn**	**20 39 54.4**	**-0.3**
PPCY	**Paphos**	**3.17**	**118**	P	**Pn**	**20 39 55.7**	**-0.1**
	baz=306						
PPCY	**Paphos**	**3.17**	**118**	P	**Pn**	**20 39 55.7**	**-0.1**
ALFC	**Alefka**	**3.23**	**112**	P	**Pn**	**20 39 56.0**	**-0.7**
	baz=300						
ALFC				S	**Sn**	**20 40 33.2**	**-1.2**
ALFC	**Alefka**	**3.23**	**112**	P	**Pn**	**20 39 56.0**	**-0.7**
ALFC				S	**Sn**	**20 40 33.2**	**-1.2**
SZAC	**Souni**	**3.62**	**116**	P	**Pn**	**20 40 01.6**	**-0.4**
	baz=304						
SZAC				S	**Sn**	**20 40 44.2**	**+0.2**
SZAC	**Souni**	**3.62**	**116**	P	**Pn**	**20 40 01.6**	**-0.4**
SZAC				S	**Sn**	**20 40 44.2**	**+0.2**
SIVA	**Sivas**	**3.64**	**249**	P	**Pn**	**20 40 04.1**	**+1.8**
SIVA	**Sivas**	**3.64**	**249**	P	**Pn**	**20 40 03.6**	**+1.3**
MAMC	**Mammari**	**3.69**	**108**	P	**Pn**	**20 40 02.7**	**-0.3**
	baz=296						
MAMC	**Mammari**	**3.69**	**108**	P	**Pn**	**20 40 02.7**	**-0.3**
SIGR	**SIGRI**	**3.71**	**320**	P	**Pn**	**20 40 04.2**	**+1.0**
SIGR				S	**Sn**	**20 40 45.3**	**-0.8**
SIGR	**SIGRI**	**3.71**	**320**	P	**Pn**	**20 40 04.2**	**+1.0**
SIGR	**SIGRI**	**3.71**	**320**	P	**Pn**	**20 40 04.2**	**+1.0**
SIGR				S	**Sn**	**20 40 45.5**	**-0.6**
CSS	**Mathiatis**	**3.86**	**111**	P	**Pn**	**20 40 04.6**	**-0.7**
	baz=298						
CSS				S	**Sn**	**20 40 48.4**	**-1.5**
CSS	**Mathiatis**	**3.86**	**111**	P	**Pn**	**20 40 04.6**	**-0.7**
CSS				S	**Sn**	**20 40 48.4**	**-1.5**
KARY	**Karystos**	**3.94**	**295**	P	**Pn**	**20 40 06.2**	**-0.2**
KARY				S	**Sn**	**20 40 52.4**	**+0.5**
KARY				AML	AML	20 40 53.9	
	comp=E,56μm,0.2s						
KARY				AML	AML	20 40 54.3	
	comp=N,52μm,0.2s						
KARY	**Karystos**	**3.94**	**295**	P	**Pn**	**20 40 06.5**	**+0.1**
KARY				S	**Sn**	**20 40 51.7**	**-0.2**
KARY	**Karystos**	**3.94**	**295**	P	**Pn**	**20 40 06.5**	**+0.1**
KARY				S	**Sn**	**20 40 51.7**	**-0.2**
IMMV	**Iera Moni Meta**	**4.14**	**258**	P	**Pn**	**20 40 08.9**	**-0.2**
IMMV	**Iera Moni Meta**	**4.14**	**258**	P	**Pn**	**20 40 09.4**	**+0.3**
IMMV	**Iera Moni Meta**	**4.14**	**258**	P	**Pn**	**20 40 09.4**	**+0.3**
GVD	**Gavdhos**	**4.26**	**250**	P	**Pn**	**20 40 11.3**	**+0.5**
GVD				S	**Sn**	**20 40 57.6**	**-2.1**
GVD				AML	AML	20 41 02.6	
	comp=N,92μm,0.3s						
GVD				AML	AML	20 41 02.8	
	comp=E,102μm,0.7s						
GVD	**Gavdhos**	**4.26**	**250**	P	**Pn**	**20 40 11.6**	**+0.8**
GVD				S	**Sn**	**20 40 58.2**	**-1.5**
DION	**Dionisos Attik**	**4.33**	**294**	P	**Pn**	**20 40 12.3**	**+0.5**
DION				S	**Sn**	**20 41 01.8**	**+0.4**
DION				AML	AML	20 41 02.1	
	comp=E,86μm,0.9s						
DION				AML	AML	20 41 05.1	
	comp=N,44μm,0.3s						
DION	**Dionisos Attik**	**4.33**	**294**	P	**Pn**	**20 40 12.6**	**+0.8**
DION				S	**Sn**	**20 41 01.2**	**-0.2**
LIA	**Limnos Island**	**4.56**	**321**	P	**Pn**	**20 40 16.4**	**+1.4**
LIA	**Limnos Island**	**4.56**	**321**	P	**Pn**	**20 40 16.4**	**+1.4**
ANKY	**Antikythira Is**	**4.60**	**265**	P	**Pn**	**20 40 16.6**	**+1.1**
ANKY	**Antikythira Is**	**4.60**	**265

CMAR	**Chiang Mai Arr**	**16.16**	**21**	Pn	Pn	21 11 11.5	+0.9
	0.1nm,0.3s,baz=214,slow=13,SNR=5.5						
H08S2	**Diego Garcia H**	**23.13**	**242**	T	T	21 37 35.9	
	baz=61,slow=74,SNR=14						
H08S3	**Diego Garcia H**	**23.13**	**242**	T	T	21 37 34.7	
	baz=61,slow=74,SNR=19						
H08S1	**Diego Carcia H**	**23.14**	**242**	T	T	21 37 37.0	
	baz=61,slow=74,SNR=15						
H01W3	**Cape Leeuwin H**	**42.90**	**154**	T	T	22 01 22.0	
	baz=330,slow=76,SNR=9.6						
H01W2	**Cape Leeuwin H**	**42.91**	**154**	T	T	22 01 20.9	
	baz=330,slow=76,SNR=12						
H01W1	**Cape Leeuwin H**	**42.91**	**154**	T	T	22 01 20.3	
	baz=330,slow=76,SNR=11						
MKAR	**Makanchi Array**	**44.29**	**350**	P	P	21 15 33.3	-0.2
	0.2nm,0.5s,baz=166,slow=6.5,SNR=3.6						
WRA	**Warramunga Arr**	**46.76**	**121**	P	P	21 15 53.4	-0.1
	0.9nm,1.2s,baz=300,slow=9.0,SNR=2.1						

*ISK **10** 21:51:03.7, 36°.43N×28°.94E, h18km, ML2.4/4*
*CSEM **10** 21:51:04.4±0.1, 36°.44N×28°.95E, h20km, ML2.7, Error ellipse: s-maj=3.7km s-min=2.9km az=174.0*
*ISCJB **10** 21:51:04.8±0.4, 36°.45N±0°.03×28°.93E±0°.03, h29km±4km, Error ellipse: s-maj=5.2km s-min=4.4km az=8.5*
*DDA **10** 21:51:04.7, 36°.50N×28°.96E, h7km, Ml2.7*
*ATH **10** 21:51:04.3, 36°.42N×28°.92E, h40km±2km, ML2.1/2, Error ellipse: s-maj=3.5km s-min=1.1km az=176.0*
*THE **10** 21:51:04.8, 36°.43N×28°.92E, h12km±2km, ML1.8/2, Error ellipse: s-maj=2.4km s-min=0.8km az=77.0*

ISC 10 21:51:04.3±1.0, 36°.44N±0°.02×28°.94E±0°.02, h20km±3km, n64, σ0°59/92, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.23**	**30**	PG	**Pg**	**21 51 09.2**	**-0.7**
FETY				SG	**Sg**	**21 51 14.1**	**+0.4**
FETY	**Fethiye**	**0.23**	**30**	P	**Pg**	**21 51 09.6**	**-0.3**
FETY				S	**Sg**	**21 51 14.5**	**+0.8**
FETY	**Fethiye**	**0.23**	**30**	*e*Pg	**Pg**	**21 51 09.2**	**-0.7**
FETY	**Fethiye**	**0.23**	**30**	P	**Pg**	**21 51 09.6**	**-0.3**
FETY				*e*Sg	**Sg**	**21 51 14.1**	**+0.4**
DALY	**Dalyan (Mu¨la**	**0.45**	**328**	PG	**Pg**	**21 51 13.5**	**0.0**
DALY				SG	**Sb**	**21 51 20.1**	**+0.2**
DALY	**Dalyan (Mu¨la**	**0.45**	**328**	*i* P	**Pg**	**21 51 13.5**	**0.0**
DALY				*i* S	**Sb**	**21 51 20.4**	**+0.6**
DALY	**Dalyan (Mu¨la**	**0.45**	**328**	P	**Pg**	**21 51 13.5**	**0.0**
DALY				*e*Sg	**Sb**	**21 51 20.1**	**+0.2**
TURN	**Turunc**	**0.51**	**328**	PG	**Pn**	**21 51 17.2**	**+0.6**
TURN	**Turunc**	**0.51**	**328**	*i* P	**Pn**	**21 51 17.1**	**+0.5**
TURN	**Turunc**	**0.51**	**328**	P	**Pn**	**21 51 17.1**	**+0.5**
AKAS	**Kas**	**0.57**	**111**	PG	**Pg**	**21 51 15.3**	**-0.6**
AKAS	**Kas**	**0.57**	**111**	*i* P	**Pg**	**21 51 15.2**	**-0.6**
AKAS				*i* S	**Sn**	**21 51 26.1**	**-0.3**
AKAS	**Kas**	**0.57**	**111**	*e*Pg	**Pg**	**21 51 15.3**	**-0.6**
AKAS				S	**Sn**	**21 51 26.1**	**-0.3**
KSL	**Kastellorizon**	**0.59**	**119**	P	**Pg**	**21 51 16.3**	**+0.2**
KSL				S	**Sn**	**21 51 27.5**	**+0.8**
KSL	**Kastellorizon**	**0.59**	**119**	P	**Pg**	**21 51 16.6**	**+0.4**
KSL				S	**Sn**	**21 51 26.2**	**-0.5**
MRSB	**Marmaris-Mugla**	**0.66**	**295**	PG	**Pb**	**21 51 17.0**	**-0.2**
MRSB	**Marmaris-Mugla**	**0.66**	**295**	*e*Pg	**Pb**	**21 51 17.0**	**-0.2**
ARG	**Arkhangelos**	**0.70**	**252**	PG	**Pg**	**21 51 18.1**	**0.0**
ARG				SG	**Sg**	**21 51 27.8**	**+0.4**
ARG	**Arkhangelos**	**0.70**	**252**	P	**Pg**	**21 51 18.0**	**0.0**
ARG				S	**Sn**	**21 51 28.9**	**-0.4**
ARG				AML	AML	21 51 29.2	
	comp=N,199μm,0.4s						
ARG				AML	AML	21 51 29.5	
	comp=E,211μm,0.4s						
ARG	**Arkhangelos**	**0.70**	**252**	P	**Pg**	**21 51 18.1**	**0.0**
ARG				S	**Sn**	**21 51 28.5**	**-0.8**
ARG	**Arkhangelos**	**0.70**	**252**	P	**Pg**	**21 51 18.1**	**0.0**
ARG				*e*Sg	**Sg**	**21 51 27.8**	**+0.4**
ARG				S	**Sn**	**21 51 28.5**	**-0.8**
ELL	**Elmali**	**0.84**	**68**	PG	**Pb**	**21 51 20.6**	**+0.3**
ELL	**Elmali**	**0.84**	**68**	*e*Pg	**Pb**	**21 51 20.6**	**+0.3**
GLHS	**Glhisar (BURDU**	**0.84**	**32**	PG	**Pb**	**21 51 20.3**	**-0.1**
GLHS	**Glhisar (BURDU**	**0.84**	**32**	*e*Pg	**Pb**	**21 51 20.3**	**-0.1**
YER	**Yerkesik**	**0.88**	**323**	PG	**Pg**	**21 51 21.4**	**-0.1**
YER	**Yerkesik**	**0.88**	**323**	P	**Pb**	**21 51 20.7**	**-0.2**
YER				S	**Sn**	**21 51 34.4**	**+0.5**
YER	**Yerkesik**	**0.88**	**323**	P	**Pb**	**21 51 20.7**	**-0.2**
YER	**Yerkesik**	**0.88**	**323**	*e*Pg	**Pg**	**21 51 21.4**	**-0.1**
YER				S	**Sn**	**21 51 34.4**	**+0.5**
GOLH	**Golhisar**	**0.94**	**32**	*i* P	**Pb**	**21 51 20.8**	**-1.2**
GOLH	**Golhisar**	**0.94**	**32**	P	**Pb**	**21 51 20.8**	**-1.2**
TAVA	**DENIZLI_Tavas**	**1.03**	**359**	*i* P	**Pb**	**21 51 23.2**	**-0.3**
TAVA				*i* S	**Sb**	**21 51 37.0**	**+0.3**
TAVA	**DENIZLI_Tavas**	**1.03**	**359**	P	**Pb**	**21 51 23.2**	**-0.3**
TAVA				S	**Sb**	**21 51 37.0**	**+0.3**
DATC	**Datca-Mugla**	**1.08**	**288**	PN	**Pb**	**21 51 24.5**	**+0.1**
DATC	**Datca-Mugla**	**1.08**	**288**	*e*Pn	**Pb**	**21 51 24.5**	**+0.1**
DAT	**Datca**	**1.14**	**285**	PN	**Pn**	**21 51 24.9**	**-0.4**
DAT	**Datca**	**1.14**	**285**	*i* P	**Pb**	**21 51 25.6**	**+0.2**
DAT	**Datca**	**1.14**	**285**	*e*Pn	**Pn**	**21 51 24.9**	**-0.4**
DAT	**Datca**	**1.14**	**285**	P	**Pb**	**21 51 25.6**	**+0.2**
DNZL	**Cakiroluk**	**1.25**	**4**	*i* P	**Pn**	**21 51 26.4**	**-0.6**
DNZL	**Cakiroluk**	**1.25**	**4**	P	**Pn**	**21 51 26.4**	**-0.6**
KORT	**Korkueli**	**1.26**	**63**	PN	**Pn**	**21 51 27.2**	**+0.2**
KORT	**Korkueli**	**1.26**	**63**	*e*Pn	**Pn**	**21 51 27.2**	**+0.2**
MLSB	**Milas**	**1.27**	**313**	PN	**Pn**	**21 51 27.4**	**+0.4**
MLSB	**Milas**	**1.27**	**313**	*e*Pn	**Pn**	**21 51 27.4**	**+0.4**
BODT	**Bodrum**	**1.45**	**296**	PN	**Pn**	**21 51 29.4**	**-0.1**
BODT	**Bodrum**	**1.45**	**296**	P	**Pn**	**21 51 28.6**	**-0.9**
BODT				S	**Sn**	**21 51 47.1**	**-0.9**
BODT	**Bodrum**	**1.45**	**296**	P	**Pn**	**21 51 28.6**	**-0.9**
BODT	**Bodrum**	**1.45**	**296**	*e*Pn	**Pn**	**21 51 29.4**	**-0.1**
BODT				S	**Sn**	**21 51 47.1**	**-0.9**
KARP	**Karpathos**	**1.70**	**239**	PN	**Pn**	**21 51 33.3**	**+0.4**
KARP	**Karpathos**	**1.70**	**239**	P	**Pn**	**21 51 32.9**	**0.0**
KARP				S	**Sn**	**21 51 53.7**	**-0.4**
KARP	**Karpathos**	**1.70**	**239**	P	**Pn**	**21 51 32.9**	**0.0**
KARP				S	**Sn**	**21 51 53.3**	**-0.8**
KARP	**Karpathos**	**1.70**	**239**	P	**Pn**	**21 51 32.9**	**0.0**
KARP	**Karpathos**	**1.70**	**239**	*e*Pn	**Pn**	**21 51 33.3**	**+0.4**
KARP				S	**Sn**	**21 51 53.6**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**1.73**	**331**	PN	**Pn**	**21 51 33.7**	**+0.3**
AYDB	**Zeytinkoy-Aydi**	**1.73**	**331**	*e*Pn	**Pn**	**21 51 33.7**	**+0.3**
KULA	**Kula-Manisa**	**2.09**	**354**	PN	**Pn**	**21 51 38.9**	**+0.6**
KULA	**Kula-Manisa**	**2.09**	**354**	*e*Pn	**Pn**	**21 51 38.9**	**+0.6**
SMG	**Samos**	**2.11**	**308**	P	**Pn**	**21 51 39.3**	**+0.7**
SMG				S	**Sn**	**21 52 04.2**	**-0.1**
SMG				AML	AML	21 52 06.7	
	comp=N,88μm,0.2s						
SMG				AML	AML	21 52 07.9	
	comp=E,75μm,0.3s						
SMG	**Samos**	**2.11**	**308**	P	**Pn**	**21 51 39.1**	**+0.5**
SMG				S	**Sn**	**21 52 04.1**	**-0.1**
ZKR	**Zakros**	**2.58**	**240**	P	**Pn**	**21 51 46.2**	**+1.1**
ZKR	**Zakros**	**2.58**	**240**	P	**Pn**	**21 51 45.7**	**+0.7**
LAST	**Lasithi**	**3.09**	**247**	P	**Pn**	**21 51 52.4**	**+0.3**
LAST				S	**Sn**	**21 52 26.2**	**-2.4**
LAST	**Lasithi**	**3.09**	**247**	P	**Pn**	**21 51 52.4**	**+0.3**
LAST				S	**Sn**	**21 52 26.9**	**-1.7**

*SFS **10** 21:51:29.0, 37°.27N×12°.70W, h0km, ML3.7*
*MDD **10** 21:51:30.8±1.7, 37°.29N×12°.70W, h0km, mb3.9/5, Error ellipse: s-maj=15.7km s-min=14.0km az=46.0, PRXIMO*
*IGIL **10** 21:51:30.5, 37°.27N×12°.76W, h0km, ML2.1*
*INMG **10** 21:51:31.9±1.2, 37°.11N×13°.12W, h10km, ML2.3, Error ellipse: s-maj=6.0km s-min=4.4km az=88.0*
*CSEM **10** 21:51:33.2±0.3, 37°.38N×12°.49W, h10km, mb3.9, Error ellipse: s-maj=5.5km s-min=4.7km az=48.0*

ISC 10 21:51:30.6±3.3, 37°.33N±0°.09×12°.6W±0°.2, h10km, n86, σ1°16/166, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.05**	**93**	*e*Pn	**Pn**	**21 52 18.5**	**-0.4**
PFVI				*e*Sn	**Sn**	**21 52 55.1**	**-0.4**
PFVI	**Vila Bisbo**	**3.05**	**93**	*e*Pn	**Pn**	**21 52 18.5**	**-0.4**
PFVI				*e*Sn	**Sn**	**21 52 55.1**	**-0.4**
PMAFR	**Mafra**	**3.11**	**57**	*e*Pn	**Pn**	**21 52 20.7**	**+1.0**
PMAFR				*e*Sn	**Sn**	**21 52 58.6**	**+1.7**
PMAFR				A	A	21 53 06.4	
	12nm,0.5s						
PMAFR	**Mafra**	**3.11**	**57**	P	**Pn**	**21 52 20.7**	**+1.0**
	2.4nm,0.1s,SNR=5.6						
PMAFR				S	**Sn**	**21 52 58.0**	**+1.1**
	8.9nm,0.2s,SNR=7.3						
PMAFR	**Mafra**	**3.11**	**57**	P	**Pn**	**21 52 20.7**	**+1.0**
	2.4nm,0.1s,SNR=5.6						
PMAFR				S	**Sn**	**21 52 58.0**	**+1.1**
	8.9nm,0.2s,SNR=7.3						
PMAFR				*e*Sn	**Sn**	**21 52 58.6**	**+1.7**
PTEO	**Sao Teotonio**	**3.13**	**85**	*e*Pn	**Pn**	**21 52 20.2**	**+0.2**
PTEO				*e*Sn	**Sn**	**21 52 56.5**	**-0.8**
PTEO				A	A	21 53 02.7	
	6.8nm,0.7s						
PTEO	**Sao Teotonio**	**3.13**	**85**	P	**Pn**	**21 52 20.2**	**+0.2**
PTEO				S	**Sn**	**21 52 56.5**	**-0.8**
	3.4nm,0.7s						
PTEO	**Sao Teotonio**	**3.13**	**85**	P	**Pn**	**21 52 20.2**	**+0.2**
PTEO				S	**Sn**	**21 52 56.5**	**-0.8**
	3.4nm,0.7s						
MORF	**Marmelete**	**3.18**	**89**	*e*Pn	**Pn**	**21 52 22.3**	**+1.5**
MORF	**Marmelete**	**3.18**	**89**	P	**Pn**	**21 52 22.3**	**+1.5**
MORF	**Marmelete**	**3.18**	**89**	P	**Pn**	**21 52 22.3**	**+1.5**
PNCL	**Nicolau / Gran**	**3.35**	**75**	*e*Pn	**Pn**	**21 52 23.9**	**+0.8**
PNCL				*e*Sn	**Sn**	**21 53 02.7**	**-0.3**
PNCL				A	A	21 53 09.7	
	3.0nm,0.1s						
PNCL	**Nicolau / Gran**	**3.35**	**75**	*e*Pn	**Pn**	**21 52 23.9**	**+0.8**
PNCL				*e*Sn	**Sn**	**21 53 02.7**	**-0.3**
MESJ	**Messejana**	**3.55**	**80**	*e*S	**Sn**	**21 53 07.3**	**-0.4**
MESJ				AML	AML	21 53 13.1	
	comp=N,4.1nm,0.3s						
MESJ	**Messejana**	**3.55**	**80**	*e*Pn	**Pn**	**21 52 27.3**	**+1.5**
MESJ				*e*Sn	**Sn**	**21 53 06.7**	**-1.1**
MESJ	**Messejana**	**3.55**	**80**	P	**Pn**	**21 52 27.3**	**+1.5**
MESJ				S	**Sn**	**21 53 07.3**	**-0.4**
	comp=N,4.1nm,0.3s						
MESJ	**Messejana**	**3.55**	**80**	P	**Pn**	**21 52 27.3**	**+1.5**
MESJ				*e*Sn	**Sn**	**21 53 06.7**	**-1.1**
MESJ				S	Sb	21 53 07.3	-9.4
	comp=N,4.1nm,0.3s						
PCVE	**Castro Verde**	**3.67**	**84**	*e*Pn	**Pn**	**21 52 28.5**	**+1.0**
PCVE				*e*Sn	**Sn**	**21 53 10.3**	**-0.6**
PCVE				A	A	21 53 21.3	
	comp=N,2.5nm,1.0s						
PCVE	**Castro Verde**	**3.67**	**84**	P	**Pn**	**21 52 28.5**	**+1.0**
PCVE				S	**Sn**	**21 53 10.3**	**-0.6**
	comp=N,2.5nm,1.0s						
PCVE	**Castro Verde**	**3.67**	**84**	P	**Pn**	**21 52 28.5**	**+1.0**
PCVE				S	**Sn**	**21 53 10.3**	**-0.6**
	comp=N,2.5nm,1.0s						
ALMR	**Almeirim**	**3.68**	**59**	*e*P	**Pn**	**21 52 28.2**	**+0.6**
ALMR				*e*S	**Sn**	**21 53 10.6**	**-0.5**
ALMR				AML	AML	21 53 13.8	
	comp=N,6.6nm,0.6s						
ALMR	**Almeirim**	**3.68**	**59**	*e*Pn	**Pn**	**21 52 28.7**	**+1.1**
ALMR				*e*Sn	**Sn**	**21 53 12.3**	**+1.2**
ALMR				A	A	21 53 15.3	
	comp=N,7.7nm,0.7s						
ALMR	**Almeirim**	**3.68**	**59**	P	**Pn**	**21 52 28.2**	**+0.6**
ALMR				S	**Sn**	**21 53 10.6**	**-0.5**
	comp=N,3.3nm,0.6s						
ALMR	**Almeirim**	**3.68**	**59**	P	**Pn**	**21 52 28.2**	**+0.6**
ALMR	**Almeirim**	**3.68**	**59**	*e*Pn	**Pn**	**21 52 28.7**	**+1.1**
ALMR				S	**Sn**	**21 53 10.6**	**-0.5**
	comp=N,3.3nm,0.6s						
ALMR				*e*Sn	**Sn**	**21 53 12.3**	**+1.2**
PBDV	**Barranco-do-Ve**	**3.76**	**90**	*e*Pn	**Pn**	**21 52 29.7**	**+1.0**
PBDV				*e*Sn	**Sn**	**21 53 13.8**	**+0.8**
PBDV				A	A	21 53 22.0	
	comp=N,3.0nm,0.7s						
PBDV	**Barranco-do-Ve**	**3.76**	**90**	P	**Pn**	**21 52 29.7**	**+1.0**
PBDV				S	**Sn**	**21 53 13.8**	**+0.8**
	comp=N,3.0nm,0.7s						
PBDV	**Barranco-do-Ve**	**3.76**	**90**	P	**Pn**	**21 52 29.7**	**+1.0**
PBDV				S	**Sn**	**21 53 13.8**	**+0.8**
	comp=N,3.0nm,0.7s						
EVO	**Evora**	**3.85**	**70**	*e*Pn	**Pn**	**21 52 31.4**	**+1.4**
EVO				*e*Sn	**Sn**	**21 53 15.1**	**-0.2**
EVO	**Evora**	**3.85**	**70**	P	**Pn**	**21 52 31.2**	**+1.3**
EVO				S	**Sn**	**21 53 14.3**	**-1.0**
EVO	**Evora**	**3.85**	**70**	P	**Pn**	**21 52 31.2**	**+1.3**
EVO				S	**Sn**	**21 53 14.3**	**-1.0**
EVO				*e*Sn	**Sn**	**21 53 15.1**	**-0.2**
PBEJ	**Beja**	**3.85**	**78**	*e*Pn	**Pn**	**21 52 31.0**	**+1.0**
PBEJ				*e*Sn	**Sn**	**21 53 16.0**	**+0.7**
PBEJ	**Beja**	**3.85**	**78**	P	**Pn**	**21 52 31.0**	**+1.0**
PBEJ				S	**Sn**	**21 53 16.0**	**+0.7**
PBEJ	**Beja**	**3.85**	**78**	P	**Pn**	**21 52 31.0**	**+1.0**
PBEJ				S	**Sn**	**21 53 16.0**	**+0.7**
PMTG	**Montargil**	**3.89**	**62**	*e*Pn	**Pn**	**21 52 31.2**	**+0.8**
PMTG				*e*Sn	**Sn**	**21 53 16.2**	**0.0**
PMTG				A	A	21 53 21.4	
	comp=N,2.2nm,0.4s						
PMTG	**Montargil**	**3.89**	**62**	*e*Pn	**Pn**	**21 52 31.2**	**+0.8**
PMTG				*e*Sn	**Sn**	**21 53 16.2**	**0.0**
PVAQ	**Vaqueiros**	**3.92**	**87**	*e*Pn	**Pn**	**21 52 31.7**	**+0.8**
PVAQ				*e*Sn	**Sn**	**21 53 16.8**	**-0.2**
PVAQ				A	A	21 53 21.8	
	comp=N,3.2nm,0.4s						
PVAQ	**Vaqueiros**	**3.92**	**87**	P	**Pn**	**21 52 31.7**	**+0.8**
PVAQ				S	**Sn**	**21 53 16.8**	**-0.2**
	comp=N,3.2nm,0.4s						
PVAQ	**Vaqueiros**	**3.92**	**87**	P	**Pn**	**21 52 31.7**	**+0.8**
PVAQ				S	**Sn**	**21 53 16.8**	**-0.2**
	comp=N,3.2nm,0.4s						
PTOM	**Tomar**	**4.03**	**54**	*e*Pn	**Pn**	**21 52 34.0**	**+1.6**
PTOM				*e*Sn	**Sn**	**21 53 20.8**	**+1.1**
PTOM				A	A	21 53 25.9	
	comp=N,5.8nm,0.2s						
PTOM	**Tomar**	**4.03**	**54**	P	**Pn**	**21 52 34.0**	**+1.6**
PTOM				S	**Sn**	**21 53 20.8**	**+1.1**
	comp=N,2.9nm,0.2s						
PTOM	**Tomar**	**4.03**	**54**	P	**Pn**	**21 52 34.0**	**+1.6**
PTOM				S	**Sn**	**21 53 20.8**	**+1.1**
	comp=N,2.9nm,0.2s						
EGRO	**El Granado**	**4.11**	**86**	P	**Pn**	**21 52 34.3**	**+0.8**
	comp=N,1.2nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**21 53 21.3**	**-0.3**
	comp=N,4.5nm,0.3s,SNR=7.9						
EGRO	**El Granado**	**4.11**	**86**	P	**Pn**	**21 52 34.3**	**+0.8**
	comp=N,1.2nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**21 53 21.3**	**-0.3**
	comp=N,4.5nm,0.3s,SNR=7.9						
PCAS	**Casmilo, Conde**	**4.23**	**49**	*e*Pn	**Pn**	**21 52 36.5**	**+1.3**
PCAS				*e*Sn	**Sn**	**21 53 25.1**	**+0.5**
PCAS				A	A	21 53 28.7	
	comp=N,2.2nm,0.6s						
PCAS	**Casmilo, Conde**	**4.23**	**49**	*e*Pn	**Pn**	**21 52 36.5**	**+1.3**
PCAS				*e*Sn	**Sn**	**21 53 25.1**	**+0.5**
PESTR	**Estremoz**	**4.27**	**67**	*e*Pn	**Pn**	**21 52 36.8**	**+1.1**
PESTR				*e*Sn	**Sn**	**21 53 25.9**	**+0.3**
PESTR				A	A	21 53 32.1	
	comp=N,1.6nm,0.7s						
PESTR	**Estremoz**	**4.27**	**67**	*e*Pn	**Pn**	**21 52 36.8**	**+1.1**
PESTR				*e*Sn	**Sn**	**21 53 25.9**	**+0.3**
PBAR	**Barrancos**	**4.52**	**78**	*e*Pn	**Pn**	**21 52 40.0**	**+0.9**
PBAR				*e*Sn	**Sn**	**21 53 31.1**	**-0.6**
PBAR				A	A	21 53 37.5	
	comp=N,3.8nm,0.5s						
PBAR	**Barrancos**	**4.52**	**78**	P	**Pn**	**21 52 40.0**	**+0.9**
PBAR				S	**Sn**	**21 53 31.1**	**-0.6**
	comp=N,3.8nm,0.5s						
PBAR	**Barrancos**	**4.52**	**78**	P	**Pn**	**21 52 40.0**	**+0.9**
PBAR				S	**Sn**	**21 53 31.1**	**-0.6**
	comp=N,3.8nm,0.5s						
PMRV	**Marv??o**	**4.63**	**61**	*e*Pn	**Pn**	**21 52 41.7**	**+1.1**
PMRV				*e*Sn	**Sn**	**21 53 34.5**	**+0.1**
PMRV				A	A	21 53 38.1	
	comp=N,1.7nm,0.3s						
PMRV	**Marv??o**	**4.63**	**61**	P	**Pn**	**21 52 41.7**	**+1.1**
PMRV				S	**Sn**	**21 53 34.5**	**+0.1**
	comp=N,1.7nm,0.3s						
PMRV	**Marv??o**	**4.63**	**61**	P	**Pn**	**21 52 41.7**	**+1.1**
PMRV				S	**Sn**	**21 53 34.5**	**+0.1**
	comp=N,1.7nm,0.3s						
EBAD	**Badajoz**	**4.67**	**71**	P	**Pn**	**21 52 41.8**	**+0.7**
	comp=N,1.1nm,0.1s,SNR=16						
EBAD				S	**Sn**	**21 53 33.7**	**-1.6**
	comp=N,3.2nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**4.67**	**71**	P	**Pn**	**21 52 41.8**	**+0.7**
	comp=N,1.1nm,0.1s,SNR=16						
EBAD				S	**Sn**	**21 53 33.7**	**-1.6**
	comp=N,3.2nm,0.2s,SNR=7.9						
PCBR	**Castelo Branco**	**4.76**	**57**	*e*Pn	**Pn**	**21 52 44.0**	**+1.6**
PCBR				*e*Sn	**Sn**	**21 53 37.0**	**-0.6**
PCBR				A	A	21 53 52.4	
	comp=N,1.9nm,0.8s						
PCBR	**Castelo Branco**	**4.76**	**57**	P	**Pn**	**21 52 44.0**	**+1.6**
PCBR				S	**Sn**	**21 53 37.0**	**-0.6**
	comp=N,0.9nm,0.8s						
PCBR	**Castelo Branco**	**4.76**	**57**	P	**Pn**	**21 52 44.0**	**+1.6**
PCBR				S	**Sn**	**21 53 37.0**	**-0.6**
	comp=N,0.9nm,0.8s						
EMIN	**Mina Concepcio**	**4.76**	**83**	P	**Pn**	**21 52 43.0**	**+0.5**
	comp=N,1.0nm,0.2s,SNR=12						
EMIN				S	**Sn**	**21 53 35.9**	**-1.9**
	comp=N,1.1nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.76**	**83**	P	**Pn**	**21 52 43.0**	**+0.5**
	comp=N,1.0nm,0.2s,SNR=12						
EMIN				S	**Sn**	**21 53 35.9**	**-1.9**
	comp=N,1.1nm,0.2s,SNR=7.9						
POLO	**Lamas de Olo**	**5.52**	**41**	*e*Pn	**Pn**	**21 52 54.6**	**+1.7**
POLO				*e*Sn	**Sn**	**21 53 54.7**	**-1.7**
POLO				A	A	21 54 13.1	
	comp=N,0.9nm,0.7s						
POLO	**Lamas de Olo**	**5.52**	**41**	*e*Pn	**Pn**	**21 52 54.6**	**+1.7**
POLO				*e*Sn	**Sn**	**21 53 54.7**	**-1.7**
PCAB	**Cabril**	**5.64**	**38**	*e*Pn	**Pn**	**21 52 55.3**	**+0.7**
PCAB				*e*Sn	**Sn**	**21 53 58.7**	**-0.8**
PCAB	**Cabril**	**5.64**	**38**	P	**Pn**	**21 52 55.3**	**+0.7**
PCAB				Sn	**Sn**	**21 53 58.7**	**-0.8**
PCAB	**Cabril**	**5.64**	**38**	P	**Pn**	**21 52 55.3**	**+0.7**
PCAB				Sn	**Sn**	**21 53 58.7**	**-0.8**
PGAV	**Gavieira, Arco**	**5.73**	**35**	*e*Pn	**Pn**	**21 52 56.7**	**+0.9**
PGAV				*e*Sn	**Sn**	**21 53 59.2**	**-2.5**
PGAV				A	A	21 54 06.0	
	comp=N,2.4nm,1.0s						
PGAV	**Gavieira, Arco**	**5.73**	**35**	*e*Pn	**Pn**	**21 52 56.7**	**+0.9**
PGAV				*e*Sn	**Sn**	**21 53 59.2**	**-2.5**
ELOB	**Lobios**	**5.75**	**37**	P	**Pn**	**21 52 56.9**	**+0.8**
	comp=N,0.3nm,0.2s,SNR=7.9						
ELOB				S	**Sn**	**21 54 00.3**	**-1.8**
	comp=N,0.4nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.75**	**37**	P	**Pn**	**21 52 56.9**	**+0.8**
	comp=N,0.3nm,0.2s,SNR=7.9						
ELOB				S	**Sn**	**21 54 00.3**	**-1.8**
	comp=N,0.4nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**5.78**	**80**	P	**Pn**	**21 52 56.8**	**+0.4**
	comp=N,0.8nm,0.1s,SNR=16						
ECAB				S	**Sn**	**21 54 00.7**	**-2.1**
	comp=N,0.2nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**5.78**	**80**	P	**Pn**	**21 52 56.8**	**+0.4**
	comp=N,0.8nm,0.1s,SNR=16						
ECAB				S	**Sn**	**21 54 00.7**	**-2.1**
	comp=N,0.2nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**5.80**	**47**	*e*Pn	**Pn**	**21 52 57.8**	**+1.0**
MVO				*e*Sn	**Sn**	**21 54 01.1**	**-2.3**
MVO				A	A	21 54 02.9	
	comp=N,1.8nm,0.4s						
MVO	**Moncorvo**	**5.80**	**47**	P	**Pn**	**21 52 56.7**	**-0.1**
	comp=N,1.3nm,0.3s,SNR=7.9						
MVO				S	**Sn**	**21 54 01.0**	**-2.4**
	comp=N,3.0nm,0.6s,SNR=7.9						
MVO	**Moncorvo**	**5.80**	**47**	P	**Pn**	**21 52 56.7**	**-0.1**
	comp=N,1.3nm,0.3s,SNR=7.9						
MVO	**Moncorvo**	**5.80**	**47**	*e*Pn	**Pn**	**21 52 57.8**	**+1.0**
MVO				*e*Sn	**Sn**	**21 54 01.1**	**-2.3**
EPLA	**Plasencia**	**5.81**	**60**	P	**Pn**	**21 52 57.9**	**+1.0**
	comp=N,0.7nm,0.2s,SNR=7.9						
EPLA				S	**Sn**	**21 54 01.9**	**-1.8**
	comp=N,1.0nm,0.3s,SNR=7.9						
EPLA	**Plasencia**	**5.81**	**60**	P	**Pn**	**21 52 57.9**	**+1.0**
	comp=N,0.7nm,0.2s,SNR=7.9						
EPLA				S	**Sn**	**21 54 01.9**	**-1.8**
	comp=N,1.0nm,0.3s,SNR=7.9						
EADA	**Adamuz**	**6.45**	**80**	P	**Pn**	**21 53 06.0**	**+0

TUMD	**Tumrok D**	**1.90**	**251**	*e*P	Pb	22 15 40.7	+0.1
TUMD				*e*S	Sb	22 16 04.0	0.0
KZV	**Kizimen**	**1.99**	**249**	*e*P	Pb	22 15 42.0	-0.3
KZV				*e*S	Sb	22 16 06.4	-0.3
TUMR	**Tumrok**	**2.01**	**254**	*e*P	Pb	22 15 42.8	+0.2
TUMR				*e*S	Sb	22 16 07.5	+0.3
KOZ	**Kozyrevsk**	**2.06**	**277**	*e*P	Pb	22 15 43.4	0.0
ESO	**Esso**	**2.72**	**273**	*e*P	Pn	22 15 51.7	+2.5
OSSR	**Ossora**	**3.40**	**356**	*e*P	Pn	22 15 58.5	+0.1
SPN	**Mys Shipunski**	**3.45**	**218**	*e*P	Pn	22 16 02.2	+3.0
SPN				*e*S	Sn	22 16 41.0	+1.6
NLC	**Nalytchevo**	**3.64**	**224**	*e*S	Sn	22 16 46.9	+2.8
SDLR	**Sedlovina**	**3.75**	**228**	*e*P	Pn	22 16 07.0	+3.6
KRER	**Koryakskii**	**3.79**	**229**	*e*P	Pb	22 16 08.8	-4.1
AVH	**Avacha**	**3.82**	**229**	*e*P	Pn	22 16 08.6	+4.2
UGLR	**Uglovaya**	**3.83**	**228**	*e*P	Pn	22 16 08.2	+3.7
GNL	**Ganaly**	**3.90**	**238**	*e*P	Pn	22 16 09.4	+3.9
DALK	**Dalny**	**3.98**	**226**	*e*P	Pn	22 16 10.2	+3.7
DALK				*e*S	Sn	22 16 55.1	+2.5
PET	**Petropavlovsk**	**4.03**	**227**	*e*S	Sn	22 16 58.2	+4.5
KRMR	**Karymshinskiy**	**4.39**	**228**	*e*P	Pb	22 16 17.6	-5.4
KRMR				*e*S	Sn	22 17 07.7	+5.1
RUS	**Russkaya**	**4.54**	**223**	*e*P	Pn	22 16 17.8	+3.7
RUS				*e*S	Sn	22 17 08.6	+2.5
ASAK	**Asacha**	**4.81**	**226**	*e*P	Pn	22 16 23.1	+5.1
KDTR	**Khodutka, Kamc**	**5.20**	**221**	*e*P	Pn	22 16 26.5	+3.4

*SFS **10** 22:24:15.0, 37.°28N×12.°70W, h0km, ML3.9*
*MDD **10** 22:24:16.6±1.8, 37.°30N×12.°69W, h0km, mb4.1/7, Error ellipse: s-maj=15.8km s-min=12.2km az=57.0, PRXIMO*
*IGIL **10** 22:24:16.1, 37.°28N×12.°78W, h0km, ML2.0*
*INMG **10** 22:24:18.3±1.2, 37.°13N×13.°08W, h10km, ML2.4, Error ellipse: s-maj=5.8km s-min=4.7km az=83.0*
*CSEM **10** 22:24:19.1±0.3, 37.°38N×12.°48W, h10km, mb4.1, Error ellipse: s-maj=5.6km s-min=4.9km az=55.0*

ISC 10 22:24:15.1±3.3, 37.°32N±0.°09×12.°7W±0.°2, h10km, n97, σ1$58/174, 1D, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.12**	**92**	*e*Pn	**Pn**	**22 25 05.0**	**+0.7**
PFVI				*e*Sn	**Sn**	**22 25 40.3**	**-1.3**
PFVI	**Vila Bisbo**	**3.12**	**92**	*e*Pn	**Pn**	**22 25 05.0**	**+0.7**
PFVI				*e*Sn	**Sn**	**22 25 40.3**	**-1.3**
PMST	**Lisbon--Monsan**	**3.13**	**62**	*e*Sn	**Sn**	**22 25 42.5**	**+0.5**
PMST				A	A	22 25 58.5	
	17nm,0.5s						
PMST	**Lisbon--Monsan**	**3.13**	**62**	*e*Sn	**Sn**	**22 25 42.5**	**+0.5**
PMAFR	**Mafra**	**3.17**	**58**	*e*Pn	**Pn**	**22 25 06.6**	**+1.6**
PMAFR				*e*Sn	**Sn**	**22 25 43.9**	**+1.0**
PMAFR				A	A	22 25 46.2	
	12nm,0.2s						
PMAFR	**Mafra**	**3.17**	**58**	P	**Pn**	**22 25 06.6**	**+1.6**
	5.0nm,0.1s,SNR=16						
PMAFR				S	**Sn**	**22 25 43.5**	**+0.6**
	9.4nm,0.3s,SNR=9.6						
PMAFR				*e*Sn	**Sn**	**22 25 43.9**	**+1.0**
PMAFR	**Mafra**	**3.17**	**58**	P	**Pn**	**22 25 06.6**	**+1.6**
	5.0nm,0.1s,SNR=16						
PMAFR				S	**Sn**	**22 25 43.5**	**+0.6**
	9.4nm,0.3s,SNR=9.6						
PMAFR				*e*Sn	**Sn**	**22 25 43.9**	**+1.0**
PTEO	**Sao Teotonio**	**3.19**	**85**	*e*Pn	**Pn**	**22 25 06.0**	**+0.7**
PTEO				*e*Sn	**Sn**	**22 25 42.6**	**-0.9**
PTEO				A	A	22 25 53.8	
	7.4nm,0.7s						
PTEO	**Sao Teotonio**	**3.19**	**85**	P	**Pn**	**22 25 06.0**	**+0.7**
PTEO				S	**Sn**	**22 25 42.6**	**-0.9**
	3.7nm,0.7s						
PTEO	**Sao Teotonio**	**3.19**	**85**	P	**Pn**	**22 25 06.0**	**+0.7**
PTEO				S	**Sn**	**22 25 42.6**	**-0.9**
	3.7nm,0.7s						
MORF	**Marmelete**	**3.25**	**89**	*e*P	**Pn**	**22 25 07.1**	**+0.9**
MORF	**Marmelete**	**3.25**	**89**	*e*Pn	**Pn**	**22 25 06.5**	**+0.3**
MORF	**Marmelete**	**3.25**	**89**	P	**Pn**	**22 25 07.1**	**+0.9**
MORF	**Marmelete**	**3.25**	**89**	*e*Pn	**Pn**	**22 25 06.5**	**+0.3**
MORF	**Marmelete**	**3.25**	**89**	P	**Pn**	**22 25 07.1**	**+0.9**
PNCL	**Nicolau / Gran**	**3.42**	**75**	*e*Pn	**Pn**	**22 25 09.3**	**+0.8**
PNCL				*e*Sn	**Sn**	**22 25 48.6**	**-0.5**
PNCL				A	A	22 25 55.2	
	4.3nm,0.1s						
PNCL	**Nicolau / Gran**	**3.42**	**75**	*e*Pn	**Pn**	**22 25 09.3**	**+0.8**
PNCL				*e*Sn	**Sn**	**22 25 48.6**	**-0.5**
MESJ	**Messejana**	**3.62**	**80**	*e*P	**Pn**	**22 25 12.0**	**+0.8**
MESJ				*e*S	**Sn**	**22 25 53.1**	**-0.9**
MESJ				AML	AML	22 25 56.4	
	comp=N,4.3nm,0.6s						
MESJ	**Messejana**	**3.62**	**80**	*e*Pn	**Pn**	**22 25 12.0**	**+0.8**
MESJ				*e*Sn	**Sn**	**22 25 53.0**	**-0.9**
MESJ				A	A	22 25 59.9	
	comp=N,2.5nm,0.2s						
MESJ	**Messejana**	**3.62**	**80**	P	**Pn**	**22 25 12.0**	**+0.8**
MESJ				S	**Sn**	**22 25 53.1**	**-0.9**
	comp=N,4.3nm,0.6s						
MESJ	**Messejana**	**3.62**	**80**	P	**Pn**	**22 25 12.0**	**+0.8**
MESJ				S	**Sn**	**22 25 53.1**	**-0.9**
	comp=N,4.3nm,0.6s						
PCVE	**Castro Verde**	**3.74**	**84⇓**	*e*Pn	**Pn**	**22 25 14.7**	**+1.8**
PCVE				*e*Sn	**Sn**	**22 25 55.9**	**-1.1**
PCVE				A	A	22 26 04.3	
	comp=N,2.9nm,0.6s						
PCVE	**Castro Verde**	**3.74**	**84**	P	**Pn**	**22 25 14.7**	**+1.8**
PCVE				S	**Sn**	**22 25 55.9**	**-1.1**
	comp=N,2.9nm,0.6s						
PCVE	**Castro Verde**	**3.74**	**84**	P	**Pn**	**22 25 14.7**	**+1.8**
PCVE				S	**Sn**	**22 25 55.9**	**-1.1**
	comp=N,2.9nm,0.6s						
ALMR	**Almeirim**	**3.75**	**59**	*e*P	**Pn**	**22 25 14.1**	**+1.2**
ALMR	**Almeirim**	**3.75**	**59**	*e*Pn	**Pn**	**22 25 15.0**	**+2.1**
ALMR				*e*Sn	**Sn**	**22 25 57.4**	**+0.3**
ALMR				A	A	22 26 03.8	
	comp=N,12nm,0.6s						
ALMR	**Almeirim**	**3.75**	**59**	P	**Pn**	**22 25 14.1**	**+1.2**
ALMR				S	**Sn**	**22 25 57.4**	**+0.3**
	comp=N,6.1nm,0.6s						
ALMR	**Almeirim**	**3.75**	**59**	P	**Pn**	**22 25 14.1**	**+1.2**
ALMR				S	**Sn**	**22 25 57.4**	**+0.3**
	comp=N,6.1nm,0.6s						
PBDV	**Barranco-do-Ve**	**3.83**	**90**	*e*Pn	**Pn**	**22 25 15.7**	**+1.6**
PBDV				*e*Sn	**Sn**	**22 25 59.4**	**+0.3**
PBDV				A	A	22 26 04.3	
	comp=N,3.5nm,0.3s						
PBDV	**Barranco-do-Ve**	**3.83**	**90**	P	**Pn**	**22 25 15.7**	**+1.6**
PBDV				S	**Sn**	**22 25 59.4**	**+0.3**
	comp=N,3.5nm,0.3s						
PBDV	**Barranco-do-Ve**	**3.83**	**90**	P	**Pn**	**22 25 15.7**	**+1.6**
PBDV				S	**Sn**	**22 25 59.4**	**+0.3**
	comp=N,3.5nm,0.3s						
EVO	**Evora**	**3.92**	**71**	*e*Pn	**Pn**	**22 25 17.2**	**+1.9**
EVO				*e*Sn	**Sn**	**22 26 01.6**	**+0.2**
EVO				A	A	22 26 05.3	
	comp=N,5.0nm,0.4s						
EVO	**Evora**	**3.92**	**71**	P	**Pn**	**22 25 16.7**	**+1.4**
EVO				S	**Sn**	**22 25 59.9**	**-1.4**
EVO	**Evora**	**3.92**	**71**	P	**Pn**	**22 25 16.7**	**+1.4**
EVO	**Evora**	**3.92**	**71**	*e*Pn	**Pn**	**22 25 17.2**	**+1.9**
EVO				S	**Sn**	**22 25 59.9**	**-1.4**
EVO				*e*Sn	**Sn**	**22 26 01.6**	**+0.2**
PBEJ	**Beja**	**3.92**	**78**	*e*Pn	**Pn**	**22 25 17.1**	**+1.8**
PBEJ				*e*Sn	**Sn**	**22 26 01.7**	**+0.3**
PBEJ				A	A	22 26 05.6	
	comp=N,6.0nm,0.3s						
PBEJ	**Beja**	**3.92**	**78**	P	**Pn**	**22 25 17.1**	**+1.8**
PBEJ				S	**Sn**	**22 26 01.7**	**+0.3**
	comp=N,3.0nm,0.3s						
PBEJ	**Beja**	**3.92**	**78**	P	**Pn**	**22 25 17.1**	**+1.8**
PBEJ				S	**Sn**	**22 26 01.7**	**+0.3**
	comp=N,3.0nm,0.3s						
PMTG	**Montargil**	**3.95**	**62**	*e*Pn	**Pn**	**22 25 17.2**	**+1.4**
PMTG				*e*Sn	**Sn**	**22 26 01.9**	**-0.3**
PMTG				A	A	22 26 06.9	
	comp=N,2.6nm,0.3s						
PMTG	**Montargil**	**3.95**	**62**	*e*Pn	**Pn**	**22 25 17.2**	**+1.4**
PMTG				*e*Sn	**Sn**	**22 26 01.9**	**-0.3**
PVAQ	**Vaqueiros**	**3.99**	**87**	*e*Pn	**Pn**	**22 25 17.9**	**+1.6**
PVAQ				*e*Sn	**Sn**	**22 26 02.7**	**-0.5**
PVAQ				A	A	22 26 08.8	
	comp=N,3.7nm,0.2s						
PTOM	**Tomar**	**4.09**	**55**	*e*Pn	**Pn**	**22 25 20.2**	**+2.5**
PTOM				*e*Sn	**Sn**	**22 26 06.3**	**+0.7**
PTOM				A	A	22 26 11.5	
	comp=N,6.2nm,0.3s						
PTOM	**Tomar**	**4.09**	**55**	*e*Pn	**Pn**	**22 25 20.2**	**+2.5**
PTOM				*e*Sn	**Sn**	**22 26 06.3**	**+0.7**
EGRO	**El Granado**	**4.18**	**86**	P	**Pn**	**22 25 20.1**	**+1.2**
	comp=N,1.9nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**22 26 06.6**	**-1.2**
	comp=N,1.9nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**4.18**	**86**	P	**Pn**	**22 25 20.1**	**+1.2**
	comp=N,1.9nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**22 26 06.6**	**-1.2**
	comp=N,1.9nm,0.1s,SNR=7.9						
PCAS	**Casmilo, Conde**	**4.29**	**49**	*e*Pn	**Pn**	**22 25 22.4**	**+2.0**
PCAS				*e*Sn	**Sn**	**22 26 10.3**	**-0.2**
PCAS				A	A	22 26 16.1	
	comp=N,2.1nm,0.4s						
PCAS	**Casmilo, Conde**	**4.29**	**49**	*e*Pn	**Pn**	**22 25 22.4**	**+2.0**
PCAS				*e*Sn	**Sn**	**22 26 10.3**	**-0.2**
PESTR	**Estremoz**	**4.33**	**68**	*e*Pn	**Pn**	**22 25 22.8**	**+1.7**
PESTR				*e*Sn	**Sn**	**22 26 10.9**	**-0.8**
PESTR				A	A	22 26 16.5	
	comp=N,2.5nm,0.4s						
PESTR	**Estremoz**	**4.33**	**68**	*e*Pn	**Pn**	**22 25 22.8**	**+1.7**
PESTR				*e*Sn	**Sn**	**22 26 10.9**	**-0.8**
PBAR	**Barrancos**	**4.59**	**78**	*e*Pn	**Pn**	**22 25 26.2**	**+1.7**
PBAR				*e*Sn	**Sn**	**22 26 17.6**	**-0.3**
PBAR				A	A	22 26 24.9	
	comp=N,3.8nm,0.8s						
PBAR	**Barrancos**	**4.59**	**78**	P	**Pn**	**22 25 26.2**	**+1.7**
PBAR				S	**Sn**	**22 26 17.6**	**-0.3**
	comp=N,3.8nm,0.8s						
PBAR	**Barrancos**	**4.59**	**78**	P	**Pn**	**22 25 26.2**	**+1.7**
PBAR				S	**Sn**	**22 26 17.6**	**-0.3**
	comp=N,3.8nm,0.8s						
PMRV	**Marv??o**	**4.69**	**62**	*e*Pn	**Pn**	**22 25 27.6**	**+1.7**
PMRV				*e*Sn	**Sn**	**22 26 19.7**	**-0.7**
PMRV				A	A	22 26 24.9	
	comp=N,2.9nm,0.4s						
PMRV	**Marv??o**	**4.69**	**62**	P	**Pn**	**22 25 27.6**	**+1.7**
PMRV				S	**Sn**	**22 26 19.7**	**-0.7**
	comp=N,2.9nm,0.4s						
PMRV	**Marv??o**	**4.69**	**62**	P	**Pn**	**22 25 27.6**	**+1.7**
PMRV				S	**Sn**	**22 26 19.7**	**-0.7**
	comp=N,2.9nm,0.4s						
EBAD	**Badajoz**	**4.73**	**71**	P	**Pn**	**22 25 27.4**	**+0.9**
	comp=N,1.5nm,0.1s,SNR=17						
EBAD				S	**Sn**	**22 26 19.6**	**-1.8**
	comp=N,1.1nm,0.3s,SNR=4.7						
EBAD	**Badajoz**	**4.73**	**71**	P	**Pn**	**22 25 27.4**	**+0.9**
	comp=N,1.5nm,0.1s,SNR=17						
EBAD				S	**Sn**	**22 26 19.6**	**-1.8**
	comp=N,1.1nm,0.3s,SNR=4.7						
PCBR	**Castelo Branco**	**4.82**	**57**	*e*Pn	**Pn**	**22 25 29.9**	**+2.2**
PCBR				*e*Sn	**Sn**	**22 26 22.6**	**-1.0**
PCBR				A	A	22 26 29.5	
	comp=N,2.6nm,0.6s						
PCBR	**Castelo Branco**	**4.82**	**57**	P	**Pn**	**22 25 29.9**	**+2.2**
PCBR				S	**Sn**	**22 26 22.6**	**-1.0**
	comp=N,1.3nm,0.6s						
PCBR	**Castelo Branco**	**4.82**	**57**	P	**Pn**	**22 25 29.9**	**+2.2**
PCBR				S	**Sn**	**22 26 22.6**	**-1.0**
	comp=N,1.3nm,0.6s						
EMIN	**Mina Concepcio**	**4.83**	**83**	P	**Pn**	**22 25 28.9**	**+1.0**
	comp=N,1.2nm,0.2s,SNR=14						
EMIN				S	**Sn**	**22 26 20.9**	**-3.0**
	comp=N,0.9nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.83**	**83**	P	**Pn**	**22 25 28.9**	**+1.0**
	comp=N,1.2nm,0.2s,SNR=14						
EMIN				S	**Sn**	**22 26 20.9**	**-3.0**
	comp=N,0.9nm,0.1s,SNR=7.9						
PVIS	**Viseu**	**5.06**	**47**	*e*Pn	**Pn**	**22 25 32.9**	**+1.8**
PVIS				*e*Sn	**Sn**	**22 26 28.2**	**-1.5**
PVIS				A	A	22 26 33.1	
	comp=N,2.7nm,0.3s						
PVIS	**Viseu**	**5.06**	**47**	P	**Pn**	**22 25 32.9**	**+1.8**
PVIS				S	**Sn**	**22 26 28.2**	**-1.5**
	comp=N,1.4nm,0.3s						
PVIS	**Viseu**	**5.06**	**47**	P	**Pn**	**22 25 32.9**	**+1.8**
PVIS				S	**Sn**	**22 26 28.2**	**-1.5**
	comp=N,1.4nm,0.3s						
MTE	**Manteigas**	**5.08**	**51**	*e*Sn	**Sn**	**22 26 30.3**	**+0.2**
MTE				A	A	22 26 50.3	
	comp=N,3.6nm,0.8s						
MTE	**Manteigas**	**5.08**	**51**	S	**Sn**	**22 26 30.3**	**+0.2**
	comp=N,1.8nm,0.8s						
MTE	**Manteigas**	**5.08**	**51**	S	**Sn**	**22 26 30.3**	**+0.2**
	comp=N,1.8nm,0.8s						
PVRL	**Vila Real**	**5.54**	**43**	*e*Sn	**Sn**	**22 26 41.8**	**+0.4**
PVRL	**Vila Real**	**5.54**	**43**	*e*Sn	**Sn**	**22 26 41.8**	**+0.4**
POLO	**Lamas de Olo**	**5.57**	**42**	*e*Pn	**Pn**	**22 25 40.3**	**+2.2**
POLO				*e*Sn	**Sn**	**22 26 41.2**	**-0.9**
POLO				A	A	22 26 55.3	
	comp=N,0.8nm,0.8s						
POLO	**Lamas de Olo**	**5.57**	**42**	*e*Pn	**Pn**	**22 25 40.3**	**+2.2**
POLO				*e*Sn	**Sn**	**22 26 41.2**	**-0.9**
PCAB	**Cabril**	**5.69**	**38**	*e*Pn	**Pn**	**22 25 41.6**	**+1.9**
PCAB				*e*Sn	**Sn**	**22 26 40.7**	**-4.4**
PCAB				A	A	22 27 06.8	
	comp=N,3.3nm,0.8s						
PCAB	**Cabril**	**5.69**	**38**	P	**Pn**	**22 25 41.6**	**+1.9**
PCAB	**Cabril**	**5.69**	**38**	P	**Pn**	**22 25 41.6**	**+1.9**
PGAV	**Gavieira, Arco**	**5.77**	**35**	*e*Pn	**Pn**	**22 25 43.0**	**+2.1**
PGAV				*e*Sn	**Sn**	**22 26 45.0**	**-2.2**
PGAV				A	A	22 27 11.2	
	comp=N,2.8nm,0.7s						
PGAV	**Gavieira, Arco**	**5.77**	**35**	*e*Pn	**Pn**	**22 25 43.0**	**+2.1**
PGAV				*e*Sn	**Sn**	**22 26 45.0**	**-2.2**
ELOB	**Lobios**	**5.79**	**37**	P	**Pn**	**22 25 42.5**	**+1.3**
	comp=N,0.3nm,0.1s,SNR=7.9						
ELOB				S	**Sn**	**22 26 45.0**	**-2.7**
	comp=N,0.6nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.79**	**37**	P	**Pn**	**22 25 42.5**	**+1.3**
	comp=N,0.3nm,0.1s,SNR=7.9						
ELOB				S	**Sn**	**22 26 45.0**	**-2.7**
	comp=N,0.6nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**5.84**	**80**	P	**Pn**	**22 25 43.1**	**+1.3**
	comp=N,0.9nm,0.1s,SNR=18						
ECAB				S	**Sn**	**22 26 47.7**	**-1.2**
	comp=N,1.1nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**5.84**	**80**	P	**Pn**	**22 25 43.1**	**+1.3**
	comp=N,0.9nm,0.1s,SNR=18						
ECAB				S	**Sn**	**22 26 47.7**	**-1.2**
	comp=N,1.1nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**5.85**	**47**	*e*Sn	**Sn**	**22 26 46.7**	**-2.4**
MVO				A	A	22 26 55.9	
	comp=N,2.4nm,0.7s						
MVO	**Moncorvo**	**5.85**	**47**	P	**Pn**	**22 25 43.3**	**+1.3**
	comp=N,1.2nm,0.2s,SNR=7.9						
MVO				S	**Sn**	**22 26 46.8**	**-2.4**
	comp=N,2.3nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**5.85**	**47**	P	**Pn**	**22 25 43.3**	**+1.3**
	comp=N,1.2nm,0.2s,SNR=7.9						
MVO				S	**Sn**	**22 26 46.8**	**-2.4**
	comp=N,2.3nm,0.2s,SNR=7.9						
EPLA	**Plasencia**	**5.88**	**60**	P	**Pn**	**22 25 43.5**	**+1.3**
	comp=N,1.4nm,0.2s,SNR=10						
EPLA				S	**Sn**	**22 26 47.6**	**-2.1**
	comp=N,2.5nm,0.2s,SNR=7.9						
EPLA	**Plasencia**	**5.88**	**60**	P	**Pn**	**22 25 43.5**	**+1.3**
	comp=N,1.4nm,0.2s,SNR=10						
EPLA				S	**Sn**	**22 26 47.6**	**-2.1**
	comp=N,2.5nm,0.2s,SNR=7.9						
PBRG	**Braganca**	**6.43**	**44**	*e*Pn	**Pn**	**22 25 51.2**	**+1.3**
PBRG	**Braganca**	**6.43**	**44**	Pn	**Pn**	**22 25 51.2**	**+1.3**
PBRG	**Braganca**	**6.43**	**44**	Pn	**Pn**	**22 25 51.2**	**+1.3**
EADA	**Adamuz**	**6.51**	**80**	P	**Pn**	**22 25 52.1**	**+1.1**
	comp=N,1.1nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**22 27 02.1**	**-3.3**
	comp=N,0.8nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**6.51**	**80**	P	**Pn**	**22 25 52.1**	**+1.1**
	comp=N,1.1nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**22 27 02.1**	**-3.3**
	comp=N,0.8nm,0.1s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.53**	**32**	P	**Pn**	**22 25 52.5**	**+1.3**
	comp=N,0.5nm,0.1s,SNR=7.9						
EAGO				S	**Sn**	**22 27 00.6**	**-5.1**
	comp=N,0.8nm,0.1s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.53**	**32**	P	**Pn**	**22 25 52.5**	**+1.3**
	comp=N,0.5nm,0.1s,SNR=7.9						
EAGO				S	**Sn**	**22 27 00.6**	**-5.1**
	comp=N,0.8nm,0.1s,SNR=7.9						
PAB	**San Pablo**	**6.94**	**69**	P	**Pn**	**22 25 57.9**	**+1.0**
	comp=N,0.6nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**22 27 13.0**	**-3.0**
	comp=N,0.1nm,0.2s,SNR=7.9						
PAB	**San Pablo**	**6.94**	**69**	P	**Pn**	**22 25 57.9**	**+1.0**
	comp=N,0.6nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**22 27 13.0**	**-3.0**
	comp=N,0.1nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	**7.26**	**68**	P	**Pn**	**22 26 02.3**	**+1.0**
	comp=N,1.1nm,0.3s,baz=254,slow=13,SNR=19						
ESDC	**Sonseca Array**	**7.26**	**68**	P	**Pn**	**22 26 02.3**	**+1.0**
	comp=N,1.1nm,0.3s,baz=254,SNR=19						

IDC 10 22:29:18.3±5.2, 6.°33S×148.°12E, h139km±34km, mb3.2/2, mb1 3.1/4, mb1mx2.9/46, mbtmp3.4/4, Error ellipse: s-maj=68.2km s-min=44.8km az=99.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.20**	**197**	P	Pn	22 30 08.4	+0.6
	1.4nm,0.3s,baz=14,slow=8.3,SNR=5.8						
PMG				S	Sn	22 30 46.6	+0.4
	3.0nm,0.3s,baz=15,slow=20,SNR=8.1						
WRA	**Warramunga Arr**	**19.04**	**223**	P	P	22 33 28.4	-1.3
	0.1nm,0.3s,baz=48,slow=11,SNR=6.4						
ASAR	**Alice Springs**	**22.00**	**217**	P	P	22 34 02.1	+0.6
	1.1nm,0.8s,baz=55,slow=9.0,SNR=9.3						
STKA	**Stephens Creek**	**26.14**	**193**	P	P	22 34 39.4	-0.1
	1.3nm,0.7s,baz=8.8,slow=19,SNR=2.4						
TORD	**Torodi Ar. Bea**	**146.25**	**284**	PKPbc	PKPdf	22 48 42.9	+0.7
	0.3nm,0.8s,baz=72,slow=4.2,SNR=2.2						

*IDC **10** 22:31:40.0±1.2, 36.°40N×29.°02E, h0km, mb3.4/4, mb1 3.4/9, mb1mx3.2/61, mbtmp3.3/9, ML3.6/4, Error ellipse: s-maj=23.4km s-min=17.3km az=148.0*
*DDA **10** 22:31:44.6, 36.°42N×28.°94E, h28km, Ml4.0*
*ISK **10** 22:31:44.9, 36.°43N×28.°93E, h22km, ML3.9/13*
*ATH **10** 22:31:45.1, 36.°39N×28.°91E, h38km±1km, ML3.4/16, Error ellipse: s-maj=1.2km s-min=0.4km az=150.0*
*CSEM **10** 22:31:45.9±0.1, 36.°37N×28.°99E, h30km, ML3.9, Error ellipse: s-maj=3.4km s-min=2.6km az=6.0*
*THE **10** 22:31:46.0, 36.°42N×28.°91E, h13km±1km, ML3.4/8, Error ellipse: s-maj=1.9km s-min=0.5km az=158.0*
*NIC **10** 22:31:48.9±0.1, 36.°31N×29.°16E, h25km, mb4.1, ML3.6*
*HLW **10** 22:31:49.7, 35.°87N×29.°02E, h34km±35km, Md3.6, Ml3.4*

ISC 10 22:31:44.7±0.8, 36.°40N±0.°02×28.°98E±0.°02, h27km±7km, n232, σ1$50/305, mb3.3/4, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.25**	**20**	PG	**Pb**	**22 31 50.9**	**-0.3**
FETY				SG	**Sb**	**22 31 55.6**	**-0.1**
FETY	**Fethiye**	**0.25**	**20**	*e*Pg	**Pb**	**22 31 50.9**	**-0.3**
FETY				*e*Sg	**Sb**	**22 31 55.6**	**-0.1**
DALY	**Dalyan (Mu¨la**	**0.49**	**328**	PG	**Pb**	**22 31 54.9**	**+0.1**
DALY				SG	**Sb**	**22 32 01.5**	**-0.3**
DALY	**Dalyan (Mu¨la**	**0.49**	**328**	*i* P	**Pb**	**22 31 54.8**	**-0.1**
DALY	**Dalyan (Mu¨la**	**0.49**	**328**	*e*Pg	**Pb**	**22 31 54.9**	**+0.1**
DALY				*e*Sg	**Sb**	**22 32 01.5**	**-0.3**
AKAS	**Kas**	**0.53**	**108**	PG	**Pb**	**22 31 56.5**	**+0.9**
AKAS	**Kas**	**0.53**	**108**	*i* P	**Pb**	**22 31 56.5**	**+0.9**
AKAS	**Kas**	**0.53**	**108**	P	**Pb**	**22 31 56.5**	**+0.9**
KSL	**Kastellorizon**	**0.55**	**116**	P	**Pn**	**22 31 57.4**	**+0.7**
KSL				S	**Sn**	**22 32 07.6**	**+2.7**
KSL	**Kastellorizon**	**0.55**	**116**	P	**Pn**	**22 31 57.6**	**+0.9**
KSL				S	**Sn**	**22 32 07.1**	**+2.1**
TURN	**Turunc**	**0.56**	**328**	PG	**Pn**	**22 31 58.3**	**+1.3**
TURN	**Turunc**	**0.56**	**328**	*i* P	**Pn**	**22 31 58.2**	**+1.3**
TURN	**Turunc**	**0.56**	**328**	P	**Pn**	**22 31 58.2**	**+1.3**
MRSB	**Marmaris-Mugla**	**0.70**	**297**	PG	**Pb**	**22 31 58.3**	**-0.1**
MRSB	**Marmaris-Mugla**	**0.70**	**297**	*e*Pg	**Pb**	**22 31 58.3**	**-0.1**
ARG	**Arkhangelos**	**0.71**	**256**	PG	**Pb**	**22 31 59.1**	**+0.7**
ARG				SG	**Sb**	**22 32 09.2**	**+1.4**
ARG	**Arkhangelos**	**0.71**	**256**	P	**Pb**	**22 31 58.4**	**0.0**
ARG				S	**Sb**	**22 32 09.1**	**+1.2**
ARG				AML	AML	22 32 10.2	
	comp=E,11713μm,0.3s						
ARG				AML	AML	22 32 12.2	
	comp=N,7543μm,0.4s						
ARG	**Arkhangelos**	**0.71**	**256**	P

SMG				AML	AML	22 32 48.9
	comp=N,3183μm,0.2s					
SMG				AML	AML	22 32 49.4
	comp=E,3389μm,0.3s					
SMG	**Samos**	**2.16 308**	P	**Pn**	**Pn**	**22 32 19.7 +0.9**
SMG			S	**Sn**	**Sn**	**22 32 45.0 +0.3**
SMG	**Samos**	**2.16 308**	P	**Pn**	**Pn**	**22 32 19.8 +0.9**
SMG			S	**Sn**	**Sn**	**22 32 45.8 +1.1**
BLCB	**Balcova**	**2.51 323**	PN	**Pn**	**Pn**	**22 32 25.2 +1.4**
BLCB	**Balcova**	**2.51 323**	*e*Pn	**Pn**	**Pn**	**22 32 25.2 +1.4**
ZKR	**Zakros**	**2.58 241**	P	**Pn**	**Pn**	**22 32 26.9 +2.2**
ZKR			S	**Sn**	**Sn**	**22 32 54.4 -0.9**
ZKR				AML	AML	22 32 58.1
	comp=E,569μm,0.8s					
ZKR				AML	AML	22 32 59.1
	comp=N,357μm,0.5s					
ZKR	**Zakros**	**2.58 241**	P	**Pn**	**Pn**	**22 32 26.4 +1.7**
ZKR	**Zakros**	**2.58 241**	P	**Pn**	**Pn**	**22 32 26.4 +1.7**
ZKR			S	**Sn**	**Sn**	**22 32 55.0 -0.3**
SHAP	**Saphane-Kutahy**	**2.63 4**	PN	**Pn**	**Pn**	**22 32 25.2 -0.3**
SHAP	**Saphane-Kutahy**	**2.63 4**	*e*Pn	**Pn**	**Pn**	**22 32 25.2 -0.3**
AKS	**Akhisar**	**2.65 340**	PN	**Pn**	**Pn**	**22 32 25.3 -0.3**
AKS	**Akhisar**	**2.65 340**	*e*Pn	**Pn**	**Pn**	**22 32 25.3 -0.3**
GEDZ	**Gediz**	**2.67 7**	PN	**Pn**	**Pn**	**22 32 27.2 +1.3**
GEDZ	**Gediz**	**2.67 7**	*e*Pn	**Pn**	**Pn**	**22 32 27.2 +1.3**
SIMA	**Simav-Kutahya**	**2.68 0**	PN	**Pn**	**Pn**	**22 32 26.6 +0.4**
SIMA	**Simav-Kutahya**	**2.68 0**	*e*Pn	**Pn**	**Pn**	**22 32 26.6 +0.4**
SMAA	**Simav-Kutahya**	**2.70 0**	PN	**Pn**	**Pn**	**22 32 27.8 +1.4**
SMAA	**Simav-Kutahya**	**2.70 0**	*e*Pn	**Pn**	**Pn**	**22 32 27.8 +1.4**
URLA	**Izmir**	**2.73 317**	PN	**Pn**	**Pn**	**22 32 28.1 +1.4**
URLA	**Izmir**	**2.73 317**	*e*Pn	**Pn**	**Pn**	**22 32 28.1 +1.4**
SANT	**Santorini**	**2.84 271**	P	**Pn**	**Pn**	**22 32 28.6 +0.4**
SANT	**Santorini**	**2.84 271**	P	**Pn**	**Pn**	**22 32 29.0 +0.7**
APE	**Apeiranthos**	**2.85 285**	P	**Pn**	**Pn**	**22 32 27.9 -0.5**
APE			S	**Sn**	**Sn**	**22 33 03.3 +1.4**
APE				AML	AML	22 33 06.0
	comp=N,166μm,0.6s					
APE				AML	AML	22 33 09.6
	comp=E,142μm,0.2s					
APE	**Apeiranthos**	**2.85 285**	P	**Pn**	**Pn**	**22 32 29.4 +1.0**
APE			S	**Sn**	**Sn**	**22 33 02.8 +0.9**
APE	**Apeiranthos**	**2.85 285**	P	**Pn**	**Pn**	**22 32 29.4 +1.0**
APE			S	**Sn**	**Sn**	**22 33 02.7 +0.9**
NPS	**Neapolis**	**2.96 249**	P	**Pn**	**Pn**	**22 32 29.5 -0.4**
NPS			S	**Sn**	**Sn**	**22 33 04.7 +0.1**
NPS				AML	AML	22 33 05.2
	comp=N,601μm,0.3s					
NPS				AML	AML	22 33 05.3
	comp=E,735μm,0.3s					
NPS	**Neapolis**	**2.96 249**	P	**Pn**	**Pn**	**22 32 30.2 +0.3**
NPS	**Neapolis**	**2.96 249**	P	**Pn**	**Pn**	**22 32 30.3 +0.3**
NPS			S	**Sn**	**Sn**	**22 33 04.7 +0.1**
AKMC	**Akamas**	**3.05 116**	P	**Pn**	**Pn**	**22 32 31.9 +0.7**
	baz=297					
AKMC	**Akamas**	**3.05 116**	P	**Pn**	**Pn**	**22 32 31.9 +0.7**
CHOS	**Chios island**	**3.06 311**	P	**Pn**	**Pn**	**22 32 32.0 +0.7**
CHOS			S	**Sn**	**Sn**	**22 33 08.4 +1.2**
CHOS				AML	AML	22 33 10.8
	comp=E,894μm,0.4s					
CHOS				AML	AML	22 33 11.2
	comp=N,574μm,0.4s					
CHOS	**Chios island**	**3.06 311**	P	**Pn**	**Pn**	**22 32 32.3 +0.9**
CHOS			S	**Sn**	**Sn**	**22 33 08.3 +1.2**
CHOS	**Chios island**	**3.06 311**	P	**Pn**	**Pn**	**22 32 32.4 +1.0**
CHOS			S	**Sn**	**Sn**	**22 33 08.0 +0.9**
LAST	**Lasithi**	**3.10 248**	P	**Pn**	**Pn**	**22 32 31.8 -0.1**
LAST			S	**Sn**	**Sn**	**22 33 09.4 +1.3**
LAST				AML	AML	22 33 17.9
	comp=N,204μm,0.5s					
LAST				AML	AML	22 33 25.6
	comp=E,256μm,0.7s					
LAST	**Lasithi**	**3.10 248**	P	**Pn**	**Pn**	**22 32 32.3 +0.4**
LAST	**Lasithi**	**3.10 248**	P	**Pn**	**Pn**	**22 32 32.4 +0.5**
LAST			S	**Sn**	**Sn**	**22 33 08.8 +0.7**
PPCY	**Paphos**	**3.13 118**	P	**Pn**	**Pn**	**22 32 33.2 +1.0**
	baz=299					
PPCY	**Paphos**	**3.13 118**	P	**Pn**	**Pn**	**22 32 33.2 +1.0**
ALFC	**Alefka**	**3.19 112**	P	**Pn**	**Pn**	**22 32 33.9 +0.8**
	baz=293					
ALFC			S	**Sn**	**Sn**	**22 33 09.4 -1.0**
ALFC	**Alefka**	**3.19 112**	P	**Pn**	**Pn**	**22 32 33.9 +0.8**
ALFC			S	**Sn**	**Sn**	**22 33 09.4 -1.0**
PSRA	**Psara**	**3.46 309**	P	**Pn**	**Pn**	**22 32 39.4 +2.7**
PSRA	**Psara**	**3.46 309**	P	**Pn**	**Pn**	**22 32 38.9 +2.2**
IDI	**Anoyia**	**3.50 253**	Pn	**Pn**	**Pn**	**22 32 37.8 +0.4**
	comp=E,4.9nm,0.3s,baz=71,slow=14,SNR=89					
IDI			Sn	**Sn**	**Sn**	**22 33 15.8 -2.1**
	comp=E,9.9nm,0.3s,baz=123,slow=11,SNR=6.6					
PRK	**Paraskevi**	**3.56 324**	P	**Pn**	**Pn**	**22 32 38.8 +0.6**
PRK	**Paraskevi**	**3.56 324**	P	**Pn**	**Pn**	**22 32 39.5 +1.3**
PRK	**Paraskevi**	**3.56 324**	P	**Pn**	**Pn**	**22 32 39.4 +1.3**
SZAC	**Souni**	**3.58 116**	P	**Pn**	**Pn**	**22 32 39.2 +0.8**
	baz=298					
SZAC			S	**Sn**	**Sn**	**22 33 18.8 -1.1**
SZAC	**Souni**	**3.58 116**	P	**Pn**	**Pn**	**22 32 39.2 +0.8**
SZAC			S	**Sn**	**Sn**	**22 33 18.8 -1.1**
SIVA	**Sivas**	**3.66 249**	P	**Pn**	**Pn**	**22 32 42.1 +2.6**
SIVA			S	**Sn**	**Sn**	**22 33 21.4 -0.4**
SIVA	**Sivas**	**3.66 249**	P	**Pn**	**Pn**	**22 32 41.5 +2.0**
SIVA			S	**Sn**	**Sn**	**22 33 21.6 -0.2**
MHLA	**Plaka, Milos I**	**3.68 277**	P	**Pn**	**Pn**	**22 32 41.5 +1.7**
MHLA	**Plaka, Milos I**	**3.68 277**	P	**Pn**	**Pn**	**22 32 41.4 +1.6**
SERI	**Serifos**	**3.69 283**	P	**Pn**	**Pn**	**22 32 40.5 +0.6**
SERI			S	**Sn**	**Sn**	**22 33 21.2 -1.3**
SERI	**Serifos**	**3.69 283**	P	**Pn**	**Pn**	**22 32 41.0 +1.1**
SERI			S	**Sn**	**Sn**	**22 33 21.8 -0.7**
SIGR	**SIGRI**	**3.74 320**	P	**Pn**	**Pn**	**22 32 42.1 +1.5**
SIGR			S	**Sn**	**Sn**	**22 33 25.2 +1.3**
SIGR	**SIGRI**	**3.74 320**	P	**Pn**	**Pn**	**22 32 42.0 +1.4**
SIGR			S	**Sn**	**Sn**	**22 33 24.5 +0.7**
SIGR	**SIGRI**	**3.74 320**	P	**Pn**	**Pn**	**22 32 42.0 +1.4**
SIGR			S	**Sn**	**Sn**	**22 33 24.7 +0.9**
CSS	**Mathiatis**	**3.82 111**	P	**Pn**	**Pn**	**22 32 42.9 +1.1**
	baz=292					
CSS	**Mathiatis**	**3.82 111**	P	**Pn**	**Pn**	**22 32 42.9 +1.1**
KARY	**Karystos**	**3.98 296**	P	**Pn**	**Pn**	**22 32 46.4 +2.5**
KARY			S	**Sn**	**Sn**	**22 33 30.5 +0.9**
KARY				AML	AML	22 33 32.5
	comp=E,198μm,0.2s					
KARY				AML	AML	22 33 32.7
	comp=N,145μm,0.2s					
KARY	**Karystos**	**3.98 296**	P	**Pn**	**Pn**	**22 32 45.2 +1.3**
KARY			S	**Sn**	**Sn**	**22 33 30.3 +0.7**
KARY	**Karystos**	**3.98 296**	P	**Pn**	**Pn**	**22 32 45.2 +1.3**
KARY			S	**Sn**	**Sn**	**22 33 30.3 +0.7**
VAM	**Vamos**	**4.00 257**	P	**Pn**	**Pn**	**22 32 44.4 +0.2**
VAM	**Vamos**	**4.00 257**	P	**Pn**	**Pn**	**22 32 45.1 +0.9**
IMMV	**Iera Moni Meta**	**4.16 259**	P	**Pn**	**Pn**	**22 32 46.6 +0.2**
IMMV	**Iera Moni Meta**	**4.16 259**	P	**Pn**	**Pn**	**22 32 46.3 -0.1**
IMMV	**Iera Moni Meta**	**4.16 259**	P	**Pn**	**Pn**	**22 32 47.3 +0.9**
GVD	**Gavdhos**	**4.28 250**	P	**Pn**	**Pn**	**22 32 49.1 +1.1**
GVD			S	**Sn**	**Sn**	**22 33 36.7 -0.3**
GVD				AML	AML	22 33 38.3
	comp=E,358μm,0.4s					
GVD				AML	AML	22 33 39.5
	comp=N,367μm,0.3s					
GVD	**Gavdhos**	**4.28 250**	P	**Pn**	**Pn**	**22 32 49.3 +1.3**
GVD	**Gavdhos**	**4.28 250**	P	**Pn**	**Pn**	**22 32 49.3 +1.3**
GVD			S	**Sn**	**Sn**	**22 33 36.7 -0.3**
SKY	**Skiros Island**	**4.30 307**	P	**Pn**	**Pn**	**22 32 51.7 +3.4**
SKY	**Skiros Island**	**4.30 307**	P	**Pn**	**Pn**	**22 32 51.0 +2.7**
DION	**Dionisos Attik**	**4.36 294**	P	**Pn**	**Pn**	**22 32 52.0 +2.8**
DION			S	**Sn**	**Sn**	**22 33 41.1 +2.0**
DION				AML	AML	22 33 43.8
	comp=N,80μm,0.6s					
DION				AML	AML	22 33 44.6
	comp=E,138μm,0.4s					
DION	**Dionisos Attik**	**4.36 294**	P	**Pn**	**Pn**	**22 32 51.5 +2.3**
DION			S	**Sn**	**Sn**	**22 33 40.1 +0.9**
VLY	**Voula,Athens**	**4.39 291**	P	**Pn**	**Pn**	**22 32 52.9 +3.4**
VLY	**Voula,Athens**	**4.39 291**	P	**Pn**	**Pn**	**22 32 52.1 +2.5**
PTL	**Penteli**	**4.40 294**	P	**Pn**	**Pn**	**22 32 53.1 +3.3**
PTL			S	**Sn**	**Sn**	**22 33 41.3 +1.2**
PTL				AML	AML	22 33 43.6
	comp=E,72μm,0.2s					
PTL				AML	AML	22 33 44.1
	comp=N,65μm,0.6s					
PTL	**Penteli**	**4.40 294**	P	**Pn**	**Pn**	**22 32 52.3 +2.6**
PTL			S	**Sn**	**Sn**	**22 33 40.6 +0.5**
ATHU	**Athens Univers**	**4.43 292**	P	**Pn**	**Pn**	**22 32 51.3 +1.1**
ATHU			S	**Sn**	**Sn**	**22 33 39.2 -1.7**
ATHU	**Athens Univers**	**4.43 292**	P	**Pn**	**Pn**	**22 32 51.6 +1.4**
ATHU			S	**Sn**	**Sn**	**22 33 40.0 -0.9**
EREA	**Eretria**	**4.50 298**	P	**Pn**	**Pn**	**22 32 53.7 +2.7**
EREA			S	**Sn**	**Sn**	**22 33 43.0 +0.6**
EREA				AML	AML	22 33 45.0
	comp=E,120μm,0.5s					
EREA				AML	AML	22 33 45.9
	comp=N,124μm,0.3s					
EREA	**Eretria**	**4.50 298**	P	**Pn**	**Pn**	**22 32 52.8 +1.8**
EREA			S	**Sn**	**Sn**	**22 33 42.7 +0.2**
EREA	**Eretria**	**4.50 298**	P	**Pn**	**Pn**	**22 32 52.8 +1.8**
EREA			S	**Sn**	**Sn**	**22 33 42.7 +0.2**
GADA	**Gvkgeada**	**4.50 328**	P	**Pn**	**Pn**	**22 32 51.2 +0.2**
GADA			S	**Sn**	**Sn**	**22 33 43.6 +1.2**
GADA	**Gvkgeada**	**4.50 328**	P	**Pn**	**Pn**	**22 32 51.2 +0.2**
GADA			S	**Sn**	**Sn**	**22 33 43.6 +1.2**
LIA	**Limnos Island**	**4.60 321**	P	**Pn**	**Pn**	**22 32 54.9 +2.5**
LIA			S	**Sn**	**Sn**	**22 33 44.8 -0.2**
LIA	**Limnos Island**	**4.60 321**	P	**Pn**	**Pn**	**22 32 54.4 +2.0**
LIA	**Limnos Island**	**4.60 321**	P	**Pn**	**Pn**	**22 32 54.4 +2.0**
LIA			S	**Sn**	**Sn**	**22 33 45.0 0.0**
ANKY	**Antikythira Is**	**4.62 265**	P	**Pn**	**Pn**	**22 32 53.2 +0.5**
ANKY	**Antikythira Is**	**4.62 265**	P	**Pn**	**Pn**	**22 32 54.0 +1.2**
ANKY	**Antikythira Is**	**4.62 265**	P	**Pn**	**Pn**	**22 32 53.9 +1.2**
DID	**Didima**	**4.73 285**	P	**Pn**	**Pn**	**22 32 58.8 +4.5**
DID	**Didima**	**4.73 285**	P	**Pn**	**Pn**	**22 32 57.4 +3.1**
VILL	**Villia**	**4.85 293**	P	**Pn**	**Pn**	**22 32 58.7 +2.8**
VILL			S	**Sn**	**Sn**	**22 33 51.7 +0.5**
VLI	**Veliai**	**4.87 276**	P	**Pn**	**Pn**	**22 32 58.8 +2.6**
VLI	**Veliai**	**4.87 276**	P	**Pn**	**Pn**	**22 32 58.4 +2.2**
SMTH	**Samothraki Isl**	**4.89 327**	P	**Pn**	**Pn**	**22 32 58.5 +2.1**
SMTH			S	**Sn**	**Sn**	**22 33 52.5 +0.4**
SMTH	**Samothraki Isl**	**4.89 327**	P	**Pn**	**Pn**	**22 32 58.6 +2.2**
SMTH			S	**Sn**	**Sn**	**22 33 52.4 +0.4**
VIL2	**Platees**	**4.90 293**	P	**Pn**	**Pn**	**22 32 59.5 +2.9**
VIL2			S	**Sn**	**Sn**	**22 33 52.5 +0.1**
VIL2				AML	AML	22 33 57.0
	comp=E,55μm,0.4s					
VIL2				AML	AML	22 33 59.5
	comp=N,120μm,0.9s					
BRTR	**Keskin Array B**	**4.96 46**	Pn	**Pn**	**Pn**	**22 32 59.2 +1.7**
	comp=N,0.8nm,0.3s,baz=223,slow=15,SNR=34					
BRTR			Sn	**Sn**	**Sn**	**22 33 55.8 +1.7**
	comp=N,1.0nm,0.3s,baz=227,slow=23,SNR=7.7					
LTK	**Loutraki**	**5.07 290**	P	**Pn**	**Pn**	**22 33 01.5 +2.7**
LTK	**Loutraki**	**5.07 290**	P	**Pn**	**Pn**	**22 33 01.2 +2.3**
SKIA	**Skiathos**	**5.17 304**	P	**Pn**	**Pn**	**22 33 02.3 +2.0**
SKIA	**Skiathos**	**5.17 304**	P	**Pn**	**Pn**	**22 33 02.3 +2.0**
PROD	**Prodromos**	**5.19 293**	P	**Pn**	**Pn**	**22 33 04.1 +3.5**
PROD			S	**Sn**	**Sn**	**22 34 00.2 +0.8**
PROD				AML	AML	22 34 03.1
	comp=N,123μm,0.3s					
PROD				AML	AML	22 34 04.7
	comp=E,159μm,0.4s					
PROD	**Prodromos**	**5.19 293**	P	**Pn**	**Pn**	**22 33 03.3 +2.8**
PROD			S	**Sn**	**Sn**	**22 33 59.7 +0.2**
LKR	**Lokris**	**5.26 297**	P	**Pn**	**Pn**	**22 33 04.7 +3.2**
LKR	**Lokris**	**5.26 297**	P	**Pn**	**Pn**	**22 33 04.1 +2.6**
DYR	**Agios Nikonas**	**5.36 276**	P	**Pn**	**Pn**	**22 33 07.6 +4.7**
DYR	**Agios Nikonas**	**5.36 276**	P	**Pn**	**Pn**	**22 33 06.3 +3.4**
NEO	**Neokhori**	**5.40 304**	P	**Pn**	**Pn**	**22 33 05.8 +2.3**
NEO			S	**Sn**	**Sn**	**22 34 03.3 -1.5**
NEO				AML	AML	22 34 04.8
	comp=E,48μm,0.6s					
NEO				AML	AML	22 34 05.9
	comp=N,59μm,0.7s					
NEO	**Neokhori**	**5.40 304**	P	**Pn**	**Pn**	**22 33 05.7 +2.2**
NEO			S	**Sn**	**Sn**	**22 34 03.9 -0.9**
XOR	**Xorichti**	**5.45 305**	P	**Pn**	**Pn**	**22 33 07.0 +2.9**
XOR			S	**Sn**	**Sn**	**22 34 04.1 -2.0**
XOR	**Xorichti**	**5.45 305**	P	**Pn**	**Pn**	**22 33 06.7 +2.5**
XOR			S	**Sn**	**Sn**	**22 34 04.9 -1.2**
GUR	**Goura**	**5.52 288**	P	**Pn**	**Pn**	**22 33 06.3 +1.1**
GUR	**Goura**	**5.52 288**	P	**Pn**	**Pn**	**22 33 06.3 +1.1**
OUR	**Ouranopolis**	**5.56 317**	P	**Pn**	**Pn**	**22 33 08.2 +2.7**
OUR	**Ouranopolis**	**5.56 317**	P	**Pn**	**Pn**	**22 33 08.1 +2.6**
KLV	**Kalavryta, Ach**	**5.69 289**	P	**Pn**	**Pn**	**22 33 09.9 +2.3**
KLV	**Kalavryta, Ach**	**5.69 289**	P	**Pn**	**Pn**	**22 33 09.8 +2.3**
ITM	**Ithomi**	**5.71 280**	P	**Pn**	Pn	22 33 13.7 +5.9
KALE	**Kalithea**	**5.80 292**	P	**Pn**	**Pn**	**22 33 13.7 +4.7**
KALE	**Kalithea**	**5.80 292**	P	**Pn**	**Pn**	**22 33 12.4 +3.5**
DQRL	**Deir Qamar**	**6.04 114**	*e*P	**Pn**	**Pn**	**22 33 12.3 0.0**
HWQ	**Hawqa**	**6.08 108**	*e*P	**Pn**	**Pn**	**22 33 13.2 +0.4**
EVR	**Evrytania**	**6.22 296**	P	**Pn**	Pn	22 33 20.9 +6.1
MMAI	**Mount Meron Ar**	**6.27 121**	Pn	**Pn**	**Pn**	**22 33 15.2 -0.4**
	comp=N,5.3nm,0.3s,baz=303,slow=12,SNR=24					
MMAI			Sn	**Sn**	**Sn**	**22 34 22.3 -4.1**
	comp=N,7.9nm,0.3s,baz=310,slow=20,SNR=7.7					
LIT	**Litokhoron**	**6.30 308**	P	**Pn**	**Pn**	**22 33 19.6 +3.8**
LIT	**Litokhoron**	**6.30 308**	P	**Pn**	**Pn**	**22 33 19.0 +3.1**
SHBL	**Chebaa**	**6.34 117**	*e*P	**Pn**	**Pn**	**22 33 16.2 -0.3**
RSH		**6.71 143**	P	**Pn**	**Pn**	**22 33 21.3 -0.1**
	baz=139					
RSH		**6.71 143**	P	**Pn**	**Pn**	**22 33 21.3 -0.1**
HHAG	**Hagoal**	**6.94 157**	P	**Pn**	**Pn**	**22 33 23.5 -1.1**
	baz=155					
HHAG				AMP		22 34 00.0
	baz=155					
HHAG	**Hagoal**	**6.94 157**	P	**Pn**	**Pn**	**22 33 23.5 -1.1**
SWA2		**7.72 204**	P	**Pn**	**Pn**	**22 33 34.4 -0.9**
	baz=206					
SWA2			S	Sn	Sn	22 34 54.0 -7.9
	baz=206					
SWA2				AMP		22 35 00.0
	baz=206					
SWA2		**7.72 204**	P	**Pn**	**Pn**	**22 33 34.4 -0.9**
HBST	**Basata**	**8.64 144**	P	**Pn**	**Pn**	**22 33 46.9 -1.1**
	baz=142					
HBST	**Basata**	**8.64 144**	P	**Pn**	**Pn**	**22 33 46.9 -1.1**
HFRF	**Wahat Farafira**	**9.24 184**	P	**Pn**	**Pn**	**22 33 54.6 -1.5**
	baz=185					
HFRF	**Wahat Farafira**	**9.24 184**	P	**Pn**	**Pn**	**22 33 54.6 -1.5**
MLR	**Muntele Rosu**	**9.37 347**	Pn	**Pn**	**Pn**	**22 33 57.1 -0.9**
	baz=118,slow=15					
GERES	**GERESS Array B**	**16.73 323**	Pn	**Pn**	**Pn**	**22 35 36.5 -0.6**
	comp=N,0.1nm,0.3s,baz=134,slow=11,SNR=2.3					
FINES	**FINESS Array B**	**25.14 357**	P	**P**	**P**	**22 37 07.2 +0.1**
	comp=N,0.3nm,0.6s,baz=162,slow=14,SNR=2.7					
TORD	**Torodi Ar. Bea**	**33.69 234**	P	**P**	**P**	**22 38 22.9 -0.8**
	comp=N,0.7nm,0.6s,baz=34,slow=7.7,SNR=11					
KURBB	**Kurchatov Arra**	**37.92 52**	P	**P**	**P**	**22 38 58.7 -0.8**
	comp=N,0.3nm,0.3s,baz=284,slow=9.1,SNR=2.7					
MKAR	**Makanchi Array**	**40.50 58**	P	**P**	**P**	**22 39 18.3 -2.8**
	comp=N,0.2nm,0.6s,baz=286,slow=6.5,SNR=2.2					

MAN 10 22:37:28.8, 9°.86N×123°.12E, h16km, mb4.7, ML3.6, MS3.5, 1C-3D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**0.53**	**167**	⇓*i*P	Pg	22 37 39.0	-0.2
SNPH				*i* S	Sb	22 37 46.8	-0.3
GUIM	**Jordan**	**0.92**	**326**	*e*P	Pb	22 37 46.5	+0.1
GUIM				*e*S	Sn	22 37 59.9	-0.1
LLP	**Lapu-Lapu**	**0.95**	**61**	⇓*e*P	Pb	22 37 44.8	-2.1
LLP				*e*S	Sn	22 38 00.6	-0.1
DCPH	**Dipolog City**	**1.29**	**170**	⇑*e*P	Pn	22 37 50.6	-1.6
DCPH				*e*S	Sb	22 38 08.3	-0.7
RCP	**Roxas**	**1.73**	**348**	⇓*e*P	Pb	22 38 00.0	-0.1
RCP				*e*S	Sg	22 38 24.6	+0.1
MSLP	**Maasin**	**1.73**	**81**	*e*P	Pn	22 37 57.0	-1.2
MSLP				*e*S	Sb	22 38 21.4	-0.4
PAGZ	**Pagadian**	**2.02**	**173**	*e*P	Pn	22 38 02.1	0.0
PAGZ				*e*S	Sb	22 38 29.8	-0.2

ISCJB ***10*** *22:41:14.2±0.5, 6°.84N±0°.04×73°.14W±0°.05, h154km±5km, mb3.4/3, Error ellipse: s-maj=8.2km s-min=5.1km az=28.1*
IDC ***10*** *22:41:15.4±1.2, 6°.81N×72°.96W, h163km±15km, mb3.2/3, mb1 3.4/5, mb1mx3.0/49, mbtmp3.7/5, MS3.0/1, Ms1 3.0/1, ms1mx2.2/18, Error ellipse: s-maj=34.1km s-min=14.5km az=128.0*
RSNC ***10*** *22:41:16.6±0.6, 6°.80N×73°.17W, h142km±3km, ML3.0*
ISC 10 22:41:14.7±0.9, 6°.82N±0°.04×73°.12W±0°.05, h152km±6km, n22, σ0°.76/35, mb3.6/3, 1C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.24**	**196**	*i* P	**Pn**	**22 41 36.3**	**+0.7**
BARC				*i*		22 41 36.5	
	comp=Z,322nm,0.1s						
BARC				*e*S	**Sn**	**22 41 50.8**	**-0.7**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUSC	**La Rusia**	**0.92**	**178**	⇑*i*P	**Pn**	**22 41 40.1**	**+0.5**
RUSC				*e*S	**Sn**	**22 41 58.2**	**-0.4**
RUSC				*i*		22 41 59.6	
	comp=Z,80nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.36**	**258**	*e*P	**Pn**	**22 41 42.9**	**-0.1**
PTBC				*e*S	**Sn**	**22 42 03.6**	**-0.9**
PTBC				*i*		22 42 08.2	
	comp=Z,121nm,0.2s						
OCAC	**Ocana**	**1.42**	**352**	*e*P	**Pn**	**22 41 44.6**	**+0.8**
OCAC				*e*S	**Sn**	**22 42 05.9**	**-0.2**
OCAC				*i*		22 42 10.4	
	comp=Z,235nm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.85**	**291**	*e*P	**Pn**	**22 41 49.0**	**+0.8**
ZARC				*e*S	**Sn**	**22 42 13.4**	**-0.5**
ZARC				*i*		22 42 20.8	
	comp=Z,258nm,0.3s						
NORC	**Norcasia**	**2.14**	**234**	*e*P	**Pn**	**22 41 52.2**	**+0.6**
NORC				*e*S	**Sn**	**22 42 20.0**	**-0.1**
CHIC	**Chingaza**	**2.26**	**196**	*e*P	**Pn**	**22 41 53.9**	**+0.4**
CHIC				*e*S	**Sn**	**22 42 23.1**	**-0.1**
CHIC				*i*		22 42 32.1	
	comp=Z,33nm,0.3s						
ROSC	**El Rosal**	**2.30**	**211**	P	**Pn**	**22 41 56.1**	**+2.2**
	comp=Z,8.4nm,0.3s,baz=9.8,slow=5.2,SNR=13						
ROSC				S	**Sn**	**22 42 22.8**	**-1.3**
	comp=Z,6.9nm,0.3s,baz=337,slow=15,SNR=8.8						
HELC	**Santa Helena**	**2.48**	**255**	*e*P	**Pn**	**22 41 56.3**	**+0.3**
HELC				*e*S	**Sn**	**22 42 27.2**	**-0.5**
HELC				*i*		22 42 37.8	
	comp=Z,93nm,0.5s						
VILC	**Villavicencio,**	**2.75**	**192**	*e*P	**Pn**	**22 41 59.5**	**+0.4**
VILC				*e*S	**Sn**	**22 42 32.6**	**-1.0**
DBBC	**Dabeiba**	**3.08**	**274**	*e*P	**Pn**	**22 42 03.5**	**+0.4**
TOLC	**Tolima**	**3.12**	**225**	*e*P	**Pn**	**22 42 04.8**	**+0.9**
TOLC				*e*S	**Sn**	**22 42 42.5**	**+0.4**
SDV	**Santo Domingo**	**3.21**	**50**	P	**Pn**	**22 42 05.6**	**+0.7**
	comp=Z,12nm,0.3s,baz=168,slow=1.6,SNR=8.7						
SDV				S	**Sn**	**22 42 42.9**	**-0.9**
	comp=Z,4.8nm,0.3s,baz=231,slow=22,SNR=9.5						
ANIL	**Santa Ana**	**3.25**	**225**	*e*P	**Pn**	**22 42 06.5**	**+1.0**
ANIL				*e*S	**Sn**	**22 42 44.4**	**-0.4**
PRAC	**Prado**	**3.55**	**210**	*e*P	**Pn**	**22 42 09.7**	**+0.4**
PRAC				*e*S	**Sn**	**22 42 51.6**	**0.0**
YOTC	**Yotoco, Valle**	**4.27**	**229**	*e*P	**Pn**	**22 42 18.9**	**+0.2**
YOTC				*i*		22 42 23.7	
	comp=Z,13nm,0.6s						
APG	**El Apazote**	**18.86**	**297**	LR	LR	22 54 02.0	
	comp=Z,41nm,19.3s,baz=154,slow=40						
TXAR	**Lajitas Array**	**36.46**	**312**	P	**P**	**22 48 05.7**	**+0.4**
	comp=Z,0.2nm,0.7s,baz=130,slow=8.3,SNR=3.0						
ULM	**Lac du Bonnet**	**47.29**	**340**	P	**P**	**22 49 32.4**	**-0.3**
	comp=Z,2.0nm,0.7s,baz=141,slow=6.5,SNR=3.5						
YKA	**Yellowknife Ar**	**63.26**	**340**	P	**P**	**22 51 27.2**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=136,slow=6.1,SNR=2.2						
ASAR	**Alice Springs**	**149.11**	**234**	PKPbc	**PKPbc**	**23 00 44.9**	**-1.1**
	comp=Z,0.4nm,0.5s,baz=124,slow=3.6,SNR=5.5						
WRA	**Warramunga Arr**	**150.34**	**241**	PKPbc	**PKPbc**	**23 00 48.4**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=108,slow=2.7,SNR=8.2						

ISCJB ***10*** *22:45:41.7±0.4, 32°.10N±0°.02×115°.71W±0°.02, h9km±2km, mb3.0/1, MS3.2/1, Error ellipse: s-maj=2.7km s-min=2.2

GLA	Glamis	1.19	38	ePg	Pg	22 46 03.3	-1.7
GLA				eSn	Sg	22 46 18.7	-1.9
SDRC	San Diego Road	1.21	301⇑	eP	Pg	22 46 04.3	-1.1
EML	El Monte Cty P	1.23	309	ePg	Pg	22 46 05.1	-0.7
EML				eSn	Sg	22 46 20.9	-0.8
FRK	Frink	1.28	3	ePg	Pn	22 46 04.7	-1.6
BORC	Borrego Spring	1.29	333	ePn	Pg	22 46 07.7	+0.7
BORC				eSn	Sb	22 46 23.6	+0.1
DPP	Dos Picos Cty	1.36	311	ePn	Pn	22 46 07.1	-0.3
DPP				eSn	Sb	22 46 24.9	-0.6
HWB	Hans Werner Br	1.39	311	ePn	Pn	22 46 07.6	-0.2
HWB				eSn	Sb	22 46 25.6	-0.7
109C	Camp Elliot, M	1.41	304	P	Pn	22 46 07.6	-0.4
109C	baz=124,SNR=165			S	Sb	22 46 25.6	-1.1
CPE	Camp Elliot	1.41	304	ePn	Pn	22 46 07.6	-0.4
CPE				eSn	Sb	22 46 25.5	-1.2
CTW	Cottonwood Mou	1.56	355	ePn	Pn	22 46 08.9	-1.3
FRD	Ford Ranch, An	1.57	332	ePn	Pn	22 46 09.4	-0.9
PLM	Palomar	1.57	322	ePn	Pb	22 46 11.6	+0.1
PFO	Pinyon Flats O	1.62	337	P	Pn	22 46 09.9	-1.1
PFO	baz=158,SNR=80			Sb	Sg	22 46 34.0	-0.2
PFO	Pinyon Flats O	1.62	337	eSn	Sn	22 46 32.1	-0.1
SNDA	J Saunders Pla	1.62	332	ePn	Pn	22 46 11.4	+0.3
SNDA				eSn	Sg	22 46 34.6	+0.3
DNR	Dunn Ranch,Anz	1.64	332	ePn	Pg	22 46 14.4	+0.8
CRY	Cary Ranch	1.69	329	ePn	Pg	22 46 15.0	+0.6
CRY				eSn	Sg	22 46 36.5	+0.2
113A	Mohawk Valley,	1.77	68	ePn	Pn	22 46 11.8	-1.2
113A				eSn	Sn	22 46 35.7	+0.1
BACC	Bachelor Mtn.	1.87	323	ePn	Pb	22 46 16.7	+0.3
BACC				eSn	Sb	22 46 40.6	+0.7
DGR	Domenigoni Val	1.88	325	ePn	Pn	22 46 14.2	-0.3
DGR				eSn	Sb	22 46 40.4	0.0
BELC	Belle Mtn. Jos	1.90	353	P	Pn	22 46 14.2	-0.7
BELC	baz=174,SNR=46						
BELC	Belle Mtn. Jos	1.90	353	ePn	Pn	22 46 14.2	-0.7
Y12C	Blythe	1.91	31	P	Pn	22 46 14.0	-0.9
Y12C	baz=212						
Y12C	Blythe	1.91	31	ePn	Pn	22 46 14.2	-0.7
Y12C				eSn	Sn	22 46 38.1	-1.1
HMTC	Hemet	1.93	326	ePg	Pb	22 46 17.8	+0.3
HMTC				eSn	Sb	22 46 42.6	+1.0
MURC	Murrieta	1.94	320	P	Pn	22 46 14.7	-0.6
MURC	baz=140						
TPC	Twentynine Pal	2.00	352	ePn	Pn	22 46 15.8	-0.4
IRM	Iron Mountain	2.09	13	P	Pn	22 46 16.8	-0.6
IRM	baz=194,SNR=22						
BBSC	Beaumont Base	2.09	330	ePn	Pn	22 46 17.1	-0.4
BBRC	Big Bear Solar	2.37	335	Pb	Pb	22 46 24.1	-1.0
BBRC	baz=155			Sb	Sg	22 46 56.4	-1.9
214A	Organ Pipe Nat	2.47	93	P	Pn	22 46 20.5	-2.1
SCI2	baz=274,SNR=18						
SCI2	San Clemente I	2.55	291	Sb	Sb	22 47 02.0	+2.5
CIS	baz=110						
CIS	Catalina Islan	2.62	300	P	Pn	22 46 24.5	-0.2
CIS	baz=119,SNR=27			S	Sn	22 46 56.9	+0.3
GMRC	Granite Mounta	2.66	1	P	Pn	22 46 24.7	-0.7
SSK	baz=182,SNR=9.4						
SSK	Sunset Peak	2.67	322	ePn	Pb	22 46 30.2	-0.1
BFSC	Mount Baldy Ra	2.67	323	Pb	Pb	22 46 29.5	-0.8
BFSC	baz=143						
FMP	Fort Macarthur	2.69	307	Sb	Sb	22 47 05.1	+1.4
FMP	baz=126						
PEM	Pine Mountain	2.73	319	ePn	Pb	22 46 30.8	-0.4
HEC	Hector,Ludlow	2.76	349	P	Pn	22 46 25.9	-0.7
HEC	baz=170,SNR=12						
NEE2	Needles Airpor	2.80	19	P	Pn	22 46 26.9	-0.2
NEE2	baz=200			S	Sn	22 47 00.2	-0.9
MWC	Mount Wilson	2.88	318	ePn	Pn	22 46 31.0	+2.5
MWC				eSn	Sn	22 47 03.9	+0.5
Y14A	Wickenburg	2.91	51	ePn	Pn	22 46 28.8	+0.1
PASC	Pasadena Art C	2.92	315	ePn	Pn	22 46 28.8	0.0
PASC				eSn	Sn	22 47 04.1	+0.1
CHFC	Chilao Flat St	2.94	319	ePn	Pb	22 46 35.4	+0.5
LDFC	Landfair	3.00	9	ePn	Pn	22 46 30.6	+0.6
LDFC				eSn	Sn	22 47 05.1	-1.1
DECC	Green Verdugo	3.06	315	Pb	Pb	22 46 35.8	-1.0
DECC	baz=134			Sb	Sb	22 47 15.7	+1.3
IR2C	Iron Canyon	3.20	316	ePn	Pb	22 46 38.3	-0.8
IR2C				eSg	Sb	22 47 20.0	+1.8
GSC	Goldstone, Bar	3.31	344	ePn	Pn	22 46 34.5	+0.3
GSC				eSn	Sn	22 47 13.7	0.0
LEOC	Leona Valley	3.32	320	ePn	Pn	22 46 32.3	-2.1
LEOC				ePg	Pg	22 46 44.1	-1.6
W13A	Hualapai Mount	3.34	27	ePn	Pn	22 46 34.8	0.0
EDW2	Edwards Air Fo	3.35	326	P	Pn	22 46 34.8	-0.1
EDW2	baz=145,SNR=25			Sb	Sb	22 47 26.2	+3.4
SNCC	San Nicolas Is	3.41	290	ePn	Pn	22 46 39.4	+3.9
BLG	Laguna Peak, P	3.45	306	P	Pn	22 46 36.2	+0.2
BLG	baz=125,SNR=7.3			Sb	Sb	22 47 27.7	+2.3
OSI	Osito Audit: C	3.55	315	Pb	Pb	22 46 44.3	-0.8
OSI	baz=134						
OSI	Osito Audit: C	3.55	315	ePg	Pb	22 46 44.4	-0.7
LRMC	Laurel Mtn Rad	3.74	334	Sb	Sg	22 47 38.1	-4.0
SCZ2	baz=154						
SCZ2	Santa Cruz Isl	3.79	301	Pb	Pb	22 46 49.2	0.0
ARVC	baz=119						
ARVC	Arvin	3.98	320	Sb	Sb	22 47 43.4	+2.8
CLC	baz=139						
CLC	China Lake	4.01	337	ePn	Pn	22 46 48.1	+4.3
TUC	Tucson	4.18	86	ePn	Pn	22 46 50.0	+3.8
ISA	Isabella, Lake	4.22	328	ePn	Pn	22 46 48.5	+1.8
X16A	Lo Mia Camp, P	4.25	56	ePn	Pn	22 46 48.0	+0.7
SHPR	Sheep Range	4.40	6	ePn	Pn	22 46 51.0	+1.6
DAC	Darwin (Calif)	4.43	340	ePn	Pn	22 46 50.9	+1.0
SMMC	Simmler	4.79	313	P	Pn	22 46 56.4	+1.9
SMMC	baz=131,SNR=5.4						
TPNV	Topopah Spring	4.84	355	P	Pn	22 46 56.7	+1.3
TPNV	baz=175,SNR=9.3						
TPNV	Topopah Spring	4.84	355	ePn	Pn	22 46 57.1	+1.7
WUAZ	Wupatki	4.95	46	P	Pn	22 46 58.3	+1.3
WUAZ	baz=228,SNR=21						
WUAZ	Wupatki	4.95	46	ePn	Pn	22 46 58.9	+2.0
U15A	North Rim	5.15	32	ePn	Pn	22 47 01.1	+1.4
PAGB	Antelope Grade	5.22	315	ePn	Pn	22 47 03.3	+2.8
LCMT	Little Creek M	5.29	22	ePn	Pn	22 47 03.1	+1.6
X18A	Snowflake	5.39	62	ePn	Pn	22 47 04.5	+1.6
KNB	Kanab	5.44	25	ePn	Pn	22 47 05.6	+2.0
319A	Douglas	5.53	96	ePn	Pn	22 47 09.0	+4.2
CCUT	Cedar City	5.75	19	ePn	Pn	22 47 10.1	+2.1
W18A	Petrified Fore	5.81	57	P	Pn	22 47 09.8	+1.1
W18A	baz=241,SNR=5.8						
W18A	Petrified Fore	5.81	57	ePn	Pn	22 47 10.6	+1.8
SZCU	Shurtz Canyon	5.88	21	ePn	Pn	22 47 11.9	+2.3
PKCU	Pink Cliffs	6.01	27	ePn	Pn	22 47 13.2	+1.7
R11A	Troy Canyon, C	6.22	1	ePn	Pn	22 47 17.5	+3.2
MTPU	Mount Pierson	6.58	25	ePn	Pn	22 47 21.5	+2.1
PSUT	Pine Spring	6.58	13	ePn	Pn	22 47 14.7	-4.6
NV01	Mina Array Sit	6.65	342	ePn	Pn	22 47 21.6	+1.4
NV01				eLg	Lg	22 49 11.0	
NVAR	Mina Array Bea	6.65	342	Pn	Pn	22 47 21.0	+0.8
NVAR	baz=166,slow=16,SNR=2.1			Lg	Lg	22 49 11.0	
RYN	Ryan	6.89	341	ePn	Pn	22 47 25.5	+1.9
MSU	Marysvale	7.00	23	ePn	Pn	22 47 28.5	+3.4
MVCO	Mesa Verde	7.82	47	ePn	Pn	22 47 41.5	+5.2
LPM	Los Pinos Moun	7.92	71	ePn	Pn	22 47 40.9	+3.3
SRU	San Rafael Swe	8.16	30	ePn	Pn	22 47 40.8	-0.1
ANMO	Albuquerque	8.22	67	Pn	Pn	22 47 41.7	-0.1
ANMO	baz=N,0.1nm,0.3s,baz=288,slow=20,SNR=1.9			Lg	Lg	22 49 57.4	
ANMO	baz=N,0.0nm,0.3s,baz=279,slow=13,SNR=2.0			LR	LR	22 50 54.9	
ANMO	baz=N,105nm,20.8s,baz=240,slow=39						
ANMO	Albuquerque	8.22	67	ePn	Pn	22 47 45.6	+3.7
ANMO				eLg	Lg	22 49 57.4	
PV13	Radium Mtn., P	8.26	41	ePn	Pn	22 47 45.1	+2.8
PV18	Skein Mesa, Pa	8.27	40	ePn	Pn	22 47 45.2	+2.8
PV20	West Nyswonger	8.30	40	ePn	Pn	22 47 43.6	+0.6
PV16	Nyswonger Mesa	8.31	40	ePn	Pn	22 47 48.9	+5.8
PV11	David Mesa, Pa	8.33	40	ePn	Pn	22 47 47.4	+4.1
PV09	Paradox Valley	8.33	38	ePn	Pn	22 47 46.2	+2.8
PV23	Carpenter Ridg	8.36	39	ePn	Pn	22 47 44.7	+0.9
PV12	Saucer Basin,	8.38	40	ePn	Pn	22 47 46.8	+2.8
PV21	Cone Mtn., Par	8.46	39	ePn	Pn	22 47 48.0	+2.8
PV22	Blue Mesa, Par	8.54	40	ePn	Pn	22 47 48.8	+2.6
LPIG	La Paz	9.30	148	LR	LR	22 51 46.0	
	comp=N,65nm,18.7s,baz=281,slow=39						
TX31	Lajitas Ar. Si	10.73	102	ePn	Pn	22 48 21.3	+5.2
TXAR	Lajitas Array	10.73	102	Pn	Pn	22 48 18.2	+2.1
	comp=N,0.4nm,0.3s,baz=283,slow=12,SNR=14						
TXAR				Lg	Lg	22 51 19.6	
	comp=N,0.0nm,0.3s,baz=286,slow=27,SNR=3.8						
TXAR				LR	LR	22 52 41.4	
	comp=N,55nm,19.8s,baz=0.0,slow=39						
PDAR	Pinedale Array	11.70	23	LR	LR	22 53 19.9	
	comp=N,103nm,18.7s,baz=218,slow=40						
BEND	Bend	12.72	341	ePn	Pn	22 48 45.8	+2.5
BEND				eSn	Sn	22 51 16.5	+11
NLW	Nelson Butte	16.33	349	ePcP	PcP	22 54 25.9	+1.0
SWID	South Whidbey	16.67	344	eSn	Sn	22 52 33.8	-7.3
PNT	Penticton	17.43	351	eSn	Sn	22 52 51.9	-7.7
JTS	JuntasAbangare	35.75	121	LR	LR	23 07 58.8	
	comp=N,48nm,21.6s,baz=352,slow=37						
ILAR	Eielson Array	37.89	339	P	P	22 53 02.0	+2.7
	comp=N,0.2nm,0.7s,baz=157,slow=8.7,SNR=4.8						
ILB	Eielson Array	37.89	339	eP	P	22 53 02.0	+2.7

TAP 10 22:57:14.9, 24.91N×121.96E, 5km, ML1.0, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		0.07	205	P	Pg	22 57 17.2	+0.6
EGS	baz=195			S	Sg	22 57 18.8	+1.1
TIPB	Shuangxi	0.14	297	P	Pg	22 57 18.6	+0.8
TIPB	baz=296			S	Sg	22 57 21.4	+1.6
	baz=296						

*ISCJB **10** 22:57:45.1±0.8, 32.11N±0.05×115.75W±0.05, h8km±12km, Error ellipse: s-maj=9.9km s-min=4.2km az=33.7*
*ECX **10** 22:57:46.6±0.5, 32.11N×115.74W, h6km, MD2.7, ML2.9*
*MEX **10** 22:57:47.1±0.5, 32.15N×115.75W, h5km±11km, MD3.8*
ISC 10 22:57:43.6±1.4, 32.16N±0.03×115.71W±0.04, h12km±12km, n19, σ0.44/32, 8C-1D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPBX	Cerro Prieto	0.43	54	eP	Pn	22 57 54.9	-0.6
SGL	Mount Signal	0.49	359	⇑iP	Pn	22 57 56.0	-0.3
MBIG	Mexicali	0.50	61	⇑eP	Pn	22 57 56.5	0.0
MBIG	Mexicali	0.50	61	iP	Pn	22 57 56.5	0.0
MBIG				eS	Sn	22 58 05.0	0.0
YUH	Yuha Desert	0.52	340	⇑iP	Pn	22 57 56.3	-0.5
RMX	La Rumorosa	0.54	325	eP	Pb	22 57 55.5	+0.5
RMX				eS	Sb	22 58 02.7	-0.1
IKP	In-Ko-Pah, Jac	0.59	326	eP	Pn	22 57 57.6	-0.2
WESC	Westside Schoo	0.60	359	eP	Pn	22 57 58.2	+0.4
ZAX	El Zacaton	0.80	217	eP	Pb	22 57 59.5	+0.1
ZAX				eS	Sb	22 58 09.8	-0.5
ZAX				IAML		22 58 14.4	
	comp=N,595nm,0.4s						
CBX	Cerro Bola	0.82	281	⇑iP	Pn	22 58 01.3	+0.3
CBX				eS	Sn	22 58 12.2	-0.9
CBX				⇓e		22 58 15.6	
CBX				IAML		22 58 15.6	
	comp=E,525nm,0.6s						
CBX	Cerro Bola	0.82	281	eP	Pn	22 58 00.8	-0.2
CBX				eS	Sb	22 58 11.5	+0.7
TJIG	Tijuana	0.86	289	iP	Pn	22 58 01.7	+0.3
TJIG				eS	Sb	22 58 12.3	+0.4
ECBX	El Chinero	0.89	140	eP	Pg	22 58 00.7	-0.1
ECBX				eS	Sg	22 58 12.3	-0.1
ECBX				IAML		22 58 17.0	
	comp=E,413nm,0.5s						
ECBX				⇑e		22 58 17.0	
ECNX	Esteban Cantu	0.91	236	⇑eP	Pn	22 58 01.8	-0.4
ECNX				⇑eP	Pb	22 58 00.8	-0.4
ECNX				eS	Sb	22 58 13.6	+0.3
BAR	Barrett	0.96	303	⇑iP	Pn	22 58 03.8	+0.9
SPIG	San Pedro Mart	1.13	169	eP	Pn	22 58 05.8	+0.3
SPIG				eS	Sb	22 58 20.6	+0.6
SPIG	San Pedro Mart	1.13	169	eP	Pn	22 58 05.9	+0.4
SPIG				eS	Sb	22 58 20.4	+0.4
SPX	San Pedro Mart	1.13	169	eP	Pn	22 58 06.0	+0.4
SPX				eS	Sb	22 58 20.4	+0.3
SPX	San Pedro Mart	1.13	169	eP	Pn	22 58 05.7	+0.2
SPX				eS	Sg	22 58 20.1	-0.2

*ISCJB **10** 23:10:00.7±0.4, 44.85N±0.05×141.83E±0.08, h271km±4km, mb3.1/9, Error ellipse: s-maj=8.9km s-min=8.7km az=27.5*
*JMA **10** 23:10:01.1±0.3, 44.89N×141.82E, h271km±2km, M3.0*
*IDC **10** 23:10:01.4±0.6, 44.90N×141.83E, h261km±9km, mb3.0/9, mb1 3.2/13, mb1mx3.0/66, mbtmp3.7/13, Error ellipse: s-maj=24.1km s-min=13.0km az=166.0*
ISC 10 23:10:01.4±0.7, 44.81N±0.07×141.85E±0.07, h268km±6km, n32, σ0.93/40, mb3.1/9, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSS	Shosan	0.41	179	P	Pn	23 10 36.7	+0.5
JSS				eS	S	23 11 04.2	+0.5
JYG	Yagishiri	0.49	218	P	Pn	23 10 36.6	+0.2
JWK2	Keihoku	0.50	4	eS	S	23 11 02.8	-1.1
JSE	Soyaes	0.55	74	eS	S	23 11 03.4	-0.7
ASAJ	Asahikawa	0.88	142	P	Pn	23 10 38.4	+0.6
	10nm,0.3s,baz=311,slow=5.3,SNR=32			S	S	23 11 05.4	-1.2
ASAJ							
	0.7nm,0.3s,baz=30,slow=18,SNR=4.8						
ASAJ	Asahikawa	0.88	142	P	Pn	23 10 38.1	+0.3
ASAJ				eS	S	23 11 07.3	+0.7
JHR	Hokuryu	1.07	185	P	Pn	23 10 39.6	+0.8
JKK2	Kamakawa 2	1.14	145	P	Pn	23 10 39.9	+0.7
JTKR	Abashiri--Toko	1.70	119	P	Pn	23 10 44.0	+1.1
JTKR				eS	S	23 11 16.9	+1.1
JSK	Shakotan	1.76	215	P	Pn	23 10 43.8	+0.4
JEW	Eniwo	1.99	188	P	Pn	23 10 46.5	+1.1
JEW				eS	S	23 11 21.2	+1.0
JAR	Ashorobuto	2.06	137	eS	S	23 11 23.2	+2.0
JCH	Churui	2.46	153	P	Pn	23 10 49.2	-0.4
JCH				eS	S	23 11 25.6	-2.3
JNBK	Urakawa-nobuka	2.62	165	P	Pn	23 10 51.8	+0.6
JNBK				eS	S	23 11 30.5	-0.2
JAK	Akkeshi	2.75	130	eS	S	23 11 31.6	-1.3
JKB	Kayabe	2.98	192	P	Pn	23 10 54.7	-0.2
JKB				eS	S	23 11 35.2	-2.2
NEM2	Nemuro 2	3.16	116	P	Pn	23 10 56.1	-0.6
JOSM	Okushiri--Mats	3.23	213	P	Pn	23 10 57.7	+0.2
USRK	Ussuriysk Ar.	7.07	268	P	Pn	23 11 43.6	+0.4
	0.5nm,0.3s,baz=85,slow=12,SNR=5.8						
KLR	Kul'dur	8.19	306	P	Pn	23 11 56.2	-0.7
	0.0nm,0.3s,baz=108,slow=17,SNR=5.0						
MJAR	Matsushiro Arr	8.71	200	P	Pn	23 12 04.1	+0.4
	0.4nm,0.3s,baz=2.0,slow=11,SNR=3.8						
PETK	Petropavlovsk-	13.29	46	P	P	23 13 00.2	-0.9
	0.4nm,0.3s,baz=238,slow=8.2,SNR=3.6						
SEY	Seymchan	19.14	15	P	P	23 14 04.3	-0.4
	0.6nm,0.3s,baz=213,slow=10.0,SNR=23						
SONM	Songino Array	24.53	290	P	P	23 14 57.3	+0.5
	1.2nm,0.5s,baz=84,slow=9.3,SNR=9.4						
MKAR	Makanchi Array	40.70	295	P	P	23 17 16.3	+0.4
	0.5nm,0.6s,baz=82,slow=9.6,SNR=6.7						
KURBB	Kurchatov Arra	41.83	301	P	P	23 17 24.5	-0.5
	0.6nm,0.2s,baz=76,slow=8.7,SNR=3.8						
ILAR	Eielson Array	42.90	37	P	P	23 17 32.9	-0.5
	0.6nm,0.6s,baz=274,slow=6.5,SNR=9.3						
BVAR	Borovoye Array	45.85	307	P	P	23 17 56.2	-0.6
	0.2nm,0.4s,baz=68,slow=12,SNR=4.0						
YKA	Yellowknife Ar	57.00	33	P	P	23 19 19.2	+0.4
	0.5nm,0.5s,baz=308,slow=6.9,SNR=4.6						
PDAR	Pinedale Array	72.06	47	P	P	23 20 57.4	+0.8
	0.5nm,0.4s,baz=312,slow=1.5,SNR=4.9						
EKA	Eskdalemuir Ar	75.92	340	P	P	23 21 18.3	0.0
	0.1nm,0.3s,baz=29,slow=5.2,SNR=3.5						
TXAR	Lajitas Array	85.14	53	P	P	23 22 08.3	+0.7
	0.2nm,0.7s,baz=296,slow=2.9,SNR=3.0						

*ISCJB **10** 23:20:11.2±0.8, 28.64S±0.05×68.13W±0.04, h113km±8km, Error ellipse: s-maj=7.7km s-min=6.0km az=177.5*
*SJA **10** 23:20:11.7±0.6, 28.71S×68.10W, h110km±3km, ML2.6, MW3.1*
*GUC **10** 23:20:12.9±0.6, 28.61S×68.27W, h95km±5km, ML3.2*
ISC 10 23:20:11.7±1.5, 28.64S±0.05×68.14W±0.04, h112km±9km, n15, σ0.66/25, 4C-1D, La Rioja Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VCA	Vinchina	0.12	210	eP	Pn	23 20 27.6	+0.3
VCA				eS	Sn	23 20 39.4	+0.4
VCA	Vinchina	0.12	210	⇓iP	Pn	23 20 27.6	+0.3
VCA				iS	Sn	23 20 38.1	-1.0
VCA				IAML		23 20 40.5	
	comp=E,5μm,0.2s						
AGUA	GUANDACOL	0.90	200	eP	Pn	23 20 32.3	+0.1
AGUA				eS	Sn	23 20 47.3	-0.3
ACDV	Cuesta del Vie	1.75	209	eP	Pn	23 20 42.7	+0.9
ACDV				IAML		23 20 43.2	
	comp=Z,56nm,0.4s						
ACDV				eS	Sn	23 21 05.3	+0.5
AROD	Rodeo	1.92	217	eP	Pn	23 20 45.2	+1.2
CYA	Choya	2.07	85	eP	Pn	23 20 46.5	+0.8
CYA	Choya	2.07	85	⇑iP	Pn	23 20 46.4	+0.8
CYA				iS	Sn	23 21 10.7	-0.8
CYA				IAML		23 21 11.7	
	comp=E,121nm,0.4s						
GO03	Copiap	2.12	299	⇑iP	Pn	23 20 46.3	-0.1
GO03				iS	Sn	23 21 12.2	-0.7
GO03				IAML		23 21 13.1	
	comp=N,127nm,0.2s						
APLL	PUNTA DE LOS L	2.25	142	eP	Pn	23 20 47.9	-0.1
APLL				IAML		23 20 48.0	
	comp=Z,37nm,0.2s						
APLL				eS	Sn	23 21 14.8	-1.0
LCO	Las Campanas	2.28	260	⇑iP	Pn	23 20 49.1	+0.6
LCO				iS	Sn	23 21 17.0	+0.2
LCO				IAML		23 21 18.6	
	comp=E,165nm,0.3s						
AMOG	MOGNA	2.32	188	eP	Pn	23 20 48.8	-0.1
AMOG				eS	Sn	23 21 16.9	-0.5
GO04	Tololo Observa	2.78	236	⇑iP	Pn	23 20 54.5	-0.6
GO04				iS	Sn	23 21 27.8	-0.6
AHML	Horco Molle	3.10	54	eP	Pn	23 20 59.5	+0.5
AHML				IAML		23 21 35.4	
	comp=Z,12nm,0.3s						
AUSP	Uspallata	3.73	196	eP	Pn	23 21 08.1	+0.3
ASAL	Salagasta	3.99	188	eP	Pn	23 21 11.4	+0.4

*ISCJB **10** 23:44:31.8±0.5, 40.02N±0.06×55.23E±0.04, h10km, mb3.1/2, Error ellipse: s-maj=8.7km s-min=4.3km az=14.5*
*IDC **10** 23:44:33.4±1.2, 39.41N×54.56E, h0km, mb3.3/2, mb1 3.6/6, mb1mx3.2/60, mbtmp3.4/6, ML3.3/4, MS2.5/1, Ms1 2.4/1, ms1mx1.9/40, Error ellipse: s-maj=25.5km s-min=10.3km az=25.0*
*CSEM **10** 23:44:35.7±0.4, 40.00N×55.28E, h19km, mb3.9, Error ellipse: s-maj=15.9km s-min=8.0km az=170.0*
*AZER **10** 23:44:37.3±0.1, 39.69N×54.76E, h16km, ml3.8/7, Error ellipse: s-maj=16.9km s-min=4.9km az=20.0*
*NNC **10** 23:44:39.0±1.7, 40.19N×55.63E, h24km±12km, mb3.9, mpv3.8, Error ellipse: s-maj=17.4km s-min=8.5km az=75.0*
ISC 10 23:44:34.2±0.7, 40.03N±0.05×55.23E±0.04, h10km, n40, σ2.71/64, 25C-20D, Turkmenistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEYT	Alibeck	3.08	132	Pn	Pn	23 45 24.4	+1.5
GEYT	2.3nm,0.3s,baz=301,slow=17,SNR=6.5			Pg	Pb	23 45 31.2	+2.2
GEYT	11nm,0.3s,baz=296,slow=18,SNR=10			Lg	Lg	23 46 10.9	
GYA0B	ALIBECK ARRAY	3.08	132	⇑Pn	Pn	23 45 24.6	+1.7
GYA0B	4.2nm,0.4s			⇑Pg	Pb	23 45 32.2	+3.1
GYA0B	17nm,0.4s			⇑Lg	Lg	23 46 13.4	
GYA0B	211nm,0.5s						
GYA0B	ALIBECK ARRAY	3.08	132	Pn	Pn	23 45 24.6	+1.7
ASHT	4.2nm,0.4s Ashkhabad	3.23	129	⇓Pg	Pg	23 45 36.3	+0.3
ASHT	43nm,0.4s			⇑Lg	Lg	23 46 18.4	
ASHT	299nm,0.4s						
ASHT	Ashkhabad	3.23	129	Pg	Pg	23 45 36.3	+0.3
ASHT	43nm,0.4s			Lg	Lg	23 46 18.4	
ASHT	299nm,0.4s						
ATGJ	Altiaghaj	4.87	282	⇑P	Pn	23 45 49.8	+2.2
ATGJ	Altiaghaj	4.87	282	⇑P	Pn	23 45 49.8	+2.2
LKRN	Lenkeran, Azer	5.17	257	⇑P	Pn	23 45 51.8	+0.2
LKRN				⇓S	Sn	23 46 47.1	-4.2
LKRN	Lenkeran, Azer	5.17	257	⇑P	Pn	23 45 51.8	+0.2
LKRN				⇓S	Sn	23 46 47.1	-4.2
ASTR	Astara	5.21	256	⇓P	Pn	23 45 51.1	-1.0
ASTR				⇑S	Sn	23 46 47.1	-5.1
ASTR	Astara	5.21	256	⇓P	Pn	23 45 51.1	-1.0
ASTR				⇑S	Sn	23 46 47.1	-5.1
GLBA	Ciilabad	5.34	264	⇓S	Sn	23 46 53.1	-2.3
GLBA	Ciilabad	5.34	264	⇓S	Sn	23 46 53.1	-2.3
QSAR	Qusar	5.49	288	⇓P	Pn	23 45 59.1	+3.0
QSAR	SNR=3.6			⇓S	Sn	23 46 59.6	+0.3
QSAR	Qusar	5.49	288	⇓P	Pn	23 45 59.1	+3.0

0.1nm,0.3s,baz=192,slow=14,SNR=2.3
AKTO Sn **Sn** **23 49 00.3 -4.2**
0.7nm,0.3s,baz=231,slow=22,SNR=6.5
AKTO Aktyubinsk 10.59 10 ⇑Pn **Pn** **23 47 07.4 +1.5**
2.0nm,0.9s
AKTO ⇑Sn **Sn** **23 49 00.9 -3.6**
2.8nm,0.5s
AKTO Aktyubinsk 10.59 10 Pn **Pn** **23 47 07.4 +1.5**
2.0nm,0.9s
AKTO Sn **Sn** **23 49 00.9 -3.6**
2.8nm,0.5s
KK31 Karatay Array 11.85 70 Pn **Pn** **23 47 21.6 -1.6**
0.3nm,0.3s,baz=265,slow=14,SNR=9.0
KK31 ⇑Sn **Sn** **23 49 30.9 -4.6**
0.3nm,0.3s,baz=299,slow=14,SNR=4.0
KK31 Karatay Array 11.85 70 Pn **Pn** **23 47 21.6 -1.6**
0.3nm,0.3s,SNR=9.0
KK31 Sn **Sn** **23 49 30.9 -4.6**
0.3nm,0.3s,SNR=4.0
OTUK Ortayu 14.75 51 ⇓Pn **Pn** **23 48 02.5 -0.3**
0.6nm,0.3s
OTUK ⇑Sn **Sn** **23 50 41.4 -4.9**
1.9nm,0.3s
BVAR Borovoye Array 16.62 34 Pn **P** **23 48 33.5 +4.0**
0.1nm,0.3s,baz=224,slow=7.5,SNR=4.3
AKASG Malin Array Be 21.05 309 P **P** **23 49 19.3 +1.2**
0.1nm,0.3s,baz=102,slow=9.2,SNR=3.1
FINES FINESS Array B 27.86 330 P **P** **23 50 28.9 +5.2**
1.2nm,0.9s,baz=138,slow=15,SNR=2.6

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*ISK **10** 23:47:05.5, 36.°39N×28.°98E, h21km, ML2.6/8*
*DDA **10** 23:47:05.9, 36.°47N×28.°98E, h7km, Ml3.0*
*ISCJB **10** 23:47:06.6±0.4, 36.°41N±0.°03×28.°98E±0.°03, h28km±4km, Error ellipse: s-maj=5.5km s-min=4.1km az=0.7*
*THE **10** 23:47:06.8, 36.°42N×28.°97E, h14km±2km, ML2.2/4, Error ellipse: s-maj=2.5km s-min=0.8km az=72.0*
*ATH **10** 23:47:06.0, 36.°39N×28.°98E, h40km±2km, ML2.3/2, Error ellipse: s-maj=3.5km s-min=1.5km az=158.0*
*CSEM **10** 23:47:06.3±0.1, 36.°42N×28.°98E, h20km, ML3.0, Error ellipse: s-maj=3.3km s-min=2.2km az=166.0*

ISC 10 23:47:06.2±1.0, 36.°41N±0.°02×28.°98E±0.°02, h19km±3km, n90, σ0.°56/111, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.24**	**21**	PG	**Pg**	**23 47 11.2**	**-0.7**
FETY				SG	**Sg**	**23 47 16.9**	**+1.1**
FETY	**Fethiye**	**0.24**	**21**	P	**Pg**	**23 47 11.6**	**-0.3**
FETY				S	**Sg**	**23 47 16.5**	**+0.7**
FETY	**Fethiye**	**0.24**	**21**	*e*Pg	**Pg**	**23 47 11.2**	**-0.7**
FETY	**Fethiye**	**0.24**	**21**	P	**Pg**	**23 47 11.6**	**-0.3**
FETY				S	**Sg**	**23 47 16.5**	**+0.7**
DALY	**Dalyan (Mu¨la**	**0.48**	**327**	PG	**Pb**	**23 47 16.2**	**+0.1**
DALY				SG	**Sb**	**23 47 23.7**	**+0.8**
DALY	**Dalyan (Mu¨la**	**0.48**	**327**	*i* P	**Pb**	**23 47 16.3**	**+0.1**
DALY	**Dalyan (Mu¨la**	**0.48**	**327**	P	**Pb**	**23 47 16.3**	**+0.1**
DALY				*e*Sg	**Sb**	**23 47 23.7**	**+0.8**
AKAS	**Kas**	**0.54**	**109**	PG	**Pg**	**23 47 16.6**	**-0.5**
AKAS	**Kas**	**0.54**	**109**	*i* P	**Pg**	**23 47 16.6**	**-0.5**
AKAS	**Kas**	**0.54**	**109**	P	**Pg**	**23 47 16.6**	**-0.5**
TURN	**Turunc**	**0.55**	**327**	PG	**Pn**	**23 47 19.9**	**+0.8**
TURN	**Turunc**	**0.55**	**327**	*i* P	**Pn**	**23 47 19.8**	**+0.7**
TURN	**Turunc**	**0.55**	**327**	P	**Pn**	**23 47 19.8**	**+0.7**
KSL	**Kastellorizon**	**0.55**	**118**	P	**Pb**	**23 47 17.6**	**+0.3**
KSL				S	**Sn**	**23 47 27.2**	**-0.6**
KSL				AML	AML	23 47 27.9	
	comp=N,267μm,0.4s						
KSL				AML	AML	23 47 28.1	
	comp=E,977μm,0.4s						
KSL	**Kastellorizon**	**0.55**	**118**	P	**Pb**	**23 47 17.7**	**+0.4**
KSL				S	**Sn**	**23 47 26.9**	**-1.0**
MRSB	**Marmaris-Mugla**	**0.70**	**296**	PG	**Pb**	**23 47 19.9**	**+0.1**
MRSB	**Marmaris-Mugla**	**0.70**	**296**	*e*Pg	**Pb**	**23 47 19.9**	**+0.1**
ARG	**Arkhangelos**	**0.71**	**254**	PG	**Pb**	**23 47 19.9**	**-0.2**
ARG				SG	**Sg**	**23 47 30.6**	**+0.8**
ARG	**Arkhangelos**	**0.71**	**254**	P	**Pb**	**23 47 20.0**	**-0.2**
ARG				AML	AML	23 47 31.8	
	comp=N,424μm,0.3s						
ARG				AML	AML	23 47 32.0	
	comp=E,625μm,0.3s						
ARG				S	**Sn**	**23 47 32.4**	**+0.6**
ARG	**Arkhangelos**	**0.71**	**254**	P	**Pb**	**23 47 20.3**	**+0.2**
ARG				S	**Sn**	**23 47 31.6**	**-0.2**
ARG	**Arkhangelos**	**0.71**	**254**	*e*Pg	**Pb**	**23 47 19.9**	**-0.2**
ARG	**Arkhangelos**	**0.71**	**254**	P	**Pb**	**23 47 20.2**	**+0.2**
ARG				*e*Sg	**Sg**	**23 47 30.6**	**+0.8**
ARG				S	**Sn**	**23 47 31.6**	**-0.2**
ELL	**Elmali**	**0.82**	**66**	PG	**Pg**	**23 47 22.4**	**0.0**
ELL	**Elmali**	**0.82**	**66**	*e*Pg	**Pg**	**23 47 22.4**	**0.0**
GLHS	**Glhisar (BURDU**	**0.85**	**29**	PG	**Pb**	**23 47 21.8**	**-0.8**
GLHS	**Glhisar (BURDU**	**0.85**	**29**	*e*Pg	**Pb**	**23 47 21.8**	**-0.8**
YER	**Yerkesik**	**0.91**	**323**	PG	**Pb**	**23 47 23.9**	**+0.4**
YER	**Yerkesik**	**0.91**	**323**	P	**Pb**	**23 47 23.8**	**+0.3**
YER				S	**Sg**	**23 47 36.1**	**0.0**
YER	**Yerkesik**	**0.91**	**323**	*e*Pg	**Pb**	**23 47 23.9**	**+0.4**
YER				S	**Sg**	**23 47 36.1**	**0.0**
GOLH	**Golhisar**	**0.95**	**29**	*i* P	**Pb**	**23 47 23.2**	**-1.0**
GOLH	**Golhisar**	**0.95**	**29**	P	**Pb**	**23 47 23.2**	**-1.0**
TAVA	**DENIZLI_Tavas**	**1.05**	**357**	*i* P	**Pb**	**23 47 25.8**	**-0.2**
TAVA	**DENIZLI_Tavas**	**1.05**	**357**	P	**Pb**	**23 47 25.8**	**-0.2**
DATC	**Datca-Mugla**	**1.11**	**289**	PN	**Pn**	**23 47 26.7**	**-0.2**
DATC	**Datca-Mugla**	**1.11**	**289**	*e*Pn	**Pn**	**23 47 26.7**	**-0.2**
DAT	**Datca**	**1.17**	**286**	PN	**Pn**	**23 47 27.5**	**-0.3**
DAT	**Datca**	**1.17**	**286**	*i* P	**Pn**	**23 47 27.8**	**0.0**
DAT	**Datca**	**1.17**	**286**	*e*Pn	**Pn**	**23 47 27.5**	**-0.3**
DAT	**Datca**	**1.17**	**286**	P	**Pn**	**23 47 27.8**	**0.0**
KORT	**Korkueli**	**1.25**	**62**	PN	**Pn**	**23 47 28.8**	**-0.1**
KORT	**Korkueli**	**1.25**	**62**	*i* P	**Pb**	**23 47 29.8**	**+0.4**
KORT	**Korkueli**	**1.25**	**62**	*e*Pn	**Pn**	**23 47 28.8**	**-0.1**
KORT	**Korkueli**	**1.25**	**62**	P	**Pb**	**23 47 29.8**	**+0.4**
DNZL	**Cakiroluk**	**1.28**	**2**	*i* P	**Pn**	**23 47 29.2**	**-0.1**
DNZL	**Cakiroluk**	**1.28**	**2**	P	**Pn**	**23 47 29.2**	**-0.1**
MLSB	**Milas**	**1.31**	**313**	PN	**Pn**	**23 47 29.4**	**-0.2**
MLSB	**Milas**	**1.31**	**313**	*e*Pn	**Pn**	**23 47 29.4**	**-0.2**
DENT	**Denizli**	**1.34**	**2**	PN	**Pn**	**23 47 29.9**	**-0.2**
DENT	**Denizli**	**1.34**	**2**	*e*Pn	**Pn**	**23 47 29.9**	**-0.2**
BDRM	**Kayabasi**	**1.39**	**298**	*i* P	**Pb**	**23 47 31.5**	**-0.2**
BDRM	**Kayabasi**	**1.39**	**298**	P	**Pb**	**23 47 31.5**	**-0.2**
ANTB	**Antalya**	**1.43**	**70**	PN	**Pn**	**23 47 31.4**	**+0.2**
ANTB	**Antalya**	**1.43**	**70**	*e*Pn	**Pn**	**23 47 31.4**	**+0.2**
BODT	**Bodrum**	**1.49**	**296**	PN	**Pn**	**23 47 31.5**	**-0.5**
BODT	**Bodrum**	**1.49**	**296**	P	**Pn**	**23 47 30.9**	**-1.1**
BODT				S	**Sn**	**23 47 50.0**	**-1.0**
BODT	**Bodrum**	**1.49**	**296**	P	**Pn**	**23 47 30.9**	**-1.1**
BODT	**Bodrum**	**1.49**	**296**	*e*Pn	**Pn**	**23 47 31.5**	**-0.5**
BODT				S	**Sn**	**23 47 50.0**	**-1.0**
AYDN	**Tasoluk**	**1.53**	**325**	*i* P	**Pb**	**23 47 33.9**	**-0.1**
AYDN	**Tasoluk**	**1.53**	**325**	P	**Pb**	**23 47 33.9**	**-0.1**
BRDR	**BURDUR-Merkez**	**1.55**	**34**	*i* P	**Pn**	**23 47 33.6**	**+0.6**
BRDR	**BURDUR-Merkez**	**1.55**	**34**	P	**Pn**	**23 47 33.6**	**+0.6**
KARP	**Karpathos**	**1.71**	**240**	PN	**Pn**	**23 47 34.7**	**-0.4**
KARP	**Karpathos**	**1.71**	**240**	P	**Pn**	**23 47 35.1**	**0.0**
KARP				S	**Sn**	**23 47 55.3**	**-1.1**
KARP	**Karpathos**	**1.71**	**240**	P	**Pn**	**23 47 35.0**	**0.0**
KARP				S	**Sn**	**23 47 54.7**	**-1.7**
KARP	**Karpathos**	**1.71**	**240**	*e*Pn	**Pn**	**23 47 34.7**	**-0.4**
KARP	**Karpathos**	**1.71**	**240**	P	**Pn**	**23 47 35.0**	**0.0**
KARP				S	**Sn**	**23 47 55.6**	**-0.8**
AYDB	**Zeytinkoy-Aydi**	**1.76**	**331**	PN	**Pn**	**23 47 35.8**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	**1.76**	**331**	*e*Pn	**Pn**	**23 47 35.8**	**-0.1**
ISP	**Isparta**	**1.87**	**41**	PN	**Pn**	**23 47 37.6**	**+0.2**
ISP	**Isparta**	**1.87**	**41**	*e*Pn	**Pn**	**23 47 37.6**	**+0.2**
SUTC	**Sutluce-Ispart**	**1.94**	**56**	PN	**Pn**	**23 47 38.4**	**+0.1**
SUTC	**Sutluce-Ispart**	**1.94**	**56**	*e*Pn	**Pn**	**23 47 38.4**	**+0.1**
KULA	**Kula-Manisa**	**2.12**	**353**	PN	**Pn**	**23 47 39.8**	**-0.9**
KULA	**Kula-Manisa**	**2.12**	**353**	*e*Pn	**Pn**	**23 47 39.8**	**-0.9**
SMG	**Samos**	**2.15**	**308**	P	**Pn**	**23 47 41.2**	**+0.1**
SMG	**Samos**	**2.15**	**308**	P	**Pn**	**23 47 41.1**	**0.0**
SMG				S	**Sn**	**23 48 07.0**	**-0.2**
SMG	**Samos**	**2.15**	**308**	P	**Pn**	**23 47 41.1**	**0.0**
SMG				S	**Sn**	**23 48 07.0**	**-0.2**
BLCB	**Balcova**	**2.50**	**323**	PN	**Pn**	**23 47 46.5**	**+0.5**
BLCB	**Balcova**	**2.50**	**323**	*e*Pn	**Pn**	**23 47 46.5**	**+0.5**
ZKR	**Zakros**	**2.59**	**241**	P	**Pn**	**23 47 48.0**	**+0.8**
ZKR	**Zakros**	**2.59**	**241**	P	**Pn**	**23 47 47.7**	**+0.5**
ZKR	**Zakros**	**2.59**	**241**	P	**Pn**	**23 47 47.6**	**+0.4**
URLA	**Izmir**	**2.72**	**316**	PN	**Pn**	**23 47 49.2**	**+0.2**
APE	**Apeiranthos**	**2.84**	**284**	P	**Pn**	**23 47 52.0**	**+1.2**
NPS	**Neapolis**	**2.96**	**248**	P	**Pn**	**23 47 51.4**	**-0.9**
NPS	**Neapolis**	**2.96**	**248**	P	**Pn**	**23 47 52.0**	**-0.3**
CHOS	**Chios island**	**3.05**	**311**	P	**Pn**	**23 47 54.4**	**+0.8**
CHOS	**Chios island**	**3.05**	**311**	P	**Pn**	**23 47 54.3**	**+0.8**
LAST	**Lasithi**	**3.11**	**247**	P	**Pn**	**23 47 54.4**	**0.0**
LAST	**Lasithi**	**3.11**	**247**	P	**Pn**	**23 47 54.5**	**+0.2**

SJA 10 23:48:29.4±0.7, 31.°45S×68.°63W, h100km±3km, ML3.0, MW3.6,3D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZON	**Zonda**	**0.10**	**205**	*e*P	Pn	23 48 44.0	+0.6
ZON				*e*S	Sn	23 48 54.8	+1.0
RTLL	**Cerro Villicun**	**0.18**	**47**	*e*P	Pn	23 48 44.1	+0.5
RTCV	**Cerro Valdivia**	**0.42**	**170**	*e*P	Pn	23 48 45.3	+0.6
RTCV				⇓*e*S	Sn	23 48 56.5	+0.5
AMOG	**MOGNA**	**0.52**	**13**	⇓*e*P	Pn	23 48 46.3	+0.9
RTLS	**Leoncito**	**0.67**	**239**	*e*P	Pn	23 48 47.8	+1.0
RTLS				*e*S	Sn	23 49 01.9	+2.0
RTLS				IAML		23 49 02.3	
	comp=Z,263nm,0.3s						
AUSP	**Uspallata**	**1.01**	**220**	*e*P	Pn	23 48 51.1	+0.9
AUSP				*e*S	Sn	23 49 07.7	+1.9
ASAL	**Salagasta**	**1.15**	**189**	*e*P	Pn	23 48 52.6	+1.0
ASAL				*e*S	Sn	23 49 10.2	+1.9
ACDV	**Cuesta del Vie**	**1.34**	**341**	*e*P	Pn	23 48 54.9	+0.9
ACDV				*e*S	Sn	23 49 14.2	+1.8
ACDV				IAML		23 49 14.7	
	comp=Z,203nm,0.1s						
ARCO	**CERRO ARCO**	**1.41**	**191**	*e*P	Pn	23 48 55.6	+0.9
ARCO				IAML		23 49 16.8	
	comp=Z,188nm,0.2s						
ACAN	**Cantantal**	**1.47**	**124**	*e*P	Pn	23 48 56.2	+0.8
AROD	**Rodeo**	**1.47**	**330**	⇓*e*P	Pn	23 48 56.8	+1.2
AGUA	**GUANDACOL**	**1.96**	**3**	*e*P	Pn	23 49 03.0	+1.4
AGUA				*e*S	Sn	23 49 27.5	+1.4

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*IDC **10** 23:50:20.6±1.2, 36.°52N×1.°60E, h0km, mb3.5/7, mb1 3.5/11, mb1mx3.4/66, mbtmp3.5/11, ML3.8/4, Error ellipse: s-maj=21.9km s-min=21.1km az=141.0*
*ISCJB **10** 23:50:21.6±0.3, 36.°64N±0.°02×1.°55E±0.°02, h14km, mb3.5/7, Error ellipse: s-maj=2.6km s-min=2.4km az=165.6*
*INMG **10** 23:50:21.2±1.1, 36.°23N×1.°76E, h31km, ML3.0, Error ellipse: s-maj=8.4km s-min=3.3km az=154.0*
*CRAAG **10** 23:50:21.5, 36.°50N×1.°66E, Ml3.8*
*IGIL **10** 23:50:22.7, 36.°51N×1.°60E, h1km*
*MDD **10** 23:50:23.7±1.3, 36.°49N×1.°59E, h15km±13km, mb4.5/39, Error ellipse: s-maj=6.8km s-min=5.0km az=176.0, PRXIMO*
*CSEM **10** 23:50:23.3±0.1, 36.°49N×1.°57E, h20km, ML3.7/18, Error ellipse: s-maj=3.6km s-min=2.8km az=165.0*
*LDG **10** 23:50:25.6±0.2, 36.°43N×1.°62E, h30km, Ml3.4/14, Error ellipse: s-maj=5.3km s-min=2.5km az=149.0*
*CNRM **10** 23:50:30.5, 36.°30N×1.°16E, h50km, ML3.6*

ISC 10 23:50:22.3±0.6, 36.°59N±0.°04×1.°57E±0.°03, h14km, n194, σ1.°86/279, mb3.6/7, 1D, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EBNR	**Beni Rached**	**0.30**	**186**	P	**Pg**	**23 50 28.4**	**-0.2**
EBNR	**Beni Rached**	**0.30**	**186**	P	**Pg**	**23 50 28.4**	**-0.2**
ECHA	**Ech Chlef**	**0.47**	**200**	P	**Pg**	**23 50 31.3**	**-0.3**
ECHA	**Ech Chlef**	**0.47**	**200**	P	**Pg**	**23 50 31.3**	**-0.3**
ECHF	**Ech Chlef**	**0.47**	**203**	Pn	**Pg**	**23 50 31.3**	**-0.4**
ECHF	**Ech Chlef**	**0.47**	**203**	Pn	**Pg**	**23 50 31.3**	**-0.4**
EANR	**'Ain N'Sour**	**0.74**	**211**	P	**Pg**	**23 50 36.5**	**-0.3**
EANR	**'Ain N'Sour**	**0.74**	**211**	Pn	**Pg**	**23 50 36.5**	**-0.3**
EANR	**'Ain N'Sour**	**0.74**	**211**	P	**Pg**	**23 50 36.5**	**-0.3**
EMHD	**Djebel Mahouad**	**1.18**	**109**	P	**Pb**	**23 50 43.6**	**-1.0**
EMHD	**Djebel Mahouad**	**1.18**	**109**	Pn	**Pb**	**23 50 43.6**	**-1.0**
EMHD	**Djebel Mahouad**	**1.18**	**109**	P	**Pb**	**23 50 43.6**	**-1.0**
ABA	**Alger-Bouzarea**	**1.20**	**79**	P	**Pb**	**23 50 44.9**	**+0.1**
ABA	**Alger-Bouzarea**	**1.20**	**79**	Pn	**Pb**	**23 50 44.9**	**+0.1**
ABA	**Alger-Bouzarea**	**1.20**	**79**	P	**Pb**	**23 50 44.9**	**+0.1**
ETRT	**Tiaret**	**1.22**	**199**	P	**Pg**	**23 50 45.9**	**+0.1**
OJGS	**Djebel Guires**	**1.27**	**212**	P	**Pn**	**23 50 44.2**	**-1.6**
OJGS	**Djebel Guires**	**1.27**	**212**	Pn	**Pn**	**23 50 44.2**	**-1.6**
OJGS	**Djebel Guires**	**1.27**	**212**	P	**Pn**	**23 50 44.2**	**-1.6**
OJBR	**Djebel Berber**	**1.41**	**225**	P	Pn	23 50 43.0	-4.7
USTO	**Oran**	**1.92**	**244**	P	Pg	23 51 07.0	+7.9
EIBI	**Ibiza**	**2.44**	**356**	⇓Pn	**Pn**	**23 51 02.8**	**+1.1**
EIBI	91nm,0.2s,SNR=18			Sn	**Sn**	**23 51 30.5**	**-0.9**
	306nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**2.44**	**356**	Pn	**Pn**	**23 51 02.8**	**+1.1**
EIBI	91nm,0.2s,SNR=18			Sn	**Sn**	**23 51 30.5**	**-0.9**
	306nm,0.2s,SNR=7.9						
EBEN2	**Beniarda presa**	**2.51**	**327**	Pn	**Pn**	**23 51 04.2**	**+1.5**
EBEN2	45nm,0.1s,SNR=7.9			Sn	**Sn**	**23 51 32.7**	**-0.4**
	124nm,0.2s,SNR=7.9						
EMUR	**La Murta**	**2.57**	**300**	Pn	**Pn**	**23 51 03.6**	**+0.1**
EMUR	32nm,0.3s,SNR=19			Sn	**Sn**	**23 51 34.8**	**+0.2**
	16nm,0.3s,SNR=7.9						
EMUR	**La Murta**	**2.57**	**300**	Pn	**Pn**	**23 51 03.6**	**+0.1**
EMUR	32nm,0.3s,SNR=19			Sn	**Sn**	**23 51 34.8**	**+0.2**
	16nm,0.3s,SNR=7.9						
AFON	**Font Roja**	**2.66**	**322**	Pn	**Pn**	**23 51 06.2**	**+1.3**
AFON	17nm,0.3s,SNR=8.9			Sn	**Sn**	**23 51 37.2**	**+0.1**
	10.0nm,0.2s,SNR=7.9						
AFON	**Font Roja**	**2.66**	**322**	Pn	**Pn**	**23 51 06.2**	**+1.3**
AFON	17nm,0.3s,SNR=8.9			Sn	**Sn**	**23 51 37.2**	**+0.1**
	10.0nm,0.2s,SNR=7.9						
ENIJ	**Nijar**	**3.06**	**278**	Pn	**Pn**	**23 51 09.2**	**-1.0**
ENIJ	17nm,0.4s,SNR=7.9			Sn	**Sn**	**23 51 43.6**	**-3.0**
	10nm,0.2s,SNR=7.9						
ENIJ	**Nijar**	**3.06**	**278**	Pn	**Pn**	**23 51 09.2**	**-1.0**
ENIJ	17nm,0.4s,SNR=7.9			Sn	**Sn**	**23 51 43.6**	**-3.0**
	10nm,0.2s,SNR=7.9						
SET	**Setif**	**3.12**	**96**	P	**Pg**	**23 51 24.0**	**+1.9**
ETOB	**Tobarra**	**3.21**	**311**	Pn	**Pn**	**23 51 14.1**	**+1.7**
ETOB	14nm,0.3s,SNR=28			Sn	**Sn**	**23 51 51.6**	**+1.0**
	18nm,0.3s,SNR=7.3						
ETOB	**Tobarra**	**3.21**	**311**	Pn	**Pn**	**23 51 14.1**	**+1.7**
ETOB	14nm,0.3s,SNR=28			Sn	**Sn**	**23 51 51.6**	**+1.0**
	18nm,0.3s,SNR=7.3						
CKHR	**Kef el Ahmar**	**3.24**	**99**	P	**Pn**	**23 51 13.2**	**+0.4**
CKHR	**Kef el Ahmar**	**3.24**	**99**	Pn	**Pn**	**23 51 13.2**	**+0.4**
CKHR	**Kef el Ahmar**	**3.24**	**99**	P	**Pn**	**23 51 13.2**	**+0.4**
ETOS	**Mallorca**	**3.32**	**17**	Pn	**Pn**	**23 51 13.8**	**-0.1**
ETOS	20nm,0.3s,SNR=28			Sn	**Sn**	**23 51 51.3**	**-1.8**
	28nm,0.4s,SNR=10						
ETOS	**Mallorca**	**3.32**	**17**	Pn	**Pn**	**23 51 13.8**	**-0.1**
ETOS	20nm,0.3s,SNR=28			Sn	**Sn**	**23 51 51.3**	**-1.8**
	28nm,0.4s,SNR=10						
DFRA	**Djebel Bou Aff**	**3.47**	**89**	P	**Pn**	**23 51 16.3**	**+0.3**
DFRA	**Djebel Bou Aff**	**3.47**	**89**	Pn	**Pn**	**23 51 16.3**	**+0.3**
DFRA	**Djebel Bou Aff**	**3.47**	**89**	P	**Pn**	**23 51 16.3**	**+0.3**
SESP	**Santiago Espad**	**3.62**	**296**	Pn	**Pn**	**23 51 19.9**	**+1.8**
SESP	31nm,0.3s,SNR=7.9			Sn	**Sn**	**23 52 01.8**	**+1.1**
	120nm,0.4s,SNR=7.9						
SESP	**Santiago Espad**	**3.62**	**296**	Pn	**Pn**	**23 51 19.9**	**+1.8**
SESP	31nm,0.3s,SNR=7.9			Sn	**Sn**	**23 52 01.8**	**+1.1**
	120nm,0.4s,SNR=7.9						
SESP	**Santiago Espad**	**3.62**	**296**	P	**Pn**	**23 51 22.3**	**+4.2**
SESP				S	**Sb**	**23 52 03.1**	**-6.8**
GORA	**Gorafe**	**3.79**	**285**	Sn	**Sn**	**23 52 07.2**	**+2.3**
	128nm,0.7s,SNR=7.9						
GORA	**Gorafe**	**3.79**	**285**	Sn	**Sn**	**23 52 07.2**	**+2.3**
	128nm,0.7s,SNR=7.9						
EQES	**Quesada**	**3.90**	**289**	Pn	**Pn**	**23 51 23.8**	**+1.9**
EQES	17nm,0.4s,SNR=28			Sn	**Sn**	**23 52 10.1**	**+2.6**
	32nm,0.3s,SNR=14						
EQES	**Quesada**	**3.90**	**289**	Pn	**Pn**	**23 51 23.8**	**+1.9**
EQES	17nm,0.4s,SNR=28			Sn	**Sn**	**23 52 10.1**	**+2.6**
	32nm,0.3s,SNR=14						
CTEI	**Djebel Teioual**	**3.94**	**96**	P	**Pn**	**23 51 23.8**	**+1.3**
CTEI	**Djebel Teioual**	**3.94**	**96**	P	**Pn**	**23 51 23.8**	**+1.3**
CTEI	**Djebel Teioual**	**3.94**	**96**	P	**Pn**	**23 51 23.8**	**+1.3**
EQUE	**Quentar**	**4.06**	**280**	Pn	**Pn**	**23 51 25.0**	**+0.8**
EQUE	11nm,0.5s,SNR=21			Sn	**Sn**	**23 52 14.0**	**+2.5**
	44nm,0.7s,SNR=7.9						
EQUE	**Quentar**	**4.06**	**280**	Pn	**Pn**	**23 51 25.0**	**+0.8**
EQUE	11nm,0.5s,SNR=21			Sn	**Sn**	**23 52 14.0**	**+2.5**
	44nm,0.7s,SNR=7.9						
EMOS	**Mosqueruela**	**4.09**	**338**	Pn	**Pn**	**23 51 26.3**	**+1.6**
EMOS	27nm,0.2s,SNR=297			Sn	**Sn**	**23 52 11.4**	**-1.0**
	33nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**4.09**	**338**	Pn	**Pn**	**23 51 26.3**	**+1.6**
EMOS	27nm,0.2s,SNR=297			Sn	**Sn**	**23 52 11.4**	**-1.0**
	33nm,0.2s,SNR=7.9						
ELGU	**Los Guajares,**	**4.18**	**275**	Pn	**Pn**	**23 51 26.6**	**+0.8**
ELGU	7.5nm,0.3s,SNR=7.9			Sn	**Sn**	**23 52 13.9**	**-0.6**
	22nm,0.3s,SNR=7.9						
ELGU	**Los Guajares,**	**4.18**	**275**	Pn	**Pn**	**23 51 26.6**	**+0.8**
ELGU	7.5nm,0.3s,SNR=7.9			Sn	**Sn**	**23 52 13.9**	**-0.6**
	22nm,0.3s,SNR=7.9						
CAEH	**'Ain El Ouahch**	**4.25**	**86**	P	**Pn**	**23 51 26.6**	**-0.1**
CAEH	**'Ain El Ouahch**	**4.25**	**86**	Pn	**Pn**	**23 51 26.6**	**-0.1**
CAEH	**'Ain El Ouahch**	**4.25**	**86**	P	**Pn**	**23 51 26.6**	**-0.1**
EBR	**Ebro Roquetas**	**4.31**	**349**	Pn	**Pn**	**23 51 29.1**	**+1.7**
EBR	143nm,0.5s,SNR=7.9			Sn	**Sn**	**23 52 16.2**	**-1.2**
	110nm,0.3s,SNR=7.9						
EBR	**Ebro Roquetas**	**4.31**	**349**	Pn	**Pn**	**23 51 29.1**	**+1.7**
EBR	143nm,0.5s,SNR=7.9			Sn	**Sn**	**23 52 16.2**	**-1.2**
	110nm,0.3s,SNR=7.9						
ERTA	**Horta de San J**	**4.46**	**348**	Pn	**Pn**	**23 51 31.1**	**+1.5**
ERTA	19nm,0.3s,SNR=57			Sn	**Sn**	**23 52 20.4**	**-1.0**
	5.8nm,0.4s,SNR=7.9						
ERTA	**Horta de San J**	**4.46**	**348**	Pn	**Pn**	**23 51 31.1**	**+1.5**
ERTA	19nm,0.3s,SNR=57			Sn	**Sn**	**23 52 20.4**	**-1.0**
	5.8nm,0.4s,SNR=7.9						
EGOR	**Sierra Gorda,**	**4.58**	**278**	Pn	**Pn**	**23 51 34.3**	**+2.9**
EGOR	5.8nm,0.4s,SNR=7.9			Sn	**Sn**	**23 52 28.0**	**+3.5**
	25nm,0.4s,SNR=7.9						
EGOR	**Sierra Gorda,**	**4.58**	**278**	Pn	**Pn**	**23 51 34.3**	**+2.9**
EGOR	5.8nm,0.4s,SNR=7.9			Sn	**Sn**	**23 52 28.0**	**+3.5**
	25nm,0.4s,SNR=7.9						
CMAH	**Djebel Manchou**	**4.71**	**88**	P	**Pn**	**23 51 32.8**	**-0.2**
CMAH	**Djebel Manchou**	**4.71**	**88**	Pn	**Pn**	**23 51 32.8**	**-0.2**
CMAH	**Djebel Manchou**	**4.71**	**88**	P	**Pn**	**23 51 32.8**	**-0.2**
EPOB	**Poblet**	**4.77**	**356**	Pn	**Pn**	**23 51 35.0**	**+1.2**
EPOB	25nm,0.3s,SNR=58			Sn	**Sn**	**23 52 25.3**	**-3.7**
	6.5nm,0.1s,SNR=7.9						
EPOB	**Poblet**	**4.77**	**356**	Pn	**Pn**	**23 51 35.0**	**+1.2**
EPOB	25nm,0.3s,SNR=58			Sn	**Sn**	**23 52 25.3**	**-3.7**
	6.5nm,0.1s,SNR=7.9						
ETOR	**Torete**	**5.08**	**327**	Pn	**Pn**	**23 51 41.5**	**+3.3**
ETOR	9.9nm,0.5s,SNR=7.9			Sn	**Sn**	**23 52 39.5**	**+2.7**
	6.5nm,0.4s,SNR=7.9						
ETOR	**Torete**	**5.08**	**327**	Pn	**Pn**	**23 51 41.5**	**+3.3**
ETOR	9.9nm,0.5s,SNR=7.9			Sn	**Sn**	**23 52 39.5**	**+2.7**
	6.5nm,0.4s,SNR=7.9						
EMIJ	**Mijas**	**5.10**	**272**	Pn	**Pn**	**23 51 38.1**	**-0.3**
EMIJ	6.5nm,0.4s,SNR=7.9			Sn	**

MDT Midelt 6.33 235 Pn **Pn 23 51 55.5 +0.1**
0.3nm,0.3s,baz=50,slow=8.7,SNR=11
KEST Kesra 6.35 95 Pn **Pn 23 51 55.9 +0.3**
2.5nm,0.3s,baz=190,slow=7.2,SNR=49
KEST Sn **Sn 23 53 06.6 -1.3**
0.3nm,0.3s,baz=257,slow=16,SNR=1.8
CZD Col de Zad 6.49 239 P **Pn 23 51 58.1 +0.4**
EPF Esparros 6.50 352 *e*Pn **Pn 23 52 00.5 +2.9**
SNR=1.0
EPF *e*Sn **Sn 23 53 10.0 -1.6**
7.2nm,0.3s,SNR=1.0
EPF Esparros 6.50 352 *e*Pn **Pn 23 52 00.5 +2.9**
SNR=1.0
ETSF Etsaut 6.51 346 *e*Pn **Pn 23 52 00.1 +2.4**
SNR=1.0
ETSF *e*Sn **Sn 23 53 10.6 -1.2**
4.1nm,0.3s,SNR=1.0
ETSF Etsaut 6.51 346 *e*Pn **Pn 23 52 00.1 +2.4**
SNR=1.0
IELO Elcoad 6.61 342 Pn **Pn 23 52 01.5 +2.4**
4.0nm,0.3s,SNR=7.9
IELO Sn **Sn 23 53 11.3 -2.9**
9.4nm,0.5s,SNR=7.9
IELO Elcoad 6.61 342 Pn **Pn 23 52 01.5 +2.4**
4.0nm,0.3s,SNR=7.9
EARA Aranguren 6.63 340 Pn **Pn 23 52 01.4 +2.0**
3.8nm,0.3s,SNR=4.0
EARA Aranguren 6.63 340 Pn **Pn 23 52 01.4 +2.0**
3.8nm,0.3s,SNR=4.0
EORO Oroz-Betelu 6.67 341 Pn **Pn 23 52 02.6 +2.6**
5.0nm,0.5s,SNR=13
EORO Sn **Sn 23 53 11.8 -4.0**
11nm,0.4s,SNR=7.9
EORO Oroz-Betelu 6.67 341 Pn **Pn 23 52 02.6 +2.6**
5.0nm,0.5s,SNR=13
EMIN Mina Concepcio 6.68 283 Pn **Pn 23 52 00.6 +0.5**
1.5nm,0.2s,SNR=8.2
EMIN Sn **Sn 23 53 13.9 -2.1**
3.0nm,0.5s,SNR=7.9
EMIN Mina Concepcio 6.68 283 Pn **Pn 23 52 00.6 +0.5**
1.5nm,0.2s,SNR=8.2
EMIN Sn **Sn 23 53 13.9 -2.1**
3.0nm,0.5s,SNR=7.9
ATE Arette 6.72 346 Pn **Pn 23 52 03.1 +2.6**
6.5nm,0.5s,SNR=7.9
ATE Sn **Sn 23 53 15.1 -1.8**
7.3nm,0.3s,SNR=7.9
MTLF Montolieu 6.76 4 *e*Pn **Pn 23 52 03.3 +2.2**
SNR=1.0
MTLF *e*Sn **Sn 23 53 15.1 -2.8**
1.5nm,0.2s
MTLF Montolieu 6.76 4 *e*Pn **Pn 23 52 03.3 +2.2**
SNR=1.0
SJPF Ste Jean 6.86 343 *e*Pn **Pn 23 52 05.0 +2.5**
SNR=1.0
SJPF *e*Sn **Sn 23 53 18.2 -2.1**
2.6nm,0.2s,SNR=1.0
EALK Alkurruntz 7.03 341 Pn **Pn 23 52 07.9 +3.0**
6.2nm,0.3s,SNR=23
EALK Sn **Sn 23 53 23.1 -1.5**
44nm,1.0s,SNR=7.9
PBAR Barrancos 7.03 286 *e*Pn **Pn 23 52 05.9 +1.0**
PBAR *e*Sn **Sn 23 53 22.7 -1.9**
PBAR Barrancos 7.03 286 *e*Pn **Pn 23 52 05.9 +1.0**
PBAR *e*Sn **Sn 23 53 22.7 -1.9**
EBAD Badajoz 7.14 290 Pn **Pn 23 52 07.2 +0.9**
0.9nm,0.3s,SNR=5.0
EBAD Sn **Sn 23 53 24.8 -2.5**
1.9nm,0.3s,SNR=4.9
EBAD Badajoz 7.14 290 Pn **Pn 23 52 07.2 +0.9**
0.9nm,0.3s,SNR=5.0
PVAQ Vaqueiros 7.47 279 *e*Pn **Pn 23 52 10.7 -0.2**
PVAQ *e*Sn **Sn 23 53 33.3 -2.2**
PVAQ Vaqueiros 7.47 279 *e*Pn **Pn 23 52 10.7 -0.2**
PVAQ *e*Sn **Sn 23 53 33.3 -2.2**
PESTR Estremoz 7.61 290 *e*Pn **Pn 23 52 15.3 +2.6**
PESTR *e*Sn **Sn 23 53 37.6 -1.1**
PESTR Estremoz 7.61 290 *e*Pn **Pn 23 52 15.3 +2.6**
PESTR *e*Sn **Sn 23 53 37.6 -1.1**
PMRV Marv??o 7.62 295 *e*Pn **Pn 23 52 14.4 +1.5**
PMRV *e*Sn **Sn 23 53 38.3 -0.8**
PMRV Marv??o 7.62 295 *e*Pn **Pn 23 52 14.4 +1.5**
PMRV *e*Sn **Sn 23 53 38.3 -0.8**
PBDV Barranco-do-Ve 7.64 278 *e*Pn **Pn 23 52 13.6 +0.4**
PBDV Barranco-do-Ve 7.64 278 *e*Pn **Pn 23 52 13.6 +0.4**
ELAN Lanestosa 7.66 331 Pn **Pn 23 52 17.1 +3.5**
5.3nm,0.2s,SNR=56
ELAN Sn **Sn 23 53 41.1 +1.0**
14nm,0.7s,SNR=7.9
LASF Ste Croix 7.68 12 *e*Pn **Pn 23 52 15.4 +1.7**
SNR=1.0
LASF *e*Sn **Sn 23 53 36.9 -3.6**
1.8nm,0.2s,SNR=1.0
LASF Ste Croix 7.68 12 *e*Pn **Pn 23 52 15.4 +1.7**
SNR=1.0
LMR La Mourre 7.73 28 *e*Pn **Pn 23 52 15.4 +1.0**
SNR=1.0
LMR *e*Sn **Sn 23 53 37.1 -4.6**
4.7nm,0.2s,SNR=1.0
LMR La Mourre 7.73 28 *e*Pn **Pn 23 52 15.4 +1.0**
SNR=1.0
EVO Evora 7.85 287 *e*Sn **Sn 23 53 42.7 -2.1**
EVO Evora 7.85 287 *e*Sn **Sn 23 53 42.7 -2.1**
MESJ Messejana 7.91 282 *e*P **Pn 23 52 16.0 -0.9**
MESJ Messejana 7.91 282 *e*Pn **Pn 23 52 17.0 +0.1**
MESJ Messejana 7.91 282 *e*Pn **Pn 23 52 17.0 +0.1**
FRF La Foret Royal 7.97 28 *e*Pn **Pn 23 52 18.4 +0.6**
SNR=1.0
FRF *e*Sn **Sn 23 53 44.3 -3.4**
5.2nm,0.3s
FRF La Foret Royal 7.97 28 *e*Pn **Pn 23 52 18.4 +0.6**
SNR=1.0
SMRF Simiane la Rot 7.99 21 *e*Pn **Pn 23 52 20.6 +2.6**
SMRF *e*Sn **Sn 23 53 45.3 -2.8**
0.8nm,0.2s
SMRF Simiane la Rot 7.99 21 *e*Pn **Pn 23 52 20.6 +2.6**
PMTG Montargil 8.13 291 *e*Pn **Pn 23 52 20.7 +0.7**
PMTG *e*Sn **Sn 23 53 49.8 -1.9**
PMTG Montargil 8.13 291 *e*Pn **Pn 23 52 20.7 +0.7**
PMTG *e*Sn **Sn 23 53 49.8 -1.9**
PNCL Nicolau / Gran 8.18 284 *e*Pn **Pn 23 52 20.9 +0.2**
PNCL Nicolau / Gran 8.18 284 *e*Pn **Pn 23 52 20.9 +0.2**
PGF Pioggiola 8.26 42 *e*Pn **Pn 23 52 22.9 +1.1**
SNR=1.0
PGF Pioggiola 8.26 42 *e*Pn **Pn 23 52 22.9 +1.1**
SNR=1.0
CAF Calviac 8.34 2 *e*Pn **Pn 23 52 25.5 +2.8**
SNR=1.0
CAF *e*Sn **Sn 23 53 54.2 -2.5**
0.9nm,0.2s,SNR=1.0
CAF Calviac 8.34 2 *e*Pn **Pn 23 52 25.5 +2.8**
SNR=1.0
LFF La Frestale 8.36 356 *e*Pn **Pn 23 52 24.6 +1.5**
SNR=1.0
LFF *e*Sn **Sn 23 53 53.6 -3.7**
3.1nm,0.3s,SNR=1.0
LFF La Frestale 8.36 356 *e*Pn **Pn 23 52 24.6 +1.5**
SNR=1.0
EARI Arriondas 8.48 324 Pn **Pn 23 52 27.6 +2.8**
4.6nm,0.3s,SNR=19
EARI Sn **Sn 23 53 59.5 -0.9**
2.3nm,0.6s,SNR=7.9
SBF Sospel 8.54 30 *e*Pn **Pn 23 52 26.0 +0.5**
SBF *e*Sn **Sn 23 53 57.0 -4.6**
1.5nm,0.2s
SBF Sospel 8.54 30 *e*Pn **Pn 23 52 26.0 +0.5**
PCAS Casmilo, Conde 8.63 297 *e*Pn **Pn 23 52 29.2 +2.4**
PCAS Casmilo, Conde 8.63 297 *e*Pn **Pn 23 52 29.2 +2.4**
RJF Les Rejaudoux 8.71 360 *e*Pn **Pn 23 52 29.4 +1.6**
SNR=1.0
RJF *e*Sn **Sn 23 54 02.7 -3.0**
1.3nm,0.2s,SNR=1.0
RJF Les Rejaudoux 8.71 360 *e*Pn **Pn 23 52 29.4 +1.6**
SNR=1.0
ORIF Oris-en-Rattie 8.94 20 *e*Pn **Pn 23 52 32.8 +1.7**
ORIF Oris-en-Rattie 8.94 20 *e*Pn **Pn 23 52 32.8 +1.7**
MBDF Montbardon 9.04 24 *e*Pn **Pn 23 52 33.8 +1.3**
SNR=1.0
MBDF Montbardon 9.04 24 *e*Pn **Pn 23 52 33.8 +1.3**
SNR=1.0
EPON Pontenova 9.48 318 Pn **Pn 23 52 39.9 +1.4**
5.6nm,0.6s,SNR=5.7
LPG La Plagne 9.72 22 *e*Pn **Pn 23 52 43.5 +1.6**
LPG La Plagne 9.72 22 *e*Pn **Pn 23 52 43.5 +1.6**
LPL La Plagne 9.73 22 *e*Pn **Pn 23 52 43.5 +1.5**
LPL La Plagne 9.73 22 *e*Pn **Pn 23 52 43.5 +1.5**

BGF Bois d'Agland 10.00 5 *e*Pn **Pn 23 52 47.9 +2.3**
SNR=1.0
BGF Bois d'Agland 10.00 5 *e*Pn **Pn 23 52 47.9 +2.3**
SNR=1.0
MFF Saint Martin d 10.08 353 *e*Pn **Pn 23 52 47.9 +1.2**
SNR=1.0
MFF *e*Sn **Sn 23 54 35.2 -4.3**
2.0nm,0.3s
MFF Saint Martin d 10.08 353 *e*Pn **Pn 23 52 47.9 +1.2**
SNR=1.0
QUIF Quistinic 11.85 344 *e*Pn **Pn 23 53 12.2 +1.5**
SNR=1.0
QUIF Quistinic 11.85 344 *e*Pn **Pn 23 53 12.2 +1.5**
SNR=1.0
SGMF Saint Gilles 12.04 347 *e*Pn **Pn 23 53 15.0 +1.5**
SNR=1.0
SGMF Saint Gilles 12.04 347 Pn **Pn 23 53 15.0 +1.5**
SGMF Saint Gilles 12.04 347 *e*Pn **Pn 23 53 15.0 +1.5**
SNR=1.0
LDF La Druitiere 12.06 355 *e*Pn **Pn 23 53 14.4 +0.7**
SNR=1.0
LDF La Druitiere 12.06 355 *e*Pn **Pn 23 53 14.4 +0.7**
SNR=1.0
FLN La Foliniere 12.26 354 *e*Pn **Pn 23 53 17.9 +1.5**
SNR=1.0
FLN La Foliniere 12.26 354 Pn **Pn 23 53 17.9 +1.5**
FLN La Foliniere 12.26 354 *e*Pn **Pn 23 53 17.9 +1.5**
SNR=1.0
EKA Eskdalemuir Ar 19.02 352 Pn **Pn 23 54 47.3 +2.9**
baz=166,slow=14,SNR=4.2
TORD Torodi Ar. Bea 23.34 180 P **P 23 55 29.7 -0.6**
1.1nm,1.0s,baz=353,slow=11,SNR=4.3
AKASG Malin Array Be 24.30 46 P **P 23 55 40.0 +0.8**
0.2nm,0.4s,baz=244,slow=9.5,SNR=2.6
HFS Hagfors 24.82 15 P **P 23 55 44.5 +0.8**
1.0nm,0.7s,baz=189,slow=8.2,SNR=2.5
FINES FINESS Array B 29.26 24 P **P 23 56 24.5 +0.8**
1.2nm,0.8s,baz=216,slow=6.7,SNR=3.7
ARCES ARCESS Array B 35.48 14 P **P 23 57 18.9 +0.9**
1.1nm,0.7s,baz=224,slow=8.5,SNR=4.4
KURBB Kurchatov Arra 55.03 49 P **P 23 59 53.0 -0.2**
0.4nm,0.4s,baz=297,slow=8.7,SNR=5.0
MKAR Makanchi Array 58.64 53 P **P 00 00 20.0 +1.0**
0.2nm,0.6s,baz=298,slow=5.7,SNR=3.7

GUC ***10*** *23:50:19.8±0.6, 35°.80S×73°.53W, h39km±5km, ML3.6*
ISCJB ***10*** *23:50:21.2±0.8, 35°.81S±0°.05×73°.57W±0°.08, h35km, mb3.9/7, MS3.6/1, Error ellipse: s-maj=9.4km s-min=7.0km az=171.9*
IDC ***10*** *23:50:30.5±3.1, 35°.98S×72°.04W, h116km±29km, mb3.5/6, mb1 3.6/8, mb1mx3.4/32, mbtmp3.8/8, MS3.3/3, Ms1 3.3/3, ms1mx3.0/25, Error ellipse: s-maj=40.0km s-min=16.2km az=85.0*
ISC 10 23:50:23.1±0.9, 35°.81S±0°.05×73°.41W±0°.10, h35km, n18, σ1§89/18, mb4.1/7, 2C, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COCH	**Cobquecura**	**0.59**	**123**	⇑*i*P	**Pn**	**23 50 33.7**	**-1.4**
COCH				*i* S	**Sn**	**23 50 44.0**	**+0.5**
COCH				IAML		23 50 46.1	
	comp=E,4μm,0.6s						
CCSP	**San Pedro de C**	**1.06**	**167**	*e*S	**Sn**	**23 50 54.9**	**-0.1**
CCSP				IAML		23 51 02.6	
	comp=N,2μm,0.6s						
CCHI	**Chillan**	**1.33**	**127**	⇑*i*P	**Pn**	**23 50 45.0**	**-0.2**
CCHI				*i* S	**Sn**	**23 51 04.4**	**+2.6**
GO05	**HualaæØ**	**1.45**	**57**	*e*P	**Pn**	**23 50 47.0**	**+0.2**
GO05				*i* S	**Sn**	**23 51 06.8**	**+2.2**
GO05				IAML		23 51 13.8	
	comp=E,2μm,0.6s						
FCH	**Farellones**	**3.57**	**47**	*e*P	**Pn**	**23 51 14.9**	**-1.4**
PLCA	**Paso Flores**	**5.41**	**156**	P	**Pn**	**23 51 41.8**	**+0.6**
	comp=E,1.0nm,0.3s,baz=350,slow=11,SNR=29						
PLCA				LR	LR	23 53 48.0	
	comp=E,130nm,18.6s,baz=346,slow=40						
CPUP	**Villa Florida**	**16.68**	**60**	LR	LR	23 59 50.7	
	comp=E,120nm,18.7s,baz=238,slow=35						
LPAZ	**La Paz**	**20.00**	**15**	P	**Pn**	**23 54 55.1**	**-0.1**
	comp=E,0.1nm,0.3s,baz=170,slow=11,SNR=4.5						
SIV	**San Ignacio**	**22.60**	**32**	P	**P**	**23 55 16.7**	**-4.1**
	comp=E,1.8nm,0.9s,baz=233,slow=11,SNR=7.0						
SIV				LR	LR	00 06 15.5	
	comp=E,197nm,18.5s,baz=246,slow=43						
VNA3	**Neumayer Olymp**	**48.12**	**157**	P	**P**	**23 59 00.3**	**+1.2**
VNA2	**Neumayer--Watz**	**48.80**	**156**	P	**P**	**23 59 05.9**	**+1.6**
	baz=288,slow=8.6						
SNAA	**Sanae**	**50.35**	**157**	P	**P**	**23 59 14.7**	**-1.5**
SNAA	**Sanae**	**50.35**	**157**	P	P	23 59 10.6	-5.5
	comp=E,0.8nm,0.4s,baz=255,slow=17,SNR=10.0						
QSPA	**South Pole Qui**	**54.43**	**180**	P	**P**	**23 59 44.4**	**-2.2**
	comp=E,3.1nm,1.0s,baz=136,slow=13,SNR=2.5						
TXAR	**Lajitas Array**	**70.78**	**332**	P	**P**	**00 01 36.9**	**+1.0**
	comp=E,0.3nm,1.0s,baz=154,slow=6.5,SNR=2.5						
KOWA	**Kowa**	**82.40**	**66**	P	**P**	**00 02 41.5**	**-0.3**
	comp=E,1.4nm,0.6s,baz=253,slow=11,SNR=5.4						
PDAR	**Pinedale Array**	**84.88**	**334**	P	**P**	**00 02 57.2**	**+3.0**
	comp=E,0.2nm,0.3s,baz=144,slow=9.8,SNR=3.0						
MATP	**Matopo**	**87.43**	**113**	P	P	00 02 59.9	-7.5
	comp=E,2.2nm,0.6s,baz=253,slow=19,SNR=16						

ISCJB ***10*** *23:51:25.7±0.3, 5°.85S±0°.03×130°.08E±0°.04, h200km, mb4.1/16, Error ellipse: s-maj=5.7km s-min=4.0km az=166.6*
NEIC ***10*** *23:51:27.2±0.7, 5°.80S×130°.06E, h197km±8km, mb4.4/9, Error ellipse: s-maj=10.0km s-min=6.6km az=58.0*
IDC ***10*** *23:51:27.9±1.8, 5°.74S×130°.14E, h206km±19km, mb3.7/9, mb1 3.8/13, mb1mx3.5/50, mbtmp4.3/13, MS3.8/1, Ms1 3.8/1, ms1mx2.5/48, Error ellipse: s-maj=20.8km s-min=14.1km az=64.0*
DJA ***10*** *23:52:20.5±0.4, 3°.S±4°.×12°.7E±°, h10km, M4.3/6, mB5.6/1, mb4.9/4, MLv4.0/6, Mw(mB)5.1/1*
ISC 10 23:51:26.7±0.5, 5°.84S±0°.04×130°.08E±0°.06, h200km, n48, σ1§94/53, mb4.2/16, 1C, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.45**	**150**	*e*Pn	**Pn**	**23 52 09.9**	**-0.2**
SAUI				*e*Sn	**Sn**	**23 52 42.5**	**-1.5**
MSAI	**Masohi**	**2.73**	**335**	P	**Sn**	**23 52 46.8**	**-2.9**
FAKI	**Fak Fak**	**3.62**	**37**	*e*Pn	**Pn**	**23 52 24.3**	**+0.4**
FAKI				*e*Sn	**Sn**	**23 53 07.3**	**-1.4**
NLAI	**Namlea**	**3.94**	**311**	P	Pn	23 52 33.0	+5.2
SIJI	**Sorong**	**5.08**	**14**	P	**Pn**	**23 52 42.0**	**-0.2**
	13nm,0.3s,baz=4.0,slow=1.1,SNR=63						
SIJI				S	**Sn**	**23 53 36.1**	**-5.7**
	23nm,0.3s,baz=217,slow=20,SNR=15						
SANI	**Sanana**	**5.55**	**313**	P	**Pn**	**23 52 49.1**	**+0.8**
LBMI	**Labuha**	**5.78**	**333**	P	**Pn**	**23 52 51.1**	**-0.1**
RKPI	**Ransiki, Papua**	**5.93**	**44**	P	**Sn**	**23 53 58.0**	**-3.6**
SOEI	**Soe**	**6.95**	**236**	*e*Pn	**Pn**	**23 53 06.5**	**0.0**
SOEI				*e*Sn	**Sn**	**23 54 23.5**	**-2.1**
MTN	**Manton Dam**	**7.04**	**172**	*e*Pn	**Pn**	**23 53 08.0**	**+0.5**
BATI	**Baumata**	**7.69**	**235**	P	**Pn**	**23 53 17.5**	**+1.4**
	7.1nm,0.3s,baz=82,slow=8.2,SNR=4.8						
BATI				S	**Sn**	**23 54 41.0**	**-2.1**
	15nm,0.3s,baz=47,slow=20,SNR=8.5						
MRSI	**Marisa**	**10.27**	**307**	P	**Pn**	**23 53 50.2**	**+0.7**
	32nm,0.6s						
WRAB	**Tennant Creek**	**14.61**	**164**	*e*Pn	**Pn**	**23 54 45.1**	**+0.8**
WRA	**Warramunga Arr**	**14.62**	**164**	P	**Pn**	**23 54 42.6**	**-1.8**
	0.5nm,0.3s,baz=352,slow=11,SNR=14						
WRA				S	**S**	**23 57 19.3**	**-7.6**
	3.4nm,0.3s,baz=324,slow=27,SNR=9.1						
WB2	**Warramunga Arr**	**14.62**	**164**	*e*Pn	**Pn**	**23 54 44.7**	**+0.3**
COEN	**Coen**	**15.20**	**123**	*e*Pn	**P**	**23 54 53.0**	**+1.0**
	15nm,1.1s						
MYLDM	**Lahad Datu**	**15.92**	**313**	*e*P	**Pn**	**23 55 00.2**	**-0.1**
	24nm,0.9s						
PMG	**Port Moresby**	**17.29**	**103**	P	**P**	**23 55 15.5**	**+0.5**
	0.9nm,0.3s,baz=252,slow=19,SNR=2.5						
PMG	**Port Moresby**	**17.29**	**103**	*e*P	**Pn**	**23 55 17.8**	**+1.2**
	15nm,0.9s						
AS31	**Alice Springs**	**18.10**	**169**	*e*P	**Pn**	**23 55 25.9**	**-0.2**
	6.1nm,0.6s						
ASAR	**Alice Springs**	**18.10**	**169**	P	**Pn**	**23 55 26.1**	**0.0**
	1.3nm,0.3s,baz=352,slow=11,SNR=78						
ASAR				S	**S**	**23 58 36.7**	**-4.1**
	0.3nm,0.3s,baz=349,slow=21,SNR=7.8						
AS01	**Alice Springs**	**18.11**	**169**	*e*P	**P**	**23 55 25.7**	**+1.8**
KKM	**Kota Kinabalu**	**18.19**	**310**	*e*P	**P**	**23 55 25.8**	**+0.8**
	39nm,0.7s						

SBUM Sibu 19.65 294 *e*P **Pn 23 55 43.1 -1.4**
17nm,1.0s
CTA Charters Tower 21.16 133 LR LR 00 05 01.2
comp=Z,246nm,20.0s,baz=248,slow=38
STKA Stephens Creek 28.05 159 P **P 23 57 00.8 +1.2**
0.8nm,0.5s,baz=344,slow=12,SNR=2.9
LHI Lord Howe Isla 37.27 137 *e*P **P 23 58 22.8 +3.3**
280nm,1.3s
CMAR Chiang Mai Arr 39.06 309 P **P 23 58 35.1 +0.5**
2.7nm,0.4s,baz=138,slow=7.9,SNR=8.5
CHTO Chiang Mai 39.27 309 *e*P **P 23 58 36.6 +0.3**
5.6nm,0.8s
CD2 Chengdu 44.38 327 P **P 23 59 18.1 +0.5**
CD2 pmax pmax
comp=Z,16nm,0.6s
LZH Lanzhou 48.43 331 ⇑P **P 23 59 51.3 +2.1**
LZH pmax pmax
comp=Z,18nm,1.3s
LZH pmax pmax
comp=Z,42nm,6.0s
HHC Hu-ho-hao-te 49.48 342 *e*P **P 23 59 59.7 +2.8**
HHC pmax pmax
comp=Z,9.0nm,0.9s
HHC pmax pmax
comp=Z,61nm,6.0s
SONM Songino Array 57.38 341 P **P 00 00 55.2 +0.9**
comp=Z,1.0nm,0.5s,baz=161,slow=7.3,SNR=7.1
SONA1 Songino Array 57.38 341 *e*P **P 00 00 54.9 +0.6**
WMQ Urumqi 62.48 327 P **P 00 01 29.2 +0.2**
WMQ pmax pmax
comp=Z,22nm,0.9s
WMQ pmax pmax
comp=Z,180nm,4.3s
WMQ LR LR
comp=N,130nm,21.3s
WMQ LR LR
comp=Z,56nm,17.9s
PETK Petropavlovsk- 63.20 18 *e*P **P 00 01 33.5 -0.1**
MK01 Makanchi Array 67.29 327 *e*P **P 00 02 00.3 +0.4**
MK31 Makanchi Array 67.31 327 *e*P **P 00 02 00.7 +0.6**
MKAR Makanchi Array 67.31 327 P **P 00 02 00.8 +0.8**
comp=Z,4.5nm,0.7s,baz=123,slow=8.0,SNR=39
MKAR Makanchi Array 67.31 327 *e*P **P 00 02 00.7 +0.6**
comp=Z,22nm,0.6s
MAKZ Makanchi 67.49 326 *e*P **P 00 02 01.9 +0.7**
comp=Z,5.5nm,1.2s
ZALV Zalesovo Beam 70.59 334 P **P 00 02 19.4 -0.6**
comp=Z,1.7nm,0.6s,baz=127,slow=6.3,SNR=7.1
KURBB Kurchatov Arra 71.57 328 P **P 00 02 26.2 +0.2**
comp=Z,1.7nm,0.5s,baz=128,slow=4.9,SNR=17
KURK Kurchatov 71.58 328 P **P 00 02 26.2 +0.1**
WSAR Wadi Sarin 75.44 296 P **P 00 02 49.6 +0.4**
comp=Z,3.6nm,1.1s,baz=100,slow=6.1,SNR=3.2
BVAR Borovoye Array 77.13 328 P **P 00 02 57.7 -0.4**
comp=Z,0.7nm,0.5s,baz=120,slow=8.5,SNR=4.6
RAYN Ar Rayn 87.35 294 *e*P **P 00 03 51.4 -0.4**
ILAR Eielson Array 92.27 25 P **P 00 04 12.3 -1.5**
comp=Z,0.4nm,0.6s,baz=284,slow=3.6,SNR=3.4

IDC 10 23:56:34.3±1.3, 27°.87S×177°.10W, h0km, mb3.6/2, mb1 3.8/2, mb1mx3.5/41, mbtmp3.6/2, MS3.5/1, Ms1 3.5/1, ms1mx2.7/35, Error ellipse: s-maj=65.6km s-min=41.0km az=29.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPT	**Papeete**	**27.32**	**74**	LR	LR	00 12 35.5	
	comp=Z,82nm,18.6s,baz=8.0,slow=35						
ASAR	**Alice Springs**	**44.10**	**264**	P	P	00 04 44.1	-0.5
	0.5nm,0.8s,baz=94,slow=8.8,SNR=2.8						
WRA	**Warramunga Arr**	**44.86**	**269**	P	P	00 04 50.8	+0.1
	0.8nm,0.7s,baz=106,slow=8.2,SNR=5.1						
MKAR	**Makanchi Array**	**116.74**	**311**	PKP	PKPdf	00 15 19.3	-1.2
	0.2nm,0.6s,baz=70,slow=4.7,SNR=2.3						
H10S3	**ASCENSION HYDR**	**139.64**	**153**	T	T	02 52 31.9	
	baz=205						
H10S2	**ASCENSION HYDR**	**139.64**	**153**	T	T	02 52 31.9	
	baz=205						
H10S1	**ASCENSION HYDR**	**139.65**	**153**	T	T	02 52 32.5	
	baz=205						
H10N3	**ASCENSION HYDR**	**140.71**	**152**	T	T	02 53 58.6	
	baz=210						
H10N1	**ASCENSION HYDR**	**140.71**	**152**	T	T	02 53 56.5	
	baz=210						
H10N2	**ASCENSION HYDR**	**140.72**	**152**	T	T	02 53 56.3	
	baz=210						
HFS	**Hagfors**	**146.91**	**350**	PKPbc	PKPbc	00 16 17.3	-0.8
	1.0nm,0.7s,baz=46,slow=6.2,SNR=4.8						
AKASG	**Malin Array Be**	**149.71**	**326**	PKPbc	PKPbc	00 16 25.1	-0.6
	0.9nm,0.6s,baz=48,slow=4.1,SNR=5.5						
MMAI	**Mount Meron Ar**	**151.59**	**288**	PKPbc	PKPbc	00 16 31.9	+1.0
	0.5nm,0.4s,baz=76,slow=6.1,SNR=4.9						
BRTR	**Keskin Array B**	**151.99**	**303**	PKPbc	PKPbc	00 16 31.4	-0.3
	0.3nm,0.5s,baz=113,slow=3.3,SNR=3.6						
TORD	**Torodi Ar. Bea**	**165.31**	**175**	PKPab	PKPab	00 17 38.3	-0.5
	3.0nm,1.4s,baz=181,slow=4.9,SNR=3.8						

IDC 11 00:17:42.3±4.8, 13°.74S×74°.36W, h122km±43km, mb3.1/3, mb1 3.3/4, mb1mx3.0/44, mbtmp3.5/4, Error ellipse: s-maj=59.5km s-min=28.4km az=47.0, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**6.53**	**114**	P	Pn	00 19 16.6	+0.1
	0.9nm,0.3s,baz=296,slow=8.8,SNR=23						
LPAZ				S	Sn	00 20 30.6	+0.6
	baz=199,slow=21,SNR=1.1						
TXAR	**Lajitas Array**	**51.33**	**327**	P	P	00 26 34.4	-0.1
	0.2nm,0.5s,baz=158,slow=9.2,SNR=5.1						
SNAA	**Sanae**	**71.25**	**162**	P	P	00 28 48.1	0.0
	0.9nm,0.9s,baz=261,slow=8.4,SNR=2.5						
TORD	**Torodi Ar. Bea**	**79.94**	**74**	P	P	00 29 38.6	+0.1
	0.4nm,0.9s,baz=250,slow=4.7,SNR=1.1						

NEIC ***11*** *00:18:36.7±0.0, 69°.46N×144°.71W, h13km, ML3.1(AEIC), After AEIC.*
PGC 11 00:18:34.7±5.3, 69°.82N×144°.08W, h30km, mb4.4, ML4.6, ML3.1/1, 168km east of Prudhoe Bay, Ak Northern Alaska, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PS01	**TAPS Pump Stn**	**1.62**	**288**	P	Pb	00 19 05.5	+1.6
PS01				S	Sb	00 19 28.3	+4.4
TOLK	**Toolik Lake Re**	**2.29**	**241**	P	Pn	00 19 10.1	-0.3
PS04	**TAPS Pump Stn4**	**2.35**	**236**	P	Pn	00 19 10.3	-1.0
BM3	**Burnt Mountain**	**2.42**	**185**	P	Pn	00 19 10.3	-1.8
FYU	**Fort Yukon**	**3.29**	**188**	P	Pn	00 19 22.3	-1.9
COLD	**Coldfoot**	**3.44**	**224**	Pn	Pn	00 19 25.3	-0.9
COLD	**Coldfoot**	**3.44**	**224**	P	Pn	00 19 25.5	-0.7
INK	**Inuvik**	**4.08**	**107**	Pn	Pn	00 19 34.6	-0.3
INK				Sn	Sn	00 20 18.0	-3.6
MDM	**Murphy Dome**	**5.14**	**200**	P	Pn	00 19 48.3	-1.2
ILB	**Eielson Array**	**5.18**	**193**	P	Pn	00 19 49.7	-0.4
EGAK	**Eagle**	**5.19**	**166**	*e*Pn	Pn	00 19 48.7	-1.5
IM3	**Indian Mountai**	**5.30**	**228**	P	Pn	00 19 50.8	-0.9
CCB	**Clear Creek Bu**	**5.39**	**197**	P	Pn	00 19 51.6	-1.4
CCB				S	Sn	00 20 50.5	-3.3
WRH	**Wood River Hil**	**5.59**	**198**	P	Pn	00 19 55.3	-0.4
SCRK	**Sand Creek**	**5.87**	**180**	P	Pn	00 19 58.5	-1.1
SCRK				S	Sn	00 21 02.5	-3.3
DAWY	**Dawson**	**6.06**	**160**	Pn	Pn	00 20 00.3	-1.9
DAWY				Sn	Sn	00 21 05.2	-5.3
DAWY	**Dawson**	**6.06**	**160**	*e*Pn	Pn	00 20 00.7	-1.5
	15nm,0.7s						
RIDG	**Independ'e Rid**	**6.11**	**183**	P	Pn	00 20 01.6	-1.4
DOT	**Dot Lake**	**6.20**	**180**	Pn	Pn	00 20 02.2	-1.8
DOT				Sn	Sn	00 21 07.5	-6.3
DOT	**Dot Lake**	**6.20**	**180**	P	Pn	00 20 02.6	-1.4
BPAW	**Bear Paw Mtn.**	**6.35**	**209**	P	Pn	00 20 04.7	-1.4
BPAW				S	Sn	00 21 12.8	-4.6
BCA3	**Beaver Creek A**	**6.84**	**171**	P

YKW1	Yellowknife Ar	13.88	107	Sn	Sn	00 24 08.0 -14
RES	Resolute Bay	15.33	50	Pn	Pn	00 22 06.0 -2.5

ATH 11 00:38:14.4, 36°.36N×28°.97E, h51km±8km, ML2.4/5, Error ellipse: s-maj=8.2km s-min=1.1km az=134.0
ISK 11 00:38:14.4, 36°.41N×28°.96E, h18km, ML2.8/19
DDA 11 00:38:14.8, 36°.47N×28°.99E, h7km, Ml2.8
ISCJB 11 00:38:14.4±0.4, 36°.40N±0°.03×28°.93E±0°.02, h14km, Error ellipse: s-maj=4.2km s-min=2.8km az=6.9
CSEM 11 00:38:15.0±0.2, 36°.41N×28°.97E, h20km, ML2.8, Error ellipse: s-maj=4.4km s-min=2.9km az=179.0
THE 11 00:38:15.5, 36°.43N×28°.94E, h10km±2km, ML2.5/3, Error ellipse: s-maj=2.1km s-min=0.7km az=91.0

ISC 11 00:38:14.3±0.8, 36°.42N±0°.02×28°.96E±0°.02, h14km, n84, σ0°80/112, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	Fethiye	0.24	25	PG	Pg	00 38 20.1	+0.7
FETY				SG	Sb	00 38 25.3	+0.8
FETY	Fethiye	0.24	25	P	Pg	00 38 20.1	+0.7
FETY				S	Sb	00 38 24.9	+0.4
FETY	Fethiye	0.24	25	P	Pg	00 38 20.1	+0.7
FETY				S	Sb	00 38 24.9	+0.4
FETY				eSg	Sb	00 38 25.3	+0.8
DALY	Dalyan (Mu¨la	0.47	328	PG	Pb	00 38 24.4	+0.2
DALY				SG	Sb	00 38 31.7	+0.6
DALY	Dalyan (Mu¨la	0.47	328	i P	Pb	00 38 24.5	+0.2
DALY	Dalyan (Mu¨la	0.47	328	P	Pb	00 38 24.5	+0.2
DALY				eSg	Sb	00 38 31.7	+0.6
TURN	Turunc	0.54	328	PG	Pn	00 38 28.3	+0.7
TURN	Turunc	0.54	328	i P	Pn	00 38 28.2	+0.7
TURN	Turunc	0.54	328	P	Pn	00 38 28.2	+0.7
AKAS	Kas	0.55	110	PG	Pg	00 38 25.4	+0.2
AKAS				SG	Sb	00 38 34.4	+0.8
AKAS	Kas	0.55	110	i P	Pg	00 38 25.4	+0.2
AKAS	Kas	0.55	110	P	Pg	00 38 25.4	+0.2
AKAS				eSg	Sb	00 38 34.4	+0.8
KSL	Kastellorizon	0.57	118	P	Pb	00 38 26.4	+0.3
KSL				S	Sn	00 38 36.1	-1.0
KSL				AML	AML	00 38 36.9	
	comp=N,269μm,0.4s						
KSL				AML	AML	00 38 37.1	
	comp=E,839μm,0.6s						
KSL	Kastellorizon	0.57	118	P	Pb	00 38 26.5	+0.5
KSL				S	Sn	00 38 36.5	-0.7
MRSB	Marmaris-Mugla	0.68	296	PG	Pb	00 38 28.3	+0.3
MRSB	Marmaris-Mugla	0.68	296	ePg	Pb	00 38 28.3	+0.3
ARG	Arkhangelos	0.70	253	PG	Pb	00 38 29.1	+0.8
ARG	Arkhangelos	0.70	253	P	Pb	00 38 28.8	+0.5
ARG				S	Sn	00 38 39.7	-0.9
ARG				AML	AML	00 38 40.3	
	comp=N,562μm,0.3s						
ARG				AML	AML	00 38 40.5	
	comp=E,856μm,0.3s						
ARG	Arkhangelos	0.70	253	P	Pb	00 38 28.9	+0.6
ARG				S	Sn	00 38 40.0	-0.5
ARG	Arkhangelos	0.70	253	P	Pb	00 38 28.9	+0.6
ARG				S	Sn	00 38 39.6	-0.9
ELL	Elmali	0.83	67	PG	Pb	00 38 30.9	+0.4
ELL	Elmali	0.83	67	ePg	Pb	00 38 30.9	+0.4
GLHS	Gihisar (BURDU	0.85	30	PG	Pg	00 38 30.7	-0.1
GLHS	Gihisar (BURDU	0.85	30	ePg	Pg	00 38 30.7	-0.1
YER	Yerkesik	0.90	323	PG	Pn	00 38 32.4	-0.2
YER	Yerkesik	0.90	323	P	Pb	00 38 31.9	+0.2
YER				S	Sn	00 38 45.0	-0.4
YER	Yerkesik	0.90	323	P	Pb	00 38 31.9	+0.2
YER	Yerkesik	0.90	323	ePg	Pn	00 38 32.4	-0.2
YER				S	Sn	00 38 45.0	-0.4
GOLH	Golhisar	0.95	30	i P	Pb	00 38 31.8	-0.8
GOLH	Golhisar	0.95	30	P	Pb	00 38 31.8	-0.8
TAVA	DENIZLI_Tavas	1.04	358	i P	Pb	00 38 34.2	0.0
TAVA	DENIZLI_Tavas	1.04	358	P	Pb	00 38 34.2	0.0
DATC	Datca-Mugla	1.10	288	PN	Pn	00 38 35.6	+0.3
DATC	Datca-Mugla	1.10	288	ePn	Pn	00 38 35.6	+0.3
DAT	Datca	1.16	286	PN	Pn	00 38 36.4	+0.3
DAT	Datca	1.16	286	i P	Pg	00 38 36.8	+0.2
DAT	Datca	1.16	286	ePn	Pn	00 38 36.4	+0.3
DAT	Datca	1.16	286	P	Pg	00 38 36.8	+0.2
KORT	Korkueli	1.26	62	PN	Pb	00 38 38.0	+0.1
KORT	Korkueli	1.26	62	i P	Pg	00 38 38.4	-0.1
KORT	Korkueli	1.26	62	ePn	Pb	00 38 38.0	+0.1
KORT	Korkueli	1.26	62	P	Pg	00 38 38.4	-0.1
DNZL	Cakiroluk	1.27	3	i P	Pn	00 38 37.5	-0.3
DNZL	Cakiroluk	1.27	3	P	Pn	00 38 37.5	-0.3
MLSB	Milas	1.29	313	PN	Pb	00 38 38.8	+0.4
MLSB	Milas	1.29	313	ePn	Pb	00 38 38.8	+0.4
DENT	Denizli	1.33	2	PN	Pb	00 38 39.1	0.0
DENT	Denizli	1.33	2	ePn	Pb	00 38 39.1	0.0
ANTB	Antalya	1.44	70	PN	Pb	00 38 40.9	0.0
ANTB	Antalya	1.44	70	ePn	Pb	00 38 40.9	0.0
BODT	Bodrum	1.47	296	PN	Pn	00 38 40.4	0.0
BODT	Bodrum	1.47	296	P	Pn	00 38 39.6	-0.8
BODT				S	Sn	00 38 58.9	-0.6
BODT	Bodrum	1.47	296	P	Pn	00 38 39.6	-0.8
BODT	Bodrum	1.47	296	ePn	Pn	00 38 40.4	0.0
BODT				S	Sn	00 38 58.9	-0.6
BCK	Bucak	1.67	51	PN	Pn	00 38 43.8	+0.7
BCK	Bucak	1.67	51	ePn	Pn	00 38 43.8	+0.7
AYDB	Zeytinkoy-Aydi	1.75	331	PN	Pn	00 38 44.5	+0.2
AYDB	Zeytinkoy-Aydi	1.75	331	ePn	Pn	00 38 44.5	+0.2
ISP	Isparta	1.87	41	PN	Pn	00 38 46.7	+0.7
ISP	Isparta	1.87	41	P	Pn	00 38 46.9	+0.9
ISP	Isparta	1.87	41	ePn	Pn	00 38 46.7	+0.7
SUTC	Sutluce-Ispart	1.94	57	PN	Pn	00 38 47.4	+0.4
SUTC	Sutluce-Ispart	1.94	57	ePn	Pn	00 38 47.4	+0.4
KULA	Kula-Manisa	2.10	354	PN	Pn	00 38 47.9	-1.3
KULA	Kula-Manisa	2.10	354	ePn	Pn	00 38 47.9	-1.3
SMG	Samos	2.13	308	P	Pn	00 38 49.5	0.0
SMG				S	Sn	00 39 14.7	-1.0
SMG				AML	AML	00 39 18.8	
	comp=N,180μm,0.4s						
SMG				AML	AML	00 39 20.4	
	comp=E,164μm,0.3s						
SMG	Samos	2.13	308	P	Pn	00 38 49.7	+0.2
SMG				S	Sn	00 39 14.9	-0.8
SMG	Samos	2.13	308	P	Pn	00 38 49.5	0.0
SMG				S	Sn	00 39 15.0	-0.8
BLCB	Balcova	2.49	323	PN	Pn	00 38 54.4	+0.1
BLCB	Balcova	2.49	323	ePn	Pn	00 38 54.4	+0.1
ZKR	Zakros	2.58	241	P	Pn	00 38 56.8	+1.1
ZKR				S	Sn	00 39 25.5	-1.4
ZKR				AML	AML	00 39 27.9	
	comp=E,43μm,0.5s						
ZKR				AML	AML	00 39 29.0	
	comp=N,21μm,0.4s						
ZKR	Zakros	2.58	241	P	Pn	00 38 55.9	+0.2
ZKR				S	Sn	00 39 25.1	-1.8
SIMA	Simav-Kutahya	2.66	0	PN	Pn	00 38 55.2	-1.6
SIMA	Simav-Kutahya	2.66	0	ePn	Pn	00 38 55.2	-1.6
URLA	Izmir	2.70	316	PN	Pn	00 38 58.7	+1.4
URLA	Izmir	2.70	316	ePn	Pn	00 38 58.7	+1.4
APE	Apeiranthos	2.83	284	P	Pn	00 38 59.9	+0.8
APE				S	Sn	00 39 32.9	-0.2
APE	Apeiranthos	2.83	284	P	Pn	00 38 59.6	+0.5
APE				S	Sn	00 39 32.5	-0.6
NPS	Neapolis	2.96	248	P	Pn	00 39 00.1	-0.7
NPS				S	Sn	00 39 32.2	-3.9
NPS	Neapolis	2.96	248	P	Pn	00 39 00.3	-0.5
NPS				S	Sn	00 39 33.1	-3.0
CHOS	Chios island	3.03	311	P	Pn	00 39 02.8	+0.8
CHOS				S	Sn	00 39 37.4	-0.7
CHOS				AML	AML	00 39 41.0	
	comp=N,42μm,0.3s						
CHOS				AML	AML	00 39 42.6	
	comp=E,78μm,0.3s						
CHOS	Chios island	3.03	311	P	Pn	00 39 02.6	+0.7
CHOS				S	Sn	00 39 37.4	-0.7
LAST	Lasithi	3.10	247	P	Pn	00 39 02.8	-0.1
LAST	Lasithi	3.10	247	P	Pn	00 39 02.6	-0.2

IDC 11 00:44:11.2±1.9, 0°.07S×97°.71E, h0km, mb3.8/5, mb1 3.8/6, mb1mx3.5/60, mbtmp3.8/6, ML2.8/1, Error ellipse: s-maj=58.6km s-min=22.2km az=62.0
ISCJB 11 00:44:14.6±0.9, 0°.18N±0°.06×97°.62E±0°.07, h25km, mb3.8/5, Error ellipse: s-maj=12.4km s-min=5.4km az=141.8

DJA 11 00:44:15.8±0.8, 0°.N±4°.×9°.8E±°, h15km±4km, M3.6/10, MLv3.6/10

ISC 11 00:44:14.8±1.1, 0°.09N±0°.07×97°.61E±0°.09, h25km, n22, σ1°01/19, mb3.9/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBSI	Pulau Batu	0.68	102	P	Pb	00 44 27.8	-0.3
PBSI				S	Sb	00 44 37.5	+0.3
GSI	Gunungsitoli	1.21	358	P	Pb	00 44 36.8	-0.2
SISI	Saibi	2.04	134	P	Pb	00 44 50.7	-0.5
SISI				S	Sb	00 45 15.3	-0.8
MNSI	Mandailing Nat	2.09	70	P	Pn	00 44 48.2	0.0
MNSI				S	Sn	00 45 13.4	-0.1
PPI	Padang Panjang	2.84	101	P	Pn	00 44 57.6	-0.9
PSI	Prapat	3.00	26	Pn	Pn	00 45 00.3	-0.5
	1.1nm,0.3s,baz=180,slow=18,SNR=3.5						
PDSI	Padang	3.02	109	P	Pn	00 45 03.1	+2.0
TPTI		3.18	352	S	Sn	00 45 39.9	-0.5
KCSI	Kotacane, Aceh	3.42	3	P	Pn	00 45 06.4	-0.1
BKNI	Bangkinang	3.44	86	P	Pn	00 45 08.0	+1.2
H08S2	Diego Garcia H	26.20	252	T	T	01 17 05.1	
	baz=73,slow=74,SNR=601						
H08S3	Diego Garcia H	26.20	252	T	T	01 17 03.8	
	baz=73,slow=74,SNR=1374						
H08S1	Diego Carcia H	26.21	252	T	T	01 17 04.8	
	baz=73,slow=74,SNR=992						
H01W3	Cape Leeuwin H	38.07	158	T	T	01 31 51.6	
	baz=334,slow=76,SNR=6.6						
H01W2	Cape Leeuwin H	38.08	158	T	T	01 31 47.7	
	baz=334,slow=76,SNR=6.8						
H01W1	Cape Leeuwin H	38.08	158	T	T	01 31 53.9	
	baz=334,slow=76,SNR=3.9						
WRA	Warramunga Arr	41.11	121	P	P	00 51 55.8	-1.2
	0.5nm,0.6s,baz=304,slow=8.9,SNR=5.6						
ASAR	Alice Springs	42.40	126	P	P	00 52 06.4	-1.3
	0.7nm,0.7s,baz=300,slow=7.8,SNR=6.9						
KSRS	Korea Array	46.53	34	P	P	00 52 40.7	+0.3
	0.9nm,0.7s,baz=231,slow=7.7,SNR=4.6						
MKAR	Makanchi Array	48.41	346	P	P	00 52 56.6	+1.7
	1.7nm,0.7s,baz=159,slow=8.5,SNR=15						
ZALV	Zalesovo Beam	54.71	351	P	P	00 53 43.2	+1.4
	1.3nm,0.4s,baz=173,slow=6.5,SNR=5.6						
TXAR	Lajitas Array	144.38	33	PKP	PKPdf	01 03 49.4	-0.3
	0.1nm,0.7s,baz=264,slow=2.6,SNR=2.3						

IDC 11 00:55:03.4±0.7, 22°.63N×144°.07E, h0km, mb3.7/13, mb1 3.9/15, mb1mx3.7/61, mbtmp3.8/15, ML4.0/2, MS3.2/5, Ms1 3.2/5, ms1mx2.7/60, Error ellipse: s-maj=27.8km s-min=15.9km az=71.0
ISCJB 11 00:55:09.0±0.5, 22°.66N±0°.05×143°.9E±0°.1, h53km, mb3.9/22, MS3.1/5, Error ellipse: s-maj=17.5km s-min=6.7km az=165.6
NEIC 11 00:55:08.6±0.4, 22°.68N×144°.09E, h35km, mb4.2/8, Error ellipse: s-maj=14.6km s-min=8.2km az=77.0

ISC 11 00:55:10.5±0.6, 22°.71N±0°.08×144°.1E±0°.1, h53km, n37, σ1°07/32, mb3.9/22, MS3.2/5, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	4.69	339	Pn	Pn	00 56 18.6	-0.1
CBIJ				Sn	Sn	00 57 13.2	+1.3
JCJ	Chichijima	4.69	339	Pn	Pn	00 56 18.6	-0.1
	13nm,0.3s,baz=269,slow=19,SNR=6.2						
JCJ				Sn	Sn	00 57 13.2	+1.3
	38nm,0.3s,baz=290,slow=23,SNR=15						
MJAR	Matsushiro Arr	14.69	341	Pn	Pn	00 58 32.7	-2.5
	0.3nm,0.3s,baz=139,slow=16,SNR=3.3						
KSRS	Korea Array	20.23	320	P	P	00 59 40.6	-0.6
	0.4nm,0.3s,baz=141,slow=11,SNR=2.7						
KSAR	Wonju Array Be	20.24	320	P	P	00 59 40.6	-0.8
ASAJ	Asahikawa	21.39	357	LR	LR	01 10 19.7	
	comp=Z,15nm,18.6s,baz=132,slow=43						
H11N1	WAKE ISLAND Hy	21.49	94	T	T	01 22 00.1	
	baz=283,slow=74,SNR=5.7						
H11N2	WAKE ISLAND Hy	21.49	94	T	T	01 21 56.1	
	baz=283,slow=74,SNR=4.0						
H11N3	WAKE ISLAND Hy	21.51	94	T	T	01 21 56.8	
	baz=283,slow=74,SNR=4.8						
KLR	Kul'dur	28.21	343	P	P	01 00 58.2	+0.1
	0.1nm,0.5s,baz=172,slow=14,SNR=5.5						
BJT	Baijiatuau	29.24	313	P	P	01 01 07.4	0.0
	2.8nm,0.6s						
PETK	Petropavlovsk-	32.09	16	LR	LR	01 16 48.0	
	comp=Z,15nm,18.4s,baz=150,slow=41						
MA2	Magadan	37.14	6	P	P	01 02 14.2	-1.8
	16nm,0.8s						
BATI	Baumata	38.33	214	LR	LR	01 17 11.3	
	comp=Z,184nm,19.3s,baz=116,slow=35						
SONM	Songino Array	39.09	319	P	P	01 02 33.2	+0.5
	0.7nm,0.6s,baz=125,slow=7.6,SNR=3.1						
CTAO	Charters Tower	42.59	177	P	P	01 03 01.6	+0.1
	8.4nm,0.8s						
WRAB	Tennant Creek	43.43	193	P	P	01 03 07.9	-0.4
	0.8nm,0.5s						
WRA	Warramunga Arr	43.44	193	P	P	01 03 07.4	-1.1
	0.8nm,0.5s,baz=17,slow=9.2,SNR=9.9						
ASAR	Alice Springs	47.14	193	P	P	01 03 37.0	-0.8
	0.5nm,0.5s,baz=14,slow=9.2,SNR=2.8						
BILL	Bilibino	47.38	11	P	P	01 03 39.9	+0.9
	0.8nm,0.6s						
ZALV	Zalesovo Beam	53.93	321	P	P	01 04 28.7	+0.1
	0.6nm,0.4s,baz=106,slow=7.5,SNR=4.3						
ZALV				LR	LR	01 26 46.6	
	comp=Z,19nm,19.1s,baz=66,slow=35						
MKAR	Makanchi Array	54.62	312	P	P	01 04 34.4	+0.6
	0.3nm,0.6s,baz=87,slow=8.7,SNR=3.8						
KURK	Kurchatov	57.30	317	P	P	01 04 53.8	+1.0
KURBB	Kurchatov Arra	57.35	316	P	P	01 04 53.8	+0.6
	0.5nm,0.6s,baz=93,slow=7.8,SNR=6.1						
ILAR	Eielson Array	60.77	27	P	P	01 05 14.0	-2.6
	0.2nm,0.6s,baz=261,slow=5.2,SNR=4.7						
BVAR	Borovoye Array	62.44	319	P	P	01 05 28.3	+0.3
	1.1nm,0.6s,baz=99,slow=7.5,SNR=5.6						
BRVK	Borovoye	62.50	319	P	P	01 05 29.6	+1.1
	3.0nm,0.8s						
DLBC	Dease Lake	68.84	34	P	P	01 06 10.7	+1.4
	0.7nm,0.4s						
AKTO	Aktyubinsk	70.38	317	P	P	01 06 19.8	+0.9
	0.5nm,0.5s,baz=162,slow=3.2,SNR=2.1						
YKA	Yellowknife Ar	75.19	28	P	P	01 06 47.6	+0.4
	0.1nm,0.4s,baz=296,slow=5.9,SNR=3.6						
ARCES	ARCESS Array B	78.22	342	P	P	01 07 05.4	+1.2
	2.1nm,0.9s,baz=67,slow=7.9,SNR=3.5						
NVAR	Mina Array Bea	81.88	52	P	P	01 07 25.6	+0.8
	0.9nm,0.7s,baz=285,slow=6.7,SNR=9.0						
FINES	FINESS Array B	82.62	335	P	P	01 07 27.7	-0.2
	1.0nm,0.8s,baz=46,slow=6.0,SNR=4.3						
FFC	Flin Flon	84.55	32	P	P	01 07 39.0	+1.1
	1.2nm,0.6s						
PDAR	Pinedale Array	86.11	45	LR	LR	01 46 15.4	
	comp=Z,18nm,18.2s,baz=82,slow=36						
PLCA	Paso Flores	145.79	130	PKPbc	PKPbc	01 14 44.2	+0.2
	1.2nm,0.6s,baz=285,slow=4.8,SNR=3.5						
LPAZ	La Paz	149.04	84	PKPbc	PKPbc	01 14 54.9	+0.5
	1.2nm,0.7s,baz=98,slow=2.0,SNR=4.5						

ATH 11 00:56:28.7, 36°.40N×28°.91E, h42km±3km, ML2.3/3, Error ellipse: s-maj=4.8km s-min=1.2km az=178.0
DDA 11 00:56:28.6, 36°.49N×28°.93E, h7km, Ml2.9
ISK 11 00:56:28.2, 36°.43N×28°.91E, h19km, ML2.7/15
ISCJB 11 00:56:29.2±0.4, 36°.45N±0°.04×28°.92E±0°.03, h28km±4km, Error ellipse: s-maj=5.9km s-min=4.2km az=8.5
THE 11 00:56:29.2, 36°.44N×28°.91E, h11km±1km, ML2.1/2, Error ellipse: s-maj=1.5km s-min=0.5km az=92.0
CSEM 11 00:56:29.1±0.2, 36°.44N×28°.93E, h21km±1km, ML2.9, Error ellipse: s-maj=3.7km s-min=2.6km az=1.0

ISC 11 00:56:28.8±1.0, 36°.43N±0°.03×28°.91E±0°.02, h19km±2km, n82, σ0°54/98, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	Fethiye	0.24	34	PG	Pb	00 56 34.3	-0.1
FETY				SG	Sg	00 56 38.9	+0.5
FETY	Fethiye	0.24	34	P	Pb	00 56 34.2	-0.1
FETY				S	Sg	00 56 38.8	+0.4
FETY	Fethiye	0.24	34	ePg	Pb	00 56 34.3	-0.1
FETY				eSg	Sg	00 56 38.9	+0.5
DALY	Dalyan (Mu¨la	0.43	332	PG	Pg	00 56 37.7	0.0
DALY				SG	Sb	00 56 45.0	+0.9
DALY	Dalyan (Mu¨la	0.43	332	i P	Pb	00 56 38.0	+0.1
DALY	Dalyan (Mu¨la	0.43	332	ePg	Pg	00 56 37.7	0.0
DALY	Dalyan (Mu¨la	0.43	332	P	Pb	00 56 38.0	+0.1
DALY				eSg	Sb	00 56 45.0	+0.9
TURN	Turunc	0.50	331	PG	Pn	00 56 41.4	+0.4
TURN	Turunc	0.50	331	i P	Pn	00 56 41.6	+0.7
TURN	Turunc	0.50	331	ePg	Pn	00 56 41.4	+0.4
TURN	Turunc	0.50	331	P	Pn	00 56 41.7	+0.7
AKAS	Kas	0.59	110	PG	Pb	00 56 40.3	-0.3
AKAS	Kas	0.59	110	i P	Pb	00 56 40.3	-0.3
AKAS	Kas	0.59	110	P	Pb	00 56 40.3	-0.3
KSL	Kastellorizon	0.61	117	P	Pg	00 56 41.5	+0.5
KSL				S	Sn	00 56 51.0	-0.8
KSL				AML	AML	00 56 52.5	
	comp=E,390μm,0.4s						
KSL				AML	AML	00 56 52.9	
	comp=N,217μm,0.3s						
KSL	Kastellorizon	0.61	117	P	Pg	00 56 41.3	+0.4
KSL				S	Sn	00 56 50.6	-1.2
MRSB	Marmaris-Mugla	0.64	296	PG	Pg	00 56 41.6	+0.1
MRSB	Marmaris-Mugla	0.64	296	ePg	Pg	00 56 41.6	+0.1
ARG	Arkhangelos	0.67	251	PG	Pg	00 56 42.2	+0.2
ARG	Arkhangelos	0.67	251	P	Pg	00 56 42.3	+0.2
ARG				S	Sn	00 56 52.9	-0.4
ARG				AML	AML	00 56 53.4	
	comp=N,388μm,0.3s						
ARG				AML	AML	00 56 56.1	
	comp=E,466μm,0.3s						
ARG	Arkhangelos	0.67	251	P	Pg	00 56 42.3	+0.2
ARG				S	Sn	00 56 52.4	-0.9
ARG	Arkhangelos	0.67	251	ePg	Pg	00 56 42.2	+0.2
ARG				S	Sn	00 56 52.4	-0.9
ELL	Elmali	0.86	68	PG	Pg	00 56 45.4	-0.2
ELL	Elmali	0.86	68	ePg	Pg	00 56 45.4	-0.2
GLHS	Gihisar (BURDU	0.86	33	PG	Pb	00 56 45.1	-0.1
GLHS	Gihisar (BURDU	0.86	33	ePg	Pb	00 56 45.1	-0.1
YER	Yerkesik	0.86	324	PG	Pb	00 56 44.8	-0.4
YER	Yerkesik	0.86	324	P	Pb	00 56 45.2	0.0
YER				S	Sn	00 56 57.6	-0.6
YER	Yerkesik	0.86	324	ePg	Pb	00 56 44.8	-0.4
YER	Yerkesik	0.86	324	P	Pb	00 56 45.2	0.0
YER				S	Sn	00 56 57.6	-0.6
GOLH	Golhisar	0.96	33	i P	Pb	00 56 45.9	-0.9
GOLH	Golhisar	0.96	33	P	Pb	00 56 45.9	-0.9
TAVA	DENIZLI_Tavas	1.03	0	i P	Pb	00 56 47.9	-0.2
TAVA	DENIZLI_Tavas	1.03	0	P	Pb	00 56 47.9	-0.2
DATC	Datca-Mugla	1.06	288	PG	Pn	00 56 48.6	0.0
DATC	Datca-Mugla	1.06	288	ePg	Pn	00 56 48.6	0.0
DAT	Datca	1.11	286	PN	Pn	00 56 49.4	-0.1
DAT	Datca	1.11	286	i P	Pg	00 56 50.2	-0.2
DAT	Datca	1.11	286	ePn	Pn	00 56 49.4	-0.1
DAT	Datca	1.11	286	P	Pg	00 56 50.2	-0.2
MLSB	Milas	1.25	314	PN	Pb	00 56 51.5	-0.3
MLSB	Milas	1.25	314	ePn	Pb	00 56 51.5	-0.3
KORT	Korkueli	1.29	63	PN	Pn	00 56 52.1	+0.2
KORT	Korkueli	1.29	63	ePn	Pn	00 56 52.1	+0.2
DENT	Denizli	1.32	4	PN	Pb	00 56 52.6	-0.4
DENT	Denizli	1.32	4	ePn	Pb	00 56 52.6	-0.4
BDRM	Kayabasi	1.34	299	i P	Pb	00 56 52.8	-0.5
BDRM	Kayabasi	1.34	299	P	Pb	00 56 52.8	-0.5
BODT	Bodrum	1.43	296	PN	Pn	00 56 52.8	-1.0
BODT	Bodrum	1.43	296	P	Pn	00 56 53.1	-0.7
BODT				S	Sn	00 57 11.9	-0.2
BODT	Bodrum	1.43	296	ePn	Pn	00 56 52.8	-1.0
BODT	Bodrum	1.43	296	P	Pn	00 56 53.1	-0.7
BODT				S	Sn	00 57 11.9	-0.2
ANTB	Antalya	1.48	71	PN	Pn	00 56 54.8	+0.5
ANTB	Antalya	1.48	71	ePn	Pn	00 56 54.8	+0.5
AYDN	Tasoluk	1.48	326	i P	Pb	00 56 55.2	-0.5
AYDN	Tasoluk	1.48	326	P	Pb	00 56 55.2	-0.5
BRDR	BURDUR-Merkez	1.56	36	i P	Pn	00 56 56.0	+0.4
BRDR	BURDUR-Merkez	1.56	36	P	Pn	00 56 56.0	+0.4
AYDB	Zeytinkoy-Aydi	1.72	332	PN	Pn	00 56 57.9	+0.1
AYDB	Zeytinkoy-Aydi	1.72	332	ePn	Pn	00 56 57.9	+0.1
SUTC	Sutluce-Ispart	1.97	57	PN	Pn	00 57 01.9	+0.6
SUTC	Sutluce-Ispart	1.97	57	ePn	Pn	00 57 01.9	+0.6
KULA	Kula-Manisa	2.09	355	PN	Pn	00 57 02.2	-0.7
KULA	Kula-Manisa	2.09	355	ePn	Pn	00 57 02.2	-0.7
SMG	Samos	2.09	308	P	Pn	00 57 03.6	+0.8
SMG				S	Sn	00 57 27.5	-0.9
SMG				AML	AML	00 57 30.7	
	comp=N,289μm,0.3s						
SMG				AML	AML	00 57 31.2	
	comp=E,202μm,0.3s						
SMG	Samos	2.09	308	P	Pn	00 57 03.5	+0.6
SMG	Samos	2.09	308	P	Pn	00 57 03.4	+0.6
SMG				S	Sn	00 57 27.9	-0.5
BLCB	Balcova	2.45	323	PN	Pn	00 57 08.2	+0.4
BLCB	Balcova	2.45	323	ePn	Pn	00 57 08.2	+0.4
ZKR	Zakros	2.56	240	P	Pn	00 57 09.8	+0.5
ZKR	Zakros	2.56	240	P	Pn	00 57 09.5	+0.3
SIMA	Simav-Kutahya	2.65	1	PN	Pn	00 57 09.8	-0.8
SIMA

comp=Z,32nm,0.6s
LMEL **Las Melosas** 2.68 154 *e*P Pn 01 02 48.8 +2.0
LMEL *i* S Sn 01 03 19.6 0.0
AMOG **MOGNA** 2.73 80 *i* P Pn 01 02 49.6 +2.3
AAGR **Agrelo** 2.88 125 *i* P Pb 01 02 52.2 -2.6
AGUA **GÜANDACOL** 3.33 55 *i* P Pn 01 02 58.9 +3.3

IDC 11 01:51:00.8±2.1, 3°16S×126°23E, h0km, mb3.5/2, mb1 3.6/3, mb1mx3.3/56, mbtmp3.4/3, ML3.3/1, Error ellipse: s-maj=360.9km s-min=28.2km az=70.0, Buru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.46**	**155**	P	Pn	01 55 18.1	-0.3
	0.1nm,0.3s,baz=332,slow=12,SNR=5.6						
ASAR	**Alice Springs**	**21.69**	**161**	P	P	01 55 53.6	+0.1
	0.6nm,0.5s,baz=341,slow=11,SNR=7.1						
SONM	**Songino Array**	**53.68**	**344**	P	P	02 00 24.3	-0.1
	0.6nm,0.5s,baz=142,slow=7.3,SNR=3.5						

CSEM 11 02:01:39.8, 39°01N×27°87W, h6km, ML2.3
PDA 11 02:01:39.8±0.8, 39°01N×27°87W, h6km±5km, MD3.6, ML2.3, 2D, Error ellipse: s-maj=6.0km s-min=4.8km az=24.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGRA	**Graciosa**	**0.09**	**285**	*e*P	Pg	02 01 41.7	-0.1
PGRA				*e*S	Sg	02 01 43.3	+0.1
PGRA				A	A	02 01 46.9	
	7μm,0.3s						
PGRA	**Graciosa**	**0.09**	**285**	*e*P	Pg	02 01 41.7	-0.1
PGRA				*e*S	Sg	02 01 43.3	+0.1
ROSA	**Rosais**	**0.41**	**225**	*e*P	Pg	02 01 46.6	-1.1
ROSA				*e*S	Sg	02 01 52.1	-0.9
ROSA				A	A	02 01 54.0	
	160nm,0.4s						
ROSA	**Rosais**	**0.41**	**225**	*e*P	Pg	02 01 46.6	-1.1
ROSA				*e*S	Sg	02 01 52.1	-0.9
PMAN	**Manadas**	**0.41**	**204**	⇓*i*P	Pg	02 01 46.9	-0.8
PMAN				*e*S	Sg	02 01 52.5	-0.6
PMAN				A	A	02 02 00.2	
	204nm,0.4s						
PMAN	**Manadas**	**0.41**	**204**	⇓*i*P	Pg	02 01 46.9	-0.8
PMAN				*e*S	Sg	02 01 52.5	-0.6
PICO	**Pico**	**0.66**	**221**	*e*P	Pg	02 01 51.1	-1.5
PICO				*e*S	Sg	02 01 59.6	-1.6
PICO				A	A	02 02 02.0	
	126nm,0.4s						
PICO	**Pico**	**0.66**	**221**	*e*P	Pg	02 01 51.1	-1.5
PICO				*e*S	Sg	02 01 59.6	-1.6
PCAN	**Candelaria**	**0.72**	**222**	*e*P	Pg	02 01 51.8	-1.9
PCAN				*e*S	Sg	02 02 00.7	-2.4
PCAN				A	A	02 02 06.6	
	83nm,0.6s						
PCAN	**Candelaria**	**0.72**	**222**	*e*P	Pg	02 01 51.8	-1.9
PCAN				*e*S	Sg	02 02 00.7	-2.4
PCED	**Cedros**	**0.75**	**240**	*e*P	Pg	02 01 52.1	-2.1
PCED				*e*S	Sg	02 02 01.0	-2.9
PCED				A	A	02 02 01.7	
	39nm,0.3s						
PCED	**Cedros**	**0.75**	**240**	*e*P	Pg	02 01 52.1	-2.1
PCED				*e*S	Sg	02 02 01.0	-2.9
HOR	**Horta**	**0.76**	**231**	*e*P	Pg	02 01 52.1	-2.3
HOR				*e*S	Sg	02 02 01.3	-3.0
HOR				A	A	02 02 06.7	
	56nm,0.3s						
HOR	**Horta**	**0.76**	**231**	*e*P	Pg	02 01 52.1	-2.3
HOR				*e*S	Sg	02 02 01.3	-3.0
CALA	**Caldeira**	**0.77**	**237**	*e*S	Sg	02 02 01.9	-2.8
CALA	**Caldeira**	**0.77**	**237**	*e*S	Sg	02 02 01.9	-2.8

NNC 11 02:02:55.8±2.4, 39°03N×72°19E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=28.9km s-min=9.8km az=151.0
KRNET 11 02:02:56.0±0.1, 39°31N×71°98E, h15km, mb3.1
ISCJB 11 02:02:58.6±0.8, 39°38N±0°05×71°98E±0°04, h10km, Error ellipse: s-maj=8.2km s-min=4.0km az=163.4
ISC 11 02:02:57.0±1.2, 39°36N±0°06×71°96E±0°03, h10km, n24, σ2°07/40, 24C-12D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**0.17**	**313**	⇓*i*P	Pg	02 03 00.7	-0.1
	baz=24						
DRK				⇓*i*S	Sg	02 03 04.1	+0.6
	baz=24						
BTK	**Batken**	**1.12**	**309**	⇑*i*P	Pb	02 03 17.6	-0.9
	baz=10.0						
BTK				⇑*i*S	Sn	02 03 34.2	-0.1
	baz=10.0						
SFK	**Sufi-Kurgan**	**1.36**	**61**	⇑P	Pb	02 03 21.5	-1.1
	11nm,0.3s						
SFK				⇑S	Sg	02 03 40.7	0.0
	12nm,0.4s						
SFK	**Sufi-Kurgan**	**1.36**	**61**	⇓*i*P	Pg	02 03 21.6	-1.4
	baz=58						
SFK				⇓*i*S	Sg	02 03 40.0	-0.6
	baz=58						
ARSB	**Arslanbob**	**2.11**	**21**	⇑*i*P	Pb	02 03 33.9	-1.5
	baz=21						
ARSB				⇑*i*S	Sb	02 04 01.7	+0.1
	baz=21						
ARK	**Arkit**	**2.43**	**0**	⇓*i*P	Pn	02 03 38.1	+1.2
	baz=0.0						
ARK				⇓*i*S	Sb	02 04 09.0	-1.9
	baz=0.0						
DZET	**Dzherino**	**2.50**	**258**	⇑Pn	Pb	02 03 39.9	-2.1
	4.2nm,0.3s						
DZET				⇑Sn	Sb	02 04 13.0	+0.1
	35nm,0.5s						
TOKL	**Toktogul**	**2.67**	**15**	⇑*i*P	Pn	02 03 41.2	+1.2
	baz=14						
TOKL				⇑*i*S	Sb	02 04 14.9	-2.7
	baz=14						
AML	**Almayashu**	**3.06**	**25**	P	Pb	02 03 50.6	-1.1
	SNR=8.8						
AML	**Almayashu**	**3.06**	**25**	⇑*e*P	Pn	02 03 47.6	+1.8
	baz=24						
AML				⇑*i*S	Sn	02 04 25.3	+2.6
	baz=24						
MNAS	**Manas**	**3.15**	**7**	⇑Pn	Pb	02 03 51.9	-1.2
	2.0nm,0.2s						
MNAS				⇑Sn	Sb	02 04 33.2	+1.6
	12nm,0.6s						
MNAS	**Manas**	**3.15**	**7**	⇑*i*P	Pn	02 03 49.0	+2.3
	baz=7.0						
MNAS				⇑*i*S	Sn	02 04 27.5	+3.1
	baz=7.0						
UCH	**Uchtor**	**3.46**	**33**	P	Pb	02 03 55.8	-2.7
	SNR=5.9						
UCH	**Uchtor**	**3.46**	**33**	⇓*e*P	Pn	02 03 52.9	+1.7
	baz=33						
UCH				⇓*i*S	Sn	02 04 34.7	+2.2
	baz=33						
KZA	**Kyzart**	**3.69**	**42**	⇑*e*P	Pn	02 03 56.4	+2.0
	baz=41						
KZA				⇑*i*S	Sn	02 04 40.1	+2.0
	baz=41						
AAK	**Ala-Archa**	**3.79**	**30**	⇓Pn	Pb	02 04 00.2	-3.8
	2.4nm,0.3s						
AAK				⇑Sn	Sb	02 04 51.3	+1.2
	9.8nm,0.9s						
AAK	**Ala-Archa**	**3.79**	**30**	P	Pb	02 04 01.4	-2.6
	SNR=6.0						
AAK	**Ala-Archa**	**3.79**	**30**	⇑*i*P	Pn	02 03 57.2	+1.6
	baz=29						
AAK				⇑*i*S	Sn	02 04 42.6	+2.3
	baz=29						
KK31	**Karatay Array**	**3.89**	**344**	Pn	Pb	02 04 01.6	-4.1
	0.5nm,0.3s,baz=158,slow=13,SNR=14						
KK31				⇑Sn	Sb	02 04 52.0	-0.8
	4.3nm,0.4s,baz=163,slow=28,SNR=11						
CHMS	**Chumysh**	**4.20**	**29**	P	Pb	02 04 06.4	-4.5
	SNR=7.6						
ULHL	**Ulahol**	**4.34**	**47**	⇑*e*P	Pn	02 04 05.1	+1.9
	baz=46						
ULHL				⇑*i*S	Sn	02 04 55.0	+1.0
	baz=46						
USP	**Ospenovka**	**4.34**	**25**	P	Pb	02 04 08.2	-5.2
	SNR=5.2						
USP	**Ospenovka**	**4.34**	**25**	⇓*i*P	Pn	02 04 05.0	+1.9
	baz=25						
USP				⇓*i*S	Sn	02 04 55.5	+1.7
	baz=25						
TKM2	**Tokmak 2**	**4.49**	**37**	⇓Pn	Pn	02 04 09.4	+4.2
	1.1nm,0.3s						

IDC 11 02:06:30.6±0.9, 36°36N×29°08E, h0km, mb3.7/8, mb1 3.8/16, mb1mx3.6/61, mbtmp3.7/16, ML3.5/7, MS2.9/7, Ms1 2.9/7, ms1mx2.6/60, Error ellipse: s-maj=18.1km s-min=12.9km az=149.0
ISK 11 02:06:34.7, 36°39N×28°96E, h16km, ML4.4/16
DDA 11 02:06:34.8, 36°43N×28°98E, h28km, Ml4.4
CSEM 11 02:06:35.6±0.1, 36°37N×29°02E, h20km, ML4.4, Error ellipse: s-maj=3.3km s-min=2.3km az=177.0
ATH 11 02:06:35.1, 36°41N×28°97E, h39km±1km, ML3.9/20, Error ellipse: s-maj=1.3km s-min=0.4km az=155.0
THE 11 02:06:35.9, 36°40N×28°96E, h10km, ML3.9/9, Error ellipse: s-maj=0.8km s-min=0.3km az=101.0
HLW 11 02:06:36.3, 36°12N×29°00E, h29km±10km, Md4.4, Ml4.6
NIC 11 02:06:38.8±0.3, 36°09N×29°10E, h25km, mb4.3, ML4.0
GII 11 02:06:38.4±0.0, 36°29N×29°31E, h30km
ISC 11 02:06:34.6±0.8, 36°35N±0°02×29°02E±0°02, h26km±6km, n361, σ1°79/465, mb3.7/8, MS3.0/3, 13C-11D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.29**	**11**	PG	Pb	02 06 40.9	-0.7
FETY				SG	Sb	02 06 45.7	-0.6
FETY	**Fethiye**	**0.29**	**11**	P	Pb	02 06 40.8	-0.8
FETY				S	Sb	02 06 45.9	-0.4
FETY	**Fethiye**	**0.29**	**11**	*i* Pg	Pb	02 06 40.9	-0.7
FETY				S	Sb	02 06 45.9	-0.4
AKAS	**Kas**	**0.49**	**104**	PG	Pn	02 06 45.9	-0.1
AKAS				SG	Sn	02 06 54.1	+0.3
AKAS	**Kas**	**0.49**	**104**	⇑*i*P	Pn	02 06 46.0	-0.1
AKAS				*i* S	Sn	02 06 54.8	+1.0
AKAS	**Kas**	**0.49**	**104**	P	Pn	02 06 46.0	-0.1
AKAS				*e*Sg	Sn	02 06 54.1	+0.3
KSL	**Kastellorizon**	**0.50**	**114**	P	Pn	02 06 47.0	+0.9
KSL				S	Sn	02 06 56.5	+2.6
KSL	**Kastellorizon**	**0.50**	**114**	P	Pn	02 06 47.2	+1.1
KSL				S	Sn	02 06 55.7	+1.8
DALY	**Dalyan (Mu¨la**	**0.55**	**328**	PG	Pb	02 06 45.2	-0.4
DALY				SG	Sb	02 06 52.4	-0.7
DALY	**Dalyan (Mu¨la**	**0.55**	**328**	⇓*i*P	Pb	02 06 45.3	-0.3
DALY				*i* S	Sb	02 06 52.6	-0.5
DALY	**Dalyan (Mu¨la**	**0.55**	**328**	P	Pb	02 06 45.3	-0.3
DALY				S	Sb	02 06 52.6	-0.5
TURN	**Turunc**	**0.62**	**328**	PG	Pn	02 06 48.7	+1.1
TURN	**Turunc**	**0.62**	**328**	⇑*i*P	Pn	02 06 49.0	+1.4
TURN				*i* S	Sn	02 06 58.9	+2.2
TURN	**Turunc**	**0.62**	**328**	*e*Pg	Pn	02 06 48.7	+1.1
TURN	**Turunc**	**0.62**	**328**	P	Pn	02 06 49.0	+1.4
TURN				S	Sn	02 06 58.9	+2.2
ARG	**Arkhangelos**	**0.73**	**260**	PG	Pb	02 06 48.8	+0.1
ARG	**Arkhangelos**	**0.73**	**260**	P	Pn	02 06 49.4	+0.1
ARG				S	Sn	02 07 00.7	+1.1
ARG				AML	AML	02 07 03.0	
	comp=E,19376μm,0.4s						
ARG				AML	AML	02 07 03.5	
	comp=N,14695μm,0.5s						
ARG	**Arkhangelos**	**0.73**	**260**	P	Pn	02 06 49.5	+0.3
ARG				S	Sn	02 07 00.8	+1.3
ARG	**Arkhangelos**	**0.73**	**260**	*e*Pg	Pb	02 06 48.8	+0.1
ARG	**Arkhangelos**	**0.73**	**260**	P	Pn	02 06 49.5	+0.3
ARG				S	Sn	02 07 00.4	+0.9
MRSB	**Marmaris-Mugla**	**0.75**	**299**	PG	Pb	02 06 48.7	-0.4
MRSB	**Marmaris-Mugla**	**0.75**	**299**	*e*Pg	Pb	02 06 48.7	-0.4
ELL	**Elmali**	**0.82**	**61**	PG	Pn	02 06 51.5	+0.9
ELL	**Elmali**	**0.82**	**61**	*e*Pg	Pn	02 06 51.5	+0.9
GLHS	**Glhisar (BURDU**	**0.89**	**26**	PG	Pn	02 06 51.7	+0.1
GLHS	**Glhisar (BURDU**	**0.89**	**26**	*e*Pg	Pn	02 06 51.7	+0.1
YER	**Yerkesik**	**0.98**	**323**	PG	Pb	02 06 52.9	0.0
YER	**Yerkesik**	**0.98**	**323**	P	Pn	02 06 52.8	+0.1
YER				S	Sn	02 07 06.4	+0.6
YER	**Yerkesik**	**0.98**	**323**	*e*Pg	Pb	02 06 52.9	0.0
YER				S	Sn	02 07 06.4	+0.6
GOLH	**Golhisar**	**0.98**	**26**	⇓*i*P	Pn	02 06 52.4	-0.4
GOLH				*i* S	Sn	02 07 06.2	+0.2
GOLH	**Golhisar**	**0.98**	**26**	P	Pn	02 06 52.4	-0.4
GOLH				S	Sn	02 07 06.2	+0.2
TAVA	**DENIZLI_Tavas**	**1.11**	**356**	⇓*i*P	Pb	02 06 55.2	-0.1
TAVA				*i* S	Sn	02 07 08.9	-0.3
TAVA	**DENIZLI_Tavas**	**1.11**	**356**	P	Pb	02 06 55.2	-0.1
TAVA				S	Sn	02 07 08.9	-0.3
DATC	**Datca-Mugla**	**1.16**	**291**	PN	Pb	02 06 56.2	+0.2
DATC	**Datca-Mugla**	**1.16**	**291**	*e*Pn	Pb	02 06 56.2	+0.2
DAT	**Datca**	**1.22**	**288**	PN	Pb	02 06 57.0	-0.1
DAT	**Datca**	**1.22**	**288**	⇑*i*P	Pb	02 06 56.9	-0.1
DAT				*i* S	Sb	02 07 13.7	+1.3
DAT	**Datca**	**1.22**	**288**	P	Pb	02 06 56.9	-0.1
DAT				S	Sb	02 07 13.7	+1.3
KORT	**Korkueli**	**1.25**	**59**	PN	Pb	02 06 58.6	+1.0
KORT	**Korkueli**	**1.25**	**59**	⇑*i*P	Pb	02 06 58.7	+1.1
KORT				*i* S	Sb	02 07 18.7	+5.3
KORT	**Korkueli**	**1.25**	**59**	*e*Pn	Pb	02 06 58.6	+1.0
KORT				S	Sb	02 07 18.7	+5.3
DNZL	**Cakiroluk**	**1.33**	**1**	⇓*i*P	Pb	02 06 58.6	-0.5
DNZL				*i* S	Sb	02 07 15.4	-0.4
DNZL	**Cakiroluk**	**1.33**	**1**	P	Pb	02 06 58.6	-0.5
DNZL				S	Sb	02 07 15.4	-0.4
MLSB	**Milas**	**1.37**	**314**	PN	Pb	02 06 59.1	-0.4
MLSB	**Milas**	**1.37**	**314**	*e*Pn	Pb	02 06 59.1	-0.4
DENT	**Denizli**	**1.40**	**1**	PN	Pb	02 06 59.6	-0.5
DENT	**Denizli**	**1.40**	**1**	*e*Pn	Pb	02 06 59.6	-0.5
ANTB	**Antalya**	**1.43**	**67**	PN	Pb	02 07 01.1	+0.6
ANTB	**Antalya**	**1.43**	**67**	*e*Pn	Pb	02 07 01.1	+0.6
BDRM	**Kayabasi**	**1.45**	**300**	⇑*i*P	Pb	02 07 00.1	-0.8
BDRM				*i* S	Sb	02 07 19.2	+0.3
BDRM	**Kayabasi**	**1.45**	**300**	P	Pb	02 07 00.1	-0.8
BDRM				S	Sb	02 07 19.2	+0.3
BODT	**Bodrum**	**1.54**	**298**	PN	Pn	02 07 00.4	0.0
BODT	**Bodrum**	**1.54**	**298**	P	Pn	02 07 00.4	0.0
BODT				S	Sb	02 07 20.7	-0.9
BODT	**Bodrum**	**1.54**	**298**	P	Pn	02 07 00.4	0.0
BODT				S	Sb	02 07 20.7	-0.9
NISR	**Nisiros**	**1.54**	**280**	P	Pb	02 07 02.9	+0.4
NISR	**Nisiros**	**1.54**	**280**	P	Pn	02 07 00.7	+0.3
NISR				S	Sn	02 07 20.2	+0.6
NISR	**Nisiros**	**1.54**	**280**	P	Pb	02 07 02.0	-0.5
NISR				S	Sn	02 07 20.2	+0.6
BRDR	**BURDUR-Merkez**	**1.58**	**32**	⇑*i*P	Pb	02 07 03.0	-0.2
BRDR				*i* S	Sb	02 07 23.6	+0.8
BRDR	**BURDUR-Merkez**	**1.58**	**32**	P	Pb	02 07 03.0	-0.2
BRDR				S	Sb	02 07 23.6	+0.8
AYDN	**Tasoluk**	**1.59**	**325**	*i* P	Pn	02 07 02.2	+1.1
AYDN				*i* S	Sb	02 07 23.3	+0.3
AYDN	**Tasoluk**	**1.59**	**325**	P	Pn	02 07 02.2	+1.1
AYDN				S	Sb	02 07 23.3	+0.3
YKAV	**Yalikavak-Bodr**	**1.59**	**299**	PN	Pn	02 07 01.9	+0.8
YKAV	**Yalikavak-Bodr**	**1.59**	**299**	*e*Pn	Pn	02 07 01.9	+0.8
BCK	**Bucak**	**1.68**	**48**	PN	Pb	02 07 04.3	-0.5
BCK	**Bucak**	**1.68**	**48**	*e*Pn	Pb	02 07 04.3	-0.5
AYDB	**Zeytinkoy-Aydi**	**1.83**	**331**	PN	Pn	02 07 05.4	+1.0
AYDB	**Zeytinkoy-Aydi**	**1.83**	**331**	*e*Pn	Pn	02 07 05.4	+1.0
ISP	**Isparta**	**1.90**	**39**	PN	Pb	02 07 07.5	-1.1
ISP	**Isparta**	**1.90**	**39**	P	Pn	02 07 06.7	+1.3
ISP				S	Sb	02 07 30.8	-1.1
ISP	**Isparta**	**1.90**	**39**	Pn	Pn	02 07 06.9	+1.5
ISP	**Isparta**	**1.90**	**39**	P	Pn	02 07 06.7	+1.3
ISP	**Isparta**	**1.90**	**39**	*e*Pn	Pb	02 07 07.5	-1.1
ISP				S	Sb	02 07 30.8	-1.1
SUTC	**Sutluce-Ispart**	**1.95**	**54**	PN	Pb	02 07 08.5	-0.9
SUTC	**Sutluce-Ispart**	**1.95**	**54**	*e*Pn	Pb	02 07 08.5	-0.9
KHL	**Karahalli**	**2.01**	**11**	PN	Pn	02 07 08.5	+1.6
KHL	**Karahalli**	**2.01**	**11**	*e*Pn	Pn	02 07 08.5	+1.6
KHAL	**Karahalli**	**2.05**	**11**	*i* P	Pn	02 07 07.1	-0.4
KHAL				*i* S	Sn	02 07 30.4	-1.9
KHAL	**Karahalli**	**2.05**	**11**	P	Pn	02 07 07.1	-0.4
KHAL				S	Sn	02 07 30.4	-1.9
KEPZ	**Antalya-Kepez**	**2.15**	**74**	⇑*i*P	Pb	02 07 11.9	-1.0
KEPZ				*i* S	Sb	02 07 38.9	-0.3
KEPZ	**Antalya-Kepez**	**2.15**	**74**	P	Pb	02 07 11.9	-1.0
KEPZ				S	Sb	02 07 38.9	-0.3
BAGO	**Egridir - ISPA**	**2.16**	**40**	⇑*i*P	Pn	02 07 10.8	+1.7
BAGO				*i* S	Sb	02 07 39.8	+0.2
MANT	**Manisa**	**2.17**	**350**	*i* P	Pn	02 07 09.2	0.0
MANT				*i* S	Sn	02 07 33.7	-1.6
MANT	**Manisa**	**2.17**	**350**	P	Pn	02 07 09.2	0.0
MANT				S	Sn	02 07 33.7	-1.6
KULA	**Kula-Manisa**	**2.18**	**353**	PN	Pn	02 07 09.5	+0.3
KULA	**Kula-Manisa**	**2.18**	**353**	*e*Pn	Pn	02 07 09.5	+0.3
SMG	**Samos**	**2.21**	**308**	P	Pn	02 07 11.0	+1.4
SMG				S	Sn	02 07 36.8	+0.8
SMG				AML	AML	02 07 38.2	
	comp=E,10128μm,0.3s						
SMG				AML	AML	02 07 39.3	
	comp=N,11778μm,0.3s						
SMG	**Samos**	**2.21**	**308**	P	Pn	02 07 10.4	+0.8
SMG				S	Sn	02 07 37.3	+1.3
SMG	**Samos**	**2.21**	**308**	P	Pn	02 07 10.6	+1.1
SMG				S	Sn	02 07 37.3	+1.3
DGB	**¯zmir**	**2.40**	**316**	*i* P	Pn	02 07 12.8	+0.6
DGB				*i* S	Sn	02 07 41.0	+0.2
BLCB	**Balcova**	**2.57**	**323**	PN	Pn	02 07 15.9	+1.4
BLCB	**Balcova**	**2.57**	**323**	*e*Pn	Pn	02 07 15.9	+1.4
ZKR	**Zakros**	**2.59**	**242**	P	Pb	02 07 17.9	-2.4
ZKR				S	Sn	02 07 47.9	+2.5
ZKR				AML	AML	02 07 49.2	
	comp=E,2754μm,0.4s						
ZKR				AML	AML	02 07 49.8	
	comp=N,1534μm,0.6s						
ZKR	**Zakros**	**2.59**	**242**	P	Pn	02 07 17.1	+2.3
ZKR				S	Sn	02 07 47.4	+2.0
ZKR	**Zakros**	**2.59**	**242**	P	Pn	02 07 17.1	+2.3
ZKR				S	Sn	02 07 47.4	+2.0
SHAP	**Saphane-Kutahy**	**2.67**	**3**	PN	Pn	02 07 16.5	+0.5
SHAP	**Saphane-Kutahy**	**2.67**	**3**	*e*Pn	Pn	02 07 16.5	+0.5
AKHS	**Akhisar**	**2.70**	**340**	*i* P	Pn	02 07 16.1	-0.2
AKHS				*i* S	Sn	02 07 46.7	-1.4
AKHS	**Akhisar**	**2.70**	**340**	P	Pn	02 07 16.1	-0.2
AKHS				S	Sn	02 07 46.7	-1.4
DEMI	**Demirci**	**2.70**	**355**	⇓*i*P	Pn	02 07 16.5	+0.2
DEMI				*i* S	Sn	02 07 46.9	-1.3
DEMI	**Demirci**	**2.70**	**355**	P	Pn	02 07 16.5	+0.2
DEMI				S	Sn	02 07 46.9	-1.3
AKS	**Akhisar**	**2.70**	**340**	PN	Pn	02 07 17.7	+1.4
AKS	**Akhisar**	**2.70**	**340**	*e*Pn	Pn	02 07 17.7	+1.4
GEDZ	**Gediz**	**2.71**	**7**	PN	Pn	02 07 18.3	+1.8
GEDZ	**Gediz**	**2.71**	**7**	*e*Pn	Pn	02 07 18.3	+1.8
SIMA	**Simav-Kutahya**	**2.73**	**359**	PN	Pn	02 07 16.9	+0.1
SIMA	**Simav-Kutahya**	**2.73**	**359**	*e*Pn	Pn	02 07 16.9	+0.1
SMAA	**Simav-Kutahya**	**2.74**	**359**	PN	Pn	02 07 18.9	+1.9
SMAA	**Simav-Kutahya**	**2.74**	**359**	*e*Pn	Pn	02 07 18.9	+1.9
DOGA	**KONYA_Doganhis**	**2.75**	**50**	*i* P	Pn	02 07 19.2	+2.1
DOGA				*i* S	Sn	02 07 52.2	+2.7
DOGA	**KONYA_Doganhis**	**2.75**	**50**	P	Pn	02 07 19.2	+2.1
DOGA				S	Sn	02 07 52.2	+2.7
URLA	**Izmir**	**2.78**	**317**	PN	Pn	02 07 19.3	+1.8
URLA	**Izmir**	**2.78**	**317**	*e*Pn	Pn	02 07 19.3	+1.8
THR8	**Santorini-Mono**	**2.85**	**272**	P	Pn	02 07 19.6	+1.2
THR8	**Santorini-Mono**	**2.85**	**272**	P	Pn	02 07 19.6	+1.2
SANT	**Santorini**	**2.87**	**271**	P	Pn	02 07 19.1	+0.4
SANT	**Santorini**	**2.87**	**271**	P	Pn	02 07 19.5	+0.8
APE	**Apeiranthos**	**2.89**	**285**	S	Sn	02 07 55.4	+2.5
APE	**Apeiranthos**	**2.89**	**285**	P	Pn	02 07 18.6	-0.3
APE				S	Sn	02 07 53.8	+0.9
APE				AML	AML	02 07 57.0	
	comp=N,653μm,0.4s						
APE				AML	AML	02 07 57.7	
	comp=E,674μm,0.4s						
APE	**Apeiranthos**	**2.89**	**285**	P	Pn	02 07 19.6	+0.6
APE				S	Sn	02 07 54.0	+1.1
APE	**Apeiranthos**	**2.89**	**285**	P	Pn	02 07 19.6	+0.6
APE				S	Sn	02 07 54.0	+1.1
THR2	**Thira island,**	**2.89**	**273**	P	Pn	02 07 20.0	+1.0
THR2	**Thira island,**	**2.89**	**273**	P	Pn	02 07 20.1	+1.2
THR2	**Thira island,**	**2.89**	**273**	P	Pn	02 07 20.1	+1.2
THT1	**Athinios (Pele**	**2.89**	**272**	P	Pn	02 07 19.0	+0.1
THT1	**Athinios (Pele**	**2.89**	**272**	P	Pn	02 07 19.7	+0.7
THR7	**Fira-Santorini**	**2.90**	**272**	P	Pn	02 07 20.3	+1.3
THR7	**Fira-Santorini**	**2.90**	**272**	P	Pn	02 07 20.3	+1.3
THT2	**Imerovigli**	**2.90**	**273**	P	Pn	02 07 20.4	+1.3
THT2	**Imerovigli**	**2.90**	**273**	P	Pn	02 07 20.4	+1.3
THT2	**Imerovigli**	**2.90**	**273**	P	Pn	02 07 20.4	+1.3
THR3	**Thira Island,**	**2.92**	**272**	P	Pn	02 07 19.9	+0.6
THR3	**Thira Island,**	**2.92**	**272**	P	Pn	02 07 20.2	+1.0
THR3	**Thira Island,**	**2.92**	**272**	P	Pn	02 07 20.3	+1.0
THR6	**Thira Island,**	**2.92**	**271**	P	Pn	02 07 19.7	+0.4
THR6	**Thira Island,**	**2.92**	**271**	P	Pn	02 07 20.3	+1.0
THR6	**Thira Island,**	**2.92**	**271**	P	Pn	02 07 20.3	+1.0
SAP1	**Santorini-Akro**	**2.92**	**271**	P	Pn	02 07 20.2	+0.8
SAP1	**Santorini-Akro**	**2.92**	**271**	P	Pn	02 07 20.4	+1.0
SAP1	**Santorini-Akro**	**2.92**	**271**	P	Pn	02 07 20.4	+1.0
THR5	**Thira Island,**	**2.96**	**272**	P	Pn	02 07 19.3	-0.6
THR5	**Thira Island,**	**2.96**	**272**	P	Pn	02 07 20.6	+0.7
THR5	**Thira Island,**	**2.96**	**272**	P	Pn	02

SIVA			S	Sn	02 08 13.6 +1.5
MHLA	**Plaka, Milos I**	**3.72 277**	P	Pn	02 07 31.2 +0.9
MHLA	**Plaka, Milos I**	**3.72 277**	P	Pn	02 07 31.6 +1.3
SERI	**Serifos**	**3.73 284**	P	Pn	02 07 31.3 +0.8
SERI	**Serifos**	**3.73 284**	P	Pn	02 07 31.6 +1.2
MHLO	**Agia Marina, M**	**3.73 277**	P	Pn	02 07 33.8 +3.3
MHLO	**Agia Marina, M**	**3.73 277**	P	Pn	02 07 32.9 +2.4
CSS	**Mathiatis**	**3.78 110**	P	Pn	02 07 32.3 +1.1
	baz=289				
CSS	**Mathiatis**	**3.78 110**	Pn	Pn	02 07 31.7 +0.5
CSS	**Mathiatis**	**3.78 110**	P	Pn	02 07 32.3 +1.1
SIGR	**SIGRI**	**3.80 320**	P	Pn	02 07 32.0 +0.6
SIGR			S	Sn	02 08 15.3 +0.1
SIGR			AML	AML	02 08 42.3
	comp=E,337μm,0.9s				
SIGR			AML	AML	02 08 44.5
	comp=N,821μm,0.7s				
SIGR	**SIGRI**	**3.80 320**	P	Pn	02 07 32.1 +0.7
SIGR			S	Sn	02 08 15.6 +0.4
SIGR	**SIGRI**	**3.80 320**	P	Pn	02 07 32.3 +0.9
SIGR			S	Sn	02 08 15.6 +0.4
KARY	**Karystos**	**4.02 296**	P	Pn	02 07 35.9 +1.4
KARY			S	Sn	02 08 20.4 -0.3
KARY			AML	AML	02 08 23.6
	comp=E,527μm,0.4s				
KARY			AML	AML	02 08 24.2
	comp=N,550μm,0.3s				
KARY	**Karystos**	**4.02 296**	P	Pn	02 07 35.9 +1.4
KARY			S	Sn	02 08 20.4 -0.3
VAM	**Vamos**	**4.02 258**	P	Pn	02 07 35.2 +0.7
VAM	**Vamos**	**4.02 258**	P	Pn	02 07 35.8 +1.3
IMMV	**Iera Moni Meta**	**4.18 259**	P	Pn	02 07 37.3 +0.6
IMMV	**Iera Moni Meta**	**4.18 259**	P	Pn	02 07 38.0 +1.3
GVD	**Gavdhos**	**4.29 251**	P	Pn	02 07 40.0 +1.8
GVD			S	Sn	02 08 28.4 +1.1
GVD			AML	AML	02 08 32.9
	comp=N,1285μm,0.3s				
GVD			AML	AML	02 08 34.2
	comp=E,1486μm,0.4s				
GVD	**Gavdhos**	**4.29 251**	P	Pn	02 07 40.2 +2.0
GVD			S	Sn	02 08 28.2 +0.8
SKY	**Skiros Island**	**4.35 307**	P	Pn	02 07 41.7 +2.7
SKY	**Skiros Island**	**4.35 307**	P	Pn	02 07 41.1 +2.1
DION	**Dionisos Attik**	**4.41 295**	P	Pn	02 07 41.2 +1.5
DION			S	Sn	02 08 31.5 +1.2
DION			AML	AML	02 08 33.7
	comp=E,660μm,0.3s				
DION			AML	AML	02 08 34.5
	comp=N,541μm,0.5s				
DION	**Dionisos Attik**	**4.41 295**	P	Pn	02 07 41.3 +1.5
DION			S	Sn	02 08 30.6 +0.3
VLY	**Voula,Athens**	**4.43 291**	P	Pn	02 07 42.0 +1.9
VLY			S	Sn	02 08 29.5 -1.4
VLY			AML	AML	02 08 36.1
	comp=N,383μm,0.6s				
VLY			AML	AML	02 08 37.1
	comp=E,508μm,0.5s				
VLY	**Voula,Athens**	**4.43 291**	P	Pn	02 07 41.9 +1.7
VLY			S	Sn	02 08 30.0 -0.9
PTL	**Penteli**	**4.45 294**	P	Pn	02 07 42.1 +1.7
PTL			S	Sn	02 08 32.2 +1.0
PTL			AML	AML	02 08 33.2
	comp=N,300μm,0.4s				
PTL			AML	AML	02 08 33.8
	comp=E,385μm,0.4s				
PTL	**Penteli**	**4.45 294**	P	Pn	02 07 42.0 +1.7
PTL			S	Sn	02 08 31.5 +0.2
ATHU	**Athens Univers**	**4.48 293**	P	Pn	02 07 39.4 -1.4
ATHU			S	Sn	02 08 31.1 -0.9
ATHU	**Athens Univers**	**4.48 293**	P	Pn	02 07 40.9 +0.1
ATHU			S	Sn	02 08 31.3 -0.7
ANTO	**Ankara**	**4.60 39**	⇓*i*P	Pn	02 07 44.2 +1.6
ANKY	**Antikythira Is**	**4.65 266**	P	Pn	02 07 43.8 +0.7
ANKY	**Antikythira Is**	**4.65 266**	P	Pn	02 07 44.5 +1.4
LIA	**Limnos Island**	**4.65 321**	P	Pn	02 07 43.8 +0.7
LIA	**Limnos Island**	**4.65 321**	P	Pn	02 07 44.2 +1.1
DID	**Didima**	**4.77 286**	P	Pn	02 07 46.2 +1.4
DID	**Didima**	**4.77 286**	P	Pn	02 07 46.4 +1.6
KRND	**KRANIDI**	**4.81 284**	P	Pn	02 07 47.3 +1.9
KRND	**KRANIDI**	**4.81 284**	P	Pn	02 07 47.3 +1.9
KYTH	**Kithira**	**4.82 271**	P	Pn	02 07 47.1 +1.6
KYTH			S	Sn	02 08 41.6 +1.1
KYTH			AML	AML	02 08 47.9
	comp=E,307μm,0.5s				
KYTH			AML	AML	02 08 47.9
	comp=N,316μm,0.2s				
KYTH	**Kithira**	**4.82 271**	P	Pn	02 07 47.4 +1.9
KYTH			S	Sn	02 08 41.1 +0.6
VILL	**Villia**	**4.89 293**	P	Pn	02 07 48.4 +1.9
VILL			S	Sn	02 08 42.6 +0.2
VLI	**Veliai**	**4.91 276**	P	Pn	02 07 46.9 +0.2
VLI			S	Sn	02 08 42.1 -0.5
VLI			AML	AML	02 08 49.9
	comp=N,310μm,0.6s				
VLI			AML	AML	02 08 50.9
	comp=E,192μm,0.5s				
VLI	**Veliai**	**4.91 276**	P	Pn	02 07 47.7 +1.0
VLI			S	Sn	02 08 42.2 -0.5
SMTH	**Samothraki Isl**	**4.94 327**	P	Pn	02 07 47.0 -0.1
SMTH	**Samothraki Isl**	**4.94 327**	P	Pn	02 07 47.8 +0.7
VIL2	**Platees**	**4.94 294**	P	Pn	02 07 48.5 +1.3
VIL2			S	Sn	02 08 43.5 0.0
VIL2			AML	AML	02 08 46.3
	comp=N,469μm,0.4s				
VIL2			AML	AML	02 08 47.0
	comp=E,384μm,0.4s				
BRTR	**Keskin Array B**	**4.96 46**	Pn	Pn	02 07 48.8 +1.2
	comp=E,3.0nm,0.3s,baz=220,slow=15,SNR=101				
BRTR			Sn	Sn	02 08 44.6 +0.4
	comp=E,3.9nm,0.3s,baz=223,slow=25,SNR=10				
ALN	**Alexandroupoli**	**5.10 334**	P	Pn	02 07 48.0 -1.2
ALN	**Alexandroupoli**	**5.10 334**	P	Pn	02 07 49.5 +0.2
LTK	**Loutraki**	**5.11 291**	P	Pn	02 07 51.1 +1.7
LTK	**Loutraki**	**5.11 291**	P	Pn	02 07 51.2 +1.7
MATC	**Matruh**	**5.21 197**	P	Pn	02 07 50.3 -0.5
	baz=198				
SKIA	**Skiathos**	**5.22 304**	P	Pn	02 07 53.0 +2.0
SKIA			S	Sn	02 08 50.3 +0.1
SKIA			AML	AML	02 08 50.4
	comp=E,201μm,0.4s				
SKIA			AML	AML	02 08 51.0
	comp=N,329μm,0.8s				
SKIA	**Skiathos**	**5.22 304**	P	Pn	02 07 52.9 +2.0
SKIA			S	Sn	02 08 49.8 -0.4
LKR	**Lokris**	**5.30 297**	P	Pn	02 07 56.1 +4.0
LKR	**Lokris**	**5.30 297**	P	Pn	02 07 55.1 +3.0
DYR	**Agios Nikonas**	**5.39 276**	P	Pn	02 07 57.6 +4.2
DYR	**Agios Nikonas**	**5.39 276**	P	Pn	02 07 56.6 +3.2
VLX	**Vlachokerasia**	**5.42 283**	P	Pn	02 07 56.9 +3.1
VLX	**Vlachokerasia**	**5.42 283**	P	Pn	02 07 56.3 +2.5
NEO	**Neokhori**	**5.45 304**	P	Pn	02 07 55.1 +0.9
NEO	**Neokhori**	**5.45 304**	P	Pn	02 07 55.5 +1.4
XOR	**Xorichti**	**5.50 305**	P	Pn	02 07 56.3 +1.4
XOR	**Xorichti**	**5.50 305**	P	Pn	02 07 56.5 +1.6
RDO	**Rodhopi**	**5.50 331**	P	Pn	02 07 55.3 +0.5
RDO	**Rodhopi**	**5.50 331**	P	Pn	02 07 56.0 +1.2
PAIG	**Paliouri**	**5.51 312**	P	Pn	02 07 56.7 +1.8
PAIG	**Paliouri**	**5.51 312**	P	Pn	02 07 56.8 +1.8
GUR	**Goura**	**5.56 289**	P	Pn	02 07 57.4 +1.6
GUR	**Goura**	**5.56 289**	P	Pn	02 07 57.6 +1.9
OUR	**Ouranopolis**	**5.61 317**	P	Pn	02 07 58.3 +2.1
OUR			S	Sn	02 08 57.3 -2.5
OUR			AML	AML	02 09 04.7
	comp=E,122μm,0.2s				
OUR			AML	AML	02 09 04.9
	comp=N,87μm,0.4s				
OUR	**Ouranopolis**	**5.61 317**	P	Pn	02 07 58.2 +1.9
OUR			S	Sn	02 08 58.0 -1.8
KLV	**Kalavryta, Ach**	**5.73 289**	P	Pn	02 08 00.3 +2.2
KLV	**Kalavryta, Ach**	**5.73 289**	P	Pn	02 08 00.2 +2.2
SLUM	**Salum**	**5.79 214**	P	Pn	02 07 58.9 +0.1
	baz=216				
SLUM			S	Sn	02 08 56.1 -8.2
	baz=216				
SLUM			AMP		02 09 00.0
	baz=216				
KALE	**Kalithea**	**5.84 292**	P	Pn	02 08 02.9 +3.4
KALE	**Kalithea**	**5.84 292**	P	Pn	02 08 02.3 +2.8
PYL	**PYLOS**	**5.88 277**	P	Pn	02 08 04.0 +4.0
PYL	**PYLOS**	**5.88 277**	P	Pn	02 08 03.2 +3.2
LAKA	**Lakka**	**5.92 291**	P	Pn	02 08 03.4 +2.9
LAKA	**Lakka**	**5.92 291**	P	Pn	02 08 03.1 +2.5
AGG	**Agios Georgios**	**5.93 299**	P	Pn	02 08 04.4 +3.6
AGG	**Agios Georgios**	**5.93 299**	P	Pn	02 08 03.6 +2.8
MES3	**Kyparissia**	**5.96 281**	P	Pn	02 08 05.7 +4.6
MES3	**Kyparissia**	**5.96 281**	P	Pn	02 08 04.5 +3.4
AMT	**Artemida-Makis**	**5.97 284**	P	Pn	02 08 05.8 +4.5
AMT	**Artemida-Makis**	**5.97 284**	P	Pn	02 08 04.7 +3.4
DQRL	**Deir Qamar**	**5.99 114**	*e*P	Pn	02 08 00.7 -0.9
EFP	**Efpalio**	**6.03 292**	P	Pn	02 08 05.7 +3.6
EFP	**Efpalio**	**6.03 292**	P	Pn	02 08 05.0 +3.0
HNTI	**Hanita**	**6.03 121**	Pn	Pn	02 08 02.3 +0.2
HWQ	**Hawqa**	**6.03 108**	*e*P	Pn	02 08 02.6 +0.4
OFRI	**'Ofer**	**6.18 125**	Pn	Pn	02 08 04.6 +0.5
MMA0B	**Mount Meron ar**	**6.23 120**	Pn	Pn	02 08 04.9 0.0
MMA0B			Sn	Sn	02 09 12.2 -3.0
MMAI	**Mount Meron Ar**	**6.23 120**	Pn	Pn	02 08 04.8 -0.1
	comp=N,47nm,0.3s,baz=304,slow=12,SNR=275				
MMAI			Sn	Sn	02 09 12.0 -3.3
	comp=N,29nm,0.3s,baz=311,slow=25,SNR=12				
EVR	**Evrytania**	**6.26 296**	P	Pn	02 08 09.6 +4.2
EVR	**Evrytania**	**6.26 296**	P	Pn	02 08 08.6 +3.2
RCY	**Rachaya**	**6.29 115**	*e*P	Pn	02 08 05.4 -0.3
SHBL	**Chebaa**	**6.29 116**	*e*P	Pn	02 08 05.5 -0.3
KSDI	**Kefar Szold**	**6.31 118**	Pn	Pn	02 08 06.1 +0.2
KSDI			Sn	Sn	02 09 13.2 -4.0
LIT	**Litokhoron**	**6.35 308**	P	Pn	02 08 11.3 +4.8
LIT	**Litokhoron**	**6.35 308**	P	Pn	02 08 10.0 +3.4
THL	**Klokotos Trika**	**6.39 302**	P	Pn	02 08 09.8 +2.8
THL	**Klokotos Trika**	**6.39 302**	P	Pn	02 08 09.6 +2.6
FKH	**Fakeheh**	**6.40 107**	*e*P	Pn	02 08 07.8 +0.5
NVR	**Nevrokopi**	**6.41 323**	P	Pn	02 08 10.6 +3.3
NVR	**Nevrokopi**	**6.41 323**	P	Pn	02 08 10.0 +2.7
SLTI	**Sal'it**	**6.46 128**	Pn	Pn	02 08 07.3 -0.6
KSHT	**Keshet**	**6.53 119**	Pn	Pn	02 08 11.8 +2.8
MMLI	**Mount Malkishu**	**6.58 125**	Pn	Pn	02 08 09.8 +0.1
MMLI			Sn	Sn	02 09 21.8 -2.1
RSH		**6.66 143**	P	Pn	02 08 10.6 -0.1
	baz=141				
RSH		**6.66 143**	P	Pn	02 08 10.6 -0.1
HMDT	**Nahal Hemdat**	**6.76 125**	Pn	Pn	02 08 13.0 +0.8
KOT	**Kottamia**	**6.83 159**	P	Pn	02 08 13.6 +0.5
	baz=158				
KOT			S	Sn	02 09 22.5 -7.5
	baz=158				
DSL	**Palaion Diasel**	**6.86 296**	P	Pn	02 08 20.2 +6.7
DSL	**Palaion Diasel**	**6.86 296**	P	Pn	02 08 18.1 +4.6
HHAG	**Hagoal**	**6.88 157**	P	Pn	02 08 13.9 0.0
	baz=156				
GRG	**Griva**	**6.92 314**	P	Pn	02 08 18.5 +4.2
GRG	**Griva**	**6.92 314**	P	Pn	02 08 17.6 +3.3
VLS	**Valsamata**	**6.96 288**	P	Pn	02 08 20.2 +5.3
VLS	**Valsamata**	**6.96 288**	P	Pn	02 08 18.9 +4.0
KPRO	**Kipourio**	**7.02 303**	P	Pn	02 08 20.2 +4.5
KPRO	**Kipourio**	**7.02 303**	P	Pn	02 08 19.2 +3.5
KZIT	**Kziot**	**7.04 139**	Pn	Pn	02 08 15.9 -0.1
LKD2	**Lefkada island**	**7.07 293**	P	Pn	02 08 23.0 +6.6
LKD2	**Lefkada island**	**7.07 293**	P	Pn	02 08 21.0 +4.6
YTIR	**Yattir**	**7.11 133**	Pn	Pn	02 08 17.4 +0.4
DSI	**Dead Sea**	**7.12 130**	Pn	Pn	02 08 18.6 +1.5
DSI			Sn	Sn	02 09 34.0 -3.1
PENT	**Pentalofos**	**7.29 304**	P	Pn	02 08 25.2 +5.7
PENT	**Pentalofos**	**7.29 304**	P	Pn	02 08 23.5 +4.1
NEST	**Nestorio**	**7.46 305**	P	Pn	02 08 27.8 +6.1
NEST	**Nestorio**	**7.46 305**	P	Pn	02 08 26.0 +4.3
STIP	**Stip**	**7.53 317**	*i* Pn	Pn	02 08 24.8 +2.2
BIA	**Bitola**	**7.61 310**	*i* Pn	Pn	02 08 29.1 +5.3
HNKL	**Nakhl**	**7.64 146**	P	Pn	02 08 23.4 -0.8
	baz=144				
VTS	**Vitosha**	**7.68 326**	⇓*i*P	Pn	02 08 29.7 +4.9
VTS	**Vitosha**	**7.68 326**	S	Sn	02 09 51.8 +0.8
SWA2		**7.70 204**	P	Pn	02 08 24.4 -0.5
	baz=205				
SWA2			AMP		02 10 00.0
	baz=205				
SWA2		**7.70 204**	P	Pn	02 08 24.4 -0.5
ASF	**Jabal al Asfar**	**7.74 120**	Pn	Pn	02 08 26.2 +0.6
	comp=N,1.2nm,0.3s,baz=262,slow=5.5,SNR=10				
ASF			Sn	Sn	02 09 52.7 +0.1
	comp=N,1.2nm,0.3s,baz=107,slow=19,SNR=3.0				
PRNI	**Paran**	**7.80 138**	Pn	Pn	02 08 26.4 -0.1
NBNS	**Bani Suef**	**7.94 165**	P	Pn	02 08 27.5 -0.9
	baz=164				
HRFI	**Mount Harif**	**8.07 140**	Pn	Pn	02 08 29.7 -0.4
TIRR	**Tirgusor**	**8.11 357**	⇓*i*P	Pn	02 08 31.9 +1.3
MBRI	**Mt Berech**	**8.20 141**	Pn	Pn	02 08 31.9 -0.1
TLB	**Topalu**	**8.26 355**	⇑*i*P	Pn	02 08 30.8 -1.8
EIL	**Elat**	**8.32 142**	Pn	Pn	02 08 37.6 +4.1
	comp=N,0.2nm,0.3s,baz=322,slow=8.6,SNR=2.3				
EIL			Sn	Sn	02 10 09.9 +3.2
	comp=N,1.1nm,0.3s,baz=73,slow=19,SNR=3.9				
EIL	**Elat**	**8.32 142**	Pn	Pn	02 08 33.4 -0.1
HBST	**Basata**	**8.59 144**	P	Pn	02 08 36.9 -0.3
	baz=143				
HQLS		**8.68 142**	P	Pn	02 08 38.5 0.0
HQLS			S	Sn	02 10 10.5 -5.1
TIR	**Tirane**	**8.71 308**	⇑*i*P	Pn	02 08 43.0 +4.2
TAMRE	**El Minia**	**8.79 169**	P	Pn	02 08 39.8 -0.3
	baz=168				
HAQS	**Haql**	**8.82 144**	P	Pn	02 08 40.0 -0.4
TLCR		**8.83 359**	⇑*i*P	Pn	02 08 41.7 +1.3
HKAT	**Jabal Katrina**	**8.87 150**	P	Pn	02 08 40.6 -0.6
	baz=149				
TR2	**Tor 2**	**8.88 152**	P	Pn	02 08 41.1 -0.2
	baz=151				
HFRF	**Wahat Farafira**	**9.20 184**	P	Pn	02 08 44.6 -0.9
	baz=184				
TR1	**Tor 1**	**9.31 152**	P	Pn	02 08 46.7 -0.4
	baz=151				
JLOS		**9.36 142**	P	Pn	02 08 47.6 -0.3
RSHS		**9.40 147**	P	Pn	02 08 48.6 +0.3
RSHS			S	Sn	02 10 26.3 -6.9
MLR	**Muntele Rosu**	**9.42 347**	Pn	Pn	02 08 49.5 +0.8
	comp=N,0.1nm,0.3s,baz=220,slow=4.1,SNR=11				
MLR			LR	LR	02 13 10.6
	comp=N,22nm,19.8s,baz=174,slow=42				
MLR	**Muntele Rosu**	**9.42 347**	⇑*i*P	Pn	02 08 50.0 +1.3
BDAS	**Al Bad'**	**9.42 145**	P	Pn	02 08 48.0 -0.7
PLOR	**Plostina**	**9.65 350**	⇓*i*P	Pn	02 08 54.0 +2.2
VRI	**Vrincioaia**	**9.66 350**	⇑*i*P	Pn	02 08 54.3 +2.4
TIP	**Timpagrande**	**10.11 290**	⇓*i*P	Pn	02 09 01.9 +3.9
STON	**Ston**	**10.88 310**	*e*Pn	Pn	02 09 12.4 +3.8
STON			Sn	Sn	02 11 15.0 +5.6
VAE	**Valguarnera**	**11.75 280**	Sn	Sn	02 11 24.7 -6.0
	comp=N,0.3nm,0.3s,baz=205,slow=15,SNR=2.6				
KVAR	**Kislovodsk Arr**	**12.92 50**	Pn	Pn	02 09 37.1 +0.5
	baz=345,slow=15,SNR=2.7				
GNI	**Garni**	**12.93 68**	LR	LR	02 15 44.1
	comp=N,131nm,21.1s,baz=268,slow=43				
KBZ	**Khabaz**	**12.93 51**	Pn	P	02 09 46.3 -0.6
	comp=N,0.1nm,0.3s,baz=200,slow=3.6,SNR=6.0				
KBZ			LR	LR	02 15 05.7
	comp=N,33nm,21.8s,baz=266,slow=40				
UDBI	**Udbina**	**12.97 313**	*e*Pn	P	02 09 43.8 -3.7
AKASG	**Malin Array Be**	**14.34 1**	Pn	Pn	02 09 55.9 +0.1
	comp=N,0.2nm,0.3s,baz=276,slow=9.6,SNR=2.7				
KEST	**Kesra**	**15.93 274**	Pn	P	02 10 20.1 -0.3
	comp=N,0.1nm,0.3s,baz=320,slow=2.2,SNR=8.2				
GERES	**GERESS Array B**	**16.78 323**	Pn	Pn	02 10 28.3 +0.5
	comp=N,0.1nm,0.3s,baz=130,slow=11,SNR=3.4				
KHC	**Kasperske Hory**	**17.03 323**	*e*P	P	02 10 36.7 +4.2
KHC			*ex*	x	02 10 44.2
CLL	**Collm**	**18.83 328**	*e*(PP)		02 11 05.0
AKTO	**Aktyubinsk**	**25.14 47**	P	P	02 11 56.3 -1.1
	comp=N,1.0nm,0.6s,baz=250,slow=9.7,SNR=5.2				
FINES	**FINESS Array B**	**25.18 357**	P	P	02 11 57.6 0.0
	comp=N,0.9nm,0.7s,baz=160,slow=16,SNR=3.7				
HFS	**Hagfors**	**25.76 342**	P	P	02 12 02.9 0.0
	comp=N,1.6nm,0.8s,baz=171,slow=19,SNR=3.3				
HFS			LR	LR	02 23 52.4
	comp=N,48nm,18.6s,baz=166,slow=40				
ESDC	**Sonseca Array**	**26.11 287**	P	P	02 12 06.5 +0.1
	comp=N,0.2nm,0.4s,baz=82,slow=9.4,SNR=4.7				
NOA	**NORSAR Array B**	**27.17 341**	LR	LR	02 23 37.3
	comp=N,19nm,19.6s,baz=150,slow=38				
TORD	**Torodi Ar. Bea**	**33.69 234**	P	P	02 13 13.5 -0.1
	comp=N,2.1nm,0.6s,baz=34,slow=9.2,SNR=48				
KOWA	**Kowa**	**36.65 242**	P	P	02 13 39.2 +0.1
	comp=N,0.8nm,0.6s,baz=63,slow=14,SNR=3.4				
KURBB	**Kurchatov Arra**	**37.93 52**	P	P	02 13 48.7 -0.9
	comp=N,0.9nm,0.6s,baz=275,slow=8.7,SNR=7.9				
MKAR	**Makanchi Array**	**40.49 58**	P	P	02 14 10.0 -1.1
	comp=N,0.8nm,0.6s,baz=282,slow=7.2,SNR=8.3				
KSRS	**Korea Array**	**75.06 54**	LR	LR	02 54 30.5
	comp=N,15nm,19.0s,baz=265,slow=38				

AZER ***11*** *02:24:08.1±3.4,38°.86N×43°.42E,h5km,ml3.1/6,Error ellipse: s-maj=33.3km s-min=24.0km az=18.0*
DDA ***11*** *02:24:12.9,39°.05N×43°.78E,h5km,Ml3.2*
ISK ***11*** *02:24:12.2,39°.07N×43°.85E,h5km,ML3.1/10*
ISCJB ***11*** *02:24:13.9±0.4,39°.07N±0°.04×43°.85E±0°.04,h10km,Error ellipse: s-maj=5.7km s-min=3.6km az=151.5*
CSEM ***11*** *02:24:13.5±0.2,39°.07N×43°.86E,h2km,ML3.2,Error ellipse: s-maj=7.4km s-min=5.0km az=148.0*

ISC 11 02:24:14.7±0.8, 39°.05N±0°.02×43°.83E±0°.02, h10km, n79, σ1⁹63/89, **12C-8D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLDR	**Caldiran**	**0.12**	**36**	PG	**Pg**	**02 24 14.0**	**-3.7**
CLDR	**Caldiran**	**0.12**	**36**	*i* P	**Pg**	**02 24 14.4**	**-3.3**
CLDR	**Caldiran**	**0.12**	**36**	*e*Pg	**Pg**	**02 24 14.0**	**-3.7**
CLDR	**Caldiran**	**0.12**	**36**	P	**Pg**	**02 24 14.4**	**-3.3**
VMUR	**Van-Muradiye**	**0.21**	**253**	*i* P	**Pg**	**02 24 16.8**	**-2.3**
VMUR	**Van-Muradiye**	**0.21**	**253**	P	**Pg**	**02 24 16.8**	**-2.3**
ERCV	**ERCIS-VAN**	**0.38**	**266**	PG	**Pg**	**02 24 20.2**	**-2.1**
ERCV				SG	**Sb**	**02 24 28.3**	**-1.4**
ERCV	**ERCIS-VAN**	**0.38**	**266**	*e*Pg	**Pg**	**02 24 20.2**	**-2.1**
ERCV				*e*Sg	**Sb**	**02 24 28.3**	**-1.4**
DYDN	**Diyadin**	**0.51**	**348**	*i* P	**Pg**	**02 24 22.9**	**-1.7**
DYDN	**Diyadin**	**0.51**	**348**	P	**Pg**	**02 24 22.9**	**-1.7**
VANB	**Van**	**0.57**	**217**	PG	**Pb**	**02 24 25.7**	**-1.1**
VANB	**Van**	**0.57**	**217**	*e*Pg	**Pb**	**02 24 25.7**	**-1.1**
TVAN	**Van**	**0.62**	**213**	*i* P	**Pg**	**02 24 25.6**	**-1.1**
TVAN	**Van**	**0.62**	**213**	P	**Pg**	**02 24 25.5**	**-1.1**
AGRB	**Hanur-Agry**	**0.83**	**309**	PG	**Pg**	**02 24 29.0**	**-1.8**
AGRB	**Hanur-Agry**	**0.83**	**309**	*e*Pg	**Pg**	**02 24 29.0**	**-1.8**
IGDI	**IGDIR**	**0.84**	**13**	*i* P	**Pg**	**02 24 29.6**	**-1.2**
TUTA	**Tutak**	**0.86**	**294**	*i* P	**Pg**	**02 24 29.2**	**-2.2**
TUTA	**Tutak**	**0.86**	**294**	P	**Pg**	**02 24 29.2**	**-2.2**
ADCV	**BITLIS_Adilcev**	**0.89**	**255**	*i* P	**Pg**	**02 24 29.9**	**-1.9**
ADCV	**BITLIS_Adilcev**	**0.89**	**255**	P	**Pg**	**02 24 30.0**	**-1.9**
TASB	**TASBURUN-IGDIR**	**0.99**	**19**	PG	**Pg**	**02 24 32.0**	**-1.6**
TASB	**TASBURUN-IGDIR**	**0.99**	**19**	*e*Pg	**Pg**	**02 24 32.0**	**-1.6**
HYR	**Heyderabad**	**1.04**	**50**	⇑P	**Pn**	**02 24 34.0**	**-1.3**
HYR				⇑S	**Sn**	**02 24 54.6**	**+4.6**
HYR	**Heyderabad**	**1.04**	**50**	⇑P	**Pn**	**02 24 34.0**	**-1.3**
HYR				⇑S	**Sn**	**02 24 54.6**	**+4.6**
NAX	**Nakhchivan**	**1.30**	**84**	⇑P	**Pn**	**02 24 37.5**	**-1.5**
NAX				⇓S	**Sg**	**02 24 59.3**	**+2.7**
NAX	**Nakhchivan**	**1.30**	**84**	⇑P	**Pn**	**02 24 37.5**	**-1.5**
NAX				⇓S	**Sg**	**02 24 59.3**	**+2.7**
GNI	**Garni**	**1.31**	**32**	PN	**Pn**	**02 24 37.9**	**-1.2**
GNI	**Garni**	**1.31**	**32**	*e*Pn	**Pn**	**02 24 37.9**	**-1.2**
EATA	**Eleskirt**	**1.32**	**309**	*i* P	**Pn**	**02 24 38.5**	**-0.9**
EATA	**Eleskirt**	**1.32**	**309**	P	**Pn**	**02 24 38.5**	**-0.9**
SBZ	**Shahbuz**	**1.38**	**75**	⇑P	**Pn**	**02 24 38.5**	**-1.7**
SBZ				⇓S	**Sg**	**02 25 01.0**	**+1.8**
SBZ	**Shahbuz**	**1.38**	**75**	⇑P	**Pn**	**02 24 38.5**	**-1.7**
SBZ				⇓S	**Sg**	**02 25 01.0**	**+1.8**
EKAR	**Karacoban**	**1.39**	**279**	*i* P	**Pn**	**02 24 39.3**	**-1.0**
EKAR	**Karacoban**	**1.39**	**279**	P	**Pn**	**02 24 39.3**	**-1.0**
DIGO	**Kars**	**1.41**	**346**	*i* P	**Pb**	**02 24 40.2**	**-1.0**
DIGO	**Kars**	**1.41**	**346**	P	**Pb**	**02 24 40.2**	**-1.0**
GURO	**Guroymak-BITLI**	**1.49**	**251**	PN	**Pb**	**02 24 41.5**	**-1.0**
GURO	**Guroymak-BITLI**	**1.49**	**251**	*e*Pn	**Pb**	**02 24 41.5**	**-1.0**
YOVA	**Hakkari_Y`…kse**	**1.50**	**166**	*i* P	**Pb**	**02 24 42.3**	**-0.5**
YOVA	**Hakkari_Y`…kse**	**1.50**	**166**	P	**Pb**	**02 24 42.3**	**-0.5**
EAK	**Akyaka**	**1.64**	**354**	*i* P	**Pg**	**02 24 46.4**	**+0.1**
EAK	**Akyaka**	**1.64**	**354**	P	**Pg**	**02 24 46.3**	**+0.1**
KARS	**Kars**	**1.68**	**340**	PN	**Pb**	**02 24 43.6**	**-0.6**
KARS	**Kars**	**1.68**	**340**	*e*Pn	**Pb**	**02 24 43.6**	**-0.6**
ORD	**Ordubad**	**1.69**	**93**	⇓P	**Pn**	**02 24 43.4**	**-1.0**
ORD				⇑S	**Sg**	**02 25 10.3**	**+1.3**
ORD	**Ordubad**	**1.69**	**93**	⇓P	**Pn**	**02 24 43.4**	**-1.0**
ORD				⇑S	**Sg**	**02 25 10.3**	**+1.3**
HOMI	**Horasan**	**1.79**	**304**	*i* P	**Pb**	**02 24 46.9**	**-0.8**
**SRTM

ISN 11 02:25:49.2±0.9, 38.°54N×43.°92E, h14km±5km, ML3.5
AZER 11 02:25:49.1±2.5, 38.°40N×43.°67E, h0km, ml3.1/8, Error ellipse: s-maj=26.7km s-min=19.4km az=13.0
ISK 11 02:25:49.9, 38.°54N×43.°91E, h4km, ML3.6/7
DDA 11 02:25:50.4, 38.°56N×43.°86E, h5km, Ml3.5
CSEM 11 02:25:51.3±0.2, 38.°53N×43.°82E, h2km, ML3.5, Error ellipse: s-maj=5.3km s-min=4.0km az=148.0

ISC 11 02:25:52.5±1.1, 38.°54N±0.°02×43.°82E±0.°02, h20km±4km, n76, σ1§52/92, 12C-15D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVAN	**Van**	**0.33**	**268**	*i* P	**Pg**	**02 25 57.6**	**-2.2**
TVAN	**Van**	**0.33**	**268**	P	**Pg**	**02 25 57.6**	**-2.2**
VANB	**Van**	**0.35**	**280**	PG	**Pg**	**02 25 57.8**	**-2.2**
VANB				SG	**Sb**	**02 26 04.5**	**-0.8**
VANB	**Van**	**0.35**	**280**	*e*Pg	**Pg**	**02 25 57.8**	**-2.2**
VANB				*e*Sg	**Sb**	**02 26 04.5**	**-0.8**
VMUR	**Van-Muradiye**	**0.49**	**336**	*i* P	**Pg**	**02 26 01.0**	**-1.6**
VMUR	**Van-Muradiye**	**0.49**	**336**	P	**Pg**	**02 26 01.0**	**-1.6**
CLDR	**Caldiran**	**0.61**	**7**	PG	**Pb**	**02 26 01.4**	**-3.2**
CLDR				SG	**Sb**	**02 26 10.9**	**-1.9**
CLDR	**Caldiran**	**0.61**	**7**	*i* P	**Pb**	**02 26 01.5**	**-3.2**
CLDR	**Caldiran**	**0.61**	**7**	P	**Pb**	**02 26 01.5**	**-3.2**
CLDR				*e*Sg	**Sb**	**02 26 10.9**	**-1.9**
ERCV	**ERCIS-VAN**	**0.61**	**322**	PG	**Pb**	**02 26 03.6**	**-1.1**
ERCV	**ERCIS-VAN**	**0.61**	**322**	*e*Pg	**Pb**	**02 26 03.6**	**-1.1**
GEVA	**Gevas**	**0.64**	**250**	*i* P	**Pb**	**02 26 03.2**	**-2.0**
GEVA	**Gevas**	**0.64**	**250**	P	**Pb**	**02 26 03.2**	**-2.0**
ADCV	**BITLIS_Adilcev**	**0.90**	**288**	*i* P	**Pb**	**02 26 08.6**	**-1.0**
ADCV	**BITLIS_Adilcev**	**0.90**	**288**	P	**Pb**	**02 26 08.6**	**-1.0**
DYDN	**Diyadin**	**1.01**	**354**	*i* P	**Pb**	**02 26 10.0**	**-1.5**
DYDN	**Diyadin**	**1.01**	**354**	P	**Pb**	**02 26 10.0**	**-1.5**
YOVA	**Hakkari_Y¨…kse**	**1.02**	**159**	*i* P	**Pb**	**02 26 10.5**	**-1.1**
YOVA	**Hakkari_Y¨…kse**	**1.02**	**159**	P	**Pb**	**02 26 10.5**	**-1.1**
TUTA	**Tutak**	**1.17**	**318**	*i* P	**Pb**	**02 26 13.4**	**-0.8**
TUTA	**Tutak**	**1.17**	**318**	P	**Pb**	**02 26 13.4**	**-0.8**
AGRB	**Hanur-Agry**	**1.22**	**328**	PN	**Pg**	**02 26 14.8**	**-1.4**
AGRB	**Hanur-Agry**	**1.22**	**328**	*e*Pn	**Pg**	**02 26 14.8**	**-1.4**
IGDI	**IGDIR**	**1.34**	**8**	*i* P	**Pb**	**02 26 16.5**	**-0.6**
GURO	**Guroymak-BITLI**	**1.41**	**271**	PN	**Pb**	**02 26 17.3**	**-0.9**
GURO	**Guroymak-BITLI**	**1.41**	**271**	*e*Pn	**Pb**	**02 26 17.3**	**-0.9**
HYR	**Heyderabad**	**1.43**	**34**	⇑P	**Pg**	**02 26 19.1**	**-1.0**
HYR				⇑S	**Sg**	**02 26 41.5**	**+2.8**
HYR	**Heyderabad**	**1.43**	**34**	⇑P	**Pg**	**02 26 19.1**	**-1.0**
HYR				⇑S	**Sg**	**02 26 41.5**	**+2.8**
NAX	**Nakhchivan**	**1.45**	**64**	⇑P	**Pb**	**02 26 18.4**	**-0.5**
NAX				⇓S	**Sg**	**02 26 41.4**	**+1.9**
NAX	**Nakhchivan**	**1.45**	**64**	⇑P	**Pb**	**02 26 18.4**	**-0.5**
NAX				⇓S	**Sg**	**02 26 41.4**	**+1.9**
TASB	**TASBURUN-IGDIR**	**1.48**	**12**	PN	**Pb**	**02 26 18.1**	**-1.3**
TASB	**TASBURUN-IGDIR**	**1.48**	**12**	*e*Pn	**Pb**	**02 26 18.1**	**-1.3**
SIRT	**Sirnak**	**1.51**	**227**	PN	**Pn**	**02 26 19.1**	**+0.6**
SIRT	**Sirnak**	**1.51**	**227**	*e*Pn	**Pn**	**02 26 19.1**	**+0.6**
SIRN	**S¨–rnak**	**1.52**	**227**	*i* P	**Pg**	**02 26 21.6**	**-0.4**
SRTM	**Siirt_Merkez**	**1.59**	**251**	*i* P	**Pg**	**02 26 22.2**	**-1.1**
SRTM	**Siirt_Merkez**	**1.59**	**251**	P	**Pg**	**02 26 22.2**	**-1.1**
SBZ	**Shahbuz**	**1.60**	**57**	⇓P	**Pb**	**02 26 21.2**	**-0.2**
SBZ				⇓S	**Sg**	**02 26 44.6**	**+0.4**
SBZ	**Shahbuz**	**1.60**	**57**	⇓P	**Pb**	**02 26 21.2**	**-0.2**
SBZ				⇓S	**Sg**	**02 26 44.6**	**+0.4**
EATA	**Eleskirt**	**1.68**	**322**	*i* P	**Pg**	**02 26 23.6**	**-1.3**
EATA	**Eleskirt**	**1.68**	**322**	P	**Pg**	**02 26 23.6**	**-1.3**
ORD	**Ordubad**	**1.74**	**76**	⇓P	**Pb**	**02 26 23.6**	**-0.3**
ORD				⇓S	**Sg**	**02 26 49.7**	**+0.9**
ORD	**Ordubad**	**1.74**	**76**	⇓P	**Pb**	**02 26 23.6**	**-0.3**
ORD				⇓S	**Sg**	**02 26 49.7**	**+0.9**
GNI	**Garni**	**1.76**	**24**	PN	**Pn**	**02 26 22.4**	**+0.3**
GNI	**Garni**	**1.76**	**24**	*e*Pn	**Pn**	**02 26 22.4**	**+0.3**
DIGO	**Kars**	**1.91**	**350**	*i* P	**Pb**	**02 26 26.9**	**+0.1**
DIGO	**Kars**	**1.91**	**350**	P	**Pb**	**02 26 26.9**	**+0.1**
VRTB	**Varto-Mus**	**1.95**	**289**	*i* P	**Pg**	**02 26 32.9**	**+2.8**
SVAN	**Silvan-Diyarba**	**2.10**	**260**	PN	**Pb**	**02 26 28.2**	**-1.8**
SVAN	**Silvan-Diyarba**	**2.10**	**260**	*i* P	**Pb**	**02 26 30.2**	**+0.2**
SVAN	**Silvan-Diyarba**	**2.10**	**260**	*e*Pn	**Pb**	**02 26 28.2**	**-1.8**
BTMN	**Batman**	**2.11**	**253**	*i* P	**Pb**	**02 26 31.0**	**+0.8**
HOMI	**Horasan**	**2.12**	**316**	*i* P	**Pg**	**02 26 31.2**	**-2.0**
BNGL	**BINGOL**	**2.13**	**282**	*i* P	**Pb**	**02 26 30.7**	**+0.1**
EAK	**Akyaka**	**2.15**	**356**	*i* P	**Pg**	**02 26 33.0**	**-0.9**
KARS	**Kars**	**2.17**	**345**	PN	**Pn**	**02 26 28.3**	**+0.7**
KARS	**Kars**	**2.17**	**345**	*e*Pn	**Pn**	**02 26 28.3**	**+0.7**
ERZM	**Erzurum**	**2.35**	**306**	*i* P	**Pb**	**02 26 35.0**	**+0.7**
ECAT	**Cat-ERZURUM**	**2.46**	**297**	*i* P	**Pb**	**02 26 36.5**	**+0.3**
GDB	**GEDABAY**	**2.64**	**34**	⇓P	**Pn**	**02 26 36.0**	**+1.8**
GDB	**GEDABAY**	**2.64**	**34**	⇓P	**Pn**	**02 26 36.0**	**+1.8**
GDB				⇓S	**Sb**	**02 27 13.4**	**+2.1**
YEDI	**Yedisu-Bingol**	**2.71**	**290**	PN	**Pn**	**02 26 36.7**	**+1.6**
YEDI	**Yedisu-Bingol**	**2.71**	**290**	*e*Pn	**Pn**	**02 26 36.7**	**+1.6**
QZX	**Qazax, Azerbai**	**2.79**	**25**	⇑P	**Pn**	**02 26 38.0**	**+2.0**
QZX	**Qazax, Azerbai**	**2.79**	**25**	⇑P	**Pn**	**02 26 38.0**	**+2.0**
GANJ	**Ganja**	**2.86**	**42**	⇑P	**Pn**	**02 26 38.3**	**+1.3**
GANJ				⇑S	**Sb**	**02 27 16.3**	**-1.1**
GANJ	**Ganja**	**2.86**	**42**	⇑P	**Pn**	**02 26 38.3**	**+1.3**
GANJ				⇑S	**Sb**	**02 27 16.3**	**-1.1**
MAZI	**Mazidag**	**2.88**	**249**	PN	**Pn**	**02 26 38.8**	**+1.4**
MAZI	**Mazidag**	**2.88**	**249**	*e*Pn	**Pn**	**02 26 38.8**	**+1.4**
BAYT	**Ayd¨–ntepe-Bay**	**3.40**	**304**	PN	**Pn**	**02 26 46.8**	**+2.2**
BAYT	**Ayd¨–ntepe-Bay**	**3.40**	**304**	*e*Pn	**Pn**	**02 26 46.8**	**+2.2**
PTK	**Pertek**	**3.48**	**277**	PN	**Pn**	**02 26 47.8**	**+2.0**
PTK	**Pertek**	**3.48**	**277**	*e*Pn	**Pn**	**02 26 47.8**	**+2.0**
LRK	**Lerik**	**3.54**	**87**	⇓P	**Pn**	**02 26 47.1**	**+0.5**
LRK	**Lerik**	**3.54**	**87**	⇓P	**Pn**	**02 26 47.1**	**+0.5**
RTB	**Rutbah**	**6.19**	**209**	*e*Pn	**Pn**	**02 27 23.0**	**+0.1**
	SNR=5.0						
RTB				*e*Sn	**Sn**	**02 28 32.0**	**-1.2**
	SNR=5.0						

ISCJB 11 02:39:45.4±0.4, 24.°51N±0.°02×122.°29E±0.°02, h72km±4km, Error ellipse: s-maj=3.8km s-min=2.7km az=175.7
JMA 11 02:39:45.9±0.1, 24.°40N×122.°29E, h70km±2km, M2.3
TAP 11 02:39:46.6, 24.°50N×122.°16E, h72km, ML3.1, D

ISC 11 02:39:45.6±1.3, 24.°51N±0.°03×122.°29E±0.°02, h73km±7km, n60, σ0§75/104, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.15**	**284**	*i* P	**Pn**	**02 39 56.9**	**+0.6**
	baz=327						
EOS1				*e*S	**Sn**	**02 40 05.0**	**+0.9**
	baz=327						
TWC	**Suao**	**0.41**	**283**	P	**Pn**	**02 39 57.9**	**0.0**
	baz=291						
TWC				*e*S	**Sn**	**02 40 06.2**	**-0.7**
	baz=291						
ENAH	**Nanao**	**0.44**	**262**	P	**Pn**	**02 39 58.4**	**+0.2**
	baz=257						
ENAH				*e*S	**Sn**	**02 40 07.0**	**-0.3**
	baz=257						
EGS		**0.46**	**316**	P	**Pn**	**02 39 58.6**	**+0.3**
	baz=329						
EGS				*e*S	**Sn**	**02 40 07.8**	**+0.1**
	baz=329						
NANB	**Nanao**	**0.50**	**260**	P	**Pn**	**02 39 58.8**	**+0.1**
	baz=255						
NANB				*e*S	**Sn**	**02 40 08.7**	**+0.4**
	baz=255						
ENA	**Nanau**	**0.51**	**260**	*i* P	**Pn**	**02 39 58.9**	**+0.2**
	baz=259						
ENA				*e*S	**Sn**	**02 40 08.8**	**+0.4**
	baz=259						
NTC	**Toucheng**	**0.54**	**309**	P	**Pn**	**02 39 59.4**	**+0.3**
	baz=322						
NTC				S	**Sn**	**02 40 08.7**	**-0.3**
	baz=322						
ILA	**Ilan**	**0.55**	**297**	*e*S	**Sn**	**02 40 08.6**	**-0.5**
	baz=305						
TWE	**Neicheng**	**0.60**	**290**	P	**Pn**	**02 40 00.2**	**+0.6**
	baz=296						
TWE				*e*S	**Sn**	**02 40 09.0**	**-1.0**
	baz=296						
JYNG	**Yonagunijimaku**	**0.60**	**96**	P	**Pn**	**02 39 59.8**	**+0.1**
JYNG				*e*S	**Sn**	**02 40 09.8**	**-0.3**
TIPB	**Shuangxi**	**0.62**	**317**	*e*P	**Pn**	**02 39 59.2**	**-0.7**
	baz=333						
TIPB				*e*S	**Sn**	**02 40 09.3**	**-1.2**
	baz=333						
SLBB	**Yuanshan**	**0.64**	**292**	P	**Pn**	**02 40 00.9**	**+0.8**
	baz=305						
SLBB				*e*S	**Sn**	**02 40 11.4**	**+0.5**
	baz=305						
YOJ	**Yonaguni jima**	**0.66**	**94**	P	**Pn**	**02 40 00.4**	**+0.1**
YOJ				*e*S	**Sn**	**02 40 10.7**	**-0.5**
ENTT	**Nioudou**	**0.67**	**281**	P	**Pn**	**02 40 01.4**	**+1.0**
	baz=289						
ENTT				*e*S	**Sn**	**02 40 11.5**	**+0.2**
	baz=289						
NACB	**Ninganchiao**	**0.72**	**242**	*e*P	**Pn**	**02 40 00.6**	**-0.3**
	baz=238						
NACB				*e*S	**Sn**	**02 40 11.3**	**-0.9**
	baz=238						
NWF	**Wu-fen Shan**	**0.72**	**320**	P	**Pn**	**02 40 01.6**	**+0.5**
	baz=328						
NWF				*e*S	**Sn**	**02 40 12.6**	**+0.2**
	baz=328						
WFSB	**Wu-fen Shan**	**0.72**	**320**	*e*P	**Pn**	**02 40 01.4**	**+0.5**
	baz=328						
WFSB				*e*S	**Sn**	**02 40 12.6**	**+0.3**
	baz=328						
TWD	**Chiawan**	**0.76**	**236**	*e*P	**Pn**	**02 40 01.2**	**-0.3**
	baz=226						
TWD				*e*S	**Sn**	**02 40 12.6**	**-0.6**
	baz=226						
TWA	**Mucha**	**0.79**	**306**	*e*S	**Sn**	**02 40 13.3**	**-0.4**
	baz=321						
HWA	**Hwalien**	**0.82**	**229**	*e*S	**Sn**	**02 40 13.9**	**-0.4**
	baz=216						
NNSB	**Datong**	**0.83**	**264**	*e*P	**Pn**	**02 40 02.5**	**+0.2**
	baz=258						
NNSB				*e*S	**Sn**	**02 40 13.7**	**-1.0**
	baz=258						
NNSH	**Datong**	**0.83**	**264**	*e*P	**Pn**	**02 40 02.5**	**+0.1**
	baz=258						
NNSH				*e*S	**Sn**	**02 40 14.6**	**-0.1**
	baz=258						
NNS	**Nan Shan**	**0.84**	**265**	*e*P	**Pn**	**02 40 02.6**	**+0.2**
	baz=259						
NNS				*e*S	**Sn**	**02 40 14.7**	**-0.2**
	baz=259						
YHNB	**Yeheng**	**0.84**	**281**	P	**Pn**	**02 40 03.2**	**+0.8**
	baz=283						
YHNB				*e*S	**Sn**	**02 40 15.4**	**+0.5**
	baz=283						
NSK	**Sanguang**	**0.86**	**281**	*e*P	**Pn**	**02 40 02.0**	**-0.7**
	baz=276						
NSK				*e*S	**Sn**	**02 40 13.6**	**-1.7**
	baz=276						
ENLB	**Shoufeng**	**0.87**	**226**	*e*P	**Pn**	**02 40 02.6**	**-0.1**
	baz=215						
ENLB				S	**Sn**	**02 40 14.9**	**-0.5**
	baz=215						
YM07	**YM07**	**0.90**	**318**	*e*P	**Pn**	**02 40 02.3**	**-0.7**
	baz=323						
YM07				*e*S	**Sn**	**02 40 14.9**	**-1.0**
	baz=323						
YM11	**YM11**	**0.92**	**315**	*e*P	**Pn**	**02 40 04.3**	**+1.0**
	baz=321						
YM11				*e*S	**Sn**	**02 40 17.3**	**+0.8**
	baz=321						
YM10	**YM10**	**0.92**	**314**	*e*P	**Pn**	**02 40 03.8**	**+0.4**
	baz=320						
YM10				*e*S	**Sn**	**02 40 15.9**	**-0.6**
	baz=320						
YM08	**YM08**	**0.92**	**317**	*e*P	**Pn**	**02 40 02.8**	**-0.6**
	baz=322						
YM08				*e*S	**Sn**	**02 40 16.0**	**-0.5**
	baz=322						
YM12	**YM12**	**0.93**	**316**	*e*P	**Pn**	**02 40 03.8**	**+0.4**
	baz=321						
YM12				*e*S	**Sn**	**02 40 16.3**	**-0.4**
	baz=321						
YM04	**YM04**	**0.93**	**313**	*e*P	**Pn**	**02 40 03.9**	**+0.4**
	baz=319						
YM04				*e*S	**Sn**	**02 40 16.5**	**-0.3**
	baz=319						
TWS1	**Kuangyinshan**	**0.98**	**307**	*e*S	**Sn**	**02 40 18.5**	**+0.8**
	baz=318						
NTST	**Danshui**	**1.00**	**311**	*e*S	**Sn**	**02 40 17.6**	**-0.5**
	baz=321						
TWT	**Tachien**	**1.05**	**256**	*e*S	**Sn**	**02 40 19.7**	**+0.2**
	baz=254						
TDCB	**Techi**	**1.06**	**256**	*e*P	**Pn**	**02 40 06.0**	**+0.8**
	baz=255						
TDCB				*e*S	**Sn**	**02 40 19.6**	**-0.1**
	baz=255						
NCUH	**Zhongli**	**1.10**	**295**	*e*S	**Sn**	**02 40 20.3**	**0.0**
	baz=297						
CHGB	**Renai**	**1.11**	**246**	P	**Pn**	**02 40 06.4**	**+0.5**
	baz=237						
CHGB				*e*S	**Sn**	**02 40 19.8**	**-1.2**
	baz=237						
EGFH	**Guangfu**	**1.15**	**223**	*e*P	**Pn**	**02 40 06.6**	**+0.4**
	baz=229						
EGFH				*e*S	**Sn**	**02 40 19.9**	**-1.7**
	baz=229						
NSTT	**Nanjuang**	**1.18**	**276**	*e*S	**Sn**	**02 40 23.1**	**+1.0**
	baz=277						
HGSD	**Ruisui**	**1.29**	**218**	*e*P	**Pn**	**02 40 07.2**	**-0.7**
	baz=207						
HGSD				*e*S	**Sn**	**02 40 24.3**	**-0.4**
	baz=207						
VWDT	**VWDT**	**1.29**	**234**	P	**Pn**	**02 40 08.2**	**+0.3**
	baz=227						
VWDT				*e*S	**Sn**	**02 40 24.0**	**-0.7**
	baz=227						
IRIF	**Iriomote-Funau**	**1.33**	**97**	P	**Pn**	**02 40 08.5**	**+0.1**
IRIF				*e*S	**Sn**	**02 40 25.0**	**-0.5**
SMLT	**Sun Moon Lake**	**1.41**	**244**	*e*P	**Pn**	**02 40 10.9**	**+1.2**
	baz=235						
SMLT				*e*S	**Sn**	**02 40 29.3**	**+1.5**
	baz=235						
SSLB	**Suanglung**	**1.42**	**240**	*e*P	**Pn**	**02 40 10.6**	**+1.0**
	baz=234						
SSLB				*e*S	**Sn**	**02 40 27.6**	**-0.1**
	baz=234						
YULB	**Yu-li**	**1.44**	**219**	*e*P	**Pn**	**02 40 09.0**	**-0.9**
	baz=225						
TYC	**Yuchr**	**1.44**	**245**	*e*P	**Pn**	**02 40 11.9**	**+2.1**
	baz=238						
TYC				*e*S	**Sn**	**02 40 29.2**	**+1.0**
	baz=238						
HATJ	**Hateruma jima**	**1.46**	**108**	S	**Sn**	**02 40 29.2**	**+0.6**
TWF1	**Yuli**	**1.47**	**218**	*e*P	**Pn**	**02 40 09.4**	**-0.9**
	baz=223						
TCU	**Taichung**	**1.51**	**256**	*e*S	**Sn**	**02 40 28.4**	**-1.6**
	baz=266						
WJS	**Zhushan**	**1.58**	**245**	*e*S	**Sn**	**02 40 33.2**	**+1.7**
	baz=255						
JKRS	**Kuro-shima**	**1.59**	**100**	P	**Pn**	**02 40 12.5**	**+0.6**
JKRS				S	**Sn**	**02 40 32.4**	**+0.6**
JIJ	**Ishigaki jima**	**1.70**	**95**	P	**Pn**	**02 40 13.4**	**+0.1**
JIJ				S	**Sn**	**02 40 33.5**	**-0.8**
WDLH	**Douliu**	**1.80**	**243**	*e*S	**Sn**	**02 40 35.8**	**-0.8**
	baz=254						
JISG	**Ishigakijimahi**	**1.84**	**87**	P	**Pn**	**02 40 15.5**	**+0.3**
JISG				*e*S	**Sn**	**02 40 37.7**	**0.0**
RLNB	**Erlin**	**1.87**	**251**	*e*S	**Sn**	**02 40 38.9**	**+0.7**
	baz=260						
CHN1	**Nanshi**	**2.08**	**231**	*e*S	**Sn**	**02 40 44.8**	**+1.2**
	baz=230						
JTJ	**Tarama**	**2.20**	**86**	P	**Pn**	**02 40 19.8**	**-0.2**
JTJ				*e*S	**Sn**	**02 40 46.7**	**+0.3**
VWUC	**VWUC**	**2.62**	**281**	*e*P	**Pn**	**02 40 25.8**	**+0.1**
	baz=280						
VWUC				*e*S	**Sn**	**02 40 54.5**	**-2.1**
	baz=280						
MATB	**Ma-tsu**	**2.67**	**308**	*e*P	**Pn**	**02 40 26.5**	**+0.1**
	baz=308						
MATB				*e*S	**Sn**	**02 40 57.1**	**-0.6**
	baz=308						

IDC 11 02:49:09.0±1.9, 8.°50S×124.°61E, h0km, mb3.6/1, mb1 3.9/3, mb1mx3.4/53, mbtmp3.7/3, ML3.8/2, Error ellipse: s-maj=51.6km s-min=28.5km az=78.0
ISCJB 11 02:49:10.0±1.3, 8.°6S±0.°1×124.°54E±0.°08, h20km, mb3.7/1, Error ellipse: s-maj=15.2km s-min=10.2km az=19.5
DJA 11 02:49:22.4±1.1, 9.°S±4.°×12.°4E±.°, h32km±26km, M3.7/2, MLv3.7/2

ISC 11 02:49:13.0±1.4, 8.°64S±0.°08×124.°6E±0.°1, h20km, n7, σ2§88/11, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**1.15**	**194**	P	**Pb**	**02 49 37.5**	**+3.2**
SOEI				S	**Sb**	**02 49 50.7**	**+1.9**
BATI	**Baumata**	**1.79**	**209**	Pn	**Pn**	**02 49 43.4**	**+0.6**
	23nm,0.3s,baz=33,slow=4.6,SNR=12						
BATI				Sn	**Sn**	**02 49 59.9**	**-5.1**
	168nm,0.3s,baz=336,slow=20,SNR=44						
BATI	**Baumata**	**1.79**	**209**	P	**Pn**	**02 49 43.2**	**+0.3**
BATI				S	**Sn**	**02 50 01.5**	**-3.5**
MMRI	**Maumere**	**2.29**	**270**	P	**Pn**	**02 49 51.7**	**+2.0**
MMRI				S	**Sn**	**02 50 14.8**	**-2.6**
WRA	**Warramunga Arr**	**14.69**	**141**	Pn	**Pn**	**02 52 39.1**	**-0.8**
	0.4nm,0.3s,baz=318,slow=14,SNR=23						
WRA				Sn	Sn	02 55 10.9	-11
	1.8nm,0.3s,baz=323,slow=23,SNR=11						
ASAR	**Alice Springs**	**17.42**	**150**	P	**Pn**	**02 53 14.8**	**-0.3**
	0.3nm,0.3s,baz=323,slow=12,SNR=19						
ASAR				S	Sn	02 56 15.8	-13
	0.6nm,0.3s,baz=316,slow=22,SNR=8.6						
MKAR	**Makanchi Array**	**66.77**	**330**	P	**P**	**03 00 01.8**	**-1.3**
	0.6nm,0.8s,baz=134,slow=7.4,SNR=4.2						

CSEM 11 02:55:48.8±0.1, 48.°21N×7.°75E, h15km, ML2.3/14, Error ellipse: s-maj=1.3km s-min=1.2km az=171.0
STR 11 02:55:49.6±0.3, 48.°N±1.°×.°±.°, h6km±4km, MLv2.1/6
BGR 11 02:55:49.4±0.3, 48.°21N×7.°78E, h10km, ML1.8/7, Error ellipse: s-maj=3.3km s-min=2.2km az=55.0
ZUR 11 02:55:49.9, 48.°17N×7.°80E, h14km±2km, ML2.0/4
LDG 11 02:55:49.6±0.0, 48.°21N×7.°77E, h2km, Md2.3/3, Ml2.4/14, Error ellipse: s-maj=0.8km s-min=0.7km az=159.0

ISC 11 02:55:49.4±0.8, 48.°20N±0.°01×7.°77E±0.°01, h17km±5km, n126, σ1§08/224, 5C-13D, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FBB	**Freiburg im Br**	**0.21**	**165**	⇑P*	**Pg**	**02 55 54.0**	**-0.4**
FBB				S*	**Sg**	**02 55 57.2**	**-0.6**
FBB	**Freiburg im Br**	**0.21**	**165**	Pb	**Pg**	**02 55 54.0**	**-0.4**
FBB				Sb	**Sg**	**02 55 57.2**	**-0.6**
KIZ	**Kirchzarten**	**0.27**	**158**	⇓*i*Pg	**Pg**	**02 55 54.9**	**-0.5**
	252nm,0.7s						
KIZ				*i* Sg	**Sg**	**02 55 58.4**	**-1.0**
	252nm,0.7s						
KIZ	**Kirchzarten**	**0.27**	**158**	⇓*i*P*	**Pg**	**02 55 54.9**	**-0.5**
KIZ				S*	**Sg**	**02 55 58.4**	**-1.0**
KIZ	**Kirchzarten**	**0.27**	**158**	Pg	**Pg**	**02 55 55.0**	**-0.5**
KIZ	**Kirchzarten**	**0.27**	**158**	⇓*i*Pg	**Pg**	**02 55 54.9**	**-0.5**
KIZ				Sg	**Sg**	**02 55 58.6**	**-0.8**
WLS	**Welschbruch**	**0.35**	**307**	⇓P*	**Pg**	**02 55 56.5**	**-0.3**
WLS				S*	**Sg**	**02 56 01.5**	**-0.3**
WLS	**Welschbruch**	**0.35**	**307**	Pg	**Pg**	**02 55 56.5**	**-0.3**
WLS	**Welschbruch**	**0.35**	**307**	Pb	**Pg**	**02 55 56.5**	**-0.3**
WLS				Sg	**Sg**	**02 56 01.4**	**-0.3**
FELD	**Feldberg im Sc**	**0.36**	**154**	⇓*i*P*	**Pg**	**02 55 56.7**	**-0.4**
FELD				S*	**Sg**	**02 56 01.5**	**-0.8**
FELD	**Feldberg im Sc**	**0.36**	**154**	⇓*i*Pg	**Pg**	**02 55 56.7**	**-0.4**
FELD				*i* Sg	**Sg**	**02 56 01.5**	**-0.8**
CDF	**Champ du Feu**	**0.39**	**302**	*e*Pg	**Pg**	**02 55 56.9**	**-0.6**
CDF				*e*Sg	**Sg**	**02 56 01.9**	**-1.1**
	16nm,0.2s						
CDF	**Champ du Feu**	**0.39**	**302**	*e*Pg	**Pg**	**02 55 56.9**	**-0.6**
CDF				*e*Sg	**Sg**	**02 56 01.9**	**-1.1**
	7.8nm,0.2s						
BFO	**Black Forest**	**0.40**	**71**	⇓P*	**Pg**	**02 55 56.9**	**-0.7**
BFO				S*	**Sg**	**02 56 01.9**	**-1.2**
BFO	**Black Forest**	**0.40**	**71**	Pb	**Pg**	**02 55 56.9**	**-0.7**
BFO				Sb	**Sg**	**02 56 01.9**	**-1.2**
OPP	**Oppenau**	**0.40**	**43**	⇑P*	**Pg**	**02 55 57.0**	**-0.7**
OPP				S*	**Sg**	**02 56 02.2**	**-1.2**
OPP	**Oppenau**	**0.40**	**43**	Pg	**Pg**	**02 55 57.0**	**-0.7**
OPP	**Oppenau**	**0.40**	**43**	Pb	**Pg**	**02 55 57.0**	**-0.7**
OPP				Sb	**Sg**	**02 56 02.2**	**-1.2**
ECH	**Echery**	**0.41**	**272**	⇓P*	**Pg**	**02 55 57.6**	**-0.2**
ECH				S*	**Sg**	**02 56 03.2**	**-0.3**
ECH	**Echery**	**0.41**	**272**	Pb	**Pg**	**02 55 57.6**	**-0.2**
ECH				Sb	**Sg**	**02 56 03.2**	**-0.3**
ENDD	**Endenburg**	**0.49**	**183**	⇑*i*P*	**Pg**	**02 55 59.0**	**-0.3**
ENDD				PmP		02 56 00.0	
ENDD				S*	**Sg**	**02 56 05.6**	**-0.3**
ENDD				SmS		02 56 08.0	
MOF	**Molkenrain**	**0.55**	**231**	P*	**Pg**	**02 56 00.4**	**-0.1**
MOF				PmP		02 56 01.1	
MOF				SmS		02 56 09.8	
MOF	**Molkenrain**	**0.55**	**231**	Pg	**Pg**	**02 56 00.5**	**0.0**
MOF	**Molkenrain**	**0.55**	**231**	Pb	**Pg**	**02 56 00.4**	**-0.1**
MOF	**Molkenrain**	**0.55**	**231**	Pg	**Pg**	**02 56 00.5**	**0.0**
MOF	**Molkenrain**	**0.55**	**231**	P	**Pb**	**02 56 01.1**	**+0.4**
MOF				S	**Sb**	**02 56 09.8**	**+1.5**
OTER2	**Otterbach 2 (B**	**0.64**	**190**	*i* Pg	**Pg**	**02 56 01.6**	**-0.3**
OTER2	**Otterbach 2 (B**	**0.64**	**190**	*i* Pg	**Pg**	**02 56 01.6**	**-0.3**

LOMF	**Lomont**	**1.06 217**	Pg	**Pg**	**02 56 09.8**	**-0.3**
LOMF	**Lomont**	**1.06 217**	Pg	**Pg**	**02 56 09.8**	**-0.3**
WILA	**Wila**	**1.10 135**	*e*Pg	**Pb**	**02 56 10.6**	**+0.6**
WILA			*e*Sg	**Sb**	**02 56 25.2**	**+1.2**
WILA	**Wila**	**1.10 135**	Pg	**Pb**	**02 56 10.6**	**+0.6**
WILA			Sg	**Sb**	**02 56 25.2**	**+1.2**
KTD	**Kalmit**	**1.14 10**	Sg	**Sb**	**02 56 26.2**	**+1.1**
KTD	**Kalmit**	**1.14 10**	Sg	**Sb**	**02 56 26.2**	**+1.1**
THEF	**They Montfort**	**1.19 272**	Pg	**Pb**	**02 56 11.8**	**+0.3**
CHMF	**Charmoille**	**1.22 219**	Pg	**Pn**	**02 56 12.2**	**+0.5**
CHMF	**Charmoille**	**1.22 219**	Pg	**Pn**	**02 56 12.2**	**+0.5**
CHMF			Sg	**Sg**	**02 56 28.8**	**-0.1**
DUP	**Duppenweiler**	**1.37 332**	Sg	**Sn**	**02 56 33.1**	**+1.6**
DUP	**Duppenweiler**	**1.37 332**	Sg	**Sn**	**02 56 33.1**	**+1.6**
IMS	**Imsbach**	**1.39 4**	Pg	**Pb**	**02 56 15.7**	**+0.7**
IMS			Sg	**Sg**	**02 56 33.7**	**-0.8**
IMS	**Imsbach**	**1.39 4**	Pg	**Pb**	**02 56 15.7**	**+0.7**
IMS			Sg	**Sg**	**02 56 33.7**	**-0.8**
PAGF	**Fort de Pagny**	**1.41 285**	*e*Pg	**Pb**	**02 56 15.7**	**+0.5**
PAGF			*e*Sg	**Sb**	**02 56 34.3**	**+1.5**
	2.6nm,0.2s					
PAGF	**Fort de Pagny**	**1.41 285**	*e*Pg	**Pb**	**02 56 15.7**	**+0.5**
PAGF			*e*Sg	**Sb**	**02 56 34.3**	**+1.5**
	1.3nm,0.2s					
LIENZ	**Kamor/St.Gall**	**1.48 127**	Pg	**Pg**	**02 56 17.8**	**-0.1**
LIENZ			S	**Sn**	**02 56 33.4**	**-0.9**
LIENZ			Sg	**Sg**	**02 56 36.9**	**-0.2**
LIENZ	**Kamor/St.Gall**	**1.48 127**	Pg	**Pg**	**02 56 17.8**	**-0.1**
LIENZ			S	**Sn**	**02 56 33.4**	**-0.9**
LIENZ			Sg	**Sg**	**02 56 36.9**	**-0.2**
UBR	**Ueberruh**	**1.66 108**	Pg	**Pg**	**02 56 21.1**	**-0.2**
UBR			Sg	**Sg**	**02 56 42.4**	**-0.4**
UBR	**Ueberruh**	**1.66 108**	Pg	**Pg**	**02 56 21.1**	**-0.2**
UBR			Sg	**Sg**	**02 56 42.4**	**-0.4**
SIND	**Sindeldorf**	**1.67 46**	Sg	**Sb**	**02 56 41.9**	**+1.6**
SIND	**Sindeldorf**	**1.67 46**	Sg	**Sb**	**02 56 41.9**	**+1.6**
ABH	**Alteburg**	**1.69 355**	Pg	**Pb**	**02 56 20.9**	**+1.0**
ABH			Sg	**Sb**	**02 56 42.2**	**+1.3**
ABH	**Alteburg**	**1.69 355**	Pg	**Pb**	**02 56 21.0**	**+1.0**
ABH	**Alteburg**	**1.69 355**	Pg	**Pb**	**02 56 20.9**	**+1.0**
ABH			Sn	**Sb**	**02 56 41.4**	**+0.5**
ABH			Sg	**Sb**	**02 56 42.2**	**+1.3**
DAVA	**Damuels**	**1.69 122**	*e*Pn	**Pg**	**02 56 22.7**	**+0.7**
	0.5nm,0.1s					
DAVA			Sg	**Sg**	**02 56 43.1**	**-1.0**
	0.9nm,0.2s					
WLF	**Walferdange**	**1.81 324**	*e*Pg	**Pg**	**02 56 23.5**	**-0.7**
WLF			*e*Sg	**Sb**	**02 56 46.0**	**+1.6**
WLF	**Walferdange**	**1.81 324**	Pg	**Pg**	**02 56 23.5**	**-0.7**
WLF			Sg	**Sb**	**02 56 46.0**	**+1.6**
SFTF	**Sexfontaines**	**1.83 271**	*e*Pn	**Pn**	**02 56 20.2**	**+0.2**
SFTF	**Sexfontaines**	**1.83 271**	*e*Pg	**Pg**	**02 56 23.9**	**-0.6**
SFTF			*e*Sn	**Sn**	**02 56 42.4**	**-0.3**
SFTF			*e*Sg	**Sg**	**02 56 47.2**	**-1.1**
	4.2nm,0.2s					
SFTF	**Sexfontaines**	**1.83 271**	*e*Pn	**Pn**	**02 56 20.2**	**+0.2**
SFTF	**Sexfontaines**	**1.83 271**	*e*Pg	**Pg**	**02 56 23.9**	**-0.6**
SFTF			*e*Sn	**Sn**	**02 56 42.4**	**-0.3**
SFTF			*e*Sg	**Sg**	**02 56 47.2**	**-1.1**
	2.1nm,0.2s					
MEZF	**Maizieres J'vi**	**1.84 280**	*e*Pg	**Pb**	**02 56 23.6**	**+1.1**
MEZF			*e*Sg	**Sb**	**02 56 47.1**	**+1.9**
	1.2nm,0.2s					
MEZF	**Maizieres J'vi**	**1.84 280**	*e*Pg	**Pb**	**02 56 23.6**	**+1.1**
MEZF			*e*Sg	**Sb**	**02 56 47.1**	**+1.9**
	0.6nm,0.2s					
CABF	**La Chapelle**	**1.96 216**	*e*Pn	**Pn**	**02 56 20.9**	**-1.0**
CABF			*e*Sn	**Sn**	**02 56 46.5**	**+0.4**
CABF			*e*Sg	**Sg**	**02 56 51.7**	**-0.8**
	0.9nm,0.2s					
CABF	**La Chapelle**	**1.96 216**	*e*Pn	**Pn**	**02 56 20.9**	**-1.0**
CABF			*e*Sn	**Sn**	**02 56 46.5**	**+0.4**
CABF			*e*Sg	**Sg**	**02 56 51.7**	**-0.8**
	0.4nm,0.2s					
FETA	**Feichten**	**2.33 119**	*e*Pn	**Pg**	**02 56 33.6**	**-0.5**
	0.4nm,0.2s					
FETA			Sn	**Sn**	**02 56 53.3**	**-1.9**
	0.5nm,0.3s					
MOTA	**Moosalm**	**2.41 110**	*e*Pn	**Pb**	**02 56 33.1**	**+0.8**
	0.9nm,0.1s					
MOTA			*e*Sg	**Sb**	**02 57 04.2**	**+2.5**
	0.7nm,0.2s					
GIVF	**Givet**	**2.71 316**	*e*Pn	**Pn**	**02 56 32.1**	**0.0**
GIVF	**Givet**	**2.71 316**	*e*Pg	**Pb**	**02 56 39.6**	**+2.2**
GIVF			*e*Sn	**Sn**	**02 57 03.1**	**-1.4**
	1.6nm,0.2s					
GIVF	**Givet**	**2.71 316**	*e*Pn	**Pn**	**02 56 32.1**	**0.0**
GIVF	**Givet**	**2.71 316**	*e*Pg	**Pb**	**02 56 39.6**	**+2.2**
GIVF			*e*Sn	**Sn**	**02 57 03.1**	**-1.4**
	0.8nm,0.2s					
LOR	**Lormes**	**2.80 252**	*e*Pg	**Pg**	**02 56 42.1**	**-1.0**
	baz=72					
LOR			*e*Sg	**Sg**	**02 57 16.9**	**-2.5**
	4.0nm,0.2s					
LOR	**Lormes**	**2.80 252**	*e*Pg	**Pg**	**02 56 42.1**	**-1.0**
LOR			*e*Sg	**Sg**	**02 57 16.9**	**-2.5**
	2.0nm,0.2s					
BAIF	**Baives**	**2.99 310**	*e*Pn	**Pn**	**02 56 36.0**	**+0.1**
BAIF			*e*Sn	**Sn**	**02 57 10.1**	**-1.2**
	0.3nm,0.2s					
BAIF	**Baives**	**2.99 310**	*e*Pn	**Pn**	**02 56 36.0**	**+0.1**
BAIF			*e*Sn	**Sn**	**02 57 10.1**	**-1.2**
	0.2nm,0.2s					
SMF	**Signal de Mont**	**3.09 241**	*e*Pn	**Pn**	**02 56 37.7**	**+0.4**
SMF	**Signal de Mont**	**3.09 241**	*e*Pg	**Pg**	**02 56 46.9**	**-1.7**
SMF			*e*Sn	**Sn**	**02 57 13.0**	**-0.9**
SMF			*e*Sg	**Sg**	**02 57 26.4**	**-2.2**
	2.6nm,0.2s					
SMF	**Signal de Mont**	**3.09 241**	*e*Pn	**Pn**	**02 56 37.7**	**+0.4**
SMF	**Signal de Mont**	**3.09 241**	*e*Pg	**Pg**	**02 56 46.9**	**-1.7**
SMF			*e*Sn	**Sn**	**02 57 13.0**	**-0.9**
SMF			*e*Sg	**Sg**	**02 57 26.4**	**-2.2**
	1.3nm,0.2s					
SSF	**Saint Saulge**	**3.10 250**	*e*Pn	**Pn**	**02 56 37.8**	**+0.3**
SSF	**Saint Saulge**	**3.10 250**	*e*Pg	**Pg**	**02 56 47.6**	**-1.2**
SSF			*e*Sn	**Sn**	**02 57 13.6**	**-0.5**
SSF			*e*Sg	**Sb**	**02 57 25.8**	**+4.2**
	2.6nm,0.2s					
SSF	**Saint Saulge**	**3.10 250**	*e*Pn	**Pn**	**02 56 37.8**	**+0.3**
SSF	**Saint Saulge**	**3.10 250**	*e*Pg	**Pg**	**02 56 47.6**	**-1.2**
SSF			*e*Sn	**Sn**	**02 57 13.6**	**-0.5**
SSF			*e*Sg	**Sb**	**02 57 25.8**	**+4.2**
	1.3nm,0.2s					
AVF	**Avril sur Loir**	**3.31 246**	*e*Pn	**Pn**	**02 56 40.7**	**+0.3**
AVF	**Avril sur Loir**	**3.31 246**	*e*Pg	**Pg**	**02 56 51.5**	**-1.3**
AVF			*e*Sn	**Sn**	**02 57 17.9**	**-1.4**
AVF			*e*Sg	**Sg**	**02 57 33.3**	**-2.4**
	1.2nm,0.2s					
AVF	**Avril sur Loir**	**3.31 246**	*e*Pn	**Pn**	**02 56 40.7**	**+0.3**
AVF	**Avril sur Loir**	**3.31 246**	*e*Pg	**Pg**	**02 56 51.5**	**-1.3**
AVF			*e*Sn	**Sn**	**02 57 17.9**	**-1.4**
AVF			*e*Sg	**Sg**	**02 57 33.3**	**-2.4**
	0.6nm,0.2s					
BGF	**Bois d'Agland**	**3.73 246**	*e*Pn	**Pn**	**02 56 46.2**	**+0.1**
BGF	**Bois d'Agland**	**3.73 246**	*e*Pg	**Pg**	**02 56 58.5**	**-2.3**
BGF			*e*Sn	**Sn**	**02 57 28.3**	**-1.3**
BGF			*e*Sg	**Sg**	**02 57 46.3**	**-2.8**
	6.5nm,0.4s					
BGF	**Bois d'Agland**	**3.73 246**	*e*Pn	**Pn**	**02 56 46.2**	**+0.1**
BGF	**Bois d'Agland**	**3.73 246**	*e*Pg	**Pg**	**02 56 58.5**	**-2.3**
BGF			*e*Sn	**Sn**	**02 57 28.3**	**-1.3**
BGF			*e*Sg	**Sg**	**02 57 46.3**	**-2.8**
	3.2nm,0.4s					

*ISK **11** 02:59:00.9, 38˚.52N×43˚.90E, h4km, Ml2.3/4*
*ISCJB **11** 02:59:01.6±0.9, 38˚.55N±0˚.05×43˚.90E±0˚.06, h6km, Error ellipse: s-maj=7.9km s-min=6.5km az=148.5*
*CSEM **11** 02:59:01.6±0.4, 38˚.55N×43˚.87E, h2km, Ml2.5, Error ellipse: s-maj=8.1km s-min=6.5km az=92.0*
*DDA **11** 02:59:01.1, 38˚.60N×43˚.90E, h7km, Ml2.5*
ISC 11 02:59:00.9±1.1, 38˚.50N±0˚.04×43˚.84E±0˚.05, h6km, n22, σ0°64/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVAN	**Van**	**0.34 275**		*i* P	**Pg**	**02 59 08.3**	**+0.6**
TVAN				*i* S	**Sb**	**02 59 15.4**	**0.0**
TVAN	**Van**	**0.34 275**		P	**Pg**	**02 59 08.3**	**+0.6**
TVAN				S	**Sb**	**02 59 15.4**	**0.0**
VANB	**Van**	**0.37 285**		PG	**Pg**	**02 59 09.0**	**+0.9**
VANB				SG	**Sb**	**02 59 15.1**	**-0.9**
VANB	**Van**	**0.37 285**		*e*Pg	**Pg**	**02 59 09.0**	**+0.9**
VANB				*e*Sg	**Sb**	**02 59 15.1**	**-0.9**
VMUR	**Van-Muradiye**	**0.53 336**		*i* P	**Pb**	**02 59 12.9**	**+0.2**
VMUR	**Van-Muradiye**	**0.53 336**		P	**Pb**	**02 59 12.9**	**+0.2**
CLDR	**Caldiran**	**0.64 5**		PG	**Pg**	**02 59 13.6**	**+0.3**
CLDR	**Caldiran**	**0.64 5**		*e*Pg	**Pg**	**02 59 13.6**	**+0.3**
GEVA	**Gevas**	**0.65 253**		*i* P	**Pb**	**02 59 14.6**	**-0.1**
GEVA				*i* S	**Sn**	**02 59 26.1**	**-1.3**
GEVA	**Gevas**	**0.65 253**		P	**Pb**	**02 59 14.6**	**-0.1**
GEVA				S	**Sn**	**02 59 26.1**	**-1.3**
ADCV	**BITLIS_Adilcev**	**0.93 290**		*i* P	**Pg**	**02 59 18.9**	**+0.2**
ADCV	**BITLIS_Adilcev**	**0.93 290**		P	**Pg**	**02 59 18.9**	**+0.2**
YOVA	**Hakkari_Y¨…kse**	**0.98 159**		*i* P	**Pn**	**02 59 21.6**	**+0.2**
YOVA	**Hakkari_Y¨…kse**	**0.98 159**		P	**Pn**	**02 59 21.6**	**+0.2**
TUTA	**Tutak**	**1.21 319**		*i* P	**Pg**	**02 59 24.0**	**0.0**
TUTA	**Tutak**	**1.21 319**		P	**Pg**	**02 59 24.0**	**0.0**
AGRB	**Hanur-Agry**	**1.26 329**		PN	**Pn**	**02 59 25.9**	**+0.6**
AGRB	**Hanur-Agry**	**1.26 329**		*e*Pn	**Pn**	**02 59 25.9**	**+0.6**
SIRT	**Sirnak**	**1.49 228**		PN	**Pg**	**02 59 29.8**	**+0.3**
SIRT	**Sirnak**	**1.49 228**		*e*Pn	**Pg**	**02 59 29.8**	**+0.3**
SRTM	**Siirt_Merkez**	**1.60 252**		*i* P	**Pg**	**02 59 32.4**	**+0.9**
SRTM	**Siirt_Merkez**	**1.60 252**		P	**Pg**	**02 59 32.4**	**+0.9**

DDA 11 03:26:24.8, 36˚.63N×31˚.06E, h7km, Ml2.3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEPZ	**Antalya-Kepez**	**0.51**	**58**	*i* P	Pn	03 26 38.3	-0.3
KEPZ				*i* S	Sg	03 26 42.6	+1.1
KONT	**Konya--Tatoy**	**1.67**	**38**	*i* P	Pn	03 26 50.0	-4.5
KONT				*i* S	Sn	03 27 03.3	-13

*DDA **11** 03:26:32.8, 36˚.41N×28˚.87E, h7km, Ml2.4*
*ISK **11** 03:26:32.6, 36˚.39N×28˚.90E, h20km, ML2.3/11*
*ISCJB **11** 03:26:33.7±0.6, 36˚.40N±0˚.04×28˚.90E±0˚.04, h20km±6km, Error ellipse: s-maj=6.8km s-min=4.7km az=5.6*
*CSEM **11** 03:26:33.4±0.2, 36˚.40N×28˚.91E, h20km, ML2.3, Error ellipse: s-maj=5.9km s-min=3.6km az=5.0*
ISC 11 03:26:33.1±1.0, 36˚.40N±0˚.04×28˚.90E±0˚.02, h20km±3km, n45, σ0°60/70, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.28**	**32**	PG	**Pb**	**03 26 39.0**	**-0.4**
FETY				SG	**Sg**	**03 26 44.3**	**+0.6**
FETY	**Fethiye**	**0.28**	**32**	*e*Pg	**Pb**	**03 26 39.0**	**-0.4**
FETY				S	**Sg**	**03 26 44.3**	**+0.6**
DALY	**Dalyan (Mu¨la**	**0.46**	**334**	PG	**Pb**	**03 26 42.4**	**-0.1**
DALY				SG	**Sb**	**03 26 49.6**	**+0.6**
DALY	**Dalyan (Mu¨la**	**0.46**	**334**	*i* P	**Pb**	**03 26 42.5**	**-0.1**
DALY				*i* S	**Sb**	**03 26 50.0**	**+1.0**
DALY	**Dalyan (Mu¨la**	**0.46**	**334**	P	**Pb**	**03 26 42.5**	**-0.1**
DALY				*e*Sg	**Sb**	**03 26 49.6**	**+0.6**
DALY				S	**Sb**	**03 26 50.0**	**+1.0**
TURN	**Turunc**	**0.53**	**333**	PG	**Pn**	**03 26 46.0**	**+0.5**
TURN	**Turunc**	**0.53**	**333**	*i* P	**Pn**	**03 26 46.1**	**+0.5**
TURN	**Turunc**	**0.53**	**333**	*e*Pg	**Pn**	**03 26 46.0**	**+0.5**
AKAS	**Kas**	**0.59**	**106**	PG	**Pg**	**03 26 44.9**	**-0.2**
AKAS				SG	**Sg**	**03 26 53.6**	**+0.5**
AKAS	**Kas**	**0.59**	**106**	*i* P	**Pg**	**03 26 44.8**	**-0.2**
AKAS				*i* S	**Sn**	**03 26 55.1**	**-0.7**
AKAS	**Kas**	**0.59**	**106**	*e*Pg	**Pg**	**03 26 44.9**	**-0.2**
AKAS				*e*Sg	**Sg**	**03 26 53.6**	**+0.5**
AKAS				S	**Sn**	**03 26 55.1**	**-0.7**
ARG	**Arkhangelos**	**0.65**	**254**	PG	**Pg**	**03 26 45.8**	**-0.3**
ARG	**Arkhangelos**	**0.65**	**254**	*e*Pg	**Pg**	**03 26 45.8**	**-0.3**
ELL	**Elmali**	**0.88**	**67**	PG	**Pn**	**03 26 50.3**	**-0.2**
ELL	**Elmali**	**0.88**	**67**	*e*Pg	**Pn**	**03 26 50.3**	**-0.2**
YER	**Yerkesik**	**0.88**	**326**	PG	**Pn**	**03 26 50.6**	**+0.1**
YER	**Yerkesik**	**0.88**	**326**	*e*Pg	**Pn**	**03 26 50.6**	**+0.1**
GLHS	**Glhisar (BURDU**	**0.89**	**32**	PG	**Pn**	**03 26 50.6**	**-0.1**
GLHS	**Glhisar (BURDU**	**0.89**	**32**	*e*Pg	**Pn**	**03 26 50.6**	**-0.1**
GOLH	**Golhisar**	**0.99**	**32**	*i* P	**Pb**	**03 26 50.3**	**-1.4**
GOLH	**Golhisar**	**0.99**	**32**	*i* P	**Pb**	**03 26 50.1**	**-1.5**
GOLH				*i* S	**Sn**	**03 27 06.0**	**+0.5**
GOLH	**Golhisar**	**0.99**	**32**	P	**Pb**	**03 26 50.2**	**-1.5**
GOLH				S	**Sn**	**03 27 06.0**	**+0.5**
DATC	**Datca-Mugla**	**1.06**	**290**	PG	**Pn**	**03 26 52.7**	**-0.2**
DATC	**Datca-Mugla**	**1.06**	**290**	*e*Pg	**Pn**	**03 26 52.7**	**-0.2**
TAVA	**DENIZLI_Tavas**	**1.06**	**1**	*i* P	**Pb**	**03 26 52.3**	**-0.6**
TAVA				*i* S	**Sb**	**03 27 06.1**	**-0.3**
TAVA	**DENIZLI_Tavas**	**1.06**	**1**	P	**Pb**	**03 26 52.3**	**-0.6**
TAVA				S	**Sb**	**03 27 06.1**	**-0.3**
DAT	**Datca**	**1.11**	**287**	PN	**Pb**	**03 26 53.8**	**0.0**
DAT	**Datca**	**1.11**	**287**	*i* P	**Pg**	**03 26 54.2**	**-0.5**
DAT				*i* S	**Sg**	**03 27 10.3**	**+0.9**
DAT	**Datca**	**1.11**	**287**	*e*Pn	**Pb**	**03 26 53.8**	**0.0**
DAT	**Datca**	**1.11**	**287**	P	**Pg**	**03 26 54.2**	**-0.5**
DAT				S	**Sg**	**03 27 10.3**	**+0.9**
MLSB	**Milas**	**1.27**	**315**	PN	**Pn**	**03 26 55.1**	**-0.7**
MLSB	**Milas**	**1.27**	**315**	*e*Pn	**Pn**	**03 26 55.1**	**-0.7**
DNZL	**Cakiroluk**	**1.29**	**5**	*i* P	**Pn**	**03 26 56.0**	**-0.2**
DNZL				*i* S	**Sn**	**03 27 12.9**	**-0.2**
DNZL	**Cakiroluk**	**1.29**	**5**	P	**Pn**	**03 26 56.0**	**-0.2**
DNZL				S	**Sn**	**03 27 12.9**	**-0.2**
KORT	**Korkueli**	**1.31**	**62**	PN	**Pb**	**03 26 56.6**	**-0.5**
KORT	**Korkueli**	**1.31**	**62**	*i* P	**Pb**	**03 26 57.2**	**0.0**
KORT				*i* S	**Sg**	**03 27 16.5**	**+0.9**
KORT	**Korkueli**	**1.31**	**62**	*i* P	**Pb**	**03 26 57.6**	**+0.5**
KORT				*i* S	**Sg**	**03 27 17.3**	**+1.7**
KORT	**Korkueli**	**1.31**	**62**	*e*Pn	**Pb**	**03 26 56.6**	**-0.5**
KORT	**Korkueli**	**1.31**	**62**	P	**Pb**	**03 26 57.6**	**+0.5**
KORT				S	**Sg**	**03 27 16.5**	**+0.9**
BDRM	**Kayabasi**	**1.34**	**300**	*i* P	**Pb**	**03 26 57.3**	**-0.3**
BDRM				*i* S	**Sg**	**03 27 16.4**	**-0.3**
BDRM	**Kayabasi**	**1.34**	**300**	P	**Pb**	**03 26 57.3**	**-0.3**
BDRM				S	**Sg**	**03 27 16.4**	**-0.3**
BODT	**Bodrum**	**1.44**	**298**	PN	**Pn**	**03 26 58.2**	**+0.1**
BODT	**Bodrum**	**1.44**	**298**	*e*Pn	**Pn**	**03 26 58.2**	**+0.1**
AYDN	**Tasoluk**	**1.50**	**327**	*i* P	**Pb**	**03 26 59.7**	**-0.6**
AYDN				*i* S	**Sb**	**03 27 19.2**	**+0.2**
AYDN	**Tasoluk**	**1.50**	**327**	P	**Pb**	**03 26 59.7**	**-0.6**
AYDN				S	**Sb**	**03 27 19.2**	**+0.2**

*NIED **11** 03:35:00, 43˚.40N×146˚.60E, h38km, Mw3.9 Best double couple: M0 8.58000×10^14 NP1:φ=234.00000°, δ27.00000°, λ115.00000°. NP2:φ=26.00000°, δ66.00000°, λ78.00000°.*
*MOS **11** 03:35:56.6±0.9, 43˚.53N×146˚.86E, h50km, mb4.2/19, Error ellipse: s-maj=10.7km s-min=7.0km az=109.4*
MOS Felt (III) at Malokuril'skoye.
*ISCJB **11** 03:35:56.7±0.7, 43˚.46N±0˚.05×146˚.81E±0˚.06, h53km±4km, mb3.9/32, MS3.3/5, Error ellipse: s-maj=9.9km s-min=5.0km az=145.6*
*SKHL **11** 03:35:57.1±0.3, 43˚.42N×146˚.95E, h56km±5km, mb5.1/8*
SKHL Felt (III) Malokukilskoe (51 km).
*IDC **11** 03:35:57.0±0.9, 43˚.50N×146˚.75E, h38km±6km, mb3.7/23, mb1 3.9/26, mb1mx3.7/71, mbtmp3.9/26, ML3.3/3, MS3.0/11, Ms1 3.0/11, ms1mx2.7/70, Error ellipse: s-maj=20.2km s-min=14.6km az=167.0*
*JMA **11** 03:35:58.4±0.2, 43˚.36N×146˚.65E, h45km±2km, M4.0*
JMA Felt I J1.
ISC 11 03:35:56.9±0.5, 43˚.42N±0˚.06×146˚.86E±0˚.05, h38km±2km, n104, σ0°99/116, mb3.9/32, MS3.3/5, 2C-5D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.45**	**358**	*i* P	**Pn**	**03 36 06.9**	**+0.1**
SHO				AMB	AMB	03 36 07.1	
	10μm,0.3s						
SHO				*i* S	**Sn**	**03 36 14.1**	**+0.3**
SHO				A	A	03 36 14.5	
	21μm,0.3s						
SHO				A	A	03 36 14.5	
	7μm,0.3s						
SHO	**Shikotan**	**0.45**	**358**	*d* iPN	**Pn**	**03 36 06.9**	**+0.1**
SHO				*i* S	**Sn**	**03 36 14.1**	**+0.3**
SHO				pmax	pmax		
	comp=N,4μm,0.2s						
SHO				pmax	pmax		
	comp=E,3μm,0.2s						
SHO				pmax	pmax		
	comp=Z,10μm,0.2s						
SHO				smax	smax		
	comp=E,21nm,0.2s						
SHO				smax	smax		
	comp=N,7.0nm,0.3s						
NEM2	**Nemuro 2**	**0.81**	**266**	P	**Pn**	**03 36 11.4**	**-0.4**
NEM2				*e*S	**Sn**	**03 36 21.0**	**-1.7**
YUK	**Yuzh-Kuril'sk**	**0.95**	**311**	*e*P	**Pn**	**03 36 13.7**	**0.0**
YUK				AMB	AMB	03 36 14.2	
	comp=N,266nm,0.3s						
YUK				AMB	AMB	03 36 14.2	
	comp=N,333nm,0.3s						
YUK				AMB	AMB	03 36 14.2	
	comp=N,5μm,0.3s						
YUK				*i* S	**Sn**	**03 36 26.0**	**+0.1**
YUK				A	A	03 36 27.4	
	comp=N,4μm,0.3s						
YUK				A	A	03 36 27.4	
	comp=N,11μm,0.3s						
YUK	**Yuzh-Kuril'sk**	**0.95**	**311**	*d* iPN	**Pn**	**03 36 13.7**	**0.0**
YUK				*i* S	**Sn**	**03 36 26.0**	**+0.1**
YUK				pmax	pmax		
	comp=Z,5μm,0.2s						
YUK				pmax	pmax		
	comp=N,266nm,0.3s						
YUK				pmax	pmax		
	comp=E,333nm,0.1s						
YUK				smax	smax		
	comp=E,11μm,0.3s						
YUK				smax	smax		
	comp=N,4μm,0.2s						
GRPR	**Tuman**	**0.97**	**306**	*e*P	**Pn**	**03 36 13.9**	**-0.1**
GRPR				AMB	AMB	03 36 14.7	
	comp=N,2μm,0.2s						
GRPR				*i* S	**Sn**	**03 36 26.8**	**+0.2**
GRPR				A	A	03 36 27.2	
	comp=N,4μm,0.2s						
GRPR				A	A	03 36 27.2	
	comp=N,8μm,0.2s						
GRPR	**Tuman**	**0.97**	**306**	*e*PN	**Pn**	**03 36 13.9**	**-0.1**
GRPR				*i* S	**Sn**	**03 36 26.8**	**+0.2**
GRPR				pmax	pmax		
	comp=E,330nm,0.2s						
GRPR				pmax	pmax		
	comp=Z,2μm,0.2s						
GRPR				pmax	pmax		
	comp=N,650nm,0.3s						
GRPR				smax	smax		
	comp=N,4.0nm,0.2s						
GRPR				smax	smax		
	comp=E,8.0nm,0.4s						
LAGR	**Lagunnoye**	**1.00**	**310**	*e*P	**Pn**	**03 36 14.4**	**0.0**
LAGR				AMB	AMB	03 36 16.1	
	comp=E,1μm,0.3s						
LAGR				*e*S	**Sn**	**03 36 27.3**	**0.0**
LAGR				A	A	03 36 28.7	
	comp=E,11μm,0.4s						
LAGR				A	A	03 36 28.7	
	comp=E,10μm,0.4s						
LAGR	**Lagunnoye**	**1.00**	**310**	*d* iPN	**Pn**	**03 36 14.4**	**0.0**
LAGR				*e*S	**Sn**	**03 36 27.3**	**0.0**
LAGR				pmax	pmax		
	comp=E,470nm,0.2s						
LAGR				pmax	pmax		
	comp=Z,1μm,0.2s						
LAGR				pmax	pmax		
	comp=N,253nm,0.1s						
LAGR				smax	smax		
	comp=E,11μm,0.4s						
LAGR				smax	smax		
	comp=N,10μm,0.2s						
GLVR	**Golovnino**	**1.02**	**289**	*e*P	**Pn**	**03 36 14.8**	**+0.1**
GLVR				AMB	AMB	03 36 16.5	
	comp=N,610nm,0.2s						
GLVR				*e*S	**Sn**	**03 36 29.0**	**+1.2**
GLVR				A	A	03 36 29.2	
	comp=N,2μm,0.2s						
GLVR				A	A	03 36 29.2	
	comp=N,4μm,0.2s						
GLVR	**Golovnino**	**1.02**	**289**	*c* iPN	**Pn**	**03 36 14.8**	**+0.1**
GLVR				*e*S	**Sn**	**03 36 29.0**	**+1.2**
GLVR				pmax	pmax		
	comp=N,103nm,0.1s						
GLVR				pmax	pmax		
	comp=E,402nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,607nm,0.1s						
GLVR				smax	smax		
	comp=E,2.0nm,0.2s						
GLVR				smax	smax		
	comp=N,4.0nm,0.3s						
JRA	**Rausu**	**1.36**	**293**	P	**Pn**	**03 36 19.7**	**+0.4**
JRA				*e*S	**Sn**	**03 36 35.4**	**-0.7**
JNK	**Nakash**	**1.56**	**277**	P	**Pn**	**03 36 22.1**	**0.0**
JNK				*e*S	**Sn**	**03 36 39.0**	**-2.1**
JAK	**Akkeshi**	**1.63**	**256**	P	**Pn**	**03 36 22.7**	**-0.4**
KUR	**Kuril'sk**	**1.95**	**21**	*i* P	**Pn**	**03 36 27.8**	**+0.3**
KUR				AMB	AMB	03 36 30.5	
	comp=N,155nm,0.3s						
KUR				*i* S	**Sn**	**03 36 50.6**	**-0.1**
KUR				A	A	03 36 53.5	
	comp=N,630nm,0.3s						
KUR				A	A	03 36 53.5	
	comp=N,1μm,0.3s						
KUR	**Kuril'sk**	**1.95**	**21**	*d* iPN	**Pn**	**03 36 27.8**	**+0.3**
KUR		

comp=Z,1.0nm,0.8s
SONM Songino Array 28.40 293 P **P 03 41 47.2 -0.5**
comp=Z,1.8nm,0.6s,baz=91,slow=8.3,SNR=8.4
SONM LR LR 03 54 14.1
comp=Z,77nm,18.8s,baz=100,slow=39
SONM Songino Array 28.40 293 *eP* **P 03 41 48.4 +0.7**
SONM pmax pmax
comp=Z,2.0nm,0.6s
H11N2 WAKE ISLAND Hy 29.00 138 T T 04 12 33.7
baz=330,slow=76,SNR=91
H11N1 WAKE ISLAND Hy 29.01 138 T T 04 12 35.3
baz=330,slow=76,SNR=56
H11N3 WAKE ISLAND Hy 29.01 138 T T 04 12 35.6
baz=330,slow=76,SNR=73
TIK Tiksi 29.62 349 *eP* **P 03 41 58.2 +0.1**
TIXI Tiksi 29.64 349 *i P* **P 03 41 58.2 0.0**
TIXI pmax pmax
comp=Z,1.0nm,0.8s
TLY Talaya 29.93 301 *eP* **P 03 42 00.1 -1.0**
TLY Talaya 29.93 301 *i P* **P 03 42 00.1 -1.0**
TLY pmax pmax
comp=Z,2.0nm,0.9s
H11S1 WAKE ISLAND Hy 29.95 140 T T 04 13 47.5
baz=331,slow=76,SNR=1069
H11S3 WAKE ISLAND Hy 29.96 140 T T 04 13 46.8
baz=331,slow=76,SNR=966
H11S2 WAKE ISLAND Hy 29.97 140 T T 04 13 43.2
baz=331,slow=76,SNR=521
ILAR Eielson Array 41.88 36 P **P 03 43 42.6 -0.4**
comp=Z,0.7nm,0.6s,baz=281,slow=9.7,SNR=10
ILAR Eielson Array 41.88 36 *eP* **P 03 43 45.4 +2.4**
ILAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR Makanchi Array 44.55 298 P **P 03 44 04.1 -0.7**
comp=Z,2.2nm,0.5s,baz=82,slow=9.9,SNR=24
MKAR LR LR 04 02 58.7
comp=Z,50nm,19.3s,baz=234,slow=36
MKAR Makanchi Array 44.55 298 *eP* **P 03 44 04.3 -0.5**
MKAR pmax pmax
comp=Z,2.0nm,0.5s
KURK Kurchatov 45.54 304 *eP* **P 03 44 12.0 -0.5**
KURK Kurchatov 45.54 304 *i P* **P 03 44 12.1 -0.5**
KURK pmax pmax
comp=Z,1.0nm,1.1s
KURBB Kurchatov Arra 45.62 304 P **P 03 44 12.2 -1.0**
comp=Z,0.9nm,0.5s,baz=75,slow=8.3,SNR=8.4
INK Inuvik 46.80 30 P **P 03 44 22.3 +0.2**
comp=Z,1.9nm,0.3s,baz=299,slow=9.5,SNR=23
CMAR Chiang Mai Arr 47.23 254 LR LR 04 04 14.7
comp=Z,14nm,19.3s,baz=140,slow=36
BRVK Borovoye 49.59 310 *eP* **P 03 44 45.6 +1.6**
BRVK Borovoye 49.59 310 *i P* **P 03 44 45.6 +1.6**
BRVK pmax pmax
comp=Z,1.0nm,1.1s
ARU Arti 54.44 317 *eP* **P 03 45 20.7 +0.7**
ARU Arti 54.44 317*c i P* **P 03 45 20.4 +0.4**
ARU 03 46 21.5
ARU 03 47 19.3
ARU S **S 03 52 58.5 +2.9**
ARU SS **SS 03 56 37.9 +0.3**
ARU pmax pmax
comp=Z,5.0nm,1.7s
SPITS Spitsbergen Ar 55.06 349 P **P 03 45 24.0 -0.2**
comp=Z,0.8nm,0.6s,baz=15,slow=6.0,SNR=5.9
RES Resolute Bay 55.34 17 P **P 03 45 25.8 -0.4**
comp=Z,1.2nm,0.6s,baz=315,slow=9.7,SNR=8.4
YKA Yellowknife Ar 56.19 34 P **P 03 45 32.2 -0.2**
comp=Z,0.3nm,0.5s,baz=298,slow=6.7,SNR=4.0
AKTO Aktyubinsk 57.59 311 P **P 03 45 42.4 -0.1**
comp=Z,0.6nm,0.5s,baz=92,slow=6.7,SNR=2.6
ARCES ARCESS Array B 59.48 340 P **P 03 45 55.1 -0.4**
comp=Z,3.1nm,1.0s,baz=45,slow=6.9,SNR=8.5
WRA Warramunga Arr 64.09 193 P **P 03 46 27.4 +0.4**
comp=Z,0.3nm,0.8s,baz=8.0,slow=7.1,SNR=4.6
WRA Warramunga Arr 64.09 193 *eP* **P 03 46 28.2 +1.2**
WRA Warramunga Arr 64.09 193 *eP* **P 03 46 28.2 +1.2**
WRA pmax pmax
comp=Z,1.0nm,1.1s
FINES FINESS Array B 65.07 333 P **P 03 46 32.0 -0.9**
comp=Z,2.6nm,0.6s,baz=46,slow=8.2,SNR=20
NVAR Mina Array Bea 67.94 58 P **P 03 46 52.9 +1.0**
comp=Z,0.2nm,0.4s,baz=286,slow=8.1,SNR=2.8
NVAR pP **pP 03 47 03.5 0.0**
comp=Z,0.4nm,0.6s,baz=295,slow=7.3,SNR=3.7
KIV Kislovodsk 69.82 312 *eP* **P 03 47 02.3 -1.1**
KIV Kislovodsk 69.82 312 *eP* **P 03 47 02.3 -1.1**
KIV pmax pmax
comp=Z,7.0nm,1.1s
NB2 NORSAR Subarra 69.83 339 P **P 03 47 01.8 -1.3**
comp=Z,1.4nm,0.6s,baz=40,slow=6.2
NOA NORSAR Array B 69.83 339 P **P 03 47 02.4 -0.7**
comp=Z,3.4nm,0.5s,baz=32,slow=6.6,SNR=17
NOA NORSAR Array B 69.83 339 *eP* **P 03 47 02.3 -0.8**
NOA pmax pmax
comp=Z,4.0nm,0.5s
KBZ Khabaz 69.86 311 P **P 03 47 03.1 -0.3**
comp=Z,1.1nm,0.5s,baz=124,slow=3.2,SNR=3.4
HFS Hagfors 69.91 337 P **P 03 47 02.7 -0.8**
comp=Z,2.4nm,0.3s,baz=31,slow=6.7,SNR=64
PDAR Pinedale Array 70.28 49 P **P 03 47 06.5 +0.1**
comp=Z,0.2nm,0.5s,baz=324,slow=4.5,SNR=3.0
PDAR pP **pP 03 47 17.6 -0.4**
comp=Z,0.4nm,0.5s,baz=204,slow=2.0,SNR=4.4
AKASG Malin Array Be 71.72 324 P **P 03 47 13.9 -0.8**
comp=Z,1.8nm,0.6s,baz=39,slow=6.1,SNR=12
AKASG Malin Array Be 71.72 324 *eP* **P 03 47 13.8 -0.8**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
MLR Muntele Rosu 77.08 322 P **P 03 47 46.2 0.0**
comp=Z,0.2nm,0.6s,baz=79,slow=16,SNR=3.6
CLL Collm 77.51 332 *eP* **P 03 47 47.6 -0.6**
CLL Collm 77.51 332 *i P* **P 03 47 47.6 -0.6**
comp=Z,4.0nm,0.8s
CLL Collm 77.51 332 *i P* **P 03 47 47.6 -0.6**
CLL pmax pmax
comp=Z,4.0nm,0.8s
BRTR Keskin Array B 77.61 313 P **P 03 47 48.9 -0.3**
comp=Z,0.3nm,0.7s,baz=46,slow=6.2,SNR=2.9
EKA Eskdalemuir Ar 78.38 343 P **P 03 47 52.6 -0.4**
comp=Z,1.3nm,0.5s,baz=27,slow=5.4,SNR=23
KHC Kasperske Hory 79.14 331 *eP* **P 03 47 57.2 -0.2**
KHC *ex* x 03 48 01.1
KHC *ep*P **PcP 03 48 07.0 +1.3**
KHC Kasperske Hory 79.14 331 *eP* **P 03 47 57.2 -0.2**
KHC Kasperske Hory 79.14 331 *eP* **P 03 47 57.2 -0.2**
KHC *e* 03 48 07.0
GERES GERESS Array B 79.34 331 P **P 03 47 57.7 -0.9**
comp=Z,0.3nm,0.5s,baz=56,slow=5.8,SNR=3.8
GERES LR LR 04 25 52.1
comp=Z,18nm,18.1s,baz=214,slow=38
GERES GERESS Array B 79.34 331 *eP* **P 03 47 57.3 -1.2**
GERES GERESS Array B 79.34 331 *eP* **P 03 47 57.3 -1.2**
TXAR Lajitas Array 83.01 56 P **P 03 48 18.8 +0.4**
comp=Z,0.2nm,0.5s,baz=302,slow=4.7,SNR=7.1
TXAR pP **pP 03 48 31.1 +0.9**
comp=Z,0.5nm,0.6s,baz=304,slow=3.9,SNR=6.0
TORD Torodi Ar. Bea 115.32 322 PKP **PKPdf 03 54 33.2 -1.5**
comp=Z,0.2nm,0.6s,baz=42,slow=2.0,SNR=3.3
SNAA Sanae 148.08 198 PKPbc **PKPbc 03 55 36.7 -0.4**
comp=Z,0.4nm,0.8s,baz=187,slow=8.1,SNR=3.8

*IDC **11** 03:36:52.8±2.0, 36°16N×142°65E, h0km, mb3.7/6, mb1 3.8/8, mb1mx3.5/71, mbtmp3.7/8, ML3.5/2, Error ellipse: s-maj=55.8km s-min=20.3km az=68.0*
*ISCJB **11** 03:36:54.5±0.8, 36°13N±0°04×142°45E±0°07, h18km, mb3.6/6, Error ellipse: s-maj=8.7km s-min=5.7km az=156.4*
*JMA **11** 03:36:55.2±0.2, 36°17N×142°53E, h73km, M3.4*
ISC 11 03:36:56.0±1.3, 36°16N±0°05×142°5E±0°1, h18km, n26, σ0s89/29, mb3.7/6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.37**	**251**	P	**Pn**	03 37 19.8	**-0.4**
JHO	**Hitachi**	**1.59**	**287**	P	**Pn**	03 37 22.4	**-0.8**
JHO				S	**Sn**	03 37 42.8	**-0.4**
ONAJ	**Iwakimizuishiy**	**1.63**	**306**	P	**Pn**	03 37 22.8	**-1.1**
ONAJ				*e*S	**Sn**	03 37 43.9	**-0.5**
JFK	**Kawauchi**	**1.75**	**314**	P	**Pn**	03 37 24.3	**-1.2**
JFK				*e*S	**Sn**	03 37 46.3	**-1.0**
BSO1	**Boso 1**	**1.92**	**219**	P	**Pn**	03 37 27.1	**-0.2**
JMM	**Marumori**	**2.16**	**323**	P	**Pn**	03 37 30.0	**-1.1**
JMM				*e*S	**Sn**	03 37 56.6	**-0.8**
JFT	**Otama**	**2.17**	**309**	P	**Pn**	03 37 31.4	**+0.1**
JFT				*e*S	**Sn**	03 37 57.7	**-0.1**
JAG	**Ashikaga**	**2.44**	**277**	P	**Pn**	03 37 34.6	**-0.3**
JAG				*e*S	**Sn**	03 38 03.6	**-0.7**
JOD2	**Odawara 2**	**2.88**	**253**	P	**Pn**	03 37 40.9	**-0.1**
JRY	**Ryogami san**	**2.88**	**268**	P	**Pn**	03 37 40.7	**-0.3**
JRY				S	**Sn**	03 38 15.1	**-0.1**
MJAR	**Matsushiro Arr**	**3.45**	**278**	Pn	**Pn**	03 37 49.1	**+0.3**
	3.2nm,0.3s,baz=107,slow=8.2,SNR=26						
MAT	**Matsushiro**	**3.45**	**278**	P	**Pn**	03 37 49.7	**+0.9**
MAT				S	**Sn**	03 38 28.3	**-0.9**
JHJ	**Hachijo jima 2**	**3.75**	**217**	Pn	**Pn**	03 37 53.1	**+0.3**
	11nm,0.3s,baz=75,slow=20,SNR=3.7						
JHJ				Sn	**Sn**	03 38 33.7	**-2.8**
	26nm,0.3s,baz=180,slow=20,SNR=4.3						
H11N2	**WAKE ISLAND Hy**	**26.98**	**121**	T	T	04 10 45.2	
	baz=313						
H11N1	**WAKE ISLAND Hy**	**26.99**	**121**	T	T	04 10 45.2	
	baz=313						
H11N3	**WAKE ISLAND Hy**	**27.00**	**121**	T	T	04 10 45.2	
	baz=313						
H11S1	**WAKE ISLAND Hy**	**27.68**	**123**	T	T	04 11 40.1	
	baz=314						
H11S3	**WAKE ISLAND Hy**	**27.68**	**123**	T	T	04 11 40.7	
	baz=314						
H11S2	**WAKE ISLAND Hy**	**27.70**	**123**	T	T	04 11 40.7	
	baz=314						
SONM	**Songino Array**	**28.97**	**305**	P	**P**	**03 42 55.9**	**+1.4**
	1.1nm,0.7s,baz=101,slow=8.9,SNR=3.1						
ZALV	**Zalesovo Beam**	**43.12**	**313**	P	**P**	**03 44 55.2**	**+0.2**
	0.4nm,0.4s,baz=79,slow=9.0,SNR=2.2						
MKAR	**Makanchi Array**	**45.29**	**304**	P	**P**	**03 45 13.1**	**+0.5**
	0.5nm,0.6s,baz=77,slow=7.4,SNR=2.6						
KURBB	**Kurchatov Arra**	**47.20**	**309**	P	**P**	**03 45 27.6**	**+0.2**
	0.4nm,0.4s,baz=82,slow=7.7,SNR=3.7						
WRA	**Warramunga Arr**	**56.32**	**189**	P	**P**	**03 46 34.8**	**-0.9**
	0.7nm,0.9s,baz=8.1,slow=6.9,SNR=3.9						
ASAR	**Alice Springs**	**60.05**	**189**	P	**P**	**03 47 02.3**	**+0.5**
	0.4nm,0.8s,baz=12,slow=9.7,SNR=3.6						
ASAR	**Alice Springs**	**60.05**	**189**	P	**P**	**03 47 02.3**	**+0.5**

DJA 11 03:38:24.4±1.2, 2°S±2°×12°1E±°, h14km±10km, M3.7/9, MLv3.7/9, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTSI	**Tana Toraja**	**1.43**	**245**	P	Pn	03 38 49.4	-0.6
APSI	**Ampana**	**1.61**	**19**	P	Pn	03 38 51.2	-1.2
APSI				S	Sn	03 39 13.4	+0.4
PCI	**Palu**	**1.99**	**320**	P	Pn	03 38 58.7	+1.0
SPSI	**Sidrap Palu**	**2.03**	**222**	P	Pn	03 38 58.3	+0.1
SPSI				S	Sb	03 39 27.0	+0.8
KDI	**Kendari**	**2.12**	**135**	P	Pn	03 39 00.0	+0.5
LUWI	**Luwuk**	**2.16**	**50**	P	Pn	03 39 00.3	+0.3
LUWI				S	Sn	03 39 27.2	+0.7
MRSI	**Marisa**	**3.01**	**16**	P	Pn	03 39 11.1	-0.6
MRSI				S	Sn	03 39 47.9	+0.3
MPSI	**Mapaga**	**3.02**	**336**	P	Pn	03 39 11.6	-0.2
BKSI	**Bulukumba**	**3.03**	**199**	P	Pn	03 39 11.5	-0.5

*IDC **11** 03:49:02.8±1.0, 39°11N×29°18E, h0km, mb3.5/6, mb1 3.5/10, mb1mx3.3/59, mbtmp3.4/10, ML2.8/3, MS2.4/2, Ms1 2.4/2, ms1mx2.0/68, Error ellipse: s-maj=19.1km s-min=17.1km az=164.0*
*DDA **11** 03:49:03.5, 39°12N×29°17E, h7km, Ml3.9*
*ISCJB **11** 03:49:03.6±0.3, 39°08N±0°02×29°15E±0°02, h11km±2km, mb3.6/7, MS2.8/1, Error ellipse: s-maj=3.3km s-min=3.0km az=178.4*
*CSEM **11** 03:49:03.8±0.1, 39°08N×29°16E, h5km, ML4.0, Error ellipse: s-maj=2.3km s-min=2.3km az=162.0*
*ISK **11** 03:49:03.4, 39°10N×29°14E, h5km, ML4.0/25*
*THE **11** 03:49:07.5, 39°01N×29°11E, h25km±6km, ML3.3/2, Error ellipse: s-maj=6.8km s-min=1.3km az=34.0*
ISC 11 03:49:03.9±0.8, 39°10N±0°02×29°16E±0°02, h10km±4km, n186, σ0s95/198, mb3.5/7, 16C-8D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHAP	**Saphane-Kutahy**	**0.09**	**147**	PG	**Pg**	03 49 06.3	**-0.2**
SHAP				SG	**Sg**	03 49 08.2	**-0.1**
SHAP	**Saphane-Kutahy**	**0.09**	**147**	*e*Pg	**Pg**	03 49 06.3	**-0.2**
SHAP				*e*Sg	**Sg**	03 49 08.2	**-0.1**
SIMA	**Simav-Kutahya**	**0.14**	**265**	PG	**Pg**	03 49 07.0	**-0.2**
SIMA				SG	**Sg**	03 49 09.0	**-0.5**
SIMA	**Simav-Kutahya**	**0.14**	**265**	*e*Pg	**Pg**	03 49 07.0	**-0.2**
SIMA				*e*Sg	**Sg**	03 49 09.0	**-0.5**
SMAA	**Simav-Kutahya**	**0.14**	**272**	PG	**Pg**	03 49 07.1	**-0.1**
SMAA	**Simav-Kutahya**	**0.14**	**272**	*e*Pg	**Pg**	03 49 07.1	**-0.1**
GEDZ	**Gediz**	**0.20**	**105**	PG	**Pg**	03 49 08.5	**+0.3**
GEDZ	**Gediz**	**0.20**	**105**	*e*Pg	**Pg**	03 49 08.5	**+0.3**
DEMI	**Demirci**	**0.35**	**261**	*i* P	**Pg**	03 49 10.9	**0.0**
DEMI	**Demirci**	**0.35**	**261**	P	**Pg**	03 49 10.9	**0.0**
TVSB	**Tavsanli**	**0.42**	**33**	PG	**Pg**	03 49 10.9	**-1.4**
TVSB	**Tavsanli**	**0.42**	**33**	*e*Pg	**Pg**	03 49 10.9	**-1.4**
DST	**Dursunbey**	**0.66**	**321**	PG	**Pg**	03 49 15.9	**-0.8**
DST	**Dursunbey**	**0.66**	**321**	*e*Pg	**Pg**	03 49 15.9	**-0.8**
KULA	**Kula-Manisa**	**0.70**	**214**	PG	**Pg**	03 49 17.1	**-0.4**
KULA	**Kula-Manisa**	**0.70**	**214**	*e*Pg	**Pg**	03 49 17.1	**-0.4**
KUTH	**Kutahya**	**0.73**	**66**	PG	**Pg**	03 49 18.1	**0.0**
KUTH	**Kutahya**	**0.73**	**66**	*e*Pg	**Pg**	03 49 18.1	**0.0**
DURS	**Dursunbey**	**0.73**	**314**	*i* P	**Pg**	03 49 17.7	**-0.4**
DURS	**Dursunbey**	**0.73**	**314**	P	**Pg**	03 49 17.7	**-0.4**
MANT	**Manisa**	**0.77**	**218**	*i* P	**Pg**	03 49 18.2	**-0.6**
MANT	**Manisa**	**0.77**	**218**	P	**Pg**	03 49 18.2	**-0.6**
KHAL	**Karahalli**	**0.77**	**160**	*i* P	**Pg**	03 49 17.7	**-1.1**
KHAL	**Karahalli**	**0.77**	**160**	P	**Pg**	03 49 17.7	**-1.1**
KHL	**Karahalli**	**0.82**	**160**	PG	**Pb**	03 49 20.0	**-0.3**
KHL	**Karahalli**	**0.82**	**160**	*e*Pg	**Pb**	03 49 20.0	**-0.3**
ORLT	**Orhaneli**	**0.97**	**348**	PG	**Pg**	03 49 22.3	**-0.3**
ORLT	**Orhaneli**	**0.97**	**348**	*e*Pg	**Pg**	03 49 22.3	**-0.3**
AUBOZ	**BOZOYUK**	**1.06**	**39**	PG	**Pg**	03 49 23.4	**-0.8**
AUBOZ	**BOZOYUK**	**1.06**	**39**	*i* P	**Pg**	03 49 23.6	**-0.7**
AUBOZ	**BOZOYUK**	**1.06**	**39**	P	**Pg**	03 49 23.6	**-0.7**
AKHS	**Akhisar**	**1.07**	**259**	*i* P	**Pb**	03 49 24.5	**-0.1**
AKHS	**Akhisar**	**1.07**	**259**	P	**Pb**	03 49 24.5	**-0.1**
AKS	**Akhisar**	**1.07**	**259**	PG	**Pb**	03 49 24.3	**-0.2**
AKS	**Akhisar**	**1.07**	**259**	*e*Pg	**Pb**	03 49 24.3	**-0.2**
AUKUT	**KUTAHYA**	**1.09**	**38**	*i* P	Pg	03 49 17.6	-7.2
BALB	**Balikesir**	**1.13**	**299**	PN	**Pb**	03 49 25.4	**-0.1**
BALB	**Balikesir**	**1.13**	**299**	*e*Pn	**Pb**	03 49 25.4	**-0.1**
KZIL	**AFYON_Kizioren**	**1.14**	**137**	*i* P	**Pb**	03 49 25.9	**+0.2**
KZIL	**AFYON_Kizioren**	**1.14**	**137**	P	**Pb**	03 49 25.9	**+0.2**
STEP	**BALIKESIR_Sava**	**1.16**	**284**	*i* P	**Pb**	03 49 26.1	**+0.1**
STEP	**BALIKESIR_Sava**	**1.16**	**284**	P	**Pb**	03 49 26.0	**+0.1**
CAVI	**Cavuskoy**	**1.22**	**25**	PN	**Pb**	03 49 27.1	**0.0**
CAVI	**Cavuskoy**	**1.22**	**25**	*e*Pn	**Pb**	03 49 27.1	**0.0**
IZI	**Iznik**	**1.26**	**11**	PN	**Pn**	03 49 27.9	**+0.2**
IZI	**Iznik**	**1.26**	**11**	*e*Pn	**Pn**	03 49 27.9	**+0.2**
BORA	**Eskisehir**	**1.27**	**52**	PN	**Pg**	03 49 27.7	**-0.6**
BORA	**Eskisehir**	**1.27**	**52**	*i* P	**Pg**	03 49 27.2	**-1.1**
BORA	**Eskisehir**	**1.27**	**52**	P	**Pg**	03 49 27.2	**-1.1**
BORA	**Eskisehir**	**1.27**	**52**	*e*Pn	**Pg**	03 49 27.7	**-0.6**
MDNY	**Mudanya-Bursa**	**1.29**	**351**	PN	**Pb**	03 49 28.1	**-0.1**
MDNY	**Mudanya-Bursa**	**1.29**	**351**	*e*Pn	**Pb**	03 49 28.1	**-0.1**
KCTX	**Karacabey (Bur**	**1.32**	**332**	PN	**Pn**	03 49 28.4	**0.0**
KCTX	**Karacabey (Bur**	**1.32**	**332**	*e*Pn	**Pn**	03 49 28.4	**0.0**
DENT	**Denizli**	**1.34**	**184**	PN	**Pg**	03 49 29.5	**-0.2**
DENT	**Denizli**	**1.34**	**184**	*e*Pn	**Pg**	03 49 29.5	**-0.2**
BALY	**Balya**	**1.36**	**299**	*i* P	**Pn**	03 49 28.4	**-0.5**
BALY	**Balya**	**1.36**	**299**	P	**Pn**	03 49 28.4	**-0.5**
ESKT	**Eskisehir**	**1.38**	**72**	PN	**Pg**	03 49 30.3	**-0.1**
ESKT	**Eskisehir**	**1.38**	**72**	*i* P	**Pn**	03 49 28.2	**-1.1**
ESKT	**Eskisehir**	**1.38**	**72**	*e*Pn	**Pg**	03 49 30.3	**-0.1**
SEYT	**Eskypehyr**	**1.38**	**72**	P	**Pn**	03 49 28.2	**-1.1**
ADVT	**Abdulvahap**	**1.41**	**18**	PN	**Pg**	03 49 30.8	**-0.1**
ADVT	**Abdulvahap**	**1.41**	**18**	*e*Pn	**Pg**	03 49 30.8	**-0.1**
BOLV	**Bolvadin**	**1.45**	**105**	*i* P	**Pb**	03 49 31.0	**0.0**
BOLV	**Bolvadin**	**1.45**	**105**	P	**Pb**	03 49 31.0	**0.0**
YLV	**Yalova**	**1.48**	**6**	PN	**Pn**	03 49 30.4	**-0.2**
YLV	**Yalova**	**1.48**	**6**	*e*Pn	**Pn**	03 49 30.4	**-0.2**
GONE	**Gonen-Balikesi**	**1.48**	**310**	PN	**Pg**	03 49 31.6	**-0.8**
GONE	**Gonen-Balikesi**	**1.48**	**310**	*e*Pn	**Pg**	03 49 31.6	**-0.8**
AYDB	**Zeytinkoy-Aydi**	**1.52**	**221**	PN	**Pn**	03 49 31.3	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**1.52**	**221**	*e*Pn	**Pn**	03 49 31.3	**+0.1**
SBT5	**Esenkoy-Cinarc**	**1.55**	**352**	PN	**Pb**	03 49 32.1	**-0.5**
SBT5	**Esenkoy-Cinarc**	**1.55**	**352**	*e*Pn	**Pb**	03 49 32.1	**-0.5**
EDC	**Edincik**	**1.60**	**322**	PN	**Pb**	03 49 32.9	**-0.6**
EDC	**Edincik**	**1.60**	**322**	*e*Pn	**Pb**	03 49 32.9	**-0.6**
GEYV	**SAKARYA_Geyve**	**1.64**	**32**	*i* P	**Pn**	03 49 33.4	**+0.6**
GEYV	**SAKARYA_Geyve**	**1.64**	**32**	P	**Pn**	03 49 33.4	**+0.6**
ISP	**Isparta**	**1.66**	**140**	PN	**Pn**	03 49 33.6	**+0.4**
ISP	**Isparta**	**1.66**	**140**	P	**Pn**	03 49 33.4	**+0.2**
ISP				S	**Sn**	03 49 52.4	**-2.2**
ISP	**Isparta**	**1.66**	**140**	*e*Pn	**Pn**	03 49 33.6	**+0.4**
ISP				S	**Sn**	03 49 52.4	**-2.2**
GULT	**Gulveren**	**1.69**	**38**	PN	**Pb**	03 49 34.9	**-0.3**
GULT	**Gulveren**	**1.69**	**38**	*e*Pn	**Pb**	03 49 34.9	**-0.3**
DKL	**Dikili**	**1.75**	**270**	PN	**Pb**	03 49 35.5	**-0.7**
DKL	**Dikili**	**1.75**	**270**	*e*Pn	**Pb**	03 49 35.5	**-0.7**
HRT	**Hereke**	**1.77**	**13**	PN	**Pn**	03 49 34.6	**0.0**
HRT	**Hereke**	**1.77**	**13**	*e*Pn	**Pn**	03 49 34.6	**0.0**
BLCB	**Balcova**	**1.80**	**247**	PN	**Pn**	03 49 35.2	**+0.2**
BLCB	**Balcova**	**1.80**	**247**	*e*Pn	**Pn**	03 49 35.2	**+0.2**
SPNC	**Sapanca-Adapaz**	**1.82**	**29**	PN	**Pb**	03 49 36.5	**-0.7**
SPNC	**Sapanca-Adapaz**	**1.82**	**29**	*e*Pn	**Pb**	03 49 36.5	**-0.7**
CAND	**Candarli**	**1.84**	**266**	PN	**Pn**	03 49 35.8	**+0.3**
SBT2	**Guzelce-Avcila**	**1.85**	**345**	PN	**Pb**	03 49 36.8	**-0.9**
SBT2	**Guzelce-Avcila**	**1.85**	**345**	*e*Pn	**Pb**	03 49 36.8	**-0.9**
SAUV	**Serdivan-Sakar**	**1.87**	**28**	PN	**Pn**	03 49 35.9	**0.0**
SAUV	**Serdivan-Sakar**	**1.87**	**28**	*e*Pn	**Pn**	03 49 35.9	**0.0**
AUSIV	**SIVRIHISAR**	**1.88**	**79**	PN	**Pn**	03 49 37.3	**+1.2**
AUSIV	**SIVRIHISAR**	**1.88**	**79**	*e*Pn	**Pn**	03 49 37.3	**+1.2**
FOCM	**Foˆşa**	**1.93**	**259**	PN	**Pn**	03 49 37.3	**+0.5**
FOCM	**Foˆşa**	**1.93**	**259**	*e*Pn	**Pn**	03 49 37.3	**+0.5**
KRBG	**Karabiga-Canak**	**1.93**	**313**	PN	**Pn**	03 49 36.9	**+0.1**
KRBG	**Karabiga-Canak**	**1.93**	**313**	*e*Pn	**Pn**	03 49 36.9	**+0.1**
AUMIH	**MIHALİCIK**	**1.96**	**66**	PN	**Pn**	03 49 38.4	**+1.2**
AUMIH	**MIHALİCIK**	**1.96**	**66**	*e*Pn	**Pn**	03 49 38.4	**+1.2**
KAVV	**Kandilli-Istan**	**1.97**	**358**	PN	**Pn**	03 49 38.4	**+1.1**
KAVV	**Kandilli-Istan**	**1.97**	**358**	*e*Pn	**Pn**	03 49 38.4	**+1.1**
ISK	**Istanbul-Kandi**	**1.97**	**358**	PN	**Pb**	03 49 38.9	**-0.9**
ISK	**Istanbul-Kandi**	**1.97**	**358**	*e*Pn	**Pb**	03 49 38.9	**-0.9**
SBT3	**Marmara-Eregli**	**2.00**	**333**	PN	**Pb**	03 49 39.1	**-1.2**
SBT3	**Marmara-Eregli**	**2.00**	**333**	*e*Pn	**Pb**	03 49 39.1	**-1.2**
YER	**Yerkesik**	**2.08**	**200**	P	**Pn**	03 49 39.1	**+0.3**
YER	**Yerkesik**	**2.08**	**200**	P	**Pn**	03 49 39.1	**+0.3**
MDUB	**Mudurnu**	**2.08**	**48**	PN	**Pn**	03 49 40.4	**+1.4**
MDUB	**Mudurnu**	**2.08**	**48**	*e*Pn	**Pn**	03 49 40.4	**+1.4**
BGKT	**Bogazkoy**	**2.10**	**352**	PN	**Pb**	03 49 40.7	**-1.4**
BGKT	**Bogazkoy**	**2.10**	**352**	*e*Pn	**Pb**	03 49 40.7	**-1.4**
KIZT	**Kizilcal**	**2.13**	**95**	PN	**Pn**	03 49 41.2	**+1.6**
KIZT	**Kizilcal**	**2.13**	**95**	*e*Pn	**Pn**	03 49 41.2	**+1.6**
KLYT	**Kilyos**	**2.16**	**358**	PN	**Pn**	03 49 39.6	**-0.2**
KLYT	**Kilyos**	**2.16**	**358**	*e*Pn	**Pn**	03 49 39.6	**-0.2**
CTKS	**Kestanelik-??a**	**2.19**	**347**	PN	**Pn**	03 49 41.7	**+1.3**
CTKS	**Kestanelik-??a**	**2.19**	**347**	*e*Pn	**Pn**	03 49 41.7	**+1.3**
RKY	**Sarkoy-Tekirda**	**2.20**	**317**	PN	**Pn**	03 49 41.5	**+0.9**
RKY	**Sarkoy-Tekirda**	**2.20**	**317**	*e*Pn	**Pn**	03 49 41.5	**+0.9**
SLVT	**Silivri**	**2.25**	**341**	PN	**Pn**	03 49 42.5	**+1.3**
SLVT	**Silivri**	**2.25**	**341**	*e*Pn	**Pn**	03 49 42.5	**+1.3**
TKR	**Tekirdag**	**2.27**	**327**	PN	**Pn**	03 49 42.5	**+1.1**
TKR	**Tekirdag**	**2.27**	**327**	*e*Pn	**Pn**	03 49 42.5	**+1.1**
SMG	**Samos**	**2.29**	**234**	P	**Pn**	03 49 41.7	**0.0**
SMG	**Samos**	**2.29**	**234**	P	**Pn**	03 49 41.7	**0.0**
CRLT	**Corlu**	**2.31**	**332**	PN	**Pn**	03 49 43.0	**+1.1**
CRLT	**Corlu**	**2.31**	**332**	*e*Pn	**Pn**	03 49 43.0	**+1.1**
EZN	**Ezine**	**2.31**	**289**	P	**Pn**	03 49 42.0	**0.0**
EZN	**Ezine**	**2.31**	**289**	P	**Pn**	03 49 42.0	**0.0**
FETY	**Fethiye**	**2.46**	**181**	P	**Pn**	03 49 44.1	**+0.1**
FETY	**Fethiye**	**2.46**	**181**	P	**Pn**	03 49 44.1	**+0.1**
BODT	**Bodrum**	**2.50**	**216**	P	**Pn**	03 49 43.8	**-0.8**
BODT				S	**Sn**	03 50 12.2	**-3.0**
BODT	**Bodrum**	**2.50**	**216**	P	**Pn**	03 49 43.8	**-0.8**
BODT				S	**Sn**	03 50 12.2	**-3.0**
CHOS	**Chios island**	**2.53**	**255**	P	**Pn**	03 49 45.1	**0.0**

SMAA	Simav-Kutahya	0.13	268	PG		Pg	03 52 00.1	0.0
SMAA	Simav-Kutahya	0.13	268	*e*Pg		Pg	03 52 00.1	0.0
GEDZ	Gediz	0.21	107	PG		Pg	03 52 01.6	+0.3
GEDZ	Gediz	0.21	107	*e*Pg		Pg	03 52 01.6	+0.3
DEMI	Demirci	0.34	260	*i* P		Pg	03 52 03.8	+0.1
DEMI	Demirci	0.34	260	P		Pg	03 52 03.8	+0.1
TVSB	Tavsanli	0.42	35	PG		Pg	03 52 04.1	-1.0
TVSB	Tavsanli	0.42	35	*e*Pg		Pg	03 52 04.1	-1.0
DST	Dursunbey	0.65	320	PG		Pg	03 52 08.7	-0.6
DST	Dursunbey	0.65	320	*e*Pg		Pg	03 52 08.7	-0.6
KULA	Kula-Manisa	0.70	213	PG		Pg	03 52 10.1	-0.3
KULA	Kula-Manisa	0.70	213	*e*Pg		Pg	03 52 10.1	-0.3
DURS	Dursunbey	0.72	314	*i* P		Pg	03 52 10.8	0.0
DURS	Dursunbey	0.72	314	P		Pg	03 52 10.8	0.0
KUTH	Kutahya	0.73	66	PG		Pg	03 52 10.7	-0.3
KUTH	Kutahya	0.73	66	*e*Pg		Pg	03 52 10.7	-0.3
MANT	Manisa	0.77	217	*i* P		Pg	03 52 11.3	-0.3
MANT	Manisa	0.77	217	P		Pg	03 52 11.3	-0.3
KHAL	Karahalli	0.78	160	*i* P		Pg	03 52 10.9	-0.9
KHAL	Karahalli	0.78	160	P		Pg	03 52 10.9	-0.9
KHL	Karahalli	0.83	159	PG		Pg	03 52 12.8	0.0
KHL	Karahalli	0.83	159	*e*Pg		Pg	03 52 12.8	0.0
ORLT	Orhaneli	0.96	348	PG		Pb	03 52 15.9	+0.5
ORLT	Orhaneli	0.96	348	*e*Pg		Pb	03 52 15.9	+0.5
AUBOZ	BOZOYUK	1.05	40	PG		Pb	03 52 17.2	+0.2
AUBOZ	BOZOYUK	1.05	40	*i* P		Pg	03 52 16.7	-0.3
AUBOZ	BOZOYUK	1.05	40	P		Pg	03 52 16.7	-0.3
AUBOZ	BOZOYUK	1.05	40	*e*Pg		Pb	03 52 17.2	+0.2
AKHS	Akhisar	1.07	258	*i* P		Pg	03 52 15.4	-1.9
AKHS	Akhisar	1.07	258	P		Pg	03 52 15.4	-1.9
AUKUT	KUTAHYA	1.08	38	*i* P		Pg	03 52 10.7	-6.9
BALB	Balikesir	1.12	299	PN		Pn	03 52 19.4	+1.1
BALB	Balikesir	1.12	299	*e*Pn		Pn	03 52 19.4	+1.1
STEP	BALIKESIR_Sava	1.15	284	*i* P		Pn	03 52 19.5	+0.8
STEP	BALIKESIR_Sava	1.15	284	P		Pn	03 52 19.5	+0.8
KZIL	AFYON_Kizioren	1.15	137	*i* P		Pn	03 52 19.2	+0.4
KZIL	AFYON_Kizioren	1.15	137	P		Pn	03 52 19.2	+0.4
CAVI	Cavuskoy	1.22	26	PN		Pn	03 52 20.2	+0.5
CAVI	Cavuskoy	1.22	26	*e*Pn		Pn	03 52 20.2	+0.5
IZI	Iznik	1.25	11	PN		Pn	03 52 21.7	+1.5
IZI	Iznik	1.25	11	*e*Pn		Pn	03 52 21.7	+1.5
BORA	Eskisehir	1.27	52	PN		Pg	03 52 20.8	-0.4
BORA	Eskisehir	1.27	52	*i* P		Pg	03 52 20.7	-0.4
BORA	Eskisehir	1.27	52	P		Pg	03 52 20.7	-0.4
MDNY	Mudanya-Bursa	1.28	351	PN		Pg	03 52 21.2	-0.1
MDNY	Mudanya-Bursa	1.28	351	*e*Pn		Pg	03 52 21.2	-0.1
KCTX	Karacabey (Bur	1.31	332	PN		Pg	03 52 21.7	-0.3
KCTX	Karacabey (Bur	1.31	332	*e*Pn		Pg	03 52 21.7	-0.3
BALY	Balya	1.35	299	*i* P		Pn	03 52 21.6	+0.2
BALY	Balya	1.35	299	P		Pn	03 52 21.6	+0.2
DENT	Denizli	1.35	184	PN		Pg	03 52 22.8	+0.1
DENT	Denizli	1.35	184	*e*Pn		Pg	03 52 22.8	+0.1
ESKT	Eskisehir	1.38	72	PN		Pg	03 52 23.7	+0.4
ESKT	Eskisehir	1.38	72	*i* P		Pn	03 52 21.6	-0.4
ESKT	Eskisehir	1.38	72	*e*Pn		Pg	03 52 23.7	+0.4
SEYT	Eskypehyr	1.38	72	P		Pn	03 52 21.6	-0.4
ADVT	Abdulvahap	1.40	19	PN		Pg	03 52 23.3	-0.4
ADVT	Abdulvahap	1.40	19	*e*Pn		Pg	03 52 23.3	-0.4
BOLV	Bolvadin	1.46	105	*i* P		Pb	03 52 24.1	+0.3
BOLV	Bolvadin	1.46	105	P		Pb	03 52 24.1	+0.3
YLV	Yalova	1.47	7	PN		Pb	03 52 23.9	-0.2
YLV	Yalova	1.47	7	*e*Pn		Pb	03 52 23.9	-0.2
GONE	Gonen-Balikesi	1.47	310	PN		Pb	03 52 24.2	+0.1
GONE	Gonen-Balikesi	1.47	310	*e*Pn		Pb	03 52 24.2	+0.1
ARMT	Armutlu	1.48	351	PN		Pn	03 52 23.6	+0.4
ARMT	Armutlu	1.48	351	*e*Pn		Pn	03 52 23.6	+0.4
SBT5	Esenkoy-Cinarc	1.54	352	PN		Pn	03 52 24.7	+0.7
SBT5	Esenkoy-Cinarc	1.54	352	*e*Pn		Pn	03 52 24.7	+0.7
EDC	Edincik	1.59	322	PN		Pn	03 52 25.5	+0.7
EDC	Edincik	1.59	322	*e*Pn		Pn	03 52 25.5	+0.7
GEYV	SAKARYA_Geyve	1.64	32	*i* P		Pg	03 52 27.5	-0.6
GEYV	SAKARYA_Geyve	1.64	32	P		Pg	03 52 27.5	-0.6
GULT	Gulveren	1.69	38	PN		Pn	03 52 27.3	+1.1
GULT	Gulveren	1.69	38	*e*Pn		Pn	03 52 27.3	+1.1
BUY	Buyukada	1.75	359	PN		Pn	03 52 27.3	+0.4
BUY	Buyukada	1.75	359	*e*Pn		Pn	03 52 27.3	+0.4
HRT	Hereke	1.76	13	PN		Pn	03 52 27.8	+0.6
HRT	Hereke	1.76	13	*e*Pn		Pn	03 52 27.8	+0.6
SPNC	Sapanca-Adapaz	1.81	29	PN		Pb	03 52 29.8	-0.1
SPNC	Sapanca-Adapaz	1.81	29	*e*Pn		Pb	03 52 29.8	-0.1
SAUV	Serdivan-Sakar	1.87	29	PN		Pn	03 52 29.2	+0.6
SAUV	Serdivan-Sakar	1.87	29	*e*Pn		Pn	03 52 29.2	+0.6
AUSIV	SIVRIHISAR	1.88	79	PN		Pb	03 52 30.6	-0.6
AUSIV	SIVRIHISAR	1.88	79	*e*Pn		Pb	03 52 30.6	-0.6
AUMIH	MIHALICIK	1.96	66	PN		Pn	03 52 31.4	+1.4
AUMIH	MIHALICIK	1.96	66	*e*Pn		Pn	03 52 31.4	+1.4
KAVV	Kandilli-Istan	1.96	358	PN		Pn	03 52 30.9	+1.1
KAVV	Kandilli-Istan	1.96	358	*e*Pn		Pn	03 52 30.9	+1.1
ISK	Istanbul-Kandi	1.96	358	PN		Pn	03 52 30.0	+0.2
ISK	Istanbul-Kandi	1.96	358	*e*Pn		Pn	03 52 30.0	+0.2
MDUB	Mudurnu	2.08	48	PN		Pb	03 52 33.7	-0.9
MDUB	Mudurnu	2.08	48	*e*Pn		Pb	03 52 33.7	-0.9

ISCJB ***11*** *03:56:25.7±0.7, 7.°52S±0.°05×128.°92E±0.°08, h131km, mb3.4/2, Error ellipse: s-maj=11.1km s-min=7.1km az=16.6.*
IDC ***11*** *03:56:27.6±2.1, 7.°60S×128.°93E, h143km±23km, mb3.3/2, mb1 3.4/6, mb1mx3.0/60, mbtmp3.8/6, Error ellipse: s-maj=26.0km s-min=20.4km az=131.0*

ISC 11 03:56:26.4±0.9, 7.°675±0.°06×129.°07E±0.°10, h131km, n6, σ2°48/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.91**	**244**	P	**Pn**	**03 57 52.3**	**+0.6**
	6.3nm,0.3s,baz=112,slow=19,SNR=4.2						
BATI				S	**Sn**	**03 58 57.2**	**-1.1**
	10nm,0.3s,baz=192,slow=22,SNR=9.1						
SIJI	**Sorong**	**7.10**	**18**	P	**Pn**	**03 58 09.2**	**+1.3**
	1.9nm,0.3s,baz=149,slow=22,SNR=7.9						
SIJI				S	**Sn**	**03 59 25.4**	**-1.8**
	0.8nm,0.3s,baz=252,slow=19,SNR=2.9						
WRA	**Warramunga Arr**	**13.22**	**158**	P	**Pn**	**03 59 30.3**	**+1.1**
	0.5nm,0.3s,baz=340,slow=13,SNR=42						
WRA				S	**Sn**	**04 01 50.6**	**-4.6**
	1.1nm,0.3s,baz=330,slow=23,SNR=11						
ASAR	**Alice Springs**	**16.56**	**164**	P	**P**	**04 00 14.5**	**+3.2**
	0.2nm,0.3s,baz=350,slow=14,SNR=9.3						
ASAR				S	**Sn**	**04 03 15.4**	**-0.3**
	0.3nm,0.3s,baz=322,slow=14,SNR=7.0						
MKAR	**Makanchi Array**	**68.29**	**327**	P	**P**	**04 07 12.6**	**-0.6**
	0.5nm,0.4s,baz=121,slow=7.4,SNR=9.0						
KURBB	**Kurchatov Arra**	**72.61**	**329**	P	**P**	**04 07 37.5**	**-1.8**
	0.2nm,0.3s,baz=129,slow=4.9,SNR=4.0						

TAP ***11*** *04:18:11.6, 23.°15N×120.°75E, h7km, ML3.5, C*
JMA ***11*** *04:18:11.2±0.2, 23.°18N×120.°73E, h0km*
ISCJB ***11*** *04:18:12.9±0.2, 23.°14N±0.°01×120.°76E±0.°01, h6km±2km, Error ellipse: s-maj=1.9km s-min=1.8km az=156.5*

ISC 11 04:18:12.7±0.8, 23.°16N±0.°01×120.°74E±0.°02, h9km±6km, n69, σ0°72/124, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WTP	**Ta-pu**	**0.14**	**306**	*i* P	**Pg**	**04 18 15.5**	**-0.4**
	baz=309						
WTP				*i* S	**Sg**	**04 18 18.4**	**+0.3**
	baz=309						
SGST	**Jiashian**	**0.16**	**241**	*i* P	**Pg**	**04 18 16.0**	**-0.3**
	baz=243						
SGST				*e*S	**Sg**	**04 18 19.0**	**+0.4**
	baz=243						
TPUB	**Ta-pu**	**0.17**	**324**	P	**Pg**	**04 18 16.1**	**-0.2**
	baz=325						
TPUB				S	**Sg**	**04 18 19.2**	**+0.3**
	baz=325						
SLGT	**Liugui**	**0.19**	**207**	P	**Pg**	**04 18 16.2**	**-0.4**
	baz=203						
SLGT				*e*S	**Sg**	**04 18 19.5**	**+0.2**
	baz=203						
CHN1	**Nanshi**	**0.20**	**277**	P	**Pg**	**04 18 16.9**	**+0.1**
	baz=280						
CHN1				*e*S	**Sg**	**04 18 20.6**	**+1.0**
	baz=280						
TWK	**Hsinying**	**0.25**	**294**	*i* P	**Pg**	**04 18 18.0**	**+0.2**
	baz=297						
TWK				S	**Sb**	**04 18 22.9**	**-1.1**
	baz=297						
ELDTW	**Lidau**	**0.26**	**84**	*i* P	**Pg**	**04 18 17.5**	**-0.4**
	baz=83						
ELDTW				*i* S	**Sg**	**04 18 21.4**	**-0.1**
	baz=83						
ALS	**Alishan**	**0.35**	**10**	*e*P	**Pg**	**04 18 19.5**	**-0.3**
	baz=10.0						
SSD	**Sandimen**	**0.43**	**193**	*i* P	**Pg**	**04 18 20.6**	**-0.4**
	baz=186						
SSD				S	**Sg**	**04 18 26.4**	**-0.2**
	baz=186						
CHY	**Chiayi**	**0.44**	**319**	P	**Pb**	**04 18 22.3**	**-0.3**
	baz=322						
CHY				S	**Sb**	**04 18 29.7**	**+0.3**
	baz=322						
TWG	**Pinlang**	**0.46**	**138**	*i* P	**Pg**	**04 18 21.6**	**-0.1**
	baz=137						
TWG				*i* S	**Sg**	**04 18 28.2**	**+0.5**
	baz=137						
TWGBT	**Beinan**	**0.47**	**137**	P	**Pg**	**04 18 21.4**	**-0.4**
	baz=137						
TWGBT				S	**Sg**	**04 18 28.0**	**+0.1**
	baz=137						
TAI1	**Yung-k'ang**	**0.48**	**256**	*e*P	**Pb**	**04 18 22.8**	**-0.6**
	baz=270						
SGLT	**Jiouru**	**0.49**	**208**	*e*P	**Pb**	**04 18 23.9**	**+0.3**
	baz=197						
SGLT				*e*S	**Sb**	**04 18 30.1**	**-0.7**
	baz=197						
SCLT	**Jiali**	**0.50**	**272**	*e*P	**Pb**	**04 18 23.6**	**-0.1**
	baz=272						
SCLT				*e*S	**Sb**	**04 18 31.9**	**+0.8**
	baz=272						
WLGB	**Puzi**	**0.51**	**308**	*e*P	**Pb**	**04 18 24.2**	**+0.3**
	baz=310						
WLGB				*e*S	**Sb**	**04 18 32.2**	**+0.8**
	baz=310						
CHN8	**Yiju**	**0.52**	**291**	*e*P	**Pb**	**04 18 23.4**	**-0.6**
	baz=293						
CHN8				*e*S	**Sb**	**04 18 32.5**	**+0.9**
	baz=293						
WGK	**Gukeng**	**0.55**	**343**	*e*P	**Pb**	**04 18 24.2**	**-0.3**
	baz=345						
WGK				S	**Sb**	**04 18 33.6**	**+1.2**
	baz=345						
TWF1	**Yuli**	**0.55**	**70**	*i* P	**Pg**	**04 18 23.0**	**-0.3**
	baz=77						
TWF1				*e*S	**Sg**	**04 18 30.0**	**-0.5**
	baz=77						
TTN	**Taitung**	**0.55**	**137**	P	**Pb**	**04 18 24.2**	**-0.4**
	baz=137						
TTN				S	**Sb**	**04 18 32.8**	**+0.2**
	baz=137						
WDLH	**Douliu**	**0.56**	**341**	*e*P	**Pb**	**04 18 24.8**	**+0.1**
	baz=342						
WDLH				*e*S	**Sb**	**04 18 33.9**	**+1.2**
	baz=342						
MASBT	**Mashibuluo**	**0.56**	**190**	P	**Pg**	**04 18 23.0**	**-0.5**
	baz=186						
YULB	**Yu-li**	**0.56**	**66**	P	**Pg**	**04 18 22.9**	**-0.7**
	baz=64						
YULB				S	**Sg**	**04 18 30.6**	**-0.4**
	baz=64						
CHKT	**Chengkung**	**0.58**	**96**	*i* P	**Pb**	**04 18 24.5**	**-0.6**
	baz=95						
CHKT				S	**Sb**	**04 18 33.2**	**-0.2**
	baz=95						
ECL	**Taimali**	**0.60**	**161**	P	**Pg**	**04 18 23.9**	**-0.4**
	baz=152						
ECL				S	**Sg**	**04 18 31.4**	**-0.7**
	baz=152						
EHY	**Hungye**	**0.64**	**57**	*e*P	**Pg**	**04 18 24.7**	**-0.4**
	baz=62						
EHY				*e*S	**Sg**	**04 18 32.5**	**-0.9**
	baz=62						
SSLB	**Suanglung**	**0.65**	**18**	P	**Pg**	**04 18 24.6**	**-0.8**
	baz=24						
SSLB				S	**Sb**	**04 18 36.5**	**+1.0**
	baz=24						
WJS	**Zhushan**	**0.66**	**359**	P	**Pb**	**04 18 26.0**	**-0.4**
	baz=345						
WJS				*e*S	**Sn**	**04 18 37.5**	**-1.3**
	baz=345						
WSF	**Szhu**	**0.67**	**315**	P	**Pb**	**04 18 26.3**	**-0.3**
	baz=317						
WSF				S	**Sb**	**04 18 37.0**	**+1.0**
	baz=317						
VWDT	**VWDT**	**0.69**	**32**	P	**Pg**	**04 18 25.4**	**-0.8**
	baz=40						
HGSD	**Ruisui**	**0.71**	**62**	P	**Pb**	**04 18 26.8**	**-0.5**
	baz=66						
HGSD				S	**Sb**	**04 18 37.7**	**+0.5**
	baz=66						
SMLT	**Sun Moon Lake**	**0.73**	**12**	P	**Pg**	**04 18 26.6**	**-0.3**
	baz=21						
SMLT				S	**Sn**	**04 18 39.6**	**-1.2**
	baz=21						
EAST	**Anshuo**	**0.78**	**173**	P	**Pg**	**04 18 27.3**	**-0.5**
	baz=166						
EAST				*e*S	**Sb**	**04 18 38.8**	**-0.5**
	baz=166						
SCZT	**Fangliau**	**0.79**	**188**	*e*P	**Pg**	**04 18 27.4**	**-0.6**
	baz=188						
SCZT				*e*S	**Sb**	**04 18 39.7**	**+0.1**
	baz=188						
RLNB	**Erlin**	**0.80**	**334**	*e*S	**Sb**	**04 18 40.1**	**+0.3**
	baz=336						
EGFH	**Guangfu**	**0.81**	**51**	*e*P	**Pg**	**04 18 28.2**	**-0.1**
	baz=60						
EGFH				S	**Sg**	**04 18 38.8**	**-0.1**
	baz=60						
TWH	**Lutao**	**0.82**	**123**	P	**Pg**	**04 18 28.3**	**-0.2**
	baz=125						
TWH				S	**Sn**	**04 18 41.3**	**-1.3**
	baz=125						
WLCH	**Liuqiu**	**0.87**	**202**	*e*P	**Pn**	**04 18 32.2**	**+1.0**
	baz=199						
ESL	**Shilin**	**0.91**	**44**	*e*P	**Pg**	**04 18 29.7**	**-0.6**
	baz=44						
ESL				S	**Sb**	**04 18 43.1**	**+0.1**
	baz=44						
CHGB	**Renai**	**0.98**	**24**	*e*P	**Pg**	**04 18 30.3**	**-1.3**
	baz=31						
CHGB				*e*S	**Sn**	**04 18 46.4**	**-0.6**
	baz=31						
TCU	**Taichung**	**0.98**	**357**	*e*P	**Pn**	**04 18 32.1**	**-0.6**
	baz=359						
TCU				*e*S	**Sn**	**04 18 46.4**	**-0.3**
	baz=359						
WDGT	**Dungji**	**1.00**	**276**	*e*P	**Pg**	**04 18 31.2**	**-0.7**
	baz=276						
WDGT				*e*S	**Sb**	**04 18 46.0**	**+0.6**
	baz=276						
ENLB	**Shoufeng**	**1.08**	**47**	*e*P	**Pn**	**04 18 33.7**	**-0.4**
	baz=46						
ENLB				*e*S	**Sn**	**04 18 49.1**	**-0.1**
	baz=46						
PHUB	**P'eng-hu**	**1.13**	**288**	*e*P	**Pb**	**04 18 33.5**	**-0.9**
	baz=289						
PHUB				*e*S	**Sn**	**04 18 50.0**	**-0.3**
	baz=289						
TDCB	**Techi**	**1.15**	**19**	*e*P	**Pb**	**04 18 34.0**	**-0.9**
	baz=22						
TWD	**Chiawan**	**1.21**	**41**	*e*P	**Pb**	**04 18 34.9**	**-0.8**
	baz=49						
TWD				*e*S	**Sn**	**04 18 52.2**	**-0.1**
	baz=49						
VCHM	**Qimei**	**1.21**	**272**	*e*P	**Pn**	**04 18 34.3**	**-1.4**
	baz=273						
VCHM				*e*S	**Sn**	**04 18 52.0**	**-0.2**
	baz=273						
TWK1	**Hengchun**	**1.22**	**177**	*e*P	**Pg**	**04 18 35.9**	**-0.1**
	baz=179						
TWK1				*e*S	**Sn**	**04 18 52.0**	**-0.5**
	baz=179						
TWKBT	**Hengchun**	**1.22**	**177**	*e*P	**Pg**	**04 18 36.9**	**+0.7**
	baz=197						
TSEB	**Hengchuen, Pin**	**1.27**	**173**	*e*P	**Pg**	**04 18 37.6**	**+0.5**
	baz=178						
NACB	**Ninganchiao**	**1.28**	**38**	*e*P	**Pn**	**04 18 36.3**	**-0.4**
	baz=46						
NACB				*e*S	**Sg**	**04 18 54.6**	**+0.8**
	baz=46						
NNSB	**Datong**	**1.39**	**25**	*e*P	**Pn**	**04 18 37.7**	**-0.7**
	baz=17						
NNSB				*e*S	**Sg**	**04 18 58.5**	**+1.0**
	baz=17						
NNSH	**Datong**	**1.39**	**25**	*e*P	**Pn**	**04 18 37.2**	**-1.3**
	baz=16						
NNSH				*e*S	**Sg**	**04 18 58.7**	**+1.2**
	baz=16						
NNS	**Nan Shan**	**1.40**	**24**	*e*P	**Pn**	**04 18 38.1**	**-0.5**
	baz=17						
NNS				*e*S	**Sg**	**04 18 58.7**	**+0.9**
	baz=17						
NSTT	**Nanjuang**	**1.48**	**9**	*e*P	**Pb**	**04 18 40.0**	**-0.4**
	baz=352						
NSTT				*e*S	**Sg**	**04 19 01.2**	**+0.8**
	baz=352						
LIOB	**Emei**	**1.50**	**10**	*e*P	**Pb**	**04 18 40.5**	**-0.2**
	baz=1.0						
LIOB				*e*S	**Sg**	**04 19 01.5**	**+0.6**
	baz=1.0						
ENA	**Nanau**	**1.56**	**36**	*e*P	**Pb**	**04 18 41.1**	**-0.7**
	baz=48						
ENA				*e*S	**Sg**	**04 19 02.9**	**0.0**
	baz=48						
NANB	**Nanao**	**1.56**	**36**	*e*P	**Pn**	**04 18 40.9**	**+0.2**
	baz=48						
NANB				*e*S	**Sg**	**04 19 02.7**	**-0.3**
	baz=48						
NSK	**Sanguang**	**1.61**	**21**	*e*P	**Pb**	**04 18 42.1**	**-0.5**
	baz=22						
NSK				*e*S	**Sg**	**04 19 03.8**	**-0.7**
	baz=22						
YHNB	**Yeheng**	**1.61**	**21**	*e*P	**Pn**	**04 18 41.7**	**+0.3**
	baz=22						
YHNB				*e*S	**Sg**	**04 19 04.0**	**-0.6**
	baz=22						
TWC	**Suao**	**1.76**	**35**	P	**Pb**	**04 18 45.0**	**-0.3**
	baz=46						
TIPB	**Shuangxi**	**2.06**	**29**	*e*P	**Pn**	**04 18 48.2**	**+0.6**
	baz=20						
YM12	**YM12**	**2.15**	**21**	*e*P	**Pb**	**04 18 51.8**	**-0.1**
	baz=23						
YM07	**YM07**	**2.16**	**22**	*e*P	**Pb**	**04 18 51.4**	**-0.6**
	baz=10.0						
YOJ	**Yonaguni jima**	**2.45**	**58**	P	**Pn**	**04 18 54.5**	**+1.6**
YOJ				*e*S	**Sn**	**04 19 24.5**	**+1.5**
IRIF	**Iriomote-Funau**	**2.98**	**66**	P	**Pn**	**04 19 02.1**	**+1.9**
IRIF				*e*S	**Sn**	**04 19 38.1**	**+2.1**
JIJ	**Ishigaki jima**	**3.34**	**68**	P	**Pn**	**04 19 05.7**	**+0.6**
JIJ				*e*S	**Sn**	**04 19 45.9**	**+0.9**
JISG	**Ishigakijimahi**	**3.56**	**66**	P	**Pn**	**04 19 08.2**	**0.0**
JISG				S	**Sn**	**04 19 51.8**	**+1.3**
JTJ	**Tarama**	**3.92**	**67**	*e*S	**Sn**	**04 20 00.5**	**+1.4**

TAP 11 04:18:19.4, 23.°09N×120.°72E, h12km, ML3.4, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLGT	**Liugui**	**0.12**	**217**	P	Pg	04 18 22.8	+0.3
	baz=217						
SLGT				S	Sg	04 18 25.8	+1.0
	baz=217						
SGST	**Jiashian**	**0.13**	**268**	*e*P	Pb	04 18 23.3	-0.5
	baz=268						
SGST				*e*S	Sg	04 18 26.0	+1.0
	baz=268						
WTP	**Ta-pu**	**0.19**	**328**	*e*P	Pb	04 18 24.6	-0.4
	baz=331						
WTP				S	Sg	04 18 27.9	+1.3
	baz=331						
CHN1	**Nanshi**	**0.20**	**299**	*e*P	Pb	04 18 24.9	-0.2
	baz=300						
CHN1				*e*S	Sg	04 18 29.2	+2.2
	baz=300						
TPUB	**Ta-pu**	**0.23**	**338**	*e*P	Pb	04 18 25.1	-0.5
	baz=339						
TPUB				*e*S	Sg	04 18 28.8	+1.1
	baz=339						
TWK	**Hsinying**	**0.28**	**310**	*e*S	Sb	04 18 31.4	+0.2
	baz=312						
ELDTW	**Lidau**	**0.29**	**69**	*e*P	Pg	04 18 25.9	+0.5
	baz=69						
ELDTW				*e*S	Sb	04 18 30.9	-0.6
	baz=69						
SSD	**Sandimen**	**0.35**	**194**	*e*P	Pb	04 18 27.8	+0.2
	baz=188						
SSD				*e*S	Sb	04 18 33.9	+0.8
	baz=188						
ALS	**Alishan**	**0.43**	**10**	*e*P	Pb	04 18 28.9	-0.2
	baz=12						
TAI1	**Yung-k'ang**	**0.46**	**264**	*e*P	Pb	04 18 30.1	+0.6
	baz=277						
TAI1				*e*S	Sb	04 18 38.2	+2.0
	baz=277						
TAI1	**Yung-k'ang**	**0.46**	**264**	*e*S	Pb	04 18 30.2	+0.8
	baz=270						
MASBT	**Mashibuluo**	**0.48**	**190**	*e*P	Pb	04 18 30.4	+0.5
	baz=189						
MASBT				*e*S	Sb	04 18 38.5	+1.6
	baz=189						
MASBT	**Mashibuluo**	**0.48**	**190**	S	Pb	04 18 30.4	+0.5
	baz=186						
CHY	**Chiayi**	**0.49**	**326**	*e*P	Pn	04 18 31.4	-1.0
	baz=329						
CHY				*e*S	Sb	04 18 39.3	+2.0
	baz=329						

MAN 11 04:21:02.9, 15.°50N×119.°91E, h24km, mb3.9, ML2.6, MS2.1, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCZP	**Santa Cruz**	**0.27**	**0**	*e*P	Pn	04 21 11.8	+0.3
SCZP				*e*S	Sn	04 21 18.3	+1.5
BOLP	**Bolinao**	**0.87**	**0**	*e*P	Pb	04 21 18.0	-1.4
BOLP				*e*S	Sb	04 21 30.5	-0.2
PCPH	**Palayan**	**1.15**	**87⇑**	*e*P	Pn	04 21 23.4	-0.1
PCPH				*e*S	Sn	04 21 38.0	-0.4
LUBP	**Lubang**	**1.79**	**169**	*e*P	Pb	04 21 34.9	-0.2
LUBP				*e*S	Sn	04 21 53.3	-1.0
ABRA	**Dolores**	**2.27**	**20**	*e*P	Pn	04 21 40.2	+1.3
ABRA				*e*S	Sn	04 22 07.4	+1.2
APYP	**Conner**	**2.67**	**28**	*e*P	Pn	04 21 45.0	+0.6
APYP				*e*S	Sn	04 22 18.5	+2.4

IDC ***11*** *04:35:53.0±0.6, 27.°29N×88.°11E, h0km, mb4.0/25, mb1 4.2/26, mb1mx4.0/69, mbtmp4.0/26, ML3.7/1, Error ellipse: s-maj=22.2km s-min=14.2km az=52.0*
ISCJB ***11*** *04:35:54.9±0.5, 27.°36N±0.°03×88.°19E±0.°02, h24km±4km, mb4.4/51, Error ellipse: s-maj=

TURI				*e*S	**Sn**	**04 37 09.5**	**+2.3**
TURI				IAML		04 37 14.6	
	comp=N,839nm,0.2s						
TURI				IAML		04 37 14.8	
	comp=E,2μm,0.4s						
KKN	**Kakani**	**2.65**	**282**	*e*Pn	**Pn**	**04 36 39.6**	**+2.1**
KKN				*e*Sn	**Sn**	**04 37 08.7**	**-0.8**
	comp=E,180nm,0.2s						
DMN	**Daman**	**2.77**	**278**	*e*Pn	**Pn**	**04 36 41.2**	**+1.9**
DMN				*e*Sg	**Sb**	**04 37 20.5**	**+2.1**
	comp=E,705nm,0.4s						
GKN	**Gorkha**	**3.25**	**284**	*e*Pn	**Pn**	**04 36 47.9**	**+2.2**
GKN				*e*Sn	**Sn**	**04 37 23.1**	**-1.1**
	comp=E,294nm,0.2s						
LSA	**Lhasa**	**3.55**	**46**	*e*Pn	**Pn**	**04 36 53.8**	**+3.6**
LSA				*e*Sn	**Sn**	**04 37 32.0**	**-0.1**
SHL	**Shillong**	**3.71**	**116**	*e*P	**Pn**	**04 36 53.0**	**+0.9**
SHL				*e*S	**Sn**	**04 37 38.5**	**+2.8**
SHL				IAML		04 37 54.9	
	comp=E,185nm,0.4s						
SHL				IAML		04 37 55.2	
	comp=N,356nm,0.5s						
SHL	**Shillong**	**3.71**	**116**	*e*Pn	**Pn**	**04 36 54.5**	**+2.3**
SHL				*e*Sn	**Sn**	**04 37 36.9**	**+1.1**
DANN	**Dangsing**	**4.08**	**286**	*e*Pn	**Pn**	**04 36 58.0**	**+0.7**
KOLN	**Koldanda**	**4.12**	**278**	*e*Pn	**Pn**	**04 36 59.0**	**+1.3**
PYUN	**Piuthan**	**4.69**	**281**	*e*Pn	**Pn**	**04 37 06.2**	**+0.5**
PYUN				*e*Sn	**Sn**	**04 37 56.3**	**-3.7**
	comp=N,162nm,0.4s						
ZIRO	**ZIRO**	**5.03**	**86**	*ex*	**Pg**	**04 37 27.6**	**-3.8**
ZIRO				*e*S	**Sn**	**04 38 08.0**	**-0.3**
AZL	**Aizawl**	**5.37**	**130**	*e*P	**Pn**	**04 37 17.1**	**+2.3**
AZL				*e*S	**Sn**	**04 38 17.7**	**+1.3**
AZL				IAML		04 38 23.3	
	comp=E,84nm,0.4s						
AZL				IAML		04 38 23.5	
	comp=N,82nm,0.2s						
MOKO	**MOKOCHONG**	**5.72**	**98**	*e*S	**Sn**	**04 38 23.0**	**-2.3**
MOKO				IAML		04 39 02.6	
	comp=E,102nm,0.2s						
MOKO				IAML		04 39 03.2	
	comp=N,155nm,0.3s						
SAIH	**SAIHA**	**6.44**	**137**	*e*P	**Pn**	**04 37 32.5**	**+2.9**
SAIH				*e*S	**Sn**	**04 38 42.1**	**-0.9**
SAIH				IAML		04 38 50.6	
	comp=N,85nm,0.4s						
SAIH				IAML		04 38 50.9	
	comp=E,117nm,0.3s						
NGP	**Nagpur**	**10.33**	**236**	*e*P	**Pn**	**04 38 24.1**	**+1.2**
NGP				*e*S	**Sn**	**04 40 12.8**	**-5.8**
HYB	**Hyderabad**	**13.25**	**224**	*i* P	**Pn**	**04 39 05.0**	**+2.1**
HYB				*e*S	**Sn**	**04 41 25.0**	**-5.1**
NIL	**Nilore**	**14.37**	**300**	*e*Pn	**P**	**04 39 26.0**	**+1.0**
AAK	**Ala-Archa**	**18.97**	**327**	P	**P**	**04 40 14.1**	**-2.0**
	comp=E,0.3nm,0.3s,baz=156,slow=20,SNR=2.2						
AAK	**Ala-Archa**	**18.97**	**327**	*e*P	**Pn**	**04 40 18.3**	**+1.6**
MK01	**Makanchi Array**	**20.02**	**348**	*e*P	**P**	**04 40 28.0**	**+0.7**
MK31	**Makanchi Array**	**20.04**	**348**	*e*P	**P**	**04 40 28.1**	**+0.5**
MK32	**Makanchi Array**	**20.04**	**348**	*e*P	**P**	**04 40 27.5**	**-0.1**
MKAR	**Makanchi Array**	**20.04**	**348**	P	**P**	**04 40 27.5**	**-0.1**
	comp=E,4.2nm,0.4s,baz=171,slow=9.6,SNR=61						
MKAR	**Makanchi Array**	**20.04**	**348**	*e*P	**P**	**04 40 28.1**	**+0.5**
	comp=E,63nm,0.3s						
MAKZ	**Makanchi**	**20.11**	**347**	*e*P	**P**	**04 40 29.2**	**+0.8**
	comp=E,4.7nm,0.4s						
KK31	**Karatay Array**	**21.35**	**322**	*e*P	**P**	**04 40 42.1**	**+0.3**
KKAR	**Karatay Array**	**21.35**	**322**	*e*P	**P**	**04 40 42.1**	**+0.3**
KURBB	**Kurchatov Arra**	**24.46**	**345**	P	**P**	**04 41 13.4**	**0.0**
	comp=E,3.0nm,0.6s,baz=161,slow=9.4,SNR=18						
KURK	**Kurchatov**	**24.53**	**345**	*e*P	**P**	**04 41 14.1**	**+0.2**
SONA0	**Songino Array**	**24.98**	**30**	*e*P	**P**	**04 41 19.2**	**+1.0**
SONM	**Songino Array**	**24.98**	**30**	P	**P**	**04 41 19.2**	**+1.0**
	comp=E,2.3nm,0.7s,baz=218,slow=9.2,SNR=8.0						
SONA1	**Songino Array**	**24.99**	**30**	*e*P	**P**	**04 41 19.5**	**+1.1**
ZAA0	**Zalesovo Array**	**26.77**	**356**	*e*P	**P**	**04 41 34.2**	**-0.1**
	comp=E,4.2nm,1.0s						
ZALV	**Zalesovo Beam**	**26.77**	**356**	P	**P**	**04 41 34.3**	**+0.1**
	comp=E,1.6nm,0.4s,baz=179,slow=9.4,SNR=14						
ZALV	**Zalesovo Beam**	**26.77**	**356**	*e*P	**P**	**04 41 34.1**	**-0.1**
ZAA1	**Zalesovo Array**	**26.77**	**356**	*e*P	**P**	**04 41 34.3**	**0.0**
BVAR	**Borovoye Array**	**28.95**	**338**	P	**P**	**04 41 53.4**	**-0.3**
	comp=E,0.3nm,0.3s,baz=150,slow=10,SNR=3.5						
ABKAR	**Akbulak array**	**30.91**	**323**	*e*P	**P**	**04 42 11.7**	**+0.5**
AKTO	**Aktyubinsk**	**32.60**	**323**	P	**P**	**04 42 26.1**	**0.0**
	comp=E,0.6nm,0.3s,baz=115,slow=17,SNR=3.3						
BR101	**Keskin Array S**	**46.52**	**300**	*e*P	**P**	**04 44 22.4**	**+0.1**
BR131	**Keskin Array S**	**46.52**	**300**	*e*P	**P**	**04 44 21.4**	**-0.8**
BRTR	**Keskin Array B**	**46.52**	**300**	P	**P**	**04 44 22.4**	**+0.1**
	comp=E,2.1nm,0.8s,baz=110,slow=7.2,SNR=10.0						
AKASG	**Malin Array Be**	**49.95**	**315**	P	**P**	**04 44 49.1**	**+0.8**
	comp=E,0.6nm,0.3s,baz=80,slow=6.8,SNR=5.8						
AKBB	**Malin Array Si**	**49.95**	**315**	*e*P	**P**	**04 44 49.1**	**+0.8**
	comp=E,3.9nm,1.3s						
MLR	**Muntele Rosu**	**52.02**	**308**	P	**P**	**04 45 05.6**	**+1.4**
	comp=E,0.4nm,0.3s,baz=117,slow=9.0,SNR=10.0						
BUR04	**Bucovina Ar. S**	**52.48**	**311**	*e*P	**P**	**04 45 06.0**	**-1.5**
BUR08	**Bucovina Ar. S**	**52.48**	**311**	*e*P	**P**	**04 45 07.1**	**-0.5**
FIA1	**FINESS Array S**	**53.16**	**328**	*e*P	**P**	**04 45 11.7**	**-0.5**
	comp=E,4.7nm,0.6s						
FIA0	**FINESS Array S**	**53.16**	**328**	*e*P	**P**	**04 45 11.6**	**-0.6**
FINES	**FINESS Array B**	**53.16**	**328**	P	**P**	**04 45 11.6**	**-0.6**
	comp=E,4.3nm,0.5s,baz=109,slow=7.5,SNR=36						
IDI	**Anoyia**	**53.90**	**295**	P	**P**	**04 45 17.8**	**-0.4**
	comp=E,2.2nm,0.7s,baz=58,slow=13,SNR=3.2						
IDI	**Anoyia**	**53.90**	**295**	*e*P	**P**	**04 45 17.8**	**-0.4**
	comp=E,4.4nm,1.1s						
KWP	**Kalwaria Pacla**	**54.10**	**313**	*e*P	**P**	**04 45 20.1**	**+0.7**
	comp=E,79nm,0.8s						
VTS	**Vitosha**	**54.19**	**304**	*e*P	**P**	**04 45 21.2**	**+1.0**
	comp=E,3.3nm,0.7s						
LIT	**Litokhoron**	**55.02**	**301**	*e*P	**P**	**04 45 26.1**	**-0.1**
	comp=E,5.2nm,0.9s						
ARA0	**ARCESS Array S**	**55.23**	**338**	*e*P	**P**	**04 45 27.0**	**-0.2**
ARCES	**ARCESS Array B**	**55.23**	**338**	P	**P**	**04 45 27.0**	**-0.2**
	comp=E,1.2nm,0.6s,baz=104,slow=7.6,SNR=8.9						
ARCES	**ARCESS Array B**	**55.23**	**338**	*e*P	**P**	**04 45 26.6**	**-0.6**
AGG	**Agios Georgios**	**55.30**	**300**	*e*P	**P**	**04 45 27.6**	**-0.7**
	comp=E,21nm,0.8s						
ITM	**Ithomi**	**55.92**	**298**	*e*P	**P**	**04 45 31.0**	**-1.7**
	comp=E,7.1nm,1.0s						
CONA	**Conrad Observa**	**58.74**	**311**	*e*P	**P**	**04 45 52.1**	**-0.4**
	comp=E,0.7nm,0.3s						
ARSA	**Arzberg**	**59.06**	**311**	*e*P	**P**	**04 45 53.6**	**-1.1**
	comp=E,1.3nm,0.3s						
HFS	**Hagfors**	**59.10**	**326**	P	**P**	**04 45 54.3**	**-0.4**
	comp=E,2.4nm,0.4s,baz=99,slow=8.9,SNR=22						
SOKA	**Soboth**	**59.47**	**310**	*e*P	**P**	**04 45 57.7**	**+0.1**
	comp=E,1.5nm,0.3s						
SPA0	**Spitsbergen Ar**	**59.79**	**347**	*e*P	**P**	**04 45 59.4**	**+0.1**
SPITS	**Spitsbergen Ar**	**59.79**	**347**	P	**P**	**04 45 59.4**	**+0.1**
	comp=E,0.7nm,0.5s,baz=84,slow=13,SNR=4.5						
MOA	**Molin**	**59.82**	**312**	*i* P	**P**	**04 45 59.8**	**-0.1**
	comp=E,3.2nm,0.6s						
NC405	**NORSAR Array S**	**60.04**	**327**	*e*P	**P**	**04 45 59.5**	**-1.7**
GEC2	**GERESS Array S**	**60.05**	**313**	*e*P	**P**	**04 46 01.6**	**+0.1**
	comp=E,3.7nm,0.7s						
GERES	**GERESS Array B**	**60.05**	**313**	P	**P**	**04 46 01.6**	**+0.1**
	comp=E,2.0nm,0.6s,baz=79,slow=6.9,SNR=16						
GEA0	**GERESS Array S**	**60.05**	**313**	*e*P	**P**	**04 46 01.5**	**-0.1**
NC303	**NORSAR Array S**	**60.20**	**327**	*e*P	**P**	**04 46 01.4**	**-0.9**
NB201	**NORSAR Array S**	**60.25**	**327**	*e*P	**P**	**04 46 00.1**	**-2.6**
NB2	**NORSAR Subarra**	**60.29**	**327**	P	**P**	**04 46 01.9**	**-1.0**
	comp=Z,0.9nm,0.4s,baz=86,slow=6.9						
NB200	**NORSAR Array S**	**60.29**	**327**	*e*P	**P**	**04 46 02.1**	**-0.8**
NOA	**NORSAR Array B**	**60.29**	**327**	P	**P**	**04 46 02.1**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=86,slow=7.9,SNR=5.8						
NAO01	**NORSAR Array S**	**60.46**	**327**	*e*P	**P**	**04 46 02.9**	**-1.2**
NC204	**NORSAR Array S**	**60.49**	**327**	*e*P	**P**	**04 46 03.4**	**-0.9**
NBO00	**NORSAR Array S**	**60.50**	**327**	*e*P	**P**	**04 46 02.7**	**-1.7**
KBA	**Koelnbreinsper**	**60.55**	**311**	*e*P	**P**	**04 46 04.7**	**-0.5**
	comp=Z,1.3nm,0.4s						
ABTA	**Abfaltersbach**	**61.17**	**310**	*e*P	**P**	**04 46 07.9**	**-1.3**
	comp=Z,1.3nm,0.3s						
WTTA	**Wattenberg**	**61.67**	**311**	*e*P	**P**	**04 46 12.1**	**-0.7**
	comp=Z,1.3nm,0.3s						
MOTA	**Moosalm**	**62.01**	**311**	*e*P	**P**	**04 46 12.6**	**-2.4**
	comp=Z,2.1nm,0.3s						
RETA	**Reutte**	**62.21**	**312**	*e*P	**P**	**04 46 15.4**	**-0.8**
	comp=Z,1.5nm,0.2s						
FETA	**Feichten**	**62.32**	**311**	*e*P	**P**	**04 46 16.4**	**-0.7**
	comp=Z,2.1nm,0.4s						
FUORN	**Ofenpass-Fuorn**	**62.72**	**311**	*e*P	**P**	**04 46 19.6**	**-0.3**
	comp=Z,3.3nm,0.7s						
DAVA	**Damuels**	**62.84**	**311**	*e*P	**P**	**04 46 19.7**	**-0.8**
	comp=Z,2.9nm,0.5s						
VLC	**Villacollemand**	**63.15**	**308**	*e*P	**P**	**04 46 22.4**	**-0.1**
	comp=Z,85nm,1.5s						
TUE	**Stuetta**	**63.37**	**311**	*e*P	**P**	**04 46 22.8**	**-1.3**
	comp=Z,4.0nm,0.7s						
WR1	**Warramunga Arr**	**64.80**	**131**	*e*P	**P**	**04 46 34.5**	**+1.0**
	comp=Z,4.3nm,0.6s						
WRA	**Warramunga Arr**	**64.80**	**131**	P	**P**	**04 46 34.5**	**+1.0**
	comp=Z,1.4nm,0.5s,baz=325,slow=6.6,SNR=52						
WRAB	**Tennant Creek**	**64.80**	**131**	*e*P	**P**	**04 46 34.2**	**+0.6**
	comp=Z,5.2nm,1.3s						
WB2	**Warramunga Arr**	**64.81**	**131**	*e*P	**P**	**04 46 34.4**	**+0.8**
	comp=Z,7.4nm,1.3s						
AS31	**Alice Springs**	**67.17**	**135**	*e*P	**P**	**04 46 50.0**	**+1.3**
	comp=Z,1.4nm,1.0s						
ASAR	**Alice Springs**	**67.17**	**135**	P	**P**	**04 46 50.0**	**+1.3**
	comp=Z,1.5nm,0.7s,baz=316,slow=6.5,SNR=17						
EKA	**Eskdalemuir Ar**	**68.78**	**322**	P	**P**	**04 46 57.2**	**-1.3**
	comp=Z,0.5nm,0.7s,baz=70,slow=6.2,SNR=3.6						
ES19	**SONSECA Array**	**74.65**	**307**	*e*P	**P**	**04 47 34.8**	**+0.6**
ESDC	**Sonseca Array**	**74.70**	**307**	P	**P**	**04 47 33.7**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=48,slow=6.0,SNR=7.8						
ILAR	**Eielson Array**	**78.85**	**21**	P	**P**	**04 47 56.9**	**-0.4**
	comp=Z,0.3nm,0.9s,baz=304,slow=4.9,SNR=3.1						
ILB	**Eielson Array**	**78.85**	**21**	*e*P	**P**	**04 47 56.9**	**-0.4**
TOA1	**Torodi Ar. Sit**	**81.03**	**280**	*e*P	**P**	**04 48 09.3**	**-0.7**
TORD	**Torodi Ar. Bea**	**81.03**	**280**	P	**P**	**04 48 09.3**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=61,slow=4.4,SNR=12						
BOSA	**Boshof**	**82.02**	**232**	P	**P**	**04 48 15.2**	**+0.2**
	comp=Z,1.4nm,0.7s,baz=51,slow=6.5,SNR=2.6						
EYAK	**Cordova Ski Ar**	**82.11**	**24**	*e*P	**P**	**04 48 19.0**	**+4.2**
	comp=Z,4μm,0.6s						
KOWA	**Kowa**	**85.41**	**284**	P	**P**	**04 48 31.6**	**-1.0**
	comp=Z,1.1nm,0.7s,baz=89,slow=3.4,SNR=5.0						
YKA	**Yellowknife Ar**	**88.70**	**10**	P	**P**	**04 48 47.7**	**0.0**
	comp=Z,0.4nm,0.6s,baz=338,slow=4.9,SNR=3.2						
YKB5	**Yellowknife Ar**	**88.70**	**10**	*e*P	**P**	**04 48 47.7**	**0.0**
TXAR	**Lajitas Array**	**122.58**	**12**	PKP	**PKPdf**	**04 54 48.9**	**-1.9**
	comp=Z,0.1nm,0.6s,baz=272,slow=2.3,SNR=2.9						

DJA 11 04:37:15.1±1.3, 10°S±7°×11°4E±°, h28km±16km, M3.5/8, MLv3.5/8, South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGBI	**Denpasar**	**1.38**	**35**	P	Pn	04 37 38.7	+0.2
IGBI				S	Sn	04 37 56.0	+0.2
JAGI	**Jajag, Banyuwa**	**1.49**	**352**	P	Pn	04 37 39.9	-0.2
JAGI				S	Sn	04 37 59.2	+0.5
DNP	**Denpasar**	**1.53**	**34**	P	Pn	04 37 39.8	-0.8
GMJI	**Gumukmas**	**1.90**	**332**	P	Pn	04 37 45.2	-0.5
GMJI				S	Sn	04 38 08.5	-0.2
TWSI	**Taliwang, Sumb**	**2.78**	**64**	P	Pn	04 37 57.6	-0.2
PWJI	**Pagerwojo**	**3.17**	**307**	P	Pn	04 38 01.8	-1.3
PWJI				S	Sn	04 38 38.3	-1.7
PLAI	**Plampang**	**3.56**	**72**	P	Pn	04 38 07.9	-0.7

*IDC **11** 05:01:51.8±1.0, 35°.86N×69°.32E, h0km, mb3.8/11, mb1 3.9/16, mb1mx3.7/79, mbtmp3.8/16, ML3.4/5, Error ellipse: s-maj=21.5km s-min=19.2km az=129.0*
*NEIC **11** 05:01:54.4±0.5, 36°.04N×69°.06E, h10km, mb4.3/6, Error ellipse: s-maj=9.3km s-min=8.6km az=84.0*
*ISCJB **11** 05:01:56.1±0.4, 36°.12N±0°.05×69°.12E±0°.06, h35km, mb4.0/15, Error ellipse: s-maj=7.6km s-min=6.6km az=18.5*

ISC 11 05:01:57.8±0.6, 36°.07N±0°.08×69°.12E±0°.09, h35km, n59, σ1°54/59, mb3.8/15, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**1.52**	**182**	*e*Pn	**Pn**	**05 02 23.1**	**+0.4**
NIL	**Nilore**	**4.17**	**124**	*e*Pn	**Pn**	**05 03 01.1**	**+2.2**
AML	**Almayashu**	**7.02**	**29**	P	**Pn**	**05 03 39.2**	**+0.8**
	SNR=15						
KK31	**Karatay Array**	**7.11**	**8**	*e*Pn	**Pn**	**05 03 39.8**	**+0.5**
KKAR	**Karatay Array**	**7.11**	**8**	*e*Pn	**Pn**	**05 03 39.8**	**+0.5**
UCH	**Uchtor**	**7.44**	**33**	P	**Pn**	**05 03 45.9**	**+1.6**
	SNR=6.6						
NRN	**Naryn**	**7.59**	**43**	*e*Pn	**Pn**	**05 03 46.6**	**+0.5**
AAK	**Ala-Archa**	**7.77**	**31**	Pn	**Pn**	**05 03 49.0**	**+0.5**
	1.8nm,0.3s,baz=208,slow=8.5,SNR=24						
AAK	**Ala-Archa**	**7.77**	**31**	*e*Pn	**Pn**	**05 03 49.9**	**+1.4**
TKM2	**Tokmak 2**	**8.48**	**34**	P	**Pn**	**05 03 58.3**	**+0.1**
	SNR=8.3						
TARG	**Taragay, Kyrgy**	**8.82**	**47**	*e*Pn	**Pn**	**05 04 04.6**	**+1.5**
MAKZ	**Makanchi**	**14.41**	**38**	*e*Pn	**Pn**	**05 05 19.7**	**+0.6**
MK01	**Makanchi Array**	**14.54**	**39**	*e*Pn	**Pn**	**05 05 20.4**	**-0.5**
MK32	**Makanchi Array**	**14.55**	**39**	*e*Pn	**Pn**	**05 05 19.6**	**-1.5**
MKAR	**Makanchi Array**	**14.55**	**39**	Pn	**Pn**	**05 05 19.6**	**-1.5**
	0.1nm,0.3s,baz=212,slow=15,SNR=2.5						
MKAR	**Makanchi Array**	**14.55**	**39**	Pn	**Pn**	**05 05 19.6**	**-1.5**
ABKAR	**Akbulak array**	**14.79**	**336**	*e*Pn	**Pn**	**05 05 21.6**	**-2.6**
KURBB	**Kurchatov Arra**	**16.06**	**22**	Pn	**Pn**	**05 05 37.6**	**-3.2**
	0.0nm,0.3s,baz=213,slow=11,SNR=3.6						
KURK	**Kurchatov**	**16.17**	**22**	*e*Pn	**Pn**	**05 05 37.6**	**-4.5**
AKTO	**Aktyubinsk**	**16.45**	**334**	Pn	**Pn**	**05 05 44.2**	**-1.5**
	0.4nm,0.3s,baz=139,slow=14,SNR=13						
AKTO	**Aktyubinsk**	**16.45**	**334**	*e*Pn	**Pn**	**05 05 44.2**	**-1.5**
BVAR	**Borovoye Array**	**16.98**	**3**	Pn	**Pn**	**05 05 49.6**	**-2.7**
	0.4nm,0.3s,baz=153,slow=11,SNR=8.0						
BVAR	**Borovoye Array**	**16.98**	**3**	Pn	**Pn**	**05 05 49.6**	**-2.7**
BRVK	**Borovoye**	**17.01**	**2**	*e*Pn	**P**	**05 05 55.3**	**+1.0**
	6.6nm,1.0s						
ZAA0	**Zalesovo Array**	**20.96**	**27**	*e*P	**P**	**05 06 38.1**	**+0.6**
	4.5nm,0.6s						
ZALV	**Zalesovo Beam**	**20.96**	**27**	P	**P**	**05 06 36.9**	**-0.6**
	2.7nm,0.5s,baz=218,slow=10,SNR=11						
ZALV	**Zalesovo Beam**	**20.96**	**27**	*e*P	**P**	**05 06 37.4**	**-0.1**
ZAA1	**Zalesovo Array**	**20.96**	**27**	*e*P	**P**	**05 06 36.9**	**-0.7**
SHL	**Shillong**	**22.12**	**112**	*e*P	**P**	**05 06 49.7**	**-0.8**
	20nm,0.7s						
AGG	**Agios Georgios**	**36.90**	**289**	*e*P	**P**	**05 09 01.5**	**-1.6**
	5.8nm,0.6s						
FIA0	**FINESS Array S**	**37.01**	**327**	*e*P	**P**	**05 09 04.4**	**+0.8**
FINES	**FINESS Array B**	**37.01**	**327**	P	**P**	**05 09 04.4**	**+0.8**
	1.0nm,0.7s,baz=122,slow=9.5,SNR=2.4						
FINES	**FINESS Array B**	**37.01**	**327**	P	**P**	**05 09 04.4**	**+0.8**
EVR	**Evrytania**	**37.32**	**289**	*e*P	**P**	**05 09 05.3**	**-1.4**
ARA0	**ARCESS Array S**	**40.98**	**338**	*e*P	**P**	**05 09 37.0**	**+0.3**
ARCES	**ARCESS Array B**	**40.98**	**338**	P	**P**	**05 09 37.0**	**+0.3**
	1.9nm,1.0s,baz=109,slow=7.7,SNR=2.8						
ARCES	**ARCESS Array B**	**40.98**	**338**	*e*P	**P**	**05 09 37.0**	**+0.2**
ARE0	**ARCESS Array S**	**40.98**	**338**	*e*P	**P**	**05 09 36.9**	**+0.1**
	3.3nm,0.9s						
HFS	**Hagfors**	**42.48**	**322**	P	**P**	**05 09 50.5**	**+1.3**
	1.2nm,0.6s,baz=93,slow=12,SNR=6.1						
HFS	**Hagfors**	**42.48**	**322**	P	**P**	**05 09 50.5**	**+1.3**
NC303	**NORSAR Array S**	**43.77**	**324**	*e*P	**P**	**05 10 01.3**	**+1.7**
NB200	**NORSAR Array S**	**43.82**	**323**	*e*P	**P**	**05 10 00.9**	**+0.9**
NOA	**NORSAR Array B**	**43.82**	**323**	P	**P**	**05 10 00.9**	**+0.9**
	0.7nm,0.5s,baz=99,slow=7.9,SNR=2.9						
NOA	**NORSAR Array B**	**43.82**	**323**	P	**P**	**05 10 00.9**	**+0.9**
MYKOM	**Kota Tinggi**	**46.86**	**129**	*e*P	**P**	**05 10 25.5**	**+0.9**
	20nm,0.4s						
EKA	**Eskdalemuir Ar**	**51.54**	**316**	P	**P**	**05 11 02.8**	**+2.9**
	0.9nm,0.7s,baz=95,slow=7.9,SNR=4.2						
EKA	**Eskdalemuir Ar**	**51.54**	**316**	*e*P	**P**	**05 11 02.8**	**+2.9**
TOA1	**Torodi Ar. Sit**	**64.18**	**268**	*e*P	**P**	**05 12 29.2**	**0.0**
TORD	**Torodi Ar. Bea**	**64.19**	**268**	P	**P**	**05 12 29.2**	**0.0**
	0.8nm,0.6s,baz=47,slow=6.1,SNR=9.0						
TORD	**Torodi Ar. Bea**	**64.19**	**268**	P	**P**	**05 12 29.2**	**0.0**
ILAR	**Eielson Array**	**75.60**	**15**	P	**P**	**05 13 39.0**	**+0.5**
	0.6nm,0.9s,baz=312,slow=4.4,SNR=6.1						
ILAR	**Eielson Array**	**75.60**	**15**	P	**P**	**05 13 39.0**	**+0.5**
YKA	**Yellowknife Ar**	**81.74**	**2**	P	**P**	**05 14 13.5**	**+1.2**
	0.7nm,0.9s,baz=350,slow=5.0,SNR=3.4						
YKA	**Yellowknife Ar**	**81.74**	**2**	P	**P**	**05 14 13.5**	**+1.2**
WR1	**Warramunga Arr**	**83.06**	**121**	*e*P	**P**	**05 14 17.9**	**-2.0**
	8.8nm,1.1s						
WRA	**Warramunga Arr**	**83.06**	**121**	P	**P**	**05 14 17.9**	**-2.0**
	0.5nm,0.8s,baz=319,slow=4.9,SNR=4.5						
WRA	**Warramunga Arr**	**83.06**	**121**	P	**P**	**05 14 17.9**	**-2.0**
ASAR	**Alice Springs**	**85.27**	**124**	P	**P**	**05 14 29.8**	**-1.3**
	0.5nm,0.9s,baz=321,slow=5.1,SNR=3.8						
ASAR	**Alice Springs**	**85.27**	**124**	P	**P**	**05 14 29.8**	**-1.3**

*ISCJB **11** 05:02:11.5±0.5, 36°.05N±0°.02×69°.39E±0°.01, h20km±3km, mb5.3/352, MS5.0/70, Error ellipse: s-maj=2.5km s-min=1.9km az=12.9*
*MOS **11** 05:02:12.3±1.1, 36°.18N×69°.36E, h21km, mb5.5/135, MS5.0/30, Error ellipse: s-maj=4.3km s-min=3.2km az=114.5*
*NNC **11** 05:02:12.3±3.1, 36°.29N×68°.91E, h0km, mb5.8, mpv5.5, Error ellipse: s-maj=26.2km s-min=21.6km az=23.0*
*IDC **11** 05:02:13.2±1.7, 36°.01N×69°.38E, h25km±10km, mb5.0/64, mb1 5.0/71, mb1mx5.0/78, mbtmp5.1/71, ML4.6/6, MS4.9/20, Ms1 4.9/20, ms1mx4.5/58, Error ellipse: s-maj=7.2km s-min=6.1km az=5.0*
*BJI **11** 05:02:13.5, 36°.25N×69°.45E, h18km, mb5.1/70, mB5.2/55, ML5.4/2, Ms5.2/79, Ms7 5.0/73*
*NEIC **11** 05:02:14.2±1.1, 36°.04N×69°.40E, h29km±7km, mb5.4/190, Error ellipse: s-maj=3.2km s-min=2.4km az=186.0*
NEIC Felt [III] at Kabul. Also felt at Asadabad, Baghlan, Ishkashem and Jalalabad.
*GCMT **11** 05:02:14.2±0.1, 36°.07N×69°.20E, h23km, MW5.3/106, Moment Tensor Solution. s84,c124; s106,c180; Duration: 1ŝ1 Moment tensor: Scale 10^17Nm; Mrr0.25±.02; Mθθ0.60±.02; Mφφ-0.84±.01; Mrθ-0.63±.04; Mθφ-0.37±.01; Mφr-0.00±.02; Best double couple: M0 1.04100×10^17 NP1:φs234.00000°, δ72.00000°, λ147.00000°. NP2:φs335.00000°, δ59.00000°, λ21.00000°. Principal axes: T 1.1210, Plg35.0000°, Azm191.0000°; N -0.1600, Plg53.0000°, Azm29.0000°; P -0.9610, Plg9.0000°, Azm287.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 11 05:02:12.8±0.4, 36°.07N±0°.03×69°.25E±0°.02, h19km±2km, h20km: pP-P, n997, σ2ŝ19/1137, mb5.4/370, MS5.0/74, 44C-52D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**1.53**	**186**	*e*Pn	**Pn**	**05 02 39.8**	**+0.5**
KBL				*e*Sn	**Sb**	**05 03 00.0**	**+0.3**
KBL	**Kabul**	**1.53**	**186**	*e*PN	**Pn**	**05 02 39.8**	**+0.5**
KBL				*e*		05 03 00.0	
CEP	**Cherat**	**3.13**	**135**	P	**Pb**	**05 03 05.4**	**-2.4**
THW	**Thamme Wali**	**3.86**	**147**	P	**Pn**	**05 03 14.2**	**+3.1**
NIL	**Nilore**	**4.08**	**125**	*e*Pn	**Pn**	**05 03 17.9**	**+3.8**
NIL	**Nilore**	**4.08**	**125**	*e*PN	**Pn**	**05 03 17.9**	**+3.8**
CHCP	**Chirah Chowk**	**4.08**	**125**	P	**Pn**	**05 03 17.8**	**+3.6**
SRNI	**Srinagar**	**4.99**	**112**	*e*P	**Pn**	**05 03 27.5**	**+0.9**
SRNI				*ex*	x	05 04 37.5	
SARP	**Sargodha**	**5.02**	**145**	P	**Pn**	**05 03 30.8**	**+3.8**
SFK	**Sufi-Kurgan**	**5.18**	**39**	⇓Pn	**Pn**	**05 03 32.3**	**+2.9**
	134nm,0.3s						
SFK				⇓Sn	**Sn**	**05 04 34.6**	**+5.9**
	1μm,0.5s						
SFK	**Sufi-Kurgan**	**5.18**	**39**	PN	**Pn**	**05 03 32.

AAA pmax pmax
comp=Z,700nm,2.9s
AAA smax smax
comp=N,900nm,1.5s
KNDC Almaty 9.29 37 ⇓Pn **Pn 05 04 27.2 +1.4**
comp=N,106nm,0.5s
MDOK Medeo 9.29 38 Pn **Pn 05 04 26.7 +0.9**
comp=N,188nm,0.7s
DDI Dehra Dun 9.34 125 *e*P **Pn 05 04 26.5 +0.2**
DDI *e*S Sn 05 06 01.5 -9.4
DDI IAML 05 07 13.3
comp=E,1μm,0.5s
DDI IAML 05 07 17.5
comp=N,1μm,0.3s
PRZ Przheval'sk 9.55 45 *e*Pn **Pn 05 04 31.1 +1.6**
PRZ Przheval'sk 9.55 45 *e*P **Pn 05 04 31.1 +1.6**
NDI New Delhi 9.97 135 *e*P **Pn 05 04 34.0 -1.0**
NDI *ex* x 05 06 24.0
PDGK Podgornoye 10.71 44 ⇓Pn **Pn 05 04 44.1 -1.1**
comp=N,73nm,0.6s
PDGK Podgornoye 10.71 44 P **Pn 05 04 44.1 -1.1**
PDGK pmax pmax
comp=Z,73nm,0.6s
OTUK Ortayu 12.38 10 ⇑Pn **Pn 05 05 06.3 -1.7**
comp=Z,29nm,0.5s
OTUK Ortayu 12.38 10 P **Pn 05 05 06.2 -1.7**
OTUK pmax pmax
comp=Z,99nm,0.9s
BHJ Bhuj 12.77 178 *e*P **Pn 05 05 12.4 -0.9**
BHJ IAmb IAmb 05 05 14.1
comp=Z,3μm,1.6s
PYUN Piuthan 14.09 120 *e*P **Pn 05 05 28.8 -2.7**
comp=Z,796nm,0.7s
PYUN *e*S **Sn 05 08 01.4 -6.0**
MAKZ Makanchi 14.34 38 *e*Pn **Pn 05 05 32.8 -1.9**
MAKZ Makanchi 14.34 38 *e*P **Pn 05 05 32.8 -1.9**
MK01 Makanchi Array 14.48 38 *e*Pn **Pn 05 05 34.9 -1.7**
DANN Dangsing 14.48 118 *e*P **Pn 05 05 33.9 -3.1**
comp=Z,2μm,0.9s
MK31 Makanchi Array 14.49 38 P **Pn 05 05 34.8 -1.9**
comp=Z,133nm,0.9s,baz=220,slow=14,SNR=184
MK31 Makanchi Array 14.49 38 *e*Pn **Pn 05 05 34.7 -1.9**
MK31 Makanchi Array 14.49 38 *e*P **Pn 05 05 34.8 -1.9**
MK31 pmax pmax
comp=Z,60nm,0.6s
MK32 Makanchi Array 14.49 38 *e*Pn **Pn 05 05 35.0 -1.8**
MK32 *e*Sn **Sn 05 08 20.2 +3.5**
MKAR Makanchi Array 14.49 38 Pn **Pn 05 05 34.9 -1.8**
comp=Z,1.6nm,0.3s,baz=220,slow=11,SNR=7.7
MKAR Sn **Sn 05 08 20.2 +3.5**
baz=241,slow=18,SNR=1.6
MKAR Lg Lg 05 09 50.8
comp=Z,0.7nm,0.3s,baz=214,slow=31,SNR=2.7
MKAR Makanchi Array 14.49 38 *i* P **Pn 05 05 32.7 -4.0**
MKAR pmax pmax
comp=Z,17nm,0.6s
BHPL Bhopal 14.61 149 *ex* **Pn 05 05 35.5 -3.1**
BHPL IAmb IAmb 05 05 37.6
comp=Z,240nm,1.1s
KOLN Koldanda 14.71 120 *e*P **Pn 05 05 37.3 -2.8**
comp=Z,237nm,0.4s
AB31 Akbulak array 14.84 336 ⇓Pn **Pn 05 05 38.2 -3.2**
comp=Z,125nm,0.6s,baz=152,slow=13,SNR=5.4
AB31 ⇑Sn Sn 05 08 15.3 -10
comp=Z,72nm,0.5s,baz=149,slow=25,SNR=12
AB31 Akbulak array 14.84 336 *e*P **Pn 05 05 38.2 -3.2**
AB31 pmax pmax
comp=Z,125nm,0.6s
ABKAR Akbulak array 14.84 336 *e*Pn **Pn 05 05 38.6 -2.8**
BANOM Banah 15.00 231 Pn **P 05 05 47.4 -1.7**
BANOM Banah 15.00 231 P **P 05 05 47.4 -1.7**
SHME Shamm 15.02 232 Pn **Pn 05 05 45.0 +1.1**
SHME Shamm 15.02 232 P **Pn 05 05 45.0 +1.1**
GKN Gorkha 15.31 117 *e*P **Pn 05 05 44.9 -3.1**
MDH Madha 15.45 230 Pn **P 05 05 53.2 -0.8**
MDH Madha 15.45 230 P **P 05 05 53.2 -0.8**
MSFE Esma-Masafi 15.49 230 *i* Pn **P 05 05 53.0 -1.6**
SNR=6.2
MSFE Esma-Masafi 15.49 230 *i* P **P 05 05 53.0 -1.6**
SNR=6.2
WSAR Wadi Sarin 15.75 219 Pn **Pn 05 05 53.4 -0.3**
comp=Z,0.5nm,0.3s,baz=74,slow=11,SNR=8.0
WSAR Sn **Sn 05 08 54.9 +7.2**
comp=Z,0.3nm,0.3s,baz=71,slow=14,SNR=1.8
UOSS Minazif 15.77 229 *e*Pn **Pn 05 05 54.9 +1.1**
comp=Z,25nm,0.9s
BIDO Bidbid 15.78 221 Pn **P 05 05 56.0 -1.8**
SNR=11
BIDO Bidbid 15.78 221 P **P 05 05 56.0 -1.8**
SNR=11
DMN Daman 15.88 118 *e*P **Pn 05 05 52.3 -3.2**
comp=Z,1μm,1.0s
KKN Kakani 15.90 117 *e*P **Pn 05 05 53.1 -2.6**
comp=Z,1μm,0.7s
HATD Hatta, Dubai 15.90 229 Pn **P 05 06 01.0 +1.9**
SNR=8.7
HATD Hatta, Dubai 15.90 229 P **P 05 06 01.0 +1.9**
SNR=8.7
HATD Hatta, Dubai 15.90 229 *i* Pn **P 05 05 57.7 -1.4**
SNR=9.0
HATD Hatta, Dubai 15.90 229 *i* P **P 05 05 57.7 -1.4**
SNR=9.0
KURBB Kurchatov Arra 16.02 22 Pn **Pn 05 05 54.0 -2.8**
comp=Z,0.6nm,0.3s,baz=210,slow=12,SNR=51
KURBB Lg Lg 05 10 38.6
comp=Z,0.3nm,0.3s,baz=217,slow=28,SNR=4.4
KURBB Kurchatov Arra 16.02 22 ⇑P **Pn 05 05 54.8 -2.0**
comp=Z,214nm,0.8s
NAZ Nazwa, Dubai 16.07 230 Pn **P 05 05 59.6 -1.4**
NAZ Nazwa, Dubai 16.07 230 P **P 05 05 59.6 -1.4**
WMQ Urumqi 16.11 56 P **P 05 06 00.4 -0.9**
WMQ pP pP 05 06 06.1 -0.6
WMQ S **Sn 05 08 54.1 -2.1**
WMQ pmax pmax
comp=Z,200nm,1.1s
WMQ pmax pmax
comp=Z,1μm,3.6s
WMQ LR LR
comp=Z,21μm,13.5s
WMQ LR LR
comp=Z,18μm,12.1s
WMQ LR LR
comp=Z,4μm,17.5s
PKIN Phulchoki 16.11 117 *e*P **Pn 05 05 55.6 -2.8**
comp=Z,1μm,0.9s
KURK Kurchatov 16.13 22 ⇓P **Pn 05 05 55.5 -2.6**
comp=Z,199nm,1.0s
KURK Kurchatov 16.13 22 *e*Pn **Pn 05 05 55.6 -2.6**
comp=Z,190nm,0.9s
KURK Lg Lg 05 10 38.6
KURK Kurchatov 16.13 22 Pn **Pn 05 05 56.0 -2.3**
SNR=82
KURK Kurchatov 16.13 22 *ce*P **Pn 05 05 55.6 -2.6**
KURK pmax pmax
comp=Z,122nm,1.2s
SMDO Samad 16.20 220 Pn **P 05 06 02.0 -0.5**
SNR=9.2
SMDO Samad 16.20 220 P **P 05 06 02.0 -0.5**
SNR=9.2
GUN Gumba 16.27 115 *e*P **Pn 05 05 58.4 -2.2**
comp=Z,2μm,0.9s
AKTO Aktyubinsk 16.50 334 Pn **Pn 05 06 00.8 -2.3**
comp=Z,5.2nm,0.3s,baz=144,slow=14,SNR=94
AKTO Sn Sn 05 08 54.9 -11
comp=Z,3.0nm,0.3s,baz=173,slow=19,SNR=3.8
AKTO Lg Lg 05 10 57.9
comp=Z,1.1nm,0.3s,baz=180,slow=20,SNR=1.6
AKTO Aktyubinsk 16.50 334 ⇓Pn **Pn 05 06 01.0 -2.0**
comp=Z,291nm,1.1s
AKTO Aktyubinsk 16.50 334 P **Pn 05 06 01.0 -2.0**
AKTO pmax pmax
comp=Z,479nm,1.5s
ASUD Al Ashush, Dub 16.54 230 Pn **P 05 06 06.1 -0.1**
ASUD Al Ashush, Dub 16.54 230 P **P 05 06 06.1 -0.1**
JIRN Jiri 16.64 115 *e*P **Pn 05 06 03.8 -1.5**
comp=Z,775nm,0.4s
ALNE Al Ain 16.71 228 *i* Pn **P 05 06 07.0 -1.0**
SNR=6.7
ALNE Al Ain 16.71 228 *i* P **P 05 06 07.0 -1.0**
SNR=6.7
JMDO Jabal Madar 16.74 218 Pn **P 05 06 10.0 +1.6**
SNR=13
JMDO Jabal Madar 16.74 218 P **P 05 06 10.0 +1.6**
SNR=13
AJN Ajban 16.80 231 Pn **P 05 06 09.2 +0.1**
AJN Ajban 16.80 231 P **P 05 06 09.2 +0.1**

ARQ Araqi 16.81 224 Pn **P 05 06 15.0 +5.8**
SNR=12
BSY Bisya 16.90 222 Pn **P 05 06 14.0 +3.7**
SNR=12
BSY Bisya 16.90 222 P **P 05 06 14.0 +3.7**
SNR=12
BVA0 Borovoye Array 16.98 2 ⇓Pn **Pn 05 06 06.0 -3.0**
comp=Z,153nm,1.0s
BVA0 ⇓Sn **Sn 05 09 09.7 -7.4**
comp=Z,85nm,1.0s,baz=188,slow=21,SNR=4.0
BVA0 Borovoye Array 16.98 2 P **Pn 05 06 06.0 -3.0**
BVA0 pmax pmax
comp=Z,190nm,1.2s
BVAR Borovoye Array 16.98 2 Pn **Pn 05 06 06.7 -2.3**
comp=Z,9.0nm,0.3s,baz=170,slow=14,SNR=44
BVAR S **Sn 05 09 07.5 -10**
comp=Z,3.4nm,0.3s,baz=175,slow=17,SNR=2.7
BVAR Lg Lg 05 11 13.2
baz=169,slow=31,SNR=2.2
BVAR LR LR 05 13 28.2
comp=Z,8μm,19.3s,baz=187,slow=40
BRVK Borovoye 17.01 2 *e*Pn **Pn 05 06 07.2 -2.2**
comp=Z,619nm,1.4s
BRVK Borovoye 17.01 2 *e*P **Pn 05 06 07.2 -2.2**
BRVK pmax pmax
comp=Z,619nm,1.4s
NGP Nagpur 17.16 147 *e*P **Pn 05 06 09.5 -2.0**
NGP IAmb IAmb 05 06 10.2
comp=Z,136nm,1.0s
NGP *e*S **Sn 05 09 18.7 -3.1**
RAMN Ramite 17.34 117 *e*P **Pn 05 06 12.1 -1.9**
comp=Z,517nm,0.5s
AKT Akhty 17.61 294 ⇓*i*P **Pn 05 06 16.0 -1.2**
AKT *e*S **Sn 05 09 28.6 -4.3**
AKT pmax pmax
comp=Z,41nm,0.4s
AKT smax smax
comp=N,183nm,0.4s
AKT smax smax
comp=E,41nm,0.4s
TAPN Taplejung 17.93 114 *e*P **Pn 05 06 19.0 -2.3**
comp=E,2μm,1.0s
POO Poona 17.94 166 *e*P **Pn 05 06 20.7 -0.5**
POO IAmb IAmb 05 06 24.8
comp=Z,378nm,1.8s
ODAN Odare 17.97 116 *e*P **Pn 05 06 19.8 -1.9**
comp=Z,2μm,0.9s
MAK Makhachkala 18.11 299 *e*P **Pn 05 06 21.9 -1.2**
MAK *e*S **Sn 05 09 40.9 -3.7**
MAK pmax pmax
comp=Z,136nm,1.2s
MAK MLR MLR
comp=Z,9μm,14.0s
GTK Tadong 18.61 113 *e*P **P 05 06 28.4 -0.8**
BOK Bokaro 18.87 126 *e*P **Pn 05 06 32.3 -0.3**
BOK IAmb IAmb 05 06 41.1
comp=Z,116nm,1.0s
MZR Muzera 18.88 231 *i* P **Pn 05 06 32.9 +0.2**
SNR=12
MZR Muzera 18.88 231 *i* P **Pn 05 06 32.9 +0.2**
SNR=12
GROC Groznyy 19.38 299 *e*P **P 05 06 36.6 -0.8**
GROC *e*S **Sn 05 10 11.8 -3.6**
GROC pmax pmax
comp=Z,213nm,1.0s
LSA Lhasa 19.44 103 P **Pn 05 06 41.6 +1.8**
LSA S **Sn 05 10 17.4 -0.2**
LSA pmax pmax
comp=Z,330nm,0.8s
LSA pmax pmax
comp=Z,1μm,8.0s
LSA LR LR
comp=Z,2μm,11.6s
LSA LR LR
comp=Z,2μm,11.0s
LSA LR LR
comp=Z,5μm,9.7s
LSA Lhasa 19.44 103 *e*P **Pn 05 06 40.0 +0.2**
comp=Z,232nm,0.9s
LSA Lhasa 19.44 103 Pn **Pn 05 06 39.7 -0.1**
LSA Lhasa 19.44 103 P **Pn 05 06 39.7 -0.1**
LSA Lhasa 19.44 103 *e*P **Pn 05 06 40.0 +0.2**
LSA pmax pmax
comp=Z,232nm,0.9s
GNI Garni 19.69 289 P **Pn 05 06 41.9 -0.6**
comp=Z,2.4nm,0.3s,baz=151,slow=2.9,SNR=47
GNI S **Sn 05 10 24.8 +1.6**
comp=Z,1.3nm,0.3s,baz=16,slow=15,SNR=2.5
GNI Garni 19.69 289 *e*P **Pn 05 06 44.3 +1.7**
comp=Z,245nm,0.9s
GNI S **Sn 05 10 24.8 +1.6**
GNI Garni 19.69 289 P **Pn 05 06 44.9 +2.4**
SNR=56
GNI Garni 19.69 289 P **Pn 05 06 44.9 +2.4**
SNR=56
GNI Garni 19.69 289 *i* Pn **Pn 05 06 44.2 +1.7**
SNR=54
GNI Garni 19.69 289 *i* P **Pn 05 06 44.2 +1.7**
SNR=54
GNI Garni 19.69 289 *ce*P **Pn 05 06 42.9 +0.4**
GNI pmax pmax
comp=Z,401nm,1.1s
HYB Hyderabad 20.33 154 ⇑*i*P Pn 05 06 49.0 -0.9
HYB *e*S S 05 10 21.0 -14
HYB Hyderabad 20.33 154 *e*P **P 05 06 47.6 -0.3**
HYB IAmb IAmb 05 06 53.2
comp=Z,227nm,1.1s
DHUB DHUBRI 20.36 114 *e*P **P 05 06 48.7 +0.5**
ZEI Tsey 20.66 297 *e*P Pn 05 06 52.7 -1.1
ZEI pmax pmax
comp=Z,34nm,0.6s
TURI Tura 20.88 114 *e*P **P 05 06 52.1 -1.7**
ZAA0 Zalesovo Array 20.91 26 *e*P **P 05 06 53.4 -0.5**
comp=Z,313nm,1.3s
ZALV Zalesovo Beam 20.91 26 P **P 05 06 53.3 -0.6**
comp=Z,103nm,0.5s,baz=220,slow=9.9,SNR=54
ZALV S **S 05 10 45.7 -0.4**
comp=Z,12nm,0.9s,baz=228,slow=13,SNR=2.0
ZALV Lg Lg 05 13 17.7
comp=Z,9.2nm,1.1s,baz=222,slow=23,SNR=2.0
ZALV LR LR 05 15 40.4
comp=Z,5μm,19.0s,baz=222,slow=39
ZALV Zalesovo Beam 20.91 26 P **P 05 06 53.3 -0.6**
ZALV S **S 05 10 45.7 -0.4**
ZALV pmax pmax
comp=Z,103nm,0.5s
ZALV smax smax
comp=N,12nm,0.9s
ZALV MLR MLR
comp=Z,5μm,19.0s
ZAA1 Zalesovo Array 20.92 26 *e*P **P 05 06 53.3 -0.7**
ZAA1 *e*S **S 05 10 45.7 -0.4**
NCK Nalchik 21.01 299 *i* P **P 05 06 55.6 +0.5**
NCK pmax pmax
comp=Z,113nm,1.2s
NVS Novosibirsk 21.11 23 ⇓*i*P **P 05 06 56.0 0.0**
NVS *e*S **S 05 10 47.8 -2.1**
NVS pmax pmax
comp=Z,335nm,1.1s
NVS pmax pmax
comp=N,240nm,1.3s
NVS pmax pmax
comp=E,79nm,1.2s
NVS smax smax
comp=N,187nm,2.0s
NVS smax smax
comp=E,46nm,1.2s
GUWA GUWAHATI 21.54 111 *e*P **P 05 07 01.9 +1.0**
KBZ Khabaz 21.56 299 P **P 05 07 01.1 +0.2**
comp=E,52nm,1.0s,baz=110,slow=6.3,SNR=24
KBZ S **S 05 10 57.2 -1.7**
comp=E,20nm,1.0s,baz=104,slow=19,SNR=4.4
KBZ Lg Lg 05 13 53.6
comp=E,7.8nm,0.8s,baz=127,slow=5.1,SNR=1.8
SVE Sverdlovsk 21.57 347 *c i P* **P 05 06 57.7 -3.2**
SVE *e*S **S 05 10 53.8 -5.1**
SVE pmax pmax
comp=Z,191nm,1.0s
SVE MLR MLR
comp=Z,18μm,13.0s
NEY Neytrino 21.59 298 *i* P **P 05 07 04.1 +2.6**
NEY pmax pmax
comp=Z,7.0nm,0.8s
ARU Arti 21.62 344 P **P 05 07 01.5 0.0**
comp=Z,59nm,0.6s,baz=146,slow=5.1,SNR=26
ARU S **S 05 10 55.9 -4.0**

comp=Z,17nm,0.5s,baz=125,slow=19,SNR=6.3
ARU Lg Lg 05 13 41.1
comp=Z,5.5nm,0.5s,baz=78,slow=19,SNR=2.2
ARU LR LR 05 16 20.5
comp=Z,4μm,20.1s,baz=152,slow=39
ARU Arti 21.62 344 *e*P **P 05 07 01.4 0.0**
comp=Z,172nm,0.8s
ARU *e*S **S 05 10 58.9 -1.0**
ARU Lg Lg 05 13 41.1
ARU Arti 21.62 344 *d i P* **P 05 07 00.9 -0.6**
ARU PPP PPP 05 07 27.7
ARU S **S 05 10 57.9 -2.0**
ARU SSS SSS 05 11 37.1
ARU pmax pmax
comp=Z,99nm,0.7s
ARU MLR MLR
comp=Z,8μm,21.0s
KVAR Kislovodsk Arr 21.75 299 P **P 05 07 03.5 +0.4**
comp=Z,57nm,0.8s,baz=90,slow=7.1,SNR=21
KVAR S **S 05 10 58.9 -4.1**
comp=Z,32nm,0.8s,baz=195,slow=19,SNR=4.2
KVAR Lg Lg 05 13 43.2
comp=Z,37nm,1.1s,baz=151,slow=19,SNR=2.3
KVAR LR LR 05 18 34.2
comp=Z,3μm,18.3s,baz=75,slow=45
KIV Kislovodsk 21.75 299 *e*P **P 05 07 03.3 +0.2**
comp=Z,218nm,1.3s
KIV *e*S **S 05 11 04.2 +1.2**
KIV Kislovodsk 21.75 299 P **P 05 07 03.5 +0.3**
SNR=48
KIV Kislovodsk 21.75 299 P **P 05 07 03.5 +0.3**
SNR=48
KIV Kislovodsk 21.75 299 *i* P **P 05 07 03.2 +0.1**
SNR=16
KIV Kislovodsk 21.75 299 *i* P **P 05 07 03.2 +0.1**
SNR=16
KIV Kislovodsk 21.75 299 *e*P **P 05 07 03.5 +0.3**
KIV *e*S **S 05 11 03.4 +0.4**
KIV pmax pmax
comp=Z,131nm,1.0s
KIV MLR MLR
comp=Z,3μm,14.0s
GOF Gofitskoye 21.77 302 ⇓*i*P **P 05 07 04.3 +1.1**
GOF *e*S **S 05 10 59.8 -3.3**
GOF pmax pmax
comp=Z,360nm,1.2s
GOF smax smax
comp=N,350nm,1.3s
GOF smax smax
comp=E,420nm,1.3s
SHL Shillong 22.03 112 *e*P **P 05 07 06.9 +0.5**
SHL *ex* x 05 11 06.0
SHL Shillong 22.03 112 *e*P **P 05 07 06.3 0.0**
comp=E,744nm,0.8s
SHL *e*PcP **PcP 05 11 03.6 -0.6**
SHL Shillong 22.03 112 *e*P **P 05 07 06.3 0.0**
SHL *e* 05 11 03.6
SHL pmax pmax
comp=Z,744nm,0.8s
VIS Vishakhapatnam 22.12 142 *i* P **P 05 07 07.3 +0.1**
VIS *i x* x 05 11 13.1
TEZP TEZPUR 22.16 109 *e*P **P 05 07 06.8 -0.8**
ZIRO ZIRO 22.53 105 *e*P **P 05 07 12.0 +0.3**
AGT Agartala 22.54 117 *e*P **P 05 07 13.7 +2.1**
BELO BELONIA 23.07 118 *e*P **P 05 07 19.0 +1.8**
HVS Khovu-Aksy 23.10 42 *d i P* **P 05 07 17.3 0.0**
HVS pmax pmax
comp=Z,216nm,1.1s
JORH JORHAT 23.22 107 *e*P **P 05 07 20.6 +1.8**
MOKO MOKOCHONG 23.64 107 *e*P **P 05 07 23.9 +0.9**
AZL Aizawl 23.68 115 *e*P **P 05 07 24.3 +0.9**
SOC Sochi 23.80 297 *e*P **P 05 07 24.5 +0.2**
SOC *e*S **S 05 11 40.2 +1.3**
SOC pmax pmax
comp=Z,70nm,1.2s
IMP Imphal 23.99 111 *e*P **P 05 07 28.2 +1.9**
RAYN Ar Rayn 24.03 245 *e*P **P 05 07 25.9 -0.8**
comp=Z,44nm,1.2s
RAYN Ar Rayn 24.03 245 *i* P **P 05 07 26.4 -0.3**
SNR=7.1
RAYN Ar Rayn 24.03 245 *i* P **P 05 07 26.4 -0.3**
SNR=7.1
RAYN Ar Rayn 24.03 245 P **P 05 07 26.5 -0.2**
RAYN pmax pmax
comp=Z,44nm,1.2s
LKP Lekhapani 24.19 104 *e*P **P 05 07 28.9 +0.9**
GTA Gaotai 24.34 73 ⇑P **P 05 07 30.1 +0.6**
GTA pP pP 05 07 34.5 -0.9
GTA sP sP 05 07 37.4 -0.4
GTA S **S 05 11 47.8 -0.1**
GTA sS pS 05 11 54.9 +0.6
GTA pmax pmax
comp=Z,22nm,1.7s
GTA pmax pmax
comp=Z,810nm,6.0s
GTA LR LR
comp=Z,6μm,16.5s
GTA LR LR
comp=Z,2μm,16.2s
GTA LR LR
comp=Z,2μm,16.2s
SAIH SAIHA 24.65 117 *e*P **P 05 07 33.2 +0.7**
SOKR Solikamsk 24.90 345 *d i P* P 05 07 43.5 +9.4
SOKR S **S 05 11 58.1 +2.0**
SOKR pmax pmax
comp=Z,75nm,1.1s
SOKR MLR MLR
comp=Z,4μm,15.0s
ANN Anapa 25.61 300 *e*P **P 05 07 38.6 -2.1**
ANN *i* *PP **sP 05 07 47.9 -1.1**
ANN *e* 05 08 16.3
ANN *e*S **S 05 12 04.1 -3.7**
ANN pmax pmax
comp=Z,67nm,0.9s
VORD Divnogorie 26.11 314 *e*P **P 05 07 45.4 +0.2**
VORD pmax pmax
comp=Z,50nm,1.0s
VSR Storozhevoye 26.28 315 *e*P **P 05 07 47.2 +0.4**
VSR *e*S **S 05 12 19.8 +1.5**
VSR pmax pmax
comp=Z,130nm,1.3s
VSR smax smax
comp=E,70nm,1.1s
VSR MLR MLR
comp=Z,4μm,13.0s
VORR Voronezh 26.44 316 *e*P **P 05 07 48.0 -0.2**
ASF Jabal al Asfar 27.00 271 P **P 05 07 55.3 +1.7**
comp=Z,4.1nm,1.0s,baz=31,slow=2.0,SNR=13
ASF S **S 05 12 39.8 +10**
comp=Z,2.4nm,0.9s,baz=47,slow=18,SNR=1.9
ASF Lg Lg 05 17 18.4
comp=Z,0.8nm,0.3s,baz=73,slow=19,SNR=2.1
MOY Mondy 27.41 45 *e*P **P 05 07 58.6 +1.5**
MOY pmax pmax
comp=Z,122nm,1.8s
LZH Lanzhou 27.88 80 *e*P **P 05 08 02.6 +1.1**
LZH pP pP 05 08 07.2 -0.1
LZH sP sP 05 08 09.6 -0.2
LZH PP **PnPn 05 08 53.1 +5.0**
LZH S **S 05 12 47.6 +3.5**
LZH sS sS 05 12 58.5 +4.7
LZH SS **SnSn 05 14 05.7 +8.0**
LZH pmax pmax
comp=Z,56nm,1.0s
LZH pmax pmax
comp=Z,190nm,4.8s
LZH LR LR
comp=Z,4μm,13.0s
LZH LR LR
comp=Z,5μm,11.4s
LZH LR LR
comp=Z,7μm,15.7s
MMAI Mount Meron Ar 27.97 274 P **P 05 08 04.6 +2.3**
comp=Z,0.7nm,0.2s,baz=95,slow=16,SNR=2.9
MMAI LR LR 05 22 53.2
comp=Z,1μm,18.1s,baz=70,slow=44
SIM Simferopol' 27.97 299 *e*P **P 05 08 06.3 +4.3**
SIM *e*S **S 05 12 42.0 -3.1**
SIM pmax pmax
comp=Z,100nm,10.4s
SIM pmax pmax
comp=Z,55nm,0.5s
ILGA Ilgaz 28.10 291 *e*P **P 05 08 06.5 +2.9**
comp=Z,99nm,1.2s
BR101 Keskin Array S 28.22 288 *e*P **P 05 08 06.3 +1.8**

BR131	Keskin Array S	28.22 288	eP	P	P	05 08 06.7 +2.2
BRTR	Keskin Array B	28.22 288	P	P	P	05 08 06.3 +1.8
	comp=Z,16nm,0.8s,baz=93,slow=7.1,SNR=24					
BRTR			LR	LR		05 21 23.9
	comp=Z,598nm,19.6s,baz=260,slow=41					
BRTR	Keskin Array B	28.22 288	i P	P	P	05 08 07.9 +3.4
BRTR			pmax	pmax		
	comp=Z,16nm,0.9s					
ZAK	Zakamensk	28.34 49	eP	P	P	05 08 06.7 +1.3
ZAK			pmax	pmax		
	comp=Z,32nm,1.4s					
ANTO	Ankara	28.86 289	⇓i P	P	P	05 08 13.9 +3.8
ANTO	Ankara	28.86 289	eP	P	P	05 08 12.1 +2.0
	comp=Z,48nm,1.4s					
ANTO	Ankara	28.86 289	P	P		05 08 17.2 +7.1
	SNR=11					
ANTO	Ankara	28.86 289	eP	P	P	05 08 12.1 +2.0
ANTO			pmax	pmax		
	comp=Z,48nm,1.4s					
TLY	Talaya	28.96 47	eP	P	P	05 08 10.9 +0.1
	comp=Z,46nm,1.2s					
TLY	Talaya	28.96 47	P	P	P	05 08 13.5 +2.6
	SNR=16					
TLY	Talaya	28.96 47	P	P	P	05 08 13.5 +2.6
	SNR=16					
TLY	Talaya	28.96 47	c i P	P	P	05 08 12.2 +1.4
TLY			e			05 09 02.6
TLY			ePPP	PPP		05 09 10.4
TLY			eS	S		05 13 01.0 +0.4
TLY			pmax	pmax		
	comp=Z,53nm,1.4s					
TLY			MLR	MLR		
	comp=Z,1μm,16.0s					
MOS	Moscow	29.12 322	eP	P	P	05 08 12.3 +0.1
MOS			eS	S	S	05 13 01.5 -1.5
MOS			eSS	SnSn	SnSn	05 14 26.5 -1.0
MOS			pmax	pmax		
	comp=Z,400nm,2.2s					
MOS			pmax	pmax		
	comp=Z,133nm,1.4s					
MOS			MLR	MLR		
	comp=N,3μm,12.0s					
MOS			MLR	MLR		
	comp=E,3μm,12.0s					
MOS			MLR	MLR		
	comp=Z,5μm,12.0s					
CD2	Chengdu	29.14 90	P	P	P	05 08 13.1 +0.5
CD2			S	S	S	05 13 01.8 -2.0
CD2			pmax	pmax		
	comp=Z,70nm,1.2s					
CD2			LR	LR		
	comp=Z,3μm,10.4s					
CD2			LR	LR		
	comp=Z,4μm,15.3s					
OBN	Obninsk	29.36 321	P	P	P	05 08 15.3 +1.1
	comp=Z,58nm,0.5s,baz=58,slow=1.0,SNR=20					
OBN	Obninsk	29.36 321	eP	P	P	05 08 15.0 +0.7
	comp=Z,233nm,1.4s					
OBN	Obninsk	29.36 321	d i P	P	P	05 08 14.1 -0.1
OBN			i			05 09 06.1
OBN			pmax	pmax		
	comp=Z,75nm,1.0s					
OBN			MLR	MLR		
	comp=Z,3μm,16.0s					
LADK	Ladik-KONYA	29.36 285	P	P	P	05 08 13.3 -1.3
KONT	Konya--Tatoy	29.40 285	P	P	P	05 08 15.8 +0.9
EIL	Elat	29.40 267	P	P	P	05 08 16.8 +1.9
	comp=Z,2.7nm,0.8s,baz=41,slow=9.3,SNR=2.5					
EIL			Lg	Lg		05 18 12.8
	comp=Z,1.0nm,0.4s,baz=110,slow=9.6,SNR=2.3					
IRK	Irkutsk	29.52 46	eP	P	P	05 08 16.3 +0.6
IRK			eS	S	S	05 13 16.3 +7.0
IRK			e			05 15 05.5
IRK			pmax	pmax		
	comp=Z,146nm,2.3s					
PRGR	Permogore	29.60 337	eP	P	P	05 08 16.5 +0.2
PRGR			e*PP	pP	pP	05 08 20.3 -1.9
PRGR			e*SP	sP	sP	05 08 26.5 +1.9
PRGR			pmax	pmax		
	comp=Z,100nm,0.9s					
KIZT	Kizilcal	29.66 287	P	P	P	05 08 20.5 +3.2
SONA0	Songino Array	29.74 55	eP	P	P	05 08 18.4 +0.5
SONA0			ePcP	PcP	PcP	05 11 20.3 -1.1
SONM	Songino Array	29.74 55	P	P	P	05 08 18.4 +0.5
	comp=Z,19nm,0.8s,baz=258,slow=8.6,SNR=41					
SONM			PcP	PcP	PcP	05 11 20.3 -1.1
	comp=Z,5.9nm,1.0s,baz=270,slow=5.8,SNR=3.8					
SONM			Lg	Lg		05 18 22.8
	comp=Z,0.6nm,0.5s,baz=194,slow=18,SNR=2.3					
SONM			LR	LR		05 21 51.3
	comp=Z,3μm,20.1s,baz=266,slow=40					
SONA1	Songino Array	29.75 55	eP	P	P	05 08 18.4 +0.4
AUMIH	MIHALICIK	29.87 289	P	P	P	05 08 22.9 +3.8
ULN	Ulaanbaatar	30.18 55	eP	P	P	05 08 22.5 +0.6
	comp=Z,21nm,1.0s					
ULN	Ulaanbaatar	30.18 55	P	P	P	05 08 22.9 +1.0
	SNR=18					
ULN	Ulaanbaatar	30.18 55	P	P	P	05 08 22.9 +1.0
	SNR=18					
ULN	Ulaanbaatar	30.18 55	c eP	P	P	05 08 22.4 +0.5
ULN			pmax	pmax		
	comp=Z,54nm,2.5s					
PALK	Pallekele	30.52 157	P	P	P	05 08 25.2 +0.3
	comp=Z,42nm,1.1s,baz=295,slow=9.9,SNR=4.6					
PALK			Lg	Lg		05 18 23.5
	comp=Z,9.4nm,0.9s,baz=299,slow=19,SNR=3.3					
PALK			LR	LR		05 21 31.3
	comp=Z,3μm,18.6s,baz=242,slow=38					
PALK	Pallekele	30.52 157	eP	P	P	05 08 25.3 +0.4
	comp=Z,50nm,1.1s					
PALK			Lg	Lg		05 18 23.5
PALK	Pallekele	30.52 157	i P	P	P	05 08 27.6 +2.7
SUTC	Sutluce-Ispart	30.54 284	P	P	P	05 08 23.3 -1.8
BORA	Eskisehir	30.66 289	P	P	P	05 08 27.9 +1.9
CMAI	Chiengmai2	30.67 114	P	P	P	05 08 26.1 -0.3
	comp=Z,220nm,1.7s,comp=Z,7μm					
KMI	Kunming	30.68 101	P	P	P	05 08 27.0 +0.4
KMI			S	S	S	05 13 30.6 +2.1
KMI			pmax	pmax		
	comp=Z,22nm,0.6s					
KMI			pmax	pmax		
	comp=Z,220nm,8.1s					
KMI			LR	LR		
	comp=Z,950nm,9.8s					
KMI			LR	LR		
	comp=Z,2μm,12.2s					
KMI			LR	LR		
	comp=Z,1μm,13.3s					
ISP	Isparta	30.86 285	i P	P	P	05 08 30.8 +3.0
ISP			pmax	pmax		
	comp=Z,16nm,0.9s					
KORT	Korkueli	31.13 283	P	P	P	05 08 33.3 +3.0
KLMR	Klimovskoe	31.18 332	d i P	P	P	05 08 30.3 0.0
KLMR			S	S	S	05 13 31.3 -3.8
KLMR			pmax	pmax		
	comp=Z,121nm,1.3s					
KLMR			MLR	MLR		
	comp=Z,4μm,14.0s					
KLMR	Klimovskoe	31.18 332	⇓i P	P	P	05 08 30.4 +0.1
KLMR			eP	P	P	05 08 30.4 +0.1
KLMR			eP	P	P	05 08 30.4 +0.1
KLMR			AMP			05 08 35.2
	comp=Z,121nm,1.3s					
KLMR			S	S	S	05 13 31.3 -3.8
KLMR			S	S	S	05 13 31.3 -3.8
KLMR			LQ	LQ		05 18 06.6
KLMR			LQ	LQ		05 18 06.6
KLMR			LR	LR		05 19 43.6
KLMR			AMP			05 22 03.3
	comp=Z,4μm,13.5s					
CHTO	Chiang Mai	31.29 115	P	P	P	05 08 32.5 +0.8
	comp=Z,124nm,1.0s,comp=Z,3μm					
CHTO	Chiang Mai	31.29 115	eP	P	P	05 08 31.2 -0.4
	comp=Z,24nm,1.0s					
CHTO	Chiang Mai	31.29 115	eP	P	P	05 08 31.3 -0.4
CHTO			pmax	pmax		
	comp=Z,24nm,1.0s					
TVSB	Tavsanli	31.46 288	P	P	P	05 08 33.9 +0.7
CM31	Chiang Mai Arr	31.51 116	eP	P	P	05 08 33.9 +0.3
CMAR	Chiang Mai Arr	31.51 116	P	P	P	05 08 33.0 -0.7
	comp=Z,26nm,1.0s,baz=298,slow=8.4,SNR=55					
CMAR			PcP	PcP	PcP	05 11 25.8 -0.5
	comp=Z,3.4nm,0.5s,baz=305,slow=3.9,SNR=3.7					
CMAR			ScP	ScP	ScP	05 15 07.0 -1.5
	comp=Z,5.4nm,1.0s,baz=296,slow=4.7,SNR=5.9					
CMAR	Chiang Mai Arr	31.51 116	P	P	P	05 08 33.0 -0.7
CMAR						05 11 25.8
CMAR			pmax	pmax		
	comp=Z,23nm,0.9s					
ELL	Elmali	31.52 283	P	P	P	05 08 36.1 +2.4
CM01	Chiang Mai Arr	31.55 116	eP	P	P	05 08 33.3 -0.6
TLCR		31.73 299	⇑i P	P	P	05 08 37.0 +1.7
KIS	Kishinev	31.85 303	eP	P	P	05 08 37.0 +0.7
	comp=Z,200nm,1.4s					
KIS	Kishinev	31.85 303	ePP	PP		05 09 36.0 -12
KIS			eS	S	S	05 13 46.0 +0.1
KIS			eSS	SnSn	SnSn	05 15 24.0 -10
KIS			eLQ	LQ		05 20 36.0
	comp=Z,2μm,22.0s					
KIS			LRM	MLR		05 23 36.0
	comp=Z,2μm,20.0s					
TIRR	Tirgusor	32.00 298	⇓i P	P	P	05 08 39.6 +1.9
TIRR	Tirgusor	32.00 298	eP	P	P	05 08 39.4 +1.7
	comp=Z,28nm,1.3s					
TIRR	Tirgusor	32.00 298	eP	P	P	05 08 39.4 +1.7
TIRR			pmax	pmax		
	comp=Z,28nm,1.3s					
AKASG	Malin Array Be	32.12 310	P	P	P	05 08 39.3 +0.6
	comp=Z,20nm,0.6s,baz=85,slow=7.5,SNR=181					
AKASG			ScP	ScP	ScP	05 15 09.5 -0.5
	comp=Z,0.1nm,0.3s,baz=101,slow=9.5,SNR=3.5					
AKASG			LR	LR		05 25 18.9
	comp=Z,2μm,19.3s,baz=85,slow=43					
AKASG	Malin Array Be	32.12 310	i P	P	P	05 08 39.5 +0.8
AKASG			pmax	pmax		
	comp=Z,43nm,0.6s					
AKBB	Malin Arrray Si	32.12 310	eP	P	P	05 08 39.1 +0.4
	comp=Z,47nm,0.8s					
AKBB	Malin Array Si	32.12 310	eP	P	P	05 08 39.1 +0.4
AKBB			pmax	pmax		
	comp=Z,47nm,0.8s					
KIEV	Kiev	32.13 310	eP	P	P	05 08 39.4 +0.6
	comp=Z,48nm,0.9s					
KIEV	Kiev	32.13 310	i P	P	P	05 08 39.2 +0.4
	SNR=12					
KIEV	Kiev	32.13 310	i P	P	P	05 08 39.2 +0.4
	SNR=12					
KIEV	Kiev	32.13 310	d i P	P	P	05 08 39.3 +0.6
KIEV			pmax	pmax		
	comp=Z,42nm,0.9s					
KULA	Kula-Manisa	32.20 287	P	P	P	05 08 40.3 +0.6
TLB	Topalu	32.26 298	⇓i P	P	P	05 08 41.5 +1.5
MANT	Manisa	32.29 287	eP	P	P	05 08 42.8 +2.3
	comp=Z,169nm,1.0s					
XAN	Xi'an	32.39 82	⇑P	P	P	05 08 41.0 -0.3
XAN			pP	pP		05 08 45.4 -1.8
XAN			S	S	S	05 14 00.9 +6.3
XAN			pmax	pmax		
	comp=Z,43nm,1.1s					
XAN			pmax	pmax		
	comp=Z,170nm,4.1s					
XAN			LR	LR		
	comp=Z,2μm,14.2s					
XAN			LR	LR		
	comp=Z,3μm,12.3s					
XAN			LR	LR		
	comp=Z,2μm,14.7s					
NANT	Nan	32.59 113	P	P	P	05 08 42.0 -1.1
	comp=Z,11nm,1.1s,comp=Z,117nm					
PRD	Provadia	32.74 296	i P	P	P	05 08 46.2 +2.0
ODBI	Odobesti	32.99 300	⇑i P	P	P	05 08 50.2 +3.8
GYA	Guiyang	33.21 96	⇑i P	P	P	05 08 48.4 -0.3
GYA			PcP	PcP	PcP	05 11 37.2 +6.1
GYA			S	S	S	05 14 04.1 -3.7
GYA			ScP	ScP	ScP	05 15 19.8 +5.4
GYA			SS	SnSn	SnSn	05 16 12.0 +4.2
GYA			ScS	ScS	ScS	05 19 18.7 +3.5
GYA			pmax	pmax		
	comp=Z,30nm,0.7s					
GYA			pmax	pmax		
	comp=Z,140nm,4.8s					
GYA			LR	LR		
	comp=Z,1μm,14.3s					
GYA			LR	LR		
	comp=Z,1μm,14.5s					
GYA			LR	LR		
	comp=Z,1μm,12.8s					
VRI	Vrincioaia	33.22 300	⇓i P	P	P	05 08 51.3 +2.8
VRI	Vrincioaia	33.22 300	P	P	P	05 08 51.2 +2.8
VRI			pmax	pmax		
	comp=Z,282nm,1.1s					
HHC	Hu-ho-hao-te	33.24 69	eP	P	P	05 08 50.7 +2.0
HHC			S	S	S	05 14 09.3 +1.4
HHC			pmax	pmax		
	comp=Z,17nm,1.0s					
HHC			pmax	pmax		
	comp=Z,130nm,6.9s					
HHC			LR	LR		
	comp=Z,3μm,13.6s					
HHC			LR	LR		
	comp=Z,2μm,13.7s					
HHC			LR	LR		
	comp=Z,2μm,14.8s					
PLOR	Plostina	33.28 300	⇓i P	P	P	05 08 52.0 +3.1
PLOR	Plostina	33.28 300	P	P	P	05 08 51.6 +2.7
TESR	Tescani	33.30 302	⇓i P	P	P	05 08 50.4 +1.3
ISR	Istrita	33.34 299	⇓i P	P	P	05 08 53.2 +3.7
ISR	Istrita	33.34 299	P	P	P	05 08 53.2 +3.7
JMB	Yambol	33.37 294	i P	P	P	05 08 52.3 +2.5
PHIT	Phitsanulok	33.40 116	P	P	P	05 08 51.7 +1.5
	comp=Z,47nm,1.1s					
MLR	Muntele Rosu	33.76 300	P	P	P	05 08 56.3 +3.0
	comp=Z,14nm,0.8s,baz=69,slow=2.4,SNR=94					
MLR	Muntele Rosu	33.76 300	⇑i P	P	P	05 08 56.9 +3.6
MLR	Muntele Rosu	33.76 300	eP	P	P	05 08 56.4 +3.2
	comp=Z,133nm,1.1s					
SZH	Strazhica	33.81 296	i P	P	P	05 08 55.2 +1.7
MICGM	Minsk	33.82 316	eP	P	P	05 08 53.0 -0.5
MICGM			eS	S	S	05 14 08.0 -8.4
MICGM			eLR	LR		05 21 40.0
MICGM			LRM	MLR		05 24 44.0
	comp=Z,5.0nm,10.0s					
MNK	Minsk	33.82 316	eP	P	P	05 08 53.0 -0.5
MNK			eS	S	S	05 14 08.0 -8.4
MNK			MLR	MLR		
	comp=Z,5μm,10.0s					
TMCR	Tamitsa	33.85 336	eP	P	P	05 08 54.0 +0.4
TMCR			pmax	pmax		
	comp=Z,218nm,1.4s					
ALN	Alexandroupoli	33.91 292	eP	P	P	05 08 56.8 +2.4
	comp=Z,31nm,1.1s					
ALN	Alexandroupoli	33.91 292	P	P	P	05 08 58.7 +4.3
ALN	Alexandroupoli	33.91 292	eP	P	P	05 08 56.8 +2.4
ALN			pmax	pmax		
	comp=Z,31nm,1.1s					
ENH	Enshi	34.00 88	eP	P	P	05 08 54.9 -0.5
	comp=Z,35nm,1.0s					
ATD	Arta Tunnel	34.14 231	P	P	P	05 08 56.4 -0.3
	comp=Z,4.2nm,0.4s,baz=47,slow=6.8,SNR=4.0					
ATD			LR	LR		05 25 05.7
	comp=Z,1μm,18.1s,baz=43,slow=40					
DOPR	Dopca	34.16 301	⇓i P	P	P	05 08 59.4 +2.8
PBKT	Sadao Pong	34.20 116	P	P	P	05 08 56.8 -0.3
	comp=Z,78nm,1.1s,comp=Z,1μm					
PBKT	Sadao Pong	34.20 116	eP	P	P	05 08 56.7 -0.5
	comp=Z,74nm,1.1s					
CHOS	Chios island	34.24 287	P	P		05 09 02.8 +5.3
CHOS	Chios island	34.24 287	P	P		05 09 02.8 +5.3
RDO	Rodhopi	34.26 292	P	P		05 09 02.9 +5.4
RDO	Rodhopi	34.26 292	P	P		05 09 02.9 +5.4
KDZ	Kurdzhali	34.30 293	i P	P		05 09 03.4 +5.5
BURAR	Bucovina Array	34.34 304	⇓i P	P	P	05 09 00.6 +2.4
BURAR	Bucovina Array	34.34 304	P	P	P	05 09 00.1 +1.9
BUR04	Bucovina Ar. S	34.34 304	eP	P	P	05 08 59.8 +1.5
SMTH	Samothraki Isl	34.34 291	P	P	P	05 09 01.9 +3.7
SMTH	Samothraki Isl	34.34 291	P	P	P	05 09 01.9 +3.7
BUR08	Bucovina Ar. S	34.35 304	eP	P	P	05 08 59.9 +1.6
TIY	Taiyuan	34.35 74	eP	P		05 09 03.6 +5.2
TIY			S	S	S	05 14 28.0 +2.9
TIY			LR	LR		
	comp=Z,2μm,12.3s					
TIY			LR	LR		
	comp=Z,830nm,9.0s					
TIY			LR	LR		
	comp=Z,1μm,15.7s					
SRDT	SRDT	34.38 121	P	P	P	05 08 59.1 +0.4
	comp=Z,75nm,0.9s,comp=Z,5μm					
VOIR		34.39 300	⇓i P	P	P	05 09 01.0 +2.3
VOIR		34.39 300	P	P	P	05 09 01.0 +2.3
PUL	Pulkovo	34.46 326	c eP	P	P	05 08 59.9 +0.9
PUL			pmax	pmax		
	comp=Z,94nm,0.4s					
NACGM	Naroch	34.55 317	e	P	P	05 09 01.0 +1.2
NACGM			eLQ	LQ		05 21 13.0
NACGM			eLR	LR		05 23 25.0
IDID	Didziasalis	34.68 317	eP	P	P	05 09 02.3 +1.4
IDID			IAmb	IAmb		05 09 08.1
	comp=Z,30nm,1.1s					
NRIK	Noril'sk	34.82 11	P	P	P	05 09 03.0 +1.0
	comp=Z,158nm,1.0s,baz=204,slow=5.8,SNR=27					
NRIK	Noril'sk	34.82 11	P	P	P	05 09 03.0 +1.0
NRIK			pmax	pmax		
	comp=Z,158nm,1.0s					
RZN	Rozhen	34.82 293	i P	P	P	05 09 04.5 +1.9
NONG	Nongkai	34.87 112	P	P	P	05 09 02.6 -0.4
	comp=Z,158nm,1.1s					
APE	Apeiranthos	34.90 285	⇑i P	P	P	05 09 05.2 +2.1
APE	Apeiranthos	34.90 285	i P	P	P	05 09 05.3 +2.1
APE			pmax	pmax		
	comp=Z,67nm,1.0s					
IIGN	Ignalina	34.98 317	eP	P	P	05 09 05.0 +1.6
IIGN			IAmb	IAmb		05 09 06.5
	comp=Z,23nm,0.6s					
CIT	Chita	35.00 49	eP	P	P	05 09 04.8 +1.0
CIT			pmax	pmax		
	comp=Z,169nm,1.9s					
IZAR	Zarasai	35.07 318	eP	P	P	05 09 06.0 +1.8
IZAR			IAmb	IAmb		05 09 11.5
	comp=Z,20nm,0.8s					
ISAL	Salakas	35.09 318	eP	P	P	05 09 06.0 +1.5
ISAL			IAmb	IAmb		05 09 10.6
	comp=Z,34nm,1.2s					
SANT	Santorini	35.10 284	⇓i P	P	P	05 09 06.4 +1.5
SANT	Santorini	35.10 284	eP	P	P	05 09 05.9 +1.1
	comp=Z,62nm,1.0s					
LVV	L'vov	35.29 307	eP	P	P	05 09 08.5 +2.2
LVV			e			05 10 23.3
LVV			eS	S	S	05 14 38.7 -0.5
LVV			eSS	SS	SS	05 17 18.0 +5.4
LOT	Lotru	35.29 300	⇑i P	P	P	05 09 08.8 +2.3
LAST	Lasithi	35.37 282	P	P	P	05 09 09.4 +2.1
LAST	Lasithi	35.37 282	P	P	P	05 09 09.4 +2.1
CJR	Cluj-Napoca	35.41 302	⇑i P	P	P	05 09 10.0 +2.6
NVR	Nevrokopi	35.49 293	P	P	P	05 09 13.2 +5.0
NVR	Nevrokopi	35.49 293	P	P	P	05 09 13.2 +5.0
BMR	Baia Mare	35.50 304	⇓i P	P	P	05 09 11.0 +2.9
KARY	Karystos	35.56 287	P	P	P	05 09 11.6 +2.9
MMB	Musomiste	35.57 293	i P	P	P	05 09 10.8 +2.0
VSU	Vasula	35.66 322	c eP	P	P	05 09 09.7 +0.4
VSU			pmax	pmax		
	comp=Z,225nm,0.8s					
SRS	Serrai	35.73 292	P	P	P	05 09 14.4 +4.3
SRS	Serrai	35.73 292	P	P	P	05 09 14.4 +4.3
SRS	Serrai	35.73 292	P	P	P	05 09 14.4 +4.3
PHET	Kaeng Krachan	35.74 122	P	P	P	05 09 12.4 +1.9
	comp=Z,16nm,0.9s,comp=Z,199nm					
IDI	Anoyia	35.81 282	P	P	P	05 09 11.8 +0.9
	comp=Z,4.3nm,0.4s,baz=32,slow=8.0,SNR=11					
IDI	Anoyia	35.81 282	⇓i P	P	P	05 09 12.0 +1.0
IDI	Anoyia	35.81 282	eP	P	P	05 09 12.2 +1.2
	comp=Z,48nm,1.4s					
IDI	Anoyia	35.81 282	⇓i P	P	P	05 09 12.0 +1.0
PAIG	Paliouri	35.82 290	P	P	P	05 09 14.4 +3.5
PAIG	Paliouri	35.82 290	P	P	P	05 09 14.4 +3.5
PAIG	Paliouri	35.82 290	P	P	P	05 09 14.4 +3.5
PAIG	Paliouri	35.82 290	P	P	P	05 09 14.4 +3.5
VTS	Vitosha	35.85 295	⇑i P	P	P	05 09 13.9 +2.5
VTS	Vitosha	35.85 295	eP	P	P	05 09 13.6 +2.2
	comp=Z,30nm,1.0s					
VTS	Vitosha	35.85 295	i P	P	P	05 09 13.3 +1.9
VTS	Vitosha	35.85 295	P	P	P	05 09 14.4 +3.0
VTS	Vitosha	35.85 295	eP	P	P	05 09 13.6 +2.2
VTS			pmax	pmax		
	comp=Z,30nm,1.0s					
DEV	Deva	35.89 300	⇑i P	P	P	05 09 14.5 +3.0
KKB	Krupnik	36.02 294	i P	P	P	05 09 14.4 +1.8
DRGR		36.02 302	⇓i P	P	P	05 09 15.3 +2.6
ATHU	Athens Univers	36.08 287	P	P	P	05 09 15.9 +2.7
ATHU	Athens Univers	36.08 287	P	P	P	05 09 15.9 +2.7
SKIA	Skiathos	36.11 289	P	P	P	05 09 17.8 +4.4
ATH	Athens Observa	36.13 287	P	P		05 09 18.6 +5.0
ATH	Athens Observa	36.13 287	P	P		05 09 18.6 +5.0
ATH	Athens Observa	36.13 287	P	P		05 09 18.6 +5.0
KWP	Kalwaria Pacla	36.13 307	eP	P	P	05 09 15.2 +1.7
KWP			LMZ	LR		05 27 03.3
	comp=Z,2μm,16.2s					
KWP	Kalwaria Pacla	36.13 307	eP	P	P	05 09 15.1 +1.6
	comp=Z,728nm,1.1s					
KWP	Kalwaria Pacla	36.13 307	eP	P	P	05 09 15.2 +1.7
KWP			MLR	MLR		
	comp=Z,2μm,16.2s					
TRPA	Tarpa	36.16 304	⇓e pP	pP		05 09 19.2 -0.5
SKNT	Sakolnakorn	36.17 113	P	P	P	05 09 12.9 -1.2
	comp=Z,60nm,1.0s					
KNT	Kendrikon	36.24 292	P	P	P	05 09 18.5 +4.0
KNT	Kendrikon	36.24 292	P	P	P	05 09 18.5 +4.0
KNT	Kendrikon	36.24 292	P	P	P	05 09 18.5 +4.0
XOR	Xorichti	36.28 289	P	P	P	05 09 18.5 +3.6
XOR	Xorichti	36.28 289	P	P	P	05 09 18.5 +3.6
UZH	Uzhgorod	36.35 305	⇓e P	P	P	05 09 17.4 +2.1
UZH			i			05 09 23.8
UZH			e			05 10 36.8
UZH			eS	S	S	05 14 55.8 +0.5
UZH			e			05 17 18.6
UZH			MLR	MLR		
	comp=N,320nm,13.0s					
UZH			MLR	MLR		
	comp=E,10.0nm,13.0s					
UZH			MLR	MLR		
	comp=Z,120nm,13.0s					
SUW	Suwalki	36.40 314	eP	P	P	05 09 16.1 +0.4
SUW			LMZ	LR		05 26 24.2
	comp=Z,4μm,16.4s					
SUW	Suwalki	36.40 314	eP	P	P	05 09 16.1 +0.4
	comp=Z,76nm,1.1s					
SUW	Suwalki	36.40 314	eP	P	P	05 09 16.1 +0.4
SUW			MLR	MLR		
	comp=Z,4μm,16.4s					
VAY	Valandovo	36.46 293	i P	P		05 09 22.0 +5.6
IMMV	Iera Moni Meta	36.48 283	P	P	P	05 09 21.0 +4.3
LIT	Litokhoron	36.70 291	eP	P	P	05 09 21.3 +2.8
	comp=Z,24nm,1.1s					
LIT	Litokhoron	36.70 291	eP	P	P	05 09 21.3 +2.8
LIT			pmax	pmax		
	comp=Z,24nm,1.1s					
STIP	Stip	36.70 293	i P	P	P	05 09 18.5 0.0
SIRR	Siria	36.75 301	⇓i P	P	P	05 09 21.3 +2.4
MDVR	Moldovita	36.77 299	⇓i P	P	P	05 09 20.6 +1.5
BZS	Buzias	36.80 300	⇑i P	P	P	05 09 21.8 +2.5
BJT	Baijiatuau	36.83 69	eP	P	P	05 09 20.5 +0.9
	comp=Z,12nm,0.5s					
BJT	Baijiatuau	36.83 69	eP	P	P	05 09 20.5 +0.9
BJT			pmax	pmax		
	comp=Z,12nm,0.5s					
BJI	Beijing	36.83 69	⇑e P	P	P	05 09 20.0 +0.4
BJI			S	S	S	05 15 08.3 +5.4
BJI			pmax	pmax		
	comp=Z,15nm,0.8s					
BJI			pmax	pmax		
	comp=Z,180nm,3.1s					
BJI			LR	LR		
	comp=Z,5μm,24.0s					
BJI			LR	LR		
	comp=Z,3μm,14.3s					
BJI			LR	LR		
	comp=Z,2μm,15.7s					
CRVS	Cervenica-Dubn	36.91 306	eP	P	P	05 09 21.9 +1.8
CRVS			pmax	pmax		
	comp=Z,31nm,1.7s					
CRVS	Cervenica-Dubn	36.91 306	eP	P	P	05 09 21.9 +1.8
CRVS			eS	S	S	05 15 05.7 +1.8
CRVS			eSS	SS	SS	05 17 50.5 +5.1
CRVS			eL	L		05 29 00.9
AGG	Agios Georgios	37.00 289	eP	P	P	05 09 23.5 +2.4
	comp=Z,151nm,1.3s					
AGG	Agios Georgios	37.00 289	P	P	P	05 09 23.4 +2.4
AGG	Agios Georgios	37.00 289	eP	P	P	05 09 23.5 +2.4
AGG			pmax	pmax		
	comp=Z,151nm,1.3s					
FIA1	FINESS Array S	37.06 327	eP	P	P	05 09 22.1 +0.8
FIA0	FINESS Array S	37.06 327	eP	P	P	05 09 21.8 +0.6
FIA0	FINESS Array S	37.06 327	eP	P	P	05 09 21.8 +0.6
FINES	FINESS Array B	37.06 327	P	P	P	05 09 21.8 +0.6
	comp=Z,36nm,0.7s,baz=111,slow=11,

FINES LR LR 05 25 48.0
comp=Z,3µm,21.8s,baz=108,slow=38
FINES FINES Array B 37.06 327 *i* P **P** **05 09 22.0 +0.7**
FINES pmax pmax
comp=Z,36nm,0.7s
THL Klokotos Trika 37.15 290 P **P** **05 09 24.1 +1.9**
SKO Skopje 37.22 294 *i* P P 05 09 28.6 +5.7
EVR Evrytania 37.42 289 P **P** **05 09 25.3 +0.6**
EVR Evrytania 37.42 289 P **P** **05 09 25.3 +0.6**
FNA Florina 37.43 292 *e*P **P** **05 09 26.3 +1.6**
comp=Z,38nm,0.9s
FNA Florina 37.43 292 *e*P **P** **05 09 26.3 +1.6**
FNA pmax pmax
comp=Z,38nm,0.9s
BIA Bitola 37.44 292 *i* P P 05 09 31.1 +6.4
APA Apatity 37.51 338⇑*i*P **P** **05 09 25.0 +0.1**
APA *i* 05 11 44.0
APA *i* S **S** **05 15 09.0 -3.5**
APA pmax pmax
comp=Z,40nm,1.0s
APA MLR MLR
comp=Z,7µm,10.0s
BEL Belsk 37.53 310 *e*P **P** **05 09 29.9 +4.6**
BEL LMZ LR 05 27 57.6
comp=Z,2µm,17.9s
BEL Belsk 37.53 310 *e*P **P** **05 09 29.9 +4.6**
BEL MLR MLR
comp=Z,2µm,17.9s
KECS Kecovo 37.54 305 *e*P **P** **05 09 27.3 +1.8**
KECS Kecovo 37.54 305 *e*P **P** **05 09 27.3 +1.8**
NIE Niedzica 37.69 306 *e*P **P** **05 09 29.1 +2.3**
NIE *e*S **S** **05 15 22.7 +6.8**
NIE LMZ LR 05 28 17.3
comp=Z,2µm,16.9s
NIE Niedzica 37.69 306 *e*P **P** **05 09 29.1 +2.3**
NIE *e*S **S** **05 15 22.7 +6.8**
NIE MLR MLR
comp=Z,2µm,16.9s
PENT Pentalofos 37.70 291 P **P** **05 09 28.9 +1.8**
WHN Wuhan 37.83 85 ⇑P **P** **05 09 28.5 +0.3**
WHN pP **pP** **05 09 32.9 -1.2**
WHN PP **PnPn** **05 11 03.0 +7.2**
WHN S **S** **05 15 26.6 +8.3**
WHN pmax pmax
comp=Z,110nm,1.2s
WHN LR LR
comp=Z,3µm,10.9s
WHN LR LR
comp=Z,2µm,12.1s
WHN LR LR
comp=Z,5µm,19.8s
DSL Palaion Diasel 37.92 290 P **P** **05 09 30.2 +1.3**
DSL Palaion Diasel 37.92 290 P **P** **05 09 30.2 +1.3**
PSZ Piszkesteto 37.94 304⇓*e*pP **P** **05 09 30.7 +1.8**
PSZ Piszkesteto 37.94 304 *e*P **P** **05 09 31.3 +2.3**
comp=Z,24nm,0.9s
PSZ Piszkesteto 37.94 304 *e*P **P** **05 09 31.3 +2.3**
PSZ pmax pmax
comp=Z,24nm,0.9s
PDO Prodromos 37.96 289 P **P** **05 09 29.9 +0.7**
OJC Ojcow 38.04 308 *e*P **P** **05 09 30.3 +0.5**
OJC *e*S **S** **05 15 25.3 +4.1**
OJC LMZ LR 05 23 58.8
comp=Z,900nm,30.6s
OJC Ojcow 38.04 308 *e*P **P** **05 09 31.1 +1.4**
comp=Z,69nm,1.1s
OJC Ojcow 38.04 308 *e*P **P** **05 09 31.1 +1.4**
OJC pmax pmax
comp=Z,69nm,1.1s
DIVS Divibare 38.05 298 *e*P **P** **05 09 31.5 +1.5**
comp=Z,52nm,1.0s
KLNR Kaliningrad 38.21 315*c i*P **P** **05 09 31.3 +0.3**
KLNR pmax pmax
comp=Z,64nm,0.8s
LANS Liptovska Anna 38.23 306 *e*P **P** **05 09 33.9 +2.6**
LANS Liptovska Anna 38.23 306 *e*P **P** **05 09 33.9 +2.6**
LKD2 Lefkada island 38.33 289 P **P** **05 09 32.8 +0.5**
LKD2 Lefkada island 38.33 289 P **P** **05 09 32.8 +0.5**
TIA Tai'an 38.35 75 P **P** **05 09 32.6 +0.1**
TIA S **S** **05 15 27.0 +0.9**
TIA pmax pmax
comp=Z,10.0nm,1.4s
TIA LR LR
comp=Z,1µm,15.9s
TIA LR LR
comp=Z,590nm,17.1s
TIA LR LR
comp=Z,650nm,18.6s
VYHS Vyhne 38.64 305 *e*P **P** **05 09 36.9 +2.1**
VYHS pmax pmax
comp=Z,17nm,1.3s
VYHS Vyhne 38.64 305 *e*P **P** **05 09 36.9 +2.1**
VYHS *e*S **S** **05 15 34.9 +4.7**
HIA Hailar 38.69 54 *e*P **P** **05 09 36.4 +1.1**
comp=Z,26nm,1.0s
HIA Hailar 38.69 54 *e*P **P** **05 09 36.4 +1.1**
HIA pmax pmax
comp=Z,25nm,1.0s
PDG Podgorica 38.77 295⇑*i*P **P** **05 09 37.2 +1.3**
TTG Podgorica 38.77 295 *e*P **P** **05 09 36.7 +0.7**
comp=Z,30nm,1.1s
TTG Podgorica 38.77 295 *e*P **P** **05 09 36.7 +0.7**
TTG pmax pmax
comp=Z,30nm,1.1s
OKC Ostrava-Krasne 39.10 307 *e*PP PP 05 11 15.7 +7.5
OKC *e*S **S** **05 15 39.2 +2.2**
OKC AMS AMS 05 31 50.0
comp=Z,2µm,11.8s
JAVC Velka Javorina 39.41 305 *e*P **P** **05 09 43.5 +2.2**
JAVC *e* 05 09 47.9
QIZ Qiongzhong 39.47 104 P **P** **05 09 46.4 +4.4**
QIZ pP **pP** **05 09 49.0 +1.0**
QIZ S **S** **05 15 50.3 +7.1**
QIZ sS **sS** **05 15 52.3 -0.7**
QIZ pmax pmax
comp=Z,200nm,6.7s
QIZ LR LR
comp=Z,620nm,10.0s
QIZ LR LR
comp=Z,820nm,16.7s
QIZ LR LR
comp=Z,860nm,14.2s
MORC Moravsky Berou 39.49 307⇑*i*P **P** **05 09 44.1 +2.2**
MORC Moravsky Berou 39.49 307 *e*P **P** **05 09 43.8 +1.9**
comp=Z,185nm,1.1s
MORC Moravsky Berou 39.49 307 *e*P **P** **05 09 43.8 +1.9**
MORC pmax pmax
comp=Z,185nm,1.1s
MORC Moravsky Berou 39.49 307 *e*P **P** **05 09 43.6 +1.7**
MORC *e* 05 09 47.7
TRTT Trang 39.51 128 P **P** **05 09 42.5 +0.1**
comp=Z,26nm,1.1s
MODS Modra-Piesok 39.68 305 *e*P **P** **05 09 44.3 +0.8**
MODS *e* 05 09 47.3
MODS *e* 05 11 15.7
MODS *e*S **S** **05 15 47.2 +1.3**
MODS pmax pmax
comp=Z,40nm,1.2s
MODS MLR MLR
comp=Z,2µm,18.0s
MODS Modra-Piesok 39.68 305 *e*P **P** **05 09 44.3 +0.8**
MODS *e* 05 09 47.3
MODS *e*PP **PP** **05 11 15.7 +1.1**
MODS *e*S **S** **05 15 47.2 +1.3**
MODS *e*SS **SnSn** **05 18 45.9 +2.4**
MODS *e*L L 05 30 38.4
ZST Bratislava 39.80 304 *e*P **P** **05 09 45.4 +0.9**
ZST pmax pmax
comp=Z,4.0nm,1.5s
ZST Bratislava 39.80 304 *e*P **P** **05 09 45.4 +0.9**
ZST *e*S **S** **05 15 50.0 +2.3**
GKP Gorka Klasztor 39.81 312 *e*P **P** **05 09 45.9 +1.5**
GKP LMZ LR 05 28 46.7
comp=Z,3µm,16.1s
GKP Gorka Klasztor 39.81 312 *e*P **P** **05 09 45.9 +1.5**
GKP MLR MLR
comp=Z,3µm,16.1s
STON Ston 39.85 296 P **P** **05 09 45.1 +0.2**
KRLC Kraliky 39.98 307 *e*P **P** **05 09 48.1 +2.1**
KRLC *ex* x 05 09 51.0
KRLC Kraliky 39.98 307 *e*P **P** **05 09 48.1 +2.1**
KRLC *e* 05 09 51.0
BLY Banja Luka 39.99 299⇓*i*P **P** **05 09 48.9 +2.8**
BLY Banja Luka 39.99 299 *e*P **P** **05 09 48.3 +2.2**
comp=Z,51nm,1.3s
VRAC Vranov 40.11 306⇑*i*P **P** **05 09 49.6 +2.6**
VRAC Vranov 40.11 306 *e*P **P** **05 09 48.8 +1.8**
VRAC *e* 05 09 53.2
SOP Sopron 40.19 304⇓*e*pP pP 05 09 52.5 -1.2
KRUC Moravsky 40.24 306 *e*P **P** **05 09 49.9 +1.8**
KRUC *e* 05 09 53.9
DPC Dobruska-Polom 40.27 308 *e*P **P** **05 09 50.8 +2.4**
DPC *ex* x 05 09 54.5
DPC *e*PP **PnPn** **05 11 27.1 +2.3**
DPC AMS AMS 05 29 50.0
comp=Z,1µm,15.9s
DPC Dobruska-Polom 40.27 308 *e*P **P** **05 09 50.8 +2.4**
DPC *e* 05 09 54.5
DPC *e* 05 11 27.1
DPC MLR MLR
comp=Z,1µm,15.9s
KSP Ksiaz 40.30 309 *e*P **P** **05 09 50.0 +1.5**
KSP *e*S **S** **05 15 57.7 +2.7**
KSP LMZ LR 05 29 47.5
comp=Z,3µm,16.3s
KSP Ksiaz 40.30 309 *e*P **P** **05 09 50.0 +1.5**
KSP *e*S **S** **05 15 57.7 +2.7**
KSP MLR MLR
comp=Z,3µm,16.3s
MLSI Meulaboh, Aceh 40.34 135 P **P** **05 09 47.6 -1.6**
UPC Upice 40.47 308 *e*P **P** **05 09 52.3 +2.3**
UPC *ex* x 05 09 55.9
UPC *e*PP **PnPn** **05 11 31.3 +4.2**
UPC *e*S **S** **05 15 52.4 -5.3**
UPC AMS AMS 05 30 20.0
comp=Z,2µm,13.4s
UPC Upice 40.47 308 *e*P **P** **05 09 52.3 +2.3**
UPC *e* 05 09 55.9
UPC *e* 05 11 31.3
UPC *e*S **S** **05 15 52.4 -5.3**
UPC MLR MLR
comp=Z,2µm,13.4s
KOGS Kog 40.48 302 *e*P **P** **05 09 52.2 +2.1**
KOGS *i* 05 09 54.7
SKLT Songkhla 40.61 127 P **P** **05 09 51.0 -0.5**
comp=Z,41nm,1.6s
CONA Conrad Observa 40.65 304 *i* P **P** **05 09 53.7 +2.1**
comp=Z,12nm,0.7s
KEV Kevo 40.69 339 *e*P **P** **05 09 52.3 +0.8**
comp=Z,60nm,1.1s
KEV Kevo 40.69 339 *e*P **P** **05 09 52.3 +0.8**
KEV pmax pmax
comp=Z,60nm,1.1s
ARSA Arzberg 40.92 303 *i* P **P** **05 09 56.6 +2.8**
comp=Z,3.7nm,0.6s,SNR=8.9
NJ2 Nanjing 40.94 81 *e*P **P** **05 09 58.6 +4.6**
NJ2 pmax pmax
comp=Z,13nm,0.5s
ARA0 ARCESS Array S 41.01 338 *e*P **P** **05 09 54.8 +0.6**
ARCES ARCESS Array B 41.01 338 P **P** **05 09 54.8 +0.6**
comp=Z,72nm,1.0s,baz=121,slow=8.7,SNR=64
ARCES LR LR 05 28 10.3
comp=Z,3µm,20.2s,baz=124,slow=38
ARCES ARCESS Array B 41.01 338 *e*P **P** **05 09 54.9 +0.7**
ARE0 ARCESS Array S 41.01 338 *e*P **P** **05 09 55.2 +0.9**
comp=Z,104nm,1.0s
ARE0 ARCESS Array S 41.01 338 *e*P **P** **05 09 55.2 +0.9**
ARE0 *e* 05 18 59.0
DL2 Dalian 41.19 70 P P 05 10 01.2 +5.1
DL2 S **S** **05 16 12.6 +4.0**
DL2 pmax pmax
comp=Z,33nm,0.8s
DL2 pmax pmax
comp=Z,270nm,3.6s
DL2 LR LR
comp=Z,2µm,19.6s
DL2 LR LR
comp=Z,1µm,21.4s
DL2 LR LR
comp=Z,1µm,17.7s
TIP Timpagrande 41.22 291⇑*i*P **P** **05 09 57.5 +1.1**
TIP Timpagrande 41.22 291 *e*P **P** **05 09 58.9 +2.5**
comp=Z,50nm,1.4s
PERS Pernice 41.25 302 *i* P **P** **05 09 58.2 +1.6**
BOJS Bojanci 41.27 300 *i* P **P** **05 09 58.2 +1.6**
BOJS *e* 05 10 01.1
GOPC GO Pecny, Ondr 41.27 307 *e*P **P** **05 09 58.6 +2.0**
GOPC *ex* x 05 10 03.3
GOPC *e*PP **PnPn** **05 11 39.2 +2.8**
GOPC *e*S **S** **05 16 08.2 -1.4**
GOPC AMS AMS 05 31 30.0
comp=Z,1µm,14.0s
GOPC GO Pecny, Ondr 41.27 307 *e*P **P** **05 09 58.6 +2.0**
GOPC *e* 05 10 03.3
GOPC *e* 05 11 39.2
GOPC *e*S **S** **05 16 08.2 -1.4**
GOPC MLR MLR
comp=Z,1µm,14.0s
SOKA Soboth 41.30 302 *i* P **P** **05 09 58.8 +1.8**
comp=Z,3.0nm,0.2s,SNR=10
BSD Bornholm Skovb 41.31 315 *i* P **P** **05 09 56.9 +0.1**
comp=Z,25nm,0.8s
BSD Bornholm Skovb 41.31 315 *i* P **P** **05 09 56.9 +0.1**
BSD pmax pmax
comp=Z,25nm,0.8s
PVCC Panska Ves 41.39 308 *e*P **P** **05 09 59.0 +1.4**
PVCC *ex* x 05 10 03.5
PVCC *e*PP **PnPn** **05 11 38.5 +0.7**
PVCC AMS AMS 05 30 30.0
comp=Z,2µm,15.1s
PVCC Panska Ves 41.39 308 *e*P **P** **05 09 59.0 +1.4**
PVCC *e* 05 10 03.5
PVCC *e* 05 11 38.5
PVCC MLR MLR
comp=Z,2µm,15.1s
PRU Pruhonice 41.43 307 *e*P **P** **05 10 00.1 +2.2**
PRU *ex* x 05 10 03.9
PRU *e*PP **PnPn** **05 11 40.5 +2.3**
PRU *e*S **S** **05 16 08.0 -3.8**
PRU AMS AMS 05 31 40.0
comp=Z,1µm,13.9s
PRU Pruhonice 41.43 307 *e*P **P** **05 10 00.1 +2.2**
PRU *e* 05 10 03.9
PRU *e* 05 11 40.5
PRU *e*S **S** **05 16 08.0 -3.8**
PRU MLR MLR
comp=Z,1µm,13.9s
PRA Prague 41.49 307 AMS AMS 05 32 00.0
comp=Z,2µm,13.1s
OBKA Obir 41.65 302 *i* P **P** **05 10 02.1 +2.2**
comp=Z,5.2nm,0.5s,SNR=8.6
NVLJ Novalja 41.65 299 P **P** **05 10 00.6 +0.8**
LJU Ljubljana 41.71 301 *i* P **P** **05 10 02.4 +2.1**
LJU *e*S **S** **05 16 19.1 +2.9**
MOA Molln 41.72 304 *i* P **P** **05 10 02.0 +1.6**
comp=Z,17nm,0.9s,SNR=23
KCSI Kotacane, Aceh 41.73 134 P **P** **05 09 57.9 -2.8**
CUC Castrocucco 41.75 292 *e*P **P** **05 10 02.6 +1.9**
comp=Z,72nm,1.0s
BRG Berggiesshubel 41.78 309⇓*i*P **P** **05 10 02.6 +1.8**
comp=Z,35nm,0.6s
BRG *i* 05 10 06.7
comp=Z,72nm,1.0s
BRG *i* 05 11 00.7
comp=Z,17nm,1.3s
BRG PP **PnPn** **05 11 41.0 -1.4**
comp=Z,15nm,1.1s
BRG S **S** **05 16 22.0 +4.9**
BRG SS **SS** **05 19 17.0 -6.0**
comp=Z,3µm,14.2s
comp=N,1µm,14.3s
comp=E,2µm,14.3s
BRG Berggiesshubel 41.78 309⇓*i*P **P** **05 10 02.6 +1.8**
BRG *i* 05 10 06.7
BRG 05 11 41.0
BRG S **S** **05 16 22.0 +4.9**
BRG SS **SS** **05 19 17.0 -6.0**
BRG pmax pmax
comp=Z,35nm,0.6s
BRG MLR MLR
comp=Z,3µm,14.2s
BRG MLR MLR
comp=N,1µm,14.3s
BRG MLR MLR
comp=E,2µm,14.3s
GEC2 GERESS Array S 42.03 306 *e*P **P** **05 10 04.4 +1.4**
comp=E,28nm,1.1s
GEC2 GERESS Array S 42.03 306 *e*P **P** **05 10 04.4 +1.4**
GEC2 pmax pmax
comp=Z,28nm,1.1s
GERES GERESS Array B 42.03 306 P **P** **05 10 04.3 +1.4**
comp=Z,14nm,0.9s,baz=90,slow=8.0,SNR=47
GERES PP **PP** **05 11 46.4 +6.3**
comp=Z,6.6nm,0.9s,baz=71,slow=8.6,SNR=5.7
GEA0 GERESS Array S 42.03 306 *e*P **P** **05 10 04.2 +1.3**
SNY Shenyang 42.05 65⇑P **P** **05 10 07.1 +4.0**
SNY S **S** **05 16 21.2 0.0**
SNY pmax pmax
comp=Z,23nm,0.5s
SNY LR LR
comp=Z,3µm,14.2s
SNY LR LR
comp=Z,1µm,11.7s
SNY LR LR
comp=Z,2µm,12.1s
KULM Kulim 42.07 129 *e*P **P** **05 10 03.5 0.0**
comp=Z,52nm,1.2s
KHC Kasperske Hory 42.09 306 *e*P **P** **05 10 04.5 +1.2**
KHC *ex* x 05 10 08.1
KHC *e*PP **PP** **05 11 48.3 +7.5**
KHC *e*S **S** **05 16 20.8 -1.0**
KHC AMS AMS 05 31 00.0
comp=Z,2µm,16.0s
KHC Kasperske Hory 42.09 306 *e*P **P** **05 10 04.6 +1.2**
comp=Z,16nm,1.5s
KHC Kasperske Hory 42.09 306 *e*P **P** **05 10 04.6 +1.2**
KHC pmax pmax
comp=Z,16nm,1.5s
HAMF Hammerfest 42.12 339 *e*P **P** **05 10 04.7 +1.5**
HAMF *e* 05 19 09.0
CLNS Chul'man 42.19 43 *e*P **P** **05 10 04.6 +0.6**
CLNS *e**PP **sP** **05 10 13.8 +1.4**
CLNS *e* 05 11 43.0
CLNS *e* 05 12 00.2
CLNS *e*PPP PPP 05 12 12.1
CLNS *e*S **S** **05 16 21.4 -1.6**
CLNS pmax pmax
comp=Z,40nm,1.0s
CLNS pmax pmax
comp=E,30nm,1.0s
CLNS pmax pmax
comp=N,15nm,0.9s
CLNS pmax pmax
comp=Z,9.0nm,1.0s
CLNS pmax pmax
comp=E,7.0nm,0.9s
CLNS pmax pmax
comp=N,7.0nm,0.8s
CLNS smax smax
comp=N,235nm,12.3s
CLNS smax smax
comp=E,210nm,11.9s
CLNS MLR MLR
comp=Z,2µm,16.0s
CLNS MLR MLR
comp=E,2µm,16.0s
CLNS MLR MLR
comp=N,815nm,17.0s
RGN Rugen 42.20 314 *e*P **P** **05 10 05.8 +1.7**
comp=N,286nm,1.1s
CADS Cadrg 42.24 302 *e*P **P** **05 10 05.9 +1.3**
CADS *e*S **S** **05 16 24.8 +0.7**
MYKA Terra Mystica 42.26 302 *i* P **P** **05 10 06.7 +1.9**
comp=N,1.4nm,0.3s,SNR=9.7
TRI Trieste 42.28 301 *e*P **P** **05 10 06.2 +1.3**
comp=N,21nm,0.8s
TRI Trieste 42.28 301 *e*P **P** **05 10 06.2 +1.3**
TRI pmax pmax
comp=Z,21nm,0.8s
CLL Collm 42.37 309⇓*i*P **P** **05 10 06.7 +1.2**
comp=Z,18nm,0.8s
CLL ⇑*i*P(2) 05 10 10.7
comp=Z,56nm,1.1s
CLL *e*PP **PP** **05 11 50.0 +6.4**
CLL *e*PPP PPP 05 12 19.0
CLL *e*S **S** **05 16 30.0 +4.3**
CLL *e*(SS) 05 19 39.0
CLL Collm 42.37 309 *e*P **P** **05 10 06.7 +1.2**
comp=Z,41nm,0.9s
CLL Collm 42.37 309⇓*i*P **P** **05 10 06.7 +1.2**
CLL *i* 05 10 10.7
CLL *e*S **S** **05 16 23.0 -2.7**
CLL pmax pmax
comp=Z,18nm,0.8s
KBA Koelnbreinsper 42.41 303 *i* P **P** **05 10 07.9 +1.6**
comp=Z,27nm,1.1s,SNR=18
KBA Koelnbreinsper 42.41 303 P **P** **05 10 07.8 +1.6**
HFS Hagfors 42.54 322 P **P** **05 10 07.5 +0.6**
comp=Z,74nm,0.6s,baz=107,slow=9.5,SNR=210
HFS LR LR 05 29 23.0
comp=Z,3µm,18.5s,baz=96,slow=38
COP Copenhagen 42.76 316 *i* P **P** **05 10 13.3 +4.7**
comp=Z,74nm,0.9s
COP Copenhagen 42.76 316 *i* P **P** **05 10 13.3 +4.7**
COP pmax pmax
comp=Z,74nm,0.9s
NKC Novy Kostel 42.76 308 *e*PP PP 05 11 57.4 +9.5
NKC *e*S **S** **05 16 34.6 +3.0**
NKC AMS AMS 05 31 20.0
comp=Z,3µm,15.2s
LLD Lille Linde 42.87 315 *i* P **P** **05 10 11.5 +2.0**
LLD *i* 05 10 15.2
LLD Lille Linde 42.87 315 *i* P **P** **05 10 11.5 +2.0**
LLD *i* 05 10 15.2
IPM Ipoh 42.93 130 *e*P **P** **05 10 10.3 -0.2**
comp=Z,111nm,1.2s
PSI Prapat 42.98 134 P **P** **05 10 10.6 -0.4**
comp=Z,16nm,0.9s,baz=359,slow=3.8,SNR=6.9
PSI LR LR 05 29 47.7
comp=Z,2µm,20.3s,baz=271,slow=38
PSI Prapat 42.98 134 *e*P **P** **05 10 10.6 -0.4**
comp=Z,49nm,0.9s
ABTA Abfaltersbach 43.02 303 *i* P **P** **05 10 12.6 +1.6**
comp=Z,5.2nm,0.5s,SNR=5.4
CN2 Changchun 43.06 62 *e*P **P** **05 10 09.0 -2.3**
CN2 *e*PP **PP** **05 11 51.4 +0.2**
CN2 PcP **PcP** **05 11 59.9 -1.2**
CN2 *e*S **S** **05 16 29.3 -6.8**
CN2 pmax pmax
comp=Z,10.0nm,1.1s
CN2 pmax pmax
comp=Z,90nm,8.0s
CN2 LR LR
comp=Z,4µm,17.0s
CN2 LR LR
comp=Z,1µm,17.0s
CN2 LR LR
comp=Z,2µm,17.0s
AQU L'Aquila 43.06 296 *e*P P 05 10 16.9 +5.5
comp=Z,31nm,0.9s
AQU L'Aquila 43.06 296 *e*P P 05 10 16.9 +5.5
AQU pmax pmax
comp=Z,31nm,0.9s
TRO Tromso 43.10 337 *e*P **P** **05 10 12.4 +1.2**
TRO *e* 05 19 37.0
ZEA Zeya 43.40 47 *e*P **P** **05 10 15.2 +1.3**
ZEA *e*S **S** **05 16 46.0 +5.2**
ZEA *e*SS **ScS** **05 20 06.0 -6.5**
ZEA pmax pmax
comp=Z,400nm,8.0s
ZEA pmax pmax
comp=E,83nm,1.4s
ZEA pmax pmax
comp=N,89nm,1.0s
ZEA pmax pmax
comp=Z,100nm,1.0s
ZEA smax smax
comp=N,400nm,9.0s
ZEA MLR MLR
comp=Z,2µm,16.0s
ZEA MLR MLR
comp=N,1µm,15.0s
VAE Valguarnera 43.42 289 P **P** **05 10 15.0 +0.7**
comp=N,6.8nm,0.3s,baz=98,slow=15,SNR=2.5
GSI Gunungsitoli 43.42 136 P **P** **05 10 13.8 -0.7**
GSI Gunungsitoli 43.42 136 *e*P **P** **05 10 14.6 +0.1**
comp=N,80nm,0.8s
MOR8 Moi Rana 43.51 331 *e*P **P** **05 10 15.2 +0.6**
MOR8 *e* 05 19 47.3
QZH Quanzhou 43.53 91 *e*P **P** **05 10 17.5 +2.3**
QZH S **S** **05 16 49.3 +6.0**
QZH LR LR
comp=N,1µm,18.1s
QZH LR LR

comp=N,1µm,13.4s
QZH LR LR
comp=N,2µm,13.6s
WTTA Wattenberg 43.55 303 *i* P **P 05 10 16.3 +0.9**
comp=N,4.2nm,0.4s,SNR=6.9
GRFO Grafenberg 43.59 307 *e*P **P 05 10 18.2 +2.8**
comp=N,114nm,1.2s
GRFO Grafenberg 43.59 307 *e*P **P 05 10 18.2 +2.8**
GRFO pmax pmax
comp=Z,114nm,1.2s
NC405 NORSAR Array S 43.65 324 *e*P **P 05 10 15.6 -0.2**
STEI Steigen 43.73 334 *e*P **P 05 10 19.7 +3.4**
STEI *e* 05 19 55.5
WDD Wied Dalam 43.79 287 *e*P **P 05 10 19.0 +1.8**
comp=Z,65nm,0.8s
NC303 NORSAR Array S 43.83 324 *e*P **P 05 10 17.9 +0.7**
NB201 NORSAR Array S 43.84 323 *e*P **P 05 10 16.8 -0.6**
NB2 NORSAR Subarra 43.88 323 P **P 05 10 17.3 -0.4**
comp=Z,82nm,0.8s,baz=100,slow=8.6
NB2 NORSAR Subarra 43.88 323 P **P 05 10 17.3 -0.4**
baz=100,slow=8.6
NB200 NORSAR Array S 43.88 323 *e*P **P 05 10 17.9 +0.2**
NB200 *e*PP **PP 05 12 01.4 +1.7**
NOA NORSAR Array B 43.88 323 P **P 05 10 17.9 +0.2**
comp=Z,73nm,0.9s,baz=103,slow=7.1,SNR=105
NOA PcP **PP 05 12 01.4 +1.7**
comp=Z,16nm,0.9s,baz=100,slow=6.8,SNR=2.4
NOA LR LR 05 31 59.3
comp=Z,2µm,19.1s,baz=105,slow=41
MOTA Moosalm 43.90 304 *i* P **P 05 10 17.4 -0.8**
comp=Z,8.3nm,0.6s,SNR=16
NAO01 NORSAR Array S 44.02 323 *e*P **P 05 10 19.0 +0.3**
NBO00 NORSAR Array S 44.09 323 *e*P **P 05 10 19.7 +0.4**
RETA Reutte 44.12 304 *i* P **P 05 10 21.1 +1.3**
comp=Z,4.6nm,0.3s
NC204 NORSAR Array S 44.13 324 *e*P **P 05 10 20.1 +0.4**
FETA Feichten 44.20 303 *i* P **P 05 10 20.8 +0.2**
comp=Z,7.2nm,0.7s,SNR=11
CLTB Caltabellotta 44.31 289 *e*P **P 05 10 22.3 +0.8**
comp=Z,48nm,1.1s
LOF Lofoten 44.40 334 *e*P **P 05 10 23.1 +1.4**
LOF *e* 05 20 05.0
KONO Kongsberg 44.54 321 *e*P **P 05 10 23.7 +0.8**
comp=Z,71nm,1.0s
KONO Kongsberg 44.54 321 *ce*P **P 05 10 23.5 +0.6**
KONO pmax pmax
comp=Z,65nm,0.8s
FUORN Ofenpass-Fuorn 44.57 303 *e*P **P 05 10 24.7 +1.1**
comp=Z,89nm,1.5s
MUD Monsted U'grnd 44.61 317 *i* P **P 05 10 25.3 +1.8**
MUD Monsted U'grnd 44.61 317 *e*P **P 05 10 25.3 +1.8**
DAVA Damuels 44.74 304 *i* P **P 05 10 25.7 +0.8**
comp=Z,20nm,0.6s,SNR=22
MNSI Mandailing Nat 44.98 134 P **P 05 10 26.1 -0.8**
HOMB Homborsund 45.02 319 *e*P **P 05 10 27.9 +1.2**
HOMB *e* 05 20 15.0
YAK Yakutsk 45.14 35 *e*P **P 05 10 27.9 +0.3**
comp=Z,160nm,0.9s
YAK Yakutsk 45.14 35 *e*P **P 05 10 27.4 -0.2**
YAK *e**PP **sP 05 10 41.3 +5.3**
YAK *e* 05 12 04.3
YAK *e* 05 12 13.4
YAK *e*S **S 05 17 01.8 -4.0**
YAK *e**SS sS 05 17 23.7 +8.0
YAK *e*SS **SS 05 20 26.7 -1.2**
YAK *e*SSS SSS 05 21 18.8
YAK pmax pmax
comp=Z,152nm,1.0s
YAK pmax pmax
comp=E,39nm,1.7s
YAK pmax pmax
comp=N,17nm,1.6s
YAK pmax pmax
comp=N,24nm,1.9s
YAK pmax pmax
comp=E,75nm,2.2s
YAK smax smax
comp=N,320nm,4.2s
YAK smax smax
comp=E,503nm,5.2s
YAK MLR MLR
comp=Z,2µm,12.0s
YAK MLR MLR
comp=E,1µm,12.0s
YAK MLR MLR
comp=N,901nm,16.0s
TUE Stuetta 45.22 303 *e*P **P 05 10 29.0 +0.2**
comp=N,19nm,0.9s
BJO Bjornoya 45.22 343 *e*P **P 05 10 30.8 +2.7**
BJO *e* 05 20 14.7
MDJ Mudanjiang 45.84 60 P **P 05 10 34.5 +1.0**
MDJ PP **PP 05 12 22.9 +2.0**
MDJ S **S 05 17 21.9 +5.4**
MDJ pmax pmax
comp=N,29nm,0.9s
MDJ pmax pmax
comp=N,78µm,3.2s
MDJ LR LR
comp=N,5µm,27.5s
MDJ LR LR
comp=N,580nm,21.6s
MDJ LR LR
comp=N,2µm,18.2s
SSLB Suanglung 45.97 91 *e*P **P 05 10 33.7 -1.1**
comp=N,56nm,1.2s
AKN Aaknes 46.01 325 *e*P P 05 10 39.8 +5.3
AKN *e* 05 21 03.6
BLS5 Blasjo 46.12 321 *e*P **P 05 10 38.9 +3.4**
BLS5 *e* 05 20 60.0
WTSB Winterswijk 46.19 311 *e*P **P 05 10 37.8 +1.8**
comp=N,152nm,1.1s
PGF Pioggiola 46.21 297 *e*P **P 05 10 37.1 +0.5**
PGF pmax pmax
comp=Z,75nm,1.1s
BKNI Bangkinang 46.21 133 P P 05 10 46.2 +10
BKNI Bangkinang 46.21 133 *e*P **P 05 10 35.9 -0.8**
comp=Z,169nm,0.6s
TJN Taejon 46.25 72 *i* P **P 05 10 35.7 -1.1**
CDF Champ du Feu 46.31 306 *e*P **P 05 10 38.0 +0.7**
CDF pmax pmax
comp=Z,33nm,1.0s
KS01 Wonju Array Si 46.33 70 *e*P **P 05 10 37.0 -0.4**
KS15 Wonju Array Si 46.33 70 *e*P **P 05 10 36.1 -1.3**
KSAR Wonju Array Be 46.33 70 P **P 05 10 36.9 -0.5**
KSAR ScP **ScP 05 16 01.5 -3.2**
KSAR Wonju Array Be 46.33 70 P **P 05 10 36.9 -0.5**
KSRS Korea Array 46.36 70 P **P 05 10 36.9 -0.8**
comp=Z,18nm,0.9s,baz=280,slow=6.4,SNR=42
KSRS ScP **ScP 05 16 01.5 -3.3**
comp=Z,0.8nm,0.5s,baz=278,slow=4.0,SNR=4.1
ECH Echery 46.42 305 *e*P **P 05 10 38.6 +0.6**
comp=Z,35nm,1.0s
ECH Echery 46.42 305 *e*P **P 05 10 38.6 +0.6**
ECH pmax pmax
comp=Z,35nm,1.0s
STAV Stavanger 46.50 320 *e*P **P 05 10 39.7 +1.2**
STAV *e*SS SS 05 20 50.8 -0.3
KLR Kul'dur 46.54 53 P **P 05 10 38.9 0.0**
comp=Z,4.4nm,1.0s,baz=279,slow=8.8,SNR=48
SENIN Lac Senin/Sane 46.63 303 *e*P **P 05 10 40.0 +0.1**
comp=Z,50nm,1.0s
HINF Hinteralfeld 46.68 305 *e*P **P 05 10 40.3 +0.2**
HINF pmax pmax
comp=Z,58nm,1.0s
TIXI Tiksi 46.70 22 P **P 05 10 40.0 +0.1**
comp=Z,27nm,0.3s,baz=272,slow=4.4,SNR=58
TIXI Tiksi 46.70 22 *e*P **P 05 10 40.0 +0.1**
comp=Z,126nm,1.0s
TIXI Tiksi 46.70 22 *ce*P **P 05 10 39.9 +0.1**
TIXI pmax pmax
comp=Z,76nm,0.8s
BER Bergen 46.71 322 *e*P **P 05 10 41.2 +1.1**
BER *e* 05 21 09.9
MYKOM Kota Tinggi 46.78 129 *e*P **P 05 10 41.0 -0.2**
comp=Z,82nm,1.2s
MEM Membach 46.83 309 ⇓P **P 05 10 42.6 +1.5**
comp=Z,45nm,1.0s
HGN Heimansgroeve 46.86 309 *e*P **P 05 10 46.0 +4.7**
comp=Z,49nm,1.2s
WLF Walferdange 46.86 307 ⇑P **P 05 10 44.1 +2.6**
comp=Z,93nm,1.2s
WLF Walferdange 46.86 307 *e*P **P 05 10 43.8 +2.4**
comp=Z,117nm,1.0s
WLF Walferdange 46.86 307 *e*P **P 05 10 43.8 +2.4**
WLF pmax pmax
comp=Z,117nm,1.0s
PDSI Padang 46.88 135 P **P 05 10 40.8 -1.1**
HAU Haudompre 46.99 305 *e*P **P 05 10 42.8 +0.3**
HAU pmax pmax
comp=Z,90nm,1.2s
SUE Sulen 47.01 323 *e*P **P 05 10 43.5 +1.1**
SBF Sospel 47.04 299 *e*P P 05 10 48.2 +5.2
SBF pmax pmax
comp=Z,147nm,1.3s
LPG La Plagne 47.17 302 *e*P **P 05 10 45.8 +1.5**
LPG pmax pmax
comp=Z,67nm,1.1s
LPL La Plagne 47.18 302 *e*P **P 05 10 45.0 +0.7**
LPL pmax pmax
comp=Z,83nm,1.1s
HSPB Hornsund (broa 47.20 346 *e*P **P 05 10 45.8 +2.1**
HSPB *e* 05 10 49.1
HSPB *e*S **S 05 17 36.9 +1.8**
HSPB MLR MLR
comp=Z,3µm,15.6s
HSPB Hornsund (broa 47.20 346 *e*P **P 05 10 45.3 +1.6**
HSPB *e* 05 21 09.8
BCLA Clavier 47.30 309 ⇓P P 05 10 50.1 +5.2
BNI Bardonecchia 47.31 301 *e*P **P 05 10 45.4 +0.2**
comp=Z,70nm,1.1s
BNI Bardonecchia 47.31 301 *e*P **P 05 10 45.4 +0.2**
BNI pmax pmax
comp=Z,70nm,1.1s
CABF La Chapelle 47.41 303 *e*P **P 05 10 47.4 +1.5**
CABF pmax pmax
comp=Z,106nm,1.1s
SPA0 Spitsbergen Ar 47.60 347 *e*P **P 05 10 48.3 +1.5**
SPA0 Spitsbergen Ar 47.60 347 *e* **P 05 10 48.1 +1.3**
SPITS Spitsbergen Ar 47.60 347 P **P 05 10 48.1 +1.3**
comp=Z,56nm,0.7s,baz=116,slow=5.7,SNR=60
SPITS LR LR 05 34 15.4
comp=Z,1µm,18.3s,baz=140,slow=40
TAMR Tamra 47.60 290 *e*P **P 05 10 48.9 +1.6**
comp=Z,172nm,1.5s
USRK Ussuriysk Ar. 47.61 60 P **P 05 10 47.0 -0.3**
comp=Z,6.2nm,0.4s,baz=264,slow=6.9,SNR=14
USRK LR LR 05 33 06.5
comp=Z,2µm,18.9s,baz=268,slow=39
FRF La Foret Royal 47.66 299 *e*P P 05 10 52.7 +4.9
FRF pmax pmax
comp=Z,109nm,1.4s
DOU Dourbes 47.80 308 ⇑P P 05 10 54.4 +5.7
comp=Z,35nm,1.5s
KEST Kesra 47.83 288 P **P 05 10 50.4 +1.1**
comp=Z,21nm,0.5s,baz=24,slow=1.7,SNR=58
KEST Kesra 47.83 288 *e*P **P 05 10 51.0 +1.7**
comp=Z,141nm,1.4s
TPRI Tanjung Pinang 47.88 129 P **P 05 10 51.5 +1.8**
ORIF Oris-en-Rattie 47.90 301 *e*P **P 05 10 52.1 +2.4**
ORIF pmax pmax
comp=Z,45nm,1.4s
THTN Thala 48.39 288 *e*P **P 05 10 55.7 +2.0**
comp=Z,13nm,0.8s
KRJI Kerinci 48.41 135 P **P 05 10 52.5 -1.4**
KBS Kingsbay 48.73 347 *e*P **P 05 10 57.1 +1.6**
comp=Z,181nm,0.9s
KBS Kingsbay 48.73 347 *e*P **P 05 10 57.1 +1.6**
KBS pmax pmax
comp=Z,181nm,0.9s
SSB Saint Sauveur 48.74 302 *e*P **P 05 10 56.7 +0.6**
comp=Z,74nm,1.2s
SSB Saint Sauveur 48.74 302 *e*P **P 05 10 56.7 +0.6**
SSB pmax pmax
comp=Z,74nm,1.2s
VIVF Saint-Julien-l 48.75 301 *e*P **P 05 10 57.0 +0.8**
VIVF pmax pmax
comp=Z,113nm,1.2s
CMAH Djebel Manchou 49.02 290 P **P 05 10 59.6 +1.2**
ABSA Djebel Ababsia 49.09 290 P **P 05 11 01.0 +2.0**
AVF Avril sur Loir 49.22 304 *e*P **P 05 11 00.1 +0.4**
AVF pmax pmax
comp=Z,111nm,1.0s
GRNR Gornyy 49.28 51 *e*P **P 05 11 01.2 +1.1**
GRNR pmax pmax
comp=Z,88nm,1.0s
CAEH 'Ain El Ouahch 49.40 290 P **P 05 11 01.8 +0.6**
CKFL Kef-Lekhel 49.62 290 P **P 05 11 04.9 +1.8**
MASI Maura Aman, Be 49.71 135 P **P 05 11 01.8 -2.0**
WACR West Acre 49.84 312 *e*P **P 05 11 05.3 +1.0**
CTEI Djebel Teioual 49.97 290 P **P 05 11 06.1 +0.3**
JNU Nakatsue 50.07 74 P **P 05 11 06.2 -0.2**
comp=Z,26nm,0.9s,baz=330,slow=2.4,SNR=14
JNU Nakatsue 50.07 74 *e*P **P 05 11 06.0 -0.4**
comp=Z,64nm,1.2s
DFRA Djebel Bou Aff 50.21 290 P **P 05 11 08.7 +1.1**
JOW Kunigami 50.52 83 P **P 05 11 08.9 -1.0**
comp=Z,25nm,0.4s,baz=131,slow=0.9,SNR=16
JOW Kunigami 50.52 83 *e*P **P 05 11 09.6 -0.3**
comp=Z,36nm,0.5s
CAF Calviac 50.53 302 *e*P **P 05 11 11.4 +1.7**
CAF pmax pmax
comp=Z,62nm,1.0s
CKHR Kef el Ahmar 50.67 290 P **P 05 11 11.8 +0.7**
HPK Haverah Park 50.97 314 *e*P **P 05 11 13.4 +0.5**
HPK IAmb IAmb 05 11 18.0
comp=Z,90nm,0.9s
LDF La Druitiere 51.11 307 *e*P **P 05 11 13.9 -0.1**
LDF pmax pmax
comp=Z,68nm,1.2s
MME1 Meikle Cairn 51.20 318 *e*P **P 05 11 14.7 +0.1**
WOL Wolverton 51.22 311 *e*P **P 05 11 15.7 +0.9**
WOL IAmb IAmb 05 11 20.2
comp=Z,358nm,1.2s
KSM Kuching 51.27 123 *e*P **P 05 11 15.5 0.0**
comp=Z,58nm,1.1s
MLA1 Latheron 51.27 320 *e*P **P 05 11 15.6 +0.5**
FLN La Foliniere 51.30 307 *e*P **P 05 11 16.0 +0.5**
FLN pmax pmax
comp=Z,42nm,0.9s
MCD Coleburn Disti 51.31 319 *e*P **P 05 11 16.2 +0.8**
EDU Dundee 51.34 318 *e*P **P 05 11 15.9 +0.4**
NKL Nikolayevsk 51.44 47 *i* P **P 05 11 16.0 -0.4**
NKL *e* 05 18 40.0
NKL pmax pmax
comp=N,30nm,1.0s
NKL pmax pmax
comp=E,43nm,1.0s
NKL pmax pmax
comp=Z,190nm,1.0s
NKL pmax pmax
comp=Z,500nm,5.0s
NKL MLR MLR
comp=E,1µm,10.0s
NKL MLR MLR
comp=Z,2µm,10.0s
SSW Stow on the Wo 51.48 312 *e*P **P 05 11 17.8 +1.1**
SSW IAmb IAmb 05 11 23.3
comp=Z,62nm,0.9s
EDI Edinburgh 51.53 317 *e*P **P 05 11 17.4 +0.4**
EDI IAmb IAmb 05 11 22.4
comp=Z,59nm,0.9s
SWN1 Swindon 51.54 311 *e*P **P 05 11 18.2 +1.1**
SWN1 IAmb IAmb 05 11 22.7
comp=Z,195nm,0.8s
MFF Saint Martin d 51.60 305 *e*P **P 05 11 17.9 +0.2**
MFF pmax pmax
comp=Z,84nm,1.1s
EKA Eskdalemuir Ar 51.62 316 P **P 05 11 17.9 +0.2**
comp=Z,41nm,0.8s,baz=94,slow=7.6,SNR=89
GRR Gorron 51.63 307 *e*P **P 05 11 18.4 +0.5**
GRR pmax pmax
comp=Z,61nm,1.0s
ESK Eskdalemuir 51.64 316 *e*P **P 05 11 18.9 +1.0**
comp=Z,90nm,1.3s
ESK Eskdalemuir 51.64 316 *e*P **P 05 11 18.9 +1.0**
ESK pmax pmax
comp=Z,89nm,1.3s
STRD Stroud 51.70 311 *e*P **P 05 11 18.2 -0.1**
STRD IAmb IAmb 05 11 23.2
comp=Z,72nm,0.9s
KESW Keswick, Cumbr 51.72 315 *e*P **P 05 11 19.3 +0.8**
KESW IAmb IAmb 05 11 23.8
comp=Z,95nm,1.1s
SBUM Sibu 51.89 120 *e*P **P 05 11 20.6 +0.4**
comp=Z,64nm,1.1s
INVG Invergeldie, C 51.92 317 *e*P **P 05 11 20.2 +0.2**
INVG IAmb IAmb 05 11 24.7
comp=Z,44nm,1.0s
MDO Dochfour 51.93 319 *e*P **P 05 11 20.4 +0.4**
HLM1 Long Mynd 51.98 312 *e*P **P 05 11 21.2 +0.7**
HLM1 IAmb IAmb 05 11 25.7
comp=Z,44nm,1.0s
MONM Monmouth 52.08 312 *e*P **P 05 11 21.6 +0.4**
MONM IAmb IAmb 05 11 26.1
comp=Z,122nm,1.2s
FOEL Foel Wylfa 52.10 313 *e*P **P 05 11 21.1 -0.2**
FOEL IAmb IAmb 05 11 25.7
comp=Z,95nm,1.3s
HGH Gray Hill 52.12 311 *e*P **P 05 11 22.0 +0.4**
EAB Aberfoyle 52.12 317 *e*P **P 05 11 21.9 +0.4**
MCH1 Michaelchurch 52.16 312 *e*P **P 05 11 22.4 +0.5**
MCH1 IAmb IAmb 05 11 27.3
comp=Z,154nm,1.0s
PGBU Glenifferbraes 52.27 317 *e*P **P 05 11 23.4 +0.8**
PGBU IAmb IAmb 05 11 27.7
comp=Z,76nm,0.8s
ABA Alger-Bouzarea 52.27 292 P **P 05 11 25.6 +2.7**
KKM Kota Kinabalu 52.32 113 *e*P **P 05 11 23.8 +0.2**
comp=Z,233nm,1.0s
LLW Llanuwychllyn 52.38 313 *e*P **P 05 11 24.2 +0.8**
JMIC Jan Mayen 52.41 336 P **P 05 11 23.2 -0.1**
comp=Z,44nm,0.7s,baz=124,slow=3.6,SNR=2.6
WPM1 Penmaenmawr 52.44 313 *e*P **P 05 11 24.7 +0.9**
EMHD Djebel Mahouad 52.55 291 P **P 05 11 27.5 +2.4**
YLL Llanberis 52.62 313 *e*P **P 05 11 26.4 +1.2**
KPL Plockton 52.63 319 *e*P **P 05 11 25.7 +0.5**
KPL IAmb IAmb 05 11 30.1
comp=Z,69nm,0.9s
WIM Isle of Man 52.70 315 *e*P **P 05 11 26.7 +0.9**
WLF1 Llynfaes 52.72 314 *e*P **P 05 11 26.6 +0.7**
WLF1 IAmb IAmb 05 11 31.1
comp=Z,76nm,1.0s
YRC Rhoscolyn 52.83 314 *e*P **P 05 11 27.5 +0.8**
TYV Tymovskoe 53.13 49 *e*P **P 05 11 29.9 +0.9**
TYV *e* 05 19 00.0
TYV pmax pmax
comp=Z,22nm,1.3s
TYV MLR MLR
comp=Z,800nm,12.0s
HTL Hartland 53.30 311 *e*P **P 05 11 30.2 0.0**
HTL IAmb IAmb 05 11 35.5
comp=Z,17nm,0.9s
EBNR Beni Rached 53.59 292 P **P 05 11 32.1 -0.6**
DSB Dublin 53.89 314 *e*P **P 05 11 34.9 +0.4**
comp=Z,15nm,1.0s
EANR 'Ain N'Sour 54.04 291 P **P 05 11 33.1 -2.9**
ETRT Tiaret 54.09 291 P P 05 11 42.1 +5.6
YSS Yuzh-Sakhalins 54.23 54 *e*P **P 05 11 37.2 +0.1**
comp=Z,156nm,1.0s
YSS Yuzh-Sakhalins 54.23 54 ⇓*i*P **P 05 11 37.3 +0.2**
YSS *e* 05 11 41.4
YSS pmax pmax
comp=Z,80nm,1.3s
YSS MLR MLR
comp=Z,600nm,16.0s
MJB9 Matsu-Tunnel 54.42 68 *e*P **P 05 11 37.5 -1.2**
comp=Z,39nm,1.1s
MAJO Matsushiro 54.42 68 *e*P **P 05 11 37.6 -1.1**
MAJO Matsushiro 54.42 68 *e*P **P 05 11 37.6 -1.1**
MJAR Matsushiro Arr 54.43 68 P **P 05 11 38.1 -0.7**
comp=Z,18nm,1.0s,baz=286,slow=10,SNR=31
MJAR Matsushiro Arr 54.43 68 P **P 05 11 38.1 -0.7**
MJAR pmax pmax
comp=Z,15nm,0.9s
MYLDM Lahad Datu 54.60 112 *e*P **P 05 11 39.6 -0.5**
comp=Z,97nm,1.0s
DAG Danmarks Havn 54.75 344 *i* P **P 05 11 40.8 +0.4**
comp=Z,14nm,0.5s
DAG Danmarks Havn 54.75 344 *i* P **P 05 11 40.8 +0.4**
DAG pmax pmax
comp=Z,15nm,0.5s
ASAJ Asahikawa 54.98 57 P **P 05 11 42.1 -0.5**
comp=Z,8.2nm,0.6s,baz=276,slow=14,SNR=3.9
ASAJ Asahikawa 54.98 57 *e*P **P 05 11 42.6 0.0**
comp=Z,48nm,1.3s
SEY Seymchan 55.56 33 *ce*P **P 05 11 48.0 +1.5**
MA2 Magadan 55.57 38 *e*P **P 05 11 47.0 +0.3**
comp=Z,62nm,1.4s
MA2 Magadan 55.57 38 ⇑*e*P **P 05 11 46.6 0.0**
MA2 pmax pmax
comp=Z,55nm,1.7s
ERM Erimo 56.07 60 *e*P **P 05 11 50.0 -0.4**
comp=Z,75nm,1.5s
ERM Erimo 56.07 60 *i* P **P 05 11 50.0 -0.4**
ERM pmax pmax
comp=Z,17nm,1.0s
TAM Tamanrasset 56.17 275 *e*P **P 05 11 52.1 +0.5**
comp=Z,9.9nm,0.8s
TAM Tamanrasset 56.17 275 *e*P **P 05 11 52.1 +0.5**
TAM pmax pmax
comp=Z,10.0nm,0.8s
ES19 SONSECA Array 56.35 298 *e*P **P 05 11 53.3 +0.7**
ESDC Sonseca Array 56.41 297 P **P 05 11 53.5 +0.5**
comp=Z,10nm,0.7s,baz=58,slow=7.7,SNR=45
ESDC ScP **ScP 05 16 49.6 +1.3**
comp=Z,0.2nm,0.3s,baz=90,slow=12,SNR=4.1
ESLA Sonseca Array 56.41 297 *e*P **P 05 11 53.5 +0.5**
comp=Z,18nm,0.9s
VAL Valentia 56.51 313 *e*S **S 05 19 49.1 +5.4**
PAB San Pablo 56.73 297 *e*P **P 05 11 56.4 +1.1**
comp=Z,45nm,1.3s
PAB San Pablo 56.73 297 *e*P **P 05 11 56.4 +1.1**
PAB pmax pmax
comp=Z,45nm,1.3s
SCO Scoresbysund 56.88 336 *i* P **P 05 11 57.1 +1.3**
SCO Scoresbysund 56.88 336 *e*P **P 05 11 57.9 +2.1**
comp=Z,12nm,1.1s
SCO Scoresbysund 56.88 336 *e*P **P 05 11 57.9 +2.1**
SCO pmax pmax
comp=Z,12nm,1.1s
SHO Shikotan 57.94 56 *e*P **P 05 12 01.7 -2.0**
SHO pmax pmax
comp=N,12nm,0.5s
SHO pmax pmax
comp=Z,22nm,0.5s
SHO pmax pmax
comp=E,9.0nm,0.3s
MVO Moncorvo 58.03 300 *e*P **P 05 12 05.6 +1.1**
comp=E,38nm,1.2s
MVO *e*S **S 05 20 02.9 -1.4**
OPO Ambohidratompo 58.22 205 P **P 05 12 06.4 +0.5**
comp=E,19nm,1.0s,baz=21,slow=6.0,SNR=9.9
PVRL Vila Real 58.47 301 *e*P **P 05 12 08.5 +1.0**
comp=E,47nm,1.5s
POLO Lamas de Olo 58.49 301 *e*P **P 05 12 10.1 +2.4**
comp=E,20nm,1.6s
PCAB Cabril 58.52 301 *e*P P 05 12 13.4 +5.5
comp=E,76nm,1.3s
PGAV Gavieira, Arco 58.60 301 *e*P **P 05 12 10.0 +1.5**
comp=E,65nm,1.3s
ABPO Ambohimpanom 58.62 205 *e*P **P 05 12 09.1 +0.3**
comp=E,35nm,1.1s
ABPO Ambohimpanom 58.62 205 *e*P **P 05 12 09.1 +0.3**
ABPO pmax pmax
comp=Z,35nm,1.1s
MTE Manteigas 58.69 300 *e*P **P 05 12 11.5 +2.4**
comp=Z,83nm,1.3s
MTE *e*S **S 05 20 19.7 +6.9**
MTE Manteigas 58.69 300 *e*P **P 05 12 10.1 +1.0**
comp=Z,62nm,1.2s
PVIS Viseu 58.81 300 *e*P **P 05 12 11.3 +1.4**
comp=Z,68nm,1.2s
DAV Davao City (W) 58.84 105 P **P 05 12 09.9 -0.4**
comp=Z,241nm,0.3s,baz=328,slow=5.6,SNR=2.4
DAV Davao City (W) 58.84 105 *e*P **P 05 12 09.9 -0.4**
comp=Z,258nm,0.3s
PCBR Castelo Branco 58.85 299 *e*P **P 05 12 10.3 +0.2**
comp=Z,39nm,1.4s
PMRV Marv??o 58.95 298 *e*P **P 05 12 12.9 +2.0**
comp=Z,44nm,1.4s
PMRV *e*S **S 05 20 21.0 +4.8**
PBAR Barrancos 59.20 297 *e*P **P 05 12 13.3 +0.8**
comp=Z,107nm,1.4s
PESTR Estremoz 59.32 298 *e*P **P 05 12 14.3 +0.9**
comp=Z,46nm,1.4s
PESTR Estremoz 59.32 298 *e*P **P 05 12 13.2 -0.2**
comp=Z,17nm,1.2s
PTOM Tomar 59.60 299 *e*P **P 05 12 16.7 +1.4**
comp=Z,68nm,1.3s
BILL Bilibino 59.61 26 *e*P **P 05 12 14.3 -0.6**
comp=Z,18nm,0.8s
BILL Bilibino 59.61 26 *c i*P **P 05 12 15.0 +0.1**
BILL *i* 05 13 05.8
BILL pmax pmax
comp=Z,12nm,1.0s
BILL MLR MLR

comp=Z,3μm,17.0s
MDT Midelt 59.62 290 P **P 05 12 16.2 +0.5**
comp=Z,2.8nm,0.4s,baz=90,slow=5.1,SNR=5.0
EVO Evora 59.75 298 *e*P **P 05 12 17.5 +1.1**
comp=Z,51nm,1.3s
PBEJ Beja 59.85 297 *e*P **P 05 12 17.9 +0.8**
comp=Z,30nm,1.2s
PVAQ Vaqueiros 60.00 296 *e*P **P 05 12 18.7 +0.6**
comp=Z,58nm,1.3s
PVAQ *e*S **S 05 20 37.1 +7.4**
MESJ Messejana 60.18 297 *e*P **P 05 12 20.2 +0.9**
MESJ AMb AMB 05 12 26.4
comp=Z,46nm,1.4s
MESJ *e*S **S 05 20 31.2 -0.8**
MESJ Messejana 60.18 297 *e*P **P 05 12 20.8 +1.5**
comp=Z,46nm,1.4s
MESJ Messejana 60.18 297 *e*P **P 05 12 20.2 +0.9**
MESJ *e*S **S 05 20 31.2 -0.8**
PBDV Barranco-do-Ve 60.22 296 *e*P **P 05 12 21.6 +1.9**
comp=Z,65nm,1.3s
PNCL Nicolau / Gran 60.30 297 *e*P **P 05 12 21.3 +1.2**
comp=Z,36nm,1.4s
PTEO Sao Teotonio 60.67 297 *e*P **P 05 12 20.4 -2.3**
comp=Z,64nm,1.3s
MORF Marmelete 60.72 297 *e*P **P 05 12 23.9 +0.8**
MORF AMb AMB 05 12 40.3
comp=Z,48nm,1.4s
MORF Marmelete 60.72 297 *e*P **P 05 12 23.8 +0.8**
SUMG Summit 61.01 341 *i* P **P 05 12 26.4 +1.5**
SUMG Summit 61.01 341 *e*P **P 05 12 25.6 +0.7**
comp=Z,51nm,0.9s
SUMG Summit 61.01 341 *i* P **P 05 12 26.4 +1.5**
PEA1 Petropavlovsk- 61.26 43 *e*P **P 05 12 25.4 -1.0**
PEA0B Petropavlovsk- 61.26 43 *e*P **P 05 12 26.1 -0.3**
comp=Z,50nm,1.4s
PETK Petropavlovsk- 61.26 43 P **P 05 12 25.4 -1.0**
comp=Z,5.3nm,0.6s,baz=322,slow=2.1,SNR=12
PETK LR LR 05 40 03.9
comp=Z,1μm,18.1s,baz=294,slow=37
PETK Petropavlovsk- 61.26 43 *e*P **P 05 12 25.6 -0.8**
PETK Petropavlovsk- 61.26 43 *e*P **P 05 12 25.6 -0.8**
SKR Severo-Kuril's 61.29 46 *e*P **P 05 12 25.9 -0.7**
SKR *e*S **S 05 20 45.1 -0.6**
SKR pmax pmax
comp=Z,300nm,6.1s
SKR pmax pmax
comp=Z,48nm,0.9s
SKR MLR MLR
comp=Z,1μm,21.0s
PET Petropavlovsk 61.82 43 *e*P **P 05 12 32.3 +2.1**
PET *e* 05 14 50.7
PET *e*S **S 05 20 50.0 -2.4**
PET *e*SS **SS 05 24 54.2 +0.4**
PET pmax pmax
comp=Z,52nm,1.1s
PET MLR MLR
comp=Z,800nm,21.0s
KAPI Kappang 62.45 120 *e*P **P 05 12 33.2 -1.7**
comp=Z,54nm,1.0s
LSZ Lusaka 64.14 225 *e*P **P 05 12 45.6 -0.6**
comp=Z,18nm,1.3s
LSZ Lusaka 64.14 225 *e*P **P 05 12 45.6 -0.6**
LSZ pmax pmax
comp=Z,18nm,1.3s
KULLO Kullorsuaq 64.16 346 *i* P **P 05 12 46.5 +1.1**
KULLO *i* 05 12 49.6
KULLO Kullorsuaq 64.16 346 *i* P **P 05 12 46.5 +1.1**
KULLO *i* 05 12 49.6
ANGG Ammassalik, Gr 64.18 334 *e*P **P 05 12 46.5 +0.9**
comp=Z,42nm,0.9s
TOA0 Torodi Ar. Sit 64.29 268 *e*P **P 05 12 46.3 -0.9**
comp=Z,19nm,0.7s
TOA1 Torodi Ar. Sit 64.29 268 *e*P **P 05 12 46.0 -1.2**
TORD Torodi Ar. Bea 64.29 268 P **P 05 12 46.0 -1.2**
comp=Z,8.2nm,0.3s,baz=48,slow=6.1,SNR=131
TULEG Thule 64.62 350 *e*P **P 05 12 49.1 +0.7**
comp=Z,32nm,0.8s
ILULI Ilulissat 66.34 340 *i* P **P 05 13 00.2 +0.6**
ILULI Ilulissat 66.34 340 *e*P **P 05 12 59.9 +0.3**
comp=Z,32nm,0.8s
ILULI Ilulissat 66.34 340 *i* P **P 05 13 00.2 +0.6**
SFJD Kangerlussuaq 67.64 338 P **P 05 13 07.8 -0.1**
comp=Z,11nm,0.8s,baz=58,slow=9.1,SNR=7.0
SFJD Kangerlussuaq 67.64 338 *i* P **P 05 13 08.2 +0.3**
SFJD Kangerlussuaq 67.64 338 *e*P **P 05 13 08.1 +0.3**
comp=Z,23nm,1.1s
SFJD Kangerlussuaq 67.64 338 *e*P **P 05 13 08.2 +0.3**
MATP Matopo 68.14 221 P **P 05 13 10.8 -1.0**
comp=Z,15nm,0.5s,baz=22,slow=7.4,SNR=53
MATP Matopo 68.14 221 *i* P **P 05 13 11.3 -0.5**
MATP *i* 05 13 11.6
baz=22,slow=9.3
MATP Matopo 68.14 221 *i* P **P 05 13 11.3 -0.5**
MATP *i* 05 13 11.6
baz=22,slow=9.3
KOWA Kowa 68.18 272 P **P 05 13 11.2 -0.9**
comp=Z,8.6nm,0.6s,baz=50,slow=7.6,SNR=26
KOWA Kowa 68.18 272 *e*P **P 05 13 11.6 -0.5**
comp=Z,30nm,1.1s
SIJI Sorong 68.20 108 P **P 05 13 10.9 -1.3**
comp=Z,94nm,0.9s,baz=308,slow=6.2,SNR=14
BATI Baumata 68.84 121 P **P 05 13 14.8 -1.4**
comp=Z,127nm,0.7s,baz=247,slow=1.8,SNR=14
SOEI Soe 68.95 120 *e*P **P 05 13 16.8 -0.2**
comp=Z,245nm,1.0s
RES Resolute Bay 69.03 356 P **P 05 13 15.8 -0.7**
comp=Z,1.7nm,0.6s,baz=33,slow=7.7,SNR=11
RES Resolute Bay 69.03 356 *e*P **P 05 13 16.6 +0.1**
comp=Z,5.6nm,0.9s
RES Resolute Bay 69.03 356 *e*P **P 05 13 16.6 +0.1**
RES pmax pmax
comp=Z,6.0nm,0.9s
FAKI Fak Fak 70.26 109 *e*P **P 05 13 23.8 -1.2**
comp=Z,99nm,1.1s
IVI Ivigtut 70.60 333 *e*P **P 05 13 26.1 -0.3**
comp=Z,25nm,1.2s
ANM Nome 70.97 22 *e*P **P 05 13 29.5 +1.0**
comp=Z,52nm,1.0s
ANM Nome 70.97 22 *e*P **P 05 13 29.5 +1.0**
ANM pmax pmax
comp=Z,52nm,1.0s
TOLK Toolik Lake Re 71.69 14 *e*P **P 05 13 33.7 +0.8**
comp=Z,70nm,0.8s
COLD Coldfoot 72.76 15 *e*P **P 05 13 40.0 +0.7**
comp=Z,68nm,0.9s
SAUI Saumlaki 72.83 114 *e*P **P 05 13 41.0 +0.6**
comp=Z,697nm,1.3s
IM3 Indian Mountai 73.01 17 *e*P **P 05 13 40.7 0.0**
DBIC Dimbokro 73.26 266 P **P 05 13 42.1 -0.9**
comp=Z,4.2nm,0.5s,baz=23,slow=3.8,SNR=8.8
KIC Kosan Boka 73.35 266 *e*PKIKP **P 05 13 42.5 -1.1**
comp=Z,50nm,1.2s
TIC Toumodi 73.41 266 *e*PKIKP **P 05 13 41.8 -2.2**
LBTB Lobatse 73.42 221 *e*P **P 05 13 43.6 -0.1**
comp=Z,15nm,0.6s
LBTB Lobatse 73.42 221 *e*P **P 05 13 43.7 -0.1**
LBTB pmax pmax
comp=Z,15nm,0.6s
TSUM Tsumeb 73.54 231 *e*P **P 05 13 44.5 -0.2**
comp=Z,24nm,1.4s
LIC Lamto 73.66 266 *e*PKIKP **P 05 13 42.4 -3.0**
comp=Z,134nm,1.8s
MBWA Marble Bar 74.28 132 *e*P **P 05 13 48.6 -0.2**
comp=Z,61nm,1.0s
FYU Fort Yukon 74.33 14 *e*P **P 05 13 49.9 +1.4**
comp=Z,95nm,1.0s
MLY Manley 74.50 16 *e*P **P 05 13 49.7 +0.1**
comp=Z,57nm,1.0s
INK Inuvik 74.55 9 P **P 05 13 50.3 +0.6**
comp=Z,85nm,0.9s,baz=354,slow=5.5,SNR=53
INK Inuvik 74.55 9 *e*P **P 05 13 50.5 +0.8**
comp=Z,76nm,0.8s
INK Inuvik 74.55 9 *e*P **P 05 13 50.5 +0.8**
INK pmax pmax
comp=Z,76nm,0.8s
FRB Frobisher Bay 75.05 342 P **P 05 13 52.5 -0.2**
comp=Z,3.7nm,0.5s,baz=65,slow=8.9,SNR=8.8
MDM Murphy Dome 75.12 16 *e*P **P 05 13 53.7 +0.5**
comp=Z,116nm,1.2s
BPAW Bear Paw Mtn. 75.23 17 *e*P **P 05 13 53.8 0.0**
comp=Z,44nm,1.0s
COLA College 75.28 15 *e*P **P 05 13 55.4 +1.4**
comp=Z,83nm,0.9s
COLA College 75.28 15 *e*P **P 05 13 55.4 +1.4**
COLA pmax pmax
comp=Z,83nm,0.9s
CCB Clear Creek Bu 75.48 16 *e*P **P 05 13 55.0 -0.2**
comp=Z,24nm,0.9s
BWN Browne 75.52 16 *e*P **P 05 13 55.5 +0.1**
comp=Z,248nm,1.3s
IL1 Eielson Array 75.57 15 *e*P **P 05 13 55.3 -0.4**
ILAR Eielson Array 75.57 15 P **P 05 13 55.2 -0.5**
comp=Z,36nm,1.0s,baz=315,slow=4.1,SNR=111
ILB Eielson Array 75.57 15 *e*P **P 05 13 55.5 -0.3**
WRH Wood River Hil 75.58 16 *e*P **P 05 13 55.8 +0.1**
comp=Z,36nm,1.0s
KTH Kantishna Hill 75.71 17 *e*P **P 05 13 56.8 +0.2**
comp=Z,99nm,1.1s
HDA Harding Lake 75.88 15 *e*P **P 05 13 57.0 -0.5**
comp=Z,50nm,1.2s
MTN Manton Dam 75.94 118 *e*P **P 05 13 57.2 -1.3**
comp=Z,18nm,1.1s
PPLA Purkeypile 75.95 18 *e*P **P 05 13 58.2 +0.2**
comp=Z,42nm,1.1s
TRF Thorofare Moun 75.95 17 *e*P **P 05 13 58.1 0.0**
comp=Z,29nm,1.0s
MCK McKinley 76.02 16 *e*P **P 05 13 58.7 +0.4**
comp=Z,32nm,0.9s
MCK McKinley 76.02 16 *e*P **P 05 13 58.7 +0.4**
MCK pmax pmax
comp=Z,32nm,0.9s
RND Reindeer 76.32 17 *e*P **P 05 13 59.8 -0.3**
comp=Z,95nm,1.2s
RND Reindeer 76.32 17 *e*P **P 05 13 59.8 -0.3**
RND pmax pmax
comp=Z,95nm,1.2s
BOSA Boshof 76.51 219 P **P 05 14 00.8 -0.7**
comp=Z,6.7nm,0.5s,baz=21,slow=3.9,SNR=26
BOSA Boshof 76.51 219 *i* P **P 05 14 00.2 -1.4**
BOSA Boshof 76.51 219 *e*P **P 05 14 00.9 -0.7**
comp=Z,16nm,0.9s
BOSA Boshof 76.51 219 *i* P **P 05 14 00.2 -1.4**
BOSA Boshof 76.51 219 *e*P **P 05 14 00.9 -0.7**
BOSA pmax pmax
comp=Z,16nm,0.9s
SVW2 Sparrevohn 76.52 21 *e*P **P 05 14 01.8 +0.6**
comp=Z,42nm,1.2s
JAY Jayapura 76.59 103 P **P 05 14 01.5 -0.9**
comp=Z,34nm,1.1s,baz=313,slow=6.2,SNR=3.7
EGAK Eagle 76.69 13 *e*P **P 05 14 01.7 -0.3**
comp=Z,47nm,1.1s
SCRK Sand Creek 76.87 14 *e*P **P 05 14 02.6 -0.7**
comp=Z,96nm,1.2s
SKT Skwentna 76.88 18 *e*P **P 05 14 02.8 -0.5**
comp=Z,139nm,1.1s
RIDG Independ'e Rid 76.91 15 *e*P **P 05 14 03.1 -0.4**
comp=Z,95nm,1.2s
DHY Denali Highway 76.95 16 *e*P **P 05 14 03.0 -0.7**
comp=Z,32nm,0.6s
DOT Dot Lake 77.15 15 *e*P **P 05 14 05.0 +0.2**
comp=Z,100nm,1.0s
PAX Paxson 77.46 15 *e*P **P 05 14 06.7 +0.1**
comp=Z,99nm,1.2s
PAX Paxson 77.46 15 *e*P **P 05 14 06.7 +0.1**
PAX pmax pmax
comp=Z,99nm,1.2s
SUA Susitna One 77.52 18 *e*P **P 05 14 06.8 -0.2**
comp=Z,61nm,0.9s
DAWY Dawson 77.66 12 *e*P **P 05 14 07.9 +0.3**
comp=Z,62nm,1.0s
GHO Glory Hole Cre 77.71 18 *e*P **P 05 14 08.2 +0.2**
comp=Z,82nm,1.0s
PMR Palmer 77.82 18 *e*P **P 05 14 08.4 0.0**
comp=Z,71nm,1.1s
PMR Palmer 77.82 18 *e*P **P 05 14 08.4 0.0**
PMR pmax pmax
comp=Z,71nm,1.1s
SML Sawmill 77.82 17 *e*P **P 05 14 08.7 +0.1**
comp=Z,203nm,1.0s
SML Sawmill 77.82 17 *e*P **P 05 14 08.7 +0.1**
SML pmax pmax
comp=Z,203nm,1.0s
RSO Redoubt South 77.83 20 *e*P **P 05 14 08.8 0.0**
NIKH Nikolski High 78.00 32 *e*P **P 05 14 08.2 -1.4**
comp=Z,36nm,1.2s
HARP HAARP 78.03 16 *e*P **P 05 14 10.6 +0.9**
comp=Z,313nm,1.0s
SCM Sheep Creek Mo 78.04 17 *e*P **P 05 14 10.1 +0.3**
comp=Z,79nm,0.8s
SCM Sheep Creek Mo 78.04 17 *e*P **P 05 14 10.1 +0.3**
SCM pmax pmax
comp=Z,79nm,0.8s
RC01 Rabbit Creek A 78.10 18 *e*P **P 05 14 10.0 0.0**
comp=Z,76nm,1.1s
UNV Unalaska Valle 78.35 30 *e*P **P 05 14 10.8 -0.7**
comp=Z,25nm,1.0s
KLU Klutina 78.67 16 *e*P **P 05 14 14.1 +0.8**
comp=Z,65nm,0.9s
FALS False Pass 78.81 28 *e*P **P 05 14 14.4 +0.4**
comp=Z,87nm,1.2s
BRLK Bradley Lake 78.93 19 *e*P **P 05 14 14.0 -0.7**
comp=Z,72nm,0.8s
SEW Seward 79.02 19 *e*P **P 05 14 14.9 -0.2**
comp=Z,99nm,1.2s
DIV Divide 79.02 16 *e*P **P 05 14 15.3 +0.1**
comp=Z,41nm,0.8s
CNPM China Poot 79.03 20 *e*P **P 05 14 14.4 -0.8**
comp=Z,42nm,0.9s
BMRM Bremner River 79.43 16 *e*P **P 05 14 18.0 +0.6**
comp=Z,128nm,1.1s
CHGN Chignik 79.49 25 *e*P **P 05 14 16.8 -0.9**
comp=Z,38nm,1.1s
SDPT Sand Point 79.52 26 *e*P **P 05 14 16.6 -1.3**
comp=Z,60nm,1.4s
BALM Baldy 79.86 15 *e*P **P 05 14 20.6 +0.8**
comp=Z,63nm,1.0s
BALM Baldy 79.86 15 *e*P **P 05 14 20.7 +0.8**
BALM pmax pmax
comp=Z,63nm,1.0s
RAGM Ragged Mountai 79.93 16 *e*P **P 05 14 20.1 -0.1**
comp=Z,253nm,1.0s
CRQM Cirque 79.94 15 *e*P **P 05 14 20.9 +0.5**
comp=Z,60nm,0.9s
TGL Tana Glacier 80.01 15 *e*P **P 05 14 21.3 +0.7**
comp=Z,48nm,0.9s
KDAK Kodiak Island 80.12 21 P **P 05 14 20.4 -0.7**
comp=Z,78nm,1.0s,baz=342,slow=9.5,SNR=8.9
KDAK Kodiak Island 80.12 21 *e*P **P 05 14 21.3 +0.2**
comp=Z,162nm,1.0s
KDAK Kodiak Island 80.12 21 *i* P **P 05 14 20.8 -0.3**
OHAK Old Harbor 80.38 22 *e*P **P 05 14 22.7 +0.2**
comp=Z,134nm,1.0s
SII Sitkinak Islan 80.66 23 *e*P **P 05 14 24.4 +0.3**
comp=Z,108nm,1.0s
YKW3 Yellowknife Ar 81.66 2 *e*P **P 05 14 29.5 +0.2**
comp=Z,34nm,0.9s
YKA Yellowknife Ar 81.73 2 P **P 05 14 29.2 -0.4**
comp=Z,17nm,0.7s,baz=350,slow=5.4,SNR=73
YKA PKKPbc **PKKPbc 05 32 58.8 -2.4**
comp=Z,0.3nm,0.5s,baz=172,slow=2.1,SNR=9.7
YKB5 Yellowknife Ar 81.73 2 *e*P **P 05 14 29.8 +0.2**
SCHQ Schefferville 81.93 336 P **P 05 14 31.4 +0.5**
comp=Z,11nm,0.8s,baz=88,slow=2.8,SNR=5.3
NWAO Narrogin (SRO) 82.01 141 P **P 05 14 30.6 -0.8**
comp=Z,27nm,1.1s,baz=176,slow=7.4,SNR=3.5
SKAG Skagway 82.66 12 *e*P **P 05 14 35.3 +0.7**
comp=Z,103nm,1.2s
WR1 Warramunga Arr 82.97 121 *e*P **P 05 14 34.8 -1.9**
comp=Z,18nm,0.6s
WR1 *e*PKKPbc **PKKPbc 05 32 58.5 -0.2**
WRA Warramunga Arr 82.97 121 P **P 05 14 34.8 -1.9**
comp=Z,7.1nm,0.5s,baz=325,slow=4.9,SNR=111
WRA PKKPbc **PKKPbc 05 32 58.5 -0.2**
comp=Z,0.4nm,0.5s,baz=129,slow=2.2,SNR=14
WRAB Tennant Creek 82.97 121 *e*P **P 05 14 35.3 -1.5**
comp=Z,36nm,1.3s
WRAB Tennant Creek 82.97 121 *e*P **P 05 14 35.3 -1.5**
WRAB pmax pmax
comp=Z,36nm,1.3s
WB2 Warramunga Arr 82.98 121 *e*P **P 05 14 35.3 -1.5**
comp=Z,18nm,0.6s
BESE Bessie Mountai 83.58 12 *e*P **P 05 14 40.5 +1.0**
comp=Z,62nm,1.1s
JIS Juneau Island 83.95 12 *e*P **P 05 14 41.9 +0.7**
comp=Z,65nm,1.1s
DLBC Dease Lake 84.48 10 P **P 05 14 43.9 -0.2**
comp=Z,27nm,1.0s,baz=330,slow=6.0,SNR=19
DLBC Dease Lake 84.48 10 *e*P **P 05 14 45.0 +1.0**
comp=Z,47nm,1.1s
FCC Fort Churchill 84.51 351 *e*P **P 05 14 45.2 +1.2**
comp=Z,30nm,1.0s
FCC Fort Churchill 84.51 351 *e*P **P 05 14 45.2 +1.2**
FCC pmax pmax
comp=Z,30nm,1.0s
AS31 Alice Springs 85.18 124 *e*P **P 05 14 46.6 -1.3**
comp=Z,7.4nm,0.4s
ASAR Alice Springs 85.18 124 P **P 05 14 46.2 -1.7**
comp=Z,8.3nm,0.5s,baz=311,slow=4.8,SNR=104
AS01 Alice Springs 85.21 124 *e*P **P 05 14 46.7 -1.4**
COEN Coen 85.56 111 *e*P **P 05 14 48.1 -1.9**
comp=Z,16nm,0.9s
PMG Port Moresby 85.85 105 P **P 05 14 49.1 -2.4**
comp=Z,12nm,0.8s,baz=233,slow=4.4,SNR=4.8
PMG PP **PP 05 18 09.9 -1.4**
comp=Z,8.5nm,0.7s,baz=293,slow=13,SNR=2.9
PMG Port Moresby 85.85 105 *e*P **P 05 14 50.6 -0.9**
comp=Z,19nm,1.0s
PMG *e*PP **PP 05 18 09.9 -1.4**
PMG Port Moresby 85.85 105 *e*P **P 05 14 50.6 -0.9**
PMG *e* 05 18 09.9
PMG pmax pmax
comp=Z,19nm,1.0s
WRAK Wrangell Islan 86.06 12 *e*P **P 05 14 52.2 +0.4**
comp=Z,49nm,1.0s
FORT Forrest 86.41 132 *e*P **P 05 14 53.5 -0.3**
comp=Z,95nm,0.9s
FFC Flin Flon 89.26 355 *e*P **P 05 15 07.7 +0.4**
comp=Z,19nm,1.1s
FFC Flin Flon 89.26 355 *e*P **P 05 15 07.7 +0.4**
FFC pmax pmax
comp=Z,19nm,1.1s
CTA Charters Tower 91.65 114 P **P 05 15 16.8 -2.2**
comp=Z,14nm,0.9s,baz=288,slow=7.6,SNR=15
CTAO Charters Tower 91.65 114 *e*P **P 05 15 17.2 -1.7**
comp=Z,16nm,0.9s
CTAO Charters Tower 91.65 114 *e*P **P 05 15 17.2 -1.7**
CTAO pmax pmax
comp=Z,16nm,0.9s
ULM Lac du Bonnet 93.06 351 P **P 05 15 24.4 -0.6**
comp=Z,6.5nm,0.9s,baz=4.7,slow=6.6,SNR=6.3
ULM PP **PP 05 19 07.1 +0.1**
comp=Z,2.1nm,0.9s,baz=8.1,slow=9.6,SNR=2.4
ULM Lac du Bonnet 93.06 351 *e*P **P 05 15 24.2 -0.8**
comp=Z,8.2nm,1.0s
ULM PP **PP 05 19 07.1 +0.1**
SADO Sadowa 94.60 338 P **P 05 15 30.6 -1.6**
comp=Z,1.7nm,0.7s,baz=20,slow=12,SNR=3.0
AGMN Agassiz Nation 94.97 350 *e*P **P 05 15 33.7 -0.1**
comp=Z,7.3nm,1.0s
STKA Stephens Creek 95.68 125 P **P 05 15 34.9 -2.3**
comp=Z,3.0nm,0.8s,baz=61,slow=2.3,SNR=2.9
NEW Newport 95.85 4 P **P 05 15 36.6 -1.3**
comp=Z,4.6nm,0.8s,baz=351,slow=7.2,SNR=5.8
NEW PP **PP 05 19 23.6 -5.2**
comp=Z,3.5nm,1.0s,baz=24,slow=14,SNR=2.5
NEW Newport 95.85 4 *e*P **P 05 15 37.8 -0.1**
comp=Z,11nm,1.0s
NEW PP **PP 05 19 23.6 -5.2**
NEW Newport 95.85 4 *e*P **P 05 15 37.8 -0.1**
NEW pmax pmax
comp=Z,11nm,1.0s
NLWA Neilton Lookou 96.09 9 *e*P **P 05 15 39.4 +0.4**
comp=Z,15nm,1.2s
LON Longmire 96.96 8 *e*P **P 05 15 43.9 +0.9**
comp=Z,3.8nm,0.8s
LON Longmire 96.96 8 *e*P **P 05 15 43.9 +0.9**
LON pmax pmax
comp=Z,4.0nm,0.8s
MSO Missoula 97.43 2 *e*P Pdif 05 15 46.3 +1.0
comp=Z,9.1nm,1.5s
BOZ Bozeman (W) 98.71 1 *e*P Pdif 05 15 51.5 +0.5
comp=Z,5.8nm,1.1s
BOZ Bozeman (W) 98.71 1 *e*P Pdif 05 15 51.5 +0.5
BOZ pmax pmax
comp=Z,6.0nm,1.1s
DLMT Dillon 98.93 1 *e*P **P 05 15 51.7 -0.3**
comp=Z,11nm,1.4s
ECSD EROS Data Cent 99.54 350 *e*P **Pdif 05 15 54.6 0.0**
comp=Z,2.2nm,0.9s
PD31 Pinedale Array 101.53 359 *e*Pdif **Pdif 05 16 04.1 +0.3**
PDAR Pinedale Array 101.53 359 P **Pdif 05 16 03.7 -0.1**
comp=Z,0.3nm,0.5s,baz=25,slow=4.9,SNR=3.6
PDAR PP **PP 05 20 07.2 -5.3**
comp=Z,0.9nm,0.8s,baz=25,slow=3.9,SNR=4.9
PDAR PKKPbc **PKKPbc 05 32 12.0 +0.9**
comp=Z,0.2nm,0.5s,baz=129,slow=4.0,SNR=3.7
ELK Elko 103.45 4 PKiKP **PKiKP 05 20 25.8 -5.2**
comp=Z,1.6nm,0.9s,baz=321,slow=1.6,SNR=3.7
MAW Mawson 103.46 183 Pdiff **Pdif 05 16 12.2 +1.2**
comp=Z,1.1nm,0.7s,baz=341,slow=6.3,SNR=3.7
MAW PKKPbc **PKKPbc 05 32 05.5 -0.9**
comp=Z,1.2nm,0.6s,baz=326,slow=3.6,SNR=3.2
MAW Mawson 103.46 183 *e*Pdif **Pdif 05 16 12.8 +1.7**
MAW PKKPbc **PKKPbc 05 32 05.5 -0.9**
MAW Mawson 103.46 183 *e*P **Pdif 05 16 12.8 +1.7**
NV01 Mina Array Sit 105.55 6 *e*Pdif **Pdif 05 16 20.9 -0.7**
NVAR Mina Array Bea 105.55 6 Pdiff **Pdif 05 16 22.8 +1.1**
comp=Z,0.3nm,0.5s,baz=350,slow=4.6,SNR=3.0
NVAR PKiKP **PKiKP 05 20 34.8 -0.1**
comp=Z,0.2nm,0.4s,baz=289,slow=2.8,SNR=2.3
NVAR PKKPbc **PKKPbc 05 31 58.7 -0.4**
comp=Z,0.9nm,0.9s,baz=185,slow=4.4,SNR=5.0
TXAR Lajitas Array 114.61 353 PKP PKPdf 05 20 50.4 -1.7
comp=Z,0.7nm,1.0s,baz=64,slow=2.9,SNR=5.9
TXAR PKKPbc **PKKPbc 05 31 29.7 0.0**
comp=Z,1.0nm,0.9s,baz=194,slow=5.2,SNR=10
PCRV Puerto La Cruz 116.75 307 PKP **PKPdf 05 20 56.6 +0.2**
comp=Z,5.9nm,0.8s,baz=207,slow=4.5,SNR=2.2
SNAA Sanae 118.50 200 PKiKP **PKPdf 05 20 57.1 -0.9**
SNAA Sanae 118.50 200 PKP **PKPdf 05 20 56.9 -1.2**
comp=Z,4.0nm,1.0s,baz=99,slow=5.3,SNR=12
SNAA PKKPbc **PKKPab 05 31 14.7 -0.6**
comp=Z,2.4nm,1.0s,baz=210,slow=8.1,SNR=3.5
SNAA Sanae 118.50 200 *e*PKPdf **PKPdf 05 20 57.8 -0.3**
SNAA PKKPbc **PKKPab 05 31 14.7 -0.6**
SNAA Sanae 118.50 200 *e*PKiKP **PKPdf 05 20 57.8 -0.3**
VNA2 Neumayer--Watz 119.47 202 PKiKP **PKPdf 05 20 59.9 0.0**
baz=25,slow=3.5
VNA1 Neumayer--Stat 119.62 202 PKiKP **PKPdf 05 20 58.0 -2.1**
LPIG La Paz 120.16 360 PKKPbc PKKPbc 05 31 11.7 +1.9
comp=Z,6.0nm,0.3s,baz=321,slow=9.8,SNR=2.5
VNA3 Neumayer Olymp 120.28 202 PKiKP **PKPdf 05 21 01.2 -0.2**
FOZ Fox Glacier 120.69 124 *e*PKPdf **PKPdf 05 21 01.7 -1.3**
ODZ Otahua Downs 121.79 125 *e*PKPdf **PKPdf 05 21 07.1 +2.0**
OXZ Oxford 122.11 123 *e*PKPdf **PKPdf 05 21 05.8 0.0**
URZ Urewera 123.85 116 *e*PKPdf **PKPdf 05 21 06.1 -3.1**
VNDA Vanda 125.46 165 PKP **PKPdf 05 21 09.9 -1.3**
comp=Z,1.2nm,0.9s,baz=281,slow=5.4,SNR=6.1
VNDA Vanda 125.46 165 *e*PKPdf **PKPdf 05 21 10.5 -0.7**
VNDA Vanda 125.46 165 *e*PKiKP **PKPdf 05 21 10.5 -0.7**
QSPA South Pole Qui 125.86 180 PKP **PKPdf 05 21 11.3 -1.0**
comp=Z,4.6nm,0.6s,baz=252,slow=2.7,SNR=11
QSPA South Pole Qui 125.86 180 *e*PKPdf **PKPdf 05 21 11.6 -0.8**
ROSC El Rosal 126.90 312 PKP **PKPdf 05 21 16.2 -0.2**
comp=Z,3.8nm,0.5s,baz=131,slow=11,SNR=3.2
CPUP Villa Florida 133.78 267 PKP **PKPdf 05 21 27.1 -1.4**
comp=Z,1.6nm,0.6s,baz=15,slow=4.4,SNR=5.2
CPUP Villa Florida 133.78 267 *e*PKPdf **PKPdf 05 21 27.3 -1.2**
CPUP Villa Florida 133.78 267 *e*PKiKP **PKPdf 05 21 27.3 -1.2**
LPAZ La Paz 137.39 286 PKP **PKPdf 05 21 35.2 -1.1**
comp=Z,1.8nm,1.0s,baz=176,slow=4.0,SNR=4.1
ACLC CERRO LA CRUZ 142.81 267 *e*P **PKPdf 05 21 40.4 -4.9**
APLL PUNTA DE LOS L 142.82 266 *e*P **PKPdf 05 21 40.3 -4.8**
MRA San Martin 142.84 262 *e*P **PKPdf 05 21 41.8 -3.3**
VCA Vinchina 143.57 269 *e*P PKPbc 05 21 44.8 +0.8
AGUA GUANDACOL 144.08 268 *i* P **PKPab 05 21 45.0 +0.1**
AMOG MOGNA 144.60 266 *e*P **PKPab 05 21 46.4 -0.4**
GO03 Copiap 144.76 272 *e*PKPdf **PKPab 05 21 47.0 -0.5**
ACDV Cuesta del Vie 144.84 267 *i* P **PKPab 05 21 47.5 -0.4**
RTCV Cerro Valdivia 144.94 264 *e*P **PKPab 05 21 47.4 -0.6**
AROD Rodeo 145.12 268 *i* P **PKPbc 05 21 48.8 -0.2**
ASAL Salagasta 145.40 263 *i* P **PKPbc 05 21 49.2 -0.4**
AVIZ Vizcacheras 145.41 262 *i* P **PKPab 05 21 49.7 -0.1**
RTLS Leoncito 145.53 265 *e*P **PKPdf 05 21 49.6 -0.5**
AAGR Agrelo 145.54 262 *i* P **PKPdf 05 21 49.5 -0.3**
ARCO CERRO ARCO 145.56 263 *e*P **PKPdf 05 21 49.5 -0.4**
LCO Las Campanas 145.70 270 *e*PKPdf **PKPdf 05 21 49.2 -1.2**
AUSP Uspallata 145.74 264 *i* P **PKPdf 05 21 50.6 +0.2**
GO04 Tololo Observa 146.20 268 *e*PKPdf **PKPbc 05 21 52.5 +0.3**
PLCA Paso Flores 148.35 249 PKPbc **PKPbc 05 21 57.6 -0.1**
comp=Z,27nm,1.1s,baz=102,slow=3.1,SNR=16
PLCA Paso Flores 148.35 249 *e*P **PKPbc 05 21 57.5 -0.2**
GO05 HualaæØ 148.53 260 *e*PKPbc **PKPbc 05 21 57.7 -0.6**
GO09 Cerro Castillo 148.74 229 *e*PKPbc **PKPbc 05 21 58.9 +0.6**
CHRN Cochrane 149.66 236 *e*PKPbc **PKPbc 05 22 01.8 +1.1**

CSEM ***11*** *05:08:22.8±0.3, 36°.88N×21°.57E, h15km, ML2.2, Error*

ellipse: s-maj=7.5km s-min=4.3km az=59.0

ATH ***11*** *05:08:22.4, 36°.85N×21°.57E, h25km±1km, ML2.3/7, Error ellipse: s-maj=3.3km s-min=1.4km az=59.0*

THE 11 05:08:23.7, 36°.89N×21°.60E, h18km, ML2.2/7, Error ellipse: s-maj=1.6km s-min=0.8km az=52.0, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.12**	**85**	P	Pg	05 08 27.3	-0.3
PYL				AML	AML	05 08 31.4	
	comp=N,6008μm,0.2s						
PYL				AML	AML	05 08 31.6	
	comp=E,8723μm,0.3s						
PYL				S	Sg	05 08 31.7	+1.5
PYL	**PYLOS**	**0.12**	**85**	P	Pg	05 08 27.3	-0.3
PYL				S	Sg	05 08 30.8	+0.6
PYL	**PYLOS**	**0.12**	**85**	P	Pg	05 08 27.4	-0.2
PYL				S	Sg	05 08 30.8	+0.6
ITM	**Ithomi**	**0.39**	**42**	P	Pg	05 08 31.4	-0.6
ITM				AML	AML	05 08 39.1	
	comp=N,1018μm,0.3s						
ITM				S	S	05 08 39.1	+1.4
ITM				AML	AML	05 08 44.3	
	comp=E,753μm,0.3s						
ITM	**Ithomi**	**0.39**	**42**	P	Pg	05 08 31.7	-0.2
ITM				S	Sb	05 08 38.2	+0.2
ITM	**Ithomi**	**0.39**	**42**	P	Pg	05 08 31.7	-0.2
ITM				S	Sb	05 08 38.2	+0.2
DYR	**Agios Nikonas**	**0.60**	**102**	P	Pb	05 08 34.0	-1.6
DYR				S	Sb	05 08 43.6	-0.2
DYR				AML	AML	05 08 48.6	
	comp=N,289μm,0.2s						
DYR				AML	AML	05 08 49.4	
	comp=E,348μm,0.4s						
DYR	**Agios Nikonas**	**0.60**	**102**	P	Pb	05 08 34.5	-1.1
DYR				S	Sg	05 08 44.4	+0.6
DYR	**Agios Nikonas**	**0.60**	**102**	P	Pb	05 08 34.5	-1.1
DYR				S	Sb	05 08 43.7	-0.1
AMT	**Artemida-Makis**	**0.65**	**8**	P	Pb	05 08 35.6	-0.9
AMT				S	Sg	05 08 46.5	+1.1
AMT				AML	AML	05 08 50.8	
	comp=E,597μm,0.4s						
AMT				AML	AML	05 08 51.0	
	comp=N,489μm,0.3s						
AMT	**Artemida-Makis**	**0.65**	**8**	P	Pb	05 08 35.9	-0.6
AMT				S	Sb	05 08 45.1	-0.1
AMT	**Artemida-Makis**	**0.65**	**8**	P	Pb	05 08 35.9	-0.6
AMT				S	Sb	05 08 45.1	-0.1
VLX	**Vlachokerasia**	**0.79**	**52**	P	Pb	05 08 38.2	-0.8
VLX				S	Sg	05 08 50.2	+0.5
VLX				AML	AML	05 08 58.6	
	comp=E,675μm,0.5s						
VLX				AML	AML	05 09 00.1	
	comp=N,438μm,0.8s						
VLX	**Vlachokerasia**	**0.79**	**52**	P	Pb	05 08 38.3	-0.6
VLX				S	Sg	05 08 50.1	+0.4
VLX	**Vlachokerasia**	**0.79**	**52**	P	Pb	05 08 38.3	-0.6
VLX				S	Sg	05 08 50.1	+0.4
TRIP	**Tripoli**	**0.84**	**40**	P	Pb	05 08 38.9	-0.8
TRIP	**Tripoli**	**0.84**	**40**	P	Pb	05 08 38.9	-0.8
DRO	**Drossia**	**1.07**	**5**	P	Pn	05 08 44.0	+0.2
DRO				AML	AML	05 09 06.5	
	comp=N,265μm,0.4s						
DRO				AML	AML	05 09 13.5	
	comp=E,345μm,0.4s						
DRO	**Drossia**	**1.07**	**5**	P	Pb	05 08 43.4	-0.3
DRO				S	Sb	05 08 57.7	+0.4
DRO	**Drossia**	**1.07**	**5**	P	Pb	05 08 43.4	-0.3
DRO				S	Sb	05 08 57.7	+0.4
VLI	**Veliai**	**1.09**	**98**	P	Pb	05 08 44.0	0.0
VLI	**Veliai**	**1.09**	**98**	P	Pb	05 08 43.7	-0.3
VLI				S	Sn	05 08 58.3	-0.3
VLI	**Veliai**	**1.09**	**98**	P	Pb	05 08 43.8	-0.2
VLI				S	Sn	05 08 58.3	-0.3
GUR	**Goura**	**1.21**	**29**	P	Pn	05 08 44.9	-0.8
GUR	**Goura**	**1.21**	**29**	P	Pn	05 08 44.9	-0.8
KLV	**Kalavryta, Ach**	**1.24**	**21**	P	Pn	05 08 46.2	+0.1
KLV				AML	AML	05 09 11.2	
	comp=E,73μm,0.8s						
KLV				AML	AML	05 09 19.4	
	comp=N,86μm,0.9s						
KLV	**Kalavryta, Ach**	**1.24**	**21**	P	Pb	05 08 46.4	-0.1
KYTH	**Kithira**	**1.32**	**118**	P	Pb	05 08 47.9	-0.1
KFL	**Anninata**	**1.38**	**332**	P	Pn	05 08 47.8	-0.2
KFL	**Anninata**	**1.38**	**332**	P	Pn	05 08 47.8	-0.2

NIED ***11*** *05:10:00, 37°.50N×142°.00E, h17km, Mw3.4 Best double couple: M0=1.24000×10^14 NP1:φs=216.00000°, δ42.00000°, λ-126.00000°. NP2:φs=81.00000°, δ58.00000°, λ-62.00000°.*

JMA 11 05:10:29.9±0.2, 37°.49N×142°.04E, h28km±4km, M3.8, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.94**	**263**	P	Pn	05 10 47.0	-0.2
JFK				S	Sb	05 10 58.8	-0.8
JMM	**Marumori**	**1.06**	**291**	P	Pn	05 10 49.0	+0.1
JMM				S	Sn	05 11 02.3	-0.4
ONAJ	**Iwakimizuishiy**	**1.06**	**249**	P	Pn	05 10 48.6	-0.4
ONAJ				*e*S	Sn	05 11 01.5	-1.4
JIO	**Ouri**	**1.11**	**331**	P	Pn	05 10 49.6	+0.1
JIO				S	Sn	05 11 03.0	-0.9
JFT	**Otama**	**1.35**	**272**	P	Pb	05 10 53.9	-0.7
JFT				S	Sb	05 11 11.2	-0.4
JOU	**Okura**	**1.40**	**309**	P	Pb	05 10 54.5	-0.8
JOU				S	Sb	05 11 12.0	-0.7
JMK	**Ichinoseki**	**1.60**	**336**	P	Pn	05 10 57.1	+0.8
JMK				S	Sn	05 11 16.2	+0.3
JFY	**Yanaizu**	**1.86**	**268**	P	Pn	05 11 01.5	+1.6
JFY				*e*S	Sb	05 11 24.4	-1.7
JYK	**Kaneyama**	**1.95**	**318**	P	Pn	05 11 02.4	+1.3
JYK				*e*S	Sn	05 11 25.9	+1.3
JOM	**Ohasama**	**2.06**	**344**	P	Pn	05 11 03.8	+1.1
MAT	**Matsushiro**	**3.21**	**254**	P	Pb	05 11 23.4	-2.8
MAT				S	Sn	05 11 59.7	+3.9

ISCJB ***11*** *05:29:09.2±0.5, 36°.09N±0°.01×69°.36E±0°.01, h11km±3km, mb5.4/308, MS5.6/235, Error ellipse: s-maj=2.4km s-min=1.8km az=18.8*

NNC ***11*** *05:29:09.0±2.3, 36°.12N×69°.05E, h0km, mb6.0, mpv5.9, Error ellipse: s-maj=22.2km s-min=15.0km az=153.0*

NEIC ***11*** *05:29:11.5±0.1, 36°.02N×69°.35E, h16km, mb5.6/144, MS5.6/123, MW5.6, MW5.7, MW5.7, Error ellipse: s-maj=3.7km s-min=2.6km az=7.0, Moment Tensor Solution. s26 Moment tensor: Scale 10^17Nm; Mrr0.17; Mθθ1.76; Mφφ-1.93; Mrθ-1.96; Mθφ-1.50; Mφr-0.20; Best double couple: M0=3.10000×10^17 NP1:φs=244.00000°, δ83.00000°, λ143.00000°. NP2:φs=339.00000°, δ53.00000°, λ8.00000°. Principal axes: T 3.3400, Plg30.0000°, Azm195.0000°; N -0.5700, Plg53.0000°, Azm55.0000°; P -2.7700, Plg20.0000°, Azm297.0000°;*

NEIC At least 75 people killed, 13 injured, 114 buildings destroyed and 593 damaged after landslides occurred in Baghlan. At least 19 buildings destroyed or damaged in Takhar. Felt [V] at Kunduz; [III] at Bagrami, Charikar, Jabal us Saraj, Kabul and Bazar-e Sharif; [II] at Jalalabad. Also felt at Abbottabad and Islamabad, Pakistan and at Dushanbe, Tajikistan.

GCMT ***11*** *05:29:11.5±0.1, 36°.07N×69°.24E, h24km, MW5.8/139, Moment Tensor Solution. s106,c186; s139,c370; Duration: 1s8 Moment tensor: Scale 10^17Nm; Mrr1.08±.05; Mθθ3.84±.05; Mφφ-4.91±.04; Mrθ-1.87±.08; Mθφ-1.89±.04; Mφr0.16±.07; Best double couple: M0=5.20300×10^17 NP1:φs=234.00000°, δ74.00000°, λ160.00000°. NP2:φs=329.00000°, δ71.00000°, λ17.00000°. Principal axes: T 5.0970, Plg25.0000°, Azm191.0000°; N 0.2220, Plg65.0000°, Azm17.0000°; P -5.3090, Plg2.0000°, Azm282.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

MOS ***11*** *05:29:11.6±1.1, 36°.22N×69°.35E, h20km, mb5.6/111, MS5.5/67 Error ellipse: s-maj=4.2km s-min=3.1km az=121.2*

IDC ***11*** *05:29:12.2±1.6, 36°.04N×69°.34E, h25km±10km, mb5.0/56, mb1 5.0/62, mb1mx5.0/69, mbtmp5.1/62, ML5.1/7, MS5.3/58, Ms1 5.3/58, ms1mx5.3/68, Error ellipse: s-maj=7.4km s-min=6.1km az=17.0*

BJI ***11*** *05:29:12.2, 36°.38N×69°.46E, h8km, mb5.3/75, mB5.6/66, Ms5.9/87, Ms7 5.6/81*

PDG ***11*** *05:29:14.1, 36°.13N×69°.40E, h30km, mb5.7/8*

NEIC ***11*** *05:29:14.0±0.0, 36°.08N×69°.32E, h19km, Moment Tensor Solution. s33 Moment tensor: Scale 10^17Nm; Mrr2.38; Mθθ0.96; Mφφ-3.34; Mrθ-1.86; Mθφ-1.23; Mφr-2.06; Best double couple: M0=4.30000×10^17 NP1:φs=217.00000°, δ69.00000°, λ114.00000°. NP2:φs=346.00000°, δ32.00000°, λ43.00000°. Principal axes: T 3.8300, Plg59.0000°, Azm161.0000°; N 0.7500, Plg22.0000°, Azm28.0000°; P -4.5800, Plg20.0000°, Azm289.0000°;*

NEIC ***11*** *05:29:25.4±0.0, 36°.18N×69°.04E, h10km, Moment Tensor Solution. s34 Moment tensor: Scale 10^17Nm; Mrr1.46; Mθθ2.44; Mφφ-3.90; Mrθ-1.27; Mθφ-1.19; Mφr-1.74; Best double couple: M0=4.00000×10^17 NP1:φs=326.00000°, δ52.00000°, λ14.00000°. NP2:φs=228.00000°, δ79.00000°, λ141.00000°. Principal axes: T 3.3100, Plg34.0000°, Azm180.0000°; N 1.4200, Plg50.0000°, Azm35.0000°; P -4.7300, Plg18.0000°, Azm283.0000°;*

ISC 11 05:29:12.1±0.3, 36°.08N±0°.02×69°.30E±0°.02, h20km±1km, h20km:pP-P, n1329, σ2=11/1415, mb5.5/331, MS5.6/261, 71C-57D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**1.55**	**188**	*e*Pn	**Pb**	**05 29 39.5**	**-0.7**
KBL				*e*Sn	**Sb**	**05 29 60.0**	**+0.6**
KBL	**Kabul**	**1.55**	**188**	*e*PN	**Pb**	**05 29 39.5**	**-0.7**
KBL				*e*		05 30 00.0	
CEP	**Cherat**	**3.11**	**136**	P	**Pb**	**05 30 04.2**	**-2.6**
CEP				S	**Sb**	**05 30 47.0**	**+2.7**
THW	**Thamme Wali**	**3.85**	**148**	P	**Pn**	**05 30 12.8**	**+2.6**
NIL	**Nilore**	**4.05**	**126**	*e*Pn	**Pb**	**05 30 18.2**	**-4.7**
NIL	**Nilore**	**4.05**	**126**	*e*PN	**Pb**	**05 30 18.2**	**-4.7**
CHCP	**Chirah Chowk**	**4.06**	**125**	P	**Pn**	**05 30 16.9**	**+3.8**
SRNI	**Srinagar**	**4.96**	**112**	*e*P	**Pn**	**05 30 23.5**	**-2.0**
SRNI				*ex*	x	05 31 23.0	
SARP	**Sargodha**	**5.00**	**145**	P	**Pn**	**05 30 28.7**	**+2.6**
SFK	**Sufi-Kurgan**	**5.14**	**39**	⇓Pn	**Pn**	**05 30 31.4**	**+3.1**
	705nm,0.4s						
SFK				⇑Sn	**Sn**	**05 31 32.5**	**+5.4**
	3μm,0.6s						
SFK				⇑Lg	Lg	05 31 52.2	
	5μm,0.5s						
SFK	**Sufi-Kurgan**	**5.14**	**39**	PN	**Pn**	**05 30 31.3**	**+3.1**
SFK						05 31 32.4	
SFK				pmax	pmax		
	comp=Z,870nm,0.5s						
SFK				smax	smax		
	comp=N,2μm,0.4s						
TAS	**Tashkent**	**5.24**	**360**	⇓Pn	**Pn**	**05 30 30.5**	**+1.1**
	comp=N,696nm,0.6s						
TAS				⇑Sn	**Sn**	**05 31 31.4**	**+2.2**
	comp=N,5μm,0.3s						
TAS				⇑Lg	Lg	05 31 59.9	
	comp=N,7μm,0.5s						
TAS	**Tashkent**	**5.24**	**360**	PN	**Pn**	**05 30 30.5**	**+1.1**
TAS						05 31 29.7	
TAS						05 32 00.3	
TAS				pmax	pmax		
	comp=Z,902nm,0.6s						
TAS				smax	smax		
	comp=N,9μm,0.6s						
TAS				smax	smax		
	comp=N,10μm,0.6s						
JMU	**Jammu**	**5.72**	**124**	*ex*	Pb	05 30 46.0	-5.2
JMU				*e*S	**Sn**	**05 31 35.0**	**-5.9**
KSH	**Kashi**	**6.30**	**55**	P	**Pn**	**05 30 41.5**	**-2.6**
KSH				sP	Pb	05 30 48.0	-13
KSH				S	**Sn**	**05 31 48.5**	**-7.0**
KSH				sS	Sb	05 31 53.6	-23
KSH				pmax	pmax		
	comp=Z,2μm,0.6s						
KSH				LR	LR		
	comp=N,116μm,5.1s						
KSH				LR	LR		
	comp=E,138μm,5.4s						
KSH				LR	LR		
	comp=Z,177μm,6.8s						
MNAS	**Manas**	**6.87**	**20**	⇓Pn	**Pn**	**05 30 53.7**	**+1.9**
	comp=Z,716nm,0.6s						
MNAS				⇑Sn	**Sn**	**05 32 10.9**	**+1.5**
	comp=Z,2μm,0.7s						
MNAS				⇑Lg	Lg	05 32 45.5	
	comp=Z,1μm,0.7s						
MNAS	**Manas**	**6.87**	**20**	PN	**Pn**	**05 30 52.8**	**+1.0**
MNAS						05 32 10.9	
MNAS				pmax	pmax		
	comp=Z,716nm,0.6s						
MNAS				smax	smax		
	comp=N,2μm,0.7s						
AML	**Almayashu**	**6.95**	**28**	P	**Pn**	**05 30 53.9**	**+0.8**
	SNR=1415						
DHRM	**DHARAMSHALA**	**6.95**	**121**	*e*P	**Pn**	**05 30 53.5**	**+0.5**
DHRM				*e*S	**Sn**	**05 32 04.8**	**-6.7**
DHRM				IAML		05 32 51.8	
	comp=E,11μm,0.3s						
DHRM				IAML		05 33 00.1	
	comp=N,7μm,0.7s						
KK31	**Karatay Array**	**7.08**	**7**	Pn	**Pn**	**05 30 55.3**	**+0.7**
	comp=N,116nm,0.3s,baz=189,slow=14,SNR=4830						
KK31				⇑Sn	**Sn**	**05 32 14.6**	**+0.1**
	comp=N,258nm,0.4s,baz=191,slow=22,SNR=4.8						
KK31				⇑Lg	Lg	05 32 49.7	
	comp=N,403nm,0.6s						
KK31	**Karatay Array**	**7.08**	**7**	*e*Pn	**Pn**	**05 30 55.1**	**+0.5**
KK31				*e*Sn	**Sn**	**05 32 15.8**	**+1.3**
KK31	**Karatay Array**	**7.08**	**7**	*e*PN	**Pn**	**05 30 55.3**	**+0.7**
KK31						05 32 14.5	
KK31				pmax	pmax		
	comp=Z,331nm,0.5s						
KKAR	**Karatay Array**	**7.08**	**7**	*e*Pn	**Pn**	**05 30 55.4**	**+0.8**
KKAR	**Karatay Array**	**7.08**	**7**	*e*PN	**Pn**	**05 30 55.4**	**+0.8**
UCH	**Uchtor**	**7.36**	**32**	P	**Pn**	**05 30 59.7**	**+0.9**
	SNR=941						
EKS2	**Erkin-Say**	**7.43**	**26**	P	**Pn**	**05 31 00.6**	**+1.1**
	SNR=314						
NRN	**Naryn**	**7.49**	**42**	*e*Pn	**Pn**	**05 31 00.8**	**+0.4**
NRN	**Naryn**	**7.49**	**42**	*e*P	**Pn**	**05 31 00.8**	**+0.4**
KZA	**Kyzart**	**7.57**	**36**	P	**Pn**	**05 31 02.6**	**+0.9**
	SNR=238						
AAK	**Ala-Archa**	**7.69**	**30**	Pn	**Pn**	**05 31 04.2**	**+1.2**
	comp=Z,96nm,0.3s,baz=213,slow=12,SNR=223						
AAK				Sn	**Sn**	**05 32 29.6**	**-0.1**
	baz=198,slow=20,SNR=2.4						
AAK				Lg	Lg	05 33 12.9	
	baz=0.0,slow=20,SNR=5.8						
AAK				LR	LR	05 34 27.4	
	comp=Z,40μm,19.6s,baz=206,slow=41						
AAK	**Ala-Archa**	**7.69**	**30**	⇓Pn	**Pn**	**05 31 04.8**	**+1.8**
	comp=Z,384nm,0.5s						
AAK				⇓Sn	**Sn**	**05 32 33.8**	**+4.1**
	comp=Z,718nm,0.6s						
AAK	**Ala-Archa**	**7.69**	**30**	P	**Pn**	**05 31 04.5**	**+1.4**
	SNR=483						
KBK	**Karagaybulak**	**7.89**	**32**	P	**Pn**	**05 31 07.6**	**+1.7**
	SNR=292						
FRU	**Bishkek**	**7.90**	**30**	*i* P	**Pn**	**05 31 07.0**	**+1.1**
FRU				*i* S	**Sn**	**05 32 39.0**	**+4.3**
FRU				pmax	pmax		
	comp=E,3μm,6.0s						
FRU				smax	smax		
	comp=E,12μm,2.0s						
CHMS	**Chumysh**	**8.09**	**30**	P	**Pn**	**05 31 10.1**	**+1.6**
	SNR=378						
ULHL	**Ulahol**	**8.19**	**39**	P	**Pn**	**05 31 10.8**	**+0.9**
	SNR=138						
SMLA	**Simla**	**8.21**	**125**	*e*P	**Pn**	**05 31 10.9**	**+0.7**
SMLA				*e*S	**Sn**	**05 32 34.5**	**-7.8**
SMLA				IAML		05 32 50.4	
	comp=N,3μm,0.3s						
SMLA				IAML		05 32 56.8	
	comp=E,4μm,0.5s						
USP	**Ospenovka**	**8.22**	**28**	P	**Pn**	**05 31 11.0**	**+0.7**
	SNR=101						
TKM2	**Tokmak 2**	**8.39**	**34**	P	**Pn**	**05 31 13.7**	**+1.0**
	SNR=93						
TARG	**Taragay, Kyrgy**	**8.71**	**47**	*e*Pn	**Pn**	**05 31 18.2**	**+1.0**
ASHT	**Ashkhabad**	**8.92**	**285**	P	**Pn**	**05 31 22.4**	**+2.5**
ASHT				pmax	pmax		
	comp=Z,1μm,0.6s						
GEYT	**Alibeck**	**9.13**	**285**	Pn	**Pn**	**05 31 21.0**	**-1.7**
	comp=Z,49nm,0.3s,baz=112,slow=11,SNR=32						
GEYT				Sn	**Sn**	**05 33 02.5**	**-2.5**
	comp=Z,58nm,0.3s,baz=70,slow=9.8,SNR=4.7						
GEYT				LR	LR	05 35 40.2	
	comp=Z,10μm,19.5s,baz=80,slow=42						
GYA0B	**ALIBECK ARRAY**	**9.13**	**285**	⇑Pn	**Pn**	**05 31 20.2**	**-2.5**
	comp=Z,507nm,0.7s						
GYA0B				⇓Sn	**Sn**	**05 33 02.1**	**-2.8**
	comp=Z,6μm,1.3s						
GYA0B	**ALIBECK ARRAY**	**9.13**	**285**	*e*Pn	**Pn**	**05 31 21.0**	**-1.8**
GYA0B				*e*Sn	**Sn**	**05 33 03.9**	**-1.1**
AAA	**Alma-Ata**	**9.23**	**37**	*e*P	**Pn**	**05 31 25.9**	**+1.8**
AAA				*e*S	**Sn**	**05 33 07.7**	**+0.3**
AAA				pmax	pmax		
	comp=Z,2μm,4.0s						
AAA				smax	smax		
	comp=E,4μm,3.7s						
KNDC	**Almaty**	**9.26**	**37**	⇑Pn	**Pn**	**05 31 26.3**	**+1.7**
	comp=E,383nm,0.6s						
KNDC				⇓Lg	Lg	05 34 00.1	
	comp=E,510nm,0.9s						
DDI	**Dehra Dun**	**9.31**	**126**	*e*P	**Pn**	**05 31 25.9**	**+0.5**
DDI				*e*S	**Sn**	**05 33 00.6**	**-9.0**
DDI				IAML		05 33 45.4	
	comp=E,4μm,0.0s						
DDI				IAML		05 33 46.4	
	comp=N,6μm,1.0s						
PRZ	**Przheval'sk**	**9.52**	**45**	*e*Pn	**Pn**	**05 31 29.3**	**+1.0**
PRZ	**Przheval'sk**	**9.52**	**45**	*e*P	**Pn**	**05 31 29.3**	**+1.0**
NDI	**New Delhi**	**9.96**	**136**	*e*P	**Pn**	**05 31 32.0**	**-2.1**
NDI				*ex*	x	05 33 24.0	
PDGK	**Podgornoye**	**10.68**	**44**	⇓Pn	**Pn**	**05 31 43.2**	**-0.9**
	comp=N,178nm,0.7s						
PDGK				⇓Lg	Lg	05 34 46.8	
	comp=N,307nm,1.1s						
PDGK	**Podgornoye**	**10.68**	**44**	P	**Pn**	**05 31 43.1**	**-0.9**
PDGK				pmax	pmax		
	comp=Z,428nm,0.9s						
OTUK	**Ortayu**	**12.37**	**10**	⇑Pn	**Pn**	**05 32 05.6**	**-1.3**
	comp=Z,51nm,0.5s						
OTUK	**Ortayu**	**12.37**	**10**	P	**Pn**	**05 32 05.4**	**-1.6**
OTUK				pmax	pmax		
	comp=Z,160nm,0.7s						
BHJ	**Bhuj**	**12.78**	**179**	*e*P	**Pn**	**05 32 12.1**	**-0.7**
BHJ				IAmb	IAmb	05 32 14.5	
	comp=Z,999nm,0.5s						
PYUN	**Piuthan**	**14.06**	**121**	*e*P	**Pn**	**05 32 27.6**	**-2.8**
	comp=Z,1μm,0.6s						
MAKZ	**Makanchi**	**14.31**	**38**	*e*Pn	**Pn**	**05 32 31.8**	**-1.8**
MAKZ	**Makanchi**	**14.31**	**38**	*e*P	**Pn**	**05 32 31.8**	**-1.8**
MK01	**Makanchi Array**	**14.45**	**38**	*e*Pn	**Pn**	**05 32 34.6**	**-0.8**
DANN	**Dangsing**	**14.46**	**118**	*e*P	**Pn**	**05 32 32.8**	**-3.1**
	comp=Z,816nm,0.4s						
MK31	**Makanchi Array**	**14.46**	**38**	Pn	**Pn**	**05 32 33.1**	**-2.5**
	comp=Z,47nm,0.7s,baz=214,slow=13,SNR=932						
MK31	**Makanchi Array**	**14.46**	**38**	*e*Pn	**Pn**	**05 32 33.5**	**-2.1**
MK31	**Makanchi Array**	**14.46**	**38**	*e*P	**Pn**	**05 32 33.5**	**-2.1**
MKAR	**Makanchi Array**	**14.46**	**38**	Pn	**Pn**	**05 32 33.3**	**-2.2**
	comp=Z,5.6nm,0.3s,baz=216,slow=14,SNR=137						
MKAR				Lg	Lg	05 36 48.6	
	comp=Z,0.5nm,0.3s,baz=229,slow=28,SNR=3.0						
MKAR				LR	LR	05 38 40.9	
	comp=Z,16μm,20.1s,baz=226,slow=39						
MKAR	**Makanchi Array**	**14.46**	**38**	*e*Pn	**Pn**	**05 32 33.6**	**-1.9**
MKAR				Lg	Lg	05 36 48.6	
MKAR	**Makanchi Array**	**14.46**	**38**	*e*P	**Pn**	**05 32 33.6**	**-1.9**
BHPL	**Bhopal**	**14.60**	**149**	*e*P	**Pn**	**05 32 34.0**	**-3.7**
BHPL				IAmb	IAmb	05 32 38.4	
	comp=Z,256nm,0.7s						
KOLN	**Koldanda**	**14.69**	**120**	*e*P	**Pn**	**05 32 36.1**	**-2.9**
	comp=Z,627nm,0.4s						
AB31	**Akbulak array**	**14.84**	**335**	⇑Pn	**Pn**	**05 32 37.3**	**-3.4**
	comp=Z,223nm,0.6s,baz=152,slow=12,SNR=4224						
AB31				⇓Sn	Sn	05 35 14.7	-10
	comp=Z,181nm,0.6s,baz=156,slow=23,SNR=13						
AB31	**Akbulak array**	**14.84**	**335**	*e*P	**Pn**	**05 32 36.9**	**-3.8**
AB31				pmax	pmax		
	comp=Z,223nm,0.6s						
ABKAR	**Akbulak array**	**14.84**	**335**	*e*Pn	**Pn**	**05 32 36.9**	**-3.8**
BANOM	**Banah**	**15.04**	**231**	P	**Pn**	**05 32 44.1**	**+0.6**
SHME	**Shamm**	**15.05**	**232**	*i* P	**Pn**	**05 32 44.2**	**+0.5**
	SNR=9.5						
GKN	**Gorkha**	**15.29**	**117**	*e*P	**Pn**	**05 32 43.6**	**-3.3**
	comp=Z,3μm,1.1s						
MDH	**Madha**	**15.49**	**230**	P	**Pn**	**05 32 48.1**	**-1.3**
MSFE	**Esma-Masafi**	**15.53**	**230**	*i* P	**Pn**	**05 32 49.7**	**-0.3**
	SNR=9.5						
WSAR	**Wadi Sarin**	**15.78**	**219**	Pn	**Pn**	**05 32 52.0**	**-1.2**
	comp=Z,1.7nm,0.3s,baz=74,slow=5.9,SNR=12						
WSAR				Sn	**S**	**05 35 56.6**	**-5.5**
	comp=Z,0.8nm,0.3s,baz=37,slow=20,SNR=1.8						
WSAR				Lg	Lg	05 37 35.1	
	comp=Z,0.5nm,0.3s,baz=90,slow=11,SNR=1.6						
WSAR				LR	LR	05 40 05.4	
	comp=Z,14μm,20.4s,baz=68,slow=41						
UOSS	**Minazif**	**15.80**	**229**	*e*Pn	**Pn**	**05 32 54.2**	**+0.7**
	comp=Z,111nm,1.3s						
UOSS	**Minazif**	**15.80**	**229**	*i* P	**Pn**	**05 32 52.9**	**-0.6**
	SNR=12						
BIDO	**Bidbid**	**15.81**	**221**	Pn	**Pn**	**05 32 55.0**	**+1.4**
	SNR=11						
DMN	**Daman**	**15.85**	**118**	*e*P	**Pn**	**05 32 50.9**	**-3.5**
	comp=Z,905nm,0.5s						
KKN	**Kakani**	**15.87**	**117**	*e*P	**Pn**	**05 32 51.4**	**-3.2**
	comp=Z,2μm,1.0s						
HATD	**Hatta, Dubai**	**15.94**	**229**	Pn	**P**	**05 33 02.0**	**+3.3**
	SNR=8.8						
HATD	**Hatta, Dubai**	**15.94**	**229**	P	**P**	**05 33 02.0**	**+3.3**
	SNR=8.8						
HATD	**Hatta, Dubai**	**15.94**	**229**	*i* P	**Pn**	**05 32 53.5**	**-1.7**
	SNR=14						
KURBB	**Kurchatov Arra**	**15.99**	**22**	Pn	**Pn**	**05 32 51.6**	**-4.2**
	comp=Z,1.2nm,0.3s,baz=211,slow=12,SNR=75						
KURBB				Sn	**Sn**	**05 35 44.8**	**-7.7**
	baz=205,slow=26,SNR=2.9						
KURBB				Lg	Lg	05 37 41.4	
	comp=Z,0.7nm,0.3s,baz=169,slow=33,SNR=4.5						
KURBB	**Kurchatov Arra**	**15.99**	**22**	⇑Pn	**Pn**	**05 32 53.2**	**-2.6**
	comp=Z,311nm,0.6s						
WMQ	**Urumqi**	**16.07**	**56**	P	**Pn**	**05 32 57.2**	**+0.3**
WMQ				pP	pP	05 33 04.8	-0.9
WMQ				S	**Sn**	**05 35 55.3**	**+0.8**
WMQ				PcP	PcP	05 38 01.6	+9.0
WMQ				pmax	pmax		
	comp=Z,510nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,2μm,3.8s						
WMQ				LR	LR		
	comp=Z,101μm,19.1s						
WMQ				LR	LR		
	comp=Z,80μm,14.1

baz=158,slow=19,SNR=2.4
AKTO LR LR 05 39 39.2
comp=Z,10μm,18.1s,baz=147,slow=38
AKTO Aktyubinsk 16.51 334 ⇓Pn **Pn 05 32 59.4 -3.0**
comp=Z,279nm,0.9s
AKTO Aktyubinsk 16.51 334 P **Pn 05 32 59.3 -3.0**
AKTO pmax pmax
comp=Z,1μm,1.6s
ASUD Al Ashush, Dub 16.58 230 P **Pn 05 33 03.0 -0.4**
JIRN Jiri 16.61 116 *e*P **Pn 05 33 00.4 -3.8**
comp=Z,838nm,0.4s
ALNE Al Ain 16.74 228 *i* P **Pn 05 33 05.6 +0.1**
SNR=8.1
JMDO Jabal Madar 16.77 219 Pn **P 05 33 11.0 +3.0**
SNR=15
JMDO Jabal Madar 16.77 219 P **P 05 33 11.0 +3.0**
SNR=15
AJN Ajban 16.84 231 P **Pn 05 33 06.6 -0.1**
ARQ Araqi 16.84 225 Pn P 05 33 18.0 +9.2
SNR=17
BSY Bisya 16.94 222 Pn **P 05 33 16.1 +6.3**
SNR=18
BVA0 Borovoye Array 16.96 2 ⇑Pn **Pn 05 33 06.3 -1.8**
comp=Z,155nm,0.8s
BVA0 Borovoye Array 16.96 2 P **Pn 05 33 05.2 -2.9**
BVA0 pmax pmax
comp=Z,217nm,0.8s
BVAR Borovoye Array 16.96 2 Pn **Pn 05 33 05.0 -3.1**
comp=Z,9.6nm,0.3s,baz=171,slow=10,SNR=106
BVAR Sn **Sn 05 36 07.5 -8.5**
comp=Z,3.1nm,0.3s,baz=180,slow=16,SNR=3.1
BVAR Lg Lg 05 38 12.5
baz=174,slow=30,SNR=1.6
BVAR LR LR 05 40 27.5
comp=Z,31μm,19.9s,baz=186,slow=40
BRVK Borovoye 16.99 2 *e*Pn **Pn 05 33 05.8 -2.6**
comp=Z,439nm,1.2s
BRVK Borovoye 16.99 2 Pn **Pn 05 33 05.9 -2.6**
SNR=283
BRVK Borovoye 16.99 2 P **Pn 05 33 05.9 -2.6**
SNR=283
BRVK Borovoye 16.99 2 ⇓*i*P **Pn 05 33 05.4 -3.1**
NGP Nagpur 17.14 148 *e*P **Pn 05 33 07.6 -3.0**
NGP IAmb IAmb 05 33 14.7
comp=Z,360nm,1.0s
NGP *ex* x 05 36 16.1
RAMN Ramite 17.32 117 *e*P **Pn 05 33 10.9 -2.0**
comp=Z,990nm,0.5s
AKT Akhty 17.64 294 ⇑*i*P **Pn 05 33 14.8 -2.0**
AKT *e*S **Sn 05 36 27.4 -5.4**
AKT pmax pmax
comp=Z,86nm,0.5s
AKT smax smax
comp=E,147nm,0.4s
AKT smax smax
comp=N,232nm,0.6s
TAPN Taplejung 17.90 114 *e*P **Pn 05 33 17.4 -2.8**
comp=N,3μm,1.0s
POO Poona 17.94 166 *e*P **Pn 05 33 19.7 -0.7**
POO IAmb IAmb 05 33 24.4
comp=Z,66nm,0.5s
POO *i* S **Sn 05 36 40.0 0.0**
ODAN Odare 17.94 116 *e*P **Pn 05 33 17.7 -3.0**
comp=Z,1μm,0.6s
MAK Makhachkala 18.14 299 *e*P **Pn 05 33 20.2 -2.5**
MAK *e*S **Sn 05 36 39.7 -4.8**
MAK pmax pmax
comp=Z,90nm,0.5s
MAK MLR MLR
comp=Z,35μm,14.0s
GTK Tadong 18.58 113 *e*P **P 05 33 27.5 -0.6**
GTK IAmb IAmb 05 33 37.1
comp=Z,563nm,0.8s
BOK Bokaro 18.85 126 *e*P **P 05 33 30.8 -0.1**
BOK IAmb IAmb 05 33 33.9
comp=Z,234nm,0.2s
SRSP Sriramsagar 18.86 153 *e*P **P 05 33 29.9 -1.1**
SRSP IAmb IAmb 05 33 39.2
comp=Z,131nm,1.0s
SRSP *e*S **Sn 05 37 02.7 +0.5**
SRSP IVMs_BB IVMs_BB 05 40 47.2
comp=Z,19μm,9.9s
MZR Muzera 18.92 231 *i* P **P 05 33 31.6 -0.1**
SNR=40
KLRI Killari 19.07 158 *e*P **P 05 33 33.0 -0.4**
KLRI IAmb IAmb 05 33 48.0
comp=Z,117nm,0.6s
KLRI *e*S **Sn 05 37 07.4 +0.1**
KLRI IVMs_BB IVMs_BB 05 41 04.2
comp=Z,23μm,9.7s
RPR Rampur 19.29 150 *e*P **P 05 33 35.7 0.0**
RPR IAmb IAmb 05 33 43.9
comp=Z,184nm,0.7s
RPR *e*S **S 05 37 13.7 +0.3**
RPR IVMs_BB IVMs_BB 05 41 53.2
comp=Z,13μm,7.4s
LSA Lhasa 19.41 103 P **Pn 05 33 41.5 +2.8**
LSA S **S 05 37 16.8 +0.4**
LSA LR LR
comp=Z,5μm,11.7s
LSA LR LR
comp=Z,6μm,10.6s
LSA LR LR
comp=Z,22μm,18.1s
LSA Lhasa 19.41 103 *e*P **P 05 33 37.7 +0.2**
comp=Z,798nm,0.8s
LSA Lhasa 19.41 103 P **Pn 05 33 38.4 -0.3**
LSA Lhasa 19.41 103 *e*P **P 05 33 37.7 +0.2**
LSA pmax pmax
comp=Z,798nm,0.8s
GROC Groznyy 19.41 299 *e*P **P 05 33 37.3 +0.4**
GROC *e*S **Sn 05 37 15.3 +0.1**
GROC pmax pmax
comp=Z,323nm,1.3s
GNI Garni 19.72 289 P **Pn 05 33 42.9 +0.9**
comp=Z,1.7nm,0.3s,baz=145,slow=4.2,SNR=37
GNI S **S 05 37 21.3 -0.9**
comp=Z,1.0nm,0.3s,baz=137,slow=19,SNR=2.1
GNI LR LR 05 43 39.6
comp=Z,10μm,18.0s,baz=76,slow=44
GNI Garni 19.72 289 *e*P **Pn 05 33 42.3 +0.3**
comp=Z,379nm,0.9s
GNI S **S 05 37 21.3 -0.9**
GNI Garni 19.72 289 P **Pn 05 33 43.4 +1.3**
SNR=70
GNI Garni 19.72 289 P **Pn 05 33 43.4 +1.3**
SNR=70
GNI Garni 19.72 289 *i* P **Pn 05 33 41.8 -0.2**
SNR=76
GNI Garni 19.72 289*d* *i*P **Pn 05 33 43.0 +0.9**
GNI pmax pmax
comp=Z,2μm,2.5s
GNI MLR MLR
comp=Z,14μm,18.0s
HYBB Hyderabad (bro 20.32 154 *e*P **P 05 33 47.2 +0.2**
HYBB IAmb IAmb 05 33 58.7
comp=Z,175nm,0.7s
HYBB *e*S **S 05 37 33.8 -0.2**
HYBB IVMs_BB IVMs_BB 05 42 19.7
comp=Z,15μm,10.1s
HYB Hyderabad 20.32 154 *i* P Pn 05 33 48.0 -1.1
HYB *e*S **S 05 37 32.0 -2.0**
HYB LR LR
comp=Z,13nm,16.0s
HYB Hyderabad 20.32 154 *e*P **P 05 33 46.2 -0.9**
HYB IAmb IAmb 05 33 53.6
comp=Z,185nm,0.3s
DHUB DHUBRI 20.34 114 *e*P Pn 05 33 48.2 -1.0
ZEI Tsey 20.68 297 *e*P Pn 05 33 52.6 -0.8
ZEI pmax pmax
comp=Z,132nm,1.1s
TURI Tura 20.85 114 *e*P **P 05 33 53.1 +0.4**
ZAA0 Zalesovo Array 20.89 26 ⇓Pn **P 05 33 52.1 -0.8**
comp=Z,375nm,0.7s
ZAA0 Zalesovo Array 20.89 26 *e*P **P 05 33 52.5 -0.4**
comp=Z,399nm,0.7s
ZALV Zalesovo Beam 20.89 26 P **P 05 33 51.7 -1.2**
comp=Z,123nm,0.5s,baz=220,slow=11,SNR=118
ZALV S **S 05 37 40.3 -4.5**
comp=Z,8.4nm,0.7s,baz=258,slow=12,SNR=1.6
ZALV Lg Lg 05 40 12.8
comp=Z,16nm,0.8s,baz=230,slow=22,SNR=3.1
ZALV LR LR 05 42 48.2
comp=Z,27μm,18.4s,baz=203,slow=39
ZALV Zalesovo Beam 20.89 26 *e*P **P 05 33 52.2 -0.7**
ZALV S **S 05 37 40.3 -4.5**
ZALV Lg Lg 05 40 12.8
ZALV Zalesovo Beam 20.89 26 *e*P **P 05 33 52.2 -0.7**
ZALV **S 05 37 40.3 -4.5**
NCK Nalchik 21.04 298 ⇓*i*P **P 05 33 56.2 +1.5**
NCK pmax pmax
comp=Z,15nm,0.3s
NCK MLR MLR
comp=Z,16μm,16.0s
NVS Novosibirsk 21.09 23 *e*P **P 05 33 54.8 -0.2**
NVS *e*S **S 05 37 45.4 -3.2**
NVS pmax pmax
comp=Z,651nm,1.5s
NVS pmax pmax
comp=N,579nm,1.6s
NVS smax smax
comp=N,315nm,2.3s
NVS smax smax
comp=E,211nm,1.7s
NJS Nagarjunasagar 21.39 153 *e*P **P 05 33 58.6 +0.1**
NJS IAmb IAmb 05 34 08.9
comp=Z,504nm,1.0s
NJS *e*S **S 05 37 55.0 -0.2**
NJS IVMs_BB IVMs_BB 05 42 14.6
comp=Z,14μm,9.2s
GUWA GUWAHATI 21.51 111 *e*P **P 05 34 00.8 +0.9**
SVE Sverdlovsk 21.56 347 ⇓*e*P **P 05 33 56.7 -3.4**
SVE *e*S S 05 37 47.0 -11
SVE pmax pmax
comp=Z,397nm,1.2s
SVE MLR MLR
comp=Z,64μm,13.0s
KBZ Khabaz 21.58 299 P **P 05 33 59.9 -0.5**
comp=Z,24nm,0.8s,baz=134,slow=7.1,SNR=30
KBZ S **S 05 37 57.5 -1.1**
comp=Z,36nm,0.9s,baz=299,slow=19,SNR=2.7
KBZ LR LR 05 45 31.7
comp=Z,7μm,18.9s,baz=106,slow=45
ARU Arti 21.62 344 P **P 05 34 00.2 -0.5**
comp=Z,26nm,0.5s,baz=140,slow=5.9,SNR=40
ARU S **S 05 37 51.2 -8.0**
comp=Z,30nm,0.7s,baz=107,slow=19,SNR=4.1
ARU Lg Lg 05 40 38.3
comp=Z,51nm,0.9s,baz=162,slow=20,SNR=1.4
ARU LR LR 05 43 36.4
comp=Z,14μm,18.5s,baz=152,slow=40
ARU Arti 21.62 344 *e*P **P 05 34 01.0 +0.3**
comp=Z,544nm,1.1s
ARU S **S 05 37 51.2 -8.0**
ARU Lg Lg 05 40 38.3
ARU Arti 21.62 344*d* *i*P **P 05 33 59.4 -1.3**
ARU PPP PPP 05 34 29.4
ARU *e*S **S 05 37 56.9 -2.2**
ARU SS **SnSn 05 38 23.4 0.0**
ARU pmax pmax
comp=Z,69nm,1.0s
ARU MLR MLR
comp=Z,17μm,16.0s
NEY Neytrino 21.62 297 ⇑*i*P **P 05 34 02.3 +1.3**
NEY pmax pmax
comp=Z,10.0nm,0.8s
NEY MLR MLR
comp=Z,4μm,19.0s
SRLM Srisailam 21.66 154 *e*P **P 05 34 01.8 +0.4**
SRLM IAmb IAmb 05 34 12.1
comp=Z,365nm,0.8s
SRLM *e*S **S 05 37 59.9 -0.6**
SRLM IVMs_BB IVMs_BB 05 42 23.5
comp=Z,18μm,12.2s
PVM Polavaram 21.71 147 *e*P **P 05 34 03.2 +1.2**
PVM IAmb IAmb 05 34 14.0
comp=Z,451nm,0.8s
PVM *e*S **S 05 37 59.5 -1.9**
PVM IVMs_BB IVMs_BB 05 42 24.1
comp=Z,16μm,9.1s
KVAR Kislovodsk Arr 21.77 299 P **P 05 34 02.7 +0.1**
comp=Z,49nm,0.5s,baz=85,slow=14,SNR=22
KVAR S **S 05 37 59.8 -2.9**
comp=Z,58nm,1.0s,baz=114,slow=20,SNR=2.0
KVAR Lg Lg 05 40 58.9
comp=Z,20nm,0.8s,baz=108,slow=18,SNR=1.8
KVAR LR LR 05 44 29.9
comp=Z,10μm,18.3s,baz=80,slow=42
KIV Kislovodsk 21.78 299 *e*P **P 05 34 02.6 0.0**
comp=Z,218nm,0.9s
KIV LR LR
comp=Z,10μm,19.0s
KIV Kislovodsk 21.78 299 P **P 05 34 03.1 +0.4**
SNR=48
KIV Kislovodsk 21.78 299 P **P 05 34 03.1 +0.4**
SNR=48
KIV Kislovodsk 21.78 299 *i* P **P 05 34 02.1 -0.6**
SNR=11
KIV Kislovodsk 21.78 299 *e*P **P 05 34 02.7 0.0**
KIV *e*S **S 05 38 01.7 -1.0**
KIV pmax pmax
comp=Z,114nm,4.7s
KIV pmax pmax
comp=Z,142nm,0.9s
KIV MLR MLR
comp=Z,8μm,14.0s
GOF Gofitskoye 21.79 302 ⇑*i*P **P 05 34 03.3 +0.6**
GOF *e*S **S 05 38 05.8 +3.1**
GOF pmax pmax
comp=Z,180nm,0.8s
GOF smax smax
comp=N,380nm,1.2s
GOF smax smax
comp=E,440nm,1.2s
CHLP Challavanipeta 21.82 139 *e*P **P 05 34 03.1 -0.1**
CHLP IAmb IAmb 05 34 14.8
comp=Z,151nm,1.0s
CHLP *e*S **S 05 38 01.2 -2.4**
CHLP IVMs_BB IVMs_BB 05 42 26.8
comp=Z,22μm,10.1s
SHL Shillong 22.00 112 ⇑*i*P **P 05 34 04.0 -1.3**
SHL *e*P **pP 05 34 05.3 -5.7**
SHL *ex* x 05 37 56.0
SHL Shillong 22.00 112 *e*P **P 05 34 06.2 +1.0**
comp=Z,9μm,1.7s
SHL Shillong 22.00 112 *e*P **P 05 34 06.2 +1.0**
SHL pmax pmax
comp=Z,9μm,1.7s
VIS Vishakhapatnam 22.11 142 *i* P **P 05 34 07.4 +1.2**
VIS *i x* x 05 38 12.4
TEZP TEZPUR 22.13 109 *e*P **P 05 34 06.2 -0.3**
URV Uravakonda 22.22 159 *e*P **P 05 34 07.4 -0.1**
URV IAmb IAmb 05 34 21.9
comp=Z,296nm,0.8s
URV *e*S **S 05 38 10.8 -0.5**
URV IVMs_BB IVMs_BB 05 42 52.7
comp=Z,13μm,8.5s
ADKI Addanki 22.29 152 *e*P **P 05 34 08.6 +0.4**
ADKI IAmb IAmb 05 34 19.0
comp=Z,311nm,1.0s
ADKI *e*S **S 05 38 11.8 -0.6**
ADKI IVMs_BB IVMs_BB 05 42 49.1
comp=Z,14μm,8.2s
ZIRO ZIRO 22.50 105 *e*P **P 05 34 10.3 -0.3**
AGT Agartala 22.51 117 *e*P **P 05 34 11.3 +0.8**
BELO BELONIA 23.04 118 *e*P **P 05 34 17.0 +0.9**
HVS Khovu-Aksy 23.06 42 ⇓*i*P **P 05 34 17.2 +0.9**
HVS pmax pmax
comp=Z,164nm,0.7s
HVS MLR MLR
comp=Z,47μm,10.0s
JORH JORHAT 23.19 107 *e*P **P 05 34 18.9 +1.2**
MNGI Mangalore 23.57 166 *ex* **P 05 34 17.1 -4.3**
MOKO MOKOCHONG 23.61 107 *e*P **P 05 34 22.4 +0.4**
AZL Aizawl 23.65 115 *e*P **P 05 34 23.1 +0.8**
SOC Sochi 23.83 297 *e*P **P 05 34 23.8 0.0**
SOC *e* 05 34 31.7
SOC *e* 05 34 54.5
SOC *e*S **S 05 38 41.0 +2.5**
SOC pmax pmax
comp=Z,80nm,1.6s
IMP Imphal 23.96 111 *e*P **P 05 34 25.9 +0.7**
RAYN Ar Rayn 24.07 245 *e*P **P 05 34 24.9 -1.3**
comp=Z,48nm,0.8s
RAYN LR LR
comp=Z,11μm,20.0s
RAYN Ar Rayn 24.07 245 *i* P **P 05 34 25.2 -1.0**
SNR=52
RAYN Ar Rayn 24.07 245 P **P 05 34 24.9 -1.3**
RAYN pmax pmax
comp=Z,48nm,0.8s
SKHT Srikalahasti 24.13 155 *e*P **P 05 34 26.9 +0.1**
SKHT IAmb IAmb 05 34 37.4
comp=Z,351nm,0.9s
SKHT *e*S **S 05 38 43.4 -0.2**
SKHT IVMs_BB IVMs_BB 05 43 51.4
comp=Z,17μm,9.0s
LKP Lekhapani 24.16 104 *e*P **P 05 34 27.6 +0.7**
GTA Gaotai 24.30 73 ⇓P **P 05 34 29.5 +1.1**
GTA pP pP 05 34 33.7 -0.7
GTA sP sP 05 34 36.2 -0.7
GTA S **S 05 38 44.6 -1.9**
GTA sS pS 05 38 53.1 +0.1
GTA SS **SnSn 05 39 38.4 +8.8**
GTA pmax pmax
comp=Z,110nm,1.8s
GTA pmax pmax
comp=Z,2μm,5.2s
GTA LR LR
comp=Z,31μm,16.5s
GTA LR LR
comp=Z,9μm,16.5s
GTA LR LR
comp=Z,12μm,16.5s
SAIH SAIHA 24.62 117 *e*P **P 05 34 32.6 +1.2**
SOKR Solikamsk 24.90 345 *e*P P 05 34 44.0 +11
SOKR S **S 05 38 58.1 +2.8**
SOKR pmax pmax
comp=Z,307nm,1.8s
SOKR MLR MLR
comp=Z,11μm,17.0s
SLMH Al Salmeh 25.28 280 *e*P **P 05 34 40.6 +3.5**
ANN Anapa 25.64 300 *e*P **P 05 34 36.2 -4.0**
ANN *e*PP **pP 05 34 47.1 +0.9**
ANN *e*S **S 05 39 00.2 -7.2**
ANN pmax pmax
comp=Z,143nm,0.9s
VORD Divnogorie 26.13 314 *e*P **P 05 34 44.6 0.0**
VORD *e*S **S 05 39 11.6 -3.4**
VORD pmax pmax
comp=Z,40nm,1.2s
VORD smax smax
comp=N,2.0nm,1.3s
VSR Storozhevoye 26.30 315 *e*P **P 05 34 46.0 -0.2**
VSR *e*S **S 05 39 12.4 -5.4**
VSR pmax pmax
comp=Z,80nm,0.8s
VSR smax smax
comp=N,100nm,1.4s
VSR MLR MLR
comp=Z,10μm,12.0s
VORR Voronezh 26.46 316 *e*P **P 05 34 48.0 +0.4**
ASF Jabal al Asfar 27.03 271 P **P 05 34 54.5 +1.4**
comp=Z,6.0nm,0.8s,baz=14,slow=1.9,SNR=10
ASF S **S 05 39 29.0 -0.9**
comp=Z,1.9nm,0.6s,baz=81,slow=13,SNR=1.8
ASF Lg Lg 05 44 06.2
comp=Z,0.8nm,0.4s,baz=75,slow=19,SNR=2.2
ASF LR LR 05 46 33.4
comp=Z,3μm,18.8s,baz=30,slow=38
TOTH TOTAH 27.08 274 *e*P **P 05 34 57.0 +3.5**
QASN Qassioun 27.16 274 *e*P **P 05 34 59.1 +4.9**
MOY Mondy 27.38 45 *e*P **P 05 34 57.7 +1.6**
MOY pmax pmax
comp=Z,262nm,2.1s
BRBR Barbar 27.45 274 *e*P **P 05 34 59.9 +2.9**
LZH Lanzhou 27.84 80 *e*P **P 05 35 01.4 +1.0**
LZH pP pP 05 35 05.4 -1.0
LZH sP sP 05 35 08.3 -0.6
LZH PP **PnPn 05 35 50.7 +3.9**
LZH S **S 05 39 48.8 +6.1**
LZH SS **SnSn 05 41 04.1 +8.1**
LZH pmax pmax
comp=Z,69nm,1.1s
LZH pmax pmax
comp=Z,260nm,4.2s
LZH LR LR
comp=Z,12μm,13.0s
LZH LR LR
comp=Z,14μm,14.1s
LZH LR LR
comp=Z,20μm,17.4s
SIM Simferopol' 27.99 299 *e*P **P 05 35 04.6 +3.1**
SIM *e*S **S 05 39 43.0 -1.6**
SIM pmax pmax
comp=Z,500nm,11.2s
MMAI Mount Meron Ar 28.00 274 P **P 05 35 01.9 +0.2**
comp=Z,1.4nm,0.3s,baz=46,slow=14,SNR=3.9
MMAI LR LR 05 49 52.9
comp=Z,6μm,18.3s,baz=55,slow=44
ILGA Ilgaz 28.13 291 *e*P **P 05 35 05.2 +2.1**
comp=Z,73nm,1.1s
BR131 Keskin Array S 28.25 288 *e*P **P 05 35 05.8 +1.8**
BRTR Keskin Array B 28.25 288 P **P 05 35 04.7 +0.7**
comp=Z,29nm,1.0s,baz=94,slow=7.9,SNR=85
BRTR Keskin Array B 28.25 288*ce*P **P 05 35 05.8 +1.8**
BRTR pmax pmax
comp=Z,29nm,1.0s
ZAK Zakamensk 28.31 49 *e*P **P 05 35 04.6 +0.3**
ZAK pmax pmax
comp=Z,42nm,1.5s
TRD Trivandrum 28.32 164 ⇑*e*P **P 05 35 03.2 -1.4**
ANTO Ankara 28.89 289 ⇓*i*P **P 05 35 11.8 +2.2**
ANTO Ankara 28.89 289 *e*P **P 05 35 11.8 +2.2**
comp=Z,44nm,1.2s
ANTO LR LR
comp=Z,4μm,19.0s
ANTO Ankara 28.89 289 P **P 05 35 12.5 +2.9**
SNR=8.2
ANTO Ankara 28.89 289 P **P 05 35 12.5 +2.9**
SNR=8.2
ANTO Ankara 28.89 289 *e*P **P 05 35 11.9 +2.3**
ANTO pmax pmax
comp=Z,44nm,1.2s
ANTO MLR MLR
comp=Z,4μm,19.0s
BR231 Keskin MP Arra 28.91 289 *e*P **P 05 35 12.1 +2.3**
TLY Talaya 28.93 47 *e*P **P 05 35 11.6 +1.8**
comp=Z,48nm,0.9s
TLY LR LR
comp=Z,9μm,20.0s
TLY Talaya 28.93 47 P **P 05 35 11.9 +2.1**
SNR=40
TLY Talaya 28.93 47 P **P 05 35 11.9 +2.1**
SNR=40
TLY Talaya 28.93 47*c* *i*P **P 05 35 11.8 +2.1**
TLY *e*PPP PPP 05 35 59.3
TLY *e*S **S 05 40 03.0 +3.7**
TLY pmax pmax
comp=Z,58nm,1.1s
TLY MLR MLR
comp=Z,6μm,15.0s
CD2 Chengdu 29.10 90 P **P 05 35 13.4 +1.8**
CD2 sP sP 05 35 26.5 +6.4
CD2 S **S 05 40 03.5 +1.1**
CD2 sS sS 05 40 19.0 +6.6
CD2 pmax pmax
comp=Z,170nm,0.8s
CD2 pmax pmax
comp=Z,1μm,6.1s
CD2 LR LR
comp=Z,16μm,14.2s
CD2 LR LR
comp=Z,21μm,15.3s
MOS Moscow 29.14 322 *e*P **P 05 35 11.5 0.0**
MOS *e* 05 36 04.7
MOS *e* 05 36 20.2
MOS *e*S **S 05 40 01.1 -1.2**
MOS *e*SS **SnSn 05 41 27.8 +0.8**
MOS pmax pmax
comp=Z,600nm,2.3s
MOS pmax pmax
comp=Z,200nm,1.3s
MOS MLR MLR
comp=N,12μm,12.0s
MOS MLR MLR
comp=Z,20μm,12.0s
MOS MLR MLR
comp=E,17μm,13.0s
CSS Mathiatis 29.19 279 *e*P **P 05 35 12.1 -0.2**
comp=E,6.2nm,0.9s
OBN Obninsk 29.38 321 P **P 05 35 14.3 +0.6**
comp=E,36nm,0.4s,baz=3.2,slow=1.0,SNR=12
OBN S **S 05 40 09.0 +2.9**
comp=E,12nm,0.3s,baz=114,slow=20,SNR=1.7
OBN Lg Lg 05 44 46.2

comp=E,9.0nm,0.3s,baz=180,slow=20,SNR=1.4
OBN LR LR 05 49 00.9
comp=E,17μm,19.2s,baz=115,slow=40
OBN Obninsk 29.38 321 *e*P **P 05 35 13.6 0.0**
comp=E,1μm,1.6s
OBN S **S 05 40 09.0 +2.9**
OBN Lg Lg 05 44 46.2
OBN Obninsk 29.38 321 *ce*P **P 05 35 14.2 +0.6**
OBN *i* 05 35 18.4
OBN *i* 05 36 10.0
OBN *i* S **S 05 40 03.3 -2.8**
OBN pmax pmax
comp=Z,41nm,1.0s
OBN MLR MLR
comp=Z,13μm,18.0s
EIL Elat 29.44 267 P **P 05 35 18.2 +3.8**
comp=Z,22nm,0.8s,baz=67,slow=3.2,SNR=16
EIL S **S 05 40 04.8 -2.9**
comp=Z,2.5nm,0.5s,baz=28,slow=18,SNR=1.7
EIL Lg Lg 05 44 38.6
comp=Z,2.9nm,0.7s,baz=17,slow=19,SNR=1.9
EIL LR LR 05 48 48.5
comp=Z,5μm,18.1s,baz=76,slow=40
IRK Irkutsk 29.48 46 *e*P **P 05 35 15.0 +0.3**
IRK pmax pmax
comp=Z,218nm,1.4s
PRGR Permogore 29.61 337 ⇓ *i*P **P 05 35 15.0 -0.6**
PRGR *e* 05 36 07.8
PRGR pmax pmax
comp=Z,251nm,1.5s
SONM Songino Array 29.71 55 P **P 05 35 17.4 +0.5**
comp=Z,14nm,0.6s,baz=259,slow=9.8,SNR=33
SONM PcP **PcP 05 38 14.3 -6.3**
comp=Z,6.7nm,0.8s,baz=219,slow=6.9,SNR=2.4
SONM S **S 05 40 10.2 -1.5**
comp=Z,2.4nm,0.8s,baz=273,slow=27,SNR=2.1
SONM Lg Lg 05 44 56.8
comp=Z,0.5nm,0.5s,baz=294,slow=33,SNR=3.0
SONM LR LR 05 48 49.9
comp=Z,14μm,19.8s,baz=266,slow=40
SONA1 Songino Array 29.71 55 *e*P **P 05 35 18.0 +1.1**
ULN Ulaanbaatar 30.15 55 *e*P **P 05 35 21.8 +1.1**
comp=Z,40nm,0.8s
ULN LR LR
comp=Z,15μm,21.0s
ULN Ulaanbaatar 30.15 55 P **P 05 35 22.3 +1.5**
SNR=30
ULN Ulaanbaatar 30.15 55 P **P 05 35 22.3 +1.5**
SNR=30
ULN Ulaanbaatar 30.15 55 *c i*P **P 05 35 21.9 +1.1**
ULN pmax pmax
comp=Z,57nm,1.7s
ULN MLR MLR
comp=Z,14μm,21.0s
PALK Pallekele 30.51 157 P **P 05 35 24.8 +0.7**
comp=Z,27nm,0.8s,baz=296,slow=7.1,SNR=4.3
PALK Lg Lg 05 44 44.2
comp=Z,19nm,1.0s,baz=117,slow=1.8,SNR=2.1
PALK LR LR 05 46 25.9
comp=Z,10μm,19.4s,baz=206,slow=34
PALK Pallekele 30.51 157 *e*P **P 05 35 26.1 +2.0**
comp=Z,56nm,0.9s
PALK Lg Lg 05 44 44.2
PALK Pallekele 30.51 157 *ce*P **P 05 35 27.4 +3.3**
CMAI Chiengmai2 30.64 114 P **P 05 35 25.9 +0.5**
comp=Z,637nm,1.2s
KMI Kunming 30.65 101 P P 05 35 31.8 +6.3
KMI PP **PnPn 05 36 27.2 +2.1**
KMI sS sS 05 40 36.3 -0.8
KMI pmax pmax
comp=Z,58nm,1.1s
KMI pmax pmax
comp=Z,870nm,5.1s
KMI LR LR
comp=Z,6μm,13.8s
KMI LR LR
comp=Z,4μm,13.8s
KMI LR LR
comp=Z,7μm,21.0s
ISP Isparta 30.89 285 *e*P **P 05 35 28.0 +0.6**
comp=Z,43nm,1.1s
ISP Isparta 30.89 285 *e*P **P 05 35 28.0 +0.6**
ISP pmax pmax
comp=Z,43nm,1.1s
KLMR Klimovskoe 31.19 332 *d i*P **P 05 35 28.6 -1.0**
KLMR S **S 05 40 28.6 -5.8**
KLMR pmax pmax
comp=Z,173nm,1.6s
KLMR MLR MLR
comp=Z,13μm,13.0s
KLMR Klimovskoe 31.19 332 ⇓ *i*P **P 05 35 28.7 -0.9**
KLMR *e*P **P 05 35 28.7 -0.9**
KLMR *e*P **P 05 35 28.7 -0.9**
KLMR AMP 05 35 36.1
comp=Z,173nm,1.6s
KLMR S **S 05 40 28.7 -5.7**
KLMR S **S 05 40 28.7 -5.7**
KLMR LQ LQ 05 44 44.8
KLMR LQ LQ 05 44 44.8
KLMR LR LR 05 45 45.1
KLMR AMP 05 49 02.8
comp=Z,13μm,12.8s
CHTO Chiang Mai 31.26 115 P **P 05 35 32.2 +1.5**
comp=Z,223nm,1.1s,comp=Z,5μm
CHTO Chiang Mai 31.26 115 *e*P **P 05 35 31.7 +1.1**
comp=Z,64nm,1.0s
CHTO LR LR
comp=Z,7μm,19.0s
CHTO Chiang Mai 31.26 115 P P 05 35 37.0 +6.3
SNR=12
CHTO Chiang Mai 31.26 115 *e*P **P 05 35 31.7 +1.1**
CHTO pmax pmax
comp=Z,63nm,1.0s
CHTO MLR MLR
comp=Z,7μm,19.0s
CM31 Chiang Mai Arr 31.48 116 *e*P **P 05 35 33.4 +0.7**
CMAR Chiang Mai Arr 31.48 116 P **P 05 35 32.0 -0.7**
comp=Z,16nm,0.5s,baz=296,slow=9.0,SNR=42
CMAR PcP **PcP 05 38 25.9 +0.3**
comp=Z,7.0nm,0.7s,baz=299,slow=4.2,SNR=3.8
CMAR ScP **ScP 05 42 05.7 -1.8**
comp=Z,4.2nm,0.7s,baz=295,slow=3.5,SNR=8.5
CMAR LR LR 05 50 41.6
comp=Z,5μm,18.6s,baz=308,slow=41
CMAR Chiang Mai Arr 31.48 116 *ce*P **P 05 35 33.2 +0.5**
CMAR pmax pmax
comp=Z,16nm,0.5s
CM01 Chiang Mai Arr 31.52 116 *e*P **P 05 35 33.3 +0.3**
TLCR 31.76 299 ⇓ *i*P **P 05 35 36.1 +1.3**
TLCR 31.76 299 P **P 05 35 36.1 +1.3**
KIS Kishinev 31.87 303 *e*P **P 05 35 35.5 -0.3**
comp=Z,400nm,1.0s
KIS Kishinev 31.87 303 *e*PP PP 05 36 30.0 -18
KIS Kishinev 31.87 303 *e*PcP PcP 05 37 56.0 -30
KIS *e*S **S 05 40 48.0 +2.6**
comp=Z,2μm,8.0s
KIS *e*SS **SS 05 42 56.0 -6.1**
KIS *e*LQ LQ 05 47 04.0
comp=Z,13μm,18.0s
KIS *e*LR LR 05 50 00.0
comp=Z,9μm,21.0s
KIS Kishinev 31.87 303 *i* P **P 05 35 35.5 -0.3**
KIS *e*PPP PPP 05 36 54.0
KIS *e* 05 38 21.0
KIS *e*S **S 05 40 48.0 +2.6**
KIS *e*SS **SS 05 42 56.0 -6.1**
KIS pmax pmax
comp=Z,380nm,1.0s
KIS pmax pmax
comp=Z,900nm,9.0s
KIS smax smax
comp=N,2μm,8.0s
KIS MLR MLR
comp=Z,9μm,21.0s
TIRR Tirgusor 32.02 298 ⇑ *i*P **P 05 35 38.7 +1.6**
TIRR Tirgusor 32.02 298 *e*P **P 05 35 37.7 +0.6**
comp=Z,30nm,1.1s
TIRR Tirgusor 32.02 298 *e*P **P 05 35 37.7 +0.6**
TIRR pmax pmax
comp=Z,30nm,1.1s
AKASG Malin Array Be 32.15 310 P **P 05 35 37.8 -0.4**
comp=Z,26nm,0.5s,baz=84,slow=7.8,SNR=92
AKASG S **S 05 40 52.1 +2.5**
comp=Z,5.8nm,1.0s,baz=89,slow=11,SNR=3.1
AKASG LR LR 05 50 18.5
comp=Z,6μm,21.4s,baz=90,slow=39

AKASG Malin Array Be 32.15 310 *ce*P **P 05 35 38.0 -0.1**
AKASG *e* 05 36 46.5
AKASG pmax pmax
comp=Z,45nm,0.5s
AKBB Malin Array Si 32.15 310 *e*P **P 05 35 38.5 +0.5**
comp=Z,59nm,0.6s
AKBB Malin Array Si 32.15 310 *e*P **P 05 35 38.6 +0.5**
AKBB pmax pmax
comp=Z,59nm,0.6s
KIEV Kiev 32.15 310 *e*P **P 05 35 38.5 +0.3**
comp=Z,57nm,0.7s
KIEV LR LR
comp=Z,8μm,21.0s
KIEV Kiev 32.15 310 *i* P **P 05 35 38.1 -0.1**
SNR=44
KIEV Kiev 32.15 310 *c i*P **P 05 35 38.7 +0.5**
KIEV *i* *PP **sP 05 35 48.3 +1.6**
KIEV *i* 05 36 45.5
KIEV *i* 05 38 26.4
KIEV pmax pmax
comp=Z,44nm,0.8s
KIEV MLR MLR
comp=Z,7μm,21.0s
TLB Topalu 32.29 298 ⇓ *i*P **P 05 35 41.2 +1.7**
TLB Topalu 32.29 298 P **P 05 35 41.2 +1.7**
MANT Manisa 32.32 287 *e*P **P 05 35 41.4 +1.4**
XAN Xi'an 32.35 82 P **P 05 35 40.0 -0.2**
XAN pP pP 05 35 44.3 -2.0
XAN S **S 05 40 59.0 +5.8**
XAN pmax pmax
comp=Z,30nm,1.0s
XAN pmax pmax
comp=Z,560nm,9.8s
XAN LR LR
comp=Z,9μm,17.6s
XAN LR LR
comp=Z,14μm,17.0s
XAN LR LR
comp=Z,8μm,17.7s
HARR Harsova 32.37 298 ⇑ *i*P **P 05 35 42.7 +2.5**
HARR Harsova 32.37 298 P **P 05 35 42.7 +2.5**
ICOR Ion Corvin 32.46 297 ⇓ *i*P **P 05 35 43.8 +2.8**
NANT Nan 32.56 113 P **P 05 35 41.3 -0.8**
comp=Z,26nm,0.8s,comp=Z,199nm
PRD Provadia 32.77 296 P **P 05 35 45.3 +1.6**
PETR Petresti 32.89 300 ⇓ *i*P **P 05 35 47.9 +3.2**
ODBI Odobesti 33.02 300 ⇑ *i*P **P 05 35 49.5 +3.7**
GRER 33.06 300 ⇑ *i*P **P 05 35 50.5 +4.3**
ARG Arkhangelos 33.07 283 P **P 05 35 48.2 +1.8**
ARG Arkhangelos 33.07 283 P **P 05 35 48.2 +1.8**
ARG Arkhangelos 33.07 283 P **P 05 35 48.2 +1.8**
GYA Guiyang 33.18 96 ⇑ *i*P **P 05 35 48.3 +0.7**
GYA PP **PP 05 37 02.0 -0.7**
GYA PcP **PcP 05 38 34.2 +4.0**
GYA S **S 05 41 05.9 -0.5**
GYA ScP **ScP 05 42 17.5 +4.1**
GYA SS **SnSn 05 43 09.8 +3.6**
GYA ScS **ScS 05 46 16.6 +2.4**
GYA pmax pmax
comp=Z,80nm,0.8s
GYA pmax pmax
comp=Z,430nm,8.1s
GYA LR LR
comp=Z,5μm,16.8s
GYA LR LR
comp=Z,6μm,18.0s
GYA LR LR
comp=Z,5μm,16.5s
HHC Hu-ho-hao-te 33.20 69 *e*P **P 05 35 49.0 +1.4**
HHC sP sP 05 36 02.0 +5.8
HHC PP **PnPn 05 36 59.2 +1.5**
HHC S **S 05 41 06.8 +0.3**
HHC pmax pmax
comp=Z,8.0nm,0.9s
HHC pmax pmax
comp=Z,280nm,6.8s
HHC LR LR
comp=Z,5μm,13.5s
HHC LR LR
comp=Z,6μm,14.1s
HHC LR LR
comp=Z,7μm,14.3s
VRI Vrincioaia 33.25 300 ⇓ *i*P **P 05 35 50.7 +2.8**
VRI Vrincioaia 33.25 300 P **P 05 35 50.7 +2.8**
PLOR Plostina 33.30 300 ⇓ *i*P **P 05 35 51.0 +2.7**
PLOR Plostina 33.30 300 P **P 05 35 51.1 +2.7**
TESR Tescani 33.33 302 ⇓ *i*P **P 05 35 49.5 +0.9**
ISR Istrita 33.36 299 ⇓ *i*P **P 05 35 52.3 +3.4**
ISR Istrita 33.36 299 P **P 05 35 52.3 +3.4**
PHIT Phitsanulok 33.37 116 P **P 05 35 51.4 +2.2**
comp=Z,78nm,0.9s,comp=Z,676nm
JMB Yambol 33.40 294 P **P 05 35 51.4 +2.2**
BODT Bodrum 33.54 284 P P 05 35 55.3 +4.8
BODT Bodrum 33.54 284 P P 05 35 55.3 +4.8
PRAR RASCA 33.66 303 ⇓ *i*P **P 05 35 52.9 +1.4**
SMG Samos 33.79 286 P **P 05 35 54.3 +1.6**
SMG Samos 33.79 286 P **P 05 35 54.3 +1.6**
MLR Muntele Rosu 33.79 300 P **P 05 35 53.5 +0.7**
comp=Z,23nm,0.8s,baz=83,slow=1.3,SNR=136
MLR S **S 05 41 20.7 +5.2**
comp=Z,0.9nm,0.7s,baz=49,slow=20,SNR=3.5
MLR LR LR 05 53 37.9
comp=Z,2μm,19.2s,baz=52,slow=43
MLR Muntele Rosu 33.79 300 ⇑ *i*P **P 05 35 55.4 +2.7**
MLR Muntele Rosu 33.79 300 *e*P **P 05 35 54.9 +2.2**
comp=Z,177nm,1.1s
MLR S **S 05 41 20.7 +5.2**
SZH Strazhica 33.84 296 P **P 05 35 54.6 +1.6**
MICGM Minsk 33.84 316 *e*P **P 05 35 52.0 -0.9**
MICGM *e*PP **PP 05 37 12.0 +2.5**
MICGM *e*PPP PPP 05 37 24.0
MICGM *e*S **S 05 41 16.0 +0.2**
MICGM *e*SS **SnSn 05 43 20.0 -1.3**
MICGM *e*SSS SSS 05 43 54.0
MICGM *e*LR LR 05 46 46.0
MICGM LRM MLR 05 51 59.0
comp=N,20nm,11.0s
MICGM LRM MLR 05 52 04.0
comp=Z,26nm,12.0s
MICGM LRM MLR 05 52 10.0
comp=E,17nm,12.0s
MNK Minsk 33.84 316 *e*P **P 05 35 52.0 -0.9**
MNK *e* 05 37 12.0
MNK *e* 05 37 24.0
MNK *e*S **S 05 41 16.0 +0.2**
MNK *e* 05 43 20.0
MNK *e* 05 43 54.0
MNK MLR MLR
comp=Z,26μm,12.0s
MNK MLR MLR
comp=E,17μm,12.0s
TMCR Tamitsa 33.86 336 *e*P **P 05 35 53.8 +0.9**
TMCR pmax pmax
comp=Z,266nm,1.4s
ALN Alexandroupoli 33.94 292 *e*P **P 05 35 56.0 +2.1**
comp=Z,35nm,1.1s
ALN Alexandroupoli 33.94 292 P **P 05 35 54.6 +0.7**
ALN Alexandroupoli 33.94 292 *e*P **P 05 35 56.0 +2.1**
ALN pmax pmax
comp=Z,35nm,1.1s
ENH Enshi 33.96 88 *e*P **P 05 35 55.0 +0.7**
comp=Z,167nm,0.9s
ENH LR LR
comp=Z,9μm,21.0s
PBKT Sadao Pong 34.17 116 P **P 05 35 56.1 0.0**
comp=Z,118nm,1.3s,comp=Z,2μm
PBKT Sadao Pong 34.17 116 *e*P **P 05 35 55.9 -0.2**
comp=Z,171nm,1.2s
ATD Arta Tunnel 34.18 231 P **P 05 35 57.5 +1.2**
comp=Z,3.3nm,0.4s,baz=210,slow=20,SNR=3.0
ATD PP **PP 05 37 13.0 -0.8**
comp=Z,13nm,0.8s,baz=30,slow=13,SNR=2.3
ATD LR LR 05 52 06.2
comp=Z,8μm,18.3s,baz=42,slow=40
DOPR Dopca 34.19 301 ⇓ *i*P **P 05 35 58.1 +2.1**
CHOS Chios island 34.27 287 P **P 05 36 01.6 +4.6**
CHOS Chios island 34.27 287 P **P 05 36 01.6 +4.6**
RDO Rodhopi 34.29 292 P **P 05 35 59.2 +2.2**
RDO Rodhopi 34.29 292 P **P 05 35 59.2 +2.2**
TIY Taiyuan 34.32 74 *e*P **P 05 36 01.3 +4.0**
TIY S **S 05 41 25.7 +2.0**
TIY pmax pmax
comp=Z,51nm,0.8s
TIY pmax pmax

comp=Z,640nm,5.4s
TIY LR LR
comp=Z,10μm,12.9s
TIY LR LR
comp=Z,4μm,13.0s
TIY LR LR
comp=Z,5μm,15.6s
KDZ Kurdzhali 34.33 293 P **P 05 35 59.8 +2.5**
SRDT SRDT 34.36 121 P **P 05 35 58.7 +1.0**
comp=Z,96nm,1.0s,comp=Z,4μm
BURAR Bucovina Array 34.36 304 ⇑ *i*P **P 05 35 59.3 +1.6**
BUR04 Bucovina Ar. S 34.37 304 *e*P **P 05 35 58.2 +0.5**
SMTH Samothraki Isl 34.37 291 P **P 05 36 00.1 +2.4**
SMTH Samothraki Isl 34.37 291 P **P 05 36 00.1 +2.4**
BUR08 Bucovina Ar. S 34.38 304 *e*P **P 05 35 58.4 +0.6**
VOIR 34.42 300 ⇑ *i*P **P 05 36 00.1 +2.0**
VOIR 34.42 300 P **P 05 36 00.1 +2.0**
PUL Pulkovo 34.48 326 ⇓ *i*P **P 05 36 00.3 +2.0**
PUL pmax pmax
comp=Z,124nm,0.6s
PUL MLR MLR
comp=Z,12μm,16.0s
HUMR Humele 34.48 298 ⇑ *i*P **P 05 36 01.2 +2.6**
NACGM Naroch 34.56 317 *e*P **P 05 36 01.0 +1.9**
NACGM *e*P **pP 05 36 04.0 -1.2**
NACGM PM 05 36 07.0
comp=Z,0.3nm,1.0s
NACGM *e*S **S 05 41 27.0 0.0**
NACGM *e*LQ LQ 05 48 04.0
NACGM *e*LR LR 05 50 15.0
NACGM LRM MLR 05 53 41.0
comp=Z,9.4nm,15.0s
NACGM LRM MLR 05 53 45.0
comp=E,6.0nm,15.0s
IDID Didziasalis 34.70 317 *e*P **P 05 36 01.0 +0.7**
IDID IAmb IAmb 05 36 08.4
comp=Z,29nm,0.8s
NRIK Noril'sk 34.80 11 P **P 05 36 01.2 +0.3**
comp=Z,24nm,0.5s,baz=209,slow=6.9,SNR=26
NRIK S **S 05 41 33.8 +3.5**
comp=Z,5.0nm,0.6s,baz=218,slow=3.2,SNR=2.2
NRIK Lg Lg 05 46 13.9
comp=Z,3.1nm,0.6s,baz=153,slow=6.4,SNR=2.9
NRIK LR LR 05 53 23.9
comp=Z,9μm,18.2s,baz=202,slow=42
NRIK Noril'sk 34.80 11 P **P 05 36 01.3 +0.3**
NRIK S **S 05 41 33.8 +3.5**
NRIK pmax pmax
comp=Z,27nm,0.5s
NRIK smax smax
comp=N,5.0nm,0.6s
NRIK MLR MLR
comp=Z,9μm,18.2s
PLD Plovdiv 34.82 294 P **P 05 36 04.9 +3.4**
ZKR Zakros 34.83 281 P **P 05 36 03.4 +1.7**
ZKR Zakros 34.83 281 P **P 05 36 03.4 +1.7**
NONG Nongkai 34.84 112 P **P 05 36 01.9 0.0**
comp=Z,148nm,1.0s,comp=Z,3μm
RZN Rozhen 34.85 293 P **P 05 36 03.8 +1.8**
ARCR ARCALIA 34.93 303 ⇑ *i*P **P 05 36 05.9 +3.5**
APE Apeiranthos 34.93 285 ⇑ *i*P **P 05 36 04.6 +2.0**
APE Apeiranthos 34.93 285 P **P 05 36 02.9 +0.3**
APE Apeiranthos 34.93 285 P **P 05 36 02.9 +0.3**
APE Apeiranthos 34.93 285 *d i*P **P 05 36 03.9 +1.3**
APE pmax pmax
comp=Z,40nm,0.9s
APE MLR MLR
comp=Z,2μm,19.0s
CIT Chita 34.97 49 *e*P **P 05 36 02.7 -0.1**
CIT *e* 05 37 27.8
CIT *e* 05 41 37.0
CIT pmax pmax
comp=Z,293nm,1.7s
IIGN Ignalina 34.99 317 *e*P **P 05 36 03.5 +0.7**
IIGN IAmb IAmb 05 36 11.1
comp=Z,41nm,0.8s
IZAR Zarasai 35.09 318 *e*P **P 05 36 04.6 +0.9**
IZAR IAmb IAmb 05 36 11.9
comp=Z,42nm,0.9s
ISAL Salakas 35.10 317 *e*P **P 05 36 04.5 +0.7**
ISAL IAmb IAmb 05 36 12.2
comp=Z,32nm,1.0s
SANT Santorini 35.14 284 ⇑ *i*P **P 05 36 05.0 +0.6**
SANT Santorini 35.14 284 *e*P **P 05 36 05.1 +0.6**
comp=Z,119nm,1.1s
NPS Neapolis 35.27 282 P P 05 36 11.4 +5.8
NPS Neapolis 35.27 282 P P 05 36 11.4 +5.8
NPS Neapolis 35.27 282 P P 05 36 11.4 +5.8
LVV L'vov 35.31 307 *e*P **P 05 36 07.6 +1.9**
LVV *e* 05 37 29.7
LVV *e*PPP PPP 05 37 48.5
LVV *e*S **S 05 41 39.1 +0.4**
LVV *e*SSS SSS 05 44 23.1
LVV MLR MLR
comp=E,6μm,13.0s
LVV MLR MLR
comp=Z,5μm,13.0s
LVV MLR MLR
comp=N,3μm,14.0s
LAST Lasithi 35.41 282 P **P 05 36 08.6 +1.8**
LAST Lasithi 35.41 282 P **P 05 36 08.6 +1.8**
CJR Cluj-Napoca 35.44 302 ⇓ *i*P **P 05 36 09.9 +3.0**
CJR Cluj-Napoca 35.44 302 P **P 05 36 09.9 +3.0**
NVR Nevrokopi 35.52 293 P **P 05 36 09.2 +1.5**
NVR Nevrokopi 35.52 293 P **P 05 36 09.2 +1.5**
BMR Baia Mare 35.53 304 ⇓ *i*P **P 05 36 10.2 +2.6**
BMR Baia Mare 35.53 304 P **P 05 36 10.2 +2.6**
OUR Ouranopolis 35.56 291 P **P 05 36 09.4 +1.5**
OUR Ouranopolis 35.56 291 P **P 05 36 09.4 +1.5**
OUR Ouranopolis 35.56 291 P **P 05 36 09.4 +1.5**
MMB Musomiste 35.60 293 P **P 05 36 10.4 +2.1**
VSU Vasula 35.67 322 ⇑ *i*P **P 05 36 09.4 +0.8**
VSU pmax pmax
comp=Z,141nm,0.7s
VSU MLR MLR
comp=Z,33μm,19.0s
PHET Kaeng Krachan 35.72 122 P **P 05 36 11.7 +2.2**
comp=Z,29nm,0.9s,comp=Z,267nm
SRE Strehaia 35.74 298 ⇓ *i*P **P 05 36 11.7 +2.2**
SRE Strehaia 35.74 298 P **P 05 36 11.7 +2.2**
SRS Serrai 35.75 292 P **P 05 36 11.0 +1.4**
SRS Serrai 35.75 292 P **P 05 36 11.0 +1.4**
SRS Serrai 35.75 292 P **P 05 36 11.0 +1.4**
IDI Anoyia 35.84 282 P **P 05 36 10.9 +0.4**
comp=Z,6.6nm,0.3s,baz=83,slow=15,SNR=18
IDI PP **PP 05 37 38.2 +6.2**
comp=Z,12nm,0.6s,baz=65,slow=17,SNR=1.6
IDI S **S 05 41 51.2 +3.9**
comp=Z,3.3nm,0.8s,baz=55,slow=16,SNR=2.5
IDI Anoyia 35.84 282 ⇑ *i*P **P 05 36 11.4 +0.9**
IDI Anoyia 35.84 282 *e*P **P 05 36 10.9 +0.4**
comp=Z,148nm,1.7s
IDI PP **PP 05 37 38.2 +6.2**
IDI S **S 05 41 51.2 +3.9**
PAIG Paliouri 35.85 290 P **P 05 36 12.5 +2.1**
PAIG Paliouri 35.85 290 P **P 05 36 12.5 +2.1**
PAIG Paliouri 35.85 290 P **P 05 36 12.5 +2.1**
VTS Vitosha 35.88 295 ⇑ *i*P **P 05 36 13.1 +2.3**
VTS Vitosha 35.88 295 *e*P **P 05 36 12.5 +1.6**
comp=Z,56nm,1.2s
VTS Vitosha 35.88 295 P **P 05 36 12.7 +1.9**
VTS Vitosha 35.88 295 P **P 05 36 12.2 +1.4**
VTS Vitosha 35.88 295 *e*P **P 05 36 12.5 +1.6**
VTS pmax pmax
comp=Z,56nm,1.2s
DEV Deva 35.92 300 ⇑ *i*P **P 05 36 14.1 +3.1**
DEV Deva 35.92 300 P **P 05 36 14.1 +3.1**
PLG Polygyros 35.96 291 P **P 05 36 13.3 +1.8**
PLG Polygyros 35.96 291 P **P 05 36 13.3 +1.8**
PLG Polygyros 35.96 291 P **P 05 36 13.3 +1.8**
SOH Sokhos 35.97 292 P P 05 36 16.4 +4.9
SOH Sokhos 35.97 292 P P 05 36 16.4 +4.9
SOH Sokhos 35.97 292 P P 05 36 16.4 +4.9
PTL Penteli 36.03 287 P **P 05 36 13.5 +1.4**
PTL Penteli 36.03 287 P **P 05 36 13.5 +1.4**
KKB Krupnik 36.05 294 P **P 05 36 13.7 +1.6**
DRGR 36.05 302 ⇓ *i*P **P 05 36 14.9 +2.8**
DRGR 36.05 302 P **P 05 36 14.9 +2.8**
VLY Voula,Athens 36.13 287 P **P 05 36 13.5 +0.7**
VLY Voula,Athens 36.13 287 P **P 05 36 13.5 +0.7**
SKNT Sakolnakorn 36.14 113 P **P 05 36 12.2 -0.9**
comp=Z,80nm,1.3s
KWP Kalwaria Pacla 36.15 307 *e*P **P 05 36 14.6 +1.7**

KWP LMZ LR 05 50 00.5
comp=Z,5μm,29.9s
KWP Kalwaria Pacla 36.15 307 *eP* **P 05 36 15.0 +2.0**
comp=Z,2μm,1.2s
KWP Kalwaria Pacla 36.15 307 *eP* **P 05 36 14.6 +1.7**
TRPA Tarpa 36.19 304⇑ *eP* **P 05 36 14.7 +1.5**
HORT Hortiatis 36.19 291 P **P 05 36 15.0 +1.5**
HORT Hortiatis 36.19 291 P **P 05 36 15.0 +1.5**
KNT Kendrikon 36.27 292 P **P 05 36 15.4 +1.4**
KNT Kendrikon 36.27 292 P **P 05 36 15.4 +1.4**
KNT Kendrikon 36.27 292 P **P 05 36 15.4 +1.4**
THE Thessaloniki 36.29 292 P P 05 36 19.3 +5.1
THE Thessaloniki 36.29 292 P P 05 36 19.3 +5.1
THE Thessaloniki 36.29 292 P P 05 36 19.3 +5.1
NEO Neokhori 36.30 289 P **P 05 36 15.2 +0.9**
NEO Neokhori 36.30 289 P **P 05 36 15.2 +0.9**
XOR Xorichti 36.31 289 P **P 05 36 15.1 +0.7**
XOR Xorichti 36.31 289 P **P 05 36 15.1 +0.7**
VAM Vamos 36.36 283 P P 05 36 20.7 +5.9
VAM Vamos 36.36 283 P P 05 36 20.7 +5.9
VAM Vamos 36.36 283 P P 05 36 20.7 +5.9
UZH Uzhgorod 36.37 305⇓ *iP* **P 05 36 16.0 +1.2**
UZH *e* 05 36 18.4
UZH *i* 05 36 24.8
UZH *e* 05 37 36.6
UZH *e* 05 37 56.6
UZH *e* 05 38 41.6
UZH *eS* **S 05 41 53.6 -1.2**
UZH *e* 05 44 14.8
UZH *e* 05 44 45.6
UZH MLR MLR
comp=N,900nm,15.0s
UZH MLR MLR
comp=E,10.0nm,15.0s
UZH MLR MLR
comp=Z,340nm,15.0s
SUW Suwalki 36.42 314 *eP* **P 05 36 16.0 +0.9**
SUW *eS* **S 05 41 52.1 -3.3**
SUW LMZ LR 05 51 51.8
comp=Z,8μm,22.3s
SUW Suwalki 36.42 314 *eP* **P 05 36 16.0 +0.9**
SUW *eS* **S 05 41 52.1 -3.3**
SUW MLR MLR
comp=Z,8μm,22.3s
VAY Valandovo 36.49 293 P **P 05 36 17.2 +1.3**
VAY Valandovo 36.49 293 P **P 05 36 17.2 +1.3**
VAY Valandovo 36.49 293 *i* P **P 05 36 17.7 +1.8**
VAY Valandovo 36.49 293 P **P 05 36 17.2 +1.3**
IMMV Iera Moni Meta 36.52 283 P **P 05 36 18.0 +1.8**
LKR Lokris 36.59 288 P **P 05 36 17.0 +0.3**
LKR Lokris 36.59 288 P **P 05 36 17.0 +0.3**
GVD Gavdhos 36.59 282 P **P 05 36 16.4 -0.4**
GVD Gavdhos 36.59 282 P **P 05 36 16.4 -0.4**
LIT Litokhoron 36.73 291 *eP* **P 05 36 19.3 +1.3**
comp=Z,20nm,1.0s
LIT Litokhoron 36.73 291 P **P 05 36 18.5 +0.5**
LIT Litokhoron 36.73 291 *eP* **P 05 36 19.3 +1.3**
LIT pmax pmax
comp=Z,20nm,1.0s
STIP Stip 36.73 293 *i* P **P 05 36 17.4 -0.6**
SIRR Siria 36.78 301⇑ *iP* **P 05 36 21.0 +2.7**
BJT Baijiatuau 36.79 69 *eP* **P 05 36 18.9 +0.4**
comp=Z,36nm,0.6s
BJT LR LR
comp=Z,5μm,21.0s
BJT Baijiatuau 36.79 69 *eP* **P 05 36 18.9 +0.4**
BJT pmax pmax
comp=Z,36nm,0.6s
BJT MLR MLR
comp=Z,5μm,21.0s
BJI Beijing 36.79 69⇑ *eP* **P 05 36 21.8 +3.3**
BJI S **S 05 42 04.7 +3.2**
BJI pmax pmax
comp=Z,45nm,0.8s
BJI pmax pmax
comp=Z,790nm,4.8s
BJI LR LR
comp=Z,850nm,24.6s
BJI LR LR
comp=Z,2μm,15.2s
BJI LR LR
comp=Z,4μm,17.0s
MDVR Moldovita 36.80 299⇓ *iP* **P 05 36 20.7 +2.1**
BZS Buzias 36.83 300⇑ *iP* **P 05 36 20.9 +2.2**
BZS Buzias 36.83 300 P **P 05 36 20.9 +2.2**
CRVS Cervenica-Dubn 36.93 306 *eP* **P 05 36 21.5 +1.9**
CRVS pmax pmax
comp=Z,12nm,0.8s
CRVS Cervenica-Dubn 36.93 306 *eP* **P 05 36 21.4 +1.9**
CRVS *eS* **S 05 42 04.8 +1.3**
CRVS *eL* L 05 55 57.8
ANKY Antikythira Is 36.95 284 P **P 05 36 23.9 +4.0**
ANKY Antikythira Is 36.95 284 P **P 05 36 23.9 +4.0**
DSF Desfina 37.00 288 P **P 05 36 23.3 +3.0**
DSF Desfina 37.00 288 P **P 05 36 23.3 +3.0**
AGG Agios Georgios 37.03 289 *eP* **P 05 36 21.7 +1.1**
comp=Z,86nm,0.9s
AGG Agios Georgios 37.03 289 P **P 05 36 20.9 +0.3**
AGG Agios Georgios 37.03 289 *eP* **P 05 36 21.7 +1.1**
AGG pmax pmax
comp=Z,86nm,0.9s
VLI Veliai 37.04 285 P **P 05 36 17.6 -3.0**
VLI Veliai 37.04 285 P **P 05 36 17.6 -3.0**
KYTH Kithira 37.06 284 P **P 05 36 20.5 -0.3**
KYTH Kithira 37.06 284 P **P 05 36 20.5 -0.3**
FIA1 FINESS Array S 37.08 327 *eP* **P 05 36 20.4 -0.2**
comp=Z,451nm,1.6s
FINES FINESS Array B 37.08 327 P **P 05 36 20.3 -0.3**
comp=Z,38nm,0.6s,baz=119,slow=10,SNR=80
FINES LR LR 05 51 25.1
comp=Z,3μm,20.2s,baz=108,slow=36
FINES FINESS Array B 37.08 327 *ceP* **P 05 36 20.6 0.0**
FINES pmax pmax
comp=Z,38nm,0.6s
THL Klokotos Trika 37.18 290 P **P 05 36 22.4 +0.7**
SKO Skopje 37.25 294 *i* P **P 05 36 24.1 +1.7**
KLV Kalavryta, Ach 37.36 287 P **P 05 36 24.9 +1.5**
KLV Kalavryta, Ach 37.36 287 P **P 05 36 24.9 +1.5**
EVR Evrytania 37.45 289 P **P 05 36 24.5 +0.3**
EVR Evrytania 37.45 289 P **P 05 36 24.5 +0.3**
LAKA Lakka 37.45 288 P **P 05 36 24.1 -0.1**
LAKA Lakka 37.45 288 P **P 05 36 24.1 -0.1**
FNA Florina 37.46 292 *eP* **P 05 36 25.1 +0.9**
comp=Z,33nm,0.8s
FNA Florina 37.46 292 P **P 05 36 24.7 +0.5**
FNA Florina 37.46 292 *eP* **P 05 36 25.1 +0.9**
FNA pmax pmax
comp=Z,33nm,0.8s
BIA Bitola 37.47 292 *i* P **P 05 36 26.5 +2.2**
DYR Agios Nikonas 37.50 285 P **P 05 36 24.3 -0.2**
APA Apatity 37.51 338⇑ *iP* **P 05 36 23.8 -0.4**
APA *i* S **S 05 42 08.0 -3.8**
APA pmax pmax
comp=Z,46nm,1.1s
APA MLR MLR
comp=Z,24μm,15.0s
BEL Belsk 37.55 310 *eP* **P 05 36 27.9 +3.2**
BEL LMZ LR 05 54 57.2
comp=Z,9μm,17.9s
BEL Belsk 37.55 310 *eP* **P 05 36 27.9 +3.2**
BEL MLR MLR
comp=Z,9μm,17.9s
KECS Kecovo 37.57 305 *eP* **P 05 36 26.8 +1.8**
KECS Kecovo 37.57 305 *eP* **P 05 36 26.8 +1.8**
KPRO Kipourio 37.60 291 P **P 05 36 25.5 0.0**
CHBT CHBT 37.70 120 P **P 05 36 29.3 +2.9**
comp=Z,151nm,0.8s
NIE Niedzica 37.71 306 *eP* **P 05 36 28.4 +2.2**
NIE *eS* **S 05 42 21.9 +6.5**
NIE LMZ LR 05 51 32.2
comp=Z,4μm,25.0s
NIE Niedzica 37.71 306 *eP* **P 05 36 28.4 +2.2**
NIE *eS* **S 05 42 21.9 +6.5**
NIE MLR MLR
comp=Z,4μm,25.0s
ITM Ithomi 37.72 286 *eP* **P 05 36 26.6 +0.2**
comp=Z,27nm,0.7s
ITM Ithomi 37.72 286 P **P 05 36 31.1 +4.7**
PVO Paravola 37.73 289 P **P 05 36 28.6 +2.2**
PENT Pentalofos 37.73 291 P **P 05 36 27.2 +0.6**
NEST Nestorio 37.77 292 P **P 05 36 27.2 +0.3**
WHN Wuhan 37.80 85 ⇓P **P 05 36 28.4 +1.3**
WHN pP **pP 05 36 32.1 -1.1**
WHN S **S 05 42 22.1 +5.1**
WHN LR LR
comp=Z,16μm,12.7s
WHN LR LR
comp=Z,15μm,12.9s
WHN LR LR
comp=Z,20μm,15.3s
AMT Artemida-Makis 37.81 287 P **P 05 36 31.3 +4.1**
PYL PYLOS 37.93 286 P **P 05 36 27.6 -0.6**
PYL PYLOS 37.93 286 P **P 05 36 27.6 -0.6**
DSL Palaion Diasel 37.95 289 P **P 05 36 28.5 +0.1**
DSL Palaion Diasel 37.95 289 P **P 05 36 28.5 +0.1**
PSZ Piszkesteto 37.96 304⇑ *eP* **P 05 36 30.1 +1.7**
PSZ Piszkesteto 37.96 304 *eP* **P 05 36 30.1 +1.7**
comp=Z,47nm,1.0s
PSZ Piszkesteto 37.96 304 *eP* **P 05 36 30.1 +1.7**
PSZ pmax pmax
comp=Z,47nm,1.0s
PDO Prodromos 37.99 289 P **P 05 36 28.4 -0.3**
OJC Ojcow 38.06 308 *eP* **P 05 36 30.3 +1.2**
OJC *eS* **S 05 42 22.9 +2.3**
OJC LMZ LR 05 50 57.9
comp=Z,5μm,30.3s
OJC Ojcow 38.06 308 *eP* **P 05 36 29.6 +0.4**
comp=Z,88nm,1.0s
OJC Ojcow 38.06 308 *eP* **P 05 36 29.6 +0.4**
OJC pmax pmax
comp=Z,88nm,1.0s
DIVS Divibare 38.08 298 *eP* **P 05 36 30.4 +0.9**
comp=Z,51nm,0.7s
KLNR Kaliningrad 38.23 315⇑ *iP* **P 05 36 31.2 +0.8**
KLNR *i* *PP **sP 05 36 37.8 -1.2**
KLNR pmax pmax
comp=Z,171nm,1.0s
KLNR MLR MLR
comp=Z,8μm,18.0s
LANS Liptovska Anna 38.25 306 *eP* **P 05 36 33.2 +2.4**
LANS Liptovska Anna 38.25 306 *eP* **P 05 36 33.2 +2.4**
PVY Plav 38.27 295 *eP* **P 05 36 31.8 +0.7**
IVA Berane 38.28 296 *eP* **P 05 36 32.8 +1.6**
TIA Tai'an 38.31 75 P **P 05 36 31.5 +0.1**
TIA S **S 05 42 21.9 -2.8**
TIA pmax pmax
comp=Z,26nm,1.4s
TIA LR LR
comp=Z,7μm,14.7s
TIA LR LR
comp=Z,4μm,19.6s
TIA LR LR
comp=Z,4μm,19.6s
LKD2 Lefkada island 38.36 289 P **P 05 36 31.5 -0.3**
LKD2 Lefkada island 38.36 289 P **P 05 36 31.5 -0.3**
KFL Anninata 38.40 288 P **P 05 36 31.5 -0.6**
KOME Kolasin 38.56 296⇑ *iP* **P 05 36 34.6 +1.1**
PLE Pljevlja 38.59 297⇑ *iP* **P 05 36 35.3 +1.5**
HIA Hailar 38.66 54 *eP* **P 05 36 35.3 +1.1**
comp=Z,23nm,0.7s
HIA LR LR
comp=Z,13μm,19.0s
HIA Hailar 38.66 54 *c iP* **P 05 36 35.3 +1.1**
HIA pmax pmax
comp=Z,24nm,1.1s
HIA MLR MLR
comp=Z,12μm,17.0s
VYHS Vyhne 38.66 305 *eP* **P 05 36 35.7 +1.5**
VYHS pmax pmax
comp=Z,16nm,1.2s
VYHS Vyhne 38.66 305 *eP* **P 05 36 35.7 +1.5**
VYHS *eS* **S 05 42 30.1 +0.3**
BSI Banda Aceh 38.69 136 P **P 05 36 34.2 -0.5**
comp=Z,53nm,1.0s
PDG Podgorica 38.80 295⇑ *iP* **P 05 36 36.1 +0.7**
PDG Podgorica 38.80 295 P **P 05 36 39.6 +4.2**
TTG Podgorica 38.80 295⇑ *iP* **P 05 36 36.8 +1.4**
TTG Podgorica 38.80 295 *eP* **P 05 36 36.3 +0.9**
comp=Z,60nm,1.2s
TTG Podgorica 38.80 295 *eP* **P 05 36 36.3 +0.9**
TTG pmax pmax
comp=Z,61nm,1.2s
KEK Kerkira 38.83 291 P **P 05 36 38.5 +2.8**
KEK Kerkira 38.83 291 P **P 05 36 38.5 +2.8**
ULC Ulcinj 38.88 294⇑ *iP* **P 05 36 36.9 +0.8**
DRME Dracevica, Mon 38.89 295⇑ *iP* **P 05 36 37.1 +0.9**
NKY Niksic 38.94 296 *eP* **P 05 36 37.6 +0.8**
UPM Unac-Piva 38.96 296 *eP* **P 05 36 38.2 +1.2**
NKME Niksic 38.98 296 *eP* **P 05 36 37.7 +0.7**
CEME Cevo 39.03 295⇑ *iP* **P 05 36 37.9 +0.4**
BUM Brajici-Budva 39.09 295⇑ *iP* **P 05 36 38.7 +0.8**
OKC Ostrava-Krasne 39.12 307 *eS* **S 05 42 37.5 +1.0**
OKC AMS AMS 05 59 00.0
comp=Z,6μm,12.9s
BRY Bratogost 39.26 296⇑ *iP* **P 05 36 40.4 +0.9**
HCY Herceg Novi 39.36 295⇑ *iP* **P 05 36 41.1 +1.0**
JAVC Velka Javorina 39.43 305 *eP* **P 05 36 43.0 +2.3**
QIZ Qiongzhong 39.43 104 P **P 05 36 43.9 +2.9**
QIZ pP **pP 05 36 46.6 -0.5**
QIZ PP **PnPn 05 38 14.9 +0.4**
QIZ S **S 05 42 45.5 +3.6**
QIZ sS **sS 05 42 52.0 0.0**
QIZ pmax pmax
comp=Z,530nm,8.0s
QIZ LR LR
comp=Z,3μm,14.7s
QIZ LR LR
comp=Z,3μm,12.8s
QIZ LR LR
comp=Z,3μm,20.6s
QIZ Qiongzhong 39.43 104 *eP* **P 05 36 42.0 +1.0**
comp=Z,70nm,1.2s
QIZ LR LR
comp=Z,4μm,19.0s
TRTT Trang 39.49 128 P **P 05 36 42.9 +1.5**
comp=Z,26nm,1.2s
MORC Moravsky Berou 39.51 307 *eP* **P 05 36 42.0 +0.7**
comp=Z,213nm,1.0s
MORC Moravsky Berou 39.51 307 *eP* **P 05 36 42.0 +0.7**
MORC pmax pmax
comp=Z,213nm,1.0s
MORC Moravsky Berou 39.51 307 *eP* **P 05 36 42.9 +1.6**
MODS Modra-Piesok 39.70 305 *eP* **P 05 36 44.1 +1.2**
MODS pmax pmax
comp=Z,49nm,1.1s
MODS Modra-Piesok 39.70 305 *eP* **P 05 36 44.1 +1.2**
MODS *ePP* **PP 05 38 14.9 +0.8**
MODS *eS* **S 05 42 45.5 +0.1**
MODS *eL* L 05 57 41.6
ZST Bratislava 39.83 304 *eP* **P 05 36 44.2 +0.3**
ZST pmax pmax
comp=Z,3.0nm,1.1s
ZST Bratislava 39.83 304 *eP* **P 05 36 44.2 +0.3**
GKP Gorka Klasztor 39.83 312 *eP* **P 05 36 44.6 +0.7**
GKP LMZ LR 05 54 38.1
comp=Z,8μm,21.9s
GKP Gorka Klasztor 39.83 312 *eP* **P 05 36 44.6 +0.7**
GKP MLR MLR
comp=Z,8μm,21.9s
LHMI Lhok Sumawe 39.85 134 P P 05 36 54.9 +10
STON Ston 39.88 296 P **P 05 36 44.2 -0.2**
BLY Banja Luka 40.02 299⇓ *iP* **P 05 36 47.3 +1.8**
BLY Banja Luka 40.02 299 *eP* **P 05 36 47.0 +1.5**
comp=Z,56nm,1.3s
GZH Guangzhou 40.11 96 P **P 05 36 49.1 +2.5**
GZH S **S 05 42 56.1 +4.1**
GZH LR LR
comp=Z,6μm,18.5s
GZH LR LR
comp=Z,7μm,16.5s
VRAC Vranov 40.13 306 *eP* **P 05 36 48.2 +1.7**
SOP Sopron 40.22 304⇑ *eP* **P 05 36 48.4 +1.3**
KRUC Moravsky 40.27 306 *eP* **P 05 36 49.1 +1.5**
DPC Dobruska-Polom 40.30 308 *eP* **P 05 36 49.5 +1.6**
DPC *ePP* **PnPn 05 38 28.4 +4.1**
DPC *eS* **S 05 42 55.4 +1.1**
DPC AMS AMS 05 56 50.0
comp=Z,5μm,15.5s
DPC Dobruska-Polom 40.30 308 *eP* **P 05 36 49.5 +1.6**
DPC *e* 05 38 28.4
DPC *eS* **S 05 42 55.4 +1.1**
DPC MLR MLR
comp=Z,5μm,15.5s
KSP Ksiaz 40.32 309 *eP* **P 05 36 49.3 +1.4**
KSP *eS* **S 05 42 57.1 +2.6**
KSP LMZ LR 05 53 33.9
comp=Z,5μm,24.5s
KSP Ksiaz 40.32 309 *eP* **P 05 36 49.3 +1.4**
KSP *eS* **S 05 42 57.1 +2.6**
KSP MLR MLR
comp=Z,5μm,24.5s
MLSI Meulaboh, Aceh 40.32 135 P **P 05 36 50.6 +2.3**
comp=Z,118nm,0.8s
UPC Upice 40.49 308 *eP* **P 05 36 51.1 +1.7**
UPC *ePP* **PnPn 05 38 25.3 -1.2**
UPC *eS* **S 05 42 56.6 -0.6**
UPC AMS AMS 05 56 50.0
comp=Z,6μm,16.5s
UPC Upice 40.49 308 *eP* **P 05 36 51.1 +1.7**
UPC *e* 05 38 25.3
UPC *eS* **S 05 42 56.6 -0.6**
UPC MLR MLR
comp=Z,6μm,16.5s
KOGS Kog 40.51 302 *eP* **P 05 36 51.0 +1.4**
KOGS *ePP* **PnPn 05 38 28.1 +1.4**
KOGS *eS* **S 05 43 05.5 +8.1**
SKLT Songkhla 40.59 128 P **P 05 36 51.4 +0.8**
comp=Z,66nm,0.8s,comp=Z,2μm
CONA Conrad Observa 40.67 304 *i* P **P 05 36 52.8 +1.8**
comp=Z,26nm,0.9s
KEV Kevo 40.69 339 *eP* **P 05 36 51.0 +0.2**
comp=Z,78nm,1.1s
KEV LR LR
comp=Z,13μm,19.0s
KEV Kevo 40.69 339 *eP* **P 05 36 51.0 +0.2**
KEV pmax pmax
comp=Z,78nm,1.1s
KEV MLR MLR
comp=Z,13μm,19.0s
NJ2 Nanjing 40.90 81 *eP* **P 05 36 53.9 +0.9**
NJ2 pP **pP 05 36 57.3 -1.8**
NJ2 sP **sP 05 37 03.5 +1.9**
NJ2 PcS **PcS 05 42 49.3 +5.0**
NJ2 S **S 05 43 06.3 +2.7**
NJ2 pmax pmax
comp=Z,30nm,0.5s
NJ2 pmax pmax
comp=Z,610nm,6.1s
NJ2 LR LR
comp=Z,19μm,17.4s
NJ2 LR LR
comp=Z,9μm,16.3s
NJ2 LR LR
comp=Z,7μm,19.5s
ARSA Arzberg 40.94 303 *i* P **P 05 36 54.5 +1.3**
comp=Z,1.9nm,0.3s
MATE Matera 40.98 293⇓ *iP* **P 05 36 54.7 +1.2**
ARCES ARCESS Array B 41.02 338 P **P 05 36 53.3 -0.2**
comp=Z,18nm,0.6s,baz=108,slow=8.1,SNR=43
ARCES PP **PnPn 05 38 30.6 -1.8**
comp=Z,30nm,0.8s,baz=116,slow=10,SNR=2.2
ARCES LR LR 05 55 10.0
comp=Z,11μm,21.0s,baz=124,slow=38
ARE0 ARCESS Array S 41.02 338 *eP* **P 05 36 53.5 +0.1**
comp=Z,154nm,1.1s
ARE0 ARCESS Array S 41.02 338 *eP* **P 05 36 53.4 -0.1**
OZLJ Ozalj 41.13 301 P **P 05 36 55.9 +1.2**
DL2 Dalian 41.15 70 P **P 05 36 56.1 +1.1**
DL2 S **S 05 43 11.8 +4.6**
DL2 pmax pmax
comp=Z,85nm,0.7s
DL2 pmax pmax
comp=Z,780nm,10.5s
DL2 LR LR
comp=Z,11μm,17.0s
DL2 LR LR
comp=Z,8μm,17.3s
DL2 LR LR
comp=Z,10μm,17.3s
TIP Timpagrande 41.25 291⇓ *iP* **P 05 36 56.5 +0.6**
TIP Timpagrande 41.25 291 *eP* **P 05 36 55.9 0.0**
comp=Z,52nm,1.4s
GOPC GO Pecny, Ondr 41.29 307 *eP* **P 05 36 57.6 +1.6**
GOPC *ePP* **PnPn 05 38 37.8 +1.9**
GOPC *eS* **S 05 43 07.9 -1.2**
GOPC AMS AMS 05 58 40.0
comp=Z,6μm,12.8s
GOPC GO Pecny, Ondr 41.29 307 *eP* **P 05 36 57.6 +1.6**
GOPC *e* 05 38 37.8
GOPC *eS* **S 05 43 07.9 -1.2**
GOPC MLR MLR
comp=Z,6μm,12.8s
BOJS Bojanci 41.29 300 *i* P **P 05 36 57.2 +1.1**
SOKA Soboth 41.33 302 *i* P **P 05 36 57.5 +1.1**
comp=Z,26nm,0.6s,SNR=45
BSD Bornholm Skovb 41.33 315 *i* P **P 05 36 55.4 -0.8**
comp=Z,8μm,11.0s
BSD Bornholm Skovb 41.33 315 *i* P **P 05 36 55.4 -0.8**
BSD MLR MLR
comp=Z,8μm,11.0s
PVCC Panska Ves 41.42 308 *eP* **P 05 36 58.7 +1.7**
PVCC *ePP* **PnPn 05 38 43.5 +6.2**
PVCC *eS* **S 05 43 07.0 -3.8**
PVCC AMS AMS 05 57 30.0
comp=Z,7μm,15.3s
PVCC Panska Ves 41.42 308 *eP* **P 05 36 58.7 +1.7**
PVCC *e* 05 38 43.5
PVCC *eS* **S 05 43 07.0 -3.8**
PVCC MLR MLR
comp=Z,7μm,15.3s
PRU Pruhonice 41.45 307 *eP* **P 05 36 58.9 +1.6**
PRU *ep*P **sP 05 37 04.6 -1.3**
PRU *ePP* **PP 05 38 34.8 +1.8**
PRU *eS* **S 05 43 06.8 -4.5**
PRU AMS AMS 05 56 30.0
comp=Z,6μm,11.7s
PRU Pruhonice 41.45 307 *eP* **P 05 36 58.9 +1.6**
PRU *e* 05 37 04.6
PRU *e* 05 38 34.8
PRU *eS* **S 05 43 06.8 -4.5**
PRU MLR MLR
comp=Z,6μm,11.7s
PRA Prague 41.52 307 *eS* **S 05 43 11.6 -0.7**
PRA AMS AMS 05 58 50.0
comp=Z,6μm,12.2s
TPTI 41.58 135 P **P 05 36 57.9 -0.8**
comp=Z,43nm,0.7s
OBKA Obir 41.67 302 *i* P **P 05 37 01.1 +1.8**
comp=Z,7.2nm,0.8s,SNR=11
NVLJ Novalja 41.68 299 P **P 05 36 59.1 -0.1**
KCSI Kotacane, Aceh 41.71 134 P **P 05 36 58.4 -1.4**
comp=Z,51nm,1.0s,comp=Z,1μm
LJU Ljubljana 41.74 301 *i* P **P 05 37 01.5 +1.7**
LJU *ePP* **PnPn 05 38 39.8 -1.3**
LJU *eS* **S 05 43 13.6 -2.2**
MOA Molln 41.75 304 *i* P **P 05 37 01.1 +1.2**
comp=Z,23nm,0.7s,SNR=19
CUC Castrocucco 41.78 292 *eP* **P 05 37 01.2 +1.0**
comp=Z,58nm,0.8s
BRG Berggiesshubel 41.81 309 *i* P **P 05 37 00.9 +0.7**
comp=Z,88nm,1.0s
comp=Z,11μm,14.7s
comp=N,6μm,14.5s
comp=E,8μm,14.5s
BRG Berggiesshubel 41.81 309 *i* P **P 05 37 00.9 +0.7**
BRG pmax pmax
comp=Z,88nm,1.0s
BRG MLR MLR
comp=Z,11μm,14.7s
BRG MLR MLR
comp=N,6μm,14.5s
BRG MLR MLR
comp=E,8μm,14.5s
SNY Shenyang 42.01 65 ⇓P **P 05 37 05.0 +3.0**
SNY S **S 05 43 24.1 +4.2**
SNY pmax pmax
comp=E,24nm,0.5s
SNY LR LR
comp=E,15μm,15.7s
SNY LR LR
comp=E,5μm,12.8s
SNY LR LR
comp=E,12μm,12.5s
KULM Kulim 42.05 129 *eP* **P 05 37 03.5 +0.9**
comp=E,61nm,1.0s
GEC2 GERESS Array S 42.05 306 *eP* **P 05 37 03.9 +1.5**
comp=E,39nm,1.2s
GEC2 GERESS Array S 42.05 306 *eP* **P 05 37 03.9 +1.5**
GEC2 pmax pmax
comp=Z,39nm,1.2s
GERES GERESS Array B 42.05 306 P **P 05 37 02.5 +0.1**
comp=Z,14nm,0.8s,baz=90,slow=8.0,SNR=65

GERES PP **PP** **05 38 41.9 +2.3**
comp=Z,4.6nm,0.8s,baz=79,slow=10,SNR=2.9
GERES LR LR 05 57 14.4
comp=Z,4μm,18.4s,baz=84,slow=40
GERES PKP2ab 06 10 18.9
comp=Z,0.4nm,0.3s,baz=345,slow=8.4,SNR=5.5
GEA0 GERESS Array S 42.05 306 *e*P **P** **05 37 02.7 +0.3**
KHC Kasperske Hory 42.11 306 *e*P **P** **05 37 04.1 +1.3**
KHC *e*pP **sP** **05 37 10.3 -1.1**
KHC *e*PP **PP** **05 38 46.4 +6.2**
KHC *e*S **S** **05 43 20.7 -0.6**
KHC AMS AMS 05 58 00.0
comp=Z,6μm,15.4s
KHC Kasperske Hory 42.11 306 *e*P **P** **05 37 04.2 +1.3**
comp=Z,6.8nm,0.9s
KHC Kasperske Hory 42.11 306 *e*P **P** **05 37 04.1 +1.3**
KHC *e* 05 37 10.3
KHC *e* 05 38 46.4
KHC *e*S **S** **05 43 20.7 -0.6**
KHC MLR MLR
comp=Z,6μm,15.4s
HAMF Hammerfest 42.12 339 *e*P **P** **05 37 01.3 -1.2**
CLNS Chul'man 42.15 43 *e*P **P** **05 37 03.6 +0.6**
CLNS *e**PP **sP** **05 37 12.7 +1.1**
CLNS *e* 05 38 42.4
CLNS *e* 05 38 54.9
CLNS *e*PPP PPP 05 39 15.7
CLNS *e*S **S** **05 43 24.1 +2.4**
CLNS pmax pmax
comp=Z,78nm,0.8s
CLNS pmax pmax
comp=N,21nm,0.9s
CLNS pmax pmax
comp=E,62nm,1.1s
CLNS pmax pmax
comp=Z,14nm,0.8s
CLNS pmax pmax
comp=N,14nm,0.7s
CLNS pmax pmax
comp=E,10.0nm,0.7s
CLNS smax smax
comp=N,709nm,11.1s
CLNS smax smax
comp=E,327nm,11.5s
CLNS MLR MLR
comp=N,2μm,11.0s
CLNS MLR MLR
comp=Z,9μm,16.0s
CLNS MLR MLR
comp=E,7μm,14.0s
TSI Tuntungan 42.19 133 P **P** **05 37 04.5 +0.8**
comp=E,137nm,0.5s
RGN Rugen 42.22 314 *e*P **P** **05 37 04.4 +1.0**
comp=E,280nm,0.9s
MYKA Terra Mystica 42.28 302 *i* P **P** **05 37 05.8 +1.5**
comp=E,33nm,0.7s,SNR=11
TRI Trieste 42.31 301 *e*P **P** **05 37 05.6 +1.3**
comp=E,37nm,0.8s
TRI Trieste 42.31 301 *e*P **P** **05 37 05.6 +1.3**
TRI pmax pmax
comp=Z,37nm,0.8s
CLL Collm 42.39 309⇑ *i*P **P** **05 37 05.9 +1.0**
comp=Z,27nm,0.9s
CLL *i* pP **pP** **05 37 11.6 +0.5**
comp=Z,61nm,1.1s
CLL *i* 05 37 15.3
CLL *e*PP **PP** **05 38 45.0 +1.9**
CLL *e*PcP **PcP** **05 38 58.0 +0.1**
CLL *e*PPP PPP 05 39 14.0
CLL *e*PPPP 05 39 22.0
CLL *e*S **S** **05 43 28.0 +2.8**
CLL *e* 05 44 57.0
CLL *e*SS **SS** **05 46 32.0 -2.0**
CLL Collm 42.39 309 *e*P **P** **05 37 06.0 +1.0**
comp=Z,64nm,1.1s
CLL Collm 42.39 309⇑ *i*P **P** **05 37 05.9 +1.0**
CLL *i* 05 37 11.6
CLL *e*S **S** **05 43 18.0 -7.2**
CLL pmax pmax
comp=Z,27nm,0.9s
KBA Koelnbreinsper 42.44 303 *i* P **P** **05 37 06.9 +1.3**
comp=Z,25nm,0.7s,SNR=18
HFS Hagfors 42.55 322 P **P** **05 37 05.8 -0.3**
comp=Z,58nm,0.5s,baz=99,slow=9.2,SNR=137
HFS PP **PP** **05 38 49.4 +4.6**
comp=Z,30nm,0.7s,baz=104,slow=11,SNR=2.2
HFS LR LR 05 57 34.2
comp=Z,11μm,20.0s,baz=96,slow=40
NKC Novy Kostel 42.78 308 *e*P **P** **05 37 10.7 +2.5**
NKC *e*pP **pP** **05 37 14.4 0.0**
NKC *e*PP **PP** **05 38 53.2 +5.8**
NKC *e*S **S** **05 43 30.2 -0.9**
NKC AMS AMS 05 58 20.0
comp=Z,9μm,16.0s
NKC Novy Kostel 42.78 308 *e*P **P** **05 37 10.7 +2.5**
NKC *e* 05 37 14.4
NKC *e* 05 38 53.2
NKC *e*S **S** **05 43 30.2 -0.9**
NKC MLR MLR
comp=Z,9μm,16.0s
LLD Lille Linde 42.88 315 *i* P **P** **05 37 09.4 +0.5**
comp=Z,187nm,1.0s
LLD Lille Linde 42.88 315 *i* P **P** **05 37 09.4 +0.5**
LLD pmax pmax
comp=Z,190nm,1.0s
IPM Ipoh 42.91 130 *e*P **P** **05 37 09.7 +0.1**
comp=Z,486nm,1.9s
PSI Prapat 42.96 134 P **P** **05 37 09.9 -0.2**
comp=Z,31nm,0.6s,baz=360,slow=6.6,SNR=9.2
PSI S **S** **05 43 27.6 -6.9**
comp=Z,7.1nm,0.8s,baz=359,slow=1.3,SNR=2.6
PSI LR LR 05 55 01.9
comp=Z,9μm,21.4s,baz=271,slow=36
CN2 Changchun 43.02 62 *e*P **P** **05 37 06.1 -4.1**
CN2 *es*P sP 05 37 19.8 +1.0
CN2 *e*S **S** **05 43 27.9 -6.8**
CN2 *e*SS SS 05 46 32.2 -15
CN2 LR LR
comp=N,24μm,17.0s
CN2 LR LR
comp=E,8μm,17.0s
CN2 LR LR
comp=Z,13μm,17.0s
ABTA Abfaltersbach 43.04 303 *i* P **P** **05 37 11.3 +0.9**
comp=Z,4.9nm,0.3s,SNR=11
AQU L'Aquila 43.09 296 *e*P **P** **05 37 12.8 +1.9**
comp=Z,101nm,1.1s
AQU L'Aquila 43.09 296 *e*P **P** **05 37 12.8 +1.9**
AQU pmax pmax
comp=Z,101nm,1.1s
TRO Tromso 43.11 337 *e*P **P** **05 37 10.4 -0.1**
DGAR Diego Garcia 43.36 175 PFAKE 05 37 20.0 +6.9
DGAR LR LR
comp=Z,5μm,20.0s
ZEA Zeya 43.37 47 *e*P **P** **05 37 14.5 +1.7**
ZEA *e* 05 39 03.0
ZEA *e*S **S** **05 43 45.0 +5.5**
ZEA pmax pmax
comp=Z,700nm,7.0s
ZEA pmax pmax
comp=N,190nm,0.8s
ZEA pmax pmax
comp=E,110nm,0.9s
ZEA pmax pmax
comp=Z,190nm,0.9s
ZEA smax smax
comp=N,2μm,10.0s
ZEA MLR MLR
comp=Z,6μm,16.0s
ZEA MLR MLR
comp=N,6μm,15.0s
GSI Gunungsitoli 43.41 136 P **P** **05 37 12.7 -0.9**
comp=N,248nm,1.0s
GSI Gunungsitoli 43.41 136 *e*P **P** **05 37 13.8 +0.2**
comp=N,175nm,0.8s
VAE Valguarnera 43.45 289 LR LR 05 59 08.1
comp=N,2μm,18.2s,baz=164,slow=41
QZH Quanzhou 43.49 91⇓ *i*P **P** **05 37 15.4 +1.2**
QZH S **S** **05 43 43.8 +1.9**
QZH pmax pmax
comp=N,850nm,8.7s
QZH LR LR
comp=N,8μm,16.5s
QZH LR LR
comp=N,7μm,17.8s
QZH LR LR
comp=N,7μm,16.5s
MOR8 Moi Rana 43.52 331 *e*P **P** **05 37 13.1 -0.8**
WTTA Wattenberg 43.58 303 *i* P **P** **05 37 15.5 +0.6**
comp=N,14nm,0.7s,SNR=9.7
GRF Grafenberg Arr 43.61 307 P **P** **05 37 17.5 +2.6**
GRFO Grafenberg 43.61 307 *e*P **P** **05 37 16.6 +1.7**
comp=N,104nm,1.2s
GRFO Grafenberg 43.61 307 *e*P **P** **05 37 16.6 +1.7**
GRFO pmax pmax
comp=Z,104nm,1.2s
NC405 NORSAR Array S 43.66 324 *e*P **P** **05 37 14.2 -1.0**
STEI Steigen 43.74 334 *e*P **P** **05 37 15.4 -0.1**
WDD Wied Dalam 43.83 287 *e*P **P** **05 37 18.1 +1.3**
comp=Z,121nm,0.9s
NC303 NORSAR Array S 43.84 324 *e*P **P** **05 37 16.4 -0.2**
NB201 NORSAR Array S 43.86 323 *e*P **P** **05 37 15.4 -1.3**
NB2 NORSAR Subarra 43.89 323 P **P** **05 37 16.1 -0.9**
comp=Z,55nm,0.6s,baz=99,slow=8.6
NB2 NORSAR Subarra 43.89 323 P **P** **05 37 16.1 -0.9**
baz=99,slow=8.6
NOA NORSAR Array B 43.89 323 P **P** **05 37 16.3 -0.8**
comp=Z,31nm,0.6s,baz=104,slow=7.1,SNR=64
NOA LR LR 05 58 06.6
comp=Z,11μm,18.1s,baz=105,slow=40
NOA NORSAR Array B 43.89 323 P **P** **05 37 16.3 -0.8**
NOA pmax pmax
comp=Z,30nm,0.5s
NOA MLR MLR
comp=Z,11μm,18.1s
MOTA Moosalm 43.93 304 *i* P **P** **05 37 16.9 -0.7**
comp=Z,26nm,0.7s,SNR=20
OSL Oslo 44.01 322 *e*P **P** **05 37 19.4 +1.6**
NAO01 NORSAR Array S 44.03 323 *e*P **P** **05 37 17.8 -0.3**
NBO00 NORSAR Array S 44.10 323 *e*P **P** **05 37 18.4 -0.3**
KONS Konsvik 44.12 331 *e*P **P** **05 37 18.4 -0.3**
NSS Namsos 44.13 328 *e*P **P** **05 37 18.4 -0.4**
RETA Reutte 44.14 304 *i* P **P** **05 37 19.9 +0.6**
comp=Z,14nm,0.6s,SNR=9.6
NC204 NORSAR Array S 44.14 324 *e*P **P** **05 37 19.0 0.0**
FETA Feichten 44.22 303 *i* P **P** **05 37 20.4 +0.4**
comp=Z,23nm,0.8s,SNR=16
CLTB Caltabellotta 44.34 289 *e*P **P** **05 37 20.7 -0.3**
comp=Z,38nm,0.6s
LOF Lofoten 44.41 334 *e*P **P** **05 37 20.8 -0.2**
KONO Kongsberg 44.55 321 *e*P **P** **05 37 22.3 +0.1**
comp=Z,97nm,1.0s
KONO Kongsberg 44.55 321 *e*P **P** **05 37 22.3 +0.1**
KONO pmax pmax
comp=Z,97nm,1.0s
FUORN Ofenpass-Fuorn 44.59 303 *e*P **P** **05 37 23.9 +0.8**
comp=Z,35nm,0.8s
MUD Monsted U'grnd 44.63 317 *i* P **P** **05 37 24.0 +1.1**
MUD Monsted U'grnd 44.63 317 *e*P **P** **05 37 24.0 +1.1**
TBLU Trondheim 44.65 326 *e*P **P** **05 37 21.1 -1.8**
DAVA Damuels 44.76 304 *i* P **P** **05 37 24.3 0.0**
comp=Z,48nm,0.8s,SNR=16
VLC Villacollemand 44.92 299 *e*P **P** **05 37 27.8 +2.3**
comp=Z,131nm,1.2s
MNSI Mandailing Nat 44.96 134 P **P** **05 37 27.2 +1.2**
comp=Z,230nm,0.8s
DOMB Dombas 45.04 325 *e*P **P** **05 37 28.1 +2.0**
HOMB Homborsund 45.04 319 *e*P **P** **05 37 25.8 -0.3**
YAK Yakutsk 45.11 35 *e*P **P** **05 37 27.4 +0.7**
comp=Z,483nm,0.7s
YAK LR LR
comp=Z,7μm,21.0s
YAK Yakutsk 45.11 35 *e*P **P** **05 37 26.3 -0.3**
YAK *e* 05 39 05.4
YAK *e* 05 39 12.1
YAK *e*PPP PPP 05 39 55.1
YAK *e*S **S** **05 44 05.7 +1.1**
YAK *e* 05 47 22.1
YAK pmax pmax
comp=Z,282nm,0.8s
YAK pmax pmax
comp=E,69nm,1.3s
YAK pmax pmax
comp=N,37nm,1.0s
YAK pmax pmax
comp=Z,34nm,0.9s
YAK pmax pmax
comp=N,84nm,1.6s
YAK pmax pmax
comp=E,63nm,1.3s
YAK smax smax
comp=N,920nm,4.6s
YAK smax smax
comp=E,759nm,3.8s
YAK MLR MLR
comp=Z,9μm,13.0s
YAK MLR MLR
comp=E,6μm,13.0s
YAK MLR MLR
comp=N,5μm,16.0s
BJO Bjornoya 45.22 343 *e*P **P** **05 37 27.8 +0.4**
TUE Stuetta 45.24 303 *e*P **P** **05 37 28.8 +0.6**
comp=N,32nm,1.0s
INCN Inchon 45.33 70 PFAKE 05 37 40.0 +11
INCN LR LR
comp=Z,11μm,19.0s
SNART Snartemo 45.72 319 *e*P **P** **05 37 31.8 +0.2**
MDJ Mudanjiang 45.81 60 P **P** **05 37 33.7 +1.2**
MDJ PP **PP** **05 39 23.6 +3.9**
MDJ S **S** **05 44 18.4 +3.2**
MDJ pmax pmax
comp=Z,31nm,0.9s
MDJ pmax pmax
comp=Z,480nm,5.5s
MDJ LR LR
comp=Z,9μm,14.7s
MDJ LR LR
comp=Z,10μm,18.6s
MDJ LR LR
comp=Z,14μm,18.4s
MDJ Mudanjiang 45.81 60 *e*P **P** **05 37 35.6 +3.1**
comp=Z,21nm,0.8s
MDJ LR LR
comp=Z,11μm,20.0s
TATO Taipei 45.82 89 PFAKE 05 37 40.0 +7.2
TATO LR LR
comp=Z,5μm,19.0s
YHNB Yeheng 45.87 89 *e*P **P** **05 37 37.4 +4.1**
comp=Z,56nm,0.9s
AKN Aaknes 46.02 325 *e*P **P** **05 37 34.6 +0.8**
ODD1 Odda 46.06 322 *e*P **P** **05 37 35.1 +0.8**
BLS5 Blasjo 46.14 321 *e*P **P** **05 37 35.5 +0.6**
BKNI Bangkinang 46.19 133 P **P** **05 37 38.5 +2.7**
comp=Z,409nm,0.8s,comp=Z,3μm
BKNI Bangkinang 46.19 133 *e*P **P** **05 37 36.5 +0.7**
comp=Z,280nm,0.7s
WTSB Winterswijk 46.21 311 *e*P **P** **05 37 36.5 +1.1**
comp=Z,131nm,1.1s
TJN Taejon 46.21 72⇓ *i*P **P** **05 37 37.0 +1.3**
KS01 Wonju Array Si 46.29 70 *e*P **P** **05 37 35.7 -0.7**
KS15 Wonju Array Si 46.29 70 *e*P **P** **05 37 37.0 +0.6**
KSAR Wonju Array Be 46.29 70 P **P** **05 37 35.8 -0.6**
KSAR ScP **ScP** **05 43 00.8 -3.0**
KSAR Wonju Array Be 46.29 70 P **P** **05 37 35.8 -0.6**
KSRS Korea Array 46.32 70 P **P** **05 37 35.8 -0.7**
comp=Z,17nm,0.9s,baz=278,slow=6.7,SNR=31
KSRS ScP **ScP** **05 43 00.8 -3.0**
comp=Z,1.7nm,0.6s,baz=286,slow=5.1,SNR=5.1
KSRS LR LR 05 59 28.6
comp=Z,7μm,18.8s,baz=290,slow=39
YULB Yu-li 46.40 91 *e*P **P** **05 37 39.4 +2.1**
comp=Z,42nm,0.9s
SISI Saibi 46.42 137 P **P** **05 37 39.5 +2.0**
comp=Z,141nm,1.0s
ECH Echery 46.44 305 *e*P **P** **05 37 37.3 -0.1**
comp=Z,42nm,0.9s
ECH Echery 46.44 305 *e*P **P** **05 37 37.3 -0.1**
ECH pmax pmax
comp=Z,42nm,0.9s
TWG Pinlang 46.48 92 *e*P **P** **05 37 37.2 -0.8**
comp=Z,322nm,0.9s
KLR Kul'dur 46.50 53 *c i*P **P** **05 37 38.5 +0.6**
STAV Stavanger 46.52 320 *e*P **P** **05 37 37.9 +0.1**
SENIN Lac Senin/Sane 46.66 303 *e*P **P** **05 37 39.5 +0.1**
comp=Z,53nm,0.9s
TIXI Tiksi 46.68 22 P **P** **05 37 39.2 +0.2**
comp=Z,36nm,0.3s,baz=270,slow=3.1,SNR=62
TIXI Tiksi 46.68 22 *e*P **P** **05 37 37.8 -1.2**
comp=Z,175nm,1.1s
TIXI LR LR
comp=Z,7μm,19.0s
TIXI Tiksi 46.68 22⇑ *i*P **P** **05 37 38.7 -0.2**
TIXI pmax pmax
comp=Z,53nm,1.0s
TIXI MLR MLR
comp=Z,7μm,14.0s
HINF Hinteralfeld 46.71 305 *e*P **P** **05 37 39.7 +0.1**
HINF pmax pmax
comp=Z,97nm,1.2s
BER Bergen 46.73 322 *e* **P** **05 37 39.6 +0.2**
KMY Karmoy 46.75 321 *e*P P 05 37 46.3 +6.7
MYKOM Kota Tinggi 46.76 129 *e*P **P** **05 37 40.7 +0.4**
comp=Z,84nm,0.7s
MEM Membach 46.85 309⇓ P **P** **05 37 42.1 +1.5**
comp=Z,53nm,1.2s
MEM Membach 46.85 309 *e*P **P** **05 37 42.3 +1.7**
HGN Heimansgroeve 46.88 309 *e*P **P** **05 37 41.6 +0.8**
comp=Z,53nm,1.3s
WLF Walferdange 46.88 307⇑ P **P** **05 37 42.8 +2.0**
comp=Z,100nm,1.0s
WLF Walferdange 46.88 307 *e*P **P** **05 37 42.9 +2.0**
comp=Z,117nm,0.9s
WLF Walferdange 46.88 307 *e*P **P** **05 37 42.9 +2.1**
WLF pmax pmax
comp=Z,117nm,0.9s
HAU Haudompre 47.01 305 *e*P **P** **05 37 42.0 +0.1**
HAU pmax pmax
comp=Z,88nm,1.0s
SUE Sulen 47.02 323 *e*P **P** **05 37 46.2 +4.5**
LPG La Plagne 47.20 302 *e*P **P** **05 37 45.2 +1.5**
LPG pmax pmax
comp=Z,65nm,0.9s
HSPB Hornsund (broa 47.20 346 *e*P **P** **05 37 44.6 +1.7**
HSPB *e**SP **pP** **05 37 50.2 +1.1**
HSPB *e**SS **sS** **05 44 43.8 -0.7**
HSPB MLR MLR
comp=Z,11μm,16.2s
HSPB Hornsund (broa 47.20 346 *e*P **P** **05 37 44.1 +1.2**
LPL La Plagne 47.21 302 *e*P **P** **05 37 44.4 +0.7**
LPL pmax pmax
comp=Z,80nm,1.0s
BCLA Clavier 47.32 309⇓ P P 05 37 50.7 +6.5
BNI Bardonecchia 47.34 301 *e*P **P** **05 37 45.6 +1.0**
comp=Z,64nm,0.9s
BNI Bardonecchia 47.34 301 *e*P **P** **05 37 45.6 +1.0**
BNI pmax pmax
comp=Z,65nm,0.9s
CABF La Chapelle 47.43 303 *e*P **P** **05 37 46.0 +0.7**
CABF pmax pmax
comp=Z,145nm,1.1s
USRK Ussuriysk Ar. 47.58 60 P **P** **05 37 46.6 +0.3**
comp=Z,12nm,0.7s,baz=279,slow=7.0,SNR=16
USRK LR LR 05 59 55.2
comp=Z,9μm,20.4s,baz=267,slow=39
SPA0 Spitsbergen Ar 47.59 347 *e*P **P** **05 37 47.2 +1.2**
SPA0 Spitsbergen Ar 47.59 347 *e*P **P** **05 37 50.2 +4.2**
SPITS Spitsbergen Ar 47.59 347 P **P** **05 37 46.3 +0.3**
comp=Z,19nm,0.6s,baz=116,slow=7.5,SNR=56
SPITS LR LR 06 01 15.1
comp=Z,5μm,19.4s,baz=155,slow=40
TAMR Tamra 47.63 290 *e*P **P** **05 37 47.6 +0.8**
comp=Z,186nm,1.3s
KEST Kesra 47.86 288 P **P** **05 37 49.6 +0.9**
comp=Z,34nm,0.8s,baz=351,slow=1.5,SNR=34
KEST Kesra 47.86 288 *e*P **P** **05 37 50.0 +1.2**
comp=Z,110nm,1.0s
SNF Seneffe 47.95 309⇑ P **P** **05 37 49.9 +0.8**
comp=Z,96nm,1.3s
THTN Thala 48.42 288 *e*P **P** **05 37 54.3 +1.1**
comp=Z,35nm,0.8s
KBS Kingsbay 48.72 347 *e*P **P** **05 37 55.7 +1.0**
comp=Z,193nm,0.8s
KBS LR LR
comp=Z,5μm,19.0s
KBS Kingsbay 48.72 347 *e*P **P** **05 37 55.7 +1.0**
KBS pmax pmax
comp=Z,193nm,0.8s
KBS MLR MLR
comp=Z,5μm,19.0s
SSB Saint Sauveur 48.77 302 *e*P **P** **05 37 56.2 +0.6**
comp=Z,43nm,0.8s
SSB Saint Sauveur 48.77 302 *e*P **P** **05 37 56.2 +0.6**
SSB pmax pmax
comp=Z,43nm,0.8s
DSRI Dabo 48.97 130 P **P** **05 37 58.9 +1.5**
comp=Z,638nm,0.9s
CMAH Djebel Manchou 49.05 290 P **P** **05 37 59.3 +1.5**
ABSA Djebel Ababsia 49.12 290 P **P** **05 38 01.0 +2.6**
AVF Avril sur Loir 49.24 304 *e*P **P** **05 37 59.4 +0.3**
AVF pmax pmax
comp=Z,124nm,1.0s
GRNR Gornyy 49.24 51 *e*P **P** **05 38 01.1 +2.0**
GRNR *e* 05 39 27.4
GRNR pmax pmax
comp=Z,84nm,1.0s
CAEH 'Ain El Ouahch 49.43 290 P **P** **05 38 01.8 +1.1**
CKFL Kef-Lekhel 49.65 290 P **P** **05 38 03.4 +0.8**
MASI Maura Aman, Be 49.69 135 P **P** **05 38 03.3 +0.4**
comp=Z,884nm,0.8s,comp=Z,6μm
WACR West Acre 49.86 312 *e*P **P** **05 38 03.9 +0.1**
WACR IAMs_20 IAMs_20 06 00 50.3
comp=Z,9μm,15.7s
CASM Ain Smara 49.87 290 P **P** **05 38 05.9 +1.7**
CTEI Djebel Teioual 50.00 290 P **P** **05 38 06.3 +1.1**
JNU Nakatsue 50.03 74 P **P** **05 38 05.5 +0.1**
comp=Z,15nm,0.8s,baz=269,slow=3.8,SNR=8.7
JNU LR LR 06 01 46.9
comp=Z,6μm,18.4s,baz=298,slow=39
JNU Nakatsue 50.03 74 *e*P **P** **05 38 06.0 +0.7**
comp=Z,62nm,0.9s
DFRA Djebel Bou Aff 50.24 290 P **P** **05 38 08.8 +1.8**
JOW Kunigami 50.49 83 P **P** **05 38 07.8 -1.0**
comp=Z,29nm,0.6s,baz=297,slow=2.3,SNR=11
JOW Kunigami 50.49 83 *e*P **P** **05 38 09.2 +0.4**
comp=Z,164nm,1.7s
CAF Calviac 50.55 302 *e*P **P** **05 38 10.0 +0.8**
CAF pmax pmax
comp=Z,86nm,1.0s
TEY Ternei 50.58 58 *e*P **P** **05 38 12.2 +2.9**
TEY pmax pmax
comp=Z,26nm,0.8s
TEY MLR MLR
comp=N,11μm,15.0s
TEY MLR MLR
comp=E,8μm,15.0s
TEY MLR MLR
comp=Z,10μm,14.0s
CKHR Kef el Ahmar 50.70 290 P **P** **05 38 11.2 +0.7**
SET Setif 50.72 290 P **P** **05 38 13.0 +2.4**
HPK Haverah Park 50.99 314 *e*P **P** **05 38 12.1 -0.2**
HPK IAmb IAmb 05 38 18.9
comp=Z,124nm,0.9s
HPK IAMs_20 IAMs_20 06 05 19.5
comp=Z,9μm,12.2s
MNAI Manna 51.09 135 P **P** **05 38 12.3 -1.2**
comp=Z,238nm,1.2s
MNAI Manna 51.09 135 *e*P **P** **05 38 16.7 +3.3**
comp=Z,370nm,1.3s
MBAR Mbarara 51.15 233 *e*P **P** **05 38 14.4 +0.3**
comp=Z,57nm,1.5s
MBAR LR LR
comp=Z,629nm,22.0s
MBAR Mbarara 51.15 233 *e*P **P** **05 38 14.4 +0.3**
MBAR pmax pmax
comp=Z,57nm,1.5s
MBAR MLR MLR
comp=Z,629nm,22.0s
ESY Stoneypath 51.23 317 *e*P **P** **05 38 13.5 -0.6**
KSM Kuching 51.24 123 *e*P **P** **05 38 14.7 +0.1**
comp=Z,73nm,0.9s
WOL Wolverton 51.24 311 *e*P **P** **05 38 14.7 +0.5**
WOL IAmb IAmb 05 38 21.1
comp=Z,173nm,0.9s
WOL IAMs_20 IAMs_20 06 04 24.1
comp=Z,6μm,14.2s
FLN La Foliniere 51.33 307 *e*P **P** **05 38 14.7 -0.2**
MCD Coleburn Disti 51.33 319 *e*P **P** **05 38 14.6 -0.2**
NKL Nikolayevsk 51.41 47 *e*P **P** **05 38 16.0 +0.6**
NKL pmax pmax
comp=Z,2μm,13.0s
NKL pmax pmax
comp=N,120nm,1.0s
NKL pmax pmax
comp=E,130nm,1.0s
NKL pmax pmax
comp=Z,340nm,1.0s
NKL MLR MLR
comp=N,2μm,12.0s

NKL MLR MLR
comp=E,4μm,12.0s
NKL MLR MLR
comp=Z,6μm,12.0s
BIGH Upper Bighouse 51.55 320 *e*P **P 05 38 16.3 0.0**
BIGH IAmb IAmb 05 38 23.5
comp=Z,218nm,1.1s
BIGH IAMs_20 IAMs_20 06 02 34.6
comp=Z,28μm,13.9s
EDI Edinburgh 51.55 317 *e*P **P 05 38 16.5 +0.1**
EDI IAmb IAmb 05 38 22.8
comp=Z,81nm,0.9s
EDI IAMs_20 IAMs_20 06 03 59.5
comp=Z,12μm,15.9s
SWN1 Swindon 51.56 311 *e*P **P 05 38 17.6 +1.1**
SWN1 IAmb IAmb 05 38 23.6
comp=Z,271nm,0.9s
SWN1 IAMs_20 IAMs_20 06 05 36.6
comp=Z,8μm,13.7s
EKA Eskdalemuir Ar 51.63 316 P **P 05 38 16.3 -0.8**
comp=Z,7.3nm,0.5s,baz=95,slow=7.8,SNR=47
EKA LR LR 06 02 50.6
comp=Z,6μm,19.3s,baz=60,slow=39
ESK Eskdalemuir 51.66 316 *e*P **P 05 38 17.5 +0.2**
comp=Z,91nm,1.0s
ESK LR LR
comp=Z,6μm,19.0s
ESK Eskdalemuir 51.66 316 *e*P **P 05 38 17.5 +0.2**
ESK pmax pmax
comp=Z,91nm,1.0s
ESK MLR MLR
comp=Z,6μm,19.0s
STRD Stroud 51.72 311 *e*P **P 05 38 17.9 +0.1**
STRD IAmb IAmb 05 38 24.5
comp=Z,146nm,0.9s
STRD IAMs_20 IAMs_20 06 04 48.5
comp=Z,7μm,13.0s
KESW Keswick, Cumbr 51.73 315 *e*P **P 05 38 17.6 -0.2**
KESW IAmb IAmb 05 38 24.6
comp=Z,107nm,1.1s
KESW IAMs_20 IAMs_20 06 05 22.0
comp=Z,7μm,11.9s
SBUM Sibu 51.86 120 *e*P **P 05 38 19.5 +0.2**
comp=Z,65nm,0.9s
BATH Bath 51.90 311 IAMs_20 IAMs_20 06 05 39.3
comp=Z,8μm,13.7s
MDSI Maura Dua 51.90 134 P **P 05 38 17.0 -2.5**
comp=Z,26nm,0.9s,comp=Z,1μm
INVG Invergeldie, C 51.94 317 *e*P **P 05 38 19.2 -0.1**
INVG IAmb IAmb 05 38 25.6
comp=Z,62nm,1.0s
INVG IAMs_20 IAMs_20 06 06 23.6
comp=Z,6μm,12.8s
MDO Dochfour 51.94 319 *e*P **P 05 38 19.1 -0.2**
HLM1 Long Mynd 52.00 312 *e*P **P 05 38 20.5 +0.6**
HLM1 IAmb IAmb 05 38 26.6
comp=Z,69nm,1.0s
HLM1 IAMs_20 IAMs_20 06 04 57.3
comp=Z,8μm,12.4s
MONM Monmouth 52.10 312 *e*P **P 05 38 20.4 -0.2**
MONM IAmb IAmb 05 38 27.0
comp=Z,173nm,1.2s
MONM IAMs_20 IAMs_20 06 02 06.7
comp=Z,8μm,20.3s
FOEL Foel Wylfa 52.12 313 *e*P **P 05 38 20.2 -0.6**
FOEL IAmb IAmb 05 38 26.6
comp=Z,127nm,1.2s
FOEL IAMs_20 IAMs_20 06 05 59.4
comp=Z,7μm,13.6s
EAB Aberfoyle 52.14 317 *e*P **P 05 38 20.7 -0.1**
MCH1 Michaelchurch 52.18 312 *e*P **P 05 38 20.8 -0.4**
MCH1 IAmb IAmb 05 38 28.2
comp=Z,218nm,0.9s
MCH1 IAMs_20 IAMs_20 06 02 09.2
comp=Z,8μm,16.8s
KKM Kota Kinabalu 52.29 113 *e*P **P 05 38 23.1 +0.5**
comp=Z,295nm,1.2s
ABA Alger-Bouzarea 52.30 292 P **P 05 38 26.0 +3.6**
LLW Llanuwychllyn 52.40 313 *e*P **P 05 38 23.0 +0.2**
JMIC Jan Mayen 52.41 336 P **P 05 38 21.8 -0.8**
comp=Z,32nm,0.5s,baz=68,slow=5.4,SNR=2.3
WPM1 Penmaenmawr 52.46 314 *e*P **P 05 38 23.1 -0.1**
EMHD Djebel Mahouad 52.58 291 P **P 05 38 27.5 +3.0**
YLL Llanberis 52.64 313 *e*P **P 05 38 25.1 +0.6**
KPL Plockton 52.65 319 *e*P **P 05 38 24.0 -0.5**
KPL IAmb IAmb 05 38 30.9
comp=Z,109nm,0.9s
KPL IAMs_20 IAMs_20 06 02 39.7
comp=Z,8μm,18.6s
WLF1 Llynfaes 52.74 314 *e*P **P 05 38 25.2 0.0**
WLF1 IAmb IAmb 05 38 32.0
comp=Z,106nm,0.9s
WLF1 IAMs_20 IAMs_20 06 05 27.5
comp=Z,14μm,11.9s
YRC Rhoscolyn 52.85 314 *e*P **P 05 38 26.3 +0.2**
KASI Kota Agung 52.92 134 P **P 05 38 25.2 -1.9**
TYV Tymovskoe 53.09 49 *e*P **P 05 38 30.1 +2.2**
TYV *e* 05 45 59.7
TYV pmax pmax
comp=Z,55nm,1.1s
TYV pmax pmax
comp=Z,800nm,6.2s
TYV MLR MLR
comp=Z,5μm,12.0s
QUIF Quistinic 53.27 307 *e*P **P 05 38 29.1 -0.2**
QUIF pmax pmax
comp=Z,62nm,1.0s
HTL Hartland 53.32 311 *e*P **P 05 38 29.8 +0.3**
HTL IAmb IAmb 05 38 36.0
comp=Z,28nm,0.9s
HTL IAMs_20 IAMs_20 06 04 49.9
comp=Z,3μm,16.7s
CLGH Cloghs, Cushen 53.34 316 IAMs_20 IAMs_20 06 05 13.1
comp=Z,8μm,13.9s
GMM Mts of Mourne 53.43 315 *e*P **P 05 38 31.1 +0.7**
EBNR Beni Rached 53.62 292 P **P 05 38 33.1 +1.0**
DSB Dublin 53.91 314 *e*P **P 05 38 33.9 +0.1**
comp=Z,22nm,0.9s
EANR 'Ain N'Sour 54.07 292 P **P 05 38 36.2 +0.8**
ETRT Tiaret 54.12 291 P **P 05 38 40.8 +4.9**
YSS Yuzh-Sakhalins 54.19 54 *e*P **P 05 38 36.6 +0.6**
comp=Z,173nm,0.9s
YSS LR LR
comp=Z,4μm,19.0s
YSS Yuzh-Sakhalins 54.19 54 *e*P **P 05 38 36.9 +0.9**
YSS *e* 05 38 39.9
YSS *e* 05 39 42.0
YSS *e* 05 40 41.0
YSS *e*S **S 05 46 10.8 -1.2**
YSS pmax pmax
comp=Z,50nm,0.9s
YSS MLR MLR
comp=N,4μm,16.0s
MJB9 Matsu-Tunnel 54.38 68 *e*P **P 05 38 37.7 0.0**
comp=N,24nm,0.8s
MAJO Matsushiro 54.39 68 *e*P **P 05 38 37.7 0.0**
comp=N,23nm,0.8s
MAJO LR LR
comp=Z,3μm,19.0s
MAJO Matsushiro 54.39 68 ‖ *i*P **P 05 38 38.9 +1.2**
MAJO pmax pmax
comp=Z,14nm,0.8s
MAJO MLR MLR
comp=Z,2μm,17.0s
MAT Matsushiro 54.39 68 P **P 05 38 36.4 -1.3**
MAT S **S 05 46 14.0 -1.0**
MJAR Matsushiro Arr 54.39 68 P **P 05 38 37.1 -0.6**
comp=Z,7.1nm,0.7s,baz=286,slow=9.7,SNR=14
MJAR LR LR 06 04 05.4
comp=Z,3μm,19.7s,baz=300,slow=38
MJAR Matsushiro Arr 54.39 68 P **P 05 38 37.1 -0.6**
MJAR pmax pmax
comp=Z,7.0nm,0.7s
MJAR MLR MLR
comp=Z,3μm,19.7s
MYLDM Lahad Datu 54.57 112 *e*P **P 05 38 41.7 +2.5**
comp=Z,200nm,1.2s
COCO West Island 54.60 146 PFAKE 05 38 50.0 +11
COCO LR LR
comp=Z,4μm,21.0s
DAG Danmarks Havn 54.75 344 *i*P **P 05 38 39.5 -0.1**
comp=Z,2μm,14.0s
DAG Danmarks Havn 54.75 344 *i*P **P 05 38 39.5 -0.1**
DAG MLR MLR
comp=Z,2μm,14.0s
ASAJ Asahikawa 54.95 57 P **P 05 38 41.0 -0.5**
comp=Z,19nm,0.6s,baz=274,slow=13,SNR=3.7
ASAJ Asahikawa 54.95 57 *e*P **P 05 38 44.5 +2.9**
comp=Z,355nm,2.0s
ODJA Bouhanifia 55.24 291 P **P 05 38 48.0 +4.1**
SEY Seymchan 55.53 33 ⇑ *i*P **P 05 38 47.0 +1.5**
MA2 Magadan 55.54 38 *e*P **P 05 38 46.8 +1.2**
comp=Z,103nm,1.4s
MA2 LR LR
comp=Z,5μm,19.0s
MA2 Magadan 55.54 38 ⇑ *i*P **P 05 38 47.6 +2.0**
MA2 pmax pmax
comp=Z,100nm,2.5s
LEM Lembang 55.81 132 LR LR 06 06 39.9
comp=Z,2μm,18.1s,baz=310,slow=40
ERM Erimo 56.03 60 *e*P **P 05 38 51.2 +1.8**
comp=Z,72nm,1.2s
ERM LR LR
comp=Z,6μm,22.0s
ERM Erimo 56.03 60 *d i*P **P 05 38 51.1 +1.7**
ERM pmax pmax
comp=Z,32nm,1.1s
ERM MLR MLR
comp=Z,5μm,15.0s
TAM Tamanrasset 56.20 275 *e*P **P 05 38 50.6 -0.5**
comp=Z,19nm,0.9s
TAM Tamanrasset 56.20 275 *e*P **P 05 38 50.6 -0.5**
TAM pmax pmax
comp=Z,19nm,0.9s
ES19 SONSECA Array 56.38 298 *e*P **P 05 38 52.2 +0.2**
ESDC Sonseca Array 56.43 298 P **P 05 38 52.1 -0.3**
comp=Z,10nm,0.6s,baz=60,slow=7.8,SNR=40
ESDC LR LR 06 08 45.0
comp=Z,1μm,20.2s,baz=85,slow=42
ESLA Sonseca Array 56.43 298 *e*P **P 05 38 52.3 -0.1**
comp=Z,24nm,0.8s
PAB San Pablo 56.76 297 *e*P **P 05 38 55.5 +0.7**
comp=Z,58nm,1.3s
PAB LR LR
comp=Z,2μm,21.0s
PAB San Pablo 56.76 297 *e*P **P 05 38 55.5 +0.7**
PAB pmax pmax
comp=Z,58nm,1.3s
PAB MLR MLR
comp=Z,2μm,21.0s
SCO Scoresbysund 56.89 336 *i*P **P 05 38 58.7 +3.6**
SCO Scoresbysund 56.89 336 *e*P **P 05 38 58.7 +3.6**
comp=Z,24nm,1.2s
SCO Scoresbysund 56.89 336 *i*P **P 05 38 58.7 +3.6**
YUK Yuzh-Kuril'sk 57.19 57 *e*P P 05 38 51.4 -6.2
YUK *e*S S 05 46 41.2 -11
PBRG Braganca 57.62 301 *e*P **P 05 39 01.0 +0.2**
comp=Z,47nm,1.9s
PBRG *e*pP **pP 05 39 06.6 -0.5**
MVO Moncorvo 58.06 300 *e*P **P 05 39 04.1 +0.2**
comp=Z,69nm,1.1s
MVO *e*pP **pP 05 39 10.5 +0.2**
MVO *e*S **S 05 47 09.9 +6.1**
MVO *e*LR LR 05 57 02.1
comp=Z,3μm,20.0s
OPO Ambohidratompo 58.24 205 P **P 05 39 04.6 -0.7**
comp=Z,12nm,0.9s,baz=40,slow=7.6,SNR=8.0
OPO LR LR 06 01 07.9
comp=Z,3μm,21.4s,baz=14,slow=33
BORG Borgarnes 58.27 330 PFAKE 05 39 20.0 +15
BORG LR LR
comp=Z,2μm,21.0s
PVRL Vila Real 58.50 301 *e*P **P 05 39 08.7 +1.8**
comp=Z,74nm,1.4s
PVRL *e*pP **pP 05 39 13.8 +0.5**
POLO Lamas de Olo 58.52 301 *e*P **P 05 39 09.3 +2.2**
comp=Z,25nm,1.3s
POLO *e*pP **pP 05 39 13.6 +0.1**
PCAB Cabril 58.55 301 *e*P **P 05 39 09.0 +1.7**
comp=Z,67nm,1.0s
PGAV Gavieira, Arco 58.62 301 *e*P **P 05 39 09.3 +1.4**
comp=Z,82nm,1.7s
PGAV *e*pP **pP 05 39 14.9 +0.7**
PGAV A A 06 08 41.7
comp=Z,2μm,20.0s
ABPO Ambohimpanom 58.64 205 PFAKE 05 39 20.0 +12
ABPO LR LR
comp=Z,1μm,22.0s
MTE Manteigas 58.71 300 *e*P **P 05 39 09.9 +1.4**
comp=Z,144nm,1.4s
MTE *e*pP **pP 05 39 15.3 +0.5**
MTE *e*S S 05 47 24.1 +12
MTE Manteigas 58.71 300 *e*LR LR 06 03 05.7
comp=Z,2μm,18.0s
MTE Manteigas 58.71 300 *e*P **P 05 39 09.1 +0.6**
comp=Z,139nm,1.2s
DAV Davao City (W) 58.80 105 LR LR 06 05 52.2
comp=Z,3μm,20.4s,baz=357,slow=37
PVIS Viseu 58.84 300 *e*P **P 05 39 10.8 +1.5**
comp=Z,122nm,1.2s
PCBR Castelo Branco 58.88 299 *e*P **P 05 39 12.2 +2.7**
comp=Z,62nm,1.4s
PCBR *e*pP **pP 05 39 17.0 +1.1**
PMRV Marv??o 58.98 298 *e*P **P 05 39 11.5 +1.2**
comp=Z,42nm,2.1s
PMRV *e*pP **pP 05 39 17.1 +0.5**
PMRV *e*S **S 05 47 21.8 +6.1**
PMRV Marv??o 58.98 298 *e*LR LR 06 02 19.6
comp=Z,2μm,18.0s
PBAR Barrancos 59.22 297 *e*P **P 05 39 12.9 +0.9**
comp=Z,191nm,1.5s
PBAR *e*pP **pP 05 39 17.2 -1.1**
PESTR Estremoz 59.34 298 *e*P **P 05 39 14.4 +1.6**
comp=Z,68nm,1.4s
PESTR *e*pP **pP 05 39 19.0 -0.2**
PESTR Estremoz 59.34 298 *e*P **P 05 39 13.5 +0.7**
comp=Z,34nm,1.2s
PCAS Casmilo, Conde 59.52 299 *e*P **P 05 39 16.8 +2.8**
BILL Bilibino 59.59 26 *e*P **P 05 39 15.1 +1.2**
comp=Z,102nm,1.3s
BILL LR LR
comp=Z,10μm,20.0s
BILL Bilibino 59.59 26 *d i*P **P 05 39 15.2 +1.2**
BILL *i* 05 40 04.3
BILL *i* 05 41 26.9
BILL pmax pmax
comp=Z,19nm,2.2s
BILL MLR MLR
comp=Z,12μm,17.0s
PTOM Tomar 59.63 299 *e*P **P 05 39 16.9 +2.2**
comp=Z,127nm,1.2s
PTOM *e*pP **pP 05 39 21.9 +0.8**
MDT Midelt 59.65 290 P **P 05 39 14.4 -0.7**
comp=Z,3.4nm,0.5s,baz=108,slow=5.9,SNR=5.7
MDT LR LR 06 07 27.1
comp=Z,1μm,20.9s,baz=58,slow=38
EVO Evora 59.78 298 *e*P **P 05 39 17.0 +1.2**
comp=Z,77nm,1.3s
EVO *e*pP **pP 05 39 22.5 +0.3**
PBEJ Beja 59.88 297 *e*P **P 05 39 17.6 +1.1**
comp=Z,50nm,1.3s
PBEJ *e*pP **pP 05 39 23.2 +0.3**
ALMR Almeirim 59.93 299 *e*P **P 05 39 17.5 +0.7**
ALMR AMS AMS 06 05 25.0
comp=N,4μm,23.9s
ALMR Almeirim 59.93 299 *e*P **P 05 39 17.5 +0.7**
PVAQ Vaqueiros 60.03 296 *e*P **P 05 39 18.6 +1.1**
comp=N,59nm,1.3s
PVAQ *e*pP **pP 05 39 22.6 -1.3**
PVAQ Vaqueiros 60.03 296 *e*LR LR 06 04 41.7
comp=N,2μm,18.0s
MESJ Messejana 60.21 297 *e*P **P 05 39 19.4 +0.6**
MESJ *e*S **S 05 47 31.9 +0.4**
MESJ AMS AMS 06 06 47.0
comp=N,4μm,22.0s
MESJ Messejana 60.21 297 *e*P **P 05 39 16.7 -2.1**
comp=N,43nm,1.4s
MESJ *e*pP **pP 05 39 24.4 -0.7**
MESJ Messejana 60.21 297 *e*P **P 05 39 19.4 +0.6**
MESJ *e*S **S 05 47 31.9 +0.4**
PBDV Barranco-do-Ve 60.25 296 *e*P **P 05 39 20.0 +0.9**
comp=N,70nm,1.6s
PBDV *e*pP **pP 05 39 24.5 -1.0**
PNCL Nicolau / Gran 60.32 297 *e*P **P 05 39 20.7 +1.2**
comp=N,74nm,1.5s
PNCL *e*pP **pP 05 39 26.5 +0.6**
PMAFR Mafra 60.52 299 *e*P **P 05 39 21.8 +1.0**
comp=N,172nm,1.8s
PMAFR *e*pP **pP 05 39 27.4 +0.2**
LIS Lisbon 60.52 298 *e*P **P 05 39 21.6 +0.8**
LIS Lisbon 60.52 298 *e*P **P 05 39 21.6 +0.8**
PTEO Sao Teotonio 60.70 297 *e*pP pP 05 39 27.4 -1.1
MORF Marmelete 60.74 297 *e*P **P 05 39 22.9 +0.4**
MORF *e*S **S 05 47 39.0 +0.4**
MORF AMS AMS 06 06 52.1
comp=N,4μm,22.6s
MORF Marmelete 60.74 297 *e*P **P 05 39 22.9 +0.4**
MORF *e*S **S 05 47 38.9 +0.4**
PFVI Vila Bisbo 60.94 297 *e*pP pP 05 39 30.6 +0.4
SUMG Summit 61.01 341 *i*P **P 05 39 25.5 +1.3**
comp=Z,3μm,16.0s
SUMG Summit 61.01 341 *e*P **P 05 39 24.6 +0.4**
comp=Z,122nm,1.1s
SUMG Summit 61.01 341 *e*P **P 05 39 24.6 +0.4**
SUMG pmax pmax
comp=Z,122nm,1.1s
JAGI Jajag, Banyuwa 61.17 127 *e*P **P 05 39 23.8 -1.7**
comp=Z,40nm,0.7s
PEA0B Petropavlovsk- 61.23 43 *e*P **P 05 39 27.0 +1.6**
comp=Z,180nm,1.5s
PETK Petropavlovsk- 61.23 43 P **P 05 39 24.2 -1.2**
comp=Z,5.7nm,0.5s,baz=297,slow=1.1,SNR=9.7
PETK Petropavlovsk- 61.23 43 *e*P **P 05 39 24.9 -0.5**
PETK Petropavlovsk- 61.23 43 *e*P **P 05 39 25.0 -0.5**
SKR Severo-Kuril's 61.25 46 *e*P **P 05 39 27.5 +1.9**
SKR *e*S **S 05 47 44.7 +0.3**
SKR pmax pmax
comp=Z,55nm,1.2s
SKR MLR MLR
comp=Z,6μm,20.0s
CBIJ Chichi jima 61.44 76 P **P 05 39 24.3 -3.0**
JCJ Chichijima 61.44 76 P **P 05 39 24.3 -3.0**
comp=Z,46nm,0.7s,baz=285,slow=20,SNR=3.6
PET Petropavlovsk 61.79 43 PFAKE 05 39 40.0 +11
PET LR LR
comp=Z,4μm,22.0s
PET Petropavlovsk 61.79 43 *e*P **P 05 39 27.6 -1.6**
PET MLR MLR
comp=Z,6μm,20.0s
PET pmax pmax
comp=Z,49nm,1.1s
PET MLR MLR
comp=Z,4μm,20.0s
KAPI Kappang 62.42 120 *e*P **P 05 39 32.3 -1.7**
comp=Z,39nm,0.9s
KAPI LR LR
comp=Z,2μm,20.0s
TNTI Ternate 64.14 109 *e*P **P 05 39 48.4 +3.0**
comp=Z,105nm,0.9s
KULLO Kullorsuaq 64.15 346 *i*P **P 05 39 46.2 +1.6**
comp=Z,7μm,15.0s
KULLO Kullorsuaq 64.15 346 *i*P **P 05 39 46.2 +1.6**
KULLO MLR MLR
comp=Z,7μm,15.0s
LSZ Lusaka 64.18 225 *e*P **P 05 39 44.5 -1.2**
comp=Z,15nm,0.6s
LSZ LR LR
comp=Z,3μm,20.0s
LSZ Lusaka 64.18 225 *e*P **P 05 39 44.5 -1.2**
LSZ pmax pmax
comp=Z,15nm,0.6s
LSZ MLR MLR
comp=Z,3μm,20.0s
ANGG Ammassalik, Gr 64.19 334 *e*P **P 05 39 45.3 +0.4**
comp=Z,53nm,0.8s
TOA0 Torodi Ar. Sit 64.33 268 *e*P **P 05 39 44.8 -1.8**
comp=Z,44nm,0.8s
TORD Torodi Ar. Bea 64.33 268 P **P 05 39 44.7 -1.9**
comp=Z,22nm,0.5s,baz=47,slow=5.9,SNR=163
TORD PKP2ab 06 08 47.0
comp=Z,1.7nm,1.0s,baz=302,slow=1.9,SNR=5.4
TORD LR LR 06 11 28.7
comp=Z,3μm,18.7s,baz=55,slow=39
TULEG Thule 64.62 350 *e*P **P 05 39 48.1 +0.5**
ILULI Ilulissat 66.34 340 *i*P **P 05 40 00.1 +1.3**
comp=Z,4μm,17.0s
ILULI Ilulissat 66.34 340 *e*P **P 05 39 59.0 +0.2**
comp=Z,69nm,0.8s
ILULI Ilulissat 66.34 340 *e*P **P 05 39 59.0 +0.2**
ILULI pmax pmax
comp=Z,69nm,0.8s
MMRI Maumere 66.72 121 *e*P **P 05 40 01.8 -0.2**
comp=Z,111nm,1.0s
SFJD Kangerlussuaq 67.65 338 P **P 05 40 06.9 -0.3**
comp=Z,7.7nm,0.4s,baz=100,slow=5.8,SNR=9.1
SFJD LR LR 06 10 03.1
comp=Z,2μm,21.2s,baz=50,slow=36
SFJD Kangerlussuaq 67.65 338 *i*P **P 05 40 07.3 +0.1**
comp=Z,3μm,15.0s
SFJD Kangerlussuaq 67.65 338 *e*P **P 05 40 09.2 +2.0**
comp=Z,30nm,0.9s
SFJD Kangerlussuaq 67.65 338 *e*P **P 05 40 09.2 +2.0**
SFJD pmax pmax
comp=Z,30nm,0.9s
SIJI Sorong 68.17 108 P **P 05 40 10.4 -0.9**
comp=Z,22nm,0.5s,baz=295,slow=6.2,SNR=7.6
MATP Matopo 68.17 221 P **P 05 40 09.5 -1.7**
comp=Z,15nm,0.5s,baz=21,slow=7.6,SNR=59
MATP LR LR 06 10 57.1
comp=Z,2μm,19.7s,baz=26,slow=37
MATP Matopo 68.17 221 *i*P **P 05 40 09.9 -1.3**
MATP Matopo 68.17 221 *i*P **P 05 40 09.9 -1.3**
KOWA Kowa 68.21 272 P **P 05 40 10.1 -1.4**
comp=Z,16nm,0.6s,baz=55,slow=7.2,SNR=34
KOWA LR LR 06 11 31.4
comp=Z,478nm,21.9s,baz=54,slow=37
KOWA Kowa 68.21 272 *e*P **P 05 40 10.8 -0.7**
comp=Z,43nm,0.8s
BATI Baumata 68.82 121 P **P 05 40 13.4 -1.8**
comp=Z,135nm,0.4s,baz=290,slow=2.0,SNR=15
BATI LR LR 06 13 55.8
comp=Z,3μm,21.6s,baz=274,slow=39
SOEI Soe 68.92 120 *e*P **P 05 40 14.6 -1.5**
comp=Z,229nm,0.8s
RES Resolute Bay 69.02 356 LR LR 06 12 20.0
comp=Z,2μm,20.3s,baz=28,slow=38
PMOZ Porto Moniz, M 69.02 296 *e*S S 05 49 35.3 +15
PMOZ Porto Moniz, M 69.02 296 *e*LR LR 06 03 26.3
comp=Z,926nm,18.0s
RDOG Red Dog Mine 69.11 19 *e*P **P 05 40 17.4 +1.1**
comp=Z,71nm,1.2s
NRS Narsarsuaq 69.60 332 *e*P **P 05 40 20.2 +0.8**
comp=Z,67nm,1.2s
NRS Narsarsuaq 69.60 332 *e*P **P 05 40 20.2 +0.8**
NRS pmax pmax
comp=Z,67nm,1.2s
FAKI Fak Fak 70.23 109 *e*P **P 05 40 24.2 +0.2**
comp=Z,101nm,1.1s
GUMO Guam 70.54 87 LR LR 06 11 36.0
comp=Z,1μm,21.4s,baz=301,slow=36
IVI Ivigtut 70.60 333 *e*P **P 05 40 26.4 +0.8**
comp=Z,35nm,1.2s
ANM Nome 70.94 22 *e*P **P 05 40 28.1 +0.5**
comp=Z,141nm,1.3s
ANM Nome 70.94 22 *e*P **P 05 40 28.1 +0.5**
ANM pmax pmax
comp=Z,141nm,1.3s
TOLK Toolik Lake Re 71.67 14 P **P 05 40 31.4 -0.6**
baz=328
TOLK Toolik Lake Re 71.67 14 *e*P **P 05 40 32.0 -0.1**
CMLA Cha da Macela 72.33 304 *e*P **P 05 40 39.8 +3.3**
comp=Z,23nm,1.2s
CMLA Cha da Macela 72.33 304 PFAKE 05 40 50.0 +14
CMLA LR LR
comp=Z,3μm,19.0s
PSET Sete Cidades 72.43 304 *e*P **P 05 40 41.0 +3.9**
comp=Z,76nm,0.9s
COLD Coldfoot 72.74 15 *e*P **P 05 40 38.6 +0.2**
comp=Z,80nm,0.9s
IM3 Indian Mountai 72.98 17 *e*P **P 05 40 38.9 -1.0**
PGRA Graciosa 73.28 306 *e*P **P 05 40 45.5 +3.4**
comp=Z,51nm,1.1s
DBIC Dimbokro 73.30 266 P **P 05 40 40.4 -2.2**
comp=Z,6.6nm,0.6s,baz=38,slow=5.9,SNR=15
DBIC LR LR 06 18 00.8
comp=Z,2μm,18.9s,baz=33,slow=40
DBIC Dimbokro 73.30 266 *e*P **P 05 40 41.8 -0.7**
DBIC Dimbokro 73.30 266 *e*P **P 05 40 41.8 -0.7**
KIC Kosan Boka 73.38 266 *e*P **P 05 40 41.3 -1.7**
comp=Z,51nm,0.7s
TIC Toumodi 73.44 266 *e*P **P 05 40 41.8 -1.6**
LBTB Lobatse 73.45 221 *e*P **P 05 40 42.1 -1.1**
LBTB Lobatse 73.45 221 *e*P **P 05 40 42.1 -1.1**
TSUM Tsumeb 73.58 231 *e*P **P 05 40 44.0 -0.1**
TSUM LR LR
comp=Z,3μm,20.0s
ROSA Rosais 73.61 306 *e*P **P 05 40 44.4 +0.3**
comp=Z,22nm,0.9s
LIC Lamto 73.69 266 *e*P **P 05 40 44.0 -0.9**

comp=Z,94nm,0.9s
MBWA Marble Bar 74.26 132 *eP* **P 05 40 47.6 -0.3**
comp=Z,51nm,0.9s
MBWA LR LR
comp=Z,3µm,20.0s
FYU Fort Yukon 74.31 14 *eP* **P 05 40 48.6 +1.0**
comp=Z,770nm,1.9s
MLY Manley 74.48 16 *eP* **P 05 40 50.1 +1.4**
comp=Z,73nm,1.0s
INK Inuvik 74.53 9 *eP* **P 05 40 49.1 +0.2**
INK Inuvik 74.53 9 *eP* **P 05 40 49.1 +0.2**
MDM Murphy Dome 75.10 16 *eP* **P 05 40 52.5 +0.2**
H07S1 FLORES T-PHASE 75.17 308 *eP* P 05 40 46.6 -6.5
BPAW Bear Paw Mtn. 75.21 17 *eP* **P 05 40 52.7 -0.2**
COLA College 75.26 15 *eP* **P 05 40 53.2 +0.1**
COLA College 75.26 15 *eP* **P 05 40 53.2 +0.1**
CCB Clear Creek Bu 75.47 16 *eP* **P 05 40 54.2 -0.2**
BWN Browne 75.50 16 *eP* **P 05 40 56.1 +1.6**
CAST Castle Rocks 75.51 18 *eP* **P 05 40 56.1 +1.4**
comp=Z,160nm,1.0s
IL1 Eielson Array 75.55 15 *eP* **P 05 40 52.9 -2.0**
ILAR Eielson Array 75.55 15 P **P 05 40 53.5 -1.3**
comp=Z,5.1nm,0.5s,baz=351,slow=3.4,SNR=50
ILAR PKPPKP **P'P'df 06 08 24.0 +1.4**
comp=Z,0.8nm,1.0s,baz=203,slow=3.7,SNR=4.7
ILAR Eielson Array 75.55 15 P **P 05 40 53.5 -1.3**
ILAR pmax pmax
comp=Z,6.0nm,0.6s
ILB Eielson Array 75.55 15 *eP* **P 05 40 53.9 -0.9**
WRH Wood River Hil 75.55 16 *eP* **P 05 40 54.6 -0.3**
KTH Kantishna Hill 75.69 17 *eP* **P 05 40 55.1 -0.6**
comp=Z,141nm,1.1s
HDA Harding Lake 75.86 15 *eP* **P 05 40 55.8 -0.8**
comp=Z,45nm,0.9s
MTN Manton Dam 75.91 118 *eP* **P 05 40 56.7 -0.9**
PPLA Purkeypile 75.92 18 *eP* **P 05 40 56.6 -0.6**
TRF Thorofare Moun 75.92 17 *eP* **P 05 40 58.5 +1.3**
MCK McKinley 76.00 16 *eP* **P 05 40 57.6 +0.1**
MCK McKinley 76.00 16 *eP* **P 05 40 57.6 +0.1**
RND Reindeer 76.30 17 *eP* **P 05 40 58.7 -0.5**
RND Reindeer 76.30 17 *eP* **P 05 40 58.7 -0.5**
SVW2 Sparrevohn 76.49 21 *eP* **P 05 41 01.7 +1.4**
BOSA Boshof 76.54 219 P **P 05 40 59.9 -1.1**
comp=Z,15nm,0.7s,baz=18,slow=4.0,SNR=23
BOSA LR LR 06 17 09.8
comp=Z,1µm,18.3s,baz=21,slow=38
BOSA Boshof 76.54 219 *i* P **P 05 40 59.8 -1.2**
BOSA Boshof 76.54 219 *eP* **P 05 41 00.3 -0.7**
BOSA Boshof 76.54 219 *i* P **P 05 40 59.8 -1.2**
BOSA Boshof 76.54 219 *eP* **P 05 41 00.3 -0.7**
JAY Jayapura 76.56 103 P **P 05 41 00.4 -1.0**
comp=Z,8.8nm,0.6s,baz=98,slow=1.7,SNR=4.8
EGAK Eagle 76.67 13 *eP* **P 05 41 03.0 +1.8**
EGAK LR LR
comp=Z,4µm,21.0s
SCRK Sand Creek 76.86 14 *eP* **P 05 41 03.7 +1.3**
SKT Skwentna 76.86 18 *eP* **P 05 41 01.3 -1.0**
RIDG Independ'e Rid 76.89 15 *eP* **P 05 41 02.0 -0.6**
DHY Denali Highway 76.93 16 *eP* **P 05 41 02.8 0.0**
DOT Dot Lake 77.13 15 *eP* **P 05 41 04.5 +0.6**
SPU Mount Spurr 77.40 19 *eP* **P 05 41 05.9 +0.5**
PAX Paxson 77.44 15 *eP* **P 05 41 05.4 -0.3**
PAX Paxson 77.44 15 *eP* **P 05 41 05.4 -0.3**
SUA Susitna One 77.50 18 *eP* **P 05 41 06.3 +0.3**
DAWY Dawson 77.64 12 *eP* **P 05 41 06.6 -0.1**
GHO Glory Hole Cre 77.69 18 *eP* **P 05 41 06.8 -0.3**
PMR Palmer 77.80 18 *eP* **P 05 41 06.7 -0.8**
PMR Palmer 77.80 18 *eP* **P 05 41 06.7 -0.8**
SML Sawmill 77.80 17 *eP* **P 05 41 07.3 -0.4**
SML Sawmill 77.80 17 *eP* **P 05 41 07.3 -0.4**
RSO Redoubt South 77.81 20 *eP* **P 05 41 09.5 +1.6**
NIKH Nikolski High 77.97 32 *eP* **P 05 41 08.6 -0.1**
comp=Z,52nm,1.3s
HARP HAARP 78.01 16 *eP* **P 05 41 09.9 +1.1**
SCM Sheep Creek Mo 78.02 17 *eP* **P 05 41 08.9 0.0**
SCM Sheep Creek Mo 78.02 17 *eP* **P 05 41 08.9 0.0**
RC01 Rabbit Creek A 78.08 18 *eP* **P 05 41 08.7 -0.4**
UNV Unalaska Valle 78.32 30 *eP* **P 05 41 14.0 +3.5**
KLU Klutina 78.64 16 *eP* **P 05 41 12.9 +0.5**
BRLK Bradley Lake 78.91 19 *eP* **P 05 41 12.4 -1.3**
SEW Seward 79.00 19 *eP* **P 05 41 15.2 +1.0**
DIV Divide 79.00 17 *eP* **P 05 41 14.6 +0.3**
CNPM China Poot 79.01 20 *eP* **P 05 41 14.2 -0.1**
comp=Z,39nm,1.0s
BMRM Bremner River 79.41 16 *eP* **P 05 41 18.4 +1.9**
CHGN Chignik 79.46 25 *eP* **P 05 41 18.9 +2.1**
SDPT Sand Point 79.49 26 *eP* **P 05 41 19.1 +2.2**
BALM Baldy 79.84 15 *eP* **P 05 41 19.2 +0.2**
comp=Z,64nm,0.8s
BALM Baldy 79.84 15 *eP* **P 05 41 19.2 +0.2**
BALM pmax pmax
comp=Z,64nm,0.8s
CRQM Cirque 79.92 16 *eP* **P 05 41 21.6 +2.1**
TGL Tana Glacier 79.99 15 *eP* **P 05 41 20.6 +0.8**
comp=Z,88nm,1.0s
KDAK Kodiak Island 80.10 21 P **P 05 41 19.3 -0.9**
comp=Z,26nm,0.6s,baz=9.5,slow=3.8,SNR=36
KDAK Kodiak Island 80.10 21 *eP* **P 05 41 19.7 -0.5**
KDAK LR LR
comp=Z,1µm,20.0s
OHAK Old Harbor 80.36 22 *eP* **P 05 41 21.6 0.0**
SII Sitkinak Islan 80.63 23 *eP* **P 05 41 25.8 +2.6**
YKW3 Yellowknife Ar 81.65 2 *eP* **P 05 41 27.7 -0.7**
comp=Z,61nm,1.0s
YKA Yellowknife Ar 81.72 2 P **P 05 41 27.5 -1.3**
comp=Z,13nm,0.7s,baz=349,slow=5.5,SNR=55
YKA PKKPbc **PKKPbc 05 59 59.2 -1.3**
comp=Z,0.4nm,0.5s,baz=174,slow=2.2,SNR=14
YKA LR LR 06 21 18.1
comp=Z,422nm,20.2s,baz=6.0,slow=38
SUR Sutherland 81.84 220 *eP* **P 05 41 31.1 +1.1**
SUR LR LR
comp=Z,4µm,21.0s
SCHQ Schefferville 81.93 336 P **P 05 41 29.2 -1.0**
comp=Z,5.2nm,0.5s,baz=25,slow=8.0,SNR=4.3
SCHQ LR LR 06 17 18.4
comp=Z,2µm,22.0s,baz=37,slow=35
NWAO Narrogin (SRO) 82.00 141 P **P 05 41 30.6 0.0**
comp=Z,19nm,0.7s,baz=188,slow=5.2,SNR=10.0
NWAO LR LR 06 16 08.3
comp=Z,2µm,19.7s,baz=202,slow=34
SKAG Skagway 82.65 12 *eP* **P 05 41 35.1 +1.4**
WRA Warramunga Arr 82.95 121 P **P 05 41 33.7 -2.1**
comp=Z,8.4nm,0.4s,baz=324,slow=5.0,SNR=82
WRA PKKPbc **PKKPbc 05 59 59.0 +1.0**
comp=Z,0.8nm,0.6s,baz=130,slow=2.3,SNR=15
WRA LR LR 06 22 50.8
comp=Z,863nm,21.7s,baz=290,slow=39
WRAB Tennant Creek 82.95 121 *eP* **P 05 41 34.3 -1.6**
WRAB LR LR
comp=Z,994nm,20.0s
WRAB Tennant Creek 82.95 121 *eP* **P 05 41 34.3 -1.6**
WRAB MLR MLR
comp=Z,994nm,20.0s
WB2 Warramunga Arr 82.96 121 *eP* **P 05 41 34.4 -1.6**
comp=Z,30nm,0.6s
BESE Bessie Mountai 83.56 12 *eP* **P 05 41 40.3 +1.7**
SACV Santiago Islan 83.64 284 PFAKE 05 41 50.0 +10
SACV LR LR
comp=Z,675nm,20.0s
DLBC Dease Lake 84.46 10 *eP* **P 05 41 43.2 0.0**
comp=Z,103nm,1.4s
FCC Fort Churchill 84.50 351 *eP* **P 05 41 43.4 +0.2**
comp=Z,65nm,1.1s
FCC Fort Churchill 84.50 351 *eP* **P 05 41 43.4 +0.2**
FCC pmax pmax
comp=Z,65nm,1.1s
WAKE Wake Island 84.58 70 PFAKE 05 42 00.0 +16
WAKE LR LR
comp=Z,2µm,19.0s
AS31 Alice Springs 85.15 124 *eP* **P 05 41 45.6 -1.4**
ASAR Alice Springs 85.15 124 P **P 05 41 44.6 -2.5**
comp=Z,8.0nm,0.5s,baz=310,slow=5.1,SNR=54
ASAR PKKPbc **PKKPbc 05 59 54.1 +1.1**
comp=Z,0.5nm,0.6s,baz=122,slow=3.4,SNR=5.4
ASAR LR LR 06 22 40.7
comp=Z,1µm,21.9s,baz=305,slow=38
AS01 Alice Springs 85.19 124 *eP* **P 05 41 44.6 -2.6**
COEN Coen 85.53 111 *eP* **P 05 41 47.3 -1.8**
PMG Port Moresby 85.82 105 P **P 05 41 51.3 +0.7**
comp=Z,15nm,0.8s,baz=302,slow=3.2,SNR=4.5
PMG LR LR 06 25 29.4
comp=Z,377nm,18.3s,baz=281,slow=39
WRAK Wrangell Islan 86.04 12 *eP* **P 05 41 52.2 +1.2**
WRAK LR LR
comp=Z,2µm,22.0s
FORT Forrest 86.39 132 *eP* **P 05 41 52.3 -0.7**
SHEL Horse Pasture 87.65 248 PFAKE 05 42 10.0 +11
SHEL LR LR
comp=Z,818nm,20.0s
FFC Flin Flon 89.25 355 *eP* **P 05 42 10.0 +3.5**
FFC LR LR
comp=Z,3µm,19.0s
FFC Flin Flon 89.25 355 *eP* **P 05 42 10.0 +3.5**
FFC MLR MLR
comp=Z,3µm,19.0s
ASCN Ascension 89.52 260 PFAKE 05 42 20.0 +12
ASCN LR LR
comp=Z,2µm,19.0s
MIDW Midway 90.43 54 PFAKE 05 42 20.0 +7.6
MIDW LR LR
comp=Z,2µm,20.0s
PKME Peaks-Kenny Pk 90.80 332 P **P 05 42 13.3 -0.6**
baz=32
PKME Peaks-Kenny Pk 90.80 332 PFAKE 05 42 30.0 +16
PKME LR LR
comp=Z,3µm,19.0s
CTA Charters Tower 91.63 114 P **P 05 42 16.8 -1.3**
comp=Z,9.9nm,0.5s,baz=326,slow=5.5,SNR=18
CTAO Charters Tower 91.63 114 *eP* **P 05 42 16.7 -1.3**
CTAO LR LR
comp=Z,2µm,20.0s
CTAO Charters Tower 91.63 114 *eP* **P 05 42 16.7 -1.3**
CTAO MLR MLR
comp=Z,2µm,20.0s
ULM Lac du Bonnet 93.05 351 P **P 05 42 25.3 +1.1**
comp=Z,11nm,0.8s,baz=11,slow=7.3,SNR=14
ULM PP PP 05 46 15.6 +9.5
comp=Z,5.4nm,0.9s,baz=7.7,slow=8.6,SNR=3.5
ULM LR LR 06 28 41.6
comp=Z,2µm,18.7s,baz=13,slow=38
LLLB Lillooet 93.12 7 *eP* **P 05 42 24.2 -0.4**
comp=Z,41nm,1.0s
LONY Lake Ozonia 93.26 335 *eP* **P 05 42 23.9 -1.4**
comp=Z,14nm,1.5s
LONY LR LR
comp=Z,2µm,22.0s
C40A Isle Royale Na 94.19 346 P **P 05 42 27.9 -1.6**
baz=17
A33A Warroad 94.27 350 P **P 05 42 28.8 -1.0**
baz=12,SNR=7.5
B35A Bob, Littlefor 94.58 349 P **P 05 42 31.1 -0.2**
baz=14
B34A Aery, Baudette 94.60 349 P **P 05 42 30.1 -1.2**
baz=13,SNR=6.7
EYMN Ely 94.61 347 P **P 05 42 30.2 -1.2**
baz=15
EYMN Ely 94.61 347 PFAKE 05 42 40.0 +8.6
EYMN LR LR
comp=Z,3µm,19.0s
E45A Wooded Hills, 94.78 343 P **P 05 42 31.2 -1.0**
baz=20
D41A Chassel 94.88 345 P **P 05 42 30.8 -1.9**
baz=18
A04D Lummi Island 94.90 8 P **P 05 42 31.5 -1.2**
baz=350
C37A Embarrass 94.94 348 P **P 05 42 31.5 -1.5**
baz=15
AGMN Agassiz Nation 94.96 350 P **P 05 42 32.9 -0.1**
baz=12,SNR=6.1
AGMN Agassiz Nation 94.96 350 PFAKE 05 42 40.0 +7.0
AGMN LR LR
comp=Z,3µm,19.0s
C36A Pine Crest Far 95.02 348 P **P 05 42 32.3 -1.0**
baz=14
B31A Greenbush Farm 95.07 351 P **P 05 42 30.8 -2.7**
baz=10
WALA Waterton Lakes 95.19 2 *eP* **P 05 42 34.0 -0.3**
comp=Z,44nm,1.4s
E43A Lone Tree Farm 95.19 344 P **P 05 42 32.7 -1.4**
baz=19
F46A Macinaw City C 95.23 342 P **P 05 42 32.2 -2.1**
baz=21
C35A Jirik Farms, M 95.26 349 P **P 05 42 32.7 -1.7**
baz=14
E42A Champion 95.34 344 P **P 05 42 32.9 -1.9**
baz=18
B05A Bryant 95.42 8 P **P 05 42 34.0 -1.0**
baz=351
F44A Big Bay de Noc 95.44 343 P **P 05 42 31.6 -3.6**
baz=20
C34A RKJ Ranch, Bem 95.46 349 P **P 05 42 31.4 -3.9**
baz=13
C33A Trail 95.47 350 P **P 05 42 32.4 -3.0**
baz=12
F45A CMU Biological 95.50 343 P **P 05 42 32.1 -3.4**
baz=20
C32A Crookston 95.51 350 P **P 05 42 33.6 -1.9**
baz=11
E41A Kenton 95.54 345 P **P 05 42 33.5 -2.2**
baz=18
B08A Colville Reser 95.59 6 *eP* **P 05 42 36.5 +0.5**
comp=Z,46nm,1.5s
DGMT Dagmar 95.63 356 P **P 05 42 33.6 -2.5**
baz=5.2
DGMT Dagmar 95.63 356 PFAKE 05 42 50.0 +14
DGMT LR LR
comp=Z,3µm,19.0s
D36A Goodland 95.64 348 P **P 05 42 33.9 -2.3**
baz=14
STKA Stephens Creek 95.66 125 P **P 05 42 36.3 0.0**
comp=Z,3.7nm,0.5s,baz=341,slow=10.0,SNR=7.4
STKA PP PP 05 46 36.7 +8.5
comp=Z,5.6nm,0.9s,baz=330,slow=8.1,SNR=3.1
STKA LR LR 06 32 01.3
comp=Z,1µm,19.9s,baz=290,slow=39
C31A Landman Farms, 95.70 351 P **P 05 42 34.1 -2.4**
baz=10
E40A Wakefield 95.75 346 P **P 05 42 34.9 -1.7**
baz=17
F43A Flat Rock, Esc 95.75 344 P **P 05 42 35.2 -1.5**
baz=19
NEW Newport 95.84 4 P **P 05 42 35.1 -2.0**
baz=355
NEW Newport 95.84 4 PFAKE 05 42 50.0 +13
NEW LR LR
comp=Z,2µm,21.0s
MDND Maddock 95.86 353 P **P 05 42 35.4 -1.7**
baz=9.0
BINY Binghamton 95.88 335 PFAKE 05 42 50.0 +13
BINY LR LR
comp=Z,3µm,20.0s
D35A Remer 95.88 349 P **P 05 42 34.7 -2.5**
baz=13
COWI Conover 95.92 345 PFAKE 05 42 50.0 +13
COWI LR LR
comp=Z,3µm,19.0s
E39A Mellen 95.94 346 P **P 05 42 35.4 -2.1**
baz=16
HNR Honiara 96.00 97 LR LR 06 26 13.2
comp=Z,608nm,21.8s,baz=304,slow=36
F42A Maple Grove Fa 96.03 344 P **P 05 42 35.8 -2.2**
baz=18
D34A Park Rapids 96.05 349 P **P 05 42 35.5 -2.5**
baz=12
NLWA Neilton Lookou 96.07 9 *eP* **P 05 42 38.6 +0.5**
comp=Z,29nm,1.3s
NLWA LR LR
comp=Z,2µm,19.0s
D33A AnnSam, Waubun 96.09 350 P **P 05 42 35.1 -3.1**
baz=12
PAL Palisades 96.19 333 P **P 05 42 36.3 -2.4**
baz=29
C09A Chrisman Ranch 96.22 5 *eP* **P 05 42 38.9 +0.1**
comp=Z,46nm,1.5s
D32A Dogwood Acres, 96.26 351 P P 05 42 33.6 -5.3
baz=11
F41A Three Lakes 96.26 345 P **P 05 42 34.3 -4.7**
baz=17
EGMT Eagleton 96.27 359 P P 05 42 33.3 -5.8
baz=0.7
EGMT Eagleton 96.27 359 PFAKE 05 42 50.0 +11
EGMT LR LR
comp=Z,4µm,20.0s
E36A McGregor 96.29 348 P P 05 42 33.2 -6.0
baz=14,SNR=5.4
F40A Park Falls 96.29 346 P **P 05 42 36.9 -2.2**
baz=17
G43A Wallace 96.41 344 P **P 05 42 37.5 -2.2**
baz=18
E35A Pequot Lakes 96.44 349 P **P 05 42 37.3 -2.5**
baz=13
F39A Loretta 96.45 346 P **P 05 42 35.8 -4.1**
baz=16
G42A Mountain 96.59 344 P **P 05 42 38.3 -2.2**
baz=18
F38A Pierce - Schro 96.59 347 P **P 05 42 39.2 -1.3**
baz=15,SNR=8.5
E34A Wadena 96.60 349 P **P 05 42 39.0 -1.5**
baz=12
E33A Westby DABS, E 96.74 350 P **P 05 42 39.9 -1.3**
baz=12
G41A Antigo 96.78 345 P **P 05 42 38.8 -2.5**
baz=17
G40A Rib Lake 96.93 346 P **P 05 42 40.1 -2.0**
baz=16,SNR=5.6
E31A Nome 96.94 351 P **P 05 42 40.5 -1.6**
baz=10
LON Longmire 96.95 8 *eP* **P 05 42 42.3 +0.1**
comp=Z,7.6nm,1.0s
LON Longmire 96.95 8 *eP* **P 05 42 42.3 +0.1**
LON pmax pmax
comp=Z,8.0nm,1.0s
F36A Milaca 96.98 348 P **P 05 42 41.5 -0.7**
baz=14
G39A Holcombe 97.11 346 P **P 05 42 41.5 -1.3**
baz=16
F35A Swanville 97.15 349 P **P 05 42 41.4 -1.6**
baz=13
H42A Shiocton 97.31 344 P **P 05 42 42.4 -1.3**
baz=18
G38A Ridgeland 97.35 347 P **P 05 42 42.4 -1.6**
baz=15,SNR=5.8
B202 Windy Ridge, M 97.41 8 *eP* Pdif 05 42 46.1 +1.8
MSO Missoula 97.42 2 P **P 05 42 43.3 -1.1**
baz=357
MSO Missoula 97.42 2 *eP* **P 05 42 44.1 -0.3**
comp=Z,14nm,1.3s
H41A Junction City 97.44 345 P **P 05 42 42.8 -1.6**
baz=17
LAO LASA Array 97.51 357 PFAKE 05 43 00.0 +15
LAO LR LR
comp=Z,4µm,19.0s
HAWA Hanford 97.52 6 PFAKE 05 43 00.0 +15
HAWA LR LR
comp=Z,3µm,19.0s
H40A Chili 97.59 346 P **P 05 42 43.5 -1.6**
baz=16
H39A Augusta 97.71 346 P **P 05 42 44.9 -0.7**
baz=16
M54A Oil Creek Stat 97.71 337 P **P 05 42 45.4 -0.3**
baz=25
I43A Langenfeld Bro 97.81 344 P **P 05 42 45.1 -0.9**
baz=18
H38A Maiden Rock 97.91 347 P **P 05 42 45.9 -0.5**
baz=15
I42A Draeger Farm, 97.98 344 P **P 05 42 45.8 -1.0**
baz=18
I41A Arkdale 98.02 345 P **P 05 42 44.1 -2.9**
baz=17
G33A Ortonville 98.08 350 P **P 05 42 44.8 -2.5**
baz=12
H37A Dierke Farm, C 98.11 347 P **P 05 42 45.1 -2.2**
baz=14
G32A Webster 98.17 351 P **P 05 42 45.9 -1.7**
baz=11
AAM Ann Arbor 98.17 340 PFAKE 05 43 00.0 +12
AAM LR LR
comp=Z,2µm,20.0s
H36A Jessenland, He 98.29 348 P **P 05 42 45.3 -2.9**
baz=14
G03D McMinnville, O 98.29 9 P **P 05 42 45.5 -2.6**
baz=350
H35A Sunnyside Ranc 98.32 349 P **P 05 42 46.0 -2.3**
baz=13
I40A Norwalk 98.34 345 P **P 05 42 45.9 -2.5**
baz=16
J43A Natural Harves 98.35 344 P **P 05 42 46.5 -2.0**
baz=18
O56A Blue Knob Stat 98.48 336 P **P 05 42 47.3 -1.8**
baz=26
I38A Scanlan Farm, 98.53 347 P **P 05 42 47.3 -2.0**
baz=15
I39A Houston 98.55 346 P **P 05 42 47.1 -2.3**
baz=16
J42A Columbus 98.57 344 P **P 05 42 47.4 -2.0**
baz=17
H33A Prehn Over Nor 98.63 350 P **P 05 42 46.5 -3.2**
baz=11
BOZ Bozeman (W) 98.70 1 P **P 05 42 47.7 -2.5**
baz=359
BOZ Bozeman (W) 98.70 1 PFAKE 05 43 00.0 +10
BOZ LR LR
comp=Z,2µm,19.0s
J41A Loganville 98.72 345 P **P 05 42 48.5 -1.6**
baz=17
I37A Lemond, Waseca 98.75 347 Pdiff **P 05 42 48.8 -1.4**
baz=14
J40A Soldiers Grove 98.84 345 Pdiff **P 05 42 48.0 -2.7**
baz=16
I36A Fitzsimmons Fa 98.85 348 Pdiff **P 05 42 48.4 -2.3**
baz=14
H32A Carlson Farm, 98.90 350 Pdiff **P 05 42 49.2 -1.7**
baz=11
DLMT Dillon 98.92 1 *eP* Pdif 05 42 51.2 +0.1
comp=Z,17nm,1.4s
J39A Decorah 99.09 346 Pdiff **Pdif 05 42 48.6 -3.2**
baz=15
K42A Prairie Point, 99.13 344 Pdiff **Pdif 05 42 49.7 -2.3**
baz=17
RLMT Red Lodge 99.17 359 Pdiff **Pdif 05 42 50.0 -2.3**
baz=1.1
RLMT Red Lodge 99.17 359 *eP* **Pdif 05 42 52.6 +0.2**
comp=Z,25nm,1.8s
RLMT LR LR
comp=Z,5µm,19.0s
JFWS Jewell Farm 99.20 345 Pdiff **Pdif 05 42 49.6 -2.7**
baz=17
JFWS Jewell Farm 99.20 345 PFAKE 05 43 00.0 +7.7
JFWS LR LR
comp=Z,3µm,19.0s
BMO Blue Mountains 99.22 5 PFAKE 05 43 00.0 +7.5
BMO LR LR
comp=Z,2µm,21.0s
J38A Wedel Dairy, R 99.25 347 Pdiff **Pdif 05 42 49.8 -2.7**
baz=15
I05D Terrebonne, OR 99.38 8 Pdiff **Pdif 05 42 51.8 -1.3**
baz=351
BBSR BB Station 99.42 322 PFAKE 05 43 10.0 +17
BBSR LR LR
comp=Z,2µm,22.0s
J37A Redenius Farm, 99.46 347 Pdiff **Pdif 05 42 51.8 -1.7**
baz=14
ECSD EROS Data Cent 99.54 350 Pdiff **Pdif 05 42 50.8 -3.0**
baz=12
ECSD EROS Data Cent 99.54 350 *eP* **Pdif 05 42 54.8 +1.0**
comp=Z,6.6nm,0.8s
ECSD LR LR
comp=Z,3µm,20.0s
L43A Garden Prairie 99.56 344 Pdiff **Pdif 05 42 52.1 -1.9**
baz=18
J36A Seneca 1, Swea 99.57 348 Pdiff **Pdif 05 42 52.1 -1.9**
baz=13
K40A Colesburg 99.59 346 Pdiff **Pdif 05 42 52.1 -1.9**
baz=16
K39A Oelwein 99.73 346 Pdiff **Pdif 05 42 53.0 -1.7**
baz=15
LKWY Lake 99.73 360 PFAKE 05 43 10.0 +15
LKWY LR LR
comp=Z,3µm,21.0s
I03D Drain, OR 99.77 9 Pdiff **Pdif 05 42 52.7 -2.1**
baz=350
ACSO Alum Creek Sta 99.89 339 PFAKE 05 43 10.0 +15
ACSO LR LR
comp=Z,2µm,19.0s
H17A Grant Village 99.90 360 Pdiff **Pdif 05 42 53.0 -2.7**
baz=0.1
CBN Corbin Frederi 99.91 334 PFAKE 05 43 10.0 +14
CBN LR LR
comp=Z,2µm,20.0s
L42A Oliver, Polo 99.94 344 Pdiff **Pdif 05 42 53.9 -1.6**
baz=17
L41A Preston 100.05 345 Pdiff **Pdif 05 42 53.8 -2.3**
baz=16
J05D Fort Rock, OR 100.43 8 Pdiff **Pdif 05 42 56.0 -1.9**
baz=351
L38A Oak Wood Farm, 100.48 347 Pdiff **Pdif 05 42 57.0 -1.0**
baz=14
HLID Hailey 100.66 3 Pdiff **Pdif 05 42 57.3 -1.8**
baz=357

HLID	**Hailey**	**100.66**	**3**	PFAKE		05 43 10.0	+11
HLID				LR	LR		
comp=Z,3μm,19.0s							
SCIA	**State Center**	**100.75**	**347**	PFAKE		05 43 10.0	+11
SCIA				LR	LR		
comp=Z,3μm,22.0s							
HDIL	**Hopedale**	**101.24**	**344**	PFAKE		05 43 10.0	+8.6
HDIL				LR	LR		
comp=Z,3μm,21.0s							
BW06	**Boulder Array**	**101.52**	**359**	PFAKE		05 43 10.0	+7.1
BW06				LR	LR		
comp=Z,5μm,19.0s							
PDAR	**Pinedale Array**	**101.52**	**359**	Pdiff	**Pdif**	**05 43 03.5**	**+0.5**
comp=Z,0.5nm,0.7s,baz=29,slow=3.0,SNR=6.0							
PDAR				PP	**PP**	**05 47 05.0**	**-6.6**
comp=Z,1.3nm,0.9s,baz=270,slow=1.5,SNR=4.1							
PDAR				PKKPbc	**PKKPbc**	**05 59 08.2**	**-2.1**
comp=Z,1.1nm,1.0s,baz=215,slow=1.8,SNR=4.0							
WVOR	**Wild Horse Val**	**101.53**	**6**	PFAKE		05 43 10.0	+7.2
WVOR				LR	LR		
comp=Z,2μm,20.0s							
AHID	**Auburn Hatcher**	**101.53**	**0**	PFAKE		05 43 10.0	+7.1
AHID				LR	LR		
comp=Z,3μm,20.0s							
O42A	**Bath**	**101.76**	**344**	Pdiff	**Pdif**	**05 43 02.5**	**-1.3**
baz=17							
BLA	**Blacksburg**	**101.86**	**336**	PFAKE		05 43 20.0	+16
BLA				LR	LR		
comp=Z,2μm,20.0s							
HWUT	**Hardware Ranch**	**102.69**	**1**	PFAKE		05 43 20.0	+12
HWUT				LR	LR		
comp=Z,3μm,19.0s							
CNNC	**Cliffs of the**	**102.74**	**333**	PFAKE		05 43 20.0	+12
CNNC				LR	LR		
comp=Z,2μm,19.0s							
OGNE	**Ogallala**	**102.94**	**353**	PFAKE		05 43 20.0	+11
OGNE				LR	LR		
comp=Z,4μm,19.0s							
Q40A	**Laux Farm, Aux**	**103.34**	**345**	Pdiff	**Pdif**	**05 43 09.0**	**-1.8**
baz=15							
MAW	**Mawson**	**103.48**	**183**	Pdiff	**Pdif**	**05 43 12.4**	**+2.0**
comp=Z,1.3nm,0.7s,baz=336,slow=17,SNR=3.9							
R41A	**Rosebud**	**103.86**	**344**	Pdiff	**Pdif**	**05 43 11.6**	**-1.5**
baz=16							
CCM	**Cathedral Cave**	**104.07**	**344**	Pdiff	**Pdif**	**05 43 12.7**	**-1.3**
baz=16							
KSU1	**Kansas State U**	**104.07**	**349**	PFAKE		05 43 30.0	+16
KSU1				LR	LR		
comp=Z,3μm,19.0s							
DUG	**Dugway, Tooele**	**104.08**	**2**	Pdiff	**Pdif**	**05 43 11.8**	**-2.5**
baz=358							
DUG	**Dugway, Tooele**	**104.08**	**2**	PFAKE		05 43 30.0	+16
DUG				LR	LR		
comp=Z,2μm,20.0s							
ISCO	**Idaho Springs**	**104.35**	**356**	PFAKE		05 43 30.0	+14
ISCO				LR	LR		
comp=Z,2μm,19.0s							
R38A	**Fenwick Farm,**	**104.49**	**346**	Pdiff	**Pdif**	**05 43 14.5**	**-1.4**
baz=14							
W53A	**Cullowhee**	**104.61**	**337**	Pdiff	**Pdif**	**05 43 15.0**	**-1.7**
baz=23							
S41A	**Jillco Farms,**	**104.63**	**345**	Pdiff	**Pdif**	**05 43 16.5**	**-0.1**
baz=16							
V50A	**Pikevile**	**104.74**	**339**	Pdiff	**Pdif**	**05 43 14.7**	**-2.4**
baz=21							
S40A	**Lebanon**	**104.78**	**345**	Pdiff	**Pdif**	**05 43 15.6**	**-1.6**
baz=15							
CBKS	**Cedar Bluff**	**104.79**	**351**	PFAKE		05 43 30.0	+13
CBKS				LR	LR		
comp=Z,3μm,19.0s							
S39A	**Bolivar**	**104.85**	**346**	Pdiff	**Pdif**	**05 43 16.2**	**-1.4**
baz=14							
T42A	**Van Buren**	**105.02**	**344**	Pdiff	**Pdif**	**05 43 16.9**	**-1.3**
baz=16							
S38A	**Stockton**	**105.03**	**346**	Pdiff	**Pdif**	**05 43 15.4**	**-2.9**
baz=14							
T40A	**Mansfield**	**105.21**	**345**	Pdiff	**Pdif**	**05 43 17.6**	**-1.6**
baz=15							
NHSC	**New Hope**	**105.48**	**334**	PFAKE		05 47 50.0	
NHSC				LR	LR		
comp=Z,2μm,19.0s							
NVAR	**Mina Array Bea**	**105.53**	**6**	Pdiff	**Pdif**	**05 43 23.7**	**+2.8**
comp=Z,0.6nm,0.7s,baz=329,slow=2.5,SNR=6.3							
NVAR				PP	**PP**	**05 47 39.4**	**-2.2**
comp=Z,1.1nm,0.7s,baz=341,slow=1.9,SNR=5.0							
NVAR				PKKPbc	**PKKPbc**	**05 58 58.5**	**+0.1**
comp=Z,0.9nm,0.7s,baz=191,slow=5.2,SNR=6.7							
RCBR	**Riachuelo**	**105.69**	**274**	PFAKE		05 47 50.0	
RCBR				LR	LR		
comp=Z,13μm,20.0s							
TAU	**Tasmania Unive**	**105.92**	**132**	PFAKE		05 47 50.0	
TAU				LR	LR		
comp=Z,1μm,19.0s							
GOGA	**Godfrey**	**106.33**	**336**	PFAKE		05 47 50.0	
GOGA				LR	LR		
comp=Z,3μm,22.0s							
SDCO	**Great Sand Dun**	**106.39**	**356**	PFAKE		05 47 50.0	
SDCO				LR	LR		
comp=Z,3μm,20.0s							
S22A	**4UR Ranch, Cre**	**106.46**	**357**	PKiKP	**PKiKP**	**05 47 34.6**	**-1.4**
baz=3.2							
CASY	**Casey**	**106.84**	**164**	PFAKE		05 47 50.0	
CASY				LR	LR		
comp=Z,570nm,21.0s							
MVCO	**Mesa Verde**	**107.05**	**358**	PFAKE		05 47 50.0	
MVCO				LR	LR		
comp=Z,3μm,19.0s							
MIAR	**Mount Ida**	**107.94**	**345**	PFAKE		05 47 50.0	
MIAR				LR	LR		
comp=Z,3μm,20.0s							
DZM	**Mont Dzumac**	**108.21**	**104**	*e*LR	LR	06 19 29.4	
comp=Z,958nm,24.1s							
WMOK	**Wichita Mounta**	**108.67**	**350**	PFAKE		05 47 50.0	
WMOK				LR	LR		
comp=Z,3μm,19.0s							
WUAZ	**Wupatki**	**108.77**	**1**	PFAKE		05 47 50.0	
WUAZ				LR	LR		
comp=Z,3μm,19.0s							
ANMO	**Albuquerque**	**109.23**	**356**	PKKPbc	PKKPbc	05 58 52.0	+5.2
comp=Z,0.9nm,0.8s,baz=210,slow=4.7,SNR=3.4							
ANMO	**Albuquerque**	**109.23**	**356**	PKKPbc	PKKPbc	05 58 52.0	+5.2
ANMO				LR	LR		
comp=Z,3μm,22.0s							
ANWB	**Willy Bob**	**109.31**	**310**	PFAKE		05 47 50.0	
ANWB				LR	LR		
comp=Z,1μm,22.0s							
BRAL	**Brewton**	**109.52**	**339**	PFAKE		05 47 50.0	
BRAL				LR	LR		
comp=Z,2μm,19.0s							
POHA	**Pohakuloa**	**110.13**	**45**	PFAKE		05 47 50.0	
POHA				LR	LR		
comp=Z,2μm,19.0s							
PFO	**Pinyon Flats O**	**110.46**	**5**	PFAKE		05 47 50.0	
PFO				LR	LR		
comp=Z,2μm,21.0s							
NATX	**Nacogdoches**	**110.86**	**345**	PFAKE		05 48 00.0	
NATX				LR	LR		
comp=Z,3μm,20.0s							
FUNA	**Funafuti**	**111.05**	**85**	PFAKE		05 48 00.0	
FUNA				LR	LR		
comp=Z,6μm,19.0s							
BBGH	**Gun Hill**	**111.26**	**306**	PFAKE		05 48 00.0	
BBGH				LR	LR		
comp=Z,1μm,20.0s							
GRTK	**Grand Turk**	**111.58**	**320**	PFAKE		05 48 00.0	
GRTK				LR	LR		
comp=Z,1μm,22.0s							
SJG	**San Juan**	**111.58**	**314**	PFAKE		05 48 00.0	
SJG				LR	LR		
comp=Z,882nm,20.0s							
TUC	**Tucson**	**111.97**	**0**	PFAKE		05 48 00.0	
TUC				LR	LR		
comp=Z,4μm,19.0s							
MNTX	**Cornudas Mount**	**112.39**	**355**	PFAKE		05 48 00.0	
MNTX				LR	LR		
comp=Z,3μm,22.0s							
JCT	**Junction City**	**113.01**	**350**	PFAKE		05 48 00.0	
JCT				LR	LR		
comp=Z,2μm,19.0s							
GRGR	**Grenville**	**113.38**	**306**	PFAKE		05 48 00.0	
GRGR				LR	LR		
comp=Z,751nm,22.0s							
NVL	**N'lazarevskaya**	**114.13**	**198**	*e*PKIKP	PKPpre	05 47 33.8	
NVL				MLR	MLR		
comp=Z,935nm,17.0s							
TXAR	**Lajitas Array**	**114.60**	**353**	PKP	PKPdf	05 47 50.7	-0.6
comp=Z,1.0nm,0.9s,baz=48,slow=7.1,SNR=5.7							
TXAR				PKKPbc	**PKKPbc**	**05 58 28.4**	**-0.5**
comp=Z,1.2nm,0.7s,baz=190,slow=6.0,SNR=11							
KVTX	**Kingsville**	**115.57**	**347**	PFAKE		05 48 00.0	+6.9
KVTX				LR	LR		
comp=Z,3μm,20.0s							
HPIG		**117.15**	**355**	*e*PKPdf	**PKPdf**	**05 47 56.2**	**-0.2**
MTDJ	**Mount Denham**	**117.53**	**324**	PFAKE		05 48 10.0	+13
MTDJ				LR	LR		
comp=Z,1μm,22.0s							
SNAA	**Sanae**	**118.52**	**200**	P	**PKPdf**	**05 47 57.1**	**-0.2**
SNAA	**Sanae**	**118.52**	**200**	PKP	**PKPdf**	**05 47 56.5**	**-0.9**
comp=Z,1.5nm,0.7s,baz=315,slow=2.9,SNR=12							
SNAA				PKKPbc	**PKKPab**	**05 58 13.3**	**-1.2**
comp=Z,1.0nm,0.7s,baz=236,slow=6.8,SNR=5.3							
VNA2	**Neumayer--Watz**	**119.50**	**202**	P	**PKPdf**	**05 47 59.1**	**0.0**
baz=14,slow=3.9							
VNA1	**Neumayer--Stat**	**119.64**	**202**	P	**PKPdf**	**05 47 59.1**	**-0.3**
VNA3	**Neumayer Olymp**	**120.30**	**202**	P	**PKPdf**	**05 47 59.6**	**-1.1**
FOZ	**Fox Glacier**	**120.66**	**124**	*e*PKPdf	**PKPdf**	**05 48 01.0**	**-1.1**
PTGA	**Pitinga**	**121.34**	**295**	*e*PKPdf	**PKPdf**	**05 48 02.7**	**-1.8**
PTGA				LR	LR		
comp=Z,13μm,21.0s							
SDV	**Santo Domingo**	**121.51**	**312**	PFAKE		05 48 20.0	+15
SDV				LR	LR		
comp=Z,624nm,20.0s							
LTZ	**Lake Taylor**	**122.05**	**122**	*e*PKPdf	**PKPdf**	**05 48 03.8**	**-1.1**
OXZ	**Oxford**	**122.09**	**123**	*e*PKPdf	**PKPdf**	**05 48 04.1**	**-0.9**
THZ	**Tophouse**	**122.12**	**121**	*e*PKPdf	**PKPdf**	**05 48 04.4**	**-0.7**
XMAS	**Kiritimati**	**122.28**	**59**	PFAKE		05 48 20.0	+14
XMAS				LR	LR		
comp=Z,6.0nm,21.0s							
HIZ	**Hauiti**	**122.28**	**117**	*e*PKPdf	**PKPdf**	**05 48 05.4**	**-0.1**
KHZ	**Kahutara**	**122.79**	**121**	*e*PKPdf	**PKPdf**	**05 48 04.3**	**-2.0**
SNZO	**South Karori**	**123.21**	**120**	PFAKE		05 48 20.0	+13
SNZO				LR	LR		
comp=Z,2μm,21.0s							
OCAC	**Ocana**	**123.62**	**314**	*e*P	**PKPdf**	**05 48 10.4**	**+1.4**
BKZ	**Black Stump Fm**	**123.71**	**117**	*e*PKPdf	**PKPdf**	**05 48 06.9**	**-1.4**
URZ	**Urewera**	**123.83**	**116**	PKP	**PKPdf**	**05 48 05.9**	**-2.5**
comp=Z,13nm,0.6s,baz=225,slow=9.0,SNR=11							
URZ				PKKP	PKKPdf	05 58 52.5	+18
comp=Z,3.3nm,0.3s,baz=87,slow=20,SNR=3.9							
BFZ	**Birch Farm**	**124.08**	**119**	*e*PKPdf	**PKPdf**	**05 48 09.3**	**+0.5**
VNDA	**Vanda**	**125.46**	**165**	PKP	**PKPdf**	**05 48 08.4**	**-2.0**
comp=Z,1.1nm,0.7s,baz=303,slow=5.1,SNR=5.5							
PTBC	**PUERTO BERRIO**	**125.65**	**314**	*e*P	**PKPdf**	**05 48 12.0**	**-0.8**
QSPA	**South Pole Qui**	**125.88**	**180**	PKP	**PKPdf**	**05 48 09.9**	**-1.7**
comp=Z,7.3nm,0.7s,baz=200,slow=0.7,SNR=17							
QSPA	**South Pole Qui**	**125.88**	**180**	PKP	**PKPdf**	**05 48 09.9**	**-1.7**
QSPA				LR	LR		
comp=Z,1μm,20.0s							
BCIP	**Isla Barro Col**	**126.43**	**321**	PFAKE		05 48 30.0	+16
BCIP				LR	LR		
comp=Z,689nm,20.0s							
SBA	**Scott Base**	**126.53**	**165**	PFAKE		05 48 20.0	+7.5
SBA				LR	LR		
comp=Z,1μm,21.0s							
HELC	**Santa Helena**	**126.55**	**315**	*e*P	**PKPdf**	**05 48 15.5**	**+0.6**
CHIC	**Chingaza**	**126.73**	**312**	*e*P	**PKPdf**	**05 48 18.3**	**+2.9**
ROSC	**El Rosal**	**126.92**	**312**	PKP	**PKPdf**	**05 48 15.2**	**-0.5**
comp=Z,3.4nm,0.7s,baz=75,slow=20,SNR=3.5							
JTS	**JuntasAbangare**	**127.88**	**327**	PFAKE		05 48 30.0	+13
JTS				LR	LR		
comp=Z,1μm,21.0s							
PRAC	**Prado**	**128.16**	**312**	*e*PKPdf	**PKPdf**	**05 48 18.2**	**+0.6**
YOTC	**Yotoco, Valle**	**128.81**	**314**	*e*P	**PKPdf**	**05 48 21.1**	**+2.1**
SAML	**Samuel**	**129.13**	**290**	PFAKE		05 48 30.0	+11
SAML				LR	LR		
comp=Z,1μm,19.0s							
FLOC	**Florencia**	**130.30**	**311**	*e*P	**PKPdf**	**05 48 23.3**	**+1.6**
OTAV	**Otavalo**	**133.05**	**313**	PFAKE		05 48 40.0	+13
OTAV				LR	LR		
comp=Z,1μm,21.0s							
CPUP	**Villa Florida**	**133.82**	**267**	PKP	**PKPdf**	**05 48 28.8**	**+1.0**
comp=Z,5.5nm,0.9s,baz=70,slow=1.3,SNR=6.9							
LPAZ	**La Paz**	**137.42**	**286**	PKP	**PKPdf**	**05 48 36.4**	**+0.8**
comp=Z,3.9nm,1.1s,baz=137,slow=3.4,SNR=8.0							
PAYG	**Puerto Ayora**	**140.00**	**327**	PFAKE		05 48 50.0	+10
PAYG				LR	LR		
comp=Z,549nm,20.0s							
PMSA	**Palmer Station**	**140.18**	**209**	PFAKE		05 48 50.0	+12
PMSA				LR	LR		
comp=Z,878nm,19.0s							
MNMC	**Minye Minye**	**140.18**	**284**	*e*PKPdf	**PKPdf**	**05 48 38.4**	**-1.8**
PPT2	**Papeete2**	**141.05**	**72**	*e*PP	PP	05 51 41.2	-1.7
comp=Z,198nm,35.5s							
PPT2	**Papeete2**	**141.05**	**72**	*e*SS	SS	06 10 14.1	+3.9
comp=Z,354nm,24.0s							
PPT2	**Papeete2**	**141.05**	**72**	*e*LR	LR	06 34 31.1	
comp=Z,1μm,21.8s							
NNA	**Nana**	**141.19**	**300**	PFAKE		05 48 50.0	+8.2
NNA				LR	LR		
comp=Z,680nm,22.0s							
TRQA	**Tornquist**	**141.42**	**252**	*e*PKPpre	PKPpre	05 48 35.9	
TRQA				LR	LR		
comp=Z,2μm,19.0s							
ACLC	**CERRO LA CRUZ**	**142.85**	**267**	*e*P	PKPpre	05 48 40.1	
APLL	**PUNTA DE LOS L**	**142.86**	**266**	*e*P	PKPpre	05 48 40.1	
MRA	**San Martin**	**142.88**	**262**	*e*P	PKPpre	05 48 40.1	
GO02	**Mina Guanaco**	**143.22**	**276**	*e*PKPdf	PKPbc	05 48 43.1	+0.5
VCA	**Vinchina**	**143.60**	**269**	*e*P	PKPbc	05 48 43.1	-0.2
AGUA	**GUANDACOL**	**144.12**	**268**	*e*P	**PKPab**	**05 48 44.5**	**+0.2**
TBI	**Tubuai**	**144.26**	**80**	*e*SS	SS	06 10 42.6	-4.7
comp=Z,501nm,31.0s							
TBI	**Tubuai**	**144.26**	**80**	*e*LR	LR	06 35 56.4	
comp=Z,1μm,24.2s							
AMOG	**MOGNA**	**144.63**	**266**	*e*P	**PKPab**	**05 48 44.9**	**-1.2**
GO03	**Copiap**	**144.79**	**272**	*e*PKPdf	**PKPab**	**05 48 45.7**	**-1.1**
ACDV	**Cuesta del Vie**	**144.88**	**267**	*e*P	**PKPab**	**05 48 46.4**	**-0.8**
RTCV	**Cerro Valdivia**	**144.98**	**264**	*e*P	**PKPab**	**05 48 46.7**	**-0.7**
AROD	**Rodeo**	**145.16**	**268**	*e*P	**PKPbc**	**05 48 47.3**	**-1.0**
ASAL	**Salagasta**	**145.44**	**263**	*e*P	**PKPdf**	**05 48 47.8**	**-1.1**
AVIZ	**Vizcacheras**	**145.44**	**262**	*e*P	**PKPdf**	**05 48 48.6**	**-0.3**
RTLS	**Leoncito**	**145.57**	**265**	*e*P	**PKPdf**	**05 48 48.3**	**-1.1**
AAGR	**Agrelo**	**145.58**	**263**	*e*P	**PKPdf**	**05 48 49.1**	**0.0**
LCO	**Las Campanas**	**145.73**	**270**	*e*PKPdf	**PKPdf**	**05 48 47.8**	**-1.9**
LCO				LR	LR		
comp=Z,2μm,22.0s							
AUSP	**Uspallata**	**145.77**	**264**	*e*P	**PKPdf**	**05 48 49.3**	**-0.4**
GO04	**Tololo Observa**	**146.24**	**268**	*e*PKPdf	**PKPdf**	**05 48 49.7**	**-0.8**
PLCA	**Paso Flores**	**148.39**	**249**	PKPbc	**PKPbc**	**05 48 56.5**	**-0.5**
comp=Z,40nm,1.2s,baz=104,slow=3.8,SNR=15							
GO05	**HualaæØ**	**148.57**	**260**	*e*PKPbc	**PKPbc**	**05 48 56.9**	**-0.7**
GO09	**Cerro Castillo**	**148.78**	**229**	*e*PKPbc	**PKPbc**	**05 48 57.5**	**-0.1**
CHRN	**Cochrane**	**149.70**	**236**	*e*PKPbc	**PKPbc**	**05 49 00.0**	**0.0**
RKT	**Rikitea**	**155.34**	**65**	*e*SS	SS	06 12 53.4	+2.9
comp=Z,319nm,39.5s							
RKT	**Rikitea**	**155.34**	**65**	*e*LR	LR	06 41 18.8	
comp=Z,615nm,27.8s							

ISCJB ***11*** *05:32:20.2±0.4, 11°.31S±0°.05×166°.41E±0°.07, h59km, mb4.7/28, MS3.2/1, Error ellipse: s-maj=9.6km s-min=7.4km az=0.3*

IDC ***11*** *05:32:27.8±3.2, 11°.43S×166°.40E, h117km±26km, mb4.1/9, mb1 4.2/12, mb1mx3.9/52, mbtmp4.5/12, MS3.5/2, Ms1 3.5/2, ms1mx3.1/46, Error ellipse: s-maj=24.8km s-min=16.3km az=63.0*

NEIC ***11*** *05:32:28.1±1.1, 11°.39S×166°.40E, h118km±10km, mb4.7/23, Error ellipse: s-maj=7.3km s-min=6.6km az=47.0*

ISC 11 05:32:21.8±0.6,**11°.27S**±0°.07×**166°.54E**±0°.08,**h59**km,**n49,** σ1.9**31/45,mb4.8/28,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
HNR	**Honiara**	**6.73**	**285**	P		Pn	05 34 03.3	+5.2
15nm,0.3s,baz=180,slow=20,SNR=2.2								
HNR				S		**Sn**	**05 35 17.8**	**+4.4**
33nm,0.3s,baz=183,slow=12,SNR=2.4								
HNR				LR		LR	05 36 41.6	
comp=Z,132nm,21.7s,baz=57,slow=38								
DZM	**Mont Dzumac**	**10.74**	**180**	P		**Pn**	**05 34 56.1**	**+3.1**
3.4nm,0.3s,baz=334,slow=10.0,SNR=13								
DZM				S		**Sn**	**05 36 51.5**	**-0.3**
0.7nm,0.3s,baz=342,slow=19,SNR=2.5								
DZM				LR		LR	05 38 12.3	
comp=Z,249nm,18.5s,baz=294,slow=33								
PMG	**Port Moresby**	**19.15**	**274**	P		**Pn**	**05 36 41.9**	**0.0**
1.2nm,0.3s,baz=110,slow=10.0,SNR=5.6								
PMG	**Port Moresby**	**19.15**	**274**	*e*P		**Pn**	**05 36 42.8**	**+0.9**
35nm,1.1s								
EIDS	**Eidsvold**	**20.27**	**224**	*e*P		Pn	05 36 54.1	-0.9
31nm,0.7s								
AFI	**Afiamalu**	**21.33**	**99**	LR		LR	05 44 23.9	
comp=Z,93nm,18.8s,baz=160,slow=33								
CTA	**Charters Tower**	**21.39**	**243**	P		**P**	**05 37 05.4**	**+0.7**
14nm,0.7s,baz=69,slow=11,SNR=19								
CTA				S		S	05 40 37.9	-21
2.4nm,0.8s,baz=206,slow=23,SNR=2.9								
CTAO	**Charters Tower**	**21.39**	**243**	*e*P		**P**	**05 37 05.3**	**+0.7**
16nm,0.8s								
COEN	**Coen**	**22.95**	**261**	*e*P		**P**	**05 37 21.4**	**0.0**
20nm,0.9s								
ARMA	**Armidale**	**23.55**	**214**	*e*P		**P**	**05 37 27.5**	**+0.4**
22nm,1.0s								
BKZ	**Black Stump Fm**	**29.16**	**164**	*e*P		**P**	**05 38 17.1**	**-0.5**
9.3nm,1.1s								
H11S2	**WAKE ISLAND Hy**	**29.57**	**0**	T		T	06 09 15.4	
baz=182,slow=76,SNR=4.9								
H11S3	**WAKE ISLAND Hy**	**29.57**	**0**	T		T	06 09 16.2	
baz=182,slow=76,SNR=4.0								
H11S1	**WAKE ISLAND Hy**	**29.59**	**0**	T		T	06 09 17.2	
baz=182,slow=76,SNR=3.6								
BFZ	**Birch Farm**	**30.53**	**165**	*e*P		**P**	**05 38 28.9**	**-0.6**
86nm,1.5s								
STKA	**Stephens Creek**	**30.82**	**224**	P		**P**	**05 38 30.9**	**-1.4**
3.9nm,0.8s,baz=42,slow=11,SNR=6.2								
STKA	**Stephens Creek**	**30.82**	**224**	*e*P		**P**	**05 38 32.1**	**-0.1**
0.7nm,0.8s								
KHZ	**Kahutara**	**31.63**	**170**	*e*P		**P**	**05 38 39.0**	**-0.2**
58nm,1.4s								
LTZ	**Lake Taylor**	**31.79**	**172**	*e*P		**P**	**05 38 40.8**	**+0.1**
14nm,0.8s								
WRAB	**Tennant Creek**	**32.12**	**250**	*e*P		**P**	**05 38 42.8**	**-1.1**
13nm,0.9s								
WB2	**Warramunga Arr**	**32.13**	**250**	*e*P		**P**	**05 38 42.1**	**-1.8**
14nm,0.9s								
WR1	**Warramunga Arr**	**32.14**	**250**	*e*P		**P**	**05 38 42.5**	**-1.5**
12nm,0.8s								
WRA	**Warramunga Arr**	**32.14**	**250**	P		**P**	**05 38 42.5**	**-1.5**
14nm,0.8s,baz=84,slow=9.2,SNR=57								
AS01	**Alice Springs**	**33.35**	**244**	*e*P		**P**	**05 38 52.4**	**-2.2**
AS31	**Alice Springs**	**33.39**	**244**	*e*P		**P**	**05 38 53.4**	**-1.5**
3.8nm,0.8s								
ASAR	**Alice Springs**	**33.39**	**244**	P		**P**	**05 38 52.9**	**-2.0**
11nm,0.8s,baz=74,slow=9.5,SNR=77								
MTN	**Manton Dam**	**34.64**	**264**	*e*P		**P**	**05 39 05.2**	**-0.7**
8.5nm,0.8s								
BBOO	**Buckleboo**	**35.25**	**228**	*e*P		**P**	**05 39 10.0**	**-0.9**
27nm,1.3s								
XMAS	**Kiritimati**	**38.18**	**72**	*e*P		**P**	**05 39 38.3**	**+2.3**
19nm,1.1s								
FORT	**Forrest**	**40.55**	**235**	*e*P		**P**	**05 39 54.7**	**-0.9**
25nm,0.9s								
MBWA	**Marble Bar**	**45.86**	**251**	*e*P		**P**	**05 40 38.0**	**-0.6**
23nm,1.0s								
YHNB	**Yeheng**	**56.72**	**309**	*e*P		**P**	**05 42 00.2**	**+0.3**
18nm,0.7s								
KSRS	**Korea Array**	**60.50**	**325**	P		**P**	**05 42 25.2**	**-0.5**
2.2nm,0.6s,baz=83,slow=11,SNR=6.0								
KS15	**Wonju Array Si**	**60.51**	**325**	*e*P		**P**	**05 42 25.2**	**-0.6**
KSAR	**Wonju Array Be**	**60.51**	**325**	P		**P**	**05 42 25.2**	**-0.6**
CM31	**Chiang Mai Arr**	**72.91**	**293**	*e*P		**P**	**05 43 44.3**	**-1.0**
CMAR	**Chiang Mai Arr**	**72.91**	**293**	P		**P**	**05 43 44.3**	**-1.0**
1.4nm,0.4s,baz=127,slow=3.9,SNR=5.7								
QSPA	**South Pole Qui**	**78.74**	**180**	P		**P**	**05 44 16.8**	**-1.1**
2.9nm,1.0s,baz=63,slow=3.9,SNR=4.4								
QSPA	**South Pole Qui**	**78.74**	**180**	*e*P		**P**	**05 44 18.2**	**+0.4**
5.8nm,1.3s								
BEKR	**Beckworth**	**84.52**	**48**	*e*P		**P**	**05 44 49.7**	**+0.9**
1.7nm,0.9s								
NVAR	**Mina Array Bea**	**85.58**	**50**	P		**P**	**05 44 54.8**	**+0.6**
0.7nm,0.7s,baz=246,slow=6.5,SNR=5.0								
DLBC	**Dease Lake**	**86.24**	**28**	*e*P		**P**	**05 44 57.1**	**+0.3**
18nm,1.3s								
EGMT	**Eagleton**	**94.11**	**42**	*e*P		**P**	**05 45 34.1**	**0.0**
5.5nm,0.8s								
MK01	**Makanchi Array**	**94.20**	**317**	*e*P		**P**	**05 45 34.0**	**-0.4**
MK32	**Makanchi Array**	**94.21**	**317**	*e*P		**P**	**05 45 33.8**	**-0.7**
MKAR	**Makanchi Array**	**94.21**	**317**	P		**P**	**05 45 33.8**	**-0.7**
2.6nm,0.7s,baz=90,slow=5.8,SNR=3.9								
TSUM	**Tsumeb**	**136.95**	**226**	*e*PKPdf		**PKPdf**	**05 51 37.8**	**-1.3**
CLTB	**Caltabellotta**	**144.52**	**322**	*e*PKPdf		**PKPdf**	**05 51 51.5**	**-0.6**
SHEL	**Horse Pasture**	**151.89**	**196**	*e*PKPbc		**PKPbc**	**05 52 09.5**	**-1.6**

DDA ***11*** *05:41:34.0, 39°.34N×26°.12E, h7km, Ml2.7*

ATH ***11*** *05:41:34.9, 39°.33N×26°.09E, h9km±4km, ML2.2/5, Error ellipse: s-maj=4.0km s-min=0.9km az=135.0*

ISCJB ***11*** *05:41:34.5±0.4, 39°.32N±0°.02×26°.10E±0°.03, h6km±3km, Error ellipse: s-maj=3.5km s-min=2.4km az=164.4*

THE ***11*** *05:41:34.8, 39°.32N×26°.09E,

LIA	**Limnos Island**	**0.91**	**309**	P	**Pg**	**05 41 52.0**	**-0.5**
LIA				S	**Sb**	**05 42 04.8**	**+0.1**
CHOS	**Chios island**	**0.94**	**183**	PG	**Pb**	**05 41 53.4**	**+0.3**
CHOS	**Chios island**	**0.94**	**183**	P	**Pg**	**05 41 51.9**	**-1.0**
CHOS				S	**Sb**	**05 42 06.2**	**+0.6**
CHOS				AML	AML	05 42 08.5	
	comp=N,314μm,0.2s						
CHOS				AML	AML	05 42 08.6	
	comp=E,687μm,0.2s						
CHOS	**Chios island**	**0.94**	**183**	P	**Pg**	**05 41 52.2**	**-0.7**
CHOS				S	**Sb**	**05 42 05.8**	**+0.3**
CHOS	**Chios island**	**0.94**	**183**	P	**Pg**	**05 41 52.4**	**-0.5**
CHOS	**Chios island**	**0.94**	**183**	*e*Pg	**Pb**	**05 41 53.4**	**+0.3**
CHOS				S	**Sb**	**05 42 05.8**	**+0.3**
URLA	**Izmir**	**1.04**	**158**	PG	**Pg**	**05 41 53.4**	**-1.4**
URLA	**Izmir**	**1.04**	**158**	*i* P	**Pg**	**05 41 53.3**	**-1.4**
URLA				*i* S	**Sg**	**05 42 07.8**	**-0.5**
GELI	**Tayfur-Gelibol**	**1.10**	**15**	PN	**Pb**	**05 41 55.7**	**-0.1**
ZEY	**¯zmir**	**1.13**	**164**	*i* P	**Pb**	**05 41 55.3**	**-0.9**
ZEY				*i* S	**Sb**	**05 42 10.5**	**-0.4**
LPK	**Lapseki**	**1.16**	**25**	PN	**Pb**	**05 41 55.7**	**-1.0**
SMTH	**Samothraki Isl**	**1.23**	**339**	P	**Pn**	**05 41 57.1**	**-0.6**
SMTH				S	**Sg**	**05 42 14.1**	**-0.2**
SMTH				AML	AML	05 42 16.3	
	comp=E,85μm,0.2s						
SMTH				AML	AML	05 42 16.6	
	comp=N,89μm,0.3s						
SMTH	**Samothraki Isl**	**1.23**	**339**	P	**Pn**	**05 41 57.9**	**+0.2**
SMTH				S	**Sn**	**05 42 15.5**	**+1.3**
SMTH	**Samothraki Isl**	**1.23**	**339**	P	**Pn**	**05 41 57.9**	**+0.2**
SMTH				S	**Sg**	**05 42 14.3**	**0.0**
BALY	**Balya**	**1.24**	**70**	*i* P	**Pn**	**05 41 56.7**	**-1.2**
BALY				*i* S	**Sb**	**05 42 14.2**	**+0.1**
BALY	**Balya**	**1.24**	**70**	P	**Pn**	**05 41 56.7**	**-1.2**
BALY				S	**Sb**	**05 42 14.1**	**+0.1**
STEP	**BALIKESIR_Sava**	**1.25**	**87**	*i* P	**Pg**	**05 41 58.7**	**-0.1**
STEP				*i* S	**Sn**	**05 42 15.3**	**+0.6**
STEP	**BALIKESIR_Sava**	**1.25**	**87**	P	**Pg**	**05 41 58.7**	**-0.1**
STEP				S	**Sn**	**05 42 15.4**	**+0.6**
ERIK	**Erikli-Kesan**	**1.38**	**13**	PN	**Pb**	**05 42 00.3**	**-0.1**
ERIK	**Erikli-Kesan**	**1.38**	**13**	*e*Pn	**Pb**	**05 42 00.3**	**-0.1**
KRBG	**Karabiga-Canak**	**1.40**	**40**	PN	**Pn**	**05 42 00.4**	**+0.3**
BALB	**Balikesir**	**1.40**	**77**	PN	**Pb**	**05 42 00.9**	**0.0**
BALB	**Balikesir**	**1.40**	**77**	*e*Pn	**Pb**	**05 42 00.9**	**0.0**
ENEZ	**Enez**	**1.41**	**1**	PN	**Pb**	**05 42 01.3**	**+0.4**
ENEZ	**Enez**	**1.41**	**1**	*e*Pn	**Pb**	**05 42 01.3**	**+0.4**
DGB	**¯zmir**	**1.41**	**154**	*i* P	**Pb**	**05 42 01.1**	**+0.1**
DGB				*i* S	**Sg**	**05 42 19.9**	**-0.3**
GONE	**Gonen-Balikesi**	**1.41**	**59**	PN	**Pb**	**05 42 01.1**	**+0.1**
GONE	**Gonen-Balikesi**	**1.41**	**59**	*e*Pn	**Pb**	**05 42 01.1**	**+0.1**
KNL	**Bal¯–kesir**	**1.44**	**49**	*i* P	**Pn**	**05 42 00.8**	**+0.2**
KNL				*i* S	**Sb**	**05 42 20.5**	**+0.6**
KESN	**Edirne-Kesan**	**1.56**	**16**	*i* P	**Pn**	**05 42 03.2**	**+0.6**
KESN				*i* S	**Sn**	**05 42 23.4**	**+0.4**
KESN	**Edirne-Kesan**	**1.56**	**16**	P	**Pn**	**05 42 03.2**	**+0.6**
KESN				S	**Sn**	**05 42 23.4**	**+0.4**
ALN	**Alexandroupoli**	**1.57**	**358**	PN	**Pb**	**05 42 03.6**	**-0.1**
ALN	**Alexandroupoli**	**1.57**	**358**	P	**Pb**	**05 42 03.8**	**+0.1**
ALN	**Alexandroupoli**	**1.57**	**358**	P	**Pn**	**05 42 02.6**	**+0.2**
ALN				S	**Sb**	**05 42 23.9**	**+0.4**
ALN	**Alexandroupoli**	**1.57**	**358**	*e*Pn	**Pb**	**05 42 03.6**	**-0.1**
ALN	**Alexandroupoli**	**1.57**	**358**	P	**Pb**	**05 42 04.0**	**+0.3**
ALN				S	**Sb**	**05 42 23.9**	**+0.4**
RKY	**Sarkoy-Tekirda**	**1.58**	**31**	PN	**Pb**	**05 42 03.6**	**-0.4**
SART	**Tekirdag**	**1.59**	**31**	*i* P	**Pn**	**05 42 02.7**	**-0.1**
SART				*i* S	**Sb**	**05 42 24.1**	**0.0**
SMG	**Samos**	**1.71**	**160**	P	**Pg**	**05 42 08.4**	**+0.7**
SMG	**Samos**	**1.71**	**160**	P	**Pn**	**05 42 05.2**	**+0.7**
SMG				S	**Sb**	**05 42 28.5**	**+0.8**
SMG	**Samos**	**1.71**	**160**	P	**Pn**	**05 42 05.2**	**+0.7**
SMG				S	**Sb**	**05 42 28.5**	**+0.8**
RDO	**Rodhopi**	**1.87**	**347**	PN	**Pb**	**05 42 07.9**	**-0.9**
RDO	**Rodhopi**	**1.87**	**347**	*e*Pn	**Pb**	**05 42 07.9**	**-0.9**
AYDB	**Zeytinkoy-Aydi**	**1.96**	**134**	PN	**Pn**	**05 42 08.9**	**+0.9**
MANT	**Manisa**	**2.08**	**113**	*i* P	**Sn**	**05 42 31.9**	**-3.8**
MANT				*i* S	**Sg**	**05 42 42.5**	**+0.6**
KULA	**Kula-Manisa**	**2.15**	**111**	PN	**Pn**	**05 42 11.8**	**+1.3**
KULA	**Kula-Manisa**	**2.15**	**111**	*e*Pn	**Pn**	**05 42 11.8**	**+1.3**

IDC 11 05:45:26.0±44.0, 16°00S×175°21W, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.6/46, mbtmp4.1/3, Error ellipse: s-maj=832.4km s-min=169.4km az=78.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**42.23**	**240**	P	P	05 53 21.8	+0.7
	0.8nm,0.3s,baz=90,slow=7.1,SNR=4.3						
WRA	**Warramunga Arr**	**48.02**	**257**	P	P	05 54 06.8	-0.5
	0.4nm,0.5s,baz=95,slow=7.5,SNR=16						
ASAR	**Alice Springs**	**48.27**	**252**	P	P	05 54 09.1	-0.3
	5.0nm,0.5s,baz=88,slow=8.1,SNR=70						

MEX 11 05:46:52.6±0.3, 16°29N×98°33W, h15km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.29**	**350**	*e*P	Pn	05 47 12.8	-3.5
TLIG				*e*S	Sb	05 47 27.9	-5.2
VHO	**Vista Hermosa**	**1.72**	**63**	*e*P	Pn	05 47 18.7	-3.5
VHO				*e*S	Sn	05 47 39.4	-4.6
HUIG	**Huatulco**	**2.20**	**103**	*e*P	Pn	05 47 25.4	-3.2
HUIG				*e*S	Sn	05 47 48.9	-6.7

*MDD **11** 06:09:03.1±1.7, 37°29N×12°71W, h0km, mb4.0/8, Error ellipse: s-maj=15.1km s-min=13.8km az=60.0, PRXIMO*
*IGIL **11** 06:09:03.4, 37°32N×12°77W, h2km, ML2.3*
*CSEM **11** 06:09:05.9±0.4, 37°39N×12°48W, h10km, mb4.0, Error ellipse: s-maj=6.8km s-min=5.8km az=58.0*
*INMG **11** 06:09:05.1±1.3, 37°09N×13°05W, h10km, ML2.5, Error ellipse: s-maj=7.6km s-min=5.8km az=111.0*

ISC 11 06:09:01.9±3.3, 37°32N±0°09×12°7W±0°2, h10km, n94, σ1°52/172, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.10**	**92**	*e*Pn	**Pn**	**06 09 51.2**	**+0.2**
PFVI				*e*Sn	**Sn**	**06 10 26.6**	**-1.5**
PFVI				A	A	06 10 37.8	
	8.0nm,0.7s						
PFVI	**Vila Bisbo**	**3.10**	**92**	P	**Pn**	**06 09 51.2**	**+0.2**
	2.0nm,0.1s,SNR=7.9						
PFVI				S	**Sn**	**06 10 27.8**	**-0.3**
	2.8nm,0.2s,SNR=7.9						
PFVI	**Vila Bisbo**	**3.10**	**92**	P	**Pn**	**06 09 51.2**	**+0.2**
	2.0nm,0.1s,SNR=7.9						
PFVI				*e*Sn	**Sn**	**06 10 26.6**	**-1.5**
PFVI				S	**Sn**	**06 10 27.8**	**-0.3**
	2.8nm,0.2s,SNR=7.9						
PMAFR	**Mafra**	**3.16**	**58**	*e*Pn	**Pn**	**06 09 53.4**	**+1.7**
PMAFR				*e*Sn	**Sn**	**06 10 30.5**	**+1.0**
PMAFR				A	A	06 10 32.9	
	25nm,0.2s						
PMAFR	**Mafra**	**3.16**	**58**	P	**Pn**	**06 09 52.6**	**+0.9**
	4.8nm,0.1s,SNR=6.1						
PMAFR				S	**Sn**	**06 10 30.2**	**+0.7**
	24nm,0.2s,SNR=11						
PMAFR	**Mafra**	**3.16**	**58**	P	**Pn**	**06 09 52.7**	**+0.9**
	4.8nm,0.1s,SNR=6.1						
PMAFR	**Mafra**	**3.16**	**58**	*e*Pn	**Pn**	**06 09 53.4**	**+1.7**
PMAFR				S	**Sn**	**06 10 30.2**	**+0.7**
	24nm,0.2s,SNR=11						
PMAFR				*e*Sn	**Sn**	**06 10 30.5**	**+1.0**
PTEO	**Sao Teotonio**	**3.18**	**85**	*e*Pn	**Pn**	**06 09 52.7**	**+0.7**
PTEO				*e*Sn	**Sn**	**06 10 29.4**	**-0.6**
PTEO				A	A	06 10 42.6	
	8.2nm,0.6s						
PTEO	**Sao Teotonio**	**3.18**	**85**	P	**Pn**	**06 09 52.7**	**+0.7**
PTEO				S	**Sn**	**06 10 29.4**	**-0.6**
	4.1nm,0.6s						
PTEO	**Sao Teotonio**	**3.18**	**85**	P	**Pn**	**06 09 52.7**	**+0.7**
PTEO				S	**Sn**	**06 10 29.4**	**-0.6**
	4.1nm,0.6s						
MORF	**Marmelete**	**3.24**	**89**	*e*P	**Pn**	**06 09 53.4**	**+0.6**
MORF	**Marmelete**	**3.24**	**89**	*e*Pn	**Pn**	**06 09 53.5**	**+0.6**
MORF	**Marmelete**	**3.24**	**89**	P	**Pn**	**06 09 53.4**	**+0.6**
MORF	**Marmelete**	**3.24**	**89**	*e*Pn	**Pn**	**06 09 53.5**	**+0.6**
PNCL	**Nicolau / Gran**	**3.41**	**75**	*e*Pn	**Pn**	**06 09 57.3**	**+2.2**
PNCL				*e*Sn	**Sn**	**06 10 35.3**	**-0.3**
PNCL				A	A	06 10 42.0	
	4.5nm,0.4s						
PNCL	**Nicolau / Gran**	**3.41**	**75**	*e*Pn	**Pn**	**06 09 57.3**	**+2.2**
PNCL				*e*Sn	**Sn**	**06 10 35.3**	**-0.3**
MESJ	**Messejana**	**3.60**	**80**	*e*P	**Pn**	**06 09 59.2**	**+1.4**
MESJ				*e*S	**Sn**	**06 10 39.5**	**-0.9**
MESJ				AML	AML	06 10 42.6	
	comp=N,2.7nm,0.3s						
MESJ	**Messejana**	**3.60**	**80**	*e*Pn	**Pn**	**06 09 59.9**	**+2.1**
MESJ				*e*Sn	**Sn**	**06 10 40.2**	**-0.2**
MESJ				A	A	06 10 47.2	
	comp=N,3.7nm,0.4s						
MESJ	**Messejana**	**3.60**	**80**	P	**Pn**	**06 09 59.2**	**+1.4**
MESJ				S	**Sn**	**06 10 39.5**	**-0.9**
	comp=N,2.7nm,0.3s						
MESJ	**Messejana**	**3.60**	**80**	P	**Pn**	**06 09 59.2**	**+1.4**
MESJ	**Messejana**	**3.60**	**80**	*e*Pn	**Pn**	**06 09 59.9**	**+2.1**
MESJ				S	**Sn**	**06 10 39.5**	**-0.9**
	comp=N,2.7nm,0.3s						
MESJ				*e*Sn	Sb	06 10 40.2	-9.3
PCVE	**Castro Verde**	**3.73**	**84**	*e*Pn	**Pn**	**06 10 01.3**	**+1.8**
PCVE				*e*Sn	**Sn**	**06 10 43.3**	**-0.2**
PCVE				A	A	06 10 50.1	
	comp=N,2.9nm,0.2s						
PCVE	**Castro Verde**	**3.73**	**84**	P	**Pn**	**06 10 01.3**	**+1.8**
PCVE				S	**Sn**	**06 10 43.3**	**-0.2**
	comp=N,2.9nm,0.2s						
PCVE	**Castro Verde**	**3.73**	**84**	P	**Pn**	**06 10 01.3**	**+1.8**
PCVE				S	**Sn**	**06 10 43.3**	**-0.2**
	comp=N,2.9nm,0.2s						
ALMR	**Almeirim**	**3.74**	**59**	*e*P	**Pn**	**06 10 01.3**	**+1.7**
ALMR				*e*S	**Sn**	**06 10 42.7**	**-1.0**
ALMR				AML	AML	06 10 45.9	
	comp=N,19nm,0.6s						
ALMR	**Almeirim**	**3.74**	**59**	*e*Pn	**Pn**	**06 10 01.6**	**+2.0**
ALMR				*e*Sn	**Sn**	**06 10 43.9**	**+0.2**
ALMR				A	A	06 10 51.2	
	comp=N,20nm,0.5s						
ALMR	**Almeirim**	**3.74**	**59**	P	**Pn**	**06 10 01.3**	**+1.7**
ALMR				S	**Sn**	**06 10 42.7**	**-1.0**
	comp=N,9.7nm,0.6s						
ALMR	**Almeirim**	**3.74**	**59**	P	**Pn**	**06 10 01.3**	**+1.7**
ALMR	**Almeirim**	**3.74**	**59**	*e*Pn	**Pn**	**06 10 01.6**	**+2.0**
ALMR				S	**Sn**	**06 10 42.7**	**-1.0**
	comp=N,9.7nm,0.6s						
ALMR				*e*Sn	Sb	06 10 43.9	-9.4
PBDV	**Barranco-do-Ve**	**3.81**	**90**	*e*Pn	**Pn**	**06 10 02.3**	**+1.6**
PBDV				*e*Sn	**Sn**	**06 10 46.3**	**+0.7**
PBDV				A	A	06 10 51.1	
	comp=N,3.2nm,0.5s						
PBDV	**Barranco-do-Ve**	**3.81**	**90**	P	**Pn**	**06 10 02.3**	**+1.6**
PBDV				S	**Sn**	**06 10 46.3**	**+0.7**
	comp=N,3.2nm,0.5s						
PBDV	**Barranco-do-Ve**	**3.81**	**90**	P	**Pn**	**06 10 02.3**	**+1.6**
PBDV				S	**Sn**	**06 10 46.3**	**+0.7**
	comp=N,3.2nm,0.5s						
EVO	**Evora**	**3.91**	**70**	*e*Pn	**Pn**	**06 10 04.0**	**+2.0**
EVO				*e*Sn	**Sn**	**06 10 48.2**	**+0.3**
EVO				A	A	06 10 52.4	
	comp=N,6.1nm,0.1s						
EVO	**Evora**	**3.91**	**70**	P	**Pn**	**06 10 04.0**	**+2.0**
EVO				S	**Sn**	**06 10 48.2**	**+0.3**
	comp=N,6.1nm,0.1s						
EVO	**Evora**	**3.91**	**70**	P	**Pn**	**06 10 04.0**	**+2.0**
EVO				S	**Sn**	**06 10 48.2**	**+0.3**
	comp=N,6.1nm,0.1s						
PBEJ	**Beja**	**3.91**	**78**	*e*Pn	**Pn**	**06 10 03.8**	**+1.8**
PBEJ	**Beja**	**3.91**	**78**	P	**Pn**	**06 10 03.8**	**+1.8**
PBEJ	**Beja**	**3.91**	**78**	P	**Pn**	**06 10 03.8**	**+1.8**
PMTG	**Montargil**	**3.94**	**62**	*e*Pn	**Pn**	**06 10 04.3**	**+1.8**
PMTG				*e*Sn	**Sn**	**06 10 48.5**	**-0.3**
PMTG				A	A	06 10 52.7	
	comp=N,3.0nm,0.2s						
PMTG	**Montargil**	**3.94**	**62**	*e*Pn	**Pn**	**06 10 04.3**	**+1.8**
PMTG				*e*Sn	**Sn**	**06 10 48.5**	**-0.3**
PVAQ	**Vaqueiros**	**3.98**	**87**	*e*Pn	**Pn**	**06 10 04.5**	**+1.5**
PVAQ				*e*Sn	**Sn**	**06 10 48.4**	**-1.3**
PVAQ				A	A	06 10 54.4	
	comp=N,6.6nm,0.3s						
PVAQ	**Vaqueiros**	**3.98**	**87**	P	**Pn**	**06 10 04.5**	**+1.5**
PVAQ				S	**Sn**	**06 10 48.4**	**-1.3**
	comp=N,6.6nm,0.3s						
PVAQ	**Vaqueiros**	**3.98**	**87**	P	**Pn**	**06 10 04.5**	**+1.5**
PVAQ				S	**Sn**	**06 10 48.4**	**-1.3**
	comp=N,6.6nm,0.3s						
PTOM	**Tomar**	**4.08**	**54**	*e*Pn	**Pn**	**06 10 06.8**	**+2.4**
PTOM				*e*Sn	**Sn**	**06 10 52.6**	**+0.4**
PTOM				A	A	06 10 58.6	
	comp=N,11nm,0.2s						
PTOM	**Tomar**	**4.08**	**54**	P	**Pn**	**06 10 06.8**	**+2.4**
PTOM				S	**Sn**	**06 10 52.6**	**+0.4**
	comp=N,5.4nm,0.2s						
PTOM	**Tomar**	**4.08**	**54**	P	**Pn**	**06 10 06.8**	**+2.4**
PTOM				S	**Sn**	**06 10 52.6**	**+0.4**
	comp=N,5.4nm,0.2s						
EGRO	**El Granado**	**4.17**	**85**	P	**Pn**	**06 10 06.7**	**+1.2**
	comp=N,1.6nm,0.1s,SNR=34						
EGRO				S	**Sn**	**06 10 53.6**	**-0.7**
	comp=N,0.7nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**4.17**	**85**	P	**Pn**	**06 10 06.7**	**+1.2**
	comp=N,1.6nm,0.1s,SNR=34						
EGRO				S	**Sn**	**06 10 53.6**	**-0.7**
	comp=N,0.7nm,0.1s,SNR=7.9						
PCAS	**Casmilo, Conde**	**4.28**	**49**	*e*Pn	**Pn**	**06 10 09.8**	**+2.7**
PCAS				*e*Sn	**Sn**	**06 10 57.6**	**+0.4**
PCAS				A	A	06 11 05.9	
	comp=N,4.4nm,0.5s						
PCAS	**Casmilo, Conde**	**4.28**	**49**	*e*Pn	**Pn**	**06 10 09.8**	**+2.7**
PCAS				*e*Sn	**Sn**	**06 10 57.6**	**+0.4**
PESTR	**Estremoz**	**4.33**	**67**	*e*Pn	**Pn**	**06 10 09.4**	**+1.6**
PESTR				*e*Sn	**Sn**	**06 10 58.5**	**+0.2**
PESTR				A	A	06 11 03.9	
	comp=N,3.5nm,0.6s						
PESTR	**Estremoz**	**4.33**	**67**	*e*Pn	**Pn**	**06 10 09.4**	**+1.6**
PESTR				*e*Sn	**Sn**	**06 10 58.5**	**+0.2**
PBAR	**Barrancos**	**4.58**	**77**	*e*Pn	**Pn**	**06 10 12.9**	**+1.7**
PBAR				*e*Sn	**Sn**	**06 11 04.5**	**+0.1**
PBAR				A	A	06 11 07.6	
	comp=N,3.5nm,0.6s						
PBAR	**Barrancos**	**4.58**	**77**	P	**Pn**	**06 10 12.9**	**+1.7**
PBAR				S	**Sn**	**06 11 04.5**	**+0.1**
	comp=N,3.5nm,0.6s						
PBAR	**Barrancos**	**4.58**	**77**	P	**Pn**	**06 10 12.9**	**+1.7**
PBAR				S	**Sn**	**06 11 04.5**	**+0.1**
	comp=N,3.5nm,0.6s						
PMRV	**Marv??o**	**4.68**	**62**	*e*Pn	**Pn**	**06 10 14.4**	**+1.7**
PMRV				*e*Sn	**Sn**	**06 11 06.1**	**-0.9**
PMRV				A	A	06 11 11.1	
	comp=N,5.1nm,0.3s						
PMRV	**Marv??o**	**4.68**	**62**	P	**Pn**	**06 10 14.4**	**+1.7**
PMRV				S	**Sn**	**06 11 06.1**	**-0.9**
	comp=N,5.1nm,0.3s						
PMRV	**Marv??o**	**4.68**	**62**	P	**Pn**	**06 10 14.4**	**+1.7**
PMRV				S	**Sn**	**06 11 06.1**	**-0.9**
	comp=N,5.1nm,0.3s						
EBAD	**Badajoz**	**4.72**	**71**	P	**Pn**	**06 10 14.6**	**+1.4**
	comp=N,1.0nm,0.1s,SNR=7.7						
EBAD				S	**Sn**	**06 11 06.3**	**-1.7**
	comp=N,2.3nm,0.1s,SNR=4.9						
EBAD	**Badajoz**	**4.72**	**71**	P	**Pn**	**06 10 14.6**	**+1.4**
	comp=N,1.0nm,0.1s,SNR=7.7						
EBAD				S	**Sn**	**06 11 06.3**	**-1.7**
	comp=N,2.3nm,0.1s,SNR=4.9						
PCBR	**Castelo Branco**	**4.81**	**57**	*e*Pn	**Pn**	**06 10 16.8**	**+2.4**
PCBR				*e*Sn	**Sn**	**06 11 09.0**	**-1.2**
PCBR				A	A	06 11 13.9	
	comp=N,3.1nm,0.3s						
PCBR	**Castelo Branco**	**4.81**	**57**	P	**Pn**	**06 10 16.8**	**+2.4**
PCBR				S	**Sn**	**06 11 09.0**	**-1.2**
	comp=N,1.6nm,0.3s						
PCBR	**Castelo Branco**	**4.81**	**57**	P	**Pn**	**06 10 16.8**	**+2.4**
PCBR				S	**Sn**	**06 11 09.0**	**-1.2**
	comp=N,1.6nm,0.3s						
EMIN	**Mina Concepcio**	**4.82**	**83**	P	**Pn**	**06 10 15.2**	**+0.7**
	comp=N,0.8nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**06 11 09.1**	**-1.3**
	comp=N,0.6nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.82**	**83**	P	**Pn**	**06 10 15.2**	**+0.7**
	comp=N,0.8nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**06 11 09.1**	**-1.3**
	comp=N,0.6nm,0.1s,SNR=7.9						
PVIS	**Viseu**	**5.06**	**46**	*e*Pn	**Pn**	**06 10 19.5**	**+1.6**
PVIS				*e*Sn	**Sn**	**06 11 15.2**	**-1.2**
PVIS				A	A	06 11 17.9	
	comp=N,4.0nm,0.3s						
PVIS	**Viseu**	**5.06**	**46**	P	**Pn**	**06 10 19.5**	**+1.6**
PVIS				S	**Sn**	**06 11 15.2**	**-1.2**
	comp=N,2.0nm,0.3s						
PVIS	**Viseu**	**5.06**	**46**	P	**Pn**	**06 10 19.5**	**+1.6**
PVIS				S	**Sn**	**06 11 15.2**	**-1.2**
	comp=N,2.0nm,0.3s						
MTE	**Manteigas**	**5.07**	**51**	*e*Sn	**Sn**	**06 11 16.8**	**0.0**
MTE				A	A	06 11 23.0	
	comp=N,4.4nm,0.6s						
MTE	**Manteigas**	**5.07**	**51**	S	**Sn**	**06 11 16.8**	**0.0**
	comp=N,2.2nm,0.6s						
MTE	**Manteigas**	**5.07**	**51**	S	**Sn**	**06 11 16.8**	**0.0**
	comp=N,2.2nm,0.6s						
POLO	**Lamas de Olo**	**5.56**	**42**	*e*Pn	**Pn**	**06 10 26.4**	**+1.6**
POLO				*e*Sn	**Sn**	**06 11 27.3**	**-1.5**
POLO				A	A	06 11 28.8	
	comp=N,1.2nm,0.6s						
POLO	**Lamas de Olo**	**5.56**	**42**	*e*Pn	**Pn**	**06 10 26.4**	**+1.6**
POLO				*e*Sn	**Sn**	**06 11 27.3**	**-1.5**
PCAB	**Cabril**	**5.69**	**38**	*e*Sn	**Sn**	**06 11 31.1**	**-0.8**
PCAB	**Cabril**	**5.69**	**38**	Sn	**Sn**	**06 11 31.1**	**-0.8**
PCAB	**Cabril**	**5.69**	**38**	Sn	**Sn**	**06 11 31.1**	**-0.8**
PGAV	**Gavieira, Arco**	**5.77**	**35**	*e*Pn	**Pn**	**06 10 30.1**	**+2.4**
PGAV				*e*Sn	**Sn**	**06 11 32.3**	**-1.7**
PGAV				A	A	06 11 35.1	
	comp=N,3.5nm,0.9s						
PGAV	**Gavieira, Arco**	**5.77**	**35**	*e*Pn	**Pn**	**06 10 30.1**	**+2.4**
PGAV				*e*Sn	**Sn**	**06 11 32.3**	**-1.7**
ELOB	**Lobios**	**5.79**	**37**	P	**Pn**	**06 10 29.3**	**+1.3**
	comp=N,0.7nm,0.3s,SNR=7.9						
ELOB				S	**Sn**	**06 11 31.8**	**-2.7**
	comp=N,1.4nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.79**	**37**	P	**Pn**	**06 10 29.3**	**+1.3**
	comp=N,0.7nm,0.3s,SNR=7.9						
ELOB				S	**Sn**	**06 11 31.8**	**-2.7**
	comp=N,1.4nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**5.83**	**80**	P	**Pn**	**06 10 29.0**	**+0.6**
	comp=N,1.0nm,0.2s,SNR=9.2						
ECAB				S	**Sn**	**06 11 33.2**	**-2.2**
	comp=N,0.4nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**5.83**	**80**	P	**Pn**	**06 10 29.0**	**+0.6**
	comp=N,1.0nm,0.2s,SNR=9.2						
ECAB				S	**Sn**	**06 11 33.2**	**-2.2**
	comp=N,0.4nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**5.85**	**47**	*e*Pn	**Pn**	**06 10 30.4**	**+1.7**
MVO				*e*Sn	**Sn**	**06 11 34.2**	**-1.7**
MVO				A	A	06 11 46.3	
	comp=N,3.7nm,0.4s						
MVO	**Moncorvo**	**5.85**	**47**	P	**Pn**	**06 10 28.7**	**0.0**
	comp=N,1.4nm,0.3s,SNR=7.9						
MVO				S	**Sn**	**06 11 32.4**	**-3.5**
	comp=N,2.1nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**5.85**	**47**	P	**Pn**	**06 10 28.7**	**0.0**
	comp=N,1.4nm,0.3s,SNR=7.9						
MVO	**Moncorvo**	**5.85**	**47**	*e*Pn	**Pn**	**06 10 30.4**	**+1.7**
MVO				*e*Sn	**Sn**	**06 11 34.2**	**-1.7**
EPLA	**Plasencia**	**5.87**	**60**	P	**Pn**	**06 10 29.7**	**+0.7**
	comp=N,1.1nm,0.2s,SNR=7.9						
EPLA				S	**Sn**	**06 11 34.1**	**-2.2**
	comp=N,2.1nm,0.1s,SNR=6.2						
EPLA	**Plasencia**	**5.87**	**60**	P	**Pn**	**06 10 29.7**	**+0.7**
	comp=N,1.1nm,0.2s,SNR=7.9						
EPLA				S	**Sn**	**06 11 34.1**	**-2.2**
	comp=N,2.1nm,0.1s,SNR=6.2						
EADA	**Adamuz**	**6.50**	**80**	P	**Pn**	**06 10 38.8**	**+1.1**
	comp=N,1.4nm,0.2s,SNR=7.9						
EADA				S	**Sn**	**06 11 49.4**	**-2.5**
	comp=N,0.4nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**6.50**	**80**	P	**Pn**	**06 10 38.8**	**+1.1**
	comp=N,1.4nm,0.2s,SNR=7.9						
EADA				S	**Sn**	**06 11 49.4**	**-2.5**
	comp=N,0.4nm,0.1s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.53**	**31**	P	**Pn**	**06 10 38.1**	**+0.1**
	comp=N,0.5nm,0.1s,SNR=7.9						
EAGO				S	**Sn**	**06 11 47.3**	**-5.2**
	comp=N,0.1nm,0.1s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.53**	**31**	P	**Pn**	**06 10 38.1**	**+0.1**
	comp=N,0.5nm,0.1s,SNR=7.9						
PAB

0.6nm,0.3s,baz=192,slow=22,SNR=3.8
AAK Ala-Archa 7.50 34 ⇓Pn Pn 06 22 15.4 -1.4
0.7nm,0.3s
AAK ⇑Sn Sn 06 23 42.0 -0.6
2.4nm,0.6s

NNC 11 06:24:11.2±3.2, 36.46N×70.80E, h199km±57km, mb2.6, mpv3.6, 5C-3D, Error ellipse: s-maj=39.6km s-min=30.7km az=77.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**4.14**	**30**	⇓P	Pn	06 25 14.6	-0.2
	9.3nm,0.3s						
SFK				⇑S	Sn	06 26 06.0	+1.1
	5.9nm,0.3s						
MNAS	**Manas**	**6.16**	**12**	⇑P	Pn	06 25 39.9	-0.7
	1.4nm,0.5s						
MNAS				⇓S	Sn	06 26 51.5	+0.1
	1.8nm,0.3s						
KK31	**Karatay Array**	**6.64**	**358**	⇑P	Pn	06 25 46.3	-0.3
	1.3nm,0.3s,baz=178,slow=12,SNR=36						
KK31				⇓S	Sn	06 27 00.4	-1.9
	0.5nm,0.3s,baz=175,slow=19,SNR=3.7						
AAK	**Ala-Archa**	**6.80**	**24**	⇑P	Pn	06 25 49.0	+0.1
	2.4nm,0.4s						
AAK				S	Sn	06 27 07.6	+1.3
	1.7nm,0.5s						
AB31	**Akbulak array**	**15.04**	**332**	⇑P	P	06 27 35.8	+1.5
	0.8nm,0.5s,baz=155,slow=12,SNR=12						

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*ISCJB **11** 06:36:10.6±1.2, 8.8S±0.1×67.65E±0.07, h13km, mb3.7/4, Error ellipse: s-maj=16.8km s-min=9.1km az=163.2*
*IDC **11** 06:36:11.3±1.8, 8.85S×67.69E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.4/67, mbtmp3.7/4, Error ellipse: s-maj=61.1km s-min=35.2km az=54.0*
ISC 11 06:36:13.4±1.2, 8.8S±0.2×67.7E±0.1, h13km, n16, σ0°82/19, mb3.8/4, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08N3	**Diego Garcia H**	**4.08**	**54**	Pn	**Pn**	**06 37 14.4**	**-0.7**
H08N3				Sn	**Sn**	**06 38 02.8**	**+0.1**
H08N2	**Diego Garcia H**	**4.09**	**54**	Pn	**Pn**	**06 37 14.7**	**-0.7**
H08N2				Sn	**Sn**	**06 38 03.3**	**+0.2**
H08N1	**Diego Garcia H**	**4.10**	**54**	Pn	**Pn**	**06 37 14.7**	**-0.7**
H08N1				Sn	**Sn**	**06 38 03.0**	**-0.1**
H08S1	**Diego Garcia H**	**4.89**	**77**	Pn	**Pn**	**06 37 26.3**	**-0.1**
H08S1				Sn	**Sn**	**06 38 23.4**	**+0.7**
H08S1				T	T	06 42 41.7	
	baz=247						
H08S3	**Diego Garcia H**	**4.90**	**77**	Pn	**Pn**	**06 37 26.5**	**-0.1**
H08S3				Sn	**Sn**	**06 38 22.7**	**-0.4**
H08S3				T	T	06 42 43.7	
	baz=247						
H08S2	**Diego Garcia H**	**4.91**	**77**	Pn	**Pn**	**06 37 26.6**	**-0.1**
H08S2				Sn	**Sn**	**06 38 22.7**	**-0.4**
H08S2				T	T	06 42 45.9	
	baz=247						
CMAR	**Chiang Mai Arr**	**41.03**	**49**	P	**P**	**06 43 58.9**	**+2.1**
	0.8nm,0.3s,baz=233,slow=8.9,SNR=3.6						
H01W3	**Cape Leeuwin H**	**49.78**	**129**	T	T	07 38 38.6	
	baz=290,slow=75,SNR=30						
H01W2	**Cape Leeuwin H**	**49.78**	**129**	T	T	07 38 38.7	
	baz=290,slow=75,SNR=44						
H01W1	**Cape Leeuwin H**	**49.79**	**129**	T	T	07 38 39.7	
	baz=290,slow=75,SNR=39						
MKAR	**Makanchi Array**	**56.82**	**12**	P	**P**	**06 45 56.5**	**-0.9**
	0.4nm,0.7s,baz=203,slow=8.9,SNR=4.3						
KURBB	**Kurchatov Arra**	**59.88**	**8**	P	**P**	**06 46 18.1**	**-0.7**
	0.4nm,0.7s,baz=208,slow=7.3,SNR=3.5						
ASAR	**Alice Springs**	**64.82**	**112**	P	**P**	**06 46 51.4**	**-1.2**
	0.5nm,0.6s,baz=277,slow=5.9,SNR=8.1						
PDAR	**Pinedale Array**	**146.03**	**356**	PKPbc	**PKPab**	**06 55 54.0**	**-0.2**
	0.1nm,0.4s,baz=323,slow=1.4,SNR=2.0						
NVAR	**Mina Array Bea**	**149.97**	**9**	PKPbc	**PKPbc**	**06 56 05.2**	**+0.9**
	0.7nm,0.7s,baz=338,slow=2.1,SNR=5.8						
TXAR	**Lajitas Array**	**157.97**	**339**	PKPab	**PKPab**	**06 56 44.1**	**+0.4**
	0.1nm,0.4s,baz=46,slow=2.6,SNR=3.9						

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*DDA **11** 06:58:50.0, 36.48N×28.94E, h35km, MI3.3*
*CSEM **11** 06:58:50.8±0.1, 36.45N×28.94E, h20km, ML3.3, Error ellipse: s-maj=3.8km s-min=2.4km az=4.0*
*THE **11** 06:58:50.2, 36.43N×28.89E, h0km, ML3.0/6, Error ellipse: s-maj=0.8km s-min=0.5km az=170.0*
*ISK **11** 06:58:50.0, 36.44N×28.93E, h23km, ML3.5/22*
*ISCJB **11** 06:58:51.1±0.3, 36.44N±0.03×28.94E±0.02, h30km±3km, Error ellipse: s-maj=4.7km s-min=3.1km az=4.1*
ISC 11 06:58:50.8±0.9, 36.44N±0.02×28.94E±0.02, h24km±7km, n112, σ0°93/143, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.23**	**31**	PG	**Pb**	**06 58 56.0**	**-0.8**
FETY				SG	**Sb**	**06 59 01.2**	**+0.4**
FETY	**Fethiye**	**0.23**	**31**	P	**Pb**	**06 58 55.9**	**-0.8**
FETY				S	**Sb**	**06 59 01.2**	**+0.4**
FETY	**Fethiye**	**0.23**	**31**	P	**Pb**	**06 58 56.0**	**-0.8**
FETY				S	**Sb**	**06 59 01.2**	**+0.4**
DALY	**Dalyan (Mu¨la**	**0.44**	**328**	PG	**Pb**	**06 58 59.9**	**-0.1**
DALY				SG	**Sb**	**06 59 06.6**	**+0.3**
DALY	**Dalyan (Mu¨la**	**0.44**	**328**	*i* P	**Pb**	**06 58 59.7**	**-0.3**
DALY	**Dalyan (Mu¨la**	**0.44**	**328**	*e*Pg	**Pb**	**06 58 59.9**	**-0.1**
DALY				*e*Sg	**Sb**	**06 59 06.6**	**+0.3**
TURN	**Turunc**	**0.51**	**328**	PG	**Pn**	**06 59 03.4**	**+0.8**
TURN	**Turunc**	**0.51**	**328**	*i* P	**Pn**	**06 59 03.3**	**+0.7**
TURN				*i* S	**Sn**	**06 59 12.4**	**+1.8**
TURN	**Turunc**	**0.51**	**328**	P	**Pn**	**06 59 03.3**	**+0.7**
AKAS	**Kas**	**0.57**	**111**	PG	**Pb**	**06 59 02.1**	**-0.3**
AKAS				SG	**Sn**	**06 59 12.4**	**0.0**
AKAS	**Kas**	**0.57**	**111**	*i* P	**Pb**	**06 59 02.0**	**-0.3**
AKAS				*i* S	**Sn**	**06 59 12.1**	**-0.3**
AKAS	**Kas**	**0.57**	**111**	*e*Pg	**Pb**	**06 59 02.1**	**-0.3**
AKAS				S	**Sn**	**06 59 12.1**	**-0.3**
KSL	**Kastellorizon**	**0.59**	**119**	P	**Pn**	**06 59 03.2**	**-0.5**
KSL				S	**Sn**	**06 59 13.0**	**+0.4**
MRSB	**Marmaris-Mugla**	**0.66**	**295**	PG	**Pb**	**06 59 03.5**	**-0.2**
MRSB	**Marmaris-Mugla**	**0.66**	**295**	*e*Pg	**Pb**	**06 59 03.5**	**-0.2**
ARG	**Arkhangelos**	**0.70**	**251**	PG	**Pn**	**06 59 04.4**	**-0.7**
ARG	**Arkhangelos**	**0.70**	**251**	P	**Pb**	**06 59 04.0**	**-0.3**
ARG				S	**Sn**	**06 59 14.5**	**-0.6**
ARG	**Arkhangelos**	**0.70**	**251**	P	**Pb**	**06 59 04.0**	**-0.3**
ARG	**Arkhangelos**	**0.70**	**251**	*e*Pg	**Pn**	**06 59 04.4**	**-0.7**
ARG				S	**Sn**	**06 59 14.5**	**-0.6**
ELL	**Elmali**	**0.84**	**68**	PG	**Pn**	**06 59 07.0**	**-0.2**
ELL	**Elmali**	**0.84**	**68**	*e*Pg	**Pn**	**06 59 07.0**	**-0.2**
GLHS	**Glhisar (BURDU**	**0.84**	**32**	PG	**Pn**	**06 59 06.6**	**-0.7**
GLHS	**Glhisar (BURDU**	**0.84**	**32**	*e*Pg	**Pn**	**06 59 06.6**	**-0.7**
YER	**Yerkesik**	**0.87**	**323**	PG	**Pn**	**06 59 07.4**	**-0.2**
YER	**Yerkesik**	**0.87**	**323**	P	**Pn**	**06 59 07.1**	**-0.5**
YER				S	**Sn**	**06 59 20.5**	**+0.9**
YER	**Yerkesik**	**0.87**	**323**	P	**Pn**	**06 59 07.1**	**-0.5**
YER	**Yerkesik**	**0.87**	**323**	*e*Pg	**Pn**	**06 59 07.4**	**-0.2**
YER				S	**Sn**	**06 59 20.5**	**+0.9**
GOLH	**Golhisar**	**0.94**	**32**	*i* P	**Pb**	**06 59 07.3**	**-1.1**
GOLH				*i* S	**Sn**	**06 59 22.7**	**+1.4**
GOLH	**Golhisar**	**0.94**	**32**	P	**Pb**	**06 59 07.3**	**-1.1**
GOLH				S	**Sn**	**06 59 22.7**	**+1.4**
TAVA	**DENIZLI_Tavas**	**1.02**	**359**	*i* P	**Pb**	**06 59 09.7**	**-0.2**
TAVA				*i* S	**Sn**	**06 59 23.4**	**0.0**
TAVA	**DENIZLI_Tavas**	**1.02**	**359**	P	**Pb**	**06 59 09.7**	**-0.2**
TAVA				S	**Sn**	**06 59 23.4**	**0.0**
DATC	**Datca-Mugla**	**1.08**	**287**	PG	**Pb**	**06 59 10.2**	**-0.6**
DATC	**Datca-Mugla**	**1.08**	**287**	*e*Pg	**Pb**	**06 59 10.2**	**-0.6**
DAT	**Datca**	**1.13**	**285**	PN	**Pb**	**06 59 11.3**	**-0.5**
DAT	**Datca**	**1.13**	**285**	*i* P	**Pb**	**06 59 11.4**	**-0.4**
DAT	**Datca**	**1.13**	**285**	P	**Pb**	**06 59 11.4**	**-0.4**
KORT	**Korkueli**	**1.26**	**63**	PN	**Pb**	**06 59 13.1**	**-1.0**
KORT	**Korkueli**	**1.26**	**63**	*i* P	**Pb**	**06 59 13.0**	**-1.0**
KORT				*i* S	**Sb**	**06 59 33.5**	**+3.6**
KORT	**Korkueli**	**1.26**	**63**	*e*Pn	**Pb**	**06 59 13.1**	**-1.0**
MLSB	**Milas**	**1.27**	**313**	PN	**Pb**	**06 59 13.7**	**-0.3**
MLSB	**Milas**	**1.27**	**313**	*e*Pn	**Pb**	**06 59 13.7**	**-0.3**
DENT	**Denizli**	**1.31**	**3**	PN	**Pb**	**06 59 13.8**	**-1.0**
DENT	**Denizli**	**1.31**	**3**	*e*Pn	**Pb**	**06 59 13.8**	**-1.0**
BDRM	**Kayabasi**	**1.35**	**298**	*i* P	**Pb**	**06 59 14.5**	**-1.0**
BDRM	**Kayabasi**	**1.35**	**298**	P	**Pb**	**06 59 14.5**	**-1.0**
BODT	**Bodrum**	**1.45**	**296**	PN	**Pn**	**06 59 14.5**	**-1.0**
BODT	**Bodrum**	**1.45**	**296**	P	**Pn**	**06 59 14.6**	**-1.0**
BODT				S	**Sb**	**06 59 35.5**	**+0.4**
BODT	**Bodrum**	**1.45**	**296**	P	**Pn**	**06 59 14.6**	**-1.0**
BODT				S	**Sb**	**06 59 35.5**	**+0.4**
ANTB	**Antalya**	**1.45**	**71**	PN	**Pn**	**06 59 15.6**	**+0.1**
ANTB	**Antalya**	**1.45**	**71**	*e*Pn	**Pn**	**06 59 15.6**	**+0.1**
NISR	**Nisiros**	**1.47**	**277**	P	**Pb**	**06 59 16.0**	**-1.5**
NISR				S	**Sb**	**06 59 36.5**	**+0.8**
NISR	**Nisiros**	**1.47**	**277**	P	**Pb**	**06 59 16.0**	**-1.5**
NISR				S	**Sb**	**06 59 36.5**	**+0.8**
AYDN	**Tasoluk**	**1.48**	**325**	*i* P	**Pb**	**06 59 17.5**	**-0.3**
AYDN	**Tasoluk**	**1.48**	**325**	P	**Pb**	**06 59 17.5**	**-0.3**
YKAV	**Yalikavak-Bodr**	**1.50**	**298**	PN	**Pb**	**06 59 16.5**	**-1.4**
YKAV	**Yalikavak-Bodr**	**1.50**	**298**	*e*Pn	**Pb**	**06 59 16.5**	**-1.4**
BRDR	**BURDUR-Merkez**	**1.54**	**35**	*i* P	**Pb**	**06 59 17.9**	**-0.8**
BRDR				*i* S	**Sb**	**06 59 37.4**	**-0.4**
BRDR	**BURDUR-Merkez**	**1.54**	**35**	P	**Pb**	**06 59 17.9**	**-0.8**
BRDR				S	**Sb**	**06 59 37.4**	**-0.4**
BCK	**Bucak**	**1.67**	**52**	PN	**Pn**	**06 59 18.7**	**+0.1**
BCK	**Bucak**	**1.67**	**52**	*e*Pn	**Pn**	**06 59 18.7**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**1.72**	**331**	PN	**Pn**	**06 59 19.6**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**1.72**	**331**	*e*Pn	**Pn**	**06 59 19.6**	**+0.2**
ISP	**Isparta**	**1.87**	**42**	PN	**Pn**	**06 59 21.9**	**+0.5**
ISP	**Isparta**	**1.87**	**42**	*e*Pn	**Pn**	**06 59 21.9**	**+0.5**
SUTC	**Sutluce-Ispart**	**1.95**	**57**	PN	**Pn**	**06 59 22.9**	**+0.4**
SUTC	**Sutluce-Ispart**	**1.95**	**57**	*e*Pn	**Pn**	**06 59 22.9**	**+0.4**
KHAL	**Karahalli**	**1.98**	**13**	*i* P	**Pn**	**06 59 21.9**	**-1.0**
KHAL	**Karahalli**	**1.98**	**13**	P	**Pn**	**06 59 21.9**	**-1.0**
MANT	**Manisa**	**2.07**	**352**	*i* P	**Pn**	**06 59 21.0**	**-3.2**
KULA	**Kula-Manisa**	**2.08**	**354**	PN	**Pn**	**06 59 24.6**	**+0.3**
KULA	**Kula-Manisa**	**2.08**	**354**	*e*Pn	**Pn**	**06 59 24.6**	**+0.3**
SMG	**Samos**	**2.10**	**308**	P	**Pn**	**06 59 24.7**	**+0.1**
SMG				S	**Sb**	**06 59 51.9**	**-2.1**
SMG	**Samos**	**2.10**	**308**	P	**Pn**	**06 59 24.7**	**+0.1**
SMG				S	**Sb**	**06 59 51.9**	**-2.1**
KEPZ	**Antalya-Kepez**	**2.19**	**77**	*i* P	**Pb**	**06 59 27.5**	**-2.3**
KEPZ	**Antalya-Kepez**	**2.19**	**77**	P	**Pb**	**06 59 27.5**	**-2.3**
DGB	**¨zmir**	**2.30**	**315**	*i* P	**Pn**	**06 59 26.9**	**-0.3**
BLCB	**Balcova**	**2.46**	**323**	PN	**Pn**	**06 59 29.5**	**+0.1**
BLCB	**Balcova**	**2.46**	**323**	*e*Pn	**Pn**	**06 59 29.5**	**+0.1**
ZKR	**Zakros**	**2.58**	**240**	P	**Pn**	**06 59 31.8**	**+0.7**
ZKR				S	**Sn**	**07 00 03.6**	**+1.9**
ZKR	**Zakros**	**2.58**	**240**	P	**Pn**	**06 59 31.8**	**+0.7**
ZKR				S	**Sn**	**07 00 03.6**	**+1.9**
AKHS	**Akhisar**	**2.59**	**340**	*i* P	**Pn**	**06 59 29.8**	**-1.5**
AKHS	**Akhisar**	**2.59**	**340**	P	**Pn**	**06 59 29.8**	**-1.5**
DEMI	**Demirci**	**2.60**	**356**	*i* P	**Pn**	**06 59 30.4**	**-1.1**
DEMI	**Demirci**	**2.60**	**356**	P	**Pn**	**06 59 30.4**	**-1.1**
ZEY	**¨zmir**	**2.65**	**313**	*i* P	**Pn**	**06 59 31.9**	**0.0**
URLA	**Izmir**	**2.67**	**316**	PN	**Pn**	**06 59 32.2**	**-0.2**
URLA	**Izmir**	**2.67**	**316**	*i* P	**Pn**	**06 59 32.4**	**0.0**
URLA	**Izmir**	**2.67**	**316**	P	**Pn**	**06 59 32.4**	**0.0**
GAZI	**Gazipasa**	**2.73**	**93**	*i* P	**Pn**	**06 59 32.3**	**-0.9**
GAZI	**Gazipasa**	**2.73**	**93**	P	**Pn**	**06 59 32.3**	**-0.9**
APE	**Apeiranthos**	**2.81**	**284**	PN	**Pn**	**06 59 34.5**	**+0.2**
APE	**Apeiranthos**	**2.81**	**284**	*e*Pn	**Pn**	**06 59 34.5**	**+0.2**
NPS	**Neapolis**	**2.95**	**247**	P	**Pn**	**06 59 35.6**	**-0.6**
NPS	**Neapolis**	**2.95**	**247**	P	**Pn**	**06 59 35.6**	**-0.6**
CHOS	**Chios island**	**3.01**	**311**	PN	**Pn**	**06 59 37.9**	**+0.9**
CHOS	**Chios island**	**3.01**	**311**	P	**Pn**	**06 59 37.3**	**+0.3**
CHOS				S	**Sn**	**07 00 13.5**	**+1.1**
CHOS	**Chios island**	**3.01**	**311**	P	**Pn**	**06 59 37.3**	**+0.3**
CHOS	**Chios island**	**3.01**	**311**	*e*Pn	**Pn**	**06 59 37.9**	**+0.9**
CHOS				S	**Sn**	**07 00 13.5**	**+1.1**
LAST	**Lasithi**	**3.09**	**247**	P	**Pn**	**06 59 38.1**	**-0.1**
LAST	**Lasithi**	**3.09**	**247**	P	**Pn**	**06 59 38.1**	**-0.1**
KONT	**Konya--Tatoy**	**3.12**	**60**	PN	**Pn**	**06 59 39.4**	**+0.9**
KONT	**Konya--Tatoy**	**3.12**	**60**	*e*Pn	**Pn**	**06 59 39.4**	**+0.9**
KDHN	**Kadinhani**	**3.27**	**50**	*i* P	**Pn**	**06 59 41.0**	**+0.3**
KDHN	**Kadinhani**	**3.27**	**50**	P	**Pn**	**06 59 41.0**	**+0.3**
KIZT	**Kizilcal**	**3.37**	**43**	PN	**Pn**	**06 59 42.8**	**+0.7**
KIZT	**Kizilcal**	**3.37**	**43**	*e*Pn	**Pn**	**06 59 42.8**	**+0.7**
TEKE	**Tekeli-Mersin**	**3.38**	**94**	PN	**Pn**	**06 59 43.4**	**+1.3**
TEKE	**Tekeli-Mersin**	**3.38**	**94**	*e*Pn	**Pn**	**06 59 43.4**	**+1.3**
BERE	**Bereket-Mersin**	**3.46**	**90**	PN	**Pn**	**06 59 44.3**	**+1.1**
BERE	**Bereket-Mersin**	**3.46**	**90**	*e*Pn	**Pn**	**06 59 44.3**	**+1.1**
TEVE	**Tevekalti-Mers**	**3.63**	**89**	PN	**Pn**	**06 59 46.0**	**+0.4**
TEVE	**Tevekalti-Mers**	**3.63**	**89**	*e*Pn	**Pn**	**06 59 46.0**	**+0.4**

MEX 11 07:31:11.2±0.3, 14.73N×93.26W, h46km±85km, MD3.6, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.97**	**2**	*e*P	Pn	07 31 26.9	-1.6
PCIG				*i* S	Sn	07 31 39.1	-2.1
THIG		**0.98**	**79**	*e*P	Pn	07 31 26.8	-1.8
THIG				*e*S	Sn	07 31 39.4	-2.0

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*ISCJB **11** 07:33:48.0±0.8, 38.05N±0.04×42.67E±0.06, h6km±6km, Error ellipse: s-maj=8.2km s-min=6.4km az=10.3*
*ISK **11** 07:33:47.2, 38.05N×42.67E, h6km, ML2.6/6*
*CSEM **11** 07:33:48.3±0.4, 38.04N×42.67E, h8km, ML2.7, Error ellipse: s-maj=8.2km s-min=5.8km az=139.0*
*DDA **11** 07:33:49.2, 38.22N×42.55E, h7km, Ml2.7*
ISC 11 07:33:48.1±1.2, 38.04N±0.03×42.69E±0.04, h6km±11km, n25, σ0°64/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEVA	**Gevas**	**0.40**	**47**	*i* P	**Pb**	**07 33 57.2**	**-0.4**
GEVA	**Gevas**	**0.40**	**47**	P	**Pb**	**07 33 57.2**	**-0.4**
SIRT	**Sirnak**	**0.57**	**200**	PG	**Pg**	**07 33 58.9**	**-0.2**
SIRT				SG	**Sg**	**07 34 07.4**	**+0.8**
SIRT	**Sirnak**	**0.57**	**200**	*e*Pg	**Pg**	**07 33 58.9**	**-0.2**
SRTM	**Siirt_Merkez**	**0.60**	**265**	*i* P	**Pg**	**07 34 00.1**	**+0.4**
SRTM				*i* S	**Sg**	**07 34 07.6**	**0.0**
SRTM	**Siirt_Merkez**	**0.60**	**265**	P	**Pg**	**07 34 00.1**	**+0.4**
SRTM				S	**Sg**	**07 34 07.6**	**0.0**
GURO	**Guroymak-BITLI**	**0.72**	**315**	PG	**Pg**	**07 34 01.2**	**-0.8**
GURO				SG	**Sg**	**07 34 11.5**	**+0.1**
GURO	**Guroymak-BITLI**	**0.72**	**315**	*e*Pg	**Pg**	**07 34 01.2**	**-0.8**
GURO				*e*Sg	**Sg**	**07 34 11.5**	**+0.1**
ADCV	**BITLIS_Adilcev**	**0.77**	**2**	*i* P	**Pg**	**07 34 03.3**	**+0.5**
ADCV	**BITLIS_Adilcev**	**0.77**	**2**	P	**Pg**	**07 34 03.3**	**+0.5**
BTMN	**Batman**	**1.13**	**263**	*i* P	**Pb**	**07 34 10.1**	**+0.1**
BTMN				*i* S	**Sb**	**07 34 25.0**	**+0.1**
BTMN	**Batman**	**1.13**	**263**	P	**Pb**	**07 34 10.1**	**+0.1**
BTMN				S	**Sb**	**07 34 25.0**	**+0.1**
SVAN	**Silvan-Diyarba**	**1.18**	**276**	PN	**Pg**	**07 34 10.0**	**-0.7**
SVAN	**Silvan-Diyarba**	**1.18**	**276**	*i* P	**Pn**	**07 34 12.7**	**+1.6**
SVAN	**Silvan-Diyarba**	**1.18**	**276**	*e*Pn	**Pg**	**07 34 10.0**	**-0.7**
SVAN	**Silvan-Diyarba**	**1.18**	**276**	P	**Pn**	**07 34 12.7**	**+1.6**
MARD	**Mardin**	**1.68**	**245**	*i* P	**Pn**	**07 34 16.8**	**-1.2**
HANI	**Diyarbakir_Han**	**1.84**	**282**	*i* P	**Pn**	**07 34 19.4**	**-0.8**
HANI				*i* S	**Sn**	**07 34 44.0**	**+0.2**
HANI	**Diyarbakir_Han**	**1.84**	**282**	P	**Pn**	**07 34 19.4**	**-0.8**
HANI				S	**Sn**	**07 34 44.0**	**+0.2**
MAZI	**Mazidag**	**1.87**	**253**	PN	**Pn**	**07 34 20.4**	**-0.2**
MAZI	**Mazidag**	**1.87**	**253**	*e*Pn	**Pn**	**07 34 20.4**	**-0.2**
SVRC	**Sivrice-ELAZID**	**2.68**	**278**	PN	**Pn**	**07 34 32.0**	**+0.1**
SVRC	**Sivrice-ELAZID**	**2.68**	**278**	*e*Pn	**Pn**	**07 34 32.0**	**+0.1**
PTK	**Pertek**	**2.72**	**289**	PN	**Pn**	**07 34 32.4**	**0.0**
PTK	**Pertek**	**2.72**	**289**	*e*Pn	**Pn**	**07 34 32.4**	**0.0**

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*IDC **11** 07:35:55.5±1.0, 56.03S×26.48W, h0km, mb3.9/4, mb1 3.9/5, mb1mx3.8/30, mbtmp3.8/5, ML3.1/1, Error ellipse: s-maj=45.3km s-min=22.7km az=82.0*
*ISCJB **11** 07:35:59.0±1.0, 56.15S±0.1×26.3W±0.5, h35km, mb3.9/4, Error ellipse: s-maj=39.8km s-min=17.8km az=162.7*
ISC 11 07:36:00.8±1.1, 56.15S±0.2×26.5W±0.3, h35km, n12, σ0°40/6, mb4.0/4, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**18.57**	**157**	P	**P**	**07 40 14.1**	**-0.2**
	0.1nm,0.3s,baz=318,slow=14,SNR=1.9						
QSPA	**South Pole Qui**	**34.19**	**180**	P	**P**	**07 42 42.7**	**+0.2**
	1.5nm,0.6s,baz=164,slow=3.4,SNR=5.4						
VNDA	**Vanda**	**46.58**	**182**	P	**P**	**07 44 24.5**	**+0.1**
	0.7nm,0.8s,baz=169,slow=6.5,SNR=6.3						
H10S2	**ASCENSION HYDR**	**47.90**	**16**	T	T	08 36 04.6	
	baz=189,slow=75,SNR=13						
H10S3	**ASCENSION HYDR**	**47.90**	**16**	T	T	08 36 03.1	
	baz=189,slow=75,SNR=7.8						
H10S1	**ASCENSION HYDR**	**47.91**	**16**	T	T	08 36 05.6	
	baz=189,slow=75,SNR=8.3						
H10N1	**ASCENSION HYDR**	**49.02**	**16**	T	T	08 37 28.8	
	baz=195						
H10N3	**ASCENSION HYDR**	**49.02**	**16**	T	T	08 37 32.9	
	baz=195,slow=74						
H10N2	**ASCENSION HYDR**	**49.03**	**16**	T	T	08 37 28.4	
	baz=195,slow=74						
LPAZ	**La Paz**	**50.71**	**304**	P	**P**	**07 44 57.6**	**+0.1**
	1.0nm,0.6s,baz=154,slow=5.2,SNR=6.1						
TORD	**Torodi Ar. Bea**	**72.87**	**29**	P	**P**	**07 47 26.1**	**+0.2**
	1.0nm,0.5s,baz=200,slow=5.8,SNR=11						
ILAR	**Eielson Array**	**150.42**	**312**	PKPbc	**PKPbc**	**07 55 46.3**	**-0.6**
	0.7nm,0.7s,baz=138,slow=2.6,SNR=9.2						

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*NEIC **11** 07:44:11.1±0.0, 16.40N×98.37W, h16km, MD4.0(MEX), After MEX.*
MEX 11 07:44:11.1±0.9, 16.40N×98.37W, h16km±27km, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.18**	**351**	*i* P	Pn	07 44 29.2	-3.8
TLIG				*e*S	Sb	07 44 43.1	-5.1
TLIG	**Tlapa**	**1.18**	**351**	*i* P	Pn	07 44 29.2	-3.8
TLIG				*e*S	Sb	07 44 43.1	-5.1
ACX	**Acapulco**	**1.51**	**288**	*e*P	Pn	07 44 34.1	-3.4
ACX				*e*S	Sn	07 44 52.6	-4.2
ACX	**Acapulco**	**1.51**	**288**	*e*P	Pn	07 44 34.1	-3.4
ACX				*e*S	Sn	07 44 52.6	-4.2
VHO	**Vista Hermosa**	**1.70**	**66**	*e*P	Pn	07 44 36.7	-3.6
VHO				*e*S	Sn	07 44 57.1	-4.8
VHO	**Vista Hermosa**	**1.70**	**66**	*e*P	Pn	07 44 36.7	-3.6
VHO				*e*S	Sn	07 44 57.1	-4.8
CAIG	**El Cayaco**	**1.94**	**290**	*e*P	Pn	07 44 40.3	-3.0
CAIG	**El Cayaco**	**1.94**	**290**	*e*P	Pn	07 44 40.3	-3.0
MEIG	**Mezcala**	**1.94**	**322**	*e*P	Pn	07 44 41.0	-2.4
MEIG				*e*S	Sn	07 45 02.8	-4.7
MEIG	**Mezcala**	**1.94**	**322**	*e*P	Pn	07 44 41.0	-2.4
MEIG				*e*S	Sn	07 45 02.8	-4.7
HUIG	**Huatulco**	**2.26**	**106**	*e*P	Pn	07 44 43.6	-4.2
HUIG				*e*S	Sn	07 45 14.8	-0.5
HUIG	**Huatulco**	**2.26**	**106**	*e*P	Pn	07 44 43.6	-4.2
HUIG				*e*S	Sn	07 45 14.8	-0.5

MEX 11 08:06:18.4±0.8, 16.64N×98.48W, h20km±40km, MD4.1, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**0.92**	**355**	*e*P	Pb	08 06 33.1	-2.7
TLIG				*e*S	Sb	08 06 43.6	-4.0
VHO	**Vista Hermosa**	**1.73**	**75**	*e*P	Pn	08 06 42.8	-4.7
VHO				*e*S	Sn	08 07 05.8	-3.3
HUIG	**Huatulco**	**2.44**	**110**	*i* P	Pn	08 06 54.1	-3.0
HUIG				*i* S	Sn	08 07 22.8	-3.5

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*BJI **11** 08:20:31.5, 17.05N×146.83E, h98km, mb4.8/14, mB4.9/4*
*ISCJB **11** 08:20:35.9±0.2, 17.40N±0.03×146.06E±0.05, h100km, mb4.5/140, Error ellipse: s-maj=6.6km s-min=4.4km az=17.5*
*NEIC **11** 08:20:36.8±0.9, 17.38N×146.14E, h95km±8km, mb4.6/120, Error ellipse: s-maj=5.6km s-min=4.0km az=94.0*
*IDC **11** 08:20:36.2±1.8, 17.43N×146.03E, h92km±17km,

ASAR ScP **ScP** **08 33 55.8 +0.2**
0.7nm,0.8s,baz=18,slow=2.1,SNR=4.9
SONA0 Songino Array 44.54 322 *e*P **P** **08 28 38.8 -0.3**
SONM Songino Array 44.54 322 P **P** **08 28 38.8 -0.3**
0.6nm,0.5s,baz=123,slow=10,SNR=3.0
CMAR Chiang Mai Arr 44.94 279 P **P** **08 28 43.2 +0.7**
1.4nm,0.3s,baz=71,slow=8.5,SNR=5.4
SEY Seymchan 45.75 4 P **P** **08 28 48.5 +0.2**
2.0nm,0.6s,baz=196,slow=12,SNR=11
PSI Prapat 48.63 258 LR LR 08 50 44.2
comp=Z,77nm,18.6s,baz=271,slow=37
STKA Stephens Creek 49.13 185 P **P** **08 29 14.2 -0.6**
1.4nm,0.5s,baz=3.5,slow=7.9,SNR=6.4
STKA Stephens Creek 49.13 185 *e*P **P** **08 29 14.3 -0.5**
1.7nm,1.1s
GSI Gunungsitoli 50.42 257 *e*P **P** **08 29 24.0 -0.9**
17nm,0.7s
BBOO Buckleboo 50.80 191 *e*P **P** **08 29 26.8 -0.6**
44nm,1.5s
AFI Afiamalu 51.76 124 LR LR 08 46 51.9
comp=Z,24nm,21.9s,baz=274,slow=30
BILL Bilibino 52.27 9 *e*P **P** **08 29 37.7 -0.2**
11nm,1.0s
WMQ Urumqi 55.60 312 P **P** **08 30 05.7 +3.0**
ZALV Zalesovo Beam 59.42 323 P **P** **08 30 27.3 -1.8**
0.4nm,0.3s,baz=100,slow=6.3,SNR=2.5
ZAA1 Zalesovo Array 59.42 323 *e*P **P** **08 30 27.3 -1.9**
SVW2 Sparrevohn 59.76 29 *e*P **P** **08 30 32.0 +0.6**
4.6nm,0.8s
MK01 Makanchi Array 59.78 314 *e*P **P** **08 30 30.2 -1.7**
MK31 Makanchi Array 59.79 314 *e*P **P** **08 30 31.8 -0.1**
MK32 Makanchi Array 59.79 314 *e*P **P** **08 30 31.0 -0.9**
MKAR Makanchi Array 59.79 314 P **P** **08 30 31.0 -0.9**
0.4nm,0.5s,baz=87,slow=7.6,SNR=5.3
MKAR Makanchi Array 59.79 314 *e*P **P** **08 30 31.9 0.0**
4.4nm,0.6s
KDAK Kodiak Island 60.21 33 P **P** **08 30 33.7 -0.8**
3.7nm,0.7s,baz=225,slow=1.4,SNR=2.9
KDAK Kodiak Island 60.21 33 *e*P **P** **08 30 34.0 -0.5**
34nm,1.4s
RSO Redoubt South 60.88 30 *e*P **P** **08 30 39.7 +0.4**
CNPM China Poot 61.35 31 *e*P **P** **08 30 42.1 -0.2**
24nm,1.1s
BRLK Bradley Lake 61.58 31 *e*P **P** **08 30 43.5 -0.3**
14nm,1.0s
PPLA Purkeypile 61.86 27 *e*P **P** **08 30 46.2 +0.4**
8.3nm,1.0s
SKT Skwentna 61.88 28 *e*P **P** **08 30 45.4 -0.4**
5.7nm,0.9s
SUA Susitna One 62.10 29 *e*P **P** **08 30 47.9 +0.5**
12nm,1.3s
IM3 Indian Mountai 62.25 24 *e*P **P** **08 30 48.6 +0.5**
SEW Seward 62.37 31 *e*P **P** **08 30 49.2 +0.2**
30nm,1.3s
RC01 Rabbit Creek A 62.47 30 *e*P **P** **08 30 49.8 0.0**
44nm,1.5s
KTH Kantishna Hill 62.61 27 *e*P **P** **08 30 51.4 +0.7**
14nm,0.9s
KURK Kurchatov 62.64 319 *e*P **P** **08 30 50.4 -0.5**
4.5nm,1.3s
KURBB Kurchatov Arra 62.69 318 P **P** **08 30 48.9 -2.4**
2.3nm,0.9s,baz=97,slow=7.3,SNR=11
BPAW Bear Paw Mtn. 62.74 26 *e*P **P** **08 30 51.7 +0.2**
11nm,0.9s
TRF Thorofare Moun 62.85 27 *e*P **P** **08 30 52.2 -0.2**
11nm,0.9s
PMR Palmer 62.88 29 *e*P **P** **08 30 52.1 -0.2**
SML Sawmill 63.30 29 *e*P **P** **08 30 55.1 -0.1**
24nm,0.9s
RND Reindeer 63.46 27 *e*P **P** **08 30 55.6 -0.7**
6.8nm,0.8s
SCM Sheep Creek Mo 63.77 29 *e*P **P** **08 30 59.1 +0.7**
22nm,0.9s
DHY Denali Highway 64.03 28 *e*P **P** **08 31 01.3 +1.1**
3.7nm,0.9s
WRH Wood River Hil 64.06 26 *e*P **P** **08 30 59.7 -0.4**
7.2nm,1.1s
MDM Murphy Dome 64.12 25 *e*P **P** **08 31 01.3 +0.7**
6.1nm,0.8s
CCB Clear Creek Bu 64.22 26 *e*P **P** **08 31 00.6 -0.5**
7.2nm,1.4s
KLU Klutina 64.36 30 *e*P **P** **08 31 03.0 +0.8**
6.9nm,0.8s
IL1 Eielson Array 64.63 26 *e*P **P** **08 31 02.8 -1.0**
ILAR Eielson Array 64.63 26 P **P** **08 31 02.5 -1.4**
3.3nm,0.8s,baz=257,slow=5.0,SNR=41
ILB Eielson Array 64.63 26 *e*P **P** **08 31 02.9 -1.0**
TOLK Toolik Lake Re 64.66 21 *e*P **P** **08 31 04.8 +0.8**
8.1nm,1.3s
PAX Paxson 64.86 28 *e*P **P** **08 31 05.2 -0.2**
5.3nm,0.6s
RIDG Independ'e Rid 65.28 27 *e*P **P** **08 31 07.9 -0.3**
9.7nm,1.0s
CRQM Cirque 65.56 31 *e*P **P** **08 31 10.7 +0.5**
18nm,1.0s
DOT Dot Lake 65.61 27 *e*P **P** **08 31 10.4 +0.2**
20nm,0.8s
SCRK Sand Creek 65.70 27 *e*P **P** **08 31 10.5 -0.4**
6.3nm,1.0s
DAWY Dawson 67.72 27 *e*P **P** **08 31 24.7 +1.0**
3.6nm,0.8s
BVAR Borovoye Array 67.86 321 P **P** **08 31 22.5 -2.2**
0.9nm,0.5s,baz=98,slow=8.9,SNR=6.8
SKAG Skagway 69.36 32 *e*P **P** **08 31 35.6 +1.8**
9.9nm,1.2s
INK Inuvik 70.42 23 P **P** **08 31 39.6 -0.5**
2.9nm,0.8s,baz=250,slow=5.1,SNR=4.4
PPT Papeete 72.05 116 LR LR 08 59 30.2
comp=Z,37nm,20.5s,baz=350,slow=32
DLBC Dease Lake 72.13 33 *e*P **P** **08 31 52.1 +1.3**
4.1nm,0.8s
NLWA Neilton Lookou 77.37 44 *e*P **P** **08 32 22.7 +1.5**
10nm,1.3s
PGC Sidney 77.39 43 *e*P **P** **08 32 22.2 +1.0**
4.7nm,0.9s
YKA Yellowknife Ar 78.94 28 P **P** **08 32 29.3 -0.2**
1.8nm,0.8s,baz=290,slow=5.5,SNR=7.2
HUMO Hull Mountain 79.05 49 *e*P **P** **08 32 33.2 +2.6**
9.9nm,1.4s
YBH Yreka Blue Hor 79.43 50 P **P** **08 32 34.3 +1.5**
3.0nm,0.7s,baz=327,slow=3.4,SNR=8.8
YBH LR LR 09 04 51.5
comp=Z,16nm,18.2s,baz=339,slow=33
YBH Yreka Blue Hor 79.43 50 *e*P **P** **08 32 34.1 +1.3**
3.6nm,0.8s
LTY Liberty 79.52 44 *e*P **P** **08 32 34.2 +1.1**
5.0nm,0.9s
B08A Colville Reser 80.12 42 *e*P **P** **08 32 37.2 +0.9**
7.6nm,1.0s
PINE Pine Mountain 80.19 47 *e*P **P** **08 32 38.0 +1.1**
16nm,0.8s
K05A Summer Lake 80.49 48 *e*P **P** **08 32 39.3 +0.7**
10nm,0.8s
RES Resolute Bay 80.62 14 P **P** **08 32 38.6 +0.2**
1.8nm,0.8s,baz=347,slow=8.7,SNR=5.6
RES Resolute Bay 80.62 14 *e*P **P** **08 32 38.6 +0.2**
5.0nm,1.1s
ORV Oroville 80.86 51 *e*P **P** **08 32 40.9 +0.5**
5.3nm,1.0s
MOD Modoc Plateau 81.13 49 *e*P **P** **08 32 42.4 +0.4**
4.4nm,0.8s
AFDM Forest Hills D 81.41 52 *e*P **P** **08 32 44.7 +1.3**
4.4nm,1.0s
BEKR Beckworth 81.62 51 *e*P **P** **08 32 45.6 +0.9**
8.2nm,0.8s
SLD San Luis Dam 81.71 54 *e*P **P** **08 32 45.3 +0.3**
CMB Columbia Colle 82.10 53 *e*P **P** **08 32 48.2 +1.2**
4.9nm,0.8s
WVOR Wild Horse Val 82.18 48 *e*P **P** **08 32 47.5 +0.1**
VCNR Virginia City 82.31 51 *e*P **P** **08 32 48.7 +0.5**
3.8nm,0.8s
PAHR Pah Rah Range 82.39 51 *e*P **P** **08 32 49.2 +0.6**
6.6nm,1.1s
PNTR Pine Nut 82.40 52 *e*P **P** **08 32 49.9 +1.1**
8.5nm,0.8s
BMO Blue Mountains 82.42 45 *e*P **P** **08 32 49.3 +0.7**
3.7nm,0.9s
WAKR Walker 82.69 52 *e*P **P** **08 32 51.0 +0.7**
3.5nm,0.7s
YERR Yerington 82.70 52 *e*P **P** **08 32 49.7 -0.6**
5.6nm,0.8s
RYN Ryan 83.34 52 *e*P **P** **08 32 54.2 +0.7**
5.2nm,0.8s
KVN Kaiserville 83.53 51 *e*P **P** **08 32 55.1 +0.6**
5.4nm,0.8s
NV01 Mina Array Sit 83.56 52 *e*P **P** **08 32 55.7 +1.0**
NVAR Mina Array Bea 83.56 52 P **P** **08 32 55.9 +1.1**
5.7nm,0.7s,baz=261,slow=6.3,SNR=62
NV11 Mina Array Sit 83.67 52 *e*P **P** **08 32 56.3 +1.1**
0.3nm,0.8s
ARA0 ARCESS Array S 83.95 342 *e*P **P** **08 32 54.3 -1.5**
ARCES ARCESS Array B 83.95 342 P **P** **08 32 54.3 -1.5**
1.5nm,0.9s,baz=71,slow=6.8,SNR=2.8
TJR Tejon Ranch 84.21 55 *e*P **P** **08 32 59.9 +2.0**
SBI Santa Barbara 84.44 57 *e*P **P** **08 32 59.6 +0.7**
DAC Darwin (Calif) 84.74 54 *e*P **P** **08 32 59.8 -0.9**
4.0nm,1.2s
HLID Hailey 84.79 46 *e*P **P** **08 33 01.8 +1.0**
2.1nm,0.9s
LRM Limekiln Ridge 85.36 43 *e*P **P** **08 33 04.6 +0.8**
DLMT Dillon 85.42 44 *e*P **P** **08 33 04.3 +0.4**
6.3nm,1.4s
MCMT McKenzie Canyo 85.44 45 *e*P **P** **08 33 04.2 0.0**
TPNV Topopah Spring 85.56 53 *e*P **P** **08 33 06.2 +1.4**
3.7nm,0.8s
R11A Troy Canyon, C 85.62 51 *e*P **P** **08 33 06.4 +1.3**
2.3nm,1.0s
BOZ Bozeman (W) 85.98 43 *e*P **P** **08 33 06.6 -0.1**
2.2nm,0.8s
PFO Pinyon Flats O 86.44 56 *e*P **P** **08 33 09.4 +0.2**
3.5nm,1.0s
HVU Hansel Valley 86.53 47 *e*P **P** **08 33 10.1 +0.6**
5.2nm,1.0s
SHPR Sheep Range 86.53 53 *e*P **P** **08 33 09.8 +0.2**
2.7nm,0.9s
YHB Horse Butte 86.57 44 *e*P **P** **08 33 09.7 0.0**
6.3nm,0.9s
BORC Borrego Spring 86.58 56 *e*P **P** **08 33 08.6 -1.1**
YMR Madison River 86.75 44 *e*P **P** **08 33 10.9 +0.3**
6.5nm,0.8s
PSUT Pine Spring 86.84 51 *e*P **P** **08 33 12.0 +0.9**
5.6nm,1.0s
DUG Dugway, Tooele 87.04 49 *e*P **P** **08 33 11.7 -0.3**
3.3nm,0.6s
IMW Indian Meadow 87.05 45 *e*P **P** **08 33 13.1 +1.0**
3.6nm,0.8s
FXWY Fox Creek 87.08 45 *e*P **P** **08 33 13.2 +1.0**
3.8nm,1.1s
H17A Grant Village 87.11 44 *e*P **P** **08 33 14.2 +1.9**
7.6nm,1.3s
TPAW Teton Pass 87.18 45 *e*P **P** **08 33 13.1 +0.4**
3.0nm,1.0s
MOOW Moose Ponds 87.23 45 *e*P **P** **08 33 13.5 +0.6**
4.6nm,1.1s
HWUT Hardware Ranch 87.44 47 *e*P **P** **08 33 14.9 +1.0**
5.0nm,0.8s
CCUT Cedar City 87.54 51 *e*P **P** **08 33 14.8 +0.3**
5.0nm,1.1s
TCUT Toone Canyon 87.72 48 *e*P **P** **08 33 15.0 -0.3**
5.8nm,0.8s
SZCU Shurtz Canyon 87.73 51 *e*P **P** **08 33 16.4 +1.0**
2.5nm,0.9s
LCMT Little Creek M 87.81 52 *e*P **P** **08 33 17.0 +1.2**
2.6nm,0.9s
JLU Jordanelle 87.87 48 *e*P **P** **08 33 16.4 +0.3**
5.6nm,0.9s
W13A Hualapai Mount 87.97 54 *e*P **P** **08 33 17.2 +0.6**
2.4nm,0.8s
MSU Marysvale 88.09 50 *e*P **P** **08 33 18.1 +1.0**
KNB Kanab 88.13 52 *e*P **P** **08 33 18.3 +1.0**
5.8nm,0.9s
MTPU Mount Pierson 88.25 51 *e*P **P** **08 33 18.3 +0.3**
2.9nm,1.1s
FIA0 FINESS Array S 88.34 335 *e*P **P** **08 33 17.3 -0.2**
FINES FINESS Array B 88.34 335 P **P** **08 33 17.3 -0.2**
0.7nm,0.6s,baz=202,slow=35,SNR=2.6
PD31 Pinedale Array 88.40 46 *e*P **P** **08 33 18.5 0.0**
PDAR Pinedale Array 88.40 46 P **P** **08 33 18.7 +0.2**
0.6nm,0.7s,baz=264,slow=1.5,SNR=6.3
TMUT Trail Mountain 88.52 49 *e*P **P** **08 33 19.6 +0.3**
2.7nm,0.8s
U15A North Rim 88.73 52 *e*P **P** **08 33 21.4 +1.1**
3.2nm,0.8s
Y14A Wickenburg 89.05 55 *e*P **P** **08 33 22.2 +0.7**
4.7nm,0.8s
SRU San Rafael Swe 89.08 49 *e*P **P** **08 33 22.1 +0.4**
3.6nm,0.8s
P18A Preston Nutter 89.09 49 *e*P **P** **08 33 22.2 +0.3**
2.6nm,0.9s
WUAZ Wupatki 89.75 53 *e*P **P** **08 33 25.1 +0.2**
3.6nm,0.9s
O20A White River Ci 90.32 48 *e*P **P** **08 33 28.4 +0.8**
6.3nm,1.1s
PV23 Carpenter Ridg 90.42 49 *e*P **P** **08 33 28.5 +0.4**
9.9nm,1.0s
PV14 Lion Creek, Pa 90.44 49 *e*P **P** **08 33 28.4 +0.2**
8.7nm,1.0s
PV19 Morning Glory 90.50 50 *e*P **P** **08 33 28.3 -0.1**
5.3nm,0.9s
PV20 West Nyswonger 90.50 49 *e*P **P** **08 33 28.5 +0.1**
6.0nm,0.9s
PV17 East Wray Mesa 90.53 50 *e*P **P** **08 33 28.9 +0.3**
10nm,1.3s
PV16 Nyswonger Mesa 90.54 50 *e*P **P** **08 33 28.8 +0.2**
5.3nm,1.0s
PV18 Skein Mesa, Pa 90.57 50 *e*P **P** **08 33 29.4 +0.6**
4.7nm,0.9s
PV11 David Mesa, Pa 90.58 50 *e*P **P** **08 33 28.6 -0.2**
12nm,1.1s
PV12 Saucer Basin, 90.62 49 *e*P **P** **08 33 29.2 +0.2**
8.0nm,1.2s
PV13 Radium Mtn., P 90.67 50 *e*P **P** **08 33 29.5 +0.3**
5.1nm,1.1s
TUC Tucson 91.37 56 *e*P **P** **08 33 32.6 +0.2**
2.7nm,1.0s
SMCO Snowmass 91.60 48 *e*P **P** **08 33 33.7 -0.1**
4.5nm,0.9s
N23A Red Feather La 91.62 46 *e*P **P** **08 33 34.0 +0.4**
7.6nm,1.0s
S22A 4UR Ranch, Cre 92.28 49 *e*P **P** **08 33 37.1 +0.3**
3.2nm,1.0s
ISCO Idaho Springs 92.30 47 *e*P **P** **08 33 37.7 +0.8**
3.7nm,1.0s
SDCO Great Sand Dun 93.24 49 *e*P **P** **08 33 41.8 +0.6**
1.8nm,1.1s
TORD Torodi Ar. Bea 133.72 309 SKPbc **SKPbc** **08 43 00.0 -3.1**
1.3nm,0.8s,baz=10,slow=2.1,SNR=6.1
KOWA Kowa 136.87 315 SKPbc **SKPbc** **08 43 10.3 -2.7**
1.1nm,0.7s,baz=23,slow=6.9,SNR=3.8
LCO Las Campanas 144.23 116 *e*PKPdf **PKPdf** **08 40 02.0 -0.3**
GO03 Copiap 144.88 113 *e*PKPbc **PKPab** **08 40 02.7 +0.1**
MNMC Minye Minye 145.94 99 *e*PKPdf **PKPbc** **08 40 06.0 -0.3**
LPAZ La Paz 147.09 93 PKP **PKPdf** **08 40 08.0 +0.1**
4.2nm,1.0s,baz=331,slow=4.1,SNR=5.4
LPAZ PKPbc **PKPab** **08 40 11.3 -0.6**
4.2nm,1.0s,baz=324,slow=1.8,SNR=10
LPAZ La Paz 147.09 93 *e*PKPdf **PKPdf** **08 40 06.5 -1.5**
TRQA Tornquist 147.78 136 *e*PKPbc **PKPbc** **08 40 11.2 +0.5**
SAML Samuel 150.18 78 *e*PKPbc **PKPbc** **08 40 17.4 -0.1**
SAML *e*PKPab **PKPab** **08 40 24.0 +0.3**

NIED ***11*** *08:28:00,37°.30N×142°.10E,h20km,Mw3.7 Best double couple: M₀4.15000×10¹⁴ NP1:φs338.00000°,δ22.00000°, λ-91.00000°. NP2:φs159.00000°,δ68.00000°, λ-90.00000°.*
IDC ***11*** *08:28:55.3±1.2,37°.18N×142°.44E,h0km,mb3.5/4, mb1 3.8/7,mb1mx3.5/72,mbtmp3.7/7,ML3.7/3,Error ellipse: s-maj=27.0km s-min=23.3km az=116.0*
ISCJB ***11*** *08:28:58.5±0.8,37°.27N±0°.05×142°.15E±0°.08,h35km, mb3.8/5,Error ellipse: s-maj=9.6km s-min=7.2km az=165.4*
JMA ***11*** *08:28:58.2±0.2,37°.31N×142°.08E,h23km±3km,M3.8*
ISC 11 08:28:59.7±1.1,37°.32N±0°.05×142°.20E±0°.08,h35km,n24, σ2°22/20,mb3.5/5,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.05**	**273**	P	**Pn**	**08 29 16.0**	**-2.0**
JFK				*e*S	**Sn**	**08 29 28.6**	**-2.9**
ONAJ	**Iwakimizuishiy**	**1.14**	**260**	P	**Pn**	**08 29 16.9**	**-2.3**
JMM	**Marumori**	**1.24**	**297**	P	**Pn**	**08 29 19.0**	**-1.6**
JMM				*e*S	**Sn**	**08 29 34.0**	**-2.1**
JIO	**Ouri**	**1.32**	**330**	P	**Pn**	**08 29 20.9**	**-0.7**
JIO				*e*S	**Sn**	**08 29 37.2**	**-0.8**
JFT	**Otama**	**1.50**	**278**	P	**Pn**	**08 29 23.2**	**-0.9**
JOU	**Okura**	**1.60**	**311**	P	**Pn**	**08 29 24.8**	**-0.8**
JMK	**Ichinoseki**	**1.81**	**335**	P	**Pn**	**08 29 28.3**	**0.0**
JFY	**Yanaizu**	**1.99**	**273**	P	**Pn**	**08 29 30.3**	**-0.5**
JYK	**Kaneyama**	**2.16**	**318**	P	**Pn**	**08 29 33.5**	**+0.3**
MJAR	**Matsushiro Arr**	**3.29**	**258**	Pn	**Pn**	**08 29 49.8**	**+1.0**
	8.6nm,0.3s,baz=88,slow=13,SNR=33						
MJAR				Sn	**Sn**	**08 30 31.8**	**+5.2**
	3.5nm,0.3s,baz=122,slow=13,SNR=6.1						
MAT	**Matsushiro**	**3.29**	**258**	P	Pn	08 29 50.7	+2.0
MAT				S	**Sn**	**08 30 30.8**	**+4.2**
JHJ	**Hachijo jima 2**	**4.63**	**206**	Pn	**Pn**	**08 30 07.0**	**-0.1**
	34nm,0.3s,baz=59,slow=23,SNR=12						
JHJ				Sn	**Sn**	**08 30 56.6**	**-3.1**
	38nm,0.3s,baz=265,slow=22,SNR=6.5						
KSRS	**Korea Array**	**11.36**	**275**	Pn	Pn	08 31 43.6	+4.2
	0.2nm,0.3s,baz=93,slow=14,SNR=4.8						
H11N2	**WAKE ISLAND Hy**	**27.76**	**122**	T	T	09 04 13.0	
	baz=314,slow=75,SNR=25						
H11N1	**WAKE ISLAND Hy**	**27.77**	**122**	T	T	09 03 57.3	
	baz=314,slow=75,SNR=18						
H11N3	**WAKE ISLAND Hy**	**27.78**	**122**	T	T	09 04 13.1	
	baz=314,slow=75,SNR=18						
H11S1	**WAKE ISLAND Hy**	**28.49**	**124**	T	T	09 05 12.4	
	baz=316,slow=76,SNR=20						
H11S3	**WAKE ISLAND Hy**	**28.50**	**124**	T	T	09 04 54.4	
	baz=316,slow=76,SNR=22						
H11S2	**WAKE ISLAND Hy**	**28.51**	**124**	T	T	09 04 49.7	
	baz=316,slow=76,SNR=16						
KURBB	**Kurchatov Arra**	**46.32**	**308**	P	P	08 37 24.0	+2.0
	1.6nm,0.6s,baz=82,slow=8.3,SNR=5.7						
ILAR	**Eielson Array**	**48.92**	**32**	P	**P**	**08 37 42.9**	**+1.0**
	0.4nm,0.8s,baz=283,slow=6.4,SNR=6.1						
WRA	**Warramunga Arr**	**57.43**	**189**	P	**P**	**08 38 44.9**	**-0.1**
	0.2nm,0.4s,baz=6.3,slow=7.4,SNR=8.9						
ASAR	**Alice Springs**	**61.16**	**189**	P	**P**	**08 39 10.7**	**0.0**
	0.2nm,0.5s,baz=354,slow=7.6,SNR=3.0						
BRG	**Berggiesshubel**	**81.13**	**330**	*e*(P)	P	08 41 04.4	-6.9
	6.9nm,1.2s						

IDC ***11*** *08:32:48.1±0.9,35°.90N×69°.43E,h0km,mb3.8/12, mb1 3.9/16,mb1mx3.7/69,mbtmp3.9/16,ML4.1/5,MS3.5/2, Ms1 3.5/2,ms1mx2.7/64,Error ellipse: s-maj=18.4km s-min=15.1km az=159.0*
ISCJB ***11*** *08:32:49.2±0.3,36°.17N±0°.03×69°.32E±0°.03,h10km, mb4.0/31,MS4.1/1,Error ellipse: s-maj=4.3km s-min=3.6km az=146.0*
NNC ***11*** *08:32:50.0±2.3,36°.07N×69°.13E,h0km,mb4.5,mpv4.5, Error ellipse: s-maj=20.5km s-min=11.9km az=160.0*
NEIC ***11*** *08:32:51.7±2.9,36°.25N×69°.35E,h13km±19km,mb4.2/14, Error ellipse: s-maj=7.8km s-min=6.6km az=173.0*
NEIC Felt at Charikar, Kabul and Mazar-e Sharif.
MOS ***11*** *08:32:52.8±1.3,36°.26N×69°.41E,h33km,mb4.3/19,Error ellipse: s-maj=8.0km s-min=4.7km az=88.4*
BJI ***11*** *08:32:52.9,35°.78N×69°.99E,h10km,mb4.6/4,mB4.4/1*
ISC 11 08:32:51.0±0.4,36°.19N±0°.04×69°.29E±0°.04,h10km,n135, σ2°30/152,mb4.1/30,17C-12D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**1.66**	**187**	*e*Pn	**Pn**	**08 33 19.8**	**-0.6**
KBL				*e*Sn	**Sn**	**08 33 40.5**	**-1.4**
KBL	**Kabul**	**1.66**	**187**	*e*PN	**Pn**	**08 33 19.8**	**-0.6**
DZET	**Dzherino**	**2.63**	**352**	⇓P	**Pb**	**08 33 36.6**	**-1.8**
	142nm,0.4s						
DZET				⇑S	**Sb**	**08 34 11.0**	**+0.2**
	262nm,0.4s						
DZET	**Dzherino**	**2.63**	**352**	PN	**Pb**	**08 33 36.6**	**-1.8**
DZET				S	**Sb**	**08 34 11.0**	**+0.2**
DZET				pmax	pmax		
	comp=Z,142nm,0.4s						
DZET				smax	smax		
	comp=N,262nm,0.4s						
CEP	**Cherat**	**3.19**	**137**	P	**Pn**	**08 33 44.9**	**+3.5**
CEP				S	**Sb**	**08 34 30.0**	**+3.0**
THW	**Thamme Wali**	**3.95**	**148**	P	**Pn**	**08 33 53.7**	**+2.0**
NIL	**Nilore**	**4.13**	**127**	*e*Pn	**Pn**	**08 33 57.6**	**+3.5**
NIL	**Nilore**	**4.13**	**127**	*e*PN	**Pn**	**08 33 57.6**	**+3.5**
CHCP	**Chirah Chowk**	**4.13**	**127**	P	**Pn**	**08 33 58.3**	**+4.1**
SFK	**Sufi-Kurgan**	**5.06**	**40**	⇑Pn	**Pn**	**08 34 11.0**	**+3.9**
	comp=N,14nm,0.3s						
SFK				⇑Sn	**Sb**	**08 35 13.8**	**-6.9**
	comp=N,20nm,0.3s						
SFK	**Sufi-Kurgan**	**5.06**	**40**	PN	**Pn**	**08 34 11.3**	**+4.2**
SFK				S	**Sb**	**08 35 13.8**	**-6.9**
SFK				pmax	pmax		
	comp=Z,14nm,0.3s						
SFK				smax	smax		
	comp=N,21nm,0.3s						
MNAS	**Manas**	**6.76**	**21**	⇑Pn	**Pn**	**08 34 33.3**	**+2.9**
	comp=N,12nm,0.4s						
MNAS				⇓Sn	**Sn**	**08 35 53.3**	**+5.8**
	comp=N,22nm,0.6s						
MNAS	**Manas**	**6.76**	**21**	PN	**Pn**	**08 34 33.3**	**+2.9**
MNAS				S	**Sn**	**08 35 53.3**	**+5.8**
MNAS				pmax	pmax		
	comp=Z,12nm,0.4s						
MNAS				smax	smax		
	comp=Z,33nm,0.6s						
AML	**Almayashu**	**6.85**	**29**	P	**Pn**	**08 34 34.3**	**+2.5**
	SNR=34						
KK31	**Karatay Array**	**6.97**	**7**	⇓Pn	**Pn**	**08 34 35.6**	**+2.5**
	comp=Z,18nm,0.6s,baz=191,slow=14,SNR=5.4						
KK31				⇓Sn	**Sn**	**08 35 54.2**	**+1.9**
	comp=Z,4.3nm,0.3s,baz=189,slow=25,SNR=2.8						
KK31	**Karatay Array**	**6.97**	**7**	*e*Pn	**Pn**	**08 34 31.6**	**-1.5**
KK31	**Karatay Array**	**6.97**	**7**	*e*PN	**Pn**	**08 34 31.6**	**-1.5**
KKAR	**Karatay Array**	**6.97**	**7**	*e*Pn	**Pn**	**08 34 31.7**	**-1.4**
KKAR	**Karatay Array**	**6.97**	**7**	*e*PN	**Pn**	**08 34 31.7**	**-1.4**
DHRM	**DHARAMSHALA**	**7.01**	**122**	*e*P	**Pn**	**08 34 38.3**	**+4.4**
DHRM				*e*S	**Sn**	**08 35 50.5**	**-3.4**
DHRM				IAML		08 36 32.4	
	comp=E,200nm,0.7s						
UCH	**Uchtor**	**7.26**	**32**	P	**Pn**	**08 34 40.5**	**+2.9**
	SNR=27						
EKS2	**Erkin-Say**	**7.33**	**27**	P	**Pn**	**08 34 41.3**	**+3.0**
	SNR=11						
NRN	**Naryn**	**7.40**	**43**	*e*Pn	**Pn**	**08 34 38.1**	**-1.3**
NRN	**Naryn**	**7.40**	**43**	*e*P	**Pn**	**08 34 38.1**	**-1.3**
KZA	**Kyzart**	**7.48**	**36**	P	**Pn**	**08 34 43.1**	**+2.5**
	SNR=14						
AAK	**Ala-Archa**	**7.59**	**30**	Pn	**Pn**	**08 34 44.5**	**+2.7**
	comp=E,10nm,0.3s,baz=171,slow=3.0,SNR=35						
AAK				Sn	**Sn**	**08 36 11.9**	**+3.9**
	comp=E,3.0nm,0.3s,baz=120,slow=20,SNR=3.9						
AAK				LR	LR	08 38 10.4	
	comp=E,103nm,21.8s,baz=238,slow=41						
AAK	**Ala-Archa**	**7.59**	**30**	⇑Pn	**Pn**	**08 34 44.1**	**+2.3**
	comp=E,11nm,0.3s						
AAK				⇑Sn	**Sn**	**08 36 11.9**	**+3.9**
	comp=E,16nm,0.6s						
AAK	**Ala-Archa**	**7.59**	**30**	P	**Pn**	**08 34 44.7**	**+2.8**
	SNR=23						
AAK	**Ala-Archa**	**7.59**	**30**	*e*Pn	**Pn**	**08 34 41.4**	**-0.4**
AAK				*e*Sn	**Sn**	**08 36 11.9**	**+3.9**
KBK	**Karagaybulak**	**7.80**	**32**	P	**Pn**	**08 34 47.9**	**+3.2**
	SNR=8.3						
CHMS	**Chumysh**	**8.00**	**30**	P	**Pn**	**08 34 49.4**	**+2.1**
	SNR=21						
ULHL	**Ulahol**	**8.10**	**40**	P	**Pn**	**08 34 51.3**	**+2.5**
	SNR=10						
USP	**Ospenovka**	**8.12**	**28**	P	**Pn**	**08 34 51.0**	**+2.0**
	SNR=12						
SMLA	**Simla**	**8.28**	**125**	*e*P	**Pn**	**08 34 50.4**	**-0.7**
SMLA				*e*S	**Sn**	**08 36 23.8**	**-0.9**
SMLA				IAML		08 36 35.8	
	comp=N,49nm,0.6s						
SMLA				IAML		08 36 36.1	
	comp=E,59nm,0.7s						
TKM2	**Tokmak 2**	**8.30**	**34**	⇓Pn	**Pn**	**08 34 53.7**	**+2.2**
	comp=E,11nm,0.5s						
TKM2				⇑Sn	**Sn**	**08 36 31.4**	**+6.0**
	comp=E,4.9nm,0.5s						
TKM2	**Tokmak 2**	**8.30**	**34**	P	**Pn**	**08 34 53.9**	**+2.4**
	SNR=22						
TKM2	**Tokmak 2**	**8.30**	**34**	P	**Pn**	**08 34 53.7**	**+2.2**
TKM2				S	**Sn**	**08 36 31.4**	**+6.0**
TKM2				pmax	pmax		
	comp=Z,11nm,0.5s						
TKM2				smax	smax		
	comp=N,5.0nm,0.5s						
GEYT	**Alibeck**	**9.10**	**284**	Pn	**Pn**	**08 35 02.3**	**-0.1**
	comp=N,7.6nm,0.3s,baz=116,slow=13,SNR=4.3						
GEYT				Sn	**Sn**	**08 36 46.7**	**+1.8**
	comp=N,6.3nm,0.3s,baz=90,slow=26,SNR=2.3						
GYA0B	**ALIBECK ARRAY**	**9.10**	**284**	⇓Pn	**Pn**	**08 35 03.1**	**+0.8**
	comp=N,8.0nm,0.4s						
GYA0B				⇑Sn	**Sn**	**08 36 42.8**	**-2.1**
	comp=N,16nm,0.5s						
GYA0B	**ALIBECK ARRAY**	**9.10**	**284**	*e*Pn	**Pn**	**08 35 02.8**	**+0.4**
GYA0B				*e*Sn	**Sn**	**08 36 47.2**	**+2.4**

PRZ	**Przheval'sk**	**9.45**	**46**	*e*Pn	**Pn**	**08 35 09.0**	**+1.7**
PRZ	**Przheval'sk**	**9.45**	**46**	*e*P	**Pn**	**08 35 09.0**	**+1.7**
PDGK	**Podgornoye**	**10.60**	**45**	P	**Pn**	**08 35 22.9**	**-0.1**
PDGK				pmax	pmax		
	comp=Z,6.0nm,0.5s						
OTUK	**Ortayu**	**12.25**	**10**	P	**Pn**	**08 35 45.4**	**-0.1**
OTUK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MAKZ	**Makanchi**	**14.22**	**38**	*e*Pn	**Pn**	**08 36 11.1**	**-1.3**
MAKZ	**Makanchi**	**14.22**	**38**	*e*P	**Pn**	**08 36 11.1**	**-1.3**
MK01	**Makanchi Array**	**14.36**	**39**	*e*Pn	**Pn**	**08 36 13.4**	**-0.9**
MK31	**Makanchi Array**	**14.37**	**39**	⇓P	**Pn**	**08 36 13.6**	**-0.8**
	comp=Z,1.8nm,0.6s,baz=219,slow=14,SNR=17						
MK31	**Makanchi Array**	**14.37**	**39**	*e*Pn	**Pn**	**08 36 13.3**	**-1.1**
MK31	**Makanchi Array**	**14.37**	**39**	*e*P	**Pn**	**08 36 13.3**	**-1.1**
MK32	**Makanchi Array**	**14.37**	**39**	*e*Pn	**Pn**	**08 36 13.8**	**-0.6**
MKAR	**Makanchi Array**	**14.37**	**39**	Pn	**Pn**	**08 36 13.8**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=222,slow=14,SNR=23						
MKAR	**Makanchi Array**	**14.37**	**39**	*e*Pn	**Pn**	**08 36 13.2**	**-1.2**
MKAR	**Makanchi Array**	**14.37**	**39**	*e*P	**Pn**	**08 36 13.2**	**-1.2**
AB31	**Akbulak array**	**14.73**	**335**	⇓P	**Pn**	**08 36 17.8**	**-1.6**
	comp=Z,2.3nm,0.3s,baz=165,slow=13,SNR=89						
AB31	**Akbulak array**	**14.73**	**335**	P	**Pn**	**08 36 17.8**	**-1.6**
AB31				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ABKAR	**Akbulak array**	**14.73**	**335**	*e*Pn	**Pn**	**08 36 18.2**	**-1.2**
KURBB	**Kurchatov Arra**	**15.89**	**22**	Pn	**Pn**	**08 36 31.9**	**-2.7**
	comp=Z,0.1nm,0.3s,baz=211,slow=12,SNR=7.7						
KURBB	**Kurchatov Arra**	**15.89**	**22**	⇑P	**Pn**	**08 36 32.0**	**-2.6**
	comp=Z,2.6nm,0.7s						
KURK	**Kurchatov**	**16.00**	**22**	*e*Pn	**P**	**08 36 39.1**	**-0.4**
	comp=Z,5.8nm,0.8s						
KURK	**Kurchatov**	**16.00**	**22**	⇑*i*P	**Pn**	**08 36 33.5**	**-2.5**
WMQ	**Urumqi**	**16.01**	**56**	P	**Pn**	**08 36 37.1**	**+0.8**
WMQ				pP	sP	08 36 44.5	+0.6
WMQ				pmax	pmax		
	comp=Z,15nm,0.7s						
AKTO	**Aktyubinsk**	**16.40**	**334**	Pn	**Pn**	**08 36 42.0**	**+0.9**
	comp=Z,1.0nm,0.3s,baz=147,slow=13,SNR=13						
AKTO				Sn	**Sn**	**08 39 34.1**	**-9.0**
	comp=Z,0.3nm,0.3s,baz=0.0,slow=20,SNR=7.2						
AKTO	**Aktyubinsk**	**16.40**	**334**	⇑P	**Pn**	**08 36 42.8**	**+1.6**
	comp=Z,3.1nm,0.5s						
BVA0	**Borovoye Array**	**16.85**	**2**	P	**Pn**	**08 36 45.9**	**-0.9**
	comp=Z,0.1nm,0.4s,baz=176,slow=14,SNR=25						
BVA0	**Borovoye Array**	**16.85**	**2**	P	**Pn**	**08 36 45.9**	**-0.9**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BVAR	**Borovoye Array**	**16.85**	**2**	P	**Pn**	**08 36 46.2**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=170,slow=14,SNR=11						
BRVK	**Borovoye**	**16.88**	**2**	*e*Pn	**Pn**	**08 36 45.8**	**-1.4**
	comp=Z,5.9nm,0.7s						
BRVK	**Borovoye**	**16.88**	**2**	⇑*i*P	**Pn**	**08 36 46.8**	**-0.4**
GNI	**Garni**	**19.68**	**289**	*e*P	**Pn**	**08 37 22.8**	**+1.0**
	comp=Z,6.6nm,0.7s						
GNI	**Garni**	**19.68**	**289**	*e*P	**Pn**	**08 37 22.8**	**+1.0**
GNI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ZAA0	**Zalesovo Array**	**20.79**	**26**	*e*P	**P**	**08 37 31.5**	**-0.6**
	comp=Z,6.3nm,0.6s						
ZALV	**Zalesovo Beam**	**20.79**	**26**	P	**P**	**08 37 31.8**	**-0.2**
	comp=Z,8.5nm,0.5s,baz=216,slow=10,SNR=27						
ZAA1	**Zalesovo Array**	**20.79**	**26**	*e*P	**P**	**08 37 31.8**	**-0.3**
NCK	**Nalchik**	**20.98**	**298**	⇓*e*P	**P**	**08 37 35.5**	**+1.2**
NCK				pmax	pmax		
	comp=Z,16nm,0.3s						
NVS	**Novosibirsk**	**20.98**	**23**	*e*P	**P**	**08 37 33.5**	**-0.7**
NVS				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NVS				pmax	pmax		
	comp=N,5.0nm,0.6s						
ARU	**Arti**	**21.51**	**344**	P	**P**	**08 37 42.6**	**+2.8**
	comp=N,2.8nm,0.3s,baz=114,slow=9.6,SNR=5.6						
ARU	**Arti**	**21.51**	**344**	*e*P	**P**	**08 37 39.5**	**-0.3**
	comp=N,5.0nm,0.8s						
ARU	**Arti**	**21.51**	**344**	*c i*P	**P**	**08 37 40.8**	**+1.0**
ARU				PPP	PPP	08 38 06.4	
ARU				S	**S**	**08 41 38.6**	**+0.5**
ARU				SSS	SSS	08 42 13.1	
ARU				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KBZ	**Khabaz**	**21.52**	**299**	P	**P**	**08 37 40.4**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=27,slow=4.5,SNR=2.7						
NEY	**Neytrino**	**21.56**	**297**	⇑*e*P	**P**	**08 37 41.9**	**+1.2**
NEY				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KIV	**Kislovodsk**	**21.72**	**299**	*e*P	**P**	**08 37 43.5**	**+1.2**
	comp=Z,6.0nm,0.9s						
KIV	**Kislovodsk**	**21.72**	**299**	*e*P	**P**	**08 37 44.2**	**+1.9**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SHL	**Shillong**	**22.05**	**112**	*e*x	x	08 37 49.0	
SHL	**Shillong**	**22.05**	**112**	*e*P	**P**	**08 37 45.8**	**-0.3**
	comp=Z,21nm,1.0s						
SHL	**Shillong**	**22.05**	**112**	*e*P	**P**	**08 37 45.8**	**-0.3**
SHL				pmax	pmax		
	comp=Z,21nm,1.0s						
RAYN	**Ar Rayn**	**24.11**	**245**	*e*P	**P**	**08 38 08.0**	**+1.0**
	comp=Z,3.3nm,1.1s						
GTA	**Gaotai**	**24.28**	**73**	*e*P	P	08 38 16.8	+8.3
GTA				pP	sP	08 38 26.3	+13
GTA				sP	pP	08 38 30.7	+19
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BR101	**Keskin Array S**	**28.21**	**288**	*e*P	**P**	**08 38 46.0**	**+1.9**
BR131	**Keskin Array S**	**28.21**	**288**	*e*P	**P**	**08 38 45.2**	**+1.1**
BRTR	**Keskin Array B**	**28.21**	**288**	P	**P**	**08 38 46.0**	**+1.9**
	comp=Z,0.9nm,0.8s,baz=102,slow=9.5,SNR=4.9						
CD2	**Chengdu**	**29.11**	**90**	P	**P**	**08 38 51.6**	**-0.4**
OBN	**Obninsk**	**29.28**	**321**	*i*P	**P**	**08 38 54.7**	**+1.5**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
PRGR	**Permogore**	**29.50**	**337**	*e*P	P	08 38 50.4	-4.6
PRGR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
AKASG	**Malin Array Be**	**32.07**	**310**	P	**P**	**08 39 18.3**	**+0.5**
	comp=Z,1.0nm,0.4s,baz=83,slow=8.5,SNR=8.7						
AKASG	**Malin Array Be**	**32.07**	**310**	*i*P	**P**	**08 39 19.3**	**+1.5**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKBB	**Malin Array Si**	**32.07**	**310**	*e*P	**P**	**08 39 18.4**	**+0.6**
	comp=Z,2.2nm,0.9s						
AKBB	**Malin Array Si**	**32.07**	**310**	*e*P	**P**	**08 39 18.5**	**+0.6**
AKBB				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KIEV	**Kiev**	**32.08**	**310**	⇑*i*P	**P**	**08 39 19.1**	**+1.2**
KIEV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**33.16**	**69**	*e*P	**P**	**08 39 28.8**	**+1.1**
HHC				pmax	pmax		
	comp=Z,41nm,5.8s						
MLR	**Muntele Rosu**	**33.73**	**300**	*e*P	**P**	**08 39 33.1**	**+0.5**
	comp=Z,3.8nm,0.8s						
MLR	**Muntele Rosu**	**33.73**	**300**	*e*P	**P**	**08 39 33.1**	**+0.5**
MLR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BUR04	**Bucovina Ar. S**	**34.30**	**303**	*e*P	**P**	**08 39 37.9**	**+0.4**
BUR08	**Bucovina Ar. S**	**34.31**	**303**	*e*P	**P**	**08 39 37.7**	**+0.1**
APE	**Apeiranthos**	**34.90**	**285**	⇓*i*P	**P**	**08 39 44.2**	**+1.5**
APE				pmax	pmax		
	comp=Z,3.0nm,0.9s						
VSU	**Vasula**	**35.58**	**322**	*e*P	**P**	**08 39 49.0**	**+0.8**
VSU				pmax	pmax		
	comp=Z,9.0nm,0.9s						
FIA0	**FINESS Array S**	**36.98**	**327**	*e*P	**P**	**08 40 01.5**	**+1.4**
FIA0	**FINESS Array S**	**36.98**	**327**	*e*P	**P**	**08 40 01.5**	**+1.4**
FIA1	**FINESS Array S**	**36.98**	**327**	*e*P	**P**	**08 40 01.9**	**+1.7**
FINES	**FINESS Array B**	**36.98**	**327**	P	**P**	**08 40 01.5**	**+1.4**
	comp=Z,0.8nm,0.6s,baz=132,slow=13,SNR=4.6						
KLNR	**Kaliningrad**	**38.15**	**315**	⇓*e*P	**P**	**08 40 10.9**	**+0.8**
KLNR				pmax	pmax		
	comp=Z,13nm,0.9s						
HFS	**Hagfors**	**42.46**	**322**	P	**P**	**08 40 46.8**	**+1.0**
	comp=Z,1.5nm,0.5s,baz=91,slow=8.9,SNR=5.2						
NB2	**NORSAR Subarra**	**43.80**	**323**	P	**P**	**08 40 57.4**	**+0.7**
	comp=Z,0.6nm,0.5s,baz=98,slow=7.9						
NB200	**NORSAR Array S**	**43.80**	**323**	*e*P	**P**	**08 40 58.0**	**+1.3**
NOA	**NORSAR Array B**	**43.80**	**323**	P	**P**	**08 40 58.0**	**+1.3**
	comp=Z,0.7nm,0.5s,baz=94,slow=8.0,SNR=3.0						
TIXI	**Tiksi**	**46.58**	**22**	⇓*i*P	**P**	**08 41 18.6**	**+0.1**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.3s						
TGY	**Tagaytay City**	**51.00**	**102**	LR	LR	09 03 51.3	
	comp=Z,194nm,21.8s,baz=188,slow=37						
MAJO	**Matsushiro**	**54.35**	**68**	⇑*i*P	**P**	**08 42 17.0**	**-0.9**
MAJO				pmax	pmax		
	comp=Z,6.0nm,1.1s						
COCO	**West Island**	**54.70**	**146**	*i*P	**P**	**08 42 18.4**	**-2.0**
SEY	**Seymchan**	**55.44**	**33**	⇑*e*P	**P**	**08 42 25.2**	**-0.1**
PEA1	**Petropavlovsk-**	**61.14**	**43**	*e*P	**P**	**08 43 06.5**	**+1.1**
PETK	**Petropavlovsk-**	**61.15**	**43**	P	**P**	**08 43 06.5**	**+1.1**
	comp=Z,1.1nm,0.6s,baz=198,slow=9.0,SNR=4.3						
PETK	**Petropavlovsk-**	**61.15**	**43**	*e*P	**P**	**08 43 05.8**	**+0.4**
PETK	**Petropavlovsk-**	**61.15**	**43**	*e*P	**P**	**08 43 05.8**	**+0.4**
KAPI	**Kappang**	**62.49**	**120**	*e*P	**P**	**08 43 16.0**	**+1.1**
TOA0	**Torodi Ar. Sit**	**64.33**	**268**	*e*P	**P**	**08 43 26.6**	**-0.5**
	comp=Z,3.0nm,1.1s						
TOA1	**Torodi Ar. Sit**	**64.33**	**268**	*e*P	**P**	**08 43 25.8**	**-1.4**
TORD	**Torodi Ar. Bea**	**64.33**	**268**	P	**P**	**08 43 25.8**	**-1.3**
	comp=Z,0.7nm,0.6s,baz=59,slow=4.2,SNR=8.2						
TOLK	**Toolik Lake Re**	**71.56**	**14**	*e*P	**P**	**08 44 12.3**	**+0.4**
	comp=Z,2.3nm,0.8s						
RIDG	**Independ'e Rid**	**76.78**	**15**	*e*P	**P**	**08 44 41.5**	**-0.9**
	comp=Z,11nm,1.5s						
WR1	**Warramunga Arr**	**83.01**	**121**	*e*P	**P**	**08 45 14.6**	**-2.1**
	comp=Z,8.6nm,1.4s						
WRA	**Warramunga Arr**	**83.01**	**121**	P	**P**	**08 45 14.6**	**-2.1**
	comp=Z,0.2nm,0.7s,baz=326,slow=5.0,SNR=4.4						
ASAR	**Alice Springs**	**85.22**	**124**	P	**P**	**08 45 25.1**	**-2.8**
	comp=Z,0.3nm,0.8s,baz=316,slow=5.2,SNR=3.7						
RAR	**Rarotonga**	**134.91**	**84**	*e*PKPdf	**PKPdf**	**08 52 08.8**	**-1.8**
RAR	**Rarotonga**	**134.91**	**84**	*e*PKIKP	**PKPdf**	**08 52 08.8**	**-1.8**

NNC 11 08:45:42.2±3.0, 36°.40N×68°.98E, h0km, mb3.8, mpv3.4, 5C-3D, Error ellipse: s-maj=31.9km s-min=22.1km az=130.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**5.07**	**43**	⇓Pn	Pn	08 46 60.0	+0.4
	2.2nm,0.3s						
SFK				⇑Sn	Sn	08 48 01.0	+2.0
	3.6nm,0.2s						
MNAS	**Manas**	**6.66**	**23**	⇓Pn	Pn	08 47 21.8	+0.4
	1.5nm,0.4s						
MNAS				⇓Sn	Sn	08 48 39.7	+1.6
	2.0nm,0.5s						
KK31	**Karatay Array**	**6.79**	**10**	⇑Pn	Pn	08 47 24.4	+1.2
	0.6nm,0.3s,baz=188,slow=16,SNR=9.1						
KK31				⇑Sn	Sn	08 48 42.7	+1.5
	0.6nm,0.3s,baz=194,slow=20,SNR=4.0						
AAK	**Ala-Archa**	**7.54**	**33**	⇑Pn	Pn	08 47 31.9	-1.6
	0.9nm,0.3s						
AAK				⇑Sn	Sn	08 48 59.5	-0.4
	1.0nm,0.5s						

JMA 11 08:49:57.6±0.2, 43°.15N×146°.96E, h52km±4km, M3.0
MOS 11 08:49:58.0±1.6, 43°.16N×147°.03E, h51km, mb4.2/1, Error ellipse: s-maj=43.3km s-min=17.7km az=116.1
SKHL 11 08:49:58.0±0.4, 43°.18N×147°.06E, h55km±9km, mb4.0/6

ISC 11 08:49:57.8±3.0, 43°.23N±0°.09×146°.98E±0°.08, h27km±18km, n18, σ0°30/33, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.65**	**350**	*e*P	**Pn**	**08 50 11.2**	**0.0**
SHO				AMB	AMB	08 50 11.6	
	43nm,0.2s						
SHO				*i* S	**Sn**	**08 50 20.7**	**+0.1**
SHO				A	A	08 50 21.8	
	470nm,0.1s						
SHO				A	A	08 50 21.8	
	123nm,0.1s						
SHO	**Shikotan**	**0.65**	**350**	*d i*PN	**Pn**	**08 50 11.2**	**0.0**
SHO				*i* S	**Sn**	**08 50 20.7**	**+0.1**
SHO				pmax	pmax		
	comp=Z,434nm,0.2s						
SHO				pmax	pmax		
	comp=N,237nm,0.3s						
SHO				pmax	pmax		
	comp=E,123nm,0.1s						
SHO				smax	smax		
	comp=E,471nm,0.1s						
SHO				smax	smax		
	comp=N,1μm,0.2s						
NEM2	**Nemuro 2**	**0.92**	**279**	P	**Pn**	**08 50 14.4**	**-0.4**
NEM2				*e*S	**Sb**	**08 50 27.0**	**+0.2**
YUK	**Yuzh-Kuril'sk**	**1.15**	**315**	*e*P	**Pn**	**08 50 17.9**	**-0.1**
YUK				AMB	AMB	08 50 19.3	
	comp=N,39nm,0.3s						
YUK				*e*S	**Sb**	**08 50 33.1**	**-0.2**
YUK				A	A	08 50 36.3	
	comp=N,102nm,0.3s						
YUK				A	A	08 50 36.3	
	comp=N,680nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.15**	**315**	*e*PN	**Pn**	**08 50 17.9**	**-0.1**
YUK				*e*S	**Sb**	**08 50 33.1**	**-0.2**
YUK				pmax	pmax		
	comp=E,98nm,0.1s						
YUK				pmax	pmax		
	comp=Z,392nm,0.1s						
YUK				pmax	pmax		
	comp=N,118nm,0.2s						
YUK				smax	smax		
	comp=N,1μm,0.3s						
YUK				smax	smax		
	comp=E,683nm,0.2s						
GRPR	**Tuman**	**1.16**	**311**	*e*P	**Pn**	**08 50 18.1**	**-0.2**
GRPR				AMB	AMB	08 50 18.7	
	comp=E,91nm,0.3s						
GRPR				*e*S	**Sn**	**08 50 32.8**	**-0.5**
GRPR				A	A	08 50 34.6	
	comp=E,760nm,0.2s						
GRPR				A	A	08 50 34.6	
	comp=E,430nm,0.2s						
GRPR	**Tuman**	**1.16**	**311**	*e*PN	**Pn**	**08 50 18.1**	**-0.2**
GRPR				*e*S	**Sn**	**08 50 32.8**	**-0.5**
GRPR				pmax	pmax		
	comp=N,86nm,0.2s						
GRPR				pmax	pmax		
	comp=Z,91nm,0.2s						
GRPR				pmax	pmax		
	comp=E,42nm,0.1s						
GRPR				smax	smax		
	comp=N,764nm,0.4s						
GRPR				smax	smax		
	comp=E,425nm,0.3s						
GLVR	**Golovnino**	**1.18**	**296**	*e*P	**Pn**	**08 50 18.7**	**+0.2**
GLVR				AMB	AMB	08 50 18.8	
	comp=E,18nm,0.2s						
GLVR				*e*S	**Sb**	**08 50 34.5**	**+0.2**
GLVR				A	A	08 50 35.4	
	comp=E,620nm,0.2s						
GLVR				A	A	08 50 35.4	
	comp=E,210nm,0.2s						
GLVR	**Golovnino**	**1.18**	**296**	*e*PN	**Pn**	**08 50 18.7**	**+0.2**
GLVR				*e*S	**Sb**	**08 50 34.5**	**+0.2**
GLVR				pmax	pmax		
	comp=N,52nm,0.1s						
GLVR				pmax	pmax		
	comp=E,32nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,184nm,0.1s						
GLVR				smax	smax		
	comp=N,618nm,0.2s						
GLVR				smax	smax		
	comp=E,211nm,0.2s						
LAGR	**Lagunnoye**	**1.20**	**314**	*e*P	**Pn**	**08 50 19.0**	**+0.3**
LAGR				AMB	AMB	08 50 20.2	
	comp=E,18nm,0.2s						
LAGR				*e*S	**Sb**	**08 50 34.6**	**-0.3**
LAGR				A	A	08 50 35.2	
	comp=E,490nm,0.2s						
LAGR				A	A	08 50 35.2	
	comp=E,155nm,0.2s						
LAGR	**Lagunnoye**	**1.20**	**314**	*e*PN	**Pn**	**08 50 19.0**	**+0.3**
LAGR				*e*S	**Sb**	**08 50 34.6**	**-0.3**
LAGR				pmax	pmax		
	comp=Z,182nm,0.1s						
LAGR				smax	smax		
	comp=E,489nm,0.2s						
LAGR				smax	smax		
	comp=N,2μm,0.3s						
JRA	**Rausu**	**1.53**	**298**	P	**Pn**	**08 50 23.4**	**+0.2**
JRA				*e*S	**Sn**	**08 50 42.6**	**+0.4**
JAK	**Akkeshi**	**1.69**	**263**	P	**Pn**	**08 50 25.1**	**-0.4**
KUR	**Kuril'sk**	**2.10**	**17**	*e*P	**Pn**	**08 50 31.2**	**+0.1**
KUR				AMB	AMB	08 50 34.0	
	comp=N,9.0nm,0.1s						
KUR				*i* S	**Sn**	**08 50 56.3**	**-0.1**
KUR				A	A	08 50 57.3	
	comp=N,168nm,0.2s						
KUR				A	A	08 50 57.3	
	comp=N,157nm,0.2s						
KUR	**Kuril'sk**	**2.10**	**17**	*e*PN	**Pn**	**08 50 31.2**	**+0.1**
KUR				*i* S	**Sn**	**08 50 56.3**	**-0.1**
KUR				pmax	pmax		
	comp=Z,9.0nm,0.1s						
KUR				smax	smax		
	comp=N,68nm,0.2s						
KUR				smax	smax		
	comp=E,157nm,0.2s						
JOB	**Onbets**	**2.33**	**263**	P	**Pn**	**08 50 34.4**	**+0.1**
JAR	**Ashorobuto**	**2.35**	**273**	P	**Pn**	**08 50 34.9**	**+0.4**
JAR				*e*S	**Sn**	**08 51 02.2**	**-0.3**
JTKR	**Abashiri--Toko**	**2.35**	**289**	P	**Pn**	**08 50 35.4**	**+0.8**

ISCJB 11 08:53:41.7±0.9, 22°.52S±0°.06×68°.1W±0°.2, h193km±15km, mb3.9/2, Error ellipse: s-maj=29.1km s-min=8.5km az=11.6
GUC 11 08:53:42.1±0.7, 22°.53S×68°.11W, h181km±7km, ML4.0
IDC 11 08:53:46.3±9.9, 22°.17S×67°.26W, h178km±77km, mb3.9/2, mb1 3.8/3, mb1mx3.2/35, mbtmp4.3/3, MS2.3/1, Ms1 2.4/1, ms1mx2.3/36, Error ellipse: s-maj=117.0km s-min=82.0km az=57.0

ISC 11 08:53:42.2±1.4, 22°.53S±0°.08×68°.0W±0°.2, h179km±17km, n13, σ0°68/23, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**1.38**	**301**	*e*P	**Pn**	**08 54 13.5**	**+0.3**
PB09				*i* S	**Sn**	**08 54 37.0**	**0.0**
PB06	**IPOC Station P**	**1.49**	**263**	*e*P	**Pn**	**08 54 13.9**	**-0.2**
PB06				*i* S	**Sn**	**08 54 39.0**	**+0.3**
PB15	**IPOC Station P**	**1.54**	**244**	*e*P	**Pn**	**08 54 14.5**	**-0.1**
PB15				*i* S	**Sn**	**08 54 39.6**	**-0.2**
PB07	**IPOC Station P**	**1.94**	**294**	*e*P	**Pn**	**08 54 19.1**	**+0.4**
PB07				*i* S	**Sn**	**08 54 46.9**	**-0.2**
PB07				IAML		08 54 48.4	
	comp=N,1μm,0.2s						
PB04	**IPOC Station P**	**2.02**	**275**	*e*P	**Pn**	**08 54 19.8**	**+0.2**
PB04				*i* S	**Sn**	**08 54 48.3**	**-0.2**
PB04				IAML		08 54 51.4	
	comp=E,406nm,0.1s						
PB01	**IPOC Station P**	**2.04**	**316**	*e*P	**Pn**	**08 54 19.6**	**-0.1**
PB01				*i* S	**Sn**	**08 54 48.8**	**0.0**
PB01				IAML		08 54 49.9	
	comp=N,1μm,0.2s						
PB02	**IPOC Station P**	**2.15**	**304**	*e*P	**Pn**	**08 54 21.1**	**+0.1**
PB02				*i* S	**Sn**	**08 54 50.5**	**-0.6**
PB02				IAML		08 54 51.4	
	comp=N,988nm,0.5s						
PB10	**IPOC Station P**	**2.57**	**247**	*e*P	**Pn**	**08 54 25.6**	**0.0**
PB10				*i* S	**Sn**	**08 54 58.3**	**-1.1**
PB08	**IPOC Station P**	**2.62**	**335**	*e*P	**Pn**	**08 54 27.3**	**+0.7**
PB08				*i* S	**Sn**	**08 55 01.4**	**+0.3**
PB08				IAML		08 55 04.9	
	comp=E,366nm,0.4s						
LPAZ	**La Paz**	**6.21**	**359**	P	**Pn**	**08 55 12.8**	**+0.3**
	comp=E,3.7nm,0.3s,baz=130,slow=7.6,SNR=101						
LPAZ				S	**Sn**	**08 56 21.2**	**-2.4**
	comp=E,0.1nm,0.3s,baz=270,slow=20,SNR=1.7						
LPAZ				LR	LR	08 58 33.2	
	comp=E,31nm,21.4s,baz=34,slow=48						
KOWA	**Kowa**	**72.64**	**66**	P	**P**	**09 04 50.7**	**+0.1**
	comp=E,0.6nm,0.3s,baz=219,slow=3.4,SNR=1.9						
TORD	**Torodi Ar. Bea**	**76.89**	**70**	P	**P**	**09 05 15.1**	**0.0**
	comp=E,2.1nm,0.4s,baz=252,slow=5.4,SNR=57						
MKAR	**Makanchi Array**	**145.93**	**37**	PKPbc	**PKPab**	**09 13 02.0**	**+0.5**
	comp=E,0.2nm,0.6s,baz=316,slow=4.0,SNR=2.4						

IDC 11 09:06:55.0±1.2, 12°.04N×90°.43E, h0km, mb3.7/5, mb1 3.8/7, mb1mx3.5/63, mbtmp3.7/7, ML4.0/2, MS3.5/14, Ms1 3.5/14, ms1mx3.1/72, Error ellipse: s-maj=33.4km s-min=21.2km az=67.0
ISCJB 11 09:06:57.1±0.8, 12°.0N±0°.1×90°.40E±0°.07, h33km, mb3.6/5, MS3.4/12, Error ellipse: s-maj=15.9km s-min=9.2km az=9.7

ISC 11 09:06:58.9±0.9, 12°.0N±0°.2×90°.3E±0°.1, h35km, n20, σ2°17/8, mb3.6/5, MS3.4/12, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**2.42**	**98**	*e*P	Pn	09 07 33.2	-2.9
PBA				*e*S	Sn	09 08 01.3	-3.3
CMAR	**Chiang Mai Arr**	**10.53**	**51**	Pn	**Pn**	**09 09 25.0**	**-2.5**
	0.6nm,0.3s,baz=240,slow=16,SNR=3.3						
CMAR				Sn	Sn	09 11 10.6	-14
	0.7nm,0.3s,baz=245,slow=33,SNR=4.5						
PALK	**Pallekele**	**10.55**	**244**	Pn	**Pn**	**09 09 29.2**	**+1.4**
	0.5nm,0.3s,baz=116,slow=18,SNR=2.2						
PALK				Sn	**Sn**	**09 11 21.5**	**-3.4**
	3.5nm,0.3s,baz=115,slow=20,SNR=6.6						
PALK				LR	LR	09 13 11.3	
	comp=Z,164nm,20.1s,baz=112,slow=35						
PSI	**Prapat**	**12.52**	**136**	LR	LR	09 15 23.2	
	comp=Z,348nm,21.4s,baz=274,slow=41						
LEM	**Lembang**	**25.43**	**136**	LR	LR	09 22 04.4	
	comp=Z,253nm,18.4s,baz=273,slow=36						
MKAR	**Makanchi Array**	**35.34**	**350**	P	**P**	**09 13 51.7**	**+0.9**
	0.9nm,0.7s,baz=166,slow=8.1,SNR=8.1						
MKAR				LR	LR	09 29 57.2	
	comp=Z,43nm,19.8s,baz=162,slow=39						
SONM	**Songino Array**	**38.19**	**18**	P	**P**	**09 14 15.6**	**+0.3**
	0.9nm,0.4s,baz=206,slow=9.6,SNR=2.7						
GEYT	**Alibeck**	**38.62**	**318**	LR	LR	09 31 17.0	
	comp=Z,81nm,21.5s,baz=110,slow=38						
**K

KFL	Anninata	0.35	317	P	Pb	09 12 20.7	+2.0
KFL				S	Sb	09 12 26.4	+2.2
RLS	Riolos of Patr	0.36	55	P	Pb	09 12 20.2	+1.5
RLS				AML	AML	09 12 28.2	
	comp=E,11004μm,0.6s						
RLS				AML	AML	09 12 28.6	
	comp=N,8374μm,0.3s						
RLS				S	Sn	09 12 28.8	+0.4
RLS	Riolos of Patr	0.36	55	P	Pb	09 12 20.3	+1.5
RLS				S	Sb	09 12 26.3	+2.0
RLS	Riolos of Patr	0.36	55	P	Pb	09 12 20.4	+1.7
RLS				S	Sb	09 12 26.3	+2.0
AXS	Araxos	0.41	33	P	Pb	09 12 20.9	+1.3
AXS				S	Sn	09 12 29.0	-0.7
AXS	Araxos	0.41	33	P	Pb	09 12 21.1	+1.5
AXS				S	Sn	09 12 28.7	-0.9
DRO	Drossia	0.50	78	P	Pb	09 12 22.4	+1.3
DRO				S	Sn	09 12 31.2	-0.6
DRO	Drossia	0.50	78	P	Pb	09 12 22.4	+1.3
DRO				S	Sn	09 12 31.2	-0.6
VLS	Valsamata	0.52	309	P	Pb	09 12 22.9	+1.5
VLS				S	Sb	09 12 29.6	+0.8
VLS				AML	AML	09 12 36.4	
	comp=N,4522μm,0.1s						
VLS				AML	AML	09 12 36.5	
	comp=E,3988μm,0.1s						
VLS	Valsamata	0.52	309	P	Pb	09 12 22.8	+1.4
VLS				S	Sb	09 12 30.9	+2.1
VLS	Valsamata	0.52	309	P	Pb	09 12 22.9	+1.5
VLS				S	Sb	09 12 30.4	+1.6
AMT	Artemida-Makis	0.58	123	P	Pb	09 12 24.1	+1.5
AMT				S	Sn	09 12 34.6	+0.7
AMT				AML	AML	09 12 35.4	
	comp=E,2418μm,0.5s						
AMT				AML	AML	09 12 39.0	
	comp=N,3396μm,0.4s						
AMT	Artemida-Makis	0.58	123	P	Pb	09 12 23.9	+1.4
AMT				S	Sb	09 12 33.0	+2.3
AMT	Artemida-Makis	0.58	123	P	Pb	09 12 24.0	+1.5
AMT				S	Sb	09 12 33.0	+2.3
UPR	University Cam	0.70	51	P	Pb	09 12 25.8	+1.3
UPR	University Cam	0.70	51	P	Pn	09 12 26.9	+0.8
UPR	University Cam	0.70	51	P	Pb	09 12 25.8	+1.3
FSK	Fiskardo	0.74	326	P	Pb	09 12 26.4	+1.2
FSK				S	Sn	09 12 38.2	+0.4
PDO	Prodromos	0.75	5	P	Pn	09 12 26.9	+0.1
PDO				S	Sn	09 12 38.6	+0.5
PDO	Prodromos	0.75	5	P	Pn	09 12 26.9	+0.1
PDO				S	Sn	09 12 38.6	+0.5
LAKA	Lakka	0.80	61	P	Pb	09 12 27.0	+0.7
LAKA	Lakka	0.80	61	P	Pb	09 12 27.3	+1.0
LAKA				S	Sn	09 12 40.2	+0.9
LAKA	Lakka	0.80	61	P	Pb	09 12 27.3	+1.0
LAKA				S	Sn	09 12 40.2	+0.9
PVO	Paravola	0.84	24	P	Pb	09 12 28.2	+1.3
PVO	Paravola	0.84	24	P	Pb	09 12 28.2	+1.3
MGNA	Meganis,,,	0.84	344	P	Pn	09 12 28.3	+0.5
MGNA	Meganis,,,	0.84	344	P	Pn	09 12 28.3	+0.3
KLV	Kalavryta, Ach	0.86	77	P	Pg	09 12 27.9	+0.9
KLV	Kalavryta, Ach	0.86	77	P	Pg	09 12 28.0	+0.9
KLV	Kalavryta, Ach	0.86	77	P	Pb	09 12 28.1	+0.8
EFP	Efpalio	0.86	48	P	Pb	09 12 28.0	+0.8
EFP	Efpalio	0.86	48	P	Pb	09 12 28.1	+0.8
EFP	Efpalio	0.86	48	P	Pb	09 12 28.2	+0.9
ALIK	Aliki, Aigiali	0.90	63	P	Pb	09 12 29.1	+1.1
ALIK	Aliki, Aigiali	0.90	63	P	Pb	09 12 29.1	+1.1
TRIZ	Trizonia	0.93	56	P	Pg	09 12 29.2	+0.8
TRIZ	Trizonia	0.93	56	P	Pg	09 12 29.3	+0.8
TRIZ	Trizonia	0.93	56	P	Pb	09 12 29.4	+1.0
ITM	Ithomi	0.94	135	P	Pn	09 12 30.3	+0.9
ITM	Ithomi	0.94	135	P	Pg	09 12 30.0	+1.3
ITM	Ithomi	0.94	135	P	Pg	09 12 30.0	+1.3
SERG	Sergoula	0.94	53	P	Pg	09 12 29.5	+0.8
SERG	Sergoula	0.94	53	P	Pg	09 12 29.5	+0.8
GUR	Goura	0.99	85	P	Pb	09 12 30.1	+0.5
GUR	Goura	0.99	85	P	Pb	09 12 30.2	+0.7
GUR	Goura	0.99	85	P	Pb	09 12 30.3	+0.7
LKD2	Lefkada island	1.00	340	P	Pn	09 12 31.6	+1.4
LKD2	Lefkada island	1.00	340	P	Pn	09 12 31.2	+1.0
LKD2				S	Sn	09 12 46.0	+1.8
LKD2	Lefkada island	1.00	340	P	Pn	09 12 31.1	+0.9
PYL	PYLOS	1.08	151	P	Pb	09 12 31.3	+0.2
PYL	PYLOS	1.08	151	P	Pn	09 12 32.3	+0.9
PYL	PYLOS	1.08	151	P	Pn	09 12 32.3	+0.9
VLX	Vlachokerasia	1.13	115	P	Pg	09 12 33.5	+1.3
VLX	Vlachokerasia	1.13	115	P	Pn	09 12 33.1	+1.0
EVR	Evrytania	1.20	28	P	Pg	09 12 35.4	+1.7
EVR	Evrytania	1.20	28	P	Pg	09 12 34.6	+0.9
THAL	Thalero	1.25	81	P	Pg	09 12 35.7	+1.1
THAL	Thalero	1.25	81	P	Pg	09 12 35.4	+0.8
THAL	Thalero	1.25	81	P	Pb	09 12 35.1	+1.1
DSF	Desfina	1.26	63	P	Pg	09 12 35.6	+0.8
DSF	Desfina	1.26	63	P	Pb	09 12 35.1	+0.9
DSF	Desfina	1.26	63	P	Pb	09 12 35.1	+0.9
DLFA	Delphi	1.27	60	P	Pg	09 12 36.5	+1.5
DLFA	Delphi	1.27	60	P	Pg	09 12 35.6	+0.7
DSL	Palaion Diasel	1.28	0	P	Pb	09 12 35.1	+0.6
DSL	Palaion Diasel	1.28	0	P	Pn	09 12 35.0	+0.9
DYR	Agios Nikonas	1.47	137	P	Pn	09 12 36.8	+0.1
DYR	Agios Nikonas	1.47	137	P	Pn	09 12 37.2	+0.5
PROD	Prodromos	1.48	73	P	Pb	09 12 38.3	+0.4
PROD	Prodromos	1.48	73	P	Pn	09 12 38.0	+1.1
LTK	Loutraki	1.49	83	P	Pn	09 12 38.4	+1.4
LTK	Loutraki	1.49	83	P	Pn	09 12 38.1	+1.1
LTK	Loutraki	1.49	83	P	Pn	09 12 38.1	+1.1
LOUT	Loutraki	1.49	84	P	Pn	09 12 38.2	+1.2
LOUT	Loutraki	1.49	84	P	Pn	09 12 38.2	+1.2
AGG	Agios Georgios	1.52	39	P	Pb	09 12 39.2	+0.6
AGG	Agios Georgios	1.52	39	P	Pb	09 12 39.0	+0.4
AGG	Agios Georgios	1.52	39	P	Pn	09 12 38.7	+1.3
KRND	KRANIDI	1.70	105	P	Pn	09 12 40.8	+1.0
KRND	KRANIDI	1.70	105	P	Pn	09 12 40.7	+0.9
KRND	KRANIDI	1.70	105	P	Pn	09 12 40.7	+0.9
LKR	Lokris	1.70	61	P	Pn	09 12 40.4	+0.6
LKR	Lokris	1.70	61	P	Pn	09 12 40.6	+0.8
LKR	Lokris	1.70	61	P	Pn	09 12 40.6	+0.8
DID	Didima	1.73	101	P	Pn	09 12 40.6	+0.2
DID	Didima	1.73	101	P	Pn	09 12 40.8	+0.4
DID	Didima	1.73	101	P	Pn	09 12 40.9	+0.5
VIL2	Platees	1.75	77	P	Pn	09 12 41.2	+0.5
VILL	Villia	1.78	79	P	Pn	09 12 41.7	+0.7
VILL	Villia	1.78	79	P	Pn	09 12 41.7	+0.7
VLI	Veliai	1.85	127	P	Pn	09 12 43.7	+1.7
VLI	Veliai	1.85	127	P	Pn	09 12 43.4	+1.4
SMIA	Simia	1.95	58	P	Pn	09 12 43.8	+0.4
SMIA	Simia	1.95	58	P	Pn	09 12 44.1	+0.7
ATH	Athens Observa	2.08	86	P	Pn	09 12 45.2	+0.2
ATH	Athens Observa	2.08	86	P	Pn	09 12 45.7	+0.7
KPRO	Kipourio	2.11	6	P	Pb	09 12 48.5	-0.2
KPRO	Kipourio	2.11	6	P	Pn	09 12 47.5	+1.9
KEK	Kerkira	2.12	332	P	Pn	09 12 44.8	-0.8
KEK	Kerkira	2.12	332	P	Pn	09 12 45.7	+0.1
FYTO	Fytoko, Volos	2.12	42	P	Pn	09 12 45.2	-0.5
FYTO	Fytoko, Volos	2.12	42	P	Pn	09 12 46.0	+0.3
VLY	Voula,Athens	2.14	89	P	Pn	09 12 45.9	0.0
VLY	Voula,Athens	2.14	89	P	Pn	09 12 46.4	+0.5
PTL	Penteli	2.20	84	P	Pn	09 12 46.3	-0.4
PTL	Penteli	2.20	84	P	Pn	09 12 47.1	+0.4
KYTH	Kithira	2.22	135	P	Pb	09 12 50.0	-0.5
XOR	Xorichti	2.23	47	P	Pn	09 12 46.5	-0.7
XOR	Xorichti	2.23	47	P	Pn	09 12 47.4	+0.2
DION	Dionisos Attik	2.25	83	P	Pn	09 12 47.7	+0.1
DION	Dionisos Attik	2.25	83	P	Pn	09 12 48.1	+0.6
SKIA	Skiathos	2.28	54	P	Pn	09 12 47.3	-0.5
SKIA	Skiathos	2.28	54	P	Pn	09 12 48.1	+0.3
EREA	Eretria	2.31	75	P	Pn	09 12 48.2	0.0
EREA	Eretria	2.31	75	P	Pn	09 12 48.8	+0.6
ANKY	Antikythira Is	2.66	138	P	Pn	09 12 55.5	+2.5
ANKY	Antikythira Is	2.66	138	P	Pn	09 12 54.9	+1.9
SERI	Serifos	2.78	103	P	Pn	09 12 53.7	-1.1
SERI	Serifos	2.78	103	P	Pn	09 12 54.9	+0.1
IDI	Anoyia	3.98	129	Pn	Pn	09 13 12.1	+0.8
	comp=N,0.4nm,0.3s,baz=289,slow=18,SNR=2.1						
IDI				Sn	Sn	09 13 53.9	-4.0
	comp=N,0.8nm,0.3s,baz=90,slow=20,SNR=2.6						
NVLJ	Novalja	8.18	327	*i* Pn	Pn	09 14 07.3	-1.6
NVLJ				Sn	Sn	09 15 34.3	-6.8
BRTR	Keskin Array B	9.97	75	Pn	Pn	09 14 35.1	+1.5
	comp=N,0.1nm,0.3s,baz=251,slow=13,SNR=2.8						
TORD	Torodi Ar. Bea	30.07	220	P	P	09 18 16.7	-2.8
	comp=N,0.2nm,0.5s,baz=32,slow=9.2,SNR=4.1						
KURBB	Kurchatov Arra	42.06	53	P	P	09 19 58.9	-2.8
	comp=N,0.6nm,0.6s,baz=283,slow=8.6,SNR=4.1						
MKAR	Makanchi Array	45.09	58	P	P	09 20 22.7	-3.5
	comp=N,0.3nm,0.5s,baz=272,slow=8.0,SNR=5.5						

*TAP **11** 09:18:29.6,24.°70N×121.°22E,h8km,ML3.7,B*
*ISCJB **11** 09:18:30.7±0.2,24.°68N±0.°01×121.°24E±0.°01,h9km±1km,*
Error ellipse: s-maj=2.0km s-min=1.6km az=41.5
*JMA **11** 09:18:30.5±0.3,24.°68N×121.°28E,h0km,M3.4*
ISC 11 09:18:30.2±0.8,24.°67N±0.°01×121.°26E±0.°02,h13km±5km,
n90,σ0.69/151,19C-12D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NSK	Sanguang	0.09	85	⇑*i*P	Pg	09 18 33.1	+0.1
NSK	baz=101			*i* S	Sg	09 18 35.3	+0.2
YHNB	Yeheng	0.10	89	⇑P	Pg	09 18 33.4	+0.1
YHNB	baz=102			S	Sg	09 18 35.7	+0.2
LIOB	Emei	0.23	264	⇑*i*P	Pg	09 18 34.4	-0.6
LIOB	baz=241			S	Sg	09 18 37.8	-0.6
NSTT	Nanjuang	0.24	261	⇑*i*P	Pg	09 18 34.6	-0.7
NSTT	baz=237			*i* S	Sg	09 18 38.1	-0.7
NWLT	Wulai	0.24	63	⇑*i*P	Pg	09 18 35.5	+0.1
NWLT	baz=75			S	Sb	09 18 39.9	-0.9
NNS	Nan Shan	0.25	156	⇓*i*P	Pb	09 18 36.4	-0.3
NNS	baz=139			S	Sb	09 18 40.6	-0.4
NNSB	Datong	0.26	155	⇓P	Pb	09 18 36.6	-0.3
NNSB	baz=140			S	Sb	09 18 40.7	-0.7
NNSH	Datong	0.26	155	⇓P	Pb	09 18 36.6	-0.3
NNSH	baz=144			S	Sb	09 18 40.7	-0.7
ENTT	Nioudou	0.28	96	⇑*i*P	Pb	09 18 36.9	-0.2
ENTT	baz=102			S	Sb	09 18 41.4	-0.4
SBCB	Hsinchu	0.28	296	⇑P	Pg	09 18 35.6	-0.4
SBCB	baz=290			S	Sg	09 18 40.0	0.0
HSN	Hsinchu	0.30	297	⇑P	Pg	09 18 35.7	-0.7
HSN	baz=302			S	Sg	09 18 39.8	-0.6
NCUH	Zhongli	0.31	347	⇓*e*P	Pg	09 18 36.4	-0.1
NCUH	baz=353			*e*S	Sg	09 18 41.6	+0.8
NCU	National Centr	0.31	347	⇓P	Pg	09 18 36.5	-0.1
NCU	baz=355			*e*S	Sg	09 18 41.7	+0.9
TATO	Taipei	0.37	34	⇑*i*P	Pg	09 18 38.0	+0.4
TATO	baz=48			*i* S	Sb	09 18 43.6	-0.8
TWE	Neicheng	0.37	82	⇑*i*P	Pb	09 18 38.6	-0.1
TWE	baz=96			S	Sb	09 18 44.2	-0.2
TWT	Tachien	0.42	191	⇓P	Pg	09 18 39.0	+0.4
TWT	baz=187			S	Sg	09 18 44.8	+0.6
TDCB	Techi	0.42	193	⇓P	Pg	09 18 38.9	+0.2
TDCB	baz=188			*e*S	Sg	09 18 44.8	+0.4
TAP1	Taipei	0.44	33	P	Pb	09 18 39.4	-0.4
TAP1	baz=41			*e*S	Sg	09 18 45.5	+0.7
NMLH	Miaoli	0.45	253	*e*P	Pg	09 18 39.7	+0.7
NMLH	baz=235			*e*S	Sb	09 18 46.3	-0.3
ILA	Ilan	0.45	77	*e*P	Pg	09 18 38.5	-0.6
TWS1	Kuangyinshan	0.45	18	⇓P	Pb	09 18 40.0	-0.1
TWS1	baz=37			S	Sb	09 18 47.0	+0.2
ENA	Nanau	0.50	119	*e*P	Pb	09 18 41.1	+0.2
ENA	baz=121			*e*S	Sb	09 18 47.9	-0.2
NANB	Nanao	0.51	118	P	Pb	09 18 41.0	+0.1
NANB	baz=121			S	Sb	09 18 47.7	-0.6
NSY	Sanyi	0.52	241	*e*P	Pg	09 18 41.1	+0.6
NSY	baz=224			*e*S	Sg	09 18 48.3	+1.0
NTST	Danshui	0.52	19	*e*P	Pb	09 18 41.3	0.0
NTST	baz=14			*e*S	Sb	09 18 49.7	+0.9
TWC	Suao	0.54	96	⇑*i*P	Pb	09 18 41.6	0.0
TWC	baz=100			*e*S	Sb	09 18 49.5	+0.3
YM04	YM04	0.54	27	*e*P	Pb	09 18 41.3	-0.4
YM04	baz=21			*e*S	Sb	09 18 49.6	+0.2
ENAH	Nanao	0.55	113	*e*P	Pb	09 18 41.6	-0.1
ENAH	baz=116			*e*S	Sb	09 18 49.0	-0.4
NTC	Toucheng	0.55	70	*e*P	Pb	09 18 41.3	-0.4
YM10	YM10	0.56	29	⇑P	Pb	09 18 41.8	-0.1
YM10	baz=24			*e*S	Sb	09 18 51.0	+1.2
YM03	YM03	0.57	26	⇑P	Pb	09 18 42.1	-0.1
YM03	baz=21			*e*S	Sb	09 18 50.3	+0.1
YM11	YM11	0.57	30	*e*P	Pb	09 18 43.0	+0.8
YM11	baz=25			*e*S	Sb	09 18 51.6	+1.4
NACB	Ninganchiao	0.58	148	⇓P	Pb	09 18 42.6	+0.4
NACB	baz=143			S	Sb	09 18 50.6	+0.2
YM12	YM12	0.58	29	P	Pb	09 18 42.2	-0.2
YM12	baz=19			S	Sb	09 18 51.3	+0.7
TIPB	Shuangxi	0.59	59	⇑*i*P	Pg	09 18 41.2	-0.6
TIPB	baz=80			S	Sb	09 18 50.3	-0.6
YM08	YM08	0.60	30	⇑P	Pb	09 18 42.3	-0.3
YM08	baz=22			*e*S	Sb	09 18 51.0	0.0
YM07	YM07	0.60	33	⇑P	Pg	09 18 41.5	-0.5
YM07	baz=55			*e*S	Sb	09 18 51.9	+0.7
CHGB	Renai	0.61	188	⇓*i*P	Pg	09 18 42.5	+0.3
CHGB	baz=184			*e*S	Sg	09 18 50.5	+0.2
NWF	Wu-fen Shan	0.62	49	⇑P	Pb	09 18 43.0	0.0
NWF	baz=56			*e*S	Sb	09 18 52.9	+1.2
WFSB	Wu-fen Shan	0.62	49	⇑P	Pb	09 18 43.0	+0.1
WFSB	baz=56			*e*S	Sn	09 18 52.8	-1.8
EGS		0.64	74	⇑*i*P	Pb	09 18 43.4	+0.2
TWD	baz=80 Chiawan	0.66	152	P	Pb	09 18 43.9	+0.3
TWD	baz=151			*e*S	Sb	09 18 53.0	+0.3
TWY	Chenhua	0.68	27	*e*P	Pb	09 18 43.9	-0.1
TWB1	baz=48 Santiao Chiao	0.74	63	*e*P	Pb	09 18 45.0	-0.1
TWB1	baz=77			*e*S	Sb	09 18 55.7	+0.6
TCU	Taichung	0.74	226	*e*P	Pb	09 18 45.4	+0.4
HWA	baz=219 Hwalien	0.76	155	*e*P	Pn	09 18 46.7	+0.1
EOS1	baz=147 EOS1	0.80	98	*e*P	Pn	09 18 46.6	-0.6
EOS1	baz=113			*e*S	Sn	09 18 58.2	-0.7
ENLB	baz=113 Shoufeng	0.82	158	*e*P	Pn	09 18 47.2	-0.3
ENLB	baz=158			*e*S	Sn	09 18 58.4	-1.2
TYC	baz=158 Yuchr	0.84	206	*e*P	Pg	09 18 46.5	-0.1
TYC	baz=195			*e*S	Sn	09 18 59.9	-0.2
SMLT	Sun Moon Lake	0.85	203	*e*P	Pg	09 18 46.6	0.0
ESL	baz=191 Shilin	0.86	170	*e*P	Pb	09 18 47.4	+0.3
ESL	baz=168			*e*S	Sn	09 18 59.7	-0.9
WCHH	baz=168 Zhanghua	0.87	228	*e*P	Pn	09 18 48.0	-0.2
WCHH	baz=222			*e*S	Sn	09 19 01.3	+0.6
VWDT	baz=222 VWDT	0.92	187	⇓P	Pb	09 18 47.6	-0.4
SSLB	baz=182 Suanglung	0.92	198	*e*P	Pb	09 18 47.2	-0.8
SSLB	baz=190			*e*S	Sg	09 18 59.8	-0.2
WJS	baz=190 Zhushan	0.97	210	*e*P	Pn	09 18 50.1	+0.5
WJS	baz=222			*e*S	Sn	09 19 03.9	+0.6
EGFH	baz=222 Guangfu	1.01	171	*e*P	Pn	09 18 50.0	0.0
EGFH	baz=178			*e*S	Sn	09 19 04.7	+0.5
RLNB	baz=178 Erlin	1.13	227	*e*P	Pb	09 18 51.4	-0.2
RLNB	baz=221			*e*S	Sn	09 19 07.6	+0.5
EHY	baz=221 Hungye	1.16	177	*e*P	Pn	09 18 52.4	+0.2
EHY	baz=185			*e*S	Sn	09 19 08.1	+0.2
WDLH	baz=185 Douliu	1.18	214	*e*P	Pb	09 18 52.8	+0.3
HGSD	baz=209 Ruisui	1.18	173	*e*P	Pg	09 18 53.6	+0.7
ALS	baz=170 Alishan	1.23	200	*e*P	Pg	09 18 54.0	+0.2
ALS	baz=213			*e*S	Sg	09 19 11.7	+1.9
YULB	baz=213 Yu-li	1.27	179	*e*P	Pn	09 18 53.9	+0.1
TWF1	baz=183 Yuli	1.31	179	⇓*e*P	Pb	09 18 54.8	0.0
WSF	baz=183 Szhu	1.40	223	*e*P	Pn	09 18 54.9	-0.6
WSF	baz=217			*e*S	Sg	09 19 15.1	-0.2
CHN4	baz=217 Tsaushan	1.45	205	*e*P	Pb	09 18 56.7	-0.3
WLGB	baz=214 Puzi	1.48	217	*e*P	Pn	09 18 55.5	-1.1
TPUB	baz=210 Ta-pu	1.48	203	*e*P	Pn	09 18 56.9	+0.3
ELDTW	baz=214 Lidau	1.49	189	*e*P	Pg	09 18 58.6	-0.2
WTP	baz=206 Ta-pu	1.53	203	*e*P	Pb	09 18 58.6	0.0
JYNG	baz=213 Yonagunijimaku	1.55	98	P	Pb	09 18 58.9	+0.1
JYNG				*e*S	Sg	09 19 20.3	+0.2
TWK	Hsinying	1.56	207	*e*P	Pn	09 18 58.3	+0.5
YOJ	baz=215 Yonaguni jima	1.61	97	*e*P	Pn	09 18 58.9	+0.6
YOJ	baz=86			*e*S	Sb	09 19 20.7	+0.7
YOJ	baz=86 Yonaguni jima	1.61	97	P	Pb	09 18 59.2	-0.6
YOJ				S	Sg	09 19 21.1	-0.8
CHN1	Nanshi	1.62	205	*e*P	Pn	09 18 59.4	+0.8
CHN1	baz=216			*e*S	Sg	09 19 22.2	-0.2
CHN8	baz=216 Yiju	1.63	216	*e*P	Pn	09 18 58.4	-0.3
CHN8	baz=213			*e*S	Sb	09 19 21.4	+0.7
VWUC	baz=213 VWUC	1.68	281	*e*P	Pn	09 18 57.4	-1.9
TWG	baz=275 Pinlang	1.85	185	*e*P	Pb	09 19 03.5	-0.4
TWGBT	baz=185 Beinan	1.85	185	*e*P	Pb	09 19 04.2	+0.2
MATB	baz=185 Ma-tsu	1.90	321	*e*P	Pn	09 19 03.2	+0.8
MATB	baz=313			*e*S	Sn	09 19 26.0	-0.1
PHUB	baz=313 P'eng-hu	1.93	234	*e*P	Pn	09 19 02.9	+0.2
TWH	baz=226 Lutao	1.96	174	*e*P	Pn	09 19 03.6	+0.4
WDGT	baz=160 Dungji	2.03	227	*e*P	Pn	09 19 04.8	+0.7
MASBT	baz=217 Mashibuluo	2.13	196	*e*P	Pn	09 19 06.2	+0.7
VCHM	baz=196 Qimei	2.22	229	*e*P	Pn	09 19 06.4	-0.3
EAST	baz=219 Anshuo	2.31	190	*e*P	Pb	09 19 10.3	-1.4
SCZT	baz=190 Fangliau	2.36	195	*e*P	Pb	09 19 11.4	-1.2
HATJ	baz=195 Hateruma jima	2.40	104	S	Sn	09 19 38.2	-0.3
JKRS	Kuro-shima	2.54	99	P	Pb	09 19 13.7	-2.0
JKRS				S	Sb	09 19 44.9	-2.0
JIJ	Ishigaki jima	2.64	96	P	Pb	09 19 15.7	-1.7
JIJ				S	Sn	09 19 45.5	+1.0
JISG	Ishigakijimahi	2.78	91	P	Pn	09 19 16.5	+2.1
JISG				*e*S	Sn	09 19 49.8	+2.0

DJA 11 09:20:30.0±0.4,8.°S±3.°×12.°2E±.°,h10km,M3.7/9,MLv3.7/9,
Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	Maumere	0.23	149	P	Pg	09 20 36.0	+1.3
MMRI				S	Sg	09 20 39.6	+1.7
EDFI	Ende, Flores	0.53	234	P	Pg	09 20 40.8	+0.5
EDFI				S	Sg	09 20 47.7	+0.5
WSI	Waingapu	2.17	236	P	Pn	09 21 07.1	+0.8
WSI				S	Sb	09 21 35.0	-1.5
BASI	Baing, Sumba	2.33	221	P	Pn	09 21 08.7	+0.2
SOEI	Soe	2.49	122	P	Pn	09 21 11.2	+0.4
WBSI	Waikabubak, Su	2.95	246	P	Pn	09 21 16.8	-0.2
BKSI	Bulukumba	3.68	327	P	Pn	09 21 26.6	-0.4
PLAI	Plampang	4.31	265	P	Pn	09 21 36.7	+1.0

*IDC **11** 09:21:17.0±2.4,35.°44N×141.°87E,h0km,mb3.6/4,*
mb1 3.8/7,mb1mx3.5/75,mbtmp3.8/7,ML3.7/3,MS2.8/2,
Ms1 2.8/2,ms1mx2.3/73,Error ellipse: s-maj=62.9km
s-min=22.0km az=66.0
*ISCJB **11** 09:21:22.3±0.9,35.°22N±0.°05×141.°26E±0.°09,h35km,*
mb3.6/4,MS3.3/1,Error ellipse: s-maj=10.8km
s-min=6.0km az=162.1

JMA 11 09:21:22.6±0.1, 35°.28N×141°.21E, h35km±2km, M3.3
ISC 11 09:21:23.6±1.3, 35°.26N±0°.05×141°.2E±0°.1, h35km, n23, σ1§43/20, mb3.6/4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.54**	**325**	P	**Pn**	**09 21 33.2**	**-1.6**
CHOJ				*e*S	**Sn**	**09 21 40.5**	**-2.2**
BSO1	**Boso 1**	**0.65**	**200**	P	**Pn**	**09 21 35.0**	**-0.8**
BSO1				X		09 21 44.5	
BSO3	**Boso 3**	**0.76**	**233**	P	**Pn**	**09 21 36.7**	**-0.8**
KTR	**Katsuura**	**0.77**	**262**	P	**Pn**	**09 21 36.8**	**-1.1**
KTR				S	**Sn**	**09 21 46.7**	**-1.6**
BSO4	**Boso 4**	**0.79**	**250**	P	**Pn**	**09 21 37.4**	**-0.7**
JCN	**Nagara**	**0.87**	**281**	P	**Pn**	**09 21 38.8**	**-0.5**
JYT	**Yasato**	**1.29**	**319**	P	**Pn**	**09 21 44.4**	**-0.7**
JHJ	**Hachijo jima 2**	**2.46**	**210**	Pn	**Pn**	**09 22 02.0**	**+0.8**
	14nm,0.3s,baz=66,slow=20,SNR=1.2						
JHJ				Sn	**Sn**	**09 22 27.1**	**-2.9**
	40nm,0.3s,baz=38,slow=12,SNR=2.0						
MJAR	**Matsushiro Arr**	**2.77**	**298**	Pn	**Pn**	**09 22 07.2**	**+1.6**
	3.8nm,0.3s,baz=119,slow=8.8,SNR=27						
MJAR				LR	LR	09 23 11.2	
	comp=Z,63nm,19.7s,baz=130,slow=36						
MAT	**Matsushiro**	**2.78**	**298**	P	**Pn**	**09 22 07.7**	**+2.1**
MAT				S	**Sn**	**09 22 38.5**	**+0.6**
JCJ	**Chichijima**	**8.18**	**174**	Pn	**Pn**	**09 23 18.7**	**-1.1**
	4.2nm,0.3s,baz=319,slow=19,SNR=1.5						
H11N2	**WAKE ISLAND Hy 27.40**	**118**		T	T	09 56 07.2	
	baz=310,slow=75,SNR=41						
H11N1	**WAKE ISLAND Hy 27.41**	**118**		T	T	09 56 08.2	
	baz=310,slow=75,SNR=25						
H11N3	**WAKE ISLAND Hy 27.42**	**118**		T	T	09 56 09.0	
	baz=310,slow=75,SNR=25						
H11S1	**WAKE ISLAND Hy 28.05**	**120**		T	T	09 56 41.9	
	baz=312,slow=75,SNR=104						
H11S3	**WAKE ISLAND Hy 28.05**	**120**		T	T	09 56 38.4	
	baz=312,slow=75,SNR=101						
H11S2	**WAKE ISLAND Hy 28.07**	**120**		T	T	09 56 42.0	
	baz=312,slow=75,SNR=80						
ZALV	**Zalesovo Beam**	**43.02**	**314**	P	**P**	**09 29 19.9**	**+0.4**
	1.0nm,0.5s,baz=101,slow=9.6,SNR=3.9						
ZALV	**Zalesovo Beam**	**43.02**	**314**	P	**P**	**09 29 19.9**	**+0.4**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**44.96**	**304**	P	**P**	**09 29 36.2**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=91,slow=6.6,SNR=3.9						
WRA	**Warramunga Arr**	**55.29**	**188**	P	**P**	**09 30 54.0**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=22,slow=7.1,SNR=12						
ASAR	**Alice Springs**	**59.02**	**188**	P	**P**	**09 31 21.3**	**+1.4**
	comp=Z,0.2nm,0.7s,baz=20,slow=11,SNR=1.7						
SPITS	**Spitsbergen Ar**	**62.23**	**349**	LR	LR	09 59 49.5	
	comp=Z,19nm,18.6s,baz=315,slow=37						

NIED 11 09:21:00, 43°.30N×146°.90E, h47km, Mw3.9 Best double couple: M0=7.18000×10^14 NP1:φ=193.00000°, δ=34.00000°, λ=55.00000°. NP2:φ=53.00000°, δ=63.00000°, λ=111.00000°.
MOS 11 09:21:29.0±1.7, 43°.31N×147°.11E, h19km, mb4.4/11, Error ellipse: s-maj=10.5km s-min=7.2km az=109.8
JMA 11 09:21:32.9±0.3, 43°.38N×146°.91E, h40km±4km, M4.1
JMA Felt I J1.
ISCJB 11 09:21:34.2±0.7, 43°.50N±0°.05×146°.84E±0°.06, h55km±4km, mb4.2/21, Error ellipse: s-maj=10.0km s-min=5.0km az=142.0
SKHL 11 09:21:34.6±0.8, 43°.48N×146°.93E, h51km±3km, mb4.6/6
IDC 11 09:21:41.2±1.5, 45°.52N×145°.80E, h0km, mb4.0/14, mb1 4.1/15, mb1mx3.8/73, mbtmp4.0/15, ML3.3/1, Error ellipse: s-maj=40.5km s-min=18.4km az=168.0
NEIC 11 09:21:50.1±1.3, 45°.06N×145°.46E, h81km±13km, mb4.5/5, Error ellipse: s-maj=17.2km s-min=12.7km az=193.0
ISC 11 09:21:34.8±1.1, 43°.48N±0°.07×146°.87E±0°.05, h44km±8km, n99, σ1§38/107, mb4.2/21, 4C-5D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.40**	**356**	*i* P	**Pn**	**09 21 44.0**	**-0.4**
SHO				AMB	AMB	09 21 44.3	
	500nm,0.3s						
SHO				*i* S	**Sn**	**09 21 51.2**	**+0.1**
SHO				A	A	09 21 51.6	
	8μm,0.3s						
SHO				A	A	09 21 51.6	
	1μm,0.3s						
SHO	**Shikotan**	**0.40**	**356**	*d* iPN	**Pn**	**09 21 44.0**	**-0.4**
SHO				*i* S	**Sn**	**09 21 51.2**	**+0.1**
SHO				pmax	pmax		
	comp=N,2μm,0.2s						
SHO				pmax	pmax		
	comp=Z,5μm,0.2s						
SHO				pmax	pmax		
	comp=E,658nm,0.1s						
SHO				smax	smax		
	comp=N,8μm,0.3s						
SHO				smax	smax		
	comp=E,12μm,0.5s						
NEM2	**Nemuro 2**	**0.83**	**263**	P	**Pn**	**09 21 48.6**	**-1.4**
NEM2				*e*S	**Sn**	**09 22 00.2**	**-0.9**
YUK	**Yuzh-Kuril'sk**	**0.92**	**308**	*e*P	**Pn**	**09 21 50.8**	**-0.5**
YUK				AMB	AMB	09 21 51.3	
	comp=E,106nm,0.3s						
YUK				AMB	AMB	09 21 51.3	
	comp=E,222nm,0.3s						
YUK				AMB	AMB	09 21 51.3	
	comp=E,340nm,0.3s						
YUK				*i* S	**Sn**	**09 22 03.2**	**-0.1**
YUK				A	A	09 22 04.4	
	comp=E,397nm,0.2s						
YUK				A	A	09 22 04.4	
	comp=E,710nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**0.92**	**308**	*d* iPN	**Pn**	**09 21 50.8**	**-0.5**
YUK				*i* S	**Sn**	**09 22 03.2**	**-0.1**
YUK				pmax	pmax		
	comp=N,106nm,0.2s						
YUK				pmax	pmax		
	comp=E,221nm,0.2s						
YUK				pmax	pmax		
	comp=Z,3μm,0.2s						
YUK				smax	smax		
	comp=N,4μm,0.3s						
YUK				smax	smax		
	comp=E,709nm,0.4s						
GRPR	**Tuman**	**0.95**	**303**	*e*P	**Pn**	**09 21 50.9**	**-0.8**
GRPR				AMB	AMB	09 21 52.6	
	comp=E,850nm,0.3s						
GRPR				*e*S	**Sn**	**09 22 04.0**	**-0.1**
GRPR				A	A	09 22 04.3	
	comp=E,270nm,0.1s						
GRPR				A	A	09 22 04.3	
	comp=E,570nm,0.1s						
GRPR	**Tuman**	**0.95**	**303**	*e*PN	**Pn**	**09 21 50.9**	**-0.8**
GRPR				*e*S	**Sn**	**09 22 04.0**	**-0.1**
GRPR				pmax	pmax		
	comp=Z,849nm,0.2s						
GRPR				pmax	pmax		
	comp=N,262nm,0.1s						
GRPR				pmax	pmax		
	comp=E,135nm,0.1s						
GRPR				smax	smax		
	comp=N,3μm,0.2s						
GRPR				smax	smax		
	comp=E,6μm,0.4s						
LAGR	**Lagunnoye**	**0.98**	**307**	*e*P	**Pn**	**09 21 51.5**	**-0.5**
LAGR				AMB	AMB	09 21 52.6	
	comp=E,66nm,0.3s						
LAGR				*e*S	**Sn**	**09 22 03.6**	**-1.1**
LAGR				A	A	09 22 05.8	
	comp=E,792nm,0.1s						
LAGR				A	A	09 22 05.8	
	comp=E,701nm,0.1s						
LAGR	**Lagunnoye**	**0.98**	**307**	*e*PN	**Pn**	**09 21 51.5**	**-0.5**
LAGR				*e*S	**Sn**	**09 22 03.6**	**-1.1**
LAGR				pmax	pmax		
	comp=N,167nm,0.1s						
LAGR				pmax	pmax		
	comp=E,156nm,0.1s						
LAGR				pmax	pmax		
	comp=Z,660nm,0.1s						
LAGR				smax	smax		
	comp=E,8μm,0.4s						
LAGR				smax	smax		
	comp=N,7μm,0.2s						
GLVR	**Golovnino**	**1.02**	**285**	*e*P	**Pn**	**09 21 52.0**	**-0.6**
GLVR				AMB	AMB	09 21 54.1	
	comp=N,464nm,0.3s						
GLVR				*e*S	**Sn**	**09 22 04.5**	**-1.2**
GLVR				A	A	09 22 06.3	
	comp=N,200nm,0.1s						
GLVR				A	A	09 22 06.3	
	comp=N,287nm,0.1s						
GLVR	**Golovnino**	**1.02**	**285**	*e*PN	**Pn**	**09 21 52.0**	**-0.6**
GLVR				*e*S	**Sn**	**09 22 04.5**	**-1.2**
GLVR				pmax	pmax		
	comp=Z,464nm,0.1s						
GLVR				smax	smax		
	comp=E,2μm,0.2s						
GLVR				smax	smax		
	comp=N,3μm,0.3s						
JRA	**Rausu**	**1.35**	**291**	P	**Pn**	**09 21 57.0**	**-0.1**
JRA				*e*S	**Sn**	**09 22 14.4**	**+0.6**
JNK	**Nakash**	**1.57**	**275**	P	**Pn**	**09 21 59.3**	**-0.8**
JNK				*e*S	**Sn**	**09 22 18.4**	**-0.9**
JAK	**Akkeshi**	**1.66**	**254**	P	**Pn**	**09 21 59.8**	**-1.6**
KUR	**Kuril'sk**	**1.90**	**22**	*e*P	**Pn**	**09 22 04.3**	**-0.3**
KUR				AMB	AMB	09 22 10.8	
	comp=N,103nm,0.3s						
KUR				*i* S	**Sn**	**09 22 26.8**	**-0.5**
KUR				A	A	09 22 30.7	
	comp=N,260nm,0.3s						
KUR				A	A	09 22 30.7	
	comp=N,440nm,0.3s						
KUR	**Kuril'sk**	**1.90**	**22**	*d* iPN	**Pn**	**09 22 05.8**	**+1.2**
KUR				*e*S	**Sn**	**09 22 27.8**	**+0.5**
KUR				pmax	pmax		
	comp=Z,104nm,0.4s						
KUR				pmax	pmax		
	comp=N,28nm,0.2s						
KUR				pmax	pmax		
	comp=E,62nm,0.2s						
KUR				smax	smax		
	comp=N,411nm,0.3s						
KUR				smax	smax		
	comp=E,256nm,0.3s						
JTKR	**Abashiri--Toko**	**2.20**	**284**	P	**Pn**	**09 22 09.6**	**+0.8**
JAR	**Ashorobuto**	**2.27**	**267**	P	**Pn**	**09 22 09.5**	**-0.2**
JOB	**Onbets**	**2.29**	**257**	P	**Pn**	**09 22 09.4**	**-0.7**
JMP	**Maruseppu**	**2.60**	**283**	P	**Pn**	**09 22 15.2**	**+0.9**
JCH	**Churui**	**2.71**	**253**	P	**Pn**	**09 22 15.2**	**-0.6**
HRK	**Horoka**	**2.73**	**271**	*e*P	**Pn**	**09 22 17.0**	**+0.9**
JKK2	**Kamakawa 2**	**3.02**	**279**	P	**Pn**	**09 22 22.6**	**+2.6**
ERM	**Erimo**	**3.10**	**243**	*e*P	**Pn**	**09 22 22.7**	**+1.5**
ERM	**Erimo**	**3.10**	**243**	*e*Pn	Pn	09 22 42.2	+21
ERM	**Erimo**	**3.10**	**243**	*d* iPN	**Pn**	**09 22 22.7**	**+1.5**
ERM				*i* S	**Sn**	**09 22 59.7**	**+2.8**
JEM	**Erimo**	**3.10**	**243**	P	**Pn**	**09 22 22.6**	**+1.5**
JFR	**Furan**	**3.14**	**266**	P	**Pn**	**09 22 22.3**	**+0.6**
JKA	**Kamikawa-asahi**	**3.16**	**283**	*e*P	**Pn**	**09 22 24.2**	**+2.3**
ASAJ	**Asahikawa**	**3.16**	**283**	Pn	**Pn**	**09 22 24.2**	**+2.2**
	comp=E,3.7nm,0.3s,baz=93,slow=4.9,SNR=24						
ASAJ				Sn	**Sn**	**09 23 04.0**	**+5.5**
	comp=E,3.1nm,0.3s,baz=16,slow=18,SNR=2.6						
ASAJ	**Asahikawa**	**3.16**	**283**	*e*Pn	**Pn**	**09 22 24.1**	**+2.1**
ASAJ				*e*Sn	**Sn**	**09 22 58.1**	**-0.3**
ASAJ				Sn	Sn	09 23 04.0	+5.6
YSS	**Yuzh-Sakhalins**	**4.53**	**322**	*e*P	**Pn**	**09 22 42.9**	**+2.1**
YSS	**Yuzh-Sakhalins**	**4.53**	**322**	*e*Pn	Pn	09 22 31.9	-8.9
YSS	**Yuzh-Sakhalins**	**4.53**	**322**	*e*PN	Pn	09 22 31.9	-8.9
SKR	**Severo-Kuril's**	**9.57**	**38**	*e*P	**Pn**	**09 23 51.2**	**+1.4**
SKR	**Severo-Kuril's**	**9.57**	**38**	⇑*e*PN	**Pn**	**09 23 51.3**	**+1.4**
MAJO	**Matsushiro**	**9.59**	**227**	*e*P	**Pn**	**09 23 51.6**	**+1.3**
MAJO	**Matsushiro**	**9.59**	**227**	*e*PN	**Pn**	**09 23 51.6**	**+1.3**
MSHR	**Mys Shultsa**	**11.54**	**271**	⇑*i*PN	**Pn**	**09 24 17.5**	**+0.7**
HIA	**Hailar**	**19.54**	**297**	*e*P	**Pn**	**09 26 00.1**	**+0.1**
HIA	**Hailar**	**19.54**	**297**	⇑*e*P	**Pn**	**09 26 00.1**	**+0.1**
HIA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SEY	**Seymchan**	**19.75**	**7**	*e*P	**Pn**	**09 26 01.8**	**-0.6**
SEY	**Seymchan**	**19.75**	**7**	⇑*i*P	**Pn**	**09 26 01.8**	**-0.6**
YAK	**Yakutsk**	**21.17**	**337**	*e*P	**P**	**09 26 17.9**	**+2.0**
YAK	**Yakutsk**	**21.17**	**337**	⇑*e*P	**P**	**09 26 18.0**	**+2.0**
YAK				pmax	pmax		
	comp=Z,13nm,0.5s						
BILL	**Biiibino**	**26.68**	**16**	*e*P	**P**	**09 27 09.0**	**-0.2**
BILL	**Biiibino**	**26.68**	**16**	*i* P	**P**	**09 27 09.0**	**-0.2**
BILL				*i*		09 27 49.1	
BILL				pmax	pmax		
	comp=Z,1.0nm,0.9s						
IM3	**Indian Mountai**	**38.98**	**34**	*e*P	**P**	**09 28 56.8**	**+0.4**
ILAR	**Eielson Array**	**41.83**	**36**	P	**P**	**09 29 20.8**	**+0.9**
	comp=Z,0.6nm,0.6s,baz=282,slow=11,SNR=8.7						
EYAK	**Cordova Ski Ar**	**42.74**	**42**	*e*P	P	09 29 37.7	+10
	comp=Z,20μm,0.6s						
MK31	**Makanchi Array**	**44.53**	**298**	*e*P	**P**	**09 29 41.6**	**-0.4**
MK31	**Makanchi Array**	**44.53**	**298**	*e*P	**P**	**09 29 41.6**	**-0.4**
MK32	**Makanchi Array**	**44.53**	**298**	*e*P	**P**	**09 29 41.4**	**-0.6**
MKAR	**Makanchi Array**	**44.53**	**298**	P	**P**	**09 29 41.4**	**-0.6**
	comp=Z,1.4nm,0.5s,baz=82,slow=8.7,SNR=17						
MKAR	**Makanchi Array**	**44.53**	**298**	*e*P	**P**	**09 29 46.7**	**+4.7**
MKAR	**Makanchi Array**	**44.53**	**298**	*e*P	**P**	**09 29 41.6**	**-0.4**
	comp=Z,17nm,0.6s						
MKAR	**Makanchi Array**	**44.53**	**298**	*i* P	**P**	**09 29 46.7**	**+4.7**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MK01	**Makanchi Array**	**44.53**	**298**	*e*P	**P**	**09 29 37.8**	**-4.2**
KURK	**Kurchatov**	**45.52**	**304**	*e*P	**P**	**09 29 47.9**	**-1.7**
KURK	**Kurchatov**	**45.52**	**304**	*e*P	**P**	**09 29 47.9**	**-1.7**
	comp=Z,1.9nm,0.8s						
KURK				*e*P	**P**	**09 29 48.7**	**-0.9**
KURK	**Kurchatov**	**45.52**	**304**	*e*P	**P**	**09 29 47.9**	**-1.7**
KURK				*e*		09 29 48.7	
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURBB	**Kurchatov Arra**	**45.60**	**304**	P	**P**	**09 29 48.7**	**-1.6**
	comp=Z,0.6nm,0.6s,baz=75,slow=8.0,SNR=5.3						
INK	**Inuvik**	**46.74**	**30**	P	**P**	**09 29 59.3**	**+0.2**
	comp=Z,1.2nm,0.3s,baz=298,slow=9.6,SNR=26						
INK	**Inuvik**	**46.74**	**30**	*e*P	**P**	**09 29 59.5**	**+0.5**
INK	**Inuvik**	**46.74**	**30**	*e*P	**P**	**09 29 59.5**	**+0.5**
	comp=Z,2.2nm,0.5s						
INK	**Inuvik**	**46.74**	**30**	*e*P	**P**	**09 29 59.5**	**+0.5**
INK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KK31	**Karatay Array**	**53.66**	**298**	*e*P	**P**	**09 30 51.4**	**-0.4**
KK31	**Karatay Array**	**53.66**	**298**	*e*P	**P**	**09 30 51.4**	**-0.4**
KKAR	**Karatay Array**	**53.66**	**298**	*e*P	**P**	**09 30 51.7**	**-0.1**
KKAR	**Karatay Array**	**53.66**	**298**	*e*P	**P**	**09 30 51.7**	**-0.1**
RES	**Resolute Bay**	**55.29**	**17**	P	**P**	**09 31 03.0**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=342,slow=5.6,SNR=6.1						
RES	**Resolute Bay**	**55.29**	**17**	*e*P	**P**	**09 31 03.0**	**-0.1**
RES	**Resolute Bay**	**55.29**	**17**	P	**P**	**09 31 03.0**	**-0.1**
RES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ARA0	**ARCESS Array S**	**59.43**	**340**	*e*P	**P**	**09 31 31.0**	**-1.4**
ARCES	**ARCESS Array B**	**59.43**	**340**	P	**P**	**09 31 31.0**	**-1.4**
	comp=Z,1.8nm,0.7s,baz=48,slow=7.4,SNR=4.9						
FIA0	**FINESS Array S**	**65.03**	**333**	*e*P	**P**	**09 32 09.6**	**-0.3**
FIA0	**FINESS Array S**	**65.03**	**333**	*e*P	**P**	**09 32 09.6**	**-0.3**
FINES	**FINESS Array B**	**65.03**	**333**	P	**P**	**09 32 09.6**	**-0.3**
	comp=Z,2.4nm,0.6s,baz=38,slow=9.6,SNR=12						
NVAR	**Mina Array Bea**	**67.89**	**58**	P	P	09 32 39.8	+11
	comp=Z,0.2nm,0.5s,baz=292,slow=7.4,SNR=3.7						
MDPB	**Devils Postpil**	**67.91**	**59**	*e*P	P	09 32 40.4	+11
	comp=Z,2.7nm,1.1s						
MMSM	**Mammoth Summit**	**67.94**	**59**	*e*P	P	09 32 39.6	+10
NB2	**NORSAR Subarra**	**69.78**	**339**	P	**P**	**09 32 39.4**	**-0.7**
	comp=Z,2.4nm,0.8s,baz=32,slow=6.5						
NB2	**NORSAR Subarra**	**69.78**	**339**	P	**P**	**09 32 39.3**	**-0.8**
NB2				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NB200	**NORSAR Array S**	**69.78**	**339**	*e*P	**P**	**09 32 39.7**	**-0.4**
NOA	**NORSAR Array B**	**69.78**	**339**	P	**P**	**09 32 39.7**	**-0.4**
	comp=Z,4.2nm,0.6s,baz=32,slow=6.5,SNR=9.0						
HFS	**Hagfors**	**69.86**	**337**	P	**P**	**09 32 40.0**	**-0.5**
	comp=Z,1.5nm,0.3s,baz=60,slow=8.5,SNR=20						
HFS	**Hagfors**	**69.86**	**337**	*e*P	**P**	**09 32 40.0**	**-0.5**
HFS	**Hagfors**	**69.86**	**337**	P	**P**	**09 32 40.0**	**-0.5**
HFS				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PDAR	**Pinedale Array**	**70.24**	**50**	P	P	09 32 51.9	+8.4
	comp=Z,0.3nm,0.5s,baz=343,slow=0.9,SNR=5.4						
HEC	**Hector,Ludlow**	**71.40**	**60**	*e*P	P	09 33 04.3	+14
AKASG	**Malin Array Be**	**71.68**	**324**	P	**P**	**09 32 50.6**	**-1.1**
	comp=Z,0.9nm,0.6s,baz=39,slow=6.4,SNR=7.2						
BUR08	**Bucovina Ar. S**	**75.72**	**324**	*e*P	**P**	**09 33 15.5**	**-0.1**
BUR04	**Bucovina Ar. S**	**75.73**	**324**	*e*P	**P**	**09 33 15.5**	**-0.2**
CLL	**Collm**	**77.46**	**332**	*e*P	**P**	**09 33 25.0**	**-0.2**
	comp=Z,4.0nm,0.9s						
EKA	**Eskdalemuir Ar**	**78.33**	**343**	P	**P**	**09 33 30.1**	**+0.1**
	comp=Z,0.7nm,0.4s,baz=25,slow=5.6,SNR=8.6						
SCIA	**State Center**	**79.32**	**41**	*e*P	P	09 33 45.3	+10
	comp=Z,11nm,0.3s						
TXAR	**Lajitas Array**	**82.97**	**56**	P	P	09 34 07.3	+12
	comp=Z,0.4nm,0.6s,baz=308,slow=4.4,SNR=5.2						
TXAR	**Lajitas Array**	**82.97**	**56**	*e*P	**P**	**09 33 56.2**	**+0.8**
TXAR	**Lajitas Array**	**82.97**	**56**	*e*P	**P**	**09 33 56.2**	**+0.8**

GUC 11 09:22:24.8±0.4, 36°.98S×74°.31W, h11km±13km, ML3.8
IDC 11 09:22:25.1±1.3, 37°.06S×74°.25W, h0km, mb3.7/4, mb1 3.9/5, mb1mx3.7/34, mbtmp3.6/5, ML3.0/1, MS3.6/5, Ms1 3.6/5, ms1mx3.2/34, Error ellipse: s-maj=64.5km s-min=18.8km az=64.0
ISCJB 11 09:22:27.6±0.9, 37°.02S±0°.08×74°.13W±0°.09, h33km, mb3.7/4, MS3.6/4, Error ellipse: s-maj=12.1km s-min=9.2km az=144.4
ISC 11 09:22:30.3±1.1, 36°.99S±0°.08×74°.03W±0°.10, h35km, n14, σ1§42/13, mb3.8/4, MS3.6/4, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCSP	**San Pedro de C**	**0.75**	**79**	*e*S	**Sn**	**09 22 54.3**	**-0.2**
COCH	**Cobquecura**	**1.31**	**50**	*e*P	**Pn**	**09 22 50.0**	**-2.1**
COCH				*e*S	**Sn**	**09 23 08.8**	**+0.4**
CCHI	**Chillan**	**1.61**	**77**	*e*P	**Pn**	**09 22 55.1**	**-1.1**
CCHI				*e*S	**Sn**	**09 23 18.7**	**+2.9**
CCHI				IAML		09 23 41.4	
	comp=N,1μm,1.0s						
GO05	**HualaæØ**	**2.60**	**41**	*e*P	**Pn**	**09 23 09.2**	**-0.7**
GO05				IAML		09 24 17.3	
	comp=E,391nm,1.0s						
LMEL	**Las Melosas**	**4.42**	**46**	*e*P	**Pn**	**09 23 34.9**	**-0.2**
PLCA	**Paso Flores**	**4.62**	**145**	Pn	**Pn**	**09 23 37.1**	**-0.6**
	comp=E,0.1nm,0.3s,baz=340,slow=15,SNR=3.7						
PLCA				Lg	Lg	09 24 56.0	
	comp=E,0.7nm,0.3s,baz=346,slow=6.9,SNR=3.1						
PEL	**Peldehue**	**4.71**	**37**	*e*P	**Pn**	**09 23 37.8**	**-1.1**
CPUP	**Villa Florida**	**17.72**	**58**	LR	LR	09 33 58.3	
	comp=E,209nm,18.9s,baz=230,slow=39						
LPAZ	**La Paz**	**21.27**	**16**	P	**P**	**09 27 14.3**	**+0.1**
	comp=E,1.5nm,0.9s,baz=192,slow=8.0,SNR=4.9						
PMSA	**Palmer Station**	**28.45**	**171**	LR	LR	09 38 56.9	
	comp=E,129nm,18.3s,baz=272,slow=35						
SNAA	**Sanae**	**49.46**	**157**	P	**P**	**09 31 15.5**	**-1.1**
	comp=E,1.6nm,1.1s,baz=281,slow=10,SNR=3.8						
SNAA				LR	LR	09 51 27.7	
	comp=E,33nm,19.1s,baz=350,slow=35						
MAW	**Mawson**	**70.78**	**164**	LR	LR	10 02 51.9	
	comp=E,76nm,21.1s,baz=241,slow=34						
TXAR	**Lajitas Array**	**71.59**	**333**	P	**P**	**09 33 48.2**	**+0.2**
	comp=E,0.6nm,0.9s,baz=147,slow=7.4,SNR=4.5						
PDAR	**Pinedale Array**	**85.72**	**335**	P	**P**	**09 35 07.2**	**+1.5**
	comp=E,1.0nm,1.1s,baz=140,slow=4.4,SNR=5.0						
PDAR				LR	LR	10 07 11.3	
	comp=E,23nm,18.5s,baz=25,slow=31						

ISCJB 11 09:24:22.7±0.6, 40°.66N±0°.04×39°.87E±0°.05, h8km, Error ellipse: s-maj=6.0km s-min=5.3km az=20.8
CSEM 11 09:24:22.8±0.1, 40°.65N×39°.88E, h12km, ML2.5, Error ellipse: s-maj=2.6km s-min=2.3km az=179.0
ISK 11 09:24:22.4, 40°.63N×39°.90E, h16km, ML2.5/4
DDA 11 09:24:23.1, 40°.64N×39°.83E, h7km, Md2.2
ISC 11 09:24:22.7±0.9, 40°.64N±0°.03×39°.88E±0°.03, h8km, n18, σ0§62/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACK	**Trabzon**	**0.31**	**345**	*i* P	**Pg**	**09 24 29.5**	**+0.7**
MACK	**Trabzon**	**0.31**	**345**	P	**Pg**	**09 24 29.5**	**+0.7**
BAYT	**Ayd¨–ntepe-Bay**	**0.32**	**141**	PG	**Pg**	**09 24 29.4**	**+0.3**
BAYT				SG	**Sg**	**09 24 33.9**	**+0.6**
BAYT	**Ayd¨–ntepe-Bay**	**0.32**	**141**	*e*Pg	**Pg**	**09 24 29.4**	**+0.3**
BAYT				*e*Sg	**Sg**	**09 24 33.9**	**+0.6**
GUMT	**Gumushane**	**0.35**	**239**	PG	**Pg**	**09 24 30.1**	**+0.4**
GUMT	**Gumushane**	**0.35**	**239**	*e*Pg	**Pg**	**09 24 30.1**	**+0.4**
KELT	**Kelkit**	**0.69**	**224**	*i* P	**Pb**	**09 24 36.7**	**-0.3**
KELT				*i* S	**Sb**	**09 24 45.5**	**-1.2**
KELT	**Kelkit**	**0.69**	**224**	P	**Pb**	**09 24 36.7**	**-0.3**
KELT				S	**Sb**	**09 24 45.5**	**-1.2**
KOPT	**Kop Dagi**	**0.79**	**143**	*i* P	**Pb**	**09 24 38.5**	**-0.2**
KOPT				*i* S	**Sb**	**09 24 50.4**	**+0.7**
KOPT	**Kop Dagi**	**0.79**	**143**	P	**Pb**	**09 24 38.5**	**-0.2**
KOPT				S	**Sb**	**09 24 50.4**	**+0.7**
CHOM	**Cayeli-Rize**	**0.81**	**56**	PG	**Pb**	**09 24 38.4**	**-0.6**
CHOM	**Cayeli-Rize**	**0.81**	**56**	*e*Pg	**Pb**	**09 24 38.4**	**-0.6**
ESPY	**Espiye-Giresun**	**0.92**	**288**	PG	**Pb**	**09 24 40.9**	**+0.1**
ESPY	**Espiye-Giresun**	**0.92**	**288**	*e*Pg	**Pb**	**09 24 40.9**	**+0.1**
SUSE	**Susehri**	**1.35**	**252**	*i* P	**Pn**	**09 24 47.9**	**-0.1**
SUSE	**Susehri**	**1.35**	**252**	P	**Pn**	**09 24 47.9**	**-0.1**
BCA	**Borcka**	**1.54**	**58**	PN	**Pn**	**09 24 49.9**	**-0.6**
BCA	**Borcka**	**1.54**	**58**	*e*Pn	**Pn**	**09

	comp=E,13250µm,0.5s				
SFI			AML	AML	
	comp=N,15700µm,0.2s				
SFI			AML	AML	
	comp=E,12790µm,0.5s				
SFI			AML	AML	
	comp=N,15250µm,0.2s				
SFI			AML	AML	
	comp=E,13250µm,0.5s				
SFI			AML	AML	
	comp=N,15700µm,0.2s				
SFI			AML	AML	
	comp=E,12780µm,0.5s				
SFI			AML	AML	
	comp=N,15250µm,0.2s				
SFI			AML	AML	
	comp=E,13250µm,0.5s				
SFI			AML	AML	
	comp=N,15700µm,0.2s				
SFI			AML	AML	
	comp=E,12780µm,0.5s				
SFI			AML	AML	
	comp=E,13250µm,0.5s				
SFI			AML	AML	
	comp=N,15250µm,0.2s				
SFI			AML	AML	
	comp=N,15700µm,0.2s				
SEI	**Scarperia**	**0.35 303**	P	**Pn**	**09 48 22.4 +1.1**
SEI			S	**Sn**	**09 48 31.5 +0.8**
SEI	**Scarperia**	**0.35 303**	P	**Pn**	**09 48 22.4 +1.1**
SEI			S	**Sn**	**09 48 31.5 +0.8**
SSP9	**Sansepolcro**	**0.39 137**	P	**Pn**	**09 48 21.3 -0.2**
SSP9			S	**Sn**	**09 48 30.5 -0.6**
SSP9	**Sansepolcro**	**0.39 137**	P	**Pn**	**09 48 21.4 -0.2**
SSP9			S	**Sn**	**09 48 30.5 -0.6**
SSP9			AML	AML	
	comp=E,4020µm,0.9s				
SSP9			AML	AML	
	comp=N,4280µm,0.6s				
SSP9			AML	AML	
	comp=E,4030µm,0.9s				
SSP9			AML	AML	
	comp=N,4275µm,0.6s				
SSP9			AML	AML	
	comp=N,4275µm,0.6s				
SSP9			AML	AML	
	comp=E,4030µm,0.9s				
PARC	**Parchiule**	**0.40 122**	P	**Pn**	**09 48 21.9 +0.2**
PARC			S	**Sn**	**09 48 30.8 -0.5**
PARC	**Parchiule**	**0.40 122**	P	**Pn**	**09 48 21.9 +0.2**
PARC			S	**Sn**	**09 48 30.8 -0.5**
PARC			AML	AML	
	comp=E,3295µm,0.6s				
PARC			AML	AML	
	comp=N,5075µm,0.5s				
PARC			AML	AML	
	comp=E,3295µm,0.6s				
PARC			AML	AML	
	comp=N,5075µm,0.5s				
PARC			AML	AML	
	comp=N,5075µm,0.5s				
PARC			AML	AML	
	comp=E,3295µm,0.6s				
CPGN	**Carpegna, Ital**	**0.41 99**	P	**Pn**	**09 48 22.7 +0.9**
CPGN	**Carpegna, Ital**	**0.41 99**	P	**Pn**	**09 48 22.7 +0.9**
CPGN			AML	AML	
	comp=E,6095µm,0.8s				
CPGN			AML	AML	
	comp=N,8185µm,0.5s				
CPGN			AML	AML	
	comp=E,5335µm,1.4s				
CPGN			AML	AML	
	comp=N,8350µm,0.5s				
CPGN			AML	AML	
	comp=E,6095µm,0.8s				
CPGN			AML	AML	
	comp=N,8180µm,0.5s				
CPGN			AML	AML	
	comp=E,5320µm,1.4s				
CPGN			AML	AML	
	comp=N,8350µm,0.5s				
CPGN			AML	AML	
	comp=E,6095µm,0.8s				
CPGN			AML	AML	
	comp=N,8180µm,0.5s				
CPGN			AML	AML	
	comp=E,5320µm,1.4s				
CPGN			AML	AML	
	comp=N,8350µm,0.5s				
CPGN			AML	AML	
	comp=N,8350µm,0.5s				
CPGN			AML	AML	
	comp=N,8180µm,0.5s				
CPGN			AML	AML	
	comp=E,6095µm,0.8s				
CPGN			AML	AML	
	comp=E,5320µm,1.4s				
ATCA	**Cantone**	**0.47 129**	P	**Pn**	**09 48 22.2 0.0**
ATCA			S	**Sn**	**09 48 31.1 -1.1**
ATCA	**Cantone**	**0.47 129**	P	**Pn**	**09 48 22.2 0.0**
ATCA			S	**Sn**	**09 48 31.1 -1.1**
BADI	**Badiali**	**0.49 135**	⇑P	**Pn**	**09 48 22.1 -0.3**
BADI			S	**Sn**	**09 48 31.3 -1.2**
BADI	**Badiali**	**0.49 135**	P	**Pn**	**09 48 22.1 -0.3**
BADI			S	**Sn**	**09 48 31.3 -1.2**
BADI			AML	AML	
	comp=E,9470µm,0.5s				
BADI			AML	AML	
	comp=N,10835µm,0.5s				
BADI			AML	AML	
	comp=E,9460µm,0.5s				
BADI			AML	AML	
	comp=N,10830µm,0.5s				
BADI			AML	AML	
	comp=E,9460µm,0.5s				
BADI			AML	AML	
	comp=N,10830µm,0.5s				
BADI			AML	AML	
	comp=E,9460µm,0.5s				
BADI			AML	AML	
	comp=N,10830µm,0.5s				
IMOL	**Imola, Italy**	**0.50 358**	P	**Pn**	**09 48 23.7 +1.3**
IMOL	**Imola, Italy**	**0.50 358**	P	**Pn**	**09 48 23.7 +1.3**
IMOL			AML	AML	
	comp=E,16850µm,0.3s				
IMOL			AML	AML	
	comp=N,13005µm,0.5s				
IMOL			AML	AML	
	comp=E,1495µm,0.3s				
IMOL			AML	AML	
	comp=N,1380µm,0.5s				
IMOL			AML	AML	
	comp=E,1495µm,0.3s				
IMOL			AML	AML	
	comp=N,1380µm,0.5s				
IMOL			AML	AML	
	comp=E,16850µm,0.3s				
IMOL			AML	AML	
	comp=N,13005µm,0.5s				
RSM	**Repubblica di**	**0.50 82**	P	**Pn**	**09 48 23.3 +0.8**
RSM			S	**Sn**	**09 48 33.6 +1.0**
RSM			AML	AML	
	comp=E,2820µm,0.7s				
RSM			AML	AML	
	comp=N,4270µm,0.5s				
RSM			AML	AML	
	comp=E,2820µm,0.7s				
RSM			AML	AML	
	comp=N,4270µm,0.5s				
RSM			AML	AML	
	comp=E,2820µm,0.7s				
RSM			AML	AML	
	comp=N,4270µm,0.5s				
RSM			AML	AML	
	comp=E,2820µm,0.7s				
RSM			AML	AML	
	comp=N,4270µm,0.5s				
PTF	**Prato**	**0.51 281**	⇑P	**Pn**	**09 48 22.5 -0.1**
PTF			S	**Sn**	**09 48 31.6 -1.2**
PTF	**Prato**	**0.51 281**	P	**Pn**	**09 48 22.5 -0.1**
PTF			S	**Sn**	**09 48 31.6 -1.2**
ATMC	**Monte Cedrone**	**0.52 143**	⇑P	**Pn**	**09 48 21.0 -1.7**
ATMC			S	**Sn**	**09 48 31.2 -1.8**
ATMC	**Monte Cedrone**	**0.52 143**	P	**Pn**	**09 48 22.0 -0.7**
ATMC			S	**Sn**	**09 48 31.1 -1.8**
ATMC			AML	AML	
	comp=E,17100µm,0.5s				
ATMC			AML	AML	
	comp=N,11450µm,0.5s				
ATMC			AML	AML	
	comp=E,17100µm,0.5s				
ATMC			AML	AML	
	comp=N,11450µm,0.5s				
ATMC			AML	AML	
	comp=E,17100µm,0.5s				
ATMC			AML	AML	
	comp=N,11450µm,0.5s				
ATMC			AML	AML	
	comp=E,17100µm,0.5s				
ATMC			AML	AML	
	comp=N,11450µm,0.5s				
CDCA	**Citt' di Caste**	**0.53 140**	P	**Pn**	**09 48 22.1 -0.5**
CDCA			S	**Sn**	**09 48 31.2 -1.7**
CDCA	**Citt' di Caste**	**0.53 140**	P	**Pn**	**09 48 22.1 -0.5**
CDCA			S	**Sn**	**09 48 31.2 -1.7**
CDCA			AML	AML	
	comp=E,13850µm,0.4s				
CDCA			AML	AML	
	comp=N,20950µm,0.9s				
CDCA			AML	AML	
	comp=E,5665µm,0.7s				
CDCA			AML	AML	
	comp=N,6605µm,0.7s				
CDCA			AML	AML	
	comp=E,13800µm,0.4s				
CDCA			AML	AML	
	comp=N,20950µm,0.9s				
CDCA			AML	AML	
	comp=E,5665µm,0.7s				
CDCA			AML	AML	
	comp=N,6605µm,0.7s				
CDCA			AML	AML	
	comp=E,13850µm,0.4s				
CDCA			AML	AML	
	comp=N,21000µm,0.9s				
CDCA			AML	AML	
	comp=E,5660µm,0.7s				
CDCA			AML	AML	
	comp=N,6600µm,0.7s				
CDCA			AML	AML	
	comp=N,6600µm,0.7s				
CDCA			AML	AML	
	comp=N,21000µm,0.9s				
CDCA			AML	AML	
	comp=E,13850µm,0.4s				
CDCA			AML	AML	
	comp=E,5660µm,0.7s				
CAFI	**Castiglion Fio**	**0.55 165**	⇑P	**Pn**	**09 48 22.4 -0.5**
CAFI			S	**Sn**	**09 48 31.4 -2.0**
CAFI	**Castiglion Fio**	**0.55 165**	P	**Pn**	**09 48 22.4 -0.5**
CAFI			S	**Sn**	**09 48 31.4 -2.0**
CAFI			AML	AML	
	comp=E,2990µm,0.6s				
CAFI			AML	AML	
	comp=N,3735µm,0.2s				
CAFI			AML	AML	
	comp=E,3110µm,0.6s				
CAFI			AML	AML	
	comp=N,4050µm,0.2s				
CAFI			AML	AML	
	comp=E,2990µm,0.6s				
CAFI			AML	AML	
	comp=N,3735µm,0.2s				
CAFI			AML	AML	
	comp=E,3110µm,0.6s				
CAFI			AML	AML	
	comp=N,4050µm,0.2s				
CAFI			AML	AML	
	comp=N,4050µm,0.2s				
CAFI			AML	AML	
	comp=N,3735µm,0.2s				
CAFI			AML	AML	
	comp=E,3110µm,0.6s				
CAFI			AML	AML	
	comp=E,2990µm,0.6s				
FNVD	**Fontana Vidola**	**0.56 303**	P	**Pn**	**09 48 23.7 +0.7**
FNVD	**Fontana Vidola**	**0.56 303**	P	**Pn**	**09 48 23.7 +0.7**
FNVD			AML	AML	
	comp=E,5805µm,0.7s				
FNVD			AML	AML	
	comp=N,4400µm,0.4s				
FNVD			AML	AML	
	comp=E,5805µm,0.7s				
FNVD			AML	AML	
	comp=N,4400µm,0.4s				
MTRZ	**Monterenzio**	**0.56 337**	P	**Pn**	**09 48 24.3 +1.3**
MTRZ	**Monterenzio**	**0.56 337**	P	**Pn**	**09 48 24.3 +1.3**
MTRZ			AML	AML	
	comp=E,11250µm,0.5s				
MTRZ			AML	AML	
	comp=N,13450µm,0.4s				
MTRZ			AML	AML	
	comp=E,11800µm,0.5s				
MTRZ			AML	AML	
	comp=N,13700µm,0.3s				
MTRZ			AML	AML	
	comp=E,11300µm,0.5s				
MTRZ			AML	AML	
	comp=N,13450µm,0.4s				
MTRZ			AML	AML	
	comp=E,11800µm,0.5s				
MTRZ			AML	AML	
	comp=N,13700µm,0.3s				
MTRZ			AML	AML	
	comp=E,11300µm,0.5s				
MTRZ			AML	AML	
	comp=N,13450µm,0.4s				
MTRZ			AML	AML	
	comp=E,11800µm,0.5s				
MTRZ			AML	AML	
	comp=N,13700µm,0.3s				
MTRZ			AML	AML	
	comp=E,11300µm,0.5s				
MTRZ			AML	AML	
	comp=N,13450µm,0.4s				
MTRZ			AML	AML	
	comp=E,11800µm,0.5s				
MTRZ			AML	AML	
	comp=N,13700µm,0.3s				
MTRZ			AML	AML	
	comp=N,13450µm,0.4s				
BLLA	**Bellaria**	**0.58 61**	P	**Pn**	**09 48 23.5 +0.4**
BLLA			S	**Sn**	**09 48 35.3 +1.5**
BLLA	**Bellaria**	**0.58 61**	P	**Pn**	**09 48 23.5 +0.4**
BLLA			S	**Sn**	**09 48 35.3 +1.5**
BLLA			AML	AML	
	comp=E,4560µm,1.6s				
BLLA			AML	AML	
	comp=N,3115µm,1.5s				
BLLA			AML	AML	
	comp=N,3115µm,1.5s				
BLLA			AML	AML	
	comp=E,4560µm,1.6s				
CRMI	**Carmignano**	**0.58 263**	⇓P	**Pn**	**09 48 22.9 -0.3**
CRMI			S	**Sn**	**09 48 32.2 -1.7**
CRMI	**Carmignano**	**0.58 263**	P	**Pn**	**09 48 22.9 -0.3**
CRMI			S	**Sn**	**09 48 32.2 -1.7**
CRMI			AML	AML	
	comp=E,2930µm,0.4s				
CRMI			AML	AML	
	comp=N,2235µm,0.8s				
CRMI			AML	AML	
	comp=E,2930µm,0.4s				
CRMI			AML	AML	
	comp=N,2235µm,0.8s				
CRMI			AML	AML	
	comp=E,2930µm,0.4s				
CRMI			AML	AML	
	comp=N,2235µm,0.8s				
ATPI	**Pietralunga -**	**0.62 132**	⇑P	**Pn**	**09 48 23.5 -0.1**
ATPI			S	**Sn**	**09 48 33.5 -1.1**
ATPI	**Pietralunga -**	**0.62 132**	P	**Pn**	**09 48 23.5 -0.1**
ATPI			S	**Sn**	**09 48 33.5 -1.1**
ATPI			AML	AML	
	comp=E,10130µm,0.3s				
ATPI			AML	AML	
	comp=N,10175µm,0.4s				
ATPI			AML	AML	
	comp=E,10135µm,0.3s				
ATPI			AML	AML	
	comp=N,10180µm,0.4s				
ATPI			AML	AML	
	comp=N,10180µm,0.4s				
ATPI			AML	AML	
	comp=E,10135µm,0.3s				
ATPC	**Poggio Castell**	**0.63 127**	⇑P	**Pn**	**09 48 23.9 +0.2**
ATPC			S	**Sn**	**09 48 34.2 -0.6**
ATPC	**Poggio Castell**	**0.63 127**	P	**Pn**	**09 48 23.9 +0.2**
ATPC			S	**Sn**	**09 48 34.2 -0.6**
ATPC			AML	AML	
	comp=E,2585µm,0.2s				
ATPC			AML	AML	
	comp=N,11555µm,0.4s				
ATPC			AML	AML	
	comp=E,9145µm,0.2s				
ATPC			AML	AML	
	comp=N,11835µm,0.4s				
ATPC			AML	AML	
	comp=E,2585µm,0.2s				
ATPC			AML	AML	
	comp=N,11520µm,0.4s				
ATPC			AML	AML	
	comp=E,9145µm,0.2s				
ATPC			AML	AML	
	comp=N,11835µm,0.4s				
ATPC			AML	AML	
	comp=N,11835µm,0.4s				
ATPC			AML	AML	
	comp=N,11520µm,0.4s				
ATPC			AML	AML	
	comp=E,9145µm,0.2s				
ATPC			AML	AML	
	comp=E,2585µm,0.2s				
NARO	**Abbazia di Nar**	**0.64 113**	P	**Pn**	**09 48 24.2 +0.5**
NARO			S	**Sn**	**09 48 34.9 0.0**
NARO	**Abbazia di Nar**	**0.64 113**	P	**Pn**	**09 48 24.2 +0.5**
NARO			S	**Sn**	**09 48 34.9 0.0**
NARO			AML	AML	
	comp=E,3200µm,0.6s				
NARO			AML	AML	
	comp=N,3940µm,1.0s				
NARO			AML	AML	
	comp=E,3200µm,0.6s				
NARO			AML	AML	
	comp=N,3935µm,1.0s				
NARO			AML	AML	
	comp=E,3200µm,0.6s				
NARO			AML	AML	
	comp=N,3935µm,1.0s				
PIEI	**Pieia**	**0.65 120**	P	**Pn**	**09 48 24.7 +0.9**
PIEI	**Pieia**	**0.65 120**	P	**Pn**	**09 48 24.7 +0.9**
PIEI			AML	AML	
	comp=E,4010µm,0.3s				
PIEI			AML	AML	
	comp=N,3555µm,0.4s				
PIEI			AML	AML	
	comp=E,4010µm,0.3s				
PIEI			AML	AML	
	comp=N,3555µm,0.4s				
PIEI			AML	AML	
	comp=N,3555µm,0.4s				
PIEI			AML	AML	
	comp=E,4010µm,0.3s				
ATVO	**AVT- Monte Val**	**0.67 136**	⇑P	**Pn**	**09 48 23.9 -0.2**
ATVO			S	**Sn**	**09 48 34.0 -1.4**
ATVO	**AVT- Monte Val**	**0.67 136**	P	**Pn**	**09 48 23.9 -0.2**
ATVO			S	**Sn**	**09 48 34.0 -1.4**
ATVO			AML	AML	
	comp=E,6690µm,1.6s				
ATVO			AML	AML	
	comp=N,7125µm,0.5s				
ATVO			AML	AML	
	comp=E,6690µm,1.6s				
ATVO			AML	AML	
	comp=N,7125µm,0.5s				
ATVO			AML	AML	
	comp=N,7125µm,0.5s				
ATVO			AML	AML	
	comp=E,6690µm,1.6s				
ATBU	**Serra di Buran**	**0.69 124**	⇑P	**Pn**	**09 48 24.8 +0.5**
ATBU	**Serra di Buran**	**0.69 124**	P	**Pn**	**09 48 24.8 +0.5**
ATBU			AML	AML	
	comp=E,7595µm,0.4s				
ATBU			AML	AML	
	comp=N,7515µm,0.3s				
ATBU			AML	AML	
	comp=E,7595µm,0.4s				
ATBU			AML	AML	
	comp=N,7520µm,0.3s				
ATBU			AML	AML	
	comp=N,7520µm,0.3s				
ATBU			AML	AML	
	comp=E,7595µm,0.4s				
ATVA	**AVT- Monte Val**	**0.69 147**	⇑P	**Pn**	**09 48 23.9 -0.4**
ATVA	**AVT- Monte Val**	**0.69 147**	P	**Pn**	**09 48 23.9 -0.4**
ATVA			S	**Sn**	**09 48 34.0 -1.9**
ATVA			AML	AML	
	comp=E,3190µm,0.4s				
ATVA			AML	AML	
	comp=N,4890µm,0.6s				
ATVA			AML	AML	
	comp=E,3190µm,0.4s				
ATVA			AML	AML	
	comp=N,4890µm,0.6s				
ATVA			AML	AML	
	comp=N,4890µm,0.6s				
ATVA			AML	AML	
	comp=E,3190µm,0.4s				
CMPO	**Campotto Po**	**0.72 2**	⇑*i*P	**Pn**	**09 48 25.8 +1.3**
CMPO	**Campotto Po**	**0.72 2**	*i* P	**Pn**	**09 48 25.8 +1.3**
CMPO			AML	AML	
	comp=E,11150µm,0.5s				
CMPO			AML	AML	
	comp=N,10545µm,1.4s				
CMPO			AML	AML	
	comp=N,10545µm,1.4s				
CMPO			AML	AML	
	comp=E,11150µm,0.5s				
ZCCA	**Zocca**	**0.75 311**	⇓*i*P	**Pn**	**09 48 27.1 +2.2**
ZCCA	**Zocca**	**0.75 311**	*i* P	**Pn**	**09 48 27.1 +2.2**
ZCCA			AML	AML	
	comp=E,1310µm,0.5s				
ZCCA			AML	AML	
	comp=N,1124µm,0.4s				
ZCCA			AML	AML	
	comp=E,1304µm,0.8s				
ZCCA			AML	AML	
	comp=N,1102µm,0.4s				
ZCCA			AML	AML	
	comp=E,1304µm,0.8s				
ZCCA			AML	AML	
	comp=E,1310µm,0.5s				
ZCCA			AML	AML	
	comp=N,1124µm,0.4s				
ZCCA			AML	AML	
	comp=N,1102µm,0.4s				
FSSB	**Fossombrone**	**0.75 103**	⇑P	**Pn**	**09 48 25.2 +0.3**
FSSB			S	**Sn**	**09 48 36.9 0.0**
FSSB	**Fossombrone**	**0.75 103**	P	**Pn**	**09 48 25.2 +0.3**
FSSB			S	**Sn**	**09 48 36.9 0.0**
FSSB			AML	AML	
	comp=E,30800µm,0.2s				
FSSB			AML	AML	
	comp=N,19050µm,0.3s				
FSSB			AML	AML	
	comp=E,30800µm,0.2s				
FSSB			AML	AML	
	comp=N,19050µm,0.3s				
FSSB			AML	AML	
	comp=N,19050µm,0.3s				
FSSB			AML	AML	
	comp=E,30800µm,0.2s				
POPM	**Popiglio**	**0.75 284**	P	**Pn**	**09 48 24.9 0.0**
POPM	**Popiglio**	**0.75 284**	P	**Pn**	**09 48 24.9 0.0**
POPM			AML	AML	
	comp=E,4690µm,0.3s				
POPM			AML	AML	
	comp=N,3935µm,0.2s				
POPM			AML	AML	
	comp=E,4690µm,0.3s				
POPM			AML	AML	
	comp=N,3935µm,0.2s				
POPM			AML	AML	
	comp=E,4690µm,0.3s				
POPM			AML	AML	
	comp=N,3935µm,0.2s				
FRON	**Frontone**	**0.78 116**	P	**Pn**	**09 48 25.7 +0.5**
FRON			S	**Sn**	**09 48 37.7 +0.3**
FRON	**Frontone**	**0.78 116**	P	**Pn**	**09 48 25.7 +0.5**
FRON			S	**Sn**	**09 48 37.7 +0.3**
FRON			AML	AML	
	comp=E,3765µm,1.3s				
FRON			AML	AML	

	comp=N,3755μm,0.8s					
FRON				AML	AML	
	comp=N,3755μm,0.8s					
FRON				AML	AML	
	comp=E,3765μm,1.3s					
PESA	**Pesaro**	**0.78 84**	⇑P	**Pn**	**09 48 25.4 +0.2**	
PESA	**Pesaro**	**0.78 84**	P	**Pn**	**09 48 25.4 +0.2**	
PESA				AML	AML	
	comp=E,14300μm,0.2s					
PESA				AML	AML	
	comp=N,17750μm,0.2s					
PESA				AML	AML	
	comp=E,14300μm,0.2s					
PESA				AML	AML	
	comp=N,17750μm,0.2s					
PESA				AML	AML	
	comp=E,14300μm,0.2s					
PESA				AML	AML	
	comp=N,17750μm,0.2s					
ATTE	**AVT- Monte Tez**	**0.79 147**	P	**Pn**	**09 48 25.3 -0.1**	
ATTE			S	**Sn**	**09 48 35.9 -1.9**	
ATTE	**AVT- Monte Tez**	**0.79 147**	P	**Pn**	**09 48 25.3 -0.1**	
ATTE			S	**Sn**	**09 48 35.9 -1.9**	
ATTE				AML	AML	
	comp=E,3340μm,0.3s					
ATTE				AML	AML	
	comp=N,3685μm,1.1s					
ATTE				AML	AML	
	comp=E,3340μm,0.3s					
ATTE				AML	AML	
	comp=N,3685μm,1.1s					
ATTE				AML	AML	
	comp=E,3340μm,0.3s					
ATTE				AML	AML	
	comp=N,3685μm,1.1s					
FROS	**Frosini**	**0.79 214**	⇓P	**Pn**	**09 48 24.7 -0.6**	
FROS	**Frosini**	**0.79 214**	P	**Pn**	**09 48 24.7 -0.6**	
FROS				AML	AML	
	comp=E,2035μm,1.4s					
FROS				AML	AML	
	comp=N,1730μm,1.0s					
FROS				AML	AML	
	comp=E,2035μm,1.4s					
FROS				AML	AML	
	comp=N,1730μm,1.0s					
FROS				AML	AML	
	comp=N,1730μm,1.0s					
FROS				AML	AML	
	comp=E,2035μm,1.4s					
MURB	**Monte Urbino**	**0.81 137**	⇓P	**Pn**	**09 48 25.6 0.0**	
MURB			S	**Sn**	**09 48 37.2 -1.0**	
MURB	**Monte Urbino**	**0.81 137**	P	**Pn**	**09 48 25.6 0.0**	
MURB			S	**Sn**	**09 48 37.2 -1.0**	
MURB				AML	AML	
	comp=E,18900μm,0.9s					
MURB				AML	AML	
	comp=N,18400μm,0.3s					
MURB				AML	AML	
	comp=E,20650μm,0.3s					
MURB				AML	AML	
	comp=N,19450μm,1.0s					
MURB				AML	AML	
	comp=E,18950μm,0.9s					
MURB				AML	AML	
	comp=N,18400μm,0.3s					
MURB				AML	AML	
	comp=E,20650μm,0.3s					
MURB				AML	AML	
	comp=N,19450μm,1.0s					
MURB				AML	AML	
	comp=N,18400μm,0.3s					
MURB				AML	AML	
	comp=E,20650μm,0.3s					
MURB				AML	AML	
	comp=E,18950μm,0.9s					
MURB				AML	AML	
	comp=N,19450μm,1.0s					
SSFR	**Montelago di S**	**0.85 120**	P	**Pn**	**09 48 26.6 +0.5**	
SSFR			S	**Sn**	**09 48 39.7 +0.7**	
SSFR	**Montelago di S**	**0.85 120**	P	**Pn**	**09 48 26.6 +0.5**	
SSFR			S	**Sn**	**09 48 39.7 +0.7**	
SSFR				AML	AML	
	comp=E,16000μm,0.2s					
SSFR				AML	AML	
	comp=N,12250μm,0.6s					
SSFR				AML	AML	
	comp=N,12250μm,0.6s					
SSFR				AML	AML	
	comp=E,16000μm,0.2s					
BDI	**Bagni Di Lucca**	**0.87 284**	P	**Pn**	**09 48 26.2 -0.1**	
BDI	**Bagni Di Lucca**	**0.87 284**	P	**Pn**	**09 48 26.2 -0.1**	
BDI				AML	AML	
	comp=E,2385μm,0.4s					
BDI				AML	AML	
	comp=N,1585μm,1.1s					
BDI				AML	AML	
	comp=E,2340μm,0.4s					
BDI				AML	AML	
	comp=N,1475μm,0.7s					
BDI				AML	AML	
	comp=E,2340μm,0.4s					
BDI				AML	AML	
	comp=E,2385μm,0.4s					
BDI				AML	AML	
	comp=N,1475μm,0.7s					
BDI				AML	AML	
	comp=N,1585μm,1.1s					
COR1	**Corinaldo**	**0.92 104**	P	**Pn**	**09 48 27.8 +1.0**	
COR1	**Corinaldo**	**0.92 104**	P	**Pn**	**09 48 27.8 +1.0**	
COR1				AML	AML	
	comp=E,8035μm,0.9s					
COR1				AML	AML	
	comp=N,5860μm,1.2s					
COR1				AML	AML	
	comp=N,5860μm,1.2s					
COR1				AML	AML	
	comp=E,8035μm,0.9s					
MAIM	**Mastiano**	**0.92 274**	⇓*i*P	**Pn**	**09 48 26.9 +0.1**	
MAIM	**Mastiano**	**0.92 274**	*i* P	**Pn**	**09 48 26.9 +0.1**	
MAIM				AML	AML	
	comp=E,1680μm,0.3s					
MAIM				AML	AML	
	comp=N,3310μm,0.2s					
MAIM				AML	AML	
	comp=E,1680μm,0.3s					
MAIM				AML	AML	
	comp=N,3310μm,0.2s					
ARVD	**Arcevia**	**0.93 113**	⇑P	**Pn**	**09 48 27.5 +0.6**	
ARVD	**Arcevia**	**0.93 113**	P	**Pn**	**09 48 27.5 +0.6**	
ARVD				AML	AML	
	comp=E,3415μm,0.3s					
ARVD				AML	AML	
	comp=N,1990μm,0.9s					
ARVD				AML	AML	
	comp=E,3415μm,0.3s					
ARVD				AML	AML	
	comp=N,1990μm,0.9s					
ATCC	**AVT- Casa Cast**	**0.93 137**	P	**Pn**	**09 48 26.9 0.0**	
ATCC	**AVT- Casa Cast**	**0.93 137**	P	**Pn**	**09 48 26.9 0.0**	
ATCC				AML	AML	
	comp=E,5760μm,0.3s					
ATCC				AML	AML	
	comp=N,5610μm,0.3s					
ATCC				AML	AML	
	comp=E,5755μm,0.3s					
ATCC				AML	AML	
	comp=N,5615μm,0.3s					
ATCC				AML	AML	
	comp=N,5615μm,0.3s					
ATCC				AML	AML	
	comp=E,5755μm,0.3s					
TRIF	**Trifonti**	**0.98 220**	P	**Pn**	**09 48 27.2 -0.3**	
TRIF	**Trifonti**	**0.98 220**	P	**Pn**	**09 48 27.2 -0.3**	
TRIF				AML	AML	
	comp=E,818μm,0.4s					
TRIF				AML	AML	
	comp=N,689μm,0.9s					
TRIF				AML	AML	
	comp=E,818μm,0.4s					
TRIF				AML	AML	
	comp=N,689μm,0.9s					
TRIF				AML	AML	
	comp=E,818μm,0.4s					
TRIF				AML	AML	
	comp=N,689μm,0.9s					
MGAB	**Montegabbione**	**0.98 165**	⇓P	**Pn**	**09 48 27.1 -0.5**	
MGAB	**Montegabbione**	**0.98 165**	P	**Pn**	**09 48 27.1 -0.5**	
MGAB				AML	AML	
	comp=E,1955μm,0.3s					
MGAB				AML	AML	
	comp=N,1465μm,0.5s					
MGAB				AML	AML	
	comp=E,2265μm,0.3s					
MGAB				AML	AML	
	comp=N,1515μm,0.7s					
MGAB				AML	AML	
	comp=N,1465μm,0.5s					
MGAB				AML	AML	
	comp=N,1515μm,0.7s					
MGAB				AML	AML	
	comp=E,1955μm,0.3s					
MGAB				AML	AML	
	comp=E,2265μm,0.3s					
RAVA	**Ravarino**	**1.01 333**	P	**Pn**	**09 48 29.7 +1.9**	
RAVA	**Ravarino**	**1.01 333**	P	**Pn**	**09 48 29.7 +1.9**	
RAVA				AML	AML	
	comp=E,7815μm,1.0s					
RAVA				AML	AML	
	comp=N,6370μm,0.2s					
RAVA				AML	AML	
	comp=N,6370μm,0.2s					
RAVA				AML	AML	
	comp=E,7815μm,1.0s					
T0822	**Casumaru (Bond**	**1.02 343**	P	**Pn**	**09 48 28.9 +1.0**	
T0822	**Casumaru (Bond**	**1.02 343**	P	**Pn**	**09 48 28.9 +1.0**	
T0822				AML	AML	
	comp=E,8450μm,0.3s					
T0822				AML	AML	
	comp=N,5435μm,0.3s					
T0822				AML	AML	
	comp=N,5435μm,0.3s					
T0822				AML	AML	
	comp=E,8450μm,0.3s					
SACS	**San Casciano d**	**1.02 174**	P	**Pn**	**09 48 27.5 -0.5**	
SACS				AML	AML	
	comp=E,716μm,0.7s					
SACS				AML	AML	
	comp=N,854μm,0.4s					
SACS				AML	AML	
	comp=E,722μm,0.8s					
SACS				AML	AML	
	comp=N,860μm,0.4s					
SACS				AML	AML	
	comp=E,716μm,0.7s					
SACS				AML	AML	
	comp=E,722μm,0.8s					
SACS				AML	AML	
	comp=N,860μm,0.4s					
SACS				AML	AML	
	comp=N,854μm,0.4s					
ARCI	**Arcidosso**	**1.03 192**	P	**Pn**	**09 48 27.7 -0.5**	
ARCI	**Arcidosso**	**1.03 192**	P	**Pn**	**09 48 27.7 -0.5**	
ARCI				AML	AML	
	comp=E,510μm,1.0s					
ARCI				AML	AML	
	comp=N,822μm,0.4s					
ARCI				AML	AML	
	comp=E,510μm,1.0s					
ARCI				AML	AML	
	comp=N,822μm,0.4s					
ARCI				AML	AML	
	comp=N,822μm,0.4s					
ARCI				AML	AML	
	comp=E,510μm,1.0s					
VLC	**Villacollemand**	**1.04 287**	⇓*i*P	**Pn**	**09 48 28.5 +0.3**	
VLC	**Villacollemand**	**1.04 287**	*i* P	**Pn**	**09 48 28.5 +0.3**	
VLC				AML	AML	
	comp=E,857μm,0.4s					
VLC				AML	AML	
	comp=N,825μm,0.5s					
VLC				AML	AML	
	comp=E,857μm,0.4s					
VLC				AML	AML	
	comp=N,825μm,0.5s					
SNTG	**Esanatoglia**	**1.05 125**	⇓P	**Pn**	**09 48 29.3 +1.0**	
SNTG	**Esanatoglia**	**1.05 125**	P	**Pn**	**09 48 29.3 +1.0**	
SNTG				AML	AML	
	comp=E,1755μm,0.8s					
SNTG				AML	AML	
	comp=N,2210μm,0.2s					
SNTG				AML	AML	
	comp=N,2210μm,0.2s					
SNTG				AML	AML	
	comp=E,1755μm,0.8s					
T0800	**Massa Finalese**	**1.05 339**	P	**Pn**	**09 48 29.5 +1.2**	
T0800	**Massa Finalese**	**1.05 339**	P	**Pn**	**09 48 29.6 +1.2**	
T0800				AML	AML	
	comp=E,13300μm,0.3s					
T0800				AML	AML	
	comp=N,8675μm,0.7s					
T0800				AML	AML	
	comp=E,13200μm,0.3s					
T0800				AML	AML	
	comp=N,8425μm,0.4s					
T0800				AML	AML	
	comp=N,8425μm,0.4s					
T0800				AML	AML	
	comp=N,8675μm,0.7s					
T0800				AML	AML	
	comp=E,13200μm,0.3s					
T0800				AML	AML	
	comp=E,13300μm,0.3s					
SENI	**Senigallia**	**1.07 98**	P	**Pn**	**09 48 29.4 +0.8**	
SENI	**Senigallia**	**1.07 98**	P	**Pn**	**09 48 29.4 +0.8**	
SENI				AML	AML	
	comp=E,12800μm,1.2s					
SENI				AML	AML	
	comp=N,14150μm,0.3s					
SENI				AML	AML	
	comp=E,1570μm,1.0s					
SENI				AML	AML	
	comp=N,2875μm,0.5s					
SENI				AML	AML	
	comp=E,1570μm,1.0s					
SENI				AML	AML	
	comp=N,14150μm,0.3s					
SENI				AML	AML	
	comp=E,12800μm,1.2s					
SENI				AML	AML	
	comp=N,2875μm,0.5s					
T0802	**SanFelice sul**	**1.10 338**	AML	AML		
	comp=N,7065μm,0.3s					
T0802				AML	AML	
	comp=E,6420μm,0.2s					
T0802				AML	AML	
	comp=N,7065μm,0.3s					
T0802				AML	AML	
	comp=E,6420μm,0.2s					
T0805	**Bondeno (FE)**	**1.10 343**	AML	AML		
	comp=E,8955μm,0.4s					
T0805				AML	AML	
	comp=E,8955μm,0.4s					
T0805				AML	AML	
	comp=N,6030μm,1.2s					
T0805				AML	AML	
	comp=N,6030μm,1.2s					
ERBM	**Eremo**	**1.12 300**	P	**Pn**	**09 48 31.2 +1.9**	
ERBM	**Eremo**	**1.12 300**	P	**Pn**	**09 48 31.2 +1.9**	
ERBM				AML	AML	
	comp=E,534μm,1.0s					
ERBM				AML	AML	
	comp=N,460μm,0.9s					
ERBM				AML	AML	
	comp=E,534μm,1.0s					
ERBM				AML	AML	
	comp=N,460μm,0.9s					
CING	**Cingoli**	**1.15 115**	P	**Pn**	**09 48 30.1 +0.6**	
CING	**Cingoli**	**1.15 115**	P	**Pn**	**09 48 30.1 +0.6**	
CING				AML	AML	
	comp=E,1455μm,0.5s					
CING				AML	AML	
	comp=N,1550μm,0.2s					
CING				AML	AML	
	comp=E,1455μm,0.5s					
CING				AML	AML	
	comp=N,1550μm,0.2s					
T0826	**Rio Saliceto (**	**1.19 325**	P	**Pn**	**09 48 31.8 +1.7**	
T0826	**Rio Saliceto (**	**1.19 325**	P	**Pn**	**09 48 31.8 +1.7**	
T0826				AML	AML	
	comp=E,4840μm,0.5s					
T0826				AML	AML	
	comp=N,5180μm,0.8s					
T0826				AML	AML	
	comp=N,5180μm,0.8s					
T0826				AML	AML	
	comp=E,4840μm,0.5s					
SERM	**Sermide**	**1.20 344**	P	**Pn**	**09 48 30.9 +0.8**	
SERM	**Sermide**	**1.20 344**	P	**Pn**	**09 48 30.9 +0.8**	
SERM				AML	AML	
	comp=E,4485μm,0.3s					
SERM				AML	AML	
	comp=N,2870μm,0.3s					
SERM				AML	AML	
	comp=E,4485μm,0.3s					
SERM				AML	AML	
	comp=N,2870μm,0.3s					
CASP	**Castiglione de**	**1.26 212**	⇓*i*P	**Pn**	**09 48 30.5 -0.4**	
CASP	**Castiglione de**	**1.26 212**	*i* P	**Pn**	**09 48 30.5 -0.4**	
CASP				AML	AML	
	comp=E,2130μm,0.6s					
CASP				AML	AML	
	comp=N,2080μm,0.3s					
CASP				AML	AML	
	comp=E,2130μm,0.6s					
CASP				AML	AML	
	comp=N,2080μm,0.3s					
FDMO	**Fiordimonte**	**1.27 130**	P	**Pn**	**09 48 31.5 +0.5**	
FDMO	**Fiordimonte**	**1.27 130**	P	**Pn**	**09 48 31.5 +0.5**	
FDMO				AML	AML	
	comp=E,1060μm,1.0s					
FDMO				AML	AML	
	comp=N,1185μm,0.8s					
FDMO				AML	AML	
	comp=E,1060μm,1.0s					
FDMO				AML	AML	
	comp=N,1185μm,0.8s					
T0825	**Gonzaga (MN)**	**1.29 330**	AML	AML		
	comp=N,10485μm,0.3s					
T0825				AML	AML	
	comp=E,9985μm,0.3s					
T0825				AML	AML	
	comp=E,9985μm,0.3s					
T0825				AML	AML	
	comp=N,10485μm,0.3s					
SBPO	**S.Benedetto Po**	**1.33 333**	P	**Pn**	**09 48 33.5 +1.7**	
SBPO	**S.Benedetto Po**	**1.33 333**	P	**Pn**	**09 48 33.5 +1.7**	
SBPO				AML	AML	
	comp=E,2975μm,1.6s					
SBPO				AML	AML	
	comp=N,10185μm,0.2s					
SBPO				AML	AML	
	comp=N,10185μm,0.2s					
SBPO				AML	AML	
	comp=E,2975μm,1.6s					
AOI	**Ancona**	**1.37 103**	P	**Pn**	**09 48 32.5 +0.2**	
AOI	**Ancona**	**1.37 103**	P	**Pn**	**09 48 32.5 +0.2**	
AOI				AML	AML	
	comp=E,1820μm,0.4s					
AOI				AML	AML	
	comp=N,2855μm,0.4s					
AOI				AML	AML	
	comp=N,2855μm,0.4s					
AOI				AML	AML	
	comp=E,1820μm,0.4s					
CESX	**Cesi**	**1.39 154**	P	**Pn**	**09 48 32.5 -0.1**	
CESX	**Cesi**	**1.39 154**	P	**Pn**	**09 48 32.5 -0.1**	
CESX				AML	AML	
	comp=E,1345μm,1.2s					
CESX				AML	AML	
	comp=N,1930μm,0.4s					
CESX				AML	AML	
	comp=N,1930μm,0.4s					
CESX				AML	AML	
	comp=E,1345μm,1.2s					
PLMA	**Palmaria, Port**	**1.40 278**	P	**Pn**	**09 48 32.9 +0.3**	
PLMA	**Palmaria, Port**	**1.40 278**	P	**Pn**	**09 48 32.9 +0.3**	
PLMA				AML	AML	
	comp=E,668μm,0.7s					
PLMA				AML	AML	
	comp=N,886μm,0.2s					
PLMA				AML	AML	
	comp=N,886μm,0.2s					
PLMA				AML	AML	
	comp=E,668μm,0.7s					
NRCA	**Norcia**	**1.42 136**	⇓P	**Pn**	**09 48 33.2 +0.1**	
NRCA	**Norcia**	**1.42 136**	P	**Pn**	**09 48 33.2 +0.1**	
NRCA				AML	AML	
	comp=E,1036μm,1.3s					
NRCA				AML	AML	
	comp=N,1145μm,0.9s					
NRCA				AML	AML	
	comp=E,1255μm,1.2s					
NRCA				AML	AML	
	comp=N,1030μm,0.6s					
NRCA				AML	AML	
	comp=N,1030μm,0.6s					
NRCA				AML	AML	
	comp=N,1145μm,0.9s					
NRCA				AML	AML	
	comp=E,1255μm,1.2s					
NRCA				AML	AML	
	comp=E,1036μm,1.3s					
GROG	**Isola di Gorgo**	**1.43 253**	AML	AML		
	comp=N,1250μm,0.5s					
GROG				AML	AML	
	comp=E,1052μm,0.3s					
GROG				AML	AML	
	comp=N,1250μm,0.5s					
GROG				AML	AML	
	comp=E,1052μm,0.3s					
TEOL	**Teolo**	**1.50 357**	P	**Pn**	**09 48 33.8 -0.2**	
TEOL	**Teolo**	**1.50 357**	P	**Pn**	**09 48 33.8 -0.2**	
TEOL				AML	AML	
	comp=E,5435μm,0.6s					
TEOL				AML	AML	
	comp=N,4455μm,0.6s					
TEOL				AML	AML	
	comp=E,5435μm,0.6s					
TEOL				AML	AML	
	comp=N,4455μm,0.6s					
LNSS	**Leonessa**	**1.57 143**	P	**Pn**	**09 48 34.9 -0.1**	
LNSS	**Leonessa**	**1.57 143**	P	**Pn**	**09 48 34.9 -0.1**	
LNSS				AML	AML	
	comp=E,1570μm,0.6s					
LNSS				AML	AML	
	comp=N,1895μm,0.4s					
LNSS				AML	AML	
	comp=E,1570μm,0.6s					
LNSS				AML	AML	
	comp=N,1895μm,0.4s					
OFFI	**Offida**	**1.68 123**	AML	AML		
	comp=N,2070μm,0.8s					
OFFI				AML	AML	
	comp=E,2220μm,0.2s					
OFFI				AML	AML	
	comp=E,2220μm,0.2s					
OFFI				AML	AML	
	comp=N,2070μm,0.8s					
SMA1	**SAN MARTINO**	**1.68 137**	AML	AML		
	comp=N,1310μm,0.3s					
SMA1				AML	AML	
	comp=E,1470μm,0.6s					
SMA1				AML	AML	
	comp=N,1310μm,0.3s					
SMA1				AML	AML	
	comp=E,1470μm,0.6s					
MSSA	**Maissana**	**1.68 286**	P	**Pn**	**09 48 37.2 +0.8**	
MSSA	**Maissana**	**1.68 286**	P	**Pn**	**09 48 37.2 +0.8**	
MSSA				AML	AML	
	comp=E,630μm,1.6s					
MSSA				AML	AML	
	comp=N,812μm,0.3s					
MSSA				AML	AML	
	comp=N,812μm,0.3s					
MSSA				AML	AML	
	comp=E,630μm,1.6s					
GUMA	**Gualdo di Mace**	**1.77 116**	P	**Pn**	**09 48 33.7 -3.9**	
GUMA				AML	AML	
	comp=E,4925μm,0.3s					
GUMA				AML	AML	
	comp=N,3550μm,1.5s					
GUMA				AML	AML	
	comp=N,3550μm,1.5s					
GUMA				AML	AML	
	comp=E,4925μm,0.3s					
CAMP	**Campotosto**	**1.79 137**	P	**Pn**	**09 48 38.2 +0.3**	
CAMP	**Campotosto**	**1.79 137**	P	**Pn**	**09 48 38.2 +0.3**	
TERO	**Teramo**	**1.83 132**	AML	AML		
	comp=E,313μm,1.0s					
TERO				AML	AML	
	comp=N,272μm,0.9s					

TERO AML AML
comp=N,272µm,0.9s
TERO AML AML
comp=E,313µm,1.0s
ROVR Rover¯¤ Verone 1.85 345 P **Pn 09 48 38.6 -0.1**
ROVR Rover¯¤ Verone 1.85 345 P **Pn 09 48 38.6 -0.1**
ROVR AML AML
comp=E,2015µm,1.0s
ROVR AML AML
comp=N,4090µm,1.3s
ROVR AML AML
comp=E,2015µm,1.0s
ROVR AML AML
comp=N,4090µm,1.3s
FIAM Fiamignano 1.88 148 P **Pn 09 48 39.5 +0.5**
FIAM Fiamignano 1.88 148 P **Pn 09 48 39.5 +0.5**
FIAM AML AML
comp=E,404µm,0.5s
FIAM AML AML
comp=N,448µm,0.3s
FIAM AML AML
comp=E,404µm,0.5s
FIAM AML AML
comp=N,448µm,0.3s
TRTR Tortoreto Alta 1.89 123 P **Pn 09 48 40.1 +1.0**
TRTR Tortoreto Alta 1.89 123 P **Pn 09 48 40.1 +1.0**
TRTR AML AML
comp=E,2275µm,1.0s
TRTR AML AML
comp=N,1700µm,0.7s
TRTR AML AML
comp=E,2275µm,1.0s
TRTR AML AML
comp=N,1700µm,0.7s
BOB Bobbio (Coli) 1.90 299 P **Pn 09 48 41.5 +2.3**
BOB Bobbio (Coli) 1.90 299 P **Pn 09 48 41.5 +2.3**
BOB AML AML
comp=E,907µm,1.4s
BOB AML AML
comp=N,673µm,0.6s
BOB AML AML
comp=E,907µm,1.4s
BOB AML AML
comp=N,673µm,0.6s
AQU L'Aquila 1.93 141 *e*Pn **Pn 09 48 40.5 +0.8**
AQU L'Aquila 1.93 141 AML AML
comp=N,432µm,0.8s
AQU AML AML
comp=E,372µm,1.1s
AQU AML AML
comp=E,372µm,1.1s
AQU AML AML
comp=N,432µm,0.8s
SALO Salr 1.97 334 P **Pn 09 48 40.7 +0.6**
SALO Salr 1.97 334 P **Pn 09 48 40.7 +0.6**
SALO AML AML
comp=E,814µm,1.1s
SALO AML AML
comp=N,1400µm,0.3s
SALO AML AML
comp=E,814µm,1.1s
SALO AML AML
comp=N,1400µm,0.3s
MTCE Montecelio 1.97 158 AML AML
comp=E,283µm,0.4s
MTCE AML AML
comp=E,283µm,0.4s
MTCE AML AML
comp=N,228µm,0.5s
MTCE AML AML
comp=N,228µm,0.5s
CTL8 Castelleone 2.01 315 AML AML
comp=E,416µm,0.4s
CTL8 AML AML
comp=N,312µm,1.4s
CTL8 AML AML
comp=E,416µm,0.4s
CTL8 AML AML
comp=N,312µm,1.4s
CGRP Cima Grappa 2.02 1 P **Pn 09 48 40.7 -0.3**
CGRP Cima Grappa 2.02 1 P **Pn 09 48 40.7 -0.3**
CGRP AML AML
comp=E,1525µm,0.6s
CGRP AML AML
comp=N,1150µm,0.5s
CGRP AML AML
comp=E,1525µm,0.6s
CGRP AML AML
comp=N,1150µm,0.5s
MAGA Magasa 2.08 337 P **Pn 09 48 41.7 0.0**
MAGA Magasa 2.08 337 P **Pn 09 48 41.7 0.0**
FAGN Fagnano 2.08 140 AML AML
comp=N,1110µm,0.5s
FAGN AML AML
comp=E,1300µm,1.6s
FAGN AML AML
comp=N,1110µm,0.5s
FAGN AML AML
comp=E,1300µm,1.6s
CERT Cerreto 2.11 155 AML AML
comp=E,332µm,0.5s
CERT AML AML
comp=E,332µm,0.5s
CERT AML AML
comp=N,204µm,0.6s
CERT AML AML
comp=N,204µm,0.6s
VCEL Villa Celiera 2.11 133 AML AML
comp=N,580µm,0.7s
VCEL AML AML
comp=E,593µm,0.4s
VCEL AML AML
comp=N,580µm,0.7s
VCEL AML AML
comp=E,593µm,0.4s
CTI Castel Tesino 2.19 358 P **Pn 09 48 43.2 0.0**
CTI Castel Tesino 2.19 358 P **Pn 09 48 43.2 0.0**
CTI AML AML
comp=E,2560µm,0.5s
CTI AML AML
comp=N,2775µm,1.6s
CTI AML AML
comp=E,2560µm,0.5s
CTI AML AML
comp=N,2775µm,1.6s
SKDS Skadanscina 2.32 43 *i* Pn **Pn 09 48 43.5 -1.4**
SKDS *e*Sn **Sn 09 49 10.1 -2.5**
comp=Z,681nm,0.1s
SKDS Skadanscina 2.32 43 Pn **Pn 09 48 43.5 -1.4**
SKDS *e*Sn **Sn 09 49 10.1 -2.5**
comp=Z,681nm,0.1s
NVLJ Novalja 2.34 71 *i* Pn **Pn 09 48 45.3 +0.2**
NVLJ Sn **Sn 09 49 10.7 -2.3**
NVLJ Novalja 2.34 71 *i* Pn **Pn 09 48 45.3 +0.2**
NVLJ Sn **Sn 09 49 10.6 -2.3**
MABI Malga Bissina 2.37 338 P **Pn 09 48 45.9 +0.2**
MABI Malga Bissina 2.37 338 P **Pn 09 48 45.9 +0.2**
MABI AML AML
comp=E,481µm,0.6s
MABI AML AML
comp=N,298µm,0.1s
MABI AML AML
comp=E,481µm,0.6s
MABI AML AML
comp=N,298µm,0.1s
PGF Pioggiola 2.41 238 *e*Pn **Pn 09 48 46.7 +0.5**
PGF *e*Sn **Sn 09 49 14.5 -0.4**
comp=N,105nm,0.4s
PGF Pioggiola 2.41 238 *e*Pn **Pn 09 48 46.7 +0.5**
PGF *e*Sn **Sn 09 49 14.5 -0.4**
comp=N,52nm,0.4s
INTR Introdacqua 2.43 139 P **Pn 09 48 46.8 +0.4**
INTR Introdacqua 2.43 139 P **Pn 09 48 46.8 +0.4**
INTR AML AML
comp=E,278µm,0.4s
INTR AML AML
comp=N,410µm,0.9s
INTR AML AML
comp=E,278µm,0.4s
INTR AML AML
comp=N,410µm,0.9s
RIY Rijeka 2.43 52 *e*Pn **Pn 09 48 45.4 -0.9**
RIY *e*Sn Sn 09 49 05.9 -9.2
STAL STALIGIAL 2.49 15 P **Pn 09 48 46.4 -0.8**
STAL STALIGIAL 2.49 15 P **Pn 09 48 46.4 -0.8**
CAFR Castel Frentan 2.50 130 AML AML
comp=E,1390µm,1.1s
CAFR AML AML
comp=E,1390µm,1.1s
CAFR AML AML
comp=N,1610µm,0.3s
CAFR AML AML
comp=N,1610µm,0.3s
KNDS Knezji Dol 2.50 47 *i* Pn **Pn 09 48 46.3 -1.0**
KNDS *e*Sn **Sn 09 49 15.2 -1.7**
comp=Z,385nm,0.2s
KNDS Knezji Dol 2.50 47 *i* Pn **Pn 09 48 46.3 -1.0**
KNDS *e*Sn **Sn 09 49 15.2 -1.7**
comp=Z,385nm,0.2s
FINB Finale Ligure 2.50 278 P **Pn 09 48 47.6 +0.3**
FINB Finale Ligure 2.50 278 P **Pn 09 48 47.6 +0.3**
FINB AML AML
comp=E,924µm,0.3s
FINB AML AML
comp=N,19µm,1.6s
FINB AML AML
comp=E,924µm,0.3s
FINB AML AML
comp=N,19µm,1.6s
QLNO Quiliano 2.51 282 AML AML
comp=E,298µm,0.9s
QLNO AML AML
comp=N,273µm,0.3s
QLNO AML AML
comp=E,298µm,0.9s
QLNO AML AML
comp=N,273µm,0.3s
LPEL Lama dei Pelig 2.54 135 AML AML
comp=N,424µm,1.5s
LPEL AML AML
comp=E,544µm,0.7s
LPEL AML AML
comp=N,424µm,1.5s
LPEL AML AML
comp=E,544µm,0.7s
SMPL Sampolo 2.54 227 P **Pn 09 48 48.9 +1.1**
SMPL Sampolo 2.54 227 P **Pn 09 48 48.9 +1.1**
SMPL S **Sn 09 49 18.3 +0.5**
POFI Posta Fibreno 2.58 146 AML AML
comp=N,76µm,0.5s
POFI AML AML
comp=E,109µm,0.6s
POFI AML AML
comp=E,109µm,0.6s
POFI AML AML
comp=N,76µm,0.5s
JAVS Javornik 2.61 38 *i* Pn **Pn 09 48 47.5 -1.3**
JAVS Javornik 2.61 38 *i* Pn **Pn 09 48 47.5 -1.3**
KOSI Kohlern 2.62 354 AML AML
comp=N,940µm,0.5s
KOSI AML AML
comp=E,1200µm,0.8s
KOSI AML AML
comp=N,940µm,0.5s
KOSI AML AML
comp=E,1200µm,0.8s
VOJS Vojsko 2.64 34 *i* Pn **Pn 09 48 48.4 -0.8**
VOJS Vojsko 2.64 34 *i* Pn **Pn 09 48 48.4 -0.8**
ROTM Rocchetta Tana 2.64 293 P **Pn 09 48 51.5 +2.4**
ROTM Rocchetta Tana 2.64 293 P **Pn 09 48 51.5 +2.4**
APPI Appiano 2.64 352 P **Pn 09 48 50.1 +0.8**
APPI Appiano 2.64 352 P **Pn 09 48 50.1 +0.8**
CEY Cerknica 2.67 44 *e*Pn **Pn 09 48 48.2 -1.3**
CEY *e*Sn **Sn 09 49 14.2 -6.7**
CEY Cerknica 2.67 44 *e*Pn **Pn 09 48 48.2 -1.3**
ROBS Robic 2.68 27 *i* Pn **Pn 09 48 48.9 -0.8**
ROBS *e*Sn **Sn 09 49 19.7 -1.5**
comp=Z,239nm,0.2s
ROBS Robic 2.68 27 *i* Pn **Pn 09 48 48.9 -0.8**
ROBS *e*Sn **Sn 09 49 19.7 -1.5**
comp=Z,239nm,0.2s
RORO Rocca Rossa 2.68 277 P **Pn 09 48 49.8 +0.1**
RORO Rocca Rossa 2.68 277 P **Pn 09 48 49.8 +0.1**
RORO AML AML
comp=E,218µm,0.2s
RORO AML AML
comp=N,175µm,0.4s
RORO AML AML
comp=N,175µm,0.4s
RORO AML AML
comp=E,218µm,0.2s
CADS Cadrg 2.75 30 *i* Pn **Pn 09 48 49.7 -0.9**
CADS *i* Sn **Sn 09 49 21.1 -1.8**
CADS Cadrg 2.75 30 *i* Pn **Pn 09 48 49.7 -0.9**
CADS *i* Sn **Sn 09 49 21.1 -1.8**
IMI Imperia 2.80 272 P **Pn 09 48 51.6 +0.2**
IMI Imperia 2.80 272 P **Pn 09 48 51.6 +0.2**
FVI Forni Avoltri 2.83 14 P **Pn 09 48 51.8 +0.1**
FVI Forni Avoltri 2.83 14 P **Pn 09 48 51.8 +0.1**
MUGIO Muggio 2.83 318 P **Pn 09 48 51.6 -0.2**
MUGIO Muggio 2.83 318 P **Pn 09 48 51.6 -0.2**
CRNS Crni Vrh 2.84 38 *i* Pn **Pn 09 48 51.0 -0.8**
comp=Z,530nm,0.3s
CRNS Crni Vrh 2.84 38 *i* Pn **Pn 09 48 51.0 -0.8**
comp=Z,530nm,0.3s
FRES Fresagrandinar 2.85 131 P **Pn 09 48 51.8 -0.2**
FRES Fresagrandinar 2.85 131 P **Pn 09 48 51.8 -0.2**
FRES AML AML
comp=E,730µm,0.4s
FRES AML AML
comp=N,417µm,0.6s
FRES AML AML
comp=N,417µm,0.6s
FRES AML AML
comp=E,730µm,0.4s
VISS Visnje 2.92 47 *i* Pn **Pn 09 48 52.4 -0.6**
comp=Z,528nm,0.3s
VISS Visnje 2.92 47 *i* Pn **Pn 09 48 52.4 -0.6**
comp=Z,528nm,0.3s
VARE Varese 2.93 314 P **Pn 09 48 53.7 +0.6**
VARE Varese 2.93 314 P **Pn 09 48 53.7 +0.6**
ABTA Abfaltersbach 2.93 10 *e*Pn **Pn 09 48 54.0 +0.8**
comp=Z,12nm,0.3s,SNR=9.8
ABTA *e*Sn **Sn 09 49 27.7 +0.3**
comp=Z,49nm,0.3s
ABTA Abfaltersbach 2.93 10 Pn **Pn 09 48 54.0 +0.8**
comp=Z,12nm,0.3s,SNR=9.8
ABTA Sn **Sn 09 49 27.7 +0.3**
comp=Z,49nm,0.3s
LJU Ljubljana 2.93 41 *e*Pn **Pn 09 48 52.5 -0.6**
LJU *e*Sn **Sn 09 49 20.1 -7.2**
LJU *e*Sg **Sn 09 49 26.1 -1.2**
LJU Ljubljana 2.93 41 *e*Pn **Pn 09 48 52.5 -0.6**
LJU *e*Sg **Sn 09 49 26.1 -1.2**
UDBI Udbina 2.95 76 *i* Pn **Pn 09 48 54.3 +0.8**
UDBI Sn **Sn 09 49 26.9 -1.0**
UDBI Udbina 2.95 76 *i* Pn **Pn 09 48 54.2 +0.8**
UDBI Sn **Sn 09 49 26.8 -1.0**
MYKA Terra Mystica 3.07 25 *i* Pn **Pn 09 48 55.3 +0.3**
comp=Z,2.2nm,0.1s
MYKA Terra Mystica 3.07 25 Pn **Pn 09 48 55.3 +0.3**
comp=Z,2.2nm,0.1s
SBF Sospel 3.13 272 *e*Pn **Pn 09 48 56.8 +0.9**
SNR=1.0
SBF *e*Sn **Sn 09 49 31.6 -0.7**
comp=Z,340nm,0.5s,SNR=1.0
SBF Sospel 3.13 272 *e*Pn **Pn 09 48 56.8 +0.9**
SNR=1.0
SBF *e*Sn **Sn 09 49 31.6 -0.7**
comp=Z,170nm,0.5s,SNR=1.0
ENR Entracque 3.15 278 ⇑Pn **Pn 09 48 57.5 +1.3**
ENR Entracque 3.15 278 P **Pn 09 48 57.5 +1.3**
OZLJ Ozalj 3.17 55 *e*Pn **Pn 09 48 56.7 +0.4**
OZLJ Sn **Sn 09 49 30.9 -2.0**
OZLJ Ozalj 3.17 55 *e*Pn **Pn 09 48 56.6 +0.4**
OZLJ Sn **Sn 09 49 30.8 -2.0**
ESCA l'Escarene 3.18 271 P **Pn 09 48 57.5 +1.0**
ESCA l'Escarene 3.18 271 P **Pn 09 48 57.5 +1.0**
ESCA S **Sn 09 49 32.1 -1.2**
REVF Revere 3.19 269 P **Pn 09 48 56.6 0.0**
REVF Revere 3.19 269 P **Pn 09 48 56.6 0.0**
REVF S **Sn 09 49 33.1 -0.5**
LUCF Luceram 3.20 272 P **Pn 09 48 56.9 +0.1**
LUCF Luceram 3.20 272 P **Pn 09 48 56.9 +0.1**
LUCF S **Sn 09 49 33.4 -0.5**
DAVOX Davos/Dischmat 3.21 336 ⇑Pn **Pn 09 48 59.3 +2.3**
DAVOX Davos/Dischmat 3.21 336 P **Pn 09 48 59.3 +2.3**
PTRJ Pietraroja 3.22 140 ⇑Pn **Pn 09 48 57.9 +0.7**
PTRJ Pietraroja 3.22 140 P **Pn 09 48 57.9 +0.7**
STV Sant Anna di V 3.23 278 ⇓Pn **Pn 09 48 58.4 +1.3**
STV Sant Anna di V 3.23 278 P **Pn 09 48 58.4 +1.3**
FETA Feichten 3.24 347 *e*Pn **Pn 09 48 58.9 +1.4**
comp=Z,3.2nm,0.3s
FETA *i* Sn **Sn 09 49 35.7 +0.7**
comp=Z,8.0nm,0.2s
FETA Feichten 3.24 347 Pn **Pn 09 48 58.9 +1.4**
comp=Z,3.2nm,0.3s
FETA Sn **Sn 09 49 35.7 +0.7**
comp=Z,8.0nm,0.2s
CRES Cresnjev 3.28 52 *e*Pn **Pn 09 48 57.5 -0.3**
MELA Melanico ??? S 3.28 130 ⇓Pn **Pn 09 48 57.7 -0.1**
MELA Melanico ??? S 3.28 130 P **Pn 09 48 57.7 -0.1**
OBKA Obir 3.30 36 *i* Pn **Pn 09 48 57.8 -0.3**
comp=Z,3.5nm,0.2s
OBKA *i* Sn **Sn 09 49 35.7 -0.6**
comp=Z,109nm,0.3s
OBKA Obir 3.30 36 Pn **Pn 09 48 57.8 -0.3**
comp=Z,3.5nm,0.2s
OBKA Sn **Sn 09 49 35.7 -0.6**
comp=Z,109nm,0.3s
TRAV Traversella 3.31 301 ⇓Pn **Pn 09 48 57.2 -1.1**
TRAV Traversella 3.31 301 P **Pn 09 48 57.2 -1.1**
DOI San Damiano 3.31 283 ⇑Pn **Pn 09 48 59.3 +0.9**
DOI San Damiano 3.31 283 P **Pn 09 48 59.3 +0.9**
MVIF Mont Vial 3.34 272 P **Pn 09 48 59.5 +0.8**
MVIF Mont Vial 3.34 272 P **Pn 09 48 59.5 +0.8**
BHB Bricherasio 3.38 288 Pn **Pn 09 48 58.4 -0.7**
BHB Bricherasio 3.38 288 P **Pn 09 48 58.4 -0.7**
FUSIO Fusio 3.40 321 ⇑Pn **Pn 09 48 59.8 +0.3**
FUSIO Fusio 3.40 321 P **Pn 09 48 59.8 +0.3**
KBA Koelnbreinsper 3.40 18 *e*Pn **Pn 09 49 00.5 +0.9**
comp=Z,31nm,0.4s,SNR=8.1
KBA Koelnbreinsper 3.40 18 Pn **Pn 09 49 00.5 +0.9**
comp=Z,31nm,0.4s,SNR=8.1
WTTA Wattenberg 3.40 358 *e*Pn **Pn 09 49 01.5 +1.9**
comp=Z,2.9nm,0.1s
WTTA *i* Sn **Sn 09 49 40.0 +1.0**
comp=Z,16nm,0.2s
WTTA Wattenberg 3.40 358 Pn **Pn 09 49 01.9 +2.3**
WTTA Sn **Sn 09 49 40.0 +1.0**
WTTA Wattenberg 3.40 358 S **Sn 09 49 41.0 +2.0**
PZZ Stroppo 3.41 283 ⇓Pn **Pn 09 49 00.2 +0.5**
PZZ Stroppo 3.41 283 P **Pn 09 49 00.2 +0.5**
ISO Isola 3.42 277 P **Pn 09 49 00.9 +1.1**
ISO Isola 3.42 277 P **Pn 09 49 00.9 +1.1**
ISO S **Sn 09 49 39.2 0.0**
SATI Passo dei Sala 3.42 307 ⇑Pn **Pn 09 48 59.8 -0.3**
SATI Passo dei Sala 3.42 307 P **Pn 09 48 59.8 -0.3**
CIRO Champorcher 3.46 302 ⇓Pn **Pn 09 48 58.9 -1.6**
CIRO Champorcher 3.46 302 P **Pn 09 48 58.9 -1.6**
PSB1 Pescosannita 3.47 139 ⇓Pn **Pn 09 49 02.1 +1.7**
PSB1 Pescosannita 3.47 139 P **Pn 09 49 02.1 +1.7**
WATA Walderalm 3.48 358 *e*Pn **Pn 09 49 03.2 +2.6**
comp=Z,13nm,0.2s,SNR=9.0
WATA *i* Sn **Sn 09 49 42.2 +1.5**
comp=Z,14nm,0.2s
WATA Walderalm 3.48 358 Pn **Pn 09 49 03.2 +2.6**
comp=Z,13nm,0.2s,SNR=9.0
WATA Sn **Sn 09 49 42.2 +1.5**
comp=Z,14nm,0.2s
CALF Calern 3.51 270 P **Pn 09 49 02.0 +0.9**
CALF Calern 3.51 270 P **Pn 09 49 01.0 0.0**
CALF S **Sn 09 49 41.3 -0.2**
MOTA Moosalm 3.51 353 *e*Pn **Pn 09 49 02.2 +1.1**
comp=Z,5.8nm,0.2s,SNR=7.6
MOTA *i* Sn **Sn 09 49 42.9 +1.3**
comp=Z,25nm,0.3s
MOTA Moosalm 3.51 353 Pn **Pn 09 49 02.2 +1.1**
comp=Z,5.8nm,0.2s,SNR=7.6
MOTA Sn **Sn 09 49 42.9 +1.3**
comp=Z,25nm,0.3s
SGRT San Giovanni R 3.60 124 ⇓Pn **Pn 09 49 01.7 -0.6**
SGRT San Giovanni R 3.60 124 P **Pn 09 49 01.6 -0.6**
SURF Saint Ours 3.62 282 P **Pn 09 49 03.3 +0.7**
SURF Saint Ours 3.62 282 P **Pn 09 49 03.3 +0.7**
SURF S **Sn 09 49 44.3 +0.1**
SOKA Soboth 3.64 38 *e*Pn **Pn 09 49 02.3 -0.4**
comp=Z,1.6nm,0.2s
SOKA Soboth 3.64 38 Pn **Pn 09 49 02.3 -0.4**
comp=Z,1.6nm,0.2s
LSD Lago del Serru 3.67 297 P **Pn 09 49 01.9 -1.4**
DAVA Damuels 3.67 340 *e*Pn **Pn 09 49 04.3 +1.0**
comp=Z,3.6nm,0.2s
DAVA *i* Sn **Sn 09 49 47.1 +1.6**
comp=Z,60nm,0.4s
DAVA Damuels 3.67 340 Pn **Pn 09 49 04.3 +1.0**
comp=Z,3.6nm,0.2s
DAVA Sn **Sn 09 49 47.1 +1.6**
comp=Z,60nm,0.4s
MBDF Montbardon 3.69 285 *e*Pn **Pn 09 49 03.9 +0.4**
SNR=1.0
MBDF *e*Sn **Sn 09 49 44.1 -1.8**
comp=Z,42nm,0.3s,SNR=1.0
MBDF Montbardon 3.69 285 *e*Pn **Pn 09 49 03.9 +0.4**
SNR=1.0
MBDF *e*Sn **Sn 09 49 44.1 -1.8**
comp=Z,21nm,0.3s,SNR=1.0
RETA Reutte 3.69 349 *e*Pn **Pn 09 49 05.2 +1.7**
comp=Z,2.2nm,0.1s
RETA *i* Sn **Sn 09 49 46.1 +0.3**
comp=Z,28nm,0.3s
RETA Reutte 3.69 349 Pn **Pn 09 49 05.2 +1.7**
comp=Z,2.2nm,0.1s
RETA Sn **Sn 09 49 46.1 +0.3**
comp=Z,28nm,0.3s
RRL Rocca Remolon 3.72 288 ⇑Pn **Pn 09 49 03.0 -1.0**
RRL Rocca Remolon 3.72 288 P **Pn 09 49 04.0 0.0**
MSAG Monte S. Angel 3.73 124 Pn **Pn 09 49 03.2 -0.8**
MSAG Monte S. Angel 3.73 124 P **Pn 09 49 03.1 -0.8**
MS1 Monte Sant'Ang 3.75 124 *e*Pn **Pn 09 49 03.1 -1.2**
OGAG Argentiere 3.81 281 P **Pn 09 49 07.0 +1.9**
SGTA Sant Agata di 3.81 134 ⇓Pn **Pn 09 49 05.7 +0.6**
SGTA Sant Agata di 3.81 134 P **Pn 09 49 05.7 +0.6**
CAFE Carife 3.82 137 ⇑Pn **Pn 09 49 06.7 +1.4**
CAFE Carife 3.82 137 P **Pn 09 49 06.7 +1.4**
MRGE Morge 3.85 301 ⇓Pn **Pn 09 49 05.3 -0.5**
MRGE Morge 3.85 301 P **Pn 09 49 05.3 -0.5**
LMR La Mourre 3.86 264 *e*Pn **Pn 09 49 06.4 +0.8**
SNR=1.0
LMR *e*Sn **Sn 09 49 47.8 -1.9**
comp=Z,43nm,0.2s,SNR=1.0
LMR La Mourre 3.86 264 *e*Pn **Pn 09 49 06.4 +0.8**
SNR=1.0
LMR *e*Sn **Sn 09 49 47.8 -1.9**
comp=Z,22nm,0.2s,SNR=1.0
SNAL S. Angelo Dei 3.89 138 ⇓Pn **Pn 09 49 07.5 +1.3**
SNAL S. Angelo Dei 3.89 138 P **Pn 09 49 07.5 +1.3**
OGDI Digne 3.95 275 P **Pn 09 49 08.4 +1.4**
BLY Banja Luka 3.99 75 *e*Pn **Pn 09 49 07.5 +0.1**
BLY *e*Sn **Sn 09 49 45.1 -7.8**
BLY Banja Luka 3.99 75 ⇓*i*P **Pn 09 49 08.1 +0.7**
BLY Banja Luka 3.99 75 S **Sn 09 49 50.9 -2.0**
BLY Banja Luka 3.99 75 *e*Pn **Pn 09 49 07.5 +0.1**
BLY Banja Luka 3.99 75 ⇓*i*P **Pn 09 49 08.1 +0.7**
BLY S **Sn 09 49 50.9 -2.0**
RSL Roselend 4.09 298 P **Pn 09 49 10.0 +1.0**
RSL Roselend 4.09 298 P **Pn 09 49 10.0 +1.0**
MRLC Muro Lucano 4.15 137 Pn **Pn 09 49 10.4 +0.6**
MRLC Muro Lucano 4.15 137 P **Pn 09 49 10.4 +0.6**
ARSA Arzberg 4.29 37 *e*Pn **Pn 09 49 12.9 +1.3**
ARSA *e*Sn **Sn 09 49 53.6 -6.8**
ARSA Arzberg 4.29 37 *e*Pn **Pn 09 49 11.3 -0.4**
comp=Z,12nm,0.3s
ARSA Arzberg 4.29 37 *e*Pn **Pn 09 49 12.9 +1.3**
MRVN Minervino Murg 4.31 129 ⇓Pn **Pn 09 49 11.4 -0.5**
MRVN Minervino Murg 4.31 129 P **Pn 09 49 11.4 -0.5**
ORIF Oris-en-Rattie 4.35 286 *e*Pn **Pn 09 49 13.1 +0.7**
SNR=1.0
ORIF *e*Sn **Sn 09 50 00.8 -1.1**
ORIF Oris-en-Rattie 4.35 286 *e*Pn **Pn 09 49 13.1 +0.7**
SNR=1.0
ORIF *e*Sn **Sn 09 50 00.8 -1.1**
MOA Molln 4.35 23 *e*Pn **Pn 09 49 12.9 +0.5**
comp=Z,4.0nm,0.1s,SNR=6.5
MOA Molln 4.35 23 Pn **Pn 09 49 12.9 +0.5**
comp=Z,4.0nm,0.1s,SNR=6.5
BEHE Becsehely 4.40 52 *ex* **Sn 09 49 56.7 -6.2**
BEHE Becsehely 4.40 52 *e*Pn **Pn 09 49 10.7 -2.3**
BSTF la Bastide-des 4.43 272 P **Pn 09 49 14.8 +1.4**
BSTF la Bastide-des 4.43 272 P **Pn 09 49 14.8 +1.4**
STON Ston 4.44 101 *e*Pn **Pn 09 49 13.0 -0.5**
STON *e*Sn **Sn 09 49 59.6 -4.3**
STON Ston 4.44 101 *e*Pn **Pn 09 49 12.0 -1.5**
STON Sn **Sn 09 50 00.1 -3.8**
STON Ston 4.44 101 *e*Pn **Pn 09 49 13.0 -0.5**
STON *e*Sn **Sn 09 49 59.6 -4.3**

SMRF Simiane la Rot 4.47 274 *e*Pn Pn 09 49 15.9 +1.8
SNR=1.0
SMRF *e*Sn Sn 09 50 02.9 -2.0
comp=Z,16nm,0.3s
SMRF Simiane la Rot 4.47 274 *e*Pn Pn 09 49 15.9 +1.8
SNR=1.0
SMRF *e*Sn Sn 09 50 02.9 -2.0
comp=Z,7.9nm,0.3s
SLCN Sala Consilina 4.51 139 Pn **Pn 09 49 15.8 +1.2**
SLCN Sala Consilina 4.51 139 P **Pn 09 49 15.8 +1.2**
AMUR Altamura 4.64 128 ⇓Pn **Pn 09 49 15.7 -0.7**
AMUR Altamura 4.64 128 P **Pn 09 49 15.7 -0.7**
BAI Bari 4.68 124 *e*Pn **Pn 09 49 16.0 -0.8**
VSL Villasalto 4.71 203 ⇑Pn **Pn 09 49 19.4 +2.0**
VSL Villasalto 4.71 203 P **Pn 09 49 19.4 +2.0**
GIMEL St. Georges / 4.72 306 ⇓Pn **Pn 09 49 17.0 -0.4**
GIMEL St. Georges / 4.72 306 P **Pn 09 49 17.9 +0.5**
SG1 Sgolgore (BA) 4.73 128 *e*Pn **Pn 09 49 16.9 -0.7**
SG1 Sn **Sn 09 50 07.6 -3.5**
CABF La Chapelle 4.86 306 *e*Pn **Pn 09 49 19.4 0.0**
SNR=1.0
CABF *e*Sn **Sn 09 50 12.1 -2.3**
comp=Z,24nm,0.3s
CABF La Chapelle 4.86 306 *e*Pn **Pn 09 49 19.4 0.0**
SNR=1.0
CABF *e*Sn **Sn 09 50 12.1 -2.3**
comp=Z,12nm,0.3s
CGL Cagliari Serpe 4.86 203 Pn **Pn 09 49 21.7 +2.2**
CGL Cagliari Serpe 4.86 203 P **Pn 09 49 21.7 +2.2**
MATE Matera 4.87 130 ⇑*i*P **Pn 09 49 19.0 -0.4**
MATE Matera 4.87 130 S **Sn 09 50 08.9 -5.6**
MATE Matera 4.87 130 ⇑Pn **Pn 09 49 19.1 -0.4**
MATE Matera 4.87 130 P **Pn 09 49 19.1 -0.3**
CUC Castrocucco 4.91 141 P **Pn 09 49 17.0 -3.0**
TREB Trebinje 4.94 101 *e*Pn **Pn 09 49 19.9 -0.5**
CONA Conrad Observa 4.97 34 *e*Pn **Pn 09 49 20.9 0.0**
comp=Z,3.7nm,0.2s
CONA Conrad Observa 4.97 34 Pn **Pn 09 49 20.9 0.0**
comp=Z,3.7nm,0.2s
NOCI Noci 4.99 126 ⇑Pn **Pn 09 49 20.4 -0.6**
NOCI Noci 4.99 126 P **Pn 09 49 20.4 -0.6**
BRY Bratogost 5.03 99 ⇑*i*Pn **Pn 09 49 22.4 +0.7**
BRY *e*Sn **Sn 09 50 17.1 -1.5**
BRY Bratogost 5.03 99 ⇑*i*Pn **Pn 09 49 22.4 +0.7**
BRY *e*Sn **Sn 09 50 17.1 -1.5**
SOP Sopron 5.08 40 *ex* **Sn 09 50 15.4 -4.2**
HCY Herceg Novi 5.12 104 ⇑*i*Pn **Pn 09 49 22.6 -0.3**
HCY *e*Sn **Sn 09 50 19.8 -0.8**
HCY Herceg Novi 5.12 104 ⇑*i*Pn **Pn 09 49 22.6 -0.3**
HCY *e*Sn **Sn 09 50 19.8 -0.8**
MASS Massafra 5.13 127 *e*Pn **Pn 09 49 22.5 -0.5**
FASA Fasano 5.14 124 *e*Pn **Pn 09 49 22.7 -0.4**
FASA Sn **Sn 09 50 16.1 -5.0**
GERES GERESS Array B 5.16 14 Pn **Pn 09 49 23.2 -0.2**
comp=Z,2.2nm,0.3s,baz=192,slow=14,SNR=27
GERES Sn **Sn 09 50 18.9 -2.8**
comp=Z,5.3nm,0.3s,baz=183,slow=21,SNR=7.0
VIVF Saint-Julien-I 5.18 284 *e*Pn **Pn 09 49 23.9 +0.2**
SNR=1.0
VIVF *e*Sn **Sn 09 50 19.4 -2.8**
comp=Z,6.2nm,0.2s
VIVF Saint-Julien-I 5.18 284 *e*Pn **Pn 09 49 23.9 +0.2**
SNR=1.0
VIVF *e*Sn **Sn 09 50 19.4 -2.8**
comp=Z,3.1nm,0.2s
HAPS Han Pijesak,Bl 5.19 85 *e*Pn **Pn 09 49 22.8 -1.1**
UPM Unac-Piva 5.23 95 ⇓*i*Pn **Pn 09 49 25.9 +1.4**
UPM *e*Sn **Sn 09 50 22.4 -1.2**
UPM Unac-Piva 5.23 95 ⇓*i*Pn **Pn 09 49 25.9 +1.4**
UPM *e*Sn **Sn 09 50 22.4 -1.2**
HINF Hinteralfeld 5.24 321 *e*Pn **Pn 09 49 24.5 0.0**
SNR=1.0
HINF *e*Sn **Sn 09 50 20.9 -2.6**
comp=Z,69nm,0.3s
HINF Hinteralfeld 5.24 321 *e*Pn **Pn 09 49 24.5 0.0**
SNR=1.0
HINF *e*Sn **Sn 09 50 20.9 -2.6**
comp=Z,35nm,0.3s
SALB San Lorenzo Be 5.25 138 ⇑Pn **Pn 09 49 26.7 +2.0**
SALB San Lorenzo Be 5.25 138 P **Pn 09 49 26.7 +2.0**
SSB Saint Sauveur 5.35 288 P **Pn 09 49 26.1 0.0**
SSB Saint Sauveur 5.35 288 P **Pn 09 49 26.1 0.0**
NKME Niksic 5.36 99 ⇑*i*Pn **Pn 09 49 26.6 +0.5**
NKME *e*Sn **Sn 09 50 25.4 -1.1**
NKME Niksic 5.36 99 ⇑*i*Pn **Pn 09 49 26.6 +0.5**
NKME *e*Sn **Sn 09 50 25.4 -1.1**
CEME Cevo 5.39 102 ⇑*i*Pn **Pn 09 49 26.7 +0.1**
CEME *e*Sn **Sn 09 50 26.1 -1.2**
CEME Cevo 5.39 102 ⇑*i*Pn **Pn 09 49 26.7 +0.1**
CEME *e*Sn **Sn 09 50 26.1 -1.2**
MORH M¨‡r^igy, Hung 5.41 62 *ex* **Sn 09 50 22.1 -5.5**
KHC Kasperske Hory 5.42 13 *e*PN **Pn 09 49 26.8 -0.1**
KHC *ex* x 09 49 34.1
KHC *e*SN **Sn 09 50 25.1 -2.7**
KHC *ex* x 09 50 40.0
KHC Kasperske Hory 5.42 13 Pn **Pn 09 49 26.8 -0.1**
BUM Brajici-Budva 5.45 104 ⇓*i*Pn **Pn 09 49 27.5 +0.1**
BUM *e*Sn **Sn 09 50 27.1 -1.6**
BUM Brajici-Budva 5.45 104 ⇓*i*Pn **Pn 09 49 27.5 +0.1**
BUM *e*Sn **Sn 09 50 27.1 -1.6**
CDF Champ du Feu 5.52 327 *e*Pn **Pn 09 49 28.2 -0.1**
CDF *e*Sn **Sn 09 50 27.2 -3.2**
comp=Z,15nm,0.2s
CDF Champ du Feu 5.52 327 *e*Pn **Pn 09 49 28.2 -0.1**
BBLS Lazići 5.52 87 *e*Pn **Pn 09 49 28.5 +0.1**
BBLS Lazići 5.52 87 *e*Pn **Pn 09 49 28.5 +0.1**
PLE Pljevlja 5.56 93 ⇑*i*Pn **Pn 09 49 29.5 +0.5**
PLE *e*Sn **Sn 09 50 30.1 -1.5**
PLE Pljevlja 5.56 93 ⇑*i*Pn **Pn 09 49 29.5 +0.5**
PLE *e*Sn **Sn 09 50 30.1 -1.5**
HAU Haudompre 5.61 320 *e*Pn **Pn 09 49 29.4 -0.1**
SNR=1.0
HAU *e*Sn **Sn 09 50 29.9 -2.6**
comp=Z,163nm,0.4s,SNR=1.0
HAU Haudompre 5.61 320 *e*Pn **Pn 09 49 29.4 -0.1**
SNR=1.0
TEKS Tekeris 5.62 80 *e*Pn **Pn 09 49 29.7 0.0**
TEKS Tekeris 5.62 80 *e*Pn **Pn 09 49 29.7 0.0**
PDG Podgorica 5.66 102 *e*Pn **Pn 09 49 30.6 +0.4**
PDG *e*Sn **Sn 09 50 29.3 -4.5**
PDG Podgorica 5.66 102 ⇓*i*P **Pn 09 49 30.3 +0.1**
PDG Podgorica 5.66 102 S **Sn 09 50 32.1 -1.7**
PDG Podgorica 5.66 102 ⇑*i*Pn **Pn 09 49 30.1 -0.1**
PDG *e*Sn **Sn 09 50 32.2 -1.6**
TTG Podgorica 5.66 102 ⇑*i*Pn **Pn 09 49 30.1 -0.1**
TTG *e*Sn **Sn 09 50 32.2 -1.6**
DRME Dracevica, Mon 5.69 105 ⇓*i*Pn **Pn 09 49 30.8 +0.2**
DRME *e*Sn **Sn 09 50 33.5 -1.0**
DRME Dracevica, Mon 5.69 105 ⇓*i*Pn **Pn 09 49 30.8 +0.2**
DRME *e*Sn **Sn 09 50 33.5 -1.0**
ZST Bratislava 5.71 39 *e*PN **Pn 09 49 28.8 -2.0**
ZST *e*SN **Sn 09 50 28.8 -6.1**
ZST Bratislava 5.71 39 *e*Pn **Pn 09 49 28.8 -2.0**
LASF Ste Croix 5.71 275 *e*Pn **Pn 09 49 31.1 +0.1**
SNR=1.0
LASF *e*Sn **Sn 09 50 31.7 -3.4**
comp=Z,2.8nm,0.3s
LASF Ste Croix 5.71 275 *e*Pn **Pn 09 49 31.1 +0.1**
SNR=1.0
KOME Kolasin 5.74 97 ⇓*i*Pn **Pn 09 49 32.2 +0.8**
KOME *e*Sn **Sn 09 50 34.3 -1.6**
KOME Kolasin 5.74 97 ⇓*i*Pn **Pn 09 49 32.2 +0.8**
KOME *e*Sn **Sn 09 50 34.3 -1.6**
CSKK Cs¨‡kako 5.74 50 *ex* **Sn 09 50 32.5 -3.3**
ULC Ulcinj 5.81 106 ⇑*i*Pn **Pn 09 49 32.0 -0.3**
ULC *e*Sn **Sn 09 50 35.8 -1.7**
ULC Ulcinj 5.81 106 ⇑*i*Pn **Pn 09 49 32.0 -0.3**
ULC *e*Sn **Sn 09 50 35.8 -1.7**
FGSL Fruska Gora 5.90 75 *e*Pn **Pn 09 49 32.9 -0.5**
FRGS Fruska Gora 5.90 75 *e*Pn **Pn 09 49 32.9 -0.5**
FRGS *e*Sn Sn 09 50 27.9 -12
FRGS Fruska Gora 5.90 75 *e*Pn **Pn 09 49 33.0 -0.5**
MODS Modra-Piesok 5.92 38 *e*PN **Pn 09 49 32.1 -1.6**
MODS *e*SN **Sn 09 50 34.2 -5.9**
MODS Modra-Piesok 5.92 38 *e*Pn **Pn 09 49 32.1 -1.6**
DIVS Divibare 5.94 85 *e*Pn **Pn 09 49 33.5 -0.6**
DIVS Divibare 5.94 85 *e*Pn **Pn 09 49 33.5 -0.6**
SJES Sjenica 5.99 93 *e*Pn **Pn 09 49 35.5 +0.6**
SJES *e*Sn **Sn 09 50 35.1 -7.0**
BEY Berane 6.01 97 ⇑*i*Pn **Pn 09 49 36.6 +1.6**
BEY *e*Sn **Sn 09 50 41.0 -1.4**
IVA Berane 6.01 97 ⇑*i*Pn **Pn 09 49 36.6 +1.6**
IVA *e*Sn **Sn 09 50 41.0 -1.4**
SMOL Smolenice 6.09 38 *e*SN **Sn 09 50 40.3 -3.9**
KRUC Moravsky 6.10 30 *e*Pn **Pn 09 49 35.5 -0.7**
KRUC Moravsky 6.10 30 *e*PN **Pn 09 49 35.5 -0.7**
KRUC *e*SN **Sn 09 50 40.5 -4.1**
PVY Plav 6.12 99 ⇓*i*Pn **Pn 09 49 37.2 +0.6**
PVY *e*Sn **Sn 09 50 43.6 -1.6**
PUK Puka 6.23 104 *i* PG **Pn 09 49 38.5 +0.4**
PUK *i* SG **Pn 09 49 39.1 +1.0**
PUK Puka 6.23 104 *i* PG **Sn 09 50 45.7 -2.3**
PUK *i* SG **Sn 09 50 48.1 +0.1**
TRUS Trudelj 6.24 84 *e*Pn **Pn 09 49 38.0 -0.1**
TRUS Trudelj 6.24 84 *e*Pn **Pn 09 49 38.0 -0.1**
LBL Lubilhac 6.24 286 P **Pn 09 49 38.2 0.0**
LBL Lubilhac 6.24 286 P **Pn 09 49 38.2 0.0**
SMF Signal de Mont 6.25 299 *e*Pn **Pn 09 49 37.8 -0.4**
SNR=1.0
SMF *e*Sn **Sn 09 50 44.4 -3.8**
comp=Z,79nm,0.3s
SMF Signal de Mont 6.25 299 *e*Pn **Pn 09 49 37.8 -0.4**
SNR=1.0
BCI Bajram Curri 6.26 101 *i* PG **Sn 09 50 47.4 -1.0**
BCI *i* SG **Sn 09 50 51.8 +3.4**
PAGF Fort de Pagny 6.29 320 *e*Pn **Pn 09 49 39.5 +0.7**
PAGF *e*Sn **Sn 09 50 46.2 -3.0**
comp=Z,12nm,0.3s
PAGF Fort de Pagny 6.29 320 *e*Pn **Pn 09 49 39.5 +0.7**
VRAC Vranov 6.38 30 *e*Pn **Pn 09 49 38.8 -1.2**
VRAC Vranov 6.38 30 *e*PN **Pn 09 49 38.8 -1.2**
VRAC *e*SN **Sn 09 50 46.5 -4.9**
SFTF Sexfontaines 6.39 315 *e*Pn **Pn 09 49 40.2 +0.1**
SFTF *e*Sn **Sn 09 50 48.7 -2.8**
comp=Z,25nm,0.2s
SFTF Sexfontaines 6.39 315 *e*Pn **Pn 09 49 40.2 +0.1**
NKC Novy Kostel 6.39 4 *e*SN **Sn 09 50 47.3 -4.3**
GOPC GO Pecny, Ondr 6.40 18 *e*PN **Pn 09 49 40.1 -0.2**
GOPC *e*SN **Sn 09 50 48.1 -3.7**
GOPC *ex* x 09 50 59.7
GOPC GO Pecny, Ondr 6.40 18 Pn **Pn 09 49 40.1 -0.2**
PRU Pruhonice 6.42 16 *e*SN **Sn 09 50 48.1 -4.1**
PRU *ex* x 09 51 03.3
JAVC Velka Javorina 6.45 37 *e*Pn **Pn 09 49 41.6 +0.5**
JAVC Velka Javorina 6.45 37 *e*PN **Pn 09 49 41.6 +0.5**
JAVC *e*SN **Sn 09 50 48.7 -4.5**
GRUS Gruza 6.47 87 *e*Pn **Pn 09 49 41.5 +0.3**
GRUS Gruza 6.47 87 *e*Pn **Pn 09 49 41.5 +0.3**
TIR Tirane 6.48 110 ⇑*i*P **Pn 09 49 41.3 -0.1**
TIR Tirane 6.48 110 S **Sn 09 50 48.8 -5.1**
TIR Tirane 6.48 110 ⇑*i*P **Pn 09 49 41.3 -0.1**
LOR Lormes 6.51 304 *e*Pn **Pn 09 49 41.3 -0.5**
SNR=1.0
LOR *e*Sn **Sn 09 50 50.4 -4.2**
comp=Z,50nm,0.2s,SNR=1.0
LOR Lormes 6.51 304 *e*Pn **Pn 09 49 41.3 -0.5**
SNR=1.0
AVF Avril sur Loir 6.61 299 *e*Pn **Pn 09 49 43.0 -0.2**
SNR=1.0
AVF *e*Sn **Sn 09 50 53.4 -3.7**
comp=Z,12nm,0.3s
AVF Avril sur Loir 6.61 299 *e*Pn **Pn 09 49 43.0 -0.2**
SNR=1.0
SSF Saint Saulge 6.63 302 *e*Pn **Pn 09 49 43.0 -0.4**
SNR=1.0
SSF *e*Sn **Sn 09 50 52.6 -4.9**
comp=Z,36nm,0.3s,SNR=1.0
SSF Saint Saulge 6.63 302 *e*Pn **Pn 09 49 43.0 -0.4**
SNR=1.0
PHP Peshkopia 6.74 106 *i* PG **Pn 09 49 45.7 +0.6**
PHP *i* SG 09 49 52.8
PHP Peshkopia 6.74 106 *i* PG **Sn 09 50 54.2 -6.2**
VYHS Vyhne 6.75 44 *e*PN **Pn 09 49 44.5 -0.5**
VYHS *e*SN **Sn 09 50 53.6 -6.7**
VYHS Vyhne 6.75 44 *e*Pn **Pn 09 49 44.5 -0.5**
BGF Bois d'Agland 6.85 296 *e*Pn **Pn 09 49 46.5 0.0**
SNR=1.0
BGF *e*Sn **Sn 09 50 58.9 -4.0**
comp=Z,54nm,0.3s
BGF Bois d'Agland 6.85 296 *e*Pn **Pn 09 49 46.5 0.0**
SNR=1.0
PVCC Panska Ves 6.94 15 *e*SN **Sn 09 51 00.9 -4.0**
MTLF Montolieu 6.95 269 *e*Pn **Pn 09 49 47.7 -0.2**
SNR=1.0
MTLF Montolieu 6.95 269 *e*Pn **Pn 09 49 47.7 -0.2**
SNR=1.0
PSZ Piszkesteto 6.97 52 *ex* **Sn 09 50 59.0 -6.9**
KRLC Kraliky 7.10 27 *e*PN **Pn 09 49 49.3 -0.5**
KRLC *e*SN **Sn 09 51 04.3 -4.6**
KRLC *ex* x 09 51 17.5
KRLC Kraliky 7.10 27 Pn **Pn 09 49 49.3 -0.5**
MORC Moravsky Berou 7.12 32 *e*Pn **Pn 09 49 49.7 -0.4**
MORC Moravsky Berou 7.12 32 *e*PN **Pn 09 49 49.7 -0.4**
MORC *e*SN **Sn 09 51 05.0 -4.4**
TCF Toulx Ste Croi 7.19 293 *e*Pn **Pn 09 49 51.1 0.0**
SNR=1.0
TCF *e*Sn **Sn 09 51 07.4 -3.8**
comp=Z,9.8nm,0.2s
TCF Toulx Ste Croi 7.19 293 *e*Pn **Pn 09 49 51.1 0.0**
SNR=1.0
MDVR Moldovita 7.19 79 ⇓*i*P **Pn 09 49 50.4 -0.8**
MDVR Moldovita 7.19 79 ⇓*i*P **Pn 09 49 50.4 -0.8**
DPC Dobruska-Polom 7.19 24 *e*SN **Sn 09 51 06.1 -5.2**
DPC *ex* x 09 51 17.8
BZS Buzias 7.23 73 ⇑*i*P **Pn 09 49 53.5 +1.9**
BZS Buzias 7.23 73 ⇑*i*P **Pn 09 49 53.5 +1.9**
UPC Upice 7.25 22 *e*SN **Sn 09 51 09.2 -3.4**
UPC *ex* x 09 51 19.6
OKC Ostrava-Krasne 7.40 34 *e*SN **Sn 09 51 12.6 -3.7**
LANS Liptovska Anna 7.49 42 *e*SN **Sn 09 51 13.6 -5.0**
CLL Collm 7.50 6 *e*Pn **Pn 09 49 56.0 +0.8**
CLL *e* 09 51 30.0
CLL *e*Sg Sn 09 51 48.0 +29
ZAGS Zajecar 7.57 87 *e*Pn **Pn 09 49 56.4 +0.2**
ZAGS *e*Sn Sn 09 51 10.7 -10
ZAGS Zajecar 7.57 87 *e*Pn **Pn 09 49 56.4 +0.2**
VTS Vitosha 8.45 95 ⇓*i*P **Pn 09 50 08.7 +0.2**
VTS Vitosha 8.45 95 ⇓*i*P **Pn 09 50 08.7 +0.2**
MFF Saint Martin d 8.84 292 *e*Pn **Pn 09 50 13.5 -0.1**
SNR=1.0
MFF *e*Sn **Sn 09 51 46.1 -5.4**
comp=Z,3.1nm,0.2s
MFF Saint Martin d 8.84 292 *e*Pn **Pn 09 50 13.5 -0.1**
SNR=1.0
QUIF Quistinic 11.17 296 *e*Pn **Pn 09 50 44.2 -1.1**
SNR=1.0
QUIF Quistinic 11.17 296 *e*Pn **Pn 09 50 44.2 -1.1**
SNR=1.0
ESDC Sonseca Array 12.47 256 Pn **Pn 09 51 01.3 -1.7**
comp=Z,0.3nm,0.3s,baz=76,slow=16,SNR=2.2
TORD Torodi Ar. Bea 31.81 199 P **P 09 54 26.4 +0.7**
comp=Z,2.9nm,0.6s,baz=11,slow=8.8,SNR=28
ZALV Zalesovo Beam 47.03 51 LR LR 10 18 18.9
comp=Z,19nm,19.0s,baz=83,slow=39
MKAR Makanchi Array 48.13 60 P **P 09 56 42.8 +2.3**
comp=Z,0.3nm,0.6s,baz=281,slow=6.0,SNR=4.2
TXAR Lajitas Array 86.26 308 P **P 10 00 44.7 +2.9**
comp=Z,0.2nm,0.5s,baz=66,slow=3.8,SNR=5.8

*IDC **11** 09:50:51.6±1.1, 37.°10S×74.°03W, h0km, mb3.9/7, mb1 4.1/8, mb1mx3.9/36, mbtmp3.9/8, ML3.2/1, MS3.7/9, Ms1 3.7/9, ms1mx3.4/32, Error ellipse: s-maj=39.7km s-min=17.3km az=66.0*
*GUC **11** 09:50:53.9±0.6, 36.°95S×74.°22W, h15km±8km, ML3.9*
*ISCJB **11** 09:50:56.8±0.4, 37.°12S±0.°05×73.°80W±0.°07, h35km, mb4.2/17, MS3.8/8, Error ellipse: s-maj=8.3km s-min=6.1km az=36.8*
*NEIC **11** 09:50:59.2±1.6, 37.°07S×73.°66W, h40km±15km, mb4.2/12, ML3.9(GUC), Error ellipse: s-maj=23.2km s-min=10.7km az=86.0*
ISC 11 09:50:58.2±0.7, 37.°09S±0.°07×73.°91W±0.°08, h35km, n49, σ1§70/46, mb4.2/17, MS3.8/8, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CCSP	**San Pedro de C**	**0.69**	**69**	*e*P	**Pn**		**09 51 09.4**	**-2.1**
CCSP				*e*S	**Sn**		**09 51 21.1**	**+0.2**
COCH	**Cobquecura**	**1.32**	**44**	*e*P	**Pn**		**09 51 17.7**	**-2.4**
COCH				*e*S	**Sn**		**09 51 35.4**	**-1.0**
CCHI	**Chillan**	**1.55**	**72**	*e*P	**Pn**		**09 51 22.9**	**-0.4**
CCHI				*e*S	**Sn**		**09 51 44.7**	**+2.5**
CCHI				IAML			09 52 08.9	
	comp=N,2μm,0.7s							
GO05	**HualaæØ**	**2.63**	**38**	*e*Pn	**Pn**		**09 51 36.6**	**-1.5**
GO05	**HualaæØ**	**2.63**	**38**	*e*P	**Pn**		**09 51 36.6**	**-1.5**
GO05				IAML			09 52 42.0	
	comp=E,488nm,1.8s							
LMEL	**Las Melosas**	**4.43**	**44**	*e*P	**Pn**		**09 52 02.3**	**-0.8**
LMEL				*e*S	**Sn**		**09 52 55.2**	**+1.7**
PLCA	**Paso Flores**	**4.48**	**145**	Pn	**Pn**		**09 52 03.5**	**-0.1**
	comp=E,0.2nm,0.3s,baz=344,slow=15,SNR=15							
PLCA				Lg	Lg		09 53 17.2	
	comp=E,0.8nm,0.3s,baz=327,slow=22,SNR=3.1							
CLCH	**Cerro Calan**	**4.61**	**38**	*e*P	**Pn**		**09 52 03.5**	**-2.0**
PEL	**Peldehue**	**4.75**	**35**	*e*P	**Pn**		**09 52 04.9**	**-2.3**
ROC1	**El Roble**	**4.75**	**31**	*e*Pn	**Pn**		**09 52 06.2**	**-1.2**
GO04	**Tololo Observa**	**7.37**	**21**	*e*Pn	**Pn**		**09 52 41.9**	**-1.7**
TRQA	**Tornquist**	**9.52**	**99**	*e*Pn	**Pn**		**09 53 13.6**	**+0.8**
CHRN	**Cochrane**	**10.20**	**175**	*e*Pn	**Pn**		**09 53 20.6**	**-1.4**
GO02	**Mina Guanaco**	**12.45**	**18**	*e*Pn	**Pn**		**09 53 53.4**	**+0.2**
CPUP	**Villa Florida**	**17.70**	**57**	LR	LR		10 02 14.2	
	comp=E,218nm,18.0s,baz=234,slow=38							
MNMC	**Minye Minye**	**18.29**	**13**	*e*P	**Pn**		**09 55 09.6**	**+0.1**
	comp=E,13nm,1.0s							
LPAZ	**La Paz**	**21.35**	**15**	P	**P**		**09 55 43.1**	**+0.1**
	comp=E,2.3nm,1.1s,baz=205,slow=12,SNR=4.7							
LPAZ	**La Paz**	**21.35**	**15**	*e*P	**P**		**09 55 43.5**	**+0.5**
	comp=E,7.1nm,1.0s							
SIV	**San Ignacio**	**23.90**	**32**	P	**P**		**09 56 07.1**	**-1.7**
	comp=E,4.9nm,1.2s,baz=241,slow=13,SNR=9.5							
NNA	**Nana**	**25.14**	**353**	*e*P	**P**		**09 56 21.8**	**+1.7**
	comp=E,177nm,0.3s							
PMSA	**Palmer Station**	**28.33**	**171**	LR	LR		10 07 05.4	
	comp=E,65nm,18.2s,baz=46,slow=34							
RUSC	**La Rusia**	**42.77**	**1**	*e*P	**P**		**09 58 54.0**	**+1.1**
	comp=E,3.3nm,1.0s							
VNA3	**Neumayer Olymp**	**47.10**	**157**	P	**P**		**09 59 26.9**	**+0.6**
SNAA	**Sanae**	**49.33**	**157**	P	**P**		**09 59 43.9**	**+0.4**
SNAA	**Sanae**	**49.33**	**157**	P	**P**		**09 59 41.5**	**-2.0**
	comp=E,2.6nm,0.9s,baz=270,slow=6.8,SNR=9.3							
SNAA				LR	LR		10 18 34.9	
	comp=E,46nm,20.9s,baz=335,slow=34							
SNAA	**Sanae**	**49.33**	**157**	*e*P	**P**		**09 59 42.6**	**-0.9**
	comp=E,4.1nm,1.0s							
MAW	**Mawson**	**70.65**	**164**	LR	LR		10 34 33.9	
	comp=E,100nm,18.7s,baz=242,slow=37							
TX31	**Lajitas Ar. Si**	**71.73**	**333**	*e*P	**P**		**10 02 15.9**	**-0.9**
TX31				*e*P	pP		10 02 18.9	-8.8
TXAR	**Lajitas Array**	**71.73**	**333**	P	**P**		**10 02 15.5**	**-1.2**
	comp=E,0.7nm,0.8s,baz=150,slow=8.2,SNR=7.3							
TXAR				LR	LR		10 29 59.1	
	comp=E,46nm,18.4s,baz=0.0,slow=33							
SWET	**Sewanee**	**72.81**	**350**	*e*P	**P**		**10 02 22.9**	**0.0**
	comp=E,10.0nm,1.0s							
ANMO	**Albuquerque**	**77.80**	**333**	*e*P	**P**		**10 02 54.2**	**+2.3**
	comp=E,2.5nm,1.1s							
T25A	**Trinidad**	**79.07**	**336**	*e*P	**P**		**10 03 01.8**	**+2.9**
	comp=E,7.2nm,1.1s							
BOSA	**Boshof**	**79.97**	**118**	LR	LR		10 35 19.9	
	comp=E,48nm,19.4s,baz=200,slow=33							
PFO	**Pinyon Flats O**	**80.75**	**325**	LR	LR		10 32 00.9	
	comp=E,116nm,21.0s,baz=195,slow=31							
SMCO	**Snowmass**	**81.78**	**335**	*e*P	**P**		**10 03 16.3**	**+2.7**
	comp=E,3.3nm,1.0s							
KNB	**Kanab**	**82.07**	**329**	*e*P	**P**		**10 03 17.6**	**+2.7**
	comp=E,3.5nm,1.2s							
CCUT	**Cedar City**	**82.75**	**329**	*e*P	**P**		**10 03 21.5**	**+3.0**
	comp=E,3.2nm,1.1s							
ECSD	**EROS Data Cent**	**83.05**	**344**	*e*P	**P**		**10 03 21.5**	**+1.9**
P18A	**Preston Nutter**	**83.34**	**333**	*e*P	**P**		**10 03 23.4**	**+1.7**
	comp=E,2.6nm,1.1s							
R11A	**Troy Canyon, C**	**84.34**	**328**	*e*P	**P**		**10 03 29.5**	**+2.9**
	comp=E,1.9nm,1.1s							
NV01	**Mina Array Sit**	**85.58**	**327**	*e*P	**P**		**10 03 33.3**	**+0.4**
NVAR	**Mina Array Bea**	**85.58**	**327**	P	**P**		**10 03 33.3**	**+0.4**
	comp=E,0.2nm,0.6s,baz=183,slow=3.5,SNR=4.0							
PD31	**Pinedale Array**	**85.86**	**335**	*e*P	**P**		**10 03 31.9**	**-2.3**
PDAR	**Pinedale Array**	**85.86**	**335**	P	**P**		**10 03 31.9**	**-2.3**
	comp=E,1.4nm,1.1s,baz=108,slow=1.9,SNR=6.7							
TOA0	**Torodi Ar. Sit**	**86.68**	**71**	*e*P	**P**		**10 03 38.1**	**-0.5**
TORD	**Torodi Ar. Bea**	**86.68**	**71**	P	**P**		**10 03 36.9**	**-1.7**
	comp=E,2.4nm,1.2s,baz=256,slow=3.0,SNR=4.4							
TOA1	**Torodi Ar. Sit**	**86.68**	**71**	*e*P	**P**		**10 03 36.9**	**-1.7**
MDT	**Midelt**	**94.93**	**52**	LR	LR		10 46 49.5	
	comp=E,50nm,19.2s,baz=202,slow=35							
ESDC	**Sonseca Array**	**99.81**	**47**	LR	LR		10 49 53.9	
	comp=E,26nm,18.8s,baz=5.0,slow=36							

MAN 11 09:53:21.1, 7.°30N×126.°96E, h78km, mb4.2, ML3.0, MS2.7, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.78**	**243**	*e*P		Pn	09 53 39.0	+1.6
MATI				*e*S		Sn	09 53 49.2	-0.4
DMPH	**Davao City--Mi**	**1.46**	**262**	⇑*e*P		Pn	09 53 52.0	+6.2
DMPH				*e*S		Sn	09 54 09.9	+5.5
BUKP	**Musuan**	**1.97**	**287**	*e*P		Pn	09 53 53.0	+0.5
BUKP				*e*S		Sn	09 54 24.0	+7.6
BUTP	**Butuan**	**2.12**	**321**	*e*P		Pn	09 53 55.4	+0.9
BUTP				*e*S		Sn	09 54 21.1	+0.9

*CSEM **11** 09:53:45.7, 38.°97N×27.°94W, h3km, ML2.4*
PDA 11 09:53:45.7±0.7, 38.°97N×27.°94W, h3km±2km, MD3.7, ML2.4, 2C, Error ellipse: s-maj=1.6km s-min=1.2km az=83.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PGRA	**Graciosa**	**0.07**	**329**	⇑*i*P		Pg	09 53 47.1	0.0
PGRA				*e*S		Sg	09 53 48.5	+0.4
PGRA				A		A	09 53 51.1	
	12μm,0.4s							
PGRA	**Graciosa**	**0.07**	**329**	⇑*i*P		Pg	09 53 47.1	0.0
PGRA				*e*S		Sg	09 53 48.5	+0.4
ROSA	**Rosais**	**0.35**	**224**	*e*P		Pg	09 53 51.9	-0.5
ROSA				*e*S		Sg	09 53 56.7	-0.2
ROSA				A		A	09 53 59.2	
	256nm,0.2s							
ROSA	**Rosais**	**0.35**	**224**	*e*P		Pg	09 53 51.9	-0.5
ROSA				*e*S		Sg	09 53 56.7	-0.2
PMAN	**Manadas**	**0.36**	**200**	*e*P		Pg	09 53 52.1	-0.5
PMAN				*e*S		Sg	09 53 57.0	-0.2
PMAN				A		A	09 54 02.3	
	320nm,0.2s							
PMAN	**Manadas**	**0.36**	**200**	*e*P		Pg	09 53 52.1	-0.5
PMAN				*e*S		Sg	09 53 57.0	-0.2
PICO	**Pico**	**0.61**	**219**	*e*P		Pg	09 53 56.4	-0.9
PICO				*e*S		Sg	09 54 04.2	-1.0
PICO				A		A	09 54 07.6	
	235nm,0.2s							
PICO	**Pico**	**0.61**	**219**	*e*P		Pg	09 53 56.4	-0.9
PICO				*e*S		Sg	09 54 04.2	-1.0
ADH	**Angra Heroismo**	**

NIED ***11*** *09:57:00, 38°40N×142°10E, h41km, Mw3.5 Best double couple: Ma1.97000×10^14 NP1:φs344.00000°, δ40.00000°, λ-132.00000°. NP2:φs213.00000°, δ61.00000°, λ-60.00000°.*
ISCJB ***11*** *09:57:10.1±1.2, 38°35N±0°04×142°17E±0°07, h32km±7km, mb3.6/3, MS2.9/1, Error ellipse: s-maj=9.3km s-min=6.2km az=16.2*
JMA ***11*** *09:57:11.5±0.1, 38°40N×142°10E, h33km±1km, M3.7*
JMA Felt I J1.
IDC ***11*** *09:57:14.0±3.8, 38°52N×142°60E, h65km±33km, mb3.2/3, mb1 3.2/5, mb1mx3.0/74, mbtmp3.3/5, ML2.7/2, MS3.1/1, Ms1 3.1/1, ms1mx2.3/25, Error ellipse: s-maj=36.0km s-min=20.5km az=110.0*
ISC 11 09:57:10.6±1.3, 38°36N±0°04×142°06E±0°09, h22km±7km, n23, σ0°99/27, mb3.7/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**0.56**	**280**	P	**Pn**	**09 57 23.3**	**+0.1**
JIO				S	**Sn**	09 57 31.3	-0.6
OFUJ	**Ofunato**	**0.78**	**337**	P	**Pb**	**09 57 25.7**	**+0.2**
OFUJ				S	**Sb**	09 57 35.7	+0.1
JMK	**Ichinoseki**	**0.88**	**312**	P	**Pn**	**09 57 27.8**	**+0.2**
JMK				*e*S	**Sn**	09 57 39.1	-0.7
JOU	**Okura**	**1.09**	**271**	P	**Pb**	**09 57 31.5**	**+0.7**
JOU				S	**Sn**	09 57 46.0	+1.0
JMM	**Marumori**	**1.11**	**244**	P	**Pb**	**09 57 31.0**	**-0.1**
JMM				*e*S	**Sn**	09 57 45.5	+0.1
JOM	**Ohasama**	**1.26**	**332**	P	**Pn**	**09 57 33.1**	**+0.2**
JOM				S	**Sn**	09 57 49.2	0.0
JFK	**Kawauchi**	**1.36**	**224**	P	**Pn**	**09 57 34.3**	**0.0**
JFK				*e*S	**Sn**	09 57 50.7	-1.0
JYK	**Kaneyama**	**1.44**	**293**	P	**Pb**	**09 57 36.4**	**-0.3**
JRG	**Rokugo**	**1.52**	**313**	P	**Pb**	**09 57 37.4**	**-0.6**
JRG				*e*S	**Sb**	09 57 56.2	-0.6
JYS	**Shiratake**	**1.57**	**266**	P	**Pb**	**09 57 38.4**	**-0.5**
JYS				*e*S	**Sb**	09 57 57.6	-0.8
JFT	**Otama**	**1.60**	**239**	P	**Pb**	**09 57 39.1**	**-0.3**
JFT				*e*S	**Sb**	09 57 58.2	-0.9
MJAR	**Matsushiro Arr**	**3.56**	**241**	P	**Pb**	**09 58 11.5**	**-1.3**
	0.4nm,0.3s,baz=81,slow=15,SNR=1.9						
MJAR				S	**Sb**	09 58 59.4	+3.8
	0.4nm,0.3s,baz=60,slow=11,SNR=1.9						
ASAJ	**Asahikawa**	**5.77**	**4**	P	**Pn**	**09 58 35.0**	**+0.3**
	0.3nm,0.3s,baz=198,slow=19,SNR=1.3						
MA2	**Magadan**	**21.95**	**12**	LR	LR	10 10 37.2	
	comp=Z,48nm,20.9s,baz=360,slow=37						
H11N2	**WAKE ISLAND Hy**	**28.42**	**124**	T	T	10 33 02.9	
	baz=315						
H11N1	**WAKE ISLAND Hy**	**28.43**	**124**	T	T	10 33 02.5	
	baz=315						
H11N3	**WAKE ISLAND Hy**	**28.44**	**124**	T	T	10 33 00.8	
	baz=315						
H11S1	**WAKE ISLAND Hy**	**29.18**	**126**	T	T	10 34 14.9	
	baz=318						
H11S3	**WAKE ISLAND Hy**	**29.19**	**126**	T	T	10 34 19.0	
	baz=318						
H11S2	**WAKE ISLAND Hy**	**29.20**	**126**	T	T	10 34 23.2	
	baz=318						
KURBB	**Kurchatov Arra**	**45.60**	**307**	P	**P**	**10 05 29.1**	**+0.3**
	0.7nm,0.5s,baz=83,slow=7.6,SNR=4.1						
WRA	**Warramunga Arr**	**58.44**	**189**	P	**P**	**10 07 04.2**	**-0.5**
	0.5nm,0.7s,baz=6.0,slow=7.3,SNR=7.9						
ASAR	**Alice Springs**	**62.17**	**188**	P	**P**	**10 07 30.4**	**+0.2**
	0.2nm,0.6s,baz=357,slow=4.1,SNR=3.5						

ISCJB ***11*** *09:59:32.2±0.7, 40°15N±0°04×31°77E±0°06, h8km, Error ellipse: s-maj=6.8km s-min=5.7km az=0.2*
DDA ***11*** *09:59:32.2, 40°13N×31°76E, h7km, Ml2.1*
CSEM ***11*** *09:59:32.2±0.2, 40°15N×31°76E, h5km, ML2.5, Error ellipse: s-maj=4.3km s-min=3.4km az=101.0*
ISK ***11*** *09:59:33.6, 40°02N×31°24E, h20km±1km, ML2.5/4*
ISC 11 09:59:32.6±0.9, 40°17N±0°03×31°69E±0°04, h8km, n21, σ0°83/23, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUMIH	**MIHALICIK**	**0.34**	**207**	PG	**Pg**	**09 59 39.3**	**-0.1**
AUMIH				SG	**Sg**	**09 59 44.9**	**+1.0**
AUMIH	**MIHALICIK**	**0.34**	**207**	*i* P	**Pg**	**09 59 39.1**	**-0.3**
AUMIH	**MIHALICIK**	**0.34**	**207**	P	**Pg**	**09 59 39.1**	**-0.3**
AUMIH	**MIHALICIK**	**0.34**	**207**	*e*Pg	**Pg**	**09 59 39.3**	**-0.1**
AUMIH				*e*Sg	**Sg**	**09 59 44.9**	**+1.0**
MDUB	**Mudurnu**	**0.48**	**309**	PG	**Pg**	**09 59 42.0**	**+0.1**
MDUB				SG	**Sb**	**09 59 51.4**	**+0.8**
MDUB	**Mudurnu**	**0.48**	**309**	*e*Pg	**Pg**	**09 59 42.0**	**+0.1**
MDUB				*e*Sg	**Sb**	**09 59 51.4**	**+0.8**
CMDR	**Camlidere-ANKA**	**0.68**	**62**	*i* P	**Pg**	**09 59 45.1**	**-0.7**
CMDR	**Camlidere-ANKA**	**0.68**	**62**	P	**Pg**	**09 59 45.1**	**-0.7**
BCAM	**Yenicaga**	**0.70**	**24**	*i* P	**Pg**	**09 59 46.0**	**-0.2**
BCAM	**Yenicaga**	**0.70**	**24**	P	**Pg**	**09 59 46.0**	**-0.2**
AUSIV	**SIVRIHISAR**	**0.74**	**189**	PG	**Pg**	**09 59 46.2**	**-0.7**
AUSIV	**SIVRIHISAR**	**0.74**	**189**	*e*Pg	**Pg**	**09 59 46.2**	**-0.7**
SAHE	**Sakarya_HENDEK**	**0.93**	**317**	*i* P	**Pb**	**09 59 51.4**	**+0.4**
SAHE	**Sakarya_HENDEK**	**0.93**	**317**	P	**Pb**	**09 59 51.4**	**+0.4**
GULT	**Gulveren**	**0.93**	**287**	PG	**Pg**	**09 59 47.9**	**-2.7**
BORA	**Eskisehir**	**0.99**	**253**	PG	Pg	09 59 46.5	-5.2
BORA	**Eskisehir**	**0.99**	**253**	*i* P	Pg	09 59 46.3	-5.3
AFSR	**Af¨ar-Bala (A**	**1.29**	**124**	PN	**Pn**	**09 59 56.5**	**-0.5**
AFSR	**Af¨ar-Bala (A**	**1.29**	**124**	*e*Pn	**Pn**	**09 59 56.5**	**-0.5**
KIZT	**Kizilcal**	**1.30**	**173**	PN	**Pn**	**09 59 56.5**	**-0.7**
KIZT	**Kizilcal**	**1.30**	**173**	*e*Pn	**Pn**	**09 59 56.5**	**-0.7**

DJA 11 10:11:37.9±0.5, 1°S±5°×13°3E±°, h10km, M3.6/4, MLv3.6/4, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**1.16**	**122**	P	Pb	10 11 59.1	-0.9
RKPI				S	Sn	10 12 16.2	+0.2
FAKI	**Fak Fak**	**2.23**	**205**	P	Pn	10 12 14.7	-0.2
FAKI				S	Sn	10 12 42.7	+0.1

ISCJB ***11*** *10:13:38.8±1.2, 34°58N±0°06×32°97E±0°05, h11km±4km, Error ellipse: s-maj=10.4km s-min=7.2km az=2.2*
CSEM ***11*** *10:13:38.4±0.7, 34°55N×32°94E, h8km, ML3.0, Error ellipse: s-maj=13.1km s-min=7.3km az=5.0*
DDA ***11*** *10:13:39.3, 34°69N×32°74E, h19km, Ml3.0*
NIC ***11*** *10:13:39.7±0.3, 34°65N×32°97E, h15km, ML3.0*
ISK ***11*** *10:13:39.9, 34°69N×32°91E, h17km, ML2.7/12*
ISC 11 10:13:41.1±1.0, 34°77N±0°05×32°95E±0°03, h14km±6km, n56, σ0°60/75, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SZAC	**Souni**	**0.06**	**260**	P	**Pg**	**10 13 43.5**	**-0.4**
	baz=146						
SZAC				S	**Sg**	**10 13 46.4**	**+0.7**
SZAC	**Souni**	**0.06**	**260**	P	**Pg**	**10 13 43.5**	**-0.4**
SZAC				S	**Sg**	**10 13 46.4**	**+0.7**
LEF	**Lefka**	**0.36**	**352**	PG	**Pb**	**10 13 49.1**	**-0.2**
LEF				SG	**Sb**	**10 13 55.5**	**+0.7**
LEF	**Lefka**	**0.36**	**352**	PG	**Pb**	**10 13 49.1**	**-0.2**
LEF				SG	**Sb**	**10 13 55.8**	**+1.0**
LEF	**Lefka**	**0.36**	**352**	*e*Pg	**Pb**	**10 13 49.1**	**-0.2**
LEF				*e*Sg	**Sb**	**10 13 55.8**	**+1.0**
LEF				S	**Sn**	**10 13 57.7**	**-1.1**
CSS	**Mathiatis**	**0.37**	**58**	PG	**Pb**	**10 13 49.3**	**-0.3**
CSS				SG	**Sb**	**10 13 55.9**	**+0.7**
CSS	**Mathiatis**	**0.37**	**58**	PG	**Pb**	**10 13 49.2**	**-0.3**
CSS	**Mathiatis**	**0.37**	**58**	P	**Pg**	**10 13 48.5**	**-0.1**
	baz=224						
CSS				S	**Sb**	**10 13 55.6**	**+0.4**
CSS	**Mathiatis**	**0.37**	**58**	P	**Pg**	**10 13 48.5**	**-0.1**
CSS	**Mathiatis**	**0.37**	**58**	*e*Pg	**Pb**	**10 13 49.2**	**-0.3**
CSS				S	**Sb**	**10 13 55.6**	**+0.4**
MAMC	**Mammari**	**0.46**	**28**	P	**Pb**	**10 13 50.8**	**-0.3**
	baz=201						
MAMC	**Mammari**	**0.46**	**28**	P	**Pb**	**10 13 50.8**	**-0.3**
ALFC	**Alefka**	**0.48**	**324**	P	**Pg**	**10 13 50.7**	**-0.1**
	baz=149						
ALFC				S	**Sn**	**10 14 02.3**	**+0.2**
ALFC	**Alefka**	**0.48**	**324**	P	**Pg**	**10 13 50.7**	**-0.1**
ALFC				S	**Sn**	**10 14 02.3**	**+0.2**
AKIN	**Ak¨–nc¨–lar- K**	**0.49**	**59**	PG	**Pg**	**10 13 51.2**	**+0.3**
AKIN	**Ak¨–nc¨–lar- K**	**0.49**	**59**	PG	**Pg**	**10 13 50.9**	**0.0**
AKIN	**Ak¨–nc¨–lar- K**	**0.49**	**59**	*e*Pg	**Pg**	**10 13 50.9**	**0.0**
PPCY	**Paphos**	**0.51**	**284**	P	**Pg**	**10 13 51.1**	**-0.1**
	baz=114						
AKDN	**Akdeniz- K¨–br**	**0.53**	**2**	PG	**Pb**	**10 13 52.5**	**+0.2**
AKDN	**Akdeniz- K¨–br**	**0.53**	**2**	PG	**Pg**	**10 13 51.4**	**-0.2**
AKDN	**Akdeniz- K¨–br**	**0.53**	**2**	*e*Pg	**Pg**	**10 13 51.4**	**-0.2**
AKMC	**Akamas**	**0.57**	**297**	P	**Pg**	**10 13 52.4**	**0.0**
	baz=125						
AKMC	**Akamas**	**0.57**	**297**	P	**Pg**	**10 13 52.4**	**0.0**
EREN	**Erenkoy**	**1.26**	**52**	PN	**Pn**	**10 14 04.2**	**-0.1**
EREN	**Erenkoy**	**1.26**	**52**	PG	**Pn**	**10 14 04.2**	**-0.1**
EREN	**Erenkoy**	**1.26**	**52**	*e*Pg	**Pn**	**10 14 04.2**	**-0.1**
TEKE	**Tekeli-Mersin**	**1.38**	**6**	PN	**Pn**	**10 14 06.0**	**0.0**
TEKE	**Tekeli-Mersin**	**1.38**	**6**	PN	**Pn**	**10 14 06.0**	**0.0**
TEKE	**Tekeli-Mersin**	**1.38**	**6**	*e*Pn	**Pn**	**10 14 06.0**	**0.0**
AKKU	**Akkuyu-Mersin**	**1.48**	**19**	PN	**Pn**	**10 14 06.9**	**-0.4**
AKKU				SN	**Sb**	**10 14 27.6**	**+0.6**
AKKU	**Akkuyu-Mersin**	**1.48**	**19**	PN	**Pn**	**10 14 07.1**	**-0.2**
AKKU	**Akkuyu-Mersin**	**1.48**	**19**	*e*Pn	**Pn**	**10 14 07.1**	**-0.2**
GAZI	**Gazipasa**	**1.56**	**341**	*i* P	**Pn**	**10 14 08.0**	**-0.5**
GAZI				*i* S	**Sg**	**10 14 30.9**	**-0.4**
GAZI	**Gazipasa**	**1.56**	**341**	*i* P	**Pn**	**10 14 07.9**	**-0.5**
GAZI				S	**Sg**	**10 14 30.9**	**-0.4**
IKL	**Isikli**	**1.59**	**22**	PN	**Pn**	**10 14 09.3**	**+0.4**
IKL				SN	**Sb**	**10 14 31.0**	**+0.8**
IKL	**Isikli**	**1.59**	**22**	PN	**Pn**	**10 14 09.3**	**+0.4**
IKL	**Isikli**	**1.59**	**22**	*e*Pn	**Pn**	**10 14 09.3**	**+0.4**
BERE	**Bereket-Mersin**	**1.59**	**8**	PN	**Pn**	**10 14 09.2**	**+0.1**
BERE	**Bereket-Mersin**	**1.59**	**8**	PN	**Pn**	**10 14 09.6**	**+0.5**
BERE	**Bereket-Mersin**	**1.59**	**8**	*e*Pn	**Pn**	**10 14 09.6**	**+0.5**
TEVE	**Tevekalti-Mers**	**1.71**	**13**	PN	**Pn**	**10 14 10.9**	**+0.2**
TEVE	**Tevekalti-Mers**	**1.71**	**13**	PN	**Pn**	**10 14 11.2**	**+0.5**
TEVE	**Tevekalti-Mers**	**1.71**	**13**	*e*Pn	**Pn**	**10 14 11.2**	**+0.5**
KEBE	**Keben-Mersin**	**1.79**	**20**	PN	**Pn**	**10 14 12.2**	**+0.5**
KEBE	**Keben-Mersin**	**1.79**	**20**	PN	**Pn**	**10 14 12.2**	**+0.5**
KEBE	**Keben-Mersin**	**1.79**	**20**	*e*Pn	**Pn**	**10 14 12.2**	**+0.5**
ERMK	**Ermenek**	**1.87**	**359**	*i* P	**Pb**	**10 14 14.7**	**-0.7**
ERMK				*i* S	**Sg**	**10 14 41.8**	**+0.3**
ERMK	**Ermenek**	**1.87**	**359**	P	**Pb**	**10 14 14.6**	**-0.7**
ERMK				S	**Sg**	**10 14 41.8**	**+0.3**
KIZK	**Mersin**	**1.97**	**29**	PN	**Pn**	**10 14 14.9**	**+0.8**
KIZK	**Mersin**	**1.97**	**29**	PN	**Pn**	**10 14 14.9**	**+0.8**
KIZK	**Mersin**	**1.97**	**29**	*i* P	**Pb**	**10 14 15.9**	**-0.9**
KIZK				*i* S	**Sg**	**10 14 45.0**	**+0.5**
KIZK	**Mersin**	**1.97**	**29**	P	**Pb**	**10 14 15.9**	**-0.9**
KIZK				S	**Sg**	**10 14 45.0**	**+0.5**
KEPZ	**Antalya-Kepez**	**2.40**	**333**	*i* P	**Pn**	**10 14 20.7**	**+0.7**
KEPZ	**Antalya-Kepez**	**2.40**	**333**	P	**Pn**	**10 14 20.7**	**+0.7**
KERG	**Konya-Eregli**	**2.81**	**19**	*i* P	**Pb**	**10 14 29.1**	**-2.1**
KERG	**Konya-Eregli**	**2.81**	**19**	P	**Pb**	**10 14 29.1**	**-2.1**

DDA ***11*** *10:26:41.4, 40°35N×27°12E, h7km, Ml2.5*
ISK ***11*** *10:26:41.9, 40°36N×27°05E, h5km, ML1.9/9*
CSEM ***11*** *10:26:42.2±0.1, 40°34N×27°05E, h2km, ML1.9, Error ellipse: s-maj=2.5km s-min=2.1km az=5.0*
ISC 11 10:26:42.1±1.0, 40°33N±0°02×27°06E±0°02, h4km±10km, n32, σ0°53/48, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRBG	**Karabiga-Canak**	**0.20**	**72**	PG	**Pg**	**10 26 46.2**	**+0.2**
KRBG				SG	**Sg**	**10 26 49.0**	**+0.5**
KRBG	**Karabiga-Canak**	**0.20**	**72**	*e*Pg	**Pg**	**10 26 46.2**	**+0.2**
KRBG				*e*Sg	**Sg**	**10 26 49.0**	**+0.5**
LPK	**Lapseki**	**0.23**	**280**	PG	**Pg**	**10 26 46.2**	**-0.4**
LPK	**Lapseki**	**0.23**	**280**	*e*Pg	**Pg**	**10 26 46.2**	**-0.4**
RKY	**Sarkoy-Tekirda**	**0.37**	**15**	PG	**Pg**	**10 26 49.4**	**+0.1**
RKY				SG	**Sg**	**10 26 54.3**	**+0.2**
RKY	**Sarkoy-Tekirda**	**0.37**	**15**	*e*Pg	**Pg**	**10 26 49.4**	**+0.1**
RKY				*e*Sg	**Sg**	**10 26 54.3**	**+0.2**
SART	**Tekirdag**	**0.37**	**15**	*i* P	**Pg**	**10 26 48.4**	**-0.9**
SART				*i* S	**Sg**	**10 26 53.4**	**-0.8**
SART	**Tekirdag**	**0.37**	**15**	P	**Pg**	**10 26 48.4**	**-0.9**
SART				S	**Sg**	**10 26 53.3**	**-0.8**
GELI	**Tayfur-Gelibol**	**0.45**	**279**	PG	**Pg**	**10 26 51.1**	**+0.3**
GELI				SG	**Sg**	**10 26 57.7**	**+1.1**
GELI	**Tayfur-Gelibol**	**0.45**	**279**	*e*Pg	**Pg**	**10 26 51.1**	**+0.3**
GELI				*e*Sg	**Sg**	**10 26 57.7**	**+1.1**
KESN	**Edirne-Kesan**	**0.57**	**330**	*i* P	**Pn**	**10 26 58.6**	**+1.3**
KESN				*i* S	**Sn**	**10 27 07.6**	**+0.2**
BAYC	**CANAKKALE_Bayr**	**0.71**	**214**	*i* P	**Pg**	**10 26 55.7**	**0.0**
BAYC				*i* S	**Sb**	**10 27 06.4**	**-0.7**
BAYC	**CANAKKALE_Bayr**	**0.71**	**214**	P	**Pg**	**10 26 55.7**	**0.0**
BAYC				S	**Sb**	**10 27 06.4**	**-0.7**
BALY	**Balya**	**0.73**	**144**	*i* P	**Pg**	**10 26 55.6**	**-0.6**
BALY				*i* S	**Sg**	**10 27 05.4**	**-0.3**
BALY	**Balya**	**0.73**	**144**	P	**Pg**	**10 26 55.6**	**-0.6**
BALY				S	**Sg**	**10 27 05.4**	**-0.3**
ENEZ	**Enez**	**0.80**	**301**	PG	**Pg**	**10 26 57.4**	**0.0**
ENEZ	**Enez**	**0.80**	**301**	*e*Pg	**Pg**	**10 26 57.4**	**0.0**
SBT3	**Marmara-Eregli**	**0.89**	**51**	PG	**Pb**	**10 26 59.4**	**-0.6**
SBT3	**Marmara-Eregli**	**0.89**	**51**	*e*Pg	**Pb**	**10 26 59.4**	**-0.6**
GADA	**Gvkgeada**	**0.90**	**261**	PG	**Pb**	**10 26 59.7**	**-0.5**
GADA	**Gvkgeada**	**0.90**	**261**	*e*Pg	**Pb**	**10 26 59.7**	**-0.5**
BOZC	**Bozcaada**	**0.91**	**238**	*i* P	**Pg**	**10 26 59.4**	**-0.3**
BOZC				*i* S	**Sn**	**10 27 14.5**	**-0.7**
BALB	**Balikesir**	**0.94**	**137**	PG	**Pb**	**10 27 00.8**	**-0.1**
BALB	**Balikesir**	**0.94**	**137**	*e*Pg	**Pb**	**10 27 00.8**	**-0.1**
ALN	**Alexandroupoli**	**0.95**	**307**	PG	**Pg**	**10 27 00.1**	**-0.3**
ALN	**Alexandroupoli**	**0.95**	**307**	*e*Pg	**Pg**	**10 27 00.1**	**-0.3**
DURS	**Dursunbey**	**1.31**	**123**	*i* P	**Pg**	**10 27 07.4**	**+0.1**
DURS				*i* S	**Sb**	**10 27 24.5**	**-0.1**
DURS	**Dursunbey**	**1.31**	**123**	P	**Pg**	**10 27 07.4**	**+0.1**
DURS				S	**Sb**	**10 27 24.5**	**-0.1**
ARMT	**Armutlu**	**1.40**	**80**	PN	**Pg**	**10 27 09.2**	**+0.3**
ARMT	**Armutlu**	**1.40**	**80**	*e*Pn	**Pg**	**10 27 09.2**	**+0.3**
CTKS	**Kestanelik-??a**	**1.43**	**50**	PN	**Pg**	**10 27 09.3**	**-0.2**
CTKS	**Kestanelik-??a**	**1.43**	**50**	*e*Pn	**Pg**	**10 27 09.3**	**-0.2**

CSEM ***11*** *10:31:23.0, 49°03N×8°66E, h0km, ML1.4/2, Mining explosion.*
BGR ***11*** *10:31:23.0±1.2, 49°03N×8°66E, h0km, ML1.4/2, Error ellipse: s-maj=12.2km s-min=4.4km az=62.0, Mining explosion.*
LDG 11 10:31:35.9±0.3, 48°23N×7°72E, h2km, Ml2.5/4, Error ellipse: s-maj=5.5km s-min=3.3km az=86.0, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CDF	**Champ du Feu**	**0.34**	**301**	*e*Pg	Pg	10 31 42.5	0.0
CDF				*e*Sg	Sg	10 31 47.5	+0.5
CDF	**Champ du Feu**	**0.34**	**301**	*e*Pg	Pg	10 31 42.5	0.0
CDF				*e*Sg	Sg	10 31 47.5	+0.5
ECH	**Echery**	**0.38**	**267**	*e*Pg	Pn	10 31 47.0	-1.4
ECH				*e*Sg	Sb	10 32 03.8	+12
ECH	**Echery**	**0.38**	**267**	Pg	Pn	10 31 47.0	-1.4
ECH				Sg	Sb	10 32 03.8	+12
BFO	**Black Forest**	**0.42**	**77**	*e*Pg	Pg	10 31 37.4	-6.5
BFO				*e*Sg	Sg	10 31 46.7	-2.7
BFO	**Black Forest**	**0.42**	**77**	Pg	Pg	10 31 37.4	-6.5
BFO				Sg	Sg	10 31 46.7	-2.7
SLE	**Schleitheim**	**0.70**	**132**	*e*Pg	Pg	10 31 46.6	-2.7
SLE				*e*Sg	Sn	10 32 03.0	-1.2
SLE	**Schleitheim**	**0.70**	**132**	Pg	Pg	10 31 46.6	-2.7
SLE				Sg	Sn	10 32 03.0	-1.3
HINF	**Hinteralfeld**	**0.72**	**235**	*e*Pg	Pg	10 31 49.5	-0.1
HINF				*e*Sg	Sg	10 31 58.6	-0.3
	6.4nm,1.0s						
HINF	**Hinteralfeld**	**0.72**	**235**	*e*Pg	Pg	10 31 49.5	-0.1
HINF				*e*Sg	Sg	10 31 58.6	-0.3
	3.2nm,1.0s						
SULZ	**Cheisacher**	**0.76**	**159**	*e*Sg	Sn	10 32 11.4	+5.8
SULZ	**Cheisacher**	**0.76**	**159**	Sg	Sn	10 32 11.4	+5.8
BALST	**Balsthal**	**0.90**	**181**	*e*Sg	Sn	10 32 20.2	+11
BALST	**Balsthal**	**0.90**	**181**	Sg	Sn	10 32 20.2	+11
SFTF	**Sexfontaines**	**1.79**	**270**	*e*Pg	Pb	10 32 09.5	+0.1
SFTF				*e*Sg	Sb	10 32 32.8	+0.4
	17nm,0.9s						
SFTF	**Sexfontaines**	**1.79**	**270**	*e*Pg	Pb	10 32 09.5	+0.1
SFTF				*e*Sg	Sb	10 32 32.8	+0.4
	8.6nm,0.9s						
MEZF	**Maizieres J'vi**	**1.80**	**280**	*e*Pg	Pb	10 32 09.2	-0.3
MEZF				*e*Sg	Sb	10 32 32.6	+0.1
	9.8nm,0.8s						
MEZF	**Maizieres J'vi**	**1.80**	**280**	*e*Pg	Pb	10 32 09.2	-0.3
MEZF				*e*Sg	Sb	10 32 32.6	+0.1
	4.9nm,0.8s						
LOR	**Lormes**	**2.78**	**251**	*e*Pg	Pg	10 32 27.8	-1.3
LOR				*e*Sg	Sb	10 33 02.5	+1.8
	6.7nm,0.9s						
LOR	**Lormes**	**2.78**	**251**	*e*Pg	Pg	10 32 27.8	-1.3
LOR				*e*Sg	Sb	10 33 02.5	+1.8
	3.3nm,0.9s						
SSF	**Saint Saulge**	**3.08**	**249**	*e*Pg	Pb	10 32 33.0	+1.6
SSF				*e*Sg	Sb	10 33 09.5	+0.1
	50nm,1.9s						
SSF	**Saint Saulge**	**3.08**	**249**	*e*Pg	Pb	10 32 33.0	+1.6
SSF				*e*Sg	Sb	10 33 09.5	+0.1
	25nm,1.9s						

NIED ***11*** *10:33:00, 40°10N×142°50E, h41km, Mw4.2 Best double couple: Ma1.92000×10^15 NP1:φs180.00000°, δ23.00000°, λ67.00000°. NP2:φs24.00000°, δ69.00000°, λ99.00000°.*
JMA ***11*** *10:33:10.6±0.1, 40°12N×142°45E, h35km±1km, M4.1*
JMA Felt I J1.
BJI ***11*** *10:33:10.8, 40°01N×142°48E, h60km, mb4.6/22, mB4.9/14, Ms4.1/4, Ms7 3.8/4*
ISCJB ***11*** *10:33:10.6±0.4, 40°12N±0°03×142°45E±0°04, h51km±3km, mb4.3/55, MS3.5/9, Error ellipse: s-maj=6.2km s-min=3.9km az=30.9*
MOS ***11*** *10:33:11.0±1.0, 40°15N×142°54E, h57km, mb4.5/34, Error ellipse: s-maj=8.6km s-min=5.4km az=90.1*
NEIC ***11*** *10:33:13.6±0.5, 40°10N×142°48E, h67km±4km, mb4.5/12, Error ellipse: s-maj=6.3km s-min=4.0km az=129.0*
NEIC Recorded [1 JMA] in Aomori, Iwate and Miyagi.
IDC ***11*** *10:33:15.8±2.3, 40°01N×142°34E, h84km±20km, mb3.8/24, mb1 3.9/29, mb1mx3.8/72, mbtmp4.1/29, MS3.2/12, Ms1 3.2/12, ms1mx2.9/69, Error ellipse: s-maj=17.4km s-min=13.3km az=77.0*
ISC 11 10:33:11.3±0.5, 40°08N±0°04×142°54E±0°05, h44km±3km, h44km:pP-P, n150, σ1°89/176, mb4.3/55, MS3.5/9, 10C-8D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.54**	**255**	P	**Pn**	**10 33 21.0**	**-1.6**
JTH				S	**Sn**	**10 33 28.5**	**-2.2**
MIYJ	**Miyakonagasawa**	**0.74**	**228**	P	**Pn**	**10 33 24.2**	**-1.2**
MIYJ				*e*S	**Sn**	**10 33 33.9**	**-1.7**
JANG	**Nango**	**0.83**	**291**	P	**Pn**	**10 33 24.7**	**-1.9**
JANG				S	**Sn**	**10 33 34.6**	**-3.2**
JKZ	**Kuzumaki**	**0.93**	**265**	P	**Pn**	**10 33 26.7**	**-1.3**
JKZ				*e*S	**Sn**	**10 33 38.2**	**-2.0**
JOM	**Ohasama**	**1.13**	**238**	P	**Pn**	**10 33 30.3**	**-0.4**
JOM				*e*S	**Sn**	**10 33 44.3**	**-0.7**
OFUJ	**Ofunato**	**1.20**	**214**	P	**Pn**	**10 33 31.3**	**-0.3**
OFUJ				*e*S	**Sn**	**10 33 46.7**	**0.0**
JTM	**Tenmabayashi**	**1.32**	**303**	P	**Pn**	**10 33 32.3**	**-1.0**
JTM				*e*S	**Sn**	**10 33 48.0**	**-1.7**
JAH	**Hinai**	**1.46**	**275**	P	**Pn**	**10 33 34.7**	**-0.4**
JAH				S	**Sn**	**10 33 52.6**	**-0.5**
JMK	**Ichinoseki**	**1.52**	**223**	P	**Pn**	**10 33 36.1**	**+0.2**
JMK				S	**Sn**	**10 33 55.6**	**+1.2**
ERM	**Erimo**	**1.99**	**13**	*e*Pn	**Pn**	**10 33 43.6**	**+1.2**
ERM				*e*Sn	**Sn**	**10 34 07.6**	**+1.5**
ERM	**Erimo**	**1.99**	**13**	*d i*P	**Pn**	**10 33 44.2**	**+1.8**
ASAJ	**Asahikawa**	**4.04**	**1**	P	**Pn**	**10 34 11.7**	**+1.2**
	6.3nm,0.3s,baz=223,slow=9.3,SNR=42						
ASAJ				S	**Sn**	**10 35 00.5**	**+4.1**
	3.3nm,0.3s,baz=72,slow=20,SNR=2.9						
ASAJ				LR	LR	10 36 09.4	
	comp=Z,372nm,19.1s,baz=184,slow=42						
LAGR	**Lagunnoye**	**4.65**	**30**	*e*P	**Pn**	**10 34 20.7**	**+1.8**
YUK	**Yuzh-Kuril'sk**	**4.66**	**31**	*e*P	**Pn**	**10 34 19.6**	**+0.5**
YUK				*e*S	**Sn**	**10 35 07.7**	**-4.2**
YUK				pmax	pmax

comp=Z,19nm,0.6s
YAK Yakutsk 23.33 345 *e*P **P** **10 38 12.5 -2.6**
YAK *e**PP **pP** **10 38 27.5 +1.2**
YAK *e* 10 38 36.4
YAK *e*S **S** **10 42 19.4 -4.9**
YAK *e**SS **sS** **10 42 43.4 -0.5**
YAK *e*SS **SnSn** **10 43 12.3 +10**
YAK *e* 10 49 19.7
YAK pmax pmax
comp=Z,20nm,1.0s
YAK pmax pmax
comp=E,2.0nm,1.3s
YAK pmax pmax
comp=N,5.0nm,1.1s
YAK smax smax
comp=N,61nm,3.5s
YAK smax smax
comp=E,56nm,4.8s
HHC Hu-ho-hao-te 23.52 282 *e*P **P** **10 38 16.0 -1.3**
HHC sP sP 10 38 37.7 +3.6
HHC PP **PnPn** **10 38 52.4 +7.1**
HHC S **S** **10 42 26.2 -1.9**
HHC pmax pmax
comp=E,9.0nm,1.0s
HHC pmax pmax
comp=E,88nm,5.1s
SEY Seymchan 23.64 11 P **P** **10 38 17.1 -1.0**
comp=E,4.6nm,0.8s,baz=193,slow=6.5,SNR=15
SEY Seymchan 23.64 11 *ce*P **P** **10 38 20.3 +2.2**
SEY *e**SP **sP** **10 38 33.6 -1.3**
GUMO Guam 26.47 175 LR LR 10 48 07.3
comp=E,23nm,21.7s,baz=18,slow=34
ULN Ulaanbaatar 26.51 299 *e*P **P** **10 38 43.4 -1.2**
comp=E,2.1nm,0.7s
ULN Ulaanbaatar 26.51 299 *d i*P **P** **10 38 44.4 -0.2**
ULN pmax pmax
comp=Z,1.0nm,0.6s
SONA0 Songino Array 26.95 299 *e*P **P** **10 38 48.1 -0.4**
SONA0 *e* 10 50 09.4
SONM Songino Array 26.95 299 P **P** **10 38 48.1 -0.4**
comp=Z,1.6nm,0.5s,baz=107,slow=9.5,SNR=4.6
SONM LR LR 10 50 09.4
comp=Z,67nm,20.1s,baz=73,slow=38
H11N2 WAKE ISLAND Hy 29.11 127 T T 11 09 52.6
baz=319,slow=75,SNR=325
H11N1 WAKE ISLAND Hy 29.12 127 T T 11 09 52.1
baz=319,slow=75,SNR=272
H11N3 WAKE ISLAND Hy 29.13 127 T T 11 09 52.8
baz=319,slow=75,SNR=284
ZAK Zakamensk 29.19 304 *e*P P 10 39 03.1 -5.3
ZAK pmax pmax
comp=Z,5.0nm,1.3s
H11S1 WAKE ISLAND Hy 29.93 129 T T 11 11 01.4
baz=321,slow=76,SNR=57
H11S3 WAKE ISLAND Hy 29.93 129 T T 11 11 04.4
baz=321,slow=76,SNR=50
H11S2 WAKE ISLAND Hy 29.95 129 T T 11 11 03.9
baz=321,slow=76,SNR=49
LZH Lanzhou 30.55 275 *e*P **P** **10 39 22.0 +1.3**
LZH pP sP 10 39 36.3 -1.6
LZH sP pP 10 39 43.5 +11
LZH pmax pmax
comp=Z,27nm,1.1s
LZH pmax pmax
comp=Z,86nm,4.2s
LZH LR LR
comp=Z,380nm,13.1s
LZH LR LR
comp=Z,390nm,13.4s
LZH LR LR
comp=Z,470nm,15.0s
BILL Bilibino 30.86 17 *i* P **P** **10 39 22.9 0.0**
BILL pmax pmax
comp=Z,3.0nm,1.0s
TIXI Tiksi 32.39 352 ⇓ *i*P **P** **10 39 38.5 +2.3**
TIXI pmax pmax
comp=Z,1.0nm,0.7s
CD2 Chengdu 32.66 266 P **P** **10 39 37.7 -1.4**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
KMI Kunming 36.37 258 P **P** **10 40 11.9 +0.4**
KMI pP sP 10 40 28.1 -0.6
KMI pmax pmax
comp=Z,10.0nm,0.9s
KMI pmax pmax
comp=Z,71nm,3.6s
WMQ Urumqi 40.33 294 P **P** **10 40 46.7 +2.3**
WMQ pP sP 10 41 00.6 -1.2
WMQ pmax pmax
comp=Z,14nm,0.7s
WMQ pmax pmax
comp=Z,210nm,4.7s
WMQ LR LR
comp=Z,48nm,18.7s
ZAA1 Zalesovo Array 40.58 310 *e*P **P** **10 40 45.9 -0.3**
ZAA1 *e*PcP **PcP** **10 42 47.9 +0.3**
ZAA0 Zalesovo Array 40.58 310 *e*P **P** **10 40 45.8 -0.4**
comp=Z,2.5nm,0.7s
ZALV Zalesovo Beam 40.58 310 P **P** **10 40 45.9 -0.3**
comp=Z,1.6nm,0.4s,baz=96,slow=8.3,SNR=9.9
ZALV PcP **PcP** **10 42 47.8 +0.3**
comp=Z,0.7nm,0.4s,baz=87,slow=4.0,SNR=2.6
ZALV Zalesovo Beam 40.58 310 *e*P **P** **10 40 45.1 -1.0**
ZALV PcP **PcP** **10 42 47.9 +0.3**
CMAR Chiang Mai Arr 43.17 253 P **P** **10 41 07.4 -0.4**
comp=Z,1.2nm,0.4s,baz=45,slow=10,SNR=3.5
MK01 Makanchi Array 43.31 300 *e*P **P** **10 41 08.0 -0.7**
MK31 Makanchi Array 43.31 300 *e*P **P** **10 41 08.1 -0.6**
MK31 Makanchi Array 43.31 300 *e*P **P** **10 41 08.1 -0.6**
MK32 Makanchi Array 43.31 300 *e*P **P** **10 41 08.1 -0.6**
MKAR Makanchi Array 43.31 300 P **P** **10 41 08.1 -0.6**
comp=Z,1.8nm,0.6s,baz=88,slow=9.8,SNR=17
MKAR Makanchi Array 43.31 300 *e*P **P** **10 41 08.1 -0.6**
comp=Z,18nm,0.6s
MAKZ Makanchi 43.52 300 *e*P **P** **10 41 09.8 -0.5**
comp=Z,2.6nm,0.6s
MAKZ Makanchi 43.52 300 *e*P **P** **10 41 09.8 -0.5**
MAKZ pmax pmax
comp=Z,3.0nm,0.6s
IM3 Indian Mountai 43.60 32 *e*P **P** **10 41 12.0 +1.4**
KURK Kurchatov 44.80 306 *e*P **P** **10 41 19.9 -0.6**
comp=Z,10nm,0.7s
KURK *e*P **P** **10 41 20.5 0.0**
KURK Kurchatov 44.80 306 *d i*P **P** **10 41 19.9 -0.6**
KURK pmax pmax
comp=Z,8.0nm,0.8s
KURBB Kurchatov Arra 44.88 306 P **P** **10 41 20.5 -0.6**
comp=Z,7.6nm,0.7s,baz=82,slow=8.6,SNR=20
PDGK Podgornoye 46.19 296 P **P** **10 41 31.2 -0.5**
PDGK pmax pmax
comp=Z,3.0nm,0.8s
ILAR Eielson Array 46.47 34 P **P** **10 41 34.3 +0.9**
comp=Z,0.9nm,0.7s,baz=265,slow=6.3,SNR=12
ILB Eielson Array 46.47 34 *e*P **P** **10 41 33.9 +0.5**
BVAR Borovoye Array 49.22 311 P **P** **10 41 54.8 -0.1**
comp=Z,3.5nm,0.5s,baz=71,slow=8.8,SNR=18
BRVK Borovoye 49.27 311 *ce*P **P** **10 41 56.0 +0.7**
BRVK pmax pmax
comp=Z,2.0nm,0.7s
KSH Kashi 50.02 292 P **P** **10 42 05.4 +4.0**
KSH pP sP 10 42 19.9 +1.0
KSH pmax pmax
comp=Z,270nm,4.1s
INK Inuvik 51.29 28 P **P** **10 42 11.7 +1.5**
comp=Z,1.8nm,0.7s,baz=265,slow=7.2,SNR=4.7
MNAS Manas 51.29 297 P **P** **10 42 11.0 +0.1**
MNAS pmax pmax
comp=Z,6.0nm,0.9s
SFK Sufi-Kurgan 51.57 294 P **P** **10 42 13.1 0.0**
SFK pmax pmax
comp=Z,4.0nm,0.7s
KK31 Karatay Array 52.41 298 *e*P **P** **10 42 18.2 -0.8**
KK31 Karatay Array 52.41 298 *e*P **P** **10 42 18.2 -0.8**
KKAR Karatay Array 52.41 298 *e*P **P** **10 42 18.3 -0.7**
KKAR Karatay Array 52.41 298 *e*P **P** **10 42 18.3 -0.7**
SVE Sverdlovsk 53.48 317 *e*P **P** **10 42 24.1 -2.6**
SVE pmax pmax
comp=Z,12nm,0.7s
NIL Nilore 54.54 287 *e*P **P** **10 42 34.5 -0.4**
comp=Z,7.7nm,0.6s
NIL Nilore 54.54 287 *e*P **P** **10 42 34.5 -0.4**
NIL pmax pmax
comp=Z,8.0nm,0.6s
ARU Arti 54.69 317 P **P** **10 42 35.3 -0.2**
comp=Z,5.0nm,0.5s,baz=57,slow=3.4,SNR=11
ARU Arti 54.69 317 *e*P **P** **10 42 35.4 -0.2**
comp=Z,7.6nm,0.7s
ARU Arti 54.69 317 *c i*P **P** **10 42 35.2 -0.3**
ARU *PP **pP** **10 42 49.7 +1.6**
ARU 10 43 34.9
ARU 10 44 34.1
ARU S **S** **10 50 12.5 +0.2**
ARU SS **SS** **10 53 51.2 -3.8**
ARU pmax pmax
comp=Z,10.0nm,1.0s
MWH Moku'aweowe 56.36 92 *e*P **P** **10 42 46.4 -2.3**
comp=Z,73nm,1.1s
ABKAR Abkulak array 56.68 309 *e*P **P** **10 42 49.5 -0.4**
KBL Kabul 57.19 290 *e*P **P** **10 42 53.1 -0.9**
comp=Z,12nm,0.8s
KBL Kabul 57.19 290 *e*P **P** **10 42 53.1 -0.9**
KBL pmax pmax
comp=Z,12nm,0.8s
AKTO Aktyubinsk 57.32 311 P **P** **10 42 54.3 -0.2**
comp=Z,3.9nm,0.7s,baz=61,slow=14,SNR=13
SPITS Spitsbergen Ar 57.71 349 P **P** **10 42 57.2 +0.4**
comp=Z,4.1nm,1.1s,baz=62,slow=10.0,SNR=2.9
KBS Kingsbay 57.81 350 ⇑ *e*P **P** **10 43 00.9 +3.4**
PRGR Permogore 58.71 326 *e*P **P** **10 43 01.7 -2.2**
PRGR pmax pmax
comp=Z,5.0nm,0.5s
WRAB Tennant Creek 60.19 189 ⇓ *i*P **P** **10 43 14.1 -0.5**
WRAB pmax pmax
comp=Z,7.0nm,1.5s
WR1 Warramunga Arr 60.20 189 *e*P **P** **10 43 14.1 -0.5**
comp=Z,6.9nm,1.1s
WRA Warramunga Arr 60.20 189 P **P** **10 43 14.1 -0.5**
comp=Z,1.0nm,0.6s,baz=6,1,slow=7.2,SNR=18
ARA0 ARCESS Array S 61.47 339 *e*P **P** **10 43 22.6 -0.1**
ARCES ARCESS Array B 61.47 339 P **P** **10 43 22.7 -0.1**
comp=Z,1.0nm,0.6s,baz=51,slow=6.3,SNR=3.9
ASAR Alice Springs 63.92 189 P **P** **10 43 38.8 -0.8**
comp=Z,0.7nm,0.7s,baz=2.7,slow=7.7,SNR=8.3
OBN Obninsk 66.19 323 *i* P **P** **10 43 53.8 -0.2**
OBN pmax pmax
comp=Z,5.0nm,0.8s
FIA0 FINESS Array S 66.54 332 *e*P **P** **10 43 55.8 -0.3**
FIA0 *e* 11 14 52.3
FIA0 FINESS Array S 66.54 332 *e*P **P** **10 43 55.8 -0.3**
FINES FINESS Array B 66.54 332 P **P** **10 43 55.8 -0.3**
comp=Z,2.1nm,0.7s,baz=60,slow=7.7,SNR=6.5
FINES LR LR 11 14 52.3
comp=Z,41nm,20.1s,baz=201,slow=38
FINES FINESS Array B 66.54 332 *c i*P **P** **10 43 55.7 -0.4**
FINES *e**SP **pP** **10 44 10.3 +1.4**
FINES pmax pmax
comp=Z,2.0nm,0.7s
VSR Storozhevoye 67.23 318 *e*P **P** **10 44 00.4 -0.3**
VSR pmax pmax
comp=Z,4.0nm,0.5s
VSU Vasula 68.28 329 ⇑ *i*P **P** **10 44 08.7 +1.5**
VSU *i* *PP **pP** **10 44 19.8 -0.2**
VSU pmax pmax
comp=Z,19nm,1.0s
KIV Kislovodsk 69.59 311 *e*P **P** **10 44 17.3 +1.6**
KIV pmax pmax
comp=Z,11nm,1.0s
KIV MLR MLR
comp=Z,22nm,17.0s
KBZ Khabaz 69.60 310 P **P** **10 44 15.8 +0.2**
comp=Z,2.4nm,0.5s,baz=63,slow=4.1,SNR=8.2
GNI Garni 70.60 306 *c i*P **P** **10 44 22.5 +0.4**
GNI *i* *SP **sP** **10 44 38.7 -1.4**
GNI pmax pmax
comp=Z,8.0nm,0.8s
HFS Hagfors 71.68 336 P **P** **10 44 28.2 +0.2**
comp=Z,1.7nm,0.4s,baz=55,slow=5.5,SNR=9.5
HFS LR LR 11 21 05.8
comp=Z,37nm,18.6s,baz=208,slow=40
NB2 NORSAR Subarra 71.72 337 P **P** **10 44 28.0 -0.3**
comp=Z,1.2nm,0.6s,baz=38,slow=6.2
NB200 NORSAR Array S 71.72 337 *e*P **P** **10 44 28.2 -0.1**
NB200 *e* 11 18 49.6
NOA NORSAR Array B 71.72 337 P **P** **10 44 28.2 -0.1**
comp=Z,2.8nm,0.7s,baz=34,slow=3.1,SNR=4.4
NOA LR LR 11 18 49.6
comp=Z,15nm,21.5s,baz=40,slow=38
NOA NORSAR Array B 71.72 337 P **P** **10 44 28.2 -0.1**
NOA pmax pmax
comp=Z,2.0nm,0.7s
NOA MLR MLR
comp=Z,15nm,21.5s
AKASG Malin Array Be 72.43 322 P **P** **10 44 32.2 -0.5**
comp=Z,1.4nm,0.5s,baz=52,slow=5.9,SNR=10
AKASG Malin Array Be 72.43 322 *ce*P **P** **10 44 32.0 -0.7**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKBB Malin Array Si 72.43 322 *e*P **P** **10 44 32.2 -0.5**
comp=Z,3.9nm,0.9s
AKBB Malin Array Si 72.43 322 *e*P **P** **10 44 32.2 -0.5**
AKBB pmax pmax
comp=Z,4.0nm,0.9s
KIEV Kiev 72.44 322 ⇓ *i*P **P** **10 44 32.7 0.0**
KIEV *i* *PP **pP** **10 44 44.9 -0.8**
KIEV *e**SP **PcP** **10 44 48.3 -2.0**
KIEV pmax pmax
comp=Z,3.0nm,1.0s
NV01 Mina Array Sit 72.48 54 *e*P **P** **10 44 33.8 +0.3**
NVAR Mina Array Bea 72.48 54 P **P** **10 44 35.5 +2.0**
comp=Z,0.2nm,0.7s,baz=293,slow=10,SNR=3.3
PDAR Pinedale Array 74.92 47 P **P** **10 44 48.9 +1.1**
comp=Z,0.1nm,0.3s,baz=345,slow=3.2,SNR=2.5
BUR08 Bucovina Ar. S 76.45 322 *e*P **P** **10 44 55.7 -0.6**
BUR04 Bucovina Ar. S 76.47 322 *e*P **P** **10 44 56.1 -0.2**
BR101 Keskin Array S 77.49 312 *e*P **P** **10 45 01.8 -0.5**
BRTR Keskin Array B 77.49 312 P **P** **10 45 01.8 -0.5**
comp=Z,0.3nm,0.4s,baz=64,slow=3.3,SNR=3.9
BRTR Keskin Array B 77.49 312 *i* P **P** **10 45 05.5 +3.2**
EKA Eskdalemuir Ar 80.55 341 P **P** **10 45 18.7 +0.2**
comp=Z,0.8nm,0.5s,baz=22,slow=4.6,SNR=4.7
GEC2 GERESS Array S 80.58 329 *e*P **P** **10 45 18.7 -0.3**
comp=Z,1.6nm,1.0s
GEC2 *e* 11 23 24.0
GEC2 GERESS Array S 80.58 329 *e*P **P** **10 45 18.7 -0.3**
GEC2 pmax pmax
comp=Z,2.0nm,1.0s
GERES GERESS Array B 80.58 329 P **P** **10 45 18.7 -0.3**
comp=Z,0.3nm,0.2s,baz=42,slow=2.2,SNR=3.7
GERES LR LR 11 23 24.0
comp=Z,35nm,18.6s,baz=228,slow=37
ANMO Albuquerque 81.97 51 ⇑ *e*P **P** **10 45 28.8 +2.1**
ANMO pmax pmax
comp=Z,1.0nm,1.1s
TOA1 Torodi Ar. Sit 115.76 317 *e*PKPdf **PKPdf** **10 51 48.4 -0.8**
TORD Torodi Ar. Bea 115.76 317 PKP **PKPdf** **10 51 48.4 -0.8**
comp=Z,0.3nm,0.9s,baz=0.0,slow=2.2,SNR=2.7
MATP Matopo 121.04 269 PKP **PKPdf** **10 51 59.0 -0.4**
comp=Z,1.4nm,0.5s,baz=127,slow=2.5,SNR=4.6
SNAA Sanae 143.91 198 PKP PKPab 10 52 38.0 +0.2
comp=Z,1.2nm,0.8s,baz=204,slow=6.9,SNR=8.2
SNAA Sanae 143.91 198 PKIKP PKPab 10 52 38.0 +0.2
SNAA pmax pmax
comp=Z,1.0nm,0.8s

ISCJB ***11*** *10:33:12.9±0.2, 51°.54N±0°.01×16°.15E±0°.02, h0km, mb3.5/3, Error ellipse: s-maj=1.9km s-min=1.6km az=4.6*
NEIC ***11*** *10:33:14.4±0.4, 51°.60N×16°.01E, h5km, ML4.0(SZGRF), Error ellipse: s-maj=8.0km s-min=4.3km az=170.0*
IPEC ***11*** *10:33:14.6±0.3, 51°.59N×16°.23E, h0km, ML3.4/3, Error ellipse: s-maj=3.0km s-min=1.6km az=66.0*
MOS ***11*** *10:33:14.6±1.1, 51°.60N×16°.05E, h11km, mb4.3/3, Error ellipse: s-maj=6.7km s-min=3.9km az=86.3*
LDG ***11*** *10:33:14.7±0.1, 51°.52N×16°.11E, h1km, Ml4.2/2, Error ellipse: s-maj=3.2km s-min=2.1km az=30.0, Suspected Mining induced.*
CSEM ***11*** *10:33:15.2±0.1, 51°.52N×16°.17E, h2km, ML4.0/18, Ms3.8, Error ellipse: s-maj=2.4km s-min=2.3km az=14.0*
BGR ***11*** *10:33:16.4±0.3, 51°.51N×16°.17E, h1km, ML4.0/26, Error ellipse: s-maj=4.4km s-min=2.2km az=16.0*
IDC ***11*** *10:33:16.2±0.6, 51°.50N×16°.07E, h0km, mb3.7/3, mb1 3.7/9, mb1mx3.5/66, mbtmp3.6/9, ML3.5/6, Error ellipse: s-maj=10.9km s-min=6.8km az=113.0*
UPP ***11*** *10:33:18.8±3.0, 51°.73N×15°.51E, h2km, ML2.5*
VIE ***11*** *10:33:19.6±0.4, 51°.21N×15°.97E, h0km, mb3.1/17, ml3.3/16, ms3.8/2, Error ellipse: s-maj=3.1km s-min=2.9km az=104.0 74 km WNW of Wroclaw Suspected Mining induced.*

ISC 11 10:33:14.0±0.5, 51°.55N±0°.02×16°.15E±0°.02, h0km, n322, σ1884/451, mb3.6/3, 6C-10D, Poland

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.72**	**173**	*e*Pg		**Pb**		**10 33 29.2**	**-0.2**
KSP				*e*Sg		**Sg**		**10 33 38.3**	**+1.3**
KSP	**Ksiaz**	**0.72**	**173**	*e*Pg		**Pb**		**10 33 29.3**	**-0.2**
KSP	**Ksiaz**	**0.72**	**173**	⇓ *e*P		**Pb**		**10 33 29.2**	**-0.2**
KSP				*e*				10 33 38.3	
KSP	**Ksiaz**	**0.72**	**173**	*e*P		**Pb**		**10 33 29.2**	**-0.2**
KSP				*e*S		**Sg**		**10 33 38.3**	**+1.3**
UPC	**Upice**	**1.05**	**185**	⇓ *i*PG		**Pb**		**10 33 35.4**	**+0.3**
UPC				*e*SG		**Sb**		**10 33 49.6**	**+0.2**
UPC	**Upice**	**1.05**	**185**	⇓ *i*P		**Pb**		**10 33 35.4**	**+0.3**
UPC				*e*				10 33 49.6	
UPC				smax		smax			
UPC	**Upice**	**1.05**	**185**	*i* P		**Pb**		**10 33 35.4**	**+0.3**
UPC				*e*S		**Sb**		**10 33 49.6**	**+0.2**
DPC	**Dobruska-Polom**	**1.21**	**175**	*e*Pg		**Pb**		**10 33 38.0**	**+0.3**
DPC				*e*Sg		**Sb**		**10 33 54.7**	**+0.7**
DPC	**Dobruska-Polom**	**1.21**	**175**	*e*PG		**Pb**		**10 33 38.1**	**+0.3**
DPC				*e*SG		**Sg**		**10 33 53.4**	**+0.5**
DPC	**Dobruska-Polom**	**1.21**	**175**	*e*P		**Pb**		**10 33 38.1**	**+0.3**
DPC				*e*				10 33 53.4	
DPC				smax		smax			
DPC	**Dobruska-Polom**	**1.21**	**175**	*e*P		**Pb**		**10 33 38.1**	**+0.3**
DPC				*e*S		**Sg**		**10 33 53.4**	**+0.5**
DPC				Sg		**Sb**		**10 33 54.7**	**+0.7**
PVCC	**Panska Ves**	**1.43**	**225**	*e*PG		**Pb**		**10 33 42.2**	**+0.6**
PVCC				*e*SG		**Sn**		**10 34 01.9**	**+1.1**
PVCC	**Panska Ves**	**1.43**	**225**	*e*P		**Pb**		**10 33 42.2**	**+0.6**
PVCC				*e*				10 34 01.9	
PVCC				smax		smax			
PVCC	**Panska Ves**	**1.43**	**225**	*e*S		**Sn**		**10 34 01.9**	**+1.1**
KRLC	**Kraliky**	**1.53**	**165**	*e*PG		**Pb**		**10 33 43.4**	**+0.1**
KRLC				*e*SG		**Sn**		**10 34 03.7**	**+0.3**
KRLC	**Kraliky**	**1.53**	**165**	*e*P		**Pb**		**10 33 43.4**	**+0.1**
KRLC				*e*				10 34 03.7	
KRLC				smax		smax			
KRLC	**Kraliky**	**1.53**	**165**	*e*P		**Pb**		**10 33 43.4**	**+0.1**
KRLC				*e*S		**Sn**		**10 34 03.7**	**+0.3**
BRG	**Berggiesshubel**	**1.55**	**245**	PN		**Pn**		**10 33 43.0**	**+0.2**
BRG				PG		**Pg**		**10 33 44.8**	**+1.2**
BRG				SG		**Sg**		**10 34 05.4**	**+1.7**
BRG	**Berggiesshubel**	**1.55**	**245**	*e*Pn		**Pn**		**10 33 43.0**	**+0.2**
BRG				*e*Sg		**Sg**		**10 34 05.2**	**+1.5**
BRG	**Berggiesshubel**	**1.55**	**245**	P		**Pn**		**10 33 43.0**	**+0.2**
BRG				*e*				10 34 05.4	
BRG				smax		smax			
BRG	**Berggiesshubel**	**1.55**	**245**	Pn		**Pn**		**10 33 43.0**	**+0.2**
BRG				Sg		**Sg**		**10 34 05.2**	**+1.5**
PRA	**Prague**	**1.84**	**217**	*e*PN		**Pb**		**10 33 47.9**	**-0.7**
PRA				*e*SG		**Sg**		**10 34 13.5**	**+0.3**
PRA	**Prague**	**1.84**	**217**	*e*P		**Pb**		**10 33 47.9**	**-0.7**
PRA				*e*				10 34 13.5	
PRA				smax		smax			
PRA	**Prague**	**1.84**	**217**	*e*P		**Pb**		**10 33 47.9**	**-0.7**
GKP	**Gorka Klasztor**	**1.84**	**21**	*e*Pn		Pg		10 33 55.5	+6.2
GKP				*e*Sn		**Sg**		**10 34 18.0**	**+4.8**
GKP	**Gorka Klasztor**	**1.84**	**21**	*e*P		Pg		10 33 55.5	+6.2
GKP				*e*				10 34 18.0	
GOPC	**GO Pecny, Ondr**	**1.86**	**208**	*e*PN		**Pn**		**10 33 47.6**	**+0.5**
GOPC				*e*PG		**Pg**		**10 33 49.7**	**+0.1**
GOPC				*e*SG		**Sb**		**10 34 13.2**	**+0.6**
GOPC	**GO Pecny, Ondr**	**1.86**	**208**	*e*P		**Pn**		**10 33 47.6**	**+0.5**
GOPC				*e*				10 34 13.2	
GOPC				smax		smax			
GOPC	**GO Pecny, Ondr**	**1.86**	**208**	*e*P		**Pn**		**10 33 47.6**	**+0.5**
FBE	**Freiberg**	**1.87**	**251**	*e*Pn		**Pg**		**10 33 50.4**	**+0.6**
FBE				*e*Sg		**Sg**		**10 34 14.9**	**+0.9**
FBE	**Freiberg**	**1.87**	**251**	Pn		**Pg**		**10 33 50.4**	**+0.6**
FBE				Sg		**Sg**		**10 34 14.9**	**+0.9**
PRU	**Pruhonice**	**1.87**	**214**	*e*PN		**Pn**		**10 33 47.8**	**+0.5**
PRU				*e*PG		**Pg**		**10 33 49.9**	**0.0**
PRU				*e*SG		**Sg**		**10 34 14.2**	**+0.1**
PRU	**Pruhonice**	**1.87**	**214**	*e*P		**Pn**		**10 33 47.8**	**+0.5**
PRU				*e*				10 34 14.2	
PRU				smax		smax			
PRU	**Pruhonice**	**1.87**	**214**	*e*P		**Pn**		**10 33 47.8**	**+0.5**
PRU	**Pruhonice**	**1.87**	**214**	Pg		**Pg**		**10 33 49.9**	**0.0**
PRU				*e*S		**Sg**		**10 34 14.2**	**+0.1**
RAC	**Raciborz**	**1.96**	**138**	*e*P		**Pg**		**10 33 52.8**	**+1.2**
RAC				*e*				10 34 19.7	
RAC	**Raciborz**	**1.96**	**138**	*e*P		**Pg**		**10 33 52.8**	**+1.2**
RAC				*e*S		**Sg**		**10 34 19.7**	**+2.7**
CLL	**Collm**	**1.99**	**264**	*e*Pn		**Pn**		**10 33 49.2**	**+0.4**
CLL				*e*Sg		**Sg**		**10 34 19.4**	**+1.6**
CLL	**Collm**	**1.99**	**264**	*e*Pn		**Pn**		**10 33 49.0**	**+0.1**
CLL				*i* (Pg)		**Pg**		**10 33 53.5**	**+1.4**
CLL				*e*				10 33 53.0	
CLL				*i* Sg		**Sg**		**10 34 18.5**	**+0.7**
CLL	**Collm**	**1.99**	**264**	*e*Pn		**Pn**		**10 33 48.6**	**-0.2**
CLL				*e*Sn		**Sn**		**10 34 13.5**	**-0.9**
CLL	**Collm**	**1.99**	**264**	*e*P		**Pn**		**10 33 48.7**	**-0.2**
CLL				*e*				10 34 13.5	
CLL	**Collm**	**1.99**	**264**	*e*P		**Pn**		**10 33 48.7**	**-0.2**
CLL	**Collm**	**1.99**	**264**	Pn		**Pn**		**10 33 49.2**	**+0.4**
CLL				Sg		**Sg**		**10 34 19.4**	**+1.6**
MORC	**Moravsky Berou**	**1.99**	**153**	*e*Pn		**Pn**		**10 33 49.5**	**+0.5**
MORC	**Moravsky Berou**	**1.99**	**153**	*e*Pn		**Pn**		**10 33 49.1**	**+0.2**
MORC				*e*Sn		**Sb**		**10 34 17.1**	**+0.7**
MORC	**Moravsky Berou**	**1.99**	**153**	*e*P		**Pn**		**10 33 49.2**	**+0.2**
MORC				*e*				10 34 17.1	
MORC	**Moravsky Berou**	**1.99**	**153**	*e*P		**Pn**		**10 33 49.2**	**+0.2**
MORC	**Moravsky Berou**	**1.99**	**153**	Pn		**Pn**		**10 33 49.5**	**+0.5**
MORC				*e*Sg		**Sg**		**10 34 17.3**	**-0.5**
MORC	**Moravsky Berou**	**1.99**	**153**	*e*PN		**Pn**		**10 33 49.5**	**+0.5**
MORC				*e*SG		**Sg**		**10 34 17.4**	**-0.4**
MORC	**Moravsky Berou**	**1.99**	**153**	*e*Pn		**Pn**		**10 33 49.4**	**+0.5**
MORC	baz=336			*e*Sg		**Sg**		**10 34 17.3**	**-0.5**
MORC	baz=336			*e*Sg		**Sg**		**10 34 17.3**	**-0.5**
OKC	**Ostrava-Krasne**	**2.14**	**143**	*e*Pn		**Pn**		**10 33 50.8**	**-0.1**
OKC				*e*Sg		**Sg**		**10 34 22.3**	**-0.3**
OKC	**Ostrava-Krasne**	**2.14**	**143**	*e*PN		**Pn**		**10 33 50.3**	**-0.6**
OKC				*e*PG		**Pg**		**10 33 55.0**	**0.0**
OKC				*e*SG		**Sg**		**10 34 22.5**	**-0.1**
OKC	**Ostrava-Krasne**	**2.14**	**143**	*e*P		**Pn**		**10 33 50.3**	**-0.6**
OKC				*e*				10 34 22.5	
OKC				smax		smax			
OKC	**Ostrava-Krasne**	**2.14**	**143**	*e*P		**Pn**		**10 33 50.3**	**-0.6**
OKC	**Ostrava-Krasne**	**2.14**	**143**	Pn		**Pn**		**10 33 50.8**	**-0.1**
CHZP	**Chorzow**	**2.20**	**124**	*e*Pg		**Pg**		**10 33 57.0**	**+0.8**
CHZP				*e*Sg		**Sg**		**10 34 25.4**	**+0.8**
VRAC	**Vranov**	**2.27**	**173**	P		**Pn**		**10 33 54.0**	**+1.3**
VRAC	**Vranov**	**2.27**	**173**	*e*Pn		**Pn**		**10 33 53.8**	**+1.1**
VRAC				*e*Sg		**Sg**		**10 34 26.5**	**-0.3**
VRAC	**Vranov**	**2.27**	**173**	*e*PN		**Pn**		**10 33 53.8**	**+1.1**
VRAC				*e*SG		**Sg**		**10 34 26.5**	**-0.3**
VRAC	**Vranov**	**2.27**	**173**	*e*Pn		**Pn**		**10 33 53.8**	**+1.1**
VRAC	baz=354			*e*Sg		**Sg**		**10 34 26.4**	**-0.3**
VRAC	baz=354			*e*Sg		**Sg**		**10 34 26.4**	**-0.3**
KRUC	**Moravsky**	**2.50**	**176**	*e*Pn		**Pn**		**10 33 57.0**	**+1.1**
KRUC				*e*Sg		**Sg**		**10 34 33.9**	**-0.4**
KRUC	**Moravsky**	**2.50**	**176**	*e*PN		**Pn**		**10 33 57.1**	**+1.1**

KRUC eSG Sg 10 34 34.0 -0.4
KRUC Moravsky 2.50 176 ePn Pn 10 33 57.0 +1.1
baz=358
KRUC eSg Sg 10 34 33.9 -0.4
baz=358
TANN Tannenbergstha 2.59 245 ePn Pn 10 33 58.4 +1.0
TANN eSg Sg 10 34 37.9 +0.5
TANN Tannenbergstha 2.59 245 Pn Pn 10 33 58.3 +1.0
TANN Sg Sg 10 34 37.9 +0.5
OJC Ojcow 2.67 119 ePn Pn 10 33 56.7 -1.6
OJC ePg Pg 10 34 04.9 -0.3
OJC eSn Sn 10 34 28.4 -2.9
OJC eSg Sg 10 34 39.9 +0.2
OJC Ojcow 2.67 119 ePn Pn 10 33 57.8 -0.4
OJC Ojcow 2.67 119 ePn Pn 10 33 59.2 +0.9
OJC Ojcow 2.67 119 eP Pn 10 33 59.2 +0.9
OJC Ojcow 2.67 119 eP Pn 10 33 59.2 +0.9
WERD Werda 2.67 247 ePn Pn 10 33 59.2 +0.9
WERD eSg Sg 10 34 40.0 +0.3
WERD Werda 2.67 247 Pn Pn 10 33 59.2 +0.9
WERD Sg Sg 10 34 40.0 +0.3
NKC Novy Kostel 2.69 242 ePN Pn 10 33 59.8 +1.2
NKC ePG Pg 10 34 08.0 +2.4
NKC eSN Sn 10 34 32.8 +0.9
NKC eSG Sg 10 34 40.7 +0.3
comp=N,539nm,0.4s
NKC Novy Kostel 2.69 242 eP Pn 10 33 59.8 +1.2
NKC e 10 34 32.8
NKC smax smax
comp=N,539nm,0.4s
NKC Novy Kostel 2.69 242 eP Pn 10 33 59.8 +1.2
NKC Novy Kostel 2.69 242 Pg Pg 10 34 08.0 +2.4
NKC eS Sn 10 34 32.8 +0.9
comp=N,539nm,0.4s
NKC Sg Sg 10 34 40.7 +0.3
comp=N,539nm,0.4s
NEUB Neuenburg 2.76 265 eSg Sg 10 34 44.5 +1.8
NEUB Neuenburg 2.76 265 Sg Sg 10 34 44.5 +1.8
JAVC Velka Javorina 2.87 160 ePn Pn 10 34 01.8 +0.7
JAVC eSg Sg 10 34 44.8 -1.4
comp=N,175nm,0.8s
JAVC Velka Javorina 2.87 160 ePN Pn 10 34 01.8 +0.7
JAVC eSG Sg 10 34 44.9 -1.3
JAVC Velka Javorina 2.87 160 ePn Pn 10 34 01.8 +0.7
baz=342
JAVC eSg Sg 10 34 44.8 -1.4
comp=N,175nm,0.8s,baz=342
WIMM Wimmelburg 2.90 271 ePn Pn 10 34 02.5 +1.1
WIMM eSg Sg 10 34 47.2 0.0
WIMM Wimmelburg 2.90 271 Pn Pn 10 34 02.5 +1.1
WIMM Sg Sg 10 34 47.2 0.0
KHC Kasperske Hory 2.93 215 ePN Pn 10 34 02.7 +0.8
KHC ePG Pg 10 34 09.0 -1.2
KHC eSN Sn 10 34 38.8 +1.0
KHC eSG Sg 10 34 48.8 +0.6
comp=N,166nm,0.6s
KHC Kasperske Hory 2.93 215 ePn Pn 10 34 02.4 +0.5
KHC Kasperske Hory 2.93 215 eP Pn 10 34 02.4 +0.5
KHC Kasperske Hory 2.93 215 eP Pn 10 34 02.4 +0.5
MOX Moxa 3.00 254 ePn Pn 10 34 03.5 +0.7
MOX eSg Sg 10 34 52.8 +2.4
MOX Moxa 3.00 254 P Pn 10 34 03.2 +0.4
MOX Moxa 3.00 254 P Pn 10 34 03.2 +0.4
MOX Moxa 3.00 254 Pn Pn 10 34 03.5 +0.7
MOX Sg Sg 10 34 52.8 +2.4
MANZ Manzenberg 3.01 240 ePn Pn 10 34 04.1 +1.2
MANZ eSg Sg 10 34 52.7 +2.1
MANZ Manzenberg 3.01 240 Pn Pn 10 34 04.1 +1.2
MANZ Sg Sg 10 34 52.7 +2.1
ROTZ Rotzenmuhle 3.08 236 ePn Pn 10 34 05.0 +1.1
ROTZ eSg Sg 10 34 51.9 -1.1
ROTZ Rotzenmuhle 3.08 236 Pn Pn 10 34 05.0 +1.1
ROTZ Sg Sg 10 34 51.9 -1.1
GEC2 GERESS Array S 3.13 211 ePn Pn 10 34 05.8 +1.0
GEC2 GERESS Array S 3.13 211 ePn Pn 10 34 05.8 +1.0
GEC2 GERESS Array S 3.13 211 eP Pn 10 34 05.8 +1.0
GEC2 GERESS Array S 3.13 211 Pn Pn 10 34 05.8 +1.0
GERES GERESS Array B 3.13 211 Pn Pn 10 34 05.6 +0.8
comp=N,5.6nm,0.3s,baz=31,slow=12,SNR=77
GERES Pg Pg 10 34 12.6 -1.5
comp=N,17nm,0.3s,baz=32,slow=17,SNR=68
GERES Lg Lg 10 34 53.4
comp=N,29nm,0.3s,baz=28,slow=26,SNR=6.4
GEA0 GERESS Array S 3.14 211 ePn Pn 10 34 05.3 +0.4
GEA0 GERESS Array S 3.14 211 ePn Pn 10 34 05.3 +0.4
SMOL Smolenice 3.15 164 eP Pg 10 34 14.6 +0.2
SMOL e 10 34 54.1
SMOL Smolenice 3.15 164 ePG Pg 10 34 14.6 +0.2
SMOL eSG Sg 10 34 54.1 -1.2
SMOL Smolenice 3.15 164 ePg Pg 10 34 14.6 +0.2
SMOL eSg Sg 10 34 54.1 -1.2
WET Wettzell 3.20 222 ePn Pn 10 34 06.3 +0.8
WET Wettzell 3.20 222 P Pn 10 34 06.5 +1.0
WET Wettzell 3.20 222 Pn Pn 10 34 06.3 +0.8
LANS Liptovska Anna 3.21 137 eP Pn 10 34 07.1 +1.4
LANS e 10 34 55.8
LANS Liptovska Anna 3.21 137 ePN Pn 10 34 07.1 +1.4
LANS ePG Pg 10 34 16.1 +0.6
LANS eSG Sg 10 34 55.8 -1.3
LANS Liptovska Anna 3.21 137 eP Pn 10 34 07.1 +1.4
LANS eSg Sg 10 34 55.8 -1.3
MODS Modra-Piesok 3.27 167 eP Pn 10 34 06.7 +0.2
MODS Modra-Piesok 3.27 167 ePN Pn 10 34 06.7 +0.2
MODS ePG Pg 10 34 16.0 -0.6
MODS eSG Sg 10 34 58.4 -0.5
MODS eLG Lg 10 35 11.8
MODS Modra-Piesok 3.27 167 eP Pn 10 34 06.7 +0.2
NIE Niedzica 3.41 127 eP Pg 10 34 19.5 +0.2
NIE eS Sg 10 35 04.6 +1.2
NIE Niedzica 3.41 127 P Pb 10 34 13.1 -2.1
NIE Niedzica 3.41 127 P Pb 10 34 13.1 -2.1
ZST Bratislava 3.42 169 eP Pb 10 34 17.4 +2.0
ZST Bratislava 3.42 169 ePG Pb 10 34 17.4 +2.0
ZST eSG Sg 10 35 03.0 -0.8
ZST eLG Lg 10 35 06.7
ZST Bratislava 3.42 169 ePg Pb 10 34 17.4 +2.0
ZST eSg Sg 10 35 03.0 -0.8
ASSE Asse, Remlinge 3.45 282 ePn Pn 10 34 10.7 +1.8
ASSE Asse, Remlinge 3.45 282 Pn Pn 10 34 10.7 +1.8
RGN Rugen 3.45 331 ePn Pn 10 34 07.6 -1.4
VYHS Vyhne 3.52 149 eP Pn 10 34 10.6 +0.6
VYHS Vyhne 3.52 149 ePN Pn 10 34 10.6 +0.6
VYHS ePG Pg 10 34 22.7 +1.3
VYHS eSG Sg 10 35 05.7 -1.3
VYHS eLG Lg 10 35 12.4
CLZ Clausthal 3.61 277 ePn Pn 10 34 12.7 +1.5
CLZ Clausthal 3.61 277 Pn Pn 10 34 12.7 +1.5
CONA Conrad Observa 3.63 183 ePn Pn 10 34 13.3 +1.7
comp=N,8.0nm,0.4s,SNR=7.0
CONA Sg Sg 10 35 08.8 -1.9
comp=N,133nm,0.5s
CONA Conrad Observa 3.63 183 Pn Pn 10 34 13.3 +1.7
comp=N,8.0nm,0.4s,SNR=7.0
CONA Sg Sg 10 35 08.8 -1.9
comp=N,133nm,0.5s
BSD Bornholm Skovb 3.64 349 *i* P Pn 10 34 11.6 0.0
BSD *i* S Sn 10 34 51.9 -3.3
BSD Bornholm Skovb 3.64 349 *i* P Pn 10 34 11.6 0.0
BSD *i* S Sn 10 34 51.9 -3.3
BSD Bornholm Skovb 3.64 349 *i* P Pn 10 34 11.6 0.0
BSD *i* S Sn 10 34 51.9 -3.3
GRA1 Grafenberg Arr 3.65 241 Pn Pn 10 34 13.1 +1.3
GRA1 Grafenberg Arr 3.65 241 P Pn 10 34 13.7 +1.9
GRA1 Sg Sg 10 35 12.0 +0.8
GRF Grafenberg Arr 3.65 241 ePn Pn 10 34 13.1 +1.3
GRF eSg Sg 10 35 12.0 +0.8
GRF Grafenberg Arr 3.65 241 P Pn 10 34 13.7 +1.9
GRFO Grafenberg 3.65 241 ePn Pn 10 34 12.9 +1.1
GRFO Grafenberg 3.65 241 eP Pn 10 34 12.9 +1.1
GRFO Grafenberg 3.65 241 eP Pn 10 34 12.9 +1.1
NRDL Niedersach Rie 3.85 287 ePn Pn 10 34 16.8 +2.4
NRDL Niedersach Rie 3.85 287 Pn Pn 10 34 16.8 +2.4
GTTG Gvttingen 3.86 272 eSg Sg 10 35 18.4 +0.4
GTTG Gvttingen 3.86 272 Sg Sg 10 35 18.4 +0.4
SOP Sopron 3.88 176‖ ePn Pn 10 34 14.2 -0.7
SOP Sopron 3.88 176 P Pn 10 34 16.7 +1.8
SOP Sopron 3.88 176‖ ePn Pn 10 34 14.2 -0.7
SOP Sopron 3.88 176 P Pn 10 34 16.7 +1.8
MOA Molln 3.91 199 *i* Pn Pn 10 34 16.6 +1.3
comp=N,11nm,0.3s,SNR=20
MOA Sg Sg 10 35 19.2 -0.2
comp=N,72nm,0.5s
MOA Molln 3.91 199 Pn Pn 10 34 16.6 +1.3
comp=N,11nm,0.3s,SNR=20
MOA Sg Sg 10 35 19.2 -0.2
comp=N,72nm,0.5s
UBBA Unterbreizbach 3.94 262 ePn Pn 10 34 16.5 +0.9
UBBA eSg Sg 10 35 20.5 0.0
UBBA Unterbreizbach 3.94 262 Pn Pn 10 34 16.5 +0.9
UBBA Sg Sg 10 35 20.5 0.0
KECS Kecovo 4.16 136 eP Pg 10 34 34.2 +0.6
KECS Kecovo 4.16 136 ePG Pg 10 34 34.2 +0.6
KECS Kecovo 4.16 136 ePg Pg 10 34 34.2 +0.6
CRVS Cervenica-Dubn 4.32 126 eSG Sg 10 35 35.2 +2.4
CRVS eLG Lg 10 35 53.4
ARSA Arzberg 4.33 186 *i* Pn Pn 10 34 21.9 +0.9
comp=N,7.4nm,0.3s
ARSA Sg Sg 10 35 32.1 -0.9
comp=N,56nm,0.5s
ARSA Arzberg 4.33 186 Pn Pn 10 34 21.9 +0.9
comp=N,7.4nm,0.3s
ARSA Sg Sg 10 35 32.1 -0.9
comp=N,56nm,0.5s
PSZ Piszkesteto 4.38 145⇑ *i* P Pn 10 34 23.1 +1.4
PSZ Piszkesteto 4.38 145‖ ePn Pn 10 34 23.4 +1.6
PSZ Piszkesteto 4.38 145 ePn Pn 10 34 23.2 +1.4
PSZ Piszkesteto 4.38 145 eP Pn 10 34 23.2 +1.4
PSZ Piszkesteto 4.38 145 eP Pn 10 34 23.2 +1.4
LLD Lille Linde 4.46 330 *i* P Pn 10 34 22.6 -0.2
LLD Lille Linde 4.46 330 eP Pn 10 34 22.6 -0.2
LLD Lille Linde 4.46 330 eP Pn 10 34 22.6 -0.2
KWP Kalwaria Pacla 4.60 112 ePn Pg 10 34 40.5 -1.6
KWP Kalwaria Pacla 4.60 112 ePn Pn 10 34 26.5 +1.7
KWP Kalwaria Pacla 4.60 112 eP Pn 10 34 26.5 +1.7
KWP Kalwaria Pacla 4.60 112 eP Pn 10 34 26.5 +1.7
KBA Koelnbreinsper 4.84 203 ePn Pn 10 34 29.8 +1.5
comp=N,18nm,0.5s,SNR=8.4
KBA Sg Sg 10 35 49.3 -0.2
comp=N,62nm,0.6s
KBA Koelnbreinsper 4.84 203 P Pn 10 34 29.5 +1.2
KBA Koelnbreinsper 4.84 203 P Pn 10 34 29.5 +1.2
KBA Koelnbreinsper 4.84 203 Pn Pn 10 34 29.8 +1.5
comp=N,18nm,0.5s,SNR=8.4
KBA Sg Sg 10 35 49.3 -0.2
comp=N,62nm,0.6s
BJUU Bjuv 4.89 339 P Pn 10 34 28.3 -0.5
BJUU S Sn 10 35 22.2 -3.8
BJUU Bjuv 4.89 339 P Pn 10 34 28.3 -0.5
UZH Uzhgorod 4.92 124 eP Pn 10 34 34.4 +5.3
UZH eS Sn 10 35 32.0 +5.3
UZH Uzhgorod 4.92 124 eP Pn 10 34 34.4 +5.3
UZH eS Sn 10 35 32.0 +5.3
SUW Suwalki 4.93 57 ePn Pn 10 34 30.8 +1.5
SUW Suwalki 4.93 57 eP Pn 10 34 30.8 +1.5
SUW Suwalki 4.93 57 eP Pn 10 34 30.8 +1.5
SOKA Soboth 4.94 189 *i* Pn Pn 10 34 30.8 +1.3
comp=N,2.5nm,0.3s
SOKA Sg Sg 10 35 51.0 -1.5
comp=N,23nm,0.5s
SOKA Soboth 4.94 189 Pn Pn 10 34 30.8 +1.3
comp=N,2.5nm,0.3s
SOKA Sg Sg 10 35 51.0 -1.5
comp=N,23nm,0.5s
TNS Taunus Mts 5.05 258 ePn Pn 10 34 32.1 +1.0
TNS eSg Sg 10 35 57.0 +0.7
TNS Taunus Mts 5.05 258 Pn Pn 10 34 32.1 +1.0
TNS Sg Sg 10 35 57.0 +0.7
OBKA Obir 5.16 192 *i* Pn Pn 10 34 32.5 0.0
comp=N,0.8nm,0.2s
OBKA Sg Sg 10 35 59.2 -0.5
comp=N,36nm,0.5s
OBKA Obir 5.16 192 Pn Pn 10 34 32.5 0.0
comp=N,0.8nm,0.2s
OBKA Sg Sg 10 35 59.2 -0.5
comp=N,36nm,0.5s
WATA Walderalm 5.17 217 ePn Pn 10 34 34.0 +1.2
comp=N,6.7nm,0.2s,SNR=12
WATA Sg Sg 10 35 58.5 -1.5
comp=N,19nm,0.4s
WATA Walderalm 5.17 217 Pn Pn 10 34 34.0 +1.2
comp=N,6.7nm,0.2s,SNR=12
WATA Sg Sg 10 35 58.5 -1.5
comp=N,19nm,0.4s
MYKA Terra Mystica 5.20 199 ePn Pn 10 34 33.4 +0.3
comp=N,2.9nm,0.4s
MYKA Sg Sg 10 36 00.5 -0.4
comp=N,29nm,0.4s
MYKA Terra Mystica 5.20 199 Pn Pn 10 34 33.4 +0.3
comp=N,2.9nm,0.4s
MYKA Sg Sg 10 36 00.5 -0.4
comp=N,29nm,0.4s
WTTA Wattenberg 5.21 216 ePn Pn 10 34 34.2 +0.9
comp=N,6.2nm,0.4s,SNR=6.0
WTTA *i* Sg Sg 10 36 00.3 -0.9
comp=N,19nm,0.4s
WTTA Wattenberg 5.21 216 Pn Pn 10 34 34.2 +0.9
comp=N,6.2nm,0.4s,SNR=6.0
WTTA Sg Sg 10 36 00.3 -0.9
comp=N,19nm,0.4s
STU Stuttgart 5.27 241 ePn Pn 10 34 32.5 -1.4
STU eSn Sn 10 35 32.2 -3.1
STU Stuttgart 5.27 241 eP Pn 10 34 32.6 -1.4
STU *e* 10 35 32.2
STU Stuttgart 5.27 241 eP Pn 10 34 32.6 -1.4
STU eS Sn 10 35 32.2 -3.1
LVV L'vov 5.30 106 eP Pn 10 34 39.0 +4.6
LVV eS Sn 10 35 39.5 +3.3
LVV L'vov 5.30 106 eP Pn 10 34 39.0 +4.6
MOTA Moosalm 5.34 220 *i* Pn Pn 10 34 35.2 0.0
comp=N,3.9nm,0.4s
MOTA Sg Sg 10 36 04.2 -1.5
comp=N,28nm,0.5s
MOTA Moosalm 5.34 220 Pn Pn 10 34 35.2 0.0
comp=N,3.9nm,0.4s
MOTA Sg Sg 10 36 04.2 -1.5
comp=N,28nm,0.5s
ABTA Abfaltersbach 5.37 208 *i* Pn Pn 10 34 37.1 +1.6
comp=N,4.0nm,0.5s,SNR=12
ABTA Sg Sg 10 36 05.7 -0.7
comp=N,26nm,0.6s
ABTA Abfaltersbach 5.37 208 Pn Pn 10 34 37.1 +1.6
comp=N,4.0nm,0.5s,SNR=12
ABTA Sg Sg 10 36 05.7 -0.7
comp=N,26nm,0.6s
RETA Reutte 5.37 223 ePn Pn 10 34 35.8 +0.3
comp=N,2.4nm,0.2s
RETA Sg Sg 10 36 05.6 -0.9
comp=N,30nm,0.4s
RETA Reutte 5.37 223 Pn Pn 10 34 35.8 +0.3
comp=N,2.4nm,0.2s
RETA Sg Sg 10 36 05.6 -0.9
comp=N,30nm,0.4s
VXJU Vaexsjoe 5.42 353 P Pn 10 34 36.6 +0.5
VXJU S Sn 10 35 35.3 -3.9
MORH M¨±r¨¡gy, Hung 5.59 162 ePn Pn 10 34 39.8 +1.4
MORH M¨±r¨¡gy, Hung 5.59 162 ePn Pn 10 34 39.8 +1.4
OSKU Oskarshamn 5.65 360 P Pn 10 34 39.9 +0.7
OSKU Oskarshamn 5.65 360 P Pn 10 34 39.9 +0.7
FETA Feichten 5.76 220 ePn Pn 10 34 41.7 +0.9
comp=N,0.3nm,0.2s,SNR=6.1
FETA Sg Sg 10 36 21.0 +2.1
comp=N,9.7nm,0.7s
FETA Feichten 5.76 220 Pn Pn 10 34 41.7 +0.9
comp=N,0.3nm,0.2s,SNR=6.1
FETA Sg Sg 10 36 21.0 +2.1
comp=N,9.7nm,0.7s
BYXU Byxelkrok 5.77 5 P Pn 10 34 41.8 +1.0
BYXU Byxelkrok 5.77 5 P Pn 10 34 41.8 +1.0
AHRW Bad Neuenahr-A 5.81 264 ePn Pn 10 34 42.7 +1.3
AHRW Bad Neuenahr-A 5.81 264 Pn Pn 10 34 42.7 +1.3
ASPU Aespoe 5.88 2 P Pn 10 34 43.5 +1.1
ASPU Aespoe 5.88 2 P Pn 10 34 43.5 +1.1
DAVA Damuels 5.91 226 ePn Pn 10 34 43.4 +0.4
comp=N,5.2nm,0.4s
DAVA Sg Sg 10 36 26.6 +2.7
comp=N,22nm,0.5s
DAVA Damuels 5.91 226 Pn Pn 10 34 43.4 +0.4
comp=N,5.2nm,0.4s
DAVA Sg Sg 10 36 26.6 +2.7
comp=N,22nm,0.5s
BFO Black Forest 5.99 240 ePn Pn 10 34 43.0 -0.9
BFO eSn Sb 10 36 08.4 -3.1
BFO Black Forest 5.99 240 eP Pn 10 34 43.0 -0.9
BFO Black Forest 5.99 240 eP Pn 10 34 43.0 -0.9
EKSU Eksjoe 6.05 356 P Pn 10 34 44.8 +0.1
FUORN Ofenpass-Fuorn 6.27 220 ePn Pn 10 34 47.9 -0.1
FUORN Ofenpass-Fuorn 6.27 220 ePn Pn 10 34 47.9 -0.1
DRGR 6.42 135‖ *i*P Pn 10 34 53.5 +3.7
DRGR 6.42 135‖ *i*P Pn 10 34 53.5 +3.7
CDF Champ du Feu 6.53 245 eP Pn 10 34 52.4 +1.0
CDF eSg Sg 10 36 38.5 -5.1
CDF Champ du Feu 6.53 245 ePn Pn 10 34 52.4 +1.0
CDF eSg Sg 10 36 38.5 -5.1
CDF Champ du Feu 6.53 245 eP Pn 10 34 52.4 +1.0
CDF Champ du Feu 6.53 245 eP Pn 10 34 52.4 +1.0
WLF Walferdange 6.64 257 ePn Pn 10 34 52.7 -0.1
WLF Walferdange 6.64 257 eP Pn 10 34 52.7 -0.1
WLF Walferdange 6.64 257 eP Pn 10 34 52.7 -0.1
LNKU Linkoeping 6.70 357 S Sn 10 36 05.6 -4.8
ECH Echery 6.70 244 ePn Pn 10 34 53.9 +0.2
ECH Echery 6.70 244 eP Pn 10 34 53.9 +0.2
ECH Echery 6.70 244 eP Pn 10 34 53.9 +0.2
TUE Stuetta 6.77 224 ePn Pn 10 34 53.1 -1.7
BZS Buzias 6.96 147‖ *i*P Pn 10 35 05.9 +8.7
VIKU Vikbolandet 6.97 2 P Pn 10 34 58.2 +1.0
BUR08 Bucovina Ar. S 7.06 120 ePn Pn 10 34 59.2 +0.5
BUR04 Bucovina Ar. S 7.08 120 ePn Pn 10 35 00.1 +1.1
BURAR Bucovina Array 7.09 120⇑ *i*P Pn 10 34 59.8 +0.7
HINF Hinteralfeld 7.10 242 ePn Pn 10 34 57.1 -2.0
HINF Hinteralfeld 7.10 242 eP Pn 10 35 01.0 +1.9
HINF eSg Sg 10 36 54.8 -7.0
HINF Hinteralfeld 7.10 242 ePn Pn 10 34 57.1 -2.0
HINF eSg Sg 10 36 54.8 -7.0
HINF Hinteralfeld 7.10 242 eP Pn 10 34 57.1 -2.0
HINF Hinteralfeld 7.10 242 eP Pn 10 35 01.0 +1.9
ISAL Salakas 7.17 52 eP Sg 10 37 08.7 +4.5
ISAL Salakas 7.17 52 eP Sg 10 37 08.7 +4.5
HAU Haudompre 7.27 245 ePn Pn 10 34 59.3 -2.2
HAU Haudompre 7.27 245 eP Pn 10 35 04.1 +2.6
HAU eSg Sg 10 36 58.5 -8.9
HAU Haudompre 7.27 245 ePn Pn 10 34 59.3 -2.2
HAU ePb Pn 10 35 04.1 +2.6
HAU eSg Sg 10 36 58.5 -8.9
HAU Haudompre 7.27 245 eP Pn 10 34 59.3 -2.2
HAU Haudompre 7.27 245 eP Pn 10 35 04.1 +2.6
GIVF Givet 7.32 263 ePn Pn 10 35 01.4 -0.7
GIVF eSg Sg 10 37 04.4 -4.6
GIVF Givet 7.32 263 ePn Pn 10 35 01.4 -0.7
GIVF eSg Sg 10 37 04.4 -4.6
GIVF Givet 7.32 263 eP Pn 10 35 01.4 -0.7
GIVF Givet 7.32 263 ePn Pn 10 35 01.4 -0.7
IZAR Zarasai 7.32 51 eP Sg 10 37 14.9 +5.9
SFTF Sexfontaines 7.92 249 ePn Pn 10 35 08.2 -2.2
SFTF Sexfontaines 7.92 249 eP Pn 10 35 13.2 +2.8
SFTF Sexfontaines 7.92 249 ePn Pn 10 35 08.2 -2.2
SFTF ePb Pn 10 35 13.2 +2.8
SFTF Sexfontaines 7.92 249 eP Pn 10 35 13.2 +2.8
AK11 Malin Array Si 8.24 91 ePn Pn 10 35 15.2 +0.5
KIEV Kiev 8.26 91 ePn Pn 10 35 16.0 +1.0
KIEV eSn Sn 10 36 45.0 -4.0
KIEV Kiev 8.26 91 *d i*P Pn 10 35 16.6 +1.6
KIEV Kiev 8.26 91 *e*Pn Pn 10 35 16.0 +1.0
KIEV Kiev 8.26 91 *i* P Pn 10 35 16.6 +1.6
AKASG Malin Array Be 8.27 91 Pn Pn 10 35 14.6 -0.6
comp=N,2.8nm,0.3s,baz=280,slow=12,SNR=12
AKASG Sn Sn 10 36 45.2 -4.0
comp=N,2.9nm,0.3s,baz=266,slow=26,SNR=6.7
AKASG Lg Lg 10 37 44.8
comp=N,0.9nm,0.3s,baz=268,slow=28,SNR=5.0
AKBB Malin Array Si 8.27 91 ePn Pn 10 35 15.8 +0.7
AKBB eSn Sn 10 36 46.5 -2.8
AKBB Malin Array Si 8.27 91 eP Pn 10 35 15.8 +0.7
AKBB *e* 10 36 46.5
HFS Hagfors 8.71 352 Pn Pn 10 35 21.3 +0.2
comp=N,0.3nm,0.3s,baz=170,slow=14,SNR=6.9
HFS Sn Sn 10 36 56.7 -3.2
comp=N,0.3nm,0.3s,baz=180,slow=24,SNR=2.6
HFS Lg Lg 10 38 00.6
comp=N,0.6nm,0.3s,baz=172,slow=32,SNR=2.7
KONO Kongsberg 8.92 338‖ *i*P Pn 10 35 26.9 +3.0
KONO Kongsberg 8.92 338 *i* P Pn 10 35 26.9 +3.0
LOR Lormes 9.09 247 ePn Pn 10 35 24.3 -2.1
LOR Lormes 9.09 247 eP Pn 10 35 28.6 +2.2
LOR Lormes 9.09 247 ePn Pn 10 35 24.3 -2.1
LOR Lormes 9.09 247 eP Pn 10 35 24.3 -2.1
LOR Lormes 9.09 247 eP Pn 10 35 28.6 +2.2
SBF Sospel 9.67 221 ePn Pn 10 35 32.1 -2.4
SBF Sospel 9.67 221 eP Pn 10 35 37.3 +2.8
SBF eSn Sn 10 37 14.9 -8.9
comp=N,9.0nm,0.3s
SBF Sospel 9.67 221 ePn Pn 10 35 32.1 -2.4
SBF eSn Sn 10 37 14.9 -8.9
SBF Sospel 9.67 221 eP Pn 10 35 32.1 -2.4
SBF Sospel 9.67 221 eSn Sn 10 37 14.9 -8.9
comp=N,4.5nm,0.3s
SBF Sospel 9.67 221 eP Pn 10 35 37.3 +2.8
HYF Humbligny 9.79 249 ePn Pn 10 35 33.3 -2.7
HYF Humbligny 9.79 249 eP Pn 10 35 39.0 +3.0
HYF Humbligny 9.79 249 ePn Pn 10 35 33.3 -2.7
HYF Humbligny 9.79 249 eP Pn 10 35 39.0 +3.0
NOA NORSAR Array B 9.89 346 Pn Pn 10 35 37.6 +0.2
comp=N,0.4nm,0.3s,baz=160,slow=11,SNR=4.4
NOA Sn Sn 10 37 20.1 -8.9
comp=N,0.2nm,0.3s,baz=104,slow=15,SNR=2.2
NOA Lg Lg 10 38 29.6
comp=N,0.5nm,0.3s,baz=131,slow=13,SNR=2.8
BGF Bois d'Agland 10.06 245 ePg Pn 10 36 15.3 +36
VIVF Saint-Julien-I 10.17 233 ePn Pn 10 35 38.7 -2.5
VIVF Saint-Julien-I 10.17 233 eP Pn 10 35 44.3 +3.1
VIVF Saint-Julien-I 10.17 233 ePn Pn 10 35 38.7 -2.5
VIVF Saint-Julien-I 10.17 233 eP Pn 10 35 38.7 -2.5
VIVF Saint-Julien-I 10.17 233 eP Pn 10 35 44.3 +3.1
FRF La Foret Royal 10.25 222 eSn Sn 10 37 28.3 -10
FRF La Foret Royal 10.25 222 eSn Sn 10 37 28.3 -10
FRF La Foret Royal 10.25 222 eSn Sn 10 37 28.3 -10
LMR La Mourre 10.49 222 eSn Sn 10 37 34.1 -10
comp=N,6.5nm,0.3s
LMR La Mourre 10.49 222 eSn Sn 10 37 34.1 -10
LMR La Mourre 10.49 222 eSn Sn 10 37 34.1 -10
comp=N,3.2nm,0.3s
FINES FINESS Array B 11.31 25 Pn Pn 10 35 56.0 -0.7
comp=N,0.6nm,0.3s,baz=206,slow=11,SNR=7.2
FINES Sn Sn 10 37 56.3 -7.4
comp=N,0.9nm,0.3s,baz=207,slow=21,SNR=6.1
FINES Lg Lg 10 39 08.8
comp=N,0.2nm,0.3s,baz=217,slow=23,SNR=2.1
FINES FINESS Array B 11.31 25 eP Pn 10 35 59.8 +3.1
FINES pmax pmax
comp=Z,1.0nm,0.3s
FIA1 FINESS Array S 11.31 25 ePn Pn 10 35 56.1 -0.7
PUL Pulkovo 11.45 39⇑ eP Pn 10 36 02.3 +3.6
PUL pmax pmax
comp=Z,18nm,0.5s
CAF Calviac 11.49 240 ePg Pn 10 36 44.0 +45
EKA Eskdalemuir Ar 12.11 296 Pn Pn 10 36 04.6 -3.0
baz=199,slow=31,SNR=3.4
EKA Sn Sn 10 38 15.4 -7.9
baz=95,slow=25,SNR=5.7
SGMF Saint Gilles 12.50 262 ePn Pn 10 36 10.0 -3.0
SGMF Saint Gilles 12.50 262 eP Pn 10 36 15.6 +2.6
SGMF Saint Gilles 12.50 262 ePn Pn 10 36 10.0 -3.0
SGMF Saint Gilles 12.50 262 eP Pn 10 36 10.0 -3.0
SGMF Saint Gilles 12.50 262 eP Pn 10 36 15.6 +2.6
ANN Anapa 15.69 107 eP Pn 10 36 55.0 -1.2
ANN eS Sn 10 39 49.3 -1.3
ANN pmax pmax
comp=Z,15nm,0.9s
APE Apeiranthos 15.94 152⇑ eP Pn 10 37 01.1 +1.5
APE pmax pmax
comp=Z,6.0nm,1.6s
ARCES ARCESS Array B 18.57 10 Pn P 10 37 31.8 -0.4
comp=Z,0.4nm,0.3s,baz=196,slow=13,SNR=9.1
NCK Nalchik 20.12 103 eP Pn 10 37 51.4 +0.3
NCK pmax pmax
comp=Z,2.0nm,0.5s
GNI Garni 22.80 109⇑ eP P 10 38 20.6 +2.3
GNI pmax pmax
comp=Z,11nm,0.3s
AKTO Aktyubinsk 26.12 76 P P 10 38 51.0 +1.6
comp=Z,0.6nm,0.3s,baz=272,slow=11,SNR=3.3
BVAR Borovoye Array 32.55 66 P P 10 39 48.8 +2.3
comp=Z,0.4nm,0.5s,baz=291,slow=4.5,SNR=3.7
TORD Torodi Ar. Bea 40.05 202 P P 10 40 51.5 +0.6
comp=Z,0.6nm,1.0s,baz=12,slow=7.6,SNR=3.6

*CSEM **11** 10:36:03.1±0.2, 44°.87N×10°.91E, h10km, ML2.7, Error ellipse: s-maj=4.6km s-min=3.7km az=74.0*

ROM 11 10:36:03.2±0.0, 44°.874N±0°.002×10°.954E±0°.001, h7km, ML2.7/10, 7C-8D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NDIM	**Novi di Modena**	**0.04**	**289**	*i* P	Pg	10 36 05.0	+0.2
NDIM				*i* S	Sg	10 36 07.0	+1.1
T0828	**Loc. Fossoli,**	**0.05**	**213**	⇓*i*P	Pg	10 36 05.4	+0.6
T0828				*i* S	Sg	10 36 08.4	+2.4
T0828	**Loc. Fossoli,**	**0.05**	**213**	*i* P	Pg	10 36 05.4	+0.6
T0828				*i* S	Sg	10 36 08.4	+2.4
T0827	**Moglia (MN)**	**0.07**	**346**	⇑*i*P	Pg	10 36 05.8	+0.8
T0827				*i* S	Sg	10 36 08.8	+2.5
T0827	**Moglia (MN)**	**0.07**	**346**	*i* P	Pg	10 36 05.8	+0.7
T0827				*i* S	Sg	10 36 08.8	+2.4
T0814	**Loc. Cortile,**	**0.08**	**172**	⇓*i*P	Pg	10 36 05.9	+0.7
T0814				*i* S	Sg	10 36 09.1	+2.5
T0814	**Loc. Cortile,**	**0.08**	**172**	*i* P	Pg	10 36 05.9	+0.7
T0814				*i* S	Sg	10 36 09.1	+2.5
T0818	**Loc. Fossa, Co**	**0.08**	**42**	⇑*i*P	Pg	10 36 06.2	+1.0
T0818				*i* S	Sg	10 36 09.2	+2.5
T0818	**Loc. Fossa, Co**	**0.08**	**42**	*i* P	Pg	10 36 06.2	+1.0
T0818				*i* S	Sg	10 36 09.2	+2.5
T0826	**Rio Saliceto (**	**0.11**	**251**	⇓*i*P	Pg	10 36 06.3	+0.7
T0826				*i* S	Sg	10 36 09.8	+2.5
T0826	**Rio Saliceto (**	**0.11**	**251**	*i* P	Pg	10 36 06.3	+0.7
T0826				*i* S	Sg	10 36 09.8	+2.5
T0826				AML	AML		
	comp=E,11800μm,0.1s						
T0826				AML	AML		
	comp=N,8405μm,0.2s						
T0826				AML	AML		
	comp=E,11800μm,0.1s						
T0826				AML	AML		
	comp=N,8405μm,0.2s						
T0824	**Loc. Limidi di**	**0.12**	**189**	⇓*i*P	Pg	10 36 06.7	+0.9
T0824				*i* S	Sg	10 36 10.5	+3.0
T0824	**Loc. Limidi di**	**0.12**	**189**	*i* P	Pg	10 36 06.7	+0.9
T0824				*i* S	Sg	10 36 10.4	+3.0
T0825	**Gonzaga (MN)**	**0.12**	**323**	⇑*i*P	Pg	10 36 07.3	+1.4
T0825				*i* S	Sg	10 36 11.8	+4.0
T0825	**Gonzaga (MN)**	**0.12**	**323**	*i* P	Pg	10 36 07.3	+1.3
T0825				*i* S	Sg	10 36 11.8	+4.0
T0825				AML	AML		
	comp=E,58600μm,0.1s						
T0825				AML	AML		
	comp=N,30500μm,0.2s						
T0825				AML	AML		
	comp=E,58550μm,0.1s						
T0825				AML	AML		
	comp=N,30500μm,0.2s						
T0802	**SanFelice sul**	**0.16**	**89**	*i* P	Pg	10 36 07.5	+1.0
T0802	**SanFelice sul**	**0.16**	**89**	*i* P	Pg	10 36 07.5	+0.9
RAVA	**Ravarino**	**0.17**	**135**	*i* P	Pg	10 36 07.5	+0.9
RAVA				*i* S	Sg	10 36 11.0	+2.1
RAVA	**Ravarino**	**0.17**	**135**	*i* P	Pg	10 36 07.5	+0.9
RAVA				*i* S	Sg	10 36 12.0	+3.1
RAVA				AML	AML		
	comp=E,6345μm,0.4s						
RAVA				AML	AML		
	comp=N,5220μm,0.4s						
RAVA				AML	AML		
	comp=E,6340μm,0.4s						
RAVA				AML	AML		
	comp=N,5225μm,0.4s						
RAVA				AML	AML		
	comp=N,5225μm,0.4s						
RAVA				AML	AML		
	comp=E,6340μm,0.4s						
T0813	**Massa Finalese**	**0.17**	**89**	⇑*i*P	Pg	10 36 07.6	+0.8
T0813				*i* S	Sg	10 36 12.1	+2.9
T0813	**Massa Finalese**	**0.17**	**89**	*i* P	Pg	10 36 07.6	+0.8
T0813				*i* S	Sg	10 36 12.1	+2.9
SBPO	**S.Benedetto Po**	**0.18**	**352**	⇓*i*P	Pg	10 36 08.0	+1.1
SBPO	**S.Benedetto Po**	**0.18**	**352**	*i* P	Pg	10 36 08.0	+1.1
SBPO				AML	AML		
	comp=E,1735μm,0.5s						
SBPO				AML	AML		
	comp=N,10450μm,0.5s						
SBPO				AML	AML		
	comp=E,1735μm,0.5s						
SBPO				AML	AML		
	comp=N,10450μm,0.5s						
SBPO				AML	AML		
	comp=N,10450μm,0.5s						
SBPO				AML	AML		
	comp=E,1735μm,0.5s						
NOVE	**Novellara**	**0.18**	**246**	*i* P	Pg	10 36 07.8	+0.8
NOVE	**Novellara**	**0.18**	**246**	*i* P	Pg	10 36 07.8	+0.8
NOVE				*i* S	Sg	10 36 12.6	+3.1
NOVE				AML	AML		
	comp=E,5710μm,0.3s						
NOVE				AML	AML		
	comp=N,3690μm,0.2s						
NOVE				AML	AML		
	comp=E,5710μm,0.3s						
NOVE				AML	AML		
	comp=N,3685μm,0.2s						
NOVE				AML	AML		
	comp=N,3685μm,0.2s						
NOVE				AML	AML		
	comp=E,5710μm,0.3s						
T0800	**Massa Finalese**	**0.21**	**97**	*i* P	Pg	10 36 08.6	+1.2
T0800				*i* S	Sg	10 36 12.0	+1.7
T0800	**Massa Finalese**	**0.21**	**97**	*i* P	Pg	10 36 08.6	+1.2
T0800				*i* S	Sg	10 36 12.9	+2.7
T0800				AML	AML		
	comp=E,2510μm,0.2s						
T0800				AML	AML		
	comp=N,2525μm,0.5s						
T0800				AML	AML		
	comp=E,2525μm,0.3s						
T0800				AML	AML		
	comp=N,2280μm,1.1s						
T0800				AML	AML		
	comp=E,2510μm,0.2s						
T0800				AML	AML		
	comp=N,2525μm,0.5s						
T0800				AML	AML		
	comp=E,2520μm,0.3s						
T0800				AML	AML		
	comp=N,2275μm,1.1s						
T0811	**Palata Pepoli**	**0.21**	**115**	*i* P	Pg	10 36 08.1	+0.6
T0811				*i* S	Sg	10 36 13.1	+2.7
T0811	**Palata Pepoli**	**0.21**	**115**	*i* P	Pg	10 36 08.1	+0.7
T0811				*i* S	Sg	10 36 13.1	+2.8
GAZZ	**Gazzo Veronese**	**0.26**	**23**	⇓*e*Pg	Pg	10 36 09.3	+0.9
GAZZ	**Gazzo Veronese**	**0.26**	**23**	*e*Pg	Pb	10 36 09.3	-0.9
T0805	**Bondeno (FE)**	**0.27**	**80**	*i* P	Pg	10 36 08.0	-0.5
T0805	**Bondeno (FE)**	**0.27**	**80**	*i* P	Pg	10 36 09.0	+0.5
T0822	**Casumaru (Bond**	**0.28**	**98**	*i* P	Pg	10 36 09.3	+0.5
T0822				*i* S	Sb	10 36 15.2	-0.2
T0822	**Casumaru (Bond**	**0.28**	**98**	*i* P	Pg	10 36 09.3	+0.5
T0822				*i* S	Sb	10 36 15.2	-0.2
T0817	**Loc. Veratica,**	**0.38**	**71**	*i* P	Pb	10 36 12.2	0.0
T0817				*i* S	Sb	10 36 19.4	+1.2
T0817	**Loc. Veratica,**	**0.38**	**71**	*i* P	Pb	10 36 12.2	+0.1
T0817				*i* S	Sb	10 36 19.4	+1.2
ZCCA	**Zocca**	**0.52**	**178**	*i* P	Pn	10 36 17.4	+0.4
TEOL	**Teolo**	**0.70**	**46**	⇓*e*Pg	Pg	10 36 17.0	+0.3
TEOL				*e*Sg	Sb	10 36 27.9	+0.3
TEOL	**Teolo**	**0.70**	**46**	*i* P	Pg	10 36 17.0	+0.3
TEOL				*e*Sg	Sb	10 36 27.9	+0.3
TEOL	**Teolo**	**0.70**	**46**	*i* P	Pg	10 36 17.0	+0.3
ROVR	**Rover¯¤ Verone**	**0.78**	**6**	*i* P	Pg	10 36 18.5	+0.3
ROVR				*i* S	Sb	10 36 30.8	+0.9
ROVR	**Rover¯¤ Verone**	**0.78**	**6**	*i* P	Pg	10 36 18.5	+0.3
ROVR				*i* S	Sb	10 36 30.9	+0.9
ROVR				AML	AML		
	comp=E,848μm,0.2s						
ROVR				AML	AML		
	comp=N,1580μm,0.2s						
ROVR				AML	AML		
	comp=E,848μm,0.2s						
ROVR				AML	AML		
	comp=N,1580μm,0.2s						
ROVR				AML	AML		
	comp=E,848μm,0.2s						
ROVR				AML	AML		
	comp=N,1580μm,0.2s						
MARN	**Marana (Italy)**	**0.79**	**13**	⇑*e*Pg	Pb	10 36 19.1	-0.1
MARN				*e*Sg	Sb	10 36 31.2	+1.1
SALO	**Salr**	**0.80**	**338**	*i* P	Pg	10 36 18.0	-0.7
SALO	**Salr**	**0.80**	**338**	*i* P	Pg	10 36 19.0	+0.3
SALO				AML	AML		
	comp=E,224μm,0.2s						
SALO				AML	AML		
	comp=N,338μm,0.2s						
SALO				AML	AML		
	comp=N,338μm,0.2s						
SALO				AML	AML		
	comp=E,224μm,0.2s						
BALD	**Monte Baldo**	**0.81**	**353**	*e*Pg	Pb	10 36 20.0	+0.2
BALD				*e*Sg	Sn	10 36 33.4	-0.3
POPM	**Popiglio**	**0.84**	**190**	*i* P	Pn	10 36 22.0	+0.6
BDI	**Bagni Di Lucca**	**0.85**	**198**	*i* P	Pn	10 36 21.8	+0.2
MAGA	**Magasa**	**0.93**	**346**	*i* P	Pg	10 36 20.7	-0.4
MAGA	**Magasa**	**0.93**	**346**	*i* P	Pg	10 36 20.7	-0.4
MAGA				AML	AML		
	comp=E,1550μm,0.3s						
MAGA				AML	AML		
	comp=N,934μm,0.2s						
MAGA				AML	AML		
	comp=E,1550μm,0.3s						
MAGA				AML	AML		
	comp=N,934μm,0.2s						
DOSS	**Dosso del Somm**	**1.02**	**9**	⇑*e*Pg	Pg	10 36 23.0	+0.1
DOSS				*e*Sg	Sn	10 36 38.3	-0.4
DOSS	**Dosso del Somm**	**1.02**	**9**	*e*Pg	Pg	10 36 23.0	+0.2
DOSS				*e*Sg	Sn	10 36 38.3	-0.4
RNI	**Roncone**	**1.13**	**348**	⇓*e*Pg	Pg	10 36 23.8	-1.1
RNI	**Roncone**	**1.13**	**348**	*e*Pg	Pg	10 36 23.8	-1.1
CGRP	**Cima Grappa**	**1.17**	**30**	⇑*e*Pg	Pg	10 36 25.3	-0.4
CGRP				*e*Sg	Sn	10 36 42.4	0.0
CGRP	**Cima Grappa**	**1.17**	**30**	*i* P	Pg	10 36 25.3	-0.4
CGRP				*e*Sg	Sn	10 36 42.4	0.0
CGRP	**Cima Grappa**	**1.17**	**30**	*i* P	Pg	10 36 25.3	-0.3
CGRP				AML	AML		
	comp=E,252μm,0.9s						
CGRP				AML	AML		
	comp=N,200μm,1.1s						
CGRP				AML	AML		
	comp=N,200μm,1.1s						
CGRP				AML	AML		
	comp=E,252μm,0.9s						
MABI	**Malga Bissina**	**1.22**	**345**	AML	AML		
	comp=E,68μm,1.3s						
MABI				AML	AML		
	comp=E,68μm,1.3s						
MABI				AML	AML		
	comp=N,57μm,0.6s						
MABI				AML	AML		
	comp=N,57μm,0.6s						
CTI	**Castel Tesino**	**1.27**	**22**	AML	AML		
	comp=N,568μm,0.2s						
CTI				AML	AML		
	comp=E,446μm,1.5s						
CTI				AML	AML		
	comp=N,568μm,0.2s						
CTI				AML	AML		
	comp=E,446μm,1.5s						
APPI	**Appiano**	**1.62**	**7**	AML	AML		
	comp=E,216μm,1.0s						
APPI				AML	AML		
	comp=N,176μm,1.2s						
APPI				AML	AML		
	comp=N,176μm,1.2s						
APPI				AML	AML		
	comp=E,216μm,1.0s						
NVLJ	**Novalja**	**2.81**	**95**	*i* Pn	Pn	10 36 48.5	+0.1
NVLJ				Sn	Sn	10 37 20.6	-1.9
NVLJ	**Novalja**	**2.81**	**95**	*i* Pn	Pn	10 36 48.5	+0.1
NVLJ				Sn	Sn	10 37 20.6	-1.9

IDC 11 10:54:36.9±5.1, 4°.27S×149°.86E, h180km±42km, mb3.3/2, mb1 3.7/4, mb1mx3.0/48, mbtmp4.1/4, Error ellipse: s-maj=81.3km s-min=38.5km az=125.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.77**	**208**	P	Pn	10 55 59.7	-1.1
	1.2nm,0.3s,baz=45,slow=2.9,SNR=3.8						
PMG				S	Sn	10 57 08.1	+1.1
	2.4nm,0.3s,baz=330,slow=4.5,SNR=4.2						
CTA	**Charters Tower**	**16.11**	**192**	P	Pn	10 58 15.0	+1.4
	4.3nm,0.3s,baz=354,slow=23,SNR=48						
WRA	**Warramunga Arr**	**21.71**	**223**	P	P	10 59 14.7	+0.7
	1.7nm,0.3s,baz=50,slow=10.0,SNR=60						
ASAR	**Alice Springs**	**24.68**	**217**	P	P	10 59 40.9	-0.5
	0.5nm,0.3s,baz=52,slow=9.0,SNR=20						
TORD	**Torodi Ar. Bea**	**147.35**	**288**	PKPbc	PKPbc	11 13 59.4	-0.9
	0.4nm,0.4s,baz=95,slow=2.5,SNR=5.9						

*ISCJB **11** 11:00:27.0±0.6, 5°.78N±0°.03×73°.91W±0°.04, h124km±6km, mb3.5/1, Error ellipse: s-maj=7.0km s-min=4.5km az=33.7*
*IDC **11** 11:00:27.4±0.9, 5°.72N×73°.81W, h123km±13km, mb3.2/1, mb1 3.5/2, mb1mx3.0/42, mbtmp3.7/2, Error ellipse: s-maj=67.2km s-min=11.8km az=133.0*
*RSNC **11** 11:00:29.0±1.1, 5°.77N×73°.92W, h106km±8km, ML2.9, Mw3.1*

ISC 11 11:00:28.1±1.0, 5°.78N±0°.04×73°.91W±0°.04, h113km±8km, n19, σ0°.83/33, 1C-1D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUSC	**La Rusia**	**0.83**	**82**	⇑*i*P	**Pn**	**11 00 48.5**	**+0.1**
RUSC				*e*S	**Sn**	**11 01 03.2**	**-0.4**
RUSC				*i*		11 01 04.5	
	comp=Z,72nm,0.2s						
PTBC	**PUERTO BERRIO,**	**0.93**	**324**	*e*P	**Pn**	**11 00 48.0**	**-0.8**
PTBC				*e*S	**Sn**	**11 01 03.3**	**-1.2**
NORC	**Norcasia**	**0.98**	**258**	*e*P	**Pn**	**11 00 48.9**	**-0.5**
NORC				*e*S	**Sn**	**11 01 04.7**	**-0.7**
ROSC	**El Rosal**	**1.02**	**204**	P	**Pn**	**11 00 50.8**	**+0.6**
	comp=Z,15nm,0.3s,baz=32,slow=19,SNR=36						
ROSC				S	**Sn**	**11 01 07.8**	**+1.2**
	comp=Z,35nm,0.3s,baz=332,slow=20,SNR=26						
ROSC	**El Rosal**	**1.02**	**204**	*e*P	**Pn**	**11 00 50.7**	**+0.6**
ROSC				*e*S	**Sn**	**11 01 07.7**	**+1.1**
ROSC				*i*		11 01 15.4	
	comp=Z,107nm,0.3s						
BARC	**Barichara**	**1.09**	**42**	⇓*i*P	**Pn**	**11 00 51.2**	**+0.5**
BARC				*e*S	**Sn**	**11 01 08.4**	**+0.7**
BARC				*i*		11 01 10.1	
	comp=Z,354nm,0.3s						
CHIC	**Chingaza**	**1.15**	**171**	*e*P	**Pn**	**11 00 51.2**	**-0.3**
CHIC				*e*S	**Sn**	**11 01 08.4**	**-0.8**
CHIC				*i*		11 01 13.2	
	comp=Z,72nm,0.2s						
HELC	**Santa Helena**	**1.66**	**284**	*e*P	**Pn**	**11 00 57.4**	**0.0**
HELC				*e*S	**Sn**	**11 01 19.7**	**0.0**
HELC				*i*		11 01 21.6	
	comp=Z,93nm,0.6s						
TOLC	**Tolima**	**1.84**	**230**	*e*P	**Pn**	**11 00 59.7**	**+0.2**
TOLC				*e*S	**Sn**	**11 01 24.0**	**+0.6**
ZARC	**Zaragoza, Cauc**	**1.95**	**331**	*e*P	**Pn**	**11 01 00.3**	**-0.3**
ZARC				*e*S	**Sn**	**11 01 25.7**	**+0.3**
ZARC				*i*		11 01 30.8	
	comp=Z,65nm,0.2s						
ANIL	**Santa Ana**	**1.96**	**229**	*e*S	**Sn**	**11 01 26.6**	**+0.5**
ANIL				*i*		11 01 29.1	
	comp=Z,281nm,0.3s						
PAMC	**Pamplona, Colo**	**1.96**	**38**	*e*P	**Pn**	**11 01 01.5**	**+0.3**
PAMC				*e*S	**Sn**	**11 01 27.0**	**+0.6**
PRAC	**Prado**	**2.27**	**205**	*e*P	**Pn**	**11 01 04.2**	**-0.5**
PRAC				*e*S	**Sn**	**11 01 32.5**	**-0.3**
SJAC	**San Juan de Ar**	**2.49**	**181**	*e*P	**Pn**	**11 01 06.9**	**-0.7**
SJAC				*i*		11 01 41.9	
	comp=Z,87nm,0.4s						
OCAC	**Ocana**	**2.52**	**13**	*e*P	**Pn**	**11 01 08.3**	**+0.3**
OCAC				*e*S	**Sn**	**11 01 40.0**	**+1.4**
OCAC				*i*		11 01 42.8	
	comp=Z,74nm,0.3s						
DBBC	**Dabeiba**	**2.60**	**298**	*e*P	**Pn**	**11 01 09.8**	**+0.8**
SDV	**Santo Domingo**	**4.48**	**46**	P	**Pn**	**11 01 33.9**	**-0.3**
	comp=Z,5.7nm,0.3s,baz=217,slow=18,SNR=13						
SDV				S	**Sn**	**11 02 24.5**	**-1.0**
	comp=Z,3.1nm,0.3s,baz=264,slow=20,SNR=6.4						
YKA	**Yellowknife Ar**	**63.97**	**340**	P	**P**	**11 10 47.7**	**-1.4**
	comp=Z,0.3nm,0.4s,baz=138,slow=6.7,SNR=4.2						
WRA	**Warramunga Arr**	**149.15**	**240**	PKPbc	**PKPdf**	**11 20 02.0**	**+2.0**
	comp=Z,0.4nm,0.9s,baz=106,slow=3.3,SNR=6.5						

*ISK **11** 11:07:05.5, 38°.76N×43°.48E, h18km, ML2.7/4*
*ISCJB **11** 11:07:06.6±0.6, 38°.77N±0°.03×43°.47E±0°.05, h12km±5km, Error ellipse: s-maj=7.5km s-min=3.9km az=19.5*
*DDA **11** 11:07:06.5, 38°.79N×43°.45E, h7km, Ml2.9*
*CSEM **11** 11:07:06.4±0.3, 38°.78N×43°.47E, h10km, ML2.7, Error ellipse: s-maj=7.4km s-min=5.1km az=111.0*

ISC 11 11:07:06.5±1.0, 38°.77N±0°.02×43°.48E±0°.03, h13km±7km, n27, σ0°.97/48, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.19**	**202**	PG	**Pb**	**11 07 11.7**	**-0.2**
VANB	**Van**	**0.19**	**202**	*e*Pg	**Pb**	**11 07 11.7**	**-0.2**
VMUR	**Van-Muradiye**	**0.23**	**18**	*i* P	**Pg**	**11 07 11.9**	**+0.2**
VMUR				*i* S	**Sb**	**11 07 17.0**	**+0.2**
VMUR	**Van-Muradiye**	**0.23**	**18**	P	**Pg**	**11 07 11.9**	**+0.2**
VMUR				S	**Sb**	**11 07 17.0**	**+0.2**
TVAN	**Van**	**0.25**	**193**	*i* P	**Pg**	**11 07 11.9**	**0.0**
TVAN				*i* S	**Sb**	**11 07 17.0**	**-0.2**
TVAN	**Van**	**0.25**	**193**	P	**Pg**	**11 07 11.9**	**0.0**
TVAN				S	**Sb**	**11 07 17.0**	**-0.2**
ERCV	**ERCIS-VAN**	**0.27**	**336**	PG	**Pg**	**11 07 12.1**	**-0.3**
ERCV				SG	**Sg**	**11 07 16.9**	**+0.6**
ERCV	**ERCIS-VAN**	**0.27**	**336**	*e*Pg	**Pg**	**11 07 12.1**	**-0.3**
ERCV				*e*Sg	**Sg**	**11 07 16.9**	**+0.6**
CLDR	**Caldiran**	**0.51**	**42**	PG	**Pg**	**11 07 15.9**	**-0.7**
CLDR				SG	**Sb**	**11 07 24.2**	**-0.6**
CLDR	**Caldiran**	**0.51**	**42**	*i* P	**Pg**	**11 07 15.9**	**-0.7**
CLDR				*i* S	**Sb**	**11 07 24.9**	**+0.1**
CLDR	**Caldiran**	**0.51**	**42**	*e*Pg	**Pg**	**11 07 15.9**	**-0.7**
CLDR				*e*Sg	**Sb**	**11 07 24.2**	**-0.6**
GEVA	**Gevas**	**0.56**	**216**	*i* P	**Pg**	**11 07 16.8**	**-0.8**
GEVA				*i* S	**Sb**	**11 07 25.8**	**-0.5**
GEVA	**Gevas**	**0.56**	**216**	P	**Pg**	**11 07 16.8**	**-0.8**
GEVA				S	**Sb**	**11 07 25.8**	**-0.5**
ADCV	**BITLIS_Adilcev**	**0.59**	**274**	*i* P	**Pg**	**11 07 17.7**	**-0.4**
ADCV				*i* S	**Sg**	**11 07 26.4**	**+0.4**
ADCV	**BITLIS_Adilcev**	**0.59**	**274**	P	**Pg**	**11 07 17.7**	**-0.4**
ADCV				S	**Sg**	**11 07 26.4**	**+0.4**
TUTA	**Tutak**	**0.82**	**321**	*i* P	**Pg**	**11 07 21.4**	**-1.0**
TUTA				*i* S	**Sg**	**11 07 33.3**	**+0.1**
TUTA	**Tutak**	**0.82**	**321**	P	**Pg**	**11 07 21.4**	**-1.0**
TUTA				S	**Sg**	**11 07 33.3**	**+0.1**
AGRB	**Hanur-Agry**	**0.89**	**335**	PG	**Pg**	**11 07 23.3**	**-0.5**
AGRB	**Hanur-Agry**	**0.89**	**335**	*e*Pg	**Pg**	**11 07 23.3**	**-0.5**
GURO	**Guroymak-BITLI**	**1.15**	**260**	PN	**Pb**	**11 07 27.3**	**-1.1**
GURO	**Guroymak-BITLI**	**1.15**	**260**	*e*Pn	**Pb**	**11 07 27.3**	**-1.1**
EKAR	**Karacoban**	**1.21**	**294**	*i* P	**Pn**	**11 07 27.5**	**-1.8**
EKAR				*i* S	**Sn**	**11 07 48.9**	**+3.2**
EKAR	**Karacoban**	**1.21**	**294**	P	**Pn**	**11 07 27.5**	**-1.8**
EKAR				S	**Sn**	**11 07 48.8**	**+3.2**
EATA	**Eleskirt**	**1.33**	**325**	*i* P	**Pn**	**11 07 30.9**	**-0.2**
EATA				*i* S	**Sg**	**11 07 50.3**	**+0.7**
EATA	**Eleskirt**	**1.33**	**325**	P	**Pn**	**11 07 30.9**	**-0.2**
EATA				S	**Sg**	**11 07 50.3**	**+0.7**
SRTM	**Siirt_Merkez**	**1.45**	**238**	*i* P	**Pg**	**11 07 34.4**	**0.0**
SRTM				*i* S	**Sg**	**11 07 54.3**	**+1.1**
SRTM	**Siirt_Merkez**	**1.45**	**238**	P	**Pg**	**11 07 34.3**	**0.0**
SRTM				S	**Sg**	**11 07 54.3**	**+1.1**

*ISCJB **11** 11:12:47.6±0.2, 27°.55S±0°.06×177°.09W±0°.06, h55km, mb4.5/55, MS3.6/19, Error ellipse: s-maj=9.5km s-min=6.9km az=136.9*
*IDC **11** 11:12:49.9±2.3, 27°.45S×177°.09W, h68km±19km, mb4.1/20, mb1 4.2/21, mb1mx4.1/46, mbtmp4.4/21, MS3.6/21, Ms1 3.6/21, ms1mx3.4/42, Error ellipse: s-maj=17.0km s-min=14.7km az=59.0*
*NEIC **11** 11:12:50.1±1.1, 27°.56S×177°.11W, h70km±10km, mb4.5/32, Error ellipse: s-maj=9.3km s-min=7.0km az=166.0*

ISC 11 11:12:48.7±0.4, 27°.62S±0°.06×176°.96W±0°.09, h55km, n134, σ1°.63/125, mb4.5/55, MS3.7/19, 1D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.83**	**207**	P	**Pn**	**11 13 19.6**	**+1.9**
	771nm,0.3s,baz=77,slow=22,SNR=38						
RAO				S	**Sn**	**11 13 44.6**	**+4.8**
	872nm,0.3s,baz=95,slow=23,SNR=9.4						
RAO				LR	LR	11 14 14.2	
	comp=Z,870nm,20.3s,baz=92,slow=44						
RAO	**Raoul Island**	**1.83**	**207**	*e*Pn	**Pn**	**11 13 19.4**	**+1.7**
RAO				*e*Pn	Pn	11 13 19.6	+1.9
RAO				*e*Sn	**Sn**	**11 13 43.4**	**+3.6**
RAO				*e*Sn	Sn	11 13 44.6	+4.8
URZ	**Urewera**	**11.71**	**204**	P	**Pn**	**11 15 29.9**	**-3.1**
	1.1nm,0.3s,baz=329,slow=17,SNR=6.2						
URZ				S	**Sn**	**11 17 36.2**	**-6.0**
	2.3nm,0.3s,baz=3.3,slow=22,SNR=11						
BKZ	**Black Stump Fm**	**12.74**	**204**	*e*Pn	**Pn**	**11 15 46.6**	**-0.4**
AFI	**Afiamalu**	**14.48**	**21**	P	Pn	11 16 00.1	-10
	3.0nm,0.3s,baz=43,slow=3.2,SNR=5.3						
AFI				S	Sn	11 18 27.4	-22
	1.3nm,0.3s,baz=90,slow=20,SNR=2.8						
AFI	**Afiamalu**	**14.48**	**21**	*e*Pn	Pn	11 16 03.2	-7.5
AFI				*e*Sn	Sn	11 18 27.4	-22
DZM	**Mont Dzumac**	**16.05**	**287**	*e*LR	LR	11 20 33.9	
	542nm,25.1s						
DZM	**Mont Dzumac**	**16.05**	**287**	P	**Pn**	**11 16 30.2**	**-0.7**
	0.2nm,0.3s,baz=127,slow=20,SNR=1.7						
DZM				LR	LR	11 21 26.7	
	comp=Z,345nm,18.9s,baz=124,slow=32						
RAR	**Rarotonga**	**16.89**	**72**	LR	LR	11 21 17.6	
	comp=Z,197nm,21.5s,baz=260,slow=30						
RPZ	**Rata Peaks**	**18.75**	**208**	P	**P**	**11 16 57.5**	**-5.5**
	0.5nm,0.3s,baz=23,slow=15,SNR=2.4						
RPZ				S	Sn	11 20 16.7	-16
	0.3nm,0.3s,baz=41,slow=10.0,SNR=2.1						
RPZ				LR	LR	11 24 11.0	
	comp=Z,175nm,19.2s,baz=26,slow=36						
TBI	**Tubuai**	**25.16**	**86**	*e*LR	LR	11 23 56.9	
	254nm,25.2s						
TBI	**Tubuai**	**25.16**	**86**	*e*T	T	11 43 44.0	
	15nm,0.3s						
PAE	**Paea**	**27.09**	**74**	*e*T	T	11 46 05.7	
	5.7nm,0.3s						
PPT2	**Papeete2**	**27.12**	**74**	*e*LR	LR	11 24 55.8	
	318nm,26.0s,baz=234						
PPT2	**Papeete2**	**27.12**	**74**	*e*T	T	11 46 09.0	
	3.5nm,0.3s						
PPT	**Papeete**	**27.13**	**74**	LR	LR	11 28 59.5	
	comp=Z,27nm,18.5s,baz=204,slow=36						
TVO	**Taravao**	**27.31**	**75**	*e*T	T	11 46 21.9	
	2.0nm,0.3s						
HNR	**Honiara**	**28.31**	**305**	LR	LR	11 27 43

QSPA South Pole Qui 62.48 180 P **P 11 23 06.6 +0.4**
5.0nm,1.0s,baz=25,slow=3.9,SNR=7.9
QSPA LR LR 11 47 58.5
comp=Z,51nm,19.0s,baz=236,slow=34
QSPA South Pole Qui 62.48 180 *eP* **P 11 23 06.6 +0.4**
QSPA *eP* **P 11 23 07.4 +1.2**
LEM Lembang 73.97 271 LR LR 11 58 31.9
comp=Z,73nm,18.1s,baz=204,slow=37
MAW Mawson 75.22 200 P **P 11 24 26.2 +1.2**
6.2nm,0.9s,baz=97,slow=6.5,SNR=10
MAW Mawson 75.22 200 *eP* **P 11 24 26.3 +1.3**
1.7nm,0.9s
MJAR Matsushiro Arr 76.51 324 P **P 11 24 33.4 +0.6**
1.8nm,0.7s,baz=178,slow=5.9,SNR=3.1
MJAR LR LR 11 59 04.0
comp=Z,8.0nm,18.0s,baz=95,slow=36
MAJO Matsushiro 76.51 324 *eP* **P 11 24 33.4 +0.6**
SYO Syowa Base 80.01 193⇓ *eP* **P 11 24 51.0 -0.7**
ASAJ Asahikawa 80.42 332 LR LR 11 55 47.3
comp=Z,34nm,19.3s,baz=155,slow=32
SNAA Sanae 80.89 178 P **P 11 24 57.2 +0.6**
SNAA Sanae 80.89 178 P **P 11 24 56.3 -0.2**
4.6nm,0.9s,baz=183,slow=4.8,SNR=14
SNAA Sanae 80.89 178 *eP* **P 11 24 57.1 +0.5**
5.7nm,1.0s
VNA3 Neumayer Olymp 81.00 176 P **P 11 24 56.9 -0.2**
VNA2 Neumayer--Watz 81.45 177 P **P 11 25 00.3 +0.8**
baz=172,slow=3.3
VNA1 Neumayer--Stat 81.67 176 P **P 11 25 01.3 +0.8**
HJGM San Juan Grade 82.56 42 *eP* **P 11 25 06.2 +0.5**
KSRS Korea Array 82.85 319 P **P 11 25 07.7 +0.6**
2.2nm,0.8s,baz=135,slow=6.3,SNR=9.3
KSRS LR LR 11 59 25.8
comp=Z,20nm,19.8s,baz=245,slow=34
KS15 Wonju Array Si 82.86 319 *eP* **P 11 25 07.7 +0.5**
KSAR Wonju Array Be 82.86 319 P **P 11 25 07.7 +0.5**
KS01 Wonju Array Si 82.88 319 *eP* **P 11 25 07.3 0.0**
DGR Domenigoni Val 83.32 47 *eP* **P 11 25 07.5 -2.3**
DGR *ePcP* **PcP 11 25 11.1 -3.0**
PETK Petropavlovsk- 83.37 345 P **P 11 25 07.8 -1.6**
4.4nm,0.8s,baz=123,slow=7.5,SNR=8.1
PEA1 Petropavlovsk- 83.38 345 *eP* **P 11 25 07.8 -1.7**
ISA Isabella, Lake 83.69 44 *eP* **P 11 25 12.0 +0.4**
5.2nm,1.0s
PLCA Paso Flores 83.72 133 P **P 11 25 12.5 +0.6**
3.5nm,1.0s,baz=351,slow=2.3,SNR=5.8
PLCA Paso Flores 83.72 133 *eP* **P 11 25 12.5 +0.6**
1.2nm,0.6s
GSC Goldstone, Bar 84.50 45 *eP* **P 11 25 15.8 0.0**
3.9nm,0.9s
NJ2 Nanjing 85.16 310 *eP* **P 11 25 21.1 +2.1**
NJ2 pmax pmax
comp=Z,12nm,0.5s
PNTR Pine Nut 85.25 41 *eP* **P 11 25 19.8 +0.1**
8.2nm,0.9s
YBH Yreka Blue Hor 85.29 38 P **P 11 25 19.8 +0.2**
3.5nm,0.8s,baz=204,slow=10.0,SNR=7.2
YBH LR LR 11 59 24.9
comp=Z,16nm,18.7s,baz=46,slow=33
NV01 Mina Array Sit 85.58 42 *eP* **P 11 25 20.7 -0.6**
NVAR Mina Array Bea 85.58 42 P **P 11 25 21.2 -0.1**
3.5nm,0.9s,baz=221,slow=8.4,SNR=22
NVAR LR LR 11 55 22.6
comp=Z,32nm,20.7s,baz=128,slow=30
NV11 Mina Array Sit 85.67 42 *eP* **P 11 25 21.4 -0.3**
0.3nm,0.9s
TPNV Topopah Spring 85.89 44 *eP* **P 11 25 22.7 -0.1**
3.8nm,0.8s
KVN Kaiserville 86.11 42 *eP* **P 11 25 23.7 -0.1**
4.3nm,1.0s
Y14A Wickenburg 86.12 48 *eP* **P 11 25 24.0 +0.1**
4.8nm,1.0s
W13A Hualapai Mount 86.25 47 *eP* **P 11 25 24.9 +0.2**
3.3nm,0.9s
319A Douglas 87.17 52 *eP* **P 11 25 29.8 +0.6**
3.8nm,0.9s
X16A Lo Mia Camp, P 87.45 49 *eP* **P 11 25 31.3 +0.8**
5.0nm,0.9s
BMN Battle Mountai 87.51 41 *eP* **P 11 25 30.6 -0.1**
3.0nm,0.9s
PINE Pine Mountain 87.64 37 *eP* **P 11 25 31.4 +0.2**
5.1nm,1.0s
LCMT Little Creek M 87.82 46 *eP* **P 11 25 32.5 +0.4**
2.6nm,0.9s
CCUT Cedar City 88.07 45 *eP* **P 11 25 33.7 +0.2**
3.3nm,1.1s
U15A North Rim 88.08 47 *eP* **P 11 25 34.2 +0.6**
6.3nm,0.9s
KNB Kanab 88.09 46 *eP* **P 11 25 33.7 +0.2**
4.4nm,0.9s
WUAZ Wupatki 88.14 48 *eP* **P 11 25 34.5 +0.8**
4.3nm,0.9s
CN2 Changchun 88.50 322 *eP* **P 11 25 36.6 +1.6**
CN2 *ePP* **PP 11 29 08.1 +4.0**
CN2 *eS* **S 11 36 19.3 +2.8**
CN2 pmax pmax
comp=Z,10.0nm,1.1s
MTPU Mount Pierson 89.11 46 *eP* **P 11 25 39.7 +1.2**
0.4nm,0.7s
KLR Kul'dur 89.12 329 P **P 11 25 36.6 -1.2**
0.2nm,0.8s,baz=20,slow=2.2,SNR=7.7
D05A Enumclaw 89.42 34 *eP* **P 11 25 39.7 +0.5**
13nm,1.0s
KDKW Coast Env Seat 89.53 33 *eP* **P 11 25 42.8 +3.1**
G08A Pilot Rock 89.70 37 *eP* **P 11 25 40.2 -0.6**
8.0nm,0.9s
TX31 Lajitas Ar. Si 90.12 57 *eP* **P 11 25 43.0 -0.1**
TX31 *eP* **P 11 25 43.2 +0.1**
TXAR Lajitas Array 90.12 57 P **P 11 25 42.9 -0.2**
1.0nm,0.8s,baz=203,slow=7.0,SNR=12
MNTX Cornudas Mount 90.12 54 *eP* **P 11 25 43.1 +0.2**
2.1nm,0.9s
LAZ Ladron 90.36 51 *eP* **P 11 25 44.5 +0.3**
TMUT Trail Mountain 90.47 45 *eP* **P 11 25 45.3 +0.5**
5.0nm,1.1s
F10A Beach Ranch, E 91.07 37 *eP* **P 11 25 46.5 -0.6**
7.2nm,0.9s
HLID Hailey 91.11 40 *eP* **P 11 25 47.5 +0.1**
ANMO Albuquerque 91.13 51 P **P 11 25 47.8 0.0**
1.8nm,0.9s,baz=203,slow=5.4,SNR=6.1
ANMO LR LR 11 57 55.5
comp=Z,38nm,21.3s,baz=246,slow=30
ANMO Albuquerque 91.13 51 *eP* **P 11 25 47.8 0.0**
2.9nm,1.0s
S22A 4UR Ranch, Cre 92.41 48 *eP* **P 11 25 54.0 +0.2**
1.6nm,0.8s
MCMT McKenzie Canyo 92.77 40 *eP* **P 11 25 55.0 -0.2**
FXWY Fox Creek 93.12 42 *eP* **P 11 25 57.0 +0.2**
2.5nm,1.1s
NNA Nana 93.28 105 P **P 11 25 59.1 +1.0**
6.3nm,0.6s,baz=238,slow=13,SNR=2.9
IMW Indian Meadow 93.32 41 *eP* **P 11 25 57.8 0.0**
2.6nm,1.0s
PD31 Pinedale Array 93.49 43 *eP* **P 11 25 57.7 -0.9**
PDAR Pinedale Array 93.49 43 P **P 11 25 57.9 -0.7**
1.3nm,0.9s,baz=212,slow=4.5,SNR=8.1
PDAR LR LR 12 01 58.3
comp=Z,31nm,18.8s,baz=282,slow=32
SEY Seymchan 93.50 346 P **P 11 25 56.6 -1.1**
1.7nm,0.8s,baz=139,slow=6.5,SNR=7.3
HHC Hu-ho-hao-te 94.97 314 *eP* **P 11 26 08.3 +3.0**
HHC pP pP 11 26 20.2 -0.9
HHC PP **PP 11 29 56.7 +1.2**
HHC SKS **SKSac 11 36 38.1 +1.9**
HHC S **ScS 11 37 16.4 +0.1**
HHC pmax pmax
comp=Z,7.0nm,0.9s
HHC pmax pmax
comp=Z,33nm,5.7s
HHC LR LR
comp=N,70nm,16.1s
HHC LR LR
comp=E,76nm,18.8s
ILAR Eielson Array 95.03 12 P **P 11 26 03.1 -1.6**
0.4nm,0.8s,baz=206,slow=5.8,SNR=4.2
ILB Eielson Array 95.03 12 *eP* **P 11 26 03.1 -1.6**
CD2 Chengdu 95.39 302 P **P 11 26 08.4 +1.1**
CD2 pmax pmax
comp=Z,6.0nm,0.6s
JTS JuntasAbangare 96.45 82 LR LR 11 59 17.5
comp=Z,41nm,20.4s,baz=336,slow=29
WMQ Urumqi 112.22 309 *e*PKP 11 31 19.8
ZALV Zalesovo Beam 116.56 319 PKP **PKPdf 11 31 24.4 -1.6**
0.9nm,0.7s,baz=1.4,slow=5.8,SNR=3.5
ZAA1 Zalesovo Array 116.56 319 *e*PKPdf **PKPdf 11 31 24.4 -1.6**
MK32 Makanchi Array 116.67 311 *e*PKPdf **PKPdf 11 31 24.5 -2.0**
1.5nm,0.6s,baz=48,slow=2.1,SNR=6.2
KSH Kashi 119.59 302 PKP **PKPdf 11 31 34.1 +1.6**
KSH PP PP 11 33 04.9 +9.0
KURK Kurchatov 119.77 315 *e*PKPdf **PKPdf 11 31 30.6 -1.7**
KURBB Kurchatov Arra 119.81 315 PKP **PKPdf 11 31 30.6 -1.8**
1.6nm,0.8s,baz=112,slow=2.5,SNR=8.2
BVAR Borovoye Array 125.03 317 PKP **PKPdf 11 31 40.7 -1.6**
2.2nm,0.9s,baz=106,slow=3.1,SNR=5.8
AKTO Aktyubinsk 132.87 314 PKP **PKPdf 11 31 56.6 -0.7**
0.7nm,0.3s,baz=45,slow=2.9,SNR=4.6
FIA0 FINESS Array S 142.83 342 *e*PKPpre PKPpre 11 32 09.8
FINES FINESS Array B 142.83 342 PKhKP PKPpre 11 32 09.8
1.2nm,0.6s,baz=59,slow=7.4,SNR=3.9
KBZ Khabaz 144.24 307 PKP **PKPab 11 32 15.8 -0.5**
1.1nm,0.6s,baz=162,slow=2.0,SNR=4.0
NB2 NORSAR Subarra146.14 353 PKP **PKPdf 11 32 20.2 -0.9**
comp=Z,2.6nm,0.8s,baz=13,slow=2.9
NB200 NORSAR Array S 146.14 353 *e*PKPdf **PKPdf 11 32 20.6 -0.5**
NOA NORSAR Array B 146.14 353 PKPbc **PKPdf 11 32 20.6 -0.5**
comp=Z,2.8nm,0.7s,baz=22,slow=1.0,SNR=6.5
HFS Hagfors 146.69 350 PKPbc **PKPdf 11 32 22.1 +0.1**
comp=Z,6.1nm,0.7s,baz=49,slow=4.4,SNR=13
AKASG Malin Array Be 149.58 326 PKPbc **PKPbc 11 32 29.9 -1.7**
comp=Z,4.2nm,0.7s,baz=46,slow=4.1,SNR=18
AKBB Malin Array Si 149.58 326 *e*PKPbc **PKPbc 11 32 30.0 -1.6**
ASF Jabal al Asfar 150.38 287 PKPbc **PKPbc 11 32 34.1 -0.2**
comp=Z,4.4nm,0.8s,baz=353,slow=2.5,SNR=5.8
MMAI Mount Meron Ar 151.62 289 PKPbc **PKPbc 11 32 37.3 +0.2**
comp=Z,7.9nm,0.7s,baz=64,slow=6.7,SNR=6.3
BR101 Keskin Array S 151.96 303 *e*PKPbc **PKPbc 11 32 36.3 -1.5**
BR101 *e*PKPab **PKPab 11 32 50.1 +2.8**
BRTR Keskin Array B 151.96 303 PKPbc **PKPbc 11 32 36.3 -1.5**
comp=Z,2.5nm,0.9s,baz=116,slow=2.9,SNR=9.2
BRTR PKPab **PKPab 11 32 50.1 +2.8**
comp=Z,1.4nm,0.6s,baz=125,slow=2.5,SNR=5.9
CLL Collm 155.18 345 *e*PKPab **PKPab 11 33 01.0 +0.8**
GERES GERESS Array B 157.26 342 PKPab **PKPab 11 33 08.3 -1.1**
comp=Z,0.4nm,0.3s,baz=316,slow=2.7,SNR=3.8
TORD Torodi Ar. Bea 165.54 175 PKP **PKPdf 11 32 46.6 -1.2**
comp=Z,0.6nm,0.7s,baz=313,slow=2.3,SNR=2.8
TORD PKPab **PKPab 11 33 46.4 +0.3**
comp=Z,1.8nm,0.9s,baz=194,slow=2.9,SNR=6.0
TOA1 Torodi Ar. Sit 165.55 175 *e*PKPdf **PKPdf 11 32 46.6 -1.2**
TOA1 *e*PKPab **PKPab 11 33 46.4 +0.2**

NIED ***11*** *11:20:00,38°.30N×142°.00E,h47km,Mw3.8 Best double couple: M0:5.96000×10¹⁴ NP1:φs193.00000°,δ25.00000°, λ89.00000°. NP2:φs14.00000°,δ65.00000°,λ91.00000°.*
ISCJB ***11*** *11:20:40.5±0.8,38°.28N±0°.04×141°.95E±0°.08,h51km±6km, mb3.9/16,MS3.5/1,Error ellipse: s-maj=11.5km s-min=5.0km az=19.6*
IDC ***11*** *11:20:42.0±1.8,38°.30N×141°.90E,h47km±16km,mb3.7/16, mb1 3.8/20,mb1mx3.6/66,mbtmp3.9/20,ML3.5/4,MS2.6/5, Ms1 2.6/5,ms1mx2.4/67,Error ellipse: s-maj=20.9km s-min=12.2km az=98.0*
JMA ***11*** *11:20:41.5±0.1,38°.31N×141°.91E,h46km±1km,M3.8*
JMA Felt II J1.
ISC 11 11:20:41.3±1.7,38°.29N±0°.05×142°.0E±0°.1,h41km±14km, n44,σ1§49/47,mb4.0/16,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**0.53**	**288**	P	**Pn**	**11 20 52.1**	**-0.4**
JIO				S	**Sn**	**11 20 59.4**	**-1.0**
OFUJ	**Ofunato**	**0.83**	**342**	P	**Pn**	**11 20 56.3**	**-0.3**
OFUJ				S	**Sn**	**11 21 06.7**	**-0.9**
JMK	**Ichinoseki**	**0.90**	**318**	P	**Pn**	**11 20 57.3**	**-0.2**
JMK				S	**Sn**	**11 21 08.5**	**-0.7**
JMM	**Marumori**	**1.03**	**246**	P	**Pn**	**11 20 58.5**	**-0.8**
JMM				*e*S	**Sn**	**11 21 10.7**	**-1.9**
JOU	**Okura**	**1.05**	**275**	P	**Pn**	**11 20 59.2**	**-0.3**
JOU				S	**Sn**	**11 21 12.1**	**-0.8**
JFK	**Kawauchi**	**1.28**	**224**	P	**Pn**	**11 21 02.0**	**-0.7**
JFK				S	**Sn**	**11 21 16.9**	**-1.7**
JOM	**Ohasama**	**1.30**	**336**	P	**Pn**	**11 21 03.1**	**+0.1**
JOM				*e*S	**Sn**	**11 21 19.8**	**+0.6**
JYK	**Kaneyama**	**1.42**	**297**	P	**Pn**	**11 21 04.5**	**-0.2**
JYS	**Shiratake**	**1.52**	**268**	P	**Pn**	**11 21 05.7**	**-0.3**
JYS				*e*S	**Sn**	**11 21 24.2**	**-0.3**
JFT	**Otama**	**1.52**	**240**	P	**Pn**	**11 21 06.0**	**0.0**
JRG	**Rokugo**	**1.53**	**317**	P	**Pn**	**11 21 06.2**	**0.0**
JYA	**Atsumi**	**1.81**	**280**	P	**Pn**	**11 21 10.1**	**+0.1**
MJAR	**Matsushiro Arr**	**3.48**	**241**	P	**Pn**	**11 21 34.1**	**+1.2**
	2.9nm,0.3s,baz=64,slow=12,SNR=28						
MJAR				S	**Sn**	**11 22 19.7**	**+6.8**
	2.2nm,0.3s,baz=11,slow=14,SNR=2.9						
MJAR				LR	LR	11 23 07.0	
	comp=Z,96nm,18.4s,baz=45,slow=42						
MAT	**Matsushiro**	**3.48**	**241**	P	**Pn**	**11 21 34.4**	**+1.4**
MAT				S	**Sn**	**11 22 13.0**	**+0.1**
JHJ	**Hachijo jima 2**	**5.46**	**200**	P	**Pn**	**11 22 00.5**	**+0.3**
	13nm,0.3s,baz=20,slow=15,SNR=3.8						
JHJ				S	**Sn**	**11 22 58.3**	**-3.5**
	23nm,0.3s,baz=73,slow=19,SNR=3.7						
ASAJ	**Asahikawa**	**5.84**	**4**	P	**Pn**	**11 22 06.0**	**+0.7**
	1.8nm,0.3s,baz=211,slow=12,SNR=17						
ASAJ				S	**Sn**	**11 23 10.3**	**-0.7**
	0.7nm,0.3s,baz=156,slow=20,SNR=2.6						
USRK	**Ussuriysk Ar.**	**9.57**	**311**	P	**Pn**	**11 22 57.3**	**+0.8**
	0.5nm,0.3s,baz=124,slow=15,SNR=6.0						
JNU	**Nakatsue**	**10.40**	**244**	LR	LR	11 28 06.8	
	comp=Z,20nm,18.0s,baz=116,slow=43						
KSRS	**Korea Array**	**11.15**	**270**	P	**Pn**	**11 23 21.8**	**+3.7**
	0.1nm,0.3s,baz=76,slow=15,SNR=2.8						
KSRS				LR	LR	11 27 13.7	
	comp=Z,47nm,18.2s,baz=105,slow=35						
KLR	**Kul'dur**	**13.19**	**329**	LR	LR	11 28 07.0	
	comp=Z,4.5nm,19.4s,baz=298,slow=34						
MA2	**Magadan**	**22.03**	**12**	P	**P**	**11 25 32.0**	**-0.1**
	1.6nm,0.4s,baz=180,slow=14,SNR=3.8						
SEY	**Seymchan**	**25.47**	**11**	P	**P**	**11 26 05.7**	**+0.5**
	0.6nm,0.5s,baz=186,slow=18,SNR=4.4						
H11N2	**WAKE ISLAND Hy 28.43**		**124**	T	T	11 56 46.2	
	baz=316,slow=75,SNR=154						
H11N1	**WAKE ISLAND Hy 28.44**		**124**	T	T	11 56 45.7	
	baz=316,slow=75,SNR=143						
H11N3	**WAKE ISLAND Hy 28.45**		**124**	T	T	11 56 46.4	
	baz=316,slow=75,SNR=102						
H11S1	**WAKE ISLAND Hy 29.19**		**126**	T	T	11 57 39.3	
	baz=318,slow=76,SNR=27						
H11S3	**WAKE ISLAND Hy 29.19**		**126**	T	T	11 57 41.9	
	baz=318,slow=76,SNR=62						
H11S2	**WAKE ISLAND Hy 29.20**		**126**	T	T	11 57 40.9	
	baz=318,slow=76,SNR=35						
ZALV	**Zalesovo Beam**	**41.42**	**311**	P	**P**	**11 28 23.1**	**-0.5**
	1.5nm,0.3s,baz=77,slow=7.3,SNR=7.2						
MKAR	**Makanchi Array**	**43.85**	**301**	P	**P**	**11 28 42.8**	**-0.7**
	0.9nm,0.6s,baz=88,slow=11,SNR=9.4						
KURBB	**Kurchatov Arra**	**45.60**	**307**	P	**P**	**11 28 56.0**	**-1.3**
	4.1nm,0.7s,baz=81,slow=7.6,SNR=9.5						
AKTO	**Aktyubinsk**	**58.18**	**312**	P	**P**	**11 30 31.0**	**0.0**
	0.6nm,0.4s,baz=72,slow=16,SNR=3.9						
WRA	**Warramunga Arr**	**58.37**	**188**	P	**P**	**11 30 31.7**	**-0.8**
	1.1nm,0.6s,baz=6.2,slow=7.1,SNR=19						
ASAR	**Alice Springs**	**62.09**	**188**	P	**P**	**11 30 57.5**	**-0.5**
	0.6nm,0.7s,baz=11,slow=5.2,SNR=13						
ARCES	**ARCESS Array B**	**62.99**	**339**	P	**P**	**11 31 03.1**	**-0.3**
	0.6nm,0.5s,baz=45,slow=8.7,SNR=4.2						
FINES	**FINESS Array B**	**67.92**	**332**	P	**P**	**11 31 35.1**	**-0.3**
	1.5nm,0.6s,baz=46,slow=11,SNR=6.1						
KVAR	**Kislovodsk Arr**	**70.43**	**311**	LR	LR	12 06 16.5	
	comp=Z,23nm,18.8s,baz=275,slow=39						
KBZ	**Khabaz**	**70.43**	**311**	P	**P**	**11 31 50.9**	**-0.4**
	0.8nm,0.6s,baz=175,slow=4.0,SNR=3.7						
HFS	**Hagfors**	**73.13**	**336**	P	**P**	**11 32 07.2**	**0.0**
	0.9nm,0.5s,baz=57,slow=8.8,SNR=7.5						
NB2	**NORSAR Subarra**	**73.21**	**337**	P	**P**	**11 32 06.8**	**-0.9**
	comp=Z,1.2nm,0.6s,baz=39,slow=6.2						
NOA	**NORSAR Array B**	**73.21**	**337**	P	**P**	**11 32 07.5**	**-0.1**
	comp=Z,1.7nm,0.6s,baz=34,slow=3.1,SNR=3.7						
AKASG	**Malin Array Be**	**73.59**	**322**	P	**P**	**11 32 09.2**	**-0.8**
	comp=Z,0.8nm,0.4s,baz=49,slow=7.5,SNR=6.2						
PDAR	**Pinedale Array**	**76.46**	**46**	P	**P**	**11 32 27.8**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=46,slow=3.1,SNR=2.9						
TXAR	**Lajitas Array**	**89.00**	**53**	P	**P**	**11 33 33.2**	**+1.0**
	comp=Z,0.1nm,0.6s,baz=305,slow=3.2,SNR=3.3						

JMA ***11*** *11:22:45.2±0.2,42°.85N×146°.64E,h28km±3km,M3.4*
SKHL ***11*** *11:22:46.4±0.5,42°.75N×146°.48E,h53km±7km,mb4.5/5*
MOS ***11*** *11:22:46.4±1.4,42°.76N×146°.48E,h54km,mb4.2/1,Error ellipse: s-maj=55.4km s-min=15.4km az=97.8*
ISC 11 11:22:46.1±2.9,42°.91N±0°.09×146°.47E±0°.05,h11km±15km, n18,σ0§60/33,Off southeast coast of Hokkaido

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.70**	**311**	P	**Pb**	**11 23 00.5**	**+0.1**
NEM2				*e*S	**Sn**	**11 23 11.8**	**-1.1**
SHO	**Shikotan**	**1.00**	**15**	*e*P	**Pb**	**11 23 05.0**	**-0.4**
SHO				AMB	AMB	11 23 05.9	
	57nm,0.3s						
SHO				*i* S	**Sb**	**11 23 18.6**	**0.0**
SHO				A	A	11 23 19.2	
	1μm,0.3s						
SHO				A	A	11 23 19.2	
	136nm,0.3s						
SHO	**Shikotan**	**1.00**	**15**	*e*PN	**Pb**	**11 23 05.0**	**-0.4**
SHO				*i* S	**Sb**	**11 23 18.6**	**0.0**
SHO				pmax	pmax		
	comp=Z,57nm,0.3s						
SHO				smax	smax		
	comp=E,1μm,0.3s						
SHO				smax	smax		
	comp=N,1μm,0.4s						
GLVR	**Golovnino**	**1.08**	**320**	*e*P	**Pb**	**11 23 06.2**	**-0.7**
GLVR				AMB	AMB	11 23 07.9	
	comp=N,145nm,0.3s						
GLVR				*e*S	**Sn**	**11 23 23.2**	**+1.0**
GLVR				A	A	11 23 23.9	
	comp=N,920nm,0.4s						
GLVR				A	A	11 23 23.9	
	comp=N,680nm,0.4s						
GLVR	**Golovnino**	**1.08**	**320**	*e*PN	**Pb**	**11 23 06.2**	**-0.7**
GLVR				*e*S	**Sn**	**11 23 23.2**	**+1.0**
GLVR				pmax	pmax		
	comp=Z,145nm,0.3s						
GLVR				smax	smax		
	comp=N,924nm,0.2s						
GLVR				smax	smax		
	comp=E,680nm,0.3s						
GRPR	**Tuman**	**1.20**	**335**	*e*P	**Pn**	**11 23 07.9**	**-0.9**
GRPR				AMB	AMB	11 23 10.6	
	comp=E,170nm,0.3s						
GRPR				*e*S	**Sb**	**11 23 24.1**	**-0.3**
GRPR				A	A	11 23 26.9	
	comp=E,100nm,0.3s						
GRPR				A	A	11 23 26.9	
	comp=E,565nm,0.3s						
GRPR	**Tuman**	**1.20**	**335**	*e*PN	**Pn**	**11 23 07.9**	**-0.9**
GRPR				*e*S	**Sb**	**11 23 24.1**	**-0.3**
GRPR				pmax	pmax		
	comp=Z,171nm,0.3s						
GRPR				smax	smax		
	comp=E,996nm,0.3s						
GRPR				smax	smax		
	comp=N,565nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.21**	**339**	*e*P	**Pn**	**11 23 08.5**	**-0.5**
YUK				AMB	AMB	11 23 12.0	
	comp=N,230nm,0.4s						
YUK				*e*S	**Sg**	**11 23 25.6**	**+0.5**
YUK				A	A	11 23 29.7	
	comp=N,880nm,0.4s						
YUK				A	A	11 23 29.7	
	comp=N,230nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.21**	**339**	*e*PN	**Pn**	**11 23 08.5**	**-0.5**
YUK				*e*S	**Sg**	**11 23 25.6**	**+0.5**
YUK				pmax	pmax		
	comp=E,78nm,0.4s						
YUK				pmax	pmax		
	comp=Z,201nm,0.4s						
YUK				pmax	pmax		
	comp=N,84nm,0.3s						
YUK				smax	smax		
	comp=N,230nm,0.5s						
YUK				smax	smax		
	comp=E,876nm,0.5s						
LAGR	**Lagunnoye**	**1.25**	**337**	*e*P	**Pn**	**11 23 09.1**	**-0.5**
LAGR				AMB	AMB	11 23 10.5	
	comp=E,250nm,0.4s						
LAGR				*e*S	**Sb**	**11 23 25.8**	**-0.1**
LAGR				A	A	11 23 29.7	
	comp=E,1μm,0.4s						
LAGR				A	A	11 23 29.7	
	comp=E,154nm,0.4s						
LAGR	**Lagunnoye**	**1.25**	**337**	*e*PN	**Pn**	**11 23 09.1**	**-0.5**
LAGR				*e*S	**Sb**	**11 23 25.8**	**-0.1**
LAGR				pmax	pmax		
	comp=Z,251nm,0.3s						
LAGR				smax	smax		
	comp=E,1μm,0.4s						
LAGR				smax	smax		
	comp=N,2μm,0.6s						
JAK	**Akkeshi**	**1.31**	**274**	P	**Pn**	**11 23 09.7**	**-0.6**
JRA	**Rausu**	**1.42**	**317**	P	**Pn**	**11 23 11.5**	**-0.4**
JRA				*e*S	**Sb**	**11 23 31.4**	**+0.6**
JNK	**Nakash**	**1.45**	**298**	P	**Pn**	**11 23 11.7**	**-0.6**
JAR	**Ashorobuto**	**2.02**	**282**	P	**Pn**	**11 23 20.1**	**0.0**
JAR				*e*S	**Sn**	**11 23 46.1**	**+0.8**
JTKR	**Abashiri--Toko**	**2.15**	**301**	P	**Pn**	**11 23 22.7**	**+0.8**
KUR	**Kuril'sk**	**2.53**	**23**	*e*P	**Pn**	**11 23 27.3**	**+0.1**
KUR				*e*S	**Sn**	**11 23 58.5**	**+0.5**
KUR				A	A	11 23 59.5	
	comp=N,43nm,0.3s						
KUR				A	A	11 23 59.5	
	comp=N,250nm,0.3s						
KUR	**Kuril'sk**	**2.53**	**23**	*e*PN	**Pn**	**11 23 27.6**	**+0.4**
KUR				*e*S	**Sn**	**11 23 58.1**	**+0.1**
KUR				smax	smax		
	comp=N,64nm,0.2s						
KUR				smax	smax		
	comp=E,12nm,0.2s						

IDC ***11*** *11:23:39.6±13.0,33°.60N×68°.23E,h0km,mb3.8/2, mb1 3.6/4,mb1mx3.3/59,mbtmp3.6/4,ML3.2/2,Error ellipse: s-maj=222.1km s-min=91.2km az=63.0*
NNC ***11*** *11:24:52.6±2.8,37°.89N×72°.05E,h179km±25km,mb2.2, mpv3.4,Error ellipse: s-maj=23.4km s-min=9.8km az=154.0*
ISC 11 11:24:51.1±2.5,37°.7N±0°.2×72°.17E±0°.09,h150km,n15, σ1§78/19,3C-6D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**2.50**	**24**	⇓P	**Pn**	**11 25 34.0**	**+1.6**
	5.5nm,0.3s						
SFK				⇓S	**Sn**	**11 26 07.3**	**+2.9**
	11nm,0.2s						
DZET	**Dzherino**	**2.84**	**293**	⇑P	**Pn**	**11 25 37.7**	**+1.1**
	7.2nm,0.3s						
DZET				⇑S	**Sn**	**11 26 13.6**	**+2.0**
	50nm,0.5s						
AML	**Almayashu**	**4.54**	**14**	P	**Pn**	**11 25 59.3**	**+0.5**
	SNR=17						
MNAS	**Manas**	**4.75**	**3**	⇓P	**Pn**	**11 26 02.0**	**+0.6**
	4.1nm,0.3s						
MNAS				⇓S	**Sn**	**11 26 56.2**	**+0.1**
	11nm,0.8s						
UCH	**Uchtor**	**4.83**	**21**	P	**Pn**	**11 26 02.8**	**+0.2**
	SNR=6.0						
KZA	**Kyzart**	**4.94**	**28**	P	**Pn**	**11 26 03.5**	**-0.5**
	SNR=7.5						
EKS2	**Erkin-Say**	**5.07**	**14**	P	**Pn**	**11 26 06.6**	**+1.1**
	SNR=5.7						
AAK	**Ala-Archa**	**5.21**	**19**	⇓P	**Pn**	**11 26 07.8**	**+0.5**
	3.5nm,0.5s						
AAK				⇓S	**Sn**	**11 27 07.7**	**+0.8**
	4.5nm,0.6s						
AAK	**Ala-Archa**	**5.21**	**19**	P	**Pn**	**11 26 08.1**	**+0.7**
	SNR=5.5						
KK31	**Karatay Array**	**5.51**	**347**	P	**Pn**	**11 26 11.8**	**+0.6**
	1.0nm,0.5s,baz=172,slow=13,SNR=6.8						
KK31				⇑S	**Sn**	**11 27 12.9**	**-0.9**
	5.2nm,0.4s,baz=171,slow=24,SNR=22						
TKM2	**Tokmak 2**	**5.80**	**26**	P	**Pn**	**11 26 15.3**	**0.0**
	SNR=8.3						
MKAR	**Makanchi Array**

*THE **11** 11:49:22.9, 36.4°N×28.5°E, h0km±1km, ML2.6/3, Error ellipse: s-maj=1.0km s-min=0.6km az=175.0*
*DDA **11** 11:49:23.7, 36.4°N×28.5°E, h7km, Ml3.2*
*ISK **11** 11:49:23.3, 36.4°N×28.5°E, h17km, ML3.1/11*
*ISCJB **11** 11:49:23.7±0.5, 36.4°N±0.03×28.5°E±0.02, h12km±3km, Error ellipse: s-maj=4.3km s-min=3.0km az=2.9*
*CSEM **11** 11:49:23.9±0.2, 36.4°N×28.5°E, h15km, ML3.2, Error ellipse: s-maj=4.1km s-min=3.0km az=1.0*
*ATH **11** 11:49:23.5, 36.4°N×28.5°E, h27km±4km, ML2.7/5, Error ellipse: s-maj=6.9km s-min=1.5km az=181.0*

ISC 11 11:49:23.7±1.0, 36.4°N±0.02×28.5°E±0.02, h14km±8km, n82, σ0.77/121, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.23**	**34**	PG	**Pg**	**11 49 28.9**	**+0.1**
FETY				SG	**Sb**	**11 49 33.2**	**-0.5**
FETY	**Fethiye**	**0.23**	**34**	P	**Pg**	**11 49 28.9**	**+0.1**
FETY				S	**Sb**	**11 49 33.5**	**-0.2**
FETY	**Fethiye**	**0.23**	**34**	*e*Pg	**Pg**	**11 49 28.9**	**+0.1**
FETY				*e*Sg	**Sb**	**11 49 33.2**	**-0.5**
DALY	**Dalyan (Mu¨la**	**0.43**	**330**	PG	**Pb**	**11 49 32.8**	**-0.2**
DALY				SG	**Sb**	**11 49 39.8**	**+0.4**
DALY	**Dalyan (Mu¨la**	**0.43**	**330**	*i* P	**Pb**	**11 49 33.1**	**+0.1**
DALY				*i* S	**Sb**	**11 49 39.8**	**+0.4**
DALY	**Dalyan (Mu¨la**	**0.43**	**330**	*e*Pg	**Pb**	**11 49 32.8**	**-0.2**
DALY	**Dalyan (Mu¨la**	**0.43**	**330**	P	**Pb**	**11 49 33.2**	**+0.1**
DALY				S	**Sb**	**11 49 39.8**	**+0.4**
TURN	**Turunc**	**0.50**	**329**	PG	**Pn**	**11 49 36.6**	**+0.3**
TURN	**Turunc**	**0.50**	**329**	*i* P	**Pn**	**11 49 36.6**	**+0.3**
TURN				*i* S	**Sn**	**11 49 46.8**	**+2.0**
TURN	**Turunc**	**0.50**	**329**	P	**Pn**	**11 49 36.6**	**+0.3**
AKAS	**Kas**	**0.59**	**111**	PG	**Pg**	**11 49 35.0**	**-0.3**
AKAS	**Kas**	**0.59**	**111**	*i* P	**Pg**	**11 49 34.8**	**-0.6**
AKAS				*i* S	**Sb**	**11 49 45.2**	**+1.1**
AKAS	**Kas**	**0.59**	**111**	*e*Pg	**Pg**	**11 49 35.0**	**-0.3**
AKAS				S	**Sb**	**11 49 45.2**	**+1.1**
KSL	**Kastellorizon**	**0.61**	**118**	P	**Pb**	**11 49 36.0**	**-0.1**
KSL				S	**Sn**	**11 49 46.4**	**-1.0**
KSL				AML	AML	11 49 47.2	
	comp=E,1244μm,0.6s						
KSL				AML	AML	11 49 47.9	
	comp=N,421μm,0.4s						
KSL	**Kastellorizon**	**0.61**	**118**	P	**Pb**	**11 49 36.0**	**-0.1**
KSL				S	**Sb**	**11 49 45.2**	**+0.7**
MRSB	**Marmaris-Mugla**	**0.64**	**295**	PG	**Pb**	**11 49 36.7**	**0.0**
MRSB	**Marmaris-Mugla**	**0.64**	**295**	*e*Pg	**Pb**	**11 49 36.7**	**0.0**
ARG	**Arkhangelos**	**0.68**	**251**	PG	**Pb**	**11 49 37.4**	**+0.1**
ARG	**Arkhangelos**	**0.68**	**251**	P	**Pg**	**11 49 34.8**	**-2.2**
ARG				S	**Sn**	**11 49 49.0**	**-0.2**
ARG	**Arkhangelos**	**0.68**	**251**	P	**Pg**	**11 49 35.8**	**-1.2**
ARG				S	**Sn**	**11 49 47.7**	**-1.5**
ARG	**Arkhangelos**	**0.68**	**251**	P	**Pg**	**11 49 36.0**	**-1.0**
ARG	**Arkhangelos**	**0.68**	**251**	*e*Pg	**Pb**	**11 49 37.4**	**+0.1**
ARG				S	**Sn**	**11 49 47.7**	**-1.5**
GLHS	**Glhisar (BURDU**	**0.85**	**33**	PG	**Pg**	**11 49 39.8**	**-0.4**
ELL	**Elmali**	**0.85**	**69**	PG	**Pb**	**11 49 40.1**	**-0.2**
ELL	**Elmali**	**0.85**	**69**	*e*Pg	**Pb**	**11 49 40.1**	**-0.2**
YER	**Yerkesik**	**0.86**	**324**	PG	**Pg**	**11 49 40.7**	**+0.3**
YER	**Yerkesik**	**0.86**	**324**	P	**Pg**	**11 49 40.5**	**+0.1**
YER				S	**Sn**	**11 49 53.5**	**-0.3**
GOLH	**Golhisar**	**0.94**	**33**	*i* P	**Pb**	**11 49 40.7**	**-1.2**
GOLH				*i* S	**Sn**	**11 49 56.0**	**+0.1**
GOLH	**Golhisar**	**0.94**	**33**	P	**Pb**	**11 49 40.7**	**-1.2**
GOLH				S	**Sn**	**11 49 56.0**	**+0.1**
TAVA	**DENIZLI_Tavas**	**1.02**	**360**	*i* P	**Pb**	**11 49 42.9**	**-0.3**
TAVA				*i* S	**Sg**	**11 49 56.7**	**-0.1**
TAVA	**DENIZLI_Tavas**	**1.02**	**360**	P	**Pb**	**11 49 42.9**	**-0.3**
TAVA				S	**Sg**	**11 49 56.7**	**-0.1**
DATC	**Datca-Mugla**	**1.06**	**288**	PN	**Pg**	**11 49 44.2**	**0.0**
DAT	**Datca**	**1.12**	**285**	PN	**Pg**	**11 49 45.1**	**-0.2**
DAT	**Datca**	**1.12**	**285**	*i* P	**Pg**	**11 49 45.5**	**+0.2**
DAT				*i* S	**Sn**	**11 50 01.5**	**+1.3**
DAT	**Datca**	**1.12**	**285**	P	**Pg**	**11 49 45.5**	**+0.2**
DAT				S	**Sn**	**11 50 01.5**	**+1.3**
DNZL	**Cakiroluk**	**1.25**	**5**	*i* P	**Pn**	**11 49 46.7**	**-0.2**
DNZL				*i* S	**Sg**	**11 50 04.0**	**-0.1**
DNZL	**Cakiroluk**	**1.25**	**5**	P	**Pn**	**11 49 46.7**	**-0.2**
DNZL				S	**Sg**	**11 50 04.0**	**-0.1**
MLSB	**Milas**	**1.25**	**313**	PN	**Pb**	**11 49 46.9**	**-0.2**
MLSB	**Milas**	**1.25**	**313**	*e*Pn	**Pb**	**11 49 46.9**	**-0.2**
KORT	**Korkueli**	**1.28**	**64**	PN	**Pb**	**11 49 47.6**	**+0.1**
KORT	**Korkueli**	**1.28**	**64**	*i* P	**Pg**	**11 49 48.3**	**0.0**
KORT				*i* S	**Sg**	**11 50 06.4**	**+1.5**
KORT	**Korkueli**	**1.28**	**64**	*e*Pn	**Pb**	**11 49 47.6**	**+0.1**
KORT	**Korkueli**	**1.28**	**64**	P	**Pg**	**11 49 48.3**	**0.0**
DENT	**Denizli**	**1.31**	**4**	PN	**Pn**	**11 49 47.4**	**-0.2**
DENT	**Denizli**	**1.31**	**4**	*e*Pn	**Pn**	**11 49 47.4**	**-0.2**
BDRM	**Kayabasi**	**1.34**	**298**	*i* P	**Pb**	**11 49 48.2**	**-0.3**
BDRM				*i* S	**Sg**	**11 50 06.9**	**0.0**
BDRM	**Kayabasi**	**1.34**	**298**	P	**Pb**	**11 49 48.2**	**-0.3**
BDRM				S	**Sg**	**11 50 06.9**	**0.0**
BODT	**Bodrum**	**1.43**	**296**	PN	**Pn**	**11 49 48.6**	**-0.6**
BODT	**Bodrum**	**1.43**	**296**	P	**Pn**	**11 49 48.3**	**-0.9**
BODT				S	**Sb**	**11 50 08.9**	**+0.7**
BODT	**Bodrum**	**1.43**	**296**	P	**Pn**	**11 49 48.3**	**-0.9**
BODT	**Bodrum**	**1.43**	**296**	*e*Pn	**Pn**	**11 49 48.6**	**-0.6**
AYDN	**Tasoluk**	**1.47**	**326**	*i* P	**Pb**	**11 49 50.7**	**-0.2**
AYDN				*i* S	**Sb**	**11 50 09.4**	**-0.1**
AYDN	**Tasoluk**	**1.47**	**326**	P	**Pb**	**11 49 50.7**	**-0.2**
AYDN				S	**Sb**	**11 50 09.4**	**-0.1**
BRDR	**BURDUR-Merkez**	**1.55**	**36**	*i* P	**Pn**	**11 49 50.7**	**-0.2**
BRDR				*i* S	**Sb**	**11 50 12.4**	**+0.7**
BRDR	**BURDUR-Merkez**	**1.55**	**36**	P	**Pn**	**11 49 50.7**	**-0.2**
BRDR				S	**Sb**	**11 50 12.4**	**+0.7**
AYDB	**Zeytinkoy-Aydi**	**1.71**	**332**	PN	**Pn**	**11 49 53.3**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**1.71**	**332**	*e*Pn	**Pn**	**11 49 53.3**	**+0.1**
GCAM	**G?zelcaml?**	**1.84**	**313**	PN	**Pn**	**11 49 55.2**	**+0.4**
GCAM	**G?zelcaml?**	**1.84**	**313**	*i* P	**Pn**	**11 49 54.7**	**-0.1**
GCAM				*i* S	**Sn**	**11 50 18.1**	**+0.2**
GCAM	**G?zelcaml?**	**1.84**	**313**	P	**Pn**	**11 49 54.7**	**-0.1**
GCAM	**G?zelcaml?**	**1.84**	**313**	*e*Pn	**Pn**	**11 49 55.2**	**+0.4**
GCAM				S	**Sn**	**11 50 18.1**	**+0.2**
SUTC	**Sutluce-Ispart**	**1.96**	**58**	PN	**Pn**	**11 49 56.6**	**0.0**
SUTC	**Sutluce-Ispart**	**1.96**	**58**	*e*Pn	**Pn**	**11 49 56.6**	**0.0**
KHAL	**Karahalli**	**1.98**	**13**	*i* P	**Pn**	**11 49 54.6**	**-2.2**
KHAL	**Karahalli**	**1.98**	**13**	P	**Pn**	**11 49 54.6**	**-2.2**
KULA	**Kula-Manisa**	**2.08**	**354**	PN	**Pn**	**11 49 58.4**	**+0.2**
KULA	**Kula-Manisa**	**2.08**	**354**	*e*Pn	**Pn**	**11 49 58.4**	**+0.2**
SMG	**Samos**	**2.09**	**308**	P	**Pn**	**11 49 57.9**	**-0.3**
SMG				S	**Sb**	**11 50 26.2**	**-1.0**
SMG				AML	AML	11 50 26.4	
	comp=N,429μm,0.4s						
SMG				AML	AML	11 50 26.4	
	comp=E,435μm,0.3s						
SMG	**Samos**	**2.09**	**308**	P	**Pn**	**11 49 58.4**	**+0.1**
SMG				S	**Sn**	**11 50 25.2**	**+1.1**
SMG	**Samos**	**2.09**	**308**	P	**Pn**	**11 49 58.4**	**+0.1**
SMG				S	**Sn**	**11 50 25.2**	**+1.1**
KEPZ	**Antalya-Kepez**	**2.21**	**77**	*i* P	**Pn**	**11 50 00.4**	**+0.6**
KEPZ				*i* S	**Sb**	**11 50 29.1**	**-1.5**
KEPZ	**Antalya-Kepez**	**2.21**	**77**	P	**Pn**	**11 50 00.4**	**+0.6**
ZKR	**Zakros**	**2.57**	**240**	P	**Pn**	**11 50 04.6**	**-0.2**
ZKR				AML	AML	11 50 29.8	
	comp=E,197μm,0.3s						
ZKR				AML	AML	11 50 30.2	
	comp=N,109μm,0.4s						
ZKR	**Zakros**	**2.57**	**240**	P	**Pn**	**11 50 05.4**	**+0.6**
ZKR	**Zakros**	**2.57**	**240**	P	**Pn**	**11 50 05.2**	**+0.4**
NPS	**Neapolis**	**2.93**	**247**	P	**Pn**	**11 50 12.5**	**+2.7**
NPS	**Neapolis**	**2.93**	**247**	P	**Pn**	**11 50 11.7**	**+1.9**
CHOS	**Chios island**	**3.00**	**311**	P	**Pn**	**11 50 11.6**	**+0.8**
CHOS				S	**Sn**	**11 50 44.6**	**-1.9**
CHOS				AML	AML	11 50 49.9	
	comp=E,86μm,0.3s						
CHOS				AML	AML	11 50 50.7	
	comp=N,88μm,0.3s						
CHOS	**Chios island**	**3.00**	**311**	P	**Pn**	**11 50 11.1**	**+0.4**
CHOS	**Chios island**	**3.00**	**311**	P	**Pn**	**11 50 11.1**	**+0.4**
CHOS				S	**Sn**	**11 50 45.4**	**-1.1**
LAST	**Lasithi**	**3.08**	**246**	P	**Pn**	**11 50 12.0**	**+0.1**
LAST				AML	AML	11 50 45.0	
	comp=E,46μm,0.3s						
LAST				AML	AML	11 50 47.2	
	comp=N,52μm,0.4s						
LAST	**Lasithi**	**3.08**	**246**	P	**Pn**	**11 50 12.5**	**+0.6**

IDC 11 12:04:50.7±4.1, 3.23S×101.03E, h0km, mb3.7/4,

mb1 3.8/4, mb1mx3.4/66, mbtmp3.7/4, Error ellipse: s-maj=172.3km s-min=23.3km az=56.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**28.74**	**260**	T	T	12 40 06.3	
	baz=83,slow=75,SNR=28						
H08S3	**Diego Garcia H**	**28.75**	**260**	T	T	12 40 10.1	
	baz=83,slow=75,SNR=118						
H08S1	**Diego Garcia H**	**28.76**	**260**	T	T	12 40 06.3	
	baz=83,slow=75,SNR=18						
WRA	**Warramunga Arr**	**36.49**	**120**	P	P	12 11 57.6	-0.4
	0.3nm,0.5s,baz=311,slow=9.0,SNR=9.9						
ASAR	**Alice Springs**	**37.70**	**126**	P	P	12 12 08.2	-0.1
	0.6nm,0.5s,baz=298,slow=7.9,SNR=18						
SONM	**Songino Array**	**51.07**	**5**	P	P	12 13 55.6	+0.6
	1.1nm,0.6s,baz=184,slow=9.5,SNR=6.0						
MKAR	**Makanchi Array**	**52.49**	**344**	P	P	12 14 04.6	-0.9
	0.5nm,0.7s,baz=148,slow=8.8,SNR=5.2						
TXAR	**Lajitas Array**	**145.02**	**40**	PKPbc	PKPbc	12 24 29.8	-0.4
	0.5nm,0.6s,baz=252,slow=0.8,SNR=9.9						

*ATH **11** 12:22:35.4, 36.4°N×28.5°E, h51km±8km, ML2.6/7, Error ellipse: s-maj=8.9km s-min=1.3km az=135.0*
*ISK **11** 12:22:35.6, 36.4°N×28.9°E, h20km, ML3.1/19*
*ISCJB **11** 12:22:36.3±0.4, 36.4°N±0.03×28.88°E±0.03, h30km±3km, Error ellipse: s-maj=5.4km s-min=3.7km az=9.7*
*CSEM **11** 12:22:36.0±0.1, 36.4°N×28.9°E, h20km, ML3.1*
*THE **11** 12:22:36.3, 36.4°N×28.8°E, h9km±2km, ML2.7/4, Error ellipse: s-maj=2.6km s-min=0.7km az=96.0*

ISC 11 12:22:35.9±1.0, 36.4°N±0.03×28.89°E±0.02, h18km±4km, n66, σ0.81/95, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.26**	**37**	PG	**Pg**	**12 22 41.4**	**-0.4**
FETY				SG	**Sg**	**12 22 46.3**	**+0.5**
FETY	**Fethiye**	**0.26**	**37**	P	**Pg**	**12 22 41.3**	**-0.5**
FETY				S	**Sg**	**12 22 46.0**	**+0.2**
FETY	**Fethiye**	**0.26**	**37**	*e*Pg	**Pg**	**12 22 41.4**	**-0.4**
FETY				S	**Sg**	**12 22 46.0**	**+0.2**
DALY	**Dalyan (Mu¨la**	**0.43**	**334**	PG	**Pg**	**12 22 44.6**	**-0.1**
DALY				SG	**Sg**	**12 22 51.3**	**+0.6**
DALY	**Dalyan (Mu¨la**	**0.43**	**334**	*e*Pg	**Pg**	**12 22 44.6**	**-0.1**
DALY				*e*Sg	**Sg**	**12 22 51.3**	**+0.6**
TURN	**Turunc**	**0.50**	**333**	PG	**Pn**	**12 22 48.4**	**+0.3**
TURN	**Turunc**	**0.50**	**333**	*e*Pg	**Pn**	**12 22 48.4**	**+0.3**
AKAS	**Kas**	**0.61**	**108**	PG	**Pg**	**12 22 47.5**	**-0.6**
AKAS				SG	**Sb**	**12 22 57.5**	**+1.1**
AKAS	**Kas**	**0.61**	**108**	*e*Pg	**Pg**	**12 22 47.5**	**-0.6**
AKAS				*e*Sg	**Sb**	**12 22 57.5**	**+1.1**
KSL	**Kastellorizon**	**0.63**	**116**	P	**Pb**	**12 22 48.5**	**+0.3**
KSL				S	**Sn**	**12 22 58.8**	**-0.6**
KSL				AML	AML	12 22 59.6	
	comp=E,2021μm,0.4s						
KSL				AML	AML	12 23 01.2	
	comp=N,540μm,0.4s						
KSL	**Kastellorizon**	**0.63**	**116**	P	**Pb**	**12 22 48.6**	**+0.3**
KSL				S	**Sn**	**12 22 59.3**	**-0.1**
MRSB	**Marmaris-Mugla**	**0.63**	**297**	PG	**Pb**	**12 22 48.4**	**+0.1**
MRSB				SG	**Sb**	**12 22 57.7**	**+1.0**
MRSB	**Marmaris-Mugla**	**0.63**	**297**	*e*Pg	**Pb**	**12 22 48.4**	**+0.1**
MRSB				*e*Sg	**Sb**	**12 22 57.7**	**+1.0**
ARG	**Arkhangelos**	**0.65**	**251**	PG	**Pg**	**12 22 49.4**	**+0.7**
ARG	**Arkhangelos**	**0.65**	**251**	P	**Pg**	**12 22 49.0**	**+0.3**
ARG				S	**Sn**	**12 22 59.5**	**-0.6**
ARG				AML	AML	12 23 00.2	
	comp=N,830μm,0.6s						
ARG				AML	AML	12 23 02.2	
	comp=E,788μm,0.4s						
ARG	**Arkhangelos**	**0.65**	**251**	P	**Pb**	**12 22 48.8**	**+0.1**
ARG				S	**Sn**	**12 22 59.7**	**-0.3**
ARG	**Arkhangelos**	**0.65**	**251**	P	**Pg**	**12 22 49.1**	**+0.3**
ARG	**Arkhangelos**	**0.65**	**251**	*e*Pg	**Pg**	**12 22 48.4**	**+0.7**
ARG				S	**Sn**	**12 22 59.4**	**-0.6**
YER	**Yerkesik**	**0.86**	**326**	PG	**Pb**	**12 22 52.4**	**+0.1**
YER	**Yerkesik**	**0.86**	**326**	P	**Pb**	**12 22 52.1**	**-0.2**
YER				S	**Sn**	**12 23 05.3**	**+0.1**
YER	**Yerkesik**	**0.86**	**326**	P	**Pb**	**12 22 52.1**	**-0.2**
YER	**Yerkesik**	**0.86**	**326**	*e*Pg	**Pb**	**12 22 52.4**	**+0.1**
YER				S	**Sn**	**12 23 05.3**	**+0.1**
GLHS	**Glhisar (BURDU**	**0.88**	**34**	PG	**Pb**	**12 22 52.6**	**0.0**
GLHS	**Glhisar (BURDU**	**0.88**	**34**	*e*Pg	**Pb**	**12 22 52.6**	**0.0**
ELL	**Elmali**	**0.88**	**68**	PG	**Pb**	**12 22 52.9**	**+0.2**
ELL	**Elmali**	**0.88**	**68**	*e*Pg	**Pb**	**12 22 52.9**	**+0.2**
DATC	**Datca-Mugla**	**1.04**	**289**	PG	**Pb**	**12 22 55.5**	**+0.1**
DATC	**Datca-Mugla**	**1.04**	**289**	*e*Pg	**Pb**	**12 22 55.5**	**+0.1**
DAT	**Datca**	**1.10**	**286**	PN	**Pb**	**12 22 56.6**	**+0.2**
DAT	**Datca**	**1.10**	**286**	*e*Pn	**Pb**	**12 22 56.6**	**+0.2**
MLSB	**Milas**	**1.24**	**314**	PN	**Pn**	**12 22 58.4**	**0.0**
MLSB	**Milas**	**1.24**	**314**	*e*Pn	**Pn**	**12 22 58.4**	**0.0**
KORT	**Korkueli**	**1.31**	**64**	PN	**Pn**	**12 22 59.4**	**0.0**
KORT	**Korkueli**	**1.31**	**64**	*e*Pn	**Pn**	**12 22 59.4**	**0.0**
DENT	**Denizli**	**1.33**	**5**	PN	**Pn**	**12 22 59.2**	**-0.4**
DENT	**Denizli**	**1.33**	**5**	*e*Pn	**Pn**	**12 22 59.2**	**-0.4**
BODT	**Bodrum**	**1.42**	**297**	PN	**Pn**	**12 23 00.2**	**-0.6**
BODT	**Bodrum**	**1.42**	**297**	P	**Pn**	**12 22 59.6**	**-1.2**
BODT				S	**Sn**	**12 23 18.6**	**-0.4**
BODT	**Bodrum**	**1.42**	**297**	P	**Pn**	**12 22 59.6**	**-1.2**
BODT	**Bodrum**	**1.42**	**297**	*e*Pn	**Pn**	**12 23 00.2**	**-0.6**
BODT				S	**Sn**	**12 23 18.6**	**-0.4**
YKAV	**Yalikavak-Bodr**	**1.47**	**299**	PN	**Pn**	**12 23 01.5**	**+0.1**
YKAV	**Yalikavak-Bodr**	**1.47**	**299**	*e*Pn	**Pn**	**12 23 01.5**	**+0.1**
ANTB	**Antalya**	**1.50**	**71**	PN	**Pn**	**12 23 01.7**	**-0.1**
ANTB	**Antalya**	**1.50**	**71**	*e*Pn	**Pn**	**12 23 01.7**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	**1.71**	**333**	PN	**Pn**	**12 23 04.8**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	**1.71**	**333**	*e*Pn	**Pn**	**12 23 04.8**	**-0.1**
GCAM	**G?zelcaml?**	**1.83**	**314**	PN	**Pn**	**12 23 06.8**	**+0.3**
GCAM	**G?zelcaml?**	**1.83**	**314**	*e*Pn	**Pn**	**12 23 06.8**	**+0.3**
ISP	**Isparta**	**1.91**	**43**	PN	**Pn**	**12 23 07.7**	**+0.1**
ISP	**Isparta**	**1.91**	**43**	*e*Pn	**Pn**	**12 23 07.7**	**+0.1**
SUTC	**Sutluce-Ispart**	**1.99**	**58**	PN	**Pn**	**12 23 08.7**	**0.0**
SUTC	**Sutluce-Ispart**	**1.99**	**58**	*e*Pn	**Pn**	**12 23 08.7**	**0.0**
SMG	**Samos**	**2.08**	**309**	P	**Pn**	**12 23 09.1**	**-0.8**
SMG				S	**Sn**	**12 23 35.0**	**-0.3**
SMG				AML	AML	12 23 38.1	
	comp=N,520μm,0.2s						
SMG				AML	AML	12 23 38.6	
	comp=E,477μm,0.2s						
SMG	**Samos**	**2.08**	**309**	P	**Pn**	**12 23 09.3**	**-0.6**
SMG				S	**Sn**	**12 23 34.3**	**-1.0**
SMG	**Samos**	**2.08**	**309**	P	**Pn**	**12 23 09.3**	**-0.6**
SMG				S	**Sn**	**12 23 34.6**	**-0.7**
KULA	**Kula-Manisa**	**2.09**	**355**	PN	**Pn**	**12 23 10.3**	**+0.2**
KULA	**Kula-Manisa**	**2.09**	**355**	*e*Pn	**Pn**	**12 23 10.3**	**+0.2**
ZKR	**Zakros**	**2.54**	**240**	P	**Pn**	**12 23 18.0**	**+1.8**
ZKR				S	**Sn**	**12 23 42.8**	**-3.8**
ZKR				AML	AML	12 23 53.0	
	comp=N,31μm,0.5s						
ZKR				AML	AML	12 24 08.5	
	comp=E,69μm,0.6s						
ZKR	**Zakros**	**2.54**	**240**	S	**Sn**	**12 23 43.9**	**-2.7**
NPS	**Neapolis**	**2.91**	**247**	P	**Pn**	**12 23 20.1**	**-1.1**
NPS				S	**Sn**	**12 23 53.8**	**-1.9**
NPS				AML	AML	12 24 02.8	
	comp=N,86μm,0.2s						
NPS				AML	AML	12 24 03.1	
	comp=E,89μm,0.2s						
NPS	**Neapolis**	**2.91**	**247**	P	**Pn**	**12 23 20.5**	**-0.7**
NPS				S	**Sn**	**12 23 53.9**	**-1.8**
CHOS	**Chios island**	**2.98**	**312**	P	**Pn**	**12 23 21.8**	**-0.6**
CHOS				S	**Sn**	**12 23 55.6**	**-2.2**
CHOS				AML	AML	12 24 00.1	
	comp=N,117μm,0.2s						
CHOS				AML	AML	12 24 00.8	
	comp=E,196μm,0.5s						
CHOS	**Chios island**	**2.98**	**312**	P	**Pn**	**12 23 22.2**	**-0.2**
CHOS				S	**Sn**	**12 23 56.9**	**-0.9**
CHOS	**Chios island**	**2.98**	**312**	P	**Pn**	**12 23 22.2**	**-0.2**
CHOS				S	**Sn**	**12 23 56.9**	**-0.9**
LAST	**Lasithi**	**3.05**	**246**	P	**Pn**	**12 23 24.0**	**+0.7**
LAST				S	**Sn**	**12 23 58.6**	**-0.7**
LAST				AML	AML	12 24 04.2	
	comp=N,31μm,0.5s						
LAST				AML	AML	12 24 12.4	
	comp=E,26μm,0.6s						
LAST	**Lasithi**	**3.05**	**246**	P	**Pn**	**12 23 23.4**	**+0.2**
LAST				S	**Sn**	**12 23 58.0**	**-1.3**

*MAN **11** 12:26:12.4, 13.22N×124.29E, h91km, mb5.2, ML4.2, MS4.3*
*ISCJB **11** 12:26:13.4±0.3, 13.09N±0.03×124.15E±0.04, h97km±2km, mb4.3/37, Error ellipse: s-maj=6.3km s-min=3.5km az=148.7*
*IDC **11** 12:26:16.1±1.9, 12.99N×124.11E, h107km±17km, mb4.0/24, mb1 4.0/27, mb1mx3.9/61, mbtmp4.4/27, MS3.1/6, Ms1 3.1/6, ms1mx2.7/56, Error ellipse: s-maj=18.5km s-min=8.1km az=70.0*
*NEIC **11** 12:26:16.1±0.6, 12.98N×124.11E, h110km±5km, mb4.5/16, Error ellipse: s-maj=6.4km s-min=3.3km az=71.0*

ISC 11 12:26:15.0±0.6, 13.13N±0.04×124.21E±0.04, h98km±5km, n92, σ1.60/112, mb4.3/37, 2C-3D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVCP	**Virac**	**0.46**	**354**	*e*P	**Pn**	**12 26 28.8**	**-1.6**
PVCP				*e*S	**Sn**	**12 26 39.2**	**-2.6**
CNP	**Catarman**	**0.76**	**144**	*e*P	**Pn**	**12 26 31.6**	**-1.2**
CNP				*e*S	**Sn**	**12 26 45.2**	**-0.9**
MMPH	**Masbate**	**0.96**	**217**	⇓*i*P	**Pn**	**12 26 38.2**	**+3.4**
MMPH				*i* S	**Sn**	**12 26 52.0**	**+2.3**
AUQP	**San Andres**	**1.50**	**277**	*e*P	**Pn**	**12 26 40.9**	**-0.2**
AUQP				*e*S	**Sn**	**12 27 04.3**	**+3.2**
GQP	**Guinayangan**	**1.88**	**294**	⇓*i*P	**Pn**	**12 26 45.0**	**-0.8**
GQP				*i* S	**Sn**	**12 27 07.9**	**-1.5**
BESP	**Borongan**	**1.94**	**142**	*e*P	**Pn**	**12 26 44.7**	**-2.0**
BESP				*e*S	**Sn**	**12 27 09.5**	**-1.4**
PLP	**Palo**	**2.10**	**159**	⇑*e*P	**Pn**	**12 26 47.6**	**-1.1**
PLP				*i* S	**Sn**	**12 27 12.4**	**-2.2**
OCLP	**Ormoc**	**2.11**	**169**	*e*P	**Pn**	**12 26 47.9**	**-1.0**
RCP	**Roxas**	**2.12**	**223**	⇑*e*P	**Pn**	**12 26 48.4**	**-0.6**
OTRP	**Odiongan**	**2.27**	**250**	*e*P	**Pn**	**12 26 49.6**	**-1.3**
OTRP				*e*S	**Sn**	**12 27 13.2**	**-5.3**
BOAC	**Boac**	**2.32**	**278**	*e*P	**Pn**	**12 26 51.2**	**-0.5**
BOAC				*e*S	**Sn**	**12 27 19.9**	**+0.1**
LQP	**Lukban**	**2.77**	**291**	*e*P	Pn	12 27 07.0	+9.2
LLP	**Lapu-Lapu**	**2.81**	**185**	*e*P	**Pn**	**12 26 56.6**	**-1.5**
LLP				*e*S	**Sn**	**12 27 29.8**	**-1.5**
SJMP	**San Jose**	**3.09**	**258**	*e*P	**Pn**	**12 27 01.7**	**-0.1**
TGY	**Tagaytay City**	**3.32**	**287**	P	**Pn**	**12 27 06.2**	**+1.1**
	71nm,0.3s,baz=339,slow=6.7,SNR=9.6						
TGY				S	**Sn**	**12 27 40.0**	**-3.8**
	42nm,0.3s,baz=62,slow=0.5,SNR=5.2						
BALP	**Baler**	**3.64**	**316**	*e*P	**Pn**	**12 27 06.8**	**-2.5**
BALP				*e*S	**Sn**	**12 27 46.5**	**-4.7**
PCPH	**Palayan**	**3.86**	**309**	⇓*e*P	**Pn**	**12 27 10.3**	**-1.9**
PCPH				*e*S	**Sn**	**12 27 52.5**	**-4.2**
CAUP	**Cauayan**	**4.43**	**329**	*e*P	**Pn**	**12 27 18.6**	**-1.4**
CAUP				*e*S	**Sn**	**12 28 08.1**	**-2.4**
PAGZ	**Pagadian**	**5.31**	**189**	*e*P	**Pn**	**12 27 31.7**	**-0.2**
APYP	**Conner**	**5.50**	**329**	*e*P	**Pn**	**12 27 33.0**	**-1.5**
APYP				*e*S	**Sn**	**12 28 32.9**	**-3.6**
ABRA	**Dolores**	**5.61**	**324**	*e*P	**Pn**	**12 27 35.3**	**-0.7**
ABRA				*e*S	**Sn**	**12 28 37.6**	**-1.6**
DAV	**Davao City (W)**	**6.17**	**167**	P	**Pn**	**12 27 44.4**	**+0.7**
	105nm,0.3s,baz=64,slow=7.8,SNR=2.7						
MYLDM	**Lahad Datu**	**9.70**	**216**	*e*Pn	**Pn**	**12 28 30.4**	**-1.3**
JOW	**Kunigami**	**14.15**	**15**	P	**Pn**	**12 29 33.

AKTO	Aktyubinsk	64.85 320	P		P	12 36 43.3	-0.2
	2.7nm,0.8s,baz=94,slow=12,SNR=8.4						
ARU	Arti	65.74 326	*e*P		P	12 36 48.5	-0.7
	12nm,0.7s						
RAYN	Ar Rayn	74.65 291	*e*P		P	12 37 44.0	-0.3
	3.9nm,0.8s						
KLMR	Klimovskoe	76.05 330	*e*P		P	12 37 48.4	-3.1
KLMR			AMP			12 37 52.4	
	comp=Z,13nm,1.2s						
ARA0	ARCESS Array S	80.82 339	*e*P		P	12 38 18.4	+0.8
ARCES	ARCESS Array B	80.82 339	P		P	12 38 18.4	+0.8
	comp=Z,2.3nm,0.7s,baz=79,slow=6.0,SNR=10						
SPITS	Spitsbergen Ar	80.83 349	P		P	12 38 18.3	+0.8
	comp=Z,1.7nm,0.6s,baz=60,slow=8.7,SNR=10						
BR101	Keskin Array S	82.17 309	*e*P		P	12 38 26.0	+0.5
BRTR	Keskin Array B	82.17 309	P		P	12 38 26.0	+0.5
	comp=Z,0.4nm,0.5s,baz=126,slow=2.0,SNR=3.0						
FIA0	FINESS Array S	82.43 331	*e*P		P	12 38 26.4	+0.3
FINES	FINESS Array B	82.43 331	P		P	12 38 26.4	+0.3
	comp=Z,1.6nm,0.5s,baz=52,slow=4.7,SNR=12						
AKASG	Malin Array Be	83.08 320	P		P	12 38 29.2	-0.5
	comp=Z,0.2nm,0.3s,baz=64,slow=4.2,SNR=3.5						
AKBB	Malin Array Si	83.08 320	*e*P		P	12 38 29.2	-0.5
	comp=Z,1.6nm,0.6s						
BUR04	Bucovina Ar. S	86.38 318	*e*P		P	12 38 46.9	+0.4
BUR08	Bucovina Ar. S	86.38 318	*e*P		P	12 38 47.5	+0.9
HFS	Hagfors	88.59 332	P		P	12 38 56.4	-0.3
	comp=Z,0.8nm,0.4s,baz=90,slow=5.8,SNR=9.8						
HFS			LR	LR		13 23 12.6	
	comp=Z,29nm,18.2s,baz=185,slow=38						
NOA	NORSAR Array B	89.31 333	LR	LR		13 20 54.9	
	comp=Z,15nm,20.3s,baz=70,slow=37						
KDKW	Coast Env Seat	95.53 39	*e*P		P	12 39 28.9	-0.1
PLCA	Paso Flores	149.61 157	PKPbc		PKPbc	12 45 54.4	+0.9
	comp=Z,1.0nm,0.9s,baz=246,slow=1.9,SNR=6.5						

ISCJB ***11*** *12:49:13.6±0.4,24°.79N×0°.03×122°.29E±0°.02,h20km±8km, Error ellipse: s-maj=4.7km s-min=3.6km az=18.9*
TAP ***11*** *12:49:13.2,24°.82N×122°.26E,h17km,ML2.7,C*
JMA ***11*** *12:49:14.2±0.1,24°.74N×122°.27E,h44km±4km,M1.9*
ISC 11 12:49:11.6±1.7,24°.82N±0°.04×122°.31E±0°.02,h12km±14km, n35,σ0°64/57,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.31	212	*e*P		Pb	12 49 19.9	+0.8
	baz=214						
EGS		0.34	275	P		Pb	12 49 19.9	+0.3
	baz=270						
EGS				*e*S		Sb	12 49 25.2	+0.2
	baz=270						
TWB1	Santiao Chiao	0.35	303	P		Pb	12 49 20.3	+0.5
	baz=307						
TWB1				S		Sb	12 49 24.8	-0.5
	baz=307						
NTC	Toucheng	0.44	275	*i* P		Pb	12 49 21.7	+0.5
	baz=275						
NTC				*e*S		Sb	12 49 27.6	-0.2
	baz=275						
TIPB	Shuangxi	0.47	290	*e*P		Pb	12 49 21.6	-0.2
	baz=290						
TIPB				*e*S		Sb	12 49 27.8	-0.9
	baz=290						
TWC	Suao	0.47	244	P		Pb	12 49 21.4	-0.3
	baz=242						
TWC				*i* S		Sb	12 49 27.8	-0.8
	baz=242						
WFSB	Wu-fen Shan	0.54	298	*e*P		Pn	12 49 25.1	-0.1
	baz=299						
WFSB				*e*S		Sb	12 49 31.8	+1.0
	baz=299						
ENAH	Nanao	0.58	231	*e*P		Pb	12 49 24.1	+0.4
	baz=231						
TWE	Neicheng	0.59	261	P		Pb	12 49 24.4	+0.5
	baz=260						
TWE				*e*S		Sb	12 49 31.9	-0.3
	baz=260						
NANB	Nanao	0.64	233	*e*P		Pb	12 49 24.8	+0.1
	baz=231						
NANB				*e*S		Sb	12 49 33.8	+0.2
	baz=231						
ENA	Nanau	0.65	233	*e*P		Pb	12 49 25.1	+0.3
	baz=231						
ENA				*e*S		Sb	12 49 33.6	-0.1
	baz=231						
JYNG	Yonagunijimaku	0.68	122	P		Pn	12 49 27.3	+0.3
JYNG				S		Sn	12 49 36.8	-0.8
ENTT	Nioudou	0.70	256	P		Pn	12 49 26.7	-0.6
	baz=255						
ENTT				*e*S		Sn	12 49 36.7	-1.3
	baz=255						
YM07	YM07	0.72	300	*e*P		Pn	12 49 27.1	-0.5
	baz=300						
YM07				*e*S		Sb	12 49 37.0	+1.0
	baz=300						
YOJ	Yonaguni jima	0.73	119	*e*P		Pn	12 49 28.0	+0.3
	baz=118						
YOJ				*e*S		Sn	12 49 38.5	-0.2
	baz=118						
YOJ	Yonaguni jima	0.73	119	P		Pn	12 49 28.1	+0.4
YOJ				*e*S		Sn	12 49 37.9	-0.8
NWLT	Wulai	0.73	267	*e*P		Pn	12 49 26.9	-0.9
	baz=263						
YM08	YM08	0.75	300	*e*P		Pn	12 49 28.2	+0.1
	baz=301						
TATO	Taipei	0.76	282	*e*P		Pn	12 49 28.7	+0.6
	baz=282						
TATO				*e*S		Sn	12 49 39.0	-0.7
	baz=282						
YM04	YM04	0.78	296	P		Pn	12 49 28.9	+0.5
	baz=296						
YM04				*e*S		Sn	12 49 39.2	-0.8
	baz=296						
TWY	Chenhua	0.79	306	*e*P		Pn	12 49 29.2	+0.7
	baz=306						
TWY				*e*S		Sn	12 49 40.4	+0.1
	baz=306						
YHNB	Yeheng	0.86	261	*e*P		Pn	12 49 29.2	-0.4
	baz=269						
NSK	Sanguang	0.88	261	*e*P		Pn	12 49 29.3	-0.5
	baz=269						
NSK				*e*S		Sn	12 49 41.6	-0.9
	baz=269						
NACB	Ninganchiao	0.91	226	*e*S		Sb	12 49 41.0	-0.5
	baz=225						
NNSB	Datong	0.93	246	*e*P		Pn	12 49 30.2	-0.3
	baz=236						
NNSB				*e*S		Sn	12 49 43.4	-0.5
	baz=236						
NNSH	Datong	0.93	246	*i* P		Pn	12 49 30.7	+0.1
	baz=238						
NNSH				*e*S		Sb	12 49 42.0	0.0
	baz=238						
NNS	Nan Shan	0.93	247	*e*S		Sb	12 49 42.3	+0.2
	baz=238						
TWD	Chiawan	0.98	222	*e*S		Sb	12 49 43.6	+0.3
	baz=229						
NSTT	Nanjuang	1.21	262	*e*S		Sn	12 49 52.7	+2.2
	baz=262						
CHGB	Renai	1.28	234	*e*P		Pn	12 49 36.8	+1.3
	baz=235						
CHGB				*e*S		Sn	12 49 52.7	0.0
	baz=235						
IRIF	Iriomote-Funau	1.38	110	P		Pg	12 49 37.8	-0.3
HATJ	Hateruma jima	1.56	119	S		Sn	12 49 59.3	+0.1
JKRS	Kuro-shima	1.65	110	P		Pn	12 49 41.1	+0.7
JKRS				S		Sb	12 50 02.7	0.0
JIJ	Ishigaki jima	1.73	105	P		Pb	12 49 43.0	-0.2
JISG	Ishigakijimahi	1.83	97	P		Pb	12 49 44.9	-0.1

IDC ***11*** *13:03:13.8±0.8,60°.61S×26°.94W,h0km,mb4.2/7, mb1 4.3/7,mb1mx3.9/33,mbtmp4.2/7,MS3.1/5,Ms1 3.1/5, ms1mx3.0/31,Error ellipse: s-maj=36.7km s-min=20.0km az=71.0*
NEIC ***11*** *13:03:19.1±0.6,60°.59S×26°.92W,h35km,mb4.3/2,Error ellipse: s-maj=29.0km s-min=13.5km az=63.0*
ISC 11 13:03:15.1±0.8,60°.6S±0°.1×26°.0W±0°.2,h19km,n24, σ2°03/17,mb4.2/9,MS3.2/4,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	12.39	152	P		Pn	13 06 08.7	-1.4
VNA3	Neumayer Olymp	12.52	155	P		Pn	13 06 10.0	-2.0
VNA2	Neumayer--Watz	12.79	152	P		Pn	13 06 13.3	-2.2
	baz=308,slow=15						
SNAA	Sanae	14.38	150	P		Pn	13 06 35.2	-2.2
SNAA	Sanae	14.38	150	Pn		Pn	13 06 34.9	-2.5
	0.4nm,0.3s,baz=295,slow=5.9,SNR=28						
SNAA				Sn		Sn	13 09 03.9	-12
	0.2nm,0.3s,baz=56,slow=20,SNR=2.2						
SNAA				LR		LR	13 10 59.6	
	comp=Z,63nm,21.9s,baz=281,slow=32						
QSPA	South Pole Qui	29.64	180	P		P	13 09 19.7	+0.7
	4.0nm,1.0s,baz=206,slow=7.0,SNR=5.0						
QSPA				LR		LR	13 20 57.6	
	comp=Z,77nm,19.2s,baz=220,slow=36						
QSPA	South Pole Qui	29.64	180	*e*P		P	13 09 20.9	+1.9
TRQA	Tornquist	31.88	299	*e*P		P	13 09 38.1	-0.7
	2.3nm,0.5s						
PLCA	Paso Flores	33.64	286	LR		LR	13 20 37.7	
	comp=Z,16nm,21.7s,baz=160,slow=31						
CPUP	Villa Florida	40.37	314	P		P	13 10 50.4	-0.9
	1.8nm,0.5s,baz=168,slow=6.3,SNR=5.1						
CPUP				LR		LR	13 30 08.1	
	comp=Z,27nm,18.1s,baz=152,slow=40						
VNDA	Vanda	42.04	183	P		P	13 11 07.1	+2.5
	1.2nm,0.8s,baz=182,slow=6.3,SNR=8.4						
VNDA				LR		LR	13 26 46.4	
	comp=Z,40nm,20.6s,baz=192,slow=34						
SIV	San Ignacio	51.21	315	P		P	13 12 15.6	-1.5
	1.1nm,0.4s,baz=188,slow=8.4,SNR=7.0						
H10S2	ASCENSION HYDR	52.23	14	T		T	14 09 12.7	
	baz=187,slow=75,SNR=8.9						
H10S3	ASCENSION HYDR	52.23	14	T		T	14 09 13.1	
	baz=187,slow=75,SNR=12						
H10S1	ASCENSION HYDR	52.25	14	T		T	14 09 21.4	
	baz=187,slow=75,SNR=10						
H10N1	ASCENSION HYDR	53.35	14	T		T	14 10 44.3	
	baz=201,slow=75,SNR=4.7						
H10N3	ASCENSION HYDR	53.35	14	T		T	14 10 48.6	
	baz=201,slow=75,SNR=7.3						
H10N2	ASCENSION HYDR	53.37	14	T		T	14 10 41.4	
	baz=201,slow=75,SNR=4.2						
LPAZ	La Paz	53.57	307	P		P	13 12 34.5	-0.8
	1.9nm,0.5s,baz=71,slow=12,SNR=10						
SAML	Samuel	58.48	316	*e*P		P	13 13 08.1	-1.6
	2.0nm,0.8s						
TORD	Torodi Ar. Bea	76.76	28	P		P	13 15 08.1	+3.1
	3.6nm,0.7s,baz=200,slow=6.2,SNR=18						
ASAR	Alice Springs	94.45	162	P		P	13 16 34.2	+0.5
	0.6nm,1.0s,baz=195,slow=4.0,SNR=4.0						
SONM	Songino Array	150.10	94	PKPbc		PKPab	13 23 07.0	-2.5
	0.5nm,0.4s,baz=194,slow=1.2,SNR=3.0						
ILAR	Eielson Array	153.44	305	PKPbc		PKPbc	13 23 11.8	+1.4
	1.7nm,1.1s,baz=139,slow=1.3,SNR=9.1						

IDC 11 13:07:57.4±1.9,1°.23N×125°.78E,h0km,mb3.1/3, mb1 3.3/3,mb1mx3.1/54,mbtmp3.1/3,MS2.6/1,Ms1 2.6/1, ms1mx2.2/22,Error ellipse: s-maj=173.2km s-min=24.9km az=65.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.65	159	P		P	13 13 00.5	+0.1
	0.3nm,0.5s,baz=337,slow=10,SNR=15						
ASAR	Alice Springs	25.98	163	P		P	13 13 31.8	-0.3
	0.2nm,0.6s,baz=342,slow=7.7,SNR=4.7						
JHJ	Hachijo jima 2	34.34	21	LR		LR	13 30 08.4	
	comp=Z,8.6nm,18.1s,baz=283,slow=39						
MKAR	Makanchi Array	59.08	327	P		P	13 17 59.7	+0.1
	0.1nm,0.3s,baz=117,slow=7.0,SNR=2.8						

DDA ***11*** *13:16:39.0,36°.48N×28°.96E,h31km,Ml3.3*
ATH ***11*** *13:16:39.3,36°.49N×28°.90E,h31km±2km,ML2.7/4,Error ellipse: s-maj=3.2km s-min=1.0km az=177.0*
ISK ***11*** *13:16:39.2,36°.42N×28°.90E,h17km,ML3.1/18*
CSEM ***11*** *13:16:40.0±0.2,36°.44N×28°.92E,h20km,ML3.3,Error ellipse: s-maj=4.1km s-min=2.8km az=2.0*
ISCJB ***11*** *13:16:40.4±0.4,36°.45N±0°.03×28°.90E±0°.02,h26km±3km, Error ellipse: s-maj=4.5km s-min=3.2km az=1.2*
THE ***11*** *13:16:40.4,36°.46N×28°.90E,h14km±1km,ML2.6/3,Error ellipse: s-maj=2.0km s-min=0.7km az=95.0*
ISC 11 13:16:39.9±0.9,36°.44N±0°.02×28°.94E±0°.02,h21km±1km, n83,σ0°91/131,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	Fethiye	0.22	30	PG		Pb	13 16 45.1	-0.9
FETY				SG		Sb	13 16 50.0	-0.2
FETY	Fethiye	0.22	30	P		Pb	13 16 45.2	-0.8
FETY				S		Sb	13 16 49.7	-0.5
FETY	Fethiye	0.22	30	*e*Pg		Pb	13 16 45.1	-0.9
FETY				*e*Sg		Sb	13 16 50.0	-0.2
DALY	Dalyan (Mu¨la	0.44	328	PG		Pb	13 16 48.5	-0.4
DALY				SG		Sb	13 16 55.4	+0.4
DALY	Dalyan (Mu¨la	0.44	328	*i* P		Pb	13 16 48.8	-0.1
DALY				*i* S		Sb	13 16 55.2	+0.2
DALY	Dalyan (Mu¨la	0.44	328	*e*Pg		Pb	13 16 48.5	-0.4
DALY	Dalyan (Mu¨la	0.44	328	P		Pb	13 16 48.8	-0.1
DALY				S		Sb	13 16 55.2	+0.2
TURN	Turunc	0.51	328	PG		Pn	13 16 52.1	+0.1
TURN	Turunc	0.51	328	*i* P		Pn	13 16 52.3	+0.3
TURN				*i* S		Sn	13 17 02.3	+2.2
TURN	Turunc	0.51	328	*e*Pg		Pn	13 16 52.1	+0.1
AKAS	Kas	0.57	111	PG		Pb	13 16 51.1	-0.4
AKAS				SG		Sn	13 17 00.7	-1.2
AKAS	Kas	0.57	111	*i* P		Pb	13 16 51.0	-0.4
AKAS				*i* S		Sn	13 17 01.2	-0.7
AKAS	Kas	0.57	111	*e*Pg		Pb	13 16 51.1	-0.4
AKAS				*e*Sg		Sn	13 17 00.7	-1.2
AKAS				S		Sn	13 17 01.2	-0.7
KSL	Kastellorizon	0.59	119	P		Pb	13 16 51.8	0.0
KSL				S		Sn	13 17 03.0	+0.8
KSL				AML	AML		13 17 03.9	
	comp=N,884μm,0.4s						
KSL				AML	AML		13 17 06.2	
	comp=E,1218μm,0.4s						
KSL	Kastellorizon	0.59	119	P		Pb	13 16 52.1	+0.4
KSL				S		Sn	13 17 02.7	+0.6
MRSB	Marmaris-Mugla	0.66	295	PG		Pb	13 16 52.2	-0.7
MRSB	Marmaris-Mugla	0.66	295	*e*Pg		Pb	13 16 52.2	-0.7
ARG	Arkhangelos	0.70	251	PG		Pb	13 16 52.7	-0.7
ARG	Arkhangelos	0.70	251	P		Pb	13 16 53.4	-0.1
ARG				S		Sb	13 17 03.4	+0.8
ARG				AML	AML		13 17 04.7	
	comp=E,1124μm,0.3s						
ARG				AML	AML		13 17 07.6	
	comp=N,768μm,0.2s						
ARG	Arkhangelos	0.70	251	P		Pb	13 16 53.2	-0.2
ARG				S		Sn	13 17 04.0	-0.7
ARG	Arkhangelos	0.70	251	*e*Pg		Pb	13 16 52.7	-0.7
ARG	Arkhangelos	0.70	251	P		Pb	13 16 53.2	-0.2
ARG				S		Sb	13 17 03.4	+0.8
ELL	Elmali	0.83	68	PG		Pn	13 16 56.5	-0.1
ELL	Elmali	0.83	68	*e*Pg		Pn	13 16 56.5	-0.1
GLHS	Glhisar (BURDU	0.84	32	PG		Pn	13 16 56.6	-0.1
GLHS	Glhisar (BURDU	0.84	32	*e*Pg		Pn	13 16 56.6	-0.1
YER	Yerkesik	0.87	323	PG		Pb	13 16 56.4	0.0
YER	Yerkesik	0.87	323	P		Pb	13 16 56.3	-0.1
YER				S		Sb	13 17 08.1	+0.5
YER	Yerkesik	0.87	323	*e*Pg		Pb	13 16 56.4	0.0
YER				S		Sb	13 17 08.1	+0.5
GOLH	Golhisar	0.93	32	*i* P		Pb	13 16 56.3	-1.2
GOLH				*i* S		Sn	13 17 12.1	+1.3
GOLH	Golhisar	0.93	32	P		Pb	13 16 56.3	-1.2
GOLH				S		Sn	13 17 12.1	+1.3
TAVA	DENIZLI_Tavas	1.02	359	*i* P		Pn	13 16 58.6	-0.5
TAVA				*i* S		Sb	13 17 12.0	0.0
TAVA	DENIZLI_Tavas	1.02	359	P		Pn	13 16 58.6	-0.5
TAVA				S		Sb	13 17 12.0	0.0
DATC	Datca-Mugla	1.08	287	PG		Pn	13 16 59.5	-0.3
DATC	Datca-Mugla	1.08	287	*e*Pg		Pn	13 16 59.5	-0.3
DAT	Datca	1.14	285	PN		Pn	13 17 00.7	0.0
DAT	Datca	1.14	285	*i* P		Pn	13 17 00.7	0.0
DAT				*i* S		Sn	13 17 16.1	+0.3
DAT	Datca	1.14	285	P		Pn	13 17 00.7	0.0
DAT				S		Sn	13 17 16.1	+0.3
DNZL	Cakiroluk	1.25	4	*i* P		Pn	13 17 02.2	-0.1
DNZL				*i* S		Sn	13 17 18.5	-0.1
DNZL	Cakiroluk	1.25	4	P		Pn	13 17 02.2	-0.1
DNZL				S		Sn	13 17 18.5	-0.1
KORT	Korkueli	1.26	63	PN		Pb	13 17 03.7	+0.6
KORT	Korkueli	1.26	63	*i* P		Pb	13 17 03.9	+0.8
KORT				*i* S		Sb	13 17 22.0	+3.1
KORT	Korkueli	1.26	63	*e*Pn		Pb	13 17 03.7	+0.6
KORT				S		Sb	13 17 22.0	+3.1
MLSB	Milas	1.27	313	PN		Pn	13 17 02.8	+0.4
MLSB	Milas	1.27	313	*e*Pn		Pn	13 17 02.8	+0.4
DENT	Denizli	1.31	3	PN		Pn	13 17 03.4	+0.3
DENT	Denizli	1.31	3	*e*Pn		Pn	13 17 03.4	+0.3
BDRM	Kayabasi	1.35	298	*i* P		Pn	13 17 03.2	-0.4
BDRM				*i* S		Sb	13 17 21.4	-0.1
BDRM	Kayabasi	1.35	298	P		Pn	13 17 03.2	-0.4
BDRM				S		Sb	13 17 21.4	-0.1
BODT	Bodrum	1.45	296	PN		Pn	13 17 04.5	-0.5
BODT	Bodrum	1.45	296	P		Pn	13 17 03.8	-1.2
BODT				S		Sn	13 17 21.6	-1.8
BODT	Bodrum	1.45	296	P		Pn	13 17 03.8	-1.2
BODT	Bodrum	1.45	296	*e*Pn		Pn	13 17 04.5	-0.5
BODT				S		Sn	13 17 21.6	-1.8
NISR	Nisiros	1.47	277	P		Pn	13 17 04.3	-0.9
NISR	Nisiros	1.47	277	P		Pn	13 17 04.7	-0.5
AYDN	Tasoluk	1.48	325	*i* P		Pb	13 17 06.5	-0.3
AYDN				*i* S		Sb	13 17 25.8	+0.5
AYDN	Tasoluk	1.48	325	P		Pb	13 17 06.5	-0.3
AYDN				S		Sb	13 17 25.8	+0.5
BRDR	BURDUR-Merkez	1.54	35	*i* P		Pn	13 17 05.6	-0.6
BRDR				*i* S		Sb	13 17 27.0	+0.2
BRDR	BURDUR-Merkez	1.54	35	P		Pn	13 17 05.6	-0.6
BRDR				S		Sb	13 17 27.0	+0.2
AYDB	Zeytinkoy-Aydi	1.72	331	PN		Pn	13 17 09.2	+0.4
AYDB	Zeytinkoy-Aydi	1.72	331	*e*Pn		Pn	13 17 09.2	+0.4
GCAM	G?zelcaml?	1.86	313	PN		Pn	13 17 11.3	+0.8
GCAM	G?zelcaml?	1.86	313	*e*Pn		Pn	13 17 11.3	+0.8
KHAL	Karahalli	1.97	13	*i* P		Pn	13 17 10.5	-1.7
KHAL				*i* S		Sn	13 17 34.9	-1.5
KHAL	Karahalli	1.97	13	P		Pn	13 17 10.5	-1.7
KHAL				S		Sn	13 17 34.9	-1.5
KULA	Kula-Manisa	2.08	354	PN		Pn	13 17 14.6	+0.9
KULA	Kula-Manisa	2.08	354	*e*Pn		Pn	13 17 14.6	+0.9
SMG	Samos	2.11	307	P		Pn	13 17 13.6	-0.4
SMG				S		Sn	13 17 39.1	-0.5
SMG				AML	AML		13 17 40.7	
	comp=E,428μm,0.2s						
SMG				AML	AML		13 17 42.2	
	comp=N,499μm,0.2s						
SMG	Samos	2.11	307	P		Pn	13 17 13.8	-0.2
SMG	Samos	2.11	307	P		Pn	13 17 13.8	-0.2
SMG				S		Sn	13 17 39.0	-0.5
KEPZ	Antalya-Kepez	2.19	77	*i* P		Pn	13 17 16.0	+0.9
KEPZ				*i* S		Sb	13 17 45.0	-0.5
KEPZ	Antalya-Kepez	2.19	77	P		Pn	13 17 16.0	+0.9
KEPZ				S		Sb	13 17 45.0	-0.5
ZKR	Zakros	2.58	240	P		Pn	13 17 20.5	0.0
ZKR				S		Sn	13 17 52.6	+1.3
ZKR	Zakros	2.58	240	P		Pn	13 17 20.9	+0.4
ZKR				S		Sn	13 17 52.2	+0.9
URLA	Izmir	2.68	316	PN		Pn	13 17 21.2	-0.6
URLA	Izmir	2.68	316	*e*Pn		Pn	13 17 21.2	-0.6
GAZI	Gazipasa	2.73	93	*i* P		Pn	13 17 20.9	-1.7
GAZI				*i* S		Sn	13 17 51.0	-3.9
GAZI	Gazipasa	2.73	93	P		Pn	13 17 20.9	-1.7
APE	Apeiranthos	2.81	284	P		Pn	13 17 23.7	0.0
APE	Apeiranthos	2.81	284	P		Pn	13 17 23.8	+0.1
CHOS	Chios island	3.01	311	P		Pn	13 17 27.3	+0.8
CHOS				S		Sn	13 18 01.9	0.0
CHOS				AML	AML		13 18 04.5	
	comp=E,138μm,0.2s						
CHOS				AML	AML		13 18 05.3	
	comp=N,130μm,0.4s						
CHOS	Chios island	3.01	311	P		Pn	13 17 26.7	+0.3
CHOS				S		Sn	13 18 00.1	-1.8
CHOS	Chios island	3.01	311	P		Pn	13 17 26.7	+0.3
CHOS				S		Sn	13 18 01.5	-0.4

BJI ***11*** *13:31:42.9,6°.31N×124°.01E,h618km,mb5.1/61,mB4.6/38*
MAN ***11*** *13:31:45.5,6°.65N×123°.85E,h604km,mb5.7,ML4.7, MS5.1*
MOS ***11*** *13:31:46.9±0.7,6°.75N×123°.76E,h627km,mb4.8/56,Error ellipse: s-maj=8.4km s-min=4.6km az=113.1*
ISCJB ***11*** *13:31:46.6±0.1,6°.77N±0°.02×123°.77E±0°.03,h619km±1km, mb4.8/169,Error ellipse: s-maj=4.0km s-min=2.7km az=3.2*
DJA ***11*** *13:31:47.7±0.2,7°.N±3°×12°.4E±°,h601km±3km,M4.7/66, mB5.2/36,mb5.1/66,MLv5.2/9,Mw(mB)4.6/36*
IDC ***11*** *13:31:47.3±0.4,6°.72N×123°.80E,h612km±5km,mb4.1/41, mb1 4.1/43,mb1mx4.0/62,mbtmp5.0/43,Error ellipse: s-maj=8.3km s-min=5.3km az=74.0*
NEIC ***11*** *13:31:47.6±0.2,6°.73N×123°.75E,h619km±3km,mb4.8/83, Error ellipse: s-maj=3.9km s-min=2.9km az=71.0*
ISC 11 13:31:47.3±0.4,6°.75N±0°.04×123°.81E±0°.05,h613km±4km, n702,σ1°08/754,mb4.8/168,22C-21D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.64	42 ⇓	*i* P		P	13 32 59.4	+0.3
SKMP	Bagumbayan, Su	0.76	107	*e*P		P	13 32 59.0	-0.3
SKMP				*e*S		S	13 33 57.1	-0.6
PAGZ	Pagadian	1.17	339	*e*P		P	13 32 58.5	-1.6
GSPH	General Santos	1.31	120 ⇑	*i* P		P	13 33 00.5	0.0
GSPH				*i* S		S	13 34 00.6	+0.4
BUKP	Musuan	1.67	48	*e*P		P	13 33 01.7	+0.1
BUKP				*e*S		S	13 34 03.4	+1.4
DMPH	Davao City--Mi	1.71	79	*e*P		P	13 33 04.3	+2.6
DAV	Davao City (W)	1.78	80	P		P	13 33 02.6	+0.7
	142nm,0.3s,baz=164,slow=1.2,SNR=13						
DAV				S		S	13 34 01.8	-0.9
	92nm,0.3s,baz=18,slow=18,SNR=2.1						
DAV	Davao City (W)	1.78	80	*e*P		P	13 33 01.9	-0.1
DAV				S		S	13 34 01.8	-0.9
CGP	Cagayan de Oro	1.91	27 ⇑	*e*P		P	13 33 02.6	+0

BOLP	Bolinao	10.31 339	eP	P	13 34 06.4	-2.9
BOLP			eS	S	13 36 07.4	+1.5
CAUP	Cauayan	10.32 349	eP	P	13 34 08.7	-0.7
CAUP			eS	S	13 36 13.3	+7.2
NLAI	Namlea	10.45 162	P	P	13 34 12.2	+1.4
TTSI	Tana Toraja	10.51 202	P	P	13 34 10.2	-1.3
	comp=Z,163nm,0.8s,comp=Z,1μm					
BKB	Balikpapan	10.53 221	P	P	13 34 10.0	-1.7
SIJI	Sorong	10.61 135	P	P	13 34 13.6	+1.2
	comp=Z,5.9nm,0.3s,baz=136,slow=23,SNR=16					
ABRA	Dolores	11.25 345	eP	P	13 34 15.6	-3.0
ABRA			eS	S	13 36 20.2	-2.6
APYP	Conner	11.33 347	eP	P	13 34 17.6	-1.8
APYP			eS	S	13 36 22.1	-2.1
SPSI	Sidrap Palu	11.38 201	P	P	13 34 18.8	-1.2
MTKI	Muara Teweh, K	11.73 230	P	P	13 34 22.8	-0.7
SBUM	Sibu	12.32 250	eP	P	13 34 29.7	+0.4
BKSI	Bulukumba	12.54 197	P	P	13 34 31.1	-0.4
KBKI	Kotabaru	12.57 218	P	P	13 34 31.0	-0.7
FAKI	Fak Fak	12.77 138	eP	P	13 34 34.3	+0.6
RKPI	Ransiki, Papua	13.20 128	P	P	13 34 38.6	+0.6
	comp=Z,53nm,0.8s,comp=Z,9μm					
STKI	Sintang	13.98 242	P	P	13 34 45.2	-0.5
KSM	Kuching	14.45 249	eP	P	13 34 50.0	-0.1
BAKI	Biak	14.59 122	P	P	13 34 52.7	+1.4
SRPI	Serui, Papua	15.07 124	P	P	13 34 58.0	+2.3
PBKI	Pangkalan Bun	15.33 233	P	P	13 34 57.4	-0.7
MMRI	Maumere	15.36 186	P	P	13 34 59.4	+1.0
MMRI	Maumere	15.36 186	eP	P	13 34 58.7	+0.4
	comp=Z,312nm,0.6s					
EDFI	Ende, Flores	15.54 188	P	P	13 35 00.8	+0.7
TWG	Pinlang	16.20 351	eP	P	13 35 05.0	-0.9
	comp=Z,179nm,0.6s					
SOEI	Soe	16.40 178	P	P	13 35 07.0	-1.0
SOEI	Soe	16.40 178	eP	P	13 35 07.5	-0.4
	comp=Z,73nm,0.7s					
PLAI	Plampang	16.60 201	P	P	13 35 10.1	+0.4
YULB	Yu-li	16.72 352	eP	P	13 35 09.6	-1.1
	comp=Z,52nm,1.2s					
TPUB	Ta-pu	16.74 350	eP	P	13 35 11.5	+0.7
	comp=Z,133nm,0.7s					
BATI	Baumata	16.84 181	P	P	13 35 11.8	-0.1
	comp=Z,78nm,0.3s,baz=37,slow=0.8,SNR=121					
BATI	Baumata	16.84 181	P	P	13 35 10.3	-1.6
TWSI	Taliwang, Sumb	16.86 204	P	P	13 35 11.7	-0.4
WBSI	Waikabubak, Su	16.87 195	P	P	13 35 12.2	+0.1
SRBI	Singaraja	17.05 210	P	P	13 35 15.0	+1.2
	comp=Z,44nm,1.3s					
BASI	Baing, Sumba	17.16 191	P	P	13 35 13.4	-1.4
SSLB	Suanglung	17.16 351	eP	P	13 35 15.6	+0.9
	comp=Z,51nm,0.6s					
NACB	Ninganchiao	17.46 353	eP	P	13 35 18.4	+1.1
	comp=Z,168nm,2.0s					
DNP	Denpasar	17.56 209	P	P	13 35 20.2	+1.8
	comp=Z,324nm,0.6s,comp=Z,13μm					
DNP	Denpasar	17.56 209	P	P	13 35 21.1	+2.7
DNP			pmax	pmax		
	comp=Z,321nm,0.5s					
YOJ	Yonaguni jima	17.63 358	eP	P	13 35 20.3	+1.4
	comp=Z,67nm,0.5s					
YOJ	Yonaguni jima	17.63 358	eP	P	13 35 20.3	+1.4
YOJ			pmax	pmax		
	comp=Z,67nm,0.5s					
BLJI	Banyuglugur	17.64 215	P	P	13 35 19.0	-0.1
IGBI	Denpasar	17.71 209	P	P	13 35 20.1	+0.3
JAGI	Jajag, Banyuwa	17.93 213	P	P	13 35 22.2	+0.4
JAGI	Jajag, Banyuwa	17.93 213	eP	P	13 35 21.4	-0.4
	comp=Z,254nm,0.6s					
YHNB	Yeheng	17.97 353	eP	P	13 35 22.3	+0.2
	comp=Z,39nm,0.7s					
GMJI	Gumukmas	18.15 215	P	P	13 35 24.4	+0.6
	comp=Z,33nm,0.7s					
TATO	Taipei	18.26 353	eP	P	13 35 22.9	-1.7
	comp=Z,347nm,1.6s					
NGJI	Ngawi	18.67 222	P	P	13 35 28.4	-0.1
GENI	Genyem	18.78 119	P	P	13 35 31.6	+2.1
PWJI	Pagerwojo	18.94 219	P	P	13 35 32.9	+1.9
	comp=Z,28nm,0.7s					
JAY	Jayapura	19.21 118	P	P	13 35 34.1	+0.6
	comp=Z,2.6nm,0.3s,baz=239,slow=5.0,SNR=11					
JAY	Jayapura	19.21 118	P	P	13 35 37.0	+3.5
	comp=Z,197nm,0.8s					
WOJI	Wonogiri, Jawa	19.37 222	P	P	13 35 36.2	+1.3
UGM	Wanagama	19.69 223	eP	P	13 35 38.2	+0.4
	comp=Z,344nm,2.0s					
KPJI	Karang Pucung	20.40 227	P	P	13 35 44.5	+0.4
JOW	Kunigami	20.42 11	P	P	13 35 45.9	+1.7
	comp=Z,13nm,0.5s,baz=267,slow=19,SNR=4.8					
MYKOM	Kota Tinggi	20.50 257	eP	P	13 35 44.9	-0.2
	comp=Z,25nm,0.6s					
MTN	Manton Dam	20.78 159	eP	P	13 35 47.1	-0.5
	comp=Z,23nm,0.4s					
LEM	Lembang	21.05 230	P	P	13 35 51.1	+0.9
	comp=Z,32nm,0.5s,baz=332,slow=11,SNR=4.4					
DBJI	Dramaga	21.55 233	P	P	13 35 55.0	+0.5
	comp=Z,84nm,0.8s					
SBJI	Serang	21.79 234	P	P	13 35 58.2	+1.6
	comp=Z,240nm,0.9s					
GUMO	Guam	21.80 70	P	P	13 35 57.3	+0.7
	comp=Z,26nm,0.3s,baz=177,slow=3.7,SNR=7.4					
BLSI	Bandar Lampung	22.10 237	P	P	13 36 00.8	+1.4
	comp=Z,257nm,0.7s					
KLI	Kotabumi	22.16 239	P	P	13 36 00.6	+0.7
	comp=Z,86nm,0.5s					
KLI	Kotabumi	22.16 239	P	P	13 36 00.6	+0.7
KLI			pmax	pmax		
	comp=Z,116nm,0.9s					
CGJI	Cibinong	22.43 234	P	P	13 36 01.6	-0.7
	comp=Z,214nm,0.4s,comp=Z,4μm					
MDSI	Maura Dua	22.55 241	P	P	13 36 02.7	-0.7
	comp=Z,51nm,0.7s					
LWLI	Liwa	22.92 240	P	P	13 36 06.7	-0.1
	comp=Z,164nm,0.7s					
MASI	Maura Aman, Be	23.67 246	P	P	13 36 14.4	+1.0
	comp=Z,75nm,0.5s					
KRJI	Kerinci	23.98 249	P	P	13 36 16.9	+0.8
	comp=Z,80nm,0.8s					
PHET	Kaeng Krachan	24.59 286	P	P	13 36 23.7	+2.3
	comp=Z,12nm,0.7s					
FITZ	Fitzroy Crossi	24.75 176	eP	P	13 36 22.6	-0.1
MNSI	Mandailing Nat	24.88 257	P	P	13 36 23.8	-0.2
	comp=Z,14nm,0.9s					
PSI	Prapat	25.11 262	P	P	13 36 26.0	-0.1
	comp=Z,11nm,0.7s,baz=360,slow=22,SNR=8.9					
WHN	Wuhan	25.28 341 ⇓	P	P	13 36 29.2	+1.9
WHN			pmax	pmax		
	comp=Z,50nm,0.6s					
NANT	Nan	25.48 300	P	P	13 36 29.8	+0.5
	comp=Z,12nm,0.5s,comp=Z,163nm					
GYA	Guiyang	25.52 322 ⇑	iP	P	13 36 30.3	+0.7
GYA			PcP	PcP	13 39 39.8	+0.3
GYA			S	S	13 40 18.5	+2.8
GYA			ScP	ScP	13 42 23.0	+1.1
GYA			pmax	pmax		
	comp=Z,20nm,0.7s					
NJ2	Nanjing	25.60 350	eP	P	13 36 32.7	+2.7
NJ2			pmax	pmax		
	comp=Z,22nm,0.6s					
KCSI	Kotacane, Aceh	26.13 264	P	P	13 36 34.3	-0.7
	comp=Z,124nm,0.7s,comp=Z,2μm					
GSI	Gunungsitoli	26.72 259	P	P	13 36 39.2	-0.9
	comp=Z,80nm,0.9s					
GSI	Gunungsitoli	26.72 259	eP	P	13 36 39.1	-1.1
	comp=Z,79nm,0.4s					
CBIJ	Chichi jima	26.73 39	P	P	13 36 39.6	-0.4
CBIJ			S	S	13 40 32.1	-2.2
JCJ	Chichijima	26.73 39	P	P	13 36 39.6	-0.4
	comp=Z,84nm,0.4s					
JCJ			S	S	13 40 32.1	-2.2
	comp=Z,70nm,0.4s,baz=296,slow=23,SNR=11					
TPTI		26.75 264	P	P	13 36 49.8	+9.4
LHMI	Lhok Sumawe	26.76 268	P	P	13 36 53.3	+13
CM01	Chiang Mai Arr	26.84 298	eP	P	13 36 41.6	+0.4
CM01			ePcP	PcP	13 39 43.3	+0.6
CM31	Chiang Mai Arr	26.87 298	eP	P	13 36 41.6	+0.1
CMAR	Chiang Mai Arr	26.87 298	P	P	13 36 42.1	+0.6
	comp=Z,15nm,0.7s,baz=110,slow=7.0,SNR=63					
CMAR			PcP	PcP	13 39 43.4	+0.7
	comp=Z,2.5nm,0.8s,baz=141,slow=1.2,SNR=6.8					
ENH	Enshi	27.00 332	eP	P	13 36 42.6	+0.3
	comp=Z,58nm,0.8s					
CHTO	Chiang Mai	27.01 299	P	P	13 36 43.2	+0.6
	comp=Z,225nm,0.8s,comp=Z,3μm					
CHTO	Chiang Mai	27.01 299	eP	P	13 36 43.1	+0.5
	comp=Z,28nm,0.7s					
CHTO	Chiang Mai	27.01 299	eP	P	13 36 43.1	+0.5
CHTO			pmax	pmax		
	comp=Z,28nm,0.7s					
JNU	Nakatsue	27.05 13	P	P	13 36 42.6	-0.2
	comp=Z,3.0nm,0.5s,baz=298,slow=3.2,SNR=6.2					
KMI	Kunming	27.21 315	P	P	13 36 46.1	+1.6
KMI			pmax	pmax		
	comp=Z,36nm,0.7s					
KMI			pmax	pmax		
	comp=Z,170nm,4.2s					
CMAI	Chiengmai2	27.38 301	P	P	13 36 46.6	+0.6
	comp=Z,161nm,1.5s,comp=Z,8μm					
COEN	Coen	28.15 137	eP	P	13 36 52.0	-0.6
	comp=Z,33nm,0.4s					
PMG	Port Moresby	28.26 124	P	P	13 36 52.9	-0.7
	comp=Z,15nm,0.9s,baz=16,slow=6.1,SNR=5.1					
BSI	Banda Aceh	28.38 269	P	P	13 36 53.7	-0.9
	comp=Z,276nm,0.5s					
WRAB	Tennant Creek	28.47 159	eP	P	13 36 55.2	-0.1
	comp=Z,94nm,0.4s					
WRAB	Tennant Creek	28.47 159	c iP	P	13 36 55.3	0.0
WRAB			pmax	pmax		
	comp=Z,30nm,0.8s					
WRA	Warramunga Arr	28.48 159	P	P	13 36 55.1	-0.2
	comp=Z,58nm,0.5s,baz=332,slow=11,SNR=777					
WRA			PcP	PcP	13 39 46.7	0.0
	comp=Z,5.0nm,0.5s,baz=338,slow=2.6,SNR=9.3					
WRA			S	S	13 40 57.9	-3.8
	comp=Z,7.0nm,0.9s,baz=339,slow=15,SNR=9.4					
WRA			ScP	ScP	13 42 30.2	-0.6
	comp=Z,9.1nm,0.6s,baz=342,slow=3.2,SNR=23					
WRA			P3KPbc		14 08 55.1	
	comp=Z,0.7nm,0.7s,baz=156,slow=4.2,SNR=6.4					
WB2	Warramunga Arr	28.48 159	eP	P	13 36 55.2	-0.2
TJN	Taejon	29.67 6 ⇑	eP	P	13 37 05.5	+0.2
RABL	Rabaul	30.32 110	eP	P	13 37 13.1	+1.8
	comp=Z,49nm,0.6s					
XAN	Xi'an	30.45 335	P	P	13 37 12.7	+0.5
XAN			pmax	pmax		
	comp=Z,82nm,0.6s					
CD2	Chengdu	30.51 325	P	P	13 37 12.5	-0.3
CD2			pmax	pmax		
	comp=Z,40nm,0.5s					
KSAR	Wonju Array Be	30.78 6	P	P	13 37 16.1	+1.4
KSAR			PcP	PcP	13 39 53.0	+0.6
KSAR	Wonju Array Be	30.78 6	P	P	13 37 16.2	+1.4
KSAR					13 39 53.0	
KSRS	Korea Array	30.79 6	P	P	13 37 16.1	+1.2
	comp=Z,3.5nm,0.6s,baz=185,slow=9.7,SNR=22					
KSRS			PcP	PcP	13 39 53.0	+0.5
	comp=Z,3.4nm,0.8s,baz=180,slow=3.2,SNR=9.3					
KS01	Wonju Array Si	30.81 6	eP	P	13 37 15.6	+0.4
KS01			ePcP	PcP	13 39 52.9	+0.4
AS31	Alice Springs	31.80 162	eP	P	13 37 24.3	+0.6
	comp=Z,56nm,0.3s					
ASAR	Alice Springs	31.80 162	P	P	13 37 24.4	+0.7
	comp=Z,47nm,0.3s,baz=339,slow=7.4,SNR=2686					
ASAR			PcP	PcP	13 39 55.6	0.0
	comp=Z,5.8nm,0.4s,baz=345,slow=2.7,SNR=11					
ASAR			S	S	13 41 51.0	-1.5
	comp=Z,15nm,0.7s,baz=351,slow=20,SNR=36					
ASAR			ScP	ScP	13 42 41.0	-0.9
	comp=Z,6.7nm,0.6s,baz=346,slow=3.1,SNR=12					
ASAR			P3KPbc		14 08 37.6	
	comp=Z,0.2nm,0.9s,baz=162,slow=3.8,SNR=4.2					
AS01	Alice Springs	31.81 162	eP	P	13 37 24.2	+0.4
MAJO	Matsushiro	32.44 22 ⇓	iP	P	13 37 29.1	+0.1
MAJO			pmax	pmax		
	comp=Z,5.0nm,0.6s					
MAT	Matsushiro	32.44 22	P	P	13 37 28.8	-0.2
MJAR	Matsushiro Arr	32.44 22	P	P	13 37 28.9	-0.2
	comp=Z,3.2nm,0.5s,baz=201,slow=10,SNR=26					
MJAR			PcP	PcP	13 39 57.8	+0.6
	comp=Z,2.8nm,1.0s,baz=197,slow=3.2,SNR=6.1					
TIY	Taiyuan	32.51 343	eP	P	13 37 30.8	+1.2
TIY			pmax	pmax		
	comp=Z,58nm,0.6s					
BJT	Baijiatuau	33.83 349	eP	P	13 37 40.5	0.0
	comp=Z,52nm,1.2s					
BJT	Baijiatuau	33.83 349	eP	P	13 37 40.5	0.0
BJT			pmax	pmax		
	comp=Z,52nm,1.2s					
BJI	Beijing	33.85 349 ⇓	eP	P	13 37 41.2	+0.5
BJI			pP	pP	13 39 20.2	+0.2
BJI			pmax	pmax		
	comp=Z,50nm,1.1s					
LZH	Lanzhou	34.46 331	eP	P	13 37 47.7	+1.7
LZH			sP	sP	13 40 39.7	+3.4
LZH			S	S	13 42 30.1	-2.5
LZH			pmax	pmax		
	comp=Z,90nm,1.2s					
LZH			pmax	pmax		
	comp=Z,290nm,4.8s					
CTA	Charters Tower	34.62 141	P	P	13 37 48.9	+1.4
	comp=Z,10nm,0.5s,baz=320,slow=10,SNR=24					
CTA			ScP	ScP	13 42 52.4	+0.5
	comp=Z,5.7nm,0.8s,baz=311,slow=3.2,SNR=5.8					
CTAO	Charters Tower	34.62 141	eP	P	13 37 48.3	+0.8
	comp=Z,12nm,0.6s					
CTAO	Charters Tower	34.62 141	eP	P	13 37 48.3	+0.8
CTAO			pmax	pmax		
	comp=Z,12nm,0.6s					
HHC	Hu-ho-hao-te	35.68 344	eP	P	13 37 58.4	+2.4
HHC			pmax	pmax		
	comp=Z,14nm,1.0s					
HHC			pmax	pmax		
	comp=Z,65nm,5.9s					
SHL	Shillong	35.77 305	eP	P	13 37 57.2	+0.2
	comp=Z,167nm,0.5s					
SHL	Shillong	35.77 305	eP	P	13 37 57.2	+0.2
SHL			pmax	pmax		
	comp=Z,167nm,0.5s					
CN2	Changchun	36.93 2	eP	P	13 38 05.0	-1.1
CN2			eS	S	13 43 10.4	+1.5
CN2			eSS	SS	13 46 19.7	-8.8
USRK	Ussuriysk Ar.	37.98 10	P	P	13 38 15.4	+0.8
	comp=Z,6.1nm,0.6s,baz=183,slow=7.2,SNR=17					
USRK			PcP	PcP	13 40 13.7	+0.1
	comp=Z,3.2nm,0.5s,baz=218,slow=3.5,SNR=5.3					
MDJ	Mudanjiang	38.06 7	P	P	13 38 13.6	-1.6
MDJ			pmax	pmax		
	comp=Z,16nm,0.5s					
LSA	Lhasa	38.28 311	eP	P	13 38 19.0	+1.2
	comp=Z,26nm,0.8s					
LSA	Lhasa	38.28 311	P	P	13 38 19.5	+1.7
LSA	Lhasa	38.28 311	eP	P	13 38 19.0	+1.2
LSA			pmax	pmax		
	comp=Z,26nm,0.8s					
GTA	Gaotai	39.04 330 ⇓	P	P	13 38 24.2	+0.9
GTA			PcP	PcP	13 40 18.0	+0.7
GTA			ScP	ScP	13 43 07.9	-0.5
GTA			S	S	13 43 40.8	+0.6
GTA			pmax	pmax		
	comp=Z,48nm,0.8s					
GTA			pmax	pmax		
	comp=Z,120nm,7.0s					
ERM	Erimo	39.09 23 ⇑	iP	P	13 38 24.5	+1.0
ERM			pmax	pmax		
	comp=Z,24nm,0.9s					
TAPN	Taplejung	39.91 305	eP	P	13 38 31.4	+0.7
	comp=Z,69nm,0.4s					
NWAO	Narrogin (SRO)	39.95 189	P	P	13 38 30.6	+0.1
	comp=Z,22nm,0.4s,baz=252,slow=7.2,SNR=40					
NWAO	Narrogin (SRO)	39.95 189	eP	P	13 38 30.9	+0.4
NWAO	Narrogin (SRO)	39.95 189	eP	P	13 38 30.9	+0.4
ODAN	Odare	39.97 304	eP	P	13 38 31.7	+0.6
	comp=Z,82nm,0.4s					
RAMN	Ramite	40.66 304	eP	P	13 38 37.3	+0.7
	comp=Z,69nm,0.6s					
ASAJ	Asahikawa	40.69 21	P	P	13 38 37.3	+1.1
	comp=Z,18nm,0.6s,baz=226,slow=5.6,SNR=26					
BBOO	Buckleboo	41.03 164	eP	P	13 38 39.5	+0.4
	comp=Z,58nm,1.0s					
JIRN	Jiri	41.27 305	eP	P	13 38 42.2	+0.7
	comp=Z,85nm,0.3s					
GUN	Gumba	41.62 305	eP	P	13 38 44.8	+0.5
	comp=Z,136nm,0.5s					
PKIN	Phulchoki	41.88 304	eP	P	13 38 46.3	+0.1
	comp=Z,16nm,0.3s					
STKA	Stephens Creek	41.99 157	P	P	13 38 47.6	+1.0
	comp=Z,19nm,0.4s,baz=341,slow=7.9,SNR=81					
STKA			PcP	PcP	13 40 27.1	+0.1
	comp=Z,3.9nm,0.8s,baz=213,slow=8.3,SNR=3.3					
STKA			ScP	ScP	13 43 19.4	-0.7
	comp=Z,7.8nm,0.7s,baz=327,slow=5.6,SNR=8.0					
STKA	Stephens Creek	41.99 157	eP	P	13 38 47.3	+0.6
	comp=Z,4.6nm,0.5s					
STKA			PcP	PcP	13 40 27.1	+0.1
STKA			ScP	ScP	13 43 19.4	-0.7
STKA	Stephens Creek	41.99 157	eP	P	13 38 47.3	+0.6
STKA					13 40 27.2	
STKA			pmax	pmax		
	comp=Z,5.0nm,0.5s					
KKN	Kakani	42.06 305	eP	P	13 38 47.8	+0.2
	comp=Z,42nm,0.4s					
DMN	Daman	42.13 304	eP	P	13 38 48.5	+0.3
HIA	Hailar	42.51 356	eP	P	13 38 50.9	+0.5
	comp=Z,23nm,0.8s					
HIA	Hailar	42.51 356	eP	P	13 38 50.9	+0.5
HIA			pmax	pmax		
	comp=Z,23nm,0.8s					
GKN	Gorkha	42.67 304	eP	P	13 38 52.3	+0.1
	comp=Z,37nm,0.4s					
KLR	Kul'dur	42.86 8	c iP	P	13 38 53.7	+0.6
YSS	Yuzh-Sakhalins	43.23 19 ⇑	iP	P	13 38 56.9	+0.9
YSS			pmax	pmax		
	comp=Z,14nm,1.1s					
ULN	Ulaanbaatar	43.39 344	eP	P	13 38 58.1	+0.6
	comp=Z,37nm,1.2s					
ULN	Ulaanbaatar	43.39 344	d iP	P	13 38 58.2	+0.7
ULN			i		13 40 31.7	
ULN			pmax	pmax		
	comp=Z,32nm,1.3s					
KOLN	Koldanda	43.44 304	eP	P	13 38 58.9	+0.7
	comp=Z,162nm,0.4s					
DANN	Dangsing	43.52 305	eP	P	13 38 59.4	+0.5
	comp=Z,320nm,0.7s					
SONM	Songino Array	43.55 343	P	P	13 38 59.4	+0.7
	comp=Z,16nm,0.8s,baz=160,slow=9.0,SNR=51					
SONM			PcP	PcP	13 40 32.2	0.0
	comp=Z,6.2nm,0.7s,baz=155,slow=4.0,SNR=9.1					
SONM			ScP	ScP	13 43 25.3	-1.0
	comp=Z,0.8nm,0.7s,baz=134,slow=4.2,SNR=3.3					
SONA1	Songino Array	43.56 343	eP	P	13 38 59.3	+0.5
SONA1			ePcP	PcP	13 40 31.9	-0.4
PYUN	Piuthan	44.06 304	eP	P	13 39 03.8	+0.8
	comp=Z,125nm,0.5s					
ZAK	Zakamensk	46.76 342	eP	P	13 39 22.8	-0.2
ZAK			e		13 40 42.8	
ZAK			pmax	pmax		
	comp=Z,5.0nm,1.1s					
ZEA	Zeya	46.93 3	eP	P	13 39 24.0	-0.1
ZEA			pmax	pmax		
	comp=Z,20nm,1.0s					
TLY	Talaya	47.80 343	d iP	P	13 39 31.7	+1.1
TLY			pmax	pmax		
	comp=Z,20nm,0.6s					
MOY	Mondy	48.59 341	eP	P	13 39 38.0	+1.4
MOY			pmax	pmax		
	comp=Z,32nm,1.6s					
WMQ	Urumqi	48.60 325	P	P	13 39 38.3	+1.5
WMQ			PcP	PcP	13 40 50.7	+0.4
WMQ			pmax	pmax		
	comp=Z,120nm,1.1s					
WMQ			pmax	pmax		
	comp=Z,35nm,4.3s					
HVS	Khovu-Aksy	50.81 336 ⇑	iP	P	13 39 53.7	+1.0
HVS			pmax	pmax		
	comp=Z,51nm,0.8s					
SKR	Severo-Kuril's	51.38 26	eP	P	13 39 58.4	+1.7
BOD	Bodaibo	51.51 353	eP	P	13 39 57.9	+0.3
BOD			pmax	pmax		
	comp=Z,24nm,0.7s					
PDGK	Podgornoye	53.25 320	P	P	13 40 10.9	+0.5
PDGK			pmax	pmax		
	comp=Z,35nm,0.7s					
MK01	Makanchi Array	53.42 325	eP	P	13 40 12.0	+0.6
MK31	Makanchi Array	53.44 325	eP	P	13 40 12.0	+0.5
MK31	Makanchi Array	53.44 325	eP	P	13 40 12.1	+0.5
MK31			pmax	pmax		
	comp=Z,35nm,0.5s					
MKAR	Makanchi Array	53.44 325	P	P	13 40 12.2	+0.7
	comp=Z,70nm,0.4s,baz=121,slow=7.9,SNR=1238					
MKAR			PcP	PcP	13 41 08.1	-0.4
	comp=Z,11nm,0.5s,baz=114,slow=4.5,SNR=10					
MKAR			ScP	ScP	13 44 07.6	-0.8
	comp=Z,0.9nm,0.5s,baz=120,slow=5.2,SNR=5.0					
MKAR	Makanchi Array	53.44 325	eP	P	13 40 12.1	+0.6
	comp=Z,612nm,0.4s					
MKAR			PcP	PcP	13 41 08.1	-0.4
MKAR			ScP	ScP	13 44 07.6	-0.8
PRZ	Przheval'sk	53.54 319	eP	P	13 40 14.0	+1.5
	comp=Z,102nm,0.4s					
TARG	Taragay, Kyrgy	53.58 318	eP	P	13 40 13.8	+0.7
	comp=Z,18nm,0.7s					
MAKZ	Makanchi	53.62 325	eP	P	13 40 13.3	+0.5
	comp=Z,55nm,0.6s					
MAKZ	Makanchi	53.62 325	eP	P	13 40 13.3	+0.5
MAKZ			pmax	pmax		
	comp=Z,55nm,0.6s					
NIL	Nilore	53.80 307	eP	P	13 40 14.5	+0.2
	comp=Z,49nm,0.5s					
NIL	Nilore	53.80 307	eP	P	13 40 14.5	+0.2
NIL			pmax	pmax		
	comp=Z,49nm,0.5s					
PEA0B	Petropavlovsk-	53.83 25	eP	P	13 40 15.3	+1.2
	comp=Z,19nm,0.7s					
PETK	Petropavlovsk-	53.83 25	P	P	13 40 15.4	+1.3
	comp=Z,12nm,0.6s,baz=192,slow=2.4,SNR=53					
PETK			PcP	PcP	13 41 09.9	+0.1
	comp=Z,3.3nm,0.6s,baz=249,slow=8.9,SNR=6.8					
KSH	Kashi	53.87 315	P	P	13 40 16.6	+1.8
KSH			pP	pP	13 42 11.5	+2.8
KSH			S	S	13 47 03.5	-1.8
KSH			sS	sS	13 50 30.5	+0.4
KSH			SS	SS	13 51 08.6	+9.3
KSH			pmax	pmax		
	comp=Z,200nm,5.0s					
PET	Petropavlovsk	54.17 25	eP	P	13 40 17.4	+1.0
	comp=Z,86nm,1.6s					
PET	Petropavlovsk	54.17 25	eP	P	13 40 17.6	+1.2
PET			pmax	pmax		
	comp=Z,35nm,1.6s					
NRN	Naryn	54.66 317	eP	P	13 40 20.6	+0.1
	comp=Z,21nm,0.6s					
NRN	Naryn	54.66 317	eP	P	13 40 20.6	+0.1
NRN			pmax	pmax		
	comp=Z,21nm,0.6s					
ULHL	Ulahol	54.85 318	P	P	13 40 22.9	+1.2
	SNR=5.8					
YAK	Yakutsk	55.34 3	eP	P	13 40 24.7	+0.3
	comp=Z,86nm,0.7s					
YAK	Yakutsk	55.34 3	i P	P	13 40 24.7	+0.3
YAK			pmax	pmax		
	comp=Z,68nm,0.6s					
KZA	Kyzart	55.44 317	P	P	13 40 27.5	+1.4
	SNR=46					
TKM2	Tokmak 2	55.58 318	P	P	13 40 27.6	+0.9
	SNR=48					
TKM2	Tokmak 2	55.58 318	P	P	13 40 27.3	+0.6
TKM2			pmax	pmax		
	comp=Z,23nm,0.5s					
SFK	Sufi-Kurgan	55.81 314	P	P	13 40 29.3	+0.8
SFK			pmax	pmax		
	comp=Z,26nm,0.5s					
KBK	Karagaybulak	55.89 318	P	P	13 40 30.0	+1.1
	SNR=13					
UCH	Uchtor	56.00 317	P	P	13 40 31.3	+1.3
	SNR=40					
CHMS	Chumysh

comp=Z,2.5nm,0.4s,baz=241,slow=0.3,SNR=3.6
ZALV Zalesovo Beam 56.60 334 *e*P **P 13 40 32.5 -0.8**
ZALV PcP **PcP 13 41 19.1 -1.6**
ZALV Zalesovo Beam 56.60 334 *e*P **P 13 40 32.5 -0.8**
ZALV 13 41 19.1
EKS2 Erkin-Say 56.68 317 P **P 13 40 35.4 +1.2**
SNR=19
KBL Kabul 57.40 307 *e*P **P 13 40 39.2 -0.2**
comp=Z,29nm,0.7s
KBL Kabul 57.40 307 *e*P **P 13 40 39.2 -0.2**
KBL pmax pmax
comp=Z,29nm,0.7s
MNAS Manas 57.47 317 P **P 13 40 40.3 +0.7**
MNAS pmax pmax
comp=Z,19nm,0.6s
KURBB Kurchatov Arra 57.65 328 P **P 13 40 40.8 +0.4**
comp=Z,68nm,0.6s,baz=130,slow=6.3,SNR=594
KURBB PcP **PcP 13 41 27.1 +2.2**
comp=Z,3.4nm,0.5s,baz=122,slow=5.6,SNR=2.9
KURK Kurchatov 57.65 328 P **P 13 40 40.8 +0.4**
KURK PcP **PcP 13 41 27.1 +2.2**
KURK Kurchatov 57.65 328 P **P 13 40 40.8 +0.4**
KURK 13 41 27.1
NVS Novosibirsk 57.89 334 *e*P **P 13 40 41.6 -0.4**
NVS pmax pmax
comp=Z,39nm,0.9s
NVS pmax pmax
comp=N,19nm,0.7s
NVS pmax pmax
comp=E,18nm,0.5s
KK31 Karatay Array 59.06 317 *e*P **P 13 40 50.1 +0.1**
KK31 Karatay Array 59.06 317 *i* P **P 13 40 50.2 +0.1**
KK31 pmax pmax
comp=Z,18nm,0.7s
KKAR Karatay Array 59.06 317 *e*P **P 13 40 50.1 0.0**
KKAR Karatay Array 59.06 317 *e*P **P 13 40 50.1 0.0**
SEY Seymchan 59.81 15*d* iP **P 13 40 56.3 +1.6**
OTUK Ortayu 59.98 323 P **P 13 40 56.5 +0.4**
OTUK pmax pmax
comp=Z,25nm,0.6s
BVA0 Borovoye Array 63.22 327 P **P 13 41 16.8 -0.2**
BVA0 pmax pmax
comp=Z,27nm,0.9s
BVAR Borovoye Array 63.22 327 P **P 13 41 17.4 +0.4**
comp=Z,20nm,0.6s,baz=100,slow=4.8,SNR=126
BRVK Borovoye 63.30 327 *e*P **P 13 41 17.4 -0.1**
comp=Z,42nm,0.9s
BRVK Borovoye 63.30 327*d* iP **P 13 41 17.6 +0.1**
BRVK pmax pmax
comp=Z,45nm,0.9s
WSAR Wadi Sarin 64.58 292 P **P 13 41 25.4 -0.8**
comp=Z,5.5nm,0.5s,baz=144,slow=7.5,SNR=15
TIXI Tiksi 64.91 2 *e*P **P 13 41 26.5 -0.7**
comp=Z,47nm,0.4s
TIXI Tiksi 64.91 2⇓ iP **P 13 41 26.7 -0.6**
TIXI pmax pmax
comp=Z,23nm,0.5s
SOHO SOHO 66.55 293 P **P 13 41 37.9 -0.6**
MDH Madha 66.83 295 P **P 13 41 38.3 -1.8**
NRIK Noril'sk 66.84 347 P **P 13 41 39.5 +0.3**
comp=Z,39nm,0.6s,baz=135,slow=6.5,SNR=16
BANOM Banah 66.87 295 P **P 13 41 39.6 -0.8**
UOSS Minazif 66.90 294 P **P 13 41 39.6 -0.9**
MSFE Esma-Masafi 66.96 295 P **P 13 41 40.5 -0.4**
ALNE Al Ain 67.26 293 *i* P **P 13 41 42.6 -0.2**
SNR=5.8
BILL Bilibino 67.43 16 *e*P **P 13 41 42.5 -0.5**
comp=Z,8.2nm,0.4s
BILL Bilibino 67.43 16*d* iP **P 13 41 43.0 +0.1**
BILL *i* 13 42 05.4
BILL *i* *PP **pP 13 43 43.5 -1.4**
BILL pmax pmax
comp=Z,12nm,1.1s
ASUD Al Ashush, Dub 67.67 294 P **P 13 41 45.0 -0.3**
AB31 Akbulak array 67.99 321 *i* P **P 13 41 46.4 -0.3**
AB31 pmax pmax
comp=Z,35nm,0.8s
ABKAR Akbulak array 67.99 321 *e*P **P 13 41 46.5 -0.2**
MZR Muzera 69.31 292 *i* P **P 13 41 55.3 +0.1**
SNR=6.7
AKTO Aktyubinsk 69.50 321 P **P 13 41 55.9 +0.1**
comp=Z,35nm,0.7s,baz=98,slow=11,SNR=126
SVE Sverdlovsk 69.89 329*c* iP **P 13 41 54.9 -3.0**
SVE pmax pmax
comp=Z,53nm,0.7s
ARU Arti 70.85 328 *e*P **P 13 42 02.7 -0.8**
comp=Z,51nm,0.5s
ARU Arti 70.85 328*d* iP **P 13 42 02.8 -0.8**
ARU 13 42 17.7
ARU 13 44 48.2
ARU S **S 13 50 31.5 +0.6**
ARU pmax pmax
comp=Z,61nm,1.0s
NIKH Nikolski High 71.07 36 *e*P **P 13 42 05.1 +0.2**
comp=Z,42nm,0.6s
UNV Unalaska Valle 72.64 36 *e*P **P 13 42 13.6 -0.4**
comp=Z,21nm,0.8s
SOKR Solikamsk 72.68 331 *e*P P 13 42 23.6 +10
SOKR pmax pmax
comp=Z,16nm,1.0s
SDPT Sand Point 76.36 35 *e*P **P 13 42 34.8 +0.1**
comp=Z,28nm,0.6s
RAYN Ar Rayn 76.64 293 *e*P **P 13 42 36.5 -0.5**
comp=Z,33nm,0.8s
RAYN Ar Rayn 76.64 293 *i* P **P 13 42 36.7 -0.4**
SNR=37
RAYN Ar Rayn 76.64 293 *e*P **P 13 42 36.5 -0.5**
RAYN pmax pmax
comp=Z,33nm,0.8s
GNI Garni 77.33 310⇑ iP **P 13 42 39.9 -0.7**
GNI pmax pmax
comp=Z,47nm,1.4s
ZEI Tsey 78.05 312 *e*P **P 13 42 43.5 -0.9**
ZEI pmax pmax
comp=Z,21nm,0.7s
PRGR Permogore 78.48 332 *e*P **P 13 42 43.8 -2.2**
PRGR *e* 13 42 48.4
PRGR pmax pmax
comp=Z,35nm,0.5s
KBZ Khabaz 78.81 313 P **P 13 42 48.0 -0.1**
comp=Z,4.6nm,0.8s,baz=89,slow=4.1,SNR=9.0
KBZ Khabaz 78.81 313 P **P 13 42 48.0 -0.1**
NEY Neytrino 78.92 313⇓ iP **P 13 42 50.2 +1.2**
NEY pmax pmax
comp=Z,3.0nm,0.8s
KIV Kislovodsk 78.97 313 *e*P **P 13 42 49.1 0.0**
comp=Z,14nm,0.6s
KIV Kislovodsk 78.97 313 P **P 13 42 49.6 +0.5**
KIV Kislovodsk 78.97 313 *e*P **P 13 42 49.9 +0.8**
KIV pmax pmax
comp=Z,18nm,1.0s
OPO Ambohidratompo 79.57 250 P **P 13 42 52.1 -0.8**
comp=Z,2.5nm,0.2s,baz=38,slow=3.1,SNR=3.9
SVW2 Sparrevohn 79.58 29 *e*P **P 13 42 53.4 +1.5**
comp=Z,13nm,0.6s
IM3 Indian Mountai 80.79 24 *e*P **P 13 42 59.1 +1.0**
KDAK Kodiak Island 80.92 33 *e*P **P 13 42 59.9 +1.1**
comp=Z,36nm,0.7s
KDAK Kodiak Island 80.92 33*ce*P **P 13 42 59.7 +0.9**
RSO Redoubt South 80.93 30 *e*P **P 13 42 59.4 +0.3**
PPLA Purkeypile 81.30 27 *e*P **P 13 43 01.8 +0.9**
comp=Z,15nm,0.6s
VORD Divnogorie 81.35 320 *e*P **P 13 43 00.2 -1.0**
VORD pmax pmax
comp=Z,10.0nm,0.6s
KLMR Klimovskoe 81.36 330*d* iP **P 13 43 00.6 -0.4**
KLMR pmax pmax
comp=Z,40nm,0.5s
KLMR Klimovskoe 81.36 330⇓ iP **P 13 43 00.7 -0.3**
KLMR *e*P **P 13 43 00.7 -0.3**
KLMR *e*P **P 13 43 00.7 -0.3**
KLMR AMP 13 43 01.1
comp=Z,40nm,0.5s
VSR Storozhevoye 81.43 321 *e*P **P 13 43 00.5 -1.1**
VSR pmax pmax
comp=Z,20nm,0.6s
SKT Skwentna 81.57 28 *e*P **P 13 43 01.9 -0.3**
comp=Z,13nm,0.8s
BRLK Bradley Lake 81.84 31 *e*P **P 13 43 03.5 -0.1**
comp=Z,34nm,0.7s
BPAW Bear Paw Mtn. 81.87 26 *e*P **P 13 43 04.6 +1.0**
comp=Z,32nm,0.7s
SUA Susitna One 81.94 29 *e*P **P 13 43 04.2 +0.1**
comp=Z,21nm,0.8s
MLY Manley 82.00 25 *e*P **P 13 43 05.3 +1.0**
comp=Z,26nm,0.6s
TMCR Tamitsa 82.13 334 *e*P **P 13 43 04.2 -0.6**
TRF Thorofare Moun 82.17 27 *e*P **P 13 43 05.7 +0.3**
comp=Z,20nm,0.8s
MOS Moscow 82.32 325 *e*P **P 13 43 04.6 -1.4**
MOS pmax pmax
comp=Z,71nm,0.8s
TOLK Toolik Lake Re 82.52 22 P **P 13 43 08.4 +1.6**
baz=269
TOLK Toolik Lake Re 82.52 22 *e*P **P 13 43 08.5 +1.6**
comp=Z,33nm,0.8s
ANN Anapa 82.72 314 *e*P P 13 43 02.8 -5.5
ANN *e**PP pP 13 45 13.4 -4.0
ANN *e* 13 46 27.0
ANN *e*S S 13 52 25.3 -11
ANN pmax pmax
comp=Z,88nm,1.0s
MCK McKinley 82.78 27 *e*P **P 13 43 08.5 +0.3**
comp=Z,32nm,0.6s
RND Reindeer 82.82 27 *e*P **P 13 43 08.4 0.0**
comp=Z,20nm,0.5s
RND Reindeer 82.82 27 *e*P **P 13 43 08.4 0.0**
RND pmax pmax
comp=Z,20nm,0.5s
OBN Obninsk 82.94 325 *e*P **P 13 43 08.2 -0.8**
comp=Z,161nm,0.5s
OBN Obninsk 82.94 325*d* iP **P 13 43 08.4 -0.7**
OBN pmax pmax
comp=Z,47nm,1.0s
MDM Murphy Dome 83.07 25 *e*P **P 13 43 09.6 -0.1**
comp=Z,6.0nm,0.8s
SML Sawmill 83.08 29 *e*P **P 13 43 10.1 +0.3**
comp=Z,18nm,0.8s
SML Sawmill 83.08 29 *e*P **P 13 43 10.1 +0.3**
SML pmax pmax
comp=Z,18nm,0.8s
WRH Wood River Hil 83.14 26 *e*P **P 13 43 09.8 -0.1**
comp=Z,13nm,1.2s
CCB Clear Creek Bu 83.25 26 *e*P **P 13 43 10.2 -0.3**
comp=Z,17nm,1.2s
DHY Denali Highway 83.49 27 *e*P **P 13 43 12.5 +0.6**
comp=Z,7.1nm,0.8s
IL1 Eielson Array 83.65 26 *e*P **P 13 43 10.9 -1.6**
ILAR Eielson Array 83.65 26 P **P 13 43 11.6 -0.8**
comp=Z,2.2nm,0.5s,baz=236,slow=4.9,SNR=54
ILB Eielson Array 83.65 26 *e*P **P 13 43 11.4 -1.1**
PAX Paxson 84.37 27 *e*P **P 13 43 16.5 +0.4**
comp=Z,21nm,2.0s
PAX Paxson 84.37 27 *e*P **P 13 43 16.5 +0.4**
PAX pmax pmax
comp=Z,21nm,2.0s
RIDG Independ'e Rid 84.60 27 *e*P **P 13 43 17.2 0.0**
comp=Z,9.8nm,1.0s
DOT Dot Lake 84.95 27 *e*P **P 13 43 19.0 +0.1**
comp=Z,62nm,1.8s
SCRK Sand Creek 84.95 26 *e*P **P 13 43 19.4 +0.4**
comp=Z,4.8nm,0.5s
ILGA Ilgaz 85.69 311 *e*P **P 13 43 22.5 -0.6**
comp=Z,11nm,0.9s
BR131 Keskin Array S 85.87 309 *e*P **P 13 43 22.6 -1.4**
BRTR Keskin Array B 85.87 309 P **P 13 43 22.8 -1.2**
comp=Z,6.8nm,0.7s,baz=114,slow=5.2,SNR=33
BRTR Keskin Array B 85.87 309*ce*P **P 13 43 22.7 -1.2**
BRTR pmax pmax
comp=Z,6.0nm,0.5s
PUL Pulkovo 85.98 330⇓ iP **P 13 43 23.8 0.0**
PUL pmax pmax
comp=Z,59nm,0.4s
KEV Kevo 86.07 340 *e*P **P 13 43 23.0 -1.0**
comp=Z,5.8nm,0.8s
KEV Kevo 86.07 340 *e*P **P 13 43 23.0 -1.0**
KEV pmax pmax
comp=Z,6.0nm,0.8s
EGAK Eagle 86.09 25 P **P 13 43 24.4 +0.2**
comp=Z,3.4nm,0.7s
ARCES ARCESS Array B 86.63 340 P **P 13 43 25.6 -1.1**
comp=Z,9.6nm,0.7s,baz=80,slow=6.2,SNR=34
ARCES ARCESS Array B 86.63 340 *e*P **P 13 43 25.4 -1.3**
ARCES ARCESS Array B 86.63 340 *e*P **P 13 43 25.4 -1.3**
VNDA Vanda 86.78 172 P **P 13 43 27.6 +0.5**
comp=Z,2.2nm,0.8s,baz=315,slow=6.5,SNR=8.9
VNDA Vanda 86.78 172 *e*P **P 13 43 27.4 +0.2**
comp=Z,6.3nm,0.8s
VNDA Vanda 86.78 172 *e*P **P 13 43 27.4 +0.2**
VNDA pmax pmax
comp=Z,6.0nm,0.8s
DAWY Dawson 86.95 26 *e*P **P 13 43 28.7 +0.3**
comp=Z,11nm,1.4s
SPA0 Spitsbergen Ar 86.97 349 *e*P **P 13 43 27.6 -0.5**
SPITS Spitsbergen Ar 86.97 349 P **P 13 43 27.8 -0.4**
comp=Z,12nm,0.5s,baz=49,slow=6.6,SNR=101
AKASG Malin Array Be 87.73 321 P **P 13 43 30.8 -1.5**
comp=Z,3.1nm,0.4s,baz=72,slow=5.0,SNR=16
AKBB Malin Array Si 87.73 321 *e*P **P 13 43 30.6 -1.6**
comp=Z,11nm,1.1s
KIEV Kiev 87.74 321 *e*P **P 13 43 30.3 -2.0**
comp=Z,9.9nm,1.1s
KIEV Kiev 87.74 321 P **P 13 43 30.8 -1.5**
KIEV Kiev 87.74 321⇑ iP **P 13 43 30.2 -2.0**
FIA1 FINESS Array S 87.81 332 *e*P **P 13 43 31.1 -1.2**
FINES FINESS Array B 87.81 332 P **P 13 43 31.3 -1.0**
comp=Z,12nm,0.7s,baz=65,slow=4.4,SNR=69
VSU Vasula 88.00 329*c* iP **P 13 43 32.2 -1.0**
VSU pmax pmax
comp=Z,44nm,0.7s
INK Inuvik 88.43 21 *e*P **P 13 43 34.6 -0.4**
comp=Z,5.5nm,0.8s
INK Inuvik 88.43 21 *e*P **P 13 43 34.6 -0.4**
INK pmax pmax
comp=Z,5.0nm,0.8s
SKAG Skagway 89.72 30 *e*P **P 13 43 42.3 +1.1**
comp=Z,7.4nm,0.9s
TESR Tescani 90.06 317⇑ iP **P 13 43 41.8 -1.4**
VRI Vrincioaia 90.12 316⇑ iP **P 13 43 43.3 -0.2**
VRI Vrincioaia 90.12 316 P **P 13 43 43.4 -0.1**
PLOR Plostina 90.18 316⇓ iP **P 13 43 43.3 -0.4**
PLOR Plostina 90.18 316 P **P 13 43 43.3 -0.4**
MLR Muntele Rosu 90.72 316 P **P 13 43 45.7 -0.7**
comp=Z,1.6nm,0.8s,baz=194,slow=4.2,SNR=10
MLR Muntele Rosu 90.72 316⇑ iP **P 13 43 46.4 0.0**
MLR Muntele Rosu 90.72 316 *e*P **P 13 43 45.5 -0.9**
comp=Z,6.7nm,0.7s
MLR Muntele Rosu 90.72 316 P **P 13 43 46.4 0.0**
SUW Suwalki 90.80 325 *e*P **P 13 43 45.3 -1.0**
SUW Suwalki 90.80 325 *e*P **P 13 43 45.1 -1.2**
comp=Z,37nm,0.9s
SUW Suwalki 90.80 325 *e*P **P 13 43 45.3 -1.0**
BUR04 Bucovina Ar. S 90.83 318 *e*P **P 13 43 46.0 -0.8**
BUR08 Bucovina Ar. S 90.83 318 *e*P **P 13 43 46.3 -0.5**
KLNR Kaliningrad 92.35 326⇑ iP **P 13 43 53.6 +0.2**
KLNR pmax pmax
comp=Z,49nm,0.8s
UZH Uzhgorod 92.53 319 *e*P **P 13 43 53.8 -0.7**
UZH *e* 13 46 04.6
DRGR 92.67 318⇑ iP **P 13 43 53.8 -1.4**
DRGR 92.67 318 P **P 13 43 53.8 -1.4**
CRVS Cervenica-Dubn 93.01 320 *e*P **P 13 43 56.8 +0.1**
CRVS pmax pmax
comp=Z,10.0nm,1.0s
CRVS Cervenica-Dubn 93.01 320 *e*P **P 13 43 56.8 +0.1**
VTS Vitosha 93.22 313⇑ iP **P 13 43 57.1 -0.9**
VTS Vitosha 93.22 313 P **P 13 43 57.1 -0.9**
IDI Anoyia 93.38 306⇓ iP **P 13 43 57.0 -1.7**
NIE Niedzica 93.62 320 *e*P **P 13 43 59.0 -0.5**
NIE Niedzica 93.62 320 *e*P **P 13 43 59.0 -0.5**
BZS Buzias 93.67 317⇓ iP **P 13 43 59.3 -0.5**
BZS Buzias 93.67 317 P **P 13 43 59.3 -0.5**
OJC Ojcow 93.73 321 *e*P **P 13 43 59.2 -0.6**
OJC Ojcow 93.73 321 *e*P **P 13 43 59.3 -0.6**
HFS Hagfors 94.01 332 P **P 13 43 59.7 -1.2**
comp=Z,3.5nm,0.5s,baz=100,slow=4.5,SNR=23
NC303 NORSAR Array S 94.66 333 *e*P **P 13 44 02.3 -1.6**
NB2 NORSAR Subarra 94.81 333 P **P 13 44 02.5 -2.1**
comp=Z,4.1nm,0.7s,baz=68,slow=4.6
NB2 NORSAR Subarra 94.81 333 P **P 13 44 02.0 -2.6**
NB2 pmax pmax
comp=Z,5.0nm,0.7s
NB2 NORSAR Subarra 94.81 333 P **P 13 44 02.5 -2.1**
baz=68,slow=4.6
NOA NORSAR Array B 94.81 333 P **P 13 44 03.6 -0.9**
comp=Z,2.8nm,0.6s,baz=354,slow=4.2,SNR=8.7
NC204 NORSAR Array S 94.91 334 *e*P **P 13 44 03.6 -1.5**
DIVS Divibare 95.16 315 *e*P **P 13 44 05.5 -1.1**
comp=Z,3.3nm,0.8s
BRG Berggiesshubel 97.10 323 *i* P Pdif 13 44 14.8 -0.2
comp=Z,5.2nm,0.8s
BRG Berggiesshubel 97.10 323 *i* P Pdif 13 44 14.8 -0.2
BRG pmax pmax
comp=Z,5.0nm,0.8s
LSZ Lusaka 97.15 255 P **P 13 44 14.4 -1.8**
comp=Z,2.3nm,0.7s,baz=85,slow=7.7,SNR=3.5
CLL Collm 97.50 324 *e*Pdif Pdif 13 44 16.0 -0.8
comp=Z,4.0nm,1.0s
CLL Collm 97.50 324 *e*P Pdif 13 44 16.0 -0.8
CLL pmax pmax
comp=Z,4.0nm,1.0s
GERES GERESS Array B 97.93 321 P Pdif 13 44 18.6 -0.3
comp=Z,0.7nm,0.4s,baz=77,slow=7.0,SNR=8.9
GEA0 GERESS Array S 97.93 321 *e*Pdif Pdif 13 44 17.8 -1.1
YKA Yellowknife Ar 97.94 24 P **P 13 44 18.8 +0.3**
comp=Z,1.3nm,0.9s,baz=296,slow=4.9,SNR=4.3
YKA Yellowknife Ar 97.94 24*ce*P **P 13 44 18.7 +0.2**
YKA pmax pmax
comp=Z,1.0nm,0.9s
RLMT Red Lodge 109.87 37 P **PKiKP 13 49 11.1 +0.6**
baz=302
GMRC Granite Mounta 110.42 49 P **PKiKP 13 49 12.6 +0.8**
baz=294
BELC Belle Mtn. Jos 110.48 50 P **PKiKP 13 49 12.4 +0.4**
baz=294
LAO LASA Array 110.76 34 P **PKiKP 13 49 12.8 +0.8**
baz=306
PDAR Pinedale Array 110.94 39 PKiKP **PKiKP 13 49 12.8 +0.1**
comp=Z,0.4nm,0.6s,baz=129,slow=2.1,SNR=5.2
O20A White River Ci 113.16 41 P **PKiKP 13 49 17.3 +0.4**
baz=302
RSSD Black Hills 113.52 36 P **PKiKP 13 49 17.1 -0.4**
baz=307
ULM Lac du Bonnet 113.65 27 PKiKP **PKiKP 13 49 16.8 -0.5**
comp=Z,3.5nm,0.5s,baz=274,slow=1.4,SNR=6.4
214A Organ Pipe Nat 113.76 51 P **PKiKP 13 49 17.0 -1.1**
baz=295
MVCO Mesa Verde 114.48 44 P PKPdf 13 49 20.3 +0.7
C31A Landman Farms, 114.52 29 P PKPdf 13 49 18.6 -0.4
baz=314
A33A Warroad 114.82 27 P PKPdf 13 49 19.1 -0.4
baz=316
S22A 4UR Ranch, Cre 115.35 43 P **PKPdf 13 49 21.9 +0.6**
baz=302
B34A Aery, Baudette 115.48 27 P **PKPdf 13 49 20.4 -0.5**
baz=317
D33A AnnSam, Wauburn 115.89 29 P **PKPdf 13 49 21.0 -0.7**
baz=315
C34A RKJ Ranch, Bem 115.97 28 P **PKPdf 13 49 20.9 -1.0**
baz=316
B35A Bob, Littlefor 115.99 27 P **PKPdf 13 49 21.6 -0.2**
baz=318
SDCO Great Sand Dun 116.24 42 P **PKPdf 13 49 23.1 +0.1**
baz=303
SDCO Great Sand Dun 116.24 42 *e*PKPdf **PKPdf 13 49 23.5 +0.4**
E33A Westby DABS, E 116.26 30 P **PKPdf 13 49 22.2 -0.2**
baz=315
E34A Wadena 116.66 29 P **PKPdf 13 49 22.8 -0.4**
baz=316
D35A Remer 116.78 28 P **PKPdf 13 49 22.9 -0.5**
baz=317
E35A Pequot Lakes 117.00 29 P **PKPdf 13 49 23.6 -0.2**
baz=316
TASM ASL Pad, Albuq 117.06 45 P **PKPdf 13 49 24.8 +0.3**
baz=301
ANMO Albuquerque 117.06 45 P **PKPdf 13 49 25.0 +0.5**
baz=301
TASL Snake Pit, Alb 117.06 45 P **PKPdf 13 49 25.2 +0.7**
baz=301
C37A Embarrass 117.15 26 P **PKPdf 13 49 23.8 -0.3**
baz=319
EYMN Ely 117.29 26 P **PKPdf 13 49 24.0 -0.3**
baz=320
T25A Trinidad 117.30 42 P **PKPdf 13 49 25.2 +0.2**
baz=304
T25A Trinidad 117.30 42 *e*PKPdf **PKPdf 13 49 25.6 +0.6**
121A Cookes Peak, D 117.30 48 P **PKPdf 13 49 25.3 +0.2**
baz=299
G34A Benson 117.33 30 P **PKPdf 13 49 24.4 -0.2**
baz=315
D37A Cotton 117.47 27 P **PKPdf 13 49 24.5 -0.3**
baz=319
E36A McGregor 117.57 28 P **PKPdf 13 49 24.8 -0.2**
baz=318
ECSD EROS Data Cent 117.88 32 P **PKPdf 13 49 25.4 -0.3**
baz=313
F36A Milaca 117.92 29 P **PKPdf 13 49 25.5 -0.2**
baz=317
G35A Watkins 117.92 30 P **PKPdf 13 49 26.0 +0.3**
baz=316
C39A Grand Marais 117.97 25 P **PKPdf 13 49 25.2 -0.5**
baz=321
H35A Sunnyside Ranc 118.12 30 P **PKPdf 13 49 26.3 +0.2**
baz=315
E38A The Farm, Brul 118.28 27 P **PKPdf 13 49 26.2 -0.1**
baz=319
C40A Isle Royale Na 118.31 25 P **PKPdf 13 49 26.3 0.0**
baz=322
BGNE Belgrade 118.59 35 P **PKPdf 13 49 26.7 -0.4**
baz=311
F38A Pierce - Schro 118.62 28 P **PKPdf 13 49 26.8 -0.2**
baz=319
SPMN Marine on St. 118.73 29 P **PKPdf 13 49 27.1 -0.1**
baz=318
E39A Mellen 118.90 27 P **PKPdf 13 49 27.5 0.0**
baz=320,SNR=8.2
F39A Loretta 119.09 27 P **PKPdf 13 49 27.8 -0.1**
baz=320,SNR=6.3
E40A Wakefield 119.14 26 P **PKPdf 13 49 28.2 +0.2**
baz=321
H37A Dierke Farm, C 119.15 29 P **PKPdf 13 49 28.1 0.0**
baz=317
TOA0 Torodi Ar. Sit 119.21 289 *e*PKPdf **PKPdf 13 49 27.4 -1.6**
TORD Torodi Ar. Bea 119.21 289 PKP **PKPdf 13 49 28.2 -0.7**
comp=Z,2.8nm,0.4s,baz=63,slow=1.9,SNR=36
TORD PKKPbc **PKKPbc 13 59 44.7 +0.5**
comp=Z,0.4nm,0.4s,baz=269,slow=4.0,SNR=4.5
D41A Chassel 119.22 25 P **PKPdf 13 49 28.3 +0.2**
baz=323
I37A Lemond, Waseca 119.33 30 P **PKPdf 13 49 28.4 0.0**
baz=317
J36A Seneca 1, Swea 119.35 31 P **PKPdf 13 49 28.4 -0.1**
baz=315
F40A Park Falls 119.45 27 P **PKPdf 13 49 28.4 -0.2**
baz=321,SNR=5.9
G39A Holcombe 119.46 28 P **PKPdf 13 49 28.5 -0.2**
baz=319,SNR=5.5
MNTX Cornudas Mount 119.48 48 P **PKPdf 13 49 29.3 +0.2**
baz=300
MNTX Cornudas Mount 119.48 48 *e*PKPdf **PKPdf 13 49 29.5 +0.4**
E41A Kenton 119.53 25 P **PKPdf 13 49 28.7 0.0**
baz=322
J37A Redenius Farm, 119.76 31 P **PKPdf 13 49 29.0 -0.3**
baz=316
K36A Gilmore City 119.78 32 P **PKPdf 13 49 29.2 -0.2**
baz=315
I38A Scanlan Farm, 119.84 29 P **PKPdf 13 49 29.2 -0.2**
baz=318
H39A Augusta 119.86 28 P **PKPdf 13 49 29.2 -0.2**
baz=319
G40A Rib Lake 119.91 27 P **PKPdf 13 49 29.5 0.0**
baz=320
E42A Champion 120.00 25 P **PKPdf 13 49 29.6 0.0**
baz=323
F41A Three Lakes 120.04 26 P **PKPdf 13 49 29.8 +0.1**
baz=322
L36A Harm Buss Farm 120.04 32 P **PKPdf 13 49 29.6 -0.3**
baz=315
K37A Belmond 120.11 31 P **PKPdf 13 49 29.5 -0.4**
baz=316
H40A Chili 120.32 28 P **PKPdf 13 49 30.2 -0.1**
baz=320
I39A Houston 120.37 29 P **PKPdf 13 49 29.9 -0.5**
baz=318,SNR=7.0
E43A Lone Tree Farm 120.42 24 P **PKPdf 13 49 30.5 +0.1**
baz=324
L37A Phoenix Point, 120.50 32 P **PKPdf 13 49 30.2 -0.5**
baz=316
H41A Junction City 120.66 27 P **PKPdf 13 49 30.6 -0.4**
baz=321
J39A Decorah 120.66 30 P **PKPdf 13 49 30.3 -0.7**
baz=318,SNR=9.8
G42A Mountain 120.72 26 P **PKPdf 13 49 31.1 +0.1**
baz=322
F43A Flat Rock, Esc 120.79 25 P **PKPdf 13 49 31.4 +0.3**
baz=324
M37A Trindle Farm, 120.86 33 P **PKPdf 13 49 31.6 +0.2**

	baz=315						
L38A	Oak Wood Farm, baz=316	120.91	31	P	PKPdf	13 49 31.1	-0.4
I41A	Arkdale baz=320	120.99	28	P	PKPdf	13 49 31.2	-0.4
G43A	Wallace baz=323	121.03	26	P	PKPdf	13 49 31.6	0.0
J40A	Soldiers Grove baz=319	121.08	29	P	PKPdf	13 49 31.1	-0.7
H42A	Shiocton baz=322	121.25	27	P	PKPdf	13 49 31.9	-0.2
M38A	Pleasantville baz=316	121.30	32	P	PKPdf	13 49 32.1	-0.2
L39A	Vinton baz=317,SNR=5.0	121.41	31	P	PKPdf	13 49 32.0	-0.4
K40A	Colesburg baz=318,SNR=7.0	121.41	30	P	PKPdf	13 49 31.9	-0.5
J41A	Loganville baz=320	121.45	28	P	PKPdf	13 49 31.9	-0.6
I42A	Draeger Farm, baz=321	121.56	27	P	PKPdf	13 49 32.2	-0.4
F45A	CMU Biological baz=325	121.58	24	P	PKPdf	13 49 32.8	+0.1
O37A	Wolven Farm, M baz=314	121.67	34	P	PKPdf	13 49 32.9	-0.1
JFWS	Jewell Farm baz=319,SNR=5.4	121.69	29	P	PKPdf	13 49 32.5	-0.5
JFWS	Jewell Farm	121.69	29	ePKPdf	PKPdf	13 49 32.3	-0.7
N38A	Joes South For baz=315	121.72	33	P	PKPdf	13 49 32.8	-0.3
M39A	Webster baz=317	121.79	31	P	PKPdf	13 49 33.0	-0.2
F46A	Macinaw City C baz=326	121.81	23	P	PKPdf	13 49 33.4	+0.3
L40A	Anamosa baz=318,SNR=5.0	121.84	30	P	PKPdf	13 49 32.8	-0.5
K41A	Shullsburg baz=319	121.89	29	P	PKPdf	13 49 32.9	-0.5
J42A	Columbus baz=321	121.91	28	P	PKPdf	13 49 32.7	-0.6
TX31	Lajitas Ar. Si	121.95	49	ePKPdf	PKPdf	13 49 33.9	-0.1
TXAR	Lajitas Array comp=Z,0.8nm,0.6s,baz=251,slow=1.0,SNR=12	121.95	49	PKP	PKPdf	13 49 33.9	-0.1
P37A	Lathrop baz=314	121.96	34	P	PKPdf	13 49 33.2	-0.4
N39A	Derby Farms, D baz=316	122.05	32	P	PKPdf	13 49 33.4	-0.3
O38A	Galt baz=315	122.07	33	P	PKPdf	13 49 33.6	-0.2
J43A	Natural Harves baz=321	122.18	27	P	PKPdf	13 49 33.4	-0.5
K42A	Prairie Point, baz=320	122.22	28	P	PKPdf	13 49 33.6	-0.4
P38A	Dawn baz=315	122.39	34	P	PKPdf	13 49 34.3	-0.1
WMOK	Wichita Mounta baz=307	122.41	41	P	PKPdf	13 49 34.4	-0.2
WMOK	Wichita Mounta	122.41	41	ePKPdf	PKPdf	13 49 34.7	+0.1
N40A	Mertquake, Sal baz=317	122.53	31	P	PKPdf	13 49 34.4	-0.2
L42A	Oliver, Polo baz=320	122.66	29	P	PKPdf	13 49 34.3	-0.5
K43A	Burlington baz=321	122.75	28	P	PKPdf	13 49 34.6	-0.4
Q38A	Cooks Store, C baz=314	122.80	34	P	PKPdf	13 49 34.8	-0.4
P39B	Salisbury baz=315,SNR=5.7	122.91	33	P	PKPdf	13 49 35.3	-0.1
O40A	La Belle baz=316	122.93	32	P	PKPdf	13 49 35.2	-0.2
L43A	Garden Prairie baz=321	122.96	28	P	PKPdf	13 49 35.1	-0.3
Q39A	Willow Grove F baz=315	123.10	34	P	PKPdf	13 49 35.8	0.0
P40A	Paris baz=316	123.26	33	P	PKPdf	13 49 36.1	0.0
N42A	Yates City baz=319	123.36	30	P	PKPdf	13 49 35.7	-0.5
M43A	Waltham Townsh baz=320	123.43	29	P	PKPdf	13 49 36.0	-0.3
O41A	Passleys Farm, baz=318	123.45	32	P	PKPdf	13 49 36.0	-0.4
S38A	Stockton baz=313	123.56	36	P	PKPdf	13 49 36.3	-0.4
R39A	Chumby, Stover baz=314,SNR=8.5	123.58	34	P	PKPdf	13 49 36.6	-0.1
Q40A	Laux Farm, Aux baz=316	123.63	33	P	PKPdf	13 49 36.8	0.0
P41A	Barry, Barry baz=317	123.68	32	P	PKPdf	13 49 36.6	-0.3
T38A	Diamond baz=313	123.73	36	P	PKPdf	13 49 37.0	-0.1
S39A	Bolivar baz=314,SNR=11	123.85	35	P	PKPdf	13 49 37.2	-0.1
M44A	Midewin, Midew baz=321	123.91	29	P	PKPdf	13 49 37.3	0.0
HDIL	Hopedale baz=319	123.94	30	P	PKPdf	13 49 37.1	-0.2
R40A	Maddies Statio baz=315,SNR=6.1	124.03	34	P	PKPdf	13 49 37.5	0.0
Q41A	Truxton baz=317	124.12	33	P	PKPdf	13 49 37.7	0.0
KOWA	Kowa comp=Z,3.1nm,0.3s,baz=73,slow=3.0,SNR=10	124.12	292	PKP	PKPdf	13 49 38.2	-0.2
P42A	Winchester baz=318,SNR=5.5	124.12	32	P	PKPdf	13 49 37.6	-0.1
JCT	Junction City baz=304	124.18	46	P	PKPdf	13 49 38.5	+0.3
JCT	Junction City	124.18	46	ePKPdf	PKPdf	13 49 38.0	-0.2
T39A	Clever baz=314,SNR=8.1	124.28	36	P	PKPdf	13 49 38.2	+0.1
N44A	Piper City baz=321	124.32	29	P	PKPdf	13 49 38.1	+0.1
S40A	Lebanon baz=315	124.38	35	P	PKPdf	13 49 38.2	-0.1
P43A	Skaggs, Pawnee baz=319	124.51	31	P	PKPdf	13 49 38.6	+0.2
R41A	Rosebud baz=316,SNR=6.1	124.51	33	P	PKPdf	13 49 38.6	+0.1
N45A	Kentland baz=321	124.58	29	P	PKPdf	13 49 38.7	+0.1
U39A	Green Forest baz=313,SNR=6.1	124.66	36	P	PKPdf	13 49 38.8	-0.1
T40A	Mansfield baz=314,SNR=8.3	124.69	35	P	PKPdf	13 49 38.9	-0.1
CCM	Cathedral Cave baz=316	124.76	33	P	PKPdf	13 49 39.1	+0.1
S41A	Jillco Farms, baz=316,SNR=9.2	124.81	34	P	PKPdf	13 49 39.3	+0.1
N46A	Monticello baz=322	124.91	28	P	PKPdf	13 49 39.4	+0.2
V39A	Pettigrew baz=313	124.93	37	P	PKPdf	13 49 39.5	0.0
Q43A	New Douglas baz=318	124.94	32	P	PKPdf	13 49 39.4	+0.1
U40A	Yellville baz=314,SNR=14	125.04	36	P	PKPdf	13 49 39.8	+0.2
P44A	Sand Creek, Wi baz=320	125.10	30	P	PKPdf	13 49 39.8	+0.2
T41A	Mountain View baz=315,SNR=6.5	125.19	35	P	PKPdf	13 49 40.0	+0.1
S42A	Caledonia baz=316,SNR=6.7	125.21	33	P	PKPdf	13 49 40.1	+0.2
FVM	French Village	125.26	33	ePKPpre	PKPpre	13 49 30.8	
FVM	French Village	125.26	33	ePKIKP	PKPpre	13 49 30.8	
W39A	Magazine baz=312	125.27	38	P	PKPdf	13 49 40.3	+0.2
R43A	Red Bud baz=318	125.31	32	P	PKPdf	13 49 40.2	+0.2
V40A	Witts Springs baz=314,SNR=10	125.44	37	P	PKPdf	13 49 40.5	+0.1
V40A	Witts Springs	125.44	37	ePKPdf	PKPdf	13 49 40.5	+0.1
P45A	Graceland, Par baz=320	125.49	30	P	PKPdf	13 49 40.6	+0.3
X39A	Fountain Ranch baz=312,SNR=10	125.53	39	P	PKPdf	13 49 41.0	+0.4
T42A	Van Buren baz=316,SNR=6.6	125.58	34	P	PKPdf	13 49 40.9	+0.3
U41A	Viola baz=315,SNR=8.2	125.59	35	P	PKPdf	13 49 40.8	+0.1
P46A	Rosedale baz=321	125.68	29	P	PKPdf	13 49 41.0	+0.3
O47A	Sheridan baz=322	125.69	28	P	PKPdf	13 49 40.8	+0.1
W40A	Ferguson Farm, baz=313	125.71	37	P	PKPdf	13 49 41.0	+0.1
S43A	Fulton Ridge, baz=317	125.75	33	P	PKPdf	13 49 41.0	+0.1
Q45A	Warren Harvey, baz=320	125.77	31	P	PKPdf	13 49 41.4	+0.5
R44A	Waltonville baz=318	125.78	32	P	PKPdf	13 49 41.2	+0.3
PQI	Presque Isle	125.78	10	ePKPdf	PKPdf	13 49 40.2	-0.5
MIAR	Mount Ida baz=312,SNR=9.2	125.83	38	P	PKPdf	13 49 41.7	+0.5
MIAR	Mount Ida	125.83	38	ePKPdf	PKPdf	13 49 40.9	-0.2
MIAR	Mount Ida	125.83	38	ePKIKP	PKPdf	13 49 40.9	-0.2
V41A	Mountainview baz=314	125.84	36	P	PKPdf	13 49 41.2	0.0
U42A	Revenden baz=315,SNR=7.4	125.98	35	P	PKPdf	13 49 41.6	+0.3
T43A	Greenville baz=317	125.98	34	P	PKPdf	13 49 41.4	+0.1
S44A	Carbondale baz=318	126.10	32	P	PKPdf	13 49 42.0	+0.5
R45A	Skylar, Fairfi baz=319	126.16	31	P	PKPdf	13 49 42.3	+0.6
W41B	Gary Mavity, V baz=314	126.21	37	P	PKPdf	13 49 42.0	+0.2
P47A	Martinsville baz=322	126.24	29	P	PKPdf	13 49 42.1	+0.4
LONY	Lake Ozonia baz=337	126.25	16	P	PKPdf	13 49 41.9	+0.2
V42A	Cord baz=315	126.28	36	P	PKPdf	13 49 42.1	+0.1
S45A	Carrier Mills baz=319	126.47	32	P	PKPdf	13 49 42.5	+0.3
Z40A	Long Farm, Mag baz=312	126.80	39	P	PKPdf	13 49 43.3	+0.3
PKME	Peaks-Kenny Pk baz=344	126.90	12	P	PKPdf	13 49 43.4	+0.5
KIC	Kosan Boka comp=Z,157nm,2.1s	127.04	283	ePKIKP	PKPdf	13 49 44.1	+0.1
R47A	Wooly Knot Far baz=321	127.04	30	P	PKPdf	13 49 43.7	+0.3
DBIC	Dimbookro comp=Z,2.6nm,0.5s,baz=99,slow=5.4,SNR=4.3	127.08	284	PKP	PKPdf	13 49 43.2	-0.8
ACSO	Alum Creek Sta baz=326	127.13	26	P	PKPdf	13 49 43.8	+0.3
ACSO	Alum Creek Sta	127.13	26	ePKPdf	PKPdf	13 49 43.1	-0.4
WCI	Wyandotte Cave baz=321	127.21	30	P	PKPdf	13 49 43.9	+0.3
TIC	Toumodi	127.25	284	ePKIKP	PKPdf	13 49 44.3	-0.1
R48A	Northridge Ran baz=322	127.28	29	P	PKPdf	13 49 44.2	+0.4
LBNH	Lisbon baz=340	127.30	14	P	PKPdf	13 49 44.5	+0.9
T46A	Princeton baz=319	127.30	32	P	PKPdf	13 49 44.4	+0.6
LIC	Lamto comp=Z,119nm,1.8s	127.35	283	ePKIKP	PKPdf	13 49 44.5	-0.1
M54A	Oil Creek Stat baz=330	127.38	22	P	PKPdf	13 49 44.4	+0.4
M54A	Oil Creek Stat	127.38	22	ePKPdf	PKPdf	13 49 43.5	-0.4
S48A	Wiedeman Farm, baz=321	127.77	30	P	PKPdf	13 49 45.4	+0.7
WVT	Waverly baz=319	128.02	33	P	PKPdf	13 49 45.9	+0.6
WVT	Waverly	128.02	33	ePKPdf	PKPdf	13 49 44.9	-0.4
WVT	Waverly	128.02	33	ePKIKP	PKPdf	13 49 44.9	-0.4
T48A	Bowling Green baz=321	128.03	31	P	PKPdf	13 49 46.0	+0.8
BINY	Binghamton baz=335	128.04	19	P	PKPdf	13 49 45.7	+0.5
U47A	Clarksville baz=320	128.07	32	P	PKPdf	13 49 46.0	+0.7
V46A	Holladay baz=318	128.11	33	P	PKPdf	13 49 45.5	0.0
341A	Kurthwood baz=311	128.21	41	P	PKPdf	13 49 46.7	+0.9
OXF	Oxford baz=316	128.33	35	P	PKPdf	13 49 46.4	+0.5
U48A	Cassie Pea, Po baz=320	128.41	31	P	PKPdf	13 49 46.7	+0.6
V47A	Nunnelly baz=319	128.41	33	P	PKPdf	13 49 46.4	+0.3
T49A	Edmonton baz=322	128.46	30	P	PKPdf	13 49 46.3	+0.2
W46A	Michie baz=318	128.46	34	P	PKPdf	13 49 46.3	+0.2
PLAL	Pickwick Lake	128.74	34	ePKPdf	PKPdf	13 49 46.4	-0.3
SSPA	Standing Stone baz=332	128.79	21	P	PKPdf	13 49 46.8	+0.2
SSPA	Standing Stone	128.79	21	ePKPdf	PKPdf	13 49 46.5	-0.1
U49A	Red Boiling Sp baz=321	128.80	31	P	PKPdf	13 49 47.3	+0.6
W47A	Westpoint baz=319	128.81	33	P	PKPdf	13 49 47.0	+0.2
V48A	Smith Brothers baz=320	128.85	32	P	PKPdf	13 49 47.1	+0.2
O56A	Blue Knob Stat baz=331	128.87	22	P	PKPdf	13 49 47.3	+0.4
T50A	Nancy baz=322	128.87	30	P	PKPdf	13 49 47.5	+0.6
S51A	Beattyville baz=324	128.97	28	P	PKPdf	13 49 47.6	+0.5
X47A	Russelville baz=318	129.21	34	P	PKPdf	13 49 47.9	+0.3
343A	Vidalia baz=312	129.24	40	P	PKPdf	13 49 47.9	+0.2
W48A	Pulaski baz=319	129.25	33	P	PKPdf	13 49 47.8	+0.2
N59A	State Game Lan baz=335	129.27	19	P	PKPdf	13 49 47.9	+0.4
V49A	McMinnville baz=321	129.31	31	P	PKPdf	13 49 48.0	+0.2
W49A	Belvidere baz=320	129.62	32	P	PKPdf	13 49 48.7	+0.4
Y47A	UCPARC, Winfie baz=318	129.66	35	P	PKPdf	13 49 48.8	+0.4
X48A	Hartselle baz=319	129.70	33	P	PKPdf	13 49 48.6	+0.1
V50A	Pikeville baz=322	129.80	31	P	PKPdf	13 49 49.1	+0.4
Y48A	Jasper baz=318	130.03	34	P	PKPdf	13 49 49.4	+0.2
X49A	Woodville baz=320	130.05	33	P	PKPdf	13 49 49.5	+0.4
W50A	Signal Mountai baz=321	130.06	31	P	PKPdf	13 49 49.8	+0.6
Z48A	Northport baz=318	130.22	35	P	PKPdf	13 49 49.8	+0.3
V52A	Sevierville baz=323	130.41	29	P	PKPdf	13 49 50.4	+0.6
Y49A	Blount Mountai baz=319	130.49	33	P	PKPdf	13 49 50.4	+0.4
LRAL	Lakeview Retre baz=318	130.78	35	P	PKPdf	13 49 51.2	+0.6
X51A	Calhoun baz=321	130.78	32	P	PKPdf	13 49 51.3	+0.7
Y50A	Piedmont baz=320	130.84	33	P	PKPdf	13 49 51.5	+0.8
W52A	Murphy baz=322	130.84	30	P	PKPdf	13 49 51.5	+0.8
Z49A	Columbiana baz=319	130.93	34	P	PKPdf	13 49 51.7	+0.8
V53A	Saluda baz=324	130.93	29	P	PKPdf	13 49 51.7	+0.8
W53A	Cullowhee baz=323	131.16	30	P	PKPdf	13 49 52.0	+0.6
Y51A	Rockmart baz=321	131.19	32	P	PKPdf	13 49 52.3	+0.9
Z50A	Ashland baz=319	131.22	34	P	PKPdf	13 49 52.3	+0.8
149A	Jones baz=318	131.22	35	P	PKPdf	13 49 52.5	+1.0
X52A	Dahlonega baz=322	131.25	31	P	PKPdf	13 49 52.4	+0.9
348A	Jackson baz=316	131.44	37	P	PKPdf	13 49 52.5	+0.6
249A	Camden baz=317	131.49	36	P	PKPdf	13 49 52.6	+0.6
X53A	Estanollee baz=323	131.62	30	P	PKPdf	13 49 52.9	+0.7
150A	Eclectic baz=319	131.65	34	P	PKPdf	13 49 53.0	+0.8
Y52A	Lilburn baz=322	131.74	31	P	PKPdf	13 49 53.4	+1.0
448A	Bay Minette baz=316	131.81	37	P	PKPdf	13 49 53.9	+1.3
349A	Repton baz=317	131.90	36	P	PKPdf	13 49 53.7	+1.0
250A	Grady baz=318	131.98	35	P	PKPdf	13 49 53.7	+0.8
Y53A	Monroe baz=322	131.99	31	P	PKPdf	13 49 54.0	+1.1
KMSC	Kings Mountain baz=326	132.06	28	P	PKPdf	13 49 53.8	+0.9
KMSC	Kings Mountain	132.06	28	ePKPdf	PKPdf	13 49 54.5	+1.6
Z52A	Williamson baz=321	132.08	32	P	PKPdf	13 49 53.9	+0.8
152A	Waverly Hall baz=320	132.32	33	P	PKPdf	13 49 54.4	+0.9
251A	Midway baz=319	132.38	34	P	PKPdf	13 49 54.7	+1.0
GOGA	Godfrey baz=322	132.40	31	P	PKPdf	13 49 54.3	+0.7
Y54A	Tignall baz=323	132.44	30	P	PKPdf	13 49 54.3	+0.6
Z53A	Monticello baz=322	132.45	31	P	PKPdf	13 49 54.3	+0.6
Z54A	Sparta baz=323	132.86	31	P	PKPdf	13 49 55.2	+0.7
Z55A	Blythe baz=324	133.23	30	P	PKPdf	13 49 55.8	+0.6
451A	Vernon baz=318	133.28	36	P	PKPdf	13 49 55.8	+0.4
155A	Kite baz=323	133.54	31	P	PKPdf	13 49 56.5	+0.7
353A	Camilla baz=320	133.60	34	P	PKPdf	13 49 56.9	+0.9
PLCA	Paso Flores comp=Z,9.9nm,0.6s,baz=247,slow=2.8,SNR=23	143.81	161	PKP	PKPdf	13 50 14.5	+0.2
PLCA	Paso Flores	143.81	161	ePKPbc	PKPab	13 50 13.9	+0.2
PLCA	Paso Flores	143.81	161	ePKIKP	PKPab	13 50 13.9	+0.1
JTS	JuntasAbangare comp=Z,11nm,0.4s,baz=39,slow=8.3,SNR=16	146.73	60	PKPbc	PKPbc	13 50 22.6	-0.1
JTS	JuntasAbangare	146.73	60	ePKPbc	PKPbc	13 50 22.5	-0.3
JTS	JuntasAbangare	146.73	60	ePKP2	PKPbc	13 50 22.5	-0.3
SDV	Santo Domingo comp=Z,3.8nm,0.5s,baz=258,slow=5.2,SNR=4.5	158.82	43	PKP	PKPdf	13 50 37.5	+0.1
SDV				PKPab	PKPab	13 51 17.7	+0.3
	comp=Z,2.7nm,0.3s,baz=326,slow=6.0,SNR=4.1						
MNMC	Minye Minye	162.07	135	ePKPdf	PKPdf	13 50 41.9	+1.0
LPAZ	La Paz comp=Z,2.9nm,0.8s,baz=165,slow=1.8,SNR=7.8	164.95	130	PKP	PKPdf	13 50 43.4	-0.6
LPAZ	La Paz	164.95	130	ePKPdf	PKPdf	13 50 42.9	-1.1
LPAZ	La Paz	164.95	130	ePKIKP	PKPdf	13 50 42.9	-1.1

ISCJB ***11*** *13:37:28.7±0.8, 50°.2S±0°.1×112°.3E±0°.4, h10km, mb4.3/7, MS3.5/8, Error ellipse: s-maj=34.4km s-min=15.1km az=19.8*

IDC ***11*** *13:37:29.0±0.9, 50°.38S×112°.80E, h0km, mb4.4/6, mb1 4.5/6, mb1mx4. 1/44, mbtmp4.4/6, MS3.6/8, Ms1 3.6/8, ms1mx3.1/38, Error ellipse: s-maj=42.7km s-min=19.3km az=104.0*

NEIC ***11*** *13:37:30.8±0.6, 50°.35S×112°.56E, h10km, mb4.4/1, Error ellipse: s-maj=31.3km s-min=16.1km az=102.0*

ISC 11 13:37:30.5±0.8, 50°.3S±0°.1×112°.6E±0°.2, h10km, n30, σ1°.07/23, mb4.3/7, MS3.5/8, 1C, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H baz=183,slow=74,SNR=96	15.45	5	T	T	13 56 54.3	
H01W1	Cape Leeuwin H baz=183,slow=74,SNR=123	15.46	5	T	T	13 56 52.2	
H01W3	Cape Leeuwin H baz=183,slow=74,SNR=107	15.47	5	T	T	13 56 51.9	
STKA	Stephens Creek comp=Z,50nm,20.9s,baz=207,slow=32	28.30	60	LR	LR	13 52 34.7	
MAW	Mawson 2.7nm,1.0s,baz=56,slow=9.2,SNR=4.5	29.82	216	P	P	13 43 36.5	-0.7
MAW				LR	LR	13 53 26.4	
	comp=Z,86nm,20.2s,baz=74,slow=32						
VNDA	Vanda 6.3nm,0.9s,baz=348,slow=3.6,SNR=16	32.84	162	P	P	13 44 01.1	-2.6
VNDA				LR	LR	13 55 50.2	
	comp=Z,73nm,21.8s,baz=285,slow=34						
SBA	Scott Base 6.0nm,1.2s	33.93	162	P	P	13 44 15.1	+1.9
WRA	Warramunga Arr 3.5nm,0.9s,baz=204,slow=8.5,SNR=5.0	34.86	37	P	P	13 44 21.6	-0.3
SYO	Syowa Base	38.43	214	⇑ eP	P	13 44 50.2	-1.5
QSPA	South Pole Qui 4.8nm,0.8s,baz=308,slow=2.8,SNR=11	39.81	180	P	P	13 45 04.1	+0.6
QSPA	South Pole Qui	39.81	180	eP	P	13 45 04.2	+0.7
BATI	Baumata comp=Z,160nm,18.3s,baz=198,slow=34	41.02	17	LR	LR	14 00 33.9	
LEM	Lembang comp=Z,96nm,21.5s,baz=196,slow=30	43.55	353	LR	LR	13 59 19.4	
SNAA	Sanae	50.14	202	P	P	13 46 26.4	+0.9
SNAA	Sanae 6.9nm,0.9s,baz=137,slow=10,SNR=26	50.14	202	P	P	13 46 25.9	+0.4
SNAA				LR	LR	14 05 18.8	
	comp=Z,58nm,19.9s,baz=88,slow=33						
VNA2	Neumayer--Watz slow=7.1	51.73	201	P	P	13 46 38.3	+0.9
VNA3	Neumayer Olymp	52.02	200	P	P	13 46 40.0	+0.5
VNA1	Neumayer--Stat	52.12	201	P	P	13 46 41.3	+1.1
CMAR	Chiang Mai Arr 2.0nm,0.9s,baz=195,slow=5.5,SNR=6.3	69.54	346	P	P	13 48 39.8	+0.5
CMAR				LR	LR	14 18 10.4	
	comp=Z,22nm,18.1s,baz=45,slow=35						
PLCA	Paso Flores comp=Z,43nm,18.4s,baz=219,slow=36	89.28	178	LR	LR	14 30 46.7	
WVOR	Wild Horse Val	144.38	83	ePKPdf	PKPdf	13 57 06.3	0.0
WUAZ	Wupatki	145.09	98	ePKPdf	PKPdf	13 57 08.5	+0.6
TXAR	Lajitas Array 1.1nm,0.8s,baz=202,slow=5.5,SNR=10	145.61	114	PKPbc	PKPab	13 57 09.4	0.0
MNTX	Cornudas Mount	146.29	109	ePKPbc	PKPab	13 57 11.2	-0.7
BMO	Blue Mountains	146.40	80	ePKPbc	PKPab	13 57 11.4	-0.6
MFID	Camas Ranch	146.66	83	ePKPbc	PKPab	13 57 13.3	+0.2
SDCO	Great Sand Dun	150.18	100	ePKPbc	PKPbc	13 57 21.8	+0.3
BOZ	Bozeman (W)	150.33	82	ePKPbc	PKPbc	13 57 22.8	+1.4
PDAR	Pinedale Array 0.8nm,0.4s,baz=204,slow=3.3,SNR=7.4	150.34	88	PKPbc	PKPbc	13 57 21.9	+0.2
YKA	Yellowknife Ar 2.2nm,0.9s,baz=282,slow=2.2,SNR=5.0	151.87	46	PKPbc	PKPbc	13 57 22.8	-1.4

BUC 11 13:43:11.3±0.8, 44°.31N×28°.53E, h10km±2km, MD2.2/2, 8C, Error ellipse: s-maj=6.8km s-min=2.7km az=347.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIRR	Tirgusor	0.17	330	⇑ iP	Pg	13 43 15.2	+0.2
TIRR				S	Sg	13 43 17.9	+0.4
TIRR	Tirgusor	0.17	330	⇑ iP	Pg	13 43 15.2	+0.2
TIRR				i S	Sg	13 43 17.9	+0.4
TLB	Topalu	0.45	308	⇑ iP	Pg	13 43 20.5	+0.5
TLB				S	Sb	13 43 27.3	-0.7
TLB	Topalu	0.45	308	⇑ iP	Pg	13 43 20.5	+0.5
TLB				i S	Sb	13 43 27.3	-0.7
HARR	Harsova	0.57	312	⇑ iP	Pg	13 43 22.9	+0.5
HARR	Harsova	0.57	312	⇑ iP	Pg	13 43 22.9	+0.5
TLCR		0.90	13	⇑ iP	Pb	13 43 29.2	+0.2
TLCR		0.90	13	⇑ iP	Pb	13 43 29.2	+0.2

SJA 11 13:45:57.1±0.5, 31°.82S×68°.73W, h9km±2km, ML3.0, MW4.0, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTCV	Cerro Valdivia	0.16	105	i P	Pg	13 46 01.2	+0.5
ZON	Zonda	0.28	9	i P	Pg	13 46 03.4	+0.7
ZON				i S	Sb	13 46 08.2	-0.9
SJA	San Juan	0.33	26	i P	Pb	13 46 04.5	-0.6
SJA				i S	Sb	13 46 09.9	-0.5
RTLS	Leoncito	0.49	272	i P	Pb	13 46 07.9	-0.1
RTLS				i S	Sb	13 46 15.6	+0.3
RTLS				IAML		13 46 17.4	
	comp=Z,1μm,0.4s						
RTLL	Cerro Villicun	0.54	24	i P	Pg	13 46 07.8	+0.2
RTLL				i S	Sb	13 46 16.2	-0.4
AUSP	Uspallata	0.69	234	i P	Pb	13 46 11.4	-0.1
AUSP				i S	Sb	13 46 21.9	+0.7
ASAL	Salagasta	0.77	187	i P	Pb	13 46 12.4	-0.4
ASAL				i S	Sb	13 46 23.8	+0.3
AMOG	MOGNA	0.90	13	i P	Pb	13 46 15.1	+0.1
ARCO	CERRO ARCO	1.03	190	i P	Pb	13 46 17.3	0.0
ARCO				IAML		13 46 43.5	
	comp=Z,392nm,0.3s						
ACAN	Cantantal	1.38	109	i P	Pb	13 46 23.1	0.0

ISK ***11*** *14:00:17.8, 36°.41N×28°.98E, h18km, ML4.0/18*

*DDA **11** 14:00:17.7, 36°.43N×29°.01E, h29km, Ml4.0*
*ATH **11** 14:00:18.0, 36°.42N×28°.98E, h37km±2km, ML3.4/6, Error ellipse: s-maj=2.3km s-min=0.6km az=153.0*
*CSEM **11** 14:00:17.8±0.1, 36°.33N×29°.02E, h20km, ML4.0, Error ellipse: s-maj=2.6km s-min=2.0km az=13.0*
*HLW **11** 14:00:18.5, 36°.26N×29°.13E, h8km±10km, Md4.0, Ml4.1*
*THE **11** 14:00:18.7, 36°.40N×28°.97E, h12km±1km, ML3.3/8, Error ellipse: s-maj=1.2km s-min=0.5km az=99.0*
*IDC **11** 14:00:19.3±1.6, 36°.15N×29°.14E, h49km±22km, mb3.1/3, mb1 3.7/9, mb1mx3.3/61, mbtmp3.6/9, ML3.6/5, MS3.0/2, Ms1 3.0/2, ms1mx2.3/27, Error ellipse: s-maj=17.1km s-min=15.5km az=129.0*
*NIC **11** 14:00:20.6±0.1, 36°.37N×29°.36E, h16km, mb4.1, ML3.7*
ISC 11 14:00:17.2±0.9, 36°.35N±0°.02×29°.03E±0°.02, h22km±7km, n235, σ1$22/302, mb3.1/3, 6C-4D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.29**	**8**	PG	**Pb**	**14 00 23.7**	**-0.2**
FETY				SG	**Sb**	**14 00 28.1**	**-0.3**
FETY	**Fethiye**	**0.29**	**8**	P	**Pb**	**14 00 23.7**	**-0.2**
FETY				S	**Sb**	**14 00 28.8**	**+0.4**
FETY	**Fethiye**	**0.29**	**8**	P	**Pb**	**14 00 23.7**	**-0.2**
FETY				*e*Sg	**Sb**	**14 00 28.1**	**-0.3**
AKAS	**Kas**	**0.48**	**104**	PG	**Pn**	**14 00 28.5**	**-0.4**
AKAS				SG	**Sn**	**14 00 37.0**	**+0.4**
AKAS	**Kas**	**0.48**	**104**	⇑*i*P	**Pn**	**14 00 28.4**	**-0.4**
AKAS				*i* S	**Sn**	**14 00 37.2**	**+0.6**
AKAS	**Kas**	**0.48**	**104**	P	**Pn**	**14 00 28.4**	**-0.4**
AKAS				*e*Sg	**Sn**	**14 00 37.0**	**+0.4**
KSL	**Kastellorizon**	**0.49**	**114**	P	**Pn**	**14 00 29.4**	**+0.6**
KSL				S	**Sn**	**14 00 39.8**	**+3.1**
KSL				AML	AML	14 00 40.4	
	comp=E,9637μm,0.5s						
KSL				AML	AML	14 00 41.0	
	comp=N,4013μm,0.3s						
KSL	**Kastellorizon**	**0.49**	**114**	P	**Pn**	**14 00 29.4**	**+0.6**
KSL				S	**Sn**	**14 00 38.6**	**+1.9**
DALY	**Dalyan (Mu¨la**	**0.56**	**327**	PG	**Pb**	**14 00 28.4**	**+0.1**
DALY				SG	**Sb**	**14 00 35.6**	**-0.2**
DALY	**Dalyan (Mu¨la**	**0.56**	**327**	⇓*i*P	**Pb**	**14 00 28.3**	**0.0**
DALY				*i* S	**Sn**	**14 00 36.9**	**-1.5**
DALY	**Dalyan (Mu¨la**	**0.56**	**327**	*e*Pg	**Pb**	**14 00 28.4**	**+0.1**
DALY				*e*Sg	**Sb**	**14 00 35.6**	**-0.2**
DALY				S	**Sn**	**14 00 36.8**	**-1.5**
TURN	**Turunc**	**0.62**	**327**	PG	**Pn**	**14 00 31.8**	**+1.1**
TURN				SG	**Sn**	**14 00 41.9**	**+1.9**
TURN	**Turunc**	**0.62**	**327**	⇓*i*P	**Pn**	**14 00 32.0**	**+1.3**
TURN				*i* S	**Sn**	**14 00 42.1**	**+2.0**
TURN	**Turunc**	**0.62**	**327**	*e*Pg	**Pn**	**14 00 31.8**	**+1.1**
TURN				*e*Sg	**Sn**	**14 00 41.9**	**+1.9**
ARG	**Arkhangelos**	**0.74**	**260**	PG	**Pn**	**14 00 32.7**	**+0.3**
ARG	**Arkhangelos**	**0.74**	**260**	P	**Pn**	**14 00 32.6**	**+0.3**
ARG				S	**Sn**	**14 00 43.4**	**+0.5**
ARG				AML	AML	14 00 44.2	
	comp=E,4346μm,0.3s						
ARG				AML	AML	14 00 44.3	
	comp=N,4605μm,0.4s						
ARG	**Arkhangelos**	**0.74**	**260**	P	**Pn**	**14 00 32.2**	**-0.2**
ARG				S	**Sn**	**14 00 43.4**	**+0.5**
ARG	**Arkhangelos**	**0.74**	**260**	P	**Pn**	**14 00 32.6**	**+0.2**
ARG				S	**Sn**	**14 00 43.3**	**+0.3**
MRSB	**Marmaris-Mugla**	**0.76**	**299**	PG	**Pb**	**14 00 31.9**	**0.0**
MRSB				SG	**Sb**	**14 00 42.1**	**+0.3**
MRSB	**Marmaris-Mugla**	**0.76**	**299**	*e*Pg	**Pb**	**14 00 31.9**	**0.0**
MRSB				*e*Sg	**Sb**	**14 00 42.1**	**+0.3**
ELL	**Elmali**	**0.81**	**60**	PG	**Pn**	**14 00 34.2**	**+0.8**
ELL	**Elmali**	**0.81**	**60**	*e*Pg	**Pn**	**14 00 34.2**	**+0.8**
GLHS	**Glhisar (BURDU**	**0.89**	**25**	PG	**Pn**	**14 00 34.5**	**0.0**
GLHS	**Glhisar (BURDU**	**0.89**	**25**	*e*Pg	**Pn**	**14 00 34.5**	**0.0**
GOLH	**Golhisar**	**0.98**	**26**	⇑*i*P	**Pn**	**14 00 35.2**	**-0.5**
GOLH				*i* S	**Sn**	**14 00 49.5**	**+0.5**
GOLH	**Golhisar**	**0.98**	**26**	P	**Pn**	**14 00 35.2**	**-0.5**
GOLH				S	**Sn**	**14 00 49.5**	**+0.5**
YER	**Yerkesik**	**0.99**	**323**	PG	**Pb**	**14 00 35.9**	**+0.2**
YER	**Yerkesik**	**0.99**	**323**	P	**Pb**	**14 00 35.7**	**0.0**
YER				S	**Sn**	**14 00 49.6**	**+0.5**
YER	**Yerkesik**	**0.99**	**323**	*e*Pg	**Pb**	**14 00 35.9**	**+0.2**
YER				S	**Sn**	**14 00 49.6**	**+0.5**
TAVA	**DENIZLI_Tavas**	**1.12**	**355**	⇓*i*P	**Pb**	**14 00 38.0**	**+0.1**
TAVA				*i* S	**Sb**	**14 00 51.9**	**-0.2**
TAVA	**DENIZLI_Tavas**	**1.12**	**355**	P	**Pb**	**14 00 38.0**	**+0.1**
TAVA				S	**Sb**	**14 00 51.9**	**-0.2**
DATC	**Datca-Mugla**	**1.18**	**291**	PN	**Pb**	**14 00 38.9**	**+0.1**
DATC	**Datca-Mugla**	**1.18**	**291**	*e*Pn	**Pb**	**14 00 38.9**	**+0.1**
DAT	**Datca**	**1.23**	**288**	PN	**Pb**	**14 00 39.9**	**+0.1**
DAT	**Datca**	**1.23**	**288**	⇑*i*P	**Pb**	**14 00 39.7**	**-0.1**
DAT				*i* S	**Sb**	**14 00 57.3**	**+2.0**
DAT	**Datca**	**1.23**	**288**	*e*Pn	**Pb**	**14 00 39.9**	**+0.1**
DAT				S	**Sb**	**14 00 57.3**	**+2.0**
KORT	**Korkueli**	**1.24**	**58**	PN	**Pb**	**14 00 41.2**	**+1.1**
KORT	**Korkueli**	**1.24**	**58**	⇑*i*P	**Pb**	**14 00 41.8**	**+1.7**
KORT				*i* S	**Sb**	**14 01 01.0**	**+5.2**
KORT	**Korkueli**	**1.24**	**58**	*e*Pn	**Pb**	**14 00 41.2**	**+1.1**
KORT	**Korkueli**	**1.24**	**58**	P	**Pb**	**14 00 41.8**	**+1.7**
DNZL	**Cakiroluk**	**1.34**	**1**	⇓*i*P	**Pb**	**14 00 41.5**	**-0.2**
DNZL				*i* S	**Sb**	**14 00 58.2**	**-0.3**
DNZL	**Cakiroluk**	**1.34**	**1**	P	**Pb**	**14 00 41.5**	**-0.2**
DNZL				S	**Sb**	**14 00 58.2**	**-0.3**
MLSB	**Milas**	**1.38**	**314**	PN	**Pb**	**14 00 42.1**	**-0.2**
MLSB	**Milas**	**1.38**	**314**	*e*Pn	**Pb**	**14 00 42.1**	**-0.2**
DENT	**Denizli**	**1.40**	**0**	PN	**Pb**	**14 00 42.4**	**-0.3**
DENT	**Denizli**	**1.40**	**0**	*e*Pn	**Pb**	**14 00 42.4**	**-0.3**
ANTB	**Antalya**	**1.42**	**67**	PN	**Pb**	**14 00 43.9**	**+1.0**
ANTB	**Antalya**	**1.42**	**67**	*e*Pn	**Pb**	**14 00 43.9**	**+1.0**
BDRM	**Kayabasi**	**1.46**	**300**	⇑*i*P	**Pb**	**14 00 42.9**	**-0.8**
BDRM				*i* S	**Sb**	**14 01 02.2**	**+0.3**
BDRM	**Kayabasi**	**1.46**	**300**	P	**Pb**	**14 00 42.9**	**-0.8**
BDRM				S	**Sb**	**14 01 02.2**	**+0.3**
BODT	**Bodrum**	**1.55**	**298**	PN	**Pn**	**14 00 43.2**	**-0.3**
BODT	**Bodrum**	**1.55**	**298**	P	**Pn**	**14 00 43.1**	**-0.4**
BODT				S	**Sn**	**14 01 02.2**	**-0.8**
BODT	**Bodrum**	**1.55**	**298**	*e*Pn	**Pn**	**14 00 43.2**	**-0.3**
BODT				S	**Sn**	**14 01 02.2**	**-0.8**
NISR	**Nisiros**	**1.56**	**280**	P	**Pn**	**14 00 43.7**	**+0.2**
NISR				AML	AML	14 01 09.4	
	comp=E,2262μm,0.6s						
NISR				AML	AML	14 01 10.4	
	comp=N,1264μm,0.4s						
NISR	**Nisiros**	**1.56**	**280**	P	**Pn**	**14 00 43.9**	**+0.4**
NISR	**Nisiros**	**1.56**	**280**	P	**Pn**	**14 00 44.0**	**+0.4**
BRDR	**BURDUR-Merkez**	**1.58**	**31**	⇑*i*P	**Pb**	**14 00 45.7**	**0.0**
BRDR				*i* S	**Sb**	**14 01 05.7**	**+0.5**
BRDR	**BURDUR-Merkez**	**1.58**	**31**	P	**Pb**	**14 00 45.7**	**0.0**
BRDR				S	**Sb**	**14 01 05.7**	**+0.5**
AYDN	**Tasoluk**	**1.60**	**325**	*i* P	**Pb**	**14 00 45.5**	**-0.6**
AYDN				*i* S	**Sb**	**14 01 06.5**	**+0.6**
AYDN	**Tasoluk**	**1.60**	**325**	P	**Pb**	**14 00 45.5**	**-0.6**
AYDN				S	**Sb**	**14 01 06.5**	**+0.6**
YKAV	**Yalikavak-Bodr**	**1.60**	**299**	PN	**Pn**	**14 00 44.6**	**+0.4**
YKAV	**Yalikavak-Bodr**	**1.60**	**299**	*e*Pn	**Pn**	**14 00 44.6**	**+0.4**
AYDB	**Zeytinkoy-Aydi**	**1.83**	**331**	PN	**Pn**	**14 00 48.4**	**+0.9**
AYDB	**Zeytinkoy-Aydi**	**1.83**	**331**	*e*Pn	**Pn**	**14 00 48.4**	**+0.9**
ISP	**Isparta**	**1.89**	**39**	PN	**Pb**	**14 00 50.1**	**-1.0**
ISP	**Isparta**	**1.89**	**39**	P	**Pb**	**14 00 49.5**	**-1.6**
ISP				S	**Sn**	**14 01 12.2**	**+0.7**
ISP	**Isparta**	**1.89**	**39**	P	**Pb**	**14 00 49.5**	**-1.6**
ISP	**Isparta**	**1.89**	**39**	*e*Pn	**Pb**	**14 00 50.1**	**-1.0**
ISP				S	**Sn**	**14 01 12.2**	**+0.7**
SUTC	**Sutluce-Ispart**	**1.94**	**54**	PN	**Pb**	**14 00 51.1**	**-0.8**
SUTC	**Sutluce-Ispart**	**1.94**	**54**	*e*Pn	**Pb**	**14 00 51.1**	**-0.8**
GCAM	**G?zelcaml?**	**1.97**	**314**	PN	**Pn**	**14 00 50.4**	**+1.2**
GCAM	**G?zelcaml?**	**1.97**	**314**	*i* P	**Pn**	**14 00 50.3**	**+1.1**
GCAM				*i* S	**Sn**	**14 01 13.0**	**-0.2**
GCAM	**G?zelcaml?**	**1.97**	**314**	P	**Pn**	**14 00 50.3**	**+1.1**
GCAM				S	**Sn**	**14 01 13.0**	**-0.2**
KHL	**Karahalli**	**2.01**	**11**	PN	**Pb**	**14 00 51.5**	**-1.6**
KHL	**Karahalli**	**2.01**	**11**	*e*Pn	**Pb**	**14 00 51.5**	**-1.6**
KHAL	**Karahalli**	**2.05**	**10**	*i* P	**Pn**	**14 00 49.8**	**-0.6**
KHAL				*i* S	**Sn**	**14 01 14.9**	**-0.5**
KHAL	**Karahalli**	**2.05**	**10**	P	**Pn**	**14 00 49.8**	**-0.6**
KHAL				S	**Sn**	**14 01 14.9**	**-0.5**
KEPZ	**Antalya-Kepez**	**2.14**	**74**	*i* P	**Pb**	**14 00 54.5**	**-0.9**
KEPZ				*i* S	**Sb**	**14 01 22.6**	**+1.1**
KEPZ	**Antalya-Kepez**	**2.14**	**74**	P	**Pb**	**14 00 54.5**	**-0.9**
BAGO	**Egridir - ISPA**	**2.16**	**40**	*i* P	**Pb**	**14 00 53.4**	**-2.2**
BAGO				*i* S	**Sb**	**14 01 20.3**	**-1.7**
KULA	**Kula-Manisa**	**2.18**	**352**	PN	**Pn**	**14 00 52.5**	**+0.3**
KULA	**Kula-Manisa**	**2.18**	**352**	*e*Pn	**Pn**	**14 00 52.5**	**+0.3**
SMG	**Samos**	**2.22**	**308**	P	**Pn**	**14 00 53.6**	**+1.0**
SMG				S	**Sn**	**14 01 19.4**	**0.0**
SMG				AML	AML	14 01 22.2	
	comp=N,2991μm,0.3s						
SMG				AML	AML	14 01 23.7	
	comp=E,2349μm,0.4s						
SMG	**Samos**	**2.22**	**308**	P	**Pn**	**14 00 52.9**	**+0.2**
SMG				S	**Sn**	**14 01 18.9**	**-0.5**
SMG	**Samos**	**2.22**	**308**	P	**Pn**	**14 00 53.4**	**+0.7**
SMG				S	**Sn**	**14 01 19.2**	**-0.2**
DGB	**¨zmir**	**2.41**	**315**	*i* P	**Pn**	**14 00 56.1**	**+0.8**
DGB				*i* S	**Sn**	**14 01 24.3**	**+0.2**
ZKR	**Zakros**	**2.60**	**243**	P	**Pn**	**14 01 00.2**	**+2.3**
ZKR				S	**Sn**	**14 01 31.2**	**+2.4**
ZKR				AML	AML	14 01 34.4	
	comp=E,602μm,0.3s						
ZKR				AML	AML	14 01 34.8	
	comp=N,314μm,0.4s						
ZKR	**Zakros**	**2.60**	**243**	P	**Pn**	**14 00 59.8**	**+1.9**
ZKR				S	**Sn**	**14 01 30.7**	**+1.9**
ZKR	**Zakros**	**2.60**	**243**	P	**Pn**	**14 00 59.8**	**+1.9**
ZKR				S	**Sn**	**14 01 30.6**	**+1.8**
GAZI	**Gazipasa**	**2.66**	**92**	*i* P	**Pn**	**14 00 59.2**	**+0.5**
GAZI	**Gazipasa**	**2.66**	**92**	P	**Pn**	**14 00 59.2**	**+0.5**
AKS	**Akhisar**	**2.70**	**339**	PN	**Pn**	**14 01 00.8**	**+1.5**
AKS	**Akhisar**	**2.70**	**339**	*e*Pn	**Pn**	**14 01 00.8**	**+1.5**
ZEY	**¨zmir**	**2.76**	**314**	*i* P	**Pn**	**14 01 00.9**	**+0.8**
ZEY				*i* S	**Sn**	**14 01 32.1**	**-0.6**
URLA	**Izmir**	**2.79**	**317**	PN	**Pn**	**14 01 01.2**	**+0.6**
URLA	**Izmir**	**2.79**	**317**	*i* P	**Pn**	**14 01 00.4**	**-0.2**
URLA	**Izmir**	**2.79**	**317**	P	**Pn**	**14 01 00.4**	**-0.2**
URLA	**Izmir**	**2.79**	**317**	*e*Pn	**Pn**	**14 01 01.2**	**+0.6**
SANT	**Santorini**	**2.88**	**271**	P	**Pn**	**14 01 01.7**	**-0.1**
SANT	**Santorini**	**2.88**	**271**	P	**Pn**	**14 01 02.4**	**+0.6**
APE	**Apeiranthos**	**2.90**	**285**	P	**Pn**	**14 01 04.2**	**+2.1**
APE	**Apeiranthos**	**2.90**	**285**	P	**Pn**	**14 01 03.7**	**+1.6**
THR2	**Thira island,**	**2.90**	**273**	P	**Pn**	**14 01 02.2**	**+0.1**
THR2	**Thira island,**	**2.90**	**273**	P	**Pn**	**14 01 02.2**	**+0.1**
THR3	**Thira Island,**	**2.93**	**272**	P	**Pn**	**14 01 02.8**	**+0.4**
THR3	**Thira Island,**	**2.93**	**272**	P	**Pn**	**14 01 02.8**	**+0.4**
THR6	**Thira Island,**	**2.93**	**271**	P	**Pn**	**14 01 03.1**	**+0.6**
THR6	**Thira Island,**	**2.93**	**271**	P	**Pn**	**14 01 03.1**	**+0.6**
THR5	**Thira Island,**	**2.97**	**272**	P	**Pn**	**14 01 03.5**	**+0.5**
THR5	**Thira Island,**	**2.97**	**272**	P	**Pn**	**14 01 03.5**	**+0.5**
NPS	**Neapolis**	**2.98**	**250**	P	**Pn**	**14 01 03.5**	**+0.3**
NPS	**Neapolis**	**2.98**	**250**	P	**Pn**	**14 01 03.7**	**+0.5**
NPS	**Neapolis**	**2.98**	**250**	P	**Pn**	**14 01 03.7**	**+0.5**
AKMC	**Akamas**	**2.99**	**115**	P	**Pn**	**14 01 03.8**	**+0.5**
	baz=299						
AKMC	**Akamas**	**2.99**	**115**	P	**Pn**	**14 01 03.8**	**+0.5**
KMER	**Konya-Meram**	**3.02**	**61**	*i* P	**Pn**	**14 01 06.1**	**+2.3**
KMER	**Konya-Meram**	**3.02**	**61**	P	**Pn**	**14 01 06.1**	**+2.3**
IOSP	**Ios island**	**3.04**	**278**	P	**Pn**	**14 01 04.5**	**+0.6**
IOSP	**Ios island**	**3.04**	**278**	P	**Pn**	**14 01 04.8**	**+0.9**
PPCY	**Paphos**	**3.07**	**117**	P	**Pn**	**14 01 05.1**	**+0.7**
	baz=302						
PPCY	**Paphos**	**3.07**	**117**	P	**Pn**	**14 01 05.1**	**+0.7**
KONT	**Konya--Tatoy**	**3.10**	**58**	*i* P	**Pn**	**14 01 07.3**	**+2.5**
CHOS	**Chios island**	**3.12**	**311**	P	**Pn**	**14 01 06.1**	**+0.9**
CHOS				AML	AML	14 01 45.5	
	comp=N,873μm,0.4s						
CHOS				AML	AML	14 01 46.0	
	comp=E,906μm,0.4s						
CHOS	**Chios island**	**3.12**	**311**	P	**Pn**	**14 01 05.9**	**+0.7**
CHOS				S	**Sn**	**14 01 41.5**	**-0.3**
CHOS	**Chios island**	**3.12**	**311**	P	**Pn**	**14 01 05.9**	**+0.7**
CHOS				S	**Sn**	**14 01 41.5**	**-0.3**
LAST	**Lasithi**	**3.12**	**249**	P	**Pn**	**14 01 06.3**	**+1.1**
LAST				S	**Sn**	**14 01 42.5**	**+0.6**
LAST	**Lasithi**	**3.12**	**249**	P	**Pn**	**14 01 06.3**	**+1.1**
LAST				S	**Sn**	**14 01 42.3**	**+0.5**
LAST	**Lasithi**	**3.12**	**249**	P	**Pn**	**14 01 06.3**	**+1.1**
LAST				S	**Sn**	**14 01 42.3**	**+0.5**
ALFC	**Alefka**	**3.14**	**111**	P	**Pn**	**14 01 05.6**	**+0.3**
	baz=295						
ALFC				S	**Sn**	**14 01 40.8**	**-1.3**
ALFC	**Alefka**	**3.14**	**111**	P	**Pn**	**14 01 05.6**	**+0.3**
ALFC				S	**Sn**	**14 01 40.8**	**-1.3**
ERMK	**Ermenek**	**3.14**	**84**	*i* P	**Pb**	**14 01 09.0**	**-3.5**
KDHN	**Kadinhani**	**3.27**	**48**	*i* P	**Pn**	**14 01 08.7**	**+1.4**
KDHN	**Kadinhani**	**3.27**	**48**	P	**Pn**	**14 01 08.7**	**+1.4**
LEF	**Lefka**	**3.37**	**110**	P	**Pn**	**14 01 08.1**	**-0.4**
ESKT	**Eskisehir**	**3.48**	**24**	*i* P	**Pn**	**14 01 09.8**	**-0.3**
SEYT	**Eskypehyr**	**3.48**	**24**	P	**Pn**	**14 01 09.8**	**-0.3**
PSRA	**Psara**	**3.52**	**309**	P	**Pn**	**14 01 12.4**	**+1.9**
PSRA	**Psara**	**3.52**	**309**	P	**Pn**	**14 01 12.0**	**+1.5**
SZAC	**Souni**	**3.52**	**116**	P	**Pn**	**14 01 11.2**	**+0.6**
	baz=300						
SZAC	**Souni**	**3.52**	**116**	P	**Pn**	**14 01 11.2**	**+0.6**
IDI	**Anoyia**	**3.53**	**254**	P	**Pn**	**14 01 11.2**	**+0.5**
	comp=E,7.5nm,0.3s,baz=50,slow=7.0,SNR=111						
IDI				S	**Sn**	**14 01 49.6**	**-2.2**
	comp=E,4.2nm,0.3s,baz=74,slow=14,SNR=3.8						
BALY	**Balya**	**3.56**	**342**	*i* P	**Pn**	**14 01 11.2**	**0.0**
BALY	**Balya**	**3.56**	**342**	P	**Pn**	**14 01 11.2**	**0.0**
PRK	**Paraskevi**	**3.62**	**324**	P	**Pn**	**14 01 14.4**	**+2.5**
PRK	**Paraskevi**	**3.62**	**324**	P	**Pn**	**14 01 13.7**	**+1.8**
SIVA	**Sivas**	**3.68**	**250**	P	**Pn**	**14 01 15.4**	**+2.6**
SIVA	**Sivas**	**3.68**	**250**	P	**Pn**	**14 01 14.2**	**+1.4**
SIVA	**Sivas**	**3.68**	**250**	P	**Pn**	**14 01 14.2**	**+1.4**
SERI	**Serifos**	**3.74**	**284**	P	**Pn**	**14 01 14.0**	**+0.4**
SERI	**Serifos**	**3.74**	**284**	P	**Pn**	**14 01 14.5**	**+0.9**
CSS	**Mathiatis**	**3.77**	**110**	P	**Pn**	**14 01 14.7**	**+0.8**
	baz=294						
CSS	**Mathiatis**	**3.77**	**110**	P	**Pn**	**14 01 14.7**	**+0.8**
SIGR	**SIGRI**	**3.81**	**320**	P	**Pn**	**14 01 16.0**	**+1.5**
SIGR	**SIGRI**	**3.81**	**320**	P	**Pn**	**14 01 15.7**	**+1.2**
SIGR				S	**Sn**	**14 01 58.6**	**+0.1**
SIGR	**SIGRI**	**3.81**	**320**	P	**Pn**	**14 01 15.7**	**+1.2**
SIGR				S	**Sn**	**14 01 58.6**	**+0.1**
BAYC	**CANAKKALE_Bayr**	**3.91**	**331**	*i* P	**Pn**	**14 01 16.5**	**+0.6**
BAYC	**CANAKKALE_Bayr**	**3.91**	**331**	P	**Pn**	**14 01 16.5**	**+0.6**
VAM	**Vamos**	**4.03**	**258**	P	**Pn**	**14 01 19.6**	**+2.0**
VAM	**Vamos**	**4.03**	**258**	P	**Pn**	**14 01 18.0**	**+0.4**
VAM				S	**Sn**	**14 02 04.3**	**+0.1**
VAM	**Vamos**	**4.03**	**258**	P	**Pn**	**14 01 18.0**	**+0.4**
VAM				S	**Sn**	**14 02 04.3**	**+0.1**
KIZK	**Mersin**	**4.13**	**87**	*i* P	**Pn**	**14 01 20.6**	**+1.7**
KIZK	**Mersin**	**4.13**	**87**	P	**Pn**	**14 01 20.6**	**+1.7**
KKUL	**Konya-Kulu**	**4.17**	**46**	*i* P	**Pn**	**14 01 21.9**	**+2.3**
KKUL	**Konya-Kulu**	**4.17**	**46**	P	**Pn**	**14 01 22.0**	**+2.3**
IMMV	**Iera Moni Meta**	**4.19**	**259**	P	**Pn**	**14 01 22.7**	**+2.9**
IMMV	**Iera Moni Meta**	**4.19**	**259**	P	**Pn**	**14 01 20.7**	**+0.9**
IMMV	**Iera Moni Meta**	**4.19**	**259**	P	**Pn**	**14 01 20.7**	**+0.9**
BOZC	**Bozcaada**	**4.20**	**327**	*i* P	**Pn**	**14 01 21.3**	**+1.4**
KERG	**Konya-Eregli**	**4.22**	**74**	*i* P	**Pn**	**14 01 22.4**	**+2.1**
KERG	**Konya-Eregli**	**4.22**	**74**	P	**Pn**	**14 01 22.4**	**+2.1**
GVD	**Gavdhos**	**4.30**	**251**	P	**Pn**	**14 01 22.3**	**+1.0**
GVD	**Gavdhos**	**4.30**	**251**	P	**Pn**	**14 01 22.8**	**+1.5**
DION	**Dionisos Attik**	**4.42**	**294**	P	**Pn**	**14 01 24.1**	**+1.2**
DION	**Dionisos Attik**	**4.42**	**294**	P	**Pn**	**14 01 24.2**	**+1.3**
VLY	**Voula,Athens**	**4.45**	**291**	P	**Pn**	**14 01 24.4**	**+1.2**
VLY	**Voula,Athens**	**4.45**	**291**	P	**Pn**	**14 01 24.6**	**+1.3**
EREA	**Eretria**	**4.56**	**298**	P	**Pn**	**14 01 26.2**	**+1.5**
EREA	**Eretria**	**4.56**	**298**	P	**Pn**	**14 01 26.3**	**+1.5**
LIA	**Limnos Island**	**4.66**	**321**	P	**Pn**	**14 01 28.6**	**+2.4**
LIA	**Limnos Island**	**4.66**	**321**	P	**Pn**	**14 01 26.8**	**+0.6**
LIA	**Limnos Island**	**4.66**	**321**	P	**Pn**	**14 01 26.8**	**+0.6**
ANKY	**Antikythira Is**	**4.66**	**266**	P	**Pn**	**14 01 28.6**	**+2.3**
ANKY	**Antikythira Is**	**4.66**	**266**	P	**Pn**	**14 01 28.4**	**+2.1**
DID	**Didima**	**4.78**	**286**	P	**Pn**	**14 01 28.2**	**+0.2**
DID	**Didima**	**4.78**	**286**	P	**Pn**	**14 01 28.9**	**+1.0**
KYTH	**Kithira**	**4.83**	**271**	P	**Pn**	**14 01 29.1**	**+0.5**
VILL	**Villia**	**4.91**	**293**	P	**Pn**	**14 01 31.3**	**+1.6**
VLI	**Veliai**	**4.92**	**276**	P	**Pn**	**14 01 30.7**	**+0.9**
VLI	**Veliai**	**4.92**	**276**	P	**Pn**	**14 01 31.2**	**+1.4**
VLI	**Veliai**	**4.92**	**276**	P	**Pn**	**14 01 31.2**	**+1.4**
SMTH	**Samothraki Isl**	**4.95**	**327**	P	**Pn**	**14 01 31.7**	**+1.5**
SMTH	**Samothraki Isl**	**4.95**	**327**	P	**Pn**	**14 01 31.5**	**+1.3**
SMTH	**Samothraki Isl**	**4.95**	**327**	P	**Pn**	**14 01 31.5**	**+1.3**
BRTR	**Keskin Array B**	**4.96**	**46**	P	**Pn**	**14 01 31.8**	**+1.4**
	comp=E,0.6nm,0.3s,baz=225,slow=14,SNR=9.5						
BRTR				S	**Sn**	**14 02 29.3**	**+2.2**
	comp=E,1.1nm,0.3s,baz=213,slow=26,SNR=8.0						
VIL2	**Platees**	**4.96**	**294**	P	**Pn**	**14 01 31.3**	**+1.0**
LTK	**Loutraki**	**5.12**	**291**	P	**Pn**	**14 01 33.3**	**+0.7**
LTK	**Loutraki**	**5.12**	**291**	P	**Pn**	**14 01 33.8**	**+1.2**
SKIA	**Skiathos**	**5.23**	**304**	P	**Pn**	**14 01 35.9**	**+1.8**
SKIA	**Skiathos**	**5.23**	**304**	P	**Pn**	**14 01 35.8**	**+1.8**
DYR	**Agios Nikonas**	**5.41**	**276**	P	**Pn**	**14 01 38.4**	**+1.9**
DYR	**Agios Nikonas**	**5.41**	**276**	P	**Pn**	**14 01 38.5**	**+2.0**
KLV	**Kalavryta, Ach**	**5.75**	**289**	P	**Pn**	**14 01 42.9**	**+1.7**
KLV	**Kalavryta, Ach**	**5.75**	**289**	P	**Pn**	**14 01 43.1**	**+1.9**
SLUM	**Salum**	**5.79**	**214**	P	**Pn**	**14 01 42.4**	**+0.5**
	baz=216						
SLUM				AMP		14 02 00.0	
	baz=216						
SLUM	**Salum**	**5.79**	**214**	P	**Pn**	**14 01 42.3**	**+0.5**
BHL	**Bhannes**	**5.95**	**112**	*e*P	**Pn**	**14 01 43.8**	**-0.3**
HWQ	**Hawqa**	**6.02**	**108**	*e*P	**Pn**	**14 01 44.8**	**-0.2**
MMAI	**Mount Meron Ar**	**6.21**	**121**	P	**Pn**	**14 01 47.1**	**-0.6**
	comp=E,30nm,0.3s,baz=301,slow=11,SNR=96						
MMAI				S	**Sn**	**14 02 54.9**	**-3.1**
	comp=E,5.1nm,0.3s,baz=43,slow=11,SNR=5.3						
RCY	**Rachaya**	**6.27**	**115**	*e*P	**Pn**	**14 01 48.0**	**-0.5**
SHBL	**Chebaa**	**6.28**	**117**	*e*P	**Pn**	**14 01 48.0**	**-0.7**
RSH		**6.65**	**143**	P	**Pn**	**14 01 53.2**	**-0.3**
	baz=142						
RSH		**6.65**	**143**	P	**Pn**	**14 01 53.2**	**-0.3**
SQR	**Saqqara**	**6.70**	**164**	P	**Pn**	**14 01 53.4**	**-0.9**
	baz=164						
SQR	**Saqqara**	**6.70**	**164**	P	**Pn**	**14 01 53.4**	**-0.9**
HMYD	**Mayadein**	**6.70**	**167**	P	**Pn**	**14 01 54.2**	**-0.1**
	baz=167						
HMYD	**Mayadein**	**6.70**	**167**	P	**Pn**	**14 01 54.2**	**-0.1**
KOT	**Kottamia**	**6.82**	**159**	P	**Pn**	**14 01 55.6**	**-0.4**
	baz=159						
KOT				S	**Sn**	**14 03 06.3**	**-6.7**
	baz=159						
KOT	**Kottamia**	**6.82**	**159**	P	**Pn**	**14 01 55.6**	**-0.4**
HHAG	**Hagoal**	**6.88**	**157**	P	**Pn**	**14 01 56.3**	**-0.5**
	baz=157						
HHAG	**Hagoal**	**6.88**	**157**	P	**Pn

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0827	**Moglia (MN)**	**0.03**	**18⇑**	*e*P	**Pg**	**14 22 04.6**	**-0.7**
T0827			⇑	*e*S	**Sg**	**14 22 07.5**	**+0.2**
T0827	**Moglia (MN)**	**0.03**	**18**	*e*P	**Pg**	**14 22 04.6**	**-0.7**
T0827				*e*S	**Sg**	**14 22 07.5**	**+0.2**
NDIM	**Novi di Modena**	**0.03**	**211**	*i* P	**Pg**	**14 22 03.9**	**-1.4**
NDIM				*i* S	**Sg**	**14 22 05.8**	**-1.5**
T0818	**Loc. Fossa, Co**	**0.08**	**74⇑**	*e*P	**Pg**	**14 22 05.2**	**-0.4**
T0818			⇑	*e*S	**Sg**	**14 22 08.2**	**+0.3**
T0818	**Loc. Fossa, Co**	**0.08**	**74**	*e*P	**Pg**	**14 22 05.2**	**-0.4**
T0818				*e*S	**Sg**	**14 22 08.2**	**+0.3**
T0828	**Loc. Fossoli,**	**0.08**	**183⇓**	*i* P	**Pg**	**14 22 04.4**	**-1.2**
T0828			⇓	*i* S	**Sg**	**14 22 07.1**	**-0.7**
T0828	**Loc. Fossoli,**	**0.08**	**183**	*i* P	**Pg**	**14 22 04.4**	**-1.2**
T0828				*i* S	**Sg**	**14 22 07.1**	**-0.7**
T0826	**Rio Saliceto (**	**0.11**	**227**	AML	AML		
	comp=E,90350µm,0.3s						
T0826				AML	AML		
	comp=N,99500µm,0.1s						
T0814	**Loc. Cortile,**	**0.12**	**164⇓**	*i* P	**Pg**	**14 22 05.1**	**-1.0**
T0814			⇓	*i* S	**Sg**	**14 22 08.4**	**-0.2**
T0814	**Loc. Cortile,**	**0.12**	**164**	*i* P	**Pg**	**14 22 05.1**	**-1.0**
T0814				*i* S	**Sg**	**14 22 08.4**	**-0.2**
SBPO	**S.Benedetto Po**	**0.14**	**360⇓**	*e*P	**Pb**	**14 22 06.9**	**+0.4**
SBPO	**S.Benedetto Po**	**0.14**	**360**	*e*P	**Pb**	**14 22 06.9**	**+0.4**
T0824	**Loc. Limidi di**	**0.15**	**178⇓**	*e*P	**Pg**	**14 22 05.8**	**-0.6**
T0824			⇓	*e*S	**Sg**	**14 22 09.7**	**+0.5**
T0824	**Loc. Limidi di**	**0.15**	**178**	*e*P	**Pg**	**14 22 05.8**	**-0.6**
T0824				*e*S	**Sg**	**14 22 09.7**	**+0.5**
NOVE	**Novellara**	**0.18**	**232⇓**	*e*P	**Pg**	**14 22 06.8**	**-0.1**
NOVE			⇓	*e*S	**Sg**	**14 22 11.5**	**+1.5**
NOVE	**Novellara**	**0.18**	**232**	*e*P	**Pg**	**14 22 06.8**	**-0.1**
NOVE				*e*S	**Sg**	**14 22 11.5**	**+1.5**
NOVE				AML	AML		
	comp=E,31300µm,0.2s						
NOVE				AML	AML		
	comp=N,22350µm,0.2s						
NOVE				AML	AML		
	comp=E,31300µm,0.2s						
NOVE				AML	AML		
	comp=N,22350µm,0.2s						
NOVE				AML	AML		
	comp=E,31250µm,0.2s						
NOVE				AML	AML		
	comp=N,22350µm,0.2s						
T0802	**SanFelice sul**	**0.19**	**101⇑**	*e*P	**Pg**	**14 22 06.5**	**-0.5**
T0802			⇑	*e*S	**Sg**	**14 22 10.9**	**+0.8**
T0802	**SanFelice sul**	**0.19**	**101**	*e*P	**Pg**	**14 22 06.5**	**-0.5**
T0802				*e*S	**Sg**	**14 22 10.9**	**+0.8**
T0802				AML	AML		
	comp=E,24400µm,0.3s						
T0802				AML	AML		
	comp=N,21300µm,0.3s						
T0802				AML	AML		
	comp=E,24350µm,0.3s						
T0802				AML	AML		
	comp=N,21300µm,0.3s						
T0812	**Loc. Stoppiaro**	**0.19**	**77**	*e*P	**Pg**	**14 22 06.7**	**-0.3**
T0812	**Loc. Stoppiaro**	**0.19**	**77**	*e*P	**Pg**	**14 22 06.7**	**-0.3**
T0813	**Massa Finalese**	**0.20**	**100**	*e*P	**Pg**	**14 22 06.6**	**-0.5**
T0813				*e*S	**Sg**	**14 22 11.2**	**+0.8**
T0813	**Massa Finalese**	**0.20**	**100**	*e*P	**Pg**	**14 22 06.6**	**-0.5**
T0813				*e*S	**Sg**	**14 22 11.2**	**+0.8**
RAVA	**Ravarino**	**0.21**	**138**	*e*P	**Pg**	**14 22 06.8**	**-0.5**
RAVA				*e*S	**Sg**	**14 22 11.4**	**+0.7**
RAVA	**Ravarino**	**0.21**	**138**	*e*P	**Pg**	**14 22 06.8**	**-0.5**
RAVA				*e*S	**Sg**	**14 22 11.4**	**+0.7**
RAVA				AML	AML		
	comp=E,12650µm,0.5s						
RAVA				AML	AML		
	comp=N,14350µm,0.4s						
RAVA				AML	AML		
	comp=E,12650µm,0.5s						
RAVA				AML	AML		
	comp=N,14350µm,0.4s						
GAZZ	**Gazzo Veronese**	**0.24**	**32⇑**	*e*Pg	**Pb**	**14 22 08.2**	**0.0**
GAZZ	**Gazzo Veronese**	**0.24**	**32**	*e*Pg	**Pb**	**14 22 08.1**	**0.0**
T0800	**Massa Finalese**	**0.24**	**105⇑**	*e*P	**Pg**	**14 22 07.2**	**-0.6**
T0800			⇑	*e*S	**Sg**	**14 22 12.3**	**+0.8**
T0800	**Massa Finalese**	**0.24**	**105**	*e*P	**Pg**	**14 22 07.2**	**-0.6**
T0800				*e*S	**Sg**	**14 22 12.3**	**+0.8**
T0800				AML	AML		
	comp=E,9660µm,1.2s						
T0800				AML	AML		
	comp=N,10350µm,0.2s						
T0800				AML	AML		
	comp=E,8715µm,1.6s						
T0800				AML	AML		
	comp=N,10005µm,0.2s						
T0800				AML	AML		
	comp=E,9660µm,1.2s						
T0800				AML	AML		
	comp=N,10400µm,0.2s						
T0800				AML	AML		
	comp=E,8710µm,1.6s						
T0800				AML	AML		
	comp=N,10010µm,0.2s						
T0811	**Palata Pepoli**	**0.25**	**120**	*e*P	**Pg**	**14 22 07.3**	**-0.7**
T0811				*e*S	**Sg**	**14 22 12.4**	**+0.6**
T0811	**Palata Pepoli**	**0.25**	**120**	*e*P	**Pg**	**14 22 07.3**	**-0.7**
T0811				*e*S	**Sg**	**14 22 12.4**	**+0.6**
T0805	**Bondeno (FE)**	**0.29**	**89**	*e*P	**Pg**	**14 22 08.2**	**-0.3**
T0805	**Bondeno (FE)**	**0.29**	**89**	*e*P	**Pg**	**14 22 08.2**	**-0.3**
T0822	**Casumaru (Bond**	**0.31**	**105**	*e*P	**Pg**	**14 22 08.5**	**-0.5**
T0822	**Casumaru (Bond**	**0.31**	**105**	*e*P	**Pg**	**14 22 08.5**	**-0.5**
T0822				AML	AML		
	comp=E,5260µm,0.4s						
T0822				AML	AML		
	comp=N,4015µm,0.5s						
T0803	**Dosso, Cento (**	**0.34**	**115**	*e*P	**Pg**	**14 22 08.8**	**-0.6**
T0803	**Dosso, Cento (**	**0.34**	**115**	*e*P	**Pg**	**14 22 08.8**	**-0.6**
FIU	**Minerbio Fiu**	**0.49**	**124**	AML	AML		
	comp=N,918µm,1.0s						
FIU				AML	AML		
	comp=E,1465µm,0.7s						
FIU				AML	AML		
	comp=N,883µm,1.2s						
FIU				AML	AML		
	comp=E,1465µm,0.7s						
FIU				AML	AML		
	comp=E,1465µm,0.7s						
FIU				AML	AML		
	comp=N,918µm,1.0s						
ZCCA	**Zocca**	**0.56**	**176**	AML	AML		
	comp=N,1610µm,0.5s						
ZCCA				AML	AML		
	comp=E,1235µm,0.5s						
ZCCA				AML	AML		
	comp=N,1380µm,1.6s						
ZCCA				AML	AML		
	comp=E,1255µm,0.5s						
ZCCA				AML	AML		
	comp=E,1255µm,0.5s						
ZCCA				AML	AML		
	comp=N,1610µm,0.5s						
TEOL	**Teolo**	**0.69**	**50⇓**	*e*Pg	**Pb**	**14 22 16.0**	**0.0**
TEOL			⇓	*e*Sg	**Sn**	**14 22 28.2**	**+0.5**
TEOL	**Teolo**	**0.69**	**50⇓**	*e*P	**Pg**	**14 22 15.0**	**-0.9**
TEOL	**Teolo**	**0.69**	**50**	*e*Pg	**Pb**	**14 22 16.0**	**0.0**
TEOL				*e*Sg	**Sn**	**14 22 28.2**	**+0.5**
TEOL	**Teolo**	**0.69**	**50**	*e*P	**Pb**	**14 22 16.0**	**0.0**
TEOL				AML	AML		
	comp=E,6420µm,0.3s						
TEOL				AML	AML		
	comp=N,5580µm,0.3s						
MARN	**Marana (Italy)**	**0.75**	**16**	*e*Pg	**Pb**	**14 22 17.8**	**+0.8**
MARN				*e*Sg	**Sn**	**14 22 30.9**	**+1.7**
MARN	**Marana (Italy)**	**0.75**	**16**	*e*Pg	**Pb**	**14 22 17.8**	**+0.8**
BALD	**Monte Baldo**	**0.77**	**355⇑**	*e*Pg	**Pb**	**14 22 18.3**	**+0.8**
BALD			⇑	*e*Sg	**Sn**	**14 22 31.5**	**+1.5**
BALD	**Monte Baldo**	**0.77**	**355**	*e*Pg	**Pb**	**14 22 18.3**	**+0.8**
BALD				*e*Sg	**Sn**	**14 22 31.5**	**+1.5**
VLC	**Villacollemand**	**0.84**	**207**	AML	AML		
	comp=N,541µm,1.0s						
VLC				AML	AML		
	comp=E,389µm,0.8s						
BDI	**Bagni Di Lucca**	**0.88**	**195**	AML	AML		
	comp=E,1040µm,0.7s						
BDI				AML	AML		
	comp=E,1040µm,0.7s						
BDI				AML	AML		
	comp=N,1515µm,1.0s						
BDI				AML	AML		
	comp=E,1128µm,0.5s						
BDI				AML	AML		
	comp=N,1685µm,1.0s						
BDI				AML	AML		
	comp=N,1510µm,1.0s						
BDI				AML	AML		
	comp=E,1128µm,0.5s						
BDI				AML	AML		
	comp=N,1685µm,1.0s						
MAGA	**Magasa**	**0.89**	**347**	AML	AML		
	comp=N,6975µm,0.3s						
MAGA				AML	AML		
	comp=E,7900µm,0.3s						
MAGA				AML	AML		
	comp=N,6975µm,0.3s						
MAGA				AML	AML		
	comp=E,7900µm,0.3s						
CTL8	**Castelleone**	**0.90**	**294**	AML	AML		
	comp=E,488µm,0.8s						
CTL8				AML	AML		
	comp=N,516µm,0.4s						
CTL8				AML	AML		
	comp=E,488µm,0.8s						
CTL8				AML	AML		
	comp=N,516µm,0.4s						
DOSS	**Dosso del Somm**	**0.99**	**11⇓**	*e*Pg	**Pg**	**14 22 21.2**	**-0.3**
DOSS				*e*Sg	**Sn**	**14 22 36.8**	**+1.6**
DOSS	**Dosso del Somm**	**0.99**	**11**	*e*Pg	**Pg**	**14 22 21.2**	**-0.3**
DOSS				*e*Sg	**Sn**	**14 22 36.8**	**+1.6**
CGRP	**Cima Grappa**	**1.15**	**32⇓**	*e*Pg	**Pb**	**14 22 23.9**	**+0.1**
CGRP				*e*Sg	**Sn**	**14 22 42.4**	**+3.1**
CGRP	**Cima Grappa**	**1.15**	**32**	*e*Pg	**Pb**	**14 22 23.9**	**+0.1**
CGRP				*e*Sg	**Sn**	**14 22 42.4**	**+3.1**
CGRP	**Cima Grappa**	**1.15**	**32**	AML	AML		
	comp=E,604µm,1.0s						
CGRP				AML	AML		
	comp=N,695µm,0.9s						
CGRP				AML	AML		
	comp=E,604µm,1.0s						
CGRP				AML	AML		
	comp=N,695µm,0.9s						
PANI	**Panarotta**	**1.17**	**14⇓**	*e*Pg	**Pb**	**14 22 23.8**	**-0.5**
PANI	**Panarotta**	**1.17**	**14**	*e*Pg	**Pb**	**14 22 23.8**	**-0.5**
MABI	**Malga Bissina**	**1.18**	**346**	AML	AML		
	comp=N,324µm,0.8s						
MABI				AML	AML		
	comp=E,303µm,0.4s						
MABI				AML	AML		
	comp=N,325µm,0.8s						
MABI				AML	AML		
	comp=E,303µm,0.4s						
MTLO	**Montello**	**1.22**	**42⇓**	*e*Pg	**Pn**	**14 22 25.2**	**+0.5**
MTLO	**Montello**	**1.22**	**42**	*e*Pg	**Pn**	**14 22 25.2**	**+0.5**
CTI	**Castel Tesino**	**1.25**	**24**	AML	AML		
	comp=N,2035µm,0.3s						
CTI				AML	AML		
	comp=E,1295µm,0.2s						
ASQU	**Asqua**	**1.28**	**151**	AML	AML		
	comp=E,247µm,0.7s						
ASQU				AML	AML		
	comp=N,291µm,0.5s						
ASQU				AML	AML		
	comp=E,247µm,0.7s						
ASQU				AML	AML		
	comp=N,291µm,0.5s						
VARN	**Col Varnada, M**	**1.36**	**37⇓**	*e*Pg	**Pn**	**14 22 26.8**	**+0.1**
VARN	**Col Varnada, M**	**1.36**	**37**	*e*Pg	**Pn**	**14 22 26.8**	**+0.1**
CRE	**Caprese Michel**	**1.49**	**150**	AML	AML		
	comp=E,181µm,0.6s						
CRE				AML	AML		
	comp=N,139µm,0.6s						
CRE				AML	AML		
	comp=E,181µm,0.6s						
CRE				AML	AML		
	comp=N,139µm,0.6s						
OZOL	**Ozolo**	**1.50**	**3**	*e*Pg	**Pn**	**14 22 29.2**	**+0.7**
OZOL	**Ozolo**	**1.50**	**3**	*e*Pg	**Pn**	**14 22 29.2**	**+0.7**
CARE	**Lago del Cares**	**1.52**	**354**	*e*Pg	**Pn**	**14 22 29.6**	**+0.6**
CARE	**Lago del Cares**	**1.52**	**354**	*e*Pg	**Pn**	**14 22 29.6**	**+0.6**
APPI	**Appiano**	**1.58**	**8**	AML	AML		
	comp=E,947µm,0.5s						
APPI				AML	AML		
	comp=E,947µm,0.5s						
APPI				AML	AML		
	comp=N,664µm,0.3s						
APPI				AML	AML		
	comp=N,664µm,0.3s						
AGOR	**Agordo**	**1.58**	**30**	AML	AML		
	comp=E,326µm,1.4s						
AGOR				AML	AML		
	comp=E,326µm,1.4s						
AGOR				AML	AML		
	comp=N,374µm,1.1s						
AGOR				AML	AML		
	comp=N,374µm,1.1s						
KOSI	**Kohlern**	**1.58**	**12**	AML	AML		
	comp=E,614µm,0.9s						
KOSI				AML	AML		
	comp=N,655µm,0.5s						
KOSI				AML	AML		
	comp=E,614µm,0.9s						
KOSI				AML	AML		
	comp=N,655µm,0.5s						
BORM	**Bormio**	**1.60**	**346**	AML	AML		
	comp=N,331µm,0.9s						
BORM				AML	AML		
	comp=E,384µm,1.6s						
BRMO	**Bormio**	**1.61**	**346**	AML	AML		
	comp=N,172µm,0.5s						
BRMO				AML	AML		
	comp=E,202µm,1.0s						
BRMO				AML	AML		
	comp=N,172µm,0.5s						
BRMO				AML	AML		
	comp=E,202µm,1.0s						
MOSI	**Grossmontoni**	**1.72**	**351**	AML	AML		
	comp=N,748µm,0.5s						
MOSI				AML	AML		
	comp=E,452µm,1.0s						
MOSI				AML	AML		
	comp=N,748µm,0.5s						
MOSI				AML	AML		
	comp=E,452µm,1.0s						
VARE	**Varese**	**1.79**	**303**	AML	AML		
	comp=N,329µm,0.6s						
VARE				AML	AML		
VARE				AML	AML		
	comp=N,329µm,0.6s						
VARE				AML	AML		
PIEI	**Pieia**	**1.80**	**139**	AML	AML		
	comp=E,116µm,0.4s						
PIEI				AML	AML		
	comp=N,74µm,0.5s						
FSSB	**Fossombrone**	**1.81**	**132**	AML	AML		
	comp=N,210µm,1.5s						
FSSB				AML	AML		
	comp=E,187µm,0.5s						
ABSI	**Aberstueckl**	**1.84**	**9**	AML	AML		
	comp=N,469µm,0.4s						
ABSI				AML	AML		
	comp=E,615µm,0.6s						
STAL	**STALIGIAL**	**1.84**	**42**	AML	AML		
	comp=E,374µm,0.8s						
STAL				AML	AML		
	comp=E,348µm,0.8s						
STAL				AML	AML		
	comp=N,434µm,0.8s						
STAL				AML	AML		
	comp=N,374µm,0.3s						
TUE	**Stuetta**	**1.91**	**325**	AML	AML		
	comp=E,287µm,0.3s						
TUE				AML	AML		
	comp=N,184µm,0.5s						
ROSI	**Rosskopf**	**2.04**	**9**	AML	AML		
	comp=E,400µm,0.3s						
ROSI				AML	AML		
	comp=N,300µm,0.6s						
FETA	**Feichten**	**2.11**	**356**	*e*Pn	**Pb**	**14 22 41.1**	**+0.9**
	comp=N,2.6nm,0.3s						
FETA				*e*Pg	**Pg**	**14 22 43.2**	**+0.3**
	comp=N,15nm,0.3s,SNR=18						
FETA				*e*Sn	**Sb**	**14 23 06.9**	**+0.6**
	comp=N,17nm,0.4s						
FETA	**Feichten**	**2.11**	**356**	Pn	**Pb**	**14 22 41.1**	**+0.9**
	comp=N,2.6nm,0.3s						
VINO	**Villanova**	**2.13**	**50**	AML	AML		
	comp=E,122µm,0.7s						
VINO				AML	AML		
	comp=N,146µm,0.6s						
ABTA	**Abfaltersbach**	**2.15**	**31**	*e*Pg	**Pg**	**14 22 42.4**	**-1.1**
	comp=N,7.3nm,0.2s,SNR=20						
ABTA				Sg	**Sg**	**14 23 13.1**	**+1.7**
	comp=N,8.6nm,0.3s						
ABTA	**Abfaltersbach**	**2.15**	**31**	Pg	**Pg**	**14 22 42.4**	**-1.1**
	comp=N,7.3nm,0.2s,SNR=20						
ABTA				Sg	**Sg**	**14 23 13.1**	**+1.7**
	comp=N,8.6nm,0.3s						
RISI	**Rein**	**2.19**	**21**	AML	AML		
	comp=E,494µm,0.6s						
RISI				AML	AML		
	comp=N,504µm,0.4s						
WTTA	**Wattenberg**	**2.40**	**12**	*i* Pn	**Pb**	**14 22 44.2**	**-1.0**
	comp=N,0.8nm,0.1s						
WTTA				*e*Sn	**Sb**	**14 23 15.1**	**+0.4**
	comp=N,29nm,0.5s						
WTTA	**Wattenberg**	**2.40**	**12**	Pn	**Pb**	**14 22 44.2**	**-1.0**
	comp=N,0.8nm,0.1s						
WTTA	**Wattenberg**	**2.40**	**12**	Pg	**Pb**	**14 22 45.4**	**+0.2**
WTTA				Sn	**Sb**	**14 23 15.1**	**+0.4**
	comp=N,29nm,0.5s						
WTTA				Sg	**Sg**	**14 23 16.9**	**-2.7**
WTTA	**Wattenberg**	**2.40**	**12**	AML	AML		
	comp=E,110µm,0.7s						
WTTA				AML	AML		
	comp=N,92µm,0.9s						
MOTA	**Moosalm**	**2.44**	**3**	*e*Pn	**Pn**	**14 22 43.8**	**+2.3**
	comp=N,7.4nm,0.3s,SNR=12						
MOTA	**Moosalm**	**2.44**	**3**	Pn	**Pn**	**14 22 43.8**	**+2.3**
	comp=N,7.4nm,0.3s,SNR=12						
WATA	**Walderalm**	**2.47**	**10**	*e*Pn	**Pb**	**14 22 45.6**	**-0.7**
	comp=N,16nm,0.3s,SNR=7.1						
WATA	**Walderalm**	**2.47**	**10**	Pn	**Pb**	**14 22 45.6**	**-0.7**
	comp=N,16nm,0.3s,SNR=7.1						
DAVA	**Damuels**	**2.48**	**343**	*e*Pn	**Pb**	**14 22 45.8**	**-0.8**
	comp=N,2.8nm,0.2s						
DAVA				*e*Sn	**Sb**	**14 23 18.0**	**+1.1**
	comp=N,15nm,0.5s						
DAVA	**Damuels**	**2.48**	**343**	Pn	**Pb**	**14 22 45.8**	**-0.8**
	comp=N,2.8nm,0.2s						
DAVA				Sn	**Sb**	**14 23 18.0**	**+1.1**
	comp=N,15nm,0.5s						
MYKA	**Terra Mystica**	**2.56**	**47**	*e*Pg	**Pg**	**14 22 50.6**	**-0.9**
	comp=N,10nm,0.3s,SNR=8.7						
MYKA				Sg	**Sg**	**14 23 25.7**	**+1.0**
	comp=N,14nm,0.4s						
MYKA	**Terra Mystica**	**2.56**	**47**	Pg	**Pg**	**14 22 50.6**	**-0.9**
	comp=N,10nm,0.3s,SNR=8.7						
MYKA				Sg	**Sg**	**14 23 25.7**	**+1.0**
	comp=N,14nm,0.4s						
RETA	**Reutte**	**2.58**	**358**	*e*Pn	**Pb**	**14 22 46.9**	**-1.2**
	comp=N,4.9nm,0.2s						
RETA				Sn	**Sb**	**14 23 19.0**	**-0.5**
	comp=N,22nm,0.4s						
RETA	**Reutte**	**2.58**	**358**	Pn	**Pb**	**14 22 46.9**	**-1.2**
	comp=N,4.9nm,0.2s						
RETA				Sn	**Sb**	**14 23 19.0**	**-0.5**
	comp=N,22nm,0.4s						
SBF	**Sospel**	**2.71**	**248**	*e*Pn	**Pn**	**14 22 47.7**	**+2.6**
SBF				*e*Sn	**Sn**	**14 23 17.0**	**-0.6**
	comp=N,4.9nm,0.1s						
SBF	**Sospel**	**2.71**	**248**	*e*Pn	**Pn**	**14 22 47.7**	**+2.6**
SBF				*e*Sn	**Sn**	**14 23 17.0**	**-0.6**
	comp=N,2.5nm,0.1s						
PGF	**Pioggiola**	**2.74**	**211**	*e*Pn	**Pn**	**14 22 47.0**	**+1.4**
PGF				*e*Sn	**Sn**	**14 23 16.8**	**-1.6**
	comp=N,5.1nm,0.3s						
PGF	**Pioggiola**	**2.74**	**211**	*e*Pn	**Pn**	**14 22 47.0**	**+1.4**
KBA	**Koelnbreinsper**	**2.75**	**37**	Pg	**Pg**	**14 22 54.0**	**-1.0**
	comp=N,11nm,0.3s,SNR=13						
KBA				*e*Sg	**Sg**	**14 23 28.6**	**-2.0**
	comp=N,14nm,0.4s						
KBA	**Koelnbreinsper**	**2.75**	**37**	Pg	**Pg**	**14 22 54.0**	**-1.0**
	comp=N,11nm,0.3s,SNR=13						
KBA				Sg	**Sg**	**14 23 28.6**	**-2.0**
	comp=N,14nm,0.4s						
NVLJ	**Novalja**	**2.84**	**96**	*e*Pn	**Pn**	**14 22 46.7**	**-0.1**
NVLJ				Sn	**Sn**	**14 23 19.9**	**-0.7**
NVLJ	**Novalja**	**2.84**	**96**	*e*Pn	**Pn**	**14 22 46.7**	**-0.1**
NVLJ				Sn	**Sn**	**14 23 19.8**	**-0.7**
MBDF	**Montbardon**	**2.96**	**268**	*e*Pn	**Pn**	**14 22 50.9**	**+2.3**
MBDF	**Montbardon**	**2.96**	**268**	*e*Pn	**Pn**	**14 22 50.9**	**+2.3**
OBKA	**Obir**	**3.00**	**57**	*e*Pn	**Pn**	**14 22 50.9**	**+1.7**
	comp=N,2.3nm,0.3s						
OBKA				*e*Pg	**Pg**	**14 23 00.0**	**+0.2**
	comp=N,8.6nm,0.3s						
OBKA				*e*Sg	**Sg**	**14 23 37.7**	**-1.0**
	comp=N,29nm,0.5s						
OBKA	**Obir**	**3.00**	**57**	Pn	**Pn**	**14 22 50.9**	**+1.7**
	comp=N,2.3nm,0.3s						
LPG	**La Plagne**	**3.00**	**283**	*e*Pn	**Pn**	**14 22 51.2**	**+1.8**
LPG	**La Plagne**	**3.00**	**283**	*e*Pn	**Pn**	**14 22 51.2**	**+1.8**
LPL	**La Plagne**	**3.02**	**283**	*e*Pn	**Pn**	**14 22 52.2**	**+2.6**
LPL	**La Plagne**	**3.02**	**283**	*e*Pn	**Pn**	**14 22 52.2**	**+2.6**
CALF	**Calern**	**3.10**	**249**	P	**Pn**	**14 22 53.6**	**+3.1**
CALF	**Calern**	**3.10**	**249**	P	**Pn**	**14 22 53.6**	**+3.1**
OZLJ	**Ozalj**	**3.29**	**76**	*e*Pn	**Pn**	**14 22 52.8**	**-0.2**
OZLJ	**Ozalj**	**3.29**	**76**	*e*Pn	**Pn**	**14 22 52.8**	**-0.2**
FRF	**La Foret Royal**	**3.35**	**248**	*e*Sn	**Sn**	**14 23 32.3**	**-1.1**
	comp=N,4.7nm,0.2s						
FRF	**La Foret Royal**	**3.35**	**248**	*e*Sn	**Sn**	**14 23 32.3**	**-1.1**
	comp=N,2.3nm,0.2s						
SOKA	**Soboth**	**3.38**	**57**	*i* Pn	**Pn**	**14 22 55.3**	**+1.0**
	comp=N,1.8nm,0.2s						
SOKA				*e*Pg	**Pg**	**14 23 05.6**	**-1.4**
	comp=N,3.7nm,0.3s						
SOKA				*e*Sg	**Sg**	**14 23 49.2**	**-1.5**
	comp=N,2.1nm,0.2s						
SOKA	**Soboth**	**3.38**	**57**	Pn	**Pn**	**14 22 55.3**	**+1.0**
	comp=N,1.8nm,0.2s						
UDBI	**Udbina**	**3.47**	**95**	*e*Pn	**Pn**	**14 22 57.5**	**+1.8**
UDBI				Sn	**Sn**	**14 23 36.3**	**-0.1**
UDBI	**Udbina**	**3.47**	**95**	*e*Pn	**Pn**	**14 22 57.4**	**+1.8**
UDBI				Sn	**Sn**	**14 23 36.3**	**-0.1**
LMR	**La Mourre**	**3.55**	**245**	*e*Pn	**Pn**	**14 22 58.0**	**+1.4**
LMR				*e*Sn	**Sn**	**14 23 36.9**	**-1.2**
	comp=N,17nm,0.2s						
LMR	**La Mourre**	**3.55**	**245**	*e*Pn	**Pn**	**14 22 58.0**	**+1.4**
LMR				*e*Sn	**Sn**	**14 23 36.9**	**-1.2**
	comp=N,8.6nm,0.2s						
ORIF	**Oris-en-Rattie**	**3.58**	**272**	*e*Pn	**Pn**	**14 22 59.0**	**+1.9**
ORIF	**Oris-en-Rattie**	**3.58**	**272**	P	**Pn**	**14 22 59.9**	**+2.7**
ORIF	**Oris-en-Rattie**	**3.58**	**272**	*e*Pn	**Pn**	**14 22 59.0**	**+1.9**
KIZ	**Kirchzarten**	**3.69**	**327**	P	**Pn**	**14 23 00.3**	**+1.8**
KIZ	**Kirchzarten**	**3.69**	**327**	P	**Pn**	**14 23 00.3**	**+1.8**
MOA	**Molln**	**3.74**	**37**	*i* Pn	**Pn**	**14 23 01.1**	**+1.9**
	comp=N,2.6nm,0.2s						
MOA	**Molln**	**3.74**	**37**	Pn	**Pn**	**14 23 01.1**	**+1.9**
	comp=N,2.6nm,0.2s						
CABF	**La Chapelle**	**3.79**	**298**	*e*Pn	**Pn**	**14 23 01.7**	**+1.8**
CABF				*e*Sn	**Sn**	**14 23 43.1**	**-1.0**
CABF	**La Chapelle**	**3.79**	**298**	*e*Pn	**Pn**	**14 23 01.7**	**+1.8**
CABF				*e*Sn	**Sn**	**14 23 43.1**	**-1.0**
OG35	**Corcelles**	**3.93**	**289**	P	**Pn**	**14 23 04.0**	**+2.1**
OG35	**Corcelles**	**3.93**	**289**	P	**Pn**	**14 23 03.0**	**+1.1**
MOF	**Molkenrain**	**3.94**	**320**	P	**Pn**	**14 23 03.4**	**+1.4**
MOF	**Molkenrain**	**3.94**	**320**	P	**Pn**	**14 23 03.4**	**+1.4**
HINF	**Hinteralfeld**	**4.04**	**317**	*e*Pn	**Pn**	**14 23 04.5**	**+1.0**
HINF				*e*Sn	**Sn**	**14 23 49.1**	**-1.4**
	comp=N,6.9nm,0.2s						
HINF	**Hinteralfeld**	**4.04**	**317**	*e*Pn	**Pn**	**14 23 04.5**	**+1.0**

SMF			*e*Sn	**Sn**	**14 24 20.3**	**+0.3**
SMF	**Signal de Mont**	**5.25**	**292**	*e*Pn	**Pn**	**14 23 21.5**	**+1.6**
SMF				*e*Sn	**Sn**	**14 24 20.3**	**+0.3**
STON	**Ston**	**5.31**	**110**	*e*Pn	**Pn**	**14 23 20.9**	**+0.1**
STON				Sn	**Sn**	**14 24 20.3**	**-1.2**
STON	**Ston**	**5.31**	**110**	*e*Pn	**Pn**	**14 23 20.8**	**+0.1**
STON				Sn	**Sn**	**14 24 20.2**	**-1.2**
NKC	**Novy Kostel**	**5.42**	**10**	*e*SN	**Sn**	**14 24 23.2**	**-1.2**
NKC	**Novy Kostel**	**5.42**	**10**	Sn	**Sn**	**14 24 23.2**	**-1.2**
LOR	**Lormes**	**5.45**	**298**	*e*Pn	**Pn**	**14 23 22.1**	**-0.6**
	baz=115						
LOR				*e*Sn	**Sn**	**14 24 22.5**	**-2.5**
LOR	**Lormes**	**5.45**	**298**	P	**Pn**	**14 23 24.0**	**+1.3**
LOR	**Lormes**	**5.45**	**298**	*e*Pn	**Pn**	**14 23 22.1**	**-0.6**
SSF	**Saint Saulge**	**5.60**	**295**	*e*Pn	**Pn**	**14 23 26.0**	**+1.3**
SSF				*e*Sn	**Sn**	**14 24 27.1**	**-1.5**
SSF	**Saint Saulge**	**5.60**	**295**	*e*Pn	**Pn**	**14 23 26.0**	**+1.3**
AVF	**Avril sur Loir**	**5.61**	**292**	*e*Pn	**Pn**	**14 23 26.4**	**+1.5**
AVF	**Avril sur Loir**	**5.61**	**292**	*e*Pn	**Pn**	**14 23 26.4**	**+1.5**
GOPC	**GO Pecny, Ondr**	**5.65**	**26**	*e*PG	**Pg**	**14 23 48.7**	**-1.7**
GOPC				*e*SN	**Sn**	**14 24 29.3**	**-0.6**
GOPC				*e*SG	**Sg**	**14 25 03.5**	**0.0**
BGF	**Bois d'Agland**	**5.89**	**289**	*e*Pn	**Pn**	**14 23 30.2**	**+1.5**
BGF	**Bois d'Agland**	**5.89**	**289**	*e*Pn	**Pn**	**14 23 30.2**	**+1.5**
HYF	**Humbligny**	**6.22**	**295**	*e*Pn	**Pn**	**14 23 35.0**	**+1.7**
HYF	**Humbligny**	**6.22**	**295**	*e*Pn	**Pn**	**14 23 35.0**	**+1.7**
TCF	**Toulx Ste Croi**	**6.26**	**286**	*e*Pn	**Pn**	**14 23 35.5**	**+1.6**
TCF	**Toulx Ste Croi**	**6.26**	**286**	*e*Pn	**Pn**	**14 23 35.5**	**+1.6**
CAF	**Calviac**	**6.29**	**273**	*e*Pn	**Pn**	**14 23 36.2**	**+1.9**
CAF	**Calviac**	**6.29**	**273**	*e*Pn	**Pn**	**14 23 36.2**	**+1.9**
MTLF	**Montolieu**	**6.46**	**259**	*e*Pn	**Pn**	**14 23 38.5**	**+1.9**
MTLF	**Montolieu**	**6.46**	**259**	*e*Pn	**Pn**	**14 23 38.5**	**+1.9**
CLL	**Collm**	**6.55**	**12**	*e*Pn	**Pn**	**14 23 39.0**	**+1.2**
CLL				*e*Sg	**Sg**	**14 25 31.0**	**-1.3**
	comp=Z,8.0nm,1.0s						
ETSF	**Etsaut**	**8.53**	**260**	*e*Sn	**Sn**	**14 25 34.8**	**-6.1**

*CSEM **11** 14:22:56.6±2.2, 40°.16N×32°.15E, h1km, ML2.3, Error ellipse: s-maj=39.2km s-min=20.7km az=104.0, Suspected Mining explosion.*
*ISK **11** 14:23:04.9, 39°.88N×33°.05E, h2km, ML2.3/7, Suspected Mining explosion.*
*ISCJB **11** 14:23:05.9±0.4, 39°.88N±0°.03×33°.09E±0°.04, h0km, Error ellipse: s-maj=4.3km s-min=4.0km az=13.5*
*DDA **11** 14:23:06.1, 39°.90N×33°.09E, h7km, Ml2.6*
ISC 11 14:23:05.5±0.8, 39°.92N±0°.03×33°.10E±0°.03, h0km, n27, σ0s62/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANTO	**Ankara**	**0.24**	**259**	PG	**Pg**	**14 23 10.4**	**+0.2**
ANTO				SG	**Sg**	**14 23 13.7**	**+0.4**
ANTO	**Ankara**	**0.24**	**259**	*e*Pg	**Pg**	**14 23 10.4**	**+0.2**
ANTO				*e*Sg	**Sg**	**14 23 13.7**	**+0.4**
LOD	**Lodumlu**	**0.26**	**264**	PG	**Pg**	**14 23 09.9**	**-0.6**
LOD				SG	**Sg**	**14 23 14.1**	**+0.2**
LOD	**Lodumlu**	**0.26**	**264**	*e*Pg	**Pg**	**14 23 09.9**	**-0.6**
LOD				*e*Sg	**Sg**	**14 23 14.1**	**+0.2**
BBAL	**Bala**	**0.37**	**178**	*i* P	**Pg**	**14 23 13.2**	**+0.6**
BBAL	**Bala**	**0.37**	**178**	P	**Pg**	**14 23 13.2**	**+0.6**
AFSR	**Af¯ar-Bala (A**	**0.47**	**183**	PG	**Pg**	**14 23 13.9**	**-0.6**
ELDT	**Eldivan**	**0.62**	**23**	*i* P	**Pb**	**14 23 18.6**	**-0.8**
ELDT				*i* S	**Sb**	**14 23 28.4**	**-0.4**
ELDT	**Eldivan**	**0.62**	**23**	P	**Pb**	**14 23 18.6**	**-0.8**
ELDT				S	**Sb**	**14 23 28.4**	**-0.4**
CMDR	**Camlidere-ANKA**	**0.75**	**320**	*i* P	**Pb**	**14 23 21.0**	**-0.6**
KKUL	**Konya-Kulu**	**0.76**	**191**	*i* P	**Pg**	**14 23 20.5**	**+0.5**
KKUL				*i* S	**Sb**	**14 23 32.0**	**-0.5**
KKUL	**Konya-Kulu**	**0.76**	**191**	P	**Pg**	**14 23 20.5**	**+0.5**
KKUL				S	**Sb**	**14 23 32.0**	**-0.5**
KULU	**Kulu**	**0.88**	**185**	PG	**Pg**	**14 23 22.2**	**-0.1**
KULU	**Kulu**	**0.88**	**185**	*e*Pg	**Pg**	**14 23 22.2**	**-0.1**
CDAG	**Cicekdag**	**1.02**	**106**	*i* P	**Pb**	**14 23 25.8**	**-0.4**
CDAG	**Cicekdag**	**1.02**	**106**	P	**Pb**	**14 23 25.8**	**-0.4**
SERE	**Sereflikochisa**	**1.03**	**160**	PG	**Pb**	**14 23 25.9**	**-0.4**
SERE	**Sereflikochisa**	**1.03**	**160**	*e*Pg	**Pb**	**14 23 25.9**	**-0.4**
BCAM	**Yenicaga**	**1.20**	**319**	*i* P	**Pb**	**14 23 28.9**	**-0.3**
BCAM				*i* S	**Sn**	**14 23 48.7**	**+1.9**
CORM	**Corum**	**1.20**	**77**	PN	**Pn**	**14 23 29.4**	**-0.3**
CORM	**Corum**	**1.20**	**77**	*e*Pn	**Pn**	**14 23 29.4**	**-0.3**
ILGA	**Ilgaz**	**1.23**	**22**	*i* P	**Pn**	**14 23 31.2**	**+1.1**
KIZT	**Kizilcal**	**1.40**	**223**	PN	**Pg**	**14 23 31.4**	**-1.0**
YOZ	**Yozgat**	**1.73**	**98**	PN	**Pb**	**14 23 37.9**	**-0.4**
YOZ	**Yozgat**	**1.73**	**98**	*e*Pn	**Pb**	**14 23 37.9**	**-0.4**
GULA	**Gulagac**	**1.80**	**150**	PN	**Pn**	**14 23 37.9**	**0.0**
GULA	**Gulagac**	**1.80**	**150**	*e*Pn	**Pn**	**14 23 37.9**	**0.0**

*NEIC **11** 14:34:35.9±0.0, 43°.53S×172°.68E, h9km, ML4.2(WEL), After WEL.*
NEIC Felt at Christchurch.
WEL 11 14:34:34.7, 44°.5S±1°×17°.3E±°, h10km, ML4.2/7, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MQZ	**McQueen's Vall**	**0.17**	**180**	Pg	Pg	14 34 39.9	+1.5
MQZ				Sg	Sg	14 34 42.8	+1.8
MQZ	**McQueen's Vall**	**0.17**	**180**	P	Pg	14 34 39.9	+1.5
MQZ				S	Sg	14 34 42.7	+1.7
EYCZ	**Eyrewell**	**0.24**	**297**	P	Pg	14 34 41.6	+1.9
EYCZ				S	Sg	14 34 45.9	+2.9
OKCZ	**Okains Bay**	**0.35**	**123**	P	Pb	14 34 42.9	-0.2
OXZ	**Oxford**	**0.49**	**294**	P*	Pb	14 34 46.0	+0.6
OXZ	**Oxford**	**0.49**	**294**	P	Pb	14 34 46.0	+0.6
OXZ				S	Sb	14 34 54.1	+1.4
LTZ	**Lake Taylor**	**0.80**	**339**	P*	Pn	14 34 51.7	-0.3
LTZ	**Lake Taylor**	**0.80**	**339**	P	Pn	14 34 51.7	-0.3
RPZ	**Rata Peaks**	**1.18**	**261**	P*	Pg	14 34 57.6	+0.4
RPZ	**Rata Peaks**	**1.18**	**261**	P	Pg	14 34 57.7	+0.4
INZ	**Inchbonnie**	**1.20**	**312**	P	Pg	14 34 57.7	+0.1
KHZ	**Kahutara**	**1.29**	**31**	P*	Pn	14 34 58.2	-0.5
KHZ	**Kahutara**	**1.29**	**31**	P	Pn	14 34 58.2	-0.5
WVZ	**Waitaha Valley**	**1.47**	**287**	Pn	Pg	14 35 02.9	0.0
WVZ	**Waitaha Valley**	**1.47**	**287**	P	Pg	14 35 02.9	0.0
THZ	**Tophouse**	**1.78**	**6**	Pn	Pn	14 35 05.3	-0.2
THZ	**Tophouse**	**1.78**	**6**	P	Pn	14 35 05.3	-0.2
DSZ	**Denniston Nort**	**1.89**	**340**	Pn	Pn	14 35 07.4	+0.4
DSZ	**Denniston Nort**	**1.89**	**340**	P	Pn	14 35 07.6	+0.5
LBZ	**Lake Benmore**	**1.98**	**244**	Pn	Pn	14 35 09.2	+1.0
LBZ	**Lake Benmore**	**1.98**	**244**	P	Pn	14 35 09.1	+0.9
BSWZ	**Blackbirch Sta**	**2.03**	**27**	Pn	Pn	14 35 08.6	-0.3
BSWZ	**Blackbirch Sta**	**2.03**	**27**	P	Pn	14 35 08.7	-0.2
FOZ	**Fox Glacier**	**2.06**	**269**	Pn	Pb	14 35 11.6	-0.6
FOZ	**Fox Glacier**	**2.06**	**269**	P	Pb	14 35 11.7	-0.5
ODZ	**Otahua Downs**	**2.09**	**223**	Pn	Pn	14 35 10.2	+0.5
ODZ	**Otahua Downs**	**2.09**	**223**	P	Pn	14 35 10.3	+0.5
TUWZ	**Tuamarina**	**2.31**	**25**	Pn	Pn	14 35 12.2	-0.6
TUWZ	**Tuamarina**	**2.31**	**25**	P	Pn	14 35 12.2	-0.5
NNZ	**Nelson**	**2.38**	**13**	Pn	Pn	14 35 13.8	+0.2
NNZ	**Nelson**	**2.38**	**13**	P	Pn	14 35 13.9	+0.2
QRZ	**Quartz Range**	**2.71**	**358**	Pn	Pn	14 35 18.1	-0.1
QRZ	**Quartz Range**	**2.71**	**358**	P	Pn	14 35 18.1	-0.1
WEL	**Wellington**	**2.74**	**36**	Pn	Pn	14 35 17.7	-0.9
JCZ	**Jackson Bay**	**2.85**	**258**	Pn	Pn	14 35 22.0	+1.7
JCZ	**Jackson Bay**	**2.85**	**258**	P	Pn	14 35 22.1	+1.8
MSWZ	**Moikau Station**	**2.86**	**43**	P	Pn	14 35 19.0	-1.3
WKZ	**Wanaka**	**2.92**	**242**	Pn	Pn	14 35 22.1	+0.9
WKZ	**Wanaka**	**2.92**	**242**	P	Pn	14 35 22.1	+1.0
EAZ	**Earnscleugh**	**2.94**	**234**	Pn	Pn	14 35 22.0	+0.6
EAZ	**Earnscleugh**	**2.94**	**234**	P	Pn	14 35 22.0	+0.6
PAWZ	**Paruwai Farm**	**2.97**	**45**	P	Pn	14 35 23.7	+1.8
CAW	**Cannon Point**	**3.01**	**37**	Pn	Pn	14 35 21.1	-1.3
CAW	**Cannon Point**	**3.01**	**37**	P	Pn	14 35 21.2	-1.2
KIW	**Kapiti Island**	**3.15**	**33**	P	Pn	14 35 23.6	-0.7
MTW	**Mount Morrison**	**3.17**	**43**	P	Pn	14 35 23.7	-1.0
TUZ	**Tuapeka**	**3.24**	**221**	Pn	Pn	14 35 26.1	+0.6
TUZ	**Tuapeka**	**3.24**	**221**	P	Pn	14 35 26.1	+0.6
OGWZ	**Otaki Gorge**	**3.29**	**35**	Pn	Pn	14 35 25.9	-0.4
HOWZ	**Holdsworth Sta**	**3.38**	**40**	Pn	Pn	14 35 27.1	-0.4
HOWZ	**Holdsworth Sta**	**3.38**	**40**	P	Pn	14 35 27.0	-0.5
MSZ	**Milford Sound**	**3.59**	**250**	Pn	Pn	14 35 30.6	+0.3
MSZ	**Milford Sound**	**3.59**	**250**	P	Pb	14 35 31.5	-6.8
MSZ				P	Pn	14 35 31.3	+1.0
MRZ	**Mangatainoka R**	**3.60**	**38**	Pn	Pn	14 35 28.6	-1.9
MRZ	**Mangatainoka R**	**3.60**	**38**	P	Pn	14 35 28.7	-1.8
MLZ	**Mavora Lakes**	**3.73**	**239**	Pn	Pn	14 35 32.7	+0.4
MLZ	**Mavora Lakes**	**3.73**	**239**	P	Pn	14 35 32.7	+0.4

MLZ				P	Pb	14 35 33.3	-7.4
PRWZ	**Pori Road**	**3.87**	**41**	P	Pn	14 35 34.2	+0.1
SYZ	**Scrubby Hill**	**3.90**	**218**	Pn	Pn	14 35 36.2	+1.6
SYZ	**Scrubby Hill**	**3.90**	**218**	P	Pn	14 35 36.1	+1.5
BFZ	**Birch Farm**	**3.91**	**44**	Pn	Pn	14 35 32.9	-1.8
BFZ	**Birch Farm**	**3.91**	**44**	P	Pn	14 35 32.9	-1.8
WHZ	**Wether Hill Ro**	**4.10**	**233**	Pn	Pn	14 35 37.4	0.0
WHZ	**Wether Hill Ro**	**4.10**	**233**	P	Pn	14 35 37.9	+0.5
WHZ				P	Pb	14 35 39.1	-7.8
WAZ	**Wanganui**	**4.16**	**26**	Pn	Pn	14 35 40.9	+2.7
DVHZ	**Dannevirke**	**4.16**	**40**	P	Pn	14 35 36.7	-1.5
TSZ	**Takapari Road**	**4.26**	**37**	Pn	Pn	14 35 38.5	-1.2
TSZ	**Takapari Road**	**4.26**	**37**	P	Pn	14 35 38.6	-1.0
DCZ	**Deep Cove**	**4.38**	**242**	P	Pn	14 35 42.3	+1.0
NEZ	**North Egmont**	**4.39**	**15**	Pn	Pn	14 35 43.0	+1.5
PKE	**Pukeiti**	**4.45**	**13**	P	Pn	14 35 44.2	+2.1
PNHZ	**Pukenui**	**4.48**	**37**	Pn	Pn	14 35 41.9	-0.8
PNHZ	**Pukenui**	**4.48**	**37**	P	Pn	14 35 41.3	-1.4
APZ	**The Paps**	**4.67**	**223**	Pn	Pn	14 35 46.4	+1.2
VRZ	**Vera Road**	**4.68**	**20**	Pn	Pn	14 35 46.9	+1.6
VRZ	**Vera Road**	**4.68**	**20**	P	Pn	14 35 46.9	+1.6
PKVZ	**Pokaka**	**4.70**	**26**	P	Pn	14 35 47.2	+1.6
WNVZ	**Wahianoa**	**4.75**	**29**	Pn	Pn	14 35 47.0	+0.6
TRVZ	**Turoa**	**4.76**	**28**	Pn	Pn	14 35 47.0	+0.4
TRVZ	**Turoa**	**4.76**	**28**	P	Pn	14 35 47.8	+1.2
BHHZ	**Black Hill Sta**	**4.78**	**34**	P	Pn	14 35 47.1	+0.3
KRHZ	**Kereru**	**4.78**	**37**	P	Pn	14 35 45.3	-1.4
WHVZ	**Whangaehu Hut**	**4.78**	**28**	P	Pn	14 35 47.8	+0.8
TUVZ	**Tukino**	**4.82**	**29**	P	Pn	14 35 47.5	+0.1
NGZ	**Ngauruhoe**	**4.88**	**28**	P	Pn	14 35 48.8	+0.5
KAHZ	**Kahuranaki**	**4.89**	**42**	P	Pn	14 35 48.2	-0.1
OTVZ	**Oturere**	**4.92**	**28**	Pn	Pn	14 35 49.2	+0.4
MCHZ	**McNeill Hill**	**5.09**	**38**	P	Pn	14 35 51.6	+0.7
BKZ	**Black Stump Fm**	**5.23**	**35**	Pn	Pn	14 35 51.6	-1.4
BKZ	**Black Stump Fm**	**5.23**	**35**	P	Pn	14 35 51.4	-1.5
HIZ	**Hauiti**	**5.28**	**19**	P	Pn	14 35 53.9	+0.3
TLZ	**Tolley Road**	**5.64**	**24**	P	Pn	14 36 00.2	+1.6
MTHZ	**Maungataniwha**	**5.64**	**35**	P	Pn	14 35 59.3	+0.7
MWZ	**Matawai**	**6.37**	**37**	Pn	Pn	14 36 05.7	-2.9

*ISK **11** 14:41:31.7, 39°.97N×33°.10E, h5km, ML2.2/6*
*ISCJB **11** 14:41:33.0±0.6, 39°.93N±0°.04×33°.10E±0°.04, h9km, Error ellipse: s-maj=5.4km s-min=4.8km az=179.9*
*DDA **11** 14:41:33.8, 39°.91N×33°.11E, h7km, Ml2.5*
*CSEM **11** 14:41:33.1±0.2, 39°.92N×33°.10E, h10km, ML2.2, Error ellipse: s-maj=5.1km s-min=5.0km az=150.0*
ISC 11 14:41:32.9±0.9, 39°.92N±0°.03×33°.11E±0°.03, h9km, n28, σ0s64/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANTO	**Ankara**	**0.25**	**258**	PG	**Pg**	**14 41 38.1**	**+0.1**
ANTO				SG	**Sg**	**14 41 41.6**	**+0.2**
ANTO	**Ankara**	**0.25**	**258**	*e*Pg	**Pg**	**14 41 38.1**	**+0.1**
ANTO				*e*Sg	**Sg**	**14 41 41.6**	**+0.2**
LOD	**Lodumlu**	**0.27**	**263**	PG	**Pg**	**14 41 37.2**	**-1.2**
LOD				SG	**Sg**	**14 41 41.4**	**-0.6**
LOD	**Lodumlu**	**0.27**	**263**	*e*Pg	**Pg**	**14 41 37.2**	**-1.2**
LOD				*e*Sg	**Sg**	**14 41 41.4**	**-0.6**
BBAL	**Bala**	**0.38**	**179**	*i* P	**Pg**	**14 41 40.9**	**+0.5**
BBAL				*i* S	**Sb**	**14 41 47.2**	**-0.7**
BBAL	**Bala**	**0.38**	**179**	P	**Pg**	**14 41 40.9**	**+0.5**
BBAL				S	**Sb**	**14 41 47.2**	**-0.7**
AFSR	**Af¯ar-Bala (A**	**0.47**	**184**	PG	**Pg**	**14 41 41.6**	**-0.6**
AFSR	**Af¯ar-Bala (A**	**0.47**	**184**	*e*Pg	**Pg**	**14 41 41.6**	**-0.6**
ELDT	**Eldivan**	**0.62**	**23**	*i* P	**Pb**	**14 41 46.4**	**+0.4**
ELDT	**Eldivan**	**0.62**	**23**	P	**Pb**	**14 41 46.4**	**+0.4**
KKUL	**Konya-Kulu**	**0.76**	**191**	*i* P	**Pb**	**14 41 48.2**	**-0.3**
KKUL				*i* S	**Sb**	**14 41 59.9**	**+0.9**
KKUL	**Konya-Kulu**	**0.76**	**191**	P	**Pb**	**14 41 48.2**	**-0.3**
KKUL				S	**Sb**	**14 41 59.9**	**+0.9**
KULU	**Kulu**	**0.88**	**185**	PG	**Pb**	**14 41 50.4**	**-0.1**
KULU	**Kulu**	**0.88**	**185**	*e*Pg	**Pb**	**14 41 50.4**	**-0.1**
CDAG	**Cicekdag**	**1.02**	**107**	*i* P	**Pb**	**14 41 52.8**	**0.0**
CDAG	**Cicekdag**	**1.02**	**107**	P	**Pb**	**14 41 52.8**	**0.0**
YAYX	**Yaylak**	**1.12**	**151**	PN	**Pb**	**14 41 54.7**	**+0.1**
YAYX	**Yaylak**	**1.12**	**151**	*e*Pn	**Pb**	**14 41 54.7**	**+0.1**
CORM	**Corum**	**1.19**	**77**	PN	**Pb**	**14 41 54.7**	**-1.1**
CORM	**Corum**	**1.19**	**77**	*e*Pn	**Pb**	**14 41 54.7**	**-1.1**
BCAM	**Yenicaga**	**1.20**	**319**	*i* P	**Pn**	**14 41 57.0**	**+1.0**
BCAM	**Yenicaga**	**1.20**	**319**	P	**Pn**	**14 41 57.0**	**+1.0**
KIZT	**Kizilcal**	**1.41**	**223**	PN	**Pn**	**14 41 58.9**	**0.0**
KIZT	**Kizilcal**	**1.41**	**223**	*e*Pn	**Pn**	**14 41 58.9**	**0.0**
YOZ	**Yozgat**	**1.73**	**99**	PN	**Pn**	**14 42 03.3**	**0.0**
YOZ	**Yozgat**	**1.73**	**99**	*e*Pn	**Pn**	**14 42 03.3**	**0.0**
GULA	**Gulagac**	**1.80**	**151**	PN	**Pn**	**14 42 05.1**	**+0.8**
GULA	**Gulagac**	**1.80**	**151**	*e*Pn	**Pn**	**14 42 05.1**	**+0.8**

IDC 11 14:52:30.3±2.8, 27°.00N×143°.65E, h0km, mb3.4/2, mb1 3.7/3, mb1mx3.2/58, mbtmp3.5/3, ML3.6/1, Error ellipse: s-maj=59.0km s-min=27.1km az=52.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**1.31**	**275**	Pn	Pn	14 52 56.1	+0.3
	18nm,0.3s,baz=268,slow=23,SNR=16						
JCJ				Sn	Sg	14 53 11.4	-0.9
	35nm,0.3s,baz=283,slow=22,SNR=11						
MJAR	**Matsushiro Arr**	**10.58**	**335**	Pn	Pn	14 55 02.6	-0.7
	0.5nm,0.3s,baz=160,slow=11,SNR=6.2						
WRA	**Warramunga Arr**	**47.52**	**192**	P	P	15 01 07.8	+0.2
	0.5nm,0.4s,baz=11,slow=8.5,SNR=14						
ASAR	**Alice Springs**	**51.24**	**191**	P	P	15 01 35.2	-0.7
	0.3nm,0.8s,baz=3.9,slow=5.5,SNR=6.2						

*ISCJB **11** 14:55:38.8±0.4, 38°.84N±0°.02×26°.48E±0°.03, h8km±4km, Error ellipse: s-maj=4.5km s-min=2.8km az=174.5*
*ISK **11** 14:55:38.3, 38°.83N×26°.48E, h13km, ML2.3/9*
*DDA **11** 14:55:38.6, 38°.82N×26°.51E, h7km, Ml2.7*
*CSEM **11** 14:55:38.9±0.1, 38°.84N×26°.48E, h12km, ML2.3, Error ellipse: s-maj=2.8km s-min=1.8km az=91.0*
*THE **11** 14:55:39.6, 38°.84N×26°.43E, h5km±1km, ML1.9/5, Error ellipse: s-maj=1.6km s-min=0.5km az=241.0*
ISC 11 14:55:39.0±0.9, 38°.84N±0°.02×26°.51E±0°.02, h12km±8km, n53, σ0s46/76, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FOCM	**Fo¨ça**	**0.22**	**126**	PG	**Pg**	**14 55 43.8**	**+0.2**
FOCM	**Fo¨ça**	**0.22**	**126**	*e*Pg	**Pg**	**14 55 43.8**	**+0.2**
KRBN	**Karaburun**	**0.25**	**171**	PG	**Pg**	**14 55 44.0**	**-0.2**
KRBN	**Karaburun**	**0.25**	**171**	*e*Pg	**Pg**	**14 55 44.0**	**-0.2**
DKL	**Dikili**	**0.39**	**54**	PG	**Pg**	**14 55 46.6**	**-0.1**
DKL				SG	**Sb**	**14 55 53.2**	**-0.6**
DKL	**Dikili**	**0.39**	**54**	*e*Pg	**Pg**	**14 55 46.6**	**-0.1**
DKL				*e*Sg	**Sb**	**14 55 53.2**	**-0.6**
PRK	**Paraskevi**	**0.44**	**336**	P	**Pg**	**14 55 48.0**	**+0.3**
PRK				S	**Sg**	**14 55 54.0**	**+0.4**
PRK	**Paraskevi**	**0.44**	**336**	P	**Pg**	**14 55 48.0**	**+0.3**
PRK				S	**Sg**	**14 55 54.0**	**+0.4**
URLA	**Izmir**	**0.49**	**172**	PG	**Pg**	**14 55 47.5**	**-1.0**
URLA	**Izmir**	**0.49**	**172**	*i* P	**Pg**	**14 55 47.3**	**-1.2**
URLA				*i* S	**Sg**	**14 55 55.1**	**+0.1**
URLA	**Izmir**	**0.49**	**172**	*e*Pg	**Pg**	**14 55 47.5**	**-1.0**
URLA				S	**Sg**	**14 55 55.1**	**+0.1**
AYVA	**Ayvalik**	**0.49**	**17**	*i* P	**Pg**	**14 55 48.9**	**+0.3**
AYVA				*i* S	**Sb**	**14 55 56.4**	**-0.3**
AYVA	**Ayvalik**	**0.49**	**17**	P	**Pg**	**14 55 48.9**	**+0.3**
CESE	**¯e¨me**	**0.54**	**198**	PG	**Pg**	**14 55 49.0**	**-0.4**
CESE	**¯e¨me**	**0.54**	**198**	*e*Pg	**Pg**	**14 55 49.0**	**-0.4**
CHOS	**Chios island**	**0.57**	**218**	P	**Pg**	**14 55 50.3**	**+0.1**
CHOS				S	**Sg**	**14 55 57.9**	**+0.1**
CHOS	**Chios island**	**0.57**	**218**	P	**Pg**	**14 55 50.3**	**+0.1**
CHOS				S	**Sg**	**14 55 57.9**	**+0.1**
ZEY	**¯zmir**	**0.60**	**180**	*i* P	**Pg**	**14 55 50.5**	**-0.2**
ZEY				*i* S	**Sb**	**14 56 01.2**	**+1.3**
SIGR	**SIGRI**	**0.63**	**306**	PG	**Pg**	**14 55 50.9**	**-0.2**
SIGR	**SIGRI**	**0.63**	**306**	P	**Pg**	**14 55 51.0**	**-0.2**
SIGR				S	**Sg**	**14 55 59.5**	**+0.1**
SIGR	**SIGRI**	**0.63**	**306**	*e*Pg	**Pg**	**14 55 50.9**	**-0.2**
SIGR				S	**Sg**	**14 55 59.5**	**+0.1**
DGB	**¯zmir**	**0.84**	**159**	*i* P	**Pg**	**14 55 54.5**	**-0.8**
DGB				*i* S	**Sg**	**14 56 06.2**	**0.0**
BAYC	**CANAKKALE_Bayr**	**0.90**	**2**	*i* P	**Pg**	**14 55 56.2**	**-0.2**
BAYC				*i* S	**Sb**	**14 56 09.1**	**+0.5**
BAYC	**CANAKKALE_Bayr**	**0.90**	**2**	P	**Pg**	**14 55 56.2**	**-0.2**

BAYC				S	**Sb**	**14 56 09.1**	**+0.5**
EZN	**Ezine**	**0.99**	**352**	PG	**Pb**	**14 55 57.6**	**-0.6**
EZN	**Ezine**	**0.99**	**352**	*e*Pg	**Pb**	**14 55 57.6**	**-0.6**
AKHS	**Akhisar**	**1.02**	**88**	*i* P	**Pn**	**14 55 59.5**	**+0.3**
AKHS	**Akhisar**	**1.02**	**88**	P	**Pn**	**14 55 59.5**	**+0.3**
BOZC	**Bozcaada**	**1.06**	**341**	*i* P	**Pb**	**14 55 58.9**	**-0.4**
BOZC				*i* S	**Sb**	**14 56 13.0**	**-0.1**
STEP	**BALIKESIR_Sava**	**1.08**	**60**	*i* P	**Pb**	**14 55 59.4**	**-0.3**
STEP				*i* S	**Sn**	**14 56 15.2**	**+0.1**
STEP	**BALIKESIR_Sava**	**1.08**	**60**	P	**Pb**	**14 55 59.4**	**-0.3**
STEP				S	**Sn**	**14 56 15.2**	**+0.1**
SMG	**Samos**	**1.16**	**167**	P	**Pg**	**14 56 01.6**	**+0.3**
SMG				S	**Sn**	**14 56 18.1**	**+1.2**
SMG	**Samos**	**1.16**	**167**	P	**Pg**	**14 56 01.6**	**+0.3**
SMG				S	**Sn**	**14 56 18.1**	**+1.2**
BALY	**Balya**	**1.25**	**44**	*i* P	**Pn**	**14 56 01.7**	**-0.7**
BALY				*i* S	**Sb**	**14 56 18.3**	**-0.3**
BALY	**Balya**	**1.25**	**44**	P	**Pn**	**14 56 01.7**	**-0.7**
BALY				S	**Sb**	**14 56 18.3**	**-0.3**
BALB	**Balikesir**	**1.33**	**53**	PN	**Pn**	**14 56 03.6**	**+0.1**
BALB	**Balikesir**	**1.33**	**53**	*e*Pn	**Pn**	**14 56 03.6**	**+0.1**
LIA	**Limnos Island**	**1.47**	**316**	P	**Pn**	**14 56 04.7**	**-0.7**
LIA				S	**Sb**	**14 56 25.2**	**+0.2**
LIA	**Limnos Island**	**1.47**	**316**	P	**Pn**	**14 56 04.7**	**-0.7**
GONE	**Gonen-Balikesi**	**1.51**	**37**	PN	**Pn**	**14 56 05.8**	**-0.1**
GONE	**Gonen-Balikesi**	**1.51**	**37**	*e*Pn	**Pn**	**14 56 05.8**	**-0.1**
LPK	**Lapseki**	**1.54**	**7**	PN	**Pn**	**14 56 06.0**	**-0.4**
LPK	**Lapseki**	**1.54**	**7**	*e*Pn	**Pn**	**14 56 06.0**	**-0.4**
GELI	**Tayfur-Gelibol**	**1.55**	**359**	PN	**Pn**	**14 56 06.7**	**+0.2**
GELI	**Tayfur-Gelibol**	**1.55**	**359**	*e*Pn	**Pn**	**14 56 06.7**	**+0.2**
KRBG	**Karabiga-Canak**	**1.67**	**21**	PN	**Pn**	**14 56 08.2**	**+0.2**
KRBG	**Karabiga-Canak**	**1.67**	**21**	*e*Pn	**Pn**	**14 56 08.2

1.8nm,0.3s,baz=360,slow=8.0,SNR=6.2
PSI S **Sn** **15 28 21.1** **-2.8**
2.2nm,0.3s,baz=360,slow=16,SNR=5.5
WRA **Warramunga Arr** **44.09 123** P **P** **15 35 11.9** **+0.3**
0.4nm,0.7s,baz=302,slow=9.1,SNR=4.7
MKAR **Makanchi Array** **44.98 347** P **P** **15 35 17.5** **-0.9**
0.2nm,0.3s,baz=151,slow=7.4,SNR=3.2
ASAR **Alice Springs** **45.55 128** P **P** **15 35 24.1** **+0.9**
0.3nm,0.9s,baz=299,slow=8.0,SNR=1.8

MAN 11 15:42:34.1, 9°.86N×123°.16E, h2km, mb4.5, ML3.3, MS3.1, 2D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**0.51**	**172**	∥*iP*	Pb	15 42 45.3	-0.6
SNPH				*i* S	Sb	15 42 53.5	-0.4
TBP	**Tagbilaran**	**0.71**	**103**	*eP*	Pg	15 42 47.8	0.0
LLP	**Lapu-Lapu**	**0.91**	**60**	*eP*	Pg	15 42 50.5	-1.2
LLP				*eS*	Sb	15 43 05.3	0.0
GUIM	**Jordan**	**0.95**	**324**	*eP*	Pg	15 42 52.6	+0.2
GUIM				*eS*	Sb	15 43 06.2	-0.3
MSLP	**Maasin**	**1.69**	**80**	*eP*	Pn	15 43 04.8	+0.1
MSLP				*eS*	Sn	15 43 27.4	+0.4
RCP	**Roxas**	**1.74**	**346**	∥*eP*	Pb	15 43 06.4	-0.5
RCP				*eS*	Sg	15 43 30.4	+0.2
PAGZ	**Pagadian**	**2.01**	**174**	*eP*	Pn	15 43 08.5	-0.5
PAGZ				*eS*	Sn	15 43 35.3	+0.5
CUYO	**Cuyo Island**	**2.33**	**295**	*eP*	Pn	15 43 13.9	+0.4
CUYO				*eS*	Sn	15 43 43.0	+0.3

NIED ***11*** *15:47:00, 44°.40N×141°.70E, h270km, Mw4.1 Best double couple: M₀1.45000×10¹⁵ NP1:φ₀267.00000°, δ59.00000°, λ,-157.00000°. NP2:φ₀165.00000°, δ70.00000°, λ,-33.00000°.*
ISCJB ***11*** *15:47:47.4±0.3, 44°.33N±0°.04×141°.62E±0°.07, h234km±3km, mb3.4/10, Error ellipse: s-maj=8.7km s-min=6.1km az=28.3*
JMA ***11*** *15:47:47.7±0.2, 44°.37N×141°.66E, h234km±2km, M3.6*
IDC ***11*** *15:47:48.0±0.4, 44°.32N×141°.68E, h225km±4km, mb3.2/10, mb1 3.5/16, mb1mx3.2/71, mbtmp3.9/16, Error ellipse: s-maj=13.2km s-min=11.8km az=127.0*
ISC 11 15:47:47.9±0.6, 44°.33N±0°.06×141°.60E±0°.06, h226km±5km, n37, σ0°.95/52, mb3.5/10, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYG	**Yagishiri**	**0.15**	**309**	P	**Pn**	**15 48 18.0**	**+0.7**
JYG				*eS*	**S**	**15 48 40.9**	**+0.6**
JSS	**Shosan**	**0.20**	**69**	P	**Pn**	**15 48 18.4**	**+1.0**
JSS				*eS*	**S**	**15 48 41.9**	**+1.5**
JHR	**Hokuryu**	**0.59**	**171**	P	**Pn**	**15 48 19.6**	**+1.1**
JHR				*eS*	**S**	**15 48 44.2**	**+1.9**
ASAJ	**Asahikawa**	**0.75**	**106**	P	**Pn**	**15 48 19.5**	**+0.3**
ASAJ				S	**S**	**15 48 43.3**	**-0.1**
ASAJ	**Asahikawa**	**0.75**	**106**	P	**Pn**	**15 48 19.4**	**+0.3**
ASAJ				*eS*	**S**	**15 48 43.6**	**+0.2**
JRR	**Rishiri**	**0.83**	**346**	P	**Pn**	**15 48 20.4**	**+1.0**
JAB	**Ashibetsu**	**0.94**	**151**	P	**Pn**	**15 48 21.2**	**+1.1**
JSE	**Soyaes**	**0.95**	**48**	P	**Pn**	**15 48 20.2**	**+0.2**
JSE				*eS*	**S**	**15 48 45.0**	**-0.2**
JKK2	**Kamakawa 2**	**0.95**	**118**	P	**Pn**	**15 48 20.8**	**+0.6**
JKK2				*eS*	**S**	**15 48 45.9**	**+0.6**
JWK2	**Keihoku**	**1.01**	**12**	P	**Pn**	**15 48 20.9**	**+0.5**
JWK2				*eS*	**S**	**15 48 46.2**	**+0.3**
JSK	**Shakotan**	**1.27**	**220**	P	**Pn**	**15 48 23.2**	**+1.0**
JFR	**Furan**	**1.37**	**148**	P	**Pn**	**15 48 23.6**	**+0.5**
JEW	**Eniwo**	**1.49**	**184**	P	**Pn**	**15 48 25.1**	**+1.1**
JEW				*eS*	**S**	**15 48 54.0**	**+1.9**
JTKR	**Abashiri--Toko**	**1.70**	**101**	P	**Pn**	**15 48 26.5**	**+0.8**
JTKR				*eS*	**S**	**15 48 55.8**	**+0.7**
JAR	**Ashorobuto**	**1.88**	**123**	P	**Pn**	**15 48 28.3**	**+0.9**
JAR				*eS*	**S**	**15 48 59.4**	**+1.4**
JNBK	**Urakawa-nobuka**	**2.22**	**157**	P	**Pn**	**15 48 31.0**	**+0.4**
JKB	**Kayabe**	**2.48**	**190**	P	**Pn**	**15 48 33.3**	**0.0**
JKB				*eS*	**S**	**15 49 08.2**	**-0.5**
JOSM	**Okushiri--Mats**	**2.73**	**215**	P	**Pn**	**15 48 36.5**	**+0.5**
JOSM				*eS*	**S**	**15 49 14.4**	**+0.9**
JOT	**Ohata**	**2.97**	**188**	P	**Pn**	**15 48 38.2**	**-0.5**
USRK	**Ussuriysk Ar.**	**6.90**	**272**	P	**Pn**	**15 49 27.9**	**+0.9**
	0.9nm,0.3s,baz=85,slow=14,SNR=17						
MAT	**Matsushiro**	**8.20**	**200**	P	**Pn**	**15 49 43.0**	**-0.7**
MJAR	**Matsushiro Arr**	**8.20**	**199**	P	**Pn**	**15 49 43.2**	**-0.5**
	1.4nm,0.3s,baz=10,slow=13,SNR=19						
KLR	**Kul'dur**	**8.35**	**309**	P	**Pn**	**15 49 46.2**	**+0.7**
	0.0nm,0.3s,baz=117,slow=13,SNR=14						
KSRS	**Korea Array**	**12.41**	**241**	P	**Pn**	**15 50 37.7**	**+0.6**
	0.2nm,0.3s,baz=51,slow=13,SNR=11						
PETK	**Petropavlovsk-**	**13.76**	**45**	P	**P**	**15 50 54.7**	**-0.6**
	0.6nm,0.3s,baz=219,slow=9.1,SNR=24						
JNU	**Nakatsue**	**13.96**	**220**	P	**P**	**15 50 57.7**	**0.0**
	0.6nm,0.3s,baz=357,slow=3.5,SNR=8.1						
MA2	**Magadan**	**16.25**	**17**	P	**P**	**15 51 22.4**	**-0.2**
	0.4nm,0.3s,baz=178,slow=13,SNR=7.0						
SONM	**Songino Array**	**24.53**	**291**	P	**P**	**15 52 47.9**	**+1.0**
	1.3nm,0.5s,baz=89,slow=8.7,SNR=7.8						
MKAR	**Makanchi Array**	**40.74**	**295**	P	**P**	**15 55 07.2**	**+0.5**
	0.7nm,0.8s,baz=82,slow=9.4,SNR=6.7						
KURBB	**Kurchatov Arra**	**41.94**	**302**	P	**P**	**15 55 16.7**	**+0.5**
	0.9nm,0.4s,baz=73,slow=8.7,SNR=9.2						
KURBB				pP	**pP**	**15 56 01.5**	**-2.2**
	0.2nm,0.4s,baz=76,slow=8.6,SNR=1.2						
ILAR	**Eielson Array**	**43.39**	**36**	P	**P**	**15 55 27.9**	**+0.2**
	0.5nm,0.6s,baz=271,slow=7.8,SNR=5.9						
YKA	**Yellowknife Ar**	**57.50**	**32**	P	**P**	**15 57 12.4**	**-0.6**
	0.7nm,0.4s,baz=308,slow=7.4,SNR=5.9						
FINES	**FINESS Array B**	**62.47**	**331**	P	**P**	**15 57 46.4**	**-0.3**
	0.2nm,0.4s,baz=124,slow=38,SNR=1.1						
WRA	**Warramunga Arr**	**64.30**	**188**	P	**P**	**15 57 59.1**	**-0.1**
	0.3nm,0.4s,baz=6.6,slow=6.7,SNR=20						
WRA				pP	**pP**	**15 58 48.1**	**-2.9**
	0.2nm,0.3s,baz=0.2,slow=7.7,SNR=1.5						
ASAR	**Alice Springs**	**68.03**	**188**	P	**P**	**15 58 23.4**	**+0.5**
	1.2nm,0.7s,baz=5.6,slow=5.6,SNR=19						
PDAR	**Pinedale Array**	**72.52**	**47**	P	**P**	**15 58 50.0**	**-0.3**
	0.9nm,0.8s,baz=313,slow=5.0,SNR=5.6						
TXAR	**Lajitas Array**	**85.57**	**53**	P	**P**	**16 00 01.5**	**+0.6**
	0.1nm,0.6s,baz=282,slow=4.5,SNR=3.8						

NEIC ***11*** *15:53:26.6±0.0, 16°.34N×98°.25W, h15km, MD4.1(MEX), After MEX.*
MEX 11 15:53:26.6±0.5, 16°.34N×98°.25W, h15km, MD4.1, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.26**	**346**	*eP*	Pn	15 53 45.9	-3.9
TLIG				*i* S	Sb	15 54 01.4	-4.8
TLIG	**Tlapa**	**1.26**	**346**	*eP*	Pn	15 53 45.9	-3.9
TLIG				*i* S	Sb	15 54 01.4	-4.8
VHO	**Vista Hermosa**	**1.63**	**63**	*eP*	Pn	15 53 51.3	-3.6
VHO				*eS*	Sn	15 54 11.6	-4.1
VHO	**Vista Hermosa**	**1.63**	**63**	*eP*	Pn	15 53 51.3	-3.6
VHO				*eS*	Sn	15 54 11.6	-4.1
ACX	**Acapulco**	**1.63**	**289**	*eP*	Pn	15 53 52.7	-2.1
ACX				*eS*	Sn	15 54 10.1	-5.5
ACX	**Acapulco**	**1.63**	**289**	*eP*	Pn	15 53 52.7	-2.1
ACX				*eS*	Sn	15 54 10.1	-5.5
CAIG	**El Cayaco**	**2.06**	**290**	*eP*	Pn	15 53 58.5	-2.2
CAIG				*eS*	Sn	15 54 24.1	-2.1
CAIG	**El Cayaco**	**2.06**	**290**	*eP*	Pn	15 53 58.5	-2.2
CAIG				*eS*	Sn	15 54 24.1	-2.1
HUIG	**Huatulco**	**2.13**	**105**	*eP*	Pn	15 54 00.2	-1.5
HUIG				*eS*	Sn	15 54 28.0	+0.1
HUIG	**Huatulco**	**2.13**	**105**	*eP*	Pn	15 54 00.2	-1.5
HUIG				*eS*	Sn	15 54 28.0	+0.1
ARIG	**Puente Sto Nin**	**2.79**	**314**	*eP*	Pn	15 54 09.8	-1.0
ARIG				*eS*	Sn	15 54 45.0	+0.8
ARIG	**Puente Sto Nin**	**2.79**	**314**	*eP*	Pn	15 54 09.8	-1.0
ARIG				*eS*	Sn	15 54 45.0	+0.8

IDC ***11*** *15:53:58.5±0.8, 31°.28N×103°.51E, h0km, mb3.9/12, mb1 3.9/14, mb1mx3.6/74, mbtmp3.9/14, ML3.7/2, MS3.0/9, Ms1 3.0/9, ms1mx2.8/62, Error ellipse: s-maj=25.6km s-min=15.2km az=55.0*

ISCJB ***11*** *15:53:59.4±0.3, 31°.38N±0°.03×103°.66E±0°.05, h13km, mb3.9/12, MS2.9/7, Error ellipse: s-maj=6.4km s-min=4.7km az=176.7*
BJI ***11*** *15:54:01.3, 31°.33N×103°.46E, h20km, mb4.1/6, mB4.2/3, ML4.0/19, Ms3.6/9, Ms7 3.4/6*
NEIC ***11*** *15:54:02.7±3.3, 31°.29N×103°.56E, h28km±25km, mb4.0/2, Error ellipse: s-maj=12.0km s-min=8.7km az=67.0*
ISC 11 15:53:59.3±0.5, 31°.33N±0°.03×103°.64E±0°.05, h13km, n39, σ2°.22/41, mb4.0/12, MS2.8/7, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.43**	**166**	∥Pg	**Pn**	**15 54 09.1**	**-2.2**
CD2				Sg	**Sn**	**15 54 16.7**	**-2.4**
CD2				smax	smax		
	comp=N,24μm,0.6s						
CD2				smax	smax		
	comp=E,26μm,0.5s						
LZH	**Lanzhou**	**4.75**	**2**	Pn	Pb	15 55 16.0	-6.5
LZH				Pg	**Pg**	**15 55 29.5**	**-0.7**
LZH				Sn	**Sb**	**15 56 12.9**	**-6.7**
LZH				Sg	**Sg**	**15 56 33.5**	**+1.8**
LZH				smax	smax		
	comp=N,150nm,0.8s						
LZH				smax	smax		
	comp=E,280nm,1.1s						
LZH				LR	LR		
	comp=N,1μm,5.3s						
LZH				LR	LR		
	comp=E,1μm,4.3s						
LZH				LR	LR		
	comp=Z,1μm,6.0s						
ENH	**Enshi**	**5.14**	**100**	*e*Pn	**Pn**	**15 55 18.9**	**+2.8**
	62nm,0.6s						
XAN	**Xi'an**	**5.21**	**57**	Pn	**Pn**	**15 55 18.7**	**+1.7**
XAN				Pg	**Pg**	**15 55 35.6**	**-3.5**
XAN				Sn	**Sn**	**15 56 15.0**	**-2.0**
XAN				Sg	**Sg**	**15 56 43.3**	**-3.3**
XAN				smax	smax		
	comp=N,330nm,0.9s						
XAN				smax	smax		
	comp=E,340nm,0.9s						
XAN				LR	LR		
	comp=N,650nm,11.6s						
XAN				LR	LR		
	comp=E,280nm,8.6s						
XAN				LR	LR		
	comp=Z,290nm,11.4s						
GYA	**Guiyang**	**5.53**	**151**	Pn	**Pg**	**15 55 43.3**	**-2.0**
GYA				Pg	Pb	15 56 00.2	+24
GYA				Sn	**Sb**	**15 56 43.7**	**+1.5**
GYA				Sg	**Sg**	**15 56 58.7**	**+1.7**
GYA				smax	smax		
	comp=N,170nm,0.9s						
GYA				smax	smax		
	comp=E,190nm,0.8s						
KMI	**Kunming**	**6.24**	**188**	Pn	Pn	15 55 34.5	+3.2
KMI				Sn	**Sn**	**15 56 42.3**	**-0.2**
KMI				Sg	**Sg**	**15 57 15.5**	**-4.0**
KMI				smax	smax		
	comp=E,31nm,0.8s						
KMI				smax	smax		
	comp=E,38nm,0.9s						
KMI				LR	LR		
	comp=E,640nm,8.9s						
KMI				LR	LR		
	comp=E,330nm,8.4s						
KMI				LR	LR		
	comp=E,560nm,12.4s						
GTA	**Gaotai**	**8.64**	**340**	*e*P	Pn	15 56 09.0	+4.8
GTA				pP	Pg	15 56 13.4	-31
GTA				sP		15 56 16.1	
GTA				S	Sn	15 57 49.9	+8.3
GTA				pmax	pmax		
	comp=E,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=E,48nm,4.9s						
GTA				LR	LR		
	comp=E,170nm,12.7s						
GTA				LR	LR		
	comp=E,240nm,12.4s						
GTA				LR	LR		
	comp=E,100nm,12.1s						
CMAR	**Chiang Mai Arr**	**13.50**	**199**	Pn	**Pn**	**15 57 11.3**	**+0.7**
	comp=E,0.2nm,0.3s,baz=7.4,slow=15,SNR=2.9						
CMAR				LR	LR	16 02 39.3	
	comp=E,67nm,18.9s,baz=307,slow=39						
ODAN	**Odare**	**14.88**	**257**	*e*P	**Pn**	**15 57 28.5**	**-1.2**
GUN	**Gumba**	**15.81**	**262**	*e*P	**P**	**15 57 47.2**	**+1.3**
	comp=E,26nm,0.8s						
PKIN	**Phulchoki**	**16.32**	**261**	*e*P	**P**	**15 57 50.5**	**-0.9**
	comp=E,19nm,0.6s						
KKN	**Kakani**	**16.36**	**262**	*e*P	**P**	**15 57 52.5**	**+0.7**
	comp=E,42nm,1.0s						
SONM	**Songino Array**	**16.62**	**7**	Pn	**P**	**15 57 54.3**	**-0.2**
	comp=E,0.2nm,0.3s,baz=190,slow=12,SNR=16						
SONM				LR	LR	16 05 04.6	
	comp=E,116nm,18.5s,baz=190,slow=40						
ULN	**Ulaanbaatar**	**16.72**	**8**	*e*P	**P**	**15 57 53.9**	**-1.7**
	comp=E,4.6nm,1.0s						
GKN	**Gorkha**	**16.84**	**263**	*e*P	**P**	**15 57 57.9**	**+0.8**
	comp=E,56nm,1.0s						
DANN	**Dangsing**	**17.50**	**265**	*e*P	**P**	**15 58 06.9**	**+2.4**
	comp=E,44nm,1.2s						
WMQ	**Urumqi**	**17.71**	**319**	P	**P**	**15 58 03.9**	**-2.6**
WMQ				pP	sP	15 58 09.8	-2.1
WMQ				pmax	pmax		
	comp=E,15nm,0.7s						
WMQ				LR	LR		
	comp=E,190nm,28.7s						
WMQ				LR	LR		
	comp=E,96nm,30.5s						
WMQ				LR	LR		
	comp=E,86nm,18.1s						
KOLN	**Koldanda**	**17.79**	**264**	*e*P	**P**	**15 58 06.2**	**-1.4**
	comp=E,30nm,0.8s						
PYUN	**Piuthan**	**18.22**	**265**	*e*P	**P**	**15 58 13.0**	**+0.6**
	comp=E,15nm,0.8s						
KSAR	**Wonju Array Be**	**20.89**	**66**	P	Pn	15 58 44.4	+0.6
KSRS	**Korea Array**	**20.92**	**66**	P	**P**	**15 58 44.4**	**+2.8**
	comp=E,3.3nm,0.7s,baz=262,slow=10,SNR=20						
KSRS				LR	LR	16 06 42.2	
	comp=E,28nm,20.9s,baz=270,slow=36						
MKAR	**Makanchi Array**	**22.55**	**319**	P	**P**	**15 59 00.9**	**+1.9**
	comp=E,6.5nm,0.9s,baz=124,slow=12,SNR=42						
JNU	**Nakatsue**	**23.09**	**78**	LR	LR	16 09 24.1	
	comp=E,64nm,18.1s,baz=298,slow=40						
AAK	**Ala-Archa**	**25.75**	**304**	P	**P**	**15 59 32.3**	**+2.5**
	comp=E,1.4nm,0.5s,baz=134,slow=7.1,SNR=4.6						
ZALV	**Zalesovo Beam**	**26.34**	**335**	P	**P**	**15 59 36.3**	**+1.5**
	comp=E,3.3nm,0.7s,baz=141,slow=9.9,SNR=14						
ZALV				LR	LR	16 11 07.5	
	comp=E,20nm,18.8s,baz=74,slow=39						
KURBB	**Kurchatov Arra**	**26.82**	**323**	P	**P**	**15 59 40.2**	**+1.1**
	comp=E,2.7nm,0.7s,baz=127,slow=9.8,SNR=28						
KURK	**Kurchatov**	**26.83**	**323**	*e*P	**P**	**15 59 41.4**	**+2.2**
KLR	**Kul'dur**	**27.68**	**42**	LR	LR	16 11 37.2	
	comp=E,4.5nm,18.0s,baz=226,slow=38						
MJAR	**Matsushiro Arr**	**29.05**	**70**	LR	LR	16 12 17.0	
	comp=E,20nm,19.1s,baz=250,slow=38						
NRIK	**Noril'sk**	**39.14**	**351**	LR	LR	16 19 08.4	
	comp=E,58nm,18.6s,baz=169,slow=38						
TIXI	**Tiksi**	**42.61**	**12**	P	**P**	**16 01 55.7**	**+0.9**
	comp=E,0.8nm,0.5s,baz=210,slow=5.3,SNR=3.5						
PETK	**Petropavlovsk-**	**44.31**	**44**	P	**P**	**16 02 11.8**	**+3.1**
	comp=E,1.5nm,0.8s,baz=311,slow=7.7,SNR=3.6						
ARCES	**ARCESS Array B**	**56.89**	**336**	P	**P**	**16 03 44.3**	**+0.8**
	comp=E,3.1nm,1.0s,baz=64,slow=6.9,SNR=3.7						
FINES	**FINESS Array B**	**57.16**	**326**	P	**P**	**16 03 46.0**	**+0.5**
	comp=E,0.2nm,0.4s,baz=75,slow=16,SNR=2.9						
PMG	**Port Moresby**	**58.11**	**127**	LR	LR	16 27 36.6	
	comp=E,27nm,20.8s,baz=197,slow=35						
WRAB	**Tennant Creek**	**58.88**	**146**	*e*P	**P**	**16 03 58.3**	**+0.2**
	comp=E,2.5nm,0.6s						
WRA	**Warramunga Arr**	**58.88**	**146**	P	**P**	**16 03 59.2**	**+1.2**
	comp=E,1.2nm,0.9s,baz=338,slow=7.9,SNR=14						
ASAR	**Alice Springs**	**61.89**	**148**	P	**P**	**16 04 20.1**	**+1.4**
	comp=E,0.5nm,0.7s,baz=339,slow=6.7,SNR=7.9						
HFS	**Hagfors**	**63.36**	**326**	P	**P**	**16 04 27.3**	**-0.6**
	comp=E,1.4nm,0.8s,baz=39,slow=9.3,SNR=3.5						

ISCJB ***11*** *15:54:33.0±0.9, 22°.15N±0°.09×143°.8E±0°.2, h105km, mb3.8/11, Error ellipse: s-maj=32.9km s-min=11.2km az=168.7*

IDC ***11*** *15:54:36.2±3.2, 22°.25N×143°.88E, h120km±25km, mb3.4/12, mb1 3.6/14, mb1mx3.3/67, mbtmp3.9/14, Error ellipse: s-maj=32.5km s-min=19.7km az=77.0*
ISC 11 15:54:34.5±1.1, 22°.2N±0°.1×143°.8E±0°.3, h105km, n14, σ0°.77/15, mb3.8/11, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.14**	**343**	P	**Pn**	**15 55 50.2**	**+1.1**
	3.4nm,0.3s,baz=279,slow=23,SNR=1.8						
JCJ				S	**Sn**	**15 56 47.2**	**0.0**
	15nm,0.3s,baz=292,slow=23,SNR=6.4						
MJAR	**Matsushiro Arr**	**15.14**	**342**	P	**Pn**	**15 58 02.6**	**-0.1**
	0.1nm,0.3s,baz=169,slow=7.4,SNR=3.9						
KSRS	**Korea Array**	**20.51**	**322**	P	Pn	15 59 06.3	-1.0
	1.0nm,0.5s,baz=146,slow=8.5,SNR=8.2						
KLR	**Kul'dur**	**28.66**	**343**	P	**P**	**16 00 22.2**	**+0.9**
	0.2nm,0.5s,baz=157,slow=3.1,SNR=10						
SONM	**Songino Array**	**39.37**	**320**	P	**P**	**16 01 52.9**	**-0.9**
	0.4nm,0.4s,baz=132,slow=10,SNR=3.1						
WRA	**Warramunga Arr**	**42.86**	**193**	P	**P**	**16 02 23.4**	**+0.9**
	0.4nm,0.9s,baz=15,slow=9.4,SNR=4.2						
ZALV	**Zalesovo Beam**	**54.22**	**321**	P	**P**	**16 03 48.4**	**-0.8**
	0.3nm,0.2s,baz=224,slow=4.1,SNR=4.0						
MKAR	**Makanchi Array**	**54.82**	**312**	P	**P**	**16 03 54.0**	**+0.3**
	0.4nm,0.5s,baz=85,slow=9.3,SNR=6.7						
MKAR				PcP	**PcP**	**16 04 54.1**	**-0.7**
	0.2nm,0.4s,baz=188,slow=2.2,SNR=4.2						
KURBB	**Kurchatov Arra**	**57.59**	**317**	P	**P**	**16 04 13.2**	**-0.1**
	2.6nm,0.4s,baz=92,slow=7.8,SNR=41						
BVAR	**Borovoye Array**	**62.71**	**319**	P	**P**	**16 04 48.5**	**+0.3**
	2.5nm,0.4s,baz=87,slow=6.9,SNR=28						
ARCES	**ARCESS Array B**	**78.67**	**342**	P	**P**	**16 06 24.1**	**-0.5**
	1.2nm,0.8s,baz=60,slow=7.2,SNR=3.5						
NVAR	**Mina Array Bea**	**82.40**	**52**	P	**P**	**16 06 45.2**	**-0.2**
	0.2nm,0.3s,baz=328,slow=3.2,SNR=3.7						
KBZ	**Khabaz**	**82.47**	**314**	P	**P**	**16 06 45.6**	**+0.2**
	1.0nm,0.6s,baz=55,slow=5.3,SNR=3.7						
FINES	**FINESS Array B**	**83.02**	**335**	P	**P**	**16 06 46.5**	**-1.4**
	0.4nm,0.3s,baz=62,slow=4.5,SNR=6.8						

ISCJB ***11*** *16:09:57.3±0.9, 50°.3S±0°.1×112°.5E±0°.4, h10km, mb4.0/7, MS3.6/9, Error ellipse: s-maj=41.1km s-min=14.2km az=16.6*
IDC ***11*** *16:09:57.8±1.0, 50°.28S×112°.42E, h0km, mb3.9/6, mb1 4.1/6, mb1mx3.8/41, mbtmp3.9/6, MS3.6/10, Ms1 3.6/10, ms1mx3.3/39, Error ellipse: s-maj=46.0km s-min=18.6km az=104.0*
NEIC ***11*** *16:09:59.2±0.6, 50°.29S×112°.43E, h10km, mb4.2/1, Error ellipse: s-maj=31.1km s-min=11.0km az=106.0*
ISC 11 16:09:59.3±1.0, 50°.3S±0°.1×112°.4E±0°.3, h10km, n20, σ0°.57/12, mb4.0/7, MS3.6/9, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.44**	**5**	T	T	16 29 19.9	
	baz=183,slow=74,SNR=227						
H01W1	**Cape Leeuwin H**	**15.45**	**5**	T	T	16 29 20.4	
	baz=183,slow=74,SNR=267						
H01W3	**Cape Leeuwin H**	**15.45**	**5**	T	T	16 29 20.9	
	baz=183,slow=74,SNR=267						
NWAO	**Narrogin (SRO)**	**17.71**	**13**	LR	LR	16 19 31.7	
	comp=Z,235nm,20.1s,baz=148,slow=32						
STKA	**Stephens Creek**	**28.39**	**61**	LR	LR	16 25 12.4	
	comp=Z,40nm,19.6s,baz=208,slow=32						
MAW	**Mawson**	**29.77**	**216**	LR	LR	16 25 55.3	
	comp=Z,112nm,18.0s,baz=62,slow=32						
ASAR	**Alice Springs**	**31.40**	**40**	P	**P**	**16 16 19.9**	**-0.5**
	1.1nm,0.9s,baz=210,slow=7.4,SNR=11						
ASAR				LR	LR	16 27 44.5	
	comp=Z,105nm,20.8s,baz=202,slow=34						
VNDA	**Vanda**	**32.90**	**162**	P	**P**	**16 16 33.7**	**+0.8**
	1.6nm,0.7s,baz=300,slow=8.7,SNR=18						
VNDA				LR	LR	16 28 52.1	
	comp=Z,99nm,20.9s,baz=298,slow=34						
WRA	**Warramunga Arr**	**34.92**	**38**	P	**P**	**16 16 50.6**	**-0.4**
	2.1nm,0.8s,baz=203,slow=11,SNR=9.4						
WRAB	**Tennant Creek**	**34.93**	**38**	*e*P	**P**	**16 16 51.3**	**+0.1**
	3.3nm,0.8s						
QSPA	**South Pole Qui**	**39.83**	**180**	P	**P**	**16 17 32.9**	**+0.4**
	1.9nm,0.8s,baz=156,slow=1.2,SNR=4.6						
QSPA				LR	LR	16 33 18.7	
	comp=Z,89nm,19.0s,baz=290,slow=35						
QSPA	**South Pole Qui**	**39.83**	**180**	*e*P	**P**	**16 17 32.5**	**0.0**
LEM	**Lembang**	**43.51**	**353**	LR	LR	16 33 13.5	
	comp=Z,94nm,19.3s,baz=207,slow=32						
PMG	**Port Moresby**	**49.85**	**47**	LR	LR	16 38 19.4	
	comp=Z,67nm,19.2s,baz=218,slow=34						
SNAA	**Sanae**	**50.12**	**202**	P	**P**	**16 18 53.1**	**-1.0**
	1.0nm,0.9s,baz=142,slow=11,SNR=3.0						
SNAA				LR	LR	16 39 01.9	
	comp=Z,108nm,18.3s,baz=46,slow=35						
BOSA	**Boshof**	**66.84**	**253**	LR	LR	16 44 29.4	
	comp=Z,62nm,19.2s,baz=174,slow=31						
CMAR	**Chiang Mai Arr**	**69.48**	**346**	P	**P**	**16 21 08.4**	**+0.8**
	1.0nm,0.7s,baz=195,slow=5.4,SNR=5.8						
TXAR	**Lajitas Array**	**145.73**	**114**	PKPbc	**PKPab**	**16 29 38.4**	**-0.2**
	0.3nm,0.6s,baz=188,slow=5.1,SNR=5.8						
PDAR	**Pinedale Array**	**150.47**	**88**	PKPbc	**PKPbc**	**16 29 50.8**	**+0.1**
	0.7nm,0.8s,baz=255,slow=4.0,SNR=5.1						
PDAR				PKPab	**PKPab**	**16 29 57.0**	**-0.3**
	0.7nm,0.9s,baz=204,slow=3.3,SNR=4.3						
YKA	**Yellowknife Ar**	**151.94**	**46**	PKPbc	**PKPbc**	**16 29 52.9**	**-0.2**
	0.7nm,0.6s,baz=288,slow=2.8,SNR=4.0						

**IDC 11 16:32:02.6±3.2, 9°.98S×119°.35E, h0km, mb3.6/1, mb1 3.5/3,

SIJI S **Sn** **17 10 21.3 -0.3**
0.5nm,0.3s,baz=308,slow=19,SNR=2.5
DAV Davao City (W) 5.44 319 LR LR 17 12 22.9
comp=Z,118nm,20.0s,baz=330,slow=42
WRA Warramunga Arr 23.29 168 P **P** **17 13 32.8 -0.4**
2.6nm,0.5s,baz=347,slow=10,SNR=20
ASAR Alice Springs 26.83 170 P **P** **17 14 04.8 -0.7**
0.4nm,0.4s,baz=352,slow=7.9,SNR=34
STKA Stephens Creek 36.57 162 P **P** **17 15 31.5 +0.6**
1.5nm,0.5s,baz=326,slow=9.1,SNR=7.8
H11S3 WAKE ISLAND Hy 39.89 64 T T 17 59 12.6
baz=252,slow=75,SNR=34
H11S2 WAKE ISLAND Hy 39.90 64 T T 17 59 17.1
baz=252,slow=75,SNR=19
H11S1 WAKE ISLAND Hy 39.90 64 T T 17 59 12.4
baz=252,slow=75,SNR=10
H11N1 WAKE ISLAND Hy 40.46 63 T T 17 59 56.5
baz=250,slow=75,SNR=17
H11N2 WAKE ISLAND Hy 40.47 63 T T 17 59 53.3
baz=250,slow=75,SNR=13
H11N3 WAKE ISLAND Hy 40.48 63 T T 17 59 57.7
baz=250,slow=75,SNR=19
MKAR Makanchi Array 59.60 324 P **P** **17 18 28.9 +0.3**
0.8nm,0.5s,baz=112,slow=8.0,SNR=15
ZALV Zalesovo Beam 62.41 332 P **P** **17 18 47.3 -0.1**
0.3nm,0.3s,baz=111,slow=8.1,SNR=4.2
KURBB Kurchatov Arra 63.72 327 P **P** **17 18 56.2 -0.1**
1.0nm,0.5s,baz=124,slow=6.5,SNR=16
TIXI Tiksi 68.64 360 P **P** **17 19 27.1 -0.2**
0.4nm,0.4s,baz=199,slow=4.3,SNR=4.2
BVAR Borovoye Array 69.31 326 P **P** **17 19 32.1 +0.2**
0.8nm,0.6s,baz=112,slow=6.4,SNR=7.1

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*ISCJB **11** 17:18:58.6±0.7,33.°10N±0.°05×140.°91E±0.°06,h35km, mb3.5/4,MS2.6/1,Error ellipse: s-maj=7.4km s-min=6.6km az=164.0*
*IDC **11** 17:18:58.9±0.9,32.°62N×139.°26E,h0km,mb3.5/4, mb1 3.7/6,mb1mx3.4/70,mbtmp3.7/6,ML3.8/2,MS2.8/1, Ms1 2.8/1,ms1mx2.2/47,Error ellipse: s-maj=22.2km s-min=14.0km az=119.0*
*JMA **11** 17:19:00.3±0.2,33.°21N×140.°84E,h48km,M3.5*
*NIED **11** 17:19:00,33.°20N×140.°80E,h92km,Mw3.9 Best double couple: $M_0$7.99000×10^{14} NP1:ϕ_s58.00000°,δ26.00000°, λ-165.00000°. NP2:ϕ_s315.00000°,δ84.00000°, λ-65.00000°.*

ISC 11 17:18:58.7±1.1,33.°05N±0.°07×140.°92E±0.°08,h35km,n24, σ1§15/21,mb3.5/4,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**0.93**	**274**	P	Pn	17 19 16.4	+1.1
JHJ2				*e*S	**Sn**	**17 19 27.6**	**+0.2**
JHCJ	**Hachijojimakas**	**0.94**	**272**	P	Pn	17 19 16.5	+1.0
JHCJ				*e*S	**Sn**	**17 19 27.4**	**-0.3**
JHJ	**Hachijo jima 2**	**0.96**	**275**	Pn	Pn	17 19 16.5	+0.8
	166nm,0.3s,baz=240,slow=20,SNR=83						
JHJ				Sn	**Sn**	**17 19 26.6**	**-1.5**
	466nm,0.3s,baz=52,slow=20,SNR=19						
BSO1	**Boso 1**	**1.60**	**2**	P	**Pn**	**17 19 24.3**	**+0.2**
BSO3	**Boso 3**	**1.78**	**349**	P	**Pn**	**17 19 26.8**	**0.0**
JKO	**Kozu shima**	**1.87**	**308**	P	**Pn**	**17 19 28.8**	**+0.5**
JKO				*e*S	**Sn**	**17 19 49.3**	**-1.4**
JIM2	**Oshima 3**	**2.07**	**324**	P	**Pn**	**17 19 31.1**	**0.0**
JIZS	**Izushimoda**	**2.38**	**315**	P	**Pn**	**17 19 35.9**	**+0.7**
JOD2	**Odawara 2**	**2.68**	**326**	P	**Pn**	**17 19 39.7**	**+0.3**
TK02	**Tokai 2**	**2.79**	**290**	P	Pn	17 19 42.3	+1.6
SHZ3	**Shizuoka 3**	**3.02**	**313**	P	Pn	17 19 45.8	+1.7
JYN	**Shimob**	**3.14**	**322**	P	**Pn**	**17 19 47.3**	**+1.6**
JRY	**Ryogami san**	**3.40**	**331**	P	**Pn**	**17 19 50.6**	**+1.3**
MJAR	**Matsushiro Arr**	**4.14**	**328**	Pn	**Pn**	**17 20 01.1**	**+1.6**
	4.5nm,0.3s,baz=164,slow=14,SNR=41						
MJAR				Sn	**Sn**	**17 20 46.0**	**-0.6**
	1.9nm,0.3s,baz=187,slow=20,SNR=4.6						
MAT	**Matsushiro**	**4.14**	**328**	P	**Pn**	**17 20 01.3**	**+1.8**
MAT				S	**Sn**	**17 20 47.4**	**+0.8**
JCJ	**Chichijima**	**6.03**	**169**	Pn	Pn	17 20 29.8	+4.3
	3.4nm,0.3s,baz=294,slow=19,SNR=2.9						
JCJ				Sn	**Sn**	**17 21 32.2**	**-1.1**
	2.9nm,0.3s,baz=288,slow=20,SNR=2.3						
H11N2	**WAKE ISLAND Hy 26.70**	**113**		T	T	17 53 28.0	
	baz=305,slow=75,SNR=12						
H11N1	**WAKE ISLAND Hy 26.70**	**113**		T	T	17 53 28.0	
	baz=305,slow=75,SNR=7.2						
H11N3	**WAKE ISLAND Hy 26.72**	**113**		T	T	17 53 28.0	
	baz=305,slow=75,SNR=8.0						
MA2	**Magadan**	**27.33**	**11**	LR	LR	17 35 21.3	
	comp=Z,19nm,21.8s,baz=172,slow=35						
MKAR	**Makanchi Array**	**45.99**	**305**	P	**P**	**17 27 17.5**	**-1.0**
	0.2nm,0.5s,baz=97,slow=6.9,SNR=3.4						
KURBB	**Kurchatov Arra**	**48.21**	**311**	P	**P**	**17 27 34.0**	**-1.8**
	0.3nm,0.4s,baz=90,slow=7.5,SNR=3.6						
WRA	**Warramunga Arr**	**53.07**	**188**	P	**P**	**17 28 13.7**	**+1.1**
	0.5nm,0.4s,baz=4.8,slow=7.5,SNR=19						
ASAR	**Alice Springs**	**56.79**	**188**	P	**P**	**17 28 40.5**	**+0.9**
	0.2nm,0.5s,baz=3.0,slow=6.8,SNR=8.9						

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*NEIC **11** 17:24:55.9±0.0,16.°45N×98.°16W,h15km,MD4.1(MEX), After MEX.*

MEX 11 17:24:55.9±0.7,16.°45N×98.°16W,h15km±25km,MD4.1, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.18**	**341**	*i* P	Pn	17 25 14.0	-3.9
TLIG				*i* S	Sb	17 25 28.5	-4.6
TLIG	**Tlapa**	**1.18**	**341**	*i* P	Pn	17 25 14.0	-3.9
TLIG				*i* S	Sb	17 25 28.5	-4.6
VHO	**Vista Hermosa**	**1.50**	**65**	*e*P	Pn	17 25 18.9	-3.5
VHO	**Vista Hermosa**	**1.50**	**65**	*e*P	Pn	17 25 18.9	-3.5
ACX	**Acapulco**	**1.68**	**285**	*e*P	Pn	17 25 19.3	-5.5
ACX				*i* S	Sn	17 25 36.7	-9.4
ACX	**Acapulco**	**1.68**	**285**	*e*P	Pn	17 25 19.3	-5.5
ACX				*i* S	Sn	17 25 36.7	-9.4
MEIG	**Mezcala**	**2.03**	**317**	*e*P	Pn	17 25 26.2	-3.5
MEIG	**Mezcala**	**2.03**	**317**	*e*P	Pn	17 25 26.2	-3.5
HUIG	**Huatulco**	**2.08**	**109**	*e*P	Pn	17 25 26.6	-3.7
HUIG	**Huatulco**	**2.08**	**109**	*e*P	Pn	17 25 26.6	-3.7
TPIG	**Tehuac#an**	**2.11**	**21**	*e*P	Pn	17 25 29.4	-1.4
TPIG	**Tehuac#an**	**2.11**	**21**	*e*P	Pn	17 25 29.4	-1.4
CAIG	**El Cayaco**	**2.11**	**287**	*e*P	Pn	17 25 28.0	-2.6
CAIG	**El Cayaco**	**2.11**	**287**	*e*P	Pn	17 25 28.0	-2.6
PLIG	**Platanillo**	**2.32**	**327**	*e*P	Pn	17 25 30.5	-3.2
PLIG	**Platanillo**	**2.32**	**327**	*e*P	Pn	17 25 30.5	-3.2
YAIG	**Yautepec**	**2.56**	**340**	*e*P	Pn	17 25 35.7	-1.3
YAIG	**Yautepec**	**2.56**	**340**	*e*P	Pn	17 25 35.7	-1.3
ARIG	**Puente Sto Nin**	**2.77**	**311**	*e*P	Pn	17 25 38.3	-1.6
ARIG	**Puente Sto Nin**	**2.77**	**311**	*e*P	Pn	17 25 38.3	-1.6
ZIIG	**Zihuatanejo**	**3.37**	**291**	*e*P	Pn	17 25 45.3	-2.7
ZIIG	**Zihuatanejo**	**3.37**	**291**	*e*P	Pn	17 25 45.3	-2.7

IDC 11 17:34:38.9±9.1,6.°89S×124.°65E,h173km±98km,mb2.8/1, mb1 3.3/4,mb1mx2.9/57,mbtmp3.7/4,Error ellipse: s-maj=165.2km s-min=26.8km az=49.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**3.44**	**196**	P	Pn	17 35 32.9	+0.1
	45nm,0.3s,baz=86,slow=1.3,SNR=27						
BATI				S	Sn	17 36 08.4	-6.4
	27nm,0.3s,baz=292,slow=21,SNR=17						
WRA	**Warramunga Arr**	**16.03**	**145**	P	P	17 38 15.8	+0.8
	0.3nm,0.3s,baz=317,slow=12,SNR=32						
WRA				S	S	17 41 08.0	-4.9
	0.0nm,0.3s,baz=326,slow=22,SNR=2.9						
ASAR	**Alice Springs**	**18.91**	**153**	P	P	17 38 46.1	-0.4
	0.4nm,0.3s,baz=333,slow=14,SNR=28						
ASAR				S	Sn	17 42 18.9	-4.0
	0.0nm,0.3s,baz=314,slow=20,SNR=3.6						
MKAR	**Makanchi Array**	**65.32**	**329**	P	P	17 45 02.4	0.0
	0.1nm,0.5s,baz=132,slow=7.0,SNR=2.3						

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*ISK **11** 17:35:37.9,36.°40N×28.°98E,h19km,ML4.1/15*
*DDA **11** 17:35:37.5,36.°41N×28.°99E,h28km,Ml4.4*
*CSEM **11** 17:35:38.4±0.1,36.°38N×29.°01E,h20km,ML3.5,Error ellipse: s-maj=2.8km s-min=1.9km az=179.0*
*ATH **11** 17:35:38.1,36.°40N×28.°99E,h38km±1km,ML3.6/17,Error ellipse: s-maj=1.7km s-min=0.6km az=135.0*
*NIC **11** 17:35:39.4±0.4,36.°53N×29.°11E,h25km,mb4.3,ML3.9*

*THE **11** 17:35:39.1,36.°42N×29.°01E,h17km±1km,ML3.5/21,Error ellipse: s-maj=1.2km s-min=0.4km az=68.0*
*IDC **11** 17:35:39.1±1.5,36.°18N×29.°19E,h47km±19km,mb3.4/4, mb1 3.5/10,mb1mx3.3/60,mbtmp3.6/10,ML3.6/6,MS2.6/3, Ms1 2.7/3,ms1mx2.2/41,Error ellipse: s-maj=14.6km s-min=14.1km az=23.0*

ISC 11 17:35:37.9±0.8,36.°38N±0.°02×29.°04E±0.°02,h25km±6km, n242,σ1§27/352,mb3.5/4,18C-10D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.25**	**9**	PG	**Pb**	**17 35 43.9**	**-0.4**
FETY				SG	**Sb**	**17 35 48.7**	**0.0**
FETY	**Fethiye**	**0.25**	**9**	P	**Pb**	**17 35 43.6**	**-0.7**
FETY				S	**Sb**	**17 35 48.9**	**+0.2**
FETY	**Fethiye**	**0.25**	**9**	*e*Pg	**Pb**	**17 35 43.9**	**-0.4**
FETY				*e*Sg	**Sb**	**17 35 48.7**	**0.0**
AKAS	**Kas**	**0.48**	**108**	PG	**Pb**	**17 35 48.7**	**+0.8**
AKAS	**Kas**	**0.48**	**108**	⇑*i*P	**Pb**	**17 35 48.5**	**+0.6**
AKAS				*i* S	**Sn**	**17 35 56.8**	**-0.3**
AKAS	**Kas**	**0.48**	**108**	*e*Pg	**Pb**	**17 35 48.7**	**+0.8**
AKAS				S	**Sn**	**17 35 56.8**	**-0.3**
KSL	**Kastellorizon**	**0.50**	**118**	P	**Pn**	**17 35 49.8**	**+0.3**
KSL				S	**Sn**	**17 35 58.9**	**+1.6**
KSL				AML	AML	17 36 00.3	
	comp=E,19095μm,0.5s						
KSL				AML	AML	17 36 03.5	
	comp=N,4405μm,0.6s						
KSL	**Kastellorizon**	**0.50**	**118**	P	**Pn**	**17 35 49.7**	**+0.3**
KSL				S	**Sn**	**17 35 58.3**	**+1.0**
DALY	**Dalyan (Mu¨la**	**0.53**	**325**	PG	**Pb**	**17 35 48.5**	**-0.1**
DALY				SG	**Sb**	**17 35 55.8**	**-0.1**
DALY	**Dalyan (Mu¨la**	**0.53**	**325**	⇓*i*P	**Pb**	**17 35 48.3**	**-0.3**
DALY				*i* S	**Sb**	**17 35 55.9**	**-0.1**
DALY	**Dalyan (Mu¨la**	**0.53**	**325**	*e*Pg	**Pb**	**17 35 48.5**	**-0.1**
DALY				S	**Sb**	**17 35 55.9**	**0.0**
TURN	**Turunc**	**0.60**	**325**	PG	**Pn**	**17 35 52.2**	**+1.4**
TURN	**Turunc**	**0.60**	**325**	⇑*i*P	**Pn**	**17 35 52.1**	**+1.2**
TURN	**Turunc**	**0.60**	**325**	P	**Pn**	**17 35 52.1**	**+1.2**
MRSB	**Marmaris-Mugla**	**0.75**	**296**	PG	**Pb**	**17 35 52.3**	**-0.1**
MRSB	**Marmaris-Mugla**	**0.75**	**296**	*e*Pg	**Pb**	**17 35 52.3**	**-0.1**
ARG	**Arkhangelos**	**0.75**	**257**	PG	**Pb**	**17 35 52.5**	**+0.1**
ARG	**Arkhangelos**	**0.75**	**257**	P	**Pb**	**17 35 52.4**	**-0.1**
ARG				S	**Sn**	**17 36 04.2**	**+0.6**
ARG				AML	AML	17 36 04.4	
	comp=N,13652μm,0.3s						
ARG				AML	AML	17 36 04.7	
	comp=E,16619μm,0.3s						
ARG	**Arkhangelos**	**0.75**	**257**	P	**Pb**	**17 35 52.3**	**-0.1**
ARG				S	**Sn**	**17 36 03.9**	**+0.3**
ARG	**Arkhangelos**	**0.75**	**257**	*e*Pg	**Pb**	**17 35 52.5**	**+0.1**
ARG				S	**Sn**	**17 36 03.8**	**+0.2**
ELL	**Elmali**	**0.79**	**62**	PG	**Pn**	**17 35 54.4**	**+0.8**
ELL	**Elmali**	**0.79**	**62**	*e*Pg	**Pn**	**17 35 54.4**	**+0.8**
GLHS	**Glhisar (BURDU**	**0.86**	**26**	PG	**Pn**	**17 35 54.6**	**+0.1**
GLHS	**Glhisar (BURDU**	**0.86**	**26**	*e*Pg	**Pn**	**17 35 54.6**	**+0.1**
GOLH	**Golhisar**	**0.95**	**26**	⇓*i*P	**Pn**	**17 35 55.3**	**-0.5**
GOLH				*i* S	**Sn**	**17 36 08.5**	**-0.1**
GOLH	**Golhisar**	**0.95**	**26**	P	**Pn**	**17 35 55.3**	**-0.5**
GOLH				S	**Sn**	**17 36 08.5**	**-0.1**
YER	**Yerkesik**	**0.96**	**321**	PG	**Pb**	**17 35 56.0**	**0.0**
YER	**Yerkesik**	**0.96**	**321**	P	**Pn**	**17 35 55.8**	**-0.1**
YER				S	**Sb**	**17 36 08.0**	**-0.4**
YER	**Yerkesik**	**0.96**	**321**	*e*Pg	**Pb**	**17 35 56.0**	**0.0**
YER				S	**Sb**	**17 36 08.0**	**-0.4**
TAVA	**DENIZLI_Tavas**	**1.08**	**355**	⇓*i*P	**Pb**	**17 35 58.2**	**+0.1**
TAVA				*i* S	**Sn**	**17 36 11.9**	**0.0**
TAVA	**DENIZLI_Tavas**	**1.08**	**355**	P	**Pb**	**17 35 58.2**	**+0.1**
TAVA				S	**Sn**	**17 36 11.9**	**0.0**
DATC	**Datca-Mugla**	**1.17**	**289**	PN	**Pb**	**17 35 59.4**	**0.0**
DATC	**Datca-Mugla**	**1.17**	**289**	*e*Pn	**Pb**	**17 35 59.4**	**0.0**
KORT	**Korkueli**	**1.22**	**59**	PN	**Pb**	**17 36 01.7**	**+1.3**
KORT	**Korkueli**	**1.22**	**59**	⇑*i*P	**Pb**	**17 36 01.4**	**+1.0**
KORT				*i* S	**Sb**	**17 36 20.0**	**+4.1**
KORT	**Korkueli**	**1.22**	**59**	P	**Pb**	**17 36 01.4**	**+1.0**
KORT	**Korkueli**	**1.22**	**59**	*e*Pn	**Pb**	**17 36 01.7**	**+1.3**
KORT				S	**Sb**	**17 36 20.0**	**+4.1**
DAT	**Datca**	**1.22**	**287**	PN	**Pb**	**17 35 59.9**	**-0.5**
DAT	**Datca**	**1.22**	**287**	⇑*i*P	**Pn**	**17 35 59.8**	**+0.2**
DAT				*i* S	**Sb**	**17 36 16.9**	**+1.1**
DAT	**Datca**	**1.22**	**287**	*e*Pn	**Pb**	**17 35 59.9**	**-0.5**
DAT				S	**Sb**	**17 36 16.9**	**+1.1**
DNZL	**Cakiroluk**	**1.30**	**0**	⇓*i*P	**Pb**	**17 36 01.6**	**-0.3**
DNZL				*i* S	**Sb**	**17 36 19.0**	**+0.8**
DNZL	**Cakiroluk**	**1.30**	**0**	P	**Pb**	**17 36 01.6**	**-0.3**
DNZL				S	**Sb**	**17 36 19.0**	**+0.8**
MLSB	**Milas**	**1.36**	**312**	PN	**Pb**	**17 36 03.1**	**+0.4**
MLSB	**Milas**	**1.36**	**312**	*e*Pn	**Pb**	**17 36 03.1**	**+0.4**
DENT	**Denizli**	**1.37**	**360**	PN	**Pn**	**17 36 02.1**	**+0.6**
DENT	**Denizli**	**1.37**	**360**	*e*Pn	**Pn**	**17 36 02.1**	**+0.6**
ANTB	**Antalya**	**1.40**	**68**	PN	**Pb**	**17 36 03.8**	**+0.5**
ANTB	**Antalya**	**1.40**	**68**	*e*Pn	**Pb**	**17 36 03.8**	**+0.5**
BDRM	**Kayabasi**	**1.45**	**298**	*i* P	**Pn**	**17 36 03.0**	**+0.5**
BDRM				*i* S	**Sb**	**17 36 22.4**	**+0.2**
BDRM	**Kayabasi**	**1.45**	**298**	P	**Pn**	**17 36 03.0**	**+0.5**
BDRM				S	**Sb**	**17 36 22.4**	**+0.2**
BODT	**Bodrum**	**1.54**	**297**	PN	**Pn**	**17 36 03.4**	**-0.4**
BODT	**Bodrum**	**1.54**	**297**	P	**Pn**	**17 36 03.2**	**-0.6**
BODT				S	**Sn**	**17 36 22.4**	**-0.7**
BODT	**Bodrum**	**1.54**	**297**	*e*Pn	**Pn**	**17 36 03.4**	**-0.4**
BODT				S	**Sn**	**17 36 22.4**	**-0.7**
BRDR	**BURDUR-Merkez**	**1.55**	**32**	⇑*i*P	**Pb**	**17 36 05.8**	**-0.1**
BRDR				*i* S	**Sb**	**17 36 26.8**	**+1.7**
BRDR	**BURDUR-Merkez**	**1.55**	**32**	P	**Pb**	**17 36 05.8**	**-0.1**
BRDR				S	**Sb**	**17 36 26.8**	**+1.7**
NISR	**Nisiros**	**1.55**	**279**	P	**Pn**	**17 36 03.7**	**-0.3**
NISR				S	**Sn**	**17 36 23.8**	**+0.5**
NISR	**Nisiros**	**1.55**	**279**	P	**Pn**	**17 36 03.7**	**-0.3**
NISR				S	**Sn**	**17 36 23.8**	**+0.5**
AYDN	**Tasoluk**	**1.58**	**324**	*i* P	**Pb**	**17 36 05.7**	**-0.7**
AYDN	**Tasoluk**	**1.58**	**324**	P	**Pb**	**17 36 05.7**	**-0.7**
YKAV	**Yalikavak-Bodr**	**1.59**	**298**	PN	**Pn**	**17 36 04.8**	**+0.3**
YKAV	**Yalikavak-Bodr**	**1.59**	**298**	*e*Pn	**Pn**	**17 36 04.8**	**+0.3**
KARP	**Karpathos**	**1.73**	**242**	PN	**Pn**	**17 36 07.4**	**+0.9**
KARP	**Karpathos**	**1.73**	**242**	P	**Pn**	**17 36 07.2**	**+0.7**
KARP				S	**Sn**	**17 36 28.6**	**+0.7**
KARP				AML	AML	17 36 40.3	
	comp=E,2149μm,0.5s						
KARP				AML	AML	17 36 40.9	
	comp=N,2369μm,0.6s						
KARP	**Karpathos**	**1.73**	**242**	P	**Pn**	**17 36 07.3**	**+0.7**
KARP				S	**Sn**	**17 36 28.0**	**+0.2**
KARP	**Karpathos**	**1.73**	**242**	P	**Pn**	**17 36 07.2**	**+0.7**
KARP				S	**Sn**	**17 36 28.0**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**1.81**	**330**	PN	**Pn**	**17 36 08.6**	**+1.0**
AYDB	**Zeytinkoy-Aydi**	**1.81**	**330**	*e*Pn	**Pn**	**17 36 08.6**	**+1.0**
ISP	**Isparta**	**1.86**	**39**	PN	**Pn**	**17 36 09.9**	**+1.6**
ISP	**Isparta**	**1.86**	**39**	⇑*i*P	**Pn**	**17 36 10.0**	**+1.6**
ISP	**Isparta**	**1.86**	**39**	P	**Pn**	**17 36 08.6**	**+0.2**
ISP				S	**Sn**	**17 36 31.0**	**-0.2**
ISP	**Isparta**	**1.86**	**39**	P	**Pn**	**17 36 08.6**	**+0.2**
ISP	**Isparta**	**1.86**	**39**	*e*Pn	**Pn**	**17 36 09.9**	**+1.6**
ISP				S	**Sn**	**17 36 31.0**	**-0.2**
SUTC	**Sutluce-Ispart**	**1.92**	**55**	PN	**Pb**	**17 36 10.9**	**-1.3**
SUTC	**Sutluce-Ispart**	**1.92**	**55**	*e*Pn	**Pb**	**17 36 10.9**	**-1.3**
GCAM	**G?zelcaml?**	**1.95**	**313**	PN	**Pn**	**17 36 10.1**	**+0.7**
GCAM	**G?zelcaml?**	**1.95**	**313**	*i* P	**Pn**	**17 36 10.5**	**+1.1**
GCAM	**G?zelcaml?**	**1.95**	**313**	*e*Pn	**Pn**	**17 36 10.1**	**+0.7**
GCAM	**G?zelcaml?**	**1.95**	**313**	P	**Pn**	**17 36 10.5**	**+1.1**
KHL	**Karahalli**	**1.98**	**11**	PN	**Pn**	**17 36 11.1**	**+1.2**
KHL	**Karahalli**	**1.98**	**11**	*e*Pn	**Pn**	**17 36 11.1**	**+1.2**
KHAL	**Karahalli**	**2.02**	**10**	*i* P	**Pn**	**17 36 09.7**	**-0.7**
KHAL	**Karahalli**	**2.02**	**10**	P	**Pn**	**17 36 09.7**	**-0.7**
BAGO	**Egridir - ISPA**	**2.13**	**41**	*i* P	**Pn**	**17 36 12.5**	**+0.5**
KEPZ	**Antalya-Kepez**	**2.13**	**75**	⇑*i*P	**Pb**	**17 36 14.6**	**-1.2**
KEPZ				*i* S	**Sb**	**17 36 41.6**	**-0.2**
KEPZ	**Antalya-Kepez**	**2.13**	**75**	P	**Pb**	**17 36 14.6**	**-1.2**
KEPZ				S	**Sb**	**17 36 41.6**	**-0.2**
KULA	**Kula-Manisa**	**2.15**	**352**	PN	**Pn**	**17 36 12.6**	**+0.4**
KULA	**Kula-Manisa**	**2.15**	**352**	*e*Pn	**Pn**	**17 36 12.6**	**+0.4**
SMG	**Samos**	**2.20**	**308**	P	**Pn**	**17 36 13.3**	**+0.5**
SMG				S	**Sn**	**17 36 40.4**	**+1.1**
SMG				AML	AML	17 36 42.2	
	comp=N,6542μm,0.5s						
SMG				AML	AML	17 36 42.6	
	comp=E,4140μm,0.2s						
SMG	**Samos**	**2.20**	**308**	P	**Pn**	**17 36 12.9**	**0.0**
SMG				S	**Sn**	**17 36 40.0**	**+0.6**
SMG	**Samos**	**2.20**	**308**	P	**Pn**	**17 36 13.4**	**+0.5**
SMG				S	**Sn**	**17 36 39.9**	**+0.6**
DGB	**¨zmir**	**2.39**	**315**	*i* P	**Pn**	**17 36 16.3**	**+0.8**
DGB				*i* S	**Sn**	**17 36 42.8**	**-1.2**
ZKR	**Zakros**	**2.62**	**242**	P	**Pn**	**17 36 20.4**	**+1.8**
ZKR				S	**Sn**	**17 36 51.0**	**+1.3**
ZKR				AML	AML	17 36 51.3	
	comp=E,1032μm,0.4s						
ZKR				AML	AML	17 36 52.3	
	comp=N,668μm,0.4s						
ZKR	**Zakros**	**2.62**	**242**	P	**Pn**	**17 36 20.0**	**+1.4**
ZKR				S	**Sn**	**17 36 48.9**	**-0.7**
ZKR	**Zakros**	**2.62**	**242**	P	**Pn**	**17 36 20.0**	**+1.4**
ZKR				S	**Sn**	**17 36 50.5**	**+0.9**
SHAP	**Saphane-Kutahy**	**2.64**	**3**	PN	**Pn**	**17 36 20.5**	**+1.5**
SHAP	**Saphane-Kutahy**	**2.64**	**3**	*e*Pn	**Pn**	**17 36 20.5**	**+1.5**
GAZI	**Gazipasa**	**2.65**	**92**	*i* P	**Pn**	**17 36 18.9**	**-0.2**
GAZI				*i* S	**Sn**	**17 36 47.8**	**-2.7**
GAZI	**Gazipasa**	**2.65**	**92**	P	**Pn**	**17 36 18.9**	**-0.2**
AKS	**Akhisar**	**2.67**	**339**	PN	**Pn**	**17 36 20.9**	**+1.5**
AKS	**Akhisar**	**2.67**	**339**	*e*Pn	**Pn**	**17 36 20.9**	**+1.5**
SIMA	**Simav-Kutahya**	**2.70**	**359**	PN	**Pn**	**17 36 20.5**	**+0.7**
SIMA	**Simav-Kutahya**	**2.70**	**359**	*e*Pn	**Pn**	**17 36 20.5**	**+0.7**
DOGA	**KONYA_Doganhis**	**2.71**	**50**	*i* P	**Pn**	**17 36 22.1**	**+2.0**
DOGA	**KONYA_Doganhis**	**2.71**	**50**	P	**Pn**	**17 36 22.1**	**+2.0**
ZEY	**¨zmir**	**2.74**	**313**	*i* P	**Pn**	**17 36 21.3**	**+1.1**
ZEY				*i* S	**Sn**	**17 36 53.3**	**+0.7**
URLA	**Izmir**	**2.77**	**316**	PN	**Pn**	**17 36 22.3**	**+1.6**
URLA	**Izmir**	**2.77**	**316**	*i* P	**Pn**	**17 36 20.8**	**+0.1**
URLA				*i* S	**Sn**	**17 36 53.0**	**-0.4**
URLA	**Izmir**	**2.77**	**316**	P	**Pn**	**17 36 20.8**	**+0.1**
URLA	**Izmir**	**2.77**	**316**	*e*Pn	**Pn**	**17 36 22.3**	**+1.6**
URLA				S	**Sn**	**17 36 53.0**	**-0.4**
BOLV	**Bolvadin**	**2.78**	**33**	*i* P	**Pn**	**17 36 20.7**	**-0.3**
BOLV	**Bolvadin**	**2.78**	**33**	P	**Pn**	**17 36 20.7**	**-0.3**
SANT	**Santorini**	**2.89**	**271**	⇑*i*P	**Pn**	**17 36 22.3**	**-0.1**
SANT	**Santorini**	**2.89**	**271**	P	**Pn**	**17 36 21.1**	**-1.3**
SANT	**Santorini**	**2.89**	**271**	P	**Pn**	**17 36 22.2**	**-0.1**
APE	**Apeiranthos**	**2.90**	**285**	⇑*i*P	**Pn**	**17 36 22.4**	**-0.1**
APE	**Apeiranthos**	**2.90**	**285**	S	**Sn**	**17 36 58.2**	**+1.6**
APE	**Apeiranthos**	**2.90**	**285**	P	**Pn**	**17 36 21.7**	**-0.8**
APE				S	**Sn**	**17 36 57.0**	**+0.4**
APE				AML	AML	17 37 01.0	
	comp=E,296μm,0.3s						
APE				AML	AML	17 37 02.8	
	comp=N,270μm,0.2s						
APE	**Apeiranthos**	**2.90**	**285**	P	**Pn**	**17 36 22.3**	**-0.2**
APE				S	**Sn**	**17 36 56.9**	**+0.4**
APE	**Apeiranthos**	**2.90**	**285**	P	**Pn**	**17 36 22.6**	**+0.1**
APE				S	**Sn**	**17 36 56.8**	**+0.2**
THR2	**Thira island,**	**2.91**	**272**	P	**Pn**	**17 36 22.4**	**-0.2**
THR2	**Thira island,**	**2.91**	**272**	P	**Pn**	**17 36 22.4**	**-0.2**
THT1	**Athinios (Pele**	**2.91**	**271**	P	**Pn**	**17 36 22.8**	**+0.2**
THT1				S	**Sn**	**17 36 56.7**	**-0.1**
THT1	**Athinios (Pele**	**2.91**	**271**	P	**Pn**	**17 36 22.8**	**+0.2**
THT1				S	**Sn**	**17 36 56.7**	**-0.1**
THR3	**Thira Island,**	**2.93**	**272**	P	**Pn**	**17 36 23.1**	**+0.2**
THR3	**Thira Island,**	**2.93**	**272**	P	**Pn**	**17 36 23.1**	**+0.2**
THR6	**Thira Island,**	**2.94**	**271**	P	**Pn**	**17 36 23.2**	**+0.2**
THR6	**Thira Island,**	**2.94**	**271**	P	**Pn**	**17 36 23.2**	**+0.2**
THR5	**Thira Island,**	**2.98**	**

VAM	**Vamos**	**4.04 257**	P	**Pn**	**17 36 39.4**	**+1.2**
VAM			S	**Sn**	**17 37 23.9**	**-0.9**
VAM	**Vamos**	**4.04 257**	P	**Pn**	**17 36 39.4**	**+1.2**
VAM			S	**Sn**	**17 37 23.9**	**-0.9**
IMMV	**Iera Moni Meta**	**4.20 259**	P	**Pn**	**17 36 42.0**	**+1.6**
IMMV			S	**Sn**	**17 37 27.3**	**-1.5**
IMMV			AML	AML	17 37 33.8	
	comp=E,553µm,0.4s					
IMMV			AML	AML	17 37 35.9	
	comp=N,397µm,0.5s					
IMMV	**Iera Moni Meta**	**4.20 259**	P	**Pn**	**17 36 42.1**	**+1.6**
IMMV			S	**Sn**	**17 37 28.9**	**+0.2**
IMMV	**Iera Moni Meta**	**4.20 259**	P	**Pn**	**17 36 42.0**	**+1.6**
IMMV			S	**Sn**	**17 37 28.9**	**+0.2**
DION	**Dionisos Attik**	**4.41 294**	P	**Pn**	**17 36 45.4**	**+2.1**
DION			S	**Sn**	**17 37 32.9**	**-1.0**
DION			AML	AML	17 37 34.6	
	comp=E,288µm,0.6s					
DION			AML	AML	17 37 38.2	
	comp=N,236µm,0.4s					
DION	**Dionisos Attik**	**4.41 294**	P	**Pn**	**17 36 45.0**	**+1.7**
DION			S	**Sn**	**17 37 33.1**	**-0.7**
VLY	**Voula,Athens**	**4.44 291**	P	**Pn**	**17 36 45.2**	**+1.6**
VLY			S	**Sn**	**17 37 34.4**	**-0.1**
VLY			AML	AML	17 37 40.1	
	comp=N,245µm,0.7s					
VLY			AML	AML	17 37 40.3	
	comp=E,366µm,0.5s					
VLY	**Voula,Athens**	**4.44 291**	P	**Pn**	**17 36 45.2**	**+1.6**
VLY			S	**Sn**	**17 37 34.2**	**-0.3**
GADA	**Gvkgeada**	**4.53 328**	P	**Pn**	**17 36 45.7**	**+0.8**
GADA			S	**Sn**	**17 37 36.2**	**-0.6**
GADA	**Gvkgeada**	**4.53 328**	P	**Pn**	**17 36 45.7**	**+0.8**
GADA			S	**Sn**	**17 37 36.2**	**-0.6**
EREA	**Eretria**	**4.54 298**	P	**Pn**	**17 36 46.5**	**+1.4**
EREA			S	**Sn**	**17 37 37.2**	**+0.1**
EREA	**Eretria**	**4.54 298**	P	**Pn**	**17 36 46.5**	**+1.4**
EREA			S	**Sn**	**17 37 37.2**	**+0.1**
LIA	**Limnos Island**	**4.64 320**	P	**Pn**	**17 36 49.4**	**+3.0**
LIA			S	**Sn**	**17 37 39.7**	**+0.3**
LIA	**Limnos Island**	**4.64 320**	P	**Pn**	**17 36 46.8**	**+0.4**
LIA			S	**Sn**	**17 37 39.2**	**-0.2**
LIA	**Limnos Island**	**4.64 320**	P	**Pn**	**17 36 46.8**	**+0.4**
LIA			S	**Sn**	**17 37 39.3**	**-0.2**
ANKY	**Antikythira Is**	**4.67 265**	P	**Pn**	**17 36 46.3**	**-0.5**
ANKY	**Antikythira Is**	**4.67 265**	P	**Pn**	**17 36 47.4**	**+0.6**
DID	**Didima**	**4.78 285**	P	**Pn**	**17 36 48.7**	**+0.3**
DID	**Didima**	**4.78 285**	P	**Pn**	**17 36 49.2**	**+0.9**
DID	**Didima**	**4.78 285**	P	**Pn**	**17 36 49.2**	**+0.9**
VILL	**Villia**	**4.90 293**	P	**Pn**	**17 36 51.2**	**+1.2**
VILL			S	**Sn**	**17 37 46.6**	**+0.7**
VILL	**Villia**	**4.90 293**	P	**Pn**	**17 36 51.2**	**+1.2**
VILL			S	**Sn**	**17 37 46.6**	**+0.7**
SMTH	**Samothraki Isl**	**4.92 327**	P	**Pn**	**17 36 51.3**	**+1.0**
SMTH			S	**Sn**	**17 37 46.8**	**+0.3**
SMTH			AML	AML	17 37 49.9	
	comp=N,66µm,0.3s					
SMTH			AML	AML	17 37 51.5	
	comp=E,59µm,0.2s					
SMTH	**Samothraki Isl**	**4.92 327**	P	**Pn**	**17 36 51.6**	**+1.3**
SMTH			S	**Sn**	**17 37 45.8**	**-0.6**
SMTH	**Samothraki Isl**	**4.92 327**	P	**Pn**	**17 36 51.6**	**+1.3**
SMTH			S	**Sn**	**17 37 46.3**	**-0.1**
VLI	**Veliai**	**4.92 276**	P	**Pn**	**17 36 50.4**	**+0.1**
VLI	**Veliai**	**4.92 276**	P	**Pn**	**17 36 51.6**	**+1.3**
VLI	**Veliai**	**4.92 276**	P	**Pn**	**17 36 51.1**	**+0.8**
BRTR	**Keskin Array B**	**4.93 46**	P	**Pn**	**17 36 51.6**	**+1.0**
	comp=E,1.3nm,0.3s,baz=221,slow=14,SNR=34					
BRTR			S	**Sn**	**17 37 48.4**	**+1.6**
	comp=E,1.7nm,0.3s,baz=216,slow=26,SNR=10					
ALN	**Alexandroupoli**	**5.08 333**	P	**Pn**	**17 36 53.4**	**+1.0**
ALN			S	**Sn**	**17 37 49.4**	**-0.8**
ALN	**Alexandroupoli**	**5.08 333**	P	**Pn**	**17 36 53.4**	**+1.0**
ALN			S	**Sn**	**17 37 49.4**	**-0.8**
LTK	**Loutraki**	**5.11 290**	P	**Pn**	**17 36 57.4**	**+4.4**
LTK	**Loutraki**	**5.11 290**	P	**Pn**	**17 36 56.0**	**+3.1**
SKIA	**Skiathos**	**5.21 304**	P	**Pn**	**17 36 55.6**	**+1.3**
SKIA	**Skiathos**	**5.21 304**	P	**Pn**	**17 36 55.6**	**+1.3**
DYR	**Agios Nikonas**	**5.41 276**	P	**Pn**	**17 37 01.1**	**+4.1**
DYR	**Agios Nikonas**	**5.41 276**	P	**Pn**	**17 36 59.9**	**+2.9**
DSF	**Desfina**	**5.56 293**	P	**Pn**	**17 37 01.9**	**+2.8**
DSF	**Desfina**	**5.56 293**	P	**Pn**	**17 37 01.5**	**+2.4**
GUR	**Goura**	**5.57 288**	P	**Pn**	**17 37 01.0**	**+1.8**
GUR	**Goura**	**5.57 288**	P	**Pn**	**17 37 01.0**	**+1.8**
AGG	**Agios Georgios**	**5.93 298**	P	**Pn**	17 37 08.9	+4.7
AGG	**Agios Georgios**	**5.93 298**	P	**Pn**	**17 37 05.5**	**+1.3**
AGG			S	**Sn**	**17 38 11.9**	**+0.5**
AGG	**Agios Georgios**	**5.93 298**	P	**Pn**	**17 37 05.5**	**+1.3**
AGG			S	**Sn**	**17 38 11.9**	**+0.5**
ANX	**Ano Chora**	**6.07 293**	P	**Pn**	**17 37 09.0**	**+2.8**
ANX	**Ano Chora**	**6.07 293**	P	**Pn**	**17 37 07.4**	**+1.2**
ANX			S	**Sn**	**17 38 15.5**	**+0.6**
ANX	**Ano Chora**	**6.07 293**	P	**Pn**	**17 37 07.4**	**+1.2**
ANX			S	**Sn**	**17 38 15.5**	**+0.6**
MMAI	**Mount Meron Ar**	**6.23 121**	P	**Pn**	**17 37 07.1**	**-1.2**
	comp=E,11nm,0.3s,baz=306,slow=12,SNR=36					
MMAI			S	**Sn**	**17 38 13.6**	**-5.1**
	comp=E,5.2nm,0.3s,baz=300,slow=21,SNR=6.7					
MMAI			LR	LR	17 40 04.9	
	comp=E,27nm,20.8s,baz=345,slow=44					
VTS	**Vitosha**	**7.66 326** ‖	*i*P	**Pn**	**17 37 28.4**	**+0.4**
VTS	**Vitosha**	**7.66 326** ‖	*i*P	**Pn**	**17 37 28.4**	**+0.4**
ASF	**Jabal al Asfar**	**7.74 121**	P	**Pn**	**17 37 28.3**	**-0.8**
	comp=E,0.3nm,0.3s,baz=288,slow=9.6,SNR=2.6					
ASF			S	**Sn**	**17 38 49.4**	**-6.6**
	comp=E,0.3nm,0.3s,baz=166,slow=19,SNR=2.9					
TIRR	**Tirgusor**	**8.08 357** ‖	*i*P	**Pn**	**17 37 36.9**	**+3.3**
TIRR	**Tirgusor**	**8.08 357** ‖	*i*P	**Pn**	**17 37 36.9**	**+3.3**
EIL	**Elat**	**8.33 142**	P	**Pn**	**17 37 39.8**	**+2.7**
	comp=E,0.1nm,0.3s,baz=319,slow=19,SNR=1.5					
EIL			S	**Sn**	**17 39 05.1**	**-5.4**
	comp=E,0.6nm,0.3s,baz=284,slow=11,SNR=1.9					
MLR	**Muntele Rosu**	**9.39 347**	P	**Pn**	**17 37 56.0**	**+4.3**
	comp=E,0.1nm,0.3s,baz=168,slow=9.3,SNR=9.2					
MLR	**Muntele Rosu**	**9.39 347** ‖	*i*P	**Pn**	**17 37 54.4**	**+2.7**
MLR	**Muntele Rosu**	**9.39 347** ‖	*i*P	**Pn**	**17 37 54.4**	**+2.7**
PLOR	**Plostina**	**9.63 350** ‖	*i*P	**Pn**	**17 37 57.9**	**+3.0**
PLOR	**Plostina**	**9.63 350** ‖	*i*P	**Pn**	**17 37 57.9**	**+3.0**
VRI	**Vrincioaia**	**9.63 350** ‖	*i*P	**Pn**	**17 37 55.6**	**+0.7**
VRI	**Vrincioaia**	**9.63 350** ‖	*i*P	**Pn**	**17 37 55.6**	**+0.7**
PDG	**Podgorica**	**9.68 312** ‖	*i*P	**Pn**	**17 37 55.4**	**-0.1**
PDG	**Podgorica**	**9.68 312** ‖	*i*P	**Pn**	**17 37 55.4**	**-0.1**
SORM	**Soroca**	**11.76 358** ‖	*i*P	**Pn**	**17 38 25.7**	**+1.8**
SORM	**Soroca**	**11.76 358** ‖	*i*P	**Pn**	**17 38 25.7**	**+1.8**
GNI	**Garni**	**12.90 68**	LR	LR	17 44 57.1	
	comp=E,58nm,20.2s,baz=302,slow=43					
GERES	**GERESS Array B**	**16.77 323**	P	**Pn**	**17 39 31.6**	**+0.6**
	comp=E,0.1nm,0.3s,baz=138,slow=12,SNR=2.5					
FINES	**FINESS Array B**	**25.15 357**	P	**P**	**17 41 01.1**	**+0.3**
	comp=E,0.9nm,0.6s,baz=170,slow=9.9,SNR=3.3					
NOA	**NORSAR Array B**	**27.15 341**	LR	LR	17 53 41.1	
	comp=E,14nm,20.1s,baz=220,slow=40					
TORD	**Torodi Ar. Bea**	**33.72 234**	P	**P**	**17 42 16.2**	**-1.1**
	comp=E,1.0nm,0.5s,baz=37,slow=9.5,SNR=6.8					
KURBB	**Kurchatov Arra**	**37.89 52**	P	**P**	**17 42 51.7**	**-1.1**
	comp=E,0.4nm,0.5s,baz=274,slow=8.6,SNR=6.5					
MKAR	**Makanchi Array**	**40.46 58**	P	**P**	**17 43 12.9**	**-1.4**
	comp=E,0.3nm,0.6s,baz=280,slow=7.2,SNR=5.2					

*CSEM **11** 17:58:32.0±0.7, 51°.47N×16°.15E, h1km, ML2.6/7, Error ellipse: s-maj=10.6km s-min=5.9km az=5.0*
*PRU **11** 17:58:33.3, 51°.43N×16°.17E, h0km*
ISC 11 17:58:32.1±1.7, 51°.47N±0°.07×16°.19E±0°.05, h0km, n22, σ0§58/44, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.63**	**174**	*e*Pg	**Pg**	**17 58 44.6**	**+0.5**
KSP				*e*Sg	**Sg**	**17 58 52.8**	**+0.6**
KSP	**Ksiaz**	**0.63**	**174**	*e*Pg	**Pg**	**17 58 44.6**	**+0.5**
KSP				*e*Sg	**Sg**	**17 58 52.8**	**+0.6**
UPC	**Upice**	**0.97**	**187**	*e*PG	**Pb**	**17 58 51.7**	**0.0**
UPC				*e*SG	**Sg**	**17 59 03.7**	**+0.6**
	comp=Z,12nm,0.4s						
UPC	**Upice**	**0.97**	**187**	Pg	**Pb**	**17 58 51.7**	**0.0**
UPC				Sg	**Sg**	**17 59 03.7**	**+0.6**
	12nm,0.4s						
DPC	**Dobruska-Polom**	**1.12**	**176**	*e*PG	**Pg**	**17 58 53.9**	**+0.3**
DPC				*e*SG	**Sg**	**17 59 08.0**	**-0.1**
	comp=Z,5.5nm,0.3s						
DPC	**Dobruska-Polom**	**1.12**	**176**	Pg	**Pg**	**17 58 53.9**	**+0.3**
DPC				Sg	**Sg**	**17 59 08.0**	**-0.1**
	5.5nm,0.3s						
PVCC	**Panska Ves**	**1.39**	**228**	*e*PG	**Pb**	**17 58 59.3**	**+0.4**
PVCC				*e*SG	**Sn**	**17 59 17.7**	**-0.1**
	comp=Z,17nm,0.2s						
PVCC	**Panska Ves**	**1.39**	**228**	Pg	**Pb**	**17 58 59.3**	**+0.4**
PVCC				Sg	**Sn**	**17 59 17.7**	**-0.1**
	17nm,0.2s						
KRLC	**Kraliky**	**1.44**	**165**	*e*PG	**Pg**	**17 58 59.8**	**+0.1**
KRLC				*e*SG	**Sg**	**17 59 18.1**	**-0.3**
	comp=Z,1.9nm,0.3s						
KRLC	**Kraliky**	**1.44**	**165**	Pg	**Pg**	**17 58 59.8**	**+0.1**
KRLC				Sg	**Sg**	**17 59 18.1**	**-0.3**
	1.9nm,0.3s						
BRG	**Berggiesshubel**	**1.53**	**248**	PG	**Pb**	**17 59 01.4**	**+0.1**
BRG				SG	**Sn**	**17 59 21.8**	**+0.4**
	5.1nm,0.5s						
GOPC	**GO Pecny, Ondr**	**1.79**	**210**	*e*PG	**Pb**	**17 59 05.9**	**+0.1**
GOPC				*e*SG	**Sb**	**17 59 28.8**	**0.0**
	comp=Z,3.9nm,0.2s						
GOPC	**GO Pecny, Ondr**	**1.79**	**210**	Pg	**Pb**	**17 59 05.9**	**+0.1**
GOPC				Sg	**Sb**	**17 59 28.8**	**0.0**
	3.9nm,0.2s						
PRU	**Pruhonice**	**1.81**	**216**	*e*PG	**Pb**	**17 59 06.5**	**+0.4**
PRU				*e*SG	**Sg**	**17 59 30.1**	**-0.2**
	comp=Z,3.6nm,0.3s						
PRU	**Pruhonice**	**1.81**	**216**	Pg	**Pb**	**17 59 06.5**	**+0.4**
PRU				Sg	**Sg**	**17 59 30.1**	**-0.2**
	3.6nm,0.3s						
MORC	**Moravsky Berou**	**1.90**	**152**	*e*Pn	**Pn**	**17 59 05.6**	**-0.2**
MORC				*e*Sg	**Sn**	**17 59 29.7**	**-0.7**
MORC	**Moravsky Berou**	**1.90**	**152**	*e*PN	**Pn**	**17 59 05.6**	**-0.2**
MORC				*e*SG	**Sn**	**17 59 29.7**	**-0.7**
CLL	**Collm**	**2.00**	**267**	*i* Pg	**Pb**	**17 59 09.5**	**+0.1**
CLL				*e*Sg	**Sg**	**17 59 36.0**	**-0.4**
NKC	**Novy Kostel**	**2.67**	**244**	*e*SG	**Sg**	**17 59 58.0**	**+0.1**
	comp=Z,4.3nm,0.3s						
NKC	**Novy Kostel**	**2.67**	**244**	Sg	**Sg**	**17 59 58.0**	**+0.1**
	4.3nm,0.3s						
KHC	**Kasperske Hory**	**2.88**	**217**	*e*PG	**Pb**	**17 59 25.4**	**+1.1**
KHC				*e*SN	**Sn**	**17 59 53.8**	**-0.7**
KHC				*e*SG	**Sg**	**18 00 02.7**	**-1.7**
KHC	**Kasperske Hory**	**2.88**	**217**	Pg	**Pb**	**17 59 25.4**	**+1.1**
KHC				Sn	**Sn**	**17 59 53.8**	**-0.7**
KHC				Sg	**Sg**	**18 00 02.7**	**-1.7**

*IDC **11** 18:00:49.5±1.9, 1°.20N×93°.99E, h0km, mb3.7/6, mb1 3.8/8, mb1mx3.5/68, mbtmp3.7/8, ML3.8/2, MS3.1/1, Ms1 3.1/1, ms1mx2.4/66, Error ellipse: s-maj=55.3km s-min=20.4km az=55.0*
*DJA **11** 18:00:50.7±0.9, 2°.N±5°.×9°.4E±°, h60km±70km, M4.3/10, mB5.6/2, mb4.2/6, MLv4.4/10, Mw(mB)5.1/2*
*NEIC **11** 18:00:55.1±0.9, 1°.31N×94°.13E, h35km, mb4.0/2, Error ellipse: s-maj=22.8km s-min=11.1km az=55.0*
ISC 11 18:01:00.0±1.3, 2°.0N±0°.1×94°.29E±0°.10, h35km, n19, σ1§83/17, mb3.9/8, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSI	**Meulaboh, Aceh**	**3.10**	**43**	P	Pn	18 01 41.6	-4.9
MLSI				S	**Sn**	**18 02 20.9**	**-1.5**
TPTI		**3.15**	**66**	P	**Pn**	**18 01 44.9**	**-2.4**
TPTI				S	**Sn**	**18 02 27.3**	**+3.6**
GSI	**Gunungsitoli**	**3.35**	**102**	P	**Pn**	**18 01 49.3**	**-0.7**
BSI	**Banda Aceh**	**3.63**	**16**	P	Pn	18 01 44.2	-10
KCSI	**Kotacane, Aceh**	**3.80**	**66**	P	**Pn**	**18 01 54.3**	**-1.9**
KCSI				S	**Sn**	**18 02 43.0**	**+3.3**
LHMI	**Lhok Sumawe**	**4.18**	**39**	P	Pn	18 01 55.4	-5.9
PSI	**Prapat**	**4.70**	**80**	Pn	**Pn**	**18 02 07.6**	**-1.0**
	4.5nm,0.3s,baz=359,slow=3.5,SNR=12						
PSI				Sn	**Sn**	**18 03 02.9**	**+0.8**
	0.9nm,0.3s,baz=180,slow=17,SNR=1.8						
PSI				LR	LR	18 04 33.3	
	comp=Z,173nm,18.6s,baz=92,slow=44						
MNSI	**Mandailing Nat**	**5.42**	**102**	P	**Pn**	**18 02 18.3**	**-0.1**
KRJI	**Kerinci**	**8.23**	**119**	P	**Pn**	**18 02 56.6**	**-0.6**
CMAR	**Chiang Mai Arr**	**17.00**	**15**	P	**P**	**18 04 58.3**	**+1.5**
	0.1nm,0.3s,baz=209,slow=14,SNR=4.4						
LSA	**Lhasa**	**27.73**	**354**	*e*P	**P**	**18 06 46.7**	**+0.8**
	3.4nm,0.7s						
WRA	**Warramunga Arr**	**44.92**	**121**	P	P	18 09 05.2	-6.7
	0.8nm,0.6s,baz=301,slow=8.6,SNR=17						
WRAB	**Tennant Creek**	**44.93**	**121**	*e*P	P	18 09 05.4	-6.5
	1.3nm,0.7s						
MKAR	**Makanchi Array**	**45.85**	**349**	P	**P**	**18 09 18.4**	**-0.4**
	0.9nm,0.6s,baz=167,slow=8.3,SNR=8.0						
ASAR	**Alice Springs**	**46.20**	**126**	P	P	18 09 15.0	-6.9
	0.4nm,0.9s,baz=302,slow=7.4,SNR=4.4						
SONM	**Songino Array**	**46.86**	**11**	P	**P**	**18 09 29.1**	**+2.2**
	0.8nm,0.5s,baz=182,slow=8.2,SNR=4.4						
KURBB	**Kurchatov Arra**	**50.27**	**347**	P	**P**	**18 09 52.4**	**-0.5**
	0.5nm,0.6s,baz=171,slow=6.7,SNR=6.4						
KURK	**Kurchatov**	**50.34**	**347**	P	**P**	**18 09 52.4**	**-1.0**
ZALV	**Zalesovo Beam**	**52.38**	**353**	P	**P**	**18 10 08.7**	**+0.1**
	1.0nm,0.4s,baz=188,slow=8.7,SNR=5.7						

*IDC **11** 18:05:08.7±3.7, 41°.09N×113°.06W, h0km, mb1 2.3/1, mb1mx2.3/55, mbtmp1.9/1, ML2.8/1, Error ellipse: s-maj=66.5km s-min=26.9km az=147.0*
*ISCJB **11** 18:05:10.1±1.2, 41°.04N±0°.10×112°.9W±0°.2, h0km, Error ellipse: s-maj=18.6km s-min=13.6km az=17.9*
*NEIC **11** 18:05:10.4±1.1, 41°.00N×112°.85W, h0km, ML1.7, Error ellipse: s-maj=17.6km s-min=12.7km az=114.0, Suspected Mining explosion.*
NEIC 70 km [43 miles] NW of Tooele.
ISC 11 18:05:10.0±1.6, 40°.99N±0°.08×112°.9W±0°.1, h0km, n6, σ0§95/5, Utah

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUG	**Dugway, Tooele**	**0.80**	**175**	*e*Pn	**Pn**	**18 05 28.9**	**+0.3**
HWUT	**Hardware Ranch**	**1.18**	**58**	*e*P	**Pg**	**18 05 31.6**	**-1.0**
HLID	**Hailey**	**2.81**	**337**	*e*P	**Pn**	**18 05 56.5**	**+0.2**
PDAR	**Pinedale Array**	**3.06**	**53**	Pn	**Pn**	**18 06 00.6**	**+0.8**
	0.2nm,0.3s,baz=250,slow=13,SNR=3.4						
PDAR				Pg	**Pb**	**18 06 05.8**	**+0.3**
	1.1nm,0.3s,baz=232,slow=13,SNR=13						
PDAR				Lg	Lg	18 06 46.2	
	0.9nm,0.3s,baz=231,slow=26,SNR=8.7						
I56US	**NEWPORT INFRAS**	**7.87**	**339**	*i*		18 49 40.0	
	baz=158,slow=322,SNR=5.5						
I57US	**PINON FLAT INF**	**7.90**	**202**	*i*		18 54 50.0	
	baz=19,slow=307,SNR=1.3						

*ISCJB **11** 18:07:04.9±0.7, 16°.5S±0°.2×174°.9W±0°.2, h288km, mb3.8/8, Error ellipse: s-maj=31.9km s-min=9.6km az=137.2*
*IDC **11** 18:07:05.0±1.2, 16°.42S×174°.90W, h272km±14km, mb3.6/8, mb1 3.8/9, mb1mx3.4/47, mbtmp4.2/9, Error ellipse: s-maj=23.5km s-min=12.5km az=130.0*
ISC 11 18:07:06.3±0.8, 16°.4S±0°.2×174°.8W±0°.2, h288km, n9, σ1§18/11, mb3.8/8, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.83**	**51**	P	**Pn**	**18 08 10.4**	**+0.2**
	19nm,0.3s,baz=5.2,slow=2.1,SNR=22						
AFI				S	**S**	**18 08 59.7**	**-1.5**
	21nm,0.3s,baz=11,slow=23,SNR=7.0						
URZ	**Urewera**	**22.94**	**196**	P	**P**	**18 11 43.8**	**-1.9**
	8.2nm,0.6s,baz=324,slow=19,SNR=7.4						
URZ				S	**S**	**18 15 35.0**	**+1.2**
	6.8nm,0.8s,baz=114,slow=8.4,SNR=1.9						
RPZ	**Rata Peaks**	**29.79**	**201**	P	**P**	**18 12 46.6**	**-0.2**
	31nm,1.1s,baz=52,slow=14,SNR=3.2						
STKA	**Stephens Creek**	**42.36**	**240**	P	**P**	**18 14 33.3**	**+0.4**
	3.8nm,0.6s,baz=86,slow=10,SNR=14						
WRA	**Warramunga Arr**	**48.28**	**258**	P	**P**	**18 15 18.2**	**-1.1**
	0.9nm,0.4s,baz=93,slow=7.4,SNR=38						
ASAR	**Alice Springs**	**48.50**	**253**	P	**P**	**18 15 20.6**	**-0.4**
	6.6nm,0.5s,baz=89,slow=7.7,SNR=234						
NVAR	**Mina Array Bea**	**75.97**	**42**	P	**P**	**18 18 23.6**	**+1.4**
	0.5nm,0.6s,baz=213,slow=6.5,SNR=4.8						
ILAR	**Eielson Array**	**83.65**	**12**	P	**P**	**18 19 02.6**	**+0.2**
	0.5nm,0.4s,baz=226,slow=6.0,SNR=7.5						
PDAR	**Pinedale Array**	**83.90**	**42**	P	**P**	**18 19 05.2**	**+0.7**
	0.2nm,0.5s,baz=186,slow=3.3,SNR=2.8						

*ISCJB **11** 18:16:03.4±0.6, 31°.70S±0°.02×69°.70W±0°.03, h121km±5km, Error ellipse: s-maj=4.6km s-min=3.5km az=15.8*
*GUC **11** 18:16:03.6±0.5, 31°.68S×69°.89W, h19km±6km, ML3.2*
*SJA **11** 18:16:04.2±1.0, 31°.72S×69°.64W, h110km±4km, ML3.3, MW3.5*
ISC 11 18:16:03.7±1.4, 31°.70S±0°.03×69°.71W±0°.04, h120km±9km, n29, σ0§91/55, 2C, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLS	**Leoncito**	**0.37**	**106**	*i* P	**Pn**	**18 16 21.3**	**0.0**
RTLS				IAML		18 16 21.4	
	comp=Z,2µm,0.1s						
RTLS				*e*S	**Sn**	**18 16 34.0**	**-0.5**
AUSP	**Uspallata**	**0.59**	**152**	*i* P	**Pn**	**18 16 22.7**	**+0.1**
AUSP				*e*S	**Sn**	**18 16 36.4**	**-0.4**
ZON	**Zonda**	**0.90**	**81**	*e*P	**Pn**	**18 16 23.7**	**-1.1**
ZON				*e*S	**Sn**	**18 16 39.7**	**-1.0**
ZON				IAML		18 16 42.6	
	comp=Z,418nm,0.2s						
RTCV	**Cerro Valdivia**	**1.01**	**100**	*i* P	**Pn**	**18 16 26.3**	**+0.4**
RTCV				*e*S	**Sn**	**18 16 41.3**	**-1.4**
RTLL	**Cerro Villicun**	**1.12**	**71**	*e*P	**Pn**	**18 16 27.1**	**+0.1**
RTLL				*e*S	**Sn**	**18 16 44.4**	**-0.2**
RTLL				IAML		18 16 45.5	
	comp=Z,486nm,0.3s						
ASAL	**Salagasta**	**1.16**	**140**	*i* P	**Pn**	**18 16 28.1**	**+0.6**
ASAL				*e*S	**Sn**	**18 16 44.8**	**-0.7**
AMOG	**MOGNA**	**1.29**	**54**	*i* P	**Pn**	**18 16 29.4**	**+0.6**
AMOG				*i* S	**Sn**	**18 16 47.6**	**-0.3**
ARCO	**CERRO ARCO**	**1.32**	**150**	*e*P	**Pn**	**18 16 30.0**	**+0.7**
ARCO				*e*S	**Sn**	**18 16 49.5**	**+0.9**
ARCO				IAML		18 16 51.3	
	comp=Z,393nm,0.2s						
AROD	**Rodeo**	**1.54**	**8**	*i* P	**Pn**	**18 16 33.4**	**+1.4**
AROD				*e*S	**Sn**	**18 16 54.6**	**+1.3**
AAGR	**Agrelo**	**1.57**	**152**	*e*P	**Pn**	**18 16 33.0**	**+0.9**
AAGR				*e*S	**Sn**	**18 16 55.0**	**+1.3**
ACDV	**Cuesta del Vie**	**1.60**	**19**	*e*P	**Pn**	**18 16 33.8**	**+1.2**
ACDV				*e*S	**Sn**	**18 16 55.8**	**+1.4**
PEL	**Peldehue**	**1.66**	**209** ⇑	*i* P	**Pn**	**18 16 32.8**	**-0.3**
PEL				*e*S	**Sn**	**18 16 55.0**	**-0.5**
PEL				IAML		18 16 56.5	
	comp=N,331nm,0.3s						
ROCH	**El Roble**	**1.68**	**220**	*e*P	**Pn**	**18 16 32.9**	**-0.6**
ROCH				*e*S	**Sn**	**18 16 55.7**	**-0.4**
ROCH				IAML		18 16 56.5	
	comp=E,692nm,0.5s						
ROC1	**El Roble**	**1.69**	**220**	*e*P	**Pn**	**18 16 32.9**	**-0.7**
ROC1				*e*S	**Sn**	**18 16 54.9**	**-1.4**
FCH	**Farellones**	**1.70**	**197** ⇑	*i* P	**Pn**	**18 16 34.5**	**+0.7**
FCH				*e*S	**Sn**	**18 16 58.1**	**+1.4**
FCH				IAML		18 17 01.0	
	comp=N,305nm,0.1s						
GO04	**Tololo Observa**	**1.78**	**328**	*e*P	**Pn**	**18 16 34.6**	**-0.2**
GO04				*e*S	**Sn**	**18 16 57.6**	**-0.7**
TLL	**Tololo Astrono**	**1.79**	**328**	*e*P	**Pn**	**18 16 34.8**	**-0.1**
TLL				*e*S	**Sn**	**18 16 58.4**	**-0.2**
TLL				IAML		18 16 59.5	
	comp=N,619nm,0.1s						
CLCH	**Cerro Calan**	**1.83**	**202**	*e*P	**Pn**	**18 16 35.6**	**+0.4**
CLCH				*e*S	**Sn**	**18 17 00.0**	**+0.9**
CLCH				IAML		18 17 01.9	
	comp=E,389nm,0.4s						
AVIZ	**Vizcacheras**	**2.04**	**151**	*e*P	**Pn**	**18 16 38.5**	**+0.8**
AVIZ				*e*S	**Sn**	**18 17 03.8**	**0.0**
LMEL	**Las Melosas**	**2.18**	**191**	*e*P	**Pn**	**18 16 40.6**	**+0.9**
ACAN	**Cantantal**	**2.22**	**106**	*i* P	**Pn**	**18 16 40.5**	**+0.6**
ACAN				*i* S	**Sn**	**18 17 07.2**	**-0.6**
AGUA	**GUANDACOL**	**2.44**	**26**	*i* P	**Pn**	**18 16 44.2**	**+1.3**
AGUA				*e*S	**Sn**	**18 17 14.0**	**+1.1**
LCO	**Las Campanas**	**2.81**	**342**	*e*P	**Pn**	**18 16 47.9**	**+0.1**
LCO				*e*S	**Sn**	**18 17 20.5**	**-1.2**
APLL	**PUNTA DE LOS L**	**3.03**	**65**	*e*P	**Pn**	**18 16 50.5**	**0.0**
APLL				*e*S	**Sn**	**18 17 26.9**	**+0.5**
APLL				IAML		18 17 29.1	
	comp=Z,74nm,0.2s						
VCA	**Vinchina**	**3.23**	**24**	*e*P	**Pn**	**18

RAGZ	Rawiri	8.27 197	P	Pn	18 24 01.8	+1.2
TARZ	Mount Tarawera	8.30 202	P	P	18 24 05.6	+1.8
RIGZ	Rimuhau	8.39 195	P	Pn	18 24 02.4	+0.5
MUGZ	Murupara	8.44 200	P	Pn	18 24 03.4	+0.9
RTZ	Ruatahuna	8.50 199	P	Pn	18 24 02.7	-0.6
HRRZ	Handcock Road	8.51 203	P	P	18 24 07.4	+1.3
GRRZ	Galatos Road	8.54 204	P	P	18 24 08.3	+2.0
SNGZ	Shannon Statio	8.56 197	P	Pn	18 24 03.3	-0.6
PRGZ	Paritu Road	8.57 194	P	Pn	18 24 04.6	+0.5
PRRZ	Plateau Road	8.57 202	P	P	18 24 08.1	+1.4
ALRZ	Allen Road	8.65 202	P	P	18 24 08.1	+0.6
WPRZ	Whakapapatarin	8.67 203	P	P	18 24 09.4	+1.6
KNZ	Kokohu	8.71 195	P	Pn	18 24 05.9	+0.2
TLZ	Tolley Road	8.73 207	P	P	18 24 10.9	+2.4
RAHZ	Arahi	8.76 198	P	Pn	18 24 07.0	+0.7
KUTZ	Kaahu Road	8.76 205	P	P	18 24 10.7	+1.9
MTHZ	Maungataniwha	8.76 199	P	Pn	18 24 07.3	+0.9
MHGZ	Mahia Peninsul	8.79 193	P	P	18 24 08.3	-0.8
WHHZ	Waihua	8.87 197	P	P	18 24 09.7	-0.3
MRHZ	Matea Rd	8.87 201	P	P	18 24 09.6	-0.5
NMHZ	Naumai	9.00 199	P	Pn	18 24 08.3	-0.9
ARHZ	Aropaoanui	9.11 198	P	P	18 24 12.3	-0.3
BKZ	Black Stump Fm	9.15 200	P	Pn	18 24 10.0	-1.1
KATZ	Kakaramea	9.24 204	P	P	18 24 15.0	+0.8
MCHZ	McNeill Hill	9.35 198	P	Pn	18 24 13.7	+0.3
WTVZ	West Tongariro	9.40 204	P	P	18 24 15.8	-0.2
KWHZ	Kaweka Forest	9.41 200	P	Pn	18 24 14.4	+0.2
TWVZ	Taurewa	9.41 205	P	P	18 24 16.2	0.0
CKHZ	Cape Kidnapper	9.46 196	P	P	18 24 16.2	-0.3
BHHZ	Black Hill Sta	9.58 201	P	Pn	18 24 16.2	+0.1
KAHZ	Kahuranaki	9.64 197	P	Pn	18 24 17.2	+0.4
VRZ	Vera Road	9.72 208	P	P	18 24 20.7	+1.2
PNHZ	Pukenui	9.93 200	P	Pn	18 24 19.0	-1.3
PKE	Pukeiti	10.10 210	P	P	18 24 27.7	+4.0
TSZ	Takapari Road	10.13 200	P	Pn	18 24 21.2	-1.6
BFZ	Birch Farm	10.63 198	P	Pn	18 24 27.2	-1.4
MRZ	Mangatainoka R	10.80 200	P	Pn	18 24 28.3	-2.3
TIWZ	Tintock	10.82 199	P	Pn	18 24 30.5	-0.4
HOWZ	Holdsworth Sta	11.04 200	P	Pn	18 24 32.6	-0.9
OGWZ	Otaki Gorge	11.07 202	P	Pn	18 24 32.5	-1.3
TMWZ	Te Maipa	11.12 198	P	Pn	18 24 33.7	-0.9
KIW	Kapiti Island	11.20 202	P	Pn	18 24 33.8	-1.5
CAW	Cannon Point	11.37 201	P	Pn	18 24 36.7	-0.6
PAWZ	Paruwai Farm	11.51 200	P	Pn	18 24 39.0	-0.1
MSWZ	Moikau Station	11.59 200	P	Pn	18 24 40.0	0.0
TUWZ	Tuamarina	12.03 204	P	P	18 24 43.2	-1.9
NNZ	Nelson	12.06 207	P	P	18 24 45.0	-0.3
QRZ	Quartz Range	12.08 210	P	P	18 24 45.0	-0.7
BSWZ	Blackbirch Sta	12.31 204	P	Pn	18 24 49.8	+1.3
THZ	Tophouse	12.71 207	P	Pn	18 24 53.1	-0.2
KHZ	Kahutara	13.04 203	P	P	18 24 56.0	-0.2
RPZ	Rata Peaks	15.09 207	P	P	18 25 19.4	+0.7
	0.5nm,0.3s,baz=72,slow=6.4,SNR=4.6					
RPZ			S	S	18 27 57.1	-3.6
	0.6nm,0.3s,baz=22,slow=19,SNR=6.3					
CTA	Charters Tower	32.57 281	P	P	18 28 05.2	+1.9
	0.9nm,0.4s,baz=104,slow=12,SNR=5.4					
ASAR	Alice Springs	41.82 268	P	P	18 29 20.1	-0.2
	0.5nm,0.5s,baz=106,slow=7.5,SNR=26					
ASAR			PcP	PcP	18 31 08.2	-0.7
	0.8nm,0.9s,baz=105,slow=4.5,SNR=3.4					
ASAR			ScP	ScP	18 34 25.0	-0.1
	0.7nm,0.8s,baz=109,slow=3.8,SNR=5.5					
WRA	Warramunga Arr	42.83 273	P	P	18 29 27.6	-0.6
	1.7nm,0.5s,baz=111,slow=7.9,SNR=28					
WRA			ScP	ScP	18 34 26.6	-2.6
	1.3nm,1.1s,baz=113,slow=3.4,SNR=3.4					
WRA			S	S	18 35 22.3	-3.6
	0.6nm,0.7s,baz=111,slow=14,SNR=3.5					
SNAA	Sanae	77.98 179	P	P	18 33 25.6	+2.5
SNAA	Sanae	77.98 179	P	P	18 33 25.1	+2.0
	0.5nm,0.7s,baz=207,slow=6.8,SNR=6.6					
VNA3	Neumayer Olymp	78.18 177	P	P	18 33 26.6	+2.4
VNA1	Neumayer--Stat	78.83 177	P	P	18 33 30.2	+2.5
PETK	Petropavlovsk-	85.70 346	P	P	18 34 03.2	+0.2
	4.1nm,0.7s,baz=122,slow=7.0,SNR=11					
NVAR	Mina Array Bea	89.27 43	P	P	18 34 22.0	+1.5
	0.3nm,0.6s,baz=217,slow=7.3,SNR=3.5					
MKAR	Makanchi Array	116.92 310	PKP	PKPdf	18 40 05.7	-0.7
	0.2nm,0.4s,baz=103,slow=0.7,SNR=6.0					
KURBB	Kurchatov Arra	120.30 314	PKP	PKPdf	18 40 12.0	-0.7
	1.0nm,0.6s,baz=109,slow=1.9,SNR=13					
BVAR	Borovoye Array	125.66 316	PKP	PKPdf	18 40 22.7	-0.3
	1.4nm,0.7s,baz=90,slow=2.9,SNR=10					
SPITS	Spitsbergen Ar	131.82 356	PKP	PKPdf	18 40 35.2	+1.1
	3.1nm,0.9s,baz=332,slow=2.1,SNR=3.5					
ARCES	ARCESS Array B	138.51 347	PKhKP	PKPpre	18 40 39.6	
	1.1nm,0.7s,baz=21,slow=1.3,SNR=6.4					
KBZ	Khabaz	144.16 303	PKP	PKPab	18 40 56.3	-0.1
	1.5nm,0.6s,baz=108,slow=3.2,SNR=4.3					
FINES	FINESS Array B	144.89 339	PKP	PKPdf	18 40 57.9	-0.3
	25nm,0.8s,baz=54,slow=3.8,SNR=113					
NB2	NORSAR Subarra	148.75 350	PKP	PKPbc	18 41 08.5	-0.5
	comp=Z,2.2nm,0.5s,baz=17,slow=2.6					
NOA	NORSAR Array B	148.75 350	PKPbc	PKPbc	18 41 09.0	0.0
	comp=Z,6.5nm,0.8s,baz=40,slow=2.1,SNR=7.6					
NOA			PKPab	PKPab	18 41 14.0	-0.1
	comp=Z,4.1nm,0.6s,baz=18,slow=4.0,SNR=7.7					
HFS	Hagfors	149.18 347	PKPbc	PKPbc	18 41 09.5	-0.6
	comp=Z,2.5nm,0.5s,baz=90,slow=3.2,SNR=20					
HFS			PKPab	PKPab	18 41 14.8	-0.9
	comp=Z,2.5nm,0.6s,baz=90,slow=2.9,SNR=9.4					
MMAI	Mount Meron Ar	150.33 284	PKPbc	PKPbc	18 41 14.9	+1.1
	comp=Z,2.3nm,0.5s,baz=64,slow=3.4,SNR=9.9					
AKASG	Malin Array Be	150.67 321	PKPbc	PKPbc	18 41 13.4	-0.5
	comp=Z,1.7nm,0.4s,baz=54,slow=3.3,SNR=17					
BRTR	Keskin Array B	151.56 298	PKPbc	PKPbc	18 41 16.4	-0.2
	comp=Z,0.8nm,0.4s,baz=146,slow=5.2,SNR=9.2					
CLL	Collm	157.33 339	⇑*i*PKPbc	PKPab	18 41 50.4	-0.2
	comp=Z,5.0nm,0.8s					
TORD	Torodi Ar. Bea	162.59 184	PKPab	PKPab	18 42 15.7	+1.3
	comp=Z,0.9nm,0.9s,baz=178,slow=3.7,SNR=3.3					

ISC 11 18:25:20.9±2.4, 51°.5N±0°.1×16°.12E±0°.06, h0km, n10, σ0°71/20, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.65	170	*e*Pg	Pg	18 25 33.4	+0.2
KSP				*e*Sg	Sg	18 25 43.0	+1.4
UPC	Upice	0.98	184	*e*PG	Pg	18 25 39.9	+0.3
UPC				*e*SG	Sg	18 25 52.8	+0.6
	comp=Z,8.0nm,0.4s						
DPC	Dobruska-Polom	1.14	173	*e*PG	Pg	18 25 42.6	-0.1
DPC				*e*SG	Sg	18 25 57.3	-0.1
	comp=Z,3.2nm,0.3s						
PVCC	Panska Ves	1.37	226	*e*PG	Pg	18 25 47.2	+0.1
PVCC				*e*SG	Sb	18 26 05.4	+0.1
	comp=Z,10nm,0.2s						
KRLC	Kraliky	1.47	163	*e*PG	Pn	18 25 49.0	+0.4
KRLC				*e*SG	Sg	18 26 08.0	0.0
	comp=Z,0.7nm,0.3s						
BRG	Berggiesshubel	1.50	247	PG	Pn	18 25 49.4	+0.4
BRG				SG	Sg	18 26 09.1	+0.1
	4.6nm,0.3s						
GOPC	GO Pecny, Ondr	1.78	209	*e*PG	Pb	18 25 54.1	-0.3
GOPC				*e*SG	Sn	18 26 16.0	-0.3
MORC	Moravsky Berou	1.93	151	*e*PN	Pn	18 25 54.3	-0.7
MORC				*e*SG	Sb	18 26 21.8	+0.2
NKC	Novy Kostel	2.64	243	*e*SG	Sg	18 26 46.2	+0.5
	comp=Z,3.3nm,0.4s						
KHC	Kasperske Hory	2.86	216	*e*PG	Pb	18 26 13.4	+0.6
KHC				*e*SN	Sn	18 26 40.8	-2.1
KHC				*e*SG	Sg	18 26 52.5	-0.2
	comp=Z,1.2nm,0.4s						

MAN ***11*** *18:27:54.2, 15°.03N×122°.10E, h118km, mb4.9, ML3.8, MS3.8*
ISCJB ***11*** *18:27:56.7±0.4, 15°.09N±0°.03×122°.12E±0°.05, h47km±22km, mb3.4/4, Error ellipse: s-maj=7.7km s-min=3.7km az=160.8*
IDC ***11*** *18:27:57.9±1.3, 13°.75N×122°.20E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.2/63, mbtmp3.4/4, Error ellipse: s-maj=43.7km s-min=17.8km az=46.0*

ISC 11 18:27:56.7±1.0, 15°.08N±0°.03×122°.11E±0°.05, h65km±14km, n21, σ1°68/34, mb3.3/4, 2C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALP	Baler	0.83	322	*e*P	Pn	18 28 12.1	-0.8
BALP				*e*S	Sn	18 28 24.5	-0.3
PCPH	Palayan	1.09	296	⇑*e*P	Pn	18 28 15.0	-1.1
PCPH				*e*S	Sn	18 28 29.2	-1.3
LQP	Lukban	1.11	210	*e*P	Pn	18 28 08.8	-7.8
GQP	Guinayangan	1.22	164	⇑*i*P	Pn	18 28 17.5	-0.3
GQP				*i*S	Sn	18 28 33.6	+0.1
TGY	Tagaytay City	1.50	230	Pn	Pn	18 28 22.6	+1.1
	135nm,0.3s,baz=97,slow=4.7,SNR=11						
TGY				Sn	Sn	18 28 41.9	+1.6
	305nm,0.3s,baz=198,slow=20,SNR=16						
TGY	Tagaytay City	1.50	230	⇓*i*P	Pn	18 28 22.7	+1.2
TGY				*e*S	Sn	18 28 41.9	+1.6
BOAC	Boac	1.64	189	*e*P	Pn	18 28 22.9	-0.4
BOAC				*e*S	Sn	18 28 44.2	+0.8
AUQP	San Andres	1.83	163	*e*P	Pn	18 28 26.6	+0.7
AUQP				*e*S	Sn	18 28 51.2	+3.0
CAUP	Cauayan	1.87	352	*e*P	Pn	18 28 27.1	+0.6
CAUP				*e*S	Sn	18 28 50.7	+1.6
PVCP	Virac	2.47	126	*e*P	Pn	18 28 33.5	-1.1
PVCP				*e*S	Sn	18 29 05.1	+1.4
BOLP	Bolinao	2.48	302	*e*P	Pn	18 28 35.2	+0.5
BOLP				*e*S	Sn	18 29 05.4	+1.5
OTRP	Odiongan	2.71	182	*e*P	Pn	18 28 35.9	-1.9
OTRP				*e*S	Sn	18 29 12.0	+2.5
SJMP	San Jose	2.78	200	*e*P	Pn	18 28 38.6	-0.2
SJMP				*e*S	Sn	18 29 10.8	-0.4
ABRA	Dolores	2.88	332	*e*P	Pn	18 28 41.7	+1.5
ABRA				*e*S	Sn	18 29 18.3	+4.5
APYP	Conner	2.89	343	*e*P	Pn	18 28 41.0	+0.7
APYP				*e*S	Sn	18 29 16.0	+2.1
SGCP	Mt. Cagua	3.14	359	*e*P	Pn	18 28 43.4	-0.4
SGCP				*e*S	Sn	18 29 18.4	-1.7
CNP	Catarman	3.56	136	*e*P	Pn	18 28 50.5	+0.9
CNP				*e*S	Sn	18 29 33.0	+2.6
WRA	Warramunga Arr	36.83	161	P	P	18 34 56.8	-1.8
	0.3nm,0.8s,baz=342,slow=9.0,SNR=4.7						
ASAR	Alice Springs	40.20	163	P	P	18 35 25.5	-1.5
	0.3nm,0.8s,baz=342,slow=7.1,SNR=4.3						
MKAR	Makanchi Array	45.76	322	P	P	18 36 30.2	+19
	0.3nm,0.6s,baz=128,slow=6.9,SNR=3.5						
KURBB	Kurchatov Arra	49.83	325	P	P	18 37 00.9	+18
	1.0nm,0.7s,baz=120,slow=8.5,SNR=8.5						

TRN 11 18:30:26.4, 10°.84N×61°.72W, h5km, MD3.5, Trinidad

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TCE	Chacachacare	0.15	194	*e*P	Pg	18 30 29.8	+0.4
TRN	Trinidad (W)	0.36	122	*e*P	Pg	18 30 34.4	+0.9
TRN				*e*S	Sg	18 30 37.8	-0.4
TPP	Pointe-a-Pierr	0.58	153	*e*P	Pg	18 30 37.2	-0.4
TBH	Brigand Hill	0.73	119	*e*P	Pb	18 30 41.2	-0.4
TOSP	Speyside	1.25	68	*e*P	Pn	18 30 51.1	+0.7
TOSP				*e*S	Sn	18 31 08.8	+1.2
GRGR	Grenville	1.29	3	*e*P	Pn	18 30 50.5	-0.5
GRGR				*e*S	Sn	18 31 09.4	+0.8

ISK ***11*** *18:32:04.9, 36°.39N×28°.97E, h18km, ML2.6/16*
CSEM ***11*** *18:32:05.9±0.1, 36°.40N×28°.98E, h20km, ML3.0, Error ellipse: s-maj=3.7km s-min=2.7km az=3.0*
ATH ***11*** *18:32:05.5, 36°.39N×28°.99E, h42km±2km, ML2.3/4, Error ellipse: s-maj=3.6km s-min=1.3km az=178.0*
DDA ***11*** *18:32:05.2, 36°.46N×28°.93E, h7km, Ml3.0*
THE ***11*** *18:32:06.1, 36°.43N×28°.96E, h11km±1km, ML2.3/5, Error ellipse: s-maj=1.8km s-min=0.6km az=77.0*
ISCJB ***11*** *18:32:06.1±0.4, 36°.40N±0°.03×28°.95E±0°.03, h24km±4km, Error ellipse: s-maj=4.6km s-min=3.5km az=179.9*

ISC 11 18:32:05.7±1.0, 36°.40N±0°.02×28°.98E±0°.02, h19km±2km, n76, σ0°56/118, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	Fethiye	0.25	20	PG	Pg	18 32 10.9	-0.6
FETY				SG	Sg	18 32 16.0	+0.5
FETY	Fethiye	0.25	20	P	Pg	18 32 10.9	-0.6
FETY				S	Sb	18 32 14.8	-0.3
FETY	Fethiye	0.25	20	P	Pg	18 32 10.9	-0.6
FETY				S	Sg	18 32 16.0	+0.5
DALY	Dalyan (Mu¨la	0.49	328	PG	Pb	18 32 15.6	-0.1
DALY				SG	Sb	18 32 22.6	+0.1
DALY	Dalyan (Mu¨la	0.49	328	*i*P	Pb	18 32 15.6	-0.1
DALY				*i*S	Sb	18 32 23.0	+0.5
DALY	Dalyan (Mu¨la	0.49	328	P	Pb	18 32 15.6	-0.1
DALY				*e*Sg	Sb	18 32 22.6	+0.1
DALY				S	Sb	18 32 23.0	+0.5
AKAS	Kas	0.53	108	PG	Pg	18 32 15.9	-0.6
AKAS	Kas	0.53	108	*i*P	Pg	18 32 15.9	-0.6
AKAS				*i*S	Sn	18 32 25.8	-1.1
AKAS	Kas	0.53	108	P	Pg	18 32 15.9	-0.6
AKAS				S	Sn	18 32 25.8	-1.1
KSL	Kastellorizon	0.55	117	P	Pg	18 32 16.8	+0.1
KSL				S	Sn	18 32 27.3	+0.2
KSL				AML	AML	18 32 28.2	
	comp=E,904μm,0.4s						
KSL				AML	AML	18 32 28.3	
	comp=N,331μm,0.4s						
KSL	Kastellorizon	0.55	117	P	Pg	18 32 17.2	+0.5
KSL				S	Sn	18 32 26.7	-0.4
TURN	Turunc	0.56	327	PG	Pn	18 32 18.9	+0.3
TURN	Turunc	0.56	327	*i*P	Pn	18 32 19.2	+0.6
TURN				*i*S	Sn	18 32 29.1	+1.7
TURN	Turunc	0.56	327	P	Pn	18 32 19.2	+0.6
MRSB	Marmaris-Mugla	0.70	297	PG	Pb	18 32 18.9	-0.4
ARG	Arkhangelos	0.71	255	PG	Pb	18 32 19.1	-0.3
ARG	Arkhangelos	0.71	255	P	Pg	18 32 19.6	-0.1
ARG				AML	AML	18 32 31.2	
	comp=N,434μm,0.3s						
ARG				S	Sn	18 32 31.3	+0.1
ARG				AML	AML	18 32 31.4	
	comp=E,635μm,0.3s						
ARG	Arkhangelos	0.71	255	P	Pg	18 32 19.9	+0.2
ARG				S	Sn	18 32 30.6	-0.5
ARG	Arkhangelos	0.71	255	P	Pg	18 32 19.9	+0.2
ARG				S	Sn	18 32 30.6	-0.5
ELL	Elmali	0.82	65	PG	Pb	18 32 21.6	+0.1
ELL	Elmali	0.82	65	*e*Pg	Pb	18 32 21.6	+0.1
GLHS	Glhisar (BURDU	0.86	29	PG	Pb	18 32 21.6	-0.5
GLHS	Glhisar (BURDU	0.86	29	*e*Pg	Pb	18 32 21.6	-0.5
YER	Yerkesik	0.92	323	PG	Pg	18 32 23.4	-0.3
YER	Yerkesik	0.92	323	P	Pb	18 32 22.9	-0.2
YER				S	Sg	18 32 35.9	+0.1
YER	Yerkesik	0.92	323	P	Pb	18 32 22.9	-0.2
YER	Yerkesik	0.92	323	*e*Pg	Pg	18 32 23.4	-0.3
YER				S	Sg	18 32 35.9	+0.1
GOLH	Golhisar	0.96	29	*i*P	Pb	18 32 22.4	-1.3
GOLH				*i*S	Sg	18 32 37.1	+0.1
GOLH	Golhisar	0.96	29	P	Pb	18 32 22.4	-1.3
GOLH				S	Sg	18 32 37.1	+0.1
TAVA	DENIZLI_Tavas	1.06	357	*i*P	Pb	18 32 25.2	-0.3
TAVA				*i*S	Sn	18 32 39.6	-0.3
TAVA	DENIZLI_Tavas	1.06	357	P	Pb	18 32 25.2	-0.3
TAVA				S	Sn	18 32 39.7	-0.3
DATC	Datca-Mugla	1.12	289	PN	Pn	18 32 26.1	-0.2
DATC	Datca-Mugla	1.12	289	*e*Pn	Pn	18 32 26.1	-0.2
DAT	Datca	1.17	287	PN	Pn	18 32 26.9	-0.3
DAT	Datca	1.17	287	*i*P	Pn	18 32 26.8	-0.4
DAT				*i*S	Sn	18 32 42.9	+0.2
DAT	Datca	1.17	287	*e*Pn	Pn	18 32 26.9	-0.3
DAT				S	Sn	18 32 42.9	+0.2
KORT	Korkueli	1.25	61	PN	Pn	18 32 28.4	+0.1
KORT	Korkueli	1.25	61	*i*P	Pb	18 32 28.9	+0.2
KORT				*i*S	Sg	18 32 47.5	+1.0
KORT	Korkueli	1.25	61	*e*Pn	Pn	18 32 28.4	+0.1
KORT	Korkueli	1.25	61	P	Pb	18 32 29.0	+0.2
DNZL	Cakiroluk	1.29	2	*i*P	Pn	18 32 28.9	+0.1
DNZL				*i*S	Sn	18 32 46.2	+0.6
DNZL	Cakiroluk	1.29	2	P	Pn	18 32 28.9	+0.1
DNZL				S	Sn	18 32 46.2	+0.6
MLSB	Milas	1.31	313	PN	Pn	18 32 29.2	+0.2
MLSB	Milas	1.31	313	*e*Pn	Pn	18 32 29.2	+0.2
DENT	Denizli	1.35	2	PN	Pn	18 32 29.4	-0.2
DENT	Denizli	1.35	2	*e*Pn	Pn	18 32 29.4	-0.2
BDRM	Kayabasi	1.40	299	*i*P	Pn	18 32 30.3	+0.1
BDRM				*i*S	Sb	18 32 49.2	+0.6
BDRM	Kayabasi	1.40	299	P	Pn	18 32 30.3	+0.1
BDRM				S	Sb	18 32 49.2	+0.6
BODT	Bodrum	1.49	297	PN	Pn	18 32 30.5	-1.0
BODT	Bodrum	1.49	297	P	Pn	18 32 30.3	-1.2
BODT				S	Sn	18 32 49.5	-0.9
BODT	Bodrum	1.49	297	*e*Pn	Pn	18 32 30.5	-1.0
BODT				S	Sn	18 32 49.5	-0.9
AYDN	Tasoluk	1.53	325	*i*P	Pb	18 32 32.9	-0.6
AYDN				*i*S	Sb	18 32 53.5	+0.9
AYDN	Tasoluk	1.53	325	P	Pb	18 32 32.9	-0.6
AYDN				S	Sb	18 32 53.5	+0.9
BRDR	BURDUR-Merkez	1.56	34	*i*P	Pb	18 32 33.7	-0.2
BRDR				*i*S	Sb	18 32 53.8	+0.6
BRDR	BURDUR-Merkez	1.56	34	P	Pb	18 32 33.7	-0.2
BRDR				S	Sb	18 32 53.8	+0.6
KARP	Karpathos	1.70	240	PN	Pn	18 32 34.4	+0.1
KARP	Karpathos	1.70	240	P	Pn	18 32 34.9	+0.5
KARP				S	Sn	18 32 54.1	-1.6
KARP				AML	AML	18 32 57.1	
	comp=N,87μm,0.2s						
KARP				AML	AML	18 32 57.2	
	comp=E,95μm,0.2s						
KARP	Karpathos	1.70	240	P	Pn	18 32 34.5	+0.1
KARP				S	Sn	18 32 54.9	-0.7
KARP	Karpathos	1.70	240	P	Pn	18 32 34.5	+0.1
KARP				S	Sn	18 32 54.9	-0.7
AYDB	Zeytinkoy-Aydi	1.77	331	PN	Pn	18 32 35.3	-0.1
AYDB	Zeytinkoy-Aydi	1.77	331	*e*Pn	Pn	18 32 35.3	-0.1
GCAM	G?zelcaml?	1.90	313	PN	Pn	18 32 37.5	+0.4
GCAM	G?zelcaml?	1.90	313	*e*Pn	Pn	18 32 37.5	+0.4
SUTC	Sutluce-Ispart	1.94	56	PN	Pn	18 32 38.0	+0.2
SUTC	Sutluce-Ispart	1.94	56	*e*Pn	Pn	18 32 38.0	+0.2
KULA	Kula-Manisa	2.12	353	PN	Pn	18 32 40.2	0.0
KULA	Kula-Manisa	2.12	353	*e*Pn	Pn	18 32 40.2	0.0
SMG	Samos	2.15	308	P	Pn	18 32 41.1	+0.6
SMG				S	Sn	18 33 06.4	-0.3
SMG				AML	AML	18 33 09.3	
	comp=N,122μm,0.3s						
SMG				AML	AML	18 33 09.3	
	comp=E,133μm,0.2s						
SMG	Samos	2.15	308	P	Pn	18 32 40.9	+0.4
SMG				S	Sn	18 33 06.5	-0.2
SMG	Samos	2.15	308	P	Pn	18 32 40.9	+0.4
SMG				S	Sn	18 33 06.5	-0.2
ZKR	Zakros	2.59	241	P	Pn	18 32 47.3	+0.8
ZKR	Zakros	2.59	241	P	Pn	18 32 47.0	+0.5
CHOS	Chios island	3.06	311	P	Pn	18 32 53.1	+0.1
CHOS				S	Sn	18 33 28.1	-1.0
CHOS	Chios island	3.06	311	P	Pn	18 32 53.1	+0.1
CHOS				S	Sn	18 33 28.1	-1.0
LAST	Lasithi	3.10	248	P	Pn	18 32 53.7	+0.1
LAST	Lasithi	3.10	248	P	Pn	18 32 53.8	+0.1

NIED ***11*** *18:36:00.24°.40N×122°.30E, h74km, Mw3.8 Best double couple: M0=5.56000×10^14 NP1:φ0=56.00000°, δ39.00000°, λ146.00000°. NP2:φ0=174.00000°, δ70.00000°, λ57.00000°.*
ISCJB ***11*** *18:36:05.5±0.2, 24°.52N±0°.02×122°.31E±0°.01, h72km±2km, mb3.8/8, Error ellipse: s-maj=2.8km s-min=2.2km az=164.0*
JMA ***11*** *18:36:05.9±0.2, 24°.43N×122°.28E, h69km±3km, M3.6*
TAP ***11*** *18:36:06.4, 24°.48N×122°.24E, h69km, ML4.4, B*
IDC ***11*** *18:36:11.9±8.8, 24°.53N×122°.24E, h128km±91km, mb3.5/8, mb1 3.6/9, mb1mx3.2/62, mbtmp3.9/9, ML3.0/1, MS3.0/1, Ms1 3.0/1, ms1mx2.3/49, Error ellipse: s-maj=80.2km s-min=13.5km az=61.0*

ISC 11 18:36:06.1±0.7, 24°.49N±0°.03×122°.30E±0°.02, h68km±5km, n109, σ1°06/193, mb3.9/8, 16C-11D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.17	292	⇑P	Pn	18 36 16.9	+0.7
	baz=305						
EOS1				S	Sn	18 36 24.4	+0.8
	baz=305						
TWC	Suao	0.43	287	⇑*i*P	Pn	18 36 18.0	0.0
	baz=290						
TWC				S	Sn	18 36 26.3	-0.4
	baz=290						
ENAH	Nanao	0.45	265	*e*P	Pn	18 36 18.3	+0.1
	baz=262						
ENAH				S	Sn	18 36 27.1	+0.1
	baz=262						
EGS		0.49	317	⇑P	Pn	18 36 18.8	+0.2
	baz=323						
EGS				*e*S	Sn	18 36 27.1	-0.6
	baz=323						
NANB	Nanao	0.50	263	⇑P	Pn	18 36 18.9	+0.2
	baz=260						
NANB				S	Sn	18 36 28.3	+0.3
	baz=260						
ENA	Nanau	0.51	263	⇑*e*P	Pn	18 36 18.9	+0.2
	baz=260						
ENA				*e*S	Sn	18 36 28.2	+0.1
	baz=260						
NTC	Toucheng	0.56	311	*e*P	Pn	18 36 19.2	-0.1
	baz=320						
NTC				*e*S	Sn	18 36 29.1	+0.1
	baz=320

ENLB eS Sn 18 36 35.4 +0.3
baz=220
NSK Sanguang 0.88 283 P Pn 18 36 23.5 +0.5
baz=284
NSK eS Sn 18 36 35.8 +0.3
baz=284
TATO Taipei 0.88 304 ⇓P Pn 18 36 23.1 +0.1
baz=316
TATO eS Sn 18 36 35.0 -0.5
baz=316
YM07 YM07 0.92 318 eP Pn 18 36 22.3 -1.2
baz=321
YM07 eS Sn 18 36 34.8 -1.7
baz=321
YM11 YM11 0.94 316 ⇓P Pn 18 36 24.8 +1.0
baz=318
YM11 S Sn 18 36 36.7 -0.3
baz=318
YM10 YM10 0.94 315 P Pn 18 36 23.8 0.0
baz=317
YM10 eS Sn 18 36 36.2 -0.8
baz=317
YM08 YM08 0.95 317 eP Pn 18 36 23.5 -0.4
baz=320
YM08 eS Sn 18 36 35.7 -1.3
baz=320
YM12 YM12 0.96 316 P Pn 18 36 23.8 -0.2
baz=319
YM12 eS Sn 18 36 36.5 -0.7
baz=319
YM04 YM04 0.96 314 ⇓P Pn 18 36 23.9 -0.1
baz=316
YM04 eS Sn 18 36 36.2 -1.0
baz=316
YM03 YM03 0.97 315 eP Pn 18 36 24.1 -0.1
baz=317
YM03 eS Sn 18 36 37.0 -0.7
baz=317
TWS1 Kuangyinshan 1.01 307 ⇓P Pn 18 36 24.9 +0.4
baz=317
TWS1 S Sn 18 36 38.7 +0.4
baz=317
TWY Chenhua 1.01 321 eP Pn 18 36 25.0 +0.4
baz=324
TWY eS Sn 18 36 38.0 -0.3
baz=324
NTST Danshui 1.02 311 P Pn 18 36 25.1 +0.4
baz=320
NTST eS Sn 18 36 39.2 +0.6
baz=320
ESL Shilin 1.04 230 ⇑iP Pn 18 36 24.5 -0.5
baz=237
ESL eS Sn 18 36 37.8 -1.2
baz=237
TDCB Techi 1.07 258 eP Pn 18 36 24.9 -0.5
baz=254
TDCB eS Sn 18 36 39.6 -0.2
baz=254
CHGB Renai 1.11 248 ⇑P Pn 18 36 26.6 +0.5
baz=239
CHGB eS Sn 18 36 40.0 -0.9
baz=239
NCU National Centr 1.12 296 P Pn 18 36 26.7 +0.7
baz=297
NCU S Sn 18 36 41.6 +0.8
baz=297
NCUH Zhongli 1.12 295 ⇓P Pn 18 36 26.8 +0.8
baz=297
NCUH eS Sn 18 36 41.7 +0.9
baz=297
EGFH Guangfu 1.14 225 ⇑P Pn 18 36 26.0 -0.3
baz=216
EGFH eS Sn 18 36 40.2 -1.1
baz=216
LIOB Emei 1.18 278 eP Pn 18 36 27.6 +0.9
baz=278
LIOB eS Sn 18 36 43.0 +0.7
baz=278
NSTT Nanjuang 1.19 277 eP Pn 18 36 27.7 +0.8
baz=277
NSTT S Sn 18 36 43.1 +0.7
baz=277
SBCB Hsinchu 1.23 285 eP Pn 18 36 28.2 +0.8
baz=285
SBCB eS Sn 18 36 44.4 +0.9
baz=285
HSN Hsinchu 1.25 285 eP Pn 18 36 28.2 +0.6
baz=287
HSN eS Sn 18 36 43.8 0.0
baz=287
HGSD Ruisui 1.27 219 ⇑P Pn 18 36 27.5 -0.5
baz=217
HGSD eS Sn 18 36 44.7 +0.4
baz=217
IRIF Iriomote-Funau 1.31 96 P Pn 18 36 28.6 +0.1
IRIF eS Sn 18 36 45.3 0.0
EHY Hungye 1.32 223 ⇑P Pn 18 36 27.9 -0.8
baz=229
NMLH Miaoli 1.38 272 eP Pn 18 36 30.3 +1.0
baz=272
NMLH eS Sn 18 36 47.6 +0.8
baz=272
TWQ1 Liyutan 1.40 265 eP Pn 18 36 30.6 +1.0
baz=264
TWQ1 eS Sn 18 36 48.7 +1.3
baz=264
NSY Sanyi 1.40 267 eP Pn 18 36 30.6 +0.9
baz=267
NSY eS Sn 18 36 48.5 +1.0
baz=267
SMLT Sun Moon Lake 1.41 245 eP Pn 18 36 30.9 +1.0
baz=238
SMLT eS Sn 18 36 48.5 +0.7
baz=238
SSLB Suanglung 1.41 241 eP Pn 18 36 30.4 +0.6
baz=235
SSLB eS Sn 18 36 46.0 -1.7
baz=235
YULB Yu-li 1.43 220 ⇑P Pn 18 36 29.2 -0.8
baz=227
TYC Yuchr 1.44 246 eP Pn 18 36 31.1 +1.0
baz=240
TYC eS Sn 18 36 49.5 +1.3
baz=240
HATJ Hateruma jima 1.44 107 P Pn 18 36 31.4 +1.3
TWF1 Yuli 1.46 219 ⇑P Pn 18 36 29.7 -0.7
baz=226
TWF1 eS Sn 18 36 47.3 -1.4
baz=226
TCU Taichung 1.52 257 eP Pn 18 36 31.5 +0.3
baz=268
TCU eS Sn 18 36 51.3 +1.1
baz=268
JKRS Kuro-shima 1.58 99 P Pn 18 36 32.6 +0.6
JKRS eS Sn 18 36 51.5 -0.1
WJS Zhushan 1.58 246 eP Pn 18 36 33.8 +1.8
baz=257
WJS S Sn 18 36 53.9 +2.2
baz=257
CHKT Chengkung 1.62 212 eP Pn 18 36 31.5 -1.1
baz=202
CHKT eS Sn 18 36 49.7 -3.0
baz=202
WCHH Zhanghua 1.64 256 eP Pn 18 36 33.6 +0.8
baz=255
JIJ Ishigaki jima 1.69 94 P Pn 18 36 33.4 0.0
JIJ S Sn 18 36 53.5 -0.6
ELDTW Lidau 1.75 222 eP Pn 18 36 33.9 -0.4
baz=216
ELDTW eS Sn 18 36 54.4 -1.4
baz=216
WGK Gukeng 1.78 244 eP Pn 18 36 36.1 +1.4
baz=234
WGK eS Sn 18 36 59.1 +2.7
baz=234
WDLH Douliu 1.79 244 eP Pn 18 36 36.4 +1.5
baz=256
WDLH eS Sn 18 36 59.9 +3.1
baz=256
JISG Ishigakijimahi 1.83 86 P Pn 18 36 35.5 +0.1
JISG eS Sn 18 36 58.0 +0.3
RLNB Erlin 1.87 252 ⇓P Pn 18 36 36.5 +0.6
baz=262
RLNB eS Sn 18 36 59.6 +1.1
baz=262
TPUB Ta-pu 1.93 233 eP Pn 18 36 38.4 +1.6
baz=224
TPUB eS Sn 18 37 01.5 +1.4
baz=224
WTCT Ta-ch'eng 1.94 252 eP Pn 18 36 37.2 +0.3
baz=262
WTCT eS Sn 18 37 00.7 +0.3
baz=262
WTP Ta-pu 1.98 232 eP Pn 18 36 38.5 +1.1
baz=230
WTP eS Sn 18 37 02.6 +1.3
baz=230
CHY Chiayi 1.98 240 eP Pn 18 36 38.5 +1.2
baz=253
CHY eS Sn 18 37 03.9 +2.8
baz=253
TWGBT Beinan 2.00 214 eP Pn 18 36 36.5 -1.2
baz=212
TWG Pinlang 2.00 214 eP Pn 18 36 36.7 -1.0
baz=212
TWG eS Sn 18 36 58.2 -3.6
baz=212
TWK Hsinying 2.06 234 eP Pn 18 36 39.2 +0.7
baz=233
CHN1 Nanshi 2.08 232 eP Pn 18 36 40.3 +1.5
baz=231
CHN1 eS Sn 18 37 05.3 +1.7
baz=231
WSF Szhu 2.08 246 eP Pn 18 36 39.6 +0.9
baz=256
WSF eS Sn 18 37 05.1 +1.5
baz=256
SLGT Liugui 2.12 226 eP Pn 18 36 40.6 +1.2
baz=224
JTJ Tarama 2.19 86 P Pn 18 36 41.1 +0.8
JTJ eS Sn 18 37 07.0 +0.6
SSD Sandimen 2.31 222 eP Pn 18 36 43.1 +1.2
baz=220
SSD eS Sn 18 37 10.5 +1.2
baz=220
SCLT Jiali 2.33 236 eP Pn 18 36 43.0 +0.9
baz=235
SCLT eS Sn 18 37 11.9 +2.2
baz=235
MASBT Mashibuluo 2.41 220 eP Pn 18 36 44.3 +1.0
baz=218
MASBT eS Sn 18 37 13.6 +1.8
baz=218
SGLT Jiouru 2.41 224 eP Pn 18 36 45.1 +1.8
baz=222
TAW Tawu 2.48 212 eP Pn 18 36 43.9 -0.3
baz=210
TAW eS Sn 18 37 10.3 -3.1
baz=210
EAST Anshuo 2.48 213 eP Pn 18 36 44.0 -0.3
baz=205
SCZT Fangliau 2.61 217 eP Pn 18 36 47.6 +1.7
baz=215
SCZT eS Sn 18 37 18.2 +1.6
baz=215
JIRB Irabujima 2.64 82 P Pn 18 36 47.4 +1.1
JIRB eS Sn 18 37 17.6 +0.4
PNG Penghu 2.67 250 eP Pn 18 36 46.2 -0.5
baz=250
PNG eS Sn 18 37 16.0 -2.0
baz=250
PHUB P'eng-hu 2.68 249 eP Pn 18 36 46.2 -0.6
baz=260
PHUB eS Sn 18 37 16.2 -1.9
baz=260
MATB Ma-tsu 2.70 308 eP Pn 18 36 46.8 -0.4
baz=299
MATB eS Sn 18 37 17.1 -1.6
baz=299
WDGT Dungji 2.71 244 eP Pn 18 36 46.9 -0.3
baz=243
JIKM Ikemajima 2.72 80 eS Sn 18 37 19.5 +0.4
JMJ Miyako jima 2 2.74 83 eP Pn 18 36 47.6 -0.1
baz=84
HEN Hengchun 2.86 210 eP Pn 18 36 49.8 +0.5
baz=221
KNM Kinmen 3.52 270 eP Pn 18 36 59.3 +0.9
baz=269
KNMB Chin-men Tao 3.56 270 eP Pn 18 36 58.3 -0.6
baz=270
KSRS Korea Array 13.79 19 P Pn 18 39 21.6 +3.3
0.1nm,0.3s,baz=196,slow=14,SNR=6.9
ASAJ Asahikawa 25.66 35 LR LR 18 53 57.4
comp=Z,31nm,18.2s,baz=352,slow=42
SONM Songino Array 26.50 336 P P 18 41 36.9 -0.3
2.3nm,0.6s,baz=152,slow=9.6,SNR=11
MKAR Makanchi Array 38.83 315 P P 18 43 24.3 -0.2
1.3nm,0.5s,baz=100,slow=9.7,SNR=26
ZALV Zalesovo Beam 40.55 326 P P 18 43 37.1 -1.5
1.3nm,0.7s,baz=109,slow=8.3,SNR=6.7
KURBB Kurchatov Arra 42.54 319 P P 18 43 54.0 -0.8
0.3nm,0.4s,baz=109,slow=9.5,SNR=4.3
WRA Warramunga Arr 45.69 164 P P 18 44 20.4 0.0
2.7nm,0.6s,baz=347,slow=8.7,SNR=32
BVAR Borovoye Array 48.09 320 P P 18 44 38.2 -0.6
0.8nm,0.6s,baz=128,slow=9.3,SNR=7.1
ASAR Alice Springs 49.17 166 P P 18 44 47.5 0.0
0.6nm,0.4s,baz=355,slow=8.0,SNR=20
ASAR PcP PcP 18 46 08.8 -1.0
0.6nm,1.1s,baz=345,slow=3.7,SNR=3.5
BRTR Keskin Array B 73.81 307 P P 18 47 32.1 -1.6
0.4nm,0.6s,baz=120,slow=5.1,SNR=3.2

IDC 11 18:48:00.7±2.4, 10°.78N×84°.91W, h59km±54km, mb3.5/2, mb1 4.0/2, mb1mx3.3/41, mbtmp3.7/2, Error ellipse: s-maj=86.5km s-min=42.1km az=10.0, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTS	**JuntasAbangare**	**0.49**	**184**	P	Pn	18 48 13.5	+1.0
	baz=3.4,slow=19						
JTS				LR	LR	18 48 14.7	
	comp=Z,30nm,21.0s,baz=199,slow=28						
JTS				S	Sn	18 48 23.4	+2.3
	2μm,0.3s,baz=344,slow=20,SNR=54						
TXAR	**Lajitas Array**	**25.44**	**319**	P	P	18 53 23.5	+0.3
	1.5nm,0.7s,baz=139,slow=11,SNR=19						
NVAR	**Mina Array Bea**	**40.59**	**318**	P	P	18 55 34.6	-0.3
	0.6nm,0.5s,baz=125,slow=8.3,SNR=6.8						
WRA	**Warramunga Arr**	**141.15**	**252**	PKP	PKPdf	19 07 24.9	-0.5
	0.3nm,0.7s,baz=92,slow=2.3,SNR=4.6						

IDC 11 19:26:23.3±1.9, 23°.57N×44°.86W, h0km, mb3.7/7, mb1 4.1/7, mb1mx3.6/59, mbtmp3.7/7, MS3.6/29, Ms1 3.6/29, ms1mx3.4/57, Error ellipse: s-maj=80.2km s-min=24.7km az=16.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJG	**San Juan**	**20.61**	**259**	LR	LR	19 37 12.9	
	comp=Z,126nm,21.4s,baz=86,slow=32						
ROSC	**El Rosal**	**33.96**	**241**	LR	LR	19 46 53.6	
	comp=Z,80nm,21.0s,baz=1.0,slow=36						
SADO	**Sadowa**	**35.00**	**316**	LR	LR	19 44 49.1	
	comp=Z,117nm,19.0s,baz=158,slow=32						
SCHQ	**Schefferville**	**35.25**	**338**	LR	LR	19 45 54.4	
	comp=Z,62nm,21.1s,baz=257,slow=33						
MDT	**Midelt**	**36.47**	**66**	LR	LR	19 45 23.7	
	comp=Z,72nm,19.0s,baz=248,slow=31						
KOWA	**Kowa**	**39.54**	**96**	LR	LR	19 47 41.4	
	comp=Z,180nm,19.5s,baz=358,slow=32						
JTS	**JuntasAbangare**	**40.41**	**258**	LR	LR	19 48 31.3	
	comp=Z,41nm,19.5s,baz=134,slow=33						
DBIC	**Dimbokro**	**41.93**	**107**	LR	LR	19 49 50.1	
	comp=Z,55nm,20.4s,baz=270,slow=34						
H10N2	**ASCENSION HYDR**	**43.07**	**133**	T	T	20 20 03.7	
	baz=316						
H10N3	**ASCENSION HYDR**	**43.07**	**133**	T	T	20 20 04.4	
	baz=316						
H10N1	**ASCENSION HYDR**	**43.09**	**133**	T	T	20 20 04.9	
	baz=316						
SFJD	**Kangerlussuaq**	**43.58**	**357**	LR	LR	19 48 06.5	
	comp=Z,27nm,18.3s,baz=168,slow=30						
H10S3	**ASCENSION HYDR**	**43.78**	**134**	T	T	20 20 58.4	
	baz=314						
H10S1	**ASCENSION HYDR**	**43.78**	**134**	T	T	20 20 59.5	
	baz=314						
H10S2	**ASCENSION HYDR**	**43.80**	**134**	T	T	20 21 00.1	
	baz=314						
TORD	**Torodi Ar. Bea**	**45.21**	**95**	P	P	19 34 42.3	-0.3
	0.9nm,0.9s,baz=278,slow=10.0,SNR=2.8						
TORD				LR	LR	19 53 06.4	
	comp=Z,116nm,18.6s,baz=290,slow=36						
LPAZ	**La Paz**	**45.68**	**212**	LR	LR	19 53 02.9	
	comp=Z,51nm,18.9s,baz=357,slow=35						
ULM	**Lac du Bonnet**	**47.51**	**317**	LR	LR	19 53 22.2	
	comp=Z,80nm,19.4s,baz=30,slow=34						
KEST	**Kesra**	**48.10**	**62**	LR	LR	19 51 50.6	
	comp=Z,84nm,21.6s,baz=301,slow=32						
CPUP	**Villa Florida**	**51.05**	**194**	LR	LR	19 58 20.1	
	comp=Z,43nm,18.2s,baz=58,slow=38						
TXAR	**Lajitas Array**	**52.50**	**290**	P	P	19 35 38.5	0.0
	0.3nm,0.6s,baz=96,slow=8.9,SNR=3.9						
TXAR				LR	LR	19 56 37.2	
	comp=Z,42nm,21.8s,baz=0.0,slow=35						
NOA	**NORSAR Array B**	**53.37**	**30**	LR	LR	19 54 07.0	
	comp=Z,54nm,21.8s,baz=255,slow=31						
ANMO	**Albuquerque**	**54.18**	**297**	LR	LR	19 56 39.7	
	comp=Z,74nm,21.6s,baz=68,slow=34						
HFS	**Hagfors**	**54.28**	**32**	LR	LR	19 54 45.3	
	comp=Z,45nm,20.2s,baz=242,slow=31						
PDAR	**Pinedale Array**	**56.09**	**307**	P	P	19 36 04.8	0.0
	2.2nm,0.9s,baz=80,slow=11,SNR=13						
PDAR				LR	LR	19 57 48.8	
	comp=Z,61nm,21.3s,baz=96,slow=34						
LPIG	**La Paz**	**59.34**	**285**	LR	LR	20 02 44.9	
	comp=Z,36nm,20.0s,baz=34,slow=37						
YKA	**Yellowknife Ar**	**60.02**	**330**	P	P	19 36 30.7	-0.9
	0.6nm,0.7s,baz=84,slow=6.3,SNR=3.3						
YKA				LR	LR	20 01 26.7	
	comp=Z,5.8nm,19.3s,baz=82,slow=35						
FINES	**FINESS Array B**	**60.48**	**31**	LR	LR	20 00 01.8	
	comp=Z,45nm,18.8s,baz=266,slow=33						
ELK	**Elko**	**60.48**	**305**	P	P	19 36 38.4	+2.9
	1.4nm,0.7s,baz=108,slow=5.0,SNR=6.4						
NVAR	**Mina Array Bea**	**63.16**	**302**	P	P	19 36 53.4	-0.2
	0.6nm,0.8s,baz=113,slow=3.5,SNR=4.8						
NVAR				LR	LR	20 02 13.0	
	comp=Z,142nm,21.2s,baz=270,slow=34						
YBH	**Yreka Blue Hor**	**65.91**	**307**	LR	LR	20 03 28.0	
	comp=Z,66nm,21.9s,baz=54,slow=34						
PLCA	**Paso Flores**	**68.29**	**201**	LR	LR	20 07 22.7	
	comp=Z,35nm,19.7s,baz=84,slow=36						
ILAR	**Eielson Array**	**73.90**	**334**	P	P	19 38 00.6	+0.6
	1.6nm,0.9s,baz=83,slow=4.6,SNR=14						
ILAR				LR	LR	20 10 02.1	
	comp=Z,55nm,19.1s,baz=122,slow=35						
ARU	**Arti**	**77.74**	**34**	LR	LR	20 09 31.9	
	comp=Z,44nm,20.2s,baz=101,slow=33						
ATD	**Arta Tunnel**	**83.40**	**80**	LR	LR	20 16 24.9	
	comp=Z,43nm,18.2s,baz=320,slow=36						
KURBB	**Kurchatov Arra**	**90.87**	**32**	P	P	19 39 29.0	+0.2
	0.3nm,0.6s,baz=323,slow=5.6,SNR=4.6						
AAK	**Ala-Archa**	**93.64**	**40**	LR	LR	20 20 41.5	
	comp=Z,23nm,18.6s,baz=292,slow=35						

*IDC **11** 19:43:16.0±1.7, 2°.90N×96°.01E, h0km, mb3.5/6, mb1 3.6/8, mb1mx3.5/68, mbtmp3.5/8, ML3.3/2, MS3.4/1, Ms1 3.4/1, ms1mx2.4/58, Error ellipse: s-maj=64.5km s-min=18.0km az=52.0*
*ISCJB **11** 19:43:28.3±0.9, 3°.37N±0°.07×96°.81E±0°.06, h33km, mb3.5/6, MS3.4/1, Error ellipse: s-maj=12.4km s-min=5.6km az=42.1*
*DJA **11** 19:43:28.9±0.4, 3°N±4°×9°7E±°, h40km±11km, M3.6/11, MLv3.6/11*
ISC 11 19:43:24.6±1.0, 3°.38N±0°.07×96°.64E±0°.07, h33km, n16, σ2§31/18, mb3.5/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		**0.56**	**102**	P	Pn	**19 43 39.0**	**+2.9**
MLSI	**Meulaboh, Aceh**	**0.92**	**345**	P	Pb	19 43 46.3	+4.3
MLSI				S	Sb	**19 43 59.4**	**+5.5**
KCSI	**Kotacane, Aceh**	**1.14**	**83**	P	Pb	**19 43 45.6**	**-0.2**
KCSI				S	Sn	**19 43 57.6**	**-1.2**
LHMI	**Lhok Sumawe**	**1.87**	**10**	P	Pb	**19 43 57.7**	**-0.4**
TSI	**Tuntungan**	**1.93**	**86**	P	Pn	**19 43 56.0**	**+0.9**
GSI	**Gunungsitoli**	**2.26**	**155**	P	Pn	**19 44 02.9**	**+3.2**
PSI	**Prapat**	**2.35**	**104**	Pn	Pn	**19 44 03.5**	**+2.4**
	2.5nm,0.3s,baz=359,slow=3.3,SNR=5.5						
PSI				Sn	Sn	**19 44 30.2**	**+1.3**
	4.5nm,0.3s,baz=180,slow=20,SNR=6.6						
BSI	**Banda Aceh**	**2.50**	**328**	P	Pb	**19 44 08.4**	**-0.4**
MNSI	**Mandailing Nat**	**3.90**	**131**	P	Pn	**19 44 24.4**	**+2.2**
CMAR	**Chiang Mai Arr**	**15.16**	**8**	Pn	P	**19 47 00.6**	**-0.6**
	0.1nm,0.3s,baz=199,slow=11,SNR=5.1						
WRA	**Warramunga Arr**	**43.68**	**124**	P	P	**19 51 24.8**	**-1.9**
	1.2nm,0.9s,baz=301,slow=9.1,SNR=11						
MKAR	**Makanchi Array**	**45.01**	**346**	P	P	**19 51 35.2**	**-1.7**
	0.2nm,0.4s,baz=158,slow=9.2,SNR=4.6						
ASAR	**Alice Springs**	**45.16**	**128**	P	P	**19 51 36.7**	**-1.9**
	0.3nm,0.4s,baz=298,slow=7.6,SNR=20						
KURBB	**Kurchatov Arra**	**49.50**	**345**	P	P	**19 52 10.2**	**-1.6**
	0.2nm,0.5s,baz=161,slow=6.8,SNR=2.9						
ZALV	**Zalesovo Beam**	**51.34**	**351**	P	P	**19 52 24.4**	**-1.2**
	0.7nm,0.4s,baz=181,slow=7.6,SNR=3.2						
ZALV				LR	LR	20 17 27.0	
	comp=Z,33nm,18.5s,baz=64,slow=40						
BVAR	**Borovoye Array**	**54.02**	**341**	P	P	**19 52 44.0**	**-1.6**
	0.3nm,0.6s,baz=131,slow=6.5,SNR=3.4						

*GII **11** 19:51:04.8±0.2, 36°.31N×29°.03E, h10km, mb4.0/1, MD3.8/2*
*CSEM **11** 19:51:05.8±0.1, 36°.34N×29°.03E, h20km, ML4.3, Error ellipse: s-maj=2.4km s-min=1.7km az=20.0*
*ISK **11** 19:51:05.9, 36°.43N×28°.96E, h20km, ML4.2/16*
*ATH **11** 19:51:06.0, 36°.41N×28°.96E, h39km±3km, ML3.8/9, Error ellipse: s-maj=4.1km s-min=1.1km az=172.0*
*DDA **11** 19:51:06.0, 36°.46N×28°.98E, h28km, Ml4.3*
*THE **11** 19:51:06.8, 36°.43N×28°.94E, h8km, ML3.6/26, Error ellipse: s-maj=0.6km s-min=0.2km az=95.0*
*NIC **11** 19:51:07.8±0.3, 36°.51N×29°.25E, h44km, mb4.3, ML4.0*
*IDC **11** 19:51:07.7±1.4, 36°.30N×29°.13E, h45km±16km, mb3.6/9, mb1 3.8/15, mb1mx3.5/64, mbtmp3.9/15, ML3.9/6, MS2.9/4, Ms1 2.9/4, ms1mx2.5/55, Error ellipse: s-maj=12.9km s-min=11.5km az=147.0*
*HLW **11** 19:51:13.1, 35°.67N×29°.00E, h26km±19km, Md4.1, Ml4.5*
ISC 11 19:51:05.6±0.8, 36°.39N±0°.02×29°.02E±0°.02, h26km±6km, n318, σ1§40/428, mb3.8/9, 27C-9D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.25**	**12**	PG	Pb	**19 51 11.7**	**-0.4**
FETY				SG	Sb	**19 51 16.5**	**0.0**
FETY	**Fethiye**	**0.25**	**12**	P	Pb	**19 51 11.7**	**-0.4**
FETY				S	Sb	**19 51 16.1**	**-0.4**
FETY	**Fethiye**	**0.25**	**12**	P	Pb	**19 51 11.7**	**-0.4**
FETY				S	Sb	**19 51 16.1**	**-0.4**
AKAS	**Kas**	**0.50**	**108**	PG	Pb	**19 51 17.2**	**+1.2**
AKAS				SG	Sn	**19 51 25.9**	**+0.8**
AKAS	**Kas**	**0.50**	**108**	⇑iP	Pb	**19 51 17.1**	**+1.2**
AKAS				*i* S	Sn	**19 51 26.3**	**+1.2**
AKAS	**Kas**	**0.50**	**108**	P	Pb	**19 51 17.1**	**+1.2**
AKAS				*e*Sg	Sn	**19 51 25.9**	**+0.8**
DALY	**Dalyan (Mu¨la**	**0.52**	**326**	PG	Pb	**19 51 16.1**	**-0.1**
DALY	**Dalyan (Mu¨la**	**0.52**	**326**	⇓iP	Pb	**19 51 16.0**	**-0.1**
DALY				*i* S	Sb	**19 51 22.9**	**-0.4**
DALY	**Dalyan (Mu¨la**	**0.52**	**326**	*e*Pg	Pb	**19 51 16.1**	**-0.1**
KSL	**Kastellorizon**	**0.52**	**117**	P	Pn	**19 51 18.4**	**+1.1**
KSL				S	Sn	**19 51 27.2**	**+1.9**
KSL				AML	AML	19 51 29.9	
	comp=N,11091μm,0.6s						
KSL				AML	AML	19 51 30.6	
	comp=E,17171μm,0.4s						
KSL	**Kastellorizon**	**0.52**	**117**	P	Pn	**19 51 18.2**	**+0.9**
KSL				S	Sn	**19 51 27.4**	**+2.2**
TURN	**Turunc**	**0.59**	**326**	PG	Pn	**19 51 19.6**	**+1.4**
TURN	**Turunc**	**0.59**	**326**	⇓iP	Pn	**19 51 19.8**	**+1.5**
TURN				*i* S	Sn	**19 51 30.4**	**+3.4**
TURN	**Turunc**	**0.59**	**326**	*e*Pg	Pn	**19 51 19.6**	**+1.4**
MRSB	**Marmaris-Mugla**	**0.74**	**297**	PG	Pb	**19 51 19.9**	**+0.1**
MRSB	**Marmaris-Mugla**	**0.74**	**297**	*e*Pg	Pb	**19 51 19.9**	**+0.1**
ARG	**Arkhangelos**	**0.74**	**257**	PG	Pn	**19 51 21.0**	**+0.6**
ARG	**Arkhangelos**	**0.74**	**257**	P	Pb	**19 51 20.3**	**+0.4**
ARG				S	Sn	**19 51 30.9**	**+0.1**
ARG				AML	AML	19 51 32.2	
	comp=N,8690μm,0.4s						
ARG				AML	AML	19 51 34.2	
	comp=E,11584μm,0.3s						
ARG	**Arkhangelos**	**0.74**	**257**	P	Pb	**19 51 20.2**	**+0.4**
ARG				S	Sn	**19 51 31.1**	**+0.3**
ARG	**Arkhangelos**	**0.74**	**257**	P	Pb	**19 51 20.3**	**+0.4**
ARG	**Arkhangelos**	**0.74**	**257**	*e*Pg	Pn	**19 51 21.0**	**+0.6**
ARG				S	Sn	**19 51 30.8**	**+0.1**

ELL	Elmali	0.80	63	PG	Pn	19 51 22.2	+0.8
ELL	Elmali	0.80	63	ePg	Pn	19 51 22.2	+0.8
GLHS	Glhisar (BURDU	0.86	27	PG	Pn	19 51 22.3	+0.2
GLHS	Glhisar (BURDU	0.86	27	ePg	Pn	19 51 22.3	+0.2
YER	Yerkesik	0.95	322	PG	Pb	19 51 23.6	+0.2
YER	Yerkesik	0.95	322	P	Pb	19 51 23.6	+0.2
YER				S	Sn	19 51 36.1	0.0
YER	Yerkesik	0.95	322	P	Pb	19 51 23.6	+0.2
YER				S	Sn	19 51 36.1	0.0
GOLH	Golhisar	0.95	27	⇑iP	Pn	19 51 23.2	-0.2
GOLH				iS	Sb	19 51 34.3	-1.5
GOLH	Golhisar	0.95	27	P	Pn	19 51 23.2	-0.2
TAVA	DENIZLI_Tavas	1.08	356	⇑iP	Pb	19 51 25.9	+0.3
TAVA				iS	Sn	19 51 39.7	+0.4
TAVA	DENIZLI_Tavas	1.08	356	P	Pb	19 51 26.0	+0.3
TAVA				S	Sn	19 51 39.7	+0.4
DATC	Datca-Mugla	1.15	289	PN	Pb	19 51 26.8	0.0
DATC	Datca-Mugla	1.15	289	ePn	Pb	19 51 26.8	0.0
DAT	Datca	1.21	287	PN	Pb	19 51 27.6	-0.2
DAT	Datca	1.21	287	⇑iP	Pb	19 51 27.8	-0.1
DAT				iS	Sb	19 51 44.7	+1.6
DAT	Datca	1.21	287	P	Pb	19 51 27.8	-0.1
DAT				S	Sb	19 51 44.7	+1.6
KORT	Korkueli	1.23	60	PN	Pb	19 51 29.1	+0.8
KORT	Korkueli	1.23	60	⇑iP	Pb	19 51 29.6	+1.3
KORT				iS	Sb	19 51 48.8	+4.9
KORT	Korkueli	1.23	60	ePn	Pb	19 51 29.1	+0.8
KORT	Korkueli	1.23	60	P	Pb	19 51 29.6	+1.3
DNZL	Cakiroluk	1.30	1	⇑iP	Pb	19 51 29.3	-0.1
DNZL				iS	Sb	19 51 46.9	+1.1
DNZL	Cakiroluk	1.30	1	P	Pb	19 51 29.3	-0.1
DNZL				S	Sb	19 51 46.9	+1.1
MLSB	Milas	1.34	313	PN	Pb	19 51 30.0	-0.1
MLSB	Milas	1.34	313	ePn	Pb	19 51 30.0	-0.1
DENT	Denizli	1.36	1	PN	Pn	19 51 29.7	+0.7
DENT	Denizli	1.36	1	ePn	Pn	19 51 29.7	+0.7
ANTB	Antalya	1.41	68	PN	Pb	19 51 32.2	+0.9
ANTB	Antalya	1.41	68	ePn	Pb	19 51 32.2	+0.9
BDRM	Kayabasi	1.43	299	⇑iP	Pb	19 51 30.9	-0.7
BDRM				iS	Sb	19 51 49.8	+0.4
BDRM	Kayabasi	1.43	299	P	Pb	19 51 30.9	-0.7
BDRM				S	Sb	19 51 49.8	+0.4
BODT	Bodrum	1.53	297	PN	Pn	19 51 31.2	0.0
BODT	Bodrum	1.53	297	P	Pn	19 51 31.1	-0.1
BODT				S	Sn	19 51 50.5	+0.3
BODT	Bodrum	1.53	297	ePn	Pn	19 51 31.2	0.0
BODT				S	Sn	19 51 50.5	+0.3
NISR	Nisiros	1.54	279	P	Pn	19 51 31.3	0.0
NISR				AML	AML	19 51 58.5	
	comp=N,3618µm,0.5s						
NISR				AML	AML	19 52 01.4	
	comp=E,5565µm,0.4s						
NISR	Nisiros	1.54	279	P	Pn	19 51 31.6	+0.3
NISR				S	Sn	19 51 51.0	+0.6
NISR	Nisiros	1.54	279	P	Pn	19 51 31.6	+0.3
NISR				S	Sn	19 51 51.0	+0.6
BRDR	BURDUR-Merkez	1.55	32	⇑iP	Pb	19 51 33.8	+0.1
BRDR				iS	Sb	19 51 53.6	+0.7
BRDR	BURDUR-Merkez	1.55	32	P	Pb	19 51 33.8	+0.1
BRDR				S	Sb	19 51 53.6	+0.7
AYDN	Tasoluk	1.56	325	⇓iP	Pb	19 51 32.8	-1.1
AYDN				iS	Sb	19 51 54.1	+0.9
AYDN	Tasoluk	1.56	325	P	Pb	19 51 32.8	-1.1
AYDN				S	Sb	19 51 54.1	+0.9
YKAV	Yalikavak-Bodr	1.58	298	PN	Pn	19 51 32.5	+0.6
YKAV	Yalikavak-Bodr	1.58	298	ePn	Pn	19 51 32.5	+0.6
KARP	Karpathos	1.72	241	PN	Pn	19 51 35.3	+1.3
KARP	Karpathos	1.72	241	P	Pn	19 51 35.6	+1.7
KARP				AML	AML	19 51 58.6	
	comp=E,2567µm,0.3s						
KARP				AML	AML	19 52 09.0	
	comp=N,2811µm,0.6s						
KARP	Karpathos	1.72	241	P	Pn	19 51 35.2	+1.3
KARP				S	Sb	19 51 57.1	-0.7
KARP	Karpathos	1.72	241	P	Pn	19 51 35.2	+1.3
KARP				S	Sb	19 51 57.1	-0.7
AYDB	Zeytinkoy-Aydi	1.80	330	PN	Pn	19 51 35.9	+0.9
AYDB	Zeytinkoy-Aydi	1.80	330	ePn	Pn	19 51 35.9	+0.9
ISP	Isparta	1.87	40	PN	Pb	19 51 37.7	+1.7
ISP	Isparta	1.87	40	⇑iP	Pb	19 51 38.4	-0.7
ISP	Isparta	1.87	40	S	Sb	19 52 06.1	+4.0
ISP	Isparta	1.87	40	P	Pb	19 51 37.9	-1.2
ISP				S	Sb	19 52 01.9	-0.2
ISP	Isparta	1.87	40	Pn	Pb	19 51 38.0	-1.2
ISP	Isparta	1.87	40	ePn	Pn	19 51 37.7	+1.7
ISP				S	Sb	19 52 01.9	-0.2
SUTC	Sutluce-Ispart	1.92	55	PN	Pb	19 51 39.0	-1.1
SUTC	Sutluce-Ispart	1.92	55	ePn	Pb	19 51 39.0	-1.1
GCAM	G?zelcaml?	1.94	313	PN	Pn	19 51 37.9	+1.1
GCAM	G?zelcaml?	1.94	313	iP	Pn	19 51 37.7	+0.9
GCAM				iS	Sn	19 52 00.6	+0.3
GCAM	G?zelcaml?	1.94	313	ePn	Pn	19 51 37.9	+1.1
GCAM				S	Sn	19 52 00.6	+0.3
KHL	Karahalli	1.97	12	PN	Pn	19 51 38.8	+1.4
KHL	Karahalli	1.97	12	ePn	Pn	19 51 38.8	+1.4
KHAL	Karahalli	2.01	11	iP	Pn	19 51 37.6	-0.4
KHAL				iS	Sn	19 52 03.7	+1.3
KHAL	Karahalli	2.01	11	P	Pn	19 51 37.6	-0.4
KHAL				S	Sn	19 52 03.7	+1.3
KZIL	AFYON_Kizioren	2.07	25	iP	Pn	19 51 40.0	+1.2
KZIL				iS	Sb	19 52 07.4	-0.5
KZIL	AFYON_Kizioren	2.07	25	P	Pn	19 51 40.0	+1.2
MANT	Manisa	2.13	350	iP	Pn	19 51 40.0	+0.3
MANT				iS	Sn	19 52 04.1	-1.3
MANT	Manisa	2.13	350	P	Pn	19 51 40.0	+0.3
MANT				S	Sn	19 52 04.1	-1.3
BAGO	Egridir - ISPA	2.13	41	iP	Pn	19 51 41.9	+2.2
KULA	Kula-Manisa	2.14	353	PN	Pn	19 51 40.4	+0.7
KULA	Kula-Manisa	2.14	353	ePn	Pn	19 51 40.4	+0.7
KEPZ	Antalya-Kepez	2.14	75	⇓iP	Pb	19 51 42.9	-0.9
KEPZ				iS	Sb	19 52 11.6	+1.7
SMG	Samos	2.19	308	P	Pn	19 51 41.3	+1.0
SMG				S	Sn	19 52 07.5	+1.0
SMG				AML	AML	19 52 09.7	
	comp=N,7507µm,0.4s						
SMG				AML	AML	19 52 11.7	
	comp=E,6075µm,0.3s						
SMG	Samos	2.19	308	P	Pn	19 51 40.8	+0.5
SMG				S	Sn	19 52 06.6	+0.1
SMG	Samos	2.19	308	P	Pn	19 51 41.1	+0.8
SMG				S	Sn	19 52 06.9	+0.4
DGB	˜zmir	2.38	315	iP	Pn	19 51 43.2	+0.4
DGB				iS	Sn	19 52 10.8	-0.3
ZKR	Zakros	2.61	242	P	Pn	19 51 48.5	+2.5
ZKR				AML	AML	19 52 20.4	
	comp=E,1502µm,0.4s						
ZKR				AML	AML	19 52 21.1	
	comp=N,792µm,0.4s						
ZKR	Zakros	2.61	242	P	Pn	19 51 46.9	+0.8
ZKR				S	Sn	19 52 19.0	+2.1
ZKR	Zakros	2.61	242	P	Pn	19 51 46.9	+0.8
ZKR				S	Sn	19 52 19.0	+2.1
SHAP	Saphane-Kutahy	2.63	3	PN	Pn	19 51 47.9	+1.4
SHAP	Saphane-Kutahy	2.63	3	ePn	Pn	19 51 47.9	+1.4
DEMI	Demirci	2.66	355	iP	Pn	19 51 47.2	+0.3
DEMI				iS	Sn	19 52 16.8	-1.5
DEMI	Demirci	2.66	355	P	Pn	19 51 47.2	+0.3
AKS	Akhisar	2.66	339	PN	Pn	19 51 48.4	+1.6
GAZI	Gazipasa	2.67	92	iP	Pn	19 51 47.6	+0.7
GAZI				iS	Sn	19 52 18.4	0.0
GAZI	Gazipasa	2.67	92	P	Pn	19 51 47.6	+0.7
GAZI				S	Sn	19 52 18.4	0.0
GEDZ	Gediz	2.67	7	PN	Pn	19 51 48.5	+1.5
GEDZ	Gediz	2.67	7	ePn	Pn	19 51 48.5	+1.5
SIMA	Simav-Kutahya	2.69	359	PN	Pn	19 51 47.9	+0.6
SIMA	Simav-Kutahya	2.69	359	ePn	Pn	19 51 47.9	+0.6
DOGA	KONYA_Doganhis	2.72	50	iP	Pn	19 51 50.4	+2.5
DOGA				iS	Sn	19 52 22.8	+2.9
DOGA	KONYA_Doganhis	2.72	50	P	Pn	19 51 50.3	+2.5
DOGA				S	Sn	19 52 22.8	+2.9
ZEY	˜zmir	2.72	313	iP	Pn	19 51 48.4	+0.8
ZEY				iS	Sn	19 52 19.5	-0.3
URLA	Izmir	2.75	316	PN	Pn	19 51 49.1	+1.0
URLA	Izmir	2.75	316	iP	Pn	19 51 48.5	+0.4
URLA				iS	Sn	19 52 21.0	+0.4
URLA	Izmir	2.75	316	P	Pn	19 51 48.5	+0.4
URLA	Izmir	2.75	316	ePn	Pn	19 51 49.1	+1.0
URLA				S	Sn	19 52 21.0	+0.4
BOLV	Bolvadin	2.79	33	iP	Pn	19 51 50.5	+1.9
BOLV				iS	Sn	19 52 21.1	-0.4
BOLV	Bolvadin	2.79	33	P	Pn	19 51 50.5	+1.9
BOLV				S	Sn	19 52 21.1	-0.4
THR8	Santorini-Mono	2.85	271	P	Pn	19 51 50.3	+0.9
SANT	Santorini	2.87	271	⇑iP	Pn	19 51 50.2	+0.6
SANT	Santorini	2.87	271	P	Pn	19 51 49.7	0.0
SANT	Santorini	2.87	271	P	Pn	19 51 50.3	+0.6
SANT				S	Sn	19 52 24.1	+0.7
SANT	Santorini	2.87	271	P	Pn	19 51 50.3	+0.6
SANT				S	Sn	19 52 24.1	+0.7
APE	Apeiranthos	2.88	285	⇑iP	Pn	19 51 50.2	+0.3
APE	Apeiranthos	2.88	285	S	Sn	19 52 24.0	+0.3
APE	Apeiranthos	2.88	285	P	Pn	19 51 49.5	-0.3
APE	Apeiranthos	2.88	285	P	Pn	19 51 50.2	+0.3
APE				S	Sn	19 52 24.4	+0.7
APE	Apeiranthos	2.88	285	P	Pn	19 51 50.2	+0.3
APE				S	Sn	19 52 24.4	+0.7
SAP2K	Karterados	2.88	271	P	Pn	19 51 50.1	+0.3
THR2	Thira island,	2.89	272	P	Pn	19 51 50.7	+0.8
THT1	Athinios (Pele	2.89	271	P	Pn	19 51 50.7	+0.7
THT1				S	Sn	19 52 25.2	+1.3
THR7	Fira-Santorini	2.90	272	P	Pn	19 51 50.4	+0.4
THT2	Imerovigli	2.90	272	P	Pn	19 51 50.9	+0.8
THR3	Thira Island,	2.92	271	P	Pn	19 51 51.0	+0.7
THR6	Thira Island,	2.92	270	P	Pn	19 51 51.2	+0.9
SAP1	Santorini-Akro	2.92	270	P	Pn	19 51 51.3	+0.9
THR9	Santorini-Faro	2.95	270	P	Pn	19 51 50.9	+0.1
THR5	Thira Island,	2.96	272	P	Pn	19 51 51.3	+0.4
NPS	Neapolis	2.99	249	P	Pn	19 51 51.0	-0.3
NPS				AML	AML	19 52 29.1	
	comp=E,1283µm,0.2s						
NPS				AML	AML	19 52 35.1	
	comp=N,1232µm,0.4s						
NPS	Neapolis	2.99	249	P	Pn	19 51 51.7	+0.5
NPS				S	Sn	19 52 26.6	+0.4
NPS	Neapolis	2.99	249	P	Pn	19 51 51.8	+0.5
NPS				S	Sn	19 52 26.6	+0.4
KMER	Konya-Meram	3.01	62	iP	Pn	19 51 54.9	+3.2
KMER				iS	Sb	19 52 31.4	-3.6
IOSP	Ios island	3.02	277	P	Pn	19 51 52.4	+0.7
IOSP	Ios island	3.02	277	P	Pn	19 51 52.4	+0.7
AKMC	Akamas	3.02	116	P	Pn	19 51 52.1	+0.3
	baz=301						
AKMC	Akamas	3.02	116	P	Pn	19 51 52.1	+0.3
CHOS	Chios island	3.09	311	P	Pn	19 51 53.9	+1.1
CHOS				S	Sn	19 52 28.0	-0.9
CHOS				AML	AML	19 52 33.5	
	comp=E,2157µm,0.4s						
CHOS				AML	AML	19 52 33.5	
	comp=N,1297µm,0.4s						
CHOS	Chios island	3.09	311	P	Pn	19 51 53.6	+0.9
CHOS				S	Sn	19 52 29.2	+0.3
CHOS	Chios island	3.09	311	P	Pn	19 51 53.8	+1.1
CHOS				S	Sn	19 52 29.2	+0.3
PPCY	Paphos	3.10	118	P	Pn	19 51 53.6	+0.8
	baz=303						
PPCY	Paphos	3.10	118	P	Pn	19 51 53.6	+0.8
LAST	Lasithi	3.13	248	P	Pn	19 51 53.6	+0.4
LAST	Lasithi	3.13	248	P	Pn	19 51 53.9	+0.6
LAST				S	Sn	19 52 31.5	+1.7
LAST	Lasithi	3.13	248	P	Pn	19 51 54.1	+0.8
LAST				S	Sn	19 52 31.5	+1.7
ALFC	Alefka	3.16	112	P	Pn	19 51 53.9	+0.2
	baz=297						
ALFC				S	Sn	19 52 30.4	-0.2
ALFC	Alefka	3.16	112	P	Pn	19 51 53.9	+0.2
ALFC				S	Sn	19 52 30.4	-0.2
IACM	Heraklion	3.38	253	P	Pn	19 51 57.8	+1.1
IACM				S	Sn	19 52 37.8	+1.8
IACM	Heraklion	3.38	253	P	Pn	19 51 57.8	+1.1
IACM				S	Sn	19 52 37.8	+1.8
IDI	Anoyia	3.53	253	P	Pn	19 51 59.3	+0.5
	comp=N,28nm,0.3s,baz=32,slow=7.4,SNR=322						
IDI				S	Sn	19 52 37.5	-2.2
	comp=N,24nm,0.3s,baz=280,slow=17,SNR=7.0						
IDI				LR	LR	19 53 50.0	
	comp=N,98nm,18.1s,baz=69,slow=45						
IDI	Anoyia	3.53	253	⇑iP	Pn	19 51 59.2	+0.5
IDI	Anoyia	3.53	253	S	Sn	19 52 37.5	-2.2
SZAC	Souni	3.55	116	P	Pn	19 51 59.7	+0.7
	baz=301						
SZAC				S	Sn	19 52 39.3	-0.8
SZAC	Souni	3.55	116	P	Pn	19 51 59.7	+0.7
SZAC				S	Sn	19 52 39.3	-0.8
PRK	Paraskevi	3.59	324	P	Pn	19 52 00.7	+1.2
PRK				S	Sn	19 52 41.7	+0.7
PRK	Paraskevi	3.59	324	P	Pn	19 52 00.7	+1.2
PRK				S	Sn	19 52 41.7	+0.7
MAMC	Mammari	3.63	108	P	Pn	19 52 00.3	+0.2
	baz=293						
MAMC	Mammari	3.63	108	P	Pn	19 52 00.3	+0.2
SIVA	Sivas	3.69	249	P	Pn	19 52 03.2	+2.3
SIVA				AML	AML	19 52 54.3	
	comp=E,959µm,0.5s						
SIVA				AML	AML	19 52 58.7	
	comp=N,686µm,0.8s						
SIVA	Sivas	3.69	249	P	Pn	19 52 02.7	+1.8
SIVA				S	Sn	19 52 44.8	+1.3
SIVA	Sivas	3.69	249	P	Pn	19 52 02.7	+1.8
SIVA				S	Sn	19 52 44.8	+1.3
SERI	Serifos	3.72	283	P	Pn	19 52 02.4	+1.0
SERI				S	Sn	19 52 45.6	+1.3
SERI	Serifos	3.72	283	P	Pn	19 52 02.4	+1.0
SERI				S	Sn	19 52 45.6	+1.3
MHLO	Agia Marina, M	3.73	276	P	Pn	19 52 02.0	+0.5
MHLO	Agia Marina, M	3.73	276	P	Pn	19 52 02.0	+0.5
SIGR	SIGRI	3.77	319	P	Pn	19 52 02.9	+0.9
SIGR				S	Sn	19 52 46.5	+1.0
SIGR	SIGRI	3.77	319	P	Pn	19 52 02.9	+0.9
SIGR				S	Sn	19 52 46.5	+1.0
CSS	Mathiatis	3.79	111	P	Pn	19 52 02.1	-0.2
	baz=296						
CSS	Mathiatis	3.79	111	Pn	Pn	19 52 02.1	-0.2
CSS	Mathiatis	3.79	111	P	Pn	19 52 02.1	-0.2
KARY	Karystos	4.01	296	P	Pn	19 52 06.4	+1.1
KARY				S	Sn	19 52 51.5	+0.1
KARY	Karystos	4.01	296	P	Pn	19 52 06.4	+1.1
KARY				S	Sn	19 52 51.5	+0.1
VAM	Vamos	4.03	257	P	Pn	19 52 05.9	+0.2
VAM	Vamos	4.03	257	P	Pn	19 52 06.1	+0.5
VAM				S	Sn	19 52 52.8	+0.8
VAM	Vamos	4.03	257	P	Pn	19 52 06.1	+0.5
VAM				S	Sn	19 52 52.8	+0.8
IMMV	Iera Moni Meta	4.19	259	P	Pn	19 52 08.5	+0.7
IMMV				S	Sn	19 52 56.9	+1.0
IMMV	Iera Moni Meta	4.19	259	P	Pn	19 52 08.5	+0.7
IMMV				S	Sn	19 52 56.9	+1.0
GVD	Gavdhos	4.30	250	P	Pn	19 52 10.7	+1.3
GVD				S	Sn	19 52 59.7	+1.0
GVD	Gavdhos	4.30	250	P	Pn	19 52 10.7	+1.3
GVD				S	Sn	19 52 59.7	+1.0
VLY	Voula,Athens	4.42	291	P	Pn	19 52 12.3	+1.3
VLY	Voula,Athens	4.42	291	P	Pn	19 52 12.3	+1.3
PTL	Penteli	4.43	293	P	Pn	19 52 12.1	+0.9
PTL				S	Sn	19 53 02.8	+0.8
PTL	Penteli	4.43	293	P	Pn	19 52 12.1	+0.9
PTL				S	Sn	19 53 02.8	+0.8
GADA	Gvkgeada	4.52	328	P	Pn	19 52 13.6	+1.3
GADA				S	Sn	19 53 05.0	+1.0
GADA	Gvkgeada	4.52	328	P	Pn	19 52 13.6	+1.3
GADA				S	Sn	19 53 05.0	+1.0
LIA	Limnos Island	4.63	320	P	Pn	19 52 14.9	+1.1
LIA	Limnos Island	4.63	320	P	Pn	19 52 14.9	+1.1
DID	Didima	4.76	285	P	Pn	19 52 17.3	+1.6
DID	Didima	4.76	285	P	Pn	19 52 17.3	+1.6
VILL	Villia	4.88	293	P	Pn	19 52 19.1	+1.7
VILL	Villia	4.88	293	P	Pn	19 52 19.1	+1.7
VLI	Veliai	4.91	276	P	Pn	19 52 19.2	+1.6
VLI				S	Sn	19 53 14.9	+1.3
VLI	Veliai	4.91	276	P	Pn	19 52 19.2	+1.6
VLI				S	Sn	19 53 14.9	+1.3
SMTH	Samothraki Isl	4.91	327	P	Pn	19 52 19.1	+1.4
SMTH				S	Sn	19 53 14.8	+1.2
SMTH	Samothraki Isl	4.91	327	P	Pn	19 52 19.1	+1.4
SMTH				S	Sn	19 53 14.8	+1.2
BRTR	Keskin Array B	4.94	46	P	Pn	19 52 19.9	+1.6
	comp=N,1.0nm,0.3s,baz=173,slow=22,SNR=42						
BRTR				S	Sn	19 53 15.7	+1.1
	comp=N,2.5nm,0.3s,baz=220,slow=26,SNR=9.1						
ALN	Alexandroupoli	5.07	334	P	Pn	19 52 21.1	+1.3
ALN				S	Sn	19 53 18.3	+0.8
ALN	Alexandroupoli	5.07	334	P	Pn	19 52 21.1	+1.3
ALN				S	Sn	19 53 18.3	+0.8
SKIA	Skiathos	5.20	304	P	Pn	19 52 23.6	+1.9
SKIA	Skiathos	5.20	304	P	Pn	19 52 23.6	+1.9
DYR	Agios Nikonas	5.39	276	P	Pn	19 52 24.9	+0.6
DYR	Agios Nikonas	5.39	276	P	Pn	19 52 24.9	+0.6
VLX	Vlachokerasia	5.41	282	P	Pn	19 52 27.3	+2.6
VLX	Vlachokerasia	5.41	282	P	Pn	19 52 27.3	+2.6
PAIG	Paliouri	5.49	312	P	Pn	19 52 27.9	+2.2
PAIG	Paliouri	5.49	312	P	Pn	19 52 27.9	+2.2
GUR	Goura	5.55	288	P	Pn	19 52 28.6	+2.0
GUR	Goura	5.55	288	P	Pn	19 52 28.6	+2.0
OUR	Ouranopolis	5.58	316	P	Pn	19 52 29.2	+2.3
OUR	Ouranopolis	5.58	316	P	Pn	19 52 29.2	+2.3
KLV	Kalavryta, Ach	5.72	289	P	Pn	19 52 31.0	+2.1
KLV	Kalavryta, Ach	5.72	289	P	Pn	19 52 31.0	+2.1
SERG	Sergoula	5.90	292	P	Pn	19 52 33.3	+2.0
SERG	Sergoula	5.90	292	P	Pn	19 52 33.3	+2.0
BHL	Bhannes	5.98	113	eP	Pn	19 52 31.0	-1.5
DQRL	Deir Qamar	6.00	115	eP	Pn	19 52 31.7	-1.2
EFP	Efpalio	6.01	292	P	Pn	19 52 35.2	+2.3
EFP	Efpalio	6.01	292	P	Pn	19 52 35.2	+2.3
HWQ	Hawqa	6.04	108	eP	Pn	19 52 33.5	+0.1
HNTI	Hanita	6.05	121	Pn	Pn	19 52 32.8	-0.6
HNTI	Hanita	6.05	121	Pn	Pn	19 52 32.8	-0.6
ANX	Ano Chora	6.05	293	P	Pn	19 52 36.2	+2.7
ANX				S	Sn	19 53 42.6	+0.6
ANX	Ano Chora	6.05	293	P	Pn	19 52 36.2	+2.7
ANX				S	Sn	19 53 42.6	+0.6
QRWL	Qaraoun	6.16	115	eP	Pn	19 52 34.8	-0.2
OFRI	'Ofer	6.20	126	Pn	Pn	19 52 34.6	-0.8
OFRI	'Ofer	6.20	126	Pn	Pn	19 52 34.6	-0.8
MMA0B	Mount Meron ar	6.24	121	Pn	Pn	19 52 35.6	-0.5
MMA0B	Mount Meron ar	6.24	121	Pn	Pn	19 52 35.6	-0.5
MMAI	Mount Meron Ar	6.24	121	P	Pn	19 52 36.0	-0.2
	comp=N,110nm,0.3s,baz=303,slow=12,SNR=430						
MMAI				S	Sn	19 53 43.7	-3.0
	comp=N,14nm,0.3s,baz=304,slow=24,SNR=3.9						
BLGI	Bet Lehem HaGe	6.26	124	Pn	Pn	19 52 36.0	-0.3
BLGI	Bet Lehem HaGe	6.26	124	Pn	Pn	19 52 36.0	-0.3
RCY	Rachaya	6.30	115	eP	Pn	19 52 36.5	-0.5
SHBL	Chebaa	6.31	117	eP	Pn	19 52 36.6	-0.5
KSDI	Kefar Szold	6.33	118	Pn	Pn	19 52 36.9	-0.3
KSDI	Kefar Szold	6.33	118	Pn	Pn	19 52 36.9	-0.3
THL	Klokotos Trika	6.37	302	P	Pn	19 52 40.4	+2.6
THL	Klokotos Trika	6.37	302	P	Pn	19 52 40.4	+2.6
NVR	Nevrokopi	6.38	322	P	Pn	19 52 39.8	+1.9
NVR	Nevrokopi	6.38	322	P	Pn	19 52 39.8	+1.9
SLTI	Sal'it	6.48	128	Pn	Pn	19 52 38.4	-0.9
SLTI	Sal'it	6.48	128	Pn	Pn	19 52 38.4	-0.9
KSHT	Keshet	6.55	119	Pn	Pn	19 52 40.8	+0.5
KSHT	Keshet	6.55	119	Pn	Pn	19 52 40.8	+0.5
MMLI	Mount Malkishu	6.60	125	Pn	Pn	19 52 40.3	-0.7
MMLI	Mount Malkishu	6.60	125	Pn	Pn	19 52 40.3	-0.7
PDO	Prodromos	6.61	292	P	Pn	19 52 43.3	+2.3
PDO	Prodromos	6.61	292	P	Pn	19 52 43.3	+2.3
HMDT	Nahal Hemdat	6.78	126	Pn	Pn	19 52 43.3	-0.1
HMDT	Nahal Hemdat	6.78	126	Pn	Pn	19 52 43.3	-0.1
AMAZ	Amatzia	6.89	133	Pn	Pn	19 52 44.6	-0.3
AMAZ	Amatzia	6.89	133	Pn	Pn	19 52 44.6	-0.3
HHAG	Hagoal	6.92	157	AMP		19 54 00.0	
	baz=154						
KZIT	Kziot	7.07	139	Pn	Pn	19 52 47.0	-0.4
KZIT	Kziot	7.07	139	Pn	Pn	19 52 47.0	-0.4
YTIR	Yattir	7.13	133	Pn	Pn	19 52 48.2	-0.1
YTIR	Yattir	7.13	133	Pn	Pn	19 52 48.2	-0.1
DSI	Dead Sea	7.14	130	Pn	Pn	19 52 48.1	-0.3
DSI	Dead Sea	7.14	130	Pn	Pn	19 52 48.1	-0.3
MZDA	Masada	7.32	132	Pn	Pn	19 52 50.3	-0.4
MZDA	Masada	7.32	132	Pn	Pn	19 52 50.3	-0.4
VTS	Vitosha	7.65	326	⇑iP	Pn	19 52 57.6	+2.2
VTS	Vitosha	7.65	326	⇑iP	Pn	19 52 57.6	+2.2
ASF	Jabal al Asfar	7.76	121	P	Pn	19 52 57.4	+0.5
	comp=N,3.3nm,0.3s,baz=263,slow=4.8,SNR=18						
ASF				S	Sn	19 54 23

6.7nm,0.1s,SNR=6.7
PFVI S Sn 20 12 42.2 -1.1
8.1nm,0.3s,SNR=6.9
PFVI Vila Bisbo 0.99 48 P Pn 20 12 29.4 +0.1
6.7nm,0.1s,SNR=6.7
PFVI S Sn 20 12 42.2 -1.1
8.1nm,0.3s,SNR=6.9
MORF Marmelete 1.21 46 *e*P Pn 20 12 32.5 +0.4
MORF Marmelete 1.21 46 P Pn 20 12 32.5 +0.4
MORF Marmelete 1.21 46 *e*P Pn 20 12 32.5 +0.4
PTEO Sao Teotonio 1.34 37 *e*P Pn 20 12 34.2 +0.4
PTEO *e*S Sn 20 12 51.0 -0.3
PTEO A A 20 12 52.2
5.7nm,0.4s
PTEO Sao Teotonio 1.34 37 P Pn 20 12 34.2 +0.4
PTEO S Sn 20 12 51.0 -0.3
2.8nm,0.4s
PTEO Sao Teotonio 1.34 37 *e*P Pn 20 12 34.2 +0.4
PTEO S Sn 20 12 51.0 -0.3
2.8nm,0.4s
PBDV Barranco-do-Ve 1.64 62⇓*e*Pn Pn 20 12 38.7 +1.0
PBDV *e*Sn Sn 20 12 58.0 -0.3
PBDV A A 20 12 59.8
7.5nm,0.6s
PBDV Barranco-do-Ve 1.64 62 P Pn 20 12 38.7 +1.0
PBDV S Sn 20 12 58.0 -0.3
7.5nm,0.6s
PBDV Barranco-do-Ve 1.64 62 P Pn 20 12 38.7 +1.0
PBDV S Sn 20 12 58.0 -0.3
7.5nm,0.6s
PCVE Castro Verde 1.79 49 *e*Pn Pn 20 12 40.7 +1.1
PCVE *e*Sn Sn 20 13 02.5 +0.9
PCVE A A 20 13 03.6
3.7nm,0.2s
PCVE Castro Verde 1.79 49 P Pn 20 12 40.7 +1.1
PCVE S Sn 20 13 02.5 +0.9
3.7nm,0.2s
PCVE Castro Verde 1.79 49 P Pn 20 12 40.7 +1.1
PCVE S Sn 20 13 02.5 +0.9
3.7nm,0.2s
MESJ Messejana 1.83 41 *e*P Pn 20 12 41.0 +0.9
MESJ *e*S Sn 20 13 02.2 -0.3
MESJ AML AML 20 13 03.8
comp=N,6.3nm,0.4s
MESJ Messejana 1.83 41⇓*e*Pn Pn 20 12 41.0 +0.9
MESJ *e*Sn Sn 20 13 02.7 +0.2
MESJ A A 20 13 05.3
comp=N,3.2nm,0.4s
MESJ Messejana 1.83 41 P Pn 20 12 41.0 +0.9
MESJ S Sn 20 13 02.2 -0.3
comp=N,6.3nm,0.4s
MESJ Messejana 1.83 41 P Pn 20 12 41.0 +0.9
MESJ S Sn 20 13 02.2 -0.3
comp=N,6.3nm,0.4s
MESJ *e*Sn Sn 20 13 02.7 +0.2
PVAQ Vaqueiros 1.87 60⇑*e*Pn Pn 20 12 41.7 +1.0
PVAQ *e*Sn Sn 20 13 03.3 -0.3
PVAQ A A 20 13 05.8
comp=N,7.6nm,0.1s
PVAQ Vaqueiros 1.87 60 P Pn 20 12 41.7 +1.0
PVAQ S Sn 20 13 03.3 -0.3
comp=N,7.6nm,0.1s
PVAQ Vaqueiros 1.87 60 P Pn 20 12 41.7 +1.0
PVAQ S Sn 20 13 03.3 -0.3
comp=N,7.6nm,0.1s
PNCL Nicolau / Gran 1.90 30 *e*Pn Pn 20 12 41.7 +0.6
PNCL *e*Sn Sn 20 13 04.2 -0.1
PNCL A A 20 13 06.3
comp=N,4.2nm,0.2s
PNCL Nicolau / Gran 1.90 30 *e*Pn Pn 20 12 41.7 +0.6
PNCL *e*Sn Sn 20 13 04.2 -0.1
EGRO El Granado 2.10 59 P Pn 20 12 44.9 +1.2
comp=N,0.9nm,0.2s,SNR=7.9
EGRO S Sn 20 13 07.8 -1.1
comp=N,3.9nm,0.2s,SNR=7.9
EGRO El Granado 2.10 59 P Pn 20 12 44.9 +1.2
comp=N,0.9nm,0.2s,SNR=7.9
EGRO S Sn 20 13 07.8 -1.1
comp=N,3.9nm,0.2s,SNR=7.9
EVO Evora 2.47 33 *e*Pn Pn 20 12 49.6 +0.8
EVO *e*Sn Sn 20 13 17.7 -0.3
EVO A A 20 13 20.0
comp=N,5.3nm,0.1s
EVO Evora 2.47 33 P Pn 20 12 49.6 +0.8
EVO S Sn 20 13 17.7 -0.3
comp=N,5.3nm,0.1s
EVO Evora 2.47 33 P Pn 20 12 49.6 +0.8
EVO S Sn 20 13 17.7 -0.3
comp=N,5.3nm,0.1s
PMAFR Mafra 2.50 8 *e*Pn Pn 20 12 49.8 +0.6
PMAFR *e*Sn Sn 20 13 18.6 -0.2
PMAFR A A 20 13 22.0
comp=N,19nm,0.8s
PMAFR Mafra 2.50 8 P Pn 20 12 49.6 +0.3
comp=N,5.5nm,0.1s,SNR=6.2
PMAFR S Sn 20 13 16.7 -2.1
comp=N,32nm,0.7s,SNR=8.2
PMAFR Mafra 2.50 8 *e*Pn Pn 20 12 49.8 +0.6
PMAFR S Sn 20 13 16.7 -2.1
comp=N,32nm,0.7s,SNR=8.2
PMAFR *e*Sn Sn 20 13 18.6 -0.2
PBAR Barrancos 2.74 51 *e*Pn Pn 20 12 53.5 +1.1
PBAR *e*Sn Sn 20 13 24.6 0.0
PBAR A A 20 13 39.5
comp=N,3.8nm,0.5s
PBAR Barrancos 2.74 51 P Pn 20 12 53.5 +1.1
PBAR S Sn 20 13 24.6 0.0
comp=N,3.8nm,0.5s
PBAR Barrancos 2.74 51 P Pn 20 12 53.5 +1.1
PBAR S Sn 20 13 24.6 0.0
comp=N,3.8nm,0.5s
EMIN Mina Concepcio 2.77 61 P Pn 20 12 53.4 +0.6
comp=N,0.3nm,0.1s,SNR=7.9
EMIN S Sn 20 13 25.0 -0.3
comp=N,3.3nm,0.7s,SNR=8.0
EMIN Mina Concepcio 2.77 61 P Pn 20 12 53.4 +0.6
comp=N,0.3nm,0.1s,SNR=7.9
EMIN S Sn 20 13 25.0 -0.3
comp=N,3.3nm,0.7s,SNR=8.0
ALMR Almeirim 2.83 19 *e*Sn Sn 20 13 27.0 +0.3
ALMR Almeirim 2.83 19 S Sn 20 13 27.0 +0.3
ALMR Almeirim 2.83 19 S Sn 20 13 27.0 +0.3
PMTG Montargil 2.86 24 *e*Pn Pn 20 12 55.1 +1.1
PMTG *e*Sn Sn 20 13 27.0 -0.3
PMTG A A 20 13 38.3
comp=N,3.3nm,0.9s
PMTG Montargil 2.86 24 *e*Pn Pn 20 12 55.1 +1.1
PMTG *e*Sn Sn 20 13 27.0 -0.3
PESTR Estremoz 2.94 35 *e*Pn Pn 20 12 56.4 +1.3
PESTR *e*Sn Sn 20 13 29.4 +0.1
PESTR A A 20 13 45.9
comp=N,2.6nm,0.6s
PESTR Estremoz 2.94 35 *e*Pn Pn 20 12 56.4 +1.3
PESTR *e*Sn Sn 20 13 29.4 +0.1
EBAD Badajoz 3.14 43 P Pn 20 12 58.3 +0.5
comp=N,0.3nm,0.1s,SNR=7.9
EBAD S Sn 20 13 33.5 -0.8
comp=N,2.3nm,0.8s,SNR=5.8
EBAD Badajoz 3.14 43 P Pn 20 12 58.3 +0.5
comp=N,0.3nm,0.1s,SNR=7.9
EBAD S Sn 20 13 33.5 -0.8
comp=N,2.3nm,0.8s,SNR=5.8
PTOM Tomar 3.31 18 *e*Sn Sn 20 13 38.2 -0.1
PTOM A A 20 13 41.8
comp=N,3.1nm,0.4s
PTOM Tomar 3.31 18 S Sn 20 13 38.2 -0.1
comp=N,1.6nm,0.4s
PTOM Tomar 3.31 18 S Sn 20 13 38.2 -0.1
comp=N,1.6nm,0.4s
PMRV Marv??o 3.49 32 *e*Pn Pn 20 13 03.4 +0.9
PMRV *e*Sn Sn 20 13 41.9 -0.8
PMRV A A 20 13 45.5
comp=N,2.1nm,0.7s
PMRV Marv??o 3.49 32 P Pn 20 13 03.4 +0.9
PMRV S Sn 20 13 41.9 -0.8
comp=N,2.1nm,0.7s
PMRV Marv??o 3.49 32 P Pn 20 13 03.4 +0.9
PMRV S Sn 20 13 41.9 -0.8
comp=N,2.1nm,0.7s
PCAS Casmilo, Conde 3.70 15 *e*Pn Pn 20 13 07.0 +1.5
PCAS *e*Sn Sn 20 13 47.5 -0.5
PCAS A A 20 13 52.9
comp=N,3.4nm,0.7s
PCAS Casmilo, Conde 3.70 15 *e*Pn Pn 20 13 07.0 +1.5
PCAS *e*Sn Sn 20 13 47.5 -0.5

ECAB El Cabril 3.80 64 P Pn 20 13 08.1 +1.3
comp=N,0.2nm,0.1s,SNR=7.9
ECAB S Sn 20 13 48.6 -1.8
comp=N,3.0nm,0.8s,SNR=7.1
ECAB El Cabril 3.80 64 P Pn 20 13 08.1 +1.3
comp=N,0.2nm,0.1s,SNR=7.9
ECAB S Sn 20 13 48.6 -1.8
comp=N,3.0nm,0.8s,SNR=7.1
MTE Manteigas 4.28 23 *e*Pn Pn 20 13 14.4 +1.0
MTE Manteigas 4.28 23 Pn Pn 20 13 14.4 +1.0
MTE Manteigas 4.28 23 *e*Pn Pn 20 13 14.4 +1.0
EADA Adamuz 4.45 66 P Pn 20 13 17.3 +1.6
comp=N,0.2nm,0.1s,SNR=7.9
EADA S Sn 20 14 04.1 -2.1
comp=N,0.5nm,0.1s,SNR=7.9
EADA Adamuz 4.45 66 P Pn 20 13 17.3 +1.6
comp=N,0.2nm,0.1s,SNR=7.9
EADA S Sn 20 14 04.1 -2.1
comp=N,0.5nm,0.1s,SNR=7.9
EPLA Plasencia 4.60 38 P Pn 20 13 18.9 +1.2
comp=N,0.4nm,0.1s,SNR=7.9
EPLA S Sn 20 14 09.1 -0.8
comp=N,1.2nm,0.1s,SNR=7.9
EPLA Plasencia 4.60 38 P Pn 20 13 18.9 +1.2
comp=N,0.4nm,0.1s,SNR=7.9
EPLA S Sn 20 14 09.1 -0.8
comp=N,1.2nm,0.1s,SNR=7.9
POLO Lamas de Olo 5.12 17 *e*Pn Pn 20 13 25.7 +0.8
POLO *e*Sn Sn 20 14 21.4 -1.3
POLO Lamas de Olo 5.12 17 *e*Pn Pn 20 13 25.7 +0.8
POLO *e*Sn Sn 20 14 21.4 -1.3
MVO Moncorvo 5.14 24 *e*Pn Pn 20 13 26.1 +1.0
MVO *e*Sn Sn 20 14 24.1 +1.0
MVO Moncorvo 5.14 24 P Pn 20 13 25.9 +0.8
comp=N,1.5nm,0.3s,SNR=7.9
MVO S Sn 20 14 19.6 -3.5
comp=N,0.3nm,0.1s,SNR=7.9
MVO Moncorvo 5.14 24 *e*Pn Pn 20 13 26.1 +1.0
MVO S Sn 20 14 19.6 -3.5
comp=N,0.3nm,0.1s,SNR=7.9
MVO *e*Sn Sn 20 14 24.1 +1.0
PAB San Pablo 5.25 53 P Pn 20 13 27.9 +1.3
comp=N,0.2nm,0.2s,SNR=7.9
PAB S Sn 20 14 23.6 -2.2
comp=N,0.2nm,0.2s,SNR=7.9
PAB San Pablo 5.25 53 P Pn 20 13 27.9 +1.3
comp=N,0.2nm,0.2s,SNR=7.9
PAB S Sn 20 14 23.6 -2.2
comp=N,0.2nm,0.2s,SNR=7.9
EQES Quesada 5.49 74 S Sn 20 14 30.1 -1.8
comp=N,0.2nm,0.1s,SNR=7.9
EQES Quesada 5.49 74 S Sn 20 14 30.1 -1.8
comp=N,0.2nm,0.1s,SNR=7.9
ELOB Lobios 5.54 13 P Pn 20 13 31.3 +0.7
comp=N,0.3nm,0.2s,SNR=7.9
ELOB S Sn 20 14 29.8 -3.1
comp=N,0.7nm,0.1s,SNR=7.9
ELOB Lobios 5.54 13 P Pn 20 13 31.3 +0.7
comp=N,0.3nm,0.2s,SNR=7.9
PGAV Gavieira, Arco 5.60 11 *e*Pn Pn 20 13 32.2 +0.8
PGAV *e*Sn Sn 20 14 33.2 -1.2
PGAV Gavieira, Arco 5.60 11 *e*Pn Pn 20 13 32.2 +0.8
PGAV *e*Sn Sn 20 14 33.2 -1.2

IDC ***11*** *20:21:07.8±1.1, 10°.24N×125°.88E, h0km, mb3.9/9, mb1 3.9/9, mb1mx3.6/60, mbtmp3.9/9, MS2.1/1, Ms1 2.1/1, ms1mx2.0/54, Error ellipse: s-maj=162.6km s-min=15.7km az=67.0*
ISCJB ***11*** *20:21:21.2±0.5, 10°.10N±0°.03×125°.71E±0°.07, h123km±4km, mb3.8/9, Error ellipse: s-maj=11.8km s-min=4.7km az=168.0*
MAN ***11*** *20:21:21.3, 10°.10N×125°.71E, h119km, mb4.7, ML3.6, MS3.6*

ISC 11 20:21:22.2±0.8, 10°.09N±0°.04×125°.70E±0°.07, h115km±6km, n25, σ0°86/39, mb3.8/9, 2C-1D, Leyte

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.37**	**215**	⇓*i*P			**Pn**	**20 21 38.5**	**-0.5**
SCPH				*i* S			**Sn**	**20 21 49.5**	**-1.9**
MSLP	**Maasin**	**0.83**	**273**	*e*P			**Pn**	**20 21 42.1**	**-0.1**
MSLP				*e*S			**Sn**	**20 21 57.0**	**-0.2**
BUTP	**Butuan**	**1.12**	**184**	*e*P			**Pn**	**20 21 45.3**	**+0.2**
BUTP				*e*S			**Sn**	**20 22 04.2**	**+1.9**
PLP	**Palo**	**1.28**	**326**	⇑*i*P			**Pn**	**20 21 47.2**	**+0.3**
PLP				*i* S			**Sn**	**20 22 05.7**	**+0.1**
OCLP	**Ormoc**	**1.44**	**312**	*e*P			**Pn**	**20 21 49.8**	**+1.1**
OCLP				*e*S			**Sn**	**20 22 09.8**	**+1.2**
BESP	**Borongan**	**1.52**	**350**	*e*P			**Pn**	**20 21 50.8**	**+1.2**
BESP				*e*S			**Sn**	**20 22 10.2**	**-0.2**
LLP	**Lapu-Lapu**	**1.72**	**278**	⇑*e*P			**Pn**	**20 21 52.7**	**+0.7**
LLP				*e*S			**Sn**	**20 22 15.2**	**+0.5**
TBP	**Tagbilaran**	**1.86**	**258**	*e*P			**Pn**	**20 21 53.8**	**+0.1**
TBP				*e*S			**Sn**	**20 22 17.8**	**+0.2**
BUKP	**Musuan**	**2.29**	**196**	*e*P			**Pn**	**20 22 00.5**	**+1.3**
BUKP				*e*S			**Sn**	**20 22 28.2**	**+0.8**
CNP	**Catarman**	**2.61**	**337**	*e*P			**Pn**	**20 22 03.5**	**+0.2**
CNP				*e*S			**Sn**	**20 22 35.7**	**+0.8**
DAV	**Davao City (W)**	**3.00**	**182**	LR			LR	20 23 26.4	
	comp=Z,32nm,20.5s,baz=110,slow=44								
MATI	**Mati**	**3.17**	**170**	*e*P			**Pn**	**20 22 10.9**	**+0.3**
MATI				*e*S			**Sn**	**20 22 47.9**	**-0.2**
PAGZ	**Pagadian**	**3.20**	**226**	*e*P			**Pn**	**20 22 09.9**	**-1.1**
PAGZ				*e*S			Sn	20 22 41.1	-7.5
PVCP	**Virac**	**3.80**	**337**	*e*P			**Pn**	**20 22 18.6**	**-0.4**
PVCP				*e*S			**Sn**	**20 23 01.8**	**-1.2**
WRA	**Warramunga Arr**	**31.03**	**164**	P			**P**	**20 27 27.5**	**-1.7**
	0.3nm,0.9s,baz=346,slow=8.2,SNR=8.2								
WRA				PcP			**PcP**	**20 30 23.1**	**+0.5**
	0.4nm,0.7s,baz=340,slow=2.8,SNR=5.3								
ASAR	**Alice Springs**	**34.49**	**167**	P			**P**	**20 27 58.8**	**-0.7**
	0.6nm,0.9s,baz=348,slow=6.7,SNR=8.2								
ASAR				PcP			**PcP**	**20 30 33.0**	**+0.8**
	0.5nm,0.5s,baz=341,slow=2.6,SNR=8.4								
STKA	**Stephens Creek**	**44.41**	**161**	P			**P**	**20 29 22.3**	**+0.7**
	1.2nm,0.3s,baz=329,slow=10.0,SNR=11								
MKAR	**Makanchi Array**	**51.83**	**323**	P			**P**	**20 30 19.3**	**+0.7**
	0.4nm,0.6s,baz=136,slow=7.9,SNR=4.6								
MKAR				PcP			**PcP**	**20 31 30.4**	**+0.4**
	0.4nm,0.7s,baz=116,slow=5.5,SNR=4.0								
ZALV	**Zalesovo Beam**	**54.52**	**332**	P			**P**	**20 30 37.6**	**-0.4**
	0.4nm,0.3s,baz=141,slow=7.4,SNR=3.0								
BVAR	**Borovoye Array**	**61.50**	**326**	P			**P**	**20 31 26.1**	**-0.7**
	0.5nm,0.6s,baz=82,slow=10,SNR=4.0								
ARCES	**ARCESS Array B**	**84.17**	**340**	P			**P**	**20 33 40.0**	**-0.3**
	2.1nm,0.9s,baz=76,slow=7.5,SNR=5.4								
FINES	**FINESS Array B**	**85.78**	**332**	P			**P**	**20 33 48.5**	**0.0**
	1.2nm,0.5s,baz=73,slow=4.9,SNR=23								
HFS	**Hagfors**	**91.95**	**332**	P			**P**	**20 34 17.2**	**-0.5**
	0.6nm,0.5s,baz=126,slow=7.3,SNR=4.2								
TORD	**Torodi Ar. Bea**	**119.81**	**291**	PKP			**PKPdf**	**20 39 59.3**	**-0.7**
	0.5nm,0.6s,baz=48,slow=2.2,SNR=4.2								
PLCA	**Paso Flores**	**146.26**	**157**	PKPbc			**PKPab**	**20 40 51.3**	**+0.6**
	2.4nm,0.8s,baz=214,slow=6.7,SNR=4.4								

MEX 11 20:54:21.0±0.7, 16°.60N×93°.94W, h131km±11km, MD4.1, Chiapas

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TGIG		**0.80**	**77**	*i* P			Pn	20 54 41.3	-1.1
TGIG				*i* S			Sn	20 54 56.6	-2.0
PCIG		**1.13**	**142**	*e*P			Pn	20 54 44.5	-0.8
PCIG				*e*S			Sn	20 55 02.2	-1.5
HUIG	**Huatulco**	**2.24**	**249**	*e*P			Pn	20 54 56.4	-1.7
HUIG				*e*S			Sn	20 55 23.4	-3.1
VHO	**Vista Hermosa**	**2.71**	**280**	*e*P			Pn	20 55 03.4	-0.8
VHO				*e*S			Sn	20 55 37.5	+0.1

BJI ***11*** *20:56:05.7, 5°.41S×148°.56E, h39km, mb4.5/25, mB4.9/15, Ms4.6/2, Ms7 4.4/2*
IDC ***11*** *20:56:07.9±1.5, 5°.86S×148°.13E, h44km±14km, mb4.2/21, mb1 4.4/27, mb1mx4.3/50, mbtmp4.5/27, ML3.4/4, MS3.8/29, Ms1 3.9/29, ms1mx3.7/51, Error ellipse: s-maj=16.1km s-min=8.7km az=95.0*
NEIC ***11*** *20:56:08.1±1.0, 5°.89S×148°.12E, h47km±10km, mb4.9/7, Error ellipse: s-maj=10.0km s-min=7.8km az=81.0*
ISCJB ***11*** *20:56:08.3±0.4, 5°.88S±0°.04×147°.99E±0°.08, h60km, mb4.5/31, MS3.8/24, Error ellipse: s-maj=10.7km s-min=5.6km az=3.1*
GCMT ***11*** *20:56:08.1±0.2, 5°.80S×148°.05E, h20km±1km, MW4.9/86, Moment Tensor Solution. s27,c30; s86,c124; Duration: 0 Moment tensor: Scale 10^16Nm; M_rr0.07±.11; M_θθ-0.56±.08; M_φφ0.49±.09; M_rθ0.06±.18; M_θφ2.70±.08; M_φr1.01±.20; Best double couple: M_o2.93200×10^16 NP1:φ_s354.00000°, δ87.00000°, λ160.00000°. NP2: φ_s85.00000°, δ70.00000°, λ3.00000°. Principal axes: T 2.9530, Plg16.0000°, Azm308.0000°; N -0.0420, Plg70.0000°, Azm166.0000°; P -2.9100, Plg12.0000°, Azm41.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
DJA ***11*** *20:56:12.0±1.2, 6°.5S±6°.4×14°.8E±1°.1, h65km±7km, M5.2/12, mB5.6/1, mb5.0/12, MLv5.3/3, Mw(mB)5.1/1*

ISC 11 20:56:09.7±0.5, 5°.90S±0°.05×148°.10E±0°.08, h60km, n80, σ1°42/66, mb4.6/31, MS3.8/24, 1C, New Britain region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.60**	**195**	P			**Pn**	**20 57 03.2**	**+0.1**
	29nm,0.3s,baz=29,slow=5.5,SNR=38								
PMG				S			**Sn**	**20 57 45.7**	**+1.3**
	46nm,0.3s,baz=38,slow=11,SNR=4.5								
PMG				LR			LR	20 58 53.1	
	comp=Z,1μm,19.8s,baz=222,slow=45								
PMG	**Port Moresby**	**3.60**	**195**	*e*P			**Pn**	**20 57 02.7**	**-0.4**
PMG				S			**Sn**	**20 57 45.7**	**+1.3**
JAY	**Jayapura**	**8.10**	**294**	P			**Pn**	**20 58 03.5**	**-1.3**
	1.2nm,0.3s,baz=42,slow=3.9,SNR=8.0								
JAY				LR			LR	21 01 32.7	
	comp=Z,1μm,19.8s,baz=63,slow=40								
JAY	**Jayapura**	**8.10**	**294**	P			**Pn**	**20 58 03.5**	**-1.3**
	387nm,1.1s,1.6nm								
GENI	**Genyem**	**8.56**	**292**	P			**Pn**	**20 58 10.1**	**-0.9**
	78nm,0.8s,0.6nm								
HNR	**Honiara**	**12.26**	**107**	P			**Pn**	**20 58 58.2**	**-3.3**
	baz=282,slow=18,SNR=1.5								
HNR				LR			LR	21 03 46.0	
	comp=Z,384nm,18.3s,baz=277,slow=37								
CTA	**Charters Tower**	**14.22**	**187**	P			**Pn**	**20 59 26.6**	**-1.5**
	0.1nm,0.3s,baz=61,slow=19,SNR=3.6								
CTA				LR			LR	21 04 54.4	
	comp=Z,625nm,20.3s,baz=11,slow=37								
CTAO	**Charters Tower**	**14.22**	**187**	*e*P			**Pn**	**20 59 29.2**	**+1.1**
SIJI	**Sorong**	**17.52**	**286**	P			**Pn**	**21 00 07.9**	**-2.2**
	1.0nm,0.3s,baz=94,slow=15,SNR=4.4								
WRAB	**Tennant Creek**	**19.32**	**223**	*e*P			**P**	**21 00 28.8**	**-1.3**
	43nm,0.6s								
WRA	**Warramunga Arr**	**19.33**	**223**	P			**P**	**21 00 29.4**	**-0.8**
	4.9nm,0.3s,baz=46,slow=11,SNR=267								
WRA				S			**S**	**21 04 04.2**	**-1.8**
	baz=42,slow=21,SNR=12								
WRA				ScP			**ScP**	**21 08 24.1**	**+2.4**
	0.0nm,0.3s,baz=40,slow=2.2,SNR=3.8								
WRA				LR			LR	21 08 26.7	
	comp=Z,690nm,21.2s,baz=50,slow=38								
ASAR	**Alice Springs**	**22.33**	**216**	P			**P**	**21 01 02.5**	**-0.1**
	29nm,0.7s,baz=53,slow=8.9,SNR=266								
ASAR				S			**S**	**21 05 07.1**	**+2.6**
	5.8nm,0.8s,baz=29,slow=23,SNR=5.6								
ASAR				LR			LR	21 10 59.9	
	comp=Z,560nm,19.1s,baz=49,slow=40								
SOEI	**Soe**	**23.91**	**259**	P			**P**	**21 01 17.0**	**-1.4**
	92nm,1.0s								
DZM	**Mont Dzumac**	**23.94**	**134**	*e*P			**P**	**21 01 23.7**	**+5.2**
	21nm,0.8s								
DZM				*e*LR			LR	21 07 35.5	
	530nm,23.0s								
DZM	**Mont Dzumac**	**23.94**	**134**	P			**P**	**21 01 18.4**	**-0.1**
	12nm,1.0s,baz=292,slow=11,SNR=4.4								
BATI	**Baumata**	**24.56**	**258**	P			**P**	**21 01 24.0**	**-0.2**
	36nm,0.6s,baz=121,slow=4.6,SNR=6.2								
BATI				LR			LR	21 13 19.9	
	comp=Z,926nm,21.1s,baz=92,slow=42								
BATI	**Baumata**	**24.56**	**258**	P			**P**	**21 01 24.0**	**-0.2**
	31nm,1.1s								
MMRI	**Maumere**	**25.79**	**262**	P			**P**	**21 01 34.6**	**-0.8**
STKA	**Stephens Creek**	**26.55**	**192**	P			**P**	**21 01 42.6**	**+0.6**
	16nm,0.8s,baz=355,slow=8.9,SNR=32								
STKA				LR			LR	21 13 57.7	
	comp=Z,318nm,19.5s,baz=11,slow=40								
WSI	**Waingapu**	**27.79**	**261**	P			**P**	**21 01 57.4**	**+4.1**
H11S3	**WAKE ISLAND Hy**	**30.39**	**37**	T			T	21 34 10.5	
	baz=221,slow=75,SNR=30								
H11S2	**WAKE ISLAND Hy**	**30.40**	**37**	T			T	21 34 11.0	
	baz=221,slow=75,SNR=14								
H11S1	**WAKE ISLAND Hy**	**30.41**	**37**	T			T	21 34 10.5	
	baz=221,slow=75,SNR=14								
MBWA	**Marble Bar**	**31.39**	**238**	*e*P			**P**	**21 02 24.1**	**-1.0**
	61nm,0.8s								
H11N1	**WAKE ISLAND Hy**	**31.46**	**36**	T			T	21 35 29.0	
	baz=214								
H11N3	**WAKE ISLAND Hy**	**31.48**	**36**	T			T	21 35 30.1	
	baz=214								
H11N2	**WAKE ISLAND Hy**	**31.48**	**36**	T			T	21 35 30.3	
	baz=214								
JOW	**Kunigami**	**37.78**	**330**	LR			LR	21 15 18.0	
	comp=Z,200nm,21.9s,baz=269,slow=30								
NWAO	**Narrogin (SRO)**	**39.34**	**223**	P			**P**	**21 03 32.3**	**-1.0**
	12nm,0.8s,baz=78,slow=19,SNR=3.2								
NWAO				LR			LR	21 21 06.9	
	comp=Z,471nm,18.9s,baz=286,slow=38								
LEM	**Lembang**	**40.23**	**266**	LR			LR	21 23 01.7	
	comp=Z,151nm,18.5s,baz=88,slow=40								
URZ	**Urewera**	**41.60**	**145**	LR			LR	21 19 43.9	
	comp=Z,131nm,21.4s,baz=317,slow=34								
JNU	**Nakatsue**	**42.11**	**338**	P			**P**	**21 03 55.5**	**-0.6**
	10nm,0.8s,baz=140,slow=7.9,SNR=4.0								
JNU				LR			LR	21 19 42.2	
	comp=Z,85nm,20.6s,baz=128,slow=34								
RPZ	**Rata Peaks**	**42.73**	**155**	LR			LR	21 21 35.0	
	comp=Z,182nm,18.6s,baz=314,slow=36								
MJAR	**Matsushiro Arr**	**43.22**	**348**	P			**P**	**21 04 04.0**	**-1.0**
	13nm,1.0s,baz=173,slow=9.2,SNR=14								
MAJO	**Matsushiro**	**43.23**	**348**	*e*P			**P**	**21 04 04.1**	**-0.9**
	23nm,0.9s								
MAT	**Matsushiro**	**43.23**	**348**	P			**P**	**21 04 05.3**	**+0.2**
KSRS	**Korea Array**	**47.06**	**338**	P			**P**	**21 04 34.7**	**-0.7**
	6.3nm,1.1s,baz=159,slow=9.1,SNR=13								
KSRS				LR			LR	21 23 29.3	
	comp=Z,57nm,18.4s,baz=147,slow=35								
KSAR	**Wonju Array Be**	**47.06**	**338**	P			**P**	**21 04 34.7**	**-0.7**
PSI	**Prapat**	**49.86**	**279**	LR			LR	21 30 52.6	
	comp=Z,91nm,19.6s,baz=91,slow=42								
ASAJ	**Asahikawa**	**50.03**	**355**	LR			LR	21 24 28.6	
	comp=Z,30nm,20.9s,baz=176,slow=34								
ENH	**Enshi**	**51.59**	**316**	*e*P			**P**	**21 05 09.5**	**-0.7**
USRK	**Ussuriysk Ar.**	**51.94**	**345**	P			**P**	**21 05 12.9**	**+0.4**
	3.1nm,0.7s,baz=173,slow=6.9,SNR=6.2								
KMI	**Kunming**	**53.80**	**307**	P			**P**	**21 05 29.7**	**+2.8**
KMI				pmax			pmax		
	comp=Z,5.0nm,1.2s								
CMAR	**Chiang Mai Arr**	**54.17**	**298**	P			**P**	**21 05 31.1**	**+1.7**
	1.9nm,0.7s,baz=124,slow=5.9,SNR=11								
CMAR				LR			LR	21 30 46.7	
	comp=Z,53nm,18.3s,baz=152,slow=38								
XAN	**Xi'an**	**54.30**	**320**	P			**P**	**21 05 29.6**	**-0.6**
XAN				pmax			pmax		
	comp=Z,8.0nm,0.8s								
XAN				pmax			pmax		
	comp=Z,130nm,4.3s								
PETK	**Petropavlovsk-**	**59.34**	**7**	P			**P**	**21 06 06.2**	**+0.8**
	5.2nm,0.8s,baz=172,slow=6.3,SNR=11								
PETK				LR			LR	21 28 29.7	
	comp=Z,88nm,21.2s,baz=178,slow=33								
PPT2	**Papeete2**	**61.88**	**107**	*e*LR			LR	21 25 09.2	
	66nm,25.0s								
TBI	**Tubuai**	**62.41**	**113**	*e*LR			LR	21 25 28.7	
	191nm,36.5s								
GTA	**Gaotai**	**63.37**	**320**	⇑P			**P**	**21 06 33.6**	**+0.5**
GTA				pmax			pmax		
	comp=Z,9.0nm,1.0s								
ULN	**Ulaanbaatar**	**64.55**	**331**	*e*P			**P**	**21 06 41.6**	**+1.0**
	2.9nm,0.7s					

9.8nm,0.7s
GKN Gorkha 69.80 303 *e*P **P 21 07 15.0 +0.6**
9.6nm,0.8s
KOLN Koldanda 70.60 302 *e*P **P 21 07 19.1 -0.2**
6.6nm,0.7s
DANN Dangsing 70.64 303 *e*P **P 21 07 19.3 -0.4**
17nm,1.0s
PYUN Piuthan 71.21 302 *e*P **P 21 07 22.7 -0.3**
17nm,0.9s
VNDA Vanda 71.95 177 P **P 21 07 26.8 +0.5**
1.9nm,0.8s,baz=336,slow=7.0,SNR=20
VNDA LR LR 21 35 38.9
comp=Z,57nm,18.8s,baz=344,slow=33
MKAR Makanchi Array 78.12 320 P **P 21 08 01.0 -1.4**
2.2nm,0.8s,baz=102,slow=8.5,SNR=22
TIXI Tiksi 78.42 354 *e*P **P 21 08 03.7 +0.2**
2.2nm,0.9s
ZALV Zalesovo Beam 79.51 328 P **P 21 08 09.4 -0.4**
5.9nm,0.7s,baz=109,slow=5.6,SNR=31
ZALV LR LR 21 44 19.9
comp=Z,37nm,20.1s,baz=70,slow=36
NIL Nilore 80.76 305 *e*P **P 21 08 17.9 +0.8**
21nm,0.8s
KURK Kurchatov 81.78 323 P **P 21 08 21.6 -0.5**
KURBB Kurchatov Arra 81.81 323 P **P 21 08 21.6 -0.6**
0.9nm,0.7s,baz=98,slow=6.4,SNR=8.9
MAW Mawson 82.76 203 P **P 21 08 25.7 -1.1**
0.4nm,0.3s,baz=358,slow=14,SNR=2.1
QSPA South Pole Qui 84.07 180 P **P 21 08 32.9 -0.9**
2.6nm,0.7s,baz=328,slow=9.6,SNR=7.1
QSPA LR LR 21 43 44.8
comp=Z,87nm,19.5s,baz=356,slow=34
ILAR Eielson Array 84.96 23 P **P 21 08 38.2 +0.1**
1.3nm,0.6s,baz=250,slow=5.6,SNR=8.8
ILAR LR LR 21 45 32.7
comp=Z,23nm,20.4s,baz=260,slow=35
NRIK Noril'sk 85.52 342 P **P 21 08 42.2 +1.4**
2.9nm,0.5s,baz=98,slow=7.5,SNR=3.0
BVAR Borovoye Array 87.33 324 P **P 21 08 48.2 -1.9**
1.2nm,0.7s,baz=97,slow=5.8,SNR=11
BVAR LR LR 21 49 25.6
comp=Z,30nm,18.7s,baz=73,slow=37
DAWY Dawson 87.72 25 *e*P **P 21 08 52.4 +0.7**
9.1nm,1.2s
YBH Yreka Blue Hor 93.28 49 LR LR 21 47 29.7
comp=Z,76nm,18.4s,baz=312,slow=33
AKTO Aktyubinsk 94.55 320 LR LR 21 51 46.4
comp=Z,23nm,21.9s,baz=85,slow=35
NVAR Mina Array Bea 96.45 52 LR LR 21 48 29.2
comp=Z,76nm,19.3s,baz=80,slow=32
SIV San Ignacio 143.85 127 PKhKP PKPpre 21 15 35.2
1.6nm,0.9s,baz=217,slow=20,SNR=3.1
SAML Samuel 145.51 115 *e*PKPdf **PKPdf 21 15 41.8 -0.4**
TORD Torodi Ar. Bea 146.12 285 PKPbc **PKPab 21 15 45.9 +1.0**
1.3nm,0.6s,baz=70,slow=3.1,SNR=6.9
PTGA Pitinga 151.22 102 PKPbc **PKPbc 21 15 57.8 +0.3**
1.4nm,0.6s,baz=325,slow=18,SNR=2.5

IDC 11 21:07:22.4±5.0, 32°.16S×138°.64E, h0km, mb1 3.3/3, mb1mx3.2/44, mbtmp3.0/3, ML2.8/3, Error ellipse: s-maj=65.7km s-min=18.1km az=23.0, Near coast of South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**2.53**	**84**	Pn	Pn	21 08 04.1	-0.5
	0.6nm,0.3s,baz=260,slow=16,SNR=17						
STKA				Pg	Pb	21 08 08.2	-0.3
	1.3nm,0.3s,baz=259,slow=16,SNR=19						
STKA				Lg	Lg	21 08 43.2	
	2.5nm,0.3s,baz=244,slow=15,SNR=3.7						
ASAR	**Alice Springs**	**9.44**	**333**	Pn	Pn	21 09 41.3	+1.6
	0.1nm,0.3s,baz=153,slow=12,SNR=5.9						
ASAR				Sn	Sn	21 11 25.1	-1.6
	0.1nm,0.3s,baz=158,slow=23,SNR=3.0						
WRA	**Warramunga Arr**	**12.76**	**341**	Pn	Pn	21 10 25.5	+0.3
	0.1nm,0.3s,baz=158,slow=12,SNR=9.4						
WRA				Sn	Sn	21 12 47.3	-0.8
	0.1nm,0.3s,baz=163,slow=23,SNR=6.9						

DJA 11 21:07:43.5±0.7, 7°.S±7°.×10°.7E±°, h143km±6km, M3.6/8, MLv3.6/8, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	**Lembang**	**0.54**	**29**	P	Pn	21 08 05.0	+0.5
LEM				S	Sn	21 08 22.3	+1.9
SKJI	**Sukabumi**	**0.85**	**290**	P	Pn	21 08 07.3	+0.9
SKJI				S	Sn	21 08 24.8	+1.1
DBJI	**Dramaga**	**0.96**	**321**	P	Pn	21 08 07.8	+0.5
DBJI				S	Sn	21 08 26.7	+1.3
CMJI	**Cimerak**	**1.18**	**114**	P	Pn	21 08 09.4	+0.1
CMJI				S	Sn	21 08 29.3	+0.4
JCJI	**Jatiwangi**	**1.21**	**48**	P	Pn	21 08 08.1	-1.5
JCJI				S	Sn	21 08 27.3	-2.1
TNG	**Tangerang**	**1.33**	**328**	P		21 08 10.9	
TNG				P	Pn	21 08 10.7	0.0
KPJI	**Karang Pucung**	**1.56**	**91**	P	Pn	21 08 13.4	+0.2
CGJI	**Cibinong**	**1.79**	**292**	P	Pn	21 08 16.0	+0.2
CGJI				S	Sn	21 08 40.5	+0.1

IDC 11 21:16:10.0±1.8, 50°.30S×112°.87E, h0km, mb3.5/4, mb1 3.8/4, mb1mx3.6/40, mbtmp3.5/4, Error ellipse: s-maj=59.4km s-min=29.0km az=92.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.42**	**4**	T	T	21 35 34.4	
	baz=183,slow=74,SNR=42						
H01W1	**Cape Leeuwin H**	**15.43**	**4**	T	T	21 35 31.2	
	baz=183,slow=74,SNR=47						
H01W3	**Cape Leeuwin H**	**15.43**	**4**	T	T	21 35 32.0	
	baz=183,slow=74,SNR=71						
ASAR	**Alice Springs**	**31.23**	**39**	P	P	21 22 31.1	0.0
	0.4nm,0.6s,baz=208,slow=8.7,SNR=4.5						
VNDA	**Vanda**	**32.81**	**162**	P	P	21 22 44.4	0.0
	0.3nm,0.6s,baz=301,slow=8.6,SNR=5.2						
WRA	**Warramunga Arr**	**34.75**	**37**	P	P	21 23 01.9	0.0
	0.4nm,0.6s,baz=204,slow=9.1,SNR=3.8						
CMAR	**Chiang Mai Arr**	**69.55**	**346**	P	P	21 27 20.4	0.0
	0.5nm,0.7s,baz=181,slow=5.3,SNR=5.0						

MEX 11 21:20:22.1±1.3, 16°.75N×99°.34W, h16km±117km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.51**	**284**	*e*P	Pg	21 20 29.9	-2.5
ACX				*i* S	Sg	21 20 37.1	-2.1
CAIG	**El Cayaco**	**0.94**	**289**	*e*P	Pb	21 20 36.4	-3.6
CAIG				*e*S	Sb	21 20 48.4	-3.8
MEIG	**Mezcala**	**1.20**	**347**	*e*P	Pn	21 20 39.9	-4.5
MEIG				*e*S	Sb	21 20 54.8	-5.1
PLIG	**Platanillo**	**1.64**	**355**	*e*P	Pn	21 20 47.5	-2.9
PLIG				*e*S	Sn	21 21 06.5	-4.8
ARIG	**Puente Sto Nin**	**1.80**	**328**	*e*P	Pn	21 20 50.2	-2.4
ARIG				*i* S	Sn	21 21 10.4	-4.8
ZIIG	**Zihuatanejo**	**2.21**	**293**	*e*P	Pn	21 20 56.8	-1.3
ZIIG				*e*S	Sn	21 21 20.7	-4.3

TIR ***11*** *21:46:38.0, 41°.37N×20°.99E, h2km, Md2.7/5*
SKO ***11*** *21:46:40.2, 41°.35N×20°.85E, h22km, M0.9, ML1.3*
ISCJB ***11*** *21:46:41.7±0.8, 41°.35N±0°.05×20°.86E±0°.09, h6km, Error ellipse: s-maj=11.3km s-min=4.5km az=145.3*
ISC 11 21:46:41.0±1.2, 41°.37N±0°.05×20°.99E±0°.08, h6km, n6, σ0.78/10, 3C, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHR	**Ohrid**	**0.30**	**209**	⇑*i*Pg	**Pg**	**21 46 46.6**	**-0.2**
OHR				⇑*i*Sg	**Sg**	**21 46 50.6**	**-0.1**
OHR				*e*Lg	Lg	21 46 50.8	
	comp=N,122nm,0.4s						
OHR				*e*Lg	Lg	21 46 50.8	
	comp=E,188nm,0.5s						
BIA	**Bitola**	**0.43**	**144**	⇑*i*Pg	**Pb**	**21 46 50.8**	**-0.3**
BIA				*i* Sg	**Sb**	**21 46 58.7**	**+0.9**
BIA				*e*Lg	Lg	21 46 59.1	
	comp=E,36nm,0.2s						
BIA				*e*Lg	Lg	21 46 59.2	
	comp=N,31nm,0.2s						
PHP	**Peshkopia**	**0.52**	**307**	*i* PG	**Pg**	**21 46 50.5**	**-0.5**
PHP				*i* SG	**Sg**	**21 46 59.1**	**+1.4**
TIR	**Tirane**	**0.85**	**269**	*i* PN	**Pg**	**21 46 56.6**	**-0.6**
PUK	**Puka**	**1.06**	**310**	*i* PN	**Pg**	**21 47 00.9**	**-0.4**
PUK				*i* SN	**Sn**	**21 47 17.8**	**+0.2**
BCI	**Bajram Curri**	**1.21**	**326**	*i* SN	**Pg**	**21 47 03.4**	**-0.8**

NIED ***11*** *22:15:00, 38°.60N×141°.90E, h50km, Mw3.7 Best double couple: M0 3.52000×10^14 NP1:φ0 148.00000°, δ38.00000°, λ47.00000°. NP2:φ0 17.00000°, δ64.00000°, λ118.00000°.*
IDC ***11*** *22:15:02.7±1.8, 38°.81N×142°.65E, h0km, mb3.8/7, mb1 3.7/11, mb1mx3.5/71, mbtmp3.7/11, ML2.8/4, MS3.6/1, Ms1 3.6/1, ms1mx2.4/56, Error ellipse: s-maj=39.6km s-min=25.9km az=93.0*
NEIC ***11*** *22:15:07.9±1.2, 38°.84N×142°.52E, h35km, mb4.2/1, Error ellipse: s-maj=24.3km s-min=11.3km az=117.0*
ISCJB ***11*** *22:15:10.6±1.0, 38°.64N±0°.05×142°.0E±0°.1, h55km±6km, mb3.8/8, MS3.7/1, Error ellipse: s-maj=14.8km s-min=6.4km az=18.0*
JMA ***11*** *22:15:11.9±0.1, 38°.64N×141°.91E, h48km±1km, M3.8*
JMA Felt I J1.
ISC 11 22:15:11.2±1.7, 38°.64N±0°.06×142°.0E±0°.1, h48km±12km, n33, σ1.9/38/33, mb3.8/8, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.52**	**328**	P	**Pn**	**22 15 22.9**	**+0.2**
OFUJ				S	**Sn**	**22 15 30.4**	**-0.4**
JIO	**Ouri**	**0.56**	**251**	P	**Pn**	**22 15 22.7**	**-0.4**
JIO				S	**Sn**	**22 15 30.1**	**-1.5**
JMK	**Ichinoseki**	**0.70**	**297**	P	**Pn**	**22 15 24.7**	**-0.2**
JMK				S	**Sn**	**22 15 33.8**	**-1.1**
JOM	**Ohasama**	**1.01**	**326**	P	**Pn**	**22 15 29.3**	**+0.2**
JOU	**Okura**	**1.10**	**256**	P	**Pn**	**22 15 29.8**	**-0.5**
JOU				*e*S	**Sn**	**22 15 43.3**	**-1.1**
JMM	**Marumori**	**1.24**	**232**	P	**Pn**	**22 15 31.4**	**-0.7**
JMM				*e*S	**Sn**	**22 15 46.0**	**-1.7**
JRG	**Rokugo**	**1.32**	**305**	P	**Pn**	**22 15 33.3**	**0.0**
JYK	**Kaneyama**	**1.33**	**283**	P	**Pn**	**22 15 33.0**	**-0.4**
JFK	**Kawauchi**	**1.56**	**216**	P	**Pn**	**22 15 36.4**	**-0.2**
JFK				S	**Sn**	**22 15 54.0**	**-1.6**
JYS	**Shiratake**	**1.59**	**256**	P	**Pn**	**22 15 36.8**	**-0.2**
JYS				*e*S	**Sn**	**22 15 55.5**	**-0.9**
MJAR	**Matsushiro Arr**	**3.68**	**237**	Pn	**Pn**	**22 16 07.4**	**+1.8**
	1.8nm,0.3s,baz=330,slow=19,SNR=17						
MAJO	**Matsushiro**	**3.68**	**237**	*e*Pn	**Pn**	**22 16 08.0**	**+2.3**
MAT	**Matsushiro**	**3.68**	**237**	P	**Pn**	**22 16 08.7**	**+3.0**
MAT				S	**Sn**	**22 16 49.5**	**+1.7**
ASAJ	**Asahikawa**	**5.49**	**4**	Pn	Pn	22 16 22.5	-8.0
	0.3nm,0.3s,baz=205,slow=14,SNR=1.9						
ASAJ				LR	LR	22 18 26.6	
	comp=Z,21nm,19.5s,baz=24,slow=38						
USRK	**Ussuriysk Ar.**	**9.36**	**310**	Pn	**Pn**	**22 17 23.9**	**+0.4**
	0.2nm,0.3s,baz=123,slow=18,SNR=3.3						
KSRS	**Korea Array**	**11.19**	**268**	Pn	**Pn**	**22 17 51.4**	**+3.0**
	0.1nm,0.3s,baz=84,slow=14,SNR=3.2						
KSAR	**Wonju Array Be**	**11.22**	**268**	Pn	**Pn**	**22 17 51.4**	**+2.6**
H11N2	**WAKE ISLAND Hy**	**28.60**	**124**	T	T	22 51 20.3	
	baz=317,slow=76,SNR=26						
H11N1	**WAKE ISLAND Hy**	**28.61**	**124**	T	T	22 51 21.5	
	baz=317,slow=76,SNR=73						
H11N3	**WAKE ISLAND Hy**	**28.61**	**124**	T	T	22 51 22.6	
	baz=317,slow=76,SNR=198						
H11S1	**WAKE ISLAND Hy**	**29.37**	**126**	T	T	22 52 18.6	
	baz=318,slow=76,SNR=48						
H11S3	**WAKE ISLAND Hy**	**29.37**	**126**	T	T	22 52 17.6	
	baz=318,slow=76,SNR=48						
H11S2	**WAKE ISLAND Hy**	**29.38**	**126**	T	T	22 52 18.7	
	baz=318,slow=76,SNR=33						
ZALV	**Zalesovo Beam**	**41.21**	**311**	P	**P**	**22 22 51.0**	**-0.1**
	1.9nm,1.0s,baz=76,slow=7.8,SNR=4.2						
MKAR	**Makanchi Array**	**43.70**	**301**	P	**P**	**22 23 11.4**	**0.0**
	0.4nm,0.5s,baz=84,slow=10.0,SNR=6.0						
KURK	**Kurchatov**	**45.34**	**307**	*e*P	**P**	**22 23 23.2**	**-1.2**
	2.3nm,0.7s						
KURBB	**Kurchatov Arra**	**45.41**	**307**	P	**P**	**22 23 24.8**	**-0.1**
	3.5nm,0.5s,baz=83,slow=8.2,SNR=28						
BVAR	**Borovoye Array**	**49.87**	**311**	P	**P**	**22 23 59.4**	**-0.1**
	0.4nm,0.5s,baz=69,slow=7.9,SNR=5.7						
WRA	**Warramunga Arr**	**58.71**	**188**	P	**P**	**22 25 03.9**	**-0.2**
	0.4nm,0.9s,baz=5.1,slow=7.2,SNR=2.8						
FINES	**FINESS Array B**	**67.63**	**332**	P	**P**	**22 26 00.6**	**-2.0**
	2.0nm,0.9s,baz=45,slow=14,SNR=3.0						
HFS	**Hagfors**	**72.83**	**336**	P	**P**	**22 26 34.3**	**-0.2**
	0.6nm,0.6s,baz=64,slow=3.4,SNR=4.5						
CLL	**Collm**	**79.95**	**330**	*i* P	**P**	**22 27 16.1**	**+1.1**
GERES	**GERESS Array B**	**81.61**	**328**	LR	LR	23 05 38.9	
	comp=Z,31nm,19.9s,baz=299,slow=37						

ISCJB ***11*** *22:23:52.3±0.4, 58°.83N±0°.04×137°.42W±0°.05, h10km, mb3.6/7, MS3.6/26, Error ellipse: s-maj=5.9km s-min=3.1km az=28.7*
PGC ***11*** *22:23:53.3±3.8, 58°.92N×137°.27W, h0km, ML3.7/4, 118km west of Haines, Ak Southeastern Alaska*
IDC ***11*** *22:23:53.3±1.0, 58°.85N×137°.51W, h0km, mb3.6/7, mb1 3.8/10, mb1mx3.5/70, mbtmp3.5/10, ML3.1/3, MS3.6/34, Ms1 3.6/34, ms1mx3.5/59, Error ellipse: s-maj=21.5km s-min=9.9km az=22.0*
NEIC ***11*** *22:23:54.1±0.0, 58°.86N×137°.32W, h0km, ML3.4(AEIC), ML3.7(OTT), After AEIC.*
ISC 11 22:23:53.6±0.7, 58°.94N±0°.04×137°.28W±0°.03, h10km, n77, σ1.9/16/60, mb3.7/7, MS3.6/26, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLBC	**Pleasant Camp**	**0.70**	**42**	P	**Pg**	**22 24 05.6**	**-1.6**
PLBC	**Pleasant Camp**	**0.70**	**42**	P	**Pn**	**22 24 08.2**	**-1.4**
PLBC				S	**Sn**	**22 24 20.3**	**-0.2**
SKAG	**Skagway**	**1.13**	**61**	P	**Pn**	**22 24 15.8**	**+0.3**
PNL	**Peninsula**	**1.31**	**305**	P	**Pn**	**22 24 16.7**	**-1.3**
PNL				S	**Sb**	**22 24 34.3**	**-0.9**
BESE	**Bessie Mountai**	**1.31**	**105**	P	**Pn**	**22 24 16.6**	**-1.5**
BESE				S	**Sb**	**22 24 34.0**	**-1.3**
BESE	**Bessie Mountai**	**1.31**	**105**	P	**Pg**	**22 24 17.6**	**-1.2**
YKU2	**Yakutat**	**1.36**	**296**	P	**Pb**	**22 24 18.2**	**-0.9**
JIS	**Juneau Island**	**1.65**	**112**	P	**Pb**	**22 24 22.5**	**-1.6**
JIS				S	**Sb**	**22 24 44.3**	**-0.7**
YUK7	**Dusty Glacier**	**1.66**	**345**	Pn	**Pb**	**22 24 23.1**	**-1.3**
YUK7				Sn	**Sg**	**22 24 45.9**	**-1.1**
YUK7	**Dusty Glacier**	**1.66**	**345**	P	**Pb**	**22 24 23.9**	**-0.5**
HYT	**Haines Junctio**	**1.90**	**357**	Pn	**Pb**	**22 24 27.7**	**-0.7**
HYT	**Haines Junctio**	**1.90**	**357**	P	**Pb**	**22 24 27.9**	**-0.5**
HYT				S	**Sg**	**22 24 53.0**	**-1.6**
SAMH	**Samovar Hills**	**2.15**	**305**	P	**Pn**	**22 24 30.1**	**+0.5**
CHX	**Chaix Hills**	**2.26**	**302**	P	**Pn**	**22 24 31.0**	**-0.1**
RKAV	**Rock Avalanche**	**2.48**	**305**	P	**Pn**	**22 24 34.6**	**+0.4**
MESA	**MESA**	**2.68**	**300**	P	**Pn**	**22 24 37.1**	**+0.1**
CTGM	**Chitina Glacie**	**2.88**	**317**	Pn	**Pn**	**22 24 40.0**	**+0.3**
CTGM				Sn	**Sn**	**22 25 13.8**	**-0.6**
GRNC	**Granite Creek**	**2.89**	**310**	P	**Pn**	**22 24 39.8**	**-0.1**
GRNC				S	**Sb**	**22 25 18.0**	**-2.8**
ISLE	**Juniper Island**	**3.06**	**305**	P	**Pn**	**22 24 42.9**	**+0.8**
WAX	**Waxell Ridge**	**3.21**	**301**	P	**Pn**	**22 24 44.1**	**0.0**
BALM	**Baldy**	**3.30**	**312**	Pn	**Pn**	**22 24 45.6**	**+0.1**
BALM	**Baldy**	**3.30**	**312**	P	**Pn**	**22 24 45.9**	**+0.5**
WRAK	**Wrangell Islan**	**3.66**	**131**	*e*Pn	**Pn**	**22 24 50.0**	**-0.2**
WRAK				*e*Sb	**Sg**	**22 25 48.9**	**-2.1**
KAIM	**Kayak Island**	**3.78**	**288**	P	**Pn**	**22 24 51.5**	**-0.4**
DLBC	**Dease Lake**	**3.82**	**94**	Pn	**Pn**	**22 24 51.0**	**-1.6**
	0.8nm,0.3s,baz=259,slow=12,SNR=4.4						
DLBC				Pg	**Pb**	**22 25 02.0**	**+1.0**
	6.9nm,0.3s,baz=280,slow=13,SNR=16						
DLBC				Lg	Lg	22 25 57.2	
	19nm,0.3s,baz=7.3,slow=24,SNR=6.1						
DLBC				LR	LR	22 26 33.6	
	comp=Z,2μm,18.3s,baz=258,slow=41						
DLBC	**Dease Lake**	**3.82**	**94**	Pn	**Pn**	**22 24 52.0**	**-0.5**
CRAG	**Craig**	**4.15**	**145**	P	**Pn**	**22 24 55.5**	**-1.4**
BMRM	**Bremner River**	**4.21**	**302**	P	**Pn**	**22 24 57.5**	**-0.4**
BCA3	**Beaver Creek A**	**4.69**	**334**	P	**Pn**	**22 25 04.9**	**+0.5**
KLU	**Klutina**	**5.01**	**304**	P	**Pn**	**22 25 08.9**	**0.0**
HARP	**HAARP**	**5.21**	**315**	Pn	**Pn**	**22 25 11.6**	**+0.1**
DAWY	**Dawson**	**5.25**	**350**	Pn	**Pn**	**22 25 12.7**	**+0.6**
PAX	**Paxson**	**5.68**	**319**	Pn	**Pn**	**22 25 18.1**	**0.0**
DOT	**Dot Lake**	**5.75**	**328**	Pn	**Pn**	**22 25 19.7**	**+0.8**
SCM	**Sheep Creek Mo**	**5.77**	**305**	P	**Pn**	**22 25 19.9**	**+0.6**
RUBB	**Prince Rupert**	**6.03**	**137**	Pn	**Pn**	**22 25 23.3**	**+0.6**
SML	**Sawmill**	**6.19**	**302**	P	**Pn**	**22 25 24.7**	**-0.4**
GHO	**Glory Hole Cre**	**6.44**	**301**	P	**Pn**	**22 25 28.5**	**+0.1**
ILAR	**Eielson Array**	**7.40**	**326**	Pn	**Pn**	**22 25 42.8**	**+1.2**
	0.3nm,0.3s,baz=148,slow=12,SNR=8.0						
ILAR				Lg	Lg	22 27 48.5	
	0.2nm,0.3s,baz=116,slow=26,SNR=3.6						
ILAR				LR	LR	22 28 49.7	
	comp=Z,612nm,18.7s,baz=142,slow=40						
I53US	**FAIRBANKS INFR**	**7.77**	**325**	*i*		23 08 05.0	
	baz=138,slow=317,SNR=4.3						
KTH	**Kantishna Hill**	**8.04**	**311**	P	**Pn**	**22 25 50.2**	**-0.1**
KDAK	**Kodiak Island**	**8.13**	**268**	Pn	**Pn**	**22 25 48.6**	**-2.9**
	0.3nm,0.3s,baz=16,slow=7.4,SNR=2.9						
KDAK				LR	LR	22 29 07.0	
	comp=Z,617nm,18.1s,baz=84,slow=39						
BBB	**Bella Bella**	**8.52**	**139**	LR	LR	22 28 41.3	
	comp=Z,224nm,21.5s,baz=340,slow=34						
BM3	**Burnt Mountain**	**9.13**	**342**	P	**Pn**	**22 26 05.5**	**+0.3**
INK	**Inuvik**	**9.55**	**8**	Lg	Lg	22 28 56.5	
	0.1nm,0.3s,baz=258,slow=31,SNR=5.1						
INK				LR	LR	22 30 18.2	
	comp=Z,538nm,19.5s,baz=216,slow=40						
YKA	**Yellowknife Ar**	**11.63**	**63**	Pn	**Pn**	**22 26 39.1**	**-0.4**
	0.1nm,0.3s,baz=261,slow=13,SNR=3.7						
YKA				Lg	Lg	22 29 59.8	
	0.0nm,0.3s,baz=265,slow=26,SNR=3.8						
YKA				LR	LR	22 31 31.2	
	comp=Z,47nm,20.1s,baz=256,slow=39						
NEW	**Newport**	**15.97**	**123**	LR	LR	22 34 25.7	
	comp=Z,229nm,19.5s,baz=330,slow=40						
YBH	**Yreka Blue Hor**	**19.50**	**146**	LR	LR	22 34 51.9	
	comp=Z,290nm,19.0s,baz=330,slow=34						
RES	**Resolute Bay**	**22.17**	**28**	P	**P**	**22 28 52.5**	**+3.3**
	1.6nm,0.8s,baz=249,slow=12,SNR=3.8						
RES				LR	LR	22 38 07.5	
	comp=Z,312nm,20.1s,baz=228,slow=38						
PDAR	**Pinedale Array**	**23.58**	**121**	P	**P**	**22 29 06.5**	**+2.0**
	0.4nm,0.7s,baz=309,slow=5.7,SNR=3.6						
PDAR				LR	LR	22 37 46.2	
	comp=Z,59nm,18.8s,baz=326,slow=35						
NVAR	**Mina Array Bea**	**23.88**	**141**	P	**P**	**22 29 08.2**	**+0.9**
	1.8nm,0.8s,baz=316,slow=8.0,SNR=12						
NVAR				LR	LR	22 37 57.5	
	comp=Z,237nm,18.1s,baz=79,slow=35						
ULM	**Lac du Bonnet**	**25.14**	**92**	LR	LR	22 39 44.3	
	comp=Z,310nm,18.1s,baz=278,slow=38						
ANMO	**Albuquerque**	**31.42**	**126**	LR	LR	22 44 04.0	
	comp=Z,130nm,19.4s,baz=332,slow=38						
PETK	**Petropavlovsk-**	**35.49**	**290**	LR	LR	22 46 27.6	
	comp=Z,56nm,19.0s,baz=72,slow=38						
SFJD	**Kangerlussuaq**	**37.05**	**41**	LR	LR	22 46 55.1	
	comp=Z,169nm,18.6s,baz=300,slow=37						
SCHQ	**Schefferville**	**37.08**	**65**	LR	LR	22 46 34.7	
	comp=Z,211nm,18.3s,baz=314,slow=37						
SADO	**Sadowa**	**37.34**	**86**	LR	LR	22 46 53.4	
	comp=Z,141nm,19.2s,baz=334,slow=37						
TXAR	**Lajitas Array**	**37.45**	**127**	LR	LR	22 46 22.8	
	comp=Z,48nm,20.4s,baz=0.0,slow=36						
LPIG	**La Paz**	**39.69**	**140**	LR	LR	22 47 30.1	
	comp=Z,57nm,18.8s,baz=350,slow=36						
NRIK	**Noril'sk**	**48.02**	**340**	LR	LR	22 55 42.6	
	comp=Z,40nm,18.3s,baz=14,slow=40						
ASAJ	**Asahikawa**	**48.91**	**290**	LR	LR	22 54 33.0	
	comp=Z,58nm,18.9s,baz=100,slow=38						
USRK	**Ussuriysk Ar.**	**53.89**	**297**	LR	LR	22 58 17.2	
	comp=Z,76nm,18.2s,baz=100,slow=38						
H11N2	**WAKE ISLAND Hy**	**55.85**	**250**	T	T	23 32 48.4	
	baz=32						
H11N3	**WAKE ISLAND Hy**	**55.85**	**250**	T	T	23 32 48.4	
	baz=32,slow=74						
H11N1	**WAKE ISLAND Hy**	**55.87**	**250**	T	T	23 32 48.9	
	baz=32,slow=74						
KSRS	**Korea Array**	**61.10**	**295**	LR	LR	23 02 45.8	
	comp=Z,25nm,18.5s,baz=71,slow=38						
SONM	**Songino Array**	**61.52**	**317**	P	**P**	**22 34 12.1**	**+1.7**
	1.1nm,0.8s,baz=46,slow=8.6,SNR=6.3						
SONM				LR	LR	23 03 01.6	
	comp=Z,88nm,18.6s,baz=64,slow=38						
JTS	**JuntasAbangare**	**62.38**	**118**	LR	LR	23 05 45.8	
	comp=Z,48nm,18.5s,baz=26,slow=40						
JCJ	**Chichijima**	**62.39**	**277**	LR	LR	22 57 38.4	
	comp=Z,70nm,20.7s,baz=152,slow=32						
ZALV	**Zalesovo Beam**	**62.47**	**333**	P	**P**	**22 34 16.5**	**0.0**
	0.3nm,0.3s,baz=39,slow=6.8,SNR=2.4						
ZALV				LR	LR	23 06 20.8	
	comp=Z,39nm,18.4s,baz=70,slow=41						
MKAR	**Makanchi Array**	**69.72**	**332**	P	**P**	**22 35 03.7**	**+0.4**
	0.2nm,0.6s,baz=48,slow=8.7,SNR=2.8						
MKAR				LR	LR	23 10 19.8	
	comp=Z,43nm,18.3s,baz=51,slow=40						
AKTO	**Aktyubinsk**	**70.28**	**350**	LR	LR	23 08 51.3	
	comp=Z,6.2nm,18.4s,baz=6.2,slow=38						
MLR	**Muntele Rosu**	**75.02**	**12**	LR	LR	23 10 24.2	
	comp=Z,10nm,20.5s,baz=9.0,slow=37						
GNI	**Garni**	**81.26**	**358**	LR	LR	23 20 38.8	
	comp=Z,11nm,18.3s,baz=318,slow=42						
BRTR	**Keskin Array B**	**81.41**	**7**	LR	LR	23 16 55.3	
	comp=Z,13nm,19.2s,baz=302,slow=39						
MMAI	**Mount Meron Ar**	**88.19**	**6**	LR	LR	23 21 55.7	
	comp=Z,27nm,18.4s,baz=140,slow=39						
CMAR	**Chiang Mai Arr**	**90.26**	**308**	P	**P**	**22 36 56.1**	**+1.6**

-1.1240, Plg12.0000°, Azm309.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.

ISC 11 23:19:39.0±0.5, 41°.40S±0°.09×88°.17W±0°.08, h10km, n124, σ1§96/97, mb4.7/60, MS4.5/30, 2D, West Chile Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**13.32**	**93**	Pn	**Pn**	**23 22 51.6**	**+3.5**
	0.2nm,0.3s,baz=278,slow=13,SNR=6.9						
PLCA				LR	LR	23 26 41.9	
	comp=Z,2μm,21.1s,baz=286,slow=32						
AAGR	**Agrelo**	**17.47**	**68**	‖eP	**P**	**23 23 45.0**	**+0.9**
ARCO	**CERRO ARCO**	**17.54**	**67**	eP	**P**	**23 23 47.2**	**+2.3**
AUSP	**Uspallata**	**17.58**	**65**	eP	**Pn**	**23 23 44.5**	**+0.1**
ASAL	**Salagasta**	**17.75**	**67**	eP	**P**	**23 23 47.9**	**+0.8**
LCO	**Las Campanas**	**18.84**	**55**	eP	**P**	**23 23 59.0**	**-0.3**
	26nm,0.9s						
AMOG	**MOGNA**	**18.97**	**63**	‖eP	**Pn**	**23 24 01.1**	**-0.1**
ACDV	**Cuesta del Vie**	**19.05**	**60**	eP	**Pn**	**23 24 02.6**	**+0.3**
ACAN	**Cantantal**	**19.07**	**68**	eP	**Pn**	**23 24 02.4**	**0.0**
AGUA	**GUANDACOL**	**19.91**	**60**	eP	**Pn**	**23 24 12.2**	**-0.3**
TRQA	**Tornquist**	**20.39**	**89**	eP	Pn	23 24 17.5	-0.6
	25nm,0.8s						
VCA	**Vinchina**	**20.60**	**58**	eP	**P**	**23 24 19.5**	**+1.1**
CYA	**Choya**	**22.36**	**62**	eP	**P**	**23 24 36.9**	**-0.4**
EFI	**East Falkland**	**22.96**	**127**	eP	**P**	**23 24 40.3**	**-3.1**
	130nm,1.5s						
PB10	**IPOC Station P**	**23.14**	**45**	eP	**P**	**23 24 42.0**	**-3.4**
	24nm,1.1s						
PB01	**IPOC Station P**	**25.73**	**44**	eP	**P**	**23 25 09.1**	**-0.6**
	18nm,1.2s						
PMSA	**Palmer Station**	**27.19**	**157**	LR	LR	23 33 18.2	
	comp=Z,788nm,19.7s,baz=312,slow=30						
MNMC	**Minye Minye**	**27.27**	**41**	eP	**P**	**23 25 24.0**	**+0.1**
	9.7nm,0.9s						
CPUP	**Villa Florida**	**29.51**	**69**	P	**P**	**23 25 42.2**	**-1.2**
	1.8nm,0.9s,baz=272,slow=8.3,SNR=4.9						
CPUP				LR	LR	23 36 27.1	
	comp=Z,1μm,20.8s,baz=242,slow=34						
LPAZ	**La Paz**	**30.42**	**41**	P	**P**	**23 25 52.0**	**-0.3**
	3.1nm,0.7s,baz=174,slow=4.5,SNR=15						
LPAZ				LR	LR	23 35 48.7	
	comp=Z,1μm,18.8s,baz=170,slow=32						
LPAZ	**La Paz**	**30.42**	**41**	eP	**P**	**23 25 52.5**	**+0.2**
	4.3nm,0.8s						
NNA	**Nana**	**30.94**	**22**	LR	LR	23 34 56.9	
	comp=Z,998nm,20.0s,baz=196,slow=30						
SIV	**San Ignacio**	**34.46**	**51**	LR	LR	23 39 04.8	
	comp=Z,2μm,21.9s,baz=230,slow=34						
ATAH	**Atahualpa**	**35.22**	**17**	LR	LR	23 37 21.9	
	comp=Z,2μm,21.1s,baz=202,slow=30						
SAML	**Samuel**	**39.15**	**41**	eP	**P**	**23 27 05.6**	**-1.4**
	5.4nm,0.9s						
OTAV	**Otavalo**	**42.37**	**15**	eP	**P**	**23 27 32.0**	**-2.1**
	11nm,1.0s						
RKT	**Rikitea**	**43.00**	**280**	eLQ	LQ	23 37 36.0	
	1μm,33.8s						
ROSC	**El Rosal**	**47.73**	**19**	P	**P**	**23 28 16.9**	**+0.4**
	3.1nm,0.3s,baz=161,slow=11,SNR=3.6						
ROSC				LR	LR	23 45 50.3	
	comp=Z,620nm,21.9s,baz=192,slow=33						
VNA3	**Neumayer Olymp**	**47.79**	**155**	P	**P**	**23 28 18.2**	**+2.2**
PTGA	**Pitinga**	**47.84**	**40**	LR	LR	23 46 20.9	
	comp=Z,1μm,19.8s,baz=200,slow=34						
PTGA	**Pitinga**	**47.84**	**40**	eP	**P**	**23 28 15.1**	**-1.8**
	4.7nm,0.8s						
VNA1	**Neumayer--Stat**	**48.31**	**154**	P	**P**	**23 28 18.7**	**-1.3**
VNA2	**Neumayer--Watz**	**48.56**	**154**	P	**P**	**23 28 21.8**	**-0.2**
	baz=270,slow=8.0						
HELC	**Santa Helena**	**48.76**	**17**	eP	**P**	**23 28 22.5**	**-2.0**
	27nm,1.5s						
QSPA	**South Pole Qui**	**48.83**	**180**	P	**P**	**23 28 22.9**	**-1.4**
	2.4nm,1.0s,baz=113,slow=2.7,SNR=3.9						
QSPA				LR	LR	23 45 38.7	
	comp=Z,341nm,21.7s,baz=134,slow=32						
RUSC	**La Rusia**	**49.05**	**20**	eP	**P**	**23 28 25.6**	**-1.3**
	6.8nm,1.3s						
SNAA	**Sanae**	**49.88**	**156**	P	**P**	**23 28 32.5**	**+0.3**
SNAA	**Sanae**	**49.88**	**156**	P	**P**	**23 28 31.3**	**-0.8**
	1.6nm,0.8s,baz=280,slow=13,SNR=6.9						
SNAA				LR	LR	23 45 39.1	
	comp=Z,383nm,20.9s,baz=291,slow=31						
SNAA	**Sanae**	**49.88**	**156**	eP	**P**	**23 28 34.0**	**+1.8**
	5.8nm,1.1s						
BCIP	**Isla Barro Col**	**50.90**	**11**	eP	P	23 28 36.0	-4.3
	91nm,1.4s						
JTS	**JuntasAbangare**	**51.52**	**4**	LR	LR	23 45 23.8	
	comp=Z,793nm,19.7s,baz=248,slow=30						
SBA	**Scott Base**	**52.95**	**195**	eP	**P**	**23 28 53.9**	**-1.0**
	10nm,2.0s						
TBI	**Tubuai**	**53.72**	**270**	eLQ	LQ	23 42 21.4	
	783nm,30.0s						
TBI				eLR	LR	23 44 18.5	
	1μm,27.8s,baz=130						
VNDA	**Vanda**	**54.05**	**195**	P	**P**	**23 29 01.8**	**-1.2**
	2.9nm,1.2s,baz=113,slow=9.9,SNR=6.0						
VNDA				LR	LR	23 47 27.2	
	comp=Z,607nm,21.6s,baz=120,slow=31						
PCRV	**Puerto La Cruz**	**55.71**	**28**	LR	LR	23 51 04.7	
	comp=Z,1μm,20.4s,baz=194,slow=34						
TAOE	**Nuku Hiva Isla**	**56.03**	**290**	eS	**S**	**23 37 06.6**	**-0.3**
	352nm,25.5s						
TAOE				eLR	LR	23 45 37.7	
	784nm,26.5s						
APG	**El Apazote**	**56.16**	**357**	LR	LR	23 47 29.9	
	comp=Z,292nm,19.9s,baz=190,slow=30						
TRIS	**Tristan da Cun**	**57.15**	**113**	eP	**P**	**23 29 28.8**	**+3.0**
	101nm,1.0s						
PPT2	**Papeete2**	**57.23**	**275**	eS	**S**	**23 37 24.0**	**+1.3**
	165nm,26.2s						
PPT2				eLR	LR	23 46 03.8	
	925nm,28.0s						
PPT	**Papeete**	**57.24**	**275**	LR	LR	23 47 31.8	
	comp=Z,212nm,18.5s,baz=182,slow=29						
RAR	**Rarotonga**	**62.70**	**265**	LR	LR	23 51 01.9	
	comp=Z,188nm,20.2s,baz=128,slow=30						
LPIG	**La Paz**	**68.33**	**338**	LR	LR	23 54 41.8	
	comp=Z,111nm,18.5s,baz=161,slow=31						
MAW	**Mawson**	**69.13**	**169**	LR	LR	23 59 15.7	
	comp=Z,255nm,20.8s,baz=209,slow=34						
TX31	**Lajitas Ar. Si**	**71.83**	**346**	eP	**P**	**23 31 00.8**	**-1.1**
TXAR	**Lajitas Array**	**71.83**	**346**	P	**P**	**23 31 00.8**	**-1.0**
	2.6nm,0.9s,baz=161,slow=8.0,SNR=14						
JCT	**Junction City**	**72.33**	**349**	eP	**P**	**23 31 05.5**	**+0.8**
	7.7nm,0.9s						
GOGA	**Godfrey**	**74.57**	**4**	eP	**P**	**23 31 17.3**	**-0.5**
	9.9nm,0.9s						
MSTX	**Muleshoe**	**76.20**	**348**	eP	**P**	**23 31 27.6**	**+0.3**
	10nm,0.9s						
W41B	**Gary Mavity, V**	**76.30**	**357**	eP	**P**	**23 31 27.0**	**-0.7**
	7.3nm,1.0s						
WHAR	**Wooly Hollow**	**76.41**	**357**	eP	**P**	**23 31 28.4**	**+0.1**
	10nm,1.1s						
CPCT	**Cooper Cave**	**76.55**	**3**	eP	**P**	**23 31 28.6**	**-0.6**
	11nm,1.2s						
AMTX	**Amarillo**	**76.92**	**349**	eP	**P**	**23 31 31.3**	**-0.1**
	11nm,0.9s						
TUL1	**Leonard**	**77.25**	**354**	eP	**P**	**23 31 33.0**	**-0.1**
	12nm,0.8s						
HHAR	**Hobbs**	**77.49**	**355**	eP	**P**	**23 31 35.2**	**+0.8**
	3.9nm,1.0s						
ANMO	**Albuquerque**	**77.81**	**345**	P	**P**	**23 31 35.8**	**-0.7**
	3.0nm,1.0s,baz=180,slow=4.0,SNR=5.7						
ANMO	**Albuquerque**	**77.81**	**345**	eP	**P**	**23 31 36.3**	**-0.2**
	6.9nm,1.2s						
Y14A	**Wickenburg**	**78.38**	**339**	eP	**P**	**23 31 41.2**	**+1.8**
	8.5nm,1.4s						
X16A	**Lo Mia Camp, P**	**78.42**	**341**	eP	**P**	**23 31 43.9**	**+3.9**
	6.0nm,1.1s						
PFO	**Pinyon Flats O**	**79.06**	**336**	eP	**P**	**23 31 47.5**	**+4.1**
	5.5nm,1.3s						
CCM	**Cathedral Cave**	**79.13**	**358**	eP	**P**	**23 31 42.6**	**-0.8**
	11nm,1.1s						
JSRW	**J. Sargeant Re**	**79.28**	**8**	eP	**P**	**23 31 44.7**	**+0.4**
IP01	**Cuckoo**	**79.54**	**8**	eP	**P**	**23 31 45.9**	**+0.2**
	11nm,1.0s						
T25A	**Trinidad**	**79.56**	**347**	eP	**P**	**23 31 47.5**	**+1.4**
	17nm,1.5s						
SPRD	**Spring Road, M**	**79.61**	**8**	eP	**P**	**23 31 46.3**	**+0.3**
	8.9nm,0.9s						
IP04	**Greensprings**	**79.65**	**8**	eP	**P**	**23 31 46.5**	**+0.3**
	12nm,1.1s						
W13A	**Hualapai Mount**	**79.71**	**339**	eP	**P**	**23 31 50.6**	**+3.6**
	3.5nm,0.9s						
U15A	**North Rim**	**80.55**	**340**	eP	**P**	**23 31 55.0**	**+3.4**
	9.9nm,1.3s						
KNB	**Kanab**	**81.24**	**340**	eP	**P**	**23 31 58.0**	**+3.0**
	14nm,1.4s						
SHPR	**Sheep Range**	**81.38**	**338**	eP	**P**	**23 32 00.3**	**+4.5**
	4.4nm,1.1s						
SZCU	**Shurtz Canyon**	**81.85**	**340**	eP	**P**	**23 32 02.5**	**+4.1**
	9.2nm,1.2s						
CCUT	**Cedar City**	**81.88**	**340**	eP	**P**	**23 32 01.0**	**+2.5**
	17nm,1.5s						
TPNV	**Topopah Spring**	**82.10**	**338**	eP	**P**	**23 32 03.4**	**+3.7**
	9.7nm,1.5s						
MSU	**Marysvale**	**82.50**	**341**	eP	**P**	**23 32 05.7**	**+4.0**
PSUT	**Pine Spring**	**82.94**	**340**	eP	**P**	**23 32 08.3**	**+4.3**
	3.3nm,0.9s						
R11A	**Troy Canyon, C**	**83.22**	**339**	eP	**P**	**23 32 06.9**	**+1.4**
	4.0nm,1.1s						
MPU	**Maple Canyon**	**83.80**	**342**	eP	**P**	**23 32 12.0**	**+3.6**
	7.8nm,1.2s						
NV11	**Mina Array Sit**	**84.03**	**337**	eP	**P**	**23 32 12.9**	**+3.4**
	0.6nm,1.4s						
NV01	**Mina Array Sit**	**84.08**	**337**	eP	**P**	**23 32 09.3**	**-0.6**
NVAR	**Mina Array Bea**	**84.08**	**337**	P	**P**	**23 32 10.3**	**+0.5**
	3.3nm,1.0s,baz=173,slow=6.8,SNR=14						
NVAR				LR	LR	00 01 45.6	
	comp=Z,72nm,18.3s,baz=220,slow=30						
DUG	**Dugway, Tooele**	**84.25**	**341**	eP	**P**	**23 32 12.0**	**+1.4**
	17nm,1.4s						
BRYW	**Bryant College**	**84.29**	**12**	eP	**P**	**23 32 09.1**	**-1.5**
	19nm,0.7s						
CMB	**Columbia Colle**	**84.36**	**335**	eP	**P**	**23 32 13.9**	**+2.8**
	8.7nm,1.3s						
KVN	**Kaiserville**	**84.59**	**337**	eP	**P**	**23 32 15.7**	**+3.3**
	5.4nm,1.2s						
ECSD	**EROS Data Cent**	**85.09**	**354**	eP	**P**	**23 32 15.2**	**+0.6**
	13nm,1.1s						
SPUT	**South Promonto**	**85.22**	**342**	eP	**P**	**23 32 16.3**	**+0.8**
	9.2nm,1.2s						
K22A	**Casper**	**85.29**	**347**	eP	**P**	**23 32 17.3**	**+1.5**
	8.9nm,0.9s						
HVU	**Hansel Valley**	**85.74**	**342**	eP	**P**	**23 32 20.0**	**+1.9**
PDAR	**Pinedale Array**	**85.98**	**344**	P	**P**	**23 32 19.2**	**-0.2**
	0.9nm,0.7s,baz=163,slow=6.2,SNR=3.8						
DZM	**Mont Dzumac**	**86.50**	**244**	eS	**S**	**23 43 01.3**	**+2.2**
	116nm,25.1s						
DZM	**Mont Dzumac**	**86.50**	**244**	eLR	LR	23 59 49.8	
	1μm,24.7s						
DZM	**Mont Dzumac**	**86.50**	**244**	LR	LR	00 03 22.4	
	comp=Z,322nm,19.7s,baz=158,slow=30						
BOSA	**Boshof**	**87.08**	**126**	P	**P**	**23 32 22.6**	**-2.6**
	1.4nm,0.7s,baz=230,slow=17,SNR=2.9						
BOSA				LR	LR	00 04 11.2	
	comp=Z,201nm,20.4s,baz=216,slow=31						
FXWY	**Fox Creek**	**87.12**	**344**	eP	**P**	**23 32 28.6**	**+3.7**
	4.2nm,1.3s						
HLID	**Hailey**	**87.82**	**341**	eP	**P**	**23 32 28.4**	**+0.2**
	5.8nm,1.2s						
YBH	**Yreka Blue Hor**	**88.46**	**335**	LR	LR	00 04 07.8	
	comp=Z,104nm,19.9s,baz=157,slow=30						
DBIC	**Dimbokro**	**89.37**	**81**	LR	LR	00 11 31.4	
	comp=Z,111nm,18.3s,baz=220,slow=35						
ULM	**Lac du Bonnet**	**91.52**	**355**	LR	LR	00 11 06.9	
	comp=Z,116nm,18.1s,baz=125,slow=34						
STKA	**Stephens Creek**	**93.85**	**221**	LR	LR	00 07 46.8	
	comp=Z,364nm,18.4s,baz=180,slow=31						
MATP	**Matopo**	**95.06**	**123**	LR	LR	00 11 46.6	
	comp=Z,167nm,19.3s,baz=232,slow=33						
KOWA	**Kowa**	**95.15**	**75**	LR	LR	00 13 33.1	
	comp=Z,300nm,19.7s,baz=218,slow=34						
SCHQ	**Schefferville**	**97.58**	**12**	LR	LR	00 16 24.1	
	comp=Z,149nm,18.6s,baz=199,slow=35						
TORD	**Torodi Ar. Bea**	**98.47**	**80**	LR	LR	00 12 55.6	
	comp=Z,189nm,21.9s,baz=155,slow=32						
HNR	**Honiara**	**99.75**	**248**	LR	LR	00 09 37.3	
	comp=Z,91nm,21.1s,baz=140,slow=30						
KBZ	**Khabaz**	**144.30**	**69**	PKP	**PKPdf**	**23 39 14.5**	**-0.3**
	0.3nm,0.9s,baz=162,slow=5.3,SNR=4.0						
GNI	**Garni**	**144.66**	**76**	PKP	**PKPab**	**23 39 13.1**	**-1.4**
	2.6nm,0.7s,baz=229,slow=19,SNR=2.5						
NRIK	**Noril'sk**	**151.91**	**3**	PKPbc	**PKPbc**	**23 39 34.9**	**+2.0**
	0.8nm,0.5s,baz=27,slow=6.8,SNR=2.1						
KSRS	**Korea Array**	**151.97**	**274**	PKPbc	**PKPbc**	**23 39 32.5**	**-1.6**
	1.2nm,0.8s,baz=105,slow=2.1,SNR=3.9						
KSAR	**Wonju Array Be**	**152.00**	**274**	PKPbc	**PKPbc**	**23 39 32.5**	**-1.7**
BVAR	**Borovoye Array**	**161.45**	**44**	PKP	**PKPdf**	**23 39 38.9**	**-0.3**
	0.1nm,0.3s,baz=289,slow=4.4,SNR=2.6						
CD2	**Chengdu**	**165.78**	**226**	PKP	**PKPdf**	**23 39 43.5**	**-0.6**
ZALV	**Zalesovo Beam**	**166.60**	**18**	PKP	**PKPdf**	**23 39 45.2**	**+1.3**
	0.3nm,0.4s,baz=338,slow=1.6,SNR=2.4						
KSH	**Kashi**	**167.78**	**94**	PKP	**PKPdf**	**23 39 48.2**	**+2.8**
SONM	**Songino Array**	**167.80**	**307**	PKPab	**PKPab**	**23 40 53.0**	**+1.0**
	0.4nm,0.8s,baz=66,slow=6.9,SNR=2.7						
MKAR	**Makanchi Array**	**171.28**	**49**	PKPab	**PKPab**	**23 41 05.5**	**-1.8**
	0.9nm,0.9s,baz=291,slow=3.8,SNR=5.8						

*IDC **11** 23:19:44.5±2.0, 1°.43S×127°.75E, h0km, mb3.4/2, mb1 3.8/3, mb1mx3.4/50, mbtmp3.5/3, ML3.9/1, MS2.7/2, Ms1 2.8/2, ms1mx2.4/31, Error ellipse: s-maj=145.5km s-min=25.1km az=67.0*

*DJA **11** 23:20:01.3±0.3, 3°.5S±4°×12°.7E±°, h10km, M4.0/10, mb4.3/3, MLv3.8/10*

*ISCJB **11** 23:20:02.4±0.7, 3°.06S±0°.08×127°.36E±0°.07, h33km, mb3.4/1, MS2.6/2, Error ellipse: s-maj=12.4km s-min=8.4km az=37.4*

ISC 11 23:20:04.0±1.3, 3°.03S±0°.09×127°.39E±0°.08, h35km, n13, σ0§64/10, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**1.03**	**129**	P	**Pn**	**23 20 20.7**	**-1.3**
MSAI	**Masohi**	**1.57**	**102**	P	**Pn**	**23 20 29.4**	**+0.1**
SANI	**Sanana**	**1.71**	**305**	P	**Pn**	**23 20 30.8**	**-0.5**
LBMI	**Labuha**	**2.38**	**3**	P	**Pn**	**23 20 40.3**	**-0.2**
BNDI	**Bandanaira**	**2.91**	**121**	P	**Pn**	**23 20 47.9**	**+0.1**
FAKI	**Fak Fak**	**4.85**	**89**	P	**Pn**	**23 21 14.2**	**-0.3**
LUWI	**Luwuk**	**5.02**	**293**	P	**Pn**	**23 21 16.7**	**-0.2**
SOEI	**Soe**	**7.37**	**205**	P	**Pn**	**23 21 49.4**	**+0.2**
WRA	**Warramunga Arr**	**18.13**	**159**	P	**Pn**	**23 24 12.9**	**-0.2**
	0.4nm,0.3s,baz=340,slow=11,SNR=29						
ASAR	**Alice Springs**	**21.46**	**163**	P	**P**	**23 24 50.4**	**+0.9**
	0.9nm,0.4s,baz=343,slow=11,SNR=11						
JOW	**Kunigami**	**29.70**	**2**	LR	LR	23 40 30.6	
	comp=Z,27nm,19.1s,baz=66,slow=44						
CMAR	**Chiang Mai Arr**	**35.23**	**308**	LR	LR	23 43 54.0	
	comp=Z,6.0nm,18.1s,baz=210,slow=42						
MKAR	**Makanchi Array**	**63.50**	**327**	P	P	23 30 09.0	-22
	0.2nm,0.5s,baz=134,slow=8.3,SNR=2.2						

*ISN **11** 23:28:07.3±1.8, 32°.31N×47°.38E, h15km, ML2.7*

TEH 11 23:28:06.5, 32°.31N×47°.36E, h10km, ML2.7, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKFM	**Kafar-mosalman**	**1.28**	**19**	ePg	Pg	23 28 31.8	+0.7
IKFM				eSg	Sg	23 28 50.8	+3.0
IKFM				e		23 28 52.2	
	comp=Z,99nm,0.3s						
IKOM	**Komasi**	**1.87**	**4**	ePn	Pg	23 28 41.6	-0.7
IKOM				e		23 29 10.8	
	comp=Z,99nm,0.2s						
KCHF	**Cheshme Sefid,**	**1.98**	**352**	ePn	Pg	23 28 43.9	-0.6
KCHF				e		23 29 17.9	
	comp=Z,99nm,0.1s						
IDHR	**Dehrash**	**2.52**	**341**	ePn	Pb	23 28 50.0	-2.0
IDHR				e		23 29 35.6	
	comp=Z,607nm,0.2s						

*MOS **11** 23:37:33.5±1.2, 17°.69S×69°.78W, h70km, mb4.9/25, Error ellipse: s-maj=12.3km s-min=6.1km az=107.4*

*ISCJB **11** 23:37:34.8±0.4, 17°.82S±0°.03×69°.88W±0°.04, h96km±4km, mb4.9/188, Error ellipse: s-maj=7.1km s-min=3.7km az=159.2*

*NEIC **11** 23:37:37.1±0.5, 17°.82S×69°.78W, h94km±5km, mb4.9/152, ML4.7(ARE), ML4.8(GUC), Error ellipse: s-maj=7.7km s-min=4.7km az=75.0*

NEIC Felt [II] at Arequipa, Moquegua and Tacna, Peru.

*BJI **11** 23:37:37.7, 17°.12S×70°.05W, h99km, mB5.1/6*

*IDC **11** 23:37:38.8±0.5, 17°.78S×69°.76W, h103km±3km, mb4.5/25, mb1 4.6/27, mb1mx4.5/37, mbtmp4.8/27, Error ellipse: s-maj=13.9km s-min=10.1km az=73.0*

*GUC **11** 23:37:39.6±0.7, 17°.93S×69°.96W, h97km±5km, ML4.8*

ISC 11 23:37:37.3±0.3, 17°.86S±0°.03×69°.90W±0°.05, h97km±2km, h97km:pP-P, n745, σ1§68/817, mb4.9/187, 5C-8D, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB16	**IPOC Station P**	**0.60**	**142**	‖iP	**Pn**	**23 37 57.2**	**+3.0**
PB16				eS	**Sn**	**23 38 10.8**	**+4.0**
PB12	**IPOC Station P**	**0.85**	**208**	‖iP	**Pn**	**23 37 57.3**	**+1.3**
PB12				eS	**Sn**	**23 38 11.5**	**+1.5**
PB12				IAML		23 38 12.3	
	comp=E,44μm,0.3s						
MNMC	**Minye Minye**	**1.29**	**167**	ePn	**Pn**	**23 38 03.6**	**+2.4**
MNMC				eSn	**Sn**	**23 38 22.1**	**+2.9**
MNMC	**Minye Minye**	**1.29**	**167**	eP	**Pn**	**23 38 03.7**	**+2.5**
MNMC				eS	**Sn**	**23 38 21.4**	**+2.2**
MNMC				IAML		23 38 24.7	
	comp=E,35μm,1.1s						
PSGC	**Pisagua**	**1.74**	**187**	‖iP	**Pn**	**23 38 07.2**	**+0.8**
PSGC				eS	**Sn**	**23 38 28.4**	**-0.3**
PSGC				IAML		23 38 33.8	
	comp=E,8μm,0.3s						
LPAZ	**La Paz**	**2.31**	**47**	P	Pn	23 38 19.0	+4.7
	baz=225,slow=9.6						
LPAZ				S	**Sn**	**23 38 44.8**	**+2.2**
	comp=E,26nm,0.3s,baz=247,slow=7.7,SNR=3.7						
LPAZ	**La Paz**	**2.31**	**47**	ePn	Pn	23 38 18.8	+4.4
LPAZ	**La Paz**	**2.31**	**47**	eP	Pn	23 38 18.8	+4.5
PB08	**IPOC Station P**	**2.38**	**163**	‖iP	**Pn**	**23 38 17.8**	**+2.8**
PB08				eS	**Sn**	**23 38 46.2**	**+2.4**
PB08				IAML		23 38 48.2	
	comp=N,8μm,0.3s						
PB01	**IPOC Station P**	**3.19**	**173**	ePn	**Pn**	**23 38 26.0**	**+0.4**
PB01	**IPOC Station P**	**3.19**	**173**	‖iP	**Pn**	**23 38 26.3**	**+0.7**
PB01				eS	**Sn**	**23 39 00.9**	**-1.9**
PB02	**IPOC Station P**	**3.44**	**180**	eP	**Pn**	**23 38 29.2**	**+0.3**
PB04	**IPOC Station P**	**4.46**	**183**	ePn	**Pn**	**23 38 42.3**	**-0.4**
PB10	**IPOC Station P**	**5.66**	**186**	ePn	**Pn**	**23 38 57.2**	**-1.7**
GO02	**Mina Guanaco**	**7.27**	**178**	ePn	**Pn**	**23 39 19.4**	**-1.7**
SIV	**San Ignacio**	**8.65**	**79**	P	**Pn**	**23 39 39.4**	**-0.4**
	comp=N,18nm,0.3s,baz=276,slow=9.3,SNR=242						
NNA	**Nana**	**8.89**	**310**	P	**Pn**	**23 39 41.9**	**-1.2**
	comp=N,6.6nm,0.3s,baz=128,slow=11,SNR=10						
NNA				S	**Sn**	**23 41 15.7**	**-5.9**
	comp=N,7.4nm,0.3s,baz=210,slow=20,SNR=4.6						
NNA	**Nana**	**8.89**	**310**	ePn	**Pn**	**23 39 42.2**	**-0.8**
NNA	**Nana**	**8.89**	**310**	eP	**Pn**	**23 39 42.3**	**-0.8**
GO03	**Copiap**	**9.69**	**182**	ePn	**Pn**	**23 39 49.9**	**-3.9**
VCA	**Vinchina**	**10.94**	**172**	eP	**Pn**	**23 40 09.2**	**-1.6**
VCA				eS	**Sn**	**23 42 08.0**	**-3.4**
VCA				IAML		23 42 11.4	
	comp=Z,27nm,0.6s						
SAML	**Samuel**	**11.01**	**37**	ePn	**Pn**	**23 40 09.7**	**-2.1**
SAML	**Samuel**	**11.01**	**37**	eP	**Pn**	**23 40 09.7**	**-2.1**
LCO	**Las Campanas**	**11.12**	**184**	ePn	**Pn**	**23 40 12.6**	**-0.9**
LCO	**Las Campanas**	**11.12**	**184**	eP	**Pn**	**23 40 12.6**	**-0.9**
AGUA	**GUANDACOL**	**11.64**	**174**	eP	**Pn**	**23 40 17.9**	**-2.4**
AGUA				eS	**Sn**	**23 42 25.5**	**-3.0**
ACLC	**CERRO LA CRUZ**	**11.82**	**167**	eP	**Pn**	**23 40 20.1**	**-2.8**
ACLC				eS	**Sn**	**23 42 27.3**	**-5.6**
AROD	**Rodeo**	**12.26**	**178**	eP	**Pn**	**23 40 26.4**	**-2.3**
AROD				*i* S	**Sn**	**23 42 40.2**	**-3.4**
ACDV	**Cuesta del Vie**	**12.27**	**177**	eP	**Pn**	**23 40 26.3**	**-2.5**
ACDV				eS	**Sn**	**23 42 39.5**	**-4.4**
GO04	**Tololo Observa**	**12.28**	**184**	ePn	**Pn**	**23 40 25.8**	**-3.3**
APLL	**PUNTA DE LOS L**	**12.85**	**167**	eP	**Pn**	**23 40 33.2**	**-3.1**
APLL				eS	**Sn**	**23 42 50.0**	**-7.7**
AMOG	**MOGNA**	**13.08**	**175**	eP	**Pn**	**23 40 35.6**	**-3.8**
AMOG				eS	Sn	23 42 53.2	-10
RTLS	**Leoncito**	**13.89**	**178**	eP	**Pn**	**23 40 47.6**	**-2.5**
RTCV	**Cerro Valdivia**	**13.99**	**175**	eP	**Pn**	**23 40 47.8**	**-3.5**
RTCV				eS	Sn	23 43 14.9	-10
AUSP	**Uspallata**	**14.31**	**178**	eP	**Pn**	**23 40 53.2**	**-2.4**
CPUP	**Villa Florida**	**14.37**	**128**	P	**Pn**	**23 40 53.6**	**-2.5**
	comp=Z,0.2nm,0.3s,baz=318,slow=12,SNR=7.7						
CPUP	**Villa Florida**	**14.37**	**128**	ePn	**Pn**	**23 40 54.3**	**-1.8**
CPUP	**Villa Florida**	**14.37**	**128**	eP	**Pn**	**23 40 54.3**	**-1.8**
ACAN	**Cantantal**	**14.56**	**171**	eP	**Pn**	**23 40 56.0**	**-2.5**
ASAL	**Salagasta**	**14.70**	**176**	eP	**Pn**	**23 40 57.7**	**-2.7**
ARCO	**CERRO ARCO**	**14.94**	**177**	*i* P	**Pn**	**23 41 05.5**	**+1.9**
MRA	**San Martin**	**14.98**	**166**	eP	**Pn**	**23 41 01.4**	**-2.6**
ROC1	**El Roble**	**15.08**	**

DWPF	Disney Wildern baz=165	47.05 346	P	P	23 45 57.7	-1.4
656A	Willston baz=164	48.51 345	P	P	23 46 08.6	-1.9
557A	Orange Park baz=165	48.95 346	P	P	23 46 13.1	-0.7
556A	Lake Butler baz=164	49.09 346	P	P	23 46 15.0	+0.1
555A	McAlpin baz=163	49.34 345	P	P	23 46 16.6	-0.2
554A	Perry baz=163	49.48 344	P	P	23 46 17.6	-0.3
553A	Crawfordville baz=162	49.78 343	P	P	23 46 20.5	+0.3
455A	Stateville baz=164	49.95 345	P	P	23 46 21.5	+0.1
454A	Quitman baz=163	50.07 345	P	P	23 46 22.2	-0.1
356A	Blackshear baz=165	50.30 346	P	P	23 46 23.6	-0.4
453A	Whigham baz=162,SNR=6.5	50.38 344	P	P	23 46 24.7	0.0
355A	Pearson baz=164	50.48 346	P	P	23 46 25.1	-0.3
451A	Vernon baz=160	50.55 342	P	P	23 46 26.1	+0.1
452A	Marianna baz=161	50.61 343	P	P	23 46 26.3	-0.1
257A	Skidaway Islan baz=166	50.69 348	P	P	23 46 26.5	-0.4
TIGA	Tifton baz=163	50.75 345	P	P	23 46 26.8	-0.6
353A	Camilla baz=162,SNR=5.5	50.82 344	P	P	23 46 27.6	-0.4
256A	Glennville baz=165	50.87 347	P	P	23 46 27.9	-0.4
646A	Port Sulphur baz=155	50.94 338	P	P	23 46 28.6	-0.2
255A	Hazlehurst baz=164	50.95 346	P	P	23 46 28.6	-0.3
450A	Crestview baz=159	50.98 341	P	P	23 46 28.7	-0.5
449A	Pace baz=159	51.13 341	P	P	23 46 30.5	+0.2
351A	Pinckard baz=161	51.13 343	P	P	23 46 30.2	-0.1
352A	Blakely baz=161,SNR=9.5	51.14 343	P	P	23 46 30.0	-0.4
352A	Blakely comp=Z,76nm,0.9s	51.14 343	eP	P	23 46 29.9	-0.4
254A	Abbeville baz=164	51.16 345	P	P	23 46 30.1	-0.5
LNIG	Linares comp=Z,5.7nm,0.9s	51.34 325	eP	P	23 46 32.3	+0.2
LNIG			epP	pP	23 46 58.6	+3.1
RGRS	Roger Stewart comp=Z,520nm,0.6s	51.43 349	eP	P	23 46 32.0	-0.5
BRAL	Brewton baz=159,SNR=7.2	51.46 341	P	P	23 46 32.9	+0.1
BRAL	Brewton comp=Z,146nm,0.6s	51.46 341	eP	P	23 46 33.3	+0.5
253A	Americus baz=162	51.48 345	P	P	23 46 32.5	-0.4
253A	Americus comp=Z,76nm,1.4s	51.48 345	eP	P	23 46 32.2	-0.7
350A	Dozier baz=160	51.48 342	P	P	23 46 32.9	-0.1
448A	Bay Minette baz=158	51.49 340	P	P	23 46 33.0	0.0
252A	Lumpkin baz=162,SNR=7.3	51.58 344	P	P	23 46 33.1	-0.5
155A	Kite baz=165	51.62 346	P	P	23 46 33.5	-0.4
NHSC	New Hope baz=167	51.62 349	P	P	23 46 33.4	-0.5
349A	Repton baz=159,SNR=11	51.67 341	P	P	23 46 34.7	+0.3
154A	Montrose baz=164	51.76 346	P	P	23 46 34.6	-0.4
251A	Midway baz=161,SNR=27	51.85 343	P	P	23 46 35.2	-0.5
446A	Poplarville baz=156	51.87 339	P	P	23 46 36.1	+0.3
348A	Jackson baz=158	51.95 340	P	P	23 46 36.4	0.0
153A	Fort Valley baz=163	51.97 345	P	P	23 46 36.0	-0.6
250A	Grady baz=160,SNR=8.6	51.98 342	P	P	23 46 36.2	-0.5
250A	Grady comp=Z,51nm,0.8s	51.98 342	eP	P	23 46 36.4	-0.2
Z55A	Blythe baz=165	52.12 347	P	P	23 46 36.7	-0.9
347A	Saraland baz=157,SNR=7.8	52.15 340	P	P	23 46 37.9	0.0
152A	Waverly Hall baz=162,SNR=11	52.21 344	P	P	23 46 37.6	-0.8
152A	Waverly Hall comp=Z,33nm,1.0s	52.21 344	eP	P	23 46 37.5	-0.8
249A	Camden baz=159,SNR=18	52.23 341	P	P	23 46 38.4	-0.1
151A	Opelika baz=161,SNR=11	52.23 343	P	P	23 46 37.8	-0.7
Z54A	Sparta baz=164	52.29 346	P	P	23 46 37.9	-1.0
346A	Big Creek Wild baz=156	52.45 339	P	P	23 46 40.0	-0.1
150A	Eclectic baz=160,SNR=12	52.50 343	P	P	23 46 40.0	-0.5
Z53A	Monticello baz=163	52.51 346	P	P	23 46 39.5	-1.0
248A	Dixon Mills baz=158,SNR=6.1	52.53 341	P	P	23 46 40.7	0.0
345A	Thompson Farm, baz=156	52.57 338	P	P	23 46 41.6	+0.5
GOGA	Godfrey baz=164,SNR=5.1	52.60 346	P	P	23 46 40.1	-1.1
GOGA	Godfrey comp=Z,8.2nm,0.8s	52.60 346	eP	P	23 46 39.8	-1.5
GOGA	Godfrey comp=Z,8.0nm,0.8s	52.60 346	eP	P	23 46 39.8	-1.5
GOGA			pmax	pmax		
Z52A	Williamson baz=162,SNR=6.1	52.62 345	P	P	23 46 40.5	-0.9
149A	Jones baz=160	52.72 342	P	P	23 46 41.4	-0.7
247A	Quitman baz=157,SNR=6.9	52.77 340	P	P	23 46 42.7	+0.2
Y54A	Tignall baz=165,SNR=8.7	52.86 347	P	P	23 46 42.3	-0.8
246A	Jackson Lee, B baz=157	52.91 339	P	P	23 46 43.4	-0.1
Z51A	Franklin baz=162	52.94 344	P	P	23 46 43.0	-0.7
JSC	Jenkinsville comp=Z,5.2nm,0.5s	52.97 348	eP	P	23 46 42.9	-1.0
JSC			epP	sP	23 47 12.5	-5.6
JSC	Jenkinsville	52.97 348	eP	P	23 46 42.9	-1.0
JSC			e*PP	sP	23 47 12.5	-5.6
JSC			pmax	pmax		
148A	Greensboro baz=159	52.99 341	P	P	23 46 43.4	-0.7
Y53A	Monroe baz=164	53.06 346	P	P	23 46 43.7	-0.9
Z50A	Ashland baz=161,SNR=39	53.08 343	P	P	23 46 44.2	-0.6
Y52A	Lilburn baz=163	53.18 345	P	P	23 46 44.6	-0.9
LRAL	Lakeview Retre baz=160,SNR=5.8	53.18 342	P	P	23 46 44.7	-0.8
LRAL	Lakeview Retre comp=Z,17nm,0.8s	53.18 342	eP	P	23 46 44.9	-0.6
245A	Little AP, Sta baz=156,SNR=8.1	53.19 339	P	P	23 46 45.3	-0.3
Z49A	Columbiana baz=160,SNR=16	53.20 343	P	P	23 46 44.8	-0.8
146A	Union baz=157	53.46 340	P	P	23 46 47.4	0.0
146A	Union comp=Z,45nm,0.7s	53.46 340	eP	P	23 46 47.5	0.0
Y51A	Rockmart baz=162,SNR=15	53.46 344	P	P	23 46 46.6	-0.9
244A	Avery, Jackson baz=155	53.47 338	P	P	23 46 47.7	+0.1
342A	Flagon Creek P baz=153	53.48 336	P	P	23 46 48.4	+0.7
PAULI	Pauline comp=Z,13nm,1.4s	53.60 348	eP	P	23 46 48.0	-0.5
X53A	Estanollee baz=164,SNR=7.0	53.61 346	P	P	23 46 47.9	-0.8
Y50A	Piedmont baz=161	53.63 344	P	P	23 46 47.7	-1.1
Z47A	Carrollton baz=158,SNR=9.2	53.66 341	P	P	23 46 48.2	-0.8
Z48A	Northport baz=159,SNR=17	53.67 342	P	P	23 46 48.1	-0.9
145A	Houston Renfro baz=156	53.72 339	P	P	23 46 49.4	0.0
Y49A	Blount Mountai baz=160,SNR=13	53.79 343	P	P	23 46 49.0	-0.9
Y49A	Blount Mountai comp=Z,20nm,0.6s	53.79 343	eP	P	23 46 49.0	-0.9
KMSC	Kings Mountain baz=166,SNR=5.7	53.82 348	P	P	23 46 49.5	-0.6
KMSC	Kings Mountain comp=Z,10.0nm,0.6s	53.82 348	eP	P	23 46 49.6	-0.6
KMSC			epP	sP	23 47 18.7	-5.7
X52A	Dahlonega baz=163	53.85 346	P	P	23 46 49.6	-0.8
144A	Alexander Plac baz=156	53.91 339	P	P	23 46 51.1	+0.3
Z46A	Louisville baz=157	53.93 340	P	P	23 46 50.8	-0.1
BG3	Lake Jocassee comp=Z,16nm,1.3s	54.00 347	eP	P	23 46 51.4	-0.1
X51A	Calhoun baz=162	54.05 345	P	P	23 46 50.6	-1.1
Y48A	Jasper baz=160,SNR=5.5	54.05 342	P	P	23 46 50.7	-1.2
X50B	Fort Payne baz=161,SNR=12	54.15 344	P	P	23 46 51.4	-1.2
W53A	Cullowhee baz=164,SNR=22	54.22 347	P	P	23 46 52.6	-0.6
Y47A	UCPARC, Winfie baz=159,SNR=8.0	54.25 342	P	P	23 46 52.3	-1.0
W52A	Murphy baz=163	54.32 346	P	P	23 46 52.9	-1.0
Z45A	Winona baz=157	54.34 340	P	P	23 46 54.0	+0.1
X49A	Woodville baz=161,SNR=15	54.38 343	P	P	23 46 53.1	-1.1
NCAT	North Carolina comp=Z,9.2nm,1.2s	54.45 350	eP	P	23 46 54.1	-0.7
NCAT			epP	sP	23 47 24.0	-5.0
X48A	Hartselle baz=160,SNR=23	54.52 343	P	P	23 46 54.5	-0.8
Y46A	Houston baz=158,SNR=5.8	54.54 341	P	P	23 46 54.3	-1.0
V53A	Saluda baz=165	54.63 347	P	P	23 46 55.3	-0.8
Y45A	Yeager Farm, C baz=157	54.74 340	P	P	23 46 56.7	-0.2
W50A	Signal Mountai baz=162,SNR=13	54.76 345	P	P	23 46 56.2	-0.8
CPCT	Cooper Cave comp=Z,14nm,1.1s	54.80 345	eP	P	23 46 56.8	-0.5
CPCT			epP	pP	23 47 25.5	+4.6
X47A	Russelville baz=159,SNR=22	54.82 342	P	P	23 46 56.4	-1.0
ASCN	Ascension comp=Z,130nm,0.6s	54.86 87	eP	P	23 46 58.0	-0.2
W49A	Belvidere baz=161,SNR=9.9	54.93 344	P	P	23 46 57.2	-1.0
SWET	Sewanee comp=Z,35nm,0.7s	54.94 344	eP	P	23 46 57.4	-0.9
V52A	Sevierville baz=164,SNR=10	54.96 346	P	P	23 46 57.5	-1.0
X46A	Booneville baz=158,SNR=5.2	55.08 341	P	P	23 46 58.1	-1.1
W48A	Pulaski baz=160,SNR=37	55.13 343	P	P	23 46 58.9	-0.8
V50A	Pikeville baz=162,SNR=28	55.16 345	P	P	23 46 59.0	-0.8
X45A	UM Field Stati baz=157	55.21 340	P	P	23 46 58.9	-1.3
OXF	Oxford baz=157	55.29 340	P	P	23 46 59.5	-1.2
OXF	Oxford comp=Z,45nm,1.1s	55.29 340	eP	P	23 47 00.1	-0.7
OXF	Oxford comp=Z,45nm,1.1s	55.29 340	eP	P	23 47 00.1	-0.7
OXF			pmax	pmax		
W47A	Westpoint baz=159,SNR=21	55.43 342	P	P	23 47 00.6	-1.1
V49A	McMinnville baz=161,SNR=26	55.45 344	P	P	23 47 00.8	-1.1
Z40A	Long Farm, Mag baz=153	55.57 336	P	P	23 47 03.8	+1.0
TZTN	Tazewell baz=164	55.63 347	P	P	23 47 02.0	-1.2
BLA	Blacksburg baz=168	55.67 350	P	P	23 47 03.1	-0.4
BLA	Blacksburg comp=Z,8.1nm,0.6s	55.67 350	eP	P	23 47 02.8	-0.7
BLA	Blacksburg comp=Z,8.0nm,0.6s	55.67 350	eP	P	23 47 02.8	-0.7
BLA			pmax	pmax		
V48A	Smith Brothers baz=160,SNR=42	55.67 343	P	P	23 47 02.7	-0.8
W45A	Hickory Valley baz=158	55.82 341	P	P	23 47 03.5	-1.0
Y41A	Eaglette Beard baz=154	55.83 337	P	P	23 47 04.9	+0.2
V47A	Nunnelly baz=160,SNR=11	55.95 343	P	P	23 47 04.1	-1.3
JCT	Junction City baz=145	56.02 329	P	P	23 47 07.6	+1.5
JCT	Junction City comp=Z,6.8nm,0.9s	56.02 329	eP	P	23 47 06.0	-0.2
JCT			epP	pP	23 47 34.5	+4.7
JCT	Junction City	56.02 329	eP	P	23 47 06.0	-0.2
JCT			e*PP	pP	23 47 34.6	+4.7
JCT			pmax	pmax		
T52A	Hallie baz=165	56.05 347	P	P	23 47 05.2	-1.0
SPRD	Spring Road, M comp=Z,8.2nm,1.1s	56.09 352	eP	P	23 47 04.6	-1.8
V46A	Holladay baz=159,SNR=9.1	56.09 342	P	P	23 47 04.7	-1.8
IP03	Louisa comp=Z,10nm,1.0s	56.10 352	eP	P	23 47 05.8	-0.7
Y40A	Okolona baz=153	56.19 337	P	P	23 47 07.9	+0.7
V45A	Humboldt baz=158	56.29 341	P	P	23 47 06.7	-1.2
WVT	Waverly baz=159	56.32 343	P	P	23 47 06.8	-1.3
WVT	Waverly comp=Z,42nm,0.6s	56.32 343	eP	P	23 47 06.8	-1.3
WVT	Waverly comp=Z,43nm,0.6s	56.32 343	eP	P	23 47 06.8	-1.3
WVT			pmax	pmax		
U48A	Cassie Pea, Po baz=161,SNR=7.0	56.32 344	P	P	23 47 07.2	-0.9
X41A	Kaden, Bauxite baz=154	56.34 338	P	P	23 47 07.8	-0.4
T50A	Nancy baz=163,SNR=9.4	56.38 346	P	P	23 47 07.3	-1.2
X40A	Basin Creek Fa baz=154	56.45 337	P	P	23 47 09.6	+0.6
U47A	Clarksville baz=160,SNR=18	56.46 343	P	P	23 47 08.0	-1.1
T49A	Edmonton baz=162,SNR=32	56.62 345	P	P	23 47 09.3	-0.9
U46A	Springville baz=159,SNR=7.1	56.63 342	P	P	23 47 09.2	-1.1
S51A	Beattyville baz=164	56.69 347	P	P	23 47 09.6	-1.1
W42A	Bald Knob baz=155	56.69 339	P	P	23 47 10.3	-0.4
MIAR	Mount Ida baz=153,SNR=7.7	56.78 337	P	P	23 47 11.2	-0.2
MIAR	Mount Ida comp=Z,7.6nm,0.7s	56.78 337	eP	P	23 47 11.1	-0.3
MIAR	Mount Ida comp=Z,8.0nm,0.7s	56.78 337	eP	P	23 47 11.1	-0.3
MIAR			pmax	pmax		
U45A	Rockin P Farm, baz=158	56.79 342	P	P	23 47 10.4	-1.0
T48A	Bowling Green baz=161,SNR=17	56.85 344	P	P	23 47 10.8	-1.0
W41B	Gary Mavity, V baz=154,SNR=11	56.85 338	P	P	23 47 11.9	0.0
W41B	Gary Mavity, V comp=Z,12nm,0.6s	56.85 338	eP	P	23 47 11.5	-0.4
T47A	Sharon Grove baz=160,SNR=33	56.92 344	P	P	23 47 11.4	-1.0
X39A	Fountain Ranch baz=152,SNR=14	56.95 336	P	P	23 47 13.0	+0.4
WHAR	Wooly Hollow comp=Z,21nm,0.8s	56.97 338	eP	P	23 47 12.5	-0.3
V42A	Cord baz=155	57.13 339	P	P	23 47 13.4	-0.4
TXAR	Lajitas Array comp=Z,0.8nm,0.5s,baz=155,slow=9.8,SNR=5.9	57.13 325	P	P	23 47 14.4	+0.3
TXAR			pP	pP	23 47 39.9	+2.0
TXAR	Lajitas Array comp=Z,3.2nm,0.9s,baz=130,slow=7.5,SNR=8.9	57.13 325	eP	P	23 47 14.6	+0.5
TXAR			pmax	pmax		
TXAR	Lajitas Ar. Si comp=Z,1.0nm,0.6s	57.13 325	eP	P	23 47 14.1	0.0
TX31			epP	pP	23 47 41.4	+3.5
W40A	Ferguson Farm, baz=154,SNR=11	57.16 337	P	P	23 47 14.3	+0.2
W40A	Ferguson Farm, comp=Z,33nm,0.9s	57.16 337	eP	P	23 47 14.1	0.0
T46A	Princeton baz=159,SNR=24	57.19 343	P	P	23 47 13.3	-0.9
U44A	Portageville baz=157	57.22 341	P	P	23 47 14.1	-0.3
S48A	Wiedeman Farm, baz=162,SNR=25	57.28 345	P	P	23 47 13.3	-1.5
U43A	Rector baz=157,SNR=6.7	57.32 340	P	P	23 47 14.5	-0.6
V41A	Mountainview baz=155,SNR=34	57.37 339	P	P	23 47 14.7	-0.9
T45A	Paducah baz=159	57.38 342	P	P	23 47 14.4	-1.1
PARMO	Parma comp=Z,111nm,0.9s	57.38 341	eP	P	23 47 16.2	+0.6
W39A	Magazine baz=153,SNR=8.5	57.43 337	P	P	23 47 16.2	+0.2
W39A	Magazine comp=Z,8.0nm,0.7s	57.43 337	eP	P	23 47 16.8	+0.8
U42A	Revenden baz=156,SNR=28	57.57 340	P	P	23 47 16.1	-0.8
V40A	Witts Springs baz=154,SNR=15	57.62 338	P	P	23 47 16.7	-0.6
V40A	Witts Springs comp=Z,15nm,0.6s	57.62 338	eP	P	23 47 16.9	-0.5
PBMO	Poplar Bluff comp=Z,54nm,0.6s	57.70 341	eP	P	23 47 17.1	-0.7
ABTX	Abilene, Hawle comp=Z,16nm,1.0s	57.71 330	eP	P	23 47 20.6	+2.6
ABTX			epP	pP	23 47 45.1	+3.3
S46A	Don Dixon Farm baz=160,SNR=13	57.74 343	P	P	23 47 16.9	-1.2
U41A	Viola baz=155,SNR=33	57.80 339	P	P	23 47 17.7	-0.8
WCI	Wyandotte Cave baz=161	57.88 345	P	P	23 47 17.9	-1.1
WCI	Wyandotte Cave comp=Z,35nm,0.6s	57.88 345	eP	P	23 47 18.0	-1.1
WCI			epP	pP	23 47 46.9	+4.0
WCI	Wyandotte Cave	57.88 345	eP	P	23 47 18.0	-1.1
WCI			e*PP	pP	23 47 46.9	+4.0
WCI			pmax	pmax		
T43A	Greenville baz=157,SNR=21	57.94 341	P	P	23 47 18.6	-0.8
R48A	Northridge Ran baz=162,SNR=5.3	57.94 345	P	P	23 47 18.3	-1.2
V39A	Pettigrew baz=153,SNR=29	57.95 337	P	P	23 47 19.4	-0.3
MCWV	Mont Chateau baz=169	57.97 351	P	P	23 47 19.2	-0.5
MCWV	Mont Chateau comp=Z,18nm,0.7s	57.97 351	eP	P	23 47 19.4	-0.2
S45A	Carrier Mills baz=159,SNR=49	57.97 343	P	P	23 47 19.0	-0.7
USIN	University of comp=Z,40nm,0.8s	57.99 343	eP	P	23 47 19.0	-0.8
R47A	Wooly Knot Far baz=161,SNR=12	58.00 345	P	P	23 47 18.5	-1.4
U40A	Yellville baz=154,SNR=23	58.13 338	P	P	23 47 20.3	-0.6
T42A	Van Buren baz=156,SNR=29	58.14 340	P	P	23 47 19.8	-1.1
R46A	Gibon Southern baz=160,SNR=6.1	58.18 344	P	P	23 47 19.8	-1.4
S44A	Carbondale baz=158,SNR=42	58.18 342	P	P	23 47 20.6	-0.6
S43A	Fulton Ridge, baz=157,SNR=36	58.32 341	P	P	23 47 21.3	-0.9
T41A	Mountain View baz=155,SNR=19	58.38 340	P	P	23 47 21.6	-1.0
U39A	Green Forest baz=153,SNR=12	58.38 338	P	P	23 47 22.0	-0.6
O56A	Blue Knob Stat baz=170	58.39 352	P	P	23 47 21.2	-1.4
O56A	Blue Knob Stat comp=Z,8.5nm,0.7s	58.39 352	eP	P	23 47 22.2	-0.5
HHAR	Hobbs comp=Z,12nm,0.9s	58.45 337	eP	P	23 47 23.0	-0.1
R45A	Skylar, Fairfi baz=159,SNR=27	58.46 343	P	P	23 47 22.2	-0.9
Q47A	Bedord North L baz=161,SNR=14	58.58 345	P	P	23 47 22.9	-1.1
R44A	Waltonville baz=158,SNR=5.7	58.65 342	P	P	23 47 23.4	-1.0
SSPA	Standing Stone baz=171	58.67 353	P	P	23 47 23.6	-0.9
S42A	Caledonia baz=156,SNR=18	58.72 341	P	P	23 47 23.7	-1.2
N59A	State Game Lan baz=173	58.73 355	P	P	23 47 23.9	-1.1
FVM	French Village comp=Z,88nm,0.9s	58.80 341	eP	P	23 47 25.2	-0.3
FVM			epP	pP	23 47 52.6	+3.2
OLIL	Olney comp=Z,26nm,0.6s	58.83 343	eP	P	23 47 24.6	-1.0
BLO	Bloomington comp=Z,41nm,0.8s	58.83 345	eP	P	23 47 24.7	-1.0
BLO	Bloomington comp=Z,41nm,0.8s	58.83 345	eP	P	23 47 24.7	-1.0
BLO			pmax	pmax		
TUL1	Leonard baz=151	58.83 336	P	P	23 47 25.6	-0.2
TUL1	Leonard comp=Z,9.5nm,0.7s	58.83 336	eP	P	23 47 26.2	+0.5
S41A	Jillco Farms, baz=156,SNR=43	58.86 340	P	P	23 47 25.1	-0.9
T39A	Clever baz=154	58.91 338	P	P	23 47 25.7	-0.6
R43A	Red Bud baz=158,SNR=6.5	58.92 342	P	P	23 47 25.5	-0.9
Q45A	Warren Harvey, baz=160	58.99 343	P	P	23 47 25.4	-1.4
ACSO	Alum Creek Sta baz=165,SNR=5.4	59.06 348	P	P	23 47 26.2	-1.1
ACSO	Alum Creek Sta comp=Z,21nm,0.9s	59.06 348	eP	P	23 47 26.3	-0.9
ACSO			epP	pP	23 47 55.5	+4.3
P47A	Martinsville baz=162,SNR=13	59.06 345	P	P	23 47 25.9	-1.4
S40A	Lebanon baz=155,SNR=23	59.13 339	P	P	23 47 27.2	-0.6
CCM	Cathedral Cave baz=156	59.13 340	P	P	23 47 26.9	-0.8
CCM	Cathedral Cave comp=Z,28nm,0.8s	59.13 340	eP	P	23 47 27.2	-0.5
CCM			eS	S	23 55 24.7	-2.9
CCM	Cathedral Cave	59.13 340	eP	P	23 47 27.2	-0.5
CCM			eS	S	23 55 24.7	-2.9
CCM			pmax	pmax		
R42A	Luebbering baz=157,SNR=32	59.19 341	P	P	23 47 27.6	-0.6
Q44A	Meyer Farm, Va baz=159,SNR=11	59.24 343	P	P	23 47 27.2	-1.3
T38A	Diamond baz=153,SNR=25	59.25 337	P	P	23 47 28.3	-0.4
N54A	Moraine State baz=169,SNR=6.9	59.27 351	P	P	23 47 28.2	-0.5
N54A	Moraine State comp=Z,12nm,0.9s	59.27 351	eP	P	23 47 28.5	-0.2
R41A	Rosebud baz=156,SNR=51	59.39 340	P	P	23 47 29.0	-0.6
P46A	Rosedale baz=161,SNR=8.5	59.42 345	P	P	23 47 28.2	-1.5
Q43A	New Douglas baz=158,SNR=5.2	59.47 342	P	P	23 47 28.9	-1.2

P45A	Graceland, Par	59.48 344	P	P	23 47 28.3 -1.8
	baz=160,SNR=14				
S39A	Bolivar	59.49 339	P	P	23 47 29.7 -0.6
	baz=154,SNR=46				
S39A	Bolivar	59.49 339	eP	P	23 47 29.6 -0.7
	comp=Z,38nm,0.6s				
BRYW	Bryant College	59.50 359	eP	P	23 47 29.4 -0.8
	comp=Z,35nm,0.7s				
S38A	Stockton	59.64 338	P	P	23 47 30.5 -0.9
	baz=153,SNR=10				
P44A	Sand Creek, Wi	59.66 343	P	P	23 47 30.0 -1.4
	baz=159,SNR=12				
R40A	Maddies Statio	59.67 340	P	P	23 47 30.8 -0.7
	baz=155,SNR=32				
R40A	Maddies Statio	59.67 340	eP	P	23 47 30.6 -0.8
	comp=Z,40nm,0.6s				
Q42A	Golden Eagle	59.69 341	P	P	23 47 31.0 -0.6
	baz=157				
O47A	Sheridan	59.75 346	P	P	23 47 30.5 -1.5
	baz=162,SNR=17				
M54A	Oil Creek Stat	59.76 352	P	P	23 47 31.3 -0.7
	baz=169,SNR=7.3				
M54A	Oil Creek Stat	59.76 352	eP	P	23 47 31.5 -0.6
	comp=Z,17nm,0.6s				
M54A			epP	sP	23 48 01.4 -5.3
MNTX	Cornudas Mount	59.89 325	eP	P	23 47 33.1 0.0
	comp=Z,2.6nm,0.9s				
MNTX			epP	pP	23 48 00.3 +3.2
Q41A	Truxton	59.95 341	P	P	23 47 32.7 -0.7
	baz=156,SNR=29				
ALLY	Alegheny Colle	59.96 351	eP	P	23 47 32.9 -0.5
	comp=Z,43nm,0.5s				
ALLY			epP	sP	23 48 03.2 -4.8
BINY	Binghamton	60.02 355	P	P	23 47 33.2 -0.6
	baz=173,SNR=5.5				
BINY	Binghamton	60.02 355	eP	P	23 47 33.4 -0.5
	comp=Z,16nm,0.7s				
P43A	Skaggs, Pawnee	60.07 343	P	P	23 47 33.1 -1.0
	baz=158,SNR=11				
HRV	Adam Dziewonsk	60.08 359	P	P	23 47 33.5 -0.7
	baz=178				
HRV	Adam Dziewonsk	60.08 359	eP	P	23 47 33.8 -0.4
	comp=Z,24nm,0.7s				
HRV	Adam Dziewonsk	60.08 359	eP	P	23 47 33.8 -0.4
HRV			pmax	pmax	
	comp=Z,24nm,0.7s				
SFIN	Lafayette	60.11 345	P	P	23 47 32.9 -1.6
	baz=161,SNR=15				
SFIN	Lafayette	60.11 345	eP	P	23 47 32.9 -1.6
	comp=Z,47nm,0.6s				
SFIN			epP	pP	23 48 01.9 +3.5
R38A	Fenwick Farm,	60.14 338	P	P	23 47 34.1 -0.6
	baz=153,SNR=14				
O45A	Potomac	60.15 344	P	P	23 47 33.1 -1.6
	baz=160,SNR=36				
Q40A	Laux Farm, Aux	60.25 340	P	P	23 47 34.6 -0.9
	baz=156,SNR=14				
O44A	Mansfield	60.25 344	P	P	23 47 33.9 -1.5
	baz=160,SNR=6.7				
P42A	Winchester	60.26 342	P	P	23 47 34.4 -1.1
	baz=157,SNR=10				
MSTX	Muleshoe	60.32 329	eP	P	23 47 36.9 +0.8
	comp=Z,14nm,1.0s				
MSTX			epP	pP	23 48 04.2 +4.1
TRY	Troy	60.39 357	eP	P	23 47 36.1 -0.2
	comp=Z,14nm,0.8s				
ERPA	Erie	60.40 351	P	P	23 47 35.8 -0.6
	baz=169,SNR=9.6				
ERPA	Erie	60.40 351	eP	P	23 47 36.0 -0.4
	comp=Z,51nm,0.6s				
N46A	Monticello	60.51 345	P	P	23 47 35.8 -1.4
	baz=161,SNR=17				
P41A	Barry, Barry	60.55 341	P	P	23 47 36.5 -1.0
	baz=157,SNR=11				
Q39A	Willow Grove F	60.59 339	P	P	23 47 37.1 -0.6
	baz=155,SNR=8.7				
O43A	Sugar Creek Fa	60.61 343	P	P	23 47 36.4 -1.5
	baz=159,SNR=5.2				
N45A	Kentland	60.66 345	P	P	23 47 36.5 -1.7
	baz=161,SNR=11				
P40A	Paris	60.73 340	P	P	23 47 37.9 -0.8
	baz=156,SNR=18				
Q38A	Cooks Store, C	60.73 339	P	P	23 47 38.3 -0.4
	baz=154,SNR=16				
MMNY	Mt. Morris Dam	60.74 353	eP	P	23 47 38.2 -0.5
	comp=Z,23nm,0.5s				
O42A	Bath	60.74 342	P	P	23 47 37.5 -1.2
	baz=158				
N44A	Piper City	60.77 344	P	P	23 47 37.1 -1.8
	baz=160,SNR=6.2				
HDIL	Hopedale	60.85 343	P	P	23 47 38.1 -1.4
	baz=159,SNR=12				
HDIL	Hopedale	60.85 343	eP	P	23 47 38.2 -1.2
	comp=Z,57nm,0.6s				
O41A	Passleys Farm,	60.90 342	P	P	23 47 38.6 -1.3
	baz=157,SNR=17				
M46A	Old House Fiel	60.91 346	P	P	23 47 38.4 -1.5
	baz=162				
P39B	Salisbury	60.92 340	P	P	23 47 39.1 -0.8
	baz=155,SNR=13				
Q37A	Longview Farm,	60.95 338	P	P	23 47 39.5 -0.6
	baz=153				
M45A	Boilermakers S	61.10 345	P	P	23 47 39.6 -1.5
	baz=161				
O40A	La Belle	61.21 341	P	P	23 47 40.9 -1.0
	baz=156,SNR=14				
P38A	Dawn	61.30 339	P	P	23 47 41.7 -0.9
	baz=154,SNR=11				
M44A	Midewin, Midew	61.30 345	P	P	23 47 40.9 -1.5
	baz=160				
N42A	Yates City	61.31 343	P	P	23 47 41.4 -1.2
	baz=158,SNR=13				
N41A	Harden Midland	61.44 342	P	P	23 47 42.3 -1.1
	baz=157,SNR=7.8				
N41A	Harden Midland	61.44 342	eP	P	23 47 42.3 -1.1
	comp=Z,42nm,0.8s				
O39A	Kirksville	61.55 340	P	P	23 47 43.7 -0.4
	baz=155				
P37A	Lathrop	61.55 339	P	P	23 47 43.4 -0.8
	baz=153,SNR=10				
M43A	Waltham Townsh	61.59 344	P	P	23 47 43.1 -1.3
	baz=159,SNR=22				
NCB	Newcomb	61.66 356	eP	P	23 47 43.8 -1.1
	comp=Z,3.6nm,0.6s				
O38A	Galt	61.73 340	P	P	23 47 45.3 -0.1
	baz=154				
M42A	Sheffield	61.82 343	P	P	23 47 44.7 -1.2
	baz=158				
N40A	Mertquake, Sal	61.82 341	P	P	23 47 44.8 -1.2
	baz=156,SNR=7.1				
LBNH	Lisbon	61.83 358	P	P	23 47 45.6 -0.4
	baz=178,SNR=5.2				
LBNH	Lisbon	61.83 358	eP	P	23 47 45.9 -0.1
	comp=Z,11nm,0.8s				
LBNH	Lisbon	61.83 358	eP	P	23 47 45.9 -0.1
LBNH			pmax	pmax	
	comp=Z,11nm,0.8s				
121A	Cookes Peak, D	61.85 324	P	P	23 47 47.9 +1.3
	baz=138				
319A	Douglas	61.86 322	epP	pP	23 48 14.9 +4.3
KSU1	Kansas State U	61.93 337	P	P	23 47 46.3 -0.5
	baz=151				
KSU1	Kansas State U	61.93 337	eP	P	23 47 47.0 +0.2
	comp=Z,18nm,0.6s				
M41A	Milan	61.97 343	P	P	23 47 45.7 -1.3
	baz=158,SNR=7.4				
O37A	Wolven Farm, M	61.99 339	P	P	23 47 46.5 -0.7
	baz=154				
L44A	Lake County Fo	62.01 345	P	P	23 47 45.7 -1.5
	baz=160				
N39A	Derby Farms, D	62.10 341	P	P	23 47 46.8 -1.0
	baz=156,SNR=8.8				
L43A	Garden Prairie	62.23 344	P	P	23 47 47.8 -0.9
	baz=160,SNR=32				
N38A	Joes South For	62.26 340	P	P	23 47 48.2 -0.8
	baz=155				
M40A	Post Highland	62.28 342	P	P	23 47 47.9 -1.2
	baz=157,SNR=6.6				
L42A	Oliver, Polo	62.30 343	P	P	23 47 48.0 -1.2
	baz=159,SNR=6.6				
EMMW	East Machias	62.31 2	eP	P	23 47 48.5 -0.6
	comp=Z,7.7nm,0.6s				
LONY	Lake Ozonia	62.32 356	P	P	23 47 48.5 -0.8
	baz=175				
LONY	Lake Ozonia	62.32 356	eP	P	23 47 49.0 -0.4
	comp=Z,8.9nm,0.9s				
BNM	Barren Site	62.44 326	eP	P	23 47 51.0 +0.4
BNM			epP	pP	23 48 19.6 +4.9
FRNY	Flat Rock	62.48 357	eP	P	23 47 49.3 -1.0
	comp=Z,7.4nm,0.8s				
M39A	Webster	62.54 341	P	P	23 47 50.1 -0.7
	baz=156,SNR=6.1				
N37A	Lee Faris, Mou	62.55 339	P	P	23 47 50.4 -0.4
	baz=154,SNR=7.4				
L41A	Preston	62.60 343	P	P	23 47 50.0 -1.2
	baz=158,SNR=11				
K43A	Burlington	62.61 345	P	P	23 47 50.2 -1.0
	baz=160,SNR=8.7				
L40A	Anamosa	62.80 342	P	P	23 47 51.4 -1.0
	baz=157,SNR=7.5				
M38A	Pleasantville	62.81 340	P	P	23 47 51.7 -0.9
	baz=155,SNR=6.0				
PKME	Peaks-Kenny Pk	62.83 0	P	P	23 47 52.0 -0.5
	baz=180,SNR=7.3				
PKME	Peaks-Kenny Pk	62.83 0	eP	P	23 47 52.1 -0.5
	comp=Z,16nm,0.6s				
N36A	Muff Farm, Cla	62.85 339	P	P	23 47 52.7 -0.2
	baz=153,SNR=6.4				
SADO	Sadowa	62.90 353	eP	P	23 47 52.2 -0.9
	comp=Z,12nm,1.0s				
LAZ	Ladron	62.90 326	eP	P	23 47 54.5 +0.9
LAZ			epP	pP	23 48 22.3 +4.5
CBKS	Cedar Bluff	62.93 334	eP	P	23 47 54.1 +0.6
	comp=Z,12nm,0.8s				
PLVO	Plevna	62.94 354	eP	P	23 47 52.0 -1.4
	comp=Z,5.5nm,0.6s				
K42A	Prairie Point,	62.94 344	P	P	23 47 52.6 -0.8
	baz=159,SNR=34				
ANMO	Albuquerque	62.96 327	P	P	23 47 53.8 -0.2
	comp=Z,1.2nm,0.6s,baz=146,slow=7.3,SNR=2.6				
ANMO			pP	pP	23 48 21.3 +3.1
	comp=Z,3.3nm,0.9s,baz=75,slow=16,SNR=5.1				
ANMO	Albuquerque	62.96 327	eP	P	23 47 54.0 0.0
	comp=Z,1.6nm,0.8s				
ANMO			epP	pP	23 48 22.4 +4.2
ANMO	Albuquerque	62.96 327	eP	P	23 47 54.0 0.0
ANMO			e*PP	pP	23 48 22.4 +4.2
ANMO			pmax	pmax	
	comp=Z,2.0nm,0.8s				
K41A	Shullsburg	63.04 343	P	P	23 47 53.3 -0.8
	baz=158,SNR=7.0				
M37A	Trindle Farm,	63.07 340	P	P	23 47 54.1 -0.3
	baz=154				
L39A	Vinton	63.08 342	P	P	23 47 53.0 -1.3
	baz=156				
SCIA	State Center	63.26 341	eP	P	23 47 55.4 -0.1
	comp=Z,35nm,0.6s				
J43A	Natural Harves	63.27 345	P	P	23 47 54.8 -0.8
	baz=160,SNR=13				
JFWS	Jewell Farm	63.31 343	P	P	23 47 55.3 -0.6
	baz=158,SNR=16				
JFWS	Jewell Farm	63.31 343	eP	P	23 47 55.3 -0.6
	comp=Z,40nm,0.6s				
JFWS	Jewell Farm	63.31 343	eP	P	23 47 55.3 -0.6
JFWS			pmax	pmax	
	comp=Z,40nm,0.6s				
K40A	Colesburg	63.36 343	P	P	23 47 55.3 -0.9
	baz=157,SNR=18				
J42A	Columbus	63.39 344	P	P	23 47 55.6 -0.8
	baz=159,SNR=8.0				
L38A	Oak Wood Farm,	63.39 341	P	P	23 47 55.4 -1.0
	baz=155				
TUC	Tucson	63.41 322	eP	P	23 47 57.5 +0.6
	comp=Z,7.0nm,1.7s				
TUC			epP	pP	23 48 25.0 +3.9
TUC	Tucson	63.41 322	eP	P	23 47 57.5 +0.6
TUC			e*PP	pP	23 48 25.0 +3.9
TUC			pmax	pmax	
	comp=Z,7.0nm,1.7s				
K39A	Oelwein	63.58 342	P	P	23 47 56.6 -1.1
	baz=156				
L37A	Phoenix Point,	63.62 340	P	P	23 47 57.2 -0.8
	baz=154				
J41A	Loganville	63.66 344	P	P	23 47 57.6 -0.6
	baz=158,SNR=16				
I43A	Langenfeld Bro	63.68 345	P	P	23 47 57.6 -0.7
	baz=160,SNR=12				
K38A	Parkersburg	63.79 341	P	P	23 47 58.4 -0.6
	baz=156				
VNA3	Neumayer Olymp	63.80 162	P	P	23 48 04.2 +5.3
I42A	Draeger Farm,	63.87 345	P	P	23 47 58.9 -0.7
	baz=160				
I42A	Draeger Farm,	63.87 345	eP	P	23 47 59.2 -0.4
	comp=Z,36nm,0.8s				
J40A	Soldiers Grove	63.89 343	P	P	23 47 58.9 -0.8
	baz=158,SNR=13				
L36A	Harm Buss Farm	63.90 340	P	P	23 47 59.6 -0.2
	baz=154,SNR=10				
TRQ	Mont Tremblant	63.92 356	eP	P	23 47 59.3 -0.6
VNA1	Neumayer--Stat	64.01 161	P	P	23 48 02.1 +1.9
J39A	Decorah	64.11 342	P	P	23 48 00.3 -0.8
	baz=157,SNR=19				
H43A	Windswept, Lux	64.14 346	P	P	23 48 00.5 -0.8
	baz=161,SNR=6.7				
H43A	Windswept, Lux	64.14 346	eP	P	23 48 00.9 -0.4
	comp=Z,82nm,0.6s				
K37A	Belmond	64.17 341	P	P	23 48 00.9 -0.6
	baz=155				
PQI	Presque Isle	64.25 1	eP	P	23 48 01.7 -0.3
	comp=Z,10nm,0.9s				
I41A	Arkdale	64.27 344	P	P	23 48 01.7 -0.4
	baz=159				
K36A	Gilmore City	64.31 340	P	P	23 48 02.2 -0.2
	baz=154,SNR=6.0				
I40A	Norwalk	64.32 344	P	P	23 48 01.9 -0.6
	baz=158,SNR=8.9				
H42A	Shiocton	64.36 345	P	P	23 48 02.2 -0.5
	baz=160,SNR=16				
H42A	Shiocton	64.36 345	eP	P	23 48 02.3 -0.4
	comp=Z,77nm,0.7s				
VNA2	Neumayer--Watz	64.38 161	P	P	23 48 00.5 -2.1
	baz=286,slow=9.9				
214A	Organ Pipe Nat	64.38 320	P	P	23 48 04.7 +1.5
	baz=134				
BGNE	Belgrade	64.52 337	P	P	23 48 03.9 0.0
	baz=150				
BGNE	Belgrade	64.52 337	eP	P	23 48 04.5 +0.6
	comp=Z,47nm,0.7s				
I39A	Houston	64.53 343	P	P	23 48 03.2 -0.7
	baz=157,SNR=9.0				
J37A	Redenius Farm,	64.63 341	P	P	23 48 04.0 -0.5
	baz=155				
SDCO	Great Sand Dun	64.66 329	P	P	23 48 04.9 -0.3
	baz=142				
SDCO	Great Sand Dun	64.66 329	eP	P	23 48 03.7 -1.5
	comp=Z,3.8nm,0.7s				
SDCO			epP	PcP	23 48 34.2 -4.0
H41A	Junction City	64.74 345	P	P	23 48 04.5 -0.6
	baz=159,SNR=9.1				
H41A	Junction City	64.74 345	eP	P	23 48 04.6 -0.6
	comp=Z,28nm,0.6s				
F46A	Macinaw City C	64.75 349	P	P	23 48 04.4 -0.8
	baz=164,SNR=5.8				
F45A	CMU Biological	64.81 348	P	P	23 48 04.9 -0.8
	baz=164,SNR=7.8				
G43A	Wallace	64.87 346	P	P	23 48 05.1 -0.9
	baz=161,SNR=5.1				
G43A	Wallace	64.87 346	eP	P	23 48 05.2 -0.8
	comp=Z,22nm,0.8s				
J36A	Seneca 1, Swea	64.90 341	P	P	23 48 05.9 -0.4
	baz=154,SNR=10				
I38A	Scanlan Farm,	64.93 342	P	P	23 48 06.0 -0.5
	baz=156,SNR=8.2				
H40A	Chili	64.93 344	P	P	23 48 05.9 -0.6
	baz=158,SNR=10				
G42A	Mountain	65.02 346	P	P	23 48 06.1 -0.9
	baz=160,SNR=10				
G42A	Mountain	65.02 346	eP	P	23 48 06.5 -0.5
	comp=Z,39nm,0.6s				
G41A	Antigo	65.18 345	P	P	23 48 07.3 -0.8
	baz=160				
I37A	Lemond, Waseca	65.22 342	P	P	23 48 08.0 -0.4
	baz=155,SNR=7.4				
I37A	Lemond, Waseca	65.22 342	eP	P	23 48 08.2 -0.2
	comp=Z,28nm,0.6s				
H39A	Augusta	65.23 343	P	P	23 48 07.7 -0.7
	baz=157				
F44A	Big Bay de Noc	65.27 347	P	P	23 48 07.5 -1.1
	baz=163				
F43A	Flat Rock, Esc	65.30 347	P	P	23 48 07.9 -0.9
	baz=162,SNR=18				
X16A	Lo Mia Camp, P	65.31 323	eP	P	23 48 12.0 +2.7
	comp=Z,2.3nm,0.8s				
X16A			epP	PcP	23 48 38.5 -2.3
E45A	Wooded Hills,	65.39 348	P	P	23 48 08.6 -0.8
	baz=164				
I36A	Fitzsimmons Fa	65.42 341	P	P	23 48 09.1 -0.5
	baz=155				
F42A	Maple Grove Fa	65.44 346	P	P	23 48 09.1 -0.6
	baz=161				
G40A	Rib Lake	65.49 344	P	P	23 48 09.3 -0.7
	baz=159				
H38A	Maiden Rock	65.50 343	P	P	23 48 09.6 -0.5
	baz=156				
H37A	Dierke Farm, C	65.60 342	P	P	23 48 10.4 -0.4
	baz=156				
F41A	Three Lakes	65.65 345	P	P	23 48 10.7 -0.4
	baz=160,SNR=15				
F41A	Three Lakes	65.65 345	eP	P	23 48 10.9 -0.2
	comp=Z,52nm,0.8s				
G39A	Holcombe	65.76 344	P	P	23 48 11.1 -0.6
	baz=158,SNR=8.8				
E43A	Lone Tree Farm	65.78 347	P	P	23 48 11.1 -0.8
	baz=162,SNR=15				
E44A	Grand Marais A	65.79 348	P	P	23 48 11.7 -0.3
	baz=163				
G38A	Ridgeland	65.83 343	P	P	23 48 11.7 -0.6
	baz=157				
H36A	Jessenland, He	65.89 341	P	P	23 48 12.5 -0.1
	baz=155,SNR=5.3				
COWI	Conover	66.00 345	eP	P	23 48 13.3 -0.1
	comp=Z,13nm,0.9s				
ECSD	EROS Data Cent	66.00 339	P	P	23 48 13.2 -0.1
	baz=152,SNR=11				
ECSD	EROS Data Cent	66.00 339	eP	P	23 48 13.3 -0.1
	comp=Z,10nm,1.0s				
SNAA	Sanae	66.01 161	P	P	23 48 14.2 +1.0
SNAA	Sanae	66.01 161	P	P	23 48 13.9 +0.8
	comp=Z,6.4nm,0.7s,baz=255,slow=9.2,SNR=47				
SNAA	Sanae	66.01 161	eP	P	23 48 14.0 +0.8
	comp=Z,11nm,0.9s				
SNAA	Sanae	66.01 161	dP	P	23 48 13.1 -0.1
SNAA			i*PP	pP	23 48 40.1 +2.6
SNAA			i		23 48 42.0
E42A	Champion	66.03 346	P	P	23 48 12.9 -0.6
	baz=161,SNR=7.9				
WUAZ	Wupatki	66.06 324	eP	P	23 48 15.2 +1.0
	comp=Z,1.8nm,0.6s				
WUAZ			e		23 48 43.1
F40A	Park Falls	66.07 345	P	P	23 48 13.6 -0.2
	baz=159,SNR=24				
SPMN	Marine on St.	66.15 342	P	P	23 48 13.6 -0.7
	baz=156,SNR=7.5				
SPMN	Marine on St.	66.15 342	eP	P	23 48 13.8 -0.5
	comp=Z,22nm,0.4s				
SPMN			epP	PcP	23 48 41.8 -2.1
F39A	Loretta	66.27 344	P	P	23 48 14.6 -0.5
	baz=158,SNR=8.8				
H35A	Sunnyside Ranc	66.28 341	P	P	23 48 14.8 -0.3
	baz=154,SNR=12				
E41A	Kenton	66.30 346	P	P	23 48 14.5 -0.7
	baz=160				
ISCO	Idaho Springs	66.34 331	P	P	23 48 16.6 +0.6
	baz=143				
ISCO	Idaho Springs	66.34 331	eP	P	23 48 15.3 -0.7
	comp=Z,5.7nm,1.3s				
ISCO			epP	PcP	23 48 43.7 -1.5
ISCO	Idaho Springs	66.34 331	eP	P	23 48 15.3 -0.7
ISCO			e*PP	PcP	23 48 43.7 -1.5
ISCO			pmax	pmax	
	comp=Z,6.0nm,1.3s				
G36A	St. Michael	66.44 342	P	P	23 48 16.3 +0.2
	baz=155				
PV01	Paradox Valley	66.49 327	eP	P	23 48 18.6 +1.7
	comp=Z,3.7nm,0.7s				
PV01			epP	PcP	23 48 45.9 +0.2
SMCO	Snowmass	66.50 329	eP	P	23 48 18.4 +1.3
	comp=Z,3.2nm,0.6s				
SMCO			epP	PcP	23 48 45.3 -0.7
E40A	Wakefield	66.51 345	P	P	23 48 16.5 0.0
	baz=159,SNR=12				
F37A	Hinrichs Farm,	66.56 343	P	P	23 48 16.6 -0.2
	baz=156				
F38A	Pierce - Schro	66.57 343	P	P	23 48 16.8 -0.1
	baz=157,SNR=6.2				
PV15	Paradox Valley	66.60 328	eP	P	23 48 18.0 +0.4
	comp=Z,8.9nm,1.2s				
PV15			epP	PcP	23 48 46.5 +0.2
E39A	Mellen	66.61 345	P	P	23 48 17.2 0.0
	baz=158,SNR=9.3				
G35A	Watkins	66.64 341	P	P	23 48 17.2 -0.3
	baz=154				
D41A	Chassel	66.77 346	P	P	23 48 18.1 -0.1
	baz=161				
F36A	Milaca	66.94 342	P	P	23 48 18.8 -0.5
	baz=155,SNR=16				
F36A	Milaca	66.94 342	eP	P	23 48 19.2 -0.1
	comp=Z,19nm,0.8s				
G34A	Benson	67.02 341	P	P	23 48 19.7 -0.1
	baz=153				
E38A	The Farm, Brul	67.08 344	P	P	23 48 19.1 -1.0
	baz=158				
W13A	Hualapai Mount	67.21 322	eP	P	23 48 23.4 +1.8
	comp=Z,2.4nm,0.8s				
W13A			epP	PcP	23 48 50.6 +1.8
U15A	North Rim	67.23 324	eP	P	23 48 23.6 +1.9
	comp=Z,2.8nm,1.0s				
U15A			epP	PcP	23 48 50.5 +1.5
F35A	Swanville	67.25 342	P	P	23 48 20.8 -0.5
	baz=154				
N23A	Red Feather La	67.36 331	P	P	23 48 21.8 -0.6
	baz=143				
N23A	Red Feather La	67.36 331	eP	P	23 48 26.7 +4.2
	comp=Z,6.0nm,1.2s				
F34A	Alexandria	67.40 341	P	P	23 48 22.1 -0.1
	baz=154				
SUSD	Miller	67.44 338	P	P	23 48 22.1 -0.5
	baz=150				
E36A	McGregor	67.46 343	P	P	23 48 22.3 -0.3
	baz=156,SNR=9.2				
C40A	Isle Royale Na	67.71 346	P	P	23 48 23.7 -0.4
	baz=160				
D37A	Cotton	67.82 344	P	P	23 48 24.5 -0.3
	baz=157,SNR=5.1				
E35A	Pequot Lakes	67.83 342	P	P	23 48 24.5 -0.4
	baz=155				
C39A	Grand Marais	67.85 345	P	P	23 48 24.5 -0.4
	baz=159,SNR=11				
G31A	Conde	67.86 339	P	P	23 48 25.2 +0.1
	baz=151				
KNB	Kanab	67.95 324	eP	P	23 48 28.3 +2.2
	comp=Z,6.3nm,0.9s				
KNB	Kanab	67.95 324	eP	P	23 48 28.3 +2.2
KNB			pmax	pmax	
	comp=Z,6.0nm,0.9s				
E34A	Wadena	68.02 341	P	P	23 48 25.6 -0.5
	baz=154				
C38A	Sawbill Land.	68.04 345	P	P	23 48 25.3 -0.9
	baz=158				
D36A	Goodland	68.04 343	P	P	23 48 26.1 -0.1
	baz=156				
D35A	Remer	68.20 342	P	P	23 48 26.9 -0.3
	baz=155				
C37A	Embarrass	68.28 344	P	P	23 48 27.3 -0.4
	baz=157				
EYMN	Ely	68.30 345	P	P	23 48 27.2 -0.7
	baz=158				
EYMN	Ely	68.30 345	eP	P	23 48 27.6 -0.3
	comp=Z,13nm,0.8s				
LIC	Lamto	68.33 76	eP	P	23 48 27.7 -1.1
	comp=Z,114nm,1.1s				
C36A	Pine Crest Far	68.48 344	P	P	23 48 28.6 -0.4
	baz=156,SNR=15				
TIC	Toumodi	68.50 75	eP	P	23 48 29.5 -0.3
D34A	Park Rapids	68.54 342	P	P	23 48 28.5 -0.8
	baz=154				
CCUT	Cedar City	68.63 324	eP	P	23 48 33.1 +2.7
	comp=Z,12nm,1.5s				
CCUT			epP	sP	23 49 00.6 -4.8
KIC	Kosan Boka	68.65 76	eP	P	23 48 29.9 -0.8
	comp=Z,123nm,0.8s				
DBIC	Dimbokro	68.66 75	P	P	23 48 30.4 -0.3
	comp=Z,58nm,0.7s,baz=227,slow=6.4,SNR=53				
DBIC	Dimbokro	68.66 75	eP	P	23 48 30.3 -0.5
	comp=Z,56nm,0.7s				
DBIC	Dimbokro	68.66 75	eP	P	23 48 30.3 -0.5
DBIC			pmax	pmax	
	comp=Z,56nm,0.7s				
MSU	Marysvale	68.67 325	eP	P	23 48 32.6 +2.0
MSU			epP	sP	23 49 00.3 -5.4
MSU	Marysvale	68.67 325	eP	P	23 48 32.6 +2.0
MSU			e*PP	sP	23 49 00.3 -5.4
C35A	Jirik Farms, M	68.74 343	P	P	23 48 30.7 +0.1

baz=155,SNR=8.1
D33A AnnSam, Waubun 68.79 341 P **P** 23 48 29.7 -1.2
baz=153
SHPR Sheep Range 68.93 322 *e*P **P** 23 48 34.4 +2.2
comp=Z,2.2nm,0.7s
SHPR *e*pP **sP** 23 49 01.9 -5.3
GSC Goldstone, Bar 69.09 320 P **P** 23 48 34.6 +1.5
baz=132
RSSD Black Hills 69.13 334 P **P** 23 48 34.6 +1.3
baz=145
RSSD Black Hills 69.13 334 *e*P **P** 23 48 34.5 +1.1
comp=Z,5.5nm,0.6s
RSSD Black Hills 69.13 334 *e*P **P** 23 48 34.5 +1.1
RSSD pmax pmax
comp=Z,5.0nm,0.6s
B35A Bob, Littlefor 69.27 343 P **P** 23 48 33.3 -0.5
baz=156,SNR=5.1
EDW2 Edwards Air Fo 69.55 319 P **P** 23 48 36.3 +0.3
baz=131
PSUT Pine Spring 69.60 324 *e*P **P** 23 48 37.9 +1.5
comp=Z,2.1nm,0.6s
PSUT *e*pP **pP** 23 49 05.8 +4.9
B34A Aery, Baudette 69.65 343 P **P** 23 48 35.6 -0.6
baz=155
AGMN Agassiz Nation 69.83 342 P **P** 23 48 37.0 -0.3
baz=154,SNR=5.2
AGMN Agassiz Nation 69.83 342 *e*P **P** 23 48 37.3 0.0
comp=Z,6.7nm,0.8s
AGMN *e*pP **pP** 23 49 04.7 +2.8
TPNV Topopah Spring 69.87 322 P **P** 23 48 40.1 +2.1
baz=133,SNR=5.2
TPNV Topopah Spring 69.87 322 *e*P **P** 23 48 40.0 +2.0
comp=Z,4.4nm,0.8s
TPNV *e*pP **sP** 23 49 08.0 -5.1
TPNV Topopah Spring 69.87 322 *e*P **P** 23 48 40.0 +2.0
TPNV *e**PP **sP** 23 49 08.0 -5.1
TPNV pmax pmax
comp=Z,4.0nm,0.8s
FURC Furnace Creek, 69.91 321 P **P** 23 48 40.0 +2.0
baz=132
MPMC Manual Prospec 70.01 320 P **P** 23 48 40.5 +1.6
baz=132
DAC Darwin (Calif) 70.22 321 *e*P **P** 23 48 40.9 +0.7
comp=Z,1.7nm,0.7s
DAC *e*PcP **PcP** 23 48 59.8 -1.6
DAC *e*pP **pP** 23 49 08.7 +3.9
DAC Darwin (Calif) 70.22 321 *e*P **P** 23 48 40.9 +0.7
DAC *e* 23 48 59.8
DAC *e**PP **pP** 23 49 08.7 +3.9
DAC pmax pmax
comp=Z,2.0nm,0.7s
DUG Dugway, Tooele 70.23 326 P **P** 23 48 41.3 +1.2
baz=136
DUG Dugway, Tooele 70.23 326 *e*P **P** 23 48 42.8 +2.7
comp=Z,5.8nm,1.4s
DUG *e*pP **pP** 23 49 08.4 +3.7
DUG Dugway, Tooele 70.23 326 *e*P **P** 23 48 42.8 +2.7
DUG *e**PP **pP** 23 49 08.4 +3.7
DUG pmax pmax
comp=Z,6.0nm,1.4s
A33A Warroad 70.27 342 P **P** 23 48 39.5 -0.4
baz=154
ISA Isabella, Lake 70.36 320 P **P** 23 48 42.9 +2.0
baz=131
ISA Isabella, Lake 70.36 320 *e*P **P** 23 48 42.8 +2.0
comp=Z,2.8nm,0.8s
ISA Isabella, Lake 70.36 320 *e*P **P** 23 48 42.8 +1.9
ISA pmax pmax
comp=Z,3.0nm,0.8s
R11A Troy Canyon, C 70.44 323 P **P** 23 48 43.1 +1.6
baz=134,SNR=5.5
R11A Troy Canyon, C 70.44 323 *e*P **P** 23 48 43.2 +1.8
comp=Z,6.9nm,1.6s
R11A *e*pP **sP** 23 49 11.5 -5.1
B31A Greenbush Farm 70.48 341 P **P** 23 48 43.5 +2.2
baz=152
PD31 Pinedale Array 70.51 330 *e*P **P** 23 48 42.8 +0.9
PDAR Pinedale Array 70.51 330 P **P** 23 48 42.2 +0.4
comp=Z,1.5nm,0.5s,baz=120,slow=6.9,SNR=11
PDAR Pinedale Array 70.51 330 *e*P **P** 23 48 42.0 +0.1
BW06 Boulder Array 70.51 330 P **P** 23 48 42.4 +0.5
baz=140
BW06 Boulder Array 70.51 330 *e*P **P** 23 48 42.5 +0.7
comp=Z,3.2nm,1.2s
HWUT Hardware Ranch 70.62 328 *e*P **P** 23 48 43.2 +0.8
comp=Z,2.5nm,0.6s
MDND Maddock 70.62 339 P **P** 23 48 43.4 +1.3
baz=150
BGU Big Grassy Mou 70.87 327 *e*P **P** 23 48 46.1 +2.2
comp=Z,2.2nm,0.9s
BGU *e*pP **sP** 23 49 13.8 -5.3
REDW Red Top Meadow 71.58 330 *e*P **P** 23 48 49.4 +1.1
comp=Z,1.8nm,0.6s
ULM Lac du Bonnet 71.58 343 P **P** 23 48 47.9 0.0
comp=Z,15nm,0.5s,baz=154,slow=6.3,SNR=34
ULM pP **pP** 23 49 14.3 +1.8
comp=Z,9.2nm,0.7s,baz=139,slow=7.1,SNR=3.2
ULM Lac du Bonnet 71.58 343 *e*P **P** 23 48 47.6 -0.2
comp=Z,16nm,0.6s
ULM pP **pP** 23 49 14.3 +1.8
TPAW Teton Pass 71.72 330 *e*P **P** 23 48 50.4 +1.2
comp=Z,15nm,1.8s
IMW Indian Meadow 72.02 330 *e*P **P** 23 48 52.4 +1.4
comp=Z,2.5nm,0.5s
NV01 Mina Array Sit 72.07 322 *e*P **P** 23 48 51.4 +0.1
NV01 *e*pP **pP** 23 49 19.1 +3.1
NVAR Mina Array Bea 72.07 322 P **P** 23 48 52.4 +1.0
comp=Z,0.7nm,0.7s,baz=113,slow=5.4,SNR=7.1
NVAR pP **pP** 23 49 18.0 +2.0
comp=Z,2.0nm,0.7s,baz=138,slow=6.7,SNR=8.5
RLMT Red Lodge 72.18 332 P **P** 23 48 52.5 +0.6
baz=141
RLMT Red Lodge 72.18 332 *e*P **P** 23 48 52.1 +0.2
comp=Z,7.1nm,1.4s
RLMT *e*pP **pP** 23 49 20.3 +3.7
QSPA South Pole Qui 72.31 180 P **P** 23 48 53.6 +1.3
comp=Z,8.1nm,0.5s,baz=136,slow=9.4,SNR=29
QSPA South Pole Qui 72.31 180 *e*P **P** 23 48 53.6 +1.3
comp=Z,19nm,0.6s
KVN Kaiserville 72.36 322 *e*P **P** 23 48 54.1 +1.0
comp=Z,2.2nm,1.0s
KVN *e*pP **pP** 23 49 22.5 +4.8
KVN Kaiserville 72.36 322 *e*P **P** 23 48 54.1 +1.0
KVN *e**PP **pP** 23 49 22.5 +4.8
KVN pmax pmax
comp=Z,2.0nm,1.0s
SCHQ Schefferville 72.45 2 P **P** 23 48 52.4 -0.6
comp=Z,16nm,0.7s,baz=186,slow=3.7,SNR=10
SCHQ Schefferville 72.45 2 *e*P **P** 23 48 51.2 -1.7
comp=Z,18nm,0.8s
KOWA Kowa 72.48 68 P **P** 23 48 53.4 -0.6
comp=Z,32nm,0.7s,baz=250,slow=8.7,SNR=41
KOWA Kowa 72.48 68 *e*P **P** 23 48 53.5 -0.5
comp=Z,28nm,0.7s
HLID Hailey 73.48 328 P **P** 23 49 01.0 +1.5
baz=136
HLID Hailey 73.48 328 *e*P **P** 23 49 02.0 +2.5
comp=Z,4.2nm,1.4s
PAHR Pah Rah Range 73.54 322 *e*P **P** 23 49 02.1 +2.1
comp=Z,3.9nm,0.7s
PAHR *e*pP **sP** 23 49 29.7 -5.5
BOZ Bozeman (W) 73.62 331 P **P** 23 49 01.3 +1.0
baz=139
BOZ Bozeman (W) 73.62 331 *e*P **P** 23 49 02.4 +2.1
comp=Z,2.2nm,1.0s
BOZ Bozeman (W) 73.62 331 *e*P **P** 23 49 02.4 +2.1
BOZ pmax pmax
comp=Z,2.0nm,1.0s
MCMT McKenzie Canyo 73.63 330 *e*P **P** 23 49 02.6 +2.1
EGMT Eagleton 74.64 334 *e*P **P** 23 49 07.3 +1.2
comp=Z,5.4nm,0.6s
ORV Oroville 74.69 321 *e*P **P** 23 49 08.5 +2.1
comp=Z,3.3nm,0.9s
ORV *e*pP **pP** 23 49 34.8 +3.5
ORV Oroville 74.69 321 *e*P **P** 23 49 08.5 +2.1
ORV *e**PP **pP** 23 49 34.8 +3.5
ORV pmax pmax
comp=Z,3.0nm,0.9s
BMO Blue Mountains 75.87 327 *e*P **P** 23 49 14.4 +1.2
comp=Z,2.4nm,0.6s
BMO *e*pP **pP** 23 49 42.6 +4.5
BMO Blue Mountains 75.87 327 *e*P **P** 23 49 14.4 +1.2
BMO *e**PP **pP** 23 49 42.6 +4.5
BMO pmax pmax
comp=Z,2.0nm,0.6s
F10A Beach Ranch, E 76.60 328 *e*P **P** 23 49 21.8 +4.5
comp=Z,3.7nm,0.6s
TOA0 Torodi Ar. Sit 77.06 72 *e*P **P** 23 49 19.4 -1.0
TORD Torodi Ar. Bea 77.06 72 P **P** 23 49 19.4 -1.0
comp=Z,39nm,0.5s,baz=261,slow=4.8,SNR=291
FCC Fort Churchill 78.90 347 *e*P **P** 23 49 29.6 0.0
comp=Z,5.3nm,0.7s
FCC Fort Churchill 78.90 347 *e*P **P** 23 49 29.6 0.0
FCC pmax pmax
comp=Z,5.0nm,0.7s
SBA Scott Base 79.22 190 *e*P **P** 23 49 33.1 +1.8
comp=Z,9.7nm,1.1s
SBA Scott Base 79.22 190 *e*P **P** 23 49 33.1 +1.8
SBA pmax pmax
comp=Z,10.0nm,1.1s
MORF Marmelete 79.56 45 *e*P **P** 23 49 34.9 +1.1
comp=Z,50nm,1.4s
MESJ Messejana 80.13 45 *e*P **P** 23 49 38.2 +1.4
comp=Z,25nm,1.6s
PCVE Castro Verde 80.14 45 *e*P **P** 23 49 37.8 +0.9
comp=Z,34nm,1.9s
MDT Midelt 80.16 51 P **P** 23 49 39.0 +1.7
comp=Z,9.1nm,0.8s,baz=263,slow=5.0,SNR=10
SYO Syowa Base 80.22 160⇑*e*X pP 23 50 04.0 +2.1
SYO Syowa Base 80.22 160⇑*e*X sP 23 50 10.6 -1.7
PVAO Vaqueiros 80.24 46 *e*P **P** 23 49 38.3 +0.9
comp=Z,32nm,1.8s
VNDA Vanda 80.25 190 P **P** 23 49 39.0 +2.2
comp=Z,4.4nm,0.8s,baz=129,slow=5.6,SNR=33
VNDA Vanda 80.25 190 *e*P **P** 23 49 38.4 +1.5
comp=Z,6.1nm,0.9s
VNDA Vanda 80.25 190 *e*P **P** 23 49 38.4 +1.5
VNDA pmax pmax
comp=Z,6.0nm,0.9s
PBEJ Beja 80.46 45 *e*P **P** 23 49 39.7 +1.1
comp=Z,16nm,1.8s
B05A Bryant 80.60 328 P **P** 23 49 39.7 +0.6
baz=130
EVO Evora 80.63 45 *e*P **P** 23 49 39.3 -0.2
comp=Z,21nm,1.8s
PMTG Montargil 80.77 44 *e*P **P** 23 49 40.4 +0.2
comp=Z,21nm,1.7s
PTOM Tomar 80.94 43 *e*P **P** 23 49 39.5 -1.6
comp=Z,75nm,1.8s
PESTR Estremoz 81.09 44 *e*P **P** 23 49 43.8 +1.9
comp=Z,27nm,1.6s
PBAR Barrancos 81.10 45 *e*P **P** 23 49 42.9 +0.9
comp=Z,28nm,1.5s
MTE Manteigas 81.92 43 *e*P **P** 23 49 47.2 +0.9
comp=Z,33nm,1.5s
MTE Manteigas 81.92 43 *e*P **P** 23 49 47.0 +0.7
comp=Z,24nm,1.0s
TSUM Tsumeb 82.00 108 *e*P **P** 23 49 48.1 +0.7
comp=Z,8.7nm,0.8s
POLO Lamas de Olo 82.27 42 *e*P **P** 23 49 49.0 +0.8
comp=Z,23nm,1.9s
PCAB Cabril 82.30 42 *e*P **P** 23 49 48.3 +0.1
comp=Z,79nm,1.6s
MVO Moncorvo 82.65 43 *e*P **P** 23 49 50.5 +0.4
comp=Z,24nm,2.0s
PAB San Pablo 83.60 45 *e*P **P** 23 49 55.8 +0.7
comp=Z,12nm,0.8s
PAB San Pablo 83.60 45 *e*P **P** 23 49 55.8 +0.7
PAB pmax pmax
comp=Z,12nm,0.8s
ESDC Sonseca Array 83.92 45 P **P** 23 49 57.2 +0.5
comp=Z,8.0nm,0.9s,baz=255,slow=5.1,SNR=28
ESLA Sonseca Array 83.92 45 *e*P **P** 23 49 57.6 +0.9
comp=Z,9.5nm,0.9s
ES19 SONSECA Array 83.98 45 *e*P **P** 23 49 57.2 +0.2
TAM Tamanrasset 84.04 64 *e*P **P** 23 49 58.1 +0.3
comp=Z,17nm,1.4s
TAM Tamanrasset 84.04 64 *e*P **P** 23 49 58.1 +0.3
TAM pmax pmax
comp=Z,17nm,1.4s
BOSA Boshof 85.99 119 P **P** 23 50 06.7 -0.9
comp=Z,5.3nm,1.1s,baz=223,slow=9.1,SNR=3.0
YKA Yellowknife Ar 87.46 341 P **P** 23 50 14.0 +0.4
comp=Z,5.5nm,0.6s,baz=133,slow=4.8,SNR=36
YKA pP **pP** 23 50 41.9 +2.8
comp=Z,8.8nm,0.8s,baz=135,slow=4.8,SNR=8.6
YKW3 Yellowknife Ar 87.52 341 *e*P **P** 23 50 14.2 +0.4
comp=Z,7.7nm,0.8s
YKW3 *e*pP **pP** 23 50 42.2 +2.9
MAW Mawson 88.06 164 P **P** 23 50 17.8 +1.2
comp=Z,8.7nm,0.8s,baz=226,slow=6.2,SNR=15
MAW Mawson 88.06 164 *e*P **P** 23 50 17.4 +0.9
comp=Z,1.7nm,0.8s
MAW Mawson 88.06 164 *e*P **P** 23 50 17.4 +0.9
MAW pmax pmax
comp=Z,2.0nm,0.8s
MATP Matopo 91.42 112 P **P** 23 50 34.0 +0.6
comp=Z,1.8nm,0.6s,baz=225,slow=5.7,SNR=4.3
KEST Kesra 91.87 53 P **P** 23 50 35.2 +0.3
comp=Z,4.4nm,0.7s,baz=168,slow=1.0,SNR=14
KEST Kesra 91.87 53 *e*P **P** 23 50 35.3 +0.3
comp=Z,4.5nm,0.7s
EKA Eskdalemuir Ar 92.02 32 P **P** 23 50 34.3 -0.8
comp=Z,4.5nm,1.1s,baz=230,slow=10.0,SNR=4.5
SUMG Summit 92.63 9⇑*i*P **P** 23 50 38.8 +0.8
comp=Z,11nm,0.9s
SUMG Summit 92.63 9 *e*P **P** 23 50 38.8 +0.8
comp=Z,11nm,0.9s
SUMG Summit 92.63 9 *e*P **P** 23 50 38.8 +0.8
SUMG pmax pmax
comp=Z,11nm,0.9s
NKC Novy Kostel 98.76 40 AMS AMS 00 26 40.0
comp=Z,300nm,19.0s
GERES GERESS Array B 99.14 42 P **Pdif** 23 51 06.5 -1.3
comp=Z,0.8nm,0.7s,baz=242,slow=2.9,SNR=6.9
CLL Collm 99.41 39 *e*Pdif **Pdif** 23 51 09.0 +0.2
CLL Collm 99.41 39 *e*P **Pdif** 23 51 09.0 +0.2
PRA Prague 99.94 41 AMS AMS 00 26 50.0
comp=Z,200nm,19.0s
PRU Pruhonice 99.98 41 AMS AMS 00 27 30.0
comp=Z,200nm,19.4s
GOPC GO Pecny, Ondr 100.11 41 AMS AMS 00 27 40.0
comp=Z,200nm,23.9s
PVCC Panska Ves 100.14 40 AMS AMS 00 27 10.0
comp=Z,200nm,22.6s
ILAR Eielson Array 100.58 335 PP PP 23 55 17.9 -4.1
comp=Z,0.4nm,0.8s,baz=108,slow=7.2,SNR=4.6
UPC Upice 101.03 40 AMS AMS 00 27 30.0
comp=Z,200nm,21.9s
DPC Dobruska-Polom 101.18 41 AMS AMS 00 27 40.0
comp=Z,200nm,25.4s
OKC Ostrava-Krasne 102.20 41 AMS AMS 00 30 50.0
comp=Z,100nm,20.2s
BRTR Keskin Array B 111.47 54 PP PP 23 56 33.5 -10
comp=Z,0.4nm,0.7s,baz=236,slow=4.2,SNR=3.9
OBN Obninsk 113.87 37 *i* PKIKP **PKiKP** 23 56 05.1 +0.6
OBN *e* 00 03 03.6
OBN pmax pmax
comp=Z,3.0nm,0.8s
KIV Kislovodsk 118.36 49 *i* PKIKP **PKPdf** 23 56 13.9 +0.2
KIV pmax pmax
comp=Z,3.0nm,1.1s
KIV MLR MLR
comp=Z,87nm,21.0s
KBZ Khabaz 118.52 50 PKP **PKPdf** 23 56 14.0 +0.2
comp=Z,0.8nm,0.5s,baz=186,slow=16,SNR=4.7
STKA Stephens Creek 122.05 212 PKP **PKPdf** 23 56 21.5 +0.3
comp=Z,1.1nm,0.5s,baz=93,slow=5.4,SNR=3.6
ARU Arti 125.63 32 *e*PKPdf **PKPdf** 23 56 28.1 +1.0
ARU Arti 125.63 32 *i* PKIKP **PKPdf** 23 56 27.7 +0.6
ARU 23 58 18.9
ARU 00 03 30.6
SEY Seymchan 126.40 338⇓*i* PKIKP **PKPdf** 23 56 30.1 +1.7
AKTO Aktyubinsk 127.49 39 PKP **PKPdf** 23 56 31.4 +0.5
comp=Z,0.7nm,0.3s,baz=346,slow=4.2,SNR=4.1
CTA Charters Tower 128.22 225 PKP **PKPdf** 23 56 34.0 +0.8
comp=Z,2.1nm,0.6s,baz=122,slow=13,SNR=3.1
NWAO Narrogin (SRO) 129.04 188 PKP **PKPdf** 23 56 36.7 +2.2
comp=Z,13nm,0.9s,baz=244,slow=13,SNR=2.8
ABKAR Abkulak array 129.06 40 *e*PKPdf **PKPdf** 23 56 35.0 +1.2
PETK Petropavlovsk- 129.08 325 PKP **PKPdf** 23 56 34.9 +1.1
comp=Z,0.9nm,0.6s,baz=46,slow=6.2,SNR=3.2
ASAR Alice Springs 132.63 210 PKP **PKPdf** 23 56 41.5 -0.1
comp=Z,1.1nm,0.6s,baz=135,slow=1.8,SNR=17
ASAR SKPbc **SKPbc** 23 59 58.2 -1.9
comp=Z,1.4nm,1.0s,baz=132,slow=3.5,SNR=5.2
BRVK Borovoye 133.21 32⇑*i* PKIKP **PKPdf** 23 56 43.2 +1.6
BVAR Borovoye Array 133.28 32 PKP **PKPdf** 23 56 41.7 0.0
comp=Z,0.5nm,0.5s,baz=302,slow=3.2,SNR=5.1
BVAR SKPbc **SKPbc** 00 00 01.3 0.0
comp=Z,0.6nm,0.8s,baz=336,slow=3.2,SNR=2.9
WB2 Warramunga Arr 135.52 213 *e*PKPdf **PKPdf** 23 56 47.3 +0.2
WRA Warramunga Arr 135.53 213 PKP **PKPdf** 23 56 47.5 +0.5
comp=Z,2.0nm,0.5s,baz=137,slow=1.8,SNR=32
WRA pPKP **pPKPdf** 23 57 15.1 +1.3
comp=Z,1.7nm,0.7s,baz=158,slow=1.7,SNR=4.9
WRA SKPbc **SKPbc** 00 00 08.7 -1.1
comp=Z,1.9nm,1.1s,baz=158,slow=3.5,SNR=5.0
WRAB Tennant Creek 135.53 213⇓*e*PKIKP **PKPdf** 23 56 46.1 -1.0
KURK Kurchatov 138.74 30 PKP **PKPdf** 23 56 51.3 -0.7
KURK Kurchatov 138.74 30 PKIKP **PKPdf** 23 56 51.3 -0.7
KURBB Kurchatov Arra 138.75 30 PKP **PKPdf** 23 56 51.3 -0.7
comp=Z,1.0nm,0.7s,baz=315,slow=2.3,SNR=6.6
ZAA0 Zalesovo Array 139.02 23 *e*PKPdf **PKPdf** 23 56 53.0 +0.6
ZALV Zalesovo Beam 139.02 23 PKhKP PKPpre 23 56 44.5
comp=Z,0.5nm,0.5s,baz=319,slow=4.0,SNR=2.8
ZALV PKP **PKPdf** 23 56 52.8 +0.4
comp=Z,1.9nm,0.6s,baz=286,slow=2.3,SNR=10
ZALV SKPbc **SKPbc** 00 00 18.6 -0.2
comp=Z,4.6nm,0.8s,baz=308,slow=4.1,SNR=14
ZALV Zalesovo Beam 139.02 23 *e*PKPdf **PKPdf** 23 56 52.5 +0.1
ZALV Zalesovo Beam 139.02 23 *e*PKIKP **PKPdf** 23 56 52.5 +0.1
YUK Yuzh-Kuril'sk 140.23 319 *e*PKIKP **PKPdf** 23 56 54.3 -0.6
YSS Yuzh-Sakhalins 140.48 324⇓*i*PKIKP **PKPdf** 23 56 55.0 -0.2
AAK Ala-Archa 141.00 43 *e*PKIKP **PKPdf** 23 56 56.8 +0.2
MK31 Makanchi Array 143.16 32 *e*PKPpre PKPpre 23 56 56.9
MK31 Makanchi Array 143.16 32 *e*PKIKP PKPpre 23 56 56.9
MKAR Makanchi Array 143.16 32 PKhKP PKPpre 23 56 56.5
comp=Z,0.7nm,0.5s,baz=306,slow=4.6,SNR=9.2
MKAR SKPbc **SKPbc** 00 00 29.4 -0.4
comp=Z,1.4nm,0.7s,baz=298,slow=3.9,SNR=8.3
MKAR Makanchi Array 143.16 32 *e*PKPdf PKPpre 23 56 58.3
MKAR Makanchi Array 143.16 32 *e*PKIKP PKPpre 23 56 56.0
MKAR pmax pmax
comp=Z,1.0nm,0.5s
MK01 Makanchi Array 143.18 32 *e*PKPpre PKPpre 23 56 57.2
KSH Kashi 143.42 47 PKP **PKPdf** 23 57 02.1 +1.2
KSH PP **PP** 00 00 16.2 +3.0
MOY Mondy 145.51 10 *e*PKIKP **PKPab** 23 57 05.2 +0.5
MOY pmax pmax
comp=Z,19nm,1.1s
ZAK Zakamensk 147.10 8 *e*PKP2 **PKPbc** 23 57 09.5 +0.4
ZAK pmax pmax
comp=Z,6.0nm,0.9s
USRK Ussuriysk Ar. 147.93 330 pPKPbc pPKPbc 23 57 40.4 +2.5
comp=Z,6.8nm,0.8s,baz=60,slow=2.6,SNR=4.6
WMQ Urumqi 147.96 31 *e*PKPbc **PKPdf** 23 57 07.6 -0.9
WMQ LR LR
comp=Z,450nm,28.1s
WMQ LR LR
comp=Z,260nm,28.1s
WMQ LR LR
comp=Z,430nm,25.3s
MJA0 Matsu Arr-Jizo 148.98 313 *e*PKP2 **PKPbc** 23 57 14.9 +0.4
MJA0 pmax pmax
comp=Z,1.0nm,0.4s
MJAR Matsushiro Arr 149.01 313 PKPbc **PKPbc** 23 57 14.6 +0.1
comp=Z,1.2nm,0.4s,baz=52,slow=3.2,SNR=6.4
MJAR pPKPbc **pPKPbc** 23 57 42.3 +1.3
comp=Z,6.6nm,0.9s,baz=137,slow=1.6,SNR=4.4
SONA1 Songino Array 149.94 5 *e*PKPdf **PKPdf** 23 57 12.5 +0.9
SONA1 *e*PKPbc **PKiKP** 23 57 17.3 -0.2
SONM Songino Array 149.95 5 PKP **PKPdf** 23 57 13.4 +1.7
comp=Z,4.9nm,0.8s,baz=333,slow=2.2,SNR=6.6
SONM PKPbc **PKiKP** 23 57 17.3 -0.1
comp=Z,4.9nm,0.9s,baz=307,slow=1.7,SNR=26
SONM pPKPbc **sPKPdf** 23 57 45.6 -2.8
comp=Z,4.4nm,0.8s,baz=333,slow=1.2,SNR=5.4
ULN Ulaanbaatar 149.97 4 *e*PKPbc **PKPbc** 23 57 17.6 +0.9
ULN Ulaanbaatar 149.97 4 *e*PKP2 **PKPbc** 23 57 17.6 +0.9
HHC Hu-ho-hao-te 157.06 357 *e*PKP **PKPdf** 23 57 22.8 +0.8
LZH Lanzhou 161.02 16 *e*PKP **PKPdf** 23 57 22.9 -3.9
LZH pPKP pPKPdf 23 57 49.2 -4.5
LZH sPKP 23 58 06.0
LZH LR LR
comp=Z,140nm,17.9s
LZH LR LR
comp=Z,130nm,16.3s
LZH LR LR
comp=Z,170nm,19.4s
NJ2 Nanjing 163.81 332 *e*PKP **PKPdf** 23 57 29.1 -0.4
CD2 Chengdu 165.79 23 PKP **PKPdf** 23 57 29.0 -2.3
CMAR Chiang Mai Arr 169.38 85 PKPab **PKPab** 23 58 46.9 -0.5
comp=Z,1.5nm,0.3s,baz=276,slow=7.0,SNR=6.7
GYA Guiyang 170.87 20 *e*PKP **PKPdf** 23 57 33.2 -1.7
GYA PKPab **PKPab** 23 58 54.6 +1.0
GYA PKS **PKSdf** 00 01 04.9 -2.7
GYA PP **PP** 00 02 45.0 +1.9
GYA AMB AMB
comp=Z,120nm,7.9s

SOME ***11*** *23:43:01.0, 40°.32N×77°.53E, h5km*
NNC ***11*** *23:43:01.7±2.0, 40°.37N×77°.56E, h0km, mb3.8, mpv3.4,*
Error ellipse: s-maj=15.5km s-min=8.4km az=144.0
KRNET ***11*** *23:43:02.2±0.1, 40°.44N×77°.45E, mb3.3*
ISC 11 23:43:04.9±1.7, 40°.55N±0°.06×77°.34E±0°.03, h3km±11km, n55, σ1s80/92, 39C-9D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.23**	**17**	⇑*i*P	**Pn**	**23 43 27.4**	**-2.0**
TARG	baz=11			⇑*i*S	**Sn**	**23 43 46.2**	**-0.5**
NRN	**Naryn**	**1.34**	**311**	⇑*i*P	**Pb**	**23 43 30.3**	**-0.6**
NRN	baz=12			⇑*i*S	**Sg**	**23 43 51.1**	**+3.1**
ULHL	**Ulahol**	**1.88**	**334**	P	**Pg**	**23 43 40.7**	**-0.2**
	SNR=8.3						
ULHL	**Ulahol**	**1.88**	**334**	⇑*e*P	**Pb**	**23 43 39.0**	**-1.0**
ULHL	baz=34			⇑*i*S	**Sg**	**23 44 06.7**	**+1.4**
PRZ	**Przheval'sk**	**2.09**	**22**	⇑*i*P	**Pn**	**23 43 41.2**	**+0.2**
PRZ	baz=19			⇑*i*S	**Sb**	**23 44 09.8**	**-0.2**
KZA	**Kyzart**	**2.19**	**315**	P	**Pb**	**23 43 45.6**	**+0.2**
	SNR=58						
KZA	**Kyzart**	**2.19**	**315**	⇑*i*P	**Pb**	**23 43 43.4**	**-2.0**
KZA	baz=15			⇑*i*S	**Sg**	**23 44 14.5**	**-0.7**
BOOM	**Boomskoye usch**	**2.20**	**332**	⇑*i*P	**Pb**	**23 43 43.6**	**-1.9**
BOOM	baz=32			⇑*i*S	**Sg**	**23 44 15.0**	**-0.6**
TNSS	**Tian-Shan**	**2.50**	**353**	*e*P	**Pg**	**23 43 52.0**	**-0.9**
	95nm,0.6s						
TNSS	98nm,1.0s			*e*S	**Sg**	**23 44 28.8**	**+3.6**
IZV	**Izvestkoviy**	**2.54**	**348**	*e*P	**Pb**	**23 43 51.7**	**+0.5**
IZV	48nm,0.6s			*e*S	**Sg**	**23 44 28.6**	**+2.1**
MDOK	**Medeo**	**2.62**	**355**	Pg	**Pb**	**23 43 52.9**	**+0.4**
MDOK	115nm,0.7s			⇑Lg	Lg	23 44 32.0	
MDOK	**Medeo**	**2.62**	**355**	*e*P	**Pb**	**23 43 53.3**	**+0.8**
MDOK	38nm,0.8s			*e*S	**Sg**	**23 44 31.0**	**+2.0**
SATY	**Saty**	**2.63**	**17**	*e*P	**Pb**	**23 43 53.1**	**+0.4**
SATY	147nm,0.8s			*e*S	**Sg**	**23 44 30.8**	**+1.4**
MTBS	**Maitube**	**2.66**	**346**	*e*P	**Pg**	**23 43 54.7**	**-1.2**
MTBS	126nm,0.7s			*e*S	**Sg**	**23 44 33.5**	**+3.0**
KNDC	**Almaty**	**2.68**	**354**	⇑Pg	**Pg**	**23 43 55.0**	**-1.2**
KNDC	48nm,0.7s			⇓Lg	Lg	23 44 35.2	
KOTS	**Kotyrbulak**	**2.69**	**357**	*e*P	**Pb**	**23 43 54.0**	**+0.3**
KOTS	20nm,0.4s			*e*S	**Sg**	**23 44 32.2**	**+1.0**
KST	**Kastek**	**2.69**	**338**	*e*P	**Pg**	**23 43 55.0**	**-1.5**
KST	15nm,0.7s			*e*S	**Sg**	**23 44 34.2**	**+2.8**
TKM2	**Tokmak 2**	**2.70**	**332**	⇑Pg	**Pb**	**23 43 53.6**	**-0.4**
TKM2	8.0nm,0.5s			⇓Lg	Lg	23 44 35.5	

	18nm,0.4s						
TKM2	**Tokmak 2**	**2.70**	**332**	P		**Pb**	**23 43 53.6 -0.4**
	SNR=13						
TKM2	**Tokmak 2**	**2.70**	**332**	⇓*i*P		**Pn**	**23 43 50.7 +1.3**
	baz=31						
TKM2				⇓*i*S		**Sb**	**23 44 26.5 -1.1**
	baz=31						
UCH	**Uchtor**	**2.70**	**309**	P		**Pb**	**23 43 52.6 -1.6**
	SNR=18						
UCH	**Uchtor**	**2.70**	**309**	⇑*i*P		**Pn**	**23 43 50.7 +1.0**
	baz=10.0						
UCH				⇑*i*S		**Sb**	**23 44 26.4 -1.5**
	baz=10.0						
ZHN	**Zhinishke**	**2.74**	**17**	*e*P		**Pb**	**23 43 54.7 +0.1**
	14nm,0.2s						
ZHN				*e*S		**Sg**	**23 44 33.5 +0.6**
	122nm,0.3s						
KBK	**Karagaybulak**	**2.76**	**320**	P		**Pg**	**23 43 57.5 -0.3**
	SNR=18						
KBK	**Karagaybulak**	**2.76**	**320**	⇑*i*P		**Pn**	**23 43 51.6 +1.4**
	baz=21						
KBK				⇑*i*S		**Sb**	**23 44 28.1 -1.2**
	baz=21						
UZB	**Uzynbulak**	**2.88**	**25**	*e*P		**Pb**	**23 43 56.8 -0.3**
	17nm,0.7s						
UZB				*e*S		**Sg**	**23 44 36.7 -0.8**
	43nm,0.8s						
DGS	**Degeres**	**2.93**	**337**	*e*P		**Pg**	**23 43 59.4 -1.6**
	4.9nm,0.6s						
DGS				*e*S		**Sg**	**23 44 41.4 +2.4**
	62nm,0.7s						
AAK	**Ala-Archa**	**2.98**	**315**	⇑Pg		**Pg**	**23 44 00.7 -1.3**
	20nm,0.8s						
AAK				Lg		Lg	23 44 44.2
	88nm,0.8s						
AAK	**Ala-Archa**	**2.98**	**315**	P		**Pg**	**23 44 00.4 -1.6**
	SNR=12						
AAK	**Ala-Archa**	**2.98**	**315**	⇑*i*P		**Pn**	**23 43 54.4 +1.2**
	baz=16						
AAK				⇑*i*S		**Sb**	**23 44 32.7 -2.9**
	baz=16						
SFK	**Sufi-Kurgan**	**2.98**	**261**	⇓Pg		**Pb**	**23 43 58.6 -0.2**
	4.6nm,0.5s						
SFK				⇑Lg		Lg	23 44 40.0
	19nm,0.4s						
SFK	**Sufi-Kurgan**	**2.98**	**261**	⇓*i*P		**Pn**	**23 43 54.1 +0.8**
	baz=63						
SFK				⇓*i*S		**Sb**	**23 44 32.7 -3.0**
	baz=63						
KURS	**Kuram**	**3.00**	**12**	*e*P		**Pb**	**23 43 59.3 +0.3**
	20nm,0.8s						
KURS				*e*S		**Sg**	**23 44 41.3 0.0**
	49nm,0.7s						
FRU1	**Bishkek**	**3.03**	**319**	⇑*e*P		**Pn**	**23 43 55.0 +1.1**
	baz=19						
FRU1				⇑*i*S		**Sb**	**23 44 34.2 -2.8**
	baz=19						
SHLS	**Shalkode**	**3.05**	**31**	*e*P		**Pg**	**23 44 02.4 -0.9**
	30nm,0.5s						
SHLS				*e*S		**Sg**	**23 44 46.7 +3.9**
	117nm,0.4s						
KPKS	**Kokpek**	**3.08**	**19**	*e*P		**Pb**	**23 44 00.8 +0.4**
	35nm,0.3s						
KPKS				*e*S		**Sg**	**23 44 43.6 -0.3**
	102nm,0.5s						
CHMS	**Chumysh**	**3.12**	**323**	P		**Pb**	**23 43 58.8 -2.1**
	SNR=5.8						
CHMS	**Chumysh**	**3.12**	**323**	⇑*i*P		**Pn**	**23 43 56.4 +1.4**
	baz=23						
CHMS				⇑*i*S		**Sb**	**23 44 36.6 -2.8**
	baz=23						
AML	**Almayashu**	**3.16**	**301**	P		**Pb**	**23 43 59.3 -2.7**
	SNR=7.2						
PDGK	**Podgornoye**	**3.21**	**29**	⇓Pg		**Pb**	**23 44 02.2 -0.4**
	15nm,0.6s						
PDGK				⇑Lg		Lg	23 44 43.6
	51nm,0.7s						
PDGK	**Podgornoye**	**3.21**	**29**	⇑*i*P		**Pn**	**23 43 56.5 +0.2**
	baz=27						
PDGK				⇑*i*S		**Sn**	**23 44 36.9 +1.8**
	baz=27						
CHKK	**Chushkaly**	**3.31**	**356**	*e*P		**Pb**	**23 44 05.6 +1.3**
	8.9nm,0.4s						
CHKK				*e*S		**Sg**	**23 44 52.0 +0.8**
	96nm,0.6s						
ARSB	**Arslanbob**	**3.39**	**285**	⇑*e*P		**Pn**	**23 44 00.5 +1.7**
	baz=86						
ARSB				⇑*e*S		**Sb**	**23 44 42.8 -4.5**
	baz=86						
EKS2	**Erkin-Say**	**3.40**	**309**	P		**Pb**	**23 44 03.1 -2.8**
	SNR=8.4						
KUU	**Kurty**	**3.42**	**348**	*e*P		**Pb**	**23 44 07.6 +1.4**
	6.4nm,0.5s						
KUU				*e*S		**Sg**	**23 44 55.8 +1.1**
	39nm,0.9s						
USP	**Ospenovka**	**3.44**	**323**	P		**Pg**	**23 44 09.3 -1.5**
	SNR=8.6						
USP	**Ospenovka**	**3.44**	**323**	⇑*i*P		**Pn**	**23 44 01.0 +1.6**
	baz=23						
USP				⇑*i*S		**Sb**	**23 44 44.3 -4.4**
	baz=23						
ARXS	**Arharly**	**3.68**	**6**	*e*P		**Pb**	**23 44 12.0 +1.5**
	5.4nm,0.5s						
ARXS				*e*S		**Sg**	**23 45 03.1 +0.1**
	33nm,0.5s						
MRKS	**Merke**	**3.78**	**307**	*e*P		**Pb**	**23 44 13.6 +1.3**
	9.2nm,0.3s						
MRKS				*e*S		**Sg**	**23 45 06.2 0.0**
	20nm,0.4s						
MNAS	**Manas**	**4.11**	**300**	⇑Pg		**Pg**	**23 44 25.3 +1.7**
	5.2nm,0.6s						
MNAS				⇓Lg		Lg	23 45 17.3
	12nm,0.6s						
MNAS	**Manas**	**4.11**	**300**	⇑*i*P		**Pn**	**23 44 09.9 +1.2**
	baz=0.0						
MNAS				⇑*i*S		**Sn**	**23 45 00.2 +2.8**
	baz=0.0						
DJR	**Jarkent**	**4.19**	**25**	*e*P		**Pb**	**23 44 20.4 +1.1**
	10nm,0.5s						
DJR				*e*S		**Sg**	**23 45 17.5 -2.0**
	24nm,0.4s						
KAPS	**Kapalarasan**	**4.96**	**17**	*e*P		**Pb**	**23 44 35.6 +3.2**
	3.0nm,0.7s						
KAPS				*e*S		**Sg**	**23 45 43.5 -0.6**
	15nm,0.8s						
KK31	**Karatay Array**	**5.70**	**299**	Pg		**Pb**	**23 44 48.4 +3.5**
	0.3nm,0.3s,baz=121,slow=15,SNR=6.5						
KK31				Lg		Lg	23 46 07.5
	0.6nm,0.2s,baz=111,slow=30,SNR=4.2						
MK31	**Makanchi Array**	**7.20**	**28**	Pn		**Pn**	**23 44 48.4 -2.6**
	0.2nm,0.3s,baz=205,slow=14,SNR=7.0						
MK31				⇑Sn		**Sn**	**23 46 15.1 +1.8**
	0.7nm,0.6s,baz=204,slow=23,SNR=3.7						
MK31				⇑Lg		Lg	23 46 50.0
	1.5nm,0.7s						

IDC 11 23:43:15.1±1.6, 2°.00N×125°.71E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/53, mbtmp3.5/4, Error ellipse: s-maj=173.1km s-min=20.6km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.39**	**159**	P	P	23 48 25.4	-0.4
	0.9nm,0.5s,baz=337,slow=10,SNR=19						
ASAR	**Alice Springs**	**26.73**	**163**	P	P	23 48 56.8	+0.3
	0.4nm,0.6s,baz=346,slow=7.4,SNR=3.5						
MKAR	**Makanchi Array**	**58.40**	**326**	P	P	23 53 12.7	+0.1
	0.2nm,0.5s,baz=126,slow=6.9,SNR=3.8						
KURBB	**Kurchatov Arra**	**62.65**	**328**	P	P	23 53 41.2	-0.2
	0.2nm,0.4s,baz=131,slow=6.4,SNR=3.0						

IDC 12 00:38:32.3±5.7, 16°.99S×168°.47E, h216km±56km, mb3.4/4, mb1 3.5/5, mb1mx3.2/44, mbtmp3.9/5, Error ellipse: s-maj=70.0km s-min=30.6km az=163.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.40**	**200**	P	Pn	00 39 52.2	0.0
	1.3nm,0.3s,baz=164,slow=21,SNR=12						
DZM				S	S	00 40 56.1	+0.7
	2.7nm,0.3s,baz=113,slow=21,SNR=6.6						
WRA	**Warramunga Arr**	**32.47**	**259**	P	P	00 44 42.3	-0.4
	0.2nm,0.7s,baz=89,slow=10.0,SNR=4.7						
WRA				PcP	PcP	00 47 23.8	-0.7
	0.5nm,0.9s,baz=86,slow=3.5,SNR=3.6						
ASAR	**Alice Springs**	**33.03**	**253**	P	P	00 44 47.5	0.0
	2.7nm,0.5s,baz=79,slow=9.1,SNR=35						

ILAR	**Eielson Array**	**88.32**	**18**	P	P	00 50 58.2	-0.7
	0.3nm,0.7s,baz=226,slow=6.2,SNR=3.4						
MKAR	**Makanchi Array**	**99.63**	**316**	P	Pdif	00 51 52.3	+1.2
	0.2nm,0.4s,baz=97,slow=5.1,SNR=5.1						
ARCES	**ARCESS Array B**	**122.72**	**345**	PKP	PKPdf	00 57 01.1	-0.6
	2.5nm,1.0s,baz=48,slow=2.7,SNR=6.2						
FINES	**FINESS Array B**	**128.24**	**338**	PKP	PKPdf	00 57 13.1	+0.7
	1.6nm,1.0s,baz=96,slow=2.8,SNR=3.8						

*IDC **12** 00:47:29.3±1.5, 37°.80N×17°.72E, h0km, mb3.8/4, mb1 3.5/10, mb1mx3.3/65, mbtmp3.4/10, ML3.2/4, MS4.5/1, Ms1 4.5/1, ms1mx2.5/65, Error ellipse: s-maj=28.9km s-min=19.7km az=171.0*
*ISCJB **12** 00:47:31.1±0.3, 37°.96N±0°.02×17°.75E±0°.02, h10km, mb3.7/4, MS4.4/1, Error ellipse: s-maj=2.9km s-min=2.1km az=15.6*
*THE **12** 00:47:33.4, 37°.66N×17°.72E, h32km±31km, ML3.1/8, Error ellipse: s-maj=31.7km s-min=0.7km az=0.0*
*ROM **12** 00:47:34.0±0.7, 37°.62N±0°.04×17°.61E±0°.05, h37km±8km, ML3.4/8*
*CSEM **12** 00:47:33.8±0.1, 37°.86N×17°.72E, h30km, ML3.4, Error ellipse: s-maj=3.6km s-min=2.4km az=23.0*
*PDG **12** 00:47:34.5±0.3, 38°.26N×17°.71E, h10km±1km, ML3.8/11, Error ellipse: s-maj=3.4km s-min=1.4km az=90.0*
*BEO **12** 00:47:42.7±1.6, 38°.46N×17°.96E, h33km*
*TIR **12** 00:49:16.0, 38°.00N×17°.75E, h50km, Md4.6/9*

ISC 12 00:47:30.6±0.7, 37°.83N±0°.04×17°.70E±0°.02, h10km, n227, σ1§90/305, mb4.0/4, 20C-10D, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOI	**Samo**	**1.32**	**281**	P	**Pg**	**00 47 56.8**	**+0.8**
SOI				S	**Sg**	**00 48 13.9**	**+0.8**
SOI	**Samo**	**1.32**	**281**	P	**Pg**	**00 47 56.8**	**+0.8**
SOI				S	**Sg**	**00 48 13.9**	**+0.8**
SOI				AML	AML		
	comp=E,536μm,0.5s						
SOI				AML	AML		
	comp=N,398μm,0.4s						
SOI				AML	AML		
	comp=N,398μm,0.4s						
SOI				AML	AML		
	comp=E,536μm,0.5s						
GRI	**Girifalco**	**1.41**	**315**	P	**Pg**	**00 47 58.8**	**+1.1**
GRI	**Girifalco**	**1.41**	**315**	P	**Pg**	**00 47 58.8**	**+1.1**
CEL	**Celeste**	**1.49**	**287**	P	**Pb**	**00 47 59.4**	**+1.0**
CEL				S	**Sb**	**00 48 17.9**	**+0.6**
CEL	**Celeste**	**1.49**	**287**	P	**Pb**	**00 47 59.4**	**+1.0**
CEL				S	**Sb**	**00 48 17.9**	**+0.6**
TIP	**Timpagrande**	**1.53**	**332**	P	**Pb**	**00 48 00.2**	**+1.0**
TIP				S	**Sg**	**00 48 21.2**	**+1.3**
TIP	**Timpagrande**	**1.53**	**332**	P	**Pb**	**00 48 00.1**	**+1.0**
TIP				S	**Sg**	**00 48 21.2**	**+1.3**
TIP	**Timpagrande**	**1.53**	**332**	P	**Pb**	**00 48 00.1**	**+1.0**
TIP				S	**Sg**	**00 48 21.7**	**+1.8**
MTTG	**Motta San Giov**	**1.59**	**277**	P	**Pb**	**00 48 00.3**	**+0.1**
MTTG				S	**Sn**	**00 48 19.9**	**+0.3**
MTTG	**Motta San Giov**	**1.59**	**277**	P	**Pb**	**00 48 00.3**	**+0.1**
MTTG				S	**Sn**	**00 48 19.9**	**+0.3**
MTTG				AML	AML		
	comp=E,536μm,1.0s						
MTTG				AML	AML		
	comp=N,990μm,0.8s						
MTTG				AML	AML		
	comp=N,990μm,0.8s						
MTTG				AML	AML		
	comp=E,536μm,1.0s						
MCSR	**Castroreale**	**1.95**	**278**	P	**Pn**	**00 48 05.6**	**+1.8**
MCSR	**Castroreale**	**1.95**	**278**	P	**Pn**	**00 48 05.6**	**+1.8**
MCSR				AML	AML		
	comp=E,1305μm,0.3s						
MCSR				AML	AML		
	comp=N,1685μm,0.8s						
MCSR				AML	AML		
	comp=N,1685μm,0.8s						
MCSR				AML	AML		
	comp=E,1305μm,0.3s						
NOV	**Novara**	**2.03**	**276**	P	**Pn**	**00 48 06.8**	**+1.8**
NOV				AML	AML		
	comp=E,684μm,0.5s						
NOV				AML	AML		
	comp=N,934μm,0.4s						
NOV				AML	AML		
	comp=N,934μm,0.4s						
NOV				AML	AML		
	comp=E,684μm,0.5s						
AGST	**Augusta-Monte**	**2.05**	**254**	P	**Pn**	**00 48 03.3**	**-1.8**
HAGA	**Augusta**	**2.09**	**256**	P	**Pn**	**00 48 04.7**	**-1.0**
HAGA	**Augusta**	**2.09**	**256**	P	**Pn**	**00 48 04.7**	**-1.0**
HAGA				S	**Sn**	**00 48 26.8**	**-5.0**
HAGA				AML	AML		
	comp=E,458μm,0.9s						
HAGA				AML	AML		
	comp=N,404μm,0.5s						
HAGA				AML	AML		
	comp=N,404μm,0.5s						
HAGA				AML	AML		
	comp=E,458μm,0.9s						
HLNI	**Lentini**	**2.30**	**259**	P	**Pn**	**00 48 07.2**	**-1.4**
HLNI				S	**Sn**	**00 48 32.0**	**-4.9**
HLNI				AML	AML		
	comp=E,1110μm,0.7s						
HLNI				AML	AML		
	comp=N,1185μm,0.8s						
HLNI				AML	AML		
	comp=N,1185μm,0.8s						
HLNI				AML	AML		
	comp=E,1110μm,0.7s						
VLS	**Valsamata**	**2.31**	**81**	P	**Pn**	**00 48 08.9**	**+0.1**
VLS				S	**Sn**	**00 48 36.8**	**-0.4**
VLS	**Valsamata**	**2.31**	**81**	P	**Pn**	**00 48 08.9**	**+0.1**
VLS				S	**Sn**	**00 48 36.8**	**-0.4**
FSK	**Fiskardo**	**2.34**	**74**	P	**Pn**	**00 48 09.9**	**+0.7**
FSK				S	**Sn**	**00 48 38.9**	**+0.9**
KFL	**Anninata**	**2.46**	**83**	P	**Pn**	**00 48 10.9**	**+0.1**
KFL	**Anninata**	**2.46**	**83**	P	**Pn**	**00 48 10.9**	**+0.1**
MSFR	**San Fratello**	**2.46**	**276**	P	**Pn**	**00 48 12.5**	**+1.6**
MSFR	**San Fratello**	**2.46**	**276**	P	**Pn**	**00 48 12.5**	**+1.6**
MSFR				AML	AML		
	comp=E,152μm,0.8s						
MSFR				AML	AML		
	comp=N,238μm,0.4s						
MSFR				AML	AML		
	comp=E,152μm,0.8s						
MSFR				AML	AML		
	comp=N,238μm,0.4s						
GALF	**Gagliano Caste**	**2.48**	**268**	P	**Pn**	**00 48 12.0**	**+0.8**
GALF	**Gagliano Caste**	**2.48**	**268**	P	**Pn**	**00 48 12.0**	**+0.8**
GALF				AML	AML		
	comp=E,374μm,0.4s						
GALF				AML	AML		
	comp=N,303μm,0.6s						
GALF				AML	AML		
	comp=E,374μm,0.4s						
GALF				AML	AML		
	comp=N,303μm,0.6s						
KEK	**Kerkira**	**2.49**	**41**	P	**Pn**	**00 48 12.5**	**+1.2**
KEK	**Kerkira**	**2.49**	**41**	P	**Pn**	**00 48 12.5**	**+1.2**
LKD2	**Lefkada island**	**2.52**	**67**	P	**Pn**	**00 48 12.7**	**+1.1**
LKD2				S	**Sn**	**00 48 43.2**	**+0.9**
LKD2	**Lefkada island**	**2.52**	**67**	P	**Pn**	**00 48 12.7**	**+1.1**
LKD2				S	**Sn**	**00 48 43.2**	**+0.9**
VAE	**Valguarnera**	**2.63**	**263**	Pn	**Pn**	**00 48 14.4**	**+1.2**
	comp=N,1.1nm,0.3s,baz=69,slow=17,SNR=8.2						
VAE				Sn	**Sn**	**00 48 42.2**	**-3.0**
	comp=N,7.1nm,0.3s,baz=302,slow=13,SNR=11						
SGD	**Sagiada**	**2.66**	**47**	P	**Pn**	**00 48 15.4**	**+1.8**
SGD	**Sagiada**	**2.66**	**47**	P	**Pn**	**00 48 15.4**	**+1.8**
TAR1	**Taranto**	**2.71**	**353**	*e*Pn	**Pn**	**00 48 14.3**	**+0.1**
TAR1				Sn	**Sn**	**00 48 46.4**	**-0.6**
SRN	**Sarande**	**2.72**	**41**	P	**Pn**	**00 48 15.5**	**+1.1**
SRN	**Sarande**	**2.72**	**41**	*i* PN	**Pn**	**00 48 15.0**	**+0.6**
SRN				*i* SN	**Sn**	**00 48 46.0**	**-1.3**
SRN	**Sarande**	**2.72**	**41**	P	**Pn**	**00 48 15.5**	**+1.1**
VTN	**Vitineika**	**2.76**	**87**	P	**Pn**	**00 48 15.3**	**+0.4**
VTN				S	**Sn**	**00 48 47.9**	**-0.4**
VTN	**Vitineika**	**2.76**	**87**	P	**Pn**	**00 48 15.3**	**+0.4**
VTN				S	**Sn**	**00 48 47.9**	**-0.4**
PLLN	**Pollina**	**2.81**	**274**	P	**Pn**	**00 48 17.3**	**+1.6**
PLLN	**Pollina**	**2.81**	**274**	P	**Pn**	**00 48 17.3**	**+1.6**
CGL1	**Ceglie Messapi**	**2.82**	**357**	*e*Pn	**Pn**	**00 48 17.0**	**+1.2**
CGL1				Sn	**Sn**	**00 48 49.8**	**-0.1**
MASS	**Massafra**	**2.83**	**351**	*e*Pn	**Pn**	**00 48 17.1**	**+1.2**
MASS				Sn	**Sn**	**00 48 50.3**	**+0.3**
PDO	**Prodromos**	**2.85**	**73**	P	**Pn**	**00 48 17.5**	**+1.3**
PDO	**Prodromos**	**2.85**	**73**	P	**Pn**	**00 48 17.5**	**+1.3**
DSL	**Palaion Diasel**	**2.97**	**63**	P	**Pn**	**00 48 19.9**	**+2.1**
DSL	**Palaion Diasel**	**2.97**	**63**	P	**Pn**	**00 48 19.9**	**+2.1**
RLS	**Riolos of Patr**	**2.99**	**85**	P	**Pn**	**00 48 18.6**	**+0.6**
RLS				S	**Sn**	**00 48 53.4**	**-0.5**
RLS	**Riolos of Patr**	**2.99**	**85**	P	**Pn**	**00 48 18.6**	**+0.6**
RLS				S	**Sn**	**00 48 53.4**	**-0.5**
FASA	**Fasano**	**2.99**	**355**	*e*Pn	**Pn**	**00 48 19.2**	**+1.1**
FASA				Sn	**Sn**	**00 48 53.2**	**-0.8**
JAN	**Janina**	**3.06**	**53**	P	**Pn**	**00 48 21.1**	**+2.0**
JAN	**Janina**	**3.06**	**53**	P	**Pn**	**00 48 21.1**	**+2.0**
SG1	**Sgolgore (BA)**	**3.10**	**346**	*e*Pn	**Pn**	**00 48 20.8**	**+1.1**
SG1				Sn	**Sn**	**00 48 56.8**	**-0.1**
PVO	**Paravola**	**3.12**	**74**	P	**Pn**	**00 48 20.5**	**+0.7**
PVO				S	**Sn**	**00 48 57.8**	**+0.7**
PVO	**Paravola**	**3.12**	**74**	P	**Pn**	**00 48 20.5**	**+0.7**
PVO				S	**Sn**	**00 48 57.8**	**+0.7**
DRO	**Drossia**	**3.18**	**87**	P	**Pn**	**00 48 21.7**	**+1.0**
DRO				S	**Sn**	**00 48 59.0**	**+0.4**
DRO	**Drossia**	**3.18**	**87**	P	**Pn**	**00 48 21.7**	**+1.0**
DRO				S	**Sn**	**00 48 59.0**	**+0.4**
AMT	**Artemida-Makis**	**3.20**	**94**	P	**Pn**	**00 48 20.9**	**-0.1**
AMT				S	**Sn**	**00 48 58.5**	**-0.6**
AMT	**Artemida-Makis**	**3.20**	**94**	P	**Pn**	**00 48 20.9**	**-0.1**
AMT				S	**Sn**	**00 48 58.5**	**-0.6**
WDD	**Wied Dalam**	**3.23**	**233**	AML	AML		
	comp=N,500μm,0.4s						
WDD				AML	AML		
	comp=E,450μm,0.7s						
WDD				AML	AML		
	comp=N,500μm,0.4s						
WDD				AML	AML		
	comp=E,450μm,0.7s						
BAI	**Bari**	**3.33**	**349**	*e*Pn	**Pn**	**00 48 23.9**	**+1.2**
BAI				Sn	**Sn**	**00 49 00.5**	**-1.8**
PYL	**PYLOS**	**3.36**	**105**	P	**Pn**	**00 48 22.6**	**-0.5**
PYL	**PYLOS**	**3.36**	**105**	P	**Pn**	**00 48 22.6**	**-0.5**
EFP	**Efpalio**	**3.37**	**79**	P	**Pn**	**00 48 24.5**	**+1.2**
EFP	**Efpalio**	**3.37**	**79**	P	**Pn**	**00 48 24.5**	**+1.2**
LAKA	**Lakka**	**3.40**	**82**	P	**Pn**	**00 48 24.5**	**+0.7**
LAKA				S	**Sn**	**00 49 03.4**	**-0.9**
LAKA	**Lakka**	**3.40**	**82**	P	**Pn**	**00 48 24.5**	**+0.7**
LAKA				S	**Sn**	**00 49 03.4**	**-0.9**
EVR	**Evrytania**	**3.41**	**70**	P	**Pn**	**00 48 24.9**	**+1.0**
EVR	**Evrytania**	**3.41**	**70**	P	**Pn**	**00 48 24.9**	**+1.0**
ANX	**Ano Chora**	**3.41**	**76**	P	**Pn**	**00 48 25.6**	**+1.6**
ANX	**Ano Chora**	**3.41**	**76**	P	**Pn**	**00 48 25.6**	**+1.6**
ITM	**Ithomi**	**3.43**	**100**	P	**Pn**	**00 48 24.2**	**+0.1**
ITM	**Ithomi**	**3.43**	**100**	P	**Pn**	**00 48 24.2**	**+0.1**
TRIZ	**Trizonia**	**3.49**	**80**	P	**Pn**	**00 48 26.0**	**+1.0**
TRIZ	**Trizonia**	**3.49**	**80**	P	**Pn**	**00 48 26.0**	**+1.0**
KLV	**Kalavryta, Ach**	**3.53**	**85**	P	**Pn**	**00 48 26.3**	**+0.8**
KLV	**Kalavryta, Ach**	**3.53**	**85**	P	**Pn**	**00 48 26.3**	**+0.8**
KPRO	**Kipourio**	**3.56**	**52**	P	**Pn**	**00 48 28.5**	**+2.5**
KPRO	**Kipourio**	**3.56**	**52**	P	**Pn**	**00 48 28.5**	**+2.5**
TRIP	**Tripoli**	**3.64**	**93**	P	**Pn**	**00 48 27.8**	**+0.7**
TRIP	**Tripoli**	**3.64**	**93**	P	**Pn**	**00 48 27.8**	**+0.7**
NEST	**Nestorio**	**3.67**	**44**	P	**Pn**	**00 48 30.4**	**+2.9**
NEST	**Nestorio**	**3.67**	**44**	P	**Pn**	**00 48 30.4**	**+2.9**
VLX	**Vlachokerasia**	**3.75**	**96**	P	**Pn**	**00 48 28.2**	**-0.4**
VLX	**Vlachokerasia**	**3.75**	**96**	P	**Pn**	**00 48 28.2**	**-0.4**
THL	**Klokotos Trika**	**3.79**	**62**	P	**Pn**	**00 48 31.2**	**+2.1**
THL	**Klokotos Trika**	**3.79**	**62**	P	**Pn**	**00 48 31.2**	**+2.1**
AGG	**Agios Georgios**	**3.83**	**71**	P	**Pn**	**00 48 31.1**	**+1.5**
AGG	**Agios Georgios**	**3.83**	**71**	P	**Pn**	**00 48 31.1**	**+1.5**
DYR	**Agios Nikonas**	**3.85**	**105**	P	**Pn**	**00 48 29.5**	**-0.4**
DYR	**Agios Nikonas**	**3.85**	**105**	P	**Pn**	**00 48 29.5**	**-0.4**
TIR	**Tirane**	**3.89**	**25**	*e*Pn	**Pn**	**00 48 32.2**	**+1.8**
TIR	**Tirane**	**3.89**	**25**	⇑*i*P	**Pn**	**00 48 30.2**	**-0.2**
TIR	**Tirane**	**3.89**	**25**	⇑*i*P	**Pn**	**00 48 30.2**	**-0.2**
TIR	**Tirane**	**3.89**	**25**	*e*Pn	**Pn**	**00 48 32.2**	**+1.8**
TIR				S	**Sn**	**00 49 10.9**	**-5.2**
KZN	**Kozani**	**4.02**	**51**	P	**Pn**	**00 48 34.7**	**+2.4**
KZN	**Kozani**	**4.02**	**51**	P	**Pn**	**00 48 34.7**	**+2.4**
OHR	**Ohrid**	**4.06**	**35**	*i* Pn	**Pn**	**00 48 34.2**	**+1.4**
OHR				*e*Sn	**Sn**	**00 49 21.3**	**+0.8**
FNA	**Florina**	**4.10**	**43**	*e*Pn	**Pn**	**00 48 35.6**	**+2.2**
FNA				*e*Sn	**Sn**	**00 49 14.0**	**-7.5**
FNA	**Florina**	**4.10**	**43**	P	**Pn**	**00 48 35.7**	**+2.3**
FNA	**Florina**	**4.10**	**43**	*e*Pn	**Pn**	**00 48 35.6**	**+2.2**
LRSO	**Larissa Observ**	**4.10**	**62**	P	**Pn**	**00 48 35.4**	**+2.0**
LRSO	**Larissa Observ**	**4.10**	**62**	P	**Pn**	**00 48 35.4**	**+2.0**
BIA	**Bitola**	**4.24**	**40**	*i* Pn	**Pn**	**00 48 37.8**	**+2.4**
BIA				*e*Sn	**Sn**	**00 49 25.3**	**+0.3**
LKR	**Lokris**	**4.25**	**77**	P	**Pn**	**00 48 36.5**	**+1.1**
LKR	**Lokris**	**4.25**	**77**	P	**Pn**	**00 48 36.5**	**+1.1**
ULC	**Ulcinj**	**4.29**	**16**	⇑*i*Pn	**Pn**	**00 48 36.5**	**+0.5**
ULC				*e*Sn	**Sn**	**00 49 24.1**	**-2.1**
ULC	**Ulcinj**	**4.29**	**16**	⇑*i*Pn	**Pn**	**00 48 36.5**	**+0.5**
ULC				*e*Sn	**Sn**	**00 49 24.1**	**-2.1**
VLI	**Veliai**	**4.33**	**103**	P	**Pn**	**00 48 36.3**	**-0.1**
VLI	**Veliai**	**4.33**	**103**	P	**Pn**	**00 48 36.3**	**-0.1**
LIT	**Litokhoron**	**4.37**	**57**	P	**Pn**	**00 48 38.9**	**+1.9**
LIT	**Litokhoron**	**4.37**	**57**	P	**Pn**	**00 48 38.9**	**+1.9**
PHP	**Peshkopia**	**4.39**	**28**	*i* PN	**Pn**	**00 48 38.1**	**+0.7**
SMIA	**Simia**	**4.46**	**75**	P	**Pn**	**00 48 39.6**	**+1.3**
SMIA	**Simia**	**4.46**	**75**	P	**Pn**	**00 48 39.6**	**+1.3**
DRME	**Dracevica, Mon**	**4.49**	**14**	⇑*i*Pn	**Pn**	**00 48 39.8**	**+1.0**
DRME				*e*Sn	**Sn**	**00 49 29.4**	**-

BEY				*e*Sn		**Sn**		**00 49 49.0**	**-2.2**
IVA	**Berane**	**5.30**	**18**	⇑*i*Pn		**Pn**		**00 48 51.1**	**+1.1**
IVA				*e*Sn		**Sn**		**00 49 49.0**	**-2.2**
UPM	**Unac-Piva**	**5.44**	**9**	*e*Pn		**Pn**		**00 48 52.5**	**+0.5**
UPM				*e*Sn		**Sn**		**00 49 51.8**	**-2.9**
UPM	**Unac-Piva**	**5.44**	**9**	*e*Pn		**Pn**		**00 48 52.5**	**+0.5**
UPM				*e*Sn		**Sn**		**00 49 51.8**	**-2.9**
SRS	**Serrai**	**5.62**	**52**	*e*Pn		**Pn**		**00 48 54.9**	**+0.7**
SRS				*e*Sn		**Sn**		**00 49 52.4**	**-6.4**
SRS	**Serrai**	**5.62**	**52**	*e*Pn		**Pn**		**00 48 54.9**	**+0.7**
PLE	**Pljevlja**	**5.64**	**13**	⇑*i*Pn		**Pn**		**00 48 55.5**	**+0.9**
PLE				*e*Sn		**Sn**		**00 49 56.8**	**-2.7**
PLE	**Pljevlja**	**5.64**	**13**	⇑*i*Pn		**Pn**		**00 48 55.5**	**+0.9**
PLE				*e*Sn		**Sn**		**00 49 56.8**	**-2.7**
SJES	**Sjenica**	**5.69**	**17**	*e*Pn		**Pn**		**00 48 56.2**	**+0.9**
SJES	**Sjenica**	**5.69**	**17**	*e*Pn		**Pn**		**00 48 56.2**	**+0.9**
KKB	**Krupnik**	**5.78**	**44**	P		**Pn**		**00 48 58.1**	**+1.7**
BARS	**Barje**	**5.89**	**31**	*e*Pn		**Pn**		**00 48 58.9**	**+1.0**
BARS	**Barje**	**5.89**	**31**	*e*Pn		**Pn**		**00 48 58.9**	**+1.0**
MMB	**Musomiste**	**5.97**	**49**	P		**Pn**		**00 48 59.8**	**+0.7**
SELS	**Selova**	**5.98**	**25**	*e*Pn		**Pn**		**00 48 59.2**	**0.0**
BBLS	**Lazići**	**6.16**	**12**	*e*Pn		**Pn**		**00 49 01.8**	**0.0**
BBLS	**Lazići**	**6.16**	**12**	*e*Pn		**Pn**		**00 49 01.8**	**0.0**
APE	**Apeiranthos**	**6.28**	**95**	⇓⇓*i*P		**Pn**		**00 49 01.0**	**-2.3**
APE	**Apeiranthos**	**6.28**	**95**	S		**Sn**		**00 50 08.6**	**-6.6**
HAPS	**Han Pijesak,BI**	**6.32**	**8**	*e*Pn		**Pn**		**00 49 04.7**	**+0.8**
HAPS	**Han Pijesak,BI**	**6.32**	**8**	*e*Pn		**Pn**		**00 49 04.7**	**+0.8**
IDI	**Anoyia**	**6.32**	**112**	Pn		**Pn**		**00 49 02.2**	**-1.7**
	comp=E,0.6nm,0.3s,baz=259,slow=9.6,SNR=20								
IDI				Sn		**Sn**		**00 50 08.6**	**-7.7**
	comp=E,4.3nm,0.3s,baz=307,slow=23,SNR=15								
IDI	**Anoyia**	**6.32**	**112**	⇑*i*P		**Pn**		**00 49 03.3**	**-0.6**
IDI	**Anoyia**	**6.32**	**112**	S		**Sn**		**00 50 11.2**	**-5.0**
IDI	**Anoyia**	**6.32**	**112**	⇑*i*P		**Pn**		**00 49 03.3**	**-0.6**
VTS	**Vitosha**	**6.35**	**40**	S		**Sn**		**00 50 10.0**	**-7.1**
VTS	**Vitosha**	**6.35**	**40**	P		**Pn**		**00 49 05.5**	**+1.1**
SANT	**Santorini**	**6.37**	**101**	S		**Sn**		**00 50 11.9**	**-5.6**
GRUS	**Gruza**	**6.47**	**20**	*e*Pn		**Pn**		**00 49 06.6**	**+0.8**
GRUS	**Gruza**	**6.47**	**20**	*e*Pn		**Pn**		**00 49 06.6**	**+0.8**
DIVS	**Divibare**	**6.49**	**15**	*e*Pn		**Pn**		**00 49 06.3**	**0.0**
DIVS	**Divibare**	**6.49**	**15**	*e*Pn		**Pn**		**00 49 06.3**	**0.0**
BOVS	**Bovan**	**6.54**	**26**	*e*Pn		**Pn**		**00 49 07.9**	**+1.0**
BOVS	**Bovan**	**6.54**	**26**	*e*Pn		**Pn**		**00 49 07.9**	**+1.0**
ZAPS	**Zavoj**	**6.61**	**33**	*e*Pn		**Pn**		**00 49 09.3**	**+1.5**
RZN	**Rozhen**	**6.64**	**52**	P		**Pn**		**00 49 09.7**	**+1.3**
TRUS	**Trudelj**	**6.70**	**17**	*e*Pn		**Pn**		**00 49 09.7**	**+0.6**
TRUS	**Trudelj**	**6.70**	**17**	*e*Pn		**Pn**		**00 49 09.7**	**+0.6**
UDBI	**Udbina**	**6.84**	**348**	*e*Pn		**Pn**		**00 49 13.5**	**+2.3**
UDBI				Sn		**Sn**		**00 50 27.8**	**-1.3**
UDBI	**Udbina**	**6.84**	**348**	*e*Pn		**Pn**		**00 49 13.4**	**+2.3**
UDBI				Sn		**Sn**		**00 50 27.7**	**-1.3**
TEKS	**Tekeris**	**6.85**	**11**	*e*Pn		**Pn**		**00 49 10.4**	**-0.7**
TEKS	**Tekeris**	**6.85**	**11**	*e*Pn		**Pn**		**00 49 10.4**	**-0.7**
ZAGS	**Zajecar**	**6.89**	**28**	*e*Pn		**Pn**		**00 49 13.0**	**+1.3**
ZAGS	**Zajecar**	**6.89**	**28**	*e*Pn		**Pn**		**00 49 13.0**	**+1.3**
BLY	**Banja Luka**	**6.92**	**357**	*e*Pn		**Pn**		**00 49 13.7**	**+1.6**
BLY	**Banja Luka**	**6.92**	**357**	⇓⇓*i*P		**Pn**		**00 49 13.5**	**+1.4**
BLY	**Banja Luka**	**6.92**	**357**	⇓⇓*i*P		**Pn**		**00 49 13.5**	**+1.4**
BLY				S		**Sn**		**00 50 28.2**	**-2.6**
KEST	**Kesra**	**7.02**	**255**	Pn		**Pn**		**00 49 14.1**	**+0.6**
	comp=E,0.2nm,0.3s,baz=5.9,slow=15,SNR=4.1								
KEST				Sn		**Sn**		**00 50 29.6**	**-4.0**
	comp=E,0.1nm,0.3s,baz=292,slow=19,SNR=2.6								
NVLJ	**Novalja**	**7.05**	**343**	*e*Pn		**Pn**		**00 49 15.4**	**+1.6**
NVLJ				Sn		**Sn**		**00 50 30.3**	**-3.7**
NVLJ	**Novalja**	**7.05**	**343**	*e*Pn		**Pn**		**00 49 15.4**	**+1.6**
MDVR	**Moldovita**	**7.57**	**22**	⇓⇓*i*P		**Pn**		**00 49 21.0**	**0.0**
MDVR	**Moldovita**	**7.57**	**22**	S		**Sn**		**00 50 42.0**	**-4.9**
MDVR	**Moldovita**	**7.57**	**22**	⇓⇓*i*P		**Pn**		**00 49 21.0**	**0.0**
OZLJ	**Ozalj**	**7.95**	**349**	*e*Pn		**Pn**		**00 49 27.9**	**+1.7**
OZLJ	**Ozalj**	**7.95**	**349**	*e*Pn		**Pn**		**00 49 27.8**	**+1.7**
CRES	**Cresnjev**	**8.16**	**349**	*e*Pn		**Pn**		**00 49 29.8**	**+0.7**
BZS	**Buzias**	**8.31**	**19**	*e*Pn		**Pn**		**00 49 31.1**	**0.0**
BZS	**Buzias**	**8.31**	**19**	⇓⇓*i*P		**Pn**		**00 49 30.9**	**-0.2**
BZS	**Buzias**	**8.31**	**19**	S		**Sn**		**00 50 58.5**	**-6.5**
BZS	**Buzias**	**8.31**	**19**	*e*Pn		**Pn**		**00 49 31.1**	**0.0**
LJU	**Ljubljana**	**8.54**	**345**	*e*Pn		**Pn**		**00 49 35.5**	**+1.3**
OBKA	**Obir**	**8.98**	**346**	*i* Pn		**Pn**		**00 49 42.0**	**+1.6**
	comp=E,2.0nm,0.2s								
OBKA	**Obir**	**8.98**	**346**	Pn		**Pn**		**00 49 42.0**	**+1.6**
	comp=E,2.0nm,0.2s								
ARSA	**Arzberg**	**9.55**	**351**	*i* Pn		**Pn**		**00 49 49.4**	**+1.3**
	comp=E,1.3nm,0.3s								
ARSA	**Arzberg**	**9.55**	**351**	Pn		**Pn**		**00 49 49.4**	**+1.3**
	comp=E,1.3nm,0.3s								
MLR	**Muntele Rosu**	**9.82**	**36**	Pn		**Pn**		**00 49 53.9**	**+1.9**
	baz=227,slow=17								
MOA	**Molln**	**10.32**	**347**	*i* Pn		**Pn**		**00 50 00.5**	**+1.8**
	comp=E,1.0nm,0.2s								
MOA	**Molln**	**10.32**	**347**	Pn		**Pn**		**00 50 00.5**	**+1.8**
	comp=E,1.0nm,0.2s								
GERES	**GERESS Array B**	**11.38**	**347**	Pn		**Pn**		**00 50 14.0**	**+0.7**
	comp=E,0.1nm,0.3s,baz=156,slow=15,SNR=3.6								
GERES				Sn		**Sn**		**00 52 15.9**	**-4.6**
	comp=E,0.2nm,0.3s,baz=156,slow=24,SNR=4.8								
BRTR	**Keskin Array B**	**12.59**	**76**	Pn		**Pn**		**00 50 32.3**	**+2.4**
	comp=E,0.1nm,0.3s,baz=256,slow=12,SNR=3.5								
MMAI	**Mount Meron Ar**	**15.21**	**103**	Pn		**Pn**		**00 51 01.3**	**-4.2**
	comp=E,0.3nm,0.3s,baz=307,slow=12,SNR=3.7								
MMAI				Sn		Sn		00 53 35.7	-18
	comp=E,0.6nm,0.3s,baz=300,slow=18,SNR=3.7								
AKASG	**Malin Array Be**	**15.26**	**29**	Pn		**P**		**00 51 10.9**	**-0.1**
	comp=E,0.5nm,0.3s,baz=217,slow=9.1,SNR=4.2								
FINES	**FINESS Array B**	**24.21**	**10**	P		**P**		**00 52 47.6**	**+0.5**
	comp=E,2.7nm,0.9s,baz=200,slow=13,SNR=3.5								
ARU	**Arti**	**32.80**	**42**	LR		LR		01 07 43.7	
	comp=E,889nm,21.0s,baz=291,slow=37								
KURBB	**Kurchatov Arra**	**44.22**	**53**	P		**P**		**00 55 39.8**	**0.0**
	comp=E,0.5nm,0.7s,baz=285,slow=8.9,SNR=3.6								
MKAR	**Makanchi Array**	**47.37**	**58**	P		**P**		**00 56 04.9**	**+0.1**
	comp=E,1.1nm,0.5s,baz=278,slow=6.9,SNR=17								
ZALV	**Zalesovo Beam**	**47.57**	**48**	P		**P**		**00 56 06.7**	**+0.5**
	comp=E,0.7nm,0.4s,baz=265,slow=7.2,SNR=4.3								

*ISCJB **12** 01:09:20.7±0.2, 60°.13N±0°.02×153°.33W±0°.05, h158km±3km, mb3.6/5, Error ellipse: s-maj=5.1km s-min=3.2km az=39.1*
*IDC **12** 01:09:20.1±1.3, 60°.17N×153°.38W, h131km±24km, mb3.3/5, mb1 3.5/9, mb1mx3.1/78, mbtmp3.8/9, Error ellipse: s-maj=34.6km s-min=11.9km az=110.0*
*NEIC **12** 01:09:22.8±0.0, 60°.11N×153°.29W, h150km, ML3.6(AEIC), After AEIC.*

ISC 12 01:09:21.7±0.8, 60°.14N±0°.04×153°.30W±0°.04, h156km±6km, n101, σ0s81/115, mb3.6/5, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILW	**Iliamna West**	**0.11**	**132**	P	**Pn**	**01 09 42.7**	**-0.1**
ILW				S	**Sn**	**01 09 58.6**	**-0.1**
ILS	**Iliamna Low So**	**0.21**	**147**	P	**Pn**	**01 09 42.6**	**-0.2**
RDWB	**Redoubt West**	**0.42**	**33**	P	**Pn**	**01 09 43.6**	**+0.1**
RDWB				S	**Sn**	**01 09 59.4**	**-0.8**
NCT	**North Crescent**	**0.47**	**23**	P	**Pn**	**01 09 43.8**	**+0.2**
RDJH	**Redoubt Jeurge**	**0.52**	**28**	P	**Pn**	**01 09 44.0**	**+0.1**
RDJH				S	**Sn**	**01 10 00.6**	**-0.3**
DFR	**Drift River**	**0.55**	**33**	P	**Pn**	**01 09 44.0**	**0.0**
AUNW	**Augustine NWes**	**0.76**	**187**	P	**Pn**	**01 09 45.3**	**+0.1**
AUW	**Augustine West**	**0.77**	**187**	P	**Pn**	**01 09 45.4**	**+0.2**
AUI	**Augustine Isla**	**0.81**	**185**	P	**Pn**	**01 09 45.4**	**-0.1**
AUI				S	**Sn**	**01 10 02.9**	**-0.8**
HOM	**Homer**	**0.96**	**119**	P	**Pn**	**01 09 47.2**	**+0.6**
HOM				S	**Sn**	**01 10 06.1**	**+0.4**
MCNL	**McNeil River**	**1.09**	**209**	P	**Pn**	**01 09 47.3**	**-0.4**
CKL	**Chakachamna La**	**1.17**	**24**	P	**Pn**	**01 09 49.1**	**+0.6**
CKT	**Bend**	**1.20**	**26**	P	**Pn**	**01 09 49.1**	**+0.4**
SPWE	**Spurr West**	**1.20**	**17**	P	**Pn**	**01 09 49.5**	**+0.7**
CNPM	**China Poot**	**1.21**	**119**	P	**Pn**	**01 09 49.1**	**+0.3**
CNPM				S	**Sn**	**01 10 08.9**	**-0.6**
CDD	**Cape Douglas**	**1.22**	**188**	P	**Pn**	**01 09 48.6**	**-0.3**
SPCP	**Crater Peak Br**	**1.27**	**26**	P	**Pn**	**01 09 50.0**	**+0.5**
SPCP				S	**Sn**	**01 10 11.0**	**+0.1**
BRLK	**Bradley Lake**	**1.27**	**106**	P	**Pn**	**01 09 50.0**	**+0.6**
BRLK				S	**Sn**	**01 10 09.9**	**-0.7**
SPCG	**Spurr Capps Gl**	**1.32**	**28**	P	**Pn**	**01 09 50.3**	**+0.4**
FONW	**Fourpeaked Sta**	**1.34**	**194**	P	**Pn**	**01 09 49.8**	**-0.3**
SVW2	**Sparrevohn**	**1.48**	**312**	P	**Pn**	**01 09 51.0**	**-0.4**
SVW2				S	**Sn**	**01 10 12.6**	**-1.8**
SLKM	**Skilak Lake**	**1.58**	**75**	P	**Pn**	**01 09 52.4**	**0.0**
KAPH	**Katmai Pasha**	**1.63**	**200**	P	**Pn**	**01 09 52.8**	**-0.3**
KAPH				S	**Sn**	**01 10 15.7**	**-1.5**
KAHC	**Katmai Hardscr**	**1.73**	**211**	P	**Pn**	**01 09 53.6**	**-0.5**
KARR	**Katmai Rainbow**	**1.79**	**204**	P	**Pn**	**01 09 54.6**	**-0.2**
SEW	**Seward**	**1.93**	**89**	P	**Pn**	**01 09 56.5**	**+0.3**
SEW				S	**Sn**	**01 10 21.4**	**-1.4**
RC01	**Rabbit Creek A**	**2.00**	**60**	P	**Pn**	**01 09 56.8**	**-0.2**
KAKN	**Katmai Knife C**	**2.05**	**207**	P	**Pn**	**01 09 57.4**	**-0.4**
KELA	**Mount Kelaz**	**2.11**	**217**	P	**Pn**	**01 09 58.0**	**-0.5**
KABU	**Katmai Buttres**	**2.13**	**209**	P	**Pn**	**01 09 58.5**	**-0.2**
KABU				S	**Sn**	**01 10 25.8**	**-1.4**
MGLS	**Mageik Landsli**	**2.22**	**206**	P	**Pn**	**01 09 59.3**	**-0.5**
CAHL	**Cahill**	**2.33**	**207**	P	**Pn**	**01 10 00.9**	**-0.2**
KDAK	**Kodiak Island**	**2.39**	**171**	P	**Pn**	**01 09 59.9**	**-1.7**
	5.4nm,0.3s,baz=12,slow=10,SNR=33						
KDAK				S	**Sn**	**01 10 29.9**	**-2.6**
	58nm,0.3s,baz=131,slow=19,SNR=107						
PMR	**Palmer**	**2.51**	**53**	P	**Pn**	**01 10 01.9**	**-1.1**
GHO	**Glory Hole Cre**	**2.69**	**51**	P	**Pn**	**01 10 04.6**	**-0.9**
KNK	**Knik Glacier**	**2.70**	**60**	P	**Pn**	**01 10 04.6**	**-0.8**
PPLA	**Purkeypile**	**2.82**	**10**	P	**Pn**	**01 10 08.2**	**+1.1**
PLK5	**Peulik 5**	**2.83**	**222**	P	**Pn**	**01 10 07.3**	**+0.3**
PLK1	**Peulik 1**	**2.90**	**218**	P	**Pn**	**01 10 07.9**	**0.0**
OHAK	**Old Harbor**	**2.92**	**180**	P	**Pn**	**01 10 06.1**	**-2.1**
SML	**Sawmill**	**2.95**	**53**	P	**Pn**	**01 10 07.7**	**-0.9**
TT01	**Tatalina**	**3.07**	**336**	P	**Pn**	**01 10 09.8**	**-0.2**
CAST	**Castle Rocks**	**3.35**	**9**	P	**Pn**	**01 10 13.9**	**+0.3**
SCM	**Sheep Creek Mo**	**3.37**	**57**	P	**Pn**	**01 10 13.3**	**-0.7**
JPK	**Jack Peak**	**3.43**	**71**	P	**Pn**	**01 10 14.0**	**-0.7**
VLZ	**Valdez**	**3.58**	**71**	P	**Pn**	**01 10 16.0**	**-0.4**
MID	**Middleton Isla**	**3.59**	**98**	P	**Pn**	**01 10 16.9**	**+0.2**
KTH	**Kantishna Hill**	**3.61**	**17**	P	**Pn**	**01 10 16.9**	**-0.1**
TRF	**Thorofare Moun**	**3.62**	**22**	P	**Pn**	**01 10 17.2**	**-0.1**
CHUM	**Lake Minchumin**	**3.79**	**7**	P	**Pn**	**01 10 19.5**	**+0.3**
DIV	**Divide**	**3.84**	**72**	P	**Pn**	**01 10 19.4**	**-0.5**
KLU	**Klutina**	**3.86**	**66**	P	**Pn**	**01 10 19.6**	**-0.6**
RND	**Reindeer**	**3.90**	**31**	P	**Pn**	**01 10 20.7**	**-0.1**
ANNW	**Aniakchak Nort**	**4.09**	**221**	P	**Pn**	**01 10 23.6**	**+0.4**
DHY	**Denali Highway**	**4.09**	**41**	P	**Pn**	**01 10 23.0**	**-0.2**
BPAW	**Bear Paw Mtn.**	**4.13**	**14**	P	**Pn**	**01 10 22.9**	**-0.7**
AZAC	**Aniakchak**	**4.15**	**221**	P	**Pn**	**01 10 24.1**	**0.0**
MCK	**McKinley**	**4.16**	**28**	P	**Pn**	**01 10 24.2**	**+0.2**
RAGM	**Ragged Mountai**	**4.30**	**83**	P	**Pn**	**01 10 26.2**	**+0.2**
BMRM	**Bremner River**	**4.38**	**75**	P	**Pn**	**01 10 26.3**	**-0.6**
BWN	**Browne**	**4.43**	**22**	P	**Pn**	**01 10 28.0**	**+0.5**
HARP	**HAARP**	**4.54**	**56**	P	**Pn**	**01 10 29.3**	**+0.2**
NICHA	**Nichawak Mount**	**4.66**	**85**	P	**Pn**	**01 10 31.0**	**+0.4**
CHGN	**Chignik**	**4.70**	**217**	P	**Pn**	**01 10 30.1**	**-1.0**
NEA	**Nenana**	**4.87**	**22**	P	**Pn**	**01 10 32.9**	**-0.4**
VRDI	**Verde Repeater**	**4.96**	**73**	P	**Pn**	**01 10 34.6**	**-0.1**
WRH	**Wood River Hil**	**4.98**	**27**	P	**Pn**	**01 10 34.4**	**-0.4**
VNHG	**Veniaminof 1**	**5.00**	**221**	P	**Pn**	**01 10 35.0**	**-0.3**
CRQM	**Cirque**	**5.07**	**79**	P	**Pn**	**01 10 36.9**	**+0.7**
VNWF	**Veniaminof 8**	**5.19**	**222**	P	**Pn**	**01 10 37.5**	**-0.2**
CCB	**Clear Creek Bu**	**5.20**	**27**	P	**Pn**	**01 10 37.0**	**-0.6**
KULT	**Kultieth River**	**5.28**	**84**	P	**Pn**	**01 10 39.3**	**+0.5**
PS08	**TAPS Pump Stn8**	**5.35**	**32**	P	**Pn**	**01 10 39.6**	**-0.1**
MDM	**Murphy Dome**	**5.38**	**24**	P	**Pn**	**01 10 39.7**	**-0.3**
RIDG	**Independ'e Rid**	**5.39**	**44**	P	**Pn**	**01 10 40.6**	**+0.4**
BARK	**Barkley Ridge**	**5.39**	**82**	P	**Pn**	**01 10 41.0**	**+0.8**
PTPK	**Patty Peak**	**5.43**	**74**	P	**Pn**	**01 10 41.6**	**+0.6**
ILAR	**Eielson Array**	**5.52**	**30**	P	**Pn**	**01 10 41.2**	**-0.6**
	12nm,0.3s,baz=217,slow=14,SNR=411						
ILAR				S	**Sn**	**01 11 40.7**	**-4.0**
	1.2nm,0.3s,baz=216,slow=22,SNR=4.1						
ILB	**Eielson Array**	**5.52**	**30**	P	**Pn**	**01 10 41.3**	**-0.6**
DOT	**Dot Lake**	**5.61**	**47**	P	**Pn**	**01 10 43.2**	**+0.1**
MESA	**MESA**	**5.67**	**85**	P	**Pn**	**01 10 45.2**	**+1.1**
GRNC	**Granite Creek**	**5.75**	**79**	P	**Pn**	**01 10 46.1**	**+0.9**
BARN	**Barnard Glacie**	**5.81**	**76**	P	**Pn**	**01 10 47.1**	**+1.2**
SCRK	**Sand Creek**	**5.83**	**45**	P	**Pn**	**01 10 45.9**	**-0.2**
IM3	**Indian Mountai**	**5.88**	**358**	P	**Pn**	**01 10 47.0**	**+0.4**
CTGM	**Chitina Glacie**	**5.96**	**77**	P	**Pn**	**01 10 49.1**	**+1.1**
BCA3	**Beaver Creek A**	**6.23**	**57**	P	**Pn**	**01 10 51.9**	**+0.5**
DT1	**Dutton Round H**	**6.97**	**228**	P	**Pn**	**01 11 00.8**	**-0.4**
PNL	**Peninsula**	**7.01**	**88**	P	**Pn**	**01 11 02.0**	**+0.3**
COLD	**Coldfoot**	**7.25**	**10**	P	**Pn**	**01 11 04.5**	**-0.3**
EGAK	**Eagle**	**7.30**	**45**	*e*Pn	**Pn**	**01 11 05.0**	**-0.5**
	11nm,0.2s						
DAWY	**Dawson**	**7.62**	**53**	*e*Pn	**Pn**	**01 11 10.8**	**+1.0**
	5.4nm,0.4s						
BM3	**Burnt Mountain**	**8.25**	**24**	P	**Pn**	**01 11 16.5**	**-1.8**
INK	**Inuvik**	**11.82**	**38**	P	**Pn**	**01 12 05.7**	**+0.6**
	0.8nm,0.3s,baz=228,slow=13,SNR=9.2						
YKA	**Yellowknife Ar**	**18.53**	**66**	P	**Pn**	**01 13 27.7**	**-0.2**
	0.1nm,0.3s,baz=278,slow=9.8,SNR=4.2						
SONM	**Songino Array**	**54.59**	**306**	P	**P**	**01 18 35.3**	**+1.7**
	0.5nm,0.6s,baz=24,slow=8.3,SNR=3.3						
ZALV	**Zalesovo Beam**	**57.18**	**323**	P	**P**	**01 18 52.5**	**+0.8**
	1.3nm,0.6s,baz=21,slow=6.8,SNR=5.5						
KURK	**Kurchatov**	**61.83**	**325**	P	**P**	**01 19 24.4**	**+0.8**
BVAR	**Borovoye Array**	**61.88**	**332**	P	**P**	**01 19 24.1**	**+0.2**
	0.8nm,0.6s,baz=28,slow=6.5,SNR=6.9						
KURBB	**Kurchatov Arra**	**61.94**	**325**	P	**P**	**01 19 24.4**	**+0.1**
	0.4nm,0.5s,baz=27,slow=6.8,SNR=3.4						
MKAR	**Makanchi Array**	**64.23**	**321**	P	**P**	**01 19 39.6**	**+0.1**
	0.7nm,0.9s,baz=47,slow=6.0,SNR=3.8						

*ISCJB **12** 01:09:35.3±0.6, 22°.21N±0°.03×78°.83E±0°.06, h33km, Error ellipse: s-maj=8.3km s-min=4.6km az=175.9*
*NDI **12** 01:09:44.0±5.2, 22°.32N×78°.86E, h15km±32km, ML3.4*

ISC 12 01:09:39.1±0.9, 22°.01N±0°.05×78°.82E±0°.06, h35km, n22, σ3s64/33, Southern India

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NGP	**Nagpur**	**0.89**	**166**	*e*P	**Pn**	**01 09 55.9**	**+0.8**
NGP				*e*S	**Sn**	**01 10 06.3**	**-0.4**
BHPL	**Bhopal**	**1.78**	**314**	*e*P	**Pn**	**01 10 11.4**	**+4.0**
BHPL				*e*S	**Sn**	**01 10 34.1**	**+5.4**
BHPL				IAML		01 10 36.2	
	comp=N,448nm,0.2s						
BHPL				IAML		01 10 36.3	
	comp=E,493nm,0.2s						
SRSP	**Sriramsagar**	**3.10**	**188**	*e*P	**Pn**	**01 10 27.1**	**+1.5**
SRSP				IAML		01 11 14.1	
	comp=Z,229nm,0.8s						
RPR	**Rampur**	**3.17**	**172**	*e*P	**Pn**	**01 10 30.7**	**+4.2**
RPR				*e*S	**Sn**	**01 11 11.1**	**+8.0**
RPR				IAML		01 11 17.9	
	comp=Z,145nm,0.4s						
KLRI	**Killari**	**4.45**	**208**	*e*P	**Pn**	**01 10 45.4**	**+1.3**
KLRI				*e*S	**Sn**	**01 11 34.6**	**-0.1**
KLRI				IAML		01 11 56.2	
	comp=Z,232nm,0.4s						
HYBB	**Hyderabad (bro**	**4.58**	**183**	*e*P	**Pn**	**01 10 47.7**	**+1.8**
HYBB				IAML		01 12 01.0	
	comp=Z,64nm,0.4s						
HYB	**Hyderabad**	**4.58**	**183**	*i* Pn	**Pn**	**01 10 48.0**	**+2.1**
HYB				*e*Sn	**Sn**	**01 11 41.0**	**+3.0**
HYB	**Hyderabad**	**4.58**	**183**	*e*S	Sn	01 11 50.8	+13
HYB				IAML		01 12 03.8	
	comp=N,45nm,0.3s						
HYB				IAML		01 12 04.1	
	comp=E,129nm,0.6s						
PVM	**Polavaram**	**5.43**	**150**	*e*P	**Pn**	**01 11 01.3**	**+3.8**
PVM				*e*S	**Sn**	**01 11 58.5**	**-0.3**
PVM				IAmb	IAmb	01 12 27.3	
	comp=Z,49nm,0.7s						
NJS	**Nagarjunasagar**	**5.45**	**175**	*e*P	**Pn**	**01 10 59.5**	**+1.7**
NJS				*e*S	**Sn**	**01 11 58.5**	**-0.9**
NJS				IAML		01 12 33.4	
	comp=Z,29nm,0.5s						
POO	**Poona**	**5.81**	**234**	*e*P	Pn	01 11 12.3	+9.4
POO				*ex*	**Sn**	**01 12 06.6**	**-1.8**
POO				IAML		01 12 41.6	
	comp=N,65nm,0.6s						
POO				IAML		01 12 42.4	
	comp=E,48nm,0.3s						
SRLM	**Srisailam**	**5.88**	**179**	*e*P	**Pn**	**01 11 04.5**	**+0.7**
SRLM				*e*S	**Sn**	**01 12 06.3**	**-3.8**
SRLM				IAML		01 12 44.4	
	comp=Z,79nm,0.5s						
CHLP	**Challavanipeta**	**6.03**	**124**	*e*S	**Sn**	**01 12 14.7**	**+1.1**
CHLP				IAML		01 12 51.7	
	comp=Z,40nm,0.6s						
ADKI	**Addanki**	**6.23**	**170**	*e*P	**Pn**	**01 11 10.3**	**+1.7**
ADKI				*e*S	**Sn**	**01 12 11.3**	**-7.3**
ADKI				IAML		01 13 03.4	
	comp=Z,26nm,0.4s						
KHET	**Khetri**	**6.62**	**336**	*e*P	**Pn**	**01 11 15.8**	**+1.8**
KHET				*e*S	**Sn**	**01 12 23.9**	**-4.3**
BOK	**Bokaro**	**6.75**	**73**	*e*S	**Sn**	**01 12 31.2**	**-0.3**
BOK				IAML		01 13 19.2	
	comp=E,34nm,0.3s						
BOK				IAML		01 13 19.4	
	comp=N,35nm,0.7s						
URV	**Uravakonda**	**7.18**	**192**	*e*P	**Pn**	**01 11 22.7**	**+1.0**
URV				IAmb	IAmb	01 13 20.3	
	comp=Z,39nm,0.6s						
GOA	**Goa**	**8.03**	**217**	*ex*	**Sn**	**01 12 58.3**	**-4.6**
GOA				*ex*	x	01 13 32.6	
SKHT	**Srikalahasti**	**8.27**	**174**	*e*P	**Pn**	**01 11 36.5**	**-0.1**
SKHT				*e*S	**Sn**	**01 13 05.8**	**-3.1**
SKHT				IAML		01 14 06.0	
	comp=Z,16nm,0.7s						
JOSI	**Joshimath**	**8.53**	**4**	*e*S	**Sn**	**01 13 09.6**	**-5.9**
SMLA	**Simla**	**9.20**	**351**	*e*P	**Pn**	**01 11 52.3**	**+3.0**
SMLA				*e*S	Sn	01 13 22.8	-8.8
DHRM	**DHARAMSHALA**	**10.44**	**348**	*e*P	**Pn**	**01 12 09.2**	**+2.7**
DHRM				*e*S	**Sn**	**01 13 55.2**	**-7.2**

*ISCJB **12** 01:12:37.2±1.1, 71°.52N±0°.09×9°.0W±0°.5, h10km, Error ellipse: s-maj=26.9km s-min=5.6km az=154.7*
*BER **12** 01:12:39.2±0.6, 71°.33N×9°.40W, h0km±108km, ML2.9*

ISC 12 01:12:36.2±1.1, 71°.5N±0°.1×9°.7W±0°.1, h10km, n6, σ1s38/11, 1C, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNW	**Jan Mayen West**	**0.59**	**137**	*e*P	**Pb**	**01 12 48.8**	**+0.3**
JNW				*e*S	**Sb**	**01 12 55.8**	**-1.0**
JNW				IAML		01 12 58.6	
	comp=Z,632nm,0.5s						
JMIC	**Jan Mayen

KALU				*e*SN	Sg	01 41 50.8	+1.5
KALU	**Kalix**	**1.69**	**138**	*e*Pn	Pn	01 41 26.7	+0.8
KALU				*e*Sn	Sg	01 41 50.8	+1.5
HEF	**Hetta**	**1.73**	**41**	*e*P	Pn	01 41 26.3	-0.2
	baz=226						
HEF				MSG		01 41 47.3	
	comp=Z,18nm,0.2s						
HEF				*e*SN	Sg	01 41 50.7	0.0
HEF	**Hetta**	**1.73**	**41**	*e*P	Pn	01 41 26.3	-0.2
HEF	**Hetta**	**1.73**	**41**	*e*P	Pb	01 41 27.1	-0.7
HEF				*e*S	Sn	01 41 48.9	-0.3
TOF	**Tornio**	**1.82**	**124**	*e*PN	Pn	01 41 28.4	+0.7
TOF				MSG		01 41 49.6	
	comp=Z,22nm,0.2s						
TOF				*e*SN	Sg	01 41 54.0	+0.3
TOF	**Tornio**	**1.82**	**124**	*e*Pn	Pn	01 41 28.4	+0.7
TOF				*e*Sn	Sg	01 41 54.0	+0.3
KIF	**Kilpisjarvi**	**1.88**	**2**	Pn	Pb	01 41 30.3	-0.1
KIF				Sn	Sg	01 41 55.0	-0.6
KIF	**Kilpisjarvi**	**1.88**	**2**	*e*PN	Pb	01 41 30.4	+0.1
	baz=180						
KIF				MSG		01 41 52.7	
	comp=Z,25nm,0.2s						
KIF				*e*SN	Sg	01 41 55.2	-0.3
KIF	**Kilpisjarvi**	**1.88**	**2**	Pn	Pb	01 41 30.3	-0.1
KIF				Sn	Sg	01 41 55.0	-0.6
KIF				*e*S	Sb	01 41 55.1	+0.8
RNF	**Rovaniemi**	**2.20**	**101**	*e*P	Pn	01 41 33.7	+0.8
RNF				*e*SG	Sb	01 42 04.2	+0.6
RNF	**Rovaniemi**	**2.20**	**101**	*e*P	Pn	01 41 33.7	+0.8
RNF				*e*Sg	Sb	01 42 04.2	+0.6
STEI	**Steigen**	**2.21**	**294**	*e*P	Pb	01 41 35.4	-0.5
STEI				*e*S	Sg	01 42 06.3	+0.3
STEI				IAML		01 42 11.4	
	comp=Z,18nm,0.5s						
SGF	**Sodankyl**	**2.32**	**80**	*e*PB	Pn	01 41 36.0	+1.4
	baz=265						
SGF				*e*SG	Sb	01 42 07.3	+0.3
SGF	**Sodankyl**	**2.32**	**80**	*e*Pb	Pn	01 41 36.0	+1.4
SGF				*e*Sg	Sb	01 42 07.3	+0.3
BURU	**Burvik**	**2.58**	**173**	*e*PB	Pn	01 41 40.2	+2.1
	baz=358						
BURU				*e*SG	Sg	01 42 17.4	-0.5
BURU	**Burvik**	**2.58**	**173**	*e*Pb	Pn	01 41 40.2	+2.1
BURU				*e*Sg	Sg	01 42 17.4	-0.5
TRO	**Tromso**	**2.59**	**347**	*e*P	Pb	01 41 40.5	-1.8
MOR8	**Moi Rana**	**2.64**	**251**	*e*P	Pb	01 41 41.5	-1.7
MOR8				*e*S	Sb	01 42 15.1	-1.0
LOF	**Lofoten**	**2.88**	**294**	*e*P	Pg	01 41 49.9	-0.4
OUL	**Oulu**	**2.98**	**131**	*e*PG	Pb	01 41 48.3	-0.7
OUL	**Oulu**	**2.98**	**131**	*e*Pg	Pb	01 41 48.3	-0.7
ARA0	**ARCESS Array S**	**3.02**	**35**	Pn	Pn	01 41 45.2	+1.0
	baz=213,slow=14						
ARA0				Sn	Sn	01 42 20.0	-1.1
	baz=208,slow=16						
ARA0	**ARCESS Array S**	**3.02**	**35**	Pn	Pn	01 41 45.2	+1.0
	SNR=131						
ARA0				Sn	Sn	01 42 20.0	-1.1
ARA0	**ARCESS Array S**	**3.02**	**35**	Pn	Pn	01 41 45.2	+1.0
	baz=213,slow=14						
ARA0				Sn	Sn	01 42 20.0	-1.1
	baz=208,slow=16						
ARCES	**ARCESS Array B**	**3.02**	**35**	Pn	Pn	01 41 45.0	+0.8
	comp=Z,1.3nm,0.3s,baz=218,slow=13,SNR=38						
ARCES				Sn	Sn	01 42 21.4	+0.4
	comp=Z,2.1nm,0.3s,baz=213,slow=21,SNR=9.7						
ARE0	**ARCESS Array S**	**3.02**	**35**	*e*P	Pn	01 41 44.9	+0.7
	baz=216						
ARE0	**ARCESS Array S**	**3.02**	**35**	*e*P	Pn	01 41 44.9	+0.7
KONS	**Konsvik**	**3.03**	**261**	*e*P	Pn	01 41 46.8	+2.6
OUF	**Merijarvi**	**3.26**	**147**	*e*P	Pn	01 41 49.4	+2.0
OUF				*e*SB	Sb	01 42 33.6	-0.3
OUF	**Merijarvi**	**3.26**	**147**	*e*P	Pn	01 41 49.4	+2.0
UMAU	**Umeaa**	**3.26**	**179**	*e*P	Pn	01 41 49.6	+2.1
	baz=3.0						
UMAU	**Umeaa**	**3.26**	**179**	*e*P	Pn	01 41 49.6	+2.1
HAMF	**Hammerfest**	**3.70**	**16**	*e*P	Pb	01 41 58.7	-2.5
VAF	**Ylistaro**	**4.20**	**167**	*e*P	Pn	01 42 03.1	+2.8
VAF	**Ylistaro**	**4.20**	**167**	*e*P	Pn	01 42 03.1	+2.8
HEMU	**Hemsoen**	**4.61**	**195**	*e*P	Pn	01 42 08.1	+2.2
	baz=9.0						
FIA0	**FINESS Array S**	**6.19**	**155**	Pn	Pn	01 42 30.1	+2.4
	baz=349,slow=16						
FIA0				Sn	Sn	01 43 38.8	-0.2
	baz=343,slow=28						
FIA0				Lg	Lg	01 44 08.7	
	baz=349,slow=37						
FIA0	**FINESS Array S**	**6.19**	**155**	Pn	Pn	01 42 30.1	+2.4
	baz=349,slow=16						
FIA0				Sn	Sn	01 43 38.8	-0.2
	baz=343,slow=28						
FIA0				Lg	Lg	01 44 08.7	
	baz=349,slow=37						
FINES	**FINESS Array B**	**6.19**	**155**	Pn	Pn	01 42 29.8	+2.2
	comp=Z,0.3nm,0.3s,baz=347,slow=12,SNR=13						
FINES				Sn	Sn	01 43 37.8	-1.2
	comp=Z,0.4nm,0.3s,baz=343,slow=23,SNR=6.7						
FINES				Lg	Lg	01 44 09.7	
	comp=Z,1.2nm,0.3s,baz=343,slow=28,SNR=7.1						
NB2	**NORSAR Subarra**	**7.36**	**218**	Pn	Pn	01 42 46.0	+2.3
NB2	**NORSAR Subarra**	**7.36**	**218**	Pn	Pn	01 42 46.0	+2.3
NOA	**NORSAR Array B**	**7.36**	**218**	Pn	Pn	01 42 45.9	+2.1
	comp=Z,0.4nm,0.3s,baz=28,slow=11,SNR=4.9						
NOA				Sn	Sn	01 44 06.5	-1.4
	comp=Z,0.6nm,0.3s,baz=126,slow=18,SNR=4.2						
NOA				Lg	Lg	01 44 46.2	
	comp=Z,1.3nm,0.3s,baz=109,slow=15,SNR=5.0						
NRA0	**NORESS Array S**	**7.55**	**216**	Pn	Pn	01 42 47.5	+1.1
	baz=56,slow=14						
NRA0				Sn	Sn	01 44 10.2	-2.3
	baz=21,slow=28						
NRA0				Lg	Lg	01 44 56.2	
	baz=23,slow=37						
NRA0	**NORESS Array S**	**7.55**	**216**	Pn	Pn	01 42 47.5	+1.1
	SNR=7.3						
NRA0				Sn	Sn	01 44 10.2	-2.3
	SNR=6.2						
NRA0				Lg	Lg	01 44 56.2	
NRA0	**NORESS Array S**	**7.55**	**216**	Pn	Pn	01 42 47.5	+1.1
	baz=56,slow=14						
NRA0				Sn	Sn	01 44 10.2	-2.3
	baz=21,slow=28						
NRA0				Lg	Lg	01 44 56.2	
	baz=23,slow=37						
HFS	**Hagfors**	**7.66**	**207**	Pn	Pn	01 42 48.4	+0.5
	baz=14,slow=14						
HFS				Sn	Sn	01 44 13.6	-1.7
	baz=35,slow=22						
HFS				Lg	Lg	01 44 58.9	
	baz=23,slow=28						
HFS	**Hagfors**	**7.66**	**207**	Pn	Pn	01 42 48.8	+0.9
	comp=Z,0.3nm,0.3s,baz=18,slow=16,SNR=9.7						
HFS				Sn	Sn	01 44 13.7	-1.5
	comp=Z,0.5nm,0.3s,baz=32,slow=22,SNR=9.2						
HFS				Lg	Lg	01 44 57.5	
	comp=Z,0.4nm,0.3s,baz=17,slow=23,SNR=3.6						
HFS	**Hagfors**	**7.66**	**207**	Pn	Pn	01 42 48.4	+0.5
	SNR=5.6						
HFS				Sn	Sn	01 44 13.6	-1.7
	SNR=5.1						
HFS				Lg	Lg	01 44 58.9	
	SNR=3.7						
HFS	**Hagfors**	**7.66**	**207**	Pn	Pn	01 42 48.4	+0.5
	baz=14,slow=14						
HFS				Sn	Sn	01 44 13.6	-1.7
	baz=35,slow=22						
HFS				Lg	Lg	01 44 58.9	
	baz=23,slow=28						
SPITS	**Spitsbergen Ar**	**11.17**	**356**	Pn	Pn	01 43 37.0	+1.2
	baz=165,slow=12,SNR=2.6						

MOS ***12*** *01:48:34.9±1.1, 44.°92N×10.°97E, h16km, mb4.3/20, Error ellipse: s-maj=3.5km s-min=3.1km az=85.5*
PRU ***12*** *01:48:34.4, 44.°84N×10.°99E, h0km, M4.4*
IDC ***12*** *01:48:34.3±0.7, 44.°90N×10.°89E, h0km, mb4.0/16, mb1 4.0/23, mb1mx3.9/65, mbtmp3.9/23, ML3.7/7, MS3.3/23, Ms1 3.3/23, ms1mx3.1/65, Error ellipse: s-maj=15.6km s-min=10.1km az=114.0*
LDG ***12*** *01:48:35.3±0.1, 44.°92N×11.°07E, h2km, Ml4.2/17, Error ellipse: s-maj=2.0km s-min=1.4km az=42.0*
ROM ***12*** *01:48:36.1±0.0, 44.°891N±0.°001×10.°922E±0.°001, h8km, ML4.9/1*

CSEM ***12*** *01:48:36.4±0.1, 44.°93N×10.°95E, h12km, mb4.2/25, ML4.4/19, Mw3.9, Error ellipse: s-maj=1.7km s-min=1.4km az=10.0*
NEIC ***12*** *01:48:36.0±0.0, 44.°88N×10.°89E, h11km, mb4.4/12, ML4.2(LDG), ML4.3(ROM), After ROM.*
NEIC Felt [IV] in the Bomporto-Campogalliano-Luzzara area and [III] at Bologna, Ferrara, Modena and Reggio nell'Emilia. Felt widely in northern Italy.
PDG ***12*** *01:48:36.7±0.7, 44.°94N×10.°96E, h22km, ML4.5/4, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
STR ***12*** *01:48:39.2±1.5, 45.°N±7.°×1.°1E±1.°4, h5km, M4.7/19, mB4.9/4, mb4.8/4, MLv4.8/19, Mw(mB)4.2/4*
BEO ***12*** *01:48:41.9±0.6, 45.°13N×11.°64E, h0km*
ISC 12 01:48:37.1±0.5, 44.°93N±0.°01×10.°95E±0.°01, h15km±3km, n850, σ1°61/968, mb4.2/36, MS3.5/18, 47C-57D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0827	**Moglia (MN)**	**0.02**	**308**	⇑*i*P	**Pg**	**01 48 38.7**	**-0.9**
T0827				⇑*i*S	**Sg**	**01 48 41.3**	**-0.1**
T0827	**Moglia (MN)**	**0.02**	**308**	*i* P	**Pg**	**01 48 38.7**	**-0.9**
T0827				*i* S	**Sg**	**01 48 41.3**	**-0.1**
NDIM	**Novi di Modena**	**0.05**	**222**	*i* P	**Pg**	**01 48 37.8**	**-2.0**
NDIM				*i* S	**Sg**	**01 48 39.6**	**-2.0**
T0818	**Loc. Fossa, Co**	**0.06**	**83**	⇑*i*P	**Pg**	**01 48 39.3**	**-0.5**
T0818				⇑*i*S	**Sg**	**01 48 42.7**	**+1.0**
T0818	**Loc. Fossa, Co**	**0.06**	**83**	*i* P	**Pg**	**01 48 39.3**	**-0.5**
T0818				*i* S	**Sg**	**01 48 42.6**	**+1.0**
T0828	**Loc. Fossoli,**	**0.10**	**195**	⇓*i*P	**Pg**	**01 48 38.5**	**-1.8**
T0828				⇓*i*S	**Sg**	**01 48 41.3**	**-1.1**
T0828	**Loc. Fossoli,**	**0.10**	**195**	*i* P	**Pg**	**01 48 38.5**	**-1.8**
T0828				*i* S	**Sg**	**01 48 41.3**	**-1.1**
SBPO	**S.Benedetto Po**	**0.12**	**350**	⇓*i*P	**Pg**	**01 48 40.7**	**+0.1**
SBPO	**S.Benedetto Po**	**0.12**	**350**	*i* P	**Pg**	**01 48 40.7**	**+0.1**
SBPO				*i* S	**Sg**	**01 48 46.3**	**+3.4**
T0826	**Rio Saliceto (**	**0.13**	**228**	AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0814	**Loc. Cortile,**	**0.14**	**174**	⇓*i*P	**Pg**	**01 48 39.4**	**-1.3**
T0814				⇓*i*S	**Sg**	**01 48 42.9**	**-0.2**
T0814	**Loc. Cortile,**	**0.14**	**174**	*i* P	**Pg**	**01 48 39.4**	**-1.3**
T0814				*i* S	**Sg**	**01 48 42.9**	**-0.2**
T0812	**Loc. Stoppiaro**	**0.17**	**81**	⇑*e*P	**Pg**	**01 48 40.8**	**-0.3**
T0812				⇑*e*S	**Sg**	**01 48 45.7**	**+1.8**
T0812	**Loc. Stoppiaro**	**0.17**	**81**	*e*P	**Pg**	**01 48 40.8**	**-0.3**
T0812				*e*S	**Sg**	**01 48 45.7**	**+1.8**
T0824	**Loc. Limidi di**	**0.17**	**185**	⇓*i*P	**Pg**	**01 48 40.0**	**-1.2**
T0824				⇓*i*S	**Sg**	**01 48 43.0**	**-0.9**
T0824	**Loc. Limidi di**	**0.17**	**185**	*i* P	**Pg**	**01 48 40.0**	**-1.2**
T0824				*i* S	**Sg**	**01 48 44.0**	**+0.1**
T0802	**SanFelice sul**	**0.17**	**108**	⇓*e*P	**Pg**	**01 48 40.5**	**-0.7**
T0802				⇓*e*S	**Sg**	**01 48 45.6**	**+1.6**
T0802	**SanFelice sul**	**0.17**	**108**	*e*P	**Pg**	**01 48 40.5**	**-0.7**
T0802				*e*S	**Sg**	**01 48 45.6**	**+1.6**
T0802				AML	AML		
T0802				AML	AML		
T0802				AML	AML		
T0802				AML	AML		
T0802				AML	AML		
T0802				AML	AML		
T0813	**Massa Finalese**	**0.18**	**106**	⇓*e*P	**Pg**	**01 48 40.8**	**-0.6**
T0813				⇓*e*S	**Sg**	**01 48 45.8**	**+1.5**
T0813	**Massa Finalese**	**0.18**	**106**	*e*P	**Pg**	**01 48 40.8**	**-0.6**
T0813				*e*S	**Sg**	**01 48 45.8**	**+1.5**
RAVA	**Ravarino**	**0.21**	**145**	⇓*i*P	**Pg**	**01 48 41.9**	**+0.1**
RAVA				⇓*i*S	**Sg**	**01 48 45.0**	**0.0**
RAVA	**Ravarino**	**0.21**	**145**	*i* P	**Pg**	**01 48 41.9**	**+0.1**
RAVA				*i* S	**Sg**	**01 48 46.0**	**+1.0**
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
NOVE	**Novellara**	**0.21**	**232**	⇓*i*P	**Pg**	**01 48 40.6**	**-1.2**
NOVE				⇓*i*S	**Sg**	**01 48 45.1**	**+0.1**
NOVE	**Novellara**	**0.21**	**232**	*i* P	**Pg**	**01 48 40.6**	**-1.2**
NOVE				*i* S	**Sg**	**01 48 45.1**	**+0.1**
NOVE				AML	AML		
NOVE				AML	AML		
NOVE				AML	AML		
NOVE				AML	AML		
NOVE				AML	AML		
NOVE				AML	AML		
T0800	**Massa Finalese**	**0.23**	**110**	⇓*e*P	**Pg**	**01 48 41.4**	**-0.6**
T0800				⇓*e*S	**Sg**	**01 48 46.0**	**+0.6**
T0800	**Massa Finalese**	**0.23**	**110**	*e*P	**Pg**	**01 48 41.4**	**-0.6**
T0800				*e*S	**Sg**	**01 48 47.0**	**+1.5**
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0811	**Palata Pepoli**	**0.24**	**126**	⇓*e*P	**Pg**	**01 48 41.5**	**-0.8**
T0811				⇓*e*S	**Sg**	**01 48 47.1**	**+1.2**
T0811	**Palata Pepoli**	**0.24**	**126**	*e*P	**Pg**	**01 48 41.5**	**-0.8**
T0811				*e*S	**Sg**	**01 48 47.1**	**+1.2**
MNTV	**Mantova**	**0.25**	**333**	AML	AML		
MNTV				AML	AML		
MNTV				AML	AML		
MNTV				AML	AML		
MNTV				AML	AML		
MNTV				AML	AML		
SERM	**Sermide**	**0.26**	**71**	⇓*e*P	**Pb**	**01 48 42.8**	**-0.7**
SERM	**Sermide**	**0.26**	**71**	*e*P	**Pb**	**01 48 42.8**	**-0.7**
SERM				*e*S	**Sb**	**01 48 49.3**	**+1.6**
SERM				AML	AML		
	comp=E,58900μm,0.6s						
SERM				AML	AML		
	comp=N,53650μm,0.5s						
SERM				AML	AML		
	comp=E,79950μm,0.8s						
SERM				AML	AML		
	comp=N,87150μm,0.9s						
SERM				AML	AML		
	comp=E,58950μm,0.6s						
SERM				AML	AML		
	comp=N,53700μm,0.5s						
SERM				AML	AML		
	comp=E,79950μm,0.8s						
SERM				AML	AML		
	comp=N,87100μm,0.9s						
T0805	**Bondeno (FE)**	**0.27**	**92**	⇓*e*P	**Pb**	**01 48 42.3**	**-1.3**
T0805	**Bondeno (FE)**	**0.27**	**92**	*e*P	**Pb**	**01 48 42.3**	**-1.3**
T0822	**Casumaru (Bond**	**0.30**	**109**	⇓*e*P	**Pb**	**01 48 42.7**	**-1.4**
T0822				⇓*e*S	**Sb**	**01 48 49.1**	**+0.3**
T0822	**Casumaru (Bond**	**0.30**	**109**	*e*P	**Pb**	**01 48 42.7**	**-1.4**
T0822				*e*S	**Sb**	**01 48 49.1**	**+0.3**
MODE	**Modena**	**0.30**	**180**	⇓*i*P	**Pb**	**01 48 42.7**	**-1.4**
MODE	**Modena**	**0.30**	**180**	*i* P	**Pb**	**01 48 42.7**	**-1.4**
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
T0803	**Dosso, Cento (**	**0.33**	**119**	⇓*e*P	**Pb**	**01 48 43.4**	**-1.2**
T0803	**Dosso, Cento (**	**0.33**	**119**	*e*P	**Pb**	**01 48 43.4**	**-1.2**
T0803				AML	AML		
T0803				AML	AML		
T0803				AML	AML		
T0803				AML	AML		
T0803				AML	AML		
T0803				AML	AML		
T0823	**Castello D'Arg**	**0.34**	**136**	⇓*i*P	**Pb**	**01 48 43.6**	**-1.1**
T0823	**Castello D'Arg**	**0.34**	**136**	*i* P	**Pb**	**01 48 43.6**	**-1.1**
T0823				*i* S	**Sb**	**01 48 51.4**	**+1.5**
T0817	**Loc. Veratica,**	**0.36**	**80**	⇓*e*P	**Pb**	**01 48 44.3**	**-0.9**
T0817	**Loc. Veratica,**	**0.36**	**80**	*e*P	**Pb**	**01 48 44.3**	**-0.9**
T0817				*e*S	**Sb**	**01 48 52.4**	**+1.6**
OPPE	**Oppeano**	**0.41**	**22**	AML	AML		
	comp=N,94400μm,0.7s						
OPPE				AML	AML		
	comp=E,80800μm,1.1s						
OPPE				AML	AML		
	comp=N,94400μm,0.7s						
OPPE				AML	AML		
	comp=E,80800μm,1.1s						
T0821	**Loc. Casaglia**	**0.42**	**93**	AML	AML		
	comp=N,82200μm,0.5s						
T0821				AML	AML		
	comp=E,81650μm,0.5s						
T0821				AML	AML		
	comp=E,83300μm,0.5s						
T0821				AML	AML		
	comp=N,83650μm,0.6s						
T0821				AML	AML		
	comp=E,81650μm,0.5s						
T0821				AML	AML		
	comp=N,82050μm,0.5s						
T0821				AML	AML		
	comp=E,83250μm,0.5s						
T0821				AML	AML		
	comp=N,83600μm,0.6s						
FIU	**Minerbio Fiu**	**0.48**	**127**	*e*P	**Pb**	**01 48 46.0**	**-1.2**
FIU	**Minerbio Fiu**	**0.48**	**127**	*e*P	**Pb**	**01 48 46.0**	**-1.2**
FIU				*e*S	**Sb**	**01 48 56.9**	**+2.8**
FIU				AML	AML		
	comp=E,44900μm,1.0s						
FIU				AML	AML		
	comp=N,49800μm,0.5s						
FIU				AML	AML		
	comp=E,44900μm,1.0s						
FIU				AML	AML		
	comp=N,49800μm,0.5s						
PRMA	**PARMA**	**0.48**	**250**	*e*P	**Pb**	**01 48 46.3**	**-0.9**
PRMA	**PARMA**	**0.48**	**250**	*e*P	**Pb**	**01 48 46.3**	**-0.9**
PRMA				AML	AML		
	comp=E,29250μm,0.9s						
PRMA				AML	AML		
	comp=N,14950μm,1.1s						
PRMA				AML	AML		
	comp=E,29250μm,0.9s						
PRMA				AML	AML		
	comp=N,14950μm,1.1s						
T0816	**San Bartolomeo**	**0.51**	**114**	*e*P	**Pg**	**01 48 45.9**	**-1.2**
T0816	**San Bartolomeo**	**0.51**	**114**	*e*P	**Pg**	**01 48 45.9**	**-1.2**
T0815	**Correggio (RE)**	**0.55**	**95**	*e*P	**Pb**	**01 48 48.3**	**-0.1**
T0815	**Correggio (RE)**	**0.55**	**95**	*e*P	**Pb**	**01 48 48.4**	**-0.1**
T0815				*e*S	**Sn**	**01 48 58.0**	**-1.3**
ZCCA	**Zocca**	**0.58**	**178**	⇓*e*P	**Pb**	**01 48 49.2**	**+0.3**
ZCCA	**Zocca**	**0.58**	**178**	*e*P	**Pb**	**01 48 49.2**	**+0.3**
ZCCA				AML	AML		
	comp=E,33900μm,1.5s						
ZCCA				AML	AML		
	comp=N,42650μm,0.8s						
ZCCA				AML	AML		
	comp=E,33100μm,1.5s						
ZCCA				AML	AML		
	comp=N,45900μm,0.8s						
ZCCA				AML	AML		
	comp=E,33950μm,1.5s						
ZCCA				AML	AML		
	comp=N,42650μm,0.8s						
ZCCA				AML	AML		
	comp=E,33100μm,1.5s						
ZCCA				AML	AML		
	comp=N,45900μm,0.8s						
TREG	**Tregnago**	**0.61**	**14**	AML	AML		
	comp=N,26000μm,1.6s						
TREG				AML	AML		
	comp=E,12500μm,0.2s						
TREG				AML	AML		
	comp=E,12450μm,0.2s						
TREG				AML	AML		
	comp=N,26000μm,1.6s						
ERBM	**Eremo**	**0.64**	**217**	AML	AML		
	comp=E,11450μm,1.0s						
ERBM				AML	AML		
	comp=N,12450μm,0.7s						
ERBM				AML	AML		
	comp=E,11450μm,1.0s						
ERBM				AML	AML		
	comp=N,12400μm,0.7s						
MTRZ	**Monterenzio**	**0.66**	**146**	*e*P	**Pn**	**01 48 52.2**	**+0.3**
MTRZ				AML	AML		
	comp=E,59400μm,0.5s						
MTRZ				AML	AML		
	comp=N,49050μm,0.6s						
MTRZ				AML	AML		
	comp=E,61250μm,0.5s						
MTRZ				AML	AML		
	comp=N,50300μm,0.6s						
MTRZ				AML	AML		
	comp=E,59350μm,0.5s						
MTRZ				AML	AML		
	comp=N,49000μm,0.6s						
MTRZ				AML	AML		
	comp=E,61250μm,0.5s						
MTRZ				AML	AML		
	comp=N,50300μm,0.6s						
TEOL	**Teolo**	**0.67**	**49**	⇓*e*Pg	**Pb**	**01 48 50.2**	**-0.3**
TEOL				*e*Sg	**Sb**	**01 49 00.6**	**+1.1**
TEOL	**Teolo**	**0.67**	**49**	⇓*e*P	**Pb**	**01 48 50.1**	**-0.3**
TEOL				*e*Sg	**Sb**	**01 49 00.6**	**+1.1**
TEOL	**Teolo**	**0.67**	**49**	*e*P	**Pb**	**01 48 50.1**	**-0.3**
TEOL				AML	AML		
TEOL				AML	AML		
TEOL				AML	AML		
TEOL				AML	AML		
CMPO	**Campotto Po**	**0.70**	**119**	*e*P	**Pb**	**01 48 50.7**	**-0.3**
CMPO	**Campotto Po**	**0.70**	**119**	*e*P	**Pb**	**01 48 50.7**	**-0.3**
CMPO				AML	AML		
CMPO				AML	AML		
	comp=N,82950μm,1.4s						
CMPO				AML	AML		
CMPO				AML	AML		
	comp=N,82950μm,1.4s						
ROVR	**Rover¨¤ Verone**	**0.72**	**7**	⇓*e*P	**Pb**	**01 48 50.9**	**-0.6**
ROVR	**Rover¨¤ Verone**	**0.72**	**7**	*e*P	**Pb**	**01 48 50.9**	**-0.6**
ROVR				AML	AML		
	comp=E,21100μm,1.4s						
ROVR				AML	AML		
	comp=N,35800μm,0.3s						
ROVR				AML	AML		
	comp=E,21100μm,1.4s						
ROVR				AML	AML		
	comp=N,35800μm,0.3s						
ZEN8	**San Zeno di Mo**	**0.73**	**348**	AML	AML		
	comp=E,8815μm,0.5s						
ZEN8				AML	AML		
	comp=N,9300μm,0.6s						
ZEN8				AML	AML		
	comp=E,8815μm,0.5s						
ZEN8				AML	AML		
	comp=N,9300μm,0.6s						
MARN	**Marana (Italy)**	**0.73**	**14**	⇑*e*Pg	**Pg**	**01 48 50.4**	**-1.0**
MARN				*e*Sg	**Sb**	**01 49 02.7**	**+1.2**
MARN	**Marana (Italy)**	**0.73**	**14**	*e*Pg	**Pg**	**01 48 50.4**	**-1.0**
MARN				*e*Sg	**Sb**	**01 49 02.7**	**+1.2**
SALO	**Salr**	**0.75**	**337**	⇓*e*P	**Pb**	**01 48 51.4**	**-0.5**
SALO	**Salr**	**0.75**	**337**	*e*P	**Pb**	**01 48 51.4**	**-0.5**
SALO				AML	AML		
	comp=E,19050μm,0.4s						
SALO				AML	AML		
	comp=N,27050μm,0.3s						
SALO				AML	AML		
	comp=E,19050μm,0.4s						
SALO				AML	AML		
	comp=N,27050μm,0.3s						
BALD	**Monte Baldo**	**0.76**	**353**	⇓*e*Pg	**Pg**	**01 48 51.3**	**-0.6**
BALD				*e*Sg	**Sb**	**01 49 03.3**	**+0.8**
BALD	**Monte Baldo**	**0.76**	**353**	*e*Pg	**Pg**	**01 48 51.3**	**-0.6**
BALD				*e*Sg	**Sb**	**01 49 03.3**	**+0.8**
ADRI	**Adria, Italy**	**0.77**	**81**	⇓*e*Pg	**Pn**	**01 48 52.5**	**-0.8**
ADRI				*e*Sg	**Sn**	**01 49 03.9**	**-0.

comp=E,11050µm,1.5s
BOTT AML AML
comp=N,11555µm,0.3s
VOBA Vobarno 0.78 336 AML AML
comp=N,18800µm,1.2s
VOBA AML AML
comp=E,22600µm,1.0s
LEOD Capriano del C 0.79 313 AML AML
comp=N,24900µm,0.9s
LEOD AML AML
comp=E,25150µm,1.2s
IMOL Imola, Italy 0.80 135 *e*P **Pn 01 48 54.6 +0.7**
IMOL AML AML
comp=E,51450µm,0.4s
IMOL AML AML
comp=N,39650µm,0.8s
IMOL AML AML
comp=E,5790µm,0.6s
IMOL AML AML
comp=N,5775µm,0.9s
IMOL AML AML
comp=E,51500µm,0.4s
IMOL AML AML
comp=N,39650µm,0.8s
IMOL AML AML
comp=E,5790µm,0.6s
IMOL AML AML
comp=N,5775µm,0.9s
VLC Villacollemand 0.87 208 *e*Pn **Pg 01 48 52.7 -1.2**
VLC *e*Sn **Sb 01 49 04.8 -0.5**
VLC Villacollemand 0.87 208 *e*Pn **Pg 01 48 52.7 -1.2**
VLC *e*Sn **Sb 01 49 04.8 -0.5**
VLC Villacollemand 0.87 208 AML AML
comp=E,5645µm,1.1s
VLC AML AML
comp=N,7600µm,0.8s
VLC AML AML
comp=E,5645µm,1.1s
VLC AML AML
comp=N,7600µm,0.8s
MAGA Magasa 0.88 345 AML AML
MAGA AML AML
comp=N,68900µm,1.3s
MAGA AML AML
MAGA AML AML
comp=N,68900µm,1.3s
POPM Popiglio 0.89 189 AML AML
comp=E,10410µm,1.0s
POPM AML AML
comp=E,10410µm,1.0s
POPM AML AML
comp=N,15150µm,0.8s
POPM AML AML
comp=N,15150µm,0.8s
BDI Bagni Di Lucca 0.90 196 P **Pg 01 48 53.4 -1.1**
BDI Bagni Di Lucca 0.90 196 P **Pg 01 48 53.4 -1.1**
CTL8 Castelleone 0.91 293 AML AML
comp=E,19950µm,0.9s
CTL8 AML AML
comp=N,18550µm,0.7s
CTL8 AML AML
comp=E,8285µm,1.1s
CTL8 AML AML
comp=N,5290µm,0.9s
CTL8 AML AML
comp=E,19950µm,0.9s
CTL8 AML AML
comp=N,18550µm,0.7s
CTL8 AML AML
comp=E,8285µm,1.1s
CTL8 AML AML
comp=N,5290µm,0.9s
DOSS Dosso del Somm 0.97 10⇓ *e*Pg **Pg 01 48 55.1 -0.7**
DOSS *e*Sg **Sn 01 49 09.8 -0.1**
DOSS Dosso del Somm 0.97 10 *e*Pg **Pg 01 48 55.1 -0.7**
DOSS *e*Sg **Sn 01 49 09.8 -0.1**
MAIM Mastiano 1.06 198 AML AML
comp=E,8535µm,0.9s
MAIM AML AML
comp=N,13750µm,0.9s
RNI Roncone 1.08 348⇓ *e*Pg **Pg 01 48 55.8 -2.1**
RNI *e*Sg **Sb 01 49 12.2 +0.7**
RNI Roncone 1.08 348 *e*Pg **Pg 01 48 55.8 -2.1**
RNI *e*Sg **Sb 01 49 12.2 +0.7**
BOB Bobbio (Coli) 1.08 262 AML AML
BOB AML AML
BOB AML AML
comp=E,9560µm,1.4s
BOB AML AML
comp=N,8960µm,0.7s
CGRP Cima Grappa 1.12 32 *e*Pg **Pg 01 48 57.9 -0.9**
CGRP Cima Grappa 1.12 32⇓ *e*P **Pg 01 48 57.0 -1.8**
CGRP Cima Grappa 1.12 32 *e*Pg **Pg 01 48 57.9 -0.9**
CGRP Cima Grappa 1.12 32 *e*P **Pb 01 48 58.0 -0.4**
CGRP AML AML
comp=E,18500µm,0.6s
CGRP AML AML
comp=N,17400µm,0.7s
CRMI Carmignano 1.14 179 AML AML
comp=N,4215µm,0.7s
CRMI AML AML
comp=E,5165µm,1.2s
PANI Panarotta 1.16 13⇓ *e*Pg **Pg 01 48 57.6 -1.8**
PANI *e*Sg **Sb 01 49 13.8 +0.1**
PANI Panarotta 1.16 13 *e*Pg **Pg 01 48 57.6 -1.8**
PANI *e*Sg **Sb 01 49 13.8 +0.1**
PLMA Palmaria, Port 1.18 222 AML AML
comp=N,9375µm,1.3s
PLMA AML AML
comp=E,7275µm,0.6s
MSSA Maissana 1.19 240 AML AML
comp=E,5560µm,1.4s
MSSA AML AML
comp=N,5095µm,0.5s
MTLO Montello 1.20 42⇓ *i*Pg **Pn 01 48 59.3 -0.1**
MTLO *i* Sg **Sn 01 49 17.0 +1.6**
MTLO Montello 1.20 42 *i* Pg **Pn 01 48 59.3 -0.1**
MTLO *i* Sg **Sn 01 49 17.0 +1.6**
SFI Santa Sofia 1.21 148 P **Pb 01 48 58.7 -0.9**
SFI Santa Sofia 1.21 148 P **Pb 01 48 58.7 -0.9**
SFI Santa Sofia 1.21 148 AML AML
comp=N,21650µm,0.8s
SFI AML AML
comp=E,17150µm,0.5s
SFI AML AML
comp=N,21100µm,0.9s
SFI AML AML
comp=E,18100µm,0.4s
CTI Castel Tesino 1.22 23 AML AML
comp=N,27750µm,1.3s
CTI AML AML
comp=E,19950µm,0.2s
IESO Jesolo 1.28 62 *e*Pg **Pb 01 49 00.3 -0.5**
IESO Jesolo 1.28 62 *e*Pg **Pb 01 49 00.3 -0.5**
MERA Merate 1.31 305 AML AML
comp=N,10950µm,1.3s
MERA AML AML
comp=E,12200µm,1.5s
VARN Col Varnada, M 1.34 37 *e*Pg **Pn 01 49 00.8 -0.6**
VARN Col Varnada, M 1.34 37 *e*Pg **Pn 01 49 00.8 -0.6**
BLLA Bellaria 1.34 125 AML AML
comp=E,7290µm,1.4s
BLLA AML AML
comp=N,6115µm,0.4s
RSM Repubblica di 1.47 132 AML AML
comp=N,6570µm,0.6s
RSM AML AML
comp=E,8720µm,1.0s
OZOL Ozolo 1.48 3⇑ *i*Pg **Pn 01 49 02.8 -0.5**
OZOL Ozolo 1.48 3 *i* Pg **Pn 01 49 02.8 -0.5**
FAU Forcella Aurin 1.49 29 *e*Pg **Pn 01 49 03.5 0.0**
FAU Forcella Aurin 1.49 29 *e*Pg **Pn 01 49 03.5 0.0**
CRE Caprese Michel 1.49 151 AML AML
comp=N,6485µm,0.4s
CRE AML AML
comp=E,7575µm,0.7s
CAE Caneva 1.50 44⇓ *e*Pg **Pn 01 49 03.0 -0.5**
CAE Caneva 1.50 44 *e*Pg **Pn 01 49 03.0 -0.5**
CARE Lago del Cares 1.51 353⇓ *e*Pg **Pn 01 49 03.4 -0.5**
CARE Lago del Cares 1.51 353 *e*Pg **Pn 01 49 03.4 -0.5**
POLC Polcenigo 1.55 44 AML AML
comp=N,21000µm,0.3s
POLC AML AML
comp=E,20200µm,0.4s
AGOR Agordo 1.56 29 *e*Pg **Pn 01 49 04.4 +0.1**
AGOR Agordo 1.56 29 AML AML
comp=E,8950µm,0.4s
AGOR AML AML
comp=N,6330µm,0.5s
APPI Appiano 1.56 7 AML AML
comp=N,12700µm,0.5s
APPI AML AML
comp=E,12415µm,1.2s
KOSI Kohlern 1.56 11 AML AML
comp=E,6985µm,0.7s
KOSI AML AML
comp=N,8885µm,0.6s
PARC Parchiule 1.58 144 AML AML
comp=N,6165µm,0.7s
PARC AML AML
comp=E,4980µm,1.1s
BOSI Bolzano 1.59 9 AML AML
comp=N,17900µm,0.5s
BOSI AML AML
comp=E,20350µm,0.6s
BRMO Bormio 1.60 346 AML AML
comp=E,3610µm,1.0s
BRMO AML AML
comp=N,3575µm,0.7s
PESA Pesaro 1.68 125 AML AML
comp=N,7425µm,1.4s
PESA AML AML
comp=E,7805µm,0.6s
GROG Isola di Gorgo 1.68 207 AML AML
comp=E,2595µm,0.6s
GROG AML AML
comp=N,1870µm,0.6s
BADI Badiali 1.70 146 AML AML
comp=N,5360µm,0.7s
BADI AML AML
comp=E,5680µm,1.1s
MOSI Grossmontoni 1.71 351 AML AML
comp=E,9460µm,0.8s
MOSI AML AML
comp=N,13950µm,0.9s
FROS Frosini 1.72 175 AML AML
comp=E,4310µm,1.1s
FROS AML AML
comp=N,4515µm,1.4s
ATMC Monte Cedrone 1.73 148 AML AML
comp=E,8700µm,0.4s
ATMC AML AML
comp=N,7490µm,0.6s
CDCA Citt' di Caste 1.73 147 AML AML
comp=E,11090µm,0.7s
CDCA AML AML
comp=N,17550µm,0.6s
CDCA AML AML
comp=E,5775µm,0.8s
CDCA AML AML
comp=N,6540µm,0.8s
CAFI Castiglion Fio 1.76 155 AML AML
comp=E,3450µm,0.5s
CAFI AML AML
comp=E,3420µm,0.5s
CAFI AML AML
comp=N,2645µm,0.4s
CAFI AML AML
comp=N,2830µm,0.4s
FUORN Ofenpass-Fuorn 1.76 344 *e*Pn **Pn 01 49 08.1 +0.8**
FUORN *e*Sn **Sg 01 49 33.2 -0.5**
FUORN Ofenpass-Fuorn 1.76 344 *e*Pn **Pn 01 49 08.1 +0.8**
FUORN *e*Sn **Sg 01 49 33.2 -0.5**
NARO Abbazia di Nar 1.76 138 AML AML
comp=N,3380µm,0.4s
NARO AML AML
comp=E,3320µm,0.4s
PIEI Pieia 1.80 140 AML AML
comp=E,4385µm,0.4s
PIEI AML AML
comp=N,2845µm,0.4s
VARE Varese 1.80 302 AML AML
comp=N,4000µm,0.7s
VARE AML AML
comp=E,1940µm,0.7s
ATPC Poggio Castell 1.81 143 AML AML
comp=E,2120µm,0.5s
ATPC AML AML
comp=N,5435µm,0.5s
ATPC AML AML
comp=E,7665µm,0.5s
ATPC AML AML
comp=N,5545µm,0.5s
ATPI Pietralunga - 1.81 144 AML AML
comp=N,4035µm,0.5s
ATPI AML AML
comp=E,3300µm,0.8s
TRIF Trifonti 1.81 181 AML AML
comp=N,1815µm,0.6s
TRIF AML AML
comp=E,2760µm,0.6s
STAL STALIGIAL 1.82 42 AML AML
comp=E,12900µm,0.3s
STAL AML AML
comp=E,9450µm,0.8s
STAL AML AML
comp=N,10165µm,0.8s
STAL AML AML
comp=N,7495µm,0.3s
ABSI Aberstueckl 1.82 8 AML AML
comp=N,10335µm,0.7s
ABSI AML AML
comp=E,14550µm,0.5s
MPAG Monte Paganucc 1.84 134 AML AML
comp=E,3845µm,0.6s
MPAG AML AML
comp=E,3920µm,0.6s
MPAG AML AML
comp=N,4415µm,0.5s
MPAG AML AML
comp=N,4430µm,0.5s
ATBU Serra di Buran 1.85 141 AML AML
comp=N,9960µm,1.2s
ATBU AML AML
comp=E,10720µm,0.4s
ATVO AVT- Monte Val 1.87 145 AML AML
comp=N,4605µm,0.5s
ATVO AML AML
comp=E,4350µm,1.0s
FRON Frontone 1.90 137 AML AML
comp=N,4770µm,0.5s
FRON AML AML
comp=E,4730µm,0.5s
ATVA AVT- Monte Val 1.91 149 AML AML
comp=N,1790µm,1.4s
ATVA AML AML
comp=E,2150µm,0.8s
TUE Stuetta 1.91 325 *e*Pn **Pn 01 49 09.9 +0.6**
TUE *e*Sn **Sn 01 49 34.0 +0.8**
TUE Stuetta 1.91 325 *e*Pn **Pn 01 49 09.9 +0.6**
TUE *e*Sn **Sn 01 49 34.0 +0.8**
TUE Stuetta 1.91 325 AML AML
comp=E,2270µm,0.5s
TUE AML AML
comp=N,2305µm,0.5s
QLNO Quiliano 1.96 253 AML AML
comp=N,1032µm,0.7s
QLNO AML AML
comp=E,808µm,1.6s
SSFR Montelago di S 1.99 138 AML AML
comp=N,5635µm,0.4s
SSFR AML AML
comp=E,6885µm,0.3s
DAVOX Davos/Dischmat 2.00 338 P **Pn 01 49 11.1 +0.6**
ATTE AVT- Monte Tez 2.00 149 AML AML
comp=N,2395µm,1.5s
ATTE AML AML
comp=E,2385µm,0.6s
MURB Monte Urbino 2.01 145 AML AML
comp=E,8835µm,1.1s
MURB AML AML
comp=N,10040µm,0.4s
MURB AML AML
comp=E,9885µm,1.1s
MURB AML AML
comp=N,9910µm,0.4s
ARVD Arcevia 2.02 134 AML AML
comp=E,2510µm,0.6s
ARVD AML AML
comp=N,2955µm,0.7s
ROSI Rosskopf 2.03 9 AML AML
comp=E,8025µm,1.5s
ROSI AML AML
comp=N,9335µm,0.8s
GEPF Gemona 2.04 48 AML AML
comp=E,5300µm,0.5s
GEPF AML AML
comp=N,5200µm,0.6s
SENI Senigallia 2.04 126 AML AML
comp=E,14300µm,0.4s
SENI AML AML
comp=N,13300µm,0.4s
SENI AML AML
comp=E,3815µm,0.4s
SENI AML AML
comp=N,4560µm,0.7s
FETA Feichten 2.10 356 *e*Pn **Pb 01 49 13.4 -1.5**
comp=N,207nm,0.5s,SNR=405
FETA *e*Sn **Sg 01 49 42.8 -1.8**
comp=N,542nm,0.7s
FETA Feichten 2.10 356 Pn **Pb 01 49 13.4 -1.5**
comp=N,207nm,0.5s,SNR=405
FVI Forni Avoltri 2.10 37 P **Pn 01 49 12.0 +0.2**
FVI Forni Avoltri 2.10 37 P **Pn 01 49 12.0 +0.2**
FVI Forni Avoltri 2.10 37 AML AML
comp=N,5005µm,0.6s
FVI AML AML
comp=E,4090µm,0.3s
VINO Villanova 2.11 50 AML AML
comp=E,3755µm,0.8s
VINO AML AML
comp=N,6045µm,0.7s
ABTA Abfaltersbach 2.12 30 *e*Pn **Pn 01 49 13.1 +1.0**
comp=N,11nm,0.2s,SNR=148
ABTA *e*Pg **Pg 01 49 16.5 -1.3**
comp=N,195nm,0.3s
ABTA *e*Sg **Sg 01 49 47.2 +1.8**
comp=N,1µm,0.6s
ABTA Abfaltersbach 2.12 30 Pn **Pn 01 49 13.1 +1.0**
comp=N,11nm,0.2s,SNR=148
ATCC AVT- Casa Cast 2.13 144 AML AML
comp=E,5520µm,0.8s
ATCC AML AML
comp=N,4970µm,0.4s
TRI Trieste 2.13 68 *e*Pn **Pn 01 49 11.2 -0.9**
TRI *e*Sn **Sn 01 49 37.9 -0.4**
TRI Trieste 2.13 68 *e*P **Pn 01 49 11.2 -0.9**
TRI *e* 01 49 37.9
TRI Trieste 2.13 68 *e*Pn **Pn 01 49 11.2 -0.9**
TRI *e*Sn **Sn 01 49 37.9 -0.4**
CASP Castiglione de 2.14 182 AML AML
comp=E,1184µm,0.5s
CASP AML AML
comp=N,2280µm,0.6s
SABO M.te Sabotino 2.14 60 AML AML
comp=N,11200µm,0.8s
SABO AML AML
comp=E,8195µm,0.7s
RISI Rein 2.17 21 AML AML
comp=N,10285µm,0.4s
RISI AML AML
comp=E,10180µm,0.5s
MGAB Montegabbione 2.18 157 AML AML
comp=E,3040µm,0.5s
MGAB AML AML
comp=E,2670µm,0.5s
MGAB AML AML
comp=N,2895µm,0.7s
MGAB AML AML
comp=N,2695µm,0.7s
SNTG Esanatoglia 2.20 139 AML AML
comp=N,3385µm,0.6s
SNTG AML AML
comp=E,2475µm,0.5s
MCIV Monte Civitell 2.21 166 AML AML
comp=E,703µm,0.5s
MCIV AML AML
comp=N,700µm,1.0s
RORO Rocca Rossa 2.22 249 AML AML
comp=E,684µm,0.5s
RORO AML AML
comp=N,690µm,1.0s
SKDS Skadanscina 2.25 73 *i* Pn **Pn 01 49 12.9 -0.9**
SKDS *i* Sn **Sn 01 49 39.9 -1.4**
comp=Z,1µm,0.4s
SKDS Skadanscina 2.25 73 *i* Pn **Pn 01 49 12.9 -0.9**
SKDS *i* Sn **Sn 01 49 39.9 -1.4**
comp=Z,1µm,0.4s
ASSB Assisi San Ben 2.25 146 AML AML
comp=N,2575µm,0.8s
ASSB AML AML
comp=E,2435µm,1.4s
AOI Ancona 2.35 125 AML AML
comp=E,2010µm,0.5s
AOI AML AML
comp=N,1865µm,1.4s
SATI Passo dei Sala 2.37 295 AML AML
comp=N,2130µm,1.4s
SATI AML AML
comp=E,1850µm,1.0s
WTTA Wattenberg 2.38 11 *e*Pn **Pn 01 49 17.4 +1.6**
comp=E,84nm,0.3s,SNR=86
WTTA Sg **Sg 01 49 52.4 -1.4**
comp=E,1µm,0.5s
WTTA Wattenberg 2.38 11 Pn **Pn 01 49 17.4 +1.6**
comp=E,84nm,0.3s,SNR=86
WTTA Sg **Sg 01 49 52.4 -1.4**
comp=E,1µm,0.5s
JAVS Javornik 2.40 65 *i* Pn **Pn 01 49 15.4 -0.5**
JAVS *i* Sn **Sn 01 49 44.5 -0.5**
JAVS Javornik 2.40 65 *i* Pn **Pn 01 49 15.4 -0.5**
JAVS *i* Sn **Sn 01 49 44.5 -0.5**
IMI Imperia 2.42 246 AML AML
comp=N,3460µm,0.9s
IMI AML AML
comp=E,1550µm,1.1s
ACOM Acomizza, Ital 2.42 47 AML AML
comp=N,5890µm,0.8s
ACOM AML AML
comp=E,6180µm,0.3s
MOTA Moosalm 2.42 2 *e*Pn **Pn 01 49 17.4 +1.1**
comp=E,132nm,0.6s,SNR=349
MOTA Moosalm 2.42 2 Pn **Pn 01 49 17.4 +1.1**
comp=E,132nm,0.6s,SNR=349
MOMA Monte Martano 2.42 151 AML AML
comp=E,1795µm,0.8s
MOMA AML AML
comp=N,2870µm,1.6s
MOMA AML AML
comp=E,1820µm,0.8s
MOMA AML AML
comp=N,2100µm,0.5s
FDMO Fiordimonte 2.44 140 AML AML
comp=N,1325µm,1.1s
FDMO AML AML
comp=E,1715µm,0.4s
WATA Walderalm 2.45 10 *e*Pn **Pn 01 49 18.1 +1.5**
comp=E,138nm,0.2s,SNR=266
WATA Walderalm 2.45 10 Pn **Pn 01 49 18.1 +1.5**
comp=E,138nm,0.2s,SNR=266
DAVA Damuels 2.47 343 *e*Pn **Pb 01 49 19.1 -2.2**
comp=E,130nm,0.6s,SNR=62
DAVA *e*Sn **Sb 01 49 51.2 -0.5**
comp=E,209nm,0.3s
DAVA Damuels 2.47 343 Pn **Pb 01 49 19.1 -2.2**
comp=E,130nm,0.6s,SNR=62
DAVA Sn **Sb 01 49 51.2 -0.5**
comp=E,209nm,0.3s
RIY Rijeka 2.53 80 *e*Pg **Pn 01 49 17.2 -0.4**
RIY *e*Sg **Sn 01 49 46.3 -1.9**
MYKA Terra Mystica 2.54 47 *e*Pn **Pn 01 49 18.3 +0.5**
comp=E,6.5nm,0.2s
MYKA *e*Pg **Pg 01 49 24.3 -1.4**
comp=E,99nm,0.2s
MYKA *e*Sg **Sg 01 49 58.3 -0.3**
comp=E,536nm,0.4s
MYKA Terra Mystica 2.54 47 Pn **Pn 01 49 18.3 +0.5**
comp=E,6.5nm,0.2s
RETA Reutte 2.56 357 *e*Pn **Pn 01 49 20.0 +1.9**
comp=E,32nm,0.1s,SNR=47
RETA *e*Sn **Sb 01 49 55.2 +1.0**
comp=E,120nm,0.4s
RETA Reutte 2.56 357 Pn **Pn 01 49 20.0 +1.9**
comp=E,32nm,0.1s,SNR=47
CEY Cerknica 2.58 70 *e*Pg **Pn 01 49 18.0 -0.4**
CEY *e*Sg **Sn 01 49 47.1 -2.4**
CEY Cerknica 2.58 70⇑ *i*Pn **Pn 01 49 17.6 -0.8**
CESX Cesi 2.60 152 AML AML
comp=N,1805µm,1.0s
CESX AML AML
comp=E,1595µm,0.4s

NRCA	**Norcia**	**2.61**	**142**	AML	AML		
	comp=E,1220µm,0.4s						
NRCA				AML	AML		
	comp=E,1355µm,0.4s						
NRCA				AML	AML		
	comp=N,1324µm,0.7s						
NRCA				AML	AML		
	comp=N,1232µm,1.6s						
DOI	**San Damiano**	**2.67**	**262**	P	**Pn**	**01 49 21.0**	**+1.3**
DOI	**San Damiano**	**2.67**	**262**	P	**Pn**	**01 49 21.0**	**+1.3**
KBA	**Koelnbreinsper**	**2.72**	**37**	*e*Pn	**Pn**	**01 49 21.5**	**+1.1**
	comp=N,12nm,0.2s,SNR=40						
KBA				*e*Pg	**Pg**	**01 49 28.1**	**-1.2**
	comp=N,187nm,0.3s						
KBA				Sg	**Sg**	**01 50 04.5**	**0.0**
	comp=N,489nm,0.5s						
KBA	**Koelnbreinsper**	**2.72**	**37**	P	**Pn**	**01 49 21.5**	**+1.1**
KBA	**Koelnbreinsper**	**2.72**	**37**	Pn	**Pn**	**01 49 21.5**	**+1.1**
	comp=N,12nm,0.2s,SNR=40						
LJU	**Ljubljana**	**2.75**	**65**	*e*Pg	**Pn**	**01 49 20.9**	**+0.2**
LJU				*e*Sg	**Sn**	**01 49 53.0**	**-0.7**
LJU	**Ljubljana**	**2.75**	**65**	⇑*i*Pn	**Pn**	**01 49 20.6**	**-0.1**
PGF	**Pioggiola**	**2.77**	**211**	*e*Pn	**Pn**	**01 49 20.8**	**-0.2**
PGF				*e*Sn	**Sn**	**01 49 52.3**	**-1.9**
	comp=N,119nm,0.3s						
PGF	**Pioggiola**	**2.77**	**211**	*e*Pn	**Pn**	**01 49 20.8**	**-0.2**
PGF				*e*Sn	**Sn**	**01 49 52.3**	**-1.9**
	comp=N,60nm,0.3s						
LUCF	**Luceram**	**2.78**	**249**	P	**Pn**	**01 49 22.1**	**+0.9**
LUCF	**Luceram**	**2.78**	**249**	P	**Pn**	**01 49 22.1**	**+0.9**
NVLJ	**Novalja**	**2.82**	**96**	*i* Pn	**Pn**	**01 49 21.5**	**-0.1**
NVLJ				Sn	**Sn**	**01 49 53.7**	**-1.5**
NVLJ	**Novalja**	**2.82**	**96**	*i* Pn	**Pn**	**01 49 21.4**	**-0.1**
NVLJ				Sn	**Sn**	**01 49 53.7**	**-1.5**
REVF	**Revere**	**2.83**	**246**	P	**Pn**	**01 49 22.9**	**+1.1**
REVF	**Revere**	**2.83**	**246**	P	**Pn**	**01 49 22.9**	**+1.1**
GUMA	**Gualdo di Mace**	**2.85**	**130**	AML	AML		
	comp=E,17050µm,0.6s						
GUMA				AML	AML		
	comp=N,9380µm,0.4s						
ISO	**Isola**	**2.89**	**256**	P	**Pn**	**01 49 22.5**	**-0.1**
ISO	**Isola**	**2.89**	**256**	P	**Pn**	**01 49 22.5**	**-0.1**
SENIN	**Lac Senin/Sane**	**2.94**	**301**	*e*Pn	**Pn**	**01 49 24.4**	**+1.0**
SENIN				*e*Sn	**Sn**	**01 49 58.3**	**-0.2**
SENIN	**Lac Senin/Sane**	**2.94**	**301**	*e*Pn	**Pn**	**01 49 24.4**	**+1.0**
OBKA	**Obir**	**2.98**	**57**	*e*Pn	**Pn**	**01 49 24.0**	**+0.1**
	comp=N,14nm,0.2s,SNR=11						
OBKA				*e*Pg	**Pg**	**01 49 33.2**	**-0.8**
	comp=N,110nm,0.3s						
OBKA				*e*Sn	**Sn**	**01 50 00.8**	**+1.5**
	comp=N,243nm,0.3s						
OBKA				*e*Sg	**Sg**	**01 50 13.3**	**+0.7**
	comp=N,937nm,0.5s						
OBKA	**Obir**	**2.98**	**57**	Pn	**Pn**	**01 49 24.0**	**+0.1**
	comp=N,14nm,0.2s,SNR=11						
MBDF	**Montbardon**	**2.98**	**268**	*e*Pn	**Pn**	**01 49 22.6**	**-1.3**
MBDF				*e*Sn	**Sn**	**01 49 57.7**	**-1.8**
	comp=N,267nm,0.6s						
MBDF	**Montbardon**	**2.98**	**268**	*e*Pn	**Pn**	**01 49 22.6**	**-1.3**
MBDF	**Montbardon**	**2.98**	**268**	*e*P	**Pn**	**01 49 22.6**	**-1.3**
MBDF	**Montbardon**	**2.98**	**268**	*e*Pn	**Pn**	**01 49 22.6**	**-1.3**
MBDF				*e*Sn	**Sn**	**01 49 57.7**	**-1.8**
	comp=N,133nm,0.6s						
LPG	**La Plagne**	**3.02**	**282**	*e*Pn	**Pn**	**01 49 25.0**	**+0.4**
LPG				*e*Sn	**Sn**	**01 49 59.0**	**-1.7**
	comp=N,477nm,0.8s						
LPG	**La Plagne**	**3.02**	**282**	*e*Pn	**Pn**	**01 49 25.0**	**+0.4**
BNI	**Bardonecchia**	**3.03**	**274**	*e*Pn	**Pn**	**01 49 24.5**	**-0.2**
BNI				*e*Sn	**Sn**	**01 49 58.1**	**-2.6**
BNI	**Bardonecchia**	**3.03**	**274**	*e*P	**Pn**	**01 49 24.5**	**-0.2**
BNI				*e*		01 49 58.2	
BNI	**Bardonecchia**	**3.03**	**274**	*e*Pn	**Pn**	**01 49 24.5**	**-0.2**
BNI				*e*Sn	**Sn**	**01 49 58.2**	**-2.6**
LPL	**La Plagne**	**3.04**	**283**	*e*Pn	**Pn**	**01 49 26.3**	**+1.5**
LPL	**La Plagne**	**3.04**	**283**	*e*Pn	**Pn**	**01 49 26.3**	**+1.5**
LPL	**La Plagne**	**3.04**	**283**	*e*P	**Pn**	**01 49 26.3**	**+1.5**
LPL	**La Plagne**	**3.04**	**283**	*e*Pn	**Pn**	**01 49 26.3**	**+1.5**
CALF	**Calern**	**3.12**	**249**	P	**Pn**	**01 49 26.9**	**+1.1**
CALF	**Calern**	**3.12**	**249**	P	**Pn**	**01 49 26.9**	**+1.1**
RSL	**Roselend**	**3.15**	**286**	P	**Pn**	**01 49 27.5**	**+1.3**
RSL	**Roselend**	**3.15**	**286**	P	**Pn**	**01 49 27.5**	**+1.3**
OZLJ	**Ozalj**	**3.26**	**76**	*i* Pn	**Pn**	**01 49 28.1**	**+0.4**
OZLJ	**Ozalj**	**3.26**	**76**	*i* Pn	**Pn**	**01 49 28.0**	**+0.4**
CRES	**Cresnjev**	**3.30**	**73**	⇑*i*Pn	**Pn**	**01 49 28.0**	**-0.2**
SOKA	**Soboth**	**3.35**	**57**	*i* Pn	**Pn**	**01 49 29.3**	**+0.4**
	comp=N,17nm,0.4s,SNR=22						
SOKA				*e*Pg	**Pg**	**01 49 39.9**	**-1.3**
	comp=N,48nm,0.3s						
SOKA				*i* Sn	**Sn**	**01 50 09.0**	**+0.5**
	comp=N,220nm,0.6s						
SOKA				*e*Sg	**Sg**	**01 50 23.3**	**-1.3**
	comp=N,230nm,0.5s						
SOKA	**Soboth**	**3.35**	**57**	Pn	**Pn**	**01 49 29.3**	**+0.4**
	comp=N,17nm,0.4s,SNR=22						
SOKA	**Soboth**	**3.35**	**57**	Pg	**Pg**	**01 49 39.9**	**-1.3**
	comp=N,48nm,0.3s						
SOKA				Sn	**Sn**	**01 50 09.0**	**+0.5**
	comp=N,220nm,0.6s						
SOKA				Sg	**Sg**	**01 50 23.3**	**-1.3**
	comp=N,230nm,0.5s						
FRF	**La Foret Royal**	**3.38**	**248**	*e*Pn	**Pn**	**01 49 29.7**	**+0.4**
FRF				*e*Sn	**Sn**	**01 50 07.4**	**-1.8**
	comp=N,127nm,0.2s						
FRF	**La Foret Royal**	**3.38**	**248**	*e*Pn	**Pn**	**01 49 29.7**	**+0.4**
FRF				*e*Sn	**Sn**	**01 50 07.4**	**-1.8**
FRF	**La Foret Royal**	**3.38**	**248**	*e*P	**Pn**	**01 49 29.7**	**+0.4**
FRF				*e*		01 50 07.4	
FRF	**La Foret Royal**	**3.38**	**248**	*e*Pn	**Pn**	**01 49 29.7**	**+0.4**
FRF				*e*Sn	**Sn**	**01 50 07.4**	**-1.8**
	comp=N,64nm,0.2s						
OGDI	**Digne**	**3.42**	**258**	P	**Pn**	**01 49 31.7**	**+1.7**
UDBI	**Udbina**	**3.45**	**95**	*e*Pn	**Pn**	**01 49 30.9**	**+0.5**
UDBI	**Udbina**	**3.45**	**95**	*e*Pn	**Pn**	**01 49 30.8**	**+0.5**
LMR	**La Mourre**	**3.57**	**245**	*e*Pn	**Pn**	**01 49 31.7**	**-0.2**
LMR				*e*Sn	**Sn**	**01 50 12.3**	**-1.6**
	comp=N,192nm,0.3s						
LMR	**La Mourre**	**3.57**	**245**	*e*Pn	**Pn**	**01 49 31.7**	**-0.2**
LMR				*e*Sn	**Sn**	**01 50 12.3**	**-1.6**
LMR	**La Mourre**	**3.57**	**245**	*e*P	**Pn**	**01 49 31.7**	**-0.2**
LMR				*e*		01 50 12.3	
LMR	**La Mourre**	**3.57**	**245**	*e*Pn	**Pn**	**01 49 31.7**	**-0.2**
LMR				*e*Sn	**Sn**	**01 50 12.3**	**-1.6**
	comp=N,96nm,0.3s						
ORIF	**Oris-en-Rattie**	**3.60**	**272**	*e*Pn	**Pn**	**01 49 32.8**	**+0.4**
ORIF	**Oris-en-Rattie**	**3.60**	**272**	*e*Pn	**Pn**	**01 49 32.8**	**+0.4**
ORIF	**Oris-en-Rattie**	**3.60**	**272**	P	**Pn**	**01 49 33.1**	**+0.7**
ORIF	**Oris-en-Rattie**	**3.60**	**272**	*e*P	**Pn**	**01 49 32.8**	**+0.4**
ORIF	**Oris-en-Rattie**	**3.60**	**272**	*e*Pn	**Pn**	**01 49 32.8**	**+0.4**
ZAG	**Zagreb**	**3.66**	**74**	P	**Pb**	**01 49 37.0**	**-4.4**
ZAG	**Zagreb**	**3.66**	**74**	*e*Pn	**Pn**	**01 49 32.6**	**-0.5**
ZAG	**Zagreb**	**3.66**	**74**	P	**Pb**	**01 49 37.0**	**-4.4**
KIZ	**Kirchzarten**	**3.68**	**326**	P	**Pn**	**01 49 33.0**	**-0.5**
KIZ	**Kirchzarten**	**3.68**	**326**	P	**Pn**	**01 49 33.2**	**-0.3**
KIZ	**Kirchzarten**	**3.68**	**326**	P	**Pn**	**01 49 32.0**	**-1.5**
MOA	**Molln**	**3.71**	**37**	*i* Pn	**Pn**	**01 49 34.7**	**+0.8**
	comp=N,18nm,0.2s,SNR=34						
MOA				*i* Sn	**Sn**	**01 50 20.0**	**+2.5**
	comp=N,215nm,0.6s						
MOA	**Molln**	**3.71**	**37**	Pn	**Pn**	**01 49 34.7**	**+0.8**
	comp=N,18nm,0.2s,SNR=34						
MOA				Sn	**Sn**	**01 50 20.0**	**+2.5**
	comp=N,215nm,0.6s						
LOMF	**Lomont**	**3.75**	**312**	P	**Pn**	**01 49 34.6**	**+0.1**
LOMF	**Lomont**	**3.75**	**312**	P	**Pn**	**01 49 34.6**	**+0.1**
CABF	**La Chapelle**	**3.80**	**298**	*e*Pn	**Pn**	**01 49 35.4**	**+0.3**
CABF				*e*Sn	**Sn**	**01 50 17.6**	**-1.9**
	comp=N,369nm,0.8s						
CABF	**La Chapelle**	**3.80**	**298**	*e*Pn	**Pn**	**01 49 35.4**	**+0.3**
CABF				*e*Sn	**Sn**	**01 50 17.6**	**-1.9**
CABF	**La Chapelle**	**3.80**	**298**	*e*P	**Pn**	**01 49 35.4**	**+0.3**
CABF				*e*		01 50 17.6	
CABF	**La Chapelle**	**3.80**	**298**	*e*Pn	**Pn**	**01 49 35.4**	**+0.3**
CABF				*e*Sn	**Sn**	**01 50 17.6**	**-1.9**
	comp=N,185nm,0.8s						
BFO	**Black Forest**	**3.85**	**333**	*e*Pn	**Pn**	**01 49 35.6**	**-0.2**
BFO				*e*Sn	**Sn**	**01 50 15.1**	**-5.7**
BFO	**Black Forest**	**3.85**	**333**	*e*P	**Pn**	**01 49 36.2**	**+0.4**
BFO	**Black Forest**	**3.85**	**333**	*e*Pn	**Pn**	**01 49 35.6**	**-0.2**
BFO	**Black Forest**	**3.85**	**333**	*e*P	**Pn**	**01 49 36.2**	**+0.4**
ARSA	**Arzberg**	**3.94**	**52**	*e*Pn	**Pn**	**01 49 36.6**	**-0.4**
ARSA	**Arzberg**	**3.94**	**52**	*i* Pn	**Pn**	**01 49 37.0**	**0.0**
	comp=N,23nm,0.2s,SNR=29						
ARSA	**Arzberg**	**3.94**	**52**	Pn	**Pn**	**01 49 37.0**	**0.0**
	comp=N,23nm,0.2s,SNR=29						
MOF	**Molkenrain**	**3.94**	**319**	P	**Pn**	**01 49 36.8**	**-0.3**
MOF	**Molkenrain**	**3.94**	**319**	P	**Pn**	**01 49 36.8**	**-0.3**
OG35	**Corcelles**	**3.94**	**288**	P	**Pn**	**01 49 37.2**	**+0.1**
OG35	**Corcelles**	**3.94**	**288**	P	**Pn**	**01 49 37.2**	**+0.1**
SMRF	**Simiane la Rot**	**3.96**	**258**	*e*Pn	**Pn**	**01 49 37.6**	**+0.2**
SMRF	**Simiane la Rot**	**3.96**	**258**	*e*Pn	**Pn**	**01 49 37.6**	**+0.2**
SMRF	**Simiane la Rot**	**3.96**	**258**	*e*Pn	**Pn**	**01 49 37.6**	**+0.2**
STU	**Stuttgart**	**4.03**	**343**	*e*Pn	**Pn**	**01 49 38.5**	**+0.3**
STU	**Stuttgart**	**4.03**	**343**	*e*P	**Pn**	**01 49 38.5**	**+0.3**
STU	**Stuttgart**	**4.03**	**343**	*e*Pn	**Pn**	**01 49 38.5**	**+0.3**
RUSF	**Rustrel**	**4.04**	**258**	P	**Pn**	**01 49 39.4**	**+1.0**
RUSF	**Rustrel**	**4.04**	**258**	P	**Pn**	**01 49 39.4**	**+1.0**
OPP	**Oppenau**	**4.04**	**333**	P	**Pn**	**01 49 38.0**	**-0.5**
OPP	**Oppenau**	**4.04**	**333**	P	**Pn**	**01 49 37.0**	**-1.4**
HINF	**Hinteralfeld**	**4.05**	**317**	*e*Pn	**Pn**	**01 49 38.0**	**-0.5**
HINF				*e*Sn	**Sn**	**01 50 22.9**	**-2.8**
	comp=N,95nm,0.3s						
HINF	**Hinteralfeld**	**4.05**	**317**	*e*Pn	**Pn**	**01 49 38.0**	**-0.5**
HINF				*e*Sn	**Sn**	**01 50 22.9**	**-2.8**
HINF	**Hinteralfeld**	**4.05**	**317**	*e*P	**Pn**	**01 49 38.0**	**-0.5**
HINF				*e*		01 50 22.9	
HINF	**Hinteralfeld**	**4.05**	**317**	*e*Pn	**Pn**	**01 49 38.0**	**-0.5**
HINF				*e*Sn	**Sn**	**01 50 22.9**	**-2.8**
	comp=N,48nm,0.3s						
ECH	**Echery**	**4.20**	**323**	*e*Pn	**Pn**	**01 49 40.3**	**-0.3**
ECH	**Echery**	**4.20**	**323**	P	**Pn**	**01 49 40.2**	**-0.3**
ECH	**Echery**	**4.20**	**323**	*e*P	**Pn**	**01 49 40.3**	**-0.3**
ECH	**Echery**	**4.20**	**323**	*e*Pn	**Pn**	**01 49 40.3**	**-0.3**
WLS	**Welschbruch**	**4.28**	**326**	P	**Pn**	**01 49 41.8**	**+0.1**
WLS	**Welschbruch**	**4.28**	**326**	P	**Pn**	**01 49 41.8**	**+0.1**
CDF	**Champ du Feu**	**4.31**	**325**	*e*Pn	**Pn**	**01 49 41.6**	**-0.5**
CDF				*e*Sn	**Sn**	**01 50 28.9**	**-3.2**
	comp=N,110nm,0.3s						
CDF	**Champ du Feu**	**4.31**	**325**	*e*Pn	**Pn**	**01 49 41.6**	**-0.5**
CDF				*e*Sn	**Sn**	**01 50 28.9**	**-3.2**
CDF	**Champ du Feu**	**4.31**	**325**	*e*P	**Pn**	**01 49 41.6**	**-0.5**
CDF				*e*		01 50 28.9	
CDF	**Champ du Feu**	**4.31**	**325**	*e*Pn	**Pn**	**01 49 41.6**	**-0.5**
CDF				*e*Sn	**Sn**	**01 50 28.9**	**-3.2**
	comp=N,55nm,0.3s						
GEA0	**GERESS Array S**	**4.34**	**25**	*e*Pn	**Pn**	**01 49 42.1**	**-0.4**
GEA0	**GERESS Array S**	**4.34**	**25**	*e*Pn	**Pn**	**01 49 42.2**	**-0.4**
GEC2	**GERESS Array S**	**4.35**	**25**	*e*Pn	**Pn**	**01 49 42.8**	**+0.1**
GEC2				*e*Sn	**Sn**	**01 50 32.8**	**-0.4**
GEC2	**GERESS Array S**	**4.35**	**25**	*e*P	**Pn**	**01 49 42.8**	**+0.1**
GEC2				*e*		01 50 32.8	
GEC2	**GERESS Array S**	**4.35**	**25**	*e*Pn	**Pn**	**01 49 42.8**	**+0.1**
GEC2				*e*Sn	**Sn**	**01 50 32.8**	**-0.4**
GERES	**GERESS Array B**	**4.35**	**25**	Pn	**Pn**	**01 49 42.5**	**-0.2**
	comp=N,3.3nm,0.3s,baz=203,slow=13,SNR=87						
GERES				Sn	**Sn**	**01 50 32.8**	**-0.4**
	comp=N,26nm,0.3s,baz=202,slow=23,SNR=9.7						
GERES				Lg	Lg	01 50 55.4	
	comp=N,20nm,0.3s,baz=207,slow=30,SNR=5.6						
GERES				LR	LR	01 51 44.8	
	comp=N,332nm,18.1s,baz=232,slow=43						
BEHE	**Becsehely**	**4.36**	**67**	⇑*e*Pn	**Pn**	**01 49 42.0**	**-0.8**
BEHE				*ex*	x	01 50 40.3	
BEHE	**Becsehely**	**4.36**	**67**	⇑*i*Pn	**Pn**	**01 49 41.9**	**-0.8**
WET	**Wettzell**	**4.42**	**17**	P	**Pn**	**01 49 44.0**	**+0.4**
WET	**Wettzell**	**4.42**	**17**	P	**Pn**	**01 49 44.0**	**+0.4**
HAU	**Haudompre**	**4.43**	**316**	*e*Pn	**Pn**	**01 49 43.4**	**-0.3**
HAU				*e*Sn	**Sn**	**01 50 31.9**	**-3.1**
	comp=N,444nm,0.5s						
HAU	**Haudompre**	**4.43**	**316**	*e*Pn	**Pn**	**01 49 43.4**	**-0.3**
HAU				*e*Sn	**Sn**	**01 50 31.9**	**-3.1**
HAU	**Haudompre**	**4.43**	**316**	*e*P	**Pn**	**01 49 43.4**	**-0.3**
HAU				*e*		01 50 31.9	
HAU	**Haudompre**	**4.43**	**316**	*e*Pn	**Pn**	**01 49 43.4**	**-0.3**
HAU				*e*Sn	**Sn**	**01 50 31.9**	**-3.1**
	comp=N,222nm,0.5s						
BLY	**Banja Luka**	**4.44**	**90**	*e*Pn	**Pn**	**01 49 43.8**	**-0.1**
BLY				*e*Sn	**Sn**	**01 50 30.4**	**-4.8**
BLY	**Banja Luka**	**4.44**	**90**	⇓*i*P	**Pn**	**01 49 43.7**	**-0.1**
BLY	**Banja Luka**	**4.44**	**90**	*e*Pn	**Pn**	**01 49 43.1**	**-0.7**
BLY				*e*Sn	**Sn**	**01 50 32.2**	**-3.0**
BLY	**Banja Luka**	**4.44**	**90**	⇑*i*Pn	**Pn**	**01 49 43.4**	**-0.4**
BLY	**Banja Luka**	**4.44**	**90**	⇓*i*P	**Pn**	**01 49 43.7**	**-0.1**
BLY				S	**Sn**	**01 50 30.1**	**-5.1**
VIVF	**Saint-Julien-l**	**4.46**	**271**	*e*Pn	**Pn**	**01 49 43.4**	**-0.8**
VIVF				*e*Sn	**Sn**	**01 50 33.5**	**-2.4**
	comp=N,25nm,0.3s						
VIVF	**Saint-Julien-l**	**4.46**	**271**	*e*Pn	**Pn**	**01 49 43.4**	**-0.8**
VIVF				*e*Sn	**Sn**	**01 50 33.5**	**-2.4**
VIVF	**Saint-Julien-l**	**4.46**	**271**	*e*P	**Pn**	**01 49 43.4**	**-0.8**
VIVF				*e*		01 50 33.5	
VIVF	**Saint-Julien-l**	**4.46**	**271**	*e*Pn	**Pn**	**01 49 43.4**	**-0.8**
VIVF				*e*Sn	**Sn**	**01 50 33.5**	**-2.4**
	comp=N,13nm,0.3s						
SUBF	**Surbourg**	**4.52**	**333**	P	**Pn**	**01 49 45.7**	**+0.8**
SUBF	**Surbourg**	**4.52**	**333**	P	**Pn**	**01 49 45.7**	**+0.8**
CONA	**Conrad Observa**	**4.53**	**47**	*i* Pn	**Pn**	**01 49 45.6**	**+0.4**
	comp=N,25nm,0.3s,SNR=30						
CONA	**Conrad Observa**	**4.53**	**47**	Pn	**Pn**	**01 49 45.6**	**+0.4**
	comp=N,25nm,0.3s,SNR=30						
SSB	**Saint Sauveur**	**4.55**	**277**	*e*Pn	**Pn**	**01 49 44.5**	**-0.9**
SSB				*e*Sn	**Sn**	**01 50 36.7**	**-1.4**
SSB	**Saint Sauveur**	**4.55**	**277**	*e*P	**Pn**	**01 49 44.5**	**-0.9**
SSB				*e*		01 50 36.7	
SSB	**Saint Sauveur**	**4.55**	**277**	*e*Pn	**Pn**	**01 49 44.5**	**-0.9**
SSB				*e*Sn	**Sn**	**01 50 36.7**	**-1.4**
KHC	**Kasperske Hory**	**4.57**	**22**	*e*Pn	**Pn**	**01 49 45.8**	**+0.1**
KHC				*e*PG	**Pg**	**01 50 03.8**	**-0.8**
KHC				*e*SN	**Sn**	**01 50 36.5**	**-2.1**
KHC				*e*SG	**Sg**	**01 51 04.9**	**+1.1**
	comp=N,182nm,0.6s						
KHC				AMS	AMS	01 51 50.0	
	comp=N,800nm,10.0s						
KHC	**Kasperske Hory**	**4.57**	**22**	*e*Pn	**Pn**	**01 49 45.0**	**-0.7**
KHC	**Kasperske Hory**	**4.57**	**22**	*e*P	**Pn**	**01 49 45.8**	**+0.1**
KHC				*e*		01 50 36.5	
KHC				smax	smax		
	comp=N,182nm,0.6s						
KHC				MLR	MLR		
	comp=Z,800nm,10.0s						
KHC	**Kasperske Hory**	**4.57**	**22**	Pn	**Pn**	**01 49 45.8**	**+0.1**
LANF	**Langenberg**	**4.59**	**333**	P	**Pn**	**01 49 46.5**	**+0.5**
LANF	**Langenberg**	**4.59**	**333**	P	**Pn**	**01 49 46.5**	**+0.5**
THEF	**They Montfort**	**4.75**	**316**	P	**Pn**	**01 49 48.4**	**+0.2**
THEF	**They Montfort**	**4.75**	**316**	P	**Pn**	**01 49 48.4**	**+0.2**
SOP	**Sopron**	**4.76**	**53**	*e*Pn	**Pn**	**01 49 48.0**	**-0.3**
SOP				*e*Sn	**Sn**	**01 50 41.0**	**-2.2**
SOP	**Sopron**	**4.76**	**53**	*e*Pn	**Pn**	**01 49 48.0**	**-0.3**
SOP				*e*Sn	**Sn**	**01 50 41.0**	**-2.2**
GRFO	**Grafenberg**	**4.77**	**2**	*e*Pn	**Pn**	**01 49 47.2**	**-1.2**
GRFO	**Grafenberg**	**4.77**	**2**	*e*P	**Pn**	**01 49 47.2**	**-1.2**
GRFO	**Grafenberg**	**4.77**	**2**	*e*Pn	**Pn**	**01 49 47.2**	**-1.2**
GRA1	**Grafenberg Arr**	**4.77**	**2**	P	**Pn**	**01 49 47.3**	**-1.1**
GRF	**Grafenberg Arr**	**4.77**	**2**	P	**Pn**	**01 49 47.3**	**-1.1**
KTD	**Kalmit**	**4.81**	**337**	P	**Pn**	**01 49 49.2**	**+0.2**
KTD	**Kalmit**	**4.81**	**337**	P	**Pn**	**01 49 49.2**	**+0.2**
MS1	**Monte Sant'Ang**	**4.86**	**130**	*e*Pn	**Pn**	**01 49 48.5**	**-1.2**
DOB	**Doboj**	**5.09**	**90**	⇑*i*Pn	**Pn**	**01 49 51.5**	**-1.3**
PAGF	**Fort de Pagny**	**5.11**	**317**	*e*Pn	**Pn**	**01 49 53.0**	**0.0**
	baz=140						
PAGF	**Fort de Pagny**	**5.11**	**317**	*e*Pn	**Pn**	**01 49 53.0**	**0.0**
PAGF	**Fort de Pagny**	**5.11**	**317**	*e*Pn	**Pn**	**01 49 53.0**	**0.0**
LASF	**Ste Croix**	**5.14**	**263**	*e*Pn	**Pn**	**01 49 51.5**	**-2.1**
LASF				*e*Sn	**Sn**	**01 50 49.7**	**-3.0**
	comp=Z,16nm,0.4s						
LASF	**Ste Croix**	**5.14**	**263**	*e*Pn	**Pn**	**01 49 51.5**	**-2.1**
LASF				*e*Sn	**Sn**	**01 50 49.7**	**-3.0**
LASF	**Ste Croix**	**5.14**	**263**	*e*Pn	**Pn**	**01 49 51.5**	**-2.1**
LASF				*e*Sn	**Sn**	**01 50 49.7**	**-3.0**
	comp=Z,8.1nm,0.4s						
SFTF	**Sexfontaines**	**5.23**	**311**	*e*Pn	**Pn**	**01 49 54.3**	**-0.4**
	baz=131						
SFTF				*e*Sn	**Sn**	**01 50 51.6**	**-3.2**
	comp=Z,152nm,0.6s						
SFTF	**Sexfontaines**	**5.23**	**311**	*e*Pn	**Pn**	**01 49 54.3**	**-0.4**
SFTF				*e*Sn	**Sn**	**01 50 51.6**	**-3.2**
SFTF	**Sexfontaines**	**5.23**	**311**	*e*Pn	**Pn**	**01 49 54.3**	**-0.4**
SFTF				*e*Sn	**Sn**	**01 50 51.6**	**-3.2**
	comp=Z,76nm,0.6s						
SMF	**Signal de Mont**	**5.26**	**292**	*e*Pn	**Pn**	**01 49 54.9**	**-0.2**
SMF				*e*Sn	**Sn**	**01 50 52.0**	**-3.5**
	comp=Z,54nm,0.3s						
SMF	**Signal de Mont**	**5.26**	**292**	*e*Pn	**Pn**	**01 49 54.9**	**-0.2**
SMF				*e*Sn	**Sn**	**01 50 52.0**	**-3.5**
SMF	**Signal de Mont**	**5.26**	**292**	*e*P	**Pn**	**01 49 54.9**	**-0.2**
SMF				*e*		01 50 52.0	
SMF	**Signal de Mont**	**5.26**	**292**	*e*Pn	**Pn**	**01 49 54.9**	**-0.2**
SMF				*e*Sn	**Sn**	**01 50 52.0**	**-3.5**
	comp=Z,27nm,0.3s						
STON	**Ston**	**5.29**	**110**	*i* Pn	**Pn**	**01 49 54.5**	**-1.0**
STON				Sn	**Sn**	**01 50 53.7**	**-2.6**
STON	**Ston**	**5.29**	**110**	*i* Pn	**Pn**	**01 49 54.5**	**-1.0**
STON				Sn	**Sn**	**01 50 53.6**	**-2.6**
ZST	**Bratislava**	**5.36**	**50**	*e*P	**Pn**	**01 49 55.0**	**-1.4**
ZST				*e*		01 50 52.7	
ZST	**Bratislava**	**5.36**	**50**	*e*PN	**Pn**	**01 49 55.0**	**-1.4**
ZST				*e*PG	**Pg**	**01 50 17.9**	**-1.7**
ZST				*e*SN	**Sn**	**01 50 52.7**	**-5.1**
ZST	**Bratislava**	**5.36**	**50**	*e*Pn	**Pn**	**01 49 55.0**	**-1.4**
NKC	**Novy Kostel**	**5.40**	**10**	*e*PN	**Pn**	**01 49 56.7**	**-0.4**
NKC				*e*PG	**Pg**	**01 50 19.0**	**-1.5**
NKC				AMS	AMS	01 52 20.0	
	comp=Z,800nm,11.0s						
NKC	**Novy Kostel**	**5.40**	**10**	*e*P	**Pn**	**01 49 56.7**	**-0.4**
NKC				MLR	MLR		
	comp=Z,800nm,11.0s						
NKC	**Novy Kostel**	**5.40**	**10**	Pn	**Pn**	**01 49 56.7**	**-0.4**
MEZF	**Maizieres J'vi**	**5.41**	**313**	*e*Pn	**Pn**	**01 49 56.8**	**-0.3**
	baz=137						
MEZF	**Maizieres J'vi**	**5.41**	**313**	*e*Pn	**Pn**	**01 49 56.8**	**-0.3**
MEZF	**Maizieres J'vi**	**5.41**	**313**	*e*Pn	**Pn**	**01 49 56.8**	**-0.3**
LOR	**Lormes**	**5.46**	**298**	*e*Pn	**Pn**	**01 49 57.5**	**-0.4**
	baz=122						
LOR				*e*Sn	**Sn**	**01 50 57.0**	**-3.4**
	comp=Z,80nm,0.4s						
LOR	**Lormes**	**5.46**	**298**	*e*Pn	**Pn**	**01 49 57.5**	**-0.4**
LOR				*e*Sn	**Sn**	**01 50 57.0**	**-3.4**
LOR	**Lormes**	**5.46**	**298**	P	**Pn**	**01 49 57.7**	**-0.2**
LOR	**Lormes**	**5.46**	**298**	*e*P	**Pn**	**01 49 57.5**	**-0.4**
LOR				*e*		01 50 57.0	
LOR	**Lormes**	**5.46**	**298**	*e*Pn	**Pn**	**01 49 57.5**	**-0.4**
LBL	**Lubilhac**	**5.46**	**276**	P	**Pn**	**01 49 57.6**	**-0.4**
LBL	**Lubilhac**	**5.46**	**276**	P	**Pn**	**01 49 57.6**	**-0.4**
ABH	**Alteburg**	**5.47**	**336**	P	**Pn**	**01 49 58.2**	**+0.2**
ABH	**

comp=Z,165nm,1.0s
comp=Z,1µm,7.0s
comp=N,680nm,7.9s
comp=E,680nm,7.9s
BRG Berggiesshubel 6.28 18 P Pn 01 50 09.5 +0.4
BRG pmax pmax
comp=Z,18nm,0.8s
BRG MLR MLR
comp=Z,1µm,7.0s
BRG MLR MLR
comp=N,680nm,7.9s
BRG MLR MLR
comp=E,680nm,7.9s
BRG Berggiesshubel 6.28 18 P Pn 01 50 09.5 +0.4
comp=E,1µm,7.0s
TCF Toulx Ste Croi 6.28 286 *e*Pn **Pn 01 50 08.8 -0.4**
TCF *e*Sn **Sn 01 51 16.9 -3.8**
comp=E,64nm,0.5s
TCF Toulx Ste Croi 6.28 286 *e*Pn **Pn 01 50 08.8 -0.4**
TCF *e*Sn **Sn 01 51 16.9 -3.8**
TCF Toulx Ste Croi 6.28 286 *e*P **Pn 01 50 08.8 -0.4**
TCF *e* 01 51 16.9
TCF Toulx Ste Croi 6.28 286 *e*Pn **Pn 01 50 08.8 -0.4**
FGSL Fruska Gora 6.28 85 *e*Pn **Pn 01 50 07.8 -1.4**
FRGS Fruska Gora 6.28 85 *e*Pn **Pn 01 50 07.8 -1.4**
CAF Calviac 6.31 273 *e*Pn **Pn 01 50 09.3 -0.3**
CAF Calviac 6.31 273 *e*Pn **Pn 01 50 09.3 -0.3**
CAF Calviac 6.31 273 *e*P **Pn 01 50 09.3 -0.3**
CAF Calviac 6.31 273 *e*Pn **Pn 01 50 09.3 -0.3**
BUM Brajici-Budva 6.33 112 ⇑*i*Pn **Pn 01 50 10.4 +0.4**
BUM *e*Sn **Sn 01 51 20.4 -1.7**
BUM Brajici-Budva 6.33 112 ⇑*i*Pn **Pn 01 50 10.4 +0.4**
BUM *e*Sn **Sn 01 51 20.4 -1.7**
ORI Oriolo Calabro 6.33 138 P **Pn 01 50 10.2 +0.3**
ORI Oriolo Calabro 6.33 138 P **Pn 01 50 10.2 +0.3**
MTLF Montolieu 6.48 259 *e*Pn **Pn 01 50 10.8 -1.1**
MTLF Montolieu 6.48 259 *e*Pn **Pn 01 50 10.8 -1.1**
MTLF Montolieu 6.48 259 *e*P **Pn 01 50 10.8 -1.1**
MTLF Montolieu 6.48 259 *e*Pn **Pn 01 50 10.8 -1.1**
KRLC Kraliky 6.49 35 *e*PN **Pn 01 50 11.8 -0.2**
KRLC Kraliky 6.49 35 *e*P **Pn 01 50 11.8 -0.2**
KRLC Kraliky 6.49 35 Pn **Pn 01 50 11.8 -0.2**
VYHS Vyhne 6.49 54 *e*P **Pn 01 50 10.8 -1.2**
VYHS *e* 01 51 21.3
VYHS Vyhne 6.49 54 *e*PN **Pn 01 50 10.8 -1.2**
VYHS *e*PG **Pg 01 50 41.6 +0.4**
VYHS *e*SN **Sn 01 51 21.3 -4.5**
VYHS Vyhne 6.49 54 *e*Pn **Pn 01 50 10.8 -1.2**
DIVS Divibare 6.52 94 *e*Pn **Pn 01 50 11.8 -0.7**
DIVS Divibare 6.52 94 *e*Pn **Pn 01 50 12.0 -0.5**
DIVS *e*Sn **Sn 01 51 21.3 -5.3**
DIVS Divibare 6.52 94 *e*Pn **Pn 01 50 12.0 -0.5**
PDG Podgorica 6.52 110 *e*Pn **Pn 01 50 12.4 +0.1**
PDG *e*Sn **Sn 01 51 21.0 -5.4**
PDG Podgorica 6.52 110 ⇑*i*P **Pn 01 50 12.4 +0.1**
PDG Podgorica 6.52 110 S **Sn 01 51 20.8 -5.6**
PDG Podgorica 6.52 110 *e*Pn **Pn 01 50 12.4 +0.1**
PDG *e*Sn **Sn 01 51 25.1 -1.3**
TTG Podgorica 6.52 110 ⇑*i*Pn **Pn 01 50 12.5 +0.1**
TTG *e*Sn **Sn 01 51 25.1 -1.3**
TTG Podgorica 6.52 110 *e*Pn **Pn 01 50 12.5 +0.1**
TTG Podgorica 6.52 110 *e*P **Pn 01 50 12.5 +0.1**
TTG Podgorica 6.52 110 *e*Pn **Pn 01 50 12.5 +0.1**
DPC Dobruska-Polom 6.53 32 *e*PN **Pn 01 50 11.9 -0.6**
DPC *e*SN **Sn 01 51 22.5 -4.2**
DPC AMS AMS 01 52 50.0
comp=E,800nm,10.0s
DPC Dobruska-Polom 6.53 32 *e*P **Pn 01 50 11.9 -0.6**
DPC *e* 01 51 22.5
DPC MLR MLR
comp=Z,800nm,10.0s
DPC Dobruska-Polom 6.53 32 Pn **Pn 01 50 11.9 -0.6**
KOME Kolasin 6.53 106 ⇑*i*Pn **Pn 01 50 13.2 +0.6**
KOME *e*Sn **Sn 01 51 25.1 -1.7**
KOME Kolasin 6.53 106 ⇑*i*Pn **Pn 01 50 13.2 +0.6**
KOME *e*Sn **Sn 01 51 25.1 -1.7**
CLL Collm 6.53 11 *e*Pn **Pn 01 50 12.0 -0.5**
CLL *e*Pg **Pg 01 50 45.0 +3.0**
CLL *e* 01 51 22.0
CLL *e* 01 51 36.0
CLL *e* 01 51 49.0
CLL *i* 01 51 57.1
CLL Lmax 01 52 00.0
CLL *e*Sg **Sg 01 52 09.0 +2.5**
comp=Z,192nm,1.0s
CLL *e*Sglp 01 52 19.0
comp=N,200nm,19.4s
CLL *e*Sglp 01 52 19.0
comp=E,500nm,14.8s
CLL *e*Sglp 01 52 19.0
comp=Z,100nm,29.9s
CLL Collm 6.53 11 *e*Pn **Pn 01 50 11.8 -0.8**
CLL Collm 6.53 11 *e*P **Pn 01 50 12.0 -0.5**
CLL Collm 6.53 11 *e*P **Pn 01 50 12.0 -0.5**
UPC Upice 6.54 30 *e*PN **Pn 01 50 12.7 0.0**
UPC AMS AMS 01 53 00.0
comp=Z,1µm,9.0s
UPC Upice 6.54 30 *e*P **Pn 01 50 12.7 0.0**
UPC MLR MLR
comp=Z,1µm,9.0s
UPC Upice 6.54 30 Pn **Pn 01 50 12.7 0.0**
DRME Dracevica, Mon 6.58 112 ⇑*i*Pn **Pn 01 50 13.1 -0.1**
DRME *e*Sn **Sn 01 51 26.0 -2.0**
DRME Dracevica, Mon 6.58 112 ⇑*i*Pn **Pn 01 50 13.1 -0.1**
DRME *e*Sn **Sn 01 51 26.0 -2.0**
MEM Membach 6.59 331 ⇓PN **Pn 01 50 13.7 +0.3**
MORC Moravsky Berou 6.60 40 *e*Pn **Pn 01 50 13.4 -0.2**
MORC *e*Sn **Sn 01 51 26.5 -2.0**
MORC Moravsky Berou 6.60 40 *e*P **Pn 01 50 13.4 -0.2**
MORC *e* 01 51 26.5
MORC Moravsky Berou 6.60 40 *e*P **Pn 01 50 13.4 -0.2**
MORC *e*Sn **Sn 01 51 26.5 -2.0**
MORC Moravsky Berou 6.60 40 *e*PN **Pn 01 50 13.2 -0.4**
GIVF Givet 6.63 323 *e*Pn **Pn 01 50 14.7 +0.7**
GIVF Givet 6.63 323 *e*Pn **Pn 01 50 14.7 +0.7**
GIVF Givet 6.63 323 *e*P **Pn 01 50 14.7 +0.7**
GIVF Givet 6.63 323 *e*Pn **Pn 01 50 14.7 +0.7**
BCLA Clavier 6.69 327 ⇑PN **Pn 01 50 15.7 +1.1**
BCLA ⇑SN **Sn 01 51 27.5 -3.1**
comp=E,27nm,0.0s
RJF Les Rejaudoux 6.69 277 *e*Pn **Pn 01 50 15.2 +0.5**
RJF Les Rejaudoux 6.69 277 *e*Pn **Pn 01 50 15.2 +0.5**
RJF Les Rejaudoux 6.69 277 *e*P **Pn 01 50 15.2 +0.5**
RJF Les Rejaudoux 6.69 277 *e*Pn **Pn 01 50 15.2 +0.5**
SJES Sjenica 6.71 101 *e*Pn **Pn 01 50 15.4 +0.3**
ULC Ulcinj 6.72 113 ⇑*i*Pn **Pn 01 50 14.6 -0.7**
ULC *e*Sn **Sn 01 51 29.5 -2.1**
ULC Ulcinj 6.72 113 ⇑*i*Pn **Pn 01 50 14.6 -0.7**
ULC *e*Sn **Sn 01 51 29.5 -2.1**
DOU Dourbes 6.73 323 ⇓PN **Pn 01 50 15.8 +0.6**
DOU ⇓SN **Sn 01 51 31.8 +0.2**
comp=E,27nm,0.0s
HGN Heimansgroeve 6.74 332 *e*Pn **Pn 01 50 17.0 +1.5**
comp=E,8.4nm,0.4s
HGN *e*Sn **Sn 01 51 27.8 -4.2**
TRUS Trudelj 6.79 93 *e*Pn **Pn 01 50 15.6 -0.5**
TRUS Trudelj 6.79 93 *e*Pn **Pn 01 50 15.6 -0.5**
PSZ Piszkesteto 6.87 61 ⇓*i*P **Pn 01 50 17.0 -0.2**
PSZ Piszkesteto 6.87 61 S **Sn 01 51 32.6 -2.5**
PSZ Piszkesteto 6.87 61 *e*Pn **Pn 01 50 17.0 -0.2**
PSZ *e*Sn **Sn 01 51 32.3 -2.8**
PSZ Piszkesteto 6.87 61 *e*Pn **Pn 01 50 17.1 -0.2**
PSZ Piszkesteto 6.87 61 *e*P **Pn 01 50 17.1 -0.2**
PSZ Piszkesteto 6.87 61 *e*P **Pn 01 50 17.1 -0.2**
KSP Ksiaz 6.92 29 *e*Pn **Pn 01 50 18.0 +0.1**
KSP Ksiaz 6.92 29 *e*P **Pn 01 50 18.0 +0.1**
KSP Ksiaz 6.92 29 *e*P **Pn 01 50 18.0 +0.1**
GRUS Gruza 7.07 95 *e*Pn **Pn 01 50 19.6 -0.4**
GRUS Gruza 7.07 95 *e*Pn **Pn 01 50 19.6 -0.4**
TIP Timpagrande 7.19 141 *e*Pn **Pn 01 50 22.8 +1.1**
TIP Timpagrande 7.19 141 *e*Pn **Pn 01 50 22.8 +1.1**
LANS Liptovska Anna 7.19 51 *e*SN **Sn 01 51 41.2 -1.8**
LANS Liptovska Anna 7.19 51 *e*SN **Sn 01 51 41.2 -1.8**
SVIS Svilajnac 7.36 92 *e*Pn **Pn 01 50 23.0 -0.9**
SVIS Svilajnac 7.36 92 *e*Pn **Pn 01 50 23.0 -0.9**
TIR Tirane 7.44 116 ⇑*i*P **Pn 01 50 24.0 -0.9**
TIR Tirane 7.44 116 S **Sn 01 51 43.2 -5.9**
TIR Tirane 7.44 116 *e*Pn **Pn 01 50 24.1 -0.9**
TIR *e*Sn **Sn 01 51 43.4 -5.7**
TIR Tirane 7.44 116 P **Pn 01 50 24.2 -0.9**
TIR Tirane 7.44 116 *e*P **Pn 01 50 24.1 -0.9**
TIR *e* 01 51 43.4
TIR Tirane 7.44 116 *e*Pn **Pn 01 50 24.1 -0.9**
KECS Kecovo 7.46 58 *e*P **Pn 01 50 25.0 -0.3**
KECS *e* 01 51 45.8
KECS Kecovo 7.46 58 *e*PN **Pn 01 50 25.0 -0.3**
KECS *e*SN **Sn 01 51 45.8 -3.7**
KECS Kecovo 7.46 58 *e*Pn **Pn 01 50 25.0 -0.3**
SELS Selova 7.52 100 *e*Pn **Pn 01 50 25.6 -0.6**
SELS Selova 7.52 100 *e*Pn **Pn 01 50 25.6 -0.6**
CLTB Caltabellotta 7.54 166 *e*Pn Pn 01 50 32.0 +5.5
BZS Buzias 7.56 81 ⇓*i*P **Pn 01 50 25.9 -0.8**
WTSB Winterswijk 7.56 340 *e*Pn **Pn 01 50 29.5 +2.8**
comp=E,9.5nm,0.5s
PHP Peshkopia 7.64 112 P **Pn 01 50 28.3 +0.4**
PHP Peshkopia 7.64 112 P **Pn 01 50 28.3 +0.4**
PHP Peshkopia 7.64 112 P **Pn 01 50 28.3 +0.4**
PHP Peshkopia 7.64 112 P **Pn 01 50 28.3 +0.4**
MDVR Moldovita 7.65 87 ⇑*i*P **Pn 01 50 27.8 -0.2**
MDVR Moldovita 7.65 87 S **Sn 01 51 47.7 -6.7**
NIE Niedzica 7.79 51 *e*Pn **Pn 01 50 31.0 +1.1**
NIE Niedzica 7.79 51 *e*P **Pn 01 50 31.0 +1.1**
NIE Niedzica 7.79 51 *e*Pn **Pn 01 50 31.0 +1.1**
BOVS Bovan 7.83 96 *e*Pn **Pn 01 50 30.3 0.0**
BOVS Bovan 7.83 96 *e*Pn **Pn 01 50 30.3 0.0**
EPF Esparros 7.88 260 *e*P **Pn 01 50 34.0 +2.8**
EPF Esparros 7.88 260 *e*Pn **Pn 01 50 34.0 +2.8**
EPF Esparros 7.88 260 *e*P **Pn 01 50 34.0 +2.8**
VAE Valguarnera 7.88 160 Pn Pn 01 50 39.0 +7.8
comp=E,0.3nm,0.3s,baz=328,slow=19,SNR=3.3
MFF Saint Martin d 7.94 286 *e*Pn **Pn 01 50 31.5 -0.4**
MFF Saint Martin d 7.94 286 *e*Pn **Pn 01 50 31.5 -0.4**
MFF Saint Martin d 7.94 286 *e*P **Pn 01 50 31.5 -0.4**
MFF Saint Martin d 7.94 286 *e*Pn **Pn 01 50 31.5 -0.4**
BARS Barje 8.13 101 *e*Pn **Pn 01 50 33.9 -0.6**
BARS Barje 8.13 101 *e*Pn **Pn 01 50 33.9 -0.6**
OHR Ohrid 8.16 114 *i*Pn **Pn 01 50 35.1 +0.1**
OHR *e*Sn Sn 01 51 55.3 -12
ZAGS Zajecar 8.16 94 *e*Pn **Pn 01 50 34.4 -0.5**
ZAGS Zajecar 8.16 94 *e*Pn **Pn 01 50 34.4 -0.5**
SKO Skopje 8.18 107 P **Pn 01 50 35.3 0.0**
SKO Skopje 8.18 107 P **Pn 01 50 35.3 0.0**
SKO Skopje 8.18 107 *i*Pn **Pn 01 50 35.2 -0.1**
SKO Skopje 8.18 107 P **Pn 01 50 35.3 0.0**
SKO Skopje 8.18 107 P **Pn 01 50 35.3 0.0**
CRVS Cervenica-Dubn 8.22 57 *e*P **Pn 01 50 36.0 +0.3**
CRVS Cervenica-Dubn 8.22 57 *e*PN **Pn 01 50 36.0 +0.3**
CRVS Cervenica-Dubn 8.22 57 *e*P **Pn 01 50 36.0 +0.3**
KEK Kerkira 8.37 125 P **Pn 01 50 36.0 -1.8**
KEK Kerkira 8.37 125 P **Pn 01 50 36.0 -1.8**
KEK Kerkira 8.37 125 P **Pn 01 50 36.0 -1.8**
SRN Sarande 8.38 124 P **Pn 01 50 36.8 -1.1**
SRN Sarande 8.38 124 P **Pn 01 50 36.8 -1.1**
SRN Sarande 8.38 124 P **Pn 01 50 36.8 -1.1**
KBN Korca 8.41 117 P **Pn 01 50 38.3 -0.2**
KBN Korca 8.41 117 P **Pn 01 50 38.3 -0.2**
KBN Korca 8.41 117 P **Pn 01 50 38.3 -0.2**
KBN Korca 8.41 117 P **Pn 01 50 38.3 -0.2**
LDF La Druitiere 8.44 300 *e*Pn **Pn 01 50 37.4 -1.3**
LDF La Druitiere 8.44 300 *e*Pn **Pn 01 50 37.4 -1.3**
LDF La Druitiere 8.44 300 *e*P **Pn 01 50 37.4 -1.3**
LDF La Druitiere 8.44 300 *e*Pn **Pn 01 50 37.4 -1.3**
BIA Bitola 8.55 114 P **Pn 01 50 40.3 0.0**
BIA Bitola 8.55 114 P **Pn 01 50 40.3 0.0**
BIA Bitola 8.55 114 *i*Pn **Pn 01 50 40.2 0.0**
BIA *e*Sn **Sn 01 52 10.0 -6.5**
BIA Bitola 8.55 114 P **Pn 01 50 40.3 0.0**
ETSF Etsaut 8.55 260 *e*P **Pn 01 50 43.8 +3.4**
ETSF Etsaut 8.55 260 *e*Pn **Pn 01 50 43.8 +3.4**
ETSF Etsaut 8.55 260 *e*P **Pn 01 50 43.8 +3.4**
ZAPS Zavoj 8.57 97 *e*Pn **Pn 01 50 40.5 -0.1**
UZH Uzhgorod 8.62 61 *e*P **Pn 01 50 40.4 -0.8**
UZH *e*S **Sn 01 52 15.8 -2.3**
UZH Uzhgorod 8.62 61 *e*P **Pn 01 50 40.4 -0.8**
UZH *e*S **Sn 01 52 15.8 -2.3**
SGD Sagiada 8.69 124 P **Pn 01 50 40.8 -1.4**
NEST Nestorio 8.70 118 P **Pn 01 50 42.7 +0.3**
FNA Florina 8.70 115 *e*Pn **Pn 01 50 42.3 -0.2**
FNA *e*Sn **Sn 01 52 13.3 -7.0**
FNA Florina 8.70 115 P **Pn 01 50 42.0 -0.5**
FNA Florina 8.70 115 *e*P **Pn 01 50 42.3 -0.2**
FNA *e* 01 52 13.3
FNA Florina 8.70 115 *e*Pn **Pn 01 50 42.3 -0.2**
FLN La Foliniere 8.72 300 *e*Pn **Pn 01 50 42.1 -0.5**
baz=118
FLN La Foliniere 8.72 300 *e*Pn **Pn 01 50 42.1 -0.5**
FLN La Foliniere 8.72 300 *e*P **Pn 01 50 42.1 -0.5**
FLN La Foliniere 8.72 300 *e*Pn **Pn 01 50 42.1 -0.5**
STIP Stip 8.81 108 *i*Pn **Pn 01 50 44.5 +0.7**
STIP *e*Sn **Sn 01 52 15.6 -7.2**
GRR Gorron 8.83 297 *e*Pn **Pn 01 50 43.2 -0.9**
GRR Gorron 8.83 297 *e*Pn **Pn 01 50 43.2 -0.9**
GRR Gorron 8.83 297 *e*P **Pn 01 50 43.2 -0.9**
CJR Cluj-Napoca 9.01 74 ⇑*i*P **Pn 01 50 47.1 +0.4**
LOT Lotru 9.07 82 ⇓*i*P **Pn 01 50 48.8 +1.3**
KPRO Kipourio 9.16 119 P **Pn 01 50 48.4 -0.3**
VTS Vitosha 9.17 100 ⇓*i*P **Pn 01 50 48.2 -0.8**
VTS Vitosha 9.17 100 S **Sn 01 52 24.4 -7.6**
VTS Vitosha 9.17 100 *e*Pn **Pn 01 50 48.2 -0.8**
VTS *e*Sn **Sn 01 52 25.4 -6.6**
VTS Vitosha 9.17 100 *e*P **Pn 01 50 48.2 -0.8**
VTS *e* 01 52 25.4
VTS Vitosha 9.17 100 *e*Pn **Pn 01 50 48.2 -0.8**
VAY Valandovo 9.23 109 P **Pn 01 50 48.8 -0.8**
VAY Valandovo 9.23 109 P **Pn 01 50 48.8 -0.8**
VAY Valandovo 9.23 109 *i*Pn **Pn 01 50 47.7 -1.9**
VAY *e*Sn **Sn 01 52 25.5 -7.6**
VAY Valandovo 9.23 109 P **Pn 01 50 48.8 -0.8**
VAY Valandovo 9.23 109 P **Pn 01 50 48.8 -0.8**
KEST Kesra 9.27 188 Pn **Pn 01 50 54.5 +4.3**
comp=E,2.2nm,0.3s,baz=329,slow=2.2,SNR=39
KEST Sn **Sn 01 52 41.6 +7.3**
comp=E,0.2nm,0.3s,baz=24,slow=20,SNR=4.4
KEST LR LR 01 54 21.3
comp=E,111nm,21.0s,baz=310,slow=38
KEST Kesra 9.27 188 *e*Pn **Pn 01 50 53.5 +3.3**
KEST *e*Sn **Sn 01 52 41.6 +7.3**
KWP Kalwaria Pacla 9.27 55 *e*Pn **Pn 01 50 52.0 +1.9**
KWP Kalwaria Pacla 9.27 55 *e*Pn **Pn 01 50 52.0 +1.9**
KWP *e*Sn **Sn 01 52 31.2 -2.9**
KWP Kalwaria Pacla 9.27 55 *e*P **Pn 01 50 52.1 +1.9**
KWP *e* 01 52 31.2
KWP Kalwaria Pacla 9.27 55 *e*Pn **Pn 01 50 52.0 +1.9**
GRG Griva 9.29 111 P **Pn 01 50 49.6 -0.8**
GRG Griva 9.29 111 P **Pn 01 50 49.6 -0.8**
GRG Griva 9.29 111 P **Pn 01 50 49.6 -0.8**
GRG Griva 9.29 111 P **Pn 01 50 49.6 -0.8**
LKD2 Lefkada island 9.49 127 P **Pn 01 50 51.7 -1.4**
LKD2 Lefkada island 9.49 127 P **Pn 01 50 51.7 -1.4**
LKD2 Lefkada island 9.49 127 P **Pn 01 50 51.7 -1.4**
THTN Thala 9.51 191 *e*Pn Pn 01 50 58.4 +4.8
KNT Kendrikon 9.52 109 P **Pn 01 50 52.8 -0.8**
KNT Kendrikon 9.52 109 P **Pn 01 50 52.8 -0.8**
KNT Kendrikon 9.52 109 P **Pn 01 50 52.8 -0.8**
KNT Kendrikon 9.52 109 P **Pn 01 50 52.8 -0.8**
ARR Arges 9.68 83 ⇓*i*P **Pn 01 50 56.4 +0.6**
LIT Litokhoron 9.79 115 *e*Pn **Pn 01 50 56.9 -0.4**
LIT *e*Sn Sn 01 52 36.5 -10
LIT Litokhoron 9.79 115 P **Pn 01 50 55.9 -1.4**
LIT Litokhoron 9.79 115 *e*P **Pn 01 50 56.9 -0.4**
LIT Litokhoron 9.79 115 *e*Pn **Pn 01 50 56.9 -0.4**
SGMF Saint Gilles 9.88 294 *e*Pn **Pn 01 50 57.0 -1.4**
SGMF Saint Gilles 9.88 294 *e*Pn **Pn 01 50 57.0 -1.4**
SGMF Saint Gilles 9.88 294 *e*P **Pn 01 50 57.0 -1.4**
SGMF Saint Gilles 9.88 294 *e*Pn **Pn 01 50 57.0 -1.4**
VLS Valsamata 9.88 130 P **Pn 01 50 57.3 -1.2**
VLS Valsamata 9.88 130 P **Pn 01 50 57.3 -1.2**
VLS Valsamata 9.88 130 P **Pn 01 50 57.3 -1.2**
VLS Valsamata 9.88 130 P **Pn 01 50 57.3 -1.2**
PDO Prodromos 9.92 126 P **Pn 01 50 57.7 -1.3**
VOIR 9.97 82 ⇓*i*P **Pn 01 50 58.3 -1.5**
SOH Sokhos 9.98 110 P **Pn 01 50 59.4 -0.6**
SOH Sokhos 9.98 110 P **Pn 01 50 59.4 -0.6**
SOH Sokhos 9.98 110 P **Pn 01 50 59.4 -0.6**
SOH Sokhos 9.98 110 P **Pn 01 50 59.4 -0.6**
SRS Serrai 10.01 108 P **Pn 01 51 00.0 -0.3**
SRS Serrai 10.01 108 P **Pn 01 51 00.0 -0.3**
SRS Serrai 10.01 108 P **Pn 01 51 00.0 -0.3**
SRS Serrai 10.01 108 P **Pn 01 51 00.0 -0.3**
KFL Anninata 10.04 129 P **Pn 01 50 59.7 -0.9**
EVR Evrytania 10.07 123 P **Pn 01 51 00.8 -0.4**
EVR Evrytania 10.07 123 P **Pn 01 51 00.8 -0.4**
EVR Evrytania 10.07 123 P **Pn 01 51 00.8 -0.4**
NVR Nevrokopi 10.09 106 P **Pn 01 51 01.5 +0.1**
NVR Nevrokopi 10.09 106 P **Pn 01 51 01.5 +0.1**
NVR Nevrokopi 10.09 106 P **Pn 01 51 01.5 +0.1**
QUIF Quistinic 10.20 292 *e*Pn **Pn 01 51 01.5 -1.3**
QUIF Quistinic 10.20 292 *e*Pn **Pn 01 51 01.5 -1.3**
QUIF Quistinic 10.20 292 *e*P **Pn 01 51 01.5 -1.3**
QUIF Quistinic 10.20 292 *e*Pn **Pn 01 51 01.5 -1.3**
DOPR Dopca 10.20 79 ⇓*i*P **Pn 01 51 02.5 -0.4**
BUR08 Bucovina Ar. S 10.23 70 *e*Pn **Pn 01 51 05.8 +2.3**
BUR04 Bucovina Ar. S 10.24 70 *e*Pn **Pn 01 51 05.0 +1.6**
BUR04 Bucovina Ar. S 10.24 70 *e*Pn **Pn 01 51 05.0 +1.6**
PLG Polygyros 10.27 112 P **Pn 01 51 03.3 -0.5**
PLG Polygyros 10.27 112 P **Pn 01 51 03.3 -0.5**
PLG Polygyros 10.27 112 P **Pn 01 51 03.3 -0.5**
PLG Polygyros 10.27 112 P **Pn 01 51 03.3 -0.5**
AGG Agios Georgios 10.32 121 *e*Pn **Pn 01 51 04.1 -0.5**
AGG *e*Sn Sn 01 52 49.7 -10
AGG Agios Georgios 10.32 121 *e*P **Pn 01 51 04.1 -0.5**
AGG Agios Georgios 10.32 121 *e*Pn **Pn 01 51 04.1 -0.5**
ANX Ano Chora 10.35 124 P **Pn 01 51 04.5 -0.5**
ROSF Rostrenen 10.36 294 *e*Pn **Pn 01 51 04.4 -0.6**
ROSF Rostrenen 10.36 294 *e*Pn **Pn 01 51 04.4 -0.6**
ROSF Rostrenen 10.36 294 *e*P **Pn 01 51 04.4 -0.6**
ROSF Rostrenen 10.36 294 *e*Pn **Pn 01 51 04.4 -0.6**
BSD Bornholm Skovb 10.51 13 *i*P **Pn 01 51 06.3 -0.7**
comp=E,6.7nm,0.8s
BSD Bornholm Skovb 10.51 13 *i*P **Pn 01 51 06.3 -0.7**
comp=E,6.7nm,0.8s
MLR Muntele Rosu 10.60 82 Pn **Pn 01 51 09.3 +0.8**
comp=E,0.1nm,0.3s,baz=240,slow=8.4,SNR=6.3
MLR LR LR 01 55 34.8
comp=E,20nm,18.7s,baz=276,slow=40
MLR Muntele Rosu 10.60 82 ⇑*i*P **Pn 01 51 06.9 -1.6**
PAIG Paliouri 10.65 114 P **Pn 01 51 11.2 +2.2**
PAIG pmax pmax
comp=Z,21nm,0.9s
PAIG Paliouri 10.65 114 P **Pn 01 51 11.2 +2.2**
comp=Z,21nm,0.9s
PLOR Plostina 11.08 80 ⇓*i*P **Pn 01 51 14.6 -0.5**
PLOR Plostina 11.08 80 P **Pn 01 51 14.5 -0.5**
VRI Vrincioaia 11.14 80 ⇑*i*P **Pn 01 51 14.5 -1.3**
VRI Vrincioaia 11.14 80 P **Pn 01 51 14.4 -1.3**
ALN Alexandroupoli 11.78 105 *e*Pn **Pn 01 51 24.4 0.0**
ALN Alexandroupoli 11.78 105 *e*P **Pn 01 51 24.4 0.0**
ALN Alexandroupoli 11.78 105 *e*Pn **Pn 01 51 24.4 0.0**
ESDC Sonseca Array 12.22 250 Pn **Pn 01 51 30.7 +0.1**
comp=Z,0.5nm,0.3s,baz=61,slow=14,SNR=11
PAB San Pablo 12.54 250 *e*Pn **Pn 01 51 34.5 -0.5**
PAB San Pablo 12.54 250 *e*P **Pn 01 51 34.5 -0.5**
PAB San Pablo 12.54 250 *e*Pn **Pn 01 51 34.5 -0.5**
KIEV Kiev 13.54 58 *e*P **Pn 01 51 48.8 +0.3**
AKASG Malin Array Be 13.56 58 Pn **P 01 51 53.9 -3.9**
comp=Z,0.2nm,0.3s,baz=248,slow=13,SNR=3.3
AKBB Malin Array Si 13.56 58 *e*Pn **P 01 51 53.9 -3.8**
AKBB Malin Array Si 13.56 58 *e*P **P 01 51 53.9 -3.8**
EKA Eskdalemuir Ar 13.77 324 Pn **Pn 01 51 50.2 -1.4**
baz=138,slow=14,SNR=6.4
IDI Anoyia 14.35 127 Pn **Pn 01 51 58.0 -1.7**
comp=Z,0.4nm,0.3s,baz=327,slow=13,SNR=5.5
IDI LR LR 01 58 59.3
comp=Z,54nm,20.0s,baz=288,slow=44
IDI Anoyia 14.35 127 *e*Pn **Pn 01 51 58.0 -1.7**
IDI *e*Sn Sn 01 54 26.1 -12
MANT Manisa 14.63 110 *e*Pn **Pn 01 52 05.0 +1.4**
MANT Manisa 14.63 110 *e*Pn **Pn 01 52 05.0 +1.4**
HFS Hagfors 15.32 5 Pn **Pn 01 52 12.8 +0.2**
comp=Z,0.1nm,0.3s,baz=191,slow=15,SNR=5.7
HFS LR LR 01 58 39.2
comp=Z,90nm,18.3s,baz=198,slow=39
KARP Karpathos 15.50 122 *e*Pn **Pn 01 52 14.9 -0.2**
comp=Z,35nm,0.9s
KARP Karpathos 15.50 122 *e*Pn **Pn 01 52 14.9 -0.2**
comp=Z,35nm,0.9s
NB2 NORSAR Subarra 16.14 0 P **P 01 52 26.6 +0.2**
comp=Z,7.2nm,1.0s,baz=181,slow=11
NB200 NORSAR Array S 16.14 0 *e*Pn **P 01 52 26.9 +0.5**
NOA NORSAR Array B 16.14 0 Pn **P 01 52 26.9 +0.5**
comp=Z,0.1nm,0.3s,baz=185,slow=11,SNR=5.8
NOA LR LR 01 59 33.3
comp=Z,83nm,18.3s,baz=170,slow=41
NC405 NORSAR Array S 16.22 1 *e*Pn **P 01 52 27.6 +0.3**
VSU Vasula 16.65 30 ⇑*i*P **Pn 01 52 30.3 +0.6**
VSU pmax pmax
comp=Z,47nm,2.5s
BR101 Keskin Array S 17.54 99 *e*Pn **P 01 52 42.6 +0.4**
BR131 Keskin Array S 17.54 99 *e*Pn **P 01 52 45.0 +2.8**
BRTR Keskin Array B 17.54 99 P **P 01 52 42.6 +0.4**
comp=Z,0.1nm,0.3s,baz=294,slow=9.2,SNR=11
BRTR LR LR 02 00 43.1
comp=Z,55nm,18.4s,baz=290,slow=42
BRTR Keskin Array B 17.54 99 *c e*P **P 01 52 45.0 +2.8**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
FIA0 FINESS Array S 18.78 23 *e*P **P 01 52 54.6 -0.9**
FIA0 FINESS Array S 18.78 23 *e*P **P 01 52 54.6 -0.9**
FINES FINESS Array B 18.78 23 P **P 01 52 54.6 -0.9**
comp=Z,0.1nm,0.3s,baz=235,slow=6.7,SNR=7.8
OBN Obninsk 19.25 49 ⇓*i*P **Pn 01 53 01.5 -0.2**
OBN pmax pmax
comp=Z,11nm,0.7s
OBN MLR MLR
comp=Z,75nm,17.0s
VSR Storozhevoye 19.80 61 *e*P **P 01 53 06.5 -0.2**
VSR pmax pmax
comp=Z,4.0nm,0.7s
MMAI Mount Meron Ar 22.33 114 P **P 01 53 33.5 -0.8**
comp=Z,2.3nm,0.6s,baz=326,slow=10,SNR=6.6
TAM Tamanrasset 22.52 193 *e*P **P 01 53 36.4 -0.1**
comp=Z,2.7nm,0.9s
TAM Tamanrasset 22.52 193 *e*P **P 01 53 36.4 -0.1**
TAM pmax pmax
comp=Z,3.0nm,0.9s
TAM Tamanrasset 22.52 193 *e*P **P 01 53 36.4 -0.1**
comp=Z,2.7nm,0.9s
KIV Kislovodsk 22.61 81 *e*P **P 01 53 36.3 -0.9**
comp=Z,4.2nm,0.8s
KIV Kislovodsk 22.61 81 *e*P **P 01 53 38.8 +1.6**
KIV pmax pmax
comp=Z,6.0nm,1.1s
KIV MLR MLR
comp=Z,34nm,14.0s
KVAR Kislovodsk Arr 22.61 81 P **P 01 53 36.3 -1.0**
comp=Z,3.1nm,0.8s,baz=132,slow=14,SNR=2.7
NEY Neytrino 22.81 83 ⇑*e*P **P 01 53 41.5 +2.1**
NEY Neytrino 22.81 83 *e*P **P 01 53 41.5 +2.1**
KBZ Khabaz 22.81 82 P **P 01 53 39.2 0.0**
comp=Z,2.3nm,0.9s,baz=304,slow=7.1,SNR=4.2
KLMR Klimovskoe 23.20 36 *e*P **P 01 53 40.8 -2.2**
KLMR pmax pmax
comp=Z,14nm,1.2s
KLMR Klimovskoe 23.20 36 *e*P **P 01 53 40.8 -2.2**
KLMR AMP 01 53 49.5
comp=Z,14nm,1.2s
ZEI Tsey 23.77 83 *e*P **P 01 53 50.3 +1.2**
ZEI Tsey 23.77 83 *e*P **P 01 53 50.3 +1.2**
ASF Jabal al Asfar 23.84 113 P **P 01 53 50.6 +0.9**
comp=Z,5.0nm,0.9s,baz=225,slow=2.8,SNR=6.9
EIL Elat 24.30 121 P **P 01 53 55.5 +1.6**
comp=Z,5.3nm,0.8s,baz=325,slow=9.3,SNR=8.1
TMCR Tamitsa 24.52 29 *e*P **P 01 53 55.2 -0.4**
TMCR pmax pmax
comp=Z,7.0nm,1.0s
GNI Garni 25.24 89 P **P 01 54 04.1 +1.6**
comp=Z,4.0nm,0.8s,baz=246,slow=3.6,SNR=4.2
GNI Garni 25.24 89 ⇑*i*P **P 01 54 04.9 +2.4**
GNI pmax pmax
comp=Z,12nm,1.0s
ARCES ARCESS Array B 25.75 12 LR LR 02 05 34.3
comp=Z,43nm,18.6s,baz=214,slow=40
PRGR Permogore 26.19 38 *e*P **P 01 54 12.7 +2.0**
PRGR pmax pmax
comp=Z,13nm,1.0s
**MAK Makhachkala

ARU				SS	SnSn	02 01 49.6	-4.2
ARU				pmax	pmax		
comp=Z,9.0nm,1.2s							
ARU				MLR	MLR		
comp=Z,117nm,16.0s							
AKTO	**Aktyubinsk**	**31.73**	**63**	P	**P**	**01 54 59.7**	**-0.5**
comp=Z,0.7nm,0.5s,baz=288,slow=11,SNR=4.4							
AKTO				LR	LR	02 09 10.6	
comp=Z,38nm,18.4s,baz=268,slow=39							
TOA1	**Torodi Ar. Sit**	**32.64**	**197**	*eP*	**P**	**01 55 06.1**	**-2.2**
TOA0	**Torodi Ar. Sit**	**32.64**	**197**	*eP*	**P**	**01 55 06.6**	**-1.8**
TORD	**Torodi Ar. Bea**	**32.64**	**197**	P	**P**	**01 55 06.1**	**-2.3**
comp=Z,3.0nm,0.8s,baz=7.9,slow=9.4,SNR=13							
TORD				LR	LR	02 08 03.8	
comp=Z,71nm,18.9s,baz=165,slow=36							
SVE	**Sverdlovsk**	**32.80**	**51**	*eP*	**P**	**01 55 07.5**	**-1.9**
SVE				pmax	pmax		
comp=Z,10.0nm,1.0s							
ABKAR	**Akbulak array**	**33.16**	**65**	*eP*	**P**	**01 55 12.9**	**+0.2**
SPITS	**Spitsbergen Ar**	**33.43**	**2**	LR	LR	02 10 45.7	
comp=Z,32nm,18.4s,baz=210,slow=40							
BVAR	**Borovoye Array**	**38.82**	**56**	LR	LR	02 13 05.7	
comp=Z,82nm,18.3s,baz=290,slow=38							
DBIC	**Dimbokro**	**40.52**	**205**	P	**P**	**01 56 13.8**	**-1.8**
comp=Z,1.9nm,0.6s,baz=357,slow=12,SNR=4.2							
DBIC	**Dimbokro**	**40.52**	**205**	*eP*	**P**	**01 56 13.8**	**-1.8**
comp=Z,28nm,1.3s							
NRIK	**Noril'sk**	**44.24**	**30**	LR	LR	02 16 35.1	
comp=Z,50nm,18.4s,baz=342,slow=38							
KURBB	**Kurchatov Arra**	**44.34**	**57**	P	**P**	**01 56 46.1**	**-0.2**
comp=Z,1.2nm,0.8s,baz=297,slow=8.9,SNR=10							
KURK	**Kurchatov**	**44.37**	**57**	P	**P**	**01 56 46.1**	**-0.4**
KURK				pmax	pmax		
comp=Z,1.0nm,0.8s							
AAK	**Ala-Archa**	**44.88**	**69⇑**	*eP*	**P**	**01 56 52.4**	**+1.4**
AAK				pmax	pmax		
comp=Z,2.0nm,1.0s							
ZAA1	**Zalesovo Array**	**46.81**	**51**	*eP*	**P**	**01 57 06.1**	**+0.3**
ZALV	**Zalesovo Beam**	**46.81**	**51**	P	**P**	**01 57 06.1**	**+0.2**
comp=Z,1.0nm,0.7s,baz=306,slow=13,SNR=4.6							
ZALV				LR	LR	02 17 08.4	
comp=Z,38nm,19.1s,baz=248,slow=37							
MK31	**Makanchi Array**	**48.12**	**61**	*eP*	**P**	**01 57 17.2**	**+1.0**
MK31	**Makanchi Array**	**48.12**	**61**	*eP*	**P**	**01 57 17.2**	**+1.0**
MK32	**Makanchi Array**	**48.12**	**61**	*eP*	**P**	**01 57 16.2**	**0.0**
MKAR	**Makanchi Array**	**48.12**	**61**	P	**P**	**01 57 16.2**	**0.0**
comp=Z,2.2nm,0.9s,baz=285,slow=6.1,SNR=10							
MKAR				LR	LR	02 18 43.2	
comp=Z,46nm,19.0s,baz=246,slow=38							
MKAR	**Makanchi Array**	**48.12**	**61**	*eP*	**P**	**01 57 17.2**	**+1.0**
comp=Z,13nm,1.1s							
MK01	**Makanchi Array**	**48.14**	**61**	*eP*	**P**	**01 57 16.6**	**+0.2**
WMQ	**Urumqi**	**52.88**	**62**	P	**P**	**01 57 55.2**	**+3.0**
TIXI	**Tiksi**	**55.79**	**20⇑**	*iP*	**P**	**01 58 14.4**	**+1.5**
TIXI				pmax	pmax		
comp=Z,1.0nm,0.9s							
TLY	**Talaya**	**57.99**	**47**	*eP*	**P**	**01 58 30.7**	**+1.8**
TLY				pmax	pmax		
comp=Z,2.0nm,1.0s							
SONA0	**Songino Array**	**61.66**	**50**	*eP*	**P**	**01 58 54.1**	**-0.2**
SONM	**Songino Array**	**61.66**	**50**	P	**P**	**01 58 54.1**	**-0.2**
comp=Z,1.4nm,0.7s,baz=258,slow=5.7,SNR=3.0							
SONM				LR	LR	02 28 24.0	
comp=Z,65nm,19.1s,baz=74,slow=39							
BILL	**Bilibino**	**65.84**	**10**	*iP*	**P**	**01 59 22.8**	**+1.5**
BILL				*i*		01 59 56.7	
BILL				pmax	pmax		
comp=Z,1.0nm,0.9s							
MATP	**Matopo**	**66.98**	**162**	LR	LR	02 28 43.5	
comp=Z,34nm,18.4s,baz=284,slow=36							
HHC	**Hu-ho-hao-te**	**68.94**	**53**	*eP*	**P**	**01 59 43.5**	**+2.0**
HHC				pmax	pmax		
comp=Z,13nm,0.6s							
HHC				pmax	pmax		
comp=Z,71nm,5.4s							
CD2	**Chengdu**	**70.74**	**65**	P	**P**	**01 59 51.9**	**-0.8**
CD2				pmax	pmax		
comp=Z,5.0nm,0.5s							
MA2	**Magadan**	**70.75**	**20⇑**	*eP*	**P**	**01 59 53.8**	**+1.6**
V40A	**Witts Springs**	**74.19**	**305**	*eP*	**P**	**02 00 16.4**	**+3.2**
comp=Z,3.4nm,1.0s							
BOSA	**Boshof**	**74.34**	**167**	P	**P**	**02 00 12.4**	**-1.5**
comp=Z,5.0nm,1.1s,baz=0.4,slow=5.3,SNR=3.8							
HHAR	**Hobbs**	**74.50**	**306**	*eP*	**P**	**02 00 17.8**	**+2.9**
comp=Z,3.2nm,1.0s							
MIAR	**Mount Ida**	**75.51**	**304**	*eP*	**P**	**02 00 21.8**	**+1.0**
comp=Z,3.2nm,0.9s							
MIAR	**Mount Ida**	**75.51**	**304**	*eP*	**P**	**02 00 21.8**	**+1.0**
MIAR				pmax	pmax		
comp=Z,3.0nm,0.9s							
PDAR	**Pinedale Array**	**77.84**	**320**	LR	LR	02 33 16.4	
comp=Z,25nm,19.8s,baz=16,slow=34							
PETK	**Petropavlovsk-**	**78.27**	**20**	LR	LR	02 39 44.6	
comp=Z,34nm,18.2s,baz=64,slow=39							
LTY	**Liberty**	**78.82**	**329**	*eP*	**P**	**02 00 42.1**	**+2.9**
comp=Z,9.6nm,1.5s							
YSS	**Yuzh-Sakhalins**	**79.14**	**31⇑**	*eP*	**P**	**02 00 43.0**	**+2.1**
YSS				pmax	pmax		
comp=Z,7.0nm,0.7s							
BMO	**Blue Mountains**	**79.52**	**325**	*eP*	**P**	**02 00 44.4**	**+1.2**
comp=Z,5.7nm,1.5s							
BMO	**Blue Mountains**	**79.52**	**325**	*eP*	**P**	**02 00 44.4**	**+1.2**
BMO				pmax	pmax		
comp=Z,6.0nm,1.5s							
LON	**Longmire**	**79.67**	**329**	*eP*	**P**	**02 00 42.8**	**-1.1**
comp=Z,1.4nm,0.8s							
LON	**Longmire**	**79.67**	**329**	*eP*	**P**	**02 00 42.8**	**-1.1**
LON				pmax	pmax		
comp=Z,1.0nm,0.8s							
KSRS	**Korea Array**	**80.22**	**46**	LR	LR	02 41 16.2	
comp=Z,22nm,18.1s,baz=275,slow=39							
ASAJ	**Asahikawa**	**81.47**	**33**	LR	LR	02 39 00.6	
comp=Z,29nm,18.4s,baz=111,slow=37							
TX31	**Lajitas Ar. Si**	**85.14**	**307**	*eP*	**P**	**02 01 15.5**	**+2.7**
TXAR	**Lajitas Array**	**85.14**	**307**	P	**P**	**02 01 13.2**	**+0.4**
comp=Z,1.7nm,0.9s,baz=72,slow=4.1,SNR=9.7							
MJAR	**Matsushiro Arr**	**85.93**	**40**	LR	LR	02 42 36.6	
comp=Z,20nm,18.0s,baz=340,slow=38							
SNDA	**J Saunders Pla**	**88.54**	**319**	*eP*	**P**	**02 01 28.4**	**-1.0**
MWC	**Mount Wilson**	**88.65**	**320**	*eP*	**P**	**02 01 30.9**	**+1.0**
MWC	**Mount Wilson**	**88.65**	**320**	*eP*	**P**	**02 01 30.9**	**+1.0**
VNDA	**Vanda**	**145.29**	**169**	PKPbc	**PKPbc**	**02 08 12.2**	**-0.2**
comp=Z,2.2nm,0.8s,baz=269,slow=5.6,SNR=16							
VNDA	**Vanda**	**145.29**	**169**	*e*PKPbc	**PKPbc**	**02 08 12.4**	**-0.1**

*ISK **12** 02:03:27.3, 38°.71N×43°.17E, h5km, ML2.2/3*
*CSEM **12** 02:03:27.9±0.2, 38°.73N×43°.17E, h10km, ML2.6, Error ellipse: s-maj=5.3km s-min=5.2km az=149.0*
*ISCJB **12** 02:03:28.2±0.8, 38°.71N±0°.05×43°.22E±0°.06, h21km±11km, Error ellipse: s-maj=9.1km s-min=8.1km az=7.8*
*DDA **12** 02:03:28.0, 38°.70N×43°.23E, h7km, Ml2.6*
ISC 12 03:03:27.9±1.1, 38°.71N±0°.03×43°.19E±0°.03, h15km±10km, n20, σ0§47/23, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VANB	**Van**	**0.19**	**127**	PG	**Pb**	**02 03 33.2**	**-0.1**
VANB				SG	**Sb**	**02 03 37.4**	**+0.6**
VANB	**Van**	**0.19**	**127**	*e*Pg	**Pb**	**02 03 33.2**	**-0.1**
VANB				*e*Sg	**Sb**	**02 03 37.4**	**+0.6**
TVAN	**Van**	**0.25**	**138**	*i* P	**Pg**	**02 03 33.0**	**-0.5**
TVAN	**Van**	**0.25**	**138**	P	**Pg**	**02 03 33.0**	**-0.5**
ADCV	**BITLIS_Adilcev**	**0.38**	**285**	*i* P	**Pg**	**02 03 35.9**	**+0.2**
ADCV				*i* S	**Sb**	**02 03 43.1**	**+0.9**
ADCV	**BITLIS_Adilcev**	**0.38**	**285**	P	**Pg**	**02 03 35.9**	**+0.2**
VMUR	**Van-Muradiye**	**0.41**	**47**	*i* P	**Pg**	**02 03 36.4**	**+0.2**
VMUR	**Van-Muradiye**	**0.41**	**47**	P	**Pg**	**02 03 36.4**	**+0.2**
GEVA	**Gevas**	**0.41**	**195**	*i* P	**Pg**	**02 03 35.9**	**-0.4**
GEVA	**Gevas**	**0.41**	**195**	P	**Pg**	**02 03 35.9**	**-0.4**
CLDR	**Caldiran**	**0.71**	**52**	PG	**Pg**	**02 03 41.7**	**-0.2**
CLDR	**Caldiran**	**0.71**	**52**	*e*Pg	**Pg**	**02 03 41.7**	**-0.2**
TUTA	**Tutak**	**0.75**	**337**	*i* P	**Pg**	**02 03 42.2**	**-0.4**
TUTA	**Tutak**	**0.75**	**337**	P	**Pg**	**02 03 42.2**	**-0.4**
AGRB	**Hanur-Agry**	**0.88**	**350**	PG	**Pb**	**02 03 44.5**	**-0.5**
AGRB	**Hanur-Agry**	**0.88**	**350**	*e*Pg	**Pb**	**02 03 44.5**	**-0.5**
GURO	**Guroymak-BITLI**	**0.92**	**260**	PG	**Pb**	**02 03 45.2**	**-0.5**
GURO	**Guroymak-BITLI**	**0.92**	**260**	*e*Pg	**Pb**	**02 03 45.2**	**-0.5**
SRTM	**Siirt_Merkez**	**1.23**	**235**	*i* P	**Pg**	**02 03 51.9**	**+0.2**
SRTM	**Siirt_Merkez**	**1.23**	**235**	P	**Pg**	**02 03 51.9**	**+0.2**

*IDC **12** 02:18:40.8±1.6, 24°.58N×95°.02E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.4/64, mbtmp3.6/5, Error ellipse: s-maj=76.2km s-min=20.6km az=64.0*
ISC 12 02:18:42.5±1.2, 24°.6N±0°.2×95°.0E±0°.1, h10km, n6, σ1§72/7, mb3.6/5, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHL	**Shillong**	**2.96**	**290**	*i* PGCN	**Pn**	**02 19 32.0**	**+2.2**
SHL				*i* SG	**Sn**	**02 20 03.0**	**-2.5**
MKAR	**Makanchi Array**	**24.37**	**339**	P	**P**	**02 24 01.1**	**+0.2**
1.4nm,0.5s,baz=150,slow=9.3,SNR=21							
SONM	**Songino Array**	**24.91**	**18**	P	**P**	**02 24 05.7**	**-0.1**
0.9nm,0.6s,baz=201,slow=7.7,SNR=2.9							
KURBB	**Kurchatov Arra**	**28.94**	**338**	P	**P**	**02 24 41.5**	**-0.3**
0.4nm,0.4s,baz=140,slow=7.3,SNR=5.4							
WRA	**Warramunga Arr**	**58.55**	**136**	P	**P**	**02 28 38.9**	**-0.7**
0.9nm,1.2s,baz=325,slow=7.2,SNR=5.1							
ASAR	**Alice Springs**	**61.04**	**139**	P	**P**	**02 28 56.5**	**-0.2**
0.3nm,0.7s,baz=321,slow=7.2,SNR=3.6							

IDC 12 02:40:35.5±6.3, 30°.49S×178°.77W, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.5/43, mbtmp3.6/2, Error ellipse: s-maj=251.5km s-min=57.1km az=155.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**42.44**	**267**	P	P	02 48 32.3	0.0
0.3nm,0.5s,baz=112,slow=7.1,SNR=3.0							
WRA	**Warramunga Arr**	**43.44**	**273**	P	P	02 48 40.2	-0.2
0.5nm,0.3s,baz=113,slow=7.9,SNR=16							
FINES	**FINESS Array B**	**145.00**	**339**	PKPbc	PKPbc	03 00 12.5	-0.8
1.3nm,0.9s,baz=57,slow=5.1,SNR=6.2							

*ATH **12** 02:49:20.8, 36°.44N×28°.89E, h41km±2km, ML2.2/3, Error ellipse: s-maj=4.0km s-min=1.1km az=177.0*
*DDA **12** 02:49:20.8, 36°.45N×28°.90E, h7km, Ml3.0*
*ISK **12** 02:49:20.8, 36°.45N×28°.91E, h17km, ML2.6/14*
*ISCJB **12** 02:49:21.7±0.4, 36°.45N±0°.03×28°.90E±0°.03, h28km±4km, Error ellipse: s-maj=5.6km s-min=3.9km az=1.9*
*CSEM **12** 02:49:21.5±0.1, 36°.45N×28°.91E, h20km, ML2.6, Error ellipse: s-maj=2.8km s-min=1.9km az=171.0*
ISC 12 02:49:21.5±1.1, 36°.43N±0°.03×28°.90E±0°.02, h20km±2km, n77, σ0§50/91, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FETY	**Fethiye**	**0.25**	**36**	PG	**Pb**	**02 49 26.8**	**-0.6**
FETY	**Fethiye**	**0.25**	**36**	*e*Pg	**Pb**	**02 49 26.8**	**-0.6**
DALY	**Dalyan (Mu¨la**	**0.43**	**332**	PG	**Pb**	**02 49 30.3**	**-0.2**
DALY				SG	**Sb**	**02 49 36.4**	**-0.1**
DALY	**Dalyan (Mu¨la**	**0.43**	**332**	*i* P	**Pb**	**02 49 30.3**	**-0.2**
DALY				*i* S	**Sb**	**02 49 36.7**	**+0.2**
DALY	**Dalyan (Mu¨la**	**0.43**	**332**	P	**Pb**	**02 49 30.3**	**-0.2**
DALY				*e*Sg	**Sb**	**02 49 36.4**	**-0.1**
TURN	**Turunc**	**0.50**	**331**	PG	**Pn**	**02 49 33.4**	**-0.1**
TURN	**Turunc**	**0.50**	**331**	*i* P	**Pn**	**02 49 33.5**	**0.0**
TURN	**Turunc**	**0.50**	**331**	*e*Pg	**Pn**	**02 49 33.4**	**-0.1**
AKAS	**Kas**	**0.60**	**109**	PG	**Pb**	**02 49 32.7**	**-0.7**
AKAS	**Kas**	**0.60**	**109**	*i* P	**Pb**	**02 49 32.7**	**-0.7**
AKAS				*i* S	**Sb**	**02 49 42.1**	**+0.6**
AKAS	**Kas**	**0.60**	**109**	*e*Pg	**Pb**	**02 49 32.7**	**-0.7**
AKAS				S	**Sb**	**02 49 42.1**	**+0.6**
KSL	**Kastellorizon**	**0.62**	**117**	P	**Pb**	**02 49 33.9**	**+0.3**
KSL				S	**Sn**	**02 49 43.8**	**-0.6**
KSL				AML	AML	02 49 45.0	
comp=E,470μm,0.4s							
KSL				AML	AML	02 49 46.0	
comp=N,159μm,0.3s							
MRSB	**Marmaris-Mugla**	**0.64**	**297**	PG	**Pb**	**02 49 33.7**	**-0.2**
MRSB	**Marmaris-Mugla**	**0.64**	**297**	*e*Pg	**Pb**	**02 49 33.7**	**-0.2**
ARG	**Arkhangelos**	**0.66**	**251**	PG	**Pn**	**02 49 35.3**	**-0.5**
ARG	**Arkhangelos**	**0.66**	**251**	P	**Pb**	**02 49 34.4**	**+0.1**
ARG				S	**Sn**	**02 49 44.7**	**-0.9**
ARG				AML	AML	02 49 45.6	
comp=N,227μm,0.6s							
ARG				AML	AML	02 49 47.6	
comp=E,256μm,0.3s							
ARG	**Arkhangelos**	**0.66**	**251**	P	**Pb**	**02 49 34.5**	**+0.1**
ARG	**Arkhangelos**	**0.66**	**251**	*e*Pg	**Pn**	**02 49 35.3**	**-0.5**
ARG				S	**Sn**	**02 49 44.6**	**-1.0**
YER	**Yerkesik**	**0.86**	**325**	PG	**Pb**	**02 49 37.7**	**-0.1**
YER	**Yerkesik**	**0.86**	**325**	*e*Pg	**Pb**	**02 49 37.7**	**-0.1**
GLHS	**Glhisar (BURDU**	**0.87**	**33**	PG	**Pb**	**02 49 37.6**	**-0.3**
GLHS	**Glhisar (BURDU**	**0.87**	**33**	*e*Pg	**Pb**	**02 49 37.6**	**-0.3**
ELL	**Elmali**	**0.87**	**68**	PG	**Pb**	**02 49 37.8**	**-0.2**
ELL	**Elmali**	**0.87**	**68**	*e*Pg	**Pb**	**02 49 37.8**	**-0.2**
GOLH	**Golhisar**	**0.96**	**33**	*i* P	**Pb**	**02 49 38.4**	**-1.1**
GOLH				*i* S	**Sb**	**02 49 52.0**	**+0.1**
GOLH	**Golhisar**	**0.96**	**33**	P	**Pb**	**02 49 38.4**	**-1.1**
GOLH				S	**Sb**	**02 49 52.0**	**+0.1**
TAVA	**DENIZLI_Tavas**	**1.03**	**0**	*i* P	**Pb**	**02 49 40.2**	**-0.5**
TAVA	**DENIZLI_Tavas**	**1.03**	**0**	P	**Pb**	**02 49 40.2**	**-0.5**
DATC	**Datca-Mugla**	**1.05**	**288**	PG	**Pn**	**02 49 41.7**	**+0.6**
DATC	**Datca-Mugla**	**1.05**	**288**	*e*Pg	**Pn**	**02 49 41.7**	**+0.6**
DAT	**Datca**	**1.11**	**286**	PN	**Pb**	**02 49 42.2**	**+0.2**
DAT	**Datca**	**1.11**	**286**	*i* P	**Pb**	**02 49 42.1**	**+0.2**
DAT				*i* S	**Sn**	**02 49 56.7**	**0.0**
DAT	**Datca**	**1.11**	**286**	*e*Pn	**Pb**	**02 49 42.2**	**+0.2**
DAT				S	**Sn**	**02 49 56.7**	**0.0**
MLSB	**Milas**	**1.25**	**314**	PN	**Pn**	**02 49 44.1**	**+0.2**
MLSB	**Milas**	**1.25**	**314**	*e*Pn	**Pn**	**02 49 44.1**	**+0.2**
KORT	**Korkueli**	**1.29**	**64**	PN	**Pn**	**02 49 44.8**	**+0.2**
KORT	**Korkueli**	**1.29**	**64**	*i* P	**Pb**	**02 49 45.2**	**0.0**
KORT	**Korkueli**	**1.29**	**64**	*e*Pn	**Pn**	**02 49 44.8**	**+0.2**
KORT	**Korkueli**	**1.29**	**64**	P	**Pb**	**02 49 45.2**	**0.0**
DENT	**Denizli**	**1.32**	**4**	PN	**Pn**	**02 49 44.8**	**-0.1**
DENT	**Denizli**	**1.32**	**4**	*e*Pn	**Pn**	**02 49 44.8**	**-0.1**
BDRM	**Kayabasi**	**1.33**	**299**	*i* P	**Pb**	**02 49 45.6**	**-0.2**
BDRM	**Kayabasi**	**1.33**	**299**	P	**Pb**	**02 49 45.6**	**-0.2**
BODT	**Bodrum**	**1.43**	**297**	PN	**Pn**	**02 49 46.5**	**+0.2**
BODT	**Bodrum**	**1.43**	**297**	*e*Pn	**Pn**	**02 49 46.5**	**+0.2**
NISR	**Nisiros**	**1.44**	**278**	P	**Pn**	**02 49 45.7**	**-0.7**
NISR	**Nisiros**	**1.44**	**278**	P	**Pn**	**02 49 45.7**	**-0.7**
AYDN	**Tasoluk**	**1.47**	**327**	*i* P	**Pn**	**02 49 47.3**	**+0.3**
AYDN	**Tasoluk**	**1.47**	**327**	P	**Pn**	**02 49 47.3**	**+0.3**
ANTB	**Antalya**	**1.48**	**71**	PN	**Pn**	**02 49 47.5**	**+0.5**
ANTB	**Antalya**	**1.48**	**71**	*e*Pn	**Pn**	**02 49 47.5**	**+0.5**
BRDR	**BURDUR-Merkez**	**1.56**	**36**	*i* P	**Pn**	**02 49 48.2**	**-0.1**
BRDR	**BURDUR-Merkez**	**1.56**	**36**	P	**Pn**	**02 49 48.2**	**-0.1**
KARP	**Karpathos**	**1.67**	**238**	PN	**Pn**	**02 49 49.5**	**-0.1**
KARP	**Karpathos**	**1.67**	**238**	P	**Pn**	**02 49 49.3**	**-0.3**
KARP	**Karpathos**	**1.67**	**238**	P	**Pn**	**02 49 49.1**	**-0.5**
KARP	**Karpathos**	**1.67**	**238**	*e*Pn	**Pn**	**02 49 49.5**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	**1.71**	**332**	PN	**Pn**	**02 49 50.3**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**1.71**	**332**	*e*Pn	**Pn**	**02 49 50.3**	**0.0**
SUTC	**Sutluce-Ispart**	**1.98**	**58**	PN	**Pn**	**02 49 54.3**	**+0.3**
SUTC	**Sutluce-Ispart**	**1.98**	**58**	*e*Pn	**Pn**	**02 49 54.3**	**+0.3**
KHAL	**Karahalli**	**1.99**	**13**	*i* P	**Pn**	**02 49 52.9**	**-1.3**
KHAL	**Karahalli**	**1.99**	**13**	P	**Pn**	**02 49 52.8**	**-1.3**
SMG	**Samos**	**2.09**	**308**	P	**Pn**	**02 49 55.4**	**+0.1**
SMG				S	**Sn**	**02 50 19.8**	**-1.0**
SMG				AML	AML	02 50 22.4	
comp=N,180μm,0.3s							
SMG				AML	AML	02 50 23.9	
comp=E,172μm,0.3s							
SMG	**Samos**	**2.09**	**308**	P	**Pn**	**02 49 55.1**	**-0.3**
SMG				S	**Sn**	**02 50 19.8**	**-1.0**
KULA	**Kula-Manisa**	**2.09**	**355**	PN	**Pn**	**02 49 55.7**	**+0.3**
KULA	**Kula-Manisa**	**2.09**	**355**	*e*Pn	**Pn**	**02 49 55.7**	**+0.3**
KEPZ	**Antalya-Kepez**	**2.22**	**77**	*i* P	**Pn**	**02 49 57.7**	**+0.4**
KEPZ	**Antalya-Kepez**	**2.22**	**77**	P	**Pn**	**02 49 57.7**	**+0.4**
ZKR	**Zakros**	**2.55**	**240**	P	**Pn**	**02 50 01.9**	**+0.2**
ZKR	**Zakros**	**2.55**	**240**	P	**Pn**	**02 50 01.7**	**0.0**
APE	**Apeiranthos**	**2.78**	**284**	P	**Pn**	**02 50 04.0**	**-1.0**
APE	**Apeiranthos**	**2.78**	**284**	P	**Pn**	**02 50 04.4**	**-0.6**
NPS	**Neapolis**	**2.92**	**247**	P	**Pn**	**02 50 05.7**	**-1.1**
NPS	**Neapolis**	**2.92**	**247**	P	**Pn**	**02 50 06.2**	**-0.6**
LAST	**Lasithi**	**3.06**	**247**	P	**Pn**	**02 50 08.9**	**+0.1**
LAST	**Lasithi**	**3.06**	**247**	P	**Pn**	**02 50 08.8**	**0.0**

*IDC **12** 02:54:17.6±1.9, 2°.66N×96°.31E, h0km, mb3.7/5, mb1 3.8/6, mb1mx3.5/74, mbtmp3.7/6, ML3.0/1, MS2.7/1, Ms1 2.9/1, ms1mx2.4/60, Error ellipse: s-maj=67.8km s-min=19.8km az=50.0*
*DJA **12** 02:54:25.6±0.9, 3°N±3°×9°7E±°, h10km±5km, M3.5/2, MLv3.5/2*
*ISCJB **12** 02:54:27.8±0.8, 2°.92N±0°.05×96°.88E±0°.07, h33km, mb3.8/5, Error ellipse: s-maj=11.1km s-min=6.0km az=160.8*
ISC 12 02:54:25.2±0.9, 2°.86N±0°.04×96°.83E±0°.07, h33km, n21, σ1§63/17, mb3.8/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TPTI		**0.53**	**41**	P	**Pb**	**02 54 36.2**	**-0.1**
TPTI				S	**Sb**	**02 54 44.0**	**0.0**
KCSI	**Kotacane, Aceh**	**1.15**	**55**	P	**Pb**	**02 54 46.8**	**+0.2**
MLSI	**Meulaboh, Aceh**	**1.46**	**343**	P	**Pb**	**02 54 51.8**	**-0.1**
MLSI				S	**Sb**	**02 55 11.3**	**+1.2**
GSI	**Gunungsitoli**	**1.71**	**154**	P	**Pb**	**02 54 55.4**	**-0.7**
GSI				S	**Sb**	**02 55 18.8**	**+1.4**
TSI	**Tuntungan**	**1.85**	**70**	P	**Pb**	**02 54 57.5**	**-0.9**
PSI	**Prapat**	**2.10**	**91**	Pn	**Pb**	**02 55 01.8**	**-0.9**
3.1nm,0.3s,baz=359,slow=7.7,SNR=13							
LHMI	**Lhok Sumawe**	**2.36**	**3**	P	**Pn**	**02 55 04.0**	**+2.4**
BSI	**Banda Aceh**	**3.03**	**330**	P	**Pn**	**02 55 12.9**	**+1.9**
MNSI	**Mandailing Nat**	**3.43**	**127**	P	**Pn**	**02 55 19.2**	**+2.8**
CMAR	**Chiang Mai Arr**	**15.64**	**7**	LR	LR	03 04 12.1	
comp=Z,30nm,20.7s,baz=205,slow=37							
H08S2	**Diego Garcia H**	**26.42**	**247**	T	T	03 26 50.6	
baz=64							
H08S3	**Diego Garcia H**	**26.43**	**247**	T	T	03 26 48.3	
baz=64							
H08S1	**Diego Carcia H**	**26.44**	**247**	T	T	03 26 54.9	
baz=64							
H01W3	**Cape Leeuwin H**	**40.91**	**158**	T	T	03 45 43.3	
baz=330							
H01W2	**Cape Leeuwin H**	**40.92**	**158**	T	T	03 45 42.8	
baz=330							
H01W1	**Cape Leeuwin H**	**40.93**	**158**	T	T	03 45 41.2	
baz=330							
WRA	**Warramunga Arr**	**43.24**	**123**	P	**P**	**03 02 23.2**	**-0.6**
0.8nm,0.4s,baz=303,slow=9.0,SNR=17							
ASAR	**Alice Springs**	**44.70**	**128**	P	**P**	**03 02 35.3**	**-0.2**
0.4nm,0.4s,baz=299,slow=7.7,SNR=4.8							
MKAR	**Makanchi Array**	**45.55**	**346**	P	**P**	**03 02 39.9**	**-2.0**
0.5nm,0.4s,baz=164,slow=7.4,SNR=9.9							
KURBB	**Kurchatov Arra**	**50.04**	**345**	P	**P**	**03 03 14.2**	**-2.4**
0.4nm,0.6s,baz=150,slow=7.4,SNR=3.6							
ZALV	**Zalesovo Beam**	**51.87**	**351**	P	**P**	**03 03 28.3**	**-2.0**
1.2nm,0.5s,baz=181,slow=6.5,SNR=6.9							

*ISCJB **12** 02:57:55.1±1.0, 13°.9N±0°.2×144°.9E±0°.3, h200km, mb3.2/5, Error ellipse: s-maj=44.3km s-min=23.4km az=0.8*
*IDC **12** 02:57:55.9±0.6, 13°.94N×144°.83E, h181km±6km, mb3.1/5, mb1 3.4/5, mb1mx3.1/66, mbtmp3.6/5, Error ellipse: s-maj=34.3km s-min=23.6km az=95.0*
ISC 12 02:57:56.7±0.9, 13°.8N±0°.2×144°.9E±0°.3, h200km, n6, σ2§45/7, mb3.3/5, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.21**	**180**	P	**Pn**	**02 58 21.8**	**-1.3**
66nm,0.3s,baz=260,slow=3.7,SNR=41							
GUMO				S	**Sn**	**02 58 39.7**	**-3.9**
59nm,0.3s,baz=244,slow=22,SNR=6.1							
WRA	**Warramunga Arr**	**35.10**	**197**	P	**P**	**03 04 32.7**	**+1.5**
0.6nm,0.6s,baz=20,slow=9.9,SNR=6.7							
MKAR	**Makanchi Array**	**61.34**	**316**	P	**P**	**03 07 52.0**	**+0.6**
0.2nm,0.4s,baz=111,slow=7.9,SNR=2.9							
**KURBB

comp=Z,45nm,20.9s,baz=210,slow=37
KBZ Khabaz 68.77 42 LR LR 03 45 38.7
comp=Z,26nm,18.7s,baz=244,slow=39
JTS JuntasAbangare 70.00 281 LR LR 03 39 39.4
comp=Z,24nm,21.8s,baz=186,slow=33
SCHQ Schefferville 70.01 331 LR LR 03 37 32.9
comp=Z,53nm,18.9s,baz=61,slow=32
FINES FINESS Array B 70.28 20 P **P 03 12 06.3 +0.2**
1.6nm,0.9s,baz=242,slow=6.0,SNR=2.4
FINES LR LR 03 45 06.1
comp=Z,51nm,18.1s,baz=230,slow=38
SNAA Sanae 70.62 176 P **P 03 12 08.3 +0.1**
1.6nm,0.9s,baz=321,slow=6.5,SNR=4.8
PMSA Palmer Station 72.17 200 LR LR 03 36 35.7
comp=Z,58nm,20.9s,baz=77,slow=30
SADO Sadowa 72.56 318 LR LR 03 37 22.2
comp=Z,70nm,21.6s,baz=118,slow=30
APG El Apazote 75.80 286 LR LR 03 49 02.1
comp=Z,27nm,18.3s,baz=44,slow=38
WSAR Wadi Sarin 76.06 66 LR LR 03 47 14.0
comp=Z,46nm,19.7s,baz=274,slow=37
GEYT Alibeck 78.05 51 LR LR 03 50 18.9
comp=Z,118nm,18.6s,baz=265,slow=38
AKTO Aktyubinsk 80.69 38 LR LR 03 53 46.6
comp=Z,25nm,18.6s,baz=268,slow=39
SPITS Spitsbergen Ar 81.32 6 LR LR 03 46 19.7
comp=Z,21nm,19.7s,baz=305,slow=34
ULM Lac du Bonnet 84.88 321 LR LR 03 45 53.9
comp=Z,61nm,18.7s,baz=34,slow=32
BVAR Borovoye Array 88.68 37 LR LR 03 56 57.3
comp=Z,38nm,18.5s,baz=239,slow=38
TXAR Lajitas Array 89.03 299 LR LR 03 52 36.9
comp=Z,16nm,18.8s,baz=0.0,slow=35
ANMO Albuquerque 91.54 305 LR LR 03 50 22.8
comp=Z,78nm,19.5s,baz=66,slow=32
PDAR Pinedale Array 93.89 313 LR LR 03 50 45.3
comp=Z,62nm,21.6s,baz=89,slow=32
LPIG La Paz 94.91 294 LR LR 03 55 54.0
comp=Z,36nm,18.4s,baz=188,slow=35
NRIK Noril'sk 95.94 20 LR LR 04 01 57.6
comp=Z,38nm,18.5s,baz=138,slow=38
MKAR Makanchi Array 96.41 43 LR LR 04 04 15.7
comp=Z,30nm,18.4s,baz=239,slow=39
ZALV Zalesovo Beam 97.25 36 LR LR 04 00 12.3
comp=Z,31nm,21.3s,baz=250,slow=37
ASAR Alice Springs 141.23 132 PKhKP PKPpre 03 20 16.9
0.6nm,0.9s,baz=243,slow=1.9,SNR=3.1
WRA Warramunga Arr 143.65 127 PKhKP PKPpre 03 20 24.5
0.5nm,0.7s,baz=237,slow=2.4,SNR=4.6

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*ISCJB **12** 03:09:02.7±0.4, 28°.75N±0°.04×139°.42E±0°.08, h380km, mb3.6/17, Error ellipse: s-maj=9.9km s-min=5.3km az=159.6*
*JMA **12** 03:09:03.6±0.3, 28°.81N×139°.50E, h380km, M3.3*
*IDC **12** 03:09:04.0±0.7, 28°.79N×139°.76E, h390km±10km, mb3.5/15, mb1 3.6/17, mb1mx3.3/62, mbtmp4.3/17, Error ellipse: s-maj=25.6km s-min=9.4km az=72.0*
ISC 12 03:09:03.2±0.5, 28°.77N±0°.06×139°.6E±0°.1, h380km, n26, σ1§47/34, mb3.8/17, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.86**	**125**	P	**Pn**	**03 10 04.7**	**+0.9**
CBIJ				*e*S	**S**	**03 10 52.8**	**+0.2**
JCJ	**Chichijima**	**2.86**	**125**	P	**Pn**	**03 10 04.7**	**+0.9**
	61nm,0.3s,baz=59,slow=11,SNR=56						
JCJ				S	**S**	**03 10 52.5**	**-0.1**
	68nm,0.3s,baz=248,slow=22,SNR=8.2						
JHHJ	**Haha-jima-NKT**	**3.16**	**132**	P	**Pn**	**03 10 07.4**	**+1.1**
JHHJ				*e*S	**S**	**03 10 57.6**	**+0.5**
BSO1	**Boso 1**	**5.99**	**11**	*e*S	**S**	**03 11 48.2**	**-0.3**
BSO3	**Boso 3**	**6.07**	**7**	*e*S	**S**	**03 11 50.3**	**-0.3**
BSO4	**Boso 4**	**6.24**	**6**	*e*S	**S**	**03 11 53.7**	**-0.6**
JAG	**Ashikaga**	**7.63**	**359**	*e*S	**S**	**03 12 19.3**	**-4.3**
JOW	**Kunigami**	**10.17**	**262**	P	P	03 11 28.9	+5.5
	2.3nm,0.3s,baz=319,slow=9.7,SNR=4.0						
USRK	**Ussuriysk Ar.**	**16.54**	**341**	P	**Pn**	**03 12 35.3**	**-1.4**
	1.2nm,0.3s,baz=134,slow=11,SNR=11						
KLR	**Kul'dur**	**21.29**	**346**	P	**P**	**03 13 22.0**	**+1.5**
	0.1nm,0.6s,baz=165,slow=7.3,SNR=5.2						
SONM	**Songino Array**	**31.90**	**316**	P	**P**	**03 14 56.1**	**+1.3**
	0.3nm,0.4s,baz=120,slow=8.5,SNR=3.6						
ZALV	**Zalesovo Beam**	**46.70**	**318**	P	**P**	**03 16 55.9**	**+0.5**
	0.7nm,0.4s,baz=106,slow=11,SNR=3.2						
MKAR	**Makanchi Array**	**47.62**	**309**	P	**P**	**03 17 03.4**	**+0.9**
	0.8nm,0.3s,baz=86,slow=10,SNR=21						
MKAR				PcP	**PcP**	**03 18 23.9**	**-1.3**
	0.2nm,0.3s,baz=96,slow=1.4,SNR=4.0						
MKAR				ScP	**ScP**	**03 21 39.7**	**-2.7**
	0.4nm,0.7s,baz=108,slow=4.7,SNR=3.3						
WRA	**Warramunga Arr**	**48.69**	**187**	P	**P**	**03 17 11.3**	**+0.5**
	6.1nm,0.5s,baz=5.6,slow=7.7,SNR=107						
WRA				PcP	**pP**	**03 18 27.2**	**-0.4**
	1.4nm,0.8s,baz=4.9,slow=4.4,SNR=5.6						
WRA				ScP	**ScP**	**03 21 44.9**	**-2.3**
	0.3nm,0.7s,baz=359,slow=4.4,SNR=5.3						
WRA				S	**S**	**03 23 39.8**	**-4.0**
	0.3nm,0.6s,baz=8.0,slow=13,SNR=3.3						
KURBB	**Kurchatov Arra**	**50.21**	**314**	P	**P**	**03 17 22.6**	**+0.8**
	2.5nm,0.4s,baz=92,slow=7.7,SNR=31						
ASAR	**Alice Springs**	**52.42**	**187**	P	**P**	**03 17 39.0**	**+0.7**
	2.7nm,0.5s,baz=16,slow=13,SNR=49						
ASAR				PcP	**PcP**	**03 18 44.7**	**+1.4**
	1.2nm,0.8s,baz=12,slow=3.5,SNR=5.9						
BVAR	**Borovoye Array**	**55.24**	**317**	P	**P**	**03 17 58.8**	**+0.7**
	1.8nm,0.5s,baz=91,slow=8.6,SNR=11						
ILAR	**Eielson Array**	**57.38**	**29**	P	**P**	**03 18 12.7**	**-0.2**
	0.1nm,0.5s,baz=240,slow=6.1,SNR=4.3						
STKA	**Stephens Creek**	**60.34**	**178**	P	**P**	**03 18 33.6**	**+0.2**
	3.7nm,0.8s,baz=0.0,slow=5.2,SNR=4.7						
AKTO	**Aktyubinsk**	**93.21**	**315**	P	**P**	**03 18 52.5**	**+0.3**
	1.5nm,0.5s,baz=50,slow=7.9,SNR=5.5						
ARCES	**ARCESS Array B**	**71.19**	**340**	P	**P**	**03 19 42.6**	**+1.2**
	1.3nm,0.5s,baz=64,slow=8.3,SNR=4.9						
KBZ	**Khabaz**	**75.17**	**312**	P	**P**	**03 20 05.1**	**+0.3**
	5.4nm,0.8s,baz=69,slow=5.2,SNR=16						
FINES	**FINESS Array B**	**75.41**	**333**	P	**P**	**03 20 06.2**	**+0.3**
	1.5nm,0.3s,baz=74,slow=4.9,SNR=5.7						
AKASG	**Malin Array Be**	**79.89**	**323**	P	**P**	**03 20 30.4**	**-0.2**
	0.4nm,0.3s,baz=52,slow=5.6,SNR=6.3						
HFS	**Hagfors**	**80.96**	**336**	P	**P**	**03 20 35.8**	**-0.2**
	1.3nm,0.3s,baz=96,slow=2.9,SNR=20						
BRTR	**Keskin Array B**	**83.16**	**312**	P	**P**	**03 20 48.8**	**+0.8**
	1.1nm,0.8s,baz=113,slow=3.2,SNR=7.0						

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*ISK **12** 03:14:23.6, 34°.57N×32°.87E, h9km, ML3.3/31*
*ISCJB **12** 03:14:24.7±0.5, 34°.59N±0°.02×32°.88E±0°.03, h10km±3km, Error ellipse: s-maj=4.7km s-min=2.8km az=149.1*
*NIC **12** 03:14:25.5±0.4, 34°.64N×32°.96E, h15km, ML3.6 Felt I=III at Lemesos.*
NIC Felt III at Lemesos.
*CSEM **12** 03:14:25.7±0.1, 34°.64N×32°.88E, h10km, ML3.6, Error ellipse: s-maj=3.9km s-min=2.7km az=63.0*
*GII **12** 03:14:26.4±0.0, 34°.58N×33°.11E, h1km, MD2.4/3*
*DDA **12** 03:14:43.3, 35°.12N×32°.21E, h40km, Ml3.2*
ISC 12 03:14:26.0±0.9, 34°.65N±0°.03×32°.91E±0°.03, h15km±5km, n124, σ1§07/151, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SZAC	**Souni**	**0.11**	**349**	P	**Pg**	**03 14 29.3**	**-0.2**
	baz=149						
SZAC				S	**Sg**	**03 14 32.1**	**+0.3**
SZAC	**Souni**	**0.11**	**349**	P	**Pg**	**03 14 29.3**	**-0.2**
SZAC				S	**Sg**	**03 14 32.1**	**+0.3**
CSS	**Mathiatis**	**0.47**	**48**	PG	**Pg**	**03 14 34.6**	**-0.8**
CSS	**Mathiatis**	**0.47**	**48**	P	**Pg**	**03 14 34.1**	**-1.3**
	baz=223						
CSS				S	**Sg**	**03 14 42.3**	**+0.5**
CSS	**Mathiatis**	**0.47**	**48**	Pg	**Pg**	**03 14 33.7**	**-1.7**
CSS	**Mathiatis**	**0.47**	**48**	P	**Pg**	**03 14 34.1**	**-1.3**
CSS	**Mathiatis**	**0.47**	**48**	*e*Pg	**Pg**	**03 14 34.6**	**-0.8**
CSS				S	**Sg**	**03 14 42.3**	**+0.5**
LEF	**Lefka**	**0.47**	**358**	PG	**Pg**	**03 14 34.5**	**-0.9**
LEF				SG	**Sb**	**03 14 42.5**	**-0.3**
LEF	**Lefka**	**0.47**	**358**	P	**Pg**	**03 14 34.2**	**-1.2**
LEF	**Lefka**	**0.47**	**358**	*e*Pg	**Pg**	**03 14 34.5**	**-0.9**
LEF				S	**Sb**	**03 14 42.5**	**-0.3**
PPCY	**Paphos**	**0.52**	**297**	P	**Pb**	**03 14 36.7**	**-0.1**
	baz=115						
PPCY	**Paphos**	**0.52**	**297**	P	**Pb**	**03 14 36.7**	**-0.1**
ALFC	**Alefka**	**0.57**	**334**	P	**Pg**	**03 14 36.3**	**-0.9**
	baz=149						
ALFC				S	**Sb**	**03 14 47.3**	**+1.7**
ALFC	**Alefka**	**0.57**	**334**	P	**Pg**	**03 14 36.3**	**-0.9**
MAMC	**Mammari**	**0.58**	**26**	P	**Pg**	**03 14 36.2**	**-1.3**
	baz=201						
MAMC	**Mammari**	**0.58**	**26**	P	**Pg**	**03 14 36.2**	**-1.3**
AKIN	**Ak'¨nc¨-lar- K**	**0.59**	**51**	PG	**Pg**	**03 14 36.8**	**-0.8**
AKIN	**Ak'¨nc¨-lar- K**	**0.59**	**51**	*e*Pg	**Pg**	**03 14 36.8**	**-0.8**
AKMC	**Akamas**	**0.61**	**309**	P	**Pb**	**03 14 38.3**	**0.0**
	baz=126						
AKMC	**Akamas**	**0.61**	**309**	P	**Pb**	**03 14 38.3**	**0.0**
AKDN	**Akdeniz- K¨–br**	**0.65**	**4**	PG	**Pg**	**03 14 38.1**	**-0.7**
EREN	**Erenkoy**	**1.36**	**49**	PN	**Pn**	**03 14 50.4**	**0.0**
EREN				SN	**Sg**	**03 15 10.0**	**+0.1**
EREN	**Erenkoy**	**1.36**	**49**	*e*Pn	**Pn**	**03 14 50.4**	**0.0**
EREN				*e*Sn	**Sg**	**03 15 10.0**	**+0.1**
TEKE	**Tekeli-Mersin**	**1.50**	**6**	PN	**Pn**	**03 14 52.6**	**+0.2**
TEKE	**Tekeli-Mersin**	**1.50**	**6**	*e*Pn	**Pn**	**03 14 52.6**	**+0.2**
AKKU	**Akkuyu-Mersin**	**1.60**	**19**	PN	**Pn**	**03 14 53.9**	**+0.2**
AKKU	**Akkuyu-Mersin**	**1.60**	**19**	*e*Pn	**Pn**	**03 14 53.9**	**+0.2**
GAZI	**Gazipasa**	**1.66**	**343**	*i* P	**Pn**	**03 14 54.1**	**-0.4**
GAZI	**Gazipasa**	**1.66**	**343**	P	**Pn**	**03 14 54.1**	**-0.4**
YESI	**Yesilovacik-Me**	**1.66**	**21**	PN	**Pn**	**03 14 54.7**	**+0.2**
YESI	**Yesilovacik-Me**	**1.66**	**21**	*e*Pn	**Pn**	**03 14 54.7**	**+0.2**
IKL	**Isikli**	**1.71**	**22**	PN	**Pn**	**03 14 55.6**	**+0.4**
IKL	**Isikli**	**1.71**	**22**	*e*Pn	**Pn**	**03 14 55.6**	**+0.4**
BERE	**Bereket-Mersin**	**1.72**	**9**	PN	**Pn**	**03 14 55.6**	**+0.1**
BERE	**Bereket-Mersin**	**1.72**	**9**	*e*Pn	**Pn**	**03 14 55.6**	**+0.1**
TEVE	**Tevekalti-Mers**	**1.84**	**14**	PN	**Pn**	**03 14 57.3**	**+0.2**
TEVE	**Tevekalti-Mers**	**1.84**	**14**	*e*Pn	**Pn**	**03 14 57.3**	**+0.2**
KEBE	**Keben-Mersin**	**1.91**	**20**	PN	**Pn**	**03 14 58.1**	**0.0**
KEBE	**Keben-Mersin**	**1.91**	**20**	*e*Pn	**Pn**	**03 14 58.1**	**0.0**
KIZK	**Mersin**	**2.09**	**29**	PN	**Pn**	**03 15 00.9**	**+0.5**
HNTI	**Hanita**	**2.45**	**129**	Pn	**Pn**	**03 15 05.1**	**-0.3**
HNTI				Sn	**Sn**	**03 15 34.8**	**-0.2**
KEPZ	**Antalya-Kepez**	**2.49**	**335**	*i* P	**Pn**	**03 15 05.8**	**-0.1**
KEPZ				*i* S	**Sb**	**03 15 39.6**	**-1.2**
KEPZ	**Antalya-Kepez**	**2.49**	**335**	P	**Pn**	**03 15 05.8**	**-0.1**
KEPZ				S	**Sb**	**03 15 39.6**	**-1.2**
MERS	**Mersin**	**2.58**	**30**	PN	**Pn**	**03 15 07.6**	**+0.4**
MERS	**Mersin**	**2.58**	**30**	*e*Pn	**Pn**	**03 15 07.6**	**+0.4**
MMA0B	**Mount Meron ar**	**2.64**	**127**	Pn	**Pn**	**03 15 07.9**	**-0.2**
MMA0B				Sn	**Sn**	**03 15 39.6**	**-0.2**
OFRI	**'Ofer**	**2.66**	**139**	Pn	**Pn**	**03 15 08.3**	**0.0**
OFRI				Sn	**Sn**	**03 15 39.4**	**-0.9**
KSDI	**Kefar Szold**	**2.71**	**122**	Pn	**Pn**	**03 15 09.4**	**+0.4**
KSDI				Sn	**Sn**	**03 15 41.8**	**+0.4**
KERG	**Konya-Eregli**	**2.93**	**19**	*i* P	**Pn**	**03 15 14.3**	**+2.1**
KERG				*i* S	**Sb**	**03 15 51.9**	**-1.9**
KERG	**Konya-Eregli**	**2.93**	**19**	P	**Pn**	**03 15 14.3**	**+2.1**
KERG				S	**Sb**	**03 15 51.8**	**-1.9**
KSHT	**Keshet**	**2.93**	**124**	Pn	**Pn**	**03 15 12.9**	**+0.8**
SLTI	**Sal'it**	**2.99**	**143**	Pn	**Pn**	**03 15 12.9**	**+0.1**
SLTI				Sn	**Sn**	**03 15 48.1**	**-0.3**
MMLI	**Mount Malkishu**	**3.04**	**136**	PN	**Pn**	**03 15 12.9**	**-0.7**
MMLI	**Mount Malkishu**	**3.04**	**136**	Pn	**Pn**	**03 15 13.7**	**+0.1**
MMLI				Sn	**Sn**	**03 15 50.5**	**+0.7**
MMLI	**Mount Malkishu**	**3.04**	**136**	Pn	**Pn**	**03 15 13.7**	**+0.1**
MMLI				Sn	**Sn**	**03 15 50.5**	**+0.7**
AKAS	**Kas**	**3.13**	**301**	PN	**Pn**	**03 15 15.1**	**+0.3**
KORT	**Korkueli**	**3.14**	**319**	PN	**Pn**	**03 15 15.1**	**+0.1**
KMER	**Konya-Meram**	**3.15**	**352**	*i* P	**Pn**	**03 15 17.8**	**+2.7**
KMER	**Konya-Meram**	**3.15**	**352**	P	**Pn**	**03 15 17.8**	**+2.7**
TAHT	**Tahtakopru-Hat**	**3.18**	**56**	PN	**Pn**	**03 15 16.8**	**+1.3**
TAHT	**Tahtakopru-Hat**	**3.18**	**56**	*e*Pn	**Pn**	**03 15 16.8**	**+1.3**
YESY	**Yesilyurt**	**3.20**	**12**	PN	**Pn**	**03 15 16.8**	**+1.0**
YESY	**Yesilyurt**	**3.20**	**12**	*e*Pn	**Pn**	**03 15 16.8**	**+1.0**
ELL	**Elmali**	**3.22**	**312**	PN	**Pn**	**03 15 16.8**	**+0.7**
SUTC	**Sutluce-Ispart**	**3.22**	**332**	PN	**Pn**	**03 15 16.8**	**+0.7**
HMDT	**Nahal Hemdat**	**3.24**	**137**	Pn	**Pn**	**03 15 16.9**	**+0.7**
HMDT				Sn	**Sn**	**03 15 55.3**	**+0.8**
KONT	**Konya--Tatoy**	**3.32**	**353**	PN	**Pn**	**03 15 18.8**	**+1.4**
KONT	**Konya--Tatoy**	**3.32**	**353**	*i* P	**Pn**	**03 15 19.7**	**+2.3**
KONT	**Konya--Tatoy**	**3.32**	**353**	*e*Pn	**Pn**	**03 15 18.8**	**+1.4**
LADK	**Ladik-KONYA**	**3.57**	**353**	PN	**Pn**	**03 15 21.8**	**+0.9**
SULT	**Sultanhani-AKS**	**3.58**	**8**	PN	**Pn**	**03 15 22.4**	**+1.4**
SULT	**Sultanhani-AKS**	**3.58**	**8**	*e*Pn	**Pn**	**03 15 22.4**	**+1.4**
KOZT	**Kozan**	**3.69**	**39**	PN	**Pn**	**03 15 23.8**	**+1.4**
KOZT	**Kozan**	**3.69**	**39**	*e*Pn	**Pn**	**03 15 23.8**	**+1.4**
FETY	**Fethiye**	**3.69**	**304**	PN	**Pn**	**03 15 22.7**	**+0.2**
FETY	**Fethiye**	**3.69**	**304**	P	**Pn**	**03 15 20.1**	**-2.4**
FETY	**Fethiye**	**3.69**	**304**	*e*Pn	**Pn**	**03 15 22.7**	**+0.2**
DSI	**Dead Sea**	**3.70**	**145**	Pn	**Pn**	**03 15 23.4**	**+0.8**
DSI	**Dead Sea**	**3.70**	**145**	Pn	**Pn**	**03 15 23.4**	**+0.8**
GOLH	**Golhisar**	**3.75**	**315**	*i* P	**Pn**	**03 15 23.9**	**+0.6**
GOLH	**Golhisar**	**3.75**	**315**	P	**Pn**	**03 15 24.0**	**+0.6**
BAGO	**Egridir - ISPA**	**3.75**	**333**	*i* P	**Pn**	**03 15 25.2**	**+1.9**
YTIR	**Yattir**	**3.76**	**150**	Pn	**Pn**	**03 15 24.6**	**+1.1**
YTIR	**Yattir**	**3.76**	**150**	Pn	**Pn**	**03 15 24.6**	**+1.1**
GULA	**Gulagac**	**3.84**	**16**	PN	**Pn**	**03 15 26.3**	**+1.7**
GULA	**Gulagac**	**3.84**	**16**	*e*Pn	**Pn**	**03 15 26.3**	**+1.7**
MZDA	**Masada**	**3.92**	**148**	Pn	**Pn**	**03 15 26.3**	**+0.8**
MZDA				Sn	**Sn**	**03 16 12.3**	**+1.2**
MZDA	**Masada**	**3.92**	**148**	Pn	**Pn**	**03 15 26.3**	**+0.8**
MZDA				Sn	**Sn**	**03 16 12.3**	**+1.2**
CHBY	**Cihanbeyli**	**3.93**	**360**	PN	**Pn**	**03 15 26.9**	**+1.1**
CHBY	**Cihanbeyli**	**3.93**	**360**	*e*Pn	**Pn**	**03 15 26.9**	**+1.1**
KZIT	**Kziot**	**3.94**	**161**	PN	**Pn**	**03 15 25.2**	**-0.6**
KZIT	**Kziot**	**3.94**	**161**	Pn	**Pn**	**03 15 26.4**	**+0.6**
KZIT	**Kziot**	**3.94**	**161**	Pn	**Pn**	**03 15 26.4**	**+0.6**
DALY	**Dalyan (Mu¨la**	**4.08**	**303**	PN	**Pn**	**03 15 27.9**	**+0.1**
DALY	**Dalyan (Mu¨la**	**4.08**	**303**	*i* P	**Pn**	**03 15 27.3**	**-0.5**
DALY	**Dalyan (Mu¨la**	**4.08**	**303**	P	**Pn**	**03 15 27.3**	**-0.5**
DALY	**Dalyan (Mu¨la**	**4.08**	**303**	*e*Pn	**Pn**	**03 15 27.9**	**+0.1**
TURN	**Turunc**	**4.14**	**304**	PN	**Pn**	**03 15 32.1**	**+3.4**
TURN	**Turunc**	**4.14**	**304**	*e*Pn	**Pn**	**03 15 32.1**	**+3.4**
ARG	**Arkhangelos**	**4.21**	**293**	PN	**Pn**	**03 15 30.0**	**+0.5**
ARG	**Arkhangelos**	**4.21**	**293**	*e*Pn	**Pn**	**03 15 30.0**	**+0.5**
TAVA	**DENIZLI_Tavas**	**4.29**	**312**	*i* P	**Pn**	**03 15 30.7**	**-0.1**
TAVA	**DENIZLI_Tavas**	**4.29**	**312**	P	**Pn**	**03 15 30.7**	**-0.1**
KIZT	**Kizilcal**	**4.30**	**349**	PN	**Pn**	**03 15 32.4**	**+1.4**
KIZT	**Kizilcal**	**4.30**	**349**	*e*Pn	**Pn**	**03 15 32.4**	**+1.4**
KMRS	**Kahramanmaras**	**4.31**	**47**	PN	**Pn**	**03 15 32.7**	**+1.7**
KMRS	**Kahramanmaras**	**4.31**	**47**	*e*Pn	**Pn**	**03 15 32.7**	**+1.7**
RMNI	**Mount Ramon**	**4.33**	**158**	Pn	**Pn**	**03 15 32.4**	**+1.1**
RMNI	**Mount Ramon**	**4.33**	**158**	Pn	**Pn**	**03 15 32.4**	**+1.1**
YER	**Yerkesik**	**4.50**	**305**	PN	**Pn**	**03 15 34.1**	**+0.5**
YER	**Yerkesik**	**4.50**	**305**	*e*Pn	**Pn**	**03 15 34.1**	**+0.5**
PRNI	**Paran**	**4.63**	**157**	Pn	**Pn**	**03 15 35.7**	**+0.2**
PRNI				Sn	**Sn**	**03 16 30.0**	**+1.0**
PRNI	**Paran**	**4.63**	**157**	Pn	**Pn**	**03 15 35.7**	**+0.2**
PRNI				Sn	**Sn**	**03 16 30.0**	**+1.0**
SARI	**SarD1z-Kayseri**	**4.70**	**36**	PN	**Pn**	**03 15 38.0**	**+1.5**
DAT	**Datca**	**4.81**	**297**	*i* P	**Pn**	**03 15 36.9**	**-1.0**
DAT	**Datca**	**4.81**	**297**	P	**Pn**	**03 15 36.9**	**-1.0**
HRFI	**Mount Harif**	**4.94**	**158**	Pn	**Pn**	**03 15 39.8**	**+0.2**
HRFI	**Mount Harif**	**4.94**	**158**	Pn	**Pn**	**03 15 39.8**	**+0.2**
AYDN	**Tasoluk**	**5.06**	**308**	*i* P	**Pn**	**03 15 39.4**	**-1.9**
AYDN	**Tasoluk**	**5.06**	**308**	P	**Pn**	**03 15 39.4**	**-1.9**
MBRI	**Mt Berech**	**5.13**	**160**	Pn	**Pn**	**03 15 42.8**	**+0.5**
MBRI				Sn	**Sn**	**03 16 42.6**	**+1.3**
MBRI	**Mt Berech**	**5.13**	**160**	Pn	**Pn**	**03 15 42.8**	**+0.5**
MBRI				Sn	**Sn**	**03 16 42.6**	**+1.3**
EIL	**Elat**	**5.26**	**160**	Pn	**Pn**	**03 15 44.5**	**+0.5**
EIL	**Elat**	**5.26**	**160**	Pn	**Pn**	**03 15 44.5**	**+0.5**

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*ISCJB **12** 03:26:00.4±1.2, 71°.5N±0°.1×9°.5W±0°.7, h10km, Error ellipse: s-maj=37.4km s-min=6.8km az=150.5*
*BER **12** 03:26:03.3±0.5, 71°.36N×9°.40W, h3km±92km, ML2.8*
ISC 12 03:25:57.4±1.8, 71°.5N±0°.2×9°.6W±0°.3, h10km, n5, σ0§21/9, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNW	**Jan Mayen West**	**0.62**	**140**	*e*P	**Pn**	**03 26 12.4**	**+0.3**
JNW				*e*S	**Sb**	**03 26 18.9**	**0.0**
JNW				IAML		03 26 19.6	
	comp=Z,592nm,0.2s						
JMIC	**Jan Mayen**	**0.63**	**144**	*e*P	**Pn**	**03 26 12.4**	**0.0**
JMIC				*e*S	**Sb**	**03 26 19.3**	**-0.1**
JMIC				IAML		03 26 22.5	
	comp=Z,211nm,0.2s						
JMI	**Jan Mayen**	**0.65**	**152**	*e*P	**Pn**	**03 26 12.7**	**+0.2**
JMI				*e*S	**Sb**	**03 26 19.6**	**-0.2**
JNE	**Jan Mayen East**	**0.67**	**139**	*e*P	**Pn**	**03 26 13.1**	**+0.1**
JNE				*e*S	**Sb**	**03 26 20.2**	**-0.3**
JNE				IAML		03 26 21.7	
	comp=Z,830nm,0.1s						
DAG	**Danmarks Havn**	**5.84**	**339**	*i* P	Pn	03 27 29.1	+5.3
DAG				*i* S	**Sn**	**03 28 30.5**	**-0.1**

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*IDC **12** 03:30:11.1±5.6, 4°.90N×31°.78E, h0km, mb3.9/12, mb1 4.0/12, mb1mx3.7/59, mbtmp3.9/12, MS3.4/8, Ms1 3.4/8, ms1mx2.9/55, Error ellipse: s-maj=119.8km s-min=36.8km az=10.0*
*ISCJB **12** 03:30:14.0±1.8, 5°.3N±0°.3×31°.8E±0°.2, h17km, mb3.9/12, MS3.4/8, Error ellipse: s-maj=47.0km s-min=14.7km az=40.9*
ISC 12 03:30:15.3±2.2, 5°.1N±0°.3×31°.8E±0°.2, h17km, n20, σ2§04/16, mb3.9/12, MS3.4/8, Sudan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LODK	**Lodwar**	**3.94**	**116**	*i* P	**Pn**	**03 31 15.7**	**+0.7**
LODK				*e*		03 31 16.2	
	baz=295,slow=16						
LODK				*i* S	**Sb**	**03 32 16.6**	**+4.8**
LODK				*i* S	**Sg**	**03 32 16.9**	**-5.0**
LODK				AMP		03 32 23.6	
	comp=N,9μm,0.1s						
LODK				AMP		03 32 26.3	
	comp=E,7μm,0.2s						
LSZ	**Lusaka**	**20.60**	**190**	LR	LR	03 43 00.8	
	comp=E,116nm,18.9s,baz=46,slow=38						
BOSA	**Boshof**	**34.15**	**190**	LR	LR	03 50 06.5	
	comp=E,89nm,18.7s,baz=360,slow=35						
BRTR	**Keskin Array B**	**34.47**	**3**	P	**P**	**03 37 03.7**	**+1.2**
	comp=E,0.9nm,0.8s,baz=178,slow=11,SNR=7.8						
VAE	**Valguarnera**	**35.90**	**336**	LR	LR	03 53 17.8	
	comp=E,93nm,19.1s,baz=144,slow=38						
GNI	**Garni**	**36.75**	**17**	LR	LR	03 52 33.3	
	comp=E,41nm,18.1s,baz=214,slow=36						
MDT	**Midelt**	**43.70**	**314**	LR	LR	03 57 47.2	
	comp=E,50nm,18.2s,baz=157,slow=38						
AKASG	**Malin Array Be**	**45.46**	**358**	P	**P**	**03 38 32.6**	**-0.7**
	comp=E,0.3nm,0.2s,baz=163,slow=6.1,SNR=3.4						
GERES	**GERESS Array B**	**46.19**	**343**	P	**P**	**03 38 39.7**	**+0.3**
	comp=E,1.0nm,0.8s,baz=159,slow=8.0,SNR=5.7						
GERES				LR	LR	04 00 08.4	
	comp=E,23nm,18.8s,baz=232,slow=39						
ESDC	**Sonseca Array**	**47.13**	**322**	P	**P**	**03 38 47.0**	**+0.2**
	comp=E,0.8nm,0.6s,baz=139,slow=7.5,SNR=5.4						
AKTO	**Aktyubinsk**	**50.22**	**22**	P	**P**	**03 39 10.1**	**-0.2**
	comp=E,0.7nm,0.6s,baz=225,slow=7.1,SNR=2.9						
FINES	**FINESS Array B**	**56.34**	**357**	P	**P**	**03 39 56.2**	**+1.1**
	comp=E,2.9nm,0.9s,baz=163,slow=10,SNR=4.6						
BVAR	**Borovoye Array**	**57.23**	**27**	P	**P**	**03 40 01.3**	**-0.3**
	comp=E,0.3nm,0.5s,baz=237,slow=6.0,SNR=3.4						
NB2	**NORSAR Subarra**	**57.89**	**348**	P	**P**	**03 40 05.5**	**-0.7**
	comp=Z,1.4nm,0.7s,baz=159,slow=6.9						
NOA	**NORSAR Array B**	**57.89**	**348**	P	**P**	**03 40 05.7**	**-0.5**
	comp=Z,3.5nm,0.8s,baz=152,slow=7.5,SNR=5.5						
NOA				LR	LR	04 09 40.2	
	comp=Z,9.8nm,18.2s,baz=165,slow=41						
KURBB	**Kurchatov Arra**	**59.77**	**32**	P	**P**	**03 40 19.8**	**+0.4**
	comp=Z,0.6n

ACHB	Acheberg	0.71	152	⇓iPn	Pg	03 41 00.6	-0.1
	252nm,0.5s						
ACHB	Acheberg	0.71	152	⇓iP	Pg	03 41 00.6	-0.1
SFRA	Frenkendorf	0.71	183	⇑iPg	Pg	03 41 00.8	+0.1
SFRA	Frenkendorf	0.71	183	⇑iPg	Pg	03 41 00.8	+0.1
SUBF	Surbourg	0.71	5	Pg	Pn	03 41 01.4	-0.3
SUBF	Surbourg	0.71	5	Pg	Pn	03 41 01.4	-0.4
SULZ	Cheisacher	0.72	161	iPn	Pg	03 41 01.0	0.0
	546nm,0.4s						
SULZ	Cheisacher	0.72	161	⇓P*	Pg	03 41 01.0	0.0
SULZ				PmP		03 41 01.4	
SULZ				S*	Sg	03 41 10.0	-0.1
SULZ				SmS		03 41 12.0	
SULZ	Cheisacher	0.72	161	iP	Pg	03 41 01.0	0.0
SULZ				Sb	Sg	03 41 10.6	-0.1
SULZ				S	Sn	03 41 12.0	-0.6
HINF	Hinteralfeld	0.72	238	ePg	Pg	03 41 01.1	0.0
HINF				eSg	Sb	03 41 10.5	+0.1
	62nm,0.2s						
HINF	Hinteralfeld	0.72	238	ePg	Pg	03 41 01.1	0.0
HINF				eSg	Sb	03 41 10.5	+0.1
	31nm,0.2s						
LANF	Langenberg	0.77	2	P*	Pg	03 41 02.2	+0.2
LANF				S*	Sg	03 41 12.2	0.0
LANF	Langenberg	0.77	2	Pg	Pg	03 41 02.2	+0.2
LANF	Langenberg	0.77	2	Pb	Pg	03 41 02.2	+0.2
LANF				Sb	Sg	03 41 12.2	-0.1
LBG	Lerchenberg	0.83	56	⇑P*	Pb	03 41 02.6	0.0
LBG				PmP		03 41 02.9	
LBG				S*	Sb	03 41 13.0	-0.3
LBG				SmS		03 41 14.3	
LBG	Lerchenberg	0.83	56	Pb	Pb	03 41 02.6	+0.1
LBG	Lerchenberg	0.83	56	P	Pg	03 41 02.9	-0.1
LBG				Sb	Sb	03 41 13.0	-0.3
LBG				S	Sg	03 41 14.3	+0.4
TRULL	Truellikon	0.84	132	iPn	Pg	03 41 03.1	0.0
	182nm,0.2s						
TRULL	Truellikon	0.84	132	iP	Pg	03 41 03.1	0.0
FLACH	Flaach	0.84	139	⇓iPn	Pg	03 41 03.1	-0.1
	201nm,0.1s						
FLACH	Flaach	0.84	139	⇓iP	Pg	03 41 03.1	-0.1
PEB	Petersbachel	0.86	358	⇓P	Pb	03 41 03.1	0.0
PEB				PmP		03 41 03.8	
PEB				S	Sb	03 41 14.6	+0.4
PEB	Petersbachel	0.86	358	P	Pb	03 41 03.1	0.0
PEB				S	Sg	03 41 14.6	-0.4
BALST	Balsthal	0.88	183	⇑iPn	Pb	03 41 03.5	+0.1
	330nm,0.3s						
BALST	Balsthal	0.88	183	⇑P	Pb	03 41 03.5	+0.1
BALST				⇑PmP		03 41 04.0	
BALST				eSg	Sg	03 41 15.2	-0.3
BALST	Balsthal	0.88	183	P	Pb	03 41 03.5	+0.1
BALST				Sg	Sg	03 41 15.2	-0.3
BOURR	Bourrignon	0.89	204	ePn	Pb	03 41 03.7	0.0
	147nm,0.4s						
BOURR	Bourrignon	0.89	204	⇑P	Pb	03 41 03.8	+0.1
BOURR				PmP		03 41 04.7	
BOURR	Bourrignon	0.89	204	P	Pb	03 41 03.8	+0.1
GUT	Gutenstein	0.92	98	⇓iPn	Pb	03 41 04.1	0.0
GUT	Gutenstein	0.92	98	⇓P	Pb	03 41 04.1	0.0
GUT				Pg	Pg	03 41 04.4	-0.3
GUT				⇑PmP		03 41 04.8	
GUT				S	Sb	03 41 15.9	0.0
GUT	Gutenstein	0.92	98	iP	Pb	03 41 04.1	0.0
GUT	Gutenstein	0.92	98	Pg	Pb	03 41 04.4	+0.3
GUT				S	Sb	03 41 15.9	0.0
SISB	Singen-Schiene	0.96	122	Pg	Pg	03 41 05.5	-0.1
SISB	Singen-Schiene	0.96	122	Pg	Pg	03 41 05.5	-0.1
HAU	Haudompre	0.97	258	ePn	Pn	03 41 05.2	-0.2
HAU	Haudompre	0.97	258	ePg	Pg	03 41 05.9	+0.3
HAU				eSg	Sg	03 41 17.9	-0.5
	89nm,0.3s						
HAU	Haudompre	0.97	258	ePn	Pn	03 41 05.2	-0.2
HAU	Haudompre	0.97	258	ePg	Pg	03 41 05.9	+0.3
HAU				eSg	Sg	03 41 17.9	-0.5
	44nm,0.3s						
BRET	Bretten	1.01	37	P	Pb	03 41 05.2	-0.5
BRET				Pg	Pg	03 41 06.3	-0.2
BRET				S	Sb	03 41 18.4	-0.2
BRET				Sg	Sg	03 41 19.8	0.0
BRET	Bretten	1.01	37	P	Pb	03 41 05.2	-0.5
SAIRA	Les Sairains D	1.01	207	ePn	Pb	03 41 05.4	-0.4
	103nm,0.2s						
SAIRA	Les Sairains D	1.01	207	eP	Pb	03 41 05.4	-0.4
LOMF	Lomont	1.06	217	Pg	Pn	03 41 06.8	0.0
LOMF	Lomont	1.06	217	Pg	Pn	03 41 06.8	0.0
STU	Stuttgart	1.11	59	ePg	Pb	03 41 07.8	+0.5
STU				Sg	Sn	03 41 22.0	0.0
STU	Stuttgart	1.11	59	Pg	Pb	03 41 07.8	+0.5
STU				Sg	Sn	03 41 22.0	-0.1
WILA	Wila	1.11	135	Pg	Pg	03 41 08.1	-0.2
WILA				Sg	Sg	03 41 23.1	+0.2
WILA	Wila	1.11	135	Pg	Pg	03 41 08.1	-0.2
WILA				Sg	Sg	03 41 23.1	+0.2
KTD	Kalmit	1.13	11	Pg	Pg	03 41 08.5	-0.2
KTD				Sg	Sg	03 41 24.1	+0.5
KTD	Kalmit	1.13	11	Pg	Pg	03 41 08.7	-0.1
KTD	Kalmit	1.13	11	Pg	Pg	03 41 08.7	-0.1
KTD				Sg	Sg	03 41 24.1	+0.5
THEF	They Montfort	1.19	272	Pg	Pg	03 41 09.7	-0.1
THEF				Sg	Sg	03 41 25.4	0.0
THEF	They Montfort	1.19	272	Pg	Pg	03 41 09.9	+0.2
THEF	They Montfort	1.19	272	Pg	Pg	03 41 09.7	-0.1
THEF				Sg	Sg	03 41 25.4	+0.1
DUP	Duppenweiler	1.36	332	Sg	Sg	03 41 30.9	-0.1
DUP	Duppenweiler	1.36	332	Sg	Sg	03 41 30.9	-0.1
IMS	Imsbach	1.39	4	Pg	Pg	03 41 13.4	-0.3
IMS				Sg	Sg	03 41 31.4	-0.3
IMS	Imsbach	1.39	4	Pg	Pg	03 41 13.4	-0.2
IMS				Sg	Sg	03 41 31.4	-0.4
PAGF	Fort de Pagny	1.40	285	ePn	Pn	03 41 10.9	-0.4
	baz=100						
PAGF	Fort de Pagny	1.40	285	ePg	Pg	03 41 13.7	-0.1
	baz=107						
PAGF				eSn	Sn	03 41 28.7	-0.5
	baz=106						
PAGF				eSg	Sg	03 41 31.9	-0.2
	24nm,0.2s,baz=113						
PAGF	Fort de Pagny	1.40	285	ePn	Pn	03 41 10.9	-0.4
PAGF	Fort de Pagny	1.40	285	ePg	Pg	03 41 13.7	-0.1
PAGF				eSn	Sn	03 41 28.7	-0.5
PAGF				eSg	Sg	03 41 31.9	-0.2
	12nm,0.2s						
LIENZ	Kamor/St.Gall	1.48	127	⇑P	Pn	03 41 13.2	+0.6
LIENZ				Pg	Pg	03 41 15.6	+0.2
LIENZ				S	Sn	03 41 31.2	-0.4
LIENZ				Sg	Sg	03 41 34.6	-0.2
LIENZ	Kamor/St.Gall	1.48	127	P	Pn	03 41 13.2	+0.6
TOD	Tromm	1.56	26	Pg	Pg	03 41 16.1	-0.7
TOD	Tromm	1.56	26	Pg	Pg	03 41 16.1	-0.7
RUP	Ruppelstein	1.56	343	Pg	Pg	03 41 16.8	-0.1
RUP				Sg	Sg	03 41 36.9	-0.5
RUP	Ruppelstein	1.56	343	Pg	Pg	03 41 16.8	-0.1
RUP				Sg	Sg	03 41 36.8	-0.5
PLONS	Plons/SG	1.60	136	eSn	Sn	03 41 33.6	-0.6
PLONS				eSg	Sg	03 41 37.8	-0.6
PLONS	Plons/SG	1.60	136	Sn	Sn	03 41 33.6	-0.6
PLONS				Sg	Sg	03 41 37.8	-0.6
RIVT	Riveris	1.64	337	Pg	Pg	03 41 17.9	-0.4
RIVT				S	Sn	03 41 33.6	-1.5
RIVT	Riveris	1.64	337	Pg	Pg	03 41 17.9	-0.4
RIVT				S	Sn	03 41 33.6	-1.5
UBR	Ueberruh	1.67	108	Pg	Pg	03 41 18.9	+0.1
UBR				S	Sn	03 41 34.8	-1.1
UBR				Sg	Sg	03 41 40.2	-0.3
UBR	Ueberruh	1.67	108	Pg	Pg	03 41 18.9	0.0
UBR				S	Sn	03 41 34.8	-1.1
UBR				Sg	Sg	03 41 40.2	-0.3
SIND	Sindeldorf	1.67	46	Sg	Sg	03 41 40.4	-0.3
SIND	Sindeldorf	1.67	46	Sg	Sg	03 41 40.4	-0.3
ABH	Alteburg	1.68	355	Pg	Pg	03 41 18.8	-0.4
ABH				Sg	Sg	03 41 40.0	-1.0
ABH	Alteburg	1.68	355	Pg	Pg	03 41 18.8	-0.3
ABH				Sg	Sg	03 41 40.0	-1.0
DAVA	Damuels	1.70	122	Pg	Pg	03 41 19.6	0.0
DAVA	Damuels	1.70	122	ePg	Pg	03 41 19.6	0.0
	0.7nm,0.1s,SNR=6.5						
DAVA				eSn	Sn	03 41 36.6	-0.4
	4.1nm,0.3s						
DAVA	Damuels	1.70	122	Pg	Pg	03 41 19.6	0.0
LAUCH	Lauchernalp	1.79	180	ePn	Pn	03 41 17.0	+0.1
	117nm,0.3s						
LAUCH	Lauchernalp	1.79	180	ePn	Pn	03 41 17.0	+0.1
WLF	Walferdange	1.80	325	ePg	Pg	03 41 21.3	-0.2
WLF				eSg	Sg	03 41 44.1	-0.7
WLF	Walferdange	1.80	325	Pg	Pg	03 41 21.3	-0.1
WLF				Sg	Sg	03 41 44.1	-0.8
SFTF	Sexfontaines	1.82	271	ePn	Pn	03 41 16.7	-0.4
SFTF	Sexfontaines	1.82	271	ePg	Pg	03 41 21.8	0.0
	baz=93						
SFTF				eSn	Sn	03 41 38.4	-1.2
	21nm,0.2s,baz=87						
SFTF	Sexfontaines	1.82	271	ePn	Pn	03 41 16.7	-0.4
SFTF	Sexfontaines	1.82	271	ePg	Pg	03 41 21.8	0.0
SFTF				eSn	Sn	03 41 38.4	-1.2
	10nm,0.2s						
MEZF	Maizieres J'vi	1.83	280	ePn	Pb	03 41 18.7	-0.9
	baz=103						
MEZF				eSg	Sg	03 41 45.4	-0.4
	16nm,0.4s,baz=100						
MEZF	Maizieres J'vi	1.83	280	ePn	Pb	03 41 18.7	-0.9
MEZF				eSg	Sg	03 41 45.4	-0.4
	7.9nm,0.4s						
SENIN	Lac Senin/Sane	1.87	190	ePn	Pn	03 41 17.8	-0.2
	31nm,1.7s						
SENIN	Lac Senin/Sane	1.87	190	ePn	Pn	03 41 17.8	-0.2
OBER	Oberstdorf	1.89	114	ePg	Pg	03 41 23.3	+0.2
OBER				eSg	Sg	03 41 48.5	+0.9
OBER	Oberstdorf	1.89	114	Pg	Pg	03 41 23.3	+0.2
OBER				Sg	Sg	03 41 48.5	+0.9
GIMEL	St. Georges /	1.96	212	iPn	Pn	03 41 18.8	-0.3
	31nm,1.6s						
GIMEL	St. Georges /	1.96	212	iPn	Pn	03 41 18.8	-0.3
CABF	La Chapelle	1.96	216	ePn	Pn	03 41 18.6	-0.5
CABF	La Chapelle	1.96	216	ePg	Pg	03 41 24.3	-0.2
CABF				eSg	Sg	03 41 48.7	-1.3
	8.2nm,0.4s						
CABF	La Chapelle	1.96	216	ePn	Pn	03 41 18.6	-0.5
CABF	La Chapelle	1.96	216	ePg	Pg	03 41 24.3	-0.2
CABF				eSg	Sg	03 41 48.7	-1.3
	4.1nm,0.4s						
TNS	Taunus Mts	2.06	12	ePg	Pg	03 41 25.8	-0.7
TNS				eSg	Sg	03 41 52.2	-1.0
TNS	Taunus Mts	2.06	12	Pg	Pg	03 41 25.8	-0.7
TNS				Sg	Sg	03 41 52.2	-1.1
RETA	Reutte	2.15	109	ePg	Pg	03 41 28.2	+0.1
	2.6nm,0.1s						
RETA				eSg	Sg	03 41 57.4	+1.5
	1.5nm,0.2s						
FETA	Feichten	2.33	120	ePg	Pg	03 41 31.4	-0.2
	1.7nm,0.2s,SNR=5.3						
MOTA	Moosalm	2.42	110	ePg	Pb	03 41 31.4	+1.7
	4.1nm,0.1s,SNR=12						
MOTA				eSg	Sg	03 42 03.0	-1.5
	1.5nm,0.1s						
RSL	Roselend	2.64	198	Pn	Pn	03 41 28.4	-0.1
RSL	Roselend	2.64	198	Pn	Pn	03 41 28.4	-0.1
GIVF	Givet	2.70	316	eSg	Sg	03 42 12.0	-1.6
GIVF	Givet	2.70	316	eSg	Sg	03 42 12.0	-1.6
GRA1	Grafenberg Arr	2.72	56	Pg	Pg	03 41 37.5	-1.5
GRA1				Sg	Sb	03 42 11.0	+3.2
GRF	Grafenberg Arr	2.72	56	Pg	Pg	03 41 37.5	-1.5
GRF				eSg	Sb	03 42 11.0	+3.2
LOR	Lormes	2.80	252	ePn	Pn	03 41 29.9	-0.6
	baz=73						
LOR	Lormes	2.80	252	ePg	Pg	03 41 39.7	-0.7
	baz=74						
LOR				eSg	Sg	03 42 14.7	-1.9
	14nm,0.2s,baz=72						
LOR	Lormes	2.80	252	ePn	Pn	03 41 29.9	-0.6
LOR	Lormes	2.80	252	ePg	Pg	03 41 39.7	-0.7
LOR				eSg	Sg	03 42 14.7	-1.9
	7.2nm,0.2s						
LPG	La Plagne	2.80	195	ePg	Pg	03 41 39.8	-0.7
LPG				eSg	Sg	03 42 17.5	+0.7
	2.4nm,0.4s						
LPG	La Plagne	2.80	195	ePg	Pg	03 41 39.8	-0.7
LPG				eSg	Sg	03 42 17.5	+0.7
	1.2nm,0.4s						
BAIF	Baives	2.98	310	ePn	Pn	03 41 33.8	+0.8
BAIF	Baives	2.98	310	ePn	Pn	03 41 33.8	+0.8
SMF	Signal de Mont	3.09	241	ePn	Pn	03 41 33.0	-1.5
SMF	Signal de Mont	3.09	241	ePg	Pg	03 41 44.6	-1.3
SMF				eSg	Sg	03 42 22.8	-3.1
	14nm,0.3s						
SMF	Signal de Mont	3.09	241	ePn	Pn	03 41 33.0	-1.5
SMF	Signal de Mont	3.09	241	ePg	Pg	03 41 44.6	-1.3
SMF				eSg	Sg	03 42 22.8	-3.1
	6.9nm,0.3s						
SSF	Saint Saulge	3.10	250	ePn	Pn	03 41 33.3	-1.3
SSF	Saint Saulge	3.10	250	ePg	Pg	03 41 45.4	-0.7
SSF				eSg	Sg	03 42 22.7	-3.6
	9.2nm,0.2s						
SSF	Saint Saulge	3.10	250	ePn	Pn	03 41 33.3	-1.3
SSF	Saint Saulge	3.10	250	ePg	Pg	03 41 45.4	-0.7
SSF				eSg	Sg	03 42 22.7	-3.6
	4.6nm,0.2s						
AVF	Avril sur Loir	3.31	246	ePn	Pn	03 41 36.2	-1.3
AVF	Avril sur Loir	3.31	246	ePg	Pg	03 41 49.3	-0.9
AVF				eSg	Sg	03 42 30.9	-2.1
	3.5nm,0.2s						
AVF	Avril sur Loir	3.31	246	ePn	Pn	03 41 36.2	-1.3
AVF	Avril sur Loir	3.31	246	ePg	Pg	03 41 49.3	-0.9
AVF				eSg	Sg	03 42 30.9	-2.1
	1.8nm,0.2s						
ROTZ	Rotzenmuhle	3.32	60	ePg	Pg	03 41 48.3	-2.0
ROTZ				eSg	Sg	03 42 30.8	-2.5
ROTZ	Rotzenmuhle	3.32	60	Pg	Pg	03 41 48.3	-2.0
ROTZ				Sg	Sg	03 42 30.8	-2.5
WET	Wettzell	3.52	73	Sg	Sg	03 42 36.3	-3.4
HYF	Humbligny	3.58	257	ePg	Pg	03 41 54.7	-0.7
HYF				eSg	Sg	03 42 38.6	-3.2
HYF	Humbligny	3.58	257	ePg	Pg	03 41 54.7	-0.7
HYF				eSg	Sg	03 42 38.6	-3.2
NKC	Novy Kostel	3.68	55	ePG	Pg	03 41 54.7	-2.6
NKC				eSG	Sg	03 42 40.9	-4.0
	comp=Z,7.2nm,0.5s						
NKC	Novy Kostel	3.68	55	Pg	Pg	03 41 54.7	-2.6
NKC				Sg	Sg	03 42 40.9	-4.0
	7.2nm,0.5s						
BGF	Bois d'Agland	3.73	245	ePg	Pg	03 41 56.9	-1.2
BGF				eSg	Sg	03 42 42.9	-3.5
	22nm,0.4s						
BGF	Bois d'Agland	3.73	245	ePg	Pg	03 41 56.9	-1.2
BGF				eSg	Sg	03 42 42.9	-3.5
	11nm,0.4s						
KHC	Kasperske Hory	3.96	74	ePN	Pn	03 41 47.6	+1.0
KHC				ePG	Pg	03 42 08.5	+5.8
KHC				eSN	Sn	03 42 29.5	-3.0
KHC				eSG	Sg	03 42 50.1	-3.9
	comp=Z,3.5nm,0.4s						
KHC	Kasperske Hory	3.96	74	Pn	Pn	03 41 47.6	+1.0
TCF	Toulx Ste Croi	4.24	245	eSg	Sg	03 42 59.2	-3.7
TCF	Toulx Ste Croi	4.24	245	eSg	Sg	03 42 59.2	-3.7
PRU	Pruhonice	4.80	66	eSG	Sg	03 43 17.0	-3.7
	comp=Z,2.7nm,0.5s						
PRU	Pruhonice	4.80	66	Sg	Sg	03 43 17.0	-3.7
	2.7nm,0.5s						
FLN	La Foliniere	5.51	279	ePn	Pn	03 42 03.9	-3.8
FLN	La Foliniere	5.51	279	ePn	Pn	03 42 03.9	-3.8

*NEIC **12** 03:44:29.9±0.0, 45°.58S×167°.02E, h82km, ML4.0(WEL), After WEL.*

WEL 12 03:44:29.4, 46°.S±3°×16°.7E±°, h84km±4km, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	Deep Cove	0.17	25	Pn	Pn	03 44 41.4	0.0
DCZ				Sn	Sn	03 44 50.2	-0.2
DCZ	Deep Cove	0.17	25	P	Pn	03 44 41.5	+0.1
DCZ				S	Sn	03 44 50.2	-0.1
PYZ	Puysegur Point	0.61	205	P	Pn	03 44 45.0	+0.6
PYZ				S	Sn	03 44 56.5	+0.9
WHZ	Wether Hill Ro	0.68	114	Pn	Pn	03 44 45.9	+0.7
WHZ				Sn	Sn	03 44 57.8	+0.9
WHZ	Wether Hill Ro	0.68	114	P	Pn	03 44 45.9	+0.8
WHZ				S	Sn	03 44 58.1	+1.2
MLZ	Mavora Lakes	0.79	72	Pn	Pn	03 44 46.7	+0.5
MLZ	Mavora Lakes	0.79	72	P	Pn	03 44 46.9	+0.6
MLZ				S	Sn	03 44 59.8	+0.9
MSZ	Milford Sound	1.13	33	Pn	Pn	03 44 50.2	0.0
MSZ	Milford Sound	1.13	33	P	Pn	03 44 49.9	-0.2
MSZ				P		03 44 50.2	
MSZ				S	Sn	03 45 05.1	-0.6
APZ	The Paps	1.38	152	P	Pn	03 44 54.2	+0.9
APZ				S	Sn	03 45 12.5	+1.2
WKZ	Wanaka	1.60	61	Pn	Pn	03 44 56.7	+0.6
WKZ				Sn	Sn	03 45 16.1	-0.2
WKZ	Wanaka	1.60	61	P	Pn	03 44 56.8	+0.7
WKZ				S	Sn	03 45 16.1	-0.2
EAZ	Earnscleugh	1.63	77	Pn	Pn	03 44 56.9	+0.3
EAZ				Sn	Sn	03 45 16.6	-0.5
EAZ	Earnscleugh	1.63	77	P	Pn	03 44 56.9	+0.4
EAZ				S	Sn	03 45 16.7	-0.5
SYZ	Scrubby Hill	1.72	123	Pn	Pn	03 44 58.2	+0.6
SYZ				Sn	Sn	03 45 19.4	+0.3
SYZ	Scrubby Hill	1.72	123	P	Pn	03 44 58.2	+0.6
SYZ				S	Sn	03 45 19.3	+0.3
TUZ	Tuapeka	1.83	101	Pn	Pn	03 44 59.5	+0.3
TUZ	Tuapeka	1.83	101	P	Pn	03 44 59.5	+0.4
JCZ	Jackson Bay	1.98	39	Pn	Pn	03 45 00.6	-0.5
JCZ	Jackson Bay	1.98	39	P	Pn	03 45 00.6	-0.5
HHSZ	Highcliff Hill	2.50	97	Pn	Pn	03 45 08.1	+0.1
HHSZ	Highcliff Hill	2.50	97	P	Pn	03 45 08.1	+0.2
HHSZ				S	Sn	03 45 35.2	-2.3
LBZ	Lake Benmore	2.54	62	Pn	Pn	03 45 07.0	-1.5
LBZ	Lake Benmore	2.54	62	P	Pn	03 45 07.1	-1.5
LBZ				S	Sn	03 45 35.5	-3.1
ODZ	Otahua Downs	2.60	79	Pn	Pn	03 45 08.1	-1.2
ODZ	Otahua Downs	2.60	79	P	Pn	03 45 08.2	-1.1
ODZ				S	Sn	03 45 37.2	-2.7
FOZ	Fox Glacier	2.87	44	Pn	Pn	03 45 11.1	-1.8
FOZ	Fox Glacier	2.87	44	P	Pn	03 45 11.1	-1.9
FOZ				S	Sn	03 45 43.3	-3.2
RPZ	Rata Peaks	3.43	58	Pn	Pn	03 45 18.3	-2.2
RPZ	Rata Peaks	3.43	58	P	Pn	03 45 18.4	-2.2
WVZ	Waitaha Valley	3.67	47	Pn	Pn	03 45 21.2	-2.5
WVZ	Waitaha Valley	3.67	47	P	Pn	03 45 21.3	-2.4
OXZ	Oxford	4.24	59	P	Pn	03 45 28.6	-3.0
INZ	Inchbonnie	4.28	49	P	Pn	03 45 29.7	-2.4
MQZ	McQueen's Vall	4.43	66	P	Pn	03 45 32.0	-2.1
OKCZ	Okains Bay	4.68	68	P	Pn	03 45 36.6	-1.0
LTZ	Lake Taylor	4.70	55	P	Pn	03 45 34.8	-3.1
DSZ	Denniston Nort	5.18	43	P	Pn	03 45 41.4	-3.0
KHZ	Kahutara	5.67	58	P	Pn	03 45 49.6	-1.4
THZ	Tophouse	5.73	50	P	Pn	03 45 48.5	-3.5
QRZ	Quartz Range	6.24	42	P	Pn	03 45 55.6	-3.2
BSWZ	Blackbirch Sta	6.30	54	P	Pn	03 45 58.9	-0.7
NNZ	Nelson	6.37	49	P	Pn	03 45 59.6	-0.9
DUWZ	D'Urville Isla	6.95	49	P	Pn	03 46 07.6	-1.0
CAW	Cannon Point	7.37	55	P	Pn	03 46 10.9	-3.4
MTW	Mount Morrison	7.59	57	P	Pn	03 46 14.4	-2.9
OGWZ	Otaki Gorge	7.62	54	P	Pn	03 46 14.6	-3.1
HIZ	Hauiti	9.16	42	P	Pn	03 46 35.8	-2.9
OUZ	Omahuta	11.52	28	P	Pn	03 47 10.2	-0.5

*ISCJB **12** 03:52:10.5±1.2, 71°.5N±0°.1×9°.4W±0°.7, h10km, Error ellipse: s-maj=37.4km s-min=6.8km az=150.7*
*BER **12** 03:52:13.4±0.6, 71°.33N×9°.28W, h0km±95km, ML2.8*

ISC 12 03:52:11.0±1.2, 71°.5N±0°.1×9°.4W±0°.3, h10km, n5, σ1906/10, 1D, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNW	Jan Mayen West	0.56	145	eP	Pb	03 52 22.6	-0.2
JNW				eS	Sg	03 52 29.0	0.0
JNW				IAML		03 52 29.7	
	comp=Z,706nm,0.2s						
JMIC	Jan Mayen	0.58	149	eP	Pg	03 52 22.4	+0.3
JMIC				eS	Sg	03 52 29.2	-0.5
JMIC				IAML		03 52 32.4	
	comp=Z,336nm,0.5s						
JMI	Jan Mayen	0.60	158	eP	Pg	03 52 22.8	+0.2
JMI				eS	Sg	03 52 29.8	-0.6
JNE	Jan Mayen East	0.61	144	eP	Pg	03 52 23.2	+0.4
JNE				eS	Sg	03 52 30.1	-0.7
JNE				IAML		03 52 32.1	
	comp=Z,510nm,0.1s						
DAG	Danmarks Havn	5.88	339	⇓iP	Pn	03 53 39.3	+1.4
DAG				eS	Sn	03 54 43.1	-2.1

MEX 12 03:55:12.0±0.3, 17°.07N×94°.08W, h160km±10km, MD3.9, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		0.96	108	eP	Pn	03 55 36.1	-1.4
TGIG				eS	Sn	03 55 54.9	-2.0
PCIG		1.59	149	eP	Pn	03 55 41.9	-1.4
PCIG				eS	Sn	03 56 05.0	-2.3
VHO	Vista Hermosa	2.54	270	eP	Pn	03 55 53.0	-1.3
VHO				eS	Sn	03 56 24.4	-2.5

*DDA **12** 04:11:12.9, 36°.44N×28°.88E, h7km, Ml3.0*
*ISK **12** 04:11:12.9, 36°.43N×28°.91E, h18km, ML2.6/13*
*ISCJB **12** 04:11:13.2±0.3, 36°.43N±0°.03×28°.90E±0°.02, h14km, Error ellipse: s-maj=3.6km s-min=2.6km az=178.6*
*CSEM **12** 04:11:13.6±0.2, 36°.43N×28°.93E, h20km, ML2.6, Error ellipse: s-maj=4.0km s-min=2.9km az=177.0*
*ATH **12** 04:11:13.2, 36°.42N×28°.91E, h40km±2km, ML2.1/4, Error ellipse

DAT	**Datca**	**1.11**	**285**	*i* P	**Pg**	**04 11 34.0**	**-0.2**
DAT				*i* S	**Sn**	**04 11 50.0**	**+0.8**
DAT	**Datca**	**1.11**	**285**	P	**Pg**	**04 11 34.0**	**-0.2**
DAT	**Datca**	**1.11**	**285**	*e*Pn	**Pg**	**04 11 34.4**	**+0.2**
DAT				S	**Sn**	**04 11 50.0**	**+0.8**
MLSB	**Milas**	**1.25**	**313**	PN	**Pg**	**04 11 36.4**	**-0.3**
MLSB	**Milas**	**1.25**	**313**	*e*Pn	**Pg**	**04 11 36.4**	**-0.3**
KORT	**Korkueli**	**1.28**	**64**	PN	**Pb**	**04 11 36.9**	**+0.2**
KORT	**Korkueli**	**1.28**	**64**	*i* P	**Pg**	**04 11 37.1**	**-0.2**
KORT	**Korkueli**	**1.28**	**64**	*e*Pn	**Pb**	**04 11 36.9**	**+0.2**
KORT	**Korkueli**	**1.28**	**64**	P	**Pg**	**04 11 37.2**	**-0.2**
DENT	**Denizli**	**1.31**	**4**	PN	**Pn**	**04 11 36.9**	**+0.2**
DENT	**Denizli**	**1.31**	**4**	*e*Pn	**Pn**	**04 11 36.9**	**+0.2**
BDRM	**Kayabasi**	**1.33**	**298**	*i* P	**Pb**	**04 11 37.6**	**+0.1**
BDRM				*i* S	**Sg**	**04 11 55.4**	**-0.3**
BDRM	**Kayabasi**	**1.33**	**298**	P	**Pb**	**04 11 37.6**	**+0.1**
BDRM				S	**Sg**	**04 11 55.4**	**-0.3**
BODT	**Bodrum**	**1.43**	**296**	PN	**Pn**	**04 11 38.1**	**-0.1**
BODT	**Bodrum**	**1.43**	**296**	*e*Pn	**Pn**	**04 11 38.1**	**-0.1**
NISR	**Nisiros**	**1.45**	**277**	P	**Pb**	**04 11 39.6**	**+0.1**
NISR	**Nisiros**	**1.45**	**277**	P	**Pb**	**04 11 39.0**	**-0.4**
AYDN	**Tasoluk**	**1.47**	**326**	*i* P	**Pb**	**04 11 39.7**	**-0.2**
AYDN				*i* S	**Sb**	**04 11 59.0**	**+0.5**
AYDN	**Tasoluk**	**1.47**	**326**	P	**Pb**	**04 11 39.7**	**-0.2**
AYDN				S	**Sb**	**04 11 59.0**	**+0.5**
BRDR	**BURDUR-Merkez**	**1.55**	**36**	*i* P	**Pn**	**04 11 39.6**	**-0.4**
BRDR				*i* S	**Sg**	**04 12 02.4**	**-0.4**
BRDR	**BURDUR-Merkez**	**1.55**	**36**	P	**Pn**	**04 11 39.6**	**-0.4**
BRDR				S	**Sg**	**04 12 02.4**	**-0.4**
KARP	**Karpathos**	**1.68**	**238**	PN	**Pn**	**04 11 42.1**	**+0.4**
KARP	**Karpathos**	**1.68**	**238**	P	**Pn**	**04 11 41.4**	**-0.3**
KARP				S	**Sn**	**04 12 02.0**	**-0.9**
KARP				AML	AML	04 12 03.5	
	comp=N,68μm,0.3s						
KARP				AML	AML	04 12 03.6	
	comp=E,62μm,0.2s						
KARP	**Karpathos**	**1.68**	**238**	P	**Pn**	**04 11 41.4**	**-0.3**
KARP	**Karpathos**	**1.68**	**238**	*e*Pn	**Pn**	**04 11 42.1**	**+0.4**
KARP				S	**Sn**	**04 12 02.1**	**-0.9**
AYDB	**Zeytinkoy-Aydi**	**1.71**	**332**	PN	**Pn**	**04 11 42.4**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**1.71**	**332**	*e*Pn	**Pn**	**04 11 42.4**	**+0.2**
SUTC	**Sutluce-Ispart**	**1.96**	**58**	PN	**Pn**	**04 11 46.4**	**+0.7**
SUTC	**Sutluce-Ispart**	**1.96**	**58**	*e*Pn	**Pn**	**04 11 46.4**	**+0.7**
KHAL	**Karahalli**	**1.98**	**13**	*i* P	**Pn**	**04 11 43.9**	**-2.0**
KHAL				*i* S	**Sn**	**04 12 08.2**	**-2.4**
KHAL	**Karahalli**	**1.98**	**13**	P	**Pn**	**04 11 43.9**	**-2.0**
KHAL				S	**Sn**	**04 12 08.2**	**-2.4**
KULA	**Kula-Manisa**	**2.08**	**355**	PN	**Pn**	**04 11 47.2**	**0.0**
KULA	**Kula-Manisa**	**2.08**	**355**	*e*Pn	**Pn**	**04 11 47.2**	**0.0**
SMG	**Samos**	**2.09**	**308**	P	**Pn**	**04 11 47.7**	**+0.4**
SMG				S	**Sn**	**04 12 11.8**	**-1.3**
SMG				AML	AML	04 12 15.1	
	comp=N,190μm,0.5s						
SMG				AML	AML	04 12 16.2	
	comp=E,153μm,0.3s						
SMG	**Samos**	**2.09**	**308**	P	**Pn**	**04 11 47.6**	**+0.3**
SMG				S	**Sn**	**04 12 12.2**	**-0.9**
KEPZ	**Antalya-Kepez**	**2.21**	**77**	*i* P	**Pn**	**04 11 50.5**	**+1.5**
KEPZ				*i* S	**Sn**	**04 12 16.7**	**+0.5**
KEPZ	**Antalya-Kepez**	**2.21**	**77**	P	**Pn**	**04 11 50.5**	**+1.5**
KEPZ				S	**Sn**	**04 12 16.7**	**+0.5**
ZKR	**Zakros**	**2.56**	**240**	P	**Pn**	**04 11 55.1**	**+1.3**
ZKR	**Zakros**	**2.56**	**240**	P	**Pn**	**04 11 54.5**	**+0.7**
LAST	**Lasithi**	**3.07**	**246**	P	**Pn**	**04 11 59.9**	**-1.0**
LAST	**Lasithi**	**3.07**	**246**	P	**Pn**	**04 12 00.5**	**-0.3**

MAN 12 04:11:17.8, 9°.85N×123°.16E, h26km, mb4.1, ML2.9, MS2.6, 3C, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**0.51**	**171**	⇑*i*P	Pn	04 11 30.3	+0.8
SNPH				*i* S	Sn	04 11 38.0	+0.5
TBP	**Tagbilaran**	**0.71**	**103**	*e*P	Pb	04 11 31.9	+0.2
LLP	**Lapu-Lapu**	**0.92**	**60**	*e*P	Pn	04 11 34.1	-1.1
LLP				*e*S	Sb	04 11 46.9	-0.2
GUIM	**Jordan**	**0.95**	**324**	*e*P	Pn	04 11 35.0	-0.5
GUIM				*e*S	Sn	04 11 48.4	+0.2
DCPH	**Dipolog City**	**1.28**	**171**	⇑*e*P	Pb	04 11 41.4	+0.2
DCPH				*e*S	Sb	04 11 59.6	+2.4
MSLP	**Maasin**	**1.70**	**80**	*e*P	Pb	04 11 47.9	-0.5
MSLP				*e*S	Sb	04 12 11.1	+1.6
RCP	**Roxas**	**1.75**	**347**	⇑*e*P	Pb	04 11 49.1	-0.1
RCP				*e*S	Sb	04 12 13.1	+2.4

*ISCJB **12** 04:34:04.9±1.3, 71°.5N±0°.1×9°.5W±0°.7, h10km, Error ellipse: s-maj=37.4km s-min=6.8km az=149.9*
*BER **12** 04:34:07.7±0.7, 71°.37N×9°.43W, h3km±137km, ML2.5*
ISC 12 04:34:04.8±1.3, 71°.5N±0°.1×9°.4W±0°.3, h10km, n5, σ1°.45/10, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNW	**Jan Mayen West**	**0.55**	**145**	*e*P	**Pb**	**04 34 17.0**	**+0.5**
JNW				*e*S	**Sb**	**04 34 23.8**	**-0.7**
JNW				IAML		04 34 25.3	
	comp=Z,276nm,0.2s						
JMIC	**Jan Mayen**	**0.58**	**149**	*e*P	**Pb**	**04 34 16.9**	**0.0**
JMIC				*e*S	**Sb**	**04 34 24.0**	**-1.1**
JMIC				IAML		04 34 26.8	
	comp=Z,104nm,0.5s						
JMI	**Jan Mayen**	**0.60**	**158**	*e*P	**Pb**	**04 34 17.2**	**0.0**
JMI				*e*S	**Sg**	**04 34 24.2**	**+0.1**
JNE	**Jan Mayen East**	**0.61**	**143**	*e*P	**Pb**	**04 34 17.7**	**+0.2**
JNE				*e*S	**Sg**	**04 34 24.7**	**+0.2**
JNE				IAML		04 34 26.4	
	comp=Z,303nm,0.1s						
DAG	**Danmarks Havn**	**5.88**	**339**	*i* P	**Pn**	**04 35 33.7**	**+1.9**
DAG				*i* S	**Sn**	**04 36 36.1**	**-3.0**

*ISCJB **12** 04:53:50.9±0.3, 40°.79N±0°.02×30°.39E±0°.02, h8km±3km, Error ellipse: s-maj=3.9km s-min=3.1km az=9.2*
*CSEM **12** 04:53:50.9±0.1, 40°.78N×30°.41E, h8km, ML2.8, Error ellipse: s-maj=2.6km s-min=1.9km az=15.0*
*DDA **12** 04:53:50.8, 40°.76N×30°.43E, h4km, Ml2.8*
*ISK **12** 04:53:50.1, 40°.81N×30°.43E, h10km, ML2.8/19*
ISC 12 04:53:50.9±0.8, 40°.79N±0°.02×30°.42E±0°.02, h10km±5km, n86, σ0°.49/109, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUV	**Serdivan-Sakar**	**0.09**	**235**	PG	**Pg**	**04 53 53.3**	**-0.1**
SAUV				SG	**Sg**	**04 53 55.1**	**-0.1**
SAUV	**Serdivan-Sakar**	**0.09**	**235**	*i* Pg	**Pg**	**04 53 53.3**	**-0.1**
SAUV				*i* Sg	**Sg**	**04 53 55.1**	**-0.1**
SPNC	**Sapanca-Adapaz**	**0.14**	**220**	PG	**Pg**	**04 53 54.3**	**+0.2**
SPNC	**Sapanca-Adapaz**	**0.14**	**220**	*i* Pg	**Pg**	**04 53 54.3**	**+0.2**
GEYV	**SAKARYA_Geyve**	**0.32**	**198**	*i* P	**Pg**	**04 53 57.2**	**-0.2**
GEYV				*i* S	**Sg**	**04 54 01.7**	**0.0**
GEYV	**SAKARYA_Geyve**	**0.32**	**198**	P	**Pg**	**04 53 57.2**	**-0.2**
GEYV				S	**Sg**	**04 54 01.7**	**0.0**
SAHE	**Sakarya_HENDEK**	**0.33**	**79**	*i* P	**Pb**	**04 53 58.1**	**-0.9**
SAHE				*i* S	**Sb**	**04 54 03.1**	**-1.2**
SAHE	**Sakarya_HENDEK**	**0.33**	**79**	P	**Pb**	**04 53 58.1**	**-0.9**
SAHE				S	**Sb**	**04 54 03.2**	**-1.2**
KAND	**Kocaeli-Kandir**	**0.35**	**330**	*i* P	**Pb**	**04 53 58.6**	**-0.6**
KAND				*i* S	**Sg**	**04 54 03.7**	**+1.2**
KAND	**Kocaeli-Kandir**	**0.35**	**330**	P	**Pb**	**04 53 58.7**	**-0.6**
KAND				S	**Sg**	**04 54 03.7**	**+1.2**
GULT	**Gulveren**	**0.37**	**169**	PG	**Pg**	**04 53 58.3**	**+0.1**
GULT	**Gulveren**	**0.37**	**169**	*i* Pg	**Pg**	**04 53 58.3**	**+0.1**
BTAS	**Taskesti**	**0.49**	**117**	*i* P	**Pg**	**04 54 00.8**	**+0.3**
BTAS				*i* S	**Sg**	**04 54 07.1**	**+0.1**
BTAS	**Taskesti**	**0.49**	**117**	P	**Pg**	**04 54 00.8**	**+0.3**
BTAS				S	**Sg**	**04 54 07.1**	**+0.1**
ADVT	**Abdulvahap**	**0.63**	**236**	PG	**Pg**	**04 54 02.6**	**-0.6**
ADVT	**Abdulvahap**	**0.63**	**236**	*i* Pg	**Pg**	**04 54 02.6**	**-0.6**
MDUB	**Mudurnu**	**0.67**	**118**	PG	**Pg**	**04 54 03.3**	**-0.6**
MDUB	**Mudurnu**	**0.67**	**118**	*e*Pg	**Pg**	**04 54 03.3**	**-0.6**
SILT	**Sile**	**0.69**	**302**	PG	**Pg**	**04 54 04.1**	**-0.2**
SILT	**Sile**	**0.69**	**302**	*e*Pg	**Pg**	**04 54 04.1**	**-0.2**
CAVI	**Cavuskoy**	**0.74**	**217**	PG	**Pg**	**04 54 05.1**	**-0.1**
CAVI	**Cavuskoy**	**0.74**	**217**	*e*Pg	**Pg**	**04 54 05.1**	**-0.1**
YLV	**Yalova**	**0.83**	**255**	PG	**Pg**	**04 54 06.6**	**-0.4**
YLV	**Yalova**	**0.83**	**255**	*e*Pg	**Pg**	**04 54 06.6**	**-0.4**
IZI	**Iznik**	**0.86**	**238**	PG	**Pg**	**04 54 07.6**	**+0.1**
IZI	**Iznik**	**0.86**	**238**	*e*Pg	**Pg**	**04 54 07.6**	**+0.1**
BORA	**Eskisehir**	**0.91**	**179**	PG	**Pg**	**04 54 08.4**	**-0.1**
BORA	**Eskisehir**	**0.91**	**179**	*i* P	**Pg**	**04 54 08.2**	**-0.3**
BORA				*i* S	**Sb**	**04 54 21.4**	**+0.3**
BORA	**Eskisehir**	**0.91**	**179**	*e*Pg	**Pg**	**04 54 08.4**	**-0.1**
BORA				S	**Sb**	**04 54 21.4**	**+0.3**
AUBOZ	**BOZOYUK**	**0.93**	**199**	PG	**Pg**	**04 54 08.6**	**-0.3**
AUBOZ	**BOZOYUK**	**0.93**	**199**	*i* P	**Pg**	**04 54 08.0**	**-0.9**
AUBOZ				*i* S	**Sg**	**04 54 20.9**	**-0.1**
AUBOZ	**BOZOYUK**	**0.93**	**199**	P	**Pg**	**04 54 08.0**	**-0.9**
AUBOZ	**BOZOYUK**	**0.93**	**199**	*e*Pg	**Pg**	**04 54 08.6**	**-0.3**
AUBOZ				S	**Sg**	**04 54 20.9**	**-0.1**
ISK	**Istanbul-Kandi**	**1.07**	**285**	PG	**Pg**	**04 54 11.0**	**-0.5**
ISK	**Istanbul-Kandi**	**1.07**	**285**	*e*Pg	**Pg**	**04 54 11.0**	**-0.5**
KLYT	**Kilyos**	**1.14**	**294**	PN	**Pg**	**04 54 12.4**	**-0.5**
KLYT	**Kilyos**	**1.14**	**294**	*e*Pn	**Pg**	**04 54 12.4**	**-0.5**
SBT5	**Esenkoy-Cinarc**	**1.19**	**263**	PN	**Pb**	**04 54 13.5**	**0.0**
SBT5	**Esenkoy-Cinarc**	**1.19**	**263**	*e*Pn	**Pb**	**04 54 13.5**	**0.0**
ARMT	**Armutlu**	**1.21**	**260**	PN	**Pb**	**04 54 13.3**	**-0.6**
ARMT	**Armutlu**	**1.21**	**260**	*e*Pn	**Pb**	**04 54 13.3**	**-0.6**
AUMIH	**MIHALICIK**	**1.23**	**138**	PN	**Pb**	**04 54 13.9**	**-0.4**
AUMIH	**MIHALICIK**	**1.23**	**138**	*i* P	**Pb**	**04 54 14.1**	**-0.3**
AUMIH				*i* S	**Sb**	**04 54 30.4**	**+0.1**
AUMIH	**MIHALICIK**	**1.23**	**138**	P	**Pb**	**04 54 14.1**	**-0.3**
AUMIH				S	**Sb**	**04 54 30.4**	**+0.1**
BCAM	**Yenicaga**	**1.25**	**88**	*i* P	**Pb**	**04 54 14.4**	**-0.2**
BCAM				*i* S	**Sn**	**04 54 32.5**	**+1.1**
BCAM	**Yenicaga**	**1.25**	**88**	P	**Pb**	**04 54 14.4**	**-0.2**
BCAM				S	**Sn**	**04 54 32.5**	**+1.1**
MDNY	**Mudanya-Bursa**	**1.25**	**251**	PN	**Pn**	**04 54 14.0**	**-0.4**
MDNY	**Mudanya-Bursa**	**1.25**	**251**	*e*Pn	**Pn**	**04 54 14.0**	**-0.4**
BGKT	**Bogazkoy**	**1.31**	**288**	PN	**Pn**	**04 54 15.3**	**0.0**
BGKT	**Bogazkoy**	**1.31**	**288**	*e*Pn	**Pn**	**04 54 15.3**	**0.0**
ESKT	**Eskisehir**	**1.31**	**165**	*i* P	**Pn**	**04 54 14.3**	**-1.1**
SEYT	**Eskypehyr**	**1.31**	**165**	P	**Pn**	**04 54 14.3**	**-1.1**
SBT2	**Guzelce-Avcila**	**1.45**	**274**	PN	**Pn**	**04 54 16.9**	**-0.2**
SBT2	**Guzelce-Avcila**	**1.45**	**274**	*e*Pn	**Pn**	**04 54 16.9**	**-0.2**
CTKS	**Kestanelik-??a**	**1.52**	**288**	PN	**Pn**	**04 54 18.0**	**-0.1**
CTKS	**Kestanelik-??a**	**1.52**	**288**	*e*Pn	**Pn**	**04 54 18.0**	**-0.1**
TVSB	**Tavsanli**	**1.53**	**209**	PN	**Pn**	**04 54 18.4**	**0.0**
TVSB	**Tavsanli**	**1.53**	**209**	*e*Pn	**Pn**	**04 54 18.4**	**0.0**
CMDR	**Camlidere-ANKA**	**1.59**	**100**	*i* P	**Pb**	**04 54 20.4**	**0.0**
CMDR				*i* S	**Sg**	**04 54 43.0**	**+1.0**
CMDR	**Camlidere-ANKA**	**1.59**	**100**	P	**Pb**	**04 54 20.5**	**0.0**
CMDR				S	**Sg**	**04 54 43.0**	**+1.0**
AUSIV	**SIVRIHISAR**	**1.60**	**147**	PN	**Pn**	**04 54 19.1**	**-0.3**
AUSIV	**SIVRIHISAR**	**1.60**	**147**	*e*Pn	**Pn**	**04 54 19.1**	**-0.3**
BTIN	**Bart¨–n**	**1.61**	**58**	*i* P	**Pn**	**04 54 19.7**	**+0.2**
BTIN				*i* S	**Sn**	**04 54 40.5**	**+0.1**
BTIN	**Bart¨–n**	**1.61**	**58**	P	**Pn**	**04 54 19.7**	**+0.2**
BTIN				S	**Sn**	**04 54 40.5**	**+0.1**
KCTX	**Karacabey (Bur**	**1.66**	**252**	PN	**Pn**	**04 54 20.4**	**+0.2**
KCTX	**Karacabey (Bur**	**1.66**	**252**	*e*Pn	**Pn**	**04 54 20.4**	**+0.2**
SLVT	**Silivri**	**1.73**	**285**	PN	**Pn**	**04 54 21.1**	**0.0**
SLVT	**Silivri**	**1.73**	**285**	*e*Pn	**Pn**	**04 54 21.1**	**0.0**
CTYL	**Yalikoy Yolu**	**1.75**	**294**	PN	**Pn**	**04 54 21.4**	**+0.1**
CTYL	**Yalikoy Yolu**	**1.75**	**294**	*e*Pn	**Pn**	**04 54 21.4**	**+0.1**
SBT3	**Marmara-Eregli**	**1.86**	**274**	PN	**Pn**	**04 54 22.8**	**+0.1**
SBT3	**Marmara-Eregli**	**1.86**	**274**	*e*Pn	**Pn**	**04 54 22.8**	**+0.1**
DURS	**Dursunbey**	**1.91**	**232**	*i* P	**Pb**	**04 54 25.7**	**-0.2**
DURS	**Dursunbey**	**1.91**	**232**	P	**Pb**	**04 54 25.7**	**-0.2**
EDC	**Edincik**	**2.00**	**258**	PN	**Pn**	**04 54 25.1**	**+0.3**
EDC	**Edincik**	**2.00**	**258**	*e*Pn	**Pn**	**04 54 25.1**	**+0.3**
SIMA	**Simav-Kutahya**	**2.04**	**213**	PN	**Pn**	**04 54 25.8**	**+0.4**
SIMA	**Simav-Kutahya**	**2.04**	**213**	*e*Pn	**Pn**	**04 54 25.8**	**+0.4**
BOLV	**Bolvadin**	**2.11**	**169**	*i* P	**Pb**	**04 54 28.9**	**-0.5**
BOLV				*i* S	**Sg**	**04 54 59.4**	**+0.6**
BOLV	**Bolvadin**	**2.11**	**169**	P	**Pb**	**04 54 28.9**	**-0.5**
KIZT	**Kizilcal**	**2.21**	**149**	PN	**Pn**	**04 54 28.0**	**+0.1**
KIZT	**Kizilcal**	**2.21**	**149**	*e*Pn	**Pn**	**04 54 28.0**	**+0.1**
BALB	**Balikesir**	**2.26**	**240**	PN	**Pn**	**04 54 28.9**	**+0.5**
BALB	**Balikesir**	**2.26**	**240**	*e*Pn	**Pn**	**04 54 28.9**	**+0.5**
KULA	**Kula-Manisa**	**2.65**	**211**	PN	**Pn**	**04 54 34.7**	**+0.9**
KULA	**Kula-Manisa**	**2.65**	**211**	*e*Pn	**Pn**	**04 54 34.7**	**+0.9**

*MDD **12** 04:53:54.9±2.1, 37°.29N×12°.76W, h0km, mb3.7/2, Error ellipse: s-maj=19.7km s-min=17.1km az=136.0, PRXIMO*
*INMG **12** 04:53:55.9±1.1, 37°.16N×13°.19W, h10km, ML2.2, Error ellipse: s-maj=9.3km s-min=7.3km az=116.0*
*IGIL **12** 04:53:56.0, 37°.28N×12°.70W, h1km*
*CSEM **12** 04:53:57.6±0.4, 37°.33N×12°.51W, h10km, mb3.7, Error ellipse: s-maj=8.2km s-min=6.4km az=139.0*
ISC 12 04:54:00.9±3.4, 37°.43N±0°.08×12°.3W±0°.1, h10km, n66, σ1°.71/116, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMAFR	**Mafra**	**2.79**	**56**	*e*Pn	**Pn**	**04 54 45.8**	**+0.2**
PMAFR				*e*Sn	**Sb**	**04 55 23.1**	**-2.0**
PMAFR				A	A	04 55 37.9	
	16nm,0.7s						
PMAFR	**Mafra**	**2.79**	**56**	P	**Pn**	**04 54 45.8**	**+0.2**
	1.9nm,0.1s,SNR=7.9						
PMAFR				S	**Sn**	**04 55 22.3**	**+2.9**
	13nm,0.3s,SNR=5.9						
PMAFR	**Mafra**	**2.79**	**56**	P	**Pn**	**04 54 45.8**	**+0.2**
	1.9nm,0.1s,SNR=7.9						
PMAFR				S	**Sn**	**04 55 22.3**	**+2.9**
	13nm,0.3s,SNR=5.9						
PMAFR				*e*Sn	**Sb**	**04 55 23.1**	**-2.0**
PTEO	**Sao Teotonio**	**2.81**	**87**	*e*Pn	**Pn**	**04 54 44.8**	**-1.1**
PTEO				*e*Sn	**Sb**	**04 55 23.2**	**-2.4**
PTEO				A	A	04 55 27.6	
	6.8nm,0.8s						
PTEO	**Sao Teotonio**	**2.81**	**87**	P	**Pn**	**04 54 44.8**	**-1.1**
PTEO				S	**Sb**	**04 55 23.2**	**-2.4**
	3.4nm,0.8s						
PTEO	**Sao Teotonio**	**2.81**	**87**	P	**Pn**	**04 54 44.8**	**-1.1**
PTEO				S	**Sb**	**04 55 23.2**	**-2.4**
	3.4nm,0.8s						
MORF	**Marmelete**	**2.88**	**91**	*e*Pn	**Pn**	**04 54 47.4**	**+0.6**
MORF	**Marmelete**	**2.88**	**91**	P	**Pn**	**04 54 47.4**	**+0.6**
MORF	**Marmelete**	**2.88**	**91**	P	**Pn**	**04 54 47.4**	**+0.6**
PNCL	**Nicolau / Gran**	**3.03**	**76**	*e*Pn	**Pn**	**04 54 49.1**	**+0.2**
PNCL				*e*Sn	**Sn**	**04 55 27.1**	**+1.9**
PNCL				A	A	04 55 33.7	
	2.5nm,0.5s						
PNCL	**Nicolau / Gran**	**3.03**	**76**	*e*Pn	**Pn**	**04 54 49.1**	**+0.2**
PNCL				*e*Sn	**Sn**	**04 55 27.1**	**+1.9**
MESJ	**Messejana**	**3.23**	**82**	*e*P	**Pn**	**04 54 51.1**	**-0.5**
MESJ	**Messejana**	**3.23**	**82**	*e*Pn	**Pn**	**04 54 51.7**	**+0.1**
MESJ				*e*Sn	**Sn**	**04 55 34.0**	**+3.9**
MESJ				A	A	04 55 41.5	
	2.5nm,0.7s						
MESJ	**Messejana**	**3.23**	**82**	P	**Pn**	**04 54 51.1**	**-0.5**
MESJ				S	**Sn**	**04 55 34.0**	**+3.9**
	2.5nm,0.7s						
MESJ	**Messejana**	**3.23**	**82**	P	**Pn**	**04 54 51.1**	**-0.5**
MESJ	**Messejana**	**3.23**	**82**	*e*Pn	**Pn**	**04 54 51.7**	**+0.1**
MESJ				S	**Sn**	**04 55 34.0**	**+3.9**
	2.5nm,0.7s						
PCVE	**Castro Verde**	**3.36**	**85**	*e*Pn	**Pn**	**04 54 53.1**	**-0.3**
PCVE				*e*Sn	**Sn**	**04 55 36.1**	**+2.8**
PCVE				A	A	04 55 56.8	
	2.1nm,0.8s						
PCVE	**Castro Verde**	**3.36**	**85**	P	**Pn**	**04 54 53.1**	**-0.3**
PCVE				S	**Sn**	**04 55 36.1**	**+2.8**
	2.1nm,0.8s						
PCVE	**Castro Verde**	**3.36**	**85**	P	**Pn**	**04 54 53.1**	**-0.3**
PCVE				S	**Sn**	**04 55 36.1**	**+2.8**
	2.1nm,0.8s						
ALMR	**Almeirim**	**3.37**	**58**	*e*P	**Pn**	**04 54 53.3**	**-0.2**
ALMR	**Almeirim**	**3.37**	**58**	*e*Pn	**Pn**	**04 54 53.5**	**0.0**
ALMR				*e*Sn	**Sn**	**04 55 36.2**	**+2.7**
ALMR				A	A	04 55 42.1	
	7.6nm,0.5s						
ALMR	**Almeirim**	**3.37**	**58**	P	**Pn**	**04 54 53.3**	**-0.2**
ALMR				S	**Sn**	**04 55 36.2**	**+2.7**
	3.8nm,0.5s						
ALMR	**Almeirim**	**3.37**	**58**	P	**Pn**	**04 54 53.3**	**-0.2**
ALMR				S	**Sn**	**04 55 36.2**	**+2.7**
	3.8nm,0.5s						
PBDV	**Barranco-do-Ve**	**3.45**	**92**	*e*Pn	**Pn**	**04 54 54.3**	**-0.4**
PBDV				*e*Sn	**Sn**	**04 55 38.7**	**+3.0**
PBDV				A	A	04 55 49.3	
	3.2nm,0.8s						
PBDV	**Barranco-do-Ve**	**3.45**	**92**	P	**Pn**	**04 54 54.3**	**-0.4**
PBDV				S	**Sn**	**04 55 38.7**	**+3.0**
	3.2nm,0.8s						
PBDV	**Barranco-do-Ve**	**3.45**	**92**	P	**Pn**	**04 54 54.3**	**-0.4**
PBDV				S	**Sn**	**04 55 38.7**	**+3.0**
	3.2nm,0.8s						
EVO	**Evora**	**3.53**	**71**	*e*Pn	**Pn**	**04 54 55.6**	**-0.1**
EVO				*e*Sn	**Sn**	**04 55 38.8**	**+1.3**
EVO	**Evora**	**3.53**	**71**	P	**Pn**	**04 54 55.6**	**-0.1**
EVO				S	**Sn**	**04 55 38.8**	**+1.3**
EVO	**Evora**	**3.53**	**71**	P	**Pn**	**04 54 55.6**	**-0.1**
EVO				S	**Sn**	**04 55 38.8**	**+1.3**
PMTG	**Montargil**	**3.57**	**62**	*e*Pn	**Pn**	**04 54 56.1**	**-0.2**
PMTG				*e*Sn	**Sn**	**04 55 40.6**	**+2.1**
PMTG				A	A	04 55 55.8	
	2.1nm,0.8s						
PMTG	**Montargil**	**3.57**	**62**	*e*Pn	**Pn**	**04 54 56.1**	**-0.2**
PMTG				*e*Sn	**Sn**	**04 55 40.6**	**+2.1**
PVAQ	**Vaqueiros**	**3.61**	**89**	*e*Pn	**Pn**	**04 54 56.3**	**-0.6**
PVAQ				*e*Sn	**Sn**	**04 55 41.1**	**+1.5**
PVAQ				A	A	04 55 48.2	
	2.6nm,0.8s						
PVAQ	**Vaqueiros**	**3.61**	**89**	P	**Pn**	**04 54 56.3**	**-0.6**
PVAQ				S	**Sn**	**04 55 41.1**	**+1.5**
	2.6nm,0.8s						
PVAQ	**Vaqueiros**	**3.61**	**89**	P	**Pn**	**04 54 56.3**	**-0.6**
PVAQ				S	**Sn**	**04 55 41.1**	**+1.5**
	2.6nm,0.8s						
PTOM	**Tomar**	**3.72**	**53**	*e*Pn	**Pn**	**04 54 58.6**	**+0.2**
PTOM				*e*Sn	**Sn**	**04 55 46.0**	**+3.7**
PTOM				A	A	04 55 47.7	
	4.9nm,0.9s						
PTOM	**Tomar**	**3.72**	**53**	P	**Pn**	**04 54 58.6**	**+0.2**
PTOM				S	**Sn**	**04 55 46.0**	**+3.7**
	2.5nm,0.9s						
PTOM	**Tomar**	**3.72**	**53**	P	**Pn**	**04 54 58.6**	**+0.2**
PTOM				S	**Sn**	**04 55 46.0**	**+3.7**
	2.5nm,0.9s						
EGRO	**El Granado**	**3.80**	**87**	P	**Pn**	**04 54 58.8**	**-0.6**
	1.1nm,0.2s,SNR=7.9						
EGRO				S	**Sn**	**04 55 46.5**	**+2.4**
	7.3nm,0.5s,SNR=7.9						
EGRO	**El Granado**	**3.80**	**87**	P	**Pn**	**04 54 58.8**	**-0.6**
	1.1nm,0.2s,SNR=7.9						
EGRO				S	**Sn**	**04 55 46.5**	**+2.4**
	7.3nm,0.5s,SNR=7.9						
PCAS	**Casmilo, Conde**	**3.94**	**47**	*e*Sn	**Sn**	**04 55 50.6**	**+3.1**
PCAS	**Casmilo, Conde**	**3.94**	**47**	*e*Sn	**Sn**	**04 55 50.6**	**+3.1**
PESTR	**Estremoz**	**3.95**	**67**	*e*Pn	**Pn**	**04 55 02.1**	**+0.6**
PESTR				*e*Sn	**Sn**	**04 55 50.1**	**+2.2**
PESTR				A	A	04 55 56.4	
	2.0nm,0.7s						
PESTR	**Estremoz**	**3.95**	**67**	*e*Pn	**Pn**	**04 55 02.1**	**+0.6**
PESTR				*e*Sn	**Sn**	**04 55 50.1**	**+2.2**
PBAR	**Barrancos**	**4.20**	**78**	*e*Pn	**Pn**	**04 55 04.7**	**-0.2**
PBAR				*e*Sn	**Sn**	**04 55 56.5**	**+2.5**
PBAR				A	A	04

TNG	Tangerang	2.75	88	P	Pn	04 57 29.1 +0.2
SKJI	Sukabumi	2.76	106	P	Pn	04 57 29.5 +0.5
DBJI	Dramaga	2.87	96	P	Pn	04 57 30.2 -0.3
MASI	Maura Aman, Be	3.51	332	P	Pn	04 57 41.7 +2.4
LEM	Lembang	3.75	99	Pn	Pn	04 57 43.1 +0.3
	7.2nm,0.3s,baz=99,slow=13,SNR=2.5					
LEM				Sn	Sn	04 58 27.6 +1.8
	14nm,0.3s,baz=264,slow=18,SNR=3.7					
LEM				LR	LR	04 59 33.2
	comp=Z,245nm,18.9s,baz=269,slow=45					
UGM	Wanagama	6.79	104	*e*Pn	Pn	04 58 25.0 +0.6
UGM				*e*Sn	Sn	04 59 36.9 -3.6
GSI	Gunungsitoli	9.81	320	*e*Pn	Pn	04 59 04.2 -1.5
GSI				*e*Sn	Sn	05 00 47.0 -7.5
JAGI	Jajag, Banyuwa	10.42	103	*e*Pn	Pn	04 59 13.3 -0.8
JAGI				*e*Sn	Sn	05 01 07.2 -2.4
BKSI	Bulukumba	16.18	88	P	P	05 00 33.9 -0.1
	14nm,1.0s					
MYLDM	Lahad Datu	18.50	52	*e*P	P	05 00 59.5 -0.1
	16nm,0.9s					
APSI	Ampana	18.51	74	P	Pn	05 01 04.3 +4.0
MRSI	Marisa	19.23	70	P	P	05 01 08.2 +0.6
	27nm,0.6s					
BATI	Baumata	19.96	103	P	P	05 01 16.5 +0.9
	38nm,0.3s,baz=280,slow=6.1,SNR=12					
BATI	Baumata	19.96	103	P	Pn	05 01 17.0 -0.7
	38nm,1.0s					
SOEI	Soe	20.48	101	P	P	05 01 20.9 -0.5
	110nm,0.8s					
SOEI	Soe	20.48	101	*e*P	P	05 01 18.9 -2.5
	87nm,0.9s					
SOEI				*e*S	S	05 05 07.7 -0.5
CM01	Chiang Mai Arr	25.01	349	*e*P	P	05 02 04.8 -2.0
CM31	Chiang Mai Arr	25.05	349	*e*P	P	05 02 05.5 -1.7
CMAR	Chiang Mai Arr	25.05	349	P	P	05 02 07.3 +0.2
	2.8nm,0.6s,baz=185,slow=9.2,SNR=9.6					
CMAR				LR	LR	05 11 28.0
	comp=Z,52nm,19.9s,baz=174,slow=35					
H01W3	Cape Leeuwin H	30.01	163	T	T	05 34 20.9
	baz=343					
H01W1	Cape Leeuwin H	30.02	163	T	T	05 34 34.8
	baz=343					
H01W2	Cape Leeuwin H	30.02	163	T	T	05 34 30.2
	baz=343					
H08S2	Diego Garcia H	31.18	266	T	T	05 36 39.4
	baz=88,slow=75,SNR=5.8					
H08S3	Diego Garcia H	31.19	266	T	T	05 37 01.3
	baz=88,slow=75,SNR=21					
H08S1	Diego Garcia H	31.20	266	T	T	05 36 43.1
	baz=88,slow=75,SNR=5.1					
WRA	Warramunga Arr	32.55	118	P	P	05 03 13.8 -0.3
	1.5nm,0.5s,baz=297,slow=11,SNR=28					
WRA				PcP	PcP	05 06 00.9 +0.9
	0.5nm,0.4s,baz=306,slow=1.9,SNR=5.3					
WR1	Warramunga Arr	32.55	118	*e*P	P	05 03 13.8 -0.3
	6.3nm,1.0s					
WR1				*e*PcP	PcP	05 06 00.9 +0.9
WRAB	Tennant Creek	32.56	118	*e*P	P	05 03 13.4 -0.8
	5.0nm,1.0s					
WB2	Warramunga Arr	32.56	118	*e*P	P	05 03 13.9 -0.3
	4.6nm,0.7s					
WC3	Warramunga Arr	32.58	118	*e*P	P	05 03 14.1 -0.3
	0.7nm,0.4s					
ASAR	Alice Springs	33.65	124	P	P	05 03 24.1 +0.4
	1.5nm,0.6s,baz=300,slow=8.0,SNR=14					
ASAR				PcP	PcP	05 06 03.1 +0.1
	0.3nm,0.6s,baz=316,slow=2.6,SNR=3.0					
AS31	Alice Springs	33.65	124	*e*P	P	05 03 23.2 -0.5
	2.2nm,1.3s					
AS31				*e*PcP	PcP	05 06 03.1 +0.1
AS01	Alice Springs	33.69	124	*e*P	P	05 03 23.5 -0.5
ODAN	Odare	36.60	335	*e*P	P	05 03 50.0 +0.8
	15nm,0.6s					
RAMN	Ramite	37.02	334	*e*P	P	05 03 54.0 +1.2
	16nm,0.6s					
JIRN	Jiri	37.81	334	*e*P	P	05 04 00.4 +0.7
	43nm,0.6s					
GUN	Gumba	38.17	334	*e*P	P	05 04 03.2 +0.6
	34nm,0.5s					
KKN	Kakani	38.33	333	*e*P	P	05 04 04.7 +0.8
	13nm,0.4s					
GKN	Gorkha	38.81	332	*e*P	P	05 04 08.6 +0.8
	13nm,0.3s					
KOLN	Koldanda	39.10	331	*e*P	P	05 04 11.2 +0.9
	22nm,0.6s					
DANN	Dangsing	39.51	332	*e*P	P	05 04 14.5 +0.7
	34nm,0.6s					
PYUN	Piuthan	39.67	330	*e*P	P	05 04 16.0 +0.9
	19nm,0.4s					
XAN	Xi'an	40.37	6	P	P	05 04 19.2 -1.3
XAN				pP	pP	05 04 24.8 -8.6
XAN				pmax	pmax	
	comp=Z,4.0nm,0.8s					
STKA	Stephens Creek	43.44	131	P	P	05 04 45.6 -0.1
	comp=Z,2.9nm,0.7s,baz=303,slow=9.7,SNR=6.0					
STKA				LR	LR	05 23 04.5
	comp=Z,61nm,19.1s,baz=207,slow=36					
STKA	Stephens Creek	43.44	131	*e*P	P	05 04 45.6 -0.1
	comp=Z,1.7nm,0.9s					
KS15	Wonju Array Si	48.91	25	*e*P	P	05 05 29.0 +0.5
KSAR	Wonju Array Be	48.91	25	P	P	05 05 29.0 +0.5
KSRS	Korea Array	48.94	25	P	P	05 05 29.0 +0.3
	comp=Z,4.6nm,0.6s,baz=222,slow=7.9,SNR=20					
NIL	Nilore	49.18	326	*e*P	P	05 05 30.6 -0.1
	comp=Z,9.3nm,0.6s					
TARG	Taragay, Kyrgy	53.38	336	*e*P	P	05 06 02.1 -0.5
	comp=Z,3.4nm,0.7s					
SONA0	Songino Array	53.91	2	*e*P	P	05 06 06.9 +0.9
SONM	Songino Array	53.91	2	P	P	05 06 06.9 +0.9
	comp=Z,5.8nm,0.7s,baz=179,slow=9.1,SNR=30					
SONA1	Songino Array	53.93	2	*e*P	P	05 06 05.0 -1.1
MK01	Makanchi Array	56.17	342	*e*P	P	05 06 21.9 -0.2
MK31	Makanchi Array	56.20	342	*e*P	P	05 06 22.1 -0.2
MK32	Makanchi Array	56.20	342	*e*P	P	05 06 22.5 +0.1
MKAR	Makanchi Array	56.20	342	P	P	05 06 22.5 +0.1
	comp=Z,4.2nm,0.5s,baz=145,slow=8.2,SNR=34					
MKAR	Makanchi Array	56.20	342	*e*P	P	05 06 22.3 -0.1
	comp=Z,32nm,0.5s					
USRK	Ussuriysk Ar.	56.27	24	P	P	05 06 22.1 -0.7
	comp=Z,1.6nm,0.4s,baz=205,slow=5.3,SNR=5.0					
KURBB	Kurchatov Arra	60.75	342	P	P	05 06 54.5 +0.6
	comp=Z,2.3nm,0.6s,baz=159,slow=6.4,SNR=16					
KURK	Kurchatov	60.80	342	*e*P	P	05 06 54.5 +0.2
	comp=Z,3.3nm,0.6s					
ZAA0	Zalesovo Array	62.10	347	*e*P	P	05 07 02.5 -0.5
	comp=Z,5.5nm,0.6s					
ZALV	Zalesovo Beam	62.10	347	P	P	05 07 02.6 -0.3
	comp=Z,6.8nm,0.4s,baz=157,slow=5.6,SNR=31					
ZALV	Zalesovo Beam	62.10	347	*e*P	P	05 07 02.5 -0.4
ZAA1	Zalesovo Array	62.10	347	*e*P	P	05 07 02.6 -0.3
BVAR	Borovoye Array	65.52	339	P	P	05 07 25.6 +0.1
	comp=Z,2.0nm,0.4s,baz=143,slow=9.4,SNR=13					
BRVK	Borovoye	65.59	338	*e*P	P	05 07 25.9 -0.1
	comp=Z,2.6nm,0.4s					
MAW	Mawson	67.19	196	LR	LR	05 29 25.3
	comp=Z,43nm,21.1s,baz=220,slow=29					
ABKAR	Akbulak array	67.23	330	*e*P	P	05 07 36.9 +0.4
AKTO	Aktyubinsk	68.94	331	P	P	05 07 47.3 0.0
	comp=Z,1.6nm,0.6s,baz=110,slow=7.8,SNR=4.9					
PETK	Petropavlovsk-	74.50	30	P	P	05 08 20.6 0.0
	comp=Z,2.6nm,0.8s,baz=190,slow=4.5,SNR=3.8					
PEA1	Petropavlovsk-	74.50	30	*e*P	P	05 08 20.6 -0.1
BR101	Keskin Array S	79.04	312	*e*P	P	05 08 47.4 +0.7
BRTR	Keskin Array B	79.04	312	P	P	05 08 47.4 +0.7
	comp=Z,1.0nm,0.6s,baz=139,slow=6.2,SNR=7.6					
AKASG	Malin Array Be	85.21	322	P	P	05 09 19.2 +0.7
	comp=Z,0.6nm,0.4s,baz=86,slow=5.4,SNR=5.6					
AKBB	Malin Array Si	85.21	322	*e*P	P	05 09 19.2 +0.7
	comp=Z,1.6nm,0.6s					
BUR04	Bucovina Ar. S	87.00	318	*e*P	P	05 09 30.0 +2.3
BUR08	Bucovina Ar. S	87.02	318	*e*P	P	05 09 29.4 +1.6
FIA0	FINESS Array S	89.67	332	*e*P	P	05 09 40.5 +0.7
FINES	FINESS Array B	89.67	332	P	P	05 09 40.5 +0.7
	comp=Z,1.3nm,0.9s,baz=91,slow=6.3,SNR=4.7					
TXAR	Lajitas Array	145.33	45	PKPbc	PKPab	05 16 21.7 +1.0
	comp=Z,6.0nm,0.7s,baz=286,slow=1.2,SNR=99					
JCT	Junction City	147.21	40	*e*PKPbc	PKPbc	05 16 26.2 +0.2

ISCJB ***12*** *05:06:18.9±0.5, 45°.88N±0°.02×15°.62E±0°.03, h10km±4km, Error ellipse: s-maj=4.0km s-min=3.0km az=4.8*
CSEM ***12*** *05:06:19.4±0.1, 45°.88N×15°.62E, h5km, ML2.5/19, Error ellipse: s-maj=2.5km s-min=1.7km az=99.0*
LJU ***12*** *05:06:19.6, 45°.86N×15°.61E, h3km, ML1.6*
VIE ***12*** *05:06:20.2±0.5, 45°.91N×15°.54E, h3km, mb1.6/3, ml1.8/4,*

Error ellipse: s-maj=3.3km s-min=1.7km az=100.0 8 km SE of Krsko

ISC 12 05:06:19.5±0.9, 45°.88N±0°.02×15°.63E±0°.03, h4km±4km, n59, σ0§53/94, 5C-2D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCIS	**Gornji Cirnik**	**0.01**	**174**	⇑*i*Pg	**Pg**	**05 06 20.3**	**0.0**
GCIS				*i* Sg	**Sg**	**05 06 20.7**	**-0.1**
	comp=Z,581nm,0.1s						
GCIS	**Gornji Cirnik**	**0.01**	**174**	Pg	**Pg**	**05 06 20.3**	**0.0**
GCIS				*i* Sg	**Sg**	**05 06 20.7**	**-0.1**
	comp=Z,581nm,0.1s						
CRES	**Cresnjev**	**0.13**	**247**	*i* Pg	**Pg**	**05 06 21.8**	**-0.3**
CRES				*i* Sg	**Sg**	**05 06 23.7**	**-0.1**
	comp=Z,142nm,0.1s						
CRES	**Cresnjev**	**0.13**	**247**	*i* Pg	**Pg**	**05 06 21.8**	**-0.3**
CRES				*i* Sg	**Sg**	**05 06 23.7**	**-0.1**
	comp=Z,142nm,0.1s						
GOLS	**Golise**	**0.14**	**360**	⇓*i*Pg	**Pg**	**05 06 22.2**	**0.0**
GOLS				*i* Sg	**Sg**	**05 06 24.7**	**+0.7**
	comp=Z,164nm,0.2s						
GOLS	**Golise**	**0.14**	**360**	⇓*i*Pg	**Pg**	**05 06 22.2**	**0.0**
GOLS				*i* Sg	**Sg**	**05 06 24.7**	**+0.7**
	comp=Z,164nm,0.2s						
CESS	**Cesta pri Krsk**	**0.15**	**311**	*i* Pg	**Pg**	**05 06 22.5**	**0.0**
CESS				*i* Sg	**Sg**	**05 06 25.2**	**+0.7**
	comp=Z,150nm,0.1s						
CESS	**Cesta pri Krsk**	**0.15**	**311**	*i* Pg	**Pg**	**05 06 22.5**	**0.0**
CESS				*i* Sg	**Sg**	**05 06 25.2**	**+0.7**
	comp=Z,150nm,0.1s						
LEGS	**Legarje**	**0.23**	**289**	*i* Pg	**Pg**	**05 06 23.9**	**0.0**
LEGS				*i* Sg	**Sg**	**05 06 27.9**	**+1.0**
LEGS	**Legarje**	**0.23**	**289**	*i* Pg	**Pg**	**05 06 23.9**	**0.0**
LEGS				*i* Sg	**Sg**	**05 06 27.9**	**+1.0**
OZLJ	**Ozalj**	**0.28**	**203**	*i* Pg	**Pg**	**05 06 25.2**	**+0.2**
OZLJ				Sg	**Sg**	**05 06 29.6**	**+0.9**
DOBS	**Dobrina**	**0.29**	**338**	*i* Pg	**Pg**	**05 06 25.4**	**+0.2**
	comp=Z,65nm,0.1s						
DOBS	**Dobrina**	**0.29**	**338**	*i* Pg	**Pg**	**05 06 25.4**	**+0.2**
	comp=Z,65nm,0.1s						
BOJS	**Bojanci**	**0.46**	**215**	*i* Pg	**Pg**	**05 06 27.9**	**-0.4**
BOJS				*i* Sg	**Sg**	**05 06 34.6**	**+0.5**
	comp=Z,26nm,0.1s						
BOJS	**Bojanci**	**0.46**	**215**	*i* Pg	**Pg**	**05 06 27.9**	**-0.4**
BOJS				*i* Sg	**Sg**	**05 06 34.6**	**+0.5**
	comp=Z,26nm,0.1s						
PDKS	**Podkum**	**0.48**	**293**	⇑*i*Pg	**Pg**	**05 06 28.9**	**+0.2**
PDKS				*i* Sg	**Sg**	**05 06 36.1**	**+1.2**
	comp=Z,21nm,0.1s						
PDKS	**Podkum**	**0.48**	**293**	⇑*i*Pg	**Pg**	**05 06 28.9**	**+0.2**
PDKS				*i* Sg	**Sg**	**05 06 36.1**	**+1.2**
	comp=Z,21nm,0.1s						
VISS	**Visnje**	**0.56**	**263**	*i* Pg	**Pg**	**05 06 30.0**	**-0.2**
VISS				*i* Sg	**Sg**	**05 06 37.5**	**+0.2**
	comp=Z,21nm,0.2s						
VISS	**Visnje**	**0.56**	**263**	*i* Pg	**Pg**	**05 06 30.0**	**-0.2**
VISS				*i* Sg	**Sg**	**05 06 37.5**	**+0.2**
	comp=Z,21nm,0.2s						
GROS	**Grobnik**	**0.59**	**352**	*i* Pg	**Pg**	**05 06 31.2**	**+0.3**
GROS				*i* Sg	**Sg**	**05 06 39.0**	**+0.4**
	comp=Z,18nm,0.1s						
GROS	**Grobnik**	**0.59**	**352**	*i* Pg	**Pg**	**05 06 31.2**	**+0.3**
GROS				*i* Sg	**Sg**	**05 06 39.0**	**+0.4**
	comp=Z,18nm,0.1s						
GBRS	**Gornja Briga**	**0.67**	**239**	*i* Pg	**Pg**	**05 06 32.3**	**0.0**
	comp=Z,21nm,0.2s						
GBRS	**Gornja Briga**	**0.67**	**239**	*i* Pg	**Pg**	**05 06 32.3**	**0.0**
	comp=Z,21nm,0.2s						
VNDS	**Vrh nad Dolski**	**0.68**	**290**	⇑*i*Pg	**Pg**	**05 06 32.5**	**-0.1**
VNDS				*i* Sg	**Sg**	**05 06 42.0**	**+0.6**
	comp=Z,6.0nm,0.1s						
VNDS	**Vrh nad Dolski**	**0.68**	**290**	⇑*i*Pg	**Pg**	**05 06 32.5**	**-0.1**
VNDS				*i* Sg	**Sg**	**05 06 42.0**	**+0.6**
	comp=Z,6.0nm,0.1s						
KOGS	**Kog**	**0.72**	**37**	*i* Sg	**Sb**	**05 06 44.3**	**-0.5**
	comp=Z,17nm,0.2s						
KOGS	**Kog**	**0.72**	**37**	*i* Sg	**Sb**	**05 06 44.3**	**-0.5**
	comp=Z,17nm,0.2s						
LJU	**Ljubljana**	**0.79**	**283**	*i* Pg	**Pg**	**05 06 34.7**	**+0.2**
LJU	**Ljubljana**	**0.79**	**283**	*i* Pg	**Pg**	**05 06 34.7**	**+0.2**
GBAS	**Gorenja Brezov**	**0.83**	**274**	*i* Pg	**Pg**	**05 06 35.0**	**-0.4**
GBAS				*e*Sg	**Sg**	**05 06 45.5**	**-0.6**
	comp=Z,4.0nm,0.1s						
GBAS	**Gorenja Brezov**	**0.83**	**274**	*i* Pg	**Pg**	**05 06 35.0**	**-0.4**
GBAS				*e*Sg	**Sg**	**05 06 45.5**	**-0.6**
	comp=Z,4.0nm,0.1s						
PERS	**Pernice**	**0.84**	**335**	*i* Pg	**Pg**	**05 06 35.6**	**+0.1**
	comp=Z,11nm,0.2s						
PERS	**Pernice**	**0.84**	**335**	*i* Pg	**Pg**	**05 06 35.7**	**+0.1**
	comp=Z,11nm,0.2s						
SOKA	**Soboth**	**0.90**	**333**	*i* Pg	**Pg**	**05 06 36.7**	**-0.1**
	comp=Z,2.0nm,0.2s						
SOKA				*e*Sg	**Sg**	**05 06 48.0**	**-0.5**
	comp=Z,0.9nm,0.1s						
MOZS	**Mozjanca**	**0.92**	**297**	*i* Pg	**Pg**	**05 06 37.0**	**-0.2**
MOZS				*i* Sg	**Sb**	**05 06 50.5**	**-0.2**
	comp=Z,6.0nm,0.2s						
MOZS	**Mozjanca**	**0.92**	**297**	*i* Pg	**Pg**	**05 06 37.0**	**-0.2**
MOZS				*i* Sg	**Sb**	**05 06 50.5**	**-0.2**
	comp=Z,6.0nm,0.2s						
KNDS	**Knezji Dol**	**0.94**	**249**	*i* Pg	**Pg**	**05 06 37.1**	**-0.4**
KNDS				*i* Sg	**Sg**	**05 06 49.7**	**0.0**
	comp=Z,11nm,0.2s						
KNDS	**Knezji Dol**	**0.94**	**249**	*i* Pg	**Pg**	**05 06 37.1**	**-0.4**
KNDS				*i* Sg	**Sg**	**05 06 49.7**	**0.0**
	comp=Z,11nm,0.2s						
CRNS	**Crni Vrh**	**0.97**	**283**	*i* Pg	**Pg**	**05 06 38.0**	**-0.2**
CRNS				*i* Sg	**Sb**	**05 06 51.6**	**-0.5**
	comp=Z,11nm,0.2s						
CRNS	**Crni Vrh**	**0.97**	**283**	*i* Pg	**Pg**	**05 06 38.0**	**-0.2**
CRNS				*i* Sg	**Sb**	**05 06 51.7**	**-0.5**
	comp=Z,11nm,0.2s						
OBKA	**Obir**	**0.98**	**311**	*e*Pg	**Pg**	**05 06 38.5**	**+0.2**
	comp=Z,5.1nm,0.1s,SNR=9.1						
OBKA				*e*Sg	**Sg**	**05 06 51.5**	**+0.5**
	comp=Z,8.4nm,0.2s						
JAVS	**Javornik**	**1.09**	**271**	*i* Pg	**Pg**	**05 06 40.0**	**-0.4**
	comp=Z,5.0nm,0.1s						
JAVS	**Javornik**	**1.09**	**271**	*i* Pg	**Pg**	**05 06 40.0**	**-0.4**
	comp=Z,5.0nm,0.1s						
SKDS	**Skadanscina**	**1.18**	**254**	*i* Pg	**Pg**	**05 06 41.3**	**-0.8**
SKDS	**Skadanscina**	**1.18**	**254**	*i* Pg	**Pg**	**05 06 41.3**	**-0.8**
GORS	**Gorjuse**	**1.22**	**292**	*i* Pg	**Pg**	**05 06 42.3**	**-0.6**
	comp=Z,6.0nm,0.2s						
GORS	**Gorjuse**	**1.22**	**292**	*i* Pg	**Pg**	**05 06 42.3**	**-0.6**
	comp=Z,6.0nm,0.2s						
VOJS	**Vojsko**	**1.23**	**278**	*i* Pg	**Pg**	**05 06 42.2**	**-0.8**
	comp=Z,4.0nm,0.2s						
VOJS	**Vojsko**	**1.23**	**278**	*i* Pg	**Pg**	**05 06 42.2**	**-0.8**
	comp=Z,4.0nm,0.2s						
UDBI	**Udbina**	**1.35**	**176**	*e*Pg	**Pn**	**05 06 45.2**	**0.0**
UDBI				Sg	**Sn**	**05 07 04.0**	**+0.4**
UDBI	**Udbina**	**1.35**	**176**	*e*Pg	**Pn**	**05 06 45.2**	**0.0**
UDBI				Sg	**Sn**	**05 07 04.0**	**+0.4**
CADS	**Cadrg**	**1.36**	**286**	*i* Sg	**Sn**	**05 07 04.6**	**+0.7**
	comp=Z,12nm,0.2s						
CADS	**Cadrg**	**1.36**	**286**	*i* Sg	**Sn**	**05 07 04.6**	**+0.7**
	comp=Z,12nm,0.2s						
ARSA	**Arzberg**	**1.38**	**357**	*e*Pg	**Pn**	**05 06 45.5**	**0.0**
	comp=Z,1.9nm,0.3s						
ARSA				*e*Sg	**Sg**	**05 07 01.9**	**-1.8**
	comp=Z,2.9nm,0.2s						
ARSA	**Arzberg**	**1.38**	**357**	Pg	**Pn**	**05 06 45.5**	**0.0**
	comp=Z,1.9nm,0.3s						
ARSA				Sg	**Sg**	**05 07 01.9**	**-1.8**
	comp=Z,2.9nm,0.2s						
NVLJ	**Novalja**	**1.42**	**202**	*e*Pn	**Pg**	**05 06 46.8**	**+0.2**
NVLJ	**Novalja**	**1.42**	**202**	*e*Pn	**Pg**	**05 06 46.8**	**+0.2**
KBA	**Koelnbreinsper**	**1.98**	**308**	*e*Sg	**Sg**	**05 07 22.6**	**-0.6**
	comp=Z,1.3nm,0.2s						
KBA	**Koelnbreinsper**	**1.98**	**308**	Sg	**Sg**	**05 07 22.6**	**-0.6**
	comp=Z,1.3nm,0.2s						

KRSC 12 05:11:30.1±1.0, 52°.01N×160°.66E, h16km±24km, ML3.5, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**1.15**	**341**	*e*P	Pn	05 11 51.2	-0.3
SPN				*e*S	Sn	05 12 06.9	-0.1
RUS	**Russkaya**	**1.39**	**289**	*e*P	Pn	05 11 54.4	-0.3
RUS				*e*S	Sn	05 12 12.6	0.0
NLC	**Nalytchevo**	**1.41**	**326**	*e*P	Pn	05 11 55.4	+0.4
NLC				*e*S	Sb	05 12 14.2	+0.5
DALK	**Dalny**	**1.55**	**312**	*e*P	Pn	05 11 56.7	-0.2
DALK				*e*S	Sn	05 12 16.6	0.0
PET	**Petropavlovsk**	**1.59**	**310**	*e*P	Pn	05 11 58.1	+0.6
MTVR	**Mutnovka**	**1.59**	**288**	*e*P	Pn	05 11 57.7	0.0
MTVR				*e*S	Sn	05 12 18.3	+0.3
KDTR	**Khodutka, Kamc**	**1.61**	**264**	*e*P	Pn	05 11 58.6	+0.8
KDTR				*e*S	Sb	05 12 19.8	+0.3
UGLR	**Uglovaya**	**1.64**	**318**	*e*P	Pb	05 11 59.4	-0.6
UGLR				*e*S	Sb	05 12 21.2	+0.8
SDLR	**Sedlovina**	**1.67**	**320**	*e*P	Pb	05 11 59.7	-0.7
AVH	**Avacha**	**1.71**	**318**	*e*P	Pb	05 12 01.0	-0.2
ASAK	**Asacha**	**1.74**	**283**	*e*P	Pb	05 12 00.9	-0.7
ASAK				*e*S	Sb	05 12 23.8	+0.6
KRER	**Koryakskii**	**1.74**	**319**	*e*P	Pb	05 12 01.3	-0.4
KRMR	**Karymshinskiy**	**1.75**	**299**	*e*P	Pn	05 12 00.3	+0.6
KRMR				*e*S	Sb	05 12 22.8	-0.7
KOK	**Koryaka**	**1.78**	**317**	*e*P	Pb	05 12 01.6	-0.7
KRX	**Arik**	**1.82**	**319**	*e*P	Pb	05 12 02.2	-0.9
GNL	**Ganaly**	**2.36**	**317**	*e*P	Pn	05 12 10.1	+1.9
MKZ	**Mys Kozlova**	**2.63**	**14**	*e*P	Pn	05 12 13.3	+1.5

IDC ***12*** *05:12:06.0±0.6, 29°.77N×50°.71E, h0km, mb4.2/26, mb1 4.3/32, mb1mx4.1/62, mbtmp4.2/32, ML4.1/7, MS3.3/9, Ms1 3.4/9, ms1mx3.0/57, Error ellipse: s-maj=14.1km s-min=11.4km az=158.0*
MOS ***12*** *05:12:06.3±1.1, 29°.67N×50°.74E, h15km, mb4.4/38, Error ellipse: s-maj=7.3km s-min=5.1km az=95.8*
ISCJB ***12*** *05:12:07.5±0.2, 29°.68N±0°.02×50°.72E±0°.02, h22km, mb4.3/65, MS3.2/7, Error ellipse: s-maj=3.3km s-min=2.3km az=44.6*
DSN ***12*** *05:12:08.0±0.7, 29°.76N×50°.72E, h15km, mb4.6/1, ML4.3/9, Error ellipse: s-maj=13.1km s-min=7.6km az=30.0*
CSEM ***12*** *05:12:08.0±0.1, 29°.70N×50°.67E, h10km, mb4.4/22, Error ellipse: s-maj=3.9km s-min=2.5km az=46.0*
THR ***12*** *05:12:09.7±0.7, 29°.80N×50°.80E, h32km±8km, ML4.2*
BJI ***12*** *05:12:09.0, 29°.70N×50°.70E, h34km, mb4.7/17, mB4.9/10, Ms4.3/4, Ms7 4.2/2*
NEIC ***12*** *05:12:09.2±0.0, 29°.74N×50°.71E, h5km, mb4.4/28, ML4.2(THR), MN4.2(TEH), After TEH.*
TEH ***12*** *05:12:10.4, 29°.74N×50°.76E, h15km, ML4.2*
OMAN ***12*** *05:12:14.8±0.7, 29°.43N×51°.01E, h15km, Error ellipse: s-maj=18.1km s-min=5.2km az=14.0*

ISC 12 05:12:09.2±0.4, 29°.77N±0°.04×50°.73E±0°.04, h22km, n333, σ1§45/347, mb4.3/65, MS3.2/8, 16C-8D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKAZ	**Kazeroun**	**0.96**	**89**	*e*Pg	**Pb**	**05 12 25.0**	**-2.4**
IKAZ				*e*Sg	**Sb**	**05 12 40.3**	**+0.4**
IKAZ				*e*		05 12 43.5	
	comp=Z,10μm,0.3s						
AHBU	**AHRAM**	**1.03**	**151**	*e*Pg	**Pn**	**05 12 28.7**	**+0.4**
SHI	**Shiraz**	**1.56**	**94**	Pg	**Pb**	**05 12 37.9**	**+0.5**
SHI	**Shiraz**	**1.56**	**94**	*e*Pg	**Pb**	**05 12 37.9**	**+0.5**
SHI				*e*		05 13 01.6	
	comp=Z,60μm,0.3s						
SHI	**Shiraz**	**1.56**	**94**	P	**Pb**	**05 12 37.9**	**+0.5**
SHI	**Shiraz**	**1.56**	**94**	*e*Pn	**Pb**	**05 12 37.8**	**+0.4**
SHI				*e*Sg	**Sb**	**05 13 00.3**	**+3.5**
IPAR	**Pars**	**2.02**	**87**	Pn	**Pb**	**05 12 43.9**	**-1.4**
IPAR	**Pars**	**2.02**	**87**	*e*Pn	**Pb**	**05 12 44.0**	**-1.4**
IPAR				*e*		05 13 23.7	
	comp=Z,25μm,0.4s						
IPAR	**Pars**	**2.02**	**87**	*e*Pn	**Pn**	**05 12 42.7**	**+0.5**
IBRJ	**Brojen**	**2.18**	**12**	Pn	**Pn**	**05 12 46.0**	**+1.7**
IBRJ	**Brojen**	**2.18**	**12**	*e*Pn	**Pn**	**05 12 46.1**	**+1.7**
IBRJ				*e*		05 13 24.8	
	comp=Z,9μm,0.2s						
ZNGN	**Zangian**	**2.34**	**3**	*e*Pn	**Pb**	**05 12 49.2**	**-1.7**
ZNGN				*e*		05 13 26.5	
	comp=Z,99nm,0.3s						
ZNGN	**Zangian**	**2.34**	**3**	*e*Pn	**Pn**	**05 12 48.8**	**+2.2**
GHIR	**Ghir-Karzin**	**2.47**	**126**	*e*Pn	**Pn**	**05 12 49.3**	**+1.0**
GHIR				Sg	**Sb**	**05 13 24.6**	**+1.6**
GHIR	**Ghir-

NIAN Nian 5.80 111 *e*Pn **Pn 05 13 33.7 -0.2**
NIAN *e* 05 13 40.4
comp=Z,99nm,0.1s
NIAN Nian 5.80 111 *e*Pn **Pn 05 13 33.7 -0.2**
IDMV Damavand 5.89 10 *e*Pn **Pn 05 13 36.6 +1.2**
ILAS Lasjerd 5.90 18 *e*Pn **Pn 05 13 37.4 +1.9**
CHMN Cheshme madani 5.92 87 *e*Pn **Pn 05 13 37.5 +1.6**
CHMN Cheshme madani 5.92 87 *e*Pn **Pn 05 13 37.7 +1.8**
DAMV Damavand 5.93 10 *e*Pn **Pn 05 13 36.9 +0.9**
DAMV Damavand 5.93 10 *e*Pn **Pn 05 13 36.9 +0.9**
SNGE Sanandaj 6.03 333 *e*Pn **Pn 05 13 38.8 +1.6**
SNGE Sanandaj 6.03 333 *e*Pn **Pn 05 13 38.8 +1.6**
ILIN Lien 6.04 329 *e*Pn **Pn 05 13 38.3 +0.9**
SHME Shamm 6.06 126 *i* P **Pn 05 13 37.5 0.0**
SNR=9.5
SHME Shamm 6.06 126 P **Pn 05 13 38.4 +0.9**
SNR=9.5
SHME S **Sn 05 14 45.7 -0.5**
IFIR Firoozkooh 6.09 16 *e*Pn **Pn 05 13 39.0 +0.8**
CHTH Charan 6.13 3 *e*Pn **Pn 05 13 40.1 +1.5**
CHTH Charan 6.13 3 *e*Pn **Pn 05 13 40.1 +1.5**
THKV Tehran--Karaj 6.13 1 *e*Pn **Pn 05 13 40.0 +1.4**
THKV Tehran--Karaj 6.13 1 *e*Pn **Pn 05 13 40.0 +1.4**
IDHR Dehrash 6.14 324 *e*Pn **Pn 05 13 38.6 -0.1**
IDHR *e* 05 14 57.2
comp=Z,2μm,0.2s
IDHR Dehrash 6.14 324 *e*Pn **Pn 05 13 38.6 -0.1**
BANOM Banah 6.25 127 P **Pn 05 13 40.2 +0.1**
SNR=55
BANOM S **Sn 05 14 49.6 -1.3**
BANOM Banah 6.25 127 *i* P **Pn 05 13 40.0 -0.1**
SNR=55
BANOM Banah 6.25 127 P **Pn 05 13 40.2 +0.1**
SNR=55
BANOM S **Sn 05 14 49.6 -1.3**
IANJ Anjilo 6.28 24 *e*Pn **Pn 05 13 41.5 +0.8**
NAZ Nazwa, Dubai 6.48 136 P **Pn 05 13 43.8 +0.6**
NAZ Nazwa, Dubai 6.48 136 P **Pn 05 13 43.8 +0.6**
MSFE Esma-Masafi 6.52 131 P **Pn 05 13 42.9 -1.0**
MSFE Esma-Masafi 6.52 131 P **Pn 05 13 43.9 0.0**
SNR=6.2
IALA Alasht 6.53 15 *e*Pn **Pn 05 13 46.6 +2.4**
ASUD Al Ashush, Dub 6.56 140 P **Pn 05 13 46.0 +1.6**
SNR=26
ASUD Al Ashush, Dub 6.56 140 *i* P **Pn 05 13 44.5 +0.1**
SNR=26
ASUD Al Ashush, Dub 6.56 140 P **Pn 05 13 44.5 +0.1**
SNR=26
IGZV Ghazvin 6.61 356 *e*Pn **Pn 05 13 46.3 +1.1**
QALM Alamut, Qazvin 6.64 359 *e*Pn **Pn 05 13 46.9 +1.2**
MDH Madha 6.66 131 *i* P **Pn 05 13 44.0 -1.7**
SNR=8.8
MDH Madha 6.66 131 P **Pn 05 13 45.6 -0.1**
TABS Tabas 6.67 53 *e*Pn **Pn 05 13 47.5 +1.5**
TABS Tabas 6.67 53 *e*Pn **Pn 05 13 47.5 +1.5**
UOSS Minazif 6.84 133 *e*Pn **Pn 05 13 48.5 +0.2**
UOSS Minazif 6.84 133 P **Pn 05 13 47.3 -0.9**
UOSS Minazif 6.84 133 P **Pn 05 13 47.3 -0.9**
UOSS Minazif 6.84 133 *e*Pn **Pn 05 13 48.5 +0.2**
IKIA Kiasar 6.88 20 *e*Pn **Pn 05 13 50.0 +1.0**
HATD Hatta, Dubai 6.88 134 P **Pn 05 13 50.2 +1.3**
HATD S **Sn 05 15 04.4 -2.1**
HATD Hatta, Dubai 6.88 134 P **Pn 05 13 49.5 +0.7**
HATD Hatta, Dubai 6.88 134 P **Pn 05 13 49.5 +0.7**
HATD S **Sn 05 15 04.4 -2.1**
ZNJK Zanjan 7.09 347 *e*Pn **Pn 05 13 54.3 +2.5**
ZNJK Zanjan 7.09 347 *e*Pn **Pn 05 13 54.3 +2.5**
MZR Muzera 7.18 159 *i* P **Pn 05 13 53.4 +0.5**
SNR=9.6
ALNE Al Ain 7.25 141 P **Pn 05 13 53.0 -0.8**
SHRO Shahrood 7.62 34 *e*Pn **Pn 05 14 00.2 +1.1**
SHRO Shahrood 7.62 34 *e*Pn **Pn 05 14 00.2 +1.1**
SOHO SOHO 7.64 136 *i* P **Pn 05 13 58.3 -0.9**
SNR=6.6
SOHO SOHO 7.64 136 P **Pn 05 13 58.3 -0.9**
SNR=6.6
RAYN Ar Rayn 7.79 218 *e*Pn **Pn 05 14 00.5 -0.7**
RAYN Ar Rayn 7.79 218 *i* P **Pn 05 14 00.6 -0.7**
SNR=55
RAYN Ar Rayn 7.79 218 *e*Pn **Pn 05 14 00.5 -0.7**
SHRT Shahrakht 9.01 62 *e*Pn **Pn 05 14 19.6 +1.5**
SHRT Shahrakht 9.01 62 *e*Pn **Pn 05 14 19.6 +1.5**
MRVT Maraveh tapeh 9.04 28 *e*Pn **Pn 05 14 19.9 +1.4**
MRVT Maraveh tapeh 9.04 28 *e*Pn **Pn 05 14 19.9 +1.4**
BSY Bisya 9.09 139 P **Pn 05 14 20.2 +1.0**
SNR=6.4
BSYO Bisya 9.13 139 P **Pn 05 14 20.2 +0.6**
SNR=6.4
WSAR Wadi Sarin 9.61 131 Pn **Pn 05 14 27.5 +1.2**
comp=Z,2.4nm,0.3s,baz=346,slow=9.5,SNR=12
WSAR Sn **Sn 05 16 10.6 -3.1**
comp=Z,3.2nm,0.3s,baz=72,slow=20,SNR=6.8
WSAR LR LR 05 18 34.4
comp=Z,148nm,21.9s,baz=335,slow=40
GEYT Alibeck 10.19 35 Pn **Pn 05 14 35.4 +1.2**
comp=Z,12nm,0.3s,baz=224,slow=10,SNR=2.3
GYA0B ALIBECK ARRAY 10.19 35 *e*Pn **Pn 05 14 36.2 +2.0**
GYA0B ALIBECK ARRAY 10.19 35 *e*Pn **Pn 05 14 36.2 +2.0**
IMYA Miami 10.23 48 *e*Pn **Pn 05 14 37.5 +2.6**
MHTO MHTO 10.92 142 P **Pn 05 14 44.8 +0.6**
GNI Garni 11.45 336 *e*Pn **Pn 05 14 52.6 +1.0**
GNI Garni 11.45 336 ⇑*i*P **Pn 05 14 52.0 +0.4**
GNI Garni 11.45 336 *i* P **Pn 05 14 52.0 +0.4**
GNI Garni 11.45 336 *e*Pn **Pn 05 14 52.6 +1.0**
ASF Jabal al Asfar 12.11 285 Pn **Pn 05 14 57.8 -2.7**
comp=Z,1.8nm,0.3s,baz=49,slow=7.0,SNR=10
MAK Makhachkala 13.41 350 *e*P **Pn 05 15 18.1 0.0**
MAK MLR MLR
comp=Z,80nm,14.2s
MAK Makhachkala 13.41 350 *e*P **Pn 05 15 18.1 0.0**
comp=Z,80nm,14.2s
MMAI Mount Meron Ar 13.48 288 Pn **Pn 05 15 17.4 -1.9**
comp=Z,1.1nm,0.3s,baz=98,slow=18,SNR=4.2
MMAI LR LR 05 21 49.9
comp=Z,214nm,18.1s,baz=105,slow=43
EIL Elat 13.71 273 Pn **Pn 05 15 24.2 +1.8**
comp=Z,0.5nm,0.3s,baz=112,slow=11,SNR=2.7
ZEI Tsey 14.10 339 *e*P **Pn 05 15 30.7 +2.9**
NEY Neytrino 14.90 337 *i* P **Pn 05 15 39.4 +0.8**
KBZ Khabaz 15.27 338 Pn **P 05 15 46.1 -1.9**
comp=Z,0.2nm,0.3s,baz=146,slow=12,SNR=9.0
KVAR Kislovodsk Arr 15.53 338 Pn **P 05 15 49.5 -1.6**
baz=112,slow=9.9,SNR=10
KIV Kislovodsk 15.54 338 *e*Pn **Pn 05 15 48.9 +1.9**
comp=Z,18nm,1.0s
KIV Kislovodsk 15.54 338 *e*P **P 05 15 50.2 -0.9**
KIV pmax pmax
comp=Z,27nm,1.1s
KIV Kislovodsk 15.54 338 *e*Pn **Pn 05 15 48.8 +1.9**
comp=Z,18nm,1.0s
KIV Kislovodsk 15.54 338 *e*P **P 05 15 50.2 -0.9**
Ar=Z,27nm,1.1s
KBL Kabul 16.22 68 *e*Pn **Pn 05 15 56.2 +0.3**
comp=Z,12nm,1.0s
KBL Kabul 16.22 68 *e*P **Pn 05 15 56.2 +0.3**
KBL pmax pmax
comp=Z,12nm,1.0s
KBL Kabul 16.22 68 *e*Pn **Pn 05 15 56.2 +0.3**
comp=Z,12nm,1.0s
DAMY Dhamar 16.22 202 *e*Pn **Pn 05 15 55.2 -0.9**
comp=Z,29nm,1.1s
GOF Gofitskoye 16.42 340 *e*P P 05 16 15.8 +15
BRTR Keskin Array B 17.17 310 P **Pn 05 16 07.3 -0.5**
comp=Z,0.2nm,0.3s,baz=133,slow=14,SNR=7.8
BR101 Keskin Array S 17.17 310 *e*Pn **Pn 05 16 07.3 -0.6**
BR101 Keskin Array S 17.17 310 *e*Pn **Pn 05 16 07.3 -0.6**
BR131 Keskin Array S 17.17 310 *e*Pn **Pn 05 16 08.0 +0.1**
BR131 Keskin Array S 17.17 310 *e*Pn **Pn 05 16 08.0 +0.1**
ANTO Ankara 17.81 309 *e*Pn **Pn 05 16 15.5 -0.2**
comp=Z,8.1nm,0.8s
ANTO Ankara 17.81 309 *e*P **Pn 05 16 15.5 -0.2**
ANTO pmax pmax
comp=Z,8.0nm,0.8s
ANTO Ankara 17.81 309 *e*P **Pn 05 16 15.5 -0.2**
comp=Z,8.0nm,0.8s
ILGA Ilgaz 17.82 314 *e*Pn **Pn 05 16 10.2 -5.8**
comp=Z,4.7nm,1.0s
NIL Nilore 19.54 73 *e*P **P 05 16 35.5 +0.2**
comp=Z,15nm,0.8s
NIL Nilore 19.54 73 *e*P **P 05 16 35.5 +0.2**
NIL pmax pmax
comp=Z,15nm,0.8s
NIL Nilore 19.54 73 *e*P **P 05 16 35.5 +0.2**
comp=Z,15nm,0.8s

ATD Arta Tunnel 19.58 204 LR LR 05 25 26.5
comp=Z,72nm,19.5s,baz=9.0,slow=41
MANT Manisa 20.27 301 *e*P **P 05 16 43.1 -0.4**
comp=Z,39nm,1.0s
MANT Manisa 20.27 301 *e*P **P 05 16 43.1 -0.4**
comp=Z,39nm,1.0s
KARP Karpathos 20.64 292 *e*P **P 05 16 47.9 +0.6**
comp=Z,11nm,0.9s
KARP Karpathos 20.64 292 *e*P **P 05 16 47.9 +0.6**
comp=Z,11nm,0.9s
KK31 Karatay Array 20.68 45 *e*P **P 05 16 48.4 +0.8**
KK31 Karatay Array 20.68 45 *e*P **P 05 16 48.4 +0.8**
KK31 Karatay Array 20.68 45 *e*P **P 05 16 48.4 +0.8**
KKAR Karatay Array 20.68 45 *e*P **P 05 16 48.4 +0.8**
KKAR Karatay Array 20.68 45 *e*P **P 05 16 48.4 +0.8**
KKAR Karatay Array 20.68 45 *e*P **P 05 16 48.4 +0.8**
ABKAR Abkulak array 20.68 17 *e*P **P 05 16 48.1 +0.5**
ABKAR Abkulak array 20.68 17 *e*P **P 05 16 48.1 +0.5**
SFK Sufi-Kurgan 21.24 55 P **P 05 16 54.9 +1.0**
SFK pmax pmax
comp=Z,15nm,1.1s
SFK Sufi-Kurgan 21.24 55 P **P 05 16 54.9 +1.0**
comp=Z,15nm,1.1s
AKTK Aktyubinsk 21.36 13 P **P 05 16 54.5 -0.3**
comp=Z,8.0nm,0.7s
AKTO Aktyubinsk 21.36 13 P **P 05 16 54.5 -0.4**
comp=Z,8.0nm,0.7s,baz=202,slow=11,SNR=15
MNAS Manas 21.61 48 P **P 05 16 59.2 +1.4**
MNAS pmax pmax
comp=Z,9.0nm,0.9s
MNAS Manas 21.61 48 P **P 05 16 59.2 +1.4**
comp=Z,9.0nm,0.9s
SANT Santorini 22.14 294 *e*P **P 05 17 03.5 0.0**
comp=Z,21nm,0.6s
SANT Santorini 22.14 294 *e*P **P 05 17 03.5 0.0**
comp=Z,21nm,0.6s
IDI Anoyia 22.44 291 P **P 05 17 06.9 +0.3**
comp=Z,15nm,0.9s,baz=110,slow=12,SNR=8.5
IDI LR LR 05 29 43.8
comp=Z,25nm,19.1s,baz=102,slow=47
IDI Anoyia 22.44 291 ⇑*i*P **P 05 17 06.4 -0.3**
IDI Anoyia 22.44 291 *e*P **P 05 17 07.0 +0.3**
comp=Z,13nm,0.8s
IDI Anoyia 22.44 291 *e*P **P 05 17 07.0 +0.3**
comp=Z,13nm,0.8s
TIRR Tirgusor 22.95 316 ⇓*i*P **P 05 17 12.2 +0.3**
TIRR Tirgusor 22.95 316 *e*P **P 05 17 12.7 +0.8**
comp=Z,6.3nm,0.9s
TIRR Tirgusor 22.95 316 *e*P **P 05 17 12.7 +0.8**
TIRR pmax pmax
comp=Z,6.0nm,0.9s
TIRR Tirgusor 22.95 316 *e*P **P 05 17 12.7 +0.8**
comp=Z,6.0nm,0.9s
AAK Ala-Archa 22.98 50 P **P 05 17 13.3 +0.8**
comp=Z,4.1nm,0.5s,baz=202,slow=14,SNR=7.0
AAK Ala-Archa 22.98 50 *e*P **P 05 17 14.0 +1.5**
AAK Ala-Archa 22.98 50 *e*P **P 05 17 14.0 +1.5**
VSR Storozhevoye 23.10 341 *e*P **P 05 17 13.0 -0.3**
VSR *e*S **S 05 21 18.6 -4.6**
VSR pmax pmax
comp=Z,9.0nm,0.5s
VSR smax smax
comp=N,130nm,1.1s
VSR Storozhevoye 23.10 341 *e*P **P 05 17 13.0 -0.3**
comp=N,9.0nm,0.5s
TLB Topalu 23.25 316 ⇓*i*P **P 05 17 15.7 +0.8**
CFR Carcaliu 23.51 317 P **P 05 17 23.1 +5.6**
CFR pmax pmax
comp=Z,6.0nm,0.8s
NRN Naryn 23.52 54 *e*P **P 05 17 18.6 +0.5**
comp=Z,9.3nm,0.9s
NRN Naryn 23.52 54 *e*P **P 05 17 18.6 +0.5**
NRN pmax pmax
comp=Z,9.0nm,0.9s
NRN Naryn 23.52 54 *e*P **P 05 17 18.6 +0.5**
comp=Z,9.3nm,0.9s
VRI Vrincioaia 24.71 317 ⇓*i*P **P 05 17 30.3 +1.5**
PLOR Plostina 24.75 317 ⇑*i*P **P 05 17 30.4 +1.3**
PLOR Plostina 24.75 317 P **P 05 17 30.4 +1.3**
PLOR Plostina 24.75 317 P **P 05 17 30.4 +1.3**
OTUK Ortayu 24.80 36 P **P 05 17 30.9 +1.4**
OTUK pmax pmax
comp=Z,12nm,0.8s
OTUK Ortayu 24.80 36 P **P 05 17 30.9 +1.4**
comp=Z,12nm,0.8s
SOH Sokhos 24.82 304 P **P 05 17 31.2 +1.4**
SOH pmax pmax
comp=Z,5.0nm,1.1s
SOH Sokhos 24.82 304 P **P 05 17 31.2 +1.4**
comp=Z,5.0nm,1.1s
TARG Taragay, Kyrgy 24.89 54 *e*P **P 05 17 31.8 +0.9**
comp=Z,4.7nm,0.8s
TARG Taragay, Kyrgy 24.89 54 *e*P **P 05 17 31.8 +0.9**
comp=Z,4.7nm,0.8s
MLR Muntele Rosu 24.99 316 P **P 05 17 33.3 +2.0**
comp=Z,1.1nm,0.8s,baz=132,slow=3.3,SNR=9.3
MLR Muntele Rosu 24.99 316 ⇓*i*P **P 05 17 34.1 +2.7**
MLR Muntele Rosu 24.99 316 *e*P **P 05 17 33.0 +1.6**
comp=Z,7.4nm,0.9s
MLR Muntele Rosu 24.99 316 *e*P **P 05 17 33.0 +1.6**
MLR pmax pmax
comp=Z,7.0nm,0.9s
MLR Muntele Rosu 24.99 316 *e*P **P 05 17 33.0 +1.6**
comp=Z,7.4nm,0.9s
AGG Agios Georgios 25.10 299 *e*P **P 05 17 33.2 +0.8**
comp=Z,34nm,1.0s
AGG Agios Georgios 25.10 299 *e*P **P 05 17 33.2 +0.8**
AGG pmax pmax
comp=Z,34nm,1.0s
AGG Agios Georgios 25.10 299 *e*P **P 05 17 33.2 +0.8**
comp=Z,34nm,1.0s
TESR Tescani 25.11 318 ⇓*i*P **P 05 17 32.6 +0.3**
VOIR 25.51 315 ⇑*i*P **P 05 17 38.7 +2.7**
VOIR 25.51 315 P **P 05 17 38.7 +2.7**
VOIR pmax pmax
comp=Z,11nm,1.1s
VOIR 25.51 315 P **P 05 17 38.7 +2.7**
comp=Z,11nm,1.1s
GRG Griva 25.55 304 P **P 05 17 37.2 +0.8**
GRG pmax pmax
comp=Z,11nm,1.0s
GRG Griva 25.55 304 P **P 05 17 37.2 +0.8**
comp=Z,11nm,1.0s
ARR Arges 25.73 314 ⇓*i*P **P 05 17 40.3 +2.2**
FNA Florina 26.25 303 *e*P **P 05 17 43.3 +0.6**
comp=Z,6.6nm,1.1s
FNA Florina 26.25 303 *e*P **P 05 17 43.3 +0.6**
FNA pmax pmax
comp=Z,7.0nm,1.1s
FNA Florina 26.25 303 *e*P **P 05 17 43.3 +0.6**
comp=Z,6.6nm,1.1s
AKASG Malin Array Be 26.40 328 P **P 05 17 43.4 -0.6**
comp=Z,1.9nm,0.3s,baz=132,slow=9.4,SNR=20
AKASG Malin Array Be 26.40 328 *c*e*P **P 05 17 43.9 -0.1**
AKASG pmax pmax
comp=Z,2.0nm,0.3s
AKASG Malin Array Be 26.40 328 *e*P **P 05 17 43.9 -0.1**
comp=Z,2.0nm,0.3s
AKBB Malin Array Si 26.40 328 *e*P **P 05 17 43.5 -0.5**
comp=Z,9.2nm,0.6s
AKBB Malin Array Si 26.40 328 *e*P **P 05 17 43.5 -0.5**
AKBB pmax pmax
comp=Z,9.0nm,0.6s
AKBB Malin Array Si 26.40 328 *e*P **P 05 17 43.5 -0.5**
comp=Z,9.2nm,0.6s
KIEV Kiev 26.41 328 *e*P **P 05 17 43.1 -0.9**
comp=Z,8.9nm,0.6s
KIEV Kiev 26.41 328 *i* P **P 05 17 44.1 +0.1**
SNR=10.0
KIEV Kiev 26.41 328 *c i*P **P 05 17 43.1 -0.9**
KIEV Kiev 26.41 328 P **P 05 17 44.1 +0.1**
SNR=10.0
AK11 Malin Array Si 26.41 328 *e*P **P 05 17 44.3 +0.2**
AK11 Malin Array Si 26.41 328 *e*P **P 05 17 44.3 +0.2**
BURAR Bucovina Array 26.53 319 ⇑*i*P **P 05 17 48.7 +3.4**
BUR04 Bucovina Ar. S 26.54 319 *e*P **P 05 17 45.9 +0.5**
BUR04 Bucovina Ar. S 26.54 319 *e*P **P 05 17 45.9 +0.5**
BUR08 Bucovina Ar. S 26.56 319 *e*P **P 05 17 46.1 +0.5**
BUR08 Bucovina Ar. S 26.56 319 *e*P **P 05 17 46.1 +0.5**
PDGK Podgornoye 26.62 52 *e*P **P 05 17 51.2 +5.0**
ARU Arti 27.21 10 *d i*P P 05 17 39.4 -12
ARU pmax pmax
comp=Z,7.0nm,1.7s
OBN Obninsk 27.29 342 ⇑*e*P **P 05 17 53.6 +1.8**
OBN *e* 05 18 38.2
OBN *e*SS SS 05 23 50.7 -34

OBN pmax pmax
comp=Z,7.0nm,0.5s
OBN MLR MLR
comp=Z,28nm,18.0s
OBN Obninsk 27.29 342 *e*P **P 05 17 53.6 +1.8**
comp=Z,7.0nm,0.5s
BRVK Borovoye 27.32 26 *e*P **P 05 17 53.0 +0.8**
comp=Z,5.8nm,0.9s
BRVK Borovoye 27.32 26 *c*e*P **P 05 17 53.7 +1.5**
BRVK pmax pmax
comp=Z,9.0nm,1.7s
BRVK Borovoye 27.32 26 *e*P **P 05 17 53.7 +1.5**
comp=Z,9.0nm,1.7s
BVAR Borovoye Array 27.34 26 P **P 05 17 53.4 +1.1**
comp=Z,3.7nm,0.3s,baz=221,slow=6.8,SNR=27
BVAR PcP **PcP 05 21 11.4 +0.2**
comp=Z,0.6nm,0.4s,baz=204,slow=3.2,SNR=4.3
BVAR LR LR 05 30 24.1
comp=Z,51nm,19.7s,baz=192,slow=40
MDVR Moldovita 27.34 311 ⇓*i*P **P 05 17 53.7 +1.1**
UZH Uzhgorod 28.73 319 ⇑*i*P **P 05 18 05.6 +0.7**
UZH *e* 05 18 14.2
UZH Uzhgorod 28.73 319 *i* P **P 05 18 05.6 +0.7**
KURBB Kurchatov Arra 29.45 37 P **P 05 18 12.6 +1.3**
comp=Z,2.6nm,0.8s,baz=238,slow=9.5,SNR=12
KURK Kurchatov 29.55 37 *e*P **P 05 18 13.2 +1.0**
KURK Kurchatov 29.55 37 *c*e*P **P 05 18 13.7 +1.6**
KURK pmax pmax
comp=Z,5.0nm,1.0s
KURK Kurchatov 29.55 37 *e*P **P 05 18 13.7 +1.6**
comp=Z,5.0nm,1.0s
MAKZ Makanchi 29.58 46 *e*P **P 05 18 12.7 +0.2**
comp=Z,2.2nm,1.0s
MAKZ *e*S **S 05 23 01.2 -5.2**
MAKZ Makanchi 29.58 46 *e*P **P 05 18 12.7 +0.2**
MAKZ *e*S **S 05 23 01.2 -5.2**
MAKZ pmax pmax
comp=Z,2.0nm,1.0s
MAKZ Makanchi 29.58 46 *e*P **P 05 18 12.7 +0.2**
comp=Z,2.2nm,1.0s
MK01 Makanchi Array 29.77 46 *e*P **P 05 18 14.8 +0.6**
MK31 Makanchi Array 29.77 46 *e*P **P 05 18 14.8 +0.6**
MK31 Makanchi Array 29.77 46 *e*P **P 05 18 14.8 +0.6**
MK32 Makanchi Array 29.77 46 *e*P **P 05 18 15.0 +0.8**
MK32 *e*PcP **PcP 05 21 17.5 0.0**
MKAR Makanchi Array 29.77 46 P **P 05 18 15.0 +0.8**
comp=Z,1.0nm,0.4s,baz=240,slow=9.3,SNR=19
MKAR PcP **PcP 05 21 17.5 0.0**
comp=Z,0.6nm,0.8s,baz=270,slow=0.4,SNR=3.6
MKAR Makanchi Array 29.77 46 *e*P **P 05 18 14.8 +0.6**
comp=Z,17nm,0.6s
MKAR PcP **PcP 05 21 17.5 0.0**
MKAR Makanchi Array 29.77 46 *e*P **P 05 18 14.8 +0.6**
MKAR 05 21 17.5
MKAR pmax pmax
comp=Z,17nm,0.6s
KLMR Klimovskoe 31.97 350 *e*P **P 05 18 31.3 -2.0**
KLMR pmax pmax
comp=Z,9.0nm,1.2s
KLMR Klimovskoe 31.97 350 *e*P **P 05 18 31.3 -2.0**
KLMR AMP 05 18 34.9
comp=Z,9.0nm,1.2s
WMQ Urumqi 32.47 54 P **P 05 18 40.0 +2.0**
WMQ pP sP 05 18 50.9 +3.5
WMQ pmax pmax
comp=Z,11nm,0.7s
WMQ pmax pmax
comp=Z,100nm,5.7s
WMQ LR LR
comp=Z,130nm,21.5s
NVS Novosibirsk 34.19 34 *e*P **P 05 18 52.8 0.0**
ZAA0 Zalesovo Array 34.50 36 *e*P **P 05 18 56.2 +0.7**
comp=Z,5.0nm,0.8s
ZALV Zalesovo Beam 34.50 36 P **P 05 18 56.1 +0.6**
comp=Z,4.5nm,0.6s,baz=248,slow=9.6,SNR=30
ZALV Zalesovo Beam 34.50 36 *e*P **P 05 18 55.8 +0.3**
ZALV Zalesovo Beam 34.50 36 P **P 05 18 56.1 +0.6**
ZALV pmax pmax
comp=Z,2.0nm,0.3s
ZAA1 Zalesovo Array 34.50 36 *e*P **P 05 18 56.1 +0.6**
KEST Kesra 35.12 291 P **P 05 19 02.6 +1.4**
comp=Z,3.1nm,0.8s,baz=328,slow=5.2,SNR=4.8
FIA0 FINESS Array S 35.61 340 *e*P **P 05 19 04.0 -1.0**
FIA0 FINESS Array S 35.61 340 *e*P **P 05 19 04.0 -1.0**
FINES FINESS Array B 35.61 340 P **P 05 19 04.0 -1.0**
comp=Z,1.0nm,0.5s,baz=160,slow=12,SNR=7.1
FINES LR LR 05 33 37.2
comp=Z,34nm,20.3s,baz=236,slow=36
FINES FINESS Array B 35.61 340 P **P 05 19 04.0 -1.0**
FINES pmax pmax
comp=Z,1.0nm,0.5s
FINES MLR MLR
comp=Z,34nm,20.3s
HFS Hagfors 39.19 332 P **P 05 19 34.5 -0.8**
comp=Z,1.9nm,0.4s,baz=128,slow=9.3,SNR=17
NB200 NORSAR Array S 40.71 332 *e*P **P 05 19 47.3 -0.7**
NOA NORSAR Array B 40.71 332 P **P 05 19 47.3 -0.7**
comp=Z,0.8nm,0.4s,baz=134,slow=9.8,SNR=3.6
GTA Gaotai 41.10 63 ⇑P **P 05 19 52.5 +0.9**
GTA pP sP 05 20 00.0 -1.1
GTA sP pP 05 20 03.8 +5.4
GTA pmax pmax
comp=Z,7.0nm,1.0s
ARA0 ARCESS Array S 42.34 347 *e*P **P 05 20 00.5 -0.8**
ARCES ARCESS Array B 42.34 347 P **P 05 20 00.4 -0.8**
comp=Z,3.3nm,0.9s,baz=142,slow=9.0,SNR=4.3
ZAK Zakamensk 44.11 47 *e*P **P 05 20 16.6 +0.7**
ZAK pmax pmax
comp=Z,3.0nm,1.0s
TLY Talaya 44.52 45 *i* P **P 05 20 20.7 +1.7**
TLY pmax pmax
comp=Z,6.0nm,0.9s
CMAR Chiang Mai Arr 45.14 93 LR LR 05 44 39.2
comp=Z,28nm,18.8s,baz=285,slow=43
CD2 Chengdu 45.41 75 P **P 05 20 25.9 -0.6**
EKA Eskdalemuir Ar 45.71 320 P **P 05 20 27.9 -0.5**
comp=Z,0.3nm,0.3s,baz=101,slow=8.6,SNR=7.2
SONA0 Songino Array 45.93 51 *e*P **P 05 20 30.5 0.0**
SONM Songino Array 45.93 51 P **P 05 20 30.5 0.0**
comp=Z,0.8nm,0.6s,baz=264,slow=7.3,SNR=5.5
KMI Kunming 46.08 83 P **P 05 20 31.7 -0.3**
KMI pP sP 05 20 41.8 +0.3
KMI sP pP 05 20 44.9 +6.1
KMI pmax pmax
comp=Z,7.0nm,0.7s
ULN Ulaanbaatar 46.38 51 *c*e*P **P 05 20 35.4 +1.4**
ULN pmax pmax
comp=Z,4.0nm,1.0s
TOA0 Torodi Ar. Sit 48.17 261 *e*P **P 05 20 48.1 -0.1**
comp=Z,7.0nm,0.8s
TOA1 Torodi Ar. Sit 48.17 261 *e*P **P 05 20 48.3 +0.2**
TORD Torodi Ar. Bea 48.17 261 P **P 05 20 48.3 +0.2**
comp=Z,5.7nm,0.7s,baz=57,slow=8.5,SNR=42
TORD LR LR 05 43 22.4
comp=Z,93nm,20.4s,baz=165,slow=39
XAN Xi'an 49.02 69 P **P 05 20 54.3 -0.2**
XAN pP sP 05 21 04.0 -0.1
XAN sP pP 05 21 08.7 +7.3
XAN pmax pmax
comp=Z,10.0nm,0.7s
XAN pmax pmax
comp=Z,130nm,5.1s
SPITS Spitsbergen Ar 50.84 351 P **P 05 21 08.3 +0.6**
comp=Z,2.2nm,0.7s,baz=116,slow=6.6,SNR=3.2
KOWA Kowa 52.49 266 P **P 05 21 21.0 +0.2**
comp=Z,7.6nm,0.7s,baz=64,slow=7.6,SNR=25
MATP Matopo 54.31 206 P **P 05 21 34.6 +0.5**
comp=Z,3.0nm,0.9s,baz=26,slow=9.9,SNR=4.5
DBIC Dimbokro 56.97 258 P **P 05 21 53.6 +0.3**
comp=Z,5.2nm,0.6s,baz=36,slow=7.5,SNR=12
DBIC LR LR 05 46 33.8
comp=Z,69nm,18.8s,baz=82,slow=36
DBIC Dimbokro 56.97 258 *e*P **P 05 21 53.6 +0.3**
comp=Z,6.6nm,1.1s
DBIC Dimbokro 56.97 258 P **P 05 21 53.6 +0.3**
DBIC pmax pmax
comp=Z,7.0nm,0.7s
DBIC MLR MLR
comp=Z,69nm,18.8s
KIC Kosan Boka 57.03 257 *e*P **P 05 21 53.0 -0.8**
comp=Z,56nm,1.3s
TIC Toumodi 57.12 258 *e*P **P 05 21 57.8 +3.4**
LIC Lamto 57.34 257 *e*P **P 05 21 56.4 +0.4**
comp=Z,155nm,2.0s
TIXI Tiksi 58.32 21 ⇑*i*P **P 05 22 02.6 +0.6**
TIXI pmax pmax

comp=Z,1.0nm,1.0s
YAK **Yakutsk** 59.05 33 *i* P P 05 22 08.7 +1.5
YAK pmax pmax
comp=Z,8.0nm,0.8s
KLR **Kul'dur** 62.48 47⇑ *i* P P 05 22 30.7 -0.1
BOSA **Boshof** 62.95 205 P P 05 22 34.6 +0.4
comp=Z,3.4nm,0.9s,baz=30,slow=6.1,SNR=4.2
KSAR **Wonju Array Be** 63.07 61 P P 05 22 34.7 -0.2
KSAR **Wonju Array Be** 63.07 61 P P 05 22 34.7 -0.2
KSRS **Korea Array** 63.09 60 P P 05 22 34.7 -0.4
comp=Z,1.9nm,0.6s,baz=283,slow=7.1,SNR=7.8
SEY **Seymchan** 68.96 29⇑ *i* P P 05 23 13.6 +1.3
MA2 **Magadan** 69.62 32 *i* P P 05 23 17.7 +1.2
BILL **Bilibino** 71.53 21 *i* P P 05 23 29.1 +1.1
BILL *i* 05 23 39.0
BILL *i* 05 23 46.3
BILL pmax pmax
comp=Z,3.0nm,1.0s
ILAR **Eielson Array** 84.77 7 P P 05 24 41.2 -0.1
comp=Z,0.6nm,0.7s,baz=323,slow=5.0,SNR=6.7
ILB **Eielson Array** 84.77 7 *e*P P 05 24 41.2 -0.1
SCRK **Sand Creek** 85.84 6 *e*P P 05 24 46.8 -0.1
comp=Z,4.7nm,1.0s
RIDG **Independ'e Rid** 85.99 7 *e*P P 05 24 47.2 -0.4
comp=Z,12nm,0.9s
WR1 **Warramunga Arr** 94.39 110 *e*P P 05 25 26.4 -1.3
comp=Z,1.3nm,0.9s
WRA **Warramunga Arr** 94.39 110 P P 05 25 26.4 -1.3
comp=Z,0.3nm,0.5s,baz=314,slow=4.1,SNR=6.9
AS31 **Alice Springs** 95.88 114 *e*P P 05 25 33.1 -1.4
comp=Z,1.6nm,1.1s
ASAR **Alice Springs** 95.88 114 P P 05 25 33.1 -1.4
comp=Z,0.5nm,0.7s,baz=311,slow=5.7,SNR=3.8

ISCJB ***12*** *05:26:23.2±1.0, 71°.5N±0°.1×9°.5W±0°.8, h10km, Error ellipse: s-maj=39.0km s-min=5.1km az=152.5*
BER ***12*** *05:26:26.6±0.4, 71°.37N×9°.48W, h3km±91km, ML2.6*
ISC 12 05:26:24.8±1.4, 71°.5N±0°.1×9°.6W±0°.2, h10km, n5, σ0°.79/10, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JNW	**Jan Mayen West**	**0.56**	**139**	*e*P			**Pg**	**05 26 36.1**	**+0.5**
JNW				*e*S			**Sg**	**05 26 42.7**	**-0.2**
JNW				IAML				05 26 46.4	
comp=Z,471nm,0.3s									
JMIC	**Jan Mayen**	**0.58**	**144**	*e*P			**Pg**	**05 26 36.0**	**0.0**
JMIC				*e*S			**Sg**	**05 26 43.3**	**-0.2**
JMIC				IAML				05 26 46.5	
comp=Z,329nm,0.7s									
JMI	**Jan Mayen**	**0.59**	**153**	*e*P			**Pg**	**05 26 36.3**	**+0.1**
JMI				*e*S			**Sg**	**05 26 43.4**	**-0.5**
JMI				IAML				05 26 49.3	
comp=Z,201nm,0.2s									
JNE	**Jan Mayen East**	**0.61**	**138**	*e*P			**Pg**	**05 26 36.9**	**+0.1**
JNE				*e*S			**Sg**	**05 26 44.2**	**-0.5**
JNE				IAML				05 26 45.5	
comp=Z,268nm,0.1s									
DAG	**Danmarks Havn**	**5.89**	**339**	*i* P			**Pn**	**05 27 53.0**	**+1.0**
DAG				*i* S			**Sn**	**05 28 57.9**	**-1.6**

SOME ***12*** *05:29:55.5, 44°.35N×82°.85E, h15km*
NNC ***12*** *05:30:00.7±2.0, 44°.54N×82°.36E, h0km, mb2.8, mpv2.4, Error ellipse: s-maj=30.8km s-min=8.0km az=116.0*
ISC 12 05:29:59.0±3.2, 44°.2N±0°.1×83°.3E±0°.2, h35km, n7, σ1.33/11, 1C-4D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**2.52**	**274**	*e*P			**Pn**	**05 30 36.2**	**-1.3**
9.5nm,0.2s									
DJR				*e*S			**Sn**	**05 31 05.2**	**-2.0**
7.3nm,0.3s									
MK31	**Makanchi Array**	**2.66**	**345**	⇓Pn			**Pn**	**05 30 39.5**	**+0.1**
1.4nm,0.5s,baz=160,slow=14,SNR=37									
MK31				Lg			Lg	05 31 12.3	
5.1nm,0.6s,baz=168,slow=27,SNR=15									
MAKZ	**Makanchi**	**2.74**	**341**	⇓Pn			**Pn**	**05 30 40.0**	**-0.5**
0.9nm,0.3s									
MAKZ				⇓Lg			Lg	05 31 12.6	
1.7nm,0.5s									
PDGK	**Podgornoye**	**2.90**	**253**	⇓Pn			**Pn**	**05 30 41.0**	**-1.8**
1.0nm,0.5s									
PDGK				⇑Lg			Lg	05 31 17.3	
6.3nm,0.6s									
KAPS	**Kapalarasan**	**3.00**	**292**	*e*P			**Pn**	**05 30 44.7**	**+0.6**
0.6nm,0.3s									
KAPS				*e*S			**Sn**	**05 31 19.8**	**+0.9**
4.3nm,0.4s									
UZB	**Uzynbulak**	**3.29**	**252**	*e*P			**Pn**	**05 30 48.9**	**+0.8**
0.9nm,0.3s									
UZB				*e*S			**Sn**	**05 31 27.6**	**+1.6**
2.7nm,0.4s									
KPKS	**Kokpek**	**3.42**	**259**	*e*P			**Pn**	**05 30 50.4**	**+0.4**
2.6nm,0.3s									
KPKS				*e*S			**Sn**	**05 31 30.1**	**+0.8**
7.2nm,0.3s									

IDC ***12*** *05:54:59.7±3.3, 19°.89S×176°.08W, h142km±32km, mb3.6/5, mb1 3.9/7, mb1mx3.5/51, mbtmp4.2/7, MS3.8/2, Ms1 3.8/2, ms1mx2.9/40, Error ellipse: s-maj=37.1km s-min=16.5km az=146.0*
ISC 12 05:55:07.7±1.1, 20°.2S±0°.2×176°.1W±0°.2, h222km, n9, σ0.43/7, mb3.7/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.46**	**34**	P			Pn	05 56 43.1	-11
3.2nm,0.3s,baz=169,slow=16,SNR=4.4									
AFI				S			S	05 57 56.0	-23
8.5nm,0.3s,baz=254,slow=14,SNR=5.9									
AFI				LR			LR	05 58 57.3	
comp=Z,27nm,20.8s,baz=64,slow=33									
URZ	**Urewera**	**18.96**	**197**	P			**P**	**05 59 12.6**	**+0.2**
3.4nm,0.3s,baz=295,slow=3.6,SNR=14									
URZ				S			**S**	**06 02 35.4**	**-0.3**
0.3nm,0.3s,baz=72,slow=20,SNR=3.6									
CTA	**Charters Tower**	**35.32**	**263**	P			**P**	**06 01 42.1**	**0.0**
2.8nm,0.3s,baz=80,slow=11,SNR=2.3									
JAY	**Jayapura**	**45.66**	**287**	LR			LR	06 21 50.7	
comp=Z,99nm,18.3s,slow=35									
ASAR	**Alice Springs**	**46.35**	**256**	P			**P**	**06 03 12.6**	**+0.6**
4.9nm,0.6s,baz=93,slow=8.3,SNR=45									
WRA	**Warramunga Arr**	**46.43**	**261**	P			**P**	**06 03 12.2**	**-0.5**
1.1nm,0.3s,baz=94,slow=7.6,SNR=95									
SIJI	**Sorong**	**54.91**	**284**	LR			LR	06 26 28.7	
comp=Z,89nm,21.7s,baz=212,slow=34									
NVAR	**Mina Array Bea**	**79.56**	**42**	P			**P**	**06 06 50.3**	**0.0**
0.1nm,0.3s,baz=210,slow=7.0,SNR=2.9									
TXAR	**Lajitas Array**	**85.37**	**57**	P			**P**	**06 07 20.4**	**0.0**
0.3nm,0.7s,baz=207,slow=8.7,SNR=4.0									

ISCJB ***12*** *05:59:37.8±0.2, 5°.69S±0°.02×105°.51E±0°.02, h169km±1km, mb5.4/241, Error ellipse: s-maj=3.9km s-min=2.0km az=35.6*
DJA ***12*** *05:59:38.5±0.1, 6°.S±2°.×10°.5E±°., h157km±1km, M5.4/63, mb5.5/63, mB5.8/48, MLv5.8/37, Mw(mB)5.3/48*
IDC ***12*** *05:59:38.4±0.4, 5°.62S×105°.54E, h159km±3km, mb5.2/61, mb1 5.2/64, mb1mx5.1/69, mbtmp5.6/64, MS3.8/14, Ms1 3.8/14, ms1mx3.4/62, Error ellipse: s-maj=7.3km s-min=5.5km az=43.0*
BJI ***12*** *05:59:38.0, 5°.70S×105°.50E, h173km, mb5.5/71, mB5.2/38*
MOS ***12*** *05:59:38.0±0.9, 5°.59S×105°.53E, h173km, mb5.6/90, Error ellipse: s-maj=7.3km s-min=4.6km az=114.0*
NEIC ***12*** *05:59:38.7±0.4, 5°.68S×105°.49E, h164km±3km, mb5.5/118, Error ellipse: s-maj=4.1km s-min=2.7km az=218.0*
NEIC Felt [III] at Jakarta and Pangandaran and [II] at Sukabumi and Tasikmalaya, Java. Also felt at Bandung and Soreang. Felt at Sidomulyo, Sumatra.
GCMT ***12*** *05:59:38.7±0.2, 5°.85S×105°.42E, h165km±1km, MW5.3/103, Moment Tensor Solution. s83,c126; s103,c174; Depth=1±1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.37±.02; $M_{\theta\theta}$0.53±.02; $M_{\phi\phi}$-0.89±.02; $M_{r\theta}$0.73±.01; $M_{\theta\phi}$0.08±.02; $M_{\phi r}$-0.52±.02; Best double couple: M_0=1.9100×10^{17} NP1:ϕ_s=138.00000°, δ78.00000°, λ52.00000°. NP2:ϕ_s=33.00000°, δ39.00000°, λ161.00000°. Principal axes: T 1.2290, Plg44.0000°, Azm11.0000°; N -0.0740, Plg37.0000°, Azm147.0000°; P -1.1540, Plg24.0000°, Azm256.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 12 05:59:38.8±0.3, 5°.73S±0°.03×105°.46E±0°.03, h169km±1km, h169km:pP-P, n1587, σ1.30/1740, mb5.5/254, 77C-41D, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BLSI	**Bandar Lampung**	**0.41**	**329**	P			**Pn**	**06 00 01.6**	**-0.4**
BLSI				S			**Sn**	**06 00 18.3**	**-1.5**
SBJI	**Serang**	**0.78**	**120**	P			**Pn**	**06 00 02.8**	**-1.0**
SBJI				S			**Sn**	**06 00 20.6**	**-2.4**
CGJI	**Cibinong**	**0.91**	**165**	P			**Pn**	**06 00 02.7**	**-2.1**
CGJI				S			**Sn**	**06 00 20.2**	**-4.6**
KASI	**Kota Agung**	**0.98**	**282**	P			**Pn**	**06 00 04.7**	**-0.5**
KASI				S			**Sn**	**06 00 23.7**	**-1.8**
KLI	**Kotabumi**	**1.04**	**325**	P			**Pn**	**06 00 06.2**	**+0.4**
KLI				S			**Sn**	**06 00 26.8**	**+0.2**
KLI	**Kotabumi**	**1.04**	**325**	P			**Pn**	**06 00 05.9**	**+0.1**
TNG	**Tangerang**	**1.26**	**111**	P			**Pn**	**06 00 06.9**	**-0.7**
TNG				P				06 00 07.0	
TNG				S			**Sn**	**06 00 28.5**	**-1.3**
TNG				S				06 00 28.7	
DBJI	**Dramaga**	**1.53**	**123**	P			**Pn**	**06 00 09.5**	**-0.6**
DBJI				S			**Sn**	**06 00 32.4**	**-1.9**
LWLI	**Liwa**	**1.56**	**297**	P			**Pn**	**06 00 11.0**	**+0.4**
LWLI				S			**Sn**	**06 00 34.7**	**-0.4**
SKJI	**Sukabumi**	**1.68**	**139**	P			**Pn**	**06 00 10.3**	**-1.3**
SKJI				S			**Sn**	**06 00 34.3**	**-2.8**
MDSI	**Maura Dua**	**1.77**	**314**	P			**Pn**	**06 00 13.3**	**+0.7**
MDSI				S			**Sn**	**06 00 38.5**	**-0.3**
LEM	**Lembang**	**2.41**	**117**	P			**Pn**	**06 00 19.9**	**0.0**
585nm,0.3s,baz=357,slow=4.1,SNR=190									
LEM				S			**Sn**	**06 00 51.1**	**-0.8**
686nm,0.3s,baz=72,slow=20,SNR=10									
LEM				LR			LR	06 01 17.0	
comp=Z,5μm,20.5s,baz=124,slow=41									
LEM	**Lembang**	**2.41**	**117**	P			**Pn**	**06 00 20.2**	**+0.2**
LEM				S			**Sn**	**06 00 51.3**	**-0.6**
MNAI	**Manna**	**2.84**	**298**	P			**Pn**	**06 00 25.7**	**+0.7**
MNAI				S			**Sn**	**06 01 00.2**	**-0.6**
MNAI	**Manna**	**2.84**	**298**	*e*Pn			**Pn**	**06 00 25.6**	**+0.6**
MNAI				*e*Sn			**Sn**	**06 00 58.8**	**-2.0**
PMBI	**Palembang**	**2.86**	**346**	P			**Pn**	**06 00 28.1**	**+2.8**
PMBI				S			**Sn**	**06 01 03.6**	**+2.1**
JCJI	**Jatiwangi**	**2.90**	**105**	P			**Pn**	**06 00 26.5**	**+0.8**
JCJI				S			**Sn**	**06 01 02.9**	**+0.8**
PPBI	**Pangkal Pinang**	**3.60**	**11**	P			**Pn**	**06 00 36.8**	**+2.2**
PPBI				S			**Sn**	**06 01 20.8**	**+2.7**
CMJI	**Cimerak**	**3.61**	**125**	P			**Pn**	**06 00 32.6**	**-2.0**
CMJI				S			**Sn**	**06 01 12.4**	**-5.6**
KPJI	**Karang Pucung**	**3.80**	**115**	P			**Pn**	**06 00 37.4**	**+0.3**
MASI	**Maura Aman, Be**	**4.11**	**309**	P			**Pn**	**06 00 42.4**	**+1.4**
MASI				S			**Sn**	**06 01 29.9**	**+0.3**
SMRI	**Semarang**	**5.12**	**105**	P			**Pn**	**06 00 55.2**	**+0.9**
5μm,0.9s,42μm15nm									
SMRI	**Semarang**	**5.12**	**105**	*e*Pn			**Pn**	**06 00 55.1**	**+0.9**
DSRI	**Dabo**	**5.29**	**350**	P			**Pn**	**06 00 58.4**	**+2.1**
3μm,1.1s,31μm7.8nm									
DSRI				S			**Sn**	**06 01 59.9**	**+2.8**
3μm,1.1s,31μm7.8nm									
KRJI	**Kerinci**	**5.38**	**312**	P			**Pn**	**06 00 58.4**	**+0.8**
1μm,0.9s,13μm5.3nm									
KRJI				S			**Sn**	**06 02 00.5**	**+1.1**
1μm,0.9s,13μm5.3nm									
UGM	**Wanagama**	**5.48**	**114**	P			**Pn**	**06 00 57.9**	**-1.0**
1μm,0.8s,20μm16nm									
UGM				S			**Sn**	**06 01 57.0**	**-4.7**
1μm,0.8s,20μm16nm									
UGM	**Wanagama**	**5.48**	**114**	*e*Pn			**Pn**	**06 00 57.8**	**-1.1**
WOJI	**Wonogiri, Jawa**	**5.82**	**111**	P			**Pn**	**06 01 02.6**	**-0.7**
550nm,0.9s,9μm7.3nm									
PPSI	**Pulau Pagai**	**6.18**	**298**	P			**Pn**	**06 01 07.5**	**-0.6**
1μm,0.5s,21μm6.6nm									
NGJI	**Ngawi**	**6.18**	**106**	P			**Pn**	**06 01 10.1**	**+1.9**
1μm,0.8s,12μm5.0nm									
RGRI	**Rengat**	**6.18**	**330**	P			**Pn**	**06 01 10.1**	**+1.9**
439nm,1.2s,47μm7.0nm									
PCJI	**Pacitan**	**6.18**	**114**	P			**Pn**	**06 01 06.9**	**-1.3**
573nm,0.5s,14μm18nm									
TPRI	**Tanjung Pinang**	**6.67**	**352**	P			**Pn**	**06 01 16.1**	**+1.6**
299nm,1.0s,23μm1.7nm									
PWJI	**Pagerwojo**	**6.70**	**110**	P			**Pn**	**06 01 14.0**	**-1.0**
440nm,0.5s,11μm16nm									
PBKI	**Pangkalan Bun**	**6.88**	**64**	P			**Pn**	**06 01 19.6**	**+2.2**
2μm,1.3s,19μm6.7nm									
PDSI	**Padang**	**6.91**	**314**	P			**Pn**	**06 01 16.3**	**-1.5**
152nm,0.5s,10μm1.6nm									
GRJI	**Gresik**	**7.08**	**100**	P			**Pn**	**06 01 21.8**	**+1.8**
2μm,0.9s,14μm5.9nm									
BKNI	**Bangkinang**	**7.46**	**324**	P			**Pn**	**06 01 25.4**	**+0.4**
366nm,1.4s,1.2nm									
BKNI	**Bangkinang**	**7.46**	**324**	*e*Pn			**Pn**	**06 01 24.9**	**-0.2**
MYKOM	**Kota Tinggi**	**7.64**	**348**	*e*Pn			**Pn**	**06 01 28.3**	**+0.9**
SISI	**Saibi**	**7.71**	**304**	P			**Pn**	**06 01 26.5**	**-1.9**
415nm,0.5s,6μm2.9nm									
STKI	**Sintang**	**8.32**	**46**	P			**Pn**	**06 01 39.6**	**+3.1**
520nm,1.1s,2.2nm									
GMJI	**Gumukmas**	**8.32**	**108**	P			**Pn**	**06 01 37.3**	**+0.8**
552nm,0.5s,8μm2.8nm									
BLJI	**Banyuglugur**	**8.33**	**104**	P			**Pn**	**06 01 36.6**	**+0.1**
688nm,0.5s,13μm3.7nm									
KSM	**Kuching**	**8.64**	**34**	*e*Pn			**Pn**	**06 01 40.5**	**-0.2**
MNSI	**Mandailing Nat**	**8.74**	**318**	P			**Pn**	**06 01 40.1**	**-1.9**
104nm,0.7s,9μm0.6nm									
JAGI	**Jajag, Banyuwa**	**9.05**	**108**	P			**Pn**	**06 01 44.8**	**-1.3**
2μm,0.5s,29μm									
JAGI	**Jajag, Banyuwa**	**9.05**	**108**	*e*Pn			**Pn**	**06 01 45.0**	**-1.1**
SRBI	**Singaraja**	**9.96**	**104**	P			**Pn**	**06 01 58.0**	**-0.1**
1μm,0.6s,8μm									
IGBI	**Denpasar**	**10.09**	**108**	P			**Pn**	**06 01 58.2**	**-1.6**
2μm,0.7s,13μm									
DNP	**Denpasar**	**10.11**	**107**	P			**Pn**	**06 01 59.0**	**-1.0**
2μm,0.5s,29μm									
DNP	**Denpasar**	**10.11**	**107**	P			**Pn**	**06 01 59.0**	**-1.0**
DNP				pmax			pmax		
comp=Z,2μm,0.5s									
GSI	**Gunungsitoli**	**10.52**	**311**	P			**Pn**	**06 02 02.0**	**-3.5**
GSI	**Gunungsitoli**	**10.52**	**311**	*e*Pn			**Pn**	**06 02 02.0**	**-3.5**
MTKI	**Muara Teweh, K**	**10.55**	**64**	P			**Pn**	**06 02 07.6**	**+1.8**
comp=Z,117nm,0.4s									
SBUM	**Sibu**	**10.56**	**40**	*e*Pn			**Pn**	**06 02 09.0**	**+3.0**
COCO	**West Island**	**10.66**	**232**	*e*Pn			**Pn**	**06 02 05.5**	**-1.8**
COCO	**West Island**	**10.66**	**232**	*i* P			**Pn**	**06 02 05.9**	**-1.4**
PSI	**Prapat**	**10.69**	**322**	P			**Pn**	**06 02 04.2**	**-3.5**
comp=Z,2.1nm,0.3s,baz=180,slow=12,SNR=15									
PSI				S			**Sn**	**06 03 59.9**	**-6.7**
comp=Z,1.2nm,0.3s,baz=0.0,slow=20,SNR=3.5									
PSI	**Prapat**	**10.69**	**322**	*e*Pn			**Pn**	**06 02 03.8**	**-4.0**
PSI				*e*Sn			**Sn**	**06 03 59.9**	**-6.7**
IPM	**Ipoh**	**11.06**	**336**	*e*Pn			**Pn**	**06 02 12.9**	**+0.4**
TWSI	**Taliwang, Sumb**	**11.72**	**105**	P			**Pn**	**06 02 17.7**	**-3.4**
KULM	**Kulim**	**11.95**	**336**	*e*Pn			**Pn**	**06 02 24.2**	**+0.3**
KCSI	**Kotacane, Aceh**	**11.97**	**320**	P			**Pn**	**06 02 20.7**	**-3.6**
TPTI		**12.17**	**317**	P			**Pn**	**06 02 23.4**	**-3.4**
BKB	**Balikpapan**	**12.25**	**69**	P			P	06 02 38.9	+5.7
PLAI	**Plampang**	**12.60**	**105**	P			**Pn**	**06 02 29.1**	**-3.3**
SMKI	**Samarinda**	**12.85**	**66**	P			P	06 02 46.0	+6.0
SGKI	**Sangatta, Kali**	**13.18**	**67**	P			P	06 02 53.5	+10
MLSI	**Meulaboh, Aceh**	**13.43**	**317**	P			**Pn**	**06 02 41.9**	**-1.0**
comp=Z,175nm,0.9s									
WBSI	**Waikabubak, Su**	**14.35**	**107**	P			**Pn**	**06 02 49.8**	**-4.6**
SPSI	**Sidrap Palu**	**14.37**	**84**	P			**P**	**06 02 56.0**	**-0.8**
comp=Z,44nm,1.1s,comp=Z,583nm									
TTSI	**Tana Toraja**	**14.56**	**80**	P			**P**	**06 03 00.5**	**+1.5**
comp=Z,125nm,1.0s,comp=Z,1μm									
BKSI	**Bulukumba**	**14.60**	**89**	P			**P**	**06 02 59.0**	**-0.4**
comp=Z,110nm,1.2s,comp=Z,837nm									
TRTT	**Trang**	**14.65**	**337**	P			**Pn**	**06 02 56.5**	**-1.6**
comp=Z,41nm,0.9s									
PCI	**Palu**	**15.13**	**72**	P			**P**	**06 03 07.5**	**+2.2**
comp=Z,456nm,1.5s,comp=Z,5μm									
PCI	**Palu**	**15.13**	**72**	P			**P**	**06 03 07.5**	**+2.2**
PCI				pmax			pmax		
comp=Z,456nm,1.5s									
WSI	**Waingapu**	**15.22**	**106**	P			**P**	**06 03 08.0**	**+1.7**
BASI	**Baing, Sumba**	**15.62**	**108**	P			**Pn**	**06 03 07.1**	**-3.1**
MPSI	**Mapaga**	**15.63**	**68**	P			**P**	**06 03 13.6**	**+2.8**
comp=Z,100nm,0.9s,comp=Z,2μm									
KKM	**Kota Kinabalu**	**15.88**	**43**	*e*Pn			**Pn**	**06 03 12.7**	**-0.6**
comp=Z,163nm,0.8s									
EDFI	**Ende, Flores**	**16.38**	**102**	P			**P**	**06 03 17.2**	**-2.0**
comp=Z,170nm,0.5s,comp=Z,3μm									
APSI	**Ampana**	**16.85**	**74**	P			**Pn**	**06 03 27.2**	**+2.1**
comp=Z,399nm,1.0s,comp=Z,3μm									
MMRI	**Maumere**	**16.90**	**101**	P			**P**	**06 03 25.1**	**+0.3**
comp=Z,562nm,0.7s									
MMRI	**Maumere**	**16.90**	**101**	*e*P			**P**	**06 03 23.6**	**-1.3**
comp=Z,371nm,0.7s									
MYLDM	**Lahad Datu**	**16.94**	**50**	*e*P			**Pn**	**06 03 29.5**	**+3.4**
comp=Z,491nm,0.7s									
MRSI	**Marisa**	**17.57**	**70**	P			**Pn**	**06 03 33.9**	**+0.2**
comp=Z,179nm,1.0s,comp=Z,2μm									
LUWI	**Luwuk**	**17.89**	**76**	P			**Pn**	**06 03 38.1**	**+0.6**
comp=Z,356nm,0.9s,comp=Z,7μm									
LUWI	**Luwuk**	**17.89**	**76**	*e*P			**P**	**06 03 36.5**	**+0.7**
comp=Z,230nm,0.8s									
BATI	**Baumata**	**18.57**	**105**	P			**P**	**06 03 44.0**	**+0.8**
comp=Z,143nm,0.3s,baz=270,slow=1.4,SNR=129									
BATI				S			**S**	**06 06 58.6**	**-7.5**
comp=Z,69nm,0.3s,baz=246,slow=20,SNR=5.7									
BATI	**Baumata**	**18.57**	**105**	P			**P**	**06 03 43.6**	**+0.5**
comp=Z,624nm,0.9s,comp=Z,6μm									
CHBT	**CHBT**	**18.62**	**350**	P			**Pn**	**06 03 44.8**	**-1.1**
comp=Z,619nm,1.2s,comp=Z,44μm									
GIRL	**Giralia**	**18.83**	**154**	P			**Pn**	**06 03 48.2**	**-0.2**
baz=19,SNR=48									
SOEI	**Soe**	**19.06**	**103**	P			**P**	**06 03 48.6**	**0.0**
comp=Z,469nm,0.7s,comp=Z,4μm									
SOEI	**Soe**	**19.06**	**103**	*e*P			**P**	**06 03 47.0**	**-1.6**
comp=Z,348nm,0.7s									
PHET	**Kaeng Krachan**	**19.40**	**343**	P			**Pn**	**06 03 53.7**	**-1.4**
comp=Z,28nm,0.9s,comp=Z,215nm									
MBWA	**Marble Bar**	**20.66**	**139**	*e*P			**P**	**06 04 06.5**	**+1.0**
comp=Z,31nm,0.8s									
SANI	**Sanana**	**20.80**	**81**	P			**P**	**06 04 08.6**	**+1.5**
comp=Z,61nm,0.9s,comp=Z,1μm									
SRDT	**SRDT**	**20.91**	**343**	P			**P**	**06 04 09.7**	**+1.5**
comp=Z,58nm,1.1s									
PAGZ	**Pagadian**	**22.39**	**53**	*e*P			**P**	**06 04 25.2**	**+1.7**
LBMI	**Labuha**	**22.58**	**78**	P			**P**	**06 04 27.9**	**+2.7**
comp=Z,669nm,0.9s,comp=Z,5μm									
PBKT	**Sadao Pong**	**22.59**	**349**	P			**P**	**06 04 24.2**	**-1.1**
comp=Z,114nm,1.2s									
PBKT	**Sadao Pong**	**22.59**	**349**	*e*P			**P**	**06 04 24.4**	**-0.9**
comp=Z,76nm,1.1s									
SKMP	**Bagumbayan, Su**	**22.60**	**58**	*e*P			**P**	**06 04 26.6**	**+1.2**
TNTI	**Ternate**	**22.81**	**74**	*e*P			**P**	**06 04 28.0**	**+0.7**
comp=Z,495nm,1.0s									
FITZ	**Fitzroy Crossi**	**23.23**	**124**	P			**P**	**06 04 30.8**	**-0.3**
baz=23,SNR=67									
FITZ	**Fitzroy Crossi**	**23.23**	**124**	*e*P			**P**	**06 04 30.8**	**-0.3**
comp=Z,61nm,0.8s									
GUIM	**Jordan**	**23.55**	**46**	*e*P			**P**	**06 04 35.4**	**+1.2**
DAV	**Davao City (W)**	**23.76**	**58**	P			**P**	**06 04 39.3**	**+3.3**
comp=Z,202nm,0.4s,baz=269,slow=1.0,SNR=18									
DAV	**Davao City (W)**	**23.76**	**58**	*e*P			**P**	**06 04 35.8**	**-0.2**
comp=Z,562nm,1.0s									
DAV	**Davao City (W)**	**23.76**	**58**	P			**P**	**06 04 40.4**	**+4.3**
SNR=13									
MEEK	**Meekatharra**	**24.29**	**150**	P			**P**	**06 04 41.2**	**+0.5**
baz=24,SNR=4.8									
RCP	**Roxas**	**24.30**	**45⇑**	*e*P			**P**	**06 04 42.4**	**+1.5**
CM01	**Chiang Mai Arr**	**24.83**	**345**	*e*P			**P**	**06 04 45.3**	**-0.3**
CM01				*e*PcP			**PcP**	**06 08 19.0**	**+1.5**
CM31	**Chiang Mai Arr**	**24.87**	**345**	*e*P			**P**	**06 04 45.3**	**-0.7**
CM31				*e*PcP			**PcP**	**06 08 19.2**	**+1.7**
CMAR	**Chiang Mai Arr**	**24.87**	**345**	P			**P**	**06 04 46.0**	**0.0**
comp=Z,33nm,0.6s,baz=180,slow=8.7,SNR=72									
CMAR				PcP			**PcP**	**06 08 19.2**	**+1.7**
comp=Z,15nm,0.7s,baz=202,slow=2.9,SNR=14									
CMAR				ScP			**ScP**	**06 11 42.1**	**+1.3**
comp=Z,19nm,0.8s,baz=200,slow=3.8,SNR=31									
KNRA	**Kununurra**	**24.91**	**115**	P			**P**	**06 04 45.6**	**-0.9**
baz=25,SNR=95									
QIZ	**Qiongzhong**	**24.98**	**10**	P			**P**	**06 04 48.9**	**+1.9**
QIZ				pP			**pP**	**06 05 22.9**	**+1.5**
QIZ				sP			**sP**	**06 05 43.1**	**+1.9**
QIZ				S			**S**	**06 09 01.2**	**+2.9**
Q

WB2	Warramunga Arr	31.44	119	*e*P	P	06 05 43.9 -0.6
WB2				*e*P	P	06 05 44.1 -0.4
WB2				*e*PcP	PcP	06 08 34.4 +0.5
PALU	Palau	31.73	66	P	P	06 05 46.9 -0.2
baz=32,SNR=8.5						
GYA	Guiyang	32.01	2⇑	*i*P	P	06 05 50.2 +0.7
GYA				pP	pP	06 06 29.6 +4.7
GYA				sP	sP	06 06 50.0 +5.6
GYA				PP	PP	06 07 06.4 +1.0
GYA				PcP	PcP	06 08 36.3 +0.9
GYA				S	S	06 10 51.8 +2.9
GYA				sS	sS	06 11 56.0 +4.6
GYA				ScP	ScP	06 12 03.8 +0.7
GYA				SS	SnSn	06 12 58.2 -1.7
GYA				pmax	pmax	
comp=Z,90nm,0.8s						
GYA				pmax	pmax	
comp=Z,140nm,5.6s						
CHLP	Challavanipeta	32.02	319	*e*P	P	06 05 49.8 +0.3
CHLP				IAmb	IAmb	06 05 51.9
comp=Z,41nm,1.0s						
SKHT	Srikalahasti	32.05	307	*e*P	P	06 05 50.2 +0.4
SKHT				IAmb	IAmb	06 05 52.2
comp=Z,241nm,0.9s						
TWG	Pinlang	32.22	28	*e*P	P	06 05 52.3 +1.1
comp=Z,345nm,1.0s						
AS31	Alice Springs	32.67	126	*e*P	P	06 05 55.3 0.0
comp=Z,28nm,0.3s						
AS31				*e*PcP	PcP	06 08 37.8 +0.5
AS31				*e*S	S	06 10 57.3 -1.9
ASAR	Alice Springs	32.67	126	P	P	06 05 55.4 +0.1
comp=Z,31nm,0.3s,baz=297,slow=7.9,SNR=460						
ASAR				PcP	PcP	06 08 37.8 +0.5
comp=Z,20nm,0.7s,baz=312,slow=2.3,SNR=17						
ASAR				S	S	06 10 57.3 -1.8
comp=Z,31nm,0.9s,baz=293,slow=16,SNR=27						
ASAR				ScP	ScP	06 12 06.2 +0.7
comp=Z,34nm,0.8s,baz=304,slow=3.1,SNR=21						
ASAR				ScS	ScS	06 16 05.0 -0.8
comp=Z,6.0nm,0.9s,baz=294,slow=5.0,SNR=6.4						
ASAR				P3KPbc		06 37 15.3
comp=Z,0.7nm,0.6s,baz=116,slow=4.2,SNR=9.7						
ASAR				P3KP		06 38 31.2
comp=Z,0.9nm,0.8s,baz=39,slow=3.6,SNR=6.2						
AS01	Alice Springs	32.71	126	*e*P	P	06 05 54.8 -0.8
PVM	Polavaram	32.80	315	*e*P	P	06 05 56.5 +0.2
PVM				IAmb	IAmb	06 05 58.3
comp=Z,55nm,1.0s						
YULB	Yu-li	32.82	28	*e*P	P	06 05 57.6 +1.1
comp=Z,75nm,0.8s						
YULB				*e*PcP	PcP	06 08 37.3 -0.2
DGAR	Diego Garcia	32.83	265⇑	*i*P	P	06 05 55.2 -1.4
SSLB	Suanglung	33.00	27	*e*P	P	06 05 59.8 +1.8
comp=Z,110nm,0.8s						
SSLB				*e*PcP	PcP	06 08 38.9 +0.9
NACB	Ninganchiao	33.63	27	*e*P	P	06 06 03.9 +0.5
comp=Z,58nm,0.8s						
SHL	Shillong	33.79	338	*e*P	P	06 06 04.6 -0.4
comp=Z,371nm,1.5s						
SHL	Shillong	33.79	338	*e*P	P	06 06 04.6 -0.4
SHL				pmax	pmax	
comp=Z,371nm,1.5s						
YHNB	Yeheng	33.96	27	*e*P	P	06 06 07.3 +0.9
comp=Z,564nm,2.0s						
NJS	Nagarjunasagar	34.05	311	*e*P	P	06 06 07.1 -0.1
NJS				IAmb	IAmb	06 06 08.7
comp=Z,112nm,1.0s						
SRLM	Srisailam	34.08	310	*e*P	P	06 06 07.4 -0.1
SRLM				IAmb	IAmb	06 06 09.1
comp=Z,158nm,1.0s						
YOJ	Yonaguni jima	34.54	29	*e*P	P	06 06 11.3 +0.1
comp=Z,182nm,0.7s						
YOJ	Yonaguni jima	34.54	29	*e*P	P	06 06 11.3 +0.1
YOJ				pmax	pmax	
comp=Z,182nm,0.7s						
URV	Uravakonda	34.69	307	*e*P	P	06 06 12.6 -0.1
URV				IAmb	IAmb	06 06 14.5
comp=Z,225nm,1.0s						
GENI	Genyem	34.75	86	P	P	06 06 12.8 -0.5
comp=Z,182nm,1.2s						
HYB	Hyderabad	35.14	311⇓	*i*P	P	06 06 17.5 +0.9
comp=Z,140nm,1.0s						
HYBB	Hyderabad (bro	35.15	311	*e*P	P	06 06 16.7 +0.1
HYBB				IAmb	IAmb	06 06 18.0
comp=Z,136nm,1.1s						
JAY	Jayapura	35.30	86	P	P	06 06 16.8 -1.2
comp=Z,61nm,0.8s,baz=261,slow=7.7,SNR=18						
JAY	Jayapura	35.30	86	P	P	06 06 16.9 -1.1
comp=Z,585nm,1.1s						
RPR	Rampur	35.52	314	*e*P	P	06 06 19.7 0.0
RPR				IAmb	IAmb	06 06 22.0
comp=Z,92nm,1.1s						
ENH	Enshi	36.00	6	*e*P	P	06 06 23.7 0.0
comp=Z,86nm,0.8s						
ENH				*e*PcP	PcP	06 08 47.6 +1.0
SRSP	Sriramsagar	36.25	313	*e*P	P	06 06 25.5 -0.4
SRSP				IAmb	IAmb	06 06 28.1
comp=Z,141nm,1.1s						
QIS	Mount Isa	36.26	117	P	P	06 06 26.1 -0.1
baz=36,SNR=55						
CD2	Chengdu	36.47	358	P	P	06 06 27.3 -0.4
CD2				pP	pP	06 07 04.0 +0.3
CD2				sP	sP	06 07 24.1 +1.1
CD2				PP	PP	06 07 54.5 +0.1
CD2				PcP	PcP	06 08 46.4 -1.6
CD2				S	S	06 11 58.0 +0.9
CD2				sS	sS	06 13 03.1 +2.8
CD2				pmax	pmax	
comp=Z,150nm,0.9s						
CD2				pmax	pmax	
comp=Z,350nm,5.3s						
ODAN	Odare	36.82	332	*e*P	P	06 06 30.6 -0.3
comp=Z,153nm,0.7s						
KLRI	Killari	37.01	310	*e*P	P	06 06 32.4 -0.1
KLRI				IAmb	IAmb	06 06 34.0
comp=Z,351nm,1.0s						
WHN	Wuhan	37.06	13⇑	*i*P	P	06 06 33.9 +1.3
WHN				sP	sP	06 07 27.0 -0.9
WHN				PcP	PcP	06 08 50.8 +1.1
WHN				S	S	06 12 10.4 +4.5
WHN				pmax	pmax	
comp=Z,160nm,1.2s						
WHN				pmax	pmax	
comp=Z,630nm,9.9s						
WHN				LR	LR	
comp=Z,640nm,13.6s						
WHN				LR	LR	
comp=Z,1μm,14.7s						
WHN				LR	LR	
comp=Z,760nm,20.2s						
TAPN	Taplejung	37.09	333	*e*P	P	06 06 33.6 +0.3
comp=Z,402nm,1.0s						
RAMN	Ramite	37.26	332	*e*P	P	06 06 34.6 -0.1
comp=Z,96nm,0.6s						
LSA	Lhasa	37.81	339	*e*P	P	06 06 39.9 +0.4
comp=Z,214nm,1.0s						
LSA				*e*S	S	06 12 20.2 +1.9
LSA	Lhasa	37.81	339	P	P	06 06 39.6 +0.1
LSA	Lhasa	37.81	339	*e*P	P	06 06 39.9 +0.4
LSA				*e*S	S	06 12 20.2 +1.9
LSA				pmax	pmax	
comp=Z,214nm,1.0s						
COEN	Coen	38.01	105	P	P	06 06 39.7 -1.2
baz=38,SNR=55						
COEN	Coen	38.01	105	*e*P	P	06 06 39.6 -1.3
comp=Z,61nm,0.6s						
JIRN	Jiri	38.05	332	*e*P	P	06 06 41.2 -0.3
comp=Z,244nm,0.6s						
PKIN	Phulchoki	38.37	331	*e*P	P	06 06 43.7 -0.3
comp=Z,22nm,0.3s						
GUN	Gumba	38.41	331	*e*P	P	06 06 44.1 -0.4
comp=Z,289nm,0.8s						
DMN	Daman	38.53	330	*e*P	P	06 06 44.7 -0.7
comp=Z,341nm,1.1s						
KKN	Kakani	38.60	331	*e*P	P	06 06 45.5 -0.4
comp=Z,166nm,0.8s						
GKN	Gorkha	39.09	330	*e*P	P	06 06 49.4 -0.5
comp=Z,100nm,0.4s						
JOW	Kunigami	39.19	33	P	P	06 06 51.3 +0.8
comp=Z,30nm,0.7s,baz=315,slow=14,SNR=8.6						
BBOO	Buckleboo	39.22	137	P	P	06 06 50.8 +0.1
baz=39,SNR=33						
BBOO	Buckleboo	39.22	137	*e*P	P	06 06 50.7 -0.1
comp=Z,34nm,0.8s						
POO	Poona	39.40	308⇑	*i*PS	P	06 06 49.0 -3.4
comp=Z,300nm,1.0s						
KOLN	Koldanda	39.43	329	*e*P	P	06 06 52.3 -0.4
comp=Z,236nm,0.8s						
NJ2	Nanjing	39.68	18	*e*P	P	06 06 55.8 +1.3
NJ2				PcP	PcP	06 08 58.6 +0.7
NJ2				pmax	pmax	
comp=Z,57nm,0.9s						
XAN	Xi'an	39.68	5⇑	P	P	06 06 54.7 +0.1
XAN				pP	pP	06 07 33.5 +2.4
XAN				PcP	PcP	06 08 58.4 +0.4
XAN				ScP	ScP	06 12 30.9 -0.1
XAN				S	S	06 12 49.3 +3.9
XAN				sS	sS	06 13 49.6 +0.2
XAN				ScS	ScS	06 16 40.3 -3.8
XAN				pmax	pmax	
comp=Z,110nm,1.2s						
XAN				LR	LR	
comp=Z,280nm,13.2s						
XAN				LR	LR	
comp=Z,290nm,17.2s						
DANN	Dangsing	39.82	329	*e*P	P	06 06 55.3 -0.8
comp=Z,411nm,1.0s						
MTSU	Mount Surprise	39.87	111	P	P	06 06 56.7 +0.4
baz=40,SNR=113						
PYUN	Piuthan	40.01	328	*e*P	P	06 06 56.9 -0.7
PMG	Port Moresby	41.48	98	P	P	06 07 09.4 -0.2
comp=Z,131nm,0.7s,baz=269,slow=4.6,SNR=44						
PMG				ScP	ScP	06 12 39.0 +0.5
comp=Z,20nm,0.7s,baz=284,slow=4.6,SNR=5.9						
PMG	Port Moresby	41.48	98	*e*P	P	06 07 08.9 -0.7
comp=Z,153nm,0.8s						
HTT	Hallett	41.54	136	P	P	06 07 10.4 +0.5
baz=42,SNR=38						
LZH	Lanzhou	41.62	358	⇓P	P	06 07 11.0 +0.5
LZH				pP	pP	06 07 49.1 +1.8
LZH				sP	sP	06 08 09.8 +3.4
LZH				PP	PP	06 08 52.0 +1.6
LZH				PcP	PcP	06 09 05.8 +1.4
LZH				ScP	ScP	06 12 38.9 +0.2
LZH				PcS	PcS	06 12 57.1 +1.0
LZH				S	S	06 13 14.2 -0.1
LZH				sS	sS	06 14 24.3 +5.7
LZH				pmax	pmax	
comp=Z,150nm,1.2s						
LZH				pmax	pmax	
comp=Z,580nm,4.3s						
LZH				LR	LR	
comp=Z,310nm,11.7s						
LZH				LR	LR	
comp=Z,470nm,12.0s						
LZH				LR	LR	
comp=Z,590nm,12.5s						
MANU	Manus Island	41.96	87	*e*P	P	06 07 13.1 -0.5
comp=Z,74nm,0.8s						
CTA	Charters Tower	42.11	114	P	P	06 07 15.4 +0.7
comp=Z,55nm,0.8s,baz=284,slow=11,SNR=36						
CTA				PcP	PcP	06 09 06.7 +0.5
comp=Z,9.7nm,0.5s,baz=292,slow=4.8,SNR=5.2						
CTA				ScP	ScP	06 12 42.1 +1.2
comp=Z,23nm,0.8s,baz=282,slow=6.6,SNR=13						
CTAO	Charters Tower	42.11	114	*e*P	P	06 07 15.5 +0.9
comp=Z,177nm,1.5s						
CTAO	Charters Tower	42.11	114	*e*P	P	06 07 15.5 +0.9
CTAO				pmax	pmax	
comp=Z,177nm,1.5s						
QLP	Quilpie	42.37	124	P	P	06 07 17.7 +1.1
baz=42,SNR=16						
STKA	Stephens Creek	42.63	132	P	P	06 07 19.2 +0.6
comp=Z,68nm,0.5s,baz=311,slow=7.6,SNR=210						
STKA				ScP	ScP	06 12 43.8 +1.0
comp=Z,5.3nm,0.7s,baz=308,slow=4.1,SNR=3.2						
STKA				LR	LR	06 27 47.4
comp=Z,81nm,18.1s,baz=331,slow=40						
STKA	Stephens Creek	42.63	132	P	P	06 07 19.2 +0.6
baz=43,SNR=127						
STKA	Stephens Creek	42.63	132	*e*P	P	06 07 19.3 +0.6
comp=Z,17nm,0.6s						
STKA				*e*		06 27 47.4
STKA	Stephens Creek	42.63	132	*e*P	P	06 07 19.3 +0.7
STKA				pmax	pmax	
comp=Z,17nm,0.6s						
TIA	Tai'an	43.13	14	P	P	06 07 22.5 0.0
TIA				pmax	pmax	
comp=Z,35nm,1.0s						
GUMO	Guam	43.58	64	P	P	06 07 25.4 -1.1
comp=Z,94nm,0.4s,baz=193,slow=4.0,SNR=12						
GUMO	Guam	43.58	64	*e*P	P	06 07 25.1 -1.4
comp=Z,108nm,0.8s						
GUMO				*e*P	P	06 07 25.4 -1.1
TIY	Taiyuan	43.70	8	*e*P	P	06 07 28.2 +1.0
TIY				pmax	pmax	
comp=Z,91nm,1.0s						
TIY				pmax	pmax	
comp=Z,280nm,5.7s						
GTA	Gaotai	45.21	354	⇑P	P	06 07 39.9 +0.7
GTA				pP	pP	06 08 17.2 +0.7
GTA				sP	sP	06 08 38.5 +3.0
GTA				PcP	PcP	06 09 17.2 +0.8
GTA				PP	PP	06 09 30.1 +1.6
GTA				ScP	ScP	06 12 53.4 +0.2
GTA				PcS	PcS	06 13 09.8 -0.8
GTA				S	S	06 14 06.6 +0.2
GTA				sS	sS	06 15 14.8 +3.3
GTA				ScS	ScS	06 17 17.0 -1.3
GTA				SS	SS	06 17 27.8 -4.4
GTA				pmax	pmax	
comp=Z,190nm,1.0s						
GTA				pmax	pmax	
comp=Z,410nm,5.4s						
GTA				LR	LR	
comp=Z,100nm,20.6s						
GTA				LR	LR	
comp=Z,120nm,20.9s						
GTA				LR	LR	
comp=Z,140nm,22.2s						
ARPS	Mount Arapiles	45.38	138	P	P	06 07 42.0 +1.5
baz=46,SNR=11						
JNU	Nakatsue	45.55	30	P	P	06 07 42.1 +0.2
comp=Z,266nm,1.1s,baz=187,slow=3.7,SNR=47						
JNU				ScP	ScP	06 12 55.1 +0.4
comp=Z,19nm,0.9s,baz=64,slow=4.8,SNR=7.5						
JNU	Nakatsue	45.55	30	*e*P	P	06 07 41.8 -0.1
comp=Z,310nm,1.1s						
CMSA	Cobar Meteorol	45.56	129	P	P	06 07 42.8 +0.8
baz=46,SNR=103						
RMQ	Roma	46.13	122	P	P	06 07 47.9 +1.3
baz=46,SNR=7.4						
BJT	Baijiatuau	46.58	11	*e*P	P	06 07 50.7 +1.0
comp=Z,134nm,0.8s						
BJT				*e*PcP	PcP	06 09 22.1 +1.1
BJT	Baijiatuau	46.58	11	*e*P	P	06 07 50.7 +1.0
BJT				*e*		06 09 22.1
BJT				pmax	pmax	
comp=Z,134nm,0.8s						
BJI	Beijing	46.60	11	*e*P	P	06 07 50.6 +0.8
BJI				pmax	pmax	
comp=Z,120nm,0.8s						
TJN	Taejon	46.64	24⇑	*i*P	P	06 07 50.8 +0.5
HHC	Hu-ho-hao-te	46.69	6	*e*P	P	06 07 52.6 +1.9
HHC				pmax	pmax	
comp=Z,65nm,0.9s						
DL2	Dalian	46.87	17	P	P	06 07 52.5 +0.5
DL2				pmax	pmax	
comp=Z,67nm,1.0s						
KS15	Wonju Array Si	47.77	24	*e*P	P	06 08 00.5 +1.5
KS15				*e*PcP	PcP	06 09 26.2 +0.9
KSAR	Wonju Array Be	47.77	24	P	P	06 08 00.1 +1.2
KSAR				PcP	PcP	06 09 26.2 +0.9
KSAR	Wonju Array Be	47.77	24	P	P	06 08 00.2 +1.2
KSAR						06 09 26.2
EIDS	Eidsvold	47.79	119	P	P	06 08 00.3 +0.9
baz=48,SNR=12						
EIDS	Eidsvold	47.79	119	*e*P	P	06 08 00.1 +0.6
comp=Z,65nm,1.3s						
KSRS	Korea Array	47.80	24	P	P	06 08 00.1 +1.0
comp=Z,59nm,0.9s,baz=205,slow=8.0,SNR=127						
KSRS				PcP	PcP	06 09 26.2 +0.8
comp=Z,19nm,0.9s,baz=206,slow=3.5,SNR=11						
KSRS				ScP	ScP	06 13 04.1 +0.2
comp=Z,23nm,0.9s,baz=210,slow=4.3,SNR=36						
KS01	Wonju Array Si	47.80	24	*e*P	P	06 07 59.9 +0.7
CBIJ	Chichi jima	48.23	46	P	P	06 08 00.6 -2.1
JCJ	Chichijima	48.23	46	P	P	06 08 00.6 -2.1
comp=Z,54nm,0.5s,baz=294,slow=19,SNR=9.2						
TOO	Toolangi	48.27	137	P	P	06 08 05.6 +2.6
baz=48,SNR=5.5						
YNG	Young	48.80	131	P	P	06 08 08.1 +1.0
baz=49,SNR=19						
NIL	Nilore	49.63	324	*e*P	P	06 08 12.3 -1.1
comp=Z,241nm,1.1s						
NIL				*e*S	S	06 15 09.3 +0.4
NIL	Nilore	49.63	324	*e*P	P	06 08 12.3 -1.1
NIL				*e*S	S	06 15 09.3 +0.4
NIL				pmax	pmax	
comp=Z,241nm,1.1s						
CAN	Canberra	49.69	132	*e*P	P	06 08 14.2 +0.4
comp=Z,28nm,0.9s						
CAN	Canberra	49.69	132	*e*P	P	06 08 14.2 +0.4
CAN				pmax	pmax	
comp=Z,28nm,0.9s						
ARMA	Armidale	49.82	125	P	P	06 08 17.0 +2.1
baz=50,SNR=7.6						
CNB	Canberra Magne	49.96	132	P	P	06 08 17.0 +1.2
baz=50,SNR=6.2						
SNY	Shenyang	50.14	18	⇑P	P	06 08 16.5 -0.4
SNY				pmax	pmax	
comp=Z,71nm,1.3s						
MGCD	Mangrove Creek	50.42	129	P	P	06 08 20.6 +1.3
baz=50,SNR=16						
INU	Inuyama	50.50	34	*e*P	P	06 08 19.0 -0.8
comp=Z,77nm,1.1s						
WMQ	Urumqi	51.86	344	P	P	06 08 30.0 +0.1
WMQ				PcP	PcP	06 09 41.8 +1.5
WMQ				ScP	ScP	06 13 22.4 +1.1
WMQ				S	S	06 15 39.2 -0.1
WMQ				ScS	ScS	06 18 01.1 -1.6
WMQ				pmax	pmax	
comp=Z,400nm,1.1s						
WMQ				pmax	pmax	
comp=Z,390nm,3.7s						
WMQ				LR	LR	
comp=Z,140nm,21.5s						
MAJO	Matsushiro	52.03	34	*e*P	P	06 08 30.4 -0.8
comp=Z,79nm,0.7s						
MAJO				*e*PcP	PcP	06 09 42.1 +1.0
MAJO	Matsushiro	52.03	34	*c i*P	P	06 08 29.8 -1.4
MAJO				pmax	pmax	
comp=Z,59nm,0.6s						
MAT	Matsushiro	52.03	34	P	P	06 08 29.9 -1.3
MJAR	Matsushiro Arr	52.03	34	P	P	06 08 30.2 -0.9
comp=Z,58nm,0.5s,baz=213,slow=8.2,SNR=151						
MJAR				PcP	PcP	06 09 42.1 +1.0
comp=Z,16nm,0.7s,baz=213,slow=4.8,SNR=7.9						
MJAR				ScP	ScP	06 13 21.9 -0.3
comp=Z,7.2nm,0.8s,baz=208,slow=5.0,SNR=9.9						
MJB9	Matsu-Tunnel	52.03	34	*e*P	P	06 08 30.6 -0.6
comp=Z,82nm,0.7s						
CN2	Changchun	52.50	18	⇑P	P	06 08 34.2 -0.3
CN2				pmax	pmax	
comp=Z,270nm,1.0s						
CN2				pmax	pmax	
comp=Z,600nm,4.0s						
KSH	Kashi	52.61	331⇑	*i*P	P	06 08 33.7 -1.8
KSH				pP	pP	06 09 13.2 -0.7
KSH				S	S	06 15 40.2 -10
KSH				sS	sS	06 16 57.7 +1.1
KSH				SS	SS	06 19 29.4 -1.3
KSH				pmax	pmax	
comp=Z,180nm,1.0s						
KSH				LR	LR	
comp=Z,230nm,7.5s						
KSH				LR	LR	
comp=Z,290nm,6.6s						
KBL	Kabul	52.76	322	*e*P	P	06 08 36.4 -0.4
comp=Z,182nm,1.4s						
KBL	Kabul	52.76	322	*e*P	P	06 08 36.4 -0.4
KBL				pmax	pmax	
comp=Z,182nm,1.4s						
SONA0	Songino Array	53.34	1	*e*P	P	06 08 41.5 +0.8
SONA0				*e*PcP	PcP	06 09 46.4 +0.5
SONA0				*e*		06 33 00.0
SONM	Songino Array	53.34	1	P	P	06 08 41.5 +0.8
comp=Z,114nm,0.9s,baz=176,slow=8.8,SNR=482						
SONM				PcP	PcP	06 09 46.4 +0.5
comp=Z,63nm,0.8s,baz=178,slow=4.2,SNR=25						
SONM				ScP	ScP	06 13 27.6 -0.1
comp=Z,10nm,0.8s,baz=175,slow=4.2,SNR=14						
SONM				LR	LR	06 33 00.0
comp=Z,112nm,19.5s,baz=170,slow=38						
SONM				P4KPbc		06 46 00.6
comp=Z,1.2nm,0.8s,baz=178,slow=4.0,SNR=4.4						
SONM	Songino Array	53.34	1	P	P	06 08 41.5 +0.8
SONM						06 09 46.4
SONM				pmax	pmax	
comp=Z,116nm,0.9s						
SONM				MLR	MLR	
comp=Z,112nm,19.5s						
SONA1	Songino Array	53.35	1	*e*P	P	06 08 41.5 +0.8
ULN	Ulaanbaatar	53.38	1	*e*P	P	06 08 41.9 +0.8
comp=Z,106nm,0.8s						
ULN	Ulaanbaatar	53.38	1	P	P	06 08 41.8 +0.8
SNR=48						
ULN	Ulaanbaatar	53.38	1	*c i*P	P	06 08 41.6 +0.6
ULN				pmax	pmax	
comp=Z,82nm,0.8s						
MSHR	Mys Shultsa	53.46	23	*d i*P	P	06 08 42.3 +0.8
WBK	Wadi Bani Khal	53.47	303	P	P	06 08 43.5 +1.5
SNR=6.3						
TARG	Taragay, Kyrgy	53.56	334	*e*P	P	06 08 41.7 -1.1
comp=Z,50nm,1.1s						
PRZ	Przheval'sk	53.92	335	*e*P	P	06 08 45.6 +0.5
PRZ	Przheval'sk	53.92	335	*e*P	P	06 08 45.6 +0.5
WSAR	Wadi Sarin	54.03	304	P	P	06 08 47.7 +1.6
comp=Z,47nm,0.8s,baz=119,slow=8.6,SNR=32						
SHLS	Shalkode	54.06	337⇑	*i*P	P	06 08 44.9 -1.1
comp=Z,64nm,0.8s						
SHLS				*i* S	S	06 16 07.0 -2.3
JMDO	Jabal Madar	54.09	303	P	P	06 08 48.9 +2.4
SNR=5.7						
NRN	Naryn	54.12	333	*e*P	P	06 08 45.1 -1.6
comp=Z,79nm,1.0s						
NRN				*e*PcP	PcP	06 09 50.9 +1.6
NRN	Naryn	54.12	333	*e*P	P	06 08 45.1 -1.6
NRN				*e*		06 09 50.9
NRN				pmax	pmax	
comp=Z,79nm,1.0s						
PATS	Pohnpei	54.20	77	P	P	06 08 46.8 -0.6
baz=54,SNR=3.4						
UZB	Uzynbulak	54.23	336⇑	*i*P	P	06 08 46.9 -0.3
comp=Z,35nm,0.9s						
UZB				*e*PP	PP	06 10 50.3 -0.6
UZB				*e*S	S	06 16 11.2 -0.4
SATY	Saty	54.40	336⇑	*e*P	P	06 08 48.2 -0.3
comp=Z,60nm,1.0s						
SATY				*e*S	S	06 16 13.3 -0.5
SMDO	Samad	54.43	304	P	P	06 08 51.0 +2.0
SNR=9.8						
ZHN	Zhinishke	54.48	336⇑	*e*P	P	06 08 48.4 -0.7
comp=Z,20nm,1.0s						
ZHN				*e*S	S	06 16 14.0 -0.8
BIDO	Bidbid	54.57	304	P	P	06 08 51.6 +1.7
SNR=22						
MDJ	Mudanjiang	54.61	21	P	P	06 08 47.7 -2.1
MDJ				pP	pP	06 09 26.8 -1.6
MDJ				sP	sP	06 09 46.2 -0.8
MDJ				S	S	06 16 17.1 +0.9
MDJ				sS	sS	06 17 26.4 +3.0
MDJ				pmax	pmax	
comp=Z,130nm,0.8s						
MDJ	Mudanjiang	54.61	21	*e*P	P	06 08 50.1 +0.4
comp=Z,90nm,0.8s						
KPKS	Kokpek	54.63	336⇑	*i*P	P	06 08 49.4 -0.7
comp=Z,46nm,0.9s						
KPKS				*e*S	S	06 16 15.9 -0.9
ULHL	Ulahol	54.66	334	P	P	06 08 49.5 -1.0
SNR=46						
KZA	Kyzart	54.97	333	P	P	06 08 52.4 -0.5
SNR=80						
BSY	Bisya	55.01	303	P	P	06 08 55.7 +2.6
SNR=18						
MDOK	Medeo	55.05	335	*i* P	P	06 08 52.6 -0.6
comp=Z,711nm,1.4s						
MDOK				*e*PP	PP	06 10 57.9 -0.4
MDOK				*e*S	S	06 16 22.1 -0.4
AAA	Alma-Ata	55.14	335	*e*P	P	06 08 53.8 +0.1
comp=Z,41nm,0.9s						
USRK	Ussuriysk Ar.	55.15	23	P	P	06 08 54.1 +0.4
comp=Z,294nm,0.7s,baz=210,slow=6.0,SNR=273						
USRK				ScP	ScP	06 13 35.5 -0.1
comp=Z,7.6nm,0.9s,baz=198,slow=4.1,SNR=4.9						
HOQ	Hoqain	55.27	304	P	P	06 08 56.9 +2.0
SNR=17						

UCH	Uchtor	55.42	332	P	P	06 08 55.5 -0.7
	SNR=26					
TKM2	Tokmak 2	55.48	334	P	P	06 08 55.4 -1.0
	SNR=129					
KBK	Karagaybulak	55.56	333	P	P	06 08 56.6 -0.2
	SNR=52					
AML	Almayashu	55.73	332	P	P	06 08 58.2 -0.1
	SNR=14					
AAK	Ala-Archa	55.75	333	ScP	ScP	06 13 38.6 +0.2
	comp=Z,15nm,0.9s,baz=163,slow=5.4,SNR=12					
AAK	Ala-Archa	55.75	333	P	P	06 08 57.7 -0.5
	SNR=21					
AAK	Ala-Archa	55.75	333	eP	P	06 08 57.7 -0.5
	comp=Z,41nm,0.9s					
AAK	Ala-Archa	55.75	333	P	P	06 08 57.8 -0.5
AAK	Ala-Archa	55.75	333	P	P	06 08 57.6 -0.7
AAK	Ala-Archa	55.75	333	P	P	06 08 57.2 -1.0
AAK				pmax	pmax	
	comp=Z,33nm,1.1s					
ARQ	Araqi	55.82	303	P	P	06 09 00.6 +1.7
FRU	Bishkek	55.85	333	eP	P	06 09 00.0 +1.2
FRU				e		06 09 59.0
FRU				pmax	pmax	
	comp=Z,140nm,1.8s					
ZAK	Zakamensk	55.91	358	eP	P	06 08 59.1 0.0
ZAK				e		06 09 56.2
ZAK				pmax	pmax	
	comp=Z,56nm,1.1s					
CHMS	Chumysh	55.92	333	P	P	06 08 58.7 -0.6
	SNR=11					
KUU	Kurty	55.94	335⇑	eP	P	06 08 58.2 -1.2
	comp=Z,95nm,1.0s					
ZSN	Zaisan	55.98	343⇑	iP	P	06 08 59.6 0.0
	comp=Z,14nm,0.8s					
TDK	Taldyqorghan	56.02	337	eP	P	06 08 59.2 -0.8
	comp=Z,80nm,0.8s					
EKS2	Erkin-Say	56.10	332	P	P	06 09 00.3 -0.4
	SNR=112					
SOHO	SOHO	56.15	304	i P	P	06 09 02.0 +0.8
	SNR=22					
MK01	Makanchi Array	56.16	341	eP	P	06 09 00.1 -0.7
HIA	Hailar	56.17	11	eP	P	06 09 00.9 +0.1
	comp=Z,101nm,0.8s					
HIA	Hailar	56.17	11	c iP	P	06 09 00.7 -0.2
HIA				pmax	pmax	
	comp=Z,100nm,0.9s					
MK31	Makanchi Array	56.18	341	eP	P	06 09 00.2 -0.9
MK31	Makanchi Array	56.18	341	eP	P	06 09 00.2 -0.9
MK32	Makanchi Array	56.18	341	eP	P	06 09 00.2 -0.8
MKAR	Makanchi Array	56.18	341	P	P	06 09 00.2 -0.8
	comp=Z,69nm,0.7s,baz=144,slow=7.9,SNR=562					
MKAR				PcP	PcP	06 09 57.5 +0.8
	comp=Z,31nm,0.9s,baz=126,slow=6.2,SNR=11					
MKAR				ScP	ScP	06 13 40.5 +0.4
	comp=Z,6.9nm,0.9s,baz=139,slow=6.3,SNR=6.5					
MKAR				P4KPbc		06 46 14.7
	comp=Z,2.1nm,0.7s,baz=140,slow=6.9,SNR=21					
MKAR	Makanchi Array	56.18	341	eP	P	06 09 00.2 -0.8
	comp=Z,399nm,0.7s					
MKAR				PcP	PcP	06 09 57.5 +0.8
MKAR				e		06 46 14.7
USP	Ospenovka	56.24	333	P	P	06 09 00.6 -1.0
	SNR=24					
MAKZ	Makanchi	56.30	341	eP	P	06 09 01.1 -0.8
	comp=Z,57nm,1.1s					
MAKZ	Makanchi	56.30	341	eP	P	06 09 01.1 -0.8
MAKZ				pmax	pmax	
	comp=Z,57nm,1.1s					
ALNE	Al Ain	56.76	304	i P	P	06 09 06.7 +1.1
	SNR=9.0					
UOSS	Minazif	56.77	305	eP	P	06 09 06.3 +0.7
	comp=Z,50nm,0.9s					
UOSS	Minazif	56.77	305	P	P	06 09 06.0 +0.4
UOSS	Minazif	56.77	305	i P	P	06 09 05.8 +0.2
	SNR=19					
HATD	Hatta, Dubai	56.77	305	P	P	06 09 07.2 +1.6
	SNR=27					
HATD	Hatta, Dubai	56.77	305	i P	P	06 09 06.6 +1.0
	SNR=39					
MDH	Madha	56.84	305	i P	P	06 09 05.8 -0.3
	SNR=28					
MSFE	Esma-Masafi	56.98	305	i P	P	06 09 08.3 +1.2
	SNR=18					
BANOM	Banah	57.12	306	P	P	06 09 09.1 +1.0
	SNR=5.0					
BANOM	Banah	57.12	306	i P	P	06 09 08.7 +0.7
	SNR=11					
TLY	Talaya	57.20	359	eP	P	06 09 09.3 +1.2
	comp=Z,81nm,1.1s					
TLY	Talaya	57.20	359	P	P	06 09 09.3 +1.2
	SNR=35					
TLY	Talaya	57.20	359	c iP	P	06 09 09.1 +1.0
TLY				pmax	pmax	
	comp=Z,88nm,1.2s					
NAZ	Nazwa, Dubai	57.23	304	P	P	06 09 09.7 +0.9
	SNR=14					
NAZ	Nazwa, Dubai	57.23	304	i P	P	06 09 09.7 +0.9
	SNR=13					
MOY	Mondy	57.30	357	eP	P	06 09 09.5 +0.6
MOY				pmax	pmax	
	comp=Z,111nm,2.7s					
SHME	Shamm	57.30	306	i P	P	06 09 10.0 +0.6
	SNR=9.4					
ASUD	Al Ashush, Dub	57.35	304	P	P	06 09 11.1 +1.5
	SNR=10.0					
ASUD	Al Ashush, Dub	57.35	304	i P	P	06 09 10.8 +1.2
	SNR=24					
DGZ	Jazzator, Alta	57.38	346	i P	P	06 09 09.7 +0.1
DZA	Taraz	57.44	331	eP	P	06 09 08.9 -1.0
	comp=Z,19nm,1.0s					
UMQ	Umm Al-Quwin	57.46	305	P	P	06 09 11.9 +1.6
IUG	Iuzhnay	57.54	329⇑	iP	P	06 09 09.8 -1.0
	comp=Z,47nm,1.0s					
IUG				eS	S	06 16 54.3 -1.0
AJN	Ajban	57.61	304	i P	P	06 09 12.2 +0.7
	SNR=5.4					
TEY	Ternei	57.73	26	i P	P	06 09 12.0 +0.1
TEY				pmax	pmax	
	comp=E,18nm,0.6s					
TEY				pmax	pmax	
	comp=N,40nm,0.7s					
TEY				pmax	pmax	
	comp=Z,106nm,0.7s					
IRK	Irkutsk	57.75	359	eP	P	06 09 12.7 +0.8
IRK				e		06 10 03.4
IRK				pmax	pmax	
	comp=Z,122nm,1.8s					
BTLS	Baital	57.85	334	i P	P	06 09 11.1 -1.7
	comp=Z,11nm,1.0s					
CHM	Chimkent	57.88	329	eP	P	06 09 12.8 -0.3
	comp=Z,38nm,0.9s					
KK31	Karatay Array	58.00	330	eP	P	06 09 12.7 -1.2
KK31	Karatay Array	58.00	330	eP	P	06 09 12.7 -1.2
KKAR	Karatay Array	58.00	330	eP	P	06 09 12.7 -1.2
KKAR	Karatay Array	58.00	330	eP	P	06 09 12.7 -1.2
OPO	Ambohidratompo	58.14	252	P	P	06 09 17.2 +1.7
	comp=Z,29nm,0.9s,baz=79,slow=6.2,SNR=16					
ABPO	Ambohimpanom	58.14	251	eP	P	06 09 16.6 +1.1
	comp=Z,48nm,1.4s					
ABPO	Ambohimpanom	58.14	251	eP	P	06 09 16.6 +1.1
ABPO				pmax	pmax	
	comp=Z,48nm,1.4s					
MZR	Muzera	58.25	301	P	P	06 09 17.5 +1.5
ERM	Erimo	58.62	32	eP	P	06 09 17.7 -0.5
	comp=Z,109nm,0.8s					
ERM	Erimo	58.62	32	d iP	P	06 09 18.4 +0.2
ERM				pmax	pmax	
	comp=Z,116nm,0.8s					
KLR	Kul'dur	59.34	20	P	P	06 09 23.1 +0.1
	comp=Z,15nm,0.9s,baz=217,slow=6.6					
KLR				ScP	ScP	06 13 53.6 -0.3
	comp=Z,1.0nm,1.1s,baz=266,slow=3.0,SNR=4.9					
KLR	Kul'dur	59.34	20	c iP	P	06 09 22.8 -0.1
ASAJ	Asahikawa	59.83	30	P	P	06 09 26.2 -0.2
	comp=Z,155nm,0.8s,baz=239,slow=9.5,SNR=79					
ASAJ	Asahikawa	59.83	30	eP	P	06 09 26.2 -0.2
	comp=Z,137nm,0.6s					
SEM	Semipalatinsk	60.01	342⇑	eP	P	06 09 26.8 -0.9
	comp=Z,47nm,1.0s					
SEM				ePP	PP	06 11 41.1 -1.1
CASY	Casey	60.55	178	eP	P	06 09 31.9 +1.0
	comp=Z,11nm,0.8s					
KURBB	Kurchatov Arra	60.74	341	P	P	06 09 32.0 -0.5
	comp=Z,67nm,0.9s,baz=158,slow=6.2,SNR=258					
KURBB				PcP	PcP	06 10 14.8 +0.1
	comp=Z,39nm,0.7s,baz=154,slow=3.2,SNR=25					
KURBB				PP	PP	06 11 50.0 +1.6
	comp=Z,2.5nm,0.8s,baz=144,slow=13,SNR=4.6					
KURBB				ScP	ScP	06 14 00.4 +0.2
	comp=Z,8.4nm,0.9s,baz=160,slow=3.4,SNR=10					
KURBB				P4KPbc		06 46 35.0
	baz=153,slow=3.4					
KURK	Kurchatov	60.79	341	eP	P	06 09 32.0 -0.8
KURK				eP	P	06 09 32.2 -0.6
KURK				ePP	pP	06 10 14.8 +2.6
KURK				ePP	PP	06 11 50.0 +1.1
KURK				e		06 46 35.0
KURK	Kurchatov	60.79	341	P	P	06 09 32.2 -0.6
	SNR=63					
KURK	Kurchatov	60.79	341	c iP	P	06 09 32.1 -0.7
KURK				pmax	pmax	
	comp=Z,125nm,1.0s					
DZM	Mont Dzumac	61.01	112	P	P	06 09 35.5 +0.5
	comp=Z,43nm,0.9s,baz=268,slow=8.7,SNR=19					
DZM	Mont Dzumac	61.01	112	eP	P	06 09 35.0 0.0
	comp=Z,56nm,1.0s					
MIR	Mirnyy	61.34	186⇑	iP	P	06 09 39.0 +2.8
MIR				pmax	pmax	
	comp=Z,84nm,1.0s					
GEYT	Alibeck	61.80	319	P	P	06 09 40.0 +0.1
	comp=Z,191nm,0.5s,baz=127,slow=4.2,SNR=3.0					
GYA0B	ALIBECK ARRAY	61.80	319	eP	P	06 09 40.0 +0.1
	comp=Z,289nm,0.9s					
ZAA0	Zalesovo Array	61.93	346	eP	P	06 09 39.5 -0.9
	comp=Z,120nm,0.8s					
ZALV	Zalesovo Beam	61.93	346	P	P	06 09 39.4 -1.0
	comp=Z,43nm,0.4s,baz=148,slow=4.5,SNR=335					
ZALV				PcP	PcP	06 10 19.1 -0.3
	comp=Z,25nm,0.6s,baz=171,slow=4.0,SNR=7.5					
ZALV				ScP	ScP	06 14 04.3 -1.0
	comp=Z,2.3nm,0.7s,baz=145,slow=5.3,SNR=3.3					
ZALV				LR	LR	06 39 36.2
	comp=Z,118nm,19.2s,baz=76,slow=39					
ZAA1	Zalesovo Array	61.94	346	eP	P	06 09 39.4 -1.1
ZAA1				ePP	PcP	06 10 19.1 -0.3
ZAA1				e		06 39 36.2
YSS	Yuzh-Sakhalins	61.96	28	eP	P	06 09 40.7 +0.1
	comp=Z,393nm,0.9s					
YSS	Yuzh-Sakhalins	61.96	28	c iP	P	06 09 40.8 +0.1
YSS				e		06 10 19.5
YSS				pmax	pmax	
	comp=N,120nm,0.9s					
YSS				pmax	pmax	
	comp=Z,400nm,0.9s					
YSS				pmax	pmax	
	comp=E,110nm,0.7s					
YSS				pmax	pmax	
	comp=Z,180nm,2.0s					
ZEA	Zeya	62.02	14	eP	P	06 09 41.7 +0.7
ZEA				e		06 17 45.0
ZEA				pmax	pmax	
	comp=N,150nm,1.0s					
ZEA				pmax	pmax	
	comp=E,89nm,1.0s					
ZEA				pmax	pmax	
	comp=Z,280nm,1.0s					
GRNR	Gornyy	62.27	22⇑	iP	P	06 09 44.0 +1.2
GRNR				pmax	pmax	
	comp=N,100nm,1.0s					
GRNR				pmax	pmax	
	comp=E,80nm,1.0s					
GRNR				pmax	pmax	
	comp=Z,250nm,1.0s					
BRZS	Berezniki	62.33	337⇑	iP	P	06 09 42.3 -0.8
	comp=Z,39nm,1.1s					
BRZS				ePP	PP	06 12 01.4 -1.1
NVS	Novosibirsk	63.13	346⇓	iP	P	06 09 47.5 -0.8
NVS				i		06 10 24.5
NVS				e		06 18 02.7
NVS				i		06 19 19.4
NVS				pmax	pmax	
	comp=Z,36nm,1.0s					
NVS				pmax	pmax	
	comp=N,6.0nm,0.4s					
NVS				pmax	pmax	
	comp=E,5.0nm,0.5s					
BOD	Bodaibo	63.71	5	eP	P	06 09 52.2 +0.1
BOD				pmax	pmax	
	comp=Z,94nm,1.2s					
DAMY	Dhamar	63.81	289	eP	P	06 09 54.2 +0.3
	comp=Z,68nm,0.9s					
CLNS	Chul'man	64.35	12	eP	P	06 09 56.2 -0.1
CLNS				pmax	pmax	
	comp=Z,87nm,1.0s					
CLNS				pmax	pmax	
	comp=N,62nm,1.0s					
CLNS				pmax	pmax	
	comp=E,37nm,0.9s					
TYV	Tymovskoe	64.81	25	eP	P	06 09 59.7 +0.4
TYV				pmax	pmax	
	comp=Z,31nm,1.7s					
TYV				pmax	pmax	
	comp=Z,200nm,2.9s					
RAYN	Ar Rayn	65.29	299	eP	P	06 10 03.8 +0.7
	comp=Z,62nm,1.1s					
RAYN				eS	S	06 18 35.3 +1.7
RAYN	Ar Rayn	65.29	299	i P	P	06 10 03.7 +0.6
	SNR=7.4					
RAYN	Ar Rayn	65.29	299	P	P	06 10 03.8 +0.7
RAYN				pmax	pmax	
	comp=Z,62nm,1.1s					
BVA0	Borovoye Array	65.61	338	i P	P	06 10 03.3 -1.2
BVA0				pmax	pmax	
	comp=Z,62nm,1.0s					
BVAR	Borovoye Array	65.61	338	P	P	06 10 03.6 -0.9
	comp=Z,40nm,0.8s,baz=140,slow=7.7,SNR=210					
BVAR				PcP	PcP	06 10 35.4 +0.8
	comp=Z,42nm,0.8s,baz=145,slow=5.4,SNR=19					
BRVK	Borovoye	65.67	338	eP	P	06 10 04.0 -0.9
	comp=Z,44nm,0.8s					
BRVK	Borovoye	65.67	338	P	P	06 10 04.1 -0.9
	SNR=31					
BRVK	Borovoye	65.67	338	ceP	P	06 10 03.9 -0.9
BRVK				pmax	pmax	
	comp=Z,51nm,1.0s					
NKL	Nikolayevsk	65.76	22	i P	P	06 10 05.5 +0.1
NKL				pmax	pmax	
	comp=N,60nm,1.0s					
NKL				pmax	pmax	
	comp=Z,270nm,1.0s					
AB31	Akbulak array	67.54	330	i P	P	06 10 16.0 -0.8
AB31				pmax	pmax	
	comp=Z,172nm,1.0s					
ABKAR	Akbulak array	67.54	330	eP	P	06 10 16.2 -0.6
MAW	Mawson	68.14	196	P	P	06 10 22.2 +1.9
	comp=Z,40nm,0.5s,baz=53,slow=6.2,SNR=125					
MAW	Mawson	68.14	196	P	P	06 10 22.1 +1.9
	baz=68,SNR=62					
MAW	Mawson	68.14	196	eP	P	06 10 22.0 +1.8
	comp=Z,11nm,0.6s					
RPZ	Rata Peaks	68.51	135	P	P	06 10 23.7 +0.6
	comp=Z,23nm,0.4s,baz=242,slow=2.7,SNR=21					
RPZ	Rata Peaks	68.51	135	eP	P	06 10 23.6 +0.6
	comp=Z,96nm,1.2s					
AKTO	Aktyubinsk	69.25	330	P	P	06 10 26.8 -0.7
	comp=Z,15nm,0.4s,baz=130,slow=6.8,SNR=92					
YAK	Yakutsk	70.10	12	eP	P	06 10 31.7 -0.6
	comp=Z,360nm,0.8s					
YAK	Yakutsk	70.10	12	c iP	P	06 10 31.5 -0.8
YAK				e		06 10 53.4
YAK				ePP	pP	06 11 17.1 +4.3
YAK				eS	S	06 19 27.2 -2.0
YAK				e		06 20 15.6
YAK				eSS	SS	06 24 01.4 -1.3
YAK				pmax	pmax	
	comp=Z,320nm,0.9s					
YAK				pmax	pmax	
	comp=E,65nm,1.1s					
YAK				pmax	pmax	
	comp=N,90nm,1.1s					
YAK				smax	smax	
	comp=N,55nm,4.1s					
WIAZ	Waiheke Island	70.33	127	P	P	06 10 36.0 +1.7
HIZ	Hauiti	70.36	129	P	P	06 10 35.8 +1.3
MKAZ	Moumakai	70.40	127	P	P	06 10 36.3 +1.5
AKT	Akhty	70.50	318⇑	iP	P	06 10 35.9 +0.5
AKT				e		06 10 54.6
AKT				ePP	pP	06 11 14.3 -1.6
AKT				eSP	sP	06 11 31.4 -2.6
AKT				e		06 13 10.6
AKT				eS	S	06 19 32.0 -3.0
AKT				pmax	pmax	
	comp=Z,376nm,1.3s					
KUZ	Kuaotunu	70.80	127	P	P	06 10 35.3 -1.9
COVZ	Chateau Observ	70.99	129	P	P	06 10 39.3 +0.8
FWVZ	Far West T-bar	71.00	129	P	P	06 10 39.4 +0.7
TRVZ	Turoa	71.01	130	P	P	06 10 39.3 +0.6
WTVZ	West Tongariro	71.01	129	P	P	06 10 39.4 +0.8
WHVZ	Whangaehu Hut	71.04	129	P	P	06 10 39.3 +0.5
SKR	Severo-Kuril's	71.05	31	eP	P	06 10 38.3 0.0
SKR				eS	S	06 19 28.6 -12
SKR				pmax	pmax	
	comp=Z,600nm,3.8s					
SKR				pmax	pmax	
	comp=Z,257nm,1.0s					
SKR				pmax	pmax	
	comp=Z,100nm,6.2s					
SKR				MLR	MLR	
	comp=Z,100nm,15.0s					
MOVZ	Moawhango	71.18	130	P	P	06 10 39.4 -0.1
BKZ	Black Stump Fm	71.72	129	eP	P	06 10 42.8 +0.1
	comp=Z,69nm,0.5s					
MTHZ	Maungataniwha	71.94	129	P	P	06 10 44.0 -0.1
GNI	Garni	71.97	315	P	P	06 10 45.1 +0.7
	comp=Z,60nm,1.0s,baz=165,slow=1.7,SNR=41					
GNI	Garni	71.97	315	eP	P	06 10 44.4 +0.1
	comp=Z,131nm,1.2s					
GNI				eP	P	06 10 45.1 +0.7
GNI	Garni	71.97	315	P	P	06 10 45.0 +0.7
	SNR=25					
GNI	Garni	71.97	315	i P	P	06 10 44.9 +0.6
	SNR=12					
GNI	Garni	71.97	315	c iP	P	06 10 44.8 +0.5
GNI				pmax	pmax	
	comp=Z,247nm,1.1s					
URZ	Urewera	72.08	128	P	P	06 10 43.6 -1.2
	comp=Z,7.2nm,0.4s,baz=242,slow=8.1,SNR=16					
URZ				LR	LR	06 47 22.0
	comp=Z,60nm,18.1s,baz=286,slow=40					
SVE	Sverdlovsk	72.23	336	d iP	P	06 10 42.5 -2.7
SVE				pmax	pmax	
	comp=Z,215nm,1.4s					
ARU	Arti	72.82	335	P	P	06 10 48.8 0.0
	comp=Z,39nm,0.8s,baz=128,slow=4.6,SNR=105					
ARU	Arti	72.82	335	eP	P	06 10 48.5 -0.3
	comp=Z,195nm,1.3s					
ARU	Arti	72.82	335	c iP	P	06 10 48.4 -0.3
ARU						06 11 03.9
ARU				*PP	pP	06 11 29.7 +0.1
ARU						06 13 29.1
ARU				eS	S	06 19 59.7 -1.1
ARU						06 20 36.5
ARU				SS	SS	06 24 37.1 -7.5
ARU				pmax	pmax	
	comp=Z,207nm,1.7s					
PEA0B	Petropavlovsk-	73.25	30	eP	P	06 10 51.1 -0.2
	comp=Z,72nm,0.8s					
PETK	Petropavlovsk-	73.25	30	P	P	06 10 51.2 -0.1
	comp=Z,53nm,0.7s,baz=205,slow=3.9,SNR=105					
PETK	Petropavlovsk-	73.25	30	eP	P	06 10 51.0 -0.3
PEA1	Petropavlovsk-	73.25	30	eP	P	06 10 51.2 -0.2
ZEI	Tsey	73.63	318	eP	P	06 10 51.9 -2.2
ZEI				pmax	pmax	
	comp=Z,80nm,0.9s					
PET	Petropavlovsk	73.67	30	eP	P	06 10 52.3 -1.5
	comp=Z,215nm,0.8s					
PET	Petropavlovsk	73.67	30	eP	P	06 10 52.7 -1.1
PET				e*SP	pP	06 11 32.0 -2.7
PET				eS	S	06 20 13.8 +3.4
PET				pmax	pmax	
	comp=Z,500nm,1.5s					
PET				pmax	pmax	
	comp=Z,100nm,7.0s					
PET				pmax	pmax	
	comp=Z,223nm,0.6s					
NCK	Nalchik	74.12	318	c iP	P	06 10 57.2 +0.5
NCK				pmax	pmax	
	comp=Z,147nm,0.9s					
MA2	Magadan	74.29	22	P	P	06 10 57.4 +0.1
	comp=Z,63nm,0.8s,baz=208,slow=5.2,SNR=54					
MA2	Magadan	74.29	22	eP	P	06 10 56.5 -0.7
	comp=Z,77nm,0.8s					
MA2	Magadan	74.29	22	eP	P	06 10 57.3 +0.1
MA2				pmax	pmax	
	comp=Z,74nm,0.9s					
NEY	Neytrino	74.61	318	c iP	P	06 11 00.9 +1.2
NEY				pmax	pmax	
	comp=Z,24nm,0.9s					
KBZ	Khabaz	74.68	318	P	P	06 11 00.4 +0.6
	comp=Z,152nm,0.9s,baz=118,slow=4.3,SNR=256					
MBAR	Mbarara	74.73	271	eP	P	06 11 02.6 +1.6
	comp=Z,38nm,1.8s					
MBAR	Mbarara	74.73	271	eP	P	06 11 02.6 +1.6
MBAR				pmax	pmax	
	comp=Z,38nm,1.8s					
KVAR	Kislovodsk Arr	74.91	318	P	P	06 11 01.7 +0.4
	comp=Z,139nm,0.9s,baz=219,slow=0.4,SNR=78					
KIV	Kislovodsk	74.91	318	eP	P	06 11 02.2 +0.9
	comp=Z,157nm,1.0s					
KIV	Kislovodsk	74.91	318	P	P	06 11 01.9 +0.6
	SNR=51					
KIV	Kislovodsk	74.91	318	i P	P	06 11 01.7 +0.3
	SNR=20					
KIV	Kislovodsk	74.91	318	eP	P	06 11 01.5 +0.2
KIV				e		06 13 51.1
KIV				eS	S	06 20 24.1 -0.8
KIV				pmax	pmax	
	comp=Z,173nm,1.1s					
GOF	Gofitskoye	75.13	319	eP	P	06 11 03.0 +0.6
GOF				pmax	pmax	
	comp=Z,300nm,1.3s					
ASF	Jabal al Asfar	75.17	305	P	P	06 11 04.9 +1.8
	comp=Z,69nm,1.0s,baz=74,slow=3.3,SNR=77					
ASF				pP	pP	06 11 42.1 -2.0
	comp=Z,2.5nm,0.4s,baz=123,slow=4.2,SNR=1.0					
ASF				sP	sP	06 11 59.2 -2.9
	comp=Z,8.4nm,0.9s,baz=98,slow=3.3,SNR=1.8					
MATP	Matopo	75.82	250	P	P	06 11 08.3 +1.3
	comp=Z,11nm,0.5s,baz=99,slow=6.9,SNR=44					
MATP				LR	LR	06 42 26.9
	comp=Z,98nm,18.1s,baz=108,slow=34					
NRIK	Noril'sk	75.91	354	P	P	06 11 06.0 -0.4
	comp=Z,75nm,1.0s,baz=156,slow=5.0,SNR=54					
NRIK	Noril'sk	75.91	354	P	P	06 11 06.0 -0.4
NRIK				pmax	pmax	
	comp=Z,75nm,1.0s					
EIL	Elat	76.10	302	P	P	06 11 09.8 +1.5
	comp=Z,48nm,0.8s,baz=114,slow=3.4,SNR=19					
SYO	Syowa Base	76.17	200‖	eP	P	06 11 07.5 -0.4
SYO	Syowa Base	76.17	200‖	ePcP	PcP	06 11 20.3 +1.1
LSZ	Lusaka	76.26	256	eP	P	06 11 10.0 +0.4
	comp=Z,12nm,1.3s					
LSZ	Lusaka	76.26	256	eP	P	06 11 10.0 +0.4
LSZ				pmax	pmax	
	comp=Z,12nm,1.3s					
MMAI	Mount Meron Ar	76.62	306	P	P	06 11 12.9 +1.7
	comp=Z,48nm,0.8s,baz=104,slow=8.9,SNR=46					
MMAI				LR	LR	06 47 20.5
	comp=Z,28nm,18.7s,baz=195,slow=37					
SOC	Sochi	76.76	317	c iP	P	06 11 10.4 -1.3
SOC				e*PP	pP	06 11 50.1 -2.8
SOC				e*SP	sP	06 12 15.3 +4.5
SOC				eS	S	06 20 44.4 -0.5
SOC				eSS	SS	06 25 37.3 -7.6
SOC				eSSS	SSS	06 29 00.9
SOC				pmax	pmax	
	comp=Z,107nm,0.7s					
SEY	Seymchan	77.13	20	P	P	06 11 13.4 +0.1
	comp=Z,24nm,0.7s,baz=242,slow=7.2,SNR=76					
VNDA	Vanda	77.49	169	P	P	06 11 16.2 +1.0
	comp=Z,2.1nm,0.5s,baz=315,slow=6.5,SNR=37					
VNDA				pP	pP	06 11 54.2 -2.2
	comp=Z,8.3nm,1.0s,baz=297,slow=8.8,SNR=4.2					
VNDA				LR	LR	06 41 12.9
	comp=Z,50nm,19.1s,baz=310,slow=32					
LBTB	Lobatse	78.43	246	eP	P	06 11 22.3 +0.8
	comp=Z,14nm,0.8s					
LBTB	Lobatse	78.43	246	eP	P	06 11 22.3 +0.8
LBTB				pmax	pmax	
	comp=Z,14nm,0.8s					
SBA	Scott Base	78.58	169	eP	P	06 11 22.5 +1.4
	comp=Z,29nm,1.4s					
SBA	Scott Base	78.58	169	eP	P	06 11 22.5 +1.4
SBA				pmax	pmax	
	comp=Z,29nm,1.4s					
BOSA	Boshof	78.69	242	P	P	06 11 23.8 +0.8
	comp=Z,7.5nm,0.5s,baz=103,slow=5.6,SNR=26					
ANN	Anapa	78.72	318	c iP	P	06 11 21.9 -0.6

ANN *i* S **S** **06 21 01.5 -4.4**
ANN pmax pmax
comp=Z,78nm,1.3s
TIXI Tiksi 78.74 7 P **P** **06 11 21.0 -1.0**
comp=Z,83nm,0.8s,baz=180,slow=2.8,SNR=13
TIXI Tiksi 78.74 7 *e*P **P** **06 11 20.6 -1.5**
comp=Z,94nm,0.8s
TIXI *e*P **P** **06 11 21.0 -1.0**
TIXI Tiksi 78.74 7*c i*P **P** **06 11 20.5 -1.5**
TIXI pmax pmax
comp=Z,89nm,0.9s
CSS Mathiatis 78.80 307 *e*P **P** **06 11 24.2 +1.0**
comp=Z,52nm,0.9s
CSS Mathiatis 78.80 307 P **P** **06 11 24.5 +1.3**
CSS Mathiatis 78.80 307 P **P** **06 11 23.3 +0.1**
SZAC Souni 79.10 307 P **P** **06 11 26.3 +1.4**
ALFC Alefka 79.43 307 P **P** **06 11 27.5 +0.9**
AKMC Akamas 79.61 307 P **P** **06 11 28.5 +0.9**
VORD Divnogorie 79.78 324 *e*P **P** **06 11 27.8 -0.3**
VORD pmax pmax
comp=Z,360nm,1.3s
BR101 Keskin Array S 79.84 312 *e*P **P** **06 11 28.8 -0.1**
BR131 Keskin Array S 79.84 312 *e*P **P** **06 11 28.8 -0.1**
BR131 Keskin Array S 79.84 312 P **P** **06 11 28.8 -0.1**
SNR=70
BRTR Keskin Array B 79.84 312 P **P** **06 11 28.8 -0.1**
comp=Z,59nm,0.7s,baz=132,slow=7.1,SNR=296
VSR Storozhevoye 79.94 324 *e*P **P** **06 11 28.7 -0.3**
VSR *e* 06 11 28.8
VSR *e*S **S** **06 21 15.3 -3.2**
VSR pmax pmax
comp=Z,560nm,0.7s
VSR smax smax
comp=N,100nm,1.4s
VORR Voronezh 80.09 325 *e*P **P** **06 11 29.0 -0.8**
ILGA Ilgaz 80.16 313 *e*P **P** **06 11 31.2 +0.5**
comp=N,170nm,1.5s
ANTO Ankara 80.51 312⇓*i*P **P** **06 11 33.3 +0.9**
ANTO Ankara 80.51 312 *e*P **P** **06 11 33.0 +0.6**
comp=N,81nm,1.0s
ANTO Ankara 80.51 312 P **P** **06 11 32.8 +0.4**
SNR=25
ANTO Ankara 80.51 312 *e*P **P** **06 11 33.0 +0.6**
ANTO pmax pmax
comp=Z,81nm,1.0s
BR231 Keskin MP Arra 80.51 312 *e*P **P** **06 11 33.2 +0.8**
SIM Simferopol' 81.01 317*c i*P **P** **06 11 35.6 +0.8**
SIM *e*S **S** **06 21 29.0 -0.9**
SIM pmax pmax
comp=Z,127nm,1.0s
PRGR Permogore 81.27 335⇑*i*P **P** **06 11 35.8 0.0**
PRGR *e**PP **pP** **06 12 17.9 +0.5**
PRGR *e*S **S** **06 21 30.7 -1.2**
PRGR pmax pmax
comp=Z,274nm,0.9s
AFI Afiamalu 81.64 103 P **P** **06 11 40.2 +1.4**
comp=Z,109nm,0.7s,baz=279,slow=8.6,SNR=18
AFI Afiamalu 81.64 103 *e*P **P** **06 11 40.1 +1.3**
comp=Z,104nm,0.7s
ISP Isparta 81.70 309⇓*i*P **P** **06 11 39.3 +0.5**
ISP Isparta 81.70 309 *e*P **P** **06 11 39.5 +0.7**
comp=Z,33nm,0.8s
ISP Isparta 81.70 309 *e*P **P** **06 11 39.5 +0.7**
ISP pmax pmax
comp=Z,33nm,0.8s
SUR Sutherland 82.45 238 *e*P **P** **06 11 44.6 +1.7**
comp=Z,149nm,1.8s
MOS Moscow 82.50 328*α i*P **P** **06 11 42.5 +0.2**
MOS *e* 06 12 29.3
MOS *e*S **S** **06 21 41.5 -3.1**
MOS *e* 06 23 04.8
MOS pmax pmax
comp=Z,584nm,1.0s
FETY Fethiye 82.55 308 P **P** **06 11 42.1 -1.0**
FETY Fethiye 82.55 308 P **P** **06 11 42.1 -1.0**
OBN Obninsk 82.83 327 P **P** **06 11 44.6 +0.6**
comp=Z,327nm,0.8s,baz=16,slow=0.6,SNR=109
OBN Obninsk 82.83 327 *e*P **P** **06 11 44.4 +0.3**
comp=Z,1μm,0.9s
OBN Obninsk 82.83 327*c i*P **P** **06 11 44.1 +0.1**
OBN *i* S **S** **06 21 47.2 -0.8**
OBN *e*SS **SS** **06 27 09.1 -5.8**
OBN pmax pmax
comp=Z,506nm,0.9s
ARG Arkhangelos 83.21 307 P **P** **06 11 47.5 +1.0**
ARG Arkhangelos 83.21 307 P **P** **06 11 47.5 +1.0**
ARG Arkhangelos 83.21 307 P **P** **06 11 47.5 +1.0**
MANT Manisa 83.36 310 *e*P **P** **06 11 48.2 +0.7**
comp=Z,264nm,1.2s
KLMR Klimovskoe 83.56 333*d i*P **P** **06 11 46.9 -0.7**
KLMR pmax pmax
comp=Z,590nm,1.2s
KLMR Klimovskoe 83.56 333⇓*i*P **P** **06 11 47.0 -0.7**
KLMR *e*P **P** **06 11 47.0 -0.7**
KLMR *e*P **P** **06 11 47.0 -0.7**
KLMR AMP 06 11 49.8
comp=Z,590nm,1.2s
KARP Karpathos 83.84 307 *e*P **P** **06 11 51.1 +1.3**
comp=Z,127nm,0.9s
KARP Karpathos 83.84 307 P **P** **06 11 50.8 +1.0**
BODT Bodrum 84.03 308 P **P** **06 11 50.0 -0.7**
BODT Bodrum 84.03 308 P **P** **06 11 50.0 -0.7**
QSPA South Pole Qui 84.26 180 P **P** **06 11 52.1 +0.7**
comp=Z,2.2nm,0.3s,baz=150,slow=3.1,SNR=18
QSPA pP **pP** **06 12 31.0 -2.2**
comp=Z,11nm,1.0s,baz=295,slow=10,SNR=4.4
ZKR Zakros 84.52 306 P **P** **06 11 54.1 +1.0**
ZKR Zakros 84.52 306 P **P** **06 11 54.1 +1.0**
SMG Samos 84.53 309 P **P** **06 11 53.8 +0.7**
SMG Samos 84.53 309 P **P** **06 11 53.8 +0.7**
TLCR 84.69 316⇓*i*P **P** **06 11 55.2 +1.5**
PSN Preselentsi 84.79 315 P **P** **06 11 54.0 -0.3**
BILL Bilibino 84.80 19 *e*P **P** **06 11 52.9 -0.9**
comp=Z,127nm,1.8s
BILL Bilibino 84.80 19*c i*P **P** **06 11 53.0 -0.8**
BILL pmax pmax
comp=Z,21nm,0.9s
TIRR Tirgusor 84.80 316⇑*i*P **P** **06 11 55.6 +1.3**
TIRR Tirgusor 84.80 316 *e*P **P** **06 11 54.9 +0.6**
comp=Z,65nm,0.8s
TIRR Tirgusor 84.80 316 *e*P **P** **06 11 54.9 +0.6**
TIRR pmax pmax
comp=Z,65nm,0.8s
NPS Neapolis 85.03 306 P **P** **06 11 57.7 +2.0**
NPS Neapolis 85.03 306 P **P** **06 11 57.7 +2.0**
NPS Neapolis 85.03 306 P **P** **06 11 57.7 +2.0**
TLB Topalu 85.09 316⇓*i*P **P** **06 11 57.1 +1.4**
KIS Kishinev 85.12 318⇑*i*P **P** **06 11 55.0 -0.8**
KIS XM 06 11 57.0
comp=Z,400nm,1.6s
KIS *e*pP **pP** **06 12 35.0 -2.8**
KIS Kishinev 85.12 318 *e*PP PP 06 15 13.0 -2.6
KIS *i* SKS **S** **06 22 09.0 -2.2**
KIS *i* S **SKKSac** **06 22 14.0 +2.6**
KIS Kishinev 85.12 318 *e*PS PS 06 23 18.0 -14
KIS Kishinev 85.12 318*α i*P **P** **06 11 55.0 -0.8**
KIS *e**PP **pP** **06 12 35.0 -2.8**
KIS *e* 06 15 13.0
KIS *i* S **SKKSac** **06 22 14.0 +2.6**
KIS pmax pmax
comp=Z,400nm,1.6s
LAST Lasithi 85.12 306 P **P** **06 11 57.3 +1.1**
LAST Lasithi 85.12 306 P **P** **06 11 57.3 +1.1**
ICOR Ion Corvin 85.16 315⇑*i*P **P** **06 11 57.4 +1.3**
CFR Carcaliu 85.16 316⇓*i*P **P** **06 11 57.4 +1.3**
HARR Harsova 85.19 316⇑*i*P **P** **06 11 57.6 +1.3**
HARR Harsova 85.19 316 P **P** **06 11 57.5 +1.3**
PRD Provadia 85.24 314 P **P** **06 11 55.0 -1.5**
CHOS Chios island 85.27 309 P **P** **06 11 58.1 +1.2**
CHOS Chios island 85.27 309 P **P** **06 11 58.1 +1.2**
SANT Santorini 85.36 307⇓*i*P **P** **06 11 57.4 +0.1**
SANT Santorini 85.36 307 *e*P **P** **06 11 56.0 -1.3**
comp=Z,115nm,1.0s
LEOM Leova 85.38 317⇑*i*P **P** **06 11 58.6 +1.5**
LEOM Leova 85.38 317 P **P** **06 11 58.6 +1.5**
APE Apeiranthos 85.43 308⇓*i*P **P** **06 11 58.6 +0.9**
APE Apeiranthos 85.43 308*c i*P **P** **06 11 57.5 -0.2**
APE pmax pmax
comp=Z,40nm,0.8s
TMCR Tamitsa 85.51 336 *e*P **P** **06 11 53.9 -3.4**
TMCR pmax pmax
comp=Z,280nm,0.9s
IDI Anoyia 85.62 306 P **P** **06 11 59.8 +1.1**
comp=Z,35nm,0.7s,baz=74,slow=7.8,SNR=26
IDI Anoyia 85.62 306⇑*i*P **P** **06 11 59.7 +1.0**
IDI Anoyia 85.62 306 *e*P **P** **06 11 59.7 +1.0**
comp=Z,47nm,0.7s
IDI *e*S **S** **06 22 16.2 -0.6**
SORM Soroca 85.69 319⇑*i*P **P** **06 11 59.3 +0.6**
SORM Soroca 85.69 319 P **P** **06 11 59.2 +0.6**
AKASG Malin Array Be 85.75 322 P **P** **06 11 58.6 -0.2**
comp=Z,40nm,0.7s,baz=79,slow=5.9,SNR=214
AKASG PP **PP** **06 15 18.5 -2.1**
comp=Z,2.4nm,0.7s,baz=90,slow=6.5,SNR=5.7
AKBB Malin Array Si 85.75 322 *e*P **P** **06 11 58.8 -0.1**
comp=Z,129nm,1.2s
AKBB *e*PP **PP** **06 15 18.5 -2.1**
AKBB *e*S **S** **06 22 15.7 -1.6**
AKBB Malin Array Si 85.75 322 *e*P **P** **06 11 58.8 -0.1**
AKBB *e* 06 15 18.5
AKBB *e*S **S** **06 22 15.7 -1.6**
AKBB pmax pmax
comp=Z,129nm,1.2s
ALN Alexandroupoli 85.76 312 *e*P **P** **06 11 59.9 +0.8**
comp=Z,22nm,0.7s
ALN Alexandroupoli 85.76 312 P **P** **06 11 59.6 +0.5**
ALN Alexandroupoli 85.76 312 *e*P **P** **06 11 59.9 +0.8**
ALN pmax pmax
comp=Z,22nm,0.7s
KIEV Kiev 85.76 322 *e*P **P** **06 11 58.2 -0.7**
comp=Z,125nm,1.2s
KIEV Kiev 85.76 322 *i* P **P** **06 11 58.3 -0.7**
SNR=16
KIEV Kiev 85.76 322*c i*P **P** **06 11 58.5 -0.4**
KIEV pmax pmax
comp=Z,122nm,1.2s
AK11 Malin Array Si 85.78 322 *e*P **P** **06 11 58.5 -0.6**
NVL N'lazarevskaya 85.83 199⇑*i*P **P** **06 12 00.7 +1.8**
NVL *e**PP **pP** **06 12 44.2 +3.2**
NVL *e*S **SKSac** **06 22 07.4 -0.9**
NVL *e*SSS SSS 06 31 30.0
NVL pmax pmax
comp=Z,12nm,0.9s
PETR Petresti 85.90 317⇑*i*P **P** **06 12 01.6 +1.9**
SMTH Samothraki Isl 86.06 311 P **P** **06 12 00.8 +0.1**
TSUM Tsumeb 86.14 251 *e*P **P** **06 12 03.1 +1.4**
comp=Z,20nm,1.4s
RDO Rodhopi 86.18 312 P **P** **06 12 01.5 +0.3**
VAM Vamos 86.19 306 P **P** **06 12 03.1 +1.7**
VAM Vamos 86.19 306 P **P** **06 12 03.1 +1.7**
VAM Vamos 86.19 306 P **P** **06 12 03.1 +1.7**
ISR Istrita 86.25 316⇑*i*P **P** **06 12 03.4 +1.9**
VRI Vrincioaia 86.27 317⇓*i*P **P** **06 12 03.6 +2.0**
VRI Vrincioaia 86.27 317 P **P** **06 12 03.6 +2.0**
SZH Strazhica 86.30 314 P **P** **06 12 02.0 +0.2**
PLOR Plostina 86.32 317⇓*i*P **P** **06 12 03.7 +1.8**
PLOR Plostina 86.32 317 P **P** **06 12 03.7 +1.8**
SULR 86.36 315⇓*i*P **P** **06 12 03.1 +1.1**
KDZ Kurdzhali 86.37 312 P **P** **06 12 01.0 -1.2**
KARY Karystos 86.45 309 P **P** **06 12 03.2 +0.6**
TESR Tescani 86.46 317⇓*i*P **P** **06 12 03.3 +0.8**
MLR Muntele Rosu 86.73 316 P **P** **06 12 05.3 +1.3**
comp=Z,33nm,1.0s,baz=112,slow=2.5,SNR=106
MLR Muntele Rosu 86.73 316⇑*i*P **P** **06 12 05.7 +1.7**
MLR Muntele Rosu 86.73 316 *e*P **P** **06 12 04.7 +0.7**
comp=Z,187nm,1.0s
MLR *e*P **P** **06 12 05.3 +1.3**
RZN Rozhen 86.89 312 P **P** **06 12 05.0 +0.1**
PRAR RASCA 86.92 318⇓*i*P **P** **06 12 06.2 +1.5**
PLD Plovdiv 86.97 313 P **P** **06 12 05.7 +0.6**
ANKY Antikythira Is 86.99 306 P **P** **06 12 07.0 +1.7**
ANKY Antikythira Is 86.99 306 P **P** **06 12 07.0 +1.7**
DOPR Dopca 87.21 317⇓*i*P **P** **06 12 07.4 +1.2**
HUMR Humele 87.22 315⇓*i*P **P** **06 12 07.2 +1.0**
MTUR Matau 87.29 316⇓*i*P **P** **06 12 07.5 +0.8**
DID Didima 87.30 308 P **P** **06 12 06.1 -0.7**
DID Didima 87.30 308 P **P** **06 12 06.1 -0.7**
VOIR 87.34 316⇓*i*P **P** **06 12 07.7 +0.8**
VOIR 87.34 316 P **P** **06 12 07.7 +0.8**
VILL Villia 87.35 309 P **P** **06 12 06.6 -0.4**
PAIG Paliouri 87.36 310 P **P** **06 12 07.2 +0.2**
VLI Veliai 87.42 307 P **P** **06 12 06.9 -0.4**
VLI Veliai 87.42 307 P **P** **06 12 06.9 -0.4**
PGB Panagyurishte 87.44 313 P **P** **06 12 07.0 -0.4**
MICGM Minsk 87.46 325⇓*i*P **P** **06 12 07.0 -0.1**
MICGM PM 06 12 08.0
comp=Z,1.1nm,1.0s
MICGM PM 06 12 09.0
comp=E,0.5nm,1.0s
MICGM *e*S **S** **06 22 31.0 -2.6**
MICGM SM 06 22 33.0
comp=E,0.5nm,2.0s
MICGM *e*sS **pS** **06 23 34.0 +7.3**
MNK Minsk 87.46 325⇓*i*P **P** **06 12 07.0 -0.1**
MNK *e*S **S** **06 22 31.0 -2.6**
MNK pmax pmax
comp=Z,1μm,1.0s
MNK pmax pmax
comp=E,520nm,1.0s
MNK smax smax
comp=E,530nm,2.0s
NVR Nevrokopi 87.46 312 P **P** **06 12 07.7 +0.2**
PUL Pulkovo 87.50 331*c e*P **P** **06 12 08.2 +1.1**
PUL pmax pmax
comp=Z,480nm,0.9s
MMB Musomiste 87.60 312 P **P** **06 12 08.0 -0.1**
ARR Arges 87.62 316⇑*i*P **P** **06 12 09.4 +1.2**
SRS Serrai 87.62 312 P **P** **06 12 08.2 0.0**
BURAR Bucovina Array 87.64 318⇑*i*P **P** **06 12 10.3 +2.0**
BUR04 Bucovina Ar. S 87.64 318 *e*P **P** **06 12 09.7 +1.4**
BUR08 Bucovina Ar. S 87.66 318 *e*P **P** **06 12 09.8 +1.4**
BUR08 *e*S **S** **06 22 39.6 +3.5**
LKR Lokris 87.67 309 P **P** **06 12 08.1 -0.4**
LKR Lokris 87.67 309 P **P** **06 12 08.1 -0.4**
DYR Agios Nikonas 87.90 307 P **P** **06 12 11.2 +1.6**
MDB Medias 87.93 317⇓*i*P **P** **06 12 12.1 +2.5**
DSF Desfina 88.00 309 P **P** **06 12 07.1 -3.0**
DSF Desfina 88.00 309 P **P** **06 12 07.1 -3.0**
GUR Goura 88.07 308 P **P** **06 12 10.5 0.0**
GUR Goura 88.07 308 P **P** **06 12 10.5 0.0**
KKB Krupnik 88.12 312 P **P** **06 12 10.0 -0.6**
KNT Kendrikon 88.15 311 P **P** **06 12 10.8 +0.1**
VTS Vitosha 88.15 313⇓*i*P **P** **06 12 12.1 +1.2**
VTS Vitosha 88.15 313 *e*P **P** **06 12 11.4 +0.5**
comp=Z,61nm,0.8s
VTS Vitosha 88.15 313 P **P** **06 12 10.0 -0.9**
VTS Vitosha 88.15 313 P **P** **06 12 11.3 +0.5**
VTS Vitosha 88.15 313 *e*P **P** **06 12 11.4 +0.5**
VTS pmax pmax
comp=Z,61nm,0.8s
NACGM Naroch 88.17 325 *e*P **P** **06 12 11.0 +0.6**
NACGM PM 06 12 12.0
comp=Z,0.9nm,1.0s
LOT Lotru 88.23 316⇓*i*P **P** **06 12 12.4 +1.3**
KLV Kalavryta, Ach 88.24 308 P **P** **06 12 11.4 +0.1**
KLV Kalavryta, Ach 88.24 308 P **P** **06 12 11.4 +0.1**
AGG Agios Georgios 88.25 309 *e*P **P** **06 12 11.2 0.0**
comp=Z,93nm,0.9s
AGG Agios Georgios 88.25 309 P **P** **06 12 10.8 -0.4**
AGG Agios Georgios 88.25 309 *e*P **P** **06 12 11.2 0.0**
AGG pmax pmax
comp=Z,93nm,0.9s
IDID Didziasalis 88.28 326 *e*P **P** **06 12 12.0 +1.1**
IDID IAmb IAmb 06 12 13.5
comp=Z,133nm,0.9s
ITM Ithomi 88.29 307 *e*P **P** **06 12 11.9 +0.5**
comp=Z,147nm,1.5s
LIT Litokhoron 88.29 310 *e*P **P** **06 12 11.6 +0.2**
comp=Z,166nm,0.7s
LIT Litokhoron 88.29 310 P **P** **06 12 11.4 0.0**
LIT Litokhoron 88.29 310 *e*P **P** **06 12 11.6 +0.2**
LIT pmax pmax
comp=Z,166nm,0.7s
SERG Sergoula 88.37 309 P **P** **06 12 12.8 +1.0**
PYL PYLOS 88.39 307 P **P** **06 12 12.1 +0.2**
PYL PYLOS 88.39 307 P **P** **06 12 12.1 +0.2**
LAKA Lakka 88.40 308 P **P** **06 12 12.7 +0.7**
LAKA Lakka 88.40 308 P **P** **06 12 12.7 +0.7**
VAY Valandovo 88.42 312 *i* P **P** **06 12 12.1 +0.2**
GRG Griva 88.49 311 P **P** **06 12 12.6 +0.3**
ANX Ano Chora 88.50 309 P **P** **06 12 13.9 +1.4**
APA Apatity 88.50 339⇑*i*P **P** **06 12 10.0 -1.7**
APA *e*S **S** **06 22 40.0 -2.9**
APA pmax pmax
comp=Z,47nm,1.1s
AMT Artemida-Makis 88.51 308 P **P** **06 12 13.1 +0.6**
CJR Cluj-Napoca 88.56 317⇓*i*P **P** **06 12 15.0 +2.4**
DRO Drossia 88.57 308 P **P** **06 12 14.9 +2.1**
THL Klokotos Trika 88.57 310 P **P** **06 12 12.2 -0.5**
IIGN Ignalina 88.58 326 *e*P **P** **06 12 13.5 +1.1**
IIGN IAmb IAmb 06 12 14.9
comp=Z,123nm,0.8s
EVR Evrytania 88.63 309 P **P** **06 12 13.7 +0.6**
EVR Evrytania 88.63 309 P **P** **06 12 13.7 +0.6**
IZAR Zarasai 88.65 326 *e*P **P** **06 12 13.6 +0.9**
IZAR IAmb IAmb 06 12 15.1
comp=Z,55nm,0.9s
ISAL Salakas 88.68 326 *e*P **P** **06 12 13.7 +0.9**
ISAL IAmb IAmb 06 12 15.3
comp=Z,64nm,0.9s
STIP Stip 88.76 312 *i* P **P** **06 12 12.8 -0.7**
RLS Riolos of Patr 88.77 308 P **P** **06 12 15.2 +1.5**
RLS Riolos of Patr 88.77 308 P **P** **06 12 15.2 +1.5**
BMR Baia Mare 88.80 318⇓*i*P **P** **06 12 15.7 +2.1**
PVO Paravola 88.81 309 P **P** **06 12 15.2 +1.4**
LVV L'vov 88.82 320 *e*P **P** **06 12 15.0 +1.4**
DEV Deva 88.90 316⇑*i*P **P** **06 12 16.0 +1.9**
VSU Vasula 88.97 329*c e*P **P** **06 12 14.5 +0.4**
VSU pmax pmax
comp=Z,988nm,0.9s
PDO Prodromos 89.07 309 P **P** **06 12 16.0 +0.9**
DRGR 89.18 317⇓*i*P **P** **06 12 17.0 +1.5**
DSL Palaion Diasel 89.21 309 P **P** **06 12 16.8 +1.0**
DSL Palaion Diasel 89.21 309 P **P** **06 12 16.8 +1.0**
FNA Florina 89.23 311 *e*P **P** **06 12 15.7 -0.1**
comp=Z,16nm,0.7s
FNA Florina 89.23 311 *e*P **P** **06 12 15.7 -0.1**
FNA pmax pmax
comp=Z,17nm,0.7s
KFL Anninata 89.31 308 P **P** **06 12 17.2 +1.0**
SKO Skopje 89.35 312 *i* P **P** **06 12 16.4 +0.1**
NEST Nestorio 89.42 311 P **P** **06 12 16.9 +0.1**
VLS Valsamata 89.47 308 P **P** **06 12 17.9 +0.9**
VLS Valsamata 89.47 308 P **P** **06 12 17.9 +0.9**
VLS Valsamata 89.47 308 P **P** **06 12 17.9 +0.9**
LKD2 Lefkada island 89.50 309 P **P** **06 12 18.1 +1.0**
LKD2 Lefkada island 89.50 309 P **P** **06 12 18.1 +1.0**
TRPA Tarpa 89.51 318⇓*i*P **P** **06 12 18.0 +1.1**
TRPA Tarpa 89.51 318⇑*e*P **P** **06 12 17.8 +0.9**
FSK Fiskardo 89.53 309 P **P** **06 12 17.8 +0.6**
MDVR Moldovita 89.56 315⇓*i*P **P** **06 12 18.7 +1.4**
KWP Kalwaria Pacla 89.64 320 *e*P **P** **06 12 18.1 +0.7**
KWP Kalwaria Pacla 89.64 320 *e*P **P** **06 12 18.2 +0.7**
comp=Z,1μm,1.4s
KWP Kalwaria Pacla 89.64 320 *e*P **P** **06 12 18.2 +0.7**
KWP pmax pmax
comp=Z,1μm,1.4s
OHR Ohrid 89.71 311 *i* P **P** **06 12 18.0 -0.1**
OHR Ohrid 89.71 311 P **P** **06 12 18.3 +0.2**
UZH Uzhgorod 89.75 319⇓*i*P **P** **06 12 21.0 +3.0**
UZH *e* 06 13 03.8
BZS Buzias 89.75 316⇑*i*P **P** **06 12 19.3 +1.2**
SIRR Siria 89.82 316⇑*i*P **P** **06 12 19.7 +1.3**
FIA1 FINESS Array S 89.93 332 *e*P **P** **06 12 18.9 +0.4**
FIA1 *e*P **PcP** **06 12 19.0 -0.6**
FIA0 FINESS Array S 89.93 332 *e*P **P** **06 12 19.2 +0.7**
FIA0 *e*PKiKP **PKiKP** **06 17 13.3 -0.6**
FIA0 *e* 06 58 15.0
FIA0 FINESS Array S 89.93 332 *e*P **P** **06 12 19.2 +0.7**
FINES FINESS Array B 89.93 332 P **P** **06 12 19.2 +0.7**
comp=Z,132nm,0.7s,baz=109,slow=5.5,SNR=357
FINES PKiKP **PKiKP** **06 17 13.3 -0.6**
comp=Z,1.4nm,0.6s,baz=108,slow=4.5,SNR=4.4
FINES PKKP **PKKPdf** **06 29 48.1 +0.4**
comp=Z,1.2nm,0.8s,baz=304,slow=0.7,SNR=6.5
FINES LR LR 06 58 15.0
comp=Z,34nm,19.4s,baz=62,slow=39
SGD Sagiada 89.94 310 P **P** **06 12 20.1 +1.0**
SUW Suwalki 90.06 324 *e*P **P** **06 12 19.5 +0.2**
SUW Suwalki 90.06 324 *e*P **P** **06 12 19.9 +0.6**
comp=Z,294nm,1.0s
SUW Suwalki 90.06 324 *e*P **P** **06 12 19.9 +0.6**
SUW pmax pmax
comp=Z,294nm,1.0s
SRN Sarande 90.15 310 P **P** **06 12 20.9 +0.8**
SRN Sarande 90.15 310 P **P** **06 12 20.9 +0.8**
SNAA Sanae 90.28 197 P **P** **06 12 22.5 +2.4**
SNAA Sanae 90.28 197 P **P** **06 12 22.5 +2.4**
comp=Z,4.7nm,0.5s,baz=169,slow=2.4,SNR=44
SNAA pP **pP** **06 13 01.7 -0.8**
comp=Z,7.7nm,1.0s,baz=90,slow=5.0,SNR=4.2
SNAA LR LR 06 47 39.5
comp=Z,44nm,21.1s,baz=156,slow=32
SNAA Sanae 90.28 197 *e*P **P** **06 12 22.0 +1.9**
SNAA *e*pP **pP** **06 13 03.7 +1.2**
SNAA *e* 06 47 39.5
SNAA Sanae 90.28 197 *i* P **P** **06 12 21.8 +1.7**
KEK Kerkira 90.28 310 P **P** **06 12 21.4 +0.7**
KEK Kerkira 90.28 310 P **P** **06 12 21.4 +0.7**
CRVS Cervenica-Dubn 90.33 319 *e*P **P** **06 12 21.6 +0.9**
CRVS pmax pmax
comp=Z,15nm,1.4s
CRVS Cervenica-Dubn 90.33 319 *e*P **P** **06 12 21.6 +0.9**
DIVS Divibare 90.69 314 *e*P **P** **06 12 23.6 +1.0**
comp=Z,43nm,1.1s
KECS Kecovo 90.91 318 *e*P **P** **06 12 24.1 +0.7**
KECS Kecovo 90.91 318 *e*P **P** **06 12 24.1 +0.7**
PDG Podgorica 91.02 312⇓*i*P **P** **06 12 24.9 +0.9**
TTG Podgorica 91.02 312 *e*P **P** **06 12 24.9 +0.9**
comp=Z,46nm,1.2s
TTG Podgorica 91.02 312 *e*P **P** **06 12 24.9 +0.9**
TTG pmax pmax
comp=Z,46nm,1.2s
NIE Niedzica 91.16 319 *e*P **P** **06 12 25.6 +1.0**
NIE Niedzica 91.16 319 *e*P **P** **06 12 25.6 +1.0**
BEL Belsk 91.17 322 *e*P **P** **06 12 25.6 +1.1**
BEL Belsk 91.17 322 *e*P **P** **06 12 25.6 +1.1**
PSZ Piszkesteto 91.23 318⇓*i*P **P** **06 12 26.3 +1.3**
PSZ Piszkesteto 91.23 318⇑*e*P **P** **06 12 25.4 +0.4**
PSZ Piszkesteto 91.23 318 *e*P **P** **06 12 25.6 +0.6**
comp=Z,22nm,0.9s
PSZ Piszkesteto 91.23 318 *e*P **P** **06 12 25.6 +0.6**
PSZ pmax pmax
comp=Z,22nm,0.9s
KEV Kevo 91.35 340 *e*P **P** **06 12 25.1 +0.1**
comp=Z,49nm,0.8s
KEV Kevo 91.35 340 *e*P **P** **06 12 25.1 +0.1**
KEV pmax pmax
comp=Z,49nm,0.8s
OJC Ojcow 91.58 320 *e*P **P** **06 12 27.0 +0.5**
OJC Ojcow 91.58 320 *e*P **P** **06 12 27.4 +0.9**
comp=Z,30nm,1.3s
OJC Ojcow 91.58 320 *e*P **P** **06 12 27.4 +0.9**
OJC pmax pmax
comp=Z,30nm,1.3s
ARA0 ARCESS Array S 91.82 340 *e*P **P** **06 12 26.9 -0.3**
ARCES ARCESS Array B 91.82 340 P **P** **06 12 26.9 -0.3**
comp=Z,64nm,0.8s,baz=99,slow=6.1,SNR=157
ARE0 ARCESS Array S 91.82 340 *e*P **P** **06 12 27.1 -0.1**
comp=Z,89nm,0.9s
ARE0 ARCESS Array S 91.82 340 *e*P **P** **06 12 27.4 +0.2**
NIKH Nikolski High 91.93 37 *e*P **P** **06 12 27.7 -0.3**
comp=Z,99nm,0.8s
VYHS Vyhne 92.00 318 *e*P **P** **06 12 28.1 -0.4**
VYHS pmax pmax
comp=Z,13nm,1.7s
VYHS Vyhne 92.00 318 *e*P **P** **06 12 28.1 -0.4**
VYHS *e*PP **PP** **06 16 09.6 -0.9**
TIP Timpagrande 92.57 309⇓*i*P **P** **06 12 33.1 +1.7**
TIP Timpagrande 92.57 309 *e*P **P** **06 12 32.6 +1.2**
comp=Z,12nm,0.9s
OKC Ostrava-Krasne 92.60 320 *e*SKS **S** **06 23 20.0 -1.0**
HAMF Hammerfest 92.63 341 *e*P **P** **06 12 30.6 -0.3**
MATE Matera 92.74 310⇑*i*P **P** **06 12 33.5 +1.5**
BLY Banja Luka 92.76 315⇓*i*P **P** **06 12 33.5 +1.4**
BLY Banja Luka 92.76 315 *e*P **P** **06 12 33.1 +1.0**
comp=Z,35nm,1.0s
JAVC Velka Javorina 92.81 319 *e*P **P** **06 12 33.3 +1.0**
JAVC *e*PP **PP** **06 16 16.9 0.0**
MORC Moravsky Berou 92.98 320 *e*P **P** **06 12 33.8 +0.8**
comp=Z,49nm,0.7s
MORC Moravsky Berou 92.98 320 *e*P **P** **06 12 33.8 +0.8**
MORC pmax pmax
comp=Z,49nm,0.7s
MORC Moravsky Berou 92.98 320 *e*P **P** **06 12 33.6 +0.6**
MORC *e*PP **PP** **06 16 17.0 -1.2**
MODS Modra-Piesok 93.03 318 *e*P **P** **06 12 33.3 +0.1**
MODS pmax pmax
comp=Z,22nm,1.4s
MODS Modra-Piesok 93.03 318 *e*P **P** **06 12 33.3 +0.1**

ZST **Bratislava** 93.13 318 eP P 06 12 33.5 -0.1
ZST pmax pmax
comp=Z,1.0nm,0.9s
ZST **Bratislava** 93.13 318 eP P 06 12 33.5 -0.1
CUC **Castrocucco** 93.36 310 eP P 06 12 35.5 +0.5
UNV **Unalaska Valle** 93.42 36 eP P 06 12 34.2 -0.6
comp=Z,91nm,1.6s
KRLC **Kraliky** 93.50 320 eP P 06 12 37.2 +1.8
KRLC **Kraliky** 93.50 320 eP P 06 12 37.2 +1.8
VRAC **Vranov** 93.56 319 eP P 06 12 37.1 +1.5
VRAC ePP PP 06 16 21.3 -1.3
KRUC **Moravsky** 93.67 319 eP P 06 12 37.1 +1.0
KRUC ePP PP 06 16 22.0 -1.5
DPC **Dobruska-Polom** 93.81 320 eP P 06 12 38.4 +1.6
DPC eSKS S 06 23 29.0 -2.8
DPC **Dobruska-Polom** 93.81 320 eP P 06 12 38.4 +1.6
DPC e 06 23 29.0
KSP **Ksiaz** 93.87 321 eP P 06 12 37.7 +0.7
KSP **Ksiaz** 93.87 321 eP P 06 12 37.7 +0.7
AKUT **Akutan** 93.87 36 eP P 06 12 36.1 -0.8
comp=Z,53nm,0.7s
UPC **Upice** 94.02 320 eSKS S 06 23 31.2 -2.3
TRO **Tromso** 94.11 339 eP P 06 12 37.1 -0.6
BOJS **Bojanci** 94.18 315 eP P 06 12 39.1 +0.5
PERS **Pernice** 94.35 316 eP P 06 12 39.7 +0.2
VISS **Visnje** 94.49 315 eP P 06 12 40.4 +0.4
GOPC **GO Pecny, Ondr** 94.77 320 eSKS S 06 23 31.2 -8.9
PRU **Pruhonice** 94.93 320 eP P 06 12 44.3 +2.4
PRU eSKS S 06 23 39.0 -2.4
PRU **Pruhonice** 94.93 320 eP P 06 12 44.3 +2.4
PRU e 06 23 39.0
BSD **Bornholm Skovb** 94.96 325⇓ i P P 06 12 42.2 +0.3
comp=Z,28nm,1.0s
JAVS **Javornik** 95.04 316 i P P 06 12 41.9 -0.7
STEI **Steigen** 95.35 338 eP P 06 12 43.5 +0.1
BRG **Berggiesshubel** 95.36 320 eP P 06 12 44.8 +1.0
comp=Z,30nm,1.9s
BRG **Berggiesshubel** 95.36 320 eP P 06 12 44.8 +1.0
BRG pmax pmax
comp=Z,30nm,1.9s
SPA0 **Spitsbergen Ar** 95.38 348 eP P 06 12 43.1 -0.3
SPA0 e 07 01 16.8
SPA0 **Spitsbergen Ar** 95.38 348 eP P 06 12 43.0 -0.3
SPITS **Spitsbergen Ar** 95.38 348 P P 06 12 42.9 -0.5
comp=Z,72nm,0.8s,baz=94,slow=12,SNR=48
SPITS LR LR 07 01 16.8
comp=Z,68nm,19.9s,baz=140,slow=39
GEA0 **GERESS Array S** 95.42 318 eP P 06 12 44.2 -0.1
GEC2 **GERESS Array S** 95.42 318 eP P 06 12 44.7 +0.4
comp=Z,28nm,1.6s
GEC2 **GERESS Array S** 95.42 318 eP P 06 12 44.7 +0.4
GEC2 pmax pmax
comp=Z,28nm,1.6s
GERES **GERESS Array B** 95.42 318 P P 06 12 44.7 +0.4
comp=Z,3.1nm,0.8s,baz=75,slow=5.7,SNR=20
KHC **Kasperske Hory** 95.52 319 eP P 06 12 45.9 +1.2
KHC ex x 06 15 36.0
KHC eSKS S 06 23 41.2 -5.5
KHC **Kasperske Hory** 95.52 319 eP P 06 12 44.8 +0.2
comp=Z,2.1nm,0.9s
KHC **Kasperske Hory** 95.52 319 eP P 06 12 45.9 +1.2
KHC e 06 23 41.2
HSPB **Hornsund (broa** 95.52 347 eP P 06 12 43.2 -0.8
MOR8 **Moi Rana** 95.61 336 eP P 06 12 44.2 -0.4
HFS **Hagfors** 95.80 330 P P 06 12 45.7 +0.1
comp=Z,72nm,0.9s,baz=116,slow=3.4,SNR=82
HFS LR LR 07 01 11.3
comp=Z,20nm,18.1s,baz=70,slow=39
CLL **Collm** 95.96 321 eP P 06 12 47.0 +0.5
comp=Z,18nm,1.6s
CLL eS S 06 23 47.0 -3.3
CLL ePS PS 06 25 24.0 -7.7
CLL e 06 29 12.0
CLL e(SS) 06 30 06.0
CLL **Collm** 95.96 321 eP P 06 12 47.0 +0.5
CLL eS S 06 23 47.0 -3.3
CLL pmax pmax
comp=Z,18nm,1.6s
LOF **Lofoten** 95.99 338 eP P 06 12 46.0 -0.2
KONS **Konsvik** 96.15 336 eP P 06 12 46.4 -0.6
KBS **Kingsbay** 96.26 349 eP P 06 12 47.0 -0.4
comp=Z,40nm,0.8s
KBS **Kingsbay** 96.26 349 eP P 06 12 47.0 -0.4
KBS pmax pmax
comp=Z,40nm,0.8s
KBS **Kingsbay** 96.26 349 eP P 06 12 47.1 -0.2
NKC **Novy Kostel** 96.29 320 eSKS S 06 23 51.3 -1.9
NSS **Namsos** 96.64 334 eP P 06 12 49.6 +0.3
NC405 **NORSAR Array S** 96.79 331 eP P 06 12 49.4 -0.7
NC602 **NORSAR Array S** 96.88 330 eP P 06 12 50.5 0.0
NC602 **NORSAR Array S** 96.88 330 eP P 06 12 51.0 +0.5
NC303 **NORSAR Array S** 96.95 331 eP P 06 12 51.2 +0.3
NB2 **NORSAR Subarra** 97.03 331 P P 06 12 50.9 -0.3
comp=Z,23nm,1.1s,baz=89,slow=4.8
NB2 **NORSAR Subarra** 97.03 331 P P 06 12 50.0 -1.2
NB2 pmax pmax
comp=Z,31nm,1.2s
NB2 **NORSAR Subarra** 97.03 331 P P 06 12 50.9 -0.3
baz=89,slow=4.8
NB200 **NORSAR Array S** 97.03 331 eP P 06 12 51.2 -0.1
NB200 e 06 59 58.3
NOA **NORSAR Array B** 97.03 331 P P 06 12 51.2 -0.1
comp=Z,6.3nm,0.8s,baz=81,slow=1.3,SNR=9.6
NOA LR LR 06 59 58.3
comp=Z,20nm,21.2s,baz=40,slow=37
NAO01 **NORSAR Array S** 97.19 331 eP Pdif 06 12 52.3 +0.3
NBO00 **NORSAR Array S** 97.24 331 eP Pdif 06 12 52.2 0.0
NC204 **NORSAR Array S** 97.25 331 eP Pdif 06 12 52.5 +0.2
FUORN **Ofenpass-Fuorn** 97.69 316 eP Pdif 06 12 57.0 +2.1
comp=Z,14nm,1.0s
KONO **Kongsberg** 97.87 329 eP Pdif 06 12 55.9 +0.9
comp=Z,25nm,1.0s
KONO **Kongsberg** 97.87 329 ceP P 06 12 54.6 -0.4
KONO pmax pmax
comp=Z,14nm,0.8s
KONO **Kongsberg** 97.87 329 eP Pdif 06 12 55.8 +0.8
KEST **Kesra** 98.27 305 P Pdif 06 12 58.2 +0.8
comp=Z,4.8nm,0.9s,baz=302,slow=1.5,SNR=4.0
KEST **Kesra** 98.27 305 eP Pdif 06 12 58.0 +0.6
comp=Z,12nm,1.3s
HOMB **Homborsund** 98.50 328 eP Pdif 06 12 58.0 +0.2
TOLK **Toolik Lake Re** 100.74 21 P Pdif 06 13 07.5 -0.2
baz=282
TOLK **Toolik Lake Re** 100.74 21 ePdif Pdif 06 13 08.0 +0.3
BPAW **Bear Paw Mtn.** 101.04 26 ePdif Pdif 06 13 09.3 +0.2
KDAK **Kodiak Island** 101.19 32 P Pdif 06 13 09.7 0.0
comp=Z,4.8nm,0.6s,baz=226,slow=3.8,SNR=4.3
MCK **McKinley** 102.00 26 ePdif Pdif 06 13 13.1 -0.2
MCK **McKinley** 102.00 26 eP Pdif 06 13 13.1 -0.2
ILAR **Eielson Array** 102.64 25 Pdiff Pdif 06 13 14.2 -1.9
comp=Z,0.6nm,0.8s,baz=306,slow=4.9,SNR=6.8
ILAR PP PP 06 17 25.8 -5.6
comp=Z,3.3nm,1.2s,baz=290,slow=8.7,SNR=7.6
ILAR PKiKP PKiKP 06 17 36.4 +0.2
comp=Z,5.0nm,1.0s,baz=267,slow=3.1,SNR=9.5
ILAR PKKPbc PKKPbc 06 29 15.9 -2.1
comp=Z,0.9nm,0.7s,baz=136,slow=2.4,SNR=7.7
ILAR PKKP PKKPdf 06 29 25.6 +0.9
comp=Z,0.6nm,0.7s,baz=96,slow=2.4,SNR=5.3
ILAR SKKPbc SKKPbc 06 32 40.5 -4.0
comp=Z,0.7nm,0.9s,baz=138,slow=1.0,SNR=5.5
ILB **Eielson Array** 102.64 25 ePP PP 06 17 25.8 -5.6
ILB ePKiKP PP 06 17 32.0 +0.6
DAG **Danmarks Havn** 103.00 349⇑ i P Pdif 06 13 16.2 -1.3
comp=Z,26nm,0.8s
TORD **Torodi Ar. Bea** 104.66 282 PKiKP PKiKP 06 17 41.0 -0.3
comp=Z,1.4nm,0.7s,baz=67,slow=1.7,SNR=7.6
TORD SKiKP SKiKP 06 20 59.7 -1.0
comp=Z,0.8nm,0.5s,baz=60,slow=1.7,SNR=9.5
TORD PKKPbc PKKPbc 06 29 09.8 -0.5
comp=Z,0.4nm,0.4s,baz=293,slow=3.5,SNR=6.7
TORD PKKPab PKKPab 06 29 28.9 -0.2
comp=Z,0.9nm,0.5s,baz=290,slow=3.8,SNR=6.4
TORD SKKPbc SKKPbc 06 32 37.4 +1.0
comp=Z,0.9nm,1.1s,baz=296,slow=3.9,SNR=5.5
EKA **Eskdalemuir Ar** 105.24 326 Pdiff Pdif 06 13 31.1 +3.3
comp=Z,1.7nm,0.7s,baz=91,slow=4.5,SNR=4.8
EKA PP PKiKP 06 17 43.9 +2.7
comp=Z,4.3nm,1.0s,baz=91,slow=5.8,SNR=3.0
EKA PKKPbc PKKPbc 06 29 07.2 -2.7
comp=Z,0.5nm,0.4s,baz=267,slow=2.6,SNR=4.0
ESDC **Sonseca Array** 108.56 310 PP PP 06 18 11.3 -4.5
comp=Z,1.4nm,0.7s,baz=62,slow=7.6,SNR=4.8
KOWA **Kowa** 110.24 283 SKiKP SKiKP 06 21 10.5 -0.8
comp=Z,3.1nm,0.6s,baz=99,slow=3.2,SNR=4.9
KOWA PKKPab PKKPab 06 29 04.1 -0.2
comp=Z,4.5nm,0.6s,baz=252,slow=5.3,SNR=8.5
YKA **Yellowknife Ar** 116.19 19 PKP PKPdf 06 18 01.3 -0.3
comp=Z,2.2nm,0.5s,baz=317,slow=2.8,SNR=22
LLLB **Lillooet** 120.40 33 ePKPdf PKPdf 06 18 10.6 +0.4
NLWA **Neilton Lookou** 120.89 37 ePKPdf PKPdf 06 18 12.2 +0.9
A04D **Lummi Island** 120.92 35 P PKPdf 06 18 11.8 +0.7
baz=300
E03A **Lebam** 121.47 38 ePKPdf PKPdf 06 18 13.3 +1.0
B05A **Bryant** 121.50 35 P PKPdf 06 18 13.0 +0.8
baz=301
F03A **Seaside** 121.77 38 ePKPdf PKPdf 06 18 13.7 +0.8
FRB **Frobisher Bay** 121.93 357 PKP PKPdf 06 18 11.2 -1.4
comp=Z,5.1nm,0.5s,baz=50,slow=5.4,SNR=11
D05A **Enumclaw** 122.10 36 ePKPdf PKPdf 06 18 13.8 +0.3
G03D **McMinnville, O** 122.29 39 P PKPdf 06 18 14.7 +0.8
baz=298
LON **Longmire** 122.43 37 ePKPdf PKPdf 06 18 14.7 +0.5
LON **Longmire** 122.43 37 ePKIKP PKPdf 06 18 14.7 +0.5
LTY **Liberty** 122.84 36 ePKPdf PKPdf 06 18 15.5 +0.4
I03D **Drain, OR** 122.93 41 P PKPdf 06 18 15.6 +0.4
baz=297,SNR=15
B08A **Colville Reser** 123.01 34 ePKPdf PKPdf 06 18 16.0 +0.7
H04A **Detroit Lake** 123.21 39 ePKPdf PKPdf 06 18 16.5 +0.7
L02D **Cave Junction,** 123.44 42 P PKPdf 06 18 16.5 +0.3
baz=296
G05D **Wamic, OR** 123.48 38 P PKPdf 06 18 17.0 +0.8
baz=300
I04A **Tendick Farm,** 123.49 40 P PKPdf 06 18 16.9 +0.5
baz=298,SNR=6.8
HUMO **Hull Mountain** 123.67 42 ePKPdf PKPdf 06 18 18.4 +1.7
KHMM **Horse Mountain** 123.90 44 ePKPdf PKPdf 06 18 18.6 +1.2
I05D **Terrebonne, OR** 123.91 39 P PKPdf 06 18 17.7 +0.6
baz=299
C09A **Chrisman Ranch** 123.92 34 ePKPdf PKPdf 06 18 17.8 +0.8
J04D **Umpqua Nationa** 123.94 41 P PKPdf 06 18 18.2 +0.8
baz=298
D08A **Wollman Farm,** 123.96 35 ePKPdf PKPdf 06 18 18.3 +1.2
HAWA **Hanford** 123.96 36 ePKPdf PKPdf 06 18 18.1 +1.0
E08A **Dider Farm, El** 124.19 36 ePKPdf PKPdf 06 18 18.8 +1.3
YBH **Yreka Blue Hor** 124.23 42 PKP PKPdf 06 18 18.3 +0.4
comp=Z,3.1nm,0.7s,baz=306,slow=4.6,SNR=9.4
YBH **Yreka Blue Hor** 124.23 42 ePKPdf PKPdf 06 18 18.7 +0.8
YBH **Yreka Blue Hor** 124.23 42 ePKIKP PKPdf 06 18 18.7 +0.8
M02C **Callahan** 124.28 43 P PKPdf 06 18 18.8 +0.8
baz=296,SNR=7.2
NEW **Newport** 124.29 33 PKP PKPdf 06 18 18.5 +0.7
comp=Z,5.0nm,0.8s,baz=250,slow=3.4,SNR=7.2
NEW **Newport** 124.29 33 P PKPdf 06 18 17.9 +0.2
baz=306
PINE **Pine Mountain** 124.42 39 ePKPdf PKPdf 06 18 19.9 +1.6
K04D **Chiloquin, OR** 124.46 41 P PKPdf 06 18 18.7 +0.3
baz=298
J05D **Fort Rock, OR** 124.48 40 P PKPdf 06 18 19.4 +1.0
baz=299,SNR=8.0
N02D **Trinity Center** 124.56 43 P PKPdf 06 18 19.2 +0.7
baz=296
M04C **Macdoel** 124.79 42 P PKPdf 06 18 19.7 +0.7
baz=297,SNR=6.8
G08A **Pilot Rock** 124.88 37 ePKPdf PKPdf 06 18 20.4 +1.3
K05A **Summer Lake** 124.97 41 ePKPdf PKPdf 06 18 20.0 +0.6
FCC **Fort Churchill** 124.98 12 ePKPdf PKPdf 06 18 18.6 0.0
FCC **Fort Churchill** 124.98 12 ePKIKP PKPdf 06 18 18.6 0.0
O03D **Paynes Creek** 125.48 44 P PKPdf 06 18 20.5 +0.1
baz=296
WALA **Waterton Lakes** 125.50 31 ePKPdf PKPdf 06 18 20.8 +0.7
F10A **Beach Ranch, E** 125.53 36 ePKPdf PKPdf 06 18 21.4 +1.1
MOD **Modoc Plateau** 125.75 41 ePKPdf PKPdf 06 18 22.1 +1.2
ORV **Oroville** 126.01 44 ePKPdf PKPdf 06 18 22.1 +0.8
ORV **Oroville** 126.01 44 ePKIKP PKPdf 06 18 22.1 +0.8
BMO **Blue Mountains** 126.11 37 ePKPdf PKPdf 06 18 21.5 +0.1
BMO **Blue Mountains** 126.11 37 ePKIKP PKPdf 06 18 21.5 +0.1
J08A **Circle Bar Ran** 126.19 39 ePKPdf PKPdf 06 18 21.5 -0.2
FFC **Flin Flon** 126.37 19 ePKPdf PKPdf 06 18 21.9 +0.5
FFC **Flin Flon** 126.37 19 ePKIKP PKPdf 06 18 21.9 +0.5
WVOR **Wild Horse Val** 126.56 40 ePKPdf PKPdf 06 18 23.1 +0.7
WVOR **Wild Horse Val** 126.56 40 ePKIKP PKPdf 06 18 23.1 +0.7
AFDM **Forest Hills D** 126.64 45 ePKPdf PKPdf 06 18 23.9 +1.3
BEKR **Beckworth** 126.66 43 ePKPdf PKPdf 06 18 23.8 +1.0
MSO **Missoula** 126.87 33 P PKPdf 06 18 22.8 0.0
baz=308
MSO **Missoula** 126.87 33 ePKPdf PKPdf 06 18 23.0 +0.2
PAHR **Pah Rah Range** 127.40 43 ePKPdf PKPdf 06 18 25.4 +1.3
VCNR **Virginia City** 127.41 44 ePKPdf PKPdf 06 18 25.6 +1.4
CMB **Columbia Colle** 127.46 46 ePKPdf PKPdf 06 18 24.9 +0.8
CMB **Columbia Colle** 127.46 46 ePKIKP PKPdf 06 18 24.9 +0.8
PNTR **Pine Nut** 127.54 44 ePKPdf PKPdf 06 18 26.1 +1.6
YERR **Yerington** 127.83 44 ePKPdf PKPdf 06 18 26.3 +1.3
WAKR **Walker** 127.92 45 ePKPdf PKPdf 06 18 25.8 +0.6
EGMT **Eagleton** 128.26 30 P PKPdf 06 18 25.9 +0.5
baz=313
EGMT **Eagleton** 128.26 30 ePKPdf PKPdf 06 18 25.5 +0.1
LRM **Limekiln Ridge** 128.31 33 ePKPdf PKPdf 06 18 26.8 +1.1
BMN **Battle Mountai** 128.49 41 ePKPdf PKPdf 06 18 27.0 +0.8
BMN **Battle Mountai** 128.49 41 ePKIKP PKPdf 06 18 27.0 +0.8
RYN **Ryan** 128.50 44 ePKPdf PKPdf 06 18 27.7 +1.5
DLMT **Dillon** 128.51 34 ePKPdf PKPdf 06 18 27.5 +1.4
HLID **Hailey** 128.55 37 P PKPdf 06 18 27.2 +1.0
baz=305
HLID **Hailey** 128.55 37 ePKPdf PKPdf 06 18 27.9 +1.7
MDPB **Devils Postpil** 128.56 45 ePKPdf PKPdf 06 18 27.7 +1.2
KVN **Kaiserville** 128.59 43 ePKPdf PKPdf 06 18 27.5 +1.1
KVN **Kaiserville** 128.59 43 ePKIKP PKPdf 06 18 27.5 +1.1
MCMT **McKenzie Canyo** 128.70 34 ePKPdf PKPdf 06 18 27.5 +1.0
NV01 **Mina Array Sit** 128.74 44 ePKPdf PKPdf 06 18 27.9 +1.2
NV01 ePP PP 06 20 30.3 -4.5
NVAR **Mina Array Bea** 128.74 44 PKhKP PKPpre 06 18 15.0
comp=Z,0.2nm,0.5s,baz=298,slow=2.5,SNR=3.2
NVAR PKP PKiKP 06 18 27.9 +0.5
comp=Z,3.3nm,0.5s,baz=274,slow=2.4,SNR=25
NVAR PP PP 06 20 29.6 -5.2
comp=Z,5.2nm,1.0s,baz=272,slow=6.4,SNR=9.9
NVAR SKPbc SKPbc 06 21 32.2
comp=Z,2.7nm,0.7s,baz=260,slow=3.6,SNR=7.8
NVAR SKKPbc SKKPbc 06 31 22.2 -1.0
comp=Z,0.6nm,0.7s,baz=135,slow=4.8,SNR=4.5
NV11 **Mina Array Sit** 128.84 44 ePKPdf PKPdf 06 18 28.0 +1.1
BOZ **Bozeman (W)** 128.90 33 P PKPdf 06 18 27.5 +0.7
baz=310
BOZ **Bozeman (W)** 128.90 33 ePKPdf PKPdf 06 18 27.4 +0.7
BOZ **Bozeman (W)** 128.90 33 ePKIKP PKPdf 06 18 27.4 +0.6
SMMC **Simmler** 128.90 48 P PKPdf 06 18 27.5 +0.5
baz=294
PKM **Mcpherson Peak** 129.21 49 P PKPdf 06 18 28.5 +0.8
baz=294
VES **Vestal, Richgr** 129.35 47 P PKPdf 06 18 27.9 +0.2
baz=296
TIN **Tinemaha, Big** 129.43 46 P PKPdf 06 18 28.5 +0.5
baz=297
SBC **Santa Barbara** 129.46 49 P PKPdf 06 18 29.1 +1.2
baz=294
QLMT **Earthquake Lak** 129.49 34 ePKPdf PKPdf 06 18 30.1 +2.1
SCZ2 **Santa Cruz Isl** 129.70 50 P PKPdf 06 18 29.5 +1.0
baz=294
CWC **Cottonwood Cre** 129.81 46 P PKPdf 06 18 29.4 +0.6
baz=297
ARVC **Arvin** 129.84 48 P PKPdf 06 18 29.4 +0.7
baz=295
YMR **Madison River** 129.85 33 ePKPdf PKPdf 06 18 30.8 +2.1
ISA **Isabella, Lake** 129.87 47 P PKPdf 06 18 29.4 +0.6
baz=296
ISA **Isabella, Lake** 129.87 47 ePKPdf PKPdf 06 18 30.1 +1.3
ISA **Isabella, Lake** 129.87 47 ePKIKP PKPdf 06 18 30.1 +1.3
GRAC **Grapevine Rang** 130.07 45 P PKPdf 06 18 30.1 +1.0
baz=298
SNCC **San Nicolas Is** 130.08 51 P PKPdf 06 18 30.0 +0.8
baz=293
BLG **Laguna Peak, P** 130.09 50 P PKPdf 06 18 29.9 +0.6
baz=294
YPP **Pitchstone Pla** 130.19 34 ePKPdf PKPdf 06 18 31.4 +1.9
DAC **Darwin (Calif)** 130.24 46 ePKPdf PKPdf 06 18 31.3 +1.6
DAC **Darwin (Calif)** 130.24 46 ePKIKP PKPdf 06 18 31.3 +1.6
H17A **Grant Village** 130.24 34 P PKPdf 06 18 31.1 +1.6
baz=310
IMW **Indian Meadow** 130.35 34 ePKPdf PKPdf 06 18 30.1 +0.3
MPMC **Manual Prospec** 130.41 46 P PKPdf 06 18 31.0 +1.0
baz=297
RLMT **Red Lodge** 130.47 32 P PKPdf 06 18 30.7 +0.8
baz=312
RLMT **Red Lodge** 130.47 32 ePKPdf PKPdf 06 18 29.6 -0.3
FXWY **Fox Creek** 130.47 35 ePKPdf PKPdf 06 18 28.6 -1.4
DGMT **Dagmar** 130.50 26 P PKPdf 06 18 30.2 +0.6
baz=320
DGMT **Dagmar** 130.50 26 ePKPdf PKPdf 06 18 30.5 +0.9
LRMC **Laurel Mtn Rad** 130.53 47 P PKPdf 06 18 31.1 +0.9
baz=297
MOOW **Moose Ponds** 130.56 34 ePKPdf PKPdf 06 18 31.1 +1.1
EDW2 **Edwards Air Fo** 130.57 48 P PKPdf 06 18 31.2 +1.1
baz=296
HVU **Hansel Valley** 130.57 38 ePKPdf PKPdf 06 18 31.5 +1.4
HVU **Hansel Valley** 130.57 38 ePKIKP PKPdf 06 18 31.5 +1.4
TPAW **Teton Pass** 130.60 35 ePKPdf PKPdf 06 18 30.3 0.0
R11A **Troy Canyon, C** 130.64 43 P PKPdf 06 18 31.4 +1.1
baz=301
R11A **Troy Canyon, C** 130.64 43 ePKPdf PKPdf 06 18 31.3 +0.9
SCHQ **Schefferville** 130.64 354 PKP PKPdf 06 18 30.4 +0.8
comp=Z,9.8nm,0.6s,baz=48,slow=3.0,SNR=5.1
SCHQ SKPbc SKPab 06 21 38.0 +0.1
comp=Z,54nm,1.0s,baz=24,slow=4.6,SNR=12
FURC **Furnace Creek,** 130.67 46 P PKPdf 06 18 31.3 +1.2
baz=298
LOHW **Long Hollow** 130.72 34 ePKPdf PKPdf 06 18 30.7 +0.3
SNOW **Snow King Moun** 130.73 35 ePKPdf PKPdf 06 18 31.9 +1.4
REDW **Red Top Meadow** 130.74 35 ePKPdf PKPdf 06 18 31.3 +0.8
CIS **Catalina Islan** 130.87 50 P PKPdf 06 18 31.6 +0.8
baz=294
TPNV **Topopah Spring** 130.88 45 P PKPdf 06 18 31.3 +0.5
baz=299
TPNV **Topopah Spring** 130.88 45 ePKPdf PKPdf 06 18 32.2 +1.5
TPNV **Topopah Spring** 130.88 45 ePKIKP PKPdf 06 18 32.3 +1.5
LAO **LASA Array** 130.91 29 P PKPdf 06 18 31.4 +1.0
baz=316
BGU **Big Grassy Mou** 130.91 39 ePKPdf PKPdf 06 18 33.1 +2.4
SPUT **South Promonto** 131.05 38 ePKPdf PKPdf 06 18 31.1 0.0
BFSC **Mount Baldy Ra** 131.09 49 P PKPdf 06 18 31.8 +0.6
baz=296
GSC **Goldstone, Bar** 131.25 47 P PKPdf 06 18 32.6 +1.1
baz=297
SHOC **Shoshone, Teco** 131.36 46 P PKPdf 06 18 32.8 +1.2
baz=298
HWUT **Hardware Ranch** 131.40 37 ePKPdf PKPdf 06 18 30.4 -1.3
DUG **Dugway, Tooele** 131.46 39 P PKPdf 06 18 32.8 +1.0
baz=305
DUG **Dugway, Tooele** 131.46 39 ePKPdf PKPdf 06 18 33.4 +1.6
DUG **Dugway, Tooele** 131.46 39 ePKIKP PKPdf 06 18 33.4 +1.6
BBRC **Big Bear Solar** 131.63 48 P PKPdf 06 18 33.2 +0.8
baz=296
PSUT **Pine Spring** 131.71 42 ePKPdf PKPdf 06 18 32.3 -0.1
MURC **Murrieta** 131.71 49 P PKPdf 06 18 34.0 +1.7
baz=296
TCUT **Toone Canyon** 131.79 37 ePKPdf PKPdf 06 18 31.9 -0.7
HEC **Hector,Ludlow** 131.81 47 P PKPdf 06 18 33.6 +1.1
baz=297
TUQ **Turquoise Moun** 131.83 46 P PKPdf 06 18 33.7 +1.1
baz=298
CTU **Camp Tracy** 131.84 38 ePKPdf PKPdf 06 18 32.4 -0.2
BW06 **Boulder Array** 131.85 35 P PKPdf 06 18 33.4 +0.8
baz=310
BW06 **Boulder Array** 131.85 35 ePKPdf PKPdf 06 18 32.4 -0.2
PD31 **Pinedale Array** 131.85 35 ePKPdf PKPdf 06 18 32.6 +0.1
PDAR **Pinedale Array** 131.85 35 PKhKP PKPpre 06 18 24.5
comp=Z,0.7nm,0.6s,baz=76,slow=1.8,SNR=6.3
PDAR PKP PKPdf 06 18 32.6 +0.1
comp=Z,2.2nm,0.4s,baz=135,slow=0.5,SNR=31
PDAR SKPbc SKPbc 06 21 42.2 -0.7
comp=Z,15nm,0.8s,baz=239,slow=0.8,SNR=31
PDAR SKKPbc SKKPbc 06 31 10.2 -2.3
comp=Z,0.5nm,0.5s,baz=130,slow=4.6,SNR=5.6
SHPR **Sheep Range** 131.86 45 ePKPdf PKPdf 06 18 33.3 +0.6
JLU **Jordanelle** 132.07 38 ePKPdf PKPdf 06 18 33.7 +0.7
109C **Camp Elliot, M** 132.08 50 P PKPdf 06 18 34.3 +1.3
baz=295
ULM **Lac du Bonnet** 132.15 18 PKP PKPdf 06 18 32.4 -0.1
comp=Z,8.8nm,0.8s,baz=356,slow=4.8,SNR=8.8
ULM SKPbc SKPbc 06 21 42.6 -0.7
comp=Z,87nm,0.9s,baz=336,slow=5.0,SNR=48
ULM **Lac du Bonnet** 132.15 18 ePKPdf PKPdf 06 18 32.1 -0.4
PFO **Pinyon Flats O** 132.26 49 P PKPdf 06 18 34.8 +1.3
baz=296
MPU **Maple Canyon** 132.31 39 ePKPdf PKPdf 06 18 33.4 -0.1
GMRC **Granite Mounta** 132.32 47 P PKPdf 06 18 34.9 +1.3
baz=298
BELC **Belle Mtn. Jos** 132.43 48 P PKPdf 06 18 34.1 +0.3
baz=297
BAR **Barrett** 132.50 50 ePKPdf PKPdf 06 18 34.0 +0.2
LDFC **Landfair** 132.59 46 ePKPdf PKPdf 06 18 34.0 -0.1
MONP2 **Monument Peak** 132.60 50 P PKPdf 06 18 34.3 0.0
baz=296
SZCU **Shurtz Canyon** 132.72 42 ePKPdf PKPdf 06 18 33.8 -0.5
MSU **Marysvale** 132.82 41 ePKPdf PKPdf 06 18 34.2 -0.3
MSU **Marysvale** 132.82 41 ePKIKP PKPdf 06 18 34.2 -0.3
MDND **Maddock** 132.88 23 P PKPdf 06 18 35.0 +0.9
baz=325
MDND **Maddock** 132.88 23 ePKPdf PKPdf 06 18 34.5 +0.5
LCMT **Little Creek M** 132.92 43 ePKPdf PKPdf 06 18 36.7 +2.0
IKP **In-Ko-Pah, Jac** 132.94 50 P PKPdf 06 18 35.7 +0.9
baz=296
TMUT **Trail Mountain** 132.99 39 ePKPdf PKPdf 06 18 35.3 +0.4
IRM **Iron Mountain** 132.99 48 P PKPdf 06 18 36.0 +1.3
baz=298
BC3 **Big Chuckawall** 132.99 48 P PKPdf 06 18 36.2 +1.3
baz=297
SWSC **Sam W. Stewart** 133.05 49 P PKPdf 06 18 36.0 +1.2
baz=296
MTPU **Mount Pierson** 133.07 41 ePKPdf PKPdf 06 18 35.8 +0.6
B31A **Greenbush Farm** 133.12 21 P PKPdf 06 18 35.1 +0.6
baz=328
P17A **Butcher Ranch,** 133.18 39 ePKPdf PKPdf 06 18 35.5 +0.4
P18A **Preston Nutter** 133.40 38 ePKPdf PKPdf 06 18 35.7 0.0
A33A **Warroad** 133.45 19 P PKPdf 06 18 36.2 +1.1
baz=331
W13A **Hualapai Mount** 133.45 46 ePKPdf PKPdf 06 18 34.9 -0.9
K22A **Casper** 133.60 33 P PKPdf 06 18 36.3 +0.5
baz=313
PLCA **Paso Flores** 133.62 184 PKP PKPdf 06 18 37.2 +1.4
comp=Z,1.9nm,0.5s,baz=132,slow=0.4,SNR=3.1
PLCA SKPbc SKPbc 06 21 49.7 +0.9
comp=Z,31nm,0.8s,baz=178,slow=3.3,SNR=45
C31A **Landman Farms,** 133.62 22 P PKPdf 06 18 36.4 +0.9
baz=327
Y12C **Blythe** 133.64 48 P PKPdf 06 18 37.1 +1.2
baz=298
PDMCI **Parker Dam,Lak** 133.66 47 P PKPdf 06 18 37.3 +1.4
baz=299
GLA **Glamis** 133.74 49 P PKPdf 06 18 37.5 +1.3
baz=297
RSSD **Black Hills** 133.83 29 P PKPdf 06 18 37.1 +0.9
baz=317
RSSD **Black Hills** 133.83 29 ePKPdf PKPdf 06 18 34.9 -1.3
RSSD **Black Hills** 133.83 29 ePKIKP PKPdf 06 18 34.9 -1.3
AGMN **Agassiz Nation** 133.85 20 P PKPdf 06 18 37.1 +1.3
baz=330
AGMN **Agassiz Nation** 133.85 20 ePKPdf PKPdf 06 18 36.0 +0.1
RWWY **Rawlins** 133.87 34 ePKPdf PKPdf 06 18 37.1 +0.6
U15A **North Rim** 133.88 43 ePKPdf PKPdf 06 18 36.7 +0.1
B34A **Aery, Baudette** 134.08 19 P PKPdf 06 18 37.3 +1.0
baz=332
D31A **Mcclaflin, Tow** 134.25 22 P PKPdf 06 18 37.4 +0.8
baz=327
O20A **White River Ci** 134.29 36 P PKPdf 06 18 37.9 +0.7
baz=310
O20A **White River Ci** 134.29 36 ePKPdf PKPdf 06 18 37.0 -0.2
C33A **Trail** 134.35 20 P PKPdf 06 18 37.4 +0.6
baz=330
D32A **Dogwood Acres,** 134.44 21 P PKPdf 06 18 37.8 +0.8
baz=328
B35A **Bob, Littlefor** 134.48 18 P PKPdf 06 18 37.9 +0.9
baz=333
E31A **Nome** 134.60 23 P PKPdf 06 18 38.0 +0.7
baz=326
Y14A **Wickenburg** 134.66 47 ePKPdf PKPdf 06 18 38.4 +0.5
C34A **RKJ Ranch, Bem** 134.73 19 P PKPdf 06 18 38.5 +0.9
baz=331
PV09 **Paradox Valley** 134.77 39 ePKPdf PKPdf 06 18 36.8 -1.5
D33A **AnnSam, Waubum** 134.85 20 P PKPdf 06 18 38.6 +0.8
baz=329
PV23 **Carpenter Ridg** 134.87 39 ePKPdf PKPdf 06 18 38.3 -0.1
PV14 **Lion Creek, Pa** 134.91 39 ePKPdf PKPdf 06 18 40.1 +1.6
PV20 **West Nyswonger** 134.97 39 ePKPdf PKPdf 06 18 38.6 +0.1
PV19 **Morning Glory** 134.97 39 ePKPdf PKPdf 06 18 37.3 -1.3
WUAZ **Wupatki** 135.00 44 P PKPdf 06 18 39.2 +0.6
baz=303
WUAZ **Wupatki** 135.00 44 ePKPdf PKPdf 06 18 38.2 -0.4
PV17 **East Wray Mesa** 135.01 39 ePKPdf PKPdf 06 18 39.2 +0.6
PV16 **Nyswonger Mesa** 135.01 39 ePKPdf PKPdf 06 18 38.6 -0.1
PV11 **David Mesa, Pa** 135.05 39 ePKPdf PKPdf 06 18 39.7 +1.0
PV18 **Skein Mesa, Pa** 135.06 39 ePKPdf PKPdf 06 18 39.2 +0.5
PV12 **Saucer Basin,** 135.08 39 ePKPdf PKPdf 06 18 38.6 -0.2

N23A **Red Feather La** 135.11 34 P **PKPdf** 06 18 39.4 +0.6
baz=313
N23A **Red Feather La** 135.11 34 *e*PKPdf **PKPdf** 06 18 40.4 +1.6
D34A **Park Rapids** 135.12 20 P **PKPdf** 06 18 39.0 +0.7
baz=330
PV13 **Radium Mtn., P** 135.17 39 *e*PKPdf **PKPdf** 06 18 39.0 0.0
PV02 **Paradox Valley** 135.19 39 *e*PKPdf **PKPdf** 06 18 38.7 -0.3
C36A **Pine Crest Far** 135.28 18 P **PKPdf** 06 18 39.6 +1.1
baz=334
E33A **Westby DABS, E** 135.34 21 P **PKPdf** 06 18 39.6 +0.9
baz=329
EYMN **Ely** 135.50 16 P **PKPdf** 06 18 40.1 +1.2
baz=336
EYMN **Ely** 135.50 16 *e*PKPdf **PKPdf** 06 18 37.8 -1.1
C37A **Embarrass** 135.50 17 P **PKPdf** 06 18 39.7 +0.7
baz=335
D35A **Remer** 135.51 19 P **PKPdf** 06 18 39.7 +0.7
baz=332
X16A **Lo Mia Camp, P** 135.53 45 *e*PKPdf **PKPdf** 06 18 38.9 -0.7
E34A **Wadena** 135.63 20 P **PKPdf** 06 18 40.0 +0.8
baz=330
SMCO **Snowmass** 135.66 37 *e*PKPdf **PKPdf** 06 18 41.1 +1.1
214A **Organ Pipe Nat** 135.75 49 P **PKPdf** 06 18 40.7 +0.8
baz=298
G32A **Webster** 135.84 23 P **PKPdf** 06 18 40.5 +0.8
baz=326
SUSD **Miller** 135.91 25 P **PKPdf** 06 18 40.9 +1.1
baz=324
MVCO **Mesa Verde** 135.94 40 P **PKPdf** 06 18 41.3 +0.9
baz=307
D37A **Cotton** 135.95 18 P **PKPdf** 06 18 40.8 +1.0
baz=334
C39A **Grand Marais** 135.99 15 P **PKPdf** 06 18 40.9 +1.0
baz=337
ISCO **Idaho Springs** 136.04 35 *e*PKPdf **PKPdf** 06 18 39.6 -1.0
ISCO **Idaho Springs** 136.04 35 *e*PKIKP **PKPdf** 06 18 39.6 -1.0
C40A **Isle Royale Na** 136.14 14 P **PKPdf** 06 18 41.4 +1.2
baz=339
E36A **McGregor** 136.26 19 P **PKPdf** 06 18 41.6 +1.2
baz=333
G33A **Ortonville** 136.30 22 P **PKPdf** 06 18 41.8 +1.3
baz=328
W18A **Petrified Fore** 136.34 43 P **PKPdf** 06 18 42.0 +0.9
baz=304
W18A **Petrified Fore** 136.34 43 *e*PKPdf **PKPdf** 06 18 40.9 -0.2
F35A **Swanville** 136.41 20 P **PKPdf** 06 18 41.7 +1.0
baz=330
H32A **Carlson Farm,** 136.48 24 P **PKPdf** 06 18 42.3 +1.3
baz=326
E37A **Wrenshall** 136.49 18 P **PKPdf** 06 18 41.9 +1.1
baz=334
X18A **Snowflake** 136.51 44 *e*PKPpre PKPpre 06 18 35.8
G34A **Benson** 136.56 22 P **PKPdf** 06 18 42.6 +1.6
baz=329
E38A **The Farm, Brul** 136.70 17 P **PKPdf** 06 18 42.7 +1.5
baz=335
F36A **Milaca** 136.76 19 P **PKPdf** 06 18 43.0 +1.6
baz=332
G35A **Watkins** 136.99 21 P **PKPdf** 06 18 43.5 +1.7
baz=330
TUC **Tucson** 137.08 47 *e*PKPpre PKPpre 06 18 34.7
TUC **Tucson** 137.08 47 *e*PKHKP PKPpre 06 18 34.7
F37A **Hinrichs Farm,** 137.17 19 P **PKPdf** 06 18 43.6 +1.5
baz=333
OGNE **Ogallala** 137.17 31 P **PKPdf** 06 18 43.7 +1.3
baz=318
OGNE **Ogallala** 137.17 31 *e*PKPdf **PKPdf** 06 18 41.4 -1.0
E39A **Mellen** 137.20 16 P **PKPdf** 06 18 43.8 +1.6
baz=336
G36A **St. Michael** 137.23 20 P **PKPdf** 06 18 43.8 +1.6
baz=331
E40A **Wakefield** 137.32 16 P **PKPdf** 06 18 43.6 +1.2
baz=337
H35A **Sunnyside Ranc** 137.32 21 P **PKPdf** 06 18 44.2 +1.8
baz=330
ECSD **EROS Data Cent** 137.45 24 P **PKPdf** 06 18 44.4 +1.7
baz=326
ECSD **EROS Data Cent** 137.45 24 *e*PKPdf PKPpre 06 18 39.7
SDCO **Great Sand Dun** 137.46 37 P **PKPdf** 06 18 44.4 +1.1
baz=311
SDCO **Great Sand Dun** 137.46 37 *e*PKPdf **PKPdf** 06 18 42.2 -1.0
F39A **Loretta** 137.52 17 P **PKPdf** 06 18 44.5 +1.7
baz=336
E41A **Kenton** 137.54 15 P **PKPdf** 06 18 44.4 +1.6
baz=338
SPMN **Marine on St.** 137.56 19 P **PKPdf** 06 18 44.4 +1.6
baz=332
SPMN **Marine on St.** 137.56 19 *e*PKPdf **PKPdf** 06 18 43.1 +0.2
F40A **Park Falls** 137.74 16 P **PKPdf** 06 18 44.8 +1.6
baz=337
H36A **Jessenland, He** 137.74 21 P **PKPdf** 06 18 45.4 +2.2
baz=331
E42A **Champion** 137.83 14 P **PKPdf** 06 18 45.0 +1.6
baz=340
COWI **Conover** 137.84 15 *e*PKPdf **PKPdf** 06 18 44.0 +0.6
G38A **Ridgeland** 137.91 18 P **PKPdf** 06 18 45.1 +1.6
baz=334
E43A **Lone Tree Farm** 138.09 13 P **PKPdf** 06 18 45.8 +2.0
baz=341
H38A **Maiden Rock** 138.21 19 P **PKPdf** 06 18 45.7 +1.7
baz=333
I37A **Lemond, Waseca** 138.42 21 P **PKPdf** 06 18 46.1 +1.6
baz=331
E45A **Wooded Hills,** 138.49 11 P **PKPdf** 06 18 45.8 +1.2
baz=344
LAZ **Ladron** 138.50 42 *e*PKPdf **PKPdf** 06 18 45.4 +0.3
H39A **Augusta** 138.53 18 P **PKPdf** 06 18 46.3 +1.6
baz=334
F43A **Flat Rock, Esc** 138.57 13 P **PKPdf** 06 18 46.4 +1.8
baz=341
ANMO **Albuquerque** 138.62 41 PKhKP PKPpre 06 18 35.6
baz=298,slow=5.6
ANMO SKPbc **SKPbc** 06 22 05.7 +1.3
comp=Z,13nm,0.8s,baz=283,slow=4.2,SNR=21
ANMO **Albuquerque** 138.62 41 P **PKPdf** 06 18 46.7 +1.3
baz=307
ANMO **Albuquerque** 138.62 41 *e*PKPpre PKPpre 06 18 37.1
ANMO **Albuquerque** 138.62 41 *e*PKHKP PKPpre 06 18 37.1
319A **Douglas** 138.66 48 *e*PKPpre PKPpre 06 18 38.2
J36A **Seneca 1, Swea** 138.68 22 P **PKPdf** 06 18 46.7 +1.7
baz=329
BGNE **Belgrade** 138.69 27 P **PKPdf** 06 18 46.8 +1.7
baz=323
BGNE **Belgrade** 138.69 27 *e*PKPpre PKPpre 06 18 37.1
I38A **Scanlan Farm,** 138.76 20 P **PKPdf** 06 18 46.8 +1.7
baz=333
G42A **Mountain** 138.82 15 P **PKPdf** 06 18 47.2 +2.0
baz=339
H40A **Chili** 138.85 17 P **PKPdf** 06 18 47.1 +1.9
baz=336
J37A **Redenius Farm,** 138.98 21 P **PKPdf** 06 18 47.5 +2.0
baz=330
G43A **Wallace** 138.99 14 P **PKPdf** 06 18 47.6 +2.1
baz=340
H41A **Junction City** 139.07 17 P **PKPdf** 06 18 47.5 +1.9
baz=337
F45A **CMU Biological** 139.07 12 P **PKPdf** 06 18 47.7 +2.1
baz=343
I39A **Houston** 139.19 19 P **PKPdf** 06 18 47.3 +1.4
baz=334
K36A **Gilmore City** 139.22 23 P **PKPdf** 06 18 47.8 +1.8
baz=329
J39A **Decorah** 139.60 19 P **PKPdf** 06 18 48.2 +1.6
baz=333
L36A **Harm Buss Farm** 139.60 23 P **PKPdf** 06 18 48.7 +2.0
baz=328
RCBR **Riachuelo** 139.75 254 PKhKP PKPpre 06 18 45.6
comp=Z,209nm,0.8s,baz=93,slow=0.6,SNR=9.0
RCBR PP **PP** 06 21 48.2 +2.8
comp=Z,97nm,0.8s,baz=160,slow=0.3,SNR=7.2
K38A **Parkersburg** 139.84 21 P **PKPdf** 06 18 48.9 +1.8
baz=331
J40A **Soldiers Grove** 139.85 18 P **PKPdf** 06 18 48.7 +1.6
baz=335
CBKS **Cedar Bluff** 139.93 31 *e*PKPpre PKPpre 06 18 40.2
CBKS **Cedar Bluff** 139.93 31 *e*PKHKP PKPpre 06 18 40.2
I42A **Draeger Farm,** 139.94 16 P **PKPdf** 06 18 49.2 +1.9
baz=338
I42A **Draeger Farm,** 139.94 16 *e*PKPpre PKPpre 06 18 39.3
M36A **Felix, Anita** 140.09 24 P **PKPdf** 06 18 49.4 +1.8
baz=328
SCIA **State Center** 140.32 22 P **PKPdf** 06 18 50.2 +2.2
baz=330
PKME **Peaks-Kenny Pk** 140.35 354 *e*PKPpre PKPpre 06 18 40.7
J42A **Columbus** 140.41 17 P **PKPdf** 06 18 50.1 +1.9
baz=337
M37A **Trindle Farm,** 140.43 23 P **PKPdf** 06 18 50.4 +2.1
baz=329
JFWS **Jewell Farm** 140.44 18 P **PKPdf** 06 18 50.1 +1.9
baz=335
JFWS **Jewell Farm** 140.44 18 *e*PKPpre PKPpre 06 18 42.0
JFWS **Jewell Farm** 140.44 18 *e*PKHKP PKPpre 06 18 42.0
L39A **Vinton** 140.57 21 P **PKPdf** 06 18 50.5 +2.1
baz=332
EMMW **East Machias** 140.68 352 *e*PKPpre PKPpre 06 18 41.8
K41A **Shullsburg** 140.70 18 P **PKPdf** 06 18 50.5 +1.9
baz=335
M38A **Pleasantville** 140.75 22 P **PKPdf** 06 18 50.7 +2.0
baz=330
PLVO **Plevna** 140.78 3 *e*PKPpre PKPpre 06 18 41.1
SADO **Sadowa** 140.90 5 PKhKP PKPpre 06 18 42.4
comp=Z,9.2nm,0.7s,baz=318,slow=3.2,SNR=8.8
SADO SKPbc **SKPbc** 06 22 09.9 0.0
comp=Z,37nm,0.9s,baz=353,slow=4.1,SNR=14
N37A **Lee Faris, Mou** 140.92 24 P PKPpre 06 18 42.7
baz=328
N37A P **PKiKP** 06 18 51.2 -0.6
baz=328
FRNY **Flat Rock** 141.04 359 *e*PKPpre PKPpre 06 18 43.4
M39A **Webster** 141.08 21 P **PKPdf** 06 18 51.3 +1.9
baz=331
WVL **Waterville** 141.08 354 *e*PKPpre PKPpre 06 18 44.8
L41A **Preston** 141.12 19 P **PKPdf** 06 18 51.3 +1.8
baz=334
K43A **Burlington** 141.20 16 P **PKPdf** 06 18 51.7 +2.1
baz=338
KSU1 **Kansas State U** 141.24 28 *e*PKPpre PKPpre 06 18 45.6
LONY **Lake Ozonia** 141.26 0 *e*PKPpre PKPpre 06 18 43.1
MNTX **Cornudas Mount** 141.27 44 P PKPpre 06 18 45.5
baz=306
MNTX P **PKiKP** 06 18 52.1 -0.7
baz=306
MNTX **Cornudas Mount** 141.27 44 *e*PKPpre PKPpre 06 18 45.0
N38A **Joes South For** 141.27 23 P PKPpre 06 18 44.0
baz=329
N38A P **PKiKP** 06 18 51.7 -0.8
baz=329
M40A **Post Highland** 141.38 21 P PKPpre 06 18 43.7
baz=332
M40A P **PKiKP** 06 18 52.1 -0.6
baz=332
O37A **Wolven Farm, M** 141.44 24 P PKPpre 06 18 44.8
baz=328
L42A **Oliver, Polo** 141.45 18 P PKPpre 06 18 43.8
baz=335
L42A P **PKiKP** 06 18 52.3 -0.6
baz=335
N39A **Derby Farms, D** 141.48 22 P PKPpre 06 18 44.5
baz=331
N39A P **PKiKP** 06 18 52.5 -0.4
baz=331
L43A **Garden Prairie** 141.56 17 P **PKPdf** 06 18 52.5 +2.2
baz=337
LBNH **Lisbon** 141.57 357 *e*PKPpre PKPpre 06 18 46.1
LBNH **Lisbon** 141.57 357 *e*PKIKP PKPpre 06 18 46.1
AMTX **Amarillo** 141.67 37 *e*PKPpre PKPpre 06 18 45.9
M41A **Milan** 141.73 20 P PKPpre 06 18 44.7
baz=334
O38A **Galt** 141.75 24 P PKPpre 06 18 45.2
baz=329
O38A P **PKiKP** 06 18 52.8 -0.8
baz=329
N40A **Mertquake, Sal** 141.81 21 P PKPpre 06 18 45.5
baz=332
N40A P **PKiKP** 06 18 53.1 -0.5
baz=332
P37A **Lathrop** 141.85 25 P PKPpre 06 18 45.6
baz=327
P37A P **PKiKP** 06 18 53.4 -0.4
baz=327
M42A **Sheffield** 141.92 19 P PKPpre 06 18 46.5
baz=335
O39A **Kirksville** 142.00 23 P PKPpre 06 18 46.5
baz=330
O39A P **PKiKP** 06 18 53.6 -0.4
baz=330
P38A **Dawn** 142.15 24 P PKPpre 06 18 46.8
baz=328
P38A P **PKiKP** 06 18 54.0 -0.4
baz=328
M43A **Waltham Townsh** 142.18 18 P PKPpre 06 18 47.1
baz=336
M43A P **PKiKP** 06 18 54.1 -0.3
baz=336
O40A **La Belle** 142.37 22 P PKPpre 06 18 47.5
baz=331
Q37A **Longview Farm,** 142.40 26 P PKPpre 06 18 46.8
baz=326
ACCN **Adirondack Com** 142.49 359 *e*PKPpre PKPpre 06 18 47.7
M44A **Midewin, Midew** 142.50 17 P PKPpre 06 18 47.7
baz=338
N43A **Stutzman Famil** 142.57 18 P **PKPdf** 06 18 54.7 +2.7
baz=336
P39B **Salisbury** 142.58 23 P PKPpre 06 18 47.9
baz=329
P39B P **PKiKP** 06 18 54.9 -0.3
baz=329
Q38A **Cooks Store, C** 142.68 25 P PKPpre 06 18 48.1
baz=328
M45A **Boilermakers S** 142.72 16 P **PKPdf** 06 18 55.1 +2.8
baz=339
O41A **Passleys Farm,** 142.74 21 P PKPpre 06 18 48.0
baz=332
P40A **Paris** 142.82 23 P PKPpre 06 18 48.8
baz=330
P40A P **PKiKP** 06 18 55.3 -0.4
baz=330
Q39A **Willow Grove F** 142.87 24 P PKPpre 06 18 49.0
baz=329
HDIL **Hopedale** 142.88 19 P PKPpre 06 18 48.8
baz=335
HDIL P **PKiKP** 06 18 55.4 -0.5
baz=335
HDIL **Hopedale** 142.88 19 *e*PKPpre PKPpre 06 18 49.0
M46A **Old House Fiel** 142.94 15 P PKPpre 06 18 49.8
baz=340
M46A P **PKiKP** 06 18 55.5 -0.4
baz=340
O42A **Bath** 142.94 20 P PKPpre 06 18 48.6
baz=334
N44A **Piper City** 143.02 17 P PKPpre 06 18 50.1
baz=337
MMNY **Mt. Morris Dam** 143.03 4 *e*PKPpre PKPpre 06 18 49.2
P41A **Barry, Barry** 143.06 21 P PKPab 06 18 49.3 +0.6
baz=332
O43A **Sugar Creek Fa** 143.12 19 P PKPab 06 18 49.6 +0.7
baz=335
O43A P **PKiKP** 06 18 55.9 -0.5
baz=335
TRY **Troy** 143.14 359 *e*PKPpre PKPpre 06 18 50.0
N45A **Kentland** 143.15 16 P PKPbc 06 18 50.5 +0.1
baz=338
R38A **Fenwick Farm,** 143.21 26 P PKPab 06 18 49.5 +0.2
baz=327
Q40A **Laux Farm, Aux** 143.28 23 P PKPab 06 18 50.1 +0.6
baz=330
HRV **Adam Dziewonsk** 143.28 356 P PKPab 06 18 50.0 +0.6
baz=4.9
N46A **Monticello** 143.32 16 P PKPbc 06 18 51.1 +0.2
baz=339
P42A **Winchester** 143.40 21 P PKPab 06 18 50.4 +0.4
baz=333
P42A P **PKiKP** 06 18 56.3 -0.6
baz=333
ERPA **Erie** 143.44 7 P PKPab 06 18 50.6 +0.5
baz=351
WMOK **Wichita Mounta** 143.46 35 P PKPbc 06 18 51.0 -0.5
baz=317
R39A **Chumby, Stover** 143.47 25 P PKPab 06 18 50.4 +0.1
baz=328
R39A P **PKiKP** 06 18 56.7 -0.5
baz=328
O44A **Mansfield** 143.51 18 P PKPab 06 18 50.6 +0.2
baz=336
P43A **Skaggs, Pawnee** 143.63 20 P PKPab 06 18 50.9 0.0
baz=334
P43A P **PKiKP** 06 18 57.0 -0.4
baz=334
Q41A **Truxton** 143.63 22 P PKPab 06 18 51.1 +0.2
baz=331
O45A **Potomac** 143.64 17 P PKPab 06 18 51.1 +0.2
baz=338
BINY **Binghamton** 143.66 2 P PKPbc 06 18 51.5 -0.3
baz=358
BINY P **PKiKP** 06 18 57.1 -0.3
baz=358
BINY **Binghamton** 143.66 2 *e*PKPpre PKPbc 06 18 51.5 -0.4
S38A **Stockton** 143.67 26 P PKPab 06 18 50.8 -0.3
baz=326
SFIN **Lafayette** 143.70 16 P PKPab 06 18 50.9 -0.2
baz=339
SFIN P **PKiKP** 06 18 57.1 -0.4
baz=339
SFIN **Lafayette** 143.70 16 *e*PKPpre PKPpre 06 18 51.7
R40A **Maddies Statio** 143.80 24 P PKPab 06 18 51.7 +0.1
baz=329
R40A P **PKiKP** 06 18 57.5 -0.3
baz=329
TX31 **Lajitas Ar. Si** 143.84 46 *e*PKPdf PKPbc 06 18 53.5 +0.7
TXAR **Lajitas Array** 143.84 46 PKP **PKPdf** 06 18 54.4 -0.4
comp=Z,117nm,0.8s,baz=278,slow=1.3,SNR=1156
TXAR SKKPbc **SKiKP** 06 22 18.6 -0.1
comp=Z,4.5nm,0.6s,baz=241,slow=1.5,SNR=8.1
TXAR SKKPbc **SKKPab** 06 30 24.7 -0.7
comp=Z,4.0nm,1.1s,baz=132,slow=5.0,SNR=14
S39A **Bolivar** 143.87 26 P PKPab 06 18 51.4 -0.5
baz=327
S39A P **PKiKP** 06 18 57.6 -0.4
baz=327
Q42A **Golden Eagle** 143.93 21 P PKPab 06 18 51.9 -0.2
baz=332
Q42A P **PKiKP** 06 18 57.7 -0.3
baz=332
T38A **Diamond** 143.99 27 P PKPab 06 18 52.5 +0.1
baz=325
CPUP **Villa Florida** 144.03 207 PKP **PKPdf** 06 18 54.6 -0.5
comp=Z,15nm,0.6s,baz=145,slow=2.0,SNR=59
CPUP pPKP **pPKPdf** 06 19 36.0 -3.5
comp=Z,14nm,1.1s,baz=156,slow=1.6,SNR=3.1
CPUP SKPbc **SKPbc** 06 22 18.1 -0.1
comp=Z,11nm,0.9s,baz=149,slow=2.9,SNR=8.8
CPUP SKKPbc **SKKPbc** 06 30 23.8 -0.5
comp=Z,7.7nm,0.9s,baz=344,slow=4.6,SNR=11
CPUP **Villa Florida** 144.03 207 *e*PKPdf **PKPdf** 06 18 54.9 -0.1
M54A **Oil Creek Stat** 144.08 7 P **PKPab** 06 18 52.6 0.0
baz=351
P44A **Sand Creek, Wi** 144.08 19 P **PKPab** 06 18 52.8 +0.2
baz=336
O47A **Sheridan** 144.08 15 P **PKPab** 06 18 52.4 -0.2
baz=340
M65A **Busby, Falmout** 144.15 355 P PKPbc 06 18 53.1 -0.1
baz=6.5
R41A **Rosebud** 144.15 23 P **PKPab** 06 18 52.8 -0.1
baz=331
TUL1 **Leonard** 144.17 30 P PKPbc 06 18 53.4 -0.1
baz=322
TUL1 **Leonard** 144.17 30 *e*PKPdf PKPbc 06 18 53.5 -0.1
Q43A **New Douglas** 144.20 20 P **PKPab** 06 18 53.1 0.0
baz=334
SLM **Saint Louis** 144.28 21 *e*PKPdf **PKPab** 06 18 53.5 +0.1
SLM **Saint Louis** 144.28 21 *e*PKIKP **PKPab** 06 18 53.5 +0.1
S40A **Lebanon** 144.30 25 P **PKPab** 06 18 53.4 -0.1
baz=328
P45A **Graceland, Par** 144.30 18 P **PKPab** 06 18 53.5 0.0
baz=337
KSPA **Keystone Colle** 144.31 2 *e*PKPdf PKPbc 06 18 53.9 +0.2
P46A **Rosedale** 144.38 17 P **PKPab** 06 18 53.7 0.0
baz=338
R42A **Luebbering** 144.39 22 P **PKPab** 06 18 53.7 -0.2
baz=332,SNR=172
T39A **Clever** 144.41 26 P **PKPab** 06 18 54.0 0.0
baz=327
CCM **Cathedral Cave** 144.41 23 P **PKPab** 06 18 53.7 -0.3
baz=331
CCM **Cathedral Cave** 144.41 23 *e*PKPdf **PKPab** 06 18 53.7 -0.3
CCM **Cathedral Cave** 144.41 23 *e*PKIKP **PKPab** 06 18 53.7 -0.3
ABTX **Abilene, Hawle** 144.45 38 P PKPbc 06 18 54.9 +0.4
baz=314
ABTX **Abilene, Hawle** 144.45 38 *e*PKPdf **PKPdf** 06 18 55.1 -0.5
Q44A **Meyer Farm, Va** 144.47 20 P **PKPab** 06 18 53.9 -0.2
baz=335,SNR=26
YLE **Yale** 144.53 358 *e*PKPdf **PKPab** 06 18 54.1 -0.1
N54A **Moraine State** 144.58 7 P **PKPab** 06 18 54.1 -0.3
baz=351
N54A **Moraine State** 144.58 7 *e*PKPdf **PKPab** 06 18 54.0 -0.5
S41A **Jillco Farms,** 144.62 24 P **PKPab** 06 18 54.6 -0.2
baz=330
T40A **Mansfield** 144.67 25 P **PKPab** 06 18 54.5 -0.4
baz=328,SNR=71
R43A **Red Bud** 144.71 21 P **PKPab** 06 18 54.7 -0.3
baz=333,SNR=138
Q45A **Warren Harvey,** 144.75 19 P **PKPab** 06 18 55.2 0.0
baz=336,SNR=125
P47A **Martinsville** 144.76 16 P **PKPab** 06 18 54.8 -0.4
baz=340,SNR=85
FVM **French Village** 144.79 22 *e*PKPbc **PKPab** 06 18 55.0 -0.4
FVM **French Village** 144.79 22 *e*PKIKP **PKPab** 06 18 55.0 -0.4
ACSO **Alum Creek Sta** 144.82 11 P **PKPab** 06 18 54.9 -0.5
baz=345
ACSO **Alum Creek Sta** 144.82 11 *e*PKPbc **PKPab** 06 18 55.1 -0.3
S42A **Caledonia** 144.84 23 P **PKPab** 06 18 55.2 -0.4
baz=331,SNR=432
PAL **Palisades** 144.87 359 P PKPbc 06 18 55.2 -0.3
baz=1.0
PAL **Palisades** 144.87 359 *e*PKPbc PKPbc 06 18 55.3 -0.2
PAL **Palisades** 144.87 359 *e*PKIKP PKPbc 06 18 55.3 -0.2
Q46A **CEJHS Indians,** 144.88 17 P PKPbc 06 18 55.4 -0.2
baz=338,SNR=13
U39A **Green Forest** 144.89 27 P PKPbc 06 18 55.3 -0.5
baz=326
OLIL **Olney** 144.92 19 *e*PKPbc PKPbc 06 18 55.7 0.0
N59A **State Game Lan** 144.94 2 P **PKPdf** 06 18 56.1 -0.1
baz=358
N59A **State Game Lan** 144.94 2 *e*PKPbc **PKPab** 06 18 56.0 +0.1
BLO **Bloomington** 144.99 16 *e*PKPbc PKPbc 06 18 55.8 -0.1
BLO **Bloomington** 144.99 16 *e*PKIKP PKPbc 06 18 55.8 -0.2
R44A **Waltonville** 145.03 20 P **PKPbc** 06 18 55.8 -0.3
baz=334,SNR=226
T41A **Mountain View** 145.08 24 P **PKPbc** 06 18 56.1 -0.2
baz=329,SNR=389
CPNY **Central Park** 145.08 359 *e*PKPbc **PKPbc** 06 18 56.2 0.0
SSPA **Standing Stone** 145.11 4 P **PKPbc** 06 18 56.2 -0.1
baz=354
SSPA **Standing Stone** 145.11 4 *e*PKPbc **PKPbc** 06 18 56.0 -0.3
U40A **Yellville** 145.19 26 P **PKPbc** 06 18 56.5 -0.2
baz=327,SNR=755
BRNJ **Basking Ridge** 145.19 0 *e*PKPbc **PKPbc** 06 18 56.0 -0.6
Q47A **Bedord North L** 145.23 16 P **PKPbc** 06 18 56.7 -0.1
baz=339,SNR=118
R45A **Skylar, Fairfi** 145.26 19 P **PKPbc** 06 18 56.8 0.0
baz=336,SNR=175
V39A **Pettigrew** 145.26 28 P **PKPdf** 06 18 56.6 -0.4
baz=325
LCO **Las Campanas** 145.27 186 *e*PKPdf **PKPab** 06 18 58.6 +0.8
LUPA **Lehigh Univers** 145.27 1 *e*PKPdf **PKPdf** 06 18 56.6 -0.1
S43A **Fulton Ridge,** 145.28 22 P **PKPdf** 06 18 56.2 -0.7
baz=332,SNR=83
T42A **Van Buren** 145.36 24 P **PKPdf** 06 18 57.1 0.0
baz=330
O56A **Blue Knob Stat** 145.42 5 P **PKPbc** 06 18 57.4 0.0
baz=353
O56A **Blue Knob Stat** 145.42 5 *e*PKPdf **PKPbc** 06 18 57.2 -0.1
S44A **Carbondale** 145.47 21 P **PKPbc** 06 18 57.5 0.0
baz=334,SNR=80
R46A **Gibon Southern** 145.58 18 P **PKPbc** 06 18 57.6 -0.2
baz=337,SNR=75
PAGS **Pennsylvania G** 145.59 3 *e*PKPdf **PKPdf** 06 18 57.3 0.0
U41A **Viola** 145.61 25 P **PKPbc** 06 18 57.9 -0.2
baz=328,SNR=479
T43A **Greenville** 145.63 23 P **PKPdf** 06 18 57.5 0.0
baz=332,SNR=264
V40A **Witts Springs** 145.67 27 P **PKPdf** 06 18 57.8 +0.1
baz=326,SNR=161
V40A **Witts Springs** 145.67 27 *e*PKPdf **PKPdf** 06 18 57.5 -0.1
S45A **Carrier Mills** 145.72 20 P **PKPbc** 06 18 58.3 0.0
baz=335,SNR=66
W39A **Magazine** 145.72 29 P **PKPbc** 06 18 58.1 -0.3
baz=324,SNR=42
W39A **Magazine** 145.72 29 *e*PKPdf **PKPdf** 06 18 57.5 -0.2
USIN **University of** 145.76 19 *e*PKPdf **PKPbc** 06 18 58.3 -0.1
JCT **Junction City** 145.78 41 P **PKPab** 06 18 59.5 +0.1
baz=311
JCT **Junction City** 145.78 41 *e*PKPdf **PKPbc** 06 18 58.8 0.0
JCT **Junction City** 145.78 41 *e*PKP2 **PKPbc** 06 18 58.8 0.0
R47A **Wooly Knot Far** 145.80 17 P **PKPbc** 06 18 58.3 -0.2
baz=338,SNR=26
MVL **Millersville** 145.84 2 *e*PKPdf **PKPbc** 06 18 58.8 +0.2
PBMO **Poplar Bluff** 145.84 23 *e*PKPdf **PKPdf** 06 18 57.5 -0.3
MCWV **Mont Chateau** 145.88 7 P **PKPbc** 06 18 58.9 +0.2
baz=351
MCWV **Mont Chateau** 145.88 7 *e*PKPdf **PKPbc** 06 18 58.6 -0.1

R48A	Northridge Ran	145.89	16	P	PKPbc	06 18 58.9	+0.1
	baz=340						
U42A	Revenden	145.89	24	P	PKPbc	06 18 58.9	0.0
	baz=329,SNR=686						
T44A	Benton	145.89	22	P	PKPbc	06 18 58.6	-0.2
	baz=333						
WCI	Wyandotte Cave	145.93	17	P	PKPbc	06 18 58.8	-0.1
	baz=339						
WCI	Wyandotte Cave	145.93	17	ePKPdf	PKPbc	06 18 58.5	-0.4
WCI	Wyandotte Cave	145.93	17	ePKP2	PKPbc	06 18 58.5	-0.4
PSUB	Penn St. - Bra	145.94	1	ePKPdf	PKPbc	06 18 58.7	-0.2
V41A	Mountainview	145.98	26	P	PKPbc	06 18 58.7	-0.5
	baz=328,SNR=257						
S46A	Don Dixon Farm	146.00	19	P	PKPbc	06 18 58.8	-0.3
	baz=336,SNR=65						
W40A	Ferguson Farm,	146.06	28	P	PKPbc	06 18 59.3	-0.1
	baz=326,SNR=114						
W40A	Ferguson Farm,	146.06	28	ePKPdf	PKPdf	06 18 58.8	+0.5
X39A	Fountain Ranch	146.11	30	P	PKPab	06 19 00.1	-0.4
	baz=323,SNR=411						
U43A	Rector	146.21	23	P	PKPbc	06 18 59.6	-0.2
	baz=331,SNR=42						
WHTX	Lake Whitney,	146.21	37	P	PKPab	06 19 00.8	-0.1
	baz=316,SNR=126						
WHTX	Lake Whitney,	146.21	37	ePKPdf	PKPbc	06 18 59.8	-0.1
T45A	Paducah	146.29	21	P	PKPbc	06 18 59.8	-0.2
	baz=334,SNR=38						
V42A	Cord	146.29	25	P	PKPbc	06 18 59.7	-0.3
	baz=329,SNR=246						
MIAR	Mount Ida	146.35	29	P	PKPbc	06 19 00.5	+0.2
	baz=324						
MIAR	Mount Ida	146.35	29	ePKPdf	PKPbc	06 18 59.6	-0.7
MIAR	Mount Ida	146.35	29	ePKP2	PKPbc	06 18 59.6	-0.7
U44A	Portageville	146.37	22	P	PKPbc	06 19 00.2	-0.1
	baz=332,SNR=14						
SDMD	Soldier's Deli	146.40	3	ePKPdf	PKPbc	06 18 59.9	-0.4
W41B	Gary Mavity, V	146.45	27	P	PKPbc	06 18 60.0	-0.6
	baz=327,SNR=61						
W41B	Gary Mavity, V	146.45	27	ePKPdf	PKPdf	06 18 59.6	+0.6
T46A	Princeton	146.53	20	P	PKPbc	06 19 00.9	+0.2
	baz=335,SNR=203						
S48A	Wiedeman Farm,	146.53	17	P	PKPbc	06 19 00.5	-0.2
	baz=339						
GO03	Copiap	146.62	187	ePKPdf	PKPbc	06 19 01.0	-0.4
U44B	Burton Farm, H	146.64	22	P	PKPbc	06 19 01.3	+0.2
	baz=332,SNR=36						
V43A	Jonesboro	146.66	24	P	PKPbc	06 19 01.3	+0.2
	baz=330,SNR=11						
W42A	Bald Knob	146.69	26	P	PKPbc	06 19 01.0	-0.2
	baz=328,SNR=32						
X40A	Basin Creek Fa	146.75	28	P	PKPbc	06 19 01.2	-0.2
	baz=325,SNR=31						
X40A	Basin Creek Fa	146.75	28	ePKPdf	PKPbc	06 19 01.6	+0.2
T47A	Sharon Grove	146.83	19	P	PKPbc	06 19 01.5	-0.1
	baz=337,SNR=14						
U45A	Rockin P Farm,	146.85	21	P	PKPbc	06 19 01.7	+0.1
	baz=334,SNR=113						
V44A	Blytheville	146.88	23	P	PKPbc	06 19 01.8	+0.1
	baz=331,SNR=18						
X41A	Kaden, Bauxite	146.89	28	P	PKPbc	06 19 02.0	+0.2
	baz=326,SNR=7.0						
Y40A	Okolona	146.92	29	P	PKPbc	06 19 01.9	0.0
	baz=324,SNR=47						
T48A	Bowling Green	146.94	18	P	PKPbc	06 19 01.9	0.0
	baz=338,SNR=13						
435B	Jarrell	146.99	38	P	PKPbc	06 19 02.6	+0.4
	baz=314,SNR=26						
435B	Jarrell	146.99	38	ePKPdf	PKPbc	06 19 01.2	-1.0
U46A	Springville	147.04	20	P	PKPbc	06 19 02.3	+0.1
	baz=334						
S51A	Beattyville	147.18	13	P	PKPbc	06 19 02.2	-0.4
	baz=343,SNR=11						
T49A	Edmonton	147.19	16	P	PKPbc	06 19 02.2	-0.4
	baz=340						
W43A	Forest City	147.19	25	P	PKPbc	06 19 02.5	-0.1
	baz=329,SNR=7.9						
X42A	Stuttgart	147.25	27	P	PKPbc	06 19 02.6	-0.1
	baz=327,SNR=19						
S52A	Salyersville	147.26	13	P	PKPbc	06 19 02.5	-0.2
	baz=344						
U47A	Clarksville	147.27	19	P	PKPbc	06 19 02.9	+0.1
	baz=336						
V45A	Humboldt	147.32	22	P	PKPbc	06 19 02.8	-0.2
	baz=333,SNR=9.3						
Y41A	Eaglette Beard	147.35	29	P	PKPbc	06 19 03.6	+0.5
	baz=325,SNR=96						
WVT	Waverly	147.37	20	P	PKPbc	06 19 03.4	+0.3
	baz=335						
WVT	Waverly	147.37	20	ePKPdf	PKPbc	06 19 03.4	+0.3
WVT	Waverly	147.37	20	ePKP2	PKPbc	06 19 03.4	+0.3
833A	Chaparral WMA,	147.44	44	P	PKPbc	06 19 04.3	+0.8
	baz=309						
833A	Chaparral WMA,	147.44	44	ePKPdf	PKPbc	06 19 02.5	-1.0
U48A	Cassie Pea, Po	147.45	18	P	PKPbc	06 19 03.3	0.0
	baz=337						
T50A	Nancy	147.46	15	P	PKPbc	06 19 02.7	-0.6
	baz=341						
Z40A	Long Farm, Mag	147.47	30	P	PKPbc	06 19 04.1	+0.7
	baz=323,SNR=52						
MET	Memphis--Engin	147.48	24	ePKPbc	PKPbc	06 19 04.0	+0.6
W44A	Shelby Farms P	147.51	24	P	PKPbc	06 19 03.4	-0.1
	baz=331,SNR=6.9						
CBN	Corbin Frederi	147.57	4	P	PKPbc	06 19 03.5	0.0
	baz=355						
CBN	Corbin Frederi	147.57	4	ePKPdf	PKPbc	06 19 02.2	-1.3
V46A	Holladay	147.57	21	P	PKPbc	06 19 03.4	-0.3
	baz=334,SNR=12						
X43A	Marvell	147.60	26	P	PKPbc	06 19 04.1	+0.3
	baz=329,SNR=12						
X43A	Marvell	147.60	26	ePKPbc	PKPbc	06 19 04.8	+1.1
IP04	Greensprings	147.62	5	ePKPdf	PKPdf	06 19 01.8	+1.0
CVRD	Centerville Ro	147.67	5	ePKPdf	PKPdf	06 19 01.8	+1.0
U49A	Red Boiling Sp	147.67	17	P	PKPbc	06 19 03.7	-0.2
	baz=339,SNR=23						
IP03	Louisa	147.70	5	ePKPdf	PKPdf	06 19 01.9	+1.0
SPRD	Spring Road, M	147.71	5	ePKPdf	PKPdf	06 19 01.8	+0.8
W45A	Hickory Valley	147.75	23	P	PKPbc	06 19 04.2	+0.1
	baz=332						
V47A	Nunnelly	147.75	20	P	PKPbc	06 19 03.9	-0.2
	baz=335,SNR=11						
IP01	Cuckoo	147.77	5	ePKPdf	PKPdf	06 19 01.9	+0.9
Y42A	Garnett, Star	147.77	28	P	PKPbc	06 19 04.7	+0.5
	baz=326						
IP06	Yanceyville	147.79	5	ePKPbc	PKPbc	06 19 04.2	0.0
IP07	Quail	147.80	5	ePKPdf	PKPdf	06 19 02.4	+1.2
T52A	Hallie	147.82	13	P	PKPbc	06 19 04.3	0.0
	baz=344						
140A	Cam and Jess,	147.87	31	P	PKPbc	06 19 05.2	+0.7
	baz=322,SNR=18						
140A	Cam and Jess,	147.87	31	ePKPbc	PKPbc	06 19 05.4	+0.9
IP05	Hopewell Churc	147.91	5	ePKPdf	PKPdf	06 19 02.3	+1.1
X44A	Crenshaw	147.93	25	P	PKPbc	06 19 04.9	+0.3
	baz=330,SNR=7.9						
NATX	Nacogdoches	147.98	34	P	PKPbc	06 19 05.7	+0.9
	baz=320						
NATX	Nacogdoches	147.98	34	ePKPbc	PKPbc	06 19 05.5	+0.7
V48A	Smith Brothers	148.06	19	P	PKPbc	06 19 04.7	-0.2
	baz=336						
W46A	Michie	148.07	22	P	PKPbc	06 19 04.5	-0.5
	baz=333						
ZAIG	Zacatecas	148.09	55	ePKPdf	PKPbc	06 19 04.9	-0.9
Y43A	Makayla and Ka	148.10	26	P	PKPbc	06 19 05.9	+0.8
	baz=328						
Z42A	Norrel Spur, H	148.16	28	P	PKPbc	06 19 05.7	+0.4
	baz=326,SNR=41						
URVA	University of	148.19	5	ePKPdf	PKPdf	06 19 02.7	+1.0
BLA	Blacksburg	148.20	9	P	PKPbc	06 19 05.0	-0.3
	baz=349						
BLA	Blacksburg	148.20	9	ePKPdf	PKPdf	06 19 02.3	+0.4
BLA	Blacksburg	148.20	9	ePKIKP	PKPdf	06 19 02.3	+0.4
OXF	Oxford	148.22	24	P	PKPbc	06 19 05.2	-0.2
	baz=331,SNR=7.0						
OXF	Oxford	148.22	24	ePKPdf	PKPdf	06 19 02.3	+0.4
OXF	Oxford	148.22	24	ePKIKP	PKPdf	06 19 02.3	+0.4
TZTN	Tazewell	148.24	14	P	PKPbc	06 19 05.2	-0.2
	baz=343,SNR=25						
TZTN	Tazewell	148.24	14	ePKPdf	PKPdf	06 19 02.6	+0.7
VWCC	Virginia Weste	148.24	8	ePKPdf	PKPbc	06 19 04.0	-1.4
141A	Papa Simpson,	148.24	30	P	PKPbc	06 19 06.2	+0.7
	baz=324						
240A	Hunter Patters	148.25	32	P	PKPbc	06 19 05.9	+0.4
	baz=322,SNR=30						
240A	Hunter Patters	148.25	32	ePKPbc	PKPbc	06 19 06.8	+1.3
W47A	Westpoint	148.25	21	P	PKPbc	06 19 05.3	-0.2
	baz=335						
X45A	UM Field Stati	148.31	24	P	PKPbc	06 19 05.5	-0.1
	baz=331,SNR=9.4						
PLAL	Pickwick Lake	148.32	21	ePKPdf	PKPdf	06 19 01.4	-0.6
V49A	McMinnville	148.33	18	P	PKPbc	06 19 05.3	-0.4
	baz=338,SNR=39						
Y44A	Strider, Charl	148.37	25	P	PKPbc	06 19 06.4	+0.7
	baz=329						
X46A	Booneville	148.51	23	P	PKPbc	06 19 06.0	-0.1
	baz=333						
Z43A	Armstrong Fami	148.55	27	P	PKPbc	06 19 06.7	+0.4
	baz=327						
W48A	Pulaski	148.58	20	P	PKPbc	06 19 06.0	-0.3
	baz=336						
HKT	Hockley	148.64	37	ePKPdf	PKPbc	06 19 05.0	-1.5
HKT	Hockley	148.64	37	ePKP2	PKPbc	06 19 05.0	-1.5
V50A	Pikeville	148.65	17	P	PKPbc	06 19 06.2	-0.3
	baz=340,SNR=18						
241A	Mo Tay, Goldon	148.70	31	P	PKPbc	06 19 07.8	+1.1
	baz=325						
Y45A	Yeager Farm, C	148.73	25	P	PKPbc	06 19 07.2	+0.5
	baz=330						
V51A	Loudon	148.74	15	P	PKPbc	06 19 06.5	-0.2
	baz=341,SNR=18						
142A	Monroe	148.76	29	P	PKPbc	06 19 07.5	+0.7
	baz=325						
X47A	Russelville	148.81	22	P	PKPbc	06 19 06.4	-0.5
	baz=334						
W49A	Belvidere	148.81	19	P	PKPbc	06 19 06.6	-0.3
	baz=337,SNR=37						
Z44A	Pea Ridge, Bel	148.85	26	P	PKPbc	06 19 07.7	+0.7
	baz=328						
143A	Socs Landing,	148.89	28	P	PKPbc	06 19 07.6	+0.5
	baz=326						
V52A	Sevierville	148.89	14	P	PKPbc	06 19 07.5	+0.4
	baz=342						
GO02	Mina Guanaco	148.92	189	ePKPdf	PKPdf	06 19 05.3	+1.6
Y46A	Houston	148.99	24	P	PKPbc	06 19 07.5	+0.1
	baz=332						
W50A	Signal Mountai	149.03	17	P	PKPbc	06 19 07.3	-0.2
	baz=339,SNR=26						
242A	Grayson	149.06	30	P	PKPbc	06 19 08.3	+0.7
	baz=324						
Z45A	Winona	149.10	25	P	PKPbc	06 19 08.3	+0.7
	baz=330						
341A	Kurthwood	149.11	32	P	PKPbc	06 19 08.8	+1.0
	baz=322						
341A	Kurthwood	149.11	32	ePKPdf	PKPdf	06 19 04.8	+1.4
X48A	Hartselle	149.16	20	P	PKPbc	06 19 07.2	-0.6
	baz=335,SNR=7.9						
V53A	Saluda	149.24	13	P	PKPbc	06 19 08.3	+0.3
	baz=344						
X49A	Woodville	149.35	19	P	PKPbc	06 19 08.1	-0.2
	baz=337,SNR=72						
Y47A	UCPARC, Winfie	149.36	22	P	PKPbc	06 19 08.0	-0.3
	baz=333						
144A	Alexander Plac	149.41	27	P	PKPbc	06 19 09.2	+0.7
	baz=328						
NCAT	North Carolina	149.41	8	ePKPdf	PKPdf	06 19 04.5	+0.7
LNIG	Linares	149.43	49	ePKPdf	PKPdf	06 19 04.5	+0.4
W52A	Murphy	149.52	15	P	PKPbc	06 19 08.9	+0.2
	baz=341						
342A	Flagon Creek P	149.52	31	P	PKPbc	06 19 09.9	+1.1
	baz=323						
243A	Waterproof	149.53	29	P	PKPbc	06 19 09.4	+0.6
	baz=325						
441A	DeRidder	149.56	33	P	PKPbc	06 19 10.5	+1.6
	baz=321						
Z46A	Louisville	149.56	24	P	PKPbc	06 19 09.5	+0.7
	baz=331						
Y48A	Jasper	149.60	21	P	PKPbc	06 19 08.3	-0.6
	baz=335,SNR=31						
X50B	Fort Payne	149.61	18	P	PKPbc	06 19 08.6	-0.3
	baz=338						
W53A	Cullowhee	149.64	14	P	PKPbc	06 19 09.6	+0.5
	baz=343						
145A	Houston Renfro	149.65	26	P	PKPbc	06 19 09.9	+0.9
	baz=329						
VBMS	Vicksburg	149.71	28	P	PKPbc	06 19 09.9	+0.7
	baz=327						
VBMS	Vicksburg	149.71	28	ePKPbc	PKPbc	06 19 10.1	+0.9
X51A	Calhoun	149.76	17	P	PKPbc	06 19 09.4	+0.2
	baz=339						
244A	Avery, Jackson	149.78	28	P	PKPbc	06 19 09.7	+0.4
	baz=327						
Z47A	Carrollton	149.91	23	P	PKPbc	06 19 09.8	+0.1
	baz=332						
Y49A	Blount Mountai	149.92	20	P	PKPbc	06 19 09.5	-0.1
	baz=336,SNR=54						
Z48A	Northport	149.94	22	P	PKPbc	06 19 09.4	-0.3
	baz=334						
343A	Vidalia	149.95	30	P	PKPbc	06 19 10.6	+0.8
	baz=324						
442A	Mamou	149.99	32	P	PKPbc	06 19 10.9	+1.0
	baz=322						
X52A	Dahlonega	149.99	16	P	PKPbc	06 19 10.2	+0.4
	baz=341						
146A	Union	150.00	25	P	PKPbc	06 19 10.7	+0.8
	baz=330,SNR=12						
KMSC	Kings Mountain	150.06	11	P	PKPbc	06 19 10.0	+0.1
	baz=346						
KMSC	Kings Mountain	150.06	11	ePKPdf	PKPdf	06 19 05.5	+0.7
541A	Lake Charles	150.09	34	P	PKPbc	06 19 11.6	+1.4
	baz=320						
Y50A	Piedmont	150.11	19	P	PKPbc	06 19 09.9	-0.2
	baz=337						
245A	Little AP, Sta	150.15	27	P	PKPbc	06 19 10.9	+0.7
	baz=328						
X53A	Estanollee	150.24	15	P	PKPbc	06 19 10.7	+0.3
	baz=342						
344A	Westbrook Farm	150.25	29	P	PKPbc	06 19 11.4	+0.9
	baz=326						
443A	Delano Plantat	150.29	31	P	PKPbc	06 19 11.9	+1.3
	baz=324						
147A	Livingston	150.29	24	P	PKPbc	06 19 11.1	+0.6
	baz=332						
Y51A	Rockmart	150.31	18	P	PKPbc	06 19 10.6	-0.1
	baz=338						
542A	Morse	150.39	33	P	PKPbc	06 19 12.4	+1.6
	baz=322						
LRAL	Lakeview Retre	150.46	22	P	PKPbc	06 19 10.8	-0.2
	baz=334,SNR=26						
LRAL	Lakeview Retre	150.46	22	ePKPdf	PKPdf	06 19 06.2	+0.7
CNNC	Cliffs of the	150.47	6	P	PKPbc	06 19 11.2	+0.3
	baz=353						
CNNC	Cliffs of the	150.47	6	ePKPbc	PKPbc	06 19 11.7	+0.8
Z49A	Columbiana	150.48	21	P	PKPbc	06 19 10.9	-0.1
	baz=335,SNR=6.6						
246A	Jackson Lee, B	150.50	26	P	PKPbc	06 19 11.9	+0.8
	baz=330						
148A	Greensboro	150.59	23	P	PKPbc	06 19 11.5	+0.2
	baz=333,SNR=13						
MOIG	Morelia	150.61	59	ePKPbc	PKPbc	06 19 12.5	+0.5
Z50A	Ashland	150.63	20	P	PKPbc	06 19 11.4	-0.1
	baz=336						
Y52A	Lilburn	150.64	16	P	PKPbc	06 19 11.9	+0.5
	baz=340,SNR=22						
PB10	IPOC Station P	150.68	187	ePKPdf	PKPdf	06 19 05.4	-0.7
PB10				ePKPbc	PKiKP	06 19 13.0	+0.6
247A	Quitman	150.69	25	P	PKPbc	06 19 12.4	+0.9
	baz=330						
345A	Thompson Farm,	150.70	28	P	PKPbc	06 19 12.5	+0.9
	baz=327						
Y53A	Monroe	150.78	16	P	PKPbc	06 19 12.1	+0.4
	baz=341						
543A	St. Martinvill	150.79	32	P	PKPbc	06 19 12.9	+1.1
	baz=323						
JRQG	Juriquilla Cam	150.79	57	ePKPbc	PKPbc	06 19 13.8	+1.5
Z51A	Franklin	150.82	18	P	PKPbc	06 19 11.9	+0.1
	baz=338						
444A	Pine Grove	150.84	30	P	PKPbc	06 19 12.8	+0.9
	baz=325						
346A	Big Creek Wild	150.89	27	P	PKPbc	06 19 12.7	+0.7
	baz=326						
149A	Jones	150.92	22	P	PKPbc	06 19 12.4	+0.3
	baz=334						
Y54A	Tignall	151.00	14	P	PKPbc	06 19 12.7	+0.4
	baz=343						
248A	Dixon Mills	151.01	24	P	PKPbc	06 19 13.1	+0.8
	baz=332						
445A	Amite	151.03	29	P	PKPbc	06 19 13.2	+0.9
	baz=326						
544A	White Castle	151.13	31	P	PKPbc	06 19 13.6	+1.0
	baz=324						
Z52A	Williamson	151.17	17	P	PKPbc	06 19 13.1	+0.5
	baz=339						
150A	Eclectic	151.19	20	P	PKPbc	06 19 12.7	0.0
	baz=336,SNR=5.9						
GOGA	Godfrey	151.23	16	P	PKPbc	06 19 13.3	+0.5
	baz=341						
GOGA	Godfrey	151.23	16	ePKPdf	PKPdf	06 19 07.7	+1.0
GOGA				ePKPbc	PKiKP	06 19 13.4	+0.2
GOGA	Godfrey	151.23	16	ePKIKP	PKPdf	06 19 07.7	+1.0
347A	Saraland	151.28	25	P	PKPbc	06 19 13.8	+0.9
	baz=330						
Z53A	Monticello	151.32	16	P	PKPbc	06 19 13.4	+0.4
	baz=341						
249A	Camden	151.36	23	P	PKPbc	06 19 13.9	+0.9
	baz=333						
446A	Poplarville	151.44	27	P	PKPbc	06 19 13.8	+0.5
	baz=328						
151A	Opelika	151.50	19	P	PKPbc	06 19 13.7	+0.3
	baz=337,SNR=6.7						
348A	Jackson	151.54	24	P	PKPbc	06 19 14.4	+0.9
	baz=331						
Z54A	Sparta	151.56	15	P	PKPbc	06 19 13.9	+0.4
	baz=342						
152A	Waverly Hall	151.56	18	P	PKPbc	06 19 14.0	+0.4
	baz=338						
250A	Grady	151.67	21	P	PKPbc	06 19 14.4	+0.5
	baz=335						
546A	Slidell	151.74	29	P	PKPbc	06 19 14.8	+0.8
	baz=327						
Z55A	Blythe	151.74	14	P	PKPbc	06 19 14.6	+0.6
	baz=344						
447A	Lucedale	151.75	26	P	PKPbc	06 19 14.9	+0.9
	baz=329						
PB04	IPOC Station P	151.78	189	ePKPbc	PKPbc	06 19 16.1	+1.5
153A	Fort Valley	151.84	17	P	PKPbc	06 19 14.7	+0.5
	baz=340						
251A	Midway	151.87	20	P	PKPbc	06 19 14.9	+0.7
	baz=337						
349A	Repton	151.88	23	P	PKPbc	06 19 15.2	+0.9
	baz=332						
448A	Bay Minette	151.98	25	P	PKPbc	06 19 15.5	+0.9
	baz=331						
154A	Montrose	152.08	16	P	PKPbc	06 19 15.0	+0.3
	baz=342						
BRAL	Brewton	152.10	23	P	PKPbc	06 19 15.8	+1.0
	baz=333						
BRAL	Brewton	152.10	23	ePKPdf	PKPdf	06 19 09.8	+1.8
BRAL				ePKPbc	PKiKP	06 19 16.1	+1.1
350A	Dozier	152.15	22	P	PKPbc	06 19 15.7	+0.8
	baz=334						
252A	Lumpkin	152.18	19	P	PKPbc	06 19 15.4	+0.4
	baz=338						
155A	Kite	152.24	14	P	PKPbc	06 19 15.5	+0.5
	baz=343						
NHSC	New Hope	152.26	10	P	PKPbc	06 19 15.3	+0.2
	baz=348						
NHSC	New Hope	152.26	10	ePKPbc	PKPbc	06 19 15.9	+0.9
253A	Americus	152.31	18	P	PKPbc	06 19 15.7	+0.5
	baz=339						
449A	Pace	152.39	24	P	PKPbc	06 19 16.1	+0.6
	baz=332						
156A	Sylvania	152.43	13	P	PKPbc	06 19 16.4	+0.9
	baz=345						
351A	Pinckard	152.55	21	P	PKPbc	06 19 16.4	+0.6
	baz=336						
352A	Blakely	152.59	20	P	PKPbc	06 19 16.4	+0.5
	baz=337						
450A	Crestview	152.60	23	P	PKPbc	06 19 16.7	+0.8
	baz=333						
254A	Abbeville	152.66	16	P	PKPbc	06 19 16.5	+0.4
	baz=341						
255A	Hazlehurst	152.90	15	P	PKPbc	06 19 17.0	+0.4
	baz=342						
PB01	IPOC Station P	152.94	190	ePKPdf	PKPdf	06 19 09.7	0.0
PB01				ePKPbc	PKiKP	06 19 18.4	+1.2
353A	Camilla	152.94	18	P	PKPbc	06 19 17.1	+0.5
	baz=338						
256A	Glennville	152.99	14	P	PKPbc	06 19 17.3	+0.6
	baz=344						
TIGA	Tifton	153.05	17	P	PKPbc	06 19 17.4	+0.5
	baz=340						
TIGA	Tifton	153.05	17	ePKPdf	PKPdf	06 19 10.8	+1.3
TIGA				ePKPbc	PKPbc	06 19 17.3	+0.5
452A	Marianna	153.08	21	P	PKPbc	06 19 17.5	+0.5
	baz=336						
451A	Vernon	153.09	22	P	PKPbc	06 19 17.2	+0.2
	baz=335						
257A	Skidaway Islan	153.19	12	P	PKPbc	06 19 17.4	+0.2
	baz=346						
355A	Pearson	153.35	16	P	PKPbc	06 19 17.9	+0.3
	baz=341						
453A	Whigham	153.37	19	P	PKPbc	06 19 18.1	+0.5
	baz=338						
356A	Blackshear	153.56	15	P	PKPbc	06 19 18.2	+0.2
	baz=343						
357A	Townsend	153.62	13	P	PKPbc	06 19 18.4	+0.3
	baz=344						
552A	Lynn Haven	153.69	21	P	PKPbc	06 19 18.9	+0.5
	baz=335						
454A	Quitman	153.71	18	P	PKPbc	06 19 18.8	+0.4
	baz=339						
455A	Stateville	153.87	17	P	PKPbc	06 19 19.0	+0.3
	baz=341						
553A	Crawfordville	153.94	20	P	PKPbc	06 19 19.5	+0.7
	baz=337						
456A	Hilliard	154.16	15	P	PKPbc	06 19 19.8	+0.5
	baz=343						
554A	Perry	154.28	19	P	PKPbc	06 19 19.9	+0.3
	baz=339						
457A	Yulee	154.37	14	P	PKPbc	06 19 20.5	+0.7
	baz=344						
555A	McAlpin	154.47	17	P	PKPbc	06 19 20.4	+0.4
	baz=340						
556A	Lake Butler	154.74	16	P	PKPbc	06 19 21.0	+0.4
	baz=341						
MNMC	Minye Minye	154.82	191	ePKPdf	PKPdf	06 19 14.2	+1.6
MNMC				ePKPbc	PKiKP	06 19 22.6	+1.2
557A	Orange Park	154.91	15	P	PKPbc	06 19 21.1	+0.2
	baz=343						
655A	Horseshoe Beac	154.95	18	P	PKPab	06 19 36.2	-0.7
	baz=339						
656A	Willston	155.30	17	P	PKPab	06 19 37.6	-0.8
	baz=341						
658A	Bunnell	155.59	14	P	PKPab	06 19 39.3	-0.4
	baz=344						
757A	Oxford	155.84	16	P	PKPab	06 19 40.2	-0.5
	baz=342						
758A	Lake Helen	156.04	14	P	PKPab	06 19 40.9	-0.7
	baz=344						
857A	Zephyrhills	156.42	17	P	PKPab	06 19 41.7	-1.5
	baz=341						
858A	St. Cloud	156.72	15	P	PKPab	06 19 43.7	-0.7
	baz=343

comp=Z,26nm,0.7s,baz=26,slow=2.2,SNR=10
SDV PP **PP 06 24 58.1 +0.2**
comp=Z,79nm,0.9s,baz=28,slow=4.7,SNR=31
OCAC Ocana 177.22 334 *e*P PKPab 06 21 13.8 -1.6
RUSC La Rusia 178.54 277 *e*PKPdf **PKPdf 06 19 30.0 -0.8**
ROSC El Rosal 179.09 194 PKP **PKPdf 06 19 30.9 +0.1**
comp=Z,5.1nm,0.8s,baz=124,slow=2.9,SNR=6.3
ROSC El Rosal 179.09 194 *e*PKPdf **PKPdf 06 19 31.0 +0.2**

MEX 12 06:15:29.5±1.3, 17°.18N×91°.73W, h20km, MD3.7, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCIG	**Comitan**	**0.98**	**204**	*e*P	Pb	06 15 44.0	-3.9
CCIG				*i* S	Sb	06 15 57.1	-3.3
TGIG		**1.39**	**253**	*e*P	Pn	06 15 51.0	-2.9
TGIG				*e*S	Sn	06 16 07.4	-4.3
PCIG		**2.05**	**224**	*e*P	Pn	06 16 00.2	-2.6
PCIG				*e*S	Sn	06 16 24.5	-3.3

ISCJB 12 06:18:24.9±1.9, 15°.S±1°.×174°.0W±0°.6, h79km, mb3.8/4, Error ellipse: s-maj=198.0km s-min=11.2km az=157.2
IDC 12 06:18:24.4±5.3, 15°.89S×173°.60W, h70km±38km, mb3.6/4, mb1 4.0/5, mb1mx3.6/51, mbtmp4.0/5, MS2.5/1, Ms1 2.5/1, ms1mx2.3/35, Error ellipse: s-maj=150.3km s-min=20.2km az=152.0
ISC 12 06:18:26.6±2.2, 15°.S±1°.×173°.9W±0°.5, h79km, n6, σ1§44/7, mb3.9/4, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.38**	**60**	P	**Pn**	**06 19 05.0**	**+1.2**
AFI	baz=45,slow=8.6			S	**Sn**	**06 19 30.0**	**-2.2**
AFI	117nm,0.3s,baz=357,slow=18,SNR=7.5			LR	LR	06 19 50.3	
WRA	comp=Z,108nm,21.9s,baz=150,slow=32 **Warramunga Arr**	**49.44**	**257**	P	**P**	**06 27 08.4**	**-0.7**
ASAR	0.9nm,0.4s,baz=95,slow=6.4,SNR=33 **Alice Springs**	**49.74**	**252**	P	**P**	**06 27 10.4**	**-0.9**
NVAR	3.7nm,0.8s,baz=89,slow=7.4,SNR=32 **Mina Array Bea**	**74.45**	**42**	P	**P**	**06 29 57.2**	**+0.4**
TXAR	0.9nm,0.7s,baz=223,slow=7.7,SNR=5.6 **Lajitas Array**	**80.86**	**56**	P	**P**	**06 30 32.8**	**+0.3**
BRTR	0.3nm,0.8s,baz=226,slow=7.5,SNR=4.1 **Keskin Array B**	**145.64**	**321**	PKPbc	**PKPbc**	**06 37 57.4**	**+0.6**
	1.0nm,0.8s,baz=81,slow=3.2,SNR=5.4						

ISCJB 12 06:24:37.1±0.4, 23°.93N±0°.03×122°.53E±0°.02, h18km±5km, Error ellipse: s-maj=4.7km s-min=2.7km az=166.8
JMA 12 06:24:37.8±0.2, 24°.00N×122°.54E, h20km, M2.7
TAP 12 06:24:37.5, 24°.01N×122°.54E, h25km, ML3.0, C
ISC 12 06:24:37.3±1.3, 23°.96N±0°.04×122°.53E±0°.02, h21km±4km, n33, σ0§62/55, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonaguni jima**	**0.62**	**38**	P	**Pb**	**06 24 49.2**	**-0.3**
JYNG				S	**Sb**	**06 24 56.8**	**-1.0**
YOJ	**Yonaguni jima**	**0.67**	**41**	P	**Pb**	**06 24 50.0**	**-0.3**
YOJ	baz=52			S	**Sb**	**06 24 58.4**	**-0.7**
YOJ	**Yonaguni jima**	**0.67**	**41**	P	**Pb**	**06 24 50.0**	**-0.3**
YOJ	baz=52			*e*S	**Sb**	**06 24 57.5**	**-1.6**
ENAH	**Nanao**	**0.81**	**307**	P	**Pb**	**06 24 52.6**	**-0.1**
ENAH	baz=303			*e*S	**Sn**	**06 25 04.5**	**-0.5**
NANB	**Nanao**	**0.85**	**303**	*e*P	**Pb**	**06 24 53.1**	**-0.2**
NANB	baz=300			*e*S	**Sb**	**06 25 04.8**	**+0.6**
ENA	**Nanau**	**0.85**	**303**	*i* P	**Pb**	**06 24 53.4**	**-0.1**
ENA	baz=300			*e*S	**Sn**	**06 25 05.5**	**-0.5**
TWD	**Chiawan**	**0.86**	**278**	*e*P	**Pb**	**06 24 53.6**	**+0.1**
TWC	baz=275 **Suao**	**0.89**	**316**	P	**Pb**	**06 24 53.9**	**-0.2**
TWC	baz=307			*e*S	**Sb**	**06 25 05.3**	**-0.3**
EGS		**1.03**	**328**	*e*P	**Pb**	**06 24 56.3**	**-0.1**
EGS	baz=336			*e*S	**Sn**	**06 25 10.2**	**-0.1**
ENTT	**Nioudou**	**1.11**	**308**	*e*P	**Pb**	**06 24 57.9**	**+0.2**
ENTT	baz=305			*e*S	**Sn**	**06 25 13.0**	**+0.7**
HGSD	**Ruisui**	**1.11**	**245**	*e*P	**Pn**	**06 24 56.9**	**-0.7**
NNSB	baz=243 **Datong**	**1.14**	**294**	*e*P	**Pn**	**06 24 58.4**	**+0.3**
NNS	baz=279 **Nan Shan**	**1.16**	**295**	*e*P	**Pn**	**06 24 58.4**	**+0.1**
IRIF	baz=279 **Iriomote-Funau**	**1.16**	**71**	P	**Pb**	**06 24 58.9**	**+0.3**
IRIF				*e*S	**Sn**	**06 25 13.4**	**-0.1**
HATJ	**Hateruma jima**	**1.17**	**85**	P	**Pb**	**06 24 58.8**	**0.0**
HATJ				*e*S	**Sn**	**06 25 13.8**	**0.0**
EHY	**Hungye**	**1.19**	**248**	P	**Pn**	**06 24 58.5**	**-0.2**
EHY	baz=244			S	**Sn**	**06 25 14.1**	**-0.2**
TIPB	**Shuangxi**	**1.19**	**328**	P	**Pb**	**06 24 59.0**	**-0.2**
TIPB	baz=326			*e*S	**Sn**	**06 25 13.9**	**-0.4**
YULB	**Yu-li**	**1.26**	**244**	*e*P	**Pn**	**06 24 59.3**	**-0.3**
YULB	baz=240			*e*S	**Sn**	**06 25 16.2**	**+0.1**
YHNB	**Yeheng**	**1.27**	**304**	*e*P	**Pn**	**06 25 00.0**	**+0.2**
YHNB	baz=288			*e*S	**Sb**	**06 25 17.0**	**+0.7**
TWF1	**Yuli**	**1.28**	**242**	P	**Pn**	**06 24 59.9**	**-0.1**
TWF1	baz=239			*e*S	**Sn**	**06 25 16.8**	**+0.3**
VWDT	**VWDT**	**1.28**	**261**	*e*P	**Pn**	**06 24 59.8**	**-0.2**
VWDT	baz=258			*e*S	**Sn**	**06 25 16.3**	**-0.3**
CHKT	baz=258 **Chengkung**	**1.37**	**231**	*e*S	**Sn**	**06 25 16.8**	**-1.8**
JKRS	baz=216 **Kuro-shima**	**1.38**	**78**	P	**Pb**	**06 25 03.2**	**+0.8**
JKRS				*e*S	**Sb**	**06 25 20.4**	**+0.8**
TATO	**Taipei**	**1.39**	**317**	*e*P	**Pb**	**06 25 02.1**	**-0.3**
TATO	baz=315			*e*S	**Sb**	**06 25 21.0**	**+1.4**
YM07	**YM07**	**1.46**	**326**	*e*P	**Pn**	**06 25 02.7**	**+0.2**
YM11	baz=325 **YM11**	**1.48**	**324**	*e*P	**Pn**	**06 25 03.1**	**+0.3**
JIJ	baz=323 **Ishigaki jima**	**1.53**	**74**	P	**Pn**	**06 25 03.9**	**+0.6**
JIJ				S	**Sb**	**06 25 23.7**	**-0.1**
LIOB	**Emei**	**1.54**	**297**	*e*P	**Pb**	**06 25 04.6**	**-0.4**
TWH	baz=295 **Lutao**	**1.57**	**218**	*e*P	**Pn**	**06 25 03.4**	**-0.6**
ELDTW	baz=216 **Lidau**	**1.58**	**241**	*e*P	**Pn**	**06 25 04.1**	**-0.1**
ALS	baz=239 **Alishan**	**1.64**	**254**	P	**Pn**	**06 25 06.2**	**+1.0**
ALS	baz=251			*e*S	**Sn**	**06 25 26.5**	**+0.8**
JISG	**Ishigakijimahi**	**1.74**	**69**	P	**Pn**	**06 25 06.5**	**+0.2**
JISG				S	**Sn**	**06 25 28.4**	**+0.5**
WTP	**Ta-pu**	**1.89**	**248**	*e*P	**Pn**	**06 25 09.9**	**+1.5**
	baz=246						

NNC 12 06:42:57.1±3.6, 44°.63N×82°.41E, h0km, mb2.8, mpv2.3, Error ellipse: s-maj=46.0km s-min=8.2km az=116.0
SOME 12 06:42:58.0, 44°.73N×82°.08E, h5km
ISC 12 06:42:57.0±2.5, 44°.73N±0°.08×82°.2E±0°.1, h3km±17km, n7, σ0§87/14, 3C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.73**	**258**	*e*P	**Pg**	**06 43 30.5**	**+0.3**
DJR	1.9nm,0.2s			*e*S	**Sg**	**06 43 53.7**	**+1.1**
KAPS	3.4nm,0.3s **Kapalarasan**	**2.06**	**287**	*e*P	**Pb**	**06 43 35.2**	**+0.2**
KAPS	0.8nm,0.1s			*e*S	**Sg**	**06 44 01.9**	**-1.1**
MK31	2.2nm,0.3s **Makanchi Array**	**2.07**	**3**	⇓Pn	**Pb**	**06 43 35.6**	**+0.4**
MK31	2.9nm,0.5s,baz=182,slow=13,SNR=48			⇓Sn	**Sg**	**06 44 03.5**	**0.0**
MAKZ	0.9nm,0.5s,baz=184,slow=28,SNR=14 **Makanchi**	**2.09**	**357**	⇑Pn	**Pb**	**06 43 34.8**	**-0.7**
MAKZ	0.8nm,0.5s			⇑Sn	**Sg**	**06 44 03.4**	**-0.6**
PDGK	2.1nm,0.4s **Podgornoye**	**2.37**	**235**	⇓Pn	**Pn**	**06 43 37.2**	**+0.4**
PDGK	0.3nm,0.3s			⇑Sn	**Sg**	**06 44 11.5**	**-1.6**
SHLS	4.4nm,0.6s **Shalkode**	**2.49**	**232**	*e*P	**Pn**	**06 43 39.0**	**+0.5**
SHLS	2.5nm,0.6s			*e*S	**Sn**	**06 44 08.6**	**-0.8**
KPKS	6.7nm,0.2s **Kokpek**	**2.79**	**244**	*e*P	**Pb**	**06 43 47.4**	**-0.2**
KPKS	1.8nm,0.2s			*e*S	**Sb**	**06 44 22.5**	**+0.3**
	6.3nm,0.3s						

IDC 12 06:50:55.1±5.7, 19°.36S×169°.31E, h205km±67km, mb3.3/3, mb1 3.6/4, mb1mx3.2/42, mbtmp3.8/4, Error ellipse: s-maj=146.6km s-min=27.6km az=163.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.81**	**224**	P	Pn	06 51 55.5	+0.8
DZM	1.8nm,0.3s,baz=116,slow=22,SNR=16			S	S	06 52 41.2	+0.2
WRA	0.7nm,0.3s,baz=300,slow=20,SNR=2.4 **Warramunga Arr**	**32.90**	**263**	P	P	06 57 09.9	-0.3
ASAR	0.3nm,0.4s,baz=92,slow=8.4,SNR=6.3 **Alice Springs**	**33.16**	**256**	P	P	06 57 12.7	+0.2
NVAR	2.3nm,0.6s,baz=84,slow=9.1,SNR=34 **Mina Array Bea**	**88.83**	**48**	P	P	07 03 26.2	0.0
GERES	0.4nm,0.8s,baz=224,slow=6.1,SNR=3.0 **GERESS Array B**	**144.62**	**332**	PKP	PKPab	07 10 06.0	-0.4
	0.5nm,0.2s,baz=20,slow=3.1,SNR=6.1						

DDA 12 06:51:16.0, 36°.46N×28°.97E, h7km, Ml3.1
ISK 12 06:51:15.4, 36°.39N×28°.98E, h20km, ML2.8/16
ISCJB 12 06:51:16.5±0.4, 36°.40N±0°.03×28°.99E±0°.03, h23km±4km, Error ellipse: s-maj=5.1km s-min=3.8km az=1.5
CSEM 12 06:51:16.2±0.2, 36°.39N×29°.00E, h20km, ML3.1, Error ellipse: s-maj=4.4km s-min=2.9km az=8.0
ATH 12 06:51:16.2, 35°.92N×28°.97E, h17km±9km, ML2.3/2, Error ellipse: s-maj=16.1km s-min=1.1km az=4.0
ISC 12 06:51:16.1±0.9, 36°.39N±0°.03×28°.98E±0°.02, h17km±7km, n54, σ0§60/83, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.26**	**18**	PG	**Pg**	**06 51 21.7**	**-0.2**
FETY				SG	**Sg**	**06 51 26.4**	**+0.5**
FETY	**Fethiye**	**0.26**	**18**	*e*Pg	**Pg**	**06 51 21.7**	**-0.2**
FETY				*e*Sg	**Sg**	**06 51 26.4**	**+0.5**
DALY	**Dalyan (Mu¨la**	**0.50**	**328**	PG	**Pg**	**06 51 26.1**	**-0.1**
DALY				SG	**Sb**	**06 51 33.6**	**0.0**
DALY	**Dalyan (Mu¨la**	**0.50**	**328**	*i* P	**Pg**	**06 51 26.0**	**-0.1**
DALY				*i* S	**Sb**	**06 51 33.5**	**0.0**
DALY	**Dalyan (Mu¨la**	**0.50**	**328**	P	**Pg**	**06 51 26.0**	**-0.1**
DALY				S	**Sb**	**06 51 33.5**	**0.0**
AKAS	**Kas**	**0.53**	**107**	PG	**Pg**	**06 51 26.3**	**-0.4**
AKAS				SG	**Sb**	**06 51 34.6**	**+0.2**
AKAS	**Kas**	**0.53**	**107**	*i* P	**Pg**	**06 51 26.1**	**-0.6**
AKAS				*i* S	**Sb**	**06 51 35.7**	**+1.4**
AKAS	**Kas**	**0.53**	**107**	*e*Pg	**Pg**	**06 51 26.3**	**-0.4**
AKAS				*e*Sg	**Sb**	**06 51 34.6**	**+0.2**
AKAS				S	**Sb**	**06 51 35.7**	**+1.4**
KSL	**Kastellorizon**	**0.54**	**116**	P	**Pb**	**06 51 26.8**	**-0.3**
KSL				S	**Sb**	**06 51 35.4**	**+0.8**
KSL				AML	AML	06 51 37.7	
	comp=E,1033μm,0.4s						
KSL				AML	AML	06 51 38.0	
	comp=N,565μm,0.3s						
TURN	**Turunc**	**0.57**	**328**	PG	**Pn**	**06 51 29.8**	**+0.4**
TURN				SG	**Sn**	**06 51 40.1**	**+1.6**
TURN	**Turunc**	**0.57**	**328**	*i* P	**Pn**	**06 51 29.8**	**+0.4**
TURN				*i* S	**Sn**	**06 51 40.2**	**+1.8**
TURN	**Turunc**	**0.57**	**328**	*e*Pg	**Pn**	**06 51 29.8**	**+0.4**
MRSB	**Marmaris-Mugla**	**0.71**	**298**	PG	**Pg**	**06 51 29.9**	**-0.2**
ARG	**Arkhangelos**	**0.71**	**256**	PG	**Pb**	**06 51 30.2**	**+0.1**
ARG	**Arkhangelos**	**0.71**	**256**	P	**Pb**	**06 51 30.6**	**+0.5**
ARG				S	**Sn**	**06 51 40.9**	**-1.0**
ARG				AML	AML	06 51 41.8	
	comp=N,408μm,0.4s						
ARG				AML	AML	06 51 42.0	
	comp=E,622μm,0.3s						
ARG	**Arkhangelos**	**0.71**	**256**	S	**Sn**	**06 51 41.0**	**-1.0**
ELL	**Elmali**	**0.83**	**64**	PG	**Pg**	**06 51 32.1**	**-0.2**
ELL	**Elmali**	**0.83**	**64**	*e*Pg	**Pg**	**06 51 32.1**	**-0.2**
GLHS	**Gihisar (BURDU**	**0.87**	**28**	PG	**Pb**	**06 51 32.1**	**-0.7**
GLHS	**Gihisar (BURDU**	**0.87**	**28**	*e*Pg	**Pb**	**06 51 32.1**	**-0.7**
YER	**Yerkesik**	**0.93**	**323**	PG	**Pb**	**06 51 34.1**	**+0.2**
YER	**Yerkesik**	**0.93**	**323**	*e*Pg	**Pb**	**06 51 34.1**	**+0.2**
GOLH	**Golhisar**	**0.96**	**29**	*i* P	**Pb**	**06 51 33.1**	**-1.4**
GOLH				*i* S	**Sb**	**06 51 46.8**	**-0.2**
GOLH	**Golhisar**	**0.96**	**29**	P	**Pb**	**06 51 33.1**	**-1.4**
GOLH				S	**Sb**	**06 51 46.8**	**-0.2**
TAVA	**DENIZLI_Tavas**	**1.08**	**357**	*i* P	**Pb**	**06 51 35.7**	**-0.6**
TAVA				*i* S	**Sb**	**06 51 50.0**	**-0.1**
TAVA	**DENIZLI_Tavas**	**1.08**	**357**	P	**Pb**	**06 51 35.7**	**-0.6**
TAVA				S	**Sb**	**06 51 50.0**	**-0.1**
DATC	**Datca-Mugla**	**1.13**	**290**	PN	**Pb**	**06 51 36.5**	**-0.6**
DATC	**Datca-Mugla**	**1.13**	**290**	*e*Pn	**Pb**	**06 51 36.5**	**-0.6**
DAT	**Datca**	**1.18**	**287**	PN	**Pn**	**06 51 37.3**	**-0.6**
DAT	**Datca**	**1.18**	**287**	*i* P	**Pn**	**06 51 38.0**	**+0.1**
DAT				*i* S	**Sg**	**06 51 54.7**	**+0.3**
DAT	**Datca**	**1.18**	**287**	*e*Pn	**Pn**	**06 51 37.3**	**-0.6**
DAT	**Datca**	**1.18**	**287**	P	**Pn**	**06 51 38.0**	**+0.1**
DAT				S	**Sg**	**06 51 54.7**	**+0.3**
KORT	**Korkueli**	**1.26**	**61**	PN	**Pn**	**06 51 38.5**	**-0.5**
KORT	**Korkueli**	**1.26**	**61**	*i* P	**Pn**	**06 51 39.2**	**+0.1**
KORT				*i* S	**Sg**	**06 51 57.8**	**+0.9**
KORT	**Korkueli**	**1.26**	**61**	*e*Pn	**Pn**	**06 51 38.5**	**-0.5**
KORT	**Korkueli**	**1.26**	**61**	P	**Pn**	**06 51 39.2**	**+0.1**
KORT				S	**Sg**	**06 51 57.8**	**+0.9**
MLSB	**Milas**	**1.32**	**313**	PN	**Pn**	**06 51 39.3**	**-0.6**
MLSB	**Milas**	**1.32**	**313**	*e*Pn	**Pn**	**06 51 39.3**	**-0.6**
BDRM	**Kayabasi**	**1.41**	**299**	*i* P	**Pn**	**06 51 41.3**	**+0.3**
BDRM				*i* S	**Sn**	**06 51 59.6**	**+0.5**
BDRM	**Kayabasi**	**1.41**	**299**	P	**Pn**	**06 51 41.3**	**+0.3**
BDRM				S	**Sn**	**06 51 59.6**	**+0.5**
BODT	**Bodrum**	**1.50**	**297**	PN	**Pn**	**06 51 41.7**	**-0.6**
BODT	**Bodrum**	**1.50**	**297**	*e*Pn	**Pn**	**06 51 41.7**	**-0.6**
AYDN	**Tasoluk**	**1.55**	**326**	*i* P	**Pb**	**06 51 43.9**	**-0.4**
AYDN				*i* S	**Sn**	**06 52 03.2**	**+0.6**
AYDN	**Tasoluk**	**1.55**	**326**	P	**Pb**	**06 51 43.9**	**-0.4**
AYDN				S	**Sn**	**06 52 03.2**	**+0.6**
BRDR	**BURDUR-Merkez**	**1.56**	**33**	*i* P	**Pn**	**06 51 43.0**	**-0.2**
BRDR				*i* S	**Sn**	**06 52 03.2**	**+0.1**
BRDR	**BURDUR-Merkez**	**1.56**	**33**	P	**Pn**	**06 51 43.0**	**-0.2**
BRDR				S	**Sn**	**06 52 03.2**	**+0.1**
KARP	**Karpathos**	**1.70**	**241**	PN	**Pn**	**06 51 44.8**	**-0.2**
KARP	**Karpathos**	**1.70**	**241**	P	**Pn**	**06 51 44.9**	**-0.1**
KARP				S	**Sn**	**06 52 06.1**	**-0.3**
KARP	**Karpathos**	**1.70**	**241**	P	**Pn**	**06 51 44.8**	**-0.2**
KARP				S	**Sn**	**06 52 05.8**	**-0.6**
AYDB	**Zeytinkoy-Aydi**	**1.78**	**331**	PN	**Pn**	**06 51 45.8**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**1.78**	**331**	*e*Pn	**Pn**	**06 51 45.8**	**-0.4**
GCAM	**G?zelcaml?**	**1.92**	**314**	PN	**Pn**	**06 51 47.8**	**-0.1**
GCAM	**G?zelcaml?**	**1.92**	**314**	*e*Pn	**Pn**	**06 51 47.8**	**-0.1**
SUTC	**Sutluce-Ispart**	**1.95**	**56**	PN	**Pn**	**06 51 48.7**	**+0.2**

NNC 12 06:53:06.8±0.7, 44°.67N×82°.27E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=9.4km s-min=1.6km az=116.0

SOME 12 06:53:07.8, 44°.75N×82°.12E, h20km
ISC 12 06:53:05.8±3.4, 44°.68N±0°.07×82°.2E±0°.1, h1km±27km, n9, σ0§83/18, 3C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.77**	**260**	*e*P	**Pb**	**06 53 38.7**	**-0.4**
DJR	9.7nm,0.2s			*e*S	**Sn**	**06 54 00.9**	**0.0**
MK31	16nm,0.2s **Makanchi Array**	**2.12**	**1**	Pn	**Pb**	**06 53 43.9**	**-1.1**
MK31	9.9nm,0.3s,baz=180,slow=14,SNR=515			⇓Sn	**Sb**	**06 54 11.9**	**+0.1**
KAPS	7.2nm,0.3s,baz=183,slow=27,SNR=24 **Kapalarasan**	**2.12**	**288**	⇓*i*P	**Pb**	**06 53 44.1**	**-0.9**
KAPS	3.9nm,0.1s			*e*S	**Sn**	**06 54 09.7**	**+0.2**
MAKZ	16nm,0.5s **Makanchi**	**2.14**	**355**	⇓Pn	**Pn**	**06 53 43.8**	**+1.1**
MAKZ	3.9nm,0.3s			⇑Sn	**Sb**	**06 54 12.4**	**0.0**
PDGK	23nm,0.5s **Podgornoye**	**2.39**	**237**	⇑Pn	**Pn**	**06 53 47.4**	**+1.3**
PDGK	1.8nm,0.3s			⇑Sn	**Sb**	**06 54 19.1**	**-0.6**
SHLS	24nm,0.7s **Shalkode**	**2.51**	**234**	*e*P	**Pn**	**06 53 48.5**	**+0.7**
SHLS	8.1nm,0.1s			*e*S	**Sn**	**06 54 17.4**	**-1.7**
UZB	56nm,0.3s **Uzynbulak**	**2.77**	**238**	*e*P	**Pb**	**06 53 56.0**	**-0.2**
UZB	2.4nm,0.3s			*e*S	**Sb**	**06 54 30.6**	**-0.1**
MNBS	5.4nm,0.3s **Baschi**	**2.80**	**259**	*e*P	**Pb**	**06 53 56.5**	**-0.2**
MNBS	11nm,0.3s			*e*S	**Sb**	**06 54 31.0**	**-0.6**
ARXS	18nm,0.3s **Arharly**	**3.18**	**263**	*e*P	**Pb**	**06 54 03.1**	**-0.1**
ARXS	2.5nm,0.3s			*e*S	**Sb**	**06 54 42.7**	**+0.3**
	18nm,0.5s						

IDC 12 07:16:22.4±1.8, 8°.33N×74°.63W, h0km, mb3.5/1, mb1 3.3/2, mb1mx3.2/43, mbtmp3.2/2, ML1.1/1, Error ellipse: s-maj=37.8km s-min=31.7km az=88.0
ISCJB 12 07:16:32.4±0.9, 8°.07N±0°.03×74°.75W±0°.03, h31km±7km, mb3.4/1, Error ellipse: s-maj=5.6km s-min=4.9km az=137.7
RSNC 12 07:16:33.2±0.8, 8°.06N×74°.74W, h24km±3km, ML3.0, Mw3.4
ISC 12 07:16:29.4±1.2, 8°.14N±0°.04×74°.84W±0°.04, h27km±11km, n18, σ1§49/32, 1C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZARC	**Zaragoza, Cauc**	**0.65**	**182**	⇓*i*P	**Pn**	**07 16 44.3**	**+1.4**
ZARC				*e*S	**Sb**	**07 16 52.4**	**+1.5**
ZARC				*i*		07 16 53.7	
	comp=Z,636nm,0.2s						
OCAC	**Ocana**	**1.51**	**86**	⇑*i*P	**Pn**	**07 16 55.9**	**+1.1**
OCAC				*e*S	**Sn**	**07 17 14.7**	**+1.1**
OCAC				*i*		07 17 19.4	
	comp=Z,622nm,0.2s						
PTBC	**PUERTO BERRIO,**	**1.64**	**167**	*e*P	**Pn**	**07 16 57.8**	**+1.4**
PTBC				*e*S	**Sn**	**07 17 17.8**	**+1.1**
PTBC				*i*		07 17 19.7	
	comp=Z,180nm,0.2s						
DBBC	**Dabeiba**	**1.76**	**231**	*e*P	**Pb**	**07 17 02.1**	**+1.0**
DBBC				*e*S	**Sb**	**07 17 24.5**	**+1.7**
HELC	**Santa Helena**	**2.06**	**199**	*e*P	**Pb**	**07 17 05.8**	**-0.6**
HELC				*e*S	**Sb**	**07 17 30.4**	**-1.2**
HELC				*i*		07 17 39.6	
	comp=Z,68nm,0.5s						
CODC	**Agust´›n Codaz**	**2.25**	**38**	*e*P	**Pb**	**07 17 08.9**	**-0.6**
CODC				*e*S	**Sb**	**07 17 36.1**	**-0.7**
CODC				*i*		07 17 44.4	
	comp=Z,93nm,0.4s						
BARC	**Barichara**	**2.25**	**133**	*e*P	**Pn**	**07 17 06.4**	**+1.3**
BARC				*e*S	**Sn**	**07 17 33.1**	**+0.9**
BARC				*i*		07 17 36.4	
	comp=Z,215nm,0.3s						
PAMC	**Pamplona, Colo**	**2.27**	**110**	*e*P	**Pn**	**07 17 07.1**	**+1.6**
PAMC				*e*S	**Sn**	**07 17 33.5**	**+0.7**
CAPC	**Capurgana**	**2.53**	**281**	*e*P	**Pb**	**07 17 13.0**	**-1.3**
CAPC				*e*S	**Sb**	**07 17 44.4**	**-0.6**
CAPC				*i*		07 17 45.6	
	comp=Z,40nm,0.2s						
NORC	**Norcasia**	**2.56**	**181**	*e*P	**Pn**	**07 17 11.0**	**+1.7**
NORC				*e*S	**Sn**	**07 17 40.5**	**+1.0**
RUSC	**La Rusia**	**2.83**	**142**	*e*P	**Pn**	**07 17 15.4**	**+2.1**
RUSC				*e*S	**Sn**	**07 17 47.8**	**+1.0**
RUSC				*i*		07 17 53.2	
	comp=Z,82nm,0.7s						
ROSC	**El Rosal**	**3.32**	**171**	Pn	**Pn**	**07 17 19.8**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=270,slow=20,SNR=1.7						
ROSC				Pg	**Pb**	**07 17 24.6**	**-3.3**
	comp=Z,1.2nm,0.3s,baz=73,slow=20,SNR=5.5						
ROSC				Lg	Lg	07 18 02.3	
	comp=Z,3.2nm,0.3s,baz=51,slow=20,SNR=8.3						
ROSC	**El Rosal**	**3.32**	**171**	*e*P	**Pn**	**07 17 21.3**	**+1.3**
ROSC				*e*S	**Sn**	**07 18 00.1**	**+1.4**
ROSC				*i*		07 18 09.0	
	comp=Z,34nm,0.4s						
CHIC	**Chingaza**	**3.66**	**162**	*e*P	**Pn**	**07 17 25.5**	**+0.9**
CHIC				*e*S	**Sn**	**07 18 07.0**	**-0.1**
CHIC				*i*		07 18 17.1	
	comp=Z,21nm,0.4s						
SDV	**Santo Domingo**	**4.22**	**80**	Pg	**Pn**	**07 17 35.1**	**+2.9**
	comp=Z,4.3nm,0.3s,baz=296,slow=4.8,SNR=4.3						
SDV				Lg	Lg	07 18 21.7	
	comp=Z,13nm,0.3s,baz=351,slow=19,SNR=12						
LPAZ	**La Paz**	**25.17**	**165**	P	**P**	**07 21 51.4**	**-2.0**
	comp=Z,0.4nm,0.3s,baz=0.0,slow=5.1,SNR=6.1						
ASAR	**Alice Springs**	**148.44**	**237**	PKPbc	**PKPdf**	**07 36 10.5**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=117,slow=3.2,SNR=3.4						
WRA	**Warramunga Arr**	**149.42**	**244**	PKPbc	**PKPbc**	**07 36 15.8**	**-1.1**
	comp=Z,0.5nm,0.9s,baz=101,slow=2.7,SNR=6.0						

ISCJB 12 07:23:37.2±0.4, 14°.25S±0°.06×72°.65W±0°.07, h83km, mb4.3/13, Error ellipse: s-maj=11.3km s-min=6.1km az=137.7
NEIC 12 07:23:38.1±1.0, 14°.23S×72°.73W, h72km±9km, mb4.3/9, Error ellipse: s-maj=12.9km s-min=9.4km az=55.0
IDC 12 07:23:39.2±1.9, 14°.15S×72°.73W, h83km±19km, mb3.8/6, mb1 4.0/10, mb1mx3.7/41, mbtmp4.2/10, MS2.5/2, Ms1 2.6/2, ms1mx2.5/38, Error ellipse: s-maj=21.3km s-min=13.7km az=38.0
ISC 12 07:23:39.0±0.5, 14°.32S±0°.07×72°.74W±0°.08, h83km, n38, σ1§66/42, mb4.2/13, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**4.62**	**300**	P	**Pn**	**07 24 45.2**	**-1.2**
NNA	18nm,0.3s,baz=121,slow=11,SNR=32			S	**Sn**	**07 25 37.4**	**-1.5**
NNA	5.9nm,0.3s,baz=229,slow=20,SNR=2.3			LR	LR	07 26 21.8	
	comp=Z,71nm,21.7s,baz=218,slow=36						
NNA	**Nana**	**4.62**	**300**	*e*Pn	**Pn**	**07

12nm,1.4s
TXAR Lajitas Array 52.68 326 P **P 07 32 45.1 0.0**
0.2nm,0.6s,baz=142,slow=6.3,SNR=3.7
TX31 Lajitas Ar. Si 52.68 326 *e*P **P 07 32 45.4 +0.2**
KSPA Keystone Colle 55.67 357 *e*PcP **PcP 07 34 03.3 -1.7**
SDCO Great Sand Dun 60.24 330 *e*P **P 07 33 39.4 +0.4**
1.4nm,0.8s
SNAA Sanae 70.21 162 P **P 07 34 44.0 +1.4**
2.6nm,0.7s,baz=287,slow=11,SNR=15
KOWA Kowa 73.77 70 P **P 07 35 04.0 -0.8**
1.9nm,0.7s,baz=286,slow=7.4,SNR=3.2
FCC Fort Churchill 74.89 349 *e*P **P 07 35 09.9 -0.5**
9.2nm,1.5s
QSPA South Pole Qui 75.83 180 P **P 07 35 17.8 +1.8**
1.8nm,0.6s,baz=129,slow=3.0,SNR=6.6
BEVT Boeing Everett 76.04 328 *e*P **P 07 35 15.8 -1.4**
NLWA Neilton Lookou 76.53 327 *e*P **P 07 35 22.1 +2.0**
7.1nm,1.4s
TOA1 Torodi Ar. Sit 78.59 73 *e*P **P 07 35 31.3 -0.9**
TOA0 Torodi Ar. Sit 78.59 73 *e*P **P 07 35 31.3 -0.9**
5.8nm,0.9s
TORD Torodi Ar. Bea 78.59 73 P **P 07 35 31.3 -0.9**
2.2nm,0.7s,baz=256,slow=5.1,SNR=9.1
MLH Mauna Loa 87.97 291 *e*P **P 07 36 18.9 -1.7**
76nm,1.0s
MDM Murphy Dome 96.84 335 *e*P **P 07 36 59.9 -0.4**
1.4nm,0.6s
BWN Browne 97.09 335 *e*P **P 07 37 03.1 +1.7**
33nm,0.7s
AS01 Alice Springs 134.10 215 *e*PKPdf **PKPdf 07 42 48.3 +0.5**
ZAA1 Zalesovo Array 136.70 19 *e*PKPdf **PKPdf 07 42 52.4 +0.8**
ZALV Zalesovo Beam 136.71 19 PKP **PKPdf 07 42 52.4 +0.8**
1.0nm,0.7s,baz=318,slow=4.2,SNR=4.4
WB2 Warramunga Arr 136.76 219 *e*PKPdf **PKPdf 07 42 53.7 +1.0**
WR1 Warramunga Arr 136.77 219 *e*PKPdf **PKPdf 07 42 53.1 +0.4**
WRA Warramunga Arr 136.77 219 PKP **PKPdf 07 42 53.1 +0.4**
0.4nm,0.7s,baz=139,slow=1.8,SNR=7.2
SONA1 Songino Array 146.57 1 *e*PKPbc **PKPab 07 43 12.2 -0.1**
KSRS Korea Array 150.53 325 PKPbc **PKPbc 07 43 22.4 +0.9**
0.8nm,0.8s,baz=341,slow=1.9,SNR=5.6
KSAR Wonju Array Be 150.56 325 PKPbc **PKPbc 07 43 22.4 +0.8**

IDC ***12*** *07:39:52.6±2.5, 36.°62N×141.°37E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.4/68, mbtmp3.6/4, ML3.5/1, MS2.4/3, Ms1 2.4/3, ms1mx2.2/66, Error ellipse: s-maj=64.6km s-min=29.8km az=60.0*
ISCJB ***12*** *07:39:59.1±1.0, 36.°50N±0.°05×140.°98E±0.°08, h49km±7km, mb3.5/3, Error ellipse: s-maj=12.1km s-min=6.9km az=35.7*
NIED ***12*** *07:40:00, 36.°50N×140.°90E, h56km, Mw3.6 Best double couple: M0=2.86000×10^14 NP1:φs=138.00000°, δ=29.00000°, λ=49.00000°. NP2:φs=3.00000°, δ=69.00000°, λ=110.00000°.*
JMA ***12*** *07:40:00.6±0.1, 36.°53N×140.°85E, h51km±1km, M3.8*
JMA Felt III J1.
ISC 12 07:39:59.7±1.6, 36.°50N±0.°07×141.°00E±0.°10, h42km±12km, n21, σ0=83/23, mb3.6/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.36**	**288**	P	**Pn**	**07 40 09.4**	**+0.6**
JHO				S	**Sn**	**07 40 15.2**	**-0.1**
ONAJ	**Iwakimizuishiy**	**0.62**	**345**	P	**Pn**	**07 40 12.3**	**+0.1**
ONAJ				*e*S	**Sn**	**07 40 20.8**	**-0.3**
JYT	**Yasato**	**0.70**	**248**	P	**Pn**	**07 40 13.2**	**0.0**
JYT				S	**Sn**	**07 40 22.1**	**-0.8**
JFK	**Kawauchi**	**0.87**	**353**	P	**Pn**	**07 40 15.5**	**0.0**
JFK				*e*S	**Sn**	**07 40 26.5**	**-0.6**
JSB	**Shiboa**	**0.99**	**299**	P	**Pn**	**07 40 16.9**	**-0.2**
JSB				S	**Sn**	**07 40 28.8**	**-1.1**
JFT	**Otama**	**1.15**	**333**	P	**Pn**	**07 40 20.0**	**+0.7**
JFT				S	**Sn**	**07 40 33.6**	**-0.2**
JAG	**Ashikaga**	**1.25**	**267**	P	**Pn**	**07 40 20.2**	**-0.4**
JAG				S	**Sn**	**07 40 34.1**	**-2.2**
JFY	**Yanaizu**	**1.38**	**312**	P	**Pn**	**07 40 22.4**	**0.0**
JFY				S	**Sn**	**07 40 39.2**	**-0.3**
MJAR	**Matsushiro Arr**	**2.25**	**272**	Pn	**Pn**	**07 40 34.8**	**+0.4**
9.5nm,0.3s,baz=100,slow=8.4,SNR=69							
MJAR				Sn	**Sn**	**07 41 02.7**	**+1.8**
6.7nm,0.3s,baz=44,slow=25,SNR=6.5							
MJAR				LR	LR	07 41 33.3	
comp=Z,67nm,19.9s,baz=120,slow=40							
MAT	**Matsushiro**	**2.25**	**272**	P	**Pn**	**07 40 35.0**	**+0.6**
MAT				S	**Sn**	**07 41 01.6**	**+0.7**
JNU	**Nakatsue**	**8.98**	**251**	LR	LR	07 45 57.2	
comp=Z,30nm,18.8s,baz=122,slow=39							
KSRS	**Korea Array**	**10.51**	**279**	LR	LR	07 46 17.3	
comp=Z,17nm,19.8s,baz=55,slow=36							
H11N2	**WAKE ISLAND Hy**	**28.17**	**119**	T	T	08 15 49.6	
baz=312,slow=75,SNR=23							
H11N1	**WAKE ISLAND Hy**	**28.18**	**119**	T	T	08 15 49.4	
baz=312,slow=75,SNR=29							
H11N3	**WAKE ISLAND Hy**	**28.19**	**119**	T	T	08 15 50.8	
baz=312,slow=75,SNR=30							
H11S1	**WAKE ISLAND Hy**	**28.86**	**121**	T	T	08 16 40.4	
baz=314,slow=76,SNR=31							
H11S3	**WAKE ISLAND Hy**	**28.86**	**122**	T	T	08 16 40.5	
baz=314,slow=76,SNR=42							
H11S2	**WAKE ISLAND Hy**	**28.87**	**122**	T	T	08 16 41.7	
baz=314,slow=76,SNR=40							
ZALV	**Zalesovo Beam**	**42.03**	**313**	P	**P**	**07 47 46.2**	**-0.6**
1.2nm,0.5s,baz=102,slow=6.3,SNR=6.1							
MKAR	**Makanchi Array**	**44.12**	**303**	P	**P**	**07 48 04.5**	**+0.7**
0.3nm,0.5s,baz=87,slow=9.2,SNR=3.5							
WRA	**Warramunga Arr**	**56.49**	**188**	P	**P**	**07 49 37.5**	**+0.1**
0.5nm,0.7s,baz=4.9,slow=7.3,SNR=4.1							

IDC ***12*** *07:40:15.8±2.4, 18.°47S×175.°55W, h189km±23km, mb3.5/10, mb1 3.7/11, mb1mx3.4/50, mbtmp4.0/11, Error ellipse: s-maj=22.2km s-min=13.6km az=139.0*
ISCJB ***12*** *07:40:19.1±0.7, 18.°5S±0.°1×175.°6W±0.°2, h238km, mb3.5/9, Error ellipse: s-maj=24.5km s-min=15.2km az=135.2*
ISC 12 07:40:21.0±0.8, 18.°5S±0.°2×175.°6W±0.°2, h238km, n13, σ0=88/14, mb3.5/9, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.88**	**39**	P	Pn	07 41 40.8	-6.8
2.6nm,0.3s,baz=187,slow=4.4,SNR=10							
AFI				S	S	07 42 41.8	-15
7.7nm,0.3s,baz=38,slow=23,SNR=9.4							
URZ	**Urewera**	**20.66**	**196**	P	**P**	**07 44 40.6**	**-2.1**
10nm,1.0s,baz=26,slow=4.7,SNR=5.3							
CTA	**Charters Tower**	**35.98**	**261**	P	**P**	**07 46 59.8**	**+0.3**
1.8nm,0.3s,baz=78,slow=8.6,SNR=4.3							
STKA	**Stephens Creek**	**40.69**	**242**	P	**P**	**07 47 39.2**	**+0.7**
2.7nm,0.9s,baz=69,slow=8.6,SNR=3.4							
WRA	**Warramunga Arr**	**47.15**	**260**	P	**P**	**07 48 29.3**	**-0.6**
0.7nm,0.4s,baz=97,slow=7.4,SNR=22							
WRA				PcP	**PcP**	**07 49 57.9**	**+0.3**
0.5nm,0.4s,baz=95,slow=3.5,SNR=8.1							
ASAR	**Alice Springs**	**47.20**	**255**	P	**P**	**07 48 30.5**	**+0.2**
7.0nm,0.7s,baz=88,slow=8.5,SNR=85							
ASAR				PcP	**PcP**	**07 49 58.2**	**+0.5**
0.7nm,0.4s,baz=105,slow=3.8,SNR=7.7							
VNDA	**Vanda**	**60.06**	**186**	P	**P**	**07 50 03.1**	**+0.6**
0.3nm,0.8s,baz=360,slow=7.5,SNR=3.7							
QSPA	**South Pole Qui**	**71.53**	**180**	P	**P**	**07 51 16.6**	**+0.7**
2.1nm,0.8s,baz=51,slow=1.8,SNR=4.4							
NVAR	**Mina Array Bea**	**78.05**	**42**	P	**P**	**07 51 53.4**	**-0.4**
0.5nm,0.7s,baz=231,slow=7.5,SNR=4.4							
TXAR	**Lajitas Array**	**84.09**	**57**	P	**P**	**07 52 26.4**	**+0.8**
0.6nm,1.1s,baz=261,slow=3.4,SNR=3.4							
ILAR	**Eielson Array**	**85.92**	**12**	P	**P**	**07 52 32.8**	**-0.9**
0.4nm,0.5s,baz=238,slow=6.2,SNR=5.5							
BVAR	**Borovoye Array**	**119.01**	**321**	PKP	**PKPdf**	**07 58 40.5**	**-0.5**
0.6nm,0.4s,baz=40,slow=2.5,SNR=4.4							
BRTR	**Keskin Array B**	**147.10**	**316**	PKPbc	**PKPbc**	**07 59 36.3**	**0.0**
0.7nm,0.5s,baz=132,slow=3.7,SNR=5.0							

ATH ***12*** *07:47:35.2, 37.°83N×26.°91E, h27km, ML2.8/5, Error ellipse: s-maj=3.0km s-min=1.0km az=85.0*
ISK ***12*** *07:47:35.6, 37.°85N×26.°81E, h5km, ML3.3/26*
CSEM ***12*** *07:47:36.5±0.1, 37.°83N×26.°81E, h8km, ML2.8, Error ellipse: s-maj=3.8km s-min=2.3km az=50.0*
ISCJB ***12*** *07:47:36.2±0.4, 37.°86N±0.°02×26.°84E±0.°03, h6km±3km, Error ellipse: s-maj=4.1km s-min=2.4km az=143.7*
DDA ***12*** *07:47:36.4, 37.°89N×26.°86E, h6km, Ml3.2*
THE ***12*** *07:47:37.0, 37.°87N×26.°89E, h8km±1km, ML2.7/3, Error ellipse: s-maj=1.5km s-min=0.6km az=230.0*
ISC 12 07:47:36.8±0.8, 37.°86N±0.°02×26.°85E±0.°02, h14km±5km, n108, σ0=82/138, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.15**	**185**	P	**Pg**	**07 47 40.5**	**0.0**
SMG				S	**Sg**	**07 47 43.3**	**+0.2**
SMG				AML	AML	07 47 44.7	
comp=E,6712μm,0.2s							
SMG				AML	AML	07 47 44.9	
comp=N,8353μm,0.2s							
SMG	**Samos**	**0.15**	**185**	P	**Pg**	**07 47 40.5**	**0.0**
SMG				S	**Sg**	**07 47 43.8**	**+0.7**
SMG	**Samos**	**0.15**	**185**	P	**Pg**	**07 47 40.5**	**0.0**
SMG				S	**Sg**	**07 47 43.8**	**+0.7**
DGB	**˜zmir**	**0.20**	**7**	*i* P	**Pg**	**07 47 40.3**	**-0.9**
DGB				*i* S	**Sg**	**07 47 42.9**	**-1.4**
GCAM	**G?zelcaml?**	**0.34**	**117**	PG	**Pg**	**07 47 43.4**	**-0.2**
GCAM				SG	**Sb**	**07 47 48.9**	**-1.0**
GCAM	**G?zelcaml?**	**0.34**	**117**	*i* P	**Pg**	**07 47 43.5**	**-0.2**
GCAM	**G?zelcaml?**	**0.34**	**117**	P	**Pg**	**07 47 43.5**	**-0.2**
GCAM				*e*Sg	**Sb**	**07 47 48.9**	**-1.0**
ZEY	**˜zmir**	**0.47**	**324**	*i* P	**Pg**	**07 47 45.5**	**-0.6**
ZEY				*i* S	**Sg**	**07 47 52.3**	**-0.1**
URLA	**Izmir**	**0.54**	**338**	PG	**Pg**	**07 47 45.7**	**-1.7**
URLA				SG	**Sg**	**07 47 53.9**	**-0.8**
URLA	**Izmir**	**0.54**	**338**	*i* P	**Pg**	**07 47 45.7**	**-1.7**
URLA				*i* S	**Sg**	**07 47 53.7**	**-0.9**
URLA	**Izmir**	**0.54**	**338**	P	**Pg**	**07 47 45.7**	**-1.7**
URLA				*e*Sg	**Sg**	**07 47 53.9**	**-0.8**
CESE	**ˆe¯me**	**0.64**	**317**	PG	**Pg**	**07 47 48.1**	**-1.2**
CESE				SG	**Sg**	**07 47 57.4**	**-0.4**
CESE	**ˆe¯me**	**0.64**	**317**	*e*Pg	**Pg**	**07 47 48.1**	**-1.2**
CESE				*e*Sg	**Sg**	**07 47 57.4**	**-0.4**
KRBN	**Karaburun**	**0.77**	**342**	PG	**Pg**	**07 47 50.9**	**-0.8**
KRBN	**Karaburun**	**0.77**	**342**	*e*Pg	**Pg**	**07 47 50.9**	**-0.8**
YKAV	**Yalikavak-Bodr**	**0.81**	**155**	PG	**Pg**	**07 47 51.7**	**-0.7**
YKAV	**Yalikavak-Bodr**	**0.81**	**155**	*e*Pg	**Pg**	**07 47 51.7**	**-0.7**
CHOS	**Chios island**	**0.82**	**310**	P	**Pb**	**07 47 52.8**	**0.0**
CHOS				S	**Sg**	**07 48 03.5**	**0.0**
CHOS				AML	AML	07 48 04.8	
comp=N,2458μm,0.3s							
CHOS				AML	AML	07 48 06.7	
comp=E,2625μm,0.3s							
CHOS	**Chios island**	**0.82**	**310**	P	**Pb**	**07 47 53.0**	**+0.1**
CHOS				S	**Sb**	**07 48 04.8**	**+1.0**
CHOS	**Chios island**	**0.82**	**310**	P	**Pg**	**07 47 52.5**	**-0.2**
CHOS				S	**Sb**	**07 48 04.1**	**+0.3**
AYDB	**Zeytinkoy-Aydi**	**0.83**	**84**	PG	**Pg**	**07 47 52.1**	**-0.7**
AYDB	**Zeytinkoy-Aydi**	**0.83**	**84**	*e*Pg	**Pg**	**07 47 52.1**	**-0.7**
AYDN	**Tasoluk**	**0.84**	**103**	*i* P	**Pg**	**07 47 52.4**	**-0.6**
AYDN				*i* S	**Sb**	**07 48 04.0**	**-0.3**
AYDN	**Tasoluk**	**0.84**	**103**	P	**Pg**	**07 47 52.4**	**-0.6**
AYDN				S	**Sb**	**07 48 04.0**	**-0.3**
FOCM	**Fo¯Şa**	**0.86**	**354**	PG	**Pg**	**07 47 52.8**	**-0.6**
FOCM	**Fo¯Şa**	**0.86**	**354**	*e*Pg	**Pg**	**07 47 52.8**	**-0.6**
BODT	**Bodrum**	**0.87**	**155**	PG	**Pg**	**07 47 52.9**	**-0.8**
BODT	**Bodrum**	**0.87**	**155**	P	**Pb**	**07 47 53.7**	**0.0**
BODT				S	**Sb**	**07 48 05.8**	**+0.5**
BODT	**Bodrum**	**0.87**	**155**	*e*Pg	**Pg**	**07 47 52.9**	**-0.8**
BODT	**Bodrum**	**0.87**	**155**	P	**Pb**	**07 47 53.7**	**0.0**
BODT				S	**Sb**	**07 48 05.8**	**+0.5**
BDRM	**Kayabasi**	**0.92**	**149**	*i* P	**Pn**	**07 47 55.2**	**-0.1**
BDRM	**Kayabasi**	**0.92**	**149**	P	**Pn**	**07 47 55.2**	**-0.1**
MLSB	**Milas**	**0.93**	**127**	PG	**Pb**	**07 47 54.3**	**-0.3**
MLSB	**Milas**	**0.93**	**127**	*e*Pg	**Pb**	**07 47 54.3**	**-0.3**
CAND	**Candarli**	**1.09**	**358**	PN	**Pg**	**07 47 57.3**	**-0.6**
PSRA	**Psara**	**1.22**	**304**	P	**Pn**	**07 47 58.7**	**-0.7**
PSRA				S	**Sn**	**07 48 17.3**	**+1.5**
PSRA	**Psara**	**1.22**	**304**	P	**Pn**	**07 47 58.9**	**-0.5**
PSRA				S	**Sn**	**07 48 16.9**	**+1.1**
DAT	**Datca**	**1.27**	**153**	PN	**Pg**	**07 48 00.7**	**-0.5**
DAT	**Datca**	**1.27**	**153**	*e*Pn	**Pg**	**07 48 00.7**	**-0.5**
AKHS	**Akhisar**	**1.27**	**36**	*i* P	**Pn**	**07 48 00.3**	**+0.2**
AKHS	**Akhisar**	**1.27**	**36**	P	**Pn**	**07 48 00.3**	**+0.2**
AKS	**Akhisar**	**1.27**	**36**	PN	**Pg**	**07 48 01.0**	**-0.2**
AKS	**Akhisar**	**1.27**	**36**	*e*Pn	**Pg**	**07 48 01.0**	**-0.2**
DATC	**Datca-Mugla**	**1.27**	**149**	PN	**Pg**	**07 48 00.7**	**-0.5**
DATC	**Datca-Mugla**	**1.27**	**149**	*e*Pn	**Pg**	**07 48 00.7**	**-0.5**
APE	**Apeiranthos**	**1.31**	**234**	PN	**Pn**	**07 48 00.3**	**-0.4**
APE	**Apeiranthos**	**1.31**	**234**	P	**Pn**	**07 48 00.4**	**-0.4**
APE				S	**Sb**	**07 48 17.5**	**-0.5**
APE				AML	AML	07 48 23.0	
comp=N,268μm,0.2s							
APE				AML	AML	07 48 25.9	
comp=E,287μm,0.5s							
APE	**Apeiranthos**	**1.31**	**234**	P	**Pn**	**07 48 00.6**	**-0.1**
APE				S	**Sn**	**07 48 19.4**	**+1.3**
APE	**Apeiranthos**	**1.31**	**234**	*e*Pn	**Pn**	**07 48 00.3**	**-0.4**
APE	**Apeiranthos**	**1.31**	**234**	P	**Pn**	**07 48 00.6**	**-0.1**
APE				S	**Sb**	**07 48 17.9**	**-0.1**
YER	**Yerkesik**	**1.35**	**122**	P	**Pn**	**07 48 00.4**	**-0.8**
YER				S	**Sb**	**07 48 18.8**	**-0.1**
YER	**Yerkesik**	**1.35**	**122**	P	**Pn**	**07 48 00.4**	**-0.8**
YER				S	**Sb**	**07 48 18.8**	**-0.1**
AYVA	**Ayvalik**	**1.45**	**355**	*i* P	**Pb**	**07 48 03.6**	**0.0**
AYVA	**Ayvalik**	**1.45**	**355**	P	**Pb**	**07 48 03.6**	**0.0**
PRK	**Paraskevi**	**1.46**	**342**	P	**Pn**	**07 48 02.4**	**-0.3**
PRK				S	**Sn**	**07 48 21.2**	**-0.4**
PRK				AML	AML	07 48 27.2	
comp=E,637μm,0.5s							
PRK				AML	AML	07 48 27.5	
comp=N,527μm,0.5s							
PRK	**Paraskevi**	**1.46**	**342**	P	**Pn**	**07 48 02.9**	**+0.2**
PRK	**Paraskevi**	**1.46**	**342**	P	**Pn**	**07 48 02.9**	**+0.2**
PRK				S	**Sn**	**07 48 21.7**	**+0.1**
SIGR	**SIGRI**	**1.56**	**330**	PN	**Pn**	**07 48 04.6**	**+0.5**
SIGR	**SIGRI**	**1.56**	**330**	P	**Pn**	**07 48 03.6**	**-0.5**
SIGR				S	**Sn**	**07 48 24.6**	**+0.4**
SIGR				AML	AML	07 48 29.5	
comp=N,370μm,0.6s							
SIGR				AML	AML	07 48 30.2	
comp=E,268μm,0.5s							
SIGR	**SIGRI**	**1.56**	**330**	P	**Pn**	**07 48 03.9**	**-0.2**
SIGR	**SIGRI**	**1.56**	**330**	P	**Pn**	**07 48 03.9**	**-0.2**
SIGR	**SIGRI**	**1.56**	**330**	*e*Pn	**Pn**	**07 48 04.6**	**+0.5**
SIGR				S	**Sn**	**07 48 24.7**	**+0.6**
KULA	**Kula-Manisa**	**1.57**	**65**	PN	**Pb**	**07 48 05.4**	**-0.2**
KULA	**Kula-Manisa**	**1.57**	**65**	*e*Pn	**Pb**	**07 48 05.4**	**-0.2**
STEP	**BALIKESIR_Sava**	**1.66**	**24**	*i* P	**Pg**	**07 48 08.1**	**-0.6**
STEP	**BALIKESIR_Sava**	**1.66**	**24**	P	**Pg**	**07 48 08.1**	**-0.6**
TAVA	**DENIZLI_Tavas**	**1.68**	**103**	*i* P	**Pn**	**07 48 05.8**	**-0.1**
TAVA	**DENIZLI_Tavas**	**1.68**	**103**	P	**Pn**	**07 48 05.8**	**-0.1**
TURN	**Turunc**	**1.71**	**125**	PN	**Pn**	**07 48 04.8**	**-1.3**
TURN	**Turunc**	**1.71**	**125**	*e*Pn	**Pn**	**07 48 04.8**	**-1.3**
DNZL	**Cakiroluk**	**1.75**	**95**	*i* P	**Pn**	**07 48 06.9**	**+0.1**
DNZL	**Cakiroluk**	**1.75**	**95**	P	**Pn**	**07 48 06.9**	**+0.1**
DALY	**Dalyan (Mu¯la**	**1.77**	**125**	PN	**Pb**	**07 48 08.3**	**-0.7**
DALY	**Dalyan (Mu¯la**	**1.77**	**125**	*e*Pn	**Pb**	**07 48 08.3**	**-0.7**
BAYC	**CANAKKALE_Bayr**	**1.90**	**353**	*i* P	**Pn**	**07 48 08.5**	**-0.2**
BAYC	**CANAKKALE_Bayr**	**1.90**	**353**	P	**Pn**	**07 48 08.5**	**-0.2**
KARY	**Karystos**	**1.92**	**276**	P	**Pn**	**07 48 08.6**	**-0.4**
KARY	**Karystos**	**1.92**	**276**	P	**Pn**	**07 48 08.7**	**-0.3**
BALY	**Balya**	**1.97**	**17**	*i* P	**Pb**	**07 48 12.0**	**-0.5**
BALY	**Balya**	**1.97**	**17**	P	**Pb**	**07 48 12.0**	**-0.5**
SIMA	**Simav-Kutahya**	**2.07**	**53**	PN	**Pb**	**07 48 13.0**	**-1.2**
SIMA	**Simav-Kutahya**	**2.07**	**53**	*e*Pn	**Pb**	**07 48 13.0**	**-1.2**
KHAL	**Karahalli**	**2.14**	**75**	*i* P	**Pb**	**07 48 15.6**	**+0.2**
KHAL	**Karahalli**	**2.14**	**75**	P	**Pb**	**07 48 15.6**	**+0.2**
DURS	**Dursunbey**	**2.15**	**36**	*i* P	**Pb**	**07 48 16.6**	**+1.0**
DURS	**Dursunbey**	**2.15**	**36**	P	**Pb**	**07 48 16.6**	**+1.0**
FETY	**Fethiye**	**2.16**	**124**	PN	**Pn**	**07 48 12.7**	**+0.4**
FETY	**Fethiye**	**2.16**	**124**	*e*Pn	**Pn**	**07 48 12.7**	**+0.4**
DION	**Dionisos Attik**	**2.32**	**276**	P	**Pn**	**07 48 14.7**	**+0.1**
DION	**Dionisos Attik**	**2.32**	**276**	P	**Pn**	**07 48 14.6**	**+0.1**
GADA	**Gvkgeada**	**2.44**	**343**	PN	**Pn**	**07 48 17.4**	**+1.2**
GADA	**Gvkgeada**	**2.44**	**343**	*e*Pn	**Pn**	**07 48 17.4**	**+1.2**
LPK	**Lapseki**	**2.51**	**358**	PN	**Pn**	**07 48 18.4**	**+1.2**
LPK	**Lapseki**	**2.51**	**358**	*e*Pn	**Pn**	**07 48 18.4**	**+1.2**
KRBG	**Karabiga-Canak**	**2.56**	**8**	PN	**Pn**	**07 48 19.1**	**+1.4**
KRBG	**Karabiga-Canak**	**2.56**	**8**	*e*Pn	**Pn**	**07 48 19.1**	**+1.4**
TVSB	**Tavsanli**	**2.59**	**51**	PN	**Pn**	**07 48 19.9**	**+1.6**
TVSB	**Tavsanli**	**2.59**	**51**	*e*Pn	**Pn**	**07 48 19.9**	**+1.6**
RKY	**Sarkoy-Tekirda**	**2.84**	**5**	PN	**Pn**	**07 48 23.3**	**+1.6**
RKY	**Sarkoy-Tekirda**	**2.84**	**5**	*e*Pn	**Pn**	**07 48 23.3**	**+1.6**
SKIA	**Skiathos**	**2.96**	**297**	P	**Pn**	**07 48 23.8**	**+0.5**
SKIA	**Skiathos**	**2.96**	**297**	P	**Pn**	**07 48 23.7**	**+0.4**
ALN	**Alexandroupoli**	**3.10**	**349**	PN	**Pn**	**07 48 26.6**	**+1.4**
ALN	**Alexandroupoli**	**3.10**	**349**	*e*Pn	**Pn**	**07 48 26.6**	**+1.4**
ARMT	**Armutlu**	**3.12**	**29**	PN	**Pn**	**07 48 27.4**	**+1.8**
ARMT	**Armutlu**	**3.12**	**29**	*e*Pn	**Pn**	**07 48 27.4**	**+1.8**
SBT3	**Marmara-Eregli**	**3.15**	**16**	PN	**Pn**	**07 48 27.8**	**+2.1**
SBT3	**Marmara-Eregli**	**3.15**	**16**	*e*Pn	**Pn**	**07 48 27.8**	**+2.1**

KRNET ***12*** *07:47:42.8±0.1, 42.°72N×73.°10E, h19km, mb2.9*
NNC ***12*** *07:47:42.1±0.7, 42.°75N×73.°10E, h0km, mb3.3, mpv2.9, Error ellipse: s-maj=10.2km s-min=3.1km az=161.0*
SOME ***12*** *07:47:43.4, 42.°75N×73.°08E, h15km*
KNET ***12*** *07:47:43.8±0.7, 42.°70N×73.°21E, h22km±10km, ml2.6, Error ellipse: s-maj=5.4km s-min=2.3km az=108.0*
ISC 12 07:47:41.0±1.1, 42.°73N±0.°02×73.°12E±0.°02, h12km±9km, n54, σ1=06/99, 32C-34D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKS2	**Erkin-Say**	**0.49**	**98**	⇓P	**Pb**	**07 47 52.7**	**+1.0**
15nm,0.1s,SNR=41							
EKS2				⇑S	**Sb**	**07 47 59.8**	**+0.9**
248nm,0.2s							
EKS2	**Erkin-Say**	**0.49**	**98**	⇓*i*P	**Pb**	**07 47 52.7**	**+1.0**
baz=96							
EKS2				⇓*i*S	**Sb**	**07 47 59.8**	**+0.9**
baz=96							
MNAS	**Manas**	**0.51**	**242**	⇓P	**Pb**	**07 47 52.5**	**+0.4**
3.0nm,0.3s							
MNAS				⇓S	**Sb**	**07 47 58.9**	**-0.6**
18nm,0.3s							
MNAS	**Manas**	**0.51**	**242**	⇓*i*P	**Pb**	**07 47 52.3**	**+0.2**
baz=43							
MNAS				⇓*i*S	**Sb**	**07 47 59.0**	**-0.6**
baz=43							
AML	**Almayashu**	**0.73**	**144**	⇓P	**Pn**	**07 47 56.8**	**-0.8**
62nm,0.1s,SNR=44							
AML				⇓S	**Sb**	**07 48 07.2**	**+1.0**
230nm,0.1s							
AML	**Almayashu**	**0.73**	**144**	⇓*i*P	**Pn**	**07 47 56.8**	**-0.8**
baz=43							
AML				⇓*i*S	**Sb**	**07 48 06.7**	**+0.5**
baz=43							
TOKL	**Toktogul**	**0.81**	**193**	⇓*i*P	**Pn**	**07 47 57.7**	**-0.7**
baz=93							
TOKL				⇓*i*S	**Sn**	**07 48 08.8**	**-1.6**
baz=93							
AAK	**Ala-Archa**	**1.02**	**95**	⇑P	**Pn**	**07 48 02.1**	**+0.7**
7.2nm,0.4s							
AAK				⇓S	**Sn**	**07 48 15.8**	**+0.1**
46nm,0.6s							
AAK	**Ala-Archa**	**1.02**	**95**	⇑P	**Pn**	**07 48 02.2**	**+0.9**
10nm,0.2s,SNR=12							
AAK				⇓S	**Sn**	**07 48 16.0**	**+0.3**
22nm,0.2s							
AAK	**Ala-Archa**	**1.02**	**95**	⇓*i*P	**Pn**	**07 48 02.1**	**+0.7**
baz=94							
AAK				⇓*i*S	**Sn**	**07 48 15.5**	**-0.2**
baz=94							
FRU1	**Bishkek**	**1.12**	**85**	⇑*i*P	**Pn**	**07 48 04.0**	**+1.4**
baz=85							
FRU1				⇑*i*S	**Sn**	**07 48 19.0**	**+1.0**
baz=85							
UCH	**Uchtor**	**1.15**	**115**	⇑P	**Pn**	**07 48 04.4**	**+0.9**
8.9nm,0.2s,SNR=28							
UCH				⇓S	**Sn**	**07 48 19.6**	**+0.3**
103nm,0.3s							
UCH	**Uchtor**	**1.15**	**115**	⇓*i*P	**Pn**	**07 48 04.3**	**+0.9**
baz=15							
UCH				⇓*i*S	**Sn**	**07 48 19.8**	**+0.5**
baz=15							
USP	**Ospenovka**	**1.15**	**62**	⇑P	**Pn**	**07 48 04.1**	**+1.1**
9.0nm,0.1s,SNR=45							
USP				⇑S	**Sn**	**07 48 19.5**	**+0.8**
55nm,0.2s							
USP	**Ospenovka**	**1.15**	**62**	⇑*i*P	**Pn**	**07 48 04.1**	**+

8.2nm,0.3s
IZV eS Sg 07 49 03.4 -0.8
32nm,0.5s
KUU Kurty 2.62 63 eP Pg 07 48 30.2 -1.1
0.7nm,0.3s
KUU eS Sg 07 49 03.4 -1.9
14nm,0.6s
SFK Sufi-Kurgan 2.73 174 ⇓Pn Pb 07 48 30.2 +0.3
3.1nm,0.4s
SFK ⇑Lg Lg 07 49 09.8
29nm,0.6s
SFK Sufi-Kurgan 2.73 174 ⇑eP Pb 07 48 28.1 -1.8
baz=74
SFK ⇑iS Sb 07 49 00.7 -2.7
baz=74
KTBS Karatobe 2.79 68 eP Pg 07 48 34.5 +0.1
2.4nm,0.4s
KTBS eS Sg 07 49 10.6 +0.1
20nm,0.4s
TNSS Tian-Shan 2.83 82 eP Pg 07 48 34.2 -1.2
3.0nm,0.3s
TNSS eS Sg 07 49 10.2 -1.8
22nm,0.4s
MDOK Medeo 2.92 80 Pn Pn 07 48 27.7 +0.2
2.5nm,0.5s
MDOK ⇓Lg Lg 07 49 12.7
20nm,0.7s
MDOK Medeo 2.92 80 eP Pg 07 48 35.2 -1.8
3.0nm,0.4s
MDOK eS Sg 07 49 12.3 -2.5
16nm,0.5s
KOTS Kotyrbulak 2.98 79 eP Pg 07 48 37.0 -1.1
1.9nm,0.4s
KOTS eS Sg 07 49 15.2 -1.4
20nm,0.4s
CHKK Chushkaly 3.04 67 eP Pg 07 48 37.8 -1.5
2.6nm,0.5s
CHKK eS Sg 07 49 16.2 -2.5
20nm,0.3s
ARXS Arharly 3.74 65 eP Pg 07 48 52.1 -0.4
2.3nm,0.4s
ARXS eS Sg 07 49 41.0 0.0
20nm,0.4s
MNBS Baschi 4.08 69 eP Pg 07 48 58.1 -1.1
2.6nm,0.3s
MNBS eS Sg 07 49 51.3 -0.7
15nm,0.5s
PDGK Podgornoye 4.71 81 ⇓Pg Pg 07 49 08.3 -2.9
3.5nm,0.9s
PDGK ⇑Lg Lg 07 50 12.5
12nm,0.7s
OTUK Ortayu 5.54 355 ⇓Pn Pn 07 49 04.7 +1.3
1.5nm,0.8s
OTUK ⇑Lg Lg 07 50 35.9
6.8nm,0.5s
MK31 Makanchi Array 7.69 55 ⇑Lg Lg 07 51 44.8
0.7nm,0.5s

IDC 12 08:01:37.2±8.1, 22°.18S×176°.80W, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.4/45, mbtmp3.5/3, Error ellipse: s-maj=355.5km s-min=37.0km az=146.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**45.24**	**258**	P	P	08 09 57.2	+0.5
0.4nm,0.8s,baz=97,slow=7.6,SNR=3.5							
WRA	**Warramunga Arr**	**45.49**	**263**	P	P	08 09 58.2	-0.4
0.5nm,0.7s,baz=94,slow=7.7,SNR=6.9							
ILAR	**Eielson Array**	**89.70**	**12**	P	P	08 14 38.5	+1.8
0.3nm,0.6s,baz=224,slow=5.0,SNR=6.5							
AKASG	**Malin Array Be**	**145.01**	**331**	PKPbc	PKPbc	08 21 12.4	-3.2
1.1nm,0.4s,baz=48,slow=3.8,SNR=7.1							

IDC 12 08:08:22.6±5.4, 49°.64S×108°.58E, h0km, mb3.4/2, mb1 3.7/2, mb1mx3.5/42, mbtmp3.4/2, Error ellipse: s-maj=256.4km s-min=48.7km az=116.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**32.64**	**47**	P	P	08 14 56.2	+0.1
0.3nm,0.7s,baz=204,slow=8.8,SNR=4.7							
WRA	**Warramunga Arr**	**36.05**	**44**	P	P	08 15 25.4	-0.4
0.6nm,0.9s,baz=209,slow=8.2,SNR=4.7							
NVAR	**Mina Array Bea**	**145.02**	**91**	PKPbc	PKPbc	08 28 00.5	-0.5
0.2nm,0.6s,baz=222,slow=4.9,SNR=3.3							
TXAR	**Lajitas Array**	**148.26**	**118**	PKPbc	PKPbc	08 28 09.7	-0.9
0.3nm,0.7s,baz=186,slow=6.1,SNR=5.4							

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*IDC **12** 08:13:39.3±0.8, 34°.82N×141°.38E, h0km, mb3.8/9, mb1 3.9/12, mb1mx3.7/65, mbtmp3.9/12, ML3.2/3, MS3.2/13, Ms1 3.2/13, ms1mx2.9/66, Error ellipse: s-maj=23.0km s-min=14.9km az=89.0*
*ISCJB **12** 08:13:40.9±0.4, 34°.83N±0°.03×141°.51E±0°.05, h27km, mb4.3/18, MS3.3/9, Error ellipse: s-maj=6.5km s-min=4.6km az=164.0*
*JMA **12** 08:13:42.1±0.4, 34°.83N×141°.37E, h43km±3km, M3.3*
*NEIC **12** 08:13:44.3±0.3, 34°.84N×141°.42E, h35km, mb4.6/7, Error ellipse: s-maj=7.7km s-min=5.6km az=78.0*

ISC 12 08:13:42.1±0.6, 34°.80N±0°.04×141°.53E±0°.07, h27km, n69, σ2°.10/58, mb4.2/18, MS3.4/9, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.48**	**253**	P	**Pn**	**08 13 51.2**	**-1.5**
BSO1				X		08 13 57.8	
BSO3	**Boso 3**	**0.84**	**271**	P	**Pn**	**08 13 56.1**	**-1.9**
BSO4	**Boso 4**	**1.00**	**282**	P	**Pb**	**08 13 58.4**	**-2.4**
CHOJ	**Chosi**	**1.06**	**329**	P	**Pb**	**08 13 59.4**	**-2.4**
CHOJ				eS	**Sn**	**08 14 11.4**	**-3.7**
JCN	**Nagara**	**1.26**	**300**	P	**Pb**	**08 14 02.6**	**-2.6**
JIM2	**Oshima 3**	**1.73**	**268**	P	**Pn**	**08 14 08.0**	**-2.5**
JHJ2	**Mitsune**	**2.20**	**221**	ePn	**Pb**	**08 14 18.1**	**-3.1**
JHJ	**Hachijo jima 2**	**2.22**	**222**	Pn	**Pb**	**08 14 18.2**	**-3.3**
43nm,0.3s,baz=56,slow=16,SNR=5.4							
JHJ				Sn	**Sn**	**08 14 44.2**	**+0.6**
75nm,0.3s,baz=69,slow=24,SNR=6.9							
MJAR	**Matsushiro Arr**	**3.22**	**304**	Pn	**Pn**	**08 14 30.9**	**0.0**
5.3nm,0.3s,baz=125,slow=7.9,SNR=34							
MJAR				LR	LR	08 16 02.2	
comp=Z,149nm,21.2s,baz=130,slow=47							
MAJO	**Matsushiro**	**3.22**	**304**	ePn	**Pn**	**08 14 31.1**	**+0.2**
MAT	**Matsushiro**	**3.22**	**304**	P	**Pn**	**08 14 31.4**	**+0.4**
MAT				eS	**Sn**	**08 15 08.0**	**-0.5**
MJB9	**Matsu-Tunnel**	**3.23**	**304**	ePn	**Pn**	**08 14 31.4**	**+0.4**
INU	**Inuyama**	**3.75**	**280**	ePn	**Pn**	**08 14 37.1**	**-1.0**
ERM	**Erimo**	**7.32**	**10**	ePn	**Pn**	**08 15 26.2**	**-1.0**
CBIJ	**Chichi jima**	**7.70**	**176**	ePn	**Pn**	**08 15 33.3**	**+0.9**
CBIJ				eSn	**Sn**	**08 16 53.1**	**-5.6**
JCJ	**Chichijima**	**7.70**	**176**	Pn	**Pn**	**08 15 33.3**	**+0.9**
9.6nm,0.3s,baz=304,slow=18,SNR=4.8							
JCJ				Sn	**Sn**	**08 16 53.1**	**-5.6**
4.8nm,0.3s,baz=17,slow=19,SNR=2.6							
JNU	**Nakatsue**	**9.01**	**262**	LR	LR	08 19 21.1	
comp=Z,148nm,20.8s,baz=114,slow=38							
JNU	**Nakatsue**	**9.01**	**262**	ePn	**Pn**	**08 15 52.6**	**+2.1**
ASAJ	**Asahikawa**	**9.35**	**5**	Pn	**Pn**	**08 15 51.5**	**-3.5**
0.8nm,0.3s,baz=263,slow=17,SNR=3.5							
ASAJ				Sn	**Sn**	**08 17 32.5**	**-6.6**
0.5nm,0.3s,baz=330,slow=20,SNR=2.9							
KSRS	**Korea Array**	**11.32**	**287**	LR	LR	08 20 59.1	
comp=Z,59nm,18.6s,baz=100,slow=39							
JOW	**Kunigami**	**13.88**	**239**	LR	LR	08 22 18.2	
comp=Z,48nm,18.1s,baz=357,slow=38							
KLR	**Kul'dur**	**16.13**	**336**	Pn	**Pn**	**08 17 24.8**	**-2.1**
0.0nm,0.3s,baz=202,slow=16,SNR=3.3							
PETK	**Petropavlovsk-**	**21.60**	**27**	LR	LR	08 27 58.8	
comp=Z,36nm,18.8s,baz=221,slow=40							
H11N2	**WAKE ISLAND Hy**	**26.98**	**117**	T	T	08 48 47.6	
baz=309,slow=75,SNR=14							
H11N1	**WAKE ISLAND Hy**	**26.98**	**117**	T	T	08 48 46.2	
baz=309,slow=75,SNR=12							
H11N3	**WAKE ISLAND Hy**	**27.00**	**117**	T	T	08 48 52.9	
baz=309,slow=75,SNR=9.9							
H11S1	**WAKE ISLAND Hy**	**27.62**	**119**	T	T	08 49 35.4	
baz=312,slow=75,SNR=16							
H11S3	**WAKE ISLAND Hy**	**27.62**	**120**	T	T	08 49 29.4	
baz=312,slow=75,SNR=12							
H11S2	**WAKE ISLAND Hy**	**27.63**	**120**	T	T	08 49 10.7	
baz=312,slow=75,SNR=8.7							
SONA1	**Songino Array**	**29.16**	**307**	eP	**P**	**08 19 42.1**	**+1.0**
CMAR	**Chiang Mai Arr**	**41.07**	**258**	LR	LR	08 39 02.8	
comp=Z,33nm,18.3s,baz=285,slow=37							
ZAA1	**Zalesovo Array**	**43.52**	**314**	eP	**P**	**08 21 42.8**	**-0.3**
ZALV	**Zalesovo Beam**	**43.52**	**314**	P	**P**	**08 21 42.8**	**-0.3**
1.0nm,0.6s,baz=76,slow=9.3,SNR=4.6							
ZALV	**Zalesovo Beam**	**43.52**	**314**	eP	**P**	**08 21 43.0**	**-0.1**
KAPI	**Kappang**	**44.60**	**212**	eP	**P**	**08 21 52.5**	**+0.4**
NRIK	**Noril'sk**	**45.34**	**336**	LR	LR	08 42 54.1	
comp=Z,44nm,19.4s,baz=144,slow=39							
MK01	**Makanchi Array**	**45.42**	**304**	eP	**P**	**08 21 58.4**	**-0.1**
MK32	**Makanchi Array**	**45.42**	**304**	eP	**P**	**08 21 58.6**	**+0.2**
MKAR	**Makanchi Array**	**45.42**	**304**	P	**P**	**08 21 58.6**	**+0.2**
0.8nm,0.6s,baz=97,slow=9.8,SNR=12							
KURK	**Kurchatov**	**47.41**	**310**	eP	**P**	**08 22 14.7**	**+0.7**
KURBB	**Kurchatov Arra**	**47.48**	**310**	P	**P**	**08 22 14.7**	**+0.2**
1.9nm,0.6s,baz=85,slow=7.9,SNR=22							
KTH	**Kantishna Hill**	**49.56**	**33**	eP	**P**	**08 22 32.6**	**+2.2**
5.7nm,0.4s							
ILAR	**Eielson Array**	**51.34**	**31**	P	**P**	**08 22 44.7**	**+0.9**
0.3nm,0.8s,baz=263,slow=6.3,SNR=3.8							
ILB	**Eielson Array**	**51.34**	**31**	eP	**P**	**08 22 44.7**	**+0.9**
BVAR	**Borovoye Array**	**52.17**	**314**	LR	LR	08 46 12.0	
comp=Z,34nm,21.8s,baz=228,slow=38							
WRAB	**Tennant Creek**	**54.85**	**188**	eP	**P**	**08 23 11.4**	**+1.3**
5.8nm,1.1s							
WB2	**Warramunga Arr**	**54.86**	**188**	eP	**P**	**08 23 11.5**	**+1.3**
5.7nm,0.7s							
WR1	**Warramunga Arr**	**54.86**	**188**	eP	**P**	**08 23 11.1**	**+1.0**
4.9nm,0.6s							
WRA	**Warramunga Arr**	**54.86**	**188**	P	**P**	**08 23 11.1**	**+1.0**
4.5nm,0.6s,baz=5.4,slow=7.5,SNR=70							
AS01	**Alice Springs**	**58.58**	**188**	eP	**P**	**08 23 37.9**	**+1.3**
AS31	**Alice Springs**	**58.59**	**188**	eP	**P**	**08 23 37.8**	**+1.2**
1.9nm,1.1s							
ASAR	**Alice Springs**	**58.59**	**188**	P	**P**	**08 23 37.5**	**+0.8**
0.6nm,0.5s,baz=14,slow=9.8,SNR=12							
GYA0B	**ALIBECK ARRAY**	**65.02**	**300**	eP	**P**	**08 24 19.3**	**-0.6**
5.0nm,0.5s							
ARA0	**ARCESS Array S**	**66.12**	**340**	eP	**P**	**08 24 28.3**	**+1.8**
ARCES	**ARCESS Array B**	**66.12**	**340**	P	**P**	**08 24 28.3**	**+1.8**
0.5nm,0.5s,baz=72,slow=9.1,SNR=4.6							
LHI	**Lord Howe Isla**	**68.00**	**164**	eP	**P**	**08 24 40.1**	**+1.4**
373nm,0.3s							
FIA1	**FINESS Array S**	**70.84**	**333**	eP	**P**	**08 24 56.4**	**+0.3**
FIA0	**FINESS Array S**	**70.84**	**333**	eP	**P**	**08 24 56.7**	**+0.7**
FINES	**FINESS Array B**	**70.84**	**333**	P	**P**	**08 24 56.7**	**+0.7**
1.7nm,0.8s,baz=58,slow=5.0,SNR=5.9							
YBH	**Yreka Blue Hor**	**71.64**	**52**	LR	LR	08 51 37.8	
comp=Z,20nm,20.6s,baz=330,slow=32							
KBZ	**Khabaz**	**72.44**	**311**	LR	LR	08 57 41.3	
comp=Z,13nm,20.9s,baz=102,slow=36							
GNI	**Garni**	**73.13**	**307**	LR	LR	08 58 55.5	
comp=Z,24nm,18.2s,baz=360,slow=37							
AKASG	**Malin Array Be**	**76.13**	**323**	P	**P**	**08 25 27.5**	**+0.2**
0.6nm,0.5s,baz=47,slow=6.3,SNR=4.2							
AKBB	**Malin Array Si**	**76.13**	**323**	eP	**P**	**08 25 27.5**	**+0.2**
1.5nm,0.6s							
NC204	**NORSAR Array S**	**76.25**	**338**	eP	**P**	**08 25 29.9**	**+1.9**
NV01	**Mina Array Sit**	**76.26**	**53**	eP	**P**	**08 25 29.6**	**+1.0**
NVAR	**Mina Array Bea**	**76.26**	**53**	P	**P**	**08 25 32.0**	**+3.4**
0.6nm,0.8s,baz=268,slow=7.2,SNR=7.4							
NVAR				LR	LR	08 55 06.7	
comp=Z,31nm,21.0s,baz=36,slow=32							
NOA	**NORSAR Array B**	**76.29**	**338**	LR	LR	09 02 59.6	
comp=Z,22nm,19.7s,baz=170,slow=39							
TOA0	**Torodi Ar. Sit**	**118.97**	**314**	ePKPdf	**PKPdf**	**08 32 30.7**	**+1.8**

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*IDC **12** 08:35:07.7±1.3, 36°.65N×68°.47E, h0km, mb3.9/4, mb1 3.9/9, mb1mx3.6/71, mbtmp3.8/9, ML3.4/5, MS2.7/1, Ms1 2.7/1, ms1mx2.2/65, Error ellipse: s-maj=26.2km s-min=16.3km az=135.0*
*ISCJB **12** 08:35:08.7±0.7, 36°.97N±0°.05×68°.08E±0°.08, h10km, mb3.8/4, Error ellipse: s-maj=9.3km s-min=6.5km az=16.9*
*NNC **12** 08:35:11.2±2.3, 36°.83N×68°.42E, h0km, mb4.3, mpv3.9, Error ellipse: s-maj=17.0km s-min=14.5km az=60.0*

ISC 12 08:35:10.1±0.9, 36°.88N±0°.05×68°.17E±0°.08, h10km, n26, σ1°.74/36, mb3.9/4, 5C-11D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZET	**Dzherino**	**2.00**	**15**	⇓Pn	**Pn**	**08 35 46.2**	**+2.1**
87nm,0.4s							
DZET				⇓Sn	**Sb**	**08 36 13.8**	**+2.3**
194nm,0.5s							
CEP	**Cherat**	**4.32**	**134**	P	**Pn**	**08 36 18.2**	**+2.2**
CEP				S	**Sb**	**08 37 19.0**	**+0.6**
THW	**Thamme Wali**	**5.02**	**143**	P	**Pn**	**08 36 27.5**	**+1.9**
SFK	**Sufi-Kurgan**	**5.23**	**52**	⇓Pn	**Pn**	**08 36 30.2**	**+1.5**
6.6nm,0.7s							
SFK				⇓Sn	**Sn**	**08 37 31.5**	**+2.5**
20nm,0.5s							
SFK				⇓Lg	Lg	08 37 55.7	
25nm,0.6s							
KK31	**Karatay Array**	**6.47**	**15**	⇓Pn	**Pn**	**08 36 47.3**	**+1.8**
2.2nm,0.5s,baz=204,slow=13,SNR=22							
KK31				⇑Pg	**Pg**	**08 37 12.2**	**-1.9**
2.5nm,0.6s,baz=199,slow=18,SNR=3.8							
KK31				⇓Sn	**Sn**	**08 38 00.6**	**+1.1**
11nm,0.7s,baz=193,slow=29,SNR=4.1							
KK31				⇑Lg	Lg	08 38 33.2	
12nm,0.8s,baz=193,slow=29,SNR=4.1							
MNAS	**Manas**	**6.53**	**29**	⇓Pn	**Pn**	**08 36 47.4**	**+1.1**
5.5nm,0.4s							
MNAS				⇑Sn	**Sn**	**08 38 01.3**	**+0.4**
11nm,0.7s							
MNAS				⇑Lg	Lg	08 38 33.2	
32nm,1.1s							
EKS2	**Erkin-Say**	**7.21**	**35**	P	**Pn**	**08 36 57.9**	**+2.1**
SNR=6.9							
UCH	**Uchtor**	**7.25**	**41**	P	**Pn**	**08 36 57.2**	**+0.7**
SNR=9.1							
AAK	**Ala-Archa**	**7.54**	**38**	Pn	**Pn**	**08 37 01.0**	**+0.7**
2.6nm,0.3s,baz=180,slow=3.0,SNR=12							
AAK				Sn	**Sn**	**08 38 26.1**	**+0.3**
baz=313,slow=19,SNR=2.2							
AAK				Lg	Lg	08 39 07.8	
baz=330,slow=20,SNR=2.3							
AAK				LR	LR	08 40 46.6	
comp=Z,58nm,19.3s,baz=42,slow=45							
AAK	**Ala-Archa**	**7.54**	**38**	⇓Pn	**Pn**	**08 37 00.6**	**+0.3**
4.1nm,0.6s							
AAK				Sn	**Sn**	**08 38 27.8**	**+1.9**
10nm,0.7s							
AAK				Lg	Lg	08 39 04.4	
6.4nm,0.8s							
AAK	**Ala-Archa**	**7.54**	**38**	P	**Pn**	**08 37 01.1**	**+0.9**
SNR=7.2							
KZA	**Kyzart**	**7.55**	**44**	P	**Pn**	**08 37 00.9**	**+0.3**
SNR=10.0							
KBK	**Karagaybulak**	**7.78**	**40**	P	**Pn**	**08 37 05.3**	**+1.7**
SNR=15							
CHMS	**Chumysh**	**7.93**	**38**	P	**Pn**	**08 37 06.1**	**+0.5**
SNR=6.7							
USP	**Ospenovka**	**8.02**	**35**	P	**Pn**	**08 37 07.5**	**+0.8**
SNR=5.9							
TKM2	**Tokmak 2**	**8.31**	**41**	⇑Pn	**Pn**	**08 37 10.4**	**-0.4**
8.3nm,0.5s							
TKM2				⇓Sn	**Sn**	**08 38 45.3**	**+0.5**
7.4nm,1.0s							
TKM2				⇓Lg	Lg	08 39 32.3	
9.6nm,0.9s							
TKM2	**Tokmak 2**	**8.31**	**41**	P	**Pn**	**08 37 11.4**	**+0.6**
SNR=5.2							
MKAR	**Makanchi Array**	**14.44**	**42**	Pn	**Pn**	**08 38 32.9**	**-1.6**
0.1nm,0.3s,baz=232,slow=12,SNR=27							
AKTO	**Aktyubinsk**	**15.39**	**335**	Pn	**Pn**	**08 38 45.1**	**-2.2**
0.1nm,0.3s,baz=144,slow=8.7,SNR=3.1							
KURBB	**Kurchatov Arra**	**15.62**	**25**	Pn	**Pn**	**08 38 47.0**	**-3.3**
0.0nm,0.3s,baz=212,slow=12,SNR=7.1							
BVAR	**Borovoye Array**	**16.22**	**5**	Pn	**Pn**	**08 38 55.5**	**-2.5**
0.1nm,0.3s,baz=160,slow=10,SNR=4.3							
BVAR				Sn	**Sn**	**08 41 55.9**	**-2.0**
0.5nm,0.3s,baz=109,slow=27,SNR=9.5							
ZALV	**Zalesovo Beam**	**20.60**	**29**	P	**P**	**08 39 48.3**	**-0.9**
2.7nm,0.4s,baz=212,slow=10,SNR=17							
HFS	**Hagfors**	**41.37**	**322**	P	**P**	**08 42 58.9**	**+2.8**
1.7nm,0.6s,baz=93,slow=10,SNR=5.2							
NB2	**NORSAR Subarra**	**42.71**	**323**	P	**P**	**08 43 08.9**	**+1.8**
comp=Z,0.5nm,0.5s,baz=98,slow=8.6							
TORD	**Torodi Ar. Bea**	**63.46**	**267**	P	**P**	**08 45 41.1**	**+0.6**
comp=Z,0.9nm,0.7s,baz=50,slow=5.8,SNR=3.5							
WRA	**Warramunga Arr**	**84.14**	**120**	P	**P**	**08 47 38.9**	**-2.8**
comp=Z,0.8nm,1.2s,baz=324,slow=4.5,SNR=3.6							

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*ISCJB **12** 08:36:58.2±1.3, 16°.05S±0°.1×168°.1E±0°.2, h177km, mb3.9/7, Error ellipse: s-maj=29.2km s-min=18.3km az=154.6*
*IDC **12** 08:37:01.2±4.1, 16°.15S×168°.07E, h186km±34km, mb3.5/7, mb1 3.6/8, mb1mx3.3/46, mbtmp4.0/8, MS3.4/2, Ms1 3.4/2, ms1mx2.7/27, Error ellipse: s-maj=34.0km s-min=19.4km az=50.0*

ISC 12 08:37:00.1±1.5, 16°.1S±0°.2×168°.1E±0°.2, h177km, n9, σ0°.59/8, mb4.0/7, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.14**	**195**	P	**Pn**	**08 38 29.5**	**+0.5**
0.5nm,0.3s,baz=26,slow=14,SNR=7.6							
URZ	**Urewera**	**23.44**	**162**	P	**P**	**08 41 53.0**	**-0.4**
8.4nm,0.8s,baz=350,slow=6.1,SNR=4.3							
STKA	**Stephens Creek**	**28.76**	**232**	P	**P**	**08 42 41.8**	**+0.5**
1.8nm,0.9s,baz=79,slow=16,SNR=2.7							
WRA	**Warramunga Arr**	**32.32**	**258**	P	**P**	**08 43 11.9**	**-0.9**
0.2nm,0.6s,baz=84,slow=8.3,SNR=8.9							
ASAR	**Alice Springs**	**32.98**	**251**	P	**P**	**08 43 18.1**	**-0.4**
1.5nm,0.5s,baz=76,slow=9.0,SNR=34							
ASAR				LR	LR	08 57 23.1	
comp=Z,28nm,19.5s,baz=184,slow=37							
SIJI	**Sorong**	**39.36**	**289**	LR	LR	09 01 23.1	
comp=Z,91nm,19.4s,baz=192,slow=37							
MJAR	**Matsushiro Arr**	**59.50**	**332**	P	**P**	**08 46 45.2**	**+0.5**
2.0nm,0.8s,baz=171,slow=9.1,SNR=5.0							
VNDA	**Vanda**	**61.51**	**182**	P	**P**	**08 46 57.7**	**-0.1**
0.7nm,0.6s,baz=1.1,slow=3.8,SNR=7.9							
QSPA	**South Pole Qui**	**73.93**	**180**	P	**P**	**08 48 15.5**	**-0.2**
3.8nm,0.8s,baz=360,slow=4.7,SNR=8.0							

NNC 12 09:02:43.3±2.8, 37°.88N×71°.63E, h0km, mb3.8, mpv3.4, 3C-3D, Error ellipse: s-maj=21.2km s-min=17.7km az=166.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**2.58**	**34**	⇑Pn	Pn	09 03 26.8	+0.2
2.1nm,0.4s							
SFK				⇑Sn	Sn	09 04 00.5	+1.7
26nm,0.5s							
MNAS	**Manas**	**4.65**	**8**	⇓Pn	Pn	09 03 55.4	+0.5
5.8nm,0.3s							
MNAS				⇑Sn	Sn	09 04 51.0	+1.4
5.8nm,0.6s							
AAK	**Ala-Archa**	**5.23**	**24**	Pn	Pn	09 04 01.2	-1.7
3.3nm,0.6s							
AAK				Sn	Sn	09 05 03.2	-0.8
7.5nm,0.8s							
KK31	**Karatay Array**	**5.29**	**351**	⇓Pn	Pn	09 04 04.0	+0.5
1.5nm,0.3s,baz=169,slow=11,SNR=19							
KK31				⇓Sn	Sn	09 05 06.5	+1.4
4.1nm,0.5s,baz=174,slow=23,SNR=18							

GUC 12 09:10:44.9±0.6, 21°.49S×68°.53W, h130km±8km, ML2.7, 2C-5D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.73**	**245**	⇓iP	Pn	09 11 06.5	+0.8
PB09				eS	Sn	09 11 22.7	+1.2
PB09				IAML		09 11 24.1	
comp=N,83nm,0.2s							
PB01	**IPOC Station P**	**1.00**	**296**	⇑iP	Pn	09 11 08.4	+0.5
PB01				IAML		09 11 26.9	
comp=N,214nm,0.4s							
PB02	**IPOC Station P**	**1.29**	**277**	⇓iP	Pn	09 11 11.7	+0.9
PB07	**IPOC Station P**	**1.29**	**259**	⇓iP	Pn	09 11 11.6	+0.7
PB07				iS	Sn	09 11 31.5	+0.9
PB07				IAML		09 11 31.8	
comp=N,228nm,0.3s							
PB08	**IPOC Station P**	**1.46**	**336**	⇑iP	Pn	09 11 13.8	+0.8
PB08				eS	Sn	09 11 35.6	+1.2
PB08				IAML		09 11 40.8	
comp=E,42nm,0.5s							
PB06	**IPOC Station P**	**1.55**	**218**	⇓iP	Pn	09 11 14.3	+0.5
PB06				eS	Sn	09 11 36.9	+1.0
PB06				IAML		09 11 38.1	
comp=E,56nm,0.2s							
MNMC	**Minye Minye**	**2.55**	**337**	⇓iP	Pn	09 11 26.4	+0.4

GUC 12 09:10:52.0±0.4, 20°.73S×67°.91W, h206km±7km, ML3.5, 1C, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**1.30**	**297**	eP	Pn	09 11 26.3	+1.2
PB08				iS	S	09 11 52.2	+1.8
PB08				IAML		09 11 55.1	
comp=N,157nm,0.3s							
PB01	**IPOC Station P**	**1.50**	**258**	eP	Pn	09 11 26.4	0.0
PB01				eS	S	09 11 54.4	+1.7
PB01				IAML		09 11 56.4	
comp=N,176nm,0.3s							
PB02	**IPOC Station P**	**1.94**	**252**	eP	Pn	09 11 31.5	+1.0
PB02				eS	S	09 12 01.9	+1.9
PB02				IAML		09 12 02.8	
comp=N,379nm,0.3s							
MNMC	**Minye Minye**	**2.25**	**315**	eP	Pn	09 11 35.9	+2.0
MNMC				eS	S	09 12 08.7	+2.8
MNMC				IAML		09 12 12.3	
comp=E,182nm,0.4s							
PSGC	**Pisagua**	**2.36**	**298**	⇑iP	Pn	09 11 36.6	+1.7
PSGC				iS	S	09 12 09.9	+2.1
PSGC				IAML		09 12 10.8	
comp=N,203nm,0.4s							
PB16	**IPOC Station P**	**2.82**	**328**	eP	Pn	09 11 42.9	+2.4
PB16				iS	S	09 12 21.6	+3.8
PB16				IAML		09 12 24.0	
comp=N,74nm,0.6s							

DJA 12 09:26:01.6±0.7, 1°.S±6°×137°.E±°, h10km, M4.0/6, MLv4.0/6, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAKI	**Biak**	**0.87**	**246**	P	Pg	09 26 18.2	-0.2
BAKI				S	Sg	09 26 29.8	0.0
SRPI	**Serui, Papua**	**1.23**	**213**	P	Pn	09 26 24.7	-0.1
SRPI				S	Sn	09 26 41.5	0.0
RKPI	**Ransiki, Papua**	**2.81**	**256**	P	Pn	09 26 48.0	+1.4
JAY	**Jayapura**	**4.16**	**114**	P	Pn	09 27 04.9	-0.3

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*ISCJB **12** 09:37:12.9±1.2,

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIA	**Limnos Island**	**0.48**	**102**	P	Pg	09 44 34.3	+0.1
LIA				S	Sg	09 44 41.0	+0.4
LIA				AML	AML	09 44 41.6	
	comp=E,185μm,0.4s						
LIA				AML	AML	09 44 45.0	
	comp=N,153μm,0.2s						
LIA	**Limnos Island**	**0.48**	**102**	P	Pg	09 44 34.1	-0.2
LIA				S	Sg	09 44 40.7	+0.1
LIA				AML	AML	09 44 41.6	
	comp=E,185μm,0.4s						
LIA				AML	AML	09 44 45.0	
	comp=N,153μm,0.2s						
LIA	**Limnos Island**	**0.48**	**102**	P	Pg	09 44 34.3	+0.1
LIA				S	Sg	09 44 41.3	+0.7
LIA	**Limnos Island**	**0.48**	**102**	P	Pg	09 44 34.3	+0.1
LIA				S	Sg	09 44 41.3	+0.7
EFSA	**Agios Efstrati**	**0.56**	**145**	P	Pb	09 44 37.1	+0.7
OUR	**Ouranopolis**	**0.56**	**306**	P	Pg	09 44 35.1	-0.7
OUR				S	Sb	09 44 44.7	+0.2
OUR				AML	AML	09 44 46.8	
	comp=E,275μm,0.4s						
OUR				AML	AML	09 44 47.2	
	comp=N,244μm,0.2s						
OUR	**Ouranopolis**	**0.56**	**306**	P	Pg	09 44 35.4	-0.4
OUR				S	Sg	09 44 43.5	+0.1
OUR				AML	AML	09 44 46.8	
	comp=E,275μm,0.4s						
OUR				AML	AML	09 44 47.2	
	comp=N,244μm,0.2s						
OUR	**Ouranopolis**	**0.56**	**306**	P	Pg	09 44 35.3	-0.5
OUR				S	Sb	09 44 44.5	+0.1
OUR	**Ouranopolis**	**0.56**	**306**	P	Pg	09 44 35.3	-0.5
OUR				S	Sb	09 44 44.3	-0.1
PAIG	**Paliouri**	**0.69**	**264**	P	Pg	09 44 38.1	-0.2
PAIG				S	Sg	09 44 47.2	-0.2
PAIG				AML	AML	09 44 49.8	
	comp=E,108μm,0.2s						
PAIG				AML	AML	09 44 51.1	
	comp=N,70μm,0.2s						
PAIG	**Paliouri**	**0.69**	**264**	P	Pg	09 44 38.1	-0.2
PAIG				S	Sg	09 44 47.1	-0.3
PAIG				AML	AML	09 44 48.8	
	comp=N,94μm,0.4s						
PAIG				AML	AML	09 44 49.8	
	comp=E,108μm,0.2s						
PAIG	**Paliouri**	**0.69**	**264**	P	Pg	09 44 38.0	-0.2
PAIG				S	Sb	09 44 47.9	-0.2
PAIG	**Paliouri**	**0.69**	**264**	P	Pg	09 44 37.8	-0.4
PAIG				S	Sg	09 44 47.5	+0.1
SMTH	**Samothraki Isl**	**0.87**	**57**	P	Pg	09 44 41.2	-0.4
SMTH				S	Sg	09 44 52.6	-0.4
SMTH				AML	AML	09 44 54.8	
	comp=E,90μm,0.2s						
SMTH				AML	AML	09 44 55.3	
	comp=N,81μm,0.3s						
SMTH	**Samothraki Isl**	**0.87**	**57**	P	Pg	09 44 41.1	-0.5
SMTH				S	Sb	09 44 53.7	+0.4
SMTH				AML	AML	09 44 54.8	
	comp=E,90μm,0.2s						
SMTH				AML	AML	09 44 55.3	
	comp=N,81μm,0.3s						
SMTH	**Samothraki Isl**	**0.87**	**57**	P	Pg	09 44 41.2	-0.4
SMTH				S	Sb	09 44 53.7	+0.4
SMTH	**Samothraki Isl**	**0.87**	**57**	P	Pg	09 44 41.2	-0.4
SMTH				S	Sg	09 44 52.9	-0.1
PLG	**Polygyros**	**0.94**	**294**	P	Pg	09 44 42.0	-1.0
PLG				S	Sb	09 44 55.5	+0.1
PLG				AML	AML	09 44 57.7	
	comp=E,62μm,0.3s						
PLG				AML	AML	09 44 58.1	
	comp=N,80μm,0.3s						
PLG	**Polygyros**	**0.94**	**294**	P	Pg	09 44 42.0	-0.9
PLG				S	Sg	09 44 55.0	-0.4
PLG	**Polygyros**	**0.94**	**294**	P	Pg	09 44 41.9	-1.1
PLG				S	Sg	09 44 55.3	0.0
KVLA	**Kavala**	**0.95**	**351**	P	Pb	09 44 41.1	-2.0
KVLA	**Kavala**	**0.95**	**351**	P	Pb	09 44 41.5	-1.6
GADA	**Gvkgeada**	**1.03**	**79**	P	Pb	09 44 44.2	-0.3
GADA				S	Sg	09 44 58.7	+0.5
GADA	**Gvkgeada**	**1.03**	**79**	P	Pb	09 44 44.2	-0.3
GADA				S	Sg	09 44 58.7	+0.5
SKY	**Skiros Island**	**1.12**	**181**	P	Pb	09 44 46.1	+0.1
SKY	**Skiros Island**	**1.12**	**181**	P	Pb	09 44 45.4	-0.6
SKIA	**Skiathos**	**1.20**	**226**	P	Pn	09 44 46.2	-1.0
SKIA				S	Sb	09 45 02.2	-0.5
SKIA				AML	AML	09 45 07.1	
	comp=N,109μm,0.3s						
SKIA				AML	AML	09 45 08.2	
	comp=E,110μm,0.2s						
SKIA	**Skiathos**	**1.20**	**226**	P	Pn	09 44 46.4	-0.8
SKIA	**Skiathos**	**1.20**	**226**	P	Pn	09 44 46.0	-1.2
SKIA				S	Sb	09 45 02.2	-0.4
SOH	**Sokhos**	**1.24**	**312**	P	Pn	09 44 47.4	-0.5
SOH	**Sokhos**	**1.24**	**312**	P	Pn	09 44 47.5	-0.4
SOH				S	Sn	09 45 04.4	-0.1
SOH	**Sokhos**	**1.24**	**312**	P	Pn	09 44 47.0	-0.9
XOR	**Xorichti**	**1.24**	**240**	P	Pn	09 44 45.3	-2.6
XOR				S	Sb	09 45 02.1	-1.9
XOR				AML	AML	09 45 03.6	
	comp=N,44μm,0.6s						
XOR				AML	AML	09 45 04.2	
	comp=E,30μm,0.4s						
XOR	**Xorichti**	**1.24**	**240**	P	Pn	09 44 45.9	-2.0
XOR				S	Sb	09 45 02.8	-1.2
NEO	**Neokhori**	**1.25**	**237**	P	Pn	09 44 46.7	-1.3
NEO	**Neokhori**	**1.25**	**237**	P	Pn	09 44 46.8	-1.2
SIGR	**SIGRI**	**1.27**	**128**	P	Pn	09 44 48.3	+0.1
SIGR	**SIGRI**	**1.27**	**128**	P	Pn	09 44 47.6	-0.5
HORT	**Hortiatis**	**1.28**	**298**	P	Pn	09 44 47.9	-0.5
HORT	**Hortiatis**	**1.28**	**298**	P	Pn	09 44 47.5	-0.9
SRS	**Serrai**	**1.34**	**326**	P	Pn	09 44 46.7	-2.5
SRS				S	Sb	09 45 06.9	-0.1
SRS				AML	AML	09 45 09.7	
	comp=E,36μm,0.1s						
SRS				AML	AML	09 45 10.3	
	comp=N,30μm,0.2s						
SRS	**Serrai**	**1.34**	**326**	P	Pn	09 44 47.6	-1.7
SRS	**Serrai**	**1.34**	**326**	P	Pn	09 44 47.4	-1.9
SRS				S	Sb	09 45 06.4	-0.5
RDO	**Rodhopi**	**1.36**	**32**	P	Pn	09 44 46.7	-2.8
RDO	**Rodhopi**	**1.36**	**32**	P	Pn	09 44 47.9	-1.6
RDO	**Rodhopi**	**1.36**	**32**	P	Pn	09 44 47.5	-1.9
ALN	**Alexandroupoli**	**1.44**	**51**	P	Pn	09 44 49.4	-1.1
ALN				S	Sn	09 45 08.0	-1.2
ALN				AML	AML	09 45 15.8	
	comp=E,18μm,0.4s						
ALN				AML	AML	09 45 16.0	
	comp=N,31μm,0.7s						
ALN	**Alexandroupoli**	**1.44**	**51**	P	Pn	09 44 49.8	-0.7
ALN	**Alexandroupoli**	**1.44**	**51**	P	Pn	09 44 49.4	-1.1
ALN				S	Sn	09 45 08.2	-1.0
KNT	**Kendrikon**	**1.73**	**313**	P	Pn	09 44 54.2	-0.3
KNT				S	Sn	09 45 15.7	-0.7
KNT				AML	AML	09 45 22.0	
	comp=N,47μm,0.4s						
KNT				AML	AML	09 45 22.4	
	comp=E,34μm,0.3s						
KNT	**Kendrikon**	**1.73**	**313**	P	Pn	09 44 53.8	-0.7
KNT				S	Sn	09 45 15.5	-0.9

*CSEM **12** 09:51:41.8±0.2, 38°.48N×39°.16E, h12km, ML2.5, Error ellipse: s-maj=5.5km s-min=4.1km az=35.0*
*ISK **12** 09:51:41.8, 38°.47N×39°.16E, h8km, ML2.1/5*
*ISCJB **12** 09:51:42.1±0.5, 38°.46N±0°.04×39°.18E±0°.04, h11km±4km, Error ellipse: s-maj=6.2km s-min=5.1km az=7.3*
*DDA **12** 09:51:42.2, 38°.46N×39°.13E, h7km, Ml2.5*
ISC 12 09:51:41.7±0.9,**38°.46N**±0°.03×**39°.18E**±0°.03,**h17**km±6km, **n18**,σ0s**48**/31,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVRC	**Sivrice-ELAZID**	**0.12**	**129**	PG	**Pb**	**09 51 45.4**	**-0.3**
SVRC				SG	**Sb**	**09 51 47.8**	**-0.6**
SVRC	**Sivrice-ELAZID**	**0.12**	**129**	*e*Pg	**Pb**	**09 51 45.4**	**-0.3**
SVRC				*e*Sg	**Sb**	**09 51 47.8**	**-0.6**
ELZG	**Elazig**	**0.16**	**284**	*i* P	**Pg**	**09 51 46.1**	**0.0**
ELZG				*i* S	**Sg**	**09 51 49.3**	**+0.2**
ELZG	**Elazig**	**0.16**	**284**	P	**Pg**	**09 51 46.1**	**0.0**
ELZG				S	**Sg**	**09 51 49.3**	**+0.2**
PTK	**Pertek**	**0.46**	**21**	PG	**Pg**	**09 51 51.1**	**0.0**
PTK				SG	**Sg**	**09 51 58.1**	**+0.6**
MALT	**Malatya**	**0.61**	**257**	PG	**Pg**	**09 51 53.8**	**0.0**
MALT				SG	**Sb**	**09 52 02.7**	**+0.3**
MALT	**Malatya**	**0.61**	**257**	*e*Pg	**Pg**	**09 51 53.8**	**0.0**
MALT				*e*Sg	**Sb**	**09 52 02.7**	**+0.3**
KEMA	**Kemaliye**	**0.97**	**327**	*i* P	**Pb**	**09 51 59.4**	**-0.8**
KEMA				*i* S	**Sb**	**09 52 13.4**	**+0.6**
KEMA	**Kemaliye**	**0.97**	**327**	P	**Pb**	**09 51 59.4**	**-0.8**
KEMA				S	**Sb**	**09 52 13.4**	**+0.6**
AKCD	**Akcadag**	**1.00**	**261**	*i* P	**Pb**	**09 52 00.5**	**-0.3**
AKCD				*i* S	**Sg**	**09 52 14.3**	**-0.1**
AKCD	**Akcadag**	**1.00**	**261**	P	**Pb**	**09 52 00.4**	**-0.3**
AKCD				S	**Sg**	**09 52 14.3**	**-0.1**
HEKM	**Malatya_Hekimh**	**1.05**	**294**	*i* P	**Pb**	**09 52 00.6**	**-0.9**
HEKM				*i* S	**Sn**	**09 52 16.5**	**+0.4**
HEKM	**Malatya_Hekimh**	**1.05**	**294**	P	**Pb**	**09 52 00.6**	**-0.9**
HEKM				S	**Sn**	**09 52 16.5**	**+0.4**
URFA	**Urfa**	**1.05**	**196**	PG	**Pg**	**09 52 02.5**	**+0.4**
URFA	**Urfa**	**1.05**	**196**	*e*Pg	**Pg**	**09 52 02.5**	**+0.4**
MAZI	**Mazidag**	**1.41**	**135**	PN	**Pg**	**09 52 08.7**	**-0.2**
MAZI	**Mazidag**	**1.41**	**135**	*e*Pn	**Pg**	**09 52 08.7**	**-0.2**
SVAN	**Silvan-Diyarba**	**1.61**	**100**	PN	**Pb**	**09 52 11.3**	**+0.2**

*ISCJB **12** 09:54:19.8±1.0, 11°.23S±0°.08×117°.43E±0°.07, h33km, mb3.2/1, MS3.3/1, Error ellipse: s-maj=12.6km s-min=8.0km az=32.6*
*DJA **12** 09:54:20.6±1.3, 11°.S±10°×11°.7E±°, h11km±16km, M3.6/6, MLv3.6/6*
*IDC **12** 09:54:23.2±2.6, 10°.45S×119°.31E, h0km, mb3.2/1, mb1 3.4/3, mb1mx3.2/50, mbtmp3.2/3, ML3.3/2, MS3.3/1, Ms1 3.3/1, ms1mx2.5/20, Error ellipse: s-maj=168.7km s-min=20.6km az=44.0*
ISC 12 09:54:19.2±1.3,**11°.27S**±0°.09×**117°.47E**±0°.06,**h33**km,**n12**, σ2s**12**/14,**South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**2.45**	**7**	P	**Pn**	**09 54 57.8**	**+1.0**
PLAI				S	**Sn**	**09 55 24.1**	**-1.5**
WBSI	**Waikabubak, Su**	**2.49**	**50**	P	**Pn**	**09 55 00.1**	**+2.6**
WBSI				S	**Sb**	**09 55 32.9**	**-0.7**
TWSI	**Taliwang, Sumb**	**2.58**	**347**	P	**Pn**	**09 54 59.7**	**+1.0**
TWSI				S	**Sn**	**09 55 28.7**	**-0.2**
BASI	**Baing, Sumba**	**3.23**	**71**	P	**Pn**	**09 55 10.9**	**+3.3**
IGBI	**Denpasar**	**3.34**	**317**	P	**Pn**	**09 55 10.8**	**+1.7**
IGBI				S	**Sn**	**09 55 48.9**	**+1.2**
SRBI	**Singaraja**	**3.87**	**325**	P	**Pn**	**09 55 17.7**	**+1.3**
JAGI	**Jajag, Banyuwa**	**4.29**	**310**	P	**Pn**	**09 55 23.0**	**+0.8**
GMJI	**Gumukmas**	**4.96**	**307**	P	**Pn**	**09 55 33.9**	**+2.5**
WRA	**Warramunga Arr**	**18.38**	**120**	P	**P**	**09 58 27.8**	**-3.7**
	0.1nm,0.3s,baz=286,slow=14,SNR=11						
WRA				S	Sn	10 01 38.4	-18
	0.0nm,0.3s,baz=280,slow=24,SNR=3.2						
ASAR	**Alice Springs**	**19.92**	**130**	P	**Pn**	**09 58 50.0**	**-0.2**
	0.1nm,0.3s,baz=311,slow=12,SNR=15						
HNR	**Honiara**	**41.80**	**92**	LR	LR	10 18 45.7	
	comp=Z,38nm,18.8s,baz=348,slow=36						
MKAR	**Makanchi Array**	**65.81**	**334**	P	P	10 05 10.4	+9.2
	0.1nm,0.4s,baz=153,slow=5.1,SNR=3.5						

IDC 12 10:05:13.3±2.4,**3°.20N**×**94°.06E**,**h0**km,**mb3.4**/3,**mb1 3.7**/5, **mb1mx3.4**/64,**mbtmp3.5**/5,**ML4.1**/2,**MS3.1**/3,**Ms1 3.1**/3, **ms1mx2.7**/39,**Error ellipse: s-maj=71.1km s-min=25.7km az=56.0**,**Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**4.87**	**95**	Pn	Pn	10 06 29.0	+1.0
	1.1nm,0.3s,baz=180,slow=8.4,SNR=3.0						
PSI				Sn	Sn	10 07 19.9	-5.3
	2.5nm,0.3s,baz=180,slow=10,SNR=4.3						
PSI				LR	LR	10 08 31.4	
	comp=Z,162nm,21.3s,baz=91,slow=41						
CMAR	**Chiang Mai Arr**	**15.90**	**17**	Pn	Pn	10 08 56.8	-1.8
	0.9nm,0.3s,baz=202,slow=11,SNR=7.1						
LEM	**Lembang**	**16.80**	**126**	LR	LR	10 15 45.0	
	comp=Z,54nm,18.5s,baz=313,slow=38						
H08S2	**Diego Garcia H**	**24.07**	**243**	T	T	10 35 36.1	
	baz=63,slow=75,SNR=467						
H08S3	**Diego Garcia H**	**24.07**	**243**	T	T	10 35 38.6	
	baz=63,slow=75,SNR=752						
H08S1	**Diego Garcia H**	**24.08**	**243**	T	T	10 35 40.2	
	baz=63,slow=75,SNR=279						
H01W3	**Cape Leeuwin H**	**42.32**	**155**	T	T	10 58 14.4	
	baz=331,slow=76,SNR=192						
H01W2	**Cape Leeuwin H**	**42.33**	**155**	T	T	10 58 15.0	
	baz=331,slow=76,SNR=166						
H01W1	**Cape Leeuwin H**	**42.34**	**155**	T	T	10 58 16.3	
	baz=331,slow=76,SNR=210						
MKAR	**Makanchi Array**	**44.61**	**348**	P	P	10 13 27.6	+0.2
	0.4nm,0.5s,baz=169,slow=8.4,SNR=1.6						
WRA	**Warramunga Arr**	**45.75**	**122**	P	P	10 13 37.0	+0.2
	0.2nm,0.6s,baz=298,slow=9.0,SNR=4.3						
ASAR	**Alice Springs**	**47.10**	**127**	P	P	10 13 46.7	-0.7
	0.5nm,0.9s,baz=294,slow=7.7,SNR=5.3						
BRTR	**Keskin Array B**	**65.45**	**312**	LR	LR	10 47 36.8	
	comp=Z,20nm,18.1s,baz=168,slow=39						

*SOME **12** 10:20:19.7, 44°.68N×81°.97E, h5km*
*NNC **12** 10:20:20.3±1.1, 44°.66N×82°.17E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=16.0km s-min=2.6km az=116.0*
*ISCJB **12** 10:20:21.4±1.3, 44°.65N±0°.06×82°.2E±0°.1, h10km, Error ellipse: s-maj=14.6km s-min=5.0km az=31.4*
ISC 12 10:20:17.9±1.6,**44°.67N**±0°.06×**82°.17E**±0°.09,**h10**km,**n9**, σ1s**25**/18,**3C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.74**	**260**	*e*P	**Pg**	**10 20 50.9**	**-0.4**
	13nm,0.3s						
DJR				*e*S	**Sg**	**10 21 13.2**	**-0.6**
	9.7nm,0.3s						
KAPS	**Kapalarasan**	**2.09**	**288**	*e*P	**Pg**	**10 20 56.9**	**-1.1**
	6.4nm,0.2s						
KAPS				*e*S	**Sg**	**10 21 23.4**	**-1.7**
	16nm,0.4s						
MK31	**Makanchi Array**	**2.12**	**2**	⇓Pn	**Pg**	**10 20 57.4**	**-1.2**
	7.1nm,0.3s,baz=182,slow=13,SNR=300						
MK31				⇓Sn	**Sg**	**10 21 25.7**	**-0.5**
	4.9nm,0.4s,baz=184,slow=28,SNR=23						
MAKZ	**Makanchi**	**2.14**	**356**	⇓Pn	**Pb**	**10 20 57.4**	**+0.6**
	3.8nm,0.4s						
MAKZ				⇑Sn	**Sg**	**10 21 25.6**	**-1.1**
	6.8nm,0.3s						
PDGK	**Podgornoye**	**2.36**	**236**	⇑Pn	**Pb**	**10 20 59.8**	**-0.7**
	1.7nm,0.3s						
PDGK				⇑Sn	**Sg**	**10 21 31.2**	**-2.4**
	17nm,0.6s						
SHLS	**Shalkode**	**2.48**	**233**	*e*P	**Pn**	**10 20 59.9**	**+1.5**
	12nm,0.2s						
SHLS				*e*S	**Sn**	**10 21 28.7**	**0.0**
	35nm,0.2s						
UZB	**Uzynbulak**	**2.74**	**237**	*e*P	**Pb**	**10 21 06.8**	**-0.2**
	3.9nm,0.3s						
UZB				*e*S	**Sb**	**10 21 40.4**	**-0.4**
	6.2nm,0.3s						
KPKS	**Kokpek**	**2.79**	**246**	*e*P	**Pb**	**10 21 08.6**	**+0.7**
	8.4nm,0.2s						
KPKS				*e*S	**Sb**	**10 21 43.6**	**+1.5**
	23nm,0.5s						
ARXS	**Arharly**	**3.15**	**263**	*e*P	**Pb**	**10 21 14.7**	**+0.7**
	2.7nm,0.3s						
ARXS				*e*S	**Sb**	**10 21 54.3**	**+1.9**
	7.6nm,0.4s						

*NIED **12** 10:38:00, 36°.20N×141°.90E, h17km, Mw3.7 Best double couple: M:3.99000×10^14 NP1:ϕs206.00000°, δ22.00000°, λ96.00000°. NP2:ϕs19.00000°, δ68.00000°, λ88.00000°.*
*JMA **12** 10:38:04.0±0.2, 36°.22N×141°.87E, h62km±5km, M3.5*
*IDC **12** 10:38:13.0±14.0, 35°.87N×141°.12E, h78km±84km, mb3.5/5, mb1 3.5/6, mb1mx3.2/65, mbtmp3.8/6, ML3.5/1, MS3.0/8, Ms1 3.0/8, ms1mx2.7/52, Error ellipse: s-maj=212.1km s-min=26.9km az=67.0*
ISC 12 10:38:00.7±2.3,**36°.18N**±0°.05×**141°.91E**±0°.09,**h2**km±12km, **n27**,σ1s**01**/26,**mb3.8**/5,**MS3.4**/4,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.98**	**241**	P	**Pn**	**10 38 22.0**	**+0.6**
CHOJ				*e*S	**Sn**	**10 38 35.3**	**-0.5**
JHO	**Hitachi**	**1.16**	**292**	P	**Pg**	**10 38 23.4**	**+0.4**
JHO				*e*S	**Sg**	**10 38 38.3**	**+0.2**
ONAJ	**Iwakimizuishiy**	**1.28**	**316**	P	**Pg**	**10 38 25.3**	**0.0**
ONAJ				*e*S	**Sg**	**10 38 41.1**	**-0.8**
JFK	**Kawauchi**	**1.45**	**325**	P	**Pn**	**10 38 28.1**	**+0.2**
JFK				S	**Sg**	**10 38 46.1**	**-1.1**
JFT	**Otama**	**1.84**	**317**	P	**Pb**	**10 38 34.3**	**-0.7**
JFT				*e*S	**Sn**	**10 38 56.3**	**-0.8**
JMM	**Marumori**	**1.90**	**332**	P	**Pn**	**10 38 35.2**	**+1.0**
JMM				*e*S	**Sn**	**10 38 57.6**	**-1.2**
JAG	**Ashikaga**	**2.00**	**278**	P	**Pn**	**10 38 35.7**	**+0.2**
JAG				*e*S	**Sn**	**10 38 59.7**	**-1.4**
JFY	**Yanaizu**	**2.15**	**305**	P	**Pn**	**10 38 38.7**	**+1.1**
JFY				*e*S	**Sn**	**10 39 03.7**	**-1.2**
MJAR	**Matsushiro Arr**	**3.01**	**278**	P	**Pn**	**10 38 50.5**	**+1.1**
	10nm,0.3s,baz=111,slow=7.7,SNR=125						
MJAR				S	**Sn**	**10 39 26.7**	**+0.6**
	3.3nm,0.3s,baz=187,slow=33,SNR=5.7						
MJAR				LR	LR	10 40 04.6	
	comp=Z,82nm,21.0s,baz=135,slow=46						
MAT	**Matsushiro**	**3.01**	**278**	P	**Pn**	**10 38 50.9**	**+1.5**
MAT				S	**Sn**	**10 39 25.1**	**-1.0**
JHJ	**Hachijo jima 2**	**3.52**	**210**	S	**Sn**	**10 39 36.3**	**-2.4**
	38nm,0.3s,baz=90,slow=18,SNR=4.0						
ASAJ	**Asahikawa**	**7.94**	**4**	LR	LR	10 44 06.5	
	comp=Z,51nm,18.2s,baz=170,slow=42						
JNU	**Nakatsue**	**9.59**	**255**	LR	LR	10 43 22.3	
	comp=Z,15nm,19.9s,baz=52,slow=35						
KSRS	**Korea Array**	**11.28**	**281**	LR	LR	10 45 07.1	
	comp=Z,42nm,18.6s,baz=190,slow=38						
H11N2	**WAKE ISLAND Hy**	**27.37**	**120**	T	T	11 12 32.7	
	baz=312,slow=75,SNR=7.7						
H11N1	**WAKE ISLAND Hy**	**27.38**	**120**	T	T	11 12 46.7	
	baz=312,slow=75,SNR=6.2						
H11N3	**WAKE ISLAND Hy**	**27.39**	**120**	T	T	11 12 30.7	
	baz=312,slow=75,SNR=4.7						
H11S1	**WAKE ISLAND Hy**	**28.07**	**122**	T	T	11 14 09.6	
	baz=313,slow=76,SNR=8.9						
H11S3	**WAKE ISLAND Hy**	**28.07**	**122**	T	T	11 14 04.3	
	baz=313,slow=76,SNR=5.4						
H11S2	**WAKE ISLAND Hy**	**28.08**	**122**	T	T	11 14 03.2	
	baz=313,slow=76,SNR=6.3						
SONM	**Songino Array**	**28.60**	**305**	P	**P**	**10 43 59.1**	**+0.8**
	1.4nm,0.4s,baz=106,slow=11,SNR=2.7						
ZALV	**Zalesovo Beam**	**42.78**	**313**	P	**P**	**10 46 00.2**	**+0.7**
	1.0nm,0.6s,baz=98,slow=6.4,SNR=3.9						
ZALV				LR	LR	11 03 51.9	
	comp=Z,16nm,19.2s,baz=246,slow=36						
MKAR	**Makanchi Array**	**44.91**	**303**	P	**P**	**10 46 16.8**	**0.0**
	0.7nm,0.6s,baz=74,slow=11,SNR=2.5						
MKAR				LR	LR	11 05 42.9	
	comp=Z,36nm,18.3s,baz=56,slow=37						
KURBB	**Kurchatov Arra**	**46.84**	**309**	P	**P**	**10 46 32.2**	**+0.3**
	1.3nm,0.5s,baz=84,slow=7.8,SNR=8.2						
WRA	**Warramunga Arr**	**56.28**	**189**	P	**P**	**10 47 42.6**	**-0.2**
	0.2nm,0.5s,baz=5.7,slow=7.4,SNR=4.9						
AKTO	**Aktyubinsk**	**59.54**	**312**	LR	LR	11 14 49.7	
	comp=Z,32nm,18.2s,baz=155,slow=37						
SFJD	**Kangerlussuaq**	**76.70**	**5**	LR	LR	11 26 16.4	
	comp=Z,71nm,18.6s,baz=300,slow=37						

*ISCJB **12** 10:45:08.0±1.1, 64°.60N±0°.03×152°.32W±0°.09, h1km±9km, mb3.3/2, Error ellipse: s-maj=6.5km s-min=4.1km az=18.0*
*NEIC **12** 10:45:10.1±0.0, 64°.58N×152°.29W, h12km, ML3.3(AEIC), After AEIC.*
*IDC **12** 10:45:10.0±2.8, 64°.62N×152°.40W, h0km, mb3.2/2, mb1 3.6/4, mb1mx3.3/70, mbtmp3.2/4, ML3.2/2, Error ellipse: s-maj=48.7km s-min=22.9km az=155.0*
ISC 12 10:45:09.4±1.5,**64°.59N**±0°.04×**152°.27W**±0°.04,**h2**km±11km, **n44**,σ1s**02**/53,**Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHUM	**Lake Minchumin**	**0.71**	**181**	P	**Pg**	**10 45 23.2**	**+0.1**
CHUM				S	**Sg**	**10 45 32.7**	**+0.5**
BPAW	**Bear Paw Mtn.**	**0.75**	**131**	P	**Pg**	**10 45 24.4**	**+0.7**
MLY	**Manley**	**0.79**	**55**	P	**Pb**	**10 45 25.2**	**-0.7**
MLY				S	**Sb**	**10 45 37.0**	**-0.1**
CAST	**Castle Rocks**	**1.18**	**176**	P	**Pg**	**10 45 31.2**	**-0.8**
CAST				S	**Sg**	**10 45 47.0**	**-0.3**
KTH	**Kantishna Hill**	**1.20**	**150**	P	**Pg**	**10 45 32.5**	**+0.1**
KTH				S	**Sg**	**10 45 47.7**	**-0.2**
BWN	**Browne**	**1.29**	**108**	P	**Pb**	**10 45 34.7**	**+0.3**
BWN				S	**Sn**	**10 45 53.2**	**+1.0**
NEA	**Nenana**	**1.38**	**89**	P	**Pn**	**10 45 35.2**	**-0.5**
TRF	**Thorofare Moun**	**1.44**	**142**	P	**Pn**	**10 45 35.9**	**-0.7**
TRF				S	**Sg**	**10 45 55.7**	**0.0**
IM05	**Indian Mountai**	**1.52**	**337**	P	**Pn**	**10 45 36.8**	**-0.8**
PS06	**TAPS Pump Stn6**	**1.66**	**39**	P	**Pn**	**10 45 39.0**	**-0.5**
MCK	**McKinley**	**1.70**	**119**	P	**Pn**	**10 45 39.4**	**-0.7**
PPLA	**Purkeypile**	**1.70**	**179**	P	**Pn**	**10 45 39.1**	**-1.1**
MDM	**Murphy Dome**	**1.77**	**76**	P	**Pn**	**10 45 39.8**	**-1.3**
WRH	**Wood River Hil**	**1.81**	**92**	P	**Pn**	**10 45 40.5**	**-1.1**
COLA	**College**	**1.92**	**79**	P	**Pn**	**10 45 42.2**	**-0.8**
RND	**Reindeer**	**1.92**	**127**	P	**Pn**	**10 45 40.9**	**-2.2**
CCB	**Clear Creek Bu**	**1.93**	**86**	P	**Pn**	**10 45 41.8**	**-1.3**
GCSA	**Galena City Sc**	**1.99**	**277**	P	**Pn**	**10 45 44.5**	**+0.6**
ILAR	**Eielson Array**	**2.32**	**83**	Pn	**Pn**	**10 45 47.2**	**-1.4**
	2.7nm,0.3s,baz=266,

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLDR				SG	**Sg**	**11 00 37.2**	**-0.4**
CLDR	**Caldiran**	**0.58**	**4**	*e*Pg	**Pg**	**11 00 29.9**	**0.0**
CLDR				*e*Sg	**Sg**	**11 00 37.2**	**-0.4**
GEVA	**Gevas**	**0.68**	**249**	*i* P	**Pg**	**11 00 31.1**	**-0.7**
GEVA				*i* S	**Sb**	**11 00 43.0**	**+0.2**
GEVA	**Gevas**	**0.68**	**249**	P	**Pg**	**11 00 31.1**	**-0.7**
GEVA				S	**Sb**	**11 00 43.0**	**+0.2**
ADCV	**BITLIS_Adilcev**	**0.93**	**286**	*i* P	**Pg**	**11 00 36.9**	**+0.4**
ADCV				*i* S	**Sb**	**11 00 49.6**	**-0.3**
ADCV	**BITLIS_Adilcev**	**0.93**	**286**	P	**Pg**	**11 00 36.9**	**+0.4**
ADCV				S	**Sb**	**11 00 49.6**	**-0.3**
HAKT	**HAKKARI**	**1.01**	**187**	*i* P	**Pg**	**11 00 37.8**	**-0.3**
HAKT				*i* S	**Sn**	**11 00 53.7**	**-0.5**
HAKT	**HAKKARI**	**1.01**	**187**	P	**Pg**	**11 00 37.8**	**-0.3**
HAKT				S	**Sn**	**11 00 53.7**	**-0.5**
TUTA	**Tutak**	**1.17**	**316**	*i* P	**Pb**	**11 00 41.5**	**0.0**
TUTA				*i* S	**Sn**	**11 00 58.0**	**-0.2**
TUTA	**Tutak**	**1.17**	**316**	P	**Pb**	**11 00 41.5**	**0.0**
TUTA				S	**Sn**	**11 00 58.0**	**-0.2**
GURO	**Guroymak-BITLI**	**1.44**	**270**	PN	**Pn**	**11 00 44.4**	**-1.0**
GURO	**Guroymak-BITLI**	**1.44**	**270**	*e*Pn	**Pn**	**11 00 44.4**	**-1.0**
EKAR	**Karacoban**	**1.57**	**297**	*i* P	**Pb**	**11 00 48.1**	**-0.1**
EKAR	**Karacoban**	**1.57**	**297**	P	**Pb**	**11 00 48.1**	**-0.1**
SRTM	**Siirt_Merkez**	**1.63**	**250**	*i* P	**Pb**	**11 00 49.7**	**+0.5**
SRTM				*i* S	**Sg**	**11 01 13.5**	**+2.3**
SRTM	**Siirt_Merkez**	**1.63**	**250**	P	**Pb**	**11 00 49.7**	**+0.5**
SRTM				S	**Sg**	**11 01 13.5**	**+2.3**
EATA	**Eleskirt**	**1.68**	**321**	*i* P	**Pb**	**11 00 50.0**	**-0.2**
EATA	**Eleskirt**	**1.68**	**321**	P	**Pb**	**11 00 50.0**	**-0.2**
GNI	**Garni**	**1.72**	**23**	PN	**Pn**	**11 00 50.0**	**+0.7**
GNI	**Garni**	**1.72**	**23**	*e*Pn	**Pn**	**11 00 50.0**	**+0.7**

NIED ***12*** *11:12:00, 37.°20N×142.°20E, h20km, Mw4.4 Best double couple: M0=4.25000×10^15 NP1:φ=241.00000°, δ=10.00000°, λ=164.00000°. NP2:φ=347.00000°, δ=87.00000°, λ=80.00000°.*
IDC ***12*** *11:12:43.0±0.6, 37.°20N×142.°27E, h0km, mb4.2/22, mb1 4.3/31, mb1mx4.2/71, mbtmp4.2/31, ML3.8/7, MS3.6/30, Ms1 3.6/30, ms1mx3.4/64, Error ellipse: s-maj=14.6km s-min=12.4km az=142.0*
JMA ***12*** *11:12:45.5±0.2, 37.°23N×142.°24E, h31km±5km, M4.5*
JMA Felt I J1.
MOS ***12*** *11:12:46.2±1.0, 37.°48N×142.°22E, h22km, mb4.6/34, Error ellipse: s-maj=8.7km s-min=5.8km az=90.2*
BJI ***12*** *11:12:47.4, 37.°19N×142.°18E, h33km, mb4.6/32, mB4.7/19, Ms4.2/14, Ms7 3.9/14*
NEIC ***12*** *11:12:47.0±1.1, 37.°27N×142.°24E, h22km±8km, mb4.6/47, Error ellipse: s-maj=4.8km s-min=3.5km az=145.0*
NEIC Recorded [1 JMA] in Fukushima and Miyagi.
ISC 12 11:12:47.6±0.7, 37.°21N±0.°05×142.°39E±0.°05, h31km±4km, n209, σ1§67/204, mb4.5/84, MS3.6/27, 6C-1D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.22**	**278**	P	**Pn**	**11 13 05.0**	**-3.5**
ONAJ	**Iwakimizuishiy**	**1.27**	**266**	P	**Pn**	**11 13 05.9**	**-3.4**
JMM	**Marumori**	**1.43**	**298**	P	**Pn**	**11 13 08.2**	**-3.2**
JMM				*e*S	**Sn**	**11 13 24.6**	**-4.5**
JIO	**Ouri**	**1.49**	**327**	P	**Pn**	**11 13 09.5**	**-2.8**
JIO				*e*S	**Sn**	**11 13 26.4**	**-4.3**
JFT	**Otama**	**1.66**	**281**	P	**Pn**	**11 13 12.5**	**-2.1**
JFT				*e*S	**Sn**	**11 13 31.2**	**-3.7**
JOU	**Okura**	**1.79**	**311**	P	**Pn**	**11 13 14.2**	**-2.2**
JOU				*e*S	**Sn**	**11 13 35.7**	**-2.4**
JMK	**Ichinoseki**	**1.97**	**332**	P	**Pn**	**11 13 17.1**	**-1.7**
JYS	**Shirataka**	**2.10**	**300**	P	**Pn**	**11 13 19.0**	**-1.7**
JFY	**Yanaizu**	**2.15**	**276**	P	**Pn**	**11 13 19.5**	**-1.8**
JFY				*e*S	**Sn**	**11 13 44.5**	**-2.4**
JYK	**Kaneyama**	**2.34**	**317**	P	**Pn**	**11 13 22.1**	**-1.8**
JOM	**Ohasama**	**2.42**	**339**	P	**Pn**	**11 13 24.1**	**-0.9**
JAG	**Ashikaga**	**2.48**	**253**	P	**Pn**	**11 13 23.5**	**-2.3**
MJAR	**Matsushiro Arr**	**3.42**	**260**	Pn	**Pn**	**11 13 37.5**	**-1.3**
	25nm,0.3s,baz=90,slow=15,SNR=152						
MJAR				Sn	**Sn**	**11 14 17.6**	**-0.5**
	11nm,0.3s,baz=70,slow=24,SNR=5.0						
MJAR				LR	LR	11 15 10.3	
	comp=Z,2μm,18.7s,baz=80,slow=45						
MAJO	**Matsushiro**	**3.42**	**260**	*e*Pn	**Pn**	**11 13 38.4**	**-0.3**
MAJO				*e*Sn	**Sn**	**11 14 17.6**	**-0.6**
MAJO	**Matsushiro**	**3.42**	**260**	*c i* P	**Pn**	**11 13 38.5**	**-0.3**
MAT	**Matsushiro**	**3.42**	**260**	P	**Pn**	**11 13 37.7**	**-1.0**
MAT				*e*S	**Sn**	**11 14 19.8**	**+1.6**
MJB9	**Matsu-Tunnel**	**3.42**	**260**	*e*Pn	**Pn**	**11 13 38.6**	**-0.2**
JHJ2	**Mitsune**	**4.59**	**208**	*e*Pn	**Pn**	**11 13 55.1**	**+0.2**
JHJ2				*e*Sn	**Sn**	**11 14 44.1**	**-3.1**
JHJ	**Hachijo jima 2**	**4.60**	**208**	Pn	**Pn**	**11 13 53.6**	**-1.4**
	49nm,0.3s,baz=291,slow=23,SNR=9.8						
JHJ				Sn	**Sn**	**11 14 42.7**	**-4.7**
	81nm,0.3s,baz=93,slow=23,SNR=5.6						
JHJ				LR	LR	11 15 53.1	
	comp=Z,398nm,20.7s,baz=91,slow=42						
INU	**Inuyama**	**4.72**	**248**	*e*Pn	**Pn**	**11 13 57.3**	**+0.7**
ERM	**Erimo**	**4.84**	**7**	*e*Pn	**Pn**	**11 13 57.0**	**-1.3**
ERM	**Erimo**	**4.84**	**7**	*i* P	**Pn**	**11 13 57.3**	**-0.9**
ASAJ	**Asahikawa**	**6.91**	**1**	Pn	**Pn**	**11 14 25.3**	**-1.3**
	5.6nm,0.3s,baz=212,slow=8.6,SNR=53						
ASAJ				Sn	**Sn**	**11 15 42.6**	**-1.4**
	2.5nm,0.3s,baz=83,slow=32,SNR=6.8						
ASAJ	**Asahikawa**	**6.91**	**1**	*e*Pn	**Pn**	**11 14 25.7**	**-0.9**
ASAJ				*e*Sn	**Sn**	**11 15 42.6**	**-1.4**
YUK	**Yuzh-Kuril'sk**	**7.32**	**20**	*e*P	**Pn**	**11 14 31.3**	**-0.9**
YUK				*e*S	**Sn**	**11 15 48.7**	**-5.4**
YUK				pmax	pmax		
	comp=Z,162nm,0.4s						
YUK				pmax	pmax		
	comp=E,29nm,0.2s						
YUK				pmax	pmax		
	comp=N,120nm,0.5s						
YUK				MLR	MLR		
	comp=N,409nm,22.0s						
YUK				MLR	MLR		
	comp=Z,366nm,22.0s						
SHO	**Shikotan**	**7.47**	**26**	*e*P	**Pn**	**11 14 31.9**	**-2.4**
SHO				*e*S	**Sn**	**11 15 52.1**	**-5.7**
SHO				pmax	pmax		
	comp=N,15nm,0.3s						
SHO				pmax	pmax		
	comp=E,17nm,0.3s						
SHO				pmax	pmax		
	comp=Z,33nm,0.3s						
SHO				MLR	MLR		
	comp=Z,209nm,14.0s						
SHO				MLR	MLR		
	comp=N,228nm,13.0s						
TEY	**Ternei**	**8.96**	**333**	*e*P	Pn	11 15 03.0	+8.3
KUR	**Kuril'sk**	**9.02**	**25**	*e*P	**Pn**	**11 14 53.6**	**-1.9**
KUR				*e*S	**Sn**	**11 16 30.9**	**-5.1**
KUR				pmax	pmax		
	comp=Z,34nm,0.3s						
KUR				pmax	pmax		
	comp=N,20nm,0.2s						
KUR				pmax	pmax		
	comp=E,18nm,0.2s						
KUR				MLR	MLR		
	comp=Z,141nm,14.0s						
KUR				MLR	MLR		
	comp=N,177nm,13.0s						
YSS	**Yuzh-Sakhalins**	**9.75**	**1**	*e*Pn	**Pn**	**11 15 04.7**	**-0.9**
YSS	**Yuzh-Sakhalins**	**9.75**	**1⇑**	*e*P	**Pn**	**11 15 04.8**	**-0.7**
YSS				*e*S	**Sn**	**11 16 49.9**	**-3.9**
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS				pmax	pmax		
	comp=E,20nm,0.5s						
YSS				MLR	MLR		
	comp=Z,280nm,16.0s						
YSS				MLR	MLR		
	comp=N,240nm,15.0s						
CBIJ	**Chichi jima**	**10.08**	**181**	*e*Pn	**Pn**	**11 15 09.0**	**-1.3**
CBIJ				*e*Sn	Sn	11 16 53.2	-9.0
JCJ	**Chichijima**	**10.08**	**181**	Pn	**Pn**	**11 15 08.5**	**-1.8**
	baz=270,slow=20						
JCJ				Sn	Sn	11 16 53.2	-9.0
	comp=N,7.7nm,0.3s,baz=287,slow=19,SNR=5.1						
JNU	**Nakatsue**	**10.26**	**250**	Pn	**Pn**	**11 15 11.2**	**-1.5**
	comp=N,0.6nm,0.3s,baz=43,slow=12,SNR=8.1						
JNU				LR	LR	11 19 19.1	
	comp=N,339nm,20.0s,baz=100,slow=39						
JNU	**Nakatsue**	**10.26**	**250**	*e*Pn	**Pn**	**11 15 13.4**	**+0.7**
USRK	**Ussuriysk Ar.**	**10.54**	**315**	Pn	**Pn**	**11 15 14.5**	**-1.9**
	comp=N,0.2nm,0.3s,baz=111,slow=10,SNR=2.6						
USRK				LR	LR	11 19 02.7	
	comp=N,239nm,18.8s,baz=126,slow=36						
KSRS	**Korea Array**	**11.52**	**276**	Pn	**Pn**	**11 15 29.3**	**-0.6**
	comp=N,0.2nm,0.3s,baz=89,slow=14,SNR=10						
KSRS				LR	LR	11 19 44.1	
	comp=N,429nm,18.8s,baz=69,slow=37						
KLR	**Kul'dur**	**14.29**	**331**	Pn	**Pn**	**11 16 06.2**	**-1.4**
	comp=N,0.0nm,0.3s,baz=126,slow=19,SNR=1.8						
KLR				LR	LR	11 21 33.9	
	comp=N,17nm,18.7s,baz=142,slow=37						
JOW	**Kunigami**	**15.80**	**233**	Pn	**Pn**	**11 16 27.4**	**-0.5**
	comp=N,0.6nm,0.3s,baz=59,slow=19,SNR=2.1						
JOW				LR	LR	11 22 20.6	
	comp=N,180nm,21.2s,baz=78,slow=37						
PETK	**Petropavlovsk-**	**19.15**	**29**	P	**P**	**11 17 08.4**	**+0.2**
	comp=N,0.2nm,0.3s,baz=347,slow=6.1,SNR=4.6						
PETK				LR	LR	11 24 38.3	
	comp=N,83nm,21.4s,baz=228,slow=37						
PEA1	**Petropavlovsk-**	**19.16**	**29**	*e*P	**P**	**11 17 08.4**	**+0.2**
ZEA	**Zeya**	**19.58**	**332**	*e*P	**P**	**11 17 12.3**	**-0.5**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZEA				MLR	MLR		
	comp=Z,200nm,15.0s						
ZEA				MLR	MLR		
	comp=N,200nm,16.0s						
NJ2	**Nanjing**	**20.02**	**262**	*e*P	Pn	11 17 19.2	-0.5
NJ2				pmax	pmax		
	comp=N,6.0nm,0.5s						
MA2	**Magadan**	**23.03**	**11**	P	**P**	**11 17 49.3**	**-0.5**
	comp=N,5.8nm,0.9s,baz=198,slow=10,SNR=8.8						
MA2				LR	LR	11 26 17.9	
	comp=N,88nm,21.2s,baz=176,slow=35						
MA2	**Magadan**	**23.03**	**11**	*e*P	**P**	**11 17 49.5**	**-0.4**
	comp=N,9.8nm,0.7s						
MA2	**Magadan**	**23.03**	**11⇑**	*e*P	**P**	**11 17 50.7**	**+0.9**
MA2				pmax	pmax		
	comp=Z,17nm,1.7s						
HHC	**Hu-ho-hao-te**	**24.16**	**288**	*e*P	**P**	**11 17 59.6**	**-1.4**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,45nm,5.2s						
YAK	**Yakutsk**	**26.08**	**346**	*e*P	**P**	**11 18 24.9**	**+6.8**
YAK				*e**PP	**sP**	**11 18 34.5**	**+3.7**
YAK				*e*SS		11 23 49.5	
YAK				pmax	pmax		
	comp=Z,17nm,0.9s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.0s						
YAK				MLR	MLR		
	comp=Z,100nm,18.0s						
SEY	**Seymchan**	**26.48**	**10**	P	**P**	**11 18 21.6**	**0.0**
	comp=Z,4.3nm,0.7s,baz=183,slow=8.2,SNR=20						
SEY	**Seymchan**	**26.48**	**10**	*c e*P	**P**	**11 18 23.3**	**+1.6**
XAN	**Xi'an**	**27.31**	**273**	P	**P**	**11 18 31.4**	**+1.9**
XAN				pP	sP	11 18 41.1	-1.1
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
XAN				LR	LR		
	comp=Z,210nm,13.2s						
XAN				LR	LR		
	comp=Z,240nm,15.2s						
H11N2	**WAKE ISLAND Hy**	**27.57**	**122**	T	T	11 47 26.4	
	baz=315,slow=75,SNR=346						
H11N1	**WAKE ISLAND Hy**	**27.58**	**122**	T	T	11 47 27.1	
	baz=315,slow=75,SNR=107						
H11N3	**WAKE ISLAND Hy**	**27.59**	**122**	T	T	11 47 29.2	
	baz=315,slow=75,SNR=130						
ULN	**Ulaanbaatar**	**27.91**	**304**	*e*P	**P**	**11 18 34.2**	**-0.6**
	comp=Z,4.9nm,0.8s						
ULN	**Ulaanbaatar**	**27.91**	**304**	*c e*P	**P**	**11 18 35.9**	**+1.0**
ULN				pmax	pmax		
	comp=Z,10.0nm,2.5s						
ENH	**Enshi**	**28.12**	**266**	*e*P	**P**	**11 18 36.0**	**-0.8**
	comp=Z,29nm,1.2s						
H11S1	**WAKE ISLAND Hy**	**28.31**	**125**	T	T	11 48 20.0	
	baz=317,slow=75,SNR=211						
H11S3	**WAKE ISLAND Hy**	**28.31**	**125**	T	T	11 48 21.4	
	baz=317,slow=75,SNR=291						
H11S2	**WAKE ISLAND Hy**	**28.32**	**125**	T	T	11 48 21.2	
	baz=317,slow=75,SNR=194						
SONA1	**Songino Array**	**28.34**	**303**	*e*P	**P**	**11 18 37.7**	**-1.0**
SONA0	**Songino Array**	**28.34**	**303**	*e*P	**P**	**11 18 37.3**	**-1.4**
SONM	**Songino Array**	**28.34**	**303**	P	**P**	**11 18 37.3**	**-1.4**
	comp=Z,3.4nm,0.7s,baz=84,slow=7.0,SNR=5.1						
ZAK	**Zakamensk**	**30.78**	**308**	*e*P	**P**	**11 18 58.5**	**-1.7**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
LZH	**Lanzhou**	**30.81**	**280**	*e*P	**P**	**11 19 02.5**	**+1.8**
LZH				pP	sP	11 19 12.5	-1.0
LZH				sP	pP	11 19 16.6	+6.9
LZH				pmax	pmax		
	comp=Z,16nm,1.2s						
GTA	**Gaotai**	**33.26**	**287**	*e*P	**P**	**11 19 23.3**	**+1.1**
GTA				pP	pP	11 19 30.8	-0.4
GTA				sP	sP	11 19 33.7	-1.2
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BILL	**Bilibino**	**33.65**	**16**	*e*P	**P**	**11 19 25.4**	**+0.3**
	comp=Z,4.8nm,1.0s						
BILL	**Bilibino**	**33.65**	**16**	*i* P	**P**	**11 19 24.0**	**-1.0**
BILL				*i*		11 19 32.6	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.2s						
DAV	**Davao City (W)**	**33.67**	**211**	LR	LR	11 31 17.4	
	comp=Z,91nm,21.4s,baz=52,slow=33						
KMI	**Kunming**	**35.76**	**262**	P	**P**	**11 19 45.9**	**+1.9**
KMI				pP	pP	11 19 51.7	-1.4
KMI				pmax	pmax		
	comp=Z,20nm,0.7s						
WMQ	**Urumqi**	**41.46**	**297**	P	**P**	**11 20 33.1**	**+1.6**
WMQ				pP	sP	11 20 41.6	-2.8
WMQ				pmax	pmax		
	comp=Z,57nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,210nm,3.7s						
WMQ				LR	LR		
	comp=Z,190nm,25.7s						
WMQ				LR	LR		
	comp=Z,280nm,27.3s						
WMQ				LR	LR		
	comp=Z,98nm,25.7s						
CMAR	**Chiang Mai Arr**	**42.29**	**256**	LR	LR	11 40 07.3	
	comp=Z,148nm,18.2s,baz=74,slow=39						
ZAA0	**Zalesovo Array**	**42.38**	**312**	*e*P	**P**	**11 20 38.2**	**-0.5**
	comp=Z,4.7nm,0.8s						
ZAA1	**Zalesovo Array**	**42.38**	**312**	*e*P	**P**	**11 20 38.1**	**-0.6**
ZALV	**Zalesovo Beam**	**42.38**	**312**	P	**P**	**11 20 38.1**	**-0.6**
	comp=Z,1.5nm,0.5s,baz=96,slow=6.6,SNR=7.4						
ZALV				LR	LR	11 38 53.4	
	comp=Z,53nm,20.3s,baz=74,slow=37						
NVS	**Novosibirsk**	**43.29**	**314**	*i* P	**P**	**11 20 47.0**	**+0.9**
NRIK	**Noril'sk**	**43.44**	**335**	LR	LR	11 39 58.4	
	comp=Z,101nm,18.8s,baz=104,slow=38						
MK01	**Makanchi Array**	**44.69**	**302**	*e*P	**P**	**11 20 56.5**	**-1.0**
MK31	**Makanchi Array**	**44.69**	**302**	*e*P	**P**	**11 20 56.6**	**-0.9**
MK31	**Makanchi Array**	**44.69**	**302**	*e*P	**P**	**11 20 56.6**	**-0.9**
MK32	**Makanchi Array**	**44.69**	**302**	*e*P	**P**	**11 20 56.4**	**-1.1**
MKAR	**Makanchi Array**	**44.69**	**302**	P	**P**	**11 20 56.4**	**-1.1**
	comp=Z,1.5nm,0.6s,baz=87,slow=9.0,SNR=14						
MKAR				LR	LR	11 39 05.8	
	comp=Z,48nm,20.8s,baz=59,slow=36						
MKAR	**Makanchi Array**	**44.69**	**302**	*e*P	**P**	**11 20 56.8**	**-0.7**
	comp=Z,31nm,0.6s						
MKAR	**Makanchi Array**	**44.69**	**302**	*e*P	**P**	**11 20 56.8**	**-0.7**
MKAR				pmax	pmax		
	comp=Z,31nm,0.6s						
MAKZ	**Makanchi**	**44.90**	**302**	*e*P	**P**	**11 20 58.2**	**-1.0**
	comp=Z,5.0nm,0.8s						
MAKZ	**Makanchi**	**44.90**	**302**	*e*P	**P**	**11 20 58.2**	**-1.0**
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KURK	**Kurchatov**	**46.44**	**308**	*e*P	**P**	**11 21 10.6**	**-0.7**
	comp=Z,14nm,0.6s						
KURK				*e*P	pP	11 21 10.8	-10
KURK	**Kurchatov**	**46.44**	**308**	P	**P**	**11 21 10.9**	**-0.4**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KDAK	**Kodiak Island**	**46.45**	**42**	*c e*P	**P**	**11 21 11.7**	**+0.5**
KURBB	**Kurchatov Arra**	**46.51**	**308**	P	**P**	**11 21 10.8**	**-1.0**
	comp=Z,5.7nm,0.5s,baz=80,slow=7.6,SNR=31						
MLY	**Manley**	**47.29**	**32**	*e*P	**P**	**11 21 19.2**	**+1.4**
	comp=Z,5.3nm,1.0s						
PDGK	**Podgornoye**	**47.38**	**298**	P	**P**	**11 21 19.6**	**+0.7**
PDGK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TRF	**Thorofare Moun**	**47.45**	**34**	*e*P	**P**	**11 21 19.8**	**+0.6**
	comp=Z,3.3nm,0.8s						
JIRN	**Jiri**	**47.78**	**276**	*e*P	**P**	**11 21 24.6**	**+2.1**
	comp=Z,42nm,1.1s						
GUN	**Gumba**	**47.91**	**276**	*e*P	**P**	**11 21 25.5**	**+2.0**
PMR	**Palmer**	**48.02**	**37**	*e*P	**P**	**11 21 24.0**	**+0.6**
PMR	**Palmer**	**48.02**	**37**	*e*P	**P**	**11 21 24.0**	**+0.6**
GHO	**Glory Hole Cre**	**48.11**	**37**	*e*P	**P**	**11 21 25.2**	**+1.0**
	comp=Z,14nm,1.1s						
MDM	**Murphy Dome**	**48.36**	**32**	*e*P	**P**	**11 21 27.7**	**+1.7**
	comp=Z,9.4nm,0.8s						
SML	**Sawmill**	**48.39**	**36**	*e*P	**P**	**11 21 27.3**	**+0.9**
	comp=Z,8.0nm,0.8s						
SML	**Sawmill**	**48.39**	**36**	*e*P	**P**	**11 21 27.3**	**+0.9**
SML				pmax	pmax		
	comp=Z,8.0nm,0.8s						
PKIN	**Phulchoki**	**48.44**	**276**	*e*P	**P**	**11 21 30.2**	**+2.7**
	comp=Z,13nm,0.2s						
DMN	**Daman**	**48.66**	**276**	*e*P	**P**	**11 21 31.4**	**+2.2**
IL1	**Eielson Array**	**48.93**	**32**	*e*P	**P**	**11 21 31.2**	**+0.8**
ILAR	**Eielson Array**	**48.93**	**32**	P	**P**	**11 21 30.9**	**+0.6**
	comp=Z,4.9nm,0.7s,baz=266,slow=6.4,SNR=74						
ILAR	**Eielson Array**	**48.93**	**32**	P	**P**	**11 21 31.0**	**+0.6**
ILAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ILB	**Eielson Array**	**48.93**	**32**	*e*P	**P**	**11 21 31.1**	**+0.7**
TARG	**Taragay, Kyrgy**	**49.02**	**296**	*e*P	**P**	**11 21 31.2**	**-0.8**
	comp=Z,5.6nm,0.7s						
HNR	**Honiara**	**49.23**	**157**	LR	LR	11 42 25.3	
	comp=Z,29nm,18.1s,baz=226,slow=36						
DANN	**Dangsing**	**49.40**	**278**	*e*P	**P**	**11 21 34.4**	**-0.5**
	comp=Z,38nm,0.6s						
KLU	**Klutina**	**49.56**	**37**	*e*P	**P**	**11 21 36.7**	**+1.3**
	comp=Z,10nm,0.8s						
DIV	**Divide**	**49.67**	**37**	*e*P	**P**	**11 21 37.9**	**+1.7**
	comp=Z,26nm,0.8s						
PYUN	**Piuthan**	**50.12**	**278**	*e*P	**P**	**11 21 41.7**	**+1.5**
	comp=Z,22nm,0.8s						
SCRK	**Sand Creek**	**50.23**	**33**	*e*P	**P**	**11 21 41.4**	**+0.9**
	comp=Z,5.8nm,0.9s						
BVAR	**Borovoye Array**	**51.03**	**312**	P	**P**	**11 21 45.1**	**-1.4**
	comp=Z,0.6nm,0.4s,baz=70,slow=9.3,SNR=4.3						
BVAR				LR	LR	11 44 21.9	
	comp=Z,66nm,18.3s,baz=116,slow=37						
KSH	**Kashi**	**51.05**	**294**	P	**P**	**11 21 50.4**	**+3.4**
KSH				pmax	pmax		
	comp=Z,220nm,4.7s						
MNAS	**Manas**	**52.53**	**299**	P	**P**	**11 21 59.2**	**+1.1**
MNAS				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SFK	**Sufi-Kurgan**	**52.66**	**296**	P	**P**	**11 21 59.7**	**+0.5**
SFK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
INK	**Inuvik**	**53.88**	**27**	*e*P	**P**	**11 22 08.4**	**+1.1**
	comp=Z,6.0nm,0.7s						
INK	**Inuvik**	**53.88**	**27**	*e*P	**P**	**11 22 08.4**	**+1.1**
INK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
DZET	**Dzherino**	**56.47**	**296**	P	**P**	**11 22 26.9**	**+0.2**
DZET				pmax	pmax		
	comp=Z,49nm,0.6s						
ARU	**Arti**	**56.75**	**319**	*d i* P	P	11 22 20.1	-8.1
ARU				pmax	pmax		
	comp=Z,6.0nm,1.7s						
WR1	**Warramunga Arr**	**57.34**	**189**	*e*P	**P**	**11 22 32.0**	**-0.7**
	comp=Z,10nm,1.3s						
WRA	**Warramunga Arr**	**57.34**	**189**	P	**P**	**11 22 32.0**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=5.7,slow=7.3,SNR=7.9						
ABKAR	**Akbulak array**	**58.42**	**310**	*e*P	**P**	**11 22 39.1**	**-1.0**
AKTO	**Aktyubinsk**	**59.14**	**312**	P	**P**	**11 22 45.6**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=42,slow=11,SNR=3.4						
AKTO				LR	LR	11 49 56.9	
	comp=Z,34nm,18.6s,baz=76,slow=38						
SPITS	**Spitsbergen Ar**	**60.51**	**349**	LR	LR	11 52 30.9	
	comp=Z,48nm,18.7s,baz=290,slow=40						
ASAR	**Alice Springs**	**61.07**	**189**	P	**P**	**11 22 57.9**	**-0.6**
	comp=Z,0.9nm,0.7s,baz=14,slow=6.0,SNR=5.5						
RES	**Resolute Bay**	**62.24**	**15**	*e*P	**P**	**11 23 06.5**	**+0.7**
	comp=Z,9.6nm,1.3s						
RES	**Resolute Bay**	**62.24**	**15**	*e*P	**P**	**11 23 06.5**	**+0.7**
RES				pmax	pmax		
	comp=Z,10.0nm,1.3s						
YKA	**Yellowknife Ar**	**63.27**	**30**	P	**P**	**11 23 12.7**	**-0.1**
	comp=Z,1.5nm,0.7s,baz=307,slow=6.6,SNR=3.8						
GEYT	**Alibeck**	**64.43**	**299**	LR	LR	11 53 59.2	
	comp=Z,40nm,18.2s,baz=215,slow=38						
OBN	**Obninsk**	**68.42**	**324**	*e*P	**P**	**11 23 47.3**	**+1.2**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,46nm,16.0s						
FIA0	**FINESS Array S**	**69.02**	**333**	*e*P	**P**	**11 23 49.4**	**-0.4**
FIA0	**FINESS Array S**	**69.02**	**333**	*e*P	**P**	**11 23 49.4**	**-0.4**
FINES	**FINESS Array B**	**69.02**	**333**	P	**P**	**11 23 49.4**	**-0.4**
	comp=Z,2.3nm,0.7s,baz=76,slow=8.0,SNR=8.3						
FINES				LR

comp=Z,2.1nm,0.8s
TPNV Topopah Spring 76.45 54 *e*P **P 11 24 35.8 +1.3**
comp=Z,2.3nm,0.6s
TPNV Topopah Spring 76.45 54 *e*P **P 11 24 35.8 +1.3**
TPNV pmax pmax
comp=Z,2.0nm,0.6s
PD31 Pinedale Array 76.99 46 *e*P **P 11 24 38.2 +0.6**
PDAR Pinedale Array 76.99 46 P **P 11 24 38.1 +0.6**
comp=Z,1.2nm,0.7s,baz=273,slow=1.7,SNR=16
PSUT Pine Spring 77.02 51 *e*P **P 11 24 38.5 +0.7**
comp=Z,5.4nm,1.5s
MPU Maple Canyon 77.48 49 *e*P **P 11 24 41.4 +1.1**
comp=Z,2.8nm,0.9s
MSU Marysvale 78.07 51 *e*P **P 11 24 44.7 +1.0**
MSU Marysvale 78.07 51 *e*P **P 11 24 44.7 +1.0**
LCMT Little Creek M 78.33 52 *e*P **P 11 24 45.5 +0.5**
comp=Z,3.6nm,1.1s
P17A Butcher Ranch, 78.35 49 *e*P **P 11 24 46.3 +1.2**
comp=Z,4.9nm,0.9s
MTPU Mount Pierson 78.36 51 *e*P **P 11 24 47.0 +1.6**
comp=Z,3.2nm,0.9s
ILGA Ilgaz 78.43 313 *e*P **P 11 24 45.3 -0.3**
comp=Z,5.7nm,1.0s
KWP Kalwaria Pacla 78.44 325 *e*P **P 11 24 44.4 -0.8**
comp=Z,101nm,0.6s
KWP Kalwaria Pacla 78.44 325 *e*P **P 11 24 44.4 -0.8**
KNB Kanab 78.59 52 *e*P **P 11 24 48.0 +1.5**
comp=Z,9.6nm,1.3s
KNB Kanab 78.59 52 *e*P **P 11 24 48.0 +1.5**
KNB pmax pmax
comp=Z,10.0nm,1.3s
BUR04 Bucovina Ar. S 78.66 322 *e*P **P 11 24 47.4 +0.8**
BR101 Keskin Array S 79.32 312 *e*P **P 11 24 50.5 +0.1**
BRTR Keskin Array B 79.32 312 P **P 11 24 50.5 +0.1**
comp=Z,0.5nm,0.6s,baz=79,slow=7.5,SNR=3.2
BRTR LR LR 12 04 03.5
comp=Z,17nm,18.2s,baz=114,slow=39
MLR Muntele Rosu 79.75 320 LR LR 12 03 37.6
comp=Z,15nm,18.4s,baz=47,slow=38
PV21 Cone Mtn., Par 80.00 49 *e*P **P 11 24 55.2 +1.0**
comp=Z,5.2nm,0.7s
PV14 Lion Creek, Pa 80.09 49 *e*P **P 11 24 56.0 +1.3**
comp=Z,5.2nm,0.7s
PV16 Nyswonger Mesa 80.19 49 *e*P **P 11 24 56.3 +1.0**
comp=Z,3.9nm,0.8s
PV12 Saucer Basin, 80.25 49 *e*P **P 11 24 57.6 +2.0**
comp=Z,20nm,1.7s
PV13 Radium Mtn., P 80.34 49 *e*P **P 11 24 57.3 +1.1**
comp=Z,5.2nm,0.8s
Y14A Wickenburg 80.38 55 *e*P **P 11 24 57.1 +1.0**
comp=Z,23nm,0.2s
CLL Collm 81.33 331 *e*P **P 11 25 01.0 +0.2**
CLL *e*sP **pP 11 25 10.0 -0.6**
CLL *i* 11 25 12.6
comp=Z,5.0nm,0.6s
CLL Collm 81.33 331 *e*P **P 11 25 01.0 +0.2**
CLL *i* 11 25 12.6
MMAI Mount Meron Ar 82.50 306 LR LR 12 04 05.8
comp=Z,37nm,20.0s,baz=110,slow=37
KHC Kasperske Hory 82.80 329 *e*P P 11 25 21.6 +13
KHC Kasperske Hory 82.80 329 *e*P P 11 25 21.6 +13
GEC2 GERESS Array S 82.97 329 *e*P **P 11 25 09.8 +0.2**
comp=Z,22nm,2.0s
GEC2 GERESS Array S 82.97 329 *e*P **P 11 25 09.8 +0.2**
GEC2 pmax pmax
comp=Z,22nm,2.0s
GERES GERESS Array B 82.97 329 P **P 11 25 10.2 +0.6**
comp=Z,0.5nm,0.2s,baz=53,slow=8.8,SNR=3.5
GEA0 GERESS Array S 82.98 329 *e*P **P 11 25 09.6 -0.1**
GEA0 *e*pP **sP 11 25 21.6 -1.4**
GRF Grafenberg Arr 83.31 331 P **P 11 25 11.1 -0.1**
GRF pmax pmax
comp=Z,38nm,0.7s
ANMO Albuquerque 83.88 50 P **P 11 25 17.0 +2.4**
comp=Z,2.0nm,0.9s,baz=295,slow=6.3,SNR=5.7
ANMO Albuquerque 83.88 50 *e*P **P 11 25 16.3 +1.7**
comp=Z,4.3nm,1.2s
ANMO Albuquerque 83.88 50 *e*P **P 11 25 16.3 +1.7**
ANMO pmax pmax
comp=Z,4.0nm,1.2s
PPT Papeete 84.02 117 LR LR 11 54 02.5
comp=Z,33nm,21.5s,baz=300,slow=30
LPIG La Paz 88.42 61 LR LR 12 02 05.2
comp=Z,21nm,18.3s,baz=224,slow=34
TX31 Lajitas Ar. Si 89.40 53 *e*P **P 11 25 42.4 +0.8**
TXAR Lajitas Array 89.40 53 P **P 11 25 42.4 +0.8**
comp=Z,0.7nm,0.6s,baz=314,slow=3.3,SNR=13
TXAR LR LR 12 00 00.6
comp=Z,24nm,21.4s,baz=0.0,slow=32
LPAZ La Paz 145.93 61 PKPbc **PKPbc 11 32 25.4 +0.2**
comp=Z,3.7nm,0.8s,baz=352,slow=4.8,SNR=14
LPAZ La Paz 145.93 61 *e*PKPdf **PKPab 11 32 25.8 +0.1**

KRSC 12 11:20:56.0±0.6, 55°.73N×162°.23E, h58km±16km, ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.59**	**35**	*i* P		Pn	11 21 09.3	+0.5
KBTR				*e*S		Sn	11 21 18.9	+0.9
ZLN	**Zelenaya**	**0.85**	**290**	*e*P		Pn	11 21 13.1	+1.0
ZLN				*e*S		Sn	11 21 25.3	+1.3
BZGR	**Bezymyannyi-Gr**	**0.89**	**284**	*e*P		Pn	11 21 13.4	+0.8
BZGR				*e*S		Sn	11 21 25.8	+1.0
CIRR	**Tsirk**	**0.92**	**296**	*e*P		Pn	11 21 13.9	+0.9
CIRR				*e*S		Sn	11 21 26.5	+1.0
LGNR	**Loginova**	**0.94**	**293**	*e*P		Pn	11 21 14.5	+1.1
LGNR				*e*S		Sn	11 21 27.7	+1.6
SMKR	**Semkarok**	**0.95**	**334**	*e*P		Pn	11 21 14.5	+1.1
SMKR				*e*S		Sn	11 21 28.0	+1.7
BZMR	**Bezymyannaya**	**1.00**	**283**	*e*P		Pn	11 21 15.0	+0.9
BZMR				*e*S		Sn	11 21 28.5	+1.1
BZWR	**Bezymyannyi-We**	**1.00**	**284**	*e*P		Pn	11 21 15.4	+1.3
BZWR				*e*S		Sn	11 21 29.2	+1.7
BDR	**Baidarnaya**	**1.02**	**326**	*e*P		Pn	11 21 15.6	+1.4
BDR				*e*S		Sn	11 21 29.2	+1.5
KRSR	**Krestovskiy**	**1.05**	**298**	*e*P		Pn	11 21 15.4	+0.7
KRSR				*e*S		Sn	11 21 29.1	+0.5
KLY	**Klyuchi**	**1.06**	**304**	*e*P		Pn	11 21 14.3	-0.4
KLY				*e*S		Sn	11 21 27.3	-1.3
KIRR	**Kirishev**	**1.09**	**283**	*e*P		Pn	11 21 16.5	+1.3
KIRR				*e*S		Sn	11 21 31.2	+1.7
SRKR	**Sorokina**	**1.10**	**328**	*e*P		Pn	11 21 16.5	+1.2
SRKR				*e*S		Sn	11 21 31.2	+1.5
KMNR	**Kamenistaya**	**1.12**	**272**	*i* P		Pn	11 21 17.8	+2.1
KMNR				*e*S		Sn	11 21 32.8	+2.5
KPT	**Kopyto**	**1.15**	**283**	*e*P		Pn	11 21 17.6	+1.5
KPT				*e*S		Sn	11 21 33.0	+2.0
TUMD	**Tumrok D**	**1.17**	**244**	*e*P		Pn	11 21 17.5	+1.4
TUMD				*e*S		Sn	11 21 32.7	+1.6
MKZ	**Mys Kozlova**	**1.21**	**194**	*e*P		Pn	11 21 17.8	+1.1
MKZ				*e*S		Sn	11 21 33.6	+1.5
KZV	**Kizimen**	**1.26**	**242**	*i* P		Pn	11 21 19.3	+1.7
KZV				*e*S		Sn	11 21 36.1	+2.5
TUMR	**Tumrok**	**1.26**	**250**	*i* P		Pn	11 21 19.8	+2.3
TUMR				*e*S		Sn	11 21 36.9	+3.3
KOZ	**Kozyrevsk**	**1.36**	**285**	*e*P		Pn	11 21 21.4	+2.6
KOZ				*e*S		Sn	11 21 39.7	+3.8
ESO	**Esso**	**2.00**	**277**	*e*P		Pn	11 21 29.3	+1.9
ESO				*e*S		Sn	11 21 53.4	+2.1
BKI	**Bering**	**2.20**	**102**	*e*P		Pn	11 21 33.2	+3.2
BKI				*e*S		Sn	11 21 59.0	+3.0
SPN	**Mys Shipunski**	**2.93**	**207**	*e*P		Pn	11 21 41.5	+1.4
SPN				*e*S		Sn	11 22 14.6	+0.5
NLC	**Nalytchevo**	**3.06**	**214**	*e*P		Pn	11 21 44.4	+2.5
SDLR	**Sedlovina**	**3.13**	**220**	*i* P		Pn	11 21 47.8	+4.8
KRX	**Arik**	**3.16**	**223**	*e*P		Pn	11 21 46.5	+3.2
KRER	**Koryakskii**	**3.16**	**221**	*e*P		Pn	11 21 46.9	+3.5
AVH	**Avacha**	**3.20**	**221**	*e*P		Pn	11 21 47.3	+3.5
UGLR	**Uglovaya**	**3.21**	**220**	*e*P		Pn	11 21 47.1	+3.1
GNL	**Ganaly**	**3.21**	**232**	*e*P		Pn	11 21 46.6	+2.6
KOK	**Koryaka**	**3.21**	**222**	*e*P		Pn	11 21 46.6	+2.5
DALK	**Dalny**	**3.38**	**218**	*e*P		Pn	11 21 49.1	+2.9
DALK				*e*S		Sn	11 22 27.4	+2.4
PET	**Petropavlovsk**	**3.42**	**219**	*e*P		Pn	11 21 50.4	+3.6
KDTR	**Khodutka, Kamc**	**4.63**	**214**	*e*P		Pn	11 22 07.8	+4.4

ISCJB **12** *11:22:00.6±1.4, 37°.20N±0°.05×142°.33E±0°.06, h15km±9km, mb3.6/10, Error ellipse: s-maj=8.7km s-min=7.4km az=36.1*
NIED **12** *11:22:00, 37°.20N×142°.20E, h23km, Mw4.0 Best double*

couple: M₀1.20000×10¹⁵ NP1:φ=241.00000°, δ11.00000°, λ167.00000°. NP2:φ=343.00000°, δ88.00000°, λ79.00000°.
IDC **12** *11:22:00.3±0.8, 37°.20N×142°.26E, h0km, mb3.6/10, mb1 3.8/15, mb1mx3.7/65, mbtmp3.7/15, ML3.4/4, MS3.2/5, Ms1 3.2/5, ms1mx2.7/66, Error ellipse: s-maj=19.1km s-min=16.0km az=133.0*
JMA **12** *11:22:03.1±0.2, 37°.24N×142°.21E, h26km±4km, M3.9*
ISC 12 11:22:01.0±2.1, 37°.21N±0°.05×142°.24E±0°.06, h7km±12km, n38, σ1°39/38, mb3.6/10, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.10**	**279**	P		**Pb**	**11 22 22.3**	**0.0**
JFK				*e*S		**Sg**	**11 22 36.1**	**-0.2**
ONAJ	**Iwakimizuishiy**	**1.15**	**265**	P		**Pg**	**11 22 23.2**	**+0.1**
JMM	**Marumori**	**1.32**	**300**	P		**Pn**	**11 22 25.5**	**-0.4**
JMM				*e*S		**Sb**	**11 22 41.9**	**-1.4**
JIO	**Ouri**	**1.43**	**331**	P		**Pn**	**11 22 27.0**	**-0.4**
JIO				*e*S		**Sb**	**11 22 44.4**	**-2.0**
JFT	**Otama**	**1.55**	**282**	P		**Pb**	**11 22 29.8**	**-0.1**
JFT				*e*S		**Sn**	**11 22 48.8**	**-0.5**
JOU	**Okura**	**1.70**	**313**	P		**Pb**	**11 22 32.0**	**-0.6**
JOU				*e*S		**Sn**	**11 22 53.1**	**-0.1**
JMK	**Ichinoseki**	**1.92**	**336**	P		**Pn**	**11 22 35.0**	**+0.9**
JYS	**Shiratake**	**2.00**	**301**	P		**Pb**	**11 22 36.6**	**-1.1**
JFY	**Yanaizu**	**2.03**	**276**	P		**Pb**	**11 22 37.5**	**-0.7**
JYK	**Kaneyama**	**2.26**	**320**	P		**Pn**	**11 22 39.7**	**+0.9**
JAG	**Ashikaga**	**2.37**	**252**	P		**Pn**	**11 22 41.1**	**+0.9**
JOM	**Ohasama**	**2.38**	**342**	P		**Pn**	**11 22 42.0**	**+1.5**
MJAR	**Matsushiro Arr**	**3.30**	**260**	Pn		**Pn**	**11 22 54.9**	**+1.8**
5.3nm,0.3s,baz=164,slow=22,SNR=53								
MJAR					Sn	**Sn**	**11 23 35.2**	**+2.7**
3.8nm,0.3s,baz=81,slow=17,SNR=5.3								
MJAR					LR	LR	11 24 27.4	
comp=Z,618nm,18.2s,baz=80,slow=45								
MAT	**Matsushiro**	**3.30**	**260**	P		**Pn**	**11 22 55.5**	**+2.4**
MAT				*e*S		**Sb**	**11 23 37.6**	**-2.6**
JHJ	**Hachijo jima 2**	**4.54**	**207**	Pn		**Pn**	**11 23 09.5**	**-0.7**
12nm,0.3s,baz=239,slow=19,SNR=4.3								
JHJ					Sn	**Sn**	**11 24 00.2**	**-3.1**
22nm,0.3s,baz=233,slow=20,SNR=2.7								
ASAJ	**Asahikawa**	**6.91**	**2**	Pn		**Pn**	**11 23 42.9**	**+0.2**
0.7nm,0.3s,baz=205,slow=17,SNR=8.5								
ASAJ					Sn	**Sn**	**11 24 57.6**	**-3.8**
0.4nm,0.3s,baz=288,slow=20,SNR=2.1								
JNU	**Nakatsue**	**10.15**	**250**	Pn		**Pn**	**11 24 26.5**	**-0.7**
baz=61,slow=16,SNR=1.6								
JNU					LR	LR	11 28 36.2	
comp=Z,129nm,18.4s,baz=114,slow=39								
KSRS	**Korea Array**	**11.40**	**276**	Pn		**Pn**	**11 24 44.8**	**+0.6**
0.1nm,0.3s,baz=83,slow=14,SNR=2.9								
KSRS					LR	LR	11 29 01.2	
comp=Z,136nm,18.8s,baz=71,slow=37								
KLR	**Kul'dur**	**14.23**	**331**	LR		LR	11 30 07.9	
comp=Z,5.0nm,19.1s,baz=159,slow=34								
JOW	**Kunigami**	**15.70**	**233**	LR		LR	11 31 48.2	
comp=Z,68nm,20.9s,baz=77,slow=37								
PETK	**Petropavlovsk-**	**19.21**	**29**	LR		LR	11 34 24.4	
comp=Z,36nm,19.8s,baz=234,slow=39								
SEY	**Seymchan**	**26.50**	**10**	P		**P**	**11 27 39.5**	**+0.8**
0.9nm,0.7s,baz=185,slow=9.7,SNR=3.9								
H11N2	**WAKE ISLAND Hy**	**27.68**	**122**	T		T	11 56 42.9	
baz=315,slow=75,SNR=70								
H11N1	**WAKE ISLAND Hy**	**27.68**	**122**	T		T	11 56 43.2	
baz=315,slow=75,SNR=46								
H11N3	**WAKE ISLAND Hy**	**27.69**	**122**	T		T	11 56 44.4	
baz=315,slow=75,SNR=52								
SONM	**Songino Array**	**28.24**	**304**	P		**P**	**11 27 55.1**	**+0.5**
0.6nm,0.4s,baz=122,slow=7.1,SNR=2.5								
H11S1	**WAKE ISLAND Hy**	**28.41**	**124**	T		T	11 57 37.0	
baz=317,slow=76,SNR=49								
H11S3	**WAKE ISLAND Hy**	**28.41**	**124**	T		T	11 57 38.7	
baz=317,slow=76,SNR=50								
H11S2	**WAKE ISLAND Hy**	**28.42**	**124**	T		T	11 57 35.5	
baz=317,slow=76,SNR=48								
ZALV	**Zalesovo Beam**	**42.29**	**312**	P		**P**	**11 29 54.5**	**-0.4**
0.2nm,0.3s,baz=110,slow=12,SNR=2.7								
MKAR	**Makanchi Array**	**44.59**	**302**	P		**P**	**11 30 14.1**	**+0.4**
0.5nm,0.7s,baz=91,slow=6.3,SNR=4.5								
KURBB	**Kurchatov Arra**	**46.41**	**308**	P		**P**	**11 30 28.7**	**+0.6**
1.8nm,0.7s,baz=84,slow=8.3,SNR=10								
ILAR	**Eielson Array**	**49.00**	**32**	P		**P**	**11 30 48.0**	**+0.1**
0.9nm,0.8s,baz=270,slow=6.5,SNR=14								
WRA	**Warramunga Arr**	**57.33**	**189**	P		**P**	**11 31 49.5**	**-0.2**
0.4nm,0.7s,baz=7.8,slow=7.7,SNR=5.6								
ASAR	**Alice Springs**	**61.05**	**189**	P		**P**	**11 32 16.4**	**+0.9**
0.1nm,0.4s,baz=22,slow=6.0,SNR=3.2								
NVAR	**Mina Array Bea**	**74.36**	**54**	P		**P**	**11 33 40.5**	**+0.8**
0.4nm,0.7s,baz=294,slow=6.6,SNR=4.9								
TXAR	**Lajitas Array**	**89.49**	**53**	P		**P**	**11 34 59.5**	**+0.3**
0.3nm,0.9s,baz=304,slow=8.9,SNR=3.5								
LPAZ	**La Paz**	**146.04**	**60**	PKPbc		**PKPdf**	**11 41 42.0**	**0.0**
1.2nm,0.8s,baz=10,slow=4.2,SNR=4.8								

ISCJB **12** *11:43:20.5±0.6, 34°.62N±0°.02×33°.01E±0°.04, h8km±4km, Error ellipse: s-maj=6.1km s-min=3.8km az=158.5*
CSEM **12** *11:43:21.1±0.6, 34°.66N×32°.99E, h8km, ML3.3, Error ellipse: s-maj=12.0km s-min=5.7km az=171.0*
GII **12** *11:43:21.0±0.3, 34°.67N×32°.93E, h10km*
NIC **12** *11:43:21.2±0.1, 34°.66N×32°.99E, h12km, ML3.3*
ISK **12** *11:43:25.3, 35°.01N×33°.09E, h6km, ML2.6/11*
DDA **12** *11:43:28.4, 35°.22N×33°.06E, h23km, Ml2.8*
ISC 12 11:43:21.6±0.9, 34°.67N±0°.03×33°.01E±0°.03, h12km±6km, n51, σ0°88/70, Cyprus region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SZAC	**Souni**	**0.13**	**309**	P		**Pg**	**11 43 24.9**	**-0.1**
baz=137								
SZAC				S		**Sg**	**11 43 27.8**	**+0.4**
SZAC	**Souni**	**0.13**	**309**	P		**Pg**	**11 43 24.9**	**-0.1**
SZAC				S		**Sg**	**11 43 27.8**	**+0.4**
CSS	**Mathiatis**	**0.39**	**43**	PG		**Pg**	**11 43 29.8**	**+0.3**
CSS	**Mathiatis**	**0.39**	**43**	P		**Pg**	**11 43 29.8**	**+0.3**
baz=222								
CSS				S		**Sb**	**11 43 36.0**	**-0.6**
CSS	**Mathiatis**	**0.39**	**43**	Pg		**Pg**	**11 43 29.6**	**+0.1**
CSS	**Mathiatis**	**0.39**	**43**	P		**Pg**	**11 43 29.8**	**+0.3**
CSS				S		**Sb**	**11 43 36.0**	**-0.6**
LEF	**Lefka**	**0.46**	**348**	PG		**Pg**	**11 43 30.4**	**-0.2**
LEF	**Lefka**	**0.46**	**348**	P		**Pg**	**11 43 29.8**	**-0.8**
LEF	**Lefka**	**0.46**	**348**	*e*Pg		**Pg**	**11 43 30.4**	**-0.2**
LEF				S		**Sb**	**11 43 38.5**	**+0.2**
AKIN	**Ak¨–nc¨–lar- K**	**0.51**	**48**	PG		**Pb**	**11 43 32.1**	**-0.4**
AKIN				SG		**Sg**	**11 43 37.3**	**-1.1**
AKIN	**Ak¨–nc¨–lar- K**	**0.51**	**48**	*e*Pg		**Pb**	**11 43 32.1**	**-0.4**
AKIN				*e*Sg		**Sg**	**11 43 37.3**	**-1.1**
MAMC	**Mammari**	**0.53**	**19**	P		**Pg**	**11 43 31.8**	**-0.2**
baz=199								
MAMC	**Mammari**	**0.53**	**19**	P		**Pg**	**11 43 31.8**	**-0.2**
PPCY	**Paphos**	**0.58**	**291**	P		**Pg**	**11 43 32.5**	**-0.5**
baz=112								
PPCY	**Paphos**	**0.58**	**291**	P		**Pg**	**11 43 32.5**	**-0.5**
AKDN	**Akdeniz- K¨–br**	**0.62**	**357**	PG		**Pg**	**11 43 31.9**	**-1.9**
AKDN	**Akdeniz- K¨–br**	**0.62**	**357**	*e*Pg		**Pg**	**11 43 31.9**	**-1.9**
AKMC	**Akamas**	**0.66**	**303**	P		**Pg**	**11 43 34.0**	**-0.5**
baz=123								
AKMC	**Akamas**	**0.66**	**303**	P		**Pg**	**11 43 34.0**	**-0.5**
EREN	**Erenkoy**	**1.28**	**48**	PG		**Pn**	**11 43 45.3**	**0.0**
EREN	**Erenkoy**	**1.28**	**48**	*e*Pg		**Pn**	**11 43 45.3**	**0.0**
AKKU	**Akkuyu-Mersin**	**1.55**	**17**	PN		**Pn**	**11 43 48.6**	**-0.4**
AKKU	**Akkuyu-Mersin**	**1.55**	**17**	*e*Pn		**Pn**	**11 43 48.6**	**-0.4**
GULN	**MERSIN_Gulnar**	**1.57**	**16**	*i* P		**Pn**	**11 43 47.8**	**-1.5**
GULN				*i* S		**Sb**	**11 44 10.4**	**0.0**
GULN	**MERSIN_Gulnar**	**1.57**	**16**	P		**Pn**	**11 43 47.8**	**-1.5**
GULN				S		**Sb**	**11 44 10.4**	**0.0**
GAZI	**Gazipasa**	**1.66**	**340**	*i* P		**Pn**	**11 43 50.1**	**-0.4**
GAZI				*i* S		**Sn**	**11 44 12.3**	**+0.5**
GAZI	**Gazipasa**	**1.66**	**340**	P		**Pn**	**11 43 50.1**	**-0.4**
GAZI				S		**Sn**	**11 44 12.3**	**+0.5**
IKL	**Isikli**	**1.66**	**19**	PN		**Pn**	**11 43 50.6**	**+0.1**
IKL	**Isikli**	**1.66**	**19**	*e*Pn		**Pn**	**11 43 50.6**	**+0.1**
BERE	**Bereket-Mersin**	**1.68**	**6**	PN		**Pn**	**11 43 51.1**	**+0.1**
BERE	**Bereket-Mersin**	**1.68**	**6**	*e*Pn		**Pn**	**11 43 51.1**	**+0.1**
TEVE	**Tevekalti-Mers**	**1.79**	**11**	PN		**Pn**	**11 43 52.7**	**+0.2**
TEVE	**Tevekalti-Mers**	**1.79**	**11**	*e*Pn		**Pn**	**11 43 52.7**	**+0.2**
KEBE	**Keben-Mersin**	**1.86**	**18**	PN		**Pn**	**11 43 53.9**	**+0.5**
KEBE	**Keben-Mersin**	**1.86**	**18**	*e*Pn		**Pn**	**11 43 53.9**	**+0.5**
ERMK	**Ermenek**	**1.97**	**358**	*i* P		**Pn**	**11 43 55.9**	**+0.9**
ERMK	**Ermenek**	**1.97**	**358**	P		**Pn**	**11 43 55.9**	**+0.9**
KIZK	**Mersin**	**2.03**	**27**	PN		**Pn**	**11 43 56.3**	**+0.7**
KEPZ	**Antalya-Kepez**	**2.50**	**333**	*i* P		**Pn**	**11 44 02.0**	**-0.1**
KEPZ				*i* S		**Sn**	**11 44 34.7**	**+2.1**
KEPZ	**Antalya-Kepez**	**2.50**	**333**	P		**Pn**	**11 44 02.0**	**-0.1**
KEPZ				S		**Sn**	**11 44 34.7**	**+2.1**
KERG	**Konya-Eregli**	**2.88**	**18**	*i* P		**Pn**	**11 44 10.1**	**+2.6**
KERG				*i* S		**Sb**	**11 44 47.5**	**-0.8**
KERG	**Konya-Eregli**	**2.88**	**18**	P		**Pn**	**11 44 10.1**	**+2.6**
KERG				S		**Sb**	**11 44 47.5**	**-0.8**
GULE	**Gulek**	**2.97**	**28**	*i* P		**Pn**	**11 44 09.7**	**+0.8**
GULE	**Gulek**	**2.97**	**28**	P		**Pn**	**11 44 09.6**	**+0.8**
MMLI	**Mount Malkishu**	**3.00**	**137**	Pn		**Pn**	**11 44 08.6**	**-0.5**
MMLI				Sn		**Sn**	**11 44 46.1**	**+1.1**
HMDT	**Nahal Hemdat**	**3.20**	**138**	Pn		**Pn**	**11 44 12.2**	**+0.4**
HMDT				Sn		**Sn**	**11 44 50.9**	**+1.1**
DSI	**Dead Sea**	**3.68**	**147**	Pn		**Pn**	**11 44 18.6**	**+0.3**
DSI				Sn		**Sn**	**11 45 02.6**	**+1.0**
PRNI	**Paran**	**4.63**	**158**	Pn		**Pn**	**11 44 31.1**	**-0.3**
PRNI				Sn		**Sn**	**11 45 25.2**	**+0.2**
HRFI	**Mount Harif**	**4.93**	**159**	Pn		**Pn**	**11 44 35.7**	**+0.1**
MBRI	**Mt Berech**	**5.12**	**161**	Pn		**Pn**	**11 44 38.6**	**+0.3**
EIL	**Elat**	**5.25**	**161**	Pn		**Pn**	**11 44 39.6**	**-0.4**

JMA 12 12:01:23.9, 35°.69N×138°.17E, h19km±1km, M2.6, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JNT	**Takato**	**0.19**	**352**	P		Pg	12 01 28.5	-0.4
JNT				S		Sg	12 01 31.8	-0.5
JYN	**Shimob**	**0.36**	**122**	P		Pg	12 01 31.3	-0.3
JYN				S		Sb	12 01 37.0	-0.2
JNY	**Yasuok**	**0.42**	**217**	P		Pg	12 01 32.0	-0.6
JNY				S		Sg	12 01 37.9	-0.5
SHZ3	**Shizuoka 3**	**0.62**	**177**	P		Pb	12 01 35.3	-0.8
MAT	**Matsushiro**	**0.85**	**2**	P		Pb	12 01 39.2	-0.9
MAT				S		Sb	12 01 50.9	-0.3

ISCJB **12** *12:22:49.6±0.4, 40°.80N±0°.02×30°.39E±0°.03, h8km±3km, Error ellipse: s-maj=4.1km s-min=3.7km az=27.9*
CSEM **12** *12:22:49.7±0.1, 40°.80N×30°.40E, h10km, ML2.5, Error ellipse: s-maj=2.0km s-min=1.5km az=27.0*
DDA **12** *12:22:49.3, 40°.78N×30°.40E, h7km, Ml2.8*
ISK **12** *12:22:49.0, 40°.82N×30°.41E, h7km, ML2.5/17*
ISC 12 12:22:49.7±0.8, 40°.80N±0°.02×30°.39E±0°.02, h11km±5km, n55, σ0°33/75, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SAUV	**Serdivan-Sakar**	**0.07**	**222**	PG		**Pg**	**12 22 52.1**	**0.0**
SAUV				SG		**Sg**	**12 22 53.5**	**-0.4**
SAUV	**Serdivan-Sakar**	**0.07**	**222**	*i* Pg		**Pg**	**12 22 52.1**	**0.0**
SAUV				*e*Sg		**Sg**	**12 22 53.5**	**-0.4**
SPNC	**Sapanca-Adapaz**	**0.13**	**210**	PG		**Pg**	**12 22 52.9**	**+0.1**
SPNC				SG		**Sg**	**12 22 55.2**	**+0.2**
SPNC	**Sapanca-Adapaz**	**0.13**	**210**	*e*Pg		**Pg**	**12 22 52.9**	**+0.1**
SPNC				*e*Sg		**Sg**	**12 22 55.2**	**+0.2**
GEYV	**SAKARYA_Geyve**	**0.32**	**193**	*i* P		**Pg**	**12 22 55.9**	**-0.2**
GEYV				*i* S		**Sg**	**12 23 00.5**	**+0.1**
GEYV	**SAKARYA_Geyve**	**0.32**	**193**	P		**Pg**	**12 22 55.9**	**-0.2**
GEYV				S		**Sg**	**12 23 00.5**	**+0.1**
KAND	**Kocaeli-Kandir**	**0.34**	**333**	*i* P		**Pb**	**12 22 57.2**	**-0.5**
KAND				*i* S		**Sb**	**12 23 02.4**	**-0.7**
KAND	**Kocaeli-Kandir**	**0.34**	**333**	P		**Pb**	**12 22 57.2**	**-0.5**
KAND				S		**Sb**	**12 23 02.4**	**-0.7**
SAHE	**Sakarya_HENDEK**	**0.35**	**81**	*i* P		**Pg**	**12 22 56.6**	**-0.2**
SAHE				*i* S		**Sg**	**12 23 02.1**	**+0.6**
SAHE	**Sakarya_HENDEK**	**0.35**	**81**	P		**Pg**	**12 22 56.6**	**-0.2**
SAHE				S		**Sg**	**12 23 02.1**	**+0.6**
GULT	**Gulveren**	**0.37**	**166**	PG		**Pg**	**12 22 57.1**	**-0.1**
GULT	**Gulveren**	**0.37**	**166**	*e*Pg		**Pg**	**12 22 57.1**	**-0.1**
BTAS	**Taskesti**	**0.51**	**116**	*i* P		**Pg**	**12 22 59.7**	**0.0**
BTAS				*i* S		**Sg**	**12 23 06.5**	**0.0**
BTAS	**Taskesti**	**0.51**	**116**	P		**Pg**	**12 22 59.7**	**0.0**
BTAS				S		**Sg**	**12 23 06.5**	**0.0**
HRT	**Hereke**	**0.55**	**273**	PG		**Pg**	**12 23 00.5**	**+0.1**
HRT	**Hereke**	**0.55**	**273**	*e*Pg		**Pg**	**12 23

URLA	**Izmir**	**0.62**	**349**	*e*Pg	**Pg**	**12 33 36.7**	**-1.4**
URLA				S	**Sg**	**12 33 45.5**	**-0.8**
BLCB	**Balcova**	**0.67**	**20**	PG	**Pg**	**12 33 38.6**	**-0.5**
BLCB	**Balcova**	**0.67**	**20**	*e*Pg	**Pg**	**12 33 38.6**	**-0.5**
YKAV	**Yalikavak-Bodr**	**0.76**	**146**	PG	**Pg**	**12 33 40.2**	**-0.5**
YKAV				SG	**Sb**	**12 33 52.2**	**+1.2**
YKAV	**Yalikavak-Bodr**	**0.76**	**146**	*e*Pg	**Pg**	**12 33 40.2**	**-0.5**
YKAV				*e*Sg	**Sb**	**12 33 52.2**	**+1.2**
BODT	**Bodrum**	**0.82**	**147**	PG	**Pg**	**12 33 41.7**	**-0.2**
BODT				SG	**Sb**	**12 33 53.8**	**+0.9**
BODT	**Bodrum**	**0.82**	**147**	*e*Pg	**Pg**	**12 33 41.7**	**-0.2**
BODT				*e*Sg	**Sb**	**12 33 53.8**	**+0.9**
CHOS	**Chios island**	**0.84**	**319**	PG	**Pg**	**12 33 42.5**	**+0.3**
CHOS				SG	**Sb**	**12 33 54.1**	**+0.7**
CHOS	**Chios island**	**0.84**	**319**	P	**Pg**	**12 33 41.8**	**-0.5**
CHOS				S	**Sg**	**12 33 53.6**	**+0.4**
CHOS				AML	AML	12 33 55.1	
	comp=E,499μm,0.3s						
CHOS				AML	AML	12 33 56.7	
	comp=N,289μm,0.4s						
CHOS	**Chios island**	**0.84**	**319**	P	**Pg**	**12 33 41.9**	**-0.3**
CHOS	**Chios island**	**0.84**	**319**	*e*Pg	**Pg**	**12 33 42.5**	**+0.3**
CHOS				S	**Sg**	**12 33 53.5**	**+0.2**
CHOS				*e*Sg	**Sb**	**12 33 54.1**	**+0.7**
BDRM	**Kayabasi**	**0.88**	**141**	*i* P	**Pb**	**12 33 43.5**	**+0.5**
BDRM				*i* S	**Sn**	**12 33 56.7**	**+0.2**
BDRM	**Kayabasi**	**0.88**	**141**	P	**Pb**	**12 33 43.5**	**+0.5**
BDRM				S	**Sn**	**12 33 56.7**	**+0.2**
AYDN	**Tasoluk**	**0.90**	**95**	*i* P	**Pg**	**12 33 43.0**	**-0.4**
AYDN				*i* S	**Sg**	**12 33 54.7**	**-0.5**
AYDN	**Tasoluk**	**0.90**	**95**	P	**Pg**	**12 33 43.0**	**-0.4**
AYDN				S	**Sg**	**12 33 54.7**	**-0.5**
AYDB	**Zeytinkoy-Aydi**	**0.93**	**78**	PG	**Pg**	**12 33 43.3**	**-0.6**
AYDB	**Zeytinkoy-Aydi**	**0.93**	**78**	*e*Pg	**Pg**	**12 33 43.3**	**-0.6**
MLSB	**Milas**	**0.94**	**119**	PG	**Pb**	**12 33 44.3**	**+0.4**
MLSB	**Milas**	**0.94**	**119**	*e*Pg	**Pb**	**12 33 44.3**	**+0.4**
APE	**Apeiranthos**	**1.19**	**235**	PN	**Pg**	**12 33 48.5**	**-0.3**
APE	**Apeiranthos**	**1.19**	**235**	P	**Pg**	**12 33 48.5**	**-0.3**
APE				S	**Sg**	**12 34 02.8**	**-1.5**
APE				AML	AML	12 34 07.0	
	comp=N,149μm,0.2s						
APE				AML	AML	12 34 09.8	
	comp=E,127μm,0.3s						
APE	**Apeiranthos**	**1.19**	**235**	P	**Pg**	**12 33 48.3**	**-0.5**
APE				S	**Sg**	**12 34 03.4**	**-0.9**
DAT	**Datca**	**1.22**	**147**	PN	**Pb**	**12 33 48.7**	**-0.1**
DAT	**Datca**	**1.22**	**147**	*i* P	**Pb**	**12 33 48.0**	**-0.8**
DAT	**Datca**	**1.22**	**147**	P	**Pb**	**12 33 48.0**	**-0.8**
DAT	**Datca**	**1.22**	**147**	*e*Pn	**Pb**	**12 33 48.7**	**-0.1**
YER	**Yerkesik**	**1.37**	**116**	PN	**Pb**	**12 33 51.7**	**+0.4**
YER	**Yerkesik**	**1.37**	**116**	*e*Pn	**Pb**	**12 33 51.7**	**+0.4**
AKHS	**Akhisar**	**1.40**	**36**	*i* P	**Pg**	**12 33 53.1**	**+0.2**
AKHS				*i* S	**Sb**	**12 34 08.7**	**-1.0**
AKHS	**Akhisar**	**1.40**	**36**	P	**Pg**	**12 33 53.1**	**+0.2**
AKHS				S	**Sb**	**12 34 08.7**	**-1.0**
PRK	**Paraskevi**	**1.54**	**346**	P	**Pg**	**12 33 56.4**	**+0.9**
PRK				S	**Sb**	**12 34 14.9**	**+1.4**
PRK				AML	AML	12 34 17.1	
	comp=N,243μm,0.5s						
PRK				AML	AML	12 34 23.9	
	comp=E,271μm,0.6s						
PRK	**Paraskevi**	**1.54**	**346**	P	**Pg**	**12 33 55.8**	**+0.3**
PRK				S	**Sg**	**12 34 15.6**	**+0.1**
MANT	**Manisa**	**1.61**	**62**	*i* P	**Pg**	**12 33 57.5**	**+0.6**
MANT	**Manisa**	**1.61**	**62**	P	**Pg**	**12 33 57.5**	**+0.6**
SIGR	**SIGRI**	**1.62**	**335**	PN	**Pn**	**12 33 55.4**	**+1.4**
SIGR	**SIGRI**	**1.62**	**335**	P	**Pg**	**12 33 58.1**	**+1.1**
SIGR				S	**Sg**	**12 34 18.4**	**+0.4**
SIGR	**SIGRI**	**1.62**	**335**	*e*Pn	**Pn**	**12 33 55.4**	**+1.4**
SIGR	**SIGRI**	**1.62**	**335**	P	**Pg**	**12 33 57.3**	**+0.3**
SIGR				S	**Sg**	**12 34 18.5**	**+0.4**
KULA	**Kula-Manisa**	**1.69**	**63**	PN	**Pn**	**12 33 55.9**	**+0.8**
KULA	**Kula-Manisa**	**1.69**	**63**	*e*Pn	**Pn**	**12 33 55.9**	**+0.8**
TURN	**Turunc**	**1.72**	**120**	PN	**Pn**	**12 33 54.9**	**-0.5**
TURN	**Turunc**	**1.72**	**120**	*i* P	**Pn**	**12 33 54.2**	**-1.2**
TURN	**Turunc**	**1.72**	**120**	P	**Pn**	**12 33 54.2**	**-1.2**
TURN	**Turunc**	**1.72**	**120**	*e*Pn	**Pn**	**12 33 54.9**	**-0.5**
STEP	**BALIKESIR_Sava**	**1.79**	**25**	*i* P	**Pn**	**12 33 52.6**	**-3.8**
BAYC	**CANAKKALE_Bayr**	**1.99**	**356**	*i* P	**Pn**	**12 33 58.3**	**-0.9**
BAYC	**CANAKKALE_Bayr**	**1.99**	**356**	P	**Pn**	**12 33 58.3**	**-0.9**

*ISCJB **12** 12:35:19.3±0.3,58.°40N±0.°02×17.°28E±0.°04, h0km, Error ellipse: s-maj=3.1km s-min=2.7km az=40.7*
*CSEM **12** 12:35:20.3±0.1,58.°40N×17.°24E, h2km, ML2.5, Error ellipse: s-maj=2.7km s-min=2.2km az=116.0, Mining explosion.*
*UPP **12** 12:35:20.1±0.5,58.°40N×17.°29E, h1km±2km, ML2.5*
*NAO **12** 12:35:21.1±1.7,58.°47N×17.°22E, ML2.2*
*BER **12** 12:35:22.6±4.5,58.°51N×17.°31E, h0km±22km, ML2.2(NAO)*
*IDC **12** 12:35:24.8±2.0,58.°77N×17.°30E, h0km, mb1 3.0/4, mb1mx2.8/67, mbtmp2.9/4, ML2.6/4, Error ellipse: s-maj=23.3km s-min=7.2km az=7.0*

ISC 12 12:35:19.2±0.7, 58.°40N±0.°02×17.°28E±0.°02, h0km, n69, σ1°11/98, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VIKU	**Vikbolandet**	**0.32**	**288**	P	**Pg**	**12 35 26.3**	**+1.1**
VIKU				S	**Sg**	**12 35 30.8**	**+1.4**
VIKU	**Vikbolandet**	**0.32**	**288**	P	**Pg**	**12 35 26.3**	**+1.1**
VIKU				S	**Sg**	**12 35 30.8**	**+1.4**
NYNU	**Nynaeshamn**	**0.71**	**32**	P	**Pg**	**12 35 33.2**	**+0.4**
NYNU	**Nynaeshamn**	**0.71**	**32**	P	**Pg**	**12 35 33.2**	**+0.4**
VSTU	**Vaestervik**	**0.84**	**208**	P	**Pg**	**12 35 36.0**	**+0.7**
VSTU				S	**Sg**	**12 35 47.3**	**+1.1**
VSTU	**Vaestervik**	**0.84**	**208**	P	**Pg**	**12 35 36.0**	**+0.7**
VSTU				S	**Sg**	**12 35 47.3**	**+1.1**
ESKU	**Eskilstuna**	**0.95**	**331**	P	**Pg**	**12 35 38.0**	**+0.7**
ESKU	**Eskilstuna**	**0.95**	**331**	P	**Pg**	**12 35 38.0**	**+0.7**
LNKU	**Linkoeping**	**0.95**	**260**	P	**Pg**	**12 35 37.9**	**+0.5**
LNKU				S	**Sb**	**12 35 51.2**	**-0.5**
LNKU	**Linkoeping**	**0.95**	**260**	P	**Pg**	**12 35 37.9**	**+0.5**
LNKU				S	**Sb**	**12 35 51.2**	**-0.5**
GOTU	**Gotland**	**1.00**	**136**	P	**Pg**	**12 35 38.4**	**+0.2**
GOTU				S	**Sg**	**12 35 51.1**	**+0.1**
GOTU	**Gotland**	**1.00**	**136**	P	**Pg**	**12 35 38.4**	**+0.2**
GOTU				S	**Sg**	**12 35 51.2**	**+0.1**
ASPU	**Aespoe**	**1.05**	**200**	P	**Pg**	**12 35 39.9**	**+0.6**
ASPU	**Aespoe**	**1.05**	**200**	P	**Pg**	**12 35 39.9**	**+0.6**
BYXU	**Byxelkrok**	**1.13**	**187**	P	**Pg**	**12 35 41.0**	**+0.3**
BYXU	**Byxelkrok**	**1.13**	**187**	P	**Pg**	**12 35 41.0**	**+0.3**
EKSU	**Eksjoe**	**1.34**	**232**	P	**Pg**	**12 35 44.9**	**0.0**
EKSU	**Eksjoe**	**1.34**	**232**	P	**Pg**	**12 35 44.9**	**0.0**
OSKU	**Oskarshamn**	**1.37**	**208**	P	**Pg**	**12 35 45.5**	**+0.2**
OSKU				S	**Sn**	**12 36 04.3**	**+0.1**
OSKU	**Oskarshamn**	**1.37**	**208**	P	**Pg**	**12 35 45.5**	**+0.2**
OSKU				S	**Sn**	**12 36 04.3**	**+0.1**
ASKU	**Askersund**	**1.37**	**292**	P	**Pg**	**12 35 45.5**	**+0.1**
ASKU				S	**Sg**	**12 36 03.5**	**+0.3**
ASKU	**Askersund**	**1.37**	**292**	P	**Pg**	**12 35 45.5**	**+0.1**
ASKU				S	**Sg**	**12 36 03.5**	**+0.3**
BACU	**Backbrunna**	**1.46**	**357**	P	**Pg**	**12 35 47.0**	**0.0**
BACU				S	**Sg**	**12 36 05.7**	**-0.2**
BACU	**Backbrunna**	**1.46**	**357**	P	**Pg**	**12 35 47.0**	**0.0**
BACU				S	**Sg**	**12 36 05.7**	**-0.2**
UPP	**Uppsala**	**1.47**	**7**	P	**Pb**	**12 35 47.4**	**+0.1**
UPP	**Uppsala**	**1.47**	**7**	P	**Pb**	**12 35 47.4**	**+0.1**
FIBU	**Brunna**	**1.50**	**1**	P	**Pb**	**12 35 47.8**	**-0.1**
FIBU				S	**Sg**	**12 36 07.2**	**-0.2**
FIBU	**Brunna**	**1.50**	**1**	P	**Pb**	**12 35 47.8**	**-0.1**
FIBU				S	**Sg**	**12 36 07.2**	**-0.2**
NRAU	**Nora**	**1.65**	**316**	P	**Pb**	**12 35 50.3**	**-0.1**
NRAU	**Nora**	**1.65**	**316**	P	**Pb**	**12 35 50.3**	**-0.1**
OSTU	**Oestervaala**	**1.83**	**358**	P	**Pb**	**12 35 53.8**	**+0.3**
OSTU	**Oestervaala**	**1.83**	**358**	P	**Pb**	**12 35 53.8**	**+0.3**
GRAU	**Graesoe**	**2.04**	**18**	P	**Pb**	**12 35 56.4**	**-0.7**
GRAU	**Graesoe**	**2.04**	**18**	P	**Pb**	**12 35 56.4**	**-0.7**
BLEU	**Blekinge**	**2.25**	**201**	P	**Pn**	**12 35 58.3**	**+0.7**
BLEU	**Blekinge**	**2.25**	**201**	P	**Pn**	**12 35 58.3**	**+0.7**
HFS	**Hagfors**	**2.53**	**315**	Pn	**Pb**	**12 36 03.6**	**-1.8**
	baz=131,slow=14						
HFS				Lg	Lg	12 36 37.5	
	baz=122,slow=28						
HFS	**Hagfors**	**2.53**	**315**	Pn	**Pn**	**12 36 03.5**	**+2.1**
	1.0nm,0.3s,baz=129,slow=14,SNR=26						
HFS				Lg	Lg	12 36 36.0	
	4.9nm,0.3s,baz=121,slow=26,SNR=24						
HFS	**Hagfors**	**2.53**	**315**	Pn	**Pb**	**12 36 03.6**	**-1.8**
	baz=131,slow=14,SNR=0.4						
HFS				Lg	Lg	12 36 37.5	
	SNR=7.7						
HFS	**Hagfors**	**2.53**	**315**	Pn	**Pb**	**12 36 03.6**	**-1.8**
	baz=131,slow=14						
HFS				Lg	Lg	12 36 37.5	
	baz=122,slow=28						
DEL	**Delary**	**2.67**	**225**	P	**Pn**	**12 36 04.9**	**+1.5**
DEL	**Delary**	**2.67**	**225**	P	**Pn**	**12 36 04.9**	**+1.5**
FINU	**Finntorp**	**2.68**	**294**	P	**Pn**	**12 36 04.7**	**+1.1**
FINU	**Finntorp**	**2.68**	**294**	P	**Pn**	**12 36 04.7**	**+1.1**
SLIT	**Slitere, Latvi**	**2.78**	**104**	*e*P	**Pb**	**12 36 07.3**	**-2.3**
	SNR=50						
SLIT				*e*S	**Sb**	**12 36 43.8**	**-0.3**
	125nm,0.8s,SNR=50						
BJUU	**Bjuv**	**3.29**	**227**	P	**Pn**	**12 36 13.0**	**+1.2**
BJUU	**Bjuv**	**3.29**	**227**	P	**Pn**	**12 36 13.0**	**+1.2**
MTSE	**Matsula**	**3.44**	**82**	*e*P	**Pn**	**12 36 16.7**	**+2.8**
	SNR=50						
MTSE				*e*S	**Sn**	**12 36 56.8**	**+1.5**
	SNR=50						
RAF	**Rauma**	**3.47**	**39**	*e*P	**Pn**	**12 36 16.4**	**+2.0**
	SNR=50						
RAF				*e*S	**Sn**	**12 36 57.6**	**+1.5**
	6.5nm,0.1s,SNR=50						
BSD	**Bornholm Skovb**	**3.55**	**203**	*i* P	**Pn**	**12 36 16.4**	**+1.0**
BSD	**Bornholm Skovb**	**3.55**	**203**	*i* P	**Pn**	**12 36 16.4**	**+1.0**
NRA0	**NORESS Array S**	**3.74**	**311**	Pn	**Pn**	**12 36 18.1**	**+0.1**
	baz=126,slow=12						
NRA0				Pg	**Pb**	**12 36 26.6**	**+0.6**
	baz=130,slow=16						
NRA0				Sn	**Sn**	**12 37 03.0**	**+0.2**
	baz=130,slow=28						
NRA0				Lg	Lg	12 37 16.9	
	baz=136,slow=37						
NRA0	**NORESS Array S**	**3.74**	**311**	Pn	**Pn**	**12 36 18.1**	**+0.1**
	baz=126,slow=12,SNR=9.9						
NRA0				Sn	**Sn**	**12 37 03.0**	**+0.2**
	baz=130,slow=24						
NRA0				Lg	Lg	12 37 16.9	
	SNR=9.0						
NRA0	**NORESS Array S**	**3.74**	**311**	Pn	**Pn**	**12 36 18.1**	**+0.1**
	baz=126,slow=12						
NRA0				Pg	**Pb**	**12 36 26.6**	**+0.6**
	baz=130,slow=16						
NRA0				Sn	**Sn**	**12 37 03.0**	**+0.2**
	baz=130,slow=28						
NRA0				Lg	Lg	12 37 16.9	
	baz=136,slow=37						
NB2	**NORSAR Subarra**	**4.05**	**313**	Pn	**Pn**	**12 36 23.4**	**+1.0**
	baz=130,slow=14						
NB2				Lg	Lg	12 37 26.1	
NB2	**NORSAR Subarra**	**4.05**	**313**	Pn	**Pn**	**12 36 23.4**	**+1.0**
	baz=130,slow=13,SNR=6.9						
NB2				Lg	Lg	12 37 26.1	
NB2	**NORSAR Subarra**	**4.05**	**313**	Pn	**Pn**	**12 36 23.4**	**+1.0**
	baz=130,slow=14						
NB2				Lg	Lg	12 37 26.1	
NOA	**NORSAR Array B**	**4.05**	**313**	Pn	**Pn**	**12 36 23.5**	**+1.1**
	0.7nm,0.3s,baz=344,slow=11,SNR=6.9						
NOA				Sn	**Sn**	**12 37 08.0**	**-2.5**
	0.5nm,0.3s,baz=322,slow=23,SNR=2.0						
NOA				Lg	Lg	12 37 25.7	
	2.1nm,0.3s,baz=287,slow=6.5,SNR=6.4						
MEF	**Metsahovi**	**4.08**	**60**	*e*P	**Pn**	**12 36 24.0**	**+1.4**
	SNR=50						
MEF				*e*S	**Sn**	**12 37 13.8**	**+2.8**
	3.1nm,0.5s,SNR=50						
LLD	**Lille Linde**	**4.15**	**224**	*i* P	Pn	12 36 13.2	-10
HOMB	**Homborsund**	**4.63**	**272**	*i* P	**Pn**	**12 36 31.1**	**+0.9**
	SNR=49						
FIA0	**FINESS Array S**	**5.37**	**52**	Pn	**Pn**	**12 36 42.0**	**+1.6**
	baz=227,slow=14						
FIA0				Sn	**Sn**	**12 37 41.9**	**-1.0**
	baz=251,slow=28						
FIA0				Lg	Lg	12 38 04.1	
	baz=233,slow=37						
FIA0	**FINESS Array S**	**5.37**	**52**	*e*P	**Pn**	**12 36 41.8**	**+1.4**
FIA0	**FINESS Array S**	**5.37**	**52**	*e*P	**Pn**	**12 36 41.8**	**+1.4**
FIA0				Sn	**Sn**	**12 37 41.9**	**-1.0**
	baz=251,slow=23,SNR=2.9						
FIA0				Lg	Lg	12 38 04.1	
	SNR=3.0						
FIA0	**FINESS Array S**	**5.37**	**52**	Pn	**Pn**	**12 36 42.0**	**+1.6**
	baz=227,slow=14						
FIA0				Sn	**Sn**	**12 37 41.9**	**-1.0**
	baz=251,slow=28						
FIA0				Lg	Lg	12 38 04.1	
	baz=233,slow=37						
FINES	**FINESS Array B**	**5.37**	**52**	Pn	**Pn**	**12 36 41.8**	**+1.4**
	0.2nm,0.3s,baz=240,slow=13,SNR=13						
FINES				Sn	**Sn**	**12 37 43.0**	**+0.1**
	0.4nm,0.3s,baz=251,slow=20,SNR=5.6						
FINES				Lg	Lg	12 38 04.3	
	0.8nm,0.3s,baz=239,slow=28,SNR=10.0						
ARA0	**ARCESS Array S**	**11.73**	**14**	Pn	**Pn**	**12 38 04.8**	**-2.7**
	baz=193,slow=12						
ARA0	**ARCESS Array S**	**11.73**	**14**	Pn	**Pn**	**12 38 04.8**	**-2.7**
	baz=193,slow=12						
ARCES	**ARCESS Array B**	**11.73**	**14**	Pn	**Pn**	**12 38 05.3**	**-2.1**
	0.1nm,0.3s,baz=195,slow=13,SNR=4.2						

*CSEM **12** 12:35:45.6±0.2,63.°73N×20.°15E, h2km, ML1.0, Error ellipse: s-maj=4.1km s-min=3.0km az=128.0, Mining explosion.*

HEL 12 12:35:45.5, 63.°74N×19.°99E, h0km, ML1.6, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UMAU	**Umeaa**	**0.34**	**64**	*e*P	Pg	12 35 51.6	-0.3
UMAU				*e*S	Sg	12 35 55.7	-0.6
UMAU	**Umeaa**	**0.34**	**64**	*e*P	Pg	12 35 51.6	-0.4
UMAU				S	Sg	12 35 55.7	-0.6
HUSU	**Husum**	**0.53**	**221**	*i* P	Pb	12 35 56.9	-0.7
HUSU				*i* S	Sb	12 36 04.4	-1.3
HUSU	**Husum**	**0.53**	**221**	P	Pb	12 35 56.9	-0.7
HUSU				S	Sb	12 36 04.4	-1.3
SVAU	**Svanoeiden**	**0.78**	**347**	*i* P	Pg	12 36 00.7	+0.2
SVAU				*i* S	Sg	12 36 10.8	+0.2
SVAU	**Svanoeiden**	**0.78**	**347**	P	Pg	12 36 00.7	+0.2
SVAU				S	Sg	12 36 10.8	+0.2
BURU	**Burvik**	**1.04**	**35**	*e*P	Pg	12 36 04.9	-0.6
BURU				*e*S	Sg	12 36 18.1	-0.9
BURU	**Burvik**	**1.04**	**35**	P	Pg	12 36 04.9	-0.6
BURU				S	Sg	12 36 18.1	-0.9
SOLU	**Sollefteaa**	**1.32**	**249**	*e*P	Pn	12 36 11.2	+0.1
SOLU				*e*S	Sn	12 36 29.4	0.0
SOLU	**Sollefteaa**	**1.32**	**249**	P	Pn	12 36 11.2	+0.1
SOLU				S	Sn	12 36 29.4	0.0
HEMU	**Hemsoen**	**1.39**	**221**	*e*P	Pg	12 36 11.7	-0.3
HEMU				*e*S	Sb	12 36 30.6	+0.2
HEMU	**Hemsoen**	**1.39**	**221**	P	Pg	12 36 11.7	-0.3
HEMU				*e*S	Sb	12 36 30.6	+0.2
VAF	**Ylistaro**	**1.39**	**119**	*e*PB	Pn	12 36 11.3	-0.8
	baz=300						
VAF				MSG		12 36 27.2	
	comp=Z,3.2nm,0.2s						
VAF				*e*SB	Sg	12 36 29.3	-0.9
VAF	**Ylistaro**	**1.39**	**119**	*e*Pb	Pn	12 36 11.3	-0.8
VAF				*e*Sb	Sg	12 36 29.3	-0.9
LILU	**Lilltraesk**	**1.56**	**358**	*e*P	Pn	12 36 14.1	-0.3
LILU				*e*S	Sn	12 36 34.7	-0.5
LILU	**Lilltraesk**	**1.56**	**358**	P	Pn	12 36 14.1	-0.3
LILU				S	Sn	12 36 34.7	-0.5
SJUU	**Sjulsmark**	**1.91**	**21**	*e*P	Pb	12 36 20.3	-0.8
SJUU				*e*S	Sb	12 36 45.1	-0.4
SJUU	**Sjulsmark**	**1.91**	**21**	P	Pb	12 36 20.3	-0.9
SJUU				S	Sb	12 36 45.1	-0.4
OUF	**Merijarvi**	**2.18**	**71**	*e*PB	Pn	12 36 24.0	+1.0
OUF				MSG		12 36 50.0	
	comp=Z,1.1nm,0.2s						
OUF				*e*SG	Sn	12 36 51.9	+1.3
OUF	**Merijarvi**	**2.18**	**71**	*e*Pb	Pn	12 36 24.0	+1.1
OUF				*e*Sg	Sn	12 36 51.9	+1.3
	comp=Z,1.1nm,0.2s						
KALU	**Kalix**	**2.57**	**33**	*e*PG	Pb	12 36 33.4	+1.0
KALU	**Kalix**	**2.57**	**33**	*e*Pg	Pb	12 36 33.4	+1.0
KEF	**Keuruu**	**2.73**	**123**	*e*PB	Pb	12 36 33.6	-1.6
KEF				MSG		12 37 05.8	
	comp=Z,2.0nm,0.2s						
KEF	**Keuruu**	**2.73**	**123**	*e*Pb	Pb	12 36 33.6	-1.5
RAF	**Rauma**	**2.85**	**162**	*e*S	Sn	12 37 05.8	-1.3
RAF	**Rauma**	**2.85**	**162**	*e*S	Sn	12 37 05.8	-1.2
ERTU	**Ertsjaerv**	**2.98**	**17**	*e*P	Pn	12 36 34.9	+1.0
ERTU	**Ertsjaerv**	**2.98**	**17**	P	Pn	12 36 34.9	+1.0
LANU	**Lannavaara**	**4.41**	**10**	*e*SG	Sg	12 38 02.3	-4.6
LANU	**Lannavaara**	**4.41**	**10**	*e*Sg	Sg	12 38 02.3	-4.6

CSEM 12 12:36:26.7, 42.°41N×0.°14W, h0km, ML1.2, Mining explosion., Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECHI	**Chisagues Biel**	**0.35**	**45**	Pg	Pg	12 36 33.2	-0.3
	SNR=7.9						
ESAC	**San Caprasio**	**0.73**	**200**	Pg	Pg	12 36 38.5	-2.2
	SNR=7.9						
ESAC				Lg	Lg	12 36 52.0	
	SNR=7.9						
ATE	**Arette**	**0.79**	**329**	Pg	Pg	12 36 41.2	-0.6
	SNR=7.9						
ATE				Lg	Lg	12 36 51.8	
	SNR=7.9						
IELO	**Elcoad**	**0.92**	**298**	Pg	Pg	12 36 42.8	-1.4
	SNR=7.9						
IELO				Lg	Lg	12 36 57.9	
	SNR=7.9						
EORO	**Oroz-Betelu**	**0.98**	**300**	Pg	Pg	12 36 43.8	-1.8
	SNR=7.9						
EORO				Lg	Lg	12 37 00.0	
	3.4nm,0.3s,SNR=7.6						
EALK	**Alkurruntz**	**1.29**	**309**	Pg	Pg	12 36 50.3	-1.1
	SNR=7.9						
EALK				Lg	Lg	12 37 08.1	
	SNR=7.9						
EPOB	**Poblet**	**1.40**	**139**	Pg	Pg	12 36 52.6	-0.9
	SNR=7.9						
EPOB				Lg	Lg	12 37 13.3	
	SNR=7.9						

*CSEM **12** 12:38:00.2±0.5, 41.°53N×5.°95W, h2km, ML2.2/4, Error ellipse: s-maj=8.8km s-min=4.5km az=59.0*

MDD 12 12:38:01.3±1.5, 41.°54N×5.°94W, h11km±2km, mbLg1.6/6, 1C, Error ellipse: s-maj=9.5km s-min=6.1km az=72.0, PRXIMO, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBRG	**Braganca**	**0.66**	**294**	*e*P	Pg	12 38 11.5	-2.7
PBRG				*e*S	Sg	12 38 22.1	-0.8
PBRG				A	A	12 38 23.0	
	18nm,0.3s						
PBRG	**Braganca**	**0.66**	**294**	Pg	Pg	12 38 11.5	-2.7
PBRG				Lg	Lg	12 38 22.1	
	8.8nm,0.3s						
PBRG	**Braganca**	**0.66**	**294**	*e*P	Pg	12 38 11.5	-2.7
PBRG				*e*S	Sg	12 38 22.1	-0.8
	18nm,0.3s						
MVO	**Moncorvo**	**0.90**	**246**	*e*P	Pg	12 38 18.1	-0.7
MVO				*e*S	Sg	12 38 29.7	-0.8
MVO				A	A	12 38 30.4	
	4.5nm,0.7s						
MVO	**Moncorvo**	**0.90**	**246**	⇑Pg	Pg	12 38 18.1	-0.7
	5.3nm,0.1s,SNR=18						
MVO				Lg	Lg	12 38 29.8	
	3.9nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**0.90**	**246**	*e*P	Pg	12 38 18.1	-0.7
MVO				*e*S	Sg	12 38 29.7	-0.8
	4.5nm,0.7s						
MVO				Lg	Lg	12 38 29.8	
	3.9nm,0.1s,SNR=7.9						
POLO	**Lamas de Olo**	**1.41**	**264**	*e*P	Pn	12 38 26.7	-0.3
POLO				*e*S	Sn	12 38 43.9	-1.7
POLO				A	A	12 38 44.1	
	1.8nm,0.7s						
POLO	**Lamas de Olo**	**1.41**	**264**	*e*P	Pn	12 38 26.7	-0.3
POLO				*e*S	Sn	12 38 43.9	-1.7
	1.8nm,0.7s						
EPLA	**Plasencia**	**1.47**	**184**	Pg	Pb	12 38 28.4	-0.3
	0.8nm,0.1s,SNR=7.9						
EPLA				Lg	Lg	12 38 47.0	
	6.4nm,0.2s,SNR=6.7						
EPLA	**Plasencia**	**1.47**	**184**	Pg	Pb	12 38 28.4	-0.3
	0.8nm,0.1s,SNR=7.9						
EPLA				Lg	Lg	12 38 47.0	
	6.4nm,0.2s,SNR=6.7						
PCAB	**Cabril**	**1.58**	**277**	*e*S	Sn	12 38 49.7	0.0
PCAB				A	A	12 38 50.4	
	8.6nm,0.4s						
PCAB	**Cabril**	**1.58**	**277**	S	Sn	12 38 49.7	0.0
	4.3nm,0.4s						
PCAB	**Cabril**	**1.58**	**277**	S	Sn	12 38 49.7	0.0
	4.3nm,0.4s						
GUD	**Guadarrama**	**1.61**	**123**	Lg	Lg	12 38 51.9	
	2.1nm,0.4s,SNR=5.8						
GUD	**Guadarrama**	**1.61**	**123**	Lg	Lg	12 38 51.9	
	2.1nm,0.4s,SNR=5.8			

MAN 12 12:45:37.5, 11°.60N×125°.49E, h48km, mb3.8, ML2.5, MS2.0, 1C-1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.05**	**273**	*eP*	Pn	12 45 45.4	+0.4
BESP				*eS*	Sn	12 45 50.7	+0.5
PLP	**Palo**	**0.66**	**229**	‖ *iP*	Pn	12 45 52.6	+2.0
CNP	**Catarman**	**1.21**	**318**	*eP*	Pn	12 45 58.1	0.0
CNP				*eS*	Sn	12 46 15.4	+2.0
SCPH	**Surigao**	**1.81**	**180**	‖ *iP*	Pn	12 45 40.2	-26
SCPH				*i* S	Sn	12 45 42.7	-45

ISCJB ***12*** *13:09:57.6±0.3, 24°.09N±0°.02×122°.28E±0°.02, h27km±3km, Error ellipse: s-maj=3.0km s-min=2.2km az=157.8*
JMA ***12*** *13:09:57.4±0.1, 24°.05N×122°.29E, h25km±4km, M3.0*
TAP ***12*** *13:09:57.4, 24°.14N×122°.26E, h21km, ML3.4, C*

ISC 12 13:09:57.1±1.3, 24°.07N±0°.02×122°.27E±0°.02, h21km±4km, n54, σ0°.58/106, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.49**	**345**	P	**Pb**	**13 10 07.1**	**0.0**
	baz=343						
EOS1				S	**Sb**	**13 10 13.9**	**+0.1**
	baz=343						
ENAH	**Nanao**	**0.56**	**312**	*i* P	**Pb**	**13 10 08.2**	**-0.1**
	baz=307						
ENAH				*i* S	**Sb**	**13 10 16.3**	**+0.4**
	baz=307						
NANB	**Nanao**	**0.59**	**307**	P	**Pb**	**13 10 08.7**	**-0.2**
	baz=301						
NANB				S	**Sb**	**13 10 17.4**	**+0.5**
	baz=301						
ENA	**Nanau**	**0.60**	**307**	*eP*	**Pb**	**13 10 09.3**	**+0.4**
	baz=301						
ENA				*eS*	**Sb**	**13 10 17.1**	**+0.1**
	baz=301						
TWD	**Chiawan**	**0.61**	**271**	*eP*	**Pb**	**13 10 09.9**	**+0.7**
	baz=264						
TWD				*eS*	**Sn**	**13 10 19.0**	**-0.7**
	baz=264						
NACB	**Ninganchiao**	**0.62**	**280**	*eP*	**Pb**	**13 10 10.0**	**+0.6**
	baz=273						
NACB				*eS*	**Sn**	**13 10 19.3**	**-0.7**
	baz=273						
ENLB	**Shoufeng**	**0.63**	**255**	P	**Pn**	**13 10 10.6**	**-0.1**
	baz=248						
ENLB				*eS*	**Sn**	**13 10 20.3**	**+0.1**
	baz=248						
TWC	**Suao**	**0.66**	**325**	*eP*	**Pb**	**13 10 09.4**	**-0.6**
	baz=321						
TWC				S	**Sb**	**13 10 17.3**	**-1.4**
	baz=321						
JYNG	**Yonagunijimaku**	**0.73**	**58**	P	**Pb**	**13 10 10.8**	**-0.3**
JYNG				S	**Sb**	**13 10 20.0**	**-0.6**
YOJ	**Yonaguni jima**	**0.78**	**60**	P	**Pb**	**13 10 12.1**	**+0.1**
	baz=63						
YOJ				*eS*	**Sb**	**13 10 22.6**	**+0.4**
	baz=63						
YOJ	**Yonaguni jima**	**0.78**	**60**	P	**Pb**	**13 10 11.9**	**-0.1**
YOJ				S	**Sb**	**13 10 21.2**	**-1.0**
ESL	**Shilin**	**0.80**	**252**	*eP*	**Pb**	**13 10 12.3**	**0.0**
	baz=246						
ESL				*eS*	**Sn**	**13 10 24.4**	**-0.1**
	baz=246						
EGS		**0.83**	**339**	*eP*	**Pn**	**13 10 13.2**	**-0.3**
	baz=337						
EGS				*eS*	**Sb**	**13 10 23.7**	**+0.2**
	baz=337						
TWE	**Neicheng**	**0.85**	**320**	P	**Pb**	**13 10 13.4**	**+0.3**
	baz=317						
TWE				S	**Sb**	**13 10 23.7**	**-0.3**
	baz=317						
ENTT	**Nioudou**	**0.85**	**312**	*eP*	**Pb**	**13 10 13.7**	**+0.4**
	baz=308						
ENTT				S	**Sb**	**13 10 23.8**	**-0.5**
	baz=308						
EGFH	**Guangfu**	**0.86**	**243**	*eP*	**Pb**	**13 10 13.5**	**+0.1**
	baz=238						
EGFH				*eS*	**Sb**	**13 10 25.3**	**+0.8**
	baz=238						
NTC	**Toucheng**	**0.88**	**333**	*eP*	**Pn**	**13 10 13.9**	**-0.2**
	baz=331						
NTC				*eS*	**Sb**	**13 10 24.8**	**-0.1**
	baz=331						
NNSB	**Datong**	**0.88**	**294**	*eP*	**Pb**	**13 10 14.1**	**+0.3**
	baz=289						
NNSB				*eS*	**Sn**	**13 10 26.6**	**0.0**
	baz=289						
NNSH	**Datong**	**0.88**	**294**	*eP*	**Pb**	**13 10 14.2**	**+0.4**
	baz=289						
NNSH				*eS*	**Sn**	**13 10 26.6**	**0.0**
	baz=289						
SLBB	**Yuanshan**	**0.89**	**320**	*eP*	**Pn**	**13 10 14.6**	**+0.1**
	baz=317						
SLBB				*eS*	**Sb**	**13 10 25.5**	**+0.1**
	baz=317						
NNS	**Nan Shan**	**0.89**	**295**	P	**Pn**	**13 10 14.6**	**0.0**
	baz=290						
NNS				S	**Sn**	**13 10 27.2**	**+0.3**
	baz=290						
TWB1	**Santiao Chiao**	**0.97**	**345**	*eP*	**Pb**	**13 10 15.1**	**0.0**
	baz=344						
TWB1				*eS*	**Sb**	**13 10 27.2**	**-0.3**
	baz=344						
TIPB	**Shuangxi**	**0.98**	**336**	P	**Pb**	**13 10 14.7**	**-0.8**
	baz=334						
TIPB				S	**Sb**	**13 10 26.7**	**-1.3**
	baz=334						
NWLT	**Wulai**	**0.99**	**316**	*eP*	**Pn**	**13 10 16.2**	**+0.4**
	baz=312						
NWLT				*eS*	**Sb**	**13 10 28.3**	**+0.1**
	baz=312						
CHGB	**Renai**	**1.00**	**270**	*eP*	**Pb**	**13 10 16.0**	**+0.2**
	baz=265						
CHGB				*eS*	**Sn**	**13 10 29.6**	**0.0**
	baz=265						
YHNB	**Yeheng**	**1.01**	**307**	*eP*	**Pn**	**13 10 16.2**	**+0.2**
	baz=303						
YHNB				*eS*	**Sn**	**13 10 29.7**	**0.0**
	baz=303						
NSK	**Sanguang**	**1.02**	**306**	P	**Pb**	**13 10 16.5**	**+0.3**
	baz=303						
NSK				*eS*	**Sn**	**13 10 29.9**	**-0.1**
	baz=303						
EHY	**Hungye**	**1.03**	**237**	*eP*	**Pn**	**13 10 16.2**	**-0.1**
	baz=233						
EHY				*eS*	**Sb**	**13 10 29.8**	**+0.5**
	baz=233						
VWDT	**VWDT**	**1.08**	**253**	*eP*	**Pb**	**13 10 17.5**	**+0.5**
	baz=249						
VWDT				*eS*	**Sn**	**13 10 32.6**	**+1.4**
	baz=249						
NWF	**Wu-fen Shan**	**1.09**	**336**	P	**Pn**	**13 10 17.1**	**-0.1**
	baz=334						
NWF				S	**Sb**	**13 10 31.1**	**0.0**
	baz=334						
WFSB	**Wu-fen Shan**	**1.09**	**336**	P	**Pn**	**13 10 17.1**	**-0.1**
	baz=334						
WFSB				S	**Sb**	**13 10 30.8**	**-0.3**
	baz=334						
YULB	**Yu-li**	**1.11**	**233**	*eP*	**Pn**	**13 10 17.1**	**-0.3**
	baz=230						
YULB				*eS*	**Sb**	**13 10 31.0**	**-0.8**
	baz=230						
TWF1	**Yuli**	**1.14**	**231**	*eP*	**Pn**	**13 10 17.5**	**-0.3**
	baz=228						
TWF1				*eS*	**Sn**	**13 10 33.1**	**+0.3**
	baz=228						
TATO	**Taipei**	**1.15**	**322**	*eP*	**Pb**	**13 10 18.9**	**+0.7**
	baz=320						
TATO				*eS*	**Sn**	**13 10 32.9**	**-0.1**
	baz=320						
YM07	**YM07**	**1.25**	**332**	*eP*	**Pn**	**13 10 18.6**	**-0.7**
	baz=330						
YM07				*eS*	**Sn**	**13 10 34.9**	**-0.7**
	baz=330						
YM10	**YM10**	**1.26**	**329**	*eP*	**Pn**	**13 10 19.5**	**0.0**
	baz=327						
YM10				*eS*	**Sn**	**13 10 34.6**	**-1.2**
	baz=327						
YM11	**YM11**	**1.26**	**330**	*eP*	**Pb**	**13 10 20.5**	**+0.3**
	baz=328						
SMLT	**Sun Moon Lake**	**1.26**	**262**	*eP*	**Pn**	**13 10 19.9**	**+0.3**
	baz=258						
SMLT				*eS*	**Sb**	**13 10 36.8**	**+0.7**
	baz=258						
CHKT	**Chengkung**	**1.27**	**221**	*eP*	**Pn**	**13 10 18.4**	**-1.1**
	baz=218						
CHKT				*eS*	**Sn**	**13 10 34.1**	**-1.9**
	baz=218						
LIOB	**Emei**	**1.28**	**297**	*eP*	**Pb**	**13 10 20.7**	**+0.3**
	baz=294						
LIOB				*eS*	**Sb**	**13 10 36.8**	**+0.4**
	baz=294						
YM12	**YM12**	**1.28**	**330**	*eS*	**Sn**	**13 10 36.0**	**-0.2**
	baz=328						
NSTT	**Nanjuang**	**1.28**	**296**	*eP*	**Pn**	**13 10 19.8**	**0.0**
	baz=293						
NSTT				*eS*	**Sn**	**13 10 36.6**	**+0.3**
	baz=293						
NCU	**National Centr**	**1.33**	**313**	*eP*	**Pn**	**13 10 20.5**	**+0.1**
	baz=310						
NCU				*eS*	**Sn**	**13 10 36.8**	**-0.7**
	baz=310						
IRIF	**Iriomote-Funau**	**1.36**	**79**	P	**Pn**	**13 10 21.4**	**+0.6**
IRIF				S	**Sb**	**13 10 39.0**	**+0.1**
HATJ	**Hateruma jima**	**1.41**	**90**	P	**Pb**	**13 10 22.7**	**+0.1**
HATJ				S	**Sb**	**13 10 41.0**	**+0.9**
JKRS	**Kuro-shima**	**1.60**	**84**	P	**Pb**	**13 10 25.4**	**-0.5**
JKRS				S	**Sb**	**13 10 45.4**	**-0.3**
TWGBT	**Beinan**	**1.66**	**221**	*eP*	**Pn**	**13 10 24.1**	**-0.8**
	baz=219						
TWGBT				*eS*	**Sn**	**13 10 45.1**	**-0.4**
	baz=219						
TWG	**Pinlang**	**1.66**	**222**	*eP*	**Pn**	**13 10 24.6**	**-0.3**
	baz=219						
TWG				*eS*	**Sn**	**13 10 45.0**	**-0.6**
	baz=219						
WTP	**Ta-pu**	**1.72**	**242**	*eP*	**Pb**	**13 10 27.9**	**-0.2**
	baz=239						
WTP				*eS*	**Sn**	**13 10 48.5**	**+1.3**
	baz=239						
JIJ	**Ishigaki jima**	**1.74**	**80**	P	**Pn**	**13 10 26.1**	**+0.1**
JIJ				S	**Sn**	**13 10 47.5**	**-0.1**
JISG	**Ishigakijimahi**	**1.94**	**74**	P	**Pn**	**13 10 28.8**	**+0.1**
JISG				S	**Sn**	**13 10 51.4**	**-1.0**
SSD	**Sandimen**	**2.00**	**229**	*eP*	**Pb**	**13 10 32.2**	**-0.5**
	baz=227						
SSD				*eS*	**Sb**	**13 10 56.5**	**-0.6**
	baz=227						
JTJ	**Tarama**	**2.29**	**75**	P	**Pn**	**13 10 34.6**	**+0.9**
JTJ				*eS*	**Sn**	**13 11 01.7**	**+0.4**
JIKM	**Ikemajima**	**2.85**	**72**	P	**Pn**	**13 10 42.4**	**+1.1**
JIKM				S	**Sn**	**13 11 16.2**	**+1.3**

MAN 12 13:13:08.9, 10°.94N×125°.41E, h12km, mb3.7, ML2.4, MS1.9, 1C, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLP	**Palo**	**0.48**	**298**	‖ *eP*	Pb	13 13 18.9	-0.4
PLP				*i* S	Sg	13 13 25.2	+0.4
BESP	**Borongan**	**0.66**	**2**	*eP*	Pg	13 13 21.8	+0.1
BESP				*eS*	Sg	13 13 30.7	+0.3
CNP	**Catarman**	**1.73**	**335**	*eP*	Pn	13 13 38.4	-0.3
CNP				*eS*	Sb	13 14 01.5	-0.7

GCMT ***12*** *13:13:11.5±0.6, 15°.52N×93°.18W, h84km±4km, MW4.8/57, Moment Tensor Solution. s22, c25; s57, c77; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.36±.09; $M_{\theta\theta}$0.40±.11; $M_{\phi\phi}$0.95±.12; $M_{r\theta}$0.56±.06; $M_{\theta\phi}$-1.01±.09; $M_{\phi r}$-0.60±.07; Best double couple: $M_0$1.75000×10^{16} NP1:ϕ_s319.00000°, δ59.00000°, λ-94.00000°. NP2: ϕ_s147.00000°, δ31.00000°, λ-83.00000°. Principal axes: T 1.9310, Plg14.0000°, Azm52.0000°; N -0.3640, Plg4.0000°, Azm321.0000°; P -1.5690, Plg76.0000°, Azm217.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
IDC ***12*** *13:13:11.1±0.6, 15°.56N×92°.80W, h91km±4km, mb3.9/14, mb1 4.2/16, mb1mx3.9/45, mbtmp4.3/16, MS3.4/14, Ms1 3.4/14, ms1mx3.2/40 Error ellipse: s-maj=24.4km s-min=9.7km az=54.0*
UCR ***12*** *13:13:11.6±1.1, 15°.58N×93°.12W, h71km±86km, ML4.3*
MEX ***12*** *13:13:11.5±1.4, 15°.42N×93°.28W, h102km±12km, MD4.2*
NEIC ***12*** *13:13:11.5±0.0, 15°.42N×93°.28W, h102km, mb4.6/159, MD4.2(MEX), After MEX.*
NEIC Felt at Tapachula and Tonala.
ISCJB ***12*** *13:13:12.5±0.3, 15°.53N±0°.02×92°.99W±0°.02, h121km±3km, mb4.4/116, Error ellipse: s-maj=4.0km s-min=2.9km az=136.0*

ISC 12 13:13:11.2±0.4, 15°.44N±0°.04×93°.20W±0°.04, h95km±3km, h95km:pP-P, n580, σ1°.40/603, mb4.5/117, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.27**	**355**	*i* P	**Pn**	**13 13 25.0**	**0.0**
PCIG				*eS*	**Sn**	**13 13 35.6**	**+0.3**
PCIG		**0.27**	**355**	*i* P	**Pn**	**13 13 25.0**	**0.0**
PCIG				*eS*	**Sn**	**13 13 35.6**	**+0.3**
THIG		**1.04**	**120**	*eP*	**Pn**	**13 13 31.9**	**+0.3**
THIG				*eS*	**Sn**	**13 13 48.0**	**+1.0**
THIG		**1.04**	**120**	*eP*	**Pn**	**13 13 31.9**	**+0.3**
THIG				*eS*	**Sn**	**13 13 48.0**	**+1.0**
CCIG	**Comitan**	**1.32**	**50**	*ePn*	**Pn**	**13 13 35.4**	**+0.3**
CCIG				*eS*	**Sn**	**13 13 51.8**	**-1.4**
CCIG	**Comitan**	**1.32**	**50**	*eP*	**Pn**	**13 13 35.5**	**+0.3**
CCIG				*eS*	**Sn**	**13 13 51.8**	**-1.4**
TGIG		**1.33**	**3**	*i* P	**Pn**	**13 13 35.4**	**+0.2**
TGIG				*eS*	**Sn**	**13 13 51.3**	**-2.1**
TGIG		**1.33**	**3**	*i* P	**Pn**	**13 13 35.4**	**+0.2**
TGIG				*eS*	**Sn**	**13 13 51.3**	**-2.1**
CMIG	**Matias Romero**	**2.31**	**316**	P	**Pn**	**13 13 48.4**	**+0.8**
	27nm,0.3s,baz=122,slow=9.9,SNR=206						
CMIG				S	**Sn**	**13 14 17.4**	**+1.9**
	210nm,0.3s,baz=90,slow=13,SNR=21						
CMIG				LR	LR	13 14 48.4	
	comp=Z,425nm,18.7s,baz=62,slow=39						
APG	**El Apazote**	**2.67**	**99**	P	**Pn**	**13 13 52.9**	**+0.3**
	166nm,0.3s,baz=322,slow=16,SNR=1001						
APG				S	**Sn**	**13 14 23.8**	**-0.7**
	1μm,0.3s,baz=66,slow=20,SNR=23						
HUIG	**Huatulco**	**2.83**	**277**	*eP*	**Pn**	**13 13 53.9**	**-0.6**
HUIG				*i* S	**Sn**	**13 14 23.3**	**-4.6**
HUIG	**Huatulco**	**2.83**	**277**	*eP*	**Pn**	**13 13 53.9**	**-0.6**
HUIG				*i* S	**Sn**	**13 14 23.3**	**-4.6**
IXG	**Ixpaco**	**2.93**	**115**	*eP*	**Pn**	**13 13 57.1**	**+1.0**
IXG				*eS*	**Sn**	**13 14 31.2**	**+0.6**
SBLS	**San Blas**	**3.81**	**114**	*eP*	**Pn**	**13 14 08.9**	**+1.0**
SBLS				AML	AML	13 15 06.8	
	comp=Z,697nm,0.5s						
SNJE	**San Jose**	**3.81**	**114**	*eP*	**Pn**	**13 14 08.4**	**+0.6**
BOQS	**Boqueron**	**4.15**	**114**	*eP*	**Pn**	**13 14 13.5**	**+0.9**
COLS	**Colinas**	**4.16**	**115**	*eP*	**Pn**	**13 14 14.0**	**+1.4**
COLS				*eS*	**Sn**	**13 15 01.6**	**+1.3**
UEES	**San Salvador**	**4.19**	**113**	IAML		13 15 15.3	
	comp=Z,1μm,0.4s						
LFU	**La Fuente**	**4.29**	**113**	*eP*	**Pn**	**13 14 14.8**	**+0.5**
LBRS	**Las Brisas**	**4.36**	**112**	*eP*	**Pn**	**13 14 16.1**	**+0.9**
LFRS	**El Faro**	**4.39**	**114**	*eP*	**Pn**	**13 14 16.5**	**+0.8**
TECA	**Tecapa**	**4.94**	**112**	*eP*	**Pn**	**13 14 24.0**	**+0.8**
LCY	**Lacayo**	**5.15**	**112**	*eP*	**Pn**	**13 14 27.5**	**+1.4**
LVIG	**Laguna Verde**	**5.25**	**325**	*ePn*	**Pn**	**13 14 25.9**	**-1.4**
TLIG	**Tlapa**	**5.57**	**293**	*ePn*	**Pn**	**13 14 33.2**	**+1.5**
TGUH	**Tegucigalpa,Un**	**5.89**	**103**	*ePn*	**Pn**	**13 14 36.6**	**+0.6**
MYIG	**MÖrida**	**6.40**	**30**	*ePn*	**Pn**	**13 14 41.9**	**-0.9**
TEIG	**Tepich**	**6.68**	**44**	*eP*	**Pn**	**13 14 45.0**	**-1.7**
TEIG				*eS*	**Sn**	**13 16 00.0**	**-1.3**
TEIG				AML	AML	13 16 36.2	
	comp=Z,730nm,0.6s						
CNGN	**Cerro Negro**	**6.95**	**114**	*eP*	**Pn**	**13 14 52.0**	**+1.5**
ESTN	**Estel**	**7.01**	**108**	*ePn*	**Pn**	**13 14 50.1**	**-1.3**
ESTN	**Estel**	**7.01**	**108**	*eP*	**Pn**	**13 14 53.5**	**+2.2**
RCON	**San Juan de Ri**	**7.09**	**105**	*eP*	**Pn**	**13 14 53.7**	**+1.3**
MOMN	**Momotombo**	**7.13**	**114**	*eP*	**Pn**	**13 14 54.1**	**+1.3**
COPN	**Copaltepe**	**7.18**	**116**	*eP*	**Pn**	**13 14 54.3**	**+0.7**
MATN	**Matagalpa**	**7.48**	**109**	*eP*	**Pn**	**13 14 59.4**	**+1.7**
BOAB	**BOACO BROADBAN**	**7.89**	**111**	*eP*	**Pn**	**13 15 04.8**	**+1.6**
MOIG	**Morelia**	**8.71**	**300**	*ePn*	**Pn**	**13 15 16.2**	**+1.6**
ESPN	**Las Esperanzas**	**9.22**	**109**	*ePn*	**Pn**	**13 15 18.1**	**-3.2**
JTS	**JuntasAbangare**	**9.53**	**122**	P	**Pn**	**13 15 26.2**	**+0.7**
	comp=Z,12nm,0.3s,baz=1.6,slow=13,SNR=37						
JTS	**JuntasAbangare**	**9.53**	**122**	*ePn*	**Pn**	**13 15 25.3**	**-0.3**
	comp=Z,52nm,0.6s						
JTS	**JuntasAbangare**	**9.53**	**122**	*eP*	**Pn**	**13 15 26.6**	**+1.1**
HDC	**Heredia**	**10.38**	**120**	*ePn*	**Pn**	**13 15 35.4**	**-1.8**
LNIG	**Linares**	**11.10**	**329**	*ePn*	**Pn**	**13 15 48.5**	**+1.6**
ZAIG	**Zacatecas**	**11.47**	**311**	*ePn*	**Pn**	**13 15 55.1**	**+2.9**
WBCY	**West Bay, Gran**	**11.92**	**69**	*ePn*	**Pn**	**13 15 56.0**	**-1.9**
FSCY	**Frank Sound, G**	**12.10**	**70**	*ePn*	**Pn**	**13 15 60.0**	**-0.3**
LCCY	**Blossom Villag**	**13.19**	**70**	*ePn*	**Pn**	**13 16 13.6**	**-1.3**
CBCY	**The Bluff, Cay**	**13.51**	**70**	*ePn*	**Pn**	**13 16 17.3**	**-1.6**
833A	**Chaparral WMA,**	**14.05**	**337**	P	**Pn**	**13 16 27.9**	**+1.9**
	baz=155						
833A	**Chaparral WMA,**	**14.05**	**337**	*ePn*	**Pn**	**13 16 28.0**	**+2.0**
645A	**Chauvin**	**14.16**	**9**	P	**Pn**	**13 16 28.3**	**+1.0**
	baz=191						
HKT	**Hockley**	**14.65**	**351**	*ePn*	**Pn**	**13 16 34.3**	**+0.7**
441A	**DeRidder**	**15.24**	**0**	P	**Pn**	**13 16 42.1**	**+0.9**
	baz=180						
MTDJ	**Mount Denham**	**15.25**	**77**	*ePn*	**Pn**	**13 16 41.9**	**+0.4**
	comp=Z,74nm,0.6s						
444A	**Pine Grove**	**15.37**	**8**	P	**Pn**	**13 16 43.1**	**+0.3**
	baz=189						
059Z	**Ave Maria**	**15.42**	**43**	P	**Pn**	**13 16 42.3**	**-1.1**
	baz=228						
445A	**Amite**	**15.45**	**9**	P	**Pn**	**13 16 44.0**	**+0.3**
	baz=191						
061Z	**Ochoppi**	**15.48**	**46**	P	**Pn**	**13 16 42.8**	**-1.4**
	baz=230						
446A	**Poplarville**	**15.68**	**12**	P	**Pn**	**13 16 46.6**	**-0.1**
	baz=194						
058A	**Arcadia**	**15.68**	**41**	P	**Pn**	**13 16 45.3**	**-1.4**
	baz=225						
435B	**Jarrell**	**15.80**	**346**	*ePn*	**P**	**13 16 49.7**	**-0.4**
	comp=Z,27nm,0.6s						
341A	**Kurthwood**	**15.82**	**0**	*ePn*	**P**	**13 16 49.5**	**-0.9**
	comp=Z,50nm,0.4s						
957A	**Wimauma**	**15.86**	**38**	P	**Pn**	**13 16 48.1**	**-0.9**
	baz=222						
342A	**Flagon Creek P**	**15.88**	**3**	P	**P**	**13 16 50.3**	**-0.8**
	baz=183						
342A	**Flagon Creek P**	**15.88**	**3**	*ePn*	**P**	**13 16 50.7**	**-0.4**
	comp=Z,77nm,1.4s						
059A	**Moore Haven**	**16.04**	**42**	P	**Pn**	**13 16 50.5**	**-0.7**
	baz=227						
059A	**Moore Haven**	**16.04**	**42**	*ePn*	**Pn**	**13 16 50.9**	**-0.4**
	comp=Z,222nm,1.1s						
345A	**Thompson Farm,**	**16.06**	**10**	P	**Pn**	**13 16 51.7**	**+0.3**
	baz=191						
060Z	**West Palm Beac**	**16.06**	**45**	P	**Pn**	**13 16 50.3**	**-1.2**
	baz=230						
958A	**Wauchula**	**16.09**	**39**	P	**Pn**	**13 16 50.5**	**-1.4**
	baz=224						
344A	**Westbrook Farm**	**16.10**	**8**	P	**Pn**	**13 16 52.0**	**+0.1**
	baz=189						
344A	**Westbrook Farm**	**16.10**	**8**	*ePn*	**Pn**	**13 16 52.6**	**+0.7**
	comp=Z,77nm,0.9s						
JCT	**Junction City**	**16.15**	**339**	P	**P**	**13 16 53.4**	**-0.7**
	baz=157						
JCT	**Junction City**	**16.15**	**339**	*ePn*	**P**	**13 16 55.2**	**+1.1**
	comp=Z,26nm,0.8s						
448A	**Bay Minette**	**16.18**	**17**	P	**Pn**	**13 16 51.7**	**-1.2**
	baz=199						
449A	**Pace**	**16.21**	**19**	P	**Pn**	**13 16 52.1**	**-1.2**
	baz=201						
346A	**Big Creek Wild**	**16.24**	**11**	P	**Pn**	**13 16 53.4**	**-0.2**
	baz=193						
346A	**Big Creek Wild**	**16.24**	**11**	*ePn*	**Pn**	**13 16 54.0**	**+0.4**
	comp=Z,82nm,0.8s						
HPIG		**16.30**	**317**	*ePn*	**P**	**13 16 57.7**	**+1.8**
	comp=Z,21nm,1.0s						
NATX	**Nacogdoches**	**16.30**	**356**	*ePn*	**P**	**13 16 55.6**	**-0.1**
	comp=Z,44nm,0.8s						
857A	**Zephyrhills**	**16.31**	**37**	P	**Pn**	**13 16 52.9**	**-1.7**
	baz=221,SNR=7.3						
450A	**Crestview**	**16.45**	**20**	P	**Pn**	**13 16 54.5**	**-1.8**
	baz=203						
347A	**Saraland**	**16.45**	**14**	P	**Pn**	**13 16 56.3**	**+0.1**
	baz=196						
240A	**Hunter Patters**	**16.54**	**358**	P	**P**	**13 16 58.0**	**-0.3**
	baz=178						
240A	**Hunter Patters**	**16.54**	**358**	*ePn*	**P**	**13 16 58.0**	**-0.3**
	comp=Z,104nm,1.3s						
242A	**Grayson**	**16.58**	**3**	P	**P**	**13 16 58.5**	**-0.2**
	baz=184						
060A	**Indiantown**	**16.61**	**44**	*ePn*	**Pn**	**13 16 58.5**	**+0.3**
	comp=Z,294nm,1.4s						
348A	**Jackson**	**16.62**	**16**	P	**P**	**13 16 59.0**	**-0.2**
	baz=198						
348A	**Jackson**	**16.62**	**16**	*ePn*	**P**	**13 16 59.2**	**-0.1**
	comp=Z,317nm,1.5s						
BRAL	**Brewton**	**16.64**	**19**	P	**P**	**13 16 59.4**	**0.0**
	baz=201						
BRAL	**Brewton**	**16.64**	**19**	*ePn*	**P**	**13 16 59.6**	**+0.2**
	comp=Z,314nm,1.3s						
DWPF	**Disney Wildern**	**16.67**	**39**	P	**Pn**	**13 16 57.8**	**-1.2**
	baz=223						
DWPF	**Disney Wildern**	**16.67**	**39**	*ePn*	**Pn**	**13 16 58.8**	**-0.2**
	comp=Z,63nm,0.6s						
244A	**Avery, Jackson**	**16.69**	**7**	P	**P**	**13 16 59.5**	**-0.4**
	baz=189,SNR=8.0						
655A	**Horseshoe Beac**	**16.73**	**32**	P	**Pn**	**13 16 59.4**	**-0.4**
	baz=215						
553A	**Crawfordville**	**16.75**	**27**	P	**Pn**	**13 16 59.9**	**0.0**
	baz=211,SNR=7.4						
349A	**Repton**	**16.76**	**18**	P	**P**	**13 17 00.8**	**0.0**
	baz=201,SNR=21						
245A	**Little AP, Sta**	**16.79**	**10**	P	**P**	**13 17 01.4**	**+0.3**
	baz=191						
TXAR	**Lajitas Array**	**16.87**	**327**	P	**P**	**13 17 04.2**	**+2.1**
	comp=Z,0.2nm,0.3s,baz=150,slow=13,SNR=79						
TX31	**Lajitas Ar. Si**	**16.87**	**327**	*ePn*	**P**	**13 17 04.2**	**+2.1**
VBMS	**Vicksburg**	**16.88**	**8**	P	**P**	**13 17 02.2**	**+0.1**
	baz=189						
VBMS	**Vicksburg**	**16.88**	**8**	*ePn*	**P**	**13 17 02.4**	**+0.3**
	comp=Z,66nm,0.8s						
246A	**Jackson Lee, B**	**16.91**	**12**	P	**P**	**13 17 02.7**	**+0.2**
	baz=194						
757A	**Oxford**	**16.92**	**36**	P	**Pn**	**13 17 01.6**	**-0.4**
	baz=220,SNR=8.1						
WHTX	**Lake Whitney,**	**16.93**	**347**	P	**P**	**13 17 03.1**	**+0.4**
	baz=166						
WHTX	**Lake Whitney,**	**16.93**	**347**	*ePn*	**P**	**13 17 03.5**	**+0.9**
	comp=Z,31nm,0.9s						
859A	**Kempfer Cattle**	**16.96**	**40**	P	**Pn**	**13 17 02.1**	**-0.5**
	baz=225						
656A	**Will

146A	Union baz=194	17.53	12	P	Pn	13 17 10.7	+1.2
146A	Union comp=Z,108nm,1.4s	17.53	12	eP	Pn	13 17 10.5	+1.0
454A	Quitman baz=212,SNR=11	17.55	28	P	P	13 17 09.6	+0.1
556A	Lake Butler baz=217,SNR=12	17.56	33	P	P	13 17 09.3	-0.3
250A	Grady baz=203,SNR=13	17.64	20	P	Pn	13 17 11.3	+0.6
250A	Grady comp=Z,73nm,0.6s	17.64	20	eP	Pn	13 17 11.7	+0.9
352A	Blakely baz=207	17.66	24	P	Pn	13 17 11.2	0.0
352A	Blakely comp=Z,79nm,1.0s	17.66	24	eP	Pn	13 17 10.9	-0.2
147A	Livingston baz=196	17.73	14	P	Pn	13 17 12.9	+0.9
147A	Livingston comp=Z,87nm,0.8s	17.73	14	eP	Pn	13 17 12.0	+0.1
658A	Bunnell baz=221	17.74	36	P	P	13 17 10.9	-0.7
658A	Bunnell comp=Z,69nm,0.6s	17.74	36	eP	Pn	13 17 12.0	-0.1
Z40A	Long Farm, Mag baz=180	17.74	359	P	Pn	13 17 13.5	+1.4
Z42A	Norrel Spur, H baz=184	17.79	3	P	Pn	13 17 13.0	+0.3
353A	Camilla baz=210,SNR=13	17.84	26	P	P	13 17 12.3	-0.3
455A	Stateville baz=214	17.86	30	P	P	13 17 12.7	-0.1
148A	Greensboro baz=198	17.88	16	P	Pn	13 17 14.1	+0.4
557A	Orange Park baz=218,SNR=7.4	17.93	34	P	P	13 17 13.8	+0.1
Z44A	Pea Ridge, Bel baz=189	17.94	8	P	Pn	13 17 14.9	+0.5
251A	Midway baz=205,SNR=20	18.03	22	P	Pn	13 17 15.3	-0.2
149A	Jones baz=200,SNR=8.7	18.05	18	P	P	13 17 15.0	+0.1
ABTX	Abilene, Hawle baz=160,SNR=6.9	18.09	342	P	Pn	13 17 16.8	+0.5
ABTX	Abilene, Hawle comp=Z,74nm,1.2s	18.09	342	eP	Pn	13 17 17.3	+1.0
Z46A	Louisville baz=194,SNR=8.1	18.09	12	P	Pn	13 17 15.9	-0.4
Z45A	Winona baz=191	18.13	9	P	Pn	13 17 17.0	+0.2
TIGA	Tifton baz=211	18.19	27	P	Pn	13 17 17.3	-0.1
TIGA	Tifton comp=Z,72nm,0.6s	18.19	27	eP	Pn	13 17 18.0	+0.6
252A	Lumpkin baz=207,SNR=26	18.20	24	P	P	13 17 17.0	+0.4
Z47A	Carrollton baz=196	18.28	14	P	Pn	13 17 18.4	-0.2
150A	Eclectic baz=203,SNR=20	18.29	20	P	Pn	13 17 18.3	-0.4
456A	Hilliard baz=216	18.34	32	P	P	13 17 18.0	-0.1
456A	Hilliard comp=Z,248nm,1.4s	18.34	32	eP	Pn	13 17 19.3	0.0
Y42A	Garnett, Star baz=184	18.36	4	P	Pn	13 17 19.2	-0.3
Y41A	Eaglette Beard baz=182	18.37	2	P	Pn	13 17 19.1	-0.5
LRAL	Lakeview Retre baz=199,SNR=11	18.40	17	P	Pn	13 17 19.6	-0.3
LRAL	Lakeview Retre comp=Z,18nm,0.6s	18.40	17	eP	Pn	13 17 20.4	+0.4
SJCC	San Jacinto, C	18.41	105	eP	P	13 17 18.1	-1.1
151A	Opelika baz=205,SNR=12	18.46	21	P	P	13 17 19.9	+0.5
Y40A	Okolona baz=180	18.50	360	P	Pn	13 17 21.3	+0.2
253A	Americus baz=209,SNR=6.5	18.50	25	P	P	13 17 20.3	+0.4
253A	Americus comp=Z,85nm,0.6s	18.50	25	eP	Pn	13 17 20.8	-0.3
Z48A	Northport baz=197,SNR=8.2	18.58	15	P	P	13 17 20.7	0.0
Y44A	Strider, Charl baz=189,SNR=5.5	18.64	8	P	P	13 17 21.9	+0.5
Z49A	Columbiana baz=201,SNR=55	18.68	18	P	Pn	13 17 23.3	0.0
254A	Abbeville baz=211,SNR=20	18.75	27	P	P	13 17 23.2	+0.5
Y46A	Houston baz=193,SNR=27	18.78	11	P	Pn	13 17 23.9	-0.6
152A	Waverly Hall baz=206,SNR=7.7	18.80	23	P	P	13 17 23.6	+0.4
152A	Waverly Hall comp=Z,25nm,0.9s	18.80	23	eP	P	13 17 23.2	0.0
Z50A	Ashland baz=202,SNR=14	18.92	19	P	P	13 17 24.8	+0.3
X40A	Basin Creek Fa baz=181	18.97	1	P	P	13 17 25.4	+0.4
X40A	Basin Creek Fa comp=Z,12nm,0.8s	18.97	1	eP	Pn	13 17 26.1	-0.7
X41A	Kaden, Bauxite baz=182	18.99	2	P	Pn	13 17 26.2	-0.7
Y47A	UCPARC, Winfie baz=196,SNR=8.3	19.01	14	P	P	13 17 25.9	+0.4
X39A	Fountain Ranch baz=178,SNR=5.5	19.01	358	P	P	13 17 25.8	+0.4
MIAR	Mount Ida baz=179,SNR=52	19.03	359	P	P	13 17 25.8	+0.1
MIAR	Mount Ida comp=Z,80nm,1.0s	19.03	359	eP	P	13 17 25.4	-0.2
255A	Hazlehurst baz=213,SNR=7.5	19.10	29	P	P	13 17 25.8	-0.7
255A	Hazlehurst comp=Z,62nm,0.8s	19.10	29	eP	P	13 17 26.3	-0.1
X43A	Marvell baz=187,SNR=5.6	19.11	6	P	P	13 17 27.3	+0.7
X43A	Marvell comp=Z,121nm,0.8s	19.11	6	eP	P	13 17 26.1	-0.4
X44A	Crenshaw baz=189,SNR=7.4	19.18	8	P	P	13 17 27.7	+0.4
Y48A	Jasper baz=198	19.18	15	P	P	13 17 27.4	0.0
OXF	Oxford baz=191	19.30	9	P	P	13 17 28.2	-0.4
OXF	Oxford comp=Z,88nm,1.0s	19.30	9	eP	P	13 17 28.0	-0.6
Y49A	Blount Mountai baz=200	19.34	17	P	P	13 17 29.1	0.0
Y49A	Blount Mountai comp=Z,30nm,0.6s	19.34	17	eP	P	13 17 29.0	0.0
Z52A	Williamson baz=206	19.38	23	P	P	13 17 29.2	-0.3
154A	Montrose baz=211,SNR=6.6	19.40	26	P	P	13 17 28.9	-0.9
154A	Montrose comp=Z,159nm,0.8s	19.40	26	eP	P	13 17 29.2	-0.6
X46A	Booneville baz=194	19.48	11	P	P	13 17 31.3	+0.6
GDL2	Guadalupe Moun	19.54	331	eP	Pn	13 17 33.3	-0.3
Y50A	Piedmont baz=202,SNR=7.2	19.57	19	P	P	13 17 31.0	-0.5
X47A	Russelville baz=196,SNR=14	19.60	13	P	P	13 17 31.7	-0.1
ZARC	Zaragoza, Cauc	19.62	112	eP	P	13 17 29.5	-2.8
MNTX	Cornudas Mount baz=143,SNR=20	19.64	328	P	Pn	13 17 34.3	-0.3
MNTX	Cornudas Mount comp=Z,7.9nm,0.8s	19.64	328	eP	Pn	13 17 34.1	-0.6
W40A	Ferguson Farm, baz=181	19.67	0	P	P	13 17 32.9	+0.2
W40A	Ferguson Farm, comp=Z,51nm,1.0s	19.67	0	eP	P	13 17 33.6	+1.0
W41B	Gary Mavity, V baz=183,SNR=10	19.67	2	P	P	13 17 32.6	0.0
W41B	Gary Mavity, V comp=Z,26nm,0.9s	19.67	2	eP	P	13 17 32.8	+0.2
W39A	Magazine baz=179,SNR=10	19.68	359	P	P	13 17 33.6	+0.9
W39A	Magazine comp=Z,30nm,0.9s	19.68	359	eP	P	13 17 33.3	+0.5
155A	Kite baz=212,SNR=5.2	19.69	28	P	P	13 17 32.3	-0.6
X48A	Hartselle baz=198,SNR=9.6	19.73	15	P	P	13 17 32.3	-1.0
Z53A	Monticello baz=208	19.79	24	P	P	13 17 33.4	-0.6
Y51A	Rockmart baz=204	19.80	20	P	P	13 17 33.4	-0.7
WMOK	Wichita Mounta baz=164	19.86	346	P	P	13 17 34.9	+0.1
WMOK	Wichita Mounta comp=Z,20nm,0.8s	19.86	346	eP	P	13 17 34.1	-0.7
LGNH	LÐogne comp=Z,44nm,0.8s	19.93	78	eP	P	13 17 35.2	-0.3
GOGA	Godfrey baz=209,SNR=14	19.95	24	P	P	13 17 35.1	-0.5
GOGA	Godfrey comp=Z,32nm,0.9s	19.95	24	eP	P	13 17 34.8	-0.8
W45A	Hickory Valley baz=192,SNR=6.5	19.96	10	P	P	13 17 36.2	+0.4
X49A	Woodville baz=200,SNR=20	19.98	17	P	P	13 17 35.3	-0.7
PLAL	Pickwick Lake comp=Z,47nm,0.9s	20.00	12	eP	P	13 17 36.2	0.0
Z54A	Sparta baz=210,SNR=9.1	20.05	26	P	P	13 17 36.4	-0.4
W46A	Michie baz=194,SNR=9.4	20.08	12	P	P	13 17 37.6	+0.5
Y52A	Lilburn baz=206,SNR=8.6	20.12	23	P	P	13 17 37.0	-0.5
X50B	Fort Payne baz=202,SNR=12	20.12	18	P	P	13 17 37.2	-0.4
156A	Sylvania baz=215	20.17	30	P	P	13 17 37.6	-0.5
V41A	Mountainview baz=183,SNR=10	20.29	2	P	P	13 17 39.4	+0.1
V40A	Witts Springs baz=181,SNR=16	20.29	1	P	P	13 17 39.5	+0.1
V40A	Witts Springs comp=Z,27nm,0.6s	20.29	1	eP	P	13 17 40.7	+1.3
Y53A	Monroe baz=208,SNR=12	20.29	24	P	P	13 17 38.7	-0.6
V39A	Tigrew baz=179,SNR=12	20.32	359	P	P	13 17 39.0	-0.7
Z55A	Blythe baz=212,SNR=5.7	20.34	28	P	P	13 17 39.1	-0.8
V42A	Cord baz=185,SNR=6.5	20.35	4	P	P	13 17 38.9	-1.0
W47A	Westpoint baz=196	20.36	13	P	P	13 17 39.3	-0.8
MSTX	Muleshoe baz=153	20.38	337	P	P	13 17 41.0	+0.6
MSTX	Muleshoe comp=Z,120nm,1.6s	20.38	337	eP	P	13 17 41.3	+0.9
PTBC	PUERTO BERRIO,	20.39	114	eP	P	13 17 37.9	-2.8
W48A	Pulaski baz=198	20.41	15	P	P	13 17 39.2	-1.4
X51A	Calhoun baz=204	20.47	20	P	P	13 17 40.6	-0.7
TUL1	Leonard baz=173	20.52	354	P	P	13 17 43.2	+1.4
TUL1	Leonard comp=Z,98nm,1.3s	20.52	354	eP	Pn	13 17 43.8	-1.0
W49A	Belvidere baz=200	20.56	16	P	P	13 17 41.6	-0.7
Y54A	Tignall baz=210,SNR=5.6	20.66	25	P	P	13 17 42.3	-1.0
POPC	Popayan, Colom	20.72	127	eP	Pn	13 17 46.6	-1.0
V46A	Holladay baz=194	20.78	12	P	P	13 17 43.5	-1.2
AMTX	Amarillo baz=157	20.81	340	P	P	13 17 45.9	+0.8
AMTX	Amarillo comp=Z,64nm,0.8s	20.81	340	eP	P	13 17 45.8	+0.7
U40A	Yellville baz=181,SNR=15	20.84	1	P	P	13 17 45.2	0.0
X52A	Dahlonega baz=206	20.84	22	P	P	13 17 44.3	-1.0
U41A	Viola baz=184,SNR=10	20.85	3	P	P	13 17 44.9	-0.5
U39A	Green Forest baz=179	20.86	359	P	P	13 17 44.6	-0.9
U42A	Revenden baz=186,SNR=14	20.90	4	P	P	13 17 44.9	-1.0
W50A	Signal Mountai baz=202,SNR=10	20.91	18	P	P	13 17 45.3	-0.8
V47A	Nunnelly baz=196,SNR=30	20.93	13	P	P	13 17 45.4	-0.9
X53A	Estanollee baz=208,SNR=18	20.97	23	P	P	13 17 45.7	-0.9
OTAV	Otavalo comp=Z,10.0nm,0.9s	20.98	135	eP	P	13 17 48.8	+1.4
OTAV	Otavalo	20.98	135	eP	Pn	13 17 49.6	-1.3
U43A	Rector baz=188	20.99	6	P	P	13 17 46.6	-0.3
V48A	Smith Brothers baz=198	21.01	15	P	P	13 17 46.1	-0.9
U44B	Burton Farm, H baz=190	21.10	9	P	P	13 17 47.2	-0.8
WVT	Waverly baz=195	21.16	12	P	P	13 17 48.1	-0.5
WVT	Waverly comp=Z,27nm,0.8s	21.16	12	eP	P	13 17 49.0	+0.3
W52A	Murphy baz=205	21.27	21	P	P	13 17 48.6	-1.3
V49A	McMinnville baz=200	21.27	17	P	P	13 17 49.0	-0.9
SRIG	Santa Rosalia comp=Z,24nm,1.0s	21.28	307	eP	P	13 17 52.5	+2.4
V50A	Pikevile baz=202	21.41	18	P	P	13 17 50.2	-1.2
PRAC	Prado comp=Z,26nm,0.4s	21.46	121	eP	P	13 17 50.6	-1.5
PRAC	Prado	21.46	121	eP	P	13 17 52.7	+0.6
T39A	Clever baz=180,SNR=14	21.50	360	P	P	13 17 51.7	-0.7
BARC	Barichara	21.50	112	eP	P	13 17 51.5	-1.4
T38A	Diamond baz=177,SNR=12	21.53	358	P	P	13 17 52.0	-0.7
T41A	Mountain View baz=184,SNR=13	21.56	3	P	P	13 17 52.1	-0.8
U47A	Clarksville baz=196	21.57	13	P	P	13 17 52.4	-0.6
121A	Cookes Peak, D baz=139	21.57	325	P	P	13 17 56.3	+2.9
T42A	Van Buren baz=186	21.59	5	P	P	13 17 51.9	-1.3
W53A	Cullowhee baz=207	21.61	23	P	P	13 17 52.4	-1.3
319A	Douglas comp=Z,27nm,0.8s	21.63	320	eP	P	13 17 56.6	+2.7
T40A	Mansfield baz=182	21.63	1	P	P	13 17 53.4	-0.4
T43A	Greenville baz=188,SNR=5.8	21.71	6	P	P	13 17 52.8	-1.7
GRTK	Grand Turk	21.77	71	eP	P	13 17 54.1	-1.2
V51A	Loudon baz=204,SNR=5.5	21.77	20	P	P	13 17 52.9	-2.3
T44A	Benton baz=190	21.80	8	P	P	13 17 54.0	-1.4
U48A	Cassie Pea, Po baz=198,SNR=6.6	21.81	15	P	P	13 17 53.2	-2.4
RUSC	La Rusia	21.90	114	eP	P	13 17 54.5	-2.8
CHIC	Chingaza	21.94	117	eP	P	13 17 56.8	-0.9
U49A	Red Boiling Sp baz=200,SNR=6.7	22.01	16	P	P	13 17 56.0	-1.7
T46A	Princeton baz=194,SNR=8.7	22.03	11	P	P	13 17 56.1	-1.8
V52A	Sevierville baz=205	22.06	21	P	P	13 17 56.5	-1.8
S40A	Lebanon baz=182,SNR=11	22.08	1	P	P	13 17 57.3	-1.2
S38A	Stockton baz=178,SNR=13	22.11	358	P	P	13 17 57.3	-1.5
T47A	Sharon Grove baz=196	22.14	13	P	P	13 17 57.1	-2.0
S39A	Bolivar baz=180,SNR=18	22.17	360	P	P	13 17 58.1	-1.2
V53A	Saluda baz=208,SNR=6.4	22.19	23	P	P	13 17 57.3	-2.4
S43A	Fulton Ridge, baz=188,SNR=8.1	22.22	7	P	P	13 17 57.7	-2.3
BNM	Barren Site	22.23	329	eP	P	13 18 02.7	+2.4
KMSC	Kings Mountain baz=212	22.32	26	P	P	13 17 58.0	-3.1
KMSC	Kings Mountain comp=Z,44nm,1.1s	22.32	26	eP	P	13 18 02.5	+1.5
S42A	Caledonia baz=186	22.35	5	P	P	13 17 58.6	-2.7
LPM	Los Pinos Moun	22.36	330	eP	P	13 18 04.4	+2.8
T49A	Edmonton baz=200	22.63	16	P	P	13 18 02.9	-1.3
R38A	Fenwick Farm, baz=178,SNR=19	22.67	359	P	P	13 18 02.8	-1.8
LAZ	Ladron	22.68	329	eP	P	13 18 05.8	+0.8
TZTN	Tazewell baz=205,SNR=12	22.71	20	P	P	13 18 04.5	-0.5
TZTN	Tazewell comp=Z,59nm,0.6s	22.71	20	eP	P	13 18 05.7	+0.7
T50A	Nancy baz=201	22.74	18	P	P	13 18 03.8	-1.6
R40A	Maddies Statio baz=182,SNR=8.1	22.78	2	P	P	13 18 04.2	-1.6
TASL	Snake Pit, Alb baz=146,SNR=10	22.79	331	P	P	13 18 03.8	-2.3
ANMO	Albuquerque comp=Z,7.3nm,0.7s,baz=149,slow=13,SNR=24	22.79	331	P	P	13 18 08.2	+2.1
ANMO	Albuquerque baz=146	22.79	331	P	P	13 18 04.9	-1.2
ANMO	Albuquerque comp=Z,8.6nm,0.8s	22.79	331	eP	P	13 18 06.2	+0.1
TASM	ASL Pad, Albuq baz=146,SNR=8.9	22.79	331	P	P	13 18 05.3	-0.8
R41A	Rosebud baz=185,SNR=5.9	22.83	4	P	P	13 18 03.8	-2.4
R42A	Luebbering baz=186	22.85	5	P	P	13 18 04.1	-2.3
R43A	Red Bud baz=188	22.93	7	P	P	13 18 04.6	-2.7
SDV	Santo Domingo comp=Z,4.2nm,0.3s,baz=291,slow=5.9,SNR=5.1	22.98	104	P	P	13 18 05.9	-2.3
SDV	Santo Domingo comp=Z,27nm,0.7s	22.98	104	eP	P	13 18 05.7	-2.5
R44A	Waltonville baz=190	23.01	8	P	P	13 18 05.3	-2.6
R45A	Skylar, Fairfi baz=192,SNR=6.3	23.18	10	P	P	13 18 07.3	-2.3
TUC	Tucson baz=133	23.20	319	P	P	13 18 09.7	-0.3
TUC	Tucson comp=Z,14nm,0.9s	23.20	319	eP	P	13 18 12.6	+2.6
Q38A	Cooks Store, C baz=179,SNR=12	23.44	359	P	P	13 18 10.3	-1.7
Q41A	Truxton baz=185,SNR=6.9	23.49	4	P	P	13 18 10.5	-1.9
Q42A	Golden Eagle baz=187,SNR=12	23.50	5	P	P	13 18 10.7	-1.8
WCI	Wyandotte Cave baz=197	23.51	14	P	P	13 18 10.2	-2.4
WCI	Wyandotte Cave comp=Z,45nm,0.8s	23.51	14	eP	P	13 18 10.6	-2.0
R47A	Wooly Knot Far baz=196	23.52	13	P	P	13 18 09.4	-3.3
Q39A	Willow Grove F baz=181,SNR=7.2	23.52	0	P	P	13 18 11.1	-1.6
Q43A	New Douglas baz=189,SNR=7.3	23.61	7	P	P	13 18 11.0	-2.5
OLIL	Olney comp=Z,111nm,0.8s	23.64	10	eP	P	13 18 14.4	+0.6
S51A	Beattyville baz=204,SNR=5.2	23.69	19	P	P	13 18 10.9	-3.4
Q45A	Warren Harvey, baz=192,SNR=6.5	23.78	10	P	P	13 18 12.6	-2.5
NCAT	North Carolina comp=Z,48nm,1.4s	23.80	28	eP	P	13 18 16.2	+0.9
T25A	Trinidad baz=153,SNR=12	23.80	337	P	P	13 18 14.3	-1.2
T25A	Trinidad comp=Z,29nm,0.8s	23.80	337	eP	P	13 18 17.9	+2.4
P39B	Salisbury baz=181,SNR=8.3	23.96	1	P	P	13 18 14.8	-1.9
CBKS	Cedar Bluff baz=165	23.99	347	P	P	13 18 15.8	-1.2
CBKS	Cedar Bluff comp=Z,32nm,0.9s	23.99	347	eP	P	13 18 16.3	-0.7
P40A	Paris baz=183,SNR=8.8	24.02	2	P	P	13 18 15.1	-2.1
P37A	Lathrop baz=178	24.08	358	P	P	13 18 15.7	-2.0
P38A	Dawn baz=179	24.10	359	P	P	13 18 16.0	-1.9
P41A	Barry, Barry baz=185,SNR=12	24.22	4	P	P	13 18 17.1	-1.9
X18A	Snowflake comp=Z,20nm,0.9s	24.27	325	eP	P	13 18 22.2	+2.5
P44A	Sand Creek, Wi baz=191,SNR=5.7	24.27	9	P	P	13 18 16.8	-2.7
214A	Organ Pipe Nat baz=128,SNR=8.1	24.28	316	P	P	13 18 18.7	-1.1
P43A	Skaggs, Pawnee baz=189,SNR=8.9	24.33	7	P	P	13 18 18.2	-1.8
P45A	Graceland, Par baz=193,SNR=9.1	24.47	10	P	P	13 18 19.3	-2.0
BLA	Blacksburg baz=211	24.47	25	P	P	13 18 18.7	-2.7
W18A	Petrified Fore	24.58	326	eP	P	13 18 25.1	+2.5
O38A	Galt baz=180,SNR=5.5	24.59	359	P	P	13 18 20.4	-2.1
O40A	La Belle baz=183,SNR=7.5	24.62	2	P	P	13 18 20.1	-2.6
O37A	Wolven Farm, M baz=178	24.65	358	P	P	13 18 21.6	-1.3
P46A	Rosedale baz=194,SNR=13	24.65	11	P	P	13 18 21.1	-1.9
O41A	Passleys Farm, baz=186,SNR=5.3	24.67	4	P	P	13 18 21.5	-1.5
SDCO	Great Sand Dun baz=151,SNR=11	24.75	336	P	P	13 18 23.2	-1.0
SDCO	Great Sand Dun comp=Z,11nm,1.2s	24.75	336	eP	P	13 18 26.1	+1.9
KSCO	Kaye Shedlock' baz=158	24.90	342	P	P	13 18 24.0	-1.4
X16A	Lo Mia Camp, P comp=Z,14nm,1.0s	25.04	322	eP	P	13 18 29.3	+2.5
N37A	Lee Faris, Mou baz=178	25.24	358	P	P	13 18 26.6	-1.8
HDIL	Hopedale baz=189	25.26	7	P	P	13 18 26.1	-2.3
N41A	Harden Midland baz=185,SNR=6.9	25.26	4	P	P	13 18 26.4	-2.1
N38A	Joes South For baz=180,SNR=11	25.26	360	P	P	13 18 27.0	-1.5
S22A	4UR Ranch, Cre baz=148,SNR=9.3	25.29	334	P	P	13 18 27.9	-1.2
S22A	4UR Ranch, Cre comp=Z,6.1nm,0.9s	25.29	334	eP	P	13 18 31.2	+2.1
N39A	Derby Farms, D baz=182,SNR=6.8	25.36	1	P	P	13 18 26.4	-2.9
N40A	Mertquake, Sal baz=184	25.39	3	P	P	13 18 28.2	-1.4
SFIN	Lafayette comp=Z,29nm,0.8s	25.41	11	eP	P	13 18 30.9	+1.1
113A	Mohawk Valley, comp=Z,13nm,1.0s	25.42	316	eP	P	13 18 31.7	+1.7
MVCO	Mesa Verde baz=144,SNR=14	25.59	331	P	P	13 18 31.1	-0.7
MVCO	Mesa Verde comp=Z,17nm,0.8s	25.59	331	eP	P	13 18 34.2	+2.4
N43A	Stutzman Famil baz=189,SNR=6.3	25.65	7	P	P	13 18 29.9	-2.1
Y14A	Wickenburg comp=Z,17nm,1.2s	25.67	319	eP	P	13 18 34.6	+2.3
Q24A	Divide comp=Z,6.3nm,0.8s	25.68	338	eP	P	13 18 34.6	+1.9
WUAZ	Wupatki comp=Z,25nm,1.0s	25.78	324	eP	P	13 18 35.5	+2.0
M37A	Trindle Farm, baz=178	25.88	359	P	P	13 18 32.7	-1.4
M38A	Pleasantville baz=180,SNR=6.1	25.89	360	P	P	13 18 32.2	-2.0
M36A	Felix, Anita baz=177	25.96	357	P	P	13 18 33.5	-1.3
M39A	Webster baz=182,SNR=9.1	25.96	2	P	P	13 18 32.6	-2.2
SJG	San Juan comp=Z,58nm,20.4s,baz=263,slow=34	26.02	80	LR	LR	13 27 48.3	
URVA	University of	26.05	29	eP	P	13 18 36.1	+0.6
M43A	Waltham Townsh baz=189	26.16	7	P	P	13 18 34.7	-1.9
IP04	Greensprings comp=Z,9.9nm,0.7s	26.21	28	eP	P	13 18 37.0	-0.1
GLA	Glamis	26.30	316	eP	P	13 18 39.9	+1.9
PV01	Paradox Valley comp=Z,13nm,1.2s	26.37	332	eP	P	13 18 41.1	+2.2
PV15	Paradox Valley comp=Z,11nm,1.0s	26.50	332	eP	P	13 18 42.2	+2.2
PV02	Paradox Valley comp=Z,20nm,1.3s	26.51	332	eP	P	13 18 42.5	+2.5
Y12C	Blythe baz=128	26.52	317	P	P	13 18 39.2	-0.7
SMCO	Snowmass comp=Z,8.2nm,1.0s	26.56	336	eP	P	13 18 41.8	+1.0
PV05	Paradox Valley	26.57	331	eP	P	13 18 42.6	+2.0

comp=Z,15nm,0.8s
L40A **Anamosa** 26.59 3 P P 13 18 38.9 -1.6
baz=184
ISCO **Idaho Springs** 26.59 338 eP P 13 18 41.9 +1.0
comp=Z,3.1nm,0.9s
PV03 **Paradox Valley** 26.60 332 eP P 13 18 42.2 +1.4
comp=Z,16nm,0.9s
L37A **Phoenix Point,** 26.60 359 P P 13 18 39.2 -1.4
baz=179
L36A **Harm Buss Farm** 26.60 358 P P 13 18 39.2 -1.3
baz=177
L38A **Oak Wood Farm,** 26.61 0 P P 13 18 39.5 -1.2
baz=181,SNR=7.6
PDMCI **Parker Dam,Lak** 26.62 319 P P 13 18 42.6 +1.7
baz=130
PV07 **Paradox Valley** 26.65 332 eP P 13 18 42.9 +1.5
comp=Z,12nm,0.8s
PV04 **Paradox Valley** 26.73 332 eP P 13 18 44.1 +2.1
comp=Z,27nm,1.1s
PV10 **Paradox Valley** 26.78 332 eP P 13 18 42.7 +0.1
comp=Z,21nm,1.0s
ATAH **Atahualpa** 26.80 146 P P 13 18 44.7 +1.7
comp=Z,11nm,0.9s,baz=305,slow=3.3,SNR=6.2
PV09 **Paradox Valley** 26.92 332 eP P 13 18 46.4 +2.5
IKP **In-Ko-Pah, Jac** 26.95 314 P P 13 18 44.9 +1.0
baz=124,SNR=5.7
U15A **North Rim** 26.95 324 eP P 13 18 45.8 +1.6
comp=Z,30nm,1.9s
W13A **Hualapai Mount** 26.98 320 eP P 13 18 45.8 +1.4
comp=Z,7.3nm,1.0s
BC3 **Big Chuckawall** 27.08 316 P P 13 18 47.0 +1.9
baz=127,SNR=15
IRM **Iron Mountain** 27.18 317 P P 13 18 46.2 +0.3
baz=128,SNR=7.9
K41A **Shullsburg** 27.19 5 P P 13 18 43.9 -1.9
baz=186
K39A **Oelwein** 27.20 2 P P 13 18 44.0 -1.9
baz=183
K40A **Colesburg** 27.23 3 P P 13 18 45.5 -0.7
baz=184
MONP2 **Monument Peak** 27.30 314 P P 13 18 47.2 0.0
baz=124
JFWS **Jewell Farm** 27.50 5 P P 13 18 46.0 -2.6
baz=186
JFWS **Jewell Farm** 27.50 5 epP pP 13 19 09.8 -0.1
BELC **Belle Mtn. Jos** 27.65 316 P P 13 18 49.4 -0.8
baz=127
KNB **Kanab** 27.67 325 eP P 13 18 52.6 +2.1
comp=Z,9.8nm,1.2s
LDFC **Landfair** 27.73 319 eP P 13 18 54.1 +3.2
comp=Z,15nm,1.0s
J36A **Seneca 1, Swea** 27.82 358 P P 13 18 49.8 -1.6
baz=178
J39A **Decorah** 27.83 2 P P 13 18 50.0 -1.6
baz=183
GMRC **Granite Mounta** 27.90 318 P P 13 18 54.6 +2.1
baz=128
J40A **Soldiers Grove** 27.94 4 P P 13 18 53.0 +0.4
baz=185
J42A **Columbus** 28.00 6 P P 13 18 51.1 -2.0
baz=188
SRU **San Rafael Swe** 28.06 330 eP P 13 18 56.0 +2.1
comp=Z,6.5nm,1.1s
SZCU **Shurtz Canyon** 28.23 325 ePcP PcP 13 22 07.9 +1.1
P18A **Preston Nutter** 28.35 332 eP P 13 18 58.1 +1.6
comp=Z,6.1nm,1.2s
ECSD **EROS Data Cent** 28.35 355 P P 13 18 55.3 -1.0
baz=173
ECSD **EROS Data Cent** 28.35 355 eP P 13 18 55.2 -1.0
comp=Z,7.5nm,0.6s
CCUT **Cedar City** 28.36 325 eP P 13 18 59.6 +3.0
comp=Z,3.7nm,1.0s
I39A **Houston** 28.36 3 P P 13 18 54.8 -1.4
baz=184
P17A **Butcher Ranch,** 28.45 331 eP P 13 18 59.8 +2.4
comp=Z,6.9nm,0.9s
TUQ **Turquoise Moun** 28.47 319 P P 13 18 57.3 -0.2
baz=129
TMUT **Trail Mountain** 28.54 330 eP P 13 18 59.3 +1.0
comp=Z,3.9nm,0.8s
I42A **Draeger Farm,** 28.59 6 P P 13 18 55.6 -2.7
baz=189,SNR=5.1
I42A **Draeger Farm,** 28.59 6 epP pP 13 19 19.1 -0.6
SHPR **Sheep Range** 28.68 321 eP P 13 19 01.1 +1.7
comp=Z,8.2nm,1.3s
SCI2 **San Clemente I** 28.86 312 P P 13 19 02.2 +1.4
baz=121
BFSC **Mount Baldy Ra** 28.91 315 P P 13 19 02.4 +0.9
baz=125
CIS **Catalina Islan** 28.98 313 P P 13 19 02.5 +0.6
baz=122
H38A **Maiden Rock** 29.15 1 P P 13 19 01.0 -2.2
baz=182
H40A **Chili** 29.19 4 P P 13 19 01.4 -2.1
baz=186
H39A **Augusta** 29.19 3 P P 13 19 01.9 -1.8
baz=184
MPU **Maple Canyon** 29.30 330 eP P 13 19 07.1 +2.1
comp=Z,6.5nm,0.9s
K22A **Casper** 29.44 340 P P 13 19 05.1 -1.0
baz=153
TPNV **Topopah Spring** 29.64 321 P P 13 19 08.3 +0.4
baz=130
TPNV **Topopah Spring** 29.64 321 eP P 13 19 10.9 +3.1
comp=Z,12nm,1.5s
LRMC **Laurel Mtn Rad** 29.64 317 P P 13 19 08.1 +0.2
baz=126
G38A **Ridgeland** 29.66 2 P P 13 19 06.0 -1.8
baz=183
SPMN **Marine on St.** 29.70 1 P P 13 19 06.8 -1.3
baz=181
G33A **Ortonville** 29.79 355 P P 13 19 07.5 -1.4
baz=174
G39A **Holcombe** 29.80 3 P P 13 19 07.1 -1.9
baz=184
MPMC **Manual Prospec** 29.86 318 P P 13 19 11.9 +2.0
baz=127
CTU **Camp Tracy** 29.89 331 eP P 13 19 12.1 +2.0
comp=Z,5.2nm,0.8s
RSSD **Black Hills** 30.04 344 P P 13 19 12.2 +0.8
baz=159
RSSD **Black Hills** 30.04 344 eP P 13 19 11.9 +0.5
comp=Z,3.7nm,0.7s
DAC **Darwin (Calif)** 30.06 318 eP P 13 19 13.7 +2.0
comp=Z,4.7nm,1.0s
TCUT **Toone Canyon** 30.07 332 eP P 13 19 12.7 +1.0
comp=Z,35nm,1.4s
KSPA **Keystone Colle** 30.07 27 eP P 13 19 12.7 +1.2
comp=Z,57nm,0.8s
R11A **Troy Canyon, C** 30.17 323 P P 13 19 14.0 +1.4
baz=133
R11A **Troy Canyon, C** 30.17 323 eP P 13 19 15.5 +2.9
comp=Z,3.6nm,1.2s
ISA **Isabella, Lake** 30.27 316 ePcP PcP 13 22 13.4 +1.5
HWUT **Hardware Ranch** 30.53 332 eP P 13 19 17.1 +1.4
comp=Z,5.8nm,1.1s
HWUT ePcP PcP 13 22 12.9 +0.3
BW06 **Boulder Array** 30.64 336 P P 13 19 17.8 +1.0
baz=148
BW06 **Boulder Array** 30.64 336 eP P 13 19 17.1 +0.3
comp=Z,3.7nm,1.2s
PD31 **Pinedale Array** 30.64 336 eP P 13 19 17.4 +0.6
PDAR **Pinedale Array** 30.64 336 P P 13 19 18.1 +1.3
comp=Z,1.0nm,0.6s,baz=140,slow=7.7,SNR=10
PDAR PcP PcP 13 22 13.1 +0.2
comp=Z,0.6nm,0.5s,baz=132,slow=5.3,SNR=5.7
PDAR ScP ScP 13 25 47.5 +0.5
comp=Z,0.3nm,0.6s,baz=128,slow=5.8,SNR=4.4
PDAR LR LR 13 32 35.6
comp=Z,44nm,20.0s,baz=146,slow=38
BGU **Big Grassy Mou** 30.68 330 eP P 13 19 17.0 0.0
comp=Z,4.1nm,0.8s
COWI **Conover** 30.76 6 eP P 13 19 15.1 -2.4
COWI epP pP 13 19 38.3 -0.6
E36A **McGregor** 30.99 360 P P 13 19 17.7 -1.7
baz=180
E34A **Wadena** 31.03 357 P P 13 19 18.1 -1.8
baz=176
E40A **Wakefield** 31.04 4 P P 13 19 17.7 -2.2
baz=186
E35A **Pequot Lakes** 31.04 358 P P 13 19 18.8 -1.1
baz=178
HVU **Hansel Valley** 31.22 331 eP P 13 19 23.0 +1.2
comp=Z,7.5nm,0.9s
D37A **Cotton** 31.63 1 P P 13 19 23.4 -1.8
baz=182
REDW **Red Top Meadow** 31.66 335 eP P 13 19 26.8 +1.1
comp=Z,15nm,0.8s

D33A **AnnSam, Waubun** 31.69 357 P P 13 19 23.8 -1.8
baz=175
NNA **Nana** 31.70 148 LR LR 13 30 33.4
comp=Z,41nm,20.2s,baz=328,slow=33
SNOW **Snow King Moun** 31.70 335 eP P 13 19 26.6 +0.5
comp=Z,29nm,0.8s
NV11 **Mina Array Sit** 31.74 321 eP P 13 19 28.1 +1.7
comp=Z,1.2nm,1.3s
NV11 ePcP PcP 13 22 17.3 +1.4
OMMB **Old Mammoth Mi** 31.76 319 eP P 13 19 29.6 +2.8
comp=Z,5.5nm,1.1s
LOHW **Long Hollow** 31.77 336 eP P 13 19 27.8 +1.1
comp=Z,5.8nm,0.6s
TPAW **Teton Pass** 31.80 335 eP P 13 19 28.5 +1.5
comp=Z,8.6nm,0.8s
MDPB **Devils Postpil** 31.82 319 eP P 13 19 28.6 +1.3
comp=Z,6.5nm,1.1s
NV01 **Mina Array Sit** 31.83 321 eP P 13 19 28.8 +1.5
NV01 ePcP PcP 13 22 17.6 +1.4
NVAR **Mina Array Bea** 31.83 321 P P 13 19 29.9 +2.7
comp=Z,6.9nm,0.7s,baz=136,slow=8.4,SNR=62
NVAR pP pP 13 19 50.9 +2.1
comp=Z,4.0nm,0.7s,baz=130,slow=8.8,SNR=6.2
NVAR PcP PcP 13 22 17.4 +1.3
comp=Z,2.1nm,0.8s,baz=135,slow=3.8,SNR=6.0
NVAR ScP ScP 13 25 53.1 +1.9
comp=Z,0.3nm,0.6s,baz=131,slow=3.7,SNR=2.7
NVAR LR LR 13 33 49.2
comp=Z,51nm,21.8s,baz=232,slow=39
MOOW **Moose Ponds** 31.94 336 eP P 13 19 29.2 +1.1
comp=Z,6.6nm,0.8s
FXWY **Fox Creek** 31.96 335 eP P 13 19 29.6 +1.3
comp=Z,5.6nm,0.8s
RYN **Ryan** 32.09 321 eP P 13 19 31.1 +1.6
comp=Z,4.3nm,0.9s
KVN **Kaiserville** 32.11 322 eP P 13 19 31.4 +1.8
comp=Z,6.5nm,1.0s
IMW **Indian Meadow** 32.14 336 eP P 13 19 30.7 +0.8
comp=Z,6.8nm,0.6s
IMW ePcP PcP 13 22 18.2 +1.3
C34A **RKJ Ranch, Bem** 32.15 358 P P 13 19 28.0 -1.7
baz=177
C35A **Jirik Farms, M** 32.18 359 P P 13 19 28.2 -1.7
baz=179
C36A **Pine Crest Far** 32.23 0 P P 13 19 28.5 -1.9
baz=181
H17A **Grant Village** 32.41 336 eP P 13 19 34.3 +2.0
comp=Z,11nm,1.5s
C31A **Landman Farms,** 32.48 354 P P 13 19 31.5 -1.1
baz=172
BMN **Battle Mountai** 32.52 325 eP P 13 19 33.9 +0.7
comp=Z,4.6nm,1.0s
RLMT **Red Lodge** 32.55 339 P P 13 19 32.8 -0.7
baz=150
RLMT **Red Lodge** 32.55 339 eP P 13 19 33.5 0.0
comp=Z,22nm,2.0s
MDND **Maddock** 32.75 352 P P 13 19 33.8 -1.1
baz=169
MDND **Maddock** 32.75 352 eP P 13 19 33.7 -1.3
comp=Z,25nm,0.8s
YERR **Yerington** 32.75 321 eP P 13 19 35.5 +0.3
comp=Z,22nm,1.5s
B35A **Bob, Littlefor** 32.83 359 P P 13 19 33.5 -2.1
baz=179
AGMN **Agassiz Nation** 32.84 357 P P 13 19 33.2 -2.5
baz=175
AGMN **Agassiz Nation** 32.84 357 eP P 13 19 34.9 -0.8
comp=Z,9.2nm,0.8s
YHB **Horse Butte** 32.95 336 eP P 13 19 37.9 +0.9
comp=Z,10nm,1.3s
B34A **Aery, Baudette** 32.98 358 P P 13 19 34.2 -2.6
baz=178
LAO **LASA Array** 33.00 343 P P 13 19 36.9 -0.3
baz=157
GCMT **Greycliff** 33.27 339 eP P 13 19 40.5 +0.8
PAHR **Pah Rah Range** 33.29 322 eP P 13 19 41.4 +1.4
comp=Z,8.9nm,1.3s
RUBR **Rubicon Trail** 33.35 320 eP P 13 19 41.9 +1.4
comp=Z,84nm,1.9s
HLID **Hailey** 33.37 331 P P 13 19 42.2 +1.6
baz=141,SNR=14
HLID **Hailey** 33.37 331 eP P 13 19 42.5 +2.0
comp=Z,4.7nm,0.8s
A33A **Warroad** 33.46 357 P P 13 19 39.8 -1.3
baz=176
MCMT **McKenzie Canyo** 33.68 334 eP P 13 19 45.7 +2.4
BOZ **Bozeman (W)** 33.83 336 P P 13 19 45.2 +0.7
baz=147
BOZ **Bozeman (W)** 33.83 336 eP P 13 19 45.7 +1.2
comp=Z,9.5nm,1.5s
BEKR **Beckworth** 33.98 321 eP P 13 19 47.9 +2.0
comp=Z,6.6nm,1.0s
DLMT **Dillon** 34.02 335 eP P 13 19 47.7 +1.6
comp=Z,11nm,1.1s
LRM **Limekiln Ridge** 34.34 336 eP P 13 19 50.2 +1.2
WVOR **Wild Horse Val** 34.66 326 eP P 13 19 53.6 +1.8
comp=Z,9.4nm,1.2s
WVOR ePcP PcP 13 22 25.4 +1.5
ULM **Lac du Bonnet** 34.79 357 P P 13 19 50.2 -2.3
comp=Z,2.6nm,0.5s,baz=175,slow=11,SNR=4.4
ULM pP pP 13 20 12.1 -2.1
comp=Z,6.5nm,0.8s,baz=181,slow=10,SNR=3.1
ULM LR LR 13 35 45.6
comp=Z,29nm,19.8s,baz=229,slow=39
EGMT **Eagleton** 35.25 341 P P 13 19 57.5 +0.8
baz=152,SNR=8.6
EGMT **Eagleton** 35.25 341 eP P 13 19 57.3 +0.6
comp=Z,8.3nm,0.7s
F10A **Beach Ranch, E** 36.50 331 eP P 13 20 08.6 +1.2
comp=Z,18nm,0.9s
YBH **Yreka Blue Hor** 36.53 322 P P 13 20 08.3 +0.7
comp=Z,0.8nm,0.5s,baz=191,slow=9.5,SNR=5.5
YBH LR LR 13 36 57.3
comp=Z,58nm,18.2s,baz=158,slow=39
PTGA **Pitinga** 36.55 113 P P 13 20 04.9 -3.2
comp=Z,2.9nm,0.6s,baz=286,slow=21,SNR=5.1
PINE **Pine Mountain** 36.82 326 eP P 13 20 10.6 +0.4
comp=Z,6.0nm,1.0s
J04D **Umpqua Nationa** 37.11 324 P P 13 20 14.2 +1.5
baz=130
I05D **Terrebonne, OR** 37.40 326 P P 13 20 16.3 +1.4
baz=132
I04A **Tendick Farm,** 37.63 325 P P 13 20 17.7 +0.8
baz=130
H04A **Detroit Lake** 38.08 326 eP P 13 20 22.2 +1.5
comp=Z,9.1nm,0.8s
I03D **Drain, OR** 38.10 324 P P 13 20 21.5 +0.8
baz=128
NEW **Newport** 38.20 334 P P 13 20 22.3 +0.7
baz=141
SAML **Samuel** 38.36 127 eP P 13 20 21.0 -2.2
comp=Z,9.4nm,0.8s
LON **Longmire** 39.27 329 eP P 13 20 30.8 +0.2
comp=Z,3.6nm,0.8s
LPAZ **La Paz** 40.07 141 P P 13 20 38.5 +0.3
comp=Z,4.3nm,0.6s,baz=324,slow=6.5,SNR=17
LPAZ LR LR 13 38 28.6
comp=Z,51nm,18.3s,baz=285,slow=38
LPAZ **La Paz** 40.07 141 eP P 13 20 37.2 -1.0
comp=Z,4.4nm,0.6s
MNMC **Minye Minye** 41.47 145 eP P 13 20 48.6 -0.6
comp=Z,18nm,0.8s
LLLB **Lillooet** 42.02 333 eP P 13 20 53.5 +0.3
comp=Z,5.5nm,0.9s
SCHQ **Schefferville** 44.30 22 LR LR 13 42 41.8
comp=Z,72nm,18.6s,baz=246,slow=40
YKA **Yellowknife Ar** 49.37 347 P P 13 21 50.6 -0.2
comp=Z,2.6nm,0.7s,baz=135,slow=9.1,SNR=7.2
YKA pP pP 13 22 12.2 -1.3
comp=Z,3.1nm,0.6s,baz=152,slow=7.4,SNR=4.9
DLBC **Dease Lake** 50.88 336 eP P 13 22 04.2 +1.8
DLBC epP pP 13 22 26.5 +1.3
CPUP **Villa Florida** 54.22 140 P P 13 22 25.5 -1.8
comp=Z,6.4nm,1.0s,baz=335,slow=7.1,SNR=9.1
CPUP pP pP 13 22 49.0 -1.5
comp=Z,2.8nm,0.8s,baz=321,slow=9.7,SNR=3.6
CPUP LR LR 13 43 34.6
comp=Z,47nm,21.3s,baz=5.5,slow=34
CPUP **Villa Florida** 54.22 140 eP P 13 22 26.3 -1.1
comp=Z,12nm,1.3s
CPUP pP pP 13 22 49.0 -1.5
PLCA **Paso Flores** 59.71 160 P P 13 23 06.8 +0.8
comp=Z,8.5nm,0.9s,baz=359,slow=8.5,SNR=12
PLCA **Paso Flores** 59.71 160 eP P 13 23 06.4 +0.5
comp=Z,16nm,1.0s
RIDG **Independ'e Rid** 59.79 336 eP P 13 23 07.9 +1.7
comp=Z,11nm,1.2s
IL1 **Eielson Array** 61.07 337 eP P 13 23 15.1 +0.3

ILAR **Eielson Array** 61.07 337 P P 13 23 16.1 +1.2
comp=Z,2.8nm,0.8s,baz=110,slow=6.0,SNR=33
ILAR pP pP 13 23 37.7 -0.7
comp=Z,4.1nm,1.0s,baz=118,slow=5.1,SNR=8.1
ILB **Eielson Array** 61.07 337 eP P 13 23 15.2 +0.4
RND **Reindeer** 61.24 335 eP P 13 23 16.5 +0.4
RND epP pP 13 23 40.8 +1.0
CCB **Clear Creek Bu** 61.37 336 eP P 13 23 16.6 -0.2
comp=Z,3.4nm,1.0s
MDM **Murphy Dome** 61.67 337 eP P 13 23 19.3 +0.5
comp=Z,3.6nm,0.9s
TRF **Thorofare Moun** 61.85 335 eP P 13 23 20.2 -0.1
TRF epP pP 13 23 44.4 +0.4
BPAW **Bear Paw Mtn.** 62.39 335 eP P 13 23 24.3 +0.5
comp=Z,5.3nm,0.9s
CAST **Castle Rocks** 62.59 334 eP P 13 23 25.4 +0.3
comp=Z,22nm,0.6s
MLY **Manley** 62.66 336 eP P 13 23 25.8 +0.2
comp=Z,7.2nm,0.8s
TOLK **Toolik Lake Re** 63.78 340 P P 13 23 33.7 +0.8
baz=117,SNR=7.5
TOLK **Toolik Lake Re** 63.78 340 eP P 13 23 33.1 +0.2
comp=Z,5.7nm,0.6s
UNV **Unalaska Valle** 67.84 322 eP P 13 24 00.1 +1.0
comp=Z,21nm,1.2s
JMIC **Jan Mayen** 73.79 20 LR LR 13 58 08.1
comp=Z,49nm,18.3s,baz=252,slow=37
EKA **Eskdalemuir Ar** 77.48 36 P P 13 24 54.4 -1.8
comp=Z,0.2nm,0.3s,baz=285,slow=5.6,SNR=5.3
EKA pP pP 13 25 19.6 -1.1
comp=Z,7.3nm,0.9s,baz=284,slow=5.1,SNR=10.0
BILL **Bilibino** 79.70 338 eP P 13 25 08.9 +0.7
comp=Z,4.7nm,0.7s
MDT **Midelt** 80.63 59 LR LR 13 56 21.3
comp=Z,37nm,20.1s,baz=149,slow=32
NB2 **NORSAR Subarra** 83.44 28 P pP 13 25 54.4 +1.5
comp=Z,1.6nm,0.7s,baz=290,slow=5.3
NOA **NORSAR Array B** 83.44 28 LR LR 14 01 40.1
comp=Z,18nm,20.5s,baz=280,slow=35
ARCES **ARCESS Array B** 85.14 18 P P 13 25 36.7 +0.2
comp=Z,0.5nm,0.5s,baz=308,slow=4.0,SNR=4.9
TIXI **Tiksi** 88.62 348 eP P 13 25 53.0 -0.2
comp=Z,2.5nm,0.6s
TIXI epP pP 13 26 19.1 +0.8
MA2 **Magadan** 89.30 333 eP P 13 25 57.4 +0.8
comp=Z,5.9nm,1.0s
TORD **Torodi Ar. Bea** 91.16 76 LR LR 14 02 27.4
comp=Z,26nm,21.5s,baz=160,slow=33
KURK **Kurchatov** 113.74 6 PKiKP PKiKP 13 31 37.8 -0.9
KURBB **Kurchatov Arra** 113.83 6 PKiKP PKiKP 13 31 37.8 -1.0
comp=Z,0.3nm,0.3s,baz=343,slow=2.0,SNR=3.1
MKAR **Makanchi Array** 117.93 4 PKP PKPdf 13 31 46.5 -0.4
comp=Z,0.5nm,0.6s,baz=4.7,slow=3.0,SNR=3.3
BOSA **Boshof** 122.00 114 PKP PKPdf 13 31 54.9 -0.5
comp=Z,2.2nm,0.7s,baz=96,slow=4.6,SNR=3.2
KSH **Kashi** 124.41 10 PKP PKPdf 13 32 01.4 +1.7
KSH PP PP 13 33 51.0 +5.9
KSH AMB AMB
comp=Z,210nm,5.1s
MATP **Matopo** 124.54 104 PKP PKPdf 13 31 59.6 -0.8
comp=Z,1.6nm,0.7s,baz=303,slow=1.7,SNR=3.1
MAW **Mawson** 125.60 169 PKP PKPdf 13 31 59.9 -0.9
comp=Z,3.1nm,0.7s,baz=260,slow=6.3,SNR=4.1
STKA **Stephens Creek** 127.74 242 PKP PKPdf 13 32 06.5 +0.4
comp=Z,5.0nm,0.8s,baz=15,slow=0.9,SNR=7.8
CD2 **Chengdu** 131.12 341 PKP PKPdf 13 32 10.7 -2.0
WRA **Warramunga Arr** 134.61 257 PKP PKPdf 13 32 19.7 +0.3
comp=Z,2.0nm,0.6s,baz=82,slow=2.1,SNR=12
WRA pPKP pPKPdf 13 32 44.9 -0.7
comp=Z,0.8nm,0.7s,baz=75,slow=1.6,SNR=3.0
ASAR **Alice Springs** 135.03 252 PKhKP PKPpre 13 32 12.3
comp=Z,1.5nm,1.0s,baz=108,slow=3.8,SNR=13
ASAR PKP PKPdf 13 32 20.9 +0.7
comp=Z,1.6nm,0.9s,baz=95,slow=2.0,SNR=12
ASAR pPKP pPKPdf 13 32 46.2 -0.2
comp=Z,0.5nm,0.6s,baz=82,slow=2.0,SNR=2.1
CMAR **Chiang Mai Arr** 144.26 340 PKP PKPbc 13 32 35.5 +0.1
comp=Z,2.1nm,0.8s,baz=348,slow=2.8,SNR=8.4
CMAR pPKP pPKPdf 13 33 01.4 -1.9
comp=Z,1.3nm,0.7s,baz=357,slow=2.9,SNR=2.3

ISCJB ***12*** *13:13:57.6±0.6, 55°.97S±0°.09×27°.5W±0°.2, h112km, mb4.2/9, Error ellipse: s-maj=18.0km s-min=11.3km az=162.3*
IDC ***12*** *13:13:59.9±6.7, 55°.97S×27°.37W, h116km±62km, mb3.9/9, mb1 4.0/10, mb1mx3.9/30, mbtmp4.3/10, Error ellipse: s-maj=24.3km s-min=17.0km az=73.0*
NEIC ***12*** *13:13:59.4±3.6, 55°.99S×27°.46W, h115km±34km, mb4.6/1, Error ellipse: s-maj=15.2km s-min=11.0km az=55.0*
ISC 12 13:13:59.2±0.7, 56°.05±0°.1×27°.5W±0°.1, h112km, n17, σ0=55/17, mb4.3/8, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	16.92	158	P	P	13 17 49.4	+0.5
VNA3	Neumayer Olymp	17.11	160	P	P	13 17 50.8	-0.2
SNAA	Sanae	18.87	156	P	P	13 18 10.4	+0.1
SNAA	Sanae	18.87	156	P	P	13 18 10.2	-0.1
3.3nm,0.3s,baz=298,slow=12,SNR=245							
PMSA	Palmer Station	19.84	229	P	P	13 18 20.0	-0.8
17nm,0.5s							
QSPA	South Pole Qui	34.28	180	P	P	13 20 34.8	+0.5
2.7nm,0.5s,baz=194,slow=2.3,SNR=13							
QSPA	South Pole Qui	34.28	180	eP	P	13 20 34.8	+0.5
14nm,0.6s							
CPUP	Villa Florida	36.65	312	P	P	13 20 54.5	-0.3
1.0nm,0.5s,baz=173,slow=8.1,SNR=2.9							
MAW	Mawson	40.30	144	P	P	13 21 24.8	+0.1
1.0nm,0.4s,baz=264,slow=10,SNR=3.1							
VNDA	Vanda	46.64	183	P	P	13 22 15.8	+0.2
2.5nm,0.6s,baz=187,slow=7.2,SNR=23							
LPAZ	La Paz	50.21	305	P	P	13 22 44.9	+0.6
2.2nm,0.4s,baz=169,slow=5.2,SNR=6.8							
MATP	Matopo	54.40	73	P	P	13 23 14.1	-0.6
2.1nm,0.7s,baz=215,slow=7.3,SNR=3.2							
DBIC	Dimbokro	65.16	25	P	P	13 24 28.4	+0.2
2.7nm,0.6s,baz=198,slow=6.4,SNR=4.4							
TORD	Torodi Ar. Bea	73.06	30	P	P	13 25 17.4	+0.6
3.6nm,0.5s,baz=199,slow=6.3,SNR=40							
ASAR	Alice Springs	99.11	163	P	Pdif	13 27 27.4	-0.2
0.4nm,0.7s,baz=187,slow=4.5,SNR=6.9							
ILAR	Eielson Array	149.95	312	PKPbc	PKPbc	13 33 34.8	0.0
2.9nm,0.7s,baz=134,slow=2.0,SNR=28							
SONM	Songino Array	150.87	87	PKPbc	PKPbc	13 33 36.5	-1.2
0.4nm,0.3s,baz=259,slow=3.2,SNR=5.2							

NNC 12 13:16:15.9±5.2, 36°.83N×69°.87E, h0km, mb4.0, mpv3.7, 4C-4D, Error ellipse: s-maj=43.3km s-min=36.8km az=133.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	4.27	41	⇑Pn	Pn	13 17 24.0	+1.6
4.6nm,0.4s							
SFK				⇑Sn	Sn	13 18 16.0	+3.0
52nm,0.4s							
MNAS	Manas	6.00	19	⇑Pn	Pn	13 17 46.5	+0.4
6.6nm,0.8s							
MNAS				⇓Sn	Sn	13 18 57.0	+1.4
7.4nm,0.7s							
KK31	Karatay Array	6.28	4	⇓Pn	Pn	13 17 49.7	-0.2
1.2nm,0.5s,baz=191,slow=13,SNR=14							
KK31				⇑Sn	Sn	13 19 05.2	+2.8
0.9nm,0.4s,baz=198,slow=24,SNR=4.0							
UCH	Uchtor	6.47	32	P	Pn	13 17 52.0	-0.8
SNR=8.8							
EKS2	Erkin-Say	6.55	26	P	Pn	13 17 53.5	-0.2
SNR=9.2							
AAK	Ala-Archa	6.80	30	Pn	Pn	13 17 56.1	-1.1
7.3nm,0.5s							
AAK				Sn	Sn	13 19 13.5	-1.9
3.9nm,0.5s							
AAK	Ala-Archa	6.80	30	P	Pn	13 17 56.4	-0.8
SNR=11							
KBK	Karagaybulak	7.01	32	P	Pn	13 17 59.0	-0.9
SNR=5.3							
USP	Ospenovka	7.34	27	P	Pn	13 18 03.4	-1.0
SNR=6.7							
TKM2	Tokmak 2	7.50	34	⇓Pn	Pn	13 18 04.1	-2.8
2.4nm,0.6s							
TKM2				⇓Sn	Sn	13 19 30.8	-2.0
3.7nm,1.0s							
TKM2	Tokmak 2	7.50	34	P	Pn	13 18 04.7	-2.1
SNR=5.7							

*IDC **12** 13:22:13.0±1.4, 23°.46N×93°.87E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.4/67, mbtmp3.5/5, ML3.1/1, Error ellipse: s-maj=103.6km s-min=21.7km az=53.0*
*ISCJB **12** 13:22:23.0±1.1, 23°.5N±0°.4×94°.0E±0°.5, h100km, mb3.6/4, Error ellipse: s-maj=89.3km s-min=11.1km az=137.8*
ISC 12 13:22:23.5±1.0, 23°.5N±0°.5×94°.0E±0°.6, h100km, n6, σ2§64/7, mb3.6/4, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**2.87**	**317**	*e*PN	**Pn**	**13 23 08.0**	**+0.3**
SHL				*e*SN	**Sn**	**13 23 39.0**	**-2.7**
CMAR	**Chiang Mai Arr**	**6.77**	**136**	Pn	**Pn**	**13 23 57.2**	**-3.0**
	0.1nm,0.3s,baz=314,slow=14,SNR=2.8						
MKAR	**Makanchi Array**	**25.13**	**341**	P	**P**	**13 27 39.4**	**+0.3**
	0.4nm,0.5s,baz=156,slow=9.7,SNR=4.7						
AKASG	**Malin Array Be**	**56.35**	**316**	P	**P**	**13 31 55.1**	**+1.0**
	0.5nm,0.3s,baz=78,slow=7.4,SNR=2.5						
WRA	**Warramunga Arr**	**58.36**	**134**	P	**P**	**13 32 10.2**	**+1.6**
	0.3nm,0.7s,baz=318,slow=7.7,SNR=11						
ASAR	**Alice Springs**	**60.78**	**138**	P	**P**	**13 32 27.9**	**+2.8**
	0.5nm,0.6s,baz=319,slow=6.8,SNR=11						

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*MOS **12** 13:40:39.4±1.1, 28°.07N×104°.46E, h15km, mb4.7/42, Error ellipse: s-maj=7.9km s-min=5.4km az=107.1*
*BJI **12** 13:40:39.5, 28°.10N×104°.28E, h9km, mb4.7/40, mB4.7/29, ML4.6/24, Ms4.5/45, Ms7 4.2/37*
*ISCJB **12** 13:40:40.3±1.0, 28°.05N±0°.03×104°.35E±0°.03, h22km±8km, mb4.5/77, MS3.9/37, Error ellipse: s-maj=4.6km s-min=3.9km az=1.4*
*IDC **12** 13:40:42.0±2.6, 28°.01N×104°.42E, h21km±16km, mb4.2/34, mb1 4.3/36, mb1mx4.2/74, mbtmp4.3/36, ML4.0/2, MS3.7/26, Ms1 3.8/26, ms1mx3.6/66, Error ellipse: s-maj=15.0km s-min=10.5km az=24.0*
*NEIC **12** 13:40:42.1±0.2, 28°.11N×104°.42E, mb4.7/26, Error ellipse: s-maj=5.0km s-min=4.5km az=134.0*
ISC 12 13:40:42.0±0.5, 28°.11N±0°.03×104°.44E±0°.04, h18km±1km, h19km:pP-P, n185, σ1§85/210, mb4.5/77, MS3.9/38, 10C-2D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GYA	**Guiyang**	**2.58**	**129**	⇑*i*Pn	**Pn**	**13 41 24.9**	**+2.1**
GYA				Pg	**Pg**	**13 41 30.7**	**-0.7**
GYA				Sn	**Sn**	**13 41 55.7**	**+1.9**
GYA				Sg	**Sg**	**13 42 02.8**	**-2.0**
GYA				smax	smax		
	comp=N,4μm,0.7s						
GYA				smax	smax		
	comp=E,4μm,0.7s						
CD2	**Chengdu**	**2.85**	**348**	Pn	**Pn**	**13 41 28.0**	**+1.4**
CD2				Sn	**Sn**	**13 42 03.0**	**+2.4**
CD2				Sg	**Sg**	**13 42 14.2**	**+0.4**
CD2				smax	smax		
	comp=N,8μm,0.8s						
CD2				smax	smax		
	comp=E,14μm,0.7s						
KMI	**Kunming**	**3.34**	**207**	Pn	**Pn**	**13 41 34.5**	**+1.1**
KMI				Sn	**Sn**	**13 42 14.7**	**+2.0**
KMI				smax	smax		
	comp=N,450nm,1.3s						
KMI				smax	smax		
	comp=E,330nm,1.2s						
KMI				LR	LR		
	comp=N,6μm,4.8s						
KMI				LR	LR		
	comp=E,5μm,4.6s						
KMI				LR	LR		
	comp=Z,2μm,5.8s						
ENH	**Enshi**	**4.92**	**63**	*e*Pn	**Pn**	**13 41 57.8**	**+2.8**
XAN	**Xi'an**	**7.05**	**32**	Pn	**Pn**	**13 42 24.3**	**0.0**
XAN				Sn	**Sn**	**13 43 42.0**	**-2.1**
XAN				Sg	**Sg**	**13 44 25.1**	**-3.2**
XAN				smax	smax		
	comp=N,1μm,0.7s						
XAN				smax	smax		
	comp=E,1μm,1.2s						
XAN				LR	LR		
	comp=N,2μm,4.7s						
XAN				LR	LR		
	comp=E,3μm,5.1s						
XAN				LR	LR		
	comp=Z,2μm,12.3s						
LZH	**Lanzhou**	**7.97**	**357**	*e*P	**Pn**	**13 42 39.1**	**+2.1**
LZH				pP	Pb	13 42 43.8	-16
LZH				sP		13 42 46.8	
LZH				S	Sn	13 44 17.1	+10
LZH				pmax	pmax		
	comp=Z,32nm,1.0s						
LZH				pmax	pmax		
	comp=Z,190nm,4.3s						
LZH				LR	LR		
	comp=E,3μm,6.5s						
LZH				LR	LR		
	comp=Z,5μm,6.5s						
WHN	**Wuhan**	**8.99**	**72**	⇑P	**Pn**	**13 42 52.4**	**+1.6**
WHN				S	**Sn**	**13 44 28.3**	**-3.3**
WHN				LR	LR		
	comp=E,3μm,11.4s						
WHN				LR	LR		
	comp=Z,4μm,8.7s						
GZH	**Guangzhou**	**9.47**	**120**	P	**Pn**	**13 42 57.3**	**-0.1**
GZH				LR	LR		
	comp=E,2μm,4.5s						
QIZ	**Qiongzhong**	**10.30**	**150**	P	**Pn**	**13 43 11.0**	**+2.1**
QIZ				S	**Sn**	**13 45 07.2**	**+3.2**
QIZ				pmax	pmax		
	comp=Z,23nm,1.6s						
QIZ				pmax	pmax		
	comp=Z,380nm,3.2s						
QIZ				LR	LR		
	comp=E,2μm,8.0s						
QIZ				LR	LR		
	comp=Z,1μm,12.9s						
CHTO	**Chiang Mai**	**10.53**	**210**	*e*Pn	**Pn**	**13 43 13.8**	**+1.7**
CHTO	**Chiang Mai**	**10.53**	**210**	*e*P	**Pn**	**13 43 13.8**	**+1.7**
CM31	**Chiang Mai Arr**	**10.85**	**209**	*e*Pn	**Pn**	**13 43 16.0**	**-0.3**
CMAR	**Chiang Mai Arr**	**10.85**	**209**	Pn	**Pn**	**13 43 16.0**	**-0.3**
	0.3nm,0.3s,baz=16,slow=11,SNR=30						
CMAR				Lg	Lg	13 46 34.5	
	0.2nm,0.3s,baz=23,slow=30,SNR=4.2						
CMAR				LR	LR	13 48 00.1	
	comp=Z,801nm,18.2s,baz=26,slow=41						
CMAR	**Chiang Mai Arr**	**10.85**	**209**	*i* P	**Pn**	**13 43 19.2**	**+2.8**
CMAR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CM01	**Chiang Mai Arr**	**10.87**	**209**	*e*Pn	**Pn**	**13 43 17.8**	**+1.1**
LSA	**Lhasa**	**11.75**	**281**	P	**Pn**	**13 43 31.2**	**+2.1**
LSA	**Lhasa**	**11.75**	**281**	*e*Pn	**Pn**	**13 43 29.3**	**+0.2**
LSA	**Lhasa**	**11.75**	**281**	*e*P	**Pn**	**13 43 29.3**	**+0.2**
GTA	**Gaotai**	**11.91**	**342**	⇑P	**Pn**	**13 43 32.2**	**+1.3**
GTA				pP		13 43 36.7	
GTA				sP		13 43 39.2	
GTA				S	**Sn**	**13 45 47.8**	**+4.4**
GTA				sS		13 45 54.0	
GTA				SS	**SnSn**	**13 46 01.6**	**+5.9**
GTA				pmax	pmax		
	comp=Z,7.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,64nm,4.6s						
GTA				LR	LR		
	comp=Z,880nm,13.6s						
GTA				LR	LR		
	comp=Z,2μm,13.6s						
GTA				LR	LR		
	comp=Z,1μm,12.4s						
PBKT	**Sadao Pong**	**11.92**	**196**	*e*Pn	**Pn**	**13 43 32.1**	**+1.1**
NJ2	**Nanjing**	**13.09**	**69**	*e*P	**Pn**	**13 43 50.5**	**+3.5**
NJ2				S	**Sn**	**13 46 14.7**	**+2.6**
NJ2				pmax	pmax		
	comp=Z,23nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,190nm,4.0s						
NJ2				LR	LR		
	comp=Z,2μm,11.9s						
NJ2				LR	LR		
	comp=Z,1μm,8.7s						
BTO	**Baotou**	**13.29**	**19**	*e*P	**Pn**	**13 43 47.9**	**-1.9**
TIA	**Tai'an**	**13.44**	**50**	P	**Pn**	**13 43 53.7**	**+2.0**
TIA				pmax	pmax		
	comp=Z,16nm,1.6s						
TIA				LR	LR		
	comp=Z,250nm,9.8s						
TIA				LR	LR		
	comp=Z,470nm,11.2s						
HHC	**Hu-ho-hao-te**	**14.00**	**23**	*e*P	**Pn**	**13 44 02.5**	**+3.1**
HHC				pmax	pmax		
	comp=Z,17nm,0.6s						
HHC				pmax	pmax		
	comp=Z,64nm,5.8s						
ODAN	**Odare**	**15.18**	**269**	*e*P	**Pn**	**13 44 13.8**	**-1.9**
	comp=Z,27nm,0.6s						
BJT	**Baijiatuau**	**15.33**	**36**	*e*Pn	**Pn**	**13 44 16.8**	**-0.6**
	comp=Z,51nm,1.4s						
BJT	**Baijiatuau**	**15.33**	**36**	*e*P	**Pn**	**13 44 16.8**	**-0.6**
BJT				pmax	pmax		
	comp=Z,51nm,1.4s						
RAMN	**Ramite**	**15.87**	**270**	*e*P	**Pn**	**13 44 21.5**	**-3.1**
	comp=Z,38nm,0.8s						
JIRN	**Jiri**	**16.14**	**273**	*e*P	**Pn**	**13 44 25.0**	**-3.3**
	comp=Z,47nm,0.6s						
GUN	**Gumba**	**16.39**	**274**	*e*P	**Pn**	**13 44 28.5**	**-3.0**
	comp=Z,60nm,1.0s						
PKI	**Pulchoki**	**16.84**	**273**	*e*P	**Pn**	**13 44 33.8**	**-3.3**
PKIN	**Phulchoki**	**16.85**	**273**	*e*P	**Pn**	**13 44 34.0**	**-3.2**
KKN	**Kakani**	**16.93**	**273**	*e*P	**Pn**	**13 44 35.9**	**-2.3**
	comp=Z,58nm,0.7s						
DMN	**Daman**	**17.10**	**273**	*e*P	**Pn**	**13 44 37.3**	**-3.1**
GKN	**Gorkha**	**17.48**	**274**	*e*P	**Pn**	**13 44 41.3**	**-3.7**
	comp=Z,18nm,0.5s						
DANN	**Dangsing**	**18.22**	**276**	*e*P	**Pn**	**13 44 50.1**	**-4.2**
	comp=Z,46nm,0.6s						
KOLN	**Koldanda**	**18.41**	**274**	*e*P	**P**	**13 44 52.9**	**-3.5**
PYUN	**Piuthan**	**18.92**	**275**	*e*P	**P**	**13 44 58.9**	**-3.1**
	comp=Z,92nm,0.9s						
SONM	**Songino Array**	**19.75**	**4**	P	**Pn**	**13 45 12.4**	**0.0**
	comp=Z,0.6nm,0.3s,baz=187,slow=11,SNR=17						
SONM				Lg	Lg	13 51 25.7	
	comp=Z,0.1nm,0.3s,baz=189,slow=26,SNR=3.7						
SONM				LR	LR	13 53 35.4	
	comp=Z,165nm,19.5s,baz=197,slow=39						
SONA1	**Songino Array**	**19.77**	**4**	*e*P	**P**	**13 45 10.5**	**-0.6**
ULN	**Ulaanbaatar**	**19.83**	**5**	*e*P	**P**	**13 45 11.9**	**+0.1**
	comp=Z,7.8nm,0.9s						
ULN	**Ulaanbaatar**	**19.83**	**5**	*c*eP	**Pn**	**13 45 13.1**	**-0.3**
ULN				pmax	pmax		
	comp=Z,14nm,1.7s						
WMQ	**Urumqi**	**20.66**	**324**	P	**P**	**13 45 21.1**	**+0.4**
WMQ				sP	sP	13 45 31.1	+2.7
WMQ				S	**S**	**13 49 05.1**	**-5.8**
WMQ				ScP	**ScP**	**13 53 08.9**	**+2.6**
WMQ				pmax	pmax		
	comp=Z,30nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,310nm,3.6s						
WMQ				LR	LR		
	comp=Z,660nm,8.9s						
WMQ				LR	LR		
	comp=Z,510nm,20.5s						
TGY	**Tagaytay City**	**20.73**	**129**	LR	LR	13 53 02.1	
	comp=Z,216nm,19.6s,baz=329,slow=36						
TJN	**Taejon**	**21.04**	**61**	*c*eP	**P**	**13 45 26.7**	**+1.9**
JOW	**Kunigami**	**21.19**	**88**	P	**P**	**13 45 27.7**	**+1.2**
	comp=Z,30nm,0.4s,baz=92,slow=4.1,SNR=26						
JOW				LR	LR	13 54 04.6	
	comp=Z,330nm,18.6s,baz=270,slow=38						
JOW	**Kunigami**	**21.19**	**88**	*e*P	**P**	**13 45 26.5**	**+0.1**
	comp=Z,209nm,1.7s						
KS15	**Wonju Array Si**	**21.76**	**59**	*e*P	**P**	**13 45 33.0**	**+0.5**
KSAR	**Wonju Array Be**	**21.76**	**59**	P	**P**	**13 45 33.4**	**+0.9**
KSAR	**Wonju Array Be**	**21.76**	**59**	P	**P**	**13 45 33.4**	**+0.9**
KS01	**Wonju Array Si**	**21.78**	**59**	*e*P	**P**	**13 45 33.0**	**+0.3**
KSRS	**Korea Array**	**21.79**	**59**	P	**P**	**13 45 33.4**	**+0.6**
	comp=Z,14nm,0.9s,baz=243,slow=9.8,SNR=25						
KSRS				LR	LR	13 55 15.0	
	comp=Z,392nm,18.3s,baz=256,slow=40						
ZAK	**Zakamensk**	**22.26**	**358**	*e*P	**P**	**13 45 37.8**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,12nm,1.1s						
CN2	**Changchun**	**23.02**	**42**	*e*P	**P**	**13 45 46.5**	**+0.6**
CN2				*e*S	**S**	**13 49 51.5**	**-4.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=Z,310nm,13.0s						
CN2				LR	LR		
	comp=Z,450nm,13.0s						
CN2				LR	LR		
	comp=Z,470nm,15.0s						
JNU	**Nakatsue**	**23.27**	**71**	P	**P**	**13 45 48.9**	**+0.3**
	comp=Z,59nm,1.0s,baz=288,slow=3.2,SNR=15						
JNU				LR	LR	13 55 10.6	
	comp=Z,324nm,19.8s,baz=266,slow=37						
JNU	**Nakatsue**	**23.27**	**71**	*e*P	**P**	**13 45 48.9**	**+0.3**
	comp=Z,76nm,1.0s						
MOY	**Mondy**	**23.67**	**355**	*e*P	**P**	**13 45 56.1**	**+3.6**
PDGK	**Podgornoye**	**25.19**	**314**	P	**P**	**13 46 05.5**	**-1.0**
PDGK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MK01	**Makanchi Array**	**25.46**	**323**	*e*P	**P**	**13 46 08.3**	**-0.6**
MK31	**Makanchi Array**	**25.48**	**323**	*e*P	**P**	**13 46 08.5**	**-0.5**
MK31	**Makanchi Array**	**25.48**	**323**	*e*P	**P**	**13 46 08.5**	**-0.5**
MKAR	**Makanchi Array**	**25.48**	**323**	P	**P**	**13 46 09.2**	**+0.2**
	comp=Z,6.0nm,0.8s,baz=124,slow=10,SNR=33						
MKAR				ScP	**ScP**	**13 53 18.0**	**-0.9**
	comp=Z,1.4nm,0.8s,baz=127,slow=3.2,SNR=6.2						
MKAR				LR	LR	13 57 04.8	
	comp=Z,335nm,18.2s,baz=112,slow=38						
MKAR	**Makanchi Array**	**25.48**	**323**	*e*P	**P**	**13 46 08.7**	**-0.3**
	comp=Z,68nm,0.6s						
MKAR				ScP	**ScP**	**13 53 18.0**	**-0.9**
MAKZ	**Makanchi**	**25.66**	**323**	*e*P	**P**	**13 46 10.5**	**-0.1**
	comp=Z,14nm,1.0s						
MAKZ	**Makanchi**	**25.66**	**323**	*e*P	**P**	**13 46 10.5**	**-0.1**
MAKZ				pmax	pmax		
	comp=Z,14nm,1.0s						
PSI	**Prapat**	**25.71**	**193**	LR	LR	13 55 55.4	
	comp=Z,350nm,18.8s,baz=271,slow=36						
HYB	**Hyderabad**	**26.08**	**251**	*i* P	**P**	**13 46 16.0**	**+1.3**
KSH	**Kashi**	**26.14**	**303**	P	**P**	**13 46 16.7**	**+1.6**
KSH				pP	sP	13 46 24.4	+1.4
KSH				PP	**PnPn**	**13 47 00.0**	**+6.3**
KSH				S	**S**	**13 50 43.2**	**-2.8**
KSH				sS	sS	13 50 56.1	+0.8
KSH				SS	**SnSn**	**13 51 53.4**	**+8.7**
KSH				pmax	pmax		
	comp=Z,13nm,0.7s						
KSH				pmax	pmax		
	comp=Z,290nm,5.4s						
KSH				LR	LR		
	comp=Z,440nm,8.6s						
KSH				LR	LR		
	comp=Z,520nm,9.9s						
KSH				LR	LR		
	comp=Z,700nm,15.0s						
NRN	**Naryn**	**26.74**	**307**	*e*P	**P**	**13 46 20.8**	**0.0**
	comp=Z,4.9nm,0.9s						
NRN	**Naryn**	**26.74**	**307**	*e*P	**P**	**13 46 20.8**	**0.0**
NRN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
USRK	**Ussuriysk Ar.**	**27.26**	**47**	P	**P**	**13 46 25.4**	**+0.3**
	comp=Z,21nm,0.9s,baz=243,slow=9.8,SNR=16						
USRK				LR	LR	13 58 02.1	
	comp=Z,131nm,18.3s,baz=233,slow=38						
NIL	**Nilore**	**27.27**	**289**	*e*P	**P**	**13 46 25.8**	**+0.5**
NIL				*e*pP	**sP**	**13 46 34.2**	**+1.1**
NIL	**Nilore**	**27.27**	**289**	*e*P	**P**	**13 46 25.8**	**+0.5**
NIL				*e**PP	**sP**	**13 46 34.3**	**+1.1**
SFK	**Sufi-Kurgan**	**28.10**	**303**	P	**P**	**13 46 34.2**	**+1.3**
SFK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
AAK	**Ala-Archa**	**28.22**	**309**	P	**P**	**13 46 34.3**	**+0.5**
	comp=Z,1.4nm,0.3s,baz=135,slow=5.7,SNR=1.9						
AAK				LR	LR	14 00 24.7	
	comp=Z,100nm,19.8s,baz=77,slow=42						
ZAA0	**Zalesovo Array**	**29.55**	**336**	*e*P	**P**	**13 46 42.9**	**-2.5**
	comp=Z,7.3nm,1.0s						
ZALV	**Zalesovo Beam**	**29.55**	**336**	P	**P**	**13 46 45.1**	**-0.3**
	comp=Z,2.0nm,0.4s,baz=142,slow=8.5,SNR=14						
ZALV				LR	LR	13 59 07.9	
	comp=Z,196nm,19.8s,baz=76,slow=37						
ZALV	**Zalesovo Beam**	**29.55**	**336**	*e*P	**P**	**13 46 43.8**	**-1.5**
MJAR	**Matsushiro Arr**	**29.64**	**65**	P	**P**	**13 46 45.5**	**-0.8**
	comp=Z,3.2nm,0.9s,baz=266,slow=10,SNR=5.9						
MJAR				LR	LR	13 59 45.8	
	comp=Z,234nm,19.1s,baz=260,slow=38						
KLR	**Kul'dur**	**29.72**	**37**	P	**P**	**13 46 46.0**	**-0.9**
	comp=Z,0.5nm,0.9s,baz=259,slow=11,SNR=14						
KLR				LR	LR	13 59 06.4	
	comp=Z,18nm,18.9s,baz=226,slow=37						
KLR	**Kul'dur**	**29.72**	**37**	*i* P	**P**	**13 46 46.6**	**-0.3**
KURBB	**Kurchatov Arra**	**29.84**	**326**	P	**P**	**13 46 47.5**	**-0.5**
	comp=Z,7.7nm,1.1s,baz=130,slow=10,SNR=16						
KURBB				ScP	**ScP**	**13 53 31.2**	**-0.9**
	comp=Z,0.4nm,0.7s,baz=150,slow=2.0,SNR=3.8						
KURK	**Kurchatov**	**29.85**	**326**	*e*P	**P**	**13 46 46.1**	**-1.9**
KURK				*e*pP	**pP**	**13 46 52.6**	**-1.0**
KURK				ScP	**ScP**	**13 53 31.2**	**-0.9**
KURK	**Kurchatov**	**29.85**	**326**	*c*eP	**P**	**13 46 48.1**	**+0.1**
KURK				pmax	pmax		
	comp=Z,15nm,1.2s						
PALK	**Pallekele**	**30.55**	**232**	LR	LR	14 01 14.0	
	comp=Z,96nm,18.1s,baz=115,slow=40						
ZEA	**Zeya**	**30.60**	**27**	*e*P	**P**	**13 46 55.2**	**+0.6**
ZEA				pmax	pmax		
	comp=E,16nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,18nm,0.8s						
JHJ	**Hachijo jima 2**	**30.74**	**72**	LR	LR	14 00 13.8	
	comp=Z,128nm,20.5s,baz=262,slow=38						
OTUK	**Ortayu**	**31.92**	**318**	P	**P**	**13 47 06.6**	**+0.2**
OTUK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ASAJ	**Asahikawa**	**34.37**	**52**	LR	LR	14 01 20.5	
	comp=Z,82nm,19.3s,baz=203,slow=36						
YSS	**Yuzh-Sakhalins**	**35.30**	**47**	*e*P	**P**	**13 47 39.0**	**+3.3**
YSS				*e*		13 47 47.8	
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YSS				MLR	MLR		
	comp=N,200nm,15.0s						
YSS				MLR	MLR		
	comp=Z,420nm,15.0s						
YSS				MLR	MLR		
	comp=E,410nm,13.0s						
BVAR	**Borovoye Array**	**35.35**	**324**	P	**P**	**13 47 36.8**	**+0.7**
	comp=E,1.2nm,0.6s,baz=111,slow=7.9,SNR=5.4						
BVAR				ScP	**ScP**	**13 53 50.0**	**-1.0**
	comp=E,0.3nm,0.2s,baz=99,slow=4.5,SNR=2.9						
BVAR				LR	LR	14 02 45.5	
	comp=E,168nm,18.5s,baz=99,slow=37						
BRVK	**Borovoye**	**35.42**	**324**	*c*eP	**P**	**13 47 38.4**	**+1.7**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NKL	**Nikolayevsk**	**36.56**	**37**	*e*P	**P**	**13 47 45.8**	**-0.6**
TYV	**Tymovskoe**	**36.65**	**41**	*e*P	**P**	**13 47 49.3**	**+2.1**
TYV				*e*		13 53 32.2	
TYV				pmax	pmax		
	comp=Z,18nm,1.0s						
YAK	**Yakutsk**	**37.81**	**19**	*e*P	**P**	**13 47 55.5**	**-1.5**
YAK				*e*pP	**pP**	**13 48 01.4**	**-1.2**
YAK	**Yakutsk**	**37.81**	**19**	*e*P	**P**	**13 47 56.3**	**-0.7**
YAK				*e**PP	**sP**	**13 48 06.2**	**+1.3**
YAK				*e*		13 50 13.1	
YAK				*e*S	**S**	**13 53 45.3**	**-1.5**
YAK				*e*SS	**SnSn**	**13 56 28.7**	**+1.1**
YAK				*e*		13 58 05.1	
YAK				pmax	pmax		
	comp=Z,26nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.2s						
YAK				smax	smax		
	comp=E,36nm,2.2s						
YAK				smax	smax		
	comp=N,13nm,2.0s						
YAK				MLR	MLR		
	comp=Z,297nm,13.0s						
YAK				MLR	MLR		
	comp=E,161nm,13.0s						
YAK				MLR	MLR		
	comp=N,208nm,14.0s						
GEYT	**Alibeck**	**39.71**	**296**	P	**P**	**13 48 13.1**	**-0.2**
	comp=N,238nm,0.7s,baz=116,slow=6.6,SNR=3.0						
GYA0B	**ALIBECK ARRAY**	**39.71**	**296**	*e*P	**P**	**13 48 12.5**	**-0.7**
	comp=N,6.8nm,0.7s						
WSAR	**Wadi Sarin**	**41.38**	**274**	P	**P**	**13 48 26.1**	**-1.2**
	comp=N,4.6nm,0.7s,baz=93,slow=5.4,SNR=3.3						
AKTO	**Aktyubinsk**	**41.43**	**316**	P	**P**	**13 48 26.9**	**-0.4**
	comp=N,0.5nm,0.3s,baz=111,slow=8.6,SNR=2.4						
SVE	**Sverdlovsk**	**42.10**	**325**	*e*P	**P**	**13 48 34.8**	**+2.2**
NRIK	**Noril'sk**	**42.42**	**351**	P	**P**	**13 48 36.2**	**+1.1**
	comp=N,5.9nm,0.7s,baz=170,slow=7.2,SNR=4.3						
NRIK	**Noril'sk**	**42.42**	**351**	P	**P**	**13 48 36.2**	**+1.1**
NRIK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ARU	**Arti**	**43.00**	**324**	P	**P**	**13 48 40.4**	**+0.5**
	comp=Z,2.7nm,0.6s,baz=125,slow=6.2,SNR=5.1						
ARU	**Arti**	**43.00**	**324**	*e*P	**P**	**13 48 38.3**	**-1.7**
	comp=Z,6.1nm,1.0s						
ARU	**Arti**	**43.00**	**324**	*d i* P	**P**	**13 48 39.2**	**-0.8**
ARU						13 50 18.1	
ARU						13 50 27.8	
ARU				S	**S**	**13 55 01.9**	**-2.5**
ARU				SS	**SS**	**13 58 11.0**	**-5.3**
ARU				pmax	pmax		
	comp=Z,12nm,1.7s						
MA2	**Magadan**	**44.45**	**32**	LR	LR	14 09 38.5	
	comp=Z,74nm,18.2s,baz=353,slow=39						
SOKR	**Solikamsk**	**45.07**	**328**	*e*P	P	13 49 10.7	+14
SOKR				pmax	pmax		
	comp=Z,22nm,0.9s						
TIXI	**Tiksi**	**45.63**	**11**	*e*P	**P**	**13 48 59.4**	**-1.4**
	comp=Z,4.7nm,0.6s						
TIXI	**Tiksi**	**45.63**	**11**	*c*eP	**P**	**13 49 00.8**	**0.0**
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.7s						
PETK	**Petropavlovsk-**	**46.17**	**42**	P	**P**	**13 49 06.1**	**+0.7**
	comp=Z,4.1nm,0.9s,baz=243,slow=12,SNR=4.7						
PETK				LR	LR	14 11 01.8	
	comp=Z,128nm,18.3s,baz=250,slow=39						
SEY	**Seymchan**	**46.57**	**28**	*i* P	**P**	**13 49 08.1**	**-0.3**
GNI	**Garni**	**50.01**	**300**	P	**P**	**13 49 35.0**	**-0.4**
	comp=Z,4.4nm,0.5s,baz=82,slow=15,SNR=2.5						
ZEI	**Tsey**	**50.42**	**304**	*e*P	**P**	**13 49 37.1**	**-1.5**
PRGR	**Permogore**	**50.93**	**328**	*e*P	**P**	**13 49 42.6**	**+0.8**
PRGR				*e*		13 50 54.9	
PRGR				pmax	pmax		
	comp=Z,15nm,0.6s						
KBZ	**Khabaz**	**51.09**	**305**	P	**P**	**13 49 42.4**	**-0.9**
	comp=Z,1.1nm,0.8s,baz=53,slow=5.1,SNR=2.6						
KBZ				LR	LR	14 15 48.0	
	comp=Z,57nm,19.6s,baz=84,slow=41						
KVAR	**Kislovodsk Arr**	**51.23**	**305**	P	**P**	**13 49 44.2**	**-0.3**
	comp=Z,2.3nm,0.3s,baz=97,slow=4.7,SNR=4.9						
KIV	**Kislovodsk**	**51.23**	**305**	*e*P	**P**	**13 49 43.2**	**-1.4**
	comp=Z,15nm,1.0s						
KIV	**Kislovodsk**	**51.23**	**305**	*e*P	**P**	**13 49 45.7**	**+1.1**
KIV				pmax	pmax		
	comp=Z,14nm,1.0s						
KIV				MLR	MLR		
	comp=Z,82nm,16.0s						
NEY	**

WRAB	**Tennant Creek**	**55.84**	**145**	*e*P	**P**	**13 50 17.5**	**-0.9**
	comp=Z,12nm,0.8s						
WRAB	**Tennant Creek**	**55.84**	**145**	*c*e*P*	**P**	**13 50 17.9**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,37nm,2.5s						
WRA	**Warramunga Arr**	**55.84**	**145**	P	**P**	**13 50 17.1**	**-1.3**
	comp=Z,4.5nm,0.4s,baz=335,slow=8.5,SNR=106						
WB2	**Warramunga Arr**	**55.85**	**145**	*e*P	**P**	**13 50 17.6**	**-0.9**
	comp=Z,17nm,0.4s						
ASF	**Jabal al Asfar**	**57.68**	**292**	P	**P**	**13 50 31.8**	**+0.1**
	comp=Z,1.6nm,0.4s,baz=141,slow=5.4,SNR=4.6						
JOF	**Joensuu**	**57.72**	**329**	P	**P**	**13 50 32.3**	**+1.1**
JOF				pmax	pmax		
	comp=Z,11nm,1.0s						
ILGA	**Ilgaz**	**58.18**	**303**	*e*P	**P**	**13 50 35.1**	**0.0**
	comp=Z,6.6nm,1.0s						
BR131	**Keskin Array S**	**58.50**	**301**	*e*P	**P**	**13 50 35.7**	**-1.6**
BRTR	**Keskin Array B**	**58.51**	**301**	P	**P**	**13 50 36.8**	**-0.6**
	comp=Z,2.5nm,1.0s,baz=76,slow=7.1,SNR=7.9						
BRTR				LR	LR	14 18 06.2	
	comp=Z,30nm,21.4s,baz=140,slow=38						
AS31	**Alice Springs**	**58.80**	**148**	*e*P	**P**	**13 50 38.2**	**-1.1**
	comp=Z,3.2nm,0.4s						
ASAR	**Alice Springs**	**58.80**	**148**	P	**P**	**13 50 38.9**	**-0.4**
	comp=Z,3.1nm,0.5s,baz=328,slow=6.5,SNR=55						
AS01	**Alice Springs**	**58.82**	**148**	*e*P	**P**	**13 50 37.3**	**-2.1**
AS01				*e*pP	**pP**	**13 50 44.4**	**-1.0**
AKASG	**Malin Array Be**	**59.66**	**315**	P	**P**	**13 50 45.0**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=71,slow=7.5,SNR=5.4						
AKASG	**Malin Array Be**	**59.66**	**315**	*i* P	**P**	**13 50 47.4**	**+2.4**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KIEV	**Kiev**	**59.67**	**315**	*i* P	**P**	**13 50 46.3**	**+1.3**
KIEV				pmax	pmax		
	comp=Z,7.0nm,1.7s						
ARCES	**ARCESS Array B**	**60.11**	**337**	P	**P**	**13 50 47.2**	**-0.6**
	comp=Z,2.1nm,0.7s,baz=81,slow=10.0,SNR=6.2						
ARCES				LR	LR	14 20 32.8	
	comp=Z,40nm,20.4s,baz=74,slow=40						
FIA1	**FINESS Array S**	**60.22**	**327**	*e*P	**P**	**13 50 48.2**	**-0.4**
FIA1				*e*pP	**pP**	**13 50 54.1**	**-0.4**
FINES	**FINESS Array B**	**60.22**	**327**	P	**P**	**13 50 49.1**	**+0.5**
	comp=Z,3.1nm,0.6s,baz=120,slow=12,SNR=8.1						
FINES	**FINESS Array B**	**60.22**	**327**	*i* P	**P**	**13 50 50.0**	**+1.4**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
VAF	**Ylistaro**	**61.65**	**329**	P	**P**	**13 50 58.4**	**+0.1**
VAF				pmax	pmax		
	comp=Z,13nm,0.9s						
VRI	**Vrincioaia**	**62.18**	**309**	P	**P**	**13 51 03.6**	**+1.4**
VRI				pmax	pmax		
	comp=Z,69nm,1.2s						
SPITS	**Spitsbergen Ar**	**62.31**	**347**	LR	LR	14 20 22.6	
	comp=Z,125nm,21.1s,baz=10.0,slow=38						
HFS	**Hagfors**	**66.42**	**327**	P	**P**	**13 51 30.2**	**+0.5**
	comp=Z,3.6nm,0.8s,baz=113,slow=6.9,SNR=7.3						
HFS				LR	LR	14 22 15.7	
	comp=Z,72nm,20.0s,baz=71,slow=38						
GRG	**Griva**	**66.50**	**305**	P	**P**	**13 51 30.3**	**-0.3**
GRG				pmax	pmax		
	comp=Z,7.0nm,1.1s						
NB2	**NORSAR Subarra**	**67.34**	**328**	P	**P**	**13 51 35.5**	**-0.1**
	comp=Z,6.0nm,1.2s,baz=74,slow=6.5						
NOA	**NORSAR Array B**	**67.34**	**328**	P	**P**	**13 51 35.7**	**+0.1**
	comp=Z,6.5nm,1.0s,baz=77,slow=4.8,SNR=4.2						
NOA				LR	LR	14 22 37.5	
	comp=Z,45nm,18.2s,baz=80,slow=37						
NC204	**NORSAR Array S**	**67.48**	**329**	*e*P	**P**	**13 51 36.2**	**-0.3**
NC204				*e*pP	**pP**	**13 51 41.6**	**-0.9**
DPC	**Dobruska-Polom**	**67.76**	**316**	*e*pP	**pP**	**13 51 46.2**	**+1.7**
DPC				AMS	AMS	14 22 30.0	
	comp=Z,200nm,16.3s						
DPC	**Dobruska-Polom**	**67.76**	**316**	*e*P	P	13 51 46.2	+7.7
DPC				MLR	MLR		
	comp=Z,200nm,16.3s						
UPC	**Upice**	**67.90**	**316**	AMS	AMS	14 22 50.0	
	comp=Z,200nm,17.8s						
PVCC	**Panska Ves**	**68.77**	**317**	AMS	AMS	14 23 10.0	
	comp=Z,200nm,15.6s						
PRU	**Pruhonice**	**68.96**	**316**	AMS	AMS	14 23 20.0	
	comp=Z,200nm,17.9s						
STKA	**Stephens Creek**	**69.35**	**147**	P	**P**	**13 51 46.5**	**-1.9**
	comp=Z,1.1nm,0.3s,baz=325,slow=9.8,SNR=3.4						
CLL	**Collm**	**69.45**	**318**	*e*P	**P**	**13 51 49.0**	**+0.1**
CLL				Lm	MLR	14 23 00.0	
	comp=N,100nm,21.7s						
CLL				Lm	MLR	14 23 00.0	
	comp=E,100nm,19.8s						
CLL				Lm	MLR	14 23 00.0	
	comp=Z,100nm,20.7s						
CLL	**Collm**	**69.45**	**318**	*e*P	**P**	**13 51 49.0**	**+0.1**
KHC	**Kasperske Hory**	**69.84**	**316**	AMS	AMS	14 23 50.0	
	comp=Z,200nm,19.0s						
GERES	**GERESS Array B**	**69.86**	**315**	P	**P**	**13 51 52.7**	**+1.0**
	comp=Z,0.9nm,0.5s,baz=81,slow=7.4,SNR=5.8						
GERES				LR	LR	14 24 26.1	
	comp=Z,108nm,20.1s,baz=88,slow=38						
MLY	**Manley**	**70.83**	**26**	*e*P	**P**	**13 51 57.5**	**+0.3**
	comp=Z,4.9nm,0.9s						
BPAW	**Bear Paw Mtn.**	**71.13**	**27**	*e*P	**P**	**13 51 59.6**	**+0.6**
	comp=Z,7.4nm,1.0s						
PPLA	**Purkeypile**	**71.16**	**28**	*e*P	**P**	**13 51 59.7**	**+0.3**
MDM	**Murphy Dome**	**71.82**	**25**	*e*P	**P**	**13 52 03.3**	**+0.1**
	comp=Z,10nm,1.0s						
COLA	**College**	**72.00**	**25**	*e*P	**P**	**13 52 03.5**	**-0.7**
	comp=Z,7.8nm,1.0s						
COLA	**College**	**72.00**	**25**	*e*P	**P**	**13 52 03.5**	**-0.7**
COLA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
WRH	**Wood River Hil**	**72.10**	**26**	*e*P	**P**	**13 52 04.7**	**-0.1**
CCB	**Clear Creek Bu**	**72.12**	**26**	*e*P	**P**	**13 52 05.1**	**+0.1**
	comp=Z,3.8nm,1.1s						
IL1	**Eielson Array**	**72.41**	**25**	*e*P	**P**	**13 52 05.7**	**-1.0**
ILAR	**Eielson Array**	**72.41**	**25**	P	**P**	**13 52 05.9**	**-0.8**
	comp=Z,0.5nm,0.4s,baz=270,slow=6.6,SNR=10						
KDAK	**Kodiak Island**	**73.18**	**33**	*c*e*P*	**P**	**13 52 13.4**	**+2.1**
RIDG	**Independ'e Rid**	**73.70**	**26**	*e*P	**P**	**13 52 13.2**	**-1.3**
RIDG				*e*pP	**pP**	**13 52 19.5**	**-0.9**
SCRK	**Sand Creek**	**73.90**	**25**	*e*P	**P**	**13 52 15.0**	**-0.7**
SCRK				*e*pP	**pP**	**13 52 21.5**	**-0.2**
KLU	**Klutina**	**74.41**	**28**	*e*P	**P**	**13 52 18.2**	**-0.4**
	comp=Z,8.8nm,0.8s						
BMRM	**Bremner River**	**75.23**	**28**	*e*P	**P**	**13 52 23.3**	**-0.1**
	comp=Z,11nm,1.0s						
DAWY	**Dawson**	**75.55**	**24**	*e*P	**P**	**13 52 24.6**	**-0.5**
	comp=Z,3.9nm,1.1s						
EKA	**Eskdalemuir Ar**	**76.58**	**326**	P	**P**	**13 52 32.0**	**+0.9**
	comp=Z,0.8nm,0.6s,baz=62,slow=6.0,SNR=3.0						
SFJD	**Kangerlussuaq**	**83.33**	**350**	P	**P**	**13 53 08.0**	**+0.7**
	comp=Z,5.8nm,0.7s,baz=14,slow=7.3,SNR=4.0						
SFJD	**Kangerlussuaq**	**83.33**	**350**	P	**P**	**13 53 08.0**	**+0.7**
SFJD	**Kangerlussuaq**	**83.33**	**350**	P	**P**	**13 53 08.0**	**+0.7**
SFJD				pmax	pmax		
	comp=Z,6.0nm,0.7s						
YKA	**Yellowknife Ar**	**84.46**	**17**	P	**P**	**13 53 14.4**	**+1.2**
	comp=Z,2.1nm,0.7s,baz=328,slow=5.3,SNR=4.8						
ALVY	**Alvey**	**96.12**	**32**	*e*P	**P**	**13 54 08.1**	**-0.5**

ATH ***12*** *13:43:05.5,36°.38N×29°.01E,h37km±3km,ML1.9/2,Error ellipse: s-maj=4.1km s-min=1.0km az=149.0*
DDA ***12*** *13:43:05.4,36°.40N×29°.02E,h7km,Ml2.9*
ISK ***12*** *13:43:05.7,36°.40N×29°.03E,h17km,ML2.5/14*
ISCJB ***12*** *13:43:06.3±0.4,36°.38N±0°.03×29°.02E±0°.03,h25km±4km, Error ellipse: s-maj=5.2km s-min=4.3km az=18.3*
CSEM ***12*** *13:43:06.1±0.1,36°.38N×29°.04E,h20km,ML2.9,Error ellipse: s-maj=2.9km s-min=2.1km az=13.0*
ISC 12 13:43:05.7±1.0,36°.37N±0°.03×29°.03E±0°.02,h18km±3km, n56,σ0§67/84,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.27**	**10**	PG	**Pg**	**13 43 11.6**	**-0.2**
FETY				SG	**Sb**	**13 43 16.0**	**-0.2**
FETY	**Fethiye**	**0.27**	**10**	*e*Pg	**Pg**	**13 43 11.6**	**-0.2**
FETY				*e*Sg	**Sb**	**13 43 16.0**	**-0.2**
FETY				S		13 43 17.0	
AKAS	**Kas**	**0.49**	**106**	PG	**Pg**	**13 43 15.6**	**0.0**
AKAS				SG	**Sb**	**13 43 23.8**	**+1.1**
AKAS	**Kas**	**0.49**	**106**	*i* P	**Pg**	**13 43 15.6**	**0.0**
AKAS				*i* S	**Sb**	**13 43 23.2**	**+0.5**
AKAS	**Kas**	**0.49**	**106**	P	**Pg**	**13 43 15.6**	**0.0**
AKAS				S	**Sb**	**13 43 23.2**	**+0.5**
KSL	**Kastellorizon**	**0.50**	**116**	P	**Pb**	**13 43 16.5**	**+0.5**
KSL				S	**Sn**	**13 43 25.4**	**-0.7**
DALY	**Dalyan (Mu¨la**	**0.54**	**326**	PG	**Pg**	**13 43 16.5**	**0.0**
DALY				SG	**Sb**	**13 43 24.3**	**+0.3**
DALY	**Dalyan (Mu¨la**	**0.54**	**326**	*i* P	**Pb**	**13 43 16.9**	**+0.3**
DALY				*i* S	**Sb**	**13 43 24.2**	**+0.3**
DALY	**Dalyan (Mu¨la**	**0.54**	**326**	*e*Pg	**Pg**	**13 43 16.5**	**0.0**
DALY	**Dalyan (Mu¨la**	**0.54**	**326**	P	**Pb**	**13 43 16.9**	**+0.3**
DALY				S	**Sb**	**13 43 24.2**	**+0.3**
TURN	**Turunc**	**0.61**	**326**	PG	**Pn**	**13 43 20.5**	**+1.1**
TURN				SG	**Sn**	**13 43 31.2**	**+2.4**
TURN	**Turunc**	**0.61**	**326**	*i* P	**Pn**	**13 43 20.3**	**+0.9**
TURN				*i* S	**Sn**	**13 43 31.1**	**+2.4**
TURN	**Turunc**	**0.61**	**326**	P	**Pn**	**13 43 20.3**	**+0.9**
ARG	**Arkhangelos**	**0.74**	**258**	PG	**Pn**	**13 43 21.2**	**-0.1**
ARG	**Arkhangelos**	**0.74**	**258**	P	**Pn**	**13 43 21.2**	**-0.1**
ARG				S	**Sb**	**13 43 29.9**	**-0.1**
ARG				AML	AML	13 43 34.7	
	comp=N,75μm,0.2s						
ARG				AML	AML	13 43 35.3	
	comp=E,80μm,0.2s						
ARG	**Arkhangelos**	**0.74**	**258**	S	**Sg**	**13 43 30.5**	**+0.3**
MRSB	**Marmaris-Mugla**	**0.75**	**298**	PG	**Pg**	**13 43 20.5**	**0.0**
ELL	**Elmali**	**0.80**	**62**	PG	**Pg**	**13 43 21.4**	**-0.1**
ELL	**Elmali**	**0.80**	**62**	*e*Pg	**Pg**	**13 43 21.4**	**-0.1**
GLHS	**Glhisar (BURDU**	**0.87**	**26**	PG	**Pb**	**13 43 22.2**	**-0.2**
GLHS	**Glhisar (BURDU**	**0.87**	**26**	*e*Pg	**Pb**	**13 43 22.2**	**-0.2**
GOLH	**Golhisar**	**0.97**	**26**	*i* P	**Pb**	**13 43 23.0**	**-1.0**
GOLH				*i* S	**Sg**	**13 43 36.7**	**-0.6**
GOLH	**Golhisar**	**0.97**	**26**	P	**Pb**	**13 43 23.0**	**-1.0**
GOLH				S	**Sg**	**13 43 36.7**	**-0.6**
YER	**Yerkesik**	**0.97**	**322**	PG	**Pn**	**13 43 24.4**	**-0.1**
YER	**Yerkesik**	**0.97**	**322**	*e*Pg	**Pn**	**13 43 24.4**	**-0.1**
TAVA	**DENIZLI_Tavas**	**1.10**	**355**	*i* P	**Pb**	**13 43 25.9**	**-0.4**
TAVA				*i* S	**Sn**	**13 43 41.0**	**0.0**
TAVA	**DENIZLI_Tavas**	**1.10**	**355**	P	**Pb**	**13 43 25.9**	**-0.4**
TAVA				S	**Sn**	**13 43 41.0**	**0.0**
DAT	**Datca**	**1.22**	**288**	PN	**Pb**	**13 43 28.5**	**+0.2**
DAT	**Datca**	**1.22**	**288**	*i* P	**Pn**	**13 43 27.9**	**-0.1**
DAT				*i* S	**Sg**	**13 43 45.6**	**+0.2**
DAT	**Datca**	**1.22**	**288**	P	**Pn**	**13 43 27.9**	**-0.1**
DAT	**Datca**	**1.22**	**288**	*e*Pn	**Pb**	**13 43 28.5**	**+0.2**
DAT				S	**Sg**	**13 43 45.6**	**+0.2**
KORT	**Korkueli**	**1.24**	**59**	PN	**Pb**	**13 43 28.6**	**0.0**
KORT	**Korkueli**	**1.24**	**59**	*i* P	**Pb**	**13 43 28.4**	**-0.2**
KORT	**Korkueli**	**1.24**	**59**	P	**Pb**	**13 43 28.4**	**-0.2**
DNZL	**Cakiroluk**	**1.32**	**1**	*i* P	**Pn**	**13 43 29.2**	**-0.2**
DNZL	**Cakiroluk**	**1.32**	**1**	P	**Pn**	**13 43 29.2**	**-0.2**
MLSB	**Milas**	**1.36**	**313**	PN	**Pn**	**13 43 30.2**	**+0.3**
MLSB	**Milas**	**1.36**	**313**	*e*Pn	**Pn**	**13 43 30.2**	**+0.3**
BDRM	**Kayabasi**	**1.45**	**299**	*i* P	**Pn**	**13 43 31.1**	**0.0**
BDRM				*i* S	**Sb**	**13 43 50.6**	**+0.3**
BDRM	**Kayabasi**	**1.45**	**299**	P	**Pn**	**13 43 31.1**	**0.0**
BDRM				S	**Sb**	**13 43 50.6**	**+0.3**
BODT	**Bodrum**	**1.54**	**297**	PN	**Pn**	**13 43 33.0**	**+0.7**
BODT	**Bodrum**	**1.54**	**297**	*e*Pn	**Pn**	**13 43 33.0**	**+0.7**
AYDN	**Tasoluk**	**1.58**	**325**	*i* P	**Pn**	**13 43 33.2**	**+0.3**
AYDN				*i* S	**Sb**	**13 43 54.2**	**+0.1**
AYDN	**Tasoluk**	**1.58**	**325**	P	**Pn**	**13 43 33.2**	**+0.3**
AYDN				S	**Sb**	**13 43 54.2**	**+0.1**
KARP	**Karpathos**	**1.72**	**242**	PN	**Pn**	**13 43 34.9**	**+0.1**
KARP	**Karpathos**	**1.72**	**242**	P	**Pn**	**13 43 35.0**	**+0.2**
KARP				S	**Sn**	**13 43 56.0**	**-0.4**
KARP	**Karpathos**	**1.72**	**242**	P	**Pn**	**13 43 34.9**	**+0.1**
KARP				S	**Sn**	**13 43 56.0**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**1.82**	**330**	PN	**Pn**	**13 43 36.7**	**+0.5**
AYDB	**Zeytinkoy-Aydi**	**1.82**	**330**	*e*Pn	**Pn**	**13 43 36.7**	**+0.5**
SUTC	**Sutuce-Ispart**	**1.93**	**54**	PN	**Pn**	**13 43 38.5**	**+0.8**
SMG	**Samos**	**2.20**	**308**	P	**Pn**	**13 43 42.1**	**+0.7**
SMG				S	**Sn**	**13 44 06.4**	**-1.8**
SMG				AML	AML	13 44 11.4	
	comp=E,76μm,0.2s						
SMG				AML	AML	13 44 12.4	
	comp=N,67μm,0.2s						
SMG	**Samos**	**2.20**	**308**	P	**Pn**	**13 43 41.7**	**+0.3**
SMG				S	**Sn**	**13 44 06.9**	**-1.3**
CHOS	**Chios island**	**3.11**	**311**	P	**Pn**	**13 43 54.5**	**+0.7**
CHOS				S	**Sn**	**13 44 29.2**	**-1.4**
CHOS	**Chios island**	**3.11**	**311**	P	**Pn**	**13 43 54.4**	**+0.5**
CHOS				S	**Sn**	**13 44 29.4**	**-1.2**
LAST	**Lasithi**	**3.13**	**248**	P	**Pn**	**13 43 52.7**	**-1.5**
LAST	**Lasithi**	**3.13**	**248**	P	**Pn**	**13 43 53.6**	**-0.6**

UPP ***12*** *13:44:19.6±0.1,58°.39N×17°.28E,h0km,ML2.7*
ISCJB ***12*** *13:44:19.2±0.3,58°.39N±0°.03×17°.29E±0°.05,h0km,Error ellipse: s-maj=3.9km s-min=3.6km az=138.9*
HEL ***12*** *13:44:20.4±0.1,58°.39N×17°.29E,h0km,ML2.7(UPP), Explosion*
CSEM ***12*** *13:44:20.1±0.1,58°.38N×17°.23E,h2km,ML2.7,Error ellipse: s-maj=3.7km s-min=2.9km az=119.0,Mining explosion.*
BER ***12*** *13:44:21.1±5.0,58°.45N×17°.31E,h0km±23km, ML2.3(NAO)*
NAO ***12*** *13:44:21.4±1.0,58°.54N×17°.24E,ML2.3*
IDC ***12*** *13:44:23.6±2.0,58°.69N×17°.27E,h0km,mb1 3.3/4, mb1mx3.0/67,mbtmp3.2/4,ML3.0/4,Error ellipse: s-maj=22.7km s-min=7.2km az=8.0*
ISC 12 13:44:18.7±0.7,58°.39N±0°.02×17°.29E±0°.02,h0km,n99, σ1§10/116,Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VIKU	**Vikbolandet**	**0.33**	**291**	P	**Pg**	**13 44 26.0**	**+0.9**
VIKU				S	**Sg**	**13 44 30.4**	**+1.1**
VIKU	**Vikbolandet**	**0.33**	**291**	*i* P	**Pg**	**13 44 26.0**	**+0.9**
VIKU				*i* S	**Sg**	**13 44 30.4**	**+1.1**
VIKU	**Vikbolandet**	**0.33**	**291**	P	**Pg**	**13 44 26.0**	**+0.9**
VIKU				S	**Sg**	**13 44 30.4**	**+1.1**
NYNU	**Nynaeshamn**	**0.72**	**31**	P	**Pg**	**13 44 33.1**	**+0.5**
NYNU	**Nynaeshamn**	**0.72**	**31**	*i* P	**Pg**	**13 44 33.1**	**+0.5**
NYNU	**Nynaeshamn**	**0.72**	**31**	P	**Pg**	**13 44 33.1**	**+0.5**
LNKU	**Linkoeping**	**0.95**	**261**	P	**Pg**	**13 44 37.4**	**+0.3**
LNKU	**Linkoeping**	**0.95**	**261**	*e*P	**Pg**	**13 44 37.4**	**+0.3**
LNKU	**Linkoeping**	**0.95**	**261**	P	**Pg**	**13 44 37.3**	**+0.3**
ESKU	**Eskilstuna**	**0.96**	**332**	P	**Pg**	**13 44 37.7**	**+0.5**
ESKU	**Eskilstuna**	**0.96**	**332**	*e*P	**Pg**	**13 44 37.7**	**+0.5**
ESKU	**Eskilstuna**	**0.96**	**332**	P	**Pg**	**13 44 37.7**	**+0.5**
GOTU	**Gotland**	**0.98**	**135**	P	**Pg**	**13 44 38.0**	**+0.5**
GOTU	**Gotland**	**0.98**	**135**	*e*P	**Pg**	**13 44 38.0**	**+0.5**
GOTU	**Gotland**	**0.98**	**135**	P	**Pg**	**13 44 38.0**	**+0.5**
ASPU	**Aespoe**	**1.04**	**201**	P	**Pg**	**13 44 39.2**	**+0.6**
ASPU	**Aespoe**	**1.04**	**201**	*e*P	**Pg**	**13 44 39.2**	**+0.6**
ASPU	**Aespoe**	**1.04**	**201**	P	**Pg**	**13 44 39.2**	**+0.6**
BYXU	**Byxelkrok**	**1.11**	**188**	P	**Pg**	**13 44 40.4**	**+0.4**
BYXU	**Byxelkrok**	**1.11**	**188**	*e*P	**Pg**	**13 44 40.4**	**+0.4**
BYXU	**Byxelkrok**	**1.11**	**188**	P	**Pg**	**13 44 40.4**	**+0.4**
EKSU	**Eksjoe**	**1.34**	**233**	P	**Pg**	**13 44 44.1**	**-0.2**
EKSU	**Eksjoe**	**1.34**	**233**	*e*P	**Pg**	**13 44 44.1**	**-0.2**
EKSU	**Eksjoe**	**1.34**	**233**	P	**Pg**	**13 44 44.1**	**-0.2**
OSKU	**Oskarshamn**	**1.35**	**208**	P	**Pg**	**13 44 44.9**	**+0.2**
OSKU	**Oskarshamn**	**1.35**	**208**	*e*P	**Pg**	**13 44 44.9**	**+0.2**
OSKU	**Oskarshamn**	**1.35**	**208**	P	**Pg**	**13 44 44.9**	**+0.2**
NRTU	**Norrtaelje**	**1.47**	**28**	P	**Pn**	**13 44 46.6**	**+0.2**
NRTU	**Norrtaelje**	**1.47**	**28**	*e*P	**Pn**	**13 44 46.6**	**+0.2**
NRTU	**Norrtaelje**	**1.47**	**28**	P	**Pn**	**13 44 46.6**	**+0.2**
BACU	**Backbrunna**	**1.47**	**356**	P	**Pn**	**13 44 46.8**	**+0.3**
BACU	**Backbrunna**	**1.47**	**356**	*e*P	**Pn**	**13 44 46.8**	**+0.3**
BACU	**Backbrunna**	**1.47**	**356**	P	**Pn**	**13 44 46.8**	**+0.3**
UPP	**Uppsala**	**1.49**	**7**	P	**Pn**	**13 44 47.2**	**+0.5**
UPP	**Uppsala**	**1.49**	**7**	*e*P	**Pn**	**13 44 47.2**	**+0.5**
UPP	**Uppsala**	**1.49**	**7**	P	**Pn**	**13 44 47.2**	**+0.5**
FIBU	**Brunna**	**1.52**	**1**	P	**Pn**	**13 44 47.6**	**+0.5**
FIBU				S	**Sg**	**13 45 07.1**	**-0.4**
FIBU	**Brunna**	**1.52**	**1**	P	**Pn**	**13 44 47.6**	**+0.5**
FIBU				S	**Sg**	**13 45 07.1**	**-0.4**
NRAU	**Nora**	**1.66**	**317**	P	**Pn**	**13 44 49.9**	**+0.8**
NRAU				S	**Sn**	**13 45 11.6**	**+0.5**
NRAU	**Nora**	**1.66**	**317**	*e*P	**Pn**	**13 44 49.9**	**+0.8**
NRAU				*e*S	**Sn**	**13 45 11.6**	**+0.5**
NRAU	**Nora**	**1.66**	**317**	P	**Pn**	**13 44 49.9**	**+0.8**
NRAU				S	**Sn**	**13 45 11.6**	**+0.5**
FLYU	**Flymyra**	**1.77**	**10**	P	**Pb**	**13 44 52.1**	**0.0**
FLYU	**Flymyra**	**1.77**	**10**	*e*P	**Pb**	**13 44 52.1**	**0.0**
FLYU	**Flymyra**	**1.77**	**10**	P	**Pb**	**13 44 52.1**	**0.0**
OSTU	**Oestervaala**	**1.85**	**358**	P	**Pb**	**13 44 53.4**	**0.0**
OSTU	**Oestervaala**	**1.85**	**358**	*e*P	**Pb**	**13 44 53.4**	**0.0**
OSTU	**Oestervaala**	**1.85**	**358**	P	**Pb**	**13 44 53.4**	**0.0**
FKPU	**Falk**	**1.90**	**265**	P	**Pb**	**13 44 53.9**	**-0.3**
FKPU	**Falk**	**1.90**	**265**	*e*P	**Pb**	**13 44 53.9**	**-0.3**
FKPU	**Falk**	**1.90**	**265**	P	**Pb**	**13 44 53.9**	**-0.3**
VXJU	**Vaexsjoe**	**1.94**	**222**	P	**Pb**	**13 44 54.7**	**-0.2**
VXJU	**Vaexsjoe**	**1.94**	**222**	*e*P	**Pb**	**13 44 54.7**	**-0.2**
VXJU	**Vaexsjoe**	**1.94**	**222**	P	**Pb**	**13 44 54.7**	**-0.2**
GRAU	**Graesoe**	**2.06**	**18**	P	**Pb**	**13 44 56.5**	**-0.4**
GRAU	**Graesoe**	**2.06**	**18**	*e*P	**Pb**	**13 44 56.5**	**-0.4**
GRAU	**Graesoe**	**2.06**	**18**	P	**Pb**	**13 44 56.5**	**-0.4**
NASU	**Vaermlandsnaes**	**2.21**	**286**	P	**Pb**	**13 44 58.7**	**-0.8**
NASU	**Vaermlandsnaes**	**2.21**	**286**	*e*P	**Pb**	**13 44 58.7**	**-0.8**
NASU	**Vaermlandsnaes**	**2.21**	**286**	P	**Pb**	**13 44 58.7**	**-0.8**
BLEU	**Blekinge**	**2.24**	**202**	P	**Pn**	**13 44 57.6**	**+0.6**
BLEU	**Blekinge**	**2.24**	**202**	*e*P	**Pn**	**13 44 57.6**	**+0.6**
BLEU	**Blekinge**	**2.24**	**202**	P	**Pn**	**13 44 57.6**	**+0.6**
FALU	**Falun**	**2.24**	**341**	P	**Pb**	**13 44 59.1**	**-0.9**
FALU	**Falun**	**2.24**	**341**	*e*P	**Pb**	**13 44 59.1**	**-0.9**
FALU	**Falun**	**2.24**	**341**	P	**Pb**	**13 44 59.1**	**-0.9**
HFS	**Hagfors**	**2.54**	**315**	Pn	**Pn**	**13 45 03.1**	**+1.9**
	baz=130,slow=14						
HFS				Lg	Lg	13 45 36.4	
	baz=149,slow=37						
HFS	**Hagfors**	**2.54**	**315**	Pn	**Pn**	**13 45 03.1**	**+1.9**
	3.7nm,0.3s,baz=131,slow=17,SNR=84						
HFS				Lg	Lg	13 45 35.9	
	10nm,0.3s,baz=128,slow=26,SNR=22						
HFS	**Hagfors**	**2.54**	**315**	Pn	**Pn**	**13 45 03.1**	**+1.9**
	baz=130,slow=14,SNR=145						
HFS				Lg	Lg	13 45 36.3	
	SNR=0.5						
HFS	**Hagfors**	**2.54**	**315**	Pn	**Pn**	**13 45 03.1**	**+1.9**
	baz=130,slow=14						
HFS				Lg	Lg	13 45 36.4	
	baz=149,slow=37						
SLIT	**Slitere, Latvi**	**2.77**	**104**	*e*P	**Pb**	**13 45 08.0**	**-1.0**
	SNR=50						
SLIT				*e*S	**Sb**	**13 45 44.5**	**+1.0**
	260nm,0.3s,SNR=50						
MTSE	**Matsula**	**3.44**	**82**	*e*P	**Pn**	**13 45 16.1**	**+2.6**
	SNR=50						
MTSE				*e*S	**Sn**	**13 45 56.5**	**+1.7**
	SNR=50						
PBUR	**Paburg¯**	**3.46**	**131**	*e*S	**Sb**	**13 46 01.4**	**-2.0**
	SNR=50						
RAF	**Rauma**	**3.48**	**39**	*e*P	**Pn**	**13 45 15.7**	**+1.6**
RAF				*e*S	**Sn**	**13 45 55.9**	**-0.1**
RAF	**Rauma**	**3.48**	**39**	*e*P	**Pn**	**13 45 15.5**	**+1.4**
	SNR=50						
RAF				*e*S	**Sn**	**13 45 57.3**	**+1.3**
	16nm,0.2s,SNR=50						
BSD	**Bornholm Skovb**	**3.53**	**203**	*i* P	**Pn**	**13 45 15.8**	**+1.0**
BSD	**Bornholm Skovb**	**3.53**	**203**	*e*P	**Pn**	**13 45 15.8**	**+1.0**
NRA0	**NORESS Array S**	**3.75**	**311**	Pn	**Pn**	**13 45 18.2**	**+0.4**
	baz=119,slow=12						
NRA0				Pg	**Pb**	**13 45 26.3**	**+0.5**
	baz=117,slow=16						
NRA0				Lg	Lg	13 46 16.4	
	baz=125,slow=28						
NRA0	**NORESS Array S**	**3.75**	**311**	Pn	**Pn**	**

YOJ	**Yonaguni jima**	**0.76**	**62**	S	**Sb**	**13 47 04.6**	**-0.1**
TWE	**Neicheng**	**0.83**	**318**	*e*P	**Pn**	**13 46 56.6**	**+0.1**
	baz=316						
TWE				S	**Sb**	**13 47 06.9**	**+0.2**
	baz=316						
ENTT	**Nioudou**	**0.84**	**310**	P	**Pn**	**13 46 56.6**	**-0.1**
	baz=306						
ENTT				*e*S	**Sb**	**13 47 07.0**	**-0.1**
	baz=306						
SLBB	**Yuanshan**	**0.87**	**318**	*e*P	**Pn**	**13 46 57.9**	**+0.7**
	baz=315						
SLBB				*e*S	**Sb**	**13 47 08.5**	**+0.5**
	baz=315						
NNS	**Nan Shan**	**0.89**	**292**	*e*P	**Pn**	**13 46 57.6**	**+0.1**
	baz=288						
NNS				*e*S	**Sn**	**13 47 09.4**	**-0.3**
	baz=288						
TWB1	**Santiao Chiao**	**0.94**	**344**	*e*P	**Pn**	**13 46 59.3**	**+1.2**
	baz=343						
TIPB	**Shuangxi**	**0.96**	**335**	*e*P	**Pb**	**13 46 57.7**	**-0.5**
	baz=333						
TIPB				*e*S	**Sb**	**13 47 09.8**	**-0.7**
	baz=333						
YHNB	**Yeheng**	**1.00**	**305**	*e*P	**Pn**	**13 46 59.2**	**+0.3**
	baz=301						
YHNB				*e*S	**Sb**	**13 47 11.6**	**-0.1**
	baz=301						
NSK	**Sanguang**	**1.01**	**304**	*e*P	**Pn**	**13 46 59.3**	**+0.1**
	baz=301						
TWF1	**Yuli**	**1.17**	**230**	*e*P	**Pn**	**13 47 01.0**	**-0.3**
	baz=227						
TWF1				*e*S	**Sn**	**13 47 17.2**	**+0.7**
	baz=227						
FULB	**Fuli**	**1.28**	**225**	*e*P	**Pb**	**13 47 03.8**	**+0.1**
	baz=223						
FULB				*e*S	**Sn**	**13 47 18.8**	**-0.3**
	baz=223						
IRIF	**Iriomote-Funau**	**1.34**	**80**	P	**Pn**	**13 47 04.2**	**+0.6**
IRIF				S	**Sb**	**13 47 22.1**	**+0.5**
JKRS	**Kuro-shima**	**1.59**	**85**	S	**Sb**	**13 47 28.2**	**-0.4**
JIJ	**Ishigaki jima**	**1.72**	**81**	P	**Pn**	**13 47 09.3**	**+0.5**
JIJ				S	**Sn**	**13 47 30.4**	**+0.3**
JISG	**Ishigakijimahi**	**1.92**	**75**	P	**Pn**	**13 47 11.3**	**-0.2**
JISG				S	**Sn**	**13 47 36.1**	**+1.3**

BJI ***12*** *13:48:32.7, 31°.73S×178°.24W, h46km, mb5.3/26, mB5.5/14, Ms5.1/5, Ms7 4.8/4*
ISCJB ***12*** *13:48:32.3±0.1, 31°.74S±0°.02×178°.74W±0°.04, h33km, mb5.1/125, MS4.2/39, Error ellipse: s-maj=5.4km s-min=1.8km az=25.8*
NEIC ***12*** *13:48:34.7±0.7, 31°.70S×178°.66W, h46km±6km, mb5.1/98, Error ellipse: s-maj=6.5km s-min=4.2km az=150.0*
WEL ***12*** *13:48:34.0, 31°.70S×178°.66W, h46km, ML5.8/25*
GCMT ***12*** *13:48:34.7±0.3, 31°.69S×178°.41W, h60km±1km, MW5.1/84, Moment Tensor Solution. s75,c94; s84,c122; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr4.64±.16; Mθθ0.58±.15; Mφφ-5.22±.13; Mrθ-0.01±.11; Mrφ-1.00±.14; Mθφ1.14±.11; Best double couple: M0 5.14300×10^16 NP1:φs7.00000°, δ51.00000°, λ86.00000°. NP2: φs193.00000°, δ39.00000°, λ94.00000°. Principal axes: T 4.7740, Plg83.0000°, Azm255.0000°; N 0.7370, Plg3.0000°, Azm9.0000°; P -5.5120, Plg6.0000°, Azm99.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
MOS ***12*** *13:48:36.3±0.9, 31°.52S×178°.64W, h62km, mb5.3/35, MS4.1/6 Error ellipse: s-maj=11.5km s-min=8.5km az=75.7*
IDC ***12*** *13:48:37.3±1.4, 31°.50S×178°.65W, h64km±12km, mb4.7/25, mb1 4.7/26, mb1mx4.6/47, mbtmp5.0/26, MS4.1/39, Ms1 4.1/39, ms1mx4.1/44, Error ellipse: s-maj=11.3km s-min=9.9km az=100.0*
ISC 12 13:48:33.3±0.2, 31°.72S±0°.04×178°.35W±0°.05, h35km, n592, σ1s96/592, mb5.2/118, MS4.1/39, 14C-5D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.48**	**9**	P	**Pn**	**13 49 12.8**	**+1.8**
GLKZ				S	**Sn**	**13 49 38.1**	**-1.9**
RAO	**Raoul Island**	**2.49**	**9**	P	**Pn**	**13 49 13.1**	**+1.8**
	633nm,0.3s,baz=159,slow=3.2,SNR=29						
RAO				S	**Sn**	**13 49 41.4**	**+1.1**
	2μm,0.3s,baz=86,slow=23,SNR=10.0						
RAO				LR	LR	13 50 10.4	
	comp=Z,4μm,21.2s,baz=182,slow=40						
RAO	**Raoul Island**	**2.49**	**9**	*e*Pn	**Pn**	**13 49 12.8**	**+1.5**
RAO				S	**Sn**	**13 49 41.4**	**+1.1**
RIZ	**Raoul Island**	**2.49**	**8**	P	**Pn**	**13 49 13.6**	**+2.3**
RIZ				S	**Sn**	**13 49 40.3**	**-0.2**
MXZ	**Matakaoa Point**	**6.45**	**204**	*e*Pn	**Pn**	**13 50 05.0**	**-0.6**
MXZ	**Matakaoa Point**	**6.45**	**204**	P*	**Pn**	**13 50 05.0**	**-0.6**
MXZ	**Matakaoa Point**	**6.45**	**204**	P	**Pn**	**13 50 05.5**	**-0.1**
MXZ				S	**Sn**	**13 51 17.4**	**-0.6**
WMGZ	**Waiomatatini S**	**6.64**	**203**	Pn	**Pn**	**13 50 08.6**	**+0.2**
WMGZ	**Waiomatatini S**	**6.64**	**203**	P	**Pn**	**13 50 08.6**	**+0.2**
WMGZ				S	**Sn**	**13 51 23.4**	**+0.6**
HAZ	**Te Kaha**	**6.81**	**207**	P	**Pn**	**13 50 11.0**	**+0.4**
HAZ				S	**Sn**	**13 51 28.7**	**+1.7**
PKGZ	**Pakihiroa**	**6.82**	**205**	P	**Pn**	**13 50 10.1**	**-0.8**
PKGZ				S	**Sn**	**13 51 26.1**	**-1.2**
PKGZ	**Pakihiroa**	**6.82**	**205**	P	**Sn**	**13 51 27.5**	**+0.2**
PUZ	**Puketiti**	**6.92**	**203**	Pn	**Pn**	**13 50 11.9**	**-0.3**
PUZ	**Puketiti**	**6.92**	**203**	P	**Pn**	**13 50 11.6**	**-0.6**
PUZ				S	**Sn**	**13 51 30.0**	**+0.2**
PUZ	**Puketiti**	**6.92**	**203**	P	**Sn**	**13 51 28.2**	**-1.5**
RUGZ	**Raukumara Rang**	**7.04**	**207**	P	**Pn**	**13 50 13.5**	**-0.3**
RUGZ				S	**Sn**	**13 51 32.2**	**-0.4**
RUGZ	**Raukumara Rang**	**7.04**	**207**	P	**Sn**	**13 51 35.1**	**+2.5**
TWGZ	**Tauwhareparae**	**7.11**	**204**	Pn	**Pn**	**13 50 14.6**	**-0.2**
TWGZ	**Tauwhareparae**	**7.11**	**204**	P	**Pn**	**13 50 14.3**	**-0.6**
TWGZ				P		13 50 14.6	
TWGZ				S	**Sn**	**13 51 32.9**	**-1.6**
TWGZ	**Tauwhareparae**	**7.11**	**204**	P	**Sn**	**13 51 34.4**	**-0.1**
WHRZ	**Whale Island**	**7.23**	**211**	P	**Pn**	**13 50 20.5**	**+4.1**
WHRZ	**Whale Island**	**7.23**	**211**	P	**Sn**	**13 51 41.8**	**+4.5**
CNGZ	**Carnagh Statio**	**7.32**	**202**	Pn	**Pn**	**13 50 17.1**	**-0.5**
CNGZ	**Carnagh Statio**	**7.32**	**202**	P	**Pn**	**13 50 17.3**	**-0.3**
TKGZ	**Te Karaka**	**7.39**	**204**	P	**Pn**	**13 50 17.1**	**-1.5**
TKGZ	**Te Karaka**	**7.39**	**204**	P	**Sn**	**13 51 35.3**	**-5.9**
OPRZ	**Ohinepanea**	**7.41**	**213**	Pn	**Pn**	**13 50 20.7**	**+1.8**
MWZ	**Matawai**	**7.42**	**206**	Pn	**Pn**	**13 50 17.7**	**-1.3**
MWZ	**Matawai**	**7.42**	**206**	P	**Pn**	**13 50 17.7**	**-1.3**
MWZ	**Matawai**	**7.42**	**206**	P	**Sn**	**13 51 38.6**	**-3.3**
TGRZ	**Tauranga**	**7.46**	**215**	P	**Pn**	**13 50 24.1**	**+4.5**
MARZ	**Manawahe**	**7.47**	**212**	P	**Pn**	**13 50 23.3**	**+3.5**
URZ	**Urewera**	**7.51**	**208**	P	**Pn**	**13 50 20.4**	**+0.1**
	7.1nm,0.3s,baz=270,slow=3.6,SNR=52						
URZ				S	**Sn**	**13 51 43.4**	**-0.8**
	33nm,0.3s,baz=4.8,slow=23,SNR=11						
URZ	**Urewera**	**7.51**	**208**	*e*Pn	**Pn**	**13 50 19.5**	**-0.8**
URZ				S	**Sn**	**13 51 43.4**	**-0.8**
URZ	**Urewera**	**7.51**	**208**	Pn	**Pn**	**13 50 19.5**	**-0.8**
URZ	**Urewera**	**7.51**	**208**	P	**Pn**	**13 50 19.5**	**-0.8**
EDRZ	**Edgecumbe**	**7.54**	**211**	P	**Pn**	**13 50 24.6**	**+3.8**
OUZ	**Omahuta**	**7.58**	**240**	*e*Pn	Pn	13 50 26.9	+5.6
RAGZ	**Rawiri**	**7.60**	**206**	Pn	**Pn**	**13 50 22.2**	**+0.6**
RAGZ	**Rawiri**	**7.60**	**206**	P	**Pn**	**13 50 21.6**	**+0.1**
RIGZ	**Rimuhau**	**7.66**	**203**	P	**Pn**	**13 50 22.2**	**-0.2**
RIGZ	**Rimuhau**	**7.66**	**203**	P	**Sn**	**13 51 43.9**	**-4.0**
KARZ	**Kaharoa**	**7.70**	**214**	P	**Pn**	**13 50 25.8**	**+2.9**
OMRZ	**Omania**	**7.71**	**213**	P	**Pn**	**13 50 26.8**	**+3.8**
TARZ	**Mount Tarawera**	**7.75**	**212**	P	**Pn**	**13 50 27.9**	**+4.3**
PRGZ	**Paritu Road**	**7.82**	**202**	P	**Pn**	**13 50 24.6**	**+0.1**
PRGZ	**Paritu Road**	**7.82**	**202**	P	**Sn**	**13 51 50.4**	**-1.4**
RRRZ	**Republican Roa**	**7.83**	**211**	Pn	**Pn**	**13 50 27.3**	**+2.6**
RRRZ	**Republican Roa**	**7.83**	**211**	P	**Pn**	**13 50 28.4**	**+3.7**
HLRZ	**Highlands Stat**	**7.83**	**212**	P	**Pn**	**13 50 28.8**	**+4.0**
MUGZ	**Murupara**	**7.84**	**209**	P	**Pn**	**13 50 23.7**	**-1.1**
SNGZ	**Shannon Statio**	**7.88**	**205**	Pn	**Pn**	**13 50 25.2**	**-0.2**
SNGZ	**Shannon Statio**	**7.88**	**205**	P	**Pn**	**13 50 24.8**	**-0.5**
HSRZ	**Hossack Road**	**7.93**	**212**	P	**Pn**	**13 50 30.6**	**+4.6**
HRRZ	**Handcock Road**	**7.98**	**212**	P	**Pn**	**13 50 29.9**	**+3.1**
KNZ	**Kokohu**	**7.98**	**203**	Pn	**Pn**	**13 50 25.1**	**-1.5**
KNZ	**Kokohu**	**7.98**	**203**	P	**Pn**	**13 50 26.5**	**-0.2**
KNZ	**Kokohu**	**7.98**	**203**	P	**Sn**	**13 51 48.1**	**-7.5**
PRRZ	**Plateau Road**	**8.02**	**211**	Pn	**Pn**	**13 50 28.3**	**+1.1**
PRRZ	**Plateau Road**	**8.02**	**211**	P	**Pn**	**13 50 28.6**	**+1.4**
MHGZ	**Mahia Peninsul**	**8.02**	**201**	Pn	**Pn**	**13 50 25.8**	**-1.4**
MHGZ	**Mahia Peninsul**	**8.02**	**201**	P	**Pn**	**13 50 25.8**	**-1.4**
MHGZ	**Mahia Peninsul**	**8.02**	**201**	P	**Sn**	**13 51 49.9**	**-6.9**
RAHZ	**Arahi**	**8.09**	**206**	P	**Pn**	**13 50 27.7**	**-0.6**
ALRZ	**Allen Road**	**8.09**	**211**	P	**Pn**	**13 50 30.6**	**+2.3**
MTHZ	**Maungataniwha**	**8.13**	**208**	P	**Pn**	**13 50 28.3**	**-0.5**
WPRZ	**Whakapapatarin**	**8.14**	**212**	P	**Pn**	**13 50 31.8**	**+2.9**
WHHZ	**Waihua**	**8.18**	**205**	P	**Pn**	**13 50 30.9**	**+1.5**
WHHZ				P		13 50 32.3	
KUTZ	**Kaahu Road**	**8.27**	**214**	P	**Pn**	**13 50 33.7**	**+3.0**
TLZ	**Tolley Road**	**8.28**	**216**	P	**Pn**	**13 50 34.5**	**+3.6**
MRHZ	**Matea Rd**	**8.29**	**210**	P	**Pn**	**13 50 30.0**	**-1.0**
NMHZ	**Naumai**	**8.36**	**207**	Pn	**Pn**	**13 50 30.9**	**-1.0**
NMHZ	**Naumai**	**8.36**	**207**	P	**Pn**	**13 50 30.4**	**-1.5**
ARHZ	**Aropaoanui**	**8.43**	**205**	Pn	**Pn**	**13 50 33.0**	**+0.1**
ARHZ	**Aropaoanui**	**8.43**	**205**	P	**Pn**	**13 50 31.8**	**-1.1**
HATZ	**Hinemaiaia**	**8.47**	**211**	Pn	**Pn**	**13 50 34.1**	**+0.6**
HATZ	**Hinemaiaia**	**8.47**	**211**	P	**Pn**	**13 50 34.2**	**+0.6**
WATZ	**Wairara**	**8.49**	**213**	P	**Pn**	**13 50 36.0**	**+2.3**
BKZ	**Black Stump Fm**	**8.54**	**208**	*e*Pn	**Pn**	**13 50 33.0**	**-1.4**
BKZ	**Black Stump Fm**	**8.54**	**208**	Pn	**Pn**	**13 50 32.2**	**-2.2**
BKZ	**Black Stump Fm**	**8.54**	**208**	P	**Pn**	**13 50 32.3**	**-2.2**
RATZ	**Rangitukua**	**8.60**	**212**	P	**Pn**	**13 50 37.7**	**+2.5**
MCHZ	**McNeill Hill**	**8.70**	**206**	Pn	**Pn**	**13 50 35.0**	**-1.5**
MCHZ	**McNeill Hill**	**8.70**	**206**	P	**Pn**	**13 50 35.3**	**-1.3**
KATZ	**Kakaramea**	**8.72**	**212**	P	**Pn**	**13 50 39.6**	**+2.6**
CKHZ	**Cape Kidnapper**	**8.75**	**204**	P	**Pn**	**13 50 37.8**	**+0.5**
HIZ	**Hauiti**	**8.77**	**218**	*e*Pn	**Pn**	**13 50 41.4**	**+3.9**
HIZ	**Hauiti**	**8.77**	**218**	Pn	**Pn**	**13 50 40.2**	**+2.7**
HIZ	**Hauiti**	**8.77**	**218**	P	**Pn**	**13 50 41.8**	**+4.2**
KWHZ	**Kaweka Forest**	**8.79**	**208**	P	**Pn**	**13 50 37.1**	**-0.8**
KRVZ	**Karewarewa**	**8.84**	**212**	Pn	**Pn**	**13 50 40.3**	**+1.6**
KRVZ				Sn	**Pn**	**13 50 43.0**	**+4.4**
KRVZ	**Karewarewa**	**8.84**	**212**	P	**Pn**	**13 50 40.4**	**+1.8**
WTVZ	**West Tongariro**	**8.88**	**212**	P	**Pn**	**13 50 40.5**	**+1.3**
OTVZ	**Oturere**	**8.89**	**212**	Pn	**Pn**	**13 50 38.9**	**-0.4**
TWVZ	**Taurewa**	**8.92**	**213**	P	**Pn**	**13 50 40.9**	**+1.3**
NGZ	**Ngauruhoe**	**8.93**	**212**	P	**Pn**	**13 50 41.1**	**+1.3**
KAHZ	**Kahuranaki**	**8.94**	**204**	Pn	**Pn**	**13 50 38.4**	**-1.5**
KAHZ	**Kahuranaki**	**8.94**	**204**	P	**Pn**	**13 50 38.4**	**-1.5**
COVZ	**Chateau Observ**	**8.97**	**212**	P	**Pn**	**13 50 42.5**	**+2.1**
BHHZ	**Black Hill Sta**	**8.99**	**209**	Pn	**Pn**	**13 50 40.9**	**+0.3**
BHHZ	**Black Hill Sta**	**8.99**	**209**	P	**Pn**	**13 50 39.7**	**-0.9**
KRHZ	**Kereru**	**9.00**	**207**	P	**Pn**	**13 50 38.5**	**-2.2**
FWVZ	**Far West T-bar**	**9.01**	**212**	P	**Pn**	**13 50 42.2**	**+1.1**
WHVZ	**Whangaehu Hut**	**9.02**	**212**	P	**Pn**	**13 50 42.6**	**+1.4**
MOVZ	**Moawhango**	**9.05**	**210**	Pn	**Pn**	**13 50 41.9**	**+0.5**
MOVZ	**Moawhango**	**9.05**	**210**	P	**Pn**	**13 50 42.0**	**+0.5**
TRVZ	**Turoa**	**9.05**	**212**	P	**Pn**	**13 50 43.2**	**+1.6**
WNVZ	**Wahianoa**	**9.05**	**211**	Pn	**Pn**	**13 50 41.0**	**-0.5**
MTVZ	**Mangateitei**	**9.16**	**212**	Pn	**Pn**	**13 50 46.2**	**+3.3**
MTVZ	**Mangateitei**	**9.16**	**212**	P	**Pn**	**13 50 42.6**	**-0.3**
PXZ	**Pawanui**	**9.16**	**204**	Pn	**Pn**	**13 50 40.7**	**-2.1**
PXZ	**Pawanui**	**9.16**	**204**	P	**Pn**	**13 50 40.7**	**-2.1**
VRZ	**Vera Road**	**9.28**	**215**	P	**Pn**	**13 50 46.9**	**+2.4**
PNHZ	**Pukenui**	**9.30**	**207**	Pn	**Pn**	**13 50 42.6**	**-2.2**
PNHZ	**Pukenui**	**9.30**	**207**	P	**Pn**	**13 50 42.6**	**-2.2**
WPHZ	**Waipukurau**	**9.34**	**205**	P	**Pn**	**13 50 43.8**	**-1.5**
PRHZ	**Porangahau**	**9.45**	**204**	Pn	**Pn**	**13 50 45.1**	**-1.7**
PRHZ	**Porangahau**	**9.45**	**204**	P	**Pn**	**13 50 44.3**	**-2.5**
TSZ	**Takapari Road**	**9.51**	**207**	Pn	**Pn**	**13 50 43.7**	**-4.0**
TSZ	**Takapari Road**	**9.51**	**207**	P	**Pn**	**13 50 44.4**	**-3.3**
DVHZ	**Dannevirke**	**9.64**	**206**	Pn	**Pn**	**13 50 47.4**	**-2.1**
DVHZ	**Dannevirke**	**9.64**	**206**	P	**Pn**	**13 50 47.5**	**-2.1**
ANWZ	**Angora Road**	**9.67**	**204**	P	**Pn**	**13 50 48.1**	**-1.8**
WAZ	**Wanganui**	**9.67**	**212**	Pn	**Pn**	**13 50 50.1**	**+0.1**
WAZ	**Wanganui**	**9.67**	**212**	P	**Pn**	**13 50 50.0**	**+0.1**
PKE	**Pukeiti**	**9.73**	**218**	P	**Pn**	**13 50 54.3**	**+3.6**
POWZ	**Post Office Ro**	**9.88**	**207**	Pn	**Pn**	**13 50 51.7**	**-1.0**
POWZ	**Post Office Ro**	**9.88**	**207**	P	**Pn**	**13 50 51.7**	**-1.0**
PRWZ	**Pori Road**	**9.94**	**206**	Pn	**Pn**	**13 50 53.0**	**-0.5**
PRWZ	**Pori Road**	**9.94**	**206**	P	**Pn**	**13 50 52.4**	**-1.1**
BFZ	**Birch Farm**	**9.95**	**204**	*e*Pn	**Pn**	**13 50 50.9**	**-2.8**
BFZ	**Birch Farm**	**9.95**	**204**	Pn	**Pn**	**13 50 49.5**	**-4.2**
BFZ	**Birch Farm**	**9.95**	**204**	P	**Pn**	**13 50 50.0**	**-3.7**
TIWZ	**Tintock**	**10.16**	**206**	Pn	**Pn**	**13 50 54.9**	**-1.7**
TIWZ	**Tintock**	**10.16**	**206**	P	**Pn**	**13 50 54.8**	**-1.9**
MRZ	**Mangatainoka R**	**10.18**	**207**	Pn	Pn	13 50 52.5	-4.3
HOWZ	**Holdsworth Sta**	**10.41**	**207**	Pn	**Pn**	**13 50 55.8**	**-4.2**
HOWZ	**Holdsworth Sta**	**10.41**	**207**	P	**Pn**	**13 50 55.9**	**-4.2**
TMWZ	**Te Maipa**	**10.45**	**205**	Pn	**Pn**	**13 50 57.3**	**-3.3**
TMWZ	**Te Maipa**	**10.45**	**205**	P	**Pn**	**13 50 56.5**	**-4.1**
OGWZ	**Otaki Gorge**	**10.47**	**208**	Pn	**Pn**	**13 50 57.6**	**-3.3**
OGWZ	**Otaki Gorge**	**10.47**	**208**	P	**Pn**	**13 50 57.5**	**-3.3**
KIW	**Kapiti Island**	**10.62**	**209**	Pn	Pn	13 50 58.2	-4.7
MTW	**Mount Morrison**	**10.64**	**206**	Pn	Pn	13 50 58.8	-4.3
MTW	**Mount Morrison**	**10.64**	**206**	P	**Pn**	**13 50 59.0**	**-4.1**
CAW	**Cannon Point**	**10.76**	**208**	Pn	**Pn**	**13 51 01.0**	**-3.8**
DUWZ	**D'Urville Isla**	**11.00**	**212**	Pn	**Pn**	**13 51 05.0**	**-3.1**
SNZO	**South Karori**	**11.08**	**208**	*e*Pn	**Pn**	**13 51 05.6**	**-3.5**
TCW	**Tory Channel**	**11.18**	**210**	Pn	Pn	13 51 05.4	-5.0
TUWZ	**Tuamarina**	**11.50**	**210**	Pn	**Pn**	**13 51 10.7**	**-4.1**
QRZ	**Quartz Range**	**11.69**	**216**	Pn	**Pn**	**13 51 14.8**	**-2.7**
THZ	**Tophouse**	**12.23**	**212**	*e*Pn	**Pn**	**13 51 20.8**	**-4.1**
THZ	**Tophouse**	**12.23**	**212**	Pn	Pn	13 51 19.8	-5.1
KHZ	**Kahutara**	**12.48**	**209**	*e*Pn	Pn	13 51 23.2	-5.1
KHZ	**Kahutara**	**12.48**	**209**	Pn	Pn	13 51 23.7	-4.6
DSZ	**Denniston Nort**	**12.74**	**215**	Pn	Pn	13 51 27.5	-4.4
LTZ	**Lake Taylor**	**13.32**	**211**	*e*Pn	**Pn**	**13 51 36.1**	**-3.7**
OXZ	**Oxford**	**13.86**	**211**	*e*P	Pn	13 51 39.9	-7.3
OXZ	**Oxford**	**13.86**	**211**	Pn	Pn	13 51 40.3	-6.8
MQZ	**McQueen's Vall**	**13.91**	**208**	*e*Pn	**Pn**	**13 51 44.2**	**-3.6**
RPZ	**Rata Peaks**	**14.60**	**212**	P	Pn	13 51 51.6	-5.7
	1.6nm,0.3s,baz=35,slow=12,SNR=6.3						
RPZ				S	Sn	13 54 25.1	-13
	3.6nm,0.3s,baz=272,slow=22,SNR=13						
FOZ	**Fox Glacier**	**15.05**	**215**	*e*Pn	**Pn**	**13 51 58.5**	**-4.7**
LBZ	**Lake Benmore**	**15.52**	**212**	*e*Pn	**Pn**	**13 52 05.8**	**-3.6**
	115nm,1.6s						
ODZ	**Otahua Downs**	**15.84**	**210**	*e*Pn	**Pn**	**13 52 08.3**	**-5.2**
	33nm,0.9s						
JCZ	**Jackson Bay**	**15.95**	**216**	Pn	**Pn**	**13 52 09.8**	**-5.2**
WKZ	**Wanaka**	**16.39**	**213**	*e*Pn	**Pn**	**13 52 18.7**	**-1.9**
	198nm,1.6s						
DZM	**Mont Dzumac**	**16.61**	**302**	*e*P	**P**	**13 52 28.5**	**+2.8**
	192nm,1.4s						
DZM				*e*LR	LR	13 56 19.6	
	5μm,25.5s						
DZM	**Mont Dzumac**	**16.61**	**302**	LR	LR	13 57 39.9	
	comp=Z,2μm,18.4s,baz=134,slow=33						
DZM	**Mont Dzumac**	**16.61**	**302**	*e*Pn	**P**	**13 52 27.0**	**+1.4**
	71nm,1.1s						
MLZ	**Mavora Lakes**	**17.22**	**214**	*e*Pn	**Pn**	**13 52 28.7**	**-2.3**
	201nm,2.0s						
WHZ	**Wether Hill Ro**	**17.69**	**213**	*e*P	**Pn**	**13 52 33.2**	**-3.6**
	153nm,1.9s						
DCZ	**Deep Cove**	**17.76**	**215**	*e*P	**Pn**	**13 52 34.9**	**-2.7**
	73nm,1.5s						
AFI	**Afiamalu**	**18.72**	**20**	P	**P**	**13 52 46.9**	**-2.1**
	2.2nm,0.3s,baz=192,slow=14,SNR=3.9						
AFI				S	Sn	13 56 07.9	-10
	1.8nm,0.3s,baz=106,slow=12,SNR=3.2						
AFI	**Afiamalu**	**18.72**	**20**	*e*P	**P**	**13 52 44.6**	**-4.4**
	144nm,1.3s						
AFI				S	Sn	13 56 07.9	-10
RAR	**Rarotonga**	**19.62**	**62**	P	**P**	**13 52 59.8**	**+1.1**
	0.8nm,0.3s,baz=243,slow=14,SNR=2.3						
RAR				S	S	13 56 28.6	-10
	1.8nm,0.3s,baz=9.0,slow=19,SNR=3.2						
RAR				LR	LR	14 01 28.4	
	comp=Z,234nm,18.0s,baz=250,slow=39						
TBI	**Tubuai**	**26.88**	**79**	*e*S	**S**	**13 58 42.5**	**-2.8**
	279nm,32.2s						
TBI				*e*LQ	LQ	13 59 36.8	
	617nm,27.5s						
TBI				*e*LR	LR	14 01 02.3	
	1μm,27.5s,baz=244						
TBI	**Tubuai**	**26.88**	**79**	*e*T	T	14 22 17.1	
	53nm,0.3s						
EIDS	**Eidsvold**	**27.53**	**276**	*e*P	**P**	**13 54 14.7**	**-2.1**
	33nm,0.8s						
PAE	**Paea**	**29.54**	**69**	*e*T	T	14 25 26.7	
	31nm,0.3s						
PPT2	**Papeete2**	**29.58**	**68**	*e*S	**S**	**13 59 24.8**	**-3.3**
	272nm,28.2s						
PPT2				*e*LQ	LQ	14 00 37.7	
	323nm,25.5s						
PPT2				*e*LR	LR	14 02 07.8	
	2μm,29.5s,baz=232						
PPT2	**Papeete2**	**29.58**	**68**	*e*T	T	14 25 31.0	
	20nm,0.3s						
PPT	**Papeete**	**29.59**	**68**	LR	LR	14 03 28.2	
	comp=Z,185nm,21.7s,baz=233,slow=30						
TVO	**Taravao**	**29.73**	**69**	*e*T	T	14 25 42.2	
	3.4nm,0.3s						
TIAR	**Tiarei**	**29.78**	**69**	*e*P	**P**	**13 54 40.5**	**+3.7**
	6.6nm,0.8s						
TIAR	**Tiarei**	**29.78**	**69**	*e*T	T	14 25 34.0	
	2.2nm,0.2s						
HNR	**Honiara**	**29.96**	**313**	P	**P**	**13 54 36.6**	**-1.7**
	111nm,0.7s,baz=49,slow=1.5,SNR=15						
HNR				LR	LR	14 05 14.5	
	comp=Z,403nm,19.9s,baz=164,slow=34						
HNR	**Honiara**	**29.96**	**313**	*e*P	**P**	**13 54 36.0**	**-2.4**
	113nm,0.8s						
TOO	**Toolangi**	**30.19**	**249**	P	**P**	**13 54 43.7**	**+3.4**
TOO				pmax	pmax		
	comp=Z,17nm,1.3s						
PMOR	**Pomariorio Ree**	**32.38**	**66**	*e*T	T	14 28 57.6	
	comp=Z,7.7nm,0.3s						
VAH	**Vaihoa**	**32.45**	**67**	*e*T	T	14 29 03.5	
	comp=Z,103nm,0.2s						
CTA	**Charters Tower**	**33.74**	**281**	P	**P**	**13 55 12.2**	**+0.6**
	comp=Z,185nm,0.7s,baz=106,slow=11,SNR=231						
CTA				LR	LR	14 07 12.0	
	comp=Z,498nm,18.7s,baz=112,slow=33						
CTAO	**Charters Tower**	**33.74**	**281**	*e*P	**P**	**13 55 12.7**	**+1.1**
	comp=Z,215nm,0.8s						
CTAO	**Charters Tower**	**33.74**	**281**	*e*P	**P**	**13 55 12.7**	**+1.1**
CTAO				pmax	pmax		
	comp=Z,215nm,0.8s						
STKA	**Stephens Creek**	**33.91**	**259**	P	**P**	**13 55 13.0**	**0.0**
	comp=Z,40nm,0.8s,baz=96,slow=9.9,SNR=63						
STKA				LR	LR	14 07 11.7	
	comp=Z,590nm,21.4s,baz=66,slow=33						
STKA	**Stephens Creek**	**33.91**	**259**	*e*P	**P**	**13 55 13.0**	**0.0**
	comp=Z,11nm,0.9s						
STKA	**Stephens Creek**	**33.91**	**259**	P	**P**	**13 55 13.0**	**0.0**
STKA				pmax	pmax		
	comp=Z,40nm,0.8s						
BBOO	**Buckleboo**	**38.34**	**256**	*e*P	**P**	**13 55 50.5**	**-0.4**
	comp=Z,62nm,0.8s						
PMG	**Port Moresby**	**38.92**	**297**	LR	LR	14 10 09.3	
	comp=Z,201nm,18.2s,baz=154,slow=34						
RABL	**Rabaul**	**38.94**	**309**	*e*P	**P**	**13 55 55.0**	**-1.0**
	comp=Z,66nm,0.6s						
RKT	**Rikitea**	**39.23**	**88**	*e*S	**S**	**14 01 54.0**	**-2.7**
	comp=Z,251nm,29.5s						
RKT				*e*LR	LR	14 06 40.9	
	comp=Z,1μm,26.2s						
RKT	**Rikitea**	**39.23**	**88**	*e*T	T	14 37 50

JOW	Kunigami	77.33	313	P	P	14 00 22.6	-1.8
	comp=Z,28nm,0.9s,baz=204,slow=6.0,SNR=5.8						
JOW				LR	LR	14 30 21.0	
	comp=Z,72nm,19.3s,baz=130,slow=32						
VNA2	Neumayer--Watz	77.44	177	P	P	14 00 27.0	+2.6
	baz=166,slow=4.5						
NVL	N'lazarevskaya	77.55	183⇑	*iP*	P	14 00 26.1	+1.1
NVL				*eS*	S	14 10 17.9	+4.5
NVL				pmax	pmax		
	comp=Z,29nm,0.8s						
VNA1	Neumayer--Stat	77.67	177	P	P	14 00 28.6	+2.9
MJAR	Matsushiro Arr	79.16	326	P	P	14 00 32.3	-2.0
	comp=Z,3.0nm,0.7s,baz=169,slow=7.3,SNR=8.1						
MJAR				LR	LR	14 30 38.9	
	comp=Z,86nm,21.6s,baz=135,slow=32						
JNU	Nakatsue	80.34	319	P	P	14 00 38.8	-2.1
	comp=Z,24nm,0.9s,baz=87,slow=6.3,SNR=8.6						
JNU				LR	LR	14 31 35.5	
	comp=Z,114nm,21.8s,baz=120,slow=32						
JNU	Nakatsue	80.34	319	*eP*	P	14 00 39.5	-1.4
	comp=Z,29nm,0.9s						
PLCA	Paso Flores	81.83	133	P	P	14 00 51.5	+2.5
	comp=Z,9.9nm,1.0s,baz=250,slow=5.4,SNR=11						
PLCA				LR	LR	14 28 33.3	
	comp=Z,110nm,19.5s,baz=264,slow=29						
PLCA	Paso Flores	81.83	133	*eP*	P	14 00 51.2	+2.3
	comp=Z,18nm,1.1s						
ASAJ	Asahikawa	83.47	333	LR	LR	14 34 38.9	
	comp=Z,68nm,18.2s,baz=170,slow=33						
IPM	Ipoh	84.39	279	*eP*	P	14 01 00.3	-2.2
	comp=Z,20nm,1.1s						
TJN	Taejon	84.69	319	*ceP*	P	14 01 03.4	0.0
KSRS	Korea Array	85.16	320	P	P	14 01 05.1	-0.6
	comp=Z,8.9nm,0.8s,baz=143,slow=5.5,SNR=26						
KS15	Wonju Array Si	85.17	320	*eP*	P	14 01 05.9	+0.2
KSAR	Wonju Array Be	85.17	320	P	P	14 01 05.1	-0.7
KSAR	Wonju Array Be	85.17	320	P	P	14 01 05.1	-0.7
KS01	Wonju Array Si	85.19	320	*eP*	P	14 01 04.7	-1.1
PSI	Prapat	85.28	276	LR	LR	14 39 35.1	
	comp=Z,298nm,20.5s,baz=90,slow=36						
LPIG	La Paz	85.48	58	LR	LR	14 33 46.6	
	comp=Z,148nm,18.2s,baz=221,slow=32						
SCZ2	Santa Cruz Isl	85.61	45	P	P	14 01 10.6	+2.5
	baz=227						
GSI	Gunungsitoli	85.64	274	*eP*	P	14 01 07.4	-1.3
	comp=Z,45nm,1.0s						
YSS	Yuzh-Sakhalins	85.80	334	*eP*	P	14 01 08.8	+0.1
	comp=Z,22nm,0.7s						
YSS	Yuzh-Sakhalins	85.80	334⇓	*eP*	P	14 01 09.2	+0.6
YSS				pmax	pmax		
	comp=N,10.0nm,0.8s						
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS				MLR	MLR		
	comp=Z,100nm,13.0s						
CIS	Catalina Islan	85.96	47	P	P	14 01 12.0	+2.2
	baz=228						
PKM	Mcpherson Peak	86.11	45	P	P	14 01 13.5	+2.7
	baz=227						
OSI	Osito Audit: C	86.58	45	P	P	14 01 15.4	+2.4
	baz=228						
PET	Petropavlovsk	86.74	346	*eP*	P	14 01 14.5	+1.4
PET				pmax	pmax		
	comp=Z,34nm,1.7s						
MURC	Murrieta	86.85	47	P	P	14 01 16.5	+2.3
	baz=228						
ARVC	Arvin	86.87	45	P	P	14 01 16.8	+2.6
	baz=227						
MONP2	Monument Peak	86.87	48	P	P	14 01 17.3	+2.8
	baz=229,SNR=5.9						
NJ2	Nanjing	86.88	311	*eP*	P	14 01 14.5	+0.2
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
IKP	In-Ko-Pah, Jac	86.91	48	P	P	14 01 17.2	+2.6
	baz=229						
BFSC	Mount Baldy Ra	86.98	46	P	P	14 01 17.3	+2.3
	baz=228,SNR=6.4						
PEA0B	Petropavlovsk-	87.01	346	*eP*	P	14 01 13.8	-0.7
	comp=Z,20nm,0.8s						
PETK	Petropavlovsk-	87.01	346	P	P	14 01 14.3	-0.2
	comp=Z,15nm,0.7s,baz=112,slow=3.7,SNR=20						
PETK				LR	LR	14 34 16.7	
	comp=Z,109nm,21.6s,baz=151,slow=32						
PETK	Petropavlovsk-	87.01	346	*eP*	P	14 01 13.5	-1.0
VES	Vestal, Richgr	87.20	44	P	P	14 01 17.9	+2.1
	baz=227,SNR=5.0						
EDW2	Edwards Air Fo	87.21	46	P	P	14 01 18.4	+2.5
	baz=228,SNR=7.3						
SWSC	Sam W. Stewart	87.30	48	P	P	14 01 19.0	+2.7
	baz=229						
PFO	Pinyon Flats O	87.31	47	P	P	14 01 18.9	+2.3
	baz=229						
PFO	Pinyon Flats O	87.31	47	*eP*	P	14 01 17.9	+1.3
	comp=Z,12nm,1.1s						
PFO	Pinyon Flats O	87.31	47	*eP*	P	14 01 17.9	+1.3
PFO				pmax	pmax		
	comp=Z,12nm,1.1s						
ISA	Isabella, Lake	87.44	45	P	P	14 01 19.6	+2.5
	baz=228,SNR=18						
ISA	Isabella, Lake	87.44	45	*eP*	P	14 01 17.7	+0.6
	comp=Z,23nm,1.0s						
ISA	Isabella, Lake	87.44	45	*eP*	P	14 01 17.7	+0.6
ISA				pmax	pmax		
	comp=Z,23nm,1.0s						
BBRC	Big Bear Solar	87.46	47	P	P	14 01 20.0	+2.6
	baz=229						
LRMC	Laurel Mtn Rad	87.80	45	P	P	14 01 21.3	+2.4
	baz=228,SNR=13						
RRX	Edison Barstow	87.81	46	P	P	14 01 21.5	+2.7
	baz=228						
BELC	Belle Mtn. Jos	87.86	47	P	P	14 01 22.1	+2.9
	baz=229,SNR=9.0						
CMB	Columbia Colle	87.94	42	*eP*	P	14 01 20.8	+1.4
	comp=Z,13nm,0.8s						
CMB	Columbia Colle	87.94	42	*eP*	P	14 01 20.8	+1.4
CMB				pmax	pmax		
	comp=Z,13nm,0.8s						
BC3	Big Chuckawall	87.98	48	P	P	14 01 22.8	+3.1
	baz=229,SNR=10						
GLA	Glamis	87.99	49	P	P	14 01 22.7	+3.0
	baz=230						
GLA	Glamis	87.99	49	*eP*	P	14 01 21.8	+2.0
	comp=Z,24nm,1.3s						
GLA	Glamis	87.99	49	*eP*	P	14 01 21.8	+2.0
GLA				pmax	pmax		
	comp=Z,24nm,1.3s						
SDPT	Sand Point	88.06	10	*eP*	P	14 01 19.9	+0.5
	comp=Z,64nm,0.8s						
USRK	Ussuriysk Ar.	88.09	327	P	P	14 01 20.0	+0.1
	comp=Z,8.7nm,1.0s,baz=142,slow=7.2,SNR=6.0						
USRK				LR	LR	14 35 50.3	
	comp=Z,82nm,20.6s,baz=136,slow=32						
KHMM	Horse Mountain	88.10	38	*eP*	P	14 01 22.7	+2.5
	comp=Z,11nm,0.8s						
HEC	Hector,Ludlow	88.19	47	P	P	14 01 23.3	+2.6
	baz=229,SNR=6.2						
CWC	Cottonwood Cre	88.20	44	P	P	14 01 23.0	+2.2
	baz=228						
GSC	Goldstone, Bar	88.21	46	P	P	14 01 23.4	+2.5
	baz=229,SNR=10						
GSC	Goldstone, Bar	88.21	46	*eP*	P	14 01 22.4	+1.6
	comp=Z,15nm,0.9s						
GSC	Goldstone, Bar	88.21	46	*eP*	P	14 01 22.4	+1.6
GSC				pmax	pmax		
	comp=Z,15nm,0.9s						
AFDM	Forest Hills D	88.24	41	*eP*	P	14 01 22.1	+1.3
	comp=Z,6.9nm,0.9s						
MPMC	Manual Prospec	88.30	45	P	P	14 01 23.9	+2.5
	baz=228,SNR=11						
ORV	Oroville	88.37	40	*eP*	P	14 01 22.9	+1.6
	comp=Z,8.4nm,1.1s						
ORV	Oroville	88.37	40	*eP*	P	14 01 22.9	+1.6
ORV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
DAC	Darwin (Calif)	88.38	45	*eP*	P	14 01 22.7	+1.0
	comp=Z,3.7nm,0.9s						
DAC	Darwin (Calif)	88.38	45	*eP*	P	14 01 22.7	+1.0
DAC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MDPB	Devils Postpil	88.42	43	*eP*	P	14 01 22.2	+0.3
	comp=Z,9.5nm,1.2s						
OMMB	Old Mammoth Mi	88.45	43	*eP*	P	14 01 23.9	+1.7
	comp=Z,24nm,1.8s						
113A	Mohawk Valley,	88.49	50	*eP*	P	14 01 24.2	+2.2
	comp=Z,14nm,1.3s						
IRM	Iron Mountain	88.50	48	P	P	14 01 25.3	+3.1
	baz=230,SNR=17						
TIN	Tinemaha, Big	88.52	44	P	P	14 01 24.4	+2.1
	baz=228						
WDC	Whiskeytown Da	88.52	39	*eP*	P	14 01 23.6	+1.6
	comp=Z,13nm,1.0s						
WDC	Whiskeytown Da	88.52	39	*eP*	P	14 01 23.6	+1.6
WDC				pmax	pmax		
	comp=Z,13nm,1.0s						
MLAC	Mammoth, Mammo	88.56	43	P	P	14 01 24.9	+2.3
	baz=227						
GMRC	Granite Mounta	88.58	47	P	P	14 01 25.4	+2.7
	baz=229,SNR=7.9						
214A	Organ Pipe Nat	88.60	51	P	P	14 01 25.7	+3.0
	baz=231						
Y12C	Blythe	88.63	48	P	P	14 01 25.7	+3.1
	baz=230						
N02D	Trinity Center	88.72	39	P	P	14 01 25.6	+2.6
	baz=225,SNR=5.2						
SKNT	Sakolnakorn	88.72	291	P	P	14 01 22.8	-0.7
	comp=Z,14nm,1.2s						
O03D	Paynes Creek	88.72	40	P	P	14 01 24.9	+1.8
	baz=225						
WAKR	Walker	88.80	42	*eP*	P	14 01 25.5	+1.8
	comp=Z,16nm,1.1s						
TUQ	Turquoise Moun	88.84	46	P	P	14 01 26.5	+2.6
	baz=229,SNR=11						
SHOC	Shoshone, Teco	88.93	46	P	P	14 01 26.5	+2.4
	baz=229						
M02C	Callahan	88.93	38	P	P	14 01 26.8	+2.8
	baz=225,SNR=6.5						
FURC	Furnace Creek,	88.95	45	P	P	14 01 26.7	+2.6
	baz=229						
GRAC	Grapevine Rang	89.00	44	P	P	14 01 27.0	+2.6
	baz=228,SNR=14						
L02D	Cave Junction,	89.09	37	P	P	14 01 27.2	+2.5
	baz=224						
PNTR	Pine Nut	89.11	42	*eP*	P	14 01 26.7	+1.6
	comp=Z,19nm,0.9s						
TYV	Tymovskoe	89.14	336	*eP*	P	14 01 22.3	-2.3
TYV				pmax	pmax		
	comp=Z,11nm,1.4s						
BEKR	Beckworth	89.22	41	*eP*	P	14 01 26.8	+1.3
	comp=Z,6.0nm,1.0s						
NEE2	Needles Airpor	89.22	48	P	P	14 01 28.3	+2.8
	baz=230						
PDMCI	Parker Dam,Lak	89.23	48	P	P	14 01 28.0	+2.6
	baz=230						
YERR	Yerington	89.24	42	*eP*	P	14 01 26.9	+1.2
	comp=Z,11nm,0.9s						
YBH	Yreka Blue Hor	89.25	38	P	P	14 01 26.7	+1.2
	comp=Z,4.8nm,1.0s,baz=234,slow=2.2,SNR=11						
YBH				LR	LR	14 33 45.0	
	comp=Z,111nm,21.8s,baz=234,slow=30						
YBH	Yreka Blue Hor	89.25	38	*eP*	P	14 01 25.7	+0.1
	comp=Z,12nm,1.3s						
NV01	Mina Array Sit	89.41	43	*eP*	P	14 01 27.8	+1.3
NVAR	Mina Array Bea	89.41	43	P	P	14 01 28.3	+1.8
	comp=Z,10nm,0.8s,baz=222,slow=8.1,SNR=67						
NVAR				PKKPbc	PKKPbc	14 19 03.2	+0.5
	comp=Z,0.5nm,0.7s,baz=85,slow=4.5,SNR=4.0						
NVAR				LR	LR	14 36 51.1	
	comp=Z,117nm,18.2s,baz=96,slow=32						
RYN	Ryan	89.41	43	*eP*	P	14 01 25.9	-0.6
	comp=Z,6.9nm,1.0s						
NV11	Mina Array Sit	89.49	43	*eP*	P	14 01 28.1	+1.2
	comp=Z,0.9nm,1.0s						
TPNV	Topopah Spring	89.64	45	P	P	14 01 30.1	+2.5
	baz=229,SNR=14						
TPNV	Topopah Spring	89.64	45	*eP*	P	14 01 28.4	+0.8
	comp=Z,9.3nm,0.9s						
TPNV	Topopah Spring	89.64	45	*eP*	P	14 01 28.4	+0.8
TPNV				pmax	pmax		
	comp=Z,9.0nm,0.9s						
PAHR	Pah Rah Range	89.65	41	*eP*	P	14 01 27.9	+0.3
	comp=Z,8.7nm,1.0s						
Y14A	Wickenburg	89.72	49	*eP*	P	14 01 30.1	+2.2
	comp=Z,12nm,0.9s						
CHAI	Chaiyaphum	89.73	289	P	P	14 01 28.8	+0.5
	comp=Z,5.3nm,0.9s						
HUMO	Hull Mountain	89.74	37	*eP*	P	14 01 28.2	+0.5
	comp=Z,23nm,1.5s						
M04C	Macdoel	89.75	39	P	P	14 01 29.9	+2.0
	baz=225						
W13A	Hualapai Mount	89.90	48	*eP*	P	14 01 31.5	+2.6
	comp=Z,9.6nm,0.9s						
KVN	Kaiserville	89.94	43	*eP*	P	14 01 30.0	+1.0
	comp=Z,9.3nm,0.9s						
KVN	Kaiserville	89.94	43	*eP*	P	14 01 30.0	+1.0
KVN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
NONG	Nongkai	89.98	291	P	P	14 01 29.7	+0.3
SHPR	Sheep Range	90.01	46	*eP*	P	14 01 31.0	+1.7
	comp=Z,8.0nm,1.0s						
TUC	Tucson	90.16	52	P	P	14 01 33.4	+3.4
	baz=232						
TUC	Tucson	90.16	52	*eP*	P	14 01 32.2	+2.1
	comp=Z,17nm,1.1s						
TUC	Tucson	90.16	52	*eP*	P	14 01 32.2	+2.1
TUC				pmax	pmax		
	comp=Z,17nm,1.1s						
I03D	Drain, OR	90.32	36	P	P	14 01 32.7	+2.3
	baz=224						
K04D	Chiloquin, OR	90.38	38	P	P	14 01 33.2	+2.3
	baz=226						
J04D	Umpqua Nationa	90.63	37	P	P	14 01 34.3	+2.2
	baz=225,SNR=10						
MOD	Modoc Plateau	90.65	39	*eP*	P	14 01 32.4	+0.2
	comp=Z,12nm,1.1s						
I04A	Tendick Farm,	90.87	37	P	P	14 01 34.7	+1.8
	baz=225,SNR=6.8						
K05A	Summer Lake	90.91	38	*eP*	P	14 01 34.7	+1.3
	comp=Z,53nm,0.5s						
PBKT	Sadao Pong	90.92	289	*eP*	P	14 01 32.6	-1.1
R11A	Troy Canyon, C	90.95	44	P	P	14 01 35.5	+1.8
	baz=229,SNR=5.2						
R11A	Troy Canyon, C	90.95	44	*eP*	P	14 01 35.0	+1.4
	comp=Z,1.9nm,0.9s						
X16A	Lo Mia Camp, P	91.03	50	*eP*	P	14 01 35.0	+0.8
	comp=Z,11nm,0.9s						
J05D	Fort Rock, OR	91.12	38	P	P	14 01 36.3	+2.1
	baz=226,SNR=7.0						
GRNR	Gornyy	91.32	333	*eP*	P	14 01 35.2	+0.4
GRNR				pmax	pmax		
	comp=Z,26nm,1.0s						
BMN	Battle Mountai	91.37	42	*eP*	P	14 01 36.9	+1.3
	comp=Z,7.6nm,0.8s						
BMN	Battle Mountai	91.37	42	*eP*	P	14 01 36.9	+1.3
BMN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
G03D	McMinnville, O	91.45	35	P	P	14 01 37.8	+2.3
	baz=224						
LCMT	Little Creek M	91.51	47	*eP*	P	14 01 37.2	+1.0
	comp=Z,5.5nm,0.9s						
PINE	Pine Mountain	91.62	38	*eP*	P	14 01 38.0	+1.3
	comp=Z,23nm,0.8s						
U15A	North Rim	91.74	48	*eP*	P	14 01 39.5	+2.0
	comp=Z,13nm,0.9s						
KDAK	Kodiak Island	91.76	13	P	P	14 01 37.5	+0.9
	comp=Z,6.7nm,0.9s,baz=224,slow=4.8,SNR=5.9						
KDAK	Kodiak Island	91.76	13	*ceP*	P	14 01 38.7	+2.1
WUAZ	Wupatki	91.76	49	P	P	14 01 40.1	+2.6
	baz=232						
WUAZ	Wupatki	91.76	49	*eP*	P	14 01 38.5	+1.0
	comp=Z,6.9nm,0.8s						
KNB	Kanab	91.78	47	*eP*	P	14 01 39.4	+1.8
	comp=Z,10nm,0.9s						
KNB	Kanab	91.78	47	*eP*	P	14 01 39.4	+1.8
KNB				pmax	pmax		
	comp=Z,11nm,0.9s						
CCUT	Cedar City	91.78	46	*eP*	P	14 01 39.5	+1.8
	comp=Z,4.1nm,0.9s						
I05D	Terrebonne, OR	91.80	37	P	P	14 01 39.4	+2.1
	baz=226,SNR=7.9						
WVOR	Wild Horse Val	91.92	40	*eP*	P	14 01 39.1	+1.1
	comp=Z,6.9nm,1.0s						
WVOR	Wild Horse Val	91.92	40	*eP*	P	14 01 39.1	+1.1
WVOR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GYA	Guiyang	91.95	300⇑	*iP*	P	14 01 38.5	0.0
GYA				pP	pP	14 01 52.6	+3.0
GYA				sP	sP	14 01 58.0	+4.4
GYA				PP	PP	14 05 21.2	+2.6
GYA				SKS	SKSac	14 12 07.4	-1.7
GYA				S	S	14 12 34.5	-3.4
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GYA				pmax	pmax		
	comp=Z,120nm,5.6s						
KLR	Kul'dur	92.02	330	*cP*	P	14 01 37.9	-0.2
X18A	Snowflake	92.07	50	*eP*	P	14 01 40.4	+1.4
	comp=Z,6.9nm,1.0s						
ENH	Enshi	92.10	305	*eP*	P	14 01 38.8	-0.2
	comp=Z,42nm,1.4s						
PSUT	Pine Spring	92.11	45	*eP*	P	14 01 40.0	+0.9
	comp=Z,3.6nm,0.9s						
G05D	Wamic, OR	92.44	36	P	P	14 01 42.2	+2.0
	baz=226						
W18A	Petrified Fore	92.57	50	P	P	14 01 43.5	+2.2
	baz=233						
I07A	Izee	92.58	38	*eP*	P	14 01 42.7	+1.7
	comp=Z,5.3nm,0.8s						
G06A	Carlson Farm,	92.78	37	*eP*	P	14 01 43.1	+1.3
	comp=Z,9.6nm,0.8s						
MTPU	Mount Pierson	92.82	46	*eP*	P	14 01 43.4	+0.9
	comp=Z,5.5nm,1.1s						
TX31	Lajitas Ar. Si	93.35	58	*eP*	P	14 01 46.3	+1.4
TXAR	Lajitas Array	93.35	58	P	P	14 01 46.6	+1.7
	comp=Z,0.6nm,0.8s,baz=232,slow=6.2,SNR=6.7						
TXAR				LR	LR	14 38 52.0	
	comp=Z,82nm,18.1s,baz=0.0,slow=32						
MNTX	Cornudas Mount	93.48	55	P	P	14 01 47.4	+2.0
	baz=235						
CMAR	Chiang Mai Arr	93.55	289	P	P	14 01 46.7	+0.7
	comp=Z,1.7nm,0.7s,baz=152,slow=3.3,SNR=7.4						
CMAR				PP	PP	14 05 32.2	+1.1
	comp=Z,3.0nm,0.9s,baz=140,slow=6.3,SNR=9.1						
CMAR				LR	LR	14 44 55.7	
	comp=Z,27nm,21.7s,baz=140,slow=36						
G08A	Pilot Rock	93.68	38	*eP*	P	14 01 47.0	+0.9
	comp=Z,7.4nm,1.0s						
BRLK	Bradley Lake	93.93	14	*eP*	P	14 01 47.5	+0.8
	comp=Z,102nm,0.5s						
RSO	Redoubt South	94.22	12	*eP*	P	14 01 49.0	+0.7
BMO	Blue Mountains	94.26	39	*eP*	P	14 01 48.7	0.0
	comp=Z,2.6nm,0.8s						
BMO	Blue Mountains	94.26	39	*eP*	P	14 01 48.7	0.0
BMO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MA2	Magadan	94.48	345	*iP*	P	14 01 48.2	-1.0
MA2				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SRU	San Rafael Swe	94.50	46	*eP*	P	14 01 51.0	+1.0
	comp=Z,4.9nm,1.0s						
SRU	San Rafael Swe	94.50	46	*eP*	P	14 01 51.1	+1.0
SRU				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ANMO	Albuquerque	94.63	52	LR	LR	14 39 40.9	
	comp=Z,106nm,18.0s,baz=240,slow=32						
XAN	Xi'an	94.67	307	P	P	14 01 51.3	+0.5
XAN				pP	sP	14 02 05.3	-0.6
XAN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
XAN				pmax	pmax		
	comp=Z,170nm,7.1s						
HVU	Hansel Valley	94.80	43	*eP*	P	14 01 52.9	+1.6
	comp=Z,7.3nm,0.8s						
HVU	Hansel Valley	94.80	43	*eP*	P	14 01 52.9	+1.6
HVU				pmax	pmax		
	comp=Z,7.0nm,0.8s						
D08A	Wollman Farm,	94.90	36	*eP*	P	14 01 52.8	+1.4
	comp=Z,7.4nm,0.8s						
HLID	Hailey	95.00	41	P	P	14 01 54.2	+2.0
	baz=230						
HLID	Hailey	95.00	41	*eP*	P	14 01 53.7	+1.5
	comp=Z,5.0nm,0.9s						
APG	El Apazote	95.98	76	LR	LR	14 35 04.9	
	comp=Z,102nm,21.9s,baz=259,slow=29						
S22A	4UR Ranch, Cre	96.01	49	*eP*	P	14 01 57.3	+0.2
	comp=Z,3.4nm,1.3s						
CD2	Chengdu	96.53	302	P	P	14 01 58.3	-1.1
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
SDCO	Great Sand Dun	96.87	50	P	P	14 02 02.1	+1.1
	baz=235						
HHC	Hu-ho-hao-te	96.93	314	*eP*	P	14 02 02.0	+1.0
HHC				pmax	pmax		
	comp=Z,3.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,38nm,5.5s						
FXWY	Fox Creek	96.96	42	*eP*		14 02 03.6	
	comp=Z,2.9nm,1.1s						
IMW	Indian Meadow	97.17	42	*eP*	Pdif	14 02 03.9	+1.6
	comp=Z,3.3nm,0.9s						
SEY	Seymchan	97.19	347	P	P	14 02 00.4	-1.0
	comp=Z,2.3nm,0.7s,baz=161,slow=7.1,SNR=6.1						
SEY	Seymchan	97.19	347	*ceP*	P	14 02 01.1	-0.3
PDAR	Pinedale Array	97.29	44	P	P	14 02 03.7	+0.9
	comp=Z,0.5nm,0.4s,baz=194,slow=3.1,SNR=6.9						
PDAR				PKKPbc	PKKPbc	14 18 41.6	-0.5
	comp=Z,0.7nm,0.7s,baz=79,slow=3.2,SNR=4.2						
PDAR				LR	LR	14 41 46.0	
	comp=Z,100nm,18.6s,baz=280,slow=33						
TRF	Thorofare Moun	97.44	12	*eP*	P	14 02 02.2	-0.6
	comp=Z,29nm,0.8s						
BOZ	Bozeman (W)	97.82	41	P	Pdif	14 02 06.7	+1.7
	baz=232						
BOZ	Bozeman (W)	97.82	41	*eP*	P	14 02 06.0	+1.0
	comp=Z,19nm,2.0s						
BOZ	Bozeman (W)	97.82	41	*eP*	P	14 02 06.0	+1.0
BOZ				pmax	pmax		
	comp=Z,19nm,2.0s						
LPAZ	La Paz	97.88	115	P	Pdif	14 02 08.8	+2.2
	comp=Z,1.3nm,0.7s,baz=193,slow=5.3,SNR=4.2						
LPAZ				LR	LR	14 35 56.3	
	comp=Z,68nm,21.7s,baz=256,slow=29						
JTS	JuntasAbangare	98.19	83	LR	LR	14 36 52.6	
	comp=Z,65nm,20.5s,baz=354,slow=29						
WRH	Wood River Hil	98.77	13	*eP*	P	14 02 08.3	-0.2
	comp=Z,7.4nm,1.2s						
CCB	Clear Creek Bu	98.99	13	*eP*	Pdif	14 02 08.8	-0.7
	comp=Z,2.7nm,0.8s						
SCRK	Sand Creek	99.16	15	*eP*	Pdif	14 02 10.7	+0.2
	comp=Z,9.3nm,0.8s						
MDM	Murphy Dome	99.19	12	*eP*	Pdif	14 02 10.2	-0.3
	comp=Z,2.6nm,0.7s						
IL1	Eielson Array	99.27	13	*eP*	Pdif	14 02 09.3	-1.5
ILAR	Eielson Array	99.27	13	P	Pdif	14 02 10.3	-0.4
	comp=Z,1.3nm,0.9s,baz=218,slow=5.4,SNR=14						
ILAR				PKKPbc	PKKPbc	14 18 33.1	-4.0
	comp=Z,0.8nm,0.9s,baz=350,slow=2.7,SNR=6.7						
ILAR				LR	LR	14 40 01.6	
	comp=Z,42nm,21.7s,baz=230,slow=31						
CPUP	Villa Florida	99.40	129	LR	LR	14 41 03.6	
	comp=Z,38nm,19.7s,baz=215,slow=32						
BILL	Bilibino	100.12	354	*iP*	Pdif	14 02 14.9	+0.4
BILL				*i*		14 06 24.9	
BILL				p

KURK	**Kurchatov**	**121.74 313**	*e*PKPdf	**PKPdf**	**14 07 21.6**	**-1.4**
KURK	**Kurchatov**	**121.74 313**	PKIKP	**PKPdf**	**14 07 22.1**	**-0.9**
KURK			pmax	pmax		
	comp=Z,8.0nm,0.8s					
KURBB	**Kurchatov Arra**	**121.77 313**	PKP	**PKPdf**	**14 07 22.1**	**-1.0**
	comp=Z,7.6nm,0.8s,baz=105,slow=2.0,SNR=58					
MATP	**Matopo**	**122.11 210**	PKP	**PKPdf**	**14 07 24.7**	**-0.3**
	comp=Z,17nm,0.8s,baz=161,slow=2.1,SNR=34					
FRU	**Bishkek**	**122.55 303**	*e*PKIKP	**PKPdf**	**14 07 23.0**	**-1.9**
KBL	**Kabul**	**124.45 292**	*e*PKPdf	**PKPdf**	**14 07 28.1**	**-0.9**
KBL	**Kabul**	**124.45 292**	*e*PKIKP	**PKPdf**	**14 07 28.1**	**-0.9**
TULEG	**Thule**	**125.12 16**	*e*PKPdf	**PKPdf**	**14 07 28.4**	**-0.4**
KK31	**Karatay Array**	**125.54 303**	*e*PKPdf	**PKPdf**	**14 07 29.8**	**-0.8**
KK31	**Karatay Array**	**125.54 303**	*e*PKIKP	**PKPdf**	**14 07 29.8**	**-0.8**
KKAR	**Karatay Array**	**125.54 303**	*e*PKPdf	**PKPdf**	**14 07 29.6**	**-1.0**
KKAR	**Karatay Array**	**125.54 303**	*e*PKIKP	**PKPdf**	**14 07 29.6**	**-1.0**
PQI	**Presque Isle**	**125.68 53**	*e*PKPdf	**PKPdf**	**14 07 30.2**	**-0.5**
LSZ	**Lusaka**	**126.79 213**	*e*PKPdf	**PKPdf**	**14 07 33.8**	**-0.2**
LSZ	**Lusaka**	**126.79 213**	*e*PKIKP	**PKPdf**	**14 07 33.8**	**-0.2**
TSUM	**Tsumeb**	**127.11 199**	*e*PKPdf	**PKPdf**	**14 07 34.9**	**+0.3**
BVAR	**Borovoye Array**	**127.13 315**	PKP	**PKPdf**	**14 07 32.0**	**-1.3**
	comp=Z,7.0nm,0.8s,baz=104,slow=3.0,SNR=36					
BVAR	**Borovoye Array**	**127.13 315**	PKIKP	**PKPdf**	**14 07 32.0**	**-1.3**
BVAR			pmax	pmax		
	comp=Z,7.0nm,0.8s					
BRVK	**Borovoye**	**127.20 315**	*e*PKPdf	**PKPdf**	**14 07 32.6**	**-0.8**
BRVK	**Borovoye**	**127.20 315**	*c i*PKIKP	**PKPdf**	**14 07 33.4**	**0.0**
BRVK			pmax	pmax		
	comp=Z,11nm,1.0s					
SCHQ	**Schefferville**	**127.41 43**	PKP	**PKPdf**	**14 07 33.3**	**-0.5**
	comp=Z,6.5nm,1.0s,baz=307,slow=5.1,SNR=4.4					
KBS	**Kingsbay**	**132.49 357**	*e*PKPdf	**PKPdf**	**14 07 43.7**	**+0.9**
KBS	**Kingsbay**	**132.49 357**	*e*PKIKP	**PKPdf**	**14 07 43.7**	**+0.9**
SPITS	**Spitsbergen Ar**	**132.99 356**	PKP	**PKPdf**	**14 07 42.2**	**-1.6**
	comp=Z,13nm,0.7s,baz=148,slow=1.4,SNR=8.1					
ABKAR	**Akbulak array**	**133.53 310**	*e*PKPdf	**PKPdf**	**14 07 45.0**	**-0.5**
ARU	**Arti**	**133.91 320**	*e*PKPdf	**PKPdf**	**14 07 45.6**	**-0.4**
ARU	**Arti**	**133.91 320**	*i* PKIKP	**PKPdf**	**14 07 46.3**	**+0.3**
ARU					14 10 15.5	
SUMG	**Summit**	**134.05 16**	*e*PKPdf	**PKPdf**	**14 07 46.7**	**+0.3**
SUMG	**Summit**	**134.05 16**	*e*PKIKP	**PKPdf**	**14 07 46.7**	**+0.3**
AKTO	**Aktyubinsk**	**134.76 311**	PKP	**PKPdf**	**14 07 46.1**	**-1.7**
	comp=Z,7.3nm,0.9s,baz=98,slow=2.0,SNR=16					
PRGR	**Permogore**	**138.81 330**	*e*PKIKP	**PKPdf**	**14 07 54.1**	**-0.8**
PRGR			pmax	pmax		
	comp=Z,10.0nm,0.5s					
ARCES	**ARCESS Array B**	**139.81 347**	PKhKP	PKPpre	14 07 49.0	
	comp=Z,4.1nm,0.7s,baz=32,slow=2.8,SNR=12					
ARCES	**ARCESS Array B**	**139.81 347**	PKHKP	PKPpre	14 07 49.0	
ARCES			pmax	pmax		
	comp=Z,4.0nm,0.7s					
RAYN	**Ar Rayn**	**140.51 269**	*e*PKPdf	**PKPdf**	**14 07 58.6**	**-0.7**
KLMR	**Klimovskoe**	**141.77 331**	*e*PKIKP	**PKPdf**	**14 07 56.8**	**-3.5**
KLMR			pmax	pmax		
	comp=Z,18nm,1.2s					
KLMR	**Klimovskoe**	**141.77 331**	*e*PKPdf	**PKPdf**	**14 07 56.8**	**-3.5**
KLMR			AMP		14 08 00.7	
	comp=Z,18nm,1.2s					
GNI	**Garni**	**144.40 296**	PKP	**PKPab**	**14 08 04.4**	**+0.3**
	comp=Z,4.1nm,0.4s,baz=135,slow=2.9,SNR=9.2					
GNI	**Garni**	**144.40 296**	*e*PKPdf	**PKPab**	**14 08 04.1**	**0.0**
ZEI	**Tsey**	**144.93 301**	*i* PKIKP	PKPbc	14 08 07.1	+1.0
ZEI			pmax	pmax		
	comp=Z,15nm,0.8s					
NCK	**Nalchik**	**145.10 302**	*i* PKIKP	**PKPbc**	**14 08 06.1**	**-0.2**
MOS	**Moscow**	**145.24 324**	*e*PKIKP	**PKPbc**	**14 08 04.1**	**-2.2**
GOF	**Gofitskoye**	**145.31 305**	*e*PKIKP	**PKPbc**	**14 08 07.2**	**+0.3**
GOF			pmax	pmax		
	comp=Z,70nm,0.8s					
KBZ	**Khabaz**	**145.58 302**	PKPbc	**PKPdf**	**14 08 07.0**	**-0.6**
	comp=Z,17nm,0.9s,baz=106,slow=2.2,SNR=42					
KBZ	**Khabaz**	**145.58 302**	PKIKP	**PKPdf**	**14 08 07.0**	**-0.6**
KBZ			pmax	pmax		
	comp=Z,17nm,0.9s					
KIV	**Kislovodsk**	**145.71 303**	*e*PKPbc	**PKPdf**	**14 08 06.8**	**-1.2**
KIV	**Kislovodsk**	**145.71 303**	*i* PKIKP	**PKPdf**	**14 08 08.1**	**+0.2**
KIV			pmax	pmax		
	comp=Z,30nm,1.0s					
KIV			MLR	MLR		
	comp=Z,79nm,24.0s					
NEY	**Neytrino**	**145.76 301**	*d i*PKIKP	**PKPdf**	**14 08 09.4**	**+1.3**
PUL	**Pulkovo**	**146.06 334**	*c i*PKIKP	**PKPdf**	**14 08 07.4**	**-0.4**
PUL			pmax	pmax		
	comp=Z,121nm,0.5s					
OBN	**Obninsk**	**146.07 324**	*e*PKPdf	**PKPdf**	**14 08 07.4**	**-0.5**
OBN	**Obninsk**	**146.07 324**	*c i*PKP2	**PKPdf**	**14 08 07.8**	**-0.2**
OBN			pmax	pmax		
	comp=Z,55nm,1.2s					
FIA1	**FINESS Array S**	**146.27 339**	*e*PKPdf	**PKPdf**	**14 08 07.8**	**-0.4**
FIA1			*e*PKPdf	**PKPbc**	**14 08 08.0**	**-1.3**
FINES	**FINESS Array B**	**146.27 339**	PKPbc	**PKPdf**	**14 08 08.3**	**+0.2**
	comp=Z,44nm,0.7s,baz=51,slow=3.8,SNR=162					
VSR	**Storozhevoye**	**146.29 316**	*e*PKP2	**PKPdf**	**14 08 08.4**	**-0.1**
VSR			pmax	pmax		
	comp=Z,80nm,0.9s					
VORD	**Divnogorie**	**146.31 316**	*e*PKP2	**PKPdf**	**14 08 09.6**	**+1.1**
VORD			pmax	pmax		
	comp=Z,40nm,0.7s					
SOC	**Sochi**	**147.89 303**	*i* PKP2	**PKPbc**	**14 08 14.1**	**-0.4**
SOC			*e*		14 11 38.9	
SOC			*e*PPP	PPP	14 15 04.4	
SOC			*e*SS	SS	14 30 37.3	-8.3
SOC			pmax	pmax		
	comp=Z,16nm,0.4s					
VSU	**Vasula**	**148.30 335**	*c i*PKP2	**PKPbc**	**14 08 14.5**	**-0.5**
VSU			pmax	pmax		
	comp=Z,148nm,0.7s					
NC204	**NORSAR Array S**	**149.84 351**	*e*PKPbc	**PKPbc**	**14 08 18.8**	**-0.2**
NC405	**NORSAR Array S**	**149.86 350**	*e*PKPbc	**PKPbc**	**14 08 18.2**	**-0.8**
NB201	**NORSAR Array S**	**149.98 351**	*e*PKPbc	**PKPdf**	**14 08 17.8**	**+3.5**
NB201			*e*PKPab	**PKiKP**	**14 08 23.7**	**+3.6**
NB2	**NORSAR Subarra**	**150.00 351**	PKP	**PKPbc**	**14 08 18.7**	**-0.6**
	comp=Z,8.4nm,0.7s,baz=24,slow=3.0					
NOA	**NORSAR Array B**	**150.00 351**	PKPbc	**PKPbc**	**14 08 18.4**	**-0.9**
	comp=Z,7.6nm,0.6s,baz=344,slow=1.8,SNR=7.8					
NBO00	**NORSAR Array S**	**150.07 351**	*e*PKPbc	**PKPbc**	**14 08 19.4**	**-0.1**
ASF	**Jabal al Asfar**	**150.17 280**	PKPbc	**PKPbc**	**14 08 20.0**	**-0.7**
	comp=Z,12nm,0.8s,baz=184,slow=1.0,SNR=18					
NAO01	**NORSAR Array S**	**150.24 351**	*e*PKPbc	**PKPbc**	**14 08 19.8**	**-0.1**
NAO01			*e*PKPab	**PKPab**	**14 08 25.2**	**-0.8**
NC602	**NORSAR Array S**	**150.25 350**	*e*PKPbc	**PKPbc**	**14 08 19.2**	**-0.7**
HFS	**Hagfors**	**150.47 348**	PKPbc	**PKPbc**	**14 08 19.1**	**-1.3**
	comp=Z,15nm,0.6s,baz=90,slow=1.4,SNR=17					
SIM	**Simferopol'**	**151.52 307**	*e*PKIKP	**PKPbc**	**14 08 24.2**	**+0.8**
SIM			pmax	pmax		
	comp=Z,18nm,0.8s					
MMAI	**Mount Meron Ar**	**151.53 282**	PKPbc	**PKPbc**	**14 08 23.5**	**-0.4**
	comp=Z,39nm,0.8s,baz=77,slow=3.3,SNR=33					
KONO	**Kongsberg**	**151.56 352**	*e*PKPbc	**PKPbc**	**14 08 22.8**	**-0.2**
KONO	**Kongsberg**	**151.56 352**	*e*PKIKP	**PKPbc**	**14 08 22.8**	**-0.2**
AKASG	**Malin Array Be**	**152.15 321**	PKPbc	**PKPbc**	**14 08 24.0**	**-0.6**
	comp=Z,12nm,0.8s,baz=43,slow=4.3,SNR=32					
AKBB	**Malin Array Si**	**152.15 321**	*e*PKPdf	**PKPdf**	**14 08 16.9**	**-1.0**
AKBB			*e*PKPbc	**PKPbc**	**14 08 23.6**	**-1.0**
AKBB	**Malin Array Si**	**152.15 321**	*e*PKIKP	**PKPdf**	**14 08 16.9**	**-1.0**
KIEV	**Kiev**	**152.16 321**	*e*PKPbc	**PKPbc**	**14 08 23.5**	**-1.1**
KIEV	**Kiev**	**152.16 321**	*e*PKIKP	**PKPbc**	**14 08 23.5**	**-1.1**
ILGA	**Ilgaz**	**152.68 299**	*e*PKPbc	**PKPbc**	**14 08 25.6**	**-0.9**
SUW	**Suwalki**	**152.90 332**	*e*PKP	**PKPbc**	**14 08 26.0**	**-0.1**
SUW	**Suwalki**	**152.90 332**	*e*PKIKP	**PKPbc**	**14 08 26.0**	**-0.1**
BR131	**Keskin Array S**	**152.94 296**	*e*PKPbc	**PKPbc**	**14 08 25.2**	**-1.7**
BRTR	**Keskin Array B**	**152.94 296**	PKP	**PKPdf**	**14 08 19.0**	**-0.7**
	comp=Z,1.1nm,0.9s,baz=151,slow=3.3,SNR=4.6					
BRTR			PKPbc	**PKPbc**	**14 08 26.2**	**-0.7**
	comp=Z,9.1nm,0.7s,baz=134,slow=4.2,SNR=31					
BRTR			PKPab	**sPKPdf**	**14 08 37.2**	**+2.1**
	comp=Z,7.3nm,0.8s,baz=100,slow=5.0,SNR=11					
CSS	**Mathiatis**	**153.40 286**	*e*PKPbc	**PKPbc**	**14 08 26.4**	**-1.6**
ANTO	**Ankara**	**153.56 297**	*e*PKPbc	**PKPbc**	**14 08 27.9**	**-0.3**
ANTO	**Ankara**	**153.56 297**	*e*PKIKP	**PKPbc**	**14 08 27.9**	**-0.3**
LIC	**Lamto**	**153.88 165**	*e*PKIKP	**PKPdf**	**14 08 22.0**	**+0.4**
	comp=Z,71nm,0.7s					
KIC	**Kosan Boka**	**154.07 165**	*e*PKIKP	**PKPdf**	**14 08 21.7**	**-0.2**
	comp=Z,104nm,1.1s					
TIC	**Toumodi**	**154.29 165**	*e*PKIKP	**PKPdf**	**14 08 21.7**	**-0.5**
DBIC	**Dimbokro**	**154.35 165**	PKPbc	**PKPbc**	**14 08 33.2**	**+2.7**
	comp=Z,9.2nm,0.8s,baz=153,slow=2.3,SNR=4.4					
BUR04	**Bucovina Ar. S**	**156.03 318**	*e*PKPdf	**PKPdf**	**14 08 23.4**	**-0.2**
EKA	**Eskdalemuir Ar**	**156.15 7**	PKP	**PKPdf**	**14 08 22.4**	**-1.0**
	comp=Z,1.2nm,0.7s,baz=343,slow=1.5,SNR=3.7					
EKA			PKPab	**PKPab**	**14 08 50.8**	**-0.3**
	comp=Z,2.0nm,0.7s,baz=327,slow=2.8,SNR=5.6					
OJC	**Ojcow**	**157.10 329**	*e*PKP	**PKPdf**	**14 08 24.9**	**+0.1**
OJC	**Ojcow**	**157.10 329**	*e*PKIKP	**PKPdf**	**14 08 24.9**	**+0.1**
NIE	**Niedzica**	**157.45 327**	*e*PKP	**PKPdf**	**14 08 26.0**	**+0.6**
NIE	**Niedzica**	**157.45 327**	*e*PKIKP	**PKPdf**	**14 08 26.0**	**+0.6**
LANS	**Liptovska Anna**	**158.02 328**	*e*PKP2	**PKPab**	**14 09 00.6**	**+1.1**
LANS	**Liptovska Anna**	**158.02 328**	*e*PKP	**PKPab**	**14 09 00.6**	**+1.1**
MORC	**Moravsky Berou**	**158.39 331**	*e*PKP	**PKPdf**	**14 08 27.0**	**+0.5**
DPC	**Dobruska-Polom**	**158.42 334**	*e*PKPAB	**PKPab**	**14 09 00.9**	**-0.3**
DPC			*ex*	x	14 09 04.2	
DPC	**Dobruska-Polom**	**158.42 334**	*e*PKP2	**PKPab**	**14 09 00.9**	**-0.3**
KRLC	**Kraliky**	**158.46 333**	*e*PKPAB	**PKPab**	**14 09 03.9**	**+2.5**
KRLC	**Kraliky**	**158.46 333**	*e*PKP2	**PKPab**	**14 09 03.9**	**+2.5**
CLL	**Collm**	**158.71 340**	*j i*PKPab	**PKPab**	**14 09 01.4**	**-0.9**
	comp=Z,10.0nm,0.9s					
CLL			LmV		15 25 00.0	
	comp=Z,100nm,21.4s					
CLL	**Collm**	**158.71 340**	*e*PKPab	**PKPab**	**14 09 00.8**	**-1.6**
CLL	**Collm**	**158.71 340**	*j i*PKP2	**PKPab**	**14 09 01.4**	**-0.9**
CLL			pmax	pmax		
	comp=Z,10.0nm,0.9s					
VYHS	**Vyhne**	**158.79 327**	*e*PKP2	**PKPab**	**14 09 01.3**	**-1.5**
VYHS	**Vyhne**	**158.79 327**	*e*PKP	**PKPab**	**14 09 01.3**	**-1.5**
BRG	**Berggiesshubel**	**158.81 338**	*e*PKP	**PKPdf**	**14 08 27.6**	**+0.7**
	comp=Z,9.4nm,1.3s					
BRG			*e*		14 09 02.1	
	comp=Z,7.6nm,0.9s					
BRG	**Berggiesshubel**	**158.81 338**	*e*PKIKP	**PKPdf**	**14 08 27.6**	**+0.7**
BRG			*e*		14 09 02.1	
BRG			pmax	pmax		
	comp=Z,9.0nm,1.3s					
BRG			pmax	pmax		
	comp=Z,8.0nm,0.9s					
PVCC	**Panska Ves**	**158.90 337**	*e*PKPAB	**PKPab**	**14 09 03.0**	**-0.2**
PVCC	**Panska Ves**	**158.90 337**	*e*PKP2	**PKPab**	**14 09 03.0**	**-0.2**
JAVC	**Velka Javorina**	**159.04 329**	*e*PKP	**PKPdf**	**14 08 27.2**	**-0.1**
JAVC			*e*		14 09 03.9	
VRAC	**Vranov**	**159.15 332**	*e*PKP	**PKPdf**	**14 08 27.3**	**-0.1**
VRAC			*e*		14 09 03.3	
KRUC	**Moravsky**	**159.42 332**	*e*PKP	**PKPdf**	**14 08 27.5**	**-0.2**
VTS	**Vitosha**	**159.73 308**	*e*PKPab	**PKPab**	**14 09 07.5**	**+0.1**
VTS	**Vitosha**	**159.73 308**	*e*PKP2	**PKPab**	**14 09 07.5**	**+0.1**
KHC	**Kasperske Hory**	**160.42 336**	*e*PKPDF	**PKPdf**	**14 08 28.5**	**-0.4**
KHC			*e*PKPAB	**PKPab**	**14 09 09.8**	**-0.1**
KHC	**Kasperske Hory**	**160.42 336**	*e*PKIKP	**PKPdf**	**14 08 28.5**	**-0.4**
KHC			*e*		14 09 09.8	
GERES	**GERESS Array B**	**160.62 335**	PKP	**PKPdf**	**14 08 28.3**	**-0.9**
	comp=Z,0.7nm,0.7s,baz=83,slow=3.2,SNR=6.0					
GERES			PKPab	**PKPab**	**14 09 10.0**	**-0.9**
	comp=Z,1.3nm,0.7s,baz=23,slow=7.2,SNR=4.3					
GEA0	**GERESS Array S**	**160.63 335**	*e*PKPdf	**PKPdf**	**14 08 27.4**	**-1.8**
DIVS	**Divibare**	**161.02 316**	*e*PKPdf	**PKPdf**	**14 08 29.4**	**-0.3**
TOA0	**Torodi Ar. Sit**	**161.52 180**	*e*PKPdf	**PKPdf**	**14 08 31.2**	**+0.2**
TOA0			*e*PKPab	**PKPab**	**14 09 16.4**	**+1.0**
TORD	**Torodi Ar. Bea**	**161.52 180**	PKP	**PKPdf**	**14 08 31.9**	**+0.9**
	comp=Z,7.8nm,1.0s,baz=186,slow=1.4,SNR=14					
TORD			PKPab	**PKPab**	**14 09 16.4**	**+1.0**
	comp=Z,20nm,0.8s,baz=176,slow=3.4,SNR=26					
FUORN	**Ofenpass-Fuorn**	**163.71 338**	*e*PKPab	**PKPab**	**14 09 24.4**	**-0.2**
TAM	**Tamanrasset**	**170.47 202**	*e*PKPdf	**PKPdf**	**14 08 38.4**	**+0.2**
TAM	**Tamanrasset**	**170.47 202**	*e*PKIKP	**PKPdf**	**14 08 38.4**	**+0.2**
ESDC	**Sonseca Array**	**170.84 28**	PKP	**PKPdf**	**14 08 39.0**	**+1.3**
	comp=Z,4.6nm,0.9s,baz=346,slow=2.7,SNR=18					
ESDC			PKPab	**PKPab**	**14 09 56.7**	**+0.6**
	comp=Z,2.0nm,0.7s,baz=324,slow=3.8,SNR=6.8					
ES19	**SONSECA Array**	**170.85 28**	*e*PKPdf	**PKPdf**	**14 08 38.3**	**+0.6**
KEST	**Kesra**	**172.44 304**	PKP	**PKPdf**	**14 08 39.3**	**+0.6**
	comp=Z,5.8nm,0.9s,baz=358,slow=3.7,SNR=4.9					
MDT	**Midelt**	**174.58 77**	PKP	**PKPdf**	**14 08 40.5**	**+0.9**
	comp=Z,4.1nm,0.9s,baz=21,slow=2.5,SNR=4.5					

SKO 12 14:06:26.6, 41°.32N×22°.67E, h18km, M0.9, ML1.2, 1C-1D,
Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.07**	**271**	*i* Pg	Pg	14 06 30.1	+0.1
VAY				*i* Sg	Sg	14 06 31.9	-0.5
VAY				*e*Lg	Lg	14 06 31.9	
	comp=E,78nm,0.2s						
VAY				*e*Lg	Lg	14 06 31.9	
	comp=N,271nm,0.2s						
STIP	**Stip**	**0.52**	**316**	*j e*Pg	Pg	14 06 36.5	-0.6

*CSEM **12** 14:06:32.9±58°.34N×11°.87E, h1km, ML1.6, Mining explosion.*

UPP 12 14:06:32.9±0.1, 58°.34N×11°.87E, h1km, ML1.6, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANU	**Vaenersborg**	**0.19**	**34**	P	Pg	14 06 36.5	+0.1
VANU				S	Sg	14 06 39.2	+0.3
VANU	**Vaenersborg**	**0.19**	**34**	P	Pg	14 06 36.5	0.0
VANU				S	Sg	14 06 39.2	+0.3
TJOU	**Tjoern**	**0.33**	**203**	P	Pg	14 06 39.2	0.0
TJOU				S	Sg	14 06 43.5	0.0
TJOU	**Tjoern**	**0.33**	**203**	P	Pg	14 06 39.2	-0.1
TJOU				S	Sg	14 06 43.5	-0.1
STRU	**Stroemstad**	**0.79**	**333**	P	Pg	14 06 47.5	-0.5
STRU	**Stroemstad**	**0.79**	**333**	P	Pg	14 06 47.5	-0.5
BORU	**Boraas**	**0.85**	**146**	P	Pg	14 06 48.7	-0.5
BORU	**Boraas**	**0.85**	**146**	P	Pg	14 06 48.7	-0.5
NASU	**Vaermlandsnaes**	**0.91**	**49**	P	Pg	14 06 49.6	-0.6
NASU				S	Sg	14 07 01.0	-0.9
NASU	**Vaermlandsnaes**	**0.91**	**49**	P	Pg	14 06 49.6	-0.6
NASU				S	Sg	14 07 01.0	-1.0
FKPU	**Falk**	**0.99**	**100**	P	Pg	14 06 51.3	-0.6
FKPU	**Falk**	**0.99**	**100**	P	Pg	14 06 51.3	-0.6
ASKU	**Askersund**	**1.64**	**69**	P	Pn	14 07 03.0	+0.1
ASKU	**Askersund**	**1.64**	**69**	P	Pn	14 07 03.0	+0.1

*IDC **12** 14:09:57.6±1.9, 10°.88S×112°.71E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/52, mbtmp3.5/4, ML4.6/1, MS3.7/2, Ms1 3.7/2, ms1mx2.8/42, Error ellipse: s-maj=65.6km s-min=18.5km az=40.0*

*ISCJB **12** 14:09:58.0±0.9, 11°.37S±0°.06×111°.96E±0°.08, h33km, mb3.5/4, MS3.8/2, Error ellipse: s-maj=11.4km s-min=7.6km az=163.3*

*DJA **12** 14:10:00.9±0.9, 11°.5±22°×11°.2E±°, h119km±82km, M4.2/8, mb4.1/1, MLv4.2/8*

ISC 12 14:09:59.7±1.2, 11°.33S±0°.08×111°.94E±0°.09, h35km, n15,
σ1§88/18, mb3.5/4, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	**Pacitan**	**3.21**	**346**	P	**Pn**	**14 10 47.9**	**+0.2**
PCJI				S	**Sn**	**14 11 25.6**	**+0.9**
PWJI	**Pagerwojo**	**3.29**	**358**	P	**Pn**	**14 10 46.9**	**-1.9**
PWJI				S	**Sn**	**14 11 22.4**	**-4.4**
GMJI	**Gumukmas**	**3.38**	**26**	P	**Pn**	**14 10 50.4**	**+0.3**
GMJI				S	**Sn**	**14 11 29.6**	**+0.6**
JAGI	**Jajag, Banyuwa**	**3.58**	**38**	P	**Pn**	**14 10 53.8**	**+0.9**
JAGI				S	**Sn**	**14 11 34.1**	**+0.1**
UGM	**Wanagama**	**3.67**	**338**	P	**Pn**	**14 10 54.5**	**+0.4**
BLJI	**Banyuglugur**	**3.92**	**25**	P	**Pn**	**14 10 59.2**	**+1.7**
IGBI	**Denpasar**	**4.03**	**52**	P	**Pn**	**14 11 00.6**	**+1.6**
TWSI	**Taliwang, Sumb**	**5.51**	**63**	P	**Pn**	**14 11 17.6**	**-1.8**
BATI	**Baumata**	**11.58**	**86**	Pn	Pn	14 12 35.4	-7.2
	4.1nm,0.3s,baz=273,slow=19,SNR=8.9						
WRA	**Warramunga Arr**	**23.19**	**114**	P	**P**	**14 15 01.7**	**-1.9**
	0.5nm,0.7s,baz=286,slow=12,SNR=5.3						
WRA				S	**S**	**14 19 11.0**	**-2.2**
	0.4nm,0.9s,baz=290,slow=25,SNR=3.1						
ASAR	**Alice Springs**	**24.23**	**123**	P	**P**	**14 15 12.4**	**-1.1**
	0.4nm,0.7s,baz=303,slow=9.7,SNR=15						
ASAR				S	**S**	**14 19 32.4**	**+2.3**
	0.4nm,1.1s,baz=305,slow=24,SNR=2.7						
STKA	**Stephens Creek**	**34.14**	**131**	P	**P**	**14 16 41.6**	**0.0**
	1.5nm,0.5s,baz=282,slow=9.3,SNR=3.8						
SONM	**Songino Array**	**59.11**	**356**	LR	LR	14 48 39.9	
	comp=Z,48nm,18.3s,baz=88,slow=40						
MKAR	**Makanchi Array**	**63.65**	**338**	P	**P**	**14 20 29.5**	**+2.1**
	0.3nm,0.4s,baz=139,slow=8.1,SNR=4.3						
ZALV	**Zalesovo Beam**	**68.99**	**343**	LR	LR	14 53 44.1	
	comp=Z,67nm,19.9s,baz=72,slow=38						

*NEIC **12** 14:15:33.5±0.0, 43°.59S×172°.64E, h6km, ML3.8(WEL), After WEL.*
NEIC Felt at Christchurch.

WEL 12 14:15:32.4, 44°.S±1°×172°.6E±0°.8, h7km±1km, ML3.9/4,
South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MQZ	**McQueen's Vall**	**0.11**	**175**	Pg	Pg	14 15 36.2	+1.4
MQZ				Sg	Sg	14 15 38.3	+1.7
MQZ	**McQueen's Vall**	**0.11**	**175**	P	Pg	14 15 36.3	+1.4
MQZ				S	Sg	14 15 38.2	+1.6
EYCZ	**Eyrewell**	**0.27**	**310**	P	Pb	14 15 39.2	-0.3
EYCZ				S	Sb	14 15 43.5	-0.7
OKCZ	**Okains Bay**	**0.33**	**113**	P	Pb	14 15 40.4	-0.1
OKCZ				S	Sb	14 15 45.5	-0.6
AKCZ	**Akaroa Harbour**	**0.34**	**145**	P	Pb	14 15 40.7	0.0
OXZ	**Oxford**	**0.51**	**301**	Pg	Pb	14 15 43.4	-0.2
OXZ	**Oxford**	**0.51**	**301**	P	Pb	14 15 43.5	-0.2
LTZ	**Lake Taylor**	**0.86**	**342**	P	Pb	14 15 50.2	+0.6
RPZ	**Rata Peaks**	**1.16**	**264**	P	Pb	14 15 54.8	+0.1
RPZ				P	Pb	14 15 54.8	+0.1
INZ	**Inchbonnie**	**1.23**	**314**	P	Pb	14 15 55.7	-0.3
KHZ	**Kahutara**	**1.35**	**30**	Pn	Pn	14 15 56.9	-0.7
KHZ	**Kahutara**	**1.35**	**30**	P	Pn	14 15 57.0	-0.6
WVZ	**Waitaha Valley**	**1.48**	**290**	Pn	Pn	14 15 59.7	+0.4
WVZ	**Waitaha Valley**	**1.48**	**290**	P	Pn	14 15 59.7	+0.4
THZ	**Tophouse**	**1.84**	**6**	Pn	Pn	14 16 04.0	-0.4
THZ	**Tophouse**	**1.84**	**6**	P	Pn	14 16 04.1	-0.3
LBZ	**Lake Benmore**	**1.94**	**245**	Pn	Pn	14 16 05.9	+0.2
LBZ	**Lake Benmore**	**1.94**	**245**	P	Pn	14 16 06.0	+0.3
DSZ	**Denniston Nort**	**1.95**	**341**	Pn	Pn	14 16 05.8	-0.1
DSZ	**Denniston Nort**	**1.95**	**341**	P	Pn	14 16 05.9	+0.1
ODZ	**Otahua Downs**	**2.04**	**224**	Pn	Pn	14 16 07.0	0.0
ODZ	**Otahua Downs**	**2.04**	**224**	P	Pn	14 16 07.1	+0.1
FOZ	**Fox Glacier**	**2.05**	**271**	Pn	Pb	14 16 08.9	-1.0
FOZ	**Fox Glacier**	**2.05**	**271**	P	Pb	14 16 08.6	-1.3
BSWZ	**Blackbirch Sta**	**2.09**	**26**	Pn	Pn	14 16 07.9	+0.2
BSWZ	**Blackbirch Sta**	**2.09**	**26**	P	Pn	14 16 07.6	-0.1
TUWZ	**Tuamarina**	**2.37**	**24**	*e*Pn	Pn	14 16 11.4	-0.2
TUWZ	**Tuamarina**	**2.37**	**24**	P	Pn	14 16 11.4	-0.1
NNZ	**Nelson**	**2.44**	**13**	P	Pn	14 16 12.8	+0.3
TCW	**Tory Channel**	**2.67**	**28**	P	Pn	14 16 16.0	+0.2
SNZO	**South Karori**	**2.75**	**34**	*e*Pg	Pg	14 16 24.8	-0.2
QRZ	**Quartz Range**	**2.77**	**358**	Pn	Pn	14 16 16.9	-0.2
QRZ	**Quartz Range**	**2.77**	**358**	P	Pn	14 16 17.0	-0.1
WEL	**Wellington**	**2.80**	**35**	Pn	Pn	14 16 16.9	-0.5
JCZ

JMA 12 15:16:39.0±0.4, 47.°06N×147.°32E, h454km, M4.5
IDC 12 15:16:40.4±0.6, 47.°72N×146.°94E, h425km±6km, mb3.8/36, mb1 3.9/44, mb1mx3.7/77, mbtmp4.6/44, Error ellipse: s-maj=8.9km s-min=6.5km az=150.0
ISC 12 15:16:38.9±0.4, 47.°59N±0.°04×147.°11E±0.°04, h417km±4km, h417km:pP-P, n641, σ1932/708, mb4.3/193, 23C-21D, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.41**	**167**	*i* P		**P**	**15 17 39.2**	**+0.1**
KUR					AMB	AMB	15 17 40.1	
	17nm,0.5s							
KUR					AMB	AMB	15 17 40.1	
	30nm,0.5s							
KUR					AMB	AMB	15 17 40.1	
	272nm,0.5s							
KUR					AMB	AMB	15 17 40.3	
	537nm,2.0s							
KUR				*i* S		**S**	**15 18 26.8**	**-1.1**
KUR				A		A	15 18 28.6	
	182nm,0.8s							
KUR				A		A	15 18 28.6	
	239nm,0.8s							
KUR				A		A	15 18 29.1	
	1μm,3.0s							
KUR				A		A	15 18 29.1	
	3μm,3.0s							
KUR	**Kuril'sk**	**2.41**	**167**	*d i* PN		**P**	**15 17 39.5**	**+0.4**
KUR				*i* S		**S**	**15 18 26.8**	**-1.1**
KUR					pmax	pmax		
	comp=E,29nm,0.5s							
KUR					pmax	pmax		
	comp=Z,265nm,0.5s							
KUR					pmax	pmax		
	comp=N,16nm,0.3s							
KUR					smax	smax		
	comp=N,183nm,0.8s							
KUR					smax	smax		
	comp=E,224nm,0.8s							
KUR					smax	smax		
	comp=E,1μm,2.7s							
KUR					smax	smax		
	comp=N,735nm,1.9s							
YSS	**Yuzh-Sakhalins**	**3.03**	**260**	*i* P		**P**	**15 17 44.9**	**+1.3**
YSS					AMB	AMB	15 17 45.7	
	comp=N,280nm,0.8s							
YSS					AMB	AMB	15 17 45.7	
	comp=N,530nm,0.8s							
YSS					AMB	AMB	15 17 45.7	
	comp=N,900nm,0.8s							
YSS				*e*S		**S**	**15 18 36.8**	**+0.7**
YSS				A		A	15 18 38.6	
	comp=N,90nm,1.0s							
YSS	**Yuzh-Sakhalins**	**3.03**	**260**	*e*P		**P**	**15 17 44.8**	**+1.3**
YSS	**Yuzh-Sakhalins**	**3.03**	**260**	*α i* PN		**P**	**15 17 45.1**	**+1.5**
YSS				*i* S		**S**	**15 18 36.3**	**+0.2**
YSS					pmax	pmax		
	comp=Z,900nm,0.8s							
YSS					pmax	pmax		
	comp=N,280nm,0.6s							
YSS					pmax	pmax		
	comp=E,530nm,0.9s							
YSS					smax	smax		
	comp=E,90nm,1.0s							
LAGR	**Lagunnoye**	**3.65**	**195**	*e*P		**P**	**15 17 48.7**	**-0.2**
LAGR					AMB	AMB	15 17 50.3	
	comp=E,1μm,0.5s							
LAGR				*e*S		**S**	**15 18 43.6**	**-2.1**
LAGR				A		A	15 18 45.1	
	comp=E,1μm,2.0s							
LAGR				A		A	15 18 45.1	
	comp=E,2μm,2.0s							
LAGR				A		A	15 18 56.9	
	comp=E,160nm,0.6s							
LAGR				A		A	15 18 56.9	
	comp=E,190nm,0.6s							
LAGR	**Lagunnoye**	**3.65**	**195**	*e*PN		**P**	**15 17 48.7**	**-0.2**
LAGR				*e*S		**S**	**15 18 43.6**	**-2.1**
LAGR					pmax	pmax		
	comp=E,127nm,0.3s							
LAGR					pmax	pmax		
	comp=Z,100nm,0.3s							
LAGR					pmax	pmax		
	comp=N,71nm,0.2s							
LAGR					smax	smax		
	comp=N,1μm,2.0s							
LAGR					smax	smax		
	comp=E,2μm,1.5s							
LAGR					smax	smax		
	comp=N,2μm,0.5s							
LAGR					smax	smax		
	comp=E,2μm,0.6s							
YUK	**Yuzh-Kuril'sk**	**3.66**	**194**	*i* P		**P**	**15 17 48.4**	**-0.5**
YUK					AMB	AMB	15 17 50.1	
	comp=E,56nm,0.3s							
YUK					AMB	AMB	15 17 50.1	
	comp=E,39nm,0.3s							
YUK					AMB	AMB	15 17 50.1	
	comp=E,122nm,0.3s							
YUK				*e*S		**S**	**15 18 43.0**	**-2.9**
YUK				A		A	15 18 49.0	
	comp=E,422nm,0.6s							
YUK				A		A	15 18 49.0	
	comp=E,447nm,0.6s							
YUK				A		A	15 18 49.7	
	comp=E,2μm,2.0s							
YUK				A		A	15 18 49.7	
	comp=E,1μm,2.0s							
YUK	**Yuzh-Kuril'sk**	**3.66**	**194**	*c i* PN		**P**	**15 17 48.4**	**-0.5**
YUK				*i* S		**S**	**15 18 43.5**	**-2.4**
YUK					pmax	pmax		
	comp=Z,122nm,0.3s							
YUK					pmax	pmax		
	comp=N,55nm,0.2s							
YUK					pmax	pmax		
	comp=E,38nm,0.2s							
YUK					smax	smax		
	comp=N,867nm,0.6s							
YUK					smax	smax		
	comp=E,422nm,0.6s							
YUK					smax	smax		
	comp=N,2μm,1.8s							
YUK					smax	smax		
	comp=E,1μm,1.7s							
UGL	**Uglegorsk**	**3.68**	**296**	*e*P		**P**	**15 17 49.2**	**+0.3**
UGL					AMB	AMB	15 17 50.2	
	comp=E,520nm,1.0s							
UGL					AMB	AMB	15 17 50.3	
	comp=E,160nm,0.6s							
UGL					AMB	AMB	15 17 50.3	
	comp=E,140nm,0.6s							
UGL					AMB	AMB	15 17 50.3	
	comp=E,230nm,0.6s							
GRPR	**Tuman**	**3.72**	**195**	*e*P		**P**	**15 17 48.8**	**-0.6**
GRPR					AMB	AMB	15 17 50.6	
	comp=E,162nm,0.4s							
GRPR				*i* S		**S**	**15 18 44.4**	**-2.4**
GRPR				A		A	15 18 45.6	
	comp=E,999nm,2.0s							
GRPR				A		A	15 18 45.6	
	comp=E,1μm,2.0s							
GRPR				A		A	15 18 53.3	
	comp=E,104nm,0.6s							
GRPR				A		A	15 18 53.3	
	comp=E,150nm,0.6s							
GRPR	**Tuman**	**3.72**	**195**	*c i* PN		**P**	**15 17 48.8**	**-0.6**
GRPR				*i* S		**S**	**15 18 44.4**	**-2.4**
GRPR					pmax	pmax		
	comp=E,64nm,0.4s							
GRPR					pmax	pmax		
	comp=Z,162nm,0.4s							
GRPR					pmax	pmax		
	comp=N,38nm,0.2s							
GRPR					smax	smax		
	comp=N,999nm,1.1s							
GRPR					smax	smax		
	comp=E,1μm,2.7s							
GRPR					smax	smax		
	comp=N,1μm,0.4s							
GRPR					smax	smax		
	comp=E,1μm,0.6s							
SHO	**Shikotan**	**3.72**	**183**	*i* P		**P**	**15 17 47.1**	**-2.4**
SHO					AMB	AMB	15 17 47.8	
	comp=E,124nm,0.3s							
SHO				*i* S		**S**	**15 18 40.6**	**-6.3**
SHO				A		A	15 18 42.4	
	comp=E,140nm,0.7s							
SHO				A		A	15 18 42.4	
	comp=E,100nm,0.7s							
SHO	**Shikotan**	**3.72**	**183**	*d i* PN		**P**	**15 17 47.1**	**-2.4**
SHO				*i* S		**S**	**15 18 40.6**	**-6.3**
SHO					pmax	pmax		
	comp=N,84nm,0.3s							
SHO					pmax	pmax		
	comp=Z,124nm,0.3s							
SHO					pmax	pmax		
	comp=E,49nm,0.2s							
SHO					smax	smax		
	comp=E,1μm,0.7s							
SHO					smax	smax		
	comp=N,957nm,0.4s							
JRA	**Rausu**	**3.91**	**202**	P		**P**	**15 17 50.7**	**-0.4**
JRA				*e*S		**S**	**15 18 47.6**	**-2.3**
GLVR	**Golovnino**	**4.01**	**197**	*i* P		**P**	**15 17 52.0**	**-0.1**
GLVR					AMB	AMB	15 17 54.5	
	comp=N,150nm,0.2s							
GLVR				*i* S		**S**	**15 18 49.8**	**-1.8**
GLVR				A		A	15 18 57.4	
	comp=N,206nm,0.6s							
GLVR				A		A	15 18 57.4	
	comp=N,190nm,0.6s							
GLVR	**Golovnino**	**4.01**	**197**	*d i* PN		**P**	**15 17 52.0**	**-0.1**
GLVR				*i* S		**S**	**15 18 49.8**	**-1.8**
GLVR					pmax	pmax		
	comp=N,57nm,0.2s							
GLVR					pmax	pmax		
	comp=Z,153nm,0.2s							
GLVR					pmax	pmax		
	comp=E,92nm,0.4s							
GLVR					smax	smax		
	comp=N,2μm,0.6s							
GLVR					smax	smax		
	comp=E,2μm,0.3s							
JSE	**Soyaes**	**4.09**	**232**	P		**P**	**15 17 54.1**	**+1.3**
JSE				*e*S		**S**	**15 18 53.2**	**+0.2**
JTKR	**Abashiri--Toko**	**4.25**	**213**	P		**P**	**15 17 54.5**	**+0.2**
JTKR				*e*S		**S**	**15 18 54.3**	**-1.5**
JWK2	**Keihoku**	**4.26**	**240**	P		**P**	**15 17 56.3**	**+2.0**
JWK2				*e*S		**S**	**15 18 58.3**	**+2.5**
NEM2	**Nemuro 2**	**4.33**	**193**	P		**P**	**15 17 52.6**	**-2.5**
NEM2				*e*S		**S**	**15 18 50.9**	**-6.3**
TYV	**Tymovskoe**	**4.39**	**320**	*i* P		**P**	**15 17 56.0**	**+0.7**
TYV					AMB	AMB	15 17 56.7	
	comp=E,490nm,5.0s							
TYV					AMB	AMB	15 17 56.9	
	comp=E,126nm,0.9s							
TYV				*i* S		**S**	**15 18 56.9**	**-1.0**
TYV				A		A	15 18 58.8	
	comp=E,95nm,1.0s							
TYV				A		A	15 18 59.6	
	comp=E,506nm,3.0s							
TYV	**Tymovskoe**	**4.39**	**320**	*e*PN		**P**	**15 17 56.1**	**+0.7**
TYV				*e*S		**S**	**15 18 53.7**	**-4.2**
TYV					pmax	pmax		
	comp=Z,127nm,0.9s							
TYV					smax	smax		
	comp=E,95nm,1.1s							
JKA	**Kamikawa-asahi**	**4.69**	**224**	*e*P		**P**	**15 17 59.5**	**+1.0**
ASAJ	**Asahikawa**	**4.69**	**224**	P		**P**	**15 17 59.5**	**+0.9**
	comp=E,10nm,0.3s,baz=44,slow=5.8,SNR=126							
ASAJ				S		**S**	**15 19 03.5**	**+0.1**
	baz=0.0,slow=20,SNR=3.8							
JKK2	**Kamakawa 2**	**4.81**	**221**	P		**P**	**15 18 00.1**	**+0.4**
JAR	**Ashorobuto**	**4.89**	**210**	P		**P**	**15 18 00.2**	**-0.4**
JAR				*e*S		**S**	**15 19 02.6**	**-4.6**
JAK	**Akkeshi**	**4.90**	**201**	P		**P**	**15 17 58.3**	**-2.3**
JAK				*e*S		**S**	**15 19 01.3**	**-6.0**
JHR	**Hokuryu**	**5.39**	**226**	P		**P**	**15 18 06.4**	**+0.9**
JFR	**Furan**	**5.45**	**217**	P		**P**	**15 18 06.1**	**-0.1**
JCH	**Churui**	**5.64**	**209**	P		**P**	**15 18 05.9**	**-2.2**
JCH				*e*S		**S**	**15 19 14.5**	**-6.6**
JNBK	**Urakawa-nobuka**	**6.14**	**212**	P		**P**	**15 18 11.1**	**-2.4**
JEW	**Eniwo**	**6.21**	**222**	P		**P**	**15 18 14.0**	**-0.1**
ERM	**Erimo**	**6.24**	**208**	*e*P		**P**	**15 18 13.8**	**-0.7**
ERM	**Erimo**	**6.24**	**208**	*e*P		**P**	**15 18 13.7**	**-0.9**
ERM	**Erimo**	**6.24**	**208**	*c e*PN		**P**	**15 18 13.8**	**-0.7**
ERM					pmax	pmax		
	comp=Z,245nm,0.7s							
JSK	**Shakotan**	**6.30**	**230**	P		**P**	**15 18 15.9**	**+0.8**
OKH	**Okha**	**6.53**	**338**	*e*P		P	15 18 24.6	+6.7
OKH				*e*S		**S**	**15 19 36.8**	**-1.5**
OKH				A		A	15 19 43.7	
	comp=Z,400nm,8.0s							
OKH	**Okha**	**6.53**	**338**	*e*PN		P	15 18 24.6	+6.7
OKH				*e*S		**S**	**15 19 36.8**	**-1.5**
OKH					smax	smax		
	comp=N,400nm,8.0s							
SKR	**Severo-Kuril's**	**6.67**	**59**	*i* P		**P**	**15 18 20.2**	**+0.7**
SKR					AMB	AMB	15 18 20.9	
	comp=N,284nm,0.7s							
SKR					AMB	AMB	15 18 27.4	
	comp=N,220nm,1.0s							
SKR				*i* S		**S**	**15 19 39.4**	**-1.8**
SKR				A		A	15 19 40.1	
	comp=N,405nm,2.0s							
SKR				A		A	15 19 40.1	
	comp=N,278nm,0.9s							
SKR				A		A	15 19 40.1	
	comp=N,266nm,0.9s							
SKR	**Severo-Kuril's**	**6.67**	**59**	*e*PN		**P**	**15 18 19.8**	**+0.3**
SKR				*e*S		**S**	**15 19 38.8**	**-2.4**
SKR					pmax	pmax		
	comp=Z,346nm,0.8s							
SKR					smax	smax		
	comp=N,279nm,1.1s							
SKR					smax	smax		
	comp=E,266nm,0.7s							
NKL	**Nikolayevsk**	**6.92**	**326**	*e*P		**P**	**15 18 22.0**	**-0.1**
NKL					AMB	AMB	15 18 23.0	
	comp=E,43nm,0.9s							
NKL					AMB	AMB	15 18 23.0	
	comp=E,33nm,0.9s							
NKL					AMB	AMB	15 18 23.0	
	comp=E,67nm,0.9s							
NKL					AMB	AMB	15 18 23.0	
	comp=E,300nm,8.0s							
NKL				*e*S		**S**	**15 19 46.0**	**-0.1**
NKL				A		A	15 19 48.5	
	comp=E,410nm,2.0s							
NKL				A		A	15 19 49.0	
	comp=E,1μm,5.0s							
NKL	**Nikolayevsk**	**6.92**	**326**	*i* PN		**P**	**15 18 22.0**	**-0.1**
NKL					pmax	pmax		
	comp=Z,300nm,8.0s							
NKL					pmax	pmax		
	comp=N,43nm,0.9s							
NKL					pmax	pmax		
	comp=E,33nm,0.9s							
NKL					pmax	pmax		
	comp=Z,67nm,0.9s							
JKB	**Kayabe**	**7.15**	**219**	P		**P**	**15 18 22.6**	**-2.4**
JKB				*e*S		**S**	**15 19 43.8**	**-7.3**
PAU	**Pauzhetka**	**7.41**	**55**	*i* P		**P**	**15 18 28.7**	**+1.1**
PAU					AMB	AMB	15 18 29.2	
	comp=Z,384nm,0.8s							
PAU					AMB	AMB	15 18 33.6	
	comp=Z,511nm,6.0s							
PAU				*i* S		**S**	**15 19 57.2**	**+1.1**
PAU				A		A	15 20 02.8	
	comp=Z,499nm,0.8s							
JOT	**Ohata**	**7.57**	**217**	P		**P**	**15 18 26.6**	**-2.9**
JOT				*e*S		**S**	**15 19 51.0**	**-8.5**
GRNR	**Gornyy**	**7.69**	**298**	*e*P		**P**	**15 18 32.3**	**+1.6**
GRNR					AMB	AMB	15 18 32.8	
	comp=Z,25nm,0.5s							
GRNR					AMB	AMB	15 18 32.8	
	comp=Z,57nm,0.5s							
GRNR					AMB	AMB	15 18 32.8	
	comp=Z,110nm,0.5s							
GRNR				*e*S		**S**	**15 20 00.0**	**-1.9**
GRNR	**Gornyy**	**7.69**	**298**	*i e*PN		**P**	**15 18 32.3**	**+1.6**
GRNR					pmax	pmax		
	comp=N,25nm,0.5s							
GRNR					pmax	pmax		
	comp=E,57nm,0.5s							
GRNR					pmax	pmax		
	comp=Z,110nm,0.5s							
TEY	**Ternei**	**7.71**	**255**	*e*P		**P**	**15 18 30.5**	**-0.5**
TEY					AMB	AMB	15 18 33.0	
	comp=Z,21nm,0.7s							
TEY					AMB	AMB	15 18 33.0	
	comp=Z,32nm,0.7s							
TEY	**Ternei**	**7.71**	**255**	*e*PN		**P**	**15 18 32.8**	**+1.8**
TEY					pmax	pmax		
	comp=E,21nm,0.7s							
TEY					pmax	pmax		
	comp=Z,32nm,0.7s							
TEY					pmax	pmax		
	comp=E,138nm,1.4s							
TEY					pmax	pmax		
	comp=N,99nm,1.1s							
JOSM	**Okushiri--Mats**	**7.73**	**227**	P		**P**	**15 18 31.0**	**-0.2**
JANG	**Nango**	**8.26**	**211**	P		**P**	**15 18 35.1**	**-2.0**
JANG				*e*S		**S**	**15 20 05.9**	**-8.0**
PEA0B	**Petropavlovsk-**	**8.74**	**47**	*e*P		**P**	**15 18 42.8**	**+0.8**
PETK	**Petropavlovsk-**	**8.74**	**47**	P		**P**	**15 18 42.6**	**+0.5**
	comp=N,1.7nm,0.3s,baz=223,slow=8.1,SNR=65							
PETK				S		**S**	**15 20 22.6**	**-0.8**
	baz=145,slow=18,SNR=2.8							
PET	**Petropavlovsk**	**9.17**	**49**	*i* P		**P**	**15 18 48.4**	**+1.6**
PET					AMB	AMB	15 18 49.7	
	comp=N,25nm,0.6s							
PET					AMB	AMB	15 18 58.6	
	comp=N,102nm,4.0s							
PET				*i* S		**S**	**15 20 30.3**	**-2.0**
PET				A		A	15 20 32.4	
	comp=N,397nm,4.0s							
PET				A		A	15 20 34.3	
	comp=N,89nm,0.7s							
PET				A		A	15 20 34.3	
	comp=N,67nm,0.7s							
PET	**Petropavlovsk**	**9.17**	**49**	*e*P		**P**	**15 18 47.8**	**+1.0**
PET	**Petropavlovsk**	**9.17**	**49**	*e*PN		**P**	**15 18 47.9**	**+1.1**
PET				*e*S		**S**	**15 20 27.6**	**-4.7**
PET					pmax	pmax		
	comp=Z,30nm,0.6s							
PET					smax	smax		
	comp=E,67nm,0.7s							
PET					smax	smax		
	comp=N,90nm,0.6s							
PET					MLR	MLR		
	comp=Z,200nm,16.0s							
KLR	**Kul'dur**	**10.35**	**285**	P		**P**	**15 19 01.2**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=87,slow=9.5,SNR=43							
KLR	**Kul'dur**	**10.35**	**285**	*e*P		**P**	**15 19 01.0**	**+1.1**
KLR	**Kul'dur**	**10.35**	**285**	*d i* PN		**P**	**15 19 01.0**	**+1.1**
EKMR	**Ekimchan**	**10.58**	**306**	*e*P		**P**	**15 19 03.0**	**+0.6**
EKMR					AMB	AMB	15 19 06.0	
	comp=Z,17nm,0.8s							
USRK	**Ussuriysk Ar.**	**11.07**	**258**	P		**P**	**15 19 08.0**	**0.0**
	comp=Z,2.0nm,0.3s,baz=67,slow=12,SNR=34							
USRK				S		**S**	**15 21 08.9**	**-2.0**
	baz=69,slow=27,SNR=4.5							
MA2	**Magadan**	**12.20**	**9**	P		**P**	**15 19 20.9**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=189,slow=12,SNR=4.8							
MA2	**Magadan**	**12.20**	**9**	*e*P		**P**	**15 19 21.8**	**+1.7**
MA2	**Magadan**	**12.20**	**9**	*e*P		**P**	**15 19 21.1**	**+1.0**
MA2	**Magadan**	**12.20**	**9**	*i* PN		**P**	**15 19 21.8**	**+1.7**
MDJ	**Mudanjiang**	**12.52**	**263**	*e*P		**P**	**15 19 23.9**	**+0.1**
MJB9	**Matsu-Tunnel**	**12.85**	**214**	*e*P		**P**	**15 19 28.9**	**+1.2**
MAJO	**Matsushiro**	**12.86**	**214**	*e*P		**P**	**15 19 29.0**	**+1.4**
MAJO	**Matsushiro**	**12.86**	**214**	*e*P		**P**	**15 19 29.0**	**+1.4**
MAJO	**Matsushiro**	**12.86**	**214**	*e*PN		**P**	**15 19 29.0**	**+1.4**
MAT	**Matsushiro**	**12.86**	**214**	P		**P**	**15 19 28.7**	**+1.1**
MJAR	**Matsushiro Arr**	**12.86**	**214**	P		**P**	**15 19 29.0**	**+1.3**
	comp=Z,2.0nm,0.3s,baz=10.0,slow=12,SNR=24							
MJAR	**Matsushiro Arr**	**12.86**	**214**	PN		**P**	**15 19 29.0**	**+1.3**
MJAR					pmax	pmax		
	comp=Z,2.0nm,0.3s							
BMKR	**Bomnak**	**13.48**	**309**	*e*P		**P**	**15 19 34.4**	**+0.3**
BMKR					AMB	AMB	15 19 35.0	
	comp=Z,54nm,0.4s							
BMKR					AMB	AMB	15 19 35.0	
	comp=Z,66nm,0.4s							
BMKR					AMB	AMB	15 19 35.0	
	comp=Z,156nm,0.4s							
ZEA	**Zeya**	**13.99**	**303**	*e*P		**P**	**15 19 39.8**	**+0.1**
ZEA					AMB	AMB	15 19 40.8	
	comp=Z,24nm,1.0s							
ZEA					AMB	AMB	15 19 40.8	
	comp=Z,39nm,1.0s							
ZEA	**Zeya**	**13.99**	**303**	*e*P		**P**	**15 19 39.8**	**+0.1**
ZEA				*e*			15 22 08.1	
ZEA					pmax	pmax		
	comp=N,24nm,1.0s							
ZEA					pmax	pmax		
	comp=E,24nm,1.0s							
ZEA					pmax	pmax		
	comp=Z,39nm,1.2s							
INU	**Inuyama**	**14.36**	**215**	*e*P		**P**	**15 19 45.0**	**+1.0**
KROS	**Kirovskiy**	**14.38**	**306**	*e*P		**P**	**15 19 40.5**	**-3.4**
KROS					AMB	AMB	15 19 41.6	
	comp=Z,49nm,0.4s							
KROS					AMB	AMB	15 19 41.6	
	comp=Z,71nm,0.4s							
KROS					AMB	AMB	15 19 41.6	
	comp=Z,57nm,0.4s							
SEY	**Seymchan**	**15.66**	**9**	P		**P**	**15 19 58.6**	**+1.0**
	comp=Z,0.5nm,0.3s,baz=191,slow=11,SNR=20							
SEY	**Seymchan**	**15.66**	**9**	*c e*P		**P**	**15 19 59.7**	**+2.1**
CLNS	**Chul'man**	**16.39**	**313**	*e*P		**P**	**15 20 05.2**	**-0.3**
CLNS	**Chul'man**	**16.39**	**313**	*e*P		**P**	**15 20 05.2**	**-0.3**
CLNS					pmax	pmax		
	comp=Z,75nm,1.1s							
CLNS					pmax	pmax		
	comp=N,20nm,0.9s							
CLNS					pmax	pmax		
	comp=E,32nm,0.9s							
KSRS	**Korea Array**	**17.35**	**241**	P		**P**	**15 20 17.6**	**+1.7**
	comp=E,2.2nm,0.3s,baz=45,slow=10,SNR=47							
KS01	**Wonju Array Si**	**17.35**	**241**	*e*P		**P**	**15 20 16.7**	**+0.8**
KS15	**Wonju Array Si**	**17.38**	**241**	*e*P		**P**	**15 20 17.2**	**+1.0**
KSAR	**Wonju Array Be**	**17.38**	**241**	P		**P**	**15 20 17.6**	**+1.4**
KSAR	**Wonju Array Be**	**17.38**	**241**	P		**P**	**15 20 17.6**	**+1.4**
YAK	**Yakutsk**	**17.52**	**332**	*e*P		**P**	**15 20 15.9**	**-1.4**
YAK	**Yakutsk**	**17.52**	**332**	*e*P		**P**	**15 20 15.7**	**-1.6**
	comp=E,105nm,0.7s							
YAK	**Yakutsk**	**17.52**	**332**	*d i*P		**P**	**15 20 15.9**	**-1.4**
YAK				*e*S		**S**	**15 23 12.1**	**-5.8**
YAK					pmax	pmax		
	comp=Z,102nm,0.9s							
YAK					pmax	pmax		
	comp=N,19nm,0.9s							
YAK					pmax	pmax		
	comp=E,15nm,1.0s							
YAK					smax	smax		
	comp=E,194nm,2.9s							
YAK					smax	smax		
	comp=N,154nm,2.4s							
SMY	**Shemya**	**17.99**	**63**	*e*P		**P**	**15 20 23.8**	**+1.5**
SMY	**Shemya**	**17.99**	**63**	*e*P		**P**	**15 20 23.9**	**+1.5**
	comp=N,312nm,1.7s							
SMY	**Shemya**	**17.99**	**63**	*e*P		**P**	**15 20 23.9**	**+1.5**
SMY					pmax	pmax		
	comp=Z,312nm,1.7s							
INCN	**Inchon**	**18.11**	**244**	*e*P		**P**	**15 20 24.8**	**+0.9**
	comp=Z,25nm,1.1s							
HIA	**Hailar**	**18.20**	**285**	*e*P		**P**	**15 20 22.4**	**-2.4**
HIA	**Hailar**	**18.20**	**285**	*e*P		**P**	**15 20 22.4**	**-2.4**
	comp=Z,17nm,0.9s							
HIA	**Hailar**	**18.20**	**285**	*e*P		**P**	**15 20 22.4**	**-2.4**
HIA					pmax	pmax		
	comp=Z,17nm,0.9s							
TJN	**Taejon**	**18.41**	**240**	*c e*P		**P**	**15 20 28.5**	**+1.5**
JNU	**Nakatsue**	**18.96**	**226**	P		**P**	**15 20 33.5**	**+0.8**
	comp=Z,1.9nm,0.3s,baz=60,slow=2.5,SNR=17							
JNU	**Nakatsue**	**18.96**	**226**	*e*P		**P**	**15 20 31.9**	**-0.8**
	comp=Z,68nm,1.3s							
BILL	**Bilibino**	**22.70**	**19**	*e*P		**P**	**15 21 04.9**	**-1.5**
BILL	**Bilibino**	**22.70**	**19**	*e*P		**P**	**15 21 04.9**	**-1.5**
	comp=Z,7.0nm,1.3s							
BILL	**Bilibino**	**22.70**	**19**	*i* P		**P**	**15 21 04.9**	**-1.5**
BILL					pmax	pmax		
	comp=Z,3.0nm,1.0s							
BJT	**Baijiatuau**	**23.46**	**263**	*e*P		**P**	**15 21 13.5**	**0.0**
BJT	**Baijiatuau**	**23.46**	**263**	*e*P		**P**	**15 21 13.6**	**0.0**
	comp=Z,36nm,0.8s							
BJT	**Baijiatuau**	**23.46**	**263**	*e*P		**P**	**15 21 13.6**	**0.0**
BJT					pmax	pmax		
	comp=Z,36nm,0.8s							
JOW	**Kunigami**	**25.45**	**222**	P		**P**	**15 21 31.6**	**+0.2**
	comp=Z,7.6nm,0.5s,baz=151,slow=4.9,SNR=8.3							
TIXI	**Tiksi**	**25.61**	**347**	P		**P**	**15 21 30.5**	**-1.7**
	comp=Z,2.4nm,0.7s,baz=153,slow=4.7,SNR=9.8							
TIXI	**Tiksi**	**25.61**	**347**	*e*P		**P**	**15 21 30.8**	**-1.5**
	comp=Z,2.3nm,0.8s

TIXI pmax pmax
comp=Z,2.0nm,0.9s
HHC Hu-ho-hao-te 26.18 268 *e*P **P 15 21 38.1 +0.2**
HHC pmax pmax
comp=Z,11nm,0.7s
HHC pmax pmax
comp=Z,100nm,5.5s
ULN Ulaanbaatar 26.74 286 *e*P **P 15 21 42.5 -0.3**
ULN Ulaanbaatar 26.74 286 *e*P **P 15 21 42.3 -0.5**
comp=Z,25nm,0.9s
ULN Ulaanbaatar 26.74 286 *c e*P **P 15 21 42.5 -0.3**
ULN pmax pmax
comp=Z,8.0nm,1.0s
SONA1 Songino Array 27.17 286 *e*P **P 15 21 46.2 -0.4**
SONM Songino Array 27.18 286 P **P 15 21 46.1 -0.5**
comp=Z,3.9nm,0.8s,baz=70,slow=7.8,SNR=15
SONM PcP **PcP 15 24 54.0 -0.1**
comp=Z,0.8nm,0.4s,baz=69,slow=3.7,SNR=2.9
SONM ScP **ScP 15 27 54.4 +0.4**
comp=Z,1.6nm,0.8s,baz=4.8,slow=1.7,SNR=6.9
TLY Talaya 28.13 295 *e*P **P 15 21 55.1 +0.3**
TLY Talaya 28.13 295 *e*P **P 15 21 54.7 -0.1**
comp=Z,8.8nm,0.8s
TLY Talaya 28.13 295⇑ *e*P **P 15 21 55.2 +0.4**
TLY pmax pmax
comp=Z,12nm,1.0s
ZAK Zakamensk 28.59 292 *e*P **P 15 21 58.1 -0.9**
ZAK Zakamensk 28.59 292 *e*P **P 15 21 58.1 -0.9**
ZAK *e* 15 23 13.3
ZAK pmax pmax
comp=Z,13nm,1.2s
XAN Xi'an 31.58 259 P **P 15 22 25.2 +0.1**
XAN pmax pmax
comp=Z,29nm,0.9s
XAN pmax pmax
comp=Z,130nm,4.3s
ENH Enshi 33.59 253 *e*P **P 15 22 41.9 -0.5**
LZH Lanzhou 33.81 266 *e*P **P 15 22 46.1 +1.8**
LZH pP PP 15 24 05.6 -5.9
LZH sP sP 15 24 51.2 +2.4
LZH pmax pmax
comp=Z,15nm,1.2s
GTA Gaotai 34.80 274 ⇓P **P 15 22 53.7 +1.0**
GTA PP **PP 15 24 26.2 +3.5**
GTA PcP **PcP 15 25 16.7 +1.9**
GTA S **S 15 27 53.7 +1.4**
GTA ScP **ScP 15 28 20.5 +0.8**
GTA sS sS 15 30 11.0 -1.8
GTA pmax pmax
comp=Z,27nm,1.1s
NRIK Noril'sk 35.91 329 P **P 15 23 01.2 -0.2**
comp=Z,1.8nm,0.5s,baz=99,slow=9.9,SNR=8.3
CAST Castle Rocks 36.30 42 *e*P **P 15 23 05.7 +0.9**
comp=Z,7.4nm,0.8s
BPAW Bear Paw Mtn. 36.75 40 *e*P **P 15 23 09.5 +1.0**
comp=Z,4.1nm,0.8s
KDAK Kodiak Island 36.76 51 P **P 15 23 08.9 +0.3**
comp=Z,5.1nm,0.4s,baz=275,slow=7.1,SNR=10
KDAK Kodiak Island 36.76 51 *e*P **P 15 23 09.1 +0.5**
KDAK Kodiak Island 36.76 51 *c e*P **P 15 23 09.1 +0.5**
TOLK Toolik Lake Re 37.23 33 P **P 15 23 14.1 +1.7**
baz=269
BRLK Bradley Lake 37.28 48 *e*P **P 15 23 13.5 +0.5**
comp=Z,17nm,0.8s
RND Reindeer 37.75 41 *e*P **P 15 23 17.1 +0.2**
comp=Z,4.9nm,0.8s
RND Reindeer 37.75 41 *e*P **P 15 23 17.1 +0.2**
RND pmax pmax
comp=Z,5.0nm,0.8s
MDM Murphy Dome 37.87 39 *e*P **P 15 23 18.0 +0.2**
comp=Z,4.1nm,0.9s
GHO Glory Hole Cre 37.93 44 *e*P **P 15 23 19.1 +0.7**
comp=Z,14nm,0.8s
GHO *e*S **S 15 28 36.3 -2.2**
SEW Seward 37.94 47 *e*P **P 15 23 18.9 +0.6**
comp=Z,18nm,0.7s
WRH Wood River Hil 37.98 40 *e*P **P 15 23 19.4 +0.8**
comp=Z,5.5nm,0.8s
GYA Guiyang 38.00 251⇑ *i*P **P 15 23 18.9 -0.5**
GYA pP pP 15 24 40.0 +2.5
GYA PP **PP 15 25 00.6 +3.2**
GYA PcP **PcP 15 25 26.2 +1.4**
GYA S **S 15 28 41.4 +0.9**
GYA sS sS 15 31 03.0 +0.3
GYA pmax pmax
comp=Z,30nm,1.0s
CCB Clear Creek Bu 38.08 39 *e*P **P 15 23 19.5 0.0**
comp=Z,7.8nm,1.6s
SML Sawmill 38.20 44 *e*P **P 15 23 21.3 +0.8**
SML Sawmill 38.20 44 *e*P **P 15 23 21.2 +0.8**
comp=Z,16nm,0.8s
SML Sawmill 38.20 44 *e*P **P 15 23 21.3 +0.8**
SML pmax pmax
comp=Z,16nm,0.8s
DHY Denali Highway 38.46 42 *e*P **P 15 23 22.4 -0.4**
comp=Z,7.8nm,0.7s
IL1 Eielson Array 38.46 39 *e*P **P 15 23 22.1 -0.5**
ILAR Eielson Array 38.46 39 P **P 15 23 22.7 +0.1**
comp=Z,5.7nm,0.8s,baz=273,slow=7.9,SNR=73
ILB Eielson Array 38.46 39 *e*P **P 15 23 22.3 -0.3**
SCM Sheep Creek Mo 38.67 44 *e*P **P 15 23 25.2 +0.8**
comp=Z,9.3nm,0.8s
SCM Sheep Creek Mo 38.67 44 *e*P **P 15 23 25.2 +0.8**
SCM pmax pmax
comp=Z,9.0nm,0.8s
ZAA0 Zalesovo Array 38.76 303 *e*P **P 15 23 24.1 -1.0**
comp=Z,4.5nm,0.8s
ZAA0 *e*PcP **PcP 15 25 26.4 -0.1**
ZALV Zalesovo Beam 38.76 303 P **P 15 23 24.1 -1.0**
comp=Z,4.8nm,0.7s,baz=67,slow=8.1,SNR=14
ZALV PcP **PcP 15 25 26.2 -0.3**
comp=Z,3.1nm,0.5s,baz=81,slow=2.0,SNR=12
ZALV ScP **ScP 15 28 33.6 -0.4**
comp=Z,0.7nm,0.5s,baz=56,slow=4.4,SNR=5.0
ZALV Zalesovo Beam 38.76 303 *e*P **P 15 23 23.8 -1.4**
ZALV *e*PcP **PcP 15 25 26.4 -0.1**
ZALV ScP **ScP 15 28 33.6 -0.4**
ZALV Zalesovo Beam 38.76 303 *e*P **P 15 23 23.8 -1.4**
ZALV *e* 15 25 26.4
KLU Klutina 39.39 44 *e*P **P 15 23 30.9 +0.6**
comp=Z,9.9nm,0.8s
NVS Novosibirsk 39.39 305 *e*P **P 15 23 29.9 -0.3**
NVS Novosibirsk 39.39 305 *i*P **P 15 23 29.9 -0.3**
RIDG Independ'e Rid 39.49 40 *e*P **P 15 23 30.9 -0.1**
comp=Z,7.7nm,0.9s
DIV Divide 39.53 45 *e*P **P 15 23 32.0 +0.6**
comp=Z,19nm,1.4s
SCRK Sand Creek 39.82 40 *e*P **P 15 23 33.5 -0.3**
comp=Z,6.6nm,0.9s
BMRM Bremner River 40.12 45 *e*P **P 15 23 36.6 +0.4**
comp=Z,6.1nm,0.8s
WMQ Urumqi 40.78 287 P **P 15 23 42.6 +0.8**
WMQ pmax pmax
comp=Z,51nm,0.7s
WMQ pmax pmax
comp=Z,170nm,4.1s
CRQM Cirque 40.87 45 *e*P **P 15 23 43.3 +1.0**
comp=Z,14nm,0.8s
EGAK Eagle 40.89 38 *e*P **P 15 23 42.1 -0.2**
comp=Z,9.1nm,1.0s
TGL Tana Glacier 41.01 45 *e*P **P 15 23 44.3 +0.9**
comp=Z,10.0nm,1.0s
MK31 Makanchi Array 42.89 294 *e*P **P 15 23 58.0 -0.5**
MK31 Makanchi Array 42.89 294 *e*P **P 15 23 58.0 -0.5**
MKAR Makanchi Array 42.89 294 P **P 15 23 58.4 -0.1**
comp=Z,17nm,0.7s,baz=69,slow=7.5,SNR=195
MKAR PcP **PcP 15 25 39.1 -1.2**
comp=Z,1.4nm,0.7s,baz=98,slow=3.2,SNR=4.2
MKAR ScP **ScP 15 28 49.8 -0.9**
comp=Z,0.8nm,0.7s,baz=62,slow=5.6,SNR=3.8
MKAR Makanchi Array 42.89 294 *e*P **P 15 23 58.1 -0.4**
comp=Z,147nm,0.6s
MKAR PcP **PcP 15 25 39.1 -1.2**
MKAR ScP **ScP 15 28 49.8 -0.9**
MK01 Makanchi Array 42.89 294 *e*P **P 15 23 58.1 -0.4**
MAKZ Makanchi 43.07 294 *e*P **P 15 23 59.4 -0.5**
comp=Z,14nm,0.6s
MAKZ Makanchi 43.07 294 P **P 15 23 59.4 -0.5**
MAKZ pmax pmax
comp=Z,15nm,0.8s
KURK Kurchatov 43.45 301 *e*P **P 15 24 02.1 -0.7**
KURK Kurchatov 43.45 301 *e*P **P 15 24 02.1 -0.7**
comp=Z,38nm,0.9s
KURK PcP **PcP 15 25 42.4 +0.3**
KURK Kurchatov 43.45 301 *d i*P **P 15 24 02.1 -0.7**
KURK pmax pmax
comp=Z,34nm,0.9s
KURBB Kurchatov Arra 43.54 301 P **P 15 24 02.9 -0.6**
comp=Z,24nm,0.8s,baz=70,slow=8.7,SNR=110
KURBB PcP **PcP 15 25 42.4 0.0**
comp=Z,4.1nm,0.6s,baz=70,slow=3.3,SNR=17
LSA Lhasa 46.17 268 *e*P **P 15 24 25.5 +0.7**
comp=Z,26nm,0.6s
LSA Lhasa 46.17 268 P **P 15 24 24.8 0.0**
LSA Lhasa 46.17 268 *e*P **P 15 24 25.5 +0.7**
LSA pmax pmax
comp=Z,27nm,0.6s
PDGK Podgornoye 46.26 291 P **P 15 24 24.9 0.0**
PDGK pmax pmax
comp=Z,12nm,1.1s
NONG Nongkai 46.34 246 P **P 15 24 26.9 +1.3**
comp=Z,20nm,1.7s
SKNT Sakolnakorn 46.66 244 P **P 15 24 29.0 +0.9**
comp=Z,13nm,1.0s
BVA0 Borovoye Array 47.12 307 *i*P **P 15 24 30.0 -1.1**
BVA0 pmax pmax
comp=Z,12nm,1.0s
BVAR Borovoye Array 47.12 307 P **P 15 24 30.5 -0.6**
comp=Z,6.5nm,0.7s,baz=52,slow=9.3,SNR=37
BVAR PcP **PcP 15 25 54.8 -0.1**
comp=Z,2.0nm,0.4s,baz=66,slow=4.1,SNR=6.8
BRVK Borovoye 47.16 307 *e*P **P 15 24 30.9 -0.5**
BRVK Borovoye 47.16 307 *e*P **P 15 24 30.7 -0.7**
comp=Z,13nm,0.8s
BRVK Borovoye 47.16 307 *d i*P **P 15 24 30.9 -0.5**
BRVK pmax pmax
comp=Z,13nm,1.0s
DLBC Dease Lake 47.91 45 P **P 15 24 38.2 +1.1**
comp=Z,2.0nm,0.4s,baz=213,slow=16,SNR=3.6
TARG Taragay, Kyrgy 48.15 290 *e*P **P 15 24 39.9 +0.3**
comp=Z,16nm,0.9s
LAMP Lampang 48.20 250 P **P 15 24 41.4 +1.7**
comp=Z,6.0nm,0.8s
OTUK Ortayu 48.22 300 P **P 15 24 39.4 -0.1**
OTUK pmax pmax
comp=Z,17nm,1.0s
SHL Shillong 48.35 263 *e*P **P 15 24 41.0 0.0**
comp=Z,31nm,0.9s
SHL Shillong 48.35 263 *e*P **P 15 24 41.0 0.0**
SHL pmax pmax
comp=Z,31nm,0.9s
CHTO Chiang Mai 48.42 251 P **P 15 24 42.3 +0.9**
comp=Z,100nm,1.0s
CHTO Chiang Mai 48.42 251 *e*P **P 15 24 41.6 +0.2**
comp=Z,14nm,0.6s
CHTO Chiang Mai 48.42 251 *e*P **P 15 24 41.6 +0.2**
CHTO pmax pmax
comp=Z,14nm,0.6s
CMAR Chiang Mai Arr 48.69 250 P **P 15 24 44.6 +1.2**
comp=Z,3.7nm,0.7s,baz=33,slow=7.3,SNR=19
CMAR PcP **PcP 15 26 01.5 +0.3**
comp=Z,1.2nm,0.7s,baz=7.5,slow=2.5,SNR=6.5
CMAR ScP **ScP 15 29 16.9 +1.7**
comp=Z,1.5nm,0.7s,baz=17,slow=2.8,SNR=8.0
CHAI Chaiyaphum 48.70 245 P **P 15 24 44.5 +1.0**
comp=Z,7.6nm,0.9s
CM01 Chiang Mai Arr 48.70 250 *e*P **P 15 24 43.7 +0.2**
PBKT Sadao Pong 48.82 247 *e*P **P 15 24 44.3 -0.1**
comp=Z,6.8nm,0.7s
ULHL Ulahol 48.87 291 P **P 15 24 45.6 +0.8**
SNR=6.0
TKM2 Tokmak 2 48.92 292 P **P 15 24 45.7 +0.6**
SNR=17
USP Ospenovka 49.42 293 P **P 15 24 49.2 +0.6**
SNR=23
NRN Naryn 49.45 291 *e*P **P 15 24 49.2 -0.1**
comp=Z,8.2nm,0.9s
NRN Naryn 49.45 291 *e*P **P 15 24 49.2 -0.1**
NRN pmax pmax
comp=Z,8.0nm,0.9s
KBK Karagaybulak 49.46 292 P **P 15 24 49.8 +0.6**
SNR=11
FRU Bishkek 49.58 293 *i*P **P 15 24 51.0 +1.2**
KZA Kyzart 49.58 292 P **P 15 24 51.6 +1.3**
SNR=26
AAK Ala-Archa 49.76 293 *e*P **P 15 24 51.4 +0.1**
AAK Ala-Archa 49.76 293 P **P 15 24 51.8 +0.5**
SNR=12
AAK Ala-Archa 49.76 293 P **P 15 24 51.7 +0.4**
AAK Ala-Archa 49.76 293 P **P 15 24 51.4 +0.1**
AAK pmax pmax
comp=Z,13nm,0.7s
SRAK Srakaew 50.12 244 P **P 15 24 53.4 -0.7**
comp=Z,59nm,0.9s,comp=Z,678nm
EKS2 Erkin-Say 50.19 293 P **P 15 24 55.1 +0.7**
SNR=29
SVE Sverdlovsk 50.38 315 *e*P **P 15 24 55.5 +0.1**
SVE Sverdlovsk 50.38 315 *c i*P **P 15 24 55.5 +0.1**
SVE pmax pmax
comp=Z,41nm,0.8s
ODAN Odare 50.53 268 *e*P **P 15 24 58.1 +0.8**
comp=Z,15nm,0.5s
AML Almayashu 50.53 293 P P 15 25 13.9 +17
SNR=9.5
SOKR Solikamsk 50.81 319 *e*P P 15 25 09.3 +11
SOKR pmax pmax
comp=Z,37nm,0.6s
JIRN Jiri 50.82 270 *e*P **P 15 25 00.5 +0.9**
comp=Z,118nm,0.7s
GUN Gumba 50.87 270 *e*P **P 15 25 00.4 +0.5**
comp=Z,27nm,0.5s
RAMN Ramite 51.00 269 *e*P **P 15 25 01.4 +0.6**
comp=Z,140nm,0.8s
SPITS Spitsbergen Ar 51.01 348 P **P 15 24 59.2 -0.6**
comp=Z,3.4nm,0.9s,baz=37,slow=15,SNR=3.6
MNAS Manas 51.08 294 P **P 15 25 01.5 +0.5**
MNAS pmax pmax
comp=Z,26nm,0.8s
RES Resolute Bay 51.31 17 P **P 15 25 01.2 -0.7**
comp=Z,2.5nm,0.4s,baz=337,slow=3.5,SNR=18
RES Resolute Bay 51.31 17 *e*P **P 15 25 01.5 -0.5**
comp=Z,19nm,1.8s
RES Resolute Bay 51.31 17 *e*P **P 15 25 01.5 -0.5**
RES pmax pmax
comp=Z,19nm,1.8s
KKN Kakani 51.35 270 *e*P **P 15 25 04.1 +0.8**
comp=Z,29nm,0.6s
PKIN Phulchoki 51.41 270 *e*P **P 15 25 04.7 +0.9**
comp=Z,31nm,0.6s
ARU Arti 51.57 315 *e*P **P 15 25 03.5 -0.7**
ARU Arti 51.57 315 *e*P **P 15 25 03.2 -1.0**
comp=Z,32nm,0.7s
ARU Arti 51.57 315 *d i*P **P 15 25 03.4 -0.7**
ARU 15 26 08.9
ARU *PP **pP 15 26 27.4 -0.5**
ARU 15 27 04.3
ARU S **S 15 31 52.5 +0.5**
ARU pmax pmax
comp=Z,57nm,1.2s
DMN Daman 51.59 270 *e*P **P 15 25 05.9 +0.8**
comp=Z,74nm,0.8s
GKN Gorkha 51.65 271 *e*P **P 15 25 06.2 +0.8**
comp=Z,80nm,0.7s
SFK Sufi-Kurgan 51.82 290 P **P 15 25 06.7 +0.1**
SFK pmax pmax
comp=Z,28nm,1.0s
KK31 Karatay Array 51.97 295 *e*P **P 15 25 07.1 -0.2**
KK31 Karatay Array 51.97 295 *i*P **P 15 25 06.9 -0.4**
KK31 pmax pmax
comp=Z,17nm,0.7s
KKAR Karatay Array 51.97 295 *e*P **P 15 25 07.0 -0.4**
KKAR Karatay Array 51.97 295 *e*P **P 15 25 07.0 -0.4**
DANN Dangsing 52.02 272 *e*P **P 15 25 09.4 +1.1**
comp=Z,103nm,0.6s
KOLN Koldanda 52.50 272 *e*P **P 15 25 12.5 +0.8**
comp=Z,62nm,0.7s
YKA Yellowknife Ar 52.66 35 P **P 15 25 11.9 0.0**
comp=Z,1.0nm,0.6s,baz=302,slow=6.0,SNR=2.7
PYUN Piuthan 52.70 272 *e*P **P 15 25 14.0 +0.9**
comp=Z,148nm,1.0s
PRGR Permogore 54.38 325 *e*P **P 15 25 23.2 -1.1**
PRGR pmax pmax
comp=Z,25nm,0.6s
AB31 Akbulak array 54.69 307 *i*P **P 15 25 26.4 -0.3**
AB31 pmax pmax
comp=Z,10.0nm,0.4s
ABKAR Akbulak array 54.69 307 *e*P **P 15 25 26.4 -0.3**
AKTO Aktyubinsk 55.06 309 P **P 15 25 28.6 -0.7**
comp=Z,5.5nm,0.5s,baz=69,slow=8.2,SNR=24
ARCES ARCESS Array B 55.65 339 P **P 15 25 32.5 -0.6**
comp=Z,1.7nm,0.4s,baz=47,slow=8.2,SNR=17
NIL Nilore 55.74 284 *e*P **P 15 25 34.4 0.0**
comp=Z,58nm,0.9s
NIL Nilore 55.74 284 *e*P **P 15 25 34.4 0.0**
NIL pmax pmax
comp=Z,58nm,0.9s
KSM Kuching 55.90 226 *e*P **P 15 25 36.3 +0.7**
comp=Z,9.3nm,1.0s
KRAB Krabi 56.38 242 P **P 15 25 40.8 +1.8**
comp=Z,43nm,0.6s
NLWA Neilton Lookou 56.78 54 *e*P **P 15 25 43.3 +1.9**
comp=Z,12nm,0.8s
KLMR Klimovskoe 57.20 326 *e*P **P 15 25 40.7 -3.3**
KLMR pmax pmax
comp=Z,15nm,0.9s
KLMR Klimovskoe 57.20 326 *e*P **P 15 25 40.7 -3.3**
KLMR AMP 15 25 44.2
comp=Z,15nm,0.9s
B05A Bryant 57.23 53 P **P 15 25 45.4 +1.1**
baz=307
MSF Maaselka 57.28 335 P **P 15 25 44.3 -0.2**
MSF pmax pmax
comp=Z,17nm,0.8s
KBL Kabul 57.93 288 *e*P **P 15 25 48.9 -0.8**
comp=Z,31nm,0.8s
KBL Kabul 57.93 288 *e*P **P 15 25 48.9 -0.8**
KBL pmax pmax
comp=Z,31nm,0.8s
B08A Colville Reser 58.64 51 *e*P **P 15 25 54.5 +0.3**
comp=Z,14nm,1.4s
JOF Joensuu 58.69 331 P **P 15 25 53.7 -0.5**
OUL Oulu 58.79 335 P **P 15 25 54.2 -0.6**
OUL pmax pmax
comp=Z,21nm,0.7s
I03D Drain, OR 59.29 58 P **P 15 26 00.3 +1.7**
baz=308
H04A Detroit Lake 59.34 56 *e*P **P 15 25 59.0 0.0**
comp=Z,16nm,0.9s
G05D Wamic, OR 59.48 55 P **P 15 26 01.1 +1.2**
baz=308
I04A Tendick Farm, 59.77 57 P **P 15 26 03.8 +1.9**
baz=309
NEW Newport 59.86 50 P **P 15 26 03.5 +1.1**
comp=Z,3.7nm,0.8s,baz=324,slow=7.7,SNR=5.1
NEW Newport 59.86 50 P **P 15 26 03.4 +1.1**
baz=309
I05D Terrebonne, OR 60.03 56 P **P 15 26 05.5 +1.9**
baz=309
SUMG Summit 60.07 2 *e*P **P 15 26 02.4 -1.4**
comp=Z,5.2nm,0.5s
SUMG Summit 60.07 2 *e*P **P 15 26 02.4 -1.4**
SUMG pmax pmax
comp=Z,5.0nm,0.5s
L02D Cave Junction, 60.10 59 P **P 15 26 06.0 +1.9**
baz=309
J04D Umpqua Nationa 60.28 57 P **P 15 26 07.2 +1.7**
baz=309
PINE Pine Mountain 60.60 56 *e*P **P 15 26 09.0 +1.4**
comp=Z,14nm,0.8s
J05D Fort Rock, OR 60.75 57 P **P 15 26 10.4 +1.8**
baz=309
PSI Prapat 60.89 238 *e*P **P 15 26 10.1 +0.3**
comp=Z,8.8nm,1.0s
PSI Prapat 60.89 238 *e*P **P 15 26 10.1 +0.3**
PSI pmax pmax
comp=Z,9.0nm,1.0s
YBH Yreka Blue Hor 60.89 59 P **P 15 26 10.6 +1.2**
comp=Z,3.3nm,0.7s,baz=2.6,slow=4.7,SNR=11
YBH Yreka Blue Hor 60.89 59 *e*P **P 15 26 10.5 +1.1**
comp=Z,20nm,1.7s
M02C Callahan 61.02 59 P **P 15 26 12.0 +1.7**
baz=310
F10A Beach Ranch, E 61.25 52 *e*P **P 15 26 11.8 0.0**
comp=Z,3.8nm,0.8s
K05A Summer Lake 61.30 57 *e*P **P 15 26 12.2 -0.1**
comp=Z,19nm,1.0s
M04C Macdoel 61.36 58 P **P 15 26 14.4 +1.8**
baz=310
N02D Trinity Center 61.37 60 P **P 15 26 14.7 +2.1**
baz=310
FIA1 FINESS Array S 61.45 332 *e*P **P 15 26 11.4 -1.3**
FINES FINESS Array B 61.45 332 P **P 15 26 11.8 -0.8**
comp=Z,19nm,0.5s,baz=37,slow=8.3,SNR=132
FINES FINESS Array B 61.45 332 *e*P **P 15 26 11.7 -1.0**
FINES FINESS Array B 61.45 332 *e*P **P 15 26 11.7 -1.0**
BMO Blue Mountains 61.93 53 *e*P **P 15 26 17.5 +1.2**
comp=Z,15nm,1.5s
BMO Blue Mountains 61.93 53 *e*P **P 15 26 17.5 +1.2**
BMO pmax pmax
comp=Z,15nm,1.5s
OBN Obninsk 62.23 323 *e*P **P 15 26 16.7 -1.1**
OBN Obninsk 62.23 323 *d i*P **P 15 26 16.7 -1.1**
OBN pmax pmax
comp=Z,19nm,0.8s
MSO Missoula 62.43 50 P **P 15 26 20.6 +1.1**
baz=311,SNR=6.5
MSO Missoula 62.43 50 *e*P **P 15 26 20.1 +0.5**
comp=Z,11nm,1.1s
GEYT Alibeck 62.61 297 P **P 15 26 20.1 -0.7**
comp=Z,105nm,0.7s,baz=50,slow=7.2,SNR=3.8
GYA0B ALIBECK ARRAY 62.61 297 *e*P **P 15 26 20.9 +0.1**
comp=Z,28nm,0.8s
WVOR Wild Horse Val 62.77 56 *e*P **P 15 26 22.9 +1.1**
comp=Z,7.4nm,0.9s
WVOR Wild Horse Val 62.77 56 *e*P **P 15 26 22.9 +1.1**
WVOR pmax pmax
comp=Z,7.0nm,0.9s
BEKR Beckworth 63.45 59 *e*P **P 15 26 27.3 +0.9**
comp=Z,8.1nm,1.0s
HRY Holter Researc 63.59 49 *e*P **P 15 26 27.8 +0.7**
EGMT Eagleton 63.75 47 P **P 15 26 28.9 +0.9**
baz=313,SNR=6.2
EGMT Eagleton 63.75 47 *e*P **P 15 26 28.8 +0.8**
comp=Z,11nm,1.0s
VSR Storozhevoye 63.83 318 *e*P **P 15 26 27.3 -1.0**
VSR pmax pmax
comp=Z,20nm,0.6s
VORD Divnogorie 63.94 318 *e*P **P 15 26 28.3 -0.7**
VORD pmax pmax
comp=Z,10.0nm,0.8s
DLMT Dillon 64.11 50 *e*P **P 15 26 30.5 +0.1**
comp=Z,8.9nm,0.9s
PAHR Pah Rah Range 64.12 59 *e*P **P 15 26 30.8 +0.2**
comp=Z,6.9nm,1.0s
MCMT McKenzie Canyo 64.33 51 *e*P **P 15 26 32.2 +0.2**
HLID Hailey 64.35 53 P **P 15 26 33.2 +1.2**
baz=312
HLID Hailey 64.35 53 *e*P **P 15 26 32.9 +0.9**
comp=Z,14nm,1.8s
BOZ Bozeman (W) 64.45 50 P **P 15 26 33.7 +1.1**
baz=313,SNR=13
BOZ Bozeman (W) 64.45 50 *e*P **P 15 26 33.3 +0.7**
BOZ Bozeman (W) 64.45 50 *e*P **P 15 26 33.3 +0.7**
comp=Z,5.8nm,0.6s
BOZ Bozeman (W) 64.45 50 *e*P **P 15 26 33.3 +0.7**
BOZ pmax pmax
comp=Z,6.0nm,0.6s
YERR Yerington 64.69 59 *e*P **P 15 26 34.1 -0.2**
comp=Z,13nm,1.2s
BMN Battle Mountai 64.88 57 *e*P **P 15 26 35.0 -0.4**
comp=Z,6.9nm,1.0s
BMN Battle Mountai 64.88 57 *e*P **P 15 26 35.1 -0.4**
BMN pmax pmax
comp=Z,7.0nm,1.0s
YHB Horse Butte 65.25 50 *e*P **P 15 26 37.6 -0.2**
comp=Z,6.9nm,0.8s
KVN Kaiserville 65.30 59 *e*P **P 15 26 39.1 +0.9**
comp=Z,11nm,1.1s
KVN Kaiserville 65.30 59 *e*P **P 15 26 39.1 +0.9**
KVN pmax pmax
comp=Z,11nm,1.1s
NV01 Mina Array Sit 65.60 59 *e*P **P 15 26 40.9 +0.8**
NVAR Mina Array Bea 65.60 59 P **P 15 26 41.8 +1.6**
comp=Z,4.1nm,0.8s,baz=286,slow=6.3,SNR=31
NVAR pP **pP 15 28 12.4 +3.4**
comp=Z,0.4nm,0.6s,baz=298,slow=7.3,SNR=3.6
NV11 Mina Array Sit 65.69 59 *e*P **P 15 26 41.5 +0.9**
comp=Z,0.4nm,1.1s
YPP Pitchstone Pla 65.78 50 *e*P **P 15 26 41.7 +0.4**
comp=Z,1.8nm,0.8s
H17A Grant Village 65.82 50 P **P 15 26 43.1 +1.7**
baz=314,SNR=5.7
MLAC Mammoth, Mammo 65.83 60 P **P 15 26 43.6 +2.0**
baz=313
NC405 NORSAR Array S 65.83 338 *e*P **P 15 26 38.8 -2.1**
NC204 NORSAR Array S 65.93 339 *e*P **P 15 26 40.8 -0.8**
IMW Indian Meadow 65.97 51 *e*P **P 15 26 43.0 +0.6**
comp=Z,5.1nm,1.1s

RLMT	Red Lodge	65.99	49	P		P	15 26 43.6 +1.1
	baz=314,SNR=6.5						
RLMT	Red Lodge	65.99	49	eP		P	15 26 43.1 +0.6
	comp=Z,4.4nm,0.8s						
NB201	NORSAR Array S	65.99	338	eP		P	15 26 40.0 -2.0
NB2	NORSAR Subarra	66.02	338	P		P	15 26 40.6 -1.5
	comp=Z,5.3nm,0.4s,baz=31,slow=6.5						
NOA	NORSAR Array B	66.02	338	P		P	15 26 41.5 -0.6
	comp=Z,16nm,0.5s,baz=32,slow=6.6,SNR=35						
FXWY	Fox Creek	66.10	51	eP		P	15 26 44.0 +0.8
	comp=Z,10nm,1.4s						
DGMT	Dagmar	66.11	44	P		P	15 26 43.5 +0.6
	baz=316						
NBO00	NORSAR Array S	66.14	338	eP		P	15 26 40.9 -2.0
HFS	Hagfors	66.15	337	P		P	15 26 41.7 -1.2
	comp=Z,9.4nm,0.4s,baz=58,slow=5.4,SNR=79						
MOOW	Moose Ponds	66.17	51	eP		P	15 26 44.7 +1.0
	comp=Z,8.0nm,1.2s						
TPAW	Teton Pass	66.24	51	eP		P	15 26 45.2 +1.0
	comp=Z,8.3nm,0.9s						
REDW	Red Top Meadow	66.38	51	eP		P	15 26 45.8 +0.8
	comp=Z,3.8nm,0.8s						
LAO	LASA Array	66.41	46	P		P	15 26 45.9 +1.1
	baz=315						
LAO	LASA Array	66.41	46	eP		P	15 26 44.8 0.0
	comp=Z,7.6nm,1.0s						
HVU	Hansel Valley	66.44	53	eP		P	15 26 46.2 +0.9
	comp=Z,5.8nm,1.2s						
HVU	Hansel Valley	66.44	53	eP		P	15 26 46.2 +0.9
HVU				pmax		pmax	
	comp=Z,6.0nm,1.2s						
CWC	Cottonwood Cre	67.08	61	P		P	15 26 50.9 +1.6
	baz=313						
PKM	Mcpherson Peak	67.09	63	P		P	15 26 51.3 +1.8
	baz=313						
GRAC	Grapevine Rang	67.12	60	P		P	15 26 51.2 +1.7
	baz=313,SNR=5.7						
KIV	Kislovodsk	67.21	311	eP		P	15 26 50.2 +0.3
KIV	Kislovodsk	67.21	311	eP		P	15 26 50.0 +0.1
	comp=Z,36nm,0.8s						
KIV	Kislovodsk	67.21	311	i P		P	15 26 50.5 +0.5
	SNR=8.2						
KIV	Kislovodsk	67.21	311	eP		P	15 26 50.2 +0.3
KIV				pmax		pmax	
	comp=Z,46nm,1.0s						
HWUT	Hardware Ranch	67.22	53	eP		P	15 26 51.2 +1.1
	comp=Z,5.5nm,0.8s						
R11A	Troy Canyon, C	67.22	58	P		P	15 26 51.4 +1.1
	baz=314,SNR=6.5						
R11A	Troy Canyon, C	67.22	58	eP		P	15 26 50.7 +0.4
	comp=Z,20nm,2.0s						
KBZ	Khabaz	67.26	310	P		P	15 26 50.9 +0.8
	comp=Z,21nm,0.9s,baz=73,slow=3.9,SNR=43						
ZEI	Tsey	67.40	309	eP		P	15 26 50.6 -0.7
ZEI	Tsey	67.40	309	eP		P	15 26 50.6 -0.7
ZEI				pmax		pmax	
	comp=Z,23nm,0.9s						
BW06	Boulder Array	67.48	51	P		P	15 26 52.7 +0.8
	baz=315,SNR=12						
BW06	Boulder Array	67.48	51	eP		P	15 26 52.6 +0.8
	comp=Z,7.5nm,0.8s						
PD31	Pinedale Array	67.48	51	eP		P	15 26 52.4 +0.6
PDAR	Pinedale Array	67.48	51	P		P	15 26 53.1 +1.3
	comp=Z,6.0nm,0.7s,baz=288,slow=1.8,SNR=49						
PDAR				pP		pP	15 28 25.1 +3.9
	comp=Z,0.6nm,0.6s,baz=318,slow=2.0,SNR=4.4						
PDAR	Pinedale Array	67.48	51	eP		P	15 26 52.3 +0.5
PDAR				epP		pP	15 28 24.4 +3.2
DUG	Dugway, Tooele	67.52	55	P		P	15 26 53.4 +1.4
	baz=314,SNR=7.2						
DUG	Dugway, Tooele	67.52	55	eP		P	15 26 53.2 +1.2
DUG	Dugway, Tooele	67.52	55	eP		P	15 26 53.2 +1.2
	comp=Z,7.6nm,0.8s						
DUG	Dugway, Tooele	67.52	55	eP		P	15 26 53.2 +1.2
DUG				pmax		pmax	
	comp=Z,8.0nm,0.8s						
MPMC	Manual Prospec	67.69	61	P		P	15 26 54.3 +1.1
	baz=314,SNR=6.3						
TPNV	Topopah Spring	67.80	59	P		P	15 26 55.0 +1.2
	baz=314,SNR=8.2						
TPNV	Topopah Spring	67.80	59	eP		P	15 26 54.6 +0.8
	comp=Z,6.6nm,0.9s						
TPNV	Topopah Spring	67.80	59	eP		P	15 26 54.6 +0.8
TPNV				pmax		pmax	
	comp=Z,7.0nm,0.9s						
LRMC	Laurel Mtn Rad	67.97	61	P		P	15 26 55.9 +1.1
	baz=314						
PSUT	Pine Spring	68.08	57	eP		P	15 26 56.4 +0.8
	comp=Z,4.7nm,0.8s						
NLU	North Lily Min	68.09	54	eP		P	15 26 56.6 +1.0
	comp=Z,16nm,1.0s						
EDW2	Edwards Air Fo	68.19	62	P		P	15 26 57.4 +1.3
	baz=314,SNR=5.3						
WRA	Warramunga Arr	68.19	193	P		P	15 26 56.6 +0.6
	comp=Z,1.8nm,0.4s,baz=8.2,slow=6.5,SNR=60						
AKASG	Malin Array Be	68.48	323	P		P	15 26 56.6 -0.8
	comp=Z,8.7nm,0.5s,baz=53,slow=4.1,SNR=32						
AKBB	Malin Array Si	68.48	323	eP		P	15 26 56.0 -1.5
	comp=Z,13nm,0.7s						
AKBB	Malin Array Si	68.48	323	eP		P	15 26 56.0 -1.5
AKBB				pmax		pmax	
	comp=Z,13nm,0.7s						
KIEV	Kiev	68.50	323	eP		P	15 26 55.7 -1.9
	comp=Z,13nm,0.6s						
KIEV	Kiev	68.50	323	i P		P	15 26 56.5 -1.0
	SNR=9.7						
KIEV	Kiev	68.50	323	d iP		P	15 26 56.4 -1.2
KIEV				pmax		pmax	
	comp=Z,13nm,0.7s						
SHPR	Sheep Range	68.74	59	eP		P	15 27 00.8 +1.3
	comp=Z,4.1nm,0.8s						
GNI	Garni	68.80	307	P		P	15 26 58.4 -1.4
BFSC	Mount Baldy Ra	68.83	62	P		P	15 27 01.1 +1.0
	baz=314						
TMUT	Trail Mountain	69.03	54	eP		P	15 27 02.5 +1.0
	comp=Z,7.0nm,0.7s						
TUQ	Turquoise Moun	69.03	60	P		P	15 27 02.7 +1.4
	baz=314,SNR=5.1						
MSU	Marysvale	69.04	56	eP		P	15 27 02.6 +1.2
MSU	Marysvale	69.04	56	eP		P	15 27 02.6 +1.2
CCUT	Cedar City	69.05	57	eP		P	15 27 02.2 +0.7
	comp=Z,2.4nm,0.8s						
K22A	Casper	69.14	49	P		P	15 27 02.5 +0.7
	baz=316						
P17A	Butcher Ranch,	69.16	54	eP		P	15 27 03.2 +1.1
	comp=Z,8.8nm,0.9s						
SCI2	San Clemente I	69.17	64	P		P	15 27 04.0 +2.0
	baz=314						
HEC	Hector,Ludlow	69.21	61	P		P	15 27 03.6 +1.3
	baz=314						
P18A	Preston Nutter	69.32	54	eP		P	15 27 04.5 +1.2
	comp=Z,3.7nm,0.7s						
RSSD	Black Hills	69.32	47	P		P	15 27 03.5 +0.5
	baz=317						
RSSD	Black Hills	69.32	47	eP		P	15 27 03.9 +0.9
	comp=Z,21nm,1.6s						
RSSD	Black Hills	69.32	47	eP		P	15 27 03.9 +0.9
RSSD				pmax		pmax	
	comp=Z,21nm,1.6s						
MTPU	Mount Pierson	69.37	56	eP		P	15 27 05.2 +1.6
	comp=Z,5.4nm,0.7s						
SRU	San Rafael Swe	69.53	54	eP		P	15 27 05.5 +1.1
	comp=Z,11nm,0.7s						
SRU	San Rafael Swe	69.53	54	eP		P	15 27 05.5 +1.1
SRU				pmax		pmax	
	comp=Z,11nm,0.7s						
GMRC	Granite Mounta	69.64	61	P		P	15 27 06.1 +1.1
	baz=315						
KNB	Kanab	69.73	57	eP		P	15 27 06.7 +1.1
	comp=Z,8.1nm,1.1s						
KNB	Kanab	69.73	57	eP		P	15 27 06.7 +1.1
KNB				pmax		pmax	
	comp=Z,8.0nm,1.1s						
LDFC	Landfair	69.76	60	eP		P	15 27 06.6 +0.9
	comp=Z,9.3nm,0.8s						
PFO	Pinyon Flats O	69.98	62	P		P	15 27 08.0 +1.0
	baz=315						
BELC	Belle Mtn. Jos	69.99	61	P		P	15 27 08.0 +0.9
	baz=315						
O20A	White River Ci	70.04	52	P		P	15 27 08.2 +0.8
	baz=316						
IRM	Iron Mountain	70.38	61	P		P	15 27 10.9 +1.6
	baz=315,SNR=5.5						
U15A	North Rim	70.44	57	eP		P	15 27 11.0 +1.0
	comp=Z,6.8nm,0.9s						
W13A	Hualapai Mount	70.46	59	eP		P	15 27 11.1 +1.0
	comp=Z,19nm,1.8s						
BC3	Big Chuckawall	70.55	61	P		P	15 27 11.7 +1.2
	baz=315						
N23A	Red Feather La	70.70	50	P		P	15 27 11.9 +0.4
	baz=317						
PV09	Paradox Valley	70.73	54	eP		P	15 27 12.8 +1.1
B35A	Bob, Littlefor	70.83	38	P		P	15 27 11.6 -0.1
	baz=322						
SORM	Soroca	70.83	322	⇓ i P		P	15 27 10.8 -0.9
SORM	Soroca	70.83	322	P		P	15 27 10.8 -0.9
IKP	In-Ko-Pah, Jac	70.87	62	P		P	15 27 13.4 +1.1
	baz=315						
PV10	Paradox Valley	70.87	54	eP		P	15 27 14.1 +1.6
	comp=Z,19nm,0.8s						
PDMCI	Parker Dam,Lak	70.87	60	P		P	15 27 13.5 +1.4
	baz=315						
PV04	Paradox Valley	70.93	54	eP		P	15 27 13.2 +0.5
	comp=Z,10nm,1.0s						
Y12C	Blythe	71.04	61	P		P	15 27 14.4 +1.2
	baz=315						
PV07	Paradox Valley	71.04	54	eP		P	15 27 14.0 +0.6
	comp=Z,5.3nm,0.8s						
PV05	Paradox Valley	71.05	54	eP		P	15 27 14.1 +0.6
	comp=Z,13nm,0.8s						
PV03	Paradox Valley	71.06	54	eP		P	15 27 14.2 +0.6
	comp=Z,6.2nm,0.9s						
PV15	Paradox Valley	71.20	54	eP		P	15 27 12.7 -1.7
	comp=Z,7.9nm,0.8s						
PV01	Paradox Valley	71.30	54	eP		P	15 27 13.2 -1.7
	comp=Z,27nm,2.0s						
WUAZ	Wupatki	71.61	57	P		P	15 27 18.4 +1.6
	baz=316						
WUAZ	Wupatki	71.61	57	eP		P	15 27 15.7 -1.1
	comp=Z,5.4nm,0.9s						
ISCO	Idaho Springs	71.68	51	P		P	15 27 18.4 +1.1
	baz=317						
ISCO	Idaho Springs	71.68	51	eP		P	15 27 18.8 +1.5
	comp=Z,13nm,1.8s						
ISCO	Idaho Springs	71.68	51	eP		P	15 27 18.8 +1.5
ISCO				pmax		pmax	
	comp=Z,13nm,1.8s						
Y14A	Wickenburg	71.80	60	eP		P	15 27 18.4 +0.7
	comp=Z,5.5nm,0.7s						
BANOM	Banah	71.85	289	i P		P	15 27 18.2 0.0
	SNR=7.1						
SHME	Shamm	71.87	289	P		P	15 27 17.5 -0.7
AS31	Alice Springs	71.91	193	eP		P	15 27 19.8 +1.4
	comp=Z,4.1nm,1.7s						
ASAR	Alice Springs	71.91	193	P		P	15 27 19.9 +1.6
	comp=Z,1.0nm,0.4s,baz=9.9,slow=5.7,SNR=44						
MVCO	Mesa Verde	72.01	54	P		P	15 27 20.2 +1.0
	baz=317						
MVCO	Mesa Verde	72.01	54	eP		P	15 27 20.4 +1.2
	comp=Z,3.4nm,0.7s						
MDH	Madha	72.29	288	P		P	15 27 19.9 -0.8
MSFE	Esma-Masafi	72.34	288	P		P	15 27 20.2 -0.8
X16A	Lo Mia Camp, P	72.36	58	eP		P	15 27 21.8 +0.6
	comp=Z,6.8nm,0.8s						
E36A	McGregor	72.47	39	P		P	15 27 21.1 -0.3
	baz=322						
BUR08	Bucovina Ar. S	72.52	323	eP		P	15 27 21.5 -0.3
S22A	4UR Ranch, Cre	72.53	53	P		P	15 27 23.0 +0.7
	baz=317						
S22A	4UR Ranch, Cre	72.53	53	eP		P	15 27 22.9 +0.7
	comp=Z,6.2nm,1.2s						
Q24A	Divide	72.53	51	P		P	15 27 23.0 +0.8
	baz=318						
BUR04	Bucovina Ar. S	72.54	323	eP		P	15 27 21.4 -0.5
BURAR	Bucovina Array	72.54	323	⇓ i P		P	15 27 21.7 -0.2
BURAR	Bucovina Array	72.54	323	P		P	15 27 21.7 -0.2
UMQ	Umm Al-Quwin	72.54	289	P		P	15 27 21.1 -1.0
UOSS	Minazif	72.60	288	eP		P	15 27 21.4 -1.1
	comp=Z,11nm,0.8s						
UOSS	Minazif	72.60	288	P		P	15 27 20.7 -1.8
OGNE	Ogallala	72.67	48	P		P	15 27 23.2 +0.5
	baz=319						
HATD	Hatta, Dubai	72.73	288	i P		P	15 27 24.0 +0.7
	SNR=7.0						
TESR	Tescani	72.82	321	⇓ i P		P	15 27 22.6 -0.8
TLCR		72.93	319	⇑ i P		P	15 27 24.1 +0.1
ECSD	EROS Data Cent	73.15	43	P		P	15 27 25.4 0.0
	baz=321						
ECSD	EROS Data Cent	73.15	43	eP		P	15 27 24.5 -0.9
	comp=Z,6.9nm,1.0s						
TRPA	Tarpa	73.19	325	⇓ i P		P	15 27 25.8 +0.3
H35A	Sunnyside Ranc	73.21	41	P		P	15 27 26.2 +0.5
	baz=322						
CFR	Carcaliu	73.24	320	⇑ i P		P	15 27 25.9 +0.1
CFR	Carcaliu	73.24	320	P		P	15 27 25.9 +0.1
SDCO	Great Sand Dun	73.24	52	P		P	15 27 27.5 +1.1
	baz=318						
SDCO	Great Sand Dun	73.24	52	eP		P	15 27 27.4 +1.0
	comp=Z,3.4nm,1.0s						
VRI	Vrincioaia	73.30	321	⇑ i P		P	15 27 26.7 +0.5
VRI	Vrincioaia	73.30	321	P		P	15 27 26.6 +0.4
214A	Organ Pipe Nat	73.32	61	P		P	15 27 27.9 +1.2
	baz=316						
PLOR	Plostina	73.35	321	⇑ i P		P	15 27 25.5 -1.0
PLOR	Plostina	73.35	321	P		P	15 27 25.5 -1.0
ASUD	Al Ashush, Dub	73.39	288	P		P	15 27 27.4 +0.4
F38A	Pierce - Schro	73.50	39	P		P	15 27 27.5 +0.2
	baz=323						
LANS	Liptovska Anna	73.52	327	eP		P	15 27 26.2 -1.2
LANS	Liptovska Anna	73.52	327	eP		P	15 27 26.2 -1.2
ALNE	Al Ain	73.52	288	P		P	15 27 27.8 0.0
UPC	Upice	73.60	330	eP		P	15 27 28.0 +0.2
UPC	Upice	73.60	330	eP		P	15 27 28.0 +0.2
DPC	Dobruska-Polom	73.63	330	eP		P	15 27 28.4 +0.4
DPC	Dobruska-Polom	73.63	330	eP		P	15 27 28.4 +0.4
MORC	Moravsky Berou	73.69	329	⇓ i P		P	15 27 28.5 +0.1
MORC	Moravsky Berou	73.69	329	eP		P	15 27 27.7 -0.7
	comp=Z,32nm,0.9s						
MORC	Moravsky Berou	73.69	329	eP		P	15 27 27.7 -0.7
MORC				pmax		pmax	
	comp=Z,33nm,0.9s						
MORC	Moravsky Berou	73.69	329	eP		P	15 27 28.4 +0.1
TLB	Topalu	73.74	319	⇑ i P		P	15 27 29.0 +0.3
DOPR	Dopca	73.78	322	⇓ i P		P	15 27 29.2 +0.2
ILGA	Ilgaz	73.84	314	eP		P	15 27 30.5 +0.8
CLL	Collm	73.90	332	eP		P	15 27 28.8 -0.7
CLL	Collm	73.90	332	i P		P	15 27 28.8 -0.7
	comp=Z,13nm,0.7s						
CLL	Collm	73.90	332	eP		P	15 27 28.4 -1.1
	comp=Z,12nm,0.8s						
CLL	Collm	73.90	332	i P		P	15 27 28.8 -0.7
CLL				pmax		pmax	
	comp=Z,13nm,0.7s						
E40A	Wakefield	73.93	37	P		P	15 27 29.9 +0.1
	baz=324						
MLR	Muntele Rosu	73.93	321	P		P	15 27 30.5 +0.5
	comp=Z,1.5nm,0.6s,baz=175,slow=11,SNR=8.1						
MLR	Muntele Rosu	73.93	321	⇑ i P		P	15 27 30.9 +0.9
MLR	Muntele Rosu	73.93	321	eP		P	15 27 30.3 +0.3
	comp=Z,5.5nm,0.6s						
F39A	Loretta	73.93	38	P		P	15 27 30.2 +0.3
	baz=324						
ISR	Istrita	73.97	321	⇓ i P		P	15 27 30.8 +0.7
BRG	Berggiesshubel	73.97	331	i P		P	15 27 29.3 -0.6
	comp=Z,6.3nm,1.2s						
BRG	Berggiesshubel	73.97	331	eP		P	15 27 29.3 -0.6
BRG	Berggiesshubel	73.97	331	i P		P	15 27 29.3 -0.6
BRG				pmax		pmax	
	comp=Z,6.0nm,1.2s						
DRGR		74.21	324	⇑ i P		P	15 27 31.6 +0.1
TUC	Tucson	74.26	59	P		P	15 27 33.5 +1.5
	baz=317						
T25A	Trinidad	74.28	52	P		P	15 27 32.7 +0.5
	baz=318						
VYHS	Vyhne	74.29	327	eP		P	15 27 31.7 -0.1
VYHS				pmax		pmax	
	comp=Z,3.0nm,0.7s						
VYHS	Vyhne	74.29	327	eP		P	15 27 31.7 -0.1
VOIR		74.35	322	⇓ i P		P	15 27 32.9 +0.6
VOIR		74.35	322	P		P	15 27 32.9 +0.6
JAVC	Velka Javorina	74.41	328	eP		P	15 27 33.7 +1.1
VRAC	Vranov	74.41	329	⇓ i P		P	15 27 32.7 +0.2
VRAC	Vranov	74.41	329	eP		P	15 27 33.0 +0.5
EKA	Eskdalemuir Ar	74.44	343	P		P	15 27 31.9 -0.6
	comp=Z,1.9nm,0.6s,baz=17,slow=7.4,SNR=3.2						
GOPC	GO Pecny, Ondr	74.52	330	eP		P	15 27 33.3 +0.2
GOPC	GO Pecny, Ondr	74.52	330	eP		P	15 27 33.3 +0.2
PRU	Pruhonice	74.54	330	eP		P	15 27 33.4 +0.2
PRU	Pruhonice	74.54	330	eP		P	15 27 33.4 +0.2
PRU	Pruhonice	74.54	330	eP		P	15 27 33.4 +0.2
ARR	Arges	74.58	322	⇓ i P		P	15 27 34.3 +0.7
KRUC	Moravsky	74.69	329	eP		P	15 27 34.2 +0.1
G40A	Rib Lake	74.75	38	P		P	15 27 34.4 -0.1
	baz=324						
TASM	ASL Pad, Albuq	74.79	55	P		P	15 27 36.3 +1.2
	baz=318						
ANMO	Albuquerque	74.79	55	P		P	15 27 35.8 +0.6
	comp=Z,1.6nm,0.8s,baz=304,slow=10,SNR=4.9						
ANMO	Albuquerque	74.79	55	P		P	15 27 36.3 +1.2
	baz=318						
ANMO	Albuquerque	74.79	55	eP		P	15 27 36.3 +1.2
	comp=Z,5.8nm,1.4s						
ANMO	Albuquerque	74.79	55	eP		P	15 27 36.3 +1.2
ANMO				pmax		pmax	
	comp=Z,6.0nm,1.4s						
TASL	Snake Pit, Alb	74.79	55	P		P	15 27 36.3 +1.2
	baz=318						
F41A	Three Lakes	74.82	37	P		P	15 27 34.8 -0.1
	baz=325						
I38A	Scanlan Farm,	74.83	40	P		P	15 27 34.5 -0.5
	baz=323						
J37A	Redenius Farm,	74.87	41	P		P	15 27 35.2 0.0
	baz=323						
BR131	Keskin Array S	74.89	313	eP		P	15 27 35.6 +0.1
BRTR	Keskin Array B	74.89	313	P		P	15 27 35.8 +0.2
	comp=Z,3.8nm,0.8s,baz=73,slow=4.1,SNR=19						
H40A	Chili	75.19	39	P		P	15 27 37.5 +0.5
	baz=324						
L36A	Harm Buss Farm	75.32	43	P		P	15 27 38.1 +0.3
	baz=322						
KHC	Kasperske Hory	75.59	331	eP		P	15 27 39.4 +0.2
KHC	Kasperske Hory	75.59	331	eP		P	15 27 38.9 -0.3
KHC	Kasperske Hory	75.59	331	eP		P	15 27 38.9 -0.3
	comp=Z,2.4nm,0.7s						
KHC	Kasperske Hory	75.59	331	eP		P	15 27 38.9 -0.3
KHC				pmax		pmax	
	comp=Z,2.0nm,0.7s						
BZS	Buzias	75.61	324	⇑ i P		P	15 27 39.3 0.0
BZS	Buzias	75.61	324	P		P	15 27 39.3 0.0
MZR	Muzera	75.73	288	i P		P	15 27 40.4 +0.1
	SNR=7.9						
GERES	GERESS Array B	75.80	330	P		P	15 27 40.1 -0.3
	comp=Z,2.0nm,0.5s,baz=33,slow=5.9,SNR=16						
GEA0	GERESS Array S	75.81	330	eP		P	15 27 39.7 -0.8
319A	Douglas	75.81	59	eP		P	15 27 41.5 +0.7
	comp=Z,9.3nm,0.8s						
121A	Cookes Peak, D	75.82	57	P		P	15 27 42.3 +1.4
	baz=318						
CONA	Conrad Observa	75.84	329	i P		P	15 27 41.3 +0.6
	comp=Z,6.8nm,0.8s						
MDVR	Moldovita	76.26	323	⇑ i P		P	15 27 42.4 -0.6
M39A	Webster	76.95	42	P		P	15 27 46.0 -0.8
	baz=324						
O37A	Wolven Farm, M	77.09	44	P		P	15 27 47.8 +0.2
	baz=323						
SOKA	Soboth	77.20	328	eP		P	15 27 48.4 +0.1
	comp=Z,9.7nm,1.1s						
AMTX	Amarillo	77.42	52	P		P	15 27 50.5 +0.8
	baz=320						
VTS	Vitosha	77.44	321	⇑ i P		P	15 27 50.1 +0.4
VTS	Vitosha	77.44	321	eP		P	15 27 49.2 -0.4
	comp=Z,11nm,0.9s						
VTS	Vitosha	77.44	321	eP		P	15 27 49.2 -0.4
VTS				pmax		pmax	
	comp=Z,11nm,0.9s						
KBA	Koelnbreinsper	77.45	330	eP		P	15 27 50.1 +0.5
	comp=Z,8.7nm,0.6s						
MNTX	Cornudas Mount	77.80	56	P		P	15 27 52.9 +1.2
	baz=319						
MNTX	Cornudas Mount	77.80	56	eP		P	15 27 52.5 +0.8
	comp=Z,4.1nm,0.9s						
WATA	Walderalm	77.82	331	eP		P	15 27 52.0 +0.4
	comp=Z,6.1nm,0.7s						
WTTA	Wattenberg	77.86	331	eP		P	15 27 52.2 +0.3
	comp=Z,11nm,0.8s						
MOTA	Moosalm	77.97	331	eP		P	15 27 51.7 -0.8
	comp=Z,3.1nm,0.5s						
O40A	La Belle	78.17	42	P		P	15 27 53.7 +0.2
	baz=324						
Q38A	Cooks Store, C	78.29	44	P		P	15 27 53.7 -0.5
	baz=323						
M43A	Waltham Townsh	78.40	40	P		P	15 27 54.4 -0.3
	baz=325						
N42A	Yates City	78.42	41	P		P	15 27 55.0 +0.2
	baz=325						
Q39A	Willow Grove F	78.53	44	P		P	15 27 55.6 +0.1
	baz=324						
P40A	Paris	78.57	43	P		P	15 27 55.8 +0.2
	baz=324						
O41A	Passleys Farm,	78.62	42	P		P	15 27 56.2 +0.3
	baz=324						
N43A	Stutzman Famil	78.71	40	P		P	15 27 56.2 -0.2
	baz=325						
M44A	Midewin, Midew	78.83	39	P		P	15 27 57.0 0.0
	baz=326						
P41A	Barry, Barry	78.90	42	P		P	15 27 57.5 +0.1
	baz=324						
WMOK	Wichita Mounta	79.06	50	P		P	15 27 58.9 +0.4
	baz=321						
WMOK	Wichita Mounta	79.06	50	eP		P	15 27 58.8 +0.4
	comp=Z,4.4nm,0.9s						
WMOK	Wichita Mounta	79.06	50	eP		P	15 27 58.8 +0.4
WMOK				pmax		pmax	
	comp=Z,4.0nm,0.9s						
MMAI	Mount Meron Ar	79.12	307	P		P	15 27 59.8 +1.0
	comp=Z,5.8nm,0.6s,baz=38,slow=7.3,SNR=9.2						
P42A	Winchester	79.30	42	P		P	15 28 00.1 +0.6
	baz=325						
Q41A	Truxton	79.41	42	P		P	15 28 00.4 +0.3
	baz=324						
S39A	Bolivar	79.45	45	P		P	15 28 00.3 -0.2
	baz=324						
R40A	Maddies Statio	79.46	44	P		P	15 28 00.5 0.0
	baz=324						
T38A	Diamond	79.50	46	P		P	15 28 00.8 +0.1
	baz=323						
TUL1	Leonard	79.66	47	P		P	15 28 02.3 +0.8
	baz=322						
Q42A	Golden Eagle	79.76	42	P		P	15 28 02.5 +0.5
	baz=325						
N46A	Monticello	79.79	38	P		P	15 28 01.8 -0.3
	baz=326						
R41A	Rosebud	79.87	43	P		P	15 28 02.5 -0.1
	baz=324						
O45A	Potomac	79.90	39	P		P	15 28 03.1 +0.4
	baz=326						
S40A	Lebanon	79.91	44	P		P	15 28 02.7

baz=330
U42A Revenden 81.51 44 P P 15 28 11.7 +0.5
baz=325
V41A Mountainview 81.53 45 P P 15 28 11.4 0.0
baz=324
X39A Fountain Ranch 81.60 47 P P 15 28 12.3 +0.6
baz=323
MIAR Mount Ida 81.84 47 P P 15 28 13.6 +0.7
baz=324
W41B Gary Mavity, V 81.98 45 P P 15 28 14.1 +0.4
baz=324
X40A Basin Creek Fa 82.25 46 P P 15 28 15.3 +0.2
baz=324
IDI Anoyia 82.64 316 P P 15 28 16.4 -0.7
comp=Z,8.4nm,0.9s,baz=27,slow=6.8,SNR=4.7
WVT Waverly 83.27 42 P P 15 28 20.8 +0.6
baz=326
V46A Holladay 83.41 42 P P 15 28 21.6 +0.7
baz=326
V47A Nunnelly 83.66 42 P P 15 28 22.5 +0.3
baz=326
Y45A Yeager Farm, C 84.34 44 P P 15 28 26.2 +0.6
baz=326
V49A McMinnville 84.43 41 P P 15 28 26.0 -0.1
baz=327
W48A Pulaski 84.49 42 P P 15 28 26.3 0.0
baz=327
X47A Russelville 84.59 43 P P 15 28 27.1 +0.3
baz=326
Y46A Houston 84.65 44 P P 15 28 27.2 +0.1
baz=326
TZTN Tazewell 84.79 39 P P 15 28 27.6 -0.2
baz=329
W49A Belvidere 84.81 41 P P 15 28 27.7 -0.2
baz=327
V50A Pikevile 84.86 40 P P 15 28 28.1 -0.1
baz=328
X48A Hartselle 85.01 42 P P 15 28 28.6 -0.3
baz=327
W50A Signal Mountai 85.16 41 P P 15 28 29.7 0.0
baz=328
X49A Woodville 85.29 42 P P 15 28 30.6 +0.4
baz=327
U53A Fall Branch 85.35 38 P P 15 28 30.9 +0.3
baz=329
BLA Blacksburg 85.51 36 P P 15 28 31.4 0.0
baz=330
Z49A Columbiana 86.30 43 P P 15 28 35.2 +0.1
baz=327
Y51A Rockmart 86.37 41 P P 15 28 35.9 +0.4
baz=328
445A Amite 86.53 47 P P 15 28 36.5 +0.3
baz=325
Z50A Ashland 86.53 42 P P 15 28 36.8 +0.5
baz=328
X53A Estanollee 86.63 40 P P 15 28 37.6 +0.9
baz=329
149A Jones 86.67 43 P P 15 28 37.1 +0.2
baz=327
150A Eclectic 87.02 43 P P 15 28 38.7 +0.2
baz=327
249A Camden 87.04 44 P P 15 28 39.3 +0.6
baz=327
Y53A Monroe 87.06 40 P P 15 28 38.9 +0.2
baz=329
Z52A Williamson 87.26 41 P P 15 28 40.1 +0.4
baz=328
Y54A Tignall 87.44 40 P P 15 28 41.1 +0.5
baz=329
GOGA Godfrey 87.49 40 P P 15 28 40.8 +0.1
baz=329
252A Lumpkin 88.12 42 P P 15 28 43.9 +0.1
baz=328
SNAA Sanae 152.08 200 PKPbc PKPbc 15 35 43.9 -0.5
comp=Z,1.1nm,0.5s,baz=302,slow=9.5,SNR=16
PLCA Paso Flores 152.34 90 PKPbc PKPbc 15 35 45.9 -0.1
comp=Z,0.9nm,0.4s,baz=353,slow=4.7,SNR=5.1

IDC 12 15:38:26.2±5.7, 0°.90N×92°.99E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.4/62, mbtmp3.5/5, MS3.9/1, Ms1 3.9/1, ms1mx2.6/54, Error ellipse: s-maj=260.6km s-min=28.0km az=54.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.51**	**119**	P	P	15 46 47.6	-0.2
	0.7nm,0.9s,baz=296,slow=8.7,SNR=5.0						
MKAR	**Makanchi Array**	**46.66**	**350**	P	P	15 46 57.6	+1.1
	0.3nm,0.6s,baz=163,slow=8.7,SNR=4.2						
JAY	**Jayapura**	**47.83**	**94**	LR	LR	16 10 17.9	
	comp=Z,141nm,19.7s,slow=40						
KURBB	**Kurchatov Arra**	**51.04**	**348**	P	P	15 47 30.3	+0.2
	0.4nm,0.6s,baz=169,slow=6.6,SNR=3.4						
ZALV	**Zalesovo Beam**	**53.30**	**354**	P	P	15 47 46.2	-0.6
	0.6nm,0.6s,baz=163,slow=5.8,SNR=3.4						
BVAR	**Borovoye Array**	**55.25**	**344**	P	P	15 48 00.1	-0.9
	0.2nm,0.4s,baz=169,slow=8.4,SNR=2.9						
TXAR	**Lajitas Array**	**145.98**	**27**	PKPbc	PKPdf	15 58 08.2	+0.1
	0.2nm,0.6s,baz=11,slow=1.9,SNR=2.8						

*ISCJB **12** 15:38:44.0±0.5, 5°.04N±0°.04×77°.47W±0°.05, h28km, mb3.9/10, MS3.0/1, Error ellipse: s-maj=7.0km s-min=5.1km az=173.5*
*RSNC **12** 15:38:45.3±1.2, 5°.06N×77°.49W, h28km±19km, ML3.1, Mw3.3*
*IDC **12** 15:38:51.2±2.8, 4°.82N×77°.27W, h75km±25km, mb3.5/9, mb1 3.8/12, mb1mx3.6/40, mbtmp3.9/12, MS3.1/2, Ms1 3.2/2, ms1mx2.6/41, Error ellipse: s-maj=22.8km s-min=14.6km az=54.0*
ISC 12 15:38:45.6±0.6, 5°.04N±0°.04×77°.39W±0°.05, h28km, n26, σ1§90/29, mb4.0/10, 1D, Near west coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MALC	**Bahia Malaga**	**1.02**	**177**	*e*P	**Pb**	**15 39 03.8**	**-0.9**
PLMC	**San Jos¨ del**	**1.11**	**97**	*e*P	**Pb**	**15 39 05.0**	**-1.2**
PLMC				*e*S	**Sb**	**15 39 21.7**	**+1.3**
SOLC	**Bahia Solano**	**1.18**	**359**	*e*P	**Pn**	**15 39 04.2**	**-2.0**
SOLC				*e*S	**Sn**	**15 39 20.3**	**-1.1**
YOTC	**Yotoco, Valle**	**1.48**	**135**	⇓*i*P	**Pn**	**15 39 10.1**	**-0.4**
YOTC				*i*		15 39 29.4	
	comp=Z,538nm,0.3s						
HORQ	**Saladito**	**1.73**	**154**	*e*P	**Pn**	**15 39 13.1**	**-1.0**
HORQ				*i*		15 39 43.1	
	comp=Z,217nm,0.5s						
TOLC	**Tolima**	**2.11**	**102**	*e*P	**Pb**	**15 39 20.7**	**-2.7**
HELC	**Santa Helena**	**2.18**	**58**	*e*S	**Sn**	**15 39 47.5**	**+1.0**
HELC				*i*		15 40 04.8	
	comp=Z,75nm,0.5s						
POPC	**Popayan, Colom**	**2.58**	**164**	*e*P	**Pn**	**15 39 26.3**	**+0.5**
POPC				*e*S	**Sn**	**15 39 55.8**	**-0.6**
ROSC	**El Rosal**	**3.07**	**94**	P	**Pb**	**15 39 36.9**	**-2.8**
	comp=Z,4.8nm,0.3s,baz=292,slow=19,SNR=4.6						
BCIP	**Isla Barro Col**	**4.76**	**330**	*e*P	**Pn**	**15 39 53.5**	**-2.0**
BCIP				*i*		15 39 56.8	
	comp=Z,13nm,0.2s						
SDV	**Santo Domingo**	**7.72**	**60**	P	**Pn**	**15 40 40.6**	**+4.2**
	comp=Z,3.0nm,0.3s,baz=238,slow=6.1,SNR=3.5						
SDV				S	**Sn**	**15 42 04.5**	**+1.5**
	comp=Z,1.8nm,0.3s,baz=343,slow=12,SNR=2.1						
JTS	**JuntasAbangare**	**9.13**	**305**	LR	LR	15 44 25.4	
	comp=Z,113nm,18.8s,baz=182,slow=36						
PTGA	**Pitinga**	**18.32**	**108**	P	**Pn**	**15 42 57.2**	**-0.7**
	comp=Z,0.8nm,0.3s,baz=294,slow=21,SNR=5.0						
LPAZ	**La Paz**	**23.09**	**157**	P	**P**	**15 43 48.0**	**-1.9**
	comp=Z,1.2nm,0.6s,baz=326,slow=16,SNR=5.2						
LPAZ				LR	LR	15 53 47.5	
	comp=Z,56nm,20.0s,baz=311,slow=39						
TXAR	**Lajitas Array**	**34.66**	**317**	P	**P**	**15 45 34.1**	**+1.1**
	comp=Z,0.2nm,0.7s,baz=142,slow=10,SNR=2.7						
PLCA	**Paso Flores**	**45.98**	**173**	P	**P**	**15 47 06.8**	**+0.4**
	comp=Z,3.4nm,0.8s,baz=6.6,slow=7.5,SNR=6.8						
PDAR	**Pinedale Array**	**47.16**	**328**	P	**P**	**15 47 16.9**	**+1.0**
	comp=Z,0.2nm,0.5s,baz=125,slow=8.3,SNR=2.4						
NVAR	**Mina Array Bea**	**49.81**	**318**	P	**P**	**15 47 40.3**	**+3.9**
	comp=Z,0.1nm,0.3s,baz=144,slow=6.3,SNR=3.3						
YKA	**Yellowknife Ar**	**63.54**	**342**	P	**P**	**15 49 16.7**	**+3.5**
	comp=Z,0.7nm,0.7s,baz=147,slow=6.4,SNR=3.9						
PMSA	**Palmer Station**	**70.33**	**174**	P	**P**	**15 49 54.3**	**-2.0**
	comp=Z,11nm,0.8s,baz=320,slow=17,SNR=3.0						
DBIC	**Dimbokro**	**72.12**	**85**	P	**P**	**15 50 07.1**	**-1.1**
	comp=Z,5.2nm,1.0s,baz=336,slow=3.7,SNR=4.0						
KOWA	**Kowa**	**72.68**	**76**	P	**P**	**15 50 11.8**	**+0.3**
	comp=Z,3.1nm,0.7s,baz=267,slow=5.5,SNR=5.0						
TORD	**Torodi Ar. Bea**	**78.26**	**78**	P	**P**	**15 50 43.3**	**-0.3**
	comp=Z,1.1nm,0.5s,baz=282,slow=6.5,SNR=13						
MKAR	**Makanchi Array**	**125.34**	**17**	PKP	**PKPdf**	**15 57 42.5**	**-1.6**
	comp=Z,0.1nm,0.4s,baz=24,slow=4.2,SNR=4.6						
ASAR	**Alice Springs**	**144.62**	**235**	PKP	**PKPab**	**15 58 18.4**	**-0.7**
	comp=Z,5.7nm,0.8s,baz=120,slow=3.9,SNR=203						
WRA	**Warramunga Arr**	**145.76**	**242**	PKPbc	**PKPdf**	**15 58 22.5**	**-0.1**
	comp=Z,4.5nm,0.7s,baz=105,slow=3.0,SNR=47						

MEX 12 15:45:19.3±0.3, 16°.16N×95°.89W, h19km±604km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.44**	**209**	*e*P	Pg	15 45 26.9	-1.5
HUIG				*e*S	Sg	15 45 32.9	-1.6
VHO	**Vista Hermosa**	**1.22**	**318**	*e*P	Pn	15 45 38.3	-3.3
VHO				*e*S	Sb	15 45 52.9	-4.4
TLIG	**Tlapa**	**2.92**	**299**	*e*P	Pn	15 46 06.1	+1.2
TLIG				*i* S	Sn	15 46 39.5	-0.1

*PRU **12** 15:55:56.2, 44°.48N×10°.87E, h0km*
*IDC **12** 15:56:00.9±1.2, 44°.89N×10°.84E, h0km, mb3.6/4, mb1 3.6/8, mb1mx3.4/70, mbtmp3.5/8, ML3.6/4, MS2.6/3, Ms1 2.7/3, ms1mx2.2/57, Error ellipse: s-maj=31.9km s-min=14.0km az=120.0*
*ROM **12** 15:56:03.2±0.0, 44°.895N±0°.001×10°.921E±0°.001, h5km, ML3.4/45*
*LDG **12** 15:56:03.6±0.1, 44°.95N×11°.09E, h2km, Ml3.6/16, Error ellipse: s-maj=2.8km s-min=2.4km az=80.0*
*CSEM **12** 15:56:03.7±0.1, 44°.94N×10°.97E, h10km, ML3.6/11, Mw2.7, Error ellipse: s-maj=3.4km s-min=2.3km az=158.0*
*ISCJB **12** 15:56:03.3±0.2, 44°.96N±0°.02×10°.93E±0°.02, h16km±2km, mb3.6/4, Error ellipse: s-maj=3.3km s-min=2.1km az=160.8*
*STR **12** 15:56:09.4±0.7, 45°N±2°×1°1E±°, h10km, M3.7/6, mB3.8/1, mb3.5/2, MLv3.8/1, MLv3.7/6, Mw(mB)2.7/1*
ISC 12 15:56:03.1±0.6, 44°.92N±0°.02×10°.91E±0°.02, h14km±3km, n237, σ1§44/279, mb3.8/4, 17C-6D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0827	**Moglia (MN)**	**0.03**	**40**	⇓*i*P	**Pg**	**15 56 04.9**	**-0.6**
T0827				⇓*i*S	**Sg**	**15 56 07.4**	**+0.3**
T0827	**Moglia (MN)**	**0.03**	**40**	*i* P	**Pg**	**15 56 04.9**	**-0.6**
T0827				*i* S	**Sg**	**15 56 07.4**	**+0.3**
NDIM	**Novi di Modena**	**0.03**	**192**	*i* P	**Pg**	**15 56 04.2**	**-1.3**
NDIM				*i* S	**Sg**	**15 56 05.7**	**-1.5**
T0825	**Gonzaga (MN)**	**0.07**	**322**	AML	AML		
T0825				AML	AML		
T0818	**Loc. Fossa, Co**	**0.09**	**79**	⇓*i*P	**Pg**	**15 56 05.8**	**-0.2**
T0818				⇓*i*S	**Sg**	**15 56 08.0**	**0.0**
T0818	**Loc. Fossa, Co**	**0.09**	**79**	*i* P	**Pg**	**15 56 05.8**	**-0.2**
T0818				*i* S	**Sg**	**15 56 08.9**	**+0.9**
T0826	**Rio Saliceto (**	**0.10**	**221**	AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
SBPO	**S.Benedetto Po**	**0.13**	**4**	⇑*e*P	**Pb**	**15 56 07.6**	**+0.2**
SBPO	**S.Benedetto Po**	**0.13**	**4**	*e*P	**Pb**	**15 56 07.6**	**+0.2**
NOVE	**Novellara**	**0.18**	**229**	⇓*i*P	**Pg**	**15 56 07.4**	**+0.1**
NOVE				⇓*i*S	**Sb**	**15 56 12.1**	**+0.5**
NOVE	**Novellara**	**0.18**	**229**	*i* P	**Pg**	**15 56 07.4**	**+0.1**
NOVE				*i* S	**Sb**	**15 56 12.1**	**+0.5**
NOVE				AML	AML		
NOVE				AML	AML		
NOVE				AML	AML		
NOVE				AML	AML		
NOVE				AML	AML		
NOVE				AML	AML		
NOVE				AML	AML		
NOVE				AML	AML		
T0812	**Loc. Stoppiaro**	**0.20**	**79**	*e*P	**Pb**	**15 56 08.2**	**-0.3**
T0812	**Loc. Stoppiaro**	**0.20**	**79**	*e*P	**Pb**	**15 56 08.2**	**-0.3**
T0802	**SanFelice sul**	**0.20**	**102**	⇑*e*P	**Pg**	**15 56 07.6**	**+0.1**
T0802	**SanFelice sul**	**0.20**	**102**	*e*P	**Pg**	**15 56 07.6**	**+0.1**
T0813	**Massa Finalese**	**0.21**	**101**	⇑*e*P	**Pg**	**15 56 07.7**	**0.0**
T0813				⇑*e*S	**Sb**	**15 56 12.5**	**+0.1**
T0813	**Massa Finalese**	**0.21**	**101**	*e*P	**Pg**	**15 56 07.7**	**0.0**
T0813				*e*S	**Sb**	**15 56 12.6**	**+0.1**
RAVA	**Ravarino**	**0.22**	**137**	⇑*e*P	**Pg**	**15 56 07.0**	**-0.9**
RAVA				⇑*e*S	**Sb**	**15 56 12.9**	**+0.2**
RAVA	**Ravarino**	**0.22**	**137**	*e*P	**Pg**	**15 56 08.0**	**+0.1**
RAVA				*e*S	**Sb**	**15 56 12.9**	**+0.2**
RAVA				AML	AML		
	comp=E,43200µm,1.0s						
RAVA				AML	AML		
	comp=N,37950µm,0.4s						
RAVA				AML	AML		
	comp=E,43200µm,1.0s						
RAVA				AML	AML		
	comp=N,37900µm,0.4s						
RAVA				AML	AML		
	comp=E,43200µm,1.0s						
RAVA				AML	AML		
	comp=N,37950µm,0.4s						
RAVA				AML	AML		
	comp=N,37950µm,0.4s						
RAVA				AML	AML		
	comp=E,43200µm,1.0s						
T0800	**Massa Finalese**	**0.25**	**106**	⇑*e*P	**Pg**	**15 56 08.3**	**-0.1**
T0800				⇑*e*S	**Sb**	**15 56 13.7**	**+0.1**
T0800	**Massa Finalese**	**0.25**	**106**	*e*P	**Pg**	**15 56 08.3**	**-0.1**
T0800				*e*S	**Sb**	**15 56 13.7**	**+0.1**
T0800				AML	AML		
	comp=E,26200µm,0.8s						
T0800				AML	AML		
	comp=N,26400µm,0.3s						
T0800				AML	AML		
	comp=E,30150µm,0.8s						
T0800				AML	AML		
	comp=N,25000µm,0.8s						
T0800				AML	AML		
	comp=E,26200µm,0.8s						
T0800				AML	AML		
	comp=N,26400µm,0.3s						
T0800				AML	AML		
	comp=E,30150µm,0.8s						
T0800				AML	AML		
	comp=N,24950µm,0.8s						
T0800				AML	AML		
	comp=E,26200µm,0.8s						
T0800				AML	AML		
	comp=N,26400µm,0.3s						
T0800				AML	AML		
	comp=E,30150µm,0.8s						
T0800				AML	AML		
	comp=N,25000µm,0.8s						
T0800				AML	AML		
	comp=E,30150µm,0.8s						
T0800				AML	AML		
	comp=N,26400µm,0.3s						
T0800				AML	AML		
	comp=E,26200µm,0.8s						
T0800				AML	AML		
	comp=N,25000µm,0.8s						
T0811	**Palata Pepoli**	**0.26**	**120**	*e*P	**Pg**	**15 56 08.4**	**-0.2**
T0811				*e*S	**Sg**	**15 56 13.0**	**+0.7**
T0811	**Palata Pepoli**	**0.26**	**120**	*e*P	**Pg**	**15 56 08.4**	**-0.2**
T0811				*e*S	**Sb**	**15 56 14.0**	**0.0**
MODE	**Modena**	**0.29**	**174**	*e*P	**Pg**	**15 56 09.6**	**+0.6**
MODE	**Modena**	**0.29**	**174**	*e*P	**Pg**	**15 56 09.6**	**+0.6**
MODE				AML	AML		
	comp=E,68150µm,0.5s						
MODE				AML	AML		
	comp=N,49000µm,0.7s						
MODE				AML	AML		
	comp=E,68150µm,0.5s						
MODE				AML	AML		
	comp=N,49000µm,0.7s						
MODE				AML	AML		
	comp=E,68150µm,0.5s						
MODE				AML	AML		
	comp=N,48950µm,0.7s						
MODE				AML	AML		
	comp=E,68150µm,0.5s						
MODE				AML	AML		
	comp=N,48950µm,0.7s						
SERM	**Sermide**	**0.29**	**71**	*e*P	**Pb**	**15 56 09.7**	**-0.4**
SERM	**Sermide**	**0.29**	**71**	*e*P	**Pb**	**15 56 09.7**	**-0.4**
SERM				AML	AML		
	comp=E,9260µm,0.4s						
SERM				AML	AML		
	comp=N,6130µm,0.7s						
SERM				AML	AML		
	comp=E,13300µm,0.5s						
SERM				AML	AML		
	comp=N,11400µm,0.6s						
SERM				AML	AML		
	comp=E,9255µm,0.4s						
SERM				AML	AML		
	comp=N,6130µm,0.7s						
SERM				AML	AML		
	comp=E,13350µm,0.5s						
SERM				AML	AML		
	comp=N,11350µm,0.6s						
SERM				AML	AML		
	comp=E,9250µm,0.4s						
SERM				AML	AML		
	comp=N,6130µm,0.7s						
SERM				AML	AML		
	comp=E,13315µm,0.5s						
SERM				AML	AML		
	comp=N,11400µm,0.6s						
SERM				AML	AML		
	comp=N,11400µm,0.6s						
SERM				AML	AML		
	comp=N,6130µm,0.7s						
SERM				AML	AML		
	comp=E,13315µm,0.5s						
SERM				AML	AML		
	comp=E,9250µm,0.4s						
T0805	**Bondeno (FE)**	**0.29**	**90**	AML	AML		
	comp=E,28450µm,0.5s						
T0805				AML	AML		
	comp=N,17800µm,0.3s						
T0805				AML	AML		
	comp=E,28500µm,0.5s						
T0805				AML	AML		
	comp=N,17800µm,0.3s						
T0805				AML	AML		
	comp=N,17800µm,0.3s						
T0805				AML	AML		
	comp=E,28500µm,0.5s						
T0817	**Loc. Veratica,**	**0.40**	**79**	*e*P	**Pb**	**15 56 11.9**	**+0.1**
T0817	**Loc. Veratica,**	**0.40**	**79**	*e*P	**Pb**	**15 56 11.9**	**+0.1**
T0817				*e*S	**Sn**	**15 56 19.9**	**-1.7**
OPPE	**Oppeano**	**0.43**	**26**	AML	AML		
	comp=E,9500µm,0.8s						
OPPE				AML	AML		
	comp=E,8435µm,0.7s						
OPPE				AML	AML		
	comp=N,13350µm,0.9s						
OPPE				AML	AML		
	comp=E,9500µm,0.8s						
OPPE				AML	AML		
	comp=N,14350µm,0.9s						
OPPE				AML	AML		
	comp=N,14350µm,0.9s						
ZCCA	**Zocca**	**0.57**	**175**	AML	AML		
	comp=N,3730µm,0.9s						
ZCCA				AML	AML		
	comp=E,3720µm,1.5s						
ZCCA				AML	AML		
	comp=N,3595µm,0.9s						
ZCCA				AML	AML		
	comp=E,3790µm,1.5s						
ZCCA				AML	AML		
	comp=E,3720µm,1.5s						
ZCCA				AML	AML		
	comp=N,3595µm,0.9s						
ZCCA				AML	AML		
	comp=E,3790µm,1.5s						
ZCCA				AML	AML		
	comp=N,3730µm,0.9s						
ZCCA				AML	AML		
	comp=E,3790µm,1.5s						
ZCCA				AML	AML		
	comp=E,3720µm,1.5s						
ZCCA				AML	AML		
	comp=N,3730µm,0.9s						
ZCCA				AML	AML		
	comp=N,3595µm,0.9s						
ERBM	**Eremo**	**0.61**	**216**	AML	AML		
	comp=N,2075µm,1.1s						
ERBM				AML	AML		
	comp=E,3090µm,1.1s						
ERBM				AML	AML		
	comp=N,2070µm,1.1s						
ERBM				AML	AML		
	comp=E,3090µm,1.1s						
ERBM				AML	AML		
	comp=N,2075µm,1.1s						
ERBM				AML	AML		
	comp=E,3090µm,1.1s						
TEOL	**Teolo**	**0.70**	**50**	⇑*e*Pg	**Pb**	**15 56 17.0**	**-0.1**
TEOL				*e*Sg	**Sn**	**15 56 30.4**	**+1.2**
TEOL	**Teolo**	**0.70**	**50**	⇑*e*P	**Pg**	**15 56 16.9**	**+0.3**
TEOL				*e*Sg	**Sn**	**15 56 30.4**	**+1.2**
TEOL	**Teolo**	**0.70**	**50**	*e*P	**Pg**	**15 56 16.9**	**+0.3**
TEOL				AML	AML		
	comp=E,7115µm,0.4s						
TEOL				AML	AML		
	comp=N,4740µm,0.4s						
TEOL				AML	AML		
	comp=E,7115µm,0.4s						
TEOL				AML	AML		
	comp=N,4745µm,0.4s						
TEOL				AML	AML		
	comp=N,4745µm,0.4s						
TEOL				AML	AML		
	comp=E,7115µm,0.4s						
CMPO	**Campotto Po**	**0.72**	**117**	AML	AML		
	comp=E,5380µm,1.4s						
CMPO				AML	AML		
	comp=E,5380µm,1.4s						
CMPO				AML	AML		
	comp=N,3065µm,1.4s						
CMPO				AML	AML		
	comp=N,3635µm,1.3s						
CMPO				AML	AML		
	comp=E,5380µm,1.4s						
CMPO				AML	AML		
	comp=N,3635µm,1.3s						
ROVR	**Rover¨¤ Verone**	**0.74**	**9**	AML	AML		
	comp=N,3455µm,0.3s						
ROVR				AML	AML		
	comp=E,2070µm,0.7s						
ROVR				AML	AML		
	comp=E,2070µm,0.7s						
ROVR				AML	AML		
	comp=N,3455µm,0.3s						
ROVR				AML	AML		
	comp=E,2070µm,0.7s						
ROVR				AML	AML		
	comp=N,3455µm,0.3s						
MARN	**Marana (Italy)**	**0.75**	**16**	⇑*e*Pg	**Pb**	**15 56 18.7**	**+0.7**
MARN				*e*Sg	**Sn**	**15 56 31.5**	**+0.9**
MARN	**Marana (Italy)**	**0.75**	**16**	*e*Pg	**Pb**	**15 56 18.7**	**+0.7**
MARN				*e*Sg	**Sn**	**15 56 31.5**	**+0.9**
SALO	**Salr**	**0.75**	**339**	AML	AML		
	comp=N,4080µm,0.7s						
SALO				AML	AML		
	comp=E,3235µm,0.6s						
SALO				AML	AML		
	comp=E,3235µm,0.6s						
SALO				AML	AML		
	comp=N,4080µm,0.7s						
SALO				AML	AML		
	comp=N,4080µm,0.7s						
SALO				AML	AML		
	comp=E,3235µm,0.6s						
VLC	**Villacollemand**	**0.84**	**206**	AML	AML		
	comp=N,1305µm,0.9s						
VLC				AML	AML		
	comp=E,906µm,0.9s						
VLC				AML	AML		
	comp=E,906µm,0.9s						
VLC				AML	AML		
	comp=N,1305µm,0.9s						
VLC				AML	AML		
	comp=E,906µm,0.9s						
VLC				AML	AML		

	comp=N,1305µm,0.9s						
POPM	**Popiglio**	**0.88**	**187**	AML	AML		
	comp=N,2750µm,0.8s						
POPM				AML	AML		
	comp=E,1765µm,0.3s						
POPM				AML	AML		
	comp=E,1765µm,0.3s						
POPM				AML	AML		
	comp=N,2750µm,0.8s						
POPM				AML	AML		
	comp=N,2750µm,0.8s						
POPM				AML	AML		
	comp=E,1765µm,0.3s						
MAGA	**Magasa**	**0.88**	**347**	AML	AML		
	comp=E,12200µm,0.5s						
MAGA				AML	AML		
	comp=N,10425µm,0.5s						
MAGA				AML	AML		
	comp=E,12200µm,0.5s						
MAGA				AML	AML		
	comp=N,10425µm,0.5s						
MAGA				AML	AML		
	comp=E,12200µm,0.5s						
MAGA				AML	AML		
	comp=N,10425µm,0.5s						
CTL8	**Castelleone**	**0.89**	**294**	AML	AML		
	comp=N,4755µm,0.6s						
CTL8				AML	AML		
	comp=E,3895µm,0.7s						
CTL8				AML	AML		
	comp=E,1485µm,0.4s						
CTL8				AML	AML		
	comp=N,910µm,0.6s						
CTL8				AML	AML		
	comp=E,3895µm,0.7s						
CTL8				AML	AML		
	comp=N,4755µm,0.6s						
CTL8				AML	AML		
	comp=E,1485µm,0.4s						
CTL8				AML	AML		
	comp=N,909µm,0.6s						
CTL8				AML	AML		
	comp=E,1485µm,0.4s						
CTL8				AML	AML		
	comp=E,3895µm,0.7s						
CTL8				AML	AML		
	comp=N,909µm,0.6s						
CTL8				AML	AML		
	comp=N,4755µm,0.6s						
DOSS	**Dosso del Somm**	**0.98**	**11⇑**	*e*Pg	**Pg**	**15 56 21.9**	**-0.2**
DOSS				*e*Sg	**Sn**	**15 56 38.0**	**+1.5**
DOSS	**Dosso del Somm**	**0.98**	**11**	*e*Pg	**Pg**	**15 56 21.9**	**-0.2**
DOSS				*e*Sg	**Sn**	**15 56 38.0**	**+1.5**
MAIM	**Mastiano**	**1.05**	**197**	AML	AML		
	comp=N,2390µm,1.0s						
MAIM				AML	AML		
	comp=E,1200µm,0.7s						
MAIM				AML	AML		
	comp=E,1200µm,0.7s						
MAIM				AML	AML		
	comp=N,2390µm,1.0s						
MAIM				AML	AML		
	comp=E,1200µm,0.7s						
MAIM				AML	AML		
	comp=N,2390µm,1.0s						
BOB	**Bobbio (Coli)**	**1.05**	**262**	AML	AML		
	comp=E,4510µm,0.5s						
BOB				AML	AML		
BOB				AML	AML		
BOB				AML	AML		
	comp=N,6665µm,0.5s						
BOB				AML	AML		
	comp=N,6665µm,0.5s						
BOB				AML	AML		
	comp=E,4510µm,0.5s						
BOB				AML	AML		
BOB				AML	AML		
CRMI	**Carmignano**	**1.13**	**178**	AML	AML		
	comp=N,582µm,1.4s						
CRMI				AML	AML		
	comp=E,875µm,0.9s						
CRMI				AML	AML		
	comp=E,875µm,0.9s						
CRMI				AML	AML		
	comp=N,582µm,1.4s						
CRMI				AML	AML		
	comp=N,582µm,1.4s						
CRMI				AML	AML		
	comp=E,875µm,0.9s						
CGRP	**Cima Grappa**	**1.15**	**33⇑**	*e*Pg	**Pb**	**15 56 24.8**	**-0.1**
CGRP				*e*Sg	**Sn**	**15 56 43.1**	**+2.5**
CGRP	**Cima Grappa**	**1.15**	**33**	AML	AML		
	comp=N,1970µm,0.6s						
CGRP				AML	AML		
	comp=E,1710µm,0.6s						
CGRP				AML	AML		
	comp=E,1710µm,0.6s						
CGRP				AML	AML		
	comp=N,1970µm,0.6s						
CGRP				AML	AML		
	comp=E,1710µm,0.6s						
CGRP				AML	AML		
	comp=N,1970µm,0.6s						
PLMA	**Palmaria, Port**	**1.15**	**221**	AML	AML		
	comp=N,548µm,1.4s						
PLMA				AML	AML		
	comp=E,1540µm,0.3s						
MSSA	**Maissana**	**1.16**	**239**	AML	AML		
	comp=E,1885µm,0.3s						
MSSA				AML	AML		
	comp=E,1885µm,0.3s						
MSSA				AML	AML		
	comp=N,2525µm,0.5s						
MSSA				AML	AML		
	comp=N,2525µm,0.5s						
MSSA				AML	AML		
	comp=E,1885µm,0.3s						
MSSA				AML	AML		
	comp=N,2525µm,0.5s						
MABI	**Malga Bissina**	**1.17**	**346**	AML	AML		
	comp=N,693µm,1.0s						
MABI				AML	AML		
	comp=E,615µm,0.5s						
MABI				AML	AML		
	comp=E,615µm,0.5s						
MABI				AML	AML		
	comp=N,693µm,1.0s						
MABI				AML	AML		
	comp=E,615µm,0.5s						
MABI				AML	AML		
	comp=N,693µm,1.0s						
PANI	**Panarotta**	**1.17**	**15⇑**	*e*Pg	**Pb**	**15 56 24.6**	**-0.7**
PANI				*e*Sg	**Sn**	**15 56 43.8**	**+2.6**
PANI	**Panarotta**	**1.17**	**15**	*e*Pg	**Pb**	**15 56 24.6**	**-0.7**
PANI				*e*Sg	**Sn**	**15 56 43.8**	**+2.6**
SFI	**Santa Sofia**	**1.22**	**146**	AML	AML		
	comp=N,2050µm,1.0s						
SFI				AML	AML		
	comp=E,1040µm,0.6s						
SFI				AML	AML		
	comp=N,2050µm,1.0s						
SFI				AML	AML		
	comp=E,1033µm,0.7s						
SFI				AML	AML		
	comp=N,2135µm,1.0s						
SFI				AML	AML		
	comp=E,1044µm,0.6s						
SFI				AML	AML		
	comp=N,2050µm,1.0s						
SFI				AML	AML		
	comp=E,1036µm,0.7s						
SFI				AML	AML		
	comp=N,2135µm,1.0s						
SFI				AML	AML		
	comp=N,2135µm,1.0s						
SFI				AML	AML		
	comp=E,1036µm,0.7s						
SFI				AML	AML		
	comp=E,1044µm,0.6s						
MTLO	**Montello**	**1.23**	**43⇑**	*e*Pg	**Pb**	**15 56 26.2**	**+0.1**
CTI	**Castel Tesino**	**1.25**	**25**	AML	AML		
	comp=E,1550µm,0.5s						
CTI				AML	AML		
	comp=E,1550µm,0.5s						
CTI				AML	AML		
	comp=N,2205µm,0.2s						
CTI				AML	AML		
	comp=N,2205µm,0.2s						
CTI				AML	AML		
	comp=N,2205µm,0.2s						
CTI				AML	AML		
	comp=E,1550µm,0.5s						
VARN	**Col Varnada, M**	**1.37**	**38⇑**	*e*Pg	**Pn**	**15 56 27.6**	**-0.2**
VARN				*e*Sg	**Sg**	**15 56 47.2**	**0.0**
OZOL	**Ozolo**	**1.49**	**4**	*e*Pg	**Pn**	**15 56 29.7**	**+0.1**
OZOL	**Ozolo**	**1.49**	**4**	*e*Pg	**Pn**	**15 56 29.7**	**+0.1**
FAU	**Forcella Aurin**	**1.51**	**29⇑**	*e*Pg	**Pn**	**15 56 30.3**	**+0.4**
CARE	**Lago del Cares**	**1.52**	**354**	*e*Pg	**Pn**	**15 56 30.3**	**+0.2**
CARE	**Lago del Cares**	**1.52**	**354**	*e*Pg	**Pn**	**15 56 30.3**	**+0.2**
APPI	**Appiano**	**1.58**	**8**	AML	AML		
	comp=N,1244µm,0.9s						
APPI				AML	AML		
	comp=E,1305µm,0.6s						
APPI				AML	AML		
	comp=N,1244µm,0.9s						
APPI				AML	AML		
	comp=E,1310µm,0.6s						
APPI				AML	AML		
	comp=N,1244µm,0.9s						
APPI				AML	AML		
	comp=E,1310µm,0.6s						
KOSI	**Kohlern**	**1.58**	**12**	AML	AML		
	comp=E,1190µm,1.0s						
KOSI				AML	AML		
	comp=N,1002µm,0.7s						
KOSI				AML	AML		
	comp=N,1002µm,0.7s						
KOSI				AML	AML		
	comp=E,1190µm,1.0s						
AGOR	**Agordo**	**1.58**	**30**	AML	AML		
	comp=N,741µm,0.5s						
AGOR				AML	AML		
	comp=E,811µm,1.0s						
AGOR				AML	AML		
	comp=N,741µm,0.5s						
AGOR				AML	AML		
	comp=E,811µm,1.0s						
BRMO	**Bormio**	**1.60**	**347**	AML	AML		
	comp=N,720µm,0.8s						
BRMO				AML	AML		
	comp=E,1014µm,0.8s						
BRMO				AML	AML		
	comp=N,720µm,0.8s						
BRMO				AML	AML		
	comp=E,1014µm,0.8s						
BRMO				AML	AML		
	comp=N,720µm,0.8s						
BRMO				AML	AML		
	comp=E,1014µm,0.8s						
MOSI	**Grossmontoni**	**1.72**	**352**	AML	AML		
	comp=N,3040µm,0.7s						
MOSI				AML	AML		
	comp=E,2385µm,0.8s						
MOSI				AML	AML		
	comp=N,3040µm,0.7s						
MOSI				AML	AML		
	comp=E,2385µm,0.8s						
CAFI	**Castiglion Fio**	**1.76**	**154**	AML	AML		
	comp=N,280µm,0.7s						
CAFI				AML	AML		
	comp=E,266µm,0.7s						
CAFI				AML	AML		
	comp=N,280µm,0.7s						
CAFI				AML	AML		
	comp=E,266µm,0.7s						
ABSI	**Aberstueckl**	**1.83**	**9**	AML	AML		
	comp=N,2000µm,0.6s						
ABSI				AML	AML		
	comp=E,2015µm,0.7s						
ABSI				AML	AML		
	comp=N,2000µm,0.6s						
ABSI				AML	AML		
	comp=E,2015µm,0.7s						
STAL	**STALIGIAL**	**1.84**	**43**	AML	AML		
	comp=N,712µm,0.3s						
STAL				AML	AML		
	comp=E,750µm,0.7s						
STAL				AML	AML		
	comp=N,712µm,0.3s						
STAL				AML	AML		
	comp=E,1088µm,0.7s						
STAL				AML	AML		
	comp=N,770µm,1.4s						
STAL				AML	AML		
	comp=N,770µm,1.4s						
STAL				AML	AML		
	comp=E,750µm,0.7s						
STAL				AML	AML		
	comp=E,1088µm,0.7s						
TUE	**Stuetta**	**1.90**	**325**	AML	AML		
	comp=N,452µm,0.6s						
TUE				AML	AML		
	comp=E,504µm,0.4s						
TUE				AML	AML		
	comp=N,452µm,0.6s						
TUE				AML	AML		
	comp=E,504µm,0.4s						
FRON	**Frontone**	**1.92**	**136**	AML	AML		
	comp=N,435µm,0.7s						
FRON				AML	AML		
	comp=E,498µm,0.7s						
FRON				AML	AML		
	comp=N,435µm,0.7s						
FRON				AML	AML		
	comp=E,498µm,0.7s						
QLNO	**Quiliano**	**1.92**	**253**	AML	AML		
	comp=E,322µm,0.4s						
QLNO				AML	AML		
	comp=N,407µm,0.4s						
QLNO				AML	AML		
	comp=N,407µm,0.4s						
QLNO				AML	AML		
	comp=E,322µm,0.4s						
ATTE	**AVT- Monte Tez**	**2.01**	**148**	AML	AML		
	comp=N,209µm,0.6s						
ATTE				AML	AML		
	comp=E,344µm,0.5s						
ATTE				AML	AML		
	comp=N,209µm,0.6s						
ATTE				AML	AML		
	comp=E,344µm,0.5s						
ROSI	**Rosskopf**	**2.04**	**10**	AML	AML		
	comp=E,932µm,0.8s						
ROSI				AML	AML		
	comp=E,932µm,0.8s						
ROSI				AML	AML		
	comp=N,1034µm,0.8s						
ROSI				AML	AML		
	comp=N,1034µm,0.8s						
FETA	**Feichten**	**2.11**	**357**	*e*Pn	**Pb**	**15 56 40.8**	**-0.4**
	comp=N,14nm,0.3s,SNR=33						
FETA	**Feichten**	**2.11**	**357**	Pn	**Pb**	**15 56 40.8**	**-0.4**
	comp=N,14nm,0.3s,SNR=33						
CASP	**Castiglione de**	**2.13**	**181**	AML	AML		
	comp=E,198µm,1.5s						
CASP				AML	AML		
	comp=E,198µm,1.5s						
CASP				AML	AML		
	comp=N,348µm,1.2s						
CASP				AML	AML		
	comp=N,348µm,1.2s						
ABTA	**Abfaltersbach**	**2.15**	**31**	Pn	**Pn**	**15 56 40.1**	**+1.5**
	comp=N,19nm,0.3s,SNR=11						
ABTA	**Abfaltersbach**	**2.15**	**31**	Pn	**Pn**	**15 56 40.1**	**+1.5**
	comp=N,19nm,0.3s,SNR=11						
RISI	**Rein**	**2.19**	**21**	AML	AML		
	comp=N,982µm,0.4s						
RISI				AML	AML		
	comp=E,1250µm,0.5s						
RISI				AML	AML		
	comp=N,982µm,0.4s						
RISI				AML	AML		
	comp=E,1250µm,0.5s						
SKDS	**Skadanscina**	**2.28**	**73**	*i* Pn	**Pn**	**15 56 39.8**	**-0.6**
SKDS				*i* Sn	**Sn**	**15 57 08.1**	**-0.2**
	comp=Z,36nm,0.3s						
SKDS	**Skadanscina**	**2.28**	**73**	Pn	**Pn**	**15 56 39.8**	**-0.6**
SKDS				*i* Sn	**Sn**	**15 57 08.1**	**-0.2**
	comp=Z,36nm,0.3s						
WTTA	**Wattenberg**	**2.40**	**12**	*e*Pn	**Pb**	**15 56 44.5**	**-1.7**
	comp=Z,9.6nm,0.2s,SNR=13						
WTTA	**Wattenberg**	**2.40**	**12**	Pn	**Pb**	**15 56 44.5**	**-1.7**
	comp=Z,9.6nm,0.2s,SNR=13						
WTTA	**Wattenberg**	**2.40**	**12**	AML	AML		
	comp=N,236µm,0.7s						
WTTA				AML	AML		
	comp=N,236µm,0.7s						
WTTA				AML	AML		
	comp=N,236µm,0.7s						
WTTA				AML	AML		
	comp=E,418µm,0.9s						
WTTA				AML	AML		
	comp=N,236µm,0.7s						
WTTA				AML	AML		
	comp=E,418µm,0.9s						
JAVS	**Javornik**	**2.43**	**65**	*i* Pn	**Pn**	**15 56 42.3**	**-0.1**
JAVS				*i* Sn	**Sn**	**15 57 13.2**	**+1.2**
	comp=Z,146nm,0.7s						
JAVS	**Javornik**	**2.43**	**65**	*i* Pn	**Pn**	**15 56 42.3**	**-0.1**
JAVS				*i* Sn	**Sn**	**15 57 13.2**	**+1.2**
	comp=Z,146nm,0.7s						
MOMA	**Monte Martano**	**2.43**	**150**	AML	AML		
	comp=N,174µm,0.8s						
MOMA				AML	AML		
	comp=E,194µm,0.3s						
MOMA				AML	AML		
	comp=N,174µm,0.8s						
MOMA				AML	AML		
	comp=E,194µm,0.3s						
MOTA	**Moosalm**	**2.43**	**3**	*e*Pn	**Pn**	**15 56 44.5**	**+1.9**
	comp=E,35nm,0.4s,SNR=29						
MOTA	**Moosalm**	**2.43**	**3**	Pn	**Pn**	**15 56 44.5**	**+1.9**
	comp=E,35nm,0.4s,SNR=29						
ACOM	**Acomizza, Ital**	**2.45**	**47**	AML	AML		
	comp=E,515µm,1.6s						
ACOM				AML	AML		
	comp=N,561µm,0.8s						
ACOM				AML	AML		
	comp=E,515µm,1.6s						
ACOM				AML	AML		
	comp=N,561µm,0.8s						
FDMO	**Fiordimonte**	**2.45**	**139**	AML	AML		
	comp=E,122µm,0.6s						
FDMO				AML	AML		
	comp=E,122µm,0.6s						
FDMO				AML	AML		
	comp=N,156µm,1.3s						
FDMO				AML	AML		
	comp=N,156µm,1.3s						
WATA	**Walderalm**	**2.46**	**11**	*e*Pn	**Pn**	**15 56 45.4**	**+2.4**
	comp=N,16nm,0.2s,SNR=52						
WATA	**Walderalm**	**2.46**	**11**	Pn	**Pn**	**15 56 45.4**	**+2.4**
	comp=N,16nm,0.2s,SNR=52						
DAVA	**Damuels**	**2.48**	**344**	*e*Pn	**Pb**	**15 56 46.1**	**-1.3**
	comp=N,21nm,0.6s,SNR=14						
DAVA	**Damuels**	**2.48**	**344**	Pn	**Pb**	**15 56 46.1**	**-1.3**
	comp=N,21nm,0.6s,SNR=14						
MYKA	**Terra Mystica**	**2.57**	**47**	Pn	**Pn**	**15 56 45.0**	**+0.7**
	comp=N,0.1nm,0.1s,SNR=14						
MYKA	**Terra Mystica**	**2.57**	**47**	Pn	**Pn**	**15 56 45.0**	**+0.7**
	comp=N,0.1nm,0.1s,SNR=14						
RETA	**Reutte**	**2.57**	**358**	*e*Pn	**Pb**	**15 56 47.1**	**-1.9**
	comp=N,9.6nm,0.2s,SNR=9.8						
RETA	**Reutte**	**2.57**	**358**	Pn	**Pb**	**15 56 47.1**	**-1.9**
	comp=N,9.6nm,0.2s,SNR=9.8						
SAOF	**Saorge**	**2.58**	**250**	P	**Pn**	**15 56 47.0**	**+2.6**
SAOF	**Saorge**	**2.58**	**250**	P	**Pn**	**15 56 47.0**	**+2.6**
SAOF				S	**Sb**	**15 57 19.5**	**-1.1**
SBF	**Sospel**	**2.70**	**248**	*e*Pn	**Pn**	**15 56 48.7**	**+2.5**
SBF				*e*Sn	**Sn**	**15 57 21.1**	**+2.4**
	comp=N,129nm,0.3s						
SBF	**Sospel**	**2.70**	**248**	*e*Pn	**Pn**	**15 56 48.7**	**+2.5**
SBF				*e*Sn	**Sn**	**15 57 21.1**	**+2.4**
	comp=N,64nm,0.3s						
PGF	**Pioggiola**	**2.74**	**211**	*e*Pn	**Pn**	**15 56 48.5**	**+1.7**
PGF				*e*Sn	**Sn**	**15 57 21.0**	**+1.2**
	comp=N,60nm,0.3s						
PGF	**Pioggiola**	**2.74**	**211**	*e*Pn	**Pn**	**15 56 48.5**	**+1.7**
PGF				*e*Sn	**Sn**	**15 57 21.0**	**+1.2**
	comp=N,30nm,0.3s						
KBA	**Koelnbreinsper**	**2.75**	**37**	*e*Pn	**Pb**	**15 56 51.2**	**-0.9**
	comp=N,31nm,0.3s,SNR=16						
KBA	**Koelnbreinsper**	**2.75**	**37**	Pn	**Pb**	**15 56 51.2**	**-0.9**
	comp=N,31nm,0.3s,SNR=16						
LUCF	**Luceram**	**2.75**	**249**	P	**Pb**	**15 56 50.4**	**-1.7**
LUCF	**Luceram**	**2.75**	**249**	P	**Pb**	**15 56 50.4**	**-1.7**
LUCF				S	**Sn**	**15 57 23.8**	**+3.9**
ESCA	**l'Escarene**	**2.76**	**248**	P	**Pn**	**15 56 50.2**	**+3.3**
ESCA	**l'Escarene**	**2.76**	**248**	P	**Pn**	**15 56 50.2**	**+3.3**
ESCA				S	**Sb**	**15 57 24.5**	**-1.3**
REVF	**Revere**	**2.80**	**246**	P	**Pb**	**15 56 51.4**	**-1.5**
REVF	**Revere**	**2.80**	**246**	P	**Pb**	**15 56 51.4**	**-1.5**
REVF				S	**Sb**	**15 57 25.8**	**-1.3**
NVLJ	**Novalja**	**2.85**	**96**	*e*Pn	**Pn**	**15 56 47.9**	**-0.1**
NVLJ				Sn	**Sn**	**15 57 20.8**	**-1.4**
NVLJ	**Novalja**	**2.85**	**96**	*e*Pn	**Pn**	**15 56 47.9**	**-0.1**
NVLJ				Sn	**Sn**	**15 57 20.7**	**-1.4**
ISO	**Isola**	**2.85**	**256**	P	**Pn**	**15 56 50.7**	**+2.5**
ISO	**Isola**	**2.85**	**256**	P	**Pn**	**15 56 50.7**	**+2.5**
MVIF	**Mont Vial**	**2.88**	**251**	P	**Pn**	**15 56 51.6**	**+2.9**
MVIF	**Mont Vial**	**2.88**	**251**	P	**Pn**	**15 56 51.6**	**+2.9**
MVIF				S	**Sb**	**15 57 27.7**	**-1.7**
MBDF	**Montbardon**	**2.95**	**268**	*e*Pn	**Pn**	**15 56 50.1**	**+0.5**
MBDF				*e*Sn	**Sn**	**15 57 26.9**	**+2.0**
MBDF	**Montbardon**	**2.95**	**268**	*e*Pn	**Pn**	**15 56 50.1**	**+0.5**
MBDF				*e*Sn	**Sn**	**15 57 26.9**	**+2.0**
SURF	**Saint Ours**	**2.95**	**263**	P	**Pn**	**15 56 51.4**	**+1.7**
SURF	**Saint Ours**	**2.95**	**263**	P	**Pn**	**15 56 51.4**	**+1.7**
LPG	**La Plagne**	**3.00**	**283**	*e*Pn	**Pn**	**15 56 53.3**	**+2.9**
LPG				*e*Sn	**Sn**	**15 57 27.1**	**+0.9**
	comp=N,51nm,0.5s						
LPG	**La Plagne**	**3.00**	**283**	*e*Pn	**Pn**	**15 56 53.3**	**+2.9**
LPG				*e*Sn	**Sn**	**15 57 27.1**	**+0.9**
	comp=N,26nm,0.5s						
OBKA	**Obir**	**3.01**	**57**	*e*Pn	**Pn**	**15 56 51.4**	**+1.0**
	comp=N,8.6nm,0.4s						
OBKA	**Obir**	**3.01**	**57**	Pn	**Pn**	**15 56 51.4**	**+1.0**
	comp=N,8.6nm,0.4s						
LPL	**La Plagne**	**3.01**	**283**	*e*Pn	**Pn**	**15 56 52.8**	**+2.2**
LPL				*e*Sn	**Sn**	**15 57 28.1**	**+1.5**
	comp=N,23nm,0.3s						
LPL	**La Plagne**	**3.01**	**283**	*e*Pn	**Pn**	**15 56 52.8**	**+2.2**
LPL				*e*Sn	**Sn**	**15 57 28.1**	**+1.5**
	comp=N,12nm,0.3s						
CALF	**Calern**	**3.09**	**249**	P	**Pn**	**15 56 54.0**	**+2.5**
CALF	**Calern**	**3.09**	**249**	P	**Pn**	**15 56 54.0**	**+2.5**
CALF				Sn	**Sn**	**15 57 32.4**	**+4.1**
OZLJ	**Ozalj**	**3.29**	**76**	*i* Pn	**Pn**	**15 56 54.8**	**+0.5**
OZLJ				Sn	**Sn**	**15 57 34.7**	**+1.6**
OZLJ	**Ozalj**	**3.29**	**76**	*i* Pn	**Pn**	**15 56 54.7**	**+0.5**
OZLJ				Sn	**Sn**	**15 57 34.7**	**+1.6**
FRF	**La Foret Royal**	**3.35**	**248**	*e*Pn	**Pn**	**15 56 57.2**	**+2.2**
FRF				*e*Sn	**Sn**	**15 57 36.2**	**+1.6**
	comp=N,32nm,0.2s						
FRF	**La Foret Royal**	**3.35**	**248**	*e*Pn	**Pn**	**15 56 57.2**	**+2.2**
FRF				*e*Sn	**Sn**	**15 57 36.2**	**+1.6**
	comp=N,16nm,0.2s						
SOKA	**Soboth**	**3.38**	**57**	*e*Pn	**Pn**	**15 56 56.3**	**+0.8**
	comp=N,5.2nm,0.3s						
SOKA	**Soboth**	**3.38**	**57**	Pn	**Pn**	**15 56 56.3**	**+0.8**
	comp=N,5.2nm,0.3s						
UDBI	**Udbina**	**3.48**	**95**	*e*Pn	**Pn**	**15 56 58.7**	**+1.8**
UDBI				Sn	**Sn**	**15 57 38.6**	**+0.7**
UDBI	**Udbina**	**3.48**	**95**	*e*Pn	**Pn**	**15 56 58.7**	**+1.8**
UDBI				Sn	**Sn**	**15 57 38.6**	**+0.7**
SPAK	**Spaichingen-Ko**	**3.51**	**336**	P	**Pn**	**15 56 58.9**	**+1.6**
SPAK	**Spaichingen-Ko**	**3.51**	**336**	P	**Pn**	**15 56 58.9**	**+1.6**
LMR	**La Mourre**	**3.54**	**245**	*e*Pn	**Pn**	**15 56 59.3**	**+1.7**
LMR				*e*Sn	**Sn**	**15 57 40.9**	**+1.6**
	comp=N,111nm,0.3s						
LMR	**La Mourre**	**3.54**	**245**	*e*Pn	**Pn**	**15 56 59.3**	**+1.7**
LMR				*e*Sn	**Sn**	**15 57 40.9**	**+1.6**
	comp=N,56nm,0.3s						
ORIF	**Oris-en-Rattie**	**3.57**	**272**	*e*Pn	**Pn**	**15 57 00.1**	**+2.0**
ORIF				*e*Sn	**Sn**	**15 57 42.0**	**+1.8**
	comp=N,35nm,0.4s						
ORIF	**Oris-en-Rattie**	**3.57**	**272**	*e*Pn	**Pn**	**15 57 00.1**	**+2.0**
ORIF				*e*Sn	**Sn**	**15 57 42.0**	**+1.8**
	comp=N,18nm,0.4s						
LOMF	**Lomont**	**3.74**	**312**	P	**Pn**	**15 57 01.4**	**+1.0**
LOMF	**Lomont**	**3.74**	**312**	P	**Pn**	**15 57 01.4**	**+1.0**
LOMF				S	**Sn**	**15 57 44.4**	**+0.1**
MOA	**Molln**	**3.74**	**37**	*e*Pn	**Pn**	**15 57 01.7**	**+1.3**
	comp=N,6.8nm,0.3s						
MOA	**Molln**	**3.74**	**37**	Pn	**Pn**	**15 57 01.7**	**+1.3**
	comp=N,6.8nm,0.3s						
CABF	**La Chapelle**	**3.77**	**298**	*e*Pn	**Pn**	**15 57 03.3**	**+2.4**
CABF	**La Chapelle**	**3.77**	**298**	*e*Pn	**Pn**	**15 57 03.3**	**+2.4**
MOF	**Molkenrain**	**3.93**	**320**	P	**Pn**	**15 57 04.4**	**+1.4**
MOF	**Molkenrain**	**3.93**	**320**	P	**Pn**	**15 57 04.4**	**+1.4**
MOF				S	**Sn**	**15 57 50.1**	**+1.1**
SMRF	**Simiane la Rot**	**3.93**	**258**	*e*Pn	**Pb**	**15 57 08.6**	**-3.6**
SMRF				*e*Sn	**Sn**	**15 57 49.9**	**+0.9**
SMRF	**Simiane la Rot**	**3.93**	**258**	*e*Pn	**Pb**	**15 57 08.6**	**-3.6**
SMRF				*e*Sn	**Sn**	**15 57 49.9**	**+0.9**

ARSA	Arzberg	3.97	52	*e*Pn		Pn	15 57 03.8	+0.3
	comp=N,2.2nm,0.3s							
ARSA	Arzberg	3.97	52	Pn		Pn	15 57 03.8	+0.3
	comp=N,2.2nm,0.3s							
HINF	Hinteralfeld	4.04	317	*e*Pn		Pn	15 57 05.2	+0.7
HINF	Hinteralfeld	4.04	317	*e*Pn		Pn	15 57 05.2	+0.7
CDF	Champ du Feu	4.30	326	*e*Pn		Pn	15 57 08.9	+0.8
CDF	Champ du Feu	4.30	326	*e*Pn		Pn	15 57 08.9	+0.8
GERES	GERESS Array B	4.37	25	Pn		Pn	15 57 09.6	+0.4
	comp=N,2.2nm,0.3s,baz=202,slow=13,SNR=46							
GERES				Sn		Sn	15 57 59.5	-0.4
	comp=N,2.4nm,0.3s,baz=201,slow=22,SNR=4.4							
GERES				Lg		Lg	15 58 23.1	
	comp=N,2.2nm,0.3s,baz=202,slow=24,SNR=3.4							
GERES				LR		LR	15 59 17.5	
	comp=N,66nm,18.8s,baz=266,slow=44							
HAU	Haudompre	4.41	316	*e*Pn		Pn	15 57 10.4	+0.8
HAU	Haudompre	4.41	316	*e*Pn		Pn	15 57 10.4	+0.8
VIVF	Saint-Julien-I	4.43	271	*e*Pn		Pn	15 57 10.4	+0.5
VIVF				*e*Sn		Sn	15 58 01.7	+0.4
	comp=N,6.3nm,0.3s							
VIVF	Saint-Julien-I	4.43	271	*e*Pn		Pn	15 57 10.4	+0.5
VIVF				*e*Sn		Sn	15 58 01.7	+0.4
	comp=N,3.2nm,0.3s							
CONA	Conrad Observa	4.56	47	*e*Pn		Pn	15 57 12.9	+1.2
	comp=N,2.0nm,0.3s							
CONA	Conrad Observa	4.56	47	Pn		Pn	15 57 12.9	+1.2
	comp=N,2.0nm,0.3s							
LANF	Langenberg	4.59	334	P		Pn	15 57 13.1	+1.1
LANF	Langenberg	4.59	334	P		Pn	15 57 13.1	+1.1
KHC	Kasperske Hory	4.59	22	*e*PN		Pn	15 57 12.8	+0.7
KHC				*e*PG		Pg	15 57 31.2	+0.2
KHC				*e*SN		Sn	15 58 05.4	+0.1
KHC				*e*SG		Sg	15 58 37.0	+6.5
	comp=N,46nm,0.8s							
KHC				AMS		AMS	15 59 00.0	
	comp=N,200nm,9.1s							
KHC	Kasperske Hory	4.59	22	Pn		Pn	15 57 12.8	+0.7
THEF	They Montfort	4.74	316	P		Pn	15 57 15.3	+1.2
THEF	They Montfort	4.74	316	P		Pn	15 57 15.3	+1.2
THEF				S		Sn	15 58 09.9	+1.0
PAGF	Fort de Pagny	5.09	317	*e*Pn		Pn	15 57 19.8	+0.9
	baz=128							
PAGF	Fort de Pagny	5.09	317	*e*Pn		Pn	15 57 19.8	+0.9
LASF	Ste Croix	5.11	263	*e*Pn		Pn	15 57 19.6	+0.3
LASF				*e*Sn		Sn	15 58 18.6	+0.5
	comp=N,8.9nm,0.4s							
LASF	Ste Croix	5.11	263	*e*Pn		Pn	15 57 19.6	+0.3
LASF				*e*Sn		Sn	15 58 18.6	+0.5
	comp=N,4.4nm,0.4s							
SFTF	Sexfontaines	5.21	311	*e*Pn		Pn	15 57 21.5	+0.9
	baz=134							
SFTF	Sexfontaines	5.21	311	*e*Pn		Pn	15 57 21.5	+0.9
SMF	Signal de Mont	5.24	292	*e*Pn		Pn	15 57 22.2	+1.3
SMF				*e*Sn		Sn	15 58 20.1	-1.0
	comp=N,5.8nm,0.2s							
SMF	Signal de Mont	5.24	292	*e*Pn		Pn	15 57 22.2	+1.3
SMF				*e*Sn		Sn	15 58 20.1	-1.0
	comp=N,2.9nm,0.2s							
STON	Ston	5.32	110	*i* Pn		Pn	15 57 21.0	-1.0
STON				Sn		Sn	15 58 20.4	-2.6
STON	Ston	5.32	110	*i* Pn		Pn	15 57 21.0	-1.0
STON				Sn		Sn	15 58 20.4	-2.6
MEZF	Maizieres J'vi	5.39	314	*e*Pn		Pn	15 57 24.1	+1.1
	baz=128							
MEZF	Maizieres J'vi	5.39	314	*e*Pn		Pn	15 57 24.1	+1.1
NKC	Novy Kostel	5.42	11	*e*PN		Pn	15 57 23.5	0.0
NKC				*e*PG		Pg	15 57 46.5	-0.3
NKC	Novy Kostel	5.42	11	Pn		Pn	15 57 23.5	0.0
LBL	Lubilhac	5.43	276	P		Pn	15 57 25.2	+1.5
LBL	Lubilhac	5.43	276	P		Pn	15 57 25.2	+1.5
LOR	Lormes	5.44	298	*e*Pn		Pn	15 57 24.8	+1.1
	baz=116							
LOR	Lormes	5.44	298	*e*Pn		Pn	15 57 24.8	+1.1
MODS	Modra-Piesok	5.58	49	*e*PN		Pn	15 57 24.4	-1.3
MODS				*e*PG		Pg	15 57 45.6	-4.3
MODS	Modra-Piesok	5.58	49	*e*Pn		Pn	15 57 24.4	-1.3
AGO	Saint Agoulin	5.58	284	P		Pn	15 57 27.1	+1.4
AGO	Saint Agoulin	5.58	284	P		Pn	15 57 27.1	+1.4
SSF	Saint Saulge	5.59	295	*e*Pn		Pn	15 57 26.8	+1.1
SSF	Saint Saulge	5.59	295	*e*Pn		Pn	15 57 26.8	+1.1
KRUC	Moravsky	5.59	40	*e*Pn		Pn	15 57 25.0	-0.8
KRUC	Moravsky	5.59	40	*e*PN		Pn	15 57 25.0	-0.8
KRUC				*e*SG		Sg	15 59 01.2	-1.2
AVF	Avril sur Loir	5.60	292	*e*Pn		Pn	15 57 26.9	+1.0
AVF	Avril sur Loir	5.60	292	*e*Pn		Pn	15 57 26.9	+1.0
PRU	Pruhonice	5.64	25	*e*PN		Pn	15 57 27.3	+0.9
PRU				AMS		AMS	15 59 40.0	
	comp=N,200nm,6.0s							
PRU	Pruhonice	5.64	25	Pn		Pn	15 57 27.3	+0.9
GOPC	GO Pecny, Ondr	5.65	26	*e*PN		Pn	15 57 27.6	+1.0
GOPC	GO Pecny, Ondr	5.65	26	Pn		Pn	15 57 27.6	+1.0
BGF	Bois d'Agland	5.88	289	*e*Pn		Pn	15 57 31.0	+1.3
BGF				*e*Sn		Sn	15 58 36.0	-0.9
	comp=N,44nm,0.5s							
BGF	Bois d'Agland	5.88	289	*e*Pn		Pn	15 57 31.0	+1.3
BGF				*e*Sn		Sn	15 58 36.0	-0.9
	comp=N,22nm,0.5s							
HYF	Humbligny	6.21	295	*e*Pn		Pn	15 57 35.9	+1.6
HYF				*e*Sn		Sn	15 58 44.0	-1.1
HYF	Humbligny	6.21	295	*e*Pn		Pn	15 57 35.9	+1.6
TCF	Toulx Ste Croi	6.25	286	*e*Sn		Sn	15 58 45.2	-1.0
	comp=N,7.0nm,0.4s							
CAF	Calviac	6.28	273	*e*Pn		Pn	15 57 36.9	+1.6
CAF	Calviac	6.28	273	*e*Pn		Pn	15 57 36.9	+1.6
BRG	Berggiesshubel	6.30	18	PN		Pn	15 57 36.4	+0.9
	comp=N,5.7nm,0.5s							
BRG				PG		Pg	15 58 04.6	+1.0
BRG				*e*			15 59 05.4	
BRG				*e*			15 59 21.8	
	comp=N,33nm,1.2s							
MTLF	Montolieu	6.45	259	*e*Pn		Pn	15 57 38.7	+1.1
MTLF				*e*Sn		Sn	15 58 50.3	-0.7
	comp=N,3.1nm,0.3s							
MTLF	Montolieu	6.45	259	*e*Pn		Pn	15 57 38.7	+1.1
VYHS	Vyhne	6.52	54	*e*PN		Pn	15 57 37.5	-1.0
VYHS	Vyhne	6.52	54	*e*Pn		Pn	15 57 37.5	-1.0
CLL	Collm	6.55	12	*e*Pn		Pn	15 57 39.0	+0.1
CLL				*e*Pg		Pg	15 58 13.0	+4.7
CLL				*e*Sg		Sg	15 59 32.0	-1.0
	comp=Z,20nm,0.9s							
CLL				LV			17 44 00.0	
	comp=Z,100nm,20.2s							
DPC	Dobruska-Polom	6.55	32	*e*PN		Pn	15 57 38.2	-0.8
DPC				AMS		AMS	16 00 20.0	
	comp=Z,100nm,6.3s							
DPC	Dobruska-Polom	6.55	32	Pn		Pn	15 57 38.2	-0.8
FLN	La Foliniere	8.70	300	*e*Pn		Pn	15 58 09.5	+1.1
FLN	La Foliniere	8.70	300	*e*Pn		Pn	15 58 09.5	+1.1
ESDC	Sonseca Array	12.19	250	Pn		Pn	15 58 56.4	+0.1
	comp=Z,0.4nm,0.3s,baz=82,slow=12,SNR=2.8							
EKA	Eskdalemuir Ar	13.76	324	Pn		Pn	15 59 16.8	-0.8
	baz=138,slow=14,SNR=3.4							
NOA	NORSAR Array B	16.15	1	LR		LR	16 06 42.8	
	comp=Z,15nm,19.6s,baz=220,slow=40							
FINES	FINESS Array B	18.80	23	P		Pn	16 00 22.8	+0.5
	comp=Z,0.1nm,0.3s,baz=190,slow=16,SNR=3.5							
FINES				LR		LR	16 08 20.9	
	comp=Z,31nm,19.2s,baz=234,slow=39							
TORD	Torodi Ar. Bea	32.62	197	P		P	16 02 33.5	-0.9
	comp=Z,1.2nm,0.9s,baz=14,slow=8.2,SNR=4.3							
KURBB	Kurchatov Arra	44.38	57	P		P	16 04 12.9	+0.2
	comp=Z,0.3nm,0.6s,baz=308,slow=7.5,SNR=4.5							
MKAR	Makanchi Array	48.15	61	P		P	16 04 43.2	+0.6
	comp=Z,0.6nm,0.8s,baz=305,slow=9.4,SNR=6.0							
YKA	Yellowknife Ar	64.43	335	P		P	16 06 38.1	-0.3
	comp=Z,0.7nm,0.7s,baz=36,slow=7.6,SNR=2.9							

ISCJB ***12*** *15:59:34.6±0.3, 3°.73S±0°.04×128°.87E±0°.05, h10km, mb4.1/23, MS3.1/8, Error ellipse: s-maj=6.8km s-min=5.4km az=158.4*
NEIC ***12*** *15:59:37.5±6.7, 3°.69S×128°.81E, h18km±43km, mb4.5/2, Error ellipse: s-maj=16.6km s-min=9.0km az=76.0*
IDC ***12*** *15:59:38.3±3.0, 3°.73S×128°.73E, h24km±18km, mb4.0/20, mb1 4.1/21, mb1mx4.0/59, mbtmp4.2/21, ML3.7/1, MS3.3/10, Ms1 3.3/10, ms1mx2.9/48, Error ellipse: s-maj=28.9km s-min=10.0km az=74.0*
DJA ***12*** *15:59:38.7±0.2, 4°.5S±3°.×12°.9E±°, h10km, M4.7/13, mb4.7/13, mB5.4/5, MLv4.7/13, Mw(mB)4.8/5*
ISC 12 15:59:36.4±0.4, 3.71S±0.04×128.87E±0.04, h10km, n55, σ1º62/50, mb4.3/23, MS3.2/8, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	Masohi	0.36	10	P	Pg	15 59 43.7	0.0
AAI	Ambon	0.67	272	P	Pg	15 59 47.7	-1.8
BNDI	Bandanaira	1.31	128	P	Pg	16 00 03.0	+1.3
SANI	Sanana	3.31	300	P	Pn	16 00 26.7	-1.7
LBMI	Labuha	3.34	336	P	Pn	16 00 30.9	+2.1
FAKI	Fak Fak	3.47	77	P	Pb	16 00 34.8	-3.2
RKPI	Ransiki, Papua	5.74	68	P	Pn	16 01 04.6	+2.9
	195nm,0.8s,2μm1.1nm						
KMSI	Cibinong	6.48	311	P	Pn	16 01 05.6	-6.3
LUWI	Luwuk	6.64	293	P	Pn	16 01 19.0	+4.8
	101nm,0.8s,7μm0.6nm						
SOEI	Soe	7.55	217	P	Pb	16 01 49.4	+1.8
BAKI	Biak	7.65	71	P	Pn	16 01 31.8	+3.7
	61nm,1.3s						
APSI	Ampana	7.73	291	P	Pn	16 01 31.5	+2.4
	97nm,1.1s,1μm0.5nm						
MRSI	Marisa	8.07	301	P	Pn	16 01 39.7	+5.8
EDFI	Ende, Flores	8.72	235	P	Pn	16 01 43.5	+0.7
	92nm,0.6s,6μm0.7nm						
BKSI	Bulukumba	8.86	259	P	Pn	16 01 48.1	+3.4
	11nm,0.9s						
SPSI	Sidrap Palu	9.08	268	P	Pn	16 01 49.7	+2.0
	9.1nm,0.7s						
PCI	Palu	9.44	287	P	Pn	16 01 54.3	+1.6
	62nm,1.1s,616nm						
MPSI	Mapaga	9.82	294	P	Pn	16 02 00.9	+3.0
	7.9nm,0.7s						
DAV	Davao City (W)	11.20	343	LR	LR	16 07 37.7	
	comp=Z,144nm,19.8s,baz=92,slow=43						
WRAB	Tennant Creek	16.99	162	*e*Pn	Pn	16 03 33.7	-0.7
	39nm,1.4s						
WRA	Warramunga Arr	17.00	162	P	Pn	16 03 33.1	-1.4
	0.3nm,0.3s,baz=345,slow=12,SNR=18						
WRA				S	Sn	16 06 40.5	-3.1
	baz=329,slow=25,SNR=4.8						
WRA				PcP	PcP	16 08 19.2	-1.5
	baz=332,slow=1.4,SNR=2.7						
WRA				ScP	ScP	16 11 54.0	-1.9
	baz=323,slow=2.3,SNR=2.7						
PMG	Port Moresby	19.03	108	LR	LR	16 12 04.3	
	comp=Z,137nm,18.1s,baz=278,slow=39						
MBWA	Marble Bar	19.49	206	*e*P	Pn	16 04 05.1	0.0
	22nm,0.5s						
ASAR	Alice Springs	20.43	167	P	Pn	16 04 15.6	-0.7
	42nm,0.9s,baz=349,slow=12,SNR=588						
ASAR				S	S	16 08 02.2	-0.8
	2.9nm,1.1s,baz=352,slow=22,SNR=5.9						
ASAR				PcP	PcP	16 08 26.1	-0.4
	1.3nm,0.5s,baz=356,slow=1.8,SNR=9.3						
ASAR				LR	LR	16 11 56.2	
	comp=Z,126nm,18.8s,baz=340,slow=36						
ASAR				ScP	ScP	16 12 01.7	-1.7
	0.3nm,0.6s,baz=342,slow=2.2,SNR=6.0						
LEM	Lembang	21.38	261	LR	LR	16 13 02.3	
	comp=Z,110nm,18.1s,baz=154,slow=38						
CTA	Charters Tower	23.50	135	P	P	16 04 48.2	+1.4
	15nm,0.9s,baz=330,slow=12,SNR=11						
CTAO	Charters Tower	23.50	135	*e*P	P	16 04 47.9	+1.1
	104nm,0.9s						
JOW	Kunigami	30.37	359	LR	LR	16 16 03.5	
	comp=Z,36nm,20.4s,baz=107,slow=32						
STKA	Stephens Creek	30.47	158	P	P	16 05 49.7	+0.2
	4.7nm,0.9s,baz=345,slow=10.0,SNR=6.7						
STKA				LR	LR	16 18 18.6	
	comp=Z,87nm,20.2s,baz=24,slow=37						
HNR	Honiara	31.38	106	LR	LR	16 19 05.8	
	comp=Z,20nm,18.0s,baz=239,slow=37						
JNU	Nakatsue	36.68	3	LR	LR	16 20 00.8	
	comp=Z,36nm,20.2s,baz=306,slow=33						
CMAR	Chiang Mai Arr	36.80	308	P	P	16 06 44.9	+0.1
	0.9nm,0.8s,baz=143,slow=8.7,SNR=5.2						
CMAR				LR	LR	16 24 38.1	
	comp=Z,17nm,18.2s,baz=130,slow=41						
KSAR	Wonju Array Be	40.95	359	P	P	16 07 19.7	+0.3
KSRS	Korea Array	40.96	359	P	P	16 07 19.7	+0.3
	1.2nm,0.7s,baz=182,slow=11,SNR=3.4						
KSRS				LR	LR	16 23 30.6	
	comp=Z,17nm,22.0s,baz=335,slow=35						
MJAR	Matsushiro Arr	40.98	11	P	P	16 07 19.9	+0.3
	4.3nm,1.1s,baz=186,slow=9.9,SNR=5.1						
USRK	Ussuriysk Ar.	47.77	3	P	P	16 08 13.4	-0.4
	2.9nm,0.7s,baz=37,slow=9.8,SNR=4.4						
GTA	Gaotai	50.56	331	*e*P	P	16 08 40.5	+5.0
GTA				pP	sP	16 08 44.6	+4.7
GTA				sP	pP	16 08 47.6	+8.9
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KLR	Kul'dur	52.78	2	P	P	16 08 51.2	-0.5
	comp=Z,0.1nm,0.8s,baz=138,slow=0.4,SNR=4.8						
SONM	Songino Array	54.98	342	P	P	16 09 07.8	-0.2
	comp=Z,0.4nm,0.5s,baz=159,slow=14,SNR=2.6						
PETK	Petropavlovsk-	61.59	19	P	P	16 09 54.4	+0.5
	comp=Z,4.6nm,1.0s,baz=224,slow=4.1,SNR=4.7						
MKAR	Makanchi Array	64.87	327	P	P	16 10 14.5	-1.4
	comp=Z,1.5nm,0.8s,baz=119,slow=8.4,SNR=14						
MA2	Magadan	65.42	12	P	P	16 10 18.2	-0.9
	comp=Z,0.9nm,0.4s,baz=152,slow=10,SNR=3.6						
YAK	Yakutsk	65.56	0	*e*P	P	16 10 19.9	-0.1
	comp=Z,16nm,0.8s						
ZALV	Zalesovo Beam	68.15	334	P	P	16 10 35.2	-1.5
	comp=Z,0.8nm,0.6s,baz=99,slow=9.2,SNR=4.7						
SEY	Seymchan	68.81	11	P	P	16 10 40.6	0.0
	comp=Z,5.3nm,0.9s,baz=198,slow=4.1,SNR=19						
KURBB	Kurchatov Arra	69.13	328	P	P	16 10 41.4	-1.5
	comp=Z,1.8nm,0.8s,baz=131,slow=5.9,SNR=18						
KURK	Kurchatov	69.14	328	*e*P	P	16 10 41.3	-1.6
	comp=Z,35nm,1.0s						
BVAR	Borovoye Array	74.69	328	P	P	16 11 14.9	-1.3
	comp=Z,0.7nm,0.8s,baz=83,slow=4.6,SNR=5.4						
TIXI	Tiksi	75.22	360	P	P	16 11 17.8	-1.1
	comp=Z,2.1nm,0.7s,baz=172,slow=3.9,SNR=8.0						
TIXI	Tiksi	75.22	360	*e*P	P	16 11 18.2	-0.6
VNDA	Vanda	75.83	173	P	P	16 11 21.2	-1.2
	comp=Z,0.7nm,0.5s,baz=297,slow=7.7,SNR=4.1						
NRIK	Noril'sk	78.11	346	P	P	16 11 35.9	+0.5
	comp=Z,2.1nm,0.5s,baz=137,slow=6.1,SNR=4.3						
AKTO	Aktyubinsk	80.80	322	P	P	16 11 50.6	+0.3
	comp=Z,1.0nm,0.5s,baz=95,slow=5.3,SNR=3.9						
QSPA	South Pole Qui	86.25	180	P	P	16 12 18.7	+0.4
	comp=Z,2.6nm,0.8s,baz=342,slow=3.2,SNR=5.0						
TORD	Torodi Ar. Bea	127.00	284	PKP	PKPdf	16 18 41.0	-0.9
	comp=Z,0.7nm,0.7s,baz=357,slow=3.8,SNR=3.8						

ISCJB ***12*** *16:01:23.5±5.4, 32°.0S±0°.1×179°.7E±0°.8, h363km, mb3.2/4, Error ellipse: s-maj=92.5km s-min=14.6km az=171.4*
IDC ***12*** *16:01:23.1±6.7, 32°.09S×179°.94E, h368km±76km, mb3.1/4, mb1 3.2/5, mb1mx2.9/50, mbtmp3.8/5, Error ellipse: s-maj=84.7km s-min=38.9km az=6.0*
ISC 12 16:01:23.3±2.6, 32°.1S±0°.1×179°.9E±0°.3, h363km, n6, σ1º01/7, mb3.4/4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	6.56	199	P	P	16 03 02.3	+0.3
	0.6nm,0.3s,baz=272,slow=5.5,SNR=7.3						
URZ				S	S	16 04 19.4	-0.6
	1.1nm,0.3s,baz=286,slow=22,SNR=12						
CTA	Charters Tower	32.35	283	P	P	16 07 20.2	-0.2
	2.2nm,0.8s,baz=90,slow=11,SNR=2.6						
STKA	Stephens Creek	32.36	260	P	P	16 07 21.7	+1.4
	3.1nm,1.0s,baz=95,slow=16,SNR=2.8						
ASAR	Alice Springs	41.25	270	P	P	16 08 33.8	-0.7
	0.3nm,0.4s,baz=108,slow=7.5,SNR=5.0						
WRA	Warramunga Arr	42.40	275	P	P	16 08 42.8	-1.0
	0.5nm,0.3s,baz=112,slow=8.1,SNR=9.7						
FINES	FINESS Array B	146.06	338	PKPbc	PKPdf	16 20 18.7	-0.1
	0.6nm,0.4s,baz=70,slow=4.6,SNR=7.5						

IDC 12 16:09:44.2±2.7, 3°.56S×141°.73E, h0km, mb3.1/2, mb1 3.2/3, mb1mx3.0/48, mbtmp3.1/3, ML2.9/1, Error ellipse: s-maj=60.9km s-min=17.7km az=63.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	Jayapura	1.46	315	Pg	Pb	16 10 12.6	+0.4
	14nm,0.3s,baz=146,slow=7.6,SNR=72						
JAY				Lg	Lg	16 10 29.7	
	7.7nm,0.3s,baz=222,slow=14,SNR=5.5						
WRA	Warramunga Arr	17.81	203	P	Pn	16 13 53.3	-0.4
	0.1nm,0.3s,baz=25,slow=12,SNR=5.0						
ASAR	Alice Springs	21.38	200	P	P	16 14 33.6	+0.1
	0.3nm,1.0s,baz=31,slow=9.7,SNR=2.8						
MKAR	Makanchi Array	72.31	322	P	P	16 21 11.2	-0.6
	0.5nm,0.8s,baz=122,slow=5.9,SNR=3.6						

ISCJB ***12*** *16:15:34.9±1.2, 32°.88S±0°.03×71°.79W±0°.05, h3km±6km, Error ellipse: s-maj=7.6km s-min=5.9km az=1.3*
GUC ***12*** *16:15:37.5±0.5, 32°.64S×71°.49W, h31km±11km, ML3.6*
SJA ***12*** *16:15:39.6±1.2, 32°.49S×71°.43W, h8km, ML3.4, MW3.4*
ISC 12 16:15:36.6±2.1, 32°.91S±0°.05×71°.69W±0°.07, h10km±11km, n22, σ1º59/37, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROCH	El Roble	0.57	97	*e*P	Pg	16 15 48.5	+0.7
ROCH				*e*S	Sb	16 15 56.7	-0.5
ROCH				IAML		16 15 57.5	
	comp=N,4μm,0.1s						
PEL	Peldehue	0.88	106	*e*P	Pg	16 15 53.4	-0.1
PEL				*e*S	Sg	16 16 05.1	+0.2
PEL				IAML		16 16 06.9	
	comp=N,5μm,0.2s						
CLCH	Cerro Calan	1.08	117	*e*S	Sb	16 16 12.2	+0.4
CLCH				IAML		16 16 13.2	
	comp=E,4μm,0.5s						
ANTU	Antumapu	1.10	127	*e*P	Pb	16 15 58.3	+0.4
ANTU				*e*S	Sn	16 16 14.0	+0.4
ANTU				IAML		16 16 18.0	
	comp=N,2μm,0.7s						
FCH	Farellones	1.25	110	*e*P	Pb	16 15 59.4	-1.1
FCH				*e*S	Sb	16 16 16.4	-0.4
FCH				IAML		16 16 16.9	
	comp=N,3μm,0.2s						
AUSP	Uspallata	2.06	71	*e*P	Pn	16 16 11.5	-0.1
AUSP				*e*S	Sn	16 16 37.2	-0.3
GO05	HualaæØ	2.11	185	*e*P	Pn	16 16 11.9	-0.1
GO05				*e*S	Sn	16 16 38.3	0.0
ARCO	CERRO ARCO	2.32	89	*e*P	Pb	16 16 17.8	-0.9
ARCO				*e*S	Sb	16 16 47.5	0.0
AAGR	Agrelo	2.41	95	*e*P	Pn	16 16 18.4	+2.2
AAGR				*e*S	Sb	16 16 51.9	+1.8
ASAL	Salagasta	2.43	83	*e*P	Pn	16 16 18.5	+2.1
ASAL				*e*S	Sb	16 16 50.1	-0.4
AVIZ	Vizcacheras	2.72	103	*e*P	Pb	16 16 24.0	-1.5
AVIZ				*e*S	Sg	16 17 04.2	+0.2
RTCV	Cerro Valdivia	2.86	69	*e*P	Pn	16 16 23.7	+1.3
ZON	Zonda	2.89	63	*e*P	Pn	16 16 23.5	+0.7
ZON				*e*S	Sn	16 16 59.8	+2.1
ZON				IAML		16 17 09.1	
	comp=Z,83nm,0.3s						
RTLL	Cerro Villicun	3.15	61	*e*P	Pn	16 16 27.5	+1.1
RTLL				*e*S	Sn	16 17 06.3	+2.3
RTLL				IAML		16 17 13.7	
	comp=Z,137nm,0.3s						
AROD	Rodeo	3.32	35	*e*P	Pn	16 16 29.5	+0.5
AROD				*e*S	Sn	16 17 09.7	+0.9
AMOG	MOGNA	3.35	55	*e*P	Pn	16 16 28.7	-0.4
ACAN	Cantantal	3.85	82	*e*P	Pn	16 16 37.5	+1.5
ACAN				*i* S	Sb	16 17 26.4	-5.0
MRA	San Martin	5.06	86	*e*P	Pn	16 16 52.5	-0.2
MRA				IAML		16 17 59.1	
	comp=Z,26nm,0.3s						
VCA	Vinchina	5.12	37	*e*P	Pn	16 16 55.7	+2.1
VCA				*e*S	Sn	16 17 54.8	+1.9
VCA				IAML		16 18 05.2	
	comp=Z,91nm,0.5s						
ACLC	CERRO LA CRUZ	5.34	51	*e*P	Pn	16 16 56.0	-0.6
ACLC				*e*S	Sn	16 17 54.5	-3.9
SUCO	SUCO	5.73	96	*e*P	Pn	16 17 01.3	-0.5
SUCO				IAML		16 18 12.8	
	comp=Z,12nm,0.4s						
CYA	Choya	6.75	50	IAML		16 18 37.0	
	comp=Z,12nm,0.5s						

ISN ***12*** *16:25:24.0±0.5, 37°.32N×42°.60E, h0km±2km, ML2.7*
ISCJB ***12*** *16:25:25.8±1.1, 37°.32N±0°.05×42°.68E±0°.05, h2km±7km, Error ellipse: s-maj=8.8km s-min=6.0km az=10.3*
CSEM ***12*** *16:25:26.4±0.2, 37°.33N×42°.68E, h5km, ML2.8, Error ellipse: s-maj=5.9km s-min=3.9km az=37.0*
DDA ***12*** *16:25:26.1, 37°.31N×42°.61E, h6km, Ml2.8*
ISK ***12*** *16:25:27.4, 37°.38N×42°.60E, h11km, ML2.7//11*
ISC 12 16:25:26.3±1.3, 37°.31N±0°.04×42°.62E±0°.03, h4km±10km, n35, σ0º93/49, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRN	S¯–rnak	0.25	318	*i* P	Pg	16 25 30.7	-0.5
SIRN				*i* S	Sg	16 25 35.1	+0.7
SIRN	S¯–rnak	0.25	318	P

	baz=190						
ENLB				*e*S	**Sb**	**16 26 26.1**	**+1.7**
	baz=190						
ESL	**Shilin**	**0.33**	**222**	*i* P	**Pb**	**16 26 21.9**	**-0.5**
	baz=212						
ESL				*e*S	**Sb**	**16 26 27.2**	**-0.5**
	baz=212						
ENA	**Nanau**	**0.37**	**9**	P	**Pb**	**16 26 22.6**	**-0.3**
	baz=16						
ENA				*e*S	**Sb**	**16 26 28.7**	**+0.2**
	baz=16						
NANB	**Nanao**	**0.37**	**11**	*e*P	**Pb**	**16 26 22.6**	**-0.3**
	baz=16						
NANB				*e*S	**Sb**	**16 26 28.9**	**+0.3**
	baz=16						
ENAH	**Nanao**	**0.40**	**18**	*e*P	**Pb**	**16 26 23.8**	**+0.4**
	baz=23						
ENAH				*e*S	**Sn**	**16 26 30.5**	**-0.5**
	baz=23						
NNSB	**Datong**	**0.45**	**324**	*i* P	**Pb**	**16 26 24.1**	**-0.2**
	baz=324						
NNSB				*e*S	**Sb**	**16 26 30.4**	**-0.5**
	baz=324						
NNSH	**Datong**	**0.45**	**324**	*i* P	**Pb**	**16 26 23.9**	**-0.3**
	baz=324						
NNSH				*e*S	**Sb**	**16 26 30.4**	**-0.5**
	baz=324						
EGFH	**Guangfu**	**0.46**	**210**	*e*P	**Pb**	**16 26 23.2**	**-1.0**
	baz=204						
EGFH				*e*S	**Sb**	**16 26 30.7**	**-0.1**
	baz=204						
CHGB	**Renai**	**0.46**	**270**	P	**Pb**	**16 26 24.3**	**-0.2**
	baz=265						
CHGB				*e*S	**Sb**	**16 26 31.0**	**-0.2**
	baz=265						
NNS	**Nan Shan**	**0.47**	**324**	*i* P	**Pb**	**16 26 24.2**	**-0.3**
	baz=325						
NNS				*e*S	**Sb**	**16 26 30.8**	**-0.4**
	baz=325						
TWC	**Suao**	**0.56**	**16**	*e*P	**Pb**	**16 26 25.8**	**-0.3**
	baz=21						
TWC				*e*S	**Sb**	**16 26 34.1**	**+0.3**
	baz=21						
VWDT	**VWDT**	**0.58**	**238**	*e*P	**Pb**	**16 26 26.0**	**-0.2**
	baz=233						
VWDT				*e*S	**Sb**	**16 26 33.9**	**-0.3**
	baz=233						
ENTT	**Nioudou**	**0.58**	**350**	*e*P	**Pb**	**16 26 26.0**	**-0.3**
	baz=353						
ENTT				*e*S	**Sb**	**16 26 34.1**	**-0.2**
	baz=353						
HGSD	**Ruisui**	**0.61**	**202**	*e*P	**Pb**	**16 26 26.8**	**0.0**
	baz=198						
HGSD				*e*S	**Sn**	**16 26 37.9**	**+1.7**
	baz=198						
EOS1	**EOS1**	**0.64**	**40**	*e*P	**Pn**	**16 26 28.0**	**+0.5**
	baz=44						
EOS1				*e*S	**Sn**	**16 26 38.8**	**+2.2**
	baz=44						
EHY	**Hungye**	**0.64**	**210**	*e*P	**Pb**	**16 26 25.7**	**-1.6**
	baz=205						
EHY				*e*S	**Sb**	**16 26 35.1**	**-0.9**
	baz=205						
TWE	**Neicheng**	**0.65**	**359**	*e*P	**Pb**	**16 26 27.2**	**-0.2**
	baz=3.0						
TWE				*e*S	**Sb**	**16 26 36.1**	**-0.2**
	baz=3.0						
YHNB	**Yeheng**	**0.66**	**336**	P	**Pb**	**16 26 27.2**	**-0.4**
	baz=337						
YHNB				*e*S	**Sb**	**16 26 35.8**	**-0.8**
	baz=337						
NSK	**Sanguang**	**0.67**	**335**	*e*P	**Pb**	**16 26 27.4**	**-0.5**
	baz=336						
NSK				*e*S	**Sb**	**16 26 36.1**	**-0.9**
	baz=336						
SSLB	**Suanglung**	**0.72**	**247**	*e*P	**Pb**	**16 26 26.6**	**-2.0**
	baz=243						
SSLB				*e*S	**Sb**	**16 26 37.3**	**-0.8**
	baz=243						
NWLT	**Wulai**	**0.73**	**347**	*e*S	**Sb**	**16 26 36.9**	**-1.5**
	baz=349						
SMLT	**Sun Moon Lake**	**0.73**	**256**	P	**Pb**	**16 26 28.7**	**-0.2**
	baz=252						
SMLT				*e*S	**Sb**	**16 26 38.5**	**-0.1**
	baz=252						
YULB	**Yu-li**	**0.75**	**207**	*e*P	**Pb**	**16 26 27.1**	**-2.0**
	baz=204						
YULB				*e*S	**Sb**	**16 26 38.4**	**-0.7**
	baz=204						
TYC	**Yuchr**	**0.77**	**258**	*e*P	**Pn**	**16 26 29.1**	**-0.2**
	baz=254						
TYC				*e*S	**Sb**	**16 26 39.1**	**-0.3**
	baz=254						
TWF1	**Yuli**	**0.79**	**206**	*e*P	**Pn**	**16 26 27.8**	**-1.9**
	baz=202						
TWF1				*e*S	**Sn**	**16 26 40.6**	**+0.1**
	baz=202						
NTC	**Toucheng**	**0.80**	**10**	*e*P	**Pb**	**16 26 29.9**	**0.0**
	baz=12						
NTC				*e*S	**Sb**	**16 26 40.4**	**0.0**
	baz=12						
LIOB	**Emei**	**0.83**	**314**	*e*P	**Pb**	**16 26 30.9**	**+0.4**
	baz=314						
LIOB				*e*S	**Sn**	**16 26 41.7**	**0.0**
	baz=314						
NSTT	**Nanjuang**	**0.83**	**313**	*e*S	**Sb**	**16 26 40.5**	**-0.9**
	baz=312						
TWQ1	**Liyutan**	**0.87**	**289**	*e*P	**Pb**	**16 26 32.0**	**+0.9**
	baz=287						
TWQ1				*e*S	**Sn**	**16 26 44.3**	**+1.7**
	baz=287						
WJS	**Zhushan**	**0.90**	**255**	*e*S	**Sn**	**16 26 42.8**	**-0.5**
	baz=251						
NSY	**Sanyi**	**0.91**	**293**	*e*P	**Pb**	**16 26 32.6**	**+0.9**
	baz=291						
NSY				*e*S	**Sb**	**16 26 45.1**	**+1.7**
	baz=291						
TIPB	**Shuangxi**	**0.91**	**9**	*e*P	**Pn**	**16 26 30.8**	**-0.6**
	baz=11						
TIPB				*e*S	**Sn**	**16 26 43.0**	**-0.6**
	baz=11						
TWA	**Mucha**	**0.92**	**355**	*e*P	**Pb**	**16 26 31.7**	**-0.1**
	baz=357						
TWA				*e*S	**Sn**	**16 26 43.5**	**-0.2**
	baz=357						
TCU	**Taichung**	**0.92**	**275**	*e*P	**Pb**	**16 26 32.8**	**+0.9**
	baz=273						
TCU				*e*S	**Sb**	**16 26 45.8**	**+2.0**
	baz=273						
TATO	**Taipei**	**0.92**	**349**	*e*P	**Pn**	**16 26 29.8**	**-1.7**
	baz=351						
TATO				*e*S	**Sn**	**16 26 42.3**	**-1.5**
	baz=351						
FULB	**Fuli**	**0.93**	**202**	*e*P	**Pn**	**16 26 30.9**	**-0.7**
	baz=199						
FULB				*e*S	**Sb**	**16 26 44.5**	**+0.3**
	baz=199						
NMLH	**Miaoli**	**0.94**	**300**	*e*P	**Pb**	**16 26 33.3**	**+1.1**
	baz=299						
NMLH				*e*S	**Sb**	**16 26 45.7**	**+1.4**
	baz=299						
SBCB	**Hsinchu**	**0.96**	**319**	*e*P	**Pb**	**16 26 32.9**	**+0.3**
	baz=319						
SBCB				*e*S	**Sb**	**16 26 46.1**	**+1.1**
	baz=319						
ALS	**Alishan**	**0.97**	**236**	*e*P	**Pb**	**16 26 32.7**	**-0.2**
	baz=232						
ALS				*e*S	**Sn**	**16 26 44.5**	**-0.9**
	baz=232						
HSN	**Hsinchu**	**0.98**	**319**	*e*S	**Sb**	**16 26 47.4**	**+2.0**
	baz=322						
TAP1	**Taipei**	**0.98**	**352**	*e*S	**Sn**	**16 26 43.1**	**-2.1**
	baz=353						
TWB1	**Santiao Chiao**	**0.98**	**17**	*e*S	**Sb**	**16 26 46.7**	**+1.1**
	baz=19						
CHKT	**Chengkung**	**1.00**	**197**	*e*P	**Pn**	**16 26 32.3**	**-0.4**
	baz=193						
CHKT				*e*S	**Sb**	**16 26 46.4**	**+0.2**
	baz=193						
NCUH	**Zhongli**	**1.00**	**334**	*e*S	**Sb**	**16 26 46.6**	**+0.3**
	baz=334						
NCU	**National Centr**	**1.00**	**334**	*e*S	**Sb**	**16 26 46.3**	**0.0**
	baz=335						
NWF	**Wu-fen Shan**	**1.01**	**5**	*e*P	**Pb**	**16 26 33.3**	**-0.1**
	baz=7.0						
NWF				*e*S	**Sb**	**16 26 47.3**	**+0.9**
	baz=7.0						
WFSB	**Wu-fen Shan**	**1.01**	**5**	*e*P	**Pb**	**16 26 33.4**	**0.0**
	baz=7.0						
WFSB				*e*S	**Sb**	**16 26 47.2**	**+0.9**
	baz=7.0						
WCHH	**Zhanghua**	**1.02**	**271**	*e*P	**Pb**	**16 26 33.9**	**+0.3**
	baz=269						
WCHH				*e*S	**Sb**	**16 26 48.5**	**+1.8**
	baz=269						
WGK	**Gukeng**	**1.09**	**250**	*e*P	**Pb**	**16 26 35.2**	**+0.5**
	baz=247						
WGK				*e*S	**Sb**	**16 26 50.2**	**+1.6**
	baz=247						
YM10	**YM10**	**1.09**	**355**	*e*P	**Pb**	**16 26 34.8**	**-0.1**
	baz=356						
YM10				*e*S	**Sb**	**16 26 48.9**	**+0.1**
	baz=356						
YM04	**YM04**	**1.09**	**353**	*e*P	**Pb**	**16 26 34.6**	**-0.3**
	baz=354						
YM04				*e*S	**Sb**	**16 26 48.8**	**0.0**
	baz=354						
YM11	**YM11**	**1.10**	**355**	*e*P	**Pn**	**16 26 33.6**	**-0.5**
	baz=356						
YM11				*e*S	**Sn**	**16 26 48.0**	**-0.3**
	baz=356						
WDLH	**Douliu**	**1.11**	**250**	*e*P	**Pb**	**16 26 35.0**	**-0.1**
	baz=248						
WDLH				*e*S	**Sb**	**16 26 50.2**	**+1.1**
	baz=248						
YM07	**YM07**	**1.11**	**357**	*e*P	**Pn**	**16 26 33.0**	**-1.1**
	baz=359						
YM07				*e*S	**Sn**	**16 26 48.1**	**-0.3**
	baz=359						
NTST	**Danshui**	**1.11**	**349**	*e*S	**Sn**	**16 26 48.1**	**-0.4**
	baz=350						
YM03	**YM03**	**1.12**	**354**	*e*P	**Pb**	**16 26 34.9**	**-0.4**
	baz=355						
YM03				*e*S	**Sb**	**16 26 49.3**	**-0.2**
	baz=355						
YM08	**YM08**	**1.12**	**356**	*e*P	**Pn**	**16 26 33.4**	**-0.9**
	baz=357						
YM08				*e*S	**Sn**	**16 26 48.1**	**-0.6**
	baz=357						
RLNB	**Erlin**	**1.22**	**262**	*e*P	**Pb**	**16 26 37.0**	**+0.1**
	baz=260						
RLNB				*e*S	**Sb**	**16 26 53.1**	**+0.8**
	baz=260						
TPUB	**Ta-pu**	**1.22**	**232**	*e*P	**Pn**	**16 26 36.1**	**+0.4**
	baz=229						
TPUB				*e*S	**Sb**	**16 26 53.3**	**+0.8**
	baz=229						
WTP	**Ta-pu**	**1.27**	**230**	*e*P	**Pb**	**16 26 37.7**	**-0.2**
	baz=227						
WTP				*e*S	**Sb**	**16 26 55.3**	**+1.5**
	baz=227						
CHY	**Chiayi**	**1.28**	**244**	*e*P	**Pb**	**16 26 38.0**	**0.0**
	baz=241						
CHY				*e*S	**Sb**	**16 26 56.0**	**+2.0**
	baz=241						
WTCT	**Ta-ch'eng**	**1.29**	**261**	*e*P	**Pb**	**16 26 37.8**	**-0.4**
	baz=259						
WTCT				*e*S	**Sb**	**16 26 55.7**	**+1.3**
	baz=259						
TWK	**Hsinying**	**1.35**	**234**	*e*P	**Pb**	**16 26 38.7**	**-0.5**
	baz=231						
TWG	**Pinlang**	**1.36**	**204**	*e*P	**Pb**	**16 26 38.2**	**-1.1**
	baz=201						
TWG				*e*S	**Sn**	**16 26 54.9**	**+0.4**
	baz=201						
TWGBT	**Beinan**	**1.36**	**204**	*e*P	**Pn**	**16 26 36.4**	**-1.1**
	baz=201						
TWGBT				*e*S	**Sb**	**16 26 55.3**	**-1.0**
	baz=201						
CHN1	**Nanshi**	**1.37**	**230**	*e*P	**Pb**	**16 26 39.6**	**+0.1**
	baz=228						
CHN1				*e*S	**Sb**	**16 26 58.9**	**+2.2**
	baz=228						
WSF	**Szhu**	**1.40**	**253**	*e*P	**Pb**	**16 26 40.0**	**0.0**
	baz=250						
WSF				*e*S	**Sb**	**16 26 58.4**	**+1.0**
	baz=250						
SLGT	**Liugui**	**1.43**	**222**	*e*P	**Pb**	**16 26 40.5**	**0.0**
	baz=219						
SLGT				*e*S	**Sb**	**16 26 59.6**	**+1.3**
	baz=219						
CHN8	**Yiju**	**1.52**	**242**	*e*S	**Sb**	**16 27 02.3**	**+1.3**
	baz=240						
SSD	**Sandimen**	**1.63**	**216**	*e*P	**Pb**	**16 26 43.3**	**-0.6**
	baz=214						
SSD				*e*S	**Sb**	**16 27 04.0**	**0.0**
	baz=214						
MASBT	**Mashibuluo**	**1.73**	**214**	*e*P	**Pn**	**16 26 43.9**	**+1.2**
	baz=212						
MASBT				*e*S	**Sb**	**16 27 05.5**	**-1.6**
	baz=212						
IRIF	**Iriomote-Funau**	**1.90**	**81**	P	**Pn**	**16 26 46.1**	**+1.2**
IRIF				*e*S	**Sn**	**16 27 08.2**	**+0.4**
HATJ	**Hateruma jima**	**1.95**	**90**	S	**Sn**	**16 27 10.1**	**+1.0**
PHUB	**P'eng-hu**	**2.00**	**255**	*e*P	**Pn**	**16 26 45.6**	**-0.8**
	baz=252						
PHUB				*e*S	**Sn**	**16 27 11.0**	**+0.6**
	baz=252						
PNG	**Penghu**	**2.00**	**256**	*e*P	**Pn**	**16 26 47.0**	**+0.6**
	baz=254						
JKRS	**Kuro-shima**	**2.14**	**85**	*e*S	**Sn**	**16 27 15.1**	**+1.3**
VWUC	**VWUC**	**2.23**	**295**	*e*P	**Pn**	**16 26 49.3**	**-0.2**
	baz=294						
VWUC				*e*S	**Sn**	**16 27 13.6**	**-2.4**
	baz=294						
JIJ	**Ishigaki jima**	**2.27**	**82**	P	**Pn**	**16 26 50.4**	**+0.3**
JIJ				S	**Sn**	**16 27 16.8**	**-0.3**
JISG	**Ishigakijimahi**	**2.46**	**77**	P	**Pn**	**16 26 53.2**	**+0.6**
JISG				*e*S	**Sn**	**16 27 21.1**	**-0.6**
JTJ	**Tarama**	**2.82**	**78**	S	**Sn**	**16 27 30.4**	**-0.2**

NNC 12 16:37:24.4±5.0, 37°.87N×71°.63E, h0km, mb3.7, mpv3.3, 4C-6D, Error ellipse: s-maj=38.4km s-min=32.1km az=157.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**2.59**	**34**	⇓Pn	Pn	16 38 08.9	+1.1
	2.7nm,0.3s						
SFK				⇓Sn	Sb	16 38 42.7	-1.6
	41nm,0.5s						
MNAS	**Manas**	**4.66**	**8**	⇓Pn	Pn	16 38 36.6	+0.5
	4.1nm,0.5s						
MNAS				⇓Sn	Sn	16 39 31.5	+0.5
	3.2nm,0.6s						
AAK	**Ala-Archa**	**5.24**	**24**	⇓Pn	Pn	16 38 42.2	-1.9
	3.3nm,0.5s						
AAK				⇑Sn	Sn	16 39 43.7	-1.7
	3.3nm,0.8s						
KK31	**Karatay Array**	**5.30**	**351**	⇑Pn	Pn	16 38 45.6	+0.9
	0.4nm,0.3s,baz=165,slow=12,SNR=13						
KK31				⇑Sn	Sn	16 39 49.1	+2.6
	1.0nm,0.3s,baz=165,slow=17,SNR=8.2						
TKM2	**Tokmak 2**	**5.88**	**30**	⇑Pn	Pn	16 38 49.3	-3.7
	3.7nm,0.6s						
TKM2				⇓Sn	Sn	16 39 60.0	-1.3
	1.4nm,0.8s						

IDC ***12*** *17:02:00.8±2.5, 23°.70N×94°.37E, h27km±16km, mb4.1/31, mb1 4.2/32, mb1mx4.0/68, mbtmp4.2/32, ML4.3/1, MS3.6/24, Ms1 3.6/24, ms1mx3.4/63, Error ellipse: s-maj=17.6km s-min=9.8km az=50.0*

MOS ***12*** *17:02:00.3±0.9, 23°.71N×94°.34E, h41km, mb4.6/12, Error ellipse: s-maj=16.2km s-min=5.8km az=119.1*

ISCJB ***12*** *17:02:01.4±0.4, 23°.74N±0°.02×94°.34E±0°.03, h48km±3km, mb4.5/61, MS3.6/27, Error ellipse: s-maj=4.3km s-min=3.3km az=142.3*

NEIC ***12*** *17:02:02.7±0.5, 23°.71N×94°.31E, h45km±5km, mb4.7/34, Error ellipse: s-maj=5.9km s-min=3.0km az=57.0*

BJI ***12*** *17:02:02.6, 23°.71N×94°.30E, h59km, mb4.3/30, mB4.7/19, ML4.1/5, Ms4.0/19, Ms7 3.9/20*

ISC 12 17:02:03.7±0.7, 23°.78N±0°.03×94°.28E±0°.03, h52km±6km, n204, σ1f95/217, mb4.4/61, MS3.5/27, 6C-2D, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**1.09**	**344**	*e*P	**Pn**	**17 02 21.2**	**-1.5**
IMP				*e*S	**Sn**	**17 02 35.7**	**-1.1**
IMP				IAML		17 02 43.0	
	comp=N,2μm,0.5s						
IMP				IAML		17 02 45.9	
	comp=E,3μm,0.6s						
AZL	**Aizawl**	**1.46**	**269**	*e*P	**Pn**	**17 02 27.6**	**-0.1**
AZL				*e*S	**Sn**	**17 02 47.6**	**+1.8**
SAIH	**SAIHA**	**1.75**	**223**	*e*P	**Pn**	**17 02 31.9**	**+0.1**
SAIH				*e*S	**Sn**	**17 02 55.0**	**+1.9**
SAIH				IAML		17 03 04.4	
	comp=E,2μm,1.6s						
SAIH				IAML		17 03 05.4	
	comp=N,2μm,0.8s						
MOKO	**MOKOCHONG**	**2.54**	**5**	*e*P	**Pn**	**17 02 42.9**	**+0.3**
MOKO				*e*S	**Sn**	**17 03 11.9**	**-0.5**
MOKO				IAML		17 03 26.0	
	comp=E,2μm,0.7s						
MOKO				IAML		17 03 26.8	
	comp=N,959nm,0.5s						
BELO	**BELONIA**	**2.65**	**259**	*e*P	**Pn**	**17 02 44.4**	**+0.4**
AGT	**Agartala**	**2.77**	**273**	*e*P	**Pn**	**17 02 44.6**	**-1.1**
SHL	**Shillong**	**2.81**	**310**	*e*P	**Pn**	**17 02 46.7**	**+0.4**
SHL				*e*S	**Sn**	**17 03 15.1**	**-4.1**
SHL				IAML		17 03 26.7	
	comp=N,4μm,1.1s						
SHL				IAML		17 03 27.2	
	comp=E,304nm,0.0s						
SHL	**Shillong**	**2.81**	**310**	*e*Pn	**Pn**	**17 02 46.6**	**+0.2**
SHL	**Shillong**	**2.81**	**310**	*e*P	**Pn**	**17 02 46.6**	**+0.2**
JORH	**JORHAT**	**2.95**	**360**	*e*P	**Pn**	**17 02 48.7**	**+0.6**
JORH				*e*S	**Sn**	**17 03 22.0**	**-0.2**
JORH				IAML		17 03 32.9	
	comp=N,2μm,0.7s						
JORH				IAML		17 03 33.2	
	comp=E,1μm,0.7s						
TEZP	**TEZPUR**	**3.12**	**335**	*e*P	**Pn**	**17 02 48.5**	**-1.9**
TEZP				*e*S	**Sn**	**17 03 22.7**	**-3.9**
TEZP				IAML		17 03 49.6	
	comp=E,197nm,0.4s						
GUWA	**GUWAHATI**	**3.36**	**316**	*e*P	**Pn**	**17 02 52.5**	**-1.2**
ITAN	**ITANAGAR**	**3.39**	**352**	*e*P	**Pn**	**17 02 53.0**	**-1.0**
ZIRO	**ZIRO**	**3.75**	**354**	*e*P	**Pn**	**17 02 57.6**	**-1.6**
LKP	**Lekhapani**	**3.81**	**21**	*e*P	**Pn**	**17 02 59.7**	**-0.2**
TURI	**Tura**	**4.00**	**297**	*e*P	**Pn**	**17 03 02.0**	**-0.5**
DHUB	**DHUBRI**	**4.48**	**301**	*e*P	**Pn**	**17 03 07.2**	**-1.9**
CMAI	**Chiengmai2**	**5.85**	**130**	P	**Pn**	**17 03 32.4**	**+4.3**
GTK	**Tadong**	**6.22**	**306**	*e*P	**Pn**	**17 03 32.9**	**-0.2**
LSA	**Lhasa**	**6.52**	**335**	*e*Pn	**Pn**	**17 03 37.9**	**+0.4**
LSA	**Lhasa**	**6.52**	**335**	*e*P	**Pn**	**17 03 37.9**	**+0.4**
CHTO	**Chiang Mai**	**6.58**	**138**	P	**Pn**	**17 03 36.7**	**-1.3**
	comp=E,104nm,0.9s,comp=E,1.3nm						
CHTO	**Chiang Mai**	**6.58**	**138**	*e*Pn	**Pn**	**17 03 35.5**	**-2.4**
CHTO	**Chiang Mai**	**6.58**	**138**	*e*P	**Pn**	**17 03 35.5**	**-2.4**
CM31	**Chiang Mai Arr**	**6.86**	**140**	*e*Pn	**Pn**	**17 03 39.4**	**-2.3**
CM31				*e*		17 05 44.8	
CMAR	**Chiang Mai Arr**	**6.86**	**140**	Pn	**Pn**	**17 03 39.7**	**-2.0**
	comp=E,1.4nm,0.3s,baz=315,slow=14,SNR=41						
CMAR				Lg	Lg	17 05 44.8	
	comp=E,0.8nm,0.3s,baz=297,slow=31,SNR=3.4						
CMAR				LR	LR	17 07 02.4	
	comp=E,696nm,18.8s,baz=315,slow=45						
CM01	**Chiang Mai Arr**	**6.89**	**140**	*e*Pn	**Pn**	**17 03 40.1**	**-2.1**
LAMP	**Lampang**	**7.23**	**135**	P	**Pn**	**17 03 45.9**	**-1.0**
	comp=E,13nm,0.8s,comp=E,158nmcomp=E,0.1nm						
BOK	**Bokaro**	**7.69**	**272**	*e*P	**Pn**	**17 03 51.7**	**-1.4**
KMI	**Kunming**	**7.82**	**78**	P	Pn	17 04 02.5	+7.4
KMI				S	Sn	17 05 33.4	+11
KMI				smax	smax		
	comp=N,35nm,1.4s						
KMI				smax	smax		
	comp=E,26nm,1.1s						
KMI				LR	LR		
	comp=N,500nm,6.3s						
KMI				LR	LR		
	comp=E,560nm,10.4s						
KMI				LR	LR		
	comp=Z,620nm,14.4s						
PHIT	**Phitsanulok**	**8.72**	**138**	P	**Pn**	**17 04 07.0**	**-0.2**
	comp=Z,36nm,0.8s,comp=Z,0.1nm						
PBKT	**Sadao Pong**	**9.53**	**138**	P	**Pn**	**17 04 16.7**	**-1.7**
	comp=Z,22nm,0.8s						
PBKT	**Sadao Pong**	**9.53**	**138**	*e*Pn	**Pn**	**17 04 16.1**	**-2.3**
CHAI	**Chaiyaphum**	**10.68**	**136**	P	Pn	17 04 39.5	+5.5
CD2	**Chengdu**	**11.02**	**48**	P	**Pn**	**17 04 39.4**	**+0.8**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SKNT	**Sakolnakorn**	**11.34**	**125**	P	Pn	17 04 53.7	+11
GYA	**Guiyang**	**11.53**	**74**	P	**Pn**	**17 04 45.4**	**-0.4**
GYA				pP		17 04 55.8	
GYA				S	**Sn**	**17 06 55.0**	**+1.8**
GYA				sS		17 07 08.9	
GYA				SS	**SnSn**	**17 07 10.2**	**+4.7**
GYA				pmax	pmax		
	comp=Z,20nm,0.7s						
GYA				pmax	pmax		
	comp=Z,120nm,4.6s						
GYA				LR	LR		
	comp=Z,620nm,14.6s						
GYA				LR	LR		
	comp=Z,310nm,12.2s						
GYA				LR	LR		
	comp=Z,520nm,13.1s						
PBA	**Port Blair**	**12.15**	**187**	*e*Pn	Pn	17 04 52.2	-1.9
SRAK	**Srakaew**	**12.18**	**142**	P	**P**	**17 05 03.4**	**-2.2**
LZH	**Lanzhou**	**14.79**	**32**	*e*P	Pn	17 05 22.5	-7.4
LZH				pP	P	17 05 30.9	-3.8
LZH				sP		17 05 35.9	
LZH				S	**Sn**	**17 08 17.5**	**+4.9**
LZH				sS	S	17 08 33.7	+5.0
LZH				SS	SnSn	17 08 48.4	+22
LZH				pmax	pmax		
	comp=Z,29nm,1.0s						
LZH				pmax	pmax		
	comp=Z,170nm,4.2s						
LZH				LR	LR		
	comp=N,410nm,10.8s						
LZH				LR	LR		
	comp=E,650nm,10.1s						
LZH				LR	LR		
	comp=Z,780nm,10.8s						
ENH	**Enshi**	**15.01**	**61**	*e*Pn	**Pn**	**17 05 32.0**	**-0.7**
	comp=Z,35nm,0.7s						
QIZ	**Qiongzhong**	**15.24**	**105**	P	**Pn**	**17 05 34.8**	**-0.9**
QIZ				S	**Sn**	**17 08 23.0**	**-0.5**
QIZ				LR	LR		
	comp=Z,540nm,9.4s						
QIZ				LR	LR		
	comp=Z,400nm,13.7s						
QIZ				LR	LR		
	comp=Z,430nm,11.8s						
QIZ	**Qiongzhong**	**15.24**	**105**	*e*Pn	**P**	**17 05 40.8**	**+1.1**
	comp=Z,26nm,0.8s						
HYB	**Hyderabad**	**16.02**	**250**	*i* P	**P**	**17 05 49.0**	**+0.7**
HYB				*e*S	**Sn**	**17 08 43.0**	**+0.5**
HYB	**Hyderabad**	**16.02**	**250**	*e*P	**Pn**	**17 05 45.5**	**-0.1**
KRAB	**Krabi**	**16.17**	**162**	P	**P**	**17 05 51.3**	**+1.3**
	comp=Z,40nm,1.0s						
GTA	**Gaotai**	**16.27**	**15**	⇓P	**P**	**17 05 54.8**	**+3.7**
GTA				pP	pP	17 06 01.9	-0.8
GTA				sP	sP	17 06 05.0	-4.4
GTA				pmax	pmax		
	comp=Z,4.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,73nm,4.9s						
GTA				LR	LR		
	comp=Z,200nm,17.1s						
GTA				LR	LR		
	comp=Z,440nm,15.6s						
GTA				LR	LR		
	comp=Z,330nm,15.7s						
XAN	**Xi'an**	**16.38**	**48**	P	**P**	**17 05 52.3**	**+0.1**
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,130nm,6.9s						
XAN				LR	LR		
	comp=Z,440nm,15.1s						
XAN				LR	LR		
	comp=Z,400nm,12.7s						
TRTT	**Trang**	**16.68**	**161**	P	**P**	**17 05 55.5**	**-0.1**
	comp=Z,14nm,1.0s						
SMLA	**Simla**	**16.85**	**299**	*ex*	**Pn**	**17 05 50.9**	**-5.0**
DHRM	**DHARAMSHALA**	**17.96**	**302**	*ex*	**Pn**	**17 06 03.2**	**-6.7**
WHN	**Wuhan**	**19.07**	**65**	*e*P

comp=Z,30nm,0.9s
KCSI Kotacane, Aceh 20.42 170 P Pn 17 06 38.8 -0.4
TPTI 20.59 172 P Pn 17 06 40.4 -0.8
WMQ Urumqi 20.71 346 P Pn 17 06 43.9 +1.4
WMQ pP sP 17 06 56.7 -1.4
WMQ pmax pmax
comp=Z,34nm,1.3s
WMQ pmax pmax
comp=Z,210nm,4.5s
WMQ LR LR
comp=Z,620nm,20.7s
WMQ LR LR
comp=Z,480nm,15.1s
WMQ LR LR
comp=Z,480nm,24.3s
NIL Nilore 20.86 303 *e*P **P 17 06 41.2 -0.2**
comp=Z,17nm,0.9s
NIL Nilore 20.86 303 *e*P **P 17 06 41.2 -0.2**
NIL pmax pmax
comp=Z,17nm,0.9s
PSI Prapat 21.34 167 P **P 17 06 47.1 +0.5**
comp=Z,19nm,1.0s,baz=359,slow=3.5,SNR=8.3
PSI LR LR 17 16 22.8
comp=Z,140nm,18.8s,baz=276,slow=40
PSI Prapat 21.34 167 *e*P **P 17 06 46.6 0.0**
comp=Z,33nm,1.2s
PSI Prapat 21.34 167 *e*P **P 17 06 46.6 0.0**
PSI pmax pmax
comp=Z,33nm,1.2s
KSH Kashi 22.05 320 P **P 17 06 57.0 +2.9**
KSH sP sP 17 07 11.6 -1.0
KSH S **S 17 10 49.5 -4.9**
KSH sS sS 17 11 12.2 -1.8
KSH SS **SnSn 17 11 33.4 +10**
KSH pmax pmax
comp=Z,43nm,1.1s
KSH pmax pmax
comp=Z,270nm,5.0s
KSH LR LR
comp=Z,280nm,6.0s
KSH LR LR
comp=Z,280nm,4.7s
KSH LR LR
comp=Z,420nm,11.1s
HHC Hu-ho-hao-te 22.36 36 *e*P **P 17 06 57.4 0.0**
HHC PP **PnPn 17 07 27.0 +5.0**
HHC S **S 17 10 54.6 -5.4**
HHC SS **SnSn 17 11 39.1 +7.8**
HHC pmax pmax
comp=Z,7.0nm,0.7s
HHC pmax pmax
comp=Z,27nm,6.1s
HHC LR LR
comp=Z,1μm,12.1s
HHC LR LR
comp=Z,1μm,11.2s
HHC LR LR
comp=Z,1μm,11.5s
TARG Taragay, Kyrgy 22.56 326 *e*P **P 17 07 00.3 +0.3**
comp=Z,14nm,1.0s
GSI Gunungsitoli 22.57 171 *e*P **P 17 06 58.3 -1.5**
comp=Z,41nm,1.5s
NJ2 Nanjing 23.19 64 *e*P **P 17 07 04.2 -1.8**
NJ2 pmax pmax
comp=Z,14nm,0.5s
NRN Naryn 23.30 323 *e*P **P 17 07 05.7 -1.7**
comp=Z,7.3nm,1.0s
NRN Naryn 23.30 323 *e*P **P 17 07 05.7 -1.7**
NRN pmax pmax
comp=Z,7.0nm,1.0s
MNSI Mandailing Nat 23.42 167 P **P 17 07 08.2 -0.1**
comp=Z,13nm,0.9s
MYKOM Kota Tinggi 23.75 156 *e*P **P 17 07 11.4 0.0**
comp=Z,50nm,1.4s
KBL Kabul 24.44 302 *e*P **P 17 07 18.4 +0.5**
comp=Z,12nm,0.9s
KBL Kabul 24.44 302 *e*P **P 17 07 18.4 +0.5**
KBL pmax pmax
comp=Z,12nm,0.9s
MK01 Makanchi Array 24.88 340 *e*P **P 17 07 21.9 +0.5**
MK31 Makanchi Array 24.90 340 *e*P **P 17 07 21.9 +0.2**
MK31 Makanchi Array 24.90 340 *e*P **P 17 07 21.9 +0.2**
MK32 Makanchi Array 24.90 340 *e*P **P 17 07 22.6 +0.9**
MK32 *e*PcP **PcP 17 10 56.5 +0.2**
MK32 *e*ScP **ScP 17 14 34.5 +3.5**
MKAR Makanchi Array 24.90 340 P **P 17 07 22.6 +0.9**
comp=Z,2.7nm,0.4s,baz=152,slow=10,SNR=59
MKAR PcP **PcP 17 10 56.5 +0.2**
comp=Z,0.9nm,0.6s,baz=178,slow=4.5,SNR=8.7
MKAR ScP **ScP 17 14 34.5 +3.5**
comp=Z,0.7nm,0.9s,baz=176,slow=1.9,SNR=4.5
MKAR LR LR 17 17 09.7
comp=Z,18nm,21.5s,baz=154,slow=36
MKAR Makanchi Array 24.90 340 *e*P **P 17 07 22.0 +0.3**
comp=Z,50nm,0.6s
MKAR PcP **PcP 17 10 56.5 +0.2**
MKAR ScP **ScP 17 14 34.5 +3.5**
MKAR Makanchi Array 24.90 340 *e*P **P 17 07 22.0 +0.3**
MKAR 17 10 56.5
MKAR pmax pmax
comp=Z,50nm,0.6s
AAK Ala-Archa 24.95 324 P **P 17 07 24.1 +1.8**
comp=Z,4.8nm,0.7s,baz=146,slow=7.3,SNR=7.4
AAK Ala-Archa 24.95 324 *e*P **P 17 07 23.8 +1.5**
comp=Z,6.6nm,0.8s
MAKZ Makanchi 25.01 340 *e*P **P 17 07 23.2 +0.5**
comp=Z,5.7nm,0.8s
MAKZ Makanchi 25.01 340 *e*P **P 17 07 23.2 +0.5**
MAKZ pmax pmax
comp=Z,6.0nm,0.8s
PDSI Padang 25.27 165 P **P 17 07 29.2 +3.9**
comp=Z,11nm,0.9s,comp=Z,4μm
SONA0 Songino Array 25.87 19 *e*P **P 17 07 31.0 +0.4**
SONM Songino Array 25.87 19 P **P 17 07 31.0 +0.4**
comp=Z,3.0nm,0.7s,baz=197,slow=9.3,SNR=9.4
SONM Songino Array 25.87 19 P **P 17 07 31.0 +0.4**
SONA1 Songino Array 25.89 19 *e*P **P 17 07 30.7 -0.1**
ULN Ulaanbaatar 26.10 20 *e*P **P 17 07 32.5 -0.2**
comp=Z,3.3nm,0.7s
ULN Ulaanbaatar 26.10 20 *e*P **P 17 07 32.5 -0.2**
ULN pmax pmax
comp=Z,3.0nm,0.7s
ZAK Zakamensk 27.46 13 *e*P **P 17 07 45.8 +0.9**
ZAK *e* 17 11 02.0
ZAK pmax pmax
comp=Z,5.0nm,1.1s
KK31 Karatay Array 27.49 320 *e*P **P 17 07 43.9 -1.2**
KK31 Karatay Array 27.49 320 *e*P **P 17 07 43.9 -1.2**
KKAR Karatay Array 27.49 320 *e*P **P 17 07 43.6 -1.5**
KKAR Karatay Array 27.49 320 *e*P **P 17 07 43.6 -1.5**
KURBB Kurchatov Arra 29.46 339 P **P 17 08 03.1 +0.6**
comp=Z,2.0nm,0.7s,baz=153,slow=8.0,SNR=15
KURBB PcP **PcP 17 11 07.5 +0.5**
comp=Z,1.9nm,0.6s,baz=151,slow=2.1,SNR=13
KURBB ScP **ScP 17 14 47.8 +3.3**
comp=Z,1.0nm,0.6s,baz=153,slow=2.7,SNR=9.5
KURK Kurchatov 29.51 340 *e*P **P 17 08 02.9 0.0**
comp=Z,3.2nm,0.8s
KURK *e*PcP **PcP 17 11 07.5 +0.4**
KURK *e*ScP **ScP 17 14 47.8 +3.1**
KURK Kurchatov 29.51 340 *e*P **P 17 08 02.9 0.0**
KURK *e* 17 11 07.5
KURK *e* 17 14 47.8
KURK pmax pmax
comp=Z,3.0nm,0.8s
JOW Kunigami 30.83 77 P **P 17 08 13.6 -1.3**
comp=Z,3.7nm,0.2s,baz=87,slow=29,SNR=11
JOW LR LR 17 21 15.3
comp=Z,93nm,18.4s,baz=124,slow=38
JOW Kunigami 30.83 77 *e*P **P 17 08 13.8 -1.0**
comp=Z,247nm,2.0s
ZAA0 Zalesovo Array 30.96 349 *e*P **P 17 08 16.2 +0.5**
comp=Z,3.3nm,0.8s
ZALV Zalesovo Beam 30.96 349 P **P 17 08 16.3 +0.7**
comp=Z,1.6nm,0.4s,baz=186,slow=10,SNR=10.0
ZALV PcP **PcP 17 11 10.3 -0.5**
comp=Z,0.4nm,0.3s,baz=183,slow=2.9,SNR=4.0
ZALV LR LR 17 22 04.0
comp=Z,81nm,20.2s,baz=264,slow=39
ZALV Zalesovo Beam 30.96 349 *e*P **P 17 08 15.9 +0.3**
ZALV PcP **PcP 17 11 10.3 -0.5**
ZALV Zalesovo Beam 30.96 349 *e*P **P 17 08 15.9 +0.3**
ZALV 17 11 10.3
ZAA1 Zalesovo Array 30.96 349 *e*P **P 17 08 16.3 +0.6**
ZAA1 *e*PcP **PcP 17 11 10.3 -0.5**
KS15 Wonju Array Si 31.79 57 *e*P **P 17 08 23.4 +0.2**
KS01 Wonju Array Si 31.80 57 *e*P **P 17 08 24.2 +0.9**
KSRS Korea Array 31.82 57 LR LR 17 21 25.3
comp=Z,84nm,19.4s,baz=256,slow=37
NVS Novosibirsk 32.09 348 *e*P **P 17 08 26.5 +0.9**
LEM Lembang 33.09 155 LR LR 17 23 42.5
comp=Z,88nm,18.8s,baz=295,slow=40
JNU Nakatsue 33.36 65 LR LR 17 22 51.9
comp=Z,92nm,18.4s,baz=273,slow=38
GEYT Alibeck 33.87 303 LR LR 17 25 24.0
comp=Z,145nm,20.6s,baz=105,slow=41
DAV Davao City (W) 34.32 114 LR LR 17 23 22.8
comp=Z,84nm,19.5s,baz=279,slow=38
BVAR Borovoye Array 34.36 334 P **P 17 08 46.1 +0.7**
comp=Z,0.9nm,0.5s,baz=144,slow=10,SNR=7.1
BVAR PcP **PcP 17 11 20.5 +0.2**
comp=Z,0.4nm,0.3s,baz=147,slow=5.5,SNR=6.2
BVAR ScP **ScP 17 15 03.9 +2.8**
comp=Z,0.4nm,0.6s,baz=165,slow=6.0,SNR=4.7
BVAR LR LR 17 24 47.2
comp=Z,266nm,18.2s,baz=131,slow=40
USRK Ussuriysk Ar. 36.88 47 P **P 17 09 06.7 -0.5**
comp=Z,0.9nm,0.5s,baz=242,slow=11,SNR=2.8
USRK LR LR 17 26 58.0
comp=Z,73nm,18.2s,baz=233,slow=41
ABKAR Abkulak array 37.01 322 *e*P **P 17 09 08.9 +0.8**
AKTO Aktyubinsk 38.68 323 P **P 17 09 22.8 +0.5**
comp=Z,3.0nm,0.7s,baz=121,slow=8.9,SNR=14
AKTO LR LR 17 27 24.4
comp=Z,96nm,20.4s,baz=131,slow=39
MJAR Matsushiro Ar 39.73 61 LR LR 17 26 44.7
comp=Z,49nm,21.3s,baz=265,slow=37
JHJ Hachijo jima 2 40.81 66 LR LR 17 28 28.2
comp=Z,102nm,20.2s,baz=305,slow=39
SVE Sverdlovsk 41.04 332 *e*P **P 17 09 43.3 +1.5**
ARU Arti 41.70 331 *e*P **P 17 09 47.8 +0.7**
comp=Z,4.1nm,0.5s
ARU Arti 41.70 331 *d i*P **P 17 09 47.9 +0.7**
ARU 17 11 31.3
ARU pmax pmax
comp=Z,4.0nm,0.7s
ARU MLR MLR
comp=Z,167nm,17.0s
ASAJ Asahikawa 44.20 50 LR LR 17 29 45.3
comp=Z,23nm,18.3s,baz=258,slow=38
BATI Baumata 44.34 136 P **P 17 10 07.2 -1.8**
comp=Z,12nm,0.7s,baz=308,slow=9.6,SNR=4.2
SOEI Soe 44.39 135 P P 17 10 20.5 +11
SOEI Soe 44.39 135 *e*P **P 17 10 08.0 -1.5**
comp=Z,36nm,0.8s
ZEI Tsey 45.46 307 *e*P **P 17 10 18.5 +0.6**
KBZ Khabaz 46.31 308 P **P 17 10 26.9 +2.6**
comp=Z,1.0nm,0.5s,baz=104,slow=8.3,SNR=2.5
FITZ Fitzroy Crossi 51.67 141 *e*P **P 17 11 05.0 -0.5**
comp=Z,6.7nm,0.6s
TIXI Tiksi 51.74 13 *e*P **P 17 11 04.2 -1.1**
comp=Z,7.0nm,1.0s
TIXI Tiksi 51.74 13 *e*P **P 17 11 04.3 -1.1**
TIXI pmax pmax
comp=Z,7.0nm,1.0s
BR101 Keskin Array S 53.01 303 *e*P **P 17 11 15.2 -0.3**
BRTR Keskin Array B 53.01 303 P **P 17 11 15.2 -0.3**
comp=Z,0.5nm,0.6s,baz=101,slow=7.6,SNR=4.0
BRTR LR LR 17 36 33.8
comp=Z,26nm,21.7s,baz=92,slow=39
PETK Petropavlovsk- 55.46 41 LR LR 17 38 26.0
comp=Z,40nm,18.6s,baz=255,slow=39
AKASG Malin Array Be 56.28 316 P **P 17 11 38.4 -0.4**
comp=Z,2.5nm,0.5s,baz=80,slow=7.5,SNR=18
AKBB Malin Array Si 56.28 316 *e*P **P 17 11 38.0 -0.8**
comp=Z,3.3nm,0.6s
KIEV Kiev 56.29 316 *e*P **P 17 11 37.6 -1.3**
comp=Z,3.4nm,0.5s
KIEV Kiev 56.29 316 *e*P **P 17 11 37.6 -1.3**
KIEV pmax pmax
comp=Z,3.0nm,0.5s
AK11 Malin Array Si 56.31 316 *e*P **P 17 11 38.2 -0.8**
VRI Vrincioaia 57.91 310 ⇑ *i*P **P 17 11 54.2 +3.7**
PLOR Plostina 57.96 310 ⇑ *i*P **P 17 11 51.8 +0.9**
WRA Warramunga Arr 58.42 135 P **P 17 11 53.6 -0.7**
comp=Z,5.1nm,0.7s,baz=322,slow=7.4,SNR=63
WR1 Warramunga Arr 58.42 135 *e*P **P 17 11 53.6 -0.7**
comp=Z,22nm,0.4s
WRAB Tennant Creek 58.42 135 *e*P **P 17 11 53.8 -0.5**
comp=Z,21nm,0.4s
WRAB Tennant Creek 58.42 135 *e*P **P 17 11 53.8 -0.5**
WRAB pmax pmax
comp=Z,21nm,0.4s
WB2 Warramunga Arr 58.43 135 *e*P **P 17 11 53.1 -1.3**
MLR Muntele Rosu 58.47 310 P **P 17 11 56.6 +2.0**
comp=Z,1.9nm,0.8s,baz=93,slow=6.4,SNR=9.2
MLR LR LR 17 43 54.4
comp=Z,18nm,19.9s,baz=53,slow=43
MLR Muntele Rosu 58.47 310 ⇑ *i*P **P 17 11 56.2 +1.6**
MLR Muntele Rosu 58.47 310 *e*P **P 17 11 55.9 +1.4**
comp=Z,7.2nm,0.8s
MLR Muntele Rosu 58.47 310 *e*P **P 17 11 55.9 +1.4**
MLR pmax pmax
comp=Z,7.0nm,0.8s
KARP Karpathos 58.50 298 *e*P **P 17 11 54.6 -0.1**
comp=Z,9.8nm,1.0s
FIA1 FINESS Array S 58.99 329 *e*P **P 17 11 57.7 0.0**
FIA0 FINESS Array S 58.99 329 *e*P **P 17 11 58.4 +0.7**
FIA0 FINESS Array S 58.99 329 *e*P **P 17 11 58.4 +0.7**
FINES FINESS Array B 58.99 329 P **P 17 11 58.4 +0.7**
comp=Z,1.3nm,0.7s,baz=141,slow=12,SNR=4.1
FINES LR LR 17 39 58.9
comp=Z,111nm,18.7s,baz=130,slow=38
VOIR 59.10 310 ⇑ *i*P **P 17 11 59.1 +0.2**
SANT Santorini 59.74 299 *e*P **P 17 12 03.3 -0.1**
comp=Z,133nm,0.5s
LOT Lotru 60.00 310 ⇑ *i*P P 17 11 57.0 -8.1
IDI Anoyia 60.37 298 P **P 17 12 08.2 +0.5**
comp=Z,1.9nm,0.5s,baz=140,slow=16,SNR=4.6
IDI Anoyia 60.37 298 *e*P **P 17 12 07.9 +0.1**
comp=Z,28nm,1.4s
ARA0 ARCESS Array S 60.53 338 *e*P **P 17 12 09.8 +1.7**
ARCES ARCESS Array B 60.53 338 P **P 17 12 09.8 +1.7**
comp=Z,1.4nm,0.7s,baz=89,slow=9.8,SNR=3.7
ARCES ARCESS Array B 60.53 338 *e*P **P 17 12 10.5 +2.4**
ARCES ARCESS Array B 60.53 338 *e*P **P 17 12 10.5 +2.4**
AS31 Alice Springs 60.86 138 *e*P **P 17 12 10.2 -0.9**
comp=Z,7.0nm,0.6s
ASAR Alice Springs 60.86 138 P **P 17 12 10.7 -0.4**
comp=Z,4.3nm,0.6s,baz=319,slow=6.7,SNR=100
AS01 Alice Springs 60.89 138 *e*P **P 17 12 10.1 -1.2**
PMG Port Moresby 61.29 116 P **P 17 12 14.1 0.0**
comp=Z,12nm,0.8s,baz=176,slow=5.6,SNR=4.2
MDVR Moldovita 61.51 309 ⇑ *i*P **P 17 12 15.2 -0.1**
AGG Agios Georgios 61.80 303 *e*P **P 17 12 17.4 0.0**
comp=Z,73nm,1.8s
AGG Agios Georgios 61.80 303 *e*P **P 17 12 17.4 0.0**
AGG pmax pmax
comp=Z,73nm,1.8s
ITM Ithomi 62.41 301 *e*P **P 17 12 20.6 -0.8**
comp=Z,36nm,1.6s
FORT Forrest 63.18 148 *e*P **P 17 12 25.2 -1.2**
comp=Z,41nm,1.2s
SPA0 Spitsbergen Ar 64.41 347 *e*P **P 17 12 34.8 +0.8**
SPITS Spitsbergen Ar 64.41 347 P **P 17 12 34.5 +0.6**
comp=Z,1.7nm,0.6s,baz=93,slow=12,SNR=4.7
SPITS LR LR 17 46 00.9
comp=Z,90nm,19.2s,baz=95,slow=41
HFS Hagfors 65.03 327 P **P 17 12 39.0 +0.8**
comp=Z,1.3nm,0.6s,baz=115,slow=10.0,SNR=6.0
NB2 NORSAR Subarra 66.16 328 P **P 17 12 45.4 -0.2**
comp=Z,1.0nm,0.6s,baz=84,slow=6.5
NC204 NORSAR Array S 66.36 328 *e*P **P 17 12 47.2 +0.3**
GEC2 GERESS Array S 66.42 315 *e*P **P 17 12 48.3 +0.8**
comp=Z,24nm,2.0s
GEC2 GERESS Array S 66.42 315 *e*P **P 17 12 48.3 +0.8**
GEC2 pmax pmax
comp=Z,24nm,2.0s
GERES GERESS Array B 66.42 315 P **P 17 12 48.1 +0.6**
comp=Z,1.0nm,0.5s,baz=84,slow=6.3,SNR=9.1
GEA0 GERESS Array S 66.42 315 *e*P **P 17 12 47.4 -0.1**
CTA Charters Tower 66.83 126 P **P 17 12 49.4 -0.9**
comp=Z,2.8nm,0.9s,baz=251,slow=20,SNR=3.2
EKA Eskdalemuir Ar 74.85 324 P **P 17 13 38.8 +0.2**
comp=Z,0.4nm,0.4s,baz=82,slow=5.1,SNR=2.5
MATP Matopo 77.68 241 P **P 17 13 55.7 +0.4**
comp=Z,3.0nm,0.8s,baz=20,slow=4.0,SNR=5.9
MATP LR LR 17 45 32.3
comp=Z,52nm,21.9s,baz=82,slow=34
ILAR Eielson Array 80.04 22 P **P 17 14 07.7 +0.2**
comp=Z,0.2nm,0.3s,baz=302,slow=5.1,SNR=3.9
BOSA Boshof 84.42 236 P **P 17 14 31.0 0.0**
comp=Z,4.8nm,0.8s,baz=86,slow=6.5,SNR=4.9
BOSA LR LR 17 53 46.4
comp=Z,83nm,18.1s,baz=92,slow=37
TORD Torodi Ar. Bea 87.11 283 P **P 17 14 45.4 +0.9**
comp=Z,1.3nm,0.8s,baz=85,slow=5.0,SNR=7.2
TOA1 Torodi Ar. Sit 87.11 283 *e*P **P 17 14 45.4 +0.9**
KOWA Kowa 91.62 287 P **P 17 15 06.5 +0.8**
comp=Z,1.3nm,0.5s,baz=69,slow=1.5,SNR=5.0
DBIC Dimbokro 95.64 280 LR LR 18 01 08.1
comp=Z,34nm,21.8s,baz=94,slow=37
MNTX Cornudas Mount 121.71 20 *e*PKPdf **PKPdf 17 20 52.6 +0.3**
JCT Junction City 124.38 15 *e*PKPdf **PKPdf 17 20 57.2 -0.3**
TXAR Lajitas Array 124.44 19 PKP **PKPdf 17 20 57.1 -0.6**
comp=Z,0.5nm,0.6s,baz=135,slow=0.4,SNR=7.9
SDV Santo Domingo 144.34 334 PKP **PKPab 17 21 33.3 +0.1**
comp=Z,21nm,1.0s,baz=27,slow=3.2,SNR=8.5
SDV Santo Domingo 144.34 334 *e*PKPdf **PKPab 17 21 33.1 -0.1**
RUSC La Rusia 148.03 336 *e*PKPbc **PKPbc 17 21 44.0 -0.9**
ROSC El Rosal 149.46 337 PKPbc **PKPbc 17 21 49.5 +1.1**
comp=Z,12nm,0.5s,baz=86,slow=19,SNR=5.1
ROSC El Rosal 149.46 337 *e*PKPbc **PKPbc 17 21 50.0 +1.5**
PRAC Prado 150.70 337 *e*PKPbc **PKPbc 17 21 50.4 -0.7**
CPUP Villa Florida 154.18 258 PKPbc **PKPbc 17 21 56.8 -1.6**
comp=Z,1.7nm,0.6s,baz=132,slow=3.8,SNR=4.7
CPUP Villa Florida 154.18 258 *e*PKPbc **PKPbc 17 21 57.0 -1.4**
CPUP Villa Florida 154.18 258 *e*PKIKP **PKPbc 17 21 57.0 -1.4**

GUC ***12*** *17:03:05.3±0.5, 32.°62S×71.°45W, h36km±7km, ML3.6*
SJA ***12*** *17:03:06.8±0.9, 32.°66S×71.°45W, h10km±12km, ML3.2, MW3.4*

ISC 12 17:03:07.0±2.2, 32.°95S±0.°05×71.°5W±0.°1, h10km, n19, σ1°74/36, 1C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROC1	**El Roble**	**0.38**	**94**	*e*P	**Pn**	**17 03 16.4**	**-2.4**
ROC1				*e*S	**Sb**	**17 03 24.5**	**+2.4**
ROCH	**El Roble**	**0.38**	**93**	*e*P	**Pb**	**17 03 16.3**	**+0.3**
ROCH				*e*S	**Sb**	**17 03 24.7**	**+2.6**
ROCH				IAML		17 03 25.4	
comp=E,8μm,0.7s							
PEL	**Peldehue**	**0.68**	**107**	*e*P	**Pn**	**17 03 20.9**	**-1.9**
PEL				*e*S	**Sn**	**17 03 33.6**	**0.0**
PEL				IAML		17 03 34.5	
comp=E,6μm,0.2s							
CLCH	**Cerro Calan**	**0.90**	**120**	⇑ *i*P	**Pn**	**17 03 25.0**	**-0.8**
CLCH				*e*S	**Sn**	**17 03 39.9**	**+1.1**
CLCH				IAML		17 03 40.8	
comp=N,3μm,0.5s							
ANTU	**Antumapu**	**0.93**	**132**	*e*P	**Pn**	**17 03 26.2**	**-0.1**
ANTU				*e*S	**Sn**	**17 03 41.7**	**+2.1**
ANTU				IAML		17 03 44.7	
comp=E,2μm,0.4s							
FCH	**Farellones**	**1.05**	**111**	*e*P	**Pn**	**17 03 26.9**	**-1.3**
FCH				*e*S	**Sn**	**17 03 44.1**	**+1.0**
FCH				IAML		17 03 44.6	
comp=E,2μm,0.3s							
AUSP	**Uspallata**	**1.90**	**68**	*e*P	**Pn**	**17 03 39.2**	**-0.5**
AUSP				*e*S	**Sb**	**17 04 04.5**	**-1.3**
ARCO	**CERRO ARCO**	**2.13**	**88**	*i* P	**Pb**	**17 03 45.4**	**-0.5**
ARCO				IAML		17 03 56.1	
comp=Z,188nm,0.5s							
ARCO				*e*S	**Sn**	**17 04 09.8**	**+0.3**
RTLS	**Leoncito**	**2.16**	**59**	*e*P	**Pn**	**17 03 42.4**	**-1.0**
RTLS				IAML		17 03 53.4	
comp=Z,85nm,0.3s							
RTLS				*e*S	**Sn**	**17 04 10.8**	**+0.3**
AAGR	**Agrelo**	**2.22**	**94**	*e*P	**Pb**	**17 03 46.0**	**-1.3**
AAGR				*e*S	**Sg**	**17 04 18.4**	**+0.1**
ASAL	**Salagasta**	**2.24**	**82**	*e*P	**Pb**	**17 03 45.7**	**-2.0**
ASAL				*i* S	**Sg**	**17 04 17.9**	**-1.3**
AVIZ	**Vizcacheras**	**2.53**	**103**	*e*P	**Pb**	**17 03 51.6**	**-0.9**
RTCV	**Cerro Valdivia**	**2.70**	**67**	*e*P	**Pn**	**17 03 51.4**	**+0.9**
RTCV				*e*S	**Sb**	**17 04 30.4**	**+1.8**
RTLL	**Cerro Villicun**	**3.01**	**58**	*i* P	**Pn**	**17 03 55.4**	**+0.6**
RTLL				*e*S	**Sb**	**17 04 36.1**	**-1.4**
RTLL				IAML		17 04 39.3	
comp=Z,80nm,0.4s							
AMOG	**MOGNA**	**3.23**	**52**	*e*P	**Pn**	**17 03 56.1**	**-1.7**
AROD	**Rodeo**	**3.25**	**32**	*e*P	**Pn**	**17 03 57.9**	**-0.5**
AROD				*e*S	**Sn**	**17 04 35.5**	**-1.9**
MRA	**San Martin**	**4.88**	**85**	*e*P	**Pn**	**17 04 20.0**	**-0.5**
MRA				*e*S	**Sn**	**17 05 18.2**	**+1.1**
MRA				IAML		17 05 45.6	
comp=Z,19nm,0.7s							
APLL	**PUNTA DE LOS L**	**4.92**	**60**	*e*P	**Pn**	**17 04 19.8**	**-1.3**
APLL				IAML		17 04 23.4	
comp=Z,16nm,0.5s							
APLL				*e*S	**Sn**	**17 05 21.1**	**+2.9**
VCA	**Vinchina**	**5.05**	**35**	*e*P	**Pn**	**17 04 23.2**	**+0.2**
VCA				*e*S	**Sn**	**17 05 27.2**	**+5.7**
VCA				IAML		17 05 32.0	
comp=Z,48nm,0.4s							

ISCJB ***12*** *17:09:22.7±0.3, 5.°88S±0.°03×130.°89E±0.°04, h86km, mb4.6/21, Error ellipse: s-maj=5.4km s-min=3.5km az=161.0*
IDC ***12*** *17:09:25.5±4.0, 5.°74S×130.°74E, h84km±39km, mb3.9/8, mb1 4.1/11, mb1mx3.8/51, mbtmp4.4/11, Error ellipse: s-maj=30.6km s-min=15.7km az=46.0*
NEIC ***12*** *17:09:25.7±0.6, 5.°80S×130.°80E, h94km±6km, mb4.4/19, Error ellipse: s-maj=6.5km s-min=4.6km az=58.0*
DJA ***12*** *17:09:25.5±0.4, 6.°S±3.°×13.°1E±.°, h117km±12km, M4.8/4, mB5.5/1, mb4.6/4, MLv4.9/3, Mw(mB)4.9/1*

ISC 12 17:09:24.2±0.4, 5.°85S±0.°04×130.°92E±0.°05, h86km, n73, σ2°18/80, mb4.4/21, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.66**	**323**	P	**Pn**	**17 09 53.8**	**+1.9**
SAUI	**Saumlaki**	**2.15**	**170**	P	**Pn**	**17 10 02.2**	**+3.9**
SAUI	**Saumlaki**	**2.15**	**170**	*e*Pn	**Pn**	**17 10 02.7**	**+4.4**
SAUI				*e*Sn	**Sn**	**17 10 25.1**	**+0.8**
MSAI	**Masohi**	**3.18**	**321**	P	**Pn**	**17 10 13.8**	**+1.6**
MSAI	**Masohi**	**3.18**	**321**	P	**Pn**	**17 10 12.3**	**+0.1**
FAKI	**Fak Fak**	**3.20**	**25**	P	**Pn**	**17 10 13.6**	**+1.1**
FAKI	**Fak Fak**	**3.20**	**25**	*e*Pn	**Pn**	**17 10 13.5**	**+1.1**
FAKI				*e*Sn	**Sn**	**17 10 45.2**	**-4.5**
AAI	**Ambon**	**3.46**	**308**	P	**Pn**	**17 10 17.4**	**+1.4**
KMPI	**Kaimana, Papua**	**3.53**	**52**	P	**Pn**	**17 10 17.7**	**+0.8**
SANI	**Sanana**	**6.20**	**307**	P	**Pn**	**17 10 55.0**	**+1.8**
MTN	**Manton Dam**	**6.95**	**178**	*e*Pn	**Pn**	**17 11 04.6**	**+1.1**
MTN				*e*Sn	**Sn**	**17 12 21.6**	**+0.6**
TNTI	**Ternate**	**7.48**	**332**	*e*Pn	**Pn**	**17 11 11.7**	**+1.0**
SOEI	**Soe**	**7.64**	**239**	P	**Pn**	**17 11 16.3**	**+3.3**
SOEI	**Soe**	**7.64**	**239**	*e*Pn	**Pn**	**17 11 13.8**	**+0.8**
SOEI				*e*Sn	**Sn**	**17 12 35.1**	**-3.1**
BATI	**Baumata**	**8.38**	**238**	P	**Pn**	**17 11 24.2**	**+1.1**
12nm,0.3s,baz=55,slow=2.4,SNR=15							
BATI				S	**Sn**	**17 12 55.6**	**-0.5**
12nm,0.3s,baz=88,slow=24,SNR=11							
BATI	**Baumata**	**8.38**	**238**	P	**Pn**	**17 11 25.9**	**+2.8**
22nm,0.8s,0.1nm							
MRSI	**Marisa**	**10.95**	**305**	P	**Pn**	**17 11 59.0**	**+1.0**
8.6nm,0.5s							
FITZ	**Fitzroy Crossi**	**13.22**	**202**	*e*Pn	Pn	17 12 24.8	-3.8
DAV	**Davao City (W)**	**13.90**	**337**	*e*Pn	**Pn**	**17 12 36.9**	**-0.7**
DAV				*e*Sn	**Sn**	**17 15 16.0**	**+5.5**
WRAB	**Tennant Creek**	**14.39**	**167**	*e*Pn	**Pn**	**17 12 41.5**	**-2.3**
WRA	**Warramunga Arr**	**14.39**	**167**	P	**Pn**	**17 12 41.4**	**-2.5**
4.9nm,0.3s,baz=343,slow=14,SNR=56							
WRA				S	Sn	17 15 13.5	-9.0
3.2nm,0.3s,baz=346,slow=23,SNR=7.8							
WR1	**Warramunga Arr**	**14.39**	**167**	*e*Pn	**Pn**	**17 12 41.4**	**-2.5**
WR1				*e*Sn	Sn	17 15 13.5	-9.0
WB2	**Warramunga Arr**	**14.40**	**167**	*e*Pn	**Pn**	**17 12 41.6**	**-2.3**
WB2				*e*Sn	Sn	17 15 13.4	-9.1
COEN	**Coen**	**14.51**	**125**	*e*Pn	**Pn**	**17 12 46.9**	**+1.5**
COEN				*e*Sn	Sn	17 15 16.1	-9.1
PMG	**Port Moresby**	**16.48**	**103**	P	**P**	**17 13 14.4**	**+2.9**
0.5nm,0.3s,baz=308,slow=12,SNR=2.8							
PMG				S	**Sn**	**17 16 08.3**	**-4.6**
0.5nm,0.3s,baz=269,slow=22,SNR=2.9							
PMG	**Port Moresby**	**16.48**	**103**	*e*Pn	**P**	**17 13 13.5**	**+2.0**
PMG				*e*Sn	**Sn**	**17 16 08.3**	**-4.6**
MYLDM	**Lahad Datu**	**16.55**	**311**	*e*Pn	**Pn**	**17 13 12.1**	**+0.9**
52nm,1.5s							
JAGI	**Jajag, Banyuwa**	**16.84**	**260**	*e*Pn	**Pn**	**17 13 14.1**	**-0.6**
41nm,1.4s							
AS31	**Alice Springs**	**17.94**	**171**	*e*P	**P**	**17 13 28.3**	**+0.7**
7.0nm,0.6s							

AS31				*e*Sn	**Sn**	17 16 43.4	-4.8
ASAR	**Alice Springs**	**17.94**	**171**	P	**Pn**	17 13 29.4	+1.2
	3.6nm,0.3s,baz=350,slow=9.2,SNR=95						
ASAR				S	**Sn**	17 16 40.0	-8.1
	0.5nm,0.3s,baz=359,slow=30,SNR=4.6						
AS01	**Alice Springs**	**17.95**	**171**	*e*P	**P**	17 13 28.1	+0.4
MBWA	**Marble Bar**	**18.68**	**214**	*e*P	**P**	17 13 36.2	+0.5
	65nm,1.8s						
KKM	**Kota Kinabalu**	**18.84**	**309**	*e*P	**P**	17 13 37.9	+0.2
	98nm,1.6s						
SBUM	**Sibu**	**20.41**	**293**	*e*P	**P**	17 13 52.0	-2.6
	11nm,1.3s						
CTA	**Charters Tower**	**20.55**	**135**	P	Pn	17 13 59.6	+0.6
	5.3nm,0.9s,baz=303,slow=14,SNR=3.5						
CTAO	**Charters Tower**	**20.55**	**135**	*e*P	Pn	17 13 59.9	+0.9
	31nm,1.7s						
KSM	**Kuching**	**21.83**	**289**	*e*P	**P**	17 14 07.5	-2.3
	6.0nm,0.9s						
FORT	**Forrest**	**24.94**	**186**	*e*P	**P**	17 14 40.4	+0.8
	36nm,1.1s						
BBOO	**Buckleboo**	**27.25**	**171**	*e*P	**P**	17 15 02.1	+1.7
	86nm,1.8s						
STKA	**Stephens Creek**	**27.75**	**160**	P	**P**	17 15 07.5	+2.7
	3.9nm,0.3s,baz=329,slow=8.8,SNR=22						
STKA	**Stephens Creek**	**27.75**	**160**	*e*P	**P**	17 15 07.3	+2.4
	9.4nm,1.9s						
MNAI	**Manna**	**27.89**	**272**	*e*P	**P**	17 15 07.4	+1.1
	649nm,2.0s						
PATS	**Pohnpei**	**30.11**	**66**	*e*P	**P**	17 15 26.4	+0.4
	86nm,1.4s						
COCO	**West Island**	**34.22**	**257**	*e*P	**P**	17 16 00.4	-1.6
	173nm,1.2s						
CBIJ	**Chichi jima**	**34.52**	**18**	*e*P	**P**	17 16 04.1	-0.4
	154nm,1.2s						
LHMI	**Lhok Sumawe**	**35.66**	**287**	*e*P	**P**	17 16 13.1	-1.3
	317nm,1.8s						
CM01	**Chiang Mai Arr**	**39.69**	**308**	*e*P	**P**	17 16 47.4	-0.9
CM31	**Chiang Mai Arr**	**39.72**	**308**	*e*P	**P**	17 16 47.7	-0.9
CMAR	**Chiang Mai Arr**	**39.72**	**308**	P	**P**	17 16 48.0	-0.7
	1.3nm,0.7s,baz=138,slow=6.5,SNR=6.1						
CHTO	**Chiang Mai**	**39.92**	**309**	*e*P	**P**	17 16 49.6	-0.7
	9.0nm,1.4s						
ULN	**Ulaanbaatar**	**57.47**	**341**	*e*P	**P**	17 19 05.1	+0.7
	1.8nm,0.9s						
SONA0	**Songino Array**	**57.66**	**341**	*e*P	**P**	17 19 06.4	+0.6
SONM	**Songino Array**	**57.66**	**341**	P	**P**	17 19 06.4	+0.6
	0.5nm,0.4s,baz=158,slow=4.8,SNR=4.0						
SONA1	**Songino Array**	**57.67**	**341**	*e*P	**P**	17 19 06.0	+0.1
MK01	**Makanchi Array**	**67.76**	**326**	*e*P	**P**	17 20 13.1	+0.3
MK31	**Makanchi Array**	**67.78**	**326**	*e*P	**P**	17 20 13.4	+0.5
MK32	**Makanchi Array**	**67.78**	**326**	*e*P	**P**	17 20 13.4	+0.5
MKAR	**Makanchi Array**	**67.78**	**326**	P	**P**	17 20 13.4	+0.5
	4.3nm,0.6s,baz=115,slow=7.9,SNR=42						
MKAR	**Makanchi Array**	**67.78**	**326**	*e*P	**P**	17 20 13.6	+0.6
	29nm,0.8s						
MAKZ	**Makanchi**	**67.96**	**326**	*e*P	**P**	17 20 14.6	+0.6
	3.6nm,0.7s						
AAK	**Ala-Archa**	**70.27**	**319**	*e*P	**P**	17 20 28.5	-0.1
	6.9nm,1.2s						
ZAA0	**Zalesovo Array**	**70.97**	**333**	*e*P	**P**	17 20 32.0	-0.4
	2.8nm,0.8s						
ZALV	**Zalesovo Beam**	**70.97**	**333**	P	**P**	17 20 32.1	-0.2
	1.1nm,0.3s,baz=144,slow=5.2,SNR=4.9						
ZALV	**Zalesovo Beam**	**70.97**	**333**	*e*P	**P**	17 20 31.9	-0.5
ZAA1	**Zalesovo Array**	**70.97**	**333**	*e*P	**P**	17 20 32.1	-0.3
KURBB	**Kurchatov Arra**	**72.02**	**328**	P	**P**	17 20 39.1	+0.3
	2.0nm,0.6s,baz=127,slow=5.0,SNR=19						
KURK	**Kurchatov**	**72.03**	**328**	*e*P	**P**	17 20 39.0	+0.2
	3.0nm,0.9s						
KHLU	**Kahalu'u**	**76.26**	**68**	*e*P	**P**	17 21 03.7	-0.6
BVAR	**Borovoye Array**	**77.59**	**327**	P	**P**	17 21 11.0	+0.1
	1.3nm,0.7s,baz=120,slow=8.8,SNR=6.2						
TORD	**Torodi Ar. Bea**	**129.47**	**282**	PKP	**PKPdf**	17 28 24.9	+0.8
	0.3nm,0.6s,baz=71,slow=2.7,SNR=2.6						
TOA1	**Torodi Ar. Sit**	**129.47**	**282**	*e*PKPdf	**PKPdf**	17 28 24.9	+0.8
LPAZ	**La Paz**	**151.03**	**140**	PKPbc	**PKPbc**	17 29 12.1	+3.0
	0.6nm,0.4s,baz=231,slow=6.9,SNR=4.2						
LPAZ	**La Paz**	**151.03**	**140**	*e*PKPbc	**PKPbc**	17 29 11.9	+2.9

*IDC **12** 17:15:30.5±0.9, 36°.69N×73°.13E, h0km, mb3.7/11, mb1 3.8/17, mb1mx3.7/65, mbtmp3.8/17, ML2.9/6, MS3.2/1, Ms1 3.4/1, ms1mx2.5/56, Error ellipse: s-maj=20.6km s-min=18.2km az=86.0*

*ISCJB **12** 17:15:33.7±0.7, 36°.62N±0°.05×73°.0E±0°.1, h33km, mb3.7/13, MS3.1/1, Error ellipse: s-maj=12.0km s-min=7.5km az=2.5*

*NNC **12** 17:15:39.6±5.2, 37°.09N×73°.84E, h0km, mb4.1, mpv3.8, Error ellipse: s-maj=51.0km s-min=37.9km az=86.0*

ISC 12 17:15:35.3±0.9, 36°.59N±0°.09×73°.1E±0°.1, h35km, n32, σ1°56/33, mb3.7/13, 8C-5D, Northwestern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.44**	**6**	⇑Pn	**Pn**	**17 16 28.9**	**+2.3**
	83nm,0.9s						
SFK				⇑Lg	Lg	17 17 13.2	
	93nm,0.8s						
AML	**Almayashu**	**5.56**	**5**	P	Pn	17 17 04.9	+9.0
	SNR=9.8						
KZA	**Kyzart**	**5.74**	**17**	P	**Pn**	**17 16 59.2**	**+0.8**
	SNR=19						
UCH	**Uchtor**	**5.75**	**11**	P	**Pn**	**17 16 59.2**	**+0.7**
	SNR=24						
MNAS	**Manas**	**5.91**	**356**	⇓Pn	**Pn**	**17 17 00.4**	**-0.1**
	4.0nm,0.8s						
MNAS				⇑Sn	**Sn**	**17 18 08.9**	**+1.9**
	9.8nm,0.8s						
MNAS				⇓Lg	Lg	17 18 33.2	
	20nm,1.1s						
EKS2	**Erkin-Say**	**6.09**	**5**	P	**Pn**	**17 17 04.1**	**+1.2**
	SNR=10						
AAK	**Ala-Archa**	**6.14**	**10**	Pn	**Pn**	**17 17 04.6**	**+0.9**
	0.7nm,0.3s,baz=176,slow=7.5,SNR=12						
AAK				Sn	**Sn**	**17 18 17.1**	**+4.3**
	0.3nm,0.3s,baz=15,slow=22,SNR=4.7						
AAK	**Ala-Archa**	**6.14**	**10**	⇑Pn	**Pn**	**17 17 04.0**	**+0.3**
	8.3nm,0.7s						
AAK				⇓Sn	**Sn**	**17 18 12.5**	**-0.3**
	11nm,1.1s						
AAK				⇑Lg	Lg	17 18 38.9	
	16nm,1.1s						
AAK	**Ala-Archa**	**6.14**	**10**	P	**Pn**	**17 17 04.8**	**+1.1**
	SNR=5.1						
KBK	**Karagaybulak**	**6.24**	**13**	P	**Pn**	**17 17 06.2**	**+1.2**
	SNR=7.2						
TKM2	**Tokmak 2**	**6.62**	**16**	⇑Pn	**Pn**	**17 17 10.6**	**+0.3**
	5.2nm,0.8s						
TKM2				⇓Lg	Lg	17 18 49.5	
	6.4nm,0.9s						
TKM2	**Tokmak 2**	**6.62**	**16**	P	**Pn**	**17 17 10.8**	**+0.6**
	SNR=6.9						
KK31	**Karatay Array**	**6.80**	**344**	⇓Pn	**Pn**	**17 17 13.6**	**+1.1**
	9.0nm,1.1s,baz=151,slow=12,SNR=29						
KK31				⇑Sn	**Sn**	**17 18 29.6**	**+1.0**
	3.9nm,0.6s,baz=148,slow=23						
KK31				⇑Lg	Lg	17 19 05.3	
	8.4nm,0.8s,baz=153,slow=30						
MKAR	**Makanchi Array**	**12.30**	**31**	Pn	**Pn**	**17 18 26.0**	**-1.9**
	0.0nm,0.3s,baz=196,slow=12,SNR=5.5						
KURBB	**Kurchatov Arra**	**14.57**	**14**	Pn	Pn	17 18 54.9	-3.9
	0.0nm,0.3s,baz=204,slow=11,SNR=4.5						
BVAR	**Borovoye Array**	**16.55**	**354**	Pn	**Pn**	**17 19 21.2**	**-3.3**
	0.1nm,0.3s,baz=174,slow=16,SNR=4.5						
AKTO	**Aktyubinsk**	**17.58**	**327**	P	**Pn**	**17 19 34.9**	**-2.5**
	0.1nm,0.3s,baz=154,slow=8.7,SNR=5.3						
ZALV	**Zalesovo Beam**	**19.19**	**21**	P	**P**	**17 19 53.9**	**-1.9**
	0.3nm,0.3s,baz=216,slow=11,SNR=32						
ARU	**Arti**	**22.13**	**338**	P	**P**	**17 20 26.2**	**-1.4**
	1.7nm,0.6s,baz=119,slow=4.3,SNR=5.2						
SONM	**Songino Array**	**26.93**	**55**	P	**P**	**17 21 13.3**	**0.0**
	0.4nm,0.4s,baz=272,slow=6.9,SNR=3.4						
CMAR	**Chiang Mai Arr**	**29.06**	**121**	LR	LR	17 35 40.1	
	comp=Z,46nm,20.5s,baz=198,slow=42						
BRTR	**Keskin Array B**	**30.99**	**288**	P	**P**	**17 21 51.3**	**+1.8**
	0.5nm,0.8s,baz=99,slow=8.9,SNR=3.1						
FINES	**FINESS Array B**	**38.35**	**326**	P	**P**	**17 22 52.8**	**+0.3**
	2.8nm,1.0s,baz=124,slow=7.4,SNR=4.3						
ARCES	**ARCESS Array B**	**41.71**	**337**	P	**P**	**17 23 20.2**	**0.0**
	2.0nm,0.8s,baz=123,slow=7.6,SNR=5.4						
HFS	**Hagfors**	**44.03**	**322**	P	**P**	**17 23 39.4**	**+0.3**
	2.3nm,0.7s,baz=90,slow=8.9,SNR=5.4						
NB2	**NORSAR Subarra**	**45.31**	**323**	P	**P**	**17 23 49.0**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=94,slow=7.9						
TORD	**Torodi Ar. Bea**	**67.38**	**270**	P	**P**	**17 26 26.8**	**-0.5**
	comp=Z,0.4nm,0.8s,baz=43,slow=5.0,SNR=4.3						
ILAR	**Eielson Array**	**74.23**	**17**	P	**P**	**17 27 06.8**	**-1.4**
	comp=Z,0.4nm,0.6s,baz=335,slow=3.6,SNR=5.7						
WRA	**Warramunga Arr**	**80.64**	**123**	P	**P**	**17 27 45.6**	**+1.0**
	comp=Z,0.7nm,0.9s,baz=319,slow=5.0,SNR=5.4						
YKA	**Yellowknife Ar**	**81.07**	**4**	P	**P**	**17 27 46.1**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=355,slow=5.8,SNR=4.4						
SCHQ	**Schefferville**	**82.66**	**338**	P	**P**	**17 27 55.7**	**+0.9**
	comp=Z,6.3nm,0.6s,baz=261,slow=18,SNR=3.7						
ASAR	**Alice Springs**	**82.95**	**126**	P	**P**	**17 27 58.5**	**+1.7**
	comp=Z,0.3nm,0.8s,baz=308,slow=5.6,SNR=3.8						

*ISCJB **12** 17:57:02.9±0.5, 24°.58N±0°.02×122°.27E±0°.02, h73km±4km, Error ellipse: s-maj=3.9km s-min=2.9km az=172.0*

*TAP **12** 17:57:02.8, 24°.58N×122°.24E, h78km, ML2.8, C*

*JMA **12** 17:57:02.6±0.1, 24°.54N×122°.25E, h77km±2km, M1.8*

ISC 12 17:57:03.2±1.3, 24°.57N±0°.03×122°.26E±0°.02, h74km±7km, n59, σ1°00/100, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.12**	**259**	*e*P	**Pn**	**17 57 14.4**	**+0.5**
	baz=242						
EOS1				*e*S	**Sn**	**17 57 22.8**	**+1.0**
	baz=242						
TWC	**Suao**	**0.38**	**275**	P	**Pn**	**17 57 15.1**	**-0.2**
	baz=274						
TWC				S	**Sn**	**17 57 23.9**	**-0.4**
	baz=274						
ENAH	**Nanao**	**0.43**	**253**	P	**Pn**	**17 57 16.1**	**+0.3**
	baz=255						
ENAH				S	**Sn**	**17 57 25.5**	**+0.5**
	baz=255						
NTC	**Toucheng**	**0.48**	**305**	*e*P	**Pn**	**17 57 18.0**	**+1.8**
	baz=305						
NTC				*e*S	**Sn**	**17 57 25.3**	**-0.5**
	baz=305						
NANB	**Nanao**	**0.49**	**253**	P	**Pn**	**17 57 16.5**	**+0.2**
	baz=251						
NANB				*e*S	**Sn**	**17 57 26.6**	**+0.7**
	baz=251						
ENA	**Nanau**	**0.50**	**253**	P	**Pn**	**17 57 16.4**	**+0.1**
	baz=251						
ENA				S	**Sn**	**17 57 26.6**	**+0.5**
	baz=251						
TWB1	**Santiao Chiao**	**0.50**	**330**	*e*P	**Pn**	**17 57 16.1**	**-0.3**
	baz=326						
TWB1				S	**Sn**	**17 57 25.8**	**-0.3**
	baz=326						
ILA	**Ilan**	**0.51**	**292**	*e*S	**Sn**	**17 57 26.6**	**+0.4**
	baz=291						
TIPB	**Shuangxi**	**0.56**	**315**	P	**Pn**	**17 57 15.9**	**-1.1**
	baz=320						
TIPB				S	**Sn**	**17 57 25.4**	**-1.8**
	baz=320						
TWE	**Neicheng**	**0.56**	**285**	*e*P	**Pn**	**17 57 17.1**	**+0.2**
	baz=284						
TWE				*e*S	**Sn**	**17 57 26.6**	**-0.5**
	baz=284						
JYNG	**Yonagunijimaku**	**0.63**	**101**	P	**Pn**	**17 57 17.3**	**-0.4**
JYNG				S	**Sn**	**17 57 28.7**	**+0.3**
ENTT	**Nioudou**	**0.64**	**276**	P	**Pn**	**17 57 18.4**	**+0.7**
	baz=277						
ENTT				*e*S	**Sn**	**17 57 28.6**	**0.0**
	baz=277						
NWF	**Wu-fen Shan**	**0.66**	**319**	*e*P	**Pn**	**17 57 18.1**	**0.0**
	baz=311						
NWF				*e*S	**Sn**	**17 57 28.8**	**-0.3**
	baz=311						
WFSB	**Wu-fen Shan**	**0.66**	**319**	*e*P	**Pn**	**17 57 17.9**	**0.0**
	baz=311						
WFSB				*e*S	**Sn**	**17 57 28.7**	**-0.2**
	baz=311						
YOJ	**Yonaguni jima**	**0.69**	**99**	*e*P	**Pn**	**17 57 18.4**	**+0.2**
	baz=99						
YOJ				*e*S	**Sn**	**17 57 29.6**	**+0.1**
	baz=99						
YOJ	**Yonaguni jima**	**0.69**	**99**	P	**Pn**	**17 57 18.3**	**0.0**
YOJ				*e*S	**Sn**	**17 57 29.2**	**-0.2**
NWLT	**Wulai**	**0.72**	**286**	*e*S	**Sn**	**17 57 30.3**	**+0.2**
	baz=294						
NACB	**Ninganchiao**	**0.73**	**237**	*e*S	**Sn**	**17 57 29.8**	**-0.4**
	baz=229						
TWD	**Chiawan**	**0.78**	**231**	*e*P	**Pn**	**17 57 19.0**	**-0.3**
	baz=224						
TWD				*e*S	**Sn**	**17 57 31.1**	**-0.1**
	baz=224						
TATO	**Taipei**	**0.81**	**300**	*e*P	**Pn**	**17 57 18.2**	**-1.4**
	baz=299						
TATO				*e*S	**Sn**	**17 57 31.1**	**-0.7**
	baz=299						
YHNB	**Yeheng**	**0.81**	**277**	P	**Pn**	**17 57 20.3**	**+0.6**
	baz=276						
YHNB				S	**Sn**	**17 57 32.6**	**+0.6**
	baz=276						
NNSB	**Datong**	**0.81**	**260**	*e*P	**Pn**	**17 57 21.2**	**+1.4**
	baz=252						
NNSB				*e*S	**Sn**	**17 57 32.4**	**+0.2**
	baz=252						
NNSH	**Datong**	**0.81**	**260**	*e*P	**Pn**	**17 57 20.3**	**+0.5**
	baz=252						
NNSH				*e*S	**Sn**	**17 57 31.7**	**-0.4**
	baz=252						
NNS	**Nan Shan**	**0.82**	**261**	*e*P	**Pn**	**17 57 20.1**	**+0.2**
	baz=253						
NNS				*e*S	**Sn**	**17 57 32.0**	**-0.2**
	baz=253						
YM07	**YM07**	**0.84**	**316**	*e*P	**Pn**	**17 57 19.0**	**-1.0**
	baz=308						
YM07				*e*S	**Sn**	**17 57 30.7**	**-1.8**
	baz=308						
YM11	**YM11**	**0.86**	**313**	*e*P	**Pn**	**17 57 20.9**	**+0.6**
	baz=306						
YM11				*e*S	**Sn**	**17 57 32.9**	**-0.1**
	baz=306						
YM10	**YM10**	**0.86**	**312**	*e*P	**Pn**	**17 57 20.0**	**-0.3**
	baz=305						
YM10				*e*S	**Sn**	**17 57 32.3**	**-0.7**
	baz=305						
YM08	**YM08**	**0.86**	**315**	*e*S	**Sn**	**17 57 31.9**	**-1.1**
	baz=307						
YM12	**YM12**	**0.87**	**314**	*e*S	**Sn**	**17 57 31.7**	**-1.5**
	baz=306						
YM04	**YM04**	**0.88**	**311**	P	**Pn**	**17 57 20.2**	**-0.3**
	baz=305						
YM04				S	**Sn**	**17 57 32.1**	**-1.2**
	baz=305						
YM03	**YM03**	**0.89**	**313**	*e*P	**Pn**	**17 57 22.1**	**+1.4**
	baz=305						
YM03				*e*S	**Sn**	**17 57 33.4**	**-0.2**
	baz=305						
ENLB	**Shoufeng**	**0.90**	**222**	*e*P	**Pn**	**17 57 20.8**	**+0.1**
	baz=216						
ENLB				*e*S	**Sn**	**17 57 34.2**	**+0.5**
	baz=216						
TWY	**Chenhua**	**0.92**	**319**	*e*P	**Pn**	**17 57 21.2**	**+0.2**
	baz=312						
TWY				*e*S	**Sn**	**17 57 34.4**	**+0.2**
	baz=312						
TWS1	**Kuangyinshan**	**0.93**	**305**	*e*S	**Sn**	**17 57 34.1**	**-0.2**
	baz=309						
NTST	**Danshui**	**0.94**	**309**	*e*P	**Pn**	**17 57 21.0**	**-0.2**
	baz=308						
NTST				*e*S	**Sn**	**17 57 34.3**	**-0.3**
	baz=308						
NCU	**National Centr**	**1.05**	**292**	*e*S	**Sn**	**17 57 38.0**	**+1.0**
	baz=291						
NCUH	**Zhongli**	**1.06**	**292**	*e*S	**Sn**	**17 57 37.7**	**+0.7**
	baz=291						
ESL	**Shilin**	**1.07**	**225**	*e*P	**Pn**	**17 57 22.3**	**-0.5**
	baz=232						
ESL				*e*S	**Sn**	**17 57 36.1**	**-1.3**
	baz=232						
CHGB	**Renai**	**1.12**	**243**	*e*P	**Pn**	**17 57 23.8**	**+0.2**
	baz=235						
CHGB				*e*S	**Sn**	**17 57 38.6**	**-0.2**
	baz=235						
LIOB	**Emei**	**1.14**	**274**	*e*P	**Pn**	**17 57 23.5**	**-0.1**
	baz=273						
LIOB				*e*S	**Sn**	**17 57 39.5**	**+0.6**
	baz=273						
NSTT	**Nanjuang**	**1.15**	**273**	*e*S	**Sn**	**17 57 39.1**	**-0.1**
	baz=272						
EGFH	**Guangfu**	**1.18**	**220**	*e*P	**Pn**	**17 57 23.9**	**-0.3**
	baz=229						
EGFH				*e*S	**Sn**	**17 57 38.4**	**-1.5**
	baz=229						
HSN	**Hsinchu**	**1.20**	**281**	*e*S	**Sn**	**17 57 37.5**	**-2.7**
	baz=282						
VWDT	**VWDT**	**1.31**	**232**	*e*S	**Sn**	**17 57 42.3**	**-0.5**
	baz=225						
HGSD	**Ruisui**	**1.32**	**216**	*e*S	**Sn**	**17 57 42.4**	**-0.7**
	baz=208						
IRIF	**Iriomote-Funau**	**1.36**	**100**	P	**Pn**	**17 57 26.3**	**-0.1**
IRIF				*e*S	**Sn**	**17 57 43.7**	**-0.2**
EHY	**Hungye**	**1.37**	**219**	*e*S	**Sn**	**17 57 41.7**	**-2.4**
	baz=227						
SMLT	**Sun Moon Lake**	**1.42**	**241**	P	**Pn**	**17 57 29.0**	**+1.6**
	baz=233						
SMLT				*e*S	**Sn**	**17 57 47.9**	**+2.4**
	baz=233						
TYC	**Yuchr**	**1.45**	**243**	*e*S	**Sn**	**17 57 48.1**	**+2.2**
	baz=246						
YULB	**Yu-li**	**1.47**	**217**	*e*P	**Pn**	**17 57 26.5**	**-1.5**
	baz=224						
YULB				*e*S	**Sn**	**17 57 44.1**	**-2.4**
	baz=224						
TWF1	**Yuli**	**1.50**	**216**	*e*P	**Pn**	**17 57 27.1**	**-1.3**
	baz=223						
TWF1				*e*S	**Sn**	**17 57 45.4**	**-1.9**
	baz=223						
WJS	**Zhushan**	**1.59**	**242**	*e*S	**Sn**	**17 57 51.2**	**+1.9**
	baz=252						
JKRS	**Kuro-shima**	**1.63**	**102**	P	**Pn**	**17 57 30.0**	**+0.1**
JKRS				*e*S	**Sn**	**17 57 50.2**	**0.0**
JIJ	**Ishigaki jima**	**1.73**	**97**	P	**Pn**	**17 57 31.3**	**+0.1**
JIJ				S	**Sn**	**17 57 52.3**	**-0.2**
WGK	**Gukeng**	**1.79**	**241**	*e*S	**Sn**	**17 57 56.6**	**+2.6**
	baz=250						
WDLH	**Douliu**	**1.81**	**241**	*e*S	**Sn**	**17 57 57.1**	**+2.7**
	baz=251						
JISG	**Ishigakijimahi**	**1.86**	**89**	P	**Pn**	**17 57 33.2**	**+0.1**
JISG				*e*S	**Sn**	**17 57 56.2**	**+0.4**
RLNB	**Erlin**	**1.87**	**249**	*e*S	**Sn**	**17 57 55.5**	**-0.3**
	baz=257						
JTJ	**Tarama**	**2.22**	**88**	P	**Pn**	**17 57 38.7**	**+0.8**
JTJ				S	**Sn**	**17 58 05.2**	**+0.8**

*ISK **12** 17:57:41.9, 38°.66N×43°.20E, h5km±1km, ML2.0/4*

*DDA **12** 17:57:43.0, 38°.70N×43°.27E, h7km, Ml2.5*

*CSEM **12** 17:57:42.8±0.3, 38°.70N×43°.22E, h5km, ML2.5, Error ellipse: s-maj=6.4km s-min=5.8km az=81.0*

ISC 12 17:57:42.3±1.0, 38°.70N±0°.03×43°.26E±0°.03, h18km±2km, n18, σ0°74/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.15**	**135**	PG	**Pg**	**17 57 46.9**	**+0.2**
VANB				SG	**Sg**	**17 57 50.5**	**+0.9**
VANB	**Van**	**0.15**	**135**	*e*Pg	**Pg**	**17 57 46.9**	**+0.2**
VANB				*e*Sg	**Sg**	**17 57 50.5**	**+0.9**
TVAN	**Van**	**0.21**	**146**	*i* P	**Pg**	**17 57 46.8**	**-0.7**
TVAN				*i* S	**Sb**	**17 57 51.0**	**+0.5**
TVAN	**Van**	**0.21**	**146**	P	**Pg**	**17 57 46.8**	**-0.7**
TVAN				S	**Sb**	**17 57 51.0**	**+0.5**
VMUR	**Van-Muradiye**	**0.38**	**40**	*i* P	**Pb**	**17 57 50.0**	**-0.6**
VMUR				*i* S	**Sb**	**17 57 57.2**	**+0.9**
VMUR	**Van-Muradiye**	**0.38**	**40**	P	**Pb**	**17 57 50.0**	**-0.6**
VMUR				S	**Sb**	**17 57 57.2**	**+0.9**
GEVA	**Gevas**	**0.42**	**202**	*i* P	**Pg**	**17 57 50.6**	**-0.3**
GEVA				*i* S	**Sb**	**17 57 58.6**	**+1.3**
GEVA	**Gevas**	**0.42**	**202**	P	**Pg**	**17 57 50.6**	**-0.3**
GEVA				S	**Sb**	**17 57 58.6**	**+1.3**
ADCV	**BITLIS_Adilcev**	**0.43**	**285**	*i* P	**Pb**	**17 57 51.7**	**+0.2**
ADCV				*i* S	**Sn**	**17 58 00.0**	**-1.2**
ADCV	**BITLIS_Adilcev**	**0.43**	**285**	P	**Pb**	**17 57 51.7**	**+0.2**
ADCV				S	**Sn**	**17 58 00.0**	**-1.2**
CLDR	**Caldiran**	**0.68**	**49**	PG	**Pn**	**17 57 56.9**	**-0.3**
CLDR	**Caldiran**	**0.68**	**49**	*e*Pg	**Pn**	**17 57 56.9**	**-0.3**
TUTA	**Tutak**	**0.78**	**334**	*i* P	**Pn**	**17 57 58.3**	**-0.3**
TUTA				*i* S	**Sn**	**17 58 10.6**	**+0.7**
TUTA	**Tutak**	**0.78**	**334**	P	**Pn**	**17 57 58.3**	**-0.3**
TUTA				S	**Sn**	**17 58 10.6**	**+0.7**
AGRB	**Hanur-Agry**	**0.90**	**347**	PG	**Pn**	**17 57 59.7**	**-0.5**
AGRB	**Hanur-Agry**	**0.90**	**347**	*e*Pg	**Pn**	**17 57 59.7**	**-0.5**
GURO	**Guroymak-BITLI**	**0.97**	**262**	PG	**Pb**	**17 58 00.1**	**-0.5**
GURO	**Guroymak-BITLI**	**0.97**	**262**	*e*Pg	**Pb**	**17 58 00.1**	**-0.5**

*ISCJB **12** 18:00:00.8±0.5, 2°.81N±0°.05×123°.15E±0°.09, h450km, mb3.6/10, Error ellipse: s-maj=12.8km s-min=6.4km az=8.5*

*IDC **12** 18:00:03.7±1.4, 2°.60N×122°.90E, h488km±17km, mb3.2/10, mb1 3.4/12, mb1mx3.1/59, mbtmp4.3/12, Error ellipse: s-maj=21.0km s-min=7.9km az=77.0*

*DJA **12** 18:00:05.9±0.7, 3°.N±9°.×12°.3E±°.1, h443km±5km, M4.2/12, mb4.2/7, mB4.5/5, MLv4.5/12, Mw(mB)3.7/5*

ISC 12 18:00:01.2±0.6, 2°.71N±0°.07×123°.1E±0°.1, h450km, n23, σ2°36/32, mb3.6/10, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**2.48**	**207**	P	**P**	**18 01 08.5**	**+3.9**
MRSI				S	**S**	**18 01 57.2**	**+1.2**
LUWI	**Luwuk**	**3.73**	**184**	P	**P**	**18 01 16.6**	**+2.5**
APSI	**Ampana**	**3.86**	**201**	P	**P**	**18 01 17.9**	**+2.7**
APSI				S	**S**	**18 02 16.1**	**+0.9**
MPSI	**Mapaga**	**3.94**	**233**	P	**P**	**18 01 17.7**	**+1.9**
PCI	**Palu**	**4.82**	**222**	P	**P**	**18 01 24.5**	**+0.6**
LBMI	**Labuha**	**5.55**	**127**	P	**P**	**18 01 35.7**	**+4.7**
	21nm,0.5s,1.1nm					

h25km≏17km,**n339**,σ1$**00**/344,**mb4.4**/150,**MS3.2**/12,**10C**,
Pribilof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC
SPIA	**Saint Paul Isl**	**1.24**	**304**	*e*Pn	**Pn**	**18 17 22.6**	**-2.3**
SPIA				*e*Sn	**Sn**	**18 17 39.8**	**-1.0**
MCIR	**Makushin Cirqu**	**2.70**	**161**	*e*Pn	**Pn**	**18 17 44.2**	**-0.9**
LVA	**Lava Point**	**2.70**	**150**	P	**Pn**	**18 17 44.1**	**-1.0**
MTBL	**Makushin Table**	**2.72**	**159**	*e*Pn	**Pn**	**18 17 44.1**	**-1.3**
MSW	**Makushin Switc**	**2.75**	**160**	*e*Pn	**Pn**	**18 17 44.3**	**-1.6**
AKMO	**Akutan Morgan**	**2.77**	**150**	*e*Pn	**Pn**	**18 17 44.8**	**-1.3**
ZRO	**Akutan Zero**	**2.78**	**150**	*e*Pn	**Pn**	**18 17 45.1**	**-1.0**
AKUT	**Akutan**	**2.80**	**147**	*e*Pn	**Pn**	**18 17 45.1**	**-1.4**
AKSA	**Akutan Strait**	**2.82**	**146**	*e*Pn	**Pn**	**18 17 46.1**	**-0.7**
WECS	**Westdahl Cape**	**2.84**	**133**	P	**Pn**	**18 17 45.9**	**-1.1**
UNV	**Unalaska Valle**	**2.87**	**158**	*e*Pn	**Pn**	**18 17 45.7**	**-1.7**
WESP	**Westdahl Peak**	**2.89**	**133**	*e*Pn	**Pn**	**18 17 46.5**	**-1.2**
OKID	**Okmok Mt. Idak**	**3.06**	**174**	P	**Pn**	**18 17 48.7**	**-1.3**
OKER	**Okmok East Rim**	**3.07**	**177**	*e*Pn	**Pn**	**18 17 49.0**	**-1.2**
FALS	**False Pass**	**3.25**	**119**	*e*Pn	**Pn**	**18 17 52.9**	**+0.3**
NIKH	**Nikolski High**	**3.56**	**185**	*e*Pn	**Pn**	**18 17 56.0**	**-0.9**
NIKH				*e*Sn	**Sn**	**18 18 35.8**	**-2.2**
DT1	**Dutton Round H**	**3.70**	**110**	*e*Pn	**Pn**	**18 17 57.2**	**-1.7**
DRIA	**Deer Island**	**3.77**	**112**	P	**Pn**	**18 17 58.1**	**-1.7**
SDPT	**Sand Point**	**4.58**	**101**	*e*Pn	**Pn**	**18 18 09.6**	**-1.2**
VNWF	**Veniaminof 8**	**4.91**	**91**	P	**Pn**	**18 18 14.9**	**-0.6**
VNSS	**Veniaminof 8**	**4.96**	**90**	P	**Pn**	**18 18 16.0**	**-0.2**
VNHG	**Veniaminof 1**	**5.12**	**89**	P	**Pn**	**18 18 17.6**	**-0.7**
KOKL	**Mount Kliuchef**	**5.41**	**222**	*e*Pn	**Pn**	**18 18 21.5**	**-0.8**
KOFP	**Korovin Flat P**	**5.41**	**221**	*e*Pn	**Pn**	**18 18 21.9**	**-0.4**
ATKA	**Atka Island**	**5.50**	**221**	*e*Pn	**Pn**	**18 18 23.3**	**-0.3**
CHGN	**Chignik**	**5.52**	**88**	*e*Pn	**Pn**	**18 18 22.9**	**-0.9**
AZAC	**Aniakchak**	**5.59**	**82**	P	**Pn**	**18 18 25.0**	**+0.1**
ANNW	**Aniakchak Nort**	**5.60**	**81**	P	**Pn**	**18 18 24.7**	**-0.2**
ANNE	**Aniakchak Nort**	**5.69**	**82**	P	**Pn**	**18 18 25.4**	**-0.7**
ADAG	**Mount Adagdak**	**6.63**	**230**	*e*Pn	**Pn**	**18 18 37.1**	**-1.9**
KICM	**Kanaga Island**	**6.93**	**232**	*e*Pn	**Pn**	**18 18 40.8**	**-2.3**
KELA	**Mount Kelaz**	**7.07**	**69**	P	**Pn**	**18 18 44.0**	**-1.1**
CAHL	**Cahill**	**7.24**	**72**	P	**Pn**	**18 18 46.8**	**-0.7**
KAKN	**Katmai Knife C**	**7.40**	**70**	P	**Pn**	**18 18 48.9**	**-0.8**
KAHC	**Katmai Hardscr**	**7.49**	**68**	P	**Pn**	**18 18 50.1**	**-0.8**
KARR	**Katmai Rainbow**	**7.62**	**69**	P	**Pn**	**18 18 52.0**	**-0.6**
SVW2	**Sparrevohn**	**8.06**	**50**	*e*Pn	**Pn**	**18 18 57.4**	**-1.3**
ANM	**Nome**	**8.21**	**9**	*e*Pn	**Pn**	**18 19 01.7**	**+1.0**
ANM	**Nome**	**8.21**	**9**	*e*P	**Pn**	**18 19 01.7**	**+1.0**
OHAK	**Old Harbor**	**8.29**	**79**	*e*Pn	**Pn**	**18 19 00.8**	**-1.0**
KDAK	**Kodiak Island**	**8.67**	**75**	Pn	**Pn**	**18 19 07.8**	**+0.8**
	1.9nm,0.3s,baz=286,slow=7.0,SNR=11						
KDAK				Sn	**Sn**	**18 20 45.3**	**+1.5**
	0.5nm,0.3s,baz=238,slow=16,SNR=2.1						
KDAK				Lg	Lg	18 21 41.8	
	0.4nm,0.3s,baz=255,slow=20,SNR=2.6						
KDAK				LR	LR	18 22 37.0	
	comp=Z,179nm,20.5s,baz=268,slow=39						
KDAK	**Kodiak Island**	**8.67**	**75**	*e*Pn	**Pn**	**18 19 06.4**	**-0.5**
KDAK				*e*Sn	**Sn**	**18 20 45.2**	**+1.5**
KDAK				Lg	Lg	18 21 41.8	
KDAK	**Kodiak Island**	**8.67**	**75**	*ce*P	**Pn**	**18 19 08.2**	**+1.3**
RSO	**Redoubt South**	**9.07**	**58**	*e*Pn	**Pn**	**18 19 12.5**	**-0.1**
CNPM	**China Poot**	**9.57**	**65**	*e*Pn	**Pn**	**18 19 20.1**	**+0.8**
SPU	**Mount Spurr**	**9.64**	**54**	*e*Pn	**Pn**	**18 19 20.3**	**-0.1**
BRLK	**Bradley Lake**	**9.79**	**63**	*e*Pn	**Pn**	**18 19 22.2**	**-0.1**
PPLA	**Purkeypile**	**10.35**	**45**	*e*Pn	**Pn**	**18 19 29.5**	**-0.7**
CAST	**Castle Rocks**	**10.67**	**43**	*e*Pn	**Pn**	**18 19 33.0**	**-1.3**
GHO	**Glory Hole Cre**	**11.26**	**54**	*e*Pn	**Pn**	**18 19 41.4**	**-1.1**
TRF	**Thorofare Moun**	**11.38**	**45**	*e*Pn	**Pn**	**18 19 44.5**	**+0.3**
BPAW	**Bear Paw Mtn.**	**11.46**	**41**	*e*Pn	**Pn**	**18 19 43.7**	**-1.4**
SML	**Sawmill**	**11.54**	**54**	*e*Pn	**Pn**	**18 19 45.1**	**-1.1**
SML	**Sawmill**	**11.54**	**54**	*e*P	**Pn**	**18 19 45.1**	**-1.1**
RND	**Reindeer**	**11.93**	**47**	*e*Pn	**Pn**	**18 19 48.3**	**-3.3**
RND	**Reindeer**	**11.93**	**47**	*e*P	**Pn**	**18 19 48.3**	**-3.3**
SCM	**Sheep Creek Mo**	**12.00**	**55**	*e*Pn	**Pn**	**18 19 52.0**	**-0.6**
MID	**Middleton Isla**	**12.03**	**67**	*e*Pn	**Pn**	**18 19 51.9**	**-1.0**
MID	**Middleton Isla**	**12.03**	**67**	*e*P	**Pn**	**18 19 51.9**	**-1.0**
MCK	**McKinley**	**12.04**	**45**	*e*Pn	**Pn**	**18 19 53.1**	**-0.1**
MCK	**McKinley**	**12.04**	**45**	*e*P	**Pn**	**18 19 53.1**	**-0.1**
MLY	**Manley**	**12.08**	**38**	*e*Pn	**Pn**	**18 19 52.2**	**-1.5**
DHY	**Denali Highway**	**12.40**	**49**	*e*Pn	**Pn**	**18 19 56.5**	**-1.6**
DIV	**Divide**	**12.55**	**59**	*e*Pn	**Pn**	**18 19 59.6**	**-0.5**
KLU	**Klutina**	**12.56**	**57**	*e*Pn	**Pn**	**18 19 59.0**	**-1.2**
WRH	**Wood River Hil**	**12.73**	**43**	*e*Pn	**Pn**	**18 20 01.8**	**-0.7**
CCB	**Clear Creek Bu**	**12.92**	**43**	*e*Pn	**Pn**	**18 20 04.2**	**-0.9**
MDM	**Murphy Dome**	**12.92**	**41**	*e*Pn	**Pn**	**18 20 03.6**	**-1.5**
RAGM	**Ragged Mountai**	**12.96**	**63**	*e*Pn	**Pn**	**18 20 06.0**	**+0.4**
COLA	**College**	**13.02**	**42**	*e*Pn	**Pn**	**18 20 08.0**	**+1.7**
COLA	**College**	**13.02**	**42**	*e*P	**Pn**	**18 20 08.0**	**+1.7**
BMRM	**Bremner River**	**13.08**	**60**	*e*Pn	**Pn**	**18 20 06.8**	**-0.5**
HDA	**Harding Lake**	**13.13**	**44**	*e*Pn	**Pn**	**18 20 06.8**	**-1.1**
HARP	**HAARP**	**13.14**	**54**	*e*Pn	**Pn**	**18 20 06.6**	**-1.5**
PAX	**Paxson**	**13.18**	**51**	*e*Pn	**Pn**	**18 20 08.4**	**-0.2**
PAX	**Paxson**	**13.18**	**51**	*e*P	**Pn**	**18 20 08.4**	**-0.2**
ILAR	**Eielson Array**	**13.33**	**43**	Pn	**Pn**	**18 20 10.1**	**-0.5**
	0.1nm,0.3s,baz=241,slow=13,SNR=36						
ILAR				Lg	Lg	18 24 09.4	
	0.0nm,0.3s,baz=240,slow=25,SNR=6.1						
ILB	**Eielson Array**	**13.33**	**43**	*e*Pn	**Pn**	**18 20 10.7**	**+0.1**
IL1	**Eielson Array**	**13.33**	**43**	*e*Pn	**Pn**	**18 20 08.9**	**-1.7**
COLD	**Coldfoot**	**13.67**	**31**	*e*Pn	**Pn**	**18 20 14.8**	**-0.4**
RIDG	**Independ'e Rid**	**13.71**	**48**	*e*Pn	**Pn**	**18 20 15.5**	**-0.3**
CRQM	**Cirque**	**13.76**	**62**	*e*Pn	**Pn**	**18 20 15.2**	**-1.4**
TGL	**Tana Glacier**	**13.91**	**62**	*e*Pn	**Pn**	**18 20 18.0**	**-0.7**
DOT	**Dot Lake**	**14.00**	**49**	*e*Pn	**Pn**	**18 20 20.2**	**+0.4**
SCRK	**Sand Creek**	**14.14**	**48**	*e*Pn	**Pn**	**18 20 22.6**	**+0.7**
FYU	**Fort Yukon**	**14.82**	**38**	*e*Pn	**Pn**	**18 20 30.2**	**-0.7**
TOLK	**Toolik Lake Re**	**14.83**	**27**	*e*Pn	**Pn**	**18 20 29.5**	**-1.6**
EGAK	**Eagle**	**15.57**	**47**	*e*Pn	**Pn**	**18 20 41.1**	**+0.2**
	8.6nm,1.0s						
DAWY	**Dawson**	**16.10**	**50**	*e*Pn	**Pn**	**18 20 47.5**	**-0.2**
	11nm,0.8s						
BILL	**Bilibino**	**16.35**	**325**	*i* P	**Pn**	**18 20 50.4**	**-0.4**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,169nm,15.0s						
BESE	**Bessie Mountai**	**17.99**	**69**	*e*Pn	**P**	**18 21 13.0**	**+1.3**
	comp=Z,12nm,1.0s						
CRAG	**Craig**	**19.61**	**78**	*e*P	**P**	**18 21 30.2**	**+0.8**
	comp=Z,74nm,1.8s						
INK	**Inuvik**	**19.64**	**39**	P	**P**	**18 21 30.2**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=235,slow=11,SNR=6.0						
INK	**Inuvik**	**19.64**	**39**	*e*P	**P**	**18 21 30.1**	**+0.4**
	comp=Z,8.9nm,0.6s						
INK	**Inuvik**	**19.64**	**39**	*e*P	**P**	**18 21 30.1**	**+0.4**
INK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
PEA1	**Petropavlovsk-**	**19.73**	**274**	*e*P	**P**	**18 21 31.4**	**+0.6**
PEA0B	**Petropavlovsk-**	**19.74**	**274**	*e*P	**P**	**18 21 31.0**	**+0.1**
	comp=Z,54nm,1.4s						
PETK	**Petropavlovsk-**	**19.74**	**274**	P	**P**	**18 21 31.4**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=86,slow=9.1,SNR=5.1						
PETK				LR	LR	18 28 43.2	
	comp=Z,55nm,21.0s,baz=89,slow=36						
PETK	**Petropavlovsk-**	**19.74**	**274**	*e*P	**P**	**18 21 31.8**	**+1.0**
PETK	**Petropavlovsk-**	**19.74**	**274**	*e*P	**P**	**18 21 31.8**	**+1.0**
WRAK	**Wrangell Islan**	**19.75**	**75**	*e*P	**P**	**18 21 31.1**	**+0.1**
	comp=Z,86nm,1.8s						
DLBC	**Dease Lake**	**20.51**	**69**	P	**P**	**18 21 39.2**	**-0.1**
	comp=Z,1.7nm,0.6s,baz=39,slow=4.5,SNR=4.6						
DLBC	**Dease Lake**	**20.51**	**69**	*e*P	**P**	**18 21 39.6**	**+0.2**
	comp=Z,44nm,1.8s						
SEY	**Seymchan**	**20.54**	**304**	P	**P**	**18 21 39.5**	**0.0**
	comp=Z,3.1nm,0.7s,baz=93,slow=9.8,SNR=14						
SEY	**Seymchan**	**20.54**	**304**	*ce*P	Pn	18 21 43.3	+1.5
MA2	**Magadan**	**21.61**	**295**	P	**P**	**18 21 50.1**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=71,slow=10,SNR=2.6						
MA2	**Magadan**	**21.61**	**295**	*e*P	**P**	**18 21 51.8**	**+0.8**
	comp=Z,4.4nm,0.8s						
MA2	**Magadan**	**21.61**	**295**	*e*P	**P**	**18 21 52.4**	**+1.4**
MA2				pmax	pmax		
	comp=Z,6.0nm,1.0s						
YKA	**Yellowknife Ar**	**27.21**	**55**	P	**P**	**18 22 44.9**	**+0.4**
	comp=Z,2.7nm,0.9s,baz=276,slow=9.4,SNR=7.3						
YKA				LR	LR	18 34 36.3	
	comp=Z,14nm,19.3s,baz=285,slow=39						
YKA	**Yellowknife Ar**	**27.21**	**55**	P	**P**	**18 22 45.0**	**+0.4**
LLLB	**Lillooet**	**27.78**	**82**	*e*P	**P**	**18 22 49.6**	**-0.3**
	comp=Z,6.3nm,1.0s						
LON	**Longmire**	**29.95**	**89**	*e*P	**P**	**18 23 10.0**	**+0.8**
	comp=Z,3.0nm,0.9s						
LON	**Longmire**	**29.95**	**89**	*e*P	**P**	**18 23 10.0**	**+0.8**
LON				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LTY	**Liberty**	**30.28**	**87**	*e*P	**P**	**18 23 12.8**	**+0.6**
	comp=Z,5.5nm,1.2s						
B08A	**Colville Reser**	**30.39**	**84**	*e*P	**P**	**18 23 13.4**	**+0.4**
	comp=Z,7.1nm,0.8s						
H04A	**Detroit Lake**	**31.00**	**93**	*e*P	**P**	**18 23 19.4**	**+0.9**
	comp=Z,8.9nm,0.8s						
D08A	**Wollman Farm,**	**31.37**	**86**	*e*P	**P**	**18 23 19.9**	**-1.7**
	comp=Z,4.4nm,0.9s						
HAWA	**Hanford**	**31.42**	**88**	*e*P	**P**	**18 23 22.6**	**+0.4**
	comp=Z,8.0nm,0.9s						
KBO	**Bosley Butte**	**31.49**	**98**	*e*P	**P**	**18 23 24.8**	**+1.9**
	comp=Z,64nm,1.5s						
NEW	**Newport**	**31.66**	**83**	*e*P	**P**	**18 23 24.5**	**+0.2**
	comp=Z,6.9nm,0.8s						
NEW	**Newport**	**31.66**	**83**	*e*P	**P**	**18 23 24.5**	**+0.2**
NEW				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HUMO	**Hull Mountain**	**31.92**	**96**	*e*P	**P**	**18 23 27.9**	**+1.2**
	comp=Z,4.7nm,0.8s						
E09A	**Wood Farm, Sta**	**32.12**	**86**	*e*P	**P**	**18 23 28.6**	**+0.4**
	comp=Z,8.4nm,0.8s						
PINE	**Pine Mountain**	**32.26**	**93**	*e*P	**P**	**18 23 30.8**	**+1.0**
	comp=Z,4.8nm,0.8s						
RES	**Resolute Bay**	**32.40**	**28**	*e*P	**P**	**18 23 29.3**	**-1.1**
	comp=Z,14nm,1.7s						
RES	**Resolute Bay**	**32.40**	**28**	*e*P	**P**	**18 23 29.3**	**-1.1**
RES				pmax	pmax		
	comp=Z,14nm,1.7s						
G08A	**Pilot Rock**	**32.41**	**89**	*e*P	**P**	**18 23 30.8**	**-0.2**
	comp=Z,8.3nm,1.4s						
YBH	**Yreka Blue Hor**	**32.65**	**97**	P	**P**	**18 23 34.7**	**+1.7**
	comp=Z,2.5nm,0.8s,baz=307,slow=5.1,SNR=7.7						
YBH				LR	LR	18 34 21.8	
	comp=Z,46nm,19.1s,baz=339,slow=32						
YBH	**Yreka Blue Hor**	**32.65**	**97**	*e*P	**P**	**18 23 34.9**	**+1.9**
	comp=Z,5.3nm,0.9s						
YBH	**Yreka Blue Hor**	**32.65**	**97**	*e*P	**P**	**18 23 34.9**	**+1.9**
YBH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
F10A	**Beach Ranch, E**	**32.95**	**87**	*e*P	**P**	**18 23 35.7**	**0.0**
	comp=Z,5.9nm,0.9s						
ASAJ	**Asahikawa**	**32.96**	**269**	LR	LR	18 35 19.8	
	comp=Z,39nm,21.6s,baz=4.0,slow=34						
WALA	**Waterton Lakes**	**32.97**	**80**	*e*P	**P**	**18 23 35.0**	**-0.9**
	comp=Z,4.1nm,0.8s						
K05A	**Summer Lake**	**32.98**	**94**	*e*P	**P**	**18 23 37.8**	**+1.7**
	comp=Z,14nm,0.8s						
KMRM	**Mail Ridge**	**33.14**	**100**	*e*P	**P**	**18 23 38.3**	**+0.9**
	comp=Z,87nm,1.8s						
JTMT	**Jette**	**33.52**	**82**	*e*P	**P**	**18 23 40.4**	**-0.3**
	comp=Z,8.2nm,0.8s						
WDC	**Whiskeytown Da**	**33.53**	**99**	*e*P	**P**	**18 23 41.5**	**+0.8**
	comp=Z,4.9nm,0.8s						
WDC	**Whiskeytown Da**	**33.53**	**99**	*e*P	**P**	**18 23 41.5**	**+0.8**
WDC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BMO	**Blue Mountains**	**33.60**	**88**	*e*P	**P**	**18 23 41.9**	**+0.6**
	comp=Z,2.9nm,0.9s						
BMO	**Blue Mountains**	**33.60**	**88**	*e*P	**P**	**18 23 41.9**	**+0.6**
BMO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MOD	**Modoc Plateau**	**33.86**	**95**	*e*P	**P**	**18 23 44.9**	**+1.2**
	comp=Z,8.0nm,0.7s						
J08A	**Circle Bar Ran**	**33.91**	**91**	*e*P	**P**	**18 23 44.5**	**+0.4**
	comp=Z,3.9nm,0.8s						
MSO	**Missoula**	**34.25**	**83**	*e*P	**P**	**18 23 46.9**	**-0.1**
	comp=Z,14nm,1.8s						
WVOR	**Wild Horse Val**	**34.42**	**93**	*e*P	**P**	**18 23 49.1**	**+0.5**
	comp=Z,6.1nm,0.8s						
WVOR	**Wild Horse Val**	**34.42**	**93**	*e*P	**P**	**18 23 49.1**	**+0.5**
WVOR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GDXM	**Geysers**	**34.64**	**101**	*e*P	**P**	**18 23 51.1**	**+0.7**
	comp=Z,8.8nm,1.0s						
GBGM	**Boggs Mountain**	**34.70**	**101**	*e*P	**P**	**18 23 48.8**	**-2.2**
ORV	**Oroville**	**34.82**	**99**	*e*P	**P**	**18 23 52.1**	**+0.3**
	comp=Z,4.4nm,0.8s						
ORV	**Oroville**	**34.82**	**99**	*e*P	**P**	**18 23 52.1**	**+0.3**
ORV				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MAC	**Mark West Spri**	**34.86**	**101**	*e*P	**P**	**18 23 49.1**	**-3.1**
BEKR	**Beckworth**	**35.22**	**97**	*e*P	**P**	**18 23 56.0**	**+0.5**
	comp=Z,4.7nm,0.8s						
HRY	**Holter Researc**	**35.48**	**81**	*e*P	**P**	**18 23 57.7**	**+0.1**
AFDM	**Forest Hills D**	**35.53**	**99**	*e*P	**P**	**18 23 58.6**	**+0.5**
	comp=Z,4.4nm,1.0s						
LRM	**Limekiln Ridge**	**35.68**	**83**	*e*P	**P**	**18 23 58.2**	**-1.3**
EGMT	**Eagleton**	**35.83**	**78**	*e*P	**P**	**18 24 00.3**	**-0.3**
	comp=Z,4.0nm,0.8s						
PAHR	**Pah Rah Range**	**35.87**	**97**	*e*P	**P**	**18 24 01.9**	**+0.8**
	comp=Z,10.0nm,0.7s						
DLMT	**Dillon**	**35.89**	**84**	*e*P	**P**	**18 24 01.6**	**+0.4**
	comp=Z,2.6nm,0.9s						
VCNR	**Virginia City**	**36.01**	**97**	*e*P	**P**	**18 24 03.5**	**+1.2**
	comp=Z,11nm,0.8s						
HLID	**Hailey**	**36.03**	**88**	*e*P	**P**	**18 24 02.9**	**+0.5**
	comp=Z,3.4nm,0.9s						
MCMT	**McKenzie Canyo**	**36.08**	**85**	*e*P	**P**	**18 24 02.9**	**0.0**
MCMT				*e*PcP	**PcP**	**18 26 26.9**	**-1.6**
PNTR	**Pine Nut**	**36.19**	**98**	*e*P	**P**	**18 24 04.7**	**+0.9**
	comp=Z,27nm,0.7s						
BOZ	**Bozeman (W)**	**36.27**	**83**	*e*P	**P**	**18 24 04.8**	**+0.4**
	comp=Z,2.5nm,0.9s						
YERR	**Yerington**	**36.46**	**97**	*e*P	**P**	**18 24 05.9**	**-0.2**
	comp=Z,8.3nm,0.8s						
CMB	**Columbia Colle**	**36.51**	**100**	*e*P	**P**	**18 24 07.1**	**+0.6**
	comp=Z,6.2nm,1.1s						
BMN	**Battle Mountai**	**36.56**	**94**	*e*P	**P**	**18 24 04.7**	**-2.3**
	comp=Z,3.0nm,0.8s						
BMN	**Battle Mountai**	**36.56**	**94**	*e*P	**P**	**18 24 04.7**	**-2.3**
BMN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WAKR	**Walker**	**36.69**	**98**	*e*P	**P**	**18 24 09.3**	**+1.1**
	comp=Z,8.1nm,0.7s						
SAO	**San Andreas Ge**	**36.86**	**102**	*e*P	**P**	**18 24 10.0**	**+0.6**
	comp=Z,23nm,1.3s						
SAO	**San Andreas Ge**	**36.86**	**102**	*e*P	**P**	**18 24 10.0**	**+0.6**
SAO				pmax	pmax		
	comp=Z,23nm,1.3s						
QLMT	**Earthquake Lak**	**36.86**	**84**	*e*P	**P**	**18 24 09.7**	**+0.1**
BSRM	**Salinas Radio**	**36.89**	**102**	*e*P	**P**	**18 24 12.2**	**+2.6**
KVN	**Kaiserville**	**37.04**	**96**	*e*P	**P**	**18 24 11.6**	**+0.5**
	comp=Z,3.8nm,0.8s						
KVN	**Kaiserville**	**37.04**	**96**	*e*P	**P**	**18 24 11.6**	**+0.5**
KVN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
YHB	**Horse Butte**	**37.04**	**84**	*e*P	**P**	**18 24 10.8**	**-0.3**
	comp=Z,9.7nm,0.8s						
RYN	**Ryan**	**37.11**	**97**	*e*P	**P**	**18 24 12.6**	**+0.9**
	comp=Z,5.2nm,0.7s						
YMR	**Madison River**	**37.22**	**84**	*e*P	**P**	**18 24 13.0**	**+0.3**
	comp=Z,24nm,0.4s						
GCMT	**Greycliff**	**37.23**	**81**	*e*P	**P**	**18 24 12.5**	**-0.1**
NV01	**Mina Array Sit**	**37.37**	**97**	*e*P	**P**	**18 24 14.5**	**+0.6**
NV01				*e*PcP	**PcP**	**18 26 33.2**	**+0.7**
NVAR	**Mina Array Bea**	**37.37**	**97**	P	**P**	**18 24 14.7**	**+0.8**
	comp=Z,2.1nm,0.6s,baz=304,slow=7.9,SNR=15						
NVAR				PcP	**PcP**	**18 26 33.2**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=266,slow=2.7,SNR=3.6						
NVAR				LR	LR	18 37 57.7	
	comp=Z,62nm,18.2s,baz=82,slow=34						
NV11	**Mina Array Sit**	**37.45**	**97**	*e*P	**P**	**18 24 15.2**	**+0.7**
	comp=Z,0.2nm,0.7s						
MDPB	**Devils Postpil**	**37.52**	**99**	*e*P	**P**	**18 24 15.7**	**+0.5**
	comp=Z,9.1nm,0.9s						
YPP	**Pitchstone Pla**	**37.56**	**84**	*e*P	**P**	**18 24 13.0**	**-2.6**
	comp=Z,2.5nm,0.8s						
OMMB	**Old Mammoth Mi**	**37.57**	**99**	*e*P	**P**	**18 24 16.5**	**+0.8**
	comp=Z,6.0nm,0.9s						
H17A	**Grant Village**	**37.61**	**84**	*e*P	**P**	**18 24 16.9**	**+1.0**
	comp=Z,8.2nm,1.0s						
HPAH	**Hawaii Prepara**	**37.63**	**160**	*e*P	**P**	**18 24 17.0**	**+0.9**
	comp=Z,251nm,1.7s						
IMW	**Indian Meadow**	**37.73**	**84**	*e*P	**P**	**18 24 17.0**	**0.0**
	comp=Z,3.8nm,0.7s						
FXWY	**Fox Creek**	**37.85**	**85**	*e*P	**P**	**18 24 17.3**	**-0.7**
	comp=Z,2.1nm,1.0s						
RLMT	**Red Lodge**	**37.87**	**82**	*e*P	**P**	**18 24 18.2**	**+0.1**
	comp=Z,5.5nm,0.9s						
MOOW	**Moose Ponds**	**37.94**	**85**	*e*P	**P**	**18 24 18.7**	**0.0**
	comp=Z,1.8nm,0.9s						
FCC	**Fort Churchill**	**37.94**	**55**	*e*P	**P**	**18 24 18.4**	**+0.2**
	comp=Z,7.8nm,1.0s						
FCC	**Fort Churchill**	**37.94**	**55**	*e*P	**P**	**18 24 18.4**	**+0.2**
FCC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TPAW	**Teton Pass**	**37.99**	**85**	*e*P	**P**	**18 24 18.2**	**-0.9**
	comp=Z,20nm,1.9s						
TULEG	**Thule**	**38.04**	**22**	*e*P	**P**	**18 24 18.4**	**-0.5**
	comp=Z,6.0nm,1.0s						
LOHW	**Long Hollow**	**38.10**	**85**	*e*P	**P**	**18 24 20.2**	**+0.1**
	comp=Z,4.0nm,0.8s						
HVU	**Hansel Valley**	**38.11**	**89**	*e*P	**P**	**18 24 20.3**	**+0.2**
	comp=Z,6.9nm,0.8s						
HVU	**Hansel Valley**	**38.11**	**89**	*e*P	**P**	**18 24 20.3**	**+0.2**
HVU				pmax	pmax		
	comp=Z,7.0nm,0.8s						
REDW	**Red Top Meadow**	**38.13**	**85**	*e*P	**P**	**18 24 21.0**	**+0.7**
	comp=Z,5.5nm,1.0s						
USRK	**Ussuriysk Ar.**	**38.77**	**278**	LR	LR	18 40 25.6	
	comp=Z,57nm,20.2s,baz=1.4,slow=36						
HWUT	**Hardware Ranch**	**38.90**	**88**	*e*P	**P**	**18 24 26.8**	**0.0**
	comp=Z,5.9nm,0.9s						
R11A	**Troy Canyon, C**	**38.92**	**95**	*e*P	**P**	**18 24 27.1**	**+0.1**
	comp=Z,5.5nm,1.2s						
DUG	**Dugway, Tooele**	**39.17**	**90**	*e*P	**P**	**18 24 28.9**	**0.0**
	comp=Z,5.2nm,1.1s						
DUG	**Dugway, Tooele**	**39.17**	**90**	P	**P**	**18 24 28.8**	**-0.1**
DUG				pmax	pmax		
	comp=Z,4.0nm,1.2s						
BAKC	**Calstate**	**39.18**	**101**	*e*P	**P**	**18 24 31.8**	**+2.9**
PD31	**Pinedale Array**	**39.23**	**85**	*e*P	**P**	**18 24 28.4**	**-1.2**
PD31				*e*PcP	**PcP**	**18 26 37.3**	**-0.9**
PDAR	**Pinedale Array**	**39.23**	**85**	P	**P**	**18 24 29.4**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=295,slow=7.7,SNR=4.8						
PDAR				PcP	**PcP**	**18 26 37.3**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=256,slow=1.5,SNR=2.6						
PDAR	**Pinedale Array**	**39.23**	**85**	*e*P	**P**	**18 24 28.3**	**-1.2**
PDAR				PcP	**PcP**	**18 26 37.3**	**-0.9**
ISA	**Isabella, Lake**	**39.29**	**100**	*e*P	**P**	**18 24 28.4**	**-1.5**
	comp=Z,3.5nm,1.1s						
ISA	**Isabella, Lake**	**39.29**	**100**	*e*P	**P**	**18 24 28.4**	**-1.5**
ISA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
DAC	**Darwin (Calif)**	**39.32**	**99**	*e*P	**P**	**18 24 30.5**	**+0.2**
	comp=Z,4.9nm,0.7s						
DAC	**Darw

comp=Z,44nm,18.1s,baz=245,slow=39
WMOK Wichita Mounta 50.84 84 *e*P **P 18 26 01.8 +0.2**
comp=Z,5.8nm,0.6s
WMOK Wichita Mounta 50.84 84 *e*P **P 18 26 01.8 +0.2**
WMOK pmax pmax
comp=Z,6.0nm,0.6s
SCO Scoresbysund 51.05 14 *e*P **P 18 26 02.4 -0.2**
comp=Z,7.1nm,1.3s
SCO Scoresbysund 51.05 14 *e*P **P 18 26 02.4 -0.2**
SCO pmax pmax
comp=Z,7.0nm,1.3s
HHC Hu-ho-hao-te 52.07 289 *e*P **P 18 26 11.2 +0.4**
HHC pmax pmax
comp=Z,11nm,0.6s
HHC pmax pmax
comp=Z,55nm,5.3s
TX31 Lajitas Ar. Si 52.22 93 *e*P **P 18 26 11.5 -0.6**
TXAR Lajitas Array 52.22 93 P **P 18 26 12.0 -0.1**
comp=Z,2.0nm,0.9s,baz=335,slow=6.3,SNR=15
TXAR LR LR 18 47 41.5
comp=Z,33nm,18.1s,baz=0.0,slow=35
TXAR Lajitas Array 52.22 93 P **P 18 26 12.0 -0.1**
V40A Witts Springs 53.32 79 *e*P **P 18 26 21.6 +1.6**
comp=Z,5.2nm,1.0s
JOW Kunigami 53.44 264 LR LR 18 48 48.9
comp=Z,22nm,20.8s,baz=125,slow=36
BINY Binghamton 57.32 62 *e*P **P 18 26 48.5 -0.2**
comp=Z,28nm,1.1s
O56A Blue Knob Stat 57.49 65 *e*P **P 18 26 48.8 -1.2**
comp=Z,22nm,1.5s
SSPA Standing Stone 57.55 64 *e*P **P 18 26 50.1 -0.3**
comp=Z,8.4nm,0.8s
N59A State Game Lan 58.39 63 *e*P **P 18 26 55.6 -0.8**
comp=Z,12nm,0.8s
LUPA Lehigh Univers 58.83 63 *e*P **P 18 26 59.3 0.0**
comp=Z,2.6nm,0.9s
GTA Gaotai 59.17 296 ⇑P P 18 27 07.4 +5.5
GTA pP pP 18 27 10.9 +1.2
GTA sP sP 18 27 13.8 +1.1
GTA pmax pmax
comp=Z,3.0nm,1.3s
PRGR Permogore 59.22 342 *e*P **P 18 27 01.1 -0.6**
PRGR pmax pmax
comp=Z,4.0nm,0.6s
KURK Kurchatov 59.70 317 *e*P **P 18 27 04.9 -0.2**
KURK Kurchatov 59.70 317 *ce*P **P 18 27 07.2 +2.1**
KURK pmax pmax
comp=Z,4.0nm,1.7s
KURBB Kurchatov Arra 59.80 317 P **P 18 27 04.9 -1.0**
comp=Z,1.5nm,0.7s,baz=35,slow=6.8,SNR=11
BVAR Borovoye Array 60.69 324 P **P 18 27 12.0 +0.1**
comp=Z,2.8nm,0.7s,baz=32,slow=8.5,SNR=18
BRVK Borovoye 60.70 324 *e*P **P 18 27 12.2 +0.3**
comp=Z,4.7nm,0.9s
BRVK Borovoye 60.70 324 *ce*P **P 18 27 13.0 +1.0**
BRVK pmax pmax
comp=Z,3.0nm,0.8s
ARU Arti 61.21 332 *c i*P **P 18 27 15.0 -0.4**
ARU S **S 18 35 30.9 -2.2**
ARU pmax pmax
comp=Z,6.0nm,1.7s
MK32 Makanchi Array 61.41 312 *e*P **P 18 27 16.6 -0.4**
MKAR Makanchi Array 61.41 312 P **P 18 27 16.6 -0.4**
comp=Z,0.6nm,0.8s,baz=54,slow=7.3,SNR=5.6
MKAR LR LR 18 53 49.1
comp=Z,27nm,18.2s,baz=58,slow=36
MKAR Makanchi Array 61.41 312 *ce*P P 18 27 22.6 +5.6
MKAR pmax pmax
comp=Z,1.0nm,0.9s
WMQ Urumqi 61.48 307 P **P 18 27 19.5 +2.0**
FIA0 FINESS Array S 61.84 352 *e*P **P 18 27 19.2 -0.3**
FIA0 FINESS Array S 61.84 352 *e*P **P 18 27 19.2 -0.3**
FINES FINESS Array B 61.84 352 P **P 18 27 19.2 -0.3**
comp=Z,2.6nm,0.5s,baz=21,slow=7.7,SNR=24
NB2 NORSAR Subarra 62.79 0 P **P 18 27 25.6 -0.4**
comp=Z,0.7nm,0.7s,baz=355,slow=6.5
NOA NORSAR Array B 62.79 0 LR LR 18 55 42.5
comp=Z,9.9nm,18.3s,baz=355,slow=37
HFS Hagfors 63.69 359 P **P 18 27 31.1 -0.8**
comp=Z,2.8nm,0.7s,baz=2.6,slow=6.3,SNR=8.0
AKTO Aktyubinsk 66.72 330 P **P 18 27 51.8 +0.1**
comp=Z,3.4nm,0.7s,baz=32,slow=6.7,SNR=16
ABKAR Akbulak array 67.22 328 *e*P **P 18 27 55.0 +0.1**
EKA Eskdalemuir Ar 67.86 9 P **P 18 27 59.0 +0.1**
comp=Z,0.8nm,0.5s,baz=352,slow=4.9,SNR=5.2
EKA Eskdalemuir Ar 67.86 9 *e*P **P 18 27 59.0 +0.1**
MNAS Manas 68.88 316 P **P 18 28 06.0 +0.4**
MNAS pmax pmax
comp=Z,3.0nm,1.1s
AKASG Malin Array Be 72.17 348 P **P 18 28 24.6 -0.7**
comp=Z,3.4nm,0.8s,baz=12,slow=6.0,SNR=15
AKBB Malin Array Si 72.17 348 *e*P **P 18 28 24.8 -0.5**
comp=Z,6.0nm,1.0s
AKBB Malin Array Si 72.17 348 *e*P **P 18 28 24.8 -0.5**
AKBB pmax pmax
comp=Z,6.0nm,1.0s
KIEV Kiev 72.17 348 *e*P **P 18 28 24.6 -0.7**
comp=Z,5.4nm,1.0s
KIEV Kiev 72.17 348 *e*P **P 18 28 24.6 -0.7**
KIEV pmax pmax
comp=Z,5.0nm,1.0s
CLL Collm 72.54 359 *e*P **P 18 28 27.0 -0.6**
CLL Collm 72.54 359 *e*P **P 18 28 27.0 -0.6**
KWP Kalwaria Pacla 73.83 353 *e*P **P 18 28 35.6 +0.4**
comp=Z,381nm,0.6s
KWP Kalwaria Pacla 73.83 353 *e*P **P 18 28 35.6 +0.4**
GEC2 GERESS Array S 75.00 359 *e*P **P 18 28 42.2 0.0**
comp=Z,11nm,1.6s
GEC2 GERESS Array S 75.00 359 *e*P **P 18 28 42.2 0.0**
GEC2 pmax pmax
comp=Z,11nm,1.6s
GERES GERESS Array B 75.00 359 P **P 18 28 42.2 0.0**
comp=Z,0.5nm,0.6s,baz=12,slow=5.0,SNR=4.8
VYHS Vyhne 75.19 355 *e*P **P 18 28 42.6 -0.6**
VYHS pmax pmax
comp=Z,2.0nm,1.0s
VYHS Vyhne 75.19 355 *e*P **P 18 28 42.6 -0.6**
MODS Modra-Piesok 75.38 356 *e*P **P 18 28 44.2 0.0**
MODS pmax pmax
comp=Z,11nm,1.3s
MODS Modra-Piesok 75.38 356 *e*P **P 18 28 44.2 0.0**
BUR04 Bucovina Ar. S 75.62 351 *e*P **P 18 28 45.0 -0.7**
CM31 Chiang Mai Arr 76.28 283 *e*P **P 18 28 50.0 +0.2**
CMAR Chiang Mai Arr 76.28 283 P **P 18 28 49.7 -0.1**
comp=Z,0.4nm,0.7s,baz=19,slow=5.7,SNR=3.2
KBZ Khabaz 76.72 337 P **P 18 28 53.0 +1.1**
comp=Z,1.9nm,0.8s,baz=12,slow=24,SNR=5.5
BR101 Keskin Array S 82.33 343 *e*P **P 18 29 23.6 +0.9**
BRTR Keskin Array B 82.34 343 P **P 18 29 23.6 +0.9**
comp=Z,1.3nm,0.8s,baz=19,slow=4.2,SNR=8.2
ES19 SONSECA Array 83.25 12 *e*P **P 18 29 26.6 -0.8**
ESDC Sonseca Array 83.27 12 P **P 18 29 27.7 +0.3**
comp=Z,0.5nm,0.5s,baz=344,slow=5.9,SNR=5.5
MMAI Mount Meron Ar 88.56 340 P **P 18 29 54.0 +0.3**
comp=Z,0.9nm,0.7s,baz=17,slow=2.0,SNR=2.5
WR1 Warramunga Arr 90.03 232 *e*P **P 18 29 59.8 -0.7**
comp=Z,47nm,2.0s
WRA Warramunga Arr 90.03 232 P **P 18 29 59.8 -0.7**
comp=Z,0.5nm,0.9s,baz=32,slow=6.3,SNR=4.0
AS31 Alice Springs 93.49 231 *e*P **P 18 30 15.6 -0.9**
comp=Z,3.5nm,1.6s
ASAR Alice Springs 93.49 231 P **P 18 30 15.9 -0.6**
comp=Z,0.4nm,0.7s,baz=24,slow=4.4,SNR=7.7
QSPA South Pole Qui 146.28 180 PKPbc **PKPdf 18 36 39.4 +0.5**
comp=Z,1.4nm,0.7s,baz=199,slow=2.8,SNR=3.9
BOSA Boshof 150.49 335 PKPbc **PKPbc 18 36 51.8 -0.6**
comp=Z,1.3nm,0.9s,baz=22,slow=4.0,SNR=4.8

MEX 12 18:19:01.7±0.6, 16°.16N×95°.51W, h7km±999km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.70**	**236**	*e*P	Pg	18 19 13.9	-1.2
HUIG				*e*S	Sg	18 19 23.4	-0.8
VHO	**Vista Hermosa**	**1.48**	**308**	*e*P	Pn	18 19 25.0	-3.9
VHO				*e*S	Sn	18 19 44.0	-4.7

*ISCJB **12** 18:26:09.3±0.4, 24°.49N±0°.02×122°.31E±0°.02, h66km±5km, Error ellipse: s-maj=3.4km s-min=2.6km az=168.3*
*TAP **12** 18:26:09.1, 24°.47N×122°.24E, h76km, ML3.0, C*
*JMA **12** 18:26:09.1±0.2, 24°.44N×122°.29E, h71km±3km, M2.0*
ISC 12 18:26:09.8±1.3, **24°.48N**±0°.03×**122°.31E**±0°.02, **h65**km±7km,
n68, σ1°.**04**/116, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.18**	**293**	P	**Pn**	**18 26 20.2**	**+0.5**
	baz=308						
EOS1				S	**Sn**	**18 26 28.5**	**+1.6**
	baz=308						
TWC	**Suao**	**0.44**	**287**	*i* P	**Pn**	**18 26 21.3**	**-0.2**
	baz=295						
TWC				S	**Sn**	**18 26 30.1**	**-0.1**
	baz=295						
ENAH	**Nanao**	**0.46**	**266**	*i* P	**Pn**	**18 26 21.7**	**0.0**
	baz=263						
ENAH				*i* S	**Sn**	**18 26 30.9**	**+0.5**
	baz=263						
NANB	**Nanao**	**0.51**	**264**	P	**Pn**	**18 26 22.2**	**-0.1**
	baz=264						
NANB				S	**Sn**	**18 26 32.0**	**+0.5**
	baz=264						
ENA	**Nanau**	**0.52**	**264**	P	**Pn**	**18 26 22.4**	**0.0**
	baz=264						
ENA				S	**Sn**	**18 26 32.1**	**+0.5**
	baz=264						
NTC	**Toucheng**	**0.57**	**311**	*e*P	**Pn**	**18 26 22.5**	**-0.4**
	baz=318						
NTC				*e*S	**Sn**	**18 26 32.1**	**-0.5**
	baz=318						
JYNG	**Yonagunijimaku**	**0.58**	**93**	P	**Pn**	**18 26 23.2**	**+0.2**
JYNG				S	**Sn**	**18 26 32.9**	**+0.2**
ILA	**Ilan**	**0.58**	**299**	*e*S	**Sn**	**18 26 33.2**	**+0.4**
	baz=306						
TWE	**Neicheng**	**0.63**	**292**	P	**Pn**	**18 26 23.5**	**-0.1**
	baz=296						
TWE				*e*S	**Sn**	**18 26 33.9**	**+0.2**
	baz=296						
YOJ	**Yonaguni jima**	**0.64**	**91**	*e*P	**Pn**	**18 26 23.8**	**+0.2**
	baz=90						
YOJ				*e*S	**Sn**	**18 26 34.0**	**+0.2**
	baz=90						
YOJ	**Yonaguni jima**	**0.64**	**91**	P	**Pn**	**18 26 23.8**	**+0.2**
YOJ				*e*S	**Sn**	**18 26 34.0**	**+0.2**
TIPB	**Shuangxi**	**0.66**	**318**	P	**Pn**	**18 26 22.5**	**-1.4**
	baz=325						
TIPB				S	**Sn**	**18 26 32.8**	**-1.5**
	baz=325						
ENTT	**Nioudou**	**0.69**	**283**	P	**Pn**	**18 26 24.6**	**+0.3**
	baz=289						
ENTT				S	**Sn**	**18 26 35.8**	**+0.8**
	baz=289						
NACB	**Ninganchiao**	**0.72**	**245**	S	**Sn**	**18 26 34.8**	**-0.7**
	baz=243						
NWF	**Wu-fen Shan**	**0.76**	**321**	P	**Pn**	**18 26 24.9**	**-0.3**
	baz=316						
NWF				*e*S	**Sn**	**18 26 36.0**	**-0.5**
	baz=316						
WFSB	**Wu-fen Shan**	**0.76**	**321**	P	**Pn**	**18 26 24.8**	**-0.2**
	baz=318						
WFSB				S	**Sn**	**18 26 36.1**	**-0.2**
	baz=318						
TWD	**Chiawan**	**0.76**	**239**	P	**Pn**	**18 26 24.6**	**-0.5**
	baz=232						
TWD				S	**Sn**	**18 26 35.7**	**-0.6**
	baz=232						
NWLT	**Wulai**	**0.79**	**292**	P	**Pn**	**18 26 25.5**	**0.0**
	baz=298						
NWLT				*e*S	**Sn**	**18 26 37.9**	**+0.9**
	baz=298						
HWA	**Hwalien**	**0.81**	**232**	*e*S	**Sn**	**18 26 38.1**	**+0.7**
	baz=222						
NNSB	**Datong**	**0.84**	**267**	*e*P	**Pn**	**18 26 26.1**	**-0.1**
	baz=261						
NNSB				*e*S	**Sn**	**18 26 37.8**	**-0.6**
	baz=261						
NNSH	**Datong**	**0.84**	**267**	P	**Pn**	**18 26 25.5**	**-0.7**
	baz=262						
NNSH				*e*S	**Sn**	**18 26 37.6**	**-0.7**
	baz=262						
NNS	**Nan Shan**	**0.85**	**268**	*e*P	**Pn**	**18 26 26.5**	**+0.1**
	baz=262						
NNS				*e*S	**Sn**	**18 26 38.0**	**-0.6**
	baz=262						
ENLB	**Shoufeng**	**0.86**	**229**	*e*P	**Pn**	**18 26 26.0**	**-0.3**
	baz=218						
ENLB				*e*S	**Sn**	**18 26 38.5**	**0.0**
	baz=218						
YHNB	**Yeheng**	**0.87**	**283**	P	**Pn**	**18 26 26.6**	**+0.1**
	baz=284						
YHNB				S	**Sn**	**18 26 38.8**	**-0.1**
	baz=284						
NSK	**Sanguang**	**0.89**	**283**	P	**Pn**	**18 26 27.0**	**+0.3**
	baz=276						
NSK				*e*S	**Sn**	**18 26 39.5**	**+0.3**
	baz=276						
TATO	**Taipei**	**0.90**	**304**	*e*P	**Pn**	**18 26 25.0**	**-1.7**
	baz=315						
TATO				*e*S	**Sn**	**18 26 38.9**	**-0.3**
	baz=315						
TAP1	**Taipei**	**0.91**	**308**	*e*P	**Pn**	**18 26 26.5**	**-0.3**
	baz=319						
TAP1				*e*S	**Sn**	**18 26 39.3**	**-0.1**
	baz=319						
YM07	**YM07**	**0.93**	**318**	*e*P	**Pn**	**18 26 25.8**	**-1.4**
	baz=314						
YM07				*e*S	**Sn**	**18 26 38.1**	**-2.1**
	baz=314						
YM11	**YM11**	**0.95**	**316**	*e*P	**Pn**	**18 26 28.2**	**+0.6**
	baz=319						
YM11				*e*S	**Sn**	**18 26 41.0**	**+0.3**
	baz=319						
YM10	**YM10**	**0.96**	**315**	P	**Pn**	**18 26 27.2**	**-0.4**
	baz=318						
YM10				*e*S	**Sn**	**18 26 40.0**	**-0.7**
	baz=318						
YM08	**YM08**	**0.96**	**317**	*e*P	**Pn**	**18 26 26.1**	**-1.4**
	baz=320						
YM08				*e*S	**Sn**	**18 26 39.3**	**-1.4**
	baz=320						
YM12	**YM12**	**0.97**	**316**	*e*S	**Sn**	**18 26 39.5**	**-1.5**
	baz=319						
YM04	**YM04**	**0.97**	**314**	*e*P	**Pn**	**18 26 27.4**	**-0.4**
	baz=317						
YM04				S	**Sn**	**18 26 40.0**	**-1.0**
	baz=317						
YM03	**YM03**	**0.99**	**315**	*e*S	**Sn**	**18 26 40.7**	**-0.7**
	baz=318						
TWY	**Chenhua**	**1.02**	**321**	*e*S	**Sn**	**18 26 42.0**	**0.0**
	baz=324						
NTST	**Danshui**	**1.04**	**311**	*e*P	**Pn**	**18 26 28.2**	**-0.3**
	baz=319						
NTST				*e*S	**Sn**	**18 26 42.1**	**-0.4**
	baz=319						
ESL	**Shilin**	**1.04**	**231**	*e*S	**Sn**	**18 26 41.1**	**-1.4**
	baz=238						
CHGB	**Renai**	**1.12**	**248**	*e*P	**Pn**	**18 26 30.1**	**+0.3**
	baz=240						
CHGB				*e*S	**Sn**	**18 26 43.7**	**-0.9**
	baz=240						
NCU	**National Centr**	**1.13**	**296**	*e*S	**Sn**	**18 26 45.4**	**+0.8**
	baz=287						
NCUH	**Zhongli**	**1.13**	**296**	*e*S	**Sn**	**18 26 44.9**	**+0.3**
	baz=287						
EGFH	**Guangfu**	**1.14**	**225**	*e*P	**Pn**	**18 26 29.0**	**-0.9**
	baz=216						
EGFH				*e*S	**Sn**	**18 26 43.7**	**-1.1**
	baz=216						
LIOB	**Emei**	**1.19**	**278**	*e*P	**Pn**	**18 26 31.3**	**+0.8**
	baz=279						
LIOB				*e*S	**Sn**	**18 26 46.4**	**+0.4**
	baz=279						
NSTT	**Nanjuang**	**1.20**	**277**	*e*P	**Pn**	**18 26 31.7**	**+1.1**
	baz=278						
NSTT				*e*S	**Sn**	**18 26 46.5**	**+0.3**
	baz=278						
HGSD	**Ruisui**	**1.27**	**220**	*e*P	**Pn**	**18 26 32.5**	**+0.9**
	baz=217						
HGSD				*e*S	**Sn**	**18 26 47.6**	**-0.3**
	baz=217						
VWDT	**VWDT**	**1.29**	**236**	*e*P	**Pn**	**18 26 31.9**	**+0.2**
	baz=234						
VWDT				*e*S	**Sn**	**18 26 47.4**	**-0.9**
	baz=234						
IRIF	**Iriomote-Funau**	**1.30**	**96**	P	**Pn**	**18 26 31.8**	**-0.2**
IRIF				*e*S	**Sn**	**18 26 48.6**	**0.0**
EHY	**Hungye**	**1.32**	**223**	*e*P	**Pn**	**18 26 32.6**	**+0.3**
	baz=212						
EHY				*e*S	**Sn**	**18 26 46.9**	**-2.2**
	baz=212						
NSY	**Sanyi**	**1.41**	**268**	*e*S	**Sn**	**18 26 52.3**	**+1.0**
	baz=267						
SMLT	**Sun Moon Lake**	**1.42**	**246**	*e*P	**Pn**	**18 26 34.7**	**+1.1**
	baz=238						
SMLT				*e*S	**Sn**	**18 26 52.2**	**+0.7**
	baz=238						
YULB	**Yu-li**	**1.42**	**221**	P	**Pn**	**18 26 32.7**	**-0.9**
	baz=219						
YULB				S	**Sn**	**18 26 49.0**	**-2.5**
	baz=219						
TYC	**Yuchr**	**1.44**	**247**	*e*S	**Sn**	**18 26 52.6**	**+0.7**
	baz=240						
TWF1	**Yuli**	**1.46**	**220**	*e*P	**Pn**	**18 26 32.6**	**-1.4**
	baz=225						
TWF1				*e*S	**Sn**	**18 26 50.5**	**-1.8**
	baz=225						
JKRS	**Kuro-shima**	**1.57**	**98**	P	**Pn**	**18 26 35.9**	**+0.4**
JKRS				S	**Sn**	**18 26 55.0**	**+0.1**
FULB	**Fuli**	**1.58**	**216**	*e*P	**Pn**	**18 26 36.2**	**+0.5**
	baz=207						
FULB				*e*S	**Sn**	**18 26 54.3**	**-0.9**
	baz=207						
WJS	**Zhushan**	**1.59**	**246**	*e*P	**Pn**	**18 26 36.5**	**+0.7**
	baz=257						
WJS				*e*S	**Sn**	**18 26 56.2**	**+0.8**
	baz=257						
CHKT	**Chengkung**	**1.62**	**212**	*e*S	**Sn**	**18 26 53.1**	**-3.2**
	baz=203						
JIJ	**Ishigaki jima**	**1.68**	**94**	P	**Pn**	**18 26 36.8**	**-0.1**
JIJ				S	**Sn**	**18 26 56.9**	**-0.6**
ALS	**Alishan**	**1.68**	**235**	*e*P	**Pn**	**18 26 38.7**	**+1.4**
	baz=227						
ALS				*e*S	**Sn**	**18 26 58.4**	**+0.4**
	baz=227						
WGK	**Gukeng**	**1.78**	**244**	*e*S	**Sn**	**18 27 03.0**	**+2.9**
	baz=233						
WDLH	**Douliu**	**1.80**	**244**	*e*S	**Sn**	**18 27 02.4**	**+1.9**
	baz=256						
JISG	**Ishigakijimahi**	**1.83**	**86**	P	**Pn**	**18 26 38.8**	**-0.2**
JISG				*e*S	**Sn**	**18 27 01.0**	**-0.1**
TPUB	**Ta-pu**	**1.93**	**233**	*e*S	**Sn**	**18 27 05.6**	**+1.8**
	baz=225						
TWGBT	**Beinan**	**2.00**	**214**	*e*S	**Sn**	**18 27 02.4**	**-3.0**
	baz=213						
TWG	**Pinlang**	**2.00**	**215**	*e*S	**Sn**	**18 27 02.6**	**-2.8**
	baz=213						
CHN1	**Nanshi**	**2.08**	**232**	*e*S	**Sn**	**18 27 09.1**	**+1.8**
	baz=231						
WSF	**Szhu**	**2.08**	**247**	*e*S	**Sn**	**18 27 07.9**	**+0.5**
	baz=255						
SLGT	**Liugui**	**2.12**	**226**	*e*S	**Sn**	**18 27 10.6**	**+2.2**
	baz=225						
JTJ	**Tarama**	**2.19**	**85**	P	**Pn**	**18 26 45.5**	**+1.7**
JTJ				*e*S	**Sn**	**18 27 09.9**	**+0.1**

MAN 12 18:34:54.0, 8°.49N×125°.80E, h74km, mb4.1, ML2.9, MS2.6, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.51**	**340**	*e*P	Pn	18 35 08.9	+1.6
BUTP				*e*S	Sn	18 35 20.5	+3.4
BUKP	**Musuan**	**0.95**	**230**	*e*P	Pn	18 35 12.3	+0.2
BUKP				*e*S	Sn	18 35 27.4	+1.8
CGP	**Cagayan de Oro**	**1.09**	**268**	⇑*i* P	Pn	18 35 15.5	+1.6
CGP				*i* S	Sn	18 35 29.8	+1.0

*NAO **12** 18:37:56.6±2.5, 72°.88N×5°.64E, ML2.5*
*BER **12** 18:38:00.0±3.6, 72°.93N×5°.55E, h15km±41km, ML2.0, ML2.5(NAO)*
ISC 12 18:37:56.7±1.0, **72°.81N**±0°.07×**5°.59E**±0°.08, **h11**km, **n20**, σ**2°.12**/28, **Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJO1	**Bjornoya**	**4.15**	**60**	Pn	**Pn**	**18 38 59.1**	**-0.8**
BJO	**Bjornoya**	**4.20**	**60**	Pn	**Pn**	**18 38 59.1**	**-1.4**
TRO	**Tromso**	**5.35**	**120**	*e*P	**Pn**	**18 39 18.2**	**+1.8**
TRO				*e*S	**Sn**	**18 40 15.8**	**-2.1**
LOF	**Lofoten**	**5.40**	**147**	*e*P	**Pn**	**18 39 20.3**	**+3.3**
LOF				*e*S	**Sn**	**18 40 15.9**	**-3.1**
LOF				IAML		18 40 21.3	
	comp=Z,2.5nm,0.3s						
STEI	**Steigen**	**5.88**	**142**	*e*P	**Pn**	**18 39 26.0**	**+2.5**
STEI				*e*S	**Sn**	**18 40 28.2**	**-2.5**
STEI				IAML		18 40 35.5	
	comp=Z,3.5nm,0.5s						
SPA0	**Spitsbergen Ar**	**6.02**	**22**	Pn	**Pn**	**18 39 25.0**	**-0.6**
	baz=211,slow=16						
SPA0	**Spitsbergen Ar**	**6.02**	**22**	Pn	**Pn**	**18 39 25.0**	**-0.6**
	baz=211,slow=16						
KBS	**Kingsbay**	**6.34**	**11**	Pn	**Pn**	**18 39 29.4**	**-0.5**
KBS	**Kingsbay**	**6.34**	**11**	Pn	**Pn**	**18 39 29.4**	**-0.5**
KBS				*e*P	**Pn**	**18 39 29.7**	**-0.2**
KONS	**Konsvik**	**6.85**	**154**	*e*P	**Pn**	**18 39 39.9**	**+2.9**
KONS				*e*S	**Sn**	**18 40 51.1**	**-3.7**
ARA0	**ARCESS Array S**	**7.21**	**107**	Pn	**Pn**	**18 39 43.7**	**+1.8**
	baz=320,slow=12						
ARA0				Sn	**Sn**	**18 41 02.7**	**-0.9**
	baz=311,slow=22						
ARA0	**ARCESS Array S**	**7.21**	**107**	Pn	**Pn**	**18 39 43.7**	**+1.8**
	baz=320,slow=12						
ARA0				Sn	**Sn**	**18 41 02.7**	**-0.9**
	baz=311,slow=22						
MOR8	**Moi Rana**	**7.35**	**151**	*e*P	**Pn**	**18 39 46.8**	**+3.1**
MOR8				*e*S	**Sn**	**18 41 05.7**	**-1.3**
MOR8				IAML		18 41 07.5	
	comp=Z,2.9nm,0.3s						
SCO	**Scoresbysund**	**8.94**	**268**	*i* P	**Pn**	**18 40 05.2**	**-0.4**
NRA0	**NORESS Array S**	**12.34**	**166**	Pn	**Pn**	**18 40 53.5**	**+1.5**
	baz=335,slow=14						
NRA0	**NORESS Array S**	**12.34**	**166**	Pn	**Pn**	**18 40 53.5**	**+1.5**
	baz=335,slow=14						
HFS	**Hagfors**	**13.11**	**162**	Pn	**Pn**	**18 41 05.4**	**+2.8**
	baz=350,slow=14						
HFS	**Hagfors**	**13.11**	**162**	Pn	**Pn**	**18 41 05.4**	**+2.8**
	baz=350,slow=14						
FIA0	**FINESS Array S**	**13.79**	**135**	Pn	**Pn**	**18 41 13.5**	**+1.7**
	baz=334,slow=12						
FIA0	**FINESS Array S**	**13.79**	**135**	Pn	**Pn**	**18 41 13.5**	**+1.7**
	baz=334,slow=12						

*NDI **12** 18:53:39.2±2.7, 24°.87N×91°.17E, h10km±9km, ML2.7*
ISC 12 18:53:39.8±1.7, **24°.90N**±0°.06×**91°.23E**±0°.04, **h8**km±12km, **n7**, σ0°.**97**/14, **India-Bangladesh border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**0.89**	**41**	*e*P	**Pg**	**18 53 57.1**	**+0.1**
SHL				*e*S	**Sg**	**18 54 10.5**	**+1.9**
TURI	**Tura**	**1.04**	**309**	*e*P	**Pg**	**18 53 59.8**	**-0.1**
TURI				*e*S	**Sg**	**18 54 14.2**	**+0.8**
TURI				IAML		18 54 15.6	
	comp=E,232nm,0.2s						
TURI				IAML		18 54 15.8	
	comp=N,183nm,0.1s						
GUWA	**GUWAHATI**	**1.36**	**18**	*e*P	**Pg**	**18 54 04.8**	**-1.0**
GUWA				*e*S	**Sg**	**18 54 21.6**	**-1.8**
GUWA				IAML		18 54 23.4	
	comp=E,50nm,0.1s						
GUWA				IAML		18 54 23.4	
	comp=N,85nm,0.1s						
DHUB	**DHUBRI**	**1.58**	**315**	*e*P	**Pn**	**18 54 08.3**	**+0.2**
DHUB				*e*S	**Sn**	**18 54 28.7**	**-0.1**
DHUB				*e*S	**Sn**	**18 54 28.7**	**-0.1**
DHUB				IAML		18 54 30.8	
	comp=N,142nm,0.2s						
AZL	**Aizawl**	**1.76**	**131**	*e*P	**Pn**	**18 54 10.8**	**0.0**
AZL				*e*S	**Sn**	**18 54 32.8**	**-0.6**
AZL				IAML		18 54 35.9	
	comp=N,33nm,0.3s						
AZL				IAML		18 54 35.9	
	comp=E,49nm,0.2s						
MOKO	**MOKOCHONG**	**3.29**	**64**	*ex*	x	18 54 35.6	
MOKO				*e*S	**Sn**	**18 55 11.4**	**+0.3**
ZIRO	**ZIRO**	**3.52**	**41**	*e*P	**Pn**	**18 54 35.2**	**+0.2**
ZIRO				*e*S	**Sn**	**18 55 17.4**	**+0.5**
ZIRO				IAML		18 55 32.0	
	comp=N,43nm,0.6s						
ZIRO				IAML		18 55 32.1	
	comp=E,52nm,0.5s						

*IDC **12** 19:01:01.6±0.4,20.°45S×173.°83W,h0km,mb4.5/21, mb1 4.6/23,mb1mx4.4/48,mbtmp4.5/23,ML4.4/2,MS3.5/3, Ms1 3.5/3,ms1mx2.9/47,Error ellipse: s-maj=18.6km s-min=13.4km az=136.0*

*ISCJB **12** 19:01:04.2±0.2,20.°45S±0.°05×173.°88W±0.°06,h27km, mb4.8/80,MS3.6/2,Error ellipse: s-maj=9.2km s-min=4.8km az=37.5*

*BJI **12** 19:01:05.6,20.°41S×173.°86W,h27km,mb5.0/13,mB5.3/2*

*NEIC **12** 19:01:07.7±2.1,20.°43S×173.°88W,h43km±18km,mb4.8/63, Error ellipse: s-maj=8.8km s-min=6.2km az=138.0*

ISC 12 19:01:05.7±0.4,20.°43S±0.°07×173.°80W±0.°09,h27km, n151,σ1°40/148,mb4.8/79,1C,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**6.77**	**17**	Pn	Pn	19 02 37.2	-6.2
	5.9nm,0.3s,baz=260,slow=1.2,SNR=8.4						
AFI				Sn	Sn	19 03 49.3	-10
	9.2nm,0.3s,baz=77,slow=19,SNR=2.6						
AFI				LR	LR	19 05 12.2	
	comp=Z,272nm,18.5s,baz=143,slow=37						
AFI	**Afiamalu**	**6.77**	**17**	ePn	Pn	19 02 37.7	-5.7
AFI				eSn	Sn	19 03 45.9	-14
RAO	**Raoul Island**	**9.54**	**202**	ePn	**Pn**	**19 03 18.8**	**-2.6**
RAR	**Rarotonga**	**13.14**	**96**	Pn	Pn	19 04 01.1	-10
	3.4nm,0.3s,baz=219,slow=10,SNR=5.1						
RAR	**Rarotonga**	**13.14**	**96**	ePn	Pn	19 04 00.8	-10
KNTN	**Kanton**	**17.66**	**7**	ePn	**Pn**	**19 05 06.0**	**-4.0**
	432nm,1.9s						
MXZ	**Matakaoa Point**	**18.40**	**200**	eP	**Pn**	**19 05 20.6**	**+1.7**
	98nm,1.2s						
OUZ	**Omahuta**	**18.45**	**214**	eP	**Pn**	**19 05 19.5**	**0.0**
	74nm,1.5s						
DZM	**Mont Dzumac**	**18.49**	**261**	P	**P**	**19 05 19.5**	**-0.4**
	0.7nm,0.3s,baz=106,slow=18,SNR=3.2						
DZM	**Mont Dzumac**	**18.49**	**261**	eP	**Pn**	**19 05 20.3**	**+0.1**
	274nm,2.0s						
URZ	**Urewera**	**19.43**	**202**	P	**Pn**	**19 05 30.8**	**-0.5**
	1.9nm,0.3s,baz=13,slow=4.7,SNR=8.7						
URZ				S	S	19 08 53.5	-15
	0.3nm,0.3s,baz=347,slow=19,SNR=2.3						
BKZ	**Black Stump Fm**	**20.46**	**202**	eP	**P**	**19 05 39.6**	**-1.7**
	79nm,1.6s						
HIZ	**Hauiti**	**20.52**	**206**	eP	**P**	**19 05 41.1**	**-0.8**
	40nm,0.8s						
BFZ	**Birch Farm**	**21.90**	**201**	eP	**P**	**19 05 57.5**	**+0.8**
	149nm,1.4s						
TBI	**Tubuai**	**22.77**	**102**	eLR	LR	19 11 26.0	
	121nm,36.5s						
PPT2	**Papeete2**	**23.07**	**87**	eLR	LR	19 11 17.6	
	69nm,22.2s						
THZ	**Tophouse**	**24.06**	**205**	eP	**P**	**19 06 16.6**	**-2.3**
	82nm,1.6s						
KHZ	**Kahutara**	**24.38**	**203**	eP	**P**	**19 06 19.7**	**-1.9**
	297nm,1.9s						
LTZ	**Lake Taylor**	**25.18**	**205**	eP	**P**	**19 06 28.6**	**-0.3**
	181nm,2.0s						
OXZ	**Oxford**	**25.73**	**204**	eP	**P**	**19 06 33.6**	**-0.3**
	142nm,1.7s						
RPZ	**Rata Peaks**	**26.44**	**205**	P	**P**	**19 06 38.9**	**-1.4**
	7.7nm,0.7s,baz=90,slow=8.1,SNR=3.2						
FOZ	**Fox Glacier**	**26.80**	**207**	eP	**P**	**19 06 44.5**	**+0.9**
	293nm,1.9s						
LBZ	**Lake Benmore**	**27.35**	**206**	eP	**P**	**19 06 52.8**	**+4.3**
	73nm,1.4s						
WKZ	**Wanaka**	**28.19**	**206**	eP	P	19 07 01.1	+5.1
	144nm,1.5s						
MLZ	**Mavora Lakes**	**29.00**	**207**	eP	**P**	**19 07 07.0**	**+3.7**
	249nm,2.0s						
EIDS	**Eidsvold**	**32.66**	**255**	eP	**P**	**19 07 33.9**	**-1.8**
	68nm,1.8s						
CAN	**Canberra**	**35.84**	**238**	eP	**P**	**19 08 03.9**	**+0.6**
	50nm,1.4s						
CTA	**Charters Tower**	**37.41**	**263**	P	**P**	**19 08 15.9**	**-0.9**
	2.9nm,0.5s,baz=95,slow=12,SNR=9.2						
CTAO	**Charters Tower**	**37.41**	**263**	eP	**P**	**19 08 16.7**	**-0.1**
	7.8nm,0.8s						
PATS	**Pohnpei**	**38.55**	**312**	eP	**P**	**19 08 25.6**	**-0.7**
	116nm,1.3s						
TAU	**Tasmania Unive**	**39.48**	**226**	eP	**P**	**19 08 35.0**	**+1.1**
	103nm,1.8s						
STKA	**Stephens Creek**	**41.37**	**245**	P	**P**	**19 08 49.2**	**-0.5**
	2.2nm,0.6s,baz=102,slow=5.8,SNR=5.0						
STKA	**Stephens Creek**	**41.37**	**245**	eP	**P**	**19 08 49.7**	**0.0**
	3.2nm,1.4s						
HLP	**Hilina Pali**	**43.44**	**26**	eP	**P**	**19 09 06.4**	**-0.2**
	517nm,1.8s						
JAY	**Jayapura**	**47.78**	**286**	P	**P**	**19 09 40.7**	**-0.4**
	14nm,0.6s,baz=112,slow=3.6,SNR=15						
AS31	**Alice Springs**	**48.36**	**256**	eP	**P**	**19 09 44.1**	**-1.4**
	1.9nm,0.5s						
AS31				ePcP	**PcP**	**19 11 12.4**	**+0.4**
ASAR	**Alice Springs**	**48.36**	**256**	P	**P**	**19 09 44.5**	**-1.0**
	3.1nm,0.6s,baz=99,slow=7.7,SNR=14						
ASAR				PcP	**PcP**	**19 11 13.0**	**+1.0**
	3.0nm,0.7s,baz=101,slow=3.9,SNR=6.7						
WR1	**Warramunga Arr**	**48.50**	**261**	eP	**P**	**19 09 45.1**	**-1.5**
	43nm,1.8s						
WR1				ePcP	**PcP**	**19 11 13.7**	**+1.2**
WRA	**Warramunga Arr**	**48.50**	**261**	P	**P**	**19 09 45.1**	**-1.6**
	3.2nm,0.7s,baz=96,slow=5.5,SNR=8.2						
WRA				PcP	**PcP**	**19 11 13.7**	**+1.2**
	3.0nm,0.8s,baz=92,slow=3.7,SNR=6.6						
SBA	**Scott Base**	**58.23**	**185**	eP	**P**	**19 10 59.7**	**+2.5**
	11nm,0.9s						
VNDA	**Vanda**	**58.36**	**186**	P	**P**	**19 10 59.4**	**+1.3**
	3.9nm,0.8s,baz=358,slow=6.6,SNR=12						
VNDA	**Vanda**	**58.36**	**186**	eP	**P**	**19 10 59.9**	**+1.7**
	4.9nm,0.9s						
QSPA	**South Pole Qui**	**69.64**	**180**	P	**P**	**19 12 12.4**	**-0.2**
	9.7nm,0.9s,baz=56,slow=2.6,SNR=13						
QSPA	**South Pole Qui**	**69.64**	**180**	eP	**P**	**19 12 13.7**	**+1.1**
	14nm,1.0s						
MJAR	**Matsushiro Arr**	**72.56**	**321**	P	**P**	**19 12 29.9**	**-0.5**
	2.0nm,0.7s,baz=150,slow=5.6,SNR=5.3						
MAJO	**Matsushiro**	**72.56**	**321**	eP	**P**	**19 12 29.9**	**-0.5**
ASAJ	**Asahikawa**	**75.61**	**329**	LR	LR	19 41 13.8	
	comp=Z,17nm,20.0s,baz=166,slow=32						
ISA	**Isabella, Lake**	**76.52**	**44**	eP	**P**	**19 12 53.7**	**+0.1**
	5.2nm,1.0s						
LEM	**Lembang**	**76.98**	**267**	P	**P**	**19 12 56.3**	**-0.5**
	17nm,0.7s,baz=126,slow=18,SNR=5.4						
PETK	**Petropavlovsk-**	**77.29**	**343**	P	**P**	**19 12 58.4**	**+0.9**
	0.9nm,0.4s,baz=142,slow=3.5,SNR=3.8						
PEA1	**Petropavlovsk-**	**77.29**	**343**	eP	**P**	**19 12 58.4**	**+0.9**
DAC	**Darwin (Calif)**	**77.46**	**43**	eP	**P**	**19 12 59.7**	**+0.6**
	6.1nm,1.3s						
CHGN	**Chignik**	**77.53**	**9**	eP	**P**	**19 12 59.7**	**+1.1**
	273nm,1.4s						
YBH	**Yreka Blue Hor**	**77.83**	**37**	P	**P**	**19 13 01.6**	**+0.8**
	2.2nm,0.8s,baz=202,slow=11,SNR=4.5						
113A	**Mohawk Valley,**	**78.01**	**48**	eP	**P**	**19 13 01.9**	**0.0**
	10.0nm,1.4s						
RYN	**Ryan**	**78.31**	**41**	eP	**P**	**19 13 04.2**	**+0.5**
	25nm,0.3s						
NV01	**Mina Array Sit**	**78.32**	**41**	eP	**P**	**19 13 03.6**	**-0.2**
NVAR	**Mina Array Bea**	**78.32**	**41**	P	**P**	**19 13 04.1**	**+0.3**
	4.8nm,0.8s,baz=223,slow=8.7,SNR=23						
LDFC	**Landfair**	**78.39**	**46**	eP	**P**	**19 13 04.9**	**+0.8**
	19nm,1.2s						
NV11	**Mina Array Sit**	**78.41**	**41**	eP	**P**	**19 13 04.7**	**+0.4**
	0.7nm,1.0s						
TPNV	**Topopah Spring**	**78.73**	**44**	eP	**P**	**19 13 06.2**	**+0.1**
	4.1nm,0.9s						
KVN	**Kaiserville**	**78.83**	**41**	eP	**P**	**19 13 06.4**	**-0.1**
	5.4nm,1.2s						
SHPR	**Sheep Range**	**79.18**	**44**	eP	**P**	**19 13 09.2**	**+0.7**
	4.0nm,0.9s						
Y14A	**Wickenburg**	**79.19**	**48**	eP	**P**	**19 13 08.9**	**+0.4**
	5.8nm,0.9s						
W13A	**Hualapai Mount**	**79.23**	**46**	eP	**P**	**19 13 09.2**	**+0.3**
	3.6nm,1.0s						
KSRS	**Korea Array**	**79.49**	**316**	P	**P**	**19 13 11.8**	**+1.8**
	0.7nm,0.5s,baz=116,slow=5.5,SNR=2.7						
KS15	**Wonju Array Si**	**79.51**	**316**	eP	**P**	**19 13 11.2**	**+1.2**
KSAR	**Wonju Array Be**	**79.51**	**316**	P	**P**	**19 13 11.8**	**+1.7**
TUC	**Tucson**	**79.88**	**50**	eP	**P**	**19 13 12.8**	**+0.5**
	6.7nm,1.1s						
PINE	**Pine Mountain**	**80.17**	**36**	eP	**P**	**19 13 13.8**	**+0.1**
	9.5nm,0.6s						
BMN	**Battle Mountai**	**80.20**	**40**	eP	**P**	**19 13 14.0**	**0.0**
	3.8nm,1.0s						
X16A	**Lo Mia Camp, P**	**80.53**	**48**	eP	**P**	**19 13 16.9**	**+1.0**
	6.0nm,1.0s						
LCMT	**Little Creek M**	**80.73**	**45**	eP	**P**	**19 13 17.4**	**+0.5**
	4.6nm,1.0s						
CCUT	**Cedar City**	**80.96**	**44**	eP	**P**	**19 13 18.9**	**+0.8**
	4.9nm,1.0s						
KNB	**Kanab**	**81.02**	**45**	eP	**P**	**19 13 19.5**	**+1.1**
	14nm,1.4s						
U15A	**North Rim**	**81.05**	**46**	eP	**P**	**19 13 19.9**	**+1.1**
	8.8nm,1.1s						
WUAZ	**Wupatki**	**81.17**	**47**	eP	**P**	**19 13 20.1**	**+0.8**
	8.5nm,1.3s						
USRK	**Ussurisk Ar.**	**81.17**	**324**	LR	LR	19 44 33.6	
	comp=Z,42nm,19.8s,baz=164,slow=32						
MTPU	**Mount Pierson**	**82.01**	**45**	eP	**P**	**19 13 25.0**	**+1.2**
	14nm,1.4s						
BMO	**Blue Mountains**	**82.86**	**37**	eP	**P**	**19 13 28.2**	**+0.4**
	6.9nm,1.7s						
NJ2	**Nanjing**	**82.91**	**308**	eP	**P**	**19 13 29.3**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
MAW	**Mawson**	**82.93**	**199**	P	**P**	**19 13 27.5**	**-0.3**
	4.3nm,0.7s,baz=140,slow=11,SNR=4.9						
MAW	**Mawson**	**82.93**	**199**	eP	**P**	**19 13 28.7**	**+0.9**
	5.5nm,1.8s						
MNTX	**Cornudas Mount**	**83.53**	**53**	eP	**P**	**19 13 31.5**	**0.0**
	5.6nm,1.0s						
LAZ	**Ladron**	**83.57**	**50**	eP	**P**	**19 13 29.2**	**-2.7**
F10A	**Beach Ranch, E**	**83.59**	**36**	eP	**P**	**19 13 31.3**	**-0.3**
	5.8nm,0.8s						
TX31	**Lajitas Ar. Si**	**83.73**	**56**	eP	**P**	**19 13 32.6**	**-0.2**
TXAR	**Lajitas Array**	**83.73**	**56**	P	**P**	**19 13 32.7**	**-0.1**
	2.1nm,0.8s,baz=210,slow=8.7,SNR=21						
HLID	**Hailey**	**83.75**	**39**	eP	**P**	**19 13 32.6**	**0.0**
	8.2nm,1.3s						
GHO	**Glory Hole Cre**	**84.30**	**12**	eP	**P**	**19 13 32.0**	**-2.9**
	9.3nm,0.6s						
ANMO	**Albuquerque**	**84.32**	**50**	P	**P**	**19 13 36.2**	**+0.5**
	5.4nm,1.0s,baz=215,slow=7.5,SNR=14						
ANMO	**Albuquerque**	**84.32**	**50**	eP	**P**	**19 13 36.0**	**+0.3**
	10nm,1.2s						
LNIG	**Linares**	**85.14**	**61**	eP	**P**	**19 13 38.7**	**-1.1**
	13nm,1.0s						
TRF	**Thorofare Moun**	**85.61**	**10**	eP	**P**	**19 13 41.0**	**-0.5**
	5.4nm,0.7s						
MSTX	**Muleshoe**	**86.54**	**52**	eP	**P**	**19 13 46.8**	**+0.1**
	14nm,0.9s						
T25A	**Trinidad**	**86.83**	**49**	eP	**P**	**19 13 46.0**	**-2.2**
	8.0nm,1.0s						
WRH	**Wood River Hil**	**86.94**	**11**	eP	**P**	**19 13 47.8**	**+0.1**
	16nm,1.4s						
IPM	**Ipoh**	**87.03**	**276**	eP	**P**	**19 13 48.5**	**-1.0**
	10nm,1.1s						
HDA	**Harding Lake**	**87.09**	**11**	eP	**P**	**19 13 48.4**	**-0.1**
	3.4nm,0.9s						
CCB	**Clear Creek Bu**	**87.15**	**11**	eP	**P**	**19 13 48.4**	**-0.3**
	7.1nm,1.3s						
MDM	**Murphy Dome**	**87.36**	**11**	eP	**P**	**19 13 49.6**	**-0.2**
	8.1nm,1.3s						
IL1	**Eielson Array**	**87.43**	**11**	eP	**P**	**19 13 49.2**	**-0.9**
ILAR	**Eielson Array**	**87.43**	**11**	P	**P**	**19 13 49.8**	**-0.3**
	1.2nm,0.8s,baz=215,slow=5.8,SNR=10						
ILB	**Eielson Array**	**87.43**	**11**	eP	**P**	**19 13 49.4**	**-0.7**
VNA3	**Neumayer Olymp**	**87.91**	**175**	P	**P**	**19 13 52.2**	**-0.4**
SNAA	**Sanae**	**87.93**	**177**	P	**P**	**19 13 52.4**	**-0.4**
SNAA	**Sanae**	**87.93**	**177**	P	**P**	**19 13 52.4**	**-0.4**
	2.4nm,0.9s,baz=175,slow=4.6,SNR=7.6						
SNAA	**Sanae**	**87.93**	**177**	eP	**P**	**19 13 52.2**	**-0.6**
	18nm,1.9s						
APG	**El Apazote**	**89.09**	**74**	P	**P**	**19 13 59.6**	**+0.2**
	4.9nm,0.7s,baz=318,slow=11,SNR=5.1						
GYA	**Guiyang**	**90.06**	**298**	eP	**P**	**19 14 05.0**	**+1.4**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN	**Xi'an**	**91.25**	**306**	P	**P**	**19 14 11.2**	**+2.3**
XAN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
CD2	**Chengdu**	**94.09**	**301**	P	**P**	**19 14 21.8**	**-0.3**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LZH	**Lanzhou**	**95.88**	**306**	eP	**P**	**19 14 32.7**	**+2.4**
LZH				pP	sP	19 14 40.8	-1.4
LZH				sP	pP	19 14 45.0	+5.9
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
ULM	**Lac du Bonnet**	**98.05**	**39**	P	Pdif	19 14 40.0	+0.4
	1.0nm,0.6s,baz=254,slow=7.6,SNR=3.1						
GTA	**Gaotai**	**100.00**	**308**	eP	**Pdif**	**19 14 57.3**	**+8.6**
GTA				pP	sP	19 15 01.1	+0.4
GTA				sP	pP	19 15 03.6	+6.1
GTA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
MK32	**Makanchi Array**	**114.02**	**313**	ePKiKP	PKPdf	19 19 41.9	-0.4
MKAR	**Makanchi Array**	**114.02**	**313**	PKP	PKPdf	19 19 41.9	-0.4
	comp=Z,0.4nm,0.7s,baz=80,slow=2.7,SNR=4.6						
KURK	**Kurchatov**	**116.61**	**317**	ePKPdf	**PKPdf**	**19 19 47.2**	**+0.1**
KURBB	**Kurchatov Arra**	**116.67**	**317**	PKP	**PKPdf**	**19 19 47.2**	**0.0**
	comp=Z,0.4nm,0.7s,baz=104,slow=1.9,SNR=4.2						
KSH	**Kashi**	**118.08**	**305**	PKP	**PKPdf**	**19 19 51.1**	**+0.6**
KSH				PP	**PP**	**19 21 10.7**	**+4.9**
BVAR	**Borovoye Array**	**121.55**	**320**	PKP	**PKPdf**	**19 19 56.6**	**0.0**
	comp=Z,0.6nm,0.6s,baz=64,slow=3.4,SNR=4.7						
ARA0	**ARCESS Array S**	**129.50**	**351**	ePKPdf	**PKPdf**	**19 20 11.4**	**+0.1**
ARCES	**ARCESS Array B**	**129.50**	**351**	PKP	**PKPdf**	**19 20 11.4**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=5,7,slow=1.8,SNR=5.5						
FIA0	**FINESS Array S**	**136.73**	**346**	ePKPdf	**PKPdf**	**19 20 23.7**	**-1.4**
FINES	**FINESS Array B**	**136.73**	**346**	PKP	**PKPdf**	**19 20 23.7**	**-1.4**
	comp=Z,1.7nm,1.0s,baz=43,slow=6.3,SNR=2.9						
EKA	**Eskdalemuir Ar**	**144.44**	**9**	PKP	**PKPab**	**19 20 37.5**	**0.0**
	comp=Z,2.6nm,0.8s,baz=336,slow=3.1,SNR=5.9						
AKASG	**Malin Array Be**	**144.75**	**334**	PKP	**PKPab**	**19 20 38.8**	**0.0**
	comp=Z,5.2nm,0.7s,baz=42,slow=4.5,SNR=32						
AKBB	**Malin Array Si**	**144.75**	**334**	ePKPdf	**PKPab**	**19 20 38.6**	**-0.1**
KIEV	**Kiev**	**144.76**	**334**	ePKPdf	**PKPab**	**19 20 38.6**	**-0.2**
AK11	**Malin Array Si**	**144.79**	**334**	ePKPdf	**PKPab**	**19 20 38.8**	**-0.1**
CLL	**Collm**	**148.72**	**352**	ePKPbc	**PKPbc**	**19 20 51.0**	**+0.6**
	comp=Z,5.0nm,1.0s						
CLL				ePKPab	**PKPab**	**19 20 53.0**	**-1.1**
CLL				epPKPbc	**sPKPbc**	**19 21 02.0**	**-0.4**
BUR08	**Bucovina Ar. S**	**148.79**	**335**	ePKPbc	**PKPbc**	**19 20 51.1**	**+0.2**
BUR04	**Bucovina Ar. S**	**148.81**	**335**	ePKPbc	**PKPbc**	**19 20 51.7**	**+0.8**
BRG	**Berggiesshubel**	**149.01**	**350**	ePKP	**PKPbc**	**19 20 51.8**	**+0.7**
	comp=Z,7.9nm,1.2s						
MORC	**Moravsky Berou**	**149.35**	**346**	ePKP	**PKPbc**	**19 20 52.8**	**+0.7**
BR101	**Keskin Array S**	**149.63**	**315**	ePKPbc	**PKPbc**	**19 20 53.9**	**+0.6**
BRTR	**Keskin Array B**	**149.63**	**315**	PKPbc	**PKPbc**	**19 20 53.9**	**+0.6**
	comp=Z,0.9nm,0.8s,baz=116,slow=2.9,SNR=5.2						
VRAC	**Vranov**	**150.01**	**346**	ePKP	**PKPbc**	**19 20 53.5**	**-0.2**
MLR	**Muntele Rosu**	**150.18**	**331**	PKPbc	**PKPbc**	**19 20 54.6**	**+0.2**
	comp=Z,1.1nm,1.0s,baz=74,slow=8.7,SNR=5.8						
MLR	**Muntele Rosu**	**150.18**	**331**	ePKPdf	**PKPdf**	**19 20 48.0**	**-1.3**
MLR				ePKPbc	**PKPbc**	**19 20 54.4**	**0.0**
MLR				ePKPbc	**PKPbc**	**19 20 54.6**	**+0.2**
JAVC	**Velka Javorina**	**150.18**	**345**	ePKP	**PKPbc**	**19 20 55.9**	**+1.7**
ASF	**Jabal al Asfar**	**150.20**	**299**	PKPbc	**PKPbc**	**19 20 55.4**	**+0.6**
	comp=Z,0.9nm,0.3s,baz=153,slow=4.5,SNR=2.6						
VYHS	**Vyhne**	**150.21**	**343**	ePKP	**PKPbc**	**19 20 55.2**	**+1.0**
VYHS				e		19 21 01.4	
VYHS				e		19 21 06.7	
KRUC	**Moravsky**	**150.29**	**346**	ePKP	**PKPbc**	**19 20 55.0**	**+0.7**
KHC	**Kasperske Hory**	**150.76**	**350**	ePKP	**PKPbc**	**19 20 55.5**	**0.0**
GEC2	**GERESS Array S**	**151.02**	**350**	ePKPbc	**PKPbc**	**19 20 56.0**	**-0.2**
GERES	**GERESS Array B**	**151.02**	**350**	PKPbc	**PKPbc**	**19 20 56.5**	**+0.3**
	comp=Z,0.8nm,0.8s,baz=352,slow=3.0,SNR=8.1						
GEA0	**GERESS Array S**	**151.02**	**350**	ePKPbc	**PKPbc**	**19 20 56.0**	**-0.2**
MMAI	**Mount Meron Ar**	**151.16**	**302**	PKPbc	**PKPbc**	**19 20 58.5**	**+1.5**
	comp=Z,0.9nm,0.6s,baz=52,slow=9.3,SNR=3.3						
TORD	**Torodi Ar. Bea**	**171.57**	**149**	PKP	**PKPdf**	**19 21 11.4**	**-1.3**
	comp=Z,0.9nm,0.9s,baz=233,slow=3.3,SNR=3.2						
TOA1	**Torodi Ar. Sit**	**171.58**	**149**	ePKPdf	**PKPdf**	**19 21 11.4**	**-1.3**

*ISCJB **12** 19:03:35.3±0.5,6.°62N±0.°04×123.°61E±0.°05,h627km±7km, mb4.3/69,Error ellipse: s-maj=9.0km s-min=4.5km az=143.9*

*NEIC **12** 19:03:36.2±0.4,6.°60N×123.°58E,h615km±6km,mb4.5/50, Error ellipse: s-maj=6.8km s-min=3.4km az=53.0*

*IDC **12** 19:03:37.0±1.1,6.°61N×123.°64E,h628km±14km,mb3.5/20, mb1 3.6/22,mb1mx3.3/61,mbtmp4.6/22,Error ellipse: s-maj=18.9km s-min=6.4km az=66.0*

ISC 12 19:03:36.1±0.7,6.°60N±0.°06×123.°60E±0.°08,h616km±8km, n113,σ0°88/124,mb4.4/69,1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MYLDM	**Lahad Datu**	**5.26**	**255**	eP	**P**	**19 05 12.7**	**+0.6**
TNTI	**Ternate**	**6.90**	**147**	eP	**P**	**19 05 25.2**	**-0.8**
TNTI				eS	**S**	**19 06 53.3**	**-2.2**
KKM	**Kota Kinabalu**	**7.36**	**266**	eP	**P**	**19 05 29.9**	**-0.3**
SBUM	**Sibu**	**12.07**	**251**	eP	**P**	**19 06 15.7**	**+0.1**
FAKI	**Fak Fak**	**12.81**	**137**	eP	**P**	**19 06 23.3**	**+0.5**
KSM	**Kuching**	**14.20**	**250**	eP	**P**	**19 06 36.1**	**-0.4**
MMRI	**Maumere**	**15.20**	**185**	eP	**P**	**19 06 47.6**	**+2.2**
	29nm,0.5s						
SOEI	**Soe**	**16.26**	**178**	eP	**P**	**19 06 55.3**	**0.0**
	20nm,0.8s						
BATI	**Baumata**	**16.70**	**180**	P	**P**	**19 06 59.5**	**+0.2**
	11nm,0.3s,baz=2.5,slow=0.5,SNR=34						
YULB	**Yu-li**	**16.84**	**353**	eP	**P**	**19 06 59.8**	**-0.6**
	54nm,1.8s						
JAY	**Jayapura**	**19.33**	**117**	P	**P**	**19 07 23.4**	**+0.2**
	0.8nm,0.3s,baz=21,slow=1.0,SNR=4.3						
MYKOM	**Kota Tinggi**	**20.26**	**257**	eP	**P**	**19 07 31.7**	**+0.1**
	34nm,1.7s						
MTN	**Manton Dam**	**20.72**	**159**	eP	**P**	**19 07 34.9**	**-0.7**
	7.6nm,0.8s						
IPM	**Ipoh**	**22.57**	**266**	eP	**P**	**19 07 51.3**	**-0.9**
	25nm,1.6s						
KULM	**Kulim**	**22.86**	**268**	eP	**P**	**19 07 53.9**	**-0.9**
	38nm,1.7s						
PBKT	**Sadao Pong**	**24.25**	**296**	eP	**P**	**19 08 07.1**	**+0.1**
	11nm,0.9s						
FITZ	**Fitzroy Crossi**	**24.62**	**175**	eP	**P**	**19 08 10.1**	**-0.2**
	6.9nm,1.1s						
NJ2	**Nanjing**	**25.71**	**351**	eP	**P**	**19 08 19.6**	**0.0**
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
GSI	**Gunungsitoli**	**26.48**	**260**	eP	**P**	**19 08 25.9**	**-0.9**
	17nm,0.7s						
CM01	**Chiang Mai Arr**	**26.73**	**298**	eP	**P**	**19 08 29.5**	**+0.7**
CM31	**Chiang Mai Arr**	**26.75**	**298**	eP	**P**	**19 08 29.6**	**+0.6**
CMAR	**Chiang Mai Arr**	**26.75**	**298**	P	**P**	**19 08 30.1**	**+1.1**
	4.6nm,0.8s,baz=119,slow=7.4,SNR=29						
CHTO	**Chiang Mai**	**26.89**	**299**	eP	**P**	**19 08 31.1**	**+0.8**
	7.2nm,0.6s						
ENH	**Enshi**	**27.03**	**332**	eP	**P**	**19 08 32.0**	**+0.7**
	12nm,0.8s						
COEN	**Coen**	**28.19**	**136**	eP	**P**	**19 08 41.2**	**-0.4**
	12nm,0.6s						
WRAB	**Tennant Creek**	**28.41**	**158**	eP	**P**	**19 08 43.3**	**-0.1**
	26nm,0.6s						
WRA	**Warramunga Arr**	**28.42**	**158**	P	**P**	**19 08 43.4**	**-0.1**
	22nm,0.5s,baz=341,slow=9.2,SNR=348						
WRA				PcP	**PcP**	**19 11 33.8**	**-1.2**
	0.6nm,0.5s,baz=325,slow=2.1,SNR=3.4						
WRA				S	**S**	**19 12 46.0**	**-3.2**
	2.0nm,0.8s,baz=337,slow=16,SNR=5.0						
WRA				ScP	**ScP**	**19 14 18.7**	**-0.2**
	1.0nm,0.4s,baz=342,slow=3.2,SNR=11						
WB2	**Warramunga Arr**	**28.42**	**158**	eP	**P**	**19 08 42.2**	**-1.3**
RABL	**Rabaul**	**30.46**	**110**	eP	**P**	**19 09 02.2**	**+1.0**
	19nm,0.4s						
XAN	**Xi'an**	**30.50**	**336**	P	**P**	**19 09 01.2**	**0.0**
XAN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
AS31	**Alice Springs**	**31.72**	**162**	eP	**P**	**19 09 12.6**	**+0.9**
	7.4nm,0.6s						
ASAR	**Alice Springs**	**31.72**	**162**	P	**P**	**19 09 12.4**	**+0.7**
	15nm,0.4s,baz=342,slow=6.8,SNR=664						
ASAR				PcP	**PcP**	**19 11 43.2**	**-0.6**
	0.9nm,0.5s,baz=349,slow=2.4,SNR=4.7						
ASAR				S	**S**	**19 13 40.2**	**+0.4**
	1.7nm,0.6s,baz=349,slow=20,SNR=8.7						
ASAR				ScP	**ScP**	**19 14 29.6**	**-0.2**
	1.4nm,0.7s,baz=346,slow=2.8,SNR=8.3						
AS01	**Alice Springs**	**31.73**	**162**	eP	**P**	**19 09 12.1**	**+0.3**
**

1.2nm,0.6s,baz=211,slow=5.0,SNR=2.7
PETK Petropavlovsk- 54.05 25 *e*P **P 19 12 05.1 +0.9**
PET Petropavlovsk 54.39 25 *e*P **P 19 12 06.1 -0.4**
22nm,0.4s
NRN Naryn 54.62 317 *e*P **P 19 12 09.3 +0.5**
3.0nm,0.6s
YAK Yakutsk 55.50 3 *e*P **P 19 12 14.4 +0.4**
24nm,0.3s
AAK Ala-Archa 56.15 318 *e*P **P 19 12 19.0 -0.2**
12nm,1.8s
ZAA0 Zalesovo Array 56.64 334 *e*P **P 19 12 21.3 -0.7**
2.2nm,0.6s
ZALV Zalesovo Beam 56.64 334 P **P 19 12 21.7 -0.4**
2.1nm,0.6s,baz=140,slow=5.9,SNR=9.1
ZALV Zalesovo Beam 56.64 334 *e*P **P 19 12 21.1 -1.0**
MA2 Magadan 56.76 16 *e*P **P 19 12 23.1 +0.3**
5.7nm,0.7s
KBL Kabul 57.31 307 *e*P **P 19 12 26.7 -0.6**
5.4nm,0.8s
KURBB Kurchatov Arra 57.66 328 P **P 19 12 29.7 +0.6**
8.2nm,0.6s,baz=128,slow=6.2,SNR=115
KURK Kurchatov 57.66 328 *e*P **P 19 12 29.2 +0.1**
16nm,0.6s
KK31 Karatay Array 59.02 317 *e*P **P 19 12 38.5 +0.1**
KKAR Karatay Array 59.02 317 *e*P **P 19 12 38.5 +0.1**
BVAR Borovoye Array 63.23 327 P **P 19 13 05.2 -0.4**
2.2nm,0.7s,baz=125,slow=7.4,SNR=15
BRVK Borovoye 63.30 327 *e*P **P 19 13 06.1 +0.1**
4.4nm,0.8s
TIXI Tiksi 65.06 2 *e*P **P 19 13 16.0 -0.7**
3.3nm,0.5s
THZ Tophouse 65.87 142 *e*P **P 19 13 22.4 -0.1**
166nm,1.9s
RPZ Rata Peaks 65.89 144 P **P 19 13 23.3 +0.8**
18nm,1.0s,baz=233,slow=5.1,SNR=3.5
RPZ Rata Peaks 65.89 144 *e*P **P 19 13 23.5 +1.0**
100nm,1.4s
KHZ Kahutara 66.63 142 *e*P **P 19 13 28.5 +1.6**
86nm,1.0s
GYA0B ALIBECK ARRAY 66.68 308 *e*P **P 19 13 25.9 -1.6**
3.8nm,0.8s
BKZ Black Stump Fm 66.79 138 *e*P **P 19 13 28.2 0.0**
107nm,1.7s
NRIK Noril'sk 66.93 347 P **P 19 13 28.4 0.0**
7.1nm,0.7s,baz=91,slow=5.9,SNR=3.0
ABKAR Akbulak array 67.97 321 *e*P **P 19 13 34.8 -0.3**
AKTO Aktyubinsk 69.49 322 P **P 19 13 44.6 +0.4**
3.3nm,0.6s,baz=102,slow=12,SNR=14
ARU Arti 70.86 328 *e*P **P 19 13 51.2 -0.9**
5.7nm,0.5s
CASY Casey 73.32 185 *e*P **P 19 14 06.0 0.0**
14nm,1.4s
FALS False Pass 74.86 35 *e*P **P 19 14 15.2 +0.3**
105nm,0.3s
ANM Nome 75.97 25 *e*P **P 19 14 21.4 +0.4**
58nm,1.3s
RAYN Ar Rayn 76.50 293 *e*P **P 19 14 24.2 -0.6**
3.8nm,0.8s
KLMR Klimovskoe 81.39 330 *e*P **P 19 14 46.9 -2.8**
KLMR AMP 19 14 50.1
comp=Z,11nm,1.3s
BRTR Keskin Array B 85.80 309 P **P 19 15 11.2 -0.9**
comp=Z,1.0nm,0.8s,baz=117,slow=4.1,SNR=7.4
VNDA Vanda 86.66 172 P **P 19 15 15.1 0.0**
comp=Z,1.0nm,0.7s,baz=294,slow=5.9,SNR=3.5
ARCES ARCESS Array B 86.69 340 P **P 19 15 14.5 -1.0**
comp=Z,1.4nm,0.8s,baz=60,slow=7.4,SNR=3.7
FINES FINESS Array B 87.84 332 P **P 19 15 19.9 -1.1**
comp=Z,0.9nm,0.7s,baz=46,slow=5.5,SNR=6.8
MVCO Mesa Verde 114.74 44 *e*Pdif **Pdif 19 17 22.1 -0.6**
PLCA Paso Flores 143.73 162 PKP PKPab 19 22 02.0 0.0
comp=Z,2.0nm,0.6s,baz=258,slow=3.2,SNR=6.1

*DDA **12** 19:10:09.0,36.′46N×28.′91E,h29km,MI3.4*
*ISK **12** 19:10:08.6,36.′41N×28.′91E,h18km,ML3.0/15*
*ISCJB **12** 19:10:09.9±0.4,36.′43N±0.′03×28.′88E±0.′02,h24km±3km,*
Error ellipse: s-maj=4.6km s-min=3.3km az=0.3
*CSEM **12** 19:10:09.7±0.1,36.′42N×28.′91E,h20km,ML3.4,Error*
ellipse: s-maj=3.8km s-min=2.5km az=179.0
*ATH **12** 19:10:09.2,36.′45N×28.′90E,h42km±2km,ML2.5/3,Error*
ellipse: s-maj=3.8km s-min=1.1km az=179.0
ISC 12 19:10:08.9±1.1,36.′44N±0.′02×28.′95E±0.′02,h16km±9km,
n83,σ0°78/120,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.22**	**29**	PG	**Pb**	**19 10 14.8**	**+0.2**
FETY				SG	**Sb**	**19 10 19.6**	**+1.2**
FETY	**Fethiye**	**0.22**	**29**	P	**Pb**	**19 10 14.8**	**+0.2**
FETY				*e*Sg	**Sb**	**19 10 19.6**	**+1.2**
FETY				S		19 10 20.1	
DALY	**Dalyan (Mu¨la**	**0.45**	**328**	PG	**Pb**	**19 10 18.6**	**+0.2**
DALY				SG	**Sb**	**19 10 25.5**	**+0.8**
DALY	**Dalyan (Mu¨la**	**0.45**	**328**	*i* P	**Pb**	**19 10 18.5**	**+0.2**
DALY				*i* S	**Sb**	**19 10 25.3**	**+0.6**
DALY	**Dalyan (Mu¨la**	**0.45**	**328**	*e*Pg	**Pb**	**19 10 18.6**	**+0.2**
DALY				S	**Sb**	**19 10 25.3**	**+0.6**
TURN	**Turunc**	**0.52**	**327**	PG	**Pn**	**19 10 21.9**	**+0.4**
TURN	**Turunc**	**0.52**	**327**	*i* P	**Pn**	**19 10 22.2**	**+0.7**
TURN				*i* S	**Sn**	**19 10 31.6**	**+1.7**
TURN	**Turunc**	**0.52**	**327**	*e*Pg	**Pn**	**19 10 21.9**	**+0.4**
TURN	**Turunc**	**0.52**	**327**	P	**Pn**	**19 10 22.2**	**+0.7**
AKAS	**Kas**	**0.57**	**111**	PG	**Pb**	**19 10 20.6**	**+0.1**
AKAS				SG	**Sb**	**19 10 29.3**	**+0.9**
AKAS	**Kas**	**0.57**	**111**	*i* P	**Pb**	**19 10 20.7**	**+0.1**
AKAS				*i* S	**Sn**	**19 10 31.2**	**-0.3**
AKAS	**Kas**	**0.57**	**111**	P	**Pb**	**19 10 20.7**	**+0.1**
AKAS				*e*Sg	**Sb**	**19 10 29.3**	**+0.9**
AKAS				S	**Sn**	**19 10 31.2**	**-0.3**
KSL	**Kastellorizon**	**0.59**	**119**	P	**Pb**	**19 10 21.4**	**+0.6**
KSL				AML	AML	19 10 32.6	
	comp=E,1243μm,0.6s						
KSL				S	**Sn**	**19 10 32.8**	**+1.0**
KSL				AML	AML	19 10 33.5	
	comp=N,670μm,0.4s						
MRSB	**Marmaris-Mugla**	**0.67**	**295**	PG	**Pg**	**19 10 22.0**	**0.0**
MRSB	**Marmaris-Mugla**	**0.67**	**295**	*e*Pg	**Pg**	**19 10 22.0**	**0.0**
ARG	**Arkhangelos**	**0.70**	**252**	PG	**Pg**	**19 10 22.2**	**-0.4**
ARG	**Arkhangelos**	**0.70**	**252**	P	**Pg**	**19 10 22.8**	**+0.2**
ARG				S	**Sb**	**19 10 33.6**	**+1.5**
ARG				AML	AML	19 10 33.8	
	comp=N,626μm,0.5s						
ARG				AML	AML	19 10 34.4	
	comp=E,928μm,0.2s						
ARG	**Arkhangelos**	**0.70**	**252**	*e*Pg	**Pg**	**19 10 22.2**	**-0.4**
ARG	**Arkhangelos**	**0.70**	**252**	P	**Pg**	**19 10 23.0**	**+0.4**
ARG				S	**Sb**	**19 10 33.4**	**+1.3**
ELL	**Elmali**	**0.83**	**68**	PG	**Pn**	**19 10 26.1**	**+0.1**
ELL	**Elmali**	**0.83**	**68**	*e*Pg	**Pn**	**19 10 26.1**	**+0.1**
GLHS	**Glhisar (BURDU**	**0.84**	**31**	PG	**Pn**	**19 10 25.8**	**-0.3**
GLHS	**Glhisar (BURDU**	**0.84**	**31**	*e*Pg	**Pn**	**19 10 25.8**	**-0.3**
YER	**Yerkesik**	**0.88**	**323**	PG	**Pg**	**19 10 26.2**	**+0.2**
YER	**Yerkesik**	**0.88**	**323**	*e*Pg	**Pg**	**19 10 26.2**	**+0.2**
GOLH	**Golhisar**	**0.94**	**31**	*i* P	**Pb**	**19 10 26.2**	**-0.6**
GOLH				*i* S	**Sn**	**19 10 41.9**	**+1.4**
GOLH	**Golhisar**	**0.94**	**31**	P	**Pb**	**19 10 26.2**	**-0.6**
GOLH				S	**Sn**	**19 10 41.9**	**+1.4**
TAVA	**DENIZLI_Tavas**	**1.02**	**358**	*i* P	**Pb**	**19 10 28.3**	**0.0**
TAVA				*i* S	**Sn**	**19 10 42.5**	**-0.2**
TAVA	**DENIZLI_Tavas**	**1.02**	**358**	P	**Pb**	**19 10 28.3**	**0.0**
TAVA				S	**Sn**	**19 10 42.5**	**-0.2**
DATC	**Datca-Mugla**	**1.08**	**288**	PG	**Pb**	**19 10 29.2**	**0.0**
DATC	**Datca-Mugla**	**1.08**	**288**	*e*Pg	**Pb**	**19 10 29.2**	**0.0**
DAT	**Datca**	**1.14**	**285**	PN	**Pn**	**19 10 29.9**	**-0.4**
DAT	**Datca**	**1.14**	**285**	*i* P	**Pn**	**19 10 30.4**	**+0.2**
DAT				*i* S	**Sb**	**19 10 45.4**	**+0.5**
DAT	**Datca**	**1.14**	**285**	*e*Pn	**Pn**	**19 10 29.9**	**-0.4**
DAT	**Datca**	**1.14**	**285**	P	**Pn**	**19 10 30.4**	**+0.2**
DAT				S	**Sb**	**19 10 45.4**	**+0.5**
DNZL	**Cakiroluk**	**1.25**	**4**	*i* P	**Pb**	**19 10 32.3**	**+0.1**
DNZL				*i* S	**Sg**	**19 10 48.9**	**-0.5**
DNZL	**Cakiroluk**	**1.25**	**4**	P	**Pb**	**19 10 32.3**	**+0.1**
DNZL				S	**Sg**	**19 10 48.9**	**-0.5**
KORT	**Korkueli**	**1.26**	**63**	PN	**Pg**	**19 10 33.2**	**0.0**
KORT	**Korkueli**	**1.26**	**63**	*i* P	**Pg**	**19 10 33.6**	**+0.4**
KORT				*i* S	**Sg**	**19 10 52.6**	**+3.0**
KORT	**Korkueli**	**1.26**	**63**	*e*Pn	**Pg**	**19 10 33.2**	**0.0**
KORT	**Korkueli**	**1.26**	**63**	P	**Pg**	**19 10 33.6**	**+0.4**
MLSB	**Milas**	**1.27**	**313**	PN	**Pn**	**19 10 32.3**	**+0.3**
MLSB	**Milas**	**1.27**	**313**	*e*Pn	**Pn**	**19 10 32.3**	**+0.3**
DENT	**Denizli**	**1.31**	**3**	PN	**Pn**	**19 10 32.8**	**+0.2**
DENT	**Denizli**	**1.31**	**3**	*e*Pn	**Pn**	**19 10 32.8**	**+0.2**
BDRM	**Kayabasi**	**1.36**	**298**	*i* P	**Pn**	**19 10 33.0**	**-0.2**
BDRM				*i* S	**Sn**	**19 10 50.9**	**0.0**
BDRM	**Kayabasi**	**1.36**	**298**	P	**Pn**	**19 10 33.0**	**-0.2**
BDRM				S	**Sn**	**19 10 50.9**	**0.0**
ANTB	**Antalya**	**1.45**	**71**	PN	**Pb**	**19 10 35.1**	**-0.3**
ANTB	**Antalya**	**1.45**	**71**	*e*Pn	**Pb**	**19 10 35.1**	**-0.3**
BODT	**Bodrum**	**1.46**	**296**	PN	**Pn**	**19 10 33.5**	**-1.0**
BODT	**Bodrum**	**1.46**	**296**	*e*Pn	**Pn**	**19 10 33.5**	**-1.0**
NISR	**Nisiros**	**1.48**	**277**	P	**Pn**	**19 10 34.8**	**0.0**
NISR	**Nisiros**	**1.48**	**277**	P	**Pn**	**19 10 34.5**	**-0.2**
AYDN	**Tasoluk**	**1.49**	**325**	*i* P	**Pb**	**19 10 36.1**	**-0.1**
AYDN				*i* S	**Sb**	**19 10 55.6**	**+0.7**
AYDN	**Tasoluk**	**1.49**	**325**	P	**Pb**	**19 10 36.1**	**-0.1**
AYDN				S	**Sb**	**19 10 55.6**	**+0.7**
YKAV	**Yalikavak-Bodr**	**1.50**	**298**	PN	**Pn**	**19 10 34.9**	**-0.2**
YKAV	**Yalikavak-Bodr**	**1.50**	**298**	*e*Pn	**Pn**	**19 10 34.9**	**-0.2**
BRDR	**BURDUR-Merkez**	**1.54**	**35**	*i* P	**Pg**	**19 10 37.5**	**-1.0**
BRDR				*i* S	**Sg**	**19 10 57.4**	**-1.2**
BRDR	**BURDUR-Merkez**	**1.54**	**35**	P	**Pg**	**19 10 37.5**	**-1.0**
BRDR				S	**Sg**	**19 10 57.4**	**-1.2**
KARP	**Karpathos**	**1.70**	**239**	PN	**Pn**	**19 10 37.5**	**-0.4**
KARP	**Karpathos**	**1.70**	**239**	P	**Pn**	**19 10 37.5**	**-0.4**
KARP				S	**Sn**	**19 10 57.6**	**-1.7**
KARP				AML	AML	19 10 59.5	
	comp=N,156μm,0.2s						
KARP				AML	AML	19 10 59.5	
	comp=E,192μm,0.2s						
KARP	**Karpathos**	**1.70**	**239**	P	**Pn**	**19 10 37.5**	**-0.4**
KARP				S	**Sn**	**19 10 57.9**	**-1.4**
AYDB	**Zeytinkoy-Aydi**	**1.73**	**331**	PN	**Pn**	**19 10 38.7**	**+0.4**
AYDB	**Zeytinkoy-Aydi**	**1.73**	**331**	*e*Pn	**Pn**	**19 10 38.7**	**+0.4**
GCAM	**G?zelcaml?**	**1.86**	**313**	PN	**Pn**	**19 10 40.6**	**+0.5**
GCAM	**G?zelcaml?**	**1.86**	**313**	*i* P	**Pn**	**19 10 40.1**	**+0.1**
GCAM				*i* S	**Sn**	**19 11 03.0**	**-0.2**
GCAM	**G?zelcaml?**	**1.86**	**313**	P	**Pn**	**19 10 40.1**	**+0.1**
GCAM	**G?zelcaml?**	**1.86**	**313**	*e*Pn	**Pn**	**19 10 40.6**	**+0.5**
GCAM				S	**Sn**	**19 11 03.0**	**-0.2**
SUTC	**Sutluce-Ispart**	**1.94**	**57**	PN	**Pb**	**19 10 42.6**	**-1.4**
SUTC	**Sutluce-Ispart**	**1.94**	**57**	*e*Pn	**Pb**	**19 10 42.6**	**-1.4**
KHAL	**Karahalli**	**1.98**	**12**	*i* P	**Pn**	**19 10 42.0**	**+0.2**
KHAL				*i* S	**Sn**	**19 11 03.8**	**-2.4**
KHAL	**Karahalli**	**1.98**	**12**	P	**Pn**	**19 10 42.0**	**+0.2**
KULA	**Kula-Manisa**	**2.08**	**354**	PN	**Pn**	**19 10 43.7**	**+0.5**
KULA	**Kula-Manisa**	**2.08**	**354**	*e*Pn	**Pn**	**19 10 43.7**	**+0.5**
SMG	**Samos**	**2.11**	**308**	P	**Pn**	**19 10 43.4**	**-0.1**
SMG				S	**Sn**	**19 11 08.0**	**-1.4**
SMG	**Samos**	**2.11**	**308**	P	**Pn**	**19 10 43.4**	**-0.2**
SMG				S	**Sn**	**19 11 08.0**	**-1.4**
KEPZ	**Antalya-Kepez**	**2.18**	**77**	*i* P	**Pb**	**19 10 46.2**	**-1.8**
KEPZ				*i* S	**Sb**	**19 11 15.2**	**+0.3**
KEPZ	**Antalya-Kepez**	**2.18**	**77**	P	**Pb**	**19 10 46.2**	**-1.8**
DGB	**¨zmir**	**2.30**	**315**	*i* P	**Pn**	**19 10 45.7**	**-0.5**
DGB				*i* S	**Sn**	**19 11 13.0**	**-1.1**
ZKR	**Zakros**	**2.58**	**240**	P	**Pn**	**19 10 50.8**	**+0.8**
ZKR	**Zakros**	**2.58**	**240**	P	**Pn**	**19 10 50.3**	**+0.3**
URLA	**Izmir**	**2.68**	**316**	PN	**Pn**	**19 10 51.9**	**+0.5**
URLA	**Izmir**	**2.68**	**316**	*e*Pn	**Pn**	**19 10 51.9**	**+0.5**

*IDC **12** 19:10:13.3±2.3,20.′44S×173.′88W,h0km,mb3.8/5,*
mb1 4.1/5,mb1mx3.8/47,mbtmp3.8/5,Error ellipse:
s-maj=179.0km s-min=24.1km az=156.0
*NEIC **12** 19:10:13.9±4.2,20.′54S×173.′91W,h9km±26km,mb4.9/7,*
Error ellipse: s-maj=17.4km s-min=9.0km az=114.0
*ISCJB **12** 19:10:14.4±0.6,20.′69S±0.′09×173.′8W±0.′1,h27km,*
mb4.5/10,Error ellipse: s-maj=19.8km s-min=9.5km
az=31.8
ISC 12 19:10:16.7±0.8,20.′52S±0.′10×174.′0W±0.′2,h27km,n21,
σ1°34/24,mb4.5/10,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**6.90**	**18**	*e*Pn	**Pn**	**19 11 56.9**	**+0.7**
RAO	**Raoul Island**	**9.40**	**202**	*e*Pn	**Pn**	**19 12 29.3**	**-1.1**
FUNA	**Funafuti**	**13.64**	**330**	*e*Pn	**Pn**	**19 13 26.3**	**-2.1**
URZ	**Urewera**	**19.29**	**202**	*e*P	**P**	**19 14 38.1**	**-1.4**
91nm,1.8s							
BKZ	**Black Stump Fm**	**20.32**	**202**	*e*P	**P**	**19 14 50.3**	**-0.4**
122nm,1.9s							
HIZ	**Hauiti**	**20.37**	**206**	*e*P	**P**	**19 14 52.1**	**+0.9**
247nm,2.0s							
CTA	**Charters Tower**	**37.26**	**264**	P	**P**	**19 17 28.1**	**+1.6**
2.2nm,0.7s,baz=100,slow=11,SNR=2.3							
AS01	**Alice Springs**	**48.16**	**256**	*e*P	**P**	**19 18 56.2**	**+1.3**
ASAR	**Alice Springs**	**48.20**	**256**	P	**P**	**19 18 56.3**	**+1.1**
0.5nm,0.5s,baz=100,slow=7.4,SNR=11							
ASAR				PcP	**PcP**	**19 20 24.1**	**+1.8**
0.4nm,0.7s,baz=109,slow=4.3,SNR=6.0							
WB2	**Warramunga Arr**	**48.34**	**261**	*e*P	**P**	**19 18 56.9**	**+0.6**
16nm,1.4s							
WR1	**Warramunga Arr**	**48.35**	**261**	*e*P	**P**	**19 18 56.6**	**+0.3**
29nm,1.8s							
WR1				*e*PcP	**PcP**	**19 20 24.8**	**+1.9**
WRA	**Warramunga Arr**	**48.35**	**261**	P	**P**	**19 18 56.6**	**+0.3**
0.5nm,0.5s,baz=97,slow=7.5,SNR=22							
WRA				PcP	**PcP**	**19 20 24.8**	**+1.9**
0.6nm,0.8s,baz=100,slow=3.2,SNR=3.6							
FITZ	**Fitzroy Crossi**	**56.78**	**261**	*e*P	**P**	**19 20 00.3**	**+1.5**
20nm,1.8s							
NWAO	**Narrogin (SRO)**	**61.74**	**243**	*e*P	**P**	**19 20 31.2**	**-1.8**
210nm,1.6s							
NV01	**Mina Array Sit**	**78.49**	**41**	*e*P	**P**	**19 22 15.5**	**-0.1**
NVAR	**Mina Array Bea**	**78.49**	**41**	P	**P**	**19 22 15.8**	**+0.1**
1.3nm,0.9s,baz=209,slow=8.6,SNR=5.0							
LON	**Longmire**	**81.81**	**33**	*e*P	**P**	**19 22 31.7**	**-1.5**
21nm,1.9s							
TXAR	**Lajitas Array**	**83.91**	**56**	P	**P**	**19 22 44.5**	**0.0**
0.3nm,0.7s,baz=206,slow=8.3,SNR=3.8							
AKASG	**Malin Array Be**	**144.78**	**334**	PKP	**PKPdf**	**19 29 50.3**	**-0.6**
0.4nm,0.5s,baz=45,slow=4.1,SNR=7.0							
AKBB	**Malin Array Si**	**144.78**	**334**	*e*PKPdf	**PKPdf**	**19 29 50.2**	**-0.7**
BRTR	**Keskin Array B**	**149.60**	**315**	PKPbc	**PKPbc**	**19 30 06.0**	**+1.9**
0.3nm,0.5s,baz=196,slow=1.0,SNR=2.6							

IDC 12 19:12:00.5±47.0,16.′44S×174.′77W,h0km,mb3.9/3,
mb1 4.0/3,mb1mx3.6/47,mbtmp3.9/3,Error ellipse:
s-maj=889.5km s-min=172.6km az=79.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**42.38**	**241**	P	P	19 19 57.6	+0.8
1.6nm,0.9s,baz=80,slow=12,SNR=5.2							
WRA	**Warramunga Arr**	**48.33**	**258**	P	P	19 20 43.4	-0.9
0.2nm,0.3s,baz=96,slow=8.2,SNR=8.7							
ASAR	**Alice Springs**	**48.54**	**253**	P	P	19 20 45.8	-0.1
2.0nm,0.5s,baz=89,slow=8.2,SNR=30							

*ISCJB **12** 19:43:18.7±0.8,37.′53N±0.′03×26.′74E±0.′06,h5km±7km,*
Error ellipse: s-maj=8.9km s-min=4.0km az=150.2
*CSEM **12** 19:43:18.7±0.2,37.′54N×26.′73E,h10km,ML2.3,Error*
ellipse: s-maj=4.5km s-min=2.3km az=59.0
*ISK **12** 19:43:18.1,37.′55N×26.′75E,h11km±3km,ML2.1/6*
*DDA **12** 19:43:20.0,37.′55N×26.′83E,h7km,Ml2.3*
ISC 12 19:43:18.8±1.3,37.′54N±0.′03×26.′74E±0.′04,h14km±10km,
n26,σ0°41/39,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.42**	**68**	PG	**Pg**	**19 43 26.9**	**-0.3**
GCAM				SG	**Sb**	**19 43 33.4**	**-0.8**
GCAM	**G?zelcaml?**	**0.42**	**68**	*i* P	**Pg**	**19 43 27.4**	**+0.2**
GCAM				*i* S	**Sg**	**19 43 33.0**	**+0.1**
GCAM	**G?zelcaml?**	**0.42**	**68**	*e*Pg	**Pg**	**19 43 26.9**	**-0.3**
GCAM	**G?zelcaml?**	**0.42**	**68**	P	**Pg**	**19 43 27.4**	**+0.2**
GCAM				S	**Sg**	**19 43 33.0**	**+0.1**
DGB	**¨zmir**	**0.52**	**12**	*i* P	**Pb**	**19 43 30.0**	**+0.3**
DGB				*i* S	**Sb**	**19 43 37.0**	**-0.1**
BODT	**Bodrum**	**0.66**	**136**	PG	**Pg**	**19 43 31.4**	**-0.3**
BODT				SG	**Sb**	**19 43 41.0**	**-0.1**
BODT	**Bodrum**	**0.66**	**136**	*e*Pg	**Pg**	**19 43 31.4**	**-0.3**
BODT				*e*Sg	**Sb**	**19 43 41.0**	**-0.1**
ZEY	**¨zmir**	**0.72**	**345**	*i* P	**Pn**	**19 43 34.3**	**-0.2**
ZEY				*i* S	**Sn**	**19 43 44.9**	**-0.5**
BDRM	**Kayabasi**	**0.73**	**130**	*i* P	**Pb**	**19 43 33.5**	**+0.1**
BDRM				*i* S	**Sb**	**19 43 43.7**	**+0.5**
BDRM	**Kayabasi**	**0.73**	**130**	P	**Pb**	**19 43 33.5**	**+0.1**
BDRM				S	**Sb**	**19 43 43.7**	**+0.5**
URLA	**Izmir**	**0.82**	**352**	PG	**Pg**	**19 43 34.3**	**-0.5**
URLA	**Izmir**	**0.82**	**352**	*i* P	**Pb**	**19 43 35.4**	**+0.5**
URLA				*i* S	**Sb**	**19 43 46.8**	**+0.9**
URLA	**Izmir**	**0.82**	**352**	*e*Pg	**Pg**	**19 43 34.3**	**-0.5**
URLA	**Izmir**	**0.82**	**352**	P	**Pb**	**19 43 35.4**	**+0.5**
URLA				S	**Sb**	**19 43 46.8**	**+0.9**
BLCB	**Balcova**	**0.87**	**16**	PG	**Pg**	**19 43 35.3**	**-0.4**
BLCB	**Balcova**	**0.87**	**16**	*e*Pg	**Pg**	**19 43 35.3**	**-0.4**
AYDN	**Tasoluk**	**0.91**	**82**	*i* P	**Pg**	**19 43 36.3**	**-0.1**
AYDN				*i* S	**Sb**	**19 43 48.3**	**-0.1**
AYDN	**Tasoluk**	**0.91**	**82**	P	**Pg**	**19 43 36.3**	**-0.1**
AYDN				S	**Sb**	**19 43 48.3**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	**0.99**	**66**	PG	**Pg**	**19 43 37.6**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**0.99**	**66**	*e*Pg	**Pg**	**19 43 37.6**	**-0.4**
CHOS	**Chios island**	**1.00**	**327**	PG	**Pg**	**19 43 37.8**	**-0.4**
CHOS	**Chios island**	**1.00**	**327**	*e*Pg	**Pg**	**19 43 37.8**	**-0.4**
DAT	**Datca**	**1.05**	**140**	PG	**Pg**	**19 43 38.7**	**-0.4**
DAT	**Datca**	**1.05**	**140**	*i* P	**Pn**	**19 43 39.4**	**+0.2**
DAT	**Datca**	**1.05**	**140**	*e*Pg	**Pg**	**19 43 38.7**	**-0.4**
DAT	**Datca**	**1.05**	**140**	P	**Pn**	**19 43 39.4**	**+0.2**

*ISCJB **12** 19:45:00.3±0.4,24.′46N±0.′02×122.′33E±0.′02,h68km±4km,*
Error ellipse: s-maj=3.2km s-min=2.5km az=167.1
*JMA **12** 19:45:00.2±0.2,24.′39N×122.′30E,h72km±3km,M2.0*
*TAP **12** 19:45:00.4,24.′45N×122.′29E,h74km,ML3.0,C*
ISC 12 19:45:00.9±1.3,24.′45N±0.′03×122.′32E±0.′02,h67km±7km,
n74,σ0°94/135,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.20**	**299**	P	**Pn**	**19 45 11.6**	**+0.6**
baz=303							
EOS1				S	**Sn**	**19 45 19.7**	**+1.3**
baz=303							
TWC	**Suao**	**0.46**	**290**	P	**Pn**	**19 45 12.8**	**-0.2**
baz=295							
TWC				S	**Sn**	**19 45 21.6**	**-0.2**
baz=295							
ENAH	**Nanao**	**0.47**	**270**	P	**Pn**	**19 45 13.1**	**+0.1**
baz=266							
ENAH				S	**Sn**	**19 45 21.9**	**0.0**
baz=266							
NANB	**Nanao**	**0.52**	**267**	*i* P	**Pn**	**19 45 13.7**	**+0.1**
baz=267							
NANB				S	**Sn**	**19 45 23.2**	**+0.3**
baz=267							
ENA	**Nanau**	**0.53**	**267**	P	**Pn**	**19 45 13.7**	**0.0**
baz=267							
ENA				S	**Sn**	**19 45 23.3**	**+0.3**
baz=267							
JYNG	**Yonagunijimaku**	**0.57**	**90**	P	**Pn**	**19 45 14.3**	**+0.2**
JYNG				S	**Sn**	**19 45 24.1**	**+0.4**
NTC	**Toucheng**	**0.60**	**312**	P	**Pn**	**19 45 14.2**	**-0.2**
baz=318							
NTC				*e*S	**Sn**	**19 45 23.9**	**-0.4**
baz=318							
ILA	**Ilan**	**0.61**	**301**	P	**Pn**	**19 45 14.7**	**+0.2**
baz=307							
ILA				S	**Sn**	**19 45 24.8**	**+0.3**
baz=307							
YOJ	**Yonaguni jima**	**0.63**	**89**	P	**Pn**	**19 45 14.9**	**+0.2**
baz=89							
YOJ				S	**Sn**	**19 45 25.2**	**+0.3**
baz=89							
YOJ	**Yonaguni jima**	**0.63**	**89**	P	**Pn**	**19 45 14.9**	**+0.2**
YOJ				*e*S	**Sn**	**19 45 25.1**	**+0.2**
TWB1	**Santiao Chiao**	**0.63**	**331**	P	**Pn**	**19 45 14.4**	**-0.4**
baz=326							
TWB1				*e*S	**Sn**	**19 45 24.8**	**-0.1**
baz=326							
TWE	**Neicheng**	**0.65**	**294**	P	**Pn**	**19 45 15.0**	**0.0**
baz=298							
TWE				S	**Sn**	**19 45 25.7**	**+0.3**
baz=298							
TIPB	**Shuangxi**	**0.69**	**319**	*i* P	**Pn**	**19 45 14.0**	**-1.5**
baz=323							
TIPB				*i* S	**Sn**	**19 45 24.6**	**-1.5**
baz=323							
ENTT	**Nioudou**	**0.71**	**285**	P	**Pn**	**19 45 16.0**	**+0.3**
baz=290							
ENTT				*e*S	**Sn**	**19 45 27.4**	**+0.8**
baz=290							
NACB	**Ninganchiao**	**0.72**	**247**	*e*P	**Pn**	**19 45 15.3**	**-0.5**
baz=240							
NACB				*e*S	**Sn**	**19 45 26.3**	**-0.4**
baz=240							
NWF	**Wu-fen Shan**	**0.79**	**321**	P	**Pn**	**19 45 16.5**	**-0.2**
baz=316							
NWF				S	**Sn**	**19 45 28.0**	**-0.3**
baz=316							
WFSB	**Wu-fen Shan**	**0.79**	**321**	P	**Pn**	**19 45 16.5**	**-0.1**
baz=316							
WFSB				S	**Sn**	**19 45 27.8**	**-0.3**
baz=316							
HWA	**Hwalien**	**0

baz=314
NTST Danshui 1.06 312 P Pn 19 45 19.8 -0.2
baz=319
NTST S Sn 19 45 34.0 -0.2
baz=319
CHGB Renai 1.12 250 P Pn 19 45 21.2 +0.3
baz=242
CHGB S Sn 19 45 35.6 -0.2
baz=242
EGFH Guangfu 1.13 226 P Pn 19 45 20.1 -0.8
baz=220
EGFH eS Sn 19 45 34.6 -1.2
baz=220
NCU National Centr 1.15 297 eP **Pn 19 45 21.0 -0.2**
baz=297
NCU eS Sn 19 45 37.0 +0.7
baz=297
NCUH Zhongli 1.15 297 eP **Pn 19 45 21.4 +0.2**
baz=297
NCUH eS Sn 19 45 36.6 +0.3
baz=297
LIOB Emei 1.20 279 eP **Pn 19 45 22.3 +0.5**
baz=279
LIOB eS Sn 19 45 38.5 +1.0
baz=279
NSTT Nanjuang 1.22 279 eS **Sn 19 45 38.3 +0.5**
baz=278
HGSD Ruisui 1.26 221 P Pn 19 45 21.8 -0.8
baz=219
HGSD S Sn 19 45 38.1 -0.7
baz=219
VWDT VWDT 1.28 237 P Pn 19 45 22.9 +0.1
baz=230
VWDT S Sn 19 45 38.7 -0.6
baz=230
IRIF Iriomote-Funau 1.29 95 P Pn 19 45 22.8 -0.1
IRIF S Sn 19 45 39.3 -0.2
EHY Hungye 1.31 224 P Pn 19 45 22.2 -1.1
baz=223
EHY S Sn 19 45 38.1 -2.0
baz=223
HATJ Hateruma jima 1.41 106 eS **Sn 19 45 42.9 +0.6**
YULB Yu-li 1.41 222 eP **Pn 19 45 23.5 -1.1**
baz=220
YULB eS Sn 19 45 40.6 -1.9
baz=220
SSLB Suanglung 1.41 242 eS **Sn 19 45 42.6 +0.1**
baz=237
SMLT Sun Moon Lake 1.42 247 P Pn 19 45 25.3 +0.6
baz=241
SMLT eS Sn 19 45 44.7 +2.0
baz=241
TWF1 Yuli 1.44 221 eP **Pn 19 45 23.8 -1.2**
baz=227
TWF1 eS Sn 19 45 41.6 -1.5
baz=227
TYC Yuchr 1.45 248 eS **Sn 19 45 44.1 +1.0**
baz=242
TCU Taichung 1.53 259 eS **Sn 19 45 46.6 +1.4**
baz=269
JKRS Kuro-shima 1.56 98 P Pn 19 45 27.2 +0.8
JKRS S Sn 19 45 46.3 +0.5
FULB Fuli 1.56 217 P Pn 19 45 25.7 -0.9
baz=208
FULB eS Sn 19 45 44.8 -1.2
baz=208
WJS Zhushan 1.59 247 eS **Sn 19 45 48.5 +2.0**
baz=259
CHKT Chengkung 1.61 213 eP **Pn 19 45 25.9 -1.3**
baz=204
CHKT eS Sn 19 45 43.9 -3.2
baz=204
JIJ Ishigaki jima 1.66 93 P Pn 19 45 28.1 +0.2
JIJ S Sn 19 45 47.5 -0.9
ALS Alishan 1.68 236 eP **Pn 19 45 28.8 +0.5**
baz=228
ALS eS Sn 19 45 50.0 +0.9
baz=228
WGK Gukeng 1.78 245 eS **Sn 19 45 53.7 +2.5**
baz=244
WDLH Douliu 1.80 245 eP **Pn 19 45 30.7 +1.0**
baz=257
WDLH eS Sn 19 45 53.9 +2.2
baz=257
JISG Ishigakijimahi 1.82 85 P Pn 19 45 30.3 +0.3
JISG eS Sn 19 45 51.6 -0.5
RLNB Erlin 1.88 253 eS **Sn 19 45 54.3 +0.8**
baz=263
TPUB Ta-pu 1.93 234 eP **Pn 19 45 32.9 +1.4**
baz=233
TPUB eS Sn 19 45 56.5 +1.8
baz=233
TWGBT Beinan 1.99 215 eP **Pn 19 45 31.8 -0.5**
baz=219
TWGBT eS Sn 19 45 53.6 -2.6
baz=219
TWG Pinlang 1.99 215 eP **Pn 19 45 31.2 -1.1**
baz=219
TWG eS Sn 19 45 54.5 -1.7
baz=219
WSF Szhu 2.08 247 eS **Sn 19 45 59.4 +0.8**
baz=257
JTJ Tarama 2.18 85 eS **Sn 19 46 01.2 +0.5**
SSD Sandimen 2.30 223 eP **Pn 19 45 38.0 +1.5**
baz=212
SSD eS Sn 19 46 05.7 +1.9
baz=212
MASBT Mashibuluo 2.40 221 eP **Pn 19 45 39.7 +1.8**
baz=219
MASBT eS Sn 19 46 08.1 +1.9
baz=219
VWUC VWUC 2.67 282 eP **Pn 19 45 40.6 -0.9**
baz=281
PHUB P'eng-hu 2.68 250 eS **Sn 19 46 12.6 -0.5**
baz=249
MATB Ma-tsu 2.73 309 eP **Pn 19 45 41.6 -0.8**
baz=307

BJI ***12*** *19:54:14.1,0˚.44S×123˚.31E,h85km,mb4.7/39,mB4.9/25, Ms4.8/7,Ms7 4.5/5*
ISCJB ***12*** *19:54:17.2±0.3,0˚.20S±0˚.02×123˚.13E±0˚.02,h98km±3km, mb4.7/73,Error ellipse: s-maj=4.0km s-min=3.5km az=19.7*
NEIC ***12*** *19:54:18.6±0.5,0˚.21S×123˚.11E,h99km±5km,mb4.9/43, Error ellipse: s-maj=6.1km s-min=4.0km az=56.0*
IDC ***12*** *19:54:18.2±0.6,0˚.16S×123˚.15E,h93km±4km,mb4.1/20, mb1 4.2/22,mb1mx3.9/59,mbtmp4.4/22,MS3.3/9, Ms1 3.3/9,ms1mx2.9/58,Error ellipse: s-maj=15.8km s-min=9.0km az=67.0*
DJA ***12*** *19:54:19.1±0.2,0˚S±2˚×12˚3E±˚,h80km±2km,M4.9/21, mb4.8/21,mB5.4/10,MLv5.1/18,Mw(mB)4.8/10*
ISC 12 19:54:18.4±0.5,0˚.24S±0˚.04×123˚.14E±0˚.04,h92km±4km, n168,σ1$49/201,mb4.8/73,1C,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.87**	**205**	**P**	**Pn**	**19 54 36.4**	**-0.5**
LUWI				S	**Sn**	**19 54 50.7**	**0.0**
LUWI	**Luwuk**	**0.87**	**205**	ePn	**Pn**	**19 54 35.2**	**-1.6**
LUWI				eSn	**Sn**	**19 54 48.3**	**-2.4**
KMSI	**Cibinong**	**1.17**	**46**	P	**Pn**	**19 54 40.8**	**+0.6**
KMSI				S	**Sn**	**19 54 58.1**	**+1.4**
MRSI	**Marisa**	**1.39**	**301**	P	**Pn**	**19 54 40.8**	**-2.1**
MRSI				S	**Sn**	**19 54 58.6**	**-2.8**
APSI	**Ampana**	**1.63**	**246**	P	**Pn**	**19 54 45.7**	**-0.2**
APSI				S	**Sn**	**19 55 05.5**	**-1.2**
MPSI	**Mapaga**	**3.29**	**280**	P	**Pn**	**19 55 07.5**	**-0.3**
MPSI				S	**Sn**	**19 55 46.5**	**+0.5**
PCI	**Palu**	**3.36**	**259**	P	**Pn**	**19 55 09.5**	**+0.6**
PCI				S	**Sn**	**19 55 47.5**	**-0.4**
SANI	**Sanana**	**3.37**	**122**	P	**Pn**	**19 55 10.0**	**+1.0**
KDI	**Kendari**	**3.73**	**188**	P	**Pn**	**19 55 13.9**	**+0.1**
TTSI	**Tana Toraja**	**4.33**	**230**	P	**Pn**	**19 55 20.8**	**-1.1**
TNTI	**Ternate**	**4.35**	**77**	ePn	**Pn**	**19 55 22.9**	**+0.6**
TNTI				eSn	**Sn**	**19 56 10.9**	**-0.9**
LBMI	**Labuha**	**4.38**	**95**	P	**Pn**	**19 55 24.9**	**+2.2**
SGSI	**Sangihe**	**4.58**	**31**	P	**Pn**	**19 55 25.8**	**+0.5**
SPSI	**Sidrap Palu**	**5.00**	**222**	P	**Pn**	**19 55 32.2**	**+1.2**
BKSI	**Bulukumba**	**5.87**	**211**	P	**Pn**	**19 55 44.1**	**+1.1**
SMKI	**Samarinda**	**5.93**	**268**	P	**Pn**	**19 55 43.1**	**-0.6**
AAI	**Ambon**	**6.11**	**124**	P	**Pn**	**19 55 47.5**	**+1.4**
BKB	**Balikpapan**	**6.32**	**261**	P	**Pn**	**19 55 49.5**	**+0.5**

MSAI Masohi 6.56 118 P Pn 19 55 53.4 +1.1
MYLDM Lahad Datu 7.10 319 ePn **Pn 19 55 59.9 +0.2**
DAV Davao City (W) 7.66 19 P Pn 19 56 10.0 +2.7
70nm,0.3s,baz=114,slow=2.7,SNR=10
DAV S **Sn 19 57 33.6 +1.0**
16nm,0.3s,baz=230,slow=17,SNR=2.2
DAV LR LR 19 59 17.7
comp=Z,150nm,19.2s,baz=206,slow=40
DAV Davao City (W) 7.66 19 ePn **Pn 19 56 09.7 +2.4**
DAV S **Sn 19 57 33.6 +1.0**
DAV eSn Sn 19 57 42.4 +10
MTKI Muara Teweh, K 8.27 265 P Pn 19 56 17.2 +1.6
MMRI Maumere 8.38 186 P Pn 19 56 18.2 +1.0
MMRI Maumere 8.38 186 ePn **Pn 19 56 18.2 +1.0**
MMRI eSn **Sn 19 57 48.4 -1.8**
EDFI Ende, Flores 8.57 190 P Pn 19 56 20.1 +0.3
KKM Kota Kinabalu 9.31 312 ePn **Pn 19 56 30.0 +0.1**
FAKI Fak Fak 9.49 106 ePn **Pn 19 56 31.0 -1.3**
FAKI eSn **Sn 19 58 09.6 -7.6**
SOEI Soe 9.52 173 P Pn 19 56 33.5 +0.8
SOEI Soe 9.52 173 ePn **Pn 19 56 35.4 +2.6**
BATI Baumata 9.91 177 LR LR 20 00 52.2
comp=Z,210nm,18.1s,baz=14,slow=39
SBUM Sibu 11.23 284 ePn **Pn 19 56 54.6 -1.4**
STKI Sintang 11.66 271 P Pn 19 57 03.0 +1.2
16nm,1.4s,7μm
KSM Kuching 12.94 278 ePn **Pn 19 57 18.1 -0.8**
SRPI Serui, Papua 13.20 97 P P 19 57 33.0 +4.2
TGY Tagaytay City 14.42 351 P Pn 19 57 38.2 +0.1
33nm,0.3s,baz=158,slow=5.4,SNR=2.4
MTN Manton Dam 14.82 148 ePn **Pn 19 57 42.6 -0.7**
KPJI Karang Pucung 15.82 243 P P 19 58 05.4 +7.5
LEM Lembang 16.80 247 P P 19 58 10.6 +1.6
1.8nm,0.3s,baz=83,slow=13,SNR=4.0
LEM LR LR 20 04 40.2
comp=Z,154nm,20.6s,baz=169,slow=37
GENI Genyem 17.19 98 P P 19 58 16.2 +3.2
69nm,1.0s
JAY Jayapura 17.71 97 P Pn 19 58 19.3 +0.1
1.9nm,0.3s,baz=221,slow=9.8,SNR=9.4
JAY Jayapura 17.71 97 P Pn 19 58 25.0 +5.8
FITZ Fitzroy Crossi 17.91 172 eP **P 19 58 21.0 0.0**
9.5nm,1.0s
KLI Kotabumi 18.82 256 P Pn 19 58 35.1 +2.5
MYKOM Kota Tinggi 19.39 276 eP **P 19 58 36.3 -0.9**
49nm,1.6s
MDSI Maura Dua 19.40 257 P Pn 19 58 39.2 -0.1
23nm,1.1s
MASI Maura Aman, Be 21.08 262 P pP 19 59 10.5 -3.1
KRJI Kerinci 21.75 265 P pP 19 59 22.5 +1.6
WRAB Tennant Creek 22.44 151 eP **P 19 59 09.5 -0.4**
16nm,0.9s
WR1 Warramunga Arr 22.44 151 eP **P 19 59 09.4 -0.5**
WR1 eScP **ScP 20 06 30.2 -0.6**
WRA Warramunga Arr 22.44 151 P P 19 59 09.4 -0.5
7.7nm,0.6s,baz=336,slow=9.8,SNR=57
WRA pP **pP 19 59 29.3 +1.1**
12nm,0.9s,baz=331,slow=10,SNR=7.4
WRA ScP **ScP 20 06 30.2 -0.6**
2.5nm,0.8s,baz=334,slow=3.0,SNR=9.3
WB2 Warramunga Arr 22.45 151 eP **P 19 59 08.4 -1.6**
IPM Ipoh 22.58 282 eP **P 19 59 09.6 -1.8**
15nm,0.9s
PDSI Padang 22.68 268 P P 19 59 13.1 +0.6
13nm,0.9s,8μm
TWG Pinlang 23.01 355 eP **P 19 59 13.5 -2.2**
284nm,1.5s
KULM Kulim 23.12 284 eP **P 19 59 15.5 -1.2**
24nm,1.4s
QIZ Qiongzhong 23.18 326 eP **P 19 59 17.2 0.0**
177nm,1.8s
TPUB Ta-pu 23.53 354 eP **P 19 59 20.0 -0.5**
45nm,0.9s
YULB Yu-li 23.56 356 eP **P 19 59 19.2 -1.5**
30nm,1.3s
MNSI Mandailing Nat 23.58 273 P P 19 59 20.8 -0.2
31nm,0.7s
SSLB Suanglung 23.98 355 eP **P 19 59 25.0 +0.5**
33nm,1.0s
COEN Coen 24.07 125 eP **P 19 59 25.1 -0.3**
13nm,0.7s
SISI Saibi 24.07 267 P P 19 59 26.6 +1.2
37nm,0.7s
MANU Manus Island 24.29 94 eP **P 19 59 29.1 +1.7**
39nm,0.6s
CHBT CHBT 24.34 303 P P 19 59 30.3 +2.5
66nm,1.4s,26μm
PSI Prapat 24.39 277 P P 19 59 27.6 -0.9
9.3nm,0.8s,baz=180,slow=2.8,SNR=4.7
PSI Prapat 24.39 277 eP **P 19 59 27.1 -1.4**
13nm,0.9s
YHNB Yeheng 24.82 356 eP **P 19 59 29.6 -2.6**
52nm,1.3s
TATO Taipei 25.12 356 eP **P 19 59 34.4 -0.3**
245nm,1.6s
AS31 Alice Springs 25.52 157 eP **P 19 59 38.7 +0.2**
2.5nm,0.7s
ASAR Alice Springs 25.52 157 P P 19 59 39.0 +0.5
2.6nm,0.6s,baz=335,slow=10,SNR=41
ASAR pP **pP 19 59 58.8 -0.5**
5.1nm,0.7s,baz=337,slow=7.3,SNR=9.9
ASAR PcP **PcP 20 03 07.7 -0.3**
2.3nm,0.6s,baz=343,slow=2.0,SNR=15
ASAR ScP **ScP 20 06 40.5 +1.3**
1.5nm,0.7s,baz=342,slow=2.7,SNR=8.7
AS01 Alice Springs 25.54 156 eP **P 19 59 38.6 -0.1**
PMG Port Moresby 25.59 112 P P 19 59 40.0 +0.8
22nm,0.9s,baz=253,slow=5.0,SNR=4.8
PMG LR LR 20 11 23.0
comp=Z,52nm,18.0s,baz=245,slow=40
PMG Port Moresby 25.59 112 eP **P 19 59 39.5 +0.3**
25nm,0.8s
PMG *e* 20 11 23.0
GSI Gunungsitoli 25.60 274 P P 19 59 40.2 +0.8
20nm,0.8s
GSI Gunungsitoli 25.60 274 eP **P 19 59 37.5 -1.8**
129nm,2.0s
LHMI Lhok Sumawe 26.71 282 eP **P 19 59 49.8 +0.4**
99nm,1.0s
NONG Nongkai 26.78 314 P P 19 59 52.1 +2.2
30nm,0.7s
PBKT Sadao Pong 27.51 308 P P 19 59 57.4 +1.0
11nm,0.9s
PBKT Sadao Pong 27.51 308 eP **P 19 59 55.3 -1.1**
9.4nm,1.1s
RABL Rabaul 29.27 98 eP **P 20 00 12.2 0.0**
50nm,0.6s
LAMP Lampang 29.68 310 P P 20 00 17.6 +1.9
5.8nm,0.8s
CM01 Chiang Mai Arr 30.14 309 eP **P 20 00 20.6 +0.8**
CM31 Chiang Mai Arr 30.17 309 eP **P 20 00 20.4 +0.3**
CMAR Chiang Mai Arr 30.17 309 P P 20 00 21.1 +1.1
5.3nm,0.8s,baz=135,slow=7.1,SNR=35
CMAR LR LR 20 12 49.3
comp=Z,54nm,21.0s,baz=148,slow=37
CHTO Chiang Mai 30.38 310 P P 20 00 22.9 +1.0
CHTO Chiang Mai 30.38 310 eP **P 20 00 22.4 +0.5**
17nm,0.9s
GYA Guiyang 30.93 330⇑ *i*P **P 20 00 27.9 +1.1**
GYA pP pP 20 00 47.8 0.0
GYA sP sP 20 00 58.0 -0.5
GYA PP **PnPn 20 01 32.6 +1.2**
GYA PcP **PcP 20 03 21.4 0.0**
GYA S **S 20 05 26.8 +2.1**
GYA sS sS 20 06 00.2 -0.9
GYA SS **SnSn 20 07 16.0 +1.6**
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,120nm,5.2s
GYA LR LR
comp=N,620nm,15.0s
GYA LR LR
comp=E,510nm,15.8s
GYA LR LR
comp=Z,520nm,15.6s
KMI Kunming 32.02 323 P P 20 00 36.3 -0.2
KMI pmax pmax
comp=Z,7.0nm,0.6s
NJ2 Nanjing 32.37 353 eP **P 20 00 37.2 -2.0**
NJ2 pmax pmax
comp=Z,13nm,0.5s
CBIJ Chichi jima 32.78 33 eP **P 20 00 40.8 -2.1**
542nm,1.8s
JCJ Chichijima 32.78 33 P P 20 00 41.7 -1.1
61nm,0.5s,baz=276,slow=18,SNR=5.4

NWAO Narrogin (SRO) 32.98 189 eP **P 20 00 46.9 +2.4**
214nm,1.6s
ENH Enshi 33.01 338 eP **P 20 00 45.5 +0.6**
33nm,0.8s
STKA Stephens Creek 35.98 153 P P 20 01 11.1 +0.6
4.2nm,0.7s,baz=326,slow=9.7,SNR=9.8
STKA PcP **PcP 20 03 34.5 -0.8**
3.2nm,0.7s,baz=16,slow=6.8,SNR=3.2
STKA Stephens Creek 35.98 153 eP **P 20 01 10.8 +0.3**
7.4nm,1.8s
STKA PcP **PcP 20 03 34.5 -0.8**
CD2 Chengdu 36.04 331 P P 20 01 10.5 -0.5
CD2 pmax pmax
comp=Z,50nm,0.8s
XAN Xi'an 36.62 340 P P 20 01 15.9 0.0
XAN pmax pmax
comp=Z,11nm,1.1s
XAN pmax pmax
comp=Z,100nm,4.4s
MJAR Matsushiro Arr 39.18 19 P P 20 01 35.8 -1.6
7.6nm,0.8s,baz=197,slow=9.8,SNR=19
MJAR pP **pP 20 01 58.7 -0.3**
3.6nm,0.8s,baz=197,slow=10,SNR=3.5
MJAR ScP **ScP 20 07 25.5 +0.1**
2.6nm,1.1s,baz=177,slow=5.7,SNR=4.3
MAJO Matsushiro 39.19 19 eP **P 20 01 36.0 -1.4**
17nm,0.9s
MAJO eScP **ScP 20 07 25.5 +0.1**
MAT Matsushiro 39.19 19 P P 20 01 35.8 -1.6
MJB9 Matsu-Tunnel 39.19 19 eP **P 20 01 35.9 -1.5**
17nm,0.9s
LZH Lanzhou 40.35 336 eP **P 20 01 49.6 +2.3**
LZH pP pP 20 02 09.2 +0.2
LZH sP sP 20 02 21.4 +1.9
LZH pmax pmax
comp=Z,20nm,1.0s
LZH pmax pmax
comp=Z,130nm,4.8s
LZH LR LR
comp=N,300nm,13.1s
LZH LR LR
comp=E,400nm,12.3s
LZH LR LR
comp=Z,460nm,14.0s
ARMA Armidale 40.42 141 eP **P 20 01 49.7 +1.8**
102nm,1.7s
HHC Hu-ho-hao-te 42.23 347 eP **P 20 02 03.4 +0.9**
HHC pmax pmax
comp=Z,8.0nm,0.8s
HHC pmax pmax
comp=Z,48nm,5.9s
CAN Canberra 42.42 148 eP **P 20 02 06.5 +2.4**
29nm,0.8s
LSA Lhasa 42.62 317 eP **P 20 02 06.2 -0.1**
5.9nm,0.7s
ODAN Odare 43.68 311 eP **P 20 02 13.3 -1.4**
22nm,0.9s
RAMN Ramite 44.33 310 eP **P 20 02 19.1 -0.8**
25nm,0.8s
GTA Gaotai 44.87 334 P P 20 02 24.2 +0.4
GTA pP pP 20 02 48.4 +2.6
GTA sP sP 20 03 00.4 +4.2
GTA ScP **ScP 20 07 48.8 +0.6**
GTA pmax pmax
comp=Z,8.0nm,0.8s
GTA pmax pmax
comp=Z,57nm,5.2s
JIRN Jiri 45.01 311 eP **P 20 02 25.0 -0.4**
23nm,0.7s
GUN Gumba 45.38 311 eP **P 20 02 27.9 -0.4**
40nm,0.8s
PKIN Phulchoki 45.57 310 eP **P 20 02 29.0 -0.7**
5.8nm,0.5s
KKN Kakani 45.77 311 eP **P 20 02 30.3 -0.9**
DMN Daman 45.81 310 eP **P 20 02 31.2 -0.4**
GKN Gorkha 46.37 310 eP **P 20 02 35.0 -0.8**
KOLN Koldanda 47.04 310 eP **P 20 02 41.0 -0.2**
14nm,0.6s
DANN Dangsing 47.21 310 eP **P 20 02 42.7 +0.1**
33nm,0.7s
ASAJ Asahikawa 47.45 19 P P 20 02 43.1 -0.7
6.8nm,0.7s,baz=209,slow=6.9,SNR=5.7
ASAJ Asahikawa 47.45 19 eP **P 20 02 44.0 +0.2**
124nm,1.8s
PYUN Piuthan 47.67 310 eP **P 20 02 45.7 -0.4**
47nm,0.9s
KLR Kul'dur 49.84 7 P P 20 03 01.9 -0.1
0.1nm,0.5s,baz=186,slow=10,SNR=3.7
ULN Ulaanbaatar 49.92 346 eP **P 20 03 02.6 -0.2**
4.8nm,1.1s
SONA0 Songino Array 50.05 345 eP **P 20 03 03.6 -0.2**
SONA0 eScP **ScP 20 08 09.4 -0.5**
SONM Songino Array 50.05 345 P P 20 03 03.6 -0.2
2.8nm,0.7s,baz=149,slow=8.0,SNR=14
SONM ScP **ScP 20 08 09.4 -0.5**
0.5nm,0.6s,baz=134,slow=6.2,SNR=4.4
SONA1 Songino Array 50.06 345 eP **P 20 03 03.3 -0.6**
WMQ Urumqi 54.07 329 P P 20 03 34.7 +1.1
WMQ pP pP 20 03 54.7 -1.6
WMQ sP sP 20 04 04.7 -1.9
WMQ pmax pmax
comp=Z,22nm,0.6s
WMQ pmax pmax
comp=Z,310nm,4.1s
WMQ LR LR
comp=N,47nm,25.9s
WMQ LR LR
comp=E,76nm,27.1s
NIL Nilore 57.65 311 eP **P 20 03 59.2 -0.1**
29nm,1.9s
KSH Kashi 58.45 318 P P 20 04 07.2 +2.3
KSH pP pP 20 04 29.1 +1.2
KSH PP **PP 20 06 20.4 +5.1**
KSH S **S 20 12 00.0 -1.3**
KSH sS sS 20 12 36.2 -4.3
KSH pmax pmax
comp=Z,170nm,4.8s
KSH LR LR
comp=N,310nm,8.0s
KSH LR LR
comp=E,250nm,4.3s
KSH LR LR
comp=Z,250nm,5.1s
MK01 Makanchi Array 58.87 328 eP **P 20 04 06.4 -1.2**
MK31 Makanchi Array 58.89 328 eP **P 20 04 06.3 -1.4**
MK32 Makanchi Array 58.89 328 eP **P 20 04 07.0 -0.8**
MK32 eScP **ScP 20 08 48.2 -0.2**
MKAR Makanchi Array 58.89 328 P P 20 04 07.0 -0.8
2.4nm,0.6s,baz=120,slow=8.3,SNR=33
MKAR pP **pP 20 04 30.0 -0.7**
2.4nm,0.7s,baz=128,slow=8.4,SNR=5.5
MKAR ScP **ScP 20 08 48.2 -0.2**
1.0nm,0.8s,baz=140,slow=4.0,SNR=5.6
MKAR LR LR 20 30 41.3
comp=Z,34nm,19.5s,baz=230,slow=37
MKAR Makanchi Array 58.89 328 eP **P 20 04 06.7 -1.0**
19nm,0.6s
MKAR ScP **ScP 20 08 48.2 -0.2**
MAKZ Makanchi 59.06 328 eP **P 20 04 08.0 -0.9**
PEA0B Petropavlovsk- 60.45 23 eP **P 20 04 18.8 +0.5**
35nm,1.6s
PETK Petropavlovsk- 60.45 23 P P 20 04 18.4 +0.1
3.3nm,0.6s,baz=200,slow=3.7,SNR=12
PEA1 Petropavlovsk- 60.46 23 eP **P 20 04 18.4 +0.1**
LBZ Lake Benmore 60.56 143 eP **P 20 04 20.0 +0.7**
177nm,1.7s
RPZ Rata Peaks 60.73 142 eP **P 20 04 21.5 +1.1**
126nm,1.6s
THZ Tophouse 60.92 139 eP **P 20 04 21.5 -0.3**
120nm,1.7s
AAK Ala-Archa 61.00 321 P P 20 04 22.4 0.0
1.0nm,0.3s,baz=135,slow=1.4,SNR=3.4
AAK pP **pP 20 04 46.2 +0.6**
1.0nm,0.3s,baz=160,slow=4.7,SNR=2.4
OXZ Oxford 61.15 141 eP **P 20 04 22.7 -0.5**
197nm,1.9s
KBL Kabul 61.20 310 eP **P 20 04 22.3 -1.7**
5.8nm,0.8s
YAK Yakutsk 62.31 3 eP **P 20 04 28.8 -1.8**
12nm,0.8s
ZALV Zalesovo Beam 62.59 336 P P 20 04 30.9 -1.8
1.1nm,0.6s,baz=116,slow=9.9,SNR=6.5
ZAA1 Zalesovo Array 62.59 336 eP **P 20 04 30.9 -1.8**
KURBB Kurchatov Arra 63.24 330 P P 20 04 35.2 -1.8
1.5nm,0.8s,baz=139,slow=6.2,SNR=12
KURBB pP **pP 20 04 59.6 -0.7**

2.6nm,0.9s,baz=128,slow=6.2,SNR=5.2
KURK Kurchatov 63.25 330 *e*P **P 20 04 35.2 -1.9**
MA2 Magadan 63.43 15 P **P 20 04 35.5 -2.6**
6.7nm,0.7s,baz=185,slow=6.3,SNR=9.2
MA2 Magadan 63.43 15 *e*P **P 20 04 37.5 -0.6**
7.8nm,0.8s
SEY Seymchan 66.71 14 P **P 20 04 59.0 -0.2**
2.7nm,1.0s,baz=216,slow=5.0,SNR=7.8
BVAR Borovoye Array 68.76 329 P **P 20 05 11.0 -1.3**
0.3nm,0.4s,baz=158,slow=4.7,SNR=3.3
BVAR pP **pP 20 05 35.1 -0.8**
0.8nm,0.6s,baz=125,slow=9.3,SNR=4.0
TIXI Tiksi 71.87 2 P **P 20 05 29.0 -2.0**
1.1nm,0.3s,baz=171,slow=2.8,SNR=7.3
TIXI LR LR 20 37 23.2
comp=Z,18nm,21.2s,baz=263,slow=36
TIXI Tiksi 71.87 2 *e*P **P 20 05 28.5 -2.4**
4.2nm,1.1s
ATKA Atka Island 73.78 35 *e*P **P 20 05 42.5 -0.1**
24nm,0.8s
AKTO Aktyubinsk 74.58 323 LR LR 20 42 52.9
comp=Z,24nm,18.7s,baz=121,slow=39
VNDA Vanda 79.99 172 P **P 20 06 17.4 +0.4**
2.3nm,0.7s,baz=13,slow=4.0,SNR=3.8
VNDA Vanda 79.99 172 *e*P **P 20 06 16.9 -0.1**
KLMR Klimovskoe 87.09 331 *e*P **P 20 06 55.6 +2.0**
KLMR AMP 20 06 57.0
comp=Z,5.0nm,1.0s
BRTR Keskin Array B 89.77 310 LR LR 20 54 40.3
comp=Z,10nm,18.4s,baz=224,slow=40
SPA0 Spitsbergen Ar 93.65 349 *e*P **P 20 07 22.0 -2.0**
SPITS Spitsbergen Ar 93.65 349 P **P 20 07 21.5 -2.5**
comp=Z,5.4nm,0.8s,baz=62,slow=3.4,SNR=3.1
TORD Torodi Ar. Bea 120.60 285 PKP **PKPdf 20 12 58.4 -2.1**
comp=Z,0.7nm,0.6s,baz=100,slow=1.2,SNR=6.5
TOA1 Torodi Ar. Sit 120.60 285 *e*PKPdf **PKPdf 20 12 58.4 -2.1**
TXAR Lajitas Array 126.85 53 PKP **PKPdf 20 13 12.0 -0.3**
comp=Z,0.3nm,0.7s,baz=270,slow=0.9,SNR=3.7
CPUP Villa Florida 153.58 179 PKPbc **PKPbc 20 14 07.2 +0.1**
comp=Z,1.4nm,0.9s,baz=304,slow=1.0,SNR=4.7
CPUP Villa Florida 153.58 179 *e*PKPbc **PKPbc 20 14 04.5 -2.6**

IDC 12 20:05:12.5±1.9, 2°.24N×128°.79E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.4/53, mbtmp3.5/5, Error ellipse: s-maj=150.3km s-min=21.5km az=69.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.71**	**166**	P	P	20 10 15.9	-0.2
0.4nm,0.5s,baz=346,slow=10,SNR=7.2							
ASAR	**Alice Springs**	**26.23**	**169**	P	P	20 10 49.2	-0.2
0.2nm,0.8s,baz=347,slow=7.3,SNR=1.7							
MKAR	**Makanchi Array**	**59.94**	**325**	P	P	20 15 21.1	+0.4
0.7nm,0.6s,baz=117,slow=7.8,SNR=11							
KURBB	**Kurchatov Arra**	**64.09**	**327**	P	P	20 15 48.2	-0.2
0.3nm,0.3s,baz=127,slow=6.0,SNR=5.8							
BVAR	**Borovoye Array**	**69.68**	**327**	P	P	20 16 23.9	-0.1
0.1nm,0.4s,baz=131,slow=7.9,SNR=4.1							

IDC 12 20:09:28.2±8.4, 20°.39S×178°.07W, h495km±90km, mb2.5/3, mb1 2.9/3, mb1mx2.6/47, mbtmp3.4/3, Error ellipse: s-maj=144.0km s-min=37.5km az=161.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**44.48**	**257**	P	P	20 16 55.0	-0.1
0.2nm,0.4s,baz=95,slow=7.8,SNR=6.8							
ASAR				PcP	PcP	20 18 28.1	+0.1
0.3nm,0.7s,baz=107,slow=3.1,SNR=3.1							
WRA	**Warramunga Arr**	**44.55**	**262**	P	P	20 16 55.3	-0.3
0.1nm,0.2s,baz=96,slow=8.2,SNR=12							
TXAR	**Lajitas Array**	**87.05**	**57**	P	P	20 21 21.2	+0.2
0.2nm,0.7s,baz=215,slow=7.7,SNR=2.9							
AKASG	**Malin Array Be**	**142.89**	**331**	PKP	PKPdf	20 28 01.8	-3.0
0.4nm,0.4s,baz=46,slow=4.2,SNR=12							
BRTR	**Keskin Array B**	**146.72**	**312**	PKPbc	PKPbc	20 28 14.6	+0.1
0.4nm,0.8s,baz=110,slow=1.8,SNR=2.9							

*ISCJB **12** 20:09:53.6±0.4, 11°.47N±0°.06×140°.61E±0°.06, h43km, mb4.4/17, MS3.2/2, Error ellipse: s-maj=9.3km s-min=7.9km az=35.0*
*IDC **12** 20:09:56.4±3.1, 11°.49N×140°.63E, h49km±34km, mb3.7/9, mb1 3.8/11, mb1mx3.5/63, mbtmp4.0/11, ML3.9/2, MS3.1/3, Ms1 3.1/3, ms1mx2.6/55, Error ellipse: s-maj=28.2km s-min=17.7km az=96.0*
*NEIC **12** 20:09:56.6±1.5, 11°.48N×140°.77E, h57km±15km, mb4.7/9, Error ellipse: s-maj=13.6km s-min=8.1km az=94.0*
ISC 12 20:09:55.4±0.6, 11°.50N±0°.09×140°.59E±0°.09, h43km, n37, σ1§13/37, **mb4.5/17, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.66**	**63**	P	**Pn**	20 11 03.0	**-0.3**
3.9nm,0.3s,baz=18,slow=19,SNR=3.2							
GUMO				S	**Sn**	20 11 57.6	**+1.5**
4.0nm,0.3s,baz=71,slow=18,SNR=2.0							
GUMO				LR	LR	20 12 51.3	
comp=Z,101nm,18.9s,baz=216,slow=38							
GUMO	**Guam**	**4.66**	**63**	*e*Pn	**Pn**	20 11 02.4	**-0.8**
GUMO				*e*Sn	**Sn**	20 11 57.6	**+1.5**
JAY	**Jayapura**	**13.93**	**180**	P	**Pn**	20 13 10.8	**+0.6**
0.8nm,0.3s,baz=281,slow=5.5,SNR=4.5							
JNU	**Nakatsue**	**23.29**	**339**	LR	LR	20 22 40.3	
comp=Z,29nm,20.2s,baz=129,slow=33							
WB2	**Warramunga Arr**	**31.85**	**191**	*e*P	**P**	20 16 14.7	**-1.8**
WR1	**Warramunga Arr**	**31.85**	**191**	*e*P	**P**	20 16 16.6	**+0.1**
22nm,1.8s							
WRA	**Warramunga Arr**	**31.85**	**191**	P	**P**	20 16 16.6	**+0.1**
0.6nm,0.9s,baz=7.0,slow=9.9,SNR=3.0							
AS31	**Alice Springs**	**35.56**	**191**	*e*P	**P**	20 16 49.6	**+0.9**
4.7nm,1.8s							
ASAR	**Alice Springs**	**35.56**	**191**	P	**P**	20 16 49.1	**+0.4**
0.3nm,0.8s,baz=21,slow=13,SNR=3.7							
SONA0	**Songino Array**	**46.16**	**328**	*e*P	**P**	20 18 17.8	**+1.9**
SONM	**Songino Array**	**46.16**	**328**	P	**P**	20 18 17.8	**+1.9**
0.3nm,0.3s,baz=160,slow=9.2,SNR=2.8							
SONA1	**Songino Array**	**46.17**	**328**	*e*P	**P**	20 18 16.4	**+0.4**
YAK	**Yakutsk**	**51.06**	**353**	*e*P	**P**	20 18 53.4	**+0.3**
8.4nm,0.5s							
AKUT	**Akutan**	**59.85**	**33**	*e*P	**P**	20 19 55.3	**-1.2**
134nm,1.8s							
MK01	**Makanchi Array**	**60.13**	**318**	*e*P	**P**	20 19 59.2	**+0.6**
MK31	**Makanchi Array**	**60.15**	**318**	*e*P	**P**	20 19 59.5	**+0.8**
MK32	**Makanchi Array**	**60.15**	**318**	*e*P	**P**	20 19 59.8	**+1.0**
MKAR	**Makanchi Array**	**60.15**	**318**	P	**P**	20 19 59.8	**+1.0**
1.2nm,0.5s,baz=98,slow=9.7,SNR=16							
MKAR	**Makanchi Array**	**60.15**	**318**	*e*P	**P**	20 19 59.2	**+0.5**
9.7nm,0.4s							
MAKZ	**Makanchi**	**60.36**	**318**	*e*P	**P**	20 20 00.9	**+0.8**
1.9nm,0.5s							
ZALV	**Zalesovo Beam**	**60.94**	**326**	P	**P**	20 20 04.2	**+0.2**
0.9nm,0.3s,baz=112,slow=7.8,SNR=6.9							
ZALV	**Zalesovo Beam**	**60.94**	**326**	*e*P	**P**	20 20 03.7	**-0.2**
ZAA1	**Zalesovo Array**	**60.94**	**326**	*e*P	**P**	20 20 04.2	**+0.2**
KURK	**Kurchatov**	**63.53**	**321**	*e*P	**P**	20 20 21.5	**+0.1**
5.8nm,0.7s							
KURBB	**Kurchatov Arra**	**63.56**	**321**	P	**P**	20 20 22.3	**+0.8**
2.8nm,0.6s,baz=105,slow=7.1,SNR=29							
BVAR	**Borovoye Array**	**69.00**	**322**	P	**P**	20 20 56.8	**+0.5**
2.0nm,0.6s,baz=110,slow=8.6,SNR=23							
BRVK	**Borovoye**	**69.06**	**323**	*e*P	**P**	20 20 57.3	**+0.5**
3.6nm,0.9s							
ARU	**Arti**	**76.10**	**325**	P	**P**	20 21 38.5	**0.0**
1.4nm,0.4s,baz=100,slow=11,SNR=4.2							
ARU	**Arti**	**76.10**	**325**	*e*P	**P**	20 21 38.3	**-0.2**
16nm,1.9s							
ARCES	**ARCESS Array B**	**87.75**	**341**	LR		21 04 19.4	
comp=Z,28nm,21.1s,baz=61,slow=37							
FRI	**Friant**	**90.77**	**52**	*e*P	**P**	20 22 54.7	**+0.4**
FIA0	**FINESS Array S**	**91.24**	**334**	*e*P	**P**	20 22 54.5	**-1.4**
FINES	**FINESS Array B**	**91.24**	**334**	P	**P**	20 22 54.5	**-1.4**
0.4nm,0.3s,baz=64,slow=3.2,SNR=7.8							
BBRC	**Big Bear Solar**	**93.70**	**54**	*e*P	**P**	20 23 08.3	**+0.1**
EML	**El Monte Cty P**	**94.14**	**55**	*e*P	**P**	20 23 09.4	**-0.6**
P18A	**Preston Nutter**	**97.04**	**47**	*e*P	**P**	20 23 19.7	**-3.8**
3.6nm,0.7s							
LPAZ	**La Paz**	**151.73**	**103**	PKPbc	**PKPbc**	20 29 47.6	**+0.6**
2.1nm,0.5s,baz=3.3,slow=1.0,SNR=9.2							

*ISCJB **12** 20:37:27.8±0.4, 31°.56S±0°.05×180°.0W±0°.1, h450km, mb3.6/3, Error ellipse: s-maj=14.9km s-min=4.7km az=22.3*
*IDC **12** 20:37:28.0±0.9, 31°.52S×179°.83E, h427km±9km, mb3.2/3, mb1 3.5/4, mb1mx3.1/42, mbtmp4.3/4, Error ellipse: s-maj=29.5km s-min=14.5km az=132.0*
*WEL **12** 20:37:33.9±0.7, 32°.5S±0°.10×17°.9W±0°.8, h384km±10km*
ISC 12 20:37:28.2±0.8, 31°.68S±0°.09×179°.8W±0°.1, h450km, n88, σ2§39/101, **mb3.7/3, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.92**	**35**	P	**P**	**20 38 34.9**	**+0.1**
GLKZ				S	**S**	**20 39 25.7**	**-3.0**
RAO	**Raoul Island**	**2.93**	**35**	P	**P**	**20 38 34.9**	**+0.1**
101nm,0.3s,baz=92,slow=6.7,SNR=8.6							
RAO				S	**S**	**20 39 25.3**	**-3.6**
59nm,0.3s,baz=253,slow=19,SNR=2.6							
RIZ	**Raoul Island**	**2.93**	**35**	P	**P**	**20 38 35.1**	**+0.2**
RIZ				S	**S**	**20 39 27.8**	**-1.1**
MXZ	**Matakaoa Point**	**6.07**	**194**	P	**P**	**20 39 05.1**	**+2.1**
MXZ				P	**S**	**20 40 18.9**	**-1.7**
WMGZ	**Waiomatatini S**	**6.29**	**193**	P	**P**	**20 39 07.7**	**+2.4**
WMGZ				P	**S**	**20 40 22.1**	**-2.8**
HAZ	**Te Kaha**	**6.37**	**197**	P	**P**	**20 39 07.8**	**+1.6**
HAZ				P	**S**	**20 40 25.9**	**-0.5**
PKGZ	**Pakihiroa**	**6.43**	**195**	P	**P**	**20 39 08.3**	**+1.4**
PKGZ				P	**S**	**20 40 23.2**	**-4.4**
PUZ	**Puketiti**	**6.57**	**193**	P	**P**	**20 39 10.7**	**+2.4**
PUZ				P	**S**	**20 40 28.6**	**-1.6**
RUGZ	**Raukumara Rang**	**6.60**	**197**	P	**P**	**20 39 09.3**	**+0.6**
RUGZ				P	**S**	**20 40 27.1**	**-3.8**
WHRZ	**Whale Island**	**6.70**	**202**	P	**P**	**20 39 14.4**	**+4.7**
TWGZ	**Tauwhareparae**	**6.73**	**195**	P	**P**	**20 39 11.8**	**+1.8**
TWGZ				P	**S**	**20 40 33.4**	**+0.1**
OPRZ	**Ohinepanea**	**6.83**	**205**	P	**P**	**20 39 14.5**	**+3.5**
MARZ	**Manawahe**	**6.91**	**204**	P	**P**	**20 39 15.9**	**+3.9**
CNGZ	**Carnagh Statio**	**6.98**	**193**	P	**P**	**20 39 15.7**	**+3.2**
MWZ	**Matawai**	**6.98**	**197**	P	**P**	**20 39 13.6**	**+0.9**
MWZ				P	**S**	**20 40 37.8**	**-0.4**
EDRZ	**Edgecumbe**	**7.00**	**203**	P	**P**	**20 39 16.9**	**+4.0**
TKGZ	**Te Karaka**	**7.01**	**195**	P	**P**	**20 39 15.6**	**+2.8**
URZ	**Urewera**	**7.03**	**200**	P	**P**	**20 39 14.1**	**+1.1**
39nm,0.3s,baz=301,slow=2.1,SNR=72							
URZ				S	**S**	**20 40 37.5**	**-1.4**
18nm,0.3s,baz=43,slow=20,SNR=13							
URZ	**Urewera**	**7.03**	**200**	P	**P**	**20 39 14.7**	**+1.6**
KMRZ	**Kaimai**	**7.06**	**208**	P	**P**	**20 39 17.6**	**+4.1**
KARZ	**Kaharoa**	**7.10**	**206**	P	**P**	**20 39 17.2**	**+3.3**
OMRZ	**Omania**	**7.13**	**205**	P	**P**	**20 39 18.4**	**+4.2**
OMRZ	**Omania**	**7.13**	**205**	P	**P**	**20 39 18.4**	**+4.2**
RAGZ	**Rawiri**	**7.16**	**198**	P	**P**	**20 39 17.2**	**+2.5**
TARZ	**Mount Tarawera**	**7.20**	**204**	P	**P**	**20 39 18.7**	**+3.7**
TARZ	**Mount Tarawera**	**7.20**	**204**	P	**P**	**20 39 18.7**	**+3.7**
HLRZ	**Highlands Stat**	**7.26**	**204**	P	**P**	**20 39 19.9**	**+4.2**
RIGZ	**Rimuhau**	**7.28**	**195**	P	**P**	**20 39 18.5**	**+2.7**
MUGZ	**Murupara**	**7.33**	**201**	P	**P**	**20 39 17.9**	**+1.6**
HSRZ	**Hossack Road**	**7.36**	**205**	P	**P**	**20 39 20.7**	**+4.1**
RTZ	**Ruatahuna**	**7.39**	**208**	P	**P**	**20 39 18.0**	**+0.9**
HRRZ	**Handcock Road**	**7.41**	**204**	P	**P**	**20 39 20.7**	**+3.4**
SNGZ	**Shannon Statio**	**7.45**	**197**	P	**P**	**20 39 19.5**	**+1.8**
PRGZ	**Paritu Road**	**7.46**	**194**	P	**P**	**20 39 21.4**	**+3.6**
PRRZ	**Plateau Road**	**7.47**	**203**	P	**P**	**20 39 19.9**	**+2.0**
KNZ	**Kokohu**	**7.60**	**195**	P	**P**	**20 39 21.7**	**+2.5**
TLZ	**Tolley Road**	**7.64**	**208**	P	**P**	**20 39 23.9**	**+4.2**
RAHZ	**Arahi**	**7.65**	**198**	P	**P**	**20 39 21.5**	**+1.8**
MTHZ	**Maungataniwha**	**7.65**	**200**	P	**P**	**20 39 21.8**	**+2.0**
MHGZ	**Mahia Peninsul**	**7.68**	**193**	P	**P**	**20 39 23.6**	**+3.6**
WHHZ	**Waihua**	**7.76**	**197**	P	**P**	**20 39 22.7**	**+1.8**
NMHZ	**Naumai**	**7.89**	**199**	P	**P**	**20 39 25.0**	**+2.6**
ARHZ	**Aropaoanui**	**8.00**	**198**	P	**P**	**20 39 26.7**	**+3.3**
BKZ	**Black Stump Fm**	**8.05**	**201**	P	**P**	**20 39 24.1**	**0.0**
HIZ	**Hauiti**	**8.09**	**211**	P	**P**	**20 39 28.3**	**+3.9**
KATZ	**Kakaramea**	**8.14**	**205**	P	**P**	**20 39 28.9**	**+3.7**
MCHZ	**McNeill Hill**	**8.25**	**199**	P	**P**	**20 39 27.6**	**+1.4**
KRVZ	**Karewarewa**	**8.27**	**205**	P	**P**	**20 39 28.7**	**+2.2**
WTVZ	**West Tongariro**	**8.30**	**205**	P	**P**	**20 39 28.8**	**+1.9**
TWVZ	**Taurewa**	**8.32**	**206**	P	**P**	**20 39 29.3**	**+2.2**
CKHZ	**Cape Kidnapper**	**8.35**	**197**	P	**P**	**20 39 30.0**	**+2.7**
NGZ	**Ngauruhoe**	**8.35**	**205**	P	**P**	**20 39 29.7**	**+2.2**
FWVZ	**Far West T-bar**	**8.44**	**205**	P	**P**	**20 39 28.9**	**+0.4**
WHVZ	**Whangaehu Hut**	**8.45**	**205**	P	**P**	**20 39 30.1**	**+1.4**
BHHZ	**Black Hill Sta**	**8.48**	**202**	P	**P**	**20 39 27.2**	**-1.5**
TRVZ	**Turoa**	**8.48**	**205**	P	**P**	**20 39 29.0**	**0.0**
MOVZ	**Moawhango**	**8.51**	**204**	P	**P**	**20 39 29.6**	**+0.6**
KRHZ	**Kereru**	**8.52**	**200**	P	**P**	**20 39 28.0**	**-1.2**
KAHZ	**Kahuranaki**	**8.53**	**197**	P	**P**	**20 39 31.9**	**+2.7**
PKVZ	**Pokaka**	**8.55**	**206**	P	**P**	**20 39 31.3**	**+1.9**
PXZ	**Pawanui**	**8.75**	**197**	P	**P**	**20 39 33.6**	**+2.0**
PNHZ	**Pukenui**	**8.82**	**200**	P	**P**	**20 39 30.9**	**-1.5**
WPHZ	**Waipukurau**	**8.89**	**199**	P	**P**	**20 39 35.0**	**+1.8**
TSZ	**Takapari Road**	**9.03**	**201**	P	**P**	**20 39 34.1**	**-0.6**
PRHZ	**Porangahau**	**9.03**	**197**	P	**P**	**20 39 38.3**	**+3.7**
DVHZ	**Dannevirke**	**9.19**	**199**	P	**P**	**20 39 37.8**	**+1.4**
ANWZ	**Angora Road**	**9.26**	**198**	P	**P**	**20 39 38.8**	**+2.7**
PRWZ	**Pori Road**	**9.48**	**200**	P	**P**	**20 39 41.0**	**+1.4**
BFZ	**Birch Farm**	**9.52**	**198**	P	**P**	**20 39 41.5**	**+1.5**
MRZ	**Mangatainoka R**	**9.70**	**201**	P	**P**	**20 39 42.7**	**+0.8**
HOWZ	**Holdsworth Sta**	**9.93**	**201**	P	**P**	**20 39 45.1**	**+0.6**
OGWZ	**Otaki Gorge**	**9.97**	**202**	P	**P**	**20 39 44.4**	**-0.4**
TMWZ	**Te Maipa**	**10.02**	**199**	P	**P**	**20 39 48.0**	**+2.6**
KIW	**Kapiti Island**	**10.09**	**203**	P	**P**	**20 39 45.7**	**-0.5**
CAW	**Cannon Point**	**10.26**	**202**	P	**P**	**20 39 48.8**	**+0.8**
DUWZ	**D'Urville Isla**	**10.40**	**207**	P	**P**	**20 39 48.9**	**-0.7**
TUWZ	**Tuamarina**	**10.94**	**205**	P	**P**	**20 39 54.9**	**-0.5**
NNZ	**Nelson**	**10.97**	**208**	P	**P**	**20 39 54.8**	**-1.0**
QRZ	**Quartz Range**	**11.01**	**212**	P	**P**	**20 39 56.1**	**0.0**
STKA	**Stephens Creek**	**32.67**	**259**	P	**P**	**20 43 21.4**	**-0.3**
1.2nm,0.4s,baz=95,slow=9.5,SNR=7.2							
ASAR	**Alice Springs**	**41.49**	**269**	P	**P**	**20 44 33.5**	**-1.2**
0.5nm,0.4s,baz=105,slow=7.0,SNR=13							
ASAR				ScP	**ScP**	**20 49 30.1**	**+1.2**
0.2nm,0.5s,baz=128,slow=3.9,SNR=5.1							
WRA	**Warramunga Arr**	**42.59**	**275**	P	**P**	**20 44 42.1**	**-1.4**
1.7nm,0.3s,baz=111,slow=8.0,SNR=61							
KURBB	**Kurchatov Arra**	**120.82**	**313**	PKP	**PKPdf**	**20 55 28.1**	**+0.2**
0.2nm,0.3s,baz=116,slow=2.2,SNR=2.9							
FINES	**FINESS Array B**	**145.77**	**338**	PKPbc	**PKPab**	**20 56 16.1**	**-0.5**
5.3nm,0.8s,baz=45,slow=4.6,SNR=32							
HFS	**Hagfors**	**150.15**	**346**	PKPbc	**PKPbc**	**20 56 27.8**	**+1.2**
0.9nm,0.5s,baz=247,slow=1.1,SNR=6.4							
MMAI	**Mount Meron Ar**	**150.28**	**282**	PKPbc	**PKPbc**	**20 56 30.1**	**+2.2**
1.1nm,0.5s,baz=83,slow=3.5,SNR=5.1							
AKASG	**Malin Array Be**	**151.31**	**320**	PKPbc	**PKPbc**	**20 56 30.4**	**+0.8**
0.2nm,0.2s,baz=57,slow=3.4,SNR=4.2							
BRTR	**Keskin Array B**	**151.78**	**296**	PKPbc	**PKPbc**	**20 56 31.8**	**+0.6**
0.3nm,0.5s,baz=143,slow=5.2,SNR=3.3							

MAN 12 20:44:02.3, 8°.60N×123°.25E, h1km, mb4.1, ML2.9, MS2.5, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCPH	**Dipolog City**	**0.10**	**99⇑**	*e*P	Pg	20 44 01.6	-2.6
DCPH				*e*S	Sg	20 44 12.7	+7.3
SNPH	**Sibulan**	**0.74**	**359⇑**	*i*P	Pg	20 44 16.8	+0.3
SNPH				*i* S	Sb	20 44 27.6	-1.0
PAGZ	**Pagadian**	**0.76**	**170**	*e*P	Pg	20 44 16.9	+0.2
PAGZ				*e*S	Sb	20 44 27.9	-1.1
TBP	**Tagbilaran**	**1.24**	**29**	*e*P	Pg	20 44 25.8	-0.3
CGP	**Cagayan de Oro**	**1.43**	**96⇓**	*e*P	Pn	20 44 28.8	-0.6
CGP				*e*S	Sn	20 44 50.0	+1.2

NNC 12 20:45:35.5±3.6, 37°.31N×71°.02E, h0km, mb3.6, mpv3.2, 5C-3D, Error ellipse: s-maj=27.7km s-min=24.1km az=155.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.33**	**35**	⇓Pn	Pn	20 46 29.0	0.0
1.9nm,0.4s							
SFK				⇓Sn	Sn	20 47 11.2	+1.9
25nm,0.3s							
MNAS	**Manas**	**5.29**	**12**	⇑Pn	Pn	20 46 55.9	0.0
0.6nm,0.3s							
MNAS				⇓Sn	Sn	20 47 58.6	+0.9
1.9nm,0.5s							
KK31	**Karatay Array**	**5.80**	**356**	⇑Pn	Pn	20 47 03.0	+0.3
2.0nm,0.3s,baz=180,slow=13,SNR=42							
KK31				⇑Sn	Sn	20 48 12.3	+2.3
0.6nm,0.3s,baz=187,slow=24,SNR=6.5							
AAK	**Ala-Archa**	**5.95**	**26**	⇑Pn	Pn	20 47 04.8	-0.2
1.4nm,0.6s							
AAK				⇑Sn	Sn	20 48 12.5	-1.4
0.4nm,0.4s							

*IDC **12** 20:50:07.6±1.2, 34°.91S×179°.63W, h0km, mb4.3/2, mb1 4.5/4, mb1mx3.9/48, mbtmp4.4/4, ML3.9/2, Error ellipse: s-maj=41.6km s-min=30.8km az=133.0*
*NEIC **12** 20:50:08.9±0.4, 34°.93S×179°.64W, h10km, mb4.8/5, Error ellipse: s-maj=14.6km s-min=8.2km az=125.0*
*ISCJB **12** 20:50:13.0±0.6, 35°.03S±0°.05×179°.9W±0°.1, h43km, mb4.8/10, Error ellipse: s-maj=14.7km s-min=4.4km az=22.1*
*WEL **12** 20:50:14.9±1.3, 35°.5S±22°×18°.0W±3°.8, h33km, ML4.5/9*
ISC 12 20:50:14.3±0.8, 34°.95S±0°.10×179°.9W±0°.2, h43km, n45, σ1§03/52, **mb4.8/10, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.97**	**208**	P	**Pn**	**20 50 58.4**	**-0.4**
MXZ				S	**Sn**	**20 51 32.9**	**-0.3**
WMGZ	**Waiomatatini S**	**3.16**	**205**	P	**Pn**	**20 51 02.2**	**+0.7**
WMGZ				S	**Sn**	**20 51 39.3**	**+1.4**
PKGZ	**Pakihiroa**	**3.34**	**208**	P	**Pn**	**20 51 04.1**	**0.0**
PKGZ				S	**Sn**	**20 51 42.1**	**-0.4**
HAZ	**Te Kaha**	**3.35**	**213**	P	**Pn**	**20 51 04.2**	**+0.1**
HAZ				S	**Sn**	**20 51 44.4**	**+1.7**
PUZ	**Puketiti**	**3.44**	**205**	P	**Pn**	**20 51 04.9**	**-0.5**
PUZ				S	**Sn**	**20 51 44.8**	**-0.1**
RUGZ	**Raukumara Rang**	**3.57**	**212**	P	**Pn**	**20 51 07.3**	**0.0**
TWGZ	**Tauwhareparae**	**3.63**	**207**	P	**Pn**	**20 51 08.1**	**0.0**
CNGZ	**Carnagh Statio**	**3.83**	**203**	P	**Pn**	**20 51 10.5**	**-0.2**
TKGZ	**Te Karaka**	**3.91**	**207**	P	**Pn**	**20 51 12.0**	**+0.2**
TKGZ				S	**Sn**	**20 51 55.2**	**-1.3**
MWZ	**Matawai**	**3.95**	**210**	P	**Pn**	**20 51 11.8**	**-0.6**
MWZ				S	**Sn**	**20 51 56.4**	**-1.0**
URZ	**Urewera**	**4.07**	**215**	Pn	**Pn**	**20 51 13.9**	**-0.1**
11nm,0.3s,baz=264,slow=4.5,SNR=51							
URZ				Sn	**Sn**	**20 51 59.3**	**-1.1**
12nm,0.3s,baz=286,slow=23,SNR=7.7							
RAGZ	**Rawiri**	**4.13**	**210**	P	**Pn**	**20 51 14.2**	**-0.7**
RAGZ				S	**Sn**	**20 52 01.1**	**-0.9**
RPZ	**Rata Peaks**	**11.19**	**216**	Pn	**Pn**	**20 52 50.1**	**-1.5**
0.5nm,0.3s,baz=333,slow=2.3,SNR=2.4							
RPZ				Sn	Sn	20 54 43.3	-12
0.6nm,0.3s,baz=347,slow=14,SNR=5.3							
ODZ	**Otahua Downs**	**12.39**	**213**	*e*Pn	**Pn**	**20 53 07.3**	**-0.7**
WKZ	**Wanaka**	**13.00**	**217**	*e*Pn	**Pn**	**20 53 15.4**	**-0.9**
AS01	**Alice Springs**	**41.44**	**273**	*e*P	**P**	**20 57 58.9**	**+2.0**
AS31	**Alice Springs**	**41.48**	**273**	*e*P	**P**	**20 57 59.0**	**+1.8**
1.4nm,0.6s							
ASAR	**Alice Springs**	**41.48**	**273**	P	**P**	**20 57 59.0**	**+1.7**
2.8nm,0.5s,baz=114,slow=7.4,SNR=48							
WB2	**Warramunga Arr**	**42.87**	**278**	*e*P	**P**	**20 58 09.7**	**+1.1**
WRAB	**Tennant Creek**	**42.88**	**278**	*e*P	**P**	**20 58 09.7**	**+1.1**
43nm,2.0s							
WR1	**Warramunga Arr**	**42.88**	**278**	*e*P	**P**	**20 58 09.5**	**+0.8**
30nm,1.8s							
WRA	**Warramunga Arr**	**42.88**	**278**	P	**P**	**20 58 09.5**	**+0.8**
1.4nm,0.5s,baz=118,slow=7.7,SNR=27							
CASY	**Casey**	**50.38**	**209**	*e*P	**P**	**20 59 07.1**	**+0.4**
18nm,1.5s							
FITZ	**Fitzroy Crossi**	**50.91**	**275**	*e*P	**P**	**20 59 12.4**	**+1.0**
26nm,2.0s							
JOHN	**Johnston Islan**	**52.34**	**13**	*e*P	**P**	**20 59 21.3**	**-0.6**
150nm,0.8s							
MBWA	**Marble Bar**	**54.27**	**268**	*e*P	**P**	**20 59 36.2**	**0.0**
82nm,1.7s							
WAKE	**Wake Island**	**55.42**	**345**	*e*P	**P**	**20 59

VMUR	**Van-Muradiye**	**0.27**	**17**	*i* P	**Pb**	**21 27 11.8**	**+0.3**
VMUR				*i* S	**Sb**	**21 27 17.2**	**+1.1**
VMUR	**Van-Muradiye**	**0.27**	**17**	P	**Pb**	**21 27 11.8**	**+0.3**
VMUR				S	**Sb**	**21 27 17.2**	**+1.1**
ERCV	**ERCIS-VAN**	**0.31**	**340**	PG	**Pb**	**21 27 11.0**	**-1.1**
ERCV				SG	**Sb**	**21 27 16.3**	**-0.7**
ERCV	**ERCIS-VAN**	**0.31**	**340**	*e*Pg	**Pb**	**21 27 11.0**	**-1.1**
ERCV				*e*Sg	**Sb**	**21 27 16.3**	**-0.7**
GEVA	**Gevas**	**0.53**	**218**	*i* P	**Pb**	**21 27 15.1**	**-0.5**
GEVA				*i* S	**Sb**	**21 27 23.9**	**+1.0**
GEVA	**Gevas**	**0.53**	**218**	P	**Pb**	**21 27 15.1**	**-0.5**
GEVA				S	**Sb**	**21 27 23.9**	**+1.0**
CLDR	**Caldiran**	**0.54**	**40**	PG	**Pb**	**21 27 16.0**	**+0.2**
CLDR				SG	**Sb**	**21 27 24.2**	**+0.9**
CLDR	**Caldiran**	**0.54**	**40**	*i* P	**Pb**	**21 27 12.8**	**-3.0**
CLDR				*i* S	**Sb**	**21 27 24.9**	**+1.6**
CLDR	**Caldiran**	**0.54**	**40**	P	**Pb**	**21 27 12.9**	**-3.0**
CLDR	**Caldiran**	**0.54**	**40**	*e*Pg	**Pb**	**21 27 16.0**	**+0.2**
CLDR				*e*Sg	**Sb**	**21 27 24.2**	**+0.9**
ADCV	**BITLIS_Adilcev**	**0.59**	**278**	*i* P	**Pb**	**21 27 16.1**	**-0.5**
ADCV				*i* S	**Sb**	**21 27 24.3**	**-0.3**
ADCV	**BITLIS_Adilcev**	**0.59**	**278**	P	**Pb**	**21 27 16.1**	**-0.5**
ADCV				S	**Sb**	**21 27 24.3**	**-0.3**
TUTA	**Tutak**	**0.84**	**323**	*i* P	**Pb**	**21 27 20.2**	**-0.8**
TUTA				*i* S	**Sb**	**21 27 31.9**	**-0.1**
TUTA	**Tutak**	**0.84**	**323**	P	**Pb**	**21 27 20.2**	**-0.8**
TUTA				S	**Sb**	**21 27 31.9**	**-0.1**
AGRB	**Hanur-Agry**	**0.92**	**336**	PG	**Pb**	**21 27 22.2**	**-0.1**
AGRB	**Hanur-Agry**	**0.92**	**336**	*e*Pg	**Pb**	**21 27 22.2**	**-0.1**
GURO	**Guroymak-BITLI**	**1.14**	**261**	PN	**Pn**	**21 27 25.2**	**-0.2**
GURO	**Guroymak-BITLI**	**1.14**	**261**	*e*Pn	**Pn**	**21 27 25.2**	**-0.2**
EATA	**Eleskirt**	**1.36**	**326**	*i* P	**Pb**	**21 27 29.7**	**-0.1**
EATA				*i* S	**Sb**	**21 27 49.7**	**+2.7**
EATA	**Eleskirt**	**1.36**	**326**	P	**Pb**	**21 27 29.7**	**-0.1**
EATA				S	**Sb**	**21 27 49.7**	**+2.7**

NIED ***12*** *21:56:00,27.°00N×128.°20E,h11km,Mw4.0 Best double couple: M0 1.12000×1015 NP1:φ=282.00000°, δ=41.00000°, λ=-85.00000°. NP2:φ=96.00000°, δ=49.00000°, λ=-94.00000°.*
NEIC ***12*** *21:56:36.9±1.6,26.°92N×127.°92E,h4km±10km,mb4.3/7, Error ellipse: s-maj=10.0km s-min=6.6km az=83.0*
NEIC Felt at Ishikawa and Urasoe, Okinawa. Recorded [2 JMA] on Okinawa.
IDC ***12*** *21:56:36.1±0.6,26.°96N×127.°97E,h0km,mb3.9/16, mb1 4.0/17,mb1mx3.8/63,mbtmp3.9/17,ML3.5/1,MS3.2/4, Ms1 3.2/4,ms1mx2.8/59, Error ellipse: s-maj=20.5km s-min=4.8km az=31.0*
ISCJB ***12*** *21:56:37.4±0.4,27.°03N±0.°03×128.°19E±0.°04,h22km±3km, mb4.0/23,MS3.4/3, Error ellipse: s-maj=6.6km s-min=4.2km az=30.7*
JMA ***12*** *21:56:37.7,27.°02N×128.°21E,h15km±1km,M4.0*
JMA Felt II J1.
ISC 12 21:56:37.9±0.8,27.°00N±0.°03×128.°18E±0.°04,h14km±5km, n60,σ1§47/58,mb4.1/23,MS3.6/3,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIH	**Iheya**	**0.19**	**280**	P	**Pg**	**21 56 42.6**	**+0.3**
JIH				S	**Sg**	**21 56 46.0**	**+0.8**
JOW	**Kunigami**	**0.19**	**153**	Pg	**Pg**	**21 56 42.4**	**0.0**
	2μm,0.3s,baz=164,slow=4.0						
JOW				Lg	Lg	21 56 45.3	
	7μm,0.3s,baz=306,slow=19,SNR=336						
JOW	**Kunigami**	**0.19**	**153**	P	**Pg**	**21 56 42.3**	**0.0**
JOW				S	**Sg**	**21 56 45.2**	**-0.1**
JOKE	**Okinoerabujima**	**0.50**	**45**	P	**Pg**	**21 56 47.1**	**-0.8**
JOKE				S	**Sg**	**21 56 53.2**	**-1.4**
JNTH	**Nagotoyohara**	**0.50**	**196**	P	**Pb**	**21 56 47.9**	**-0.6**
JNTH				S	**Sb**	**21 56 54.9**	**-0.8**
JJT3	**Tamagusuku3**	**0.93**	**202**	P	**Pn**	**21 56 56.1**	**-0.4**
JJT3				S	**Sn**	**21 57 08.6**	**-1.0**
JAGN	**Aguni-jima**	**0.93**	**244**	P	**Pn**	**21 56 55.4**	**-1.2**
JAGN				S	**Sn**	**21 57 08.2**	**-1.5**
JTK	**Tokunoshima**	**1.04**	**41**	P	**Pg**	**21 56 56.5**	**-1.5**
JTK				S	**Sg**	**21 57 09.0**	**-2.6**
JNU	**Nakatsue**	**6.53**	**20**	Pn	**Pn**	**21 58 16.7**	**+3.0**
	1.0nm,0.3s,baz=193,slow=12,SNR=9.2						
JNU	**Nakatsue**	**6.53**	**20**	*e*Pn	**Pn**	**21 58 16.9**	**+3.2**
YULB	**Yu-li**	**7.19**	**242**	*e*Pn	**Pn**	**21 58 19.8**	**-3.0**
YULB				*e*Pn	Pb	21 58 24.3	-18
KS15	**Wonju Array Si**	**10.41**	**359**	*e*Pn	**Pn**	**21 59 07.3**	**+0.5**
KSAR	**Wonju Array Be**	**10.41**	**359**	Pn	**Pn**	**21 59 10.1**	**+3.3**
KSRS	**Korea Array**	**10.42**	**359**	Pn	**Pn**	**21 59 10.1**	**+3.1**
	0.2nm,0.3s,baz=185,slow=14,SNR=4.9						
KSRS				LR	LR	22 02 24.1	
	comp=Z,26nm,21.7s,baz=167,slow=33						
SONA0	**Songino Array**	**26.88**	**326**	*e*P	**P**	**22 02 18.8**	**+0.3**
SONM	**Songino Array**	**26.88**	**326**	P	**P**	**22 02 18.8**	**+0.3**
	0.6nm,0.7s,baz=137,slow=11,SNR=2.6						
SONA1	**Songino Array**	**26.89**	**326**	*e*P	**P**	**22 02 19.1**	**+0.6**
PBKT	**Sadao Pong**	**27.26**	**253**	*e*P	**P**	**22 02 21.5**	**-0.4**
	4.4nm,0.8s						
PETK	**Petropavlovsk-**	**34.07**	**32**	LR	LR	22 18 17.8	
	comp=Z,28nm,18.5s,baz=126,slow=38						
H11N1	**WAKE ISLAND Hy**	**36.17**	**93**	T	T	22 41 49.0	
	baz=285						
H11N2	**WAKE ISLAND Hy**	**36.17**	**93**	T	T	22 41 49.9	
	baz=285						
H11N3	**WAKE ISLAND Hy**	**36.18**	**93**	T	T	22 41 51.8	
	baz=285						
H11S3	**WAKE ISLAND Hy**	**36.40**	**95**	T	T	22 42 07.3	
	baz=289						
H11S1	**WAKE ISLAND Hy**	**36.40**	**95**	T	T	22 42 07.8	
	baz=289						
H11S2	**WAKE ISLAND Hy**	**36.41**	**95**	T	T	22 42 07.9	
	baz=289						
PMG	**Port Moresby**	**40.61**	**150**	LR	LR	22 19 50.1	
	comp=Z,79nm,18.4s,baz=82,slow=34						
MK01	**Makanchi Array**	**40.98**	**311**	*e*P	**P**	**22 04 19.8**	**-0.5**
MK32	**Makanchi Array**	**40.99**	**311**	*e*P	**P**	**22 04 20.1**	**-0.3**
MKAR	**Makanchi Array**	**40.99**	**311**	P	**P**	**22 04 20.1**	**-0.3**
	0.8nm,0.6s,baz=100,slow=9.9,SNR=13						
MKAR	**Makanchi Array**	**40.99**	**311**	*e*P	**P**	**22 04 20.1**	**-0.3**
	6.3nm,0.8s						
ZALV	**Zalesovo Beam**	**41.60**	**322**	P	**P**	**22 04 24.4**	**-0.9**
	1.0nm,0.5s,baz=114,slow=8.5,SNR=4.8						
ZAA1	**Zalesovo Array**	**41.61**	**322**	*e*P	**P**	**22 04 24.4**	**-0.9**
KURK	**Kurchatov**	**44.23**	**316**	*e*P	**P**	**22 04 46.1**	**-0.6**
KURBB	**Kurchatov Arra**	**44.26**	**316**	P	**P**	**22 04 46.1**	**-0.8**
	0.5nm,0.5s,baz=104,slow=8.9,SNR=4.5						
WR1	**Warramunga Arr**	**47.05**	**172**	*e*P	**P**	**22 05 09.4**	**+0.2**
	2.3nm,0.9s						
WRA	**Warramunga Arr**	**47.05**	**172**	P	**P**	**22 05 09.4**	**+0.2**
	1.9nm,0.8s,baz=353,slow=8.4,SNR=17						
WB2	**Warramunga Arr**	**47.05**	**172**	*e*P	**P**	**22 05 09.9**	**+0.6**
	3.0nm,1.0s						
BVAR	**Borovoye Array**	**49.67**	**318**	P	**P**	**22 05 29.2**	**0.0**
	1.2nm,0.6s,baz=70,slow=9.1,SNR=9.4						
CTA	**Charters Tower**	**49.98**	**158**	P	**P**	**22 05 33.5**	**+1.6**
	2.9nm,0.8s,baz=329,slow=5.9,SNR=2.7						
AS31	**Alice Springs**	**50.67**	**173**	*e*P	**P**	**22 05 37.0**	**0.0**
	1.1nm,1.0s						
ASAR	**Alice Springs**	**50.68**	**173**	P	**P**	**22 05 37.7**	**+0.7**
	1.5nm,0.6s,baz=2.4,slow=14,SNR=22						
AS01	**Alice Springs**	**50.68**	**173**	*e*P	**P**	**22 05 37.9**	**+0.8**
ARU	**Arti**	**56.76**	**321**	P	**P**	**22 06 19.9**	**-1.3**
	1.4nm,0.6s,baz=76,slow=7.7,SNR=2.0						
WSAR	**Wadi Sarin**	**62.35**	**283**	LR	LR	22 38 53.5	
	comp=Z,43nm,18.8s,baz=214,slow=41						
MDM	**Murphy Dome**	**63.19**	**28**	*e*P	**P**	**22 07 06.5**	**+1.1**
	3.3nm,0.9s						
ILAR	**Eielson Array**	**63.78**	**28**	P	**P**	**22 07 12.2**	**+2.9**
	0.2nm,0.7s,baz=296,slow=9.0,SNR=3.4						
ILB	**Eielson Array**	**63.78**	**28**	*e*P	**P**	**22 07 12.2**	**+2.9**
SPA0	**Spitsbergen Ar**	**68.06**	**348**	*e*P	**P**	**22 07 38.9**	**+2.3**
SPITS	**Spitsbergen Ar**	**68.06**	**348**	P	**P**	**22 07 38.9**	**+2.3**
	5.0nm,1.0s,baz=90,slow=6.3,SNR=4.0						
FIA0	**FINESS Array S**	**72.17**	**330**	*e*P	**P**	**22 08 01.1**	**-0.9**
FINES	**FINESS Array B**	**72.17**	**330**	P	**P**	**22 08 01.1**	**-0.9**
	1.4nm,0.5s,baz=68,slow=5.8,SNR=13						
AKASG	**Malin Array Be**	**74.91**	**319**	P	**P**	**22 08 16.9**	**-1.4**
	0.8nm,0.4s,baz=62,slow=6.6,SNR=4.5						
AKBB	**Malin Array Si**	**74.91**	**319**	*e*P	**P**	**22 08 16.9**	**-1.4**
	1.5nm,0.6s						
BR101	**Keskin Array S**	**76.52**	**308**	*e*P	**P**	**22 08 27.3**	**-0.7**
BRTR	**Keskin Array B**	**76.52**	**308**	P	**P**	**22 08 27.3**	**-0.7**
	1.1nm,0.8s,baz=104,slow=5.7,SNR=6.7						
YKA	**Yellowknife Ar**	**77.85**	**25**	P	**P**	**22 08 35.4**	**+0.6**
	0.5nm,0.6s,baz=321,slow=5.8,SNR=3.8						
YKB5	**Yellowknife Ar**	**77.85**	**25**	*e*P	**P**	**22 08 35.4**	**+0.6**
HFS	**Hagfors**	**78.12**	**332**	P	**P**	**22 08 35.6**	**-0.7**
	1.2nm,0.6s,baz=33,slow=3.5,SNR=6.1						
NB2	**NORSAR Subarra**	**78.60**	**334**	P	**P**	**22 08 37.9**	**-1.1**
	comp=Z,1.1nm,0.6s,baz=52,slow=5.9						
NC204	**NORSAR Array S**	**78.64**	**334**	*e*P	**P**	**22 08 38.1**	**-1.2**

NEIC ***12*** *21:58:11.9±0.0,36.°45N×28.°92E,h21km,mb4.4/8, ML4.1(NIC),ML4.5(DDA),ML3.8(THE),ML4.5(ISK),After ISK.*
NEIC Felt at Koycegiz, Turkey.
CSEM ***12*** *21:58:11.8±0.1,36.°36N×29.°01E,h20km,mb4.5/4, Error ellipse: s-maj=2.4km s-min=1.7km az=16.0*
ATH ***12*** *21:58:12.0,36.°47N×28.°93E,h40km±1km,ML3.8/24, Error ellipse: s-maj=1.3km s-min=0.5km az=148.0*
IDC ***12*** *21:58:12.9±1.9,36.°42N×28.°93E,h38km±18km,mb3.7/13, mb1 3.8/21,mb1mx3.6/63,mbtmp3.8/21,ML3.7/8,MS2.9/9, Ms1 2.9/9,ms1mx2.7/65,Error ellipse: s-maj=15.8km s-min=11.3km az=151.0*
DDA ***12*** *21:58:12.0,36.°46N×28.°93E,h28km,Ml4.5*
THE ***12*** *21:58:12.8,36.°41N×28.°93E,h7km±1km,ML3.8/6, Error ellipse: s-maj=1.4km s-min=0.3km az=169.0*
HLW ***12*** *21:58:12.0,36.°06N×29.°06E,h5km±12km,Ml4.3*
ISK ***12*** *21:58:12.2,36.°46N×28.°92E,h21km,ML4.5/13*
GII ***12*** *21:58:15.2±0.0,36.°06N×29.°45E,h1km,mb4.1/1,MD3.5/4*
NIC ***12*** *21:58:15.6±0.2,36.°37N×29.°23E,h22km,mb4.5,ML4.1*
ISC 12 21:58:11.8±0.8,36.°38N±0.°02×28.°97E±0.°02,h27km±6km, n629,σ1§55/739,mb4.0/17,29C-33D,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.27**	**20**	PG	**Pb**	**21 58 17.8**	**-0.9**
FETY				SG	**Sb**	**21 58 22.7**	**-0.7**
FETY	**Fethiye**	**0.27**	**20**	*e*Pg	**Pb**	**21 58 17.7**	**-0.9**
FETY	**Fethiye**	**0.27**	**20**	P	**Pb**	**21 58 17.8**	**-0.9**
FETY				*e*Sg	**Sb**	**21 58 22.7**	**-0.7**
DALY	**Dalyan (Mu¨la**	**0.51**	**330**	PG	**Pb**	**21 58 21.8**	**-0.4**
DALY	**Dalyan (Mu¨la**	**0.51**	**330**	⇑*i*P	**Pb**	**21 58 21.6**	**-0.6**
DALY				*i* S	**Sb**	**21 58 28.8**	**-0.5**
DALY	**Dalyan (Mu¨la**	**0.51**	**330**	*i* Pg	**Pb**	**21 58 21.8**	**-0.4**
AKAS	**Kas**	**0.53**	**106**	PG	**Pn**	**21 58 23.8**	**0.0**
AKAS	**Kas**	**0.53**	**106**	⇑*i*P	**Pn**	**21 58 23.8**	**0.0**
AKAS				*i* S	**Sn**	**21 58 34.3**	**+2.4**
AKAS	**Kas**	**0.53**	**106**	*e*Pg	**Pn**	**21 58 23.8**	**0.0**
AKAS	**Kas**	**0.53**	**106**	P	**Pn**	**21 58 23.8**	**0.0**
KSL	**Kastellorizon**	**0.55**	**115**	P	**Pn**	**21 58 24.8**	**+1.0**
KSL				S	**Sn**	**21 58 34.8**	**+2.8**
KSL				AML	AML	21 58 36.3	
	comp=E,40503μm,0.6s						
KSL				AML	AML	21 58 36.5	
	comp=N,17300μm,0.6s						
KSL	**Kastellorizon**	**0.55**	**115**	*e*Pn	**Pn**	**21 58 24.9**	**+1.1**
KSL				*e*Sg	**Sn**	**21 58 33.2**	**+1.2**
KSL	**Kastellorizon**	**0.55**	**115**	P	**Pn**	**21 58 24.9**	**+1.1**
KSL				S	**Sn**	**21 58 33.2**	**+1.2**
TURN	**Turunc**	**0.57**	**329**	PG	**Pn**	**21 58 25.3**	**+1.1**
TURN	**Turunc**	**0.57**	**329**	⇑*i*P	**Pn**	**21 58 25.3**	**+1.1**
TURN				*i* S	**Sn**	**21 58 34.4**	**+1.7**
TURN	**Turunc**	**0.57**	**329**	P	**Pn**	**21 58 25.3**	**+1.1**
TURN				S	**Sn**	**21 58 34.4**	**+1.7**
ARG	**Arkhangelos**	**0.70**	**257**	PG	**Pn**	**21 58 26.1**	**+0.1**
ARG	**Arkhangelos**	**0.70**	**257**	P	**Pn**	**21 58 25.8**	**-0.1**
ARG				S	**Sn**	**21 58 37.7**	**+1.8**
ARG				AML	AML	21 58 40.9	
	comp=N,14553μm,0.7s						
ARG				AML	AML	21 58 42.0	
	comp=E,21723μm,0.6s						
ARG	**Arkhangelos**	**0.70**	**257**	*e*Pg	**Pn**	**21 58 25.8**	**-0.1**
ARG	**Arkhangelos**	**0.70**	**257**	P	**Pn**	**21 58 26.0**	**+0.1**
ARG				S	**Sn**	**21 58 36.7**	**+0.8**
ARG	**Arkhangelos**	**0.70**	**257**	P	**Pn**	**21 58 26.1**	**+0.1**
ARG				S	**Sn**	**21 58 36.7**	**+0.8**
MRSB	**Marmaris-Mugla**	**0.71**	**299**	PG	**Pb**	**21 58 25.6**	**0.0**
MRSB	**Marmaris-Mugla**	**0.71**	**299**	*e*Pg	**Pb**	**21 58 25.6**	**0.0**
GLHS	**Glhisar (BURDU**	**0.88**	**29**	PG	**Pb**	**21 58 28.8**	**+0.2**
GLHS	**Glhisar (BURDU**	**0.88**	**29**	*e*Pg	**Pb**	**21 58 28.8**	**+0.2**
GLHS	**Glhisar (BURDU**	**0.88**	**29**	*e*Pg	**Pb**	**21 58 28.8**	**+0.2**
YER	**Yerkesik**	**0.93**	**324**	PG	**Pb**	**21 58 29.2**	**-0.3**
YER	**Yerkesik**	**0.93**	**324**	*e*Pg	**Pb**	**21 58 29.2**	**-0.3**
YER	**Yerkesik**	**0.93**	**324**	*e*Pg	**Pb**	**21 58 29.2**	**-0.3**
GOLH	**Golhisar**	**0.98**	**29**	⇑*i*P	**Pn**	**21 58 29.6**	**-0.3**
GOLH				*i* S	**Sn**	**21 58 44.0**	**+1.1**
GOLH	**Golhisar**	**0.98**	**29**	P	**Pn**	**21 58 29.6**	**-0.3**
GOLH				S	**Sn**	**21 58 44.0**	**+1.1**
TAVA	**DENIZLI_Tavas**	**1.08**	**358**	⇓*i*P	**Pb**	**21 58 31.8**	**-0.2**
TAVA				*i* S	**Sb**	**21 58 46.0**	**+0.1**
TAVA	**DENIZLI_Tavas**	**1.08**	**358**	P	**Pb**	**21 58 31.8**	**-0.2**
TAVA				S	**Sb**	**21 58 46.0**	**+0.1**
DATC	**Datca-Mugla**	**1.12**	**290**	PG	**Pb**	**21 58 32.6**	**+0.1**
DATC	**Datca-Mugla**	**1.12**	**290**	*e*Pg	**Pb**	**21 58 32.6**	**+0.1**
DAT	**Datca**	**1.17**	**288**	PN	**Pb**	**21 58 33.8**	**+0.3**
DAT	**Datca**	**1.17**	**288**	⇓*i*P	**Pb**	**21 58 33.5**	**0.0**
DAT				*i* S	**Sb**	**21 58 49.8**	**+1.4**
DAT	**Datca**	**1.17**	**288**	P	**Pb**	**21 58 33.5**	**0.0**
DAT	**Datca**	**1.17**	**288**	*e*Pn	**Pb**	**21 58 33.8**	**+0.3**
DAT				S	**Sb**	**21 58 49.8**	**+1.4**
KORT	**Korkueli**	**1.27**	**60**	PN	**Pb**	**21 58 36.5**	**+1.3**
KORT	**Korkueli**	**1.27**	**60**	⇑*i*P	**Pb**	**21 58 35.9**	**+0.7**
KORT				*i* S	**Sb**	**21 58 55.6**	**+4.5**
KORT	**Korkueli**	**1.27**	**60**	P	**Pb**	**21 58 35.9**	**+0.7**
KORT	**Korkueli**	**1.27**	**60**	*e*Pn	**Pb**	**21 58 36.5**	**+1.3**
DNZL	**Cakiroluk**	**1.31**	**3**	⇓*i*P	**Pb**	**21 58 35.3**	**-0.6**
DNZL				*i* S	**Sb**	**21 58 52.8**	**+0.4**
DNZL	**Cakiroluk**	**1.31**	**3**	P	**Pb**	**21 58 35.3**	**-0.6**
DNZL				S	**Sb**	**21 58 52.8**	**+0.4**
MLSB	**Milas**	**1.32**	**314**	PN	**Pb**	**21 58 36.2**	**+0.2**
MLSB	**Milas**	**1.32**	**314**	*e*Pn	**Pb**	**21 58 36.2**	**+0.2**
DENT	**Denizli**	**1.37**	**2**	PN	**Pn**	**21 58 35.5**	**+0.3**
DENT	**Denizli**	**1.37**	**2**	*e*Pn	**Pn**	**21 58 35.5**	**+0.3**
BDRM	**Kayabasi**	**1.40**	**300**	⇓*i*P	**Pb**	**21 58 36.7**	**-0.7**
BDRM				*i* S	**Sb**	**21 58 55.3**	**+0.4**
BDRM	**Kayabasi**	**1.40**	**300**	P	**Pb**	**21 58 36.7**	**-0.7**
BDRM				S	**Sb**	**21 58 55.3**	**+0.4**
ANTB	**Antalya**	**1.45**	**69**	PN	**Pb**	**21 58 39.7**	**+1.6**
ANTB	**Antalya**	**1.45**	**69**	*e*Pn	**Pb**	**21 58 39.7**	**+1.6**
BODT	**Bodrum**	**1.50**	**298**	PN	**Pn**	**21 58 37.0**	**+0.1**
BODT	**Bodrum**	**1.50**	**298**	*e*Pn	**Pn**	**21 58 37.0**	**+0.1**
BODT	**Bodrum**	**1.50**	**298**	*e*Pn	**Pn**	**21 58 37.0**	**+0.1**
NISR	**Nisiros**	**1.50**	**279**	P	**Pn**	**21 58 37.7**	**+0.7**
NISR				AML	AML	21 59 05.1	
	comp=E,10516μm,0.4s						
NISR				AML	AML	21 59 06.9	
	comp=N,5156μm,0.5s						
NISR	**Nisiros**	**1.50**	**279**	P	**Pn**	**21 58 37.6**	**+0.7**
NISR				S	**Sb**	**21 58 58.1**	**+0.4**
NISR	**Nisiros**	**1.50**	**279**	P	**Pn**	**21 58 37.6**	**+0.7**
NISR				S	**Sb**	**21 58 58.1**	**+0.4**
AYDN	**Tasoluk**	**1.55**	**326**	⇓*i*P	**Pn**	**21 58 38.4**	**+0.7**
AYDN				*i* S	**Sb**	**21 58 59.3**	**+0.2**
AYDN	**Tasoluk**	**1.55**	**326**	P	**Pn**	**21 58 38.4**	**+0.7**
AYDN				S	**Sb**	**21 58 59.3**	**+0.2**
YKAV	**Yalikavak-Bodr**	**1.55**	**299**	PN	**Pn**	**21 58 38.3**	**+0.7**
YKAV	**Yalikavak-Bodr**	**1.55**	**299**	*e*Pn	**Pn**	**21 58 38.3**	**+0.7**
BRDR	**BURDUR-Merkez**	**1.58**	**33**	⇓*i*P	**Pb**	**21 58 40.0**	**-0.4**
BRDR				*i* S	**Sb**	**21 59 00.9**	**+1.0**
BRDR	**BURDUR-Merkez**	**1.58**	**33**	P	**Pb**	**21 58 40.0**	**-0.4**
BCK	**Bucak**	**1.69**	**50**	PN	**Pb**	**21 58 42.0**	**-0.2**
BCK	**Bucak**	**1.69**	**50**	*e*Pn	**Pb**	**21 58 42.0**	**-0.2**
KARP	**Karpathos**	**1.69**	**241**	PN	**Pb**	**21 58 41.2**	**-1.0**
KARP	**Karpathos**	**1.69**	**241**	P	**Pb**	**21 58 41.5**	**-0.7**
KARP				S	**Sb**	**21 59 02.5**	**-0.6**
KARP				AML	AML	21 59 03.7	
	comp=N,3308μm,0.3s						
KARP				AML	AML	21 59 09.4	
	comp=E,3461μm,0.4s						
KARP	**Karpathos**	**1.69**	**241**	*e*Pn	**Pn**	**21 58 40.9**	**+1.4**
KARP				*e*Sn	**Sb**	**21 59 02.1**	**-0.9**
KARP	**Karpathos**	**1.69**	**241**	P	**Pb**	**21 58 41.1**	**-1.1**
KARP				S	**Sb**	**21 59 02.4**	**-0.6**
KARP	**Karpathos**	**1.69**	**241**	*e*Pn	**Pn**	**21 58 40.9**	**+1.4**
KARP				*e*Sn	**Sb**	**21 59 02.1**	**-0.9**
AYDB	**Zeytinkoy-Aydi**	**1.79**	**331**	PN	**Pn**	**21 58 41.3**	**+0.3**
AYDB	**Zeytinkoy-Aydi**	**1.79**	**331**	*e*Pn	**Pn**	**21 58 41.3**	**+0.3**
ISP	**Isparta**	**1.90**	**40**	PN	**Pn**	**21 58 44.1**	**+1.6**
ISP	**Isparta**	**1.90**	**40**	⇓*i*P	**Pb**	**21 58 44.3**	**-1.6**
ISP	**Isparta**	**1.90**	**40**	S	**Sb**	**21 59 07.9**	**-1.4**
ISP	**Isparta**	**1.90**	**40**	*e*Pn	**Pn**	**21 58 44.2**	**+1.6**
ISP	**Isparta**	**1.90**	**40**	P	**Pb**	**21 58 44.4**	**-1.5**
ISP				S	**Sb**	**21 59 08.1**	**-1.2**
ISP	**Isparta**	**1.90**	**40**	Pn	**Pb**	**21 58 44.4**	**-1.5**
ISP	**Isparta**	**1.90**	**40**	*e*Pn	**Pn**	**21 58 44.1**	**+1.6**
ISP	**Isparta**	**1.90**	**40**	P	**Pb**	**21 58 44.4**	**-1.5**
ISP				S	**Sb**	**21 59 08.1**	**-1.2**
GCAM	**G?zelcaml?**	**1.92**	**314**	PN	**Pn**	**21 58 43.7**	**+1.1**
GCAM	**G?zelcaml?**	**1.92**	**314**	⇓*i*P	**Pn**	**21 58 43.4**	**+0.8**
GCAM				*i* S	**Sn**	**21 59 07.2**	**+1.4**
GCAM	**G?zelcaml?**	**1.92**	**314**	P	**Pn**	**21 58 43.4**	**+0.8**
GCAM	**G?zelcaml?**	**1.92**	**314**	*e*Pn	**Pn**	**21 58 43.7**	**+1.1**
GCAM				S	**Sn**	**21 59 07.2**	**+1.4**
SUTC	**Sutluce-Ispart**	**1.96**	**55**	PN	**Pb**	**21 58 45.7**	**-1.2**
SUTC	**Sutluce-Ispart**	**1.96**	**55**	*e*Pn	**Pb**	**21 58 45.7**	**-1.2**
KHL	**Karahalli**	**1.99**	**13**	PN	**Pn**	**21 58 44.2**	**+0.4**
KHL	**Karahalli**	**1.99**	**13**	*e*Pn	**Pn**	**21 58 44.2**	**+0.4**
KHAL	**Karahalli**	**2.03**	**12**	⇓*i*P	**Pn**	**21 58 43.5**	**-0.8**
KHAL				*i* S	**Sn**	**21 59 08.0**	**-0.8**
KHAL	**Karahalli**	**2.03**	**12**	P	**Pn**	**21 58 43.5**	**-0.8**
KHAL				S	**Sn**	**21 59 08.0**	**-0.8**
MANT	**Manisa**	**2.13**	**351**	⇓*i*P	**Pn**	**21 58 45.7**	**-0.1**
MANT				*i* S	**Sn**	**21 59 10.2**	**-1.3**
MANT	**Manisa**	**2.13**	**351**	*e*Pn	**Pn**	**21 58 45.7**	**-0.1**
MANT				*e*Sn	**Sn**	**21 59 10.6**	**-0.9**
MANT	**Manisa**	**2.13**	**351**	P	**Pn**	**21 58 45.7**	**-0.1**
MANT				S	**Sn**	**21 59 10.2**	**-1.3**
KULA	**Kula-Manisa**	**2.15**	**353**	PN	**Pn**	**21 58 45.9**	**0.0**
KULA	**Kula-Manisa**	**2.15**	**353**	*e*Pn	**Pn**	**21 58 45.9**	**0.0**
SMG	**Samos**	**2.16**	**308**	P	**Pn**	**21 58 47.0**	**+1.0**
SMG				S	**Sn**	**21 59 10.8**	**-1.1**
SMG				AML	AML	21 59 15.1	
	comp=N,17646μm,0.3s						
SMG				AML	AML	21 59 15.3	
	comp=E,16598μm,0.2s						
SMG	**Samos**	**2.16**	**308**	P	**Pn**	**21 58 46.6**	**+0.6**
SMG				S	**Sn**	**21 59 12.4**	**+0.5**
SMG	**Samos**	**2.16**	**308**	P	**Pn**	**21 58 46.6**	**+0.6**
SMG				S	**Sn**	**21 59 12.4**	**+0.5**
BAGO	**Egridir - ISPA**	**2.17**	**42**	*i* P	**Pn**	**21 58 47.7**	**+1.5**
BAGO				*i* S	**Sn**	**21 59 14.5**	**+2.3**
KEPZ	**Antalya-Kepez**	**2.18**	**75**	⇑*i*P	**Pb**	**21 58 49.3**	**-1.3**
KEPZ				*i* S	**Sb**	**21 59 17.9**	**+0.7**
DGB	**¨zmir**	**2.36**	**316**	⇓*i*P	**Pn**	**21 58 49.0**	**+0.2**
DGB				*i* S	**Sn**	**21 59 16.9**	**+0.1**
BLCB	**Balcova**	**2.52**	**323**	PN	**Pn**	**21 58 51.1**	**+0.1**

CHOS	**Chios island**	**3.07 312**	P	**Pn**	**21 58 59.4**	**+0.9**
CHOS			S	**Sn**	**21 59 36.7**	**+2.3**
LAST	**Lasithi**	**3.09 248**	P	**Pn**	**21 58 59.6**	**+0.7**
LAST	**Lasithi**	**3.09 248**	P	**Pn**	**21 59 00.0**	**+1.1**
LAST	**Lasithi**	**3.09 248**	P	**Pn**	**21 59 00.0**	**+1.1**
KONT	**Konya--Tatoy**	**3.13 59** ⇑	*i* P	**Pn**	**21 59 02.0**	**+2.6**
KONT			*i* S	**Sn**	**21 59 38.1**	**+2.3**
PPCY	**Paphos**	**3.13 118**	P	**Pn**	**21 59 00.1**	**+0.8**
	baz=301					
PPCY	**Paphos**	**3.13 118**	P	**Pn**	**21 59 00.1**	**+0.8**
STEP	**BALIKESIR_Sava**	**3.15 342** ⇓	*i* P	**Pn**	**21 58 59.6**	**-0.1**
STEP			*i* S	**Sn**	**21 59 35.1**	**-1.2**
STEP	**BALIKESIR_Sava**	**3.15 342**	P	**Pn**	**21 58 59.6**	**-0.1**
ERMK	**Ermenek**	**3.19 84**	*i* P	**Pn**	**21 59 03.2**	**+2.9**
ALFC	**Alefka**	**3.19 111**	P	**Pn**	**21 59 00.6**	**+0.3**
	baz=294					
ALFC			S	**Sn**	**21 59 36.2**	**-1.2**
ALFC	**Alefka**	**3.19 111**	P	**Pn**	**21 59 00.6**	**+0.3**
ALFC			S	**Sn**	**21 59 36.2**	**-1.2**
DURS	**Dursunbey**	**3.24 353** ⇓	*i* P	**Pn**	**21 59 01.1**	**+0.2**
DURS			*i* S	**Sn**	**21 59 37.0**	**-1.7**
DURS	**Dursunbey**	**3.24 353**	P	**Pn**	**21 59 01.1**	**+0.2**
TNSA	**Tinos**	**3.26 292**	P	**Pn**	**21 59 02.3**	**+1.2**
TNSA	**Tinos**	**3.26 292**	P	**Pn**	**21 59 02.2**	**+1.1**
KDHN	**Kadinhani**	**3.29 49**	*i* P	**Pn**	**21 59 03.2**	**+1.5**
KDHN	**Kadinhani**	**3.29 49**	P	**Pn**	**21 59 03.2**	**+1.5**
IACM	**Heraklion**	**3.34 252**	P	**Pn**	**21 59 03.1**	**+0.8**
IACM			S	**Sn**	**21 59 42.7**	**+1.6**
IACM	**Heraklion**	**3.34 252**	P	**Pn**	**21 59 03.6**	**+1.3**
IACM			S	**Sn**	**21 59 42.3**	**+1.2**
LEF	**Lefka**	**3.43 110**	P	**Pn**	**21 59 03.1**	**-0.3**
LEF			S	**Sn**	**21 59 42.2**	**-0.9**
AYVA	**Ayvalik**	**3.44 329**	*i* P	**Pn**	**21 59 04.1**	**+0.6**
AYVA	**Ayvalik**	**3.44 329**	P	**Pn**	**21 59 04.1**	**+0.6**
PSRA	**Psara**	**3.46 310**	P	**Pn**	**21 59 05.4**	**+1.5**
PSRA	**Psara**	**3.46 310**	P	**Pn**	**21 59 05.0**	**+1.1**
ESKT	**Eskisehir**	**3.47 25**	*i* P	**Pn**	**21 59 04.0**	**-0.1**
SEYT	**Eskypehyr**	**3.47 25**	P	**Pn**	**21 59 04.0**	**-0.1**
IDI	**Anoyia**	**3.49 253**	Pn	**Pn**	**21 59 05.1**	**+0.7**
	comp=N,22nm,0.3s,baz=37,slow=6.7,SNR=193					
IDI			Sn	**Sn**	**21 59 43.4**	**-1.4**
	comp=N,14nm,0.3s,baz=332,slow=15,SNR=4.5					
IDI			LR	LR	22 00 42.4	
	comp=N,120nm,21.6s,baz=102,slow=43					
IDI	**Anoyia**	**3.49 253** ⇑	*i* P	**Pn**	**21 59 05.1**	**+0.7**
IDI	**Anoyia**	**3.49 253** ⇑	*i* P	**Pn**	**21 59 05.1**	**+0.7**
IDI			S	**Sn**	**21 59 45.0**	**+0.2**
BALY	**Balya**	**3.52 343**	*i* P	**Pn**	**21 59 04.0**	**-0.8**
BALY			*i* S	**Sn**	**21 59 43.6**	**-1.9**
BALY	**Balya**	**3.52 343**	P	**Pn**	**21 59 04.0**	**-0.8**
PRK	**Paraskevi**	**3.57 324**	P	**Pn**	**21 59 05.9**	**+0.5**
PRK	**Paraskevi**	**3.57 324**	P	**Pn**	**21 59 05.6**	**+0.2**
PRK	**Paraskevi**	**3.57 324**	P	**Pn**	**21 59 05.9**	**+0.5**
SZAC	**Souni**	**3.58 116**	P	**Pn**	**21 59 06.2**	**+0.7**
	baz=299					
SZAC			S	**Sn**	**21 59 45.8**	**-1.1**
SZAC	**Souni**	**3.58 116**	P	**Pn**	**21 59 06.2**	**+0.7**
SZAC			S	**Sn**	**21 59 45.8**	**-1.1**
SIVA	**Sivas**	**3.65 249**	P	**Pn**	**21 59 08.5**	**+2.0**
SIVA			S	**Sn**	**21 59 47.2**	**-1.4**
SIVA			AML	AML	21 59 53.4	
	comp=E,1269μm,0.7s					
SIVA			AML	AML	21 59 56.8	
	comp=N,845μm,0.7s					
SIVA	**Sivas**	**3.65 249**	P	**Pn**	**21 59 08.6**	**+2.1**
SIVA	**Sivas**	**3.65 249**	P	**Pn**	**21 59 08.4**	**+2.0**
SIVA			S	**Sn**	**21 59 48.3**	**-0.3**
MAMC	**Mammari**	**3.66 108**	P	**Pn**	**21 59 07.4**	**+0.8**
	baz=291					
MAMC	**Mammari**	**3.66 108**	P	**Pn**	**21 59 07.4**	**+0.8**
AUSIV	**SIVRIHISAR**	**3.67 33**	*i* P	**Pn**	**21 59 07.3**	**+0.5**
AUSIV			*i* S	**Sn**	**21 59 47.2**	**-2.0**
AUSIV	**SIVRIHISAR**	**3.67 33**	P	**Pn**	**21 59 07.3**	**+0.5**
AUSIV			S	**Sn**	**21 59 47.2**	**-2.0**
MHLA	**Plaka, Milos I**	**3.68 277**	P	**Pn**	**21 59 08.2**	**+1.3**
MHLA	**Plaka, Milos I**	**3.68 277**	P	**Pn**	**21 59 08.2**	**+1.3**
SERI	**Serifos**	**3.68 284**	P	**Pn**	**21 59 07.8**	**+0.8**
SERI	**Serifos**	**3.68 284**	P	**Pn**	**21 59 07.8**	**+0.8**
BORA	**Eskisehir**	**3.69 18**	*i* P	**Pn**	**21 59 07.7**	**+0.6**
BORA	**Eskisehir**	**3.69 18**	P	**Pn**	**21 59 07.7**	**+0.6**
MHLO	**Agia Marina, M**	**3.69 276**	P	**Pn**	**21 59 09.3**	**+2.2**
MHLO	**Agia Marina, M**	**3.69 276**	P	**Pn**	**21 59 08.8**	**+1.7**
GULN	**MERSIN_Gulnar**	**3.70 92**	*i* P	**Pn**	**21 59 08.4**	**+1.2**
GULN			*i* S	**Sn**	**21 59 50.6**	**+0.7**
GULN	**MERSIN_Gulnar**	**3.70 92**	P	**Pn**	**21 59 08.4**	**+1.2**
GULN			S	**Sn**	**21 59 50.6**	**+0.7**
SIGR	**SIGRI**	**3.75 320**	P	**Pn**	**21 59 08.1**	**+0.2**
SIGR	**SIGRI**	**3.75 320**	P	**Pn**	**21 59 08.3**	**+0.4**
SIGR	**SIGRI**	**3.75 320**	P	**Pn**	**21 59 08.3**	**+0.4**
CSS	**Mathiatis**	**3.82 110**	*e*Pn	**Pn**	**21 59 08.3**	**-0.6**
CSS	**Mathiatis**	**3.82 110**	P	**Pn**	**21 59 09.3**	**+0.4**
	baz=293					
CSS	**Mathiatis**	**3.82 110**	P	**Pn**	**21 59 08.6**	**-0.3**
CSS			S	**Sn**	**21 59 54.5**	**+1.6**
CSS	**Mathiatis**	**3.82 110**	Pn	**Pn**	**21 59 08.2**	**-0.7**
CSS	**Mathiatis**	**3.82 110**	*e*Pn	**Pn**	**21 59 08.3**	**-0.6**
CSS	**Mathiatis**	**3.82 110**	P	**Pn**	**21 59 08.6**	**-0.3**
CSS			S	**Sn**	**21 59 54.5**	**+1.6**
BAYC	**CANAKKALE_Bayr**	**3.86 331**	*i* P	**Pn**	**21 59 09.5**	**+0.1**
BAYC	**CANAKKALE_Bayr**	**3.86 331**	P	**Pn**	**21 59 09.5**	**+0.1**
KARY	**Karystos**	**3.98 296**	P	**Pn**	**21 59 12.3**	**+1.3**
KARY			S	**Sn**	**21 59 57.6**	**+0.9**
KARY	**Karystos**	**3.98 296**	P	**Pn**	**21 59 12.3**	**+1.3**
KARY			S	**Sn**	**21 59 57.6**	**+0.9**
VAM	**Vamos**	**3.99 257**	P	**Pn**	**21 59 12.1**	**+0.8**
VAM	**Vamos**	**3.99 257**	P	**Pn**	**21 59 11.7**	**+0.5**
VAM	**Vamos**	**3.99 257**	P	**Pn**	**21 59 11.7**	**+0.5**
KNL	**Bal¨–kesir**	**4.05 344**	*i* P	**Pn**	**21 59 12.1**	**+0.1**
BOZC	**Bozcaada**	**4.15 327**	*i* P	**Pn**	**21 59 13.8**	**+0.4**
IMMV	**Iera Moni Meta**	**4.15 259**	P	**Pn**	**21 59 13.8**	**+0.4**
IMMV			AML	AML	22 00 07.4	
	comp=N,802μm,0.4s					
IMMV			AML	AML	22 00 09.6	
	comp=E,974μm,0.8s					
IMMV	**Iera Moni Meta**	**4.15 259**	P	**Pn**	**21 59 14.5**	**+1.1**
IMMV			S	**Sn**	**22 00 01.2**	**+0.2**
IMMV	**Iera Moni Meta**	**4.15 259**	P	**Pn**	**21 59 14.5**	**+1.1**
IMMV			S	**Sn**	**22 00 01.2**	**+0.2**
KKUL	**Konya-Kulu**	**4.19 47**	*i* P	**Pn**	**21 59 16.3**	**+2.3**
KKUL	**Konya-Kulu**	**4.19 47**	P	**Pn**	**21 59 16.3**	**+2.3**
GEYV	**SAKARYA_Geyve**	**4.23 14**	*i* P	**Pn**	**21 59 15.6**	**+1.2**
GEYV	**SAKARYA_Geyve**	**4.23 14**	P	**Pn**	**21 59 15.6**	**+1.2**
KERG	**Konya-Eregli**	**4.26 74**	*i* P	**Pn**	**21 59 18.4**	**+3.4**
GVD	**Gavdhos**	**4.26 250**	P	**Pn**	**21 59 16.8**	**+1.8**
GVD			AML	AML	22 00 07.9	
	comp=N,972μm,0.6s					
GVD			AML	AML	22 00 08.4	
	comp=E,910μm,0.7s					
GVD	**Gavdhos**	**4.26 250**	P	**Pn**	**21 59 16.9**	**+2.0**
SKY	**Skiros Island**	**4.30 307**	P	**Pn**	**21 59 18.0**	**+2.5**
SKY			S	**Sn**	**22 00 05.6**	**+0.8**
SKY	**Skiros Island**	**4.30 307**	P	**Pn**	**21 59 18.0**	**+2.5**
SKY			S	**Sn**	**22 00 05.6**	**+0.8**
DION	**Dionisos Attik**	**4.36 294**	P	**Pn**	**21 59 18.4**	**+2.0**
DION			AML	AML	22 00 07.8	
	comp=E,490μm,0.6s					
DION			AML	AML	22 00 09.8	
	comp=N,325μm,0.4s					
DION	**Dionisos Attik**	**4.36 294**	P	**Pn**	**21 59 17.9**	**+1.6**
VLY	**Voula,Athens**	**4.39 291**	P	**Pn**	**21 59 17.5**	**+0.8**
VLY	**Voula,Athens**	**4.39 291**	P	**Pn**	**21 59 18.6**	**+1.9**
VLY	**Voula,Athens**	**4.39 291**	P	**Pn**	**21 59 17.7**	**+1.0**
PTL	**Penteli**	**4.40 294**	P	**Pn**	**21 59 19.2**	**+2.3**
PTL			AML	AML	22 00 09.3	
	comp=E,293μm,0.5s					
PTL			AML	AML	22 00 20.0	
	comp=N,400μm,0.6s					
PTL	**Penteli**	**4.40 294**	P	**Pn**	**21 59 18.3**	**+1.4**
PTL	**Penteli**	**4.40 294**	P	**Pn**	**21 59 18.3**	**+1.4**
AKSY	**AKSARAY - Alti**	**4.43 58**	*i* P	**Pn**	**21 59 19.8**	**+2.5**
AKSY	**AKSARAY - Alti**	**4.43 58**	P	**Pn**	**21 59 19.8**	**+2.5**
ATHU	**Athens Univers**	**4.43 292**	P	**Pn**	**21 59 17.1**	**-0.2**
ATHU			AML	AML	22 00 09.9	
	comp=E,114μm,0.4s					
ATHU			AML	AML	22 00 11.6	
	comp=N,130μm,0.5s					
ATHU	**Athens Univers**	**4.43 292**	P	**Pn**	**21 59 18.0**	**+0.7**
ATHU			S	**Sn**	**22 00 07.9**	**-0.1**
ATHU	**Athens Univers**	**4.43 292**	P	**Pn**	**21 59 18.0**	**+0.7**
ATHU			S	**Sn**	**22 00 07.9**	**-0.1**
BTAS	**Taskesti**	**4.48 20**	*i* P	**Pn**	**21 59 19.3**	**+1.4**
BTAS	**Taskesti**	**4.48 20**	P	**Pn**	**21 59 19.3**	**+1.4**
ATH	**Athens Observa**	**4.49 292**	P	**Pn**	**21 59 20.6**	**+2.6**
ATH			AML	AML	22 00 11.2	
	comp=E,277μm,0.5s					
ATH			AML	AML	22 00 11.2	
	comp=N,273μm,0.4s					
ATH	**Athens Observa**	**4.49 292**	P	**Pn**	**21 59 20.6**	**+2.6**
ATH			S	**Sn**	**22 00 10.4**	**+1.2**
ATH	**Athens Observa**	**4.49 292**	P	**Pn**	**21 59 19.9**	**+1.9**
ATH			S	**Sn**	**22 00 10.4**	**+1.2**
SART	**Tekirdag**	**4.53 342**	*i* P	**Pn**	**21 59 17.6**	**-1.0**
SART	**Tekirdag**	**4.53 342**	P	**Pn**	**21 59 17.6**	**-1.0**
BBAL	**Bala**	**4.55 45**	*i* P	**Pn**	**21 59 20.8**	**+1.8**
BBAL	**Bala**	**4.55 45**	P	**Pn**	**21 59 20.8**	**+1.8**
BR231	**Keskin MP Arra**	**4.58 40**	*e*Pn	**Pn**	**21 59 18.8**	**-0.6**
BR231	**Keskin MP Arra**	**4.58 40**	*e*Pn	**Pn**	**21 59 18.8**	**-0.6**
ANTO	**Ankara**	**4.61 40** ⇓	*i* P	**Pn**	**21 59 21.4**	**+1.7**
ANTO	**Ankara**	**4.61 40**	*e*Pn	**Pn**	**21 59 21.5**	**+1.7**
ANTO	**Ankara**	**4.61 40** ⇓	*i* P	**Pn**	**21 59 21.4**	**+1.7**
LIA	**Limnos Island**	**4.61 321**	P	**Pn**	**21 59 20.4**	**+0.7**
LIA	**Limnos Island**	**4.61 321**	P	**Pn**	**21 59 20.6**	**+0.9**
LIA	**Limnos Island**	**4.61 321**	P	**Pn**	**21 59 20.6**	**+0.9**
ANKY	**Antikythira Is**	**4.62 265**	P	**Pn**	**21 59 20.7**	**+0.9**
ANKY			AML	AML	22 00 21.7	
	comp=E,408μm,1.0s					
ANKY			AML	AML	22 00 23.6	
	comp=N,366μm,0.6s					
ANKY	**Antikythira Is**	**4.62 265**	P	**Pn**	**21 59 21.2**	**+1.4**
ANKY	**Antikythira Is**	**4.62 265**	P	**Pn**	**21 59 21.2**	**+1.4**
SAHE	**Sakarya_HENDEK**	**4.70 18**	*i* P	**Pn**	**21 59 22.0**	**+1.0**
SAHE	**Sakarya_HENDEK**	**4.70 18**	P	**Pn**	**21 59 22.0**	**+1.0**
DID	**Didima**	**4.73 285**	P	**Pn**	**21 59 22.7**	**+1.4**
DID	**Didima**	**4.73 285**	P	**Pn**	**21 59 22.6**	**+1.3**
DID	**Didima**	**4.73 285**	P	**Pn**	**21 59 22.6**	**+1.3**
GULE	**Gulek**	**4.74 77**	*i* P	**Pn**	**21 59 25.7**	**+4.0**
KRND	**KRANIDI**	**4.77 284**	P	**Pn**	**21 59 23.3**	**+1.4**
KRND	**KRANIDI**	**4.77 284**	P	**Pn**	**21 59 23.4**	**+1.5**
KYTH	**Kithira**	**4.78 270**	P	**Pn**	**21 59 24.2**	**+2.0**
KYTH			AML	AML	22 00 18.7	
	comp=N,233μm,0.5s					
KYTH			AML	AML	22 00 19.7	
	comp=E,262μm,0.5s					
KYTH	**Kithira**	**4.78 270**	P	**Pn**	**21 59 24.1**	**+2.0**
KYTH	**Kithira**	**4.78 270**	P	**Pn**	**21 59 24.1**	**+2.0**
KESN	**Edirne-Kesan**	**4.79 339**	*i* P	**Pn**	**21 59 22.5**	**0.0**
KESN	**Edirne-Kesan**	**4.79 339**	P	**Pn**	**21 59 22.5**	**0.0**
KAND	**Kocaeli-Kandir**	**4.80 11**	*i* P	**Pn**	**21 59 23.0**	**+0.7**
KAND	**Kocaeli-Kandir**	**4.80 11**	P	**Pn**	**21 59 23.0**	**+0.7**
VILL	**Villia**	**4.85 293**	P	**Pn**	**21 59 24.7**	**+1.6**
VILL	**Villia**	**4.85 293**	P	**Pn**	**21 59 24.7**	**+1.6**
VLI	**Veliai**	**4.87 276**	P	**Pn**	**21 59 25.4**	**+2.1**
VLI	**Veliai**	**4.87 276**	P	**Pn**	**21 59 25.1**	**+1.8**
VLI	**Veliai**	**4.87 276**	P	**Pn**	**21 59 25.1**	**+1.8**
SMTH	**Samothraki Isl**	**4.90 328**	P	**Pn**	**21 59 23.2**	**-0.4**
SMTH			AML	AML	22 00 23.3	
	comp=N,87μm,0.6s					
SMTH			AML	AML	22 00 23.7	
	comp=E,96μm,0.5s					
SMTH	**Samothraki Isl**	**4.90 328**	P	**Pn**	**21 59 23.9**	**+0.3**
SMTH	**Samothraki Isl**	**4.90 328**	P	**Pn**	**21 59 23.9**	**+0.3**
VIL2	**Platees**	**4.90 294**	P	**Pn**	**21 59 25.0**	**+1.3**
VIL2			AML	AML	22 00 22.9	
	comp=E,380μm,0.4s					
VIL2			AML	AML	22 00 23.1	
	comp=N,498μm,0.6s					
CMDR	**Camlidere-ANKA**	**4.94 33**	*i* P	**Pn**	**21 59 26.3**	**+1.9**
CMDR	**Camlidere-ANKA**	**4.94 33**	P	**Pn**	**21 59 26.3**	**+1.9**
BR131	**Keskin Array S**	**4.97 46**	*e*Pn	**Pn**	**21 59 26.3**	**+1.5**
BR131	**Keskin Array S**	**4.97 46**	*e*Pn	**Pn**	**21 59 26.3**	**+1.5**
BRTR	**Keskin Array B**	**4.97 46**	Pn	**Pn**	**21 59 26.1**	**+1.3**
	comp=N,2.3nm,0.3s,baz=208,slow=11,SNR=78					
BRTR			Sn	**Sn**	**22 00 20.6**	**-0.8**
	comp=N,5.2nm,0.3s,baz=220,slow=26,SNR=14					
BCAM	**Yenicaga**	**5.05 28**	*i* P	**Pn**	**21 59 27.4**	**+1.6**
BCAM	**Yenicaga**	**5.05 28**	P	**Pn**	**21 59 27.4**	**+1.6**
ALN	**Alexandroupoli**	**5.06 334**	P	**Pn**	**21 59 25.1**	**-0.7**
ALN			AML	AML	22 01 03.7	
	comp=E,122μm,1.3s					
ALN			AML	AML	22 01 07.2	
	comp=N,118μm,1.6s					
ALN	**Alexandroupoli**	**5.06 334**	*e*Pn	**Pn**	**21 59 26.1**	**+0.3**
ALN	**Alexandroupoli**	**5.06 334**	P	**Pn**	**21 59 25.9**	**+0.1**
ALN	**Alexandroupoli**	**5.06 334**	*e*Pn	**Pn**	**21 59 26.1**	**+0.3**
LTK	**Loutraki**	**5.07 291**	P	**Pn**	**21 59 28.3**	**+2.3**
LTK	**Loutraki**	**5.07 291**	P	**Pn**	**21 59 27.8**	**+1.8**
LTK	**Loutraki**	**5.07 291**	P	**Pn**	**21 59 27.8**	**+1.8**
SKIA	**Skiathos**	**5.17 304**	P	**Pn**	**21 59 29.9**	**+2.5**
SKIA	**Skiathos**	**5.17 304**	P	**Pn**	**21 59 29.2**	**+1.8**
SKIA	**Skiathos**	**5.17 304**	P	**Pn**	**21 59 29.2**	**+1.8**
PROD	**Prodromos**	**5.19 293**	P	**Pn**	**21 59 29.2**	**+1.6**
PROD			AML	AML	22 00 29.8	
	comp=N,331μm,0.4s					
PROD			AML	AML	22 00 31.8	
	comp=E,538μm,0.3s					
PROD	**Prodromos**	**5.19 293**	P	**Pn**	**21 59 28.7**	**+1.1**
PROD	**Prodromos**	**5.19 293**	P	**Pn**	**21 59 28.7**	**+1.1**
SMIA	**Simia**	**5.21 300**	P	**Pn**	**21 59 30.6**	**+2.6**
SMIA			AML	AML	22 00 35.7	
	comp=E,298μm,0.6s					
SMIA			AML	AML	22 00 37.5	
	comp=N,394μm,0.6s					
SMIA	**Simia**	**5.21 300**	P	**Pn**	**21 59 30.2**	**+2.3**
SMIA	**Simia**	**5.21 300**	P	**Pn**	**21 59 29.9**	**+2.0**
MATC	**Matruh**	**5.22 197**	P	**Pn**	**21 59 27.7**	**-0.4**
	baz=199					
AVNS	**Nevsehir-Avano**	**5.26 61**	*i* P	**Pn**	**21 59 31.0**	**+2.3**
AVNS	**Nevsehir-Avano**	**5.26 61**	P	**Pn**	**21 59 31.0**	**+2.3**
LKR	**Lokris**	**5.26 297**	P	**Pn**	**21 59 30.6**	**+2.0**
LKR	**Lokris**	**5.26 297**	P	**Pn**	**21 59 31.1**	**+2.5**
LKR	**Lokris**	**5.26 297**	P	**Pn**	**21 59 30.3**	**+1.7**
THAL	**Thalero**	**5.30 290**	P	**Pn**	**21 59 32.2**	**+3.1**
THAL	**Thalero**	**5.30 290**	P	**Pn**	**21 59 31.5**	**+2.4**
THAL	**Thalero**	**5.30 290**	P	**Pn**	**21 59 31.5**	**+2.4**
CDAG	**Cicekdag**	**5.36 51**	*i* P	**Pn**	**21 59 31.7**	**+1.7**
CDAG	**Cicekdag**	**5.36 51**	P	**Pn**	**21 59 31.7**	**+1.7**
DYR	**Agios Nikonas**	**5.36 276**	P	**Pn**	**21 59 34.4**	**+4.4**
DYR	**Agios Nikonas**	**5.36 276**	P	**Pn**	**21 59 33.3**	**+3.3**
DYR	**Agios Nikonas**	**5.36 276**	P	**Pn**	**21 59 33.1**	**+3.1**
VLX	**Vlachokerasia**	**5.38 283**	P	**Pn**	**21 59 32.9**	**+2.6**
VLX	**Vlachokerasia**	**5.38 283**	P	**Pn**	**21 59 32.8**	**+2.5**
VLX	**Vlachokerasia**	**5.38 283**	P	**Pn**	**21 59 32.5**	**+2.2**
YURE	**YUREGIR**	**5.38 83**	*i* P	**Pn**	**21 59 32.3**	**+2.0**
YURE	**YUREGIR**	**5.38 83**	P	**Pn**	**21 59 32.3**	**+2.0**
NEO	**Neokhori**	**5.41 304**	P	**Pn**	**21 59 32.3**	**+1.7**
NEO	**Neokhori**	**5.41 304**	P	**Pn**	**21 59 32.3**	**+1.7**
XOR	**Xorichti**	**5.46 305**	P	**Pn**	**21 59 33.2**	**+1.8**
XOR	**Xorichti**	**5.46 305**	P	**Pn**	**21 59 32.6**	**+1.2**
XOR	**Xorichti**	**5.46 305**	P	**Pn**	**21 59 32.6**	**+1.2**
RDO	**Rodhopi**	**5.46 332**	P	**Pn**	**21 59 31.3**	**0.0**
RDO			AML	AML	22 00 36.3	
	comp=E,70μm,0.3s					
RDO			AML	AML	22 00 36.9	
	comp=N,64μm,0.4s					
RDO	**Rodhopi**	**5.46 332**	P	**Pn**	**21 59 31.4**	**0.0**
RDO	**Rodhopi**	**5.46 332**	P	**Pn**	**21 59 31.9**	**+0.5**
PAIG	**Paliouri**	**5.47 312**	P	**Pn**	**21 59 33.4**	**+1.9**
PAIG	**Paliouri**	**5.47 312**	P	**Pn**	**21 59 32.9**	**+1.4**
PAIG	**Paliouri**	**5.47 312**	P	**Pn**	**21 59 32.9**	**+1.4**
TRIP	**Tripoli**	**5.49 284**	P	**Pn**	**21 59 35.8**	**+4.0**
TRIP	**Tripoli**	**5.49 284**	P	**Pn**	**21 59 34.7**	**+2.9**
DSF	**Desfina**	**5.52 293**	P	**Pn**	**21 59 34.9**	**+2.7**
DSF	**Desfina**	**5.52 293**	P	**Pn**	**21 59 34.9**	**+2.7**
DSF	**Desfina**	**5.52 293**	P	**Pn**	**21 59 34.3**	**+2.1**
GUR	**Goura**	**5.52 288**	P	**Pn**	**21 59 35.7**	**+3.4**
GUR	**Goura**	**5.52 288**	P	**Pn**	**21 59 34.7**	**+2.4**
GUR	**Goura**	**5.52 288**	P	**Pn**	**21 59 34.7**	**+2.4**
OUR	**Ouranopolis**	**5.56 317**	P	**Pn**	**21 59 34.0**	**+1.3**
OUR	**Ouranopolis**	**5.56 317**	P	**Pn**	**21 59 34.0**	**+1.3**
OUR	**Ouranopolis**	**5.56 317**	P	**Pn**	**21 59 34.0**	**+1.3**
FYTO	**Fytoko, Volos**	**5.65 304**	P	**Pn**	**21 59 36.0**	**+2.1**
FYTO	**Fytoko, Volos**	**5.65 304**	P	**Pn**	**21 59 36.0**	**+2.1**
KLV	**Kalavryta, Ach**	**5.69 289**	P	**Pn**	**21 59 37.4**	**+2.8**
KLV	**Kalavryta, Ach**	**5.69 289**	P	**Pn**	**21 59 36.9**	**+2.3**
KLV	**Kalavryta, Ach**	**5.69 289**	P	**Pn**	**21 59 36.9**	**+2.3**
ITM	**Ithomi**	**5.71 280**	*e*Pn	**Pn**	**21 59 37.7**	**+2.9**
ITM	**Ithomi**	**5.71 280**	P	**Pn**	**21 59 36.7**	**+1.9**
ITM	**Ithomi**	**5.71 280**	P	**Pn**	**21 59 36.7**	**+1.9**
ITM	**Ithomi**	**5.71 280**	*e*Pn	**Pn**	**21 59 37.7**	**+2.9**
YAYL	**Yayladag**	**5.78 91**	*i* P	**Pn**	**21 59 36.6**	**+0.7**
YAYL	**Yayladag**	**5.78 91**	P	**Pn**	**21 59 36.6**	**+0.7**
SLUM	**Salum**	**5.79 214**	P	**Pn**	**21 59 36.0**	**+0.1**
	baz=217					
SLUM	**Salum**	**5.79 214**	P	**Pn**	**21 59 36.0**	**+0.1**
BTIN	**Bart¨–n**	**5.84 25**	*i* P	**Pn**	**21 59 37.9**	**+1.4**
BTIN	**Bart¨–n**	**5.84 25**	P	**Pn**	**21 59 37.9**	**+1.4**
TRIZ	**Trizonia**	**5.84 292**	P	**Pn**	**21 59 40.7**	**+4.1**
TRIZ	**Trizonia**	**5.84 292**	P	**Pn**	**21 59 39.5**	**+2.9**
SERG	**Sergoula**	**5.87 292**	P	**Pn**	**21 59 39.9**	**+2.9**
SERG	**Sergoula**	**5.87 292**	P	**Pn**	**21 59 39.9**	**+2.9**
LAKA	**Lakka**	**5.87 291**	P	**Pn**	**21 59 40.3**	**+3.2**
LAKA	**Lakka**	**5.87 291**	P	**Pn**	**21 59 39.6**	**+2.5**
AGG	**Agios Georgios**	**5.89 299**	P	**Pn**	**21 59 41.6**	**+4.3**
AGG	**Agios Georgios**	**5.89 299**	*e*Pn	**Pn**	**21 59 40.3**	**+3.0**
AGG	**Agios Georgios**	**5.89 299**	P	**Pn**	**21 59 40.2**	**+3.0**
SAIM	**ADANA**	**5.90 72**	*i* P	**Pn**	**21 59 41.1**	**+3.6**
AMT	**Artemida-Makis**	**5.93 283**	P	**Pn**	**21 59 37.9**	**+0.1**
AMT	**Artemida-Makis**	**5.93 283**	P	**Pn**	**21 59 38.8**	**+1.0**
KDZ	**Kurdzhali**	**5.95 333**	P	**Pn**	**21 59 38.5**	**+0.5**
ILGA	**Ilgaz**	**5.96 37**	*e*Pn	**Pn**	**21 59 39.2**	**+0.8**
ILGA	**Ilgaz**	**5.96 37**	*e*Pn	**Pn**	**21 59 39.2**	**+0.8**
EFP	**Efpalio**	**5.98 292**	P	**Pn**	**21 59 41.6**	**+3.1**
EFP	**Efpalio**	**5.98 292**	P	**Pn**	**21 59 41.6**	**+3.1**
DRO	**Drossia**	**6.01 287**	P	**Pn**	**21 59 41.7**	**+2.8**
DRO	**Drossia**	**6.01 287**	P	**Pn**	**21 59 41.2**	**+2.3**
BHL	**Bhannes**	**6.01 112**	*e*P	**Pn**	**21 59 37.5**	**-1.4**
ANDN	**Andirin**	**6.02 76**	*i* P	**Pn**	**21 59 41.2**	**+2.0**
ANDN	**Andirin**	**6.02 76**	P	**Pn**	**21 59 41.2**	**+2.0**
ANX	**Ano Chora**	**6.03 294**	P	**Pn**	**21 59 42.7**	**+3.5**
ANX	**Ano Chora**	**6.03 294**	P	**Pn**	**21 59 42.4**	**+3.2**
ANX	**Ano Chora**	**6.03 294**	P	**Pn**	**21 59 41.8**	**+2.6**
DQRL	**Deir Qamar**	**6.04 114**	*e*P	**Pn**	**21 59 38.3**	**-1.1**
HNTI	**Hanita**	**6.07 121**	Pn	**Pn**	**21 59 38.9**	**-0.9**
HNTI	**Hanita**	**6.07 121**	Pn	**Pn**	**21 59 38.9**	**-0.9**
HWQ	**Hawqa**	**6.08 108**	*e*P	**Pn**	**21 59 40.1**	**+0.2**
EVR	**Evrytania**	**6.22 296**	P	**Pn**	**21 59 45.7**	**+3.8**
EVR	**Evrytania**	**6.22 296**	P	**Pn**	**21 59 44.7**	**+2.8**
OFRI	**'Ofer**	**6.22 125**	Pn	**Pn**	**21 59 41.2**	**-0.7**
OFRI	**'Ofer**	**6.22 125**	Pn	**Pn**	**21 59 41.2**	**-0.7**
HORT	**Hortiatis**	**6.24 314**	P	**Pn**	**21 59 44.6**	**+2.4**
HORT	**Hortiatis**	**6.24

comp=N,1.8nm,0.3s,baz=277,slow=19,SNR=4.3
EIL Elat 8.36 141 Pn **Pn 22 00 10.5 -0.8**
EIL Elat 8.36 141 Pn **Pn 22 00 10.5 -0.8**
TIR Tirane 8.66 308 ⇑P **Pn 22 00 13.1 -2.2**
TIR Tirane 8.66 308 *e*Pn **Pn 22 00 14.7 -0.6**
TIR Tirane 8.66 308 *e*Pn **Pn 22 00 14.7 -0.6**
TLCR 8.80 359 ⇓*i*P **Pn 22 00 18.1 +1.0**
TLCR 8.80 359 ⇓*i*P **Pn 22 00 18.1 +1.0**
CFR Carcaliu 8.81 356 ⇑*i*P **Pn 22 00 17.8 +0.5**
CFR Carcaliu 8.81 356 ⇑*i*P **Pn 22 00 17.8 +0.5**
HKAT Jabal Katrina 8.91 150 P **Pn 22 00 18.1 -0.8**
baz=149
HKAT Jabal Katrina 8.91 150 P **Pn 22 00 18.1 -0.8**
ZAGS Zajecar 9.04 327 *e*Pn **Pn 22 00 23.6 +3.2**
BOVS Bovan 9.14 325 *e*Pn **Pn 22 00 24.6 +2.8**
MLR Muntele Rosu 9.38 347 Pn **Pn 22 00 26.8 +1.5**
comp=N,0.1nm,0.3s,baz=91,slow=19,SNR=5.3
MLR LR LR 22 04 52.4
comp=N,31nm,18.0s,baz=186,slow=43
MLR Muntele Rosu 9.38 347 ⇑*i*P **Pn 22 00 26.8 +1.5**
MLR Muntele Rosu 9.38 347 *e*Pn **Pn 22 00 26.3 +1.0**
MLR Muntele Rosu 9.38 347 *e*Pn **Pn 22 00 26.3 +1.0**
PLOR Plostina 9.62 350 ⇓*i*P **Pn 22 00 29.5 +1.0**
PLOR Plostina 9.62 350 ⇓*i*P **Pn 22 00 29.5 +1.0**
VRI Vrincioaia 9.63 351 ⇑*i*P **Pn 22 00 29.8 +1.3**
VRI Vrincioaia 9.63 351 ⇑*i*P **Pn 22 00 29.8 +1.3**
PDG Podgorica 9.64 312 ⇓*i*P **Pn 22 00 32.8 +4.1**
GRUS Gruza 9.80 322 *e*Pn **Pn 22 00 34.4 +3.5**
IVAS Ivanjica 9.87 319 *e*Pn **Pn 22 00 35.5 +3.6**
TIP Timpagrande 10.06 290 ⇓*i*P **Pn 22 00 35.7 +1.1**
TIP Timpagrande 10.06 290 *e*Pn **Pn 22 00 35.7 +1.1**
TIP Timpagrande 10.06 290 ⇓*i*P **Pn 22 00 35.7 +1.1**
TESR Tescani 10.27 351 ⇑*i*P **Pn 22 00 37.1 -0.2**
TESR Tescani 10.27 351 ⇑*i*P **Pn 22 00 37.1 -0.2**
MILM Milestii Mici 10.53 359 ⇑*i*P **Pn 22 00 41.7 +0.8**
MILM Milestii Mici 10.53 359 ⇑*i*P **Pn 22 00 41.7 +0.8**
BZS Buzias 10.77 331 ⇑*i*P **Pn 22 00 44.8 +0.7**
BZS Buzias 10.77 331 ⇑*i*P **Pn 22 00 44.8 +0.7**
CUC Castrocucco 10.96 293 *e*Pn **Pn 22 00 49.1 +2.2**
CUC Castrocucco 10.96 293 *e*Pn **Pn 22 00 49.1 +2.2**
BURAR Bucovina Array 11.57 347 ⇑*i*P **Pn 22 00 57.4 +2.3**
BURAR Bucovina Array 11.57 347 ⇑*i*P **Pn 22 00 57.4 +2.3**
BUR04 Bucovina Ar. S 11.57 347 *e*Pn **Pn 22 00 56.3 +1.1**
BUR04 Bucovina Ar. S 11.57 347 *e*Pn **Pn 22 00 56.3 +1.1**
BUR08 Bucovina Ar. S 11.60 347 *e*Pn **Pn 22 00 57.0 +1.4**
BUR08 Bucovina Ar. S 11.60 347 *e*Pn **Pn 22 00 57.0 +1.4**
SORM Soroca 11.76 358 ⇓*i*P **Pn 22 00 57.5 -0.1**
SORM Soroca 11.76 358 ⇓*i*P **Pn 22 00 57.5 -0.1**
KVAR Kislovodsk Arr 12.93 50 LR LR 22 06 27.3
comp=N,41nm,20.8s,baz=128,slow=38
KBZ Khabaz 12.94 51 Pn **Pn 22 01 18.4 +4.6**
comp=N,0.1nm,0.3s,baz=17,slow=20,SNR=2.3
KBZ LR LR 22 06 42.9
comp=N,43nm,20.7s,baz=102,slow=39
GNI Garni 12.95 68 LR LR 22 07 21.9
comp=N,152nm,21.4s,baz=269,slow=42
VYHS Vyhne 14.21 332 *e*P **P 22 01 38.6 +0.3**
AKASG Malin Array Be 14.32 1 Pn **Pn 22 01 31.8 -0.8**
comp=N,0.4nm,0.3s,baz=172,slow=11,SNR=4.4
KEST Kesra 15.89 273 Pn **Pn 22 01 53.6 +0.1**
comp=N,0.1nm,0.3s,baz=293,slow=4.0,SNR=3.3
GEA0 GERESS Array S 16.73 323 *e*Pn **Pn 22 02 04.9 +0.7**
GEC2 GERESS Array S 16.74 323 *e*Pn **P 22 02 06.6 +0.2**
comp=N,16nm,1.7s
GEC2 GERESS Array S 16.74 323 *e*Pn **P 22 02 06.6 +0.2**
comp=N,16nm,1.7s
GERES GERESS Array B 16.74 323 Pn **P 22 02 06.1 -0.3**
comp=N,0.3nm,0.3s,baz=129,slow=11,SNR=11
GERES LR LR 22 09 50.7
comp=N,42nm,18.2s,baz=122,slow=42
KHC Kasperske Hory 16.99 323 *e*P **P 22 02 09.5 +0.4**
KHC AMS AMS 22 09 20.0
comp=N,100nm,13.0s
KHC Kasperske Hory 16.99 323 *e*Pn **P 22 02 09.8 +0.6**
comp=N,2.6nm,1.1s
KHC Kasperske Hory 16.99 323 P **P 22 02 09.5 +0.4**
KHC Kasperske Hory 16.99 323 *e*Pn **P 22 02 09.8 +0.6**
comp=N,2.6nm,1.1s
FUORN Ofenpass-Fuorn 17.31 312 *e*Pn **Pn 22 02 12.2 +0.5**
comp=N,34nm,1.8s
FUORN Ofenpass-Fuorn 17.31 312 *e*Pn **Pn 22 02 12.2 +0.5**
comp=N,34nm,1.8s
SUW Suwalki 18.09 349 *e*Pn **P 22 02 21.3 +0.2**
comp=N,19nm,0.6s
SUW Suwalki 18.09 349 *e*Pn **P 22 02 21.3 +0.2**
comp=N,19nm,0.6s
NKC Novy Kostel 18.28 324 *e*P **P 22 02 24.6 +1.3**
NKC Novy Kostel 18.28 324 P **P 22 02 24.6 +1.3**
CLL Collm 18.79 328 *e*P **P 22 02 28.0 -0.8**
SENIN Lac Senin/Sane 19.02 308 *e*P **P 22 02 30.8 -1.0**
comp=N,58nm,1.8s
SENIN Lac Senin/Sane 19.02 308 *e*P **P 22 02 30.8 -1.0**
comp=N,58nm,1.8s
AKTO Aktyubinsk 25.15 47 P **P 22 03 35.1 +0.5**
comp=N,0.6nm,0.6s,baz=245,slow=13,SNR=3.1
AKTO LR LR 22 16 20.0
comp=N,20nm,19.9s,baz=225,slow=43
FINES FINESS Array B 25.15 357 P **P 22 03 33.9 -0.5**
comp=N,2.8nm,0.5s,baz=160,slow=10,SNR=26
FIA1 FINESS Array S 25.15 357 *e*P **P 22 03 33.9 -0.5**
HFS Hagfors 25.72 342 P **P 22 03 38.0 -1.6**
comp=N,1.3nm,0.5s,baz=149,slow=11,SNR=11
HFS LR LR 22 15 03.6
comp=N,32nm,20.9s,baz=160,slow=39
ES19 SONSECA Array 26.02 287 *e*P **P 22 03 42.6 0.0**
ES19 SONSECA Array 26.02 287 *e*P **P 22 03 42.6 0.0**
ESDC Sonseca Array 26.07 287 P **P 22 03 41.9 -1.1**
comp=N,0.8nm,0.5s,baz=83,slow=9.7,SNR=11
ESLA Sonseca Array 26.07 287 *e*P **P 22 03 42.1 -1.0**
comp=N,18nm,1.5s
ESLA Sonseca Array 26.07 287 *e*P **P 22 03 42.1 -1.0**
comp=N,18nm,1.5s
PAB San Pablo 26.37 287 *e*P **P 22 03 46.2 +0.4**
comp=N,46nm,1.9s
PAB San Pablo 26.37 287 *e*P **P 22 03 46.2 +0.4**
comp=N,46nm,1.9s
NOA NORSAR Array B 27.13 341 LR LR 22 16 43.8
comp=N,23nm,18.7s,baz=135,slow=41
EKA Eskdalemuir Ar 28.94 321 P **P 22 04 05.3 -3.2**
comp=N,0.3nm,0.4s,baz=116,slow=10,SNR=3.8
ARCES ARCESS Array B 33.27 358 P **P 22 04 45.4 -1.1**
comp=N,1.4nm,0.8s,baz=178,slow=9.5,SNR=4.5
TOA0 Torodi Ar. Sit 33.68 234 *e*P **P 22 04 50.3 -0.3**
TORD Torodi Ar. Bea 33.68 234 P **P 22 04 50.5 -0.1**
comp=N,2.7nm,0.5s,baz=32,slow=8.7,SNR=43
KOWA Kowa 36.63 242 P **P 22 05 15.5 -0.5**
comp=N,1.5nm,0.7s,baz=54,slow=13,SNR=3.6
KURBB Kurchatov Arra 37.94 52 P **P 22 05 26.6 -0.1**
comp=N,1.1nm,0.7s,baz=275,slow=8.8,SNR=9.8
MK31 Makanchi Array 40.51 58 *e*P **P 22 05 47.3 -1.0**
MKAR Makanchi Array 40.51 58 P **P 22 05 47.9 -0.4**
comp=N,0.3nm,0.4s,baz=264,slow=8.0,SNR=8.8
MK01 Makanchi Array 40.52 58 *e*P **P 22 05 47.9 -0.6**
SPITS Spitsbergen Ar 42.25 356 P **P 22 06 01.7 -0.4**
comp=N,1.1nm,0.6s,baz=209,slow=20,SNR=4.7
DBIC Dimbokro 42.77 235 P **P 22 06 06.8 -0.3**
comp=N,1.2nm,0.3s,baz=12,slow=9.3,SNR=4.6
WMQ Urumqi 44.71 62 P **P 22 06 23.4 +0.9**
HHC Hu-ho-hao-te 62.37 58 *e*P **P 22 08 32.5 +0.3**
HHC pmax pmax
comp=Z,4.0nm,0.6s
HHC pmax pmax
comp=Z,41nm,6.4s
CMAR Chiang Mai Arr 63.37 86 P **P 22 08 39.0 0.0**
comp=Z,0.3nm,0.5s,baz=294,slow=6.9,SNR=4.8
MDM Murphy Dome 78.97 359 *e*P **P 22 10 12.2 -0.5**
comp=Z,4.4nm,1.1s
IL1 Eielson Array 79.13 358 *e*P **P 22 10 12.3 -1.1**
ILAR Eielson Array 79.13 358 P **P 22 10 12.8 -0.6**
comp=Z,0.4nm,0.6s,baz=342,slow=3.0,SNR=5.4
WRH Wood River Hil 79.46 359 *e*P **P 22 10 14.5 -0.8**
comp=Z,3.4nm,0.7s

JMA 12 22:06:00.6±0.2, 36°.99N×143°.67E, h46km, M3.6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**2.26**	**280**	P	Pn	22 06 36.6	+1.0
JFK				*e*S	Sn	22 07 03.6	+1.3
ONAJ	**Iwakimizuishiy**	**2.30**	**274**	P	Pn	22 06 37.3	+1.2
ONAJ				S	Sn	22 07 04.4	+1.2
JIO	**Ouri**	**2.35**	**309**	P	Pn	22 06 37.9	+1.2
JIO				S	Sn	22 07 05.7	+1.4
JMM	**Marumori**	**2.45**	**292**	P	Pn	22 06 39.6	+1.5
JFT	**Otama**	**2.71**	**282**	P	Pn	22 06 43.8	+2.1
JFT				*e*S	Sn	22 07 15.2	+1.9
JMK	**Ichinoseki**	**2.75**	**316**	P	Pn	22 06 43.5	+1.3
JMK				*e*S	Sn	22 07 15.7	+1.4
JOM	**Ohasama**	**3.11**	**324**	P	Pn	22 06 48.6	+1.5
JOM				S	Sn	22 07 23.8	+0.8
JYK	**Kaneyama**	**3.25**	**307**	P	Pn	22 06 51.0	+2.0
JAG	**Ashikaga**	**3.44**	**262**	P	Pn	22 06 53.0	+1.4
JRY	**Ryogami san**	**3.96**	**257**	P	Pn	22 06 59.8	+0.9

*ISCJB **12** 22:10:42.1±0.3, 58°.40N±0°.02×17°.28E±0°.04, h0km, mb3.2/1, MS3.2/2, Error ellipse: s-maj=3.2km s-min=2.5km az=42.5*
*UPP **12** 22:10:43.1±0.1, 58°.40N×17°.27E, h0km, ML2.7*
*CSEM **12** 22:10:43.2±0.1, 58°.40N×17°.25E, h2km, ML2.7, Error ellipse: s-maj=2.8km s-min=2.1km az=130.0, Mining explosion.*
*IDC **12** 22:10:44.3±1.0, 58°.46N×17°.38E, h0km, mb3.4/1, mb1 3.3/6, mb1mx3.1/65, mbtmp3.2/6, ML3.1/5, MS3.2/2, Ms1 3.2/2, ms1mx2.2/42, Error ellipse: s-maj=13.4km s-min=7.1km az=19.0*
*HEL **12** 22:10:44.0±0.1, 58°.40N×17°.28E, h0km, ML2.7(UPP), Explosion*
*NAO **12** 22:10:45.2±1.7, 58°.52N×17°.17E, ML2.5*
*BER **12** 22:10:46.5±5.0, 58°.55N×17°.30E, h0km±19km, ML2.5(NAO)*

ISC 12 22:10:42.3±0.6, 58°.41N±0°.02×17°.30E±0°.02, h0km, n80, σ1°.08/129, 1C, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VIKU	**Vikbolandet**	**0.33**	**287**	P	Pg	22 10 49.4	+0.8
VIKU				S	Sg	22 10 53.5	+0.7
VIKU	**Vikbolandet**	**0.33**	**287**	*i* P	Pg	22 10 49.4	+0.8
VIKU				*i* S	Sg	22 10 53.5	+0.7
VIKU	**Vikbolandet**	**0.33**	**287**	P	Pg	22 10 49.4	+0.8
VIKU				S	Sg	22 10 53.5	+0.7
VSTU	**Vaestervik**	**0.85**	**209**	P	Pg	22 10 58.9	+0.3
VSTU				S	Sg	22 11 09.8	+0.2
VSTU	**Vaestervik**	**0.85**	**209**	*i* P	Pg	22 10 58.9	+0.3
VSTU				*i* S	Sg	22 11 09.8	+0.2
VSTU	**Vaestervik**	**0.85**	**209**	P	Pg	22 10 58.9	+0.3
VSTU				S	Sg	22 11 09.8	+0.2
LNKU	**Linkoeping**	**0.96**	**260**	P	Pg	22 11 00.9	+0.2
LNKU				S	Sg	22 11 13.8	+0.6
LNKU	**Linkoeping**	**0.96**	**260**	*e*P	Pg	22 11 00.9	+0.2
LNKU				*e*S	Sg	22 11 13.8	+0.6
LNKU	**Linkoeping**	**0.96**	**260**	P	Pg	22 11 00.9	+0.2
LNKU				S	Sg	22 11 13.8	+0.6
GOTU	**Gotland**	**0.99**	**136**	P	Pg	22 11 01.6	+0.2
GOTU	**Gotland**	**0.99**	**136**	*e*P	Pg	22 11 01.6	+0.2
GOTU	**Gotland**	**0.99**	**136**	P	Pg	22 11 01.5	+0.2
ASPU	**Aespoe**	**1.06**	**201**	P	Pg	22 11 02.9	+0.2
ASPU	**Aespoe**	**1.06**	**201**	*e*P	Pg	22 11 02.9	+0.2
ASPU	**Aespoe**	**1.06**	**201**	P	Pg	22 11 02.8	+0.2
BYXU	**Byxelkrok**	**1.13**	**188**	P	Pg	22 11 04.0	0.0
BYXU	**Byxelkrok**	**1.13**	**188**	*e*P	Pg	22 11 04.0	0.0
BYXU	**Byxelkrok**	**1.13**	**188**	P	Pg	22 11 04.0	0.0
EKSU	**Eksjoe**	**1.35**	**233**	P	Pg	22 11 07.8	-0.4
EKSU				S	Sg	22 11 25.6	-0.2
EKSU	**Eksjoe**	**1.35**	**233**	*e*P	Pg	22 11 07.8	-0.4
EKSU				*e*S	Sg	22 11 25.6	-0.2
EKSU	**Eksjoe**	**1.35**	**233**	P	Pg	22 11 07.8	-0.4
EKSU				S	Sg	22 11 25.5	-0.2
OSKU	**Oskarshamn**	**1.38**	**208**	P	Pg	22 11 08.5	-0.2
OSKU				S	Sg	22 11 26.4	-0.1
OSKU	**Oskarshamn**	**1.38**	**208**	*e*P	Pg	22 11 08.5	-0.2
OSKU				*e*S	Sg	22 11 26.4	-0.1
OSKU	**Oskarshamn**	**1.38**	**208**	P	Pg	22 11 08.5	-0.2
OSKU				S	Sg	22 11 26.4	-0.1
ASKU	**Askersund**	**1.38**	**292**	P	Pg	22 11 08.8	+0.1
ASKU	**Askersund**	**1.38**	**292**	*e*P	Pg	22 11 08.8	+0.1
ASKU	**Askersund**	**1.38**	**292**	P	Pg	22 11 08.8	+0.1
NRTU	**Norrtaelje**	**1.45**	**28**	P	Pn	22 11 10.0	+0.3
NRTU				S	Sn	22 11 30.0	+0.6
NRTU	**Norrtaelje**	**1.45**	**28**	*e*P	Pn	22 11 10.0	+0.3
NRTU				*e*S	Sn	22 11 30.0	+0.6
NRTU	**Norrtaelje**	**1.45**	**28**	P	Pn	22 11 10.0	+0.3
NRTU				S	Sn	22 11 30.0	+0.6
UPP	**Uppsala**	**1.47**	**7**	P	Pn	22 11 10.4	+0.5
UPP				S	Sg	22 11 29.5	+0.2
UPP	**Uppsala**	**1.47**	**7**	*e*P	Pn	22 11 10.4	+0.5
UPP				*e*S	Sg	22 11 29.5	+0.2
UPP	**Uppsala**	**1.47**	**7**	P	Pn	22 11 10.4	+0.5
UPP				S	Sg	22 11 29.5	+0.2
FIBU	**Brunna**	**1.50**	**1**	P	Pn	22 11 11.0	+0.6
FIBU				S	Sn	22 11 31.1	+0.5
FIBU	**Brunna**	**1.50**	**1**	P	Pn	22 11 11.0	+0.6
FIBU				S	Sn	22 11 31.1	+0.5
NRAU	**Nora**	**1.65**	**316**	P	Pn	22 11 13.4	+0.9
NRAU	**Nora**	**1.65**	**316**	*e*P	Pn	22 11 13.4	+0.9
NRAU	**Nora**	**1.65**	**316**	P	Pn	22 11 13.4	+0.9
OSTU	**Oestervaala**	**1.83**	**357**	P	Pb	22 11 16.7	+0.1
OSTU				S	Sb	22 11 39.9	-0.2
OSTU	**Oestervaala**	**1.83**	**357**	*e*P	Pb	22 11 16.7	+0.1
OSTU				*e*S	Sb	22 11 39.9	-0.2
OSTU	**Oestervaala**	**1.83**	**357**	P	Pb	22 11 16.7	+0.1
OSTU				S	Sb	22 11 39.9	-0.2
HFS	**Hagfors**	**2.53**	**315**	Pn	Pn	22 11 26.8	+2.2
baz=133,slow=14
HFS Lg Lg 22 11 59.8
baz=132,slow=28
HFS Hagfors 2.53 315 Pn **Pn 22 11 26.1 +1.4**
3.3nm,0.3s,baz=140,slow=18,SNR=115
HFS Sn **Sn 22 11 58.3 +2.1**
20nm,0.3s,baz=128,slow=28,SNR=43
HFS Hagfors 2.53 315 Pn **Pn 22 11 26.8 +2.2**
baz=133,slow=14,SNR=381
HFS Lg Lg 22 11 59.8
SNR=2.8
HFS Hagfors 2.53 315 Pn **Pn 22 11 26.8 +2.2**
baz=133,slow=14
HFS Lg Lg 22 11 59.8
baz=132,slow=28
SLIT Slitere, Latvi 2.77 104 *e*P **Pn 22 11 28.9 +1.0**
SNR=50
MTSE Matsula 3.43 82 *e*P **Pn 22 11 38.5 +1.6**
SNR=50
MTSE *e*S **Sn 22 12 20.8 +2.6**
SNR=50
RAF Rauma 3.46 39 *e*P **Pn 22 11 38.8 +1.4**
RAF *e*S **Sn 22 12 19.8 +0.7**
RAF Rauma 3.46 39 *e*P **Pn 22 11 38.8 +1.4**
RAF *e*S **Sn 22 12 19.8 +0.7**
PBUR Paburg˜ 3.47 132 *e*P **Pn 22 11 40.2 +2.6**
SNR=50
PBUR *e*S **Sn 22 12 23.7 +4.4**
SNR=50
BSD Bornholm Skovb 3.55 203 *i* P **Pn 22 11 39.5 +0.8**
BSD *e*S **Sg 22 12 34.0 -2.4**
BSD Bornholm Skovb 3.55 203 *i* P **Pn 22 11 39.5 +0.8**
NRA0 NORESS Array S 3.74 311 Pn **Pn 22 11 41.3 0.0**
baz=109,slow=10
NRA0 Pg **Pb 22 11 49.5 +0.3**
baz=128,slow=16
NRA0 Sn **Sn 22 12 25.3 -0.7**
baz=128,slow=18
NRA0 Lg Lg 22 12 40.6
baz=136,slow=28
NRA0 NORESS Array S 3.74 311 Pn **Pn 22 11 41.3 0.0**
baz=109,slow=9.7,SNR=0.7
NRA0 Lg Lg 22 12 40.6
baz=136,slow=26,SNR=9.5
NRA0 NORESS Array S 3.74 311 Pn **Pn 22 11 41.3 0.0**
baz=109,slow=10
NRA0 Pg **Pb 22 11 49.5 +0.3**
baz=128,slow=16
NRA0 Sn **Sn 22 12 25.3 -0.7**
baz=128,slow=18
NRA0 Lg Lg 22 12 40.6
baz=136,slow=28
NB2 NORSAR Subarra 4.05 313 Pn **Pn 22 11 46.7 +1.1**
baz=128,slow=16
NB2 Pg **Pb 22 11 55.5 +0.9**
NB2 Sn **Sn 22 12 34.4 +0.6**
baz=150,slow=28
NB2 Lg Lg 22 12 49.4
baz=128,slow=37
NOA NORSAR Array B 4.05 313 Pn **Pn 22 11 46.3 +0.7**
1.7nm,0.3s,baz=172,slow=2.5,SNR=29
NOA Pg **Pb 22 11 55.0 +0.4**
2.3nm,0.3s,baz=122,slow=14,SNR=17
NOA Sn **Sn 22 12 32.1 -1.7**
1.9nm,0.3s,baz=132,slow=26,SNR=3.7
NOA Lg Lg 22 12 50.3
7.5nm,0.3s,baz=135,slow=27,SNR=12
MEF Metsahovi 4.07 60 *e*P **Pn 22 11 47.4 +1.7**
SNR=50
MEF *e*S **Sn 22 12 34.3 +0.4**
8.9nm,0.3s,SNR=50
LLD Lille Linde 4.16 224 *i* P **Pn 22 11 49.3 +2.4**
LLD Lille Linde 4.16 224 ⇑*i*P **Pn 22 11 47.5 +0.6**
SNR=71
HOMB Homborsund 4.63 272 *i* P **Pn 22 11 54.0 +0.5**
SNR=71
SNART Snartemo 5.31 274 *i* P **Pn 22 12 03.2 +0.4**
SNR=71
FIA0 FINESS Array S 5.36 52 Pn **Pn 22 12 05.2 +1.7**
baz=239,slow=12
FIA0 Sn **Sn 22 13 06.0 +0.2**
baz=249,slow=28
FIA0 Lg Lg 22 13 27.4
baz=243,slow=28
FIA0 FINESS Array S 5.36 52 *e*P **Pn 22 12 04.8 +1.3**
FIA0 *e*S **Sn 22 13 05.8 -0.1**
FIA0 FINESS Array S 5.36 52 *e*P **Pn 22 12 04.8 +1.3**
FIA0 FINESS Array S 5.36 52 Pn **Pn 22 12 05.2 +1.7**
baz=239,slow=12,SNR=1.6
FIA0 *e*S **Sn 22 13 05.8 -0.1**
FIA0 Sn **Sn 22 13 06.1 +0.2**
baz=249,slow=23,SNR=4.7
FIA0 Lg Lg 22 13 27.4
SNR=3.3
FIA0 FINESS Array S 5.36 52 Pn **Pn 22 12 05.2 +1.7**
baz=239,slow=12
FIA0 Sn **Sn 22 13 06.0 +0.2**
baz=249,slow=28
FIA0 Lg Lg 22 13 27.4
baz=243,slow=28
FINES FINESS Array B 5.36 52 Pn **Pn 22 12 05.1 +1.7**
0.8nm,0.3s,baz=239,slow=12,SNR=45
FINES Sn **Sn 22 13 05.6 -0.2**
1.2nm,0.3s,baz=248,slow=23,SNR=8.3
FINES Lg Lg 22 13 27.1
2.1nm,0.3s,baz=242,slow=27,SNR=11
FIA1 FINESS Array S 5.36 52 *e*P **Pn 22 12 04.8 +1.3**
FIA1 *e*S **Sn 22 13 05.8 -0.1**
FIA1 FINESS Array S 5.36 52 *e*P **Pn 22 12 04.8 +1.3**
FIA1 *e*S **Sn 22 13 05.8 -0.1**
AKASG Malin Array Be 10.36 133 Pn **Pn 22 13 08.8 -3.3**
0.6nm,0.3s,baz=321,slow=12,SNR=2.9
EKA Eskdalemuir Ar 11.60 263 Pn **Pn 22 13 26.4 -2.5**
baz=77,slow=14,SNR=2.8
ARA0 ARCESS Array S 11.72 14 Pn **Pn 22 13 29.3 -1.3**
baz=201,slow=14
ARA0 Sn Sn 22 15 32.1 -10
baz=206,slow=28
ARA0 ARCESS Array S 11.72 14 Pn **Pn 22 13 29.3 -1.3**
baz=201,slow=14
ARA0 Sn Sn 22 15 32.1 -10
baz=206,slow=28
ARCES ARCESS Array B 11.72 14 Pn **Pn 22 13 27.6 -3.0**
0.2nm,0.3s,baz=196,slow=12,SNR=9.2
GNI Garni 25.29 124 LR LR 22 27 08.0
comp=Z,24nm,18.7s,baz=232,slow=39
MKAR Makanchi Array 39.59 78 P **P 22 18 14.5 -0.5**
0.2nm,0.3s,baz=315,slow=6.4,SNR=10
TXAR Lajitas Array 79.75 310 LR LR 23 01 15.4
comp=Z,25nm,18.8s,baz=0.0,slow=38

*ISCJB **12** 22:35:01.1±0.4, 49°.86N±0°.03×18°.48E±0°.03, h0km, Error ellipse: s-maj=4.5km s-min=2.4km az=19.0*
*IPEC **12** 22:35:02.7±0.2, 49°.82N×18°.59E, h0km, ML2.1/3, Error ellipse: s-maj=2.1km s-min=1.1km az=161.0*
*CSEM **12** 22:35:02.3±0.2, 49°.84N×18°.52E, h1km, ML3.0/9, Error ellipse: s-maj=5.7km s-min=3.0km az=12.0*
*PRU **12** 22:35:03.3, 49°.82N×18°.50E, h0km*

ISC 12 22:35:02.7±0.8, 49°.83N±0°.03×18°.54E±0°.02, h0km, n39, σ0°.82/71, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.26**	**273**	*e*PG	Pg	22 35 08.7	+1.1
OKC				*e*SG	Sg	22 35 12.0	+1.1
comp=Z,106nm,0.4s
OKC Ostrava-Krasne 0.26 273 Pg **Pg 22 35 08.7 +1.1**
OKC Sg **Sg 22 35 12.0 +1.1**
106nm,0.4s
RAC Raciborz 0.34 319 *e*Sg **Sb 22 35 16.8 -0.8**
MORC Moravsky Berou 0.65 266 *e*Pg **Pg 22 35 15.6 +0.5**
MORC *e*Sg **Sg 22 35 23.7 +0.2**
44nm,0.3s,baz=86
MORC Moravsky Berou 0.65 266 *e*PG **Pg 22 35 15.6 +0.5**
MORC *e*SG **Sg 22 35 23.8 +0.2**
MORC Moravsky Berou 0.65 266 *e*Pg **Pg 22 35 15.6 +0.5**
baz=86
MORC *e*Sg **Sg 22 35 23.7 +0.2**
44nm,0.3s,baz=86
OJC Ojcow 0.90 64 *e*Pg **Pg 22 35 19.8 -0.1**
OJC *e*Sg **Sg 22 35 32.4 +0.8**
OJC Ojcow 0.90 64 *e*Pg **Pg 22 35 19.8 -0.1**
OJC *e*Sg **Sg 22 35 32.4 +0.8**
LANS Liptovska Anna 0.91 138 *e*PG **Pg 22 35 20.1 +0.1**
LANS *e*SG **Sg 22 35 31.9 +0.2**
LANS Liptovska Anna 0.91 138 *e*Pg **Pg 22 35 20.1 +0.1**
LANS *e*Sg **Sg 22 35 31.9 +0.2**
JAVC Velka Javorina 1.12 211 *e*Pg **Pn 22 35 25.4 -0.3**
JAVC Velka Javorina 1.12 211 *e*PG **Pn 22 35 25.4 -0.3**
KRLC Kraliky 1.16 283 *e*PG **Pg 22 35 24.2 -0.8**
KRLC *e*SG **Sg 22 35 40.5 +0.5**
comp=Z,12nm,0.2s
KRLC Kraliky 1.16 283 Pg **Pg 22 35 24.2 -0.8**
KRLC Sg **Sg 22 35 40.5 +0.5**
12nm,0.2s
NIE Niedzica 1.21 109 *e*Pg **Pg 22 35 25.9 0.0**
NIE *e*Sg **Sn 22 35 43.9 -0.2**
NIE Niedzica 1.21 109 *e*Pg **Pg 22 35 25.9 0.0**
NIE *e*Sg **Sn 22 35 43.9 -0.2**
VYHS Vyhne 1.35 172 *e*PN **Pg 22 35 28.0 -0.5**
VYHS *e*SN **Sg 22 35 45.9 0.0**
VYHS eLG Lg 22 35 48.6
VYHS Vyhne 1.35 172 *e*Pn **Pg 22 35 28.0 -0.5**
VYHS *e*Sn **Sg 22 35 45.9 0.0**
VRAC Vranov 1.37 249 *e*Pg **Pg 22 35 28.7 -0.2**
VRAC *e*Sg **Sg 22 35 46.4 -0.2**
20nm,0.3s,baz=68
VRAC Vranov 1.37 249 *e*PG **Pg 22 35 28.7 -0.2**
VRAC *e*SG **Sg 22 35 46.5 -0.2**
VRAC Vranov 1.37 249 *e*Pg **Pg 22 35 28.7 -0.2**
baz=68
VRAC *e*Sg **Sg 22 35 46.4 -0.2**
20nm,0.3s,baz=68
DPC Dobruska-Polom 1.52 291 *e*PG **Pn 22 35 31.0 -0.2**
DPC *e*SG **Sg 22 35 51.4 -0.2**
comp=Z,15nm,0.2s
DPC Dobruska-Polom 1.52 291 Pg **Pn 22 35 31.0 -0.2**
DPC Sg **Sg 22 35 51.4 -0.2**
15nm,0.2s
KRUC Moravsky 1.60 242 *e*Pg **Pn 22 35 32.1 0.0**
KRUC *e*Sg **Sn 22 35 53.5 +0.1**
19nm,0.2s,baz=61
KRUC Moravsky 1.60 242 *e*PG **Pn 22 35 32.1 0.0**
KRUC *e*SG **Sn 22 35 53.5 +0.1**
KRUC Moravsky 1.60 242 *e*Pg **Pn 22 35 32.1 0.0**
baz=61
KRUC *e*Sg **Sn 22 35 53.5 +0.1**
19nm,0.2s,baz=61
MODS Modra-Piesok 1.67 210 *e*SN **Sn 22 35 53.7 -1.7**
MODS *e*LG Lg 22 35 56.4
MODS Modra-Piesok 1.67 210 *e*Sn **Sn 22 35 53.7 -1.7**
KSP Ksiaz 1.76 306 *e*Pg **Pn 22 35 34.1 -0.3**
KSP *e*Sg **Sn 22 35 57.4 -0.2**

UPC	**Upice**	**1.76**	**294**	*e*PG	**Pb**	**22 35 35.3**	**-0.6**
UPC				*e*SG	**Sb**	**22 35 58.6**	**0.0**
comp=Z,9.1nm,0.3s							
UPC	**Upice**	**1.76**	**294**	Pg	**Pb**	**22 35 35.3**	**-0.6**
UPC				Sg	**Sb**	**22 35 58.6**	**0.0**
9.1nm,0.3s							
PRU	**Pruhonice**	**2.59**	**275**	*e*PG	**Pb**	**22 35 50.5**	**+0.5**
PRU				*e*SG	**Sb**	**22 36 23.3**	**+1.0**
comp=Z,6.9nm,0.4s							
PRU	**Pruhonice**	**2.59**	**275**	Pg	**Pb**	**22 35 50.5**	**+0.5**
PRU				Sg	**Sb**	**22 36 23.3**	**+1.0**
6.9nm,0.4s							
PVCC	**Panska Ves**	**2.65**	**287**	*e*SG	**Sg**	**22 36 26.5**	**-1.2**
comp=Z,14nm,0.3s							
PVCC	**Panska Ves**	**2.65**	**287**	Sg	**Sg**	**22 36 26.5**	**-1.2**
14nm,0.3s							
BRG	**Berggiesshubel**	**3.13**	**291**	PG	**Pb**	**22 36 00.4**	**+1.3**
BRG				SG	**Sg**	**22 36 41.7**	**-1.4**
5.3nm,0.5s							
KHC	**Kasperske Hory**	**3.31**	**260**	*e*PN	**Pn**	**22 35 56.4**	**+0.6**
KHC				*e*PG	**Pb**	**22 36 04.1**	**+1.8**
KHC				*e*SG	**Sg**	**22 36 46.2**	**-2.8**
comp=Z,6.5nm,0.3s							
KHC	**Kasperske Hory**	**3.31**	**260**	Pn	**Pn**	**22 35 56.4**	**+0.6**
CLL	**Collm**	**3.83**	**295**	*e*	**Sg**	**22 37 03.0**	**-2.6**
CLL				*e*Sg	**Sg**	**22 37 06.0**	**+0.4**
comp=Z,5.0nm,0.7s							

DDA ***12*** *22:50:45.0,39.°59N×26.°08E,h7km,Ml2.6*
ISCJB ***12*** *22:50:45.9±0.4,39.°61N±0.°02×26.°05E±0.°03,h5km±3km, Error ellipse: s-maj=3.9km s-min=2.7km az=178.5*
ATH ***12*** *22:50:45.5,39.°61N×26.°08E,h20km±4km,ML1.7/6, Error ellipse: s-maj=4.5km s-min=0.8km az=201.0*
ISK ***12*** *22:50:45.5,39.°62N×26.°05E,h5km,ML2.3/16*
CSEM ***12*** *22:50:46.2±0.1,39.°61N×26.°04E,h10km,ML2.3, Error ellipse: s-maj=3.8km s-min=2.7km az=89.0*
ISC 12 22:50:45.8±0.9,**39.°61**N±0.°01×**26.°07E**±0.°02,**h13**km±7km, **n81**,σ0**80**/113,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOZC	**Bozcaada**	**0.23**	**356**	*i* P	**Pg**	**22 50 50.7**	**-0.1**
BOZC				*i* S	**Sg**	**22 50 54.4**	**+0.3**
EZN	**Ezine**	**0.29**	**42**	PG	**Pg**	**22 50 51.9**	**+0.1**
EZN				SG	**Sg**	**22 50 56.2**	**+0.4**
EZN	**Ezine**	**0.29**	**42**	*e*Pg	**Pg**	**22 50 51.9**	**+0.1**
EZN				*e*Sg	**Sg**	**22 50 56.2**	**+0.4**
BAYC	**CANAKKALE_Bayr**	**0.39**	**70**	*i* P	**Pg**	**22 50 53.7**	**+0.2**
BAYC				*i* S	**Sg**	**22 50 59.2**	**+0.4**
BAYC	**CANAKKALE_Bayr**	**0.39**	**70**	P	**Pg**	**22 50 53.7**	**+0.2**
BAYC				S	**Sg**	**22 50 59.2**	**+0.4**
PRK	**Paraskevi**	**0.40**	**157**	P	**Pg**	**22 50 53.7**	**+0.1**
PRK				S	**Sb**	**22 50 59.8**	**-0.9**
PRK				AML	AML	22 51 00.2	
comp=N,699μm,0.4s							
PRK				AML	AML	22 51 00.7	
comp=E,655μm,0.4s							
PRK	**Paraskevi**	**0.40**	**157**	P	**Pg**	**22 50 53.7**	**+0.1**
PRK				S	**Sb**	**22 50 59.7**	**-0.9**
SIGR	**SIGRI**	**0.43**	**203**	PG	**Pb**	**22 50 55.0**	**-0.3**
SIGR				SG	**Sb**	**22 51 00.9**	**-0.8**
SIGR	**SIGRI**	**0.43**	**203**	P	**Pg**	**22 50 53.7**	**-0.6**
SIGR				S	**Sg**	**22 51 00.4**	**+0.2**
SIGR				AML	AML	22 51 01.8	
comp=E,272μm,0.2s							
SIGR				AML	AML	22 51 01.8	
comp=N,317μm,0.3s							
SIGR	**SIGRI**	**0.43**	**203**	P	**Pg**	**22 50 54.1**	**-0.3**
SIGR	**SIGRI**	**0.43**	**203**	*e*Pg	**Pb**	**22 50 55.0**	**-0.3**
SIGR				S	**Sg**	**22 51 00.6**	**+0.5**
AYVA	**Ayvalik**	**0.56**	**122**	*i* P	**Pn**	**22 50 59.8**	**+0.3**
AYVA				*i* S	**Sn**	**22 51 09.2**	**+0.5**
AYVA	**Ayvalik**	**0.56**	**122**	P	**Pn**	**22 50 59.8**	**+0.3**
AYVA				S	**Sn**	**22 51 09.2**	**+0.5**
GADA	**Gvkgeada**	**0.59**	**347**	PG	**Pg**	**22 50 57.4**	**0.0**
GADA	**Gvkgeada**	**0.59**	**347**	*e*Pg	**Pg**	**22 50 57.4**	**0.0**
LIA	**Limnos Island**	**0.74**	**293**	P	**Pb**	**22 51 00.3**	**-0.3**
LIA				S	**Sb**	**22 51 10.8**	**+0.1**
LIA				AML	AML	22 51 14.5	
comp=N,36μm,0.2s							
LIA				AML	AML	22 51 17.1	
comp=E,55μm,0.4s							
LIA	**Limnos Island**	**0.74**	**293**	P	**Pg**	**22 51 00.1**	**-0.1**
LIA				S	**Sb**	**22 51 10.7**	**0.0**
DKL	**Dikili**	**0.84**	**130**	PG	**Pb**	**22 51 02.7**	**+0.5**
DKL	**Dikili**	**0.84**	**130**	*e*Pg	**Pb**	**22 51 02.7**	**+0.5**
GELI	**Tayfur-Gelibol**	**0.84**	**21**	PG	**Pb**	**22 51 02.3**	**0.0**
GELI	**Tayfur-Gelibol**	**0.84**	**21**	*e*Pg	**Pb**	**22 51 02.3**	**0.0**
LPK	**Lapseki**	**0.93**	**35**	PG	**Pg**	**22 51 02.9**	**-0.8**
LPK	**Lapseki**	**0.93**	**35**	*e*Pg	**Pg**	**22 51 02.9**	**-0.8**
SMTH	**Samothraki Isl**	**0.95**	**334**	P	**Pg**	**22 51 04.0**	**-0.3**
SMTH				S	**Sn**	**22 51 18.1**	**-0.3**
SMTH				AML	AML	22 51 18.8	
comp=N,31μm,0.2s							
SMTH				AML	AML	22 51 19.7	
comp=E,48μm,0.2s							
SMTH	**Samothraki Isl**	**0.95**	**334**	P	**Pg**	**22 51 03.9**	**-0.3**
SMTH				S	**Sb**	**22 51 17.6**	**+0.8**
ERIK	**Erikli-Kesan**	**1.11**	**18**	PN	**Pn**	**22 51 07.1**	**0.0**
ERIK	**Erikli-Kesan**	**1.11**	**18**	*e*Pn	**Pn**	**22 51 07.1**	**0.0**
ENEZ	**Enez**	**1.13**	**3**	PN	**Pn**	**22 51 07.3**	**0.0**
ENEZ	**Enez**	**1.13**	**3**	*e*Pn	**Pn**	**22 51 07.3**	**0.0**
CHOS	**Chios island**	**1.22**	**181**	PN	**Pg**	**22 51 09.5**	**+0.2**
CHOS	**Chios island**	**1.22**	**181**	P	**Pg**	**22 51 09.1**	**-0.2**
CHOS				S	**Sn**	**22 51 27.0**	**+1.9**
CHOS				AML	AML	22 51 28.5	
comp=E,88μm,0.2s							
CHOS				AML	AML	22 51 29.2	
comp=N,82μm,0.3s							
CHOS	**Chios island**	**1.22**	**181**	P	**Pg**	**22 51 08.9**	**-0.4**
CHOS	**Chios island**	**1.22**	**181**	*e*Pn	**Pg**	**22 51 09.5**	**+0.2**
CHOS				S	**Sn**	**22 51 26.3**	**+1.2**
KRBG	**Karabiga-Canak**	**1.22**	**50**	PN	**Pn**	**22 51 08.5**	**-0.1**
KRBG	**Karabiga-Canak**	**1.22**	**50**	*e*Pn	**Pn**	**22 51 08.5**	**-0.1**
ALN	**Alexandroupoli**	**1.28**	**359**	PN	**Pg**	**22 51 10.3**	**-0.2**
ALN	**Alexandroupoli**	**1.28**	**359**	P	**Pn**	**22 51 09.5**	**0.0**
ALN				S	**Sn**	**22 51 26.8**	**+0.3**
ALN				AML	AML	22 51 27.9	
comp=E,54μm,0.4s							
ALN				AML	AML	22 51 33.9	
comp=N,27μm,0.5s							
ALN	**Alexandroupoli**	**1.28**	**359**	P	**Pn**	**22 51 09.6**	**+0.1**
ALN	**Alexandroupoli**	**1.28**	**359**	*e*Pn	**Pg**	**22 51 10.3**	**-0.2**
ALN				S	**Sg**	**22 51 27.1**	**-0.1**
STEP	**BALIKESIR_Sava**	**1.29**	**100**	*i* P	**Pg**	**22 51 10.2**	**-0.5**
STEP				*i* S	**Sg**	**22 51 28.4**	**+0.9**
STEP	**BALIKESIR_Sava**	**1.29**	**100**	P	**Pg**	**22 51 10.2**	**-0.5**
STEP				S	**Sg**	**22 51 28.4**	**+0.9**
KNL	**Bal¨–kesir**	**1.30**	**59**	*i* P	**Pb**	**22 51 09.9**	**-0.1**
KNL				*i* S	**Sg**	**22 51 28.7**	**+1.1**
KESN	**Edirne-Kesan**	**1.30**	**21**	*i* P	**Pg**	**22 51 10.9**	**+0.1**
KESN				*i* S	**Sn**	**22 51 28.6**	**+1.2**
KESN	**Edirne-Kesan**	**1.30**	**21**	P	**Pg**	**22 51 10.9**	**+0.1**
KESN				S	**Sn**	**22 51 28.6**	**+1.2**
URLA	**Izmir**	**1.31**	**162**	PN	**Pg**	**22 51 11.1**	**+0.1**
URLA	**Izmir**	**1.31**	**162**	*i* P	**Pn**	**22 51 08.4**	**-1.5**
URLA				*i* S	**Sb**	**22 51 26.7**	**-0.4**
URLA	**Izmir**	**1.31**	**162**	P	**Pn**	**22 51 08.4**	**-1.5**
URLA	**Izmir**	**1.31**	**162**	*e*Pn	**Pg**	**22 51 11.1**	**+0.1**
URLA				S	**Sb**	**22 51 26.7**	**-0.4**
RKY	**Sarkoy-Tekirda**	**1.37**	**38**	PN	**Pg**	**22 51 11.7**	**-0.4**
RKY	**Sarkoy-Tekirda**	**1.37**	**38**	*e*Pn	**Pg**	**22 51 11.7**	**-0.4**
SART	**Tekirdag**	**1.37**	**38**	*i* P	**Pn**	**22 51 10.3**	**-0.4**
SART				*i* S	**Sg**	**22 51 29.7**	**-0.3**
SART	**Tekirdag**	**1.37**	**38**	P	**Pn**	**22 51 10.3**	**-0.4**
SART				S	**Sg**	**22 51 29.7**	**-0.3**
BALB	**Balikesir**	**1.40**	**88**	PN	**Pg**	**22 51 12.6**	**0.0**
BALB	**Balikesir**	**1.40**	**88**	*e*Pn	**Pg**	**22 51 12.6**	**0.0**
ZEY	**¨zmir**	**1.41**	**166**	*i* P	**Pb**	**22 51 11.6**	**-0.3**
ZEY				*i* S	**Sg**	**22 51 31.0**	**-0.2**
BLCB	**Balcova**	**1.44**	**148**	PN	**Pg**	**22 51 12.9**	**-0.5**
BLCB	**Balcova**	**1.44**	**148**	*e*Pn	**Pg**	**22 51 12.9**	**-0.5**
EDC	**Edincik**	**1.56**	**61**	PN	**Pb**	**22 51 14.9**	**+0.4**
EDC	**Edincik**	**1.56**	**61**	*e*Pn	**Pb**	**22 51 14.9**	**+0.4**
RDO	**Rodhopi**	**1.59**	**345**	PN	**Pb**	**22 51 14.9**	**-0.1**
RDO	**Rodhopi**	**1.59**	**345**	P	**Pn**	**22 51 14.0**	**+0.4**
RDO	**Rodhopi**	**1.59**	**345**	P	**Pb**	**22 51 14.3**	**-0.7**
RDO	**Rodhopi**	**1.59**	**345**	*e*Pn	**Pb**	**22 51 14.9**	**-0.1**
OUR	**Ouranopolis**	**1.76**	**295**	PN	**Pn**	**22 51 16.8**	**+0.8**
OUR	**Ouranopolis**	**1.76**	**295**	*e*Pn	**Pn**	**22 51 16.8**	**+0.8**
DURS	**Dursunbey**	**1.85**	**90**	*i* P	**Pn**	**22 51 18.1**	**+0.7**
DURS				*i* S	**Sb**	**22 51 41.9**	**-0.9**
DURS	**Dursunbey**	**1.85**	**90**	P	**Pn**	**22 51 18.1**	**+0.7**
DURS				S	**Sb**	**22 51 41.9**	**-0.9**
SBT3	**Marmara-Eregli**	**1.93**	**48**	PN	**Pb**	**22 51 20.5**	**-0.3**
SBT3	**Marmara-Eregli**	**1.93**	**48**	*e*Pn	**Pb**	**22 51 20.5**	**-0.3**
EDRB	**Edirne**	**2.29**	**13**	PN	**Pb**	**22 51 25.2**	**-1.8**
EDRB	**Edirne**	**2.29**	**13**	*e*Pn	**Pb**	**22 51 25.2**	**-1.8**
SLVT	**Silivri**	**2.30**	**45**	PN	**Pb**	**22 51 25.7**	**-1.4**
SLVT	**Silivri**	**2.30**	**45**	*e*Pn	**Pb**	**22 51 25.7**	**-1.4**
ARMT	**Armutlu**	**2.34**	**65**	PN	**Pb**	**22 51 26.0**	**-1.9**
ARMT	**Armutlu**	**2.34**	**65**	*e*Pn	**Pb**	**22 51 26.0**	**-1.9**
SBT5	**Esenkoy-Cinarc**	**2.38**	**64**	PN	**Pb**	**22 51 26.9**	**-1.6**
SBT5	**Esenkoy-Cinarc**	**2.38**	**64**	*e*Pn	**Pb**	**22 51 26.9**	**-1.6**
CTKS	**Kestanelik-??a**	**2.47**	**48**	PN	**Pb**	**22 51 28.1**	**-1.9**
CTKS	**Kestanelik-??a**	**2.47**	**48**	*e*Pn	**Pb**	**22 51 28.1**	**-1.9**
YLV	**Yalova**	**2.71**	**68**	PN	**Pn**	**22 51 31.3**	**+2.2**
YLV	**Yalova**	**2.71**	**68**	*e*Pn	**Pn**	**22 51 31.3**	**+2.2**

DSN ***12*** *22:53:47.0±1.8,29.°62N×52.°99E,h30km,ML4.0/10, Error ellipse: s-maj=22.8km s-min=5.8km az=2.0*
IDC ***12*** *22:53:47.7±0.7,29.°02N×52.°93E,h0km,mb3.9/25, mb1 4.0/30,mb1mx3.9/69,mbtmp3.9/30,ML3.2/4,MS2.8/1, Ms1 2.8/1,ms1mx2.2/60,Error ellipse: s-maj=15.6km s-min=12.7km az=10.0*
ISCJB ***12*** *22:53:49.3±0.2,29.°04N±0.°02×52.°94E±0.°03,h16km, mb3.9/31,Error ellipse: s-maj=4.1km s-min=2.2km az=152.8*
THR ***12*** *22:53:50.2±0.6,29.°06N×53.°10E,h16km±5km,ML3.6*
CSEM ***12*** *22:53:50.0±0.1,29.°05N×52.°89E,h10km,mb4.0/8,Error ellipse: s-maj=5.6km s-min=3.0km az=56.0*
TEH ***12*** *22:53:51.5,28.°99N×52.°95E,h10km,ML3.6*
NEIC ***12*** *22:53:51.5±0.0,28.°99N×52.°95E,h10km,mb4.0/7, MN3.6(TEH),After TEH.*
OMAN ***12*** *22:53:54.7±0.7,28.°87N×53.°17E,h10km,Error ellipse: s-maj=27.6km s-min=9.0km az=238.0*
ISC 12 22:53:50.5±0.4,**29.°07N**±0.°03×**53.°01E**±0.°03,**h16**km,**n179**, σ1**552**/196,**mb3.9**/31,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHRM	**Jahrom**	**0.75**	**138**	*e*Sg	**Sg**	**22 54 14.9**	**-0.1**
JHRM				*e*Pg	**Pg**	**22 54 04.2**	**-0.9**
JHRM				*e*		22 54 29.9	
comp=Z,99nm,0.2s							
GHIR	**Ghir-Karzin**	**0.78**	**182**	*e*Pg	**Pg**	**22 54 05.2**	**-0.5**
GHIR	**Ghir-Karzin**	**0.78**	**182**	*e*Pg	**Pg**	**22 54 05.2**	**-0.5**
IKAZ	**Kazeroun**	**1.25**	**305**	Pg	**Pb**	**22 54 14.2**	**+0.4**
IKAZ	**Kazeroun**	**1.25**	**305**	*e*Pg	**Pb**	**22 54 14.3**	**+0.4**
IKAZ				*e*		22 54 42.4	
comp=Z,25μm,0.4s							
IKAZ	**Kazeroun**	**1.25**	**305**	Pg	**Pb**	**22 54 14.2**	**+0.4**
AHBU	**AHRAM**	**1.52**	**263**	*e*Pn	**Pg**	**22 54 19.9**	**+0.2**
IMEH	**Mehriz**	**2.70**	**30**	*e*Pn	**Pn**	**22 54 36.2**	**+2.7**
IMEH	**Mehriz**	**2.70**	**30**	*e*Pn	**Pn**	**22 54 36.2**	**+2.7**
IMEH				*e*Sg	**Sg**	**22 55 18.8**	**+1.5**
IMEH				*e*		22 55 23.3	
comp=Z,2μm,0.4s							
IMEH	**Mehriz**	**2.70**	**30**	*e*Pn	**Pn**	**22 54 36.2**	**+2.7**
IRAM	**Ramesheh**	**2.79**	**349**	*e*Pn	**Pn**	**22 54 36.5**	**+1.8**
IRAM	**Ramesheh**	**2.79**	**349**	*e*Pn	**Pn**	**22 54 36.6**	**+1.8**
IRAM				*e*		22 55 31.4	
comp=Z,3μm,0.4s							
IRAM	**Ramesheh**	**2.79**	**349**	*e*Pn	**Pn**	**22 54 36.5**	**+1.8**
ISAD	**Sadrabad**	**2.90**	**11**	*e*Pn	**Pn**	**22 54 39.0**	**+2.7**
ISAD				*e*		22 55 29.2	
comp=Z,2μm,0.4s							
ISAD	**Sadrabad**	**2.90**	**11**	*e*Pn	**Pn**	**22 54 38.9**	**+2.7**
GENO	**Geno**	**3.24**	**120**	*e*Pn	**Pn**	**22 54 41.7**	**+0.8**
GENO				*e*		22 55 50.3	
comp=Z,99nm,0.3s							
GENO	**Geno**	**3.24**	**120**	*e*Pn	**Pn**	**22 54 41.8**	**+0.8**
KHGB	**Koh Gabri**	**3.28**	**66**	*e*Pn	**Pn**	**22 54 43.3**	**+1.7**
KHGB				*e*		22 55 41.5	
comp=Z,99nm,0.4s							
KHGB	**Koh Gabri**	**3.28**	**66**	*e*Pn	**Pn**	**22 54 43.2**	**+1.7**
NGRK	**Negar Kerman**	**3.30**	**79**	*e*Pn	**Pn**	**22 54 44.5**	**+2.7**
NGRK				*e*		22 55 49.0	
comp=Z,99nm,0.4s							
NGRK	**Negar Kerman**	**3.30**	**79**	*e*Pn	**Pn**	**22 54 44.5**	**+2.7**
ICHK	**Chekchek**	**3.39**	**20**	*e*Pn	**Pn**	**22 54 45.2**	**+2.2**
ICHK				*e*		22 54 58.4	
comp=Z,2μm,0.3s							
ICHK	**Chekchek**	**3.39**	**20**	*e*Pn	**Pn**	**22 54 45.4**	**+2.4**
IGAR	**Gharneh**	**3.43**	**346**	*e*Pn	**Pn**	**22 54 45.6**	**+2.0**
IGAR				*e*		22 55 53.4	
comp=Z,1μm,0.4s							
IBND	**Bandar-abas**	**3.50**	**117**	*e*Pn	**Pn**	**22 54 46.5**	**+2.2**
IBND	**Bandar-abas**	**3.50**	**117**	*e*Pn	**Pn**	**22 54 46.5**	**+2.2**
IBND				*e*		22 56 13.5	
comp=Z,3μm,0.2s							
IBND	**Bandar-abas**	**3.50**	**117**	*e*Pn	**Pn**	**22 54 46.5**	**+2.2**
NIAN	**Nian**	**3.69**	**113**	*e*Pn	**Pn**	**22 54 48.9**	**+2.0**
NIAN				*e*		22 56 06.0	
comp=Z,99nm,0.4s							
NIAN	**Nian**	**3.69**	**113**	*e*Pn	**Pn**	**22 54 48.6**	**+1.7**
NASN	**Na'in**	**3.73**	**357**	*e*Pn	**Pn**	**22 54 49.7**	**+2.0**
NASN				*e*Sg	**Sg**	**22 55 46.6**	**-3.6**
NASN	**Na'in**	**3.73**	**357**	*e*Pn	**Pn**	**22 54 49.7**	**+2.0**
IZEF	**Zefreh**	**3.86**	**351**	*e*Pn	**Pn**	**22 54 51.3**	**+1.8**
IZEF				*e*		22 55 10.9	
comp=Z,579nm,0.3s							
IZEF	**Zefreh**	**3.86**	**351**	*e*Pn	**Pn**	**22 54 51.0**	**+1.5**
CHMN	**Cheshme madani**	**4.03**	**78**	*e*Pn	**Pn**	**22 54 53.7**	**+1.9**
CHMN				*e*		22 56 05.1	
comp=Z,99nm,0.8s							
CHMN	**Cheshme madani**	**4.03**	**78**	*e*Pn	**Pn**	**22 54 54.2**	**+2.4**
IPIR	**Pirpir**	**4.04**	**334**	*e*Pn	**Pn**	**22 54 53.8**	**+1.8**
IPIR				*e*		22 55 45.9	
comp=Z,1μm,0.4s							
IPIR	**Pirpir**	**4.04**	**334**	*e*Pn	**Pn**	**22 54 53.8**	**+1.8**
SHME	**Shamm**	**4.09**	**137**	P	**Pn**	**22 54 53.6**	**+1.1**
ANAR	**Anarak**	**4.16**	**8**	*e*Pn	**Pn**	**22 54 56.3**	**+2.9**
ANAR				*e*		22 56 14.6	
comp=Z,99nm,0.4s							
ANAR	**Anarak**	**4.16**	**8**	*e*Pn	**Pn**	**22 54 55.8**	**+2.4**
KHSK	**Kohestak**	**4.25**	**122**	*e*Pn	**Pn**	**22 54 56.3**	**+1.7**
KHSK				*e*		22 57 37.0	
comp=N,99nm,0.5s							
KHSK	**Kohestak**	**4.25**	**122**	*e*Pn	**Pn**	**22 54 56.3**	**+1.7**
BANOM	**Banah**	**4.28**	**136**	P	**Pn**	**22 54 56.1**	**+1.1**
SNR=11							
BANOM				S	**Sn**	**22 55 45.4**	**+0.7**
BANOM	**Banah**	**4.28**	**136**	*i* P	**Pn**	**22 54 56.5**	**+1.4**
SNR=11							
BANOM	**Banah**	**4.28**	**136**	P	**Pn**	**22 54 56.5**	**+1.4**
SNR=11							
BANOM				S	**Sn**	**22 55 45.4**	**+0.7**
IKLH	**Kolahrood**	**4.42**	**344**	*e*Pn	**Pn**	**22 54 59.9**	**+2.8**
IKLH				*e*		22 56 30.9	
comp=Z,495nm,0.5s							
IKLH	**Kolahrood**	**4.42**	**344**	*e*Pn	**Pn**	**22 54 59.9**	**+2.8**
BOQSS		**4.54**	**226**	P	**Pn**	**22 55 01.2**	**+2.7**
BOQSS				S	**Sn**	**22 55 53.7**	**+2.7**
MSFE	**Esma-Masafi**	**4.63**	**142**	*i* P	**Pn**	**22 55 02.0**	**+2.1**
SNR=18							
MSFE	**Esma-Masafi**	**4.63**	**142**	P	**Pn**	**22 55 01.4**	**+1.5**
SNR=18							
MSFE	**Esma-Masafi**	**4.63**	**142**	*e*Pn	**Pn**	**22 55 02.1**	**+2.2**
MSFE				S	**Sn**	**22 55 54.3**	**+0.9**
NAZ	**Nazwa, Dubai**	**4.70**	**149**	*i* P	**Pn**	**22 55 03.4**	**+2.7**
SNR=7.2							
NAZ	**Nazwa, Dubai**	**4.70**	**149**	P	**Pn**	**22 55 03.4**	**+2.7**
SNR=7.2							
SLWS		**4.75**	**207**	P	**Pn**	**22 55 03.3**	**+1.8**
MDH	**Madha**	**4.76**	**141**	*i* P	**Pn**	**22 55 03.1**	**+1.4**
SNR=10.0							
MDH	**Madha**	**4.76**	**141**	P	**Pn**	**22 55 03.0**	**+1.4**
SNR=10.0							
MDH				S	**Sn**	**22 55 58.1**	**+1.7**
AJN	**Ajban**	**4.82**	**158**	P	**Pn**	**22 55 04.7**	**+2.3**
ASUD	**Al Ashush, Dub**	**4.88**	**154**	P	**Pn**	**22 55 06.0**	**+2.7**
SNR=31							
ASUD				S	**Sn**	**22 56 01.8**	**+2.3**
ASUD	**Al Ashush, Dub**	**4.88**	**154**	*i* P	**Pn**	**22 55 06.2**	**+2.9**
SNR=31							
ASUD	**Al Ashush, Dub**	**4.88**	**154**	*e*Pn	**Pn**	**22 55 05.9**	**+2.7**
ASUD				S	**Sn**	**22 56 01.8**	**+2.3**
UOSS	**Minazif**	**4.99**	**145**	*e*Pn	**Pn**	**22 55 06.3**	**+1.4**
UOSS	**Minazif**	**4.99**	**145**	P	**Pn**	**22 55 06.1**	**+1.3**
SNR=24							
UOSS				S	**Sn**	**22 56 02.0**	**-0.3**
UOSS	**Minazif**	**4.99**	**145**	*i* P	**Pn**	**22 55 06.3**	**+1.4**
SNR=18							
UOSS	**Minazif**	**4.99**	**145**	P	**Pn**	**22 55 06.1**	**+1.3**
SNR=24							
UOSS				S	**Sn**	**22 56 02.0**	**-0.3**
HATD	**Hatta, Dubai**	**5.06**	**146**	P	**Pn**	**22 55 07.5**	**+1.8**
HATD	**Hatta, Dubai**	**5.06**	**146**	P	**Pn**	**22 55 07.5**	**+1.8**
HATD	**Hatta, Dubai**	**5.06**	**146**	*e*Pn	**Pn**	**22 55 07.9**	**+2.2**
HATD				S	**Sn**	**22 56 04.8**	**+0.9**
KHMZ	**Khomeyn**	**5.34**	**332**	*e*Pn	**Pn**	**22 55 11.7**	**+1.9**
KHMZ				AML	AML	22 56 15.1	
comp=E,31nm,0.5s							
KHMZ				AML	AML	22 56 15.1	
comp=N,39nm,0.6s							
KHMZ	**Khomeyn**	**5.34**	**332**	*e*Pn	**Pn**	**22 55 12.2**	**+2.4**
BTHS		**5.36**	**202**	P	**Pn**	**22 55 11.8**	**+1.9**
BTHS				S	**Sn**	**22 56 12.4**	**+1.1**
ALNE	**Al Ain**	**5.56**	**153**	*i* P	**Pn**	**22 55 14.6**	**+2.0**
SNR=22							
ALNE	**Al Ain**	**5.56**	**153**	P	**Pn**	**22 55 14.5**	**+1.9**
SNR=22							
ALNE				S	**Sn**	**22 56 16.8**	**+0.6**
GHVR	**GHOM**	**5.59**	**345**	*e*Pn	**Pn**	**22 55 15.7**	**+2.6**
GHVR	**GHOM**	**5.59**	**345**	*e*Pn	**Pn**	**22 55 15.7**	**+2.6**
TABS	**Tabas**	**5.76**	**37**	*e*Pn	**Pn**	**22 55 16.9**	**+1.4**
TABS	**Tabas**	**5.76**	**37**	*e*Pn	**Pn**	**22 55 17.0**	**+1.5**
SOHO	**SOHO**	**5.83**	**147**	*i* P	**Pn**	**22 55 17.3**	**+0.9**
SNR=11							
SOHO	**SOHO**	**5.83**	**147**	P	**Pn**	**22 55 17.3**	**+0.9**
SNR=7.1							
SOHO				S	**Sn**	**22 56 23.3**	**+0.3**
MZR	**Muzera**	**6.05**	**176**	P	**Pn**	**22 55 22.5**	**+3.1**
IKOO	**Kooshah**	**6.15**	**56**	*e*Pn	**Pn**	**22 55 23.7**	**+2.8**
IKOO				*e*		22 57 28.0	
comp=Z,326nm,0.3s							
IKOO	**Kooshah**	**6.15**	**56**	*e*Pn	**Pn**	**22 55 23.2**	**+2.3**
ARQ	**Araqi**	**6.52**	**150**	P	**Pn**	**22 55 27.2**	**+1.4**
SNR=18							
ARQ				S	**Sn**	**22 56 39.4**	**-0.5**
ARQ	**Araqi**	**6.52**	**150**	P	**Pn**	**22 55 27.2**	**+1.4**
SNR=18							
ARQ				S	**Sn**	**22 56 39.4**	**-0.5**
HOQ	**Hoqain**	**6.68**	**144**	*e*Pn	**Pn**	**22 55 29.6**	**+1.5**
BSY	**Bisya**	**7.34**	**148**	P	**Pn**	**22 55 38.3**	**+1.3**
SNR=11							
BSYO	**Bisya**	**7.37**	**148**	P	**Pn**	**22 55 38.3**	**+0.8**
SNR=11							
SMDO	**Samad**	**7.50**	**142**	P	**Pn**	**22 55 41.0**	**+1.6**
SNR=17							
SMDO	**Samad**	**7.50**	**142**	P	**Pn**	**22 55 41.0**	**+1.6**
SNR=17							
WSAR	**Wadi Sarin**	**7.69**	**138**	Pn	**Pn**	**22 55 42.4**	**+0.5**
comp=Z,7.1nm,0.3s,baz=330,slow=10,SNR=57							
WSAR				Sn	**Sn**	**22 57 04.5**	**-4.2**
comp=Z,1.0nm,0.3s,baz=158,slow=19,SNR=3.3							
WSAR	**Wadi Sarin**	**7.69**	**138**	P	**Pn**	**22 55 43.1**	**+1.2**
SNR=7.6							
WSAR	**Wadi Sarin**	**7.69**	**138**	P	**Pn**	**22 55 43.1**	**+1.2**
SNR=7.6							
WBK	**Wadi Bani Khal**	**8.37**	**139**	P	**Pn**	**22 55 53.0**	**+1.7**
SNR=15							
WBK	**Wadi Bani Khal**	**8.37**	**139**	P	**Pn**	**22 55 53.0**	**+1.7**
SNR=15							
RAYN

ESDC	Sonseca Array	47.50	299	P		P	23 02 24.4	-0.6
	comp=Z,0.3nm,0.4s,baz=77,slow=7.4,SNR=8.4							
EKA	Eskdalemuir Ar	47.54	320	P		P	23 02 24.6	-0.3
	comp=Z,0.9nm,0.6s,baz=106,slow=9.1,SNR=6.1							
TOA0	Torodi Ar. Sit	50.04	263	*e*P		P	23 02 44.2	-0.5
TOA1	Torodi Ar. Sit	50.04	263	*e*P		P	23 02 43.9	-0.8
TORD	Torodi Ar. Bea	50.04	263	P		P	23 02 43.9	-0.8
	comp=Z,1.7nm,0.6s,baz=60,slow=8.6,SNR=11							
KOWA	Kowa	54.43	267	P		P	23 03 15.9	-1.5
	comp=Z,3.0nm,1.0s,baz=40,slow=7.9,SNR=2.3							
MATP	Matopo	54.59	209	P		P	23 03 18.1	-0.4
	comp=Z,1.6nm,0.6s,baz=15,slow=11,SNR=8.7							
KS15	Wonju Array Si	61.68	61	*e*P		P	23 04 07.1	-0.8
KS15	Wonju Array Si	61.68	61	*e*P		P	23 04 07.1	-0.8
KSAR	Wonju Array Be	61.68	61	P		P	23 04 07.1	-0.8
KSAR	Wonju Array Be	61.68	61	P		P	23 04 07.1	-0.8
KSRS	Korea Array	61.70	61	P		P	23 04 07.1	-0.9
	comp=Z,1.4nm,0.7s,baz=281,slow=4.8,SNR=4.2							
SEY	Seymchan	68.62	29	P		P	23 04 52.6	+0.2
	comp=Z,2.0nm,0.7s,baz=317,slow=6.4,SNR=8.4							
FITZ	Fitzroy Crossi	84.30	114	*e*P		P	23 06 21.9	-0.1
ILAR	Eielson Array	85.19	8	P		P	23 06 25.3	-0.5
	comp=Z,0.4nm,0.8s,baz=338,slow=4.2,SNR=4.3							
ILB	Eielson Array	85.19	8	*e*P		P	23 06 25.2	-0.6
YKA	Yellowknife Ar	88.22	354	P		P	23 06 40.8	+0.2
	comp=Z,1.4nm,0.8s,baz=8.5,slow=4.8,SNR=3.8							
YKB5	Yellowknife Ar	88.22	354	*e*P		P	23 06 40.8	+0.2
WR1	Warramunga Arr	92.27	111	*e*P		P	23 07 00.5	+0.2
WRA	Warramunga Arr	92.27	111	P		P	23 07 00.5	+0.2
	comp=Z,0.5nm,0.9s,baz=314,slow=4.0,SNR=7.0							
AS31	Alice Springs	93.78	115	*e*P		P	23 07 06.2	-0.9
	comp=Z,1.4nm,1.0s							
ASAR	Alice Springs	93.78	115	P		P	23 07 06.2	-0.9
	comp=Z,0.2nm,0.3s,baz=316,slow=5.2,SNR=4.0							

*IDC **12** 23:11:20.6±1.0, 3°.76S×128°.63E, h0km, mb3.9/6, mb1 3.9/8, mb1mx3.7/55, mbtmp3.8/8, ML3.5/2, Error ellipse: s-maj=46.7km s-min=22.0km az=72.0*
*DJA **12** 23:11:22.0±0.4, 4°S±5°×12°9E±°, h10km, M3.8/6, MLv3.8/6*
*ISCJB **12** 23:11:23.3±0.5, 3°.72S±0°.06×128°.66E±0°.05, h33km, mb3.8/7, Error ellipse: s-maj=8.8km s-min=6.6km az=169.4*
*NEIC **12** 23:11:25.5±0.6, 3°.76S×128°.78E, h35km, mb4.0/2, Error ellipse: s-maj=21.9km s-min=10.1km az=65.0*
ISC 12 23:11:25.2±0.7, 3°.74S±0°.08×128°.66E±0°.07, h35km, n17, σ1°63/19, mb4.0/7, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	Ambon	0.46	276	P	Pn	23 11 32.0	-3.4
AAI				S	Sn	23 11 39.4	-3.0
MSAI	Masohi	0.47	35	P	Pn	23 11 29.2	-6.3
MSAI				S	Sn	23 11 34.4	-8.3
BNDI	Bandanaira	1.47	122	P	Pn	23 11 50.1	+0.9
FAKI	Fak Fak	3.68	77	P	Pn	23 12 18.9	-0.7
SIJI	Sorong	3.86	43	Pn	Pn	23 12 22.2	0.0
	4.8nm,0.3s,baz=252,slow=19,SNR=14						
SIJI					Sn	23 13 04.8	-1.6
	5.1nm,0.3s,baz=222,slow=23,SNR=8.4						
KAPI	Kappang	8.97	262	*e*Pn	Pn	23 13 34.1	+1.7
WRAB	Tennant Creek	17.03	161	*e*Pn	Pn	23 15 20.4	-0.4
WRA	Warramunga Arr	17.03	161	P	Pn	23 15 19.4	-1.4
	0.1nm,0.3s,baz=351,slow=13,SNR=7.2						
ASAR	Alice Springs	20.45	166	P	P	23 16 00.2	+0.3
	5.5nm,0.6s,baz=348,slow=10,SNR=46						
ASAR				PcP	PcP	23 20 11.7	+0.3
	0.3nm,0.5s,baz=345,slow=1.6,SNR=4.1						
SONM	Songino Array	54.94	342	P	P	23 20 54.1	+1.3
	0.7nm,0.9s,baz=160,slow=4.7,SNR=3.7						
MKAR	Makanchi Array	64.78	327	P	P	23 22 00.1	-0.3
	1.0nm,0.7s,baz=123,slow=7.7,SNR=12						
ZALV	Zalesovo Beam	68.08	334	P	P	23 22 21.4	+0.1
	1.0nm,0.7s,baz=113,slow=9.1,SNR=5.4						
KURBB	Kurchatov Arra	69.05	328	P	P	23 22 28.4	+1.0
	1.5nm,0.7s,baz=131,slow=6.1,SNR=13						
KURK	Kurchatov	69.05	329	P	P	23 22 28.4	+1.0
BVAR	Borovoye Array	74.61	328	P	P	23 23 03.0	+2.2
	0.2nm,0.4s,baz=106,slow=9.2,SNR=3.0						
ARU	Arti	82.25	328	*e*P	P	23 23 42.1	-0.7
	0.6nm,0.5s						
RAYN	Ar Rayn	85.21	294	*e*P	P	23 24 00.7	+1.9
	0.9nm,0.8s						

*PGC **12** 23:24:46.4±0.2, 49°.09N×128°.05W, h10km, MLSn2.9/38, Mw3.6/38, Mw3.6/38, 155km Wsw of Gold R., Bc Vancouver Island, Canada Region*
*IDC **12** 23:24:46.8±2.6, 49°.16N×127°.89W, h0km, mb3.6/2, mb1 3.8/7, mb1mx3.5/68, mbtmp3.6/7, ML3.7/5, MS2.8/1, Ms1 2.8/1, ms1mx2.1/65, Error ellipse: s-maj=44.2km s-min=13.4km az=50.0*
ISC 12 23:24:44.0±1.3, 49°.10N±0°.03×128°.05W±0°.03, h3km±9km, n82, σ2°43/136, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NC89	ODP889	0.90	118	P	Pg	23 25 02.8	+1.6
NC89				S	Sg	23 25 15.6	+2.7
EDB	Eliza Dome	0.98	38	P	Pg	23 25 03.6	+0.8
EDB				S	Sg	23 25 14.8	-0.7
ETB	Estevan Point	1.02	74	P	Pg	23 25 04.7	+1.1
ETB				S	Sg	23 25 17.2	+0.3
BPBC	Brooks Peninsu	1.07	9	P	Pg	23 25 05.2	+0.7
KEMF	NEPTUNE Canada	1.35	212	P	Pg	23 25 08.4	-1.4
NC27	ODP1027	1.35	172	P	Pn	23 25 08.5	-0.9
PACB	Port Alice, BC	1.38	15	Pn	Pn	23 25 09.6	-0.6
PACB				Sn	Sg	23 25 25.1	-3.2
TOFB	Tofino	1.41	87	Pn	Pn	23 25 09.6	-0.9
TOFB				Sn	Sg	23 25 24.6	-4.5
NCBC	Barkley Canyon	1.41	118	Pn	Pn	23 25 10.0	-0.5
NCBC				Sn	Sg	23 25 27.3	-1.9
MAYB	Maynard	1.42	23	Pn	Pn	23 25 10.5	-0.3
MAYB				Sn	Sg	23 25 26.7	-2.9
WOSB	Woss	1.43	42	Pn	Pn	23 25 10.7	-0.3
WOSB				Sn	Sg	23 25 26.2	-3.6
GDR	Gold River	1.48	62	Pn	Pn	23 25 10.8	-0.7
GDR				Sn	Sg	23 25 26.6	-4.8
HOLB	Holberg	1.54	358	Pn	Pn	23 25 11.9	-0.5
HOLB				Sn	Sn	23 25 28.8	-4.2
TLCB	Telegraph Cove	1.64	28	Pn	Pn	23 25 13.9	+0.1
TLCB				Sn	Sn	23 25 32.9	-2.5
PHC	Port Hardy	1.65	14	Pn	Pn	23 25 13.7	-0.3
PHC				Sn	Sn	23 25 32.2	-3.4
B012	Ucluelet	1.66	95	Pn	Pn	23 25 12.8	-1.1
B012				Sn	Sn	23 25 31.1	-4.7
OZB	Mount Ozzard	1.69	94	Pn	Pn	23 25 13.4	-1.0
OZB				Sn	Sn	23 25 31.6	-4.9
BTB	Buttle Lake	1.69	77	Pn	Pn	23 25 14.2	-0.4
BTB				Sn	Sn	23 25 34.0	-2.9
SPLB	Strathcona Par	1.75	62	Pn	Pn	23 25 15.2	0.0
SPLB				Sn	Sn	23 25 35.0	-3.0
NCRB	Newcastle Ridg	1.83	44	Pn	Pn	23 25 16.7	+0.2
NCRB				Sn	Sn	23 25 38.2	-2.1
MWAB	Mount Washingt	1.90	69	Pn	Pn	23 25 16.3	-1.1
MWAB				Sn	Sn	23 25 37.9	-4.1
B928	Bamfield	1.94	97	Pn	Pn	23 25 16.9	-0.8
B928				Sn	Sn	23 25 37.9	-4.7
CBB	Campbell River	1.98	61	Pn	Pn	23 25 18.3	-0.1
CBB				Sn	Sn	23 25 41.3	-2.4
B927	Port Alberni	2.13	86	Pn	Pn	23 25 19.7	-0.6
MGB	Mount Grey	2.21	91	Pn	Pn	23 25 20.8	-0.9
MGB				Sn	Sn	23 25 45.0	-4.5
TXB	Texada	2.43	74	Pn	Pn	23 25 24.6	0.0
TXB				Sn	Sn	23 25 52.4	-2.5
YOUB	Youbou, Lake C	2.50	93	Pn	Pn	23 25 25.1	-0.5
YOUB				Sn	Sn	23 25 52.9	-3.8
GHNB	Nanoose	2.51	84	Pn	Pn	23 25 25.8	+0.2
GHNB				Sn	Sn	23 25 54.8	-1.9
B926	Mesachie Lake	2.59	95	Pn	Pn	23 25 26.6	-0.3
B926				Sn	Sn	23 25 55.2	-3.7
NLLB	Nanaimo Lost L	2.67	86	Pn	Pn	23 25 28.2	+0.4
NLLB				Sn	Sn	23 25 59.3	-1.4
OFR	Olym-F Res Ctr	2.69	114	Pn	Pn	23 25 27.3	-0.9
OFR				Sn	Sn	23 25 58.8	-2.5
SHB	Sechelt	2.77	78	Pn	Pn	23 25 29.6	+0.2
SHB				Sn	Sn	23 26 00.5	-2.9
LZB	Mount Lazard	2.83	98	Pn	Pn	23 25 29.7	-0.5
LZB				Sn	Sn	23 26 00.3	-4.6
GOBB	Galiano Island	2.99	91	Pn	Pn	23 25 33.5	+1.2
B010	North Saanich	3.07	97	Pn	Pn	23 25 33.1	-0.3
B010				Sn	Sn	23 26 06.6	-3.9
PGC	Sidney	3.07	97	Pn	Pn	23 25 33.2	-0.1
PGC				Sn	Sn	23 26 06.6	-3.9
B009	North Saanich	3.07	97	Pn	Pn	23 25 33.2	-0.1
B009				Sn	Sn	23 26 06.0	-4.5
PA02	PA02 Ocean	3.07	97	Pn	Pn	23 25 33.1	-0.2
PA02				Sn	Sn	23 26 06.5	-4.1
B011	North Saanich	3.07	97	Pn	Pn	23 25 33.1	-0.2
B011				Sn	Sn	23 26 06.4	-4.1
PA12	PA12 Sannich	3.07	97	Pn	Pn	23 25 33.2	-0.1
PA12				Sn	Sn	23 26 06.5	-4.0
BBB	Bella Bella	3.08	359	Pn	Pn	23 25 34.0	+0.4
	22nm,0.3s,baz=187,slow=4.9,SNR=523						
BBB				Sn	Sn	23 26 08.2	-2.8
	12nm,0.3s,baz=71,slow=20,SNR=6.3						
BBB	Bella Bella	3.08	359	Pn	Pn	23 25 33.9	+0.4
BBB				Sn	Sn	23 26 07.8	-3.1
OSD	Olympics--Snow	3.16	112	Pn	Pn	23 25 34.9	0.0
VGZ	Gonzales	3.20	101	Pn	Pn	23 25 34.8	-0.3
VGZ				Sn	Sn	23 26 09.1	-4.7
SNB	Saturna Island	3.23	94	Pn	Pn	23 25 35.7	+0.1
SNB				Sn	Sn	23 26 12.8	-1.8
MCW	Mount Constitu	3.47	95	Pn	Pn	23 25 39.5	+0.6
WISH	Wishkah	3.49	123	Pn	Pn	23 25 39.8	+0.7
WISH				Sn	Sn	23 26 16.1	-4.8
WSLR	Whistler	3.49	71	Pn	Pn	23 25 40.4	+1.2
WSLR				Sn	Sn	23 26 20.2	-0.8
A04D	Lummi Island	3.54	94	P	Pn	23 25 41.3	+1.4
	baz=278						
BLN	Blyn Mountain	3.54	106	Pn	Pn	23 25 40.0	+0.1
BLN				Sn	Sn	23 26 19.4	-3.0
SMW	South Mountain	3.62	118	Sn	Sn	23 26 20.8	-3.4
HDW	Hoodsport	3.63	112	Pn	Pn	23 25 41.8	+0.6
HDW				Sn	Sn	23 26 19.8	-4.8
VDB	Vedder Mountai	3.91	89	Pn	Pn	23 25 45.5	+0.6
E03A	Lebam	3.96	129	Pn	Pn	23 25 45.5	0.0
E03A				Sn	Sn	23 26 28.6	-3.9
B05A	Bryant	4.03	100	P	Pn	23 25 47.2	+0.7
	baz=284						
MBW	Mount Baker	4.06	92	Pn	Pn	23 25 48.4	+1.1
MBW				Sn	Sn	23 26 33.3	-2.1
JCW	Jim Creek	4.16	100	Pn	Pn	23 25 49.3	+0.9
JCW				Sn	Sn	23 26 34.7	-2.7
BNB	Barry Inlet	4.20	327	Pn	Pn	23 25 50.6	+1.7
BNB				Sn	Sn	23 26 35.8	-2.7
LLLB	Lilooet	4.26	67	Pn	Pn	23 25 50.5	+0.7
B06A	Marblemount	4.38	95	Pn	Pn	23 25 52.6	+1.3
C05A	Tolt Reservoir	4.46	106	Sn	Sn	23 26 42.8	-2.2
D05A	Enumclaw	4.49	113	Pn	Pn	23 25 55.8	+3.0
D05A				Sn	Sn	23 26 43.9	-1.6
UBRB	Upper Baezaeko	4.54	32	Pn	Pn	23 25 55.2	+1.5
GPW	Glacier Peak	4.69	100	Pn	Pn	23 25 57.2	+1.3
GPW				Sn	Sn	23 26 48.4	-2.5
FMW	Mount Fremont	4.80	115	Pn	Pn	23 25 58.8	+1.5
FMW				Sn	Sn	23 26 50.8	-2.7
LON	Longmire	4.81	117	Pn	Pn	23 25 59.1	+1.8
LON				Sn	Sn	23 26 50.6	-3.0
DIB	Dawson Inlet,	4.96	327	Pn	Pn	23 26 00.3	+1.0
DIB				Sn	Sn	23 26 52.9	-4.3
LTY	Liberty	5.27	108	Pn	Pn	23 26 05.7	+2.0
LTY				Sn	Sn	23 27 00.9	-4.0
RUBB	Prince Rupert	5.41	346	Pn	Pn	23 26 07.0	+1.5
RUBB				Sn	Sn	23 27 05.8	-2.4
PNT	Penticton	5.53	85	Pn	Pn	23 26 07.5	+0.3
B08A	Colville Reser	5.81	94	Pn	Pn	23 26 12.0	+0.8
BLBC	Blue River	6.33	59	P	Pn	23 26 19.9	+1.4
MNB	Mounoet Dainar	6.88	60	P	Pn	23 26 27.9	+2.0
NEW	Newport	7.28	93	Pn	Pn	23 26 32.9	+1.6
	0.5nm,0.3s,baz=291,slow=14,SNR=3.1						
NEW				LR	LR	23 29 17.6	
	comp=Z,69nm,20.0s,baz=58,slow=38						
DLBC	Dease Lake	9.43	354	Pn	Pn	23 27 04.8	+4.2
	0.5nm,0.3s,baz=175,slow=14,SNR=3.9						
DLBC	Dease Lake	9.43	354	P	Pn	23 27 05.0	+4.4
FNBB	Fort Nelson	10.24	15	P	Pn	23 27 13.2	+1.4
RDEA	Red Earth Cree	10.71	41	P	Pn	23 27 20.5	+2.5
YKA	Yellowknife Ar	15.35	24	Pn	Pn	23 28 20.8	-0.5
	0.3nm,0.3s,baz=213,slow=13,SNR=5.7						
ILAR	Eielson Array	18.64	334	P	P	23 29 05.6	+3.1
	0.1nm,0.3s,baz=148,slow=12,SNR=3.2						
ULM	Lac du Bonnet	20.77	75	P	P	23 29 27.9	+2.0
	4.2nm,0.8s,baz=282,slow=13,SNR=5.5						
TXAR	Lajitas Array	27.12	128	P	P	23 30 31.5	+3.2
	0.7nm,1.0s,baz=336,slow=5.9,SNR=4.6						

*DJA **12** 23:27:26.5±0.4, 9°S±4°×10°9E±°, h60km±9km, M4.3/6, mb4.4/1, MLv4.3/6*
*IDC **12** 23:27:29.1±1.3, 7°.99S×109°.40E, h131km±12km, mb3.7/16, mb1 3.7/17, mb1mx3.6/59, mbtmp4.0/17, Error ellipse: s-maj=29.0km s-min=12.5km az=43.0*
ISC 12 23:27:25.4±1.1, 8°.4S±0°.1×109°.24E±0°.05, h108km±7km, n33, σ1°79/38, mb4.0/16, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMJI	Cimerak	0.98	307	P	Pn	23 27 45.5	-0.8
CMJI				S	Sn	23 27 59.7	-2.3
KPJI	Karang Pucung	1.08	344	P	Pn	23 27 47.7	+0.3
KPJI				S	Sn	23 28 04.6	+0.7
UGM	Wanagama	1.35	70	P	Pn	23 27 50.7	+0.3
UGM				S	Sn	23 28 08.1	-1.3
WOJI	Wonogiri, Jawa	1.75	72	P	Pn	23 27 55.7	+0.5
WOJI				S	Sn	23 28 15.9	-2.0
SMRI	Semarang	1.78	42	P	Pn	23 27 56.8	+1.2
SMRI				S	Sn	23 28 20.4	+1.9
PCJI	Pacitan	1.93	85	P	Pn	23 27 57.6	+0.2
PCJI				S	Sn	23 28 21.2	-0.6
LEM	Lembang	2.23	314	P	Pn	23 28 03.4	+2.0
	27nm,0.3s,baz=75,slow=16,SNR=17						
LEM				S	Sn	23 28 32.6	+3.6
	46nm,0.3s,baz=81,slow=14,SNR=8.1						
LEM	Lembang	2.23	314	P	Pn	23 28 02.6	+1.2
NGJI	Ngawi	2.42	66	P	Pn	23 28 08.1	+4.4
PWJI	Pagerwojo	2.58	82	P	Pn	23 28 05.9	+0.3
DBJI	Dramaga	3.06	306	P	Pn	23 28 13.9	+1.6
CGJI	Cibinong	3.93	296	P	Pn	23 28 25.2	+1.4
MRSI	Marisa	15.42	56	P	P	23 31 01.7	+2.4
WRA	Warramunga Arr	26.87	118	P	P	23 32 58.7	+2.4
	0.5nm,0.7s,baz=293,slow=11,SNR=5.3						
ASAR	Alice Springs	28.09	126	P	P	23 33 09.3	+2.1
	0.4nm,0.6s,baz=298,slow=10,SNR=4.6						
CMAR	Chiang Mai Arr	28.54	339	P	P	23 33 11.3	+0.2
	0.6nm,0.5s,baz=176,slow=8.2,SNR=3.4						
H08S2	Diego Garcia H	36.39	268	T	T	00 12 57.0	
	baz=93,slow=75,SNR=15						
H08S3	Diego Garcia H	36.40	269	T	T	00 12 55.5	
	baz=93,slow=75,SNR=17						
H08S1	Diego Carcia H	36.41	268	T	T	00 12 58.3	
	baz=93,slow=75,SNR=3.5						
STKA	Stephens Creek	38.08	132	P	P	23 34 36.5	+2.7
	1.0nm,0.5s,baz=323,slow=9.7,SNR=3.3						
MJAR	Matsushiro Arr	52.31	30	P	P	23 36 24.0	-2.1
	0.8nm,0.4s,baz=202,slow=8.4,SNR=3.9						
SONM	Songino Array	56.02	358	P	P	23 36 51.4	-1.6
	0.7nm,0.5s,baz=168,slow=6.9,SNR=4.7						
SONM				PcP	PcP	23 37 50.1	0.0
	0.4nm,0.5s,baz=165,slow=3.8,SNR=3.0						
USRK	Ussuriysk Ar.	56.24	20	P	P	23 36 52.7	-1.7
	1.1nm,0.5s,baz=221,slow=5.7,SNR=2.4						
MKAR	Makanchi Array	59.95	339	P	P	23 37 18.9	-1.3
	2.9nm,0.5s,baz=146,slow=7.6,SNR=37						
KURBB	Kurchatov Arra	64.52	339	P	P	23 37 49.4	-1.2
	1.5nm,0.5s,baz=154,slow=5.7,SNR=7.5						
ZALV	Zalesovo Beam	65.43	344	P	P	23 37 55.1	-1.4
	1.4nm,0.4s,baz=174,slow=4.5,SNR=9.5						
BVAR	Borovoye Array	69.51	336	P	P	23 38 21.3	-0.9
	1.7nm,0.6s,baz=145,slow=8.5,SNR=18						
AKTO	Aktyubinsk	73.44	329	P	P	23 38 44.7	-1.2
	0.6nm,0.3s,baz=95,slow=5.3,SNR=4.3						
KBZ	Khabaz	79.16	317	P	P	23 39 18.8	+0.5
	1.7nm,0.8s,baz=192,slow=24,SNR=5.0						
MMAI	Mount Meron Ar	81.20	305	P	P	23 39 30.6	+0.9
	0.8nm,0.5s,baz=96,slow=8.8,SNR=4.0						
BRTR	Keskin Array B	84.40	311	P	P	23 39 46.5	+0.3
	1.9nm,0.7s,baz=132,slow=7.0,SNR=17						
FINES	FINESS Array B	94.03	331	P	P	23 40 31.1	0.0
	0.9nm,0.8s,baz=116,slow=3.2,SNR=3.4						
TXAR	Lajitas Array	142.74	52	PKP	PKPdf	23 46 44.1	-2.8
	0.2nm,0.6s,baz=255,slow=1.3,SNR=4.5						

*CSEM **12** 23:38:11.3±0.2, 67°.80N×20°.29E, h2km, ML1.5, Error ellipse: s-maj=5.8km s-min=4.8km az=6.0, Mining explosion.*
HEL 12 23:38:12.4±0.1, 67°.84N×20°.22E, h0km, ML1.7, ML1.5(UPP), Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	Kurravaara	0.13	21	*i* P	Pg	23 38 14.4	-0.4
KUA				*i* S	Sg	23 38 16.2	-0.3
KUA	Kurravaara	0.13	21	P	Pg	23 38 14.4	-0.4
KUA				S	Sg	23 38 16.2	-0.3
RATU	Laukkuluspa	0.24	267	*i* P	Pg	23 38 16.6	-0.3
RATU				*i* S	Sg	23 38 19.4	-0.7
RATU	Laukkuluspa	0.24	267	P	Pg	23 38 16.6	-0.3
RATU				S	Sg	23 38 19.4	-0.6
NIKU	Nikkaluokta	0.45	275	*i* P	Pg	23 38 20.5	-0.5
NIKU				*i* S	Sg	23 38 26.6	-0.2
NIKU	Nikkaluokta	0.45	275	P	Pg	23 38 20.5	-0.5
NIKU				S	Sg	23 38 26.6	-0.2
LANU	Lannavaara	0.70	71	*e*P	Pg	23 38 25.3	-0.5
	baz=251						
LANU				*e*S	Sg	23 38 34.6	-0.3
LANU	Lannavaara	0.70	71	P	Pg	23 38 25.2	-0.6
LANU				*e*S	Sg	23 38 34.6	-0.3
SALU	Saltoluokta	0.80	236	*i* P	Pg	23 38 26.8	-0.9
SALU	Saltoluokta	0.80	236	P	Pg	23 38 26.8	-0.9
KIF	Kilpisjarvi	1.20	10	*e*PN	Pb	23 38 35.7	-0.2
KIF				*e*S	Sg	23 38 48.5	-2.2
KIF				MSG		23 38 51.4	
	comp=Z,6.8nm,0.2s						
KIF	Kilpisjarvi	1.20	10	*e*Pn	Pb	23 38 35.7	-0.2
KIF				*e*S	Sg	23 38 48.5	-2.2
KIF	Kilpisjarvi	1.20	10	*e*P	Pg	23 38 34.9	-0.4
PAJU	Pajala	1.38	125	*e*P	Pg	23 38 37.6	-1.3
PAJU	Pajala	1.38	125	P	Pg	23 38 37.6	-1.3
HEF	Hetta	1.41	64	*e*PG	Pn	23 38 38.0	-1.3
HEF	Hetta	1.41	64	*e*Pg	Pn	23 38 38.0	-1.3
ERTU	Ertsjaerv	1.50	148	*e*PG	Pn	23 38 39.5	-1.0
	baz=323						
ERTU				*e*		23 38 52.7	
ERTU	Ertsjaerv	1.50	148	*e*Pg	Pn	23 38 39.5	-1.0
ERTU	Ertsjaerv	1.50	148	P	Pn	23 38 40.1	-0.4
STEI	Steigen	1.89	275	*e*P	Pb	23 38 46.9	-0.8
KALU	Kalix	2.34	147	*e*PG	Pb	23 38 53.7	-1.6
	baz=333						
KALU	Kalix	2.34	147	*e*Pg	Pb	23 38 53.7	-1.7
TOF	Tornio	2.39	136	*e*PB	Pn	23 38 54.1	+1.3
	baz=324						
TOF				MSG		23 39 21.9	
	comp=Z,2.4nm,0.2s						
SGF	Sodankyl	2.44	96	*e*PG	Pb	23 38 56.0	-1.2
	baz=290						
SGF	Sodankyl	2.44	96	*e*Pg	Pb	23 38 56.0	-1.2
RNF	Rovaniemi	2.57	116	*e*PB	Pb	23 38 57.3	-2.0
RNF				*e*SG	Sb	23 39 31.7	+0.3
ARE0	ARCESS Array S	2.58	46	*e*PG	Pb	23 38 58.0	-1.4
	baz=222						
ARE0				*e*S	Sn	23 39 27.5	+0.1
UMAU	Umeaa	3.97	177	*e*SG	Sg	23 40 16.0	-3.9
UMAU	Umeaa	3.97	177	*e*Sg	Sg	23 40 16.0	-3.9

*CSEM **12** 23:38:16.1±0.7, 67°.87N×21°.53E, h1km, ML1.6, Error ellipse: s-maj=25.0km s-min=13.6km az=10.0, Mining explosion.*
UPP 12 23:38:24.8±0.4, 67°.84N×20°.25E, h1km, ML1.6, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	Kurravaara	0.12	16	P	Pg	23 38 27.3	+0.1
KUA				S	Sg	23 38 29.0	+0.2
KUA	Kurravaara	0.12	16	P	Pg	23 38 27.3	+0.1
KUA				S	Sg	23 38 29.0	+0.2
RATU	Laukkuluspa	0.25	268	P	Pg	23 38 29.6	+0.1
RATU				S	Sg	23 38 32.9	+0.2
RATU	Laukkuluspa	0.25	268	P	Pg	23 38 29.6	+0.1
NIKU	Nikkaluokta	0.46	275	P	Pg	23 38 33.6	0.0
NIKU	Nikkaluokta	0.46	275	P	Pg	23 38 33.6	0.0

*IDC **13** 00:00:04.6±0.9, 11°.55N×85°.20W, h0km, mb3.8/8, mb1 4.1/9, mb1mx3.8/44, mbtmp3.9/9, ML3.7/1, MS3.4/8, Ms1 3.4/8, ms1mx3.0/42, Error ellipse: s-maj=56.4km s-min=10.6km az=72.0*
*NEIC **13** 00:00:09.9±0.9, 11°.02N×85°.91W, h37km±10km, mb4.2/19, Error ellipse: s-maj=20.8km s-min=7.7km az=46.0*
**IS

NVAR PcP **PcP** **00 09 45.4 -0.1**
0.5nm,0.6s,baz=134,slow=3.5,SNR=5.1
ULM Lac du Bonnet 39.89 350 P **P** **00 07 37.3 -2.7**
3.5nm,0.9s,baz=179,slow=7.0,SNR=5.0
HLID Hailey 40.72 328 *e*P **P** **00 07 47.6 +0.3**
0.4nm,0.4s
MCMT McKenzie Canyo 40.83 330 *e*P **P** **00 07 49.3 +1.0**
YBH Yreka Blue Hor 44.41 320 LR LR 00 28 56.9
comp=Z,59nm,19.8s,baz=156,slow=39
YKA Yellowknife Ar 55.32 344 P **P** **00 09 38.3 -1.2**
0.2nm,0.3s,baz=130,slow=8.4,SNR=2.6
SFJD Kangerlussuaq 60.55 15 LR LR 00 35 31.7
comp=Z,58nm,21.6s,baz=210,slow=36
IL1 Eielson Array 67.88 336 *e*P **P** **00 11 03.0 -1.4**
ILAR Eielson Array 67.88 336 P **P** **00 11 03.1 -1.2**
0.2nm,0.4s,baz=114,slow=4.0,SNR=7.1
NOA NORSAR Array B 83.72 29 LR LR 00 46 21.7
comp=Z,12nm,20.6s,baz=185,slow=33
GERES GERESS Array B 87.87 41 LR LR 00 46 27.5
comp=Z,24nm,20.1s,baz=286,slow=32
ZST Bratislava 90.23 41 *e*P **P** **00 13 07.1 +0.3**
ZST *e*PCP **PcP** **00 13 09.3 +1.4**
CD2 Chengdu 137.21 348 PKP **PKPdf** **00 19 29.4 -0.6**
WRA Warramunga Arr 140.45 252 PKP **PKPdf** **00 19 37.8 +1.6**
0.3nm,0.9s,baz=88,slow=1.5,SNR=3.1

THE ***13*** *00:14:56.9, 36.°55N×28.°71E, $h0^{km}\pm1^{km}$, ML2.5/5, Error ellipse: s-maj=1.7km s-min=0.8km az=12.0*
ISK ***13*** *00:14:56.4, 36.°49N×28.°71E, $h18^{km}$, ML2.7/14*
ISCJB ***13*** *00:14:57.1±0.5, 36.°54N±0.°03×28.°71E±0.°03, $h14^{km}\pm3^{km}$, Error ellipse: s-maj=5.6km s-min=3.9km az=0.6*
CSEM ***13*** *00:14:57.5±0.1, 36.°51N×28.°72E, $h20^{km}$, ML2.7, Error ellipse: s-maj=3.6km s-min=2.5km az=174.0*
ATH ***13*** *00:14:57.1, 36.°52N×28.°70E, $h30^{km}\pm3^{km}$, ML2.3/2, Error ellipse: s-maj=6.6km s-min=1.8km az=178.0*
ISC 13 00:14:57.1±0.9, 36.°51N±0.°03×28.°70E±0.°02, $h16^{km}\pm7^{km}$, n68, σ0.°43/84, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DALY	**Dalyan (Mu˘la**	**0.30**	**353**	PG	**Pg**	**00 15 03.8**	**+0.2**
DALY				SG	**Sb**	**00 15 09.6**	**+0.6**
DALY	**Dalyan (Mu˘la**	**0.30**	**353**	*e*Pg	**Pg**	**00 15 03.8**	**+0.2**
DALY				*e*Sg	**Sb**	**00 15 09.6**	**+0.6**
FETY	**Fethiye**	**0.33**	**68**	PG	**Pg**	**00 15 03.7**	**-0.4**
FETY				SG	**Sg**	**00 15 09.2**	**+0.4**
FETY	**Fethiye**	**0.33**	**68**	*e*Pg	**Pg**	**00 15 03.7**	**-0.4**
FETY				*e*Sg	**Sg**	**00 15 09.2**	**+0.4**
TURN	**Turunc**	**0.37**	**348**	PG	**Pn**	**00 15 06.8**	**-1.0**
TURN	**Turunc**	**0.37**	**348**	*e*Pg	**Pn**	**00 15 06.8**	**-1.0**
MRSB	**Marmaris-Mugla**	**0.45**	**297**	PG	**Pg**	**00 15 06.4**	**+0.1**
MRSB	**Marmaris-Mugla**	**0.45**	**297**	*e*Pg	**Pg**	**00 15 06.4**	**+0.1**
ARG	**Arkhangelos**	**0.55**	**237**	PG	**Pg**	**00 15 07.8**	**-0.3**
ARG	**Arkhangelos**	**0.55**	**237**	P	**Pg**	**00 15 07.5**	**-0.5**
ARG				S	**Sn**	**00 15 18.9**	**-0.2**
ARG				AML	AML	00 15 20.8	
	comp=N,619μm,0.3s						
ARG				AML	AML	00 15 23.6	
	comp=E,964μm,0.3s						
ARG	**Arkhangelos**	**0.55**	**237**	P	**Pg**	**00 15 08.1**	**0.0**
ARG				S	**Sn**	**00 15 19.2**	**+0.1**
ARG	**Arkhangelos**	**0.55**	**237**	*e*Pg	**Pg**	**00 15 07.8**	**-0.3**
ARG	**Arkhangelos**	**0.55**	**237**	P	**Pg**	**00 15 08.1**	**0.0**
ARG				S	**Sn**	**00 15 18.1**	**-1.0**
YER	**Yerkesik**	**0.70**	**332**	PG	**Pb**	**00 15 10.9**	**-0.2**
YER	**Yerkesik**	**0.70**	**332**	*e*Pg	**Pb**	**00 15 10.9**	**-0.2**
AKAS	**Kas**	**0.78**	**111**	PG	**Pb**	**00 15 11.8**	**-0.6**
AKAS	**Kas**	**0.78**	**111**	*e*Pg	**Pb**	**00 15 11.8**	**-0.6**
KSL	**Kastellorizon**	**0.80**	**117**	P	**Pb**	**00 15 12.8**	**+0.2**
KSL				S	**Sn**	**00 15 25.7**	**+0.4**
KSL				AML	AML	00 15 30.1	
	comp=N,386μm,0.7s						
KSL				AML	AML	00 15 31.0	
	comp=E,386μm,0.7s						
KSL	**Kastellorizon**	**0.80**	**117**	P	**Pg**	**00 15 13.0**	**+0.3**
KSL				S	**Sn**	**00 15 25.9**	**+0.6**
DATC	**Datca-Mugla**	**0.87**	**287**	PG	**Pb**	**00 15 14.2**	**+0.3**
DATC	**Datca-Mugla**	**0.87**	**287**	*e*Pg	**Pb**	**00 15 14.2**	**+0.3**
GLHS	**Glhisar (BURDU**	**0.91**	**45**	PG	**Pb**	**00 15 14.2**	**-0.3**
GLHS	**Glhisar (BURDU**	**0.91**	**45**	*e*Pg	**Pb**	**00 15 14.2**	**-0.3**
DAT	**Datca**	**0.93**	**284**	PG	**Pb**	**00 15 14.7**	**-0.2**
DAT	**Datca**	**0.93**	**284**	*e*Pg	**Pb**	**00 15 14.7**	**-0.2**
MLSB	**Milas**	**1.07**	**317**	PN	**Pn**	**00 15 17.8**	**+0.2**
MLSB	**Milas**	**1.07**	**317**	*e*Pn	**Pn**	**00 15 17.8**	**+0.2**
BODT	**Bodrum**	**1.24**	**297**	PN	**Pn**	**00 15 19.1**	**-0.8**
BODT	**Bodrum**	**1.24**	**297**	*e*Pn	**Pn**	**00 15 19.1**	**-0.8**
DENT	**Denizli**	**1.27**	**12**	PN	**Pn**	**00 15 19.4**	**-0.8**
DENT	**Denizli**	**1.27**	**12**	*e*Pn	**Pn**	**00 15 19.4**	**-0.8**
NISR	**Nisiros**	**1.27**	**275**	P	**Pg**	**00 15 21.9**	**+0.3**
NISR	**Nisiros**	**1.27**	**275**	P	**Pn**	**00 15 20.5**	**+0.3**
NISR				S	**Sg**	**00 15 38.2**	**0.0**
NISR	**Nisiros**	**1.27**	**275**	P	**Pb**	**00 15 21.3**	**+0.7**
NISR				S	**Sg**	**00 15 38.2**	**0.0**
KORT	**Korkueli**	**1.41**	**69**	PN	**Pn**	**00 15 22.4**	**+0.1**
KORT	**Korkueli**	**1.41**	**69**	*e*Pn	**Pn**	**00 15 22.4**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**1.57**	**336**	PN	**Pn**	**00 15 24.2**	**-0.3**
AYDB	**Zeytinkoy-Aydi**	**1.57**	**336**	*e*Pn	**Pn**	**00 15 24.2**	**-0.3**
KARP	**Karpathos**	**1.58**	**233**	PN	**Pn**	**00 15 24.4**	**0.0**
KARP	**Karpathos**	**1.58**	**233**	P	**Pn**	**00 15 24.4**	**0.0**
KARP	**Karpathos**	**1.58**	**233**	P	**Pn**	**00 15 24.8**	**+0.3**
KARP				S	**Sg**	**00 15 47.7**	**-0.3**
KARP	**Karpathos**	**1.58**	**233**	*e*Pn	**Pn**	**00 15 24.4**	**0.0**
KARP	**Karpathos**	**1.58**	**233**	P	**Pn**	**00 15 24.8**	**+0.3**
KARP				S	**Sg**	**00 15 47.7**	**-0.3**
ANTB	**Antalya**	**1.62**	**76**	PN	**Pn**	**00 15 24.8**	**-0.1**
ANTB	**Antalya**	**1.62**	**76**	*e*Pn	**Pn**	**00 15 24.8**	**-0.1**
GCAM	**G?zelcaml?**	**1.67**	**316**	PN	**Pn**	**00 15 26.1**	**+0.5**
GCAM	**G?zelcaml?**	**1.67**	**316**	*e*Pn	**Pn**	**00 15 26.1**	**+0.5**
BCK	**Bucak**	**1.78**	**57**	PN	**Pn**	**00 15 27.6**	**+0.3**
BCK	**Bucak**	**1.78**	**57**	*e*Pn	**Pn**	**00 15 27.6**	**+0.3**
SMG	**Samos**	**1.91**	**309**	P	**Pn**	**00 15 29.3**	**+0.4**
SMG	**Samos**	**1.91**	**309**	P	**Pn**	**00 15 29.4**	**+0.4**
SMG				S	**Sb**	**00 15 54.4**	**-0.8**
SMG	**Samos**	**1.91**	**309**	P	**Pn**	**00 15 29.4**	**+0.4**
SMG				S	**Sb**	**00 15 54.4**	**-0.8**
ISP	**Isparta**	**1.96**	**48**	PN	**Pn**	**00 15 30.2**	**+0.5**
ISP	**Isparta**	**1.96**	**48**	P	**Pn**	**00 15 30.4**	**+0.7**
ISP	**Isparta**	**1.96**	**48**	*e*Pn	**Pn**	**00 15 30.2**	**+0.5**
KULA	**Kula-Manisa**	**2.00**	**359**	PN	**Pn**	**00 15 30.1**	**-0.2**
KULA	**Kula-Manisa**	**2.00**	**359**	*e*Pn	**Pn**	**00 15 30.1**	**-0.2**
SUTC	**Sutluce-Ispart**	**2.08**	**62**	PN	**Pn**	**00 15 31.9**	**+0.5**
SUTC	**Sutluce-Ispart**	**2.08**	**62**	*e*Pn	**Pn**	**00 15 31.9**	**+0.5**
BLCB	**Balcova**	**2.29**	**325**	PN	**Pn**	**00 15 34.1**	**-0.1**
BLCB	**Balcova**	**2.29**	**325**	*e*Pn	**Pn**	**00 15 34.1**	**-0.1**
URLA	**Izmir**	**2.49**	**318**	PN	**Pn**	**00 15 37.1**	**+0.1**
URLA	**Izmir**	**2.49**	**318**	*e*Pn	**Pn**	**00 15 37.1**	**+0.1**
APE	**Apeiranthos**	**2.60**	**283**	P	**Pn**	**00 15 39.0**	**+0.4**
APE	**Apeiranthos**	**2.60**	**283**	P	**Pn**	**00 15 39.0**	**+0.4**
NPS	**Neapolis**	**2.80**	**244**	P	**Pn**	**00 15 41.2**	**-0.1**
NPS	**Neapolis**	**2.80**	**244**	P	**Pn**	**00 15 41.2**	**-0.1**
CHOS	**Chios island**	**2.81**	**312**	P	**Pn**	**00 15 42.0**	**+0.5**
CHOS				S	**Sn**	**00 16 15.5**	**+0.3**

ISCJB ***13*** *00:16:60.0±0.5, 46.°97N±0.°06×152.°76E±0.°09, $h56^{km}$, mb3.7/16, MS3.2/6, Error ellipse: s-maj=11.8km s-min=4.6km az=135.7*
MOS ***13*** *00:17:00.0±1.4, 46.°92N×152.°65E, $h54^{km}$, mb4.0/5, Error ellipse: s-maj=16.3km s-min=8.2km az=73.7*
SKHL ***13*** *00:17:00.7±0.1, 46.°90N×152.°80E, $h65^{km}\pm1^{km}$, mb4.6/6*
IDC ***13*** *00:17:02.6±2.8, 46.°88N×152.°81E, $h69^{km}\pm25^{km}$, mb3.4/12, mb1 3.7/15, mb1mx3.4/67, mbtmp3.8/15, MS3.2/9, Ms1 3.2/9, ms1mx2.9/37, Error ellipse: s-maj=21.3km s-min=16.3km az=126.0*
ISC 13 00:17:01.8±0.7, 46.°95N±0.°08×152.°76E±0.°08, $h56^{km}$, n58, σ1.°65/52, mb3.7/16, MS3.2/6, 5C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.81**	**245**	*i* P	**Pn**	**00 17 57.4**	**-0.5**
KUR				AMB	AMB	00 18 05.6	
	59nm,0.4s						
KUR				AMB	AMB	00 18 05.6	
	70nm,0.4s						
KUR				AMB	AMB	00 18 05.6	
	103nm,0.4s						
KUR				*i* S	**Sn**	**00 18 40.0**	**-1.4**
KUR				A	A	00 18 53.6	
	440nm,0.4s						
KUR				A	A	00 18 53.6	
	210nm,0.4s						
KUR	**Kuril'sk**	**3.81**	**245**	*c i* PN	**Pn**	**00 17 58.3**	**+0.4**
KUR				*i* S	**Sn**	**00 18 42.0**	**+0.6**
KUR				pmax	pmax		
	comp=Z,155nm,0.9s						
KUR				pmax	pmax		
	comp=Z,103nm,0.4s						
KUR				pmax	pmax		
	comp=N,59nm,0.3s						
KUR				pmax	pmax		
	comp=E,70nm,0.2s						
KUR				smax	smax		
	comp=N,669nm,1.5s						
KUR				smax	smax		
	comp=E,805nm,1.5s						
KUR				smax	smax		
	comp=N,439nm,0.4s						
KUR				smax	smax		
	comp=E,214nm,0.3s						
SKR	**Severo-Kuril's**	**4.35**	**29**	*e*P	**Pn**	**00 18 05.0**	**-0.3**
SKR				AMB	AMB	00 18 07.0	
	comp=E,21nm,0.4s						
SKR				*e*S	**Sn**	**00 18 53.1**	**-1.5**
SKR				A	A	00 18 55.0	
	comp=E,455nm,0.6s						
SKR				A	A	00 18 55.0	
	comp=E,273nm,0.6s						
SKR	**Severo-Kuril's**	**4.35**	**29**	*e*PN	**Pn**	**00 18 05.5**	**+0.2**
SKR				*e*S	**Sn**	**00 18 52.6**	**-2.0**
SKR				pmax	pmax		
	comp=Z,211nm,0.4s						
SKR				smax	smax		
	comp=N,455nm,0.7s						
SKR				smax	smax		
	comp=E,273nm,0.4s						
SHO	**Shikotan**	**5.18**	**236**	*i* P	**Pn**	**00 18 15.9**	**-0.9**
SHO				AMB	AMB	00 18 20.0	
	comp=E,14nm,0.4s						
SHO				AMB	AMB	00 18 20.0	
	comp=E,21nm,0.4s						
SHO				AMB	AMB	00 18 20.0	
	comp=E,33nm,0.4s						
SHO				*e*S	**Sn**	**00 19 12.0**	**-3.2**
SHO				A	A	00 19 18.0	
	comp=E,40nm,0.6s						
SHO				A	A	00 19 18.0	
	comp=E,143nm,0.6s						
SHO	**Shikotan**	**5.18**	**236**	*i* PN	**Pn**	**00 18 14.6**	**-2.2**
SHO				*e*S	**Sn**	**00 19 12.3**	**-2.9**
SHO				pmax	pmax		
	comp=N,14nm,0.4s						
SHO				pmax	pmax		
	comp=Z,33nm,0.4s						
SHO				pmax	pmax		
	comp=E,21nm,0.3s						
SHO				smax	smax		
	comp=E,143nm,0.7s						
SHO				smax	smax		
	comp=N,40nm,0.6s						
PAU	**Pauzhetka**	**5.25**	**29**	*e*P	**Pn**	**00 18 18.2**	**+0.6**
PAU				AMB	AMB	00 18 18.6	
	comp=N,90nm,0.9s						
PAU				*e*S	**Sn**	**00 19 15.1**	**-1.6**
PAU				A	A	00 19 18.7	
	comp=N,34nm,0.5s						
PAU				A	A	00 19 18.7	
	comp=N,430nm,0.5s						
YSS	**Yuzh-Sakhalins**	**6.85**	**274**	*e*P	**Pn**	**00 18 36.7**	**-2.8**
YSS				AMB	AMB	00 18 37.4	
	comp=N,20nm,0.6s						
YSS	**Yuzh-Sakhalins**	**6.85**	**274**	*e*PN	**Pn**	**00 18 36.7**	**-2.8**
YSS				pmax	pmax		
	comp=Z,20nm,0.6s						
PETK	**Petropavlovsk-**	**6.94**	**25**	P	**Pn**	**00 18 41.3**	**+0.5**
	comp=Z,1.9nm,0.3s,baz=183,slow=13,SNR=21						
PETK				S	Sn	00 20 08.8	+11
	comp=Z,0.4nm,0.3s,baz=108,slow=28,SNR=2.1						
PETK				LR	LR	00 21 27.7	
	comp=Z,136nm,20.5s,baz=243,slow=38						
PET	**Petropavlovsk**	**7.17**	**30**	*i* P	**Pn**	**00 18 44.9**	**+1.0**
PET				AMB	AMB	00 18 46.2	
	comp=Z,18nm,0.4s						
PET				*e*S	**Sn**	**00 20 01.3**	**-2.6**
PET				A	A	00 20 08.0	
	comp=Z,70nm,0.6s						
PET				A	A	00 20 08.0	
	comp=Z,72nm,0.6s						
PET	**Petropavlovsk**	**7.17**	**30**	*e*PN	**Pn**	**00 18 44.8**	**+0.9**
PET				pmax	pmax		
	comp=Z,39nm,1.0s						
PET				MLR	MLR		
	comp=Z,100nm,19.0s						
JKA	**Kamikawa-asahi**	**7.67**	**252**	*e*P	**Pn**	**00 18 52.7**	**+1.8**
ASAJ	**Asahikawa**	**7.67**	**252**	P	**Pn**	**00 18 52.6**	**+1.8**
	comp=Z,1.5nm,0.3s,baz=128,slow=31,SNR=3.1						
TYV	**Tymovskoe**	**7.72**	**304**	*i* P	**Pn**	**00 18 51.2**	**-0.3**
MA2	**Magadan**	**12.71**	**355**	P	**Pn**	**00 20 00.8**	**+1.3**
	comp=Z,1.5nm,0.3s,baz=146,slow=7.9,SNR=6.7						
MA2				LR	LR	00 24 41.9	
	comp=Z,64nm,21.1s,baz=182,slow=36						
MA2	**Magadan**	**12.71**	**355**	*e*P	**Pn**	**00 20 02.7**	**+3.2**
MA2	**Magadan**	**12.71**	**355**	*e*PN	**Pn**	**00 20 02.7**	**+3.2**
MA2				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KLR	**Kul'dur**	**14.22**	**287**	P	**P**	**00 20 27.3**	**+1.4**
	comp=Z,0.0nm,0.3s,baz=106,slow=13,SNR=3.6						
MJAR	**Matsushiro Arr**	**15.01**	**231**	LR	LR	00 26 53.7	
	comp=Z,50nm,19.3s,baz=60,slow=39						
SEY	**Seymchan**	**16.02**	**359**	P	**P**	**00 20 46.8**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=162,slow=8.0,SNR=6.7						
SEY	**Seymchan**	**16.02**	**359**	*e*P	**Pn**	**00 20 43.6**	**+0.4**
SEY	**Seymchan**	**16.02**	**359**	*c e*P	**Pn**	**00 20 43.6**	**+0.4**
YAK	**Yakutsk**	**20.02**	**327**	*i* P	**P**	**00 21 29.1**	**-0.6**
KSRS	**Korea Array**	**20.62**	**252**	P	Pn	00 21 40.7	+1.6
	comp=Z,0.8nm,0.4s,baz=49,slow=11,SNR=4.1						
BILL	**Biiibino**	**22.26**	**13**	*e*P	**P**	**00 21 55.0**	**+1.3**
BILL	**Biiibino**	**22.26**	**13**	*i* P	**P**	**00 21 55.0**	**+1.3**
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
TIK	**Tiksi**	**27.20**	**344**	*e*P	**P**	**00 22 39.2**	**-0.5**
TIXI	**Tiksi**	**27.21**	**344**	*i* P	**P**	**00 22 39.2**	**-0.6**
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**29.51**	**152**	T	T	00 54 40.1	
	baz=340,slow=76,SNR=326						
H11N1	**WAKE ISLAND Hy**	**29.52**	**152**	T	T	00 54 41.2	
	baz=340,slow=76,SNR=284						
H11N3	**WAKE ISLAND Hy**	**29.52**	**152**	T	T	00 54 26.2	
	baz=340,slow=76,SNR=319						
H11S1	**WAKE ISLAND Hy**	**30.50**	**153**	T	T	00 56 12.0	
	baz=342,slow=76,SNR=692						
H11S3	**WAKE ISLAND Hy**	**30.60**	**153**	T	T	00 55 40.6	
	baz=342,slow=76,SNR=995						
H11S2	**WAKE ISLAND Hy**	**30.61**	**153**	T	T	00 56 03.0	
	baz=342,slow=76,SNR=594						
GUMO	**Guam**	**33.91**	**194**	LR	LR	00 34 32.0	
	comp=Z,30nm,20.6s,baz=82,slow=31						
KDAK	**Kodiak Island**	**34.17**	**51**	*c e*P	P	00 23 49.6	+8.3
ILAR	**Eielson Array**	**36.55**	**39**	P	**P**	**00 24 02.0**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=253,slow=7.5,SNR=4.1						
ZALV	**Zalesovo Beam**	**42.30**	**306**	LR	LR	00 43 20.0	
	comp=Z,30nm,19.9s,baz=82,slow=37						
MKAR	**Makanchi Array**	**46.63**	**297**	P	**P**	**00 25 23.3**	**-1.1**
	comp=Z,0.2nm,0.6s,baz=52,slow=8.8,SNR=2.4						
MKAR				LR	LR	00 46 15.8	
	comp=Z,34nm,18.5s,baz=84,slow=38						
KURK	**Kurchatov**	**47.05**	**303**	*e*P	**P**	**00 25 29.6**	**+2.1**
KURK	**Kurchatov**	**47.05**	**303**	P	**P**	**00 25 29.6**	**+2.1**
KURBB	**Kurchatov Arra**	**47.14**	**303**	P	**P**	**00 25 29.6**	**+1.4**
	comp=Z,0.2nm,0.6s,baz=72,slow=8.6,SNR=2.6						
BVAR	**Borovoye Array**	**50.54**	**309**	LR	LR	00 49 19.0	
	comp=Z,27nm,19.5s,baz=130,slow=38						
YKA	**Yellowknife Ar**	**50.91**	**37**	P	**P**	**00 26 00.2**	**+3.3**
	comp=Z,0.4nm,0.6s,baz=285,slow=7.5,SNR=2.5						
AKTO	**Aktyubinsk**	**58.41**	**312**	LR	LR	00 53 11.9	
	comp=Z,35nm,19.2s,baz=21,slow=37						
NVAR	**Mina Array Bea**	**62.56**	**62**	P	**P**	**00 27 19.8**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=282,slow=9.0,SNR=4.4						
FINES	**FINESS Array B**	**63.76**	**335**	P	**P**	**00 27 26.7**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=39,slow=5.9,SNR=10						
PDAR	**Pinedale Array**	**64.83**	**54**	P	**P**	**00 27 33.6**	**-1.4**
	comp=Z,0.4nm,0.4s,baz=235,slow=3.2,SNR=3.4						
NOA	**NORSAR Array B**	**67.96**	**341**	LR	LR	01 01 05.2	
	comp=Z,13nm,19.2s,baz=40,slow=39						
HFS	**Hagfors**	**68.19**	**339**	P	**P**	**00 27 55.2**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=69,slow=7.9,SNR=8.7						
WRAB	**Tennant Creek**	**68.61**	**199**	*c e*P	**P**	**00 28 00.7**	**+1.9**
WRAB				pmax	pmax		
	comp=Z,16nm,2.5s						
WRA	**Warramunga Arr**	**68.62**	**199**	P	**P**	**00 27 57.1**	**-1.8**
	comp=Z,0.4nm,0.5s,baz=20,slow=6.7,SNR=9.2						
WRA	**Warramunga Arr**	**68.62**	**199**	*e*P	**P**	**00 27 58.2**	**-0.7**
AKASG	**Malin Array Be**	**71.25**	**326**	P	**P**	**00 28 13.7**	**-1.0**
	comp=Z,0.4nm,0.2s,baz=35,slow=6.3,SNR=4.5						
ASAR	**Alice Springs**	**72.32**	**198**	P	**P**	**00 28 20.9**	**-0.6**
	comp=Z,1.3nm,0.7s,baz=13,slow=5.5,SNR=11						
EKA	**Eskdalemuir Ar**	**76.09**	**346**	P	**P**	**00 28 44.0**	**+1.0**
	comp=Z,0.3nm,0.5s,baz=14,slow=6.0,SNR=2.5						
TXAR	**Lajitas Array**	**77.61**	**60**	P	**P**	**00 28 51.5**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=302,slow=5.2,SNR=9.3						

IDC 13 00:59:59.6±1.5, 31.°56S×76.°47E, $h0^{km}$, mb3.8/7, mb1 3.9/7, mb1mx3.6/62, mbtmp3.8/7, MS3.9/4, Ms1 3.9/4, ms1mx3.1/55, Error ellipse: s-maj=62.8km s-min=25.2km az=26.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**24.09**	**350**	T	T	01 29 45.1	
	baz=171,slow=76,SNR=13						
H08S1	**Diego Carcia H**	**24.09**	**350**	T	T	01 29 45.6	
	baz=171,slow=76,SNR=5.5						
H08S3	**Diego Garcia H**	**24.10**	**350**	T	T	01 29 46.8	
	baz=171,slow=76,SNR=67						
H01W2	**Cape Leeuwin H**	**31.56**	**106**	T	T	01 39 46.8	
	baz=266,slow=74,SNR=18						
H01W3	**Cape Leeuwin H**	**31.56**	**106**	T	T	01 39 37.7	
	baz=266,slow=74,SNR=13						
H01W1	**Cape Leeuwin H**	**31.57**	**106**	T	T	01 39 40.7	
	baz=266,slow=74,SNR=22						
BOSA	**Boshof**	**44.09**	**260**	LR	LR	01 24 13.7	
	comp=Z,97nm,18.6s,baz=102,slow=33						
MATP	**Matopo**	**44.22**	**273**	LR	LR	01 23 37.2	
	comp=Z,109nm,18.1s,baz=98,slow=32						
ASAR	**Alice Springs**	**51.01**	**96**	P	P	01 09 03.9	+0.3
	1.6nm,0.8s,baz=245,slow=6.9,SNR=10.0						
WRA	**Warramunga Arr**	**52.86**	**92**	P	P	01 09 17.8	+0.4
	1.3nm,0.8s,baz=250,slow=6.9,SNR=6.6						
WRA				PcP	PcP	01 10 25.5	-1.3
	0.2nm,0.7s,baz=241,slow=3.0,SNR=2.9						
WRA				LR	LR	01 29 17.4	
	comp=Z,114nm,21.3s,baz=240,slow=33						
PMG	**Port Moresby**	**68.71**	**88**	LR	LR	01 39 19.4	
	comp=Z,122nm,18.2s,baz=316,slow=34						
MKAR	**Makanchi Array**	**78.17**	**4**	P	P	01 12 00.3	-0.1
	0.7nm,0.8s,baz=185,slow=7.0,SNR=5.7						
BRTR	**Keskin Array B**	**81.30**	**328**	P	P	01 12 19.2	+1.4
	0.3nm,0.7s,baz=134,slow=8.3,SNR=2.9						
KURBB	**Kurchatov Arra**	**81.85**	**1**	P	P	01 12 20.5	+0.4
	0.2nm,0.3s,baz=197,slow=5.9,SNR=3.3						
TORD	**Torodi Ar. Bea**	**84.22**	**289**	P	P	01 12 33.0	-0.3
	0.4nm,0.8s,baz=110,slow=6.3,SNR=2.3						
ZALV	**Zalesovo Beam**	**85.47**	**5**	P	P	01 12 37.3	-1.4
	0.4nm,0.4s,baz=195,slow=4.3,SNR=2.6						

IDC ***13*** *01:02:11.8±2.1, 36.°38N×141.°12E, $h0^{km}$, mb3.4/3, mb1 3.5/4, mb1mx3.2/75, mbtmp3.3/4, ML2.9/1, Error ellipse: s-maj=46.3km s-min=30.6km az=52.0*
ISCJB ***13*** *01:02:15.9±0.9, 36.°23N±0.°05×140.°98E±0.°08, $h39^{km}\pm10^{km}$, mb3.4/3, Error ellipse: s-maj=10.6km s-min=7.6km az=163.6*
JMA ***13*** *01:02:16.4±0.1, 36.°23N×140.°88E, $h45^{km}\pm1^{km}$, M3.1*
ISC 13 01:02:16.1±1.4, 36.°26N±0.°05×140.°96E±0.°07, $h26^{km}\pm11^{km}$, n15, σ0.°94/18, mb3.4/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.47**	**318**	P	**Pb**	**01 02 26.5**	**+0.6**
CHOJ	**Chosi**	**0.56**	**188**	P	**Pb**	**01 02 27.6**	**+0.2**
CHOJ				S	**Sb**	**01 02 35.0**	**-0.1**
JYT	**Yasato**	**0.62**	**267**	P	**Pb**	**01 02 28.2**	**-0.2**
JYT				S	**Sb**	**01 02 36.0**	**-0.7**
JFK	**Kawauchi**	**1.11**	**357**	P	**Pn**	**01 02 35.2**	**-0.8**
JAG	**Ashikaga**	**1.23**	**278**	P	**Pn**	**01 02 36.7**	**-0.9**
JFT	**Otama**	**1.35**	**339**	P	**Pn**	**01 02 40.1**	**+0.8**
JFT				S	**Sn**	**01 02 56.6**	**+0.2**
JKT	**Katashina**	**1.47**	**291**	P	**Pn**	**01 02 40.9**	**-0.1**
JKT				S	**Sn**	**01 02 58.4**	**-1.0**
MJAR	**Matsushiro Arr**	**2.24**	**278**	Pn	**Pn**	**01 02 52.1**	**+0.6**
	2.7nm,0.3s,baz=91,slow=15,SNR=10						
MJAR				Sn	**Sn**	**01 03 20.3**	**+2.0**
	4.5nm,0.3s,baz=155,slow=43,SNR=7.4						
MAT	**Matsushiro**	**2.24**	**278**	P	**Pn**	**01 02 51.8**

	baz=299							
SLBB				eS	Sn	01 21 41.6	+0.5	
	baz=299							
ENTT	**Nioudou**	**0.70**	**283**	*e*P	**Pn**	**01 21 31.2**	**+0.3**	
	baz=286							
ENTT				eS	Sn	01 21 42.5	+1.0	
	baz=286							
NACB	**Ninganchiao**	**0.73**	**245**	*e*P	**Pn**	**01 21 30.5**	**-0.7**	
	baz=243							
NACB				eS	Sn	01 21 41.3	-0.8	
	baz=243							
NWF	**Wu-fen Shan**	**0.76**	**320**	P	**Pn**	**01 21 31.3**	**-0.3**	
	baz=312							
NWF				S	Sn	01 21 42.5	-0.4	
	baz=312							
WFSB	**Wu-fen Shan**	**0.76**	**320**	P	**Pn**	**01 21 31.5**	**-0.1**	
	baz=314							
WFSB				eS	Sn	01 21 42.6	-0.1	
	baz=314							
TWD	**Chiawan**	**0.77**	**238**	*e*P	**Pn**	**01 21 31.0**	**-0.7**	
	baz=230							
TWD				eS	Sn	01 21 42.1	-0.9	
	baz=230							
NWLT	**Wulai**	**0.80**	**291**	*e*P	**Pn**	**01 21 32.2**	**+0.2**	
	baz=293							
NWLT				eS	Sn	01 21 43.9	+0.3	
	baz=293							
NNSB	**Datong**	**0.85**	**266**	*e*P	**Pn**	**01 21 32.3**	**-0.5**	
	baz=258							
NNSB				eS	Sn	01 21 45.0	0.0	
	baz=258							
NNSH	**Datong**	**0.85**	**266**	P	**Pn**	**01 21 32.3**	**-0.5**	
	baz=259							
NNSH				eS	Sn	01 21 44.5	-0.4	
	baz=259							
NNS	**Nan Shan**	**0.86**	**267**	P	**Pn**	**01 21 32.8**	**-0.1**	
	baz=259							
NNS				eS	Sn	01 21 45.4	+0.2	
	baz=259							
ENLB	**Shoufeng**	**0.87**	**228**	*e*P	**Pn**	**01 21 32.3**	**-0.6**	
	baz=221							
ENLB				S	Sn	01 21 45.8	+0.5	
	baz=221							
YHNB	**Yeheng**	**0.88**	**282**	*e*P	**Pn**	**01 21 32.8**	**-0.2**	
	baz=281							
YHNB				eS	Sn	01 21 45.7	+0.3	
	baz=281							
NSK	**Sanguang**	**0.89**	**282**	P	**Pn**	**01 21 33.3**	**+0.1**	
	baz=281							
NSK				eS	Sn	01 21 45.8	0.0	
	baz=281							
TATO	**Taipei**	**0.90**	**303**	*e*P	**Pn**	**01 21 32.6**	**-0.6**	
	baz=312							
TATO				eS	Sn	01 21 45.4	-0.3	
	baz=312							
YM07	**YM07**	**0.93**	**317**	*e*P	**Pn**	**01 21 32.2**	**-1.6**	
	baz=310							
YM07				eS	Sn	01 21 44.8	-1.9	
	baz=310							
YM11	**YM11**	**0.95**	**315**	P	**Pn**	**01 21 34.4**	**+0.3**	
	baz=308							
YM11				S	Sn	01 21 47.4	+0.3	
	baz=308							
YM10	**YM10**	**0.96**	**314**	P	**Pn**	**01 21 33.6**	**-0.4**	
	baz=307							
YM10				eS	Sn	01 21 46.0	-1.2	
	baz=307							
YM12	**YM12**	**0.97**	**316**	P	**Pn**	**01 21 33.6**	**-0.6**	
	baz=309							
YM12				S	Sn	01 21 46.4	-1.0	
	baz=309							
YM04	**YM04**	**0.97**	**313**	P	**Pn**	**01 21 33.8**	**-0.4**	
	baz=314							
YM04				eS	Sn	01 21 46.9	-0.6	
	baz=314							
YM03	**YM03**	**0.99**	**314**	*e*P	**Pn**	**01 21 33.9**	**-0.6**	
	baz=308							
YM03				eS	Sn	01 21 46.9	-1.0	
	baz=308							
NTST	**Danshui**	**1.04**	**311**	*e*S	**Sn**	**01 21 48.9**	**0.0**	
	baz=311							
ESL	**Shilin**	**1.05**	**230**	*e*P	**Pn**	**01 21 34.4**	**-0.8**	
	baz=238							
ESL				eS	Sn	01 21 47.7	-1.5	
	baz=238							
CHGB	**Renai**	**1.13**	**248**	P	**Pn**	**01 21 35.9**	**-0.5**	
	baz=240							
CHGB				eS	Sn	01 21 50.4	-0.9	
	baz=240							
NCUH	**Zhongli**	**1.14**	**295**	*e*S	**Sn**	**01 21 51.6**	**+0.4**	
	baz=295							
EGFH	**Guangfu**	**1.15**	**225**	*e*S	**Sn**	**01 21 50.2**	**-1.3**	
	baz=217							
LIOB	**Emei**	**1.20**	**278**	*e*P	**Pn**	**01 21 37.3**	**+0.2**	
	baz=277							
LIOB				eS	Sn	01 21 53.4	+0.8	
	baz=277							
NSTT	**Nanjuang**	**1.21**	**277**	*e*P	**Pn**	**01 21 37.6**	**+0.4**	
	baz=276							
NSTT				eS	Sn	01 21 53.2	+0.4	
	baz=276							
HGSD	**Ruisui**	**1.28**	**220**	*e*P	**Pn**	**01 21 38.3**	**+0.1**	
	baz=218							
HGSD				eS	Sn	01 21 54.0	-0.6	
	baz=218							
IRIF	**Iriomote-Funau**	**1.30**	**96**	P	**Pn**	**01 21 38.3**	**-0.1**	
IRIF				S	Sn	01 21 54.9	-0.1	
VWDT	**VWDT**	**1.30**	**236**	*e*P	**Pn**	**01 21 38.1**	**-0.3**	
	baz=229							
VWDT				eS	Sn	01 21 54.5	-0.5	
	baz=229							
TWQ1	**Liyutan**	**1.41**	**265**	*e*S	**Sn**	**01 21 59.5**	**+1.7**	
	baz=263							
HATJ	**Hateruma jima**	**1.42**	**107**	*e*S	**Sn**	**01 21 58.8**	**+0.8**	
SMLT	**Sun Moon Lake**	**1.43**	**245**	*e*P	**Pn**	**01 21 40.7**	**+0.5**	
	baz=238							
SMLT				eS	Sn	01 21 58.8	+0.6	
	baz=238							
YULB	**Yu-li**	**1.43**	**221**	*e*P	**Pn**	**01 21 38.8**	**-1.5**	
	baz=219							
YULB				eS	Sn	01 21 55.5	-2.7	
	baz=219							
TYC	**Yuchr**	**1.45**	**247**	*e*P	**Pn**	**01 21 41.8**	**+1.3**	
	baz=240							
TYC				eS	Sn	01 21 58.9	+0.2	
	baz=240							
TWF1	**Yuli**	**1.47**	**220**	*e*S	**Sn**	**01 21 56.7**	**-2.3**	
	baz=225							
TCU	**Taichung**	**1.53**	**258**	*e*S	**Sn**	**01 22 02.2**	**+1.6**	
	baz=267							
JKRS	**Kuro-shima**	**1.56**	**99**	P	**Pn**	**01 21 42.4**	**+0.4**	
JKRS				S	Sn	01 22 01.8	+0.5	
FULB	**Fuli**	**1.59**	**216**	*e*P	**Pn**	**01 21 42.1**	**-0.2**	
	baz=207							
FULB				eS	Sn	01 22 00.3	-1.7	
	baz=207							
WJS	**Zhushan**	**1.59**	**246**	*e*S	**Sn**	**01 22 03.6**	**+1.5**	
	baz=256							
JIJ	**Ishigaki jima**	**1.67**	**94**	P	**Pn**	**01 21 43.2**	**-0.2**	
JIJ				S	Sn	01 22 03.2	-0.7	
WDLH	**Douliu**	**1.81**	**244**	*e*S	**Sn**	**01 22 09.4**	**+2.1**	
	baz=255							
JISG	**Ishigakijimahi**	**1.82**	**86**	P	**Pn**	**01 21 45.4**	**0.0**	
JISG				S	Sn	01 22 07.4	-0.1	
RLNB	**Erlin**	**1.88**	**252**	*e*S	**Sn**	**01 22 10.2**	**+1.2**	
	baz=261							
TWH	**Lutao**	**1.93**	**204**	*e*S	**Sn**	**01 22 07.4**	**-2.7**	
	baz=202							
CHN4	**Tsaushan**	**1.94**	**235**	*e*P	**Pn**	**01 21 48.7**	**+1.6**	
	baz=233							
CHN4				eS	Sn	01 22 12.7	+2.3	
	baz=233							
TPUB	**Ta-pu**	**1.94**	**233**	*e*S	**Sn**	**01 22 11.5**	**+1.0**	
	baz=231							
WTP	**Ta-pu**	**1.99**	**232**	*e*S	**Sn**	**01 22 12.8**	**+1.2**	
	baz=230							
CHN1	**Nanshi**	**2.09**	**232**	*e*S	**Sn**	**01 22 15.4**	**+1.3**	
	baz=230							
SLGT	**Liugui**	**2.13**	**226**	*e*S	**Sn**	**01 22 16.1**	**+0.9**	
	baz=225							
JTJ	**Tarama**	**2.18**	**85**	S	**Sn**	**01 22 16.2**	**0.0**	

CSEM ***13*** *01:29:23.3, 44°.88N×10°.94E, h9km, ML2.3/15*
ROM 13 01:29:23.3±0.1, 44°.880N±0°.004×10°.937E±0°.006, h9km, ML2.3/8, 11C, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NDIM	**Novi di Modena**	**0.03**	**285**	*i* P	Pg	01 29 25.2	+0.2
NDIM				*i* S	Sg	01 29 27.2	+1.0
T0826	**Rio Saliceto (**	**0.10**	**246**	AML	AML		
	comp=N,3175μm,0.1s						
T0826				AML	AML		
	comp=E,2725μm,0.5s						
T0826				AML	AML		
	comp=N,3170μm,0.1s						
T0826				AML	AML		
	comp=E,2725μm,0.5s						
T0826				AML	AML		
	comp=N,3175μm,0.1s						
T0826				AML	AML		
	comp=E,2725μm,0.5s						
T0825	**Gonzaga (MN)**	**0.11**	**325**	AML	AML		
	comp=N,7690μm,0.1s						
T0825				AML	AML		
	comp=E,11300μm,0.1s						
T0825				AML	AML		
	comp=N,7675μm,0.1s						
T0825				AML	AML		
	comp=E,11265μm,0.1s						
T0825				AML	AML		
	comp=E,11265μm,0.1s						
T0825				AML	AML		
	comp=N,7690μm,0.1s						
SBPO	**S.Benedetto Po**	**0.17**	**356**	⇑*e*P	Pg	01 29 28.2	+1.2
SBPO	**S.Benedetto Po**	**0.17**	**356**	*e*P	Pg	01 29 28.2	+1.2
SBPO				AML	AML		
	comp=E,418μm,0.2s						
SBPO				AML	AML		
	comp=N,3125μm,0.4s						
SBPO				AML	AML		
	comp=E,417μm,0.2s						
SBPO				AML	AML		
	comp=N,3125μm,0.4s						
SBPO				AML	AML		
	comp=E,417μm,0.2s						
SBPO				AML	AML		
	comp=N,3125μm,0.4s						
T0802	**SanFelice sul**	**0.17**	**92**	⇑*e*P	Pg	01 29 27.7	+0.7
T0802				⇑*e*S	Sg	01 29 32.2	+2.7
T0802	**SanFelice sul**	**0.17**	**92**	*e*P	Pg	01 29 27.7	+0.7
T0802				*e*S	Sg	01 29 32.2	+2.7
NOVE	**Novellara**	**0.18**	**243**	AML	AML		
	comp=N,1555μm,0.2s						
NOVE				AML	AML		
	comp=E,1105μm,0.2s						
NOVE				AML	AML		
	comp=N,1560μm,0.2s						
NOVE				AML	AML		
	comp=E,1108μm,0.2s						
NOVE				AML	AML		
	comp=N,1555μm,0.2s						
NOVE				AML	AML		
	comp=E,1108μm,0.2s						
RAVA	**Ravarino**	**0.18**	**134**	⇑*e*P	Pg	01 29 27.0	-0.1
RAVA	**Ravarino**	**0.18**	**134**	*e*P	Pg	01 29 28.0	+0.9
RAVA				AML	AML		
	comp=E,1985μm,0.3s						
RAVA				AML	AML		
	comp=N,1510μm,0.3s						
RAVA				AML	AML		
	comp=E,1985μm,0.3s						
RAVA				AML	AML		
	comp=N,1505μm,0.3s						
RAVA				AML	AML		
	comp=E,1985μm,0.3s						
RAVA				AML	AML		
	comp=N,1505μm,0.3s						
T0800	**Massa Finalese**	**0.22**	**98**	⇑*e*P	Pg	01 29 28.4	+0.6
T0800				⇑*e*S	Sg	01 29 33.5	+2.6
T0800	**Massa Finalese**	**0.22**	**98**	*e*P	Pg	01 29 28.4	+0.6
T0800				*e*S	Sg	01 29 33.5	+2.6
T0800				AML	AML		
	comp=E,900μm,0.2s						
T0800				AML	AML		
	comp=N,747μm,0.2s						
T0800				AML	AML		
	comp=E,810μm,0.2s						
T0800				AML	AML		
	comp=N,756μm,0.2s						
T0800				AML	AML		
	comp=E,808μm,0.2s						
T0800				AML	AML		
	comp=N,756μm,0.2s						
T0800				AML	AML		
	comp=E,808μm,0.2s						
T0800				AML	AML		
	comp=N,756μm,0.2s						
T0805	**Bondeno (FE)**	**0.28**	**82**	⇑*e*P	Pg	01 29 29.4	+0.6
T0805	**Bondeno (FE)**	**0.28**	**82**	*e*P	Pg	01 29 29.4	+0.5
SERM	**Sermide**	**0.29**	**63**	⇑*e*P	Pg	01 29 29.7	+0.7
SERM				⇑*e*S	Sg	01 29 36.2	+0.8
SERM	**Sermide**	**0.29**	**63**	*e*P	Pg	01 29 29.7	+0.7
SERM				*e*S	Sg	01 29 36.2	+0.8
TEOL	**Teolo**	**0.71**	**47**	AML	AML		
	comp=E,176μm,1.2s						
TEOL				AML	AML		
	comp=E,176μm,1.2s						
TEOL				AML	AML		
	comp=N,203μm,0.4s						
TEOL				AML	AML		
	comp=N,203μm,0.4s						
ROVR	**Rover¯¤ Verone**	**0.77**	**7**	⇑*e*P	Pb	01 29 38.6	-0.4
ROVR	**Rover¯¤ Verone**	**0.77**	**7**	*e*P	Pb	01 29 38.6	-0.3
ROVR				AML	AML		
	comp=E,75μm,1.5s						
ROVR				AML	AML		
	comp=N,202μm,1.3s						
ROVR				AML	AML		
	comp=E,75μm,1.5s						
ROVR				AML	AML		
	comp=N,202μm,1.3s						
MAGA	**Magasa**	**0.92**	**346**	⇑*e*P	Pg	01 29 40.0	-1.0
MAGA	**Magasa**	**0.92**	**346**	*e*P	Pg	01 29 41.0	-0.1

CSEM ***13*** *01:29:49.5, 44°.86N×10°.97E, h7km, MD1.4/3*
ROM 13 01:29:49.5±0.1, 44°.860N±0°.004×10°.972E±0°.004, h7km, Md1.4/3, 1D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NDIM	**Novi di Modena**	**0.06**	**297**	END			
NDIM				END			
T0826	**Rio Saliceto (**	**0.12**	**260**	P	Pg	01 29 54.3	+2.3
T0826				S	Sg	01 29 57.7	+4.0
T0826	**Rio Saliceto (**	**0.12**	**260**	P	Pg	01 29 54.3	+2.3
T0826				S	Sg	01 29 57.7	+4.0
T0826				END			
T0826				END			
T0825	**Gonzaga (MN)**	**0.14**	**322**	⇓P	Pg	01 29 55.2	+2.7
T0825				S	Sg	01 29 59.6	+5.1
T0825	**Gonzaga (MN)**	**0.14**	**322**	P	Pg	01 29 55.2	+2.8
T0825				S	Sg	01 29 59.6	+5.1
T0825				AML	AML		
	comp=E,4145μm,0.1s						
T0825				AML	AML		
	comp=N,3050μm,0.1s						
T0825				AML	AML		
	comp=E,4145μm,0.1s						
T0825				AML	AML		
	comp=N,3050μm,0.1s						
T0825				END			
RAVA	**Ravarino**	**0.15**	**135**	P	Pg	01 29 55.7	+3.2
RAVA				S	Sg	01 29 59.7	+5.1
RAVA	**Ravarino**	**0.15**	**135**	P	Pg	01 29 55.7	+3.2
RAVA				S	Sg	01 29 59.7	+5.2
T0802	**SanFelice sul**	**0.15**	**84**	P	Pg	01 29 55.5	+2.9
T0802				S	Sg	01 29 59.9	+5.3
T0802	**SanFelice sul**	**0.15**	**84**	P	Pg	01 29 55.5	+2.9
T0802				S	Sg	01 29 59.9	+5.3
T0802				END			
T0802				END			
NOVE	**Novellara**	**0.19**	**251**	P	Pg	01 29 56.1	+2.8
NOVE	**Novellara**	**0.19**	**251**	P	Pg	01 29 56.1	+2.8
SBPO	**S.Benedetto Po**	**0.19**	**349**	P	Pg	01 29 55.0	+1.6
SBPO	**S.Benedetto Po**	**0.19**	**349**	P	Pg	01 29 56.0	+2.6
T0800	**Massa Finalese**	**0.20**	**93**	P	Pg	01 29 56.1	+2.7
T0800				S	Sg	01 30 01.2	+5.2
T0800	**Massa Finalese**	**0.20**	**93**	P	Pg	01 29 56.1	+2.7
T0800				S	Sg	01 30 01.2	+5.2
T0800				END			
T0800				END			
T0805	**Bondeno (FE)**	**0.26**	**77**	P	Pb	01 29 57.9	+1.5
T0805	**Bondeno (FE)**	**0.26**	**77**	P	Pb	01 29 57.9	+1.5
T0803	**Dosso, Cento (**	**0.29**	**109**	P	Pb	01 29 58.2	+1.3
T0803	**Dosso, Cento (**	**0.29**	**109**	P	Pb	01 29 58.1	+1.2
TEOL	**Teolo**	**0.70**	**44**	P	Pn	01 30 06.5	+0.6
TEOL	**Teolo**	**0.70**	**44**	P	Pn	01 30 06.5	+0.6

IDC 13 01:52:44.1±2.3, 4°.17N×125°.17E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/57, mbtmp3.5/4, MS3.4/1, Ms1 3.4/1, ms1mx2.5/41, Error ellipse: s-maj=290.4km s-min=21.3km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.60**	**160**	P	P	01 58 15.4	+0.1
	0.8nm,0.5s,baz=339,slow=9.6,SNR=26						
WRA				LR	LR	02 08 36.0	
	comp=Z,95nm,20.4s,baz=110,slow=37						
ASAR	**Alice Springs**	**28.95**	**163**	P	P	01 58 45.4	-0.1
	0.2nm,0.6s,baz=347,slow=7.8,SNR=3.0						
MKAR	**Makanchi Array**	**56.31**	**326**	P	P	02 02 27.0	+0.2
	0.2nm,0.3s,baz=121,slow=7.4,SNR=4.0						
KURBB	**Kurchatov Arra**	**60.54**	**328**	P	P	02 02 56.0	-0.2
	0.4nm,0.6s,baz=127,slow=6.8,SNR=3.0						

IDC 13 01:59:57.7±3.8, 30°.46S×138°.29E, h0km, mb1 3.0/3, mb1mx3.0/41, mbtmp2.8/3, ML2.6/3, Error ellipse: s-maj=87.5km s-min=16.9km az=41.0, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**3.16**	**117**	Pn	Pn	02 00 49.5	+0.8
	0.2nm,0.3s,baz=300,slow=14,SNR=2.7						
STKA				Pg	Pb	02 00 54.8	+0.1
	1.0nm,0.3s,baz=295,slow=14,SNR=11						
STKA				Sn	Sn	02 01 25.4	-1.7
	1.5nm,0.3s,baz=171,slow=19,SNR=5.4						
STKA				Lg	Lg	02 01 37.9	
	1.6nm,0.3s,baz=25,slow=24,SNR=4.1						
ASAR	**Alice Springs**	**7.82**	**329**	Pn	Pn	02 01 52.9	+0.2
	0.1nm,0.3s,baz=149,slow=13,SNR=3.9						
ASAR				Sn	Sn	02 03 22.5	+0.5
	0.2nm,0.3s,baz=154,slow=21,SNR=3.9						
WRA	**Warramunga Arr**	**11.07**	**340**	Pn	Pn	02 02 37.2	-0.1
	0.1nm,0.3s,baz=161,slow=15,SNR=5.4						
WRA				Sn	Sn	02 04 36.5	-5.4
	0.1nm,0.3s,baz=160,slow=23,SNR=3.0						

DDA ***13*** *02:13:37.3, 35°.10N×27°.84E, h8km, Ml3.0*
ISCJB ***13*** *02:13:44.4±1.2, 35°.47N±0°.05×27°.94E±0°.04, h6km±7km, Error ellipse: s-maj=9.6km s-min=4.5km az=151.0*
ISK ***13*** *02:13:44.8, 35°.48N×27°.91E, h15km, ML2.9/9*
CSEM ***13*** *02:13:45.4±0.3, 35°.50N×27°.91E, h10km, ML2.4, Error ellipse: s-maj=8.7km s-min=4.3km az=158.0*
ATH ***13*** *02:13:45.1, 35°.47N×27°.86E, h12km±2km, ML2.4/5, Error ellipse: s-maj=3.1km s-min=1.1km az=342.0*
ISC 13 02:13:45.3±1.2, 35°.45N±0°.04×27°.89E±0°.03, h16km±9km, n66, σ1°.06/83, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.60**	**280**	PG	**Pg**	**02 13 57.4**	**+0.2**
KARP				SG	**Sb**	**02 14 06.6**	**+0.9**
KARP	**Karpathos**	**0.60**	**280**	P	**Pg**	**02 13 56.1**	**-1.1**
KARP				S	**Sg**	**02 14 04.6**	**-0.7**
KARP				AML	AML	02 14 08.3	
	comp=N,1109μm,0.5s						
KARP				AML	AML	02 14 09.8	
	comp=E,977μm,0.2s						
KARP	**Karpathos**	**0.60**	**280**	P	**Pg**	**02 13 56.2**	**-1.0**
KARP	**Karpathos**	**0.60**	**280**	*e*Pg	**Pg**	**02 13 57.4**	**+0.2**
KARP				S	**Sg**	**02 14 04.5**	**-0.7**
ARG	**Arkhangelos**	**0.79**	**14**	PG	**Pg**	**02 13 59.5**	**-1.3**
ARG				SG	**Sb**	**02 14 11.4**	**+0.2**
ARG	**Arkhangelos**	**0.79**	**14**	P	**Pg**	**02 13 59.5**	**-1.3**
ARG				S	**Sb**	**02 14 11.5**	**+0.2**
ARG				AML	AML	02 14 14.1	
	comp=N,565μm,0.4s						
ARG				AML	AML	02 14 14.8	
	comp=E,823μm,0.6s						
ARG	**Arkhangelos**	**0.79**	**14**	P	**Pg**	**02 13 59.7**	**-1.1**
ARG				S	**Sb**	**02 14 11.1**	**-0.1**
MRSB	**Marmaris-Mugla**	**1.29**	**11**	PN	**Pn**	**02 14 08.3**	**-0.4**
MRSB	**Marmaris-Mugla**	**1.29**	**11**	*e*Pn	**Pn**	**02 14 08.3**	**-0.4**
DAT	**Datca**	**1.30**	**349**	PN	**Pn**	**02 14 08.7**	**-0.3**
DAT	**Datca**	**1.30**	**349**	*i* P	**Pn**	**02 14 08.7**	**-0.3**
DAT				*i* S	**Sg**	**02 14 31.3**	**+3.7**
DAT	**Datca**	**1.30**	**349**	*e*Pn	**Pn**	**02 14 08.7**	**-0.3**
NISR	**Nisiros**	**1.32**	**332**	P	**Pn**	**02 14 09.0**	**0.0**
NISR				S	**Sg**	**02 14 27.1**	**-0.8**
NISR				AML	AML	02 14 33.8	
	comp=E,285μm,0.4s						
NISR				AML	AML	02 14 33.9	
	comp=N,263μm,0.3s						
NISR	**Nisiros**	**1.32**	**332**	P	**Pb**	**02 14 09.2**	**-0.4**
NISR				S	**Sg**	**02 14 27.1**	**-0.8**
DATC	**Datca-Mugla**	**1.32**	**352**	PN	**Pn**	**02 14 08.9**	**-0.2**
DATC	**Datca-Mugla**	**1.32**	**352**	*e*Pn	**Pn**	**02 14 08.9**	**-0.2**
ZKR	**Zakros**	**1.41**	**257**	P	**Pn**	**02 14 09.9**	**-0.4**
ZKR				S	**Sg**	**02 14 31.5**	**+0.8**
ZKR				AML	AML	02 14 40.9	
	comp=E,504μm,1.0s						
ZKR				AML	AML	02 14 42.3	
	comp=N,302μm,0.5s						
ZKR	**Zakros**	**1.41**	**257**	P	**Pn**	**02 14 10.5**	**+0.2**
ZKR				S	**Sg**	**02 14 30.9**	**+0.2**
DALY	**Dalyan (Mu¯la**	**1.50**	**24**	PN	**Pn**	**02 14 11.7**	**+0.1**
DALY	**Dalyan (Mu¯la**	**1.50**	**24**	*i* P	**Pn**	**02 14 11.2**	**-0.4**
DALY				*i* S	**Sg**	**02 14 37.4**	**+3.6**
DALY	**Dalyan (Mu¯la**	**1.50**	**24**	P	**Pn**	**02 14 11.2**	**-0.4**
DALY	**Dalyan (Mu¯la**	**1.50**	**24**	*e*Pn	**Pn**	**02 14 11.7**	**+0.1**
FETY	**Fethiye**	**1.53**	**39**	PN	**Pn**	**02 14 11.9**	**-0.1**
FETY	**Fethiye**	**1.53**	**39**	P	**Pn**	**02 14 11.4**	**-0.6**
FETY	**Fethiye**	**1.53**	**39**	*e*Pn	**Pn**	**02 14 11.9**	**-0.1**
TURN	**Turunc**	**1.54**	**22**	PN	**Pn**	**02 14 09.5**	**-2.6**
TURN	**Turunc**	**1.54**	**22**	*i* P	**Pn**	**02 14 08.9**	**-3.2**
TURN				*i* S	**Sn**	**02 14 30.8**	**-0.9**
TURN	**Turunc**	**1.54**	**22**	P	**Pn**	**02 14 08.9**	**-3.2**
TURN	**Turunc**	**1.54**	**22**	*e*Pn	**Pn**	**02 14 09.5**	**-2.6**
TURN				S	**Sn**	**02 14 30.8**	**-0.9**
KSL	**Kastellorizon**	**1.55**	**63**	P	**Pg**	**02 14 14.7**	**-0.4**
AKAS	**Kas**	**1.60**	**60**	PN	**Pn**	**02 14 13.3**	**+0.2**
AKAS	**Kas**	**1.60**	**60**	*i* P	**Pn**	**02 14 12.2**	**-0.9**
AKAS	**Kas**	**1.60**	**60**	P	**Pn**	**02 14 12.2**	**-0.9**
AKAS	**Kas**	**1.60**	**60**	*e*Pn	**Pn**	**02 14 13.3**	**+0.2**
BDRM	**Kayabasi**	**1.66**	**348**	*i* P	**Pn**	**02 14 13.5**	**-0.2**
BDRM	**Kayabasi**	**1.66**	**348**	P	**Pn**	**02 14 13.5**	**-0.2**
BODT	**Bodrum**	**1.68**	**344**	PN	**Pn**	**02 14 13.9**	**-0.1**
BODT	**Bodrum**	**1.68**	**344**	*e*Pn	**Pn**	**02 14 13.9**	**-0.1**
YER	**Yerkesik**	**1.72**	**11**	PN	**Pn**	**02 14 14.7**	**+0.1**
YER	**Yerkesik**	**1.72**	**11**	*e*Pn	**Pn**	**02 14 14.7**	**+0.1**
MLSB	**Milas**	**1.85**	**357**	PN	**Pn**	**02 14 16.3**	**-0.1**
MLSB	**Milas**	**1.85**	**357**	*e*Pn	**Pn**	**02 14 16.3**	**-0.1**
LAST	**Lasithi**	**1.99**	**262**	P	**Pb**	**02 14 21.8**	**+0.6**
LAST				S	**Sb**	**02 14 46.0**	**+0.3**
LAST				AML	AML	02 14 57.7	
	comp=N,112μm,0.7s						
LAST				AML	AML	02 15 00.5	
	comp=E,118μm,1.0s						
LAST	**Lasithi**	**1.99**	**262**	P	**Pb**	**02 14 21.1**	**-0.1**
LAST				S	**Sb**	**02 14 46.2**	**+0.4**
GLHS	**Glhisar (BURDU**	**2.15**	**37**	PN	**Pn**	**02 14 20.8**	**+0.2**
GLHS	**Glhisar (BURDU**	**2.15**	**37**	*e*Pn	**Pn**	**02 14 20.8**	**+0.2**
TAVA	**DENIZLI_Tavas**	**2.18**	**22**	*i* P	**Pn**	**02 14 21.4**	**+0.4**
TAVA				*i* S	**Sg**	**02 14 56.2**	**+0.7**
TAVA	**DENIZLI_Tavas**	**2.18**	**22**	P	**Pn**	**02 14 21.4**	**+0.4**
AYDN

BLCB	Balcova	3.01	347	*e*Pn	Pn	02 14 32.9	+0.6
URLA	Izmir	3.09	341	PN	Pn	02 14 34.1	+0.7
URLA	Izmir	3.09	341	*e*Pn	Pn	02 14 34.1	+0.7
KULA	Kula-Manisa	3.12	11	PN	Pn	02 14 34.5	+0.5
KULA	Kula-Manisa	3.12	11	*e*Pn	Pn	02 14 34.5	+0.5
SUTC	Sutluce-Ispart	3.23	50	PN	Pn	02 14 36.5	+1.1
SUTC	Sutluce-Ispart	3.23	50	*e*Pn	Pn	02 14 36.5	+1.1

*MDD **13** 02:44:03.7±1.7, 37.°28N×12.°71W, h0km, mb4.0/8, Error ellipse: s-maj=15.8km s-min=13.5km az=39.0, PRXIMO*
*IGIL **13** 02:44:04.8, 37.°35N×12.°70W, h0km, ML1.9*
*INMG **13** 02:44:05.3±2.0, 37.°12N×13.°10W, h10km, ML2.3, Error ellipse: s-maj=7.4km s-min=5.7km az=98.0*
*CSEM **13** 02:44:06.3±0.3, 37.°39N×12.°50W, h10km, mb4.0, Error ellipse: s-maj=6.2km s-min=5.4km az=51.0*

ISC 13 02:44:01.6±3.3, 37.°30N±0.°09×12.°8W±0.°2, h10km, n97, σ1§76/174, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMST	**Lisbon--Monsan**	**3.18**	**62**	*e*Pn	**Pn**	**02 44 53.7**	**+2.0**
PMST				*e*Sn	**Sn**	**02 45 29.9**	**+0.2**
PMST				A	A	02 45 39.5	
	25nm,0.8s						
PMST	**Lisbon--Monsan**	**3.18**	**62**	*e*Pn	**Pn**	**02 44 53.7**	**+2.0**
PMST				*e*Sn	**Sn**	**02 45 29.9**	**+0.2**
PMAFR	**Mafra**	**3.22**	**58**	*e*Pn	**Pn**	**02 44 53.9**	**+1.7**
PMAFR				*e*Sn	**Sn**	**02 45 31.8**	**+1.3**
PMAFR				A	A	02 45 36.1	
	15nm,0.7s						
PMAFR	**Mafra**	**3.22**	**58**	P	**Pn**	**02 44 53.8**	**+1.7**
	3.9nm,0.1s,SNR=7.9						
PMAFR				S	**Sn**	**02 45 30.5**	**0.0**
	5.3nm,0.5s,SNR=7.9						
PMAFR	**Mafra**	**3.22**	**58**	*e*Pn	**Pn**	**02 44 53.9**	**+1.7**
PMAFR				S	**Sn**	**02 45 30.5**	**0.0**
	5.3nm,0.5s,SNR=7.9						
PMAFR				*e*Sn	**Sn**	**02 45 31.8**	**+1.3**
PTEO	**Sao Teotonio**	**3.24**	**85**	*e*Pn	**Pn**	**02 44 53.3**	**+0.8**
PTEO				*e*Sn	**Sn**	**02 45 29.6**	**-1.5**
PTEO				A	A	02 45 41.8	
	10nm,0.6s						
PTEO	**Sao Teotonio**	**3.24**	**85**	P	**Pn**	**02 44 53.3**	**+0.8**
PTEO				S	**Sn**	**02 45 29.6**	**-1.5**
	5.2nm,0.6s						
PTEO	**Sao Teotonio**	**3.24**	**85**	P	**Pn**	**02 44 53.3**	**+0.8**
PTEO				S	**Sn**	**02 45 29.6**	**-1.5**
	5.2nm,0.6s						
MORF	**Marmelete**	**3.30**	**89**	*e*Pn	**Pn**	**02 44 54.4**	**+1.1**
MORF	**Marmelete**	**3.30**	**89**	*e*Pn	**Pn**	**02 44 54.4**	**+1.1**
PNCL	**Nicolau / Gran**	**3.47**	**75**	*e*Pn	**Pn**	**02 44 57.4**	**+1.8**
PNCL				*e*Sn	**Sn**	**02 45 35.8**	**-1.0**
PNCL				A	A	02 45 43.1	
	3.0nm,0.1s						
PNCL	**Nicolau / Gran**	**3.47**	**75**	*e*Pn	**Pn**	**02 44 57.4**	**+1.8**
PNCL				*e*Sn	**Sn**	**02 45 35.8**	**-1.0**
MESJ	**Messejana**	**3.67**	**80**	*e*P	**Pn**	**02 44 59.9**	**+1.5**
MESJ				*e*S	**Sn**	**02 45 40.1**	**-1.5**
MESJ				AML	AML	02 45 42.5	
	comp=N,3.0nm,0.4s						
MESJ	**Messejana**	**3.67**	**80**	*e*Pn	**Pn**	**02 45 00.5**	**+2.2**
MESJ				*e*Sn	**Sn**	**02 45 40.0**	**-1.6**
MESJ				A	A	02 45 56.1	
	comp=N,2.8nm,0.6s						
MESJ	**Messejana**	**3.67**	**80**	P	**Pn**	**02 44 59.9**	**+1.5**
MESJ				S	**Sn**	**02 45 40.1**	**-1.5**
	comp=N,3.0nm,0.4s						
MESJ	**Messejana**	**3.67**	**80**	P	**Pn**	**02 44 59.8**	**+1.5**
MESJ	**Messejana**	**3.67**	**80**	*e*Pn	**Pn**	**02 45 00.5**	**+2.2**
MESJ				S	**Sn**	**02 45 40.1**	**-1.5**
	comp=N,3.0nm,0.4s						
PCVE	**Castro Verde**	**3.79**	**84**	*e*Pn	**Pn**	**02 45 01.9**	**+1.9**
PCVE				*e*Sn	**Sn**	**02 45 44.1**	**-0.6**
PCVE				A	A	02 45 47.0	
	comp=N,2.6nm,0.4s						
PCVE	**Castro Verde**	**3.79**	**84**	P	**Pn**	**02 45 01.9**	**+1.9**
PCVE				S	**Sn**	**02 45 44.1**	**-0.6**
	comp=N,2.6nm,0.4s						
PCVE	**Castro Verde**	**3.79**	**84**	P	**Pn**	**02 45 01.9**	**+1.9**
PCVE				S	**Sn**	**02 45 44.1**	**-0.6**
	comp=N,2.6nm,0.4s						
ALMR	**Almeirim**	**3.79**	**60**	*e*P	**Pn**	**02 45 01.4**	**+1.4**
ALMR	**Almeirim**	**3.79**	**60**	*e*Pn	**Pn**	**02 45 02.3**	**+2.2**
ALMR				*e*Sn	**Sn**	**02 45 45.1**	**+0.3**
ALMR				A	A	02 45 50.7	
	comp=N,8.0nm,0.2s						
ALMR	**Almeirim**	**3.79**	**60**	P	**Pn**	**02 45 02.3**	**+2.2**
ALMR				S	**Sn**	**02 45 45.1**	**+0.3**
	comp=N,4.0nm,0.2s						
ALMR	**Almeirim**	**3.79**	**60**	P	**Pn**	**02 45 02.3**	**+2.2**
ALMR				S	**Sn**	**02 45 45.1**	**+0.3**
	comp=N,4.0nm,0.2s						
PBDV	**Barranco-do-Ve**	**3.87**	**89**	*e*Pn	**Pn**	**02 45 03.0**	**+1.8**
PBDV				*e*Sn	**Sn**	**02 45 47.1**	**+0.4**
PBDV				A	A	02 45 51.5	
	comp=N,2.7nm,0.3s						
PBDV	**Barranco-do-Ve**	**3.87**	**89**	P	**Pn**	**02 45 03.0**	**+1.8**
PBDV				S	**Sn**	**02 45 47.1**	**+0.4**
	comp=N,2.7nm,0.3s						
PBDV	**Barranco-do-Ve**	**3.87**	**89**	P	**Pn**	**02 45 03.0**	**+1.8**
PBDV				S	**Sn**	**02 45 47.1**	**+0.4**
	comp=N,2.7nm,0.3s						
EVO	**Evora**	**3.97**	**71**	*e*Pn	**Pn**	**02 45 04.6**	**+2.1**
EVO				*e*Sn	**Sn**	**02 45 48.9**	**-0.1**
EVO	**Evora**	**3.97**	**71**	P	**Pn**	**02 45 04.6**	**+2.1**
EVO				S	**Sn**	**02 45 48.9**	**-0.1**
EVO	**Evora**	**3.97**	**71**	P	**Pn**	**02 45 04.6**	**+2.1**
EVO				S	**Sn**	**02 45 48.9**	**-0.1**
PBEJ	**Beja**	**3.97**	**78**	*e*Pn	**Pn**	**02 45 04.3**	**+1.8**
PBEJ	**Beja**	**3.97**	**78**	P	**Pn**	**02 45 04.3**	**+1.8**
PBEJ	**Beja**	**3.97**	**78**	P	**Pn**	**02 45 04.3**	**+1.8**
PMTG	**Montargil**	**4.00**	**62**	*e*Pn	**Pn**	**02 45 04.5**	**+1.6**
PMTG				*e*Sn	**Sn**	**02 45 49.6**	**-0.3**
PMTG				A	A	02 45 55.3	
	comp=N,3.5nm,0.7s						
PMTG	**Montargil**	**4.00**	**62**	*e*Pn	**Pn**	**02 45 04.5**	**+1.6**
PMTG				*e*Sn	**Sn**	**02 45 49.6**	**-0.3**
PVAQ	**Vaqueiros**	**4.04**	**87**	*e*Pn	**Pn**	**02 45 04.9**	**+1.5**
PVAQ				*e*Sn	**Sn**	**02 45 50.0**	**-0.8**
PVAQ				A	A	02 45 56.5	
	comp=N,3.4nm,0.3s						
PVAQ	**Vaqueiros**	**4.04**	**87**	P	**Pn**	**02 45 04.9**	**+1.5**
PVAQ				S	**Sn**	**02 45 50.0**	**-0.8**
	comp=N,3.4nm,0.3s						
PVAQ	**Vaqueiros**	**4.04**	**87**	P	**Pn**	**02 45 04.9**	**+1.5**
PVAQ				S	**Sn**	**02 45 50.0**	**-0.8**
	comp=N,3.4nm,0.3s						
PTOM	**Tomar**	**4.14**	**55**	*e*Pn	**Pn**	**02 45 07.4**	**+2.6**
PTOM				*e*Sn	**Sn**	**02 45 53.6**	**+0.4**
PTOM				A	A	02 45 58.3	
	comp=N,3.5nm,0.5s						
PTOM	**Tomar**	**4.14**	**55**	P	**Pn**	**02 45 07.4**	**+2.6**
PTOM				S	**Sn**	**02 45 53.6**	**+0.4**
	comp=N,1.8nm,0.5s						
PTOM	**Tomar**	**4.14**	**55**	P	**Pn**	**02 45 07.4**	**+2.6**
PTOM				S	**Sn**	**02 45 53.6**	**+0.4**
	comp=N,1.8nm,0.5s						
EGRO	**El Granado**	**4.23**	**85**	P	**Pn**	**02 45 07.1**	**+1.1**
	comp=N,2.2nm,0.3s,SNR=7.9						
EGRO				S	**Sn**	**02 45 53.8**	**-1.6**
	comp=N,6.9nm,0.3s,SNR=7.9						
EGRO	**El Granado**	**4.23**	**85**	P	**Pn**	**02 45 07.1**	**+1.1**
	comp=N,2.2nm,0.3s,SNR=7.9						
EGRO				S	**Sn**	**02 45 53.8**	**-1.6**
	comp=N,6.9nm,0.3s,SNR=7.9						
PCAS	**Casmilo, Conde**	**4.33**	**49**	*e*Pn	**Pn**	**02 45 10.0**	**+2.5**
PCAS				*e*Sn	**Sn**	**02 45 57.4**	**-0.7**
PCAS				A	A	02 46 09.7	
	comp=N,2.6nm,0.8s						
PCAS	**Casmilo, Conde**	**4.33**	**49**	*e*Pn	**Pn**	**02 45 10.0**	**+2.5**
PCAS				*e*Sn	**Sn**	**02 45 57.4**	**-0.7**
PESTR	**Estremoz**	**4.39**	**68**	*e*Pn	**Pn**	**02 45 10.2**	**+2.0**
PESTR				*e*Sn	**Sn**	**02 45 58.9**	**-0.5**
PESTR				A	A	02 46 03.2	
	comp=N,2.7nm,0.6s						
PESTR	**Estremoz**	**4.39**	**68**	*e*Pn	**Pn**	**02 45 10.2**	**+2.0**
PESTR				*e*Sn	**Sn**	**02 45 58.9**	**-0.5**
PBAR	**Barrancos**	**4.64**	**77**	*e*Pn	**Pn**	**02 45 13.4**	**+1.7**
PBAR				*e*Sn	**Sn**	**02 46 04.5**	**-1.0**
PBAR				A	A	02 46 12.6	
	comp=N,4.3nm,0.8s						
PBAR	**Barrancos**	**4.64**	**77**	P	**Pn**	**02 45 13.4**	**+1.7**
PBAR				S	**Sn**	**02 46 04.5**	**-1.0**
	comp=N,4.3nm,0.8s						
PBAR	**Barrancos**	**4.64**	**77**	P	**Pn**	**02 45 13.4**	**+1.7**
PBAR				S	**Sn**	**02 46 04.5**	**-1.0**
	comp=N,4.3nm,0.8s						
PMRV	**Marv??o**	**4.74**	**62**	*e*Pn	**Pn**	**02 45 14.8**	**+1.7**
PMRV				*e*Sn	**Sn**	**02 46 07.2**	**-0.9**
PMRV				A	A	02 46 13.7	
	comp=N,2.9nm,1.0s						
PMRV	**Marv??o**	**4.74**	**62**	P	**Pn**	**02 45 14.8**	**+1.7**
PMRV				S	**Sn**	**02 46 07.2**	**-0.9**
	comp=N,2.9nm,1.0s						
PMRV	**Marv??o**	**4.74**	**62**	P	**Pn**	**02 45 14.8**	**+1.7**
PMRV				S	**Sn**	**02 46 07.2**	**-0.9**
	comp=N,2.9nm,1.0s						
EBAD	**Badajoz**	**4.78**	**71**	P	**Pn**	**02 45 14.5**	**+0.9**
	comp=N,2.7nm,0.4s,SNR=11						
EBAD				S	**Sn**	**02 46 06.6**	**-2.5**
	comp=N,2.7nm,1.0s,SNR=6.0						
EBAD	**Badajoz**	**4.78**	**71**	P	**Pn**	**02 45 14.5**	**+0.9**
	comp=N,2.7nm,0.4s,SNR=11						
EBAD				S	**Sn**	**02 46 06.6**	**-2.5**
	comp=N,2.7nm,1.0s,SNR=6.0						
PCBR	**Castelo Branco**	**4.87**	**57**	*e*Pn	**Pn**	**02 45 17.1**	**+2.3**
PCBR				*e*Sn	**Sn**	**02 46 11.2**	**-0.1**
PCBR				A	A	02 46 17.2	
	comp=N,1.8nm,0.8s						
PCBR	**Castelo Branco**	**4.87**	**57**	P	**Pn**	**02 45 17.1**	**+2.3**
PCBR				S	**Sn**	**02 46 11.2**	**-0.1**
	comp=N,0.9nm,0.8s						
PCBR	**Castelo Branco**	**4.87**	**57**	P	**Pn**	**02 45 17.1**	**+2.3**
PCBR				S	**Sn**	**02 46 11.2**	**-0.1**
	comp=N,0.9nm,0.8s						
EMIN	**Mina Concepcio**	**4.88**	**83**	P	**Pn**	**02 45 16.1**	**+1.1**
	comp=N,0.5nm,0.1s,SNR=9.1						
EMIN				S	**Sn**	**02 46 09.4**	**-2.2**
	comp=N,3.9nm,0.4s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.88**	**83**	P	**Pn**	**02 45 16.1**	**+1.1**
	comp=N,0.5nm,0.1s,SNR=9.1						
EMIN				S	**Sn**	**02 46 09.4**	**-2.2**
	comp=N,3.9nm,0.4s,SNR=7.9						
PVIS	**Viseu**	**5.11**	**47**	*e*Pn	**Pn**	**02 45 20.0**	**+1.8**
PVIS				*e*Sn	**Sn**	**02 46 16.0**	**-1.3**
PVIS				A	A	02 46 25.2	
	comp=N,3.7nm,0.8s						
PVIS	**Viseu**	**5.11**	**47**	P	**Pn**	**02 45 20.0**	**+1.8**
PVIS				S	**Sn**	**02 46 16.0**	**-1.3**
	comp=N,1.9nm,0.8s						
PVIS	**Viseu**	**5.11**	**47**	P	**Pn**	**02 45 20.0**	**+1.8**
PVIS				S	**Sn**	**02 46 16.0**	**-1.3**
	comp=N,1.9nm,0.8s						
MTE	**Manteigas**	**5.13**	**51**	*e*Pn	**Pn**	**02 45 20.4**	**+1.9**
MTE				*e*Sn	**Sn**	**02 46 17.3**	**-0.4**
MTE				A	A	02 46 17.9	
	comp=N,2.6nm,0.7s						
MTE	**Manteigas**	**5.13**	**51**	P	**Pn**	**02 45 20.4**	**+1.9**
MTE				S	**Sn**	**02 46 17.3**	**-0.4**
	comp=N,1.3nm,0.7s						
MTE	**Manteigas**	**5.13**	**51**	P	**Pn**	**02 45 20.4**	**+1.9**
MTE				S	**Sn**	**02 46 17.3**	**-0.4**
	comp=N,1.3nm,0.7s						
POLO	**Lamas de Olo**	**5.61**	**42**	*e*Pn	**Pn**	**02 45 26.6**	**+1.5**
POLO				*e*Sn	**Sn**	**02 46 28.1**	**-1.6**
POLO				A	A	02 46 31.0	
	comp=N,0.8nm,0.7s						
POLO	**Lamas de Olo**	**5.61**	**42**	*e*Pn	**Pn**	**02 45 26.6**	**+1.5**
POLO				*e*Sn	**Sn**	**02 46 28.1**	**-1.6**
PCAB	**Cabril**	**5.74**	**38**	*e*Sn	**Sn**	**02 46 31.3**	**-1.4**
PCAB	**Cabril**	**5.74**	**38**	S	**Sn**	**02 46 31.3**	**-1.4**
PCAB	**Cabril**	**5.74**	**38**	S	**Sn**	**02 46 31.3**	**-1.4**
PGAV	**Gavieira, Arco**	**5.81**	**35**	*e*Sn	**Sn**	**02 46 32.1**	**-2.6**
PGAV				A	A	02 46 45.0	
	comp=N,3.0nm,0.9s						
ELOB	**Lobios**	**5.84**	**37**	P	**Pn**	**02 45 29.4**	**+1.2**
	comp=N,0.4nm,0.3s,SNR=7.9						
ELOB				S	**Sn**	**02 46 32.7**	**-2.6**
	comp=N,8.5nm,0.8s,SNR=7.9						
ELOB	**Lobios**	**5.84**	**37**	P	**Pn**	**02 45 29.4**	**+1.2**
	comp=N,0.4nm,0.3s,SNR=7.9						
ELOB				S	**Sn**	**02 46 32.7**	**-2.6**
	comp=N,8.5nm,0.8s,SNR=7.9						
ECAB	**El Cabril**	**5.89**	**80**	P	**Pn**	**02 45 30.3**	**+1.3**
	comp=N,0.9nm,0.1s,SNR=13						
ECAB				S	**Sn**	**02 46 33.1**	**-3.5**
	comp=N,5.1nm,1.1s,SNR=5.8						
ECAB	**El Cabril**	**5.89**	**80**	P	**Pn**	**02 45 30.3**	**+1.3**
	comp=N,0.9nm,0.1s,SNR=13						
ECAB				S	**Sn**	**02 46 33.1**	**-3.5**
	comp=N,5.1nm,1.1s,SNR=5.8						
MVO	**Moncorvo**	**5.90**	**47**	*e*Pn	**Pn**	**02 45 30.8**	**+1.7**
MVO				*e*Sn	**Sn**	**02 46 34.5**	**-2.3**
MVO				A	A	02 46 41.9	
	comp=N,1.7nm,0.6s						
MVO	**Moncorvo**	**5.90**	**47**	P	**Pn**	**02 45 30.4**	**+1.3**
	comp=N,1.5nm,0.3s,SNR=7.9						
MVO				S	**Sn**	**02 46 34.3**	**-2.5**
	comp=N,3.8nm,0.6s,SNR=7.9						
MVO	**Moncorvo**	**5.90**	**47**	P	**Pn**	**02 45 30.4**	**+1.3**
	comp=N,1.5nm,0.3s,SNR=7.9						
MVO	**Moncorvo**	**5.90**	**47**	*e*Pn	**Pn**	**02 45 30.8**	**+1.7**
MVO				*e*Sn	**Sn**	**02 46 34.5**	**-2.3**
EPLA	**Plasencia**	**5.92**	**60**	P	**Pn**	**02 45 30.7**	**+1.3**
	comp=N,1.5nm,0.2s,SNR=7.9						
EPLA				S	**Sn**	**02 46 34.9**	**-2.5**
	comp=N,2.3nm,0.7s,SNR=7.9						
EPLA	**Plasencia**	**5.92**	**60**	P	**Pn**	**02 45 30.7**	**+1.3**
	comp=N,1.5nm,0.2s,SNR=7.9						
EPLA				S	**Sn**	**02 46 34.9**	**-2.5**
	comp=N,2.3nm,0.7s,SNR=7.9						
EMAZ	**Mazaricos**	**6.35**	**26**	P	**Pn**	**02 45 36.7**	**+1.5**
	comp=N,0.4nm,0.2s,SNR=7.9						
EMAZ				S	**Sn**	**02 46 42.5**	**-5.2**
	comp=N,8.9nm,1.0s,SNR=7.9						
EMAZ	**Mazaricos**	**6.35**	**26**	P	**Pn**	**02 45 36.7**	**+1.5**
	comp=N,0.4nm,0.2s,SNR=7.9						
PBRG	**Braganca**	**6.48**	**44**	*e*Pn	**Pn**	**02 45 39.3**	**+2.3**
PBRG	**Braganca**	**6.48**	**44**	P	**Pn**	**02 45 39.3**	**+2.3**
PBRG	**Braganca**	**6.48**	**44**	P	**Pn**	**02 45 39.3**	**+2.3**
EADA	**Adamuz**	**6.56**	**80**	P	**Pn**	**02 45 39.2**	**+1.0**
	comp=N,0.6nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**02 46 49.5**	**-3.6**
	comp=N,0.7nm,0.8s,SNR=7.9						
EADA	**Adamuz**	**6.56**	**80**	P	**Pn**	**02 45 39.2**	**+1.0**
	comp=N,0.6nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**02 46 49.5**	**-3.6**
	comp=N,0.7nm,0.8s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.57**	**32**	P	**Pn**	**02 45 39.4**	**+1.2**
	comp=N,0.6nm,0.2s,SNR=7.9						
EAGO				S	**Sn**	**02 46 48.0**	**-5.1**
	comp=N,3.9nm,0.5s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.57**	**32**	P	**Pn**	**02 45 39.4**	**+1.2**
	comp=N,0.6nm,0.2s,SNR=7.9						
PAB	**San Pablo**	**6.99**	**69**	P	**Pn**	**02 45 45.0**	**+0.9**
	comp=N,0.4nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**02 47 00.4**	**-3.3**
	comp=N,1.0nm,0.5s,SNR=7.9						
PAB	**San Pablo**	**6.99**	**69**	P	**Pn**	**02 45 45.0**	**+0.9**
	comp=N,0.4nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**02 47 00.4**	**-3.3**
	comp=N,1.0nm,0.5s,SNR=7.9						
ETOR	**Torete**	**9.05**	**64**	P	**Pn**	**02 46 13.6**	**+1.2**
	comp=N,0.8nm,0.2s,SNR=9.1						
ETOR	**Torete**	**9.05**	**64**	P	**Pn**	**02 46 13.6**	**+1.2**
	comp=N,0.8nm,0.2s,SNR=9.1						
IELO	**Elcoad**	**10.43**	**54**	P	**Pn**	**02 46 33.1**	**+1.9**
	comp=N,0.8nm,0.2s,SNR=7.9						
IELO	**Elcoad**	**10.43**	**54**	P	**Pn**	**02 46 33.1**	**+1.9**
	comp=N,0.8nm,0.2s,SNR=7.9						

*ISCJB **13** 02:45:16.0±0.4, 49.°83N±0.°02×18.°42E±0.°03, h0km, Error ellipse: s-maj=3.7km s-min=2.4km az=20.7*
*IPEC **13** 02:45:16.7±0.2, 49.°85N×18.°53E, h0km±3km, ML1.9/3, Error ellipse: s-maj=1.4km s-min=1.1km az=155.0*
*CSEM **13** 02:45:16.8±0.2, 49.°82N×18.°46E, h1km, ML2.6/9, Error ellipse: s-maj=4.0km s-min=2.8km az=21.0*
*PRU **13** 02:45:17.7, 49.°83N×18.°44E, h0km*

ISC 13 02:45:16.4±0.8, 49.°84N±0.°02×18.°49E±0.°02, h0km, n39, σ0§67/77, 4C, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.22**	**269**	*i*PG	**Pg**	**02 45 22.0**	**+1.4**
OKC				*e*SG	**Sg**	**02 45 25.0**	**+1.5**
	comp=Z,168nm,0.6s						
OKC	**Ostrava-Krasne**	**0.22**	**269**	Pg	**Pg**	**02 45 22.0**	**+1.4**
OKC				Sg	**Sg**	**02 45 25.0**	**+1.5**
	168nm,0.6s						
RAC	**Raciborz**	**0.31**	**322**	*e*Pg	**Pb**	**02 45 23.8**	**-1.0**
RAC				*e*Sg	**Sb**	**02 45 28.8**	**-1.5**
MORC	**Moravsky Berou**	**0.62**	**264**	*e*Pg	**Pg**	**02 45 28.8**	**+0.6**
MORC				*e*Sg	**Sg**	**02 45 36.9**	**+0.8**
	23nm,0.3s,baz=83						
MORC	**Moravsky Berou**	**0.62**	**264**	*e*PG	**Pg**	**02 45 28.8**	**+0.6**
MORC				*e*SG	**Sg**	**02 45 37.0**	**+0.8**
MORC	**Moravsky Berou**	**0.62**	**264**	*e*Pg	**Pg**	**02 45 28.8**	**+0.6**
	baz=83						
MORC				*e*Sg	**Sg**	**02 45 36.9**	**+0.8**
	23nm,0.3s,baz=83						
OJC	**Ojcow**	**0.93**	**65**	*e*Pg	**Pg**	**02 45 34.1**	**0.0**
OJC				*e*Sg	**Sg**	**02 45 47.1**	**+1.0**
OJC	**Ojcow**	**0.93**	**65**	*e*Pg	**Pg**	**02 45 34.1**	**0.0**
OJC				*e*Sg	**Sg**	**02 45 47.1**	**+1.0**
LANS	**Liptovska Anna**	**0.94**	**137**	*e*PG	**Pb**	**02 45 35.5**	**-0.1**
LANS				*e*SG	**Sn**	**02 45 50.1**	**-1.0**
LANS	**Liptovska Anna**	**0.94**	**137**	*e*Pg	**Pb**	**02 45 35.5**	**-0.1**
LANS				*e*Sg	**Sn**	**02 45 50.1**	**-1.0**
JAVC	**Velka Javorina**	**1.12**	**209**	*e*Pg	**Pb**	**02 45 38.8**	**+0.2**
JAVC				*e*Sg	**Sg**	**02 45 52.4**	**+0.1**
	18nm,0.4s,baz=29						
JAVC	**Velka Javorina**	**1.12**	**209**	*e*PG	**Pb**	**02 45 38.9**	**+0.3**
JAVC				*e*SG	**Sg**	**02 45 52.4**	**+0.1**
JAVC	**Velka Javorina**	**1.12**	**209**	*e*Pg	**Pb**	**02 45 38.8**	**+0.2**
	baz=29						
JAVC				*e*Sg	**Sg**	**02 45 52.4**	**+0.1**
	18nm,0.4s,baz=29						
KRLC	**Kraliky**	**1.13**	**283**	*e*PG	**Pg**	**02 45 37.5**	**-0.5**
KRLC				*e*SG	**Sg**	**02 45 52.7**	**+0.1**
	comp=Z,8.4nm,0.4s						
KRLC	**Kraliky**	**1.13**	**283**	Pg	**Pg**	**02 45 37.5**	**-0.5**
KRLC				Sg	**Sg**	**02 45 52.7**	**+0.1**
	8.4nm,0.4s						
NIE	**Niedzica**	**1.25**	**109**	*e*Pg	**Pb**	**02 45 40.9**	**+0.1**
NIE				*e*Sg	**Sn**	**02 45 59.7**	**+1.0**
NIE	**Niedzica**	**1.25**	**109**	*e*Pg	**Pb**	**02 45 40.9**	**+0.1**
NIE				*e*Sg	**Sn**	**02 45 59.7**	**+1.0**
VRAC	**Vranov**	**1.34**	**247**	*e*Pg	**Pg**	**02 45 42.1**	**0.0**
VRAC				*e*Sg	**Sg**	**02 45 59.6**	**+0.1**
	24nm,0.4s,baz=66						
VRAC	**Vranov**	**1.34**	**247**	*e*PG	**Pg**	**02 45 42.1**	**0.0**
VRAC				*e*SG	**Sg**	**02 45 59.6**	**+0.1**
VRAC	**Vranov**	**1.34**	**247**	*e*Pg	**Pg**	**02 45 42.1**	**0.0**
	baz=66						
VRAC				*e*Sg	**Sg**	**02 45 59.6**	**+0.1**
	24nm,0.4s,baz=66						
VYHS	**Vyhne**	**1.37**	**170**	*e*PG	**Pn**	**02 45 42.7**	**0.0**
VYHS				*e*SG	**Sg**	**02 46 00.5**	**+0.2**
VYHS				*e*LG	Lg	02 46 02.5	
VYHS	**Vyhne**	**1.37**	**170**	*e*Pg	**Pn**	**02 45 42.7**	**0.0**
VYHS				*e*Sn	**Sg**	**02 46 00.5**	**+0.2**
DPC	**Dobruska-Polom**	**1.48**	**291**	*e*PG	**Pn**	**02 45 44.0**	**-0.4**
DPC				*e*SG	**Sn**	**02 46 04.5**	**0.0**
	comp=Z,14nm,0.5s						
DPC	**Dobruska-Polom**	**1.48**	**291**	Pg	**Pn**	**02 45 44.0**	**-0.4**
DPC				Sg	**Sn**	**02 46 04.5**	**0.0**
	14nm,0.5s						
KRUC	**Moravsky**	**1.57**	**241**	*e*Pg	**Pn**	**02 45 45.7**	**+0.2**
KRUC				*e*Sg	**Sg**	**02 46 06.8**	**-0.1**
	baz=60						
KRUC	**Moravsky**	**1.57**	**241**	*e*PG	**Pn**	**02 45 45.7**	**+0.2**
KRUC				*e*SG	**Sg**	**02 46 06.9**	**0.0**
KRUC	**Moravsky**	**1.57**	**241**	*e*Pg	**Pn**	**02 45 45.7**	**+0.2**
	baz=60						
KRUC				*e*Sg	**Sg**	**02 46 06.8**	**-0.1**
	baz=60						
MODS	**Modra-Piesok**	**1.67**	**209**	*e*PN	**Pn**	**02 45 46.5**	**-0.4**
MODS				*e*SN	**Sn**	**02 46 08.0**	**-1.0**
MODS				*e*LG	Lg	02 46 13.2	
MODS	**Modra-Piesok**	**1.67**	**209**	*e*Pn	**Pn**	**02 45 46.5**	**-0.4**
MODS				*e*Sn	**Sn**	**02 46 08.0**	**-1.0**
UPC	**Upice**	**1.73**	**294⇑**	*e*PG	**Pb**	**02 45 48.6**	**-0.3**
UPC				*e*SG	**Sg**	**02 46 11.5**	**-0.3**
UPC	**Upice**	**1.73**	**294**	Pg	**Pb**	**02 45 48.6**	**-0.3**
UPC				Sg	**Sg**

MESJ	**Messejana**	**3.54**	**81**	P	**Pn**	**02 47 32.6 +0.7**
MESJ				S	**Sn**	**02 48 13.7 -0.1**
comp=E,3.2nm,0.8s						
MESJ	**Messejana**	**3.54**	**81**	P	**Pn**	**02 47 32.6 +0.7**
MESJ	**Messejana**	**3.54**	**81**	*e*Pn	**Pn**	**02 47 33.2 +1.3**
MESJ				S	**Sn**	**02 48 13.7 -0.1**
comp=E,3.2nm,0.8s						
PCVE	**Castro Verde**	**3.67**	**84**	*e*Pn	**Pn**	**02 47 34.6 +1.0**
PCVE				*e*Sn	**Sn**	**02 48 17.1 +0.2**
PCVE				A	A	02 48 33.0
comp=E,2.7nm,0.6s						
PCVE	**Castro Verde**	**3.67**	**84**	P	**Pn**	**02 47 34.6 +1.0**
PCVE				S	**Sn**	**02 48 17.1 +0.2**
comp=E,2.7nm,0.6s						
PCVE	**Castro Verde**	**3.67**	**84**	P	**Pn**	**02 47 34.6 +1.0**
PCVE				S	**Sn**	**02 48 17.1 +0.2**
comp=E,2.7nm,0.6s						
ALMR	**Almeirim**	**3.67**	**59**	*e*S	**Sn**	**02 48 16.8 -0.2**
ALMR				AML	AML	02 48 20.2
comp=N,10nm,0.7s						
ALMR	**Almeirim**	**3.67**	**59**	*e*Pn	**Pn**	**02 47 35.0 +1.3**
ALMR				*e*Sn	**Sn**	**02 48 17.3 +0.3**
ALMR	**Almeirim**	**3.67**	**59**	P	**Pn**	**02 47 35.0 +1.3**
ALMR				S	**Sn**	**02 48 16.8 -0.2**
comp=N,5.2nm,0.7s						
ALMR	**Almeirim**	**3.67**	**59**	P	**Pn**	**02 47 35.0 +1.3**
ALMR				S	**Sn**	**02 48 16.8 -0.2**
comp=N,5.2nm,0.7s						
ALMR				*e*Sn	Sb	02 48 17.3 -9.1
PBDV	**Barranco-do-Ve**	**3.75**	**90**	*e*Pn	**Pn**	**02 47 36.0 +1.2**
PBDV				*e*Sn	**Sn**	**02 48 20.4 +1.4**
PBDV				A	A	02 48 26.1
comp=N,2.3nm,0.5s						
PBDV	**Barranco-do-Ve**	**3.75**	**90**	P	**Pn**	**02 47 36.0 +1.2**
PBDV				S	**Sn**	**02 48 20.4 +1.4**
comp=N,2.3nm,0.5s						
PBDV	**Barranco-do-Ve**	**3.75**	**90**	P	**Pn**	**02 47 36.0 +1.2**
PBDV				S	**Sn**	**02 48 20.4 +1.4**
comp=N,2.3nm,0.5s						
EVO	**Evora**	**3.84**	**71**	*e*Sn	**Sn**	**02 48 20.3 -0.9**
EVO				A	A	02 48 24.1
comp=N,2.5nm,0.4s						
EVO	**Evora**	**3.84**	**71**	S	**Sn**	**02 48 20.3 -0.9**
comp=N,2.5nm,0.4s						
EVO	**Evora**	**3.84**	**71**	S	**Sn**	**02 48 20.3 -0.9**
comp=N,2.5nm,0.4s						
PBEJ	**Beja**	**3.84**	**78**	*e*Pn	**Pn**	**02 47 36.9 +0.9**
PBEJ	**Beja**	**3.84**	**78**	P	**Pn**	**02 47 36.9 +0.9**
PBEJ	**Beja**	**3.84**	**78**	P	**Pn**	**02 47 36.9 +0.9**
PMTG	**Montargil**	**3.88**	**62**	*e*Pn	**Pn**	**02 47 37.5 +1.0**
PMTG				*e*Sn	**Sn**	**02 48 21.8 -0.3**
PMTG				A	A	02 48 26.3
comp=N,2.6nm,0.8s						
PMTG	**Montargil**	**3.88**	**62**	*e*Pn	**Pn**	**02 47 37.5 +1.0**
PMTG				*e*Sn	**Sn**	**02 48 21.8 -0.3**
PVAQ	**Vaqueiros**	**3.92**	**88**	*e*Pn	**Pn**	**02 47 37.8 +0.8**
PVAQ				*e*Sn	**Sn**	**02 48 22.6 -0.4**
PVAQ				A	A	02 48 32.6
comp=N,2.9nm,0.7s						
PVAQ	**Vaqueiros**	**3.92**	**88**	P	**Pn**	**02 47 37.8 +0.8**
PVAQ				S	**Sn**	**02 48 22.6 -0.4**
comp=N,2.9nm,0.7s						
PVAQ	**Vaqueiros**	**3.92**	**88**	P	**Pn**	**02 47 37.8 +0.8**
PVAQ				S	**Sn**	**02 48 22.6 -0.4**
comp=N,2.9nm,0.7s						
PTOM	**Tomar**	**4.02**	**54**	*e*Pn	**Pn**	**02 47 40.1 +1.7**
PTOM				*e*Sn	**Sn**	**02 48 25.9 +0.3**
PTOM				A	A	02 48 30.6
comp=N,4.7nm,0.9s						
PTOM	**Tomar**	**4.02**	**54**	P	**Pn**	**02 47 40.1 +1.7**
PTOM				S	**Sn**	**02 48 25.9 +0.3**
comp=N,2.3nm,0.9s						
PTOM	**Tomar**	**4.02**	**54**	P	**Pn**	**02 47 40.1 +1.7**
PTOM				S	**Sn**	**02 48 25.9 +0.3**
comp=N,2.3nm,0.9s						
EGRO	**El Granado**	**4.10**	**86**	P	**Pn**	**02 47 40.1 +0.5**
comp=N,1.8nm,0.4s,SNR=7.9						
EGRO				S	**Sn**	**02 48 27.3 -0.3**
comp=N,4.6nm,1.4s,SNR=7.9						
EGRO	**El Granado**	**4.10**	**86**	P	**Pn**	**02 47 40.1 +0.5**
comp=N,1.8nm,0.4s,SNR=7.9						
EGRO				S	**Sn**	**02 48 27.3 -0.3**
comp=N,4.6nm,1.4s,SNR=7.9						
PCAS	**Casmilo, Conde**	**4.22**	**49**	*e*Pn	**Pn**	**02 47 42.9 +1.7**
PCAS	**Casmilo, Conde**	**4.22**	**49**	*e*Pn	**Pn**	**02 47 42.9 +1.7**
PESTR	**Estremoz**	**4.26**	**67**	*e*Pn	**Pn**	**02 47 42.8 +1.0**
PESTR				*e*Sn	**Sn**	**02 48 31.3 -0.3**
PESTR				A	A	02 48 37.7
comp=N,2.3nm,0.6s						
PESTR	**Estremoz**	**4.26**	**67**	*e*Pn	**Pn**	**02 47 42.8 +1.0**
PESTR				*e*Sn	**Sn**	**02 48 31.3 -0.3**
PBAR	**Barrancos**	**4.51**	**78**	*e*Pn	**Pn**	**02 47 46.0 +0.8**
PBAR				*e*Sn	**Sn**	**02 48 37.0 -0.7**
PBAR				A	A	02 48 49.8
comp=N,2.9nm,0.7s						
PBAR	**Barrancos**	**4.51**	**78**	P	**Pn**	**02 47 46.0 +0.8**
PBAR				S	**Sn**	**02 48 37.0 -0.7**
comp=N,2.9nm,0.7s						
PBAR	**Barrancos**	**4.51**	**78**	P	**Pn**	**02 47 46.0 +0.8**
PBAR				S	**Sn**	**02 48 37.0 -0.7**
comp=N,2.9nm,0.7s						
PMRV	**Marv??o**	**4.62**	**62**	*e*Pn	**Pn**	**02 47 47.8 +1.1**
PMRV				*e*Sn	**Sn**	**02 48 39.6 -0.8**
PMRV				A	A	02 48 46.3
comp=N,2.4nm,0.5s						
PMRV	**Marv??o**	**4.62**	**62**	P	**Pn**	**02 47 47.8 +1.1**
PMRV				S	**Sn**	**02 48 39.6 -0.8**
comp=N,2.4nm,0.5s						
PMRV	**Marv??o**	**4.62**	**62**	P	**Pn**	**02 47 47.8 +1.1**
PMRV				S	**Sn**	**02 48 39.6 -0.8**
comp=N,2.4nm,0.5s						
EBAD	**Badajoz**	**4.66**	**71**	P	**Pn**	**02 47 48.5 +1.3**
comp=N,0.4nm,0.1s,SNR=7.3						
EBAD				S	**Sn**	**02 48 40.4 -0.9**
comp=N,8.9nm,0.9s,SNR=7.9						
EBAD	**Badajoz**	**4.66**	**71**	P	**Pn**	**02 47 48.5 +1.3**
comp=N,0.4nm,0.1s,SNR=7.3						
EBAD				S	**Sn**	**02 48 40.4 -0.9**
comp=N,8.9nm,0.9s,SNR=7.9						
PCBR	**Castelo Branco**	**4.75**	**57**	*e*Pn	**Pn**	**02 47 49.9 +1.4**
PCBR	**Castelo Branco**	**4.75**	**57**	P	**Pn**	**02 47 49.9 +1.4**
PCBR	**Castelo Branco**	**4.75**	**57**	P	**Pn**	**02 47 49.9 +1.4**
EMIN	**Mina Concepcio**	**4.76**	**83**	P	**Pn**	**02 47 48.4 -0.1**
comp=N,0.4nm,0.2s,SNR=7.9						
EMIN				S	**Sn**	**02 48 42.5 -1.2**
comp=N,1.5nm,0.5s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.76**	**83**	P	**Pn**	**02 47 48.4 -0.1**
comp=N,0.4nm,0.2s,SNR=7.9						
EMIN				S	**Sn**	**02 48 42.5 -1.2**
comp=N,1.5nm,0.5s,SNR=7.9						
PVIS	**Viseu**	**5.00**	**46**	*e*Sn	**Sn**	**02 48 49.9 +0.1**
PVIS	**Viseu**	**5.00**	**46**	S	**Sn**	**02 48 49.9 +0.1**
PVIS	**Viseu**	**5.00**	**46**	S	**Sn**	**02 48 49.9 +0.1**
MTE	**Manteigas**	**5.01**	**51**	*e*Pn	**Pn**	**02 47 53.9 +1.8**
MTE	**Manteigas**	**5.01**	**51**	Pn	**Pn**	**02 47 53.9 +1.8**
MTE	**Manteigas**	**5.01**	**51**	Pn	**Pn**	**02 47 53.9 +1.8**
POLO	**Lamas de Olo**	**5.50**	**41**	*e*Sn	**Sn**	**02 49 03.2 +0.9**
POLO	**Lamas de Olo**	**5.50**	**41**	*e*Sn	**Sn**	**02 49 03.2 +0.9**
PGAV	**Gavieira, Arco**	**5.72**	**35**	*e*Pn	**Pn**	**02 48 04.2 +2.3**
PGAV				*e*Sn	**Sn**	**02 49 06.1 -1.5**
PGAV	**Gavieira, Arco**	**5.72**	**35**	*e*Pn	**Pn**	**02 48 04.2 +2.3**
PGAV				*e*Sn	**Sn**	**02 49 06.1 -1.5**
ELOB	**Lobios**	**5.74**	**37**	S	**Sn**	**02 49 05.8 -2.3**
comp=N,8.8nm,1.0s,SNR=7.9						
ECAB	**El Cabril**	**5.77**	**80**	P	**Pn**	**02 48 02.7 +0.2**
comp=N,0.3nm,0.1s,SNR=7.9						
ECAB				S	**Sn**	**02 49 06.8 -1.9**
comp=N,3.4nm,1.4s,SNR=7.9						
ECAB	**El Cabril**	**5.77**	**80**	P	**Pn**	**02 48 02.7 +0.2**
comp=N,0.3nm,0.1s,SNR=7.9						
ECAB				S	**Sn**	**02 49 06.8 -1.9**
comp=N,3.4nm,1.4s,SNR=7.9						
MVO	**Moncorvo**	**5.79**	**47**	*e*Pn	**Pn**	**02 48 03.5 +0.7**
MVO				*e*Sn	**Sn**	**02 49 07.1 -2.2**
MVO				A	A	02 49 27.4
comp=N,2.0nm,1.0s						
MVO	**Moncorvo**	**5.79**	**47**	P	**Pn**	**02 48 03.4 +0.6**
comp=N,0.6nm,0.2s,SNR=7.9						
MVO				S	**Sn**	**02 49 07.5 -1.8**
comp=N,40nm,1.5s,SNR=7.9						
MVO	**Moncorvo**	**5.79**	**47**	*e*Pn	**Pn**	**02 48 03.5 +0.7**
MVO				*e*Sn	**Sn**	**02 49 07.1 -2.2**
MVO				S	**Sn**	**02 49 07.5 -1.8**
comp=N,40nm,1.5s,SNR=7.9						
EMAZ	**Mazaricos**	**6.26**	**25**	P	**Pn**	**02 48 09.6 +0.3**
comp=N,0.1nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**02 49 16.0 -4.9**
comp=N,5.6nm,1.0s,SNR=7.9						
EMAZ	**Mazaricos**	**6.26**	**25**	P	**Pn**	**02 48 09.6 +0.3**
comp=N,0.1nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**6.44**	**80**	P	**Pn**	**02 48 12.0 +0.3**
comp=N,0.3nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**02 49 23.2 -2.1**
comp=N,3.8nm,1.0s,SNR=4.0						
EADA	**Adamuz**	**6.44**	**80**	P	**Pn**	**02 48 12.0 +0.3**
comp=N,0.3nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**02 49 23.2 -2.1**
comp=N,3.8nm,1.0s,SNR=4.0						
PAB	**San Pablo**	**6.87**	**69**	P	**Pn**	**02 48 17.5 -0.1**
comp=N,0.2nm,0.1s,SNR=7.9						
PAB	**San Pablo**	**6.87**	**69**	P	**Pn**	**02 48 17.5 -0.1**
comp=N,0.2nm,0.1s,SNR=7.9						
ETOR	**Torete**	**8.93**	**64**	P	**Pn**	**02 48 45.7 -0.2**
comp=N,0.4nm,0.2s,SNR=4.0						
ETOR	**Torete**	**8.93**	**64**	P	**Pn**	**02 48 45.7 -0.2**
comp=N,0.4nm,0.2s,SNR=4.0						

IDC 13 02:47:44.1±2.9, 6°31'S×127°66'E, h423km±31km, mb2.9/2, mb1 3.3/5, mb1mx2.8/58, mbtmp4.0/5, Error ellipse: s-maj=47.1km s-min=13.3km az=64.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.53**	**225**	P	P	02 49 12.9	+0.4
15nm,0.3s,baz=280,slow=2.7,SNR=7.6							
BATI				S	S	02 50 24.9	+0.1
4.0nm,0.3s,baz=298,slow=16,SNR=4.8							
WRA	**Warramunga Arr**	**15.02**	**155**	P	P	02 50 55.8	-0.4
0.6nm,0.3s,baz=334,slow=11,SNR=50							
WRA				S	S	02 53 33.8	-1.3
0.2nm,0.3s,baz=333,slow=18,SNR=3.9							
ASAR	**Alice Springs**	**18.27**	**161**	P	P	02 51 31.1	+0.3
1.0nm,0.3s,baz=343,slow=12,SNR=36							
ASAR				S	S	02 54 37.8	+0.7
0.1nm,0.3s,baz=342,slow=20,SNR=6.0							
MKAR	**Makanchi Array**	**66.39**	**328**	P	P	02 57 50.1	+0.4
0.3nm,0.4s,baz=128,slow=7.4,SNR=5.2							
KURBB	**Kurchatov Arra**	**70.72**	**329**	P	P	02 58 15.6	-0.4
0.3nm,0.5s,baz=120,slow=5.3,SNR=3.2							

*MDD **13** 02:53:58.2±2.2, 37°32'N×12°68'W, h0km, mb3.7/1, Error ellipse: s-maj=21.1km s-min=18.4km az=33.0, PRXIMO*
*IGIL **13** 02:53:58.9, 37°35'N×12°69'W, h0km, ML1.8*
*INMG **13** 02:53:59.3±1.8, 37°12'N×13°10'W, h10km, ML2.1, Error ellipse: s-maj=8.4km s-min=6.2km az=89.0*
*CSEM **13** 02:54:00.9±0.4, 37°37'N×12°44'W, h10km, mb3.7, Error ellipse: s-maj=8.3km s-min=7.6km az=34.0*

ISC 13 02:53:58.5±3.8, 37°3'N±0°1'×12°6'W±0°2, h10km, n70, σ1°16/113, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMAFR	**Mafra**	**3.08**	**57**	*e*Pn	**Pn**	**02 54 48.5**	**+1.3**
PMAFR				*e*Sn	**Sn**	**02 55 24.8**	**+0.7**
PMAFR				A	A	02 55 43.4	
14nm,0.7s							
PMAFR	**Mafra**	**3.08**	**57**	*e*Pn	**Pn**	**02 54 48.5**	**+1.3**
PMAFR				*e*Sn	**Sn**	**02 55 24.8**	**+0.7**
PNCL	**Nicolau / Gran**	**3.32**	**75**	*e*Pn	**Pn**	**02 54 51.8**	**+1.4**
PNCL				*e*Sn	**Sn**	**02 55 29.9**	**+0.1**
PNCL				A	A	02 55 30.8	
4.0nm,0.8s							
PNCL	**Nicolau / Gran**	**3.32**	**75**	*e*Pn	**Pn**	**02 54 51.8**	**+1.4**
PNCL				*e*Sn	**Sn**	**02 55 29.9**	**+0.1**
MESJ	**Messejana**	**3.51**	**80**	*e*P	**Pn**	**02 54 53.8**	**+0.8**
MESJ				*e*S	**Sn**	**02 55 33.9**	**-0.7**
MESJ				AML	AML	02 55 38.7	
comp=E,2.8nm,0.7s							
MESJ	**Messejana**	**3.51**	**80**	*e*Pn	**Pn**	**02 54 54.4**	**+1.3**
MESJ				*e*Sn	**Sn**	**02 55 34.1**	**-0.5**
MESJ				A	A	02 55 39.6	
comp=E,2.9nm,0.9s							
MESJ	**Messejana**	**3.51**	**80**	P	**Pn**	**02 54 53.8**	**+0.8**
MESJ				S	**Sn**	**02 55 33.9**	**-0.7**
comp=E,2.8nm,0.7s							
MESJ	**Messejana**	**3.51**	**80**	P	**Pn**	**02 54 53.8**	**+0.8**
MESJ	**Messejana**	**3.51**	**80**	*e*Pn	**Pn**	**02 54 54.4**	**+1.3**
MESJ				*e*Sn	**Sn**	**02 55 34.1**	**-0.5**
PCVE	**Castro Verde**	**3.63**	**84**	*e*Pn	**Pn**	**02 54 55.8**	**+1.0**
PCVE				*e*Sn	**Sn**	**02 55 38.2**	**+0.5**
PCVE				A	A	02 55 39.9	
comp=E,2.5nm,0.7s							
PCVE	**Castro Verde**	**3.63**	**84**	P	**Pn**	**02 54 55.8**	**+1.0**
PCVE				S	**Sn**	**02 55 38.2**	**+0.5**
comp=E,2.5nm,0.7s							
PCVE	**Castro Verde**	**3.63**	**84**	P	**Pn**	**02 54 55.8**	**+1.0**
PCVE				S	**Sn**	**02 55 38.2**	**+0.5**
comp=E,2.5nm,0.7s							
ALMR	**Almeirim**	**3.66**	**58**	*e*Pn	**Pn**	**02 54 56.0**	**+0.9**
ALMR				*e*Sn	**Sn**	**02 55 39.0**	**+0.8**
ALMR	**Almeirim**	**3.66**	**58**	P	**Pn**	**02 54 56.0**	**+0.9**
ALMR				S	**Sn**	**02 55 39.0**	**+0.8**
ALMR	**Almeirim**	**3.66**	**58**	P	**Pn**	**02 54 56.0**	**+0.9**
ALMR				S	**Sn**	**02 55 39.0**	**+0.8**
PBEJ	**Beja**	**3.81**	**78**	*e*Pn	**Pn**	**02 54 58.3**	**+1.1**
PBEJ	**Beja**	**3.81**	**78**	P	**Pn**	**02 54 58.3**	**+1.1**
PBEJ	**Beja**	**3.81**	**78**	P	**Pn**	**02 54 58.3**	**+1.1**
EVO	**Evora**	**3.82**	**70**	*e*Pn	**Pn**	**02 54 58.4**	**+1.1**
EVO				*e*Sn	**Sn**	**02 55 42.4**	**+0.2**
EVO				A	A	02 55 43.9	
comp=E,4.4nm,0.3s							
EVO	**Evora**	**3.82**	**70**	P	**Pn**	**02 54 58.4**	**+1.1**
EVO				S	**Sn**	**02 55 42.4**	**+0.2**
comp=E,4.4nm,0.3s							
EVO	**Evora**	**3.82**	**70**	P	**Pn**	**02 54 58.4**	**+1.1**
EVO				S	**Sn**	**02 55 42.4**	**+0.2**
comp=E,4.4nm,0.3s							
PMTG	**Montargil**	**3.86**	**62**	*e*Pn	**Pn**	**02 54 58.4**	**+0.5**
PMTG				*e*Sn	**Sn**	**02 55 44.3**	**+1.0**
PMTG				A	A	02 55 47.3	
comp=E,2.6nm,0.7s							
PMTG	**Montargil**	**3.86**	**62**	*e*Pn	**Pn**	**02 54 58.4**	**+0.5**
PMTG				*e*Sn	**Sn**	**02 55 44.3**	**+1.0**
PVAQ	**Vaqueiros**	**3.88**	**87**	*e*Pn	**Pn**	**02 54 58.9**	**+0.7**
PVAQ				*e*Sn	**Sn**	**02 55 44.0**	**+0.2**
PVAQ				A	A	02 55 49.8	
comp=E,1.5nm,0.6s							
PVAQ	**Vaqueiros**	**3.88**	**87**	P	**Pn**	**02 54 58.9**	**+0.7**
PVAQ				S	**Sn**	**02 55 44.0**	**+0.2**
comp=E,1.5nm,0.6s							
PVAQ	**Vaqueiros**	**3.88**	**87**	P	**Pn**	**02 54 58.9**	**+0.7**
PVAQ				S	**Sn**	**02 55 44.0**	**+0.2**
comp=E,1.5nm,0.6s							
PTOM	**Tomar**	**4.01**	**54**	*e*Pn	**Pn**	**02 55 01.3**	**+1.4**
PTOM				*e*Sn	**Sn**	**02 55 50.3**	**+3.4**
PTOM	**Tomar**	**4.01**	**54**	P	**Pn**	**02 55 01.3**	**+1.4**
PTOM	**Tomar**	**4.01**	**54**	P	**Pn**	**02 55 01.3**	**+1.4**
EGRO	**El Granado**	**4.07**	**85**	P	**Pn**	**02 55 00.8**	**0.0**
comp=E,2.2nm,0.3s,SNR=7.9							
EGRO				S	**Sn**	**02 55 47.7**	**-0.7**
comp=E,4.7nm,1.3s,SNR=7.9							
EGRO	**El Granado**	**4.07**	**85**	P	**Pn**	**02 55 00.8**	**0.0**
comp=E,2.2nm,0.3s,SNR=7.9							
EGRO				S	**Sn**	**02 55 47.7**	**-0.7**
comp=E,4.7nm,1.3s,SNR=7.9							
PCAS	**Casmilo, Conde**	**4.21**	**48**	*e*Pn	**Pn**	**02 55 04.9**	**+2.2**
PCAS	**Casmilo, Conde**	**4.21**	**48**	*e*Pn	**Pn**	**02 55 04.9**	**+2.2**
PESTR	**Estremoz**	**4.24**	**67**	*e*Pn	**Pn**	**02 55 04.0**	**+0.9**
PESTR				*e*Sn	**Sn**	**02 55 52.6**	**0.0**
PESTR				A	A	02 56 07.9	
comp=E,1.9nm,0.7s							
PESTR	**Estremoz**	**4.24**	**67**	*e*Pn	**Pn**	**02 55 04.0**	**+0.9**
PESTR				*e*Sn	**Sn**	**02 55 52.6**	**0.0**
PBAR	**Barrancos**	**4.48**	**77**	*e*Pn	**Pn**	**02 55 07.4**	**+1.0**
PBAR				*e*Sn	**Sn**	**02 55 58.9**	**+0.3**
PBAR				A	A	02 56 11.0	
comp=E,2.9nm,0.8s							
PBAR	**Barrancos**	**4.48**	**77**	P	**Pn**	**02 55 07.4**	**+1.0**
PBAR				S	**Sn**	**02 55 58.9**	**+0.3**
comp=E,2.9nm,0.8s							
PBAR	**Barrancos**	**4.48**	**77**	P	**Pn**	**02 55 07.4**	**+1.0**
PBAR				S	**Sn**	**02 55 58.9**	**+0.3**
comp=E,2.9nm,0.8s							
PMRV	**Marv??o**	**4.60**	**61**	*e*Pn	**Pn**	**02 55 08.6**	**+0.5**
PMRV				*e*Sn	**Sn**	**02 56 01.1**	**-0.4**
comp=E,1.1nm,0.3s							
PMRV	**Marv??o**	**4.60**	**61**	P	**Pn**	**02 55 08.6**	**+0.5**
PMRV				S	**Sn**	**02 56 01.1**	**-0.4**
comp=E,1.1nm,0.3s							
EBAD	**Badajoz**	**4.63**	**70**	P	**Pn**	**02 55 09.3**	**+0.8**
comp=E,0.4nm,0.1s,SNR=7.9							
EBAD				S	**Sn**	**02 56 00.4**	**-1.9**
comp=E,3.6nm,0.7s,SNR=4.5							
EBAD	**Badajoz**	**4.63**	**70**	P	**Pn**	**02 55 09.3**	**+0.8**
comp=E,0.4nm,0.1s,SNR=7.9							
EBAD				S	**Sn**	**02 56 00.4**	**-1.9**
comp=E,3.6nm,0.7s,SNR=4.5							
EMIN	**Mina Concepcio**	**4.72**	**83**	P	**Pn**	**02 55 09.9**	**+0.1**
comp=E,0.9nm,0.3s,SNR=7.9							
EMIN				S	**Sn**	**02 56 02.9**	**-1.7**
comp=E,0.7nm,0.4s,SNR=7.9							
EMIN	**Mina Concepcio**	**4.72**	**83**	P	**Pn**	**02 55 09.9**	**+0.1**
comp=E,0.9nm,0.3s,SNR=7.9							
EMIN				S	**Sn**	**02 56 02.9**	**-1.7**
comp=E,0.7nm,0.4s,SNR=7.9							
PCBR	**Castelo Branco**	**4.73**	**56**	*e*Pn	**Pn**	**02 55 11.0**	**+1.1**
PCBR	**Castelo Branco**	**4.73**	**56**	P	**Pn**	**02 55 11.0**	**+1.1**
PCBR	**Castelo Branco**	**4.73**	**56**	P	**Pn**	**02 55 11.0**	**+1.1**
MTE	**Manteigas**	**5.00**	**50**	*e*Pn	**Pn**	**02 55 14.7**	**+1.1**
MTE	**Manteigas**	**5.00**	**50**	Pn	**Pn**	**02 55 14.7**	**+1.1**
MTE	**Manteigas**	**5.00**	**50**	*e*Pn	**Pn**	**02 55 14.7**	**+1.1**
PGAV	**Gavieira, Arco**	**5.72**	**34**	*e*Sn	**Sn**	**02 56 27.5**	**-1.8**
PGAV	**Gavieira, Arco**	**5.72**	**34**	*e*Sn	**Sn**	**02 56 27.5**	**-1.8**
ECAB	**El Cabril**	**5.74**	**80**	P	**Pn**	**02 55 24.0**	**+0.3**
comp=E,0.4nm,0.1s,SNR=7.0							
ECAB				S	**Sn**	**02 56 27.6**	**-2.0**
comp=E,0.8nm,0.6s,SNR=7.9							
ECAB	**El Cabril**	**5.74**	**80**	P	**Pn**	**02 55 24.0**	**+0.3**
comp=E,0.4nm,0.1s,SNR=7.0							
ECAB				S	**Sn**	**02 56 27.6**	**-2.0**
comp=E,0.8nm,0.6s,SNR=7.9							
ELOB	**Lobios**	**5.74**	**36**	S	**Sn**	**02 56 27.1**	**-2.6**
comp=E,3.9nm,0.7s,SNR=7.9							
ELOB	**Lobios**	**5.74**	**36**	S	**Sn**	**02 56 27.1**	**-2.6**
comp=E,3.9nm,0.7s,SNR=7.9							
MVO	**Moncorvo**	**5.78**	**47**	*e*Pn	**Pn**	**02 55 24.7**	**+0.3**
MVO				*e*Sn	**Sn**	**02 56 28.6**	**-2.2**
MVO	**Moncorvo**	**5.78**	**47**	P	**Pn**	**02 55 24.4**	**0.0**
comp=E,0.6nm,0.3s,SNR=7.9							
MVO				S	**Sn**	**02 56 28.4**	**-2.3**
comp=E,24nm,1.0s,SNR=7.9							
MVO	**Moncorvo**	**5.78**	**47**	P	**Pn**	**02 55 24.4**	**0.0**
comp=E,0.6nm,0.3s,SNR=7.9							
MVO	**Moncorvo**	**5.78**	**47**	*e*Pn	**Pn**	**02 55 24.7**	**+0.3**
MVO				*e*Sn	**Sn**	**02 56 28.6**	**-2.2**
EMAZ	**Mazaricos**	**6.28**	**25**	S	Sn	02 56 35.7	-7.2
comp=E,80nm,1.8s,SNR=7.9							
EADA	**Adamuz**	**6.41**	**80**	P	**Pn**	**02 55 33.3**	**+0.4**
comp=E,0.5nm,0.3s,SNR=7.9							
EADA				S	**Sn**	**02 56 43.6**	**-2.5**
comp=E,1.4nm,2.2s,SNR=7.9							
EADA	**Adamuz**	**6.41**	**80**	P	**Pn**	**02 55 33.3**	**+0.4**
comp=E,0.5nm,0.3s,SNR=7.9							
EADA				S	**Sn**	**02 56 43.6**	**-2.5**
comp=E,1.4nm,2.2s,SNR=7.9							
PAB	**San Pablo**	**6.84**	**68**	P	**Pn**	**02 55 39.1**	**+0.1**
comp=E,0.2nm,0.2s,SNR=7.9							
PAB	**San Pablo**	**6.84**	**68**	P	**Pn**	**02 55 39.1**	**+0.1**
comp=E,0.2nm,0.2s,SNR=7.9							
ETOR	**Torete**	**8.91**	**64**	P	**Pn**	**02 56 07.3**	**0.0**
comp=E,0.9nm,0.3s,SNR=7.9							
ETOR	**Torete**	**8.91**	**64**	P	**Pn**	**02 56 07.3**	**0.0**
comp=E,0.9nm,0.3s,SNR=7.9							
IELO	**Elcoad**	**10.30**	**54**	P	**Pn**	**02 56 27.2**	**+0.8**
comp=E,0.5nm,0.3s,SNR=7.9							
IELO	**Elcoad**	**10.30**	**54**	P	**Pn**	**02 56 27.2**	**+0.8**
comp=E,0.5nm,0.3s,SNR=7.9							

KRSC 13 02:59:33.6±1.1, 54°24'N×168°38'E, h60km±21km, ML3.7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**1.70**	**306**	*e*P	Pn	03 00 01.9	+1.0
BKI				*e*S	Sn	03 00 24.5	+3.0
KBTR	**Krutoberegovo**	**3.75**	**304**	*e*P	Pn	03 00 32.0	+3.2
MKZ	**Mys Kozlova**	**3.90**	**277**	*e*P	Pn	03 00 34.5	+3.

PMAFR				A	A	03 36 50.8	
	16nm,0.8s						
PMAFR	**Mafra**	**3.22**	**58**	P	**Pn**	**03 36 07.2**	**+1.9**
	5.3nm,0.3s,SNR=7.9						
PMAFR				S	**Sn**	**03 36 43.9**	**+0.2**
	7.7nm,0.2s,SNR=7.9						
PMAFR	**Mafra**	**3.22**	**58**	P	**Pn**	**03 36 07.2**	**+1.9**
	5.3nm,0.3s,SNR=7.9						
PMAFR				S	**Sn**	**03 36 43.9**	**+0.2**
	7.7nm,0.2s,SNR=7.9						
PMAFR				*e*Sn	**Sn**	**03 36 44.6**	**+0.9**
PTEO	**Sao Teotonio**	**3.25**	**85**	*e*Pn	**Pn**	**03 36 07.0**	**+1.4**
PTEO				*e*Sn	**Sn**	**03 36 43.6**	**-0.8**
PTEO				A	A	03 36 50.5	
	8.7nm,0.8s						
PTEO	**Sao Teotonio**	**3.25**	**85**	P	**Pn**	**03 36 07.0**	**+1.4**
PTEO				S	**Sn**	**03 36 43.6**	**-0.8**
	4.3nm,0.8s						
PTEO	**Sao Teotonio**	**3.25**	**85**	P	**Pn**	**03 36 07.0**	**+1.4**
PTEO				S	**Sn**	**03 36 43.6**	**-0.8**
	4.3nm,0.8s						
MORF	**Marmelete**	**3.31**	**89**	*e*Pn	**Pn**	**03 36 09.5**	**+3.0**
MORF	**Marmelete**	**3.31**	**89**	P	**Pn**	**03 36 09.5**	**+3.0**
MORF	**Marmelete**	**3.31**	**89**	P	**Pn**	**03 36 09.5**	**+3.0**
PNCL	**Nicolau / Gran**	**3.48**	**75**	*e*Pn	**Pn**	**03 36 11.5**	**+2.7**
PNCL				*e*Sn	**Sn**	**03 36 49.3**	**-0.7**
PNCL				A	A	03 36 57.8	
	3.7nm,0.4s						
PNCL	**Nicolau / Gran**	**3.48**	**75**	*e*Pn	**Pn**	**03 36 11.5**	**+2.7**
PNCL				*e*Sn	**Sn**	**03 36 49.3**	**-0.7**
MESJ	**Messejana**	**3.67**	**80**	*e*P	**Pn**	**03 36 13.7**	**+2.2**
MESJ				*e*S	**Sn**	**03 36 53.7**	**-1.2**
MESJ				AML	AML	03 36 56.6	
	comp=N,4.1nm,0.6s						
MESJ	**Messejana**	**3.67**	**80**	*e*Pn	**Pn**	**03 36 13.9**	**+2.4**
MESJ				*e*Sn	**Sn**	**03 36 53.7**	**-1.2**
MESJ				A	A	03 36 59.5	
	comp=N,2.6nm,0.5s						
MESJ	**Messejana**	**3.67**	**80**	P	**Pn**	**03 36 13.7**	**+2.2**
MESJ				S	**Sn**	**03 36 53.7**	**-1.2**
	comp=N,4.1nm,0.6s						
MESJ	**Messejana**	**3.67**	**80**	P	**Pn**	**03 36 13.7**	**+2.2**
MESJ				S	**Sn**	**03 36 53.7**	**-1.2**
	comp=N,4.1nm,0.6s						
PCVE	**Castro Verde**	**3.80**	**84**	*e*Pn	**Pn**	**03 36 15.2**	**+2.0**
PCVE				*e*Sn	**Sn**	**03 36 56.7**	**-1.2**
PCVE				A	A	03 37 01.3	
	comp=N,3.0nm,0.5s						
PCVE	**Castro Verde**	**3.80**	**84**	P	**Pn**	**03 36 15.2**	**+2.0**
PCVE				S	**Sn**	**03 36 56.7**	**-1.2**
	comp=N,3.0nm,0.5s						
PCVE	**Castro Verde**	**3.80**	**84**	P	**Pn**	**03 36 15.2**	**+2.0**
PCVE				S	**Sn**	**03 36 56.7**	**-1.2**
	comp=N,3.0nm,0.5s						
ALMR	**Almeirim**	**3.80**	**60**	*e*P	**Pn**	**03 36 15.4**	**+2.2**
ALMR	**Almeirim**	**3.80**	**60**	*e*Pn	**Pn**	**03 36 15.7**	**+2.5**
ALMR				*e*Sn	**Sn**	**03 36 58.6**	**+0.6**
ALMR				A	A	03 37 02.5	
	comp=N,9.5nm,0.4s						
ALMR	**Almeirim**	**3.80**	**60**	P	**Pn**	**03 36 15.4**	**+2.2**
ALMR				S	**Sn**	**03 36 58.6**	**+0.6**
	comp=N,4.8nm,0.4s						
ALMR	**Almeirim**	**3.80**	**60**	P	**Pn**	**03 36 15.4**	**+2.2**
ALMR	**Almeirim**	**3.80**	**60**	*e*Pn	**Pn**	**03 36 15.7**	**+2.5**
ALMR				S	**Sn**	**03 36 58.6**	**+0.6**
	comp=N,4.8nm,0.4s						
PBDV	**Barranco-do-Ve**	**3.88**	**89**	*e*Pn	**Pn**	**03 36 16.3**	**+1.9**
PBDV				*e*Sn	**Sn**	**03 37 00.4**	**+0.4**
PBDV				A	A	03 37 07.6	
	comp=N,2.4nm,0.6s						
PBDV	**Barranco-do-Ve**	**3.88**	**89**	P	**Pn**	**03 36 16.3**	**+1.9**
PBDV				S	**Sn**	**03 37 00.4**	**+0.4**
	comp=N,2.4nm,0.6s						
PBDV	**Barranco-do-Ve**	**3.88**	**89**	P	**Pn**	**03 36 16.3**	**+1.9**
PBDV				S	**Sn**	**03 37 00.4**	**+0.4**
	comp=N,2.4nm,0.6s						
EVO	**Evora**	**3.98**	**71**	*e*Pn	**Pn**	**03 36 18.1**	**+2.5**
EVO				*e*Sn	**Sn**	**03 37 01.6**	**-0.7**
EVO	**Evora**	**3.98**	**71**	P	**Pn**	**03 36 18.1**	**+2.5**
EVO				S	**Sn**	**03 37 01.6**	**-0.7**
EVO	**Evora**	**3.98**	**71**	P	**Pn**	**03 36 18.1**	**+2.5**
EVO				S	**Sn**	**03 37 01.6**	**-0.7**
PBEJ	**Beja**	**3.98**	**78**	*e*Pn	**Pn**	**03 36 17.6**	**+1.9**
PBEJ				*e*Sn	**Sn**	**03 37 02.5**	**+0.2**
PBEJ				A	A	03 37 05.9	
	comp=N,3.4nm,0.6s						
PBEJ	**Beja**	**3.98**	**78**	P	**Pn**	**03 36 17.6**	**+1.9**
PBEJ				S	**Sn**	**03 37 02.5**	**+0.2**
	comp=N,1.7nm,0.6s						
PBEJ	**Beja**	**3.98**	**78**	P	**Pn**	**03 36 17.6**	**+1.9**
PBEJ				S	**Sn**	**03 37 02.5**	**+0.2**
	comp=N,1.7nm,0.6s						
PMTG	**Montargil**	**4.01**	**63**	*e*Pn	**Pn**	**03 36 18.1**	**+2.0**
PMTG				*e*Sn	**Sn**	**03 37 02.5**	**-0.6**
PMTG				A	A	03 37 04.6	
	comp=N,3.5nm,0.7s						
PMTG	**Montargil**	**4.01**	**63**	*e*Pn	**Pn**	**03 36 18.1**	**+2.0**
PMTG				*e*Sn	**Sn**	**03 37 02.5**	**-0.6**
PVAQ	**Vaqueiros**	**4.05**	**87**	*e*Pn	**Pn**	**03 36 18.5**	**+1.9**
PVAQ				*e*Sn	**Sn**	**03 37 02.3**	**-1.8**
PVAQ				A	A	03 37 07.4	
	comp=N,3.2nm,0.5s						
PVAQ	**Vaqueiros**	**4.05**	**87**	P	**Pn**	**03 36 18.5**	**+1.9**
PVAQ				S	**Sn**	**03 37 02.3**	**-1.8**
	comp=N,3.2nm,0.5s						
PVAQ	**Vaqueiros**	**4.05**	**87**	P	**Pn**	**03 36 18.5**	**+1.9**
PVAQ				S	**Sn**	**03 37 02.3**	**-1.8**
	comp=N,3.2nm,0.5s						
PTOM	**Tomar**	**4.14**	**55**	*e*Pn	**Pn**	**03 36 20.8**	**+2.9**
PTOM				*e*Sn	**Sn**	**03 37 07.2**	**+0.8**
PTOM	**Tomar**	**4.14**	**55**	P	**Pn**	**03 36 20.8**	**+2.9**
PTOM				S	**Sn**	**03 37 07.2**	**+0.8**
PTOM	**Tomar**	**4.14**	**55**	P	**Pn**	**03 36 20.8**	**+2.9**
PTOM				S	**Sn**	**03 37 07.2**	**+0.8**
EGRO	**El Granado**	**4.24**	**85**	P	**Pn**	**03 36 20.8**	**+1.6**
	comp=N,1.4nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**03 37 05.7**	**-3.0**
	comp=N,0.3nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**4.24**	**85**	P	**Pn**	**03 36 20.8**	**+1.6**
	comp=N,1.4nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**03 37 05.7**	**-3.0**
	comp=N,0.3nm,0.1s,SNR=7.9						
PCAS	**Casmilo, Conde**	**4.34**	**50**	*e*Pn	**Pn**	**03 36 23.2**	**+2.6**
PCAS				*e*Sn	**Sn**	**03 37 11.4**	**+0.1**
PCAS				A	A	03 37 11.7	
	comp=N,3.1nm,0.8s						
PCAS	**Casmilo, Conde**	**4.34**	**50**	*e*Pn	**Pn**	**03 36 23.2**	**+2.6**
PCAS				*e*Sn	**Sn**	**03 37 11.4**	**+0.1**
PESTR	**Estremoz**	**4.39**	**68**	*e*Pn	**Pn**	**03 36 23.8**	**+2.4**
PESTR				*e*Sn	**Sn**	**03 37 11.9**	**-0.7**
PESTR				A	A	03 37 17.4	
	comp=N,2.6nm,0.7s						
PESTR	**Estremoz**	**4.39**	**68**	*e*Pn	**Pn**	**03 36 23.8**	**+2.4**
PESTR				*e*Sn	**Sn**	**03 37 11.9**	**-0.7**
PBAR	**Barrancos**	**4.64**	**78**	*e*Pn	**Pn**	**03 36 27.0**	**+2.2**
PBAR				*e*Sn	**Sn**	**03 37 18.3**	**-0.5**
PBAR				A	A	03 37 24.8	
	comp=N,3.0nm,0.4s						
PBAR	**Barrancos**	**4.64**	**78**	P	**Pn**	**03 36 27.0**	**+2.2**
PBAR				S	**Sn**	**03 37 18.3**	**-0.5**
	comp=N,3.0nm,0.4s						
PBAR	**Barrancos**	**4.64**	**78**	P	**Pn**	**03 36 27.0**	**+2.2**
PBAR				S	**Sn**	**03 37 18.3**	**-0.5**
	comp=N,3.0nm,0.4s						
PMRV	**Marv??o**	**4.75**	**62**	*e*Pn	**Pn**	**03 36 28.1**	**+1.9**
PMRV				*e*Sn	**Sn**	**03 37 20.4**	**-0.9**
PMRV				A	A	03 37 25.4	
	comp=N,2.2nm,0.3s						
PMRV	**Marv??o**	**4.75**	**62**	P	**Pn**	**03 36 28.1**	**+1.9**
PMRV				S	**Sn**	**03 37 20.4**	**-0.9**
	comp=N,2.2nm,0.3s						
PMRV	**Marv??o**	**4.75**	**62**	P	**Pn**	**03 36 28.1**	**+1.9**
PMRV				S	**Sn**	**03 37 20.4**	**-0.9**
	comp=N,2.2nm,0.3s						
EBAD	**Badajoz**	**4.79**	**71**	P	**Pn**	**03 36 28.3**	**+1.5**
	comp=N,0.7nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**03 37 19.1**	**-3.2**
	comp=N,1.2nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**4.79**	**71**	P	**Pn**	**03 36 28.3**	**+1.5**
	comp=N,0.7nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**03 37 19.1**	**-3.2**
	comp=N,1.2nm,0.2s,SNR=7.9						
PCBR	**Castelo Branco**	**4.87**	**57**	*e*Pn	**Pn**	**03 36 30.6**	**+2.6**
PCBR				*e*Sn	**Sn**	**03 37 23.0**	**-1.4**
PCBR				A	A	03 37 46.9	
	comp=N,1.8nm,0.8s						
PCBR	**Castelo Branco**	**4.87**	**57**	P	**Pn**	**03 36 30.6**	**+2.6**
PCBR				S	**Sn**	**03 37 23.0**	**-1.4**
	comp=N,0.9nm,0.8s						
PCBR	**Castelo Branco**	**4.87**	**57**	P	**Pn**	**03 36 30.6**	**+2.6**
PCBR				S	**Sn**	**03 37 23.0**	**-1.4**
	comp=N,0.9nm,0.8s						
EMIN	**Mina Concepcio**	**4.89**	**83**	P	**Pn**	**03 36 29.5**	**+1.3**
	comp=N,0.6nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**03 37 21.1**	**-3.7**
	comp=N,0.2nm,0.3s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.89**	**83**	P	**Pn**	**03 36 29.5**	**+1.3**
	comp=N,0.6nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**03 37 21.1**	**-3.7**
	comp=N,0.2nm,0.3s,SNR=7.9						
PVIS	**Viseu**	**5.11**	**47**	*e*Pn	**Pn**	**03 36 34.5**	**+3.2**
PVIS				*e*Sn	**Sn**	**03 37 28.6**	**-1.8**
PVIS				A	A	03 37 34.7	
	comp=N,2.8nm,0.5s						
PVIS	**Viseu**	**5.11**	**47**	P	**Pn**	**03 36 34.5**	**+3.2**
PVIS				S	**Sn**	**03 37 28.6**	**-1.8**
	comp=N,1.4nm,0.5s						
PVIS	**Viseu**	**5.11**	**47**	P	**Pn**	**03 36 34.5**	**+3.2**
PVIS				S	**Sn**	**03 37 28.6**	**-1.8**
	comp=N,1.4nm,0.5s						
MTE	**Manteigas**	**5.13**	**51**	*e*Pn	**Pn**	**03 36 34.2**	**+2.6**
MTE				*e*Sn	**Sn**	**03 37 30.7**	**-0.2**
MTE				A	A	03 37 35.6	
	comp=N,2.9nm,0.7s						
MTE	**Manteigas**	**5.13**	**51**	P	**Pn**	**03 36 34.2**	**+2.6**
MTE				Sn	**Sn**	**03 37 30.7**	**-0.2**
	comp=N,1.4nm,0.7s						
MTE	**Manteigas**	**5.13**	**51**	P	**Pn**	**03 36 34.2**	**+2.6**
MTE				Sn	**Sn**	**03 37 30.7**	**-0.2**
	comp=N,1.4nm,0.7s						
POLO	**Lamas de Olo**	**5.61**	**42**	*e*Pn	**Pn**	**03 36 40.3**	**+2.1**
POLO				*e*Sn	**Sn**	**03 37 42.0**	**-0.8**
POLO	**Lamas de Olo**	**5.61**	**42**	*e*Pn	**Pn**	**03 36 40.3**	**+2.1**
POLO				*e*Sn	**Sn**	**03 37 42.0**	**-0.8**
PGAV	**Gavieira, Arco**	**5.82**	**36**	*e*Sn	**Sn**	**03 37 45.7**	**-2.1**
PGAV				A	A	03 37 58.7	
	comp=N,2.9nm,0.7s						
ELOB	**Lobios**	**5.84**	**37**	P	**Pn**	**03 36 43.6**	**+2.3**
	comp=N,0.3nm,0.2s,SNR=7.9						
ELOB				S	**Sn**	**03 37 44.8**	**-3.6**
	comp=N,0.0nm,0.2s,SNR=7.9						
ELOB	**Lobios**	**5.84**	**37**	P	**Pn**	**03 36 43.6**	**+2.3**
	comp=N,0.3nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**5.90**	**80**	P	**Pn**	**03 36 43.7**	**+1.6**
	comp=N,0.8nm,0.1s,SNR=7.9						
ECAB				S	**Sn**	**03 37 45.9**	**-3.9**
	comp=N,0.1nm,0.3s,SNR=7.9						
ECAB	**El Cabril**	**5.90**	**80**	P	**Pn**	**03 36 43.7**	**+1.6**
	comp=N,0.8nm,0.1s,SNR=7.9						
ECAB				S	**Sn**	**03 37 45.9**	**-3.9**
	comp=N,0.1nm,0.3s,SNR=7.9						
MVO	**Moncorvo**	**5.90**	**48**	*e*Pn	**Pn**	**03 36 44.2**	**+2.0**
MVO				*e*Sn	**Sn**	**03 37 48.0**	**-1.9**
MVO				A	A	03 37 49.4	
	comp=N,2.1nm,0.5s						
MVO	**Moncorvo**	**5.90**	**48**	P	**Pn**	**03 36 44.1**	**+2.0**
	comp=N,1.3nm,0.4s,SNR=7.9						
MVO				S	**Sn**	**03 37 47.1**	**-2.8**
	comp=N,1.1nm,0.3s,SNR=7.9						
MVO	**Moncorvo**	**5.90**	**48**	*e*Pn	**Pn**	**03 36 44.2**	**+2.0**
MVO				S	**Sn**	**03 37 47.1**	**-2.8**
	comp=N,1.1nm,0.3s,SNR=7.9						
MVO				*e*Sn	**Sn**	**03 37 48.0**	**-1.9**
EPLA	**Plasencia**	**5.93**	**60**	P	**Pn**	**03 36 43.6**	**+1.1**
	comp=N,0.9nm,0.3s,SNR=7.9						
EPLA				S	**Sn**	**03 37 48.7**	**-1.9**
	comp=N,0.7nm,0.3s,SNR=7.9						
EPLA	**Plasencia**	**5.93**	**60**	P	**Pn**	**03 36 43.6**	**+1.1**
	comp=N,0.9nm,0.3s,SNR=7.9						
EPLA				S	**Sn**	**03 37 48.7**	**-1.9**
	comp=N,0.7nm,0.3s,SNR=7.9						
EMAZ	**Mazaricos**	**6.35**	**26**	P	**Pn**	**03 36 48.6**	**+0.4**
	comp=N,0.3nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**03 37 55.4**	**-5.4**
	comp=N,0.9nm,0.3s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.57**	**32**	P	**Pn**	**03 36 52.3**	**+1.0**
	comp=N,0.7nm,0.2s,SNR=7.9						
EAGO				S	**Sn**	**03 38 01.4**	**-4.8**
	comp=N,0.7nm,0.3s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.57**	**32**	P	**Pn**	**03 36 52.3**	**+1.0**
	comp=N,0.7nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**6.57**	**80**	P	**Pn**	**03 36 50.4**	**-0.9**
	comp=N,0.7nm,0.3s,SNR=7.9						
EADA				S	**Sn**	**03 38 03.4**	**-2.9**
	comp=N,0.4nm,0.3s,SNR=7.9						
EADA	**Adamuz**	**6.57**	**80**	P	**Pn**	**03 36 50.4**	**-0.9**
	comp=N,0.7nm,0.3s,SNR=7.9						
EADA				S	**Sn**	**03 38 03.4**	**-2.9**
	comp=N,0.4nm,0.3s,SNR=7.9						
PAB	**San Pablo**	**7.00**	**69**	P	**Pn**	**03 36 59.1**	**+1.8**
	comp=N,0.3nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**03 38 11.9**	**-5.0**
	comp=N,0.0nm,0.3s,SNR=7.9						
PAB	**San Pablo**	**7.00**	**69**	P	**Pn**	**03 36 59.1**	**+1.8**
	comp=N,0.3nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**03 38 11.9**	**-5.0**
	SNR=7.9						

IDC 13 03:44:34.5±1.3, 6°84S×129°02E, h0km, mb3.5/2, mb1 4.0/5, mb1mx3.6/50, mbtmp3.8/5, ML4.1/3, MS3.4/1, Ms1 3.4/1, ms1mx2.5/37, Error ellipse: s-maj=48.5km s-min=27.8km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.26**	**237**	Pn	Pn	03 46 07.8	-0.4
	9.8nm,0.3s,baz=59,slow=19,SNR=4.2						
BATI				Sn	Sn	03 47 05.1	-15
	15nm,0.3s,baz=45,slow=4.3,SNR=3.9						
WRA	**Warramunga Arr**	**14.01**	**159**	Pn	Pn	03 47 54.7	+0.2
	0.7nm,0.3s,baz=339,slow=12,SNR=35						
WRA				Sn	Sn	03 50 17.9	-13
	0.6nm,0.3s,baz=334,slow=22,SNR=5.8						
ASAR	**Alice Springs**	**17.38**	**165**	P	Pn	03 48 38.5	-0.2
	0.4nm,0.3s,baz=340,slow=10,SNR=20						
ASAR				S	Sn	03 51 38.1	-15
	0.2nm,0.3s,baz=356,slow=26,SNR=2.0						
PALK	**Pallekele**	**50.19**	**285**	LR	LR	04 15 00.8	
	comp=Z,40nm,18.8s,baz=242,slow=36						
MKAR	**Makanchi Array**	**67.56**	**327**	P	P	03 55 32.1	-0.7
	0.2nm,0.4s,baz=125,slow=7.3,SNR=1.8						
KURBB	**Kurchatov Arra**	**71.86**	**329**	P	P	03 55 59.9	+0.7
	0.3nm,0.4s,baz=129,slow=4.5,SNR=4.3						
LPAZ	**La Paz**	**151.44**	**144**	PKPbc	PKPbc	04 04 32.1	-0.1
	0.6nm,0.4s,baz=298,slow=3.1,SNR=8.6						

IDC 13 03:45:24.9±5.4, 14°08S×175°79W, h211km±76km, mb3.5/2, mb1 3.7/3, mb1mx3.2/46, mbtmp4.1/3, Error ellipse: s-maj=173.6km s-min=49.4km az=158.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.90**	**88**	P	Pn	03 46 25.9	-0.1
	7.6nm,0.3s,baz=270,slow=1.0,SNR=3.1						
AFI				S	S	03 47 14.5	+0.9
	3.7nm,0.3s,baz=245,slow=22,SNR=1.5						
WRA	**Warramunga Arr**	**47.91**	**256**	P	P	03 53 42.7	+0.4
	0.5nm,0.6s,baz=91,slow=6.8,SNR=3.2						
ASAR	**Alice Springs**	**48.34**	**251**	P	P	03 53 45.3	-0.3
	3.2nm,0.5s,baz=84,slow=8.4,SNR=17						
NOA	**NORSAR Array B**	**132.84**	**355**	PKP	PKPdf	04 04 14.2	-0.3
	3.2nm,0.7s,baz=6.4,slow=3.6,SNR=3.4						

IDC 13 03:51:18.4±2.4, 5°70N×125°98E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.4/55, mbtmp3.5/3, Error ellipse: s-maj=190.8km s-min=29.8km az=65.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.78**	**162**	P	P	03 57 00.3	0.0
	1.7nm,0.6s,baz=342,slow=11,SNR=6.8						
ASAR	**Alice Springs**	**30.20**	**165**	P	P	03 57 30.8	0.0
	0.1nm,0.3s,baz=345,slow=6.8,SNR=1.8						
MKAR	**Makanchi Array**	**55.52**	**325**	P	P	04 00 55.4	-0.1
	0.2nm,0.5s,baz=122,slow=7.1,SNR=1.9						

*ISK **13** 04:19:14.9, 39°83N×39°11E, h9km, ML2.1/2*
*CSEM **13** 04:19:15.4±0.1, 39°84N×39°09E, h10km, ML2.6, Error ellipse: s-maj=3.7km s-min=2.5km az=126.0*
*DDA **13** 04:19:15.4, 39°82N×39°08E, h7km, Ml2.6*

ISC 13 04:19:14.6±1.1, 39°79N±0°02×39°06E±0°03, h1km±10km, n27, σ1°32/46, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KELT	**Kelkit**	**0.39**	**23**	*i* P	**Pg**	**04 19 22.7**	**+0.7**
KELT				*i* S	**Sg**	**04 19 27.7**	**+0.6**
KELT	**Kelkit**	**0.39**	**23**	P	**Pg**	**04 19 22.7**	**+0.7**
KELT				S	**Sg**	**04 19 27.7**	**+0.6**
REFA	**Refahiye_ERZ¨**	**0.46**	**210**	*i* P	**Pg**	**04 19 20.9**	**-2.4**
REFA				*i* S	**Sg**	**04 19 25.2**	**-4.0**
ILIC	**ilic-Erzincan**	**0.51**	**228**	PG	**Pb**	**04 19 26.8**	**+0.4**
ILIC				SG	**Sb**	**04 19 34.6**	**+0.3**
ILIC	**ilic-Erzincan**	**0.51**	**228**	*e*Pg	**Pb**	**04 19 26.8**	**+0.4**
ILIC				*e*Sg	**Sb**	**04 19 34.6**	**+0.3**
KEMA	**Kemaliye**	**0.68**	**220**	*i* P	**Pb**	**04 19 29.3**	**0.0**
KEMA				*i* S	**Sb**	**04 19 39.5**	**+0.2**
KEMA	**Kemaliye**	**0.68**	**220**	P	**Pb**	**04 19 29.3**	**0.0**
KEMA				S	**Sb**	**04 19 39.5**	**+0.2**
SUSE	**Susehri**	**0.78**	**303**	*i* P	**Pg**	**04 19 30.1**	**+0.6**
SUSE				*i* S	**Sb**	**04 19 41.5**	**-0.6**
SUSE	**Susehri**	**0.78**	**303**	P	**Pg**	**04 19 30.1**	**+0.6**
SUSE				S	**Sb**	**04 19 41.5**	**-0.6**
PTK	**Pertek**	**0.94**	**164**	PG	**Pb**	**04 19 33.6**	**-0.1**
PTK				SG	**Sn**	**04 19 47.3**	**-1.8**
PTK	**Pertek**	**0.94**	**164**	*e*Pg	**Pb**	**04 19 33.6**	**-0.1**
PTK				*e*Sg	**Sn**	**04 19 47.3**	**-1.8**
CUZAR	**Zara_SIVAS**	**1.00**	**276**	*i* P	**Pn**	**04 19 34.8**	**-1.0**
CUZAR				*i* S	**Sn**	**04 19 50.9**	**+0.3**
CUZAR	**Zara_SIVAS**	**1.00**	**276**	P	**Pn**	**04 19 34.8**	**-1.0**
BAYT	**Ayd¨–ntepe-Bay**	**1.02**	**54**	PG	**Pg**	**04 19 34.1**	**-0.1**
BAYT				SG	**Sb**	**04 19 48.1**	**-1.1**
BAYT	**Ayd¨–ntepe-Bay**	**1.02**	**54**	*e*Pg	**Pg**	**04 19 34.1**	**-0.1**
BAYT				*e*Sg	**Sb**	**04 19 48.1**	**-1.1**
KOPT	**Kop Dagi**	**1.13**	**78**	*i* P	**Pn**	**04 19 37.3**	**-0.5**
KOPT				*i* S	**Sn**	**04 19 57.3**	**+3.2**
KOPT	**Kop Dagi**	**1.13**	**78**	P	**Pn**	**04 19 37.3**	**-0.5**
ESPY	**Espiye-Giresun**	**1.15**	**347**	PN	**Pb**	**04 19 36.3**	**-1.0**
ESPY	**Espiye-Giresun**	**1.15**	**347**	*e*Pn	**Pb**	**04 19 36.3**	**-1.0**
HEKM	**Malatya_Hekimh**	**1.25**	**223**	*i* P	**Pg**	**04 19 40.3**	**+1.8**
HEKM				*i* S	**Sn**	**04 19 58.5**	**+1.6**
HEKM	**Malatya_Hekimh**	**1.25**	**223**	P	**Pg**	**04 19 40.3**	**+1.8**
HEKM				S	**Sn**	**04 19 58.5**	**+1.6**
ELZG	**Elazig**	**1.29**	**183**	*i* P	**Pg**	**04 19 40.1**	**+0.7**
ELZG				*i* S	**Sg**	**04 19 58.4**	**+2.2**
ELZG	**Elazig**	**1.29**	**183**	P	**Pg**	**04 19 40.1**	**+0.7**
ELZG				S	**Sg**	**04 19 58.4**	**+2.2**
MALT	**Malatya**	**1.56**	**199**	PN	**Pb**	**04 19 43.8**	**-0.4**
MALT	**Malatya**	**1.56**	**199**	*e*Pn	**Pb**	**04 19 43.8**	**-0.4**
CHOM	**Cayeli-Rize**	**1.84**	**44**	PN	**Pn**	**04 19 47.2**	**-0.1**
CHOM	**Cayeli-Rize**	**1.84**	**44**	*e*Pn	**Pn**	**04 19 47.2**	**-0.1**

*JMA **13** 04:25:50.5±0.4, 36°72N×142°19E, h14km±4km, M3.4*
*IDC **13** 04:25:59.7±1.5, 37°74N×141°00E, h0km, mb3.4/5, mb1 3.6/6, mb1mx3.4/69, mbtmp3.4/6, ML3.2/1, MS2.8/2, Ms1 2.8/2, ms1mx2.4/42, Error ellipse: s-maj=33.7km s-min=28.7km az=121.0*

ISC 13 04:25:54.2±1.6, 36°84N±0°08×141°91E±0°09, h10km, n21, σ1°59/21, mb3.5/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.93**	**287**	P	**Pg**	**04 26 12.2**	**+0.1**
JFK	**Kawauchi**	**0.98**	**303**	P	**Pb**	**04 26 13.4**	**+0.1**
JHO	**Hitachi**	**1.10**	**258**	P	**Pn**	**04 26 14.3**	**-1.4**
JMM	**Marumori**	**1.36**	**319**	P	**Pn**	**04 26 18.6**	**-0.6**
JFT	**Otama**	**1.43**	**299**	P	**Pn**	**04 26 20.8**	**+0.6**
JIO	**Ouri**	**1.67**	**345**	P	**Pn**	**04 26 22.1**	**-1.4**
JIO				*e*S	**Sn**	**04 26 45.2**	**+0.2**
JOU	**Okura**	**1.82**	**327**	P	**Pn**	**04 26 25.3**	**-0.2**
JFY	**Yanaizu**	**1.85**	**288**	P	**Pn**	**04 26 26.4**	**+0.4**
JAG	**Ashikaga**	**2.02**	**259**	P	**Pn**	**04 26 27.8**	**-0.5**
JMK	**Ichinoseki**	**2.18**	**346**	P	**Pn**	**04 26 29.7**	**-0.7**
JYK	**Kaneyama**	**2.41**	**330**	P	**Pn**	**04 26 33.1**	**-0.6**
JRY	**Ryogami san**	**2.56**	**252

PLP	**Palo**	**0.40**	**268**	⇑*i*P		Pn	05 16 52.2	+0.1
PLP				*i* S		Sn	05 17 00.2	+1.5
BESP	**Borongan**	**0.42**	**7**	*e*P		Pn	05 16 52.1	-0.4
BESP				*e*S		Sn	05 17 00.3	+1.0
CNP	**Catarman**	**1.50**	**332**	*e*P		Pn	05 17 07.9	+0.6
CNP				*e*S		Sn	05 17 26.4	+0.4

NNC 13 05:21:33.0±7.5, 37°.69N×71°.42E, h0km, mb3.9, mpv3.5, 3C-5D, Error ellipse: s-maj=57.2km s-min=45.7km az=166.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan** 8.3nm,0.4s	**2.84**	**34**	⇑Pn	Pn	05 22 19.9	+0.2
SFK	61nm,0.5s			⇓Sn	Sb	05 22 57.7	-2.3
AML	**Almayashu** SNR=27	**4.77**	**21**	P	Pn	05 22 45.2	-1.3
MNAS	**Manas** 5.4nm,0.4s	**4.87**	**10**	⇓Pn	Pn	05 22 47.3	-0.2
MNAS	11nm,0.5s			⇓Sn	Sn	05 23 45.2	+0.5
UCH	**Uchtor** SNR=13	**5.12**	**27**	P	Pn	05 22 49.0	-2.4
KZA	**Kyzart** SNR=5.5	**5.29**	**33**	P	Pn	05 22 49.8	-3.8
EKS2	**Erkin-Say** SNR=7.1	**5.29**	**19**	P	Pn	05 22 52.3	-1.0
KK31	**Karatay Array** 0.7nm,0.2s,baz=164,slow=13,SNR=26	**5.46**	**353**	⇓Pn	Pn	05 22 55.9	+0.3
KK31	4.6nm,0.4s,baz=165,slow=24,SNR=13			⇓Sn	Sn	05 24 00.1	+1.1
AAK	**Ala-Archa** 3.2nm,0.5s	**5.48**	**24**	⇑Pn	Pn	05 22 53.2	-2.7
AAK	13nm,0.7s			⇑Sn	Sn	05 23 57.9	-1.9
AAK	**Ala-Archa** SNR=6.1	**5.48**	**24**	P	Pn	05 22 53.9	-2.1

*SOME **13** 05:23:56.7, 42°.83N×75°.88E, h5km*

KRNET 13 05:23:56.9±0.1, 42°.83N×75°.90E, h11km, mb2.9, 12C, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KST	**Kastek** baz=13	**0.22**	**12**	*e*P	Pg	05 24 01.1	-0.5
KST	baz=13			*e*S	Sg	05 24 04.4	-0.4
KST	**Kastek** 53nm,0.2s	**0.22**	**12**	*e*P	Pg	05 24 01.1	-0.5
KST	40nm,0.1s			*e*S	Sg	05 24 04.4	-0.4
TKM2	**Tokmak 2** SNR=25	**0.24**	**293**	P	Pg	05 24 01.5	-0.5
TKM2	**Tokmak 2** baz=93	**0.24**	**293**	⇑*i*P	Pg	05 24 01.6	-0.4
TKM2	baz=93			⇑*i*S	Sg	05 24 05.4	-0.1
BOOM	**Boomskoye usch** baz=75	**0.34**	**175**	⇑*i*P	Pg	05 24 03.5	-0.2
BOOM	baz=75			⇑*i*S	Sg	05 24 08.0	-0.3
DGS	**Degeres** baz=47	**0.42**	**347**	*e*P	Pg	05 24 05.1	-0.2
DGS	baz=47			*e*S	Sg	05 24 11.2	+0.2
DGS	**Degeres** 6.0nm,0.2s	**0.42**	**347**	*e*P	Pg	05 24 05.0	-0.2
DGS	10nm,0.2s			*e*S	Sg	05 24 11.1	+0.2
MTBS	**Maitube** baz=52	**0.49**	**52**	*e*P	Pg	05 24 06.5	0.0
MTBS	baz=52			*e*S	Sg	05 24 13.6	+0.5
MTBS	**Maitube** 14nm,0.2s	**0.49**	**52**	*e*P	Pg	05 24 06.5	0.0
MTBS	19nm,0.4s			*e*S	Sg	05 24 13.6	+0.5
IZV	**Izvestkoviy** baz=68	**0.56**	**68**	*e*P	Pg	05 24 07.8	-0.1
IZV	baz=68			*e*S	Sg	05 24 16.0	+0.6
IZV	**Izvestkoviy** 27nm,0.1s	**0.56**	**68**	*e*P	Pg	05 24 07.8	-0.1
IZV	15nm,0.1s			*e*S	Sg	05 24 16.0	+0.6
ULHL	**Ulahol** SNR=33	**0.63**	**156**	P	Pg	05 24 09.2	-0.1
ULHL	**Ulahol** baz=56	**0.63**	**156**	⇑*i*P	Pg	05 24 09.1	-0.1
ULHL	baz=56			⇑*i*S	Sg	05 24 18.1	+0.5
KZA	**Kyzart** baz=13	**0.89**	**213**	⇑*i*P	Pg	05 24 13.8	-0.3
KZA	baz=13			⇑*i*S	Sg	05 24 25.9	+0.1
MDOK	**Medeo** baz=68	**0.91**	**68**	*e*P	Pg	05 24 13.8	-0.6
MDOK	baz=68			*e*S	Sg	05 24 26.3	+0.1
MDOK	**Medeo** 9.0nm,0.2s	**0.91**	**68**	*e*P	Pg	05 24 13.8	-0.5
MDOK	4.6nm,0.1s			*e*S	Sg	05 24 26.3	+0.1
KOTS	**Kotyrbulak** 1.6nm,0.2s	**0.98**	**65**	*e*P	Pg	05 24 15.5	-0.3
KOTS	2.6nm,0.2s			*e*S	Sb	05 24 29.0	+0.1
KTBS	**Karatobe** baz=25	**1.05**	**33**	*e*P	Pg	05 24 16.6	-0.5
KTBS	baz=25			*e*S	Sg	05 24 30.9	0.0
KTBS	**Karatobe** 6.7nm,0.1s	**1.05**	**33**	*e*P	Pg	05 24 16.6	-0.5
KTBS	7.0nm,0.1s			*e*S	Sb	05 24 31.0	0.0
KUU	**Kurty** baz=17	**1.11**	**17**	*e*P	Pb	05 24 17.4	-0.7
KUU	baz=17			*e*S	Sb	05 24 32.3	-0.4
KUU	**Kurty** 1.9nm,0.1s	**1.11**	**17**	*e*P	Pb	05 24 17.4	-0.8
KUU	3.7nm,0.3s			*e*S	Sb	05 24 32.3	-0.3
USP	**Ospenovka** baz=94	**1.12**	**294**	⇑*i*P	Pb	05 24 17.9	-0.3
USP	baz=94			⇑*i*S	Sn	05 24 33.9	0.0
CHKK	**Chushkaly** baz=38	**1.30**	**37**	*e*P	Pn	05 24 20.9	-0.1
CHKK	baz=38			*e*S	Sn	05 24 38.3	0.0
CHKK	**Chushkaly** 3.5nm,0.1s	**1.30**	**37**	*e*P	Pn	05 24 20.9	-0.1
CHKK	8.4nm,0.2s			*e*S	Sn	05 24 38.3	0.0
TARG	**Taragay, Kyrgy** baz=27	**1.79**	**127**	⇑*i*P	Pb	05 24 30.5	+0.6
TARG	baz=27			⇑*i*S	Sg	05 24 55.1	+0.6
UZB	**Uzynbulak** baz=81	**2.31**	**81**	*e*P	Pb	05 24 39.8	+1.1
UZB	baz=81			*i* S	Sg	05 25 11.0	-0.2
UZB	**Uzynbulak** 1.8nm,0.3s	**2.31**	**81**	*e*P	Pb	05 24 39.8	+1.1
UZB	3.0nm,0.2s			*i* S	Sg	05 25 10.9	-0.3

*ISCJB **13** 05:27:00.3±0.5, 50°.30N±0°.03×18°.74E±0°.03, h0km, Error ellipse: s-maj=4.9km s-min=2.6km az=6.9*
*CSEM **13** 05:27:01.3±0.3, 50°.30N×18°.76E, h2km, ML2.9/6, Error ellipse: s-maj=7.0km s-min=3.6km az=11.0*
*PRU **13** 05:27:01.9, 50°.29N×18°.75E, h0km*
*WAR **13** 05:27:02.4, 50°.27N×18°.85E, h1km, Mw2.7*

ISC 13 05:27:01.5±0.8, 50°.29N±0°.03×18°.80E±0°.02, h0km, n36, σ0°.76/59, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHZP	**Chorzow**	**0.12**	**88**	*e*Pg	**Pg**	**05 27 04.2**	**+0.3**
CHZP				*e*Sg	**Sg**	**05 27 05.7**	**+0.1**
CHZP	**Chorzow**	**0.12**	**88**	*e*Pg	**Pg**	**05 27 04.2**	**+0.3**
CHZP				*e*Sg	**Sg**	**05 27 05.7**	**+0.1**
OKC	**Ostrava-Krasne**	**0.61**	**223**	*e*PG	**Pg**	**05 27 13.5**	**+0.2**
OKC	comp=Z,24nm,0.4s			*e*SG	**Sg**	**05 27 21.3**	**+0.1**
OKC	**Ostrava-Krasne**	**0.61**	**223**	Pg	**Pg**	**05 27 13.5**	**+0.2**
OKC	24nm,0.4s			Sg	**Sg**	**05 27 21.3**	**+0.1**
OJC	**Ojcow**	**0.65**	**96**	*e*Pg	**Pg**	**05 27 14.0**	**+0.1**
OJC				*e*Sg	**Sg**	**05 27 22.3**	**0.0**
OJC	**Ojcow**	**0.65**	**96**	*e*Pg	**Pg**	**05 27 14.0**	**+0.1**
OJC				*e*Sg	**Sg**	**05 27 22.3**	**0.0**
OJC	**Ojcow**	**0.65**	**96**	*e*Pg	**Pg**	**05 27 14.0**	**+0.1**
OJC				*e*Sg	**Sg**	**05 27 22.3**	**0.0**
MORC	**Moravsky Berou**	**0.96**	**238**	*e*Pg	**Pg**	**05 27 19.6**	**-0.2**
MORC				*e*Sg	**Sg**	**05 27 32.8**	**+0.6**
MORC	**Moravsky Berou**	**0.96**	**238**	*e*PG	**Pg**	**05 27 19.6**	**-0.2**
MORC				*e*SG	**Sg**	**05 27 32.8**	**+0.6**
LANS	**Liptovska Anna**	**1.22**	**159**	*e*PG	**Pg**	**05 27 24.6**	**-0.2**
LANS				*e*SG	**Sg**	**05 27 41.2**	**+0.6**
LANS	**Liptovska Anna**	**1.22**	**159**	*e*Pg	**Pg**	**05 27 24.7**	**-0.1**
LANS				*e*Sg	**Sg**	**05 27 41.2**	**+0.6**
NIE	**Niedzica**	**1.30**	**131**	*e*Pg	**Pg**	**05 27 26.3**	**-0.2**
NIE				*e*Sg	**Sb**	**05 27 44.1**	**-0.1**
NIE	**Niedzica**	**1.30**	**131**	*e*Pg	**Pg**	**05 27 26.3**	**-0.2**
NIE				*e*Sg	**Sb**	**05 27 44.1**	**-0.1**
NIE	**Niedzica**	**1.30**	**131**	*e*Pg	**Pg**	**05 27 26.3**	**-0.2**
NIE				*e*Sg	**Sb**	**05 27 44.1**	**-0.1**
KRLC	**Kraliky** comp=Z,9.1nm,0.3s	**1.31**	**262**	*e*SG	**Sg**	**05 27 43.0**	**-0.7**
KRLC	**Kraliky** 9.1nm,0.3s	**1.31**	**262**	Sg	**Sg**	**05 27 43.0**	**-0.7**
DPC	**Dobruska-Polom**	**1.59**	**273**	*e*PG	**Pn**	**05 27 30.6**	**-0.4**
DPC	comp=Z,44nm,0.6s			*e*SG	**Sn**	**05 27 51.5**	**-0.7**
DPC	**Dobruska-Polom**	**1.59**	**273**	Pg	**Pn**	**05 27 30.6**	**-0.4**
DPC	44nm,0.6s			Sg	**Sn**	**05 27 51.5**	**-0.7**
JAVC	**Velka Javorina**	**1.61**	**208**	*e*Sg	**Sg**	**05 27 54.5**	**+1.4**
JAVC	**Velka Javorina**	**1.61**	**208**	*e*SG	**Sg**	**05 27 54.5**	**+1.4**
KSP	**Ksiaz**	**1.69**	**290**	*e*Pg	**Pg**	**05 27 34.0**	**+0.1**
KSP				*e*Sg	**Sg**	**05 27 56.6**	**+0.7**
KSP	**Ksiaz**	**1.69**	**290**	*e*Pg	**Pg**	**05 27 34.0**	**+0.1**
KSP				*e*Sg	**Sg**	**05 27 56.6**	**+0.7**
KSP	**Ksiaz**	**1.69**	**290**	*e*Pg	**Pg**	**05 27 34.0**	**+0.1**
KSP				*e*Sg	**Sg**	**05 27 56.6**	**+0.7**
VRAC	**Vranov**	**1.73**	**236**	*e*Pn	**Pn**	**05 27 33.0**	**+0.1**
VRAC				*e*Sg	**Sn**	**05 27 55.5**	**-0.2**
VRAC	**Vranov**	**1.73**	**236**	*e*PN	**Pn**	**05 27 33.0**	**+0.1**
VRAC				*e*SG	**Sn**	**05 27 55.5**	**-0.2**
VYHS	**Vyhne**	**1.79**	**179**	*e*PN	**Pb**	**05 27 35.6**	**+0.3**
VYHS				*e*SN	**Sn**	**05 27 55.3**	**-1.9**
VYHS				*e*LG	Lg	05 28 07.5	
VYHS	**Vyhne**	**1.79**	**179**	*e*Pn	**Pb**	**05 27 35.6**	**+0.3**
VYHS				*e*Sn	**Sn**	**05 27 55.3**	**-1.9**
UPC	**Upice** comp=Z,11nm,0.3s	**1.80**	**278**	*e*SG	**Sn**	**05 27 57.4**	**+0.1**
UPC	**Upice** 11nm,0.3s	**1.80**	**278**	Sg	**Sn**	**05 27 57.4**	**+0.1**
KRUC	**Moravsky**	**1.98**	**233**	*e*Sg	**Sn**	**05 28 02.6**	**+0.7**
KRUC	**Moravsky**	**1.98**	**233**	*e*SG	**Sn**	**05 28 02.6**	**+0.7**
PRU	**Pruhonice** comp=Z,6.4nm,0.4s	**2.75**	**265**	*e*SG	**Sb**	**05 28 27.0**	**+1.1**
PRU	**Pruhonice** 6.4nm,0.4s	**2.75**	**265**	Sg	**Sb**	**05 28 27.0**	**+1.1**
BRG	**Berggiesshubel** 7.6nm,1.0s	**3.15**	**283**	SG	**Sg**	**05 28 40.8**	**-1.9**
KHC	**Kasperske Hory** comp=Z,10.0nm,0.4s	**3.58**	**253**	*e*SG	**Sg**	**05 28 54.5**	**-2.0**
KHC	**Kasperske Hory** 10.0nm,0.4s	**3.58**	**253**	Sg	**Sg**	**05 28 54.5**	**-2.0**

KRSC 13 05:45:19.3±0.9, 52°.02N×160°.67E, h41km±16km, ML3.8, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**1.15**	**340**	*e*P	Pn	05 45 40.2	+1.3
SPN				*e*S	Sn	05 45 54.9	+1.4
RUS	**Russkaya**	**1.39**	**288**	*e*P	Pn	05 45 43.1	+0.9
NLC	**Nalytchevo**	**1.41**	**326**	*e*P	Pn	05 45 44.2	+1.8
NLC				*e*S	Sn	05 46 01.8	+2.0
DALK	**Dalny**	**1.55**	**312**	*e*P	Pn	05 45 45.6	+1.2
DALK				*e*S	Sn	05 46 04.7	+1.5
MTVR	**Mutnovka**	**1.60**	**288**	*e*P	Pn	05 45 46.7	+1.5
MTVR				*e*S	Sn	05 46 06.3	+1.6
KDTR	**Khodutka, Kamc**	**1.62**	**264**	*e*P	Pn	05 45 46.9	+1.6
KDTR				*e*S	Sn	05 46 07.9	+3.0
UGLR	**Uglovaya**	**1.64**	**317**	*e*P	Pn	05 45 47.6	+1.9
UGLR				*e*S	Sn	05 46 08.7	+3.0
SDLR	**Sedlovina**	**1.67**	**320**	*e*P	Pn	05 45 47.9	+1.8
AVH	**Avacha**	**1.72**	**317**	*e*P	Pn	05 45 49.0	+2.3
KRER	**Koryakskii**	**1.74**	**319**	*e*P	Pn	05 45 49.4	+2.2
KRER				*e*S	Sn	05 46 11.9	+3.6
ASAK	**Asacha**	**1.75**	**283**	*e*P	Pn	05 45 49.1	+2.0
ASAK				*e*S	Sn	05 46 11.0	+2.8
KRMR	**Karymshinskiy**	**1.76**	**299**	*e*P	Pn	05 45 48.7	+1.5
APC	**Apacha**	**2.33**	**294**	*e*P	Pn	05 45 58.1	+3.0
GNL	**Ganaly**	**2.36**	**317**	*e*P	Pn	05 45 58.4	+2.8
MKZ	**Mys Kozlova**	**2.62**	**14**	*e*P	Pn	05 46 01.6	+2.6
TUMD	**Tumrok D**	**3.20**	**357**	*e*P	Pn	05 46 11.2	+4.2
TUMD				*e*S	Sn	05 46 47.4	+3.6

*ISCJB **13** 05:45:49.0±0.3, 71°.22N±0°.03×9°.84W±0°.08, h10km, mb3.8/7, MS2.9/7, Error ellipse: s-maj=4.9km s-min=3.0km az=138.6*
*IDC **13** 05:45:50.9±0.9, 71°.28N×9°.53W, h0km, mb3.5/5, mb1 3.8/10, mb1mx3.5/68, mbtmp3.7/10, ML3.3/4, MS2.9/9, Ms1 2.9/9, ms1mx2.7/66, Error ellipse: s-maj=19.9km s-min=12.9km az=56.0*
*CSEM **13** 05:45:52.6±0.2, 71°.26N×9°.87W, h20km, ML3.8, Error ellipse: s-maj=5.2km s-min=3.1km az=131.0*
*BER **13** 05:45:54.0±4.0, 71°.27N×9°.90W, h0km±20km, ML2.9, ML3.8(NAO)*
*REY **13** 05:45:54.4, 70°.58N×8°.60W, h10km*
*NAO **13** 05:45:56.0±2.2, 71°.38N×8°.26W, ML3.8*

ISC 13 05:45:51.9±0.5, 71°.24N±0°.04×9°.46W±0°.04, h10km, n59, σ2°.33/79, mb3.6/7, MS2.9/7, 3C, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMIC	**Jan Mayen**	**0.40**	**129**	Pg	**Pn**	**05 46 03.2**	**-0.5**
JMIC				Lg	Lg	05 46 10.0	
JMIC	**Jan Mayen** 416nm,0.3s,baz=54,slow=5.1,SNR=348	**0.40**	**129**	Pn	**Pn**	**05 46 03.1**	**-0.6**
JMIC	680nm,0.3s,baz=59,slow=19,SNR=71			Sn	**Sb**	**05 46 09.9**	**+2.7**
JMIC	**Jan Mayen**	**0.40**	**129**	Pg	**Pn**	**05 46 03.2**	**-0.5**
JMIC				Lg	Lg	05 46 10.0	
JMIC	**Jan Mayen**	**0.40**	**129**	⇑*i*P	**Pn**	**05 46 03.1**	**-0.6**
JMIC				*e*S	**Sb**	**05 46 09.9**	**+2.7**
JMIC				IAML		05 46 20.1	
SCO	**Scoresbysund** comp=Z,2μm,0.4s	**4.18**	**266**	*i* P	**Pn**	**05 46 55.1**	**-0.5**
SCO				*i*		05 46 57.9	
SCO				*e*S	**Sn**	**05 47 40.7**	**-3.7**
ILEI	**Leirhofn** baz=219	**5.48**	**211**	P	**Pn**	**05 47 11.8**	**-1.6**
ILEI	baz=219			S	**Sn**	**05 48 13.5**	**-2.8**
IGRI	**Grimsey** baz=225	**5.63**	**217**	P	**Pn**	**05 47 14.8**	**-0.7**
IGRI	baz=225			S	**Sn**	**05 48 16.7**	**-3.5**
IGIL	**Gilhagi** baz=216	**5.76**	**209**	P	**Pn**	**05 47 15.9**	**-1.4**
IGIL	baz=216			S	**Sn**	**05 48 20.7**	**-2.6**
IGIL	**Gilhagi**	**5.76**	**209**	P	**Pn**	**05 47 15.9**	**-1.4**
IGIL				S	**Sn**	**05 48 20.7**	**-2.6**
IHED	**Heoinshofoi** baz=220	**5.92**	**213**	P	**Pn**	**05 47 18.5**	**-0.9**
IHED	baz=220			S	**Sn**	**05 48 25.4**	**-1.8**
IDIM	**Dimmadals¨js** baz=218	**5.96**	**211**	P	**Pn**	**05 47 18.9**	**-1.2**
IDIM	baz=218			S	**Sn**	**05 48 25.9**	**-2.3**
IGHA	**Grjothals** baz=216	**6.03**	**209**	P	**Pn**	**05 47 19.8**	**-1.2**
IGHA	baz=216			S	**Sn**	**05 48 27.2**	**-2.7**
DAG	**Danmarks Havn**	**6.11**	**340**	⇑*i*P	**Pn**	**05 47 19.4**	**-2.6**
DAG				*i* S	Sn	05 48 23.0	-8.7
DAG	**Danmarks Havn**	**6.11**	**340**	⇑*i*P	**Pn**	**05 47 19.4**	**-2.6**
IGRA	**Granastaoir** baz=220	**6.11**	**213**	S	**Sn**	**05 48 31.0**	**-0.9**
IGRA	**Granastaoir**	**6.11**	**213**	S	**Sn**	**05 48 31.0**	**-0.9**
IGRS	**Grimsstaoir** baz=213	**6.13**	**207**	P	**Pn**	**05 47 21.1**	**-1.4**
IGRS	baz=213			S	**Sn**	**05 48 30.2**	**-2.4**
IGRS	**Grimsstaoir**	**6.13**	**207**	P	**Pn**	**05 47 21.1**	**-1.4**
IGRS				S	**Sn**	**05 48 30.2**	**-2.4**
IHLA	**Hella** baz=223	**6.24**	**216**	P	**Pn**	**05 47 24.6**	**+0.8**
IHLA	baz=223			S	**Sn**	**05 48 33.7**	**-1.3**
IHLA	**Hella**	**6.24**	**216**	P	**Pn**	**05 47 24.6**	**+0.8**
IHLA				S	**Sn**	**05 48 33.7**	**-1.3**
IMEL	**Melhnausar** baz=215	**6.28**	**208**	P	**Pn**	**05 47 23.2**	**-1.2**
IMEL	baz=215			S	**Sn**	**05 48 32.8**	**-3.3**
IMEL	**Melhnausar**	**6.28**	**208**	P	**Pn**	**05 47 23.2**	**-1.2**
IMEL				S	**Sn**	**05 48 32.8**	**-3.3**
IHRN	**Hraun** baz=229	**6.45**	**222**	P	**Pn**	**05 47 28.3**	**+1.7**
HSPB	**Hornsund (broa**	**8.87**	**38**	*e*P	**Pn**	**05 47 59.9**	**0.0**
BJO1	**Bjornoya**	**8.94**	**56**	Pn	**Pn**	**05 48 02.9**	**+2.1**
BJO	**Bjornoya**	**8.99**	**56**	*e*P	**Pn**	**05 48 03.2**	**+1.7**
SUMG	**Summit**	**9.07**	**292**	*i* P	**Pn**	**05 48 04.7**	**+1.8**
SUMG				*i* S	**Sn**	**05 49 41.3**	**-3.8**
STEI	**Steigen**	**9.20**	**99**	*e*P	**Pn**	**05 48 06.0**	**+1.6**
STEI				*e*S	**Sn**	**05 49 44.0**	**-3.8**
KONS	**Konsvik**	**9.39**	**109**	*e*P	**Pn**	**05 48 07.8**	**+0.8**
KONS				*e*S	**Sn**	**05 49 47.9**	**-4.5**
KONS	comp=Z,3.2nm,0.2s			IAML		05 49 49.4	
KBS	**Kingsbay**	**9.39**	**26**	Pn	**Pn**	**05 48 06.8**	**-0.1**
KBS	**Kingsbay**	**9.39**	**26**	*e*P	**Pn**	**05 48 06.2**	**-0.8**
KBS				*e*S	Sn	05 49 42.7	-10
KBS	comp=Z,8.3nm,0.2s			IAML		05 49 48.4	
TRO	**Tromso**	**9.60**	**86**	*e*P	**Pn**	**05 48 11.3**	**+1.4**
SPA0	**Spitsbergen Ar** baz=228,slow=16	**9.62**	**33**	Pn	**Pn**	**05 48 11.2**	**+1.0**
SPA0	baz=260,slow=22			Sn	**Sn**	**05 49 54.6**	**-3.6**
SPA0	**Spitsbergen Ar** baz=228,slow=16	**9.62**	**33**	Pn	**Pn**	**05 48 11.2**	**+1.0**
SPA0				*e*P		05 48 11.4	
SPA0	baz=260,slow=22			Sn	**Sn**	**05 49 54.6**	**-3.6**
SPITS	**Spitsbergen Ar** baz=224,slow=18,SNR=121	**9.62**	**33**	Pn	**Pn**	**05 48 11.1**	**+0.9**
SPITS	baz=230,slow=22,SNR=3.1			Sn	**Sn**	**05 49 54.7**	**-3.6**
NSS	**Namsos**	**10.45**	**119**	*e*P	**Pn**	**05 48 22.7**	**+1.2**
NSS				*e*S	**Sn**	**05 50 10.2**	**-8.1**
NSS	comp=Z,5.1nm,0.3s			IAML		05 50 15.3	
KIF	**Kilpisjarvi**	**10.47**	**88**	*e*P	**Pn**	**05 48 23.0**	**+1.2**
AKN	**Aaknes**	**11.13**	**136**	Pn	**Pn**	**05 48 32.2**	**+1.4**
AKN				Sn	**Sn**	**05 50 31.5**	**-3.6**
AKN	**Aaknes**	**11.13**	**136**	Pn	**Pn**	**05 48 32.2**	**+1.4**
AKN				Sn	**Sn**	**05 50 31.5**	**-3.6**
ARA0	**ARCESS Array S** baz=296,slow=12	**11.76**	**81**	Pn	**Pn**	**05 48 41.2**	**+1.8**
ARA0	**ARCESS Array S** baz=296,slow=12	**11.76**	**81**	Pn	**Pn**	**05 48 41.2**	**+1.8**
ARCES	**ARCESS Array B** comp=Z,0.2nm,0.3s,baz=286,slow=10.0,SNR=7.3	**11.76**	**81**	Pn	**Pn**	**05 48 41.0**	**+1.6**
NOA	**NORSAR Array B** comp=Z,38nm,21.4s,baz=330,slow=35	**13.11**	**131**	LR	LR	05 53 27.7	
HFS	**Hagfors** comp=Z,0.1nm,0.3s,baz=340,slow=12,SNR=2.4	**14.52**	**128**	Pn	**Pn**	**05 49 18.1**	**+1.0**
HFS	comp=Z,28nm,20.0s,baz=320,slow=37			LR	LR	05 54 44.5	
EKA	**Eskdalemuir Ar** baz=360,slow=13,SNR=3.8	**16.20**	**167**	Pn	**P**	**05 49 42.3**	**-0.1**
FIA0	**FINESS Array S** baz=323,slow=12	**16.99**	**107**	P	**P**	**05 49 52.8**	**+1.6**
FIA0	**FINESS Array S** baz=323,slow=12	**16.99**	**107**	P	**P**	**05 49 52.8**	**+1.6**
FINES	**FINESS Array B** comp=Z,0.2nm,0.3s,baz=318,slow=11,SNR=4.1	**16.99**	**107**	P	**P**	**05 49 51.5**	**+0.3**
RES	**Resolute Bay** comp=Z,2.9nm,0.6s,baz=50,slow=10,SNR=9.0	**23.22**	**318**	P	**P**	**05 51 03.1**	**+4.6**
RES	comp=Z,29nm,18.7s,baz=330,slow=36			LR	LR	05 59 39.9	
GERES	**GERESS Array B** comp=Z,0.3nm,0.3s,baz=326,slow=8.3,SNR=5.0	**24.92**	**142**	P	**P**	**05 51 17.5**	**+2.7**
GERES	comp=Z,23nm,19.0s,baz=300,slow=34			LR	LR	06 00 09.5	
MLR	**Muntele Rosu** comp=Z,24nm,20.0s,baz=349,slow=37	**30.90**	**127**	LR	LR	06 05 09.6	
AKTO	**Aktyubinsk** comp=Z,27nm,18.2s,baz=351,slow=36	**36.22**	**88**	LR	LR	06 07 42.4	
YKA	**Yellowknife Ar** comp=Z,0.9nm,0.8s,baz=25,slow=8.6,SNR=4.1	**36.99**	**312**	P	**P**	**05 52 59.3**	**-1.5**
YKA	comp=Z,4.6nm,19.7s,baz=304,slow=37			LR	LR	06 08 34.8	
MDT	**Midelt** comp=Z,75nm,20.2s,baz=179,slow=34	**38.57**	**173**	LR	LR	06 07 32.9	
ILAR	**Eielson Array** comp=Z,0.4nm,0.8s,baz=14,slow=8.4,SNR=5.0	**41.17**	**334**	P	**P**	**05 53 35.9**	**+0.1**
ZALV	**Zalesovo Beam** comp=Z,26nm,21.3s,baz=248,slow=39	**41.50**	**63**	LR	LR	06 12 57.0	
KURBB	**Kurchatov Arra** comp=Z,0.6nm,0.7s,baz=336,slow=7.8,SNR=3.9	**42.55**	**70**	P	**P**	**05 53 49.0**	**+1.8**
PDAR	**Pinedale Array** comp=Z,15nm,0.5s,baz=43,slow=6.8,SNR=3.2	**53.25**	**295**	P	**P**	**05 55 10.0**	**-0.4**
TORD	**Torodi Ar. Bea** comp=Z,0.8nm,0.8s,baz=354,slow=7.4,SNR=4.1	**58.46**	**167**	P	**P**	**05 55 50.1**	**+2.5**

*NEIC **13** 05:50:17.0±0.0, 14°.75N×93°.35W, h16km, MD4.0(MEX), After MEX.*

MEX 13 05:50:17.0±1.1, 14°.75N×93°.35W, h16km±74km, MD4.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.96**	**8**	*e*P	Pb	05 50 31.8	-3.5
PCIG				*i* S	Sb	05 50 43.4	-4.4
PCIG		**0.96**	**8**	*e*P	Pb	05 50 31.8	-3.5
PCIG				*i* S	Sb	05 50 43.4	-4.4
THIG		**1.06**	**81**	*e*P	Pb	05 50 33.3	-3.8
THIG				*e*S	Sb	05 50 46.4	-4.3
THIG		**1.06**	**81**	*e*P	Pb	05 50 33.3	-3.8
THIG				*e*S	Sb	05 50 46.4	-4.3
CCIG	**Comitan**	**1.92**	**37**	*e*P	Pn	05 50 46.9	-2.4
CCIG				*e*S	Sn	05 51 08.6	-4.6
CCIG	**Comitan**	**1.92**	**37**	*e*P	Pn	05 50 46.9	-2.4
CCIG				*e*S	Sn	05 51 08.6	-4.6
TGIG		**2.03**	**6**	*e*P	Pn	05 50 47.4	-3.3
TGIG				*e*S	Sn	05 51 10.4	-5.3
TGIG		**2.03**	**6**	*e*P	Pn	05 50 47.4	-3.3
TGIG				*e*S	Sn	05 51 10.4	-5.3

*DJA **13** 06:32:37.8±0.4, 4°S±4°×12°9E±°, h10km±4km, M4.0/6, mb4.3/1, MLv3.8/6*
*ISCJB **13** 06:32:38.2±0.5, 4°.14S±0°.05×129°.46E±0°.05, h33km, mb3.9/5, MS4.0/2, Error ellipse: s-maj=8.6km s-min=5.3km az=38.7*
*IDC **13** 06:32:43.2±3.5, 4°.16S×130°.13E, h83km±37km, mb3.6/5, mb1 3.6/8, mb1mx3.4/54, mbtmp3.8/8, MS3.5/3, Ms1 3.5/3, ms1mx2.7/48, Error ellipse: s-maj=58.4km s-min=15.9km az=86.0*

**ISC 13 06:32:38.2±0.8, 4°.18S±0°.

6.8nm,0.3s,baz=210,slow=20,SNR=30
SIJI S **Sn** **06 34 15.1** **-1.2**
5.5nm,0.3s,baz=217,slow=20,SNR=3.7
SANI **Sanana** **4.09 301** P **Pn** **06 33 39.9** **+1.6**
EDFI **Ende, Flores** **8.98 239** P **Pn** **06 34 49.5** **+3.9**
JAY **Jayapura** **11.31 82** LR LR 06 40 15.7
comp=Z,43nm,18.3s,baz=160,slow=42
MTKI **Muara Teweh, K** **14.93 282** P **Pn** **06 36 05.3** **-1.6**
WRA **Warramunga Arr** **16.36 164** P **Pn** **06 36 25.3** **-0.1**
0.1nm,0.3s,baz=347,slow=13,SNR=6.3
WRA S **Sn** **06 39 21.6** **-4.3**
0.1nm,0.3s,baz=340,slow=22,SNR=7.9
ASAR **Alice Springs** **19.83 168** P **Pn** **06 37 07.9** **0.0**
0.2nm,0.3s,baz=346,slow=11,SNR=6.4
MKAR **Makanchi Array** **65.61 326** P **P** **06 43 20.7** **+2.0**
1.1nm,0.4s,baz=114,slow=7.9,SNR=20
ZALV **Zalesovo Beam** **68.85 334** P **P** **06 43 40.1** **+1.1**
1.0nm,0.7s,baz=101,slow=7.5,SNR=2.9
KURBB **Kurchatov Arra** **69.86 328** P **P** **06 43 47.6** **+2.2**
2.0nm,0.6s,baz=130,slow=5.5,SNR=18
BVAR **Borovoye Array** **75.43 328** P **P** **06 44 19.7** **+1.3**
0.5nm,0.4s,baz=115,slow=5.5,SNR=5.2
KVAR **Kislovodsk Arr** **90.57 314** LR LR 07 30 42.0
comp=Z,16nm,20.2s,slow=38
ILAR **Eielson Array** **91.03 25** P **P** **06 45 35.4** **-3.2**
0.1nm,0.8s,baz=263,slow=5.4,SNR=2.8
ASF **Jabal al Asfar** **94.40 302** LR LR 07 37 54.5
comp=Z,137nm,18.1s,baz=174,slow=41

DDA ***13*** *06:40:31.6, 39°.11N×29°.15E, h22km, Ml4.3*
ISCJB ***13*** *06:40:31.8±0.2, 39°.13N±0°.01×29°.14E±0°.01, h9km±2km, mb4.0/18, MS3.0/7, Error ellipse: s-maj=1.8km s-min=1.7km az=24.1*
ISK ***13*** *06:40:31.7, 39°.11N×29°.15E, h9km, ML4.3/39*
MOS ***13*** *06:40:32.4±1.1, 39°.18N×29°.17E, h15km, mb4.1/12, Error ellipse: s-maj=6.6km s-min=4.2km az=94.5*
CSEM ***13*** *06:40:32.1±0.1, 39°.11N×29°.15E, h2km, mb4.0/13, Error ellipse: s-maj=1.4km s-min=1.3km az=41.0*
NEIC ***13*** *06:40:32.1±0.0, 39°.11N×29°.17E, h5km, mb4.4/3, ML4.3(ISK), After ISK.*
THE ***13*** *06:40:33.8, 39°.08N×29°.07E, h0km±1km, ML3.9/2, Error ellipse: s-maj=2.5km s-min=1.0km az=232.0*
IDC ***13*** *06:40:34.7±2.4, 39°.13N×29°.16E, h20km±16km, mb3.8/13, mb1 3.9/21, mb1mx3.7/61, mbtmp3.9/21, ML3.7/8, MS3.0/12, Ms1 3.0/12, ms1mx2.7/68, Error ellipse: s-maj=11.8km s-min=10.9km az=1.0*
BEO ***13*** *06:40:35.3±0.9, 39°.39N×29°.23E, h5km*
SOF ***13*** *06:40:39.2, 39°.70N×28°.79E, h2km, MD3.5*
ISC 13 06:40:32.6±0.8, 39°.11N±0°.01×29°.15E±0°.01, h7km±5km, n553, σ0°99/623, mb4.0/19, MS2.9/7, 49C-33D, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SHAP	**Saphane-Kutahy**	**0.10**	**146**	PG		**Pg**	**Pg**	**06 40 34.9**	**-0.2**
SHAP				SG			**Sg**	**06 40 36.7**	**0.0**
SHAP	**Saphane-Kutahy**	**0.10**	**146**	*i* Pg			**Pg**	**06 40 34.9**	**-0.2**
SHAP				*i* Sg			**Sg**	**06 40 36.7**	**0.0**
SMAA	**Simav-Kutahya**	**0.13**	**266**	PG		**Pg**	**Pg**	**06 40 35.6**	**+0.2**
SMAA				SG			**Sg**	**06 40 38.3**	**+0.9**
SMAA	**Simav-Kutahya**	**0.13**	**266**	*i* Pg			**Pg**	**06 40 35.6**	**+0.2**
SMAA				*i* Sg			**Sg**	**06 40 38.3**	**+0.9**
SIMA	**Simav-Kutahya**	**0.13**	**259**	PG		**Pg**	**Pg**	**06 40 35.5**	**0.0**
SIMA				SG			**Sg**	**06 40 37.5**	**+0.1**
SIMA	**Simav-Kutahya**	**0.13**	**259**	*i* Pg			**Pg**	**06 40 35.5**	**0.0**
SIMA				*i* Sg			**Sg**	**06 40 37.5**	**+0.1**
GEDZ	**Gediz**	**0.22**	**107**	PG		**Pg**	**Pg**	**06 40 37.1**	**+0.1**
GEDZ				SG			**Sg**	**06 40 40.2**	**+0.3**
GEDZ	**Gediz**	**0.22**	**107**	*e*Pg		**Pg**	**Pg**	**06 40 37.1**	**+0.1**
GEDZ				*e*Sg			**Sg**	**06 40 40.2**	**+0.3**
DEMI	**Demirci**	**0.34**	**259**	⇑*i*P		**Pg**	**Pg**	**06 40 39.3**	**0.0**
DEMI				*i* S			**Sg**	**06 40 44.2**	**+0.3**
DEMI	**Demirci**	**0.34**	**259**	P		**Pg**	**Pg**	**06 40 39.3**	**0.0**
DEMI				S			**Sg**	**06 40 44.2**	**+0.3**
TVSB	**Tavsanli**	**0.42**	**36**	PG		**Pg**	**Pg**	**06 40 39.6**	**-1.2**
TVSB				SG			**Sg**	**06 40 45.9**	**-0.4**
TVSB	**Tavsanli**	**0.42**	**36**	*e*Pg		**Pg**	**Pg**	**06 40 39.6**	**-1.2**
TVSB				*e*Sg			**Sg**	**06 40 45.9**	**-0.4**
DST	**Dursunbey**	**0.64**	**321**	PG		**Pg**	**Pg**	**06 40 44.2**	**-0.8**
DST	**Dursunbey**	**0.64**	**321**	*e*Pg		**Pg**	**Pg**	**06 40 44.2**	**-0.8**
KULA	**Kula-Manisa**	**0.70**	**213**	PG		**Pg**	**Pg**	**06 40 45.6**	**-0.6**
KULA	**Kula-Manisa**	**0.70**	**213**	*e*Pg		**Pg**	**Pg**	**06 40 45.6**	**-0.6**
DURS	**Dursunbey**	**0.72**	**314**	⇑*i*P		**Pg**	**Pg**	**06 40 46.3**	**-0.1**
DURS				*i* S			**Sg**	**06 40 56.0**	**+0.2**
DURS	**Dursunbey**	**0.72**	**314**	P		**Pg**	**Pg**	**06 40 46.3**	**-0.1**
DURS				S			**Sg**	**06 40 56.0**	**+0.2**
KUTH	**Kutahya**	**0.74**	**67**	PG		**Pg**	**Pg**	**06 40 46.3**	**-0.5**
KUTH	**Kutahya**	**0.74**	**67**	*e*Pg		**Pg**	**Pg**	**06 40 46.3**	**-0.5**
MANT	**Manisa**	**0.77**	**217**	⇑*i*P		**Pg**	**Pg**	**06 40 46.7**	**-0.7**
MANT				*i* S			**Sg**	**06 40 57.0**	**-0.5**
MANT	**Manisa**	**0.77**	**217**	*e*Pg		**Pg**	**Pg**	**06 40 46.7**	**-0.7**
MANT				*e*Sg			**Sg**	**06 40 56.2**	**-1.2**
MANT	**Manisa**	**0.77**	**217**	P		**Pg**	**Pg**	**06 40 46.7**	**-0.7**
MANT				*e*Sg			**Sg**	**06 40 56.2**	**-1.2**
MANT				S			**Sg**	**06 40 57.0**	**-0.5**
KHAL	**Karahalli**	**0.79**	**160**	⇑*i*P		**Pg**	**Pg**	**06 40 46.4**	**-1.3**
KHAL				*i* S			**Sg**	**06 40 56.6**	**-1.3**
KHAL	**Karahalli**	**0.79**	**160**	P		**Pg**	**Pg**	**06 40 46.4**	**-1.3**
KHAL				S			**Sg**	**06 40 56.6**	**-1.3**
KHL	**Karahalli**	**0.84**	**159**	PG		**Pg**	**Pg**	**06 40 48.3**	**-0.4**
KHL	**Karahalli**	**0.84**	**159**	*e*Pg		**Pg**	**Pg**	**06 40 48.3**	**-0.4**
ORLT	**Orhaneli**	**0.95**	**348**	PG		**Pg**	**Pg**	**06 40 50.2**	**-0.8**
ORLT	**Orhaneli**	**0.95**	**348**	*e*Pg		**Pg**	**Pg**	**06 40 50.2**	**-0.8**
AUBOZ	**BOZOYUK**	**1.05**	**40**	PG		**Pg**	**Pg**	**06 40 52.0**	**-0.9**
AUBOZ	**BOZOYUK**	**1.05**	**40**	⇑*i*P		**Pg**	**Pg**	**06 40 51.9**	**-0.9**
AUBOZ				*i* S			**Sb**	**06 41 06.9**	**-0.4**
AUBOZ	**BOZOYUK**	**1.05**	**40**	*e*Pg		**Pg**	**Pg**	**06 40 52.0**	**-0.9**
AUBOZ				S			**Sb**	**06 41 06.9**	**-0.4**
AKHS	**Akhisar**	**1.06**	**258**	⇑*i*P		**Pg**	**Pg**	**06 40 52.7**	**-0.3**
AKHS				*i* S			**Sg**	**06 41 07.1**	**+0.3**
AKHS	**Akhisar**	**1.06**	**258**	P		**Pg**	**Pg**	**06 40 52.7**	**-0.3**
AKHS				S			**Sg**	**06 41 07.1**	**+0.3**
AKS	**Akhisar**	**1.06**	**258**	PG		**Pg**	**Pg**	**06 40 52.3**	**-0.7**
AKS	**Akhisar**	**1.06**	**258**	*e*Pg		**Pg**	**Pg**	**06 40 52.3**	**-0.7**
AUKUT	**KUTAHYA**	**1.08**	**38**	⇑*i*P		Pg		06 40 46.2	-7.2
AUKUT				*i* S			Sg	06 40 56.6	-11
BALB	**Balikesir**	**1.11**	**299**	PN		**Pn**	**Pn**	**06 40 54.5**	**-0.1**
BALB	**Balikesir**	**1.11**	**299**	*e*Pn		**Pn**	**Pn**	**06 40 54.5**	**-0.1**
STEP	**BALIKESIR_Sava**	**1.14**	**284**	⇑*i*P		**Pg**	**Pg**	**06 40 54.0**	**-0.5**
STEP				*i* S			**Sn**	**06 41 10.7**	**-0.2**
STEP	**BALIKESIR_Sava**	**1.14**	**284**	P		**Pg**	**Pg**	**06 40 54.0**	**-0.5**
STEP				S			**Sn**	**06 41 10.7**	**-0.2**
KZIL	**AFYON_Kizioren**	**1.15**	**137**	*i* P		**Pg**	**Pg**	**06 40 54.4**	**-0.4**
KZIL				*i* S			**Sn**	**06 41 11.1**	**-0.2**
KZIL	**AFYON_Kizioren**	**1.15**	**137**	P		**Pg**	**Pg**	**06 40 54.4**	**-0.4**
KZIL				S			**Sn**	**06 41 11.1**	**-0.2**
CAVI	**Cavuskoy**	**1.22**	**26**	PN		**Pg**	**Pg**	**06 40 55.4**	**-0.6**
CAVI	**Cavuskoy**	**1.22**	**26**	*e*Pn		**Pg**	**Pg**	**06 40 55.4**	**-0.6**
IZI	**Iznik**	**1.25**	**12**	PN		**Pg**	**Pg**	**06 40 56.1**	**-0.6**
IZI	**Iznik**	**1.25**	**12**	*e*Pn		**Pg**	**Pg**	**06 40 56.1**	**-0.6**
BORA	**Eskisehir**	**1.27**	**52**	PN		**Pg**	**Pg**	**06 40 55.9**	**-1.1**
BORA	**Eskisehir**	**1.27**	**52**	⇑*i*P		**Pg**	**Pg**	**06 40 55.7**	**-1.3**
BORA				*i* S			**Sn**	**06 41 13.9**	**-0.3**
BORA	**Eskisehir**	**1.27**	**52**	P		**Pg**	**Pg**	**06 40 55.7**	**-1.3**
BORA				S			**Sn**	**06 41 13.9**	**-0.3**
MDNY	**Mudanya-Bursa**	**1.27**	**351**	PN		**Pg**	**Pg**	**06 40 56.2**	**-0.9**
MDNY	**Mudanya-Bursa**	**1.27**	**351**	*e*Pn		**Pg**	**Pg**	**06 40 56.2**	**-0.9**
KCTX	**Karacabey (Bur**	**1.31**	**332**	PN		**Pn**	**Pn**	**06 40 57.0**	**-0.3**
KCTX	**Karacabey (Bur**	**1.31**	**332**	*e*Pn		**Pn**	**Pn**	**06 40 57.0**	**-0.3**
BALY	**Balya**	**1.34**	**299**	⇑*i*P		**Pn**	**Pn**	**06 40 56.6**	**-1.2**
BALY				*i* S			**Sn**	**06 41 16.0**	**+0.1**
BALY	**Balya**	**1.34**	**299**	P		**Pn**	**Pn**	**06 40 56.6**	**-1.2**
DENT	**Denizli**	**1.36**	**184**	PN		**Pn**	**Pn**	**06 40 57.6**	**-0.4**
DENT	**Denizli**	**1.36**	**184**	*e*Pn		**Pn**	**Pn**	**06 40 57.6**	**-0.4**
ESKT	**Eskisehir**	**1.38**	**72**	PN		**Pn**	**Pn**	**06 40 58.1**	**-0.4**
ESKT	**Eskisehir**	**1.38**	**72**	⇓*i*P		**Pn**	**Pn**	**06 40 56.7**	**-1.8**
ESKT				*i* S			**Sn**	**06 41 22.5**	**+5.4**
ESKT	**Eskisehir**	**1.38**	**72**	*e*Pn		**Pn**	**Pn**	**06 40 58.1**	**-0.4**
SEYT	**Eskypehyr**	**1.38**	**72**	P		**Pn**	**Pn**	**06 40 56.7**	**-1.7**
ADVT	**Abdulvahap**	**1.40**	**19**	PN		**Pn**	**Pn**	**06 40 58.5**	**0.0**
ADVT	**Abdulvahap**	**1.40**	**19**	*e*Pn		**Pn**	**Pn**	**06 40 58.5**	**0.0**
DNZL	**Cakiroluk**	**1.42**	**183**	⇓*i*P		**Pn**	**Pn**	**06 40 58.3**	**-0.7**
DNZL				*i* S			**Sn**	**06 41 18.8**	**+0.8**
DNZL	**Cakiroluk**	**1.42**	**183**	P		**Pn**	**Pn**	**06 40 58.3**	**-0.7**
DNZL				S			**Sn**	**06 41 18.8**	**+0.8**
BOLV	**Bolvadin**	**1.46**	**105**	⇓*i*P		**Pn**	**Pn**	**06 40 59.6**	**+0.1**
BOLV				*i* S			**Sg**	**06 41 19.2**	**-0.4**
BOLV	**Bolvadin**	**1.46**	**105**	P		**Pn**	**Pn**	**06 40 59.6**	**+0.1**
BOLV				S			**Sg**	**06 41 19.2**	**-0.4**
GONE	**Gonen-Balikesi**	**1.47**	**310**	PN		**Pn**	**Pn**	**06 40 59.4**	**-0.1**
GONE	**Gonen-Balikesi**	**1.47**	**310**	*e*Pn		**Pn**	**Pn**	**06 40 59.4**	**-0.1**
YLV	**Yalova**	**1.47**	**7**	PN		**Pn**	**Pn**	**06 40 59.3**	**-0.2**
YLV	**Yalova**	**1.47**	**7**	*e*Pn		**Pn**	**Pn**	**06 40 59.3**	**-0.2**
ARMT	**Armutlu**	**1.47**	**352**	PN		**Pn**	**Pn**	**06 40 59.1**	**-0.5**
ARMT	**Armutlu**	**1.47**	**352**	*e*Pn		**Pn**	**Pn**	**06 40 59.1**	**-0.5**
GPA	**Golpazari**	**1.48**	**37**	PN		**Pn**	**Pn**	**06 40 59.6**	**-0.1**
GPA	**Golpazari**	**1.48**	**37**	*e*Pn		**Pn**	**Pn**	**06 40 59.6**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	**1.52**	**221**	PN		**Pn**	**Pn**	**06 40 59.8**	**-0.6**
AYDB	**Zeytinkoy-Aydi**	**1.52**	**221**	*e*Pn		**Pn**	**Pn**	**06 40 59.8**	**-0.6**
SBT5	**Esenkoy-Cinarc**	**1.53**	**352**	PN		**Pn**	**Pn**	**06 41 00.3**	**0.0**
SBT5	**Esenkoy-Cinarc**	**1.53**	**352**	*e*Pn		**Pn**	**Pn**	**06 41 00.3**	**0.0**
BRDR	**BURDUR-Merkez**	**1.58**	**153**	⇓*i*P		**Pn**	**Pn**	**06 41 00.5**	**-0.7**
BRDR				*i* S			**Sg**	**06 41 25.2**	**+1.7**
BRDR	**BURDUR-Merkez**	**1.58**	**153**	P		**Pn**	**Pn**	**06 41 00.5**	**-0.7**
BRDR				S			**Sg**	**06 41 25.2**	**+1.7**
EDC	**Edincik**	**1.58**	**322**	PN		**Pn**	**Pn**	**06 41 00.9**	**-0.2**
EDC	**Edincik**	**1.58**	**322**	*e*Pn		**Pn**	**Pn**	**06 41 00.9**	**-0.2**
GEYV	**SAKARYA_Geyve**	**1.63**	**32**	⇑*i*P		**Pn**	**Pn**	**06 41 01.5**	**-0.3**
GEYV				*i* S			**Sg**	**06 41 26.6**	**+1.4**
GEYV	**SAKARYA_Geyve**	**1.63**	**32**	P		**Pn**	**Pn**	**06 41 01.5**	**-0.3**
GEYV				S			**Sg**	**06 41 26.6**	**+1.4**
TAVA	**DENIZLI_Tavas**	**1.65**	**186**	⇓*i*P		**Pn**	**Pn**	**06 41 01.2**	**-0.9**
TAVA				*i* S			**Sg**	**06 41 25.3**	**-0.4**
TAVA	**DENIZLI_Tavas**	**1.65**	**186**	P		**Pn**	**Pn**	**06 41 01.2**	**-0.9**
TAVA				S			**Sg**	**06 41 25.3**	**-0.4**
ISP	**Isparta**	**1.68**	**140**	PN		**Pn**	**Pn**	**06 41 01.5**	**-1.0**
ISP	**Isparta**	**1.68**	**140**	⇓*i*P		**Pn**	**Pn**	**06 41 01.8**	**-0.7**
ISP	**Isparta**	**1.68**	**140**	*e*Pn		**Pn**	**Pn**	**06 41 01.8**	**-0.7**
ISP	**Isparta**	**1.68**	**140**	P		**Pn**	**Pn**	**06 41 01.8**	**-0.7**
ISP				S			**Sg**	**06 41 26.9**	**+0.3**
ISP	**Isparta**	**1.68**	**140**	*d*P		**Pn**	**Pn**	**06 41 01.6**	**-1.0**
ISP	**Isparta**	**1.68**	**140**	*e*Pn		**Pn**	**Pn**	**06 41 01.6**	**-1.0**
ISP	**Isparta**	**1.68**	**140**	P		**Pn**	**Pn**	**06 41 01.8**	**-0.7**
ISP				S			**Sg**	**06 41 26.9**	**+0.3**
GULT	**Gulveren**	**1.69**	**38**	PN		**Pn**	**Pn**	**06 41 02.8**	**+0.2**
GULT	**Gulveren**	**1.69**	**38**	*e*Pn		**Pn**	**Pn**	**06 41 02.8**	**+0.2**
BAGO	**Egridir - ISPA**	**1.71**	**130**	⇓*i*P		**Pn**	**Pn**	**06 41 02.8**	**0.0**
BAGO				*i* S			**Sg**	**06 41 31.5**	**+4.1**
KNL	**Bal¨–kesir**	**1.71**	**313**	⇑*i*P		**Pn**	**Pn**	**06 41 02.6**	**-0.1**
KNL				*i* S			**Sg**	**06 41 26.9**	**-0.6**
AYDN	**Tasoluk**	**1.76**	**215**	*i* P		**Pn**	**Pn**	**06 41 02.9**	**-0.7**
AYDN	**Tasoluk**	**1.76**	**215**	P		**Pn**	**Pn**	**06 41 02.8**	**-0.7**
HRT	**Hereke**	**1.76**	**13**	PN		**Pn**	**Pn**	**06 41 03.0**	**-0.5**
HRT	**Hereke**	**1.76**	**13**	*e*Pn		**Pn**	**Pn**	**06 41 03.0**	**-0.5**
SPNC	**Sapanca-Adapaz**	**1.81**	**29**	PN		**Pn**	**Pn**	**06 41 03.5**	**-0.7**
SPNC	**Sapanca-Adapaz**	**1.81**	**29**	*e*Pn		**Pn**	**Pn**	**06 41 03.5**	**-0.7**
SBT2	**Guzelce-Avcila**	**1.83**	**345**	PN		**Pn**	**Pn**	**06 41 04.1**	**-0.3**
SBT2	**Guzelce-Avcila**	**1.83**	**345**	*e*Pn		**Pn**	**Pn**	**06 41 04.1**	**-0.3**
SAUV	**Serdivan-Sakar**	**1.86**	**29**	PN		**Pn**	**Pn**	**06 41 04.9**	**0.0**
SAUV	**Serdivan-Sakar**	**1.86**	**29**	*e*Pn		**Pn**	**Pn**	**06 41 04.9**	**0.0**
AUSIV	**SIVRIHISAR**	**1.89**	**79**	PN		**Pn**	**Pn**	**06 41 05.2**	**-0.2**
AUSIV	**SIVRIHISAR**	**1.89**	**79**	*e*P		**Pb**	**Pn**	**06 41 06.3**	**-1.2**
AUSIV				*i* S			**Sg**	**06 41 32.3**	**-1.0**
AUSIV	**SIVRIHISAR**	**1.89**	**79**	*e*Pn		**Pn**	**Pn**	**06 41 05.2**	**-0.2**
AUSIV	**SIVRIHISAR**	**1.89**	**79**	P		**Pb**	**Pn**	**06 41 06.3**	**-1.2**
AUSIV				S			**Sg**	**06 41 32.3**	**-1.0**
GOLH	**Golhisar**	**1.90**	**170**	*i* P		**Pn**	**Pn**	**06 41 04.5**	**-1.0**
GOLH	**Golhisar**	**1.90**	**170**	P		**Pn**	**Pn**	**06 41 04.5**	**-1.0**
KRBG	**Karabiga-Canak**	**1.92**	**313**	PN		**Pn**	**Pn**	**06 41 05.7**	**0.0**
KRBG	**Karabiga-Canak**	**1.92**	**313**	*e*Pn		**Pn**	**Pn**	**06 41 05.7**	**0.0**
AYVA	**Ayvalik**	**1.92**	**277**	*i* P		**Pn**	**Pn**	**06 41 05.6**	**-0.1**
AYVA				*i* S			**Sn**	**06 41 29.8**	**-0.3**
AYVA	**Ayvalik**	**1.92**	**277**	P		**Pn**	**Pn**	**06 41 05.6**	**-0.1**
AYVA				S			**Sn**	**06 41 29.8**	**-0.3**
FOCM	**Fo^§a**	**1.93**	**259**	PN		**Pn**	**Pn**	**06 41 05.2**	**-0.6**
FOCM	**Fo^§a**	**1.93**	**259**	*e*Pn		**Pn**	**Pn**	**06 41 05.2**	**-0.6**
KAVV	**Kandilli-Istan**	**1.95**	**358**	PN		**Pn**	**Pn**	**06 41 05.5**	**-0.7**
KAVV	**Kandilli-Istan**	**1.95**	**358**	*e*Pn		**Pn**	**Pn**	**06 41 05.5**	**-0.7**
ISK	**Istanbul-Kandi**	**1.96**	**358**	PN		**Pn**	**Pn**	**06 41 05.2**	**-1.0**
ISK	**Istanbul-Kandi**	**1.96**	**358**	*e*Pn		**Pn**	**Pn**	**06 41 05.2**	**-1.0**
AUMIH	**MIHALICIK**	**1.96**	**67**	PN		**Pn**	**Pn**	**06 41 06.2**	**-0.2**
AUMIH	**MIHALICIK**	**1.96**	**67**	⇑*i*P		**Pb**	**Pn**	**06 41 08.7**	**0.0**
AUMIH				*i* S			**Sg**	**06 41 35.7**	**0.0**
AUMIH	**MIHALICIK**	**1.96**	**67**	*e*Pn		**Pn**	**Pn**	**06 41 06.2**	**-0.2**
AUMIH	**MIHALICIK**	**1.96**	**67**	P		**Pb**	**Pn**	**06 41 08.7**	**0.0**
AUMIH				S			**Sg**	**06 41 35.7**	**0.0**
SBT3	**Marmara-Eregli**	**1.99**	**333**	PN		**Pn**	**Pn**	**06 41 06.9**	**+0.4**
SBT3	**Marmara-Eregli**	**1.99**	**333**	*e*Pn		**Pn**	**Pn**	**06 41 06.9**	**+0.4**
BTAS	**Taskesti**	**2.04**	**44**	⇑*i*P		**Pn**	**Pn**	**06 41 07.5**	**0.0**
BTAS				*i* S			**Sb**	**06 41 34.6**	**-1.1**
BTAS	**Taskesti**	**2.04**	**44**	P		**Pn**	**Pn**	**06 41 07.4**	**0.0**
BTAS				S			**Sb**	**06 41 34.6**	**-1.1**
GCAM	**G?zelcaml?**	**2.06**	**227**	PN		**Pn**	**Pn**	**06 41 07.6**	**0.0**
GCAM	**G?zelcaml?**	**2.06**	**227**	*i* P		**Pn**	**Pn**	**06 41 07.8**	**+0.2**
GCAM	**G?zelcaml?**	**2.06**	**227**	P		**Pn**	**Pn**	**06 41 07.8**	**+0.2**
DGB	**¨zmir**	**2.06**	**240**	*i* P		**Pn**	**Pn**	**06 41 07.0**	**-0.7**
SILT	**Sile**	**2.08**	**10**	PN		**Pn**	**Pn**	**06 41 07.7**	**-0.2**
SILT	**Sile**	**2.08**	**10**	*e*Pn		**Pn**	**Pn**	**06 41 07.7**	**-0.2**
MDUB	**Mudurnu**	**2.08**	**49**	PN		**Pn**	**Pn**	**06 41 07.1**	**-1.0**
MDUB	**Mudurnu**	**2.08**	**49**	*e*Pn		**Pn**	**Pn**	**06 41 07.1**	**-1.0**
YER	**Yerkesik**	**2.09**	**199**	PN		**Pn**	**Pn**	**06 41 06.6**	**-1.4**
YER	**Yerkesik**	**2.09**	**199**	*e*Pn		**Pn**	**Pn**	**06 41 06.6**	**-1.4**
BGKT	**Bogazkoy**	**2.09**	**352**	PN		**Pn**	**Pn**	**06 41 07.4**	**-0.6**
BGKT	**Bogazkoy**	**2.09**	**352**	*e*Pn		**Pn**	**Pn**	**06 41 07.4**	**-0.6**
KRBN	**Karaburun**	**2.09**	**257**	PN		**Pn**	**Pn**	**06 41 08.2**	**+0.2**
KRBN	**Karaburun**	**2.09**	**257**	*e*Pn		**Pn**	**Pn**	**06 41 08.2**	**+0.2**
MLSB	**Milas**	**2.11**	**211**	PN		**Pn**	**Pn**	**06 41 08.1**	**-0.2**
MLSB	**Milas**	**2.11**	**211**	*e*Pn		**Pn**	**Pn**	**06 41 08.1**	**-0.2**
BAYC	**CANAKKALE_Bayr**	**2.11**	**288**	*i* P		**Pn**	**Pn**	**06 41 08.6**	**+0.2**
BAYC	**CANAKKALE_Bayr**	**2.11**	**288**	P		**Pn**	**Pn**	**06 41 08.6**	**+0.2**
URLA	**Izmir**	**2.13**	**250**	PN		**Pn**	**Pn**	**06 41 06.9**	**-1.7**
URLA	**Izmir**	**2.13**	**250**	*i* P		**Pn**	**Pn**	**06 41 07.7**	**-0.9**
URLA	**Izmir**	**2.13**	**250**	*e*Pn		**Pn**	**Pn**	**06 41 06.9**	**-1.7**
URLA	**Izmir**	**2.13**	**250**	P		**Pn**	**Pn**	**06 41 07.7**	**-0.9**
KAND	**Kocaeli-Kandir**	**2.14**	**22**	⇑*i*P		**Pn**	**Pn**	**06 41 08.8**	**+0.1**
KAND				*i* S			**Sn**	**06 41 36.7**	**+1.2**
KAND	**Kocaeli-Kandir**	**2.14**	**22**	P		**Pn**	**Pn**	**06 41 08.8**	**+0.1**
KAND				S			**Sn**	**06 41 36.7**	**+1.2**
KIZT	**Kizilcal**	**2.14**	**95**	PN		**Pn**	**Pn**	**06 41 08.5**	**-0.4**
KIZT	**Kizilcal**	**2.14**	**95**	*e*Pn		**Pn**	**Pn**	**06 41 08.5**	**-0.4**
KLYT	**Kilyos**	**2.14**	**358**	PN		**Pn**	**Pn**	**06 41 08.4**	**-0.4**
KLYT	**Kilyos**	**2.14**	**358**	*e*Pn		**Pn**	**Pn**	**06 41 08.4**	**-0.4**
CTKS	**Kestanelik-??a**	**2.18**	**347**	PN		**Pn**	**Pn**	**06 41 08.7**	**-0.6**
CTKS	**Kestanelik-??a**	**2.18**	**347**	*e*Pn		**Pn**	**Pn**	**06 41 08.7**	**-0.6**
RKY	**Sarkoy-Tekirda**	**2.19**	**317**	PN		**Pn**	**Pn**	**06 41 09.2**	**-0.2**
RKY	**Sarkoy-Tekirda**	**2.19**	**317**	*e*Pn		**Pn**	**Pn**	**06 41 09.2**	**-0.2**
SUTC	**Sutluce-Ispart**	**2.19**	**138**	PN		**Pn**	**Pn**	**06 41 09.2**	**-0.3**
SUTC	**Sutluce-Ispart**	**2.19**	**138**	*e*Pn		**Pn**	**Pn**	**06 41 09.2**	**-0.3**
LPK	**Lapseki**	**2.23**	**305**	PN		**Pn**	**Pn**	**06 41 09.3**	**-0.7**
LPK	**Lapseki**	**2.23**	**305**	*e*Pn		**Pn**	**Pn**	**06 41 09.3**	**-0.7**
SLVT	**Silivri**	**2.24**	**342**	PN		**Pn**	**Pn**	**06 41 10.2**	**+0.1**
SLVT	**Silivri**	**2.24**	**342**	*e*Pn		**Pn**	**Pn**	**06 41 10.2**	**+0.1**
PRK	**Paraskevi**	**2.24**	**274**	P		**Pn**	**Pn**	**06 41 10.2**	**+0.1**
PRK	**Paraskevi**	**2.24**	**274**	P		**Pn**	**Pn**	**06 41 10.2**	**+0.1**
TURN	**Turunc**	**2.27**	**191**	PN		**Pb**	**Pn**	**06 41 12.3**	**-1.7**
TURN	**Turunc**	**2.27**	**191**	*e*Pn		**Pb**	**Pn**	**06 41 12.3**	**-1.7**
CRLT	**Corlu**	**2.29**	**332**	PN		**Pn**	**Pn**	**06 41 10.9**	**+0.1**
CRLT	**Corlu**	**2.29**	**332**	*e*Pn		**Pn**	**Pn**	**06 41 10.9**	**+0.1**
SMG	**Samos**	**2.29**	**233**	P		**Pn**	**Pn**	**06 41 10.1**	**-0.7**
SMG	**Samos**	**2.29**	**233**	P		**Pn**	**Pn**	**06 41 10.1**	**-0.7**
EZN	**Ezine**	**2.30**	**289**	PN		**Pn**	**Pn**	**06 41 11.4**	**+0.5**
EZN	**Ezine**	**2.30**	**289**	P		**Pn**	**Pn**	**06 41 12.3**	**+1.4**
EZN	**Ezine**	**2.30**	**289**	*e*Pn		**Pn**	**Pn**	**06 41 11.4**	**+0.5**
EZN	**Ezine**	**2.30**	**289**	P		**Pn**	**Pn**	**06 41 12.3**	**+1.4**
KORT	**Korkueli**	**2.31**	**155**	PN		**Pn**	**Pn**	**06 41 11.4**	**+0.2**
KORT	**Korkueli**	**2.31**	**155**	*e*Pn		**Pn**	**Pn**	**06 41 11.4**	**+0.2**
DALY	**Dalyan (Mu¨la**	**2.32**	**190**	PN		**Pn**	**Pn**	**06 41 11.4**	**+0.2**
DALY	**Dalyan (Mu¨la**	**2.32**	**190**	*e*Pn		**Pn**	**Pn**	**06 41 11.4**	**+0.2**
CESE	**¨e¨me**	**2.36**	**252**	PN		**Pn**	**Pn**	**06 41 11.9**	**+0.2**
CESE	**¨e¨me**	**2.36**	**252**	*e*Pn		**Pn**

ICOR	Ion Corvin	5.10 349	⇑	iP		Pn	06 41 50.0 +0.6
ICOR	Ion Corvin	5.10 349	⇑	iP		Pn	06 41 50.0 +0.6
PGB	Panagyurishte	5.11 314		P		Pn	06 41 49.9 +0.3
PGB	Panagyurishte	5.11 314		P		Pn	06 41 49.9 +0.3
IDI	Anoyia	5.11 223		Pn		Pn	06 41 49.8 +0.2
	comp=Z,1.8nm,0.3s,baz=52,slow=12,SNR=14						
IDI				Lg		Lg	06 43 20.7
	comp=Z,0.7nm,0.3s,baz=328,slow=19,SNR=1.8						
IDI	Anoyia	5.11 223	⇓	iP		Pn	06 41 50.0 +0.4
IDI	Anoyia	5.11 223		ePn		Pn	06 41 49.6 0.0
KNT	Kendrikon	5.21 295		P		Pn	06 41 51.8 +0.9
KNT	Kendrikon	5.21 295		P		Pn	06 41 51.8 +0.9
LIT	Litokhoron	5.24 283		ePn		Pn	06 41 51.2 -0.1
LIT	Litokhoron	5.24 283		eP		Pn	06 41 51.2 -0.1
LIT	Litokhoron	5.24 283		eP		Pn	06 41 51.2 -0.1
SZAC	Souni	5.28 144		P		Pn	06 41 52.7 +0.8
CSS	Mathiatis	5.32 140		ePn		Pn	06 41 52.3 -0.2
CSS	Mathiatis	5.32 140		P		Pn	06 41 56.4 +3.9
CSS	Mathiatis	5.32 140		ePn		Pn	06 41 52.3 -0.2
SIVA	Sivas	5.36 222		P		Pn	06 41 53.7 +0.8
SIVA	Sivas	5.36 222		P		Pn	06 41 53.7 +0.8
TIRR	Tirgusor	5.37 354	⇑	iP		Pn	06 41 53.7 +0.6
TIRR	Tirgusor	5.37 354		ePn		Pn	06 41 53.2 +0.1
TIRR	Tirgusor	5.37 354		eP		Pn	06 41 53.2 +0.1
TIRR	Tirgusor	5.37 354		eP		Pn	06 41 53.2 +0.1
VAY	Valandovo	5.50 296		ePn		Pn	06 41 56.3 +1.4
VAY	Valandovo	5.50 296		ePn		Pn	06 41 51.0 -3.8
VAY	Valandovo	5.50 296		ePn		Pn	06 41 56.3 +1.4
TLB	Topalu	5.53 352	⇑	iP		Pn	06 41 55.3 0.0
TLB	Topalu	5.53 352	⇑	iP		Pn	06 41 55.3 0.0
SGRR	Singureni	5.63 336	⇑	iP		Pn	06 41 57.1 +0.4
SGRR	Singureni	5.63 336	⇑	iP		Pn	06 41 57.1 +0.4
HARR	Harsova	5.65 351	⇓	iP		Pn	06 41 58.4 +1.5
HARR	Harsova	5.65 351	⇓	iP		Pn	06 41 58.4 +1.5
VTS	Vitosha	5.69 310		ePn		Pn	06 41 58.4 +0.7
VTS				eSn		Sn	06 43 00.8 -2.5
VTS	Vitosha	5.69 310	⇑	iP		Pn	06 41 58.6 +0.9
VTS	Vitosha	5.69 310		ePn		Pn	06 41 59.0 +1.3
VTS	Vitosha	5.69 310		P		Pn	06 41 58.9 +1.3
VTS	Vitosha	5.69 310		eP		Pn	06 41 59.0 +1.3
VTS	Vitosha	5.69 310		ePn		Pn	06 41 58.4 +0.7
VTS	Vitosha	5.69 310		P		Pn	06 41 58.9 +1.3
MPEP	Malo Peshtene	5.88 318		P		Pn	06 42 00.8 +0.6
STIP	Stip	5.91 298		iPn		Pn	06 41 58.9 -1.6
TLCR		6.08 358	⇓	iP		Pn	06 42 03.4 +0.6
TLCR		6.08 358	⇓	iP		Pn	06 42 03.4 +0.6
CFR	Carcaliu	6.11 353	⇑	iP		Pn	06 42 02.9 -0.4
CFR	Carcaliu	6.11 353	⇑	iP		Pn	06 42 02.9 -0.4
FNA	Florina	6.20 288		ePn		Pn	06 42 06.4 +1.9
FNA	Florina	6.20 288		ePn		Pn	06 42 04.7 +0.1
FNA	Florina	6.20 288		P		Pn	06 42 06.5 +1.9
FNA	Florina	6.20 288		ePn		Pn	06 42 04.7 +0.1
FNA	Florina	6.20 288		P		Pn	06 42 06.5 +1.9
ISR	Istrita	6.31 343	⇓	iP		Pn	06 42 07.6 +1.5
ISR	Istrita	6.31 343	⇓	iP		Pn	06 42 07.6 +1.5
SECR		6.35 340	⇓	iP		Pn	06 42 07.4 +0.8
SECR		6.35 340	⇓	iP		Pn	06 42 07.4 +0.8
SEV	Sevastopol'	6.39 30	⇓	iP		Pn	06 42 06.0 -1.2
SEV				eS		Sn	06 43 16.8 -3.6
SEV	Sevastopol'	6.39 30		iP		Pn	06 42 06.0 -1.2
GIUM	Giurgiulesti	6.41 354	⇓	iP		Pn	06 42 08.8 +1.4
GIUM	Giurgiulesti	6.41 354	⇓	iP		Pn	06 42 08.8 +1.4
ZAPS	Zavoj	6.44 312		ePn		Pn	06 42 08.6 +0.8
YAL	Yalta	6.55 33		eP		Pn	06 42 09.4 +0.1
YAL				eS		Sn	06 43 24.3 +0.2
YAL	Yalta	6.55 33		eP		Pn	06 42 09.4 +0.1
YAL				eS		Sn	06 43 24.3 +0.2
BARS	Barje	6.67 306		ePn		Pn	06 42 11.9 +0.9
BARS	Barje	6.67 306		ePn		Pn	06 42 11.9 +0.9
MLR	Muntele Rosu	6.80 341		Pn		Pn	06 42 14.2 +1.2
	comp=Z,0.6nm,0.3s,baz=169,slow=2.0,SNR=31						
MLR				Lg		Lg	06 44 17.2
	comp=Z,0.2nm,0.3s,baz=188,slow=19,SNR=3.0						
MLR				LR		LR	06 45 22.1
	comp=Z,26nm,19.3s,baz=159,slow=42						
MLR	Muntele Rosu	6.80 341	⇑	iP		Pn	06 42 14.4 +1.5
ALU	Alushta	6.81 33		eP		Pn	06 42 14.3 +1.4
ALU				eS		Sn	06 43 32.4 +1.8
ALU	Alushta	6.81 33		eP		Pn	06 42 14.3 +1.4
ALU				eS		Sn	06 43 32.4 +1.8
MTUR	Matau	6.82 335	⇑	iP		Pn	06 42 13.1 -0.1
MTUR	Matau	6.82 335	⇑	iP		Pn	06 42 13.1 -0.1
ODBI	Odobesti	6.83 348	⇑	iP		Pn	06 42 14.8 +1.7
ODBI	Odobesti	6.83 348	⇑	iP		Pn	06 42 14.8 +1.7
SIM	Simferopol'	6.91 31		P		Pn	06 42 13.8 -0.4
SIM				S		Sn	06 43 30.6 -2.4
SIM				pmax		pmax	
	comp=Z,127nm,0.3s						
SIM	Simferopol'	6.91 31		P		Pn	06 42 13.8 -0.4
	comp=Z,127nm,0.3s						
PLOR	Plostina	6.99 346	⇓	iP		Pn	06 42 16.7 +1.4
PLOR	Plostina	6.99 346		P		Pn	06 42 16.6 +1.3
PLOR	Plostina	6.99 346		P		Pn	06 42 16.6 +1.3
VRI	Vrincioaia	6.99 346	⇓	iP		Pn	06 42 16.2 +0.9
VRI	Vrincioaia	6.99 346		P		Pn	06 42 16.0 +0.7
VRI	Vrincioaia	6.99 346		P		Pn	06 42 16.0 +0.7
ZAGS	Zajecar	7.00 314		ePn		Pn	06 42 15.6 +0.1
ZAGS	Zajecar	7.00 314		ePn		Pn	06 42 15.6 +0.1
VOIR		7.01 336	⇓	iP		Pn	06 42 16.4 +0.6
VOIR		7.01 336		P		Pn	06 42 16.0 +0.2
VOIR		7.01 336		P		Pn	06 42 16.0 +0.2
ARR	Arges	7.09 333	⇓	iP		Pn	06 42 17.5 +0.7
ARR	Arges	7.09 333	⇓	iP		Pn	06 42 17.5 +0.7
BOVS	Bovan	7.19 311		ePn		Pn	06 42 19.1 +1.0
BOVS	Bovan	7.19 311		ePn		Pn	06 42 19.1 +1.0
SELS	Selova	7.32 307		ePn		Pn	06 42 20.3 +0.4
SELS	Selova	7.32 307		ePn		Pn	06 42 20.3 +0.4
DOPR	Dopca	7.39 339	⇑	iP		Pn	06 42 21.7 +0.8
DOPR	Dopca	7.39 339	⇑	iP		Pn	06 42 21.7 +0.8
LOT	Lotru	7.48 330	⇓	iP		Pn	06 42 23.7 +1.5
LOT	Lotru	7.48 330	⇓	iP		Pn	06 42 23.7 +1.5
TESR	Tescani	7.62 347	⇑	iP		Pn	06 42 23.8 -0.2
TESR	Tescani	7.62 347	⇑	iP		Pn	06 42 23.8 -0.2
KUBS	Kucevo	7.70 316		ePn		Pn	06 42 23.6 -1.5
KUBS	Kucevo	7.70 316		ePn		Pn	06 42 23.6 -1.5
MDB	Medias	7.86 335	⇓	iP		Pn	06 42 28.8 +1.6
MDB	Medias	7.86 335	⇓	iP		Pn	06 42 28.8 +1.6
MMAI	Mount Meron Ar	7.91 138		Pn		Pn	06 42 28.1 0.0
	comp=Z,5.6nm,0.3s,baz=322,slow=13,SNR=20						
MMAI				Sn		Sn	06 43 57.1 -0.8
	comp=Z,2.4nm,0.3s,baz=316,slow=20,SNR=2.6						
MDVR	Moldovita	7.92 318	⇑	iP		Pn	06 42 27.9 -0.3
MDVR	Moldovita	7.92 318	⇑	iP		Pn	06 42 27.9 -0.3
GRUS	Gruza	7.92 310		ePn		Pn	06 42 28.3 +0.1
GRUS	Gruza	7.92 310		ePn		Pn	06 42 28.3 +0.1
IVAS	Ivanjica	8.10 306		ePn		Pn	06 42 31.0 +0.3
IVAS	Ivanjica	8.10 306		ePn		Pn	06 42 31.0 +0.3
TRUS	Trudelj	8.30 311		ePn		Pn	06 42 33.0 -0.3
TRUS	Trudelj	8.30 311		ePn		Pn	06 42 33.0 -0.3
DIVS	Divibare	8.48 309		ePn		Pn	06 42 35.6 -0.2
DIVS	Divibare	8.48 309		ePn		Pn	06 42 35.6 -0.2
BZS	Buzias	8.56 322		ePn		Pn	06 42 35.7 -1.2
BZS	Buzias	8.56 322	⇑	iP		Pn	06 42 37.0 +0.1
BZS	Buzias	8.56 322		P		Pn	06 42 38.3 +1.4
BZS	Buzias	8.56 322		ePn		Pn	06 42 35.7 -1.2
BZS	Buzias	8.56 322		P		Pn	06 42 38.3 +1.4
ARCR	ARCALIA	8.71 338	⇑	iP		Pn	06 42 39.9 +1.0
ARCR	ARCALIA	8.71 338	⇑	iP		Pn	06 42 39.9 +1.0
BURAR	Bucovina Array	8.97 343	⇑	iP		Pn	06 42 44.1 +1.5
BURAR	Bucovina Array	8.97 343		P		Pn	06 42 44.1 +1.5
BURAR	Bucovina Array	8.97 343	⇑	iP		Pn	06 42 44.1 +1.5
BUR04	Bucovina Ar. S	8.97 343		ePn		Pn	06 42 42.7 0.0
BUR04	Bucovina Ar. S	8.97 343		ePn		Pn	06 42 42.7 0.0
BUR08	Bucovina Ar. S	9.00 343		ePn		Pn	06 42 43.4 +0.3
BUR08	Bucovina Ar. S	9.00 343		ePn		Pn	06 42 43.4 +0.3
TEKS	Tekeris	9.00 310		ePn		Pn	06 42 42.3 -0.7
TEKS	Tekeris	9.00 310		ePn		Pn	06 42 42.3 -0.7
DRGR		9.01 331		ePn		Pn	06 42 41.9 -1.2
DRGR		9.01 331		ePn		Pn	06 42 41.9 -1.2
SORM	Soroca	9.04 357	⇑	iP		Pn	06 42 43.1 -0.4
SORM	Soroca	9.04 357		P		Pn	06 42 43.0 -0.4
SORM	Soroca	9.04 357		P		Pn	06 42 43.0 -0.4
ASF	Jabal al Asfar	9.36 135		Pn		Pn	06 42 49.1 +1.1
	comp=Z,0.3nm,0.3s,baz=281,slow=16,SNR=2.6						
EIL	Elat	10.56 151		Pn		Pn	06 43 03.3 -1.1
	comp=Z,0.7nm,0.3s,baz=0.0,slow=7.1,SNR=4.3						
EIL				Sn		Sn	06 44 57.9 -5.1
	comp=Z,0.3nm,0.3s,baz=270,slow=6.1,SNR=2.7						
KIV	Kislovodsk	11.24 60		eP		Pn	06 43 13.2 -0.5
KIV				pmax		pmax	
	comp=Z,8.0nm,1.0s						
KIV				MLR		MLR	
	comp=Z,18nm,9.0s						
KIV	Kislovodsk	11.24 60		eP		Pn	06 43 13.2 -0.5
	comp=Z,18nm,9.0s						
KBZ	Khabaz	11.31 62		LR		LR	06 48 43.2
	comp=Z,51nm,19.9s,baz=258,slow=43						
AK11	Malin Array Si	11.57 0		ePn		Pn	06 43 16.4 -1.6
AK11	Malin Array Si	11.57 0		ePn		Pn	06 43 16.4 -1.6
KIEV	Kiev	11.59 0		eP		Pn	06 43 17.2 -1.1
KIEV	Kiev	11.59 0	⇑	eP		Pn	06 43 17.4 -0.9
KIEV	Kiev	11.59 0		eP		Pn	06 43 17.4 -0.9
AKASG	Malin Array Be	11.59 0		Pn		Pn	06 43 16.9 -1.5
	comp=Z,1.0nm,0.3s,baz=180,slow=12,SNR=4.5						
AKBB	Malin Array Si	11.59 0		ePn		Pn	06 43 18.0 -0.4
AKBB	Malin Array Si	11.59 0		eP		Pn	06 43 18.0 -0.4
AKBB	Malin Array Si	11.59 0		eP		Pn	06 43 18.0 -0.4
GNI	Garni	12.07 80		LR		LR	06 48 06.5
	comp=Z,52nm,18.6s,baz=280,slow=38						
VORD	Divnogorie	13.84 28		eP		Pn	06 43 50.5 +1.5
VORD				pmax		pmax	
	comp=Z,10.0nm,1.2s						
VORD	Divnogorie	13.84 28		eP		Pn	06 43 50.5 +1.5
	comp=Z,10.0nm,1.2s						
VSR	Storozhevoye	14.00 27		eP		Pn	06 43 50.6 -0.7
VSR				pmax		pmax	
	comp=Z,6.0nm,0.8s						
VSR	Storozhevoye	14.00 27		eP		Pn	06 43 50.6 -0.7
	comp=Z,6.0nm,0.8s						
GERES	GERESS Array B	14.75 316		Pn		Pn	06 44 02.9 +1.2
	comp=Z,0.2nm,0.3s,baz=112,slow=16,SNR=3.5						
GERES				LR		LR	06 49 46.4
	comp=Z,49nm,18.0s,baz=39,slow=37						
KLNR	Kaliningrad	16.64 342	⇑	eP		Pn	06 44 26.6 +0.5
OBN	Obninsk	16.77 15		LR		LR	06 51 21.2
	comp=Z,51nm,19.5s,baz=269,slow=39						
OBN	Obninsk	16.77 15		iP		Pn	06 44 26.7 -1.1
OBN				pmax		pmax	
	comp=Z,6.0nm,0.9s						
OBN				MLR		MLR	
	comp=Z,35nm,15.0s						
VSU	Vasula	19.43 356	⇓	eP		P	06 44 57.1 -2.2
VSU				pmax		pmax	
	comp=Z,18nm,1.0s						
PUL	Pulkovo	20.69	2c	iP		P	06 45 11.3 -1.7
RAYN	Ar Rayn	20.84 133		eP		P	06 45 15.6 +0.6
	comp=Z,4.9nm,1.0s						
RAYN	Ar Rayn	20.84 133		eP		P	06 45 15.6 +0.6
	comp=Z,4.9nm,1.0s						
FIA0	FINESS Array S	22.44 356		eP		P	06 45 32.5 +0.7
FIA0	FINESS Array S	22.44 356		eP		P	06 45 32.5 +0.7
FINES	FINESS Array B	22.44 356		P		P	06 45 32.5 +0.7
	comp=Z,3.5nm,0.6s,baz=154,slow=11,SNR=13						
FINES				LR		LR	06 55 10.3
	comp=Z,52nm,18.8s,baz=166,slow=39						
FINES	FINESS Array B	22.44 356		iP		P	06 45 35.0 +3.2
FINES				pmax		pmax	
	comp=Z,4.0nm,0.6s						
FIA1	FINESS Array S	22.44 356		eP		P	06 45 32.3 +0.5
KLMR	Klimovskoe	22.71 13		eP		P	06 45 34.1 -0.6
KLMR				pmax		pmax	
	comp=Z,28nm,1.5s						
KLMR	Klimovskoe	22.71 13		eP		P	06 45 34.1 -0.6
KLMR				AMP			06 45 38.5
	comp=Z,28nm,1.5s						
HFS	Hagfors	23.19 340		P		P	06 45 39.4 -0.2
	comp=Z,1.4nm,0.7s,baz=186,slow=12,SNR=2.8						
HFS				LR		LR	06 55 29.8
	comp=Z,37nm,19.6s,baz=148,slow=39						
AKTO	Aktyubinsk	23.26 51		P		P	06 45 40.6 +0.1
	comp=Z,2.8nm,0.7s,baz=267,slow=6.9,SNR=7.9						
AKTO				LR		LR	06 58 54.4
	comp=Z,31nm,18.8s,baz=266,slow=47						
ABKAR	Akbulak array	24.15 55		eP		P	06 45 50.0 +0.8
NB2	NORSAR Subarra	24.62 339		P		P	06 45 54.7 +1.3
	comp=Z,0.6nm,0.6s,baz=142,slow=9.3						
NB200	NORSAR Array S	24.62 339		eP		P	06 45 53.5 +0.1
NOA	NORSAR Array B	24.62 339		P		P	06 45 53.5 +0.1
	comp=Z,1.9nm,0.6s,baz=142,slow=9.4,SNR=2.8						
NOA				LR		LR	06 56 34.3
	comp=Z,28nm,20.2s,baz=155,slow=39						
ARU	Arti	25.99 39		P		P	06 46 05.1 -0.7
	comp=Z,8.6nm,0.2s,baz=270,slow=14,SNR=5.4						
ARU				LR		LR	06 57 54.5
	comp=Z,26nm,18.3s,baz=289,slow=40						
ARU	Arti	25.99 39		eP		P	06 46 06.0 +0.3
	comp=Z,44nm,1.8s						
ARU	Arti	25.99 39	c	iP		P	06 46 07.2 +1.5
ARU							06 46 44.6
ARU				S		S	06 50 40.9 +4.5
ARU				SS		SnSn	06 51 31.9 -1.2
ARU				pmax		pmax	
	comp=Z,21nm,1.7s						
EKA	Eskdalemuir Ar	26.96 318		P		P	06 46 13.2 -1.4
	comp=Z,0.6nm,0.6s,baz=114,slow=11,SNR=2.9						
ARA0	ARCESS Array S	30.55 357		eP		P	06 46 46.4 +0.1
ARCES	ARCESS Array B	30.55 357		P		P	06 46 46.4 +0.1
	comp=Z,2.7nm,0.9s,baz=174,slow=8.8,SNR=5.5						
ARCES				LR		LR	06 59 52.6
	comp=Z,50nm,18.6s,baz=72,slow=38						
TOA1	Torodi Ar. Sit	35.46 231		eP		P	06 47 29.4 -0.3
TORD	Torodi Ar. Bea	35.46 231		P		P	06 47 29.4 -0.3
	comp=Z,1.2nm,0.6s,baz=40,slow=8.8,SNR=11						
KURBB	Kurchatov Arra	36.20 55		P		P	06 47 36.1 +0.4
	comp=Z,1.3nm,0.5s,baz=276,slow=9.0,SNR=6.1						
KURK	Kurchatov	36.26 55		eP		P	06 47 36.1 -0.1
KURK	Kurchatov	36.26 55	c	eP		P	06 47 38.3 +2.1
KURK				pmax		pmax	
	comp=Z,2.0nm,1.1s						
MK31	Makanchi Array	39.00 61		eP		P	06 47 59.2 -0.4
MK31	Makanchi Array	39.00 61		eP		P	06 47 59.2 -0.4
MK32	Makanchi Array	39.00 61		eP		P	06 48 00.1 +0.5
MKAR	Makanchi Array	39.00 61		P		P	06 48 00.1 +0.5
	comp=Z,1.3nm,0.8s,baz=286,slow=6.2,SNR=9.7						
MKAR	Makanchi Array	39.00 61		eP		P	06 47 59.0 -0.5
	comp=Z,13nm,1.1s						
MKAR	Makanchi Array	39.00 61		iP		P	06 47 59.5 -0.1
MKAR				pmax		pmax	
	comp=Z,1.0nm,0.8s						
MK01	Makanchi Array	39.01 61		eP		P	06 47 59.9 +0.2
ZAA1	Zalesovo Array	40.00 49		eP		P	06 48 07.9 +0.2
ZALV	Zalesovo Beam	40.00 49		P		P	06 48 07.9 +0.2
	comp=Z,1.6nm,0.6s,baz=266,slow=8.0,SNR=7.9						
ZALV	Zalesovo Beam	40.00 49		eP		P	06 48 08.2 +0.5
ZALV	Zalesovo Beam	40.00 49		eP		P	06 48 08.2 +0.5
SONA0	Songino Array	54.55 54		eP		P	06 50 02.1 +0.7
SONM	Songino Array	54.55 54		P		P	06 50 02.1 +0.7
	comp=Z,0.9nm,0.6s,baz=283,slow=6.8,SNR=5.9						
ULN	Ulaanbaatar	54.95 54	⇑	eP		P	06 50 05.3 +1.0
ULN				pmax		pmax	
	comp=Z,2.0nm,0.9s						
MATP	Matopo	59.22 181		P		P	06 50 35.0 +0.3
	comp=Z,2.0nm,0.9s,baz=27,slow=2.3,SNR=3.0						
HHC	Hu-ho-hao-te	60.84 59		eP		P	06 50 02.8 -43
HHC				pmax		pmax	
	comp=Z,19nm,1.4s						
HHC				pmax		pmax	
	comp=Z,40nm,8.1s						
BILL	Bilibino	68.43 16		iP		P	06 51 35.6 +1.0
BILL				i			06 51 42.6
BILL				i			06 52 01.5
BILL				i			06 54 06.2
BILL				pmax		pmax	
	comp=Z,1.0nm,1.1s						
KSAR	Wonju Array Be	73.37 55		P		P	06 52 05.5 +0.4
KSAR	Wonju Array Be	73.37 55		P		P	06 52 05.5 +0.4
KSRS	Korea Array	73.38 55		P		P	06 52 05.5 +0.3
	comp=Z,1.8nm,0.9s,baz=302,slow=5.6,SNR=5.3						
NEW	Newport	87.99 338		LR		LR	07 34 46.7
	comp=Z,30nm,18.8s,baz=280,slow=37						

*ISCJB **13** 06:48:25.0±0.4, 39°.13N±0°.03×29°.14E±0°.04, h14km±3km, Error ellipse: s-maj=5.7km s-min=4.0km az=143.4*
*ISK **13** 06:48:24.6, 39°.17N×29°.13E, h12km, ML2.3/8*
*CSEM **13** 06:48:25.0±0.2, 39°.12N×29°.13E, h15km, ML2.3, Error ellipse: s-maj=4.7km s-min=3.1km az=139.0*
*DDA **13** 06:48:25.4, 39°.10N×29°.13E, h7km, Ml2.6*

ISC 13 06:48:24.9±0.9, 39°.13N±0°.03×29°.12E±0°.02, h17km±6km, n39, σ0°47/49, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMAA	Simav-Kutahya	0.11 257		PG		Pb	06 48 28.9 +0.2
SMAA				SG		Sg	06 48 31.1 0.0
SMAA	Simav-Kutahya	0.11 257		ePg		Pb	06 48 28.9 +0.2
SMAA				eSg		Sg	06 48 31.1 0.0
SIMA	Simav-Kutahya	0.12 248		PG		Pg	06 48 28.7 0.0
SIMA				SG		Sg	06 48 30.9 -0.3
SIMA	Simav-Kutahya	0.12 248		iPg		Pg	06 48 28.7 0.0
SIMA				eSg		Sg	06 48 30.9 -0.3
GEDZ	Gediz	0.24 110		PG		Pb	06 48 31.4 +0.6
GEDZ				SG		Sg	06 48 34.2 +0.1
GEDZ	Gediz	0.24 110		ePg		Pb	06 48 31.4 +0.6
GEDZ				eSg		Sg	06 48 34.2 +0.1
DEMI	Demirci	0.33 255		iP		Pb	06 48 32.6 +0.3
DEMI				iS		Sg	06 48 36.9 +0.4
TVSB	Tavsanli	0.42 39		PG		Pg	06 48 32.7 -0.7
TVSB				SG		Sg	06 48 38.6 -0.6
TVSB	Tavsanli	0.42 39		ePg		Pg	06 48 32.7 -0.7
TVSB				eSg		Sg	06 48 38.6 -0.6
DURS	Dursunbey	0.69 314		iP		Pn	06 48 39.7 -0.3
DURS	Dursunbey	0.69 314		P		Pn	06 48 39.7 -0.3
KULA	Kula-Manisa	0.71 211		PG		Pg	06 48 38.8 0.0
KULA	Kula-Manisa	0.71 211		ePg		Pg	06 48 38.8 0.0
KUTH	Kutahya	0.75 69		PG		Pg	06 48 39.2 -0.3
KUTH	Kutahya	0.75 69		ePg		Pg	06 48 39.2 -0.3
MANT	Manisa	0.77 215		iP		Pb	06 48 40.2 +0.2
MANT				iS		Sg	06 48 50.1 -0.2
MANT	Manisa	0.77 215		P		Pb	06 48 40.2 +0.2
MANT				S		Sg	06 48 50.1 -0.2
KHAL	Karahalli	0.81 159		iP		Pg	06 48 40.0 -0.7
KHAL				iS		Sg	06 48 49.7 -1.7
AUBOZ	BOZOYUK	1.05 42		PG		Pb	06 48 44.4 -0.3
AUBOZ	BOZOYUK	1.05 42		ePg		Pb	06 48 44.4 -0.3
BALB	Balikesir	1.09 298		PN		Pb	06 48 45.4 +0.1
BALB	Balikesir	1.09 298		ePn		Pb	06 48 45.4 +0.1
STEP	BALIKESIR_Sava	1.12 283		iP		Pb	06 48 40.6 -5.2
CAVI	Cavuskoy	1.21 27		PN		Pb	06 48 47.6 +0.2
CAVI	Cavuskoy	1.21 27		ePn		Pb	06 48 47.6 +0.2
MDNY	Mudanya-Bursa	1.25 352		PN		Pn	06 48 47.4 -0.3
MDNY	Mudanya-Bursa	1.25 352		ePn		Pn	06 48 47.4 -0.3
BORA	Eskisehir	1.27 53		PN		Pn	06 48 48.4 +0.4
BORA	Eskisehir	1.27 53		iP		Pg	06 48 50.0 +0.5
BORA	Eskisehir	1.27 53		ePn		Pn	06 48 48.4 +0.4
BORA	Eskisehir	1.27 53		P		Pg	06 48 50.0 +0.5
BALY	Balya	1.31 298		iP		Pn	06 48 42.5 -6.1
ADVT	Abdulvahap	1.39 20		PN		Pb	06 48 50.2 -0.2
ADVT	Abdulvahap	1.39 20		ePn		Pb	06 48 50.2 -0.2
ARMT	Armutlu	1.45 352		PN		Pn	06 48 50.6 +0.2
ARMT	Armutlu	1.45 352		ePn		Pn	06 48 50.6 +0.2
GEYV	SAKARYA_Geyve	1.63 33		iP		Pg	06 48 57.1 +0.9
GULT	Gulveren	1.69 39		PN		Pn	06 48 54.4 +0.7
GULT	Gulveren	1.69 39		ePn		Pn	06 48 54.4 +0.7

JMA 13 06:49:36.9±0.1, 38°.35N×142°.22E, h30km±1km, M3.5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIO	Ouri	0.69 279		P		06 49 50.2	-0.3
JIO				S		06 49 59.2	-0.5
OFUJ	Ofunato	0.85 330		P		06 49 52.5	-0.3
OFUJ				S		06 50 03.4	-0.7
JMK	Ichinoseki	0.99 308		P		06 49 54.7	0.0
JMK				S		06 50 07.3	-0.3
JOU	Okura	1.22 271		P		06 49 58.5	+0.5
JOU				S		06 50 13.7	+0.2
JMM	Marumori	1.23 247		P		06 49 57.5	-0.5
JMM				eS		06 50 11.8	-1.7
JOM	Ohasama	1.33 327		P		06 50 00.1	+0.6
JOM				S		06 50 17.1	+0.9
JFK	Kawauchi	1.45 228		P		06 49 59.8	-1.3
JFK				S		06 50 16.1	-3.0
JYK	Kaneyama	1.56 292		P		06 50 03.7	+1.1
JYK				eS		06 50 23.8	-0.8
JRG	Rokugo	1.62 311		P		06 50 04.8	-1.3
JRG				eS		06 50 26.2

SNAA pmax pmax
comp=Z,403nm,0.9s
PMSA Palmer Station 19.51 228 P Pn 07 11 07.0 +1.3
comp=Z,1.8nm,0.3s,baz=81,slow=8.6,SNR=5.3
PMSA LR LR 07 18 16.5
comp=Z,313nm,18.2s,baz=72,slow=36
NVL N'lazarevskaya 22.89 147⇑ *i P* **P 07 11 38.7 -1.3**
NVL *e*PP **pP 07 11 52.2 -2.9**
NVL *e*S **S 07 15 43.5 -0.3**
NVL pmax pmax
comp=Z,47nm,0.6s
CHRN Cochrane 28.29 269 *e*P **P 07 12 31.6 +2.5**
comp=Z,7.9nm,0.8s
TRQA Tornquist 28.54 294 *e*P **P 07 12 32.6 +1.2**
comp=Z,61nm,1.1s
PLCA Paso Flores 31.22 281 P **P 07 12 55.1 -0.1**
comp=Z,3.5nm,1.0s,baz=109,slow=2.7,SNR=3.1
PLCA LR LR 07 24 43.9
comp=Z,248nm,21.9s,baz=150,slow=34
PLCA Paso Flores 31.22 281 *e*P **P 07 12 55.1 -0.1**
comp=Z,32nm,1.5s
SYO Syowa Base 32.25 141⇑ *e*P **P 07 13 01.0 -2.8**
SYO Syowa Base 32.25 141⇓ *e*pP pP 07 13 12.6 -8.4
QSPA South Pole Qui 34.46 180 P **P 07 13 25.5 +2.2**
comp=Z,69nm,0.6s,baz=190,slow=3.8,SNR=181
QSPA PcP **PcP 07 15 56.3 -0.5**
comp=Z,7.2nm,0.7s,baz=143,slow=5.1,SNR=3.2
QSPA LR LR 07 26 17.3
comp=Z,531nm,21.7s,baz=188,slow=34
QSPA South Pole Qui 34.46 180 *e*P **P 07 13 24.0 +0.6**
comp=Z,91nm,0.8s
QSPA *e*P **P 07 13 25.5 +2.2**
QSPA *e*PcP **PcP 07 15 56.3 -0.5**
SPB Sao Paulo 35.06 329 *e*P **P 07 13 29.7 +1.0**
comp=Z,67nm,0.8s
CPUP Villa Florida 36.08 313 P **P 07 13 38.3 +0.9**
comp=Z,85nm,0.9s,baz=150,slow=7.3,SNR=164
CPUP ScP **ScP 07 19 41.0 -0.5**
comp=Z,10nm,0.8s,baz=142,slow=3.3,SNR=13
CPUP LR LR 07 26 50.3
comp=Z,314nm,21.6s,baz=154,slow=33
CPUP Villa Florida 36.08 313 *e*P **P 07 13 38.1 +0.8**
comp=Z,69nm,0.8s
LCO Las Campanas 40.12 294 *e*P **P 07 14 12.0 +0.4**
LCO *e*pP **pP 07 14 26.9 -2.3**
LCO Las Campanas 40.12 294 P **P 07 14 12.7 +1.1**
LCO *e*XP **pP 07 14 26.8 -2.3**
MAW Mawson 40.80 144 P **P 07 14 17.0 +0.6**
comp=Z,53nm,0.8s,baz=232,slow=8.4,SNR=53
MAW ScP **ScP 07 19 57.4 -1.4**
comp=Z,8.1nm,0.9s,baz=323,slow=5.1,SNR=4.5
MAW LR LR 07 28 41.0
comp=Z,344nm,21.5s,baz=240,slow=32
GO03 Copiap 41.03 296 *e*P **P 07 14 19.9 +1.0**
comp=Z,42nm,0.7s
SUR Sutherland 41.30 76 LR LR 07 28 41.2
comp=Z,16nm,18.4s,baz=213,slow=32
GO02 Mina Guanaco 42.71 299 *e*P **P 07 14 34.6 +1.7**
comp=Z,167nm,0.6s
PB10 IPOC Station P 44.57 299 *e*P **P 07 14 48.6 +1.2**
comp=Z,33nm,0.6s
PB04 IPOC Station P 45.36 300 *e*P **P 07 14 55.4 +1.4**
comp=Z,122nm,1.4s
PB01 IPOC Station P 46.14 302 *e*P **P 07 15 02.0 +1.9**
comp=Z,85nm,0.7s
SBA Scott Base 46.28 184 *e*P **P 07 15 02.6 +2.2**
comp=Z,66nm,1.0s
SBA Scott Base 46.28 184 *e*P **P 07 15 02.6 +2.2**
SBA pmax pmax
comp=Z,66nm,1.0s
BOSA Boshof 46.63 77 P **P 07 15 03.5 -0.4**
comp=Z,20nm,0.9s,baz=210,slow=6.8,SNR=18
BOSA LR LR 07 31 29.0
comp=Z,262nm,18.4s,baz=215,slow=32
VNDA Vanda 46.79 183 P **P 07 15 06.6 +2.2**
comp=Z,68nm,0.7s,baz=186,slow=6.6,SNR=234
VNDA LR LR 07 33 32.3
comp=Z,128nm,20.1s,baz=176,slow=34
VNDA Vanda 46.79 183 *e*P **P 07 15 06.1 +1.7**
comp=Z,78nm,0.8s
MNMC Minye Minye 47.83 303 *e*P **P 07 15 15.3 +1.9**
comp=Z,98nm,0.8s
H10S2 ASCENSION HYDR 47.98 19 T T 08 07 17.8
baz=190,slow=75,SNR=4.9
H10S3 ASCENSION HYDR 47.98 19 T T 08 07 15.1
baz=190,slow=75,SNR=5.1
H10S1 ASCENSION HYDR 48.00 19 T T 08 07 19.1
baz=190,slow=75,SNR=7.5
H10N1 ASCENSION HYDR 49.10 19 T T 08 08 41.7
baz=189,slow=75,SNR=6.1
H10N3 ASCENSION HYDR 49.10 19 T T 08 08 37.7
baz=189,slow=75,SNR=6.5
H10N2 ASCENSION HYDR 49.11 19 T T 08 08 40.4
baz=189,slow=75,SNR=7.8
LPAZ La Paz 49.62 306 P **P 07 15 29.6 +2.0**
comp=Z,74nm,0.6s,baz=118,slow=4.9,SNR=466
LPAZ LR LR 07 37 08.8
comp=Z,96nm,21.5s,baz=149,slow=37
LBTB Lobatse 49.65 75 *e*P **P 07 15 26.9 -0.3**
comp=Z,62nm,1.1s
LBTB Lobatse 49.65 75 *e*P **P 07 15 26.9 -0.3**
LBTB pmax pmax
comp=Z,62nm,1.1s
TSUM Tsumeb 50.22 62 *e*P **P 07 15 31.6 +0.1**
comp=Z,45nm,1.6s
MIR Mirnyy 50.35 154⇑ *i* P **P 07 15 33.0 +1.3**
MIR *i* 07 15 49.0
MIR pmax pmax
comp=Z,135nm,1.5s
SAML Samuel 54.09 316 *e*P **P 07 16 01.0 +0.9**
comp=Z,48nm,0.8s
CASY Casey 54.40 161 *e*P **P 07 16 02.7 +1.0**
comp=Z,78nm,0.8s
MATP Matopo 54.92 74 P **P 07 16 05.8 -0.4**
comp=Z,59nm,0.9s,baz=217,slow=8.3,SNR=78
MATP LR LR 07 37 34.7
comp=Z,143nm,18.6s,baz=215,slow=34
NNA Nana 57.47 300 *e*P **P 07 16 25.8 +1.5**
NNA *e*pP **pP 07 16 42.0 -0.8**
NNA Nana 57.47 300 *i* P **P 07 16 22.2 -2.1**
LSZ Lusaka 58.98 70 *e*P **P 07 16 34.9 -0.1**
comp=Z,36nm,1.0s
LSZ Lusaka 58.98 70 *e*P **P 07 16 34.9 -0.1**
LSZ pmax pmax
comp=Z,36nm,1.0s
PTGA Pitinga 60.51 323 *e*P **P 07 16 45.6 +0.4**
comp=Z,10nm,0.8s
LIC Lamto 64.78 26 *e*P **P 07 17 14.0 +0.4**
comp=Z,78nm,1.3s
KIC Kosan Boka 64.98 26 *e*P **P 07 17 15.4 +0.5**
comp=Z,158nm,1.8s
TIC Toumodi 65.19 26 *e*P **P 07 17 16.4 +0.1**
DBIC Dimbokro 65.25 26 P **P 07 17 17.4 +0.7**
comp=Z,7.1nm,0.7s,baz=178,slow=8.1,SNR=7.0
DBIC LR LR 07 40 42.2
comp=Z,69nm,20.4s,baz=160,slow=31
DBIC Dimbokro 65.25 26 *e*P **P 07 17 17.4 +0.7**
comp=Z,71nm,1.8s
OPO Ambohidratompo 66.83 89 P **P 07 17 28.3 +1.3**
comp=Z,10nm,0.9s,baz=224,slow=11,SNR=7.4
OPO LR LR 07 41 17.4
comp=Z,251nm,19.6s,baz=194,slow=31
FLOC Florencia 68.81 308 *e*P **P 07 17 38.5 -0.9**
OTAV Otavalo 68.89 305 *e*P **P 07 17 40.5 +0.1**
comp=Z,16nm,0.8s
OTAV Otavalo 68.89 305 *e*P **P 07 17 40.9 +0.5**
OTAV Otavalo 68.89 305 P **P 07 17 42.7 +2.3**
OTAV pmax pmax
comp=Z,20nm,1.0s
SOTA Rioblanco 69.73 308 *e*P **P 07 17 43.8 -1.8**
POPC Popayan, Colom 70.12 308 *e*P pP 07 18 02.6 -4.1
PRAC Prado 70.38 310 *e*P **P 07 17 49.8 +0.8**
PRAC *e*pP **pP 07 18 05.8 -2.2**
ROSC El Rosal 71.15 311 P **P 07 17 55.6 +1.5**
comp=Z,3.9nm,0.8s,baz=210,slow=20,SNR=2.9
ROSC LR LR 07 49 22.4
comp=Z,61nm,21.7s,baz=164,slow=36
ROSC El Rosal 71.15 311 *e*P **P 07 17 55.0 +1.0**
ROSC *e*pP **pP 07 18 11.7 -1.4**
YOTC Yotoco, Valle 71.26 309 *e*P **P 07 17 53.5 -1.0**
RUSC La Rusia 71.57 313 *e*P **P 07 17 56.9 +0.1**
RUSC *e*PcP **PcP 07 18 12.6 -3.1**
RUSC La Rusia 71.57 313 *e*P **P 07 17 56.3 -0.4**
PCRV Puerto La Cruz 72.28 322 P **P 07 18 01.7 +1.3**
comp=Z,14nm,0.6s,baz=156,slow=1.2,SNR=14
PCRV LR LR 07 50 44.5
comp=Z,123nm,20.3s,baz=141,slow=36

MBAR Mbarara 72.70 64 *e*P **P 07 18 04.8 +1.6**
comp=Z,21nm,1.1s
MBAR Mbarara 72.70 64 *e*P **P 07 18 04.8 +1.6**
MBAR pmax pmax
comp=Z,21nm,1.1s
PTBC PUERTO BERRIO, 72.73 312 *e*P **P 07 18 01.1 -1.9**
HELC Santa Helena 72.88 310 *e*P **P 07 18 04.4 +0.1**
HELC *e*PcP **PcP 07 18 20.6 -0.5**
KOWA Kowa 72.99 25 P **P 07 18 05.8 +1.3**
comp=Z,17nm,0.8s,baz=188,slow=7.2,SNR=26
KOWA LR LR 07 46 54.0
comp=Z,72nm,18.3s,baz=212,slow=33
KOWA Kowa 72.99 25 *e*P **P 07 18 05.5 +1.0**
comp=Z,21nm,0.8s
KOWA *e*P **P 07 18 05.8 +1.3**
TOA0 Torodi Ar. Sit 73.21 31 *e*P **P 07 18 06.4 +0.6**
TOA0 *e*P **P 07 18 06.7 +0.9**
TORD Torodi Ar. Bea 73.21 31 P **P 07 18 06.5 +0.7**
comp=Z,55nm,0.7s,baz=199,slow=6.4,SNR=211
TORD LR LR 07 45 35.1
comp=Z,181nm,18.9s,baz=195,slow=32
TOA1 Torodi Ar. Sit 73.21 31 *e*P **P 07 18 06.5 +0.7**
SDV Santo Domingo 73.30 316 P **P 07 18 07.3 +0.7**
comp=Z,5.2nm,0.3s,baz=238,slow=9.5,SNR=4.0
SDV Santo Domingo 73.30 316 *e*P **P 07 18 07.5 +0.8**
SDV *e*pP **PcP 07 18 23.6 +0.9**
TAU Tasmania Unive 81.61 177 *e*P **P 07 18 51.6 -0.9**
comp=Z,51nm,0.8s
TAU Tasmania Unive 81.61 177 *e*P **P 07 18 51.6 -0.9**
TAU pmax pmax
comp=Z,51nm,0.8s
TAM Tamanrasset 83.45 31 *e*P **P 07 19 03.3 +1.0**
TAM *e*pP **pP 07 19 23.8 +1.9**
TAM Tamanrasset 83.45 31 *e*P **P 07 19 03.3 +1.0**
TAM *e*PP **pP 07 19 23.8 +1.9**
URZ Urewera 83.80 200 P **P 07 19 04.2 +0.3**
comp=Z,7.9nm,0.8s,baz=157,slow=7.7,SNR=3.6
TBI Tubuai 86.66 232 *e*LR LR 07 46 50.9
comp=Z,244nm,30.8s
NWAO Narrogin (SRO) 86.91 152 P **P 07 19 19.1 -0.4**
comp=Z,8.1nm,0.6s,baz=6.0,slow=7.4,SNR=3.6
NWAO LR LR 07 54 30.1
comp=Z,98nm,21.3s,baz=129,slow=33
ATD Arta Tunnel 89.25 68 LR LR 07 55 42.8
comp=Z,85nm,21.9s,baz=211,slow=33
MDT Midelt 90.59 20 P **P 07 19 39.6 +3.0**
comp=Z,6.6nm,0.8s,baz=188,slow=5.6,SNR=7.2
MDT LR LR 07 56 15.4
comp=Z,110nm,18.2s,baz=190,slow=33
PPT2 Papeete2 91.72 235 *e*LR LR 07 49 12.2
comp=Z,232nm,30.0s
PPT Papeete 91.74 235 LR LR 07 54 04.0
comp=Z,42nm,18.9s,baz=174,slow=31
STKA Stephens Creek 92.27 172 P **P 07 19 44.3 -0.4**
comp=Z,6.1nm,0.8s,baz=148,slow=8.3,SNR=5.8
STKA LR LR 07 58 21.4
comp=Z,158nm,21.0s,baz=200,slow=34
TLIG Tlapa 93.65 296 *e*P **P 07 19 51.8 +0.6**
TLIG *e*pP **pP 07 20 10.9 -0.1**
TAOE Nuku Hiva Isla 94.56 247 *e*LR LR 07 50 30.0
comp=Z,136nm,28.6s
KEST Kesra 96.72 30 LR LR 07 58 23.6
comp=Z,177nm,21.8s,baz=209,slow=32
ESDC Sonseca Array 97.37 19 P Pdif 07 20 08.5 +0.9
comp=Z,0.2nm,0.3s,baz=189,slow=3.9,SNR=4.1
ESDC LR LR 08 01 31.3
comp=Z,51nm,18.2s,baz=200,slow=34
TIGA Tifton 98.74 315 *e*P **P 07 20 11.4 -2.4**
comp=Z,36nm,0.3s
ASAR Alice Springs 99.45 164 P **Pdif 07 20 16.7 -0.8**
comp=Z,6.7nm,0.9s,baz=193,slow=4.4,SNR=32
ASAR PP **PP 07 24 19.9 -0.8**
comp=Z,5.5nm,0.9s,baz=184,slow=7.7,SNR=12
ASAR PKKP PKKPdf 07 36 58.5 +19
comp=Z,0.5nm,0.8s,baz=17,slow=2.0,SNR=5.6
ASAR LR LR 08 02 17.1
comp=Z,150nm,20.9s,baz=197,slow=34
AS31 Alice Springs 99.46 164 *e*Pdif **Pdif 07 20 16.8 -0.7**
comp=Z,1.9nm,0.8s
AS31 *e*PP **PP 07 24 20.6 0.0**
AS01 Alice Springs 99.46 164 *e*Pdif **Pdif 07 20 16.2 -1.3**
VAE Valparera 99.85 33 LR LR 08 02 31.6
comp=Z,89nm,18.3s,baz=148,slow=34
DZM Mont Dzumac 101.41 194 *e*LR LR 07 53 40.3
comp=Z,257nm,25.6s
WR1 Warramunga Arr 103.17 163 *e*Pdif **Pdif 07 20 32.6 -1.5**
WR1 *e*PP **PP 07 24 46.4 -2.3**
WRA Warramunga Arr 103.17 163 Pdiff **Pdif 07 20 32.6 -1.5**
comp=Z,1.2nm,0.8s,baz=195,slow=4.3,SNR=8.6
WRA PP **PP 07 24 46.4 -2.3**
comp=Z,1.9nm,0.7s,baz=182,slow=6.8,SNR=13
WRA PKKP PKKPdf 07 36 46.7 +13
comp=Z,0.4nm,0.6s,baz=2.6,slow=3.1,SNR=5.2
TXAR Lajitas Array 106.01 299 PKKPbc PKKPbc 07 36 21.3 +2.5
comp=Z,0.6nm,0.7s,baz=219,slow=2.3,SNR=5.2
TXAR PKKPab **PKKPab 07 36 33.7 -0.8**
comp=Z,0.9nm,1.0s,baz=343,slow=0.9,SNR=3.7
BRTR Keskin Array B 108.78 46 *e*PP PP 07 25 29.2 -2.0
comp=Z,1.7nm,0.9s,baz=151,slow=2.8,SNR=4.6
BR101 Keskin Array S 108.78 46 *e*PP PP 07 25 29.2 -2.0
KHC Kasperske Hory 110.30 28 AMS AMS 08 05 50.0
comp=Z,200nm,22.2s
MLR Muntele Rosu 110.83 38 PP PP 07 25 48.5 +2.5
comp=Z,0.3nm,0.4s,baz=206,slow=5.0,SNR=3.6
PRU Pruhonice 111.34 28 AMS AMS 08 08 00.0
comp=Z,100nm,19.4s
ANMO Albuquerque 111.94 300⇑ *i* PKIKP **PKiKP 07 25 08.4 -0.8**
LANS Liptovska Anna 111.98 32 *e*P **Pdif 07 21 16.2 +3.9**
CLL Collm 112.15 27 *e*PS PS 07 35 27.0 -1.1
CLL *e*PPS PPS 07 36 34.0
CLL *e*SSS SSS 07 46 06.0
CLL *e* 07 49 54.0
PV12 Saucer Basin, 115.76 301 *e*PKPdf **PKPdf 07 25 16.8 +0.4**
KIV Kislovodsk 116.06 50 *i* PKIKP **PKPdf 07 25 22.7 +6.1**
KIV pmax pmax
comp=Z,5.0nm,1.1s
KIV MLR MLR
comp=Z,40nm,21.0s
N23A Red Feather La 116.42 304 P **PKPdf 07 25 17.2 -0.5**
baz=142
AKASG Malin Array Be 116.44 37 PKP **PKPdf 07 25 16.2 -0.7**
comp=Z,0.6nm,0.6s,baz=237,slow=1.8,SNR=5.8
AKASG SKKP 07 39 55.7
comp=Z,0.6nm,0.4s,baz=46,slow=4.7,SNR=5.6
GMRC Granite Mounta 116.46 293 P **PKPdf 07 25 17.9 +0.2**
baz=141
BFSC Mount Baldy Ra 117.08 292 P **PKPdf 07 25 19.0 0.0**
baz=141
SBI Santa Barbara 117.22 290 *e*PKPdf **PKPdf 07 25 19.9 +0.8**
SRU San Rafael Swe 117.22 300 *e*PKPdf **PKPdf 07 25 18.8 -0.4**
SRU San Rafael Swe 117.22 300 *e*PKIKP **PKPdf 07 25 18.8 -0.4**
MWC Mount Wilson 117.28 291 *e*PKPdf **PKPdf 07 25 20.5 +1.1**
MWC Mount Wilson 117.28 291 *e*PKIKP **PKPdf 07 25 20.5 +1.1**
SZCU Shurtz Canyon 117.32 297 *e*PKPdf **PKPdf 07 25 19.8 +0.4**
MAK Makhachkala 117.40 53 *e*P **Pdif 07 21 33.2 -3.3**
MAK *i* 07 25 20.3
MAK *e* 07 26 31.0
MAK *e* 07 32 04.1
MAK pmax pmax
comp=Z,88nm,1.0s
CCUT Cedar City 117.42 297 *e*PKPdf **PKPdf 07 25 20.2 +0.6**
P18A Preston Nutter 117.48 301 *e*PKPdf **PKPdf 07 25 19.8 -0.1**
SHPR Sheep Range 117.53 295 *e*PKPdf **PKPdf 07 25 20.5 +0.6**
MSU Marysvale 117.57 298 *e*PKPdf **PKPdf 07 25 20.5 +0.6**
MSU Marysvale 117.57 298 *e*PKIKP **PKPdf 07 25 20.5 +0.6**
RWWY Rawlins 117.64 304 *e*PKPdf **PKPdf 07 25 19.4 -0.6**
TMUT Trail Mountain 117.70 300 *e*PKPdf **PKPdf 07 25 20.2 -0.1**
EDW2 Edwards Air Fo 117.75 292 P **PKPdf 07 25 20.2 +0.1**
baz=140
RSSD Black Hills 118.09 308 P **PKPdf 07 25 20.1 -0.6**
baz=142
FURC Furnace Creek, 118.38 294 P **PKPdf 07 25 22.2 +1.1**
baz=140
MPMC Manual Prospec 118.39 293 P **PKPdf 07 25 21.7 +0.2**
baz=140
PSUT Pine Spring 118.42 297 *e*PKPdf **PKPdf 07 25 22.1 +0.6**
TPNV Topopah Spring 118.43 294 P **PKPdf 07 25 22.0 +0.5**
baz=140
TPNV Topopah Spring 118.43 294 *e*PKPdf **PKPdf 07 25 21.9 +0.4**
TPNV Topopah Spring 118.43 294 *e*PKIKP **PKPdf 07 25 21.9 +0.4**
ISA Isabella, Lake 118.60 292 P **PKPdf 07 25 22.3 +0.5**
baz=140
JLU Jordanelle 118.82 300 *e*PKPdf **PKPdf 07 25 22.7 +0.4**
CWC Cottonwood Cre 118.98 293 P **PKPdf 07 25 23.1 +0.5**
baz=140

R11A Troy Canyon, C 119.16 296 P **PKPdf 07 25 23.1 +0.2**
baz=140
DUG Dugway, Tooele 119.18 299 P **PKPdf 07 25 23.0 +0.2**
baz=140
DUG Dugway, Tooele 119.18 299 *e*PKPdf **PKPdf 07 25 23.2 +0.4**
DUG Dugway, Tooele 119.18 299 *e*PKIKP **PKPdf 07 25 23.3 +0.4**
ULM Lac du Bonnet 119.55 317 PKP **PKPdf 07 25 21.9 -1.1**
comp=Z,2.1nm,0.5s,baz=182,slow=2.0,SNR=6.0
ULM PKKPab **PKKPbc 07 35 33.7 0.0**
comp=Z,3.8nm,0.7s,baz=37,slow=4.1,SNR=4.6
PD31 Pinedale Array 119.58 303 *e*PKPdf **PKPdf 07 25 21.2 -2.5**
PDAR Pinedale Array 119.58 303 PKP **PKPdf 07 25 21.2 -2.5**
comp=Z,12nm,0.5s,baz=134,slow=4.3,SNR=9.8
PDAR PKKPab **PKKPab 07 35 34.5 -0.2**
comp=Z,0.8nm,0.7s,baz=304,slow=2.7,SNR=7.3
HWUT Hardware Ranch 119.65 301 *e*PKPdf **PKPdf 07 25 23.7 -0.1**
BGU Big Grassy Mou 119.84 300 *e*PKPdf **PKPdf 07 25 24.6 +0.5**
SPUT South Promonto 119.85 300 *e*PKPdf **PKPdf 07 25 24.3 +0.2**
AHID Auburn Hatcher 120.31 302 *e*PKPdf **PKPdf 07 25 25.7 +0.7**
HVU Hansel Valley 120.37 300 *e*PKPdf **PKPdf 07 25 24.8 -0.3**
HVU Hansel Valley 120.37 300 *e*PKIKP **PKPdf 07 25 24.8 -0.3**
MDPB Devils Postpil 120.41 293 *e*PKPdf **PKPdf 07 25 26.5 +1.0**
NV11 Mina Array Sit 120.53 294 *e*PKPdf **PKPdf 07 25 26.3 +0.7**
NV01 Mina Array Sit 120.61 294 *e*PKPdf **PKPdf 07 25 26.2 +0.4**
NVAR Mina Array Bea 120.61 294 PKP **PKPdf 07 25 26.6 +0.8**
comp=Z,1.9nm,0.6s,baz=135,slow=3.3,SNR=16
SNOW Snow King Moun 120.67 303 *e*PKPdf **PKPdf 07 25 25.9 +0.1**
LOHW Long Hollow 120.72 303 *e*PKPdf **PKPdf 07 25 25.9 +0.1**
TPAW Teton Pass 120.79 303 *e*PKPdf **PKPdf 07 25 26.3 +0.3**
MOOW Moose Ponds 120.89 303 *e*PKPdf **PKPdf 07 25 25.9 -0.2**
FXWY Fox Creek 120.93 303 *e*PKPdf **PKPdf 07 25 26.6 +0.3**
KVN Kaiserville 120.97 295 *e*PKPdf **PKPdf 07 25 26.6 +0.2**
KVN Kaiserville 120.97 295 *e*PKIKP **PKPdf 07 25 26.6 +0.2**
LAO LASA Array 121.05 308 P **PKPdf 07 25 25.8 -0.3**
baz=140
LAO LASA Array 121.05 308 *e*PKPdf **PKPdf 07 25 25.7 -0.4**
RLMT Red Lodge 121.24 305 *e*PKPdf **PKPdf 07 25 27.1 +0.4**
YFT Old Faithful 121.46 304 *e*PKPdf **PKPdf 07 25 28.3 +1.0**
YERR Yerington 121.51 294 *e*PKPdf **PKPdf 07 25 28.3 +0.9**
BMN Battle Mountai 121.56 296 *e*PKPdf **PKPdf 07 25 27.9 +0.5**
BMN Battle Mountai 121.56 296 *e*PKIKP **PKPdf 07 25 27.9 +0.5**
AFDM Forest Hills D 122.38 293 *e*PKPdf **PKPdf 07 25 29.3 +0.4**
HLID Hailey 122.50 301 P **PKPdf 07 25 29.7 +0.5**
baz=138
HLID Hailey 122.50 301 *e*PKPdf **PKPdf 07 25 29.4 +0.3**
BOZ Bozeman (W) 122.69 304 P **PKPdf 07 25 29.8 +0.4**
baz=138
BOZ Bozeman (W) 122.69 304 *e*PKPdf **PKPdf 07 25 29.6 +0.2**
BOZ Bozeman (W) 122.69 304 *e*PKIKP **PKPdf 07 25 29.6 +0.2**
BEKR Beckworth 122.74 294 *e*PKPdf **PKPdf 07 25 30.3 +0.5**
DLMT Dillon 122.97 303 *e*PKPdf **PKPdf 07 25 30.8 +0.9**
ORV Oroville 123.10 293 *e*PKPdf **PKPdf 07 25 30.8 +0.6**
ORV Oroville 123.10 293 *e*PKIKP **PKPdf 07 25 30.8 +0.6**
LRM Limekiln Ridge 123.24 304 *e*PKPdf **PKPdf 07 25 31.3 +0.6**
NIL Nilore 123.45 78 *e*PKPdf **PKPdf 07 25 31.0 -0.1**
NIL Nilore 123.45 78 *e*PKIKP **PKPdf 07 25 31.0 -0.1**
EGMT Eagleton 123.64 307 P **PKPdf 07 25 31.2 +0.1**
baz=138
EGMT Eagleton 123.64 307 *e*PKPdf **PKPdf 07 25 31.3 +0.2**
WVOR Wild Horse Val 123.76 297 *e*PKPdf **PKPdf 07 25 32.3 +0.8**
WVOR Wild Horse Val 123.76 297 *e*PKIKP **PKPdf 07 25 32.3 +0.8**
O03D Paynes Creek 123.81 293 P **PKPdf 07 25 31.6 0.0**
baz=137
MOD Modoc Plateau 124.21 296 *e*PKPdf **PKPdf 07 25 33.3 +0.9**
J08A Circle Bar Ran 124.35 298 *e*PKPdf **PKPdf 07 25 33.3 +0.7**
FIA0 FINESS Array S 124.51 28 *e*PKPdf **PKPdf 07 25 31.4 -0.7**
FIA0 FINESS Array S 124.51 28 *e*PKIKP **PKPdf 07 25 31.4 -0.7**
FINES FINESS Array B 124.51 28 PKP **PKPdf 07 25 31.4 -0.7**
comp=Z,2.9nm,0.5s,baz=153,slow=2.3,SNR=25
FIA1 FINESS Array S 124.51 28 *e*PKPdf **PKPdf 07 25 31.3 -0.8**
FIA1 *e*PKPdf **PKiKP 07 25 31.4 -1.0**
MSO Missoula 124.68 304 P **PKPdf 07 25 33.2 +0.1**
baz=137
MSO Missoula 124.68 304 *e*PKPdf **PKPdf 07 25 32.9 -0.2**
PYUN Piuthan 124.72 90 *e*P **PKPdf 07 25 33.0 -1.0**
comp=Z,29nm,1.0s
N02D Trinity Center 124.77 293 P **PKPdf 07 25 34.0 +0.5**
baz=137
KOLN Koldanda 124.81 91 *e*P **PKPdf 07 25 33.2 -0.9**
comp=Z,20nm,0.9s
BMO Blue Mountains 124.86 300 *e*PKPdf **PKPdf 07 25 33.4 -0.1**
BMO Blue Mountains 124.86 300 *e*PKIKP **PKPdf 07 25 33.4 -0.1**
M04C Macdoel 124.91 294 P **PKPdf 07 25 34.2 +0.4**
baz=137
M02C Callahan 125.15 293 P **PKPdf 07 25 34.9 +0.7**
baz=137
YBH Yreka Blue Hor 125.32 294 PKP **PKPdf 07 25 34.4 -0.1**
comp=Z,2.8nm,0.8s,baz=42,slow=6.2,SNR=8.4
PBKT Sadao Pong 125.33 115 *e*PKPdf **PKPdf 07 25 34.1 -1.0**
DANN Dangsing 125.35 91 *e*P **PKPdf 07 25 34.6 -0.7**
comp=Z,29nm,0.8s
DMN Daman 125.54 92 *e*P **PKPdf 07 25 34.9 -0.7**
GKN Gorkha 125.58 92 *e*P **PKPdf 07 25 34.6 -0.9**
F10A Beach Ranch, E 125.63 301 *e*PKPdf **PKPdf 07 25 34.9 -0.1**
J05D Fort Rock, OR 125.69 296 P **PKPdf 07 25 36.1 +0.9**
baz=136
CM01 Chiang Mai Arr 125.83 112 *e*PKPdf **PKPdf 07 25 35.7 -0.4**
CM31 Chiang Mai Arr 125.86 112 *e*PKPdf **PKPdf 07 25 35.7 -0.4**
CMAR Chiang Mai Arr 125.86 112 PKP **PKPdf 07 25 35.7 -0.4**
comp=Z,8.5nm,0.9s,baz=231,slow=3.5,SNR=24
CMAR Chiang Mai Arr 125.86 112 PKIKP **PKPdf 07 25 35.7 -0.4**
CMAR pmax pmax
comp=Z,7.0nm,0.8s
PINE Pine Mountain 125.90 297 *e*PKPdf **PKPdf 07 25 36.6 +0.9**
G08A Pilot Rock 125.99 299 *e*PKPdf **PKPdf 07 25 36.3 +0.5**
J04D Umpqua Nationa 126.10 295 P **PKPdf 07 25 36.7 +0.6**
baz=136
CHTO Chiang Mai 126.15 111 *e*PKPdf **PKPdf 07 25 36.8 +0.1**
CHTO Chiang Mai 126.15 111 *e*PKIKP **PKPdf 07 25 36.8 +0.1**
GUN Gumba 126.21 93 *e*P **PKPdf 07 25 36.4 -0.6**
I05D Terrebonne, OR 126.49 297 P **PKPdf 07 25 37.4 +0.7**
baz=136
DAV Davao City (W) 127.24 147 PKP **PKPdf 07 25 38.1 -0.8**
comp=Z,520nm,0.4s,baz=93,slow=2.3,SNR=3.5
AKTO Aktyubinsk 127.78 54 PKP **PKPdf 07 25 38.2 -0.6**
comp=Z,5.6nm,0.9s,baz=206,slow=2.3,SNR=12
AKTO SKPbc SKPbc 07 28 47.0
comp=Z,4.4nm,0.9s,baz=185,slow=5.2,SNR=4.7
ABKAR Akbulak array 127.84 56 *e*PKPdf **PKPdf 07 25 38.7 -0.2**
KLMR Klimovskoe 128.04 35 *e*PKIKP **PKPdf 07 25 37.8 -1.1**
KLMR *e* 07 27 40.8
KLMR pmax pmax
comp=Z,15nm,1.3s
KLMR Klimovskoe 128.04 35 *e*PKPdf **PKPdf 07 25 37.9 -1.0**
KLMR AMP 07 25 40.3
comp=Z,15nm,1.3s
KLMR *e*PP **PP 07 27 40.9 -3.0**
LTY Liberty 128.22 300 *e*PKPdf **PKPdf 07 25 39.2 -0.6**
SUMG Summit 128.26 356 *i* P **PKPdf 07 25 38.9 -0.7**
comp=Z,9.9nm,1.1s
SUMG Summit 128.26 356 *e*PKPdf **PKPdf 07 25 40.0 +0.4**
SUMG Summit 128.26 356 *e*PKIKP **PKPdf 07 25 40.0 +0.4**
B08A Colville Reser 128.34 302 *e*PKPdf **PKPdf 07 25 40.2 +0.2**
LON Longmire 128.43 299 *e*PKPdf **PKPdf 07 25 39.9 -0.4**
LON Longmire 128.43 299 *e*PKIKP **PKPdf 07 25 39.9 -0.4**
KK31 Karatay Array 128.81 68 *e*PKPdf **PKPdf 07 25 40.6 -0.4**
KK31 Karatay Array 128.81 68 *e*PKIKP **PKPdf 07 25 40.7 -0.4**
KKAR Karatay Array 128.81 68 *e*PKPdf **PKPdf 07 25 40.6 -0.4**
KKAR Karatay Array 128.81 68 *e*PKIKP **PKPdf 07 25 40.7 -0.4**
D05A Enumclaw 128.82 299 *e*PKPdf **PKPdf 07 25 41.5 +0.6**
KSH Kashi 129.22 75 PKP **PKPdf 07 25 41.8 -0.3**
KSH sPKP 07 26 03.1
KSH PKS **PKSdf 07 29 19.3 +0.7**
KSH SKS **SKSdf 07 32 50.3 +3.2**
KSH SS **SS 07 45 06.3 -1.0**
KSH AMB AMB
comp=Z,200nm,6.0s
TMCR Tamitsa 130.04 32 *e*PKIKP **PKPdf 07 25 42.3 -0.3**
TMCR pmax pmax
comp=Z,31nm,0.9s
AAK Ala-Archa 130.60 71 PKP **PKPdf 07 25 44.3 -0.4**
comp=Z,2.1nm,0.5s,baz=216,slow=4.6,SNR=6.7
AAK SKPab **SKPbc 07 29 00.2 -1.6**
comp=Z,6.0nm,1.0s,baz=192,slow=4.7,SNR=6.6
AAK SKP 07 29 11.4
comp=Z,1.6nm,0.5s,baz=255,slow=12,SNR=6.0
AAK Ala-Archa 130.60 71 *e*PKPdf **PKPdf 07 25 44.3 -0.4**
AAK *e*PKPdf **PKiKP 07 25 44.5 -1.0**
PRGR Permogore 130.65 37 *e*PKIKP **PKPdf 07 25 43.3 -0.5**
PRGR pmax pmax
comp=Z,24nm,1.1s
ARA0 ARCESS Array S 130.98 22 *e*PKPdf **PKPdf 07 25 43.9 -0.4**
ARCES ARCESS Array B 130.98 22 PKP **PKPdf 07 25 43.9 -0.4**

comp=Z,5.7nm,0.9s,baz=204,slow=2.4,SNR=9.9
ARCES SKPbc **SKPbc** 07 28 57.8 -4.3
comp=Z,1.4nm,0.6s,baz=267,slow=8.0,SNR=4.3
ARCES SKPab **SKPab** 07 29 01.8 -0.6
comp=Z,1.6nm,0.6s,baz=187,slow=2.1,SNR=5.4
ARCES ARCESS Array B 130.98 22 *e*PKPdf **PKPdf** 07 25 44.0 -0.4
ARCES ARCESS Array B 130.98 22 *e*PKIKP **PKPdf** 07 25 44.0 -0.4
ARU Arti 132.08 48 PKP **PKPdf** 07 25 47.0 +0.3
comp=Z,6.4nm,0.2s,baz=270,slow=10,SNR=10
ARU SKPbc **SKPbc** 07 29 03.3 -3.1
comp=Z,7.6nm,0.2s,baz=270,slow=9.0,SNR=8.1
ARU Arti 132.08 48 *e*PKPdf **PKPdf** 07 25 46.7 -0.1
ARU Arti 132.08 48 *i* PKIKP **PKPdf** 07 25 46.4 -0.3
ARU 07 28 07.4
KMI Kunming 133.32 111 PKP **PKPdf** 07 25 53.5 +3.1
BRVK Borovoye 135.24 58 *e*PKPdf **PKPdf** 07 25 52.5 -0.3
BRVK Borovoye 135.24 58*c i* PKIKP **PKPdf** 07 25 52.4 -0.4
BRVK pmax pmax
comp=Z,6.0nm,1.0s
BVAR Borovoye Array 135.27 58 PKP **PKPdf** 07 25 53.1 +0.2
comp=Z,9.0nm,0.9s,baz=222,slow=2.0,SNR=21
BVAR pPKP **pPKPdf** 07 26 15.6 +2.2
comp=Z,2.4nm,0.7s,baz=227,slow=3.1,SNR=3.9
BVAR PP **PP** 07 28 28.3 -2.4
comp=Z,0.7nm,0.8s,baz=243,slow=4.2,SNR=2.8
BVAR SKPbc **SKPbc** 07 29 14.2 -2.9
comp=Z,5.5nm,0.9s,baz=250,slow=4.2,SNR=15
YKA Yellowknife Ar 135.48 319 PKP **PKPdf** 07 25 52.5 -0.4
comp=Z,3.9nm,0.5s,baz=129,slow=2.3,SNR=43
YKA PP **PP** 07 28 29.5 -2.3
comp=Z,0.8nm,0.8s,baz=121,slow=6.2,SNR=4.2
YKA SKPbc **SKPbc** 07 29 16.4 -1.0
comp=Z,7.5nm,0.8s,baz=125,slow=2.1,SNR=25
YKA SKKPbc **SKKPbc** 07 38 21.8 +1.0
comp=Z,1.2nm,0.9s,baz=316,slow=4.1,SNR=5.6
YKB5 Yellowknife Ar 135.48 319 *e*PKPdf **PKPdf** 07 25 52.5 -0.4
YKB5 *e*PP **PP** 07 28 29.5 -2.3
YKW3 Yellowknife Ar 135.53 319 *e*PKPdf **PKPdf** 07 25 52.9 -0.1
GYA Guiyang 136.46 113 *e*Pdif **Pdif** 07 23 02.8 +0.9
GYA PKP **PKPdf** 07 25 57.0 +0.9
GYA PP **PP** 07 28 43.3 +5.1
GYA AMB AMB
comp=Z,140nm,7.8s
RES Resolute Bay 137.34 339 PKP **PKPdf** 07 25 56.6 +0.5
comp=Z,5.5nm,0.9s,baz=130,slow=1.6,SNR=8.2
RES SKPbc **SKPbc** 07 29 18.6 -4.1
comp=Z,3.6nm,0.9s,baz=126,slow=8.7,SNR=2.7
RES SKP 07 29 22.2
comp=Z,2.6nm,0.8s,baz=340,slow=6.2,SNR=4.3
RES Resolute Bay 137.34 339 *e*PKPdf **PKPdf** 07 25 57.1 +1.0
MK01 Makanchi Array 137.50 72 *e*PKPpre PKPpre 07 25 50.9
MK32 Makanchi Array 137.51 72 *e*PKPdf **PKPdf** 07 25 55.3 -2.0
MK32 *e*PP **PP** 07 28 46.6 +1.8
MKAR Makanchi Array 137.51 72 PKhKP PKPpre 07 25 48.6
comp=Z,0.6nm,0.7s,baz=252,slow=2.9,SNR=5.0
MKAR PKP **PKPdf** 07 25 55.3 -2.0
comp=Z,1.6nm,0.7s,baz=246,slow=1.2,SNR=5.7
MKAR PP **PP** 07 28 46.6 +1.8
comp=Z,1.6nm,1.0s,baz=217,slow=5.9,SNR=4.8
MKAR SKPbc **SKPbc** 07 29 20.3 -3.9
comp=Z,6.5nm,1.1s,baz=262,slow=2.5,SNR=10
MKAR Makanchi Array 137.51 72 PKhKP PKPpre 07 25 48.6
MKAR 07 25 55.3
MKAR 07 28 46.7
MKAR pmax pmax
comp=Z,1.0nm,0.7s
MKAR pmax pmax
comp=Z,1.0nm,0.7s
MKAR pmax pmax
comp=Z,2.0nm,1.0s
KURBB Kurchatov Arra 137.87 65 PKhKP PKPpre 07 25 48.0
comp=Z,0.3nm,0.5s,baz=228,slow=2.7,SNR=4.2
KURBB SKPbc **SKPbc** 07 29 21.6 -3.4
comp=Z,7.9nm,1.1s,baz=233,slow=3.4,SNR=14
KURK Kurchatov 137.97 65*c i* PKIKP **PKPdf** 07 25 59.9 +2.0
KURK pmax pmax
comp=Z,3.0nm,0.8s
CD2 Chengdu 138.45 107 PKP **PKPdf** 07 25 59.9 +0.3
CD2 sPKP 07 26 25.1
CD2 PP **PP** 07 28 50.9 +0.3
CD2 SKS **SKSdf** 07 33 04.8 +1.2
CD2 SKKS **SKKSac** 07 35 38.3 +0.6
CD2 SS **SS** 07 47 00.8 +2.6
CD2 AMB AMB
comp=Z,180nm,6.6s
CD2 LR LR
comp=Z,250nm,5.4s
WMQ Urumqi 138.59 79 PKP **PKPdf** 07 26 01.6 +2.2
WMQ LR LR
comp=Z,110nm,27.9s
DLBC Dease Lake 139.56 307 PKP **PKPdf** 07 25 58.5 -2.2
comp=Z,3.2nm,0.8s,baz=135,slow=4.2,SNR=4.4
DLBC Dease Lake 139.56 307 *e*PKPdf **PKPdf** 07 26 00.7 -0.1
LZH Lanzhou 142.39 101 *e*PKP **PKPdf** 07 26 10.5 +3.8
LZH pPKP pPKPdf 07 26 23.0 -4.2
LZH sPKP 07 26 30.6
LZH LR LR
comp=Z,140nm,17.0s
LZH LR LR
comp=Z,140nm,15.8s
LZH LR LR
comp=Z,170nm,19.4s
GTA Gaotai 142.48 94 *e*PKP **PKPdf** 07 26 04.4 -2.3
GTA PP **PP** 07 29 16.9 +1.4
GTA SKKS 07 36 06.8
GTA SS **SS** 07 47 46.8 +1.1
GTA AMB AMB
comp=Z,60nm,9.6s
GTA LR LR
comp=Z,660nm,15.1s
GTA LR LR
comp=Z,520nm,16.5s
GTA LR LR
comp=Z,580nm,14.1s
NVS Novosibirsk 142.58 62 *e*PKIKP **PKPdf** 07 26 03.7 -2.4
ZALV Zalesovo Beam 142.93 64 PKhKP PKPpre 07 26 02.6
comp=Z,2.8nm,0.6s,baz=231,slow=3.8,SNR=10
ZALV SKPbc **SKPbc** 07 29 35.1 -3.2
comp=Z,1.5nm,0.6s,baz=224,slow=4.0,SNR=2.7
ZALV Zalesovo Beam 142.93 64 *e*PKPpre PKPpre 07 26 02.2
INK Inuvik 145.13 321 PKPbc **PKPbc** 07 26 10.0 +0.1
comp=Z,13nm,0.7s,baz=105,slow=2.0,SNR=21
DAWY Dawson 146.06 313 *e*PKPdf **PKPbc** 07 26 12.8 -0.3
HVS Khovu-Aksy 146.16 73 ‖ *i*PKP2 **PKPab** 07 26 17.0 +2.4
TGL Tana Glacier 146.42 306 *e*PKPdf **PKPbc** 07 26 14.3 0.0
JOW Kunigami 146.54 140 PKPbc **PKPbc** 07 26 15.9 +0.4
comp=Z,74nm,0.9s,baz=228,slow=2.0,SNR=7.5
JOW Kunigami 146.54 140 *e*PKPdf **PKPbc** 07 26 15.3 -0.2
CRQM Cirque 146.56 306 *e*PKPdf **PKPbc** 07 26 14.9 +0.1
EGAK Eagle 147.01 313 *e*PKPdf **PKPbc** 07 26 15.5 -0.2
NJ2 Nanjing 147.11 123 *e*PKPbc **PKPbc** 07 26 16.8 -0.2
RAGM Ragged Mountai 147.13 305 *e*PKPbc **PKPbc** 07 26 16.4 +0.2
BMRM Bremner River 147.30 306 *e*PKPdf **PKPdf** 07 26 12.7 -1.5
BMRM *e*PKPbc **PKPbc** 07 26 17.4 +0.6
DIV Divide 147.89 306 *e*PKPbc **PKPbc** 07 26 18.7 +0.4
DOT Dot Lake 147.91 311 *e*PKPbc **PKPbc** 07 26 18.6 +0.4
KLU Klutina 148.08 306 *e*PKPdf **PKPdf** 07 26 13.7 -1.8
KLU *e*PKPbc **PKPbc** 07 26 19.4 +0.6
RIDG Independ'e Rid 148.27 311 *e*PKPdf **PKPbc** 07 26 18.4 -0.8
TIY Taiyuan 148.27 108 *e*PKPbc **PKPbc** 07 26 19.9 -0.2
SCM Sheep Creek Mo 148.82 307 *e*PKPbc **PKPbc** 07 26 21.2 +0.5
SCM Sheep Creek Mo 148.82 307 *e*PKP2 **PKPbc** 07 26 21.2 +0.5
BTO Baotou 149.01 102 *e*PKPbc **PKPbc** 07 26 21.4 -0.5
DHY Denali Highway 149.19 309 *e*PKPbc **PKPbc** 07 26 22.5 +0.8
NRIK Noril'sk 149.27 39 PKPbc **PKPbc** 07 26 21.2 -0.2
comp=Z,11nm,0.9s,baz=264,slow=3.1,SNR=14
SML Sawmill 149.27 306 *e*PKPbc **PKPbc** 07 26 22.0 +0.2
SML Sawmill 149.27 306 *e*PKP2 **PKPbc** 07 26 22.0 +0.2
SEW Seward 149.28 303 *e*PKPbc **PKPbc** 07 26 21.8 0.0
HDA Harding Lake 149.33 312 *e*PKPbc **PKPbc** 07 26 21.7 -0.1
ILAR Eielson Array 149.39 312 PKP **PKPdf** 07 26 14.5 -3.0
comp=Z,1.6nm,0.9s,baz=319,slow=1.5,SNR=15
ILAR PKPbc **PKPbc** 07 26 21.8 -0.2
comp=Z,25nm,0.9s,baz=129,slow=1.5,SNR=116
ILAR pPKP **pPKPbc** 07 26 41.4 -1.0
comp=Z,29nm,0.9s,baz=124,slow=1.7,SNR=14
ILB Eielson Array 149.39 312 *e*PKPbc **PKPbc** 07 26 21.8 -0.2
GHO Glory Hole Cre 149.53 306 *e*PKPbc **PKPbc** 07 26 22.6 +0.1
PMR Palmer 149.58 306 *e*PKPbc **PKPbc** 07 26 22.4 0.0
PMR Palmer 149.58 306 *e*PKP2 **PKPbc** 07 26 22.4 0.0
TIA Tai'an 149.59 116 PKPbc **PKPbc** 07 26 23.0 -0.3
RC01 Rabbit Creek A 149.71 305 *e*PKPbc **PKPbc** 07 26 23.3 +0.5
CCB Clear Creek Bu 149.75 312 *e*PKPbc **PKPbc** 07 26 22.0 -0.7
COLA College 149.81 312 *e*PKPbc **PKPbc** 07 26 22.7 -0.2
BRLK Bradley Lake 149.86 302 *e*PKPbc **PKPbc** 07 26 23.4 +0.2
RND Reindeer 149.92 309 *e*PKPdf **PKPdf** 07 26 19.4 +1.0
MDM Murphy Dome 149.99 312 *e*PKPbc **PKPbc** 07 26 22.3 -1.1
HHC Hu-ho-hao-te 150.03 103 *e*PKPbc **PKPbc** 07 26 24.3 -0.1
HHC SKKS 07 36 48.8
HHC SS **SS** 07 49 13.8 +2.6
HHC AMB AMB
comp=Z,320nm,10.8s
HHC LR LR
comp=Z,440nm,17.8s
HHC LR LR
comp=Z,390nm,18.5s
HHC LR LR
comp=Z,300nm,18.1s
MCK McKinley 150.03 310 *e*PKPdf **PKPdf** 07 26 19.2 +0.7
MCK McKinley 150.03 310 *e*PKIKP **PKPdf** 07 26 19.2 +0.7
KDAK Kodiak Island 150.03 297 PKPbc **PKPbc** 07 26 23.9 +0.3
comp=Z,51nm,0.6s,baz=177,slow=0.9,SNR=68
KDAK Kodiak Island 150.03 297 *e*PKPbc **PKPbc** 07 26 24.1 +0.4
KDAK Kodiak Island 150.03 297 *i* PKIKP **PKPbc** 07 26 23.6 0.0
OHAK Old Harbor 150.19 296 *e*PKPbc **PKPbc** 07 26 24.0 0.0
BWN Browne 150.35 311 *e*PKPbc **PKPbc** 07 26 24.8 +0.6
MOY Mondy 150.39 77 *e*PKIKP **PKPbc** 07 26 24.9 0.0
MOY pmax pmax
comp=Z,48nm,1.6s
TRF Thorofare Moun 150.56 309 *e*PKPdf **PKPdf** 07 26 21.1 +1.6
SKT Skwentna 150.78 306 *e*PKPbc **PKPbc** 07 26 25.3 0.0
RSO Redoubt South 150.96 302 *e*PKPbc **PKPbc** 07 26 26.0 0.0
BPAW Bear Paw Mtn. 150.99 310 *e*PKPbc **PKPbc** 07 26 25.7 -0.1
TOLK Toolik Lake Re 151.00 320 P **PKPbc** 07 26 26.0 +0.3
baz=94
TOLK Toolik Lake Re 151.00 320 *e*PKPdf **PKPdf** 07 26 18.0 -1.9
TOLK *e*PKPbc **PKiKP** 07 26 26.1 -0.1
ZAK Zakamensk 151.04 80 *e*PKIKP **PKPbc** 07 26 25.4 -1.1
ZAK pmax pmax
comp=Z,25nm,1.1s
MLY Manley 151.05 312 *e*PKPbc **PKPbc** 07 26 25.6 -0.4
SONA0 Songino Array 151.46 87 *e*PKPdf **PKPdf** 07 26 20.6 -0.7
SONA0 *e*PKPbc **PKPbc** 07 26 27.1 -0.5
SONA0 *e*PKPab **PKPab** 07 26 36.1 -0.2
SONM Songino Array 151.46 87 PKP **PKPdf** 07 26 20.6 -0.7
comp=Z,1.3nm,0.8s,baz=219,slow=1.9,SNR=7.4
SONM PKPbc **PKPbc** 07 26 27.1 -0.5
comp=Z,29nm,0.8s,baz=224,slow=2.5,SNR=92
SONM PKPab **PKPab** 07 26 36.1 -0.2
comp=Z,4.4nm,0.8s,baz=232,slow=7.3,SNR=5.5
SONM pPKP **pPKPbc** 07 26 45.6 -2.4
comp=Z,4.0nm,0.5s,baz=232,slow=3.1,SNR=3.5
SONA1 Songino Array 151.47 87 *e*PKPdf **PKPdf** 07 26 23.4 +2.0
ULN Ulaanbaatar 151.85 87 *e*PKPdf **PKPbc** 07 26 26.3 -2.1
ULN Ulaanbaatar 151.85 87*c i* PKIKP **PKPbc** 07 26 28.0 -0.5
ULN pmax pmax
comp=Z,15nm,1.0s
TLY Talaya 151.86 78 *e*PKPdf **PKPdf** 07 26 22.6 +0.9
TLY Talaya 151.86 78*c i* PKIKP **PKPbc** 07 26 27.8 -0.4
TLY pmax pmax
comp=Z,19nm,0.9s
BJT Baijiatuan 151.94 109 *e*PKPbc **PKPbc** 07 26 28.0 -0.7
BJT Baijiatuan 151.94 109 *e*PKIKP **PKPbc** 07 26 28.0 -0.7
BJI Beijing 151.96 109 PKPbc **PKPbc** 07 26 28.4 -0.3
BJI LR LR
comp=Z,440nm,16.1s
JNU Nakatsue 153.18 139 PKPbc **PKPbc** 07 26 29.6 -2.2
comp=Z,18nm,0.8s,baz=56,slow=2.1,SNR=9.2
JNU PKPab **PKPab** 07 26 43.2 -0.6
comp=Z,8.9nm,0.6s,baz=335,slow=2.2,SNR=5.2
JNU Nakatsue 153.18 139 *e*PKPbc **PKPbc** 07 26 30.7 -1.1
JNU *e*PKPbc **PKPab** 07 26 43.2 -0.6
KS15 Wonju Array Si 155.72 129 *e*PKPdf **PKPdf** 07 26 26.3 -1.3
KSAR Wonju Array Be 155.72 129 PKP **PKPdf** 07 26 26.3 -1.3
KSAR PKPab **PKPab** 07 26 54.4 0.0
KSAR Wonju Array Be 155.72 129 PKIKP **PKPdf** 07 26 26.3 -1.3
KSAR 07 26 54.4
KSRS Korea Array 155.74 129 PKP **PKPdf** 07 26 26.3 -1.3
comp=Z,1.7nm,0.9s,baz=208,slow=3.2,SNR=2.9
KSRS PKPab **PKPab** 07 26 54.4 0.0
comp=Z,7.5nm,1.0s,baz=203,slow=5.2,SNR=12
KS01 Wonju Array Si 155.75 129 *e*PKPdf **PKPdf** 07 26 27.3 -0.3
KS01 *e*PKPab **PKPab** 07 26 54.3 -0.2
MAJO Matsushiro 158.73 149 *e*PKPab **PKPab** 07 27 07.5 +0.1
MAJO Matsushiro 158.73 149 *e*PKP2 **PKPab** 07 27 07.5 +0.1
MJAR Matsushiro Arr 158.73 149 PKPab **PKPab** 07 27 07.5 0.0
comp=Z,2.1nm,0.6s,baz=184,slow=5.0,SNR=4.9
TIXI Tiksi 161.42 22 PKPab **PKPab** 07 27 19.2 +1.0
comp=Z,3.1nm,0.7s,baz=336,slow=4.4,SNR=8.0
USRK Ussuriysk Ar. 162.99 125 PKPab **PKPab** 07 27 24.9 -0.9
comp=Z,5.5nm,0.8s,baz=249,slow=3.7,SNR=7.8
YSS Yuzh-Sakhalins 169.61 145 ‖ *e*PKP2 **PKPab** 07 27 54.9 0.0
YSS pmax pmax
comp=Z,20nm,1.1s
SEY Seymchan 172.82 357 PKP **PKPdf** 07 26 39.3 -2.7
comp=Z,3.3nm,0.9s,baz=315,slow=7.1,SNR=2.8
PETK Petropavlovsk- 175.49 236 PKP **PKPdf** 07 26 41.8 -1.3
comp=Z,5.3nm,0.9s,baz=108,slow=3.3,SNR=5.4
PEA1 Petropavlovsk- 175.49 236 *e*PKPdf **PKPdf** 07 26 41.8 -1.3

*IDC **13** 07:13:35.3±1.5, 18°.04S×167°.10E, h0km, mb4.1/6, mb1 4.2/8, mb1mx4.0/54, mbtmp4.1/8, ML3.6/2, MS3.2/4, Ms1 3.3/4, ms1mx2.8/41, Error ellipse: s-maj=36.7km s-min=26.6km az=121.0*
*ISCJB **13** 07:13:37.0±1.1, 18°.05S±0°.08×167°.0E±0°.2, h20km, mb3.9/6, MS3.3/3, Error ellipse: s-maj=22.8km s-min=10.8km az=177.6*
ISC 13 07:13:38.6±1.3, 18°.1S±0°.1×167°.0E±0°.2, h20km, n11, σ0°88/9, mb3.9/5, MS3.1/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**4.04**	**188**	Pn	**Pn**	**07 14 39.5**	**0.0**
	4.1nm,0.3s,baz=228,slow=23,SNR=22						
DZM				Sn	**Sn**	**07 15 26.3**	**0.0**
	8.1nm,0.3s,baz=330,slow=22,SNR=6.2						
DZM				LR	LR	07 16 03.2	
	comp=Z,222nm,18.5s,baz=350,slow=36						
CTA	**Charters Tower**	**19.75**	**261**	P	**Pn**	**07 18 08.5**	**-0.5**
	0.1nm,0.3s,baz=174,slow=10,SNR=2.6						
STKA	**Stephens Creek**	**26.78**	**234**	P	**P**	**07 19 18.1**	**+0.7**
	4.1nm,0.9s,baz=72,slow=9.6,SNR=4.6						
WRA	**Warramunga Arr**	**30.95**	**261**	P	**P**	**07 19 53.9**	**-0.8**
	0.4nm,0.8s,baz=91,slow=9.4,SNR=6.1						
RAR	**Rarotonga**	**31.39**	**101**	LR	LR	07 30 56.5	
	comp=Z,29nm,22.0s,baz=309,slow=33						
ASAR	**Alice Springs**	**31.42**	**254**	P	**P**	**07 19 58.5**	**-0.3**
	1.0nm,0.6s,baz=77,slow=8.6,SNR=8.8						
GUMO	**Guam**	**38.30**	**324**	LR	LR	07 34 34.6	
	comp=Z,28nm,19.8s,baz=134,slow=33						
CMAR	**Chiang Mai Arr**	**76.11**	**295**	P	**P**	**07 25 26.8**	**+1.2**
	1.0nm,0.3s,baz=136,slow=6.0,SNR=6.6						
NVAR	**Mina Array Bea**	**89.59**	**49**	P	**P**	**07 26 35.0**	**-0.4**
	0.1nm,0.3s,baz=232,slow=7.5,SNR=4.1						
TXAR	**Lajitas Array**	**98.04**	**62**	LR	LR	08 07 02.3	
	comp=Z,35nm,18.2s,baz=0.0,slow=33						
MKAR	**Makanchi Array**	**99.44**	**316**	P	**Pdif**	**07 27 18.6**	**-1.3**
	1.0nm,0.9s,baz=150,slow=2.6,SNR=2.2						

*SKO **13** 07:16:58.0, 41°.26N×20°.88E, h22km, M1.9, ML2.0*
*TIR **13** 07:16:58.0, 39°.09N×21°.12E, h1km, Md2.6/4*
*CSEM **13** 07:16:59.4±0.2, 41°.25N×20°.93E, h10km, ML2.0, Error ellipse: s-maj=5.1km s-min=3.3km az=63.0*
*THE **13** 07:16:59.2, 41°.28N×20°.95E, h16km±1km, ML2.0/2, Error ellipse: s-maj=1.9km s-min=0.8km az=136.0*
ISC 13 07:16:59.5±0.9, 41°.24N±0°.02×20°.91E±0°.03, h11km±8km, n20, σ1°04/39, 3C, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHR	**Ohrid**	**0.15**	**213** ⇑	*i* Pg	**Pg**	**07 17 03.0**	**0.0**
OHR				*i* Sg	**Sg**	**07 17 06.1**	**+0.7**
OHR				*e*Lg	Lg	07 17 06.2	
	comp=N,654nm,0.3s						
OHR				*e*Lg	Lg	07 17 06.2	
	comp=E,456nm,0.2s						
BIA	**Bitola**	**0.38**	**124**	P	**Pb**	**07 17 07.4**	**-0.9**
BIA				S	**Sb**	**07 17 13.0**	**-1.2**
BIA	**Bitola**	**0.38**	**124** ⇑	*i* Pg	**Pg**	**07 17 06.9**	**-0.2**
BIA				*i* Sg	**Sb**	**07 17 13.4**	**-0.9**
BIA				*e*Lg	Lg	07 17 14.7	
BIA				*e*Lg	Lg	07 17 14.7	
BIA	**Bitola**	**0.38**	**124**	P	**Pb**	**07 17 07.4**	**-0.9**
BIA				S	**Sb**	**07 17 13.0**	**-1.2**
PHP	**Peshkopia**	**0.57**	**322**	P	**Pg**	**07 17 09.7**	**-0.9**
PHP				S	**Sb**	**07 17 18.9**	**-0.7**
PHP	**Peshkopia**	**0.57**	**322**	*i* PN	**Pg**	**07 17 09.6**	**-1.0**
PHP				*i* SN	**Sb**	**07 17 19.9**	**+0.3**
PHP	**Peshkopia**	**0.57**	**322**	P	**Pg**	**07 17 09.7**	**-0.9**
PHP				S	**Sb**	**07 17 18.9**	**-0.7**
PHP				*i* Sn	**Sg**	**07 17 19.9**	**+1.8**
FNA	**Florina**	**0.57**	**142**	P	**Pg**	**07 17 10.3**	**-0.4**
FNA				S	**Sg**	**07 17 18.5**	**+0.2**
FNA	**Florina**	**0.57**	**142**	P	**Pg**	**07 17 10.3**	**-0.4**
FNA				S	**Sg**	**07 17 18.5**	**+0.2**
KBN	**Korca**	**0.62**	**188**	P	**Pg**	**07 17 11.6**	**+0.1**
KBN				S	**Sb**	**07 17 21.9**	**+0.9**
KBN	**Korca**	**0.62**	**188**	*i* PN	**Pg**	**07 17 11.9**	**+0.4**
KBN	**Korca**	**0.62**	**188**	P	**Pg**	**07 17 11.6**	**+0.1**
KBN	**Korca**	**0.62**	**188**	*i* Pn	**Pg**	**07 17 11.9**	**+0.4**
KBN				S	**Sb**	**07 17 21.9**	**+0.9**
TIR	**Tirane**	**0.79**	**278**	P	**Pb**	**07 17 15.0**	**-0.2**
TIR				S	**Sb**	**07 17 25.9**	**0.0**
TIR	**Tirane**	**0.79**	**278**	P	**Pb**	**07 17 15.0**	**-0.2**
TIR				S	**Sb**	**07 17 25.9**	**0.0**
NEST	**Nestorio**	**0.83**	**172**	P	**Pb**	**07 17 15.2**	**-0.7**
NEST				S	**Sn**	**07 17 28.6**	**-0.7**
NEST	**Nestorio**	**0.83**	**172**	P	**Pb**	**07 17 15.2**	**-0.7**
NEST				S	**Sn**	**07 17 28.6**	**-0.7**
SKO	**Skopje**	**0.84**	**28**	P	**Pg**	**07 17 15.2**	**-0.4**
SKO				S	**Sg**	**07 17 26.0**	**-0.6**
SKO	**Skopje**	**0.84**	**28**	P	**Pg**	**07 17 15.2**	**-0.4**
SKO				S	**Sg**	**07 17 26.0**	**-0.6**
STIP	**Stip**	**1.07**	**64** ⇑	*i* Pg	**Pg**	**07 17 22.0**	**+2.0**
STIP				*i* Sg	**Sn**	**07 17 39.1**	**+4.0**
STIP				*e*Lg	Lg	07 17 39.4	
STIP				*e*Lg	Lg	07 17 39.5	

*CSEM **13** 07:18:40.5, 44°.25N×19°.20E, h2km, ML1.3*
BEO 13 07:18:40.5±0.9, 44°.25N×19°.20E, h2km±5km, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HAPS	**Han Pijesak,Bl**	**0.24**	**228**	*e*Pg	Pg	07 18 44.8	-0.3
HAPS				*e*Sg	Sg	07 18 48.4	+0.2
HAPS	**Han Pijesak,Bl**	**0.24**	**228**	*e*Pg	Pg	07 18 44.8	-0.3
HAPS				*e*Sg	Sg	07 18 48.4	+0.2
BBLS	**Lazići**	**0.41**	**158**	*e*Pg	Pg	07 18 47.9	-0.4
BBLS				*e*Sg	Sg	07 18 53.8	+0.1
BBLS	**Lazići**	**0.41**	**158**	*e*Pg	Pg	07 18 47.9	-0.4
BBLS				*e*Sg	Sg	07 18 53.8	+0.1
DIVS	**Divibare**	**0.59**	**104**	*e*Pg	Pg	07 18 50.4	-1.4
DIVS				*e*Sg	Sg	07 18 59.8	+0.3
DIVS	**Divibare**	**0.59**	**104**	*e*Pg	Pg	07 18 50.4	-1.4
DIVS				*e*Sg	Sg	07 18 59.8	+0.3
IVAS	**Ivanjica**	**0.96**	**134**	*e*Pg	Pg	07 18 58.7	-0.2
IVAS				*e*Sg	Sg	07 19 10.7	-0.7
IVAS	**Ivanjica**	**0.96**	**134**	*e*Pg	Pg	07 18 58.7	-0.2
IVAS				*e*Sg	Sg	07 19 10.7	-0.7

*CSEM **13** 07:58:36.6±0.8, 51°.41N×16°.20E, h2km, ML3.0/5, Error ellipse: s-maj=11.6km s-min=8.1km az=16.0*
*PRU **13** 07:58:37.9, 51°.38N×16°.20E, h0km*
ISC 13 07:58:36.2±2.1, 51°.42N±0°.09×16°.24E±0°.05, h0km, n25, σ0°78/40, 1D, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.58**	**177**	*i* Pg	**Pg**	**07 58 48.3**	**+0.9**
KSP				*e*Sg	**Sg**	**07 58 56.2**	**+1.3**
KSP	**Ksiaz**	**0.58**	**177** ‖	*i* Pg	**Pg**	**07 58 48.3**	**+0.9**
KSP				*e*Sg	**Sg**	**07 58 56.2**	**+1.3**
UPC	**Upice**	**0.93**	**189**	*e*PG	**Pg**	**07 58 54.7**	**+0.7**
UPC				*e*SG	**Sb**	**07 59 07.8**	**-0.3**
	comp=Z,59nm,0.4s						
UPC	**Upice**	**0.93**	**189**	Pg	**Pg**	**07 58 54.7**	**+0.7**
UPC				Sg	**Sb**	**07 59 07.8**	**-0.3**
	59nm,0.4s						
DPC	**Dobruska-Polom**	**1.08**	**177**	*e*PG	**Pg**	**07 58 57.3**	**+0.5**
DPC				*e*SG	**Sg**	**07 59 11.3**	**+0.5**
	comp=Z,23nm,0.4s						
DPC	**Dobruska-Polom**	**1.08**	**177**	Pg	**Pg**	**07 58 57.3**	**+0.5**
DPC				Sg	**Sg**	**07 59 11.3**	**+0.5**
	23nm,0.4s						
PVCC	**Panska Ves**	**1.39**	**230**	*e*PG	**Pb**	**07 59 03.2**	**+0.2**
PVCC				*e*SG	**Sn**	**07 59 21.5**	**-0.3**
	comp=Z,72nm,0.3s						
PVCC	**Panska Ves**	**1.39**	**230**	Pg	**Pb**	**07 59 03.2**	**+0.2**
PVCC				Sg	**Sn**	**07 59 21.5**	**-0.3**
	72nm,0.3s						
KRLC	**Kraliky**	**1.39**	**165**	*e*PG	**Pg**	**07 59 03.2**	**+0.3**
KRLC				*e*SG	**Sb**	**07 59 21.6**	**+0.1**
	comp=Z,3.3nm,0.3s						
KRLC	**Kraliky**	**1.39**	**165**	Pg	**Pg**	**07 59 03.2**	**+0.3**
KRLC				Sg	**Sb**	**07 59 21.6**	**+0.1**
	3.3nm,0.3s						
BRG	**Berggiesshubel**	**1.55**	**250**	PG	**Pg**	**07 59 06.2**	**+0.4**
BRG				SG	**Sn**	**07 59 26.0**	**+0.2**
	22nm,0.4s						
GOPC	**GO Pecny, Ondr**	**1.77**	**212**	*e*PN	**Pb**	**07 59 09.6**	**0.0**
GOPC	**GO Pecny, Ondr**	**1.77**	**212**	Pn	**Pb**	**07 59 09.6**	**0.0**
PRA	**Prague**	**1.78**	**221**	*e*SG	**Sg**	**07 59 33.5**	**+0.3**
PRA	**Prague**	**1.78**	**221**	Sg	**Sg**	**07 59 33.5**	**+0.3**
PRU	**Pruhonice**	**1.80**	**218**	*e*SG	**Sb**	**07 59 33.2**	**+0.2**
	comp=Z,15nm,0.6s						
PRU	**Pruhonice**	**1.80**	**218**	Sg	**Sb**	**07 59 33.2**	**+0.2**
	15nm,0.6s						
MORC	**Moravsky Berou**	**1.85**	**153**	*e*Pn	**Pn**	**07 59 08.9**	**-0.3**
MORC	**Moravsky Berou**	**1.85**	**153**	*e*PN	**Pn**	**07 59 08.9**	**-0.3**
MORC				*e*SG	**Sb**	**07 59 34.6**	**+0.1**
KRUC	**Moravsky**	**2.37**	**178**	*e*Sg	**Sg**	**07 59 51.6**	**-0.6**
KRUC	**Moravsky**	**2.37**	**178**	*e*SG	**Sg**	**07 59 51.6**	**-0.6**
KHC	**Kasperske Hory**	**2.86**	**218**	*e*PN	**Pn**	**07 59 22.5**	**-0.6**
KHC				*e*PG	**Pb**	**07 59 29.0**	**+0.9**
KHC				*e*SN	**Sn**	**07 59 57.5**	**-0.8**
KHC				*e*SG	**Sg**	**08 00 06.5**	**-1.6**
KHC	**Kasperske Hory**	**2.86**	**218**	Pn	**Pn**	**07 59 22.5**	**-0.6**
MODS	**Modra-Piesok**	**3.13**	**167**	*e*SG	**Sg**	**08 00 14.5**	**-2.1**
MODS				*e*LG	Lg	08 00 22.3	
MODS	**Modra-Piesok**	**3.13**	**167**	*e*Sg	**Sg**	**08 00 14.6**	**-2.1**

*IDC **13** 08:00:46.5±1.1, 2°.62S×138°.80E, h0km, mb3.3/4, mb1 3.6/5, mb1mx3.3/48, mbtmp3.4/5, ML3.4/1, Error ellipse: s-maj=24.9km s-min=23.4km az=4.0*
*ISCJB **13** 08:00:50.1±0.9, 2°.7S±0°.1×138°.75E

CAIG				eS	Sg	08 03 54.5	-4.2
TLIG	**Tlapa**	**1.48**	**28**	eP	Pn	08 03 42.6	-3.9
TLIG				eS	Sn	08 04 01.3	-4.9
TLIG	**Tlapa**	**1.48**	**28**	eP	Pn	08 03 42.6	-3.9
TLIG				eS	Sn	08 04 01.3	-4.9
ARIG	**Puente Sto Nin**	**2.25**	**334**	eP	Pn	08 03 54.8	-2.2
ARIG				eS	Sn	08 04 24.2	-0.9
ARIG	**Puente Sto Nin**	**2.25**	**334**	eP	Pn	08 03 54.8	-2.2
ARIG				eS	Sn	08 04 24.2	-0.9
VHO	**Vista Hermosa**	**2.59**	**71**	eP	Pn	08 03 59.6	-2.2
VHO	**Vista Hermosa**	**2.59**	**71**	eP	Pn	08 03 59.6	-2.2

CSEM ***13*** *08:11:40.8±0.9, 71°.34N×8°.27W, h10km, ML3.0, Error ellipse: s-maj=29.1km s-min=8.8km az=84.0*
ISCJB ***13*** *08:11:41.3±0.6, 71°.33N±0°.04×10°.2W±0°.2, h10km, Error ellipse: s-maj=8.7km s-min=4.8km az=21.9*
BER ***13*** *08:11:49.8±1.2, 71°.51N×10°.25W, h10km, ML2.4*
REY ***13*** *08:11:50.0, 70°.70N×9°.65W, h10km*
ISC 13 08:11:44.6±1.1, 71°.29N±0°.07×9°.92W±0°.09, h10km, n21, σ1s77/30, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCO	**Scoresbysund**	**4.04**	**264**	*i* P	**Pn**	**08 12 49.7**	**+3.4**
SCO				*i* S	**Sn**	**08 13 31.5**	**-2.0**
ILEI	**Leirhofn**	**5.45**	**209**	P	**Pn**	**08 13 05.7**	**+0.1**
ILEI	baz=214			S	**Sn**	**08 14 06.5**	**-1.8**
ILEI	**Leirhofn**	**5.45**	**209**	P	**Pn**	**08 13 05.7**	**+0.1**
ILEI	baz=214			S	**Sn**	**08 14 06.5**	**-1.8**
IGRI	**Grimsey**	**5.59**	**215**	P	**Pn**	**08 13 08.7**	**+1.1**
IGRI	baz=220			S	**Sn**	**08 14 10.0**	**-1.7**
IGRI	**Grimsey**	**5.59**	**215**	P	**Pn**	**08 13 08.7**	**+1.1**
IGRI	baz=220			S	**Sn**	**08 14 10.0**	**-1.7**
IGIL	**Gilhagi**	**5.73**	**207**	S	**Sn**	**08 14 13.6**	**-1.7**
IGIL	**Gilhagi**	**5.73**	**207**	S	**Sn**	**08 14 13.6**	**-1.7**
IDIM	**Dimmadals^¡s**	**5.93**	**209**	P	**Pn**	**08 13 12.6**	**+0.3**
IDIM	baz=213			S	**Sn**	**08 14 18.8**	**-1.3**
IDIM	**Dimmadals^¡s**	**5.93**	**209**	P	**Pn**	**08 13 12.6**	**+0.3**
IDIM	baz=213			S	**Sn**	**08 14 18.8**	**-1.3**
DAG	**Danmarks Havn**	**6.00**	**340**	*i* P	**Pn**	**08 13 11.6**	**-1.7**
DAG	**Danmarks Havn**	**6.00**	**340**	*i* P	**Pn**	**08 13 11.7**	**-1.6**
IGRS	**Grimsstaoir**	**6.12**	**205**	P	**Pn**	**08 13 14.9**	**+0.1**
IGRS	baz=208			S	**Sn**	**08 14 22.9**	**-1.8**
IMEL	**Melhnausar**	**6.25**	**207**	P	**Pn**	**08 13 16.8**	**0.0**
IHRN	**Hraun**	**6.38**	**220**	P	**Pn**	**08 13 21.6**	**+3.2**
IADA	**Aoalbol**	**6.64**	**201**	P	**Pn**	**08 13 22.9**	**+0.8**
IVSH	**V-Sauoahnukur**	**6.86**	**201**	P	**Pn**	**08 13 26.1**	**+1.0**
IVSH	**V-Sauoahnukur**	**6.86**	**201**	P	**Pn**	**08 13 26.1**	**+1.0**
SUMG	**Summit**	**8.91**	**292**	*i* P	**Pn**	**08 13 56.8**	**+3.4**
SUMG				*i* S	**Sn**	**08 15 31.0**	**-2.9**
HSPB	**Hornsund (broa**	**8.93**	**39**	eP	**Pn**	**08 13 52.9**	**-0.4**
KBS	**Kingsbay**	**9.41**	**26**	eP	**Pn**	**08 13 58.0**	**-1.9**
KBS				eS	Sn	08 15 34.4	-11
KBS	comp=Z,2.3nm,0.7s			IAML		08 15 40.7	
SPA0	**Spitsbergen Ar**	**9.66**	**33**	eP	**Pn**	**08 14 03.5**	**+0.1**
SPA0				eS	Sn	08 15 40.3	-11
SPA0	comp=Z,2.5nm,0.8s			IAML		08 15 41.6	

ISK ***13*** *08:13:46.8, 38°.31N×38°.99E, h18km, ML2.2/5*
ISCJB ***13*** *08:13:47.7±0.6, 38°.34N±0°.04×38°.96E±0°.03, h8km±5km, Error ellipse: s-maj=7.1km s-min=4.5km az=177.5*
CSEM ***13*** *08:13:47.3±0.2, 38°.35N×38°.96E, h10km, ML2.9, Error ellipse: s-maj=5.5km s-min=3.7km az=178.0*
DDA ***13*** *08:13:47.9, 38°.40N×38°.96E, h16km, Ml2.9*
ISC 13 08:13:47.3±0.9, 38°.35N±0°.04×38°.96E±0°.03, h15km±6km, n20, σ0s60/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.15**	**8**	*i* P	**Pg**	**08 13 51.4**	**+0.1**
ELZG				*i* S	**Sg**	**08 13 54.0**	**0.0**
ELZG	**Elazig**	**0.15**	**8**	P	**Pg**	**08 13 51.4**	**+0.1**
ELZG				S	**Sg**	**08 13 54.0**	**0.0**
SVRC	**Sivrice-ELAZID**	**0.28**	**84**	PG	**Pg**	**08 13 53.3**	**0.0**
SVRC				SG	**Sg**	**08 13 57.5**	**+0.2**
SVRC	**Sivrice-ELAZID**	**0.28**	**84**	ePg	**Pg**	**08 13 53.3**	**0.0**
SVRC				eSg	**Sg**	**08 13 57.5**	**+0.2**
MALT	**Malatya**	**0.42**	**265**	PG	**Pg**	**08 13 56.1**	**+0.4**
MALT				SG	**Sb**	**08 14 03.2**	**+0.5**
MALT	**Malatya**	**0.42**	**265**	ePg	**Pg**	**08 13 56.1**	**+0.4**
MALT				eSg	**Sb**	**08 14 03.2**	**+0.5**
PTK	**Pertek**	**0.64**	**32**	PG	**Pg**	**08 13 59.7**	**-0.2**
PTK	**Pertek**	**0.64**	**32**	ePg	**Pg**	**08 13 59.7**	**-0.2**
AKCD	**Akcadag**	**0.82**	**266**	*i* P	**Pg**	**08 14 03.7**	**+0.5**
AKCD				*i* S	**Sn**	**08 14 15.7**	**-0.6**
AKCD	**Akcadag**	**0.82**	**266**	P	**Pg**	**08 14 03.7**	**+0.5**
AKCD				S	**Sn**	**08 14 15.7**	**-0.6**
URFA	**Urfa**	**0.92**	**187**	PG	**Pb**	**08 14 03.9**	**-1.0**
URFA	**Urfa**	**0.92**	**187**	ePg	**Pb**	**08 14 03.9**	**-1.0**
HEKM	**Malatya_Hekimh**	**0.94**	**304**	*i* P	**Pb**	**08 14 05.1**	**-0.4**
HEKM				*i* S	**Sn**	**08 14 19.2**	**-0.4**
HEKM	**Malatya_Hekimh**	**0.94**	**304**	P	**Pb**	**08 14 05.1**	**-0.4**
HEKM				S	**Sn**	**08 14 19.2**	**-0.4**
KEMA	**Kemaliye**	**0.98**	**339**	*i* P	**Pb**	**08 14 05.8**	**-0.4**
KEMA				*i* S	**Sg**	**08 14 19.5**	**+0.2**
KEMA	**Kemaliye**	**0.98**	**339**	P	**Pb**	**08 14 05.8**	**-0.4**
KEMA				S	**Sg**	**08 14 19.5**	**+0.2**
HANI	**Diyarbakir_Han**	**1.14**	**86**	*i* P	**Pg**	**08 14 09.4**	**+0.2**
HANI				*i* S	**Sg**	**08 14 25.7**	**+1.7**
HANI	**Diyarbakir_Han**	**1.14**	**86**	P	**Pg**	**08 14 09.4**	**+0.2**
HANI				S	**Sg**	**08 14 25.7**	**+1.7**
ILIC	**ilic-Erzincan**	**1.14**	**345**	PN	**Pn**	**08 14 09.0**	**+0.1**
ILIC	**ilic-Erzincan**	**1.14**	**345**	ePn	**Pn**	**08 14 09.0**	**+0.1**

NIED ***13*** *08:22:00, 24°.70N×121°.20E, h5km, Mw4.5 Best double couple: M0=5.61000×10^15 NP1:φs=34.00000°, δ61.00000°, λ-15.00000°. NP2:φs=131.00000°, δ77.00000°, λ-150.00000°.*
BJI ***13*** *08:22:18.8, 24°.77N×121°.29E, h7km, mb4.4/25, mB4.6/20, ML4.9/11, Ms4.5/24, Ms7 4.4/18*
IDC ***13*** *08:22:18.2±0.6, 24°.58N×121°.30E, h0km, mb4.0/20, mb1 4.1/23, mb1mx4.0/64, mbtmp4.0/23, ML3.6/3, MS3.8/21, Ms1 3.8/21, ms1mx3.5/67, Error ellipse: s-maj=18.5km s-min=13.1km az=63.0*
JMA ***13*** *08:22:20.3±0.3, 24°.75N×121°.24E, h0km, M4.8*
TAP ***13*** *08:22:20.4, 24°.76N×121°.26E, h10km, ML4.7, B*
ISCJB ***13*** *08:22:21.0±0.2, 24°.80N±0°.01×121°.25E±0°.01, h13km±1km, mb4.0/28, MS3.9/18, Error ellipse: s-maj=1.9km s-min=1.7km az=143.8*
NEIC ***13*** *08:22:21.2±0.7, 24°.72N×121°.25E, h13km±5km, mb4.5/6, ML4.9(TAP), Error ellipse: s-maj=7.7km s-min=5.1km az=100.0*
NEIC Recorded [4 TAP] in Hsinchu; [3 TAP] in Taoyuan and Yilan; [2 TAP] in Miaoli, New Taipei and Taichung.
ISC 13 08:22:21.0±0.7, 24°.74N±0°.01×121°.27E±0°.01, h13km±4km, n173, σ1s02/225, mb4.2/28, MS3.8/18, 32C-21D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NSK	**Sanguang**	**0.10**	**129**	⇑*i*P	**Pg**	**08 22 23.8**	**-0.3**
NSK	baz=132			*i* S	**Sg**	**08 22 26.1**	**-0.2**
YHNB	**Yeheng**	**0.12**	**127**	⇑P	**Pg**	**08 22 24.0**	**-0.3**
YHNB	baz=131			*i* S	**Sg**	**08 22 26.5**	**-0.2**
YHNB	**Yeheng**	**0.12**	**127**	ePg	**Pg**	**08 22 23.8**	**-0.6**
YHNB				eSg	**Sg**	**08 22 26.6**	**-0.2**
NWLT	**Wulai**	**0.21**	**81**	⇑*i*P	**Pg**	**08 22 25.4**	**-0.3**
NWLT	baz=87			S	**Sg**	**08 22 28.8**	**-0.2**
NCUH	**Zhongli**	**0.24**	**341**	⇓P	**Pg**	**08 22 25.9**	**-0.2**
NCU	**National Centr**	**0.24**	**342**	⇓P	**Pg**	**08 22 25.9**	**-0.2**
NCU	baz=347			eS	**Sb**	**08 22 30.5**	**-0.9**
LIOB	**Emei**	**0.25**	**247**	⇑*i*P	**Pg**	**08 22 26.6**	**+0.3**
LIOB	baz=228			*i* S	**Sb**	**08 22 31.2**	**-0.6**
SBCB	**Hsinchu**	**0.26**	**281**	⇑P	**Pg**	**08 22 27.0**	**+0.4**
SBCB	baz=273			S	**Sb**	**08 22 31.7**	**-0.4**
NSTT	**Nanjuang**	**0.27**	**246**	⇑*i*P	**Pg**	**08 22 26.9**	**+0.2**
NSTT	baz=226			*i* S	**Sb**	**08 22 31.5**	**-0.7**
HSN	**Hsinchu**	**0.28**	**282**	⇑*i*P	**Pg**	**08 22 26.6**	**-0.3**
HSN	baz=299			*i* S	**Sg**	**08 22 31.2**	**+0.5**
ENTT	**Nioudou**	**0.29**	**111**	⇑*i*P	**Pg**	**08 22 27.4**	**+0.4**
ENTT	baz=113			eS	**Sg**	**08 22 31.5**	**+0.5**
TATO	**Taipei**	**0.31**	**41**	⇑P	**Pg**	**08 22 27.3**	**0.0**
TATO	baz=46			S	**Sg**	**08 22 31.9**	**+0.3**
TATO	**Taipei**	**0.31**	**41**	ePg	**Pg**	**08 22 27.2**	**-0.2**
TATO				eSg	**Sg**	**08 22 32.3**	**+0.8**
NNS	**Nan Shan**	**0.32**	**163**	⇓*i*P	**Pg**	**08 22 28.0**	**+0.5**
NNS	baz=152			S	**Sg**	**08 22 32.8**	**+0.9**
NNSB	**Datong**	**0.33**	**162**	⇓P	**Pg**	**08 22 28.2**	**+0.4**
NNSB	baz=152			S	**Sg**	**08 22 32.7**	**+0.4**
NNSH	**Datong**	**0.33**	**162**	⇓P	**Pg**	**08 22 28.1**	**+0.3**
NNSH	baz=153			S	**Sg**	**08 22 32.9**	**+0.6**
TWE	**Neicheng**	**0.36**	**93**	⇑*i*P	**Pg**	**08 22 28.8**	**+0.4**
TWE	baz=104			eS	**Sb**	**08 22 34.2**	**-0.7**
TAP	**Taipei**	**0.37**	**36**	⇑P	**Pg**	**08 22 28.6**	**+0.2**
TWA	**Mucha**	**0.37**	**50**	⇑*i*P	**Pg**	**08 22 28.7**	**+0.2**
TWA	baz=67			S	**Sg**	**08 22 34.4**	**+0.8**
TAP1	**Taipei**	**0.38**	**38**	⇑P	**Pg**	**08 22 28.6**	**0.0**
TAP1	baz=42			eS	**Sb**	**08 22 34.7**	**-0.6**
ILA	**Ilan**	**0.44**	**87**	eP	**Pg**	**08 22 29.9**	**+0.2**
ILA	baz=91			eS	**Sb**	**08 22 37.5**	**+0.4**
YM04	**YM04**	**0.48**	**31**	P	**Pg**	**08 22 30.7**	**+0.3**
YM04	baz=22			S	**Sb**	**08 22 38.6**	**+0.3**
NMLH	**Miaoli**	**0.48**	**245**	⇑P	**Pb**	**08 22 31.6**	**+0.3**
YM10	**YM10**	**0.49**	**33**	⇑P	**Pb**	**08 22 31.1**	**-0.4**
YM03	**YM03**	**0.50**	**29**	⇓*i*P	**Pg**	**08 22 31.3**	**+0.4**
YM03	baz=21			eS	**Sg**	**08 22 37.9**	**+0.3**
YM11	**YM11**	**0.50**	**33**	⇑eP	**Pb**	**08 22 32.5**	**+0.6**
YM12	**YM12**	**0.52**	**32**	P	**Pg**	**08 22 31.4**	**+0.2**
NTC	**Toucheng**	**0.52**	**78**	eP	**Pg**	**08 22 31.1**	**-0.2**
NTC	baz=82			eS	**Sb**	**08 22 39.4**	**-0.1**
YM08	**YM08**	**0.53**	**33**	⇑P	**Pg**	**08 22 31.6**	**+0.1**
ENA	**Nanau**	**0.53**	**126**	⇑*i*P	**Pb**	**08 22 31.9**	**-0.3**
ENA	baz=126			S	**Sb**	**08 22 39.2**	**-0.6**
YM07	**YM07**	**0.54**	**36**	⇑P	**Pg**	**08 22 30.8**	**-0.8**
NANB	**Nanao**	**0.54**	**126**	⇑P	**Pg**	**08 22 31.9**	**+0.3**
NANB	baz=125			S	**Sg**	**08 22 38.8**	**+0.1**
TWC	**Suao**	**0.54**	**104**	⇑*i*P	**Pg**	**08 22 31.9**	**+0.2**
TWC	baz=113			eS	**Sb**	**08 22 39.6**	**-0.5**
TIPB	**Shuangxi**	**0.56**	**66**	⇑*i*P	**Pg**	**08 22 30.9**	**-1.0**
TIPB	baz=83			S	**Sg**	**08 22 38.9**	**-0.5**
NSY	**Sanyi**	**0.56**	**235**	⇑*i*P	**Pb**	**08 22 33.5**	**+0.7**
NSY	baz=216			eS	**Sb**	**08 22 41.2**	**+0.4**
NWF	**Wu-fen Shan**	**0.57**	**55**	⇑*i*P	**Pg**	**08 22 32.5**	**+0.3**
NWF	baz=60			eS	**Sb**	**08 22 40.4**	**-0.6**
WFSB	**Wu-fen Shan**	**0.57**	**55**	⇑P	**Pg**	**08 22 32.5**	**+0.3**
ENAH	**Nanao**	**0.57**	**121**	eP	**Pg**	**08 22 32.3**	**0.0**
ENAH	baz=121			eS	**Sg**	**08 22 40.2**	**+0.4**
TWY	**Chenhua**	**0.61**	**29**	⇓P	**Pb**	**08 22 33.4**	**-0.2**
EGS	**Keelung**	**0.61**	**80**	⇑*i*P	**Pb**	**08 22 33.4**	**-0.3**
EGS	baz=84			eS	**Sb**	**08 22 41.8**	**-0.4**
NACB	**Ninganchiao**	**0.64**	**152**	⇓P	**Pb**	**08 22 34.1**	**0.0**
NACB	baz=151			S	**Sb**	**08 22 42.8**	**-0.1**
NACB	**Ninganchiao**	**0.64**	**152**	ePg	**Pb**	**08 22 34.1**	**0.0**
CHGB	**Renai**	**0.69**	**187**	⇓P	**Pg**	**08 22 34.6**	**+0.2**
TWB1	**Santiao Chiao**	**0.70**	**68**	⇑P	**Pg**	**08 22 34.6**	**-0.1**
TWB1	baz=80			eS	**Sg**	**08 22 44.1**	**+0.1**
TWD	**Chiawan**	**0.72**	**156**	⇓*i*P	**Pb**	**08 22 35.6**	**+0.1**
TWD	baz=153			S	**Sb**	**08 22 45.2**	**-0.2**
TCU	**Taichung**	**0.80**	**223**	eP	**Pn**	**08 22 38.2**	**+0.1**
EOS1	**EOS1**	**0.81**	**104**	eP	**Pb**	**08 22 37.0**	**+0.1**
EOS1	baz=100			eS	**Sn**	**08 22 49.0**	**-0.9**
HWA	**Hwalien**	**0.82**	**158**	eP	**Pn**	**08 22 37.8**	**-0.5**
ENLB	**Shoufeng**	**0.89**	**160**	⇓*i*P	**Pn**	**08 22 39.0**	**-0.3**
ENLB	baz=157			eS	**Sn**	**08 22 51.5**	**-0.5**
TYC	**Yuchr**	**0.92**	**204**	eP	**Pn**	**08 22 39.2**	**-0.4**
SMLT	**Sun Moon Lake**	**0.92**	**202**	⇓P	**Pg**	**08 22 38.9**	**+0.1**
WCHH	**Zhanghua**	**0.93**	**225**	⇑eP	**Pn**	**08 22 40.0**	**+0.2**
WCHH	baz=216			eS	**Sn**	**08 22 54.1**	**+1.2**
ESL	**Shilin**	**0.94**	**171**	⇓*i*P	**Pb**	**08 22 39.4**	**+0.2**
ESL	baz=167			eS	**Sn**	**08 22 53.8**	**+0.6**
VWDT	**VWDT**	**0.99**	**187**	⇓P	**Pb**	**08 22 39.6**	**-0.4**
SSLB	**Suanglung**	**0.99**	**197**	⇓eP	**Pb**	**08 22 39.6**	**-0.6**
SSLB	**Suanglung**	**0.99**	**197**	ePg	**Pb**	**08 22 39.5**	**-0.6**
WJS	**Zhushan**	**1.04**	**208**	eP	**Pn**	**08 22 41.9**	**+0.5**
WJS	baz=201			eS	**Sn**	**08 22 57.4**	**+1.6**
EGFH	**Guangfu**	**1.08**	**172**	⇓P	**Pb**	**08 22 41.6**	**0.0**
EGFH	baz=161			eS	**Sn**	**08 22 57.0**	**+0.3**
RLNB	**Erlin**	**1.19**	**225**	eP	**Pn**	**08 22 43.4**	**0.0**
EHY	**Hungye**	**1.23**	**178**	eP	**Pn**	**08 22 44.1**	**+0.1**
WGK	**Gukeng**	**1.23**	**212**	eP	**Pn**	**08 22 44.0**	**0.0**
WDLH	**Douliu**	**1.24**	**213**	eP	**Pb**	**08 22 44.5**	**+0.2**
HGSD	**Ruisui**	**1.25**	**173**	eP	**Pg**	**08 22 45.2**	**+0.1**
ALS	**Alishan**	**1.30**	**199**	eP	**Pg**	**08 22 46.0**	**-0.1**
ALS	baz=207			eS	**Sg**	**08 23 03.4**	**+0.4**
YULB	**Yu-li**	**1.34**	**179**	⇓P	**Pb**	**08 22 46.3**	**+0.2**
YULB	baz=174			eS	**Sg**	**08 23 04.9**	**+0.5**
YULB	**Yu-li**	**1.34**	**179**	ePn	**Pb**	**08 22 46.4**	**+0.2**
TWF1	**Yuli**	**1.38**	**179**	⇓P	**Pb**	**08 22 46.9**	**+0.1**
WSF	**Szhu**	**1.46**	**221**	eP	**Pn**	**08 22 47.4**	**+0.3**
WSF	baz=212			eS	**Sg**	**08 23 07.7**	**-0.3**
FULB	**Fuli**	**1.54**	**179**	⇓P	**Pg**	**08 22 50.5**	**-0.1**
WLGB	**Puzi**	**1.54**	**215**	eP	**Pn**	**08 22 48.5**	**+0.3**
TPUB	**Ta-pu**	**1.55**	**202**	eP	**Pb**	**08 22 49.4**	**-0.2**
TPUB	**Ta-pu**	**1.55**	**202**	ePn	**Pb**	**08 22 49.6**	**-0.1**
JYNG	**Yonagunijimaku**	**1.55**	**100**	P	**Pb**	**08 22 49.2**	**-0.5**
JYNG				eS	**Sg**	**08 23 10.4**	**-0.7**
ELDTW	**Lidau**	**1.56**	**189**	eP	**Pb**	**08 22 50.5**	**+0.5**
ELDTW	baz=170			eS	**Sg**	**08 23 12.6**	**+1.1**
WTP	**Ta-pu**	**1.61**	**202**	eP	**Pb**	**08 22 50.5**	**-0.1**
YOJ	**Yonaguni jima**	**1.61**	**100**	⇓eP	**Pn**	**08 22 49.5**	**+0.3**
YOJ	baz=103			eS	**Sb**	**08 23 10.6**	**-0.3**
YOJ	**Yonaguni jima**	**1.61**	**100**	ePn	**Pb**	**08 22 50.0**	**-0.6**
YOJ	**Yonaguni jima**	**1.61**	**100**	P	**Pn**	**08 22 49.9**	**+0.7**
YOJ				eS	**Sb**	**08 23 11.1**	**+0.2**
TWK	**Hsinying**	**1.63**	**206**	eP	**Pb**	**08 22 50.9**	**-0.2**
CHKT	**Chengkung**	**1.64**	**177**	eP	**Pb**	**08 22 50.6**	**-0.5**
STYT	**Tauyuan**	**1.64**	**197**	eP	**Pb**	**08 22 51.2**	**0.0**
VWUC	**VWUC**	**1.67**	**279**	⇑eP	**Pn**	**08 22 48.8**	**-1.2**
CHN1	**Nanshi**	**1.69**	**204**	eP	**Pb**	**08 22 51.8**	**-0.3**
CHN8	**Yiju**	**1.69**	**215**	⇑P	**Pn**	**08 22 51.1**	**+0.8**
CHN8	baz=205			eS	**Sb**	**08 23 13.2**	**0.0**
SGST	**Jiashian**	**1.77**	**201**	eP	**Pb**	**08 22 53.4**	**+0.1**
SLGT	**Liugui**	**1.83**	**198**	eP	**Pb**	**08 22 54.6**	**+0.1**
MATB	**Ma-tsu**	**1.84**	**320**	eP	**Pn**	**08 22 51.1**	**-1.3**
MATB	baz=327			eS	**Sn**	**08 23 15.2**	**-0.4**
CHN3	**Shinhua**	**1.85**	**207**	eP	**Pb**	**08 22 55.0**	**+0.2**
TWG	**Pinlang**	**1.92**	**185**	eP	**Pb**	**08 22 54.8**	**-1.2**
TWG	**Pinlang**	**1.92**	**185**	ePn	**Pb**	**08 22 55.0**	**-1.0**
TWGBT	**Beinan**	**1.92**	**185**	eP	**Pb**	**08 22 55.0**	**-1.0**
PNG	**Penghu**	**1.95**	**234**	eP	**Pn**	**08 22 53.0**	**-0.9**
PHUB	**P'eng-hu**	**1.98**	**232**	eP	**Pn**	**08 22 53.1**	**-1.1**
TWH	**Lutao**	**2.03**	**175**	eP	**Pn**	**08 22 56.0**	**+1.0**
SSD	**Sandimen**	**2.07**	**196**	eP	**Pb**	**08 22 58.4**	**-0.2**
WDGT	**Dungji**	**2.08**	**225**	eP	**Pn**	**08 22 55.0**	**-0.7**
ECL	**Taimali**	**2.15**	**188**	eP	**Pb**	**08 23 00.8**	**+0.9**
MASBT	**Mashibuluo**	**2.20**	**196**	eP	**Pb**	**08 23 01.3**	**+0.6**
VCHM	**Qimei**	**2.27**	**228**	eP	**Pn**	**08 22 57.5**	**-0.8**
IRIF	**Iriomote-Funau**	**2.28**	**100**	P	**Pn**	**08 22 59.4**	**+1.0**
IRIF				S	**Sn**	**08 23 27.7**	**+1.4**
HATJ	**Hateruma jima**	**2.41**	**106**	P	**Pb**	**08 23 02.5**	**-1.8**
SCZT	**Fangliau**	**2.43**	**194**	eP	**Pb**	**08 23 03.4**	**-1.3**
QZH	**Quanzhou**	**2.44**	**275**	⇑*i*Pn	**Pn**	**08 23 00.4**	**-0.2**
QZH				Sn	**Sn**	**08 23 29.6**	**-0.7**
QZH	comp=N,2μm,0.9s			smax	smax		
QZH	comp=E,1μm,0.7s			smax	smax		
JKRS	**Kuro-shima**	**2.55**	**101**	P	**Pn**	**08 23 03.6**	**+1.5**
JKRS				S	**Sn**	**08 23 35.0**	**+2.0**
KNM	**Kinmen**	**2.60**	**263**	eP	**Pn**	**08 23 03.5**	**+0.6**
KNMB	**Chin-men Tao**	**2.64**	**265**	eP	**Pn**	**08 23 02.6**	**-0.8**
JIJ	**Ishigaki jima**	**2.64**	**98**	P	**Pn**	**08 23 04.3**	**+0.9**
JIJ				S	**Sn**	**08 23 37.0**	**+1.6**
LAY	**Lan-yu**	**2.70**	**174**	eP	**Pn**	**08 23 05.2**	**+0.9**
JISG	**Ishigakijimahi**	**2.77**	**93**	P	**Pn**	**08 23 07.0**	**+1.8**
JISG				S	**Sn**	**08 23 41.4**	**+2.9**
TWK1	**Hengchun**	**2.82**	**189**	eP	**Pb**	**08 23 09.1**	**-2.2**
TWKBT	**Hengchun**	**2.82**	**189**	eP	**Pb**	**08 23 09.4**	**-1.9**
JTJ	**Tarama**	**3.12**	**91**	P	**Pn**	**08 23 11.4**	**+1.4**
JIRB	**Irabujima**	**3.55**	**88**	P	**Pn**	**08 23 18.2**	**+2.3**
JOW	**Kunigami**	**6.65**	**70**	P	**Pn**	**08 23 59.0**	**+0.5**
JOW	**Kunigami**	**6.65**	**70**	ePn	**Pn**	**08 24 01.4**	**+2.9**
NJ2	**Nanjing**	**7.59**	**344**	eP	**Pn**	**08 24 09.6**	**-1.7**
NJ2				S	**Sn**	**08 25 36.5**	**-0.7**
NJ2	comp=Z,65nm,0.7s			pmax	pmax		
NJ2	comp=N,380nm,1.1s			smax	smax		
NJ2	comp=E,370nm,0.9s			smax	smax		
NJ2	comp=N,2μm,5.4s			LR	LR		
NJ2	comp=E,2μm,7.3s			LR	LR		
NJ2	comp=Z,3μm,8.9s			LR	LR		
WHN	**Wuhan**	**8.43**	**315**	⇓P	**Pn**	**08 24 23.4**	**+0.5**
WHN	comp=N,9μm,11.8s			LR	LR		
WHN	comp=E,9μm,10.7s			LR	LR		
WHN	comp=Z,3μm,6.2s			LR	LR		
TGY	**Tagaytay City**	**10.59**	**182**	LR	LR	08 29 39.3	
	comp=Z,314nm,20.2s,baz=310,slow=42						
JNU	**Nakatsue**	**11.85**	**43**	Pn	**Pn**	**08 25 10.9**	**+1.1**
	0.2nm,0.3s,baz=204,slow=9.9,SNR=1.8						
JNU				LR	LR	08 30 32.8	
	comp=Z,244nm,18.2s,baz=272,slow=41						
JNU	**Nakatsue**	**11.85**	**43**	ePn	**Pn**	**08 25 11.6**	**+1.8**
KSAR	**Wonju Array Be**	**13.86**	**22**	Pn	**Pn**	**08 25 37.2**	**0.0**
KSRS	**Korea Array**	**13.89**	**23**	Pn	**Pn**	**08 25 37.2**	**-0.3**
	0.6nm,0.3s,baz=209,slow=14,SNR=6.9						
KSRS				LR	LR	08 31 16.3	
	comp=Z,284nm,18.7s,baz=206,slow=38						
BJI	**Beijing**	**15.84**	**346**	⇑eP	**P**	**08 26 07.8**	**+0.2**
BJI				pmax	pmax		

comp=Z,22nm,0.9s
BJI LR LR
comp=E,1μm,10.8s
KMI Kunming 16.81 275 P **P** **08 26 19.6 +0.9**
KMI S **S** **08 29 32.1 -2.0**
KMI pmax pmax
comp=Z,12nm,1.0s
KMI pmax pmax
comp=Z,91nm,4.5s
KMI LR LR
comp=N,2μm,8.4s
KMI LR LR
comp=E,1μm,11.0s
KMI LR LR
comp=Z,1μm,11.4s
MJAR Matsushiro Arr 18.70 47 LR LR 08 34 03.0
comp=Z,275nm,21.3s,baz=265,slow=38
LZH Lanzhou 18.77 311 *e*P **P** **08 26 39.4 -0.8**
LZH pP pP 08 26 43.3 -0.5
LZH sP sP 08 26 46.8 +1.3
LZH PP **PnPn** **08 26 56.9 +4.1**
LZH S **S** **08 30 15.8 +2.0**
LZH pmax pmax
comp=Z,32nm,1.1s
LZH pmax pmax
comp=Z,190nm,4.3s
LZH LR LR
comp=N,2μm,11.0s
LZH LR LR
comp=E,2μm,10.4s
LZH LR LR
comp=Z,2μm,11.9s
CN2 Changchun 19.32 9 *e*P **Pn** **08 26 47.4 +0.4**
CN2 *es*P sP 08 26 54.4 +3.2
CN2 *e*S **Sn** **08 30 20.3 -3.1**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,820nm,15.0s
CN2 LR LR
comp=E,720nm,15.0s
CN2 LR LR
comp=Z,960nm,15.0s
MYLDM Lahad Datu 19.63 188 *e*P **P** **08 26 47.8 -1.8**
68nm,1.3s
USRK Ussuriysk Ar. 21.29 22 P **P** **08 27 08.2 +0.9**
2.3nm,0.8s,baz=231,slow=9.1,SNR=3.1
USRK LR LR 08 35 57.8
comp=Z,253nm,18.1s,baz=182,slow=38
CMAR Chiang Mai Arr 21.67 258 P **P** **08 27 12.3 +0.7**
0.8nm,0.4s,baz=51,slow=8.5,SNR=3.4
CMAR LR LR 08 36 01.6
comp=Z,358nm,18.4s,baz=42,slow=38
GTA Gaotai 23.25 314 *e*P **P** **08 27 35.4 +7.0**
GTA pP sP 08 27 39.5 +5.8
GTA sP pP 08 27 42.6 +11
GTA pmax pmax
comp=Z,6.0nm,0.8s
SBUM Sibu 23.82 203 *e*P **P** **08 27 34.8 +0.8**
comp=Z,13nm,1.1s
GUMO Guam 24.86 112 LR LR 08 36 57.3
comp=Z,100nm,20.0s,baz=304,slow=36
ULN Ulaanbaatar 25.68 338 *e*P **P** **08 27 51.5 +0.6**
comp=Z,7.1nm,1.1s
KLR Kul'dur 25.79 16 P **P** **08 27 52.9 +1.3**
comp=Z,0.2nm,0.9s,baz=200,slow=9.7,SNR=3.5
KLR LR LR 08 38 41.1
comp=Z,27nm,19.2s,baz=201,slow=38
SONM Songino Array 25.89 337 P **P** **08 27 53.2 +0.5**
comp=Z,3.4nm,0.8s,baz=156,slow=9.7,SNR=14
SONM LR LR 08 39 11.6
comp=Z,555nm,18.1s,baz=152,slow=39
SONA1 Songino Array 25.89 337 *e*P **P** **08 27 52.9 +0.1**
SHL Shillong 26.59 278 *e*P **P** **08 27 58.6 -0.8**
PSI Prapat 30.66 228 LR LR 08 41 01.4
comp=Z,261nm,18.6s,baz=89,slow=37
WMQ Urumqi 33.33 313 P **P** **08 29 00.3 +1.5**
WMQ sP sP 08 29 07.3 +3.0
WMQ pmax pmax
comp=Z,40nm,1.3s
WMQ pmax pmax
comp=Z,180nm,4.7s
WMQ LR LR
comp=Z,1μm,12.5s
WMQ LR LR
comp=Z,710nm,15.9s
WMQ LR LR
comp=Z,230nm,14.1s
MK01 Makanchi Array 37.98 315 *e*P **P** **08 29 39.1 +0.5**
MK31 Makanchi Array 37.99 315 *e*P **P** **08 29 38.8 +0.1**
MKAR Makanchi Array 37.99 315 P **P** **08 29 39.7 +0.9**
comp=Z,2.7nm,0.8s,baz=107,slow=10,SNR=24
MKAR PcP **PcP** **08 31 53.0 -1.2**
comp=Z,0.6nm,0.8s,baz=90,slow=3.0,SNR=2.8
MKAR Makanchi Array 37.99 315 *e*P **P** **08 29 39.5 +0.7**
comp=Z,14nm,0.8s
MKAR PcP **PcP** **08 31 53.0 -1.2**
MAKZ Makanchi 38.20 315 *e*P **P** **08 29 41.0 +0.5**
comp=Z,3.6nm,0.9s
ZALV Zalesovo Beam 39.82 327 P **P** **08 29 53.1 -0.8**
comp=Z,1.8nm,0.6s,baz=108,slow=9.5,SNR=4.1
ZALV LR LR 08 46 25.8
comp=Z,95nm,19.8s,baz=70,slow=36
KURK Kurchatov 41.72 320 P **P** **08 30 08.9 -0.6**
KURBB Kurchatov Arra 41.73 320 P **P** **08 30 09.0 -0.8**
comp=Z,0.3nm,0.4s,baz=109,slow=9.2,SNR=3.8
PALK Pallekele 42.47 253 LR LR 08 49 54.5
comp=Z,112nm,18.0s,baz=118,slow=39
WRA Warramunga Arr 46.20 163 P **P** **08 30 44.1 -1.8**
comp=Z,2.2nm,0.7s,baz=345,slow=8.6,SNR=5.4
TIXI Tiksi 47.13 3 *e*P **P** **08 30 52.4 -0.2**
comp=Z,6.8nm,1.2s
BVAR Borovoye Array 47.29 320 P **P** **08 30 54.3 +0.1**
comp=Z,0.9nm,0.6s,baz=83,slow=12,SNR=5.3
BVAR PcP **PcP** **08 32 24.1 -1.0**
comp=Z,0.9nm,0.5s,baz=5.7,slow=1.4,SNR=2.7
NRIK Noril'sk 48.89 345 P **P** **08 31 06.2 0.0**
comp=Z,3.4nm,1.0s,baz=138,slow=7.1,SNR=5.8
NRIK LR LR 08 52 56.8
comp=Z,104nm,19.3s,baz=144,slow=38
ASAR Alice Springs 49.66 165 P **P** **08 31 10.5 -2.2**
comp=Z,0.5nm,0.4s,baz=343,slow=6.9,SNR=11
ASAR PcP **PcP** **08 32 31.9 -2.1**
comp=Z,0.2nm,0.6s,baz=345,slow=3.3,SNR=2.4
ABKAR Akbulak array 53.11 314 *e*P **P** **08 31 39.3 +1.0**
STKA Stephens Creek 59.56 160 P **P** **08 32 22.9 -1.5**
comp=Z,2.0nm,0.7s,baz=322,slow=9.5,SNR=3.5
KBZ Khabaz 65.19 309 P **P** **08 33 02.7 +0.6**
comp=Z,1.7nm,0.8s,baz=112,slow=2.2,SNR=5.4
KBZ LR LR 09 04 43.9
comp=Z,61nm,18.2s,baz=83,slow=39
KVAR Kislovodsk Arr 65.29 309 LR LR 09 02 52.2
comp=Z,112nm,18.6s,baz=68,slow=37
ILAR Eielson Array 68.68 27 P **P** **08 33 24.3 +0.3**
comp=Z,0.2nm,0.6s,baz=281,slow=6.7,SNR=3.7
SPITS Spitsbergen Ar 68.96 348 LR LR 09 06 30.1
comp=Z,44nm,19.4s,baz=25,slow=38
ARCES ARCESS Array B 69.05 338 P **P** **08 33 26.7 +0.5**
comp=Z,4.7nm,1.2s,baz=71,slow=8.3,SNR=3.1
FINES FINESS Array B 71.00 330 P **P** **08 33 37.9 -0.4**
comp=Z,3.1nm,1.0s,baz=24,slow=5.2,SNR=5.8
FINES LR LR 09 07 42.7
comp=Z,159nm,19.1s,baz=77,slow=38
AKASG Malin Array Be 72.51 318 P **P** **08 33 47.2 -0.3**
comp=Z,1.0nm,0.6s,baz=62,slow=6.4,SNR=4.5
BRTR Keskin Array B 72.91 306 P **P** **08 33 51.0 +0.7**
comp=Z,1.4nm,0.8s,baz=111,slow=6.8,SNR=8.1
AFI Afiamalu 75.75 113 P **P** **08 34 04.9 -2.1**
comp=Z,37nm,1.0s,baz=298,slow=5.5,SNR=2.4
HFS Hagfors 77.12 331 P **P** **08 34 14.4 +0.4**
comp=Z,2.7nm,0.8s,baz=69,slow=7.9,SNR=5.8
HFS LR LR 09 11 30.7
comp=Z,201nm,18.2s,baz=62,slow=38
NB2 NORSAR Subarra 77.77 332 P **P** **08 34 17.6 -0.2**
comp=Z,3.9nm,1.0s,baz=62,slow=5.9
NOA NORSAR Array B 77.77 332 P **P** **08 34 18.2 +0.5**
comp=Z,4.5nm,0.8s,baz=58,slow=5.8,SNR=4.0
NOA LR LR 09 10 46.2
comp=Z,111nm,18.5s,baz=50,slow=37
LANS Liptovska Anna 78.94 319 *e*PP PP 08 37 21.7 -1.1
GERES GERESS Array B 82.46 321 P **P** **08 34 42.8 -0.6**
comp=Z,0.2nm,0.3s,baz=55,slow=8.5,SNR=2.4
EKA Eskdalemuir Ar 87.26 332 LR LR 09 17 18.3
comp=Z,68nm,18.3s,baz=65,slow=38
YBH Yreka Blue Hor 91.29 42 LR LR 09 11 51.6
comp=Z,32nm,20.9s,baz=320,slow=32
HLNC Highland 99.31 46 *e*P **Pdif** **08 36 04.2 +0.9**

TAP 13 08:22:56.4, 24°.77N×121°.26E, h12km±1km, ML3.6, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NSK	**Sanguang** baz=135	**0.13**	**137**	P	Pg	08 22 59.9	+0.3
NSK				S	Sg	08 23 02.3	+0.3
YHNB	**Yeheng** baz=134	**0.14**	**134**	P	Pg	08 23 00.1	+0.2
YHNB				S	Sg	08 23 02.5	+0.2
NWLT	**Wulai** baz=88	**0.22**	**88**	*i* P	Pg	08 23 01.4	+0.3
NWLT				S	Sg	08 23 04.8	+0.6
NSTT	**Nanjuang** baz=228	**0.28**	**240**	*e*P	Pb	08 23 03.3	0.0
NSTT				*e*S	Sb	08 23 07.8	-0.1
ENTT	**Nioudou** baz=123	**0.30**	**115**	*e*P	Pb	08 23 03.4	-0.4
NNSB	**Datong** baz=152	**0.36**	**162**	*e*P	Pg	08 23 04.1	+0.5
TWE	**Neicheng** baz=98	**0.37**	**97**	*e*P	Pb	08 23 04.5	-0.4

*IDC **13** 08:23:57.4±0.7, 59°.35S×25°.30W, h0km, mb4.0/5, mb1 4.1/6, mb1mx3.9/28, mbtmp4.1/6, ML4.5/1, MS3.2/2, Ms1 3.2/2, ms1mx2.9/30, Error ellipse: s-maj=32.2km s-min=23.2km az=57.0*
*NEIC **13** 08:23:59.0±0.2, 59°.44S×25°.23W, h10km, mb4.4/1, Error ellipse: s-maj=15.4km s-min=9.8km az=61.0*
*ISCJB **13** 08:23:60.0±0.7, 59°.59S±0°.10×25°.4W±0°.3, h32km, mb4.0/5, MS3.2/2, Error ellipse: s-maj=24.7km s-min=10.3km az=154.8*
ISC 13 08:24:02.2±0.6, 59°.5S±0°.1×25°.2W±0°.2, h32km, n42, σ0°.87/39, mb3.9/5, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.23**	**155**	P	**Pn**	**08 27 06.3**	**-1.1**
VNA3	**Neumayer Olymp**	**13.41**	**158**	P	**Pn**	**08 27 08.7**	**-1.3**
VNA3				S	Sn	08 29 21.8	-16
VNA2	**Neumayer--Watz** baz=313,slow=16	**13.63**	**155**	P	**Pn**	**08 27 11.5**	**-1.3**
VNA2				S	Sn	08 29 31.9	-11
SNAA	**Sanae**	**15.19**	**153**	P	**Pn**	**08 27 32.9**	**-1.2**
SNAA	**Sanae**	**15.19**	**153**	Pn	**Pn**	**08 27 32.9**	**-1.2**
	2.0nm,0.3s,baz=312,slow=16,SNR=128						
SNAA				Sn	Sn	08 30 07.8	-13
	0.1nm,0.3s,baz=343,slow=20,SNR=3.4						
SNAA	**Sanae**	**15.19**	**153**	*e*Pn	**Pn**	**08 27 32.6**	**-1.5**
	8.0nm,0.5s						
SNAA				*e*Sn	Sn	08 30 07.8	-13
QSPA	**South Pole Qui**	**30.77**	**180**	P	**P**	**08 30 16.6**	**+2.2**
	1.4nm,0.5s,baz=168,slow=3.6,SNR=6.2						
PLCA	**Paso Flores**	**33.72**	**283**	P	**P**	**08 30 40.1**	**-0.2**
	1.0nm,0.7s,baz=162,slow=3.2,SNR=2.8						
PLCA				LR	LR	08 42 59.1	
	comp=Z,33nm,20.5s,baz=149,slow=34						
H10S2	**ASCENSION HYDR**	**51.04**	**14**	T	T	09 28 20.5	
	baz=184						
H10S3	**ASCENSION HYDR**	**51.05**	**13**	T	T	09 28 17.7	
	baz=184						
H10S1	**ASCENSION HYDR**	**51.06**	**14**	T	T	09 28 11.9	
	baz=184						
LPAZ	**La Paz**	**53.21**	**305**	P	**P**	**08 33 16.6**	**-1.4**
	0.6nm,0.5s,baz=68,slow=3.7,SNR=5.9						
LPAZ				PcP	**PcP**	**08 34 25.1**	**-0.6**
	0.5nm,0.5s,baz=162,slow=5.7,SNR=2.9						
ROSC	**El Rosal**	**74.86**	**309**	LR	LR	09 10 03.9	
	comp=Z,21nm,19.8s,baz=154,slow=37						
TOA0	**Torodi Ar. Sit**	**75.58**	**27**	*e*P	**P**	**08 35 44.1**	**+0.6**
TORD	**Torodi Ar. Bea**	**75.58**	**27**	P	**P**	**08 35 43.9**	**+0.4**
	2.8nm,0.7s,baz=193,slow=6.2,SNR=13						
TOA1	**Torodi Ar. Sit**	**75.59**	**27**	*e*P	**P**	**08 35 43.9**	**+0.3**
ASAR	**Alice Springs**	**95.40**	**161**	P	**P**	**08 37 23.3**	**0.0**
	0.2nm,0.6s,baz=173,slow=1.9,SNR=2.8						
GATR	**Gnd/Air Tx Cnt**	**121.61**	**285**	*e*PKPdf	**PKPdf**	**08 42 51.9**	**+0.1**
HWUT	**Hardware Ranch**	**122.98**	**297**	*e*PKPdf	**PKPdf**	**08 42 55.0**	**+0.5**
PD31	**Pinedale Array**	**122.99**	**299**	*e*PKPdf	**PKPdf**	**08 42 53.4**	**-1.0**
PDAR	**Pinedale Array**	**122.99**	**299**	PKP	**PKPdf**	**08 42 53.4**	**-1.0**
	0.3nm,0.7s,baz=87,slow=5.7,SNR=3.0						
NV01	**Mina Array Sit**	**123.62**	**290**	*e*PKPdf	**PKPdf**	**08 42 56.0**	**+0.2**
NVAR	**Mina Array Bea**	**123.62**	**290**	PKP	**PKPdf**	**08 42 56.0**	**+0.2**
	0.6nm,0.7s,baz=116,slow=4.1,SNR=5.9						
FIA0	**FINESS Array S**	**126.93**	**28**	*e*PKPdf	**PKPdf**	**08 43 00.6**	**-0.5**
FINES	**FINESS Array B**	**126.93**	**28**	PKP	**PKPdf**	**08 43 00.6**	**-0.5**
	0.9nm,0.8s,baz=90,slow=2.8,SNR=2.6						
YKA	**Yellowknife Ar**	**139.37**	**315**	PKP	**PKPdf**	**08 43 25.3**	**+1.0**
	1.3nm,0.7s,baz=119,slow=2.1,SNR=8.1						
INK	**Inuvik**	**149.07**	**317**	PKPbc	**PKPbc**	**08 43 45.2**	**0.0**
	5.2nm,0.7s,baz=89,slow=2.9,SNR=9.6						
INK	**Inuvik**	**149.07**	**317**	*e*PKPbc	**PKPbc**	**08 43 45.7**	**+0.5**
SONA0	**Songino Array**	**149.76**	**91**	*e*PKPbc	**PKPbc**	**08 43 47.9**	**+0.1**
SONM	**Songino Array**	**149.76**	**91**	PKPbc	**PKPbc**	**08 43 47.9**	**+0.1**
	0.9nm,0.6s,baz=222,slow=1.9,SNR=5.4						
DAWY	**Dawson**	**149.78**	**307**	*e*PKPbc	**PKPbc**	**08 43 47.5**	**+0.3**
DOT	**Dot Lake**	**151.56**	**305**	*e*PKPbc	**PKPbc**	**08 43 52.8**	**+1.4**
KS15	**Wonju Array Si**	**152.00**	**130**	*e*PKPbc	**PKPbc**	**08 43 53.4**	**+0.2**
KSAR	**Wonju Array Be**	**152.00**	**130**	PKPbc	**PKPbc**	**08 43 53.4**	**+0.2**
KSRS	**Korea Array**	**152.03**	**130**	PKPbc	**PKPbc**	**08 43 53.4**	**+0.2**
	0.5nm,0.3s,baz=208,slow=3.4,SNR=2.5						
DHY	**Denali Highway**	**152.78**	**303**	*e*PKPbc	**PKPbc**	**08 43 55.0**	**+0.7**
IL1	**Eielson Array**	**153.09**	**306**	*e*PKPbc	**PKPbc**	**08 43 54.9**	**+0.2**
ILAR	**Eielson Array**	**153.09**	**306**	PKPbc	**PKPbc**	**08 43 55.0**	**+0.3**
	3.6nm,0.9s,baz=155,slow=2.3,SNR=34						
ILB	**Eielson Array**	**153.09**	**306**	*e*PKPbc	**PKPbc**	**08 43 55.4**	**+0.6**
WRH	**Wood River Hil**	**153.50**	**305**	*e*PKPbc	**PKPbc**	**08 43 56.4**	**+0.7**
BPAW	**Bear Paw Mtn.**	**154.62**	**304**	*e*PKPbc	**PKPbc**	**08 43 58.8**	**+0.7**
TOLK	**Toolik Lake Re**	**154.90**	**315**	*e*PKPbc	**PKPbc**	**08 43 59.7**	**+1.1**

*BER **13** 08:30:37.9±1.3, 71°.06N×10°.07W, h15km±44km, ML2.7*
*REY **13** 08:30:40.0, 70°.26N×7°.47W, h10km*
ISC 13 08:30:30.3±0.9, 70°.76N±0°.05×10°.09W±0°.06, h10km, n16, σ1°.64/22, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMIC	**Jan Mayen**	**0.57**	**65**	*e*P	**Pn**	**08 30 47.2**	**+2.8**
JMIC				*e*S	**Sn**	**08 30 54.2**	**+0.3**
JMIC				IAML		08 30 58.1	
	comp=Z,464nm,0.4s						
SCO	**Scoresbysund**	**3.96**	**272**	*i* P	**Pb**	**08 31 42.1**	**+2.0**
SCO				*i* S	**Sb**	**08 32 24.9**	**-3.0**
ILEI	**Leirhofn** baz=225	**4.96**	**211**	P	**Pb**	**08 31 58.2**	**+1.2**
ILEI				S	**Sb**	**08 32 58.7**	**+2.1**
IGRI	**Grimsey** baz=231	**5.12**	**218**	P	**Pb**	**08 32 01.6**	**+1.8**
IGIL	**Gilhagi** baz=223	**5.24**	**209**	P	**Pb**	**08 32 00.7**	**-1.1**
IGIL				S	**Sb**	**08 33 04.6**	**0.0**
IDIM	**Dimmadals^¡s** baz=224	**5.44**	**211**	P	**Pb**	**08 32 04.7**	**-0.6**
IDIM				S	**Sb**	**08 33 11.2**	**+0.8**
IGHA	**Grjothals** baz=222	**5.50**	**209**	P	**Pb**	**08 32 04.9**	**-1.5**
IGRS	**Grimsstaoir** baz=219	**5.61**	**206**	P	**Pb**	**08 32 06.2**	**-2.0**
IGRS				S	**Sb**	**08 33 14.8**	**-0.6**
IMEL	**Melhnausar** baz=221	**5.75**	**208**	P	**Pb**	**08 32 08.5**	**-2.1**
IHRN	**Hraun** baz=235	**5.95**	**223**	P	**Pb**	**08 32 14.7**	**+0.8**
DAG	**Danmarks Havn**	**6.50**	**342**	*i* P	**Pn**	**08 32 03.8**	**-1.9**
DAG				*i* S	Sn	08 33 07.9	-12
SUMG	**Summit**	**9.07**	**295**	*i* P	Pn	08 32 48.5	+7.2
SUMG				*i* S	**Sn**	**08 34 23.7**	**+0.2**
HSPB	**Hornsund (broa**	**9.38**	**37**	*e*P	**Pn**	**08 32 44.3**	**-0.9**
BJO	**Bjornoya**	**9.44**	**53**	*e*P	**Pn**	**08 32 45.5**	**-0.6**
KBS	**Kingsbay**	**9.92**	**25**	*e*P	**Pn**	**08 32 51.2**	**-1.4**
KBS				*e*S	Sn	08 34 27.3	-16
SPA0	**Spitsbergen Ar**	**10.14**	**31**	*e*P	**Pn**	**08 32 55.6**	**-0.1**
SPA0				*e*S	Sn	08 34 38.1	-11

*ISCJB **13** 08:30:33.0±0.5, 38°.84N×0°.02×26°.50E±0°.04, h5km±5km, Error ellipse: s-maj=5.8km s-min=3.0km az=175.3*
*DDA **13** 08:30:32.6, 38°.84N×26°.50E, h7km, Ml2.7*
*CSEM **13** 08:30:33.1±0.2, 38°.83N×26°.53E, h2km, ML1.7, Error ellipse: s-maj=5.0km s-min=3.1km az=96.0*
*ATH **13** 08:30:33.4, 38°.83N×26°.49E, h9km±4km, ML1.7/4, Error ellipse: s-maj=4.2km s-min=0.9km az=250.0*
ISC 13 08:30:32.7±1.0, 38°.82N±0°.02×26°.52E±0°.03, h9km±10km, n27, σ0°.52/48, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.46**	**173**	*i* P	**Pg**	**08 30 41.5**	**-0.2**
URLA				*i* S	**Sb**	**08 30 49.2**	**-0.8**
URLA	**Izmir**	**0.46**	**173**	P	**Pg**	**08 30 41.5**	**-0.2**
URLA				S	**Sb**	**08 30 49.2**	**-0.8**
PRK	**Paraskevi**	**0.47**	**336**	P	**Pg**	**08 30 42.0**	**+0.1**
PRK				S	**Sg**	**08 30 48.5**	**+0.4**
PRK				AML	AML	08 30 48.6	
	comp=E,218μm,0.5s						
PRK				AML	AML	08 30 49.0	
	comp=N,232μm,0.4s						
PRK	**Paraskevi**	**0.47**	**336**	P	**Pg**	**08 30 42.0**	**+0.1**
PRK				S	**Sg**	**08 30 48.4**	**+0.4**
AYVA	**Ayvalik**	**0.51**	**15**	*i* P	**Pg**	**08 30 42.6**	**0.0**
AYVA				*i* S	**Sg**	**08 30 50.0**	**+0.7**
AYVA	**Ayvalik**	**0.51**	**15**	P	**Pg**	**08 30 42.6**	**0.0**
AYVA				S	**Sg**	**08 30 50.0**	**+0.7**
CHOS	**Chios island**	**0.56**	**220**	P	**Pb**	**08 30 44.6**	**-0.2**
CHOS				S	**Sg**	**08 30 51.5**	**+0.4**
CHOS				AML	AML	08 30 56.3	
	comp=N,202μm,0.3s						
CHOS				AML	AML	08 30 57.2	
	comp=E,221μm,0.1s						
CHOS	**Chios island**	**0.56**	**220**	P	**Pb**	**08 30 44.4**	**-0.4**
CHOS				S	**Sb**	**08 30 51.8**	**-1.2**
ZEY	**¨zmir**	**0.58**	**181**	*i* P	**Pb**	**08 30 44.7**	**-0.3**
ZEY				*i* S	**Sb**	**08 30 54.1**	**+0.8**
SIGR	**SIGRI**	**0.65**	**307**	P	**Pg**	**08 30 45.7**	**+0.4**
SIGR				S	**Sg**	**08 30 53.3**	**-0.4**
SIGR				AML	AML	08 30 53.9	
	comp=E,88μm,0.4s						
SIGR				AML	AML	08 30 55.9	
	comp=N,80μm,0.2s						
SIGR	**SIGRI**	**0.65**	**307**	P	**Pg**	**08 30 45.5**	**+0.2**
SIGR				S	**Sg**	**08 30 53.6**	**-0.2**
PSRA	**Psara**	**0.80**	**250**	P	**Pg**	**08 30 47.4**	**-0.7**
PSRA				S	**Sb**	**08 30 59.9**	**+0.3**
PSRA	**Psara**	**0.80**	**250**	P	**Pg**	**08 30 47.8**	**-0.3**
PSRA				S	**Sb**	**08 30 59.5**	**-0.1**
DGB	**¨zmir**	**0.82**	**159**	*i* P	**Pg**	**08 30 48.3**	**-0.2**
DGB				*i* S	**Sb**	**08 31 00.6**	**+0.5**
BAYC	**CANAKKALE_Bayr**	**0.92**	**1**	*i* P	**Pg**	**08 30 49.9**	**-0.6**
BAYC				*i* S	**Sg**	**08 31 02.7**	**+0.2**
BAYC	**CANAKKALE_Bayr**	**0.92**	**1**	P	**Pg**	**08 30 49.9**	**-0.6**
BAYC				S	**Sg**	**08 31 02.7**	**+0.2**
BOZC	**Bozcaada**	**1.08**	**341**	*i* P	**Pg**	**08 30 53.0**	**-0.5**
BOZC				*i* S	**Sg**	**08 31 06.7**	**-1.0**
SMG	**Samos**	**1.14**	**167**	P	**Pn**	**08 30 55.5**	**+0.7**
SMG				S	**Sn**	**08 31 11.0**	**+0.5**
SMG				AML	AML	08 31 13.1	
	comp=N,144μm,0.5s						
SMG				AML	AML	08 31 14.7	
	comp=E,126μm,0.3s						
SMG	**Samos**	**1.14**	**167**	P	**Pn**	**08 30 55.4**	**+0.6**
SMG				S	**Sn**	**08 31 11.2**	**+0.7**
BALY	**Balya**	**1.25**	**43**	*i* P	**Pn**	**08 30 55.8**	**-0.7**
BALY				*i* S	**Sg**	**08 31 13.1**	**0.0**
BALY	**Balya**	**1.25**	**43**	P	**Pn**	**08 30 55.8**	**-0.7**
BALY				S	**Sg**	**08 31 13.1**	**0.0**
LIA	**Limnos Island**	**1.50**	**317**	P	**Pb**	**08 31 00.8**	**+0.2**
LIA	**Limnos Island**	**1.50**	**317**	P	**Pb**	**08 31 00.9**	**+0.2**
SMTH	**Samothraki Isl**	**1.82**	**335**	P	**Pb**	**08 31 06.5**	**+0.4**
SMTH	**Samothraki Isl**	**1.82**	**335**	P	**Pb**	**08 31 06.6**	**+0.4**
ALN	**Alexandroupoli**	**2.11**	**350**	P	**Pb**	**08 31 11.0**	**-0.1**
ALN	**Alexandroupoli**	**2.11**	**350**	P	**Pb**	**08 31 10.9**	**-0.1**

*IDC **13** 08:34:36.2±0.9, 43°.46N×81°.18E, h0km, mb3.4/3, mb1 3.4/8, mb1mx3.3/70, mbtmp3.3/8, ML3.0/5, Error ellipse: s-maj=14.0km s-min=10.0km az=120.0*
*SOME **13** 08:34:37.0, 43°.35N×81°.22E, h5km*
*NNC **13** 08:34:41.8±1.4, 43°.67N×81°.03E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=18.2km s-min=5.5km az=135.0*
ISC 13 08:34:36.0±1.6, 43°.45N±0°.05×81°.21E±0°.05, h3km±10km, n42, σ2°.18/67, mb3.4/3, 14C-10D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode** 224nm,0.2s	**1.31**	**258**	⇑*i* P	**Pn**	**08 34 58.1**	**-3.2**
SHLS				⇑*i* S	**Sb**	**08 35 13.2**	**-5.3**
	444nm,0.3s						
DJR	**Jarkent** 152nm,0.4s	**1.36**	**311**	*e*P	**Pg**	**08 35 03.2**	**+1.2**
DJR				*e*S	**Sg**	**08 35 22.1**	**+2.6**
	121nm,0.3s						
UZB	**Uzynbulak** 35nm,0.2s	**1.63**	**260**	⇓*i* P	**Pg**	**08 35 08.7**	**+1.5**
UZB				*i* S	**Sg**	**08 35 31.5**	**+3.3**
	148nm,0.4s						
KPKS	**Kokpek** 433nm,0.2s	**1.84**	**271**	*e*P	**Pg**	**08 35 11.9**	**+0.7**
KPKS				*e*S	**Sg**	**08 35 37.5**	**+2.5**
	594nm,0.5s						
ZHN	**Zhinishke** 72nm,0.2s	**2.04**	**263**	⇑*i* P	**Pg**	**08 35 15.4**	**+0.3**
ZHN				⇑*i* S	**Sg**	**08 35 42.4**	**+0.7**
	542nm,0.2s						
SATY	**Saty** 296nm,0.1s	**2.09**	**260**	*e*P	**Pg**	**08 35 16.3**	**+0.4**
SATY				*e*S	**Sg**	**08 35 46.0**	**+3.0**
	604nm,0.3s						
KURS	**Kuram** 47nm,0.5s	**2.21**	**272**	*e*P	**Pg**	**08 35 18.8**	**+0.4**
KURS				*e*S	**Sg**	**08 35 49.2**	**+2.1**
	102nm,0.5s						
KAPS	**Kapalarasan** 127nm,0.4s	**2.27**	**325**	*e*P	**Pb**	**08 35 17.9**	**+0.3**
KAPS				*e*S	**Sg**	**08 35 48.4**	**-0.4**
	193nm,0.3s						
TDK	**Taldyqorghan** 73nm,0.2s	**2.55**	**309**	*e*P	**Pg**	**08 35 23.9**	**-0.8**
TDK				*e*S	**Sg**	**08 35 58.2**	**+0.4**
	224nm,0.5s						
ARXS	**Arharly** 40nm,0.3s	**2.57**	**289**	*e*P	**Pb**	**08 35 22.6**	**-0.1**
ARXS				*e*S	**Sb**	**08 35 55.7**	**+1.0**
	149nm,0.4s						
KOTS	**Kotyrbulak** 19nm,0.2s	**3.00**	**267**	*e*P	**Pg**	**08 35 32.1**	**-1.3**
KOTS				*e*S	**Sg**	**08 36 12.1**	**-0.2**
	71nm,0.4s						
MDOK	**Medeo** 14nm,0.4s	**3.05**	**266**	⇓Pn	**Pb**	**08 35 29.9**	**-1.1**
MDOK				⇓Lg	Lg	08 36 14.4	
	50nm,0.6s						
MDOK	**Medeo** 27nm,0.3s	**3.05**	**266**	*e*P	**Pg**	**08 35 33.2**	**-1.3**
MDOK				*e*S	**Sg**	**08 36 14.0**	**0.0**
	50nm,0.5s						
CHKK	**Chushkaly** 19nm,0.4s	**3.09**	**279**	*e*P	**Pg**	**08 35 33.3**	**-1.9**
CHKK				⇑*e*S	**Sg**	**08 36 13.8**	**-1.5**
	109nm,0.3s						
TNSS	**Tian-Shan** 21nm,0.4s	**3.14**	**264**	⇓*i* P	**Pb**	**08 35 34.3**	**+1.6**
TNSS				*e*S	**Sg**	**08 36 15.9**	**-1.0**
	48nm,0.6s						
KTBS	**Karatobe** 19nm,0.2s	**3.30**	**276**	*e*P	**Pb**	**08 35 36.7**	**+1.5**
KTBS				*e*S	**Sg**	**08 36 20.0**	**-2.0**
	11nm,0.3s						
IZV	**Izvestkoviy** 17nm,0.3s	**3.38**	**265**	*e*P	**Pb**	**08 35 38.6**	**+1.9**
IZV				*e*S	**Sg**	**08 36 22.9**	**-1.8**
	115nm,0.5s						
MAKZ	**Makanchi** 2.6nm,0.3s	**3.41**	**9**	⇑Pn	**Pn**	**08 35 32.9**	**+2.8**
MAKZ				⇑Pg	**Pg**	**08

10nm,0.6s
MAKZ ⇓Lg Lg 08 36 23.0
16nm,0.5s
MAKZ Makanchi 3.41 9 *e*S **Pn 08 35 33.0 +3.0**
MK01 Makanchi Array 3.41 13 *e*S **Pn 08 35 32.5 +2.4**
MK31 Makanchi Array 3.43 12 ⇑Pn **Pn 08 35 33.1 +2.7**
1.4nm,0.3s,baz=202,slow=11,SNR=152
MK31 ⇑Pg **Pg 08 35 42.6 +0.9**
4.1nm,0.3s,baz=189,slow=14,SNR=33
MK31 ⇑Lg Lg 08 36 25.5
24nm,0.6s,baz=151,slow=41,SNR=4.6
MK31 Makanchi Array 3.43 12 *e*S **Pn 08 35 33.2 +2.8**
MKAR Makanchi Array 3.43 12 Pn **Pn 08 35 32.2 +1.8**
2.3nm,0.3s,baz=190,slow=16,SNR=123
MKAR Pg **Pg 08 35 40.3 -1.4**
5.4nm,0.3s,baz=193,slow=16,SNR=26
MKAR Sn **Sn 08 36 04.3 -7.3**
4.7nm,0.3s,baz=198,slow=16,SNR=8.4
MKAR Lg Lg 08 36 23.6
6.2nm,0.3s,baz=194,slow=27,SNR=8.2
MKAR Makanchi Array 3.43 12 *e*S **Pn 08 35 33.2 +2.8**
MTBS Maitube 3.51 266 *e*P **Pb 08 35 40.9 +2.2**
7.8nm,0.3s
MTBS *e*S **Sg 08 36 26.6 -2.0**
56nm,0.4s
KUU Kurty 3.56 279 *e*P **Pb 08 35 41.4 +1.8**
17nm,0.3s
KUU *e*S **Sg 08 36 28.1 -2.3**
48nm,0.5s
KST Kastek 3.85 266 *e*P **Pg 08 35 47.6 -2.3**
18nm,0.3s
KST *e*S **Sg 08 36 39.0 -0.8**
28nm,0.5s
TKM2 Tokmak 2 4.14 265 ⇓Pn **Pb 08 35 46.6 -2.9**
4.7nm,0.4s
TKM2 ⇓Lg Lg 08 36 48.3
15nm,0.4s
ZSN Zaisan 4.76 31 *e*P **Pg 08 36 03.8 -3.3**
1.8nm,0.4s
ZSN *e*S **Sg 08 37 06.8 -2.0**
6.6nm,0.4s
AAK Ala-Archa 4.99 263 Pn **Pn 08 35 54.0 +2.1**
0.2nm,0.3s,baz=292,slow=5.4,SNR=2.0
AAK Pg **Pg 08 36 08.2 -3.3**
2.4nm,0.3s,baz=110,slow=5.5,SNR=14
AAK Lg Lg 08 37 15.0
0.7nm,0.3s,baz=221,slow=21,SNR=6.3
AAK Ala-Archa 4.99 263 ⇓Pg **Pg 08 36 09.7 -1.9**
4.9nm,0.5s
AAK ⇓Lg Lg 08 37 16.3
17nm,0.6s
MRKS Merke 5.89 266 *e*P **Pg 08 36 26.8 -2.0**
4.7nm,0.5s
MRKS *e*S **Sg 08 37 46.0 +0.9**
10.0nm,0.5s
KURBB Kurchatov Arra 7.41 347 Pn **Pn 08 36 26.1 +1.2**
0.1nm,0.3s,baz=101,slow=24,SNR=4.9
KURBB Sn **Sn 08 37 48.7 -0.8**
0.1nm,0.3s,baz=174,slow=12,SNR=3.1
KURBB Lg Lg 08 38 29.8
0.3nm,0.3s,baz=117,slow=28,SNR=7.9
KURBB Kurchatov Arra 7.41 347 ⇑Sn **Sn 08 37 51.1 +1.7**
6.8nm,0.7s
KURBB ⇓Lg Lg 08 38 32.5
16nm,0.6s
KURK Kurchatov 7.48 347 ⇑Lg Lg 08 38 33.0
7.0nm,0.7s
KK31 Karatay Array 7.82 271 ⇑Pg **Pg 08 37 04.0 -1.7**
0.6nm,0.4s,baz=73,slow=16,SNR=6.3
KK31 ⇑Lg Lg 08 38 46.5
2.3nm,0.5s,baz=75,slow=30,SNR=3.9
ZALV Zalesovo Beam 10.78 11 Pn **Pn 08 37 10.8 -0.3**
0.9nm,0.3s,baz=200,slow=14,SNR=7.1
BVAR Borovoye Array 11.98 327 Lg Lg 08 40 56.4
0.3nm,0.3s,baz=136,slow=32,SNR=3.3
SONM Songino Array 18.12 67 P **P 08 38 50.0 +0.9**
0.2nm,0.3s,baz=290,slow=15,SNR=3.3
TORD Torodi Ar. Bea 73.50 273 P **P 08 46 11.2 +1.0**
0.3nm,0.6s,baz=42,slow=4.7,SNR=2.6
WRA Warramunga Arr 79.70 130 P **P 08 46 46.4 +1.3**
0.4nm,1.0s,baz=335,slow=5.3,SNR=3.3
ASAR Alice Springs 82.46 133 P **P 08 46 59.9 +0.2**
0.1nm,0.5s,baz=316,slow=6.0,SNR=2.9

GUC 13 08:36:34.7±0.5, 35°.07S×71°.28W, h85km±2km, ML3.8, 3C-2D, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NICH	**Los Niches**	**0.08**	**30**	⇓*i*P	Pn	08 36 46.1	-0.6
NICH				*i* S	Sn	08 36 55.4	-0.2
GO05	**HualaæØ**	**0.54**	**276**	⇑*i*P	Pn	08 36 49.0	-0.2
GO05				*i* S	Sn	08 36 59.8	-0.3
GO05				IAML		08 37 01.0	
	comp=N,7μm,0.3s						
CHPI	**Pichilemu**	**0.90**	**318**	*e*P	Pn	08 36 52.3	-0.6
CHPI				*i* S	Sn	08 37 06.5	0.0
ANTU	**Antumapu**	**1.59**	**20**	*e*P	Pn	08 37 01.3	-0.1
ANTU				*i* S	Sn	08 37 21.4	-0.2
ANTU				IAML		08 37 22.2	
	comp=N,1μm,0.3s						
CCHI	**Chillan**	**1.66**	**203**	⇑*i*P	Pn	08 37 02.2	-0.1
CCHI				*i* S	Sn	08 37 23.0	-0.3
CCHI				IAML		08 37 26.7	
	comp=N,1μm,0.2s						
CLCH	**Cerro Calan**	**1.78**	**20**	⇓*i*P	Pn	08 37 03.7	-0.2
CLCH				*i* S	Sn	08 37 25.7	-0.3
CLCH				IAML		08 37 27.3	
	comp=E,1μm,0.2s						
FCH	**Farellones**	**1.92**	**25**	*e*P	Pn	08 37 06.1	+0.1
FCH				*i* S	Sn	08 37 30.2	+0.5
FCH				IAML		08 37 32.1	
	comp=N,1μm,0.2s						
PEL	**Peldehue**	**1.98**	**14**	⇑*i*P	Pn	08 37 06.4	-0.1
PEL				*i* S	Sn	08 37 30.4	-0.4
PEL				IAML		08 37 32.6	
	comp=E,680nm,0.5s						
ROCH	**El Roble**	**2.10**	**6**	*e*P	Pn	08 37 08.0	-0.3
ROCH				IAML		08 37 36.6	
	comp=N,1μm,0.4s						

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*ISCJB **13** 08:42:24.8±0.6, 35°.73N±0°.05×27°.31E±0°.06, h9km±6km, Error ellipse: s-maj=10.9km s-min=3.8km az=137.5*
*ATH **13** 08:42:24.1, 35°.55N×27°.45E, h10km±31km, ML2.5/2, Error ellipse: s-maj=31.6km s-min=1.2km az=0.0*
*CSEM **13** 08:42:24.8±0.2, 35°.71N×27°.33E, h10km, ML2.3, Error ellipse: s-maj=6.4km s-min=2.5km az=137.0*
*THE **13** 08:42:24.8, 35°.69N×27°.35E, h3km±7km, ML2.3/3, Error ellipse: s-maj=16.1km s-min=1.2km az=140.0*
*ISK **13** 08:42:24.6, 35°.72N×27°.34E, h13km, ML2.4/2*
ISC 13 08:42:23.9±1.1, 35°.62N±0°.07×27°.44E±0°.05, h14km±7km, n30, σ0°85/48, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.23**	**252**	PG	**Pb**	**08 42 30.1**	**+0.2**
KARP				SG	**Sb**	**08 42 33.6**	**-0.4**
KARP	**Karpathos**	**0.23**	**252**	P	**Pg**	**08 42 29.4**	**+0.3**
KARP				S	**Sg**	**08 42 32.4**	**-0.2**
KARP				AML	AML	08 42 32.7	
	comp=N,7092μm,0.1s						
KARP				AML	AML	08 42 32.9	
	comp=E,10684μm,0.2s						
KARP	**Karpathos**	**0.23**	**252**	P	**Pg**	**08 42 29.1**	**+0.1**
KARP				S	**Sg**	**08 42 32.3**	**-0.2**
KARP	**Karpathos**	**0.23**	**252**	P	**Pg**	**08 42 29.1**	**+0.1**
KARP	**Karpathos**	**0.23**	**252**	*i* Pg	**Pb**	**08 42 30.1**	**+0.2**
KARP				S	**Sg**	**08 42 32.3**	**-0.2**
KARP				*i* Sg	**Sb**	**08 42 33.6**	**-0.4**
ARG	**Arkhangelos**	**0.82**	**43**	PG	**Pb**	**08 42 40.9**	**+1.0**
ARG				SG	**Sb**	**08 42 52.1**	**+1.4**
ARG	**Arkhangelos**	**0.82**	**43**	P	**Pb**	**08 42 40.5**	**+0.6**
ARG				S	**Sb**	**08 42 52.0**	**+1.2**
ARG				AML	AML	08 42 54.7	
	comp=E,336μm,0.2s						
ARG				AML	AML	08 42 55.9	
	comp=N,266μm,0.3s						
ARG	**Arkhangelos**	**0.82**	**43**	P	**Pb**	**08 42 40.5**	**+0.6**
ARG				S	**Sn**	**08 42 53.0**	**+0.1**
ARG	**Arkhangelos**	**0.82**	**43**	P	**Pb**	**08 42 40.5**	**+0.6**
ARG	**Arkhangelos**	**0.82**	**43**	*i* Pg	**Pb**	**08 42 40.9**	**+1.0**
ARG				S	**Sb**	**08 42 52.1**	**+1.4**
DAT	**Datca**	**1.11**	**6**	PG	**Pb**	**08 42 44.9**	**-0.1**
DAT				SG	**Sn**	**08 42 59.4**	**-0.9**
DAT	**Datca**	**1.11**	**6**	*e*Pg	**Pb**	**08 42 44.9**	**-0.1**
DAT				*e*Sg	**Sn**	**08 42 59.4**	**-0.9**
ZKR	**Zakros**	**1.12**	**243**	P	**Pb**	**08 42 44.5**	**-0.5**
ZKR				S	**Sn**	**08 43 00.9**	**+0.7**
ZKR	**Zakros**	**1.12**	**243**	P	**Pb**	**08 42 44.6**	**-0.4**
ZKR				S	**Sn**	**08 43 02.0**	**+1.8**
ZKR	**Zakros**	**1.12**	**243**	P	**Pb**	**08 42 44.7**	**-0.3**
ZKR				S	**Sg**	**08 43 00.5**	**+0.5**
BODT	**Bodrum**	**1.44**	**356**	PN	**Pb**	**08 42 49.6**	**0.0**
BODT	**Bodrum**	**1.44**	**356**	*e*Pn	**Pb**	**08 42 49.6**	**0.0**
NPS	**Neapolis**	**1.53**	**257**	P	**Pb**	**08 42 51.8**	**-0.2**
NPS	**Neapolis**	**1.53**	**257**	P	**Pb**	**08 42 52.0**	**0.0**
NPS				S	**Sn**	**08 43 10.0**	**-0.5**
NPS	**Neapolis**	**1.53**	**257**	P	**Pb**	**08 42 52.0**	**0.0**
NPS				S	**Sn**	**08 43 10.0**	**-0.5**
TURN	**Turunc**	**1.57**	**37**	PN	**Pb**	**08 42 48.5**	**-2.8**
TURN	**Turunc**	**1.57**	**37**	*e*Pn	**Pb**	**08 42 48.5**	**-2.8**
LAST	**Lasithi**	**1.66**	**255**	P	**Pn**	**08 42 52.9**	**+0.2**
LAST				S	**Sn**	**08 43 13.7**	**-0.1**
LAST	**Lasithi**	**1.66**	**255**	P	**Pn**	**08 42 52.9**	**+0.2**
LAST				S	**Sn**	**08 43 13.7**	**-0.1**
FETY	**Fethiye**	**1.68**	**52**	PN	**Pb**	**08 42 54.7**	**+0.2**
FETY	**Fethiye**	**1.68**	**52**	*e*Pn	**Pb**	**08 42 54.7**	**+0.2**
SANT	**Santorini**	**1.77**	**296**	PN	**Pn**	**08 42 54.4**	**+0.3**
SANT	**Santorini**	**1.77**	**296**	*e*Pn	**Pn**	**08 42 54.4**	**+0.3**
APE	**Apeiranthos**	**2.11**	**314**	PN	**Pn**	**08 42 58.4**	**-0.4**
APE	**Apeiranthos**	**2.11**	**314**	*e*Pn	**Pn**	**08 42 58.4**	**-0.4**

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*CSEM **13** 08:43:16.5, 39°.08N×29°.17E, h7km, ML2.5*
DDA 13 08:43:16.5, 39°.08N×29°.17E, h7km, Ml2.5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEMI	**Demirci**	**0.35**	**265**	*i* P	Pg	08 43 24.2	+0.8
DEMI				*i* S	Sg	08 43 29.0	+0.8
DEMI	**Demirci**	**0.35**	**265**	P	Pg	08 43 24.2	+0.7
DEMI				S	Sg	08 43 29.0	+0.8
KHAL	**Karahalli**	**0.75**	**160**	*i* P	Pb	08 43 31.6	-0.3
KHAL				*i* S	Sg	08 43 41.4	+0.8
KHAL	**Karahalli**	**0.75**	**160**	P	Pb	08 43 31.6	-0.3
KHAL				S	Sg	08 43 41.4	+0.8
DURS	**Dursunbey**	**0.75**	**314**	*i* P	Pg	08 43 28.6	-2.4
DURS				*i* S	Sn	08 43 46.0	+0.6
DURS	**Dursunbey**	**0.75**	**314**	P	Pg	08 43 28.6	-2.4
DURS				S	Sn	08 43 46.0	+0.6
MANT	**Manisa**	**0.75**	**220**	*i* P	Pb	08 43 31.7	-0.5
MANT				*i* S	Sg	08 43 41.6	+0.8
MANT	**Manisa**	**0.75**	**220**	P	Pb	08 43 31.7	-0.4
MANT				S	Sg	08 43 41.7	+0.8

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*MOS **13** 08:59:05.7±1.1, 36°.32N×28°.99E, h33km, mb4.2/17, Error ellipse: s-maj=6.9km s-min=4.4km az=84.0*
*ISK **13** 08:59:06.9, 36°.45N×28°.93E, h24km, ML4.4/35*
*NEIC **13** 08:59:07.5±0.0, 36°.43N×28°.88E, h37km, mb4.1/7, ML4.0(ATH), ML4.4(ISK), After ATH.*
*ATH **13** 08:59:07.5, 36°.43N×28°.88E, h37km±1km, ML3.9/12, Error ellipse: s-maj=1.4km s-min=0.5km az=154.0*
*DDA **13** 08:59:07.4, 36°.48N×28°.90E, h27km, Ml4.5*
*CSEM **13** 08:59:07.4±0.1, 36°.40N×28°.98E, h25km, mb4.1/20, Error ellipse: s-maj=2.8km s-min=2.0km az=16.0*
*IDC **13** 08:59:08.8±1.4, 36°.46N×29°.00E, h47km±14km, mb3.8/20, mb1 3.9/29, mb1mx3.8/65, mbtmp4.0/29, ML4.0/9, MS3.1/4, Ms1 3.1/4, ms1mx2.7/61, Error ellipse: s-maj=15.4km s-min=12.1km az=7.0*
*GII **13** 08:59:09.7±0.0, 36°.14N×29°.32E, h1km, MD3.5/4*
*HLW **13** 08:59:09.9, 35°.79N×29°.00E, h4km±3km, Ml4.6*
*NIC **13** 08:59:11.4±0.2, 36°.55N×29°.27E, h25km, mb4.6, ML4.3*
ISC 13 08:59:07.5±0.6, 36°.42N±0°.02×28°.96E±0°.02, h31km±4km, n483, σ1§41/590, mb4.1/29, 22C-28D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.24**	**25**	PG	**Pb**	**08 59 13.0**	**-1.4**
FETY				SG	**Sb**	**08 59 18.1**	**-1.0**
FETY	**Fethiye**	**0.24**	**25**	*e*Pg	**Pb**	**08 59 13.0**	**-1.4**
FETY				*e*Sg	**Sb**	**08 59 18.1**	**-1.0**
DALY	**Dalyan (Mu¨la**	**0.47**	**329**	PG	**Pb**	**08 59 16.6**	**-0.9**
DALY				SG	**Sb**	**08 59 23.2**	**-1.1**
DALY	**Dalyan (Mu¨la**	**0.47**	**329**	⇑*i*P	**Pb**	**08 59 16.6**	**-0.9**
DALY				*i* S	**Sb**	**08 59 23.1**	**-1.2**
DALY	**Dalyan (Mu¨la**	**0.47**	**329**	*e*Pg	**Pb**	**08 59 16.6**	**-0.9**
DALY				*e*Sg	**Sb**	**08 59 23.2**	**-1.1**
TURN	**Turunc**	**0.54**	**328**	PG	**Pn**	**08 59 19.9**	**+0.9**
TURN	**Turunc**	**0.54**	**328**	⇑*i*P	**Pn**	**08 59 20.0**	**+1.0**
TURN				*i* S	**Sn**	**08 59 28.7**	**+1.7**
TURN	**Turunc**	**0.54**	**328**	*e*Pg	**Pn**	**08 59 19.9**	**+0.9**
TURN				S	**Sn**	**08 59 28.7**	**+1.7**
AKAS	**Kas**	**0.56**	**109**	PG	**Pn**	**08 59 19.5**	**+0.1**
AKAS				SG	**Sn**	**08 59 28.2**	**+0.6**
AKAS	**Kas**	**0.56**	**109**	⇓*i*P	**Pn**	**08 59 19.5**	**+0.1**
AKAS				*i* S	**Sn**	**08 59 29.9**	**+2.2**
AKAS	**Kas**	**0.56**	**109**	P	**Pn**	**08 59 19.5**	**+0.1**
AKAS				*e*Sg	**Sn**	**08 59 28.2**	**+0.6**
AKAS				S	**Sn**	**08 59 29.9**	**+2.2**
KSL	**Kastellorizon**	**0.57**	**118**	P	**Pn**	**08 59 20.5**	**+1.0**
KSL				S	**Sn**	**08 59 31.0**	**+3.1**
MRSB	**Marmaris-Mugla**	**0.68**	**296**	PG	**Pb**	**08 59 20.1**	**-0.9**
MRSB	**Marmaris-Mugla**	**0.68**	**296**	*e*Pg	**Pb**	**08 59 20.1**	**-0.9**
ARG	**Arkhangelos**	**0.70**	**253**	PG	**Pb**	**08 59 21.7**	**+0.4**
ARG	**Arkhangelos**	**0.70**	**253**	P	**Pb**	**08 59 20.7**	**-0.5**
ARG				S	**Sb**	**08 59 30.9**	**+0.2**
ARG				AML	AML	08 59 34.5	
	comp=E,33416μm,1.0s						
ARG				AML	AML	08 59 36.9	
	comp=N,16088μm,0.4s						
ARG	**Arkhangelos**	**0.70**	**253**	P	**Pb**	**08 59 20.8**	**-0.5**
ARG	**Arkhangelos**	**0.70**	**253**	*e*Pg	**Pb**	**08 59 21.7**	**+0.4**
ARG				S	**Sb**	**08 59 30.8**	**+0.1**
ELL	**Elmali**	**0.83**	**66**	PG	**Pn**	**08 59 23.9**	**+0.7**
ELL	**Elmali**	**0.83**	**66**	P	**Pn**	**08 59 23.2**	**0.0**
ELL	**Elmali**	**0.83**	**66**	P	**Pn**	**08 59 23.2**	**0.0**
ELL	**Elmali**	**0.83**	**66**	*e*Pg	**Pn**	**08 59 23.9**	**+0.7**
GLHS	**Glhisar (BURDU**	**0.85**	**30**	PG	**Pn**	**08 59 23.7**	**+0.2**
GLHS	**Glhisar (BURDU**	**0.85**	**30**	*e*Pg	**Pn**	**08 59 23.7**	**+0.2**
YER	**Yerkesik**	**0.90**	**323**	PG	**Pn**	**08 59 23.9**	**-0.1**
YER	**Yerkesik**	**0.90**	**323**	P	**Pn**	**08 59 24.0**	**-0.1**
YER	**Yerkesik**	**0.90**	**323**	P	**Pn**	**08 59 24.0**	**-0.1**
GOLH	**Golhisar**	**0.95**	**31**	⇓*i*P	**Pn**	**08 59 24.7**	**-0.1**
GOLH				*i* S	**Sn**	**08 59 38.9**	**+1.5**
GOLH	**Golhisar**	**0.95**	**31**	P	**Pn**	**08 59 24.7**	**-0.1**
GOLH				S	**Sn**	**08 59 38.9**	**+1.5**
TAVA	**DENIZLI_Tavas**	**1.05**	**358**	⇓*i*P	**Pb**	**08 59 26.8**	**-0.4**
TAVA				*i* S	**Sb**	**08 59 41.3**	**+0.7**
TAVA	**DENIZLI_Tavas**	**1.05**	**358**	P	**Pb**	**08 59 26.8**	**-0.4**
TAVA				S	**Sb**	**08 59 41.3**	**+0.7**
DATC	**Datca-Mugla**	**1.10**	**288**	PG	**Pn**	**08 59 27.0**	**+0.3**
DATC	**Datca-Mugla**	**1.10**	**288**	*e*Pg	**Pn**	**08 59 27.0**	**+0.3**
DAT	**Datca**	**1.15**	**286**	PN	**Pn**	**08 59 28.1**	**+0.5**
DAT	**Datca**	**1.15**	**286**	⇑*i*P	**Pn**	**08 59 28.4**	**+0.8**
DAT				*i* S	**Sb**	**08 59 44.3**	**+0.7**
DAT	**Datca**	**1.15**	**286**	*e*Pn	**Pn**	**08 59 28.1**	**+0.5**
DAT	**Datca**	**1.15**	**286**	P	**Pn**	**08 59 28.4**	**+0.8**
DAT				S	**Sb**	**08 59 44.3**	**+0.7**
KORT	**Korkueli**	**1.26**	**62**	PN	**Pb**	**08 59 29.8**	**-1.0**
KORT	**Korkueli**	**1.26**	**62**	⇑*i*P	**Pb**	**08 59 32.1**	**+1.3**
KORT				*i* S	**Sb**	**08 59 51.5**	**+4.8**
KORT	**Korkueli**	**1.26**	**62**	*e*Pn	**Pb**	**08 59 29.8**	**-1.0**
KORT	**Korkueli**	**1.26**	**62**	P	**Pb**	**08 59 32.1**	**+1.3**
DNZL	**Cakiroluk**	**1.27**	**3**	⇓*i*P	**Pb**	**08 59 30.4**	**-0.6**
DNZL				*i* S	**Sb**	**08 59 47.1**	**0.0**
DNZL	**Cakiroluk**	**1.27**	**3**	P	**Pb**	**08 59 30.4**	**-0.6**
DNZL				S	**Sb**	**08 59 47.1**	**0.0**
MLSB	**Milas**	**1.29**	**313**	PN	**Pn**	**08 59 29.2**	**-0.2**
MLSB	**Milas**	**1.29**	**313**	*e*Pn	**Pn**	**08 59 29.2**	**-0.2**
DENT	**Denizli**	**1.33**	**3**	PN	**Pn**	**08 59 30.6**	**+0.5**
DENT	**Denizli**	**1.33**	**3**	*e*Pn	**Pn**	**08 59 30.6**	**+0.5**
BDRM	**Kayabasi**	**1.38**	**298**	*i* P	**Pn**	**08 59 31.4**	**+0.8**
BDRM				*i* S	**Sb**	**08 59 50.2**	**+0.3**
BDRM	**Kayabasi**	**1.38**	**298**	P	**Pn**	**08 59 31.4**	**+0.8**
BDRM				S	**Sb**	**08 59 50.2**	**+0.3**
ANTB	**Antalya**	**1.45**	**70**	PN	**Pb**	**08 59 33.2**	**-0.6**
ANTB	**Antalya**	**1.45**	**70**	*e*Pn	**Pb**	**08 59 33.2**	**-0.6**
BODT	**Bodrum**	**1.47**	**296**	PN	**Pn**	**08 59 31.9**	**0.0**
BODT	**Bodrum**	**1.47**	**296**	*e*Pn	**Pn**	**08 59 31.9**	**0.0**
NISR	**Nisiros**	**1.49**	**278**	P	**Pn**	**08 59 33.2**	**+1.2**
NISR	**Nisiros**	**1.49**	**278**	P	**Pn**	**08 59 32.9**	**+0.8**
AYDN	**Tasoluk**	**1.51**	**326**	⇓*i*P	**Pn**	**08 59 33.2**	**+0.7**
AYDN				*i* S	**Sb**	**08 59 52.9**	**-0.9**
AYDN	**Tasoluk**	**1.51**	**326**	P	**Pn**	**08 59 33.2**	**+0.7**
AYDN				S	**Sb**	**08 59 52.8**	**-0.9**
YKAV	**Yalikavak-Bodr**	**1.52**	**298**	PN	**Pn**	**08 59 32.9**	**+0.4**
YKAV	**Yalikavak-Bodr**	**1.52**	**298**	*e*Pn	**Pn**	**08 59 32.9**	**+0.4**
BRDR	**BURDUR-Merkez**	**1.55**	**34**	⇑*i*P	**Pb**	**08 59 35.3**	**-0.4**
BRDR				*i* S	**Sb**	**08 59 55.8**	**+0.8**
BRDR	**BURDUR-Merkez**	**1.55**	**34**	P	**Pb**	**08 59 35.3**	**-0.4**
KARP	**Karpathos**	**1.70**	**240**	PN	**Pn**	**08 59 35.9**	**+0.9**
KARP	**Karpathos**	**1.70**	**240**	P	**Pn**	**08 59 36.1**	**+1.1**
KARP				S	**Sn**	**08 59 56.3**	**+0.6**
KARP				AML	AML	09 00 06.8	
	comp=E,6329μm,0.5s						
KARP				AML	AML	09 00 08.4	
	comp=N,6169μm,0.6s						
KARP	**Karpathos**	**1.70**	**240**	*e*Pn	**Pn**	**08 59 36.1**	**+1.1**
KARP	**Karpathos**	**1.70**	**240**	*e*Pn	**Pn**	**08 59 35.9**	**+0.9**
KARP				S	**Sn**	**08 59 56.4**	**+0.7**
AYDB	**Zeytinkoy-Aydi**	**1.75**	**331**	PN	**Pn**	**08 59 36.1**	**+0.3**
AYDB	**Zeytinkoy-Aydi**	**1.75**	**331**	*e*Pn	**Pn**	**08 59 36.1**	**+0.3**
ISP	**Isparta**	**1.88**	**41**	PN	**Pn**	**08 59 38.7**	**+1.1**
ISP	**Isparta**	**1.88**	**41**	⇑*i*P	**Pb**	**08 59 39.6**	**-1.7**
ISP	**Isparta**	**1.88**	**41**	S	**Sn**	**09 00 01.8**	**+1.5**
ISP	**Isparta**	**1.88**	**41**	*e*Pn	**Pb**	**08 59 39.5**	**-1.8**
ISP	**Isparta**	**1.88**	**41**	P	**Pb**	**08 59 39.5**	**-1.8**
ISP				S	**Sn**	**09 00 01.6**	**+1.3**
ISP	**Isparta**	**1.88**	**41**	*c*⇓*i*P	**Pb**	**08 59 39.4**	**-1.8**
ISP	**Isparta**	**1.88**	**41**	*e*Pn	**Pn**	**08 59 38.7**	**+1.1**
ISP	**Isparta**	**1.88**	**41**	*i* P	**Pb**	**08 59 39.4**	**-1.8**
ISP				S	**Sn**	**09 00 01.6**	**+1.3**
GCAM	**G?zelcaml?**	**1.88**	**313**	PN	**Pn**	**08 59 38.2**	**+0.7**
GCAM	**G?zelcaml?**	**1.88**	**313**	*i* P	**Pn**	**08 59 38.1**	**+0.7**
GCAM				*i* S	**Sn**	**09 00 00.4**	**+0.3**
GCAM	**G?zelcaml?**	**1.88**	**313**	*e*Pn	**Pn**	**08 59 38.2**	**+0.7**
GCAM				S	**Sn**	**09 00 00.4**	**+0.3**
SUTC	**Sutluce-Ispart**	**1.95**	**57**	PN	**Pn**	**08 59 39.8**	**+1.2**
SUTC	**Sutluce-Ispart**	**1.95**	**57**	*e*Pn	**Pn**	**08 59 39.8**	**+1.2**
KHL	**Karahalli**	**1.95**	**13**	PN	**Pn**	**08 59 39.5**	**+0.9**
KHL	**Karahalli**	**1.95**	**13**	*e*Pn	**Pn**	**08 59 39.5**	**+0.9**
KHAL	**Karahalli**	**1.99**	**12**	*i* P	**Pn**	**08 59 38.4**	**-0.8**
KHAL				*i* S	**Sn**	**09 00 02.6**	**-0.5**
KHAL	**Karahalli**	**1.99**	**12**	P	**Pn**	**08 59 38.4**	**-0.8**
KHAL				S	**Sn**	**09 00 02.6**	**-0.5**
KZIL	**AFYON_Kizioren**	**2.06**	**27**	*i* P	**Pb**	**08 59 43.1**	**-1.3**
KZIL				*i* S	**Sb**	**09 00 08.7**	**-1.0**
KZIL	**AFYON_Kizioren**	**2.06**	**27**	P	**Pb**	**08 59 43.1**	**-1.3**
MANT	**Manisa**	**2.09**	**351**	*i* P	**Pn**	**08 59 40.7**	**+0.1**
MANT				*i* S	**Sn**	**09 00 04.8**	**-0.9**
MANT	**Manisa**	**2.09**	**351**	*e*Pn	**Pn**	**08 59 40.8**	**+0.1**
MANT				*e*Sn	**Sn**	**09 00 05.7**	**0.0**
MANT	**Manisa**	**2.09**	**351**	*e*Pn	**Pn**	**08 59 40.8**	**+0.1**
MANT				S	**Sn**	**09 00 04.8**	**-0.9**
MANT				*e*Sn	**Sn**	**09 00 05.7**	**0.0**
KULA	**Kula-Manisa**	**2.10**	**354**	PN	**Pn**	**08 59 41.4**	**+0.7**
KULA	**Kula-Manisa**	**2.10**	**354**	*e*Pn	**Pn**	**08 59 41.4**	**+0.7**
SMG	**Samos**	**2.13**	**308**	P	**Pn**	**08 59 41.1**	**+0.2**
SMG				S	**Sn**	**09 00 08.1**	**+1.7**
SMG				AML	AML	09 00 09.6	
	comp=N,15435μm,0.5s						
SMG				AML	AML	09 00 10.4	
	comp=E,9616μm,0.3s						
SMG	**Samos**	**2.13**	**308**	S	**Sn**	**09 00 07.4**	**+1.1**
BAGO	**Egridir - ISPA**	**2.15**	**42**	*i* P	**Pb**	**08 59 43.3**	**-2.5**
BAGO				*i* S	**Sb**	**09 00 09.7**	**-2.3**
KEPZ	**Antalya-Kepez**	**2.18**	**76**	⇑*i*P	**Pb**	**08 59 45.0**	**-1.4**
KEPZ				*i* S	**Sb**	**09 00 14.1**	**+1.1**
DGB	**¨zmir**	**2.32**	**315**	⇓*i*P	**Pn**	**08 59 43.9**	**+0.3**
DGB				*i* S	**Sn**	**09 00 11.0**	**-0.1**
ZKR	**Zakros**	**2.58**	**241**	P	**Pn**	**08 59 49.3**	**+2.2**
ZKR				S	**Sn**	**09 00 16.5**	**-1.0**
ZKR				AML	AML	09 00 33.8	
	comp=N,1308μm,0.8s						
ZKR				AML	AML	09 00 41.8	
	comp=E,2383μm,0.6s						
ZKR	**Zakros**	**2.58**	**241**	P	**Pn**	**08 59 48.8**	**+1.7**
ZKR				S	**Sn**	**09 00 17.2**	**-0.2**
SHAP	**Saphane-Kutahy**	**2.61**	**5**	PN	**Pn**	**08 59 48.6**	**+1.0**
SHAP	**Saphane-Kutahy**	**2.61**	**5**	*e*Pn	**Pn**	**08 59 48.6**	**+1.0**
AKHS	**Akhisar**	**2.62**	**340**	⇓*i*P	**Pn**	**08 59 47.6**	**-0.1**
AKHS				*i* S	**Sn**	**09 00 18.1**	**-0.3**
AKHS	**Akhisar**	**2.62**	**340**	P	**Pn**	**08 59 47.6**	**-0.1**
AKHS				S	**Sn**	**09 00 18.1**	**-0.3**
AKS	**Akhisar**	**2.62**	**340**	PN	**Pn**	**08 59 47.2**	**-0.5**
AKS	**Akhisar**	**2.62**	**340**	*e*Pn	**Pn**	**08 59 47.2**	**-0.5**
DEMI	**Demirci**	**2.63**	**356**	⇓*i*P	**Pn**

comp=E,834µm,0.6s
LAST AML AML 09 00 55.5
comp=N,1085µm,0.8s
LAST Lasithi 3.09 247 P **Pn** **08 59 54.8 +0.5**
LAST S **Sn** **09 00 30.2 0.0**
KONT Konya--Tatoy 3.12 60 PN **Pn** **08 59 56.5 +2.0**
KONT Konya--Tatoy 3.12 60 *e*Pn **Pn** **08 59 56.5 +2.0**
PPCY Paphos 3.15 118 P **Pn** **08 59 56.3 +1.3**
baz=304
PPCY Paphos 3.15 118 P **Pn** **08 59 56.3 +1.3**
DST Dursunbey 3.19 355 PN **Pn** **08 59 56.9 +1.3**
DST Dursunbey 3.19 355 *e*Pn **Pn** **08 59 56.9 +1.3**
ALFC Alefka 3.22 112 P **Pn** **08 59 56.6 +0.7**
baz=298
ALFC S **Sn** **09 00 31.9 -1.3**
ALFC Alefka 3.22 112 P **Pn** **08 59 56.6 +0.7**
ALFC S **Sn** **09 00 31.9 -1.3**
LADK Ladik-KONYA 3.25 56 PN **Pn** **08 59 57.1 +0.7**
LADK Ladik-KONYA 3.25 56 *e*Pn **Pn** **08 59 57.1 +0.7**
BOZY Bozyazi-Mersin 3.26 94 PN **Pn** **08 59 58.7 +2.2**
BOZY Bozyazi-Mersin 3.26 94 *e*Pn **Pn** **08 59 58.7 +2.2**
BALB Balikesir 3.33 346 PN **Pn** **08 59 58.9 +1.5**
BALB Balikesir 3.33 346 *e*Pn **Pn** **08 59 58.9 +1.5**
TEKE Tekeli-Mersin 3.37 93 PN **Pn** **08 59 59.3 +1.3**
TEKE Tekeli-Mersin 3.37 93 *e*Pn **Pn** **08 59 59.3 +1.3**
KIZT Kizilcal 3.38 42 PN **Pn** **09 00 00.0 +1.8**
KIZT Kizilcal 3.38 42 *e*Pn **Pn** **09 00 00.0 +1.8**
BERE Bereket-Mersin 3.44 90 PN **Pn** **09 00 00.7 +1.6**
BERE Bereket-Mersin 3.44 90 *e*Pn **Pn** **09 00 00.7 +1.6**
AKDN Akdeniz- K¯-br 3.44 108 PN **Pn** **09 00 00.7 +1.7**
AKDN Akdeniz- K¯-br 3.44 108 *e*Pn **Pn** **09 00 00.7 +1.7**
LEF Lefka 3.45 111 PN **Pn** **08 59 59.1 0.0**
LEF Lefka 3.45 111 *e*Pn **Pn** **08 59 59.1 0.0**
IDI Anoyia 3.49 252 P **Pn** **08 59 59.9 +0.2**
comp=N,20nm,0.3s,baz=64,slow=14,SNR=49
IDI S **Sn** **09 00 38.0 -2.0**
comp=N,26nm,0.3s,baz=36,slow=10,SNR=8.4
IDI LR LR 09 02 03.3
comp=N,104nm,18.8s,baz=93,slow=49
IDI Anoyia 3.49 252 ||*i*P **Pn** **08 59 59.8 +0.1**
IDI Anoyia 3.49 252 *e*Pn **Pn** **08 59 59.8 +0.1**
IDI S **Sn** **09 00 36.3 -3.7**
IDI *e*Sn Sb 09 00 38.0 -13
PRK Paraskevi 3.53 324 P **Pn** **09 00 00.0 -0.2**
PRK Paraskevi 3.53 324 P **Pn** **09 00 00.9 +0.7**
AUBOZ BOZOYUK 3.59 13 PN **Pn** **09 00 02.7 +1.7**
AUBOZ BOZOYUK 3.59 13 *e*Pn **Pn** **09 00 02.7 +1.7**
SZAC Souni 3.60 116 P **Pn** **09 00 02.3 +1.1**
baz=302
SZAC S **Sn** **09 00 42.3 -0.4**
SZAC Souni 3.60 116 P **Pn** **09 00 02.3 +1.1**
SZAC S **Sn** **09 00 42.3 -0.4**
TEVE Tevekalti-Mers 3.62 88 PN **Pn** **09 00 03.8 +2.3**
TEVE Tevekalti-Mers 3.62 88 *e*Pn **Pn** **09 00 03.8 +2.3**
ORLT Orhaneli 3.62 359 PN **Pn** **09 00 03.1 +1.6**
ORLT Orhaneli 3.62 359 *e*Pn **Pn** **09 00 03.1 +1.6**
BORA Eskisehir 3.65 18 PN **Pn** **09 00 02.9 +1.0**
BORA Eskisehir 3.65 18 *e*Pn **Pn** **09 00 02.9 +1.0**
SIVA Sivas 3.65 249 P **Pn** **09 00 04.3 +2.5**
SIVA Sivas 3.65 249 P **Pn** **09 00 03.8 +1.9**
MHLA Plaka, Milos I 3.66 276 P **Pn** **09 00 03.7 +1.6**
MHLA Plaka, Milos I 3.66 276 P **Pn** **09 00 03.5 +1.5**
SERI Serifos 3.67 283 P **Pn** **09 00 03.5 +1.4**
SERI Serifos 3.67 283 P **Pn** **09 00 03.4 +1.4**
SIGR SIGRI 3.71 320 P **Pn** **09 00 02.7 0.0**
SIGR SIGRI 3.71 320 P **Pn** **09 00 03.5 +0.8**
SIGR S **Sn** **09 00 44.4 -1.0**
SIGR SIGRI 3.71 320 P **Pn** **09 00 03.5 +0.8**
SIGR S **Sn** **09 00 44.4 -1.0**
GONE Gonen-Balikesi 3.76 345 PN **Pn** **09 00 03.8 +0.5**
GONE Gonen-Balikesi 3.76 345 *e*Pn **Pn** **09 00 03.8 +0.5**
CHBY Cihanbeyli 3.80 54 PN **Pn** **09 00 05.9 +1.9**
CHBY Cihanbeyli 3.80 54 *e*Pn **Pn** **09 00 05.9 +1.9**
CSS Mathiatis 3.84 111 *e*Pn **Pn** **09 00 04.0 -0.5**
CSS Mathiatis 3.84 111 P **Pn** **09 00 05.6 +1.1**
baz=296
CSS S **Sn** **09 00 48.0 -0.7**
CSS Mathiatis 3.84 111 P **Pn** **09 00 04.6 +0.1**
CSS S **Sn** **09 00 49.2 +0.5**
CSS Mathiatis 3.84 111 Pn **Pn** **09 00 05.3 +0.8**
CSS Mathiatis 3.84 111 Pn **Pn** **09 00 05.3 +0.8**
CSS Mathiatis 3.84 111 P **Pn** **09 00 05.6 +1.1**
CSS S **Sn** **09 00 48.0 -0.7**
KARY Karystos 3.95 295 P **Pn** **09 00 08.4 +2.4**
KARY S **Sn** **09 00 52.3 +1.0**
KARY AML AML 09 00 54.7
comp=E,426µm,0.2s
KARY AML AML 09 00 55.9
comp=N,372µm,0.3s
KARY Karystos 3.95 295 P **Pn** **09 00 08.0 +2.0**
KARY S **Sn** **09 00 49.9 -1.3**
KARY Karystos 3.95 295 P **Pn** **09 00 07.9 +2.0**
KARY S **Sn** **09 00 51.7 +0.5**
VAM Vamos 3.99 257 P **Pn** **09 00 08.5 +2.0**
VAM Vamos 3.99 257 P **Pn** **09 00 08.2 +1.7**
IMMV Iera Moni Meta 4.15 258 P **Pn** **09 00 10.2 +1.5**
IMMV Iera Moni Meta 4.15 258 P **Pn** **09 00 10.2 +1.5**
GVD Gavdhos 4.27 250 P **Pn** **09 00 11.4 +1.0**
GVD S **Sn** **09 00 58.0 -1.1**
GVD AML AML 09 01 05.2
comp=N,1133µm,0.4s
GVD AML AML 09 01 11.2
comp=E,862µm,0.4s
GVD Gavdhos 4.27 250 P **Pn** **09 00 11.6 +1.3**
GVD S **Sn** **09 00 58.5 -0.6**
DION Dionisos Attik 4.34 294 P **Pn** **09 00 13.1 +1.8**
DION S **Sn** **09 01 00.5 -0.3**
DION AML AML 09 01 04.2
comp=E,566µm,0.6s
DION AML AML 09 01 04.8
comp=N,437µm,0.4s
DION Dionisos Attik 4.34 294 P **Pn** **09 00 13.0 +1.7**
DION S **Sn** **09 01 00.5 -0.3**
PTL Penteli 4.38 293 P **Pn** **09 00 15.2 +3.3**
PTL Penteli 4.38 293 P **Pn** **09 00 14.3 +2.4**
ATHU Athens Univers 4.41 292 P **Pn** **09 00 13.1 +0.8**
ATHU S **Sn** **09 01 01.7 -0.9**
ATHU Athens Univers 4.41 292 P **Pn** **09 00 13.1 +0.8**
ATHU S **Sn** **09 01 01.7 -0.9**
EREA Eretria 4.47 298 P **Pn** **09 00 15.5 +2.4**
EREA S **Sn** **09 01 03.7 -0.4**
EREA Eretria 4.47 298 P **Pn** **09 00 15.5 +2.4**
EREA S **Sn** **09 01 03.7 -0.4**
LIA Limnos Island 4.57 321 P **Pn** **09 00 15.2 +0.7**
LIA Limnos Island 4.57 321 P **Pn** **09 00 15.8 +1.3**
ANTO Ankara 4.58 40 *e*Pn **Pn** **09 00 16.5 +1.8**
ANTO Ankara 4.58 40 *e*P **Pn** **09 00 16.5 +1.8**
ANTO Ankara 4.58 40 *e*P **Pn** **09 00 16.5 +1.8**
ANKY Antikythira Is 4.61 265 P **Pn** **09 00 16.5 +1.5**
ANKY Antikythira Is 4.61 265 P **Pn** **09 00 16.6 +1.5**
VILL Villia 4.83 293 P **Pn** **09 00 20.6 +2.6**
VLI Veliai 4.86 275 P **Pn** **09 00 20.3 +1.9**
VLI Veliai 4.86 275 P **Pn** **09 00 20.2 +1.8**
SMTH Samothraki Isl 4.86 327 P **Pn** **09 00 18.6 +0.1**
SMTH Samothraki Isl 4.86 327 P **Pn** **09 00 19.5 +1.1**
VIL2 Platees 4.88 293 P **Pn** **09 00 21.4 +2.7**
VIL2 S **Sn** **09 01 12.5 -1.5**
VIL2 AML AML 09 01 19.2
comp=N,515µm,0.5s
VIL2 AML AML 09 01 19.5
comp=E,380µm,0.4s
BR101 Keskin Array S 4.95 47 *e*Pn **Pn** **09 00 20.5 +0.6**
BR101 *e*Sn **Sn** **09 01 18.9 +2.8**
BR101 Keskin Array S 4.95 47 *e*Pn **Pn** **09 00 20.5 +0.6**
BR101 *e*Sn **Sn** **09 01 19.0 +2.8**
BR131 Keskin Array S 4.95 47 *e*Pn **Pn** **09 00 21.6 +1.7**
BR131 Keskin Array S 4.95 47 *e*Pn **Pn** **09 00 21.6 +1.7**
BRTR Keskin Array B 4.95 47 P **Pn** **09 00 20.5 +0.6**
comp=E,11nm,0.3s,baz=301,slow=6.8,SNR=206
BRTR S **Sn** **09 01 18.9 +2.8**
comp=E,3.5nm,0.3s,baz=223,slow=26,SNR=6.6
BRTR LR LR 09 03 03.7
comp=E,202nm,19.8s,baz=220,slow=48
BRTR Keskin Array B 4.95 47 *i* P **Pn** **09 00 21.7 +1.8**
BRTR pmax pmax
comp=Z,9.0nm,0.2s
ALN Alexandroupoli 5.02 334 *e*Pn **Pn** **09 00 21.8 +1.2**
ALN Alexandroupoli 5.02 334 P **Pn** **09 00 21.9 +1.2**
ALN S **Sn** **09 01 16.1 -1.4**
ALN Alexandroupoli 5.02 334 *e*P **Pn** **09 00 21.8 +1.2**
ALN Alexandroupoli 5.02 334 *e*P **Pn** **09 00 21.8 +1.2**

LTK Loutraki 5.04 290 P **Pn** **09 00 22.2 +1.2**
LTK Loutraki 5.04 290 P **Pn** **09 00 22.5 +1.5**
SKIA Skiathos 5.14 304 P **Pn** **09 00 24.5 +2.2**
SKIA Skiathos 5.14 304 P **Pn** **09 00 24.2 +1.9**
SKIA Skiathos 5.14 304 P **Pn** **09 00 24.3 +1.9**
NEO Neokhori 5.37 304 P **Pn** **09 00 28.1 +2.5**
NEO Neokhori 5.37 304 P **Pn** **09 00 27.8 +2.2**
RDO Rodhopi 5.42 332 P **Pn** **09 00 27.3 +1.1**
RDO Rodhopi 5.42 332 P **Pn** **09 00 27.9 +1.7**
XOR Xorichti 5.43 305 P **Pn** **09 00 27.7 +1.5**
XOR Xorichti 5.43 305 P **Pn** **09 00 28.0 +1.7**
XOR S **Sn** **09 01 24.5 -3.1**
XOR Xorichti 5.43 305 P **Pn** **09 00 28.0 +1.7**
DSF Desfina 5.49 293 P **Pn** **09 00 30.9 +3.7**
DSF S **Sn** **09 01 29.4 +0.2**
DSF Desfina 5.49 293 P **Pn** **09 00 30.0 +2.8**
DSF S **Sn** **09 01 29.0 -0.3**
GUR Goura 5.50 288 P **Pn** **09 00 29.0 +1.8**
GUR Goura 5.50 288 P **Pn** **09 00 29.1 +1.8**
KLV Kalavryta, Ach 5.67 289 P **Pn** **09 00 31.6 +2.0**
KLV Kalavryta, Ach 5.67 289 P **Pn** **09 00 31.6 +2.0**
ITM Ithomi 5.69 280 P **Pn** **09 00 30.3 +0.3**
ITM Ithomi 5.69 280 *e*Pn **Pn** **09 00 33.4 +3.4**
ITM Ithomi 5.69 280 P **Pn** **09 00 31.1 +1.2**
TRIZ Trizonia 5.81 292 P **Pn** **09 00 35.6 +4.1**
TRIZ Trizonia 5.81 292 P **Pn** **09 00 34.7 +3.1**
SLUM Salum 5.82 213 P **Pn** **09 00 31.1 -0.5**
baz=218
PYL PYLOS 5.82 277 P **Pn** **09 00 35.1 +3.4**
PYL PYLOS 5.82 277 P **Pn** **09 00 34.4 +2.7**
AGG Agios Georgios 5.86 298 *e*Pn **Pn** **09 00 35.1 +2.9**
AGG Agios Georgios 5.86 298 *e*P **Pn** **09 00 35.2 +2.9**
AGG Agios Georgios 5.86 298 *e*P **Pn** **09 00 35.2 +2.9**
AMT Artemida-Makis 5.91 283 P **Pn** **09 00 33.8 +0.9**
AMT Artemida-Makis 5.91 283 P **Pn** **09 00 34.4 +1.5**
ILGA Ilgaz 5.94 37 *e*Pn **Pn** **09 00 34.1 +0.7**
ILGA Ilgaz 5.94 37 *e*Pn **Pn** **09 00 34.1 +0.7**
EFP Efpalio 5.96 292 P **Pn** **09 00 35.4 +1.9**
EFP Efpalio 5.96 292 P **Pn** **09 00 35.5 +1.9**
HWQ Hawqa 6.10 108 *e*P **Pn** **09 00 36.0 +0.4**
HNTI Hanita 6.10 121 Pn **Pn** **09 00 34.8 -0.8**
HNTI Hanita 6.10 121 Pn **Pn** **09 00 34.8 -0.8**
OFRI 'Ofer 6.25 126 Pn **Pn** **09 00 38.4 +0.7**
OFRI 'Ofer 6.25 126 Pn **Pn** **09 00 38.4 +0.7**
LIT Litokhoron 6.28 308 P **Pn** **09 00 41.3 +3.3**
LIT Litokhoron 6.28 308 *e*Pn **Pn** **09 00 40.1 +2.2**
LIT Litokhoron 6.28 308 *e*P **Pn** **09 00 40.1 +2.2**
LIT Litokhoron 6.28 308 *e*P **Pn** **09 00 40.1 +2.2**
MMA0B Mount Meron ar 6.30 121 Pn **Pn** **09 00 37.7 -0.6**
MMA0B Mount Meron ar 6.30 121 Pn **Pn** **09 00 37.7 -0.6**
MMAI Mount Meron Ar 6.30 121 P **Pn** **09 00 38.0 -0.4**
comp=Z,23nm,0.3s,baz=300,slow=12,SNR=33
MMAI S **Sn** **09 01 45.0 -4.3**
comp=Z,37nm,0.3s,baz=318,slow=27,SNR=9.0
MMAI Mount Meron Ar 6.30 121 P **Pn** **09 00 38.0 -0.4**
THL Klokotos Trika 6.32 302 P **Pn** **09 00 40.9 +2.4**
THL Klokotos Trika 6.32 302 P **Pn** **09 00 40.8 +2.4**
RCY Rachaya 6.36 115 *e*P **Pn** **09 00 38.9 -0.3**
KSDI Kefar Szold 6.38 118 Pn **Pn** **09 00 39.2 -0.2**
KSDI Kefar Szold 6.38 118 Pn **Pn** **09 00 39.2 -0.2**
SLTI Sal'it 6.53 128 Pn **Pn** **09 00 41.1 -0.4**
SLTI Sal'it 6.53 128 Pn **Pn** **09 00 41.1 -0.4**
KSHT Keshet 6.60 119 Pn **Pn** **09 00 43.2 +0.7**
KSHT Keshet 6.60 119 Pn **Pn** **09 00 43.2 +0.7**
MMLI Mount Malkishu 6.66 125 Pn **Pn** **09 00 42.9 -0.3**
MMLI Mount Malkishu 6.66 125 Pn **Pn** **09 00 42.9 -0.3**
RSH 6.74 143 P **Pn** **09 00 43.9 -0.4**
baz=139
RSH 6.74 143 P **Pn** **09 00 43.9 -0.4**
GRG Griva 6.84 313 P **Pn** **09 00 49.2 +3.5**
GRG pmax pmax
comp=Z,24nm,1.0s
GRG Griva 6.84 313 P **Pn** **09 00 49.2 +3.5**
comp=Z,24nm,1.0s
KOT Kottamia 6.91 159 P **Pn** **09 00 45.6 -1.1**
baz=157
KOT S Sn 09 01 54.0 -10
baz=157
KOT AMP 09 02 00.0
baz=157
HHAG Hagoal 6.96 157 AMP 09 02 00.0
baz=155
VAY Valandovo 6.98 316 *e*Pn **Pn** **09 00 48.9 +1.3**
KZIT Kziot 7.13 139 Pn **Pn** **09 00 49.7 +0.1**
KZIT Kziot 7.13 139 Pn **Pn** **09 00 49.7 +0.1**
YTIR Yattir 7.19 133 Pn **Pn** **09 00 50.7 +0.2**
YTIR Yattir 7.19 133 Pn **Pn** **09 00 50.7 +0.2**
DSI Dead Sea 7.20 130 Pn **Pn** **09 00 51.0 +0.4**
DSI Dead Sea 7.20 130 Pn **Pn** **09 00 51.0 +0.4**
FNA Florina 7.36 309 *e*Pn **Pn** **09 00 55.5 +2.6**
FNA Florina 7.36 309 *e*P **Pn** **09 00 55.5 +2.6**
FNA Florina 7.36 309 *e*P **Pn** **09 00 55.5 +2.6**
STIP Stip 7.45 317 *e*Pn **Pn** **09 00 54.2 +0.2**
RMNI Mount Ramon 7.56 138 Pn **Pn** **09 00 55.7 0.0**
RMNI Mount Ramon 7.56 138 Pn **Pn** **09 00 55.7 0.0**
VTS Vitosha 7.60 326 ||*i*P **Pn** **09 00 57.9 +1.7**
VTS Vitosha 7.60 326 *e*Pn **Pn** **09 00 58.1 +1.9**
VTS Vitosha 7.60 326 *e*P **Pn** **09 00 58.1 +1.9**
VTS Vitosha 7.60 326 *e*P **Pn** **09 00 58.1 +1.9**
HNKL Nakhl 7.72 146 P **Pn** **09 00 56.9 -0.9**
baz=142
HNKL Nakhl 7.72 146 P **Pn** **09 00 56.9 -0.9**
SWA2 7.74 203 P **Pn** **09 00 56.6 -1.4**
baz=206
ICOR Ion Corvin 7.74 354 ||*i*P **Pn** **09 00 59.3 +1.3**
ICOR Ion Corvin 7.74 354 ||*i*P **Pn** **09 00 59.3 +1.3**
ASF Jabal al Asfar 7.82 121 P **Pn** **09 00 59.9 +0.8**
comp=Z,1.8nm,0.3s,baz=324,slow=0.7,SNR=7.7
ASF S **Sn** **09 02 25.4 -1.2**
comp=Z,1.1nm,0.3s,baz=22,slow=16,SNR=3.0
PRNI Paran 7.88 138 Pn **Pn** **09 00 59.8 -0.2**
PRNI Paran 7.88 138 Pn **Pn** **09 00 59.8 -0.2**
KRMI Paran Flat 7.92 141 Pn **Pn** **09 01 00.5 -0.1**
KRMI Paran Flat 7.92 141 Pn **Pn** **09 01 00.5 -0.1**
TIRR Tirgusor 8.04 357 ||*i*P **Pn** **09 01 02.1 0.0**
TIRR Tirgusor 8.04 357 *e*Pn **Pn** **09 01 04.1 +2.0**
TIRR Tirgusor 8.04 357 *e*P **Pn** **09 01 04.1 +2.0**
TIRR Tirgusor 8.04 357 *e*P **Pn** **09 01 04.1 +2.0**
HRFI Mount Harif 8.15 140 Pn **Pn** **09 01 03.2 -0.5**
HRFI Mount Harif 8.15 140 Pn **Pn** **09 01 03.2 -0.5**
TLB Topalu 8.19 355 ||*i*P **Pn** **09 01 05.3 +1.2**
TLB Topalu 8.19 355 ||*i*P **Pn** **09 01 05.3 +1.2**
MBRI Mt Berech 8.28 141 Pn **Pn** **09 01 05.3 -0.2**
MBRI Mt Berech 8.28 141 Pn **Pn** **09 01 05.3 -0.2**
EIL Elat 8.40 142 P **Pn** **09 01 09.1 +2.0**
comp=Z,3.0nm,0.3s,baz=349,slow=5.2,SNR=30
EIL S **Sn** **09 02 39.0 -1.9**
comp=Z,6.2nm,0.3s,baz=76,slow=5.7,SNR=6.6
EIL Elat 8.40 142 Pn **Pn** **09 01 07.4 +0.3**
EIL Elat 8.40 142 Pn **Pn** **09 01 07.4 +0.3**
EIL *e*Sn **Sn** **09 02 39.0 -1.9**
CFR Carcaliu 8.77 356 ||*i*P **Pn** **09 01 12.8 +0.7**
CFR Carcaliu 8.77 356 ||*i*P **Pn** **09 01 12.8 +0.7**
SEV Sevastopol' 8.87 22 *e*P **Pn** **09 01 13.7 +0.2**
SEV *e*S **Sn** **09 02 51.0 -1.3**
SEV Sevastopol' 8.87 22 *e*P **Pn** **09 01 13.7 +0.2**
SEV *e*S **Sn** **09 02 51.0 -1.3**
HKAT Jabal Katrina 8.95 150 P **Pn** **09 01 13.6 -1.2**
baz=148
HKAT Jabal Katrina 8.95 150 P **Pn** **09 01 13.6 -1.2**
YAL Yalta 8.98 25 *e*P **Pn** **09 01 17.1 +2.2**
YAL *e*S **Sn** **09 02 59.1 +4.2**
YAL Yalta 8.98 25 *e*P **Pn** **09 01 17.1 +2.2**
HFRF Wahat Farafira 9.26 184 P **Pn** **09 01 17.2 -1.7**
baz=185
HFRF Wahat Farafira 9.26 184 P **Pn** **09 01 17.2 -1.7**
MLR Muntele Rosu 9.34 347 P **Pn** **09 01 21.1 +1.0**
comp=Z,0.2nm,0.3s,baz=173,slow=3.7,SNR=14
MLR Muntele Rosu 9.34 347 ||*i*P **Pn** **09 01 22.1 +2.0**
SIM Simferopol' 9.38 23 *e*P **Pn** **09 01 22.9 +2.5**
SIM *e*S **Sn** **09 03 04.4 -0.3**
SIM Simferopol' 9.38 23 *e*P **Pn** **09 01 22.9 +2.5**
SIM *e*S **Sn** **09 03 04.4 -0.3**
VOIR 9.48 343 ||*i*P **Pn** **09 01 23.3 +1.4**
VOIR 9.48 343 ||*i*P **Pn** **09 01 23.3 +1.4**
SUDU Sudak 9.62 27 *e*P **Pn** **09 01 27.5 +3.7**
SUDU *e*S **Sn** **09 03 16.7 +5.9**
MDVR Moldovita 10.00 329 ||*i*P **Pn** **09 01 30.0 +1.0**
MDVR Moldovita 10.00 329 ||*i*P **Pn** **09 01 30.0 +1.0**
TIP Timpagrande 10.04 290 ||*i*P **Pn** **09 01 30.8 +1.2**
TIP Timpagrande 10.04 290 *e*Pn **Pn** **09 01 32.1 +2.5**

TIP Timpagrande 10.04 290 ||*i*P **Pn** **09 01 30.8 +1.2**
TIP Timpagrande 10.04 290 *e*Pn **Pn** **09 01 32.1 +2.5**
MILM Milestii Mici 10.49 359 ⇑*i*P **Pn** **09 01 36.7 +1.0**
MILM Milestii Mici 10.49 359 ⇑*i*P **Pn** **09 01 36.7 +1.0**
BZS Buzias 10.73 331 ||*i*P **Pn** **09 01 38.3 -0.6**
BZS Buzias 10.73 331 ||*i*P **Pn** **09 01 38.3 -0.6**
CUC Castrocucco 10.94 293 *e*Pn **Pn** **09 01 44.2 +2.3**
CUC Castrocucco 10.94 293 *e*Pn **Pn** **09 01 44.2 +2.3**
BUR04 Bucovina Ar. S 11.53 347 *e*Pn **Pn** **09 01 51.5 +1.5**
BUR04 Bucovina Ar. S 11.53 347 *e*Pn **Pn** **09 01 51.5 +1.5**
BUR08 Bucovina Ar. S 11.56 347 *e*Pn **Pn** **09 01 51.5 +1.1**
BUR08 Bucovina Ar. S 11.56 347 *e*Pn **Pn** **09 01 51.5 +1.1**
NEY Neytrino 12.58 53 ⇑*e*P **Pn** **09 02 07.2 +2.8**
NEY Neytrino 12.58 53 *e*P **Pn** **09 02 07.2 +2.8**
KIV Kislovodsk 12.91 50 *e*P **Pn** **09 02 09.9 +1.1**
KIV pmax pmax
comp=Z,6.0nm,1.1s
KIV Kislovodsk 12.91 50 *e*P **Pn** **09 02 09.9 +1.1**
comp=Z,6.0nm,1.1s
KBZ Khabaz 12.92 51 P **Pn** **09 02 13.6 +4.7**
comp=Z,0.1nm,0.3s,baz=232,slow=9.2,SNR=3.5
GNI Garni 12.95 69 LR LR 09 08 12.0
comp=Z,137nm,18.2s,baz=280,slow=42
GNI Garni 12.95 69 ⇑*e*P **Pn** **09 02 10.6 +1.1**
GNI Garni 12.95 69 *e*P **Pn** **09 02 10.6 +1.1**
ZEI Tsey 13.15 57 *e*P **P** **09 02 21.3 -0.7**
ZEI pmax pmax
comp=Z,7.0nm,0.4s
NCK Nalchik 13.26 53 ⇑*e*P **Pn** **09 02 16.2 +2.7**
NCK pmax pmax
comp=Z,16nm,0.8s
NCK Nalchik 13.26 53 *e*P **Pn** **09 02 16.2 +2.7**
comp=Z,16nm,0.8s
KIEV Kiev 14.27 1 *e*Pn **Pn** **09 02 26.1 -1.2**
KIEV Kiev 14.27 1 ||*e*P **Pn** **09 02 29.9 +2.6**
KIEV pmax pmax
comp=Z,10.0nm,1.6s
KIEV Kiev 14.27 1 *e*Pn **Pn** **09 02 26.1 -1.2**
AKASG Malin Array Be 14.28 1 P **Pn** **09 02 26.9 -0.5**
comp=Z,2.0nm,0.3s,baz=182,slow=12,SNR=6.5
AKBB Malin Array Si 14.28 1 *e*Pn **Pn** **09 02 25.9 -1.5**
AKBB Malin Array Si 14.28 1 *e*P **Pn** **09 02 25.9 -1.5**
AKBB Malin Array Si 14.28 1 *e*Pn **Pn** **09 02 25.9 -1.5**
KEST Kesra 15.88 273 P **Pn** **09 02 50.6 +1.9**
comp=Z,0.1nm,0.3s,baz=203,slow=16,SNR=1.8
KEST Kesra 15.88 273 *e*Pn **Pn** **09 02 49.8 +1.1**
comp=Z,10.0nm,0.9s
KEST Kesra 15.88 273 *e*Pn **Pn** **09 02 49.8 +1.1**
comp=Z,10.0nm,0.9s
VORD Divnogorie 16.32 24 *e*P **P** **09 02 58.4 +1.5**
VORD pmax pmax
comp=Z,8.0nm,0.5s
VORD Divnogorie 16.32 24 *e*P **P** **09 02 58.4 +1.5**
comp=Z,8.0nm,0.5s
VSR Storozhevoye 16.50 23 *e*P **P** **09 02 59.1 +0.3**
VSR pmax pmax
comp=Z,10.0nm,0.6s
VSR Storozhevoye 16.50 23 *e*P **P** **09 02 59.1 +0.3**
comp=Z,10.0nm,0.6s
GEA0 GERESS Array S 16.69 323 *e*Pn **P** **09 03 00.6 -0.5**
GEA0 GERESS Array S 16.69 323 *e*Pn **P** **09 03 00.6 -0.5**
GEC2 GERESS Array S 16.70 323 *e*Pn **P** **09 03 00.9 -0.3**
comp=Z,6.1nm,1.0s
GEC2 GERESS Array S 16.70 323 *e*P **P** **09 03 00.9 -0.3**
GEC2 pmax pmax
comp=Z,6.0nm,1.0s
GEC2 GERESS Array S 16.70 323 *e*P **P** **09 03 00.9 -0.3**
comp=Z,6.0nm,1.0s
GERES GERESS Array B 16.70 323 P **Pn** **09 03 00.3 +1.1**
comp=Z,0.1nm,0.3s,baz=128,slow=13,SNR=3.3
KHC Kasperske Hory 16.95 323 *e*Pn **Pn** **09 03 03.1 +0.8**
comp=Z,1.9nm,0.8s
KHC Kasperske Hory 16.95 323 *e*P **Pn** **09 03 03.1 +0.8**
KHC pmax pmax
comp=Z,2.0nm,0.8s
KHC Kasperske Hory 16.95 323 *e*P **Pn** **09 03 03.1 +0.8**
comp=Z,2.0nm,0.8s
SUW Suwalki 18.05 349 *e*P **Pn** **09 03 16.1 +0.4**
comp=Z,29nm,1.0s
SUW Suwalki 18.05 349 *e*P **Pn** **09 03 16.1 +0.4**
SUW pmax pmax
comp=Z,29nm,1.0s
CLL Collm 18.75 328 *e*sP **sP** **09 03 37.0 +1.0**
CLL LmV 09 14 00.0
comp=Z,100nm,19.0s
KLNR Kaliningrad 19.16 344 ||*e*P **Pn** **09 03 30.8 +1.6**
KLNR pmax pmax
comp=Z,45nm,0.9s
KLNR Kaliningrad 19.16 344 *e*P **Pn** **09 03 30.8 +1.6**
comp=Z,45nm,0.9s
OBN Obninsk 19.41 13 *i* P **P** **09 03 31.0 +0.1**
OBN pmax pmax
comp=Z,5.0nm,0.7s
OBN MLR MLR
comp=Z,83nm,21.0s
OBN Obninsk 19.41 13 *i* P **P** **09 03 31.0 +0.1**
comp=Z,83nm,21.0s
VSU Vasula 22.10 357 ⇑*e*P **P** **09 04 03.3 +3.4**
VSU pmax pmax
comp=Z,14nm,0.9s
FIA0 FINESS Array S 25.11 357 *e*P **P** **09 04 29.0 -0.2**
FIA0 FINESS Array S 25.11 357 *e*P **P** **09 04 29.0 -0.2**
FINES FINESS Array B 25.11 357 P **P** **09 04 29.0 -0.2**
comp=Z,3.2nm,0.6s,baz=160,slow=11,SNR=23
FIA1 FINESS Array S 25.11 357 *e*P **P** **09 04 28.8 -0.4**
comp=Z,7.7nm,1.0s
AKTO Aktyubinsk 25.13 47 P **P** **09 04 29.0 -0.5**
comp=Z,3.0nm,0.5s,baz=228,slow=6.9,SNR=9.8
HFS Hagfors 25.68 342 P **P** **09 04 33.4 -1.0**
comp=Z,1.4nm,0.7s,baz=154,slow=15,SNR=4.2
ABKAR Akbulak array 25.89 51 *e*P **P** **09 04 35.7 -0.8**
ABKAR Akbulak array 25.89 51 *e*P **P** **09 04 35.7 -0.8**
ESDC Sonseca Array 26.05 287 P **P** **09 04 38.6 +0.6**
comp=Z,0.2nm,0.3s,baz=90,slow=8.8,SNR=2.7
NB200 NORSAR Array S 27.09 341 *e*P **P** **09 04 45.5 -1.7**
NOA NORSAR Array B 27.09 341 P **P** **09 04 45.5 -1.7**
comp=Z,2.8nm,0.9s,baz=157,slow=10,SNR=1.7
ARA0 ARCESS Array S 33.23 358 *e*P **P** **09 05 40.8 -0.5**
ARCES ARCESS Array B 33.23 358 P **P** **09 05 40.8 -0.5**
comp=Z,0.4nm,0.4s,baz=185,slow=34,SNR=3.8
ARCES ARCESS Array B 33.23 358 P **P** **09 05 40.8 -0.5**
ARCES pmax pmax
comp=Z,1.0nm,0.6s
BVAR Borovoye Array 33.24 47 P **P** **09 05 40.5 -1.2**
comp=Z,0.5nm,0.5s,baz=258,slow=9.1,SNR=2.5
BVAR LR LR 09 22 42.7
comp=Z,48nm,19.3s,baz=270,slow=43
TOA1 Torodi Ar. Sit 33.69 234 *e*P **P** **09 05 45.7 -0.2**
TOA0 Torodi Ar. Sit 33.69 234 *e*P **P** **09 05 45.7 -0.2**
TORD Torodi Ar. Bea 33.69 234 P **P** **09 05 45.7 -0.2**
comp=Z,1.0nm,0.4s,baz=37,slow=8.1,SNR=19
AAK Ala-Archa 35.33 66 P **P** **09 05 59.1 -1.0**
comp=Z,1.2nm,0.4s,baz=225,slow=4.3,SNR=3.2
KURBB Kurchatov Arra 37.92 52 P **P** **09 06 20.4 -1.4**
comp=Z,3.5nm,0.6s,baz=275,slow=8.8,SNR=31
KURBB PcP **PcP** **09 08 36.3 -1.0**
comp=Z,0.6nm,0.5s,baz=247,slow=4.9,SNR=5.4
KURK Kurchatov 37.98 52 *e*P **P** **09 06 20.4 -2.0**
KURK *e*PcP **PcP** **09 08 36.3 -1.2**
KURK Kurchatov 37.98 52 *de*P **P** **09 06 21.9 -0.4**
KURK pmax pmax
comp=Z,3.0nm,0.9s
MK31 Makanchi Array 40.50 58 *e*P **P** **09 06 43.0 -0.5**
MK31 Makanchi Array 40.50 58 *e*P **P** **09 06 43.0 -0.5**
MK32 Makanchi Array 40.50 58 *e*P **P** **09 06 42.9 -0.6**
MK32 *e*PcP **PcP** **09 08 44.6 -1.0**
MKAR Makanchi Array 40.50 58 P **P** **09 06 42.9 -0.6**
comp=Z,3.3nm,0.6s,baz=279,slow=6.8,SNR=46
MKAR PcP **PcP** **09 08 44.6 -1.0**
comp=Z,0.5nm,0.7s,baz=264,slow=7.1,SNR=3.4
MKAR Makanchi Array 40.50 58 *e*P **P** **09 06 43.0 -0.5**
comp=Z,28nm,0.6s
MKAR PcP **PcP** **09 08 44.6 -1.0**
MKAR Makanchi Array 40.50 58 *e*P **P** **09 06 43.0 -0.5**
MKAR 09 08 44.6
MKAR pmax pmax
comp=Z,28nm,0.6s
MK01 Makanchi Array 40.51 58 *e*P **P** **09 06 42.7 -0.8**
**ZAA1 Zalesovo Array 41.90 47

comp=Z,1.2nm,0.5s,baz=139,slow=13,SNR=4.7
WMQ Urumqi 44.70 62 *e*P **P 09 07 20.0 +2.4**
TLY Talaya 53.47 48⇑*e*P **P 09 08 25.5 +0.9**
TLY pmax pmax
comp=Z,1.0nm,0.8s
SONA0 Songino Array 56.29 52 *e*P **P 09 08 44.2 -1.0**
SONM Songino Array 56.29 52 P **P 09 08 44.2 -1.0**
comp=Z,0.6nm,0.4s,baz=285,slow=7.7,SNR=4.4
ULN Ulaanbaatar 56.70 52⇓*e*P **P 09 08 47.8 -0.3**
ULN pmax pmax
comp=Z,1.0nm,1.0s
TIXI Tiksi 58.89 21⇓*e*P **P 09 09 02.8 -0.1**
TIXI pmax pmax
comp=Z,1.0nm,0.9s
HHC Hu-ho-hao-te 62.36 58 *e*P **P 09 09 27.3 +0.1**
HHC pmax pmax
comp=Z,17nm,1.2s
HHC pmax pmax
comp=Z,60nm,7.3s
CMAR Chiang Mai Arr 63.38 86 P **P 09 09 33.8 -0.4**
comp=Z,1.3nm,0.3s,baz=298,slow=8.1,SNR=7.2
USRK Ussuriysk Ar. 73.75 47 P **P 09 10 37.3 -1.2**
comp=Z,3.2nm,0.9s,baz=260,slow=7.0,SNR=3.7
KSAR Wonju Array Be 75.04 54 P **P 09 10 45.5 -0.6**
KSAR Wonju Array Be 75.04 54 P **P 09 10 45.5 -0.6**
KSRS Korea Array 75.05 54 P **P 09 10 45.5 -0.7**
comp=Z,1.1nm,0.6s,baz=179,slow=31,SNR=4.1
YKA Yellowknife Ar 77.16 344 P **P 09 10 56.2 -1.5**
comp=Z,0.1nm,0.4s,baz=287,slow=14,SNR=4.0
MDM Murphy Dome 78.93 359 *e*P **P 09 11 07.4 -0.2**
comp=Z,2.9nm,1.0s
ILAR Eielson Array 79.09 358 P **P 09 11 07.1 -1.3**
comp=Z,0.3nm,0.6s,baz=333,slow=3.9,SNR=8.0
WRH Wood River Hil 79.42 359 *e*P **P 09 11 09.9 -0.3**
comp=Z,2.6nm,0.6s
MAJO Matsushiro 82.17 50 *e*P **P 09 11 24.4 -1.1**
MAJO Matsushiro 82.17 50 *e*P **P 09 11 24.4 -1.1**
MJAR Matsushiro Arr 82.17 50 P **P 09 11 24.4 -1.1**
comp=Z,1.4nm,0.7s,baz=343,slow=1.3,SNR=3.5
KDAK Kodiak Island 86.15 1 *i*P **P 09 11 45.2 0.0**

IDC 13 09:01:36.4±1.2, 2°.62S×138°.93E, h0km, mb3.4/3, mb1 3.7/4, mb1mx3.5/49, mbtmp3.5/4, ML3.2/1, MS2.7/1, Ms1 2.7/1, ms1mx2.3/29, Error ellipse: s-maj=30.1km s-min=26.0km az=80.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**1.77**	**87**	Pn	Pn	09 02 08.3	-0.1
	2.4nm,0.3s,baz=237,slow=11,SNR=9.1						
JAY				Sn	Sn	09 02 27.2	-4.5
	5.3nm,0.3s,baz=108,slow=19,SNR=6.2						
JAY				LR	LR	09 02 28.9	
	comp=Z,39nm,21.4s,baz=349,slow=30						
WRA	**Warramunga Arr**	**17.79**	**194**	P	Pn	09 05 46.0	+0.4
	0.1nm,0.3s,baz=13,slow=12,SNR=5.3						
WRA				S	Sn	09 08 58.2	-6.4
	0.0nm,0.3s,baz=17,slow=24,SNR=2.6						
ASAR	**Alice Springs**	**21.48**	**193**	P	P	09 06 26.4	-0.3
	0.7nm,0.7s,baz=16,slow=10,SNR=15						
KSRS	**Korea Array**	**41.16**	**347**	LR	LR	09 27 12.3	
	comp=Z,9.6nm,18.4s,baz=195,slow=37						
MKAR	**Makanchi Array**	**69.86**	**322**	P	P	09 12 50.6	+1.5
	0.4nm,0.5s,baz=117,slow=7.8,SNR=5.1						
KURBB	**Kurchatov Arra**	**73.79**	**325**	P	P	09 13 11.5	-1.1
	0.2nm,0.4s,baz=110,slow=5.3,SNR=2.3						

MAN 13 09:03:58.7, 7°.09N×126°.41E, h101km, mb4.1, ML2.9, MS2.6, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.21**	**227**	*e*P	Pn	09 04 14.2	+1.1
MATI				*e*S	Sn	09 04 25.8	+2.0
DMPH	**Davao City--Mi**	**0.90**	**270**⇑	*e*P	Pn	09 04 26.0	+7.9
DMPH				*e*S	Sn	09 04 39.5	+6.8
BUKP	**Musuan**	**1.55**	**300**	*e*P	Pn	09 04 26.6	+0.9
BUKP				*e*S	Sn	09 04 46.8	+0.7
BUTP	**Butuan**	**2.02**	**337**	*e*P	Pn	09 04 32.2	+0.5
BUTP				*e*S	Sn	09 04 57.0	+0.2
CGP	**Cagayan de Oro**	**2.18**	**309**⇓	*e*P	Pn	09 04 34.2	+0.6

NIED ***13*** *09:05:00, 37°.20N×141°.60E, h53km, Mw3.5 Best double couple: M0=2.24000×10^14 NP1:φ0=233.00000°, δ37.00000°, λ84.00000°. NP2:φ0=61.00000°, δ53.00000°, λ95.00000°.*
ISCJB ***13*** *09:05:24.4±1.2, 37°.14N±0°.04×141°.67E±0°.06, h32km±7km, mb3.5/4, Error ellipse: s-maj=8.4km s-min=5.6km az=25.2*
JMA ***13*** *09:05:26.4±0.1, 37°.19N×141°.51E, h48km±2km, M3.7*
JMA Felt I J1.
IDC ***13*** *09:05:26.4±2.4, 37°.06N×141°.73E, h43km±24km, mb3.2/4, mb1 3.5/7, mb1mx3.2/67, mbtmp3.5/7, ML3.4/3, Error ellipse: s-maj=19.4km s-min=14.6km az=82.0*
ISC 13 09:05:24.1±2.0, 37°.14N±0°.04×141°.70E±0°.07, h24km±14km, n25, σ1°.41/32, mb3.5/4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.70**	**289**	P	**Pb**	**09 05 37.9**	**+0.3**
JFK				*e*S	**Sb**	**09 05 45.8**	**-1.0**
ONAJ	**Iwakimizuishiy**	**0.72**	**267**	P	**Pb**	**09 05 38.5**	**+0.4**
ONAJ				S	**Sb**	**09 05 46.8**	**-0.8**
JMM	**Marumori**	**1.02**	**315**	P	**Pn**	**09 05 42.5**	**-0.5**
JHO	**Hitachi**	**1.05**	**240**	P	**Pn**	**09 05 43.1**	**-0.3**
JHO				*e*S	**Sn**	**09 05 55.4**	**-1.9**
JFT	**Otama**	**1.15**	**290**	P	**Pn**	**09 05 44.9**	**+0.1**
JFT				*e*S	**Sn**	**09 05 58.0**	**-1.8**
JIO	**Ouri**	**1.34**	**348**	P	**Pn**	**09 05 47.7**	**+0.3**
JIO				*e*S	**Sn**	**09 06 03.1**	**-1.3**
JOU	**Okura**	**1.47**	**326**	P	**Pn**	**09 05 49.6**	**+0.4**
JOU				*e*S	**Sn**	**09 06 07.3**	**-0.5**
JFY	**Yanaizu**	**1.61**	**280**	P	**Pn**	**09 05 51.3**	**+0.1**
JFY				*e*S	**Sn**	**09 06 10.0**	**-1.2**
JYS	**Shirataka**	**1.69**	**310**	P	**Pn**	**09 05 52.5**	**+0.4**
JYS				*e*S	**Sn**	**09 06 12.0**	**-1.0**
JMK	**Ichinoseki**	**1.85**	**348**	P	**Pn**	**09 05 55.0**	**+0.7**
JMK				*e*S	**Sn**	**09 06 16.6**	**-0.3**
JAG	**Ashikaga**	**1.94**	**249**	P	**Pn**	**09 05 56.1**	**+0.5**
JAG				S	**Sn**	**09 06 17.8**	**-1.5**
MJAR	**Matsushiro Arr**	**2.86**	**259**	P	**Pn**	**09 06 09.6**	**+1.3**
	1.9nm,0.3s,baz=83,slow=14,SNR=14						
MJAR				S	**Sn**	**09 06 43.6**	**+1.6**
	2.9nm,0.3s,baz=62,slow=29,SNR=6.9						
MAT	**Matsushiro**	**2.87**	**259**	P	**Pn**	**09 06 10.7**	**+2.3**
MAT				S	**Sn**	**09 06 46.1**	**+4.0**
JHJ	**Hachijo jima 2**	**4.31**	**202**	P	**Pn**	**09 06 29.5**	**+1.3**
	12nm,0.3s,baz=38,slow=18,SNR=3.4						
JHJ				S	**Sn**	**09 07 15.2**	**-2.5**
	23nm,0.3s,baz=86,slow=14,SNR=2.6						
ASAJ	**Asahikawa**	**7.00**	**5**	P	**Pn**	**09 07 06.7**	**+1.5**
	0.7nm,0.3s,baz=169,slow=10,SNR=4.1						
H11N2	**WAKE ISLAND Hy 28.01 121**			T	T	09 40 45.3	
	baz=313,slow=76						
H11N1	**WAKE ISLAND Hy 28.02 121**			T	T	09 40 37.1	
	baz=313						
H11N3	**WAKE ISLAND Hy 28.02 121**			T	T	09 40 39.5	
	baz=313,slow=76						
H11S1	**WAKE ISLAND Hy 28.73 123**			T	T	09 41 40.7	
	baz=321,slow=76,SNR=13						
H11S3	**WAKE ISLAND Hy 28.73 123**			T	T	09 41 40.7	
	baz=321,slow=76,SNR=9.0						
H11S2	**WAKE ISLAND Hy 28.74 123**			T	T	09 41 40.7	
	baz=321,slow=76,SNR=5.4						
MKAR	**Makanchi Array**	**44.26**	**302**	P	**P**	**09 13 31.4**	**-0.3**
	0.4nm,0.6s,baz=95,slow=9.6,SNR=4.6						
KURBB	**Kurchatov Arra**	**46.12**	**308**	P	**P**	**09 13 45.2**	**-1.1**
	0.5nm,0.5s,baz=85,slow=7.5,SNR=5.7						
ILAR	**Eielson Array**	**49.28**	**32**	P	**P**	**09 14 12.0**	**+1.4**
	0.3nm,0.6s,baz=272,slow=6.4,SNR=6.1						
WRA	**Warramunga Arr**	**57.20**	**188**	P	**P**	**09 15 08.9**	**-0.4**
	0.4nm,1.0s,baz=6.8,slow=6.9,SNR=3.6						

ISCJB ***13*** *09:15:51.0±0.6, 50°.11N±0°.03×19°.05E±0°.04, h0km, Error ellipse: s-maj=4.8km s-min=3.7km az=3.9*
CSEM ***13*** *09:15:50.5±0.5, 50°.17N×19°.09E, h1km, ML2.5/4, Error ellipse: s-maj=10.1km s-min=5.7km az=7.0*
PRU ***13*** *09:15:51.2, 50°.17N×19°.08E, h0km*
ISC 13 09:15:50.9±0.8, 50°.05N±0°.03×19°.10E±0°.03, h0km, n18, σ0°.80/33, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHZP	**Chorzow**	**0.25**	**343**	*e*Pg	**Pg**	**09 15 56.5**	**+0.9**
CHZP				*e*Sg	**Sg**	**09 15 59.7**	**+0.8**
OJC	**Ojcow**	**0.48**	**69**	*e*Pg	**Pg**	**09 15 60.0**	**0.0**
OJC				*e*Sg	**Sg**	**09 16 06.3**	**+0.1**
OJC	**Ojcow**	**0.48**	**69**	*e*Pg	**Pg**	**09 16 00.0**	**0.0**
OJC				*e*Sg	**Sg**	**09 16 06.3**	**+0.1**
OKC	**Ostrava-Krasne**	**0.65**	**251**	*e*PG	**Pb**	**09 16 04.5**	**-0.7**
OKC				*e*SG	**Sb**	**09 16 14.9**	**+0.1**
	comp=Z,7.9nm,0.3s						
OKC	**Ostrava-Krasne**	**0.65**	**251**	Pg	**Pb**	**09 16 04.5**	**-0.7**
OKC				Sg	**Sb**	**09 16 14.9**	**+0.1**
	7.9nm,0.3s						
LANS	**Liptovska Anna**	**0.94**	**165**	*e*PG	**Pn**	**09 16 11.0**	**-0.3**
LANS				*e*SG	**Sn**	**09 16 24.8**	**-0.6**
LANS	**Liptovska Anna**	**0.94**	**165**	*e*Pg	**Pn**	**09 16 11.0**	**-0.3**
LANS				*e*Sg	**Sn**	**09 16 24.8**	**-0.6**
MORC	**Moravsky Berou**	**1.05**	**255**	*e*Pg	**Pb**	**09 16 12.2**	**+0.3**
MORC				*e*Sg	**Sn**	**09 16 27.1**	**-1.1**
MORC	**Moravsky Berou**	**1.05**	**255**	*e*PG	**Pb**	**09 16 12.2**	**+0.3**
MORC				*e*SG	**Sn**	**09 16 27.1**	**-1.1**
KRLC	**Kraliky**	**1.50**	**272**	*e*PG	**Pn**	**09 16 18.7**	**-0.3**
KRLC				*e*SG	**Sg**	**09 16 38.6**	**-0.3**
	comp=Z,3.3nm,0.3s						
KRLC	**Kraliky**	**1.50**	**272**	Pg	**Pn**	**09 16 18.7**	**-0.3**
KRLC				Sg	**Sg**	**09 16 38.6**	**-0.3**
	3.3nm,0.3s						
VYHS	**Vyhne**	**1.57**	**186**	*e*PN	**Pg**	**09 16 21.1**	**+0.2**
VYHS				*e*SN	**Sg**	**09 16 42.4**	**+1.1**
VYHS				*e*LG	Lg	09 16 43.6	
VYHS	**Vyhne**	**1.57**	**186**	*e*Pg	**Pg**	**09 16 21.1**	**+0.2**
VYHS				*e*Sn	**Sg**	**09 16 42.4**	**+1.1**
DPC	**Dobruska-Polom**	**1.81**	**280**	*e*PG	**Pn**	**09 16 23.2**	**-0.2**
DPC				*e*SG	**Sb**	**09 16 47.9**	**-0.3**
	comp=Z,10.0nm,0.4s						
DPC	**Dobruska-Polom**	**1.81**	**280**	Pg	**Pn**	**09 16 23.2**	**-0.2**
DPC				Sg	**Sb**	**09 16 47.9**	**-0.3**
	10.0nm,0.4s						
PRU	**Pruhonice**	**2.94**	**270**	*e*SG	**Sg**	**09 17 25.1**	**-0.2**
	comp=Z,2.7nm,0.3s						
PRU	**Pruhonice**	**2.94**	**270**	Sg	**Sg**	**09 17 25.1**	**-0.2**
	2.7nm,0.3s						
KHC	**Kasperske Hory**	**3.71**	**258**	*e*SG	**Sb**	**09 17 46.0**	**+3.2**

SOME ***13*** *09:23:57.9, 43°.37N×74°.73E, h10km*
NNC ***13*** *09:23:58.5±1.1, 43°.33N×74°.75E, h0km, mb2.9, mpv2.5, Error ellipse: s-maj=7.4km s-min=3.5km az=163.0*
KRNET ***13*** *09:23:58.0±0.1, 43°.37N×74°.71E, h13km, mb2.9*
KNET ***13*** *09:23:58.2±0.3, 43°.34N×74°.69E, h12km±1km, ml1.5, Error ellipse: s-maj=2.2km s-min=1.6km az=21.0*
ISC 13 09:23:58.0±1.0, 43°.36N±0°.03×74°.73E±0°.02, h9km±8km, n49, σ0°.88/95, 35C-17D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USP	**Ospenovka**	**0.20**	**240**	⇑P	**Pg**	**09 24 01.8**	**-0.4**
	108nm,0.1s,SNR=102						
USP				⇑S	**Sg**	**09 24 04.4**	**-0.5**
	229nm,0.2s						
USP	**Ospenovka**	**0.20**	**240**	⇑*i*P	**Pg**	**09 24 01.7**	**-0.4**
USP				⇑*i*S	**Sg**	**09 24 04.3**	**-0.6**
	baz=38						
CHMS	**Chumysh**	**0.36**	**178**	⇑P	**Pg**	**09 24 05.5**	**+0.2**
CHMS				⇑S	**Sg**	**09 24 10.5**	**+0.5**
	16nm,0.1s,SNR=14						
CHMS	**Chumysh**	**0.36**	**178**	⇑*i*P	**Pg**	**09 24 05.4**	**+0.2**
CHMS				⇑*i*S	**Sg**	**09 24 10.5**	**+0.5**
	13nm,0.1s						
CHMS	**Chumysh**	**0.36**	**178**	⇑*i*P	**Pg**	**09 24 05.4**	**+0.2**
CHMS				⇑*i*S	**Sg**	**09 24 10.5**	**+0.5**
	baz=76						
KBK	**Karagaybulak**	**0.72**	**167**	⇑P	**Pg**	**09 24 12.5**	**+0.5**
KBK				⇑S	**Sb**	**09 24 22.8**	**-0.2**
	14nm,0.3s,SNR=12						
KBK	**Karagaybulak**	**0.72**	**167**	⇑*i*P	**Pg**	**09 24 12.3**	**+0.3**
KBK				⇑*i*S	**Sb**	**09 24 22.5**	**-0.5**
	28nm,0.3s						
KBK	**Karagaybulak**	**0.72**	**167**	⇑*i*P	**Pg**	**09 24 12.3**	**+0.3**
KBK				⇑*i*S	**Sb**	**09 24 22.5**	**-0.5**
	baz=66						
AAK	**Ala-Archa**	**0.75**	**194**	⇑P	**Pg**	**09 24 12.6**	**+0.1**
AAK				⇑S	**Sg**	**09 24 23.0**	**+0.9**
	7.3nm,0.5s						
AAK	**Ala-Archa**	**0.75**	**194**	⇑P	**Pg**	**09 24 12.6**	**+0.1**
AAK				⇑S	**Sg**	**09 24 23.1**	**+0.9**
	7.5nm,0.5s						
AAK	**Ala-Archa**	**0.75**	**194**	⇑*i*P	**Pg**	**09 24 12.5**	**+0.1**
AAK				⇑*i*S	**Sg**	**09 24 23.0**	**+0.9**
	4.5nm,0.2s,SNR=5.3						
AAK	**Ala-Archa**	**0.75**	**194**	⇑*i*P	**Pg**	**09 24 12.5**	**+0.1**
AAK				⇑*i*S	**Sg**	**09 24 23.1**	**+0.9**
	14nm,0.3s						
DGS	**Degeres**	**0.77**	**99**	*e*P	**Pg**	**09 24 13.1**	**+0.2**
DGS				*e*S	**Sb**	**09 24 24.4**	**+0.2**
	baz=99						
DGS	**Degeres**	**0.77**	**99**	*e*P	**Pg**	**09 24 13.1**	**+0.2**
DGS				*e*S	**Sb**	**09 24 24.4**	**+0.2**
	19nm,0.4s						
TKM2	**Tokmak 2**	**0.77**	**125**	⇑P	**Pg**	**09 24 12.6**	**-0.3**
TKM2				⇓S	**Sg**	**09 24 22.9**	**-0.1**
	1.7nm,0.3s						
TKM2	**Tokmak 2**	**0.77**	**125**	⇑P	**Pg**	**09 24 13.1**	**+0.1**
	20nm,0.8s						
KST	**Kastek**	**0.96**	**109**	*e*P	**Pg**	**09 24 16.5**	**+0.1**
KST				*e*S	**Sb**	**09 24 30.0**	**+0.4**
	1.1nm,0.1s,SNR=7.5						
KST	**Kastek**	**0.96**	**109**	*e*P	**Pg**	**09 24 16.5**	**+0.1**
KST				*e*S	**Sb**	**09 24 30.0**	**+0.4**
	baz=9.0						
EKS2	**Erkin-Say**	**0.99**	**225**	⇑P	**Pg**	**09 24 16.9**	**-0.2**
EKS2				⇑S	**Sb**	**09 24 30.6**	**0.0**
	2.8nm,0.2s,SNR=8.0						
EKS2	**Erkin-Say**	**0.99**	**225**	⇑*i*P	**Pg**	**09 24 16.7**	**-0.4**
EKS2				⇑*i*S	**Sg**	**09 24 30.1**	**+0.1**
	5.8nm,0.3s						
EKS2	**Erkin-Say**	**0.99**	**225**	⇑*i*P	**Pg**	**09 24 16.7**	**-0.4**
EKS2				⇑*i*S	**Sg**	**09 24 30.1**	**+0.1**
	baz=25						
UCH	**Uchtor**	**1.15**	**188**	⇑P	**Pb**	**09 24 19.9**	**-0.4**
UCH				⇓S	**Sb**	**09 24 35.3**	**-0.1**
	2.9nm,0.3s,SNR=7.7						
UCH	**Uchtor**	**1.15**	**188**	⇓*i*P	**Pb**	**09 24 19.9**	**-0.4**
UCH				⇓*i*S	**Sb**	**09 24 35.3**	**-0.1**
	baz=87						
BOOM	**Boomskoye usch**	**1.25**	**134**	⇓*i*P	**Pn**	**09 24 21.5**	**-0.2**
BOOM				⇓*i*S	**Sn**	**09 24 38.6**	**-0.1**
	baz=34						
MTBS	**Maitube**	**1.26**	**100**	*e*P	**Pb**	**09 24 22.1**	**+0.1**
MTBS				*e*S	**Sg**	**09 24 39.6**	**+1.0**
	baz=0.0						
MTBS	**Maitube**	**1.26**	**100**	*e*P	**Pb**	**09 24 22.1**	**+0.1**
MTBS				*e*S	**Sg**	**09 24 39.6**	**+1.0**
	7.6nm,0.4s						
MRKS	**Merke**	**1.27**	**241**	*e*P	**Pn**	**09 24 21.6**	**-0.3**
MRKS				*e*S	**Sg**	**09 24 39.4**	**+0.7**
	15nm,0.3s						
MRKS	**Merke**	**1.27**	**241**	*e*P	**Pn**	**09 24 21.6**	**-0.3**
MRKS				*e*S	**Sg**	**09 24 39.4**	**+0.7**
	baz=41						
MRKS	**Merke**	**1.27**	**241**	*e*P	**Pn**	**09 24 21.6**	**-0.3**
MRKS				*e*S	**Sg**	**09 24 39.4**	**+0.7**
	7.7nm,0.4s						
KUU	**Kurty**	**1.28**	**65**	*e*P	**Pb**	**09 24 22.4**	**+0.1**
KUU				*e*S	**Sg**	**09 24 40.1**	**+0.8**
	16nm,0.3s						
KUU	**Kurty**	**1.28**	**65**	*e*P	**Pb**	**09 24 22.4**	**+0.1**
KUU				*e*S	**Sg**	**09 24 40.0**	**+0.8**
	baz=65						
KUU	**Kurty**	**1.28**	**65**	*e*P	**Pb**	**09 24 22.4**	**+0.1**
KUU				*e*S	**Sg**	**09 24 40.0**	**+0.8**
	10nm,0.2s						
KZA	**Kyzart**	**1.34**	**163**	⇑*i*P	**Pb**	**09 24 23.5**	**0.0**
KZA				⇑*i*S	**Sg**	**09 24 41.6**	**+0.4**
	23nm,0.5s						
AML	**Almayashu**	**1.45**	**212**	⇓P	**Pb**	**09 24 25.3**	**0.0**
AML				⇑S	**Sg**	**09 24 45.3**	**+0.6**
	baz=63						
AML	**Almayashu**	**1.45**	**212**	⇑*i*P	**Pn**	**09 24 24.9**	**+0.2**
	2.7nm,0.2s,SNR=8.4						
AML				⇑S	**Sg**	**09 24 45.3**	**+0.6**
	4.5nm,0.3s						
AML	**Almayashu**	**1.45**	**212**	⇑*i*P	**Pn**	**09 24 24.9**	**+0.2**
	baz=12						
AML				⇑*i*S	**Sg**	**09 24 44.8**	**+0.1**
	baz=12						
KTBS	**Karatobe**	**1.46**	**76**	*e*P	**Pb**	**09 24 25.7**	**+0.3**
KTBS				*e*S	**Sg**	**09 24 45.7**	**+0.7**
	26nm,0.4s						
	28nm,0.5s						
ULHL	**Ulahol**	**1.58**	**135**	⇑*i*P	**Pb**	**09 24 27.4**	**0.0**
ULHL				⇑*i*S	**Sg**	**09 24 49.0**	**+0.3**
	baz=34						
TNSS	**Tian-Shan**	**1.65**	**101**	*e*P	**Pb**	**09 24 28.8**	**0.0**
TNSS				*e*S	**Sg**	**09 24 51.1**	**-0.1**
	baz=1.0						
TNSS	**Tian-Shan**	**1.65**	**101**	*e*P	**Pb**	**09 24 28.8**	**0.0**
TNSS				*e*S	**Sg**	**09 24 51.1**	**-0.1**
	21nm,0.4s						
	24nm,0.5s						
MDOK	**Medeo**	**1.70**	**96**	⇑P	**Pg**	**09 24 30.5**	**-0.2**
MDOK				⇓S	**Sg**	**09 24 53.1**	**+0.3**
	2.5nm,0.4s						
MDOK	**Medeo**	**1.70**	**96**	*e*P	**Pb**	**09 24 29.6**	**0.0**
MDOK				*e*S	**Sg**	**09 24 52.5**	**-0.3**
	20nm,0.8s						
MDOK	**Medeo**	**1.70**	**96**	*e*P	**Pb**	**09 24 29.6**	**0.0**
MDOK				*e*S	**Sg**	**09 24 52.5**	**-0.3**
	baz=96						
MDOK	**Medeo**	**1.70**	**96**	*e*P	**Pb**	**09 24 29.6**	**0.0**
MDOK				*e*S	**Sg**	**09 24 52.5**	**-0.3**
	5.7nm,0.4s						
	13nm,0.4s						
CHKK	**Chushkaly**	**1.71**	**73**	⇓*e*P	**Pb**	**09 24 30.2**	**+0.6**
CHKK				⇓*e*S	**Sg**	**09 24 54.4**	**+1.4**
	baz=73						
CHKK	**Chushkaly**	**1.71**	**73**	⇓*e*P	**Pb**	**09 24 30.2**	**+0.6**
CHKK				⇓*e*S	**Sg**	**09 24 54.4**	**+1.4**
	baz=73						
CHKK	**Chushkaly**	**1.71**	**73**	⇓*e*P	**Pb**	**09 24 30.2**	**+0.6**
CHKK				⇓*e*S	**Sg**	**09 24 54.4**	**+1.4**
	7.5nm,0.3s						
	31nm,0.3s						
KOTS	**Kotyrbulak**	**1.74**	**93**	*e*P	**Pb**	**09 24 30.9**	**+0.6**
KOTS				*e*S	**Sg**	**09 24 54.6**	**+0.6**
	5.0nm,0.5s						
	11nm,0.7s						
MNAS	**Manas**	**1.86**	**243**	⇑P	**Pb**	**09 24 31.8**	**-0.4**
MNAS				⇓S	**Sb**	**09 24 55.8**	**+0.2**
	2.0nm,0.4s						
	7.2nm,0.4s						
ARXS	**Arharly**	**2.40**	**68**	*e*P	**Pb**	**09 24 42.0**	**+0.7**
ARXS				*e*S	**Sg**	**09 25 13.8**	**-1.2**
	3.6nm,0.3s						
	12nm,0.4s						
KURS	**Kuram**	**2.51**	**86**	*e*P	**Pb**	**09 24 43.3**	**+0.1**
KURS				*e*S	**Sg**	**09 25 16.7**	**-1.9**
	baz=86						
KURS	**Kuram**	**2.51**	**86**	*e*P	**Pb**	**09 24 43.3**	**+0.1**
KURS				*e*S	**Sg**	**09 25 16.7**	**-1.9**
	2.8nm,0.3s						
	13nm,0.7s						
KPKS	**Kokpek**	**2.88**	**87**	*e*P	**Pb**	**09 24 50.2**	**+0.6**
KPKS				*e*S	**Sg**	**09 25 28.1**	**-2.5**
	baz=87						
KPKS	**Kokpek**	**2.88**	**87**	*e*P	**Pb**	**09 24 50.2**	**+0.6**
KPKS				*e*S	**Sg**	**09 25 28.1**	**-2.5**
	4.7nm,0.4s						
	22nm,0.4s						
KK31	**Karatay Array**	**3.10**	**267**	⇑Pg	**Pb**	**09 24 53.4**	**+0.2**
KK31				⇓Lg	Lg	09 25 37.9	
	1.2nm,0.4s,baz=86,slow=15,SNR=13						
	1.0nm,0.3s,baz=82,slow=30,SNR=6.9						
UZB	**Uzynbulak**	**3.14**	**92**	⇓*i*P	**Pb**	**09 24 54.9**	**+0.8**
UZB				⇓*i*S	**Sg**	**09 25 35.8**	**-3.1**
	baz=92						
UZB	**Uzynbulak**	**3.14**	**92**	⇓*i*P	**Pb**	**09 24 54.9**	**+0.8**
UZB				⇓*i*S	**Sg**	**09 25 35.8**	**-3.1**
	2.5nm,0.3s						
	5.9nm,0.5s						
KAPS	**Kapalarasan**	**3.83**	**58**	*e*P	**Pb**	**09 25 08.6**	**+2.8**
KAPS				*e*S	**Sg**	**09 25 59.4**	**-1.8**
	4.2nm,0.4s						
	3.0nm,0.3s						

MDD ***13*** *09:30:21.1±1.9, 37°.30N×12°.62W, h0km, mb4.1/9, Error ellipse: s-maj=18.1km s-min=16.7km az=127.0, PRXIMO*
IGIL ***13*** *09:30:21.7, 37°.27N×12°.66W, h0km, ML2.3*
INMG ***13*** *09:30:21.6±1.1, 37°.12N×13°.09W, h10km, ML2.4, Error ellipse: s-maj=8.5km s-min=6.8km az=139.0*
CSEM ***13*** *09:30:23.4±0.4, 37°.37N×12°.42W, h10km, mb4.1, Error ellipse: s-maj=7.0km s-min=6.9km az=94.0*
ISC 13 09:30:18.6±2.8, 37°.36N±0°.07×12°.6W±0°.1, h10km, n78, σ2°.56/135, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.02**	**93**	*e*Pn	**Pn**	**09 31 08.1**	**+1.6**
PFVI				*e*Sn	**Sn**	**09 31 43.7**	**+1.0**
PFVI				A	A	09 32 02.1	
	8.4nm,0.7s						
PFVI	**Vila Bisbo**	**3.02**	**93**	P	**Pn**	**09 31 08.0**	**+1.5**
	2.1nm,0.1s,SNR=7.9						
PFVI				S	**Sn**	**09 31 43.3**	**+0.6**
	3.4nm,0.2s,SNR=7.9						
PFVI	**Vila Bisbo**	**3.02**	**93**	*e*Pn	**Pn**	**09 31 08.1**	**+1.6**
PFVI				S	**Sn**	**09 31 43.3**	**+0.6**
	3.4nm,0.2s,SNR=7.9						
PFVI				*e*Sn	**Sn**	**09 31 43.7**	**+1.0**
PMAFR	**Mafra**	**3.06**	**58**	*e*Pn	**Pb**	**09 31 10.2**	**-2.9**
PMAFR				*e*Sn

PCVE	**Castro Verde**	**3.64**	**84**	*e*Pn	**Pn**	**09 31 18.1 +3.1**
PCVE				*e*Sn	**Sn**	**09 31 59.7 +1.8**
PCVE				A	A	09 32 05.2
	comp=E,3.8nm,0.3s					
PCVE	**Castro Verde**	**3.64**	**84**	P	**Pn**	**09 31 18.1 +3.1**
PCVE				S	**Sn**	**09 31 59.7 +1.8**
	comp=E,3.8nm,0.3s					
PCVE	**Castro Verde**	**3.64**	**84**	P	**Pn**	**09 31 18.1 +3.1**
PCVE				S	**Sn**	**09 31 59.7 +1.8**
	comp=E,3.8nm,0.3s					
PBDV	**Barranco-do-Ve**	**3.72**	**90**	*e*Pn	**Pn**	**09 31 19.4 +3.2**
PBDV	**Barranco-do-Ve**	**3.72**	**90**	P	**Pn**	**09 31 19.4 +3.2**
PBDV	**Barranco-do-Ve**	**3.72**	**90**	P	**Pn**	**09 31 19.4 +3.2**
EVO	**Evora**	**3.81**	**71**	*e*Pn	**Pn**	**09 31 20.8 +3.5**
EVO				*e*Sn	**Sn**	**09 32 04.3 +2.1**
EVO				A	A	09 32 11.9
	comp=E,8.3nm,0.3s					
EVO	**Evora**	**3.81**	**71**	P	**Pn**	**09 31 20.8 +3.5**
EVO				S	**Sn**	**09 32 04.3 +2.1**
	comp=E,8.3nm,0.3s					
EVO	**Evora**	**3.81**	**71**	P	**Pn**	**09 31 20.8 +3.5**
EVO				S	**Sn**	**09 32 04.3 +2.1**
	comp=E,8.3nm,0.3s					
PBEJ	**Beja**	**3.81**	**79**	*e*Pn	**Pn**	**09 31 20.8 +3.4**
PBEJ	**Beja**	**3.81**	**79**	P	**Pn**	**09 31 20.8 +3.4**
PBEJ	**Beja**	**3.81**	**79**	P	**Pn**	**09 31 20.8 +3.4**
PMTG	**Montargil**	**3.84**	**62**	*e*Pn	**Pn**	**09 31 20.7 +2.9**
PMTG				*e*Sn	**Sn**	**09 32 05.5 +2.5**
PMTG				A	A	09 32 14.6
	comp=E,3.4nm,0.6s					
PMTG	**Montargil**	**3.84**	**62**	*e*Pn	**Pn**	**09 31 20.7 +2.9**
PMTG				*e*Sn	**Sn**	**09 32 05.5 +2.5**
PVAQ	**Vaqueiros**	**3.89**	**88**	*e*Pn	**Pn**	**09 31 21.3 +2.9**
PVAQ				*e*Sn	**Sn**	**09 32 05.8 +1.7**
PVAQ				A	A	09 32 13.4
	comp=E,5.1nm,0.2s					
PVAQ	**Vaqueiros**	**3.89**	**88**	P	**Pn**	**09 31 21.3 +2.9**
PVAQ				Sn	**Sn**	**09 32 05.8 +1.7**
	comp=E,5.1nm,0.2s					
PVAQ	**Vaqueiros**	**3.89**	**88**	P	**Pn**	**09 31 21.3 +2.9**
PVAQ				Sn	**Sn**	**09 32 05.8 +1.7**
	comp=E,5.1nm,0.2s					
EGRO	**El Granado**	**4.08**	**86**	P	**Pn**	**09 31 23.4 +2.4**
	comp=E,1.8nm,0.1s,SNR=14					
EGRO				S	**Sn**	**09 32 10.6 +1.9**
	comp=E,7.4nm,0.3s,SNR=5.2					
EGRO	**El Granado**	**4.08**	**86**	P	**Pn**	**09 31 23.4 +2.4**
	comp=E,1.8nm,0.1s,SNR=14					
EGRO				S	**Sn**	**09 32 10.6 +1.9**
	comp=E,7.4nm,0.3s,SNR=5.2					
PCAS	**Casmilo, Conde**	**4.18**	**49**	*e*Pn	**Pn**	**09 31 26.4 +3.9**
PCAS				*e*Sn	**Sn**	**09 32 14.6 +3.2**
PCAS	**Casmilo, Conde**	**4.18**	**49**	*e*Pn	**Pn**	**09 31 26.4 +3.9**
PCAS				*e*Sn	**Sn**	**09 32 14.6 +3.2**
PESTR	**Estremoz**	**4.23**	**68**	*e*Pn	**Pn**	**09 31 26.4 +3.3**
PESTR				*e*Sn	**Sn**	**09 32 14.8 +2.3**
PESTR				A	A	09 32 24.2
	comp=E,3.3nm,0.5s					
PESTR	**Estremoz**	**4.23**	**68**	*e*Pn	**Pn**	**09 31 26.4 +3.3**
PESTR				*e*Sn	**Sn**	**09 32 14.8 +2.3**
PBAR	**Barrancos**	**4.48**	**78**	*e*Pn	**Pn**	**09 31 29.9 +3.4**
PBAR				*e*Sn	**Sn**	**09 32 20.4 +1.7**
PBAR				A	A	09 32 28.4
	comp=E,3.6nm,0.3s					
PBAR	**Barrancos**	**4.48**	**78**	P	**Pn**	**09 31 29.9 +3.4**
PBAR				S	**Sn**	**09 32 20.4 +1.7**
	comp=E,3.6nm,0.3s					
PBAR	**Barrancos**	**4.48**	**78**	P	**Pn**	**09 31 29.9 +3.4**
PBAR				S	**Sn**	**09 32 20.4 +1.7**
	comp=E,3.6nm,0.3s					
PMRV	**Marv??o**	**4.58**	**62**	*e*Pn	**Pn**	**09 31 31.0 +3.0**
PMRV				*e*Sn	**Sn**	**09 32 23.4 +2.2**
PMRV				A	A	09 32 30.0
	comp=E,3.7nm,0.5s					
PMRV	**Marv??o**	**4.58**	**62**	P	**Pn**	**09 31 31.0 +3.0**
PMRV				S	**Sn**	**09 32 23.4 +2.2**
	comp=E,3.7nm,0.5s					
PMRV	**Marv??o**	**4.58**	**62**	P	**Pn**	**09 31 31.0 +3.0**
PMRV				S	**Sn**	**09 32 23.4 +2.2**
	comp=E,3.7nm,0.5s					
EBAD	**Badajoz**	**4.62**	**71**	P	**Pn**	**09 31 31.1 +2.6**
	comp=E,1.7nm,0.1s,SNR=6.3					
EBAD				S	**Sn**	**09 32 22.5 +0.3**
	comp=E,3.4nm,0.2s,SNR=7.9					
EBAD	**Badajoz**	**4.62**	**71**	P	**Pn**	**09 31 31.1 +2.6**
	comp=E,1.7nm,0.1s,SNR=6.3					
EBAD				S	**Sn**	**09 32 22.5 +0.3**
	comp=E,3.4nm,0.2s,SNR=7.9					
EMIN	**Mina Concepcio**	**4.73**	**83**	P	**Pn**	**09 31 32.2 +2.3**
	comp=E,2.0nm,0.2s,SNR=17					
EMIN				S	**Sn**	**09 32 24.1 -0.7**
	comp=E,0.9nm,0.2s,SNR=6.0					
EMIN	**Mina Concepcio**	**4.73**	**83**	P	**Pn**	**09 31 32.2 +2.3**
	comp=E,2.0nm,0.2s,SNR=17					
EMIN				S	**Sn**	**09 32 24.1 -0.7**
	comp=E,0.9nm,0.2s,SNR=6.0					
MTE	**Manteigas**	**4.97**	**51**	*e*Sn	**Sn**	**09 32 32.5 +1.5**
MTE	**Manteigas**	**4.97**	**51**	S	**Sn**	**09 32 32.5 +1.5**
MTE	**Manteigas**	**4.97**	**51**	S	**Sn**	**09 32 32.5 +1.5**
POLO	**Lamas de Olo**	**5.47**	**41**	*e*Pn	**Pn**	**09 31 43.5 +3.3**
POLO				*e*Sn	**Sn**	**09 32 42.3 -0.9**
POLO				A	A	09 32 48.8
	comp=E,1.2nm,0.6s					
POLO	**Lamas de Olo**	**5.47**	**41**	*e*Pn	**Pn**	**09 31 43.5 +3.3**
PGAV	**Gavieira, Arco**	**5.68**	**35**	*e*Sn	**Sn**	**09 32 48.8 +0.4**
PGAV				A	A	09 32 52.1
	comp=E,2.5nm,0.5s					
PGAV	**Gavieira, Arco**	**5.68**	**35**	*e*Sn	**Sn**	**09 32 48.8 +0.4**
ELOB	**Lobios**	**5.70**	**37**	P	**Pn**	**09 31 47.5 +4.1**
	comp=E,0.9nm,0.2s,SNR=7.9					
ELOB				S	**Sn**	**09 32 48.1 -0.8**
	comp=E,0.6nm,0.1s,SNR=7.9					
ELOB	**Lobios**	**5.70**	**37**	P	**Pn**	**09 31 47.5 +4.1**
	comp=E,0.9nm,0.2s,SNR=7.9					
ECAB	**El Cabril**	**5.74**	**81**	P	**Pn**	**09 31 46.1 +2.3**
	comp=E,1.1nm,0.1s,SNR=13					
ECAB				S	**Sn**	**09 32 50.7 +0.9**
	comp=E,1.1nm,0.2s,SNR=5.6					
ECAB	**El Cabril**	**5.74**	**81**	P	**Pn**	**09 31 46.1 +2.3**
	comp=E,1.1nm,0.1s,SNR=13					
ECAB				S	**Sn**	**09 32 50.7 +0.9**
	comp=E,1.1nm,0.2s,SNR=5.6					
MVO	**Moncorvo**	**5.75**	**47**	S	**Sn**	**09 32 49.9 -0.2**
	comp=E,1.2nm,0.2s,SNR=7.9					
MVO	**Moncorvo**	**5.75**	**47**	S	**Sn**	**09 32 49.9 -0.2**
	comp=E,1.2nm,0.2s,SNR=7.9					
EPLA	**Plasencia**	**5.77**	**60**	P	**Pn**	**09 31 46.5 +2.2**
	comp=E,1.1nm,0.2s,SNR=7.9					
EPLA				S	**Sn**	**09 32 51.0 +0.5**
	comp=E,1.8nm,0.2s,SNR=7.9					
EPLA	**Plasencia**	**5.77**	**60**	P	**Pn**	**09 31 46.5 +2.2**
	comp=E,1.1nm,0.2s,SNR=7.9					
EPLA				S	**Sn**	**09 32 51.0 +0.5**
	comp=E,1.8nm,0.2s,SNR=7.9					
EMAZ	**Mazaricos**	**6.23**	**25**	P	Pn	09 31 57.3 +6.7
	comp=E,1.4nm,0.2s,SNR=7.9					
EMAZ				S	**Sn**	**09 32 58.9 -3.0**
	comp=E,1.4nm,0.1s,SNR=4.0					
EADA	**Adamuz**	**6.41**	**80**	P	**Pn**	**09 31 55.7 +2.6**
	comp=E,1.9nm,0.2s,SNR=7.9					
EADA				S	**Sn**	**09 33 05.6 -0.7**
	comp=E,0.6nm,0.3s,SNR=7.9					
EADA	**Adamuz**	**6.41**	**80**	P	**Pn**	**09 31 55.7 +2.6**
	comp=E,1.9nm,0.2s,SNR=7.9					
EADA				S	**Sn**	**09 33 05.6 -0.7**
	comp=E,0.6nm,0.3s,SNR=7.9					
EAGO	**Agolada(Pontev**	**6.44**	**31**	S	**Sn**	**09 33 03.4 -3.6**
	comp=E,1.3nm,0.1s,SNR=7.9					
PAB	**San Pablo**	**6.83**	**69**	P	**Pn**	**09 32 01.3 +2.3**
	comp=E,0.8nm,0.2s,SNR=7.9					
PAB				S	**Sn**	**09 33 16.3 -0.5**
	comp=E,0.5nm,0.3s,SNR=7.9					
PAB	**San Pablo**	**6.83**	**69**	P	**Pn**	**09 32 01.3 +2.3**
	comp=E,0.8nm,0.2s,SNR=7.9					
PAB				S	**Sn**	**09 33 16.3 -0.5**
	comp=E,0.5nm,0.3s,SNR=7.9					

*MDD **13** 09:37:25.9±1.6, 37°.26N×12°.65W, h0km, mb4.3/15, Error ellipse: s-maj=13.7km s-min=12.5km az=58.0, PRXIMO*
*SFS **13** 09:37:25.0, 36°.26N×12°.60W, h0km, ML4.2*
*IGIL **13** 09:37:26.6, 37°.26N×12°.66W, h0km, ML2.7*
*INMG **13** 09:37:27.2±1.3, 37°.09N×13°.07W, h10km, ML2.8, Error ellipse: s-maj=6.2km s-min=5.0km az=89.0*

2012 JUN

*CSEM **13** 09:37:28.5±0.4, 37°.40N×12°.45W, h10km, mb4.3, Error ellipse: s-maj=6.4km s-min=5.7km az=58.0*
ISC 13 09:37:23.3±2.5, 37°.36N±0°.07×12°.6W±0°.1, h10km, n113, σ2.96/200, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.03**	**93**	*e*Pn	**Pn**	**09 38 13.7**	**+2.4**
PFVI				*e*Sn	**Sn**	**09 38 48.7**	**+1.1**
PFVI				A	A	09 39 00.6	
	9.7nm,0.7s						
PFVI	**Vila Bisbo**	**3.03**	**93**	P	**Pn**	**09 38 13.7**	**+2.4**
	5.3nm,0.2s,SNR=6.4						
PFVI				S	**Sn**	**09 38 48.7**	**+1.1**
	9.8nm,0.2s,SNR=5.8						
PFVI	**Vila Bisbo**	**3.03**	**93**	*e*Pn	**Pn**	**09 38 13.7**	**+2.4**
PFVI				S	**Sn**	**09 38 48.7**	**+1.1**
	9.8nm,0.2s,SNR=5.8						
PMST	**Lisbon--Monsan**	**3.03**	**62**	*e*Sn	**Sb**	**09 38 51.7**	**-2.8**
PMST				A	A	09 38 54.8	
	42nm,0.2s						
PMST	**Lisbon--Monsan**	**3.03**	**62**	*e*Sn	**Sb**	**09 38 51.7**	**-2.8**
LIS	**Lisbon**	**3.05**	**63**	*e*Sn	**Sn**	**09 38 51.3**	**+3.2**
LIS	**Lisbon**	**3.05**	**63**	S	**Sn**	**09 38 51.3**	**+3.2**
LIS	**Lisbon**	**3.05**	**63**	*e*Sn	**Sn**	**09 38 51.3**	**+3.2**
PMAFR	**Mafra**	**3.07**	**58**	*e*Pn	**Pb**	**09 38 15.7**	**-2.3**
PMAFR				*e*Sn	**Sb**	**09 38 53.1**	**-2.4**
PMAFR				A	A	09 38 57.2	
	24nm,0.2s						
PMAFR	**Mafra**	**3.07**	**58**	P	**Pn**	**09 38 14.6**	**+2.7**
	18nm,0.2s,SNR=7.9						
PMAFR				S	**Sb**	**09 38 53.0**	**-2.4**
	34nm,0.2s						
PMAFR	**Mafra**	**3.07**	**58**	P	**Pn**	**09 38 14.6**	**+2.7**
	18nm,0.2s,SNR=7.9						
PMAFR	**Mafra**	**3.07**	**58**	*e*Pn	**Pb**	**09 38 15.7**	**-2.3**
PMAFR				S	**Sb**	**09 38 53.0**	**-2.4**
	34nm,0.2s						
PTEO	**Sao Teotonio**	**3.10**	**85**	*e*Pn	**Pb**	**09 38 15.6**	**-2.9**
PTEO				*e*Sn	**Sn**	**09 38 51.3**	**+2.0**
PTEO				A	A	09 38 59.6	
	10nm,0.6s						
PTEO	**Sao Teotonio**	**3.10**	**85**	P	**Pb**	**09 38 15.6**	**-2.9**
PTEO				S	**Sn**	**09 38 51.3**	**+2.0**
	5.2nm,0.6s						
PTEO	**Sao Teotonio**	**3.10**	**85**	P	**Pb**	**09 38 15.6**	**-2.9**
PTEO				S	**Sn**	**09 38 51.3**	**+2.0**
	5.2nm,0.6s						
MORF	**Marmelete**	**3.16**	**90**	*e*P	**Pn**	**09 38 16.0**	**+2.8**
MORF	**Marmelete**	**3.16**	**90**	*e*Pn	**Pn**	**09 38 16.0**	**+2.8**
MORF				*e*Sn	**Sn**	**09 38 53.4**	**+2.5**
MORF				A	A	09 39 01.1	
	11nm,0.2s						
MORF	**Marmelete**	**3.16**	**90**	P	**Pn**	**09 38 16.0**	**+2.8**
MORF				S	**Sn**	**09 38 53.4**	**+2.5**
	11nm,0.2s						
MORF	**Marmelete**	**3.16**	**90**	P	**Pn**	**09 38 16.0**	**+2.8**
MORF				S	**Sn**	**09 38 53.4**	**+2.5**
	11nm,0.2s						
PNCL	**Nicolau / Gran**	**3.32**	**76**	*e*Pn	**Pn**	**09 38 18.4**	**+3.1**
PNCL				*e*Sn	**Sn**	**09 38 57.7**	**+2.9**
PNCL				A	A	09 39 04.4	
	12nm,0.6s						
PNCL	**Nicolau / Gran**	**3.32**	**76**	*e*Pn	**Pn**	**09 38 18.4**	**+3.1**
PNCL				*e*Sn	**Sn**	**09 38 57.7**	**+2.9**
MESJ	**Messejana**	**3.52**	**81**	*e*P	**Pn**	**09 38 21.2**	**+3.1**
MESJ				*e*S	**Sn**	**09 39 01.8**	**+2.1**
MESJ				AML	AML	09 39 05.6	
	comp=N,14nm,0.4s						
MESJ	**Messejana**	**3.52**	**81**	*e*Pn	**Pn**	**09 38 21.2**	**+3.1**
MESJ				*e*Sn	**Sn**	**09 39 02.3**	**+2.6**
MESJ				A	A	09 39 10.3	
	comp=N,8.0nm,0.6s						
MESJ	**Messejana**	**3.52**	**81**	P	**Pn**	**09 38 21.2**	**+3.1**
MESJ				S	**Sn**	**09 39 01.8**	**+2.1**
	comp=N,14nm,0.4s						
MESJ	**Messejana**	**3.52**	**81**	P	**Pn**	**09 38 21.2**	**+3.1**
MESJ				S	**Sn**	**09 39 01.8**	**+2.1**
	comp=N,14nm,0.4s						
MESJ				*e*Sn	**Sn**	**09 39 02.3**	**+2.6**
ALMR	**Almeirim**	**3.64**	**59**	*e*P	**Pn**	**09 38 23.2**	**+3.4**
ALMR				*e*S	**Sn**	**09 39 05.4**	**+2.6**
ALMR				AML	AML	09 39 09.6	
	comp=N,32nm,0.1s						
ALMR	**Almeirim**	**3.64**	**59**	*e*Pn	**Pb**	**09 38 24.3**	**-3.5**
ALMR				*e*Sn	**Sn**	**09 39 06.7**	**+3.9**
ALMR				A	A	09 39 12.7	
	comp=N,34nm,0.5s						
ALMR	**Almeirim**	**3.64**	**59**	P	**Pn**	**09 38 23.2**	**+3.4**
ALMR				S	**Sn**	**09 39 05.4**	**+2.6**
	comp=N,16nm,0.1s						
ALMR	**Almeirim**	**3.64**	**59**	P	**Pn**	**09 38 23.2**	**+3.4**
ALMR	**Almeirim**	**3.64**	**59**	*e*Pn	**Pb**	**09 38 24.3**	**-3.5**
ALMR				S	**Sn**	**09 39 05.4**	**+2.6**
	comp=N,16nm,0.1s						
ALMR				*e*Sn	**Sn**	**09 39 06.7**	**+3.9**
PCVE	**Castro Verde**	**3.65**	**84**	*e*Pn	**Pn**	**09 38 23.2**	**+3.4**
PCVE				*e*Sn	**Sn**	**09 39 04.6**	**+1.7**
PCVE				A	A	09 39 10.8	
	comp=N,6.8nm,0.3s						
PCVE	**Castro Verde**	**3.65**	**84**	P	**Pn**	**09 38 23.2**	**+3.4**
PCVE				S	**Sn**	**09 39 04.6**	**+1.7**
	comp=N,6.8nm,0.3s						
PCVE	**Castro Verde**	**3.65**	**84**	P	**Pn**	**09 38 23.2**	**+3.4**
PCVE				S	**Sn**	**09 39 04.6**	**+1.7**
	comp=N,6.8nm,0.3s						
PBDV	**Barranco-do-Ve**	**3.73**	**90**	*e*Pn	**Pn**	**09 38 24.8**	**+3.8**
PBDV				*e*Sn	**Sn**	**09 39 06.8**	**+1.7**
PBDV				A	A	09 39 13.6	
	comp=N,6.5nm,0.2s						
PBDV	**Barranco-do-Ve**	**3.73**	**90**	P	**Pn**	**09 38 24.8**	**+3.8**
PBDV				S	**Sn**	**09 39 06.8**	**+1.7**
	comp=N,6.5nm,0.2s						
PBDV	**Barranco-do-Ve**	**3.73**	**90**	P	**Pn**	**09 38 24.8**	**+3.8**
PBDV				S	**Sn**	**09 39 06.8**	**+1.7**
	comp=N,6.5nm,0.2s						
EVO	**Evora**	**3.82**	**71**	*e*Pn	**Pb**	**09 38 26.7**	**-4.1**
EVO				*e*Sn	**Sn**	**09 39 10.1**	**+3.0**
EVO				A	A	09 39 15.0	
	comp=N,13nm,0.7s						
EVO	**Evora**	**3.82**	**71**	P	**Pn**	**09 38 26.0**	**+3.9**
EVO				S	**Sn**	**09 39 09.7**	**+2.6**
EVO	**Evora**	**3.82**	**71**	P	**Pn**	**09 38 26.0**	**+3.9**
EVO	**Evora**	**3.82**	**71**	*e*Pn	**Pb**	**09 38 26.7**	**-4.1**
EVO				S	**Sn**	**09 39 09.7**	**+2.6**
EVO				*e*Sn	**Sn**	**09 39 10.1**	**+3.0**
PBEJ	**Beja**	**3.82**	**79**	*e*Pn	**Pn**	**09 38 26.3**	**+4.1**
PBEJ				*e*Sn	**Sn**	**09 39 10.8**	**+3.6**
PBEJ				A	A	09 39 15.0	
	comp=N,13nm,0.2s						
PBEJ	**Beja**	**3.82**	**79**	P	**Pn**	**09 38 26.3**	**+4.1**
PBEJ				S	**Sn**	**09 39 10.8**	**+3.6**
	comp=N,6.6nm,0.2s						
PBEJ	**Beja**	**3.82**	**79**	P	**Pn**	**09 38 26.3**	**+4.1**
PBEJ				S	**Sn**	**09 39 10.8**	**+3.6**
	comp=N,6.6nm,0.2s						
PMTG	**Montargil**	**3.85**	**62**	*e*Pn	**Pn**	**09 38 26.4**	**+3.8**
PMTG				*e*Sn	**Sn**	**09 39 11.1**	**+3.2**
PMTG				A	A	09 39 16.8	
	comp=N,6.4nm,0.3s						
PMTG	**Montargil**	**3.85**	**62**	*e*Pn	**Pn**	**09 38 26.4**	**+3.8**
PMTG				*e*Sn	**Sn**	**09 39 11.1**	**+3.2**
PVAQ	**Vaqueiros**	**3.90**	**88**	*e*Pn	**Pn**	**09 38 26.7**	**+3.4**
PVAQ				*e*Sn	**Sn**	**09 39 11.3**	**+2.2**
PVAQ				A	A	09 39 17.6	
	comp=N,10nm,0.9s						
PVAQ	**Vaqueiros**	**3.90**	**88**	P	**Pn**	**09 38 26.7**	**+3.4**
PVAQ				S	**Sn**	**09 39 11.3**	**+2.2**
	comp=N,10nm,0.9s						
PVAQ	**Vaqueiros**	**3.90**	**88**	P	**Pn**	**09 38 26.7**	**+3.4**
PVAQ				S	**Sn**	**09 39 11.3**	**+2.2**
	comp=N,10nm,0.9s						
PTOM	**Tomar**	**3.99**	**54**	*e*Pn	**Pb**	**09 38 29.3**	**-4.4**
PTOM				*e*Sn	**Sn**	**09 39 15.9**	**+4.5**
PTOM				A	A	09 39 21.7	
	comp=N,16nm,0.1s						
PTOM	**Tomar**	**3.99**	**54**	P	**Pb**	**09 38 29.3**	**-4.4**
PTOM				S	**Sn**	**09 39 15.9**	**+4.5**
	comp=N,8.2nm,0.1s						
PTOM	**Tomar**	**3.99**	**54**	P	**Pb**	**09 38 29.3**	**-4.4**
PTOM				S	**Sn**	**09 39 15.9**	**+4.5**
	comp=N,8.2nm,0.1s						
EGRO	**El Granado**	**4.08**	**86**	P	**Pn**	**09 38 29.2**	**+3.4**
	comp=N,3.2nm,0.1s,SNR=6.1						

EGRO				S	**Sn**	**09 39 15.3 +1.6**
	comp=N,9.3nm,0.1s,SNR=4.7					
EGRO	**El Granado**	**4.08**	**86**	P	**Pn**	**09 38 29.2 +3.4**
	comp=N,3.2nm,0.1s,SNR=6.1					
EGRO				S	**Sn**	**09 39 15.3 +1.6**
	comp=N,9.3nm,0.1s,SNR=4.7					
PCAS	**Casmilo, Conde**	**4.19**	**49**	*e*Pn	**Pn**	**09 38 31.6 +4.3**
PCAS				*e*Sn	**Sn**	**09 39 19.8 +3.5**
PCAS				A	A	09 39 31.1
	comp=N,7.6nm,0.5s					
PCAS	**Casmilo, Conde**	**4.19**	**49**	*e*Pn	**Pn**	**09 38 31.6 +4.3**
PCAS				*e*Sn	**Sn**	**09 39 19.8 +3.5**
PESTR	**Estremoz**	**4.23**	**68**	*e*Pn	**Pn**	**09 38 31.6 +3.7**
PESTR				*e*Sn	**Sn**	**09 39 20.3 +2.9**
PESTR				A	A	09 39 26.7
	comp=N,6.7nm,0.8s					
PESTR	**Estremoz**	**4.23**	**68**	*e*Pn	**Pn**	**09 38 31.6 +3.7**
PESTR				*e*Sn	**Sn**	**09 39 20.3 +2.9**
PBAR	**Barrancos**	**4.49**	**78**	*e*Pn	**Pn**	**09 38 35.3 +3.9**
PBAR				*e*Sn	**Sn**	**09 39 26.1 +2.4**
PBAR				A	A	09 39 32.2
	comp=N,13nm,0.5s					
PBAR	**Barrancos**	**4.49**	**78**	P	**Pn**	**09 38 35.3 +3.9**
PBAR				S	**Sn**	**09 39 26.1 +2.4**
	comp=N,13nm,0.5s					
PBAR	**Barrancos**	**4.49**	**78**	P	**Pn**	**09 38 35.3 +3.9**
PBAR				S	**Sn**	**09 39 26.1 +2.4**
	comp=N,13nm,0.5s					
PMRV	**Marv??o**	**4.59**	**62**	*e*Pn	**Pn**	**09 38 36.8 +4.0**
PMRV				*e*Sn	**Sn**	**09 39 28.9 +2.7**
PMRV				A	A	09 39 34.0
	comp=N,8.6nm,0.3s					
PMRV	**Marv??o**	**4.59**	**62**	P	**Pn**	**09 38 36.8 +4.0**
PMRV				S	**Sn**	**09 39 28.9 +2.7**
	comp=N,8.6nm,0.3s					
PMRV	**Marv??o**	**4.59**	**62**	P	**Pn**	**09 38 36.8 +4.0**
PMRV				S	**Sn**	**09 39 28.9 +2.7**
	comp=N,8.6nm,0.3s					
EBAD	**Badajoz**	**4.63**	**71**	P	**Pn**	**09 38 37.2 +3.9**
	comp=N,3.9nm,0.1s,SNR=10					
EBAD				S	**Sn**	**09 39 28.2 +1.0**
	comp=N,8.7nm,0.2s,SNR=4.7					
EBAD	**Badajoz**	**4.63**	**71**	P	**Pn**	**09 38 37.2 +3.9**
	comp=N,3.9nm,0.1s,SNR=10					
EBAD				S	**Sn**	**09 39 28.2 +1.0**
	comp=N,8.7nm,0.2s,SNR=4.7					
PCBR	**Castelo Branco**	**4.72**	**57**	*e*Pn	**Pn**	**09 38 39.2 +4.6**
PCBR				*e*Sn	**Sn**	**09 39 31.7 +2.3**
PCBR				A	A	09 39 36.1
	comp=N,7.9nm,0.2s					
PCBR	**Castelo Branco**	**4.72**	**57**	P	**Pn**	**09 38 39.2 +4.6**
PCBR				S	**Sn**	**09 39 31.7 +2.3**
	comp=N,4.0nm,0.2s					
PCBR	**Castelo Branco**	**4.72**	**57**	P	**Pn**	**09 38 39.2 +4.6**
PCBR				S	**Sn**	**09 39 31.7 +2.3**
	comp=N,4.0nm,0.2s					
EMIN	**Mina Concepcio**	**4.74**	**83**	P	**Pn**	**09 38 37.9 +3.1**
	comp=N,1.9nm,0.1s,SNR=16					
EMIN				S	**Sn**	**09 39 29.2 -0.5**
	comp=N,4.3nm,0.2s					
EMIN	**Mina Concepcio**	**4.74**	**83**	P	**Pn**	**09 38 37.9 +3.1**
	comp=N,1.9nm,0.1s,SNR=16					
EMIN				S	**Sn**	**09 39 29.2 -0.5**
	comp=N,4.3nm,0.2s					
PVIS	**Viseu**	**4.97**	**46**	*e*Sn	**Sn**	**09 39 38.2 +2.6**
PVIS	**Viseu**	**4.97**	**46**	S	**Sn**	**09 39 38.2 +2.6**
PVIS	**Viseu**	**4.97**	**46**	S	**Sn**	**09 39 38.2 +2.6**
MTE	**Manteigas**	**4.98**	**51**	*e*Sn	**Sn**	**09 39 39.3 +3.4**
MTE				A	A	09 39 44.5
	comp=N,5.0nm,0.6s					
MTE	**Manteigas**	**4.98**	**51**	S	**Sn**	**09 39 39.3 +3.4**
	comp=N,2.5nm,0.6s					
MTE	**Manteigas**	**4.98**	**51**	S	**Sn**	**09 39 39.3 +3.4**
	comp=N,2.5nm,0.6s					
PVRL	**Vila Real**	**5.45**	**43**	*e*Sn	**Sn**	**09 39 48.8 +1.5**
PVRL	**Vila Real**	**5.45**	**43**	S	**Sn**	**09 39 48.8 +1.5**
PVRL	**Vila Real**	**5.45**	**43**	S	**Sn**	**09 39 48.8 +1.5**
POLO	**Lamas de Olo**	**5.47**	**41**	*e*Pn	**Pn**	**09 38 48.8 +3.8**
POLO				*e*Sn	**Sn**	**09 39 50.3 +2.2**
POLO				A	A	09 39 52.7
	comp=N,1.5nm,0.5s					
POLO	**Lamas de Olo**	**5.47**	**41**	*e*Pn	**Pn**	**09 38 48.8 +3.8**
POLO				*e*Sn	**Sn**	**09 39 50.3 +2.2**
PCAB	**Cabril**	**5.60**	**38**	*e*Sn	**Sn**	**09 39 53.5 +2.3**
PCAB				A	A	09 39 54.5
	comp=N,4.6nm,0.1s					
PCAB	**Cabril**	**5.60**	**38**	Sn	**Sn**	**09 39 53.5 +2.3**
	comp=N,2.3nm,0.1s					
PCAB	**Cabril**	**5.60**	**38**	Sn	**Sn**	**09 39 53.5 +2.3**
	comp=N,2.3nm,0.1s					
PGAV	**Gavieira, Arco**	**5.69**	**35**	*e*Pn	**Pn**	**09 38 51.3 +3.3**
PGAV				*e*Sn	**Sn**	**09 39 54

GUD				S	Sn	09 40 34.7	+0.2		
	comp=N,0.9nm,0.3s,SNR=7.9								
GUD	**Guadarrama**	**7.35**	**61**	P	Pn	09 39 14.6	+3.7		
	comp=N,1.5nm,0.2s,SNR=7.9								
GUD				S	Sn	09 40 34.7	+0.2		
	comp=N,0.9nm,0.3s,SNR=7.9								
EQES	**Quesada**	**7.59**	**84**	S	Sn	09 40 42.2	+2.0		
	comp=N,0.8nm,0.2s,SNR=7.9								
EQES	**Quesada**	**7.59**	**84**	S	Sn	09 40 42.2	+2.0		
	comp=N,0.8nm,0.2s,SNR=7.9								
ETOB	**Tobarra**	**8.83**	**78**	P	Pn	09 39 33.0	+2.0		
	comp=N,1.1nm,0.2s,SNR=7.9								
ETOB	**Tobarra**	**8.83**	**78**	P	Pn	09 39 33.0	+2.0		
	comp=N,1.1nm,0.2s,SNR=7.9								
ETOR	**Torete**	**8.90**	**64**	P	Pn	09 39 35.6	+3.5		
	comp=N,1.5nm,0.1s,SNR=14								
ETOR				S	Sn	09 41 12.4	-0.1		
	comp=N,0.7nm,0.2s,SNR=7.9								
ETOR	**Torete**	**8.90**	**64**	P	Pn	09 39 35.6	+3.5		
	comp=N,1.5nm,0.1s,SNR=14								
ETOR				S	Sn	09 41 12.4	-0.1		
	comp=N,0.7nm,0.2s,SNR=7.9								

*NNC **13** 09:38:11.1±2.8, 53.°47N×87.°74E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=21.5km s-min=19.6km az=97.0*

IDC 13 09:38:11.0±2.9, 53.°47N×87.°81E, h0km, mb1 3.1/2, mb1mx2.9/69, mbtmp3.1/2, ML2.7/2, 4C-5D, Error ellipse: s-maj=23.6km s-min=14.7km az=65.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.84**	**286**	*i*		09 50 03.8	
	baz=106,slow=334,SNR=9.7						
ZAA0	**Zalesovo Array**	**1.84**	**286**	⇑Pn	Pn	09 38 43.1	-0.7
	3.8nm,0.3s						
ZAA0				⇓Lg	Lg	09 39 09.0	
	17nm,0.7s						
ZALV	**Zalesovo Beam**	**1.84**	**286**	Pg	Pn	09 38 43.1	-0.6
	3.5nm,0.3s,baz=106,slow=14,SNR=30						
ZALV				Lg	Lg	09 39 09.7	
	4.4nm,0.3s,baz=106,slow=24,SNR=32						
KURK	**Kurchatov**	**6.30**	**248**	⇓Pn	Pn	09 39 46.4	+1.4
	3.1nm,1.2s						
KURK				⇑Sn	Sn	09 40 57.6	+0.1
	1.8nm,0.7s						
KURK				⇑Lg	Lg	09 41 32.9	
	5.7nm,0.9s						
KURBB	**Kurchatov Arra**	**6.39**	**247**	Pn	Pn	09 39 46.8	+0.5
	0.2nm,0.3s,baz=62,slow=14,SNR=9.8						
KURBB				Sn	Sn	09 40 59.2	-0.7
	0.0nm,0.3s,baz=146,slow=26,SNR=3.9						
KURBB				Lg	Lg	09 41 34.3	
	0.1nm,0.3s,baz=55,slow=29,SNR=4.2						
KURBB	**Kurchatov Arra**	**6.39**	**247**	⇑Pn	Pn	09 39 47.3	+1.0
	2.1nm,0.5s,baz=64,slow=14						
KURBB				⇓Sn	Sn	09 40 58.7	-1.2
	5.6nm,0.7s						
KURBB				⇓Lg	Lg	09 41 34.8	
	7.3nm,0.6s,baz=56,slow=29						
MK31	**Makanchi Array**	**7.56**	**210**	⇓Lg	Lg	09 42 09.9	
	2.5nm,0.9s,baz=30,slow=29						
MKAR	**Makanchi Array**	**7.56**	**210**	Pn	Pn	09 40 03.6	+1.2
	0.1nm,0.3s,baz=29,slow=12,SNR=4.4						
MKAR				Sn	Sn	09 41 29.1	+0.3
	0.1nm,0.3s,baz=28,slow=28,SNR=4.7						
MKAR				Lg	Lg	09 42 12.6	
	0.1nm,0.3s,baz=29,slow=31,SNR=6.2						

*NIED **13** 09:49:00, 35.°70N×140.°80E, h50km, Mw4.3 Best double couple: M0≥7.79000×10^15 NP1:φs=203.00000°, δ22.00000°, λ110.00000°. NP2:φs=2.00000°, δ69.00000°, λ82.00000°.*
*ISCJB **13** 09:49:38.7±0.5, 35.°66N±0.°04×140.°74E±0.°06, h55km±3km, mb3.9/20, MS3.3/7, Error ellipse: s-maj=8.6km s-min=6.2km az=2.7*
*JMA **13** 09:49:39.4±0.1, 35.°68N×140.°72E, h47km±1km, M3.8 Broadband fault plane solution: P waves. NP1: φs12.00000°, δ79.00000°, λ89.00000°. NP2:φs197.00000°, δ11.00000°, λ95.00000°. Principal axes: T Plg56.0000°, Azm281.0000°; N Plg1.0000°, Azm12.0000°; P Plg34.0000°, Azm103.0000°;*
JMA Felt II J1.
*IDC **13** 09:49:41.3±1.7, 35.°60N×140.°64E, h64km±16km, mb3.7/19, mb1 3.8/24, mb1mx3.7/71, mbtmp4.0/24, MS3.2/13, Ms1 3.3/13, ms1mx3.0/64 Error ellipse: s-maj=17.8km s-min=10.1km az=75.0*

ISC 13 09:49:39.1±0.8, 35.°64N±0.°05×140.°85E±0.°06, h48km±6km, n56, σ1°55/51, mb4.0/20, MS3.4/7, 1C-5D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.07**	**6**	⇑P	Pn	09 49 46.8	+0.2
CHOJ				*e*S	Sn	09 49 52.3	+0.5
JCN	**Nagara**	**0.57**	**248**	⇓P	Pn	09 49 51.2	+0.1
JCN				*e*S	Sn	09 49 59.7	0.0
BSO4	**Boso 4**	**0.77**	**213**	⇓P	Pn	09 49 54.0	+0.4
JYT	**Yasato**	**0.79**	**318**	⇓P	Pn	09 49 52.9	-1.1
JYT				*e*S	Sn	09 50 02.5	-2.3
BSO3	**Boso 3**	**0.88**	**199**	P	Pn	09 49 55.6	+0.7
BSO3				*e*X		09 50 06.9	
BSO1	**Boso 1**	**0.99**	**174**	P	Pn	09 49 57.5	+1.4
JAG	**Ashikaga**	**1.38**	**305**	⇓P	Pn	09 50 00.6	-1.3
JIM2	**Oshima 3**	**1.48**	**232**	P	Pn	09 50 02.1	-1.3
JIM2				S	Sn	09 50 19.1	-2.5
JOD2	**Odawara 2**	**1.49**	**256**	⇓P	Pn	09 50 02.6	-0.8
MJAR	**Matsushiro Arr**	**2.32**	**294**	P	Pn	09 50 14.9	0.0
	43nm,0.3s,baz=99,slow=15,SNR=241						
MJAR				LR	LR	09 51 15.7	
	comp=Z,461nm,20.5s,baz=110,slow=44						
MAT	**Matsushiro**	**2.32**	**294**	P	Pn	09 50 15.2	+0.3
MAT				S	Sn	09 50 45.7	+3.4
JHJ	**Hachijo jima 2**	**2.66**	**200**	P	Pn	09 50 20.2	+0.6
	72nm,0.3s,baz=60,slow=16,SNR=14						
JHJ				S	Sn	09 50 51.0	+0.4
	150nm,0.3s,baz=76,slow=23,SNR=9.0						
ASAJ	**Asahikawa**	**8.57**	**8**	P	Pn	09 51 38.1	-2.4
	1.5nm,0.3s,baz=210,slow=9.8,SNR=10						
ASAJ				S	Sn	09 53 12.5	-3.4
	1.1nm,0.3s,baz=131,slow=20,SNR=3.0						
ASAJ				LR	LR	09 56 09.8	
	comp=Z,57nm,20.5s,baz=172,slow=45						
JCJ	**Chichijima**	**8.59**	**172**	P	Pn	09 51 38.1	-2.8
	7.9nm,0.3s,baz=354,slow=17,SNR=2.9						
JCJ				S	Sn	09 53 10.8	-5.7
	11nm,0.3s,baz=287,slow=19,SNR=3.9						
JNU	**Nakatsue**	**8.62**	**256**	P	Pn	09 51 41.8	+0.5
	0.3nm,0.3s,baz=49,slow=11,SNR=2.5						
JNU				LR	LR	09 55 29.7	
	comp=Z,329nm,18.1s,baz=112,slow=41						
KSRS	**Korea Array**	**10.56**	**284**	P	Pn	09 52 09.4	+1.7
	0.2nm,0.3s,baz=96,slow=15,SNR=9.6						
KSRS				LR	LR	09 56 13.8	
	comp=Z,151nm,21.1s,baz=122,slow=38						
USRK	**Ussuriysk Ar.**	**10.92**	**324**	P	Pn	09 52 14.2	+1.6
	0.3nm,0.3s,baz=138,slow=13,SNR=5.3						
USRK				LR	LR	09 56 15.6	
	comp=Z,90nm,18.0s,baz=114,slow=36						
JOW	**Kunigami**	**13.87**	**234**	LR	LR	09 57 46.9	
	comp=Z,77nm,21.1s,baz=356,slow=35						
KLR	**Kul'dur**	**15.14**	**337**	LR	LR	09 58 40.3	
	comp=Z,6.1nm,21.6s,baz=150,slow=36						
PETK	**Petropavlovsk-**	**21.12**	**29**	LR	LR	10 02 03.8	
	comp=Z,38nm,21.9s,baz=232,slow=35						
MA2	**Magadan**	**24.81**	**12**	P	P	09 54 58.4	+1.9
	1.8nm,0.3s,baz=206,slow=9.1,SNR=5.4						
H11N2	**WAKE ISLAND Hy**	**27.86**	**118**	T	T	10 24 24.2	
	baz=312,slow=75,SNR=18						
H11N1	**WAKE ISLAND Hy**	**27.87**	**118**	T	T	10 24 39.0	
	baz=312,slow=75,SNR=17						
H11N3	**WAKE ISLAND Hy**	**27.88**	**118**	T	T	10 24 33.8	
	baz=312,slow=75,SNR=18						
SONM	**Songino Array**	**28.21**	**306**	P	P	09 55 26.6	-0.8
	1.0nm,0.5s,baz=106,slow=9.8,SNR=6.2						
SONM				LR	LR	10 06 57.5	
	comp=Z,47nm,18.4s,baz=113,slow=37						
H11S1	**WAKE ISLAND Hy**	**28.52**	**120**	T	T	10 25 15.8	
	baz=312,slow=75,SNR=72						
H11S3	**WAKE ISLAND Hy**	**28.52**	**120**	T	T	10 25 18.6	
	baz=312,slow=75,SNR=58						
H11S2	**WAKE ISLAND Hy**	**28.54**	**120**	T	T	10 25 19.0	
	baz=312,slow=75,SNR=49						

CMAR	**Chiang Mai Arr**	**40.72**	**256**	LR	LR	10 13 35.8			
	comp=Z,49nm,18.5s,baz=202,slow=35								
ZALV	**Zalesovo Beam**	**42.53**	**314**	P	P	09 57 29.5	-0.3		
	2.9nm,0.7s,baz=89,slow=6.3,SNR=12								
NRIK	**Noril'sk**	**44.35**	**336**	LR	LR	10 16 57.4			
	comp=Z,37nm,20.1s,baz=141,slow=37								
MKAR	**Makanchi Array**	**44.49**	**303**	P	P	09 57 45.9	+0.2		
	2.4nm,0.6s,baz=87,slow=9.4,SNR=18								
MKAR				LR	LR	10 16 51.8			
	comp=Z,42nm,18.5s,baz=47,slow=37								
KURBB	**Kurchatov Arra**	**46.51**	**309**	P	P	09 58 00.5	-1.0		
	2.4nm,0.4s,baz=85,slow=8.3,SNR=19								
RAMN	**Ramite**	**46.66**	**275**	*e*P	P	09 58 02.8	-0.6		
JIRN	**Jiri**	**46.70**	**276**	*e*P	P	09 58 03.9	+0.1		
	14nm,0.4s								
GUN	**Gumba**	**46.85**	**277**	*e*P	P	09 58 05.6	+0.6		
DANN	**Dangsing**	**48.39**	**278**	*e*P	P	09 58 17.0	+0.2		
	18nm,0.3s								
PYUN	**Piuthan**	**49.11**	**278**	*e*P	P	09 58 22.2	-0.1		
	27nm,0.7s								
AAK	**Ala-Archa**	**50.76**	**299**	LR	LR	10 20 40.0			
	comp=Z,43nm,21.1s,baz=92,slow=37								
ILAR	**Eielson Array**	**50.92**	**32**	P	P	09 58 36.5	+1.3		
	0.5nm,0.6s,baz=267,slow=6.8,SNR=7.9								
BVAR	**Borovoye Array**	**51.18**	**313**	P	P	09 58 37.6	+0.2		
	1.5nm,0.5s,baz=81,slow=8.9,SNR=4.8								
WRA	**Warramunga Arr**	**55.62**	**187**	P	P	09 59 10.0	-0.2		
	1.1nm,0.4s,baz=1.0,slow=7.7,SNR=44								
AKTO	**Aktyubinsk**	**59.27**	**312**	P	P	09 59 35.2	-0.5		
	0.7nm,0.3s,baz=59,slow=7.9,SNR=4.5								
ASAR	**Alice Springs**	**59.35**	**187**	P	P	09 59 36.8	+0.4		
	0.5nm,0.6s,baz=355,slow=5.7,SNR=16								
ARCES	**ARCESS Array B**	**65.14**	**339**	P	P	10 00 13.5	-1.1		
	1.7nm,0.8s,baz=49,slow=8.2,SNR=3.8								
YKA	**Yellowknife Ar**	**65.24**	**30**	P	P	10 00 15.4	0.0		
	0.3nm,0.8s,baz=310,slow=7.3,SNR=2.8								
FINES	**FINESS Array B**	**69.83**	**332**	P	P	10 00 44.0	-0.3		
	0.8nm,0.4s,baz=57,slow=7.0,SNR=7.2								
KBZ	**Khabaz**	**71.47**	**311**	P	P	10 00 54.0	-0.6		
	3.3nm,0.9s,baz=20,slow=3.8,SNR=7.7								
AKASG	**Malin Array Be**	**75.12**	**322**	P	P	10 01 15.7	-0.3		
	0.7nm,0.4s,baz=51,slow=6.3,SNR=8.9								
HFS	**Hagfors**	**75.17**	**336**	P	P	10 01 16.1	0.0		
	1.2nm,0.7s,baz=39,slow=7.4,SNR=6.2								
NB2	**NORSAR Subarra**	**75.30**	**337**	P	P	10 01 17.5	+0.6		
	comp=Z,0.9nm,0.4s,baz=41,slow=5.9								
NVAR	**Mina Array Bea**	**76.19**	**53**	P	P	10 01 25.0	+2.3		
	comp=Z,0.2nm,0.5s,baz=280,slow=5.1,SNR=3.6								
PDAR	**Pinedale Array**	**78.97**	**45**	P	P	10 01 39.0	+0.9		
	comp=Z,0.3nm,0.6s,baz=266,slow=2.4,SNR=4.1								
BRTR	**Keskin Array B**	**79.43**	**311**	P	P	10 01 41.1	+0.5		
	comp=Z,1.2nm,0.9s,baz=91,slow=5.3,SNR=5.6								
MMAI	**Mount Meron Ar**	**82.40**	**305**	LR	LR	10 41 34.6			
	comp=Z,34nm,19.5s,baz=10.0,slow=38								
LPAZ	**La Paz**	**147.78**	**61**	PKPbc	PKPbc	10 09 20.7	+0.8		
	comp=Z,0.8nm,0.6s,baz=6.4,slow=2.5,SNR=4.0								

*ISK **13** 09:53:08.2, 37.°23N×28.°24E, h17km±3km, ML1.8/2*
*ISCJB **13** 09:53:09.5±0.7, 37.°26N±0.°04×28.°22E±0.°04, h0km, Error ellipse: s-maj=6.5km s-min=3.8km az=41.8*
*CSEM **13** 09:53:09.1±0.3, 37.°26N×28.°24E, h1km, ML1.8, Error ellipse: s-maj=6.7km s-min=3.9km az=38.0, Suspected Mining explosion.*
*DDA **13** 09:53:10.3, 37.°27N×28.°18E, h7km, Ml2.5, Suspected Mining explosion.*

ISC 13 09:53:06.9±1.1, 37.°34N±0.°05×28.°27E±0.°04, h0km, n17, σ0°80/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.21**	**176**	PG	Pg	09 53 11.9	+1.0
YER				SG	Sg	09 53 14.6	+1.0
YER	**Yerkesik**	**0.21**	**176**	*i* Pg	Pg	09 53 11.9	+1.0
YER				*i* Sg	Sg	09 53 14.6	+1.0
MLSB	**Milas**	**0.39**	**263**	PG	Pb	09 53 16.3	-0.5
MLSB				SG	Sb	09 53 23.2	-0.2
MLSB	**Milas**	**0.39**	**263**	*e*Pg	Pb	09 53 16.3	-0.5
MLSB				*e*Sg	Sb	09 53 23.2	-0.2
AYDN	**Tasoluk**	**0.44**	**316**	*i* P	Pn	09 53 19.4	-1.3
AYDN				*i* S	Sb	09 53 26.4	+1.6
TURN	**Turunc**	**0.54**	**150**	PG	Pb	09 53 18.3	-1.0
TURN	**Turunc**	**0.54**	**150**	*i* P	Pg	09 53 18.0	+0.7
TURN				*i* S	Sb	09 53 27.6	0.0
TURN	**Turunc**	**0.54**	**150**	P	Pg	09 53 18.0	+0.7
TURN	**Turunc**	**0.54**	**150**	*e*Pg	Pb	09 53 18.3	-1.0
TURN				S	Sb	09 53 27.6	0.0
AYDB	**Zeytinkoy-Aydi**	**0.67**	**334**	PG	Pn	09 53 23.5	-0.4
AYDB	**Zeytinkoy-Aydi**	**0.67**	**334**	*e*Pg	Pn	09 53 23.5	-0.4
BDRM	**Kayabasi**	**0.71**	**247**	*i* P	Pg	09 53 21.4	+0.8
BDRM				*i* S	Sb	09 53 31.9	-0.7
BDRM	**Kayabasi**	**0.71**	**247**	P	Pg	09 53 21.4	+0.8
BDRM				S	Sb	09 53 31.9	-0.7
BODT	**Bodrum**	**0.81**	**250**	PG	Pg	09 53 22.8	+0.3
BODT				SG	Sg	09 53 33.8	+0.7
BODT	**Bodrum**	**0.81**	**250**	*e*Pg	Pg	09 53 22.8	+0.3
BODT				*e*Sg	Sg	09 53 33.8	+0.7
DAT	**Datca**	**0.82**	**222**	PG	Pg	09 53 23.5	+0.8
DAT	**Datca**	**0.82**	**222**	*e*Pg	Pg	09 53 23.5	+0.8

*ISCJB **13** 09:57:42.8±0.6, 37.°25N±0.°04×28.°19E±0.°04, h0km, Error ellipse: s-maj=5.9km s-min=3.1km az=37.2*
*DDA **13** 09:57:42.2, 37.°24N×28.°24E, h7km, Ml2.6, Suspected Mining explosion.*
*ISK **13** 09:57:42.5, 37.°21N×28.°15E, h7km±9km, ML1.9/3*
*CSEM **13** 09:57:43.0±0.2, 37.°23N×28.°18E, h1km, ML1.9, Error ellipse: s-maj=4.9km s-min=2.8km az=37.0, Suspected Mining explosion.*

ISC 13 09:57:41.7±1.0, 37.°29N±0.°04×28.°25E±0.°03, h0km, n23, σ0°67/41, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.16**	**170**	PG	Pg	09 57 45.4	+0.7
YER				SG	Sg	09 57 48.2	+1.4
YER	**Yerkesik**	**0.16**	**170**	*i* Pg	Pg	09 57 45.4	+0.7
YER				*e*Sg	Sg	09 57 48.2	+1.4
MLSB	**Milas**	**0.38**	**271**	PG	Pg	09 57 49.5	+0.6
MLSB				SG	Sg	09 57 54.4	+0.6
MLSB	**Milas**	**0.38**	**271**	*e*Pg	Pg	09 57 49.5	+0.6
MLSB				*e*Sg	Sg	09 57 54.4	+0.6
AYDN	**Tasoluk**	**0.47**	**322**	*i* P	Pb	09 57 52.6	-0.3
AYDN				*i* S	Sb	09 57 59.9	-0.5
AYDN	**Tasoluk**	**0.47**	**322**	P	Pb	09 57 52.6	-0.3
AYDN				S	Sb	09 57 59.9	-0.5
TURN	**Turunc**	**0.51**	**146**	PG	Pg	09 57 51.4	+0.1
TURN				SG	Sg	09 57 58.2	+0.3
TURN	**Turunc**	**0.51**	**146**	*i* P	Pg	09 57 51.5	+0.1
TURN				*i* S	Sb	09 58 00.6	-0.8
TURN	**Turunc**	**0.51**	**146**	P	Pg	09 57 51.5	+0.1
TURN				*e*Sg	Sg	09 57 58.2	+0.3
TURN				S	Sb	09 58 00.6	-0.8
DALY	**Dalyan (Mu¨la**	**0.57**	**145**	PG	Pb	09 57 54.2	-0.4
DALY				SG	Sb	09 58 02.6	-0.7
DALY	**Dalyan (Mu¨la**	**0.57**	**145**	*e*Pg	Pb	09 57 54.2	-0.4
DALY				*e*Sg	Sb	09 58 02.6	-0.7
BDRM	**Kayabasi**	**0.68**	**251**	*i* P	Pg	09 57 54.8	+0.1
BDRM				*i* S	Sg	09 58 04.4	+0.9
BDRM	**Kayabasi**	**0.68**	**251**	P	Pg	09 57 54.8	+0.1
BDRM				S	Sg	09 58 04.4	+0.9
AYDB	**Zeytinkoy-Aydi**	**0.71**	**337**	PG	Pb	09 57 57.4	+0.3
AYDB	**Zeytinkoy-Aydi**	**0.71**	**337**	*e*Pg	Pb	09 57 57.4	+0.3
DAT	**Datca**	**0.78**	**224**	PG	Pg	09 57 55.3	-1.3
DAT	**Datca**	**0.78**	**224**	*i* P	Pg	09 57 56.8	+0.2
DAT				*i* S	Sb	09 58 09.9	+0.6
DAT	**Datca**	**0.78**	**224**	*e*Pg	Pg	09 57 55.3	-1.3
DAT	**Datca**	**0.78**	**224**	P	Pg	09 57 56.8	+0.2
DAT				S	Sb	09 58 09.9	+0.6
BODT	**Bodrum**	**0.78**	**253**	PG	Pg	09 57 56.3	-0.4
BODT				SG	Sg	09 58 06.2	-0.6
BODT	**Bodrum**	**0.78**	**253**	*e*Pg	Pg	09 57 56.3	-0.4
BODT				*e*Sg	Sg	09 58 06.2	-0.6
GCAM	**G?zelcaml?**	**0.90**	**297**	PG	Pb	09 57 59.9	-0.3
GCAM	**G?zelcaml?**	**0.90**	**297**	*e*Pg	Pb	09 57 59.9	-0.3

SJA 13 10:10:04.5±0.5, 31.°50S×69.°50W, h110km±4km, ML2.8, MW3.5, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLS	**Leoncito**	**0.35**	**151**	*i* P	Pn	10 10 21.9	+1.1
RTLS				*i* S	Sn	10 10 34.8	+1.7
RTLS				IAML		10 10 34.9	
	comp=Z,261nm,0.2s						
AUSP	**Uspallata**	**0.73**	**173**	*i* P	Pn	10 10 24.2	+0.8
RTLL	**Cerro Villicun**	**0.89**	**79**	*i* P	Pn	10 10 25.5	+0.9
RTLL				*i* S	Sn	10 10 40.9	+1.1
RTCV	**Cerro Valdivia**	**0.89**	**114**	*i* P	Pn	10 10 25.4	+0.8
RTCV				*i* S	Sn	10 10 41.0	+1.1
AMOG	**MOGNA**	**1.02**	**57**	*i* P	Pn	10 10 26.9	+0.9
AMOG				*i* S	Sn	10 10 43.0	+0.8
ASAL	**Salagasta**	**1.23**	**153**	*i* P	Pn	10 10 29.2	+1.0
ASAL				*i* S	Sn	10 10 47.2	+1.1

*NIED **13** 10:11:00, 33.°30N×137.°50E, h360km, Mw4.6 Best double couple: M0 1.01000×10^16 NP1:φs60.00000°, δ12.00000°, λ154.00000°. NP2:φs175.00000°, δ85.00000°, λ79.00000°.*
*BJI **13** 10:11:20.2, 33.°24N×137.°48E, h363km, mb4.7/61, mB4.5/33*
*MOS **13** 10:11:20.1±0.9, 33.°22N×137.°44E, h349km, mb4.4/60, Error ellipse: s-maj=6.9km s-min=4.7km az=85.8*
*JMA **13** 10:11:20.0±0.2, 33.°28N×137.°52E, h371km±3km, M4.5*
*ISCJB **13** 10:11:21.3±0.2, 33.°26N±0.°03×137.°41E±0.°02, h358km±1km, mb4.4/165, Error ellipse: s-maj=4.5km s-min=2.7km az=154.7*
*IDC **13** 10:11:21.3±0.5, 33.°20N×137.°48E, h352km±4km, mb4.0/42, mb1 4.1/48, mb1mx3.9/76, mbtmp4.7/48, Error ellipse: s-maj=7.5km s-min=6.6km az=139.0*
*NEIC **13** 10:11:21.5±0.3, 33.°18N×137.°42E, h349km±2km, mb4.5/96, Error ellipse: s-maj=3.8km s-min=2.4km az=154.0*

ISC 13 10:11:21.3±0.4, 33.°24N±0.°04×137.°51E±0.°04, h353km±3km, h353km: pP-P, n589, σ1°23/661, mb4.5/165, 21C-13D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TK01	**Tokai 1**	**0.53**	**7**	P	Pn	10 12 06.5	+1.1
TK01				S	S	10 12 42.9	+2.0
TTO3	**TONANKAI O.B.S**	**0.63**	**351**	⇑P	Pn	10 12 07.4	+1.5
TTO3				*e*S	S	10 12 44.1	+2.4
TTO2	**TONANKAI O.B.S**	**0.64**	**321**	⇑P	Pn	10 12 07.1	+1.4
TTO2				*e*S	S	10 12 44.7	+3.3
TTO1	**TONANKAI O.B.S**	**0.72**	**302**	⇑P	Pn	10 12 07.1	+1.2
TTO1				*e*S	S	10 12 44.4	+2.6
TK02	**Tokai 2**	**0.73**	**16**	P	Pn	10 12 07.4	+1.3
TK02				*e*S	S	10 12 44.6	+2.5
TTO4	**TONANKAI O.B.S**	**0.77**	**2**	P	Pn	10 12 07.3	+1.2
TTO4				*e*S	S	10 12 44.2	+2.0
TK03	**Tokai 3**	**1.00**	**22**	P	Pn	10 12 08.8	+1.7
TK03				*e*S	S	10 12 46.8	+2.9
TTO5	**TONANKAI O.B.S**	**1.02**	**10**	P	Pn	10 12 08.6	+1.4
TTO5				*e*S	S	10 12 46.3	+2.3
JIE	**Ise**	**1.33**	**330**	⇑P	Pn	10 12 09.4	+0.7
JIE				S	S	10 12 45.2	-1.6
JWZ	**Kozaga**	**1.53**	**281**	⇑P	Pn	10 12 10.0	+0.1
JWZ				S	S	10 12 48.5	-0.3
JWY	**Kouya**	**1.87**	**302**	⇑P	Pn	10 12 12.7	+0.7
JWY				*e*S	S	10 12 52.6	-0.2
JHJ	**Hachijo jima 2**	**1.91**	**93**	P	Pn	10 12 12.2	0.0
	58nm,0.3s,baz=243,slow=6.9,SNR=15						
JHJ				S	S	10 12 53.9	+0.8
	41nm,0.3s,baz=107,slow=19,SNR=2.1						
JHJ2	**Mitsune**	**1.94**	**93**	*e*Pn	Pn	10 12 12.5	+0.1
JHJ2	**Mitsune**	**1.94**	**93**	P	Pn	10 12 13.4	+1.0
INU	**Inuyama**	**2.14**	**349**	*e*Pn	Pn	10 12 14.7	+0.9
JOD2	**Odawara 2**	**2.41**	**32**	⇓P	Pn	10 12 16.0	+0.2
JYN	**Shimob**	**2.41**	**21**	⇓P	Pn	10 12 16.2	+0.3
JAI	**Aioi**	**2.61**	**283**	⇑P	Pn	10 12 17.8	+0.3
JAI				*e*S	S	10 13 02.7	0.0
JWT	**Wachi**	**2.68**	**320**	⇑P	Pn	10 12 18.6	+0.6
JWT				*e*S	S	10 13 03.0	-0.7
JRY	**Ryogami san**	**3.00**	**22**	⇓P	Pn	10 12 21.2	+0.4
JMN	**Monobe**	**3.07**	**280**	⇑P	Pn	10 12 22.1	+0.6
JMN				*e*S	S	10 13 09.6	-0.4
JKG	**Kaga**	**3.18**	**343**	P	Pn	10 12 22.9	+0.5
JKG				*e*S	S	10 13 11.8	+0.2
BSO1	**Boso 1**	**3.21**	**63**	P	Pn	10 12 20.2	-1.9
BSO1				S	S	10 13 09.6	-1.5
MJAR	**Matsushiro Arr**	**3.34**	**10**	P	Pn	10 12 23.8	-0.1
	43nm,0.3s,baz=191,slow=11,SNR=588						
MJAR				S	S	10 13 13.2	-1.3
	8.4nm,0.3s,baz=310,slow=24,SNR=10						
MAJO	**Matsushiro**	**3.34**	**10**	*e*Pn	Pn	10 12 24.5	+0.5
MAJO	**Matsushiro**	**3.34**	**10**	*d i*P	Pn	10 12 24.1	+0.1
MAT	**Matsushiro**	**3.34**	**10**	P	Pn	10 12 24.0	+0.1

comp=Z,12nm,0.6s
SHO pmax pmax
comp=N,9.0nm,0.4s
SHO pmax pmax
comp=E,9.0nm,0.4s
SNY Shenyang 13.97 312 ⇑P Pn 10 14 25.3 -0.7
SNY pmax pmax
comp=E,43nm,0.9s
YSS Yuzh-Sakhalins 14.27 15 eP Pn 10 14 28.9 -0.5
YSS Yuzh-Sakhalins 14.27 15α iP Pn 10 14 29.3 -0.1
YSS eS S 10 17 02.0 +0.1
YSS pmax pmax
comp=Z,200nm,2.0s
YSS pmax pmax
comp=N,60nm,0.8s
YSS pmax pmax
comp=Z,120nm,0.8s
YSS smax smax
comp=E,200nm,1.8s
KUR Kuril'sk 14.40 31 eP Pn 10 14 30.4 -0.5
KUR eS S 10 17 12.5 +7.9
KUR pmax pmax
comp=Z,40nm,0.6s
KUR pmax pmax
comp=N,13nm,0.5s
KUR pmax pmax
comp=E,11nm,0.2s
YOJ Yonaguni jima 15.41 239 eP P 10 14 38.8 -1.5
comp=E,79nm,0.8s
YOJ Yonaguni jima 15.41 239 eP P 10 14 38.8 -1.5
YOJ pmax pmax
comp=Z,79nm,0.8s
NJ2 Nanjing 15.76 271 eP P 10 14 43.4 -0.7
NJ2 pmax pmax
comp=Z,9.0nm,0.6s
KLR Kul'dur 16.54 347 P P 10 14 52.0 -0.3
comp=Z,0.1nm,0.3s,baz=175,slow=8.8,SNR=15
KLR S S 10 17 47.0 -0.2
comp=Z,0.0nm,0.3s,baz=315,slow=2.1
KLR ScP ScP 10 22 21.8 -0.7
comp=Z,0.0nm,0.3s,baz=310,slow=7.7,SNR=5.6
TIA Tai'an 17.02 286 P P 10 14 57.6 0.0
TIA pmax pmax
comp=Z,16nm,0.7s
GRNR Gornyy 17.54 358 eP P 10 15 04.0 +1.1
TYV Tymovskoe 18.01 11 eP P 10 15 08.1 +0.1
TYV pmax pmax
comp=Z,15nm,1.3s
BJI Beijing 18.40 298 ⇓iP P 10 15 12.0 -0.2
BJI sP sP 10 16 43.5 -4.9
BJI S S 10 18 24.0 +0.3
BJT Baijiatuau 18.40 298 eP P 10 15 12.4 +0.2
comp=Z,110nm,0.5s
BJT Baijiatuau 18.40 298 eP P 10 15 12.4 +0.2
BJT pmax pmax
comp=Z,110nm,0.5s
WHN Wuhan 19.84 268 ⇑P P 10 15 26.5 -1.0
WHN pmax pmax
comp=Z,220nm,0.8s
NKL Nikolayevsk 20.03 6 eP P 10 15 29.0 0.0
NKL pmax pmax
comp=Z,33nm,0.9s
HIA Hailar 20.77 326 eP P 10 15 35.4 -0.6
comp=Z,30nm,1.0s
HIA Hailar 20.77 326 eP P 10 15 35.4 -0.6
HIA pmax pmax
comp=Z,30nm,1.0s
TIY Taiyuan 20.88 289 P P 10 15 37.9 +0.7
TIY pmax pmax
comp=Z,42nm,0.6s
HHC Hu-ho-hao-te 22.01 298 eP P 10 15 47.3 -0.1
HHC S S 10 19 25.3 +0.9
HHC pmax pmax
comp=Z,27nm,0.9s
HHC pmax pmax
comp=Z,140nm,4.2s
BTO Baotou 23.11 296 eP P 10 15 57.9 +0.5
XAN Xi'an 23.79 280 P P 10 16 03.0 -0.5
XAN pmax pmax
comp=Z,120nm,0.9s
ENH Enshi 23.98 271 eP P 10 16 04.7 -0.7
comp=Z,160nm,0.9s
PETK Petropavlovsk- 24.57 30 P P 10 16 11.2 +1.0
comp=Z,6.0nm,0.8s,baz=205,slow=11,SNR=7.4
PETK ScP ScP 10 22 41.8 -0.1
comp=Z,1.7nm,0.7s,baz=191,slow=1.5,SNR=3.1
PETK Petropavlovsk- 24.57 30 eP P 10 16 10.2 0.0
PETK ScP ScP 10 22 41.8 -0.1
PET Petropavlovsk 24.91 31 eP P 10 16 13.9 +0.6
PET pmax pmax
comp=Z,3.0nm,0.3s
ULN Ulaanbaatar 27.15 312 eP P 10 16 34.8 +1.2
comp=Z,15nm,0.7s
ULN Ulaanbaatar 27.15 312d iP P 10 16 34.5 +1.0
ULN e*PP PP 10 17 41.7 -1.7
ULN pmax pmax
comp=Z,14nm,0.7s
GYA Guiyang 27.53 264⇑iP P 10 16 36.3 -0.8
GYA pP pP 10 17 42.8 +0.6
GYA sP sP 10 18 24.0 +0.5
GYA PcP PcP 10 19 47.5 +2.7
GYA S S 10 20 51.3 -0.6
GYA sS ScP 10 22 48.4 -2.9
GYA pmax pmax
comp=Z,20nm,0.7s
GYA pmax pmax
comp=Z,110nm,4.8s
SONA1 Songino Array 27.55 311 eP P 10 16 38.0 +1.0
SONA1 epP pP 10 17 43.0 +0.9
SONM Songino Array 27.56 311 P P 10 16 38.1 +1.0
comp=Z,11nm,0.6s,baz=117,slow=8.5,SNR=40
SONM pP pP 10 17 42.8 +0.6
comp=Z,3.6nm,0.9s,baz=118,slow=8.4,SNR=2.3
SONM ScP ScP 10 22 50.4 -0.6
comp=Z,2.6nm,1.0s,baz=138,slow=3.0,SNR=7.5
LZH Lanzhou 27.76 285 eP P 10 16 38.8 -0.2
LZH pP pP 10 17 42.9 -1.4
LZH sP sP 10 18 22.4 -3.2
LZH S S 10 20 51.3 -4.1
LZH sS sS 10 22 56.8 +1.2
LZH pmax pmax
comp=Z,58nm,1.2s
LZH pmax pmax
comp=Z,180nm,4.7s
MA2 Magadan 27.77 15 P P 10 16 39.5 +0.8
comp=Z,30nm,0.6s,baz=200,slow=8.5,SNR=48
MA2 Magadan 27.77 15 eP P 10 16 38.3 -0.4
comp=Z,34nm,0.7s
MA2 Magadan 27.77 15⇑eP P 10 16 39.4 +0.8
MA2 pmax pmax
comp=Z,34nm,0.7s
CD2 Chengdu 28.63 275 P P 10 16 45.6 -1.0
CD2 pmax pmax
comp=Z,10.0nm,0.5s
YAK Yakutsk 29.24 352 eP P 10 16 51.1 -0.4
YAK eS S 10 21 15.4 -2.2
YAK pmax pmax
comp=Z,10.0nm,0.8s
YAK pmax pmax
comp=N,2.0nm,1.0s
YAK smax smax
comp=N,22nm,1.5s
YAK smax smax
comp=E,21nm,1.5s
ZAK Zakamensk 30.38 315 eP P 10 17 02.2 +0.4
ZAK pmax pmax
comp=Z,8.0nm,1.3s
TLY Talaya 30.66 317 eP P 10 17 05.6 +1.4
comp=Z,7.5nm,1.0s
TLY Talaya 30.66 317 eP P 10 17 05.9 +1.8
TLY pmax pmax
comp=Z,7.0nm,0.9s
GTA Gaotai 30.83 292 eP P 10 17 05.6 -0.3
GTA pmax pmax
comp=Z,13nm,1.2s
SEY Seymchan 31.17 13 P P 10 17 08.7 +0.4
comp=Z,8.3nm,0.7s,baz=206,slow=7.6,SNR=34
SEY ScP ScP 10 23 00.7 -1.4
comp=Z,1.0nm,0.6s,baz=239,slow=11,SNR=5.8
SEY Seymchan 31.17 13c iP P 10 17 09.2 +0.9
KMI Kunming 31.31 264 P P 10 17 09.9 -0.4
KMI pmax pmax
comp=Z,23nm,0.9s
KMI pmax pmax
comp=Z,120nm,3.1s
PATS Pohnpei 32.60 139 eP P 10 17 17.9 -3.3
comp=Z,224nm,1.5s
MYLDM Lahad Datu 33.06 216 eP P 10 17 25.9 +0.6
comp=Z,28nm,1.0s
SKNT Sakolnakorn 34.22 250 P P 10 17 34.2 -1.0
comp=Z,18nm,0.9s
NONG Nongkai 34.28 252 P P 10 17 35.6 -0.1
comp=Z,79nm,0.9s,comp=Z,1μm
SIJI Sorong 34.43 191 P P 10 17 35.9 -1.1
comp=Z,8.0nm,0.6s,baz=1.4,slow=13,SNR=3.1
PAYA Payao 36.26 257 P P 10 17 53.4 +1.0
comp=Z,6.5nm,0.8s
CHAI Chaiyaphum 36.40 250 P P 10 17 52.7 -0.9
comp=Z,32nm,0.7s,comp=Z,254nm
HVS Khovu-Aksy 36.42 313⇑iP P 10 17 54.1 +0.7
HVS pmax pmax
comp=Z,40nm,0.9s
CMAI Chiengmai2 36.65 259 P P 10 17 58.1 +2.2
comp=Z,217nm,1.2s,comp=Z,12μm
PBKT Sadao Pong 36.84 252 P P 10 17 55.8 -1.4
comp=Z,48nm,0.9s
PBKT Sadao Pong 36.84 252 eP P 10 17 56.1 -1.1
CHTO Chiang Mai 37.29 257 P P 10 18 00.5 -0.5
comp=Z,90nm,1.0s
CHTO Chiang Mai 37.29 257 eP P 10 18 00.5 -0.5
comp=Z,13nm,0.8s
CHTO Chiang Mai 37.29 257 eP P 10 18 00.5 -0.5
CHTO pmax pmax
comp=Z,13nm,0.8s
CM31 Chiang Mai Arr 37.47 257 eP P 10 18 02.7 +0.2
CMAR Chiang Mai Arr 37.47 257 P P 10 18 02.3 -0.2
comp=Z,8.4nm,0.6s,baz=48,slow=7.9,SNR=33
CM01 Chiang Mai Arr 37.48 257 eP P 10 18 02.2 -0.4
BILL Bilibino 38.57 17 eP P 10 18 12.2 +1.3
comp=Z,34nm,0.6s
BILL Bilibino 38.57 17c iP P 10 18 11.8 +0.9
BILL pmax pmax
comp=Z,31nm,1.0s
SBUM Sibu 38.72 223 eP P 10 18 12.4 -0.4
comp=Z,10.0nm,1.0s
TIXI Tiksi 38.75 356 eP P 10 18 12.2 -0.1
comp=Z,9.0nm,1.0s
TIXI Tiksi 38.75 356ceP P 10 18 12.0 -0.3
TIXI pmax pmax
comp=Z,8.0nm,0.9s
LSA Lhasa 39.45 278 eP P 10 18 19.9 +0.6
comp=Z,21nm,0.9s
LSA Lhasa 39.45 278 eP P 10 18 19.9 +0.6
LSA pmax pmax
comp=Z,21nm,0.9s
SRDT SRDT 39.55 251 P P 10 18 19.4 -0.3
comp=Z,42nm,1.4s,comp=Z,2μm
WMQ Urumqi 39.84 300 P P 10 18 24.3 +2.5
PHET Kaeng Krachan 40.00 249 P P 10 18 23.7 +0.4
comp=Z,29nm,0.8s,comp=Z,210nm
SHL Shillong 40.23 271 eP P 10 18 24.1 -1.2
comp=Z,10nm,0.8s
SHL Shillong 40.23 271 eP P 10 18 24.1 -1.2
SHL pmax pmax
comp=Z,10.0nm,0.8s
KSM Kuching 40.62 225 eP P 10 18 28.4 +0.1
comp=Z,11nm,0.7s
ZALV Zalesovo Beam 42.24 316 P P 10 18 40.6 -0.3
comp=Z,3.3nm,0.4s,baz=103,slow=8.5,SNR=18
ZALV PcP PP 10 20 26.9 -0.3
comp=Z,1.6nm,0.5s,baz=75,slow=3.3,SNR=3.8
ZALV ScP ScP 10 23 42.6 -1.0
comp=Z,3.3nm,0.6s,baz=130,slow=3.6,SNR=8.9
ZALV Zalesovo Beam 42.24 316 P P 10 18 40.6 -0.3
ZALV 10 20 26.9
ZALV pmax pmax
comp=Z,4.0nm,0.4s
ZALV pmax pmax
comp=Z,2.0nm,0.5s
TRTT Trang 43.13 243 P P 10 18 48.2 -0.2
comp=Z,14nm,1.2s
KRAB Krabi 43.25 244 P P 10 18 49.6 +0.2
comp=Z,82nm,0.7s,comp=Z,8μm
NVS Novosibirsk 43.27 317 eP P 10 18 47.6 -1.5
NVS pmax pmax
comp=E,9.0nm,1.0s
NVS pmax pmax
comp=Z,13nm,1.0s
ODAN Odare 43.51 275 eP P 10 18 51.4 -0.3
comp=Z,70nm,0.6s
MK01 Makanchi Array 43.54 305 eP P 10 18 51.4 0.0
MK31 Makanchi Array 43.54 305 eP P 10 18 51.7 +0.3
MK31 Makanchi Array 43.54 305 eP P 10 18 51.7 +0.3
MKAR Makanchi Array 43.54 305 P P 10 18 51.5 +0.1
comp=Z,6.8nm,0.6s,baz=85,slow=9.9,SNR=54
MKAR ScP ScP 10 23 48.5 -0.6
comp=Z,3.4nm,0.7s,baz=83,slow=4.1,SNR=15
MKAR Makanchi Array 43.54 305 eP P 10 18 51.7 +0.3
comp=Z,58nm,0.4s
MKAR ScP ScP 10 23 48.5 -0.6
MKAR Makanchi Array 43.54 305 eP P 10 18 51.7 +0.3
MKAR pmax pmax
comp=Z,58nm,0.4s
PKDT Phuket 44.11 244 P P 10 18 55.7 -0.5
comp=Z,28nm,1.1s
RAMN Ramite 44.14 276 eP P 10 18 56.4 -0.2
comp=Z,153nm,0.7s
JIRN Jiri 44.23 277 eP P 10 18 57.8 +0.3
comp=Z,252nm,0.5s
GUN Gumba 44.41 277 eP P 10 18 59.0 +0.2
comp=Z,84nm,0.7s
IPM Ipoh 44.43 238 eP P 10 18 57.7 -1.1
comp=Z,26nm,0.8s
PKIN Phulchoki 44.92 277 eP P 10 19 02.9 +0.1
comp=Z,74nm,0.7s
KKN Kakani 44.95 278 eP P 10 19 02.8 -0.1
comp=Z,99nm,0.9s
DMN Daman 45.15 277 eP P 10 19 04.3 -0.2
BATI Baumata 45.17 199 P P 10 19 03.5 -1.0
comp=Z,17nm,0.4s,baz=27,slow=4.5,SNR=3.9
GKN Gorkha 45.41 278 eP P 10 19 06.2 -0.2
comp=Z,142nm,1.0s
PDGK Podgornoye 45.82 300 P P 10 19 08.9 -0.5
PDGK pmax pmax
comp=Z,27nm,0.9s
KURK Kurchatov 45.86 311 eP P 10 19 09.3 0.0
comp=Z,23nm,0.6s
KURK pP pP 10 20 21.6 +1.3
KURK PP PP 10 21 03.9 +1.9
KURK Kurchatov 45.86 311d iP P 10 19 09.1 -0.3
KURK pmax pmax
comp=Z,23nm,0.7s
KURBB Kurchatov Arra 45.92 311 P P 10 19 09.6 -0.2
comp=Z,13nm,0.5s,baz=89,slow=7.1,SNR=66
KURBB pP pP 10 20 21.6 +0.8
comp=Z,0.7nm,0.3s,baz=91,slow=8.1,SNR=1.5
KURBB PP PP 10 21 03.9 +1.4
comp=Z,1.1nm,0.3s,baz=93,slow=9.6,SNR=4.5
DANN Dangsing 46.01 279 eP P 10 19 11.6 +0.3
comp=Z,146nm,0.5s
MTN Manton Dam 46.23 189 eP P 10 19 11.2 -1.4
comp=Z,8.2nm,0.9s
KOLN Koldanda 46.35 278 eP P 10 19 13.7 0.0
PYUN Piuthan 46.74 279 eP P 10 19 17.0 +0.3
comp=Z,97nm,0.4s
PSI Prapat 47.09 238 P P 10 19 17.9 -1.6
comp=Z,13nm,0.8s,baz=0.1,slow=5.8,SNR=5.5
PSI Prapat 47.09 238 eP P 10 19 18.9 -0.6
comp=Z,16nm,0.9s
PSI Prapat 47.09 238 eP P 10 19 18.9 -0.6
PSI pmax pmax
comp=Z,16nm,0.9s
TARG Taragay, Kyrgy 47.30 298 eP P 10 19 20.7 -0.3
comp=Z,7.4nm,0.8s
LEM Lembang 48.92 221 P P 10 19 32.5 -0.9
comp=Z,47nm,0.7s,baz=327,slow=8.4,SNR=5.3
GSI Gunungsitoli 49.10 238 eP P 10 19 33.8 -0.7
comp=Z,116nm,1.0s
AAK Ala-Archa 49.55 300 P P 10 19 37.4 -0.4
comp=Z,4.6nm,0.7s,baz=124,slow=6.2,SNR=4.1
OTUK Ortayu 50.13 308 P P 10 19 42.0 +0.2
OTUK pmax pmax
comp=Z,28nm,0.9s
BVAR Borovoye Array 50.83 314 P P 10 19 47.1 +0.2
comp=Z,7.5nm,0.6s,baz=95,slow=9.1,SNR=24
BVAR ScP ScP 10 24 18.7 -1.0
comp=Z,2.4nm,0.6s,baz=107,slow=5.0,SNR=9.3
BRVK Borovoye 50.89 314 eP P 10 19 47.5 +0.2
comp=Z,7.9nm,0.8s
BRVK Borovoye 50.89 314d iP P 10 19 47.1 -0.2
BRVK pmax pmax
comp=Z,9.0nm,0.8s
NDI New Delhi 51.29 282 eP P 10 19 52.5 +1.9
RSO Redoubt South 51.85 36 eP P 10 19 55.3 +0.8
KDAK Kodiak Island 52.05 40 P P 10 19 56.3 +0.6
comp=Z,40nm,0.6s,baz=270,slow=4.0,SNR=73
KDAK Kodiak Island 52.05 40 eP P 10 19 56.3 +0.6
comp=Z,38nm,0.7s
KDAK Kodiak Island 52.05 40ceP P 10 19 56.0 +0.3
PPLA Purkeypile 52.09 33 eP P 10 19 57.4 +1.2
comp=Z,76nm,1.6s
CAST Castle Rocks 52.15 32 eP P 10 19 57.9 +1.5
comp=Z,17nm,0.9s
KK31 Karatay Array 52.32 302 eP P 10 19 58.3 +0.3
KK31 Karatay Array 52.32 302 eP P 10 19 58.3 +0.3
KKAR Karatay Array 52.32 302 eP P 10 19 58.3 +0.3
KKAR Karatay Array 52.32 302 eP P 10 19 58.3 +0.3
SKT Skwentna 52.41 34 eP P 10 19 59.6 +1.3
comp=Z,11nm,0.8s
BPAW Bear Paw Mtn. 52.63 32 eP P 10 20 01.1 +1.1
comp=Z,26nm,1.5s
MLY Manley 52.74 30 eP P 10 20 02.4 +1.7
comp=Z,18nm,0.7s
SUA Susitna One 52.80 35 eP P 10 20 01.8 +0.5
comp=Z,20nm,1.0s
NIL Nilore 52.81 289 eP P 10 20 02.2 +0.5
NIL Nilore 52.81 289 eP P 10 20 02.2 +0.5
BRLK Bradley Lake 52.81 37 eP P 10 20 02.4 +1.0
comp=Z,24nm,0.9s
TRF Thorofare Moun 52.95 32 eP P 10 20 03.3 +0.9
comp=Z,8.8nm,1.0s
WB2 Warramunga Arr 52.97 184 eP P 10 19 59.0 -3.8
WRA Warramunga Arr 52.97 184 P P 10 20 02.4 -0.5
comp=Z,3.1nm,0.4s,baz=360,slow=7.6,SNR=91
WRA ScP ScP 10 24 28.5 -0.7
comp=Z,1.0nm,0.7s,baz=354,slow=4.8,SNR=7.6
TOLK Toolik Lake Re 53.29 26 P P 10 20 06.2 +1.6
baz=268,SNR=16
TOLK Toolik Lake Re 53.29 26 eP P 10 20 05.7 +1.1
comp=Z,17nm,1.0s
BWN Browne 53.30 32 eP P 10 20 06.8 +2.1
comp=Z,40nm,0.8s
SEW Seward 53.51 37 eP P 10 20 06.6 +0.4
comp=Z,21nm,0.8s
MCK McKinley 53.55 32 eP P 10 20 07.4 +0.8
comp=Z,75nm,1.6s
MCK McKinley 53.55 32 eP P 10 20 07.4 +0.8
MCK pmax pmax
comp=Z,75nm,1.6s
PMR Palmer 53.56 35 eP P 10 20 06.9 +0.3
comp=Z,22nm,1.0s
PMR Palmer 53.56 35 eP P 10 20 06.9 +0.3
PMR pmax pmax
comp=Z,22nm,1.0s
RND Reindeer 53.60 32 eP P 10 20 07.3 +0.3
comp=Z,46nm,0.8s
RND Reindeer 53.60 32 eP P 10 20 07.3 +0.3
RND pmax pmax
comp=Z,47nm,0.8s
GHO Glory Hole Cre 53.65 34 eP P 10 20 07.9 +0.6
comp=Z,26nm,0.8s
MDM Murphy Dome 53.81 31 eP P 10 20 09.3 +0.9
comp=Z,38nm,0.8s
WRH Wood River Hil 53.89 31 eP P 10 20 09.8 +0.9
comp=Z,10nm,0.7s
SML Sawmill 53.93 34 eP P 10 20 10.3 +1.1
comp=Z,42nm,1.0s
SML Sawmill 53.93 34 eP P 10 20 10.4 +1.1
SML pmax pmax
comp=Z,42nm,1.0s
COLA College 53.98 31 eP P 10 20 10.3 +0.8
comp=Z,15nm,1.1s
COLA College 53.98 31 eP P 10 20 10.3 +0.8
COLA pmax pmax
comp=Z,15nm,1.1s
CCB Clear Creek Bu 54.01 31 eP P 10 20 10.3 +0.5
comp=Z,7.4nm,0.6s
DHY Denali Highway 54.28 33 eP P 10 20 12.5 +0.5
comp=Z,14nm,0.8s
HDA Harding Lake 54.39 31 eP P 10 20 12.7 +0.2
comp=Z,27nm,0.8s
IL1 Eielson Array 54.39 31 eP P 10 20 12.8 +0.2
ILAR Eielson Array 54.39 31 P P 10 20 12.8 +0.3
comp=Z,7.6nm,0.7s,baz=282,slow=5.3,SNR=92
ILB Eielson Array 54.39 31 eP P 10 20 12.9 +0.3
SCM Sheep Creek Mo 54.40 34 eP P 10 20 13.9 +1.1
comp=Z,49nm,0.8s
SCM Sheep Creek Mo 54.40 34 eP P 10 20 13.9 +1.1
SCM pmax pmax
comp=Z,49nm,0.8s
HYB Hyderabad 54.91 269 i P P 10 20 17.0 +0.1
KLU Klutina 55.11 35 eP P 10 20 18.8 +1.1
comp=Z,27nm,1.1s
DIV Divide 55.22 35 eP P 10 20 19.6 +1.1
comp=Z,17nm,0.8s
HARP HAARP 55.36 34 eP P 10 20 21.1 +1.6
comp=Z,48nm,0.8s
DOT Dot Lake 55.72 32 eP P 10 20 22.4 +0.4
comp=Z,95nm,0.6s
BMRM Bremner River 55.80 35 eP P 10 20 23.9 +1.2
comp=Z,37nm,0.9s
RAGM Ragged Mountai 55.85 36 eP P 10 20 23.6 +0.7
comp=Z,20nm,1.0s
CRQM Cirque 56.54 35 eP P 10 20 29.4 +1.4
comp=Z,27nm,0.9s
ASAR Alice Springs 56.69 184 P P 10 20 29.6 +0.3
comp=Z,1.8nm,0.7s,baz=358,slow=4.3,SNR=55
ASAR ScP ScP 10 24 46.2 +0.6
comp=Z,0.9nm,0.8s,baz=3.7,slow=5.2,SNR=6.8
TGL Tana Glacier 56.69 35 eP P 10 20 29.3 +0.4
comp=Z,20nm,1.0s
EGAK Eagle 56.83 30 eP P 10 20 30.2 +0.5
comp=Z,6.9nm,0.6s
ARU Arti 57.12 320 P P 10 20 31.1 -0.7
comp=Z,4.7nm,0.2s,baz=90,slow=5.1,SNR=5.1
ARU Arti 57.12 320d iP P 10 20 31.2 -0.6
ARU 10 21 19.8
ARU *PP pP 10 21 44.6 -1.9
ARU S S 10 27 57.0 -1.5
ARU pmax pmax
comp=Z,8.0nm,1.0s
DAWY Dawson 57.70 31 eP P 10 20 37.0 +1.2
DAWY ePcP PcP 10 21 25.9 +1.6
ABKAR Akbulak array 57.97 311 eP P 10 20 37.9 0.0
PALK Pallekele 58.41 257 P P 10 20 41.6 +0.1
comp=Z,7.2nm,0.6s,baz=104,slow=2.2,SNR=3.8
AKTO Aktyubinsk 58.86 313 P P 10 20 43.7 -0.2
comp=Z,4.5nm,0.6s,baz=102,slow=9.3,SNR=13
INK Inuvik 59.20 26 P P 10 20 46.3 +0.5
comp=Z,10nm,0.6s,baz=281,slow=4.7,SNR=12
INK Inuvik 59.20 26 eP P 10 20 46.5 +0.6
comp=Z,9.6nm,0.6s
INK Inuvik 59.20 26 eP P 10 20 46.5 +0.6
INK pmax pmax
comp=Z,10.0nm,0.6s
SKAG Skagway 60.64 36 eP P 10 20 57.7 +2.0
comp=Z,22nm,1.0s
JIS Juneau Island 61.46 37 eP P 10 21 03.5 +2.3
comp=Z,17nm,0.8s
DLBC Dease Lake 63.57 36 eP P 10 21 17.1 +1.9
comp=Z,9.6nm,0.8s
SPITS Spitsbergen Ar 63.61 349 P P 10 21 15.1 +0.1
comp=Z,2.8nm,0.8s,baz=85,slow=8.8,SNR=2.3
SPITS Spitsbergen Ar 63.61 349 P P 10 21 15.1 +0.1
SPITS pmax pmax
comp=Z,2.0nm,0.6s
ARCES ARCESS Array B 66.41 339 P P 10 21 33.6 +0.7
comp=Z,1.8nm,0.5s,baz=62,slow=8.4,SNR=14
RES Resolute Bay 67.04 13 eP P 10 21 37.7 +0.9
comp=Z,18nm,0.9s
RES Resolute Bay 67.04 13 eP P 10 21 37.7 +0.9
RES pmax pmax
comp=Z,18nm,0.9s
YKW3 Yellowknife Ar 68.63 28 eP P 10 21 47.1 +0.3
comp=Z,25nm,1.5s
YKA Yellowknife Ar 68.67 28 P P 10 21 47.6 +0.5
comp=Z,7.5nm,0.8s,baz=303,slow=6.3,SNR=42
WSAR Wadi Sarin 68.73 284 P P 10 21 47.2 -1.0
comp=Z,4.7nm,0.8s,baz=306,slow=8.7,SNR=3.2
OBN Obninsk 69.20 323 i P P 10 21 47.8 -2.6
OBN i *PP PcP 10 22 12.0 +0.4
OBN pmax pmax
comp=Z,5.0nm,0.8s
TULEG Thule 69.24 6 eP P 10 21 50.6 +0.3
comp=Z,15nm,0.9s
DAG Danmarks Havn 69.25 354 i P P 10 21 50.2 -0.1
comp=Z,8.5nm,0.9s
VSR Storozhevoye 69.66 318 eP P 10 21 53.1 -0.2
VSR pmax pmax
comp=Z,9.0nm,0.8s

VJF	Virojoki	70.56	330	eS		P	10 21 58.4 -0.1
FIA1	FINESS Array S	70.65	332	eP		P	10 21 58.9 -0.1
FIA1	FINESS Array S	70.65	332	eP		P	10 21 59.0 -0.1
FIA0	FINESS Array S	70.65	332	ePB		P	10 21 59.4 +0.3
FINES	FINESS Array B	70.65	332	P		P	10 21 59.1 +0.1
	comp=Z,2.3nm,0.5s,baz=56,slow=6.4,SNR=24						
KBZ	Khabaz	70.92	310	P		P	10 22 01.6 +0.7
	comp=Z,7.6nm,0.9s,baz=72,slow=4.3,SNR=16						
KIV	Kislovodsk	70.95	310	eP		P	10 22 02.4 +1.1
KIV				pmax	pmax		
	comp=Z,14nm,1.1s						
KIV				MLR	MLR		
	comp=Z,27nm,18.0s						
LLLB	Lillooet	71.20	41	eP		P	10 22 04.2 +1.6
	comp=Z,16nm,0.8s						
PVF	Pernaja	71.25	331	eS		P	10 22 09.1 +6.5
NEY	Neytrino	71.25	310	eP		P	10 22 04.1 +0.8
NEY				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GNI	Garni	71.38	306	P		P	10 22 04.7 +0.7
	comp=Z,4.3nm,0.4s,baz=154,slow=7.3,SNR=3.8						
GNI	Garni	71.38	306	c iP		P	10 22 05.6 +1.6
GNI				pmax	pmax		
	comp=Z,41nm,1.5s						
KULLO	Kullorsuaq	72.01	4	i P		P	10 22 07.5 +0.6
	comp=Z,14nm,0.8s						
B05A	Bryant	72.25	44	P		P	10 22 10.2 +1.5
	baz=300						
B06A	Marblemount	72.47	43	eP		P	10 22 11.8 +1.7
	comp=Z,23nm,0.9s						
RAF	Rauma	72.59	333	eP		P	10 22 15.5 +5.0
G03D	McMinnville, O	73.09	47	P		P	10 22 14.6 +0.9
	baz=300						
B08A	Colville Reser	73.78	43	eP		P	10 22 19.3 +1.5
	comp=Z,7.5nm,0.9s						
I03D	Drain, OR	73.80	48	P		P	10 22 19.8 +2.0
	baz=301						
G05D	Wamic, OR	74.25	46	P		P	10 22 21.6 +1.0
	baz=301						
I04A	Tendick Farm,	74.33	48	P		P	10 22 22.2 +1.2
	baz=301,SNR=6.1						
L02D	Cave Junction,	74.42	50	P		P	10 22 23.2 +1.7
	baz=301						
SUMG	Summit	74.43	359	i P		P	10 22 22.9 +1.4
	comp=Z,11nm,0.7s						
SUMG	Summit	74.43	359	eP		P	10 22 23.1 +1.6
	comp=Z,12nm,0.7s						
SUMG	Summit	74.43	359	eP		P	10 22 23.1 +1.6
SUMG				pmax	pmax		
	comp=Z,12nm,0.7s						
C09A	Chrisman Ranch	74.68	43	eP		P	10 22 24.4 +1.5
	comp=Z,8.9nm,0.8s						
I05D	Terrebonne, OR	74.71	47	P		P	10 22 24.6 +1.4
	baz=302,SNR=5.6						
J04D	Umpqua Nationa	74.81	48	P		P	10 22 25.6 +1.7
	baz=301,SNR=8.4						
NEW	Newport	75.08	42	P		P	10 22 25.9 +0.7
	baz=303						
NEW	Newport	75.08	42	eP		P	10 22 26.6 +1.4
	comp=Z,8.5nm,0.9s						
NEW	Newport	75.08	42	eP		P	10 22 26.6 +1.4
NEW				pmax	pmax		
	comp=Z,9.0nm,0.9s						
YBH	Yreka Blue Hor	75.21	50	P		P	10 22 27.0 +0.9
	comp=Z,5.3nm,0.8s,baz=315,slow=2.9,SNR=11						
YBH	Yreka Blue Hor	75.21	50	eP		P	10 22 27.8 +1.7
	comp=Z,7.0nm,0.9s						
YBH	Yreka Blue Hor	75.21	50	eP		P	10 22 27.8 +1.7
YBH				pmax	pmax		
	comp=Z,7.0nm,0.9s						
PINE	Pine Mountain	75.24	47	eP		P	10 22 28.2 +1.9
	comp=Z,32nm,0.8s						
AKASG	Malin Array Be	75.30	321	P		P	10 22 25.9 -0.3
	comp=Z,2.5nm,0.6s,baz=53,slow=6.3,SNR=8.6						
M02C	Callahan	75.30	50	P		P	10 22 28.4 +1.8
	baz=301						
J05D	Fort Rock, OR	75.33	48	P		P	10 22 28.5 +1.7
	baz=302,SNR=12						
SCO	Scoresbysund	75.52	353	i P		P	10 22 28.3 +1.2
	comp=Z,10nm,1.1s						
SCO	Scoresbysund	75.52	353	eP		P	10 22 28.7 +1.6
	comp=Z,10nm,1.1s						
SCO	Scoresbysund	75.52	353	eP		P	10 22 28.7 +1.6
SCO				pmax	pmax		
	comp=Z,11nm,1.1s						
N02D	Trinity Center	75.61	50	P		P	10 22 29.7 +1.4
	baz=302						
M04C	Macdoel	75.74	49	P		P	10 22 30.6 +1.4
	baz=302,SNR=7.1						
K05A	Summer Lake	75.84	48	eP		P	10 22 29.6 -0.1
	comp=Z,23nm,1.0s						
HFS	Hagfors	76.18	335	P		P	10 22 30.4 -0.6
	comp=Z,0.8nm,0.5s,baz=69,slow=4.8,SNR=5.5						
F10A	Beach Ranch, E	76.28	44	eP		P	10 22 33.4 +1.4
	comp=Z,6.3nm,1.1s						
WALA	Waterton Lakes	76.39	40	eP		P	10 22 34.2 +1.6
NB2	NORSAR Subarra	76.40	336	P		P	10 22 32.0 -0.3
	comp=Z,0.4nm,0.5s,baz=42,slow=5.9						
O03D	Paynes Creek	76.55	51	P		P	10 22 34.2 +0.6
	baz=302						
MOD	Modoc Plateau	76.65	49	eP		P	10 22 35.8 +1.6
	comp=Z,5.4nm,0.8s						
BMO	Blue Mountains	76.86	45	eP		P	10 22 36.3 +1.1
	comp=Z,9.0nm,0.9s						
BMO	Blue Mountains	76.86	45	eP		P	10 22 36.3 +1.1
BMO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ORV	Oroville	77.14	51	eP		P	10 22 37.5 +0.7
	comp=Z,8.8nm,1.1s						
ORV	Oroville	77.14	51	eP		P	10 22 37.5 +0.7
ORV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
WVOR	Wild Horse Val	77.40	47	eP		P	10 22 39.5 +1.2
	comp=Z,5.3nm,0.7s						
WVOR				epP		pP	10 24 01.4 +3.2
WVOR	Wild Horse Val	77.40	47	eP		P	10 22 39.5 +1.2
WVOR				e*PP		pP	10 24 01.4 +3.2
WVOR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MSO	Missoula	77.67	42	P		P	10 22 40.3 +0.6
	baz=306						
BEKR	Beckworth	77.71	50	eP		P	10 22 41.5 +1.3
	comp=Z,12nm,0.8s						
ILGA	Ilgaz	78.12	311	eP		P	10 22 43.9 +1.5
	comp=Z,6.5nm,0.8s						
PAHR	Pah Rah Range	78.43	50	eP		P	10 22 45.1 +1.0
	comp=Z,12nm,1.1s						
VCNR	Virginia City	78.49	51	eP		P	10 22 46.0 +1.5
	comp=Z,6.1nm,0.7s						
MFID	Camas Ranch	78.55	45	eP		P	10 22 45.9 +1.3
	comp=Z,11nm,1.3s						
FFC	Flin Flon	78.61	31	eP		P	10 22 44.9 +0.4
	comp=Z,7.3nm,0.8s						
FFC	Flin Flon	78.61	31	eP		P	10 22 44.9 +0.4
FFC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PNTR	Pine Nut	78.63	51	eP		P	10 22 46.9 +1.7
	comp=Z,7.3nm,0.8s						
CMB	Columbia Colle	78.70	52	eP		P	10 22 46.6 +1.2
	comp=Z,3.9nm,0.6s						
CMB	Columbia Colle	78.70	52	eP		P	10 22 46.6 +1.2
CMB				pmax	pmax		
	comp=Z,4.0nm,0.6s						
FCC	Fort Churchill	78.80	25	eP		P	10 22 45.7 +0.3
	comp=Z,13nm,1.4s						
FCC	Fort Churchill	78.80	25	eP		P	10 22 45.7 +0.3
FCC				pmax	pmax		
	comp=Z,13nm,1.4s						
BR131	Keskin Array S	78.91	310	eP		P	10 22 47.5 +0.8
BRTR	Keskin Array B	78.91	310	P		P	10 22 47.2 +0.6
	comp=Z,3.6nm,0.7s,baz=105,slow=4.7,SNR=21						
BRTR				pP		pP	10 24 07.7 +0.8
	comp=Z,2.4nm,1.0s,baz=90,slow=4.3,SNR=6.2						
YERR	Yerington	78.92	51	eP		P	10 22 48.3 +1.5
	comp=Z,16nm,1.2s						
RAYN	Ar Rayn	79.07	291	eP		P	10 22 47.9 +0.2
	comp=Z,2nm,0.8s						
LRM	Limekiln Ridge	79.09	42	eP		P	10 22 48.8 +1.2
EGMT	Eagleton	79.23	39	P		P	10 22 48.9 +0.9
	baz=308						
EGMT	Eagleton	79.23	39	eP		P	10 22 49.0 +0.9
	comp=Z,14nm,0.9s						
BUR08	Bucovina Ar. S	79.23	320	eP		P	10 22 48.9 +0.7
BUR04	Bucovina Ar. S	79.24	320	eP		P	10 22 48.9 +0.7
DLMT	Dillon	79.29	42	eP		P	10 22 49.5 +1.0
	comp=Z,11nm,0.8s						
HLID	Hailey	79.30	45	P		P	10 22 49.9 +1.2
	baz=306						
HLID	Hailey	79.30	45	eP		P	10 22 50.4 +1.7
	comp=Z,4.8nm,0.9s						
BMN	Battle Mountai	79.40	49	eP		P	10 22 50.8 +1.5
	comp=Z,7.0nm,0.9s						
BMN	Battle Mountai	79.40	49	eP		P	10 22 50.8 +1.5
BMN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
RYN	Ryan	79.59	51	eP		P	10 22 51.8 +1.5
	comp=Z,5.4nm,0.8s						
KVN	Kaiserville	79.62	50	eP		P	10 22 51.7 +1.2
	comp=Z,8.8nm,0.7s						
KVN	Kaiserville	79.62	50	eP		P	10 22 51.7 +1.2
KVN				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BOZ	Bozeman (W)	79.69	42	P		P	10 22 51.7 +1.0
	baz=307						
NV01	Mina Array Sit	79.84	51	eP		P	10 22 52.6 +0.9
NVAR	Mina Array Bea	79.84	51	P		P	10 22 52.9 +1.1
	comp=Z,3.9nm,0.7s,baz=297,slow=5.2,SNR=27						
SFJD	Kangerlussuaq	79.89	3	P		P	10 22 51.6 +0.5
	comp=Z,7.6nm,0.6s,baz=356,slow=8.2,SNR=3.9						
NV11	Mina Array Sit	79.94	51	eP		P	10 22 53.6 +1.4
MLAC	Mammoth, Mammo	79.94	52	P		P	10 22 53.4 +1.1
	baz=304						
YHB	Horse Butte	80.45	42	eP		P	10 22 56.8 +1.9
	comp=Z,9.5nm,0.9s						
YMR	Madison River	80.63	42	eP		P	10 22 57.9 +2.1
	comp=Z,12nm,1.2s						
GCMT	Greycliff	80.66	41	eP		P	10 22 57.4 +1.6
VES	Vestal, Richgr	80.78	53	P		P	10 22 56.4 -0.1
	baz=304						
YFT	Old Faithful	80.83	42	eP		P	10 23 00.7 +3.8
	comp=Z,5.5nm,0.9s						
ASF	Jabal al Asfar	80.90	302	P		P	10 22 57.6 +0.4
	comp=Z,2.4nm,0.6s,baz=27,slow=2.3,SNR=4.7						
ASF	Jabal al Asfar	80.90	302	P		P	10 22 57.6 +0.4
ASF				pmax	pmax		
	comp=Z,1.0nm,0.4s						
YPP	Pitchstone Pla	80.96	43	eP		P	10 23 00.5 +2.9
H17A	Grant Village	81.02	42	P		P	10 23 00.6 +2.7
	baz=308						
H17A	Grant Village	81.02	42	eP		P	10 23 01.1 +3.2
CWC	Cottonwood Cre	81.11	52	P		P	10 22 58.8 +0.4
	baz=305						
IMW	Indian Meadow	81.12	43	eP		P	10 23 00.4 +1.9
FXWY	Fox Creek	81.23	43	eP		P	10 23 00.5 +1.6
ISA	Isabella, Lake	81.29	53	P		P	10 22 59.0 -0.2
	baz=305						
RLMT	Red Lodge	81.30	41	P		P	10 23 00.5 +1.3
	baz=309						
RLMT	Red Lodge	81.30	41	eP		P	10 23 00.6 +1.3
	comp=Z,20nm,1.5s						
MOOW	Moose Ponds	81.32	43	eP		P	10 23 01.3 +1.9
HVU	Hansel Valley	81.33	45	eP		P	10 23 01.1 +1.6
HVU	Hansel Valley	81.33	45	eP		P	10 23 01.1 +1.6
TPAW	Teton Pass	81.36	43	eP		P	10 23 01.4 +1.7
THZ	Tophouse	81.43	154	eP		P	10 22 59.9 +0.4
MMAI	Mount Meron Ar	81.48	304	P		P	10 23 00.8 +0.5
	comp=Z,0.7nm,0.3s,baz=54,slow=7.3,SNR=3.6						
LOHW	Long Hollow	81.48	43	eP		P	10 23 02.1 +1.8
SNOW	Snow King Moun	81.49	43	eP		P	10 23 02.3 +1.9
REDW	Red Top Meadow	81.50	43	eP		P	10 23 02.1 +1.7
DAC	Darwin (Calif)	81.53	52	eP		P	10 22 59.9 -0.7
DAC	Darwin (Calif)	81.53	52	eP		P	10 22 59.9 -0.7
R11A	Troy Canyon, C	81.63	49	P		P	10 23 02.3 +1.2
	baz=306,SNR=10						
R11A	Troy Canyon, C	81.63	49	eP		P	10 23 02.2 +1.2
BGU	Big Grassy Mou	81.69	46	eP		P	10 23 02.7 +1.4
MPMC	Manual Prospec	81.72	52	P		P	10 23 02.2 +0.6
	baz=305						
DGMT	Dagmar	81.79	36	P		P	10 23 01.9 +0.4
	baz=312						
SPUT	South Promonto	81.81	46	eP		P	10 23 03.7 +1.8
FURC	Furnace Creek,	81.90	52	P		P	10 23 03.0 +0.7
	baz=306,SNR=6.0						
LRMC	Laurel Mtn Rad	81.93	53	P		P	10 23 03.1 +0.5
	baz=305						
LAO	LASA Array	81.93	39	P		P	10 23 03.0 +0.7
	baz=311						
LAO	LASA Array	81.93	39	eP		P	10 23 03.7 +1.4
TPNV	Topopah Spring	82.02	51	P		P	10 23 03.9 +0.8
	baz=306,SNR=10						
TPNV	Topopah Spring	82.02	51	eP		P	10 23 04.0 +0.9
TPNV	Topopah Spring	82.02	51	eP		P	10 23 04.0 +0.9
EDW2	Edwards Air Fo	82.06	53	P		P	10 23 03.7 +0.5
	baz=305						
HWUT	Hardware Ranch	82.16	45	eP		P	10 23 05.2 +1.4
DUG	Dugway, Tooele	82.27	47	P		P	10 23 05.6 +1.3
	baz=307,SNR=15						
DUG	Dugway, Tooele	82.27	47	eP		P	10 23 05.7 +1.4
DUG	Dugway, Tooele	82.27	47	eP		P	10 23 05.7 +1.4
TCUT	Toone Canyon	82.55	45	eP		P	10 23 07.6 +1.7
BW06	Boulder Array	82.61	43	P		P	10 23 06.4 +0.3
	baz=309						
BW06	Boulder Array	82.61	43	eP		P	10 23 06.7 +0.6
PD31	Pinedale Array	82.61	43	eP		P	10 23 06.7 +0.6
PDAR	Pinedale Array	82.61	43	P		P	10 23 06.6 +0.5
	comp=Z,2.9nm,0.6s,baz=270,slow=3.0,SNR=40						
PDAR	Pinedale Array	82.61	43	eP		P	10 23 06.5 +0.4
GSC	Goldstone, Bar	82.61	53	P		P	10 23 06.7 +0.6
	baz=306,SNR=6.8						
GSC	Goldstone, Bar	82.61	53	eP		P	10 23 07.2 +1.1
GSC	Goldstone, Bar	82.61	53	eP		P	10 23 07.2 +1.1
SHOC	Shoshone, Teco	82.62	52	P		P	10 23 06.4 +0.4
	baz=306						
CIS	Catalina Islan	82.62	55	P		P	10 23 06.2 +0.2
	baz=305						
PSUT	Pine Spring	82.62	49	eP		P	10 23 07.6 +1.4
BFSC	Mount Baldy Ra	82.66	54	P		P	10 23 06.6 +0.3
	baz=305						
CLL	Collm	82.72	329	eP		P	10 23 09.0 +2.8
CLL	Collm	82.72	329	eP		P	10 23 09.0 +2.8
RRX	Edison Barstow	82.73	53	P		P	10 23 07.1 +0.5
	baz=306						
JLU	Jordanelle	82.84	46	eP		P	10 23 09.0 +1.6
NLU	North Lily Min	82.86	47	eP		P	10 23 09.1 +1.6
SHPR	Sheep Range	82.99	51	eP		P	10 23 09.3 +1.2
MPU	Maple Canyon	83.09	46	eP		P	10 23 09.9 +1.4
TUQ	Turquoise Moun	83.12	52	P		P	10 23 09.3 +0.6
	baz=306,SNR=7.1						
BBRC	Big Bear Solar	83.14	53	P		P	10 23 09.1 +0.2
	baz=306						
HEC	Hector,Ludlow	83.20	53	P		P	10 23 09.6 +0.5
	baz=306,SNR=6.0						
MURC	Murrieta	83.34	54	P		P	10 23 09.9 +0.2
	baz=306						
CCUT	Cedar City	83.52	49	eP		P	10 23 11.8 +1.0
GMRC	Granite Mounta	83.68	52	P		P	10 23 12.1 +0.6
	baz=306,SNR=6.4						
MSU	Marysvale	83.68	48	eP		P	10 23 13.3 +1.7
MSU	Marysvale	83.68	48	eP		P	10 23 13.3 +1.7
TMUT	Trail Mountain	83.79	47	eP		P	10 23 13.7 +1.4
109C	Camp Elliot, M	83.81	55	P		P	10 23 12.4 +0.3
	baz=306						
PFO	Pinyon Flats O	83.83	54	P		P	10 23 12.8 +0.5
	baz=306,SNR=12						
PFO	Pinyon Flats O	83.83	54	eP		P	10 23 12.9 +0.6
PFO	Pinyon Flats O	83.83	54	eP		P	10 23 12.9 +0.6
BELC	Belle Mtn. Jos	83.91	53	P		P	10 23 13.0 +0.2
	baz=306,SNR=7.9						
LCMT	Little Creek M	83.92	49	eP		P	10 23 14.0 +1.3
MTPU	Mount Pierson	83.96	48	eP		P	10 23 15.0 +1.8
P18A	Preston Nutter	84.17	46	eP		P	10 23 15.7 +1.6
GERES	GERESS Array B	84.17	327	P		P	10 23 13.5 -0.1
	comp=Z,0.3nm,0.4s,baz=17,slow=4.4,SNR=2.5						
KNB	Kanab	84.19	49	eP		P	10 23 15.9 +1.8
KNB	Kanab	84.19	49	eP		P	10 23 15.9 +1.8
BAR	Barrett	84.23	55	eP		P	10 23 14.9 +0.7
MONP2	Monument Peak	84.28	54	P		P	10 23 15.0 +0.4
	baz=306,SNR=6.3						
SRU	San Rafael Swe	84.33	46	eP		P	10 23 15.8 +1.0
SRU	San Rafael Swe	84.33	46	eP		P	10 23 15.8 +1.0
IRM	Iron Mountain	84.39	53	P		P	10 23 15.8 +0.8
	baz=307,SNR=6.4						
K22A	Casper	84.40	42	P		P	10 23 15.4 +0.4
	baz=311						
ULM	Lac du Bonnet	84.41	31	P		P	10 23 14.1 -0.6
	comp=Z,6.7nm,1.0s,baz=326,slow=6.6,SNR=5.3						
ULM	Lac du Bonnet	84.41	31	eP		P	10 23 15.6 +0.9
ULM	Lac du Bonnet	84.41	31	eP		P	10 23 15.6 +0.9
MDND	Maddock	84.45	35	P		P	10 23 15.4 +0.5
	baz=315						
MDND	Maddock	84.45	35	eP		P	10 23 16.2 +1.2
BC3	Big Chuckawall	84.48	53	P		P	10 23 16.1 +0.6
	baz=306,SNR=7.6						
IKP	In-Ko-Pah, Jac	84.63	54	P		P	10 23 16.8 +0.5
	baz=306						
RWWY	Rawlins	84.64	43	eP		P	10 23 17.4 +1.1
RSSD	Black Hills	84.78	39	P		P	10 23 17.2 +0.2
	baz=312						
B31A	Greenbush Farm	84.95	33	P		P	10 23 17.5 +0.1
	baz=316						
PDMCI	Parker Dam,Lak	84.97	52	P		P	10 23 18.4 +0.6
	baz=307						
O20A	White River Ci	85.04	45	P		P	10 23 18.5 +0.2
	baz=310,SNR=5.4						
O20A	White River Ci	85.04	45	eP		P	10 23 19.4 +1.1
Y12C	Blythe	85.05	53	P		P	10 23 18.8 +0.7
	baz=307						
GLA	Glamis	85.26	53	P		P	10 23 20.0 +0.7
	baz=307						
GLA	Glamis	85.26	53	eP		P	10 23 20.6 +1.3
GLA	Glamis	85.26	53	eP		P	10 23 20.6 +1.3
C31A	Landman Farms,	85.37	34	P		P	10 23 19.5 0.0
	baz=316						
LIT	Litokhoron	85.52	316	eP		P	10 23 21.7 +1.3
LIT	Litokhoron	85.52	316	eP		P	10 23 21.7 +1.3
PV09	Paradox Valley	85.56	46	eP		P	10 23 22.6 +1.6
A33A	Warroad	85.59	32	P		P	10 23 20.5 0.0
	baz=318						
PV10	Paradox Valley	85.69	46	eP		P	10 23 23.6 +2.0
PV04	Paradox Valley	85.76	46	eP		P	10 23 23.5 +1.6
PV05	Paradox Valley	85.84	47	eP		P	10 23 23.9 +1.6
AGMN	Agassiz Nation	85.86	32	P		P	10 23 21.8 -0.1
	baz=318						
AGMN	Agassiz Nation	85.86	32	eP		P	10 23 22.0 +0.2
N23A	Red Feather La	85.88	43	P		P	10 23 23.8 +1.4
	baz=311,SNR=6.9						
N23A	Red Feather La	85.88	43	eP		P	10 23 24.1 +1.7
PV03	Paradox Valley	85.88	46	eP		P	10 23 23.8 +1.4
PHWY	Pilot Hill	85.89	42	eP		P	10 23 23.4 +0.9
PV02	Paradox Valley	85.98	46	eP		P	10 23 24.3 +1.3
WUAZ	Wupatki	86.03	50	P		P	10 23 24.1 +0.9
	baz=308						
WUAZ	Wupatki	86.03	50	eP		P	10 23 24.6 +1.5
PV01	Paradox Valley	86.13	46	eP		P	10 23 25.0 +1.3
E31A	Nome	86.19	35	P		P	10 23 23.8 +0.3
	baz=316						
B34A	Aery, Baudette	86.26	32	P		P	10 23 23.6 -0.2
	baz=319						
C33A	Trail	86.30	33	P		P	10 23 23.8 -0.2
	baz=318						
SMCO	Snowmass	86.41	45	eP		P	10 23 26.8 +1.6
B35A	Bob, Littlefor	86.76	31	P		P	10 23 26.3 +0.1
	baz=319						
B35A	Bob, Littlefor	86.76	31	eP		P	10 23 26.8 +0.6
MVCO	Mesa Verde	86.76	47	P		P	10 23 27.4 +0.6
	baz=310						
ISCO	Idaho Springs	86.79	43	P		P	10 23 28.1 +1.2
	baz=312,SNR=6.0						
ISCO	Idaho Springs	86.79	43	eP		P	10 23 28.2 +1.3
ISCO	Idaho Springs	86.79	43	eP		P	10 23 28.3 +1.3
G31A	Conde	87.00	36	P		P	10 23 27.7 +0.3
	baz=316						
D34A	Park Rapids	87.06	33	P		P	10 23 27.7 +0.1
	baz=318						
D34A	Park Rapids	87.06	33	eP		P	10 23 28.2 +0.5
E33A	Westby DABS, E	87.12	34	P		P	10 23 28.4 +0.5
	baz=318,SNR=5.7						
C35A	Jirik Farms, M	87.15	32	P		P	10 23 27.9 -0.2
	baz=319,SNR=7.3						
S22A	4UR Ranch, Cre	87.43	46	P		P	10 23 31.3 +1.4
	baz=311						
S22A	4UR Ranch, Cre	87.43	46	eP		P	10 23 31.7 +1.8
E34A	Wadena	87.50	33	P		P	10 23 29.9 +0.2
	baz=318						
D35A	Remer	87.58	32	P		P	10 23 30.0 -0.1
	baz=319						
C36A	Pine Crest Far	87.60	31	P		P	10 23 30.3 +0.1
	baz=320						
G33A	Ortonville	87.88	35	P		P	10 23 31.7 +0.2
	baz=317						
H32A	Carlson Farm,	87.90	36	P		P	10 23 32.4 +0.7
	baz=317						
D36A	Goodland	87.90	32	P		P	10 23 31.6 0.0
	baz=320						
C37A	Embarrass	87.91	31	P		P	10 23 31.6 0.0
	baz=320						
F34A	Alexandria	87.99	34	P		P	10 23 32.3 +0.2
	baz=318						
OGNE	Ogallala	88.03	41	P		P	10 23 32.6 +0.1
	baz=314						
EYMN	Ely	88.04	31	P		P	10 23 32.7 +0.4
	baz=321,SNR=5.9						
EYMN	Ely	88.04	31	eP		P	10 23 33.1 +0.8
SDCO	Great Sand Dun	88.22	45	P		P	10 23 34.7 +1.0
	baz=312						
SDCO	Great Sand Dun	88.22	45	eP		P	10 23 35.1 +1.5
G34A	Benson	88.22	34	P		P	10 23 34.0 +0.8
	baz=318,SNR=5.5						
F35A	Swanville	88.26	33	P		P	10 23 33.6 +0.3
	baz=319						
C38A	Sawbill Land.	88.31	31	P		P	10 23 33.7 +0.1
	baz=321,SNR=8.8						
E36A	McGregor	88.36	32	P		P	10 23 34.0 +0.2
	baz=320						
TUC	Tucson	88.41	52	P		P	10 23 34.7 +0.3
	baz=309						
C39A	Grand Marais	88.71	30	P		P	10 23 35.5 +0.1
	baz=322						
G35A	Watkins	88.78	34	P		P	10 23 36.4 +0.7
	baz=319						
ECSD	EROS Data Cent	88.86	36	P		P	10 23 36.5 +0.3
	baz=317,SNR=7.2						
ECSD	EROS Data Cent	88.86	36	eP		P	10 23 36.5 +0.3
H35A	Sunnyside Ranc	89.01	34	P		P	10 23 37.6 +0.7
	baz=319,SNR=12						
KSCO	Kaye Shedlock'	89.03	43	P		P	10 23 37.4 +0.1
	baz=314						
C40A	Isle Royale Na	89.04	29	P		P	10 23 37.2 +0.3
	baz=323						
E38A	The Farm, Brul	89.05	31	P		P	10 23 37.2 +0.2
	baz=321,SNR=5.7						
E38A	The Farm, Brul	89.05	31	eP		P

E41A	Kenton	90.27	30	P		P	10 23 42.9 +0.3
	baz=323						
J36A	Seneca 1, Swea	90.27	35	P		P	10 23 43.0 +0.3
	baz=319						
J36A	Seneca 1, Swea	90.27	35	eP		P	10 23 43.6 +0.9
J37A	Redenius Farm,	90.66	35	P		P	10 23 44.8 +0.2
	baz=319						
I38A	Scanlan Farm,	90.68	33	P		P	10 23 44.8 +0.1
	baz=320						
G40A	Rib Lake	90.68	31	P		P	10 23 45.2 +0.5
	baz=322						
E42A	Champion	90.73	30	P		P	10 23 45.4 +0.6
	baz=324						
F41A	Three Lakes	90.79	31	P		P	10 23 45.6 +0.5
	baz=323						
K37A	Belmond	91.03	35	P		P	10 23 46.6 +0.4
	baz=319						
J38A	Wedel Dairy, R	91.17	34	P		P	10 23 47.2 +0.3
	baz=320						
I39A	Houston	91.19	33	P		P	10 23 46.8 -0.2
	baz=321						
J39A	Decorah	91.51	34	P		P	10 23 48.3 -0.2
	baz=321						
L38A	Oak Wood Farm,	91.83	35	P		P	10 23 50.2 +0.2
	baz=320						
M37A	Trindle Farm,	91.86	36	P		P	10 23 50.2 +0.1
	baz=319						
K39A	Oelwein	91.91	34	P		P	10 23 50.6 +0.2
	baz=321						
J41A	Loganville	92.26	33	P		P	10 23 52.1 +0.2
	baz=322						
KSU1	Kansas State U	92.26	39	P		P	10 23 52.3 +0.2
	baz=317						
K40A	Colesburg	92.27	34	P		P	10 23 52.1 +0.1
	baz=321						
N37A	Lee Faris, Mou	92.27	37	P		P	10 23 52.7 +0.6
	baz=319						
M38A	Pleasantville	92.27	36	P		P	10 23 52.7 +0.7
	baz=320						
MNTX	Cornudas Mount	92.31	49	P		P	10 23 53.0 +0.6
	baz=312						
L39A	Vinton	92.31	34	P		P	10 23 52.5 +0.4
	baz=320						
AMTX	Amarillo	92.42	45	P		P	10 23 53.7 +0.8
	baz=314						
AMTX	Amarillo	92.42	45	eP		P	10 23 54.4 +1.4
M39A	Webster	92.72	35	P		P	10 23 54.3 +0.3
	baz=320						
L40A	Anamosa	92.72	34	P		P	10 23 54.0 -0.1
	baz=321						
N39A	Derby Farms, D	93.02	36	P		P	10 23 55.8 +0.4
	baz=320						
L41A	Preston	93.05	34	P		P	10 23 55.5 0.0
	baz=322						
P37A	Lathrop	93.08	37	P		P	10 23 55.7 0.0
	baz=319						
P38A	Dawn	93.46	37	P		P	10 23 57.9 +0.4
	baz=319						
L43A	Garden Prairie	93.77	33	P		P	10 23 58.8 -0.1
	baz=323						
Q38A	Cooks Store, C	93.92	37	P		P	10 23 59.5 -0.1
	baz=319						
Q39A	Willow Grove F	94.18	37	P		P	10 24 01.0 +0.2
	baz=320						
P40A	Paris	94.28	36	P		P	10 24 01.6 +0.4
	baz=320						
R38A	Fenwick Farm,	94.36	38	P		P	10 24 01.4 -0.3
	baz=319						
O41A	Passleys Farm,	94.39	35	P		P	10 24 01.7 0.0
	baz=321						
P41A	Barry, Barry	94.65	35	P		P	10 24 03.3 +0.4
	baz=321						
Q40A	Laux Farm, Aux	94.67	37	P		P	10 24 03.1 +0.1
	baz=320						
R39A	Chumby, Stover	94.71	38	P		P	10 24 03.0 -0.2
	baz=320						
TX31	Lajitas Ar. Si	94.98	50	eP		P	10 24 05.8 +1.0
TXAR	Lajitas Array	94.98	50	P		P	10 24 05.5 +0.7
	comp=Z,2.7nm,0.7s,baz=289,slow=3.1,SNR=28						
T38A	Diamond	95.02	39	P		P	10 24 04.6 -0.1
	baz=319						
S39A	Bolivar	95.03	38	P		P	10 24 04.4 -0.4
	baz=319						
Q41A	Truxton	95.12	36	P		P	10 24 05.3 +0.2
	baz=321						
R41A	Rosebud	95.56	37	P		P	10 24 07.1 0.0
	baz=321						
CCM	Cathedral Cave	95.81	37	P		P	10 24 08.3 +0.1
	baz=321						
U39A	Green Forest	95.94	39	P		P	10 24 08.7 -0.2
	baz=319						
P44A	Sand Creek, Wi	95.98	34	P		P	10 24 08.4 -0.6
	baz=323						
V39A	Pettigrew	96.26	40	P		P	10 24 09.9 -0.5
	baz=319						
U40A	Yellville	96.29	39	P		P	10 24 10.2 -0.3
	baz=320						
R43A	Red Bud	96.29	36	P		P	10 24 09.5 -0.9
	baz=322						
P45A	Graceland, Par	96.34	34	P		P	10 24 09.8 -0.8
	baz=323						
TORD	Torodi Ar. Bea	117.52	310	PKP		PKPdf	10 29 25.1 -1.1
	comp=Z,0.4nm,0.6s,baz=357,slow=2.5,SNR=6.2						
SAML	Samuel	149.19	43	ePKPdf		PKPdf	10 30 24.6 0.0
SAML				ePKPbc		PKPbc	10 30 29.1 0.0
LPAZ	La Paz	151.36	60	PKPbc		PKPbc	10 30 34.9 -0.1
	comp=Z,4.6nm,0.8s,baz=357,slow=3.4,SNR=15						

IDC ***13*** *10:13:46.0±1.1, 35°.98N×69°.10E, h0km, mb3.6/5, mb1 3.7/9, mb1mx3.5/71, mbtmp3.6/9, ML3.5/3, MS3.1/1, Ms1 3.1/1, ms1mx2.2/71, Error ellipse: s-maj=27.7km s-min=18.1km az=119.0*

ISCJB ***13*** *10:13:49.4±0.8, 36°.17N±0°.07×68°.87E±0°.08, h35km, mb3.4/4, MS3.1/1, Error ellipse: s-maj=11.2km s-min=6.9km az=142.5*

NNC ***13*** *10:13:51.6±1.4, 36°.42N×68°.84E, h0km, mb4.2, mpv3.8, Error ellipse: s-maj=12.2km s-min=10.3km az=130.0*

ISC 13 10:13:51.5±1.1, 36°.1N±0°.1×68°.92E±0°.09, h35km, n15, σ1§68/19, mb3.4/4, 6C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	5.31	42	⇑Pn	Pn	10 15 10.2	+1.8
	3.3nm,0.3s						
SFK				⇑Sn	Sn	10 16 11.1	+2.6
	21nm,0.5s						
MNAS	Manas	6.94	22	⇑Pn	Pn	10 15 31.5	+0.8
	3.2nm,0.3s						
MNAS				⇓Sn	Sn	10 16 49.9	+1.3
	4.9nm,0.6s						
KK31	Karatay Array	7.08	9	⇓Pn	Pn	10 15 32.4	-0.2
	1.5nm,0.3s,baz=198,slow=15,SNR=30						
KK31				⇑Sn	Sn	10 16 51.8	-0.1
	3.1nm,0.5s,baz=189,slow=23,SNR=3.9						
AAK	Ala-Archa	7.81	32	Pn	Pn	10 15 43.1	+0.4
	2.5nm,0.3s,baz=192,slow=7.1,SNR=14						
AAK				Sn	Sn	10 17 08.2	-1.7
	0.1nm,0.3s,baz=147,slow=1.6,SNR=2.3						
AAK				Lg	Lg	10 17 52.2	
	0.8nm,0.3s,baz=210,slow=8.1,SNR=3.4						
AAK	Ala-Archa	7.81	32	⇑Pn	Pn	10 15 43.2	+0.5
	2.9nm,0.3s						
AAK				⇑Sn	Sn	10 17 11.8	+1.9
	3.4nm,0.6s						
GEYT	Alibeck	8.83	285	Sn	Sn	10 17 36.1	+1.3
	9.3nm,0.3s,baz=104,slow=24,SNR=2.7						
MKAR	Makanchi Array	14.62	39	Pn	Pn	10 17 13.5	-2.1
	0.1nm,0.3s,baz=225,slow=14,SNR=2.9						
KURBB	Kurchatov Arra	16.07	23	Pn	Pn	10 17 32.1	-2.5
	0.1nm,0.3s,baz=211,slow=10,SNR=4.1						
BVAR	Borovoye Array	16.94	3	Pn	Pn	10 17 42.6	-2.9
	baz=181,slow=10,SNR=2.1						
ZALV	Zalesovo Beam	20.99	27	P	P	10 18 31.1	-0.3
	1.8nm,0.5s,baz=215,slow=10,SNR=6.3						
IDI	Anoyia	35.54	282	LR	LR	10 37 26.8	
	comp=Z,32nm,20.6s,baz=262,slow=40						
HFS	Hagfors	42.34	322	P	P	10 21 43.0	+1.3
	1.2nm,0.6s,baz=79,slow=7.6,SNR=4.1						
TORD	Torodi Ar. Bea	64.03	268	P	P	10 24 22.0	+0.1
	0.1nm,0.3s,baz=54,slow=5.6,SNR=6.0						
WRA	Warramunga Arr	83.23	121	P	P	10 26 12.7	-1.8
	0.3nm,0.8s,baz=324,slow=5.1,SNR=3.1						
ASAR	Alice Springs	85.43	124	P	P	10 26 26.0	+0.5
	0.1nm,0.5s,baz=312,slow=4.9,SNR=4.7						

BJI ***13*** *10:31:41.8, 53°.97N×159°.31E, h134km, mb5.0/51, mB4.8/30*

KRSC ***13*** *10:31:45.9±0.9, 53°.58N×159°.27E, h140km±9km, ML5.1*

MOS ***13*** *10:31:46.1±0.9, 53°.70N×158°.75E, h148km, mb4.7/108, Error ellipse: s-maj=6.4km s-min=3.3km az=82.7*

NEIC ***13*** *10:31:47.0±0.1, 53°.81N×158°.70E, mb4.8/229, Error ellipse: s-maj=3.5km s-min=1.9km az=166.0*

ISCJB ***13*** *10:31:46.2±0.1, 53°.72N±0°.02×158°.82E±0°.02, h148km±1km, mb4.7/327, Error ellipse: s-maj=3.6km s-min=2.1km az=160.8*

GCMT ***13*** *10:31:47.0±0.3, 53°.81N×159°.16E, h143km±4km, MW4.9/83, Moment Tensor Solution. s18,c20; s83,c124; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-0.06±.12; Mθθ-1.24±.13; Mφφ 1.30±.13; Mrθ-1.51±.09; Mθφ-0.34±.12; Mφr-1.83±.08; Best double couple: M=2.71200×10^16 NP1:φs38.00000°, δ89.00000°, λ-61.00000°. NP2: φs129.00000°, δ29.00000°, λ-179.00000°. Principal axes: T 2.6710, Plg38.0000°, Azm102.0000°; N 0.0820, Plg29.0000°, Azm218.0000°; P -2.7540, Plg39.0000°, Azm334.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

IDC ***13*** *10:31:47.3±0.3, 53°.78N×158°.76E, h142km±2km, mb4.4/43, mb1 4.4/47, mb1mx4.4/76, mbtmp4.8/47, MS3.3/16, Ms1 3.3/16, ms1mx3.0/70 Error ellipse: s-maj=8.6km s-min=6.1km az=144.0*

ISC 13 10:31:46.8±0.3, 53°.67N±0°.03×159°.00E±0°.03, h142km±2km, h141km; pP-P, n984, σ1§30/1078, mb4.8/330, 20C-30D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRX	Arik	0.38	214	eP	Pn	10 32 07.2	+0.4
KRX	Arik	0.38	214	PN	Pn	10 32 07.2	+0.4
KRER	Koryakskii	0.40	203	eP	Pn	10 32 07.0	0.0
KRER	Koryakskii	0.40	203	PN	Pn	10 32 07.0	0.0
SDLR	Sedlovina	0.40	190	eP	Pn	10 32 06.7	-0.2
SDLR	Sedlovina	0.40	190	PN	Pn	10 32 06.7	-0.2
AVH	Avacha	0.43	201	i P	Pn	10 32 07.3	+0.3
AVH	Avacha	0.43	201	PN	Pn	10 32 07.3	+0.3
KOK	Koryaka	0.44	210	eP	Pn	10 32 07.4	+0.4
KOK	Koryaka	0.44	210	PN	Pn	10 32 07.4	+0.4
KII	Karymskiy	0.45	36	eP	Pn	10 32 06.9	-0.1
KII	Karymskiy	0.45	36	PN	Pn	10 32 06.9	-0.1
UGLR	Uglovaya	0.47	193	i P	Pn	10 32 07.3	+0.1
UGLR	Uglovaya	0.47	193	PN	Pn	10 32 07.3	+0.1
NLC	Nalytchevo	0.54	157	eP	Pn	10 32 06.8	-0.6
NLC				eS	Sn	10 32 22.3	-0.6
NLC	Nalytchevo	0.54	157	PN	Pn	10 32 06.8	-0.6
NLC				S	Sn	10 32 22.3	-0.6
GNL	Ganaly	0.63	273	eP	Pn	10 32 08.0	-0.1
GNL	Ganaly	0.63	273	PN	Pn	10 32 08.0	-0.1
DALK	Dalny	0.66	193	eP	Pn	10 32 07.8	-0.3
DALK				eS	Sn	10 32 23.5	-0.7
DALK	Dalny	0.66	193	PN	Pn	10 32 07.8	-0.3
DALK				S	Sn	10 32 23.5	-0.7
PET	Petropavlovsk	0.68	198	ePn	Pn	10 32 08.0	-0.3
PET				eSn	Sn	10 32 23.9	-0.5
PET	Petropavlovsk	0.68	198	i P	Pn	10 32 08.1	-0.1
PET				eS	Sn	10 32 24.3	-0.2
PET	Petropavlovsk	0.68	198	κePN	Pn	10 32 07.4	-0.8
PET				eS	Sn	10 32 24.0	-0.5
PET				pmax	pmax		
	comp=Z,14μm,1.4s						
PET				pmax	pmax		
	comp=Z,14μm,0.6s						
PET				pmax	pmax		
	comp=Z,500nm,2.6s						
PET				smax	smax		
	comp=N,16μm,0.6s						
PET				smax	smax		
	comp=N,18μm,0.6s						
PET				smax	smax		
	comp=E,33μm,2.4s						
PET				smax	smax		
	comp=N,6μm,10.0s						
PET				smax	smax		
	comp=E,16μm,11.9s						
PET				smax	smax		
	comp=E,7μm,0.6s						
SPN	Mys Shipunski	0.84	133	eP	Pn	10 32 08.1	-1.3
SPN				eS	Sn	10 32 24.2	-2.3
SPN	Mys Shipunski	0.84	133	PN	Pn	10 32 08.1	-1.3
I44RU	PETROPAVLOVSK-	0.95	234	P	Pn	10 32 10.0	-0.4
	baz=62,slow=13,SNR=1.4						
I44RU				S	Sn	10 32 28.2	0.0
	baz=79,slow=42						
PEA0B	Petropavlovsk-	0.96	235	ePn	Pn	10 32 10.6	+0.1
PEA0B				eSn	Sn	10 32 28.9	+0.5
PETK	Petropavlovsk-	0.96	235	P	Pn	10 32 10.6	+0.2
	comp=E,697nm,0.3s,baz=66,slow=14						
PETK				S	Sn	10 32 29.1	+0.7
	comp=E,201nm,0.3s,baz=64,slow=18,SNR=19						
PETK				LR	LR	10 32 45.1	
	comp=E,1μm,18.4s,baz=232,slow=62						
PETK	Petropavlovsk-	0.96	235	ePn	Pn	10 32 10.3	-0.1
PETK				eSn	Sn	10 32 28.9	+0.5
KRMR	Karymshinskiy	0.99	212	eP	Pn	10 32 10.7	0.0
KRMR				eS	Sn	10 32 28.9	+0.1
KRMR	Karymshinskiy	0.99	212	PN	Pn	10 32 10.7	0.0
KRMR				S	Sn	10 32 28.9	+0.1
GRL	Gorelyy	1.25	207	eP	Pn	10 32 13.9	+0.6
GRL	Gorelyy	1.25	207	PN	Pn	10 32 13.9	+0.6
RUS	Russkaya	1.27	194	i P	Pn	10 32 12.8	-0.5
RUS				eS	Sn	10 32 32.5	-1.0
RUS	Russkaya	1.27	194	PN	Pn	10 32 12.8	-0.5
RUS				S	Sn	10 32 32.5	-1.0
MTVR	Mutnovka	1.29	203	eP	Pn	10 32 14.0	+0.4
MTVR	Mutnovka	1.29	203	PN	Pn	10 32 14.0	+0.4
APC	Apacha	1.33	237	eP	Pn	10 32 14.8	+0.9
APC				eS	Sn	10 32 35.6	+1.0
APC	Apacha	1.33	237	PN	Pn	10 32 14.8	+0.9
APC				S	Sn	10 32 35.6	+1.0
ASAK	Asacha	1.45	208	eP	Pn	10 32 15.9	+0.6
ASAK	Asacha	1.45	208	PN	Pn	10 32 15.9	+0.6
KZV	Kizimen	1.63	27	eP	Pn	10 32 17.9	+0.6
KZV	Kizimen	1.63	27	PN	Pn	10 32 17.9	+0.6
TUMD	Tumrok D	1.74	27	eP	Pn	10 32 18.8	+0.4
TUMR	Tumrok	1.75	22	i P	Pn	10 32 19.7	+1.1
TUMR	Tumrok	1.75	22	PN	Pn	10 32 19.7	+1.1
MKZ	Mys Kozlova	1.84	60	i P	Pn	10 32 18.8	-0.6
MKZ				eS	Sn	10 32 42.1	-2.3
MKZ	Mys Kozlova	1.84	60	PN	Pn	10 32 18.8	-0.6
KDTR	Khodutka, Kamc	1.95	197	eP	Pn	10 32 20.2	-0.5
KDTR				eS	Sn	10 32 45.1	-1.6
MIPR	Malaya Ipel'ka	1.95	225	P	Pn	10 32 21.5	+0.7
MIPR	Malaya Ipel'ka	1.95	225	PN	Pn	10 32 21.5	+0.7
KMNR	Kamenistaya	2.21	18	i P	Pn	10 32 25.3	+1.3
KMNR	Kamenistaya	2.21	18	PN	Pn	10 32 25.3	+1.3
ESO	Esso	2.27	356	eP	Pn	10 32 25.3	+0.7
ESO	Esso	2.27	356	PN	Pn	10 32 25.3	+0.7
KPT	Kopyto	2.41	17	eP	Pn	10 32 27.3	+0.9
KPT	Kopyto	2.41	17	PN	Pn	10 32 27.3	+0.9
KIRR	Kirishev	2.42	18	eP	Pn	10 32 28.1	+1.5
KIRR	Kirishev	2.42	18	PN	Pn	10 32 28.1	+1.5
BZMR	Bezymyannaya	2.43	20	eP	Pn	10 32 28.1	+1.4
BZMR	Bezymyannaya	2.43	20	PN	Pn	10 32 28.1	+1.4
KOZ	Kozyrevsk	2.45	12	eP	Pn	10 32 27.9	+1.1
KOZ	Kozyrevsk	2.45	12	PN	Pn	10 32 27.9	+1.1
BZWR	Bezymyannyi-We	2.46	20	eP	Pn	10 32 28.5	+1.4
BZWR	Bezymyannyi-We	2.46	20	PN	Pn	10 32 28.5	+1.4
BZGR	Bezymyannyi-Gr	2.48	23	eP	Pn	10 32 28.6	+1.3
BZGR	Bezymyannyi-Gr	2.48	23	PN	Pn	10 32 28.6	+1.3
ZLN	Zelenaya	2.57	23	eP	Pn	10 32 30.6	+2.1
ZLN	Zelenaya	2.57	23	PN	Pn	10 32 30.6	+2.1
PAU	Pauzhetka	2.58	212	eP	Pn	10 32 29.6	+1.1
PAU	Pauzhetka	2.58	212	PN	Pn	10 32 29.6	+1.1
LGNR	Loginova	2.61	21	i P	Pn	10 32 30.7	+1.6
LGNR	Loginova	2.61	21	PN	Pn	10 32 30.7	+1.6
CIRR	Tsirk	2.65	22	eP	Pn	10 32 31.0	+1.5
CIRR	Tsirk	2.65	22	PN	Pn	10 32 31.0	+1.5
KRSR	Krestovskiy	2.71	19	eP	Pn	10 32 30.9	+0.7
KRSR	Krestovskiy	2.71	19	PN	Pn	10 32 30.9	+0.7
KLY	Klyuchi	2.82	19	eP	Pn	10 32 33.5	+2.1
KLY				eS	Sn	10 33 07.9	+2.1
KLY	Klyuchi	2.82	19	PN	Pn	10 32 33.5	+2.1
KLY				S	Sn	10 33 07.9	+2.1
BDR	Baidarnaya	3.17	23	eP	Pn	10 32 37.8	+1.8
BDR	Baidarnaya	3.17	23	PN	Pn	10 32 37.8	+1.8
SRKR	Sorokina	3.24	22	eP	Pn	10 32 39.1	+2.2
SRKR	Sorokina	3.24	22	PN	Pn	10 32 39.1	+2.2
SMKR	Semkarok	3.25	25	eP	Pn	10 32 38.2	+1.2
SMKR	Semkarok	3.25	25	PN	Pn	10 32 38.2	+1.2
KBG	Krutoberegovo	3.36	38	eP	Pn	10 32 38.7	+0.4
KBG				eS	Sn	10 33 16.2	-2.0
KBG	Krutoberegovo	3.36	38	PN	Pn	10 32 38.7	+0.4
KBG				S	Sn	10 33 16.2	-2.0
KBTR	Krutoberegovo	3.37	39	i P	Pn	10 32 38.8	+0.4
KBTR				eS	Sn	10 33 16.0	-2.4
KBTR	Krutoberegovo	3.37	39	PN	Pn	10 32 38.8	+0.4
KBTR				S	Sn	10 33 16.0	-2.4
SKR	Severo-Kuril's	3.48	212	eP	Pn	10 32 40.5	+0.6
SKR	Severo-Kuril's	3.48	212	PN	Pn	10 32 40.5	+0.6
BKI	Bering	4.35	66	eP	Pn	10 32 50.1	-1.2
BKI	Bering	4.35	66	PN	Pn	10 32 50.1	-1.2
MA2	Magadan	7.46	326	P	Pn	10 33 31.9	-0.8
	comp=E,0.9nm,0.3s,baz=127,slow=9.0,SNR=18						
MA2				S	Sn	10 34 59.5	+3.6
	baz=18,slow=20,SNR=1.2						
MA2	Magadan	7.46	326	ePn	Pn	10 33 33.0	+0.2
MA2				S	Sn	10 34 59.5	+3.6
MA2	Magadan	7.46	326	i PN	Pn	10 33 32.8	0.0
MA2				pmax	pmax		
	comp=Z,49nm,1.3s						
SMY	Shemya	9.11	90	ePn	Pn	10 33 56.3	+1.3
SMY				eSn	Sn	10 35 32.1	-3.7
SMY	Shemya	9.11	90	ePN	Pn	10 33 56.3	+1.3
SEY	Seymchan	9.91	342	P	Pn	10 34 04.9	-0.7
	comp=Z,0.1nm,0.3s,baz=147,slow=13,SNR=39						
SEY				S	Sn	10 36 02.1	+7.1
	comp=Z,0.2nm,0.3s,baz=343,slow=19,SNR=1.7						
SEY	Seymchan	9.91	342	⇓ePN	Pn	10 34 05.9	+0.4
TYV	Tymovskoe	10.40	261	ePN	Pn	10 34 15.2	+3.0
TYV				eS	Sn	10 36 07.8	+0.8
TYV				pmax	pmax		
	comp=Z,17nm,0.9s						
TYV				pmax	pmax		
	comp=Z,200nm,2.8s						
TYV				smax	smax		
	comp=E,32nm,0.5s						
NKL	Nikolayevsk	10.95	275	ePN	Pn	10 34 18.0	-1.3
NKL				MLR	MLR		
	comp=Z,500nm,16.0s						
KUR	Kuril'sk	11.11	225	ePN	Pn	10 34 24.5	+2.9
KUR				S	Sn	10 36 28.6	+4.4
KUR				pmax	pmax		
	comp=Z,19nm,0.4s						
KUR				smax	smax		
	comp=N,21nm,0.4s						
KUR				smax	smax		
	comp=E,10.0nm,0.4s						
UGL	Uglegorsk	11.53	253	ePN	P	10 34 32.4	-2.4
UGL				pmax	pmax		
	comp=Z,71nm,0.6s						
YSS	Yuzh-Sakhalins	12.35	244	ePn	Pn	10 34 38.3	+0.5
YSS	Yuzh-Sakhalins	12.35	244	⇓ePN	Pn	10 34 39.9	+2.1
YSS				eS	Sn	10 36 54.8	+0.8
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS				MLR	MLR		
	comp=Z,200nm,15.0s						
SHO	Shikotan	12.65	224	ePN	Pn	10 34 35.2	-6.5
SHO				pmax	pmax		
	comp=Z,17nm,0.7s						
SHO				pmax	pmax		
	comp=N,12nm,0.3s						
SHO				pmax	pmax		
	comp=E,9.0nm,0.3s						
GRNR	Gornyy	14.13	267	eP	P	10 35 03.8	+0.1
GRNR				pmax	pmax		
	comp=N,170nm,1.0s						
GRNR				pmax	pmax		
	comp=E,210nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,360nm,1.0s						
ASAJ	Asahikawa	14.38	235	P	P	10 35 05.2	-1.4
	comp=Z,2.6nm,0.3s,baz=58,slow=9.3,SNR=26						
ASAJ	Asahikawa	14.38	235	ePn	P	10 35 06.0	-0.5
BILL	Bilibino	14.83	11	ePn	Pn	10 35 09.7	+0.6
BILL	Bilibino	14.83	11	d iP	Pn	10 35 08.9	-0.2
BILL				pmax	pmax		
	comp=Z,34nm,1.0s						
ERM	Erimo	15.74	229	ePn	Pn	10 35 19.8	-0.8
	comp=Z,25nm,0.6s						
ERM	Erimo	15.74	229	⇑eP	Pn	10 35 19.5	-1.0
ERM				pmax	pmax		
	comp=Z,10.0nm,0.4s						
ATKA	Atka Island	16.19	84	ePn	P	10 35 27.2	+0.7
	comp=Z,53nm,0.8s						
TEY	Ternei	16.90	248	eP	Pn	10 35 37.2	+2.5
TEY				pmax	pmax		
	comp=N,47nm,1.0s						
TEY				pmax	pmax		
	comp=E,69nm,1.0s						
TEY				pmax	pmax		
	comp=Z,138nm,1.0s						
KLR	Kul'dur	17.50	266	P	P	10 35 41.4	+0.4
	comp=Z,0.1nm,0.3s,baz=64,slow=8.7,SNR=30						
KLR				S	Sn	10 39 02.9	+5.3
	comp=Z,0.0nm,0.3s,baz=73,slow=14,SNR=1.9						
KLR				ScP	ScP	10 43 35.7	+0.6
	baz=97,slow=2.6						
KLR	Kul'dur	17.50	266	d iP	Pn	10 35 42.3	+0.4
YAK	Yakutsk	17.57	310	eP	P	10 35 41.1	-0.4
	comp=Z,200nm,0.8s						
YAK	Yakutsk	17.57	310	d iP	P	10 35 41.0	-0.5
YAK				eS	S	10 38 53.3	-3.4
YAK				pmax	pmax		
	comp=Z,218nm,1.2s						
YAK				pmax	pmax		
	comp=E,127nm,1.2s						
YAK				pmax	pmax		
	comp=N,60nm,1.1s						
YAK				smax	smax		
	comp=N,77nm,2.2s						
YAK				smax	smax		
	comp=E,56nm,2.0s						
SPIA	Saint Paul Isl	17.72	66	eP	Pn	10 35 45.1	+0.7
	comp=E,35nm,0.9s						
ZEA	Zeya	18.72	283	eP	P	10 35 54.6	+0.4
ZEA				pmax	pmax		
	comp=N,31nm,0.8s						
ZEA				pmax	pmax		
	comp=E,71nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,100nm,1.0s						
NIKH	Nikolski High	19.13	79	eP	P	10 35 59.8	+1.1
	comp=Z,296nm,0.8s						
CLNS	Chul'man	19.57	293	eP	P	10 36 03.9	+0.4
CLNS				eS	S	10 39 35.9	-0.7
CLNS				pmax	pmax		
	comp=Z,66nm,0.9s						
CLNS				pmax	pmax		
	comp=E,54nm,1.0s						
CLNS				pmax	pmax		
	comp=N,45nm,0.9s						
CLNS				smax	smax		
	comp=N,65nm,11.3s						
CLNS				smax	smax		
	comp=E,73nm,14.9s						
USRK	Uss

comp=E,3.8nm,0.7s,baz=101,slow=5.1,SNR=8.8
TIXI Tiksi 22.28 335 *e*P **P 10 36 31.5 -0.4**
comp=E,21nm,0.8s
TIXI PcP **PcP 10 40 21.3 -0.6**
TIXI ScP **ScP 10 43 46.0 +0.1**
TIXI Tiksi 22.28 335*d i*P **P 10 36 30.8 -1.1**
TIXI pmax pmax
comp=Z,37nm,1.2s
MJB9 Matsu-Tunnel 22.41 229 *e*P **P 10 36 34.0 +0.3**
comp=Z,49nm,0.7s
MAJO Matsushiro 22.41 229 *e*P **P 10 36 34.0 +0.3**
comp=Z,49nm,0.7s
MAJO Matsushiro 22.41 229*c i*P **P 10 36 33.7 +0.1**
MAJO pmax pmax
comp=Z,49nm,0.7s
MAT Matsushiro 22.41 229 P **P 10 36 33.7 +0.1**
MJAR Matsushiro Arr 22.41 229 P **P 10 36 34.0 +0.4**
comp=Z,16nm,0.7s,baz=17,slow=8.3,SNR=46
MJAR ScP **ScP 10 43 47.1 +0.3**
comp=Z,1.6nm,0.7s,baz=161,slow=0.1,SNR=5.5
RDOG Red Dog Mine 22.96 36 *e*P **P 10 36 39.3 +0.9**
comp=Z,52nm,1.1s
INU Inuyama 23.94 229 *e*P **P 10 36 48.1 +0.4**
CN2 Changchun 24.02 259 *e*P **P 10 36 47.6 -0.7**
CN2 *es*P sP 10 37 33.0 -1.1
CN2 *e*S **S 10 40 49.8 -5.2**
CN2 pmax pmax
comp=Z,20nm,1.0s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,100nm,14.0s
CN2 LR LR
comp=Z,160nm,14.0s
CN2 LR LR
comp=Z,150nm,17.0s
HIA Hailar 24.62 276 *e*P **P 10 36 52.9 -0.9**
comp=Z,34nm,0.8s
HIA Hailar 24.62 276 *e*P **P 10 36 52.9 -0.9**
HIA pmax pmax
comp=Z,34nm,0.8s
SVW2 Sparrevohn 25.12 55 *e*P **P 10 37 00.6 +2.4**
comp=Z,15nm,1.4s
BOD Bodaibo 25.30 298 *e*P **P 10 36 58.9 -0.9**
BOD pmax pmax
comp=Z,20nm,1.0s
SPU Mount Spurr 26.82 54 *e*P **P 10 37 15.1 +1.6**
SPU *e*PP **PP 10 38 15.6 -1.1**
KS01 Wonju Array Si 26.84 246 *e*P **P 10 37 14.1 +0.3**
KS01 *e*PcP **PcP 10 40 34.3 +1.8**
KSRS Korea Array 26.84 245 P **P 10 37 14.2 +0.4**
comp=Z,5.8nm,0.8s,baz=39,slow=8.9,SNR=16
KSRS ScP **ScP 10 43 59.2 +0.1**
comp=Z,2.8nm,0.9s,baz=48,slow=4.1,SNR=8.0
KSRS LR LR 10 47 56.6
comp=Z,24nm,18.6s,baz=52,slow=36
KSAR Wonju Array Be 26.87 246 P **P 10 37 14.2 +0.1**
KSAR ScP **ScP 10 43 59.2 0.0**
KSAR Wonju Array Be 26.87 246 P **P 10 37 14.2 +0.1**
KDAK Kodiak Island 27.10 62 P **P 10 37 15.6 -0.3**
comp=Z,5.7nm,0.5s,baz=299,slow=8.4,SNR=8.0
KDAK Kodiak Island 27.10 62 *i*P **P 10 37 16.4 +0.5**
TRF Thorofare Moun 27.46 49 *e*P **P 10 37 20.0 +0.6**
comp=Z,11nm,1.2s
COLD Coldfoot 27.54 41 *e*P **P 10 37 20.3 +0.5**
comp=Z,3.0nm,0.9s
BRLK Bradley Lake 27.59 57 *e*P **P 10 37 20.8 +0.5**
comp=Z,9.8nm,0.9s
TOLK Toolik Lake Re 27.90 38 P **P 10 37 23.3 +0.2**
baz=264
TOLK Toolik Lake Re 27.90 38 *e*P **P 10 37 23.7 +0.7**
comp=Z,15nm,1.3s
SEW Seward 28.24 56 *e*P **P 10 37 25.9 -0.2**
comp=Z,11nm,1.0s
WRH Wood River Hil 28.38 47 *e*P **P 10 37 28.1 +0.9**
comp=Z,5.7nm,0.8s
CCB Clear Creek Bu 28.49 46 *e*P **P 10 37 29.5 +1.3**
comp=Z,6.3nm,1.2s
SML Sawmill 28.52 52 *e*P **P 10 37 29.4 +0.8**
comp=Z,11nm,0.8s
SML Sawmill 28.52 52 *e*P **P 10 37 29.4 +0.8**
SML pmax pmax
comp=Z,11nm,0.8s
JNU Nakatsue 28.66 236 P **P 10 37 29.0 -1.1**
comp=Z,30nm,1.0s,baz=38,slow=3.6,SNR=7.8
JNU LR LR 10 48 23.1
comp=Z,32nm,18.8s,baz=112,slow=35
JNU Nakatsue 28.66 236 *e*P **P 10 37 30.9 +0.8**
comp=Z,26nm,0.9s
ILAR Eielson Array 28.88 46 P **P 10 37 31.6 0.0**
comp=Z,3.0nm,0.6s,baz=264,slow=8.2,SNR=9.9
ILAR pP **pP 10 38 03.6 +1.9**
comp=Z,2.4nm,0.8s,baz=264,slow=8.2,SNR=3.0
ILAR PcP **PcP 10 40 36.8 -0.3**
comp=Z,0.4nm,0.5s,baz=293,slow=3.8,SNR=4.6
ILAR ScP **ScP 10 44 03.7 -1.3**
comp=Z,1.2nm,1.1s,baz=291,slow=3.4,SNR=5.6
ILB Eielson Array 28.88 46 *e*P **P 10 37 32.0 +0.3**
IL1 Eielson Array 28.88 46 *e*P **P 10 37 32.1 +0.4**
SCM Sheep Creek Mo 28.99 52 *e*P **P 10 37 33.1 +0.3**
comp=Z,15nm,0.9s
SCM Sheep Creek Mo 28.99 52 *e*P **P 10 37 33.1 +0.3**
SCM pmax pmax
comp=Z,15nm,0.9s
DIV Divide 29.84 53 *e*P **P 10 37 40.8 +0.5**
comp=Z,8.3nm,0.8s
BMRM Bremner River 30.43 53 *e*P **P 10 37 46.4 +0.9**
comp=Z,16nm,1.0s
CRQM Cirque 31.18 53 *e*P **P 10 37 53.7 +1.6**
comp=Z,12nm,0.7s
EGAK Eagle 31.32 45 *e*P **P 10 37 52.8 -0.3**
comp=Z,6.1nm,0.6s
TGL Tana Glacier 31.32 53 *e*P **P 10 37 54.4 +1.0**
comp=Z,9.7nm,1.0s
BALM Baldy 31.49 53 *e*P **P 10 37 55.0 +0.1**
comp=Z,6.5nm,1.2s
BALM Baldy 31.49 53 *e*P **P 10 37 55.0 +0.1**
BALM pmax pmax
comp=Z,7.0nm,1.2s
BJI Beijing 31.78 262⇓*e*P **P 10 37 57.6 +0.1**
BJI pP **pP 10 38 24.9 -2.8**
BJI pmax pmax
comp=Z,22nm,0.8s
ULN Ulaanbaatar 32.74 281 *e*P **P 10 38 05.6 -0.4**
comp=Z,8.5nm,1.0s
ULN Ulaanbaatar 32.74 281*d i*P **P 10 38 04.9 -1.1**
ULN pmax pmax
comp=Z,9.0nm,1.0s
TLY Talaya 32.91 289 *e*P **P 10 38 07.5 +0.3**
comp=Z,9.4nm,0.9s
TLY *e*PcP **PcP 10 40 49.5 +1.4**
TLY Talaya 32.91 289 *e*P **P 10 38 07.9 +0.7**
TLY pmax pmax
comp=Z,8.0nm,0.8s
SONA1 Songino Array 33.13 282 *e*P **P 10 38 08.7 -0.6**
SONA1 *e*PcP **PcP 10 40 49.2 +0.3**
SONM Songino Array 33.14 282 P **P 10 38 08.5 -0.9**
comp=Z,7.2nm,0.7s,baz=63,slow=7.6,SNR=38
SONM PcP **PcP 10 40 48.7 -0.2**
comp=Z,3.8nm,0.5s,baz=44,slow=1.3,SNR=13
SONM ScP **ScP 10 44 19.8 +0.1**
comp=Z,6.2nm,0.8s,baz=81,slow=2.0,SNR=21
ZAK Zakamensk 33.70 288 *e*P **P 10 38 13.1 -1.1**
ZAK *e* 10 40 48.8
ZAK pmax pmax
comp=Z,6.0nm,1.2s
TIA Tai'an 33.80 256 P **P 10 38 15.0 -0.1**
TIA pmax pmax
comp=Z,10.0nm,0.8s
INK Inuvik 33.82 38 P **P 10 38 15.4 +0.6**
comp=Z,11nm,0.8s,baz=289,slow=9.2,SNR=24
INK Inuvik 33.82 38 *e*P **P 10 38 16.0 +1.2**
comp=Z,9.7nm,0.8s
INK Inuvik 33.82 38 *e*P **P 10 38 16.0 +1.2**
INK pmax pmax
comp=Z,10.0nm,0.8s
HHC Hu-ho-hao-te 34.01 267 *e*P **P 10 38 17.3 +0.3**
HHC S **S 10 43 31.1 -0.5**
HHC pmax pmax
comp=Z,12nm,1.0s
HHC pmax pmax
comp=Z,62nm,4.2s
MOY Mondy 34.40 291 *e*P **P 10 38 20.4 +0.2**
MOY pmax pmax
comp=Z,20nm,1.8s
H11N2 WAKE ISLAND Hy 34.42 167 T T 11 14 24.4
baz=352,slow=76,SNR=52
H11N3 WAKE ISLAND Hy 34.43 167 T T 11 14 21.6
baz=352,slow=76,SNR=50
H11N1 WAKE ISLAND Hy 34.43 167 T T 11 14 01.6
baz=352,slow=76,SNR=38
NRIK Noril'sk 35.06 324 P **P 10 38 24.8 -0.7**
comp=Z,2.0nm,0.4s,baz=86,slow=8.8,SNR=4.6
NRIK PP **PP 10 39 44.1 -3.5**
comp=Z,2.1nm,0.4s,baz=114,slow=6.8,SNR=4.0
NRIK PcP **PcP 10 40 53.7 -0.1**
comp=Z,7.7nm,0.5s,baz=77,slow=1.3,SNR=4.0
NRIK LR LR 10 53 58.5
comp=Z,87nm,21.0s,baz=28,slow=38
JOW Kunigami 35.13 233 P **P 10 38 26.9 +0.4**
comp=Z,35nm,0.5s,baz=154,slow=5.8,SNR=21
JOW Kunigami 35.13 233 *e*P **P 10 38 27.3 +0.7**
comp=Z,40nm,0.6s
SKAG Skagway 35.29 54 *e*P **P 10 38 29.8 +2.2**
comp=Z,16nm,0.7s
H11S1 WAKE ISLAND Hy 35.60 167 T T 11 14 33.8
baz=350,slow=76,SNR=13
H11S3 WAKE ISLAND Hy 35.61 167 T T 11 14 30.1
baz=350,slow=76,SNR=35
H11S2 WAKE ISLAND Hy 35.61 167 T T 11 14 33.7
baz=350,slow=76,SNR=10
NJ2 Nanjing 35.84 249 *e*P **P 10 38 34.3 +1.7**
NJ2 pmax pmax
comp=Z,14nm,0.7s
JIS Juneau Island 36.18 55 *e*P **P 10 38 36.9 +1.7**
comp=Z,16nm,1.3s
GUMO Guam 41.52 201 LR LR 10 53 13.6
comp=Z,24nm,21.1s,baz=82,slow=31
LZH Lanzhou 41.70 268 *e*P **P 10 39 21.1 -0.5**
LZH pP pP 10 39 50.6 -2.3
LZH sP sP 10 40 04.8 -4.1
LZH PP **PP 10 41 03.6 +3.0**
LZH S **S 10 45 26.4 -1.3**
LZH sS sS 10 46 18.6 -3.7
LZH SS **SS 10 48 33.8 -4.7**
LZH pmax pmax
comp=Z,48nm,1.1s
LZH pmax pmax
comp=Z,160nm,4.3s
GTA Gaotai 41.90 275⇓P **P 10 39 23.0 -0.1**
GTA pP pP 10 39 52.6 -1.9
GTA sP sP 10 40 05.6 -4.9
GTA S **S 10 45 28.4 -2.2**
GTA sS sS 10 46 19.9 -5.2
GTA pmax pmax
comp=Z,62nm,0.8s
GTA pmax pmax
comp=Z,89nm,7.9s
GTA LR LR
comp=Z,84nm,16.1s
GTA LR LR
comp=Z,110nm,15.5s
GTA LR LR
comp=Z,60nm,14.8s
ZAA0 Zalesovo Array 41.92 302 *e*P **P 10 39 21.4 -1.5**
comp=Z,8.9nm,0.8s
ZALV Zalesovo Beam 41.92 302 P **P 10 39 21.4 -1.5**
comp=Z,12nm,1.0s,baz=54,slow=7.5,SNR=21
ZALV PP **PP 10 41 00.3 -2.1**
comp=Z,3.2nm,0.8s,baz=39,slow=5.5,SNR=3.8
ZALV PcP **PcP 10 41 15.3 -0.3**
comp=Z,3.4nm,0.7s,baz=68,slow=4.6,SNR=4.5
ZALV Zalesovo Beam 41.92 302 *e*P **P 10 39 20.8 -2.1**
ZALV PP **PP 10 41 00.3 -2.1**
ZALV PcP **PcP 10 41 15.3 -0.3**
NVS Novosibirsk 42.25 303 *e*P **P 10 39 24.7 -0.9**
NVS *e* 10 39 58.3
NVS *e* 10 40 15.4
NVS *e* 10 41 03.3
NVS pmax pmax
comp=Z,63nm,1.0s
NVS pmax pmax
comp=N,13nm,1.1s
NVS pmax pmax
comp=E,40nm,1.1s
ENH Enshi 42.49 257 *e*P **P 10 39 26.4 -1.5**
comp=E,21nm,0.7s
RES Resolute Bay 43.03 22 *e*P **P 10 39 32.8 +1.2**
comp=E,31nm,1.1s
RES Resolute Bay 43.03 22 *e*P **P 10 39 32.8 +1.2**
RES pmax pmax
comp=Z,31nm,1.1s
YKW3 Yellowknife Ar 43.14 43 *e*P **P 10 39 33.7 +1.1**
comp=Z,4.8nm,0.8s
YKA Yellowknife Ar 43.18 43 P **P 10 39 33.8 +0.9**
comp=Z,3.9nm,0.7s,baz=300,slow=7.2,SNR=25
YKA PcP **PcP 10 41 20.4 +0.8**
comp=Z,0.3nm,0.5s,baz=306,slow=3.7,SNR=4.5
YKA ScP **ScP 10 44 56.3 -1.0**
comp=Z,1.9nm,1.0s,baz=299,slow=4.1,SNR=7.1
CD2 Chengdu 45.38 263 P **P 10 39 49.8 -1.2**
CD2 pmax pmax
comp=Z,20nm,0.6s
KIP Kipapa 45.78 118 *e*P **P 10 39 55.7 +1.7**
comp=Z,42nm,0.8s
KIP Kipapa 45.78 118*de*P **P 10 39 56.3 +2.2**
WMQ Urumqi 46.16 288 P **P 10 39 57.0 0.0**
WMQ pP pP 10 40 29.9 +1.0
WMQ sP sP 10 40 45.4 +0.7
WMQ pmax pmax
comp=Z,81nm,1.1s
WMQ pmax pmax
comp=Z,250nm,3.6s
WMQ LR LR
comp=Z,170nm,25.9s
WMQ LR LR
comp=Z,150nm,25.9s
LLLB Lilloet 46.29 60 *e*P **P 10 39 59.5 +1.7**
comp=Z,15nm,1.2s
SPA0 Spitsbergen Ar 46.46 350 *e*P **P 10 39 58.0 -0.7**
SPITS Spitsbergen Ar 46.46 350 P **P 10 39 58.2 -0.6**
comp=Z,4.4nm,0.3s,baz=61,slow=10,SNR=57
TULEG Thule 46.55 14 *e*P **P 10 39 58.9 -0.5**
comp=Z,31nm,1.2s
KURK Kurchatov 46.88 301 *e*P **P 10 40 00.8 -1.5**
comp=Z,74nm,1.0s
KURK pP **pP 10 40 35.5 +1.2**
KURK PcP **PcP 10 41 32.4 -0.2**
KURK ScP **ScP 10 45 12.3 -0.5**
KURK Kurchatov 46.88 301*d i*P **P 10 40 00.7 -1.5**
KURK *i* *PP **pP 10 40 35.0 +0.7**
KURK pmax pmax
comp=Z,80nm,1.1s
KURBB Kurchatov Arra 46.98 301 P **P 10 40 01.8 -1.3**
comp=Z,20nm,0.5s,baz=58,slow=8.0,SNR=160
KURBB pP **pP 10 40 35.5 +0.4**
comp=Z,18nm,1.1s,baz=58,slow=7.4,SNR=3.9
KURBB PcP **PcP 10 41 32.4 -0.6**
comp=Z,4.2nm,0.7s,baz=46,slow=3.1,SNR=8.3
KURBB ScP **ScP 10 45 12.3 -0.9**
comp=Z,1.6nm,0.7s,baz=56,slow=3.9,SNR=9.2
GYA Guiyang 46.99 256⇑*i*P **P 10 40 03.3 -0.4**
GYA pP pP 10 40 35.8 +0.1
GYA sP sP 10 40 52.3 +0.8
GYA PcP **PcP 10 41 36.4 +2.7**
GYA PP **PP 10 41 56.5 +1.1**
GYA ScP **ScP 10 45 15.8 +1.9**
GYA S **S 10 46 44.0 -0.4**
GYA sS sS 10 47 39.3 -0.6
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,120nm,5.4s
MK31 Makanchi Array 47.32 295 *e*P **P 10 40 04.6 -1.2**
MK31 Makanchi Array 47.32 295 *e*P **P 10 40 04.6 -1.2**
MKAR Makanchi Array 47.32 295 P **P 10 40 04.7 -1.2**
comp=Z,16nm,0.7s,baz=54,slow=7.1,SNR=135
MKAR pP **pP 10 40 38.7 +0.8**
comp=Z,2.5nm,0.6s,baz=45,slow=7.0,SNR=2.1
MKAR PcP **PcP 10 41 36.3 +1.9**
comp=Z,1.2nm,0.6s,baz=66,slow=3.7,SNR=2.5
MKAR Makanchi Array 47.32 295 *e*P **P 10 40 04.6 -1.2**
comp=Z,123nm,0.6s
MKAR pP **pP 10 40 38.7 +0.8**
MKAR PcP **PcP 10 41 36.3 +1.9**
MKAR Makanchi Array 47.32 295 *e*P **P 10 40 04.6 -1.2**
MKAR *PP **pP 10 40 38.7 +0.8**
MKAR 10 41 36.3
MKAR pmax pmax
comp=Z,123nm,0.6s
MK01 Makanchi Array 47.33 295 *e*P **P 10 40 04.2 -1.7**
MAKZ Makanchi 47.48 295 *e*P **P 10 40 05.9 -1.2**
comp=Z,25nm,0.8s
MAKZ Makanchi 47.48 295 *e*P **P 10 40 05.9 -1.2**
MAKZ pmax pmax
comp=Z,25nm,0.8s
B05A Bryant 47.59 63 P **P 10 40 09.2 +1.4**
baz=308,SNR=5.3
LTY Liberty 48.97 63 *e*P **P 10 40 19.5 +1.0**
comp=Z,18nm,1.4s
B08A Colville Reser 48.98 61 *e*P **P 10 40 19.7 +1.2**
comp=Z,13nm,0.9s
BVA0 Borovoye Array 49.52 307 *i*P **P 10 40 20.9 -1.7**
BVA0 pmax pmax
comp=Z,10.0nm,0.6s
BVAR Borovoye Array 49.52 307 P **P 10 40 21.0 -1.5**
comp=Z,9.9nm,0.6s,baz=60,slow=7.4,SNR=54
BVAR PcP **PcP 10 41 41.2 -1.0**
comp=Z,4.8nm,0.7s,baz=57,slow=5.3,SNR=5.5
BRVK Borovoye 49.55 308 *e*P **P 10 40 21.5 -1.3**
comp=Z,31nm,1.1s
BRVK Borovoye 49.55 308*d i*P **P 10 40 21.3 -1.5**
BRVK *i* *PP **pP 10 40 58.0 +2.9**
BRVK pmax pmax
comp=Z,27nm,1.1s
KULLO Kullorsuaq 49.76 12⇓*i*P **P 10 40 24.0 -0.1**
comp=Z,76nm,1.2s
I03D Drain, OR 49.79 68 P **P 10 40 26.2 +1.5**
baz=311
DAG Danmarks Havn 49.82 359 *i*P **P 10 40 23.3 -1.2**
comp=Z,20nm,1.3s
G05D Wamic, OR 49.90 65 P **P 10 40 27.3 +1.7**
baz=310
NEW Newport 50.18 60 P **P 10 40 28.7 +1.0**
baz=310
I04A Tendick Farm, 50.24 67 P **P 10 40 29.8 +1.6**
baz=311
KMI Kunming 50.29 258 P **P 10 40 30.3 +1.3**
KMI pmax pmax
comp=Z,19nm,0.5s
I05D Terrebonne, OR 50.48 66 P **P 10 40 31.3 +1.4**
baz=311
L02D Cave Junction, 50.66 70 P **P 10 40 33.6 +2.3**
baz=312
HUMO Hull Mountain 50.72 69 *e*P **P 10 40 34.0 +2.3**
comp=Z,8.6nm,1.0s
J04D Umpqua Nationa 50.77 68 P **P 10 40 34.4 +2.0**
baz=311
PINE Pine Mountain 51.05 67 *e*P **P 10 40 35.8 +1.3**
comp=Z,7.8nm,0.8s
PDGK Podgornoye 51.06 293 P **P 10 40 31.1 -3.3**
PDGK pmax pmax
comp=Z,37nm,1.0s
J05D Fort Rock, OR 51.22 67 P **P 10 40 37.8 +2.1**
baz=312,SNR=9.4
WALA Waterton Lakes 51.30 57 *e*P **P 10 40 36.8 +0.7**
comp=Z,13nm,0.8s
K04D Chiloquin, OR 51.37 68 P **P 10 40 38.7 +1.9**
baz=312
SVE Sverdlovsk 51.41 316 *e*P **P 10 40 36.2 -0.4**
SVE pmax pmax
comp=Z,26nm,1.4s
YBH Yreka Blue Hor 51.44 70 P **P 10 40 38.9 +1.7**
comp=Z,7.5nm,0.8s,baz=328,slow=4.3,SNR=20
YBH LR LR 10 58 46.7
comp=Z,30nm,21.5s,baz=324,slow=31
YBH Yreka Blue Hor 51.44 70 *e*P **P 10 40 39.3 +2.1**
comp=Z,12nm,1.0s
M02C Callahan 51.58 70 P **P 10 40 40.8 +2.5**
baz=312
M04C Macdoel 51.89 69 P **P 10 40 42.7 +2.0**
baz=312
N02D Trinity Center 51.95 70 P **P 10 40 43.5 +2.6**
baz=313
JTMT Jette 51.97 59 *e*P **P 10 40 41.9 +0.7**
comp=Z,14nm,0.8s
WDC Whiskeytown Da 52.30 71 *e*P **P 10 40 45.7 +2.2**
comp=Z,8.4nm,0.9s
WDC Whiskeytown Da 52.30 71 *e*P **P 10 40 45.7 +2.2**
WDC pmax pmax
comp=Z,8.0nm,0.9s
BMO Blue Mountains 52.31 63 *e*P **P 10 40 44.7 +1.1**
comp=Z,8.2nm,1.1s
BMO Blue Mountains 52.31 63 *e*P **P 10 40 44.7 +1.1**
BMO pmax pmax
comp=Z,8.0nm,1.1s
ARU Arti 52.53 316 *e*P **P 10 40 44.3 -0.6**
comp=Z,22nm,0.6s
ARU Arti 52.53 316*d i*P **P 10 40 43.7 -1.2**
ARU *PP **pP 10 41 14.3 -3.3**
ARU 10 41 51.8
ARU 10 42 40.6
ARU S **S 10 47 59.7 -0.6**
ARU pmax pmax
comp=Z,37nm,1.2s
ARCES ARCESS Array B 52.53 341 P **P 10 40 43.7 -1.1**
comp=Z,8.0nm,0.8s,baz=41,slow=8.3,SNR=21
ARCES PcP **PcP 10 41 53.5 +0.4**
comp=Z,3.1nm,0.7s,baz=27,slow=3.0,SNR=5.9
MOD Modoc Plateau 52.66 68 *e*P **P 10 40 48.4 +2.1**
comp=Z,23nm,1.3s
MSO Missoula 52.75 59 P **P 10 40 47.9 +1.0**
baz=312,SNR=9.8
MSO Missoula 52.75 59 *e*P **P 10 40 48.1 +1.2**
comp=Z,13nm,1.1s
O03D Paynes Creek 52.91 70 P **P 10 40 49.3 +1.2**
baz=313,SNR=9.0
TARG Taragay, Kyrgy 53.05 292 *e*P **P 10 40 49.0 -0.5**
comp=Z,7.4nm,0.8s
FFC Flin Flon 53.09 46 *e*P **P 10 40 50.0 +0.9**
comp=Z,4.1nm,0.7s
FFC Flin Flon 53.09 46 *e*P **P 10 40 50.0 +0.9**
FFC pmax pmax
comp=Z,4.0nm,0.7s
WVOR Wild Horse Val 53.21 66 *e*P **P 10 40 52.2 +1.9**
comp=Z,8.2nm,1.0s
WVOR Wild Horse Val 53.21 66 *e*P **P 10 40 52.3 +1.9**
WVOR pmax pmax
comp=Z,8.0nm,1.0s
FCC Fort Churchill 53.44 38 *e*P **P 10 40 52.0 +0.5**
comp=Z,7.4nm,0.6s
FCC Fort Churchill 53.44 38 *e*P **P 10 40 52.0 +0.5**
FCC pmax pmax
comp=Z,7.0nm,0.6s
TKM2 Tokmak 2 53.45 295 P **P 10 40 51.0 -1.1**
SNR=22
TKM2 Tokmak 2 53.45 295 P **P 10 40 50.2 -2.0**
TKM2 pmax pmax
comp=Z,20nm,1.0s
SUMG Summit 53.46 6⇓*i*P **P 10 40 52.4 +0.4**
comp=Z,23nm,0.7s
SUMG Summit 53.46 6 *e*P **P 10 40 52.1 +0.1**
comp=Z,40nm,1.1s
SUMG Summit 53.46 6 *e*P **P 10 40 52.1 +0.1**
SUMG pmax pmax
comp=Z,40nm,1.1s
ULHL Ulahol 53.56 294 P **P 10 40 52.6 -0.4**
SNR=7.8
ORV Oroville 53.59 71 *e*P **P 10 40 54.4 +1.5**
comp=Z,15nm,0.9s
ORV Oroville 53.59 71 *e*P **P 10 40 54.4 +1.5**
ORV pmax pmax
comp=Z,15nm,0.9s
PRGR Permogore 53.60 327 *e*P **P 10 40 52.1 -0.6**
PRGR *e* 10 41 56.1
PRGR pmax pmax
comp=Z,18nm,0.8s
LSA Lhasa 53.75 272 P **P 10 40 54.7 -0.1**
USP Ospenovka 53.80 296 P **P 10 40 53.8 -0.8**
SNR=27
CHMS Chumysh 53.85 295 P **P 10 40 53.9 -1.0**
SNR=10
HRY Holter Researc 53.91 58 *e*P **P 10 40 57.2 +1.9**
TMCR Tamitsa 53.97 332 *e*P **P 10 40 54.3 -1.0**
TMCR pmax pmax
comp=Z,43nm,1.1s
KBK Karagaybulak 53.98 295 P **P 10 40 55.2 -0.8**
SNR=21
BEKR Beckworth 54.01 70 *e*P **P 10 40 58.1 +1.9**
comp=Z,16nm,0.9s
EGMT Eagleton 54.05 56 P **P 10 40 57.1 +0.7**
baz=313,SNR=5.2
EGMT Eagleton 54.05 56 *e*P **P 10 40 57.3 +1.0**
comp=Z,8.6nm,0.9s
MFID Camas Ranch 54.06 64 *e*P **P 10 40 58.1 +1.6**
comp=Z,9.4nm,1.2s
LRM Limekiln Ridge 54.19 60 *e*P **P 10 40 58.4 +0.8**
KZA Kyzart 54.21 294 P **P 10 40 57.8 -0.2**
SNR=8.9

AAK	Ala-Archa	54.24	295	P		P	10 40 57.2 -0.6
	SNR=24						
AAK	Ala-Archa	54.24	295	eP		P	10 40 56.7 -1.1
	comp=Z,36nm,0.9s						
AAK	Ala-Archa	54.24	295	P		P	10 40 57.3 -0.6
AAK	Ala-Archa	54.24	295	eP		P	10 40 56.7 -1.1
AAK				pmax		pmax	
	comp=Z,36nm,0.9s						
NRN	Naryn	54.24	293	eP		P	10 40 57.1 -1.0
	comp=Z,8.0nm,0.9s						
NRN	Naryn	54.24	293	eP		P	10 40 57.1 -1.0
NRN				pmax		pmax	
	comp=Z,8.0nm,0.9s						
AFDM	Forest Hills D	54.30	71	eP		P	10 41 00.1 +1.9
	comp=Z,8.3nm,1.1s						
DLMT	Dillon	54.43	60	eP		P	10 41 00.9 +1.7
	comp=Z,9.0nm,1.0s						
UCH	Uchtor	54.51	295	P		P	10 40 59.6 -0.5
	SNR=7.8						
EKS2	Erkin-Say	54.61	296	P		P	10 41 00.1 -0.4
	SNR=22						
MCMT	McKenzie Canyo	54.67	61	eP		P	10 41 02.4 +1.4
PAHR	Pah Rah Range	54.67	69	eP		P	10 41 03.0 +2.0
	comp=Z,16nm,1.1s						
RUBR	Rubicon Trail	54.69	70	eP		P	10 41 03.5 +2.3
	comp=Z,16nm,1.0s						
HLID	Hailey	54.71	63	P		P	10 41 02.6 +1.3
	baz=314,SNR=8.6						
HLID	Hailey	54.71	63	eP		P	10 41 03.0 +1.7
	comp=Z,7.0nm,1.3s						
BOZ	Bozeman (W)	54.77	59	P		P	10 41 02.9 +1.4
	baz=314,SNR=20						
BOZ	Bozeman (W)	54.77	59	eP		P	10 41 03.0 +1.4
	comp=Z,8.9nm,0.7s						
BOZ	Bozeman (W)	54.77	59	eP		P	10 41 03.0 +1.4
BOZ				pmax		pmax	
	comp=Z,9.0nm,0.7s						
VCNR	Virginia City	54.80	70	eP		P	10 41 04.6 +2.6
	comp=Z,14nm,0.9s						
PNTR	Pine Nut	54.97	70	eP		P	10 41 05.6 +2.3
	comp=Z,19nm,0.8s						
AML	Almayashu	55.02	295	P		P	10 41 03.3 -0.4
	SNR=6.5						
YERR	Yerington	55.25	70	eP		P	10 41 07.7 +2.5
	comp=Z,17nm,1.0s						
CMB	Columbia Colle	55.27	71	eP		P	10 41 07.5 +2.3
	comp=Z,6.6nm,0.9s						
CMB	Columbia Colle	55.27	71	eP		P	10 41 07.5 +2.3
CMB				pmax		pmax	
	comp=Z,7.0nm,0.9s						
BMN	Battle Mountai	55.36	67	eP		P	10 41 08.5 +2.6
	comp=Z,13nm,0.9s						
BMN	Battle Mountai	55.36	67	eP		P	10 41 08.5 +2.6
BMN				pmax		pmax	
	comp=Z,13nm,0.9s						
QLMT	Earthquake Lak	55.40	60	eP		P	10 41 08.3 +2.1
MNAS	Manas	55.41	296	P		P	10 41 03.9 -2.3
MNAS				pmax		pmax	
	comp=Z,16nm,1.0s						
ILULI	Ilulissat	55.46	13	eP		P	10 41 05.3 -0.7
	comp=Z,33nm,1.0s						
ILULI	Ilulissat	55.46	13	eP		P	10 41 05.3 -0.7
ILULI				pmax		pmax	
	comp=Z,33nm,1.0s						
WAKR	Walker	55.47	70	eP		P	10 41 09.3 +2.5
	comp=Z,12nm,0.9s						
NONG	Nongkai	55.57	253	P		P	10 41 09.7 +2.3
	comp=Z,17nm,0.7s						
YHB	Horse Butte	55.57	60	eP		P	10 41 09.7 +2.2
	comp=Z,16nm,0.8s						
GCMT	Greycliff	55.63	58	eP		P	10 41 09.8 +2.0
YMR	Madison River	55.75	60	eP		P	10 41 09.7 +0.9
	comp=Z,12nm,0.8s						
KVN	Kaiserville	55.84	69	eP		P	10 41 11.7 +2.3
	comp=Z,20nm,1.3s						
KVN	Kaiserville	55.84	69	eP		P	10 41 11.7 +2.3
KVN				pmax		pmax	
	comp=Z,20nm,1.3s						
RYN	Ryan	55.90	70	eP		P	10 41 12.3 +2.5
	comp=Z,10nm,1.0s						
YFT	Old Faithful	55.97	60	eP		P	10 41 13.7 +3.4
	comp=Z,14nm,0.7s						
KK31	Karatay Array	56.03	298	eP		P	10 41 08.9 -1.6
KK31	Karatay Array	56.03	298	i P		P	10 41 09.1 -1.4
KK31				pmax		pmax	
	comp=Z,17nm,0.8s						
KKAR	Karatay Array	56.03	298	eP		P	10 41 08.9 -1.6
KKAR	Karatay Array	56.03	298	eP		P	10 41 08.9 -1.6
YPP	Pitchstone Pla	56.11	60	eP		P	10 41 14.4 +3.0
	comp=Z,3.5nm,0.7s						
KLMR	Klimovskoe	56.12	329	eP		P	10 41 07.0 -3.8
KLMR				pmax		pmax	
	comp=Z,47nm,1.1s						
KLMR	Klimovskoe	56.12	329	eP		P	10 41 07.1 -3.8
KLMR				AMP			10 41 11.3
	comp=Z,47nm,1.1s						
H17A	Grant Village	56.14	60	P		P	10 41 14.4 +2.8
	baz=315,SNR=13						
H17A	Grant Village	56.14	60	eP		P	10 41 14.9 +3.4
	comp=Z,17nm,1.0s						
NV01	Mina Array Sit	56.16	70	eP		P	10 41 13.8 +2.0
NVAR	Mina Array Bea	56.16	70	P		P	10 41 13.4 +1.7
	comp=Z,8.6nm,0.8s,baz=296,slow=7.4,SNR=56						
NVAR				ScP		ScP	10 45 54.0 +0.6
	comp=Z,0.4nm,0.8s,baz=305,slow=3.2,SNR=3.7						
NV11	Mina Array Sit	56.24	70	eP		P	10 41 14.4 +2.2
	comp=Z,0.5nm,0.8s						
MDPB	Devils Postpil	56.28	71	eP		P	10 41 15.3 +2.6
	comp=Z,9.9nm,1.1s						
RLMT	Red Lodge	56.30	58	P		P	10 41 14.5 +1.9
	baz=315,SNR=22						
RLMT	Red Lodge	56.30	58	eP		P	10 41 14.8 +2.1
	comp=Z,21nm,0.9s						
IMW	Indian Meadow	56.30	60	eP		P	10 41 15.3 +2.6
	comp=Z,6.2nm,0.8s						
OMMB	Old Mammoth Mi	56.34	71	eP		P	10 41 15.8 +2.7
	comp=Z,4.7nm,1.1s						
SHL	Shillong	56.36	268	eP		P	10 41 16.0 +2.7
	comp=Z,21nm,0.9s						
SHL	Shillong	56.36	268	eP		P	10 41 16.0 +2.7
SHL				pmax		pmax	
	comp=Z,21nm,0.9s						
PAYA	Payao	56.42	257	P		P	10 41 16.1 +2.6
	comp=Z,8.1nm,0.8s						
MLAC	Mammoth, Mammo	56.42	71	P		P	10 41 16.0 +2.3
	baz=315						
FXWY	Fox Creek	56.43	61	eP		P	10 41 15.9 +2.3
	comp=Z,7.0nm,0.8s						
MOOW	Moose Ponds	56.50	60	eP		P	10 41 16.6 +2.5
	comp=Z,4.3nm,0.8s						
TPAW	Teton Pass	56.58	61	eP		P	10 41 17.1 +2.4
	comp=Z,7.5nm,0.8s						
SFK	Sufi-Kurgan	56.59	293	P		P	10 41 12.2 -2.6
SFK				pmax		pmax	
	comp=Z,14nm,0.9s						
LOHW	Long Hollow	56.67	60	eP		P	10 41 17.6 +2.4
	comp=Z,13nm,1.0s						
SNOW	Snow King Moun	56.70	61	eP		P	10 41 18.0 +2.4
	comp=Z,8.3nm,0.9s						
LAO	LASA Array	56.71	55	P		P	10 41 17.0 +1.6
	baz=315,SNR=11						
LAO	LASA Array	56.71	55	eP		P	10 41 17.2 +1.9
	comp=Z,17nm,1.0s						
REDW	Red Top Meadow	56.72	61	eP		P	10 41 17.9 +2.2
	comp=Z,8.2nm,0.8s						
HVU	Hansel Valley	56.82	63	eP		P	10 41 18.5 +2.2
	comp=Z,12nm,1.0s						
HVU	Hansel Valley	56.82	63	eP		P	10 41 18.5 +2.2
HVU				pmax		pmax	
	comp=Z,12nm,1.0s						
AB31	Akbulak array	56.92	309	P		P	10 41 13.8 -2.9
AB31				pmax		pmax	
	comp=Z,14nm,1.0s						
ABKAR	Akbulak array	56.92	309	eP		P	10 41 15.2 -1.5
AKTO	Aktyubinsk	56.95	312	P		P	10 41 15.0 -1.9
	comp=Z,4.5nm,0.4s,baz=31,slow=5.9,SNR=16						
AKTO				LR		LR	11 08 32.2
	comp=Z,35nm,18.2s,baz=46,slow=39						
AKTO	Aktyubinsk	56.95	312	P		P	10 41 15.3 -1.6
AKTO				pmax		pmax	
	comp=Z,7.0nm,0.6s						
AHID	Auburn Hatcher	57.01	61	eP		P	10 41 19.9 +2.3
	comp=Z,18nm,0.9s						
LAMP	Lampang	57.22	256	P		P	10 41 21.4 +2.3
	comp=Z,6.8nm,0.9s						
BGU	Big Grassy Mou	57.29	64	eP		P	10 41 21.7 +2.1
	comp=Z,4.1nm,0.7s						
SPUT	South Promonto	57.33	63	eP		P	10 41 22.1 +2.3
	comp=Z,14nm,0.9s						
CHTO	Chiang Mai	57.39	257	P		P	10 41 20.9 +0.6
	comp=Z,83nm,0.9s						
CHTO	Chiang Mai	57.39	257	eP		P	10 41 20.5 +0.2
	comp=Z,12nm,0.7s						
CHTO	Chiang Mai	57.39	257	eP		P	10 41 20.5 +0.2
CHTO				pmax		pmax	
	comp=Z,12nm,0.7s						
SMMC	Simmler	57.41	73	P		P	10 41 22.4 +2.1
	baz=316						
VES	Vestal, Richgr	57.55	72	P		P	10 41 22.3 +1.0
	baz=316						
HWUT	Hardware Ranch	57.58	63	eP		P	10 41 23.9 +2.3
	comp=Z,18nm,0.8s						
SFJD	Kangerlussuaq	57.61	13	i P		P	10 41 19.9 -1.3
	comp=Z,13nm,0.6s						
SFJD	Kangerlussuaq	57.61	13	eP		P	10 41 20.6 -0.6
	comp=Z,26nm,1.1s						
SFJD	Kangerlussuaq	57.61	13	eP		P	10 41 20.6 -0.6
SFJD				pmax		pmax	
	comp=Z,29nm,1.1s						
CMAR	Chiang Mai Arr	57.67	257	P		P	10 41 22.2 -0.1
	comp=Z,8.1nm,0.8s,baz=22,slow=7.6,SNR=23						
CMAR				ScP		ScP	10 46 00.5 +0.4
	comp=Z,1.0nm,0.3s,baz=11,slow=4.1,SNR=4.3						
CMAR				LR		LR	11 08 41.3
	comp=Z,27nm,18.5s,baz=175,slow=38						
CMAR	Chiang Mai Arr	57.67	257	P		P	10 41 22.2 -0.1
CMAR				pmax		pmax	
	comp=Z,7.0nm,0.8s						
CMAR				MLR		MLR	
	comp=Z,27nm,18.5s						
CM01	Chiang Mai Arr	57.69	257	eP		P	10 41 22.8 +0.4
CWC	Cottonwood Cre	57.69	71	P		P	10 41 23.9 +1.4
	baz=316						
GRAC	Grapevine Rang	57.70	70	P		P	10 41 24.0 +1.6
	baz=316						
R11A	Troy Canyon, C	57.72	68	P		P	10 41 24.0 +1.3
	baz=316,SNR=13						
R11A	Troy Canyon, C	57.72	68	eP		P	10 41 24.4 +1.7
	comp=Z,4.7nm,0.8s						
BW06	Boulder Array	57.81	60	P		P	10 41 25.1 +1.8
	baz=316,SNR=37						
BW06	Boulder Array	57.81	60	eP		P	10 41 25.1 +1.8
	comp=Z,20nm,0.8s						
PD31	Pinedale Array	57.81	60	eP		P	10 41 25.2 +1.9
PDAR	Pinedale Array	57.81	60	P		P	10 41 24.5 +1.2
	comp=Z,16nm,0.7s,baz=321,slow=2.4,SNR=174						
PDAR				pP		pP	10 41 56.3 -0.2
	comp=Z,4.3nm,0.9s,baz=298,slow=3.2,SNR=2.9						
PDAR	Pinedale Array	57.81	60	eP		P	10 41 24.9 +1.6
PDAR				pP		pP	10 41 56.3 -0.2
PKM	Mcpherson Peak	57.82	74	P		P	10 41 25.4 +2.0
	baz=316						
DUG	Dugway, Tooele	57.92	65	P		P	10 41 25.9 +1.9
	baz=316,SNR=14						
DUG	Dugway, Tooele	57.92	65	eP		P	10 41 26.2 +2.2
	comp=Z,13nm,1.0s						
DUG	Dugway, Tooele	57.92	65	eP		P	10 41 26.2 +2.2
DUG				pmax		pmax	
	comp=Z,13nm,1.0s						
CHAI	Chaiyaphum	57.96	252	P		P	10 41 25.8 +1.5
	comp=Z,5.0nm,0.9s						
TCUT	Toone Canyon	58.01	63	eP		P	10 41 27.2 +2.4
	comp=Z,11nm,0.7s						
ISA	Isabella, Lake	58.03	72	P		P	10 41 25.6 +0.9
	baz=316,SNR=5.9						
ISA	Isabella, Lake	58.03	72	eP		P	10 41 26.0 +1.3
	comp=Z,12nm,1.2s						
ISA	Isabella, Lake	58.03	72	eP		P	10 41 26.0 +1.3
ISA				pmax		pmax	
	comp=Z,12nm,1.2s						
DAC	Darwin (Calif)	58.08	71	eP		P	10 41 27.1 +1.8
	comp=Z,4.1nm,0.8s						
DAC	Darwin (Calif)	58.08	71	eP		P	10 41 27.1 +1.8
DAC				pmax		pmax	
	comp=Z,4.0nm,0.8s						
CTU	Camp Tracy	58.13	64	eP		P	10 41 27.9 +2.3
	comp=Z,8.9nm,0.8s						
GUN	Gumba	58.19	275	eP		P	10 41 25.2 -1.1
	comp=Z,25nm,0.7s						
JIRN	Jiri	58.19	274	eP		P	10 41 25.2 -1.1
MPMC	Manual Prospec	58.30	71	P		P	10 41 28.4 +1.6
	baz=316,SNR=8.1						
TPNV	Topopah Spring	58.35	70	P		P	10 41 28.7 +1.7
	baz=316,SNR=15						
TPNV	Topopah Spring	58.35	70	eP		P	10 41 28.9 +1.8
	comp=Z,11nm,0.8s						
TPNV	Topopah Spring	58.35	70	eP		P	10 41 28.9 +1.8
TPNV				pmax		pmax	
	comp=Z,11nm,0.8s						
FURC	Furnace Creek,	58.36	70	P		P	10 41 28.9 +2.1
	baz=316,SNR=11						
JLU	Jordanelle	58.36	63	eP		P	10 41 29.5 +2.3
	comp=Z,5.0nm,0.8s						
PSUT	Pine Spring	58.54	67	eP		P	10 41 30.4 +2.0
	comp=Z,9.4nm,1.1s						
SCZ2	Santa Cruz Isl	58.56	74	P		P	10 41 30.7 +2.3
	baz=317						
LRMC	Laurel Mtn Rad	58.61	72	P		P	10 41 29.8 +1.0
	baz=316						
KKN	Kakani	58.63	275	eP		P	10 41 28.2 -1.0
	comp=Z,20nm,0.4s						
MPU	Maple Canyon	58.68	64	eP		P	10 41 31.6 +2.2
	comp=Z,14nm,0.8s						
PKIN	Phulchoki	58.72	275	eP		P	10 41 29.0 -0.9
	comp=Z,36nm,0.7s						
BLG	Laguna Peak, P	58.81	74	P		P	10 41 31.4 +1.3
	baz=317						
GKN	Gorkha	58.86	276	eP		P	10 41 29.5 -1.2
EDW2	Edwards Air Fo	58.86	72	P		P	10 41 32.2 +1.7
	baz=317,SNR=9.3						
DMN	Daman	58.87	275	eP		P	10 41 29.7 -1.2
	comp=Z,46nm,0.9s						
ULM	Lac du Bonnet	58.90	46	P		P	10 41 31.4 +1.0
	comp=Z,5.6nm,0.7s,baz=316,slow=6.8,SNR=7.8						
SHOC	Shoshone, Teco	59.09	70	P		P	10 41 33.6 +1.5
	baz=317,SNR=5.4						
DANN	Dangsing	59.12	277	eP		P	10 41 31.6 -1.0
	comp=Z,30nm,0.6s						
DECC	Green Verdugo	59.12	73	P		P	10 41 33.7 +1.5
	baz=317						
GSC	Goldstone, Bar	59.23	71	P		P	10 41 34.6 +1.6
	baz=317,SNR=10						
GSC	Goldstone, Bar	59.23	71	eP		P	10 41 34.8 +1.8
	comp=Z,10nm,1.0s						
GSC	Goldstone, Bar	59.23	71	eP		P	10 41 34.8 +1.8
GSC				pmax		pmax	
	comp=Z,11nm,1.0s						
SHPR	Sheep Range	59.28	69	eP		P	10 41 35.7 +2.3
	comp=Z,5.0nm,1.2s						
MWC	Mount Wilson	59.30	73	eP		P	10 41 35.6 +1.9
	comp=Z,23nm,1.3s						
MWC	Mount Wilson	59.30	73	eP		P	10 41 35.6 +1.9
MWC				pmax		pmax	
	comp=Z,23nm,1.3s						
FIA1	FINESS Array S	59.33	336	eP		P	10 41 32.8 -0.4
FINES	FINESS Array B	59.33	336	P		P	10 41 32.1 -1.1
	comp=Z,12nm,0.6s,baz=30,slow=8.8,SNR=46						
FINES				PcP		PcP	10 42 18.6 -1.0
	comp=Z,2.5nm,0.7s,baz=18,slow=4.8,SNR=4.6						
FINES				LR		LR	11 11 43.8
	comp=Z,30nm,18.1s,baz=356,slow=40						
TMUT	Trail Mountain	59.43	64	eP		P	10 41 36.7 +2.1
	comp=Z,17nm,0.8s						
K22A	Casper	59.45	59	P		P	10 41 35.9 +1.3
	baz=317,SNR=5.3						
K22A	Casper	59.45	59	eP		P	10 41 36.2 +1.6
	comp=Z,6.3nm,0.7s						
MSU	Marysvale	59.47	66	eP		P	10 41 37.2 +2.4
MSU	Marysvale	59.47	66	eP		P	10 41 37.2 +2.4
B31A	Greenbush Farm	59.47	49	P		P	10 41 35.5 +1.1
	baz=318						
BFSC	Mount Baldy Ra	59.52	73	P		P	10 41 36.4 +1.3
	baz=317,SNR=7.3						
CCUT	Cedar City	59.52	67	eP		P	10 41 37.2 +2.0
	comp=Z,6.9nm,0.9s						
FMP	Fort Macarthur	59.54	74	P		P	10 41 37.4 +2.4
	baz=317						
RSSD	Black Hills	59.63	56	P		P	10 41 37.3 +1.5
	baz=317						
RSSD	Black Hills	59.63	56	eP		P	10 41 37.4 +1.6
	comp=Z,37nm,0.6s						
RSSD	Black Hills	59.63	56	eP		P	10 41 37.4 +1.6
RSSD				pmax		pmax	
	comp=Z,37nm,0.6s						
TUQ	Turquoise Moun	59.63	71	P		P	10 41 37.6 +1.7
	baz=317						
SZCU	Shurtz Canyon	59.64	67	eP		P	10 41 38.6 +2.6
	comp=Z,9.2nm,1.2s						
KOLN	Koldanda	59.64	276	eP		P	10 41 34.6 -1.5
	comp=Z,10.0nm,0.4s						
CIS	Catalina Islan	59.69	74	P		P	10 41 37.4 +1.2
	baz=317						
P18A	Preston Nutter	59.70	63	eP		P	10 41 38.9 +2.4
	comp=Z,8.7nm,0.8s						
PYUN	Piuthan	59.76	277	eP		P	10 41 35.7 -1.2
	comp=Z,156nm,1.1s						
MTPU	Mount Pierson	59.81	66	eP		P	10 41 39.8 +2.5
	comp=Z,6.4nm,0.9s						
HEC	Hector,Ludlow	59.84	71	P		P	10 41 38.8 +1.5
	baz=317,SNR=5.8						
C31A	Landman Farms,	59.90	49	P		P	10 41 38.1 +0.8
	baz=318						
BBRC	Big Bear Solar	59.92	72	P		P	10 41 39.5 +1.5
	baz=317						
SRU	San Rafael Swe	59.93	64	eP		P	10 41 39.8 +1.9
	comp=Z,24nm,0.8s						
SRU	San Rafael Swe	59.93	64	eP		P	10 41 39.8 +1.9
SRU				pmax		pmax	
	comp=Z,24nm,0.8s						
LCMT	Little Creek M	59.97	67	eP		P	10 41 40.4 +2.2
	comp=Z,9.9nm,1.1s						
KNB	Kanab	60.20	67	eP		P	10 41 42.4 +2.6
	comp=Z,9.5nm,1.0s						
KNB	Kanab	60.20	67	eP		P	10 41 42.4 +2.6
KNB				pmax		pmax	
	comp=Z,10.0nm,1.0s						
MURC	Murrieta	60.24	73	P		P	10 41 41.5 +1.5
	baz=317,SNR=5.7						
GMRC	Granite Mounta	60.25	71	P		P	10 41 41.7 +1.6
	baz=317,SNR=14						
AGMN	Agassiz Nation	60.36	48	P		P	10 41 41.2 +0.7
	baz=319						
AGMN	Agassiz Nation	60.36	48	eP		P	10 41 41.5 +1.0
	comp=Z,5.3nm,0.9s						
O20A	White River Ci	60.39	62	P		P	10 41 42.6 +1.5
	baz=317,SNR=16						
O20A	White River Ci	60.39	62	eP		P	10 41 42.5 +1.5
	comp=Z,14nm,0.7s						
BELC	Belle Mtn. Jos	60.63	72	P		P	10 41 43.9 +1.2
	baz=318,SNR=6.5						
PFO	Pinyon Flats O	60.65	72	P		P	10 41 43.9 +1.0
	baz=318						
PFO	Pinyon Flats O	60.65	72	eP		P	10 41 44.0 +1.2
	comp=Z,3.7nm,0.7s						
PFO	Pinyon Flats O	60.65	72	eP		P	10 41 44.0 +1.2
PFO				pmax		pmax	
	comp=Z,4.0nm,0.7s						
D32A	Dogwood Acres,	60.72	49	P		P	10 41 43.8 +0.9
	baz=319						
B34A	Aery, Baudette	60.75	47	P		P	10 41 43.4 +0.3
	baz=320						
E31A	Nome	60.76	50	P		P	10 41 44.2 +1.0
	baz=319,SNR=6.7						
C33A	Trail	60.81	48	P		P	10 41 43.9 +0.4
	baz=319						
109C	Camp Elliot, M	60.82	73	P		P	10 41 45.2 +1.4
	baz=318						
MOS	Moscow	60.82	326	eP		P	10 41 41.2 -2.2
NEE2	Needles Airpor	60.85	70	P		P	10 41 45.5 +1.5
	baz=318						
U15A	North Rim	60.92	67	eP		P	10 41 47.1 +2.3
	comp=Z,6.5nm,1.0s						
IRM	Iron Mountain	61.00	71	P		P	10 41 46.9 +1.8
	baz=318,SNR=12						
N23A	Red Feather La	61.03	60	P		P	10 41 47.1 +1.6
	baz=318,SNR=12						
N23A	Red Feather La	61.03	60	eP		P	10 41 47.4 +1.9
	comp=Z,13nm,0.9s						
PV09	Paradox Valley	61.12	64	eP		P	10 41 48.1 +2.0
BC3	Big Chuckawall	61.19	72	P		P	10 41 47.6 +1.2
	baz=318,SNR=6.3						
MONP2	Monument Peak	61.20	73	P		P	10 41 47.9 +1.2
	baz=318						
BAR	Barrett	61.22	73	eP		P	10 41 48.3 +1.8
	comp=Z,5.9nm,0.9s						
B35A	Bob, Littlefor	61.25	47	P		P	10 41 46.8 +0.3
	baz=320						
PV10	Paradox Valley	61.26	64	eP		P	10 41 49.5 +2.6
	comp=Z,18nm,0.8s						
NIL	Nilore	61.31	289	eP		P	10 41 46.6 -0.6
	comp=Z,169nm,1.0s						
NIL	Nilore	61.31	289	eP		P	10 41 46.6 -0.6
NIL				pmax		pmax	
	comp=Z,169nm,1.0s						
PV04	Paradox Valley	61.31	64	eP		P	10 41 49.1 +1.8
	comp=Z,16nm,0.9s						
PV07	Paradox Valley	61.42	63	eP		P	10 41 49.7 +1.6
	comp=Z,12nm,1.0s						
PV05	Paradox Valley	61.44	64	eP		P	10 41 50.5 +2.2
	comp=Z,30nm,0.7s						
PV03	Paradox Valley	61.45	64	eP		P	10 41 49.9 +1.7
	comp=Z,12nm,0.9s						
PDMCI	Parker Dam,Lak	61.45	70	P		P	10 41 49.3 +1.3
	baz=318						
SWSC	Sam W. Stewart	61.52	72	P		P	10 41 49.7 +1.2
	baz=318						
PV02	Paradox Valley	61.54	64	eP		P	10 41 50.9 +2.0
	comp=Z,5.8nm,0.7s						
IKP	In-Ko-Pah, Jac	61.56	73	P		P	10 41 50.3 +1.4
	baz=318						
D34A	Park Rapids	61.57	48	P		P	10 41 49.2 +0.5
	baz=320,SNR=6.1						
D34A	Park Rapids	61.57	48	eP		P	10 41 49.7 +1.0
	comp=Z,19nm,0.6s						
PV15	Paradox Valley	61.58	63	eP		P	10 41 51.1 +2.0
	comp=Z,16nm,0.7s						
G31A	Conde	61.61	52	P		P	10 41 49.4 +0.4
	baz=319						
F32A	Veblen	61.62	50	P		P	10 41 49.5 +0.5
	baz=319						
Y12C	Blythe	61.65	71	P		P	10 41 51.0 +1.6
	baz=318						
Y12C	Blythe	61.65	71	eP		P	10 41 51.3 +2.0
	comp=Z,14nm,1.1s						
E33A	Westby DABS, E	61.65	49	P		P	10 41 50.1 +0.8
	baz=320						
OBN	Obninsk	61.68	327	i P		P	10 41 47.9 -1.3
OBN				i *PP		pP	10 42 23.5 +0.7
OBN				i			10 42 27.7
OBN				i			10 44 11.5
OBN				pmax		pmax	
	comp=Z,22nm,1.2s						
PV01	Paradox Valley	61.68	64	eP		P	10 41 51.8 +1.9
	comp=Z,4.3nm,0.6s						
PHET	Kaeng Krachan	61.70	252	P		P	10 41 52.9 +3.0
	comp=Z,10nm,0.8s,comp=Z,162nm						
VSU	Vasula	61.75	334	deP		P	10 41 48.8 -0.8
VSU				pmax		pmax	
	comp=Z,75nm,0.8s						
SMCO	Snowmass	61.76	62	eP		P	10 41 51.8 +1.2
	comp=Z,12nm,0.9s						
SUSD	Miller	61.84	53	P		P	10 41 51.4 +0.8
	baz=319						
G32A	Webster	61.91	51	P		P	10 41 52.5 +1.5
	baz=319						
GLA	Glamis	61.99	72	P		P	10 41 53.4 +1.7

baz=321
D36A Goodland 62.40 47 eP P 10 41 54.6 +0.4
comp=Z,6.3nm,0.8s
MVCO Mesa Verde 62.40 64 P P 10 41 56.1 +1.4
baz=318,SNR=9.2
MVCO Mesa Verde 62.40 64 eP P 10 41 56.3 +1.6
comp=Z,8.2nm,0.8s
G33A Ortonville 62.45 51 P P 10 41 55.4 +0.8
baz=320
H32A Carlson Farm, 62.51 52 P P 10 41 55.5 +0.5
baz=320
EYMN Ely 62.52 46 P P 10 41 55.6 +0.6
baz=321
EYMN Ely 62.52 46 eP P 10 41 55.8 +0.8
comp=Z,6.8nm,0.8s
APSI Ampana 62.60 223 P P 10 41 55.8 0.0
D37A Cotton 62.73 47 P P 10 41 56.8 +0.4
baz=321
G34A Benson 62.78 50 P P 10 41 57.6 +0.9
baz=320
F35A Swanville 62.79 49 P P 10 41 57.6 +0.8
baz=320
C38A Sawbill Land. 62.80 46 P P 10 41 57.5 +0.7
baz=321,SNR=5.2
NB2 NORSAR Subarra 62.80 343 P P 10 41 55.6 -1.1
comp=Z,7.9nm,0.7s,baz=21,slow=6.9
NOA NORSAR Array B 62.80 343 P P 10 41 56.0 -0.7
comp=Z,11nm,0.5s,baz=28,slow=6.0,SNR=19
NOA LR LR 11 11 06.6
comp=Z,12nm,21.7s,baz=35,slow=38
NOA NORSAR Array B 62.80 343 P P 10 41 56.0 -0.7
NOA pmax pmax
comp=Z,19nm,0.7s
NOA MLR MLR
comp=Z,12nm,21.7s
E36A McGregor 62.87 48 P P 10 41 58.0 +0.7
baz=321
Q24A Divide 62.87 61 P P 10 41 59.3 +1.5
baz=319
S22A 4UR Ranch, Cre 62.89 63 P P 10 41 59.9 +1.9
baz=318,SNR=15
S22A 4UR Ranch, Cre 62.89 63 eP P 10 42 00.1 +2.1
comp=Z,8.2nm,1.0s
OGNE Ogallala 62.97 57 P P 10 41 59.8 +1.6
baz=319
OGNE Ogallala 62.97 57 eP P 10 42 00.8 +2.6
comp=Z,21nm,0.8s
KBL Kabul 63.00 292 eP P 10 41 57.0 -1.6
comp=Z,27nm,0.9s
KBL Kabul 63.00 292 eP P 10 41 57.0 -1.6
KBL pmax pmax
comp=Z,27nm,0.9s
HFS Hagfors 63.20 341 P P 10 41 57.4 -1.9
comp=Z,6.0nm,0.5s,baz=45,slow=4.9,SNR=40
HFS Hagfors 63.20 341 P P 10 41 57.4 -1.9
HFS pmax pmax
comp=Z,7.0nm,0.6s
ECSD EROS Data Cent 63.48 52 P P 10 42 02.1 +0.8
baz=320,SNR=16
ECSD EROS Data Cent 63.48 52 eP P 10 42 02.2 +0.8
comp=Z,9.4nm,0.8s
E38A The Farm, Brul 63.54 47 P P 10 42 01.9 +0.1
baz=322
E38A The Farm, Brul 63.54 47 eP P 10 42 02.3 +0.6
comp=Z,10nm,0.8s
H35A Sunnyside Ranc 63.56 50 P P 10 42 03.0 +1.1
baz=321,SNR=6.2
SDCO Great Sand Dun 63.59 62 P P 10 42 04.1 +1.5
baz=319,SNR=9.0
SDCO Great Sand Dun 63.59 62 eP P 10 42 04.4 +1.8
comp=Z,4.2nm,0.9s
G36A St. Michael 63.64 49 P P 10 42 02.9 +0.5
baz=321
SBUM Sibu 63.82 234 eP P 10 42 05.4 +1.5
comp=Z,21nm,0.6s
F38A Pierce - Schro 63.90 47 P P 10 42 05.2 +1.1
baz=322
214A Organ Pipe Nat 63.94 71 P P 10 42 06.4 +1.8
baz=319,SNR=7.1
VSR Storozhevoye 63.98 323 eP P 10 42 03.2 -1.3
VSR pmax pmax
comp=Z,30nm,1.2s
SPMN Marine on St. 64.07 48 P P 10 42 05.8 +0.6
baz=321
VORD Divnogorie 64.14 322 eP P 10 42 04.7 -0.8
VORD pmax pmax
comp=Z,20nm,1.2s
E39A Mellen 64.15 46 P P 10 42 05.8 +0.1
baz=322,SNR=8.8
IZAR Zarasai 64.25 333 eP P 10 42 06.2 0.0
IZAR IAmb IAmb 10 42 09.0
comp=Z,6.4nm,0.5s
F39A Loretta 64.35 47 P P 10 42 07.5 +0.5
baz=322
E40A Wakefield 64.38 46 P P 10 42 08.1 +0.9
baz=322,SNR=11
D41A Chassel 64.45 44 P P 10 42 08.4 +0.7
baz=323
I36A Fitzsimmons Fa 64.46 50 P P 10 42 08.2 +0.5
baz=321
IDID Didziasalis 64.49 332 eP P 10 42 07.7 0.0
IDID IAmb IAmb 10 42 10.4
comp=Z,9.3nm,0.3s
G38A Ridgeland 64.53 48 P P 10 42 08.3 +0.1
baz=322
IIGN Ignalina 64.60 332 eP P 10 42 08.5 0.0
IIGN IAmb IAmb 10 42 08.9
comp=Z,15nm,0.9s
T25A Trinidad 64.62 61 P P 10 42 10.3 +1.1
baz=320
T25A Trinidad 64.62 61 eP P 10 42 11.0 +1.8
comp=Z,11nm,1.3s
F40A Park Falls 64.69 46 P P 10 42 10.0 +0.7
baz=322
H38A Maiden Rock 64.73 48 P P 10 42 09.8 +0.3
baz=322
G39A Holcombe 64.74 47 P P 10 42 09.5 -0.1
baz=322
I37A Lemond, Waseca 64.74 50 P P 10 42 10.3 +0.7
baz=322,SNR=5.4
I37A Lemond, Waseca 64.74 50 eP P 10 42 10.8 +1.1
comp=Z,18nm,0.8s
E41A Kenton 64.76 45 P P 10 42 09.9 +0.3
baz=323
TUC Tucson 64.81 69 P P 10 42 11.8 +1.5
baz=319
TUC Tucson 64.81 69 eP P 10 42 12.2 +1.9
comp=Z,8.4nm,1.3s
TUC Tucson 64.81 69 eP P 10 42 12.2 +1.9
TUC pmax pmax
comp=Z,8.0nm,1.3s
J36A Seneca 1, Swea 64.85 51 P P 10 42 10.7 +0.4
baz=321
J36A Seneca 1, Swea 64.85 51 eP P 10 42 11.3 +1.0
comp=Z,7.4nm,0.6s
H39A Augusta 65.17 48 P P 10 42 12.6 +0.3
baz=322
G40A Rib Lake 65.17 47 P P 10 42 12.9 +0.5
baz=322
TASM ASL Pad, Albuq 65.19 64 P P 10 42 14.6 +1.7
baz=320,SNR=12
ANMO Albuquerque 65.19 64 P P 10 42 14.1 +1.2
comp=Z,5.4nm,0.8s,baz=314,slow=8.7,SNR=26
ANMO LR LR 11 09 49.5
comp=Z,32nm,18.6s,baz=178,slow=35
ANMO Albuquerque 65.19 64 P P 10 42 14.5 +1.7
baz=320
ANMO Albuquerque 65.19 64 eP P 10 42 14.6 +1.7
comp=Z,5.8nm,0.9s
ANMO Albuquerque 65.19 64c iP P 10 42 14.4 +1.5
ANMO pmax pmax
comp=Z,6.0nm,0.9s
TASL Snake Pit, Alb 65.19 64 P P 10 42 14.5 +1.6
baz=320,SNR=12
I38A Scanlan Farm, 65.20 49 P P 10 42 12.6 0.0
baz=322
J37A Redenius Farm, 65.22 50 P P 10 42 13.3 +0.6
baz=322
E42A Champion 65.22 44 P P 10 42 12.7 0.0
baz=323
LAZ Ladron 65.23 65 eP P 10 42 15.5 +2.3
F41A Three Lakes 65.27 46 P P 10 42 13.3 +0.2
baz=323
K36A Gilmore City 65.33 51 P P 10 42 14.0 +0.5
baz=322
SCHQ Schefferville 65.44 27 P P 10 42 13.6 -0.4
comp=Z,8.5nm,0.8s,baz=351,slow=6.3,SNR=9.2
KSM Kuching 65.59 236 eP P 10 42 17.2 +1.8
comp=Z,19nm,0.6s
K37A Belmond 65.61 51 P P 10 42 15.7 +0.5
baz=322
E43A Lone Tree Farm 65.65 44 P P 10 42 15.1 -0.3
baz=324
L36A Harm Buss Farm 65.65 52 P P 10 42 15.8 +0.3
baz=322
BNM Barren Site 65.70 65 eP P 10 42 18.3 +2.1
CBKS Cedar Bluff 65.74 57 P P 10 42 16.3 +0.2
baz=321
J39A Decorah 66.04 49 P P 10 42 17.8 -0.2
baz=322
L37A Phoenix Point, 66.06 51 P P 10 42 18.3 +0.3
baz=322
I40A Norwalk 66.08 48 P P 10 42 18.4 +0.2
baz=323
GYA0B ALIBECK ARRAY 66.23 302 eP P 10 42 19.2 -0.1
comp=Z,11nm,0.9s
121A Cookes Peak, D 66.30 67 P P 10 42 22.0 +2.0
baz=320
L38A Oak Wood Farm, 66.41 51 P P 10 42 21.0 +0.7
baz=322
SCIA State Center 66.47 51 P P 10 42 21.5 +0.7
baz=322
SCIA State Center 66.47 51 eP P 10 42 22.0 +1.3
comp=Z,26nm,0.6s
M37A Trindle Farm, 66.48 52 P P 10 42 21.8 +1.0
baz=322
N36A Muff Farm, Cla 66.51 53 P P 10 42 21.5 +0.4
baz=322
SUW Suwalki 66.61 333 eP P 10 42 20.3 -1.1
SUW Suwalki 66.61 333 eP P 10 42 20.3 -1.1
J41A Loganville 66.77 48 P P 10 42 23.3 +0.7
baz=323
K40A Colesburg 66.79 49 P P 10 42 22.5 -0.3
baz=323
F45A CMU Biological 66.82 44 P P 10 42 22.3 -0.5
baz=325
L39A Vinton 66.86 50 P P 10 42 23.4 +0.2
baz=323
M38A Pleasantville 66.87 51 P P 10 42 23.9 +0.6
baz=322
N37A Lee Faris, Mou 66.91 52 P P 10 42 24.3 +0.7
baz=322
N37A Lee Faris, Mou 66.91 52 eP P 10 42 24.8 +1.2
comp=Z,40nm,0.6s
KSU1 Kansas State U 67.06 55 P P 10 42 24.1 -0.4
baz=322
J42A Columbus 67.19 47 P P 10 42 25.0 -0.3
baz=324
K41A Shullsburg 67.24 48 P P 10 42 25.4 -0.2
baz=323
L40A Anamosa 67.26 49 P P 10 42 25.4 -0.3
baz=323
M39A Webster 67.29 50 P P 10 42 26.2 +0.3
baz=323,SNR=6.6
KULM Kulim 67.39 247 eP P 10 42 27.7 +0.8
comp=Z,23nm,1.2s
O37A Wolven Farm, M 67.41 53 P P 10 42 27.1 +0.4
baz=322
J43A Natural Harves 67.45 47 P P 10 42 27.0 +0.1
baz=324
K42A Prairie Point, 67.53 48 P P 10 42 27.4 0.0
baz=324
L41A Preston 67.58 49 P P 10 42 27.8 +0.1
baz=323
BSD Bornholm Skovb 67.61 339⇑ iP P 10 42 27.7 +0.1
comp=Z,27nm,1.0s
N39A Derby Farms, D 67.62 51 P P 10 42 28.1 +0.2
baz=323
N39A Derby Farms, D 67.62 51 eP P 10 42 28.6 +0.7
comp=Z,9.8nm,0.8s
M40A Post Highland 67.65 50 P P 10 42 28.0 -0.1
baz=323
O38A Galt 67.76 52 P P 10 42 29.1 +0.3
baz=322
P37A Lathrop 67.77 53 P P 10 42 29.1 +0.2
baz=322,SNR=5.5
AMTX Amarillo 67.77 61 P P 10 42 29.6 +0.5
baz=321
AKASG Malin Array Be 67.78 328 P P 10 42 27.4 -1.4
comp=Z,5.1nm,0.5s,baz=33,slow=6.7,SNR=47
AKBB Malin Array Si 67.78 328 eP P 10 42 27.4 -1.4
comp=Z,22nm,1.0s
AKBB Malin Array Si 67.78 328 eP P 10 42 27.4 -1.4
AKBB pmax pmax
comp=Z,22nm,1.0s
KIEV Kiev 67.79 328 eP P 10 42 27.4 -1.5
comp=Z,18nm,0.9s
KIEV Kiev 67.79 328 i P P 10 42 27.5 -1.4
SNR=12
KIEV Kiev 67.79 328d iP P 10 42 27.3 -1.5
KIEV pmax pmax
comp=Z,24nm,1.0s
IPM Ipoh 67.86 246 eP P 10 42 29.8 0.0
comp=Z,19nm,0.9s
MSTX Muleshoe 67.90 63 P P 10 42 30.8 +0.8
baz=321,SNR=5.9
MSTX Muleshoe 67.90 63 eP P 10 42 31.3 +1.3
comp=Z,13nm,0.9s
L42A Oliver, Polo 68.01 48 P P 10 42 30.5 +0.1
baz=324
K43A Burlington 68.03 47 P P 10 42 30.8 +0.3
baz=324
N40A Mertquake, Sal 68.03 50 P P 10 42 30.7 +0.2
baz=323
M41A Milan 68.12 49 P P 10 42 31.2 +0.1
baz=323
P38A Dawn 68.12 53 P P 10 42 31.5 +0.3
baz=323,SNR=6.1
MNTX Cornudas Mount 68.25 66 P P 10 42 33.8 +1.7
baz=321,SNR=17
MNTX Cornudas Mount 68.25 66 eP P 10 42 33.9 +1.8
comp=Z,10nm,1.0s
O40A La Belle 68.51 51 P P 10 42 34.0 +0.5
baz=323,SNR=8.5
N41A Harden Midland 68.51 50 P P 10 42 33.6 +0.1
baz=323
KIV Kislovodsk 68.57 316 eP P 10 42 33.4 -0.6
KIV pmax pmax
comp=Z,7.0nm,0.9s
KIV MLR MLR
comp=Z,36nm,17.0s
P39B Salisbury 68.60 52 P P 10 42 34.3 +0.1
baz=323
MYKOM Kota Tinggi 68.61 242 eP P 10 42 35.7 +1.3
comp=Z,17nm,0.6s
Q38A Cooks Store, C 68.61 53 P P 10 42 34.2 +0.1
baz=323,SNR=8.8
KBZ Khabaz 68.67 316 P P 10 42 34.1 -0.3
comp=Z,13nm,0.9s,baz=71,slow=2.1,SNR=27
KBZ LR LR 11 18 23.7
comp=Z,39nm,18.3s,baz=34,slow=41
COEN Coen 68.70 197 eP P 10 42 36.5 +1.6
comp=Z,13nm,1.0s
N42A Yates City 68.78 49 P P 10 42 35.2 0.0
baz=324
Q39A Willow Grove F 68.85 53 P P 10 42 36.2 +0.6
baz=323,SNR=16
P40A Paris 68.90 52 P P 10 42 36.3 +0.3
baz=323,SNR=7.0
P40A Paris 68.90 52 eP P 10 42 36.5 +0.5
comp=Z,11nm,0.8s
O41A Passleys Farm, 68.97 50 P P 10 42 36.5 +0.1
baz=324
ZEI Tsey 69.01 314 eP P 10 42 34.1 -2.8
ZEI pmax pmax
comp=Z,9.0nm,0.5s
R38A Fenwick Farm, 69.08 54 P P 10 42 36.6 -0.6
baz=323,SNR=6.1
NEY Neytrino 69.13 315⇑ eP P 10 42 37.7 +0.1
NEY pmax pmax
comp=Z,1.0nm,1.0s
BEL Belsk 69.21 334 eP P 10 42 37.9 +0.3
BEL Belsk 69.21 334 eP P 10 42 37.9 +0.3
M44A Midewin, Midew 69.22 48 P P 10 42 37.6 -0.4
baz=324
P41A Barry, Barry 69.24 51 P P 10 42 38.5 +0.5
baz=324,SNR=5.5
Q40A Laux Farm, Aux 69.31 52 P P 10 42 38.9 +0.3
baz=323
HDIL Hopedale 69.34 49 P P 10 42 38.6 -0.1
baz=324
WMOK Wichita Mounta 69.38 59 P P 10 42 39.9 +0.8
baz=322,SNR=15
WMOK Wichita Mounta 69.38 59 eP P 10 42 40.0 +1.0
comp=Z,10nm,0.8s
WMOK Wichita Mounta 69.38 59 eP P 10 42 40.0 +1.0
WMOK pmax pmax
comp=Z,10.0nm,0.8s
R39A Chumby, Stover 69.40 53 P P 10 42 39.0 -0.1
baz=323,SNR=12
S38A Stockton 69.53 54 P P 10 42 39.5 -0.4
baz=323
Q41A Truxton 69.74 51 P P 10 42 41.5 +0.4
baz=324,SNR=8.2
S39A Bolivar 69.76 54 P P 10 42 40.7 -0.6
baz=323,SNR=5.2
S39A Bolivar 69.76 54 eP P 10 42 41.2 -0.1
comp=Z,4.7nm,0.8s
R40A Maddies Statio 69.78 53 P P 10 42 41.5 +0.2
baz=323,SNR=11
R40A Maddies Statio 69.78 53 eP P 10 42 41.6 +0.2
comp=Z,12nm,0.8s
T38A Diamond 69.81 55 P P 10 42 41.7 +0.1
baz=323,SNR=11
TUL1 Leonard 69.96 56 P P 10 42 43.0 +0.5
baz=323
TUL1 Leonard 69.96 56 eP P 10 42 43.5 +0.9
comp=Z,12nm,0.8s
O44A Mansfield 70.03 49 P P 10 42 42.9 -0.1
baz=325
Q42A Golden Eagle 70.09 51 P P 10 42 43.7 +0.4
baz=324
LVV L'vov 70.13 331 eP P 10 42 43.5 +0.2
R41A Rosebud 70.19 52 P P 10 42 44.2 +0.2
baz=324,SNR=7.0
S40A Lebanon 70.22 53 P P 10 42 44.1 0.0
baz=324,SNR=6.9
T39A Clever 70.26 54 P P 10 42 44.2 -0.2
baz=323
O45A Potomac 70.29 48 P P 10 42 44.3 -0.1
baz=325
SORM Soroca 70.30 327⇓ iP P 10 42 44.1 -0.3
EKA Eskdalemuir Ar 70.37 349 P P 10 42 44.4 -0.3
comp=Z,4.2nm,0.5s,baz=17,slow=5.1,SNR=20
EKA Eskdalemuir Ar 70.37 349 P P 10 42 44.4 -0.3
EKA pmax pmax
comp=Z,5.0nm,0.5s
PSI Prapat 70.40 247 P P 10 42 45.9 +0.3
comp=Z,9.2nm,0.5s,baz=360,slow=4.7,SNR=6.1
PSI Prapat 70.40 247 eP P 10 42 45.9 +0.3
comp=Z,13nm,0.7s
CCM Cathedral Cave 70.45 52 P P 10 42 45.5 0.0
baz=324
Q43A New Douglas 70.46 50 P P 10 42 45.8 +0.3
baz=324
R42A Luebbering 70.48 52 P P 10 42 46.0 +0.4
baz=324
P44A Sand Creek, Wi 70.52 49 P P 10 42 46.0 +0.1
baz=325
HYB Hyderabad 70.53 273 i P P 10 42 45.5 -0.8
HHAR Hobbs 70.58 55 eP P 10 42 46.6 +0.2
comp=Z,20nm,0.6s
ABTX Abilene, Hawle 70.59 61 P P 10 42 47.3 +0.8
baz=322,SNR=5.7
ABTX Abilene, Hawle 70.59 61 eP P 10 42 47.7 +1.2
comp=Z,11nm,0.8s
KWP Kalwaria Pacla 70.68 332 eP P 10 42 46.7 0.0
KWP Kalwaria Pacla 70.68 332 eP P 10 42 46.7 0.0
comp=Z,442nm,1.0s
KWP Kalwaria Pacla 70.68 332 eP P 10 42 46.7 0.0
U39A Green Forest 70.72 55 P P 10 42 47.5 +0.3
baz=323,SNR=42
Q44A Meyer Farm, Va 70.80 50 P P 10 42 47.6 0.0
baz=325
GNI Garni 70.81 312 LR LR 11 16 46.5
comp=Z,28nm,19.1s,baz=30,slow=38
GNI Garni 70.81 312 P P 10 42 47.8 -0.1
GNI Garni 70.81 312deP P 10 42 47.9 +0.1
GNI pmax pmax
comp=Z,72nm,1.8s
R43A Red Bud 70.89 51 P P 10 42 48.3 +0.1
baz=324
FVM French Village 70.89 52 eP P 10 42 49.0 +0.8
comp=Z,6.9nm,0.6s
FVM French Village 70.89 52 eP P 10 42 49.0 +0.8
FVM pmax pmax
comp=Z,7.0nm,0.6s
S42A Caledonia 70.89 52 P P 10 42 48.5 +0.3
baz=324
OJC Ojcow 70.94 334 eP P 10 42 48.1 -0.1
OJC Ojcow 70.94 334 eP P 10 42 48.4 +0.2
comp=Z,26nm,1.2s
OJC Ojcow 70.94 334 eP P 10 42 48.4 +0.2
OJC pmax pmax
comp=Z,26nm,1.2s
TX31 Lajitas Ar. Si 71.01 66 eP P 10 42 50.7 +1.6
TXAR Lajitas Array 71.01 66 P P 10 42 50.7 +1.6
comp=Z,11nm,0.7s,baz=298,slow=4.6,SNR=88
TXAR pP pP 10 43 23.2 -0.4
comp=Z,2.2nm,0.7s,baz=298,slow=4.8,SNR=3.7
T41A Mountain View 71.02 53 P P 10 42 48.9 -0.1
baz=324,SNR=8.3
P46A Rosedale 71.03 48 P P 10 42 49.0 0.0
baz=325
U40A Yellville 71.05 54 P P 10 42 49.3 +0.1
baz=324,SNR=13
Q45A Warren Harvey, 71.20 49 P P 10 42 50.2 +0.2
baz=325
KSP Ksiaz 71.25 336 eP P 10 42 50.0 -0.1
KSP Ksiaz 71.25 336 eP P 10 42 50.0 -0.1
R44A Waltonville 71.30 50 P P 10 42 50.7 +0.1
baz=325
T42A Van Buren 71.35 53 P P 10 42 50.9 0.0
baz=324
T42A Van Buren 71.35 53 eP P 10 42 51.1 +0.2
comp=Z,3.9nm,0.6s
S43A Fulton Ridge, 71.39 52 P P 10 42 51.2 0.0
baz=324
V40A Witts Springs 71.50 55 P P 10 42 51.9 0.0
baz=324,SNR=9.5
V40A Witts Springs 71.50 55 eP P 10 42 52.3 +0.4
comp=Z,10nm,0.8s
U41A Viola 71.51 54 P P 10 42 51.8 -0.1
baz=324
W39A Magazine 71.52 56 P P 10 42 52.3 +0.3
baz=324
NIE Niedzica 71.54 333 eP P 10 42 52.1 +0.2
NIE Niedzica 71.54 333 eP P 10 42 52.1 +0.2
P47A Martinsville 71.56 48 P P 10 42 51.9 -0.3
baz=326
CLL Collm 71.58 338⇓ iP P 10 42 51.7 -0.4
comp=Z,37nm,1.1s
CLL Collm 71.58 338 eP P 10 42 51.6 -0.4
comp=Z,44nm,1.2s
CLL Collm 71.58 338⇓ iP P 10 42 51.7 -0.4
CLL pmax pmax
comp=Z,37nm,1.1s
S44A Carbondale 71.67 51 P P 10 42 53.0 +0.2
baz=325
T43A Greenville 71.68 52 P P 10 42 52.8 -0.1
baz=324
CRVS Cervenica-Dubn 71.69 332 eP P 10 42 52.8 0.0
CRVS Cervenica-Dubn 71.69 332 eP P 10 42 52.8 0.0
UZH Uzhgorod 71.70 331⇓ eP P 10 42 52.2 -0.6
UZH e 10 43 16.0
DPC Dobruska-Polom 71.70 336 eP P 10 42 52.8 -0.1
DPC Dobruska-Polom 71.70 336 eP P 10 42 52.8 -0.1
MNSI Mandailing Nat 71.71 245 P P 10 42 51.7 -1.6
BUR08 Bucovina Ar. S 71.72 329 eP P 10 42 52.7 -0.5
BUR04 Bucovina Ar. S 71.74 329 eP P 10 42 52.5 -0.8
BURAR Bucovina Array 71.75 329⇓ iP P 10 42 52.5 -0.8
HPIG 71.78 69 eP P 10 42 55.3 +1.4
comp=Z,5.2nm,0.6s
U42A Revenden 71.83 53 P P 10 42 53.8 0.0
baz=324
V41A Mountainview 71.84 54 P P 10 42 53.9 -0.1
baz=324,SNR=9.0
PBMO Poplar Bluff 71.86 52 eP P 10 42 54.9 +0.9
comp=Z,9.1nm,0.8s
W40A Ferguson Farm, 71.88 55 P P 10 42 54.5 +0.4
baz=324,SNR=6.8
W40A Ferguson Farm, 71.88 55 eP P 10 42 55.0 +0.9
comp=Z,20nm,0.6s
X39A Fountain Ranch 71.91 56 P P 10 42 55.0 +0.7
baz=324,SNR=8.9
LONY Lake Ozonia 71.92 37 P P 10 42 54.3 0.0
baz=330
MORC Moravsky Berou 71.93 335⇑ iP P 10 42 54.7 +0.4
MORC Moravsky Berou 71.93 335 eP P 10 42 54.4 +0.1
comp=Z,79nm,1.1s
MORC Moravsky Berou 71.93 335 eP P 10 42 54.4 +0.1
MORC pmax pmax
comp=Z,79nm,1.1s

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MORC Moravsky Berou      71.93 335 eP      P      10 42 54.3 +0.1
Q47A Bedord North L      71.94  48 P       P      10 42 54.6 +0.2
     baz=326
S45A Carrier Mills       71.99  50 P       P      10 42 55.2 +0.5
     baz=325
LANS Liptovska Anna      72.00 333 eP      P      10 42 54.8 +0.1
LANS Liptovska Anna      72.00 333 eP      P      10 42 54.8 +0.1
T44A Benton              72.01  52 P       P      10 42 55.0 +0.2
     baz=325
TRPA Tarpa               72.08 331 ⇓iP     P      10 42 55.6 +0.5
MIAR Mount Ida           72.14  56 P       P      10 42 56.1 +0.4
     baz=324,SNR=7.6
MIAR Mount Ida           72.14  56 eP      P      10 42 56.5 +0.7
     comp=Z,7.4nm,0.7s
MIAR Mount Ida           72.14  56 eP      P      10 42 56.5 +0.7
MIAR                                pmax   pmax
     comp=Z,7.0nm,0.7s
WHAR Wooly Hollow        72.18  54 eP      P      10 42 56.6 +0.7
     comp=Z,6.8nm,0.9s
WHAR                                epP    pP     10 43 30.0 -0.5
JCT  Junction City       72.19  63 P       P      10 42 56.5 +0.4
     baz=322
JCT  Junction City       72.19  63 eP      P      10 42 57.2 +1.1
     comp=Z,5.4nm,0.8s
JCT  Junction City       72.19  63 eP      P      10 42 57.2 +1.1
JCT                                 pmax   pmax
     comp=Z,5.0nm,0.8s
V42A Cord                72.19  54 P       P      10 42 55.9 -0.1
     baz=324
WHTX Lake Whitney,       72.22  60 P       P      10 42 56.8 +0.6
     baz=323
PARMO Parma              72.28  52 eP      P      10 42 58.1 +1.6
     comp=Z,75nm,0.7s
TESR Tescani             72.28 328 ⇑iP     P      10 42 55.3 -1.0
W41B Gary Mavity, V      72.29  55 P       P      10 42 56.8 +0.3
     baz=324,SNR=6.7
W41B Gary Mavity, V      72.29  55 eP      P      10 42 57.2 +0.7
     comp=Z,12nm,0.8s
ACSO Alum Creek Sta      72.36  45 P       P      10 42 57.3 +0.4
     baz=327
GSI  Gunungsitoli        72.38 247 eP      P      10 42 58.0 +0.6
     comp=Z,31nm,0.7s
PRU  Pruhonice           72.46 337 eP      P      10 42 57.7 +0.3
PRU  Pruhonice           72.46 337 eP      P      10 42 57.7 +0.3
GOPC GO Pecny, Ondr      72.47 337 eP      P      10 42 57.7 +0.2
GOPC GO Pecny, Ondr      72.47 337 eP      P      10 42 57.7 +0.2
X40A Basin Creek Fa      72.56  55 P       P      10 42 58.5 +0.4
     baz=324
WCI  Wyandotte Cave      72.58  49 P       P      10 42 58.5 +0.3
     baz=326
VRAC Vranov              72.60 335 ⇑iP     P      10 42 58.3 +0.1
VRAC Vranov              72.60 335 eP      P      10 42 58.4 +0.2
JAVC Velka Javorina      72.74 334 eP      P      10 43 00.2 +1.1
VYHS Vyhne               72.77 334 eP      P      10 42 59.2  0.0
VYHS                                pmax   pmax
     comp=Z,9.0nm,1.3s
VYHS Vyhne               72.77 334 eP      P      10 42 59.2  0.0
T46A Princeton           72.83  50 P       P      10 43 00.3 +0.6
     baz=325
PLOR Plostina            72.86 327 ⇑iP     P      10 42 59.3 -0.6
KRUC Moravsky            72.88 335 eP      P      10 43 00.0 +0.2
CFR  Carcaliu            72.97 326 ⇓iP     P      10 43 00.0 -0.4
PSZ  Piszkesteto         73.02 333 ⇑iP     P      10 43 00.7 -0.1
PSZ  Piszkesteto         73.02 333 eP      P      10 43 00.3 -0.5
     comp=Z,13nm,1.1s
PSZ  Piszkesteto         73.02 333 eP      P      10 43 00.3 -0.5
PSZ                                 pmax   pmax
     comp=Z,13nm,1.1s
CJR  Cluj-Napoca         73.04 330 ⇑iP     P      10 43 01.4 +0.5
PKME Peaks-Kenny Pk      73.18  33 P       P      10 43 01.5 -0.1
     baz=333
LBNH Lisbon              73.19  36 P       P      10 43 01.5 -0.2
     baz=332
DRGR                     73.24 330 ⇓iP     P      10 43 02.0 -0.1
Z40A Long Farm, Mag      73.27  57 P       P      10 43 02.6 +0.3
     baz=324
MODS Modra-Piesok        73.29 334 eP      P      10 43 01.8 -0.5
MODS                                pmax   pmax
     comp=Z,18nm,1.1s
MODS Modra-Piesok        73.29 334 eP      P      10 43 01.8 -0.5
V45A Humboldt            73.40  52 P       P      10 43 03.6 +0.5
     baz=325
MLR  Muntele Rosu        73.41 328 P       P      10 43 02.2 -1.0
     comp=Z,1.3nm,0.5s,baz=26,slow=9.2,SNR=8.6
MLR                                 LR     LR     11 21 31.9
     comp=Z,5.5nm,18.5s,baz=126,slow=41
MLR  Muntele Rosu        73.41 328 ⇑iP     P      10 43 03.1 -0.1
GRFO Grafenberg          73.49 339 eP      P      10 43 04.0 +0.6
     comp=Z,36nm,1.2s
GRFO Grafenberg          73.49 339 eP      P      10 43 04.0 +0.6
GRFO                                pmax   pmax
     comp=Z,36nm,1.2s
KHC  Kasperske Hory      73.49 337 eP      P      10 43 04.0 +0.5
KHC  Kasperske Hory      73.49 337 eP      P      10 43 03.4 -0.1
     comp=Z,11nm,1.2s
KHC  Kasperske Hory      73.49 337 eP      P      10 43 04.0 +0.5
BINY Binghamton          73.49  39 P       P      10 43 03.9 +0.3
     baz=330
ZST  Bratislava          73.50 334 eP      P      10 43 03.0 -0.5
ZST                                 pmax   pmax
     comp=Z,2.0nm,1.4s
ZST  Bratislava          73.50 334 eP      P      10 43 03.0 -0.5
TIRR Tirgusor            73.52 325 ⇑iP     P      10 43 03.3 -0.3
TIRR Tirgusor            73.52 325 eP      P      10 43 02.8 -0.8
     comp=Z,15nm,1.0s
TIRR Tirgusor            73.52 325 eP      P      10 43 02.8 -0.8
TIRR                                pmax   pmax
     comp=Z,15nm,1.0s
TLB  Topalu              73.53 326 ⇓iP     P      10 43 03.5 -0.2
Y42A Garnett, Star       73.59  55 P       P      10 43 05.0 +0.7
     baz=324
U47A Clarksville         73.60  50 P       P      10 43 04.7 +0.5
     baz=326,SNR=9.3
WVT  Waverly             73.60  51 P       P      10 43 05.0 +0.7
     baz=326
WVT  Waverly             73.60  51 eP      P      10 43 05.3 +1.0
     comp=Z,5.8nm,0.8s
WVT  Waverly             73.60  51 eP      P      10 43 05.3 +1.0
WVT                                 pmax   pmax
     comp=Z,6.0nm,0.8s
MEM  Membach             73.64 342 ⇑P      P      10 43 04.8 +0.5
     comp=Z,35nm,1.2s
GEC2 GERESS Array S      73.73 337 eP      P      10 43 05.2 +0.3
     comp=Z,22nm,1.4s
GEC2 GERESS Array S      73.73 337 eP      P      10 43 05.2 +0.3
GEC2                                pmax   pmax
     comp=Z,22nm,1.4s
GERES GERESS Array B     73.73 337 P       P      10 43 04.9  0.0
     comp=Z,2.7nm,0.5s,baz=39,slow=5.1,SNR=14
GERES                               LR     LR     11 20 23.4
     comp=Z,23nm,18.1s,baz=7.0,slow=40
GEA0 GERESS Array S      73.74 337 eP      P      10 43 04.8 -0.2
V46A Holladay            73.74  51 P       P      10 43 05.6 +0.5
     baz=326
VOIR                     73.74 328 ⇑iP     P      10 43 05.5 +0.4
SISI Saibi               73.75 244 P       P      10 43 05.5 +0.1
     comp=Z,34nm,0.9s
MDSI Maura Dua           73.78 238 P       P      10 43 04.5 -1.0
     comp=Z,8.5nm,0.9s,comp=Z,1µm
X44A Crenshaw            73.85  53 P       P      10 43 05.9 +0.2
     baz=325
ARR  Arges               73.94 328 ⇓iP     P      10 43 06.7 +0.5
BCLA Clavier             73.95 343 ⇑iP     P      10 43 06.5 +0.4
Z42A Norrel Spur, H      73.97  55 P       P      10 43 07.1 +0.7
     baz=324
V47A Nunnelly            74.00  51 P       P      10 43 07.0 +0.5
     baz=326
CONA Conrad Observa      74.06 335 eP      P      10 43 07.4 +0.5
     comp=Z,6.1nm,0.6s,SNR=8.1
833A Chaparral WMA,      74.11  64 P       P      10 43 08.5 +1.2
     baz=323
O56A Blue Knob Stat      74.14  42 P       P      10 43 07.3 -0.2
     baz=329
OXF  Oxford              74.19  53 P       P      10 43 08.2 +0.5
     baz=325
U49A Red Boiling Sp      74.22  49 P       P      10 43 08.3 +0.4
     baz=326
T50A Nancy               74.22  48 P       P      10 43 08.4 +0.5
     baz=327
Y44A Strider, Charl      74.25  54 P       P      10 43 08.7 +0.6
     baz=325
CTA  Charters Tower      74.27 192 P       P      10 43 07.7 -0.5
     comp=Z,10nm,0.8s,baz=27,slow=8.2,SNR=12
CTA                                 pP     pP     10 43 42.4 -0.6
     comp=Z,1.9nm,0.4s,baz=3.5,slow=8.5,SNR=2.4
CTAO Charters Tower      74.27 192 eP      P      10 43 09.3 +1.1
     comp=Z,13nm,0.9s
CTAO Charters Tower      74.27 192 eP      P      10 43 09.3 +1.1
CTAO                                pmax   pmax
     comp=Z,13nm,0.9s
DOU  Dourbes             74.38 343 ⇑P      P      10 43 08.8 +0.3
V48A Smith Brothers      74.39  50 P       P      10 43 09.1 +0.2
     baz=326
V48A Smith Brothers      74.39  50 eP      P      10 43 10.1 +1.2
     comp=Z,5.4nm,0.8s
PLAL Pickwick Lake       74.43  52 eP      P      10 43 09.8 +0.6
     comp=Z,6.7nm,0.8s
PLAL                                epP    pP     10 43 43.0 -0.9
W47A Westpoint           74.43  51 P       P      10 43 09.6 +0.5
     baz=326
241A Mo Tay, Goldon      74.50  57 P       P      10 43 10.2 +0.6
     baz=324
MOA  Molln               74.53 336 eP      P      10 43 09.3 -0.2
     comp=Z,3.4nm,0.6s
X46A Boneville           74.54  52 P       P      10 43 10.2 +0.4
     baz=326
ILGA Ilgaz               74.58 320 eP      P      10 43 10.6 +0.4
     comp=Z,28nm,1.0s
Y45A Yeager Farm, C      74.65  53 P       P      10 43 11.2 +0.8
     baz=325
ARSA Arzberg             74.78 335 eP      P      10 43 11.4 +0.5
     comp=Z,13nm,1.1s
V49A McMinnville         74.79  50 P       P      10 43 11.3 +0.1
     baz=326
W48A Pulaski             74.83  51 P       P      10 43 11.7 +0.3
     baz=326,SNR=5.8
X47A Russelville         74.92  52 P       P      10 43 11.9  0.0
     baz=326
341A Kurthwood           74.93  58 P       P      10 43 12.7 +0.7
     baz=324
Y46A Houston             74.96  53 P       P      10 43 12.6 +0.4
     baz=326
Z45A Winona              74.98  54 P       P      10 43 13.2 +0.9
     baz=325
SWET Sewanee             75.23  50 eP      P      10 43 14.2 +0.5
     comp=Z,8.2nm,0.8s
X48A Hartselle           75.35  51 P       P      10 43 14.2 -0.2
     baz=326
MDVR Moldovita           75.36 330 ⇑iP     P      10 43 13.7 -0.6
Y47A UCPARC, Winfie      75.42  52 P       P      10 43 14.7 -0.1
     baz=326
SOKA Soboth              75.43 335 eP      P      10 43 15.2 +0.4
     comp=Z,7.6nm,0.6s,SNR=7.4
V51A Loudon              75.45  49 P       P      10 43 14.9  0.0
     baz=327
KBA  Koelnbreinsper      75.47 337 eP      P      10 43 16.1 +1.0
     comp=Z,66nm,1.4s,SNR=23
W50A Signal Mountai      75.52  50 P       P      10 43 15.3 -0.2
     baz=327
244A Avery, Jackson      75.59  55 P       P      10 43 16.3 +0.6
     baz=325
X49A Woodville           75.63  51 P       P      10 43 16.5 +0.5
     baz=326
WATA Walderalm           75.64 338 eP      P      10 43 16.6 +0.6
     comp=Z,2.9nm,0.4s
RETA Reutte              75.67 338 eP      P      10 43 16.8 +0.7
     comp=Z,11nm,1.1s
WTTA Wattenberg          75.69 338 eP      P      10 43 17.0 +0.6
     comp=Z,4.4nm,0.5s,SNR=7.2
OBKA Obir                75.71 336 eP      P      10 43 17.2 +0.8
     comp=Z,22nm,1.0s,SNR=6.5
ECH  Echery              75.72 341 eP      P      10 43 16.4 +0.1
     comp=Z,33nm,1.3s
ECH  Echery              75.72 341 eP      P      10 43 16.4 +0.1
ECH                                 pmax   pmax
     comp=Z,33nm,1.3s
MOTA Moosalm             75.73 338 eP      P      10 43 15.7 -0.9
     comp=Z,7.9nm,0.8s,SNR=5.5
Y48A Jasper              75.73  52 P       P      10 43 16.8 +0.2
     baz=326
BR131 Keskin Array S     75.76 320 eP      P      10 43 16.3 -0.5
V52A Sevierville         75.76  48 P       P      10 43 16.9 +0.2
     baz=327
BRTR Keskin Array B      75.76 320 P       P      10 43 15.6 -1.2
     comp=Z,6.5nm,0.9s,baz=46,slow=3.6,SNR=29
BRTR                                LR     LR     11 22 29.5
     comp=Z,14nm,18.3s,baz=332,slow=40
BRTR Keskin Array B      75.76 320 P       P      10 43 15.6 -1.2
BRTR                                pmax   pmax
     comp=Z,6.0nm,1.0s
MYKA Terra Mystica       75.82 336 eP      P      10 43 17.0 +0.1
     comp=Z,16nm,1.1s,SNR=5.3
ABTA Abfaltersbach       75.97 337 eP      P      10 43 17.8  0.0
     comp=Z,17nm,0.8s,SNR=16
X50B Fort Payne          75.98  50 P       P      10 43 18.1  0.0
     baz=327
Z48A Northport           76.00  52 P       P      10 43 18.0 -0.1
     baz=326
DAVA Damuels             76.05 339 eP      P      10 43 18.2 -0.2
     comp=Z,5.0nm,0.6s
FETA Feichten            76.12 338 eP      P      10 43 19.5 +0.7
     comp=Z,19nm,1.1s,SNR=6.4
LJU  Ljubljana           76.15 335 eP      P      10 43 18.9 +0.1
CADS Cadrg               76.17 336 eP      P      10 43 18.9  0.0
147A Livingston          76.24  53 P       P      10 43 20.1 +0.6
     baz=326
X51A Calhoun             76.26  50 P       P      10 43 19.8 +0.3
     baz=327
WRAB Tennant Creek       76.32 204 eP      P      10 43 20.9 +1.0
     comp=Z,7.4nm,0.8s
WRAB Tennant Creek       76.32 204 eP      P      10 43 20.9 +1.0
WRAB                                pmax   pmax
     comp=Z,7.0nm,0.8s
WB2  Warramunga Arr      76.33 204 eP      P      10 43 19.6 -0.4
WRA  Warramunga Arr      76.34 204 P       P      10 43 20.3 +0.3
     comp=Z,6.1nm,0.8s,baz=18,slow=6.0,SNR=19
CEY  Cerknica            76.46 335 eP      P      10 43 20.6  0.0
DIVS Divibare            76.48 331 eP      P      10 43 20.2 -0.6
     comp=Z,34nm,1.5s
LRAL Lakeview Retre      76.54  52 P       P      10 43 21.4 +0.3
     baz=326
SHME Shamm               76.59 296 P       P      10 43 20.6 -1.0
FUORN Ofenpass-Fuorn     76.60 338 eP      P      10 43 22.5 +0.9
     comp=Z,23nm,1.1s
Z49A Columbiana          76.63  52 P       P      10 43 21.9 +0.3
     baz=326
Y51A Rockmart            76.72  50 P       P      10 43 22.2  0.0
     baz=327
ZAIG Zacatecas           76.78  70 eP      P      10 43 24.9 +1.9
     comp=Z,5.0nm,1.0s
Z50A Ashland             76.86  51 P       P      10 43 23.4 +0.4
     baz=327
Z50A Ashland             76.86  51 eP      P      10 43 23.8 +0.8
     comp=Z,9.2nm,0.8s
Z50A                                epP    pP     10 43 57.3 -0.7
VTS  Vitosha             76.88 328 ⇑iP     P      10 43 22.8 -0.3
VTS  Vitosha             76.88 328 eP      P      10 43 22.8 -0.3
     comp=Z,12nm,1.1s
VTS  Vitosha             76.88 328 eP      P      10 43 22.8 -0.3
VTS                                 pmax   pmax
     comp=Z,12nm,1.1s
TUE  Stuetta             76.94 339 eP      P      10 43 23.4 -0.1
     comp=Z,14nm,0.7s
149A Jones               77.00  52 P       P      10 43 24.6 +0.8
     baz=326
X53A Estanollee          77.01  49 P       P      10 43 24.6 +0.8
     baz=328
MSFE Esma-Masafi         77.13 295 P       P      10 43 22.1 -2.5
Z51A Franklin            77.15  51 P       P      10 43 25.2 +0.6
     baz=327
PALK Pallekele           77.25 265 iP      P      10 43 25.4  0.0
UOSS Minazif             77.44 295 eP      P      10 43 24.9 -1.5
     comp=Z,15nm,1.0s
UOSS Minazif             77.44 295 P       P      10 43 24.8 -1.5
ALN  Alexandroupoli      77.48 325 eP      P      10 43 26.0 -0.3
     comp=Z,11nm,1.1s
ALN  Alexandroupoli      77.48 325 eP      P      10 43 26.0 -0.3
ALN                                 pmax   pmax
     comp=Z,11nm,1.1s
WSAR Wadi Sarin          77.48 292 P       P      10 43 25.2 -1.4
     comp=Z,9.0nm,1.0s,baz=270,slow=1.0,SNR=3.9
HATD Hatta, Dubai        77.58 295 P       P      10 43 24.8 -2.3
Z52A Williamson          77.61  50 P       P      10 43 27.6 +0.4
     baz=327
NAZ  Nazwa, Dubai        77.70 295 P       P      10 43 26.8 -1.0
Y54A Tignall             77.82  49 P       P      10 43 28.8 +0.5
     baz=328
SOHO SOHO                77.91 294 iP      P      10 43 26.6 -2.3
     SNR=8.9
ASUD Al Ashush, Dub      78.17 295 P       P      10 43 27.8 -2.6
Z54A Sparta              78.28  49 P       P      10 43 31.4 +0.5
     baz=328
MANT Manisa              78.74 322 eP      P      10 43 33.6  0.0
     comp=Z,71nm,1.1s
SSB  Saint Sauveur       79.04 342 eP      P      10 43 35.3 +0.4
     comp=Z,28nm,1.3s
SSB  Saint Sauveur       79.04 342 eP      P      10 43 35.3 +0.4
SSB                                 pmax   pmax
     comp=Z,28nm,1.3s
AS01 Alice Springs       80.01 203 eP      P      10 43 40.8 +0.7
ASAR Alice Springs       80.02 203 P       P      10 43 40.9 +0.7
     comp=Z,6.5nm,0.9s,baz=14,slow=5.3,SNR=21
ASAR                                pP     pP     10 44 16.1 +0.7
     comp=Z,3.4nm,0.8s,baz=15,slow=5.6,SNR=4.8
MMAI Mount Meron Ar      80.84 315 P       P      10 43 44.4 -0.4
     comp=Z,8.1nm,0.6s,baz=42,slow=6.6,SNR=11
PPT  Papeete             83.52 131 LR      LR     11 11 33.2
     comp=Z,33nm,21.2s,baz=18,slow=28
RAYN Ar Rayn             84.19 302 eP      P      10 44 01.1 -1.1
     comp=Z,35nm,1.3s
RAYN Ar Rayn             84.19 302 iP      P      10 44 01.2 -1.1
     SNR=15
RAYN Ar Rayn             84.19 302 eP      P      10 44 01.1 -1.1
POLO Lamas de Olo        84.65 350 eP      P      10 44 05.4 +1.1
     comp=Z,15nm,1.6s
PVRL Vila Real           84.74 350 eP      P      10 44 05.7 +1.0
     comp=Z,46nm,1.3s
MVO  Moncorvo            84.78 349 eP      P      10 44 05.8 +0.8
     comp=Z,30nm,1.4s
PVIS Viseu               85.31 350 eP      P      10 44 08.4 +0.8
     comp=Z,44nm,1.9s
MTE  Manteigas           85.59 350 eP      P      10 44 09.9 +0.9
     comp=Z,4.5nm,0.5s
ESDC Sonseca Array       85.87 347 P       P      10 44 10.0 -0.4
     comp=Z,2.4nm,0.5s,baz=2.5,slow=5.0,SNR=19
PCAS Casmilo, Conde      86.03 350 eP      P      10 44 11.7 +0.6
     comp=Z,42nm,1.7s
PCBR Castelo Branco      86.14 350 eP      P      10 44 12.5 +0.9
     comp=Z,17nm,1.9s
KEST Kesra               87.17 336 P       P      10 44 16.8  0.0
     comp=Z,8.3nm,1.0s,baz=327,slow=3.6,SNR=5.6
KEST Kesra               87.17 336 eP      P      10 44 17.0 +0.2
     comp=Z,13nm,1.0s
TORD Torodi Ar. Bea      110.68 336 PKiKP  PKiKP  10 50 01.6 -1.1
     comp=Z,0.5nm,0.7s,baz=18,slow=2.3,SNR=5.9
VNDA Vanda               130.93 179 SKPbc  SKPbc  10 53 50.5  0.0
     comp=Z,5.9nm,1.1s,baz=328,slow=7.0,SNR=5.0
CPUP Villa Florida       141.70  59 SKPbc  SKPbc  10 54 24.4 -0.5
     comp=Z,0.9nm,0.6s,baz=39,slow=4.3,SNR=3.0
QSPA South Pole Qui      143.41 180 PKP    PKPbc  10 51 00.3 -0.3
     comp=Z,4.4nm,0.7s,baz=9.5,slow=1.4,SNR=9.8
QSPA                                SKPbc  SKPbc  10 54 27.1 -0.7
     comp=Z,1.3nm,0.3s,baz=325,slow=3.7,SNR=8.5
PLCA Paso Flores         144.66  89 PKP    PKPdf  10 51 05.8 -0.1
     comp=Z,13nm,0.8s,baz=302,slow=4.9,SNR=19
PLCA                                SKPbc  SKiKP  10 54 32.3  0.0
     comp=Z,4.2nm,0.9s,baz=256,slow=2.1,SNR=5.2
```

IDC 13 10:37:59.2±1.6, 7°.15S×127°.73E, h234km±18km, mb3.6/2, mb1 3.9/6, mb1mx3.2/56, mbtmp4.4/6, Error ellipse: s-maj=29.7km s-min=15.9km az=109.0, Banda Sea

```
Code Station Name        Δ°   AZ°   Phase ID          Time     Res
                                    Op    ISC         h m s    ISC
BATI Baumata             5.03 233   P     Pn          10 39 15.0  0.0
     19nm,0.3s,baz=271,slow=18,SNR=9.4
BATI                                S     S           10 40 11.6 -3.6
     24nm,0.3s,baz=92,slow=10,SNR=24
SIJI Sorong              7.17  30   P     Pn          10 39 43.4 +1.3
     1.3nm,0.3s,baz=210,slow=11,SNR=5.6
SIJI                                S     S           10 41 01.7 -2.6
     0.9nm,0.3s,baz=185,slow=17,SNR=3.4
WRA  Warramunga Arr      14.24 154  P     Pn          10 41 10.0 -0.9
     2.3nm,0.3s,baz=329,slow=12,SNR=81
WRA                                 S     S           10 43 45.7 -2.9
     0.7nm,0.3s,baz=332,slow=23,SNR=7.4
ASAR Alice Springs       17.46 161  P     P           10 41 48.0 +0.9
     2.3nm,0.3s,baz=344,slow=13,SNR=121
ASAR                                S     S           10 44 53.8 -2.6
     0.1nm,0.3s,baz=325,slow=19,SNR=4.2
ASAR                                ScP   ScP         10 49 27.6 -1.0
     0.1nm,0.3s,baz=342,slow=1.6,SNR=7.8
CTA  Charters Tower      22.09 127  P     P           10 42 36.4 +0.8
     1.1nm,0.3s,baz=282,slow=11,SNR=1.9
STKA Stephens Creek      27.79 154  P     P           10 43 26.7 -0.1
     2.0nm,0.4s,baz=330,slow=8.9,SNR=13
```

DJA 13 10:48:45.9±0.6, 8°.S±3°×10°.9E±°, h29km±5km, M3.8/17, MLv3.8/17, Jawa

```
Code Station Name        Δ°   AZ°   Phase ID          Time     Res
                                    Op    ISC         h m s    ISC
CMJI Cimerak             0.75 323   P     Pn          10 49 00.8 +0.2
CMJI                                S     Sn          10 49 11.6 +0.7
KPJI Karang Pucung       1.05   2   P     Pn          10 49 04.5 -0.2
KPJI                                S     Sb          10 49 18.9  0.0
UGM  Wanagama            1.68  74   P     Pn          10 49 13.4 +0.1
LEM  Lembang             2.01 321   P     Pn          10 49 18.0  0.0
SMRI Semarang            2.03  49   P     Pn          10 49 18.2 +0.1
WOJI Wonogiri, Jawa      2.08  75   P     Pn          10 49 18.8  0.0
WOJI                                S     Sn          10 49 44.5 +0.8
PCJI Pacitan             2.26  85   P     Pn          10 49 21.4  0.0
PCJI                                S     Sn          10 49 48.9 +0.6
SKJI Sukabumi            2.70 300   P     Pn          10 49 27.6 +0.2
SKJI                                S     Sn          10 49 59.5 +0.4
NGJI Ngawi               2.73  68   P     Pn          10 49 28.1 +0.3
DBJI Dramaga             2.81 310   P     Pn          10 49 28.9  0.0
UWJI Ujung Watu          2.82  46   P     Pn          10 49 29.1  0.0
PWJI Pagerwojo           2.90  83   P     Pn          10 49 29.6 -0.5
CGJI Cibinong            3.64 299   P     Pn          10 49 40.4 +0.1
GRJI Gresik              3.84  68   P     Pn          10 49 43.4 +0.3
```

IDC 13 10:49:22.4±1.9, 6°.63S×129°.29E, h0km, mb3.4/1, mb1 3.4/3, mb1mx3.1/58, mbtmp3.2/3, ML3.6/3, Error ellipse: s-maj=51.5km s-min=30.3km az=76.0, Banda Sea

```
Code Station Name        Δ°   AZ°   Phase ID          Time     Res
                                    Op    ISC         h m s    ISC
BATI Baumata             6.60 237   Pn    Pn          10 51 01.6 +0.8
     8.4nm,0.3s,baz=90,slow=20,SNR=6.3
BATI                                Sn    Sn          10 52 05.2  -12
     9.0nm,0.3s,baz=25,slow=19,SNR=3.9
WRA  Warramunga Arr      14.11 160  Pn    Pn          10 52 43.7 -0.1
     0.2nm,0.3s,baz=340,slow=13,SNR=9.9
WRA                                 Sn    Sn          10 55 08.8  -12
     0.6nm,0.3s,baz=340,slow=21,SNR=10
ASAR Alice Springs       17.51 166  P     Pn          10 53 27.4 -0.8
     0.1nm,0.3s,baz=330,slow=11,SNR=12
ASAR                                S     Sn          10 56 27.3  -17
     0.2nm,0.3s,baz=344,slow=25,SNR=7.9
MKAR Makanchi Array      67.53 327  P     P           11 00 20.6  0.0
     0.2nm,0.5s,baz=126,slow=7.3,SNR=2.8
```

MEX 13 10:55:43.8±0.3, 14°.78N×93°.55W, h26km±28km, MD3.7, Near coast of Chiapas

```
Code Station Name        Δ°   AZ°   Phase ID          Time     Res
                                    Op    ISC         h m s    ISC
PCIG                     0.97  19   iP    Pn          10 55 59.1 -2.6
PCIG                                eS    Sb          10 56 10.9 -3.5
THIG                     1.25  84   eP    Pn          10 56 02.8 -2.7
THIG                                eS    Sn          10 56 13.9 -7.6
CCIG Comitan             2.02  42   eP    Pn          10 56 14.2 -2.1
CCIG                                eS    Sn          10 56 35.8 -5.0
TGIG                     2.03  12   eP    Pn          10 56 14.2 -2.1
TGIG                                eS    Sn          10 56 37.6 -3.2
```

*ISK **13** 10:56:12.3, 40°.09N×29°.43E, h19km±4km, ML1.7/3*
*CSEM **13** 10:56:13.4±0.2, 40°.11N×29°.43E, h2km, ML1.7, Error ellipse: s-maj=3.5km s-min=3.2km az=44.0*
*DDA **13** 10:56:15.0, 39°.96N×29°.52E, h7km, Ml2.6*

ISC 13 10:56:13.5±1.0, 40°.10N±0°.03×29°.43E±0°.03, h9km±12km, n23, σ0°.63/33, Turkey

```
Code Station Name        Δ°   AZ°   Phase ID          Time     Res
                                    Op    ISC         h m s    ISC
CAVI Cavuskoy            0.33  72   PG    Pg          10 56 19.4 -0.7
CAVI                                SG    Sg          10 56 25.3 +0.8
CAVI Cavuskoy            0.33  72   ePg   Pg          10 56 19.4 -0.7
CAVI                                eSg   Sg          10 56 25.3 +0.8
ORLT Orhaneli            0.41 263   PG    Pg          10 56 20.9 -0.7
ORLT Orhaneli            0.41 263   ePg   Pg          10 56 20.9 -0.7
YLV  Yalova              0.47 355   PG    Pg          10 56 22.2 -0.4
```

YLV				SG	Sb	10 56 30.2	-0.9
YLV	**Yalova**	**0.47**	**355**	*e*Pg	**Pg**	**10 56 22.2**	**-0.4**
YLV				*e*Sg	**Sb**	**10 56 30.2**	**-0.9**
ARMT	**Armutlu**	**0.64**	**317**	PG	**Pg**	**10 56 25.3**	**-0.5**
ARMT				SG	**Sg**	**10 56 34.8**	**+0.7**
ARMT	**Armutlu**	**0.64**	**317**	*e*Pg	**Pg**	**10 56 25.3**	**-0.5**
ARMT				*e*Sg	**Sg**	**10 56 34.8**	**+0.7**
TVSB	**Tavsanli**	**0.65**	**178**	PG	**Pg**	**10 56 25.6**	**-0.4**
TVSB				SG	**Sb**	**10 56 35.4**	**-0.9**
TVSB	**Tavsanli**	**0.65**	**178**	*e*Pg	**Pg**	**10 56 25.6**	**-0.4**
TVSB				*e*Sg	**Sb**	**10 56 35.4**	**-0.9**
SBT5	**Esenkoy-Cinarc**	**0.68**	**322**	PG	**Pg**	**10 56 26.3**	**-0.2**
SBT5	**Esenkoy-Cinarc**	**0.68**	**322**	*e*Pg	**Pg**	**10 56 26.3**	**-0.2**
BORA	**Eskisehir**	**0.82**	**105**	PG	**Pg**	**10 56 28.9**	**-0.3**
BORA				SG	**Sb**	**10 56 40.4**	**-0.7**
BORA	**Eskisehir**	**0.82**	**105**	*i* P	**Pg**	**10 56 28.9**	**-0.3**
BORA	**Eskisehir**	**0.82**	**105**	P	**Pg**	**10 56 28.9**	**-0.3**
BORA				*e*Sg	**Sb**	**10 56 40.4**	**-0.7**
KCTX	**Karacabey (Bur**	**0.84**	**282**	PG	**Pg**	**10 56 29.3**	**-0.3**
KCTX	**Karacabey (Bur**	**0.84**	**282**	*e*Pg	**Pg**	**10 56 29.3**	**-0.3**
DURS	**Dursunbey**	**0.89**	**236**	*i* P	**Pb**	**10 56 30.9**	**-0.2**
DURS	**Dursunbey**	**0.89**	**236**	P	**Pb**	**10 56 30.9**	**-0.2**
DEMI	**Demirci**	**1.19**	**208**	*i* P	**Pn**	**10 56 37.3**	**+0.9**
DEMI	**Demirci**	**1.19**	**208**	P	**Pn**	**10 56 37.3**	**+0.9**
MANT	**Manisa**	**1.74**	**203**	*i* P	**Pb**	**10 56 45.8**	**0.0**
MANT	**Manisa**	**1.74**	**203**	P	**Pb**	**10 56 45.8**	**0.0**

NNC 13 11:06:00.4±2.5, 49°.79N×74°.48E, h0km, mb3.6, mpv3.2, 6C-2D, Error ellipse: s-maj=31.4km s-min=11.2km az=15.0, Suspected Mining explosion., Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.73**	**71**	⇓Pn	Pn	11 06 45.5	0.0
	8.3nm,0.5s						
KURBB				⇓Lg	Lg	11 07 26.2	
	36nm,0.9s						
KURK	**Kurchatov**	**2.81**	**69**	⇑Pn	Pn	11 06 46.8	+0.2
	13nm,1.1s						
KURK				⇑Lg	Lg	11 07 28.9	
	21nm,1.0s						
BVA0	**Borovoye Array**	**4.13**	**323**	⇑Pg	Pb	11 07 16.0	+2.2
	4.3nm,1.1s,baz=136,slow=15,SNR=6.8						
BVA0				⇑Lg	Lg	11 08 10.5	
	4.6nm,0.8s,baz=144,slow=26,SNR=4.0						
BRVK	**Borovoye**	**4.19**	**323**	⇑Pg	Pb	11 07 17.7	+2.7
	4.2nm,0.9s						
BRVK				⇑Lg	Lg	11 08 10.9	
	3.9nm,0.7s						

TAP 13 11:19:44.1, 24°.58N×122°.09E, h66km, ML2.6, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.05**	**125**	P	Pn	11 19 53.8	+0.1
	baz=110						
EOS1				S	Sn	11 20 01.2	+0.6
	baz=110						
TWC	**Suao**	**0.22**	**279**	*e*P	Pn	11 19 54.8	+0.5
	baz=279						
TWC				*e*S	Sn	11 20 02.7	+0.9
	baz=279						
NANB	**Nanao**	**0.34**	**244**	*e*P	Pn	11 19 55.4	+0.3
	baz=237						
ENA	**Nanau**	**0.35**	**245**	*e*P	Pn	11 19 55.7	+0.4
	baz=237						
ENTT	**Nioudou**	**0.48**	**278**	*e*P	Pn	11 19 57.2	+0.8
	baz=283						

TAP 13 11:19:48.6, 24°.78N×121°.25E, h10km±1km, ML2.2, 1D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NSK	**Sanguang**	**0.14**	**135**	P	Pg	11 19 52.3	+0.4
	baz=124						
NSK				S	Sg	11 19 54.8	+0.6
	baz=124						
YHNB	**Yeheng**	**0.16**	**132**	⇓*i*P	Pg	11 19 52.5	+0.3
	baz=123						
YHNB				S	Sg	11 19 55.1	+0.5
	baz=123						
NCUH	**Zhongli**	**0.20**	**344**	*e*P	Pb	11 19 54.0	-0.3
	baz=345						
NCUH				*e*S	Sg	11 19 56.2	+0.5
	baz=345						
NCU	**National Centr**	**0.20**	**344**	*e*P	Pb	11 19 53.9	-0.5
	baz=347						
NWLT	**Wulai**	**0.23**	**90**	P	Pg	11 19 53.8	+0.4
	baz=90						
NWLT				*e*S	Sg	11 19 57.2	+0.5
	baz=90						
SBCB	**Hsinchu**	**0.24**	**274**	*e*P	Pb	11 19 55.2	+0.2
	baz=286						
SBCB				*e*S	Sg	11 19 59.9	+3.1
	baz=286						
LIOB	**Emei**	**0.25**	**238**	*e*P	Pb	11 19 54.8	-0.4
	baz=226						
LIOB				*e*S	Sg	11 19 59.6	+2.5
	baz=226						
HSN	**Hsinchu**	**0.25**	**276**	*e*P	Pb	11 19 54.6	-0.6
	baz=297						
HSN				*e*S	Sb	11 19 58.9	-0.9
	baz=297						
NSTT	**Nanjuang**	**0.27**	**237**	P	Pb	11 19 55.1	-0.4
	baz=223						
NSTT				S	Sb	11 19 59.9	-0.2
	baz=223						
ENTT	**Nioudou**	**0.32**	**115**	*e*P	Pb	11 19 55.8	-0.6
	baz=121						
ENTT				*e*S	Sg	11 19 59.6	+0.2
	baz=121						
NNS	**Nan Shan**	**0.36**	**161**	*e*P	Pb	11 19 56.5	-0.6
	baz=146						
NNS				*e*S	Sg	11 20 01.6	+1.2
	baz=146						
NNSH	**Datong**	**0.37**	**160**	*e*P	Pg	11 19 56.6	+0.6
	baz=151						
NNSH				*e*S	Sg	11 20 01.4	+0.5
	baz=151						
TWE	**Neicheng**	**0.39**	**98**	*e*P	Pb	11 19 57.0	-0.6
	baz=105						
YM10	**YM10**	**0.47**	**37**	*e*P	Pb	11 19 59.3	+0.2
	baz=29						
NMLH	**Miaoli**	**0.48**	**240**	*e*P	Pb	11 19 60.0	+0.8
	baz=240						
YM03	**YM03**	**0.48**	**34**	*e*P	Pb	11 19 59.4	+0.2
	baz=25						
YM12	**YM12**	**0.50**	**36**	*e*P	Pb	11 19 59.8	+0.3
	baz=27						
YM08	**YM08**	**0.51**	**37**	*e*P	Pb	11 19 59.9	+0.1
	baz=29						
YM07	**YM07**	**0.52**	**41**	*e*P	Pg	11 19 58.9	+0.1
	baz=33						
TIPB	**Shuangxi**	**0.56**	**70**	*e*P	Pg	11 19 59.5	-0.1
	baz=83						
TIPB				*e*S	Sg	11 20 07.4	+0.4
	baz=83						
NWF	**Wu-fen Shan**	**0.57**	**59**	*e*P	Pb	11 20 00.8	+0.1
	baz=60						
WFSB	**Wu-fen Shan**	**0.57**	**59**	*e*P	Pb	11 20 00.2	-0.5
	baz=60						
WFSB				*e*S	Sg	11 20 07.5	+0.4
	baz=60						
NSY	**Sanyi**	**0.57**	**231**	*e*P	Pb	11 20 01.7	+1.0
	baz=217						
NSY				*e*S	Sb	11 20 10.5	+1.6
	baz=217						
NANB	**Nanao**	**0.58**	**127**	*e*P	Pg	11 19 59.9	+0.1
	baz=125						
NANB				*e*S	Sg	11 20 07.6	+0.2
	baz=125						
TWB1	**Santiao Chiao**	**0.71**	**71**	*e*P	Pb	11 20 03.2	+0.1
	baz=80						
TWB1				*e*S	Sb	11 20 13.1	+0.2
	baz=80						
CHGB	**Renai**	**0.72**	**185**	*e*P	Pb	11 20 03.0	-0.4
	baz=181						
TYC	**Yuchr**	**0.94**	**202**	*e*P	Pn	11 20 08.4	+0.6
	baz=192						
SMLT	**Sun Moon Lake**	**0.94**	**200**	*e*P	Pn	11 20 07.9	-0.1
	baz=190						

NIED ***13*** *11:27:00, 44°.30N×148°.40E, h77km, Mw3.8 Best double couple: M0=4.95000×10^14 NP1:φ1=84.00000°, δ1=47.00000°, λ1=32.00000°. NP2:φ2=211.00000°, δ2=57.00000°, λ2=54.00000°.*
MOS ***13*** *11:27:16.0±0.6, 44°.67N×148°.88E, h50km, mb4.1/3, Error ellipse: s-maj=15.5km s-min=10.5km az=150.5*
ISCJB ***13*** *11:27:16.9±0.9, 44°.64N±0°.06×148°.74E±0°.09, h65km±9km, mb3.6/8, Error ellipse: s-maj=13.4km s-min=6.5km az=41.9*
SKHL ***13*** *11:27:17.8±0.8, 44°.72N×148°.78E, h57km±2km, mb4.1/5*
JMA ***13*** *11:27:18.5±0.4, 44°.30N×148°.42E, h0km, M4.4*
IDC ***13*** *11:27:22.1±3.4, 45°.17N×148°.37E, h92km±31km, mb3.4/6, mb1 3.7/8, mb1mx3.3/70, mbtmp3.7/8, MS2.5/2, Ms1 2.5/2, ms1mx2.2/42, Error ellipse: s-maj=58.0km s-min=28.6km az=156.0*

ISC 13 11:27:16.9±1.4, 44°.61N±0°.06×148°.84E±0°.09, h54km±14km, n50, σ1§99/64, mb3.7/8, 6C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.93**	**313**	*i* P	**Pn**	**11 27 33.0**	**-0.8**
KUR				AMB	AMB	11 27 34.3	
	227nm,0.3s						
KUR				AMB	AMB	11 27 34.3	
	231nm,0.3s						
KUR				AMB	AMB	11 27 34.3	
	84nm,0.3s						
KUR				*i* S	**Sn**	**11 27 44.5**	**-1.7**
KUR				A	A	11 27 48.6	
	2μm,0.4s						
KUR				A	A	11 27 48.6	
	2μm,0.4s						
KUR	**Kuril'sk**	**0.93**	**313**	*c i*PN	**Pn**	**11 27 33.9**	**+0.1**
KUR				*i* S	**Sn**	**11 27 45.3**	**-0.9**
KUR				pmax	pmax		
	comp=N,111nm,0.1s						
KUR				pmax	pmax		
	comp=Z,239nm,0.1s						
KUR				pmax	pmax		
	comp=E,342nm,0.2s						
KUR				smax	smax		
	comp=E,1μm,0.4s						
KUR				smax	smax		
	comp=N,778nm,0.3s						
SHO	**Shikotan**	**1.62**	**244**	*i* P	**Pn**	**11 27 43.5**	**+0.4**
SHO				AMB	AMB	11 27 44.0	
	comp=N,15nm,0.2s						
SHO				AMB	AMB	11 27 44.0	
	comp=N,25nm,0.2s						
SHO				AMB	AMB	11 27 44.0	
	comp=N,32nm,0.2s						
SHO				*i* S	**Sn**	**11 28 01.3**	**-1.6**
SHO				A	A	11 28 05.2	
	comp=N,490nm,0.5s						
SHO				A	A	11 28 05.2	
	comp=N,550nm,0.5s						
SHO	**Shikotan**	**1.62**	**244**	*c i*PN	**Pn**	**11 27 43.5**	**+0.4**
SHO				*i* S	**Sn**	**11 28 01.2**	**-1.6**
SHO				pmax	pmax		
	comp=N,15nm,0.2s						
SHO				pmax	pmax		
	comp=E,25nm,0.2s						
SHO				pmax	pmax		
	comp=Z,32nm,0.2s						
SHO				smax	smax		
	comp=N,229nm,0.4s						
SHO				smax	smax		
	comp=E,365nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**2.21**	**256**	*i* P	**Pn**	**11 27 52.0**	**+0.9**
YUK				AMB	AMB	11 27 52.0	
	comp=E,36nm,0.2s						
YUK				AMB	AMB	11 27 52.0	
	comp=E,61nm,0.2s						
YUK				AMB	AMB	11 27 52.0	
	comp=E,30nm,0.2s						
YUK				*i* S	**Sn**	**11 28 16.8**	**-0.5**
YUK				A	A	11 28 18.0	
	comp=E,823nm,0.6s						
YUK				A	A	11 28 18.0	
	comp=E,665nm,0.6s						
YUK	**Yuzh-Kuril'sk**	**2.21**	**256**	*d i*PN	**Pn**	**11 27 52.4**	**+1.3**
YUK				*i* S	**Sn**	**11 28 17.1**	**-0.2**
YUK				pmax	pmax		
	comp=N,36nm,0.2s						
YUK				pmax	pmax		
	comp=Z,297nm,0.2s						
YUK				pmax	pmax		
	comp=E,61nm,0.1s						
YUK				smax	smax		
	comp=E,664nm,0.5s						
YUK				smax	smax		
	comp=N,823nm,0.6s						
LAGR	**Lagunnoye**	**2.26**	**257**	*e*P	**Pn**	**11 27 52.0**	**+0.2**
LAGR				*i* S	**Sn**	**11 28 18.0**	**-0.4**
LAGR				A	A	11 28 19.0	
	comp=N,166nm,0.5s						
LAGR				A	A	11 28 19.0	
	comp=N,435nm,0.5s						
LAGR	**Lagunnoye**	**2.26**	**257**	PN	**Pn**	**11 27 52.6**	**+0.8**
LAGR				*i* S	**Sn**	**11 28 18.2**	**-0.2**
LAGR				smax	smax		
	comp=N,2μm,0.5s						
LAGR				smax	smax		
	comp=E,435nm,0.4s						
GRPR	**Tuman**	**2.29**	**255**	*e*P	**Pn**	**11 27 52.0**	**-0.2**
GRPR				AMB	AMB	11 27 53.0	
	comp=E,69nm,0.3s						
GRPR				*e*S	**Sn**	**11 28 20.0**	**+0.9**
GRPR				A	A	11 28 21.0	
	comp=E,118nm,0.5s						
GRPR				A	A	11 28 21.0	
	comp=E,810nm,0.5s						
GRPR	**Tuman**	**2.29**	**255**	*e*PN	**Pn**	**11 27 52.7**	**+0.5**
GRPR				*e*S	**Sn**	**11 28 20.4**	**+1.3**
GRPR				pmax	pmax		
	comp=Z,69nm,0.2s						
GRPR				smax	smax		
	comp=N,1μm,0.3s						
GRPR				smax	smax		
	comp=E,810nm,0.3s						
GLVR	**Golovnino**	**2.54**	**251**	*e*P	**Pn**	**11 27 56.0**	**+0.4**
GLVR				*e*S	**Sn**	**11 28 25.0**	**-0.3**
GLVR				A	A	11 28 26.0	
	comp=E,227nm,0.3s						
GLVR				A	A	11 28 26.0	
	comp=E,390nm,0.3s						
GLVR	**Golovnino**	**2.54**	**251**	*e*PN	**Pn**	**11 27 56.3**	**+0.7**
GLVR				*e*S	**Sn**	**11 28 25.0**	**-0.3**
GLVR				smax	smax		
	comp=N,227nm,0.2s						
GLVR				smax	smax		
	comp=E,390nm,0.5s						
NEM2	**Nemuro 2**	**2.56**	**242**	P	**Pn**	**11 27 56.3**	**+0.5**
NEM2				*e*S	**Sn**	**11 28 24.1**	**-1.6**
JRA	**Rausu**	**2.75**	**257**	P	**Pn**	**11 28 00.0**	**+1.5**
JRA				*e*S	**Sn**	**11 28 30.5**	**0.0**
JNK	**Nakash**	**3.14**	**252**	P	**Pn**	**11 28 05.4**	**+1.6**
JNK				*e*S	**Sn**	**11 28 39.8**	**-0.3**
JAK	**Akkeshi**	**3.40**	**243**	P	**Pn**	**11 28 08.0**	**+0.5**
JTKR	**Abashiri--Toko**	**3.60**	**262**	P	**Pn**	**11 28 11.1**	**+1.0**
JAR	**Ashorobuto**	**3.89**	**252**	P	**Pn**	**11 28 16.1**	**+2.0**
JAR				*e*S	**Sn**	**11 28 59.5**	**+1.0**
JKK2	**Kamakawa 2**	**4.44**	**263**	P	**Pn**	**11 28 23.5**	**+1.8**
JCH	**Churui**	**4.45**	**245**	P	**Pn**	**11 28 23.0**	**+1.2**
JCH				*e*S	**Sn**	**11 29 10.1**	**-2.1**
JKA	**Kamikawa-asahi**	**4.50**	**266**	*e*P	**Pn**	**11 28 24.5**	**+2.0**
ASAJ	**Asahikawa**	**4.50**	**266**	P	**Pn**	**11 28 24.4**	**+1.9**
	comp=E,4.7nm,0.3s,baz=66,slow=21,SNR=54						
ASAJ				S	**Sn**	**11 29 22.2**	**+8.6**
	baz=215,slow=18,SNR=2.4						
ASAJ				LR	LR	11 30 00.8	
	comp=E,48nm,21.2s,baz=32,slow=37						
YSS	**Yuzh-Sakhalins**	**4.86**	**301**	*e*P	**Pn**	**11 28 27.4**	**0.0**
YSS				AMB	AMB	11 28 28.9	
	comp=E,10.0nm,0.7s						
YSS				*e*S	**Sn**	**11 29 18.2**	**-4.1**
YSS	**Yuzh-Sakhalins**	**4.86**	**301**	⇓*e*PN	**Pn**	**11 28 27.3**	**-0.1**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ERM	**Erimo**	**4.89**	**240**	*e*P	**Pn**	**11 28 30.2**	**+2.4**
ERM	**Erimo**	**4.89**	**240**	*c i*PN	**Pn**	**11 28 30.2**	**+2.4**
JNBK	**Urakawa-nobuka**	**5.00**	**244**	P	**Pn**	**11 28 29.8**	**+0.4**
JKB	**Kayabe**	**6.31**	**247**	P	**Pn**	**11 28 47.6**	**+0.2**
JKB				*e*S	**Sn**	**11 29 54.1**	**-4.0**
JOT	**Ohata**	**6.56**	**243**	P	**Pn**	**11 28 50.2**	**-0.5**
JANG	**Nango**	**6.87**	**235**	*e*S	**Sn**	**11 30 05.7**	**-6.0**
PETK	**Petropavlovsk-**	**10.31**	**31**	P	**Pn**	**11 29 43.5**	**+1.5**
	comp=Z,0.2nm,0.3s,baz=224,slow=10,SNR=2.9						
PETK				LR	LR	11 33 24.2	
	comp=Z,39nm,18.9s,baz=245,slow=36						
KLR	**Kul'dur**	**12.56**	**298**	⇑*e*PN	**Pn**	**11 30 14.4**	**+1.7**
EKMR	**Ekimchan**	**13.44**	**315**	*e*P	**Pn**	**11 30 23.6**	**-1.1**
TIK	**Tiksi**	**28.77**	**347**	*e*P	**P**	**11 33 11.5**	**+2.4**
TIXI	**Tiksi**	**28.78**	**347**	⇑*e*P	**P**	**11 33 11.5**	**+2.3**
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ULN	**Ulaanbaatar**	**28.83**	**291**	⇑*e*P	**P**	**11 33 08.3**	**-1.8**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**29.00**	**143**	T	T	12 04 06.7	
	baz=334,slow=76,SNR=150						
H11N1	**WAKE ISLAND Hy**	**29.02**	**143**	T	T	12 04 13.5	
	baz=334,slow=76,SNR=144						
H11N3	**WAKE ISLAND Hy**	**29.02**	**143**	T	T	12 04 13.7	
	baz=334,slow=76,SNR=126						
H11S1	**WAKE ISLAND Hy**	**30.01**	**144**	T	T	12 05 26.1	
	baz=334,slow=76,SNR=104						
H11S3	**WAKE ISLAND Hy**	**30.02**	**144**	T	T	12 05 28.9	
	baz=334,slow=76,SNR=79						
H11S2	**WAKE ISLAND Hy**	**30.03**	**144**	T	T	12 05 27.6	
	baz=334,slow=76,SNR=77						
ILAR	**Eielson Array**	**40.08**	**37**	P	**P**	**11 34 44.9**	**-1.7**
	comp=Z,0.3nm,0.6s,baz=283,slow=8.2,SNR=4.7						
ILAR	**Eielson Array**	**40.08**	**37**	*e*P	**P**	**11 34 47.0**	**+0.4**
ILAR	**Eielson Array**	**40.08**	**37**	*e*P	**P**	**11 34 47.0**	**+0.4**
YKA	**Yellowknife Ar**	**54.41**	**35**	P	**P**	**11 36 37.6**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=302,slow=7.3,SNR=4.2						
FINES	**FINESS Array B**	**64.66**	**333**	P	**P**	**11 37 45.5**	**-3.1**
	comp=Z,1.7nm,1.0s,baz=50,slow=13,SNR=2.9						
NVAR	**Mina Array Bea**	**66.09**	**59**	P	**P**	**11 37 59.7**	**+1.1**
	comp=Z,0.9nm,0.7s,baz=290,slow=6.0,SNR=8.5						
PDAR	**Pinedale Array**	**68.43**	**51**	P	**P**	**11 38 13.9**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=318,slow=2.0,SNR=7.4						
TXAR	**Lajitas Array**	**81.16**	**57**	P	**P**	**11 39 27.7**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=305,slow=3.8,SNR=10						

ISCJB ***13*** *11:30:59.1±0.6, 51°.48N±0°.07×75°.28E±0°.08, h0km, Error ellipse: s-maj=12.0km s-min=5.1km az=30.6*
NNC ***13*** *11:30:59.6±0.8, 51°.72N×75°.42E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=16.2km s-min=5.9km az=26.0, Suspected Mining explosion.*
IDC ***13*** *11:31:01.2±0.9, 51°.67N×75°.48E, h0km, mb1 3.1/5, mb1mx3.0/73, mbtmp3.1/5, ML2.8/5, Error ellipse: s-maj=23.1km s-min=7.5km az=27.0*

ISC 13 11:31:00.4±1.0, 51°.57N±0°.09×75°.37E±0°.06, h0km, n14, σ1§35/16, 8C-8D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.21**	**114**	Pn	**Pn**	**11 31 37.9**	**-0.4**
	0.9nm,0.3s,baz=298,slow=19,SNR=49						
KURBB				Lg	Lg	11 32 09.7	
	1.1nm,0.3s,baz=306,slow=31,SNR=7.8						
KURBB	**Kurchatov Arra**	**2.21**	**114**	⇑Lg	Lg	11 32 08.4	
	76nm,0.6s						
KURK	**Kurchatov**	**2.22**	**111**	⇑Pn	**Pn**	**11 31 38.8**	**+0.3**
	4.9nm,0.5s						
KURK				⇑Pn	**Pb**	**11 31 39.0**	**-2.4**
	6.8nm,0.5s						
KURK				⇑Lg	Lg	11 32 08.9	
	37nm,0.9s						
BVA0	**Borovoye Array**	**3.39**	**298**	⇓Pg	**Pb**	**11 32 00.6**	**-0.7**
	4.2nm,0.8s,baz=113,slow=16,SNR=4.9						
BVA0				⇓Lg	Lg	11 32 44.0	
	7.1nm,0.5s,baz=116,slow=27,SNR=6.1						
BVAR	**Borovoye Array**	**3.39**	**298**	Pn	**Pn**	**11 31 55.4**	**+0.9**
	0.6nm,0.3s,baz=114,slow=13,SNR=6.9						
BVAR				Sn	**Sn**	**11 32 35.9**	**+0.5**
	1.7nm,0.3s,baz=112,slow=23,SNR=6.7						
BVAR				Lg	Lg	11 32 44.5	
	2.8nm,0.3s,baz=112,slow=28,SNR=10						
BRVK	**Borovoye**	**3.46**	**298**	⇓Pg	**Pb**	**11 32 01.1**	**-1.4**
	4.1nm,0.7s						
BRVK				⇓Lg	Lg	11 32 46.0	
	26nm,1.3s						
OTUK	**Ortayu**	**3.86**	**212**	⇑Pg	**Pg**	**11 32 13.7**	**-0.6**
	2.7nm,0.9s						
OTUK				⇓Lg	Lg	11 33 06.7	
	12nm,0.8s						
ZALV	**Zalesovo Beam**	**6.21**	**64**	Pn	**Pn**	**11 32 33.8**	**+0.5**
	0.7nm,0.3s,baz=251,slow=14,SNR=8.2						
ZALV				Lg	Lg	11 34 16.2	
	baz=259,slow=26,SNR=3.1						
MAKZ	**Makanchi**	**6.44**	**135**	⇑Pn	**Pn**	**11 32 38.7**	**+2.2**
	1.7nm,0.7s						
MAKZ				⇓Sn	**Sn**	**11 33 51.7**	**+1.2**
	1.5nm,0.5s						
MAKZ				⇑Lg	Lg	11 34 27.4	
	9.3nm,1.0s						
MK31	**Makanchi Array**	**6.59**	**134**	⇑Pn	**Pn**	**11 32 39.4**	**+0.9**
	0.6nm,0.5s,baz=312,slow=11,SNR=6.0						
MK31				⇓Sn	**Sn**	**11 33 55.2**	**+1.0**
	0.6nm,0.4s,baz=332,slow=19,SNR=2.9						
MK31				⇓Lg	Lg	11 34 32.0	
	10nm,0.9s,baz=325,slow=24,SNR=9.4						
MKAR	**Makanchi Array**	**6.59**	**134**	Pn	**Pn**	**11 32 39.5**	**+1.1**
	0.2nm,0.3s,baz=322,slow=11,SNR=7.1						
MKAR				Sn	**Sn**	**11 33 56.2**	**+2.0**
	0.5nm,0.3s,baz=315,slow=20,SNR=6.6						
MKAR				Lg	Lg	11 34 28.3	
	0.5nm,0.3s,baz=320,slow=24,SNR=12						
AAK	**Ala-Archa**	**8.95**	**184**	Lg	Lg	11 35 46.4	
	0.2nm,0.3s,baz=244,slow=22,SNR=4.9						
I31KZ	**AKTYUBINSK INF**	**10.99**	**271**	*i*		12 34 10.0	
	baz=76,slow=318,SNR=0.2						
AKTO	**Aktyubinsk**	**10.99**	**271**	Pn	**Pn**	**11 33 38.3**	**-0.5**
	0.2nm,0.3s,baz=91,slow=12,SNR=4.1						

ISK ***13*** *11:31:30.8, 37°.46N×28°.13E, h9km, ML1.9/4*
ISCJB ***13*** *11:31:31.4±0.5, 37°.45N±0°.03×28°.13E±0°.04, h0km, Error ellipse: s-maj=5.1km s-min=3.8km az=159.9*
DDA ***13*** *11:31:31.4, 37°.43N×28°.08E, h7km, Ml2.7, Suspected Mining explosion.*
CSEM ***13*** *11:31:31.5±0.2, 37°.44N×28°.11E, h1km, ML2.7, Error ellipse: s-maj=3.4km s-min=3.0km az=52.0, Suspected Mining explosion.*

ISC 13 11:31:30.1±0.9, 37°.43N±0°.03×28°.23E±0°.04, h0km, n26, σ0§45/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.30**	**172**	PG	**Pb**	**11 31 38.3**	**-0.1**
YER				SG	**Sb**	**11 31 43.3**	**-0.6**
YER	**Yerkesik**	**0.30**	**172**	*e*Pg	**Pb**	**11 31 38.3**	**-0.1**
YER				*e*Sg	**Sb**	**11 31 43.3**	**-0.6**
AYDN	**Tasoluk**	**0.36**	**309**	*i* P	**Pg**	**11 31 37.3**	**+0.4**
AYDN				*i* S	**Sg**	**11 31 41.6**	**0.0**
AYDN	**Tasoluk**	**0.36**	**309**	P	**Pg**	**11 31 37.3**	**+0.4**
AYDN				S	**Sg**	**11 31 41.6**	**0.0**
MLSB	**Milas**	**0.39**	**249**	PG	**Pg**	**11 31 37.5**	**0.0**
MLSB				SG	**Sg**	**11 31 42.8**	**+0.3**
MLSB	**Milas**	**0.39**	**249**	*e*Pg	**Pg**	**11 31 37.5**	**0.0**
MLSB				*e*Sg	**Sg**	**11 31 42.8**	**+0.3**
TAVA	**DENIZLI_Tavas**	**0.55**	**87**	*i* P	**Pn**	**11 31 44.4**

ARG	Arkhangelos	1.22 184	PN	Pn	11 31 54.9	+0.6
ARG	Arkhangelos	1.22 184	*e*Pn	Pn	11 31 54.9	+0.6

*ISCJB **13** 11:57:16.0±0.7, 36°.56N±0°.04×70°.90E±0°.09, h188km, mb3.5/3, Error ellipse: s-maj=10.0km s-min=5.1km az=164.8*
*IDC **13** 11:57:16.3±5.9, 36°.43N×71°.21E, h182km±48km, mb3.4/3, mb1 3.5/9, mb1mx3.1/75, mbtmp4.0/9, Error ellipse: s-maj=56.1km s-min=26.4km az=57.0*
*NNC **13** 11:57:20.1±3.5, 36°.92N×71°.07E, h0km, mb4.4, mpv4.0, Error ellipse: s-maj=28.2km s-min=12.2km az=172.0*

ISC 13 11:57:16.9±0.9, 36°.50N±0°.07×71°.00E±0°.08, h188km, n33, σ1°98/40, mb3.7/3, 8C-7D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZET	**Dzherino**	**2.88**	**324**	⇓P	**Pn**	**11 58 03.5**	**-1.0**
	48nm,0.3s						
DZET				⇓S	**Sn**	**11 58 37.9**	**-3.9**
	340nm,0.5s						
SFK	**Sufi-Kurgan**	**4.03**	**29**	⇑P	**Pn**	**11 58 19.4**	**+0.6**
	7.1nm,0.4s						
SFK				⇓S	**Sn**	**11 59 05.6**	**-1.8**
	74nm,0.6s						
AML	**Almayashu**	**6.00**	**20**	P	**Pn**	**11 58 44.1**	**-0.2**
	SNR=46						
MNAS	**Manas**	**6.09**	**11**	⇑P	**Pn**	**11 58 44.9**	**-0.4**
	8.8nm,0.5s						
MNAS				⇑S	**Sn**	**11 59 51.3**	**-3.8**
	38nm,0.6s						
UCH	**Uchtor**	**6.34**	**24**	P	**Pn**	**11 58 48.6**	**-0.1**
	SNR=14						
KZA	**Kyzart**	**6.47**	**29**	P	**Pn**	**11 58 53.0**	**+2.5**
	SNR=6.0						
EKS2	**Erkin-Say**	**6.52**	**18**	P	**Pn**	**11 58 51.0**	**+0.2**
	SNR=9.7						
KK31	**Karatay Array**	**6.61**	**357**	⇑P	**Pn**	**11 58 51.0**	**-0.9**
	3.2nm,0.3s,baz=183,slow=12,SNR=45						
KK31				S	**Sn**	**12 00 02.5**	**-4.5**
	43nm,0.7s,baz=181,slow=18,SNR=24						
AAK	**Ala-Archa**	**6.70**	**23**	P	**Pn**	**11 58 53.5**	**+0.2**
	4.9nm,0.3s,baz=182,slow=5.9,SNR=21						
AAK				S	**Sn**	**12 00 06.9**	**-2.5**
	1.1nm,0.3s,baz=306,slow=24,SNR=14						
AAK	**Ala-Archa**	**6.70**	**23**	⇓P	**Pn**	**11 58 53.0**	**-0.2**
	3.7nm,0.3s						
AAK				S	**Sn**	**12 00 07.2**	**-2.2**
	15nm,0.7s						
AAK	**Ala-Archa**	**6.70**	**23**	P	**Pn**	**11 58 53.4**	**+0.1**
	SNR=9.1						
KBK	**Karagaybulak**	**6.87**	**25**	⇑P	**Pn**	**11 58 56.0**	**+0.6**
	SNR=6.6						
CHMS	**Chumysh**	**7.11**	**23**	P	**Pn**	**11 58 58.4**	**0.0**
	SNR=6.9						
USP	**Ospenovka**	**7.28**	**21**	P	**Pn**	**11 59 00.1**	**-0.5**
	SNR=6.8						
TKM2	**Tokmak 2**	**7.33**	**28**	⇓P	**Pn**	**11 59 01.3**	**-0.2**
	18nm,0.6s						
TKM2				⇓S	**Sn**	**12 00 22.2**	**-2.1**
	6.3nm,0.9s						
TKM2	**Tokmak 2**	**7.33**	**28**	P	**Pn**	**11 59 01.9**	**+0.4**
	SNR=5.5						
PYUN	**Piuthan**	**13.14**	**126**	*e*P	**Pn**	**12 00 16.6**	**-0.3**
MKAR	**Makanchi Array**	**13.29**	**36**	P	**Pn**	**12 00 18.3**	**-0.1**
	0.1nm,0.3s,baz=223,slow=8.2,SNR=6.6						
KOLN	**Koldanda**	**13.76**	**126**	*e*P	**Pn**	**12 00 24.6**	**0.0**
	4.8nm,0.3s						
GKN	**Gorkha**	**14.30**	**122**	*e*P	**P**	**12 00 33.9**	**+0.8**
	11nm,0.4s						
DMN	**Daman**	**14.88**	**123**	*e*P	**Pn**	**12 00 38.7**	**+0.3**
AB31	**Akbulak array**	**15.09**	**331**	⇓P	P	12 00 47.7	+6.4
	2.9nm,0.6s,baz=146,slow=12,SNR=25						
AB31				⇑S	**S**	**12 03 33.7**	**+4.7**
	1.8nm,0.7s,baz=150,slow=24,SNR=4.3						
PKIN	**Phulchoki**	**15.09**	**122**	*e*P	**P**	**12 00 42.4**	**+0.5**
	23nm,0.6s						
KURBB	**Kurchatov Arra**	**15.12**	**19**	P	**P**	**12 00 41.9**	**+0.1**
	0.1nm,0.3s,baz=216,slow=7.7,SNR=5.5						
JIRN	**Jiri**	**15.59**	**120**	*e*P	**P**	**12 00 48.8**	**+1.3**
	17nm,0.4s						
RAMN	**Ramite**	**16.32**	**121**	*e*P	**P**	**12 00 53.5**	**-1.9**
BVAR	**Borovoye Array**	**16.53**	**359**	P	**Pn**	**12 00 58.4**	**+0.4**
	0.6nm,0.3s,baz=154,slow=10,SNR=9.4						
AKTO	**Aktyubinsk**	**16.78**	**330**	P	**Pn**	**12 01 00.5**	**-0.5**
	1.1nm,0.3s,baz=135,slow=9.6,SNR=13						
AKTO	**Aktyubinsk**	**16.78**	**330**	⇑P	Pn	12 01 09.6	+8.6
	11nm,1.2s						
AKTO				⇑S	**Sn**	**12 04 15.5**	**+6.0**
	2.3nm,0.7s						
ZALV	**Zalesovo Beam**	**19.92**	**24**	P	**P**	**12 01 34.3**	**+0.3**
	0.6nm,0.3s,baz=222,slow=11,SNR=10						
YKA	**Yellowknife Ar**	**81.25**	**3**	P	**P**	**12 09 11.9**	**+0.4**
	0.2nm,0.4s,baz=350,slow=5.5,SNR=6.4						
WRA	**Warramunga Arr**	**81.99**	**122**	P	**P**	**12 09 15.1**	**-1.0**
	0.9nm,0.6s,baz=324,slow=4.9,SNR=23						
ASAR	**Alice Springs**	**84.25**	**125**	P	**P**	**12 09 26.7**	**-0.9**
	0.9nm,0.6s,baz=310,slow=4.8,SNR=22						

IGQ 13 12:02:47.4±0.7, 3°S±6°×8°0W±°, h12km, MLv4.2/7, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MILO	**Milagro-Astudi**	**1.03**	**13**	P	Pb	12 03 04.6	-2.6
MILO				S	Sn	12 03 23.0	+1.0
RIOE1	**Riobamba**	**1.92**	**37**	P	Pn	12 03 18.0	-2.3
RIOE1				S	Sn	12 03 44.4	-0.1
BMAS	**Trigal station**	**2.20**	**36**	P	Pn	12 03 23.0	-1.2
BMAS				S	Sb	12 03 53.2	-1.6
ARRY	**Arrayan**	**2.21**	**37**	P	Pn	12 03 23.3	-1.0
BPAT	**Tungurahua Vol**	**2.23**	**37**	P	Pn	12 03 23.4	-1.3
BPAT				S	Sb	12 03 54.3	-1.4
BBIL	**Ulba Tungurahu**	**2.24**	**35**	P	Pn	12 03 23.8	-0.9
RETU	**Refugio**	**2.26**	**36**	P	Pn	12 03 24.0	-1.1
POND	**Pondoa**	**2.28**	**36**	P	Pn	12 03 24.3	-0.9
POND				S	Sn	12 03 54.6	+1.1
BULB	**Ulba Tungurahu**	**2.29**	**37**	P	Pn	12 03 25.1	-0.4
BRUN	**Tungurahua Vol**	**2.31**	**36**	P	Pn	12 03 24.7	-0.9
PISA	**Pisayambo**	**2.62**	**32**	P	Pn	12 03 30.1	+0.1
ILLI	**Illinizas Sur**	**2.77**	**22**	P	Pn	12 03 32.2	+0.2
BMOR	**Cotopaxi Volca**	**2.86**	**27**	P	Pn	12 03 33.0	-0.4
BNAS	**Cotopaxi Volca**	**2.91**	**27**	P	Pn	12 03 33.6	-0.4
BREF	**Cotopaxi Volca**	**2.93**	**27**	P	Pn	12 03 35.2	+0.8
NAS2	**Nasa**	**2.94**	**27**	P	Pn	12 03 36.0	+1.6
BTAM	**Cotopaxi Volca**	**2.94**	**28**	P	Pn	12 03 34.9	+0.3
BVC2	**Cotopaxi Volca**	**2.95**	**28**	P	Pn	12 03 35.7	+1.0
VC1	**Cotopaxi 1**	**2.97**	**28**	P	Pn	12 03 36.2	+1.4
COV1	**Cotopaxi Volc**	**2.98**	**29**	P	Pn	12 03 35.3	+0.2
PITA	**Cotopaxi Volc**	**3.03**	**26**	P	Pn	12 03 36.5	+0.8
ANTM	**Antisana-La Mi**	**3.15**	**30**	P	Pn	12 03 37.9	+0.5
ANTG	**Antisana-Guama**	**3.16**	**29**	P	Pn	12 03 38.4	+0.9
MAG1	**Magdalena**	**3.20**	**0**	P	Pn	12 03 35.6	-1.9
ANTS	**Antisana-Sarah**	**3.21**	**30**	P	Pn	12 03 39.4	+1.2
PINO	**Pino**	**3.32**	**21**	P	Pn	12 03 39.7	-0.1
YANA	**Yana**	**3.37**	**21**	P	Pn	12 03 41.3	+0.9
OTAV	**Otavalo**	**3.75**	**21**	P	Pn	12 03 44.9	-0.6
CUIC	**Cuicocha-Domo**	**3.84**	**22**	P	Pn	12 03 48.1	+1.3

*NIED **13** 12:03:00, 37°.20N×142°.40E, h11km, Mw3.9 Best double couple: M0:9.31000×10^14 NP1:φs:304.00000°, δ68.00000°, λ-178.00000°. NP2:φs:213.00000°, δ89.00000°, λ-22.00000°.*
*JMA **13** 12:03:17.9±0.3, 37°.18N×142°.42E, h0km, M4.1*
*ISCJB **13** 12:03:18.4±0.4, 37°.07N±0°.03×142°.42E±0°.05, h9km, mb3.8/17, MS2.9/2, Error ellipse: s-maj=5.5km s-min=4.6km az=28.2*
*IDC **13** 12:03:19.0±0.6, 37°.04N×142°.36E, h0km, mb3.8/15, mb1 4.0/20, mb1mx3.9/74, mbtmp3.9/20, ML3.5/5, MS2.7/6, Ms1 2.7/6, ms1mx2.5/70, Error ellipse: s-maj=16.6km s-min=13.0km az=116.0*
*NEIC **13** 12:03:24.1±0.4, 37°.08N×142°.31E, h35km, mb4.0/1, Error ellipse: s-maj=9.6km s-min=7.4km az=130.0*

ISC 13 12:03:20.4±0.6, 37°.09N±0°.05×142°.32E±0°.05, h9km, n47, σ1°18/47, mb3.9/17, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.19**	**284**	P	**Pb**	**12 03 41.8**	**-1.3**
ONAJ	**Iwakimizuishiy**	**1.22**	**271**	P	**Pn**	**12 03 42.6**	**-1.1**
JMM	**Marumori**	**1.44**	**303**	P	**Pn**	**12 03 44.8**	**-1.9**
JIO	**Ouri**	**1.57**	**331**	P	**Pn**	**12 03 46.4**	**-2.0**
JIO				S	**Sn**	**12 04 07.0**	**-1.8**
JFT	**Otama**	**1.64**	**286**	P	**Pn**	**12 03 48.9**	**-0.5**
JFT				S	**Sb**	**12 04 12.2**	**+0.6**
JOU	**Okura**	**1.83**	**315**	P	**Pn**	**12 03 50.9**	**-1.2**
JFY	**Yanaizu**	**2.11**	**279**	P	**Pn**	**12 03 56.6**	**+0.7**
JYS	**Shirataka**	**2.12**	**303**	P	**Pn**	**12 03 55.7**	**-0.3**
JYS				S	**Sn**	**12 04 23.5**	**+1.1**
JAG	**Ashikaga**	**2.39**	**255**	P	**Pn**	**12 04 01.2**	**+1.4**
JYK	**Kaneyama**	**2.40**	**320**	P	**Pn**	**12 03 59.4**	**-0.4**
JOM	**Ohasama**	**2.52**	**342**	P	**Pn**	**12 04 00.9**	**-0.6**
JRY	**Ryogami san**	**2.95**	**250**	P	**Pn**	**12 04 08.8**	**+1.3**
MJAR	**Matsushiro Arr**	**3.34**	**262**	Pn	**Pn**	**12 04 14.4**	**+1.5**
	6.6nm,0.3s,baz=92,slow=14,SNR=70						
MAJO	**Matsushiro**	**3.34**	**262**	*e*Pn	**Pn**	**12 04 13.1**	**+0.2**
MAJO				*e*Sn	**Sn**	**12 04 54.0**	**+1.3**
MAT	**Matsushiro**	**3.34**	**262**	P	**Pn**	**12 04 15.2**	**+2.3**
MAT				S	**Sb**	**12 04 58.4**	**-2.3**
JHJ	**Hachijo jima 2**	**4.47**	**208**	Pn	**Pn**	**12 04 28.0**	**-0.4**
	18nm,0.3s,baz=63,slow=8.7,SNR=2.6						
JHJ				Sn	**Sn**	**12 05 19.1**	**-1.4**
	20nm,0.3s,baz=252,slow=20,SNR=2.9						
ERM	**Erimo**	**4.96**	**7**	*e*Pn	**Pn**	**12 04 35.3**	**+0.2**
ERM				*e*Sn	**Sn**	**12 05 34.2**	**+1.6**
ASAJ	**Asahikawa**	**7.03**	**2**	Pn	**Pn**	**12 05 02.2**	**-1.2**
	0.8nm,0.3s,baz=241,slow=2.9,SNR=9.7						
ASAJ				Sn	**Sn**	**12 06 22.0**	**-1.4**
	0.1nm,0.3s,baz=278,slow=19,SNR=2.0						
ASAJ				LR	LR	12 07 53.5	
	comp=Z,69nm,21.3s,baz=350,slow=39						
JNU	**Nakatsue**	**10.17**	**250**	Pn	**Pn**	**12 05 46.7**	**+0.1**
	0.2nm,0.3s,baz=270,slow=5.1,SNR=3.0						
JNU				LR	LR	12 10 03.5	
	comp=Z,70nm,19.5s,baz=86,slow=40						
USRK	**Ussuriysk Ar.**	**10.58**	**315**	Pn	Pn	12 06 00.9	+8.8
	0.2nm,0.3s,baz=123,slow=14,SNR=5.1						
KSRS	**Korea Array**	**11.48**	**276**	Pn	**Pn**	**12 06 06.1**	**+1.7**
	0.2nm,0.3s,baz=93,slow=14,SNR=3.4						
KSRS				LR	LR	12 10 31.5	
	comp=Z,28nm,18.1s,baz=305,slow=38						
KSAR	**Wonju Array Be**	**11.51**	**276**	Pn	**Pn**	**12 06 06.1**	**+1.2**
KLR	**Kul'dur**	**14.36**	**331**	Pn	**Pn**	**12 06 44.9**	**+1.0**
	0.0nm,0.3s,baz=157,slow=9.4,SNR=2.0						
KLR				LR	LR	12 11 41.3	
	comp=Z,5.3nm,21.2s,baz=148,slow=35						
MA2	**Magadan**	**23.16**	**11**	LR	LR	12 19 14.3	
	comp=Z,40nm,18.3s,baz=179,slow=41						
GUMO	**Guam**	**23.51**	**174**	P	**P**	**12 08 29.5**	**-1.3**
	17nm,0.3s,baz=338,slow=11,SNR=4.7						
SEY	**Seymchan**	**26.60**	**10**	P	**P**	**12 08 58.9**	**+0.2**
	1.4nm,0.7s,baz=187,slow=9.1,SNR=4.9						
H11N2	**WAKE ISLAND Hy**	**27.56**	**122**	T	T	12 37 59.4	
	baz=314,slow=75,SNR=191						
H11N1	**WAKE ISLAND Hy**	**27.57**	**122**	T	T	12 37 54.3	
	baz=314,slow=75,SNR=64						
H11N3	**WAKE ISLAND Hy**	**27.58**	**122**	T	T	12 38 00.9	
	baz=314,slow=75,SNR=80						
H11S1	**WAKE ISLAND Hy**	**28.29**	**124**	T	T	12 38 55.8	
	baz=316,slow=76,SNR=60						
H11S3	**WAKE ISLAND Hy**	**28.29**	**124**	T	T	12 38 55.5	
	baz=316,slow=76,SNR=52						
H11S2	**WAKE ISLAND Hy**	**28.30**	**124**	T	T	12 38 48.9	
	baz=316,slow=76,SNR=32						
SONM	**Songino Array**	**28.36**	**304**	P	**P**	**12 09 15.0**	**+0.2**
	2.6nm,0.9s,baz=103,slow=9.3,SNR=11						
CMAR	**Chiang Mai Arr**	**42.21**	**256**	P	**P**	**12 11 14.5**	**+0.6**
	0.6nm,0.5s,baz=37,slow=6.2,SNR=3.8						
CMAR				LR	LR	12 30 03.8	
	comp=Z,14nm,20.8s,baz=305,slow=38						
ZALV	**Zalesovo Beam**	**42.41**	**312**	P	**P**	**12 11 15.2**	**+0.1**
	0.4nm,0.3s,baz=104,slow=6.3,SNR=5.5						
MKAR	**Makanchi Array**	**44.70**	**302**	P	**P**	**12 11 33.2**	**-0.5**
	1.4nm,0.7s,baz=86,slow=8.8,SNR=10						
KDAK	**Kodiak Island**	**46.58**	**42**	P	**P**	**12 11 48.2**	**0.0**
	3.2nm,0.9s,baz=290,slow=12,SNR=3.6						
ILAR	**Eielson Array**	**49.06**	**32**	P	**P**	**12 12 07.8**	**+0.2**
	1.0nm,0.8s,baz=276,slow=5.8,SNR=9.4						
WRAB	**Tennant Creek**	**57.21**	**189**	*e*P	**P**	**12 13 07.3**	**-0.6**
	1.0nm,0.7s						
WRA	**Warramunga Arr**	**57.22**	**189**	P	**P**	**12 13 07.2**	**-0.8**
	1.2nm,0.6s,baz=6.4,slow=7.2,SNR=20						
ASAR	**Alice Springs**	**60.95**	**189**	P	**P**	**12 13 33.4**	**-0.5**
	0.4nm,0.5s,baz=7.1,slow=8.3,SNR=12						
FINES	**FINESS Array B**	**69.10**	**333**	P	**P**	**12 14 25.8**	**-0.6**
	1.1nm,0.6s,baz=90,slow=3.8,SNR=4.7						
NVAR	**Mina Array Bea**	**74.38**	**54**	P	**P**	**12 14 59.5**	**+0.6**
	0.2nm,0.6s,baz=316,slow=3.8,SNR=3.1						
AKASG	**Malin Array Be**	**74.70**	**323**	P	**P**	**12 14 59.4**	**-0.8**
	0.6nm,0.5s,baz=48,slow=6.5,SNR=4.2						
PDAR	**Pinedale Array**	**77.11**	**46**	P	**P**	**12 15 16.0**	**+1.5**
	0.3nm,0.5s,baz=298,slow=4.0,SNR=3.9						
GERES	**GERESS Array B**	**83.05**	**329**	P	**P**	**12 15 48.3**	**+2.1**
	0.3nm,0.3s,baz=86,slow=6.0,SNR=2.8						
TXAR	**Lajitas Array**	**89.51**	**53**	P	**P**	**12 16 17.9**	**-0.5**
	0.3nm,0.8s,baz=316,slow=3.8,SNR=3.5						

NNC 13 12:09:52.2±0.8, 50°.79N×73°.87E, h0km, mb3.6, mpv3.2, 8C-6D, Error ellipse: s-maj=11.4km s-min=8.0km az=25.0, Suspected Mining explosion., Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTUK	**Ortayu**	**2.73**	**202**	⇑Pn	Pn	12 10 36.5	-0.8
	7.5nm,0.7s						
OTUK				⇓Lg	Lg	12 11 17.9	
	30nm,0.9s						
KURBB	**Kurchatov Arra**	**2.97**	**91**	⇓Pn	Pn	12 10 40.9	+0.4
	12nm,0.8s						
KURBB				⇑Lg	Lg	12 11 25.9	
	131nm,0.8s						
KURK	**Kurchatov**	**3.02**	**90**	⇑Pn	Pn	12 10 41.0	-0.2
	8.7nm,1.2s						
KURK				⇓Lg	Lg	12 11 26.8	
	29nm,0.6s						
BVA0	**Borovoye Array**	**3.11**	**317**	⇑Pn	Pn	12 10 43.0	+0.5
	3.4nm,0.8s,baz=126,slow=16,SNR=3.6						
BVA0				⇓Lg	Lg	12 11 29.2	
	22nm,1.1s,baz=126,slow=28,SNR=5.7						
BRVK	**Borovoye**	**3.18**	**317**	⇑Pn	Pn	12 10 44.1	+0.7
	6.8nm,1.0s						
BRVK				⇓Lg	Lg	12 11 31.4	
	28nm,0.8s						
MAKZ	**Makanchi**	**6.67**	**124**	⇑Pn	Pn	12 11 32.8	+1.3
	3.4nm,0.8s						
MAKZ				⇑Lg	Lg	12 13 23.9	
	9.0nm,0.9s						
MK31	**Makanchi Array**	**6.85**	**122**	⇑Pn	Pn	12 11 34.9	+1.0
	3.2nm,0.8s,baz=80,slow=8.6,SNR=20						
MK31				⇓Lg	Lg	12 13 30.6	
	6.1nm,0.8s,baz=317,slow=27,SNR=5.6						

MAN 13 12:29:11.9, 5°.90N×125°.99E, h115km, mb4.3, ML3.1, MS2.8, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**1.05**	**280**	⇓*i*P	Pn	12 29 33.0	-1.1
GSPH				*i* S	Sn	12 29 48.3	-2.6
MATI	**Mati**	**1.07**	**15**	*e*P	Pn	12 29 34.6	+0.3
MATI				*e*S	Sn	12 29 52.3	+1.1
DMPH	**Davao City--Mi**	**1.27**	**338**	⇓*i*P	Pn	12 29 39.1	+2.7
DMPH				*i* S	Sn	12 29 56.8	+1.9
SKMP	**Bagumbayan, Su**	**1.56**	**293**	*e*P	Pn	12 29 39.6	-0.2
SKMP				*e*S	Sn	12 29 59.9	-1.0
BUKP	**Musuan**	**2.17**	**335**	*e*P	Pn	12 29 47.9	+0.6
BUKP				*e*S	Sn	12 30 15.1	+0.7

WEL 13 12:35:36.3, 42°S±5°×17°4E±°, h33km, ML3.5/8, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHZ	**Kahutara**	**0.34**	**266**	P	Pb	12 35 39.5	-5.1
KHZ				S	Sb	12 35 44.7	-5.5
KHZ	**Kahutara**	**0.34**	**266**	P	Pb	12 35 44.0	-0.6
KHZ				S	Sb	12 35 49.9	-0.2
CMWZ	**Cape Campbell**	**0.67**	**14**	P	Pn	12 35 45.1	-4.3
BSWZ	**Blackbirch Sta**	**0.69**	**353**	P	Pn	12 35 43.5	-6.2
BSWZ				S	Sn	12 35 52.2	-7.0
TUWZ	**Tuamarina**	**0.97**	**358**	P	Pn	12 35 48.8	-4.7
TUWZ				S	Sn	12 36 01.6	-4.5
TUWZ	**Tuamarina**	**0.97**	**358**	P	Pb	12 35 54.7	+0.1
TUWZ				S	Sb	12 36 07.0	-0.1
THZ	**Tophouse**	**1.03**	**308**	P	Pn	12 35 49.8	-4.7
THZ				S	Sn	12 36 02.7	-5.1
THZ	**Tophouse**	**1.03**	**308**	P	Pb	12 35 55.2	-0.5
BHW	**Baring Head**	**1.18**	**34**	P	Pn	12 35 53.1	-3.5
BHW	**Baring Head**	**1.18**	**34**	P	Pb	12 35 58.3	+0.1
TCW	**Tory Channel**	**1.20**	**10**	P	Pn	12 35 52.7	-4.1
TCW				S	Sn	12 36 08.1	-3.9
TCW	**Tory Channel**	**1.20**	**10**	P	Pb	12 35 58.0	-0.5
PLWZ	**Palliser**	**1.25**	**49**	P	Pn	12 35 54.1	-3.4
PLWZ	**Palliser**	**1.25**	**49**	P	Pb	12 35 59.4	0.0
NNZ	**Nelson**	**1.26**	**338**	P	Pn	12 35 53.4	-4.2
NNZ	**Nelson**	**1.26**	**338**	S	Sn	12 36 13.9	+0.5
LTZ	**Lake Taylor**	**1.33**	**253**	P	Pn	12 35 56.0	-2.6
MSWZ	**Moikau Station**	**1.35**	**44**	P	Pn	12 35 55.3	-3.6
MSWZ	**Moikau Station**	**1.35**	**44**	P	Pb	12 36 00.5	-0.6
PAWZ	**Paruwai Farm**	**1.47**	**47**	P	Pn	12 35 56.8	-3.8
PAWZ	**Paruwai Farm**	**1.47**	**47**	P	Pb	12 36 02.1	-1.1
OKCZ	**Okains Bay**	**1.49**	**207**	P	Pn	12 35 59.4	-1.5
CAW	**Cannon Point**	**1.52**	**32**	P	Pn	12 35 57.5	-3.7
CAW	**Cannon Point**	**1.52**	**32**	P	Pb	12 36 02.7	-1.2
EYCZ	**Eyrewell**	**1.58**	**229**	P	Pn	12 35 60.0	-2.0
DUWZ	**D'Urville Isla**	**1.59**	**358**	P	Pn	12 35 58.2	-4.0
TRWZ	**Traveller**	**1.61**	**52**	P	Pb	12 36 04.1	-1.4
MQZ	**McQueen's Vall**	**1.64**	**216**	P	Pn	12 36 00.4	-2.3
MTW	**Mount Morrison**	**1.67**	**43**	P	Pn	12 35 59.3	-4.0
KIW	**Kapiti Island**	**1.68**	**24**	P	Pn	12 35 59.9	-3.5
OXZ	**Oxford**	**1.71**	**236**	P	Pn	12 36 01.1	-2.7
DSZ	**Denniston Nort**	**1.75**	**291**	P	Pn	12 36 02.2	-2.3
OGWZ	**Otaki Gorge**	**1.81**	**30**	P	Pn	12 36 01.3	-3.8
HOWZ	**Holdsworth Sta**	**1.88**	**38**	P	Pn	12 36 02.2	-4.0
INZ	**Inchbonnie**	**1.91**	**259**	P	Pn	12 36 04.3	-2.3
QRZ	**Quartz Range**	**1.92**	**325**	P	Pn	12 36 03.6	-3.0
TMWZ	**Te Maipa**	**1.92**	**48**	P	Pn	12 36 02.6	-4.0
MRZ	**Mangatainoka R**	**2.10**	**35**	P	Pn	12 36 05.1	-4.1
TIWZ	**Tintock**	**2.15**	**42**	P	Pn	12 36 07.0	-2.9
PRWZ	**Pori Road**	**2.36**	**40**	P	Pn	12 36 09.2	-3.6
OHWZ	**Ohakea**	**2.40**	**25**	P	Pn	12 36 10.8	-2.5
BFZ	**Birch Farm**	**2.41**	**45**	P	Pn	12 36 09.0	-4.4
POWZ	**Post Office Ro**	**2.41**	**34**	P	Pn	12 36 09.6	-3.8
WVZ	**Waitaha Valley**	**2.49**	**253**	P	Pn	12 36 12.8	-1.8
WVZ				P	Pb	12 36 13.0	-7.4
RPZ	**Rata Peaks**	**2.53**	**238**	P	Pn	12 36 12.5	-2.5
DVHZ	**Dannevirke**	**2.66**	**39**	P	Pn	12 36 12.1	-4.7
WAZ	**Wanganui**	**2.74**	**16**	P	Pn	12 36 15.8	-2.2
TSZ	**Takapari Road**	**2.77**	**33**	P	Pn	12 36 13.9	-4.4
PNHZ	**Pukenui**	**2.99**	**35**	P	Pn	12 36 16.7	-4.7
PKE	**Pukeiti**	**3.20**	**360**	P	Pn	12 36 22.7	-1.6
MTVZ	**Mangateitei**	**3.21**	**21**	P	Pn	12 36 22.5	-1.9
MOVZ	**Moawhango**	**3.27**	**25**	P	Pn	12 36 21.4	-3.9
FOZ	**Fox Glacier**	**3.27**	**248**	P	Pn	12 36 24.1	-1.1
KRHZ	**Kereru**	**3.29**	**34**	P	Pn	12 36 20.7	-4.7
BHHZ	**Black Hill Sta**	**3.30**	**29**	P	Pn	12 36 22.0	-3.7
TRVZ	**Turoa**	**3.31**	**21**	P	Pn	12 36 23.5	-2.5
VRZ	**Vera Road**	**3.32**	**10**	P	Pn	12 36 23.7	-2.2
WHVZ	**Whangaehu Hut**	**3.34**	**22**	P	Pn	12 36 23.3	-3.1
FWVZ	**Far West T-bar**	**3.35**	**21**	P	Pn	12 36 23.8	-2.8
TUVZ	**Tukino**	**3.37**	**22**	P	Pn	12 36 23.6	-3.1
COVZ	**Chateau Observ**	**3.40**	**21**	P	Pn	12 36 24.1	-3.1
LBZ	**Lake Benmore**	**3.42**	**233**	P	Pn	12 36 25.3	-1.9
NGZ	**Ngauruhoe**	**3.44**	**21**	P	Pn	12 36 24.8	-2.9
KWHZ	**Kaweka Forest**	**3.49**	**33**	P	Pn	12 36 27.5	-0.8
WTVZ	**West Tongariro**	**3.49**	**21**	P	Pn	12 36 25.8	-2.7
KRVZ	**Karewarewa**	**3.53**	**21**	P	Pn	12 36 27.3	-1.6
ODZ	**Otahua Downs**	**3.59**	**221**	P	Pn	12 36 27.3	-2.4
BKZ	**Black Stump Fm**	**3.74**	**31**	P	Pn	12 36 28.3	-3.5
HIZ	**Hauiti**	**3.93**	**10**	P	Pn	12 36 31.8	-2.6
JCZ	**Jackson Bay**	**4.16**	**244**	P	Pn	12 36 35

1.9nm,0.5s,baz=222,slow=5.6,SNR=27
PDAR Pinedale Array 89.72 43 P **P 12 56 27.6 +0.3**
1.8nm,0.6s,baz=216,slow=3.8,SNR=20
CMAR Chiang Mai Arr 89.84 290 P **P 12 56 29.6 +1.5**
3.8nm,0.9s,baz=131,slow=3.1,SNR=18
DAWY Dawson 90.15 16 *e*P **P 12 56 28.7 +0.1**
3.5nm,0.9s
YKA Yellowknife Ar 97.24 25 P Pdif 12 57 00.0 -0.7
0.3nm,0.7s,baz=262,slow=5.7,SNR=3.4
ZALV Zalesovo Beam 110.63 321 PKiKP **PKiKP 13 01 56.0 -1.0**
1.0nm,0.4s,baz=182,slow=1.4,SNR=8.0
MKAR Makanchi Array 111.23 313 PKiKP **PKiKP 13 01 57.5 -1.0**
0.7nm,0.4s,baz=127,slow=0.8,SNR=10
BVAR Borovoye Array 119.20 320 PKP **PKPdf 13 02 13.1 -0.4**
3.7nm,0.4s,baz=102,slow=2.4,SNR=18
SPITS Spitsbergen Ar 122.41 356 PKP **PKPdf 13 02 18.7 -0.3**
5.0nm,0.7s,baz=60,slow=5.7,SNR=6.0
ARU Arti 125.39 325 *e*PKPdf **PKPdf 13 02 25.6 +0.3**
AKTO Aktyubinsk 127.17 318 PKP **PKPdf 13 02 28.9 0.0**
2.0nm,0.6s,baz=112,slow=5.4,SNR=8.1
ARCES ARCESS Array B 129.40 349 PKP **PKPdf 13 02 32.3 -0.2**
2.9nm,0.6s,baz=43,slow=0.9,SNR=16
FINES FINESS Array B 136.18 343 PKhKP PKPpre 13 02 36.7
0.4nm,0.4s,baz=341,slow=4.0,SNR=3.6
FINES PKP **PKiKP 13 02 47.0 -0.3**
1.1nm,0.4s,baz=74,slow=3.7,SNR=9.0
NB2 NORSAR Subarra139.49 353 PKP PKPpre 13 02 45.3
comp=Z,0.6nm,0.6s,baz=12,slow=3.2
HFS Hagfors 140.03 351 PKhKP PKPpre 13 02 45.6
comp=Z,2.9nm,0.4s,baz=70,slow=4.7,SNR=21
AKASG Malin Array Be 143.27 330 PKP PKPab 13 02 56.1 -0.7
comp=Z,7.0nm,0.5s,baz=45,slow=4.5,SNR=95
EKA Eskdalemuir Ar 145.62 5 PKPbc **PKPbc 13 03 03.4 -0.7**
comp=Z,4.0nm,0.8s,baz=333,slow=2.5,SNR=11
ASF Jabal al Asfar 146.60 297 PKPbc **PKPbc 13 03 08.3 +0.6**
comp=Z,5.6nm,0.7s,baz=34,slow=3.6,SNR=7.8
BRTR Keskin Array B 146.85 311 PKPbc **PKPbc 13 03 08.1 -0.2**
comp=Z,5.1nm,0.6s,baz=137,slow=4.4,SNR=27
MMAI Mount Meron Ar 147.66 299 PKPbc **PKPbc 13 03 11.4 +1.0**
comp=Z,8.4nm,0.4s,baz=75,slow=6.2,SNR=17
CRVS Cervenica-Dubn 147.97 335 *e*PKP **PKPab 13 03 16.1 +0.6**
CLL Collm 148.51 346 ⇓*i*PKPbc **PKPbc 13 03 12.3 +0.5**
comp=Z,14nm,0.8s
CLL ⇑*i*PKPab **PKPab 13 03 17.4 -0.1**
comp=Z,7.0nm,0.7s
DPC Dobruska-Polom 148.52 342⇑*e*PKP **PKPbc 13 03 12.7 +0.7**
DPC *e*PKPAB **PKPab 13 03 18.8 +1.1**
LANS Liptovska Anna 148.52 337 *e*PKP **PKPbc 13 03 13.2 +1.2**
LANS *e* 13 03 18.9
MORC Moravsky Berou 148.65 340 *e*PKP **PKPbc 13 03 12.8 +0.5**
KECS Kecovo 148.69 335 *e*PKP **PKPbc 13 03 14.5 +2.1**
VYHS Vyhne 149.30 337 *e*PKP **PKPbc 13 03 14.4 +0.5**
VYHS *e* 13 03 21.5
PRU Pruhonice 149.35 343⇑*e*PKP **PKPbc 13 03 13.3 -0.6**
GOPC GO Pecny, Ondr 149.35 343⇑*e*PKP **PKPbc 13 03 14.3 +0.3**
VRAC Vranov 149.36 340 *e*PKP **PKPbc 13 03 14.2 +0.2**
JAVC Velka Javorina 149.40 339 *e*PKP **PKPbc 13 03 15.4 +1.2**
KRUC Moravsky 149.64 340 *e*PKP **PKPbc 13 03 14.9 +0.2**
KHC Kasperske Hory 150.39 344⇑*e*PKP **PKPbc 13 03 17.0 +0.5**
KHC *e*PKPAB **PKPab 13 03 26.1 +0.6**
GERES GERESS Array B 150.62 343 PKPbc **PKPbc 13 03 17.2 +0.2**
comp=Z,3.5nm,0.7s,baz=31,slow=3.1,SNR=15
CONA Conrad Observa 150.81 340 *i* PKiKP **PKiKP 13 03 18.1 +0.2**
comp=Z,6.3nm,0.7s
SOKA Soboth 152.18 340 PKPbc **PKPbc 13 03 20.2 -0.4**
comp=Z,2.0nm,0.6s
MYKA Terra Mystica 152.65 342 PKPbc **PKPbc 13 03 20.9 -0.7**
comp=Z,2.9nm,0.5s
ABTA Abfaltersbach 152.86 343 *i* PKPbc **PKPbc 13 03 21.7 -0.4**
comp=Z,5.9nm,0.6s
FETA Feichten 153.05 346 PKPbc **PKPbc 13 03 22.1 -0.5**
comp=Z,3.8nm,0.8s
TORD Torodi Ar. Bea 172.11 182 PKP **PKPdf 13 03 33.5 -0.2**
comp=Z,1.6nm,0.9s,baz=316,slow=0.1,SNR=5.9
TORD PKPab **PKPab 13 04 59.8 -1.2**
comp=Z,0.6nm,0.7s,baz=145,slow=5.3,SNR=2.9

*ISCJB **13** 12:46:58.1±0.5, 71°.30N±0°.04×10°.0W±0°.1, h10km, Error ellipse: s-maj=7.0km s-min=3.8km az=136.0*
*CSEM **13** 12:47:00.9±0.2, 71°.29N×9°.97W, h10km, ML3.5, Error ellipse: s-maj=9.2km s-min=4.3km az=130.0*
*NAO **13** 12:47:02.4±4.3, 71°.41N×9°.38W, ML3.5*
*REY **13** 12:47:03.2, 70°.38N×7°.31W, h10km*
*BER **13** 12:47:04.3±3.4, 71°.27N×9°.79W, h0km±18km, ML2.9, ML3.5(NAO)*

ISC 13 12:47:00.2±0.8,**71°.30N**±0°.05×**9°.57W**±0°.06,**h10**km,**n32,**
σ2**39**/48,**1C,Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMIC	**Jan Mayen**	**0.47**	**131**	Pg	**Pn**	**12 47 12.6**	**-0.3**
JMIC				Lg	Lg	12 47 19.6	
JMIC	**Jan Mayen**	**0.47**	**131**	Pg	**Pn**	**12 47 12.6**	**-0.3**
JMIC				Lg	Lg	12 47 19.6	
JMIC	**Jan Mayen**	**0.47**	**131**	⇑*i*P	**Pn**	**12 47 12.6**	**-0.3**
JMIC				*e*S	**Sb**	**12 47 18.8**	**+1.4**
JMIC				IAML		12 47 20.6	
comp=Z,871nm,0.3s							
ILEI	**Leirhofn**	**5.51**	**210**	P	**Pn**	**12 48 22.1**	**0.0**
baz=225							
ILEI				S	**Sn**	**12 49 24.7**	**-0.7**
baz=225							
ILEI	**Leirhofn**	**5.51**	**210**	P	**Pn**	**12 48 22.1**	**0.0**
ILEI				S	**Sn**	**12 49 24.7**	**-0.7**
IGIL	**Gilhagi**	**5.79**	**208**	P	**Pn**	**12 48 26.8**	**+0.8**
baz=222							
IGIL				S	**Sn**	**12 49 32.5**	**+0.1**
baz=222							
IGIL	**Gilhagi**	**5.79**	**208**	P	**Pn**	**12 48 26.8**	**+0.8**
IGIL				S	**Sn**	**12 49 32.5**	**+0.1**
IDIM	**Dimmadals¯¡s**	**5.99**	**210**	P	**Pn**	**12 48 29.5**	**+0.7**
baz=224							
IDIM				S	**Sn**	**12 49 37.6**	**+0.3**
baz=224							
DAG	**Danmarks Havn**	**6.04**	**340**	*i* P	**Pn**	**12 48 29.1**	**-0.2**
DAG				*i* S	**Sn**	**12 49 32.0**	**-6.3**
IGHA	**Grjothals**	**6.06**	**209**	P	**Pn**	**12 48 29.6**	**-0.1**
baz=222							
IGHA				S	**Sn**	**12 49 38.7**	**-0.2**
baz=222							
IGRS	**Grimsstaoir**	**6.17**	**206**	P	**Pn**	**12 48 30.5**	**-0.7**
baz=219							
IGRS				S	**Sn**	**12 49 40.5**	**-1.2**
baz=219							
IGRS	**Grimsstaoir**	**6.17**	**206**	P	**Pn**	**12 48 30.5**	**-0.7**
IGRS				S	**Sn**	**12 49 40.5**	**-1.2**
IMEL	**Melhnausar**	**6.31**	**208**	P	**Pn**	**12 48 33.3**	**+0.1**
baz=220							
IMEL	**Melhnausar**	**6.31**	**208**	P	**Pn**	**12 48 33.3**	**+0.1**
IHRN	**Hraun**	**6.46**	**221**	P	**Pn**	**12 48 39.9**	**+4.7**
baz=234							
IADA	**Aoalbol**	**6.69**	**202**	P	**Pn**	**12 48 37.6**	**-0.8**
baz=214							
IADA				S	**Sn**	**12 49 52.8**	**-1.6**
baz=214							
LOF	**Lofoten**	**8.60**	**100**	*e*P	**Pn**	**12 49 07.6**	**+3.1**
BJO	**Bjornoya**	**8.99**	**56**	*e*P	**Pn**	**12 49 12.6**	**+2.8**
STEI	**Steigen**	**9.25**	**99**	*e*P	**Pn**	**12 49 15.6**	**+2.3**
KBS	**Kingsbay**	**9.36**	**26**	Pn	**Pn**	**12 49 15.8**	**+1.0**
KBS	**Kingsbay**	**9.36**	**26**	*e*P	**Pn**	**12 49 16.1**	**+1.4**
KONS	**Konsvik**	**9.44**	**109**	*e*P	**Pn**	**12 49 17.9**	**+2.0**
KONS				*e*S	**Sn**	**12 50 56.8**	**-5.2**
SPA0	**Spitsbergen Ar**	**9.60**	**33**	Pn	**Pn**	**12 49 21.0**	**+2.9**
baz=231,slow=14							
SPA0				Sn	**Sn**	**12 51 04.5**	**-1.3**
baz=245,slow=14							
SPA0	**Spitsbergen Ar**	**9.60**	**33**	Pn	**Pn**	**12 49 21.0**	**+2.9**
baz=231,slow=14							
SPA0				*e*P		12 49 21.1	
SPA0				Sn	**Sn**	**12 51 04.5**	**-1.3**
baz=245,slow=14							
SPA0				*e*		12 51 05.5	
MOR8	**Moi Rana**	**10.06**	**109**	*e*P	**Pn**	**12 49 27.6**	**+3.1**
MOR8				*e*S	**Sn**	**12 51 14.9**	**-2.4**
KIF	**Kilpisjarvi**	**10.51**	**88**	*e*P	**Pn**	**12 49 32.3**	**+1.8**
NSS	**Namsos**	**10.51**	**119**	*e*P	**Pn**	**12 49 33.0**	**+2.4**
NSS				*e*S	**Sn**	**12 51 21.8**	**-6.4**
AKN	**Aaknes**	**11.20**	**136**	Pn	**Pn**	**12 49 41.4**	**+1.3**
AKN	**Aaknes**	**11.20**	**136**	Pn	**Pn**	**12 49 41.4**	**+1.3**
ARA0	**ARCESS Array S**	**11.79**	**82**	Pn	**Pn**	**12 49 51.0**	**+2.9**
baz=297,slow=12							
ARA0	**ARCESS Array S**	**11.79**	**82**	Pn	**Pn**	**12 49 51.0**	**+2.9**
baz=297,slow=12							
ARE0	**ARCESS Array S**	**11.79**	**82**	*e*P	**Pn**	**12 49 52.5**	**+4.4**

ISC 13 13:06:33.0±1.2,**44°.90N**±0°.03×**15°.09E**±0°.06,**h9**km±18km,
n6,σ0**33**/12,**Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NVLJ	**Novalja**	**0.37**	**204**	*e*Pg	**Pg**	**13 06 40.2**	**-0.2**
NVLJ				Sg	**Sg**	**13 06 45.5**	**+0.2**
BOJS	**Bojanci**	**0.61**	**11**	*i* Pg	**Pg**	**13 06 44.8**	**0.0**
BOJS				*i* Sg	**Sg**	**13 06 53.2**	**+0.4**
UDBI	**Udbina**	**0.61**	**128**	*e*Pg	**Pg**	**13 06 44.5**	**-0.3**
UDBI				Sg	**Sg**	**13 06 53.4**	**+0.5**
GBRS	**Gornja Briga**	**0.66**	**343**	*i* Pg	**Pg**	**13 06 45.6**	**-0.1**
GBRS				*i* Sg	**Sb**	**13 06 55.8**	**-0.1**
OZLJ	**Ozalj**	**0.76**	**21**	*i* Pg	**Pg**	**13 06 47.7**	**0.0**
OZLJ				Sg	**Sg**	**13 06 57.2**	**-0.4**
CRES	**Cresnjev**	**0.96**	**16**	*i* Pg	**Pg**	**13 06 51.1**	**-0.3**
CRES				*i* Sg	**Sb**	**13 07 04.9**	**+0.3**

IDC 13 13:16:43.2±7.4,**6°.31S**×**147°.16E,h106**km±76km,**mb2.9**/2,
mb1 3.2/4,**mb1mx3.0**/45,**mbtmp3.4**/4,**ML2.7**/2,**Error ellipse: s-maj=90.9km s-min=33.4km az=134.0,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.07**	**180**	P	Pn	13 17 30.9	+0.8
13nm,0.3s,baz=348,slow=9.3,SNR=42							
PMG				S	Sn	13 18 06.6	+0.4
5.9nm,0.3s,baz=184,slow=21,SNR=11							
WRA	**Warramunga Arr**	**18.40**	**221**	P	P	13 20 49.2	-1.0
0.1nm,0.3s,baz=42,slow=11,SNR=7.8							
ASAR	**Alice Springs**	**21.45**	**215**	P	P	13 21 23.2	+0.1
0.4nm,0.6s,baz=47,slow=9.1,SNR=12							
ILAR	**Eielson Array**	**85.71**	**23**	P	P	13 29 09.5	-0.5
0.2nm,0.6s,baz=260,slow=5.0,SNR=3.5							
TORD	**Torodi Ar. Bea**	**145.32**	**284**	PKPbc	PKPab	13 36 09.8	-0.1
0.8nm,0.6s,baz=64,slow=3.4,SNR=3.8							

*NIED **13** 13:38:00, 44°.80N×148°.80E, h65km, Mw4.1 Best double couple: M0 1.65000×10^15 NP1:*φ*s341.00000°,*δ*82.00000°,*λ*0.00000°. NP2:*φ*s71.00000°,*δ*90.00000°,*λ*-172.00000°.*
*BJI **13** 13:38:30.5, 45°.35N×149°.02E, h120km, mb4.6/37, mB4.7/24*
*SKHL **13** 13:38:31.8±0.4, 44°.95N×148°.84E, h110km±3km, mb4.6/13, msh4.6/2*
*MOS **13** 13:38:31.7±1.0, 45°.07N×148°.72E, h112km, mb4.1/21, Error ellipse: s-maj=7.5km s-min=5.4km az=77.0*
*ISCJB **13** 13:38:31.5±0.3, 45°.04N±0°.03×148°.74E±0°.04, h110km±3km, mb4.2/63, Error ellipse: s-maj=5.7km s-min=3.5km az=43.1*
*JMA **13** 13:38:33.1±0.5, 44°.78N×148°.80E, h102km, M4.5*
*IDC **13** 13:38:34.7±1.5, 45°.29N×148°.60E, h118km±13km, mb3.8/30, mb1 3.9/47, mb1mx3.8/76, mbtmp4.2/37, MS3.1/14, Ms1 3.1/14, ms1mx2.9/67, Error ellipse: s-maj=11.7km s-min=8.5km az=139.0*
*NEIC **13** 13:38:34.9±0.7, 45°.26N×148°.57E, h121km±6km, mb4.5/24, Error ellipse: s-maj=6.9km s-min=4.0km az=150.0*

ISC 13 13:38:31.7±0.5,**45°.02N**±0°.04×**148°.74E**±0°.04,**h99**km±4km,
n237,σ1**81**/269,**mb4.3**/63,**13C-8D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**0.65**	**289**	*i* P	**Pn**	**13 38 48.7**	**+0.1**
KUR				AMB	AMB	13 38 49.0	
768nm,0.3s							
KUR				AMB	AMB	13 38 49.0	
126nm,0.3s							
KUR				AMB	AMB	13 38 49.0	
213nm,0.3s							
KUR				*i* S	**Sn**	**13 39 01.0**	**-0.3**
KUR				A	A	13 39 05.0	
7μm,0.5s							
KUR				A	A	13 39 05.0	
8μm,0.5s							
KUR				A	A	13 39 05.2	
2μm,2.0s							
KUR				A	A	13 39 05.2	
1μm,2.0s							
KUR	**Kuril'sk**	**0.65**	**289***c*	*i*PN	**Pn**	**13 38 48.7**	**+0.1**
KUR				*i* S	**Sn**	**13 39 01.0**	**-0.3**
KUR				pmax	pmax		
comp=Z,2μm,0.4s							
KUR				pmax	pmax		
comp=N,906nm,0.2s							
KUR				pmax	pmax		
comp=E,473nm,0.3s							
KUR				smax	smax		
comp=E,8μm,0.4s							
KUR				smax	smax		
comp=N,7μm,0.3s							
SHO	**Shikotan**	**1.79**	**230**	*i* P	**Pn**	**13 39 02.0**	**+0.5**
SHO				AMB	AMB	13 39 06.0	
comp=N,29nm,0.3s							
SHO				*i* S	**Sn**	**13 39 24.8**	**+0.6**
SHO				A	A	13 39 34.0	
comp=N,3μm,0.5s							
SHO				A	A	13 39 34.0	
comp=N,3μm,0.5s							
SHO	**Shikotan**	**1.79**	**230***c*	*i*PN	**Pn**	**13 39 02.0**	**+0.5**
SHO				*i* S	**Sn**	**13 39 23.9**	**-0.3**
SHO				pmax	pmax		
comp=Z,288nm,0.3s							
SHO				pmax	pmax		
comp=N,213nm,0.5s							
SHO				pmax	pmax		
comp=E,232nm,0.4s							
SHO				smax	smax		
comp=E,3μm,0.5s							
YUK	**Yuzh-Kuril'sk**	**2.28**	**245**	*i* P	**Pn**	**13 39 09.0**	**+1.1**
YUK				AMB	AMB	13 39 12.0	
comp=E,227nm,0.4s							
YUK				AMB	AMB	13 39 12.0	
comp=E,392nm,0.4s							
YUK				AMB	AMB	13 39 12.0	
comp=E,72nm,0.4s							
YUK				*e*S	**Sn**	**13 39 37.1**	**+1.5**
YUK				A	A	13 39 45.0	
comp=E,3μm,0.5s							
YUK				A	A	13 39 45.0	
comp=E,2μm,0.5s							
YUK	**Yuzh-Kuril'sk**	**2.28**	**245***c*	*i*PN	**Pn**	**13 39 09.7**	**+1.8**
YUK				*e*S	**Sn**	**13 39 38.6**	**+3.0**
YUK				pmax	pmax		
comp=E,393nm,0.2s							
YUK				pmax	pmax		
comp=Z,716nm,0.2s							
YUK				pmax	pmax		
comp=N,227nm,0.3s							
YUK				smax	smax		
comp=N,3μm,0.4s							
YUK				smax	smax		
comp=E,2μm,0.4s							
LAGR	**Lagunnoye**	**2.32**	**246**	*i* P	**Pn**	**13 39 10.0**	**+1.6**
LAGR				AMB	AMB	13 39 14.0	
comp=E,613nm,0.6s							
LAGR				AMB	AMB	13 39 14.0	
comp=E,704nm,0.6s							
LAGR				AMB	AMB	13 39 14.0	
comp=E,83nm,0.6s							
LAGR				*e*S	**Sn**	**13 39 39.0**	**+2.5**
LAGR				A	A	13 39 46.0	
comp=E,533nm,0.7s							
LAGR				A	A	13 39 46.0	
comp=E,386nm,0.7s							
LAGR	**Lagunnoye**	**2.32**	**246***d*	*i*PN	**Pn**	**13 39 10.6**	**+2.2**
LAGR				*e*S	**Sn**	**13 39 39.6**	**+3.1**
LAGR				pmax	pmax		
comp=E,704nm,0.6s							
LAGR				pmax	pmax		
comp=Z,831nm,0.6s							
LAGR				pmax	pmax		
comp=N,613nm,0.3s							
LAGR				smax	smax		
comp=E,4μm,0.3s							
LAGR				smax	smax		
comp=N,5μm,0.6s							
GRPR	**Tuman**	**2.36**	**245**	*i* P	**Pn**	**13 39 11.0**	**+2.1**
GRPR				AMB	AMB	13 39 15.0	
comp=N,324nm,0.5s							
GRPR				AMB	AMB	13 39 15.0	
comp=N,738nm,0.5s							
GRPR				AMB	AMB	13 39 15.0	
comp=N,55nm,0.5s							
GRPR				*e*S	**Sn**	**13 39 40.0**	**+2.6**
GRPR				A	A	13 39 45.0	
comp=N,282nm,0.5s							
GRPR				A	A	13 39 45.0	
comp=N,154nm,0.5s							
GRPR	**Tuman**	**2.36**	**245***c*	*i*PN	**Pn**	**13 39 11.4**	**+2.5**
GRPR				*e*S	**Sn**	**13 39 40.5**	**+3.1**
GRPR				pmax	pmax		
comp=Z,552nm,0.5s							
GRPR				pmax	pmax		
comp=N,324nm,0.2s							
GRPR				pmax	pmax		
comp=E,738nm,0.4s							
GRPR				smax	smax		
comp=N,3μm,0.4s							
GRPR				smax	smax		
comp=E,2μm,0.4s							
GLVR	**Golovnino**	**2.64**	**242**	*i* P	**Pn**	**13 39 14.0**	**+1.4**
GLVR				AMB	AMB	13 39 19.0	
comp=E,461nm,0.4s							
GLVR				AMB	AMB	13 39 19.0	
comp=E,255nm,0.4s							
GLVR				AMB	AMB	13 39 19.0	
comp=E,58nm,0.4s							
GLVR				*e*S	**Sn**	**13 39 46.0**	**+2.0**
GLVR				A	A	13 39 59.0	
comp=E,352nm,0.6s							
GLVR				A	A	13 39 59.0	
comp=E,183nm,0.6s							
GLVR	**Golovnino**	**2.64**	**242***d*	*i*PN	**Pn**	**13 39 14.7**	**+2.1**
GLVR				*e*S	**Sn**	**13 39 46.9**	**+2.9**
GLVR				pmax	pmax		
comp=Z,576nm,0.4s							
GLVR				pmax	pmax		
comp=N,461nm,0.3s							
GLVR				pmax	pmax		
comp=E,255nm,0.3s							
GLVR				smax	smax		
comp=E,2μm,0.6s							
GLVR				smax	smax		
comp=N,4μm,0.4s							
NEM2	**Nemuro 2**	**2.72**	**233**	P	**Pn**	**13 39 14.3**	**+0.7**
NEM2				*e*S	**Sn**	**13 39 46.0**	**+0.1**
JRA	**Rausu**	**2.81**	**249**	P	**Pn**	**13 39 16.9**	**+2.1**
JNK	**Nakash**	**3.22**	**245**	P	**Pn**	**13 39 22.4**	**+2.0**
JAK	**Akkeshi**	**3.55**	**237**	P	**Pn**	**13 39 25.4**	**+0.6**
JAK				*e*S	**Sn**	**13 40 06.5**	**+0.7**
JTKR	**Abashiri--Toko**	**3.61**	**255**	P	**Pn**	**13 39 27.7**	**+2.1**
JAR	**Ashorobuto**	**3.97**	**246**	P	**Pn**	**13 39 32.9**	**+2.5**
JMP	**Maruseppu**	**3.98**	**257**	P	**Pn**	**13 39 33.1**	**+2.5**
JOB	**Onbets**	**4.12**	**241**	P	**Pn**	**13 39 34.3**	**+1.8**
JOB				*e*S	**Sn**	**13 40 20.5**	**+0.8**
HRK	**Horoka**	**4.32**	**251**	*e*P	**Pn**	**13 39 37.8**	**+2.6**
JSE	**Soyaes**	**4.37**	**271**	P	**Pn**	**13 39 37.9**	**+2.2**
JKK2	**Kamakawa 2**	**4.44**	**257**	P	**Pn**	**13 39 39.4**	**+2.6**
JKA	**Kamikawa-asahi**	**4.48**	**260**	*e*P	**Pn**	**13 39 39.2**	**+1.9**
ASAJ	**Asahikawa**	**4.48**	**260**	P	**Pn**	**13 39 39.2**	**+1.9**
comp=N,6.9nm,0.3s,baz=80,slow=8.3,SNR=56							
ASAJ				S	**Sn**	**13 40 32.7**	**+4.4**
comp=N,3.6nm,0.3s,baz=56,slow=17,SNR=3.1							
ASAJ	**Asahikawa**	**4.48**	**260**	*e*Pn	**Pn**	**13 39 39.8**	**+2.4**
ASAJ				S	**Sn**	**13 40 32.7**	**+4.4**
ASAJ	**Asahikawa**	**4.48**	**260**	P	**Pn**	**13 39 39.9**	**+2.6**
JCH	**Churui**	**4.57**	**240**	P	**Pn**	**13 39 39.5**	**+0.9**
YSS	**Yuzh-Sakhalins**	**4.59**	**297**	*e*P	**Pn**	**13 39 40.3**	**+1.5**
YSS				AMB	AMB	13 39 41.1	
comp=N,50nm,0.7s							
YSS				AMB	AMB	13 39 41.1	
comp=N,60nm,0.7s							
YSS				*e*S	**Sn**	**13 40 31.0**	**0.0**
YSS				A	A	13 40 34.2	
comp=N,120nm,0.7s							
YSS				A	A	13 40 34.2	
comp=N,220nm,0.7s							
YSS				A	A	13 40 34.4	
comp=N,500nm,2.0s							
YSS	**Yuzh-Sakhalins**	**4.59**	**297**	*e*Pn	**Pn**	**13 39 40.1**	**+1.3**
YSS	**Yuzh-Sakhalins**	**4.59**	**297**α	*i*PN	**Pn**	**13 39 40.3**	**+1.5**
YSS				*i* S	**Sn**	**13 40 29.3**	**-1.7**
YSS				pmax	pmax		
comp=E,50nm,0.7s							
YSS				pmax	pmax		
comp=Z,60nm,0.7s							
YSS				smax	smax		
comp=N,120nm,0.8s							
YSS				smax	smax		
comp=E,220nm,0.7s							
YSS				smax	smax		
comp=E,500nm,2.0s							
JFR	**Furan**	**4.80**	**249**	P	**Pn**	**13 39 44.5**	**+2.8**
MYR	**Moyori**	**4.81**	**237**	*e*P	**Pn**	**13 39 42.7**	**+0.9**
JWK2	**Keihoku**	**4.84**	**276**	P	**Pn**	**13 39 45.5**	**+3.3**
JBT2	**Biratori 2**	**5.12**	**246**	P	**Pn**	**13 39 47.5**	**+1.5**
JNBK	**Urakawa-nobuka**	**5.13**	**240**	P	**Pn**	**13 39 46.5**	**+0.3**
JEW	**Eniwo**	**5.70**	**250**	P	**Pn**	**13 39 56.5**	**+2.7**
UGL	**Uglegorsk**	**6.10**	**314**	*e*P	**Pn**	**13 40 01.1**	**+1.9**
UGL				AMB	AMB	13 40 02.0	
comp=E,60nm,0.8s							
UGL				*e*S	**Sn**	**13 41 08.6**	**+1.1**
UGL				A	A	13 41 13.0	
comp=E,80nm,0.9s							
UGL	**Uglegorsk**	**6.10**	**314**	*e*PN	**Pn**	**13 40 01.1**	**+1.9**
UGL				*e*S	**Sn**	**13 41 08.6**	**+1.1**
UGL				pmax	pmax		
comp=Z,64nm,0.8s							
UGL				smax	smax		
comp=E,79nm,0.9s							
JNB	**Noboribetsu**	**6.13**	**248**	P	**Pn**	**13 40 00.8**	**+1.1**
JKB	**Kayabe**	**6.42**	**243**	P	**Pn**	**13 40 04.1**	**+0.4**
JKB				*e*S	**Sn**	**13 41 12.2**	**-3.3**
JSH	**Shimam**	**6.72**	**252**	P	**Pn**	**13 40 11.5**	**+3.8**
JYM2	**Yakumo 2**	**6.74**	**247**	P	**Pn**	**13 40 08.9**	**+1.0**
JTM	**Tenmabayashi**	**7.04**	**236**	P	**Pn**	**13 40 11.3**	**-0.8**
JANG	**Nango**	**7.06**	**231**	P	**Pn**	**13 40 10.6**	**-1.8**
JANG				*e*S	**Sn**	**13 41 25.3**	**-5.8**
TYV	**Tymovskoe**	**7.13**	**327**	*e*P	**Pn**	**13 40 14.6**	**+1.4**
TYV				AMB	AMB	13 40 15.3	
comp=E,23nm,0.7s							
TYV	**Tymovskoe**	**7.13**	**327**	*e*PN	**Pn**	**13 40 14.2**	**+1.0**
TYV				pmax	pmax		
comp=Z,23nm,0.7s							
JOSM	**Okushiri--Mats**	**7.34**	**250**	P	**Pn**	**13 40 17.1**	**+0.9**
SKR	**Severo-Kuril's**	**7.53**	**39**	*e*P	**Pn**	**13 40 19.4**	**+0.8**
SKR				AMB	AMB	13 40 23.0	
comp=Z,92nm,0.5s							
SKR				*e*S	**Sn**	**13 41 40.2**	**-2.1**
SKR				A	A	13 41 55.0	
comp=Z,94nm,0.9s							
SKR				A	A	13 41 55.0	
comp=Z,70nm,0.9s							
SKR	**Severo-Kuril's**	**7.53**	**39**	*e*PN	**Pn**	**13 40 21.0**	**+2.4**
SKR				*e*S	**Sn**	**13 41 44.5**	**+2.2**
SKR				pmax	pmax		
comp=Z,92nm,0.5s							
SKR				smax	smax		
comp=N,94nm,0.5s							
SKR				smax	smax		
comp=E,70nm,0.6s							
OFUJ	**Ofunato**	**7.93**	**224**	*e*S	**Sn**	**13 41 46.3**	**-5.9**
JRG	**Rokugo**	**8.23**	**230**	P	**Pn**	**13 40 27.6**	**-0.7**
JRG				*e*S	**Sn**	**13 41 56.1**	**-3.4**
JIO	**Ouri**	**8.57**	**223**	P	**Pn**	**13 40 30.8**	**

comp=N,25nm,1.0s
NKL pmax pmax
comp=Z,43nm,1.0s
PEA0B Petropavlovsk- 9.99 33 *e*Pn **Pn 13 40 53.2 +1.1**
PETK Petropavlovsk- 9.99 33 P **Pn 13 40 52.8 +0.6**
comp=Z,2.2nm,0.3s,baz=190,slow=5.9,SNR=49
PETK LR LR 13 45 13.5
comp=Z,26nm,18.8s,baz=193,slow=41
PETK Petropavlovsk- 9.99 33 *e*Pn **Pn 13 40 52.6 +0.4**
GRNR Gornyy 10.06 309 *e*P **Pn 13 40 55.4 +2.2**
GRNR AMB AMB 13 40 56.2
comp=Z,42nm,1.0s
GRNR AMB AMB 13 40 56.2
comp=Z,57nm,1.0s
GRNR Gornyy 10.06 309 *e*PN **Pn 13 40 55.4 +2.2**
GRNR pmax pmax
comp=N,42nm,1.0s
GRNR pmax pmax
comp=E,42nm,1.0s
GRNR pmax pmax
comp=Z,57nm,1.0s
JFY Yanaizu 10.20 225 P **Pn 13 40 54.3 -0.8**
PET Petropavlovsk 10.31 36 *e*P **Pn 13 40 58.2 +1.7**
PET AMB AMB 13 41 04.1
comp=Z,18nm,0.8s
PET *e*S **Sn 13 42 47.7 -2.2**
PET A A 13 43 03.3
comp=Z,23nm,0.9s
PET Petropavlovsk 10.31 36 *e*Pn **Pn 13 40 57.1 +0.7**
PET Petropavlovsk 10.31 36 *e*PN **Pn 13 40 58.2 +1.7**
PET pmax pmax
comp=Z,18nm,0.8s
PET MLR MLR
comp=Z,100nm,14.0s
MJA0 Matsu Arr-Jizo 11.61 227 *e*PN **Pn 13 41 13.9 -0.3**
MJA0 pmax pmax
comp=Z,1.0nm,0.3s
MJB9 Matsu-Tunnel 11.63 227 *e*Pn **Pn 13 41 13.5 -0.9**
MAJO Matsushiro 11.63 227 *e*Pn **Pn 13 41 13.4 -1.0**
MAJO Matsushiro 11.63 227⇑ *e*PN **Pn 13 41 14.2 -0.2**
MJAR Matsushiro Arr 11.63 227 P **Pn 13 41 13.3 -1.2**
comp=Z,0.5nm,0.3s,baz=27,slow=13,SNR=8.8
USRK Ussuriysk Ar. 11.97 272 P **Pn 13 41 20.3 +1.4**
comp=Z,0.4nm,0.3s,baz=90,slow=11,SNR=10
KLR Kul'dur 12.31 296 *e*P **Pn 13 41 24.6 +1.3**
comp=Z,0.0nm,0.3s,baz=103,slow=16,SNR=18
KLR Kul'dur 12.31 296 *e*P **Pn 13 41 24.5 +1.2**
KLR Kul'dur 12.31 296 *d i*PN **Pn 13 41 24.5 +1.2**
EKMR Ekimchan 13.10 314 *e*P **Pn 13 41 33.8 +0.1**
EKMR AMB AMB 13 41 35.0
comp=Z,16nm,0.9s
MA2 Magadan 14.63 4 P **Pn 13 41 53.4 0.0**
comp=Z,1.7nm,0.3s,baz=184,slow=12,SNR=21
MA2 LR LR 13 47 03.8
comp=Z,43nm,19.6s,baz=180,slow=35
MA2 Magadan 14.63 4 *e*Pn **Pn 13 41 53.3 -0.1**
BMKR Bomnak 16.02 314 *e*P **P 13 42 11.8 -0.8**
BMKR AMB AMB 13 42 12.7
comp=Z,16nm,0.8s
ZEA Zeya 16.43 310 *e*P **P 13 42 16.0 -1.1**
ZEA AMB AMB 13 42 17.2
comp=Z,21nm,0.9s
ZEA AMB AMB 13 42 17.2
comp=Z,29nm,0.9s
ZEA Zeya 16.43 310 *e*P **P 13 42 16.0 -1.1**
ZEA pmax pmax
comp=N,21nm,0.8s
ZEA pmax pmax
comp=E,21nm,0.8s
ZEA pmax pmax
comp=Z,29nm,1.0s
KROS Kirovskiy 16.87 312 *e*P **Pn 13 42 16.8 -4.7**
KROS AMB AMB 13 42 18.0
comp=Z,3.0nm,0.7s
KSRS Korea Array 17.36 251 P **Pn 13 42 28.3 +0.8**
comp=Z,0.2nm,0.3s,baz=56,slow=12,SNR=9.4
KSAR Wonju Array Be 17.39 251 P **Pn 13 42 28.3 +0.4**
KSAR Wonju Array Be 17.39 251 P **Pn 13 42 28.3 +0.4**
SEY Seymchan 18.07 5 P **P 13 42 34.1 -0.9**
comp=Z,0.6nm,0.3s,baz=189,slow=8.8,SNR=14
SEY Seymchan 18.07 5 *e*P **Pn 13 42 35.6 -0.3**
SEY Seymchan 18.07 5⇑ *e*P **Pn 13 42 35.6 -0.3**
INCN Inchon 18.21 253 *e*P **Pn 13 42 38.5 +0.6**
comp=Z,14nm,0.6s
JNU Nakatsue 18.22 235 P **Pn 13 42 37.8 -0.2**
comp=Z,0.2nm,0.3s,baz=50,slow=16,SNR=2.5
JNU Nakatsue 18.22 235 *e*P **Pn 13 42 38.1 +0.1**
JNU Nakatsue 18.22 235 *e*P **Pn 13 42 38.1 +0.1**
comp=Z,50nm,1.6s
SMY Shemya 18.31 56 *e*P **Pn 13 42 38.8 -0.1**
SMY Shemya 18.31 56 *e*P **Pn 13 42 38.8 -0.1**
comp=Z,148nm,1.3s
SMY Shemya 18.31 56 *e*P **Pn 13 42 38.8 -0.1**
SMY pmax pmax
comp=Z,148nm,1.3s
CBIJ Chichi jima 18.65 199 *e*P **Pn 13 42 43.7 +0.6**
comp=Z,141nm,1.1s
YAK Yakutsk 20.32 334 *e*P Pn 13 43 02.0 -0.4
YAK Yakutsk 20.32 334 *e*P **P 13 42 58.8 -0.7**
comp=Z,72nm,0.7s
YAK Yakutsk 20.32 334 *c i*P Pn 13 43 02.4 0.0
YAK *e**PP pP 13 43 20.5 +2.1
YAK *e*S **S 13 46 40.0 -1.5**
YAK *e**SS sS 13 47 08.7 -4.2
YAK *e* 13 47 14.9
YAK pmax pmax
comp=Z,55nm,0.8s
YAK pmax pmax
comp=N,26nm,1.0s
YAK pmax pmax
comp=E,19nm,1.1s
YAK smax smax
comp=N,22nm,1.5s
YAK smax smax
comp=E,13nm,1.3s
BJI Beijing 24.41 270⇑ *e*P **P 13 43 40.5 -0.2**
BJI pmax pmax
comp=E,13nm,0.8s
BILL Bilibino 24.82 16 *e*P **P 13 43 43.3 -0.9**
BILL Bilibino 24.82 16 *i*P **P 13 43 43.3 -0.9**
BILL *i**PP **sP 13 44 11.8 -6.0**
BILL pmax pmax
comp=Z,6.0nm,2.1s
TIA Tai'an 25.43 261 P **P 13 43 52.3 +2.2**
TIA pmax pmax
comp=Z,8.0nm,0.8s
NJ2 Nanjing 26.56 251 *e*P **P 13 44 02.6 +2.4**
NJ2 pmax pmax
comp=Z,15nm,0.9s
HHC Hu-ho-hao-te 27.37 274 *e*P **P 13 44 06.6 -1.0**
HHC S **S 13 48 29.6 -11**
HHC pmax pmax
comp=Z,12nm,0.9s
HHC pmax pmax
comp=Z,47nm,4.5s
TIK Tiksi 28.35 347 *e*P **P 13 44 15.6 -0.2**
TIXI Tiksi 28.36 347⇓ *e*P **P 13 44 15.6 -0.3**
TIXI pmax pmax
comp=Z,1.0nm,1.0s
ULN Ulaanbaatar 28.61 291 *e*P **P 13 44 19.8 +1.2**
ULN Ulaanbaatar 28.61 291⇑ *e*P **P 13 44 19.8 +1.2**
ULN pmax pmax
comp=Z,4.0nm,1.9s
SONM Songino Array 29.05 291 P **P 13 44 23.3 +0.8**
comp=Z,1.0nm,0.7s,baz=85,slow=9.9,SNR=5.9
SONM PcP **PcP 13 47 29.0 +0.8**
comp=Z,0.9nm,0.7s,baz=166,slow=2.4,SNR=3.7
SONM LR LR 13 55 34.6
comp=Z,29nm,19.6s,baz=98,slow=35
SONM Songino Array 29.05 291 *e*P **P 13 44 23.8 +1.3**
SONM pmax pmax
comp=Z,1.0nm,0.7s
H11N2 WAKE ISLAND Hy 29.38 143 T T 14 15 29.5
baz=334,slow=76,SNR=2530
H11N1 WAKE ISLAND Hy 29.39 143 T T 14 15 31.0
baz=334,slow=76,SNR=1860
H11N3 WAKE ISLAND Hy 29.40 143 T T 14 15 31.2
baz=334,slow=76,SNR=2347
TLY Talaya 30.30 299 LR LR 13 57 23.8
comp=Z,23nm,18.3s,baz=74,slow=38
H11S1 WAKE ISLAND Hy 30.39 145 T T 14 16 46.7
baz=335,slow=76,SNR=1744
H11S3 WAKE ISLAND Hy 30.40 145 T T 14 16 50.4
baz=335,slow=76,SNR=1232
H11S2 WAKE ISLAND Hy 30.41 145 T T 14 16 48.4
baz=335,slow=76,SNR=1742

LZH Lanzhou 34.88 271 *e*P **P 13 45 14.8 +1.2**
LZH pP sP 13 45 43.3 -4.3
LZH sP pP 13 45 58.0 +22
LZH pmax pmax
comp=Z,21nm,1.3s
GTA Gaotai 36.21 279 *e*P **P 13 45 25.9 +0.9**
GTA pP pP 13 45 51.8 +4.2
GTA sP sP 13 46 03.8 +4.8
GTA PcP **PcP 13 47 50.4 +2.2**
GTA pmax pmax
comp=Z,5.0nm,0.8s
CAST Castle Rocks 37.52 39 *e*P **P 13 45 36.3 +0.7**
comp=Z,4.6nm,0.6s
KDAK Kodiak Island 37.55 49 P **P 13 45 35.0 -0.9**
comp=Z,2.4nm,0.3s,baz=263,slow=2.5,SNR=11
KDAK Kodiak Island 37.55 49 P **P 13 45 35.0 -0.9**
KDAK pmax pmax
comp=Z,2.0nm,0.3s
CD2 Chengdu 37.67 264 P **P 13 45 35.8 -1.5**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
NRIK Noril'sk 38.70 330 LR LR 14 02 27.5
comp=Z,30nm,20.6s,baz=102,slow=37
RND Reindeer 38.98 39 *e*P **P 13 45 47.8 -0.1**
comp=Z,8.0nm,1.4s
RND Reindeer 38.98 39 *e*P **P 13 45 47.8 -0.1**
RND pmax pmax
comp=Z,8.0nm,1.4s
MDM Murphy Dome 39.21 37 *e*P **P 13 45 49.7 0.0**
comp=Z,4.9nm,0.9s
WRH Wood River Hil 39.28 38 *e*P **P 13 45 50.6 +0.3**
comp=Z,12nm,1.6s
SML Sawmill 39.31 42 *e*P **P 13 45 50.9 +0.3**
SML Sawmill 39.31 42 *e*P **P 13 45 50.9 +0.3**
comp=Z,13nm,0.7s
SML Sawmill 39.31 42 *e*P **P 13 45 50.9 +0.3**
SML pmax pmax
comp=Z,13nm,0.7s
CCB Clear Creek Bu 39.40 37 *e*P **P 13 45 51.2 0.0**
comp=Z,4.2nm,1.4s
DHY Denali Highway 39.66 40 *e*P **P 13 45 53.6 -0.1**
comp=Z,3.9nm,0.6s
HDA Harding Lake 39.78 38 *e*P **P 13 45 53.7 -0.7**
comp=Z,4.3nm,0.6s
ILAR Eielson Array 39.79 37 P **P 13 45 54.5 -0.1**
comp=Z,1.6nm,0.7s,baz=272,slow=7.4,SNR=23
ILAR Eielson Array 39.79 37 *e*P **P 13 45 54.4 -0.1**
ILAR pmax pmax
comp=Z,1.0nm,0.6s
ILB Eielson Array 39.79 37 *e*P **P 13 45 54.2 -0.3**
ZALV Zalesovo Beam 41.15 306 P **P 13 46 04.8 -1.0**
comp=Z,0.4nm,0.4s,baz=70,slow=9.5,SNR=2.3
ZALV PcP **PcP 13 48 03.7 +0.5**
comp=Z,3.5nm,0.7s,baz=93,slow=2.4,SNR=12
ZALV ScP **ScP 13 51 43.1 -0.6**
comp=Z,0.5nm,0.4s,baz=92,slow=4.8,SNR=4.6
ZALV LR LR 14 04 05.5
comp=Z,23nm,18.7s,baz=235,slow=37
KMI Kunming 41.90 258 P **P 13 46 14.1 +1.5**
KMI pmax pmax
comp=Z,17nm,1.1s
EGAK Eagle 42.23 37 *e*P **P 13 46 14.1 -0.5**
comp=Z,5.2nm,0.5s
WMQ Urumqi 42.69 291 P **P 13 46 19.9 +1.3**
WMQ LR LR
comp=Z,62nm,18.1s
WMQ LR LR
comp=Z,56nm,18.1s
WMQ LR LR
comp=Z,43nm,20.5s
DAV Davao City (W) 42.83 215 LR LR 14 03 49.0
comp=Z,39nm,18.9s,baz=27,slow=35
DAWY Dawson 43.09 38 *e*P **P 13 46 21.7 +0.1**
comp=Z,11nm,1.8s
INK Inuvik 44.73 31 P **P 13 46 34.1 -0.4**
comp=Z,2.4nm,0.5s,baz=310,slow=12,SNR=24
INK Inuvik 44.73 31 *e*P **P 13 46 34.2 -0.3**
INK Inuvik 44.73 31 *e*P **P 13 46 34.2 -0.3**
INK Inuvik 44.73 31 *e*P **P 13 46 34.2 -0.3**
MK31 Makanchi Array 45.01 297 *e*P **P 13 46 36.3 -0.8**
MK31 Makanchi Array 45.01 297 *e*P **P 13 46 36.3 -0.8**
MKAR Makanchi Array 45.01 297 P **P 13 46 36.5 -0.6**
comp=Z,1.0nm,0.8s,baz=77,slow=7.7,SNR=7.2
MKAR PcP **PcP 13 48 16.8 +0.4**
comp=Z,2.9nm,0.7s,baz=60,slow=4.3,SNR=9.0
MKAR LR LR 14 06 37.8
comp=Z,39nm,19.1s,baz=61,slow=38
MKAR Makanchi Array 45.01 297 *e*P **P 13 46 36.2 -0.9**
MKAR Makanchi Array 45.01 297 *e*P **P 13 46 36.2 -0.9**
comp=Z,18nm,0.6s
MKAR PcP **PcP 13 48 16.8 +0.4**
MK01 Makanchi Array 45.01 297 *e*P **P 13 46 35.6 -1.5**
KURK Kurchatov 45.77 303 *e*P **P 13 46 42.4 -0.5**
KURK Kurchatov 45.77 303 P **P 13 46 42.4 -0.5**
KURK PcP **PcP 13 48 19.4 +0.5**
KURK Kurchatov 45.77 303 P **P 13 46 42.4 -0.5**
KURK 13 48 19.4
KURK pmax pmax
comp=Z,1.0nm,0.3s
KURBB Kurchatov Arra 45.86 303 P **P 13 46 42.4 -1.2**
comp=Z,0.6nm,0.3s,baz=72,slow=8.3,SNR=8.6
KURBB PcP **PcP 13 48 19.4 +0.2**
comp=Z,2.1nm,0.7s,baz=72,slow=3.3,SNR=13
CMAR Chiang Mai Arr 48.97 254 P **P 13 47 09.7 +1.5**
comp=Z,1.3nm,0.4s,baz=45,slow=6.7,SNR=11
BVAR Bovovye Array 49.58 309 P **P 13 47 12.2 -0.2**
comp=Z,0.3nm,0.4s,baz=86,slow=9.1,SNR=2.6
BVAR PcP **PcP 13 48 32.0 -0.5**
comp=Z,2.8nm,0.7s,baz=62,slow=3.4,SNR=11
JIRN Jiri 52.01 273 *e*P **P 13 47 32.1 +0.7**
GUN Gumba 52.08 273 *e*P **P 13 47 32.4 +0.5**
RAMN Ramite 52.14 272 *e*P **P 13 47 32.8 +0.6**
comp=Z,52nm,0.7s
KSH Kashi 52.46 291 P P 13 47 38.5 +4.2
KSH pP sP 13 48 05.4 -3.9
KSH pmax pmax
comp=Z,220nm,4.5s
KKN Kakani 52.57 274 *e*P **P 13 47 36.0 +0.6**
comp=Z,23nm,0.7s
PKIN Phulchoki 52.62 273 *e*P **P 13 47 35.9 +0.1**
DMN Daman 52.80 274 *e*P **P 13 47 37.9 +0.8**
comp=Z,28nm,0.7s
GKN Gorkha 52.90 274 *e*P **P 13 47 38.3 +0.6**
comp=Z,38nm,1.0s
DANN Dangsing 53.31 275 *e*P **P 13 47 41.8 +0.9**
comp=Z,52nm,0.8s
RES Resolute Bay 53.42 17 P **P 13 47 40.4 -0.2**
comp=Z,2.9nm,0.4s,baz=330,slow=7.1,SNR=10
KOLN Koldanda 53.77 275 *e*P **P 13 47 44.9 +0.7**
PYUN Piuthan 54.01 275 *e*P **P 13 47 46.2 +0.3**
comp=Z,76nm,1.1s
YKA Yellowknife Ar 54.11 35 P **P 13 47 45.8 0.0**
comp=Z,1.2nm,0.6s,baz=298,slow=7.1,SNR=8.2
PMG Port Moresby 54.19 182 P **P 13 47 49.5 +2.6**
comp=Z,6.0nm,0.7s,baz=241,slow=19,SNR=2.7
ARU Arti 54.20 317 *e*P **P 13 47 46.9 +0.3**
ARU Arti 54.20 317 *d i*P **P 13 47 46.8 +0.2**
ARU *PP **pP 13 48 12.0 +1.4**
ARU 13 48 47.4
ARU 13 49 50.7
ARU S **S 13 55 14.9 -0.8**
ARU SS **SS 13 58 53.9 -4.2**
ARU pmax pmax
comp=Z,3.0nm,0.8s
HNR Honiara 55.14 166 LR LR 14 09 11.1
comp=Z,30nm,20.8s,baz=342,slow=33
AKTO Aktyubinsk 57.57 311 LR LR 14 13 47.2
comp=Z,22nm,19.4s,baz=37,slow=37
ARCES ARCESS Array B 58.45 340 P **P 13 48 14.7 -1.8**
comp=Z,0.6nm,0.4s,baz=42,slow=8.7,SNR=5.6
ARCES PcP **PcP 13 49 05.9 -0.2**
comp=Z,1.3nm,0.7s,baz=54,slow=4.6,SNR=3.8
ARCES ARCESS Array B 58.45 340 *e*P **P 13 48 15.7 -0.9**
ARCES ARCESS Array B 58.45 340 *e*P **P 13 48 15.7 -0.9**
ARCES pmax pmax
comp=Z,1.0nm,0.5s
KFPM Farley Peak 62.05 61 *e*P **P 13 48 44.0 +2.3**
FINES FINESS Array B 64.25 333 P **P 13 48 52.8 -2.9**
comp=Z,2.1nm,0.6s,baz=42,slow=8.8,SNR=9.0
FINES LR LR 14 18 08.4
comp=Z,15nm,21.7s,baz=6.0,slow=37
FINES FINESS Array B 64.25 333 *i*P **P 13 48 52.7 -3.0**
FINES pmax pmax
comp=Z,2.0nm,0.6s
DLMT Dillon 64.87 50 *e*P **P 13 49 00.3 +0.1**
comp=Z,4.9nm,1.1s

BOZ Bozeman (W) 65.25 50 *e*P **P 13 49 03.6 +0.9**
BOZ Bozeman (W) 65.25 50 *e*P **P 13 49 03.6 +0.9**
comp=Z,2.6nm,0.6s
BOZ Bozeman (W) 65.25 50 *e*P **P 13 49 03.6 +0.9**
BOZ pmax pmax
comp=Z,3.0nm,0.6s
NVAR Mina Array Bea 65.94 59 P **P 13 49 08.9 +1.6**
comp=Z,1.5nm,0.7s,baz=300,slow=7.2,SNR=10.0
NV01 Mina Array Sit 65.94 59 *e*P **P 13 49 08.4 +1.0**
WRA Warramunga Arr 65.97 195 P **P 13 49 08.3 +1.0**
comp=Z,0.7nm,0.6s,baz=11,slow=6.8,SNR=14
H17A Grant Village 66.59 50 *e*P **P 13 49 14.1 +2.7**
comp=Z,4.4nm,1.1s
TPAW Teton Pass 66.98 51 *e*P **P 13 49 15.6 +1.7**
comp=Z,3.2nm,0.8s
PD31 Pinedale Array 68.22 51 *e*P **P 13 49 21.9 +0.2**
PDAR Pinedale Array 68.22 51 P **P 13 49 22.6 +0.8**
comp=Z,1.4nm,0.6s,baz=269,slow=2.0,SNR=12
PDAR Pinedale Array 68.22 51 *e*P **P 13 49 22.2 +0.5**
PDAR Pinedale Array 68.22 51 *e*P **P 13 49 22.2 +0.5**
NB2 NORSAR Subarra 68.82 339 P **P 13 49 23.9 -1.0**
comp=Z,1.0nm,0.5s,baz=31,slow=6.5
NOA NORSAR Array B 68.82 339 P **P 13 49 23.1 -1.8**
comp=Z,1.8nm,0.3s,baz=168,slow=7.4,SNR=7.4
NOA LR LR 14 22 30.5
comp=Z,8.9nm,20.0s,baz=60,slow=38
HFS Hagfors 68.95 338 P **P 13 49 23.0 -2.6**
comp=Z,1.0nm,0.3s,baz=44,slow=4.4,SNR=9.4
HFS LR LR 14 25 22.0
comp=Z,15nm,18.2s,baz=126,slow=41
ASAR Alice Springs 69.69 194 P **P 13 49 32.9 +2.3**
comp=Z,0.9nm,0.7s,baz=13,slow=6.5,SNR=32
KIV Kislovodsk 69.75 312 *e*P **P 13 49 30.5 -0.5**
KIV Kislovodsk 69.75 312 *e*P **P 13 49 30.5 -0.5**
KIV pmax pmax
comp=Z,8.0nm,1.0s
KIV MLR MLR
comp=Z,26nm,17.0s
KBZ Khabaz 69.80 312 P **P 13 49 31.7 +0.6**
comp=Z,3.3nm,0.8s,baz=48,slow=5.2,SNR=8.3
KBZ LR LR 14 22 02.0
comp=Z,28nm,19.3s,baz=51,slow=38
SNDA J Saunders Pla 70.13 62 *e*P **P 13 49 34.6 +1.0**
NEY Neytrino 70.22 312 *de*P **P 13 49 35.2 +1.2**
DPP Dos Picos Cty 70.29 63 *e*P **P 13 49 37.2 +2.8**
AKASG Malin Array Be 71.22 324 P **P 13 49 38.5 -1.1**
comp=Z,0.5nm,0.4s,baz=40,slow=7.0,SNR=7.5
KIEV Kiev 71.23 324⇓ *e*P **P 13 49 37.8 -1.9**
KIEV pmax pmax
comp=Z,8.0nm,1.7s
ECSD EROS Data Cent 74.26 43 *e*P **P 13 49 57.3 -0.5**
comp=Z,11nm,1.4s
BUR08 Bucovina Ar. S 75.26 324 *e*P **P 13 50 01.9 -1.7**
BUR04 Bucovina Ar. S 75.27 324 *e*P **P 13 50 03.0 -0.7**
ANMO Albuquerque 75.34 55⇓ *i*P **P 13 50 04.8 +0.4**
ANMO *i* *PP **pP 13 50 30.6 +0.8**
ANMO pmax pmax
comp=Z,2.0nm,1.1s
ILGA Ilgaz 76.44 315 *e*P **P 13 50 09.8 -0.8**
comp=Z,17nm,1.4s
MLR Muntele Rosu 76.65 323 P **P 13 50 09.7 -1.9**
comp=Z,0.3nm,0.5s,baz=142,slow=12,SNR=3.3
CLL Collm 76.70 333 *e*P **P 13 50 11.3 -0.3**
CLL Collm 76.70 333⇑ *i*P **P 13 50 11.3 -0.3**
comp=Z,7.0nm,1.1s
CLL Collm 76.70 333⇑ *i*P **P 13 50 11.3 -0.3**
CLL pmax pmax
comp=Z,7.0nm,1.1s
EKA Eskdalemuir Ar 77.22 344 P **P 13 50 13.9 -0.5**
comp=Z,0.8nm,0.4s,baz=23,slow=5.3,SNR=5.6
BRTR Keskin Array B 77.48 314 P **P 13 50 16.4 +0.1**
comp=Z,1.8nm,0.8s,baz=36,slow=4.5,SNR=11
BRTR Keskin Array B 77.48 314 *e*P **P 13 50 17.0 +0.6**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
KHC Kasperske Hory 78.39 332 *e*P **P 13 50 19.4 -1.7**
KHC Kasperske Hory 78.39 332 *e*P **P 13 50 19.4 -1.7**
KHC Kasperske Hory 78.39 332 *e*P **P 13 50 19.4 -1.7**
GERES GERESS Array B 78.59 332 P **P 13 50 21.6 -0.7**
comp=Z,0.6nm,0.4s,baz=36,slow=8.5,SNR=4.9
GEA0 GERESS Array S 78.60 332 *e*P **P 13 50 21.2 -1.0**
TX31 Lajitas Ar. Si 81.00 57 *e*P **P 13 50 36.1 +0.5**
TXAR Lajitas Array 81.00 57 P **P 13 50 36.6 +1.0**
comp=Z,1.6nm,0.7s,baz=302,slow=3.8,SNR=25
TXAR Lajitas Array 81.00 57 *e*P **P 13 50 37.0 +1.4**
TXAR pmax pmax
comp=Z,2.0nm,0.7s
NWAO Narrogin (SRO) 82.70 206 P **P 13 50 45.6 +1.6**
comp=Z,11nm,0.8s,baz=297,slow=9.0,SNR=2.9
PLAL Pickwick Lake 85.20 44 *e*P **P 13 50 56.8 -0.2**
comp=Z,7.1nm,0.8s
IDI Anoyia 85.28 317 P **P 13 50 55.9 -1.6**
comp=Z,4.4nm,0.6s,baz=31,slow=9.9,SNR=8.8
IDI Anoyia 85.28 317 *e*P **P 13 50 55.6 -1.9**
comp=Z,18nm,1.4s
ESDC Sonseca Array 92.18 339 P **P 13 51 29.3 -0.8**
comp=Z,0.4nm,0.3s,baz=21,slow=2.5,SNR=11
SNAA Sanae 150.01 198 PKPbc **PKPbc 13 58 10.3 +1.1**
comp=Z,1.8nm,0.8s,baz=172,slow=9.1,SNR=7.7
PLCA Paso Flores 151.09 95 PKPbc **PKPbc 13 58 14.7 +1.9**
comp=Z,3.7nm,0.9s,baz=263,slow=6.8,SNR=3.7

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*ISCJB **13** 13:51:14.9±0.4, 37.°08N±0.°03×28.°65E±0.°03, h0km, Error ellipse: s-maj=3.8km s-min=3.5km az=161.6*
*DDA **13** 13:51:14.7, 37.°06N×28.°64E, h7km, Ml2.6, Suspected Mining explosion.*
*ISK **13** 13:51:14.3, 37.°08N×28.°65E, h5km, ML2.2/6*
*CSEM **13** 13:51:15.0±0.1, 37.°08N×28.°63E, h1km, ML2.6, Error ellipse: s-maj=3.0km s-min=2.6km az=146.0, Suspected Mining explosion.*

ISC 13 13:51:14.9±0.9, **37.°13N**±0.°02×**28.°67E**±0.°02, **h0km, n40, σ0.975/54, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TURN	**Turunc**	**0.26**	**193**	PG	**Pb**	**13 51 22.9**	**+0.4**
TURN				SG	**Sb**	**13 51 30.0**	**+2.5**
TURN	**Turunc**	**0.26**	**193**	*i* P	**Pb**	**13 51 22.7**	**+0.2**
TURN				*i* S	**Sb**	**13 51 30.1**	**+2.6**
TURN	**Turunc**	**0.26**	**193**	*e*Pg	**Pb**	**13 51 22.9**	**+0.4**
DALY	**Dalyan (Mu¨la**	**0.31**	**183**	PG	**Pg**	**13 51 20.2**	**-0.7**
DALY	**Dalyan (Mu¨la**	**0.31**	**183**	*i* P	**Pg**	**13 51 20.2**	**-0.7**
DALY	**Dalyan (Mu¨la**	**0.31**	**183**	P	**Pg**	**13 51 20.2**	**-0.7**
YER	**Yerkesik**	**0.31**	**271**	PG	**Pg**	**13 51 20.9**	**0.0**
YER				SG	**Sg**	**13 51 25.1**	**+0.1**
YER	**Yerkesik**	**0.31**	**271**	*e*Pg	**Pg**	**13 51 20.9**	**0.0**
YER				*e*Sg	**Sg**	**13 51 25.1**	**+0.1**
TAVA	**DENIZLI_Tavas**	**0.39**	**29**	*i* P	**Pb**	**13 51 23.9**	**-0.9**
TAVA				*i* S	**Sb**	**13 51 31.1**	**-0.3**
TAVA	**DENIZLI_Tavas**	**0.39**	**29**	P	**Pb**	**13 51 23.9**	**-0.9**
TAVA				S	**Sb**	**13 51 31.1**	**-0.3**
MRSB	**Marmaris-Mugla**	**0.56**	**223**	PG	**Pg**	**13 51 25.3**	**-0.4**
MRSB	**Marmaris-Mugla**	**0.56**	**223**	*e*Pg	**Pg**	**13 51 25.3**	**-0.4**
FETY	**Fethiye**	**0.59**	**146**	PG	**Pg**	**13 51 25.2**	**-1.1**
FETY				SG	**Sg**	**13 51 33.9**	**0.0**
FETY	**Fethiye**	**0.59**	**146**	*e*Pg	**Pg**	**13 51 25.2**	**-1.1**
FETY				S	**Sg**	**13 51 33.7**	**-0.2**
DNZL	**Cakiroluk**	**0.64**	**28**	*i* P	**Pb**	**13 51 29.4**	**+0.3**
DNZL	**Cakiroluk**	**0.64**	**28**	P	**Pb**	**13 51 29.4**	**+0.3**
GLHS	**Glhisar (BURDU**	**0.66**	**87**	PG	**Pg**	**13 51 27.8**	**+0.2**
GLHS	**Glhisar (BURDU**	**0.66**	**87**	*e*Pg	**Pg**	**13 51 27.8**	**+0.2**
GOLH	**Golhisar**	**0.72**	**81**	*i* P	**Pb**	**13 51 30.6**	**+0.2**
GOLH	**Golhisar**	**0.72**	**81**	P	**Pb**	**13 51 30.6**	**+0.2**
AYDN	**Tasoluk**	**0.83**	**310**	*i* P	**Pg**	**13 51 30.9**	**+0.2**
AYDN				*i* S	**Sg**	**13 51 41.4**	**-0.1**
AYDN	**Tasoluk**	**0.83**	**310**	P	**Pg**	**13 51 31.0**	**+0.2**
AYDN				S	**Sg**	**13 51 41.4**	**-0.1**
DAT	**Datca**	**0.96**	**246**	PG	**Pg**	**13 51 32.6**	**-0.8**
DAT	**Datca**	**0.96**	**246**	*i* P	**Pg**	**13 51 32.1**	**-1.3**
DAT				*i* S	**Sb**	**13 51 47.3**	**-0.6**
DAT	**Datca**	**0.96**	**246**	P	**Pg**	**13 51 32.1**	**-1.3**
DAT	**Datca**	**0.96**	**246**	*e*Pg	**Pg**	**13 51 32.6**	**-0.8**
BDRM	**Kayabasi**	**0.99**	**267**	*i* P	**Pg**	**13 51 33.9**	**0.0**
BDRM				*i* S	**Sn**	**13 51 49.6**	**-1.1**
BDRM	**Kayabasi**	**0.99**	**267**	P	**Pg**	**13 51 33.9**	**0.0**
ARG	**Arkhangelos**	**1.01**	**206**	PG	**Pg**	**13 51 33.8**	**-0.5**
ARG	**Arkhangelos**	**1.01**	**206**	*e*Pg	**Pg**	**13 51 33.8**	**-0.5**
AYDB	**Zeytinkoy-Aydi**	**1.03**	**323**	PG	**Pg**	**13 51 35.1**	**+0.4**
AYDB	**Zeytinkoy-Aydi**	**1.03**	**323**	*e*Pg	**Pg**	**13 51 35.1**	**+0.4**
BODT	**Bodrum**	**1.09**	**267**	PG	**Pg**	**13 51 35.1**	**-0.8**
BODT	**Bodrum**	**1.09**	**267**	*e*Pg	**Pg**	**13 51 35.1**	**-0.8**
MANT	**Manisa**	**1.36**	**356**	*i* P	**Pg**	**13 51 40.9**	**-0.2**

MANT			*i* S	**Sn**	13 52 00.6	+0.2
MANT	**Manisa**	**1.36 356**	P	**Pg**	13 51 40.9	-0.2
MANT			S	**Sn**	13 52 00.6	+0.2
KULA	**Kula-Manisa**	**1.39 360**	PN	**Pb**	13 51 41.6	-0.2
KULA	**Kula-Manisa**	**1.39 360**	*e*Pn	**Pb**	13 51 41.6	-0.2
KHAL	**Karahalli**	**1.40 27**	*i* P	**Pb**	13 51 42.1	0.0
KHAL	**Karahalli**	**1.40 27**	P	**Pb**	13 51 42.1	0.0

*NEIC **13** 13:57:46.3±0.0, 16°.31N×98°.30W, h4km, MD4.1(MEX), After MEX.*
MEX 13 13:57:46.3±0.6, 16°.31N×98°.30W, h4km±22km, MD4.1, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.27**	**348**	*e*P	Pg	13 58 07.2	-3.5
TLIG				*e*S	Sg	13 58 22.8	-4.4
TLIG	**Tlapa**	**1.27**	**348**	*e*P	Pg	13 58 07.2	-3.5
TLIG				*e*S	Sg	13 58 22.8	-4.4
VHO	**Vista Hermosa**	**1.68**	**63**	*e*P	Pn	13 58 12.8	-3.8
VHO				*e*S	Sn	13 58 34.5	-4.2
VHO	**Vista Hermosa**	**1.68**	**63**	*e*P	Pn	13 58 12.8	-3.8
VHO				*e*S	Sn	13 58 34.5	-4.2
CAIG	**El Cayaco**	**2.03**	**291**	*e*P	Pn	13 58 17.7	-3.5
CAIG	**El Cayaco**	**2.03**	**291**	*e*P	Pn	13 58 17.7	-3.5
HUIG	**Huatulco**	**2.17**	**104**	*e*P	Pn	13 58 19.5	-3.7
HUIG	**Huatulco**	**2.17**	**104**	*e*P	Pn	13 58 19.5	-3.7
TPIG	**Tehuac#an**	**2.28**	**23**	*e*P	Pn	13 58 22.0	-2.8
TPIG	**Tehuac#an**	**2.28**	**23**	*e*P	Pn	13 58 22.0	-2.8
PLIG	**Platanillo**	**2.37**	**331**	*e*P	Pn	13 58 24.2	-1.8
PLIG	**Platanillo**	**2.37**	**331**	*e*P	Pn	13 58 24.2	-1.8
YAIG	**Yautepec**	**2.64**	**344**	*e*P	Pn	13 58 28.6	-1.2
YAIG	**Yautepec**	**2.64**	**344**	*e*P	Pn	13 58 28.6	-1.2
ARIG	**Puente Sto Nin**	**2.77**	**315**	*e*P	Pn	13 58 29.0	-2.5
ARIG	**Puente Sto Nin**	**2.77**	**315**	*e*P	Pn	13 58 29.0	-2.5

*SOME **13** 14:00:17.7, 44°.60N×82°.40E, h15km*
*NNC **13** 14:00:22.5±1.4, 44°.80N×81°.86E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=20.2km s-min=6.4km az=114.0*
ISC 13 14:00:19.2±1.3, 44°.65N±0°.06×82°.26E±0°.06, h10km, n20, σ1§57/35, 10C-8D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.79**	**261**	*e*P	**Pg**	**14 00 52.8**	**-0.7**
	43nm,0.2s						
DJR				*e*S	**Sg**	**14 01 17.1**	**+0.3**
	23nm,0.3s						
MK31	**Makanchi Array**	**2.15**	**1**	⇓Pn	**Pb**	**14 00 58.3**	**+0.2**
	8.4nm,0.2s,baz=187,slow=14,SNR=530						
MK31				⇑Lg	Lg	14 01 26.0	
	14nm,0.3s,baz=188,slow=28,SNR=27						
MAKZ	**Makanchi**	**2.17**	**355**	⇓Pn	**Pb**	**14 00 58.3**	**-0.2**
	8.5nm,0.3s						
MAKZ				⇑Lg	Lg	14 01 26.1	
	24nm,0.4s						
PDGK	**Podgornoye**	**2.39**	**237**	⇓Pn	**Pn**	**14 00 59.7**	**+1.2**
	62nm,1.1s						
PDGK				⇑Lg	Lg	14 01 35.2	
	24nm,0.4s						
SHLS	**Shalkode**	**2.51**	**235**	*e*P	**Pn**	**14 01 01.8**	**+1.6**
	8.1nm,0.3s						
SHLS				⇑*i*S	**Sn**	**14 01 32.1**	**+1.2**
	187nm,0.3s						
TDK	**Taldyqorghan**	**2.76**	**279**	*e*P	**Pb**	**14 01 08.1**	**-0.5**
TDK				*e*S	**Sb**	**14 01 42.7**	**+0.2**
UZB	**Uzynbulak**	**2.78**	**238**	*e*P	**Pb**	**14 01 07.9**	**-1.0**
	5.7nm,0.4s						
UZB				⇓*i*S	**Sb**	**14 01 42.7**	**-0.4**
	27nm,0.2s						
KPKS	**Kokpek**	**2.83**	**247**	*e*P	**Pb**	**14 01 08.6**	**-1.3**
	20nm,0.2s						
KPKS				*e*S	**Sb**	**14 01 44.0**	**-0.6**
	52nm,0.2s						
ZHN	**Zhinishke**	**3.13**	**243**	*e*P	**Pb**	**14 01 14.5**	**-0.5**
	3.1nm,0.3s						
ZHN				*e*S	**Sb**	**14 01 53.9**	**+0.6**
	43nm,0.2s						
KURS	**Kuram**	**3.16**	**250**	*e*P	**Pb**	**14 01 16.8**	**+1.3**
	6.1nm,0.8s						
KURS				*e*S	**Sg**	**14 01 57.7**	**-3.1**
	5.9nm,0.7s						
ZSN	**Zaisan**	**3.34**	**32**	⇑*i*P	**Pb**	**14 01 20.1**	**+1.7**
	1.0nm,0.3s						
ZSN				⇓*i*S	**Sg**	**14 02 03.9**	**-2.5**
	2.4nm,0.9s						
CHKK	**Chushkaly**	**3.87**	**260**	*e*P	**Pb**	**14 01 27.3**	**-0.1**
	6.2nm,0.5s						
CHKK				*e*S	**Sb**	**14 02 15.6**	**+1.2**
	20nm,0.4s						
KOTS	**Kotyrbulak**	**3.97**	**251**	*e*P	**Pb**	**14 01 30.1**	**+0.7**
	5.6nm,0.3s						
KOTS				*e*S	**Sb**	**14 02 20.8**	**+3.2**
	6.8nm,0.5s						
MDOK	**Medeo**	**4.04**	**250**	⇑Pg	**Pg**	**14 01 35.2**	**-1.5**
	6.1nm,0.5s						
MDOK				⇓Lg	Lg	14 02 27.1	
	6.3nm,0.7s						
MDOK	**Medeo**	**4.04**	**250**	*e*P	**Pg**	**14 01 35.2**	**-1.5**
MDOK				*e*S	**Sg**	**14 02 29.4**	**+0.3**
KTBS	**Karatobe**	**4.12**	**259**	*e*P	**Pb**	**14 01 32.5**	**+0.7**
	2.1nm,0.3s						
KTBS				*e*S	**Sb**	**14 02 24.2**	**+2.7**
	10nm,0.4s						
TNSS	**Tian-Shan**	**4.16**	**249**	*e*P	**Pg**	**14 01 36.1**	**-2.8**
	3.7nm,0.4s						
TNSS				⇑*i*S	**Sg**	**14 02 31.0**	**-1.9**
	5.7nm,0.4s						
KUU	**Kurty**	**4.32**	**262**	*e*P	**Pb**	**14 01 35.7**	**+0.6**
	2.6nm,0.2s						
KUU				*e*S	**Sb**	**14 02 30.3**	**+3.1**
	3.2nm,0.1s						
KURBB	**Kurchatov Arra**	**6.48**	**339**	⇓Pn	**Pn**	**14 01 55.6**	**+1.0**
	0.8nm,0.5s						
KURBB				⇑Sn	**Sn**	**14 03 08.6**	**+0.1**
	1.6nm,0.5s						
KURBB				⇓Lg	Lg	14 03 41.7	
	4.6nm,0.6s						
KURK	**Kurchatov**	**6.55**	**339**	⇑Sn	**Sn**	**14 03 08.9**	**-1.2**
	2.1nm,1.0s						
KURK				⇑Lg	Lg	14 03 43.7	
	3.9nm,1.0s						

*DDA **13** 14:04:11.6, 38°.82N×26°.72E, h7km, Ml2.8*
*ISK **13** 14:04:11.5, 38°.79N×26°.83E, h7km, ML2.4/3*
*ISCJB **13** 14:04:12.1±0.4, 38°.82N±0°.02×26°.75E±0°.05, h10km±4km, Error ellipse: s-maj=6.1km s-min=3.3km az=12.2*
*CSEM **13** 14:04:12.2±0.1, 38°.82N×26°.76E, h12km, ML2.4, Error ellipse: s-maj=4.0km s-min=2.9km az=114.0*
ISC 13 14:04:11.2±0.9, 38°.82N±0°.02×26°.75E±0°.03, h15km±6km, n36, σ0§52/56, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FOCM	**Fo˜§a**	**0.11**	**189**	PG	**Pb**	**14 04 14.5**	**-0.5**
FOCM				SG	**Sg**	**14 04 16.9**	**+0.1**
FOCM	**Fo˜§a**	**0.11**	**189**	*i* Pg	**Pb**	**14 04 14.5**	**-0.5**
FOCM				*i* Sg	**Sg**	**14 04 16.9**	**+0.1**
DKL	**Dikili**	**0.28**	**25**	PG	**Pb**	**14 04 17.8**	**-0.1**
DKL				SG	**Sb**	**14 04 21.9**	**-0.5**
DKL	**Dikili**	**0.28**	**25**	*i* Pg	**Pb**	**14 04 17.8**	**-0.1**
DKL				*i* Sg	**Sb**	**14 04 21.9**	**-0.5**
URLA	**Izmir**	**0.47**	**195**	PG	**Pb**	**14 04 20.5**	**-0.7**
URLA				SG	**Sb**	**14 04 27.8**	**-0.3**
URLA	**Izmir**	**0.47**	**195**	*i* P	**Pb**	**14 04 20.6**	**-0.6**
URLA				*i* S	**Sb**	**14 04 29.9**	**+1.8**
URLA	**Izmir**	**0.47**	**195**	P	**Pb**	**14 04 20.6**	**-0.7**
URLA				*i* Sg	**Sb**	**14 04 27.8**	**-0.3**
URLA				S	**Sb**	**14 04 29.9**	**+1.8**
AYVA	**Ayvalik**	**0.49**	**354**	*i* P	**Pb**	**14 04 21.8**	**+0.3**
AYVA				*i* S	**Sb**	**14 04 28.7**	**+0.2**
AYVA	**Ayvalik**	**0.49**	**354**	P	**Pb**	**14 04 21.8**	**+0.3**
AYVA				S	**Sb**	**14 04 28.7**	**+0.2**
ZEY	**˜zmir**	**0.61**	**199**	*i* P	**Pb**	**14 04 23.9**	**+0.3**
ZEY				*i* S	**Sn**	**14 04 34.7**	**-0.2**
CHOS	**Chios island**	**0.70**	**232**	PG	**Pn**	**14 04 26.5**	**-0.1**
CHOS				SG	**Sn**	**14 04 36.4**	**-0.7**
CHOS	**Chios island**	**0.70**	**232**	*e*Pg	**Pn**	**14 04 26.5**	**-0.1**
CHOS				*e*Sg	**Sn**	**14 04 36.4**	**-0.7**
DGB	**˜zmir**	**0.77**	**172**	*i* P	**Pb**	**14 04 26.2**	**-0.1**
DGB				*i* S	**Sb**	**14 04 37.6**	**+1.0**
SIGR	**SIGRI**	**0.80**	**299**	PG	**Pn**	**14 04 28.3**	**+0.4**
SIGR	**SIGRI**	**0.80**	**299**	*e*Pg	**Pn**	**14 04 28.3**	**+0.4**
AKHS	**Akhisar**	**0.83**	**86**	*i* P	**Pn**	**14 04 28.5**	**+0.2**
AKHS				*i* S	**Sn**	**14 04 40.2**	**-0.1**
AKHS	**Akhisar**	**0.83**	**86**	P	**Pn**	**14 04 28.5**	**+0.2**
AKHS				S	**Sn**	**14 04 40.2**	**-0.1**
BAYC	**CANAKKALE_Bayr**	**0.93**	**350**	*i* P	**Pn**	**14 04 29.5**	**-0.3**
BAYC				*i* S	**Sn**	**14 04 42.6**	**-0.3**
BAYC	**CANAKKALE_Bayr**	**0.93**	**350**	P	**Pn**	**14 04 29.5**	**-0.3**
BAYC				S	**Sn**	**14 04 42.6**	**-0.3**
STEP	**BALIKESIR_Sava**	**0.93**	**53**	*i* P	**Pn**	**14 04 30.1**	**+0.3**
STEP				*i* S	**Sn**	**14 04 43.5**	**+0.6**
STEP	**BALIKESIR_Sava**	**0.93**	**53**	P	**Pn**	**14 04 30.1**	**+0.3**
STEP				S	**Sn**	**14 04 43.5**	**+0.6**
BALY	**Balya**	**1.14**	**36**	*i* P	**Pn**	**14 04 32.7**	**+0.1**
BALY	**Balya**	**1.14**	**36**	P	**Pn**	**14 04 32.7**	**+0.1**
BOZC	**Bozcaada**	**1.16**	**332**	*i* P	**Pg**	**14 04 33.6**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**1.25**	**134**	PN	**Pg**	**14 04 35.1**	**-0.2**
AYDB	**Zeytinkoy-Aydi**	**1.25**	**134**	*e*Pn	**Pg**	**14 04 35.1**	**-0.2**
AYDN	**Tasoluk**	**1.46**	**142**	*i* P	**Pb**	**14 04 37.9**	**-0.1**
AYDN	**Tasoluk**	**1.46**	**142**	P	**Pb**	**14 04 37.9**	**-0.1**
KULA	**Kula-Manisa**	**1.52**	**101**	PN	**Pb**	**14 04 38.9**	**-0.3**
KULA	**Kula-Manisa**	**1.52**	**101**	*e*Pn	**Pb**	**14 04 38.9**	**-0.3**
DEMI	**Demirci**	**1.55**	**81**	*i* P	**Pg**	**14 04 40.7**	**-0.2**
DEMI	**Demirci**	**1.55**	**81**	P	**Pg**	**14 04 40.7**	**-0.2**
DURS	**Dursunbey**	**1.55**	**59**	*i* P	**Pb**	**14 04 39.2**	**-0.4**
DURS	**Dursunbey**	**1.55**	**59**	P	**Pb**	**14 04 39.2**	**-0.4**
KCTX	**Karacabey (Bur**	**1.90**	**40**	PN	**Pb**	**14 04 45.3**	**-0.3**
KCTX	**Karacabey (Bur**	**1.90**	**40**	*e*Pn	**Pb**	**14 04 45.3**	**-0.3**

JMA 13 14:04:33.5±0.2, 38°.01N×144°.63E, h44km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.56**	**296**	P	Pn	14 05 14.0	+1.6
OFUJ				*e*S	Sn	14 05 44.1	+1.8
JIO	**Ouri**	**2.62**	**281**	P	Pn	14 05 14.8	+1.5
JIO				*e*S	Sn	14 05 45.4	+1.5
MIYJ	**Miyakonagasawa**	**2.70**	**306**	P	Pn	14 05 15.5	+1.2
MIYJ				*e*S	Sn	14 05 47.3	+1.6
JMK	**Ichinoseki**	**2.84**	**290**	P	Pn	14 05 18.1	+1.8
JMK				*e*S	Sn	14 05 51.2	+2.0
JOM	**Ohasama**	**2.99**	**300**	P	Pn	14 05 20.4	+2.0
JOM				*e*S	Sn	14 05 55.0	+2.0
JANG	**Nango**	**3.38**	**315**	P	Pn	14 05 25.4	+1.7
JANG				*e*S	Sn	14 06 03.5	+0.9
JFT	**Otama**	**3.44**	**263**	*e*S	Sn	14 06 05.9	+1.9
JYK	**Kaneyama**	**3.47**	**286**	P	Pn	14 05 27.5	+2.5
JYK				*e*S	Sn	14 06 07.8	+2.9
JOT	**Ohata**	**4.36**	**322**	*e*S	Sn	14 06 26.8	+0.2
JCH	**Churui**	**4.70**	**349**	P	Pn	14 05 42.1	+0.3
JCH				*e*S	Sn	14 06 33.5	-1.6
JKB	**Kayabe**	**4.76**	**326**	P	Pn	14 05 45.4	+2.8
JKB				*e*S	Sn	14 06 35.8	-0.7
JRY	**Ryogami san**	**5.00**	**248**	P	Pn	14 05 47.0	+1.0
JRY				*e*S	Sn	14 06 41.4	-1.1
JOD2	**Odawara 2**	**5.23**	**240**	*e*S	Sn	14 06 46.1	-2.1
NEM2	**Nemuro 2**	**5.42**	**9**	P	Pn	14 05 48.9	-2.7
NEM2				*e*S	Sn	14 06 47.2	-5.4
JTKR	**Abashiri--Toko**	**5.98**	**355**	P	Pn	14 05 59.5	+0.1
JTKR				*e*S	Sn	14 07 02.9	-3.6

*ISK **13** 14:18:29.8, 36°.41N×28°.88E, h25km, ML2.4/10*
*ATH **13** 14:18:30.6, 36°.44N×28°.89E, h42km±3km, ML2.0/2, Error ellipse: s-maj=5.7km s-min=1.6km az=181.0*
*DDA **13** 14:18:31.0, 36°.42N×28°.86E, h7km, Ml2.7*
*ISCJB **13** 14:18:31.4±0.4, 36°.47N±0°.04×28°.89E±0°.03, h31km±4km, Error ellipse: s-maj=6.9km s-min=4.6km az=11.2*
*CSEM **13** 14:18:31.1±0.2, 36°.43N×28°.90E, h26km±2km, ML2.4, Error ellipse: s-maj=5.9km s-min=3.9km az=8.0*
ISC 13 14:18:30.9±0.9, 36°.42N±0°.03×28°.90E±0°.02, h22km±6km, n58, σ0§76/73, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.26**	**34**	PG	**Pb**	**14 18 36.7**	**-0.5**
FETY				SG	**Sb**	**14 18 42.5**	**+0.9**
FETY	**Fethiye**	**0.26**	**34**	*i* Pg	**Pb**	**14 18 36.7**	**-0.5**
FETY				S	**Sb**	**14 18 42.0**	**+0.4**
DALY	**Dalyan (Mu¨la**	**0.45**	**334**	PG	**Pb**	**14 18 40.0**	**-0.1**
DALY				SG	**Sb**	**14 18 46.7**	**+0.4**
DALY	**Dalyan (Mu¨la**	**0.45**	**334**	*i* P	**Pb**	**14 18 40.2**	**+0.1**
DALY				*i* S	**Sb**	**14 18 46.4**	**+0.1**
DALY	**Dalyan (Mu¨la**	**0.45**	**334**	P	**Pb**	**14 18 40.2**	**+0.1**
DALY				S	**Sb**	**14 18 46.4**	**+0.1**
TURN	**Turunc**	**0.51**	**332**	PG	**Pn**	**14 18 42.9**	**0.0**
TURN				SG	**Sn**	**14 18 52.4**	**+1.5**
TURN	**Turunc**	**0.51**	**332**	*i* P	**Pn**	**14 18 43.5**	**+0.6**
TURN				*i* S	**Sn**	**14 18 52.5**	**+1.5**
TURN	**Turunc**	**0.51**	**332**	*e*Pg	**Pn**	**14 18 42.9**	**0.0**
TURN	**Turunc**	**0.51**	**332**	P	**Pn**	**14 18 43.5**	**+0.6**
TURN				S	**Sn**	**14 18 52.5**	**+1.5**
AKAS	**Kas**	**0.60**	**108**	PG	**Pb**	**14 18 42.0**	**-0.8**
AKAS				SG	**Sn**	**14 18 52.3**	**-1.0**
AKAS	**Kas**	**0.60**	**108**	*i* P	**Pb**	**14 18 42.9**	**+0.1**
AKAS				*i* S	**Sn**	**14 18 53.6**	**+0.3**
AKAS	**Kas**	**0.60**	**108**	*e*Pg	**Pb**	**14 18 42.0**	**-0.8**
AKAS	**Kas**	**0.60**	**108**	P	**Pb**	**14 18 42.9**	**+0.1**
AKAS				*e*Sg	**Sn**	**14 18 52.3**	**-1.0**
AKAS				S	**Sn**	**14 18 53.6**	**+0.3**
KSL	**Kastellorizon**	**0.61**	**116**	P	**Pb**	**14 18 43.7**	**+0.7**
KSL				S	**Sn**	**14 18 54.6**	**+1.2**
KSL				AML	AML	14 18 55.0	
	comp=N,167μm,0.5s						
KSL				AML	AML	14 18 55.1	
	comp=E,458μm,0.4s						
MRSB	**Marmaris-Mugla**	**0.64**	**298**	PG	**Pb**	**14 18 42.8**	**-0.7**
MRSB	**Marmaris-Mugla**	**0.64**	**298**	*e*Pg	**Pb**	**14 18 42.8**	**-0.7**
ARG	**Arkhangelos**	**0.66**	**252**	PG	**Pb**	**14 18 43.3**	**-0.4**
ARG	**Arkhangelos**	**0.66**	**252**	P	**Pb**	**14 18 44.2**	**+0.5**
ARG				S	**Sn**	**14 18 54.6**	**+0.1**
ARG				AML	AML	14 18 54.8	
	comp=N,253μm,0.5s						
ARG				AML	AML	14 18 55.4	
	comp=E,316μm,0.3s						
ARG	**Arkhangelos**	**0.66**	**252**	*e*Pg	**Pb**	**14 18 43.3**	**-0.4**
ARG	**Arkhangelos**	**0.66**	**252**	P	**Pn**	**14 18 44.3**	**-0.6**
ARG				S	**Sn**	**14 18 54.5**	**0.0**
YER	**Yerkesik**	**0.87**	**326**	PG	**Pb**	**14 18 47.2**	**-0.2**
YER	**Yerkesik**	**0.87**	**326**	*e*Pg	**Pb**	**14 18 47.2**	**-0.2**
ELL	**Elmali**	**0.88**	**68**	PG	**Pb**	**14 18 47.0**	**-0.5**
ELL	**Elmali**	**0.88**	**68**	*e*Pg	**Pb**	**14 18 47.0**	**-0.5**
GLHS	**Glhisar (BURDU**	**0.88**	**33**	PG	**Pb**	**14 18 46.7**	**-0.9**
GLHS	**Glhisar (BURDU**	**0.88**	**33**	*e*Pg	**Pb**	**14 18 46.7**	**-0.9**
GOLH	**Golhisar**	**0.98**	**33**	*i* P	**Pb**	**14 18 48.5**	**-0.9**
GOLH	**Golhisar**	**0.98**	**33**	P	**Pb**	**14 18 48.5**	**-0.9**
TAVA	**DENIZLI_Tavas**	**1.05**	**1**	*i* P	**Pb**	**14 18 50.1**	**-0.3**
TAVA	**DENIZLI_Tavas**	**1.05**	**1**	P	**Pb**	**14 18 50.1**	**-0.3**
DATC	**Datca-Mugla**	**1.05**	**289**	PG	**Pn**	**14 18 49.2**	**-1.1**
DATC	**Datca-Mugla**	**1.05**	**289**	*e*Pg	**Pn**	**14 18 49.2**	**-1.1**
DAT	**Datca**	**1.11**	**287**	PN	**Pn**	**14 18 50.5**	**-0.7**
DAT	**Datca**	**1.11**	**287**	*i* P	**Pb**	**14 18 51.7**	**+0.2**
DAT	**Datca**	**1.11**	**287**	*e*Pn	**Pn**	**14 18 50.5**	**-0.7**
DAT	**Datca**	**1.11**	**287**	P	**Pb**	**14 18 51.7**	**+0.2**
MLSB	**Milas**	**1.26**	**315**	PN	**Pn**	**14 18 52.5**	**-0.7**
MLSB	**Milas**	**1.26**	**315**	*e*Pn	**Pn**	**14 18 52.5**	**-0.7**
DNZL	**Cakiroluk**	**1.28**	**5**	*i* P	**Pn**	**14 18 53.5**	**-0.1**
DNZL	**Cakiroluk**	**1.28**	**5**	P	**Pn**	**14 18 53.5**	**-0.1**
KORT	**Korkueli**	**1.30**	**63**	PN	**Pn**	**14 18 53.8**	**-0.1**
KORT	**Korkueli**	**1.30**	**63**	*i* P	**Pb**	**14 18 55.7**	**+0.9**
KORT	**Korkueli**	**1.30**	**63**	*e*Pn	**Pn**	**14 18 53.8**	**-0.1**
KORT	**Korkueli**	**1.30**	**63**	P	**Pb**	**14 18 55.7**	**+0.9**
BDRM	**Kayabasi**	**1.34**	**299**	*i* P	**Pb**	**14 18 55.0**	**-0.3**
BDRM	**Kayabasi**	**1.34**	**299**	P	**Pb**	**14 18 55.0**	**-0.3**
DENT	**Denizli**	**1.34**	**5**	PN	**Pn**	**14 18 52.9**	**-1.4**
DENT	**Denizli**	**1.34**	**5**	*e*Pn	**Pn**	**14 18 52.9**	**-1.4**
BODT	**Bodrum**	**1.43**	**297**	PN	**Pn**	**14 18 54.0**	**-1.5**
BODT	**Bodrum**	**1.43**	**297**	*e*Pn	**Pn**	**14 18 54.0**	**-1.5**
KARP	**Karpathos**	**1.66**	**239**	P	**Pn**	**14 18 58.8**	**+0.2**
KARP	**Karpathos**	**1.66**	**239**	P	**Pn**	**14 18 58.8**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**1.73**	**332**	PN	**Pn**	**14 18 58.2**	**-1.5**
AYDB	**Zeytinkoy-Aydi**	**1.73**	**332**	*e*Pn	**Pn**	**14 18 58.2**	**-1.5**
SUTC	**Sutluce-Ispart**	**1.99**	**57**	PN	**Pn**	**14 19 03.4**	**+0.1**
SUTC	**Sutluce-Ispart**	**1.99**	**57**	*e*Pn	**Pn**	**14 19 03.4**	**+0.1**
SMG	**Samos**	**2.09**	**309**	P	**Pn**	**14 19 04.7**	**+0.1**
SMG	**Samos**	**2.09**	**309**	P	**Pn**	**14 19 04.7**	**+0.1**

IDC 13 14:21:58.8±3.0, 32°.86S×178°.79W, h0km, mb3.7/2, mb1 4.0/3, mb1mx3.7/42, mbtmp3.8/3, ML3.6/1, Error ellipse: s-maj=69.1km s-min=45.6km az=119.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.33**	**211**	Pn	Pn	14 23 33.2	-0.2
	1.3nm,0.3s,baz=265,slow=5.4,SNR=11						
URZ				Sn	Sn	14 24 39.7	-6.8
	0.1nm,0.3s,baz=176,slow=19,SNR=2.1						
ASAR	**Alice Springs**	**42.37**	**270**	P	P	14 29 55.3	+0.3
	0.9nm,0.7s,baz=107,slow=7.4,SNR=12						
WRA	**Warramunga Arr**	**43.58**	**275**	P	P	14 30 04.3	-0.5
	0.8nm,0.7s,baz=116,slow=7.6,SNR=16						
FINES	**FINESS Array B**	**147.20**	**338**	PKPbc	PKPbc	14 41 42.5	-0.7
	1.8nm,0.7s,baz=45,slow=2.2,SNR=5.5						

*JMA **13** 14:27:20.0±0.1, 22°.48N×121°.58E, h9km±2km, M3.3*
*TAP **13** 14:27:20.6, 22°.43N×121°.46E, h24km, ML3.4, C*
ISC 13 14:27:20.2±1.0, 22°.42N±0°.02×121°.49E±0°.02, h20km±5km, n76, σ0§93/122, 8C-5D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWH	**Lutao**	**0.29**	**358**	⇓*i*P	**Pb**	**14 27 26.9**	**+0.1**
	baz=16						
TWH				*i* S	**Sb**	**14 27 31.5**	**+0.3**
	baz=16						
LAY	**Lan-yu**	**0.38**	**171**	⇓*i*P	**Pg**	**14 27 28.6**	**+0.2**
	baz=166						
LAY				*i* S	**Sg**	**14 27 34.3**	**+0.4**
	baz=166						
TTN	**Taitung**	**0.46**	**317**	⇓*i*P	**Pb**	**14 27 30.2**	**+0.5**
	baz=323						
TTN				*e*S	**Sb**	**14 27 37.4**	**+1.4**
	baz=323						
ECL	**Taimali**	**0.52**	**290**	⇑*i*P	**Pg**	**14 27 30.4**	**-0.4**
	baz=290						
ECL				*i* S	**Sg**	**14 27 37.7**	**-0.2**
	baz=290						
TWGBT	**Beinan**	**0.55**	**317**	⇓*i*P	**Pb**	**14 27 31.5**	**+0.3**
	baz=303						
TWGBT				*i* S	**Sb**	**14 27 39.0**	**+0.4**
	baz=303						
TAW	**Tawu**	**0.55**	**264**	⇑*i*P	**Pg**	**14 27 30.6**	**-0.7**
	baz=261						
TAW				*e*S	**Sg**	**14 27 37.6**	**-1.2**
	baz=261						
TWG	**Pinlang**	**0.55**	**316**	⇓*i*P	**Pb**	**14 27 31.4**	**+0.2**
	baz=303						
TWG				S	**Sb**	**14 27 39.2**	**+0.5**
	baz=303						
CHKT	**Chengkung**	**0.69**	**351**	*i* P	**Pb**	**14 27 33.3**	**-0.2**
CHKT				S	**Sb**	**14 27 42.5**	**-0.1**
TSEB	**Hengchuen, Pin**	**0.75**	**227**	*e*P	**Pb**	**14 27 34.4**	**-0.2**
	baz=235						
TSEB				*e*S	**Sb**	**14 27 45.1**	**+0.7**
	baz=235						
TWKBT	**Hengchun**	**0.79**	**233**	⇑*i*P	**Pb**	**14 27 34.6**	**-0.7**
	baz=230						
TWKBT				S	**Sb**	**14 27 44.6**	**-0.8**
	baz=230						
TWK1	**Hengchun**	**0.79**	**233**	⇑*i*P	**Pb**	**14 27 34.6**	**-0.7**
	baz=230						
TWK1				S	**Sb**	**14 27 44.9**	**-0.6**
	baz=230						
FULB	**Fuli**	**0.80**	**347**	P	**Pb**	**14 27 35.1**	**-0.4**
	baz=333						
FULB				*e*S	**Sg**	**14 27 46.5**	**-0.1**
	baz=333						
SCZT	**Fangliau**	**0.80**	**267**	⇑*i*P	**Pb**	**14 27 34.8**	**-0.8**
	baz=265						
HEN	**Hengchun**	**0.81**	**239**	⇑*i*P	**Pb**	**14 27 35.2**	**-0.4**
	baz=229						
HEN				S	**Sb**	**14 27 45.6**	**-0.5**
	baz=229						
MASBT	**Mashibuluo**	**0.81**	**284**	⇑*i*P	**Pb**	**14 27 35.0**	**-0.7**
	baz=277						
MASBT				*e*S	**Sb**	**14 27 45.3**	**-1.0**
	baz=277						
SSD	**Sandimen**	**0.85**	**293**	*i* P	**Pb**	**14 27 35.6**	**-0.8**
	baz=292						
ELDTW	**Lidau**	**0.88**	**331**	⇑P	**Pb**	**14 27 36.3**	**-0.6**
	baz=322

	baz=341								
TYC					*e*S		**Sg**	**14 28 10.4**	**-1.2**
	baz=341								
TWD	**Chiawan**	**1.66**	**3**	*e*P			**Pn**	**14 27 47.3**	**-0.9**
	baz=16								
TWD					*e*S		**Sb**	**14 28 09.5**	**-1.1**
	baz=16								
CHGB	**Renai**	**1.66**	**350**	*e*P			**Pb**	**14 27 49.6**	**-0.6**
	baz=4.0								
TCU	**Taichung**	**1.88**	**337**	*e*S			**Sb**	**14 28 18.4**	**+1.5**
	baz=338								
WDGT	**Dungji**	**1.88**	**297**	*e*P			**Pn**	**14 27 51.0**	**-0.3**
	baz=296								
WDGT					*e*S		**Sn**	**14 28 12.4**	**-2.0**
	baz=296								
NNSH	**Datong**	**2.00**	**357**	*e*P			**Pb**	**14 27 55.3**	**-0.8**
	baz=360								
NNSH					*e*S		**Sn**	**14 28 17.2**	**-0.5**
	baz=360								
ENA	**Nanau**	**2.01**	**7**	*e*S			**Sn**	**14 28 17.3**	**-0.5**
	baz=356								
NANB	**Nanao**	**2.01**	**7**	*e*P			**Pn**	**14 27 53.4**	**+0.3**
	baz=356								
NANB					*e*S		**Sn**	**14 28 17.8**	**+0.1**
	baz=356								
NNS	**Nan Shan**	**2.01**	**357**	*e*P			**Pb**	**14 27 55.4**	**-0.9**
	baz=360								
NNS					*e*S		**Sn**	**14 28 18.3**	**+0.3**
	baz=360								
PHUB	**P'eng-hu**	**2.07**	**302**	*e*S			**Sn**	**14 28 17.3**	**-1.9**
	baz=302								
NSY	**Sanyi**	**2.10**	**342**	*e*P			**Pb**	**14 27 57.5**	**-0.2**
	baz=343								
NSY					*e*S		**Sb**	**14 28 24.3**	**+1.0**
	baz=343								
PNG	**Penghu**	**2.12**	**303**	*e*P			**Pn**	**14 27 54.8**	**+0.2**
	baz=303								
PNG					*e*S		**Sn**	**14 28 19.1**	**-1.2**
	baz=303								
EOS1	**EOS1**	**2.20**	**15**	*e*S			**Sn**	**14 28 23.5**	**+1.1**
	baz=29								
TWC	**Suao**	**2.21**	**9**	*e*P			**Pn**	**14 27 56.9**	**+1.2**
	baz=22								
TWC					*e*S		**Sn**	**14 28 23.1**	**+0.6**
	baz=22								
ENTT	**Nioudou**	**2.21**	**2**	*e*P			**Pb**	**14 27 58.1**	**-1.5**
	baz=5.0								
ENTT					*e*S		**Sn**	**14 28 23.9**	**+1.2**
	baz=5.0								
YHNB	**Yeheng**	**2.24**	**357**	*e*P			**Pn**	**14 27 58.0**	**+1.6**
YHNB					*e*S		**Sn**	**14 28 24.5**	**+0.9**
NSTT	**Nanjuang**	**2.25**	**349**	*e*S			**Sb**	**14 28 27.3**	**-0.2**
	baz=1.0								
NSK	**Sanguang**	**2.25**	**357**	*e*S			**Sb**	**14 28 25.4**	**-2.3**
	baz=360								
LIOB	**Emei**	**2.26**	**349**	*e*S			**Sb**	**14 28 27.9**	**0.0**
	baz=1.0								
TWE	**Neicheng**	**2.30**	**4**	*e*S			**Sb**	**14 28 27.3**	**-1.7**
	baz=356								
SLBB	**Yuanshan**	**2.33**	**3**	*e*P			**Pn**	**14 27 58.9**	**+1.4**
	baz=5.0								
JYNG	**Yonagunijimaku**	**2.43**	**33**	S			**Sn**	**14 28 27.2**	**-0.7**
YOJ	**Yonaguni jima**	**2.47**	**34**	P			**Pn**	**14 28 00.1**	**+0.7**
TIPB	**Shuangxi**	**2.56**	**7**	*e*P			**Pn**	**14 28 02.0**	**+1.3**
	baz=358								
HATJ	**Hateruma jima**	**2.68**	**52**	P			**Pn**	**14 28 03.4**	**+1.1**
HATJ					*e*S		**Sn**	**14 28 33.6**	**-0.7**
IRIF	**Iriomote-Funau**	**2.81**	**47**	P			**Pn**	**14 28 05.2**	**+1.1**
IRIF					*e*S		**Sn**	**14 28 37.8**	**+0.4**
JKRS	**Kuro-shima**	**2.94**	**52**	P			**Pn**	**14 28 07.1**	**+1.2**
JKRS					*e*S		**Sn**	**14 28 40.6**	**-0.1**
JIJ	**Ishigaki jima**	**3.12**	**51**	P			**Pn**	**14 28 09.2**	**+0.9**
JIJ					S		**Sn**	**14 28 45.3**	**+0.4**
JISG	**Ishigakijimahi**	**3.37**	**50**	P			**Pn**	**14 28 12.5**	**+0.7**
JISG					S		**Sn**	**14 28 50.3**	**-1.0**
JTJ	**Tarama**	**3.69**	**53**	P			**Pn**	**14 28 17.2**	**+1.0**
JTJ					*e*S		**Sn**	**14 28 58.5**	**-0.6**
JIRB	**Irabujima**	**4.14**	**54**	P			**Pn**	**14 28 23.6**	**+1.2**
JIRB					*e*S		**Sn**	**14 29 09.5**	**-0.8**
JIKM	**Ikemajima**	**4.25**	**53**	P			**Pn**	**14 28 25.0**	**+1.0**
JIKM					*e*S		**Sn**	**14 29 13.8**	**+0.7**

NIED ***13*** *14:41:00, 24.°70N×121.°30E, h5km, Mw4.2 Best double couple: M0=2.19000×10^15 NP1:φs=35.00000°, δ75.00000°, λ2.00000°. NP2:φs=304.00000°, δ88.00000°, λ165.00000°.*
IDC ***13*** *14:41:04.9±0.9, 24.°58N×121.°12E, h0km, mb3.7/9, mb1 3.8/11, mb1mx3.5/61, mbtmp3.7/11, ML3.5/2, MS3.5/22, Ms1 3.5/22, ms1mx3.3/66, Error ellipse: s-maj=35.9km s-min=17.8km az=62.0*
BJI ***13*** *14:41:05.9, 24.°79N×121.°27E, h5km, mb4.0/8, mB4.4/7, ML4.3/6, Ms4.3/9, Ms7 4.1/7*
JMA ***13*** *14:41:06.1±0.3, 24.°74N×121.°25E, h0km, M4.5*
TAP ***13*** *14:41:06.1, 24.°76N×121.°26E, h10km, ML4.6, B*
ISCJB ***13*** *14:41:07.1±0.2, 24.°76N±0.°01×121.°27E±0.°01, h8km±1km, mb3.6/9, MS3.6/19, Error ellipse: s-maj=1.9km s-min=1.4km az=139.7*

ISC 13 14:41:07.2±0.7, 24.°75N±0.°01×121.°27E±0.°01, h11km±4km, n143, σ1§14/218, mb3.7/9, MS3.6/19, 36C-20D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NSK	**Sanguang**	**0.11**	**131**		*i*	P	**Pg**	**14 41 09.5**	**-0.6**
	baz=132								
NSK						S	**Sg**	**14 41 11.9**	**-0.3**
	baz=132								
YHNB	**Yeheng**	**0.12**	**128**	⇓		P	**Pg**	**14 41 09.8**	**-0.6**
	baz=131								
YHNB						S	**Sg**	**14 41 12.2**	**-0.4**
	baz=131								
NWLT	**Wulai**	**0.21**	**82**	⇑	*i*	P	**Pg**	**14 41 11.1**	**-0.6**
	baz=87								
NWLT						S	**Sg**	**14 41 14.4**	**-0.4**
	baz=87								
NCUH	**Zhongli**	**0.23**	**341**	⇓	*i*	P	**Pg**	**14 41 11.8**	**-0.2**
	baz=345								
NCU	**National Centr**	**0.23**	**342**	⇓	*i*	P	**Pg**	**14 41 11.8**	**-0.3**
	baz=347								
NCU						S	**Sg**	**14 41 16.2**	**+0.8**
	baz=347								
LIOB	**Emei**	**0.25**	**246**	⇑	*i*	P	**Pg**	**14 41 12.4**	**0.0**
	baz=228								
LIOB					*i*	S	**Sg**	**14 41 17.0**	**+1.1**
	baz=228								
SBCB	**Hsinchu**	**0.26**	**280**	⇑	*i*	P	**Pg**	**14 41 12.8**	**+0.2**
	baz=273								
SBCB					*i*	S	**Sb**	**14 41 17.6**	**-0.8**
	baz=273								
NSTT	**Nanjuang**	**0.27**	**245**	⇑	*i*	P	**Pg**	**14 41 12.7**	**-0.1**
	baz=225								
NSTT					*i*	S	**Sg**	**14 41 17.3**	**+0.8**
	baz=225								
HSN	**Hsinchu**	**0.28**	**281**	⇑	*i*	P	**Pg**	**14 41 12.4**	**-0.5**
	baz=299								
HSN					*i*	S	**Sg**	**14 41 17.0**	**+0.4**
	baz=299								
ENTT	**Nioudou**	**0.29**	**111**	⇑	*i*	P	**Pg**	**14 41 13.2**	**0.0**
	baz=113								
ENTT						S	**Sg**	**14 41 17.2**	**+0.1**
	baz=113								
TATO	**Taipei**	**0.30**	**41**	⇑		P	**Pg**	**14 41 13.0**	**-0.4**
	baz=46								
TATO						S	**Sg**	**14 41 17.9**	**+0.5**
	baz=46								
NNS	**Nan Shan**	**0.32**	**163**	⇓	*i*	P	**Pg**	**14 41 13.8**	**0.0**
	baz=151								
NNS					*i*	S	**Sg**	**14 41 18.5**	**+0.5**
	baz=151								
NNSB	**Datong**	**0.33**	**162**	⇓		P	**Pg**	**14 41 13.9**	**0.0**
	baz=152								
NNSB						S	**Sg**	**14 41 18.6**	**+0.1**
	baz=152								
NNSH	**Datong**	**0.33**	**162**	⇓	*i*	P	**Pg**	**14 41 13.9**	**0.0**
	baz=153								
NNSH						S	**Sg**	**14 41 18.6**	**+0.2**
	baz=153								
SLBB	**Yuanshan**	**0.33**	**89**	⇑	*i*	P	**Pg**	**14 41 13.6**	**-0.4**
	baz=92								
TWE	**Neicheng**	**0.36**	**94**	⇑	*i*	P	**Pg**	**14 41 14.5**	**0.0**
	baz=104								
TWE						*e*S	**Sg**	**14 41 19.4**	**+0.1**
	baz=104								
TAP1	**Taipei**	**0.37**	**39**	⇑		P	**Pg**	**14 41 14.4**	**-0.2**
	baz=42								
TAP1						*e*S	**Sg**	**14 41 20.2**	**+0.6**
	baz=42								
ILA	**Ilan**	**0.44**	**88**	⇑	*i*	P	**Pg**	**14 41 15.7**	**-0.1**
	baz=91								
ILA					*i*	S	**Sg**	**14 41 22.1**	**+0.5**
	baz=91								
NTST	**Danshui**	**0.45**	**22**	*e*P			**Pb**	**14 41 16.4**	**-0.7**
	baz=12								
NTST					*e*S		**Sb**	**14 41 23.6**	**-0.2**
	baz=12								
YM04	**YM04**	**0.47**	**31**	⇑	*i*	P	**Pg**	**14 41 16.5**	**0.0**
	baz=41								
YM04						S	**Sb**	**14 41 23.6**	**-1.0**
	baz=41								
NMLH	**Miaoli**	**0.48**	**244**	⇑		P	**Pb**	**14 41 17.6**	**-0.1**
	baz=228								
NMLH					*e*S		**Sb**	**14 41 25.3**	**+0.5**
	baz=228								
YM10	**YM10**	**0.49**	**33**	⇑	*i*	P	**Pg**	**14 41 16.8**	**0.0**
	baz=52								
YM03	**YM03**	**0.50**	**30**	⇑	*i*	P	**Pg**	**14 41 17.0**	**+0.1**
	baz=40								
YM03						S	**Sb**	**14 41 24.3**	**-1.0**
	baz=40								
YM11	**YM11**	**0.50**	**34**	⇑	*e*	P	**Pb**	**14 41 18.1**	**0.0**
	baz=44								
YM11					*e*S		**Sb**	**14 41 25.4**	**0.0**
	baz=44								
YM12	**YM12**	**0.51**	**32**	⇑		P	**Pg**	**14 41 17.2**	**-0.1**
	baz=42								
YM12						S	**Sg**	**14 41 24.6**	**+0.6**
	baz=42								
NTC	**Toucheng**	**0.52**	**78**	⇑	*e*	P	**Pg**	**14 41 16.9**	**-0.5**
	baz=82								
NTC						S	**Sg**	**14 41 24.3**	**0.0**
	baz=82								
YM08	**YM08**	**0.53**	**34**	⇑		P	**Pg**	**14 41 17.2**	**-0.3**
	baz=43								
YM08						S	**Sg**	**14 41 25.0**	**+0.5**
	baz=43								
YM07	**YM07**	**0.53**	**37**	⇑	*e*	P	**Pg**	**14 41 16.5**	**-1.1**
	baz=54								
YM07					*e*S		**Sb**	**14 41 26.0**	**-0.4**
	baz=54								
ENA	**Nanau**	**0.54**	**126**	*e*P			**Pg**	**14 41 17.6**	**0.0**
	baz=126								
ENA						S	**Sg**	**14 41 24.9**	**+0.1**
	baz=126								
NANB	**Nanao**	**0.54**	**126**	⇓		P	**Pg**	**14 41 17.7**	**-0.1**
	baz=125								
NANB						S	**Sg**	**14 41 24.7**	**-0.2**
	baz=125								
TWC	**Suao**	**0.55**	**104**	⇑	*i*	P	**Pg**	**14 41 17.7**	**-0.2**
	baz=113								
TWC						S	**Sg**	**14 41 24.5**	**-0.6**
	baz=113								
TIPB	**Shuangxi**	**0.55**	**66**	⇑	*i*	P	**Pg**	**14 41 16.7**	**-1.3**
	baz=83								
TIPB					*e*S		**Sg**	**14 41 24.2**	**-1.1**
	baz=83								
NWF	**Wu-fen Shan**	**0.57**	**55**	⇑	*i*	P	**Pg**	**14 41 18.3**	**0.0**
	baz=60								
NWF						S	**Sg**	**14 41 26.0**	**+0.2**
	baz=60								
WFSB	**Wu-fen Shan**	**0.57**	**55**	⇑	*i*	P	**Pg**	**14 41 18.3**	**0.0**
	baz=60								
WFSB						S	**Sg**	**14 41 25.9**	**+0.2**
	baz=60								
NSY	**Sanyi**	**0.57**	**235**	⇑		P	**Pb**	**14 41 19.2**	**0.0**
	baz=216								
NSY					*e*S		**Sb**	**14 41 27.3**	**0.0**
	baz=216								
ENAH	**Nanao**	**0.58**	**121**	*e*P			**Pg**	**14 41 18.2**	**-0.2**
	baz=121								
ENAH					*e*S		**Sg**	**14 41 25.5**	**-0.5**
	baz=121								
TWQ1	**Liyutan**	**0.60**	**229**	⇑	*i*	P	**Pb**	**14 41 19.5**	**-0.2**
	baz=216								
TWQ1					*e*S		**Sb**	**14 41 28.2**	**0.0**
	baz=216								
EGS		**0.61**	**81**	⇑	*i*	P	**Pg**	**14 41 19.1**	**0.0**
	baz=84								
EGS						S	**Sg**	**14 41 27.3**	**+0.1**
	baz=84								
NACB	**Ninganchiao**	**0.64**	**152**	⇓		P	**Pg**	**14 41 19.8**	**+0.1**
	baz=150								
NACB						S	**Sg**	**14 41 27.8**	**-0.4**
	baz=150								
CHGB	**Renai**	**0.69**	**187**	⇓		P	**Pg**	**14 41 20.4**	**-0.2**
	baz=192								
CHGB					*e*S		**Sg**	**14 41 29.1**	**-0.6**
	baz=192								
TWB1	**Santiao Chiao**	**0.70**	**68**	⇑		P	**Pg**	**14 41 20.4**	**-0.5**
	baz=80								
TWB1						S	**Sg**	**14 41 29.9**	**-0.2**
	baz=80								
TWD	**Chiawan**	**0.73**	**156**	⇓	*i*	P	**Pg**	**14 41 21.4**	**0.0**
	baz=153								
TWD						S	**Sg**	**14 41 30.9**	**0.0**
	baz=153								
TCU	**Taichung**	**0.81**	**222**	⇑	*e*	P	**Pn**	**14 41 24.1**	**-0.4**
	baz=216								
TCU					*e*S		**Sn**	**14 41 35.6**	**-0.8**
	baz=216								
EOS1	**EOS1**	**0.81**	**104**	*e*P			**Pg**	**14 41 22.7**	**-0.1**
	baz=100								
EOS1					*e*S		**Sb**	**14 41 34.1**	**0.0**
	baz=100								
HWA	**Hwalien**	**0.83**	**158**	*e*P			**Pb**	**14 41 23.6**	**0.0**
	baz=155								
HWA					*e*S		**Sb**	**14 41 35.3**	**+0.6**
	baz=155								
ENLB	**Shoufeng**	**0.89**	**160**	⇓		P	**Pb**	**14 41 24.7**	**0.0**
	baz=157								
ENLB						S	**Sb**	**14 41 36.8**	**+0.1**
	baz=157								
TYC	**Yuchr**	**0.92**	**204**	⇓	*e*	P	**Pg**	**14 41 24.5**	**-0.4**
	baz=192								
TYC					*e*S		**Sb**	**14 41 37.6**	**+0.2**
	baz=192								
SMLT	**Sun Moon Lake**	**0.92**	**201**	⇓	*i*	P	**Pg**	**14 41 24.8**	**-0.3**
	baz=186								
SMLT					*e*S		**Sb**	**14 41 38.5**	**+0.8**
	baz=186								
WCHH	**Zhanghua**	**0.93**	**224**	⇑	*e*	P	**Pn**	**14 41 25.6**	**-0.5**
	baz=216								
WCHH					*e*S		**Sn**	**14 41 40.1**	**+0.6**
	baz=216								
ESL	**Shilin**	**0.94**	**171**	⇓	*i*	P	**Pg**	**14 41 25.1**	**-0.2**
	baz=167								
ESL						S	**Sg**	**14 41 37.5**	**-0.2**
	baz=167								
VWDT	**VWDT**	**1.00**	**187**	⇓		P	**Pg**	**14 41 25.5**	**-0.9**
	baz=183								
VWDT					*e*S		**Sg**	**14 41 39.0**	**-0.3**
	baz=183								
SSLB	**Suanglung**	**1.00**	**197**	⇓		P	**Pg**	**14 41 25.5**	**-0.9**
	baz=185								
SSLB					*e*S		**Sg**	**14 41 37.9**	**-1.5**
	baz=185								
WJS	**Zhushan**	**1.04**	**208**	*e*P			**Pn**	**14 41 27.5**	**-0.3**
	baz=201								
WJS					*e*S		**Sn**	**14 41 42.7**	**+0.3**
	baz=201								
EGFH	**Guangfu**	**1.08**	**172**	⇓	*e*	P	**Pb**	**14 41 27.6**	**-0.3**
	baz=161								
EGFH					*e*S		**Sb**	**14 41 41.3**	**-0.9**
	baz=161								
RLNB	**Erlin**	**1.19**	**224**	*e*P			**Pn**	**14 41 29.1**	**-0.7**
	baz=215								
RLNB					*e*S		**Sn**	**14 41 45.8**	**-0.1**
	baz=215								
EHY	**Hungye**	**1.24**	**178**	*e*P			**Pn**	**14 41 30.2**	**-0.2**
	baz=173								
EHY					*e*S		**Sb**	**14 41 46.6**	**+0.1**
	baz=173								
WGK	**Gukeng**	**1.24**	**212**	*e*P			**Pb**	**14 41 30.4**	**-0.2**
	baz=203								
WGK					*e*S		**Sg**	**14 41 47.6**	**+0.5**
	baz=203								
WDLH	**Douliu**	**1.25**	**212**	*e*P			**Pn**	**14 41 30.3**	**-0.3**
	baz=204								
HGSD	**Ruisui**	**1.26**	**173**	⇓		P	**Pb**	**14 41 31.1**	**+0.2**
	baz=169								
HGSD						S	**Sg**	**14 41 47.8**	**+0.1**
	baz=169								
YULB	**Yu-li**	**1.35**	**179**	⇓		P	**Pn**	**14 41 32.1**	**+0.1**
	baz=174								
YULB					*e*S		**Sb**	**14 41 49.4**	**-0.4**
	baz=174								
TWF1	**Yuli**	**1.39**	**179**	*e*P			**Pn**	**14 41 32.7**	**+0.1**
	baz=176								
TWF1					*e*S		**Sb**	**14 41 51.3**	**+0.3**
	baz=176								
CHN2	**Minshiung**	**1.41**	**211**	*e*P			**Pn**	**14 41 32.8**	**0.0**
	baz=202								
WSF	**Szhu**	**1.46**	**221**	P			**Pn**	**14 41 32.9**	**-0.6**
	baz=212								
WSF					*e*S		**Sb**	**14 41 53.1**	**+0.1**
	baz=212								
CHY	**Chiayi**	**1.46**	**212**	*e*P			**Pn**	**14 41 33.3**	**-0.3**
	baz=203								
FULB	**Fuli**	**1.54**	**179**	*e*P			**Pb**	**14 41 35.9**	**0.0**
	baz=174								
FULB					*e*S		**Sg**	**14 41 57.9**	**+1.0**
	baz=174								
WLGB	**Puzi**	**1.54**	**215**	*e*P			**Pn**	**14 41 34.8**	**+0.1**
	baz=206								
WLGB					*e*S		**Sb**	**14 41 55.6**	**+0.2**
	baz=206								
TPUB	**Ta-pu**	**1.55**	**202**	⇑	*e*	P	**Pn**	**14 41 35.2**	**+0.4**
	baz=210								
TPUB					*e*S		**Sb**	**14 41 56.2**	**+0.5**
	baz=210								
JYNG	**Yonagunijimaku**	**1.56**	**101**	P			**Pn**	**14 41 34.9**	**+0.1**
JYNG					S		**Sb**	**14 41 56.2**	**+0.5**
ELDTW	**Lidau**	**1.57**	**188**	*e*P			**Pb**	**14 41 36.1**	**-0.2**
	baz=171								
WTP	**Ta-pu**	**1.61**	**202**	*e*P			**Pn**	**14 41 36.1**	**+0.5**
	baz=209								
WTP					*e*S		**Sg**	**14 41 58.3**	**-0.7**
	baz=209								
YOJ	**Yonaguni jima**	**1.61**	**100**	P			**Pn**	**14 41 35.3**	**-0.3**
	baz=103								
YOJ					S		**Sn**	**14 41 56.6**	**+0.2**
	baz=103								
YOJ	**Yonaguni jima**	**1.61**	**100**	P			**Pn**	**14 41 35.3**	**-0.3**
YOJ					*e*S		**Sb**	**14 41 56.9**	**-0.4**
TWK	**Hsinying**	**1.64**	**206**	*e*P			**Pn**	**14 41 36.4**	**+0.4**
	baz=212								
TWK					*e*S		**Sb**	**14 41 58.9**	**+0.8**
	baz=212								
CHKT	**Chengkung**	**1.64**	**177**	P			**Pb**	**14 41 37.0**	**-0.5**
	baz=157								
CHKT					*e*S		**Sg**	**14 41 59.4**	**-0.7**
	baz=157								
VWUC	**VWUC**	**1.67**	**279**	⇑	*e*	P	**Pn**	**14 41 34.8**	**-1.6**
	baz=274								
CHN1	**Nanshi**	**1.70**	**204**	*e*P			**Pb**	**14 41 37.6**	**-0.9**
	baz=210								
CHN1					*e*S		**Sb**	**14 42 00.3**	**+0.5**
	baz=210								
CHN8	**Yiju**	**1.70**	**215**	⇑		P	**Pn**	**14 41 36.8**	**+0.1**
	baz=205								
CHN8					*e*S		**Sb**	**14 41 59.4**	**-0.4**
	baz=205								
SGST	**Jiashian**	**1.77**	**201**	*e*P			**Pb**	**14 41 39.0**	**-0.7**
	baz=208								
SGST					*e*S		**Sb**	**14 42 02.8**	**+0.8**
	baz=208								
SLGT	**Liugui**	**1.84**	**198**	*e*P			**Pb**	**14 41 41.3**	**+0.5**
	baz=190								
MATB	**Ma-tsu**	**1.84**	**320**	*e*P			**Pn**	**14 41 37.1**	**-1.6**
	baz=327								
MATB					S		**Sn**	**14 42 01.6**	**-0.5**
	baz=327								
SCLT	**Jiali**	**1.85**	**212**	*e*P			**Pn**	**14 41 39.2**	**+0.4**
	baz=203								
SCLT					*e*S		**Sb**	**14 42 03.8**	**-0.4**
	baz=203								
CHN3	**Shinhua**	**1.86**	**207**	*e*P			**Pn**	**14 41 39.7**	**+0.8**
	baz=198								
CHN3					*e*S		**Sb**	**14 42 05.5**	**+1.0**
	baz=198								
TWG	**Pinlang**	**1.93**	**185**	*e*P			**Pn**	**14 41 40.5**	**+0.5**
	baz=179								
TWG					*e*S		**Sb**	**14 42 07.6**	**+1.1**
	baz=179								
TWGBT	**Beinan**	**1.93**	**185**	*e*P			**Pn**	**14 41 40.4**	**+0.5**
	baz=179								
TWGBT					*e*S		**Sg**	**14 42 08.1**	**-1.2**
	baz=179								
PNG	**Penghu**	**1.96**	**233**	⇑		P	**Pn**	**14 41 39.1**	**-1.3**
	baz=222								
PHUB	**P'eng-hu**	**1.98**	**232**	⇑		P	**Pn**	**14 41 39.3**	**-1.3**
	baz=221								
TTN	**Taitung**	**1.99**	**183**	*e*P			**Pn**	**14 41 40.9**	**+0.1**
	baz=194								
TWH	**Lutao**	**2.04**	**175**	*e*P			**Pn**	**14 41 41.9**	**+0.5**
	baz=157								
TWH					*e*S		**Sb**	**14 42 08.3**	**-1.3**
	baz=157								
SSD	**Sandimen**	**2.08**	**196**	*e*P			**Pb**	**14 41 44.2**	**-0.7**
	baz=203								
WDGT	**Dungji**	**2.09**	**225**	*e*P			**Pn**	**14 41 41.2**	**-0.9**
	baz=214								
WDGT					*e*S		**Sn**	**14 42 07.8**	**-0.3**
	baz=214								
SGLT	**Jiouru**	**2.13**	**200**	*e*P			**Pb**	**14 41 46.9**	**+1.0**
	baz=208								
ECL	**Taimali**	**2.16**	**188**	*e*P			**Pb**	**14 41 46.1**	**-0.2**
	baz=175								
ECL					*e*S		**Sb**	**14 42 14.5**	**+1.4**
	baz=175								
MASBT	**Mashibuluo**	**2.20**	**195**	*e*P			**Pb**	**14 41 45.5**	**-1.6**
	baz=187								
MASBT					*e*S		**Sb**	**14 42 14.6**	**+0.2**
	baz=187								
VCHM	**Qimei**	**2.27**	**228**	*e*P			**Pn**	**14 41 43.8**	**-1.0**
	baz=217								
VCHM					*e*S		**Sn**	**14 42 12.5**	**-0.3**
	baz=217								
IRIF	**Iriomote-Funau**	**2.28**	**100**	P			**Pn**	**14 41 44.3**	**-0.5**
HATJ	**Hateruma jima**	**2.41**	**106**	P			**Pb**	**14 41 48.6**	**-2.1**
HATJ					S		**Sb**	**14 42 18.7**	**-1.7**
SCZT	**Fangliau**	**2.44**	**194**	*e*P			**Pn**	**14 41 48.4**	**+1.4**
	baz=202								
QZH	**Quanzhou**	**2.44**	**275**	⇑	*i*	Pn	**Pn**	**14 41 46.3**	**-0.7**
QZH						Sn	**Sn**	**14 42 13.3**	**-3.5**
QZH						smax	smax		
	comp=N,840nm,1.0s								
QZH						smax	smax		
	comp=E,360nm,1.0s								
JKRS	**Kuro-shima**	**2.55**	**101**	P			**Pn**	**14 41 49.2**	**+0.7**
JKRS					*e*S		**Sn**	**14 42 20.4**	**+0.9**
KNM	**Kinmen**	**2.60**	**263**	*e*P			**Pn**	**14 41 49.4**	**+0.2**
	baz=256								
KNMB	**Chin-men Tao**	**2.64**	**264**	*e*P			**Pn**	**14 41 48.4**	**-1.3**
	baz=257								
JIJ	**Ishigaki jima**	**2.65**	**98**	P			**Pn**	**14 41 50.0**	**+0.2**
JIJ					*e*S		**Sn**	**14

NJ2				LR	LR		
	comp=Z,860nm,8.3s						
JNU	**Nakatsue**	**11.85**	**43**	LR	LR	14 48 53.5	
	comp=Z,66nm,21.0s,baz=240,slow=39						
KSRS	**Korea Array**	**13.88**	**23**	Pn	**Pn**	**14 44 24.4**	**+0.5**
	0.3nm,0.3s,baz=209,slow=14,SNR=4.1						
KSRS				LR	LR	14 50 12.4	
	comp=Z,84nm,20.1s,baz=208,slow=39						
KMI	**Kunming**	**16.81**	**275**	P	**P**	**14 45 10.1**	**+5.0**
KMI				pP	sP	14 45 18.5	+8.9
KMI				S	**S**	**14 48 16.9**	**-3.8**
KMI				pmax	pmax		
	comp=Z,13nm,1.2s						
KMI				pmax	pmax		
	comp=Z,180nm,4.7s						
KMI				LR	LR		
	comp=N,900nm,7.9s						
KMI				LR	LR		
	comp=E,380nm,11.4s						
KMI				LR	LR		
	comp=Z,390nm,11.5s						
MJAR	**Matsushiro Arr**	**18.69**	**47**	LR	LR	14 52 49.3	
	comp=Z,80nm,19.4s,baz=320,slow=37						
USRK	**Ussuriysk Ar.**	**21.29**	**22**	LR	LR	14 54 14.2	
	comp=Z,85nm,19.3s,baz=179,slow=37						
CMAR	**Chiang Mai Arr**	**21.67**	**258**	LR	LR	14 54 26.6	
	comp=Z,85nm,21.8s,baz=50,slow=37						
SONM	**Songino Array**	**25.88**	**337**	P	**P**	**14 46 39.7**	**+0.6**
	comp=Z,0.9nm,0.6s,baz=148,slow=9.9,SNR=4.8						
SONM				LR	LR	14 57 48.7	
	comp=Z,183nm,18.1s,baz=133,slow=39						
PSI	**Prapat**	**30.66**	**228**	LR	LR	14 59 07.3	
	comp=Z,200nm,18.0s,baz=282,slow=36						
WMQ	**Urumqi**	**33.32**	**313**	P	**P**	**14 47 46.8**	**+1.6**
WMQ				pP	sP	14 47 51.3	+1.4
WMQ				LR	LR		
	comp=Z,380nm,14.1s						
WMQ				LR	LR		
	comp=Z,210nm,14.1s						
MKAR	**Makanchi Array**	**37.99**	**315**	P	**P**	**14 48 25.6**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=104,slow=9.6,SNR=7.4						
ZALV	**Zalesovo Beam**	**39.82**	**327**	P	**P**	**14 48 40.1**	**-0.2**
	comp=Z,0.8nm,0.3s,baz=113,slow=11,SNR=2.4						
ZALV				LR	LR	15 05 12.2	
	comp=Z,41nm,18.2s,baz=72,slow=36						
AAK	**Ala-Archa**	**42.23**	**307**	LR	LR	15 07 19.7	
	comp=Z,59nm,18.6s,baz=82,slow=37						
PALK	**Pallekele**	**42.48**	**253**	LR	LR	15 07 04.7	
	comp=Z,72nm,18.8s,baz=129,slow=37						
WRA	**Warramunga Arr**	**46.21**	**163**	P	**P**	**14 49 30.2**	**-2.2**
	comp=Z,1.6nm,0.8s,baz=345,slow=8.6,SNR=12						
BVAR	**Borovoye Array**	**47.29**	**320**	P	**P**	**14 49 39.2**	**-1.4**
	comp=Z,0.4nm,0.6s,baz=125,slow=7.2,SNR=3.4						
NRIK	**Noril'sk**	**48.88**	**345**	LR	LR	15 10 29.7	
	comp=Z,36nm,20.1s,baz=99,slow=36						
ASAR	**Alice Springs**	**49.66**	**165**	P	**P**	**14 49 58.0**	**-1.1**
	comp=Z,0.3nm,0.6s,baz=341,slow=6.6,SNR=5.2						
ARU	**Arti**	**54.71**	**323**	LR	LR	15 14 23.0	
	comp=Z,50nm,20.7s,baz=98,slow=36						
WSAR	**Wadi Sarin**	**56.79**	**282**	LR	LR	15 17 26.5	
	comp=Z,64nm,18.0s,baz=110,slow=38						
GNI	**Garni**	**64.55**	**304**	LR	LR	15 21 42.0	
	comp=Z,32nm,21.0s,baz=96,slow=38						
KBZ	**Khabaz**	**65.19**	**309**	LR	LR	15 22 08.2	
	comp=Z,41nm,18.6s,baz=102,slow=38						
SPITS	**Spitsbergen Ar**	**68.95**	**348**	LR	LR	15 26 13.3	
	comp=Z,47nm,18.6s,baz=25,slow=39						
FINES	**FINESS Array B**	**71.00**	**330**	P	**P**	**14 52 24.6**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=64,slow=4.4,SNR=7.4						
FINES				LR	LR	15 26 27.3	
	comp=Z,62nm,18.9s,baz=114,slow=38						
AKASG	**Malin Array Be**	**72.50**	**318**	P	**P**	**14 52 33.4**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=64,slow=6.8,SNR=2.8						
BRTR	**Keskin Array B**	**72.90**	**306**	P	**P**	**14 52 36.8**	**0.0**
	comp=Z,0.4nm,0.8s,baz=127,slow=2.2,SNR=2.8						
HFS	**Hagfors**	**77.11**	**331**	LR	LR	15 30 08.3	
	comp=Z,69nm,19.6s,baz=67,slow=38						
NOA	**NORSAR Array B**	**77.76**	**332**	LR	LR	15 30 06.2	
	comp=Z,43nm,19.2s,baz=55,slow=38						
EKA	**Eskdalemuir Ar**	**87.25**	**332**	LR	LR	15 35 54.3	
	comp=Z,40nm,18.5s,baz=110,slow=38						
YBH	**Yreka Blue Hor**	**91.29**	**42**	LR	LR	15 31 19.7	
	comp=Z,27nm,21.5s,baz=272,slow=33						

*GUC **13** 14:53:41.4±0.5, 32°.34S×71°.36W, h14km±8km, ML2.7*
*SJA **13** 14:53:42.7±0.8, 32°.49S×71°.56W, h8km±31km, ML2.9, MW3.1*

ISC 13 14:53:40.7±3.2, **32°.77S**±0°.08×**71°.9W**±0°.1, **h6**km±17km, **n18,** σ19**84**/33, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROC1	**El Roble**	**0.75**	**106**	*e*P	**Pb**	**14 53 56.1**	**-0.2**
ROC1				*i* S	**Sb**	**14 54 06.7**	**-0.2**
ROCH	**El Roble**	**0.75**	**106**	*e*P	**Pb**	**14 53 56.1**	**-0.2**
ROCH				*e*S	**Sb**	**14 54 07.0**	**0.0**
ROCH				IAML		14 54 07.8	
	comp=N,437nm,0.5s						
PEL	**Peldehue**	**1.06**	**111**	*e*P	**Pn**	**14 54 01.2**	**-1.0**
PEL				*e*S	**Sb**	**14 54 15.3**	**-0.5**
PEL				IAML		14 54 17.3	
	comp=E,789nm,0.3s						
CLCH	**Cerro Calan**	**1.28**	**120**	*e*P	**Pb**	**14 54 05.3**	**0.0**
CLCH				*e*S	**Sg**	**14 54 23.3**	**+1.3**
CLCH				IAML		14 54 30.2	
	comp=E,354nm,0.7s						
ANTU	**Antumapu**	**1.31**	**128**	*e*S	**Sg**	**14 54 24.9**	**+2.1**
FCH	**Farellones**	**1.44**	**113**	*e*P	**Pn**	**14 54 07.0**	**-0.6**
FCH				*e*S	**Sb**	**14 54 26.5**	**-0.3**
FCH				IAML		14 54 28.2	
	comp=N,210nm,0.3s						
AUSP	**Uspallata**	**2.17**	**76**	*i* P	**Pn**	**14 54 17.4**	**-0.2**
AUSP				*e*S	**Sn**	**14 54 43.5**	**-1.5**
RTLS	**Leoncito**	**2.39**	**67**	*e*P	**Pn**	**14 54 20.3**	**-0.2**
RTLS				*e*S	**Sn**	**14 54 49.8**	**-0.5**
RTLS				IAML		14 54 55.4	
	comp=Z,41nm,0.3s						
ASAL	**Salagasta**	**2.57**	**87**	*e*P	**Pn**	**14 54 24.6**	**+1.7**
ASAL				*e*S	**Sb**	**14 54 59.3**	**+0.2**
AAGR	**Agrelo**	**2.58**	**98**	*e*P	**Pb**	**14 54 25.4**	**-2.0**
AAGR				*e*S	**Sg**	**14 55 03.1**	**-0.5**
RTCV	**Cerro Valdivia**	**2.96**	**73**	*e*P	**Pn**	**14 54 28.5**	**+0.3**
RTCV				*e*S	**Sn**	**14 55 07.1**	**+3.0**
ZON	**Zonda**	**2.97**	**67**	*e*P	**Pn**	**14 54 28.6**	**+0.2**
ZON				*e*S	**Sn**	**14 55 07.1**	**+2.8**
RTLL	**Cerro Villicun**	**3.22**	**64**	*e*P	**Pn**	**14 54 30.6**	**-1.3**
RTLL				*e*S	**Sn**	**14 55 09.7**	**-0.9**
RTLL				IAML		14 55 21.2	
	comp=Z,34nm,0.3s						
AMOG	**MOGNA**	**3.41**	**59**	*e*P	**Pn**	**14 54 33.9**	**-0.5**
AMOG				*e*S	**Sn**	**14 55 18.3**	**+3.2**
AGUA	**GUANDACOL**	**4.37**	**42**	*e*P	**Pn**	**14 54 47.3**	**-0.4**
AGUA				*e*S	**Sn**	**14 55 43.4**	**+4.4**
VCA	**Vinchina**	**5.11**	**39**	*e*P	**Pn**	**14 54 56.3**	**-1.6**
VCA				*e*S	**Sn**	**14 55 59.8**	**+2.5**
VCA				IAML		14 56 09.5	
	comp=Z,27nm,0.6s						
APLL	**PUNTA DE LOS L**	**5.14**	**64**	*e*P	**Pn**	**14 54 56.4**	**-1.8**
APLL				*e*S	**Sn**	**14 55 53.4**	**-4.5**
APLL				IAML		14 56 07.7	
	comp=Z,6.6nm,0.4s						
MRA	**San Martin**	**5.21**	**88**	IAML		14 56 35.2	
	comp=Z,6.8nm,0.5s						

IDC 13 14:58:59.8±449.0, **47°.19N**×**47°.04E, h0**km, **Error ellipse: s-maj=193.9km s-min=143.6km az=177.0, Ukraine-Moldova-Southwestern Russia region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	**7.94**	**62**	*i*		15 51 55.0	
	baz=248,slow=294,SNR=18						
I43RU	**DUBNA INFRASONI**	**1.29**	**331**	*i*		16 05 40.0	
	baz=142,slow=320,SNR=2.6						
I26DE	**FREYUNG INFRAS**	**22.26**	**287**	*i*		17 15 10.0	
	baz=81,slow=305,SNR=0.4						

*CSEM **13** 15:02:01.2±0.2, 44°.90N×15°.10E, h2km, ML2.7/8, Error ellipse: s-maj=4.9km s-min=2.4km az=80.0*
*VIE **13** 15:02:01.8±1.1, 44°.96N×15°.13E, h8km, mb1.9/3, ml2.2/3, Error ellipse: s-maj=6.1km s-min=4.6km az=179.0 67 km SSW of Karlovac*

ISC 13 15:02:01.4±1.0, **44°.90N**±0°.02×**15°.12E**±0°.04, **h8**km±10km, **n24,** σ0**68**/46, **2D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NVLJ	**Novalja**	**0.38**	**208**	*e*Pg	**Pg**	**15 02 08.3**	**-0.5**
NVLJ				Sg	**Sg**	**15 02 14.2**	**+0.3**
NVLJ	**Novalja**	**0.38**	**208**	*e*Pg	**Pg**	**15 02 08.3**	**-0.5**
NVLJ				Sg	**Sg**	**15 02 14.2**	**+0.3**
UDBI	**Udbina**	**0.59**	**129**	*e*Pg	**Pg**	**15 02 12.4**	**-0.4**
UDBI				Sg	**Sg**	**15 02 21.2**	**+0.6**
UDBI	**Udbina**	**0.59**	**129**	*e*Pg	**Pg**	**15 02 12.4**	**-0.4**
UDBI				Sg	**Sg**	**15 02 21.2**	**+0.6**
BOJS	**Bojanci**	**0.61**	**9**	⇓*i*Pg	**Pg**	**15 02 13.0**	**-0.2**
BOJS				*i* Sg	**Sg**	**15 02 21.3**	**+0.2**
	comp=Z,35nm,0.2s						
BOJS	**Bojanci**	**0.61**	**9**	⇓*i*Pg	**Pg**	**15 02 13.0**	**-0.2**
BOJS				*i* Sg	**Sg**	**15 02 21.3**	**+0.2**
	comp=Z,35nm,0.2s						
GBRS	**Gornja Briga**	**0.67**	**341**	*i* Pg	**Pg**	**15 02 13.8**	**-0.4**
GBRS				*i* Sg	**Sb**	**15 02 23.8**	**-0.9**
	comp=Z,11nm,0.1s						
GBRS	**Gornja Briga**	**0.67**	**341**	*i* Pg	**Pg**	**15 02 13.9**	**-0.4**
GBRS				*i* Sg	**Sb**	**15 02 23.8**	**-0.9**
	comp=Z,11nm,0.1s						
OZLJ	**Ozalj**	**0.75**	**19**	*i* Pg	**Pg**	**15 02 16.0**	**+0.1**
OZLJ				Sg	**Sg**	**15 02 25.6**	**-0.1**
OZLJ	**Ozalj**	**0.75**	**19**	*i* Pg	**Pg**	**15 02 16.0**	**+0.1**
OZLJ				Sg	**Sg**	**15 02 25.6**	**-0.1**
VISS	**Visnje**	**0.92**	**348**	*i* Pg	**Pg**	**15 02 19.0**	**-0.2**
VISS				*i* Sg	**Sb**	**15 02 32.0**	**-0.1**
	comp=Z,7.0nm,0.1s						
VISS	**Visnje**	**0.92**	**348**	*i* Pg	**Pg**	**15 02 19.0**	**-0.2**
VISS				*i* Sg	**Sb**	**15 02 32.0**	**-0.1**
	comp=Z,7.0nm,0.1s						
CRES	**Cresnjev**	**0.95**	**14**	*i* Pg	**Pg**	**15 02 19.4**	**-0.3**
CRES				*i* Sg	**Sb**	**15 02 32.0**	**-0.9**
	comp=Z,14nm,0.3s						
CRES	**Cresnjev**	**0.95**	**14**	*i* Pg	**Pg**	**15 02 19.4**	**-0.3**
CRES				*i* Sg	**Sb**	**15 02 32.0**	**-0.9**
	comp=Z,14nm,0.3s						
GCIS	**Gornji Cirnik**	**1.03**	**20**	*i* Pg	**Pg**	**15 02 20.8**	**-0.3**
GCIS				*i* Sg	**Sn**	**15 02 36.0**	**-0.7**
	comp=Z,3.0nm,0.1s						
GCIS	**Gornji Cirnik**	**1.03**	**20**	*i* Pg	**Pg**	**15 02 20.8**	**-0.3**
GCIS				*i* Sg	**Sn**	**15 02 36.0**	**-0.7**
	comp=Z,3.0nm,0.1s						
OBKA	**Obir**	**1.66**	**346**	*i* Pg	**Pb**	**15 02 32.0**	**-0.2**
OBKA				*i* Sg	**Sg**	**15 02 55.0**	**+0.4**
	comp=Z,3.1nm,0.2s						
OBKA	**Obir**	**1.66**	**346**	Pg	**Pb**	**15 02 32.0**	**-0.2**
	comp=Z,21nm,0.4s						
OBKA				Sg	**Sg**	**15 02 55.0**	**+0.4**
	comp=Z,3.1nm,0.2s						
SOKA	**Soboth**	**1.78**	**358**	*i* Pg	**Pg**	**15 02 35.0**	**-0.5**
SOKA				*i* Sg	**Sg**	**15 02 59.1**	**+0.6**
	comp=Z,21nm,0.4s						
SOKA	**Soboth**	**1.78**	**358**	Pg	**Pg**	**15 02 35.0**	**-0.5**
	comp=Z,0.7nm,0.2s						
SOKA				Sg	**Sg**	**15 02 59.1**	**+0.6**
	comp=Z,1.9nm,0.2s						
MYKA	**Terra Mystica**	**2.02**	**330**	*i* Sg	**Sg**	**15 03 05.8**	**-0.3**
	comp=Z,4.9nm,0.3s						
MYKA	**Terra Mystica**	**2.02**	**330**	Sg	**Sg**	**15 03 05.8**	**-0.3**
	comp=Z,4.9nm,0.3s						
STON	**Ston**	**2.76**	**137**	*i* Pn	**Pn**	**15 02 47.6**	**+1.8**
STON				Sg	**Sg**	**15 03 28.4**	**-1.4**
STON	**Ston**	**2.76**	**137**	*i* Pn	**Pn**	**15 02 47.6**	**+1.8**
STON				Sg	**Sg**	**15 03 28.4**	**-1.4**

*ISCJB **13** 15:08:34.9±0.4, 39°.77N±0°.02×25°.67E±0°.03, h11km±4km, Error ellipse: s-maj=4.2km s-min=3.5km az=20.4*
*ATH **13** 15:08:34.7, 39°.78N×25°.64E, h28km±1km, ML1.6/5, Error ellipse: s-maj=2.4km s-min=1.3km az=241.0*
*ISK **13** 15:08:34.9, 39°.77N×25°.75E, h16km, ML2.1/3*
*CSEM **13** 15:08:35.2±0.1, 39°.78N×25°.68E, h15km, ML1.6, Error ellipse: s-maj=2.8km s-min=2.5km az=97.0*
*DDA **13** 15:08:40.5, 39°.75N×26°.12E, h6km, Ml2.5*

ISC 13 15:08:34.8±1.0, **39°.78N**±0°.02×**25°.70E**±0°.03, **h15**km±9km, **n48,** σ0**39**/67, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOZC	**Bozcaada**	**0.28**	**76**	*i* P	**Pb**	**15 08 41.4**	**-0.2**
BOZC				*i* S	**Sb**	**15 08 46.2**	**0.0**
LIA	**Limnos Island**	**0.42**	**287**	P	**Pg**	**15 08 42.8**	**-0.4**
LIA				S	**Sg**	**15 08 48.0**	**-0.8**
LIA				AML	AML	15 08 48.9	
	comp=N,141μm,0.2s						
LIA				AML	AML	15 08 49.1	
	comp=E,268μm,0.3s						
LIA	**Limnos Island**	**0.42**	**287**	P	**Pg**	**15 08 43.0**	**-0.2**
LIA				S	**Sg**	**15 08 48.7**	**-0.2**
GADA	**Gvkgeada**	**0.44**	**20**	PG	**Pb**	**15 08 44.4**	**0.0**
GADA				SG	**Sb**	**15 08 50.8**	**0.0**
GADA	**Gvkgeada**	**0.44**	**20**	*e*Pg	**Pb**	**15 08 44.4**	**0.0**
GOKC	**Gokceada-Canak**	**0.46**	**22**	PG	**Pb**	**15 08 45.0**	**+0.4**
GOKC				SG	**Sb**	**15 08 51.4**	**+0.2**
GOKC	**Gokceada-Canak**	**0.46**	**22**	*e*Pg	**Pb**	**15 08 45.0**	**+0.4**
SIGR	**SIGRI**	**0.58**	**168**	PG	**Pg**	**15 08 46.3**	**+0.2**
SIGR				SG	**Sb**	**15 08 54.7**	**+0.1**
SIGR	**SIGRI**	**0.58**	**168**	P	**Pg**	**15 08 45.6**	**-0.6**
SIGR				AML	AML	15 08 59.9	
	comp=E,120μm,0.3s						
SIGR				AML	AML	15 09 00.4	
	comp=N,170μm,0.3s						
SIGR	**SIGRI**	**0.58**	**168**	*e*Pg	**Pg**	**15 08 46.3**	**+0.2**
SIGR				*e*Sg	**Sb**	**15 08 54.7**	**+0.1**
EFSA	**Agios Efstrati**	**0.60**	**247**	P	**Pg**	**15 08 46.7**	**+0.2**
EFSA				S	**Sg**	**15 08 55.3**	**+0.8**
EFSA	**Agios Efstrati**	**0.60**	**247**	P	**Pg**	**15 08 46.5**	**0.0**
EFSA				S	**Sg**	**15 08 54.9**	**+0.4**
BAYC	**CANAKKALE_Bayr**	**0.65**	**93**	*i* P	**Pb**	**15 08 47.8**	**-0.2**
BAYC	**CANAKKALE_Bayr**	**0.65**	**93**	P	**Pb**	**15 08 47.8**	**-0.2**
PRK	**Paraskevi**	**0.69**	**140**	P	**Pn**	**15 08 50.5**	**+0.4**
PRK				S	**Sb**	**15 08 58.0**	**+0.1**
PRK				AML	AML	15 09 02.1	
	comp=E,159μm,0.2s						
PRK				AML	AML	15 09 02.5	
	comp=N,168μm,0.2s						
PRK	**Paraskevi**	**0.69**	**140**	P	**Pn**	**15 08 49.8**	**-0.3**
PRK				S	**Sb**	**15 08 58.8**	**+0.9**
SMTH	**Samothraki Isl**	**0.71**	**349**	P	**Pg**	**15 08 48.8**	**+0.2**
SMTH				S	**Sb**	**15 08 59.1**	**+0.6**
SMTH				AML	AML	15 09 00.7	
	comp=N,78μm,0.1s						
SMTH				AML	AML	15 09 01.3	
	comp=E,62μm,0.2s						
SMTH	**Samothraki Isl**	**0.71**	**349**	P	**Pg**	**15 08 48.7**	**+0.1**
SMTH				S	**Sb**	**15 08 58.9**	**+0.4**
GELI	**Tayfur-Gelibol**	**0.86**	**43**	PG	**Pg**	**15 08 51.7**	**+0.2**
GELI				SG	**Sn**	**15 09 03.9**	**-0.9**
GELI	**Tayfur-Gelibol**	**0.86**	**43**	*e*Pg	**Pg**	**15 08 51.7**	**+0.2**
GELI				*e*Sg	**Sn**	**15 09 03.9**	**-0.9**
AYVA	**Ayvalik**	**0.90**	**121**	*i* P	**Pn**	**15 08 53.3**	**+0.4**
AYVA	**Ayvalik**	**0.90**	**121**	P	**Pn**	**15 08 53.3**	**+0.4**
LPK	**Lapseki**	**1.01**	**53**	PG	**Pb**	**15 08 53.4**	**-0.6**
LPK	**Lapseki**	**1.01**	**53**	*e*Pg	**Pb**	**15 08 53.4**	**-0.6**
ENEZ	**Enez**	**1.02**	**20**	PG	**Pn**	**15 08 54.6**	**0.0**
ENEZ	**Enez**	**1.02**	**20**	*e*Pg	**Pn**	**15 08 54.6**	**0.0**
ERIK	**Erikli-Kesan**	**1.09**	**35**	PG	**Pg**	**15 08 56.2**	**+0.3**
ERIK	**Erikli-Kesan**	**1.09**	**35**	*e*Pg	**Pg**	**15 08 56.2**	**+0.3**
ALN	**Alexandroupoli**	**1.15**	**13**	PN	**Pg**	**15 08 57.3**	**+0.3**
ALN	**Alexandroupoli**	**1.15**	**13**	P	**Pg**	**15 08 57.0**	**0.0**
ALN				S	**Sn**	**15 09 11.6**	**-0.3**
ALN				AML	AML	15 09 13.1	
	comp=N,32μm,0.5s						
ALN				AML	AML	15 09 13.2	
	comp=E,45μm,0.5s						
ALN	**Alexandroupoli**	**1.15**	**13**	P	**Pb**	**15 08 56.8**	**+0.3**
ALN	**Alexandroupoli**	**1.15**	**13**	*e*Pn	**Pg**	**15 08 57.3**	**+0.3**
ALN				S	**Sg**	**15 09 12.1**	**0.0**
KRBG	**Karabiga-Canak**	**1.37**	**63**	PN	**Pb**	**15 08 59.8**	**-0.4**
KRBG	**Karabiga-Canak**	**1.37**	**63**	*e*Pn	**Pb**	**15 08 59.8**	**-0.4**
RDO	**Rodhopi**	**1.38**	**355**	PN	**Pn**	**15 08 59.7**	**+0.2**
RDO	**Rodhopi**	**1.38**	**355**	*e*Pn	**Pn**	**15 08 59.7**	**+0.2**
CHOS	**Chios island**	**1.41**	**169**	P	**Pn**	**15 09 00.5**	**+0.4**
CHOS	**Chios island**	**1.41**	**169**	P	**Pn**	**15 09 00.6**	**+0.4**
OUR	**Ouranopolis**	**1.43**	**293**	P	**Pn**	**15 09 00.3**	**-0.1**
OUR	**Ouranopolis**	**1.43**	**293**	P	**Pn**	**15 09 00.2**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.45**	**51**	PN	**Pn**	**15 09 00.4**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.45**	**51**	*e*Pn	**Pn**	**15 09 00.4**	**-0.2**
SART	**Tekirdag**	**1.46**	**51**	*i* P	**Pn**	**15 09 00.4**	**-0.3**
SART				*i* S	**Sg**	**15 09 21.8**	**+0.1**
SART	**Tekirdag**	**1.46**	**51**	P	**Pn**	**15 09 00.4**	**-0.3**
SART				S	**Sg**	**15 09 21.8**	**+0.1**
BALY	**Balya**	**1.48**	**91**	*i* P	**Pb**	**15 09 01.9**	**-0.2**
BALY	**Balya**	**1.48**	**91**	P	**Pb**	**15 09 01.9**	**-0.2**
SBT3	**Marmara-Eregli**	**2.06**	**57**	PN	**Pn**	**15 09 09.5**	**+0.7**
SBT3	**Marmara-Eregli**	**2.06**	**57**	*e*Pn	**Pn**	**15 09 09.5**	**+0.7**

IDC 13 15:12:08.9±443.0, **47°.10N**×**47°.65E, h0**km, **Error ellipse: s-maj=191.1km s-min=147.3km az=0.0, Ukraine-Moldova-Southwestern Russia region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	**7.62**	**60**	*i*		16 01 25.0	
	baz=246,slow=306,SNR=13						
I43RU	**DUBNA INFRASONI**	**1.57**	**330**	*i*		16 20 50.0	
	baz=142,slow=318,SNR=3.5						
I26DE	**FREYUNG INFRAS**	**22.68**	**287**	*i*		17 31 30.0	
	baz=80,slow=320,SNR=1.0						

*ISCJB **13** 15:12:52.1±0.4, 36°.16N±0°.03×71°.30E±0°.05, h102km, mb3.7/14, Error ellipse: s-maj=6.7km s-min=3.8km az=149.1*
*IDC **13** 15:12:52.1±3.3, 36°.08N×71°.27E, h81km±28km, mb3.6/12, mb1 3.6/16, mb1mx3.4/72, mbtmp3.9/16, Error ellipse: s-maj=23.4km s-min=16.3km az=9.0*
*BJI **13** 15:12:54.7, 36°.32N×71°.25E, h102km, mb4.4/6, mB4.6/2*
*NEIC **13** 15:12:56.2±0.9, 36°.47N×71°.17E, h113km±11km, mb4.0/2, Error ellipse: s-maj=16.1km s-min=8.9km az=139.0*
*NNC **13** 15:12:58.7±4.0, 36°.98N×70°.80E, h0km, mb4.5, mpv4.1, Error ellipse: s-maj=31.7km s-min=24.9km az=161.0*

ISC 13 15:12:53.3±0.6, **36°.24N**±0°.06×**71°.20E**±0°.05, **h102**km, **n57,** σ2**26**/63, **mb3.8**/14, **5C-6D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.44**	**227**	*e*Pn	Pn	15 13 37.6	+5.6
SFK	**Sufi-Kurgan**	**4.18**	**25**	⇓P	**Pn**	**15 13 57.9**	**+2.7**
	6.4nm,0.4s						
SFK				⇑S	**Sn**	**15 14 43.9**	**+0.8**
	13nm,0.2s						
KSH	**Kashi**	**5.00**	**48**	P	**Pn**	**15 14 02.4**	**-3.7**
KSH				S	Sn	15 14 50.5	-12
KSH				smax	smax		
	comp=N,490nm,0.4s						
KSH				smax	smax		
	comp=E,330nm,0.3s						
DHRM	**DHARAMSHALA**	**5.80**	**132**	*e*P	**Pn**	**15 14 18.4**	**+1.3**
DHRM				*e*S	**Sn**	**15 15 19.2**	**-3.4**
DHRM				IAML		15 15 23.5	
	comp=N,200nm,0.2s						
DHRM				IAML		15 15 23.7	
	comp=E,154nm,0.2s						
AML	**Almayashu**	**6.19**	**17**	P	**Pn**	**15 14 23.2**	**+0.6**
	SNR=28						
MNAS	**Manas**	**6.32**	**9**	⇓P	**Pn**	**15 14 24.6**	**+0.5**
	comp=E,19nm,0.8s						
MNAS				⇓S	**Sn**	**15 15 30.4**	**-4.4**
	comp=E,35nm,0.6s						
NRN	**Naryn**	**6.40**	**34**	*e*Pn	**Pn**	**15 14 25.1**	**-0.2**
UCH	**Uchtor**	**6.51**	**22**	P	**Pn**	**15 14 27.7**	**+0.7**
	SNR=11						
EKS2	**Erkin-Say**	**6.72**	**16**	P	**Pn**	**15 14 30.6**	**+1.1**
	SNR=12						
KK31	**Karatay Array**	**6.88**	**356**	⇑P	**Pn**	**15 14 32.0**	**+0.5**
	comp=E,41nm,0.4s,baz=182,slow=14,SNR=372						
KK31				⇑S	**Sn**	**15 15 43.8**	**-4.4**
	comp=E,3.0nm,0.2s,baz=175,slow=24,SNR=6.4						
KK31	**Karatay Array**	**6.88**	**356**	*e*Pn	**Pn**	**15 14 31.9**	**+0.5**
KKAR	**Karatay Array**	**6.88**	**356**	*e*Pn	**Pn**	**15 14 31.9**	**+0.4**
AAK	**Ala-Archa**	**6.88**	**21**	P	**Pn**	**15 14 32.8**	**+1.1**
	comp=E,2.8nm,0.3s,baz=192,slow=7.6,SNR=22						
AAK				S	**Sn**	**15 15 44.3**	**-4.1**
	comp=E,1.0nm,0.3s,baz=326,slow=13,SNR=4.8						
AAK	**Ala-Archa**	**6.88**	**21**	⇓P	**Pn**	**15 14 32.6**	**+0.9**
	comp=E,8.2nm,0.7s						
AAK				⇑S	**Sn**	**15 15 44.6**	**-3.9**
	comp=E,9.7nm,0.6s						
SMLA	**Simla**	**7.12**	**134**	*e*P	Pn	15 14 36.6	+1.7
SMLA				*e*S	**Sn**	**15 15 50.4**	**-3.8**
SMLA				IAML		15 15 56.2	
	comp=N,74nm,0.1s						
SMLA				IAML		15 15 56.3	
	comp=E,66nm,0.3s						
CHMS	**Chumysh**	**7.29**	**21**	P	**Pn**	**15 14 37.9**	**+0.8**
	SNR=8.3						
USP	**Ospenovka**	**7.46**	**19**	P	**Pn**	**15 14 40.1**	**+0.6**
	SNR=5.1						
TKM2	**Tokmak 2**	**7.49**	**26**	⇓P	**Pn**	**15 14 40.6**	**+0.6**
	comp=E,4.

KSRS	Korea Array	44.81	71	P	P	15 20 58.2	+1.2
	comp=Z,0.6nm,0.5s,baz=275,slow=8.3,SNR=2.8						
TIXI	Tiksi	45.95	22	eP	P	15 21 06.1	+0.6
	comp=Z,6.5nm,1.7s						
TORD	Torodi Ar. Bea	65.87	269	P	P	15 23 28.3	-0.1
	comp=Z,0.2nm,0.4s,baz=39,slow=6.9,SNR=4.1						
DBIC	Dimbokro	74.84	267	P	P	15 24 25.3	+2.3
	comp=Z,5.2nm,0.8s,baz=45,slow=10.0,SNR=2.7						
YKA	Yellowknife Ar	81.50	3	P	P	15 24 59.8	+0.9
	comp=Z,0.3nm,0.5s,baz=347,slow=5.4,SNR=3.0						
WRA	Warramunga Arr	81.72	122	P	P	15 25 01.3	+0.5
	comp=Z,0.9nm,1.1s,baz=326,slow=4.9,SNR=5.4						
ASAR	Alice Springs	83.97	125	P	P	15 25 13.5	+1.1
	comp=Z,0.2nm,0.7s,baz=308,slow=4.6,SNR=4.0						

*ISCJB **13** 15:18:06.0±1.3, 71°.5N±0°.1×9°.5W±0°.7, h10km, Error ellipse: s-maj=37.5km s-min=6.7km az=149.5*
*BER **13** 15:18:08.9±0.6, 71°.33N×9°.37W, h0km±103km, ML2.8*
ISC 13 15:18:06.4±1.4, 71°.5N±0°.1×9°.5W±0°.2, h10km, n5, σ19°31/10, 1C, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNW	Jan Mayen West	0.58	142	eP	Pg	15 18 18.3	+0.7
JNW				eS	Sg	15 18 25.1	-0.1
JNW				IAML		15 18 25.5	
	comp=Z,913nm,0.1s						
JMIC	Jan Mayen	0.60	147	⇑iP	Pg	15 18 18.1	+0.2
JMIC				eS	Sg	15 18 25.1	-0.8
JMIC				IAML		15 18 28.6	
	comp=Z,319nm,0.3s						
JMI	Jan Mayen	0.62	155	eP	Pg	15 18 18.6	+0.3
JMI				eS	Sg	15 18 25.5	-0.9
JMI				IAML		15 18 26.8	
	comp=Z,271nm,0.4s						
JNE	Jan Mayen East	0.64	141	eP	Pg	15 18 18.9	+0.2
JNE				eS	Sg	15 18 26.2	-0.8
JNE				IAML		15 18 27.7	
	comp=Z,1μm,0.1s						
DAG	Danmarks Havn	5.86	339	iP	Pn	15 19 34.7	+1.6
DAG				iS	Sn	15 20 37.6	-2.6

*IDC **13** 15:22:59.7±1.4, 24°.61N×123°.43E, h0km, mb3.3/3, mb1 3.5/4, mb1mx3.2/60, mbtmp3.3/4, ML3.0/1, Error ellipse: s-maj=41.8km s-min=26.4km az=64.0*
*ISCJB **13** 15:23:07.7±0.6, 24°.78N±0°.08×123°.76E±0°.05, h86km±5km, mb3.3/3, Error ellipse: s-maj=14.1km s-min=5.8km az=163.0*
*JMA **13** 15:23:09.0±0.1, 24°.79N×123°.76E, h75km±2km, M3.0*
ISC 13 15:23:08.5±1.0, 24°.80N±0°.09×123°.75E±0°.05, h80km±9km, n16, σ0°54/27, mb3.5/3, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.46	183	P	Pn	15 23 21.8	-0.1
IRIF				S	Sn	15 23 31.5	-0.3
JISG	Ishigakijimahi	0.55	112	P	Pn	15 23 22.7	0.0
JISG				S	Sn	15 23 32.9	-0.2
JIJ	Ishigaki jima	0.56	140	P	Pn	15 23 22.6	-0.2
JIJ				S	Sn	15 23 32.5	-0.8
JKRS	Kuro-shima	0.60	157	P	Pn	15 23 23.3	+0.1
JKRS				S	Sn	15 23 34.3	+0.2
HATJ	Hateruma jima	0.74	176	P	Pn	15 23 24.6	0.0
HATJ				S	Sn	15 23 36.4	-0.1
YOJ	Yonaguni jima	0.75	244	P	Pn	15 23 25.1	+0.4
YOJ				S	Sn	15 23 36.7	-0.1
JYNG	Yonagunijimaku	0.81	245	P	Pn	15 23 25.7	+0.3
JYNG				S	Sn	15 23 38.3	+0.4
JTJ	Tarama	0.88	100	P	Pn	15 23 26.5	+0.4
JTJ				S	Sn	15 23 39.4	+0.2
JIRB	Irabujima	1.29	88	P	Pn	15 23 31.3	+0.2
JIKM	Ikemajima	1.36	84	P	Pn	15 23 32.7	+0.6
JIKM				eS	Sn	15 23 50.7	+0.9
JMJ	Miyako jima 2	1.40	89	P	Pn	15 23 33.1	+0.6
JMJ				eS	Sn	15 23 51.2	+0.6
JOGS	Gusukube	1.50	91	P	Pn	15 23 34.7	+0.8
JOW	Kunigami	4.55	63	Pn	Pn	15 24 14.7	-0.3
	1.5nm,0.3s,baz=90,slow=26,SNR=8.6						
JOW				Sn	Sn	15 25 05.1	-1.5
	0.4nm,0.3s,baz=288,slow=20,SNR=2.2						
MKAR	Makanchi Array	39.55	314	P	P	15 30 31.7	-0.1
	0.1nm,0.3s,baz=121,slow=7.1,SNR=2.8						
WRA	Warramunga Arr	45.65	166	P	P	15 31 21.0	-0.3
	0.5nm,0.7s,baz=348,slow=8.8,SNR=7.7						
ASAR	Alice Springs	49.17	168	P	P	15 31 48.9	+0.2
	0.2nm,0.4s,baz=349,slow=7.2,SNR=8.6						

TAP 13 15:23:20.0, 24°.77N×121°.26E, h9km, ML3.1, 1C, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NSK	Sanguang	0.13	136	P	Pg	15 23 23.4	+0.4
	baz=133						
NSK				S	Sg	15 23 25.8	+0.7
	baz=133						
YHNB	Yeheng	0.15	133	P	Pg	15 23 23.6	+0.3
	baz=132						
YHNB				S	Sg	15 23 26.1	+0.6
	baz=132						
NCUH	Zhongli	0.21	341	P	Pg	15 23 25.4	+1.1
	baz=344						
NCU	National Centr	0.21	342	P	Pg	15 23 25.4	+1.1
	baz=347						
NWLT	Wulai	0.22	88	P	Pg	15 23 25.0	+0.4
	baz=94						
NWLT				S	Sg	15 23 28.3	+0.7
	baz=94						
SBCB	Hsinchu	0.25	275	P	Pg	15 23 26.5	+1.5
	baz=287						
SBCB				S	Sg	15 23 31.5	+3.1
	baz=287						
LIOB	Emei	0.25	241	P	Pb	15 23 26.2	-0.5
	baz=226						
LIOB				S	Sb	15 23 30.9	-0.3
	baz=226						
HSN	Hsinchu	0.26	277	P	Pb	15 23 26.2	-0.6
	baz=286						
HSN				S	Sb	15 23 30.7	-0.8
	baz=286						
NSTT	Nanjuang	0.27	239	P	Pb	15 23 26.4	-0.6
	baz=224						
NSTT				S	Sb	15 23 31.2	-0.5
	baz=224						
TATO	Taipei	0.29	46	P	Pb	15 23 26.8	-0.6
	baz=47						
TATO				eS	Sb	15 23 31.5	-0.8
	baz=47						
ENTT	Nioudou	0.31	115	eP	Pb	15 23 27.0	-0.7
	baz=122						
ENTT				S	Sg	15 23 31.1	+0.9
	baz=122						
NNS	Nan Shan	0.35	162	P	Pb	15 23 27.6	-0.8
	baz=148						
NNS				S	Sb	15 23 32.7	-1.3
	baz=148						
NNSB	Datong	0.36	162	P	Pg	15 23 27.8	+0.7
	baz=148						
NNSB				S	Sg	15 23 32.8	+0.9
	baz=148						
NNSH	Datong	0.36	162	P	Pg	15 23 27.8	+0.7
	baz=152						
NNSH				S	Sg	15 23 32.8	+0.9
	baz=152						
TWE	Neicheng	0.38	98	P	Pb	15 23 28.3	-0.5
	baz=105						
TWE				S	Sb	15 23 33.8	-0.9
	baz=105						
NTST	Danshui	0.43	24	P	Pb	15 23 30.0	+0.3
	baz=12						
NTST				eS	Sb	15 23 37.1	+0.8
	baz=12						
ILA	Ilan	0.45	91	eS	Sb	15 23 36.2	-0.6
	baz=92						
YM04	YM04	0.46	33	P	Pb	15 23 30.3	0.0
	baz=25						
YM10	YM10	0.47	36	P	Pb	15 23 30.6	+0.1
	baz=28						
YM03	YM03	0.48	32	eP	Pb	15 23 30.8	+0.2
	baz=22						
YM03				eS	Sb	15 23 37.5	-0.3
	baz=22						
NMLH	Miaoli	0.48	241	eP	Pb	15 23 31.4	+0.7
	baz=224						
NMLH				eS	Sb	15 23 39.6	+1.7
	baz=224						
YM11	YM11	0.49	36	eP	Pb	15 23 31.8	+1.0
	baz=28						
YM12	YM12	0.50	35	eP	Pb	15 23 30.9	0.0
	baz=27						
YM08	YM08	0.51	36	P	Pb	15 23 31.0	-0.2
	baz=29						
YM07	YM07	0.52	39	eP	Pg	15 23 30.3	+0.2
	baz=55						
NTC	Toucheng	0.53	81	eP	Pg	15 23 30.7	+0.5
	baz=82						
NTC				S	Sg	15 23 37.8	+0.7
	baz=82						
TIPB	Shuangxi	0.55	69	⇑P	Pg	15 23 30.5	-0.3
	baz=83						
TIPB				eS	Sg	15 23 38.1	+0.1
	baz=83						
ENA	Nanau	0.56	128	eP	Pb	15 23 31.6	-0.3
	baz=125						
ENA				eS	Sg	15 23 38.8	+0.7
	baz=125						
NWF	Wu-fen Shan	0.56	58	P	Pb	15 23 32.1	0.0
	baz=60						
NWF				eS	Sb	15 23 40.8	+0.7
	baz=60						
TWC	Suao	0.56	107	P	Pb	15 23 31.4	-0.5
	baz=114						
TWC				eS	Sg	15 23 38.4	+0.2
	baz=114						
WFSB	Wu-fen Shan	0.56	58	P	Pb	15 23 32.1	+0.1
	baz=60						
WFSB				eS	Sb	15 23 40.8	+0.7
	baz=60						
NANB	Nanao	0.56	127	P	Pb	15 23 31.6	-0.5
	baz=125						
NANB				eS	Sg	15 23 38.6	+0.3
	baz=125						
NSY	Sanyi	0.57	232	eP	Pn	15 23 33.7	-0.6
	baz=218						
NSY				eS	Sb	15 23 41.7	+1.2
	baz=218						
TWY	Chenhua	0.59	32	eP	Pb	15 23 33.1	+0.7
	baz=27						
ENAH	Nanao	0.60	122	eP	Pb	15 23 32.7	+0.2
	baz=121						
ENAH				eS	Sg	15 23 39.8	+0.5
	baz=121						
EGS		0.62	83	eP	Pb	15 23 33.2	+0.3
	baz=84						
EGS				eS	Sb	15 23 41.3	-0.4
	baz=84						
NACB	Ninganchiao	0.67	153	eP	Pb	15 23 33.7	-0.1
	baz=150						
NACB				eS	Sg	15 23 42.4	+0.7
	baz=150						
TWB1	Santiao Chiao	0.70	70	P	Pb	15 23 34.3	-0.1
	baz=80						
TWB1				eS	Sb	15 23 43.6	-0.6
	baz=80						
CHGB	Renai	0.71	186	eP	Pb	15 23 34.2	-0.4
	baz=191						
CHGB				eS	Sg	15 23 43.7	+0.6
	baz=191						
TWD	Chiawan	0.75	156	eP	Pb	15 23 35.4	+0.1
	baz=147						
TWD				eS	Sb	15 23 45.0	-0.6
	baz=147						
TCU	Taichung	0.82	221	eP	Pn	15 23 37.8	+0.2
	baz=215						
TCU				eS	Sn	15 23 50.6	+0.8
	baz=215						
EOS1	EOS1	0.82	105	eP	Pg	15 23 34.5	-1.3
	baz=100						
EOS1				eS	Sb	15 23 47.9	+0.3
	baz=100						
HWA	Hwalien	0.85	158	eS	Sn	15 23 50.0	-0.6
	baz=154						
ENLB	Shoufeng	0.92	160	eP	Pn	15 23 39.4	+0.3
	baz=156						
TYC	Yuchr	0.94	203	eP	Pb	15 23 38.6	+0.2
	baz=193						
WCHH	Zhanghua	0.94	223	eP	Pb	15 23 38.8	+0.4
	baz=206						
WCHH				eS	Sn	15 23 54.2	+1.4
	baz=206						
SMLT	Sun Moon Lake	0.94	200	P	Pb	15 23 38.8	+0.2
	baz=191						
ESL	Shilin	0.97	170	P	Pb	15 23 38.9	0.0
	baz=166						
SSLB	Suanglung	1.02	196	P	Pg	15 23 39.4	-0.2
	baz=180						
VWDT	VWDT	1.02	186	P	Pg	15 23 39.2	-0.3
	baz=181						
WJS	Zhushan	1.06	207	eP	Pn	15 23 42.4	+1.4
	baz=199						
WJS				eS	Sn	15 23 57.6	+1.7
	baz=199						
EGFH	Guangfu	1.11	172	eP	Pn	15 23 41.6	-0.1
	baz=167						
WGK	Gukeng	1.25	211	eP	Pn	15 23 43.0	-0.7
	baz=201						
EHY	Hungye	1.26	177	eP	Pg	15 23 44.3	+0.1
	baz=172						
WDLH	Douliu	1.26	212	eP	Pg	15 23 46.0	+1.8
	baz=202						
HGSD	Ruisui	1.28	173	eP	Pg	15 23 45.6	+1.0
	baz=168						
YULB	Yu-li	1.37	178	eP	Pg	15 23 46.2	-0.1
	baz=172						
TWF1	Yuli	1.41	179	eP	Pg	15 23 47.1	0.0
	baz=172						
FULB	Fuli	1.57	179	eP	Pb	15 23 49.0	-0.1
	baz=173						
ELDTW	Lidau	1.59	188	eP	Pg	15 23 51.7	+1.2
	baz=199						
MATB	Ma-tsu	1.82	319	eP	Pn	15 23 51.8	+0.4
	baz=326						
MATB				eS	Sb	15 24 15.7	-0.5
	baz=326						
TWG	Pinlang	1.95	185	eP	Pb	15 23 54.6	-1.1
	baz=170						
TWH	Lutao	2.06	174	eS	Sb	15 24 23.1	-0.1
	baz=156						

IDC 13 15:48:38.7±16.0, 37°.12S×79°.49E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.4/60, mbtmp3.6/3, MS3.6/12, Ms1 3.6/12, ms1mx3.2/53, Error ellipse: s-maj=530.6km s-min=44.3km az=33.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	28.02	96	T	T	16 24 37.3	
	baz=251,slow=75,SNR=539						
H01W3	Cape Leeuwin H	28.03	96	T	T	16 24 37.9	
	baz=251,slow=75,SNR=720						
H01W1	Cape Leeuwin H	28.04	96	T	T	16 24 38.6	
	baz=251,slow=75,SNR=799						
H08S2	Diego Garcia H	30.02	346	T	T	16 27 45.8	
	baz=171,slow=77,SNR=43						
H08S1	Diego Carcia H	30.02	346	T	T	16 27 44.5	
	baz=171,slow=77,SNR=32						
H08S3	Diego Garcia H	30.04	346	T	T	16 27 47.7	
	baz=171,slow=77,SNR=78						
PALK	Pallekele	44.17	2	LR	LR	16 12 13.7	
	comp=Z,47nm,19.0s,baz=79,slow=32						
BOSA	Boshof	45.81	264	LR	LR	16 10 44.6	
	comp=Z,60nm,22.0s,baz=126,slow=29						
ASAR	Alice Springs	48.22	90	P	P	15 57 22.2	+0.9
	1.0nm,1.1s,baz=242,slow=5.9,SNR=2.9						
ASAR				LR	LR	16 16 27.2	
	comp=Z,53nm,18.0s,baz=234,slow=35						
WRA	Warramunga Arr	50.46	86	P	P	15 57 37.3	-1.1
	1.3nm,1.0s,baz=236,slow=7.3,SNR=3.9						
STKA	Stephens Creek	50.66	104	LR	LR	16 15 04.8	
	comp=Z,45nm,21.4s,baz=208,slow=31						
KMBO	Kilima Mbogo	52.88	303	LR	LR	16 17 19.3	
	comp=Z,39nm,19.1s,baz=94,slow=32						
QSPA	South Pole Qui	53.04	180	LR	LR	16 17 29.4	
	comp=Z,98nm,20.7s,baz=322,slow=33						
TGY	Tagaytay City	64.16	46	LR	LR	16 25 56.9	
	comp=Z,112nm,20.1s,baz=44,slow=35						
HNR	Honiara	76.79	92	LR	LR	16 32 04.6	
	comp=Z,35nm,18.4s,baz=169,slow=34						
MKAR	Makanchi Array	83.57	2	P	P	16 01 08.3	+0.1
	0.3nm,0.8s,baz=163,slow=6.8,SNR=2.9						
MKAR				LR	LR	16 35 45.1	
	comp=Z,18nm,21.1s,baz=216,slow=34						
TORD	Torodi Ar. Bea	88.35	288	LR	LR	16 37 39.5	
	comp=Z,79nm,21.1s,baz=190,slow=33						
DBIC	Dimbokro	89.49	279	LR	LR	16 35 59.4	
	comp=Z,29nm,18.4s,baz=114,slow=32						
ZALV	Zalesovo Beam	90.81	3	LR	LR	16 41 28.7	
	comp=Z,21nm,19.4s,baz=118,slow=35						

*CSEM **13** 16:02:39.4±0.7, 51°.51N×16°.02E, h2km, ML2.8/5, Error ellipse: s-maj=9.9km s-min=6.4km az=12.0*
*PRU **13** 16:02:40.2, 51°.50N×16°.03E, h0km*
ISC 13 16:02:39.1±1.8, 51°.51N±0°.08×16°.10E±0°.05, h0km, n24, σ0°61/45, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.68	170	ePg	Pb	16 02 53.2	-0.5
KSP				eSg	Sb	16 03 02.6	-1.1
KSP	Ksiaz	0.68	170	ePg	Pb	16 02 53.2	-0.5
KSP				eSg	Sb	16 03 02.6	-1.1
UPC	Upice	1.00	183	ePG	Pb	16 02 59.2	-0.1
UPC				eSG	Sb	16 03 12.8	-0.3
	comp=Z,24nm,0.2s						
UPC	Upice	1.00	183	Pg	Pb	16 02 59.2	-0.1
UPC				Sg	Sb	16 03 12.8	-0.3
	24nm,0.2s						
DPC	Dobruska-Polom	1.17	173	ePG	Pb	16 03 02.0	-0.2
DPC				eSG	Sg	16 03 16.8	+0.2
	comp=Z,6.6nm,0.2s						
DPC	Dobruska-Polom	1.17	173	Pg	Pb	16 03 02.0	-0.2
DPC				Sg	Sg	16 03 16.8	+0.2
	6.6nm,0.2s						
PVCC	Panska Ves	1.38	225	ePG	Pn	16 03 05.3	-0.3
PVCC				eSG	Sb	16 03 24.4	+0.5
PVCC	Panska Ves	1.38	225	Pg	Pn	16 03 05.3	-0.3
PVCC				Sg	Sb	16 03 24.4	+0.5
KRLC	Kraliky	1.50	163	ePG	Pg	16 03 08.2	+0.4
KRLC				eSG	Sn	16 03 27.7	+0.2
	comp=Z,1.6nm,0.3s						
KRLC	Kraliky	1.50	163	Pg	Pg	16 03 08.2	+0.4
KRLC				Sg	Sn	16 03 27.7	+0.2
	1.6nm,0.3s						
BRG	Berggiesshubel	1.50	246	PG	Pg	16 03 07.9	+0.1
BRG				SG	Sg	16 03 27.1	-0.1
	32nm,0.6s						
GOPC	GO Pecny, Ondr	1.80	208	eSG	Sb	16 03 36.6	+0.5
GOPC	GO Pecny, Ondr	1.80	208	Sg	Sb	16 03 36.6	+0.5
CLL	Collm	1.95	265	ePg	Pb	16 03 15.0	-0.5
CLL				e		16 03 20.0	
CLL				eSg	Sb	16 03 41.0	+0.7
	comp=Z,8.0nm,0.6s						
MORC	Moravsky Berou	1.96	152	ePn	Pn	16 03 13.2	-0.4
MORC				eSg	Sg	16 03 42.0	0.0
MORC	Moravsky Berou	1.96	152	ePN	Pn	16 03 13.2	-0.4
MORC				eSG	Sg	16 03 42.0	0.0
VRAC	Vranov	2.23	172	ePn	Pn	16 03 18.4	+1.2
VRAC				eSg	Sg	16 03 50.8	+0.3
VRAC	Vranov	2.23	172	ePN	Pn	16 03 18.4	+1.2
VRAC				eSG	Sg	16 03 50.8	+0.3
KRUC	Moravsky	2.46	176	ePn	Pn	16 03 21.3	+0.9
KRUC				eSg	Sg	16 03 57.8	-0.2
KRUC	Moravsky	2.46	176	ePN	Pn	16 03 21.3	+0.9
KRUC				eSG	Sg	16 03 57.8	-0.2
NKC	Novy Kostel	2.65	243	eSG	Sg	16 04 04.2	+0.2
	comp=Z,11nm,0.3s						
NKC	Novy Kostel	2.65	243	Sg	Sg	16 04 04.2	+0.2
	comp=Z,11nm,0.3s						
KHC	Kasperske Hory	2.88	215	ePN	Pn	16 03 26.0	-0.2
KHC				ePG	Pb	16 03 32.0	+0.7
KHC				eSN	Sn	16 04 00.0	-1.5
KHC				eSG	Sg	16 04 10.1	-1.4
	comp=Z,2.3nm,0.3s						
KHC	Kasperske Hory	2.88	215	Pn	Pn	16 03 26.0	-0.2

*ISCJB **13** 16:10:45.8±0.4, 38°.51N±0°.05×133°.81E±0°.08, h447km, mb3.1/4, Error ellipse: s-maj=7.9km s-min=7.2km az=5.5*
*JMA **13** 16:10:45.7±0.3, 38°.43N×133°.96E, h462km±3km, M3.2*
*IDC **13** 16:10:46.0±0.9, 38°.46N×134°.09E, h461km±14km, mb2.7/4, mb1 2.8/10, mb1mx2.6/74, mbtmp3.6/10, Error ellipse: s-maj=19.8km s-min=14.0km az=72.0*
ISC 13 16:10:45.7±0.8, 38°.52N±0°.08×133°.97E±0°.09, h447km, n29, σ1°82/34, mb3.2/4, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHG	Hegura jima	2.42	105	P	P	16 11 50.3	+1.9
JJH	Hakui	2.74	125	P	P	16 11 52.2	+1.5
JSZ	Suzu	2.89	111	P	P	16 11 53.3	+1.6
JKG	Kaga	2.93	139	P	P	16 11 53.1	+1.1
JKSM	Kasumi	2.98	169	P	P	16 11 53.1	+0.6
JKSM				eS	S	16 12 45.7	-0.9
JKY	Yasaka	3.03	162	P	P	16 11 53.6	+0.8
JTT	Ttatey	3.29	125	P	P	16 11 56.4	+1.6
JSD	Sado	3.41	97	P	P	16 11 57.3	+1.6
JWT	Wachi	3.43	160	P	P	16 11 57.1	+1.1
JWT				eS	S	16 12 52.9	-0.1
JHS	Saijyo	3.58	191	P	P	16 11 57.5	+0.2
MAT	Matsushiro	3.91	119	P	P	16 12 00.7	+0.8
JNG	Nsakai	3.91	121	P	P	16 12 01.2	+1.2
JNG				eS	S	16 13 02.9	+2.5
MJAR	Matsushiro Arr	3.91	119	P	P	16 12 01.6	+1.7
	1.6nm,0.3s,baz=299,slow=8.8,SNR=22						
KSRS	Korea Array	4.89	259	P	P	16 12 09.9	+1.0
	0.4nm,0.3s,baz=75,slow=9.1,SNR=11						
JFT	Otama	5.13	99	P	P	16 12 12.9	+1.7
JRG	Rokugo	5.27	78	P	P	16 12 15.9	+3.5
JMM	Marumori	5.42	95	P	P	16 12 14.9	+1.0
JTO	Tosashimizu	5.73	190	P	P	16 12 17.2	-0.1
USRK	Ussuriysk Ar.	5.86	346	P	P	16 12 20.6	+2.3
	4.6nm,0.3s,baz=170,slow=9.8,SNR=52						
JNU	Nakatsue	5.95	206	P	P	16 12 19.6	+0.1
	2.7nm,0.3s,baz=25,slow=2.6,SNR=30						
JOT	Ohata	6.14	60	P	P	16 12 24.1	+2.9
JSJ	Shimokoshiki	7.67	208	P	P	16 12 37.8	+0.2
JCH	Churui	8.23	57	P	P	16 12 45.9	+2.5
JCH				eS	S	16 14 16.5	-3.7
ASAJ	Asahikawa	8.56	47	P	P	16 12 48.5	+1.5
	1.8nm,0.3s,baz=228,slow=12,SNR=24						
ASAJ				S	S	16 14 23.6	-3.1
	0.3nm,0.3s,baz=0.0,slow=20,SNR=3.2						
KLR	Kul'dur	10.82	352	P	P	16 13 13.0	+1.5
	0.1nm,0.3s,baz=181,slow=5.9,SNR=14						
MKAR	Makanchi Array	38.29	300	P	P	16 17 26.2	0.0
	0.4nm,0.6s,baz=98,slow=9.2,SNR=5.2						
KURBB	Kurchatov Arra	40.40	306	P	P	16 17 43.6	+0.5
	0.5nm,0.4s,baz=85,slow=7.8,SNR=5.1						
WRA	Warramunga Arr	58.16	180	P	P	16 19 55.5	+0.1
	0.4nm,0.4s,baz=354,slow=7.5,SNR=11						
ASAR	Alice Springs	61.86	180	P	P	16 20 17.2	-2.9
	0.3nm,0.4s,baz=348,slow=11,SNR=11						

IDC 13 16:27:03.9±3.3, 30°.34S×177°.54W, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.5/46, mbtmp3.7/2, Error ellipse: s-maj=69.8km s-min=32.8km az=111.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.13	343	Pn	Pn	16 27 27.1	+0.1
	118nm,0.3s,baz=18,slow=20,SNR=2.4						
RAO				Sn	Sg	16 27 39.2	-1.0
	552nm,0.3s,baz=53,slow=23,SNR=8.3						
ASAR	Alice Springs	43.51	267	P	P	16 35 09.2	-0.2
	0.4nm,0.6s,baz=104,slow=7.4,SNR=6.8						
WRA	Warramunga Arr	44.49	272	P	P	16 35 17.2	-0.1
	0.7nm,0.3s,baz=110,slow=8.1,SNR=23						
FINES	FINESS Array B	145.22	340	PKPbc	PKPbc	16 46 41.6	-0.9
	0.5nm,0.3s,baz=46,slow=4.4,SNR=10						

*ISCJB **13** 16:31:09.4±0.3, 24°.50N±0°.02×122°.31E±0°.02, h67km±4km, Error ellipse: s-maj=3.3km s-min=2.3km az=170.2*
*JMA **13** 16:31:09.2±0.1, 24°.43N×122°.28E, h70km±2km, M2.2*
*TAP **13** 16:31:09.3, 24°.49N×122°.29E, h67km±1km, ML3.3, B*
**ISC 13 16:31:09.7±1.2, 24°.49N±0°.03×122°.30E±0°.02, h67km±6km, n74, σ1°02/133, Tai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.17**	**291**	P	**Pn**	**16 31 20.3**	**+0.5**
	baz=292						
EOS1				*e*S	**Sn**	**16 31 28.4**	**+1.3**
	baz=292						
TWC	**Suao**	**0.43**	**286**	P	**Pn**	**16 31 21.5**	**-0.1**
	baz=287						
TWC				*e*S	**Sn**	**16 31 30.1**	**-0.1**
	baz=287						
ENAH	**Nanao**	**0.45**	**265**	P	**Pn**	**16 31 21.4**	**-0.3**
	baz=264						
ENAH				S	**Sn**	**16 31 31.5**	**+1.0**
	baz=264						
NANB	**Nanao**	**0.50**	**263**	P	**Pn**	**16 31 22.4**	**+0.1**
	baz=263						
NANB				*e*S	**Sn**	**16 31 31.6**	**0.0**
	baz=263						
ENA	**Nanau**	**0.51**	**263**	P	**Pn**	**16 31 22.2**	**-0.1**
	baz=262						
ENA				*e*S	**Sn**	**16 31 31.6**	**-0.1**
	baz=262						
NTC	**Toucheng**	**0.56**	**311**	P	**Pn**	**16 31 22.8**	**-0.1**
	baz=311						
NTC				S	**Sn**	**16 31 32.1**	**-0.4**
	baz=311						
ILA	**Ilan**	**0.57**	**299**	*e*S	**Sn**	**16 31 32.9**	**+0.2**
	baz=299						
JYNG	**Yonagunijimaku**	**0.59**	**93**	P	**Pn**	**16 31 23.3**	**+0.1**
JYNG				S	**Sn**	**16 31 33.1**	**+0.1**
TWB1	**Santiao Chiao**	**0.59**	**331**	*e*P	**Pn**	**16 31 23.3**	**+0.1**
	baz=332						
TWB1				*e*S	**Sn**	**16 31 32.5**	**-0.6**
	baz=332						
TWE	**Neicheng**	**0.62**	**292**	P	**Pn**	**16 31 23.8**	**+0.3**
	baz=292						
TWE				*e*S	**Sn**	**16 31 33.5**	**-0.1**
	baz=292						
TIPB	**Shuangxi**	**0.65**	**318**	*e*P	**Pn**	**16 31 22.6**	**-1.2**
	baz=318						
TIPB				*e*S	**Sn**	**16 31 32.7**	**-1.5**
	baz=318						
YOJ	**Yonaguni jima**	**0.65**	**92**	P	**Pn**	**16 31 23.9**	**+0.1**
	baz=91						
YOJ				*e*S	**Sn**	**16 31 34.2**	**0.0**
	baz=91						
YOJ	**Yonaguni jima**	**0.65**	**92**	P	**Pn**	**16 31 23.8**	**0.0**
YOJ				S	**Sn**	**16 31 34.2**	**0.0**
ENTT	**Nioudou**	**0.69**	**283**	P	**Pn**	**16 31 24.8**	**+0.6**
	baz=282						
ENTT				*e*S	**Sn**	**16 31 35.0**	**0.0**
	baz=282						
NACB	**Ninganchiao**	**0.71**	**244**	P	**Pn**	**16 31 24.4**	**-0.2**
	baz=243						
NACB				*e*S	**Sn**	**16 31 35.7**	**+0.2**
	baz=243						
NWF	**Wu-fen Shan**	**0.75**	**321**	P	**Pn**	**16 31 25.2**	**+0.1**
	baz=321						
NWF				*e*S	**Sn**	**16 31 36.6**	**+0.2**
	baz=321						
WFSB	**Wu-fen Shan**	**0.75**	**321**	P	**Pn**	**16 31 25.2**	**+0.2**
	baz=321						
WFSB				*e*S	**Sn**	**16 31 36.5**	**+0.3**
	baz=321						
TWD	**Chiawan**	**0.76**	**238**	P	**Pn**	**16 31 24.6**	**-0.5**
	baz=237						
TWD				*e*S	**Sn**	**16 31 35.9**	**-0.5**
	baz=237						
NWLT	**Wulai**	**0.78**	**292**	P	**Pn**	**16 31 26.1**	**+0.7**
	baz=291						
NWLT				*e*S	**Sn**	**16 31 37.2**	**+0.2**
	baz=291						
HWA	**Hwalien**	**0.81**	**231**	P	**Pn**	**16 31 25.1**	**-0.6**
	baz=230						
HWA				*e*S	**Sn**	**16 31 37.6**	**+0.1**
	baz=230						
NNSB	**Datong**	**0.84**	**266**	P	**Pn**	**16 31 26.1**	**0.0**
	baz=265						
NNSB				*e*S	**Sn**	**16 31 38.4**	**0.0**
	baz=265						
NNSH	**Datong**	**0.84**	**266**	P	**Pn**	**16 31 26.2**	**0.0**
	baz=265						
NNSH				*e*S	**Sn**	**16 31 38.4**	**0.0**
	baz=265						
NNS	**Nan Shan**	**0.84**	**267**	P	**Pn**	**16 31 26.4**	**+0.1**
	baz=266						
NNS				S	**Sn**	**16 31 38.3**	**-0.2**
	baz=266						
YHNB	**Yeheng**	**0.86**	**282**	P	**Pn**	**16 31 26.8**	**+0.4**
	baz=282						
YHNB				*e*S	**Sn**	**16 31 38.9**	**+0.2**
	baz=282						
ENLB	**Shoufeng**	**0.86**	**228**	P	**Pn**	**16 31 26.1**	**-0.3**
	baz=227						
ENLB				*e*S	**Sn**	**16 31 38.8**	**+0.2**
	baz=227						
NSK	**Sanguang**	**0.88**	**283**	P	**Pn**	**16 31 27.2**	**+0.6**
	baz=282						
NSK				*e*S	**Sn**	**16 31 39.1**	**0.0**
	baz=282						
TATO	**Taipei**	**0.88**	**303**	P	**Pn**	**16 31 26.6**	**0.0**
	baz=303						
TATO				*e*S	**Sn**	**16 31 39.3**	**+0.2**
	baz=303						
TAP1	**Taipei**	**0.89**	**308**	*e*S	**Sn**	**16 31 38.7**	**-0.6**
	baz=307						
YM07	**YM07**	**0.92**	**318**	P	**Pn**	**16 31 27.5**	**+0.4**
	baz=318						
YM07				*e*S	**Sn**	**16 31 38.5**	**-1.5**
	baz=318						
YM11	**YM11**	**0.94**	**316**	P	**Pn**	**16 31 28.2**	**+0.8**
	baz=316						
YM11				*e*S	**Sn**	**16 31 41.4**	**+0.8**
	baz=316						
YM10	**YM10**	**0.94**	**315**	P	**Pn**	**16 31 27.3**	**-0.2**
	baz=315						
YM10				*e*S	**Sn**	**16 31 39.6**	**-1.0**
	baz=315						
YM08	**YM08**	**0.95**	**317**	*e*S	**Sn**	**16 31 39.3**	**-1.3**
	baz=317						
YM12	**YM12**	**0.96**	**316**	P	**Pn**	**16 31 27.2**	**-0.3**
	baz=316						
YM12				S	**Sn**	**16 31 40.2**	**-0.6**
	baz=316						
YM04	**YM04**	**0.96**	**314**	P	**Pn**	**16 31 27.4**	**-0.1**
	baz=314						
YM04				*e*S	**Sn**	**16 31 40.2**	**-0.6**
	baz=314						
YM03	**YM03**	**0.97**	**315**	*e*P	**Pn**	**16 31 27.2**	**-0.6**
	baz=315						
YM03				S	**Sn**	**16 31 41.0**	**-0.3**
	baz=315						
TWY	**Chenhua**	**1.01**	**321**	*e*S	**Sn**	**16 31 41.5**	**-0.3**
	baz=321						
NTST	**Danshui**	**1.02**	**311**	*e*P	**Pn**	**16 31 28.6**	**+0.2**
	baz=311						
NTST				*e*S	**Sn**	**16 31 42.5**	**+0.2**
	baz=311						
ESL	**Shilin**	**1.04**	**230**	*e*P	**Pn**	**16 31 27.5**	**-1.0**
	baz=228						
ESL				*e*S	**Sn**	**16 31 41.3**	**-1.2**
	baz=228						
CHGB	**Renai**	**1.11**	**248**	P	**Pn**	**16 31 29.9**	**+0.2**
	baz=247						
CHGB				*e*S	**Sn**	**16 31 44.5**	**-0.1**
	baz=247						
NCUH	**Zhongli**	**1.12**	**295**	*e*S	**Sn**	**16 31 44.2**	**-0.2**
	baz=295						
EGFH	**Guangfu**	**1.14**	**225**	*e*P	**Pn**	**16 31 28.9**	**-0.9**
	baz=223						
EGFH				*e*S	**Sn**	**16 31 43.6**	**-1.3**
	baz=223						
LIOB	**Emei**	**1.18**	**278**	P	**Pn**	**16 31 31.2**	**+0.9**
	baz=277						
LIOB				*e*S	**Sn**	**16 31 46.1**	**+0.3**
	baz=277						
NSTT	**Nanjuang**	**1.19**	**277**	*e*P	**Pn**	**16 31 30.9**	**+0.4**
	baz=276						
NSTT				S	**Sn**	**16 31 47.1**	**+1.0**
	baz=276						
HGSD	**Ruisui**	**1.27**	**219**	*e*P	**Pn**	**16 31 32.3**	**+0.7**
	baz=218						
HGSD				*e*S	**Sn**	**16 31 46.6**	**-1.4**
	baz=218						
VWDT	**VWDT**	**1.29**	**236**	P	**Pn**	**16 31 31.8**	**0.0**
	baz=235						
VWDT				*e*S	**Sn**	**16 31 48.5**	**+0.3**
	baz=235						
IRIF	**Iriomote-Funau**	**1.31**	**96**	P	**Pn**	**16 31 31.9**	**-0.2**
IRIF				*e*S	**Sn**	**16 31 48.8**	**-0.1**
EHY	**Hungye**	**1.32**	**223**	*e*P	**Pn**	**16 31 31.0**	**-1.3**
	baz=221						
EHY				*e*S	**Sn**	**16 31 46.8**	**-2.4**
	baz=221						
NMLH	**Miaoli**	**1.38**	**272**	*e*S	**Sn**	**16 31 51.3**	**+1.0**
	baz=272						
TWQ1	**Liyutan**	**1.40**	**265**	*e*P	**Pn**	**16 31 33.6**	**+0.3**
	baz=264						
TWQ1				*e*S	**Sn**	**16 31 52.5**	**+1.5**
	baz=264						
SMLT	**Sun Moon Lake**	**1.41**	**245**	*e*P	**Pn**	**16 31 34.3**	**+0.8**
	baz=244						
SMLT				*e*S	**Sn**	**16 31 51.6**	**+0.2**
	baz=244						
SSLB	**Suanglung**	**1.41**	**241**	*e*P	**Pn**	**16 31 34.5**	**+1.0**
	baz=240						
SSLB				*e*S	**Sn**	**16 31 54.0**	**+2.7**
	baz=240						
YULB	**Yu-li**	**1.43**	**220**	*e*P	**Pn**	**16 31 32.2**	**-1.4**
	baz=219						
YULB				*e*S	**Sn**	**16 31 48.8**	**-2.8**
	baz=219						
HATJ	**Hateruma jima**	**1.44**	**107**	P	**Pn**	**16 31 34.3**	**+0.5**
HATJ				*e*S	**Sn**	**16 31 52.5**	**+0.6**
TYC	**Yuchr**	**1.44**	**246**	*e*P	**Pn**	**16 31 35.0**	**+1.2**
	baz=245						
TYC				*e*S	**Sn**	**16 31 54.1**	**+2.2**
	baz=245						
TWF1	**Yuli**	**1.46**	**219**	*e*P	**Pn**	**16 31 33.0**	**-1.0**
	baz=218						
TWF1				*e*S	**Sn**	**16 31 50.4**	**-1.9**
	baz=218						
JKRS	**Kuro-shima**	**1.58**	**99**	P	**Pn**	**16 31 36.0**	**+0.4**
JKRS				S	**Sn**	**16 31 55.3**	**+0.1**
FULB	**Fuli**	**1.58**	**216**	P	**Pn**	**16 31 36.2**	**+0.5**
	baz=215						
FULB				S	**Sn**	**16 31 54.8**	**-0.5**
	baz=215						
WJS	**Zhushan**	**1.58**	**246**	*e*S	**Sn**	**16 31 57.4**	**+2.1**
	baz=245						
CHKT	**Chengkung**	**1.63**	**212**	*e*P	**Pn**	**16 31 35.1**	**-1.2**
	baz=211						
CHKT				*e*S	**Sn**	**16 31 52.7**	**-3.6**
	baz=211						
ALS	**Alishan**	**1.68**	**235**	*e*P	**Pn**	**16 31 38.1**	**+0.8**
	baz=234						
ALS				*e*S	**Sn**	**16 31 59.5**	**+1.4**
	baz=234						
JIJ	**Ishigaki jima**	**1.69**	**94**	P	**Pn**	**16 31 36.8**	**-0.2**
JIJ				S	**Sn**	**16 31 56.9**	**-0.8**
ELDTW	**Lidau**	**1.75**	**222**	*e*P	**Pn**	**16 31 40.2**	**+2.2**
	baz=221						
ELDTW				*e*S	**Sn**	**16 31 57.9**	**-1.6**
	baz=221						
WDLH	**Douliu**	**1.80**	**244**	*e*S	**Sn**	**16 32 01.6**	**+1.2**
	baz=243						
JISG	**Ishigakijimahi**	**1.83**	**87**	P	**Pn**	**16 31 38.9**	**-0.1**
JISG				*e*S	**Sn**	**16 32 01.0**	**-0.3**
RLNB	**Erlin**	**1.87**	**252**	*e*S	**Sn**	**16 32 02.5**	**+0.3**
	baz=251						
TPUB	**Ta-pu**	**1.93**	**233**	*e*S	**Sn**	**16 32 05.2**	**+1.4**
	baz=232						
WSF	**Szhu**	**2.08**	**246**	*e*S	**Sn**	**16 32 08.2**	**+0.9**
	baz=245						
WLGB	**Puzi**	**2.09**	**242**	*e*S	**Sn**	**16 32 10.2**	**+2.7**
	baz=241						
SLGT	**Liugui**	**2.12**	**226**	*e*S	**Sn**	**16 32 10.4**	**+2.1**
	baz=225						
JTJ	**Tarama**	**2.19**	**86**	P	**Pn**	**16 31 44.4**	**+0.5**
JTJ				S	**Sn**	**16 32 10.8**	**+0.8**
JIRB	**Irabujima**	**2.64**	**82**	*e*S	**Sn**	**16 32 21.7**	**+0.9**
VWUC	**VWUC**	**2.64**	**282**	*e*P	**Pn**	**16 31 49.2**	**-0.7**
	baz=280						
VWUC				*e*S	**Sn**	**16 32 17.2**	**-3.7**
	baz=280						
MATB	**Ma-tsu**	**2.70**	**308**	*e*P	**Pn**	**16 31 50.7**	**0.0**
	baz=308						
MATB				*e*S	**Sn**	**16 32 20.5**	**-1.8**
	baz=308						
JIKM	**Ikemajima**	**2.72**	**80**	*e*S	**Sn**	**16 32 23.0**	**+0.2**

*ISCJB **13** 16:54:06.0±1.2, 49°.7S±0°.1×126°.6E±0°.4, h10km, mb3.7/4, MS3.2/3, Error ellipse: s-maj=38.8km s-min=19.4km az=6.5*
*IDC **13** 16:54:07.2±1.2, 49°.60S×126°.09E, h0km, mb3.8/4, mb1 4.1/5, mb1mx3.8/44, mbtmp4.0/5, ML2.2/1, MS3.3/3, Ms1 3.3/3, ms1mx2.8/39, Error ellipse: s-maj=57.2km s-min=24.1km az=100.0*
*NEIC **13** 16:54:08.4±0.8, 49°.63S×126°.39E, h10km, mb4.6/1, Error ellipse: s-maj=29.6km s-min=15.5km az=94.0*
ISC 13 16:54:08.3±1.3, 49°.6S±0°.2×126°.4E±0°.4, h10km, n13, σ0s32/8, mb3.8/4, MS3.2/3, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H**	**17.25**	**324**	T	T	17 15 27.6	
	baz=152,slow=75,SNR=25						
H01W2	**Cape Leeuwin H**	**17.25**	**324**	T	T	17 15 28.1	
	baz=152,slow=75,SNR=26						
H01W3	**Cape Leeuwin H**	**17.27**	**324**	T	T	17 15 29.1	
	baz=152,slow=75,SNR=28						
NWAO	**Narrogin (SRO)**	**18.02**	**334**	P	**P**	**16 58 19.4**	**+0.2**
	0.4nm,0.3s,baz=16,slow=7.4,SNR=3.5						
NWAO	**Narrogin (SRO)**	**18.02**	**334**	*e*P	**P**	**16 58 19.2**	**-0.1**
	54nm,1.0s						
STKA	**Stephens Creek**	**21.07**	**38**	LR	LR	17 05 48.0	
	comp=Z,59nm,18.3s,baz=208,slow=33						
ASAR	**Alice Springs**	**26.58**	**16**	P	**P**	**16 59 46.8**	**+0.3**
	1.1nm,0.6s,baz=192,slow=8.7,SNR=28						
WRA	**Warramunga Arr**	**30.29**	**15**	P	**P**	**17 00 19.3**	**-0.3**
	0.8nm,0.9s,baz=197,slow=8.1,SNR=3.8						
WRAB	**Tennant Creek**	**30.30**	**15**	*e*P	**P**	**17 00 19.4**	**-0.2**
VNDA	**Vanda**	**31.05**	**166**	LR	LR	17 12 25.6	
	comp=Z,54nm,18.1s,baz=286,slow=35						
SNAA	**Sanae**	**53.80**	**198**	P	**P**	**17 03 30.4**	**-0.1**
	2.2nm,0.9s,baz=139,slow=11,SNR=7.7						
SNAA				LR	LR	17 24 30.7	
	comp=Z,44nm,21.1s,baz=132,slow=34						
CMAR	**Chiang Mai Arr**	**72.02**	**333**	P	**P**	**17 05 32.1**	**-0.1**
	0.6nm,0.7s,baz=179,slow=5.8,SNR=6.2						
YKA	**Yellowknife Ar**	**145.01**	**45**	PKPbc	**PKPdf**	**17 13 44.8**	**+0.4**
	2.0nm,0.8s,baz=269,slow=3.7,SNR=16						

*IDC **13** 16:54:26.7±17.0, 20°.71S×177°.55W, h502km±149km, mb3.3/6, mb1 3.4/6, mb1mx3.0/48, mbtmp4.1/6, Error ellipse: s-maj=156.2km s-min=33.1km az=125.0*
ISC 13 16:54:26.8±2.7, 20°.7S±0°.5×177°.6W±0°.4, h500km, n9, σ0s53/9, mb3.7/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**33.85**	**264**	P	**P**	**17 00 27.4**	**+0.2**
	0.6nm,0.3s,baz=90,slow=11,SNR=6.1						
ASAR	**Alice Springs**	**44.85**	**257**	P	**P**	**17 01 56.5**	**+0.4**
	2.0nm,0.7s,baz=87,slow=8.2,SNR=43						
ASAR				PcP	**PcP**	**17 03 27.6**	**+0.2**
	0.2nm,0.5s,baz=105,slow=3.8,SNR=5.0						
WRA	**Warramunga Arr**	**44.95**	**262**	P	**P**	**17 01 56.3**	**-0.6**
	1.5nm,0.3s,baz=96,slow=7.6,SNR=104						
PETK	**Petropavlovsk-**	**76.52**	**345**	P	**P**	**17 05 24.5**	**-0.1**
	1.5nm,1.0s,baz=126,slow=7.3,SNR=4.1						
SEY	**Seymchan**	**86.61**	**347**	P	**P**	**17 06 16.2**	**+0.1**
	1.0nm,0.6s,baz=121,slow=5.9,SNR=6.6						
ILAR	**Eielson Array**	**88.38**	**13**	P	**P**	**17 06 24.7**	**+0.3**
	0.2nm,0.3s,baz=232,slow=6.7,SNR=3.9						
BVAR	**Borovoye Array**	**119.44**	**320**	PKP	**PKPdf**	**17 12 17.8**	**-1.0**
	0.2nm,0.3s,baz=73,slow=0.2,SNR=2.9						
AKASG	**Malin Array Be**	**143.33**	**331**	PKP	PKPab	17 13 00.9	-0.6
	0.5nm,0.3s,baz=44,slow=4.6,SNR=8.2						
BRTR	**Keskin Array B**	**147.22**	**312**	PKPbc	**PKPbc**	**17 13 14.0**	**+0.1**
	0.5nm,0.6s,baz=151,slow=5.3,SNR=3.6						

*ISCJB **13** 17:03:31.0±1.7, 4°.70N±0°.08×95°.83E±0°.10, h1km±9km, mb3.5/6, MS3.1/2, Error ellipse: s-maj=19.3km s-min=7.4km az=144.8*
*IDC **13** 17:03:30.3±1.3, 4°.30N×95°.50E, h0km, mb3.5/6, mb1 3.7/8, mb1mx3.4/73, mbtmp3.5/8, ML3.7/2, MS3.0/4, Ms1 3.0/4, ms1mx2.6/53, Error ellipse: s-maj=50.0km s-min=17.9km az=52.0*
*DJA **13** 17:03:35.4±0.3, 5°.1N±2°.9×9°.6E±°, h10km, M4.2/9, MLv4.2/9*
ISC 13 17:03:34.2±1.7, 4°.73N±0°.06×96°.02E±0°.07, h9km±12km, n20, σ1s98/21, mb3.6/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSI	**Meulaboh, Aceh**	**0.60**	**140**	P	**Pg**	**17 03 45.9**	**0.0**
MLSI				S	**Sg**	**17 03 53.7**	**0.0**
BSI	**Banda Aceh**	**1.05**	**317**	P	**Pn**	**17 03 56.0**	**+0.9**
BSI				S	**Sn**	**17 04 11.4**	**+1.5**
LHMI	**Lhok Sumawe**	**1.05**	**62**	P	**Pb**	**17 03 52.7**	**-1.9**
LHMI				S	**Sb**	**17 04 05.8**	**-2.7**
TPTI		**1.86**	**141**	P	**Pn**	**17 04 06.0**	**-0.3**
TPTI				S	**Sb**	**17 04 31.5**	**-0.4**
KCSI	**Kotacane, Aceh**	**2.12**	**124**	P	**Pn**	**17 04 10.5**	**+0.6**
KCSI				S	**Sb**	**17 04 39.3**	**0.0**
TSI	**Tuntungan**	**2.82**	**116**	P	**Pn**	**17 04 21.8**	**+2.3**
PSI	**Prapat**	**3.48**	**123**	Pn	**Pn**	**17 04 30.6**	**+1.9**
	4.5nm,0.3s,baz=360,slow=12,SNR=20						
PSI				Sn	**Sb**	**17 05 21.9**	**+3.5**
	5.8nm,0.3s,baz=0.0,slow=16,SNR=3.3						
PSI				LR	LR	17 06 16.0	
	comp=Z,176nm,19.8s,baz=269,slow=44						
GSI	**Gunungsitoli**	**3.74**	**155**	P	**Pn**	**17 04 32.4**	**+0.2**
CMAR	**Chiang Mai Arr**	**13.94**	**12**	Pn	**Pn**	**17 06 54.9**	**+2.7**
	0.2nm,0.3s,baz=204,slow=15,SNR=4.2						
CMAR				LR	LR	17 12 42.3	
	comp=Z,32nm,18.6s,baz=195,slow=38						
H08S2	**Diego Garcia H**	**26.49**	**242**	T	T	17 36 13.3	
	baz=61,slow=75,SNR=6.0						
H08S3	**Diego Garcia H**	**26.49**	**243**	T	T	17 36 10.1	
	baz=61,slow=75,SNR=4.9						
H08S1	**Diego Carcia H**	**26.51**	**242**	T	T	17 36 12.7	
	baz=61,slow=75,SNR=4.7						
MKAR	**Makanchi Array**	**43.56**	**346**	P	**P**	**17 11 37.5**	**-1.0**
	0.2nm,0.5s,baz=157,slow=6.5,SNR=4.5						
SONM	**Songino Array**	**43.86**	**10**	P	**P**	**17 11 44.0**	**+3.0**
	0.6nm,0.7s,baz=188,slow=8.4,SNR=3.2						
WRA	**Warramunga Arr**	**44.94**	**124**	P	**P**	**17 11 48.2**	**-1.8**
	0.9nm,0.6s,baz=301,slow=9.2,SNR=11						
ASAR	**Alice Springs**	**46.49**	**129**	P	**P**	**17 12 00.8**	**-1.4**
	1.2nm,0.7s,baz=298,slow=8.2,SNR=18						
KURBB	**Kurchatov Arra**	**48.04**	**345**	P	**P**	**17 12 12.4**	**-1.3**
	0.1nm,0.3s,baz=169,slow=7.5,SNR=3.0						
GUMO	**Guam**	**48.95**	**76**	LR	LR	17 33 15.8	
	comp=Z,12nm,20.0s,baz=134,slow=36						
BVAR	**Borovoye Array**	**52.55**	**341**	LR	LR	17 37 56.2	
	comp=Z,26nm,19.1s,baz=336,slow=39						
BRTR	**Keskin Array B**	**65.89**	**312**	P	**P**	**17 14 18.3**	**-2.5**
	0.2nm,0.5s,baz=134,slow=6.2,SNR=2.0						

*DDA **13** 17:09:20.8, 36°.95N×28°.21E, h5km, Ml3.5*
*THE **13** 17:09:21.0, 37°.05N×28°.26E, h26km±1km, ML3.4/1, Error ellipse: s-maj=2.3km s-min=0.7km az=16.0*
*ATH **13** 17:09:21.4, 36°.95N×28°.17E, h26km±2km, ML3.2/5, Error ellipse: s-maj=3.3km s-min=1.4km az=224.0*
*CSEM **13** 17:09:21.7±0.1, 36°.94N×28°.18E, h5km, ML3.4, Error ellipse: s-maj=2.3km s-min=1.8km az=17.0*
*ISK **13** 17:09:21.3, 36°.94N×28°.18E, h7km, ML3.4/13*
*ISCJB **13** 17:09:21.4±0.3, 36°.93N±0°.02×28°.20E±0°.02, h7km±3km, Error ellipse: s-maj=2.8km s-min=2.3km az=19.5*
*NIC **13** 17:09:23.8±0.2, 37°.10N×28°.20E, h25km, ML3.2*
ISC 13 17:09:21.2±1.0, 36°.94N±0°.01×28°.21E±0°.01, h3km±9km, n127, σ0s97/186, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.20**	**18**	PG	**Pg**	**17 09 26.1**	**+0.9**
YER				SG	**Sg**	**17 09 29.6**	**+1.7**
YER	**Yerkesik**	**0.20**	**18**	P	**Pg**	**17 09 26.1**	**+0.9**
YER				S	**Sg**	**17 09 29.2**	**+1.3**
YER	**Yerkesik**	**0.20**	**18**	P	**Pg**	**17 09 26.1**	**+0.9**
YER				S	**Sg**	**17 09 29.2**	**+1.3**
MRSB	**Marmaris-Mugla**	**0.22**	**182**	PG	**Pg**	**17 09 26.0**	**+0.5**
MRSB				SG	**Sg**	**17 09 30.2**	**+1.7**
MRSB	**Marmaris-Mugla**	**0.22**	**182**	*e*Pg	**Pg**	**17 09 26.0**	**+0.5**
MRSB				*e*Sg	**Sg**	**17 09 30.2**	**+1.7**
TURN	**Turunc**	**0.33**	**102**	PG	**Pg**	**17 09 25.4**	**-2.0**
TURN				SG	**Sg**	**17 09 28.4**	**-3.3**
TURN	**Turunc**	**0.33**	**102**	*i* P	**Pg**	**17 09 25.5**	**-2.0**
TURN				*i* S	**Sg**	**17 09 28.5**	**-3.3**
TURN	**Turunc**	**0.33**	**102**	P	**Pg**	**17 09 25.5**	**-2.0**
TURN				S	**Sg**	**17 09 28.5**	**-3.3**
DALY	**Dalyan (Mu¨la**	**0.38**	**109**	PG	**Pg**	**17 09 29.0**	**+0.5**
DALY				SG	**Sb**	**17 09 35.7**	**-1.1**
DALY	**Dalyan (Mu¨la**	**0.38**	**109**	*i* P	**Pg**	**17 09 29.2**	**+0.7**
DALY				*i* S	**Sb**	**17 09 35.2**	**-1.6**
DALY	**Dalyan (Mu¨la**	**0.38**	**109**	P	**Pg**	**17 09 29.2**	**+0.7**
DALY				S	**Sb**	**17 09 35.2**	**-1.6**
DATC	**Datca-Mugla**	**0.47**	**248**	PG	**Pg**	**17 09 30.4**	**+0.1**
DATC				SG	**Sb**	**17 09 38.3**	**-1.2**
DATC	**Datca-Mugla**	**0.47**	**248**	*e*Pg	**Pg**	**17 09 30.4**	**+0.1**
DATC				*e*Sg	**Sb**	**17 09 38.3**	**-1.2**
MLSB	**Milas**	**0.49**	**316**	PG	**Pg**	**17 09 31.2**	**+0.5**
MLSB				SG	**Sb**	**17 09 38.7**	**-1.4**
MLSB	**Milas**	**0.49**	**316**	*e*Pg	**Pg**	**17 09 31.2**	**+0.5**
MLSB				*e*Sg	**Sb**	**17 09 38.7**	**-1.4**
DAT	**Datca**	**0.55**	**247**	PG	**Pg**	**17 09 31.9**	**+0.3**
DAT	**Datca**	**0.55**	**247**	*i* P	**Pg**	**17 09 32.0**	**+0.3**
DAT				*i* S	**Sb**	**17 09 41.9**	**+0.2**
DAT	**Datca**	**0.55**	**247**	P	**Pg**	**17 09 32.0**	**+0.3**
DAT				S	**Sb**	**17 09 41.9**	**+0.2**
BDRM	**Kayabasi**	**0.62**	**282**	*i* P	**Pg**	**17 09 33.6**	**+0.4**
BDRM				*i* S	**Sb**	**17 09 42.9**	**-0.9**
BDRM	**Kayabasi**	**0.62**	**282**	P	**Pg**	**17 09 33.6**	**+0.4**
BDRM				S	**Sb**	**17 09 42.9**	**-0.9**
ARG	**Arkhangelos**	**0.73**	**185**	PG	**Pg**	**17 09 35.6**	**+0.5**
ARG	**Arkhangelos**	**0.73**	**185**	P	**Pg**	**17 09 34.7**	**-0.4**
ARG				S	**Sb**	**17 09 47.9**	**+1.1**
ARG				AML	AML	17 09 50.7	
	comp=E,5284μm,0.3s						
ARG				AML	AML	17 09 50.9	
	comp=N,4525μm,0.3s						
ARG	**Arkhangelos**	**0.73**	**185**	P	**Pg**	**17 09 35.4**	**+0.3**
ARG				S	**Sb**	**17 09 47.3**	**+0.5**
ARG	**Arkhangelos**	**0.73**	**185**	P	**Pg**	**17 09 35.3**	**+0.2**
ARG	**Arkhangelos**	**0.73**	**185**	*e*Pg	**Pg**	**17 09 35.6**	**+0.5**
ARG				S	**Sb**	**17 09 47.2**	**+0.5**
BODT	**Bodrum**	**0.73**	**280**	PG	**Pg**	**17 09 34.8**	**-0.4**
BODT	**Bodrum**	**0.73**	**280**	P	**Pg**	**17 09 34.3**	**-0.9**
BODT				S	**Sg**	**17 09 45.4**	**+0.8**
BODT	**

GCAM	**G?zelcaml?**	**1.08 315**	PG	**Pb**	**17 09 42.5**	**-0.1**
GCAM	**G?zelcaml?**	**1.08 315**	*i* P	**Pg**	**17 09 41.9**	**-0.1**
GCAM			*i* S	**Sn**	**17 09 57.9**	**-0.8**
GCAM	**G?zelcaml?**	**1.08 315**	P	**Pg**	**17 09 41.9**	**-0.1**
GCAM	**G?zelcaml?**	**1.08 315**	*e*Pg	**Pb**	**17 09 42.5**	**-0.1**
GCAM			S	**Sn**	**17 09 57.9**	**-0.8**
GOLH	**Golhisar**	**1.12 74**	*i* P	**Pg**	**17 09 42.5**	**-0.3**
GOLH			*i* S	**Sn**	**17 10 02.3**	**+2.4**
GOLH	**Golhisar**	**1.12 74**	P	**Pg**	**17 09 42.5**	**-0.3**
GOLH			S	**Sn**	**17 10 02.3**	**+2.4**
AKAS	**Kas**	**1.33 122**	PN	**Pg**	**17 09 46.4**	**-0.3**
AKAS	**Kas**	**1.33 122**	*i* P	**Pb**	**17 09 46.9**	**+0.1**
AKAS			*i* S	**Sn**	**17 10 07.1**	**+2.1**
AKAS	**Kas**	**1.33 122**	*e*Pn	**Pg**	**17 09 46.4**	**-0.3**
AKAS	**Kas**	**1.33 122**	P	**Pb**	**17 09 46.9**	**+0.1**
AKAS			S	**Sn**	**17 10 07.1**	**+2.1**
SMG	**Samos**	**1.33 306**	P	**Pg**	**17 09 45.6**	**-1.2**
SMG			S	**Sn**	**17 10 05.1**	**+0.2**
SMG	comp=N,2446μm,0.4s		AML	AML	17 10 09.0	
SMG	comp=E,1769μm,0.3s		AML	AML	17 10 11.4	
SMG	**Samos**	**1.33 306**	P	**Pg**	**17 09 45.7**	**-1.1**
SMG			S	**Sb**	**17 10 04.4**	**+0.1**
KSL	**Kastellorizon**	**1.36 125**	P	**Pb**	**17 09 48.6**	**+1.3**
KSL			S	**Sn**	**17 10 05.7**	**+0.1**
KSL	comp=N,634μm,1.3s		AML	AML	17 10 10.1	
KSL	comp=E,827μm,0.7s		AML	AML	17 10 10.2	
ELL	**Elmali**	**1.38 97**	PN	**Pb**	**17 09 48.2**	**+0.5**
ELL	**Elmali**	**1.38 97**	*e*Pn	**Pb**	**17 09 48.2**	**+0.5**
MANT	**Manisa**	**1.57 10**	*i* P	**Pb**	**17 09 50.4**	**+0.2**
MANT			*i* S	**Sn**	**17 10 09.8**	**-1.3**
MANT	**Manisa**	**1.57 10**	P	**Pn**	**17 09 50.4**	**+0.2**
MANT			S	**Sn**	**17 10 09.8**	**-1.3**
KULA	**Kula-Manisa**	**1.61 13**	PN	**Pn**	**17 09 50.8**	**+0.2**
KULA	**Kula-Manisa**	**1.61 13**	*e*Pn	**Pn**	**17 09 50.8**	**+0.2**
KARP	**Karpathos**	**1.63 212**	PN	**Pn**	**17 09 51.1**	**+0.4**
KARP	**Karpathos**	**1.63 212**	P	**Pn**	**17 09 49.8**	**-0.9**
KARP			S	**Sn**	**17 10 10.8**	**-1.4**
KARP	comp=E,1431μm,0.3s		AML	AML	17 10 15.4	
KARP	comp=N,1539μm,0.8s		AML	AML	17 10 18.6	
KARP	**Karpathos**	**1.63 212**	P	**Pn**	**17 09 50.1**	**-0.6**
KARP	**Karpathos**	**1.63 212**	*e*Pn	**Pn**	**17 09 51.1**	**+0.4**
KARP			S	**Sn**	**17 10 11.2**	**-1.0**
BRDR	**BURDUR-Merkez**	**1.66 62**	*i* P	**Pg**	**17 09 53.4**	**+0.3**
BRDR			*i* S	**Sg**	**17 10 16.4**	**+1.8**
BRDR	**BURDUR-Merkez**	**1.66 62**	P	**Pg**	**17 09 53.4**	**+0.3**
BRDR			S	**Sg**	**17 10 16.4**	**+1.8**
KORT	**Korkueli**	**1.72 87**	PN	**Pb**	**17 09 53.3**	**-0.2**
KORT	**Korkueli**	**1.72 87**	*i* P	**Pg**	**17 09 55.3**	**+1.1**
KORT			*i* S	**Sg**	**17 10 19.1**	**+2.7**
KORT	**Korkueli**	**1.72 87**	*e*Pn	**Pb**	**17 09 53.3**	**-0.2**
KORT	**Korkueli**	**1.72 87**	P	**Pg**	**17 09 55.3**	**+1.1**
KORT			S	**Sg**	**17 10 19.1**	**+2.7**
URLA	**Izmir**	**1.91 318**	PN	**Pn**	**17 09 54.9**	**+0.3**
URLA	**Izmir**	**1.91 318**	*e*Pn	**Pn**	**17 09 54.9**	**+0.3**
AKS	**Akhisar**	**1.96 351**	PN	**Pn**	**17 09 55.9**	**+0.6**
AKS	**Akhisar**	**1.96 351**	*e*Pn	**Pn**	**17 09 55.9**	**+0.6**
ANTB	**Antalya**	**1.96 90**	PN	**Pb**	**17 09 56.6**	**-0.9**
ANTB	**Antalya**	**1.96 90**	*e*Pn	**Pb**	**17 09 56.6**	**-0.9**
ISP	**Isparta**	**2.04 64**	PN	**Pb**	**17 09 57.7**	**-1.3**
ISP	**Isparta**	**2.04 64**	*e*Pn	**Pb**	**17 09 57.7**	**-1.3**
APE	**Apeiranthos**	**2.15 274**	PN	**Pn**	**17 09 57.6**	**-0.3**
APE	**Apeiranthos**	**2.15 274**	P	**Pn**	**17 09 57.4**	**-0.5**
APE	**Apeiranthos**	**2.15 274**	*e*Pn	**Pn**	**17 09 57.6**	**-0.3**
SIMA	**Simav-Kutahya**	**2.23 16**	PN	**Pn**	**17 09 59.9**	**+0.9**
SIMA	**Simav-Kutahya**	**2.23 16**	*e*Pn	**Pn**	**17 09 59.9**	**+0.9**
CHOS	**Chios island**	**2.24 311**	PN	**Pn**	**17 09 59.5**	**+0.3**
CHOS	**Chios island**	**2.24 311**	P	**Pn**	**17 09 58.4**	**-0.8**
CHOS	**Chios island**	**2.24 311**	P	**Pn**	**17 09 58.5**	**-0.7**
CHOS	**Chios island**	**2.24 311**	*e*Pn	**Pn**	**17 09 59.5**	**+0.3**
SANT	**Santorini**	**2.28 256**	PN	**Pn**	**17 09 59.9**	**+0.2**
SANT	**Santorini**	**2.28 256**	*e*Pn	**Pn**	**17 09 59.9**	**+0.2**
DKL	**Dikili**	**2.36 335**	PN	**Pn**	**17 10 01.6**	**+0.8**
DKL	**Dikili**	**2.36 335**	*e*Pn	**Pn**	**17 10 01.6**	**+0.8**
ZKR	**Zakros**	**2.43 222**	P	**Pn**	**17 10 02.8**	**+1.0**
ZKR	**Zakros**	**2.43 222**	P	**Pn**	**17 10 02.2**	**+0.4**
TVSB	**Tavsanli**	**2.69 21**	PN	**Pn**	**17 10 06.4**	**+0.9**
TVSB	**Tavsanli**	**2.69 21**	*e*Pn	**Pn**	**17 10 06.4**	**+0.9**
BALB	**Balikesir**	**2.71 355**	PN	**Pn**	**17 10 06.4**	**+0.8**
BALB	**Balikesir**	**2.71 355**	*e*Pn	**Pn**	**17 10 06.4**	**+0.8**
KEPZ	**Antalya-Kepez**	**2.72 90**	*i* P	**Pb**	**17 10 09.0**	**-1.5**
KEPZ			*i* S	**Sb**	**17 10 45.2**	**+0.8**
KEPZ	**Antalya-Kepez**	**2.72 90**	P	**Pb**	**17 10 09.0**	**-1.5**
LAST	**Lasithi**	**2.83 232**	P	**Pn**	**17 10 07.5**	**0.0**
LAST	**Lasithi**	**2.83 232**	P	**Pn**	**17 10 07.4**	**0.0**
SIGR	**SIGRI**	**2.93 321**	PN	**Pn**	**17 10 09.2**	**+0.6**
SIGR	**SIGRI**	**2.93 321**	P	**Pn**	**17 10 07.7**	**-0.9**
SIGR	**SIGRI**	**2.93 321**	P	**Pn**	**17 10 08.1**	**-0.5**
SIGR	**SIGRI**	**2.93 321**	*e*Pn	**Pn**	**17 10 09.2**	**+0.6**
IDI	**Anoyia**	**3.15 239**	PN	**Pn**	**17 10 12.6**	**+0.9**
IDI	**Anoyia**	**3.15 239**	*e*Pn	**Pn**	**17 10 12.6**	**+0.9**
LIA	**Limnos Island**	**3.79 322**	P	**Pn**	**17 10 19.6**	**-0.8**
LIA	**Limnos Island**	**3.79 322**	P	**Pn**	**17 10 20.1**	**-0.3**
AKMC	**Akamas** baz=303	**3.85 118**	P	**Pn**	**17 10 21.6**	**+0.3**
AKMC			S	**Sn**	**17 11 06.6**	**-0.5**
AKMC	**Akamas**	**3.85 118**	P	**Pn**	**17 10 21.6**	**+0.3**
AKMC			S	**Sn**	**17 11 06.6**	**-0.5**
PPCY	**Paphos** baz=304	**3.94 120**	P	**Pn**	**17 10 23.0**	**+0.6**
PPCY	**Paphos**	**3.94 120**	P	**Pn**	**17 10 23.0**	**+0.6**
ALFC	**Alefka** baz=299	**3.98 115**	P	**Pn**	**17 10 23.1**	**0.0**
ALFC	**Alefka**	**3.98 115**	P	**Pn**	**17 10 23.1**	**0.0**
SZAC	**Souni** baz=303	**4.38 118**	P	**Pn**	**17 10 28.7**	**+0.1**
SZAC			S	**Sn**	**17 11 20.0**	**-0.1**
SZAC	**Souni**	**4.38 118**	P	**Pn**	**17 10 28.7**	**+0.1**
SZAC			S	**Sn**	**17 11 20.0**	**-0.1**
CSS	**Mathiatis** baz=298	**4.60 114**	P	**Pn**	**17 10 31.8**	**+0.2**
CSS			S	**Sn**	**17 11 25.5**	**-0.1**
CSS	**Mathiatis**	**4.60 114**	P	**Pn**	**17 10 31.8**	**+0.2**
CSS			S	**Sn**	**17 11 25.5**	**-0.1**

*IDC **13** 17:16:24.1±3.6, 23°.92S×177°.75W, h0km, mb4.6/3, mb1 4.7/3, mb1mx3.9/41, mbtmp4.6/3, Error ellipse: s-maj=190.7km s-min=41.0km az=158.0*

NEIC 13 17:16:24.8±2.5, 24°.95S×177°.10W, h35km, mb4.4/1, Error ellipse: s-maj=167.0km s-min=25.9km az=163.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower** 6.5nm,0.4s,baz=90,slow=12,SNR=28	**34.13**	**271**	P	P	17 23 07.5	+0.8
CTAO	**Charters Tower**	**34.13**	**271**	*e*P	P	17 23 07.0	+0.4
ASAR	**Alice Springs** 1.8nm,0.4s,baz=96,slow=7.6,SNR=55	**44.48**	**261**	P	P	17 24 33.6	+0.6
WRAB	**Tennant Creek** 2.8nm,0.5s	**44.97**	**266**	*e*P	P	17 24 35.8	-1.1
WRA	**Warramunga Arr** 2.6nm,0.3s,baz=102,slow=8.3,SNR=154	**44.98**	**266**	P	P	17 24 36.0	-1.0
HFS	**Hagfors** 0.9nm,0.3s,baz=54,slow=3.7,SNR=13	**144.04**	**351**	PKhKP	PKPpre	17 35 55.8	
AKASG	**Malin Array Be** 0.2nm,0.3s,baz=38,slow=4.6,SNR=4.1	**147.26**	**329**	PKPbc	PKPbc	17 36 03.9	-0.4
BRTR	**Keskin Array B** 0.4nm,0.6s,baz=79,slow=2.2,SNR=3.1	**150.31**	**307**	PKPbc	PKPab	17 36 16.5	-2.5
MMAI	**Mount Meron Ar** 0.8nm,0.4s,baz=77,slow=6.2,SNR=4.3	**150.54**	**293**	PKPbc	PKPbc	17 36 14.4	+1.1

IDC 13 17:17:08.6±2.9, 21°.60S×175°.03W, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.8/44, mbtmp4.0/4, Error ellipse: s-maj=265.7km s-min=29.6km az=162.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower** 2.1nm,0.4s,baz=101,slow=9.7,SNR=6.5	**36.15**	**265**	P	P	17 24 14.3	+1.4
ASAR	**Alice Springs** 1.1nm,0.6s,baz=97,slow=7.6,SNR=6.5	**46.98**	**257**	P	P	17 25 40.5	-1.2
WRA	**Warramunga Arr** 0.9nm,0.3s,baz=97,slow=8.5,SNR=10	**47.20**	**262**	P	P	17 25 42.9	-0.6
TXAR	**Lajitas Array**	**85.34**	**56**	P	P	17 29 48.1	0.0
	0.3nm,0.8s,baz=219,slow=5.6,SNR=3.3						

*ISCJB **13** 17:17:20.7±1.1, 24°.38S±0°.10×179°.0W±0°.2, h350km, mb3.4/3, Error ellipse: s-maj=23.4km s-min=11.8km az=15.3*

*IDC **13** 17:17:21.9±4.2, 24°.42S×178°.95W, h345km±40km, mb3.4/3, mb1 3.6/5, mb1mx3.2/43, mbtmp4.3/5, Error ellipse: s-maj=38.8km s-min=23.2km az=145.0*

ISC 13 17:17:21.2±1.0, 24°.45±0°.1×178°.9W±0°.2, h350km, n9, σ1°.07/9, mb3.4/3, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu** 1.4nm,0.3s,baz=259,slow=5.2,SNR=2.8	**12.43**	**34**	P	**Pn**	**17 20 09.0**	**+0.7**
URZ	**Urewera** 0.6nm,0.3s,baz=19,slow=18,SNR=3.3	**14.20**	**193**	P	**Pn**	**17 20 28.5**	**-0.2**
URZ	0.3nm,0.3s,baz=114,slow=19,SNR=2.7			S	**S**	**17 23 01.3**	**+0.4**
CTA	**Charters Tower** 1.3nm,0.3s,baz=86,slow=13,SNR=5.1	**32.51**	**271**	P	**P**	**17 23 21.8**	**+1.0**
ASAR	**Alice Springs** 1.1nm,0.4s,baz=95,slow=7.5,SNR=9.2	**42.97**	**261**	P	**P**	**17 24 47.9**	**+0.5**
WRA	**Warramunga Arr** 0.5nm,0.3s,baz=103,slow=8.2,SNR=10	**43.40**	**266**	P	**P**	**17 24 50.4**	**-0.5**
HFS	**Hagfors** 1.0nm,0.3s,baz=67,slow=4.8,SNR=7.6	**143.26**	**350**	PKhKP	PKPpre	17 36 09.6	
BRTR	**Keskin Array B** 0.4nm,0.7s,baz=83,slow=4.5,SNR=2.4	**148.72**	**307**	PKPbc	**PKPab**	**17 36 30.8**	**-2.1**
MMAI	**Mount Meron Ar** 1.2nm,0.5s,baz=62,slow=6.7,SNR=4.2	**148.86**	**294**	PKPbc	**PKPbc**	**17 36 28.3**	**0.0**
EKA	**Eskdalemuir Ar** 0.1nm,0.3s,baz=15,slow=3.1,SNR=3.4	**148.98**	**5**	PKPbc	**PKPbc**	**17 36 27.2**	**-0.6**

IDC 13 17:41:59.0±2.1, 33°.61N×86°.93E, h0km, mb3.3/3, mb1 3.5/5, mb1mx3.2/71, mbtmp3.3/5, ML2.8/2, Error ellipse: s-maj=71.6km s-min=25.7km az=74.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=159,slow=12,SNR=6.0	**13.64**	**346**	Pn	Pn	17 45 13.7	+0.1
KURBB	**Kurchatov Arra** 0.0nm,0.3s,baz=159,slow=11,SNR=3.3	**18.09**	**343**	P	Pn	17 46 10.4	-1.1
SONM	**Songino Array** 0.6nm,0.7s,baz=232,slow=9.0,SNR=3.7	**20.40**	**40**	P	P	17 46 37.5	-0.1
WRA	**Warramunga Arr** 0.2nm,0.5s,baz=320,slow=7.6,SNR=10	**69.84**	**132**	P	P	17 53 11.6	-0.1
ASAR	**Alice Springs** 0.4nm,0.8s,baz=314,slow=6.7,SNR=3.9	**72.41**	**135**	P	P	17 53 27.4	+0.2

*IDC **13** 17:46:06.8±3.3, 36°.09N×71°.33E, h85km±28km, mb3.6/12, mb1 3.7/17, mb1mx3.4/69, mbtmp4.0/17, Error ellipse: s-maj=24.9km s-min=17.9km az=22.0*

*ISCJB **13** 17:46:11.7±0.4, 36°.43N±0°.03×71°.68E±0°.07, h150km, mb3.6/11, Error ellipse: s-maj=7.7km s-min=3.8km az=172.2*

*NNC **13** 17:46:14.9±2.7, 37°.13N×70°.83E, h0km, mb4.3, mpv3.9, Error ellipse: s-maj=21.9km s-min=16.0km az=163.0*

ISC 13 17:46:13.5±0.6, 36°.48N±0°.05×71°.69E±0°.09, h150km, n48, σ1°.73/50, mb3.6/11, 9C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.66**	**176**	P	Pn	17 46 54.6	-2.1
CEP				S	**Sn**	**17 47 28.0**	**-2.0**
CHCP	**Chirah Chowk**	**3.10**	**155**	P	**Pn**	**17 47 01.6**	**-0.5**
THW	**Thamme Wali**	**3.68**	**179**	P	Pn	17 47 07.0	-2.6
SFK	**Sufi-Kurgan** 13nm,0.4s	**3.81**	**21**	⇑P	**Pn**	**17 47 12.1**	**+0.7**
SFK	20nm,0.2s			⇑S	**Sn**	**17 47 56.7**	**+0.3**
SARP	**Sargodha**	**4.62**	**170**	P	**Pn**	**17 47 20.2**	**-1.7**
AML	**Almayashu** SNR=130	**5.85**	**15**	P	**Pn**	**17 47 37.6**	**-1.0**
MNAS	**Manas** 5.8nm,0.6s	**6.03**	**6**	⇑P	**Pn**	**17 47 38.8**	**-1.9**
MNAS	40nm,0.4s			⇑S	**Sn**	**17 48 43.6**	**-5.3**
UCH	**Uchtor** SNR=19	**6.14**	**20**	P	**Pn**	**17 47 42.0**	**-0.4**
KZA	**Kyzart** SNR=11	**6.24**	**25**	P	**Pn**	**17 47 43.6**	**-0.1**
EKS2	**Erkin-Say** SNR=11	**6.38**	**14**	P	**Pn**	**17 47 44.6**	**-0.7**
AAK	**Ala-Archa** 4.0nm,0.3s,baz=151,slow=6.7,SNR=19	**6.52**	**19**	P	**Pn**	**17 47 47.2**	**+0.1**
AAK	2.2nm,0.3s,baz=298,slow=17,SNR=6.9			S	**Sn**	**17 48 58.0**	**-2.5**
AAK	**Ala-Archa** 3.2nm,0.3s	**6.52**	**19**	P	**Pn**	**17 47 47.1**	**-0.1**
AAK	21nm,0.6s			⇑S	**Sn**	**17 48 58.2**	**-2.4**
AAK	**Ala-Archa** SNR=8.6	**6.52**	**19**	P	**Pn**	**17 47 47.1**	**-0.1**
KBK	**Karagaybulak** SNR=5.8	**6.66**	**21**	P	**Pn**	**17 47 50.0**	**+0.9**
KK31	**Karatay Array** 13nm,0.3s,baz=185,slow=16,SNR=247	**6.68**	**353**	⇓P	**Pn**	**17 47 46.3**	**-2.9**
KK31	16nm,0.5s,baz=176,slow=17,SNR=13			⇑S	Sn	17 48 55.9	-8.2
CHMS	**Chumysh** SNR=13	**6.92**	**19**	P	**Pn**	**17 47 52.4**	**-0.1**
TKM2	**Tokmak 2** 4.4nm,0.6s	**7.10**	**24**	⇓P	**Pn**	**17 47 55.0**	**0.0**
TKM2	9.4nm,1.0s			⇓S	**Sn**	**17 49 14.4**	**-0.2**
TKM2	**Tokmak 2** SNR=12	**7.10**	**24**	P	**Pn**	**17 47 55.0**	**0.0**
USP	**Ospenovka** SNR=9.7	**7.12**	**17**	P	**Pn**	**17 47 54.4**	**-0.7**
GEYT	**Alibeck** 8.6nm,0.3s,baz=105,slow=11,SNR=3.3	**10.93**	**282**	P	Pn	17 48 37.6	-8.1
GEYT	baz=95,slow=18,SNR=1.0			S	Sn	17 50 30.2	-16
PYUN	**Piuthan** 53nm,0.4s	**12.69**	**128**	*e*P	**Pn**	**17 49 06.8**	**-2.1**
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=231,slow=12,SNR=8.7	**12.99**	**34**	P	**Pn**	**17 49 13.0**	**+0.6**
DANN	**Dangsing**	**13.02**	**125**	*e*P	**Pn**	**17 49 11.4**	**-1.8**
KOLN	**Koldanda** 20nm,0.4s	**13.30**	**127**	*e*P	**Pn**	**17 49 14.9**	**-1.9**
GKN	**Gorkha**	**13.83**	**124**	*e*P	**Pn**	**17 49 21.3**	**-2.0**
KKN	**Kakani** 33nm,0.6s	**14.40**	**123**	*e*P	**Pn**	**17 49 28.3**	**-2.3**
PKIN	**Phulchoki** 21nm,0.4s	**14.61**	**124**	*e*P	**Pn**	**17 49 32.2**	**-1.1**
GUN	**Gumba**	**14.73**	**121**	*e*P	**Pn**	**17 49 32.4**	**-2.5**
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=207,slow=11,SNR=20	**14.97**	**17**	P	**P**	**17 49 40.1**	**+1.0**
JIRN	**Jiri** 41nm,0.4s	**15.10**	**122**	*e*P	**Pn**	**17 49 38.2**	**-1.3**
AB31	**Akbulak array** 1.5nm,0.3s,baz=141,slow=12,SNR=53	**15.38**	**330**	⇑P	**Pn**	**17 49 38.8**	**-3.6**
AB31	2.4nm,0.6s,baz=148,slow=24,SNR=4.8			⇑S	Sn	17 52 21.5	-12
RAMN	**Ramite** 29nm,0.6s	**15.83**	**123**	*e*P	**Pn**	**17 49 46.5**	**-1.9**
BVAR	**Borovoye Array** 0.5nm,0.3s,baz=172,slow=12,SNR=10	**16.57**	**357**	P	**P**	**17 49 57.4**	**+0.6**
AKTO	**Aktyubinsk** 2.2nm,0.3s,baz=126,slow=11,SNR=35	**17.08**	**329**	P	**P**	**17 50 01.5**	**-1.0**
AKTO	0.2nm,0.3s,baz=252,slow=20,SNR=3.0			S	S	17 52 58.3	-14
AKTO	**Aktyubinsk** 12nm,0.8s	**17.08**	**329**	⇓P	**P**	**17 50 03.6**	**+1.1**
AKTO	6.2nm,0.8s			⇑S	S	17 53 02.8	-10
ZALV	**Zalesovo Beam** 5.1nm,0.3s,baz=221,slow=10,SNR=41	**19.71**	**23**	P	**P**	**17 50 32.8**	**+1.8**
ARU	**Arti** 3.7nm,0.6s,baz=107,slow=6.5,SNR=7.4	**21.84**	**340**	P	**P**	**17 50 55.7**	**+2.0**
AKASG	**Malin Array Be** 0.5nm,0.5s,baz=83,slow=7.8,SNR=5.4	**33.39**	**309**	P	**P**	**17 52 38.2**	**+0.8**
FINES	**FINESS Array B** 0.8nm,0.3s,baz=114,slow=7.9,SNR=13	**37.81**	**326**	P	**P**	**17 53 16.4**	**+1.4**
ARCES	**ARCESS Array B** 1.6nm,0.6s,baz=88,slow=9.1,SNR=6.9	**41.38**	**337**	P	**P**	**17 53 46.7**	**+2.3**
HFS	**Hagfors** 2.7nm,0.5s,baz=91,slow=12,SNR=15	**43.43**	**322**	P	**P**	**17 54 02.4**	**+1.4**
NB2	**NORSAR Subarra** comp=Z,6.8nm,1.1s,baz=96,slow=7.9	**44.73**	**323**	P	**P**	**17 54 12.2**	**+0.7**
NOA	**NORSAR Array B** comp=Z,1.7nm,0.5s,baz=106,slow=7.1,SNR=7.2	**44.73**	**323**	P	**P**	**17 54 12.6**	**+1.1**
EKA	**Eskdalemuir Ar** comp=Z,0.5nm,0.5s,baz=90,slow=6.4,SNR=3.2	**52.69**	**316**	P	**P**	**17 55 11.4**	**-0.7**
TORD	**Torodi Ar. Bea** comp=Z,0.4nm,0.5s,baz=51,slow=5.6,SNR=5.8	**66.27**	**269**	P	P	17 56 43.1	-2.8
YKA	**Yellowknife Ar** comp=Z,0.6nm,0.6s,baz=349,slow=5.2,SNR=7.3	**81.24**	**3**	P	**P**	**17 58 14.5**	**+2.3**
WRA	**Warramunga Arr** comp=Z,0.2nm,0.5s,baz=326,slow=4.8,SNR=3.8	**81.51**	**122**	P	**P**	**17 58 16.1**	**+1.8**
ASAR	**Alice Springs** comp=Z,0.2nm,0.7s,baz=309,slow=6.0,SNR=5.8	**83.79**	**125**	P	**P**	**17 58 27.1**	**+1.0**

*IDC **13** 18:05:18.1±1.7, 10°.37S×118°.34E, h0km, mb3.9/4, mb1 3.7/7, mb1mx3.5/59, mbtmp3.7/7, ML3.4/3, Error ellipse: s-maj=70.3km s-min=21.6km az=43.0*

*ISCJB **13** 18:05:24.6±0.6, 10°.15S±0°.06×118°.81E±0°.03, h37km, mb3.9/4, Error ellipse: s-maj=8.3km s-min=3.5km az=7.7*

*DJA **13** 18:05:25.8±0.5, 10°.5±3°.1×11°.9E±°.1, h11km±3km, M4.0/14, mb4.1/2, MLv3.9/14*

ISC 13 18:05:26.2±0.9, 10°.04S±0°.08×118°.81E±0°.04, h37km, n20, σ2°.34/33, mb3.9/4, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**0.70**	**55**	P	**Pn**	**18 05 38.2**	**-1.4**
WBSI				S	**Sn**	**18 05 47.9**	**-1.3**
WSI	**Waingapu**	**1.51**	**76**	P	**Pn**	**18 05 51.4**	**+0.7**
PLAI	**Plampang**	**1.58**	**320**	P	**Pn**	**18 05 51.4**	**-0.3**
PLAI				S	**Sn**	**18 06 14.1**	**+3.2**
BASI	**Baing, Sumba**	**1.75**	**96**	P	**Pn**	**18 05 57.3**	**+3.3**
BASI				S	**Sn**	**18 06 20.0**	**+5.0**
TWSI	**Taliwang, Sumb**	**2.30**	**304**	P	**Pn**	**18 06 02.2**	**+0.6**
TWSI				S	**Sn**	**18 06 31.8**	**+3.1**
EDFI	**Ende, Flores**	**3.12**	**66**	P	**Pn**	**18 06 14.2**	**+1.3**
EDFI				S	**Sn**	**18 06 51.4**	**+2.4**
MMRI	**Maumere**	**3.66**	**68**	P	**Pn**	**18 06 22.0**	**+1.7**
MMRI				S	**Sn**	**18 07 03.8**	**+1.6**
IGBI	**Denpasar**	**3.81**	**288**	P	**Pn**	**18 06 22.4**	**0.0**
IGBI				S	**Sn**	**18 07 06.7**	**+0.7**
SRBI	**Singaraja**	**4.05**	**298**	P	**Pn**	**18 06 28.6**	**+2.9**
SRBI				S	**Sn**	**18 07 17.1**	**+5.2**
BATI	**Baumata** 2.4nm,0.3s,baz=270,slow=1.0,SNR=7.8	**4.78**	**92**	Pn	**Pn**	**18 06 37.7**	**+1.9**
BATI	6.1nm,0.3s,baz=292,slow=22,SNR=5.9			Sn	**Sn**	**18 07 30.3**	**+0.4**
BATI	**Baumata**	**4.78**	**92**	P	**Pn**	**18 06 37.6**	**+1.9**
BATI				S	**Sn**	**18 07 31.3**	**+1.3**
JAGI	**Jajag, Banyuwa**	**4.86**	**288**	P	**Pn**	**18 06 39.3**	**+2.5**
JAGI				S	**Sn**	**18 07 32.7**	**+0.9**
BKSI	**Bulukumba**	**4.87**	**16**	P	**Pn**	**18 06 38.5**	**+1.6**
BKSI				S	**Sn**	**18 07 33.8**	**+1.8**
SOEI	**Soe**	**5.38**	**87**	P	**Pn**	**18 06 47.0**	**+2.9**
SOEI				S	**Sn**	**18 07 47.7**	**+2.7**
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=300,slow=13,SNR=8.7	**17.93**	**125**	P	**Pn**	**18 09 30.8**	**-2.0**
WRA	0.1nm,0.3s,baz=297,slow=20,SNR=4.3			S	Sn	18 12 39.9	-12
ASAR	**Alice Springs** 0.1nm,0.3s,baz=307,slow=9.9,SNR=16	**19.78**	**135**	P	**P**	**18 09 52.0**	**-1.3**
SONM	**Songino Array** 0.4nm,0.5s,baz=167,slow=7.7,SNR=3.0	**58.66**	**350**	P	**P**	**18 15 18.7**	**-1.2**
MKAR	**Makanchi Array** 0.5nm,0.6s,baz=152,slow=7.1,SNR=6.8	**65.29**	**333**	P	**P**	**18 16 02.5**	**-1.9**
KURBB	**Kurchatov Arra** 0.6nm,0.2s,baz=119,slow=5.8,SNR=2.7	**69.81**	**334**	P	**P**	**18 16 31.2**	**-1.6**
ZALV	**Zalesovo Beam** 0.6nm,0.4s,baz=152,slow=5.7,SNR=3.8	**69.94**	**339**	P	**P**	**18 16 31.8**	**-1.7**

NNC 13 18:35:41.5±3.5, 36°.78N×70°.58E, h0km, mb3.6, mpv3.3, 3C-3D, Error ellipse: s-maj=27.0km s-min=24.2km az=154.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan** 1.4nm,0.3s	**3.96**	**35**	⇑Pn	Pn	18 36 43.2	-0.5
SFK	3.1nm,0.3s			⇑Sn	Sn	18 37 32.7	+1.8
MNAS	**Manas** 1.5nm,0.4s	**5.89**	**14**	⇓Pn	Pn	18 37 10.0	-0.1
MNAS	11nm,0.5s			⇓Sn	Sn	18 38 18.6	+0.2
KK31	**Karatay Array** 1.0nm,0.3s,baz=177,slow=12,SNR=73	**6.32**	**360**	⇑Pn	Pn	18 37 16.9	+1.1
KK31	6.7nm,0.5s,baz=187,slow=25,SNR=14			⇓Sn	Sn	18 38 30.0	+1.3

IDC 13 18:40:53.7±1.7, 5°.68S×131°.27E, h0km, mb3.9/2, mb1 3.9/5, mb1mx3.5/49, mbtmp3.9/5, ML3.8/3, Error ellipse: s-maj=57.5km s-min=27.2km az=82.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata** 4.4nm,0.3s,baz=89,slow=6.6,SNR=7.2	**8.77**	**239**	Pn	Pn	18 43 02.9	+1.0
BATI	1.2nm,0.3s,baz=162,slow=20,SNR=2.8			Sn	Sn	18 44 29.3	-12
WRA	**Warramunga Arr** 0.3nm,0.3s,baz=349,slow=14,SNR=27	**14.49**	**168**	Pn	Pn	18 44 19.4	-0.8
WRA	1.1nm,0.3s,baz=342,slow=22,SNR=9.7			Sn	Sn	18 46 46.4	-15
ASAR	**Alice Springs** 0.2nm,0

BASI Baing, Sumba 4.54 287 P **Pn 18 53 00.2 0.0**
BASI S **Sn 18 53 50.3 -1.6**
WSI Waingapu 4.99 292 P **Pn 18 53 07.9 +1.5**
WBSI Waikabubak, Su 5.84 288 P **Pn 18 53 17.0 -1.0**
101nm,0.8s,2μm1.2nm
WBSI S **Sn 18 54 18.6 -5.2**
101nm,0.8s,2μm1.2nm
BSSI Bau Bau, Buton 6.99 320 P **Pn 18 53 32.9 -0.9**
24nm,0.6s
PLAI Plampang 7.61 290 P **Pn 18 53 41.6 -0.8**
84nm,1.1s,2μm
BKSI Bulukumba 7.85 322 P **Pn 18 53 44.7 -1.0**
TWSI Taliwang, Sumb 8.47 289 P **Pn 18 53 52.9 -1.3**
WRA Warramunga Arr 12.26 134 Pn Pn 18 54 41.1 -4.9
3.2nm,0.3s,baz=302,slow=13,SNR=96
WRA Sn Sn 18 56 49.0 -13
8.5nm,0.3s,baz=293,slow=26,SNR=13
WRAB Tennant Creek 12.26 134 *e*P Pn 18 54 41.0 -5.1
16nm,0.6s
ASAR Alice Springs 14.72 146 Pn Pn 18 55 15.7 -4.0
4.8nm,0.3s,baz=320,slow=11,SNR=172
ASAR Sn Sn 18 57 50.6 -11
2.6nm,0.3s,baz=322,slow=24,SNR=13
ASAR LR LR 19 00 26.6
comp=Z,136nm,20.4s,baz=334,slow=35
PMG Port Moresby 21.89 87 P **P 18 56 39.7 -4.4**
6.5nm,0.7s,baz=261,slow=15,SNR=3.9
PMG LR LR 19 06 47.5
comp=Z,87nm,18.5s,baz=260,slow=42
CTA Charters Tower 22.12 115 P **P 18 56 44.7 -1.8**
3.0nm,0.7s,baz=280,slow=12,SNR=4.2
CTAO Charters Tower 22.12 115 *e*P **P 18 56 44.5 -2.0**
6.9nm,0.7s
NWAO Narrogin (SRO) 22.44 197 P **P 18 56 51.2 +1.4**
13nm,0.8s,baz=322,slow=19,SNR=4.8
STKA Stephens Creek 25.36 145 P **P 18 57 17.4 -0.4**
3.8nm,0.9s,baz=316,slow=9.5,SNR=5.3
CMAR Chiang Mai Arr 39.38 319 P **P 18 59 20.1 -0.2**
0.6nm,0.9s,baz=298,slow=38,SNR=3.8
KSAR Wonju Array Be 48.81 3 P **P 19 00 37.2 +1.5**
KSRS Korea Array 48.82 3 P **P 19 00 37.2 +1.4**
0.3nm,0.6s,baz=188,slow=9.6,SNR=2.6
H08S2 Diego Garcia H 51.87 269 T T 19 56 19.2
baz=98,slow=75,SNR=12
H08S3 Diego Garcia H 51.88 269 T T 19 56 17.2
baz=98,slow=75,SNR=17
H08S1 Diego Carcia H 51.88 269 T T 19 56 19.9
baz=98,slow=75,SNR=13
ASAJ Asahikawa 57.67 15 LR LR 19 26 52.0
comp=Z,12nm,20.0s,baz=175,slow=37
SONM Songino Array 61.40 346 P **P 19 02 10.2 +3.6**
0.2nm,0.3s,baz=164,slow=5.7,SNR=2.1
MKAR Makanchi Array 69.50 330 P **P 19 02 58.7 -0.2**
0.3nm,0.6s,baz=149,slow=8.3,SNR=2.9
PETK Petropavlovsk- 70.22 20 P **P 19 03 02.8 -0.3**
1.1nm,0.8s,baz=187,slow=5.8,SNR=2.6
ZALV Zalesovo Beam 73.62 337 P **P 19 03 22.8 -0.7**
1.0nm,0.6s,baz=154,slow=3.8,SNR=5.0
KURBB Kurchatov Arra 73.95 331 P **P 19 03 25.6 +0.1**
0.7nm,0.6s,baz=144,slow=5.2,SNR=10
KURK Kurchatov 73.97 331 P **P 19 03 25.6 0.0**
BVAR Borovoye Array 79.39 330 P **P 19 03 56.5 +0.3**
0.5nm,0.6s,baz=128,slow=6.6,SNR=5.9
SNAA Sanae 90.08 194 P **P 19 04 51.4 +1.5**
1.2nm,0.9s,baz=109,slow=8.4,SNR=3.3
MATP Matopo 92.01 249 P **P 19 05 01.5 +1.5**
0.8nm,0.8s,baz=108,slow=5.3,SNR=3.3
TORD Torodi Ar. Bea 124.70 278 PKP **PKPdf 19 10 50.7 -0.1**
0.5nm,0.6s,baz=90,slow=1.4,SNR=2.9

IDC 13 19:03:41.6±5.2, 31°.17S×179°.01W, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.6/42, mbtmp3.6/2, Error ellipse: s-maj=203.8km s-min=55.6km az=156.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.21**	**268**	P	P	19 11 36.3	-0.3
	0.5nm,0.6s,baz=109,slow=7.7,SNR=9.1						
WRA	**Warramunga Arr**	**43.27**	**274**	P	P	19 11 45.0	-0.1
	0.6nm,0.5s,baz=114,slow=8.0,SNR=12						
FINES	**FINESS Array B**	**145.56**	**339**	PKPbc	PKPdf	19 23 20.4	-0.6
	1.1nm,0.6s,baz=47,slow=2.5,SNR=7.7						

*ROM **13** 19:12:44.7±0.1, 44°.883N±0°.004×11°.011E±0°.008, h8km±2km, ML2.2/9*
*ISCJB **13** 19:12:45.5±0.6, 44°.93N±0°.03×10°.99E±0°.04, h9km±7km, Error ellipse: s-maj=4.9km s-min=4.6km az=10.2*
*CSEM **13** 19:12:45.3±0.3, 44°.92N×11°.02E, h10km, ML2.2, Error ellipse: s-maj=11.8km s-min=6.4km az=92.0*

ISC 13 19:12:45.5±0.9, 44°.90N±0°.03×11°.00E±0°.03, h14km±5km, n43, σ1§09/52, 6C-10D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NDIM	**Novi di Modena**	**0.07**	**263**	*e*P	**Pg**	**19 12 46.5**	**-1.8**
NDIM				*e*S	**Sg**	**19 12 49.3**	**-0.9**
NDIM				AML	AML		
	comp=E,4835μm,0.2s						
NDIM				AML	AML		
	comp=N,6715μm,0.5s						
NDIM				AML	AML		
	comp=E,4935μm,0.2s						
NDIM				AML	AML		
	comp=N,6630μm,0.5s						
NDIM				AML	AML		
	comp=E,4835μm,0.2s						
NDIM				AML	AML		
	comp=N,6715μm,0.5s						
NDIM				AML	AML		
	comp=E,4935μm,0.2s						
NDIM				AML	AML		
	comp=N,6630μm,0.5s						
T0802	**SanFelice sul**	**0.13**	**100**	⇑*e*P	**Pg**	**19 12 48.1**	**-0.8**
T0802				⇑*e*S	**Sg**	**19 12 52.4**	**+1.1**
T0802	**SanFelice sul**	**0.13**	**100**	*e*P	**Pg**	**19 12 48.1**	**-0.8**
T0802				*e*S	**Sg**	**19 12 52.4**	**+1.1**
T0825	**Gonzaga (MN)**	**0.14**	**304**	AML	AML		
	comp=E,8175μm,0.4s						
T0825				AML	AML		
	comp=N,7575μm,0.6s						
T0826	**Rio Saliceto (**	**0.15**	**247**	AML	AML		
	comp=E,3985μm,0.1s						
T0826				AML	AML		
	comp=N,3075μm,0.2s						
T0826				AML	AML		
	comp=E,3990μm,0.1s						
T0826				AML	AML		
	comp=N,3075μm,0.2s						
RAVA	**Ravarino**	**0.16**	**150**	⇓*e*P	**Pg**	**19 12 48.7**	**-0.7**
RAVA				⇓*e*S	**Sg**	**19 12 52.9**	**+0.8**
RAVA	**Ravarino**	**0.16**	**150**	*e*P	**Pg**	**19 12 48.7**	**-0.7**
RAVA				*e*S	**Sg**	**19 12 52.9**	**+0.8**
RAVA				AML	AML		
	comp=E,4545μm,0.3s						
RAVA				AML	AML		
	comp=N,4955μm,1.6s						
RAVA				AML	AML		
	comp=E,4545μm,0.3s						
RAVA				AML	AML		
	comp=N,4955μm,1.6s						
SBPO	**S.Benedetto Po**	**0.17**	**339**	⇓*e*P	**Pg**	**19 12 49.7**	**+0.2**
SBPO	**S.Benedetto Po**	**0.17**	**339**	*e*P	**Pg**	**19 12 49.7**	**+0.2**
SBPO				AML	AML		
	comp=E,1425μm,0.5s						
SBPO				AML	AML		
	comp=N,4715μm,0.4s						
SBPO				AML	AML		
	comp=N,4715μm,0.4s						
SBPO				AML	AML		
	comp=E,1425μm,0.5s						
T0800	**Massa Finalese**	**0.18**	**105**	⇓*i*P	**Pg**	**19 12 48.8**	**-0.9**
T0800				⇓*i*S	**Sg**	**19 12 53.7**	**+1.2**
T0800	**Massa Finalese**	**0.18**	**105**	*i*P	**Pg**	**19 12 48.8**	**-0.9**
T0800				*i*S	**Sg**	**19 12 53.7**	**+1.2**
T0800				AML	AML		
	comp=E,4180μm,0.6s						
T0800				AML	AML		
	comp=N,4390μm,0.5s						
T0800				AML	AML		
	comp=E,4465μm,0.6s						
T0800				AML	AML		
	comp=N,4245μm,0.4s						
T0800				AML	AML		
	comp=E,4185μm,0.6s						
T0800				AML	AML		
	comp=N,4390μm,0.5s						
T0800				AML	AML		
	comp=E,4460μm,0.6s						
T0800				AML	AML		
	comp=N,4245μm,0.4s						
NOVE	**Novellara**	**0.23**	**244**	⇓*e*P	**Pg**	**19 12 49.0**	**-1.5**
NOVE				⇓*e*S	**Sg**	**19 12 55.6**	**+1.8**
NOVE	**Novellara**	**0.23**	**244**	*e*P	**Pg**	**19 12 50.0**	**-0.5**
NOVE				*e*S	**Sg**	**19 12 55.6**	**+1.8**
NOVE				AML	AML		
	comp=E,1045μm,1.3s						
NOVE				AML	AML		
	comp=N,960μm,0.3s						
NOVE				AML	AML		
	comp=E,1040μm,1.3s						
NOVE				AML	AML		
	comp=N,960μm,0.3s						
NOVE				AML	AML		
	comp=E,1040μm,1.3s						
NOVE				AML	AML		
	comp=N,960μm,0.3s						
T0805	**Bondeno (FE)**	**0.23**	**84**	⇓*e*P	**Pg**	**19 12 49.8**	**-0.7**
T0805	**Bondeno (FE)**	**0.23**	**84**	*e*P	**Pg**	**19 12 49.8**	**-0.7**
SERM	**Sermide**	**0.24**	**61**	AML	AML		
	comp=N,416μm,0.9s						
SERM				AML	AML		
	comp=E,382μm,0.4s						
ZCCA	**Zocca**	**0.55**	**182**	⇓*e*P	**Pn**	**19 12 59.5**	**+0.5**
ZCCA	**Zocca**	**0.55**	**182**	*e*P	**Pn**	**19 12 59.5**	**+0.5**
TEOL	**Teolo**	**0.66**	**45**	⇑*e*Pg	**Pb**	**19 12 58.3**	**-0.6**
TEOL	**Teolo**	**0.66**	**45**	*e*Pg	**Pb**	**19 12 58.3**	**-0.6**
ROVR	**Rover¯¤ Verone**	**0.75**	**4**	AML	AML		
	comp=E,141μm,0.4s						
ROVR				AML	AML		
	comp=E,141μm,0.4s						
ROVR				AML	AML		
	comp=N,221μm,0.4s						
ROVR				AML	AML		
	comp=E,141μm,0.4s						
ROVR				AML	AML		
	comp=N,221μm,0.4s						
ROVR				AML	AML		
	comp=N,221μm,0.4s						
MARN	**Marana (Italy)**	**0.76**	**11**	*e*Pg	**Pb**	**19 13 00.4**	**-0.2**
MARN				*e*Sg	**Sn**	**19 13 12.0**	**-1.2**
MARN	**Marana (Italy)**	**0.76**	**11**	*e*Pg	**Pb**	**19 13 00.4**	**-0.2**
MARN				*e*Sg	**Sn**	**19 13 12.0**	**-1.2**
SALO	**Salr**	**0.80**	**335**	⇑*i*P	**Pn**	**19 13 02.7**	**+0.2**
SALO	**Salr**	**0.80**	**335**	*i*P	**Pn**	**19 13 02.7**	**+0.2**
SALO				AML	AML		
	comp=E,152μm,1.0s						
SALO				AML	AML		
	comp=N,155μm,0.6s						
SALO				AML	AML		
	comp=N,155μm,0.6s						
SALO				AML	AML		
	comp=E,152μm,1.0s						
MAGA	**Magasa**	**0.92**	**343**	⇑*e*P	**Pg**	**19 13 02.4**	**-0.9**
MAGA	**Magasa**	**0.92**	**343**	*e*P	**Pg**	**19 13 02.4**	**-0.9**
MAGA				AML	AML		
	comp=E,798μm,1.5s						
MAGA				AML	AML		
	comp=N,488μm,0.3s						
MAGA				AML	AML		
	comp=N,488μm,0.3s						
MAGA				AML	AML		
	comp=E,798μm,1.5s						
DOSS	**Dosso del Somm**	**0.99**	**7**	*e*Pg	**Pg**	**19 13 03.7**	**-1.0**
DOSS	**Dosso del Somm**	**0.99**	**7**	*e*Pg	**Pg**	**19 13 03.7**	**-1.0**
CGRP	**Cima Grappa**	**1.13**	**29**	⇓*e*Pg	**Pg**	**19 13 06.5**	**-1.0**
CGRP				⇓*e*Sg	**Sn**	**19 13 23.7**	**+1.0**
CGRP	**Cima Grappa**	**1.13**	**29**	*e*Pg	**Pg**	**19 13 06.4**	**-1.0**
CGRP				*e*Sg	**Sn**	**19 13 23.7**	**+1.0**
CGRP	**Cima Grappa**	**1.13**	**29**	AML	AML		
	comp=E,104μm,0.4s						
CGRP				AML	AML		
	comp=E,104μm,0.4s						
CGRP				AML	AML		
	comp=N,83μm,1.2s						
CGRP				AML	AML		
	comp=N,83μm,1.2s						
PANI	**Panarotta**	**1.18**	**11**	⇑*e*Pg	**Pb**	**19 13 07.5**	**-0.3**
PANI				*e*Sg	**Sn**	**19 13 24.5**	**+0.7**
PANI	**Panarotta**	**1.18**	**11**	*e*Pg	**Pb**	**19 13 07.5**	**-0.3**
PANI				*e*Sg	**Sn**	**19 13 24.5**	**+0.7**
MABI	**Malga Bissina**	**1.21**	**344**	AML	AML		
	comp=N,31μm,0.6s						
MABI				AML	AML		
	comp=E,31μm,0.9s						
MABI				AML	AML		
	comp=N,31μm,0.6s						
MABI				AML	AML		
	comp=E,31μm,0.9s						
CARE	**Lago del Cares**	**1.54**	**352**	*e*Pg	**Pn**	**19 13 13.3**	**+0.4**
CARE	**Lago del Cares**	**1.54**	**352**	*e*Pg	**Pn**	**19 13 13.4**	**+0.4**
KOSI	**Kohlern**	**1.59**	**9**	AML	AML		
	comp=N,45μm,1.2s						
KOSI				AML	AML		
	comp=E,49μm,0.7s						
KOSI				AML	AML		
	comp=N,45μm,1.2s						
KOSI				AML	AML		
	comp=E,49μm,0.7s						
ABSI	**Aberstueckl**	**1.85**	**7**	AML	AML		
	comp=E,182μm,0.6s						
ABSI				AML	AML		
	comp=N,92μm,0.6s						
ABSI				AML	AML		
	comp=E,182μm,0.6s						
ABSI				AML	AML		
	comp=N,92μm,0.6s						
FETA	**Feichten**	**2.13**	**355**	*i*Pg	**Pg**	**19 13 25.0**	**-1.5**
	comp=N,1.7nm,0.4s						
FETA				*i*Sg	**Sg**	**19 13 56.8**	**+2.7**
	comp=N,2.0nm,0.5s						
FETA	**Feichten**	**2.13**	**355**	Pg	**Pg**	**19 13 25.0**	**-1.5**
	comp=N,1.7nm,0.4s						
FETA				Sg	**Sg**	**19 13 56.8**	**+2.7**
	comp=N,2.0nm,0.5s						
WTTA	**Wattenberg**	**2.41**	**10**	*i*Sg	**Sg**	**19 14 02.2**	**-0.8**
	comp=N,2.1nm,0.2s						
WTTA	**Wattenberg**	**2.41**	**10**	Sg	**Sg**	**19 14 02.2**	**-0.8**
	comp=N,2.1nm,0.2s						

*IDC **13** 19:27:29.0±0.8, 38°.20N×21°.50E, h0km, mb3.7/11, mb1 3.7/17, mb1mx3.6/65, mbtmp3.6/17, ML3.5/6, MS2.6/2, Ms1 2.6/2, ms1mx2.2/71, Error ellipse: s-maj=18.2km s-min=14.2km az=23.0*
*BEO **13** 19:27:28.0±1.3, 37°.73N×21°.46E, h10km*
*IASPEI **13** 19:27:30.9±0.8, 38°.04N±0°.01×21°.55E±0°.01, h17km±4km, mb3.7/11, Error ellipse: s-maj=2.0km s-min=1.9km az=50.7, GT5 selection from ISC bulletin GT5 identified by Bond¯jr and McLaughlin (2009) selection criteria Bond¯jr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
*ATH **13** 19:27:30.6, 38°.04N×21°.56E, h23km, ML3.8/32, Error ellipse: s-maj=0.9km s-min=0.6km az=275.0*
*CSEM **13** 19:27:31.0±0.1, 38°.04N×21°.54E, h10km, ML3.8, Error ellipse: s-maj=2.5km s-min=1.8km az=43.0*
*THE **13** 19:27:31.3, 38°.04N×21°.56E, h18km, ML3.8/20, Error ellipse: s-maj=0.4km s-min=0.2km az=248.0*
*ISCJB **13** 19:27:31.1±0.2, 38°.04N±0°.01×21°.50E±0°.02, h22km±2km, mb3.6/11, Error ellipse: s-maj=2.6km s-min=2.0km az=36.1*

ISC 13 19:27:31.3±0.7, 38°.05N±0°.01×21°.54E±0°.01, h17km±4km, n236, σ1§18/320, mb3.7/11, 5C-13D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.06**	**282**	P	**Pg**	**19 27 34.4**	**-0.1**
RLS				S	**Sg**	**19 27 36.3**	**-0.4**
RLS				AML	AML	19 27 37.5	
RLS				AML	AML	19 27 37.8	
RLS	**Riolos of Patr**	**0.06**	**282**	P	**Pg**	**19 27 34.6**	**+0.1**
RLS				S	**Sg**	**19 27 37.3**	**+0.6**
RLS	**Riolos of Patr**	**0.06**	**282**	P	**Pg**	**19 27 34.6**	**+0.1**
RLS				S	**Sg**	**19 27 36.9**	**+0.2**
DRO	**Drossia**	**0.17**	**124**	P	**Pb**	**19 27 35.3**	**-0.6**
DRO				S	**Sb**	**19 27 38.0**	**-0.9**
DRO	**Drossia**	**0.17**	**124**	P	**Pb**	**19 27 35.5**	**-0.4**
DRO				S	**Sg**	**19 27 38.9**	**+0.2**
DRO	**Drossia**	**0.17**	**124**	P	**Pb**	**19 27 35.4**	**-0.4**
DRO				S	**Sg**	**19 27 38.5**	**-0.2**
AXS	**Araxos**	**0.20**	**320**	P	**Pb**	**19 27 36.2**	**-0.2**
AXS				S	**Sg**	**19 27 40.3**	**+0.9**
AXS	**Araxos**	**0.20**	**320**	P	**Pb**	**19 27 36.2**	**-0.2**
AXS				S	**Sg**	**19 27 40.3**	**+0.9**
VTN	**Vitineika**	**0.31**	**245**	P	**Pb**	**19 27 39.2**	**+1.0**
VTN	**Vitineika**	**0.31**	**245**	P	**Pb**	**19 27 38.5**	**+0.2**
VTN				S	**Sb**	**19 27 43.2**	**+0.2**
VTN	**Vitineika**	**0.31**	**245**	P	**Pb**	**19 27 38.5**	**+0.2**
VTN				S	**Sb**	**19 27 43.2**	**+0.2**
UPR	**University Cam**	**0.31**	**39**	P	**Pb**	**19 27 38.6**	**+0.3**
UPR				S	**Sg**	**19 27 42.8**	**+0.3**
UPR	**University Cam**	**0.31**	**39**	P	**Pg**	**19 27 37.7**	**-0.2**
UPR				S	**Sg**	**19 27 42.9**	**+0.5**
UPR	**University Cam**	**0.31**	**39**	P	**Pg**	**19 27 37.7**	**-0.2**
UPR				S	**Sg**	**19 27 42.7**	**+0.3**
LAKA	**Lakka**	**0.40**	**61**	P	**Pg**	**19 27 38.9**	**-0.6**
LAKA				AML	AML	19 27 46.3	
	comp=N,12550μm,0.4s						
LAKA				AML	AML	19 27 51.3	
	comp=E,13492μm,0.7s						
LAKA	**Lakka**	**0.40**	**61**	P	**Pg**	**19 27 38.9**	**-0.6**
LAKA				S	**Sg**	**19 27 45.2**	**+0.1**
LAKA	**Lakka**	**0.40**	**61**	P	**Pg**	**19 27 39.0**	**-0.6**
LAKA				S	**Sg**	**19 27 45.2**	**+0.1**
EFP	**Efpalio**	**0.48**	**37**	P	**Pg**	**19 27 40.3**	**-0.7**
EFP				S	**Sb**	**19 27 48.2**	**+0.3**
EFP				AML	AML	19 27 49.2	
	comp=N,32083μm,0.7s						
EFP				AML	AML	19 27 50.3	
	comp=E,28904μm,0.3s						
EFP	**Efpalio**	**0.48**	**37**	P	**Pg**	**19 27 40.6**	**-0.3**
EFP				S	**Sg**	**19 27 47.6**	**+0.2**
EFP	**Efpalio**	**0.48**	**37**	P	**Pg**	**19 27 40.6**	**-0.3**
EFP				S	**Sg**	**19 27 47.6**	**+0.2**
KLV	**Kalavryta, Ach**	**0.48**	**90**	P	**Pg**	**19 27 40.5**	**-0.5**
KLV				S	**Sg**	**19 27 48.4**	**+0.7**
KLV				AML	AML	19 27 48.5	
	comp=N,30372μm,0.5s						
KLV				AML	AML	19 27 51.0	
	comp=E,22963μm,0.7s						
KLV	**Kalavryta, Ach**	**0.48**	**90**	P	**Pg**	**19 27 40.1**	**-1.0**
KLV				S	**Sg**	**19 27 47.6**	**0.0**
KLV	**Kalavryta, Ach**	**0.48**	**90**	P	**Pg**	**19 27 40.4**	**-0.7**
KLV				S	**Sg**	**19 27 47.4**	**-0.2**
ALIK	**Aliki, Aigiali**	**0.50**	**64**	P	**Pg**	**19 27 40.9**	**-0.4**
ALIK				S	**Sg**	**19 27 48.6**	**+0.5**
ALIK	**Aliki, Aigiali**	**0.50**	**64**	P	**Pg**	**19 27 40.9**	**-0.4**
ALIK				S	**Sg**	**19 27 48.6**	**+0.5**
TRIZ	**Trizonia**	**0.53**	**53**	P	**Pb**	**19 27 41.4**	**-0.8**
TRIZ				S	**Sb**	**19 27 49.8**	**+0.4**
TRIZ	**Trizonia**	**0.53**	**53**	P	**Pb**	**19 27 41.3**	**-0.8**
TRIZ				S	**Sg**	**19 27 49.5**	**+0.5**
TRIZ	**Trizonia**	**0.53**	**53**	P	**Pb**	**19 27 41.3**	**-0.8**
TRIZ				S	**Sg**	**19 27 49.1**	**+0.1**
AMT	**Artemida-Makis**	**0.53**	**165**	P	**Pb**	**19 27 42.1**	**0.0**
AMT				S	**Sg**	**19 27 48.5**	**-0.5**
AMT				AML	AML	19 27 51.2	
	comp=E,61116μm,0.6s						
AMT				AML	AML	19 27 52.8	
	comp=N,47646μm,0.3s						
AMT	**Artemida-Makis**	**0.53**	**165**	P	**Pb**	**19 27 41.5**	**-0.7**
AMT				S	**Sg**	**19 27 49.3**	**+0.3**
AMT	**Artemida-Makis**	**0.53**	**165**	P	**Pb**	**19 27 41.4**	**-0.7**
AMT				S	**Sg**	**19 27 48.7**	**-0.3**
SERG	**Sergoula**	**0.55**	**48**	P	**Pb**	**19 27 41.7**	**-0.7**
SERG				S	**Sb**	**19 27 49.9**	**-0.2**
SERG				AML	AML	19 27 51.9	
	comp=N,21474μm,0.2s						
SERG				AML	AML	19 27 54.1	
	comp=E,15976μm,0.3s						
SERG	**Sergoula**	**0.55**	**48**	P	**Pb**	**19 27 41.7**	**-0.7**
SERG				S	**Sb**	**19 27 50.2**	**+0.2**
SERG	**Sergoula**	**0.55**	**48**	P	**Pb**	**19 27 41.7**	**-0.7**
SERG				S	**Sb**	**19 27 49.7**	**-0.3**
PVO	**Paravola**	**0.57**	**359**	P	**Pb**	**19 27 42.9**	**+0.1**
PVO				AML	AML	19 27 56.1	
	comp=E,10730μm,0.4s						
PVO				AML	AML	19 27 56.3	
	comp=N,11195μm,0.5s						
PVO	**Paravola**	**0.57**	**359**	P	**Pb**	**19 27 42.5**	**-0.3**
PVO				S	**Sg**	**19 27 51.3**	**+1.0**
PVO	**Paravola**	**0.57**	**359**	P	**Pb**	**19 27 42.5**	**-0.3**
PVO				S	**Sg**	**19 27 51.3**	**+1.0**
KFL	**Anninata**	**0.59**	**276**	P	**Pb**	**19 27 43.2**	**0.0**
KFL				S	**Sn**	**19 27 53.4**	**-0.8**
KFL				AML	AML	19 27 58.2	
	comp=E,32684μm,0.4s						
KFL				AML	AML	19 27 59.5	
	comp=N,22363μm,0.5s						
KFL	**Anninata**	**0.59**	**276**	P	**Pb**	**19 27 43.1**	**-0.1**
KFL				S	**Sb**	**19 27 52.2**	**+1.2**
KFL	**Anninata**	**0.59**	**276**	P	**Pb**	**19 27 43.0**	**-0.1**
KFL				S	**Sg**	**19 27 52.2**	**+1.2**
PDO	**Prodromos**	**0.62**	**333**	P	**Pb**	**19 27 43.5**	**-0.2**
PDO				AML	AML	19 27 57.9	
	comp=N,24799μm,0.3s						
PDO				AML	AML	19 27 58.5	
	comp=E,18495μm,0.3s						
PDO	**Prodromos**	**0.62**	**333**	P	**Pb**	**19 27 43.4**	**-0.2**
PDO				S	**Sg**	**19 27 52.7**	**+0.9**
PDO	**Prodromos**	**0.62**	**333**	P	**Pb**	**19 27 43.4**	**-0.2**
PDO				S	**Sg**	**19 27 52.7**	**+0.9**
ANX	**Ano Chora**	**0.62**	**29**	P	**Pb**	**19 27 43.1**	**-0.7**
ANX				S	**Sg**	**19 27 53.5**	**+1.4**
ANX				AML	AML	19 27 54.6	
	comp=N,13059μm,0.8s						
ANX				AML	AML	19 27 56.0	
	comp=E,15760μm,0.4s						
ANX	**Ano Chora**	**0.62**	**29**	P	**Pb**	**19 27 43.1**	**-0.7**
ANX				S	**Sb**	**19 27 52.4**	**+0.1**
ANX	**Ano Chora**	**0.62**	**29**	P	**Pb**	**19 27 43.1**	**-0.7**
ANX				S	**Sb**	**19 27 52.4**	**+0.1**
GUR	**Goura**	**0.65**	**99**	P	**Pb**	**19 27 42.7**	**-1.4**
GUR				S	**Sg**	**19 27 53.2**	**+0.5**
GUR				AML	AML	19 27 54.6	
	comp=E,38857μm,0.5s						
GUR				AML	AML	19 27 55.1	
	comp=N,77859μm,0.3s						
GUR	**Goura**	**0.65**	**99**	P	**Pb**	**19 27 43.0**	**-1.1**
GUR				S	**Sb**	**19 27 52.3**	**-0.6**
GUR	**Goura**	**0.65**	**99**	P	**Pb**	**19 27 43.0**	**-1.1**
GUR				S	**Sb**	**19 27 52.3**	**-0.6**
VLS	**Valsamata**	**0.76**	**280**	P	**Pb**	**19 27 44.6**	**-1.4**
VLS				S	**Sb**	**19 27 55.7**	**-0.4**
VLS				AML	AML	19 28 06.1	
	comp=N,13510μm,0.6s						
VLS				AML	AML	19 28 08.9	
	comp=E,10060μm,0.5s						
VLS	**Valsamata**	**0.76**	**280**	P	**Pb**	**19 27 45.3**	**-0.7**
VLS				S	**Sn**	**19 27 57.8**	**-0.4**
VLS	**Valsamata**	**0.76**	**280**	P	**Pb**	**19 27 45.3**	**-0.7**
VLS				S	**Sb**	**19 27 56.2**	**+0.2**
TRIP	**Tripoli**	**0.78**	**131**	P	**Pb**	**19 27 45.6**	**-0.8**
TRIP				S	**Sb**	**19 27 55.4**	**-1.2**
TRIP				AML	AML	19 27 58.8	
	comp=E,20279μm,0.4s						
TRIP				AML	AML	19 27 59.7	
	comp=N,12913μm,0.4s						
TRIP	**Tripoli**	**0.78**	**131**	P	**Pb**	**19 27 45.4**	**-1.0**
TRIP				S	**Sb**	**19 27 56.5**	**-0.1**
TRIP	**Tripoli**	**0.78**	**131**	P	**Pb**	**19 27 45.8**	**-0.6**
TRIP				S	**Sb**	**19 27 55.8**	**-0.8**
MES3	**Kyparissia**	**0.80**	**172**	P	**Pb**	**19 27 46.9**	**+0.1**
MES3				S	**Sb**	**19 27 56.8**	**-0.4**
MES3	**Kyparissia**	**0.80**	**172**	P	**Pb**	**19 27 46.4**	**-0.3**
MES3				S	**Sb**	**19 27 57.1**	**-0.1**
MGNA	**Meganis¸,,**	**0.85**	**316**	P	**Pb**	**19 27 46.3**	**-1.2**
MGNA	**Meganis¸,,**	**0.85**	**316**	P	**Pb**	**19 27 46.8**	**-0.7**
DSF	**Desfina**	**0.86**	**65**	P	**Pb**	**19 27 46.5**	**-1.3**
DSF				AML	AML	19 28 01.2	
	comp=N,5928μm,0.3s						
DSF				AML	AML	19 28 05.2	
	comp=E,5842μm,0.4s						
DSF	**Desfina**	**0.86**	**65**	P	**Pb**	**19 27 46.8**	**-1.0**
DSF	**Desfina**	**0.86**	**65**	P	**Pb**	**19 27 46.8**	**-1.0**
DLFA	**Delphi**	**0.87**	**60**	P	**Pb**	**19 27 45.8**	**-2.1**

FSK				S	Sn	19 28 00.7	-0.3
FSK	**Fiskardo**	**0.87**	**299**	P	Pb	19 27 47.1	-0.8
FSK				S	Sn	19 28 00.7	-0.3
THAL	**Thalero**	**0.89**	**90**	P	Pb	19 27 47.4	-0.8
THAL				AML	AML	19 28 06.0	
	comp=N,30220μm,0.5s						
THAL				AML	AML	19 28 06.6	
	comp=E,35214μm,0.4s						
THAL	**Thalero**	**0.89**	**90**	P	Pb	19 27 47.2	-1.0
THAL				S	Sb	19 27 59.6	-0.1
THAL	**Thalero**	**0.89**	**90**	P	Pb	19 27 47.4	-0.8
THAL				S	Sb	19 27 59.6	-0.1
EVR	**Evrytania**	**0.90**	**14**	P	Pb	19 27 48.4	0.0
EVR				S	Sn	19 28 02.6	+0.9
EVR				AML	AML	19 28 12.6	
	comp=E,4167μm,1.0s						
EVR				AML	AML	19 28 13.2	
	comp=N,5238μm,0.7s						
EVR	**Evrytania**	**0.90**	**14**	P	Pb	19 27 47.9	-0.5
EVR				S	Sb	19 28 00.3	+0.2
EVR	**Evrytania**	**0.90**	**14**	P	Pb	19 27 48.1	-0.3
EVR				S	Sb	19 28 00.3	+0.2
ITM	**Ithomi**	**0.92**	**160**	P	Pb	19 27 48.1	-0.6
ITM				S	Sb	19 28 00.6	0.0
ITM				AML	AML	19 28 06.0	
	comp=N,16879μm,0.7s						
ITM				AML	AML	19 28 06.3	
	comp=E,13749μm,0.6s						
ITM	**Ithomi**	**0.92**	**160**	P	Pb	19 27 47.9	-0.8
ITM				S	Sb	19 28 01.1	+0.5
ITM	**Ithomi**	**0.92**	**160**	P	Pb	19 27 48.1	-0.6
ITM				S	Sb	19 28 00.7	+0.1
VLX	**Vlachokerasia**	**0.95**	**135**	P	Pb	19 27 48.0	-1.3
VLX				S	Sb	19 28 01.0	-0.6
VLX				AML	AML	19 28 06.4	
	comp=N,26138μm,0.6s						
VLX				AML	AML	19 28 08.3	
	comp=E,30921μm,0.5s						
VLX	**Vlachokerasia**	**0.95**	**135**	P	Pb	19 27 48.0	-1.3
VLX				S	Sb	19 28 01.2	-0.4
VLX	**Vlachokerasia**	**0.95**	**135**	P	Pb	19 27 48.3	-1.0
VLX				S	Sb	19 28 01.2	-0.4
LKD2	**Lefkada island**	**1.01**	**317**	P	Pb	19 27 49.5	-0.8
LKD2				AML	AML	19 28 13.8	
	comp=N,6987μm,0.7s						
LKD2				AML	AML	19 28 15.4	
	comp=E,4939μm,0.6s						
LKD2	**Lefkada island**	**1.01**	**317**	P	Pb	19 27 49.9	-0.5
PROD	**Prodromos**	**1.10**	**78**	P	Pn	19 27 51.6	-0.2
PROD				AML	AML	19 28 10.5	
	comp=N,6243μm,0.3s						
PROD				AML	AML	19 28 11.3	
	comp=E,5584μm,0.3s						
PROD	**Prodromos**	**1.10**	**78**	P	Pn	19 27 51.4	-0.4
LTK	**Loutraki**	**1.13**	**91**	P	Pn	19 27 51.2	-1.1
LTK				AML	AML	19 28 14.0	
	comp=E,5104μm,0.6s						
LTK				AML	AML	19 28 15.7	
	comp=N,3789μm,0.7s						
LTK	**Loutraki**	**1.13**	**91**	P	Pn	19 27 51.2	-1.1
LTK				S	Sb	19 28 06.3	-0.4
LTK	**Loutraki**	**1.13**	**91**	P	Pn	19 27 51.5	-0.8
LTK				S	Sb	19 28 06.3	-0.4
LOUT	**Loutraki**	**1.14**	**92**	P	Pb	19 27 53.2	+0.8
LOUT	**Loutraki**	**1.14**	**92**	P	Pn	19 27 52.6	+0.2
DSL	**Palaion Diasel**	**1.14**	**342**	P	Pn	19 27 51.7	-0.7
DSL	**Palaion Diasel**	**1.14**	**342**	P	Pn	19 27 52.0	-0.4
DSL	**Palaion Diasel**	**1.14**	**342**	P	Pn	19 27 52.1	-0.4
AGG	**Agios Georgios**	**1.16**	**32**	P	Pn	19 27 52.0	-0.7
AGG	**Agios Georgios**	**1.16**	**32**	P	Pn	19 27 52.3	-0.4
PYL	**PYLOS**	**1.16**	**172**	P	Pn	19 27 52.0	-0.7
PYL				S	Sg	19 28 10.3	+1.5
PYL				AML	AML	19 28 16.4	
	comp=N,5884μm,0.8s						
PYL				AML	AML	19 28 16.9	
	comp=E,8845μm,0.5s						
PYL	**PYLOS**	**1.16**	**172**	P	Pn	19 27 52.3	-0.4
PYL				S	Sg	19 28 09.4	+0.5
MES2	**Methoni**	**1.23**	**174**	P	Pn	19 27 53.1	-0.5
MES2	**Methoni**	**1.23**	**174**	P	Pn	19 27 53.4	-0.2
LKR	**Lokris**	**1.30**	**62**	P	Pn	19 27 54.2	-0.4
LKR				AML	AML	19 28 16.6	
	comp=N,2591μm,0.3s						
LKR				AML	AML	19 28 19.4	
	comp=E,2400μm,0.2s						
LKR	**Lokris**	**1.30**	**62**	P	Pn	19 27 54.6	0.0
VIL2	**Platees**	**1.38**	**83**	P	Pb	19 27 56.9	+0.4
VIL2				S	Sg	19 28 15.3	-0.4
VIL2				AML	AML	19 28 21.2	
	comp=E,3429μm,0.8s						
VIL2				AML	AML	19 28 26.8	
	comp=N,6909μm,0.7s						
VILL	**Villia**	**1.41**	**85**	P	Pn	19 27 56.7	+0.6
VILL				S	Sb	19 28 15.5	+0.8
DYR	**Agios Nikonas**	**1.43**	**153**	P	Pn	19 27 55.9	-0.5
DYR	**Agios Nikonas**	**1.43**	**153**	P	Pn	19 27 56.4	0.0
KRND	**KRANIDI**	**1.44**	**117**	P	Pb	19 27 57.6	0.0
KRND				S	Sb	19 28 16.5	+0.9
KRND				AML	AML	19 28 21.1	
	comp=N,11147μm,0.9s						
KRND				AML	AML	19 28 25.9	
	comp=E,8194μm,0.8s						
KRND	**KRANIDI**	**1.44**	**117**	P	Pn	19 27 57.3	+0.8
KRND				S	Sb	19 28 16.5	+0.9
DID	**Didima**	**1.45**	**111**	P	Pn	19 27 56.2	-0.5
DID				AML	AML	19 28 21.0	
	comp=N,10082μm,0.6s						
DID				AML	AML	19 28 22.2	
	comp=E,12205μm,0.6s						
DID	**Didima**	**1.45**	**111**	P	Pn	19 27 56.7	0.0
SMIA	**Simia**	**1.55**	**57**	P	Pn	19 27 58.8	+0.7
SMIA	**Simia**	**1.55**	**57**	P	Pn	19 27 58.8	+0.7
THL	**Klokotos Trika**	**1.56**	**14**	P	Pg	19 28 01.5	+0.2
THL	**Klokotos Trika**	**1.56**	**14**	P	Pb	19 28 00.3	+0.6
ATH	**Athens Observa**	**1.72**	**92**	P	Pb	19 28 02.3	-0.1
ATH				S	Sn	19 28 22.4	+0.4
ATH				AML	AML	19 28 28.9	
	comp=N,4734μm,0.7s						
ATH				AML	AML	19 28 31.5	
	comp=E,5288μm,1.2s						
ATH	**Athens Observa**	**1.72**	**92**	P	Pb	19 28 01.7	-0.7
ATH				S	Sn	19 28 22.8	+0.8
VLI	**Veliai**	**1.73**	**139**	P	Pg	19 28 03.9	-0.6
VLI				AML	AML	19 28 30.1	
	comp=E,6061μm,1.1s						
VLI				AML	AML	19 28 31.7	
	comp=N,6761μm,0.9s						
VLI	**Veliai**	**1.73**	**139**	P	Pb	19 28 02.6	0.0
ATHU	**Athens Univers**	**1.78**	**92**	P	Pn	19 28 00.5	-0.7
ATHU				AML	AML	19 28 29.6	
	comp=N,1426μm,0.7s						
ATHU				AML	AML	19 28 32.8	
	comp=E,1135μm,0.9s						
ATHU	**Athens Univers**	**1.78**	**92**	P	Pn	19 28 01.2	0.0
VLY	**Voula,Athens**	**1.79**	**95**	P	Pn	19 28 00.7	-0.7
VLY				S	Sb	19 28 27.4	+1.6
VLY				AML	AML	19 28 33.4	
	comp=E,2563μm,0.4s						
VLY				AML	AML	19 28 34.3	
	comp=N,4779μm,0.7s						
VLY	**Voula,Athens**	**1.79**	**95**	P	Pn	19 28 01.4	0.0
VLY				S	Sb	19 28 26.2	+0.4
MNVA	**Monemvasia**	**1.81**	**138**	P	Pb	19 28 05.3	+1.4
MNVA	**Monemvasia**	**1.81**	**138**	P	Pb	19 28 03.8	-0.1
NEO	**Neokhori**	**1.82**	**46**	P	Pn	19 28 02.1	+0.3
NEO	**Neokhori**	**1.82**	**46**	P	Pn	19 28 02.4	+0.6
PTL	**Penteli**	**1.84**	**89**	P	Pn	19 28 02.2	+0.2
PTL				AML	AML	19 28 34.5	
	comp=N,2011μm,1.0s						
PTL				AML	AML	19 28 36.7	
	comp=E,2943μm,0.8s						
PTL	**Penteli**	**1.84**	**89**	P	Pn	19 28 02.4	+0.4
XOR	**Xorichti**	**1.85**	**44**	P	Pn	19 28 01.8	-0.3
XOR	**Xorichti**	**1.85**	**44**	P	Pn	19 28 02.4	+0.2
SKIA	**Skiathos**	**1.88**	**53**	P	Pn	19 28 03.0	+0.5
SKIA	**Skiathos**	**1.88**	**53**	P	Pn	19 28 03.2	+0.6
DION	**Dionisos Attik**	**1.89**	**88**	P	Pn	19 28 03.4	+0.6
DION				S	Sn	19 28 27.6	+1.3
DION				AML	AML	19 28 33.3	
	comp=E,2766μm,0.6s						
DION				AML	AML	19 28 35.5	
	comp=N,2942μm,0.7s						
DION	**Dionisos Attik**	**1.89**	**88**	P	Pn	19 28 03.4	+0.6
DION				S	Sn	19 28 27.5	+1.3
KEK	**Kerkira**	**2.15**	**321**	P	Pb	19 28 08.5	-1.2
KEK	**Kerkira**	**2.15**	**321**	P	Pn	19 28 08.0	+1.7
LIT	**Litokhoron**	**2.18**	**20**	P	Pn	19 28 08.3	+1.5
LIT	**Litokhoron**	**2.18**	**20**	P	Pn	19 28 08.0	+1.2
SERI	**Serifos**	**2.50**	**110**	P	Pn	19 28 11.6	+0.5
SERI	**Serifos**	**2.50**	**110**	P	Pn	19 28 11.8	+0.6
ANKY	**Antikythira Is**	**2.59**	**146**	P	Pn	19 28 14.3	+2.0
ANKY	**Antikythira Is**	**2.59**	**146**	P	Pn	19 28 13.8	+1.4
FNA	**Florina**	**2.74**	**357**	*e*Pn	Pn	19 28 17.0	+2.6
FNA				*e*Sn	Sb	19 28 53.8	+0.8
FNA	**Florina**	**2.74**	**357**	*e*Pn	Pn	19 28 17.0	+2.6
BIA	**Bitola**	**2.98**	**357**	*i* Pn	Pb	19 28 21.3	-2.5
OHR	**Ohrid**	**3.12**	**350**	*i* Pn	Pn	19 28 22.5	+2.9
IMMV	**Iera Moni Meta**	**3.24**	**142**	P	Pn	19 28 22.8	+1.5
IMMV	**Iera Moni Meta**	**3.24**	**142**	P	Pn	19 28 22.6	+1.3
APE	**Apeiranthos**	**3.32**	**106**	⇑*i*P	Pn	19 28 25.0	+2.6
APE	**Apeiranthos**	**3.32**	**106**	S	Sb	19 29 07.9	-1.9
APE	**Apeiranthos**	**3.32**	**106**	P	Pn	19 28 22.7	+0.3
APE	**Apeiranthos**	**3.32**	**106**	P	Pn	19 28 23.0	+0.6
VAY	**Valandovo**	**3.37**	**13**	*e*Pn	Pn	19 28 24.4	+1.4
VAY	**Valandovo**	**3.37**	**13**	*i* Pn	Pn	19 28 25.6	+2.6
VAY	**Valandovo**	**3.37**	**13**	*e*Pn	Pn	19 28 24.4	+1.4
LIA	**Limnos Island**	**3.39**	**56**	P	Pn	19 28 23.2	-0.1
LIA	**Limnos Island**	**3.39**	**56**	P	Pn	19 28 23.9	+0.6
SRS	**Serrai**	**3.45**	**27**	*e*Pn	Pn	19 28 26.7	+2.5
SRS				*e*Sn	Sn	19 29 07.7	+3.0
SRS	**Serrai**	**3.45**	**27**	*e*Pn	Pn	19 28 26.7	+2.5
SRS				*e*Sn	Sn	19 29 07.7	+3.0
TIR	**Tirane**	**3.54**	**339**	*e*Pn	Pn	19 28 26.0	+0.6
TIR	**Tirane**	**3.54**	**339**	⇓*i*P	Pn	19 28 28.9	+3.5
TIR	**Tirane**	**3.54**	**339**	*e*Pn	Pn	19 28 26.0	+0.6
TIR	**Tirane**	**3.54**	**339**	⇓*i*P	Pn	19 28 28.9	+3.5
STIP	**Stip**	**3.68**	**8**	*e*Pn	Pn	19 28 29.9	+2.6
IDI	**Anoyia**	**3.85**	**135**	Pn	Pn	19 28 31.4	+1.7
	comp=N,1.7nm,0.3s,baz=306,slow=15,SNR=25						
IDI				Sn	Sn	19 29 20.0	+5.4
	comp=N,7.5nm,0.3s,baz=73,slow=18,SNR=6.9						
IDI	**Anoyia**	**3.85**	**135**	⇓*i*P	Pn	19 28 30.9	+1.1
IDI	**Anoyia**	**3.85**	**135**	⇓*i*P	Pn	19 28 30.9	+1.1
IDI				S	Sn	19 29 16.6	+2.0
TIP	**Timpagrande**	**3.91**	**288**	⇑*i*P	Pn	19 28 30.0	-0.6
TIP	**Timpagrande**	**3.91**	**288**	⇑*i*P	Pn	19 28 30.0	-0.6
SKO	**Skopje**	**3.92**	**359**	*e*Pn	Pn	19 28 33.9	+3.2
SKO	**Skopje**	**3.92**	**359**	*e*Pn	Pn	19 28 30.3	-0.3
SKO	**Skopje**	**3.92**	**359**	*e*Pn	Pn	19 28 33.9	+3.2
FASA	**Fasano**	**4.26**	**312**	*e*Pn	Pn	19 28 36.5	+1.2
LAST	**Lasithi**	**4.28**	**131**	P	Pn	19 28 37.5	+1.8
LAST	**Lasithi**	**4.28**	**131**	P	Pn	19 28 37.3	+1.6
DRME	**Dracevica, Mon**	**4.51**	**337**	*e*Pn	Pn	19 28 39.6	+0.8
SG1	**Sgolgore (BA)**	**4.68**	**308**	*e*Pn	Pn	19 28 42.5	+1.4
PDG	**Podgorica**	**4.71**	**339**	⇓*i*P	Pn	19 28 43.1	+1.6
PDG	**Podgorica**	**4.71**	**339**	*e*Pn	Pn	19 28 42.0	+0.5
PDG	**Podgorica**	**4.71**	**339**	⇓*i*P	Pn	19 28 43.1	+1.6
VTS	**Vitosha**	**4.72**	**15**	⇓*i*P	Pn	19 28 46.4	+4.7
VTS	**Vitosha**	**4.72**	**15**	S	Sb	19 29 44.7	-5.4
VTS	**Vitosha**	**4.72**	**15**	⇓*i*P	Pn	19 28 46.4	+4.7
BAI	**Bari**	**4.72**	**312**	*e*Pn	Pn	19 28 42.8	+1.2
BARS	**Barje**	**4.77**	**2**	*e*Pn	Pn	19 28 44.4	+2.1
BARS	**Barje**	**4.77**	**2**	*e*Pn	Pn	19 28 44.4	+2.1
HCY	**Herceg Novi**	**4.97**	**333**	*e*Pn	Pn	19 28 44.5	-0.6
SELS	**Selova**	**5.18**	**357**	*e*Pn	Pn	19 28 48.7	+0.8
TREB	**Trebinje**	**5.26**	**333**	*e*Pn	Pn	19 28 48.8	-0.3
ZAPS	**Zavoj**	**5.29**	**9**	*e*Pn	Pn	19 28 52.1	+2.6
SJES	**Sjenica**	**5.34**	**348**	*e*Pn	Pn	19 28 51.3	+1.0
BRY	**Bratogost**	**5.36**	**336**	*e*Pn	Pn	19 28 50.5	-0.1
UPM	**Unac-Piva**	**5.53**	**340**	*e*Pn	Pn	19 28 54.2	+1.3
STON	**Ston**	**5.64**	**330**	*i* Pn	Pn	19 28 52.7	-1.6
STON				Sn	Sn	19 29 55.0	-3.5
STON	**Ston**	**5.64**	**330**	*i* Pn	Pn	19 28 52.6	-1.6
MS1	**Monte Sant'Ang**	**5.65**	**312**	*e*Pn	Pn	19 28 54.7	+0.3
VAE	**Valguarnera**	**5.67**	**266**	Pn	Pn	19 28 56.0	+1.2
	comp=N,1.0nm,0.3s,baz=24,slow=10,SNR=2.2						
VAE				Sn	Sn	19 29 58.8	-0.7
	comp=N,1.3nm,0.3s,baz=32,slow=8.5,SNR=4.1						
ZAGS	**Zajecar**	**5.79**	**5**	*e*Pn	Pn	19 28 58.2	+2.0
ZAGS	**Zajecar**	**5.79**	**5**	*e*Pn	Pn	19 28 58.2	+2.0
GRUS	**Gruza**	**5.87**	**354**	*e*Pn	Pn	19 28 57.7	+0.3
GRUS	**Gruza**	**5.87**	**354**	*e*Pn	Pn	19 28 57.7	+0.3
BBLS	**Lazići**	**6.03**	**345**	*e*Pn	Pn	19 28 59.2	-0.5
BBLS	**Lazići**	**6.03**	**345**	*e*Pn	Pn	19 28 59.2	-0.5
DIVS	**Divibare**	**6.16**	**350**	*e*Pn	Pn	19 29 01.7	+0.2
DIVS	**Divibare**	**6.16**	**350**	*e*Pn	Pn	19 29 01.7	+0.2
HAPS	**Han Pijesak,Bl**	**6.34**	**343**	*e*Pn	Pn	19 29 03.2	-0.8
TEKS	**Tekeris**	**6.67**	**348**	*e*Pn	Pn	19 29 08.8	+0.4
TEKS	**Tekeris**	**6.67**	**348**	*e*Pn	Pn	19 29 08.8	+0.4
BLY	**Banja Luka**	**7.45**	**335**	⇓*i*P	Pn	19 29 20.3	+1.2
BLY	**Banja Luka**	**7.45**	**335**	⇓*i*P	Pn	19 29 20.3	+1.2
BZS	**Buzias**	**7.57**	**0**	⇓*i*P	Pn	19 29 24.5	+3.8
UDBI	**Udbina**	**7.80**	**328**	*e*Pn	Pn	19 29 25.4	+1.5
UDBI				Sn	Sn	19 30 50.7	-1.1
UDBI	**Udbina**	**7.80**	**328**	*e*Pn	Pn	19 29 25.4	+1.5
UDBI				Sn	Sn	19 30 50.6	-1.1
VOIR		**7.84**	**18**	⇓*i*P	Pn	19 29 29.5	+5.0
MLR	**Muntele Rosu**	**8.13**	**22**	Pn	Pn	19 29 32.7	+4.1
	comp=N,0.0nm,0.3s,baz=204,slow=10,SNR=3.8						
MLR				LR	LR	19 33 11.4	
	comp=N,23nm,19.0s,baz=203,slow=43						
MLR	**Muntele Rosu**	**8.13**	**22**	⇑*i*P	Pn	19 29 33.4	+4.8
NVLJ	**Novalja**	**8.22**	**325**	*e*Pn	Pn	19 29 30.6	+0.9
NVLJ				Sn	Sn	19 31 00.3	-1.7
NVLJ	**Novalja**	**8.22**	**325**	*e*Pn	Pn	19 29 30.5	+0.9
PLOR	**Plostina**	**8.68**	**24**	⇑*i*P	Pn	19 29 40.9	+4.9
VRI	**Vrincioaia**	**8.72**	**25**	⇓*i*P	Pn	19 29 41.2	+4.7
BRTR	**Keskin Array B**	**9.59**	**76**	Pn	Pn	19 29 51.4	+2.8
	comp=N,0.1nm,0.3s,baz=262,slow=12,SNR=6.2						
SOKA	**Soboth**	**9.87**	**333**	*e*Pn	Pn	19 29 52.2	-0.2
	comp=N,1.0nm,0.3s						
SOKA	**Soboth**	**9.87**	**333**	Pn	Pn	19 29 52.2	-0.2
	comp=N,1.0nm,0.3s						
OBKA	**Obir**	**9.91**	**331**	*i* Pn	Pn	19 29 53.0	+0.1
	comp=N,3.9nm,0.8s						
OBKA	**Obir**	**9.91**	**331**	Pn	Pn	19 29 53.0	+0.1
	comp=N,3.9nm,0.8s						
GERES	**GERESS Array B**	**12.20**	**335**	Pn	Pn	19 30 23.0	-1.2
	comp=N,0.1nm,0.3s,baz=163,slow=14,SNR=3.5						
GERES				LR	LR	19 36 07.5	
	comp=N,49nm,22.0s,baz=169,slow=43						
MMAI	**Mount Meron Ar**	**12.36**	**110**	Pn	Pn	19 30 27.6	+1.2
	comp=N,0.6nm,0.3s,baz=312,slow=12,SNR=3.9						
ESDC	**Sonseca Array**	**19.91**	**283**	P	P	19 32 01.5	-0.5
	comp=N,0.2nm,0.3s,baz=81,slow=12,SNR=3.6						
HFS	**Hagfors**	**22.66**	**350**	P	P	19 32 29.8	-1.6
	comp=N,2.4nm,0.8s,baz=173,slow=13,SNR=7.2						
FINES	**FINESS Array B**	**23.59**	**5**	P	P	19 32 39.2	-1.6
	comp=N,1.0nm,0.7s,baz=184,slow=11,SNR=4.6						
NB2	**NORSAR Subarra**	**23.91**	**348**	P	P	19 32 43.2	-0.8
	comp=Z,1.0nm,0.8s,baz=159,slow=9.3						
NOA	**NORSAR Array B**	**23.91**	**348**	P	P	19 32 42.8	-1.1
	comp=Z,2.9nm,0.8s,baz=156,slow=10,SNR=3.5						
EKA	**Eskdalemuir Ar**	**24.00**	**324**	P	P	19 32 44.8	0.0
	comp=Z,1.9nm,0.7s,baz=127,slow=9.7,SNR=7.0						
TORD	**Torodi Ar. Bea**	**30.44**	**221**	P	P	19 33 43.8	+0.9
	comp=Z,1.8nm,0.7s,baz=28,slow=9.2,SNR=10						
BVAR	**Borovoye Array**	**36.59**	**50**	P	P	19 34 36.6	+0.5
	comp=Z,0.2nm,0.4s,baz=219,slow=42,SNR=4.1						
KURBB	**Kurchatov Arra**	**41.66**	**53**	P	P	19 35 18.2	-0.3
	comp=Z,1.3nm,0.8s,baz=279,slow=8.7,SNR=10						
MKAR	**Makanchi Array**	**44.69**	**58**	P	P	19 35 42.8	-0.3
	comp=Z,0.9nm,0.5s,baz=275,slow=7.0,SNR=17						
ZALV	**Zalesovo Beam**	**45.18**	**48**	P	P	19 35 46.5	-0.4
	comp=Z,2.2nm,0.7s,baz=272,slow=8.7,SNR=11						
CMAR	**Chiang Mai Arr**	**69.11**	**83**	P	P	19 38 36.8	+0.1
	comp=Z,0.2nm,0.6s,baz=297,slow=9.8,SNR=2.8						
YKA	**Yellowknife Ar**	**73.78**	**340**	P	P	19 39 03.9	-0.2
	comp=Z,0.2nm,0.7s,baz=32,slow=5.9,SNR=3.0						

NNC 13 19:28:07.1±3.0, 36°.99N×70°.89E, h0km, mb4.0, mpv3.6, 2C-6D, Error ellipse: s-maj=24.6km s-min=21.3km az=135.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.65**	**33**	⇓Pn	Pn	19 29 05.5	+0.5
	6.1nm,0.3s						
SFK				⇑Sn	Sn	19 29 50.6	+1.8
	5.0nm,0.2s						
MNAS	**Manas**	**5.63**	**12**	⇓Pn	Pn	19 29 32.2	0.0
	3.6nm,0.9s						
MNAS				⇓Sn	Sn	19 30 38.8	+1.2
	9.6nm,0.6s						
KK31	**Karatay Array**	**6.11**	**357**	⇓Pn	Pn	19 29 39.3	+0.7
	5.8nm,0.4s,baz=181,slow=13,SNR=147						
KK31				⇓Sn	Sn	19 30 50.9	+1.6
	0.7nm,0.3s,baz=185,slow=25,SNR=6.6						
AAK	**Ala-Archa**	**6.28**	**25**	⇑Pn	Pn	19 29 39.5	-1.7
	1.7nm,0.7s						
AAK				⇓Sn	Sn	19 30 53.2	-0.6
	5.4nm,0.9s						

*SJA **13** 19:29:22.9±0.8, 33°.79S×70°.06W, h98km±7km, ML3.4, MW3.2*
*ISCJB **13** 19:29:23.4±1.3, 33°.75S±0°.09×70°.05W±0°.06, h115km±9km, Error ellipse: s-maj=14.4km s-min=8.1km az=167.9*
*GUC **13** 19:29:24.4±0.7, 33°.56S×70°.07W, h121km±5km, ML3.5*

ISC 13 19:29:22.9±3.3, 33°.8S±0°.1×70°.06W±0°.07, h117km±19km, n15, σ0°.72/25, 1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FCH	**Farellones**	**0.52**	**338**	⇓*i*P	Pn	19 29 41.5	+0.5
FCH				*e*S	Sn	19 29 54.6	0.0
FCH				IAML		19 29 55.8	
	comp=E,2μm,0.3s						
ANTU	**Antumapu**	**0.54**	**296**	*e*P	Pn	19 29 41.8	+1.0
ANTU				*e*S	Sn	19 29 54.8	+0.6
ANTU				IAML		19 29 55.4	
	comp=N,1μm,0.2s						
CLCH	**Cerro Calan**	**0.57**	**315**	*e*P	Pn	19 29 41.8	+0.7
CLCH				*e*S	Sn	19 29 55.0	+0.2
CLCH				IAML		19 29 56.6	
	comp=E,2μm,0.5s						
PEL	**Peldehue**	**0.84**	**321**	*e*P	Pn	19 29 43.3	0.0
PEL				*e*S	Sn	19 29 57.8	-0.8
PEL				IAML		19 29 58.6	
	comp=N,3μm,0.4s						
ROC1	**El Roble**	**1.15**	**316**	*e*P	Pn	19 29 45.9	-0.6
ROC1				*e*S	Sn	19 30 03.1	-1.2
ROCH	**El Roble**	**1.15**	**316**	*e*P	Pn	19 29 46.5	0.0
ROCH				*e*S	Sn	19 30 03.1	-1.2
ROCH				IAML		19 30 04.3	
	comp=N,1μm,0.4s						
AAGR	**Agrelo**	**1.25**	**55**	*e*P	Pn	19 29 47.4	0.0
AAGR				*e*S	Sn	19 30 05.3	-0.8
AVIZ	**Vizcacheras**	**1.33**	**76**	*e*P	Pn	19 29 47.5	-0.7
ASAL	**Salagasta**	**1.59**	**41**	*e*P	Pn	19 29 51.8	+0.6
ASAL				*e*S	Sn	19 30 12.0	-0.8
AUSP	**Uspallata**	**1.68**	**20**	*e*P	Pn	19 29 52.9	+0.3
RTLS	**Leoncito**	**2.10**	**18**	*e*P	Pn	19 29 58.7	+0.9
RTLS				*e*S	Sn	19 30 24.7	+0.3
RTLS				IAML		19 30 28.8	
	comp=Z,31nm,0.4s						
RTCV	**Cerro Valdivia**	**2.32**	**34**	*e*P	Pn	19 30 01.0	+0.7
RTCV				*e*S	Sn	19 30 28.5	-0.5
RTLL	**Cerro Villicun**	**2.81**	**29**	*e*P	Pn	19 30 06.9	+0.3
RTLL				IAML		19 30 40.8	
	comp=Z,894nm,0.3s						
ACAN	**Cantantal**	**2.85**	**58**	*e*P	Pn	19 30 08.1	+0.9
AMOG	**MOGNA**	**3.15**	**25**	*e*P	Pn	19 30 11.7	+0.5

*ISCJB **13** 19:42:11.0±1.2, 53°.07N±0°.04×164°.49W±0°.05, h23km±8km, mb4.1/30, MS3.2/14, Error ellipse: s-maj=7.5km s-min=4.3km az=162.4*
*IDC **13** 19:42:10.3±0.9, 53°.35N×164°.70W, h0km, mb4.1/29, mb1 4.2/32, mb1mx4.1/86, mbtmp4.1/32, ML3.8/3, MS3.2/15, Ms1 3.2/15, ms1mx3.0/76, Error ellipse: s-maj=22.9km s-min=12.8km az=165.0*
*NEIC **13** 19:42:12.4±0.0, 53°.11N×164°.50W, h30km, mb3.9/3, ML3.7(AEIC), After AEIC.*

ISC 13 19:42:11.1±2.9, 53°.15N±0°.07×164°.52W±0°.04, h12km±16km, n92, σ1°.03/88, mb4.2/30, MS3.2/14, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKSA	**Akutan Strait**	**1.22**	**325**	P	Pn	19 42 33.6	-0.2
AKA	**Akutan**	**1.24**	**324**	P	P

H11S2	WAKE ISLAND Hy 41.17 224		T	T	20 34 15.6	
	baz=25,slow=76,SNR=20					
H11S3	WAKE ISLAND Hy 41.18 224		T	T	20 34 21.7	
	baz=25,slow=76,SNR=12					
KSRS	Korea Array	48.21 279	P	P	19 50 52.1	+0.9
	4.9nm,0.8s,baz=51,slow=7.0,SNR=16					
KSRS		LR		LR	20 09 09.3	
	comp=Z,15nm,21.3s,baz=126,slow=34					
KSAR	Wonju Array Be	48.24 279	P	P	19 50 52.1	+0.6
SPITS	Spitsbergen Ar	48.94 360	P	P	19 50 55.6	-0.7
	5.5nm,0.9s,baz=11,slow=10,SNR=3.1					
SPITS		LR		LR	20 12 08.6	
	comp=Z,36nm,19.0s,baz=285,slow=37					
TXAR	Lajitas Array	49.82 93	P	P	19 51 06.2	+2.4
	0.6nm,0.4s,baz=300,slow=5.6,SNR=14					
ULN	Ulaanbaatar	53.04 303	eP	P	19 51 27.2	-0.6
	2.4nm,0.7s					
SONM	Songino Array	53.39 303	P	P	19 51 29.9	-0.4
	2.1nm,0.8s,baz=46,slow=7.1,SNR=12					
ARCES	ARCESS Array B	57.41 356	P	P	19 51 58.1	-0.7
	2.1nm,0.8s,baz=9.8,slow=7.9,SNR=3.7					
ZALV	Zalesovo Beam	58.79 320	P	P	19 52 08.2	-0.4
	1.3nm,0.3s,baz=35,slow=6.8,SNR=8.5					
ZALV		LR		LR	20 18 37.3	
	comp=Z,32nm,18.9s,baz=68,slow=37					
KURK	Kurchatov	63.70 321	P	P	19 52 42.3	+0.4
KURBB	Kurchatov Arra	63.80 321	P	P	19 52 42.3	-0.3
	1.4nm,0.8s,baz=53,slow=7.0,SNR=12					
BVAR	Borovoye Array	64.72 327	P	P	19 52 48.4	-0.3
	2.9nm,0.7s,baz=49,slow=7.6,SNR=25					
MKAR	Makanchi Array	65.36 316	P	P	19 52 52.0	-0.8
	1.4nm,0.6s,baz=42,slow=5.6,SNR=18					
MKAR		LR		LR	20 22 44.6	
	comp=Z,57nm,18.5s,baz=53,slow=37					
FINES	FINESS Array B	65.45 354	P	P	19 52 52.8	-0.3
	1.5nm,0.6s,baz=24,slow=7.3,SNR=13					
FINES		LR		LR	20 22 17.8	
	comp=Z,16nm,19.3s,baz=346,slow=37					
NOA	NORSAR Array B	66.11 2	LR	LR	20 23 20.3	
	comp=Z,15nm,18.0s,baz=340,slow=38					
HFS	Hagfors	67.06 1	P	P	19 53 03.1	-0.4
	1.3nm,0.4s,baz=33,slow=5.5,SNR=17					
AKTO	Aktyubinsk	70.74 333	P	P	19 53 26.9	+0.3
	6.4nm,0.6s,baz=29,slow=8.2,SNR=30					
EKA	Eskdalemuir Ar	70.80 11	P	P	19 53 27.6	+0.8
	1.1nm,0.6s,baz=354,slow=4.9,SNR=6.6					
AAK	Ala-Archa	71.95 318	P	P	19 53 34.9	+0.6
	2.6nm,0.6s,baz=30,slow=4.7,SNR=8.0					
AKASG	Malin Array Be	75.88 351	P	P	19 53 56.9	0.0
	1.0nm,0.5s,baz=14,slow=6.0,SNR=8.0					
GERES	GERESS Array B	78.38 1	P	P	19 54 11.6	+0.6
	0.5nm,0.8s,baz=340,slow=6.4,SNR=3.5					
GUN	Gumba	78.88 302	eP	P	19 54 15.7	+1.2
JIRN	Jiri	78.92 301	eP	P	19 54 15.1	+0.3
	13nm,0.4s					
CMAR	Chiang Mai Arr	79.28 286	P	P	19 54 17.0	+0.6
	1.7nm,0.9s,baz=21,slow=5.1,SNR=10.0					
RAMN	Ramite	79.29 301	eP	P	19 54 16.3	-0.4
	18nm,0.9s					
GKN	Gorkha	79.44 303	eP	P	19 54 17.1	-0.2
DMN	Daman	79.52 302	eP	P	19 54 17.7	-0.2
DANN	Dangsing	79.60 304	eP	P	19 54 18.8	+0.4
	30nm,0.8s					
KOLN	Koldanda	80.15 303	eP	P	19 54 21.3	0.0
PYUN	Piuthan	80.19 304	eP	P	19 54 22.0	+0.5
	23nm,1.0s					
KBZ	Khabaz	80.67 340	P	P	19 54 23.8	+0.3
	2.5nm,0.9s,baz=36,slow=2.5,SNR=7.4					
GEYT	Alibeck	82.06 327	LR	LR	20 33 39.0	
	comp=Z,30nm,19.1s,baz=180,slow=38					
GNI	Garni	83.69 338	LR	LR	20 37 31.4	
	comp=Z,33nm,18.8s,baz=188,slow=40					
ESDC	Sonseca Array	86.03 15	P	P	19 54 51.8	+0.5
	0.2nm,0.4s,baz=341,slow=5.1,SNR=3.3					
BRTR	Keskin Array B	86.18 346	P	P	19 54 52.7	+0.5
	1.8nm,0.8s,baz=43,slow=2.7,SNR=12					
WRA	Warramunga Arr	89.83 235	P	P	19 55 09.2	-0.3
	0.8nm,1.0s,baz=34,slow=5.9,SNR=3.9					
MMAI	Mount Meron Ar	92.46 343	P	P	19 55 22.7	+0.9
	1.3nm,0.6s,baz=19,slow=9.2,SNR=4.2					
ASAR	Alice Springs	93.19 234	P	P	19 55 25.0	-0.1
	0.3nm,0.9s,baz=33,slow=4.7,SNR=4.4					
MATP	Matopo	145.83 338	PKPbc	PKPbc	20 01 50.3	+0.1
	2.2nm,0.8s,baz=9.4,slow=3.4,SNR=5.7					

MAN 13 19:47:21.7, 9°.09N×125°.69E, h3km, mb4.2, ML3.1, MS2.8, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BUTP	Butuan	0.14	209	eP	Pg	19 47 24.5	+0.1
BUTP				eS	Sg	19 47 27.5	+1.3
SCPH	Surigao	0.72	344	eP	Pb	19 47 36.4	-0.5
SCPH				eS	Sn	19 47 49.7	-0.5
BUKP	Musuan	1.35	207	eP	Pn	19 47 46.5	-1.1
BUKP				eS	Sn	19 48 06.7	+0.7

IDC 13 20:03:20.5±3.4, 36°.27N×70°.98E, h182km±30km, mb3.3/12, mb1 3.3/17, mb1mx3.1/71, mbtmp3.8/17, Error ellipse: s-maj=22.7km s-min=14.1km az=15.0
ISCJB 13 20:03:23.7±0.5, 36°.58N±0°.03×70°.89E±0°.07, h200km, mb3.4/11, Error ellipse: s-maj=8.2km s-min=3.9km az=171.2
NNC 13 20:03:27.5±5.0, 37°.07N×70°.48E, h0km, mb4.7, mpv4.3, Error ellipse: s-maj=40.4km s-min=34.9km az=138.0
ISC 13 20:03:24.0±0.6, 36°.60N±0°.05×70°.88E±0°.08, h200km, n46, σ1§50/53, mb3.6/11, 8C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEP	Cherat	2.90	163	P	Pn	20 04 15.1	+2.4
CEP				S	Sn	20 04 52.0	+1.4
CHCP	Chirah Chowk	3.53	146	P	Pn	20 04 22.8	+2.7
THW	Thamme Wali	3.87	169	P	Pn	20 04 26.0	+1.8
SFK	Sufi-Kurgan	3.98	30	⇑Pn	Pn	20 04 28.0	+2.2
	33nm,0.5s						
SFK				⇑Sn	Sn	20 05 15.5	+1.1
	66nm,0.4s						
SARP	Sargodha	4.90	162	P	Pn	20 04 39.4	+2.2
AML	Almayashu	5.94	21	P	Pn	20 04 52.2	+1.4
	SNR=92						
MNAS	Manas	6.01	12	⇑Pn	Pn	20 04 53.0	+1.5
	16nm,0.4s						
MNAS				⇑Sn	Sn	20 05 59.4	-1.3
	44nm,0.8s						
UCH	Uchtor	6.28	26	P	Pn	20 04 56.8	+1.5
	SNR=53						
KZA	Kyzart	6.43	30	P	Pn	20 04 58.2	+1.0
	SNR=14						
EKS2	Erkin-Say	6.45	19	P	Pn	20 04 58.8	+1.6
	SNR=19						
KK31	Karatay Array	6.50	358	⇓Pn	Pn	20 04 59.0	+1.3
	9.3nm,0.5s,baz=189,slow=13,SNR=97						
KK31				⇑Sn	Sn	20 06 09.4	-2.6
	7.0nm,0.5s,baz=191,slow=23,SNR=6.9						
AAK	Ala-Archa	6.64	24	P	Pn	20 05 01.3	+1.7
	11nm,0.3s,baz=194,slow=5.6,SNR=83						
AAK				S	Sn	20 06 15.6	+0.1
	1.9nm,0.3s,baz=140,slow=23,SNR=8.6						
AAK	Ala-Archa	6.64	24	⇑Pn	Pn	20 05 01.2	+1.5
	19nm,0.4s						
AAK				⇑Sn	Sn	20 06 14.9	-0.6
	20nm,0.8s						
AAK	Ala-Archa	6.64	24	P	Pn	20 05 01.4	+1.7
	SNR=31						
KBK	Karagaybulak	6.81	26	P	Pn	20 05 03.7	+1.8
	SNR=7.8						
ULHL	Ulahol	7.00	35	P	Pn	20 05 05.7	+1.4
	SNR=9.9						
CHMS	Chumysh	7.05	24	P	Pn	20 05 06.6	+1.8
	SNR=11						
USP	Ospenovka	7.21	22	P	Pn	20 05 08.5	+1.5
	SNR=17						
TKM2	Tokmak 2	7.28	28	⇓Pn	Pn	20 05 09.2	+1.2
	22nm,0.8s						
TKM2				⇑Sn	Sn	20 06 30.1	-0.6
	13nm,0.8s						
TKM2	Tokmak 2	7.28	28	P	Pn	20 05 09.5	+1.4
	SNR=24						
MKAR	Makanchi Array	13.27	36	P	Pn	20 06 25.4	+0.6
	0.4nm,0.3s,baz=214,slow=10,SNR=14						
PYUN	Piuthan	13.29	126	eP	Pn	20 06 24.0	-1.3
	7.1nm,0.2s						
DANN	Dangsing	13.63	123	eP	Pn	20 06 29.0	-0.7
	9.2nm,0.3s						
KOLN	Koldanda	13.90	126	eP	Pn	20 06 32.5	-0.5
	6.2nm,0.2s						
GKN	Gorkha	14.44	123	eP	Pn	20 06 39.3	-0.3
	13nm,0.4s						
DMN	Daman	15.01	123	eP	Pn	20 06 46.0	-0.7
	9.3nm,0.5s						
KKN	Kakani	15.02	122	eP	Pn	20 06 45.8	-0.9
	14nm,0.5s						
KURBB	Kurchatov Arra	15.06	19	P	Pn	20 06 46.4	-0.3
	0.1nm,0.3s,baz=207,slow=11,SNR=5.0						
PKIN	Phulchoki	15.23	122	eP	Pn	20 06 49.2	-0.2
	19nm,0.5s						
GUN	Gumba	15.36	120	eP	Pn	20 06 50.5	-0.5
	11nm,0.4s						
JIRN	Jiri	15.73	120	eP	P	20 06 55.2	-0.2
	17nm,0.4s						
BVAR	Borovoye Array	16.43	359	P	Pn	20 07 03.5	+0.2
	0.4nm,0.3s,baz=157,slow=13,SNR=11						
RAMN	Ramite	16.45	121	eP	P	20 07 02.7	-0.6
	12nm,0.5s						
AKTO	Aktyubinsk	16.64	330	P	P	20 07 05.5	+0.6
	0.3nm,0.3s,baz=146,slow=13,SNR=8.4						
ZALV	Zalesovo Beam	19.86	25	P	P	20 07 40.0	+0.3
	2.2nm,0.3s,baz=214,slow=11,SNR=17						
ARU	Arti	21.50	341	P	P	20 07 58.4	+1.4
	1.0nm,0.4s,baz=93,slow=18,SNR=2.7						
SONM	Songino Array	28.36	55	P	P	20 08 59.2	-0.3
	0.5nm,0.7s,baz=251,slow=4.4,SNR=4.1						
BRTR	Keskin Array B	29.31	288	P	P	20 09 09.0	+1.0
	0.2nm,0.4s,baz=82,slow=12,SNR=2.7						
FINES	FINESS Array B	37.34	326	P	P	20 10 17.6	+0.8
	1.6nm,0.7s,baz=123,slow=10,SNR=11						
ARCES	ARCESS Array B	41.01	338	P	P	20 10 48.1	+1.0
	1.6nm,0.4s,baz=108,slow=7.8,SNR=15						
HFS	Hagfors	42.92	322	P	P	20 11 05.3	+2.6
	1.1nm,0.6s,baz=96,slow=10,SNR=4.2						
TORD	Torodi Ar. Bea	65.62	269	P	P	20 13 43.8	-3.1
	0.8nm,0.6s,baz=53,slow=5.2,SNR=11						
ILAR	Eielson Array	74.71	16	P	P	20 14 39.8	-1.5
	0.2nm,0.6s,baz=285,slow=5.5,SNR=4.0						
YKA	Yellowknife Ar	81.15	3	P	P	20 15 16.9	+0.2
	0.6nm,0.5s,baz=353,slow=5.4,SNR=11						
WRA	Warramunga Arr	82.13	122	P	P	20 15 19.7	-2.8
	0.2nm,0.4s,baz=324,slow=5.0,SNR=11						
ASAR	Alice Springs	84.39	125	P	P	20 15 32.0	-2.1
	0.2nm,0.6s,baz=314,slow=5.2,SNR=8.0						

ISCJB 13 20:03:52.9±1.2, 2°.5N±0°.2×91°.7E±0°.1, h10km, mb3.6/7, Error ellipse: s-maj=24.8km s-min=18.4km az=14.5
IDC 13 20:03:53.5±1.4, 2°.45N×91°.84E, h0km, mb3.6/7, mb1 3.8/9, mb1mx3.5/64, mbtmp3.6/9, ML3.8/2, Error ellipse: s-maj=39.8km s-min=25.2km az=42.0
ISC 13 20:03:54.7±1.2, 2°.5N±0°.2×91°.8E±0°.1, h10km, n10, σ1§01/10, mb3.7/7, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALK	Pallekele	12.03	294	Pn	Pn	20 06 45.2	-1.3
	0.7nm,0.3s,baz=114,slow=12,SNR=4.2						
PALK				Sn	Sn	20 08 49.2	-12
	1.3nm,0.3s,baz=118,slow=6.7,SNR=5.1						
CMAR	Chiang Mai Arr	17.38	23	P	Pn	20 07 56.3	-1.2
	0.1nm,0.3s,baz=216,slow=13,SNR=4.0						
MKAR	Makanchi Array	44.93	351	P	P	20 12 10.2	+0.4
	0.5nm,0.8s,baz=171,slow=8.6,SNR=4.9						
SONM	Songino Array	46.93	13	P	P	20 12 25.8	+0.1
	0.3nm,0.5s,baz=199,slow=7.6,SNR=2.2						
WRA	Warramunga Arr	47.32	120	P	P	20 12 28.6	-0.4
	0.3nm,0.5s,baz=301,slow=8.6,SNR=7.4						
KURBB	Kurchatov Arra	49.28	349	P	P	20 12 44.4	+0.7
	0.3nm,0.5s,baz=170,slow=7.1,SNR=3.6						
ZALV	Zalesovo Beam	51.64	355	P	P	20 13 02.0	+0.6
	0.5nm,0.5s,baz=134,slow=4.2,SNR=3.3						
BRTR	Keskin Array B	64.29	313	P	P	20 14 31.4	+0.7
	0.4nm,0.7s,baz=113,slow=3.7,SNR=3.2						
GERES	GERESS Array B	80.31	319	P	P	20 16 07.6	+1.4
	0.5nm,0.6s,baz=117,slow=5.3,SNR=4.6						
TXAR	Lajitas Array	145.09	24	PKPbc	PKPdf	20 23 32.6	-0.8
	0.2nm,0.4s,baz=318,slow=1.2,SNR=3.3						

MEX 13 20:05:50.3±0.4, 17°.30N×101°.15W, h16km±7km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZIIG	Zihuatanejo	0.43	315	iP	Pg	20 05 57.8	-1.2
ZIIG				eS	Sg	20 06 03.3	-1.6
CAIG	El Cayaco	0.88	106	eP	Pb	20 06 04.1	-3.1
CAIG				iS	Sb	20 06 14.8	-3.9
ARIG	Puente Sto Nin	1.24	38	eP	Pn	20 06 09.3	-3.6
ARIG				eS	Sb	20 06 24.0	-5.1
ACX	Acapulco	1.31	109	eP	Pn	20 06 11.0	-2.9
ACX				eS	Sn	20 06 28.8	-2.3
MMIG	Aquila	2.31	296	eP	Pn	20 06 24.0	-3.7
MMIG				eP	Pb	20 06 27.0	-4.6

CSEM 13 20:15:40.0, 36°.86N×26°.50E, h32km, ML2.5/5
ATH 13 20:15:40.0, 36°.86N×26°.50E, h32km±10km, ML2.5/5, Error ellipse: s-maj=12.9km s-min=2.1km az=355.0, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	Karpathos	1.42	158	P	Pb	20 16 05.3	-0.6
KARP				S	Sb	20 16 23.9	+0.3
KARP				AML	AML	20 16 27.2	
	comp=E,368μm,0.1s						
KARP				AML	AML	20 16 27.6	
	comp=N,447μm,0.2s						
KARP	Karpathos	1.42	158	P	Pb	20 16 05.4	-0.5
KARP				S	Sb	20 16 24.0	+0.4
ARG	Arkhangelos	1.46	116	P	Pb	20 16 06.2	-0.3
ARG	Arkhangelos	1.46	116	P	Pb	20 16 06.1	-0.4
NPS	Neapolis	1.75	205	P	Pb	20 16 10.5	-1.0
NPS				S	Sb	20 16 33.2	0.0
NPS				AML	AML	20 16 34.4	
	comp=E,380μm,0.2s						
NPS				AML	AML	20 16 35.3	
	comp=N,262μm,0.2s						
NPS	Neapolis	1.75	205	P	Pb	20 16 10.4	-1.2
NPS				S	Sb	20 16 32.7	-0.5
ZKR	Zakros	1.76	188	P	Pb	20 16 10.3	-1.4
ZKR				S	Sb	20 16 32.5	-0.8
ZKR				AML	AML	20 16 34.5	
	comp=N,70μm,0.3s						
ZKR				AML	AML	20 16 34.9	
	comp=E,186μm,0.3s						
ZKR	Zakros	1.76	188	P	Pb	20 16 10.3	-1.4
ZKR				S	Sb	20 16 32.5	-0.8
LAST	Lasithi	1.89	206	P	Pn	20 16 12.0	+1.8
LAST				S	Sb	20 16 35.5	-1.6
LAST				AML	AML	20 16 36.1	
	comp=E,55μm,0.4s						
LAST				AML	AML	20 16 36.8	
	comp=N,100μm,0.4s						
LAST	Lasithi	1.89	206	P	Pb	20 16 12.1	-1.8
LAST				S	Sb	20 16 35.6	-1.6
SIVA	Sivas	2.30	217	P	Pn	20 16 17.8	+2.1
SIVA				S	Sn	20 16 44.5	+1.7
SIVA				AML	AML	20 16 51.1	
	comp=E,119μm,0.4s						
SIVA				AML	AML	20 16 52.6	
	comp=N,119μm,0.4s						
SIVA	Sivas	2.30	217	P	Pn	20 16 17.8	+2.1
SIVA				S	Sn	20 16 45.0	+2.2

DDA 13 20:16:03.0, 37°.99N×27°.01E, h13km, MI3.0
ATH 13 20:16:02.1, 37°.96N×27°.09E, h25km±1km, ML2.1/5, Error ellipse: s-maj=4.0km s-min=1.2km az=265.0
ISK 13 20:16:02.2, 38°.01N×27°.00E, h6km±1km, ML2.3/5
ISCJB 13 20:16:03.1±0.4, 38°.00N±0°.02×27°.04E±0°.03, h4km±4km, Error ellipse: s-maj=4.2km s-min=2.9km az=38.8
CSEM 13 20:16:03.2±0.2, 38°.00N×27°.02E, h5km, ML2.1, Error ellipse: s-maj=3.8km s-min=2.9km az=57.0
ISC 13 20:16:02.8±0.8, 38°.00N±0°.02×27°.02E±0°.02, h14km±6km, n58, σ0§86/85, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DGB	˜zmir	0.12	297	iP	Pg	20 16 06.4	+0.1
DGB				iS	Sg	20 16 08.4	-0.2
SMG	Samos	0.32	207	P	Pg	20 16 09.8	+0.4
SMG				S	Sg	20 16 14.6	+0.6
SMG				AML	AML	20 16 15.5	
	comp=N,1537μm,0.3s						
SMG				AML	AML	20 16 20.2	
	comp=E,975μm,0.2s						
SMG	Samos	0.32	207	P	Pg	20 16 09.7	+0.2
SMG				S	Sg	20 16 14.8	+0.8
GCAM	G?zelcaml?	0.34	151	PG	Pg	20 16 10.3	+0.6
GCAM				SG	Sg	20 16 14.5	+0.1
GCAM	G?zelcaml?	0.34	151	iP	Pg	20 16 10.1	+0.4
GCAM				iS	Sg	20 16 14.9	+0.5
GCAM	G?zelcaml?	0.34	151	P	Pg	20 16 10.1	+0.4
GCAM				eSg	Sg	20 16 14.5	+0.1
ZEY	˜zmir	0.48	301	iP	Pg	20 16 12.6	+0.3
ZEY				iS	Sb	20 16 19.9	+0.1
URLA	Izmir	0.50	317	PG	Pg	20 16 12.1	-0.6
URLA				SG	Sg	20 16 18.7	-0.6
URLA	Izmir	0.50	317	iP	Pg	20 16 12.3	-0.3
URLA				iS	Sg	20 16 19.4	+0.1
URLA	Izmir	0.50	317	P	Pg	20 16 12.3	-0.3
URLA				eSg	Sg	20 16 18.7	-0.6
URLA				S	Sg	20 16 19.4	+0.1
AYDB	Zeytinkoy-Aydi	0.69	94	PG	Pb	20 16 16.7	+0.1
AYDB				SG	Sb	20 16 25.9	-0.1
AYDB	Zeytinkoy-Aydi	0.69	94	ePg	Pb	20 16 16.7	+0.1
AYDB				eSg	Sb	20 16 25.9	-0.1
AYDN	Tasoluk	0.76	116	iP	Pb	20 16 18.0	+0.3
AYDN	Tasoluk	0.76	116	P	Pb	20 16 18.0	+0.3
CHOS	Chios island	0.86	297	P	Pn	20 16 20.3	-0.2
CHOS				S	Sn	20 16 32.1	-0.8
CHOS				AML	AML	20 16 35.3	
	comp=N,244μm,0.3s						
CHOS				AML	AML	20 16 38.6	
	comp=E,356μm,0.3s						
CHOS	Chios island	0.86	297	P	Pn	20 16 20.1	-0.4
CHOS				S	Sn	20 16 32.5	-0.4
MLSB	Milas	0.92	139	PG	Pn	20 16 21.3	0.0
MLSB	Milas	0.92	139	ePg	Pn	20 16 21.3	0.0
BODT	Bodrum	0.96	166	PG	Pg	20 16 21.5	+0.1
BODT				SG	Sn	20 16 35.0	-0.3
BODT	Bodrum	0.96	166	ePg	Pg	20 16 21.5	+0.1
BODT				eSg	Sn	20 16 35.0	-0.3
BDRM	Kayabasi	0.99	160	iP	Pn	20 16 23.1	+0.9
BDRM	Kayabasi	0.99	160	P	Pn	20 16 23.1	+0.9
AKHS	Akhisar	1.08	35	iP	Pg	20 16 23.8	+0.2
AKHS	Akhisar	1.08	35	P	Pg	20 16 23.8	+0.2
AKS	Akhisar	1.08	35	PG	Pb	20 16 22.9	-0.3
AKS	Akhisar	1.08	35	ePg	Pb	20 16 22.9	-0.3
MANT	Manisa	1.30	67	iP	Pg	20 16 28.7	+0.7
MANT				iS	Sb	20 16 43.3	-0.6
MANT	Manisa	1.30	67	P	Pg	20 16 28.7	+0.7
MANT				S	Sb	20 16 43.3	-0.6
PRK	Paraskevi	1.38	335	P	Pb	20 16 28.3	0.0
PRK				S	Sb	20 16 46.5	+0.6
PRK				AML	AML	20 16 51.3	
	comp=N,154μm,0.5s						
PRK				AML	AML	20 16 51.6	
	comp=E,228μm,0.6s						
PRK	Paraskevi	1.38	335	P	Pb	20 16 28.4	0.0
PRK				S	Sg	20 16 47.2	-0.1
KULA	Kula-Manisa	1.39	68	PN	Pb	20 16 28.9	+0.3
KULA	Kula-Manisa	1.39	68	ePn	Pb	20 16 28.9	+0.3
STEP	BALIKESIR_Sava	1.48	21	iP	Pg	20 16 31.1	-0.2
STEP				iS	Sg	20 16 51.5	+0.9
STEP	BALIKESIR_Sava	1.48	21	P	Pg	20 16 31.1	-0.2
STEP				S	Sg	20 16 51.5	+0.9
APE	Apeiranthos	1.50	233	P	Pn	20 16 29.0	-0.3
APE				S	Sg	20 16 51.4	+0.1
APE				AML	AML	20 16 57.3	
	comp=E,77μm,0.6s						
APE				AML	AML	20 16 58.1	
	comp=N,72μm,0.2s						
APE	Apeiranthos	1.50	233	P	Pn	20 16 29.5	+0.1
APE				S	Sg	20 16 50.8	-0.5
SIGR	SIGRI	1.52	323	P	Pb	20 16 30.6	-0.1
SIGR				S	Sg	20 16 51.7	-0.1
TAVA	DENIZLI_Tavas	1.59	109	iP	Pn	20 16 30.9	+0.3
TAVA	DENIZLI_Tavas	1.59	109	P	Pn	20 16 30.9	+0.3
DEMI	Demirci	1.69	51	iP	Pg	20 16 35.3	0.0
DEMI	Demirci	1.69	51	P	Pg	20 16 35.3	0.0
DALY	Dalyan (Mu˜la	1.75	132	iP	Pn	20 16 27.8	-4.9
BAYC	CANAKKALE_Bayr	1.78	348	iP	Pn	20 16 33.6	+0.4
BAYC	CANAKKALE_Bayr	1.78	348	P	Pn	20 16 33.6	+0.4
BALY	Balya	1.80	15	iP	Pn	20 16 33.1	-0.4
BALY	Balya	1.80	15	P	Pn	20 16 33.1	-0.4
DURS	Dursunbey	1.96	35	iP	Pb	20 16 37.3	-1.1
DURS	Dursunbey	1.96	35	P	Pb	20 16 37.3	-1.1
KHAL	Karahalli	1.98	78	iP	Pb	20 16 38.9	+0.2
KHAL	Karahalli	1.98	78	P	Pb	20 16 38.9	+0.2
BOZC	Bozcaada	1.99	338	iP	Pg	20 16 41.6	+0.5
BOZC				iS	Sg	20 17 03.3	+0.4
AKAS	Kas	2.71	130	iP	Pn	20 16 43.4	-2.6
AKAS	Kas	2.71	130	P	Pn	20 16 43.4	-2.6
SMTH	Samothraki Isl	2.73	335	P	Pg	20 16 59.2	+4.1
SMTH	Samothraki Isl	2.73	335	P	Pb	20 16 48.9	-2.5
SMTH	Samothraki Isl	2.73	335	P	Pn	20 16 48.2	+2.1
SMTH	Samothraki Isl	2.73	335	P	Pn	20 16 48.3	+2.1

IDC 13 20:28:39.7±1.3, 37°.90N×21°.34E, h0km, mb3.4/4, mb1 3.3/6, mb1mx3.2/59, mbtmp3.3/6, ML2.6/2, Error ellipse: s-maj=25.2km s-min=23.2km az=47.0
ATH 13 20:28:42.0, 37°.84N×21°.44E, h21km, ML3.0/19, Error ellipse: s-maj=0.9km s-min=0.6km az=318.0
ISCJB 13 20:28:42.5±0.4, 37°.83N±0°.02×21°.43E±0°.02, h13km±2km, mb3.4/4, Error ellipse: s-maj=3.0km s-min=2.2km az=143.0
CSEM 13 20:28:42.9±0.2, 37°.84N×21°.42E, h20km, ML3.3, Error ellipse: s-maj=4.7km s-min=3.3km az=54.0
THE 13 20:28:42.1, 37°.84N×21°.46E, h24km, ML3.0/15, Error ellipse: s-maj=0.5km s-min=0.3km az=308.0
ISC 13 20:28:42.4±0.7, 37°.84N±0°.02×21°.42E±0°.02, h20km±1km, n153, σ1§08/227, mb3.5/4, Southern Greece

| Code | Station Name | Δ° | AZ° | Phase |

AMT				AML	AML	20 28 57.3	
	comp=N,9294μm,0.6s						
AMT				AML	AML	20 28 58.6	
	comp=E,5330μm,0.3s						
AMT	**Artemida-Makis**	**0.39**	**143**	P	**Pb**	**20 28 49.8**	**-0.6**
AMT				S	**Sb**	**20 28 56.1**	**+0.1**
AMT	**Artemida-Makis**	**0.39**	**143**	P	**Pb**	**20 28 49.9**	**-0.6**
AMT				S	**Sb**	**20 28 55.9**	**-0.1**
UPR	**University Cam**	**0.53**	**33**	P	**Pn**	**20 28 54.0**	**-0.8**
UPR				S	**Sb**	**20 29 00.6**	**+0.4**
UPR	**University Cam**	**0.53**	**33**	P	**Pb**	**20 28 52.4**	**-0.6**
UPR				S	**Sb**	**20 29 00.2**	**0.0**
UPR	**University Cam**	**0.53**	**33**	P	**Pb**	**20 28 52.6**	**-0.4**
UPR				S	**Sb**	**20 29 00.2**	**0.0**
KFL	**Anninata**	**0.56**	**298**	P	**Pb**	**20 28 53.4**	**-0.3**
KFL				S	**Sn**	**20 29 03.6**	**-0.4**
KFL				AML	AML	20 29 07.2	
	comp=E,3575μm,0.3s						
KFL				AML	AML	20 29 09.0	
	comp=N,3331μm,0.4s						
KFL	**Anninata**	**0.56**	**298**	P	**Pb**	**20 28 53.4**	**-0.3**
KFL				S	**Sb**	**20 29 02.8**	**+1.5**
LAKA	**Lakka**	**0.59**	**48**	P	**Pb**	**20 28 53.4**	**-0.8**
LAKA				S	**Sn**	**20 29 02.9**	**-1.9**
LAKA				AML	AML	20 29 03.7	
	comp=E,2437μm,0.4s						
LAKA				AML	AML	20 29 07.2	
	comp=N,2207μm,0.8s						
LAKA	**Lakka**	**0.59**	**48**	P	**Pb**	**20 28 53.1**	**-1.1**
LAKA				S	**Sb**	**20 29 01.8**	**-0.4**
LAKA	**Lakka**	**0.59**	**48**	P	**Pb**	**20 28 53.4**	**-0.8**
LAKA				S	**Sb**	**20 29 01.8**	**-0.4**
KLV	**Kalavryta, Ach**	**0.61**	**71**	P	**Pb**	**20 28 53.5**	**-1.1**
KLV				S	**Sb**	**20 29 03.2**	**+0.4**
KLV				AML	AML	20 29 05.4	
	comp=E,1224μm,0.3s						
KLV				AML	AML	20 29 06.6	
	comp=N,2791μm,0.3s						
KLV	**Kalavryta, Ach**	**0.61**	**71**	P	**Pb**	**20 28 53.3**	**-1.2**
KLV				S	**Sb**	**20 29 02.5**	**-0.3**
KLV	**Kalavryta, Ach**	**0.61**	**71**	P	**Pb**	**20 28 53.6**	**-0.9**
KLV				S	**Sb**	**20 29 02.5**	**-0.3**
MES3	**Kyparissia**	**0.63**	**161**	P	**Pb**	**20 28 54.5**	**-0.2**
MES3				S	**Sb**	**20 29 02.0**	**-1.1**
MES3	**Kyparissia**	**0.63**	**161**	P	**Pb**	**20 28 54.3**	**-0.4**
MES3				S	**Sb**	**20 29 02.5**	**-0.6**
ALIK	**Aliki, Aigiali**	**0.69**	**53**	P	**Pb**	**20 28 55.0**	**-0.7**
ALIK				S	**Sb**	**20 29 04.2**	**-0.6**
ALIK	**Aliki, Aigiali**	**0.69**	**53**	P	**Pb**	**20 28 55.0**	**-0.7**
ALIK				S	**Sb**	**20 29 04.2**	**-0.6**
EFP	**Efpalio**	**0.70**	**33**	P	**Pb**	**20 28 54.8**	**-1.1**
EFP				S	**Sn**	**20 29 07.0**	**-0.3**
EFP				AML	AML	20 29 08.9	
	comp=E,1673μm,0.3s						
EFP				AML	AML	20 29 10.3	
	comp=N,2473μm,0.3s						
EFP	**Efpalio**	**0.70**	**33**	P	**Pb**	**20 28 55.1**	**-0.8**
EFP				S	**Sb**	**20 29 05.0**	**-0.1**
EFP	**Efpalio**	**0.70**	**33**	P	**Pb**	**20 28 55.1**	**-0.8**
EFP				S	**Sb**	**20 29 05.0**	**-0.1**
TRIZ	**Trizonia**	**0.73**	**45**	P	**Pb**	**20 28 55.3**	**-1.2**
TRIZ				S	**Sn**	**20 29 06.6**	**-1.6**
TRIZ	**Trizonia**	**0.73**	**45**	P	**Pb**	**20 28 55.6**	**-0.9**
TRIZ				S	**Sb**	**20 29 06.0**	**-0.1**
TRIZ	**Trizonia**	**0.73**	**45**	P	**Pb**	**20 28 55.7**	**-0.8**
TRIZ				S	**Sb**	**20 29 06.0**	**-0.1**
VLS	**Valsamata**	**0.73**	**297**	P	**Pn**	**20 28 57.4**	**-0.2**
VLS				S	**Sn**	**20 29 07.9**	**-0.3**
VLS				AML	AML	20 29 15.0	
	comp=E,972μm,0.5s						
VLS				AML	AML	20 29 15.8	
	comp=N,1297μm,0.4s						
VLS	**Valsamata**	**0.73**	**297**	P	**Pb**	**20 28 57.0**	**+0.5**
VLS				S	**Sn**	**20 29 07.6**	**-0.6**
GUR	**Goura**	**0.74**	**83**	P	**Pb**	**20 28 55.0**	**-1.6**
GUR				S	**Sn**	**20 29 07.0**	**-1.4**
GUR				AML	AML	20 29 11.0	
	comp=E,3673μm,0.3s						
GUR				AML	AML	20 29 13.3	
	comp=N,4122μm,0.3s						
GUR	**Goura**	**0.74**	**83**	P	**Pb**	**20 28 55.3**	**-1.3**
GUR				S	**Sb**	**20 29 06.1**	**-0.2**
GUR	**Goura**	**0.74**	**83**	P	**Pb**	**20 28 55.5**	**-1.1**
GUR				S	**Sb**	**20 29 05.9**	**-0.4**
TRIP	**Tripoli**	**0.75**	**115**	S	**Sn**	**20 29 07.6**	**-1.0**
TRIP				AML	AML	20 29 10.8	
	comp=N,1717μm,0.5s						
TRIP				AML	AML	20 29 13.1	
	comp=E,1796μm,0.5s						
TRIP	**Tripoli**	**0.75**	**115**	P	**Pb**	**20 28 55.6**	**-1.1**
TRIP				S	**Sb**	**20 29 06.3**	**-0.2**
TRIP	**Tripoli**	**0.75**	**115**	P	**Pb**	**20 28 55.6**	**-1.1**
TRIP				S	**Sb**	**20 29 06.3**	**-0.2**
SERG	**Sergoula**	**0.76**	**41**	P	**Pb**	**20 28 56.0**	**-0.9**
SERG				S	**Sb**	**20 29 07.2**	**+0.3**
SERG				AML	AML	20 29 11.1	
	comp=E,4906μm,0.3s						
SERG				AML	AML	20 29 11.2	
	comp=N,2340μm,0.4s						
SERG	**Sergoula**	**0.76**	**41**	P	**Pb**	**20 28 56.1**	**-0.9**
SERG				S	**Sb**	**20 29 06.7**	**-0.2**
SERG	**Sergoula**	**0.76**	**41**	P	**Pb**	**20 28 56.3**	**-0.6**
SERG				S	**Sb**	**20 29 06.7**	**-0.2**
PDO	**Prodromos**	**0.78**	**346**	P	**Pb**	**20 28 57.2**	**0.0**
PDO				S	**Sn**	**20 29 08.3**	**-0.9**
PDO				AML	AML	20 29 13.4	
	comp=N,7868μm,0.3s						
PDO				AML	AML	20 29 14.3	
	comp=E,5255μm,0.3s						
PDO	**Prodromos**	**0.78**	**346**	P	**Pb**	**20 28 56.7**	**-0.5**
PDO				S	**Sn**	**20 29 08.4**	**-0.8**
PDO	**Prodromos**	**0.78**	**346**	P	**Pb**	**20 28 57.2**	**0.0**
PDO				S	**Sn**	**20 29 08.3**	**-0.9**
ITM	**Ithomi**	**0.78**	**148**	P	**Pn**	**20 28 57.6**	**-0.6**
ITM	**Ithomi**	**0.78**	**148**	P	**Pb**	**20 28 56.4**	**-0.8**
ITM				S	**Sb**	**20 29 07.4**	**+0.1**
ITM	**Ithomi**	**0.78**	**148**	P	**Pb**	**20 28 57.1**	**-0.1**
ITM				S	**Sb**	**20 29 07.4**	**+0.1**
PVO	**Paravola**	**0.78**	**6**	P	**Pb**	**20 28 57.1**	**-0.1**
PVO				S	**Sb**	**20 29 07.8**	**+0.6**
PVO				AML	AML	20 29 14.1	
	comp=E,1857μm,0.3s						
PVO				AML	AML	20 29 15.8	
	comp=N,1414μm,0.5s						
PVO	**Paravola**	**0.78**	**6**	P	**Pb**	**20 28 56.8**	**-0.4**
PVO				S	**Sb**	**20 29 07.9**	**+0.6**
PVO	**Paravola**	**0.78**	**6**	P	**Pb**	**20 28 57.1**	**-0.1**
PVO				S	**Sb**	**20 29 07.9**	**+0.6**
ANX	**Ano Chora**	**0.85**	**28**	P	**Pb**	**20 28 57.1**	**-1.4**
ANX				S	**Sb**	**20 29 0.0**	**-0.5**
ANX				AML	AML	20 29 18.1	
	comp=N,2489μm,0.5s						
ANX				AML	AML	20 29 18.3	
	comp=E,2714μm,0.5s						
ANX	**Ano Chora**	**0.85**	**28**	P	**Pb**	**20 28 57.5**	**-1.0**
ANX				S	**Sn**	**20 29 09.9**	**-1.2**
ANX	**Ano Chora**	**0.85**	**28**	P	**Pb**	**20 28 57.7**	**-0.8**
ANX				S	**Sb**	**20 29 09.5**	**0.0**
VLX	**Vlachokerasia**	**0.90**	**121**	P	**Pn**	**20 28 59.6**	**-0.4**
VLX	**Vlachokerasia**	**0.90**	**121**	P	**Pb**	**20 28 58.0**	**-1.3**
VLX				S	**Sb**	**20 29 10.0**	**-0.9**
VLX	**Vlachokerasia**	**0.90**	**121**	P	**Pn**	**20 28 59.2**	**-0.7**
VLX				S	**Sb**	**20 29 10.0**	**-0.9**
FSK	**Fiskardo**	**0.91**	**313**	P	**Pb**	**20 28 57.5**	**-2.0**
FSK				S	**Sn**	**20 29 13.9**	**+1.3**
MGNA	**Meganis¸,,**	**0.95**	**329**	P	**Pb**	**20 28 58.6**	**-1.5**
MGNA				S	**Sn**	**20 29 14.2**	**+0.7**
MGNA	**Meganis¸,,**	**0.95**	**329**	P	**Pb**	**20 28 59.5**	**-0.6**
MGNA				S	**Sn**	**20 29 14.0**	**+0.5**
PYL	**PYLOS**	**0.98**	**165**	P	**Pb**	**20 28 59.0**	**-1.7**
PYL	**PYLOS**	**0.98**	**165**	P	**Pb**	**20 28 59.4**	**-1.3**
PYL				S	**Sb**	**20 29 12.7**	**-0.5**
PYL	**PYLOS**	**0.98**	**165**	P	**Pb**	**20 28 59.8**	**-0.9**
PYL				S	**Sb**	**20 29 12.7**	**-0.5**
THAL	**Thalero**	**1.00**	**79**	P	**Pb**	**20 28 59.5**	**-1.5**
THAL				S	**Sn**	**20 29 14.1**	**-0.8**
THAL	**Thalero**	**1.00**	**79**	P	**Pb**	**20 29 00.2**	**-0.9**
THAL				S	**Sn**	**20 29 14.3**	**-0.5**
DSF	**Desfina**	**1.04**	**57**	P	**Pb**	**20 29 00.3**	**-1.4**
DSF				S	**Sn**	**20 29 17.6**	**+1.7**
DSF				AML	AML	20 29 25.3	
	comp=N,1070μm,0.3s						
DSF				AML	AML	20 29 26.9	
	comp=E,1074μm,0.6s						
DSF	**Desfina**	**1.04**	**57**	P	**Pb**	**20 29 01.0**	**-0.8**
DSF				S	**Sn**	**20 29 16.8**	**+0.9**
MES2	**Methoni**	**1.04**	**167**	P	**Pb**	**20 29 00.4**	**-1.3**
MES2	**Methoni**	**1.04**	**167**	P	**Pb**	**20 29 01.0**	**-0.7**
DLFA	**Delphi**	**1.06**	**53**	P	**Pb**	**20 29 00.8**	**-1.3**
DLFA	**Delphi**	**1.06**	**53**	P	**Pb**	**20 29 01.4**	**-0.7**
LKD2	**Lefkada island**	**1.12**	**328**	P	**Pn**	**20 29 01.6**	**-1.3**
LKD2				S	**Sn**	**20 29 18.9**	**+1.2**
LKD2				AML	AML	20 29 27.5	
	comp=E,1531μm,0.4s						
LKD2				AML	AML	20 29 27.7	
	comp=N,1024μm,0.3s						
LKD2	**Lefkada island**	**1.12**	**328**	P	**Pn**	**20 29 02.5**	**-0.4**
LKD2				S	**Sn**	**20 29 19.0**	**+1.3**
LTK	**Loutraki**	**1.24**	**81**	P	**Pn**	**20 29 04.1**	**-0.4**
LTK	**Loutraki**	**1.24**	**81**	P	**Pb**	**20 29 04.6**	**-0.5**
LOUT	**Loutraki**	**1.24**	**83**	P	**Pb**	**20 29 05.5**	**+0.4**
LOUT	**Loutraki**	**1.24**	**83**	P	**Pb**	**20 29 05.3**	**+0.2**
PROD	**Prodromos**	**1.24**	**70**	P	**Pb**	**20 29 05.2**	**+0.1**
PROD				S	**Sn**	**20 29 23.6**	**+2.8**
PROD				AML	AML	20 29 30.6	
	comp=E,1253μm,0.4s						
PROD				AML	AML	20 29 31.5	
	comp=N,1126μm,0.4s						
PROD	**Prodromos**	**1.24**	**70**	P	**Pb**	**20 29 05.2**	**+0.1**
PROD				S	**Sn**	**20 29 22.9**	**+2.2**
DYR	**Agios Nikonas**	**1.30**	**146**	P	**Pb**	**20 29 07.1**	**+0.9**
DYR	**Agios Nikonas**	**1.30**	**146**	P	**Pb**	**20 29 06.7**	**+0.5**
AGG	**Agios Georgios**	**1.38**	**31**	P	**Pb**	**20 29 06.7**	**-0.8**
AGG	**Agios Georgios**	**1.38**	**31**	P	**Pb**	**20 29 07.3**	**-0.2**
KRND	**KRANIDI**	**1.45**	**108**	P	**Pb**	**20 29 09.7**	**+1.1**
KRND	**KRANIDI**	**1.45**	**108**	P	**Pb**	**20 29 09.3**	**+0.6**
DID	**Didima**	**1.48**	**103**	P	**Pb**	**20 29 09.8**	**+0.6**
DID	**Didima**	**1.48**	**103**	P	**Pb**	**20 29 09.6**	**+0.4**
LKR	**Lokris**	**1.48**	**57**	P	**Pb**	**20 29 09.5**	**+0.2**
LKR	**Lokris**	**1.48**	**57**	P	**Pb**	**20 29 09.4**	**+0.2**
VIL2	**Platees**	**1.51**	**75**	P	**Pb**	**20 29 09.6**	**0.0**
VIL2				S	**Sb**	**20 29 31.2**	**+2.9**
VIL2				AML	AML	20 29 36.5	
	comp=E,929μm,0.5s						
VIL2				AML	AML	20 29 40.0	
	comp=N,1039μm,0.5s						
VILL	**Villia**	**1.53**	**77**	P	**Pb**	**20 29 09.8**	**-0.3**
VILL				S	**Sb**	**20 29 30.8**	**+1.7**
VLI	**Veliai**	**1.65**	**132**	P	**Pb**	**20 29 11.1**	**-1.0**
VLI	**Veliai**	**1.65**	**132**	P	**Pb**	**20 29 11.4**	**-0.7**
SMIA	**Simia**	**1.75**	**53**	P	**Pb**	**20 29 14.1**	**+0.3**
SMIA	**Simia**	**1.75**	**53**	P	**Pb**	**20 29 13.6**	**-0.2**
THL	**Klokotos Trika**	**1.78**	**15**	P	**Pb**	**20 29 15.5**	**+1.2**
THL	**Klokotos Trika**	**1.78**	**15**	P	**Pb**	**20 29 14.6**	**+0.3**
ATH	**Athens Observa**	**1.82**	**85**	P	**Pb**	**20 29 15.4**	**+0.4**
ATH	**Athens Observa**	**1.82**	**85**	P	**Pb**	**20 29 14.8**	**-0.2**
ATHU	**Athens Univers**	**1.88**	**86**	P	**Pn**	**20 29 13.2**	**-0.1**
ATHU	**Athens Univers**	**1.88**	**86**	P	**Pn**	**20 29 14.0**	**+0.7**
VLY	**Voula,Athens**	**1.88**	**89**	P	**Pb**	**20 29 15.1**	**-1.0**
VLY	**Voula,Athens**	**1.88**	**89**	P	**Pb**	**20 29 15.0**	**-1.0**
PTL	**Penteli**	**1.94**	**83**	P	**Pb**	**20 29 16.3**	**-0.9**
PTL	**Penteli**	**1.94**	**83**	P	**Pb**	**20 29 16.0**	**-1.1**
SGD	**Sagiada**	**1.99**	**333**	P	**Pb**	**20 29 16.9**	**-1.0**
SGD	**Sagiada**	**1.99**	**333**	P	**Pb**	**20 29 16.9**	**-1.0**
DION	**Dionisos Attik**	**2.00**	**83**	P	**Pb**	**20 29 17.2**	**-0.9**
DION	**Dionisos Attik**	**2.00**	**83**	P	**Pb**	**20 29 16.9**	**-1.2**
NEO	**Neokhori**	**2.03**	**44**	P	**Pn**	**20 29 14.6**	**-0.9**
NEO	**Neokhori**	**2.03**	**44**	P	**Pn**	**20 29 15.9**	**+0.4**
KYTH	**Kithira**	**2.04**	**140**	P	**Pb**	**20 29 17.5**	**-1.4**
XOR	**Xorichti**	**2.06**	**42**	P	**Pn**	**20 29 16.6**	**+0.7**
XOR	**Xorichti**	**2.06**	**42**	P	**Pb**	**20 29 17.1**	**-2.0**
EREA	**Eretria**	**2.06**	**73**	P	**Pb**	**20 29 18.8**	**-0.3**
EREA	**Eretria**	**2.06**	**73**	P	**Pb**	**20 29 18.2**	**-1.0**
SKIA	**Skiathos**	**2.08**	**50**	P	**Pb**	**20 29 17.7**	**-1.7**
SKIA	**Skiathos**	**2.08**	**50**	P	**Pb**	**20 29 17.7**	**-1.7**
KPRO	**Kipourio**	**2.11**	**359**	P	**Pb**	**20 29 19.0**	**-0.9**
KPRO	**Kipourio**	**2.11**	**359**	P	**Pb**	**20 29 18.7**	**-1.3**
KEK	**Kerkira**	**2.25**	**326**	P	**Pn**	**20 29 20.1**	**+1.5**
KEK	**Kerkira**	**2.25**	**326**	P	**Pn**	**20 29 20.3**	**+1.8**
PENT	**Pentalofos**	**2.36**	**355**	P	**Pb**	**20 29 22.4**	**-1.8**
PENT	**Pentalofos**	**2.36**	**355**	P	**Pb**	**20 29 22.2**	**-2.0**
LIT	**Litokhoron**	**2.40**	**20**	P	**Pn**	**20 29 20.6**	**0.0**
LIT	**Litokhoron**	**2.40**	**20**	P	**Pn**	**20 29 21.5**	**+0.9**
ANKY	**Antikythira Is**	**2.48**	**142**	P	**Pb**	**20 29 26.9**	**+0.5**
ANKY	**Antikythira Is**	**2.48**	**142**	P	**Pb**	**20 29 25.1**	**-1.2**
NEST	**Nestorio**	**2.58**	**354**	P	**Pb**	**20 29 26.5**	**-1.5**
NEST	**Nestorio**	**2.58**	**354**	P	**Pb**	**20 29 25.8**	**-2.3**
PAIG	**Paliouri**	**2.73**	**40**	P	**Pn**	**20 29 25.0**	**0.0**
PAIG	**Paliouri**	**2.73**	**40**	P	**Pn**	**20 29 26.0**	**+1.0**
FNA	**Florina**	**2.94**	**359**	P	**Pb**	**20 29 32.0**	**-2.0**
FNA	**Florina**	**2.94**	**359**	P	**Pb**	**20 29 31.0**	**-3.1**
GRG	**Griva**	**3.20**	**13**	P	**Pn**	**20 29 33.8**	**+2.2**
GRG	**Griva**	**3.20**	**13**	P	**Pn**	**20 29 33.7**	**+2.2**
APE	**Apeiranthos**	**3.36**	**102**	P	**Pn**	**20 29 35.9**	**+2.0**
APE	**Apeiranthos**	**3.36**	**102**	P	**Pn**	**20 29 35.8**	**+2.0**
KNT	**Kendrikon**	**3.51**	**19**	P	**Pn**	**20 29 38.6**	**+2.9**
KNT	**Kendrikon**	**3.51**	**19**	P	**Pn**	**20 29 38.3**	**+2.6**
CHOS	**Chios island**	**3.70**	**80**	P	**Pn**	**20 29 40.9**	**+2.4**
CHOS	**Chios island**	**3.70**	**80**	P	**Pn**	**20 29 40.6**	**+2.2**
IDI	**Anoyia**	**3.78**	**131**	Pn	**Pn**	**20 29 41.9**	**+2.3**
	comp=N,0.3nm,0.3s,baz=301,slow=12,SNR=4.5						
IDI				Sn	**Sn**	**20 30 26.1**	**+2.6**
	comp=N,1.4nm,0.3s,baz=294,slow=20,SNR=3.9						
STON	**Ston**	**5.77**	**332**	*e*Pn	**Pn**	**20 30 05.6**	**-1.2**
STON				Sn	**Sn**	**20 31 09.0**	**-3.3**
BRTR	**Keskin Array B**	**9.73**	**75**	Pn	Pn	20 31 06.0	+4.8
	comp=N,0.1nm,0.3s,baz=252,slow=11,SNR=3.0						
FINES	**FINESS Array B**	**23.80**	**6**	P	**P**	**20 33 52.2**	**-1.3**
	comp=N,1.4nm,0.9s,baz=190,slow=9.7,SNR=4.5						
EKA	**Eskdalemuir Ar**	**24.11**	**324**	P	**P**	**20 33 57.2**	**+0.8**
	comp=N,0.7nm,0.5s,baz=129,slow=10,SNR=6.0						
TORD	**Torodi Ar. Bea**	**30.23**	**221**	P	**P**	**20 34 51.8**	**+0.1**
	comp=N,0.3nm,0.6s,baz=30,slow=8.9,SNR=2.8						
MKAR	**Makanchi Array**	**44.87**	**58**	P	**P**	**20 36 55.3**	**+0.1**
	comp=N,0.4nm,0.5s,baz=282,slow=6.0,SNR=4.4						

*NNC **13** 20:33:46.1±0.5, 43°.24N×71°.89E, h0km, mb3.2, mpv3.0,*
Error ellipse: s-maj=4.5km s-min=1.5km az=23.0
*KNET **13** 20:33:46.9±0.7, 43°.26N×72°.05E, h4km±6km, ml2.7, Error ellipse: s-maj=6.2km s-min=4.4km az=143.0*
*KRNET **13** 20:33:47.0±0.1, 43°.24N×71°.94E, h16km, mb3.4*
*SOME **13** 20:33:47.7, 43°.28N×71°.95E, h10km*

ISC 13 20:33:46.9±1.1, 43°.20N±0°.03×72°.00E±0°.02, h6km±11km, n63, σ1°87/111, 36C-17D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZA	**Taraz**	**0.58**	**238**	*e*P	**Pg**	**20 33 58.1**	**+0.1**
	baz=32						
DZA				*e*S	**Sg**	**20 34 05.7**	**+0.2**
	baz=32						
DZA	**Taraz**	**0.58**	**238**	*e*P	**Pg**	**20 33 58.1**	**+0.1**
	124nm,0.2s						
DZA				*e*S	**Sg**	**20 34 05.8**	**+0.2**
	488nm,0.2s						
MNAS	**Manas**	**0.81**	**152**	⇑P	**Pb**	**20 34 03.2**	**-0.3**
	4.2nm,0.3s						
MNAS				⇓S	**Sb**	**20 34 14.8**	**+0.1**
	57nm,0.4s						
MNAS	**Manas**	**0.81**	**152**	⇑*i*P	**Pb**	**20 34 03.1**	**-0.3**
	baz=51						
MNAS				⇑*i*S	**Sb**	**20 34 14.8**	**+0.1**
	baz=51						
MRKS	**Merke**	**1.01**	**116**	*e*P	**Pn**	**20 34 07.4**	**-0.4**
	baz=17						
MRKS				*e*S	**Sn**	**20 34 21.9**	**-0.5**
	baz=17						
MRKS	**Merke**	**1.01**	**116**	*e*P	**Pn**	**20 34 07.4**	**-0.4**
	18nm,0.1s						
MRKS				*e*S	**Sn**	**20 34 21.9**	**-0.5**
	119nm,0.2s						
KK31	**Karatay Array**	**1.09**	**265**	⇑P	**Pb**	**20 34 06.0**	**-2.2**
	2.5nm,0.2s,baz=79,slow=15,SNR=211						
KK31				S	**Sb**	**20 34 19.6**	**-3.1**
	22nm,0.3s,baz=79,slow=29,SNR=26						
JBG	**Jabagly**	**1.32**	**234**	*e*P	**Pg**	**20 34 12.3**	**0.0**
	baz=6.0						
JBG				*e*S	**Sg**	**20 34 29.5**	**+0.1**
	baz=6.0						
EKS2	**Erkin-Say**	**1.42**	**112**	⇑P	**Pg**	**20 34 14.6**	**+0.5**
	17nm,0.1s,SNR=24						
EKS2				⇓S	**Sg**	**20 34 35.0**	**+2.5**
	47nm,0.2s						
EKS2	**Erkin-Say**	**1.42**	**112**	⇓*i*P	**Pb**	**20 34 14.1**	**+0.3**
	baz=13						
EKS2				⇓*i*S	**Sg**	**20 34 34.4**	**+2.0**
	baz=13						
BRLS	**Borolday**	**1.59**	**264**	*e*P	**Pg**	**20 34 18.4**	**+1.0**
	baz=56						
BRLS				*e*S	**Sg**	**20 34 40.5**	**+2.5**
	baz=56						
BRLS	**Borolday**	**1.59**	**264**	*e*P	**Pg**	**20 34 18.4**	**+1.0**
	3.7nm,0.2s						
BRLS				*e*S	**Sg**	**20 34 40.5**	**+2.5**
	49nm,0.3s						
AML	**Almayashu**	**1.65**	**130**	⇑P	**Pb**	**20 34 18.6**	**+0.6**
	11nm,0.2s,SNR=10.0						
AML				⇓S	**Sg**	**20 34 42.0**	**+2.1**
	28nm,0.2s						
AML	**Almayashu**	**1.65**	**130**	⇑*i*P	**Pb**	**20 34 18.4**	**+0.5**
	baz=30						
AML				⇑*i*S	**Sg**	**20 34 41.5**	**+1.6**
	baz=30						
IUG	**Iuzhnay**	**1.79**	**235**	*e*P	**Pg**	**20 34 20.6**	**-0.7**
	baz=33						
IUG				*e*S	**Sg**	**20 34 44.5**	**0.0**
	baz=33						
IUG	**Iuzhnay**	**1.79**	**235**	*e*P	**Pg**	**20 34 20.6**	**-0.7**
	14nm,0.3s						
IUG				*e*S	**Sg**	**20 34 44.5**	**0.0**
	82nm,0.2s						
USP	**Ospenovka**	**1.83**	**87**	P	**Pb**	**20 34 20.1**	**-0.8**
	23nm,0.2s,SNR=148						
USP				⇑S	**Sg**	**20 34 46.4**	**+0.6**
	81nm,0.2s						
USP	**Ospenovka**	**1.83**	**87**	⇑*i*P	**Pb**	**20 34 20.3**	**-0.6**
	baz=88						
USP				⇑*i*S	**Sg**	**20 34 46.2**	**+0.5**
	baz=88						
AAK	**Ala-Archa**	**1.92**	**106**	⇓Pg	**Pb**	**20 34 22.9**	**+0.4**
	8.9nm,0.5s						
AAK				⇓Lg	Lg	20 34 49.5	
	19nm,0.3s						
AAK	**Ala-Archa**	**1.92**	**106**	⇑P	**Pb**	**20 34 22.5**	**+0.1**
	9.1nm,0.1s,SNR=22						
AAK	**Ala-Archa**	**1.92**	**106**	⇓*i*P	**Pb**	**20 34 22.5**	**+0.1**
	baz=7.0						
AAK				⇓*i*S	**Sg**	**20 34 49.2**	**+0.6**
	baz=7.0						
CHM	**Chimkent**	**1.97**	**244**	*e*P	**Pg**	**20 34 23.5**	**-1.2**
	baz=43						
CHM				*e*S	**Sg**	**20 34 49.2**	**-1.0**
	baz=43						
CHM	**Chimkent**	**1.97**	**244**	*e*P	**Pg**	**20 34 23.5**	**-1.2**
	25nm,0.2s						
CHM				*e*S	**Sg**	**20 34 49.2**	**-1.0**
	86nm,0.3s						
ARSB	**Arslanbob**	**2.02**	**158**	⇑*i*P	**Pb**	**20 34 24.6**	**+0.5**
	baz=58						
ARSB				⇑*i*S	**Sg**	**20 34 51.8**	**+0.1**
	baz=58						
CHMS	**Chumysh**	**2.03**	**95**	⇑P	**Pb**	**20 34 23.2**	**-1.0**
	12nm,0.2s,SNR=50						
UCH	**Uchtor**	**2.10**	**117**	⇓P	**Pb**	**20 34 26.2**	**+0.6**
	7.4nm,0.3s,SNR=17						
UCH	**Uchtor**	**2.10**	**117**	⇑*e*P	**Pb**	**20 34 25.5**	**-0.1**
	baz=17						
UCH				⇑*i*S	**Sg**	**20 34 54.2**	**-0.1**
	baz=17						
KBK	**Karagaybulak**	**2.24**	**103**	⇓P	**Pb**	**20 34 27.0**	**-0.8**
	6.9nm,0.1s,SNR=8.8						
KBK	**Karagaybulak**	**2.24**	**103**	⇑*i*P	**Pb**	**20 34 26.8**	**-1.0**
	baz=4.0						
KBK				⇑*i*S	**Sb**	**20 34 57.1**	**+1.3**
	baz=4.0						
KZA	**Kyzart**	**2.65**	**114**	⇑*e*P	**Pb**	**20 34 33.9**	**-1.2**
	baz=14						
KZA				⇑*i*S	**Sb**	**20 35 07.3**	**-0.7**
	baz=14						
TKM2	**Tokmak 2**	**2.65**	**95**	⇓Pg	**Pb**	**20 34 35.3**	**+0.4**
	3.4nm,0.5s						
TKM2				⇑Lg	Lg	20 35 10.5	
	27nm,0.7s						
DGS	**Degeres**	**2.76**	**88**	*e*P	**Pb**	**20 34 37.2**	**+0.5**
	baz=89						
DGS				*e*S	**Sb**	**20 35 13.4**	**+2.5**
	baz=89						
DGS	**Degeres**	**2.76**	**88**	*e*P	**Pb**	**20 34 37.2**	**+0.5**
	7.2nm,0.2s						
DGS				*e*S	**Sb**	**20 35 13.4**	**+2.5**
	23nm,0.4s						
KST	**Kastek**	**2.91**	**92**	*e*P	**Pb**	**20 34 40.5**	**+1.2**
	baz

ARXS				*e*S		Sg	20 36 02.7	-3.8
	15nm,0.6s							
KPKS	**Kokpek**	**4.89**	**85**	*e*P		Pg	20 35 18.9	-1.6
	baz=85							
KPKS				*e*S		Sg	20 36 24.2	+0.4
	baz=85							
KPKS	**Kokpek**	**4.89**	**85**	*e*P		Pg	20 35 18.9	-1.6
	4.1nm,0.4s							
KPKS				*e*S		Sg	20 36 24.2	+0.4
	22nm,0.5s							
UZB	**Uzynbulak**	**5.14**	**88**	*e*P		Pb	20 35 20.8	+3.5
	baz=89							
UZB				*e*S		Sg	20 36 28.0	-3.9
	baz=89							
UZB	**Uzynbulak**	**5.14**	**88**	*e*P		Pb	20 35 20.8	+3.5
	4.8nm,0.7s							
UZB				*e*S		Sg	20 36 28.0	-3.9
	6.2nm,0.8s							
DJR	**Jarkent**	**5.76**	**76**	*e*P		Pb	20 35 32.3	+4.5
	4.1nm,0.5s							
DJR				*e*S		Sg	20 36 47.0	-4.7
	5.0nm,1.0s							
MAKZ	**Makanchi**	**7.94**	**60**	⇑Lg		Lg	20 37 58.6	
	2.4nm,0.8s							
MK31	**Makanchi Array**	**8.13**	**60**	⇑Pn		Pn	20 35 45.8	+0.3
	baz=246,slow=13,SNR=6.0							
MK31				⇑Lg		Lg	20 38 05.0	
	1.8nm,0.7s,baz=240,slow=24,SNR=2.5							
KURBB	**Kurchatov Arra**	**8.66**	**29**	⇑Lg		Lg	20 38 23.3	
	8.4nm,0.7s							
KURK	**Kurchatov**	**8.77**	**29**	⇑Lg		Lg	20 38 24.4	
	4.3nm,0.7s							

IDC 13 20:41:33.9±1.8, 9°38S×126°45E, h0km, mb3.5/1, mb1 3.6/4, mb1mx3.3/53, mbtmp3.5/4, ML3.2/3, Error ellipse: s-maj=35.7km s-min=30.9km az=31.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**2.87**	**253**	Pn	Pn	20 42 21.1	+0.2
	3.9nm,0.3s,baz=77,slow=3.5,SNR=17						
BATI				Sn	Sn	20 42 56.6	+0.4
	12nm,0.3s,baz=47,slow=23,SNR=11						
WRA	**Warramunga Arr**	**12.97**	**145**	Pn	Pn	20 44 39.3	-0.3
	0.1nm,0.3s,baz=322,slow=13,SNR=7.4						
WRA				Sn	Sn	20 46 57.9	-6.9
	0.3nm,0.3s,baz=329,slow=34,SNR=7.1						
ASAR	**Alice Springs**	**15.89**	**154**	Pn	Pn	20 45 19.3	+0.2
	0.1nm,0.3s,baz=323,slow=10,SNR=6.5						
ASAR				Sn	Sn	20 48 10.4	-5.6
	0.1nm,0.3s,baz=321,slow=22,SNR=6.4						
MKAR	**Makanchi Array**	**68.36**	**329**	P	P	20 52 37.3	0.0
	0.4nm,0.7s,baz=139,slow=6.2,SNR=2.9						

*IDC **13** 21:05:14.4±1.2, 1°21S×121°18E, h0km, mb3.4/5, mb1 3.6/5, mb1mx3.4/57, mbtmp3.4/5, Error ellipse: s-maj=156.6km s-min=20.1km az=57.0*
*DJA **13** 21:05:20.2±0.6, 1°S±2°×12°0E±°, h11km±5km, M3.6/7, MLv3.6/7*

ISC 13 21:05:16.1±1.9, 1°54S±0°03×120°42E±0°04, h7km±14km, n16, σ1°55/25, mb3.6/5, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCI	**Palu**	**0.86**	**317**	P	Pn	21 05 34.5	-0.1
PCI				S	Sn	21 05 47.9	+0.5
APSI	**Ampana**	**1.38**	**63**	P	Pn	21 05 41.1	-0.7
APSI				S	Sb	21 06 01.1	+0.9
TTSI	**Tana Toraja**	**1.61**	**202**	P	Pn	21 05 45.0	+0.1
TTSI				S	Sg	21 06 10.0	+2.1
MPSI	**Mapaga**	**1.94**	**344**	P	Pb	21 05 51.6	-0.2
MPSI				S	Sg	21 06 19.6	+1.2
LUWI	**Luwuk**	**2.41**	**78**	P	Pn	21 05 54.0	-1.9
LUWI				S	Sb	21 06 27.8	-1.9
SPSI	**Sidrap Palu**	**2.49**	**195**	P	Pb	21 06 00.7	-0.5
SPSI				S	Sb	21 06 32.4	+0.3
MRSI	**Marisa**	**2.52**	**37**	P	Pn	21 05 57.6	+0.1
MRSI				S	Sn	21 06 29.9	+1.5
KDI	**Kendari**	**3.26**	**138**	P	Pb	21 06 13.8	-0.5
BKB	**Balikpapan**	**3.53**	**274**	P	Pb	21 06 16.5	-2.4
BKB				S	Sb	21 06 59.2	-2.8
BKSI	**Bulukumba**	**3.77**	**184**	P	Pb	21 06 21.7	-1.3
BKSI				S	Sn	21 07 01.5	+2.2
MTKI	**Muara Teweh, K**	**5.55**	**276**	P	Pb	21 06 53.3	-0.1
WRA	**Warramunga Arr**	**22.80**	**144**	P	P	21 10 17.3	-2.4
	0.7nm,0.8s,baz=320,slow=11,SNR=5.6						
ASAR	**Alice Springs**	**25.59**	**150**	P	P	21 10 44.9	-1.2
	0.4nm,0.7s,baz=336,slow=9.8,SNR=4.9						
CMAR	**Chiang Mai Arr**	**29.00**	**314**	P	P	21 11 19.1	+2.2
	0.9nm,0.7s,baz=135,slow=6.8,SNR=5.4						
MKAR	**Makanchi Array**	**58.61**	**330**	P	P	21 15 13.9	+0.1
	0.3nm,0.6s,baz=130,slow=7.9,SNR=4.8						
KURBB	**Kurchatov Arra**	**63.03**	**332**	P	P	21 15 43.8	0.0
	0.3nm,0.6s,baz=134,slow=6.1,SNR=3.1						

*JMA **13** 21:07:28.2±0.1, 24°76N×121°23E, h0km, M3.1*
*TAP **13** 21:07:28.0, 24°77N×121°25E, h10km, ML3.6, B*
*ISCJB **13** 21:07:29.3±0.2, 24°76N±0°01×121°27E±0°01, h8km±2km, Error ellipse: s-maj=2.2km s-min=1.7km az=143.5*

ISC 13 21:07:29.1±0.8, 24°76N±0°02×121°26E±0°01, h11km±5km, n83, σ0°80/128, 23C-11D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NSK	**Sanguang**	**0.12**	**131**	⇑*i*P	Pg	21 07 31.8	-0.4
	baz=131						
NSK				*i*S	Sg	21 07 34.2	-0.1
	baz=131						
YHNB	**Yeheng**	**0.14**	**129**	⇑P	Pg	21 07 31.9	-0.4
	baz=130						
YHNB				S	Sg	21 07 34.5	-0.2
	baz=130						
NCUH	**Zhongli**	**0.22**	**342**	⇓*i*P	Pg	21 07 33.5	-0.3
	baz=346						
NWLT	**Wulai**	**0.22**	**84**	⇑*i*P	Pg	21 07 33.3	-0.5
	baz=89						
NWLT				*e*S	Sg	21 07 36.8	-0.1
	baz=89						
NCU	**National Centr**	**0.22**	**343**	⇓*i*P	Pg	21 07 33.5	-0.4
	baz=349						
NCU				*e*S	Sg	21 07 37.6	+0.6
	baz=349						
LIOB	**Emei**	**0.25**	**244**	⇓*i*P	Pg	21 07 34.3	0.0
	baz=225						
LIOB				S	Sg	21 07 38.7	+1.0
	baz=225						
SBCB	**Hsinchu**	**0.25**	**278**	⇑P	Pg	21 07 34.5	+0.2
	baz=288						
SBCB				S	Sg	21 07 39.2	+1.4
	baz=288						
NSTT	**Nanjuang**	**0.27**	**242**	⇓*i*P	Pb	21 07 34.5	-1.4
	baz=223						
NSTT				*i*S	Sb	21 07 39.2	-1.2
	baz=223						
HSN	**Hsinchu**	**0.27**	**280**	⇑*i*P	Pg	21 07 34.1	-0.5
	baz=298						
HSN				*i*S	Sg	21 07 38.4	+0.1
	baz=298						
ENTT	**Nioudou**	**0.30**	**112**	⇑*i*P	Pg	21 07 35.4	+0.1
	baz=113						
ENTT				*e*S	Sg	21 07 40.0	+0.7
	baz=113						
TATO	**Taipei**	**0.30**	**43**	⇑P	Pg	21 07 35.0	-0.2
	baz=48						
TATO				S	Sg	21 07 39.7	+0.4
	baz=48						
NNS	**Nan Shan**	**0.33**	**162**	⇓*i*P	Pb	21 07 35.9	-1.2
	baz=147						
NNS				S	Sg	21 07 40.8	+0.5
	baz=147						
NNSB	**Datong**	**0.34**	**161**	⇓P	Pg	21 07 36.1	0.0
	baz=148						
NNSB				S	Sg	21 07 40.9	+0.2
	baz=148						
NNSH	**Datong**	**0.34**	**161**	P	Pg	21 07 36.0	0.0
	baz=152						
NNSH				*e*S	Sg	21 07 40.9	+0.2
	baz=152						
TWE	**Neicheng**	**0.37**	**95**	⇑*i*P	Pb	21 07 36.7	-1.0
	baz=104						
TWE				S	Sg	21 07 42.2	+0.8
	baz=104						
NTST	**Danshui**	**0.44**	**23**	*e*P	Pb	21 07 38.3	-0.7
	baz=13						
NTST				*e*S	Sb	21 07 45.5	-0.1
	baz=13						
ILA	**Ilan**	**0.44**	**89**	*e*P	Pg	21 07 37.0	-0.8
	baz=103						
YM04	**YM04**	**0.47**	**32**	*e*P	Pb	21 07 38.3	-1.1
	baz=23						
YM04				*e*S	Sb	21 07 45.5	-0.9
	baz=23						
NMLH	**Miaoli**	**0.48**	**243**	*e*P	Pb	21 07 39.4	-0.1
	baz=238						
NMLH				S	Sb	21 07 47.4	+0.8
	baz=238						
YM10	**YM10**	**0.48**	**34**	⇑P	Pb	21 07 38.8	-0.9
	baz=28						
YM03	**YM03**	**0.49**	**31**	⇑*i*P	Pb	21 07 39.0	-0.9
	baz=41						
YM03				S	Sb	21 07 46.2	-0.9
	baz=41						
YM11	**YM11**	**0.50**	**35**	⇑P	Pb	21 07 40.0	+0.1
	baz=26						
YM11				*e*S	Sb	21 07 47.4	+0.1
	baz=26						
YM12	**YM12**	**0.51**	**33**	⇑P	Pb	21 07 39.1	-1.0
	baz=25						
YM12				S	Sb	21 07 46.9	-0.6
	baz=25						
YM08	**YM08**	**0.53**	**35**	⇑P	Pb	21 07 39.1	-1.2
	baz=29						
NTC	**Toucheng**	**0.53**	**79**	⇑*e*P	Pg	21 07 39.0	-0.4
	baz=92						
YM07	**YM07**	**0.53**	**38**	⇑P	Pg	21 07 38.5	-1.0
	baz=54						
YM07				*e*S	Sb	21 07 47.5	-0.6
	baz=54						
ENA	**Nanau**	**0.55**	**127**	⇑*i*P	Pb	21 07 39.9	-0.8
	baz=125						
ENA				*e*S	Sb	21 07 48.0	-0.5
	baz=125						
NANB	**Nanao**	**0.55**	**126**	⇑P	Pg	21 07 39.9	0.0
	baz=125						
NANB				*e*S	Sg	21 07 46.6	-0.6
	baz=125						
TWC	**Suao**	**0.56**	**105**	⇑*i*P	Pg	21 07 39.9	-0.1
	baz=113						
TWC				*e*S	Sb	21 07 48.0	-0.8
	baz=113						
TIPB	**Shuangxi**	**0.56**	**67**	⇑*i*P	Pg	21 07 38.8	-1.2
	baz=83						
TIPB				S	Sg	21 07 46.5	-0.9
	baz=83						
NSY	**Sanyi**	**0.57**	**233**	*e*P	Pb	21 07 41.5	+0.4
	baz=215						
NSY				S	Sb	21 07 49.7	+0.6
	baz=215						
NWF	**Wu-fen Shan**	**0.57**	**56**	⇑*i*P	Pb	21 07 40.3	-0.8
	baz=60						
WFSB	**Wu-fen Shan**	**0.57**	**56**	⇑P	Pb	21 07 40.4	-0.7
	baz=50						
ENAH	**Nanao**	**0.59**	**121**	*e*P	Pg	21 07 40.3	-0.2
	baz=121						
ENAH				*e*S	Sg	21 07 48.4	+0.1
	baz=121						
TWQ1	**Liyutan**	**0.60**	**228**	⇓*i*P	Pb	21 07 41.4	-0.3
	baz=207						
TWY	**Chenhua**	**0.60**	**31**	*e*P	Pb	21 07 40.9	-0.8
	baz=23						
TWY				*e*S	Sb	21 07 50.8	+0.6
	baz=23						
EGS		**0.62**	**82**	⇑P	Pb	21 07 41.3	-0.6
	baz=84						
EGS				S	Sg	21 07 49.5	+0.3
	baz=84						
NACB	**Ninganchiao**	**0.66**	**152**	⇓P	Pb	21 07 41.9	-0.7
	baz=150						
NACB				S	Sg	21 07 50.8	+0.4
	baz=150						
CHGB	**Renai**	**0.70**	**186**	⇓P	Pg	21 07 42.3	-0.3
	baz=182						
CHGB				*e*S	Sb	21 07 52.8	-0.3
	baz=182						
TWB1	**Santiao Chiao**	**0.71**	**69**	*e*P	Pg	21 07 42.6	-0.3
	baz=80						
TWB1				S	Sg	21 07 52.0	-0.1
	baz=80						
TWD	**Chiawan**	**0.74**	**155**	P	Pb	21 07 43.3	-0.7
	baz=152						
TWD				S	Sg	21 07 53.1	0.0
	baz=152						
TCU	**Taichung**	**0.81**	**221**	*e*P	Pn	21 07 46.0	-0.4
	baz=215						
EOS1	**EOS1**	**0.82**	**104**	*e*P	Pb	21 07 44.7	-0.6
	baz=105						
HWA	**Hwalien**	**0.84**	**158**	*e*P	Pn	21 07 46.5	-0.4
	baz=149						
SMLT	**Sun Moon Lake**	**0.93**	**201**	P	Pb	21 07 46.9	-0.4
	baz=190						
WCHH	**Zhanghua**	**0.93**	**224**	*e*P	Pn	21 07 47.3	-0.8
	baz=206						
WCHH				*e*S	Sn	21 08 01.9	+0.6
	baz=206						
ESL	**Shilin**	**0.95**	**170**	⇓*e*P	Pb	21 07 47.0	-0.6
	baz=166						
ESL				S	Sb	21 08 00.8	+0.6
	baz=166						
SSLB	**Suanglung**	**1.00**	**196**	⇓*e*P	Pg	21 07 47.4	-1.1
	baz=182						
WJS	**Zhushan**	**1.05**	**208**	*e*P	Pn	21 07 49.3	-0.4
	baz=199						
EGFH	**Guangfu**	**1.09**	**172**	*e*P	Pb	21 07 49.9	-0.1
	baz=167						
RLNB	**Erlin**	**1.19**	**224**	*e*P	Pg	21 07 50.7	-1.3
	baz=214						
RLNB				*e*S	Sn	21 08 07.8	0.0
	baz=214						
EHY	**Hungye**	**1.25**	**177**	*e*P	Pg	21 07 51.5	-1.6
	baz=172						
WDLH	**Douliu**	**1.25**	**212**	*e*P	Pg	21 07 52.0	-1.1
	baz=202						
HGSD	**Ruisui**	**1.27**	**173**	*e*P	Pb	21 07 53.0	0.0
	baz=168						
YULB	**Yu-li**	**1.36**	**179**	*e*P	Pg	21 07 54.8	-0.4
	baz=172						
TWF1	**Yuli**	**1.40**	**179**	*e*P	Pb	21 07 55.0	-0.2
	baz=173						
WSF	**Szhu**	**1.46**	**221**	*e*P	Pn	21 07 55.0	-0.4
	baz=211						
WSF				*e*S	Sg	21 08 15.1	-1.1
	baz=211						
FULB	**Fuli**	**1.55**	**179**	*e*P	Pg	21 07 58.4	-0.5
	baz=173						
TPUB	**Ta-pu**	**1.56**	**202**	*e*P	Pn	21 07 56.5	-0.3
	baz=193						
TPUB				*e*S	Sg	21 08 19.2	-0.1
	baz=193						
JYNG	**Yonagunijimaku**	**1.56**	**101**	P	Pn	21 07 57.3	+0.5
JYNG				S	Sg	21 08 18.9	-0.5
ELDTW	**Lidau**	**1.57**	**188**	*e*P	Pg	21 07 58.5	-0.9
	baz=169						
ELDTW				*e*S	Sg	21 08 20.2	+0.4
	baz=169						
WTP	**Ta-pu**	**1.61**	**202**	*e*P	Pn	21 07 57.8	+0.2
	baz=208						
YOJ	**Yonaguni jima**	**1.62**	**100**	*e*P	Pn	21 07 57.0	-0.7
	baz=86						
YOJ	**Yonaguni jima**	**1.62**	**100**	P	Pn	21 07 57.9	+0.3
YOJ				*e*S	Sb	21 08 19.6	+0.1
TWK	**Hsinying**	**1.64**	**206**	*e*P	Pn	21 07 58.3	+0.3
	baz=211						
CHKT	**Chengkung**	**1.65**	**177**	*e*P	Pn	21 07 58.4	+0.4
	baz=155						
CHN8	**Yiju**	**1.70**	**215**	*e*P	Pn	21 07 58.8	+0.1
	baz=204						
CHN8				*e*S	Sb	21 08 22.1	+0.3
	baz=204						
CHN1	**Nanshi**	**1.70**	**203**	*e*P	Pn	21 07 59.0	+0.2
	baz=209						
MATB	**Ma-tsu**	**1.83**	**320**	*e*P	Pn	21 08 00.5	0.0
	baz=325						
TWG	**Pinlang**	**1.93**	**185**	*e*P	Pb	21 08 03.0	-1.4
	baz=171						
TWGBT	**Beinan**	**1.94**	**185**	*e*P	Pb	21 08 03.1	-1.3
	baz=171						
PNG	**Penghu**	**1.96**	**233**	⇑*e*P	Pn	21 08 00.9	-1.3
	baz=227						
TWH	**Lutao**	**2.04**	**174**	*e*P	Pn	21 08 04.5	+1.0
	baz=154						
SSD	**Sandimen**	**2.08**	**196**	*e*P	Pb	21 08 06.5	-0.4
	baz=186						
ECL	**Taimali**	**2.17**	**187**	*e*P	Pb	21 08 08.8	+0.4
	baz=168						
MASBT	**Mashibuluo**	**2.21**	**195**	*e*P	Pb	21 08 08.2	-0.9
	baz=186						
IRIF	**Iriomote-Funau**	**2.29**	**100**	P	Pn	21 08 07.0	+0.2
IRIF				S	Sn	21 08 36.5	+1.5
HATJ	**Hateruma jima**	**2.42**	**106**	S	Sn	21 08 40.6	+2.3
SCZT	**Fangliau**	**2.44**	**194**	*e*P	Pb	21 08 11.2	-1.9
	baz=185						
JKRS	**Kuro-shima**	**2.56**	**101**	P	Pn	21 08 11.6	+1.1
JKRS				*e*S	Sn	21 08 43.3	+1.7
KNM	**Kinmen**	**2.59**	**263**	*e*P	Pn	21 08 12.6	+1.5
	baz=261						
JIJ	**Ishigaki jima**	**2.65**	**98**	P	Pn	21 08 11.8	0.0
JIJ				*e*S	Sn	21 08 47.0	+3.0
JISG	**Ishigakijimahi**	**2.78**	**93**	P	Pn	21 08 14.6	+1.0

*ISCJB **13** 21:14:16.1±0.6, 11°82N±0°07×43°07E±0°06, h20km±10km, Error ellipse: s-maj=13.3km s-min=7.8km az=150.1*
*ARO **13** 21:14:17.0, 11°8N±0°3×43°1E±0°4, h5km, Ml3.2*

ISC 13 21:14:15.3±1.2, 11°71N±0°07×43°06E±0°05, h24km±9km, n11, σ0°46/14, Ethiopia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCAD	**Moucha**	**0.15**	**83**	*e*P	Pb	21 14 20.5	+0.1
TDD	**Tadjoura Ara**	**0.17**	**302**	*e*P	Pb	21 14 20.5	-0.2
ATD	**Arta Tunnel**	**0.27**	**229**	*e*P	Pn	21 14 24.0	+0.1
ATD	**Arta Tunnel**	**0.27**	**229**	*e*P	Pn	21 14 24.0	+0.1
ATD				*e*S	Sn	21 14 29.1	-0.2
ATA	**Atar**	**0.30**	**150**	*e*P	Pn	21 14 24.3	+0.1
OBO	**Obock**	**0.36**	**40**	*e*P	Pb	21 14 22.7	-0.5
SGH	**Sud-Ghoubbet**	**0.50**	**237**	*e*P	Pn	21 14 27.3	+0.2
LDLD	**Lac de Lave**	**0.56**	**257**	*e*P	Pn	21 14 27.6	-0.2
MAOD	**Malaho**	**0.90**	**295**	*e*P	Pb	21 14 32.4	+0.1
LBOS		**3.03**	**45**	*i*P	Pn	21 15 02.3	+0.3
LBOS				*e*		21 15 02.5	
	baz=269,slow=14						
LBOS				*i*S	Sn	21 15 38.1	+0.3
BDHA	**Al Bayda'**	**3.32**	**47**	*i*P	Pb	21 15 12.9	-0.8
BDHA				*i*S	Sn	21 15 45.8	+0.9
BDHA				AML	AML	21 16 01.6	
	comp=N,112nm,0.3s						

NNC 13 21:19:29.1±2.5, 37°19N×70°74E, h0km, mb3.6, mpv3.2, 4C-2D, Error ellipse: s-maj=19.2km s-min=15.9km az=175.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.56**	**37**	⇑Pn	Pn	21 20 26.2	+0.5
	1.2nm,0.3s						
SFK				⇓Sn	Sn	21 21 09.5	+0.9
	8.7nm,0.3s						
MNAS	**Manas**	**5.46**	**14**	⇑Pn	Pn	21 20 51.3	-0.6
	0.8nm,0.4s						
MNAS				⇑Sn	Sn	21 21 56.8	+1.3
	4.1nm,0.4s						
KK31	**Karatay Array**	**5.91**	**358**	⇓Pn	Pn	21 20 58.0	+0.1
	3.8nm,0.5s,baz=181,slow=13,SNR=37						
KK31				⇑Sn	Sn	21 22 08.0	+1.7
	1.5nm,0.4s,baz=180,slow=23,SNR=3.6						

*TIR **13** 21:22:21.5, 41°74N×20°03E, h6km, Md2.6/4*
*CSEM **13** 21:22:22.9±0.7, 41°94N×20°25E, h5km, ML2.6, Error ellipse: s-maj=28.3km s-min=11.1km az=50.0*

ISC 13 21:22:22.9±1.1, 41°87N±0°08×20°17E±0°08, h11km, n8, σ0°86/13, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUK	**Puka**	**0.27**	**310**	*i*PG	Pg	21 22 28.4	-0.1
PUK				*i*SG	Sg	21 22 33.2	+1.0
PUK	**Puka**	**0.27**	**310**	*i*Pg	Pg	21 22 28.4	-0.1
	baz=155						
PUK				*i*Sg	Sg	21 22 33.2	+1.0
PHP	**Peshkopia**	**0.27**	**132**	*i*PG	Pg	21 22 28.0	-0.5
PHP				*i*SG	Sb	21 22 35.2	+0.7
PHP	**Peshkopia**	**0.27**	**132**	*i*Pg	Pg	21 22 28.0	-0.5
	baz=100						
PHP				*i*Sg	Sb	21 22 35.2	+0.7
BCI	**Bajram Curri**	**0.50**	**351**	*i*PN	Pg	21 22 32.3	-0.4
BCI	**Bajram Curri**	**0.50**	**351**	*i*Pn	Pg	21 22 32.3	-0.4
	baz=122						
STON	**Ston**	**2.09**	**300**	*i*Pn	Pn	21 22 57.8	0.0
STON				Sn	Sg	21 23 28.1	-1.9
STON	**Ston**	**2.09**	**300**	*i*Pn	Pn	21 22 57.8	0.0

*TIR **13** 21:38:42.8, 41°87N×20°21E, h1km, Md2.6/3*
*ISCJB **13** 21:38:43.6±0.3, 41°88N±0°02×20°22E±0°02, h4km±3km, Error ellipse: s-maj=3.0km s-min=2.0km az=40.4*
*ATH **13** 21:38:43.0, 41°92N×20°24E, h10km±4km, ML2.1/3, Error ellipse: s-maj=6.1km s-min=1.8km az=184.0*
*PDG **13** 21:38:44.7±0.2, 41°88N×20°15E, h4km, ML2.3/13, Error ellipse: s-maj=0.3km s-min=0.5km az=0.0*
*CSEM **13** 21:38:44.2±0.2, 41°87N×20°20E, h5km, ML2.3, Error ellipse: s-maj=3.4km s-min=2.5km az=32.0*
*BEO **13** 21:38:45.1±0.2, 41°86N×20°19E, h16km±2km*
*SKO **13** 21:38:45.0, 41°87N×20°19E, h2km*

ISC 13 21:38:44.3±1.0, 41°86N±0°02×20°19E±0°02, h7km±8km, n91, σ0°85/159, 12C-7D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.25**	**132**	*i*PG	Pg	21 38 49.1	-0.2
PHP				*i*SG	Sb	21 38 54.5	-1.2
PHP	**Peshkopia**	**0.25**	**132**	*i*Pg	Pg	21 38 49.1	-0.2
PHP				*i*Sg	Sb	21 38 54.5	-1.2
PUK	**Puka**	**0.29**	**310**	*i*PG	Pg	21 38 49.6	-0.4
PUK				*i*SG	Sg	21 38 53.2	-0.7
PUK	**Puka**	**0.29**	**310**	*i*Pg	Pg	21 38 49.6	-0.4
PUK				*i*Sg	Sg	21 38 53.2	-0.7
BCI	**Bajram Curri**	**0.52**	**350**	*i*PG	Pg	21 38 54.4	+0.1
BCI				*i*SG	Sg	21 39 02.0	+0.8
BCI	**Bajram Curri**	**0.52**	**350**	*i*Pg	Pg	21 38 54.4	+0.1
BCI				*i*Sg	Sg	21 39 02.0	+0.8
PRZK	**Prizren**	**0.55**	**50**	P	Pg	21 38 55.2	+0.3
PRZK				S	Sg	21 39 00.0	-2.2
TIR	**Tirane**	**0.56**	**206**	*e*Pg	Pg	21 38 55.5	+0.4
TIR				*e*Sg	Sb	21 39 04.7	+0.1
TIR	**Tirane**	**0.56**	**206**	P	Pg	21 38 54.6	-0.5
TIR				S	Sb	21 39 04.4	-0.2
TIR				AML	AML	21 39 05.7	
	comp=E,341μm,0.2s						
TIR				AML	AML	21 39 05.8	
	comp=N,346μm,0.3s						
TIR	**Tirane**	**0.56**	**206**	*e*Pg	Pg	21 38 55.5	+0.4
TIR				S	Sb	21 39 04.2	-0.4
ZATK	**Zatriq**	**0.67**	**28**	P	Pb	21 38 59.0	+0.6
ZATK				S	Sg	21 39 03.3	-2.8
ULC	**Ulcinj**	**0.71**	**279**	⇑*i*Pg	Pg	21 38 57.3	-0.7
ULC				*e*Sg	Sb	21 39 08.1	-0.9
ULC	**Ulcinj**	**0.71**	**279**	⇑*i*Pg	Pg	21 38 57.3	-0.7
ULC	**Ulcinj**	**0.71**	**279**	P	Pg	21 38 57.6	-0.4
ULC				*e*Sg	Sb	21 39 08.1	-0.9
PVY	**Plav**	**0.76**	**347**	⇑*i*Pg	Pg	21 38 58.2	-0.7
PVY				*e*Sg	Sg	21 39 09.6	+0.8
PVY	**Plav**	**0.76**	**347**	⇑*i*Pg	Pg	21 38 58.2	-0.7
PVY				*e*Sg	Sg	21 39 09.6	+0.8
PEJK	**Peje**	**0.79**	**5**	P	Pb	21 39 00.5	+0.2
DRME	**Dracevica, Mon**	**0.82**	**294**	⇓*i*Pg	Pg	21 38 58.7	-1.3
DRME				*e*Sg

SKO	**Skopje**	**0.94**	**82**	⇑*i*Pg	**Pg**	**21 39 01.9**	**-0.4**
SKO				*i* Sg	**Sg**	**21 39 14.8**	**+0.4**
SKO	**Skopje**	**0.94**	**82**	*e*Pg	**Pg**	**21 39 02.0**	**-0.3**
SKO				*e*Sg	**Sb**	**21 39 15.6**	**+0.1**
BEY	**Berane**	**1.04**	**348**	⇑*i*Pg	**Pg**	**21 39 03.4**	**-0.8**
BEY	**Berane**	**1.04**	**348**	P	**Pn**	**21 39 06.3**	**+1.0**
BEY				*e*Sg	**Sb**	**21 39 19.2**	**+0.7**
IVA	**Berane**	**1.04**	**348**	⇑*i*Pg	**Pg**	**21 39 03.4**	**-0.8**
IVA				*e*Sg	**Sb**	**21 39 19.2**	**+0.7**
BUM	**Brajici-Budva**	**1.06**	**295**	⇓*i*Pg	**Pg**	**21 39 04.0**	**-0.7**
BUM				*e*Sg	**Sn**	**21 39 20.0**	**-0.7**
BUM	**Brajici-Budva**	**1.06**	**295**	⇓*i*Pg	**Pg**	**21 39 04.0**	**-0.7**
BUM				*e*Sg	**Sn**	**21 39 20.0**	**-0.7**
KOME	**Kolasin**	**1.11**	**333**	*e*Pg	**Pg**	**21 39 04.7**	**-1.0**
KOME				*e*Sg	**Sn**	**21 39 21.5**	**-0.5**
KOME	**Kolasin**	**1.11**	**333**	*e*Pg	**Pg**	**21 39 04.7**	**-1.0**
KOME				*e*Sg	**Sn**	**21 39 21.5**	**-0.5**
CEME	**Cevo**	**1.17**	**307**	⇑*i*Pg	**Pg**	**21 39 05.4**	**-1.4**
CEME				*e*Sg	**Sn**	**21 39 23.0**	**-0.3**
CEME	**Cevo**	**1.17**	**307**	⇑*i*Pg	**Pg**	**21 39 05.4**	**-1.4**
CEME				*e*Sg	**Sn**	**21 39 23.0**	**-0.3**
NKME	**Niksic**	**1.29**	**315**	*e*Pg	**Pn**	**21 39 08.1**	**-0.7**
NKME				*e*Sg	**Sn**	**21 39 27.5**	**+1.2**
NKME	**Niksic**	**1.29**	**315**	*e*Pg	**Pn**	**21 39 08.1**	**-0.7**
NKME				*e*Sg	**Sn**	**21 39 27.5**	**+1.2**
NKY	**Niksic**	**1.31**	**318**	*e*Pg	**Pn**	**21 39 08.3**	**-0.7**
NKY				*e*Sg	**Sn**	**21 39 28.1**	**+1.4**
NKY	**Niksic**	**1.31**	**318**	*e*Pg	**Pn**	**21 39 08.3**	**-0.7**
NKY				*e*Sg	**Sn**	**21 39 28.1**	**+1.4**
FNA	**Florina**	**1.39**	**140**	*e*Pg	**Pn**	**21 39 09.8**	**-0.4**
FNA				*e*Sg	**Sg**	**21 39 30.3**	**+1.2**
FNA	**Florina**	**1.39**	**140**	P	**Pn**	**21 39 09.7**	**-0.4**
FNA				S	**Sb**	**21 39 28.2**	**-0.4**
FNA				AML	AML	21 39 35.6	
	comp=N,197μm,0.5s						
FNA				AML	AML	21 39 35.6	
	comp=E,255μm,0.4s						
FNA	**Florina**	**1.39**	**140**	P	**Pn**	**21 39 09.7**	**-0.4**
FNA				S	**Sb**	**21 39 28.7**	**+0.1**
FNA				*e*Sg	**Sg**	**21 39 30.3**	**+1.2**
HCY	**Herceg Novi**	**1.39**	**296**	⇓*i*Pg	**Pn**	**21 39 09.3**	**-0.8**
HCY				*e*Sg	**Sg**	**21 39 30.9**	**+1.8**
HCY	**Herceg Novi**	**1.39**	**296**	*e*Pn	**Pn**	**21 39 09.0**	**-1.1**
HCY	**Herceg Novi**	**1.39**	**296**	⇓*i*Pg	**Pn**	**21 39 09.3**	**-0.8**
HCY				*e*Sg	**Sg**	**21 39 30.9**	**+1.8**
SJES	**Sjenica**	**1.41**	**354**	*e*Pg	**Pn**	**21 39 10.9**	**+0.4**
SJES				*e*Sg	**Sg**	**21 39 30.1**	**+0.3**
SJES	**Sjenica**	**1.41**	**354**	*e*Pg	**Pn**	**21 39 10.9**	**+0.4**
SJES				*e*Sg	**Sg**	**21 39 30.1**	**+0.3**
SELS	**Selova**	**1.53**	**26**	*e*Pg	**Pb**	**21 39 13.1**	**+0.2**
BARS	**Barje**	**1.54**	**51**	*e*Pg	**Pn**	**21 39 12.0**	**-0.1**
BARS				*e*Sg	**Sg**	**21 39 34.7**	**+0.9**
BARS	**Barje**	**1.54**	**51**	*e*Pg	**Pn**	**21 39 12.0**	**-0.1**
BARS				*e*Sg	**Sg**	**21 39 34.7**	**+0.9**
NEST	**Nestorio**	**1.58**	**155**	P	**Pg**	**21 39 14.3**	**-0.2**
NEST	**Nestorio**	**1.58**	**155**	P	**Pb**	**21 39 13.8**	**0.0**
BRY	**Bratogost**	**1.61**	**311**	⇑*i*Pg	**Pn**	**21 39 13.6**	**+0.4**
BRY				*e*Sg	**Sg**	**21 39 38.2**	**+2.2**
BRY	**Bratogost**	**1.61**	**311**	*e*Pn	**Pn**	**21 39 13.2**	**0.0**
BRY	**Bratogost**	**1.61**	**311**	⇑*i*Pg	**Pn**	**21 39 13.6**	**+0.4**
BRY				*e*Sg	**Sg**	**21 39 38.2**	**+2.2**
TREB	**Trebinje**	**1.61**	**303**	*e*Pn	**Pn**	**21 39 12.9**	**-0.2**
UPM	**Unac-Piva**	**1.65**	**325**	*e*Pn	**Pb**	**21 39 14.9**	**-0.2**
UPM				*e*Sn	**Sg**	**21 39 38.9**	**+1.6**
UPM	**Unac-Piva**	**1.65**	**325**	*e*Pn	**Pb**	**21 39 14.9**	**-0.2**
UPM	**Unac-Piva**	**1.65**	**325**	P	**Pg**	**21 39 16.1**	**+0.2**
UPM				*e*Sn	**Sg**	**21 39 38.9**	**+1.6**
IVAS	**Ivanjica**	**1.72**	**359**	*e*Pg	**Pb**	**21 39 15.8**	**-0.4**
IVAS				*e*Sg	**Sb**	**21 39 38.7**	**+0.7**
IVAS	**Ivanjica**	**1.72**	**359**	*e*Pg	**Pb**	**21 39 15.8**	**-0.4**
IVAS				*e*Sg	**Sb**	**21 39 38.7**	**+0.7**
VAY	**Valandovo**	**1.86**	**106**	*e*Pn	**Pn**	**21 39 15.9**	**-0.6**
VAY				*e*Sg	**Sg**	**21 39 43.7**	**-0.4**
VAY	**Valandovo**	**1.86**	**106**	*e*Pn	**Pn**	**21 39 15.9**	**-0.6**
VAY				*e*Sg	**Sg**	**21 39 43.7**	**-0.4**
GRG	**Griva**	**1.89**	**118**	P	**Pn**	**21 39 16.9**	**0.0**
GRG				S	**Sb**	**21 39 43.0**	**+0.1**
GRG				AML	AML	21 39 49.2	
	comp=E,58μm,0.6s						
GRG				AML	AML	21 39 50.6	
	comp=N,45μm,0.5s						
GRG	**Griva**	**1.89**	**118**	P	**Pn**	**21 39 17.2**	**+0.3**
GRG				S	**Sb**	**21 39 42.8**	**0.0**
GRUS	**Gruza**	**2.07**	**11**	*e*Pn	**Pn**	**21 39 19.2**	**-0.2**
GRUS				*e*Sn	**Sn**	**21 39 43.9**	**-1.5**
GRUS	**Gruza**	**2.07**	**11**	*e*Pn	**Pn**	**21 39 19.2**	**-0.2**
GRUS				*e*Sn	**Sn**	**21 39 43.9**	**-1.5**
BBLS	**Lazići**	**2.09**	**344**	*e*Pn	**Pn**	**21 39 20.2**	**+0.5**
BBLS				*e*Sn	**Sn**	**21 39 45.5**	**-0.5**
BBLS	**Lazići**	**2.09**	**344**	*e*Pn	**Pn**	**21 39 20.2**	**+0.5**
BBLS				*e*Sn	**Sn**	**21 39 45.5**	**-0.5**
STON	**Ston**	**2.11**	**300**	*e*Pn	**Pn**	**21 39 18.9**	**-1.0**
STON				*e*Sg	**Sg**	**21 39 52.3**	**+0.3**
STON	**Ston**	**2.11**	**300**	*e*Pn	**Pn**	**21 39 19.2**	**-0.7**
STON				Sn	**Sb**	**21 39 48.7**	**-0.3**
STON	**Ston**	**2.11**	**300**	*e*Pn	**Pn**	**21 39 18.9**	**-1.0**
STON				Sn	**Sb**	**21 39 48.7**	**-0.3**
STON				*e*Sg	**Sg**	**21 39 52.3**	**+0.3**
KNT	**Kendrikon**	**2.15**	**108**	P	**Pn**	**21 39 21.6**	**+1.2**
KNT	**Kendrikon**	**2.15**	**108**	P	**Pn**	**21 39 21.3**	**+0.8**
DIVS	**Divibare**	**2.25**	**356**	*e*Pn	**Pn**	**21 39 21.9**	**0.0**
DIVS				*e*Sn	**Sn**	**21 39 48.6**	**-1.3**
DIVS	**Divibare**	**2.25**	**356**	*e*Pn	**Pn**	**21 39 21.9**	**0.0**
DIVS				*e*Sn	**Sn**	**21 39 48.6**	**-1.3**
ZAPS	**Zavoj**	**2.29**	**51**	*e*Pn	**Pn**	**21 39 22.4**	**-0.1**
ZAPS	**Zavoj**	**2.29**	**51**	*e*Pn	**Pn**	**21 39 22.4**	**-0.1**
HAPS	**Han Pijesak,BI**	**2.41**	**338**	*e*Pn	**Pn**	**21 39 24.7**	**+0.6**
HAPS				*e*Sn	**Sn**	**21 39 53.5**	**-0.4**
HAPS	**Han Pijesak,BI**	**2.41**	**338**	*e*Pn	**Pn**	**21 39 24.7**	**+0.6**
HAPS				*e*Sn	**Sn**	**21 39 53.5**	**-0.4**
ZAGS	**Zajecar**	**2.47**	**37**	*e*Pg	**Pb**	**21 39 30.2**	**+1.3**
ZAGS	**Zajecar**	**2.47**	**37**	*e*Pg	**Pb**	**21 39 30.2**	**+1.3**
SRS	**Serrai**	**2.66**	**105**	*e*Pn	**Pn**	**21 39 28.0**	**+0.5**
SRS	**Serrai**	**2.66**	**105**	*e*Pn	**Pn**	**21 39 28.0**	**+0.5**
TEKS	**Tekeris**	**2.74**	**350**	*e*Pn	**Pn**	**21 39 28.9**	**+0.3**
TEKS	**Tekeris**	**2.74**	**350**	*e*Pn	**Pn**	**21 39 28.9**	**+0.3**
KUBS	**Kucevo**	**2.78**	**23**	*e*Pn	**Pn**	**21 39 28.3**	**-0.8**
KUBS	**Kucevo**	**2.78**	**23**	*e*Pn	**Pn**	**21 39 28.3**	**-0.8**
UDBI	**Udbina**	**4.20**	**311**	*e*Pn	**Pn**	**21 39 50.5**	**+1.8**
UDBI	**Udbina**	**4.20**	**311**	*e*Pn	**Pn**	**21 39 50.4**	**+1.8**

*IDC **13** 22:07:34.1±5.2, 0.°26N×100.°83E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.4/61, mbtmp3.6/5, MS3.5/1, Ms1 3.5/1, ms1mx2.5/56, Error ellipse: s-maj=286.1km s-min=20.6km az=54.0*
*ISCJB **13** 22:07:39.9±0.5, 0.°48S±0.°04×99.°72E±0.°05, h92km±5km, mb3.6/5, Error ellipse: s-maj=7.9km s-min=6.3km az=161.3*
*DJA **13** 22:07:41.9±0.4, 0.°S±2.°×10.°0E±.°, h60km±9km, M3.5/6, MLv3.5/6*
ISC 13 22:07:40.9±0.9, 0.°49S±0.°04×99.°71E±0.°05, h84km±9km, n14, σ0.°92/20, mb3.5/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPI	**Padang Panjang**	**0.69**	**88**	P	**Pn**	**22 07 56.9**	**+0.2**
PPI				S	**Sn**	**22 08 08.2**	**-0.3**
PDSI	**Padang**	**0.86**	**119**	P	**Pn**	**22 07 58.6**	**-0.1**
PDSI				S	**Sn**	**22 08 11.3**	**-0.6**
SISI	**Saibi**	**1.04**	**217**	P	**Pn**	**22 08 01.6**	**+0.9**
SISI				S	**Sn**	**22 08 15.5**	**0.0**
MNSI	**Mandailing Nat**	**1.28**	**354**	P	**Pn**	**22 08 04.4**	**+0.8**
MNSI				S	**Sn**	**22 08 20.4**	**-0.2**
BKNI	**Bangkinang**	**1.56**	**59**	P	**Pn**	**22 08 07.6**	**+0.5**
BKNI				S	**Sn**	**22 08 27.2**	**+0.3**
PPSI	**Pulau Pagai**	**2.28**	**172**	P	**Pn**	**22 08 16.5**	**-0.2**
PPSI				S	**Sn**	**22 08 43.9**	**-0.2**
KRJI	**Kerinci**	**2.37**	**132**	P	**Pn**	**22 08 20.7**	**+2.7**
GSI	**Gunungsitoli**	**2.78**	**310**	P	**Pn**	**22 08 23.6**	**+0.3**
GSI				S	**Sn**	**22 08 55.9**	**-0.1**
SIJI	**Sorong**	**31.56**	**91**	LR	LR	22 27 54.0	
	comp=Z,81nm,18.4s,slow=40						
WRA	**Warramunga Arr**	**39.02**	**122**	P	**P**	**22 14 58.3**	**-1.4**
	0.3nm,0.6s,baz=302,slow=9.0,SNR=6.3						
ASAR	**Alice Springs**	**40.38**	**127**	P	**P**	**22 15 10.3**	**-0.7**
	0.3nm,0.5s,baz=309,slow=8.2,SNR=4.0						
MKAR	**Makanchi Array**	**49.50**	**344**	P	**P**	**22 16 23.9**	**+1.0**
	0.5nm,0.4s,baz=154,slow=8.7,SNR=13						
KURBB	**Kurchatov Arra**	**54.02**	**343**	P	**P**	**22 16 56.3**	**-0.2**
	0.3nm,0.6s,baz=164,slow=7.7,SNR=4.6						
ZALV	**Zalesovo Beam**	**55.63**	**349**	P	**P**	**22 17 08.2**	**+0.2**
	0.9nm,0.5s,baz=177,slow=8.6,SNR=5.5						

*IDC **13** 22:23:10.1±1.8, 4.°01N×125.°25E, h0km, mb4.3/4, mb1 4.5/4, mb1mx3.6/58, mbtmp4.3/4, Error ellipse: s-maj=181.8km s-min=23.4km az=64.0*
*DJA **13** 22:23:54.7±1.2, 2.°N±15.°×12.°4E±.°, h375km±21km, M3.9/7, mb3.9/2, MLv4.0/7*
ISC 13 22:23:52.9±2.6, 2.°5N±0.°3×124.°0E±0.°1, h350km, n11, σ1.°68/11, mb3.8/4, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**2.92**	**226**	P	**Pn**	**22 24 53.7**	**+2.2**
LUWI	**Luwuk**	**3.75**	**200**	P	Pn	22 24 54.9	-4.5
APSI	**Ampana**	**4.16**	**215**	P	**Pn**	**22 25 05.4**	**+1.8**
LBMI	**Labuha**	**4.67**	**132**	P	**Pn**	**22 25 10.0**	**+1.0**
LBMI				S	**S**	**22 26 12.5**	**+2.1**
MPSI	**Mapaga**	**4.67**	**242**	P	**Pn**	**22 25 09.4**	**+0.4**
SANI	**Sanana**	**4.94**	**157**	P	**Pn**	**22 25 12.7**	**+0.9**
SANI				S	**S**	**22 26 15.1**	**-0.6**
PCI	**Palu**	**5.40**	**231**	P	**Pn**	**22 25 17.5**	**+0.5**
WRA	**Warramunga Arr**	**24.50**	**156**	P	**P**	**22 28 39.6**	**-2.3**
	4.0nm,0.3s,baz=340,slow=9.5,SNR=42						
ASAR	**Alice Springs**	**27.74**	**160**	P	**P**	**22 29 09.4**	**-1.2**
	1.2nm,0.5s,baz=339,slow=7.2,SNR=18						
STKA	**Stephens Creek**	**38.05**	**155**	P	**P**	**22 30 38.2**	**-0.8**
	3.4nm,0.3s,baz=332,slow=7.6,SNR=23						
MKAR	**Makanchi Array**	**57.06**	**327**	P	P	22 32 53.9	-10
	0.8nm,0.5s,baz=119,slow=7.4,SNR=7.6						

*NIED **13** 22:24:00, 39.°60N×143.°80E, h11km, Mw4.1 Best double couple: M0:1.67000×10^15 NP1:φs=179.00000°, δ35.00000°, λ64.00000°. NP2:φs=30.00000°, δ59.00000°, λ107.00000°.*
*ISCJB **13** 22:24:07.2±0.5, 39.°62N±0.°04×143.°71E±0.°06, h11km, mb4.0/21, MS3.4/6, Error ellipse: s-maj=7.5km s-min=4.0km az=33.3*
*IDC **13** 22:24:07.3±0.7, 39.°54N×143.°62E, h0km, mb4.0/17, mb1 4.1/21, mb1mx3.9/67, mbtmp4.0/21, ML3.5/4, MS3.1/10, Ms1 3.2/10, ms1mx2.9/62, Error ellipse: s-maj=17.9km s-min=15.1km az=99.0*
*JMA **13** 22:24:08.5±0.2, 39.°61N×143.°76E, h32km, M4.2*
*NEIC **13** 22:24:11.4±2.4, 39.°58N×143.°64E, h28km±16km, mb4.3/4, Error ellipse: s-maj=11.2km s-min=6.7km az=113.0*
ISC 13 22:24:09.0±0.6, 39.°61N±0.°05×143.°65E±0.°06, h11km, n57, σ1.°11/60, mb4.0/21, MS3.5/6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**1.41**	**269**	P	**Pn**	**22 24 34.1**	**-0.6**
JTH	**Tanohata**	**1.41**	**284**	P	**Pn**	**22 24 33.8**	**-0.9**
OFUJ	**Ofunato**	**1.62**	**252**	P	**Pn**	**22 24 36.8**	**-0.8**
JANG	**Nango**	**1.81**	**296**	P	**Pn**	**22 24 39.3**	**-0.8**
JOM	**Ohasama**	**1.82**	**266**	P	**Pn**	**22 24 40.4**	**0.0**
JOM				*e*S	**Sb**	**22 25 04.0**	**-1.3**
JMK	**Ichinoseki**	**1.99**	**252**	P	**Pn**	**22 24 42.3**	**-0.4**
JMK				*e*S	**Sn**	**22 25 07.0**	**-0.6**
ERM	**Erimo**	**2.43**	**351**	*e*Pn	**Pn**	**22 24 48.2**	**-0.5**
JYK	**Kaneyama**	**2.64**	**256**	P	**Pn**	**22 24 51.9**	**+0.3**
JOT	**Ohata**	**2.66**	**313**	P	**Pn**	**22 24 51.8**	**0.0**
JNBK	**Urakawa-nobuka**	**2.75**	**346**	P	**Pn**	**22 24 53.6**	**+0.5**
JCH	**Churui**	**3.01**	**356**	P	**Pn**	**22 24 56.0**	**-0.6**
JCH				*e*S	**Sn**	**22 25 30.4**	**-2.3**
JFT	**Otama**	**3.33**	**232**	P	**Pn**	**22 25 00.5**	**-0.6**
JAK	**Akkeshi**	**3.48**	**13**	P	**Pn**	**22 25 01.8**	**-1.2**
JAK				*e*S	**Sn**	**22 25 41.3**	**-2.8**
JAR	**Ashorobuto**	**3.69**	**1**	P	**Pn**	**22 25 04.6**	**-1.3**
JAR				*e*S	**Sn**	**22 25 46.1**	**-3.3**
ASAJ	**Asahikawa**	**4.57**	**350**	Pn	**Pn**	**22 25 18.8**	**+0.7**
	3.8nm,0.3s,baz=182,slow=9.7,SNR=15						
ASAJ				Sn	**Sn**	**22 26 12.2**	**+1.1**
	2.1nm,0.3s,baz=253,slow=26,SNR=6.3						
MJAR	**Matsushiro Arr**	**5.27**	**236**	Pn	**Pn**	**22 25 28.0**	**+0.2**
	3.3nm,0.3s,baz=43,slow=11,SNR=82						
MJAR				LR	LR	22 27 20.9	
	comp=Z,90nm,18.9s,baz=60,slow=37						
MAJO	**Matsushiro**	**5.27**	**236**	*e*Pn	**Pn**	**22 25 28.1**	**+0.3**
	66nm,0.6s						
MAT	**Matsushiro**	**5.27**	**236**	P	**Pn**	**22 25 28.6**	**+0.8**
MAT				*e*S	**Sn**	**22 26 25.0**	**-3.5**
USRK	**Ussuriysk Ar.**	**9.82**	**302**	Pn	**Pn**	**22 26 31.7**	**+1.5**
	0.5nm,0.3s,baz=112,slow=9.2,SNR=10						
KSRS	**Korea Array**	**12.50**	**265**	Pn	**Pn**	**22 27 08.2**	**+1.3**
	0.2nm,0.3s,baz=79,slow=13,SNR=6.4						
KSRS				LR	LR	22 31 36.8	
	comp=Z,100nm,18.3s,baz=70,slow=36						
KSAR	**Wonju Array Be**	**12.53**	**265**	Pn	**Pn**	**22 27 08.2**	**+0.9**
KLR	**Kul'dur**	**12.82**	**322**	Pn	**Pn**	**22 27 13.2**	**+2.1**
	0.0nm,0.3s,baz=168,slow=12,SNR=3.6						
KLR				LR	LR	22 32 36.4	
	comp=Z,14nm,18.4s,baz=127,slow=40						
PETK	**Petropavlovsk-**	**16.58**	**31**	LR	LR	22 33 09.1	
	comp=Z,39nm,21.7s,baz=221,slow=32						
SEY	**Seymchan**	**23.94**	**10**	P	**P**	**22 29 23.7**	**+0.8**
	2.1nm,0.5s,baz=200,slow=7.2,SNR=9.5						
ULN	**Ulaanbaatar**	**27.49**	**300**	*e*P	**P**	**22 29 55.8**	**+0.4**
	4.2nm,1.0s						
SONM	**Songino Array**	**27.93**	**299**	P	**P**	**22 29 59.3**	**0.0**
	1.3nm,0.7s,baz=90,slow=8.9,SNR=8.1						
SONM				LR	LR	22 40 13.0	
	comp=Z,40nm,20.6s,baz=78,slow=35						
ZALV	**Zalesovo Beam**	**41.53**	**310**	P	**P**	**22 31 55.1**	**-1.1**
	1.7nm,0.6s,baz=83,slow=7.4,SNR=7.8						
ZALV				PcP	**PcP**	**22 33 53.3**	**-0.1**
	1.0nm,0.5s,baz=114,slow=2.3,SNR=4.3						
CMAR	**Chiang Mai Arr**	**43.86**	**254**	P	**P**	**22 32 15.2**	**-0.4**
	0.9nm,0.6s,baz=47,slow=6.5,SNR=7.2						
MKAR	**Makanchi Array**	**44.29**	**300**	P	**P**	**22 32 18.8**	**+0.1**
	2.2nm,0.7s,baz=83,slow=9.7,SNR=25						
KURK	**Kurchatov**	**45.77**	**306**	P	**P**	**22 32 30.8**	**+0.5**
KURBB	**Kurchatov Arra**	**45.85**	**306**	P	**P**	**22 32 30.8**	**-0.1**
	2.4nm,0.5s,baz=80,slow=8.3,SNR=26						
ILAR	**Eielson Array**	**46.38**	**34**	P	**P**	**22 32 35.5**	**+0.6**
	0.6nm,0.7s,baz=263,slow=7.4,SNR=7.1						
JIRN	**Jiri**	**48.56**	**274**	*e*P	**P**	**22 32 53.0**	**+0.1**
RAMN	**Ramite**	**48.60**	**273**	*e*P	**P**	**22 32 53.0**	**0.0**
GUN	**Gumba**	**48.67**	**275**	*e*P	**P**	**22 32 54.3**	**+0.6**
	20nm,0.7s						
KKN	**Kakani**	**49.20**	**275**	*e*P	**P**	**22 32 58.1**	**+0.5**
	18nm,0.8s						
DMN	**Daman**	**49.42**	**275**	*e*P	**P**	**22 32 58.6**	**-0.7**
DANN	**Dangsing**	**50.09**	**276**	*e*P	**P**	**22 33 05.1**	**+0.6**
	28nm,0.7s						
BVAR	**Borovoye Array**	**50.17**	**311**	P	**P**	**22 33 04.3**	**-0.1**
	2.0nm,0.6s,baz=73,slow=11,SNR=13						
PYUN	**Piuthan**	**50.80**	**276**	*e*P	**P**	**22 33 09.4**	**-0.4**
	42nm,1.1s						
NIL	**Nilore**	**55.50**	**288**	*e*P	**P**	**22 33 44.5**	**+0.4**
ARU	**Arti**	**55.61**	**318**	*e*P	**P**	**22 33 44.2**	**-0.3**
	7.6nm,1.2s						
LEM	**Lembang**	**56.95**	**224**	LR	LR	23 01 21.2	
	comp=Z,32nm,18.3s,baz=163,slow=39						
SPITS	**Spitsbergen Ar**	**58.34**	**349**	LR	LR	23 00 01.5	
	comp=Z,22nm,19.4s,baz=140,slow=37						
WRA	**Warramunga Arr**	**59.88**	**190**	P	**P**	**22 34 13.2**	**-1.6**
	0.9nm,0.8s,baz=9.3,slow=7.1,SNR=8.6						
YKA	**Yellowknife Ar**	**60.70**	**31**	P	**P**	**22 34 20.4**	**+0.4**
	0.2nm,0.6s,baz=300,slow=5.6,SNR=2.6						
ASAR	**Alice Springs**	**63.60**	**190**	P	**P**	**22 34 39.6**	**-0.3**
	1.9nm,1.0s,baz=12,slow=6.2,SNR=5.4						
FINES	**FINESS Array B**	**67.35**	**333**	P	**P**	**22 35 03.5**	**-0.2**
	2.2nm,0.9s,baz=56,slow=7.4,SNR=6.2						
FINES				LR	LR	23 07 32.3	
	comp=Z,26nm,19.6s,baz=30,slow=39						
KBZ	**Khabaz**	**70.55**	**311**	P	**P**	**22 35 24.5**	**+0.6**
	1.9nm,0.8s,baz=18,slow=6.6,SNR=5.0						
STKA	**Stephens Creek**	**71.15**	**182**	P	**P**	**22 35 28.4**	**+0.9**
	9.6nm,1.2s,baz=242,slow=23,SNR=3.1						
NVAR	**Mina Array Bea**	**72.06**	**55**	P	**P**	**22 35 34.8**	**+1.3**
	0.6nm,0.7s,baz=296,slow=5.7,SNR=3.9						
HFS	**Hagfors**	**72.45**	**336**	P	**P**	**22 35 36.1**	**+1.0**
	0.8nm,0.6s,baz=42,slow=6.6,SNR=5.7						
HFS				LR	LR	23 10 50.2	
	comp=Z,35nm,18.7s,baz=207,slow=39						
NOA	**NORSAR Array B**	**72.48**	**338**	LR	LR	23 13 19.9	
	comp=Z,27nm,18.1s,baz=175,slow=41						
AKASG	**Malin Array Be**	**73.32**	**323**	P	**P**	**22 35 39.9**	**-0.6**
	0.4nm,0.4s,baz=46,slow=6.1,SNR=5.7						
SDCO	**Great Sand Dun**	**80.27**	**49**	*e*P	**P**	**22 36 19.2**	**-1.1**
	4.5nm,1.0s						
RAYN	**Ar Rayn**	**81.28**	**293**	*e*P	**P**	**22 36 24.9**	**-0.7**
	0.9nm,0.7s						
SNAA	**Sanae**	**143.72**	**197**	PKP	PKPbc	22 43 41.0	+0.4
	0.7nm,0.9s,baz=135,slow=4.3,SNR=4.7						

GUC 13 23:06:05.0±0.5, 35.°03S×72.°62W, h46km±11km, ML3.5, 1C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO05	**HualaæØ**	**0.57**	**89**	⇑*i*P	Pn	23 06 17.4	+0.4
GO05				*e*S	Sn	23 06 26.1	+0.6
CCHI	**Chillan**	**1.64**	**164**	*e*P	Pn	23 06 34.0	+2.7
CLCH	**Cerro Calan**	**2.37**	**47**	*e*P	Pn	23 06 46.5	+5.0
CLCH				*e*S	Sn	23 07 18.4	+9.0
CLCH				IAML		23 07 23.6	
	comp=N,368nm,0.8s						
ROCH	**El Roble**	**2.45**	**34**	IAML		23 07 28.7	
	comp=E,298nm,0.7s						
PEL	**Peldehue**	**2.47**	**41**	*e*P	Pn	23 06 48.3	+5.5
PEL				*e*S	Sn	23 07 20.8	+9.0
PEL				IAML		23 07 34.9	
	comp=N,201nm,0.6s						
FCH	**Farellones**	**2.57**	**49**	*e*P	Pn	23 06 48.6	+4.2
FCH				*e*S	Sn	23 07 25.2	+11

*ISCJB **13** 23:22:15.8±3.9, 23.°3S±0.°7×179.°3E±0.°4, h548km, mb3.9/7, Error ellipse: s-maj=108.2km s-min=19.1km az=26.3*
*IDC **13** 23:22:15.8±14.0, 23.°38S×179.°35E, h532km±136km, mb3.4/7, mb1 3.4/7, mb1mx3.1/48, mbtmp4.3/7, Error ellipse: s-maj=93.1km s-min=22.4km az=62.0*
ISC 13 23:22:17.2±1.1, 23.°4S±0.°2×179.°3E±0.°2, h548km, n17, σ0.°79/17, mb3.9/7, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**30.84**	**270**	P	**P**	**23 27 49.5**	**+0.4**
	1.3nm,0.3s,baz=73,slow=8.6,SNR=4.1						
STKA	**Stephens Creek**	**34.33**	**247**	P	**P**	**23 28 18.6**	**+0.1**
	1.2nm,0.6s,baz=86,slow=19,SNR=2.8						
ASAR	**Alice Springs**	**41.49**	**260**	P	**P**	**23 29 16.6**	**-0.3**
	1.7nm,0.8s,baz=98,slow=8.0,SNR=9.6						
WRA	**Warramunga Arr**	**41.80**	**266**	P	**P**	**23 29 18.7**	**-0.7**
	1.7nm,0.6s,baz=94,slow=8.3,SNR=67						
QSPA	**South Pole Qui**	**66.71**	**180**	P	**P**	**23 32 14.3**	**+0.5**
	3.6nm,0.5s,baz=184,slow=0.2,SNR=9.7						
MAW	**Mawson**	**78.02**	**201**	P	**P**	**23 33 18.9**	**+0.1**
	7.2nm,0.5s,baz=194,slow=4.2,SNR=14						
SNAA	**Sanae**	**85.20**	**179**	P	**P**	**23 33 54.5**	**-1.1**
SNAA	**Sanae**	**85.20**	**179**	P	**P**	**23 33 54.2**	**-1.4**
	1.4nm,0.5s,baz=203,slow=12,SNR=42						
VNA3	**Neumayer Olymp**	**85.43**	**177**	P	**P**	**23 33 55.9**	**-0.7**
VNA2	**Neumayer--Watz**	**85.84**	**178**	P	**P**	**23 33 58.0**	**-0.6**
	baz=192,slow=3.9						
VNA1	**Neumayer--Stat**	**86.09**	**177**	P	**P**	**23 34 01.2**	**+1.5**
BVAR	**Borovoye Array

comp=Z,0.8nm,0.6s,baz=126,slow=7.3,SNR=5.4
BRTR Keskin Array B 66.70 313 P **P 23 36 40.9 -0.6**
comp=Z,0.9nm,0.7s,baz=132,slow=8.0,SNR=7.6
NRIK Noril'sk 67.77 357 P **P 23 36 47.1 -0.4**
comp=Z,1.0nm,0.2s,baz=137,slow=5.8,SNR=3.7
CFR Carcaliu 72.21 317⇑*iP* **P 23 37 15.2 -0.1**
IDI Anoyia 72.32 307 P **P 23 37 16.5 +0.2**
comp=Z,2.2nm,0.7s,baz=93,slow=18,SNR=5.0
SORM Soroca 72.92 320⇑*iP* **P 23 37 18.6 -0.8**
AKASG Malin Array Be 73.18 323 P **P 23 37 19.4 -1.5**
comp=Z,0.1nm,0.2s,baz=81,slow=6.2,SNR=4.6
TIXI Tiksi 73.31 11 P **P 23 37 20.9 -0.3**
comp=Z,1.7nm,0.5s,baz=246,slow=4.5,SNR=5.1
VRI Vrincioaia 73.35 318⇑*iP* **P 23 37 22.8 +0.7**
TESR Tescani 73.58 318⇑*iP* **P 23 37 22.7 -0.7**
MLR Muntele Rosu 73.79 317 P **P 23 37 25.1 +0.3**
comp=Z,0.9nm,0.8s,baz=105,slow=2.3,SNR=8.5
MLR Muntele Rosu 73.79 317⇑*iP* **P 23 37 25.7 +0.9**
MLR Muntele Rosu 73.79 317 *eP* **P 23 37 24.9 +0.1**
comp=Z,5.6nm,0.9s
BURAR Bucovina Array 74.81 319⇑*iP* **P 23 37 31.3 +0.6**
BUR04 Bucovina Ar. S 74.81 319 *eP* **P 23 37 31.2 +0.6**
BUR08 Bucovina Ar. S 74.83 319 *eP* **P 23 37 31.7 +0.9**
TRPA Tarpa 76.68 319⇑*iP* **P 23 37 42.1 +0.9**
GERES GERESS Array B 82.60 319 P **P 23 38 13.2 -0.2**
comp=Z,1.7nm,0.8s,baz=93,slow=5.7,SNR=13
TORD Torodi Ar. Bea 92.17 283 P **P 23 39 01.4 +0.9**
comp=Z,0.8nm,1.0s,baz=95,slow=5.0,SNR=3.9
TXAR Lajitas Array 144.75 28 PKP **PKPdf 23 45 27.4 -0.4**
comp=Z,0.7nm,0.6s,baz=350,slow=1.2,SNR=8.8

*BJI **13** 23:26:54.8, 52.°11N×173.°81W, h14km, mb4.8/37, mB4.8/23, Ms4.5/9, Ms7 4.2/9*
*NEIC **13** 23:26:55.8±0.0, 51.°62N×173.°20W, h46km, mb4.5/96, ML4.2(AEIC), After AEIC.*
*MOS **13** 23:26:55.0±1.2, 51.°84N×173.°09W, h33km, mb4.8/43, Error ellipse: s-maj=7.8km s-min=5.6km az=87.5*
*ISCJB **13** 23:26:56.7±0.4, 51.°88N±0.°04×173.°15W±0.°03, h48km±3km, mb4.5/124, MS3.7/39, Error ellipse: s-maj=7.2km s-min=2.8km az=173.1*
*IDC **13** 23:26:57.6±0.7, 51.°79N×173.°15W, h46km±5km, mb3.9/33, mb1 4.1/35, mb1mx4.0/76, mbtmp4.2/35, MS3.7/36, Ms1 3.7/36, ms1mx3.5/73, Error ellipse: s-maj=17.5km s-min=9.9km az=174.0*
ISC 13 23:26:57.0±0.6,**51.°68N**±0.°07×**173.°17W**±0.°03,**h42**km±4km, **h42**km:**pP-P**,**n335**,σ1§**40**/330,**mb4.6**/125,**MS3.7**/39, **17C-10D**,**Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**0.82**	**310**	P	**Pn**	**23 27 11.2**	**-0.9**
ATKA				S	**Sn**	**23 27 24.1**	**+1.0**
KOFP	**Korovin Flat P**	**0.83**	**316**	P	**Pn**	**23 27 12.1**	**-0.2**
KOKL	**Mount Kliuchef**	**0.91**	**315**	P	**Pn**	**23 27 13.2**	**-0.1**
KOWE	**Korovin West**	**0.96**	**316**	P	**Pn**	**23 27 14.2**	**+0.3**
GSMY	**Great Sitkin M**	**1.83**	**283**	P	**Pn**	**23 27 25.3**	**-0.6**
ETKA	**Kagalaska Isla**	**2.02**	**276**	P	**Pn**	**23 27 27.9**	**-0.6**
ADAG	**Mount Adagdak**	**2.15**	**279**	P	**Pn**	**23 27 30.4**	**+0.1**
KINC	**Kanaga Island**	**2.47**	**277**	P	**Pn**	**23 27 34.7**	**0.0**
KICM	**Kanaga Island**	**2.51**	**277**	P	**Pn**	**23 27 35.3**	**0.0**
TAPA	**Tanaga Point A**	**2.89**	**274**	P	**Pn**	**23 27 40.0**	**-0.5**
NIKH	**Nikolski High**	**2.94**	**62**	P	**Pn**	**23 27 42.4**	**+1.2**
NIKH				S	**Sn**	**23 28 20.0**	**+4.8**
OKAK	**Okmok**	**3.49**	**55**	P	**Pn**	**23 27 48.4**	**-0.3**
OKTU	**Okmok Mt. Tuli**	**3.56**	**59**	P	**Pn**	**23 27 50.5**	**+0.8**
OKID	**Okmok Mt. Idak**	**3.73**	**59**	P	**Pn**	**23 27 52.9**	**+0.9**
MCIR	**Makushin Cirqu**	**4.43**	**57**	P	**Pn**	**23 28 03.2**	**+1.5**
MREP	**Makushin Rep't**	**4.44**	**59**	P	**Pn**	**23 28 02.2**	**+0.4**
CEAP	**Semis' Anvil P**	**4.51**	**277**	P	**Pn**	**23 28 02.7**	**0.0**
MTBL	**Makushin Table**	**4.55**	**57**	P	**Pn**	**23 28 04.5**	**+1.2**
UNV	**Unalaska Valle**	**4.59**	**59**	*e*Pn	**Pn**	**23 28 04.0**	**+0.3**
AMKA	**Amchitka**	**4.71**	**269**	P	**Pn**	**23 28 04.6**	**-0.9**
AMKA				S	**Sn**	**23 29 01.9**	**+3.1**
AKMO	**Akutan Morgan**	**4.96**	**58**	P	**Pn**	**23 28 10.0**	**+1.2**
AKUT	**Akutan**	**5.10**	**58**	*e*Pn	**Pn**	**23 28 10.6**	**-0.2**
LSNW	**Little Sitkin**	**5.17**	**276**	P	**Pn**	**23 28 11.5**	**-0.2**
SPIA	**Saint Paul Isl**	**5.76**	**16**	P	**Pn**	**23 28 22.1**	**+2.3**
WECS	**Westdahl Cape**	**5.80**	**57**	P	**Pn**	**23 28 21.8**	**+1.4**
OHAK	**Old Harbor**	**12.80**	**57**	*e*Pn	**Pn**	**23 29 54.2**	**-1.9**
KDAK	**Kodiak Island**	**13.34**	**55**	P	**Pn**	**23 30 00.3**	**-3.1**
	0.6nm,0.3s,baz=226,slow=10,SNR=7.2						
SVW2	**Sparrevohn**	**13.51**	**39**	*e*Pn	**Pn**	**23 30 07.0**	**+1.2**
RSO	**Redoubt South**	**14.34**	**44**	*e*Pn	**Pn**	**23 30 14.0**	**-3.2**
CNPM	**China Poot**	**14.62**	**49**	*e*Pn	**Pn**	**23 30 18.7**	**-2.0**
BRLK	**Bradley Lake**	**14.87**	**48**	*e*Pn	**Pn**	**23 30 21.9**	**-2.2**
SKT	**Skwentna**	**15.61**	**40**	*e*Pn	**Pn**	**23 30 34.1**	**+0.3**
	23nm,1.1s						
SEW	**Seward**	**15.67**	**48**	*e*Pn	**Pn**	**23 30 31.9**	**-2.5**
	17nm,0.9s						
SUA	**Susitna One**	**15.68**	**43**	*e*Pn	**Pn**	**23 30 33.1**	**-1.6**
	11nm,0.9s						
PPLA	**Purkeypile**	**15.87**	**37**	*e*Pn	**Pn**	**23 30 35.0**	**-2.2**
	61nm,1.5s						
RC01	**Rabbit Creek A**	**15.94**	**45**	*e*Pn	**Pn**	**23 30 35.7**	**-2.3**
	35nm,1.5s						
CAST	**Castle Rocks**	**16.21**	**35**	*e*Pn	**Pn**	**23 30 40.6**	**-0.8**
	12nm,0.9s						
GHO	**Glory Hole Cre**	**16.59**	**43**	*e*Pn	**Pn**	**23 30 46.7**	**+0.4**
	9.3nm,0.7s						
KTH	**Kantishna Hill**	**16.71**	**36**	*e*Pn	**Pn**	**23 30 48.2**	**+0.4**
	30nm,1.0s						
SML	**Sawmill**	**16.86**	**43**	*e*Pn	**Pn**	**23 30 47.5**	**-2.1**
	11nm,1.0s						
SML	**Sawmill**	**16.86**	**43**	*e*P	**Pn**	**23 30 47.5**	**-2.1**
SML				pmax	pmax		
	comp=Z,11nm,1.0s						
RDOG	**Red Dog Mine**	**17.17**	**13**	*e*Pn	**Pn**	**23 30 49.5**	**-3.8**
	comp=Z,39nm,1.3s						
PET	**Petropavlovsk**	**17.23**	**286**⇓	*e*P	**P**	**23 30 56.7**	**+1.5**
SCM	**Sheep Creek Mo**	**17.30**	**44**	*e*Pn	**Pn**	**23 30 54.6**	**-0.6**
	comp=Z,21nm,0.7s						
SCM	**Sheep Creek Mo**	**17.30**	**44**	*e*P	**Pn**	**23 30 54.6**	**-0.6**
SCM				pmax	pmax		
	comp=Z,21nm,0.7s						
RND	**Reindeer**	**17.41**	**38**	*e*Pn	**Pn**	**23 30 55.8**	**-0.7**
	comp=Z,9.0nm,0.8s						
RND	**Reindeer**	**17.41**	**38**	*e*P	**Pn**	**23 30 55.8**	**-0.7**
RND				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MCK	**McKinley**	**17.55**	**37**	*e*Pn	**Pn**	**23 30 55.7**	**-2.5**
	comp=Z,26nm,1.2s						
MCK	**McKinley**	**17.55**	**37**	*e*P	**Pn**	**23 30 55.7**	**-2.5**
MCK				pmax	pmax		
	comp=Z,26nm,1.2s						
BWN	**Browne**	**17.60**	**36**	*e*Pn	**Pn**	**23 30 56.2**	**-2.5**
	comp=Z,32nm,0.8s						
DIV	**Divide**	**17.73**	**47**	*e*Pn	**Pn**	**23 30 56.7**	**-3.7**
	comp=Z,40nm,1.8s						
PETK	**Petropavlovsk-**	**17.79**	**286**	P	**Pn**	**23 31 00.3**	**-0.8**
	comp=Z,1.0nm,0.3s,baz=85,slow=18,SNR=3.3						
PETK				LR	LR	23 37 08.8	
	comp=Z,178nm,20.7s,baz=88,slow=34						
KLU	**Klutina**	**17.79**	**46**	*e*Pn	**Pn**	**23 31 00.6**	**-0.6**
	comp=Z,10nm,0.8s						
DHY	**Denali Highway**	**17.83**	**40**	*e*Pn	**Pn**	**23 30 59.1**	**-2.7**
	comp=Z,13nm,1.2s						
WRH	**Wood River Hil**	**18.26**	**36**	*e*Pn	**P**	**23 31 05.0**	**-1.6**
	comp=Z,14nm,1.2s						
CCB	**Clear Creek Bu**	**18.46**	**36**	*e*P	**P**	**23 31 07.1**	**-1.7**
	comp=Z,8.9nm,0.6s						
MDM	**Murphy Dome**	**18.48**	**34**	*e*P	**P**	**23 31 08.3**	**-0.7**
	comp=Z,10.0nm,1.0s						
PAX	**Paxson**	**18.57**	**42**	*e*P	**Pn**	**23 31 10.6**	**0.0**
	comp=Z,6.9nm,0.9s						
PAX	**Paxson**	**18.57**	**42**	*e*P	**Pn**	**23 31 10.6**	**0.0**
PAX				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HDA	**Harding Lake**	**18.65**	**37**	*e*P	**P**	**23 31 10.4**	**-0.5**
	comp=Z,16nm,0.8s						
CRQM	**Cirque**	**18.84**	**50**	*e*P	**P**	**23 31 12.7**	**-0.5**
	comp=Z,20nm,0.8s						
IL1	**Eielson Array**	**18.86**	**36**	*e*P	**P**	**23 31 12.4**	**-0.8**
ILAR	**Eielson Array**	**18.86**	**36**	P	**P**	**23 31 10.9**	**-2.2**
	comp=Z,1.1nm,0.3s,baz=237,slow=9.7,SNR=50						
ILAR				LR	LR	23 39 16.1	
	comp=Z,332nm,18.5s,baz=260,slow=39						
ILAR	**Eielson Array**	**18.86**	**36**	P	**P**	**23 31 11.0**	**-2.2**
ILB	**Eielson Array**	**18.86**	**36**	*e*P	**P**	**23 31 10.8**	**-2.4**
TGL	**Tana Glacier**	**18.99**	**50**	*e*P	**P**	**23 31 13.3**	**-1.5**
	comp=Z,19nm,0.8s						
BILL	**Bilibino**	**19.20**	**336**	*e*P	**P**	**23 31 16.6**	**-0.2**
	comp=Z,20nm,1.0s						
BILL	**Bilibino**	**19.20**	**336**	*d iP*	**Pn**	**23 31 18.8**	**+0.7**
BILL				pmax	pmax		
	comp=Z,14nm,1.2s						
BILL				MLR	MLR		
	comp=Z,249nm,15.0s						
COLD	**Coldfoot**	**19.27**	**27**	*e*P	**P**	**23 31 17.4**	**-0.2**
	comp=Z,19nm,1.0s						
BALM	**Baldy**	**19.29**	**49**	*e*P	**P**	**23 31 17.2**	**-0.9**
	comp=Z,12nm,0.9s						
BALM	**Baldy**	**19.29**	**49**	*e*P	**P**	**23 31 17.2**	**-0.9**
BALM				pmax	pmax		
	comp=Z,12nm,0.9s						
DOT	**Dot Lake**	**19.43**	**41**	*e*P	**P**	**23 31 18.1**	**-1.3**
	comp=Z,28nm,0.8s						
FYU	**Fort Yukon**	**20.41**	**32**	*e*P	**P**	**23 31 28.1**	**-1.9**
	comp=Z,81nm,1.5s						
TOLK	**Toolik Lake Re**	**20.42**	**25**	*e*P	**P**	**23 31 29.4**	**-0.7**
	comp=Z,30nm,1.0s						
EGAK	**Eagle**	**21.05**	**39**	*e*P	**P**	**23 31 36.2**	**-0.7**
	comp=Z,50nm,0.7s						
SEY	**Seymchan**	**21.45**	**315**	P	**P**	**23 31 40.3**	**-0.9**
	comp=Z,3.9nm,0.8s,baz=113,slow=7.8,SNR=9.3						
SEY	**Seymchan**	**21.45**	**315**⇓	*e*P	**P**	**23 31 43.9**	**+2.7**
DAWY	**Dawson**	**21.50**	**42**	*e*P	**P**	**23 31 40.8**	**-1.1**
	comp=Z,9.8nm,0.9s						
MA2	**Magadan**	**21.60**	**306**	LR	LR	23 39 58.5	
	comp=Z,229nm,18.6s,baz=107,slow=36						
BESE	**Bessie Mountai**	**22.71**	**57**	*e*P	**P**	**23 31 54.9**	**+0.1**
	comp=Z,22nm,1.1s						
WRAK	**Wrangell Islan**	**24.16**	**63**	*e*P	**P**	**23 32 10.4**	**+1.7**
	comp=Z,15nm,0.9s						
INK	**Inuvik**	**25.22**	**34**	P	**P**	**23 32 17.9**	**-0.3**
	comp=Z,8.2nm,0.4s,baz=228,slow=7.8,SNR=14						
INK				LR	LR	23 43 24.0	
	comp=Z,266nm,19.6s,baz=202,slow=39						
INK	**Inuvik**	**25.22**	**34**	*e*P	**P**	**23 32 17.1**	**-1.1**
	comp=Z,18nm,0.8s						
DLBC	**Dease Lake**	**25.24**	**57**	P	**P**	**23 32 19.4**	**+0.7**
	comp=Z,11nm,0.8s,baz=303,slow=10,SNR=17						
DLBC				LR	LR	23 43 00.5	
	comp=Z,219nm,19.1s,baz=270,slow=38						
DLBC	**Dease Lake**	**25.24**	**57**	*e*P	**P**	**23 32 20.1**	**+1.4**
	comp=Z,22nm,0.8s						
BBB	**Bella Bella**	**27.45**	**71**	LR	LR	23 42 20.7	
	comp=Z,105nm,18.7s,baz=279,slow=34						
YSS	**Yuzh-Sakhalins**	**28.78**	**278**⇓	*e*P	**P**	**23 32 51.6**	**+1.1**
ASAJ	**Asahikawa**	**30.22**	**273**	P	**P**	**23 33 03.7**	**+0.5**
	comp=Z,14nm,0.8s,baz=40,slow=5.1,SNR=7.9						
ASAJ				LR	LR	23 44 59.7	
	comp=Z,79nm,20.7s,baz=100,slow=36						
ASAJ	**Asahikawa**	**30.22**	**273**	*e*P	**P**	**23 33 03.9**	**+0.7**
	comp=Z,24nm,0.9s						
YAK	**Yakutsk**	**31.86**	**311**	*e*P	**P**	**23 33 18.9**	**+1.4**
YAK				pmax	pmax		
	comp=Z,26nm,0.4s						
TIXI	**Tiksi**	**32.13**	**330**	PcP	**PcP**	**23 36 07.4**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=128,slow=1.9,SNR=3.1						
TIXI				pPcP		23 36 20.8	
	comp=Z,5.7nm,1.1s,baz=8.8,slow=2.5,SNR=5.5						
TIXI	**Tiksi**	**32.13**	**330**⇑	*e*P	**P**	**23 33 20.3**	**+0.6**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.0s						
YKA	**Yellowknife Ar**	**32.45**	**48**	P	**P**	**23 33 21.6**	**-1.1**
	comp=Z,0.5nm,0.4s,baz=275,slow=9.1,SNR=9.8						
YKA				PcP	**PcP**	**23 36 08.8**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=284,slow=2.5,SNR=3.3						
YKA				pPcP		23 36 22.4	
	comp=Z,1.6nm,0.9s,baz=285,slow=2.6,SNR=6.4						
YKA				LR	LR	23 48 24.1	
	comp=Z,38nm,18.0s,baz=276,slow=40						
TEY	**Ternei**	**33.47**	**279**	*e*P	**P**	**23 33 32.8**	**+1.1**
TEY				pmax	pmax		
	comp=Z,13nm,0.7s						
B08A	**Colville Reser**	**34.09**	**74**	*e*P	**P**	**23 33 39.4**	**+2.2**
	comp=Z,7.4nm,0.8s						
KLR	**Kul'dur**	**34.46**	**288**	LR	LR	23 47 32.4	
	comp=Z,9.6nm,20.7s,baz=72,slow=36						
KLR	**Kul'dur**	**34.46**	**288**⇑	*iP*	**P**	**23 33 40.0**	**-0.3**
ZEA	**Zeya**	**35.24**	**297**	*e*P	**P**	**23 33 46.2**	**-0.8**
ZEA				pmax	pmax		
	comp=Z,17nm,1.0s						
YBH	**Yreka Blue Hor**	**35.35**	**86**	P	**P**	**23 33 49.1**	**+0.9**
	comp=Z,2.8nm,0.9s,baz=315,slow=3.4,SNR=3.6						
YBH				LR	LR	23 45 39.8	
	comp=Z,84nm,20.9s,baz=300,slow=32						
NEW	**Newport**	**35.45**	**73**	*e*P	**P**	**23 33 48.4**	**-0.6**
	comp=Z,8.9nm,0.9s						
NEW	**Newport**	**35.45**	**73**	*e*P	**P**	**23 33 48.4**	**-0.6**
NEW				pmax	pmax		
	comp=Z,9.0nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**35.52**	**214**	T	T	00 11 57.7	
	baz=21,slow=76,SNR=28						
H11N3	**WAKE ISLAND Hy**	**35.52**	**214**	T	T	00 11 54.0	
	baz=21,slow=76,SNR=31						
H11N1	**WAKE ISLAND Hy**	**35.53**	**214**	T	T	00 12 01.6	
	baz=21,slow=76,SNR=50						
H11S1	**WAKE ISLAND Hy**	**36.72**	**213**	T	T	00 13 19.3	
	baz=20,slow=75,SNR=68						
USRK	**Ussuriysk Ar.**	**36.73**	**280**	P	**P**	**23 33 59.3**	**-0.5**
	comp=Z,1.2nm,0.4s,baz=59,slow=9.4,SNR=4.5						
USRK				LR	LR	23 48 56.5	
	comp=Z,105nm,20.9s,baz=40,slow=36						
H11S2	**WAKE ISLAND Hy**	**36.73**	**213**	T	T	00 13 20.4	
	baz=20,slow=75,SNR=75						
H11S3	**WAKE ISLAND Hy**	**36.73**	**213**	T	T	00 13 14.2	
	baz=20,slow=75,SNR=26						
MOD	**Modoc Plateau**	**36.75**	**84**	*e*P	**P**	**23 34 00.9**	**+0.7**
	comp=Z,6.2nm,0.8s						
MAJO	**Matsushiro**	**37.31**	**266**⇓	*e*P	**P**	**23 34 07.4**	**+2.5**
MAJO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MJAR	**Matsushiro Arr**	**37.31**	**266**	P	**P**	**23 34 05.6**	**+0.7**
	comp=Z,1.1nm,0.3s,baz=46,slow=5.4,SNR=4.2						
MJAR				LR	LR	23 47 51.7	
	comp=Z,74nm,21.7s,baz=70,slow=34						
WVOR	**Wild Horse Val**	**37.48**	**82**	*e*P	**P**	**23 34 06.4**	**0.0**
	comp=Z,5.5nm,0.8s						
WVOR	**Wild Horse Val**	**37.48**	**82**	*e*P	**P**	**23 34 06.4**	**0.0**
WVOR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
RES	**Resolute Bay**	**37.99**	**25**	*e*P	**P**	**23 34 09.0**	**-1.1**
	comp=Z,2.7nm,0.8s						
RES	**Resolute Bay**	**37.99**	**25**	*e*P	**P**	**23 34 09.0**	**-1.1**
RES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MSO	**Missoula**	**38.03**	**73**	*e*P	**P**	**23 34 10.8**	**-0.2**
	comp=Z,14nm,1.3s						
PAHR	**Pah Rah Range**	**38.58**	**86**	*e*P	**P**	**23 34 17.3**	**+1.6**
	comp=Z,10.0nm,0.9s						
PNTR	**Pine Nut**	**38.81**	**87**	*e*P	**P**	**23 34 17.4**	**-0.4**
	comp=Z,19nm,1.0s						
CMB	**Columbia Colle**	**38.97**	**89**	*e*P	**P**	**23 34 18.6**	**-0.2**
	comp=Z,21nm,1.7s						
CMB	**Columbia Colle**	**38.97**	**89**	*e*P	**P**	**23 34 18.6**	**-0.2**
CMB				pmax	pmax		
	comp=Z,21nm,1.7s						
YERR	**Yerington**	**39.10**	**87**	*e*P	**P**	**23 34 19.5**	**-0.6**
	comp=Z,9.0nm,1.0s						
HLID	**Hailey**	**39.45**	**78**	*e*P	**P**	**23 34 24.1**	**+1.1**
	comp=Z,3.8nm,1.0s						
MCMT	**McKenzie Canyo**	**39.72**	**75**	*e*P	**P**	**23 34 26.2**	**+0.9**
RYN	**Ryan**	**39.76**	**87**	*e*P	**P**	**23 34 27.2**	**+1.6**
	comp=Z,9.1nm,1.1s						
KVN	**Kaiserville**	**39.77**	**86**	*e*P	**P**	**23 34 27.1**	**+1.4**
	comp=Z,5.7nm,1.2s						
KVN	**Kaiserville**	**39.77**	**86**	*e*P	**P**	**23 34 27.1**	**+1.4**
KVN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
NV01	**Mina Array Sit**	**40.02**	**87**	*e*P	**P**	**23 34 28.8**	**+1.0**
NVAR	**Mina Array Bea**	**40.02**	**87**	P	**P**	**23 34 28.6**	**+0.8**
	comp=Z,1.7nm,0.8s,baz=299,slow=7.9,SNR=7.6						
NVAR				LR	LR	23 47 38.5	
	comp=Z,72nm,21.6s,baz=90,slow=31						
OMMB	**Old Mammoth Mi**	**40.09**	**89**	*e*P	**P**	**23 34 30.9**	**+2.4**
	comp=Z,6.3nm,0.9s						
FFC	**Flin Flon**	**41.07**	**57**	*e*P	**P**	**23 34 35.1**	**-0.9**
	comp=Z,6.1nm,0.8s						
FFC	**Flin Flon**	**41.07**	**57**	*e*P	**P**	**23 34 35.1**	**-0.9**
FFC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HVU	**Hansel Valley**	**41.45**	**79**	*e*P	**P**	**23 34 42.1**	**+2.6**
	comp=Z,3.6nm,0.9s						
HVU	**Hansel Valley**	**41.45**	**79**	*e*P	**P**	**23 34 42.1**	**+2.6**
HVU				pmax	pmax		
	comp=Z,4.0nm,0.9s						
RLMT	**Red Lodge**	**41.70**	**73**	*e*P	**P**	**23 34 42.1**	**+0.5**
	comp=Z,15nm,1.2s						
R11A	**Troy Canyon, C**	**41.76**	**85**	*e*P	**P**	**23 34 43.1**	**+1.0**
	comp=Z,5.1nm,1.0s						
BGU	**Big Grassy Mou**	**41.79**	**80**	*e*P	**P**	**23 34 44.9**	**+2.6**
	comp=Z,4.9nm,1.1s						
TPNV	**Topopah Spring**	**42.21**	**87**	*e*P	**P**	**23 34 46.3**	**+0.5**
	comp=Z,14nm,1.0s						
TPNV	**Topopah Spring**	**42.21**	**87**	*e*P	**P**	**23 34 46.3**	**+0.5**
TPNV				pmax	pmax		
	comp=Z,14nm,1.0s						
DUG	**Dugway, Tooele**	**42.35**	**81**	*e*P	**P**	**23 34 48.1**	**+1.2**
	comp=Z,12nm,1.4s						
DUG	**Dugway, Tooele**	**42.35**	**81**	*e*P	**P**	**23 34 48.1**	**+1.2**
DUG				pmax	pmax		
	comp=Z,12nm,1.4s						
PSUT	**Pine Spring**	**42.72**	**84**	*e*P	**P**	**23 34 51.3**	**+1.4**
	comp=Z,7.1nm,0.9s						
PD31	**Pinedale Array**	**42.84**	**76**	*e*P	**P**	**23 34 50.8**	**-0.1**
PDAR	**Pinedale Array**	**42.84**	**76**	P	**P**	**23 34 50.2**	**-0.7**
	comp=Z,3.3nm,0.8s,baz=292,slow=4.2,SNR=16						
PDAR	**Pinedale Array**	**42.84**	**76**	*e*P	**P**	**23 34 50.4**	**-0.5**
GSC	**Goldstone, Bar**	**42.92**	**90**	*e*P	**P**	**23 34 51.8**	**+0.4**
	comp=Z,16nm,1.1s						
GSC	**Goldstone, Bar**	**42.92**	**90**	*e*P	**P**	**23 34 51.8**	**+0.4**
GSC				pmax	pmax		
	comp=Z,17nm,1.1s						
KSRS	**Korea Array**	**43.14**	**275**	P	**P**	**23 34 54.9**	**+1.8**
	comp=Z,2.1nm,0.6s,baz=70,slow=8.6,SNR=6.2						
KSRS				pP	**pP**	**23 35 06.5**	**+1.7**
	comp=Z,7.7nm,0.9s,baz=58,slow=8.2,SNR=8.9						
KS01	**Wonju Array Si**	**43.14**	**275**	*e*P	**P**	**23 34 54.1**	**+1.0**
FCC	**Fort Churchill**	**43.17**	**48**	*e*P	**P**	**23 34 53.4**	**+0.4**
	comp=Z,30nm,1.8s						
FCC	**Fort Churchill**	**43.17**	**48**	*e*P	**P**	**23 34 53.4**	**+0.4**
FCC				pmax	pmax		
	comp=Z,30nm,1.8s						
KSAR	**Wonju Array Be**	**43.17**	**275**	P	**P**	**23 34 54.9**	**+1.6**
KSAR				pP	**pP**	**23 35 06.5**	**+1.5**
KSAR	**Wonju Array Be**	**43.17**	**275**	P	**P**	**23 34 54.9**	**+1.6**
KSAR				*PP	**pP**	**23 35 06.6**	**+1.5**
TMUT	**Trail Mountain**	**43.88**	**81**	*e*P	**P**	**23 35 02.1**	**+2.7**
	comp=Z,5.8nm,0.8s						
LCMT	**Little Creek M**	**44.04**	**85**	*e*P	**P**	**23 35 02.6**	**+2.1**
	comp=Z,6.9nm,1.0s						
JNU	**Nakatsue**	**44.10**	**268**	LR	LR	23 52 10.4	
	comp=Z,69nm,20.1s,baz=103,slow=34						
TJN	**Taejon**	**44.16**	**274**⇑	*e*P	**P**	**23 35 02.2**	**+0.9**
PFO	**Pinyon Flats O**	**44.24**	**91**	*e*P	**P**	**23 35 04.1**	**+1.9**
PFO	**Pinyon Flats O**	**44.24**	**91**	*e*P	**P**	**23 35 04.1**	**+1.9**
P18A	**Preston Nutter**	**44.27**	**80**	*e*P	**P**	**23 35 04.2**	**+1.6**
	comp=Z,11nm,1.0s						
KNB	**Kanab**	**44.30**	**85**	*e*P	**P**	**23 35 05.4**	**+2.8**
	comp=Z,11nm,1.1s						
KNB	**Kanab**	**44.30**	**85**	*e*P	**P**	**23 35 05.4**	**+2.8**
KNB				pmax	pmax		
	comp=Z,11nm,1.1s						
DPP	**Dos Picos Cty**	**44.35**	**92**	*e*P	**P**	**23 35 01.1**	**-1.9**
DPP				*e*pP	**P**	**23 35 04.4**	**+1.5**
SRU	**San Rafael Swe**	**44.42**	**81**	*e*P	**P**	**23 35 06.0**	**+2.4**
	comp=Z,6.6nm,0.8s						
SRU	**San Rafael Swe**	**44.42**	**81**	*e*P	**P**	**23 35 06.0**	**+2.4**
SRU				pmax	pmax		
	comp=Z,7.0nm,0.8s						
W13A	**Hualapai Mount**	**44.87**	**88**	*e*P	**P**	**23 35 08.1**	**+0.9**
	comp=Z,7.4nm,1.1s						
U15A	**North Rim**	**45.00**	**85**	*e*P	**P**	**23 35 09.3**	**+0.9**
	comp=Z,10nm,0.9s						
O20A	**White River Ci**	**45.19**	**78**	*e*P	**P**	**23 35 09.4**	**-0.3**
	comp=Z,18nm,1.0s						
PV09	**Paradox Valley**	**45.65**	**81**	*e*P	**P**	**23 35 15.4**	**+1.9**
NRIK	**Noril'sk**	**45.89**	**331**	P	**P**	**23 35 14.5**	**-0.1**
	comp=Z,1.2nm,0.4s,baz=58,slow=3.7,SNR=4.5						
PV03	**Paradox Valley**	**45.98**	**81**	*e*P	**P**	**23 35 16.4**	**+0.4**
	comp=Z,6.5nm,0.7s						
PV07	**Paradox Valley**

ARCES LR LR 00 02 50.6
comp=Z,65nm,20.3s,baz=15,slow=37
GTA Gaotai 58.67 295 *eP* **P 23 36 50.1 +0.1**
GTA pP pP 23 36 57.8 -4.4
GTA sP sP 23 37 00.1 -7.0
GTA S **S 23 44 51.3 -0.1**
GTA sS pS 23 45 07.4 +1.5
GTA pmax pmax
comp=Z,10.0nm,1.1s
GTA pmax pmax
comp=Z,65nm,4.9s
GTA LR LR
comp=Z,150nm,17.8s
GTA LR LR
comp=Z,170nm,16.2s
GTA LR LR
comp=Z,190nm,17.8s
WCI Wyandotte Cave 59.40 66 *eP* **P 23 36 54.2 -0.7**
comp=Z,9.3nm,0.9s
WCI Wyandotte Cave 59.40 66 *eP* **P 23 36 54.2 -0.7**
WCI pmax pmax
comp=Z,9.0nm,0.9s
TRQ Mont Tremblant 60.10 52 *eP* **P 23 36 59.5 -0.1**
OXF Oxford 60.18 71 *eP* **P 23 36 58.3 -1.9**
OXF Oxford 60.18 71 *eP* **P 23 36 58.3 -1.9**
PLAL Pickwick Lake 60.63 70 *eP* **P 23 37 02.5 -0.9**
comp=Z,16nm,1.3s
KURK Kurchatov 61.29 316 *eP* **P 23 37 07.4 -0.1**
KURK pP **pP 23 37 21.0 +1.2**
KURK Kurchatov 61.29 316*c iP* **P 23 37 07.3 -0.3**
KURK pmax pmax
comp=Z,6.0nm,1.2s
KURBB Kurchatov Arra 61.40 316 P **P 23 37 08.1 -0.2**
comp=Z,2.9nm,0.5s,baz=43,slow=7.0,SNR=13
KURBB pP **pP 23 37 21.0 +0.4**
comp=Z,4.8nm,0.8s,baz=43,slow=6.8,SNR=10
WMQ Urumqi 62.07 306 P **P 23 37 15.9 +2.9**
WMQ pP pP 23 37 22.8 -2.5
WMQ sP sP 23 37 25.8 -4.4
WMQ pmax pmax
comp=Z,25nm,0.7s
WMQ pmax pmax
comp=Z,400nm,4.7s
WMQ LR LR
comp=Z,270nm,24.3s
WMQ LR LR
comp=Z,380nm,18.9s
WMQ LR LR
comp=Z,170nm,21.7s
CD2 Chengdu 62.32 286 P **P 23 37 13.8 -1.1**
CD2 pmax pmax
comp=Z,10.0nm,0.7s
MK31 Makanchi Array 62.54 311 *eP* **P 23 37 15.7 -0.4**
MK31 Makanchi Array 62.54 311 *eP* **P 23 37 15.7 -0.4**
MKAR Makanchi Array 62.54 311 P **P 23 37 15.6 -0.5**
comp=Z,1.1nm,0.4s,baz=50,slow=5.9,SNR=19
MKAR LR LR 00 05 05.5
comp=Z,73nm,19.7s,baz=32,slow=37
MK01 Makanchi Array 62.55 311 *eP* **P 23 37 15.2 -0.9**
BVAR Borovoye Array 62.86 323 P **P 23 37 18.5 +0.4**
comp=Z,4.2nm,0.4s,baz=60,slow=6.7,SNR=59
BVAR pP **pP 23 37 30.8 +0.4**
comp=Z,4.8nm,0.5s,baz=46,slow=8.3,SNR=11
BVAR LR LR 00 07 51.1
comp=Z,216nm,18.1s,baz=56,slow=39
BRVK Borovoye 62.87 323 *eP* **P 23 37 18.5 +0.3**
BRVK Borovoye 62.87 323*c iP* **P 23 37 18.3 +0.2**
BRVK *i* *PP **pP 23 37 26.3 -4.2**
BRVK pmax pmax
comp=Z,10.0nm,1.0s
PRGR Permogore 62.88 340 *eP* **P 23 37 17.6 -0.4**
PRGR pmax pmax
comp=Z,7.0nm,1.0s
Z50A Ashland 63.12 70 *eP* **P 23 37 18.5 -1.6**
comp=Z,10nm,1.0s
ARU Arti 64.12 331 *eP* **P 23 37 25.5 -0.8**
ARU Arti 64.12 331*c iP* **P 23 37 26.2 -0.1**
ARU 23 37 59.4
ARU 23 39 45.8
ARU S **S 23 46 02.7 +3.0**
ARU SS **SS 23 50 05.7 -2.5**
ARU pmax pmax
comp=Z,9.0nm,1.7s
ARU MLR MLR
comp=Z,171nm,18.0s
GOGA Godfrey 64.43 68 *eP* **P 23 37 27.0 -1.7**
comp=Z,4.8nm,0.7s
GOGA Godfrey 64.43 68 *eP* **P 23 37 27.0 -1.7**
GOGA pmax pmax
comp=Z,5.0nm,0.7s
FINES FINESS Array B 66.18 350 P **P 23 37 39.0 -0.6**
comp=Z,0.5nm,0.4s,baz=15,slow=8.3,SNR=7.3
FINES LR LR 00 06 39.1
comp=Z,54nm,21.9s,baz=17,slow=36
FINES FINESS Array B 66.18 350 *iP* **P 23 37 42.4 +2.8**
FINES pmax pmax
comp=Z,1.0nm,0.8s
TAOE Nuku Hiva Isla 66.66 144 *eLR* LR 23 58 01.0
comp=Z,94nm,21.9s
NOA NORSAR Array B 67.57 358 LR LR 00 07 50.4
comp=Z,27nm,18.9s,baz=10.0,slow=36
HFS Hagfors 68.40 356 P **P 23 37 53.5 -0.1**
comp=Z,1.1nm,0.3s,baz=2.7,slow=3.0,SNR=16
HFS LR LR 00 07 46.7
comp=Z,31nm,20.2s,baz=2.5,slow=36
VSU Vasula 69.02 349‖ *eP* **P 23 37 57.4 -0.1**
VSU pmax pmax
comp=Z,22nm,1.0s
AAK Ala-Archa 69.30 313 *eP* **P 23 37 59.9 +0.1**
AAK Ala-Archa 69.30 313*d iP* **P 23 38 00.6 +0.8**
AAK pmax pmax
comp=Z,11nm,1.0s
AKTO Aktyubinsk 69.39 328 P **P 23 38 00.1 +0.2**
comp=Z,9.6nm,0.7s,baz=62,slow=10,SNR=27
AKTO pP **pP 23 38 12.8 +0.4**
comp=Z,7.2nm,0.7s,baz=218,slow=0.8,SNR=8.6
AKTO LR LR 00 12 21.4
comp=Z,78nm,18.3s,baz=39,slow=39
NRN Naryn 69.55 311 *eP* **P 23 38 02.8 +1.3**
comp=Z,11nm,1.3s
NRN Naryn 69.55 311 *eP* **P 23 38 02.8 +1.3**
NRN pmax pmax
comp=Z,11nm,1.3s
ABKAR Akbulak array 69.74 326 *eP* **P 23 38 02.4 +0.3**
PMOR Pomariorio Ree 69.96 154 *eT* T 00 54 48.8
comp=Z,3.5nm,0.3s
LSA Lhasa 70.60 293 *eP* **P 23 38 10.0 +1.7**
LSA Lhasa 70.60 293 *eP* **P 23 38 10.0 +1.7**
KK31 Karatay Array 70.69 316 *eP* **P 23 38 08.6 +0.4**
KK31 Karatay Array 70.69 316 *eP* **P 23 38 08.6 +0.4**
KKAR Karatay Array 70.69 316 *eP* **P 23 38 08.6 +0.4**
KKAR Karatay Array 70.69 316 *eP* **P 23 38 08.6 +0.4**
OBN Obninsk 70.74 342 *iP* **P 23 38 07.4 -0.7**
OBN pmax pmax
comp=Z,4.0nm,1.0s
KSH Kashi 71.07 310 P **P 23 38 14.8 +4.2**
KSH sP sP 23 38 27.0 -0.9
KSH PP PP 23 40 55.8 +7.9
KSH S **S 23 47 31.5 +7.8**
KSH sS pS 23 47 39.3 +0.2
KSH pmax pmax
comp=Z,37nm,0.9s
PPT Papeete 71.97 156 LR LR 00 04 40.5
comp=Z,50nm,18.9s,baz=9.0,slow=31
PPT2 Papeete2 71.99 156 *eLR* LR 00 00 22.3
comp=Z,86nm,23.0s
EKA Eskdalemuir Ar 73.03 6 P **P 23 38 21.7 -0.2**
comp=Z,0.3nm,0.5s,baz=2.2,slow=3.6,SNR=2.8
RAR Rarotonga 73.53 167 LR LR 00 05 14.2
comp=Z,93nm,19.3s,baz=9.5,slow=31
APG El Apazote 73.87 86 LR LR 00 08 24.2
comp=Z,39nm,20.4s,baz=265,slow=34
VSR Storozhevoye 73.89 340 *eP* **P 23 38 26.3 -0.7**
VSR pmax pmax
comp=Z,10.0nm,1.1s
VORD Divnogorie 74.09 339 *eP* **P 23 38 27.2 -1.0**
VORD pmax pmax
comp=Z,10.0nm,0.7s
CMAR Chiang Mai Arr 74.45 280 P **P 23 38 31.5 +0.7**
comp=Z,2.1nm,0.8s,baz=28,slow=6.6,SNR=6.0
CMAR pP **PcP 23 38 44.5 -0.7**
comp=Z,4.1nm,0.8s,baz=26,slow=6.9,SNR=7.5
CMAR LR LR 00 15 50.1
comp=Z,22nm,18.3s,baz=169,slow=39
CMAR Chiang Mai Arr 74.45 280 *iP* **P 23 38 34.2 +3.4**
CMAR pmax pmax
comp=Z,2.0nm,0.8s
GUMB Gumba 74.95 296 *eP* **P 23 38 34.6 +0.6**
JIRN Jiri 74.97 295 *eP* **P 23 38 35.0 +0.9**
RAMN Ramite 75.28 295 *eP* **P 23 38 36.3 +0.5**
KKN Kakani 75.38 296 *eP* **P 23 38 36.8 +0.5**
PKIN Phulchoki 75.48 296 *eP* **P 23 38 36.7 -0.2**
GKN Gorkha 75.57 297 *eP* **P 23 38 37.8 +0.5**
DMN Daman 75.61 296 *eP* **P 23 38 38.3 +0.6**
DANN Dangsing 75.79 298 *eP* **P 23 38 39.3 +0.6**
comp=Z,33nm,0.7s
AKASG Malin Array Be 76.24 346 P **P 23 38 39.0 -1.6**
comp=Z,0.8nm,0.3s,baz=17,slow=5.9,SNR=9.3
AKASG LR LR 00 17 03.5
comp=Z,44nm,19.2s,baz=40,slow=40
AKASG Malin Array Be 76.24 346*cePP* **P 23 38 39.7 -0.8**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
KIEV Kiev 76.25 346‖ *eP* **P 23 38 39.8 -0.8**
KIEV pmax pmax
comp=Z,3.0nm,1.0s
KOLN Koldanda 76.33 297 *eP* **P 23 38 41.9 +0.2**
PYUN Piuthan 76.41 298 *eP* **P 23 38 42.3 +0.2**
comp=Z,65nm,1.2s
NIL Nilore 77.06 308 *eP* **P 23 38 46.0 +0.4**
NIL Nilore 77.06 308 *eP* **P 23 38 46.0 +0.4**
CLL Collm 77.25 356 *eP* **P 23 38 46.0 -0.2**
CLL *e*SS SS 23 54 00.0 +31
CLL Collm 77.25 356 *eP* **P 23 38 46.0 -0.2**
BRG Berggiesshubel 77.64 355 *eP* **P 23 38 48.8 +0.3**
comp=Z,6.0nm,1.4s
BRG Berggiesshubel 77.64 355 *eP* **P 23 38 48.8 +0.3**
BRG pmax pmax
comp=Z,6.0nm,1.4s
DPC Dobruska-Polom 78.02 354 *eP* **P 23 38 51.2 +0.6**
DPC *ep*P **pP 23 39 03.6 +0.3**
DPC Dobruska-Polom 78.02 354 *eP* **P 23 38 51.2 +0.6**
DPC *e* 23 39 03.6
KRLC Kraliky 78.27 353 *eP* **P 23 38 52.3 +0.3**
KRLC Kraliky 78.27 353 *eP* **P 23 38 52.3 +0.3**
KBL Kabul 78.34 312 *eP* **P 23 38 52.6 -0.3**
comp=Z,9.3nm,0.9s
KBL Kabul 78.34 312 *eP* **P 23 38 52.6 -0.3**
KBL pmax pmax
comp=Z,9.0nm,0.9s
GOF Gofitskoye 78.70 335 *eP* **P 23 38 54.3 -0.1**
GOF pmax pmax
comp=Z,40nm,1.3s
SORM Soroca 78.87 345‖ *iP* **P 23 38 54.8 -0.4**
SORM Soroca 78.87 345 P **P 23 38 54.8 -0.4**
LANS Liptovska Anna 78.97 352 *eP* P 23 39 01.7 +5.8
LANS Liptovska Anna 78.97 352 *eP* P 23 39 01.7 +5.8
MAK Makhachkala 79.35 331 *eP* **P 23 38 55.3 -2.7**
MAK *e* 23 41 57.1
MAK *e*S **S 23 48 53.3 -1.9**
MAK pmax pmax
comp=Z,78nm,1.1s
KHC Kasperske Hory 79.40 356 *eP* **P 23 38 59.1 +0.9**
KHC *ep*P **pP 23 39 09.6 -1.3**
KHC Kasperske Hory 79.40 356 *eP* **P 23 38 59.1 +0.9**
KHC *e* 23 39 09.6
TRPA Tarpa 79.66 349‖ *iP* **P 23 39 00.3 +0.7**
GERES GERESS Array B 79.68 355 P **P 23 38 59.6 -0.2**
comp=Z,1.0nm,0.8s,baz=15,slow=5.5,SNR=4.8
BUR08 Bucovina Ar. S 79.81 347 *eP* **P 23 39 00.8 +0.2**
KIV Kislovodsk 79.81 335 *eP* **P 23 39 01.2 +0.6**
comp=Z,5.8nm,1.0s
KIV Kislovodsk 79.81 335 *eP* **P 23 39 01.6 +1.0**
KIV pmax pmax
comp=Z,5.0nm,1.1s
BUR04 Bucovina Ar. S 79.83 347 *eP* **P 23 39 00.8 +0.1**
BURAR Bucovina Array 79.83 347‖ *iP* **P 23 39 00.7 0.0**
BURAR Bucovina Array 79.83 347 P **P 23 39 00.7 0.0**
KBZ Khabaz 79.97 334 P **P 23 39 01.0 -0.3**
comp=Z,2.5nm,0.8s,baz=74,slow=3.1,SNR=7.2
KBZ LR LR 00 20 50.3
comp=Z,72nm,18.1s,baz=22,slow=40
NCK Nalchik 79.99 334‖ *eP* **P 23 39 02.5 +1.0**
NCK pmax pmax
comp=Z,9.0nm,0.8s
GEYT Alibeck 80.15 321 LR LR 00 18 02.1
comp=Z,92nm,18.2s,baz=350,slow=38
ZEI Tsey 80.56 333 *eP* **P 23 39 04.2 -0.6**
CFR Carcaliu 81.78 345‖ *iP* **P 23 39 10.1 -0.8**
CFR Carcaliu 81.78 345 P **P 23 39 10.1 -0.8**
MLR Muntele Rosu 81.81 347 LR LR 00 20 56.0
comp=Z,11nm,19.0s,baz=354,slow=40
MLR Muntele Rosu 81.81 347‖ *iP* **P 23 39 13.2 +1.9**
MLR Muntele Rosu 81.81 347 P **P 23 39 13.2 +1.9**
BZS Buzias 82.25 350‖ *iP* **P 23 39 13.4 0.0**
BZS Buzias 82.25 350 P **P 23 39 13.4 0.0**
TLB Topalu 82.37 345‖ *iP* **P 23 39 14.6 +0.5**
TLB Topalu 82.37 345 P **P 23 39 14.6 +0.5**
TIRR Tirgusor 82.44 345‖ *iP* **P 23 39 15.1 +0.7**
TIRR Tirgusor 82.44 345 *eP* **P 23 39 14.2 -0.2**
comp=Z,5.8nm,0.7s
TIRR Tirgusor 82.44 345 P **P 23 39 15.1 +0.7**
GNI Garni 82.76 332 LR LR 00 22 39.6
comp=Z,40nm,18.5s,baz=9.0,slow=40
WRA Warramunga Arr 84.77 229 P **P 23 39 26.4 -0.1**
comp=Z,0.7nm,0.9s,baz=33,slow=5.8,SNR=6.3
BR131 Keskin Array S 86.01 340 *eP* **P 23 39 33.8 +1.0**
BRTR Keskin Array B 86.01 340 P **P 23 39 33.4 +0.5**
comp=Z,2.0nm,0.9s,baz=64,slow=2.9,SNR=13
BRTR LR LR 00 24 23.2
comp=Z,16nm,19.1s,baz=46,slow=40
ALN Alexandroupoli 86.29 346 *eP* **P 23 39 34.8 +0.8**
comp=Z,3.2nm,1.1s
ALN Alexandroupoli 86.29 346 *eP* **P 23 39 34.8 +0.8**
ALN pmax pmax
comp=Z,3.0nm,1.1s
AS01 Alice Springs 88.16 227 *eP* **P 23 39 42.3 -0.8**
ASAR Alice Springs 88.18 227 P **P 23 39 42.7 -0.5**
comp=Z,1.3nm,0.7s,baz=33,slow=4.4,SNR=11
ESDC Sonseca Array 88.53 8 P **P 23 39 44.4 -0.5**
comp=Z,0.1nm,0.4s,baz=337,slow=3.7,SNR=3.3
MMAI Mount Meron Ar 92.01 336 P **P 23 40 01.0 -0.3**
comp=Z,1.4nm,0.8s,baz=38,slow=7.3,SNR=4.2
STKA Stephens Creek 92.19 217 LR LR 00 18 04.7
comp=Z,64nm,21.1s,baz=212,slow=33
MATP Matopo 144.50 323 PKP PKPbc 23 46 27.3 -0.1
comp=Z,6.8nm,0.8s,baz=0.6,slow=4.8,SNR=13
TSUM Tsumeb 146.50 341 *e*PKPbc **PKPbc 23 46 33.8 +0.2**
BOSA Boshof 153.15 322 PKPbc **PKPbc 23 46 49.8 -0.1**
comp=Z,0.6nm,0.4s,baz=74,slow=7.4,SNR=2.5

ATH ***13*** *23:50:03.4, 36.°45N×28.°87E, h33km±6km, ML2.5/3, Error ellipse: s-maj=7.7km s-min=1.1km az=178.0*
DDA ***13*** *23:50:03.6, 36.°51N×28.°91E, h7km, Ml3.1*
THE ***13*** *23:50:03.5, 36.°45N×28.°86E, h9km±1km, ML2.5/1, Error ellipse: s-maj=1.5km s-min=0.4km az=104.0*
ISK ***13*** *23:50:03.1, 36.°43N×28.°89E, h18km, ML2.8/15*
CSEM ***13*** *23:50:04.1±0.1, 36.°43N×28.°89E, h20km, ML3.1, Error ellipse: s-maj=3.0km s-min=2.0km az=4.0*
ISCJB ***13*** *23:50:04.1±0.4, 36.°43N±0.°03×28.°89E±0.°03, h26km±3km, Error ellipse: s-maj=4.9km s-min=3.4km az=8.5*
ISC 13 23:50:03.7±1.0,**36.°44N**±0.°02×**28.°89E**±0.°02,**h18**km±3km,
n91,σ0**s56**/119,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FETY	**Fethiye**	**0.25**	**39**	PG	**Pg**	**23 50 08.9**	**-0.6**
FETY				SG	**Sg**	**23 50 14.1**	**+0.7**
FETY	**Fethiye**	**0.25**	**39**	P	**Pg**	**23 50 08.9**	**-0.6**
FETY				S	**Sg**	**23 50 13.8**	**+0.4**
DALY	**Dalyan (Mu¨la**	**0.42**	**334**	PG	**Pb**	**23 50 12.6**	**0.0**
DALY				SG	**Sb**	**23 50 19.0**	**+0.3**
DALY	**Dalyan (Mu¨la**	**0.42**	**334**	*i* P	**Pb**	**23 50 12.4**	**-0.2**
DALY				*i* S	**Sb**	**23 50 19.2**	**+0.5**
DALY	**Dalyan (Mu¨la**	**0.42**	**334**	*e*Pg	**Pb**	**23 50 12.6**	**0.0**
DALY				*e*Sg	**Sb**	**23 50 19.0**	**+0.3**
TURN	**Turunc**	**0.49**	**332**	PG	**Pn**	**23 50 15.9**	**+0.2**
TURN	**Turunc**	**0.49**	**332**	*i* P	**Pn**	**23 50 16.0**	**+0.2**
TURN				*i* S	**Sn**	**23 50 24.6**	**+0.8**
TURN	**Turunc**	**0.49**	**332**	*e*Pg	**Pn**	**23 50 15.9**	**+0.2**
AKAS	**Kas**	**0.61**	**109**	PG	**Pb**	**23 50 15.2**	**-0.7**
AKAS				SG	**Sg**	**23 50 25.1**	**+0.9**
AKAS	**Kas**	**0.61**	**109**	*i* P	**Pb**	**23 50 15.2**	**-0.7**
AKAS				*i* S	**Sn**	**23 50 25.6**	**-1.5**
AKAS	**Kas**	**0.61**	**109**	P	**Pb**	**23 50 15.2**	**-0.7**
AKAS				*e*Sg	**Sg**	**23 50 25.1**	**+0.9**
MRSB	**Marmaris-Mugla**	**0.62**	**297**	PG	**Pg**	**23 50 16.1**	**+0.1**
MRSB	**Marmaris-Mugla**	**0.62**	**297**	*e*Pg	**Pg**	**23 50 16.1**	**+0.1**
KSL	**Kastellorizon**	**0.63**	**117**	P	**Pg**	**23 50 16.2**	**+0.1**
KSL				S	**Sn**	**23 50 27.6**	**+0.3**
KSL				AML	AML	23 50 27.7	
	comp=E,1387μm,0.5s						
KSL				AML	AML	23 50 28.6	
	comp=N,532μm,0.4s						
KSL	**Kastellorizon**	**0.63**	**117**	P	**Pg**	**23 50 16.4**	**+0.2**
KSL				S	**Sn**	**23 50 26.4**	**-0.9**
ARG	**Arkhangelos**	**0.65**	**250**	PG	**Pg**	**23 50 16.5**	**-0.1**
ARG	**Arkhangelos**	**0.65**	**250**	P	**Pg**	**23 50 17.0**	**+0.5**
ARG				S	**Sn**	**23 50 26.8**	**-1.0**
ARG				AML	AML	23 50 30.0	
	comp=N,353μm,0.3s						
ARG				AML	AML	23 50 30.6	
	comp=E,423μm,0.3s						
ARG	**Arkhangelos**	**0.65**	**250**	P	**Pb**	**23 50 16.2**	**-0.3**
ARG				S	**Sg**	**23 50 25.6**	**+0.3**
ARG	**Arkhangelos**	**0.65**	**250**	*e*Pg	**Pg**	**23 50 16.5**	**-0.1**
ARG	**Arkhangelos**	**0.65**	**250**	P	**Pg**	**23 50 16.9**	**+0.3**
ARG				S	**Sg**	**23 50 25.6**	**+0.3**
YER	**Yerkesik**	**0.85**	**325**	PG	**Pg**	**23 50 19.9**	**-0.3**
YER	**Yerkesik**	**0.85**	**325**	P	**Pb**	**23 50 19.1**	**-0.8**
YER				S	**Sg**	**23 50 31.4**	**-0.1**
YER	**Yerkesik**	**0.85**	**325**	P	**Pb**	**23 50 19.1**	**-0.8**
YER	**Yerkesik**	**0.85**	**325**	*e*Pg	**Pg**	**23 50 19.9**	**-0.3**
YER				S	**Sg**	**23 50 31.4**	**-0.1**
GLHS	**Glhisar (BURDU**	**0.87**	**34**	PG	**Pb**	**23 50 19.9**	**-0.4**
GLHS	**Glhisar (BURDU**	**0.87**	**34**	*e*Pg	**Pb**	**23 50 19.9**	**-0.4**
ELL	**Elmali**	**0.88**	**69**	PG	**Pg**	**23 50 20.6**	**-0.2**
ELL	**Elmali**	**0.88**	**69**	*e*Pg	**Pg**	**23 50 20.6**	**-0.2**
GOLH	**Golhisar**	**0.96**	**34**	*i* P	**Pb**	**23 50 20.9**	**-1.0**
GOLH				*i* S	**Sn**	**23 50 35.6**	**-0.1**
GOLH	**Golhisar**	**0.96**	**34**	P	**Pb**	**23 50 20.9**	**-1.0**
GOLH				S	**Sn**	**23 50 35.6**	**-0.1**
TAVA	**DENIZLI_Tavas**	**1.03**	**1**	*i* P	**Pb**	**23 50 22.7**	**-0.2**
TAVA				*i* S	**Sg**	**23 50 36.3**	**-0.8**
TAVA	**DENIZLI_Tavas**	**1.03**	**1**	P	**Pb**	**23 50 22.7**	**-0.2**
TAVA				S	**Sg**	**23 50 36.3**	**-0.8**
DAT	**Datca**	**1.09**	**286**	PN	**Pg**	**23 50 24.7**	**-0.2**
DAT	**Datca**	**1.09**	**286**	*i* P	**Pg**	**23 50 24.7**	**-0.2**
DAT				*i* S	**Sg**	**23 50 40.2**	**+0.9**
DAT	**Datca**	**1.09**	**286**	P	**Pg**	**23 50 24.7**	**-0.2**
DAT				S	**Sg**	**23 50 40.2**	**+0.9**
MLSB	**Milas**	**1.23**	**314**	PN	**Pb**	**23 50 26.3**	**-0.2**
MLSB	**Milas**	**1.23**	**314**	*e*Pn	**Pb**	**23 50 26.3**	**-0.2**
DNZL	**Cakiroluk**	**1.25**	**6**	*i* P	**Pb**	**23 50 27.0**	**+0.1**
DNZL				*i* S	**Sn**	**23 50 43.0**	**0.0**
DNZL	**Cakiroluk**	**1.25**	**6**	P	**Pb**	**23 50 27.0**	**+0.1**
DNZL				S	**Sn**	**23 50 43.0**	**0.0**
KORT	**Korkueli**	**1.30**	**64**	PN	**Pb**	**23 50 27.5**	**-0.2**
KORT	**Korkueli**	**1.30**	**64**	*i* P	**Pb**	**23 50 27.8**	**+0.1**
KORT	**Korkueli**	**1.30**	**64**	*e*Pn	**Pb**	**23 50 27.5**	**-0.2**
KORT	**Korkueli**	**1.30**	**64**	P	**Pb**	**23 50 27.8**	**+0.1**
BDRM	**Kayabasi**	**1.32**	**299**	*i* P	**Pb**	**23 50 27.5**	**-0.4**
BDRM	**Kayabasi**	**1.32**	**299**	P	**Pb**	**23 50 27.5**	**-0.4**
BODT	**Bodrum**	**1.41**	**297**	PN	**Pn**	**23 50 28.7**	**+0.2**
BODT	**Bodrum**	**1.41**	**297**	P	**Pn**	**23 50 27.4**	**-1.1**
BODT				S	**Sn**	**23 50 46.0**	**-0.6**
BODT	**Bodrum**	**1.41**	**297**	P	**Pn**	**23 50 27.4**	**-1.1**
BODT	**Bodrum**	**1.41**	**297**	*e*Pn	**Pn**	**23 50 28.7**	**+0.2**
BODT				S	**Sn**	**23 50 46.0**	**-0.6**
NISR	**Nisiros**	**1.43**	**277**	P	**Pb**	**23 50 29.4**	**-0.3**
NISR	**Nisiros**	**1.43**	**277**	P	**Pb**	**23 50 29.0**	**-0.7**
AYDN	**Tasoluk**	**1.46**	**327**	*i* P	**Pb**	**23 50 29.9**	**-0.5**
AYDN	**Tasoluk**	**1.46**	**327**	P	**Pb**	**23 50 29.9**	**-0.5**
ANTB	**Antalya**	**1.49**	**72**	PN	**Pn**	**23 50 29.3**	**-0.2**
ANTB	**Antalya**	**1.49**	**72**	*e*Pn	**Pn**	**23 50 29.3**	**-0.2**
BRDR	**BURDUR-Merkez**	**1.57**	**36**	*i* P	**Pn**	**23 50 31.0**	**+0.3**
BRDR	**BURDUR-Merkez**	**1.57**	**36**	P	**Pn**	**23 50 31.0**	**+0.3**
KARP	**Karpathos**	**1.66**	**238**	P	**Pn**	**23 50 32.3**	**+0.5**
KARP	**Karpathos**	**1.66**	**238**	P	**Pn**	**23 50 32.2**	**+0.3**
AYDB	**Zeytinkoy-Aydi**	**1.70**	**332**	PN	**Pn**	**23 50 32.7**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**1.70**	**332**	*e*Pn	**Pn**	**23 50 32.7**	**+0.1**
GCAM	**G?zelcaml?**	**1.83**	**314**	PN	**Pn**	**23 50 34.7**	**+0.6**
GCAM	**G?zelcaml?**	**1.83**	**314**	*i* P	**Pn**	**23 50 34.3**	**+0.2**
GCAM	**G?zelcaml?**	**1.83**	**314**	P	**Pn**	**23 50 34.3**	**+0.2**
GCAM	**G?zelcaml?**	**1.83**	**314**	*e*Pn	**Pn**	**23 50 34.7**	**+0.6**
SUTC	**Sutluce-Ispart**	**1.98**	**58**	PN	**Pn**	**23 50 36.7**	**+0.3**
SUTC	**Sutluce-Ispart**	**1.98**	**58**	*e*Pn	**Pn**	**23 50 36.7**	**+0.3**
SMG	**Samos**	**2.07**	**308**	P	**Pn**	**23 50 37.3**	**-0.2**
SMG				S	**Sn**	**23 51 03.5**	**+0.6**
SMG				AML	AML	23 51 05.7	
	comp=N,260μm,0.3s						
SMG				AML	AML	23 51 06.2	
	comp=E,281μm,0.3s						
SMG	**Samos**	**2.07**	**308**	P	**Pn**	**23 50 37.5**	**-0.1**
SMG				S	**Sn**	**23 51 03.2**	**+0.3**
KULA	**Kula-Manisa**	**2.08**	**355**	PN	**Pn**	**23 50 38.1**	**+0.4**
KULA	**Kula-Manisa**	**2.08**	**355**	*e*Pn	**Pn**	**23 50 38.1**	**+0.4**
KEPZ	**Antalya-Kepez**	**2.23**	**77**	*i* P	**Pn**	**23 50 40.4**	**+0.6**
KEPZ	**Antalya-Kepez**	**2.23**	**77**	P	**Pn**	**23 50 40.4**	**+0.6**
DGB	**˜zmir**	**2.27**	**316**	*i* P	**Pn**	**23 50 40.3**	**+0.1**
URLA	**Izmir**	**2.65**	**317**	PN	**Pn**	**23 50 46.3**	**+0.8**
URLA	**Izmir**	**2.65**	**317**	*e*Pn	**Pn**	**23 50 46.3**	**+0.8**
NPS	**Neapolis**	**2.91**	**247**	P	**Pn**	**23 50 47.4**	**-1.6**
NPS	**Neapolis**	**2.91**	**247**	P	**Pn**	**23 50 48.5**	**-0.5**
CHOS	**Chios island**	**2.98**	**312**	PN	**Pn**	**23 50 51.0**	**+0.9**
CHOS	**Chios island**	**2.98**	**312**	P	**Pn**	**23 50 51.1**	**+1.1**
CHOS	**Chios island**	**2.98**	**312**	P	**Pn**	**23 50 50.9**	**+0.9**
LAST	**Lasithi**	**3.05**	**246**	P	**Pn**	**23 50 51.4**	**+0.3**
LAST	**Lasithi**	**3.05**	**246**	P	**Pn**	**23 50 51.5**	**+0.4**
KONT	**Konya--Tatoy**	**3.15**	**60**	PN	**Pn**	**23 50 53.2**	**+0.7**
KONT	**Konya--Tatoy**	**3.15**	**60**	*e*Pn	**Pn**	**23 50 53.2**	**+0.7**
KIZT	**Kizilcal**	**3.40**	**43**	PN	**Pn**	**23 50 56.9**	**+1.0**
KIZT	**Kizilcal**	**3.40**	**43**	*e*Pn	**Pn**	**23 50 56.9**	**+1.0**
TEKE	**Tekeli-Mersin**	**3.43**	**94**	PN	**Pn**	**23 50 56.4**	**+0.2**
TEKE	**Tekeli-Mersin**	**3.43**	**94**	*e*Pn	**Pn**	**23 50 56.4**	**+0.2**
SIGR	**SIGRI**	**3.66**	**320**	P	**Pn**	**23 50 58.7**	**-0.7**
SIGR	**SIGRI**	**3.66**	**320**	P	**Pn**	**23 50 59.4**	**0.0**

ISCJB ***13*** *23:52:20.3±0.4, 28.°37N±0.°04×128.°93E±0.°07, h91km±5km, mb3.4/6, Error ellipse: s-maj=12.1km s-min=4.7km az=28.8*
JMA ***13*** *23:52:21.5±0.2, 28.°42N×128.°82E, h69km±4km, M3.5*
IDC ***13*** *23:52:22.8±1.4, 28.°32N×128.°70E, h97km±12km, mb3.1/6, mb1 3.3/8, mb1mx3.1/61, mbtmp3.5/8, Error ellipse: s-maj=32.4km s-min=12.5km az=88.0*
ISC 13 23:52:21.3±0.8,**28.°37N**±0.°05×**128.°89E**±0.°06,**h82**km±8km,
n22,σ1°**s25**/32,**mb3.4**/6,**Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTK	**Tokunoshima**	**0.59**	**175**	P	**Pn**	**23 52 35.8**	**-0.2**
JTK				S	**Sn**	**23 52 46.5**	**-0.4**
JAM	**Amami Oshima**	**0.63**	**86**	P	**Pn**	**23 52 35.8**	**-0.6**
JAM				*e*S	**Sn**	**23 52 47.2**	**-0.4**
JTAJ	**Takarajima**	**0.82**	**20**	P	**Pn**	**23 52 37.7**	**-0.7**
JTAJ				*e*S	**Sn**	**23 52 50.3**	**-0.9**
JZK	**Kikaishima**	**0.96**	**93**	P	**Pn**	**23 52 41.3**	**+1.4**
JZK				*e*S	**Sn**	**23 52 57.4**	**+3.5**
JOKE	**Okinoerabujima**	**1.05**	**196**	P	**Pn**	**23 52 41.2**	**+0.2**
JOKE				*e*S	**Sn**	**23 52 56.4**	**+0.6**
JIH	**Iheya**	**1.56**	**212**	P	**Pn**	**23 52 48.0**	**+0.5**
JIH				*e*S	**Sn**	**23 53 08.3**	**+1.0**
JOW	**Kunigami**	**1.63**	**200**	P	**Pn**	**23 52 48.5**	**+0.1**
	41nm,0.3s,baz=264,slow=20,SNR=95						
JOW				S	**Sn**	**23 53 09.3**	**+0.5**
	68nm,0.3s,baz=203,slow=29,SNR=12						
JOW	**Kunigami**	**1.63**	**200**	P	**Pn**	**23 52 48.4**	**+0.1**
JOW				*e*S	**Sn**	**23 53 09.5**	**+0.6**
JNN	**Nakan

0.3nm,0.4s,baz=102,slow=8.7,SNR=4.8
WRA Warramunga Arr 48.32 173 P P 00 00 53.7 -1.0
0.3nm,0.5s,baz=353,slow=8.4,SNR=4.2
BVAR Borovoye Array 49.09 317 P P 00 00 59.7 -0.5
0.3nm,0.4s,baz=91,slow=9.3,SNR=3.6
ASAR Alice Springs 51.96 174 P P 00 01 22.6 +0.4
0.2nm,0.5s,baz=4.0,slow=14,SNR=4.4

MEX 13 23:56:06.7±0.3, 14°.15N×93°.16W, h20km, MD3.9, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.15**	**49**	*i* P	Pn	23 56 24.6	-3.0
THIG				*i* S	Sb	23 56 38.6	-3.7
CCIG	**Comitan**	**2.34**	**25**	*e*P	Pn	23 56 41.6	-2.6
CCIG				*e*S	Sn	23 57 09.0	-3.5
TGIG		**2.62**	**1**	*e*P	Pn	23 56 45.5	-2.5
TGIG				*e*S	Sn	23 57 16.0	-3.2

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*NIC **13** 23:56:41.5±0.2, 34°.40N×32°.06E, h25km, ML3.4*
*CSEM **13** 23:56:42.2±0.6, 34°.45N×32°.18E, h20km, ML3.4, Error ellipse: s-maj=11.5km s-min=8.7km az=26.0*
*ISK **13** 23:56:42.6, 34°.52N×32°.24E, h20km, ML2.8/4*
ISC 13 23:56:45.1±3.0, 34°.6N±0°.1×32°.4E±0°.1, h15km±11km, n37, σ0°.57/47, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPCY	**Paphos**	**0.27**	**358**	P	**Pb**	**23 56 51.6**	**-0.1**
	baz=206						
PPCY	**Paphos**	**0.27**	**358**	P	**Pb**	**23 56 51.6**	**-0.1**
AKMC	**Akamas**	**0.42**	**357**	P	**Pg**	**23 56 53.7**	**+0.2**
	baz=199						
AKMC	**Akamas**	**0.42**	**357**	P	**Pg**	**23 56 53.7**	**+0.2**
SZAC	**Souni**	**0.46**	**71**	P	**Pb**	**23 56 55.2**	**+0.3**
	baz=242						
SZAC				S	**Sn**	**23 57 05.2**	**+0.2**
SZAC	**Souni**	**0.46**	**71**	P	**Pb**	**23 56 55.2**	**+0.3**
SZAC				S	**Sn**	**23 57 05.2**	**+0.2**
ALFC	**Alefka**	**0.58**	**20**	P	**Pg**	**23 56 56.7**	**+0.1**
	baz=210						
ALFC				S	**Sn**	**23 57 08.5**	**+0.4**
ALFC	**Alefka**	**0.58**	**20**	P	**Pg**	**23 56 56.7**	**+0.1**
ALFC				S	**Sn**	**23 57 08.5**	**+0.4**
LEF	**Lefka**	**0.67**	**41**	PG	**Pb**	**23 56 58.4**	**-0.1**
LEF				SG	**Sn**	**23 57 09.2**	**-1.0**
LEF	**Lefka**	**0.67**	**41**	PG	**Pb**	**23 56 58.4**	**-0.1**
LEF	**Lefka**	**0.67**	**41**	*e*Pg	**Pb**	**23 56 58.4**	**-0.1**
LEF				*e*Sg	**Sn**	**23 57 09.2**	**-1.0**
CSS	**Mathiatis**	**0.88**	**66**	PG	**Pb**	**23 57 01.6**	**-0.4**
CSS				SG	**Sn**	**23 57 16.5**	**+1.2**
CSS	**Mathiatis**	**0.88**	**66**	PG	**Pb**	**23 57 01.6**	**-0.4**
CSS	**Mathiatis**	**0.88**	**66**	S	**Sn**	**23 57 16.3**	**+1.0**
	baz=242						
CSS	**Mathiatis**	**0.88**	**66**	*e*Pg	**Pb**	**23 57 01.6**	**-0.4**
CSS				*e*Sg	**Sn**	**23 57 16.5**	**+1.2**
MAMC	**Mammari**	**0.90**	**51**	P	**Pg**	**23 57 02.8**	**+0.2**
	baz=231						
MAMC	**Mammari**	**0.90**	**51**	P	**Pg**	**23 57 02.8**	**+0.2**
TEKE	**Tekeli-Mersin**	**1.65**	**22**	PN	**Pn**	**23 57 12.9**	**-0.6**
TEKE				SN	**Sn**	**23 57 34.8**	**+0.4**
TEKE	**Tekeli-Mersin**	**1.65**	**22**	PG	**Pn**	**23 57 12.9**	**-0.6**
TEKE	**Tekeli-Mersin**	**1.65**	**22**	*e*Pn	**Pn**	**23 57 12.9**	**-0.6**
TEKE				*e*Sn	**Sn**	**23 57 34.8**	**+0.4**
EREN	**Erenkoy**	**1.75**	**58**	PN	**Pn**	**23 57 13.9**	**-0.9**
EREN	**Erenkoy**	**1.75**	**58**	PG	**Pn**	**23 57 13.9**	**-0.9**
EREN	**Erenkoy**	**1.75**	**58**	*e*Pn	**Pn**	**23 57 13.9**	**-0.9**
AKKU	**Akkuyu-Mersin**	**1.83**	**32**	PN	**Pn**	**23 57 15.2**	**-0.7**
AKKU	**Akkuyu-Mersin**	**1.83**	**32**	PG	**Pn**	**23 57 15.2**	**-0.7**
AKKU	**Akkuyu-Mersin**	**1.83**	**32**	*e*Pn	**Pn**	**23 57 15.2**	**-0.7**
BERE	**Bereket-Mersin**	**1.87**	**22**	PN	**Pn**	**23 57 17.1**	**+0.4**
BERE	**Bereket-Mersin**	**1.87**	**22**	PN	**Pn**	**23 57 17.1**	**+0.4**
BERE	**Bereket-Mersin**	**1.87**	**22**	*e*Pn	**Pn**	**23 57 17.1**	**+0.4**
IKL	**Isikli**	**1.95**	**33**	PN	**Pn**	**23 57 17.4**	**-0.3**
IKL	**Isikli**	**1.95**	**33**	PN	**Pn**	**23 57 17.4**	**-0.3**
IKL	**Isikli**	**1.95**	**33**	*e*Pn	**Pn**	**23 57 17.4**	**-0.3**
KEBE	**Keben-Mersin**	**2.14**	**31**	PN	**Pn**	**23 57 20.6**	**+0.3**
KEBE	**Keben-Mersin**	**2.14**	**31**	PN	**Pn**	**23 57 20.6**	**+0.3**
KEBE	**Keben-Mersin**	**2.14**	**31**	*e*Pn	**Pn**	**23 57 20.6**	**+0.3**
KIZK	**Mersin**	**2.37**	**37**	PN	**Pn**	**23 57 23.4**	**0.0**
KIZK	**Mersin**	**2.37**	**37**	PN	**Pn**	**23 57 23.4**	**0.0**

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*CSEM **14** 00:15:53.7±1.1, 49°.86N×18°.57E, h1km, Error ellipse: s-maj=17.1km s-min=9.9km az=56.0*
PRU 14 00:15:55.0, 49°.88N×18°.55E, h0km, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.26**	**261**	*e*PG	Pg	00 16 00.2	+0.2
OKC				*e*SG	Sg	00 16 03.5	0.0
	comp=Z,3.8nm,0.3s						
OKC	**Ostrava-Krasne**	**0.26**	**261**	Pg	Pg	00 16 00.2	+0.2
OKC				Sg	Sg	00 16 03.5	0.0
	3.8nm,0.3s						
MORC	**Moravsky Berou**	**0.66**	**261**	*e*Pg	Pg	00 16 07.2	-0.4
MORC				*e*Sg	Sg	00 16 14.7	-1.5
MORC	**Moravsky Berou**	**0.66**	**261**	*e*PG	Pg	00 16 07.2	-0.4
MORC				*e*SG	Sg	00 16 14.7	-1.5
KRLC	**Kraliky**	**1.16**	**280**	*e*PG	Pg	00 16 16.1	-1.1
KRLC				*e*SG	Sg	00 16 31.9	-0.3
KRLC	**Kraliky**	**1.16**	**280**	Pg	Pg	00 16 16.1	-1.1
KRLC				Sg	Sg	00 16 31.9	-0.3
JAVC	**Velka Javorina**	**1.17**	**210**	*e*Pg	Pg	00 16 17.7	+0.3
JAVC	**Velka Javorina**	**1.17**	**210**	*e*PG	Pg	00 16 17.7	+0.3
VRAC	**Vranov**	**1.40**	**247**	*e*Pg	Pg	00 16 20.4	-1.3
VRAC				*e*Sg	Sg	00 16 37.7	-2.1
VRAC	**Vranov**	**1.40**	**247**	*e*PG	Pg	00 16 20.4	-1.3
VRAC				*e*SG	Sg	00 16 37.7	-2.1
DPC	**Dobruska-Polom**	**1.51**	**289**	*e*PG	Pn	00 16 22.6	-0.7
DPC				*e*SG	Sg	00 16 42.9	-0.6
	comp=Z,0.9nm,0.3s						
DPC	**Dobruska-Polom**	**1.51**	**289**	Pg	Pn	00 16 22.6	-0.7
DPC				Sg	Sg	00 16 42.9	-0.6
	0.9nm,0.3s						
KRUC	**Moravsky**	**1.63**	**241**	*e*Pg	Pn	00 16 23.7	-1.2
KRUC				*e*Sg	Sn	00 16 44.6	-1.9
KRUC	**Moravsky**	**1.63**	**241**	*e*PG	Pn	00 16 23.7	-1.2
KRUC				*e*SG	Sn	00 16 44.6	-1.9

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*ROM **14** 00:16:30.8±0.1, 44°.864N±0°.001×11°.106E±0°.003, h4km, ML2.4/24*
*IASPEI **14** 00:16:31.3±0.8, 44°.86N±0°.02×11°.15E±0°.02, h12km±4km, Error ellipse: s-maj=2.9km s-min=2.7km az=103.9, GT5 selection from ISC bulletin GT5 identified by Bond˙jr and McLaughlin (2009) selection criteria Bond˙jr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
*ISCJB **14** 00:16:31.3±0.3, 44°.91N±0°.02×11°.19E±0°.03, h12km±2km, Error ellipse: s-maj=3.4km s-min=2.6km az=18.0*
*CSEM **14** 00:16:31.8±0.2, 44°.90N×11°.14E, h2km, ML2.8/8, Error ellipse: s-maj=5.1km s-min=3.1km az=104.0*
ISC 14 00:16:31.6±0.8, 44°.87N±0°.02×11°.14E±0°.02, h15km±4km, n111, σ1°.08/150, 7C-7D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0802	**SanFelice sul**	**0.03**	**77**	⇑*i*P	**Pg**	**00 16 32.9**	**-1.3**
T0802	**SanFelice sul**	**0.03**	**77**	*i* P	**Pg**	**00 16 32.9**	**-1.3**
T0800	**Massa Finalese**	**0.08**	**105**	⇑*i*P	**Pg**	**00 16 33.4**	**-1.2**
T0800				*e*S	**Sg**	**00 16 36.7**	**+0.1**
T0800	**Massa Finalese**	**0.08**	**105**	*i* P	**Pg**	**00 16 33.4**	**-1.2**
T0800				*e*S	**Sg**	**00 16 36.6**	**+0.1**
RAVA	**Ravarino**	**0.11**	**188**	⇓*i*P	**Pg**	**00 16 33.5**	**-1.5**
RAVA				*e*S	**Sg**	**00 16 36.6**	**-0.6**
RAVA	**Ravarino**	**0.11**	**188**	*i* P	**Pg**	**00 16 33.5**	**-1.5**
RAVA				*e*S	**Sg**	**00 16 36.6**	**-0.6**
T0805	**Bondeno (FE)**	**0.14**	**69**	*e*P	**Pg**	**00 16 34.6**	**-0.7**
T0805	**Bondeno (FE)**	**0.14**	**69**	*e*P	**Pg**	**00 16 34.6**	**-0.7**
T0805				*e*S	**Sg**	**00 16 39.2**	**+1.5**
T0805				AML	AML		
	comp=E,8640μm,0.8s						
T0805				AML	AML		
	comp=N,8670μm,0.1s						
T0805				AML	AML		
	comp=E,8635μm,0.8s						
T0805				AML	AML		
	comp=N,8680μm,0.2s						
T0805				AML	AML		
	comp=E,8635μm,0.8s						
T0805				AML	AML		
	comp=N,8680μm,0.2s						
NDIM	**Novi di Modena**	**0.17**	**276**	*i* P	**Pg**	**00 16 34.5**	**-1.3**
NDIM				*e*S	**Sg**	**00 16 38.4**	**-0.2**
SERM	**Sermide**	**0.18**	**38**	⇓*i*P	**Pg**	**00 16 35.7**	**-0.2**
SERM	**Sermide**	**0.18**	**38**	*i* P	**Pg**	**00 16 35.7**	**-0.2**
SERM				*e*S	**Sg**	**00 16 40.9**	**+2.1**
SERM				AML	AML		
	comp=E,1985μm,0.3s						
SERM				AML	AML		
	comp=N,1595μm,0.3s						
T0803	**Dosso, Cento (**	**0.18**	**124**	*e*P	**Pg**	**00 16 34.9**	**-1.0**
T0803				*e*S	**Sg**	**00 16 39.6**	**+0.8**
T0803	**Dosso, Cento (**	**0.18**	**124**	*e*P	**Pg**	**00 16 34.9**	**-1.0**
T0803				*e*S	**Sg**	**00 16 39.6**	**+0.8**
T0825	**Gonzaga (MN)**	**0.23**	**297**	*e*P	**Pg**	**00 16 36.7**	**-0.1**
T0825	**Gonzaga (MN)**	**0.23**	**297**	*e*P	**Pg**	**00 16 36.7**	**-0.1**
T0825				*e*S	**Sg**	**00 16 43.2**	**+2.9**
T0825				AML	AML		
	comp=E,19700μm,0.2s						
T0825				AML	AML		
	comp=N,11205μm,0.4s						
T0825				AML	AML		
	comp=E,19700μm,0.2s						
T0825				AML	AML		
	comp=N,11205μm,0.4s						
T0825				AML	AML		
	comp=N,11205μm,0.4s						
T0825				AML	AML		
	comp=E,19650μm,0.2s						
T0826	**Rio Saliceto (**	**0.24**	**263**	*e*P	**Pg**	**00 16 35.7**	**-1.1**
T0826	**Rio Saliceto (**	**0.24**	**263**	*e*P	**Pg**	**00 16 35.7**	**-1.1**
SBPO	**S.Benedetto Po**	**0.24**	**319**	*e*P	**Pg**	**00 16 36.9**	**0.0**
SBPO	**S.Benedetto Po**	**0.24**	**319**	*e*P	**Pg**	**00 16 36.9**	**0.0**
SBPO				AML	AML		
	comp=E,1685μm,0.5s						
SBPO				AML	AML		
	comp=N,3080μm,1.1s						
SBPO				AML	AML		
	comp=E,1685μm,0.5s						
SBPO				AML	AML		
	comp=N,3080μm,1.1s						
SBPO				AML	AML		
	comp=E,1685μm,0.5s						
SBPO				AML	AML		
	comp=N,3080μm,1.1s						
SBPO				AML	AML		
	comp=N,3080μm,1.1s						
SBPO				AML	AML		
	comp=E,1685μm,0.5s						
GAZZ	**Gazzo Veronese**	**0.25**	**352**	⇓*e*Pg	**Pg**	**00 16 37.0**	**0.0**
GAZZ	**Gazzo Veronese**	**0.25**	**352**	*e*Pg	**Pg**	**00 16 37.0**	**0.0**
MODE	**Modena**	**0.28**	**210**	⇑*i*P	**Pg**	**00 16 36.7**	**-0.8**
MODE	**Modena**	**0.28**	**210**	*i* P	**Pg**	**00 16 36.7**	**-0.8**
T0821	**Loc. Casaglia**	**0.28**	**83**	*e*P	**Pg**	**00 16 36.6**	**-1.1**
T0821	**Loc. Casaglia**	**0.28**	**83**	*e*P	**Pg**	**00 16 36.6**	**-1.1**
T0821				AML	AML		
	comp=E,846μm,0.2s						
T0821				AML	AML		
	comp=N,880μm,0.6s						
T0821				AML	AML		
	comp=E,846μm,0.2s						
T0821				AML	AML		
	comp=N,880μm,0.6s						
T0821				AML	AML		
	comp=E,846μm,0.2s						
T0821				AML	AML		
	comp=N,880μm,0.6s						
T0821				AML	AML		
	comp=N,880μm,0.6s						
T0821				AML	AML		
	comp=E,846μm,0.2s						
NOVE	**Novellara**	**0.31**	**257**	⇑*e*P	**Pg**	**00 16 36.0**	**-2.1**
NOVE	**Novellara**	**0.31**	**257**	*e*P	**Pg**	**00 16 37.0**	**-1.1**
NOVE				AML	AML		
	comp=E,874μm,0.5s						
NOVE				AML	AML		
	comp=N,1022μm,0.3s						
NOVE				AML	AML		
	comp=E,874μm,0.5s						
NOVE				AML	AML		
	comp=N,1018μm,0.3s						
NOVE				AML	AML		
	comp=N,1018μm,0.3s						
NOVE				AML	AML		
	comp=E,874μm,0.5s						
FIU	**Minerbio Fiu**	**0.34**	**132**	AML	AML		
	comp=N,922μm,0.5s						
FIU				AML	AML		
	comp=E,988μm,0.4s						
FIU				AML	AML		
	comp=N,922μm,0.5s						
FIU				AML	AML		
	comp=E,989μm,0.4s						
FIU				AML	AML		
	comp=N,922μm,0.5s						
FIU				AML	AML		
	comp=E,989μm,0.4s						
ZCCA	**Zocca**	**0.53**	**193**	*e*P	**Pb**	**00 16 43.1**	**+0.4**
ZCCA	**Zocca**	**0.53**	**193**	*e*P	**Pb**	**00 16 43.1**	**+0.4**
ZCCA				AML	AML		
	comp=E,596μm,0.4s						
ZCCA				AML	AML		
	comp=N,350μm,0.4s						
ZCCA				AML	AML		
	comp=E,596μm,0.4s						
ZCCA				AML	AML		
	comp=N,350μm,0.4s						
ZCCA				AML	AML		
	comp=E,596μm,0.4s						
ZCCA				AML	AML		
	comp=N,350μm,0.4s						
MTRZ	**Monterenzio**	**0.54**	**155**	⇑*i*P	**Pb**	**00 16 44.8**	**+1.9**
MTRZ	**Monterenzio**	**0.54**	**155**	*i* P	**Pb**	**00 16 44.8**	**+1.9**
CMPO	**Campotto Po**	**0.55**	**121**	*e*P	**Pb**	**00 16 44.1**	**+1.1**
CMPO	**Campotto Po**	**0.55**	**121**	*e*P	**Pb**	**00 16 44.1**	**+1.1**
CMPO				AML	AML		
	comp=E,605μm,1.5s						
CMPO				AML	AML		
	comp=N,707μm,1.6s						
CMPO				AML	AML		
	comp=E,605μm,1.5s						
CMPO				AML	AML		
	comp=N,707μm,1.6s						
CMPO				AML	AML		
	comp=N,707μm,1.6s						
CMPO				AML	AML		
	comp=E,605μm,1.5s						
TEOL	**Teolo**	**0.62**	**37**	⇓*e*Pg	**Pg**	**00 16 43.6**	**-0.2**
TEOL				*e*Sg	**Sb**	**00 16 53.3**	**+0.6**
TEOL	**Teolo**	**0.62**	**37**	⇓*i*P	**Pg**	**00 16 43.6**	**-0.2**
TEOL				*e*S	**Sb**	**00 16 53.3**	**+0.6**
TEOL	**Teolo**	**0.62**	**37**	*i* P	**Pg**	**00 16 43.6**	**-0.2**
TEOL				*e*S	**Sb**	**00 16 53.3**	**+0.6**
TEOL				AML	AML		
	comp=E,1005μm,0.8s						
TEOL				AML	AML		
	comp=N,852μm,1.6s						
TEOL				AML	AML		
	comp=E,1004μm,0.8s						
TEOL				AML	AML		
	comp=N,852μm,1.6s						
TEOL				AML	AML		
	comp=E,1004μm,0.8s						
TEOL				AML	AML		
	comp=N,852μm,1.6s						
TEOL				AML	AML		
	comp=N,852μm,1.6s						
TEOL				AML	AML		
	comp=E,1004μm,0.8s						
ADRI	**Adria, Italy**	**0.64**	**74**	⇓*e*Pg	**Pb**	**00 16 44.6**	**0.0**
ADRI				*e*Sg	**Sb**	**00 16 55.5**	**+2.1**
ADRI	**Adria, Italy**	**0.64**	**74**	*e*Pg	**Pb**	**00 16 44.6**	**0.0**
ADRI				*e*Sg	**Sb**	**00 16 55.5**	**+2.1**
ERBM	**Eremo**	**0.69**	**229**	*e*P	**Pb**	**00 16 45.6**	**+0.2**
ERBM	**Eremo**	**0.69**	**229**	*e*P	**Pb**	**00 16 45.6**	**+0.2**
ERBM				AML	AML		
	comp=E,178μm,1.0s						
ERBM				AML	AML		
	comp=N,176μm,0.7s						
MARN	**Marana (Italy)**	**0.77**	**4**	⇑*e*Pg	**Pg**	**00 16 46.3**	**-0.3**
MARN				*e*Sg	**Sb**	**00 16 57.7**	**+0.6**
MARN	**Marana (Italy)**	**0.77**	**4**	*e*Pg	**Pg**	**00 16 46.3**	**-0.3**
MARN				*e*Sg	**Sb**	**00 16 57.7**	**+0.6**
ROVR	**Rover˜¤ Verone**	**0.78**	**356**	AML	AML		
	comp=N,537μm,0.8s						
ROVR				AML	AML		
	comp=E,362μm,0.9s						
ROVR				AML	AML		
	comp=N,538μm,0.8s						
ROVR				AML	AML		
	comp=E,362μm,0.9s						
ROVR				AML	AML		
	comp=N,537μm,0.8s						
ROVR				AML	AML		
	comp=E,362μm,0.9s						
BALD	**Monte Baldo**	**0.85**	**344**	⇓*e*Pg	**Pb**	**00 16 47.9**	**-0.3**
BALD				*e*Sg	**Sb**	**00 17 00.1**	**+0.6**
BALD	**Monte Baldo**	**0.85**	**344**	*e*Pg	**Pb**	**00 16 47.9**	**-0.3**
BALD				*e*Sg	**Sb**	**00 17 00.1**	**+0.6**
SALO	**Salr**	**0.87**	**330**	*e*P	**Pb**	**00 16 48.4**	**-0.1**
SALO	**Salr**	**0.87**	**330**	*e*P	**Pb**	**00 16 48.4**	**-0.1**
SALO				*e*S	**Sn**	**00 17 03.6**	**+1.8**
SALO				AML	AML		
	comp=E,467μm,1.0s						
SALO				AML	AML		
	comp=N,532μm,0.9s						
SALO				AML	AML		
	comp=E,467μm,1.0s						
SALO				AML	AML		
	comp=N,532μm,0.9s						
SALO				AML	AML		
	comp=N,532μm,0.9s						
SALO				AML	AML		
	comp=E,467μm,1.0s						
POPM	**Popiglio**	**0.87**	**199**	*e*P	**Pb**	**00 16 49.3**	**+0.9**
POPM	**Popiglio**	**0.87**	**199**	*e*P	**Pb**	**00 16 49.3**	**+0.9**
POPM				AML	AML		
	comp=E,240μm,0.8s						
POPM				AML	AML		
	comp=N,372μm,0.4s						
POPM				AML	AML		
	comp=E,240μm,0.8s						
POPM				AML	AML		
	comp=N,372μm,0.4s						
POPM				AML	AML		
	comp=E,240μm,0.8s						
POPM				AML	AML		
	comp=N,372μm,0.4s						
VLC	**Villacollemand**	**0.89**	**218**	*e*P	**Pb**	**00 16 49.8**	**+0.9**
VLC	**Villacollemand**	**0.89**	**218**	*e*P	**Pb**	**00 16 49.8**	**+0.9**
BDI	**Bagni Di Lucca**	**0.90**	**206**	*e*P	**Pb**	**00 16 49.6**	**+0.7**
BDI	**Bagni Di Lucca**	**0.90**	**206**	*e*P	**Pb**	**00 16 49.6**	**+0.7**
BDI				AML	AML		
	comp=E,273μm,0.5s						
BDI				AML	AML		
	comp=N,239μm,0.5s						
BDI				AML	AML		
	comp=E,288μm,0.5s						
BDI				AML	AML		
	comp=N,197μm,0.5s						
BDI				AML	AML		
	comp=E,273μm,0.5s						
BDI				AML	AML		
	comp=N,239μm,0.5s						
BDI				AML	AML		
	comp=E,288μm,0.5s						
BDI				AML	AML		
	comp=N,197μm,0.5s						
BDI				AML	AML		
	comp=E,288μm,0.5s						
BDI				AML	AML		
	comp=E,273μm,0.5s						
BDI				AML	AML		
	comp=N,197μm,0.5s						
BDI				AML	AML		
	comp=N,239μm,0.5s						
MAGA	**Magasa**	**0.98**	**338**	*e*P	**Pg**	**00 16 49.6**	**-0.9**
MAGA	**Magasa**	**0.98**	**338**	*e*P	**Pg**	**00 16 49.6**	**-0.9**
MAGA				*e*S	**Sn**	**00 17 05.6**	**+1.0**
MAGA				AML	AML		
	comp=E,1295μm,0.4s						
MAGA				AML	AML		
	comp=N,1160μm,0.5s						
MAGA				AML	AML		
	comp=E,1295μm,0.4s						
MAGA				AML	AML		
	comp=N,1160μm,0.5s						
DOSS	**Dosso del Somm**	**1.01**	**2**	*e*Pg	**Pg**	**00 16 50.4**	**-0.8**
DOSS				*e*Sg	**Sb**	**00 17 05.3**	**+1.1**
DOSS	**Dosso del Somm**	**1.01**	**2**	*e*Pg	**Pg**	**00 16 50.4**	**-0.8**
DOSS				*e*Sg	**Sb**	**00 17 05.3**	**+1.1**
MAIM	**Mastiano**	**1.06**	**206**	AML	AML		
	comp=N,186μm,1.5s						
MAIM				AML	AML		
	comp=E,211μm,0.3s						
MAIM				AML	AML		
	comp=N,186μm,1.5s						
MAIM				AML	AML		
	comp=E,211μm,0.3s						
MAIM				AML	AML		
	comp=E,211μm,0.3s						
MAIM				AML	AML		
	comp=N,186μm,1.5s						
CRMI	**Carmignano**	**1.09**	**187**	AML	AML		
	comp=E,66μm,1.2s						
CRMI				AML	AML		
	comp=E,66μm,1.2s						
CRMI				AML	AML		
	comp=N,49μm,0.5s						
CRMI				AML	AML		
	comp=E,66μm,1.2s						
CRMI				AML	AML		
	comp=N,49μm,0.5s						
CRMI				AML	AML		
	comp=N,49μm,0.5s						
SFI	**Santa Sofia**	**1.09**	**152**	AML	AML		
	comp=E,73μm,0.4s						
SFI				AML	AML		
	comp=N,132μm,0.5s						
SFI				AML	AML		
	comp=E,72μm,0.4s						
SFI				AML	AML		
	comp=N,132μm,0.5s						
SFI				AML	AML		
	comp=E,72μm,0.4s						
SFI				AML	AML		
	comp=N,132μm,0.5s						
CGRP	**Cima Grappa**	**1.11**	**24**	⇑*e*Pg	**Pg**	**00 16 52.5**	**-0.7**
CGRP				*e*Sg	**Sb**	**00 17 08.5**	**+1.4**
CGRP	**Cima Grappa**	**1.11**	**24**	*e*Pg	**Pg**	**00 16 52.5**	**-0.7**
CGRP				*e*Sg	**Sb**	**00 17 08.5**	**+1.4**
CGRP				*e*S	**Sn**	**00 17 09.4**	**+1.3**
CGRP	**Cima Grappa**	**1.11**	**24**	*e*P	**Pg**	**00 16 52.4**	**-0.8**
CGRP				*e*S	**Sn**	**00 17 09.4**	**+1.3**
CGRP				AML	AML		
	comp=E,234μm,0.8s						
CGRP				AML	AML		
	comp=N,144μm,0.5s						
CGRP				AML	AML		
	comp=E,234μm,0.8s						
CGRP				AML	AML		
	comp=N,144μm,0.5s						
CGRP				AML	AML		
	comp=E,234μm,0.8s						
CGRP				AML	AML		
	comp=N,144μm,0.5s						
ASQU	**Asqua**	**1.17**	**156**	AML	AML		
	comp=N,56μm,0.3s						
ASQU				AML	AML		
	comp=E,51μm,0.3s						
ASQU				AML	AML		
	comp=N,56μm,0.3s						
ASQU				AML	AML		
	comp=E,51μm,0.3s						
ASQU				AML	AML		
	comp=N,56μm,0.3s						
ASQU				AML	AML		
	comp=E,51μm,0.3s						
RNI	**Roncone**	**1.17**	**342**	*e*Pg	**Pg**	**00 16 52.3**	**-1.9**
RNI	**Roncone**	**1.17**	**342**	*e*Pg	**Pg**	**00 16 52.3**	**-1.9**
PANI	**Panarotta**	**1.19**	**6**	*e*Pg	**Pg**	**00 16 54.0**	**-0.6**
PANI				*e*Sg	**Sb**	**00 17 10.6**	**+1.2**

PANI	Panarotta	1.19	6	*e*Pg	Pg	00 16 54.0	-0.6
PANI				*e*Sg	Sb	00 17 10.6	+1.2
MABI	Malga Bissina	1.27	340	AML	AML		
	comp=E,92μm,0.5s						
MABI				AML	AML		
	comp=E,92μm,0.5s						
MABI				AML	AML		
	comp=N,66μm,0.3s						
MABI				AML	AML		
	comp=E,92μm,0.5s						
MABI				AML	AML		
	comp=N,66μm,0.3s						
MABI				AML	AML		
	comp=N,66μm,0.3s						
VARN	Col Varnada, M	1.31	31	*e*Pg	Pg	00 16 55.7	-1.3
VARN	Col Varnada, M	1.31	31	*e*Pg	Pg	00 16 55.7	-1.3
CRE	Caprese Michel	1.38	155	AML	AML		
	comp=E,51μm,0.5s						
CRE				AML	AML		
	comp=E,51μm,0.5s						
CRE				AML	AML		
	comp=N,57μm,0.2s						
CRE				AML	AML		
	comp=E,51μm,0.5s						
CRE				AML	AML		
	comp=N,57μm,0.2s						
CRE				AML	AML		
	comp=N,57μm,0.2s						
PARC	Parchiule	1.45	147	AML	AML		
	comp=E,30μm,0.9s						
PARC				AML	AML		
	comp=E,30μm,0.9s						
PARC				AML	AML		
	comp=N,44μm,0.8s						
PARC				AML	AML		
	comp=N,44μm,0.8s						
PARC				AML	AML		
	comp=N,44μm,0.8s						
PARC				AML	AML		
	comp=E,30μm,0.9s						
OZOL	Ozolo	1.54	358	*e*Pg	Pn	00 16 58.7	0.0
OZOL	Ozolo	1.54	358	*e*Pg	Pn	00 16 58.7	0.0
CARE	Lago del Cares	1.59	349	*e*Pg	Pn	00 16 59.2	-0.4
CARE	Lago del Cares	1.59	349	*e*Pg	Pn	00 16 59.2	-0.4
KOSI	Kohlern	1.60	6	AML	AML		
	comp=E,128μm,0.9s						
KOSI				AML	AML		
	comp=E,128μm,0.9s						
KOSI				AML	AML		
	comp=N,88μm,0.5s						
KOSI				AML	AML		
	comp=E,128μm,0.9s						
KOSI				AML	AML		
	comp=N,88μm,0.5s						
KOSI				AML	AML		
	comp=N,88μm,0.5s						
BRMO	Bormio	1.70	342	AML	AML		
	comp=E,72μm,0.5s						
BRMO				AML	AML		
	comp=E,72μm,0.5s						
BRMO				AML	AML		
	comp=N,71μm,0.7s						
BRMO				AML	AML		
	comp=N,71μm,0.7s						
BRMO				AML	AML		
	comp=E,72μm,0.5s						
BRMO				AML	AML		
	comp=N,71μm,0.7s						
MOSI	Grossmontoni	1.80	347	AML	AML		
	comp=N,130μm,0.3s						
MOSI				AML	AML		
	comp=E,128μm,1.6s						
MOSI				AML	AML		
	comp=E,128μm,1.6s						
MOSI				AML	AML		
	comp=N,130μm,0.3s						
ABSI	Aberstueckl	1.86	4	AML	AML		
	comp=N,146μm,0.5s						
ABSI				AML	AML		
	comp=E,182μm,0.5s						
ABTA	Abfaltersbach	2.11	27	*i* Pg	Pg	00 17 12.5	+0.4
	comp=E,0.9nm,0.2s						
ABTA				*i* Sg	Sg	00 17 40.9	+1.4
	comp=E,11nm,0.6s						
ABTA	Abfaltersbach	2.11	27	Pg	Pg	00 17 12.5	+0.4
	comp=E,0.9nm,0.2s						
ABTA				Sg	Sg	00 17 40.9	+1.4
	comp=E,11nm,0.6s						
SKDS	Skadanscina	2.14	71	*i* Pn	Pn	00 17 06.0	-0.9
SKDS				*i* Sn	Sn	00 17 31.8	-1.4
	comp=Z,5.0nm,0.1s						
SKDS	Skadanscina	2.14	71	*i* Pn	Pn	00 17 06.0	-0.9
SKDS				*i* Sn	Sn	00 17 31.8	-1.4
	comp=Z,5.0nm,0.1s						
FETA	Feichten	2.17	353	*i* Pn	Pb	00 17 10.8	0.0
	comp=Z,0.4nm,0.1s						
FETA				*i* Sg	Sg	00 17 40.3	-1.2
	comp=Z,3.0nm,0.2s						
FETA	Feichten	2.17	353	Pn	Pb	00 17 10.8	0.0
	comp=Z,0.4nm,0.1s						
FETA				Sn	Sg	00 17 40.3	-1.2
	comp=Z,3.0nm,0.2s						
RISI	Rein	2.18	17	AML	AML		
	comp=E,120μm,0.5s						
RISI				AML	AML		
	comp=N,133μm,0.4s						
JAVS	Javornik	2.30	63	*i* Pn	Pn	00 17 08.4	-0.8
JAVS				*i* Sn	Sn	00 17 36.5	-0.7
	comp=Z,5.0nm,0.2s						
JAVS	Javornik	2.30	63	*i* Sn	Sn	00 17 36.5	-0.8
	comp=Z,5.0nm,0.2s						
JAVS	Javornik	2.30	63	*i* Pn	Pn	00 17 08.4	-0.8
SQTA	Sankt Quirin	2.35	1	*i* Sg	Sg	00 17 46.6	-0.7
	comp=Z,16nm,0.3s						
SQTA	Sankt Quirin	2.35	1	Sg	Sg	00 17 46.6	-0.7
	comp=Z,16nm,0.3s						
WTTA	Wattenberg	2.42	8	*i* Pn	Pb	00 17 15.6	+0.6
	comp=Z,1.3nm,0.3s						
WTTA				*i* Sg	Sg	00 17 48.0	-1.4
	comp=Z,34nm,0.8s						
WTTA	Wattenberg	2.42	8	Pn	Pb	00 17 15.6	+0.6
	comp=Z,1.3nm,0.3s						
WTTA				Sg	Sg	00 17 48.0	-1.4
	comp=Z,34nm,0.8s						
MOTA	Moosalm	2.48	359	*i* Pn	Pn	00 17 14.0	+2.4
	comp=Z,1.8nm,0.3s						
MOTA				*i* Sn	Sb	00 17 46.6	+0.3
	comp=Z,6.8nm,0.5s						
MOTA	Moosalm	2.48	359	Pn	Pn	00 17 14.0	+2.4
	comp=Z,1.8nm,0.3s						
MOTA				Sn	Sb	00 17 46.6	+0.3
	comp=Z,6.8nm,0.5s						
MYKA	Terra Mystica	2.48	44	*i* Pg	Pg	00 17 18.0	-1.3
	comp=Z,2.1nm,0.2s						
MYKA				*i* Sg	Sg	00 17 50.6	-0.8
	comp=Z,5.2nm,0.3s						
MYKA	Terra Mystica	2.48	44	Pg	Pg	00 17 18.0	-1.3
	comp=Z,2.1nm,0.2s						
MYKA				Sg	Sg	00 17 50.6	-0.8
	comp=Z,5.2nm,0.3s						
WATA	Walderalm	2.49	7	*i* Pg	Pb	00 17 15.5	-0.6
	comp=Z,1.4nm,0.2s						
WATA				*i* Sg	Sg	00 17 50.6	-0.9
	comp=Z,3.1nm,0.2s						
WATA	Walderalm	2.49	7	Pg	Pb	00 17 15.5	-0.6
	comp=Z,1.4nm,0.2s						
WATA				Sg	Sg	00 17 50.6	-0.9
	comp=Z,3.1nm,0.2s						
DAVA	Damuels	2.57	340	*i* Pn	Pb	00 17 17.0	-0.6
	comp=Z,0.7nm,0.1s						
DAVA				*i* Sn	Sb	00 17 48.5	-0.6
	comp=Z,5.0nm,0.4s						
DAVA	Damuels	2.57	340	Pn	Pb	00 17 17.0	-0.6
	comp=Z,0.7nm,0.1s						
DAVA				Sn	Sb	00 17 48.5	-0.6
	comp=Z,5.0nm,0.4s						
KBA	Koelnbreinsper	2.69	34	*i* Pg	Pb	00 17 21.3	+1.7
	comp=Z,0.7nm,0.2s						
KBA				*i* Sg	Sg	00 17 57.3	-0.8
	comp=Z,3.8nm,0.3s						
KBA	Koelnbreinsper	2.69	34	Pg	Pb	00 17 21.3	+1.7
	comp=Z,0.7nm,0.2s						
KBA				Sg	Sg	00 17 57.3	-0.8
	comp=Z,3.8nm,0.3s						
OBKA	Obir	2.90	54	*i* Pn	Pn	00 17 18.6	+1.2
	comp=Z,0.2nm,0.1s						
OBKA				*i* Sn	Sn	00 17 50.9	-1.1
	comp=Z,1.5nm,0.2s						
OBKA	Obir	2.90	54	Pn	Pn	00 17 18.6	+1.2
	comp=Z,0.2nm,0.1s						
OBKA	Obir	2.90	54	Sn	Sn	00 17 50.9	-1.1
	comp=Z,1.5nm,0.2s						
SOKA	Soboth	3.27	55	*e*Pn	Pb	00 17 27.4	-2.0
	comp=Z,0.4nm,0.2s						
SOKA				*i* Sn	Sn	00 17 59.6	-1.5
	comp=Z,2.2nm,0.3s						
SOKA				*i* Sg	Sg	00 18 16.4	-0.2
	comp=Z,2.0nm,0.4s						
SOKA	Soboth	3.27	55	Pn	Pb	00 17 27.4	-2.0
	comp=Z,0.4nm,0.2s						
SOKA				Sn	Sn	00 17 59.6	-1.5
	comp=Z,2.2nm,0.3s						
SOKA				Sg	Sg	00 18 16.4	-0.2
	comp=Z,2.0nm,0.4s						

IDC ***14*** *00:17:35.5±1.0, 36°.22N×134°.16E, h0km, mb3.9/6, mb1 4.0/7, mb1mx3.5/74, mbtmp3.9/7, ML4.0/1, Error ellipse: s-maj=38.1km s-min=21.1km az=69.0*
ISCJB ***14*** *00:17:56.4±0.5, 36°.68N±0°.05×137°.50E±0°.08, h238km±4km, mb3.5/6, Error ellipse: s-maj=10.8km s-min=8.6km az=175.6*
JMA ***14*** *00:17:57.0±0.1, 36°.67N×137°.54E, h237km±1km, M3.0*
ISC 14 00:17:57.4±0.8, 36°.67N±0°.06×137°.52E±0°.07, h233km±6km, n24, σ0§45/32, mb3.6/6, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTT	Ttatey	0.16	245	P	Pn	00 18 27.7	+0.1
MAT	Matsushiro	0.57	103	P	Pn	00 18 28.7	+0.1
MAT				*e*S	S	00 18 53.0	0.0
MAT	Matsushiro	0.57	103	P	Pn	00 18 28.7	+0.1
MAT				*e*S	S	00 18 52.9	0.0
MJAR	Matsushiro Arr	0.57	103	Pn	Pn	00 18 29.0	+0.3
	14nm,0.3s,baz=271,slow=5.4,SNR=101						
MJAR				Sn	S	00 18 53.3	+0.3
	1.0nm,0.3s,baz=277,slow=9.8,SNR=7.5						
JSZ	Suzu	0.78	351	P	Pn	00 18 29.3	-0.1
JHG	Hegura jima	1.27	338	P	Pn	00 18 32.5	+0.2
JHG				*e*S	S	00 18 59.9	+0.3
JRY	Ryogami san	1.30	120	P	Pn	00 18 32.6	0.0
JNY	Yasuok	1.34	168	P	Pn	00 18 32.9	-0.2
JNY				*e*S	S	00 19 00.2	-0.7
JYN	Shimob	1.44	144	P	Pn	00 18 33.7	-0.1
JSD	Sado	1.48	23	P	Pn	00 18 34.1	+0.2
JSD				S	S	00 19 01.8	-0.8
JAG	Ashikaga	1.58	98	P	Pn	00 18 34.2	-0.6
JHU	Hanno	1.65	119	P	Pn	00 18 35.6	+0.3
JHU				*e*S	S	00 19 05.1	+0.2
HMMJ	Hamamatsu 2	1.82	175	P	Pn	00 18 36.7	-0.2
JNS	Sasagawa	1.84	51	P	Pn	00 18 37.3	+0.4
JOD2	Odawara 2	1.90	137	P	Pn	00 18 37.9	+0.3
JOD2				*e*S	S	00 19 10.1	+1.1
JYT	Yasato	2.20	101	P	Pn	00 18 39.4	-1.0
JWT	Wachi	2.21	232	P	Pn	00 18 40.5	0.0
JWT				*e*S	S	00 19 13.3	-0.9
JKN2	Miekihoku	2.63	203	P	Pn	00 18 45.4	+0.5
ZALV	Zalesovo Beam	39.85	313	P	P	00 24 57.0	-11
	0.4nm,0.3s,baz=88,slow=9.7,SNR=2.9						
WRA	Warramunga Arr	56.39	184	P	P	00 27 14.8	+0.2
	1.2nm,0.5s,baz=360,slow=7.6,SNR=30						
ASAR	Alice Springs	60.11	184	P	P	00 27 40.5	+0.1
	0.2nm,0.4s,baz=15,slow=12,SNR=3.5						
ARCES	ARCESS Array B	63.21	339	P	P	00 28 00.3	-0.2
	1.7nm,0.8s,baz=51,slow=7.1,SNR=2.5						
FINES	FINESS Array B	67.65	331	P	P	00 28 28.7	-0.2
	0.4nm,0.3s,baz=57,slow=7.0,SNR=8.1						
HFS	Hagfors	73.09	334	P	P	00 29 02.0	+0.2
	0.5nm,0.4s,baz=18,slow=1.8,SNR=6.4						

ISK ***14*** *00:23:48.8, 36°.99N×27°.97E, h10km, ML3.5/35*
IDC ***14*** *00:23:48.0±1.1, 36°.96N×28°.04E, h0km, mb3.3/3, mb1 3.4/9, mb1mx3.2/71, mbtmp3.3/9, ML2.9/5, Error ellipse: s-maj=21.1km s-min=16.4km az=166.0*
ATH ***14*** *00:23:49.0, 37°.01N×28°.06E, h31km±1km, ML3.3/5, Error ellipse: s-maj=2.7km s-min=0.7km az=91.0*
ISCJB ***14*** *00:23:49.0±0.3, 36°.95N±0°.02×28°.02E±0°.02, h13km±2km, mb3.1/3, Error ellipse: s-maj=2.9km s-min=2.1km az=15.1*
THE ***14*** *00:23:49.4, 36°.99N×27°.99E, h0km±1km, ML3.4/3, Error ellipse: s-maj=1.6km s-min=1.0km az=20.0*
CSEM ***14*** *00:23:49.9±0.1, 37°.00N×27°.99E, h10km, ML3.4, Error ellipse: s-maj=2.5km s-min=1.8km az=13.0*
DDA ***14*** *00:23:49.3, 37°.01N×28°.06E, h5km, Ml3.4*
GII ***14*** *00:24:03.1±0.0, 36°.22N×29°.05E, h1km*
NIC ***14*** *00:24:13.8±0.3, 36°.08N×29°.53E, h25km, mb4.2, ML3.9*
ISC 14 00:23:49.2±0.9, 36°.96N±0°.02×28°.04E±0°.01, h10km±7km, n232, σ1§22/278, mb3.0/3, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	Yerkesik	0.26	48	PG	Pg	00 23 55.4	+0.9
YER				SG	Sb	00 23 59.7	-1.0
YER	Yerkesik	0.26	48	P	Pg	00 23 55.5	+0.9
YER				S	Sb	00 23 59.7	-1.0
YER	Yerkesik	0.26	48	*i* Pg	Pg	00 23 55.4	+0.9
YER				S	Sb	00 23 59.7	-1.0
MRSB	Marmaris-Mugla	0.27	153	PG	Pg	00 23 55.7	+1.0
MRSB	Marmaris-Mugla	0.27	153	*i* Pg	Pg	00 23 55.7	+1.0
DATC	Datca-Mugla	0.37	237	PG	Pg	00 23 56.1	-0.3
DATC	Datca-Mugla	0.37	237	*i* Pg	Pg	00 23 56.1	-0.3
MLSB	Milas	0.40	328	PG	Pg	00 23 56.4	-0.6
MLSB	Milas	0.40	328	*i* Pg	Pg	00 23 56.4	-0.6
DAT	Datca	0.44	238	PG	Pg	00 23 57.4	-0.4
DAT				SG	Sg	00 24 03.6	0.0
DAT	Datca	0.44	238	*i* P	Pg	00 23 58.6	+0.8
DAT				*i* S	Sb	00 24 06.1	+0.3
DAT	Datca	0.44	238	*i* Pg	Pg	00 23 57.4	-0.4
DAT				*i* Sg	Sg	00 24 03.6	0.0
DAT				S	Sb	00 24 06.1	+0.3
TURN	Turunc	0.46	101	PG	Pg	00 23 55.4	-2.7
TURN				SG	Sg	00 24 00.1	-4.1
TURN	Turunc	0.46	101	*i* P	Pg	00 23 55.4	-2.7
TURN				*i* S	Sg	00 23 59.6	-4.6
TURN	Turunc	0.46	101	P	Pg	00 23 55.4	-2.7
TURN				*i* Sg	Sg	00 24 00.1	-4.1
BDRM	Kayabasi	0.49	283	*i* P	Pb	00 23 59.6	-0.4
BDRM				*i* S	Sb	00 24 07.2	0.0
BDRM	Kayabasi	0.49	283	P	Pb	00 23 59.6	-0.4
BDRM				S	Sb	00 24 07.2	0.0
DALY	Dalyan (Mu¨la	0.51	106	PG	Pb	00 24 00.3	0.0
DALY	Dalyan (Mu¨la	0.51	106	*i* P	Pb	00 24 00.7	+0.4
DALY				*i* S	Sb	00 24 09.4	+1.7
DALY	Dalyan (Mu¨la	0.51	106	*i* Pg	Pb	00 24 00.3	0.0
DALY	Dalyan (Mu¨la	0.51	106	P	Pb	00 24 00.7	+0.4
DALY				S	Sb	00 24 09.4	+1.7
BODT	Bodrum	0.59	280	PG	Pg	00 23 59.8	-0.9
BODT	Bodrum	0.59	280	P	Pg	00 23 59.9	-0.8
BODT				S	Sg	00 24 09.4	+0.8
BODT	Bodrum	0.59	280	*i* Pg	Pg	00 23 59.8	-0.9
YKAV	Yalikavak-Bodr	0.63	285	PG	Pg	00 24 00.3	-1.1
YKAV	Yalikavak-Bodr	0.63	285	*i* Pg	Pg	00 24 00.3	-1.1
AYDN	Tasoluk	0.71	350	*i* P	Pg	00 24 03.2	+0.2
AYDN				*i* S	Sg	00 24 12.8	+0.5
AYDN	Tasoluk	0.71	350	P	Pg	00 24 03.2	+0.2
AYDN				S	Sg	00 24 12.8	+0.5
ARG	Arkhangelos	0.74	175	PG	Pg	00 24 04.2	+0.6
ARG	Arkhangelos	0.74	175	P	Pg	00 24 03.9	+0.3
ARG				S	Sn	00 24 16.9	-0.3
ARG				AML	AML	00 24 19.4	
	comp=N,5144μm,0.5s						
ARG				AML	AML	00 24 19.9	
	comp=E,6660μm,0.4s						
ARG	Arkhangelos	0.74	175	P	Pg	00 24 04.1	+0.5
ARG				S	Sn	00 24 17.4	+0.2
ARG	Arkhangelos	0.74	175	*i* Pg	Pg	00 24 04.2	+0.6
ARG				S	Sn	00 24 16.6	-0.6
NISR	Nisiros	0.81	245	P	Pb	00 24 05.6	+0.2
NISR				S	Sn	00 24 18.3	-0.5
NISR				AML	AML	00 24 19.6	
	comp=E,7923μm,0.2s						
NISR				AML	AML	00 24 19.6	
	comp=N,5920μm,0.3s						
NISR	Nisiros	0.81	245	P	Pg	00 24 05.0	+0.1
NISR				S	Sb	00 24 17.6	+1.2
NISR	Nisiros	0.81	245	P	Pg	00 24 05.0	+0.1
NISR				S	Sn	00 24 18.0	-0.8
TAVA	DENIZLI_Tavas	0.86	54	*i* P	Pb	00 24 06.4	+0.1
TAVA				*i* S	Sb	00 24 18.3	+0.4
TAVA	DENIZLI_Tavas	0.86	54	P	Pb	00 24 06.4	+0.1
TAVA				S	Sb	00 24 18.3	+0.4
FETY	Fethiye	0.90	111	PG	Pg	00 24 06.7	+0.2
FETY	Fethiye	0.90	111	P	Pg	00 24 05.7	-0.8
FETY	Fethiye	0.90	111	P	Pg	00 24 06.1	-0.4
FETY	Fethiye	0.90	111	*e*Pg	Pg	00 24 06.7	+0.2
GCAM	G?zelcaml?	0.98	319	PG	Pg	00 24 07.1	-1.0
GCAM	G?zelcaml?	0.98	319	*i* P	Pg	00 24 08.2	+0.1
GCAM				*i* S	Sb	00 24 21.8	+0.5
GCAM	G?zelcaml?	0.98	319	*e*Pg	Pg	00 24 07.1	-1.0
GCAM	G?zelcaml?	0.98	319	P	Pg	00 24 08.2	+0.1
GCAM				S	Sb	00 24 21.8	+0.5
AYDB	Zeytinkoy-Aydi	0.99	353	PG	Pg	00 24 08.1	-0.2
AYDB	Zeytinkoy-Aydi	0.99	353	*e*Pg	Pg	00 24 08.1	-0.2
DNZL	Cakiroluk	1.08	47	*i* P	Pn	00 24 10.7	0.0
DNZL				*i* S	Sb	00 24 23.9	-0.6
DENT	Denizli	1.12	45	PN	Pb	00 24 10.6	-0.1
DENT	Denizli	1.12	45	*e*Pn	Pb	00 24 10.6	-0.1
GLHS	Glhisar (BURDU	1.18	80	PN	Pg	00 24 12.9	+1.0
GLHS	Glhisar (BURDU	1.18	80	*e*Pn	Pg	00 24 12.9	+1.0
SMG	Samos	1.22	308	P	Pn	00 24 11.6	-0.8
SMG				S	Sb	00 24 27.0	-1.2
SMG				AML	AML	00 24 32.4	
	comp=E,3684μm,0.3s						
SMG				AML	AML	00 24 33.7	
	comp=N,3355μm,0.4s						
SMG	Samos	1.22	308	P	Pn	00 24 11.2	-1.1
SMG				S	Sb	00 24 27.6	-0.5
SMG	Samos	1.22	308	P	Pn	00 24 11.5	-0.8
SMG				S	Sb	00 24 27.3	-0.8
GOLH	Golhisar	1.25	77	*i* P	Pg	00 24 14.0	+0.8
GOLH				*i* S	Sg	00 24 31.9	+2.5
GOLH	Golhisar	1.25	77	P	Pg	00 24 14.0	+0.8
GOLH				S	Sg	00 24 31.9	+2.5
DGB	¨zmir	1.43	320	*i* P	Pn	00 24 14.3	-0.9
DGB				*i* S	Sg	00 24 37.6	+2.4
AKAS	Kas	1.45	120	PN	Pb	00 24 16.8	+0.4
AKAS	Kas	1.45	120	*e*Pn	Pb	00 24 16.8	+0.4
KSL	Kastellorizon	1.48	123	P	Pg	00 24 18.0	+0.4
KSL				S	Sg	00 24 38.7	+1.9
ELL	Elmali	1.51	97	PN	Pb	00 24 18.1	+0.6
ELL	Elmali	1.51	97	*e*Pn	Pb	00 24 18.1	+0.6
KARP	Karpathos	1.58	207	PN	Pn	00 24 17.6	+0.2
KARP	Karpathos	1.58	207	P	Pn	00 24 17.8	+0.5
KARP				S	Sn	00 24 37.7	-0.2
KARP				AML	AML	00 24 38.5	
	comp=N,1572μm,0.3s						
KARP				AML	AML	00 24 45.2	
	comp=E,1499μm,0.3s						
KARP	Karpathos	1.58	207	P	Pn	00 24 17.5	+0.2
KARP				S	Sn	00 24 37.9	+0.1
KARP	Karpathos	1.58	207	*e*Pn	Pn	00 24 17.6	+0.2
KARP				S	Sn	00 24 38.0	+0.1
MANT	Manisa	1.58	15	*i* P	Pn	00 24 17.2	-0.3
MANT				*i* S	Sb	00 24 38.9	0.0
MANT	Manisa	1.58	15	P	Pn	00 24 17.2	-0.3
MANT				S	Sb	00 24 38.9	0.0
KULA	Kula-Manisa	1.63	17	PN	Pn	00 24 18.5	+0.4
KULA	Kula-Manisa	1.63	17	*e*Pn	Pn	00 24 18.5	+0.4
ZEY	¨zmir	1.77	317	*i* P	Pn	00 24 19.0	-0.9
ZEY				*i* S	Sg	00 24 48.5	+2.4
URLA	Izmir	1.81	321	PN	Pn	00 24 19.8	-0.7
URLA	Izmir	1.81	321	*i* P	Pn	00 24 18.3	-2.2
URLA				*i* S	Sg	00 24 49.4	+2.0
URLA	Izmir	1.81	321	P	Pn	00 24 18.3	-2.2
URLA	Izmir	1.81	321	*e*Pn	Pn	00 24 19.8	-0.7
KORT	Korkueli	1.85	88	PN	Pb	00 24 22.4	-0.8
KORT	Korkueli	1.85	88	*e*Pn	Pb	00 24 22.4	-0.8
AKS	Akhisar	1.92	355	PN	Pn	00 24 20.7	-1.4
AKS	Akhisar	1.92	355	*e*Pn	Pn	00 24 20.7	-1.4
APE	Apeiranthos	2.01	274	PN	Pn	00 24 22.9	-0.4
APE	Apeiranthos	2.01	274	P	Pn	00 24 22.3	-1.0
APE				S	Sn	00 24 47.4	-1.1
APE				AML	AML	00 24 59.8	
	comp=N,288μm,0.3s						
APE				AML	AML	00 25 04.3	
	comp=E,205μm,0.4s						
APE	Apeiranthos	2.01	274	P	Pn	00 24 22.8	-0.5
APE	Apeiranthos	2.01	274	*e*Pn	Pn	00 24 22.9	-0.4
APE				S	Sn	00 24 47.8	-0.8
ANTB	Antalya	2.09	91	PN	Pb	00 24 26.2	-1.1
ANTB	Antalya	2.09	91	*e*Pn	Pb	00 24 26.2	-1.1
CHOS	Chios island	2.12	313	PN	Pn	00 24 25.0	+0.1
CHOS	Chios island	2.12	313	P	Pn	00 24 24.7	-0.2
CHOS	Chios island	2.12	313	P	Pn	00 24 24.3	-0.6
CHOS	Chios island	2.12	313	P	Pn	00 24 24.5	-0.4
CHOS	Chios island	2.12	313	*e*Pn	Pn	00 24 25.0	+0.1
ISP	Isparta	2.15	66	Pn	Pg	00 24 38.0	+7.5
SANT	Santorini	2.16	255	P	Pn	00 24 24.6	-0.7
SANT	Santorini	2.16	255	P	Pn	00 24 25.0	-0.3
ZKR	Zakros	2.36	219	P	Pn	00 24 29.1	+1.0
ZKR	Zakros	2.36	219	P	Pn	00 24 28.8	+0.7
ZKR	Zakros	2.36	219	P	Pn	00 24 28.8	+0.7
SUTC	Sutluce-Ispart	2.42	77	PN	Pn	00 24 30.0	+1.1
SUTC	Sutluce-Ispart	2.42	77	*e*Pn	Pn	00 24 30.0	+1.1
NPS	Neapolis	2.60	230	P	Pn	00 24 32.0	+0.7
NPS	Neapolis	2.60	230	P	Pn	00 24 31.0	-0.3
NPS	Neapolis	2.60	230	P	Pn	00 24 31.9	+0.6
PRK	Paraskevi	2.68	329	P	Pn	00 24 32.2	-0.1
PRK	Paraskevi	2.68	329	P	Pn	00 24 32.0	-0.3
PRK	Paraskevi	2.68	329	P	Pn	00 24 32.1	-0.3
BALB	Balikesir	2.68	357	PN	Pn	00 24 32.4	0.0
BALB	Balikesir	2.68	357	*e*Pn	Pn	00 24 32.4	0.0
TVSB	Tavsanli	2.73	24	PN	Pn	00 24 32.6	-0.6
TVSB	Tavsanli	2.73	24	*e*Pn	Pn	00 24 32.6	-0.6
LAST	Lasithi	2.75	230	P	Pn	00 24 34.8	+1.3
LAST	Lasithi	2.75	230	P	Pn	00 24 34.0	+0.6
LAST	Lasithi	2.75	230	P	Pn	00 24 34.0	+0.6
SIGR	SIGRI	2.83	323	PN	Pn	00 24 34.4	-0.1
SIGR	SIGRI	2.83	323	P	Pn	00 24 33.9	-0.6
SIGR	SIGRI	2.83	323	P	Pn	00 24 34.1	-0.4
SIGR	SIGRI	2.83	323	P	Pn	00 24 34.1	-0.4
SIGR	SIGRI	2.83	323	*e*Pn	Pn	00 24 34.4	-0.1
IDI	Anoyia	3.05	238	Pn	Pn	00 24 39.5	+2.0
	comp=E,1.5nm,0.3s,baz=351,slow=8.0,SNR=26						
IDI				Sn	Sn	00 25 16.0	+1.9
	comp=E,3.0nm,0.3

VLI	Veliai	4.10	268	P	Pn	00 24 52.5	+0.5
ALFC	Alefka	4.11	115	P	Pn	00 24 53.5	+1.4
	baz=291						
ALFC				S	Sn	00 25 25.2	-15
TEKE	Tekeli-Mersin	4.16	100	PN	Pn	00 24 55.5	+2.7
TEKE	Tekeli-Mersin	4.16	100	*e*Pn	Pn	00 24 55.5	+2.7
LTK	Loutraki	4.17	286	P	Pn	00 24 53.5	+0.5
LTK	Loutraki	4.17	286	P	Pn	00 24 53.5	+0.5
BERE	Bereket-Mersin	4.21	97	PN	Pn	00 24 55.9	+2.3
BERE	Bereket-Mersin	4.21	97	*e*Pn	Pn	00 24 55.9	+2.3
ALN	Alexandroupoli	4.23	339	P	Pn	00 24 53.0	-0.7
ALN	Alexandroupoli	4.23	339	P	Pn	00 24 53.3	-0.4
ALN	Alexandroupoli	4.23	339	P	Pn	00 24 53.3	-0.4
SKIA	Skiathos	4.23	303	P	Pn	00 24 55.0	+1.3
SKIA	Skiathos	4.23	303	P	Pn	00 24 54.5	+0.7
PROD	Prodromos	4.28	289	P	Pn	00 24 55.7	+1.2
PROD	Prodromos	4.28	289	P	Pn	00 24 55.3	+0.8
LEF	Lefka	4.34	114	PN	Pn	00 24 55.5	+0.3
LEF	Lefka	4.34	114	*e*Pn	Pn	00 24 55.5	+0.3
NEO	Neokhori	4.46	303	P	Pn	00 24 57.6	+0.6
NEO	Neokhori	4.46	303	P	Pn	00 24 57.4	+0.4
SZAC	Souni	4.50	118	P	Pn	00 24 59.1	+1.5
	baz=296						
XOR	Xorichti	4.51	304	P	Pn	00 24 57.8	+0.1
XOR	Xorichti	4.51	304	P	Pn	00 24 57.9	+0.2
PAIG	Paliouri	4.53	312	P	Pn	00 24 57.5	-0.3
PAIG	Paliouri	4.53	312	P	Pn	00 24 57.9	+0.1
MAMC	Mammari	4.56	112	P	Pn	00 25 00.8	+2.5
	baz=287						
KEBE	Keben-Mersin	4.59	95	PN	Pn	00 25 01.4	+2.7
KEBE	Keben-Mersin	4.59	95	*e*Pn	Pn	00 25 01.4	+2.7
IKL	Isikli	4.60	97	PN	Pn	00 25 01.4	+2.6
IKL	Isikli	4.60	97	*e*Pn	Pn	00 25 01.4	+2.6
RDO	Rodhopi	4.61	336	P	Pn	00 24 59.2	+0.2
RDO	Rodhopi	4.61	336	P	Pn	00 24 59.1	+0.2
OUR	Ouranopolis	4.63	318	P	Pn	00 24 59.7	+0.4
OUR	Ouranopolis	4.63	318	P	Pn	00 24 59.5	+0.3
OUR	Ouranopolis	4.63	318	P	Pn	00 24 59.5	+0.3
GUR	Goura	4.64	284	P	Pn	00 25 00.8	+1.3
GUR	Goura	4.64	284	P	Pn	00 25 00.4	+0.9
CSS	Mathiatis	4.73	113	PN	Pn	00 25 02.3	+1.6
CSS	Mathiatis	4.73	113	P	Pn	00 25 02.5	+1.8
	baz=290						
CSS	Mathiatis	4.73	113	P	Pn	00 25 01.3	+0.6
CSS	Mathiatis	4.73	113	Pn	Pn	00 25 01.3	+0.6
CSS	Mathiatis	4.73	113	P	Pn	00 25 01.3	+0.6
CSS	Mathiatis	4.73	113	*e*Pn	Pn	00 25 02.3	+1.6
KLV	Kalavryta, Ach	4.81	285	P	Pn	00 25 03.3	+1.6
KLV	Kalavryta, Ach	4.81	285	P	Pn	00 25 02.9	+1.1
KIZK	Mersin	4.92	94	PN	Pn	00 25 06.1	+2.8
BRTR	Keskin Array B	5.19	56	Pn	Pn	00 25 08.8	+1.7
	comp=E,0.5nm,0.3s,baz=238,slow=16,SNR=15						
MERS	Mersin	5.19	89	PN	Pn	00 25 09.9	+2.8
MERS	Mersin	5.19	89	*e*Pn	Pn	00 25 09.9	+2.8
SRS	Serrai	5.41	322	P	Pn	00 25 10.6	+0.6
SRS	Serrai	5.41	322	P	Pn	00 25 10.4	+0.5
BHL	Bhannes	6.92	114	*e*P	Pn	00 25 30.4	-0.5
DQRL	Deir Qamar	6.96	116	*e*P	Pn	00 25 30.6	-0.7
HNTI	Hanita	7.01	121	Pn	Pn	00 25 32.3	+0.3
MMA0B	Mount Meron ar	7.21	121	Pn	Pn	00 25 34.6	-0.2
MMAI	Mount Meron Ar	7.21	121	Pn	Pn	00 25 34.5	-0.3
	comp=E,8.0nm,0.3s,baz=312,slow=11,SNR=76						
MMAI				Sn	Sn	00 26 54.2	-2.5
	comp=E,8.8nm,0.3s,baz=311,slow=25,SNR=10						
SHBL	Chebaa	7.26	117	*e*P	Pn	00 25 35.9	+0.3
KSDI	Kefar Szold	7.29	119	Pn	Pn	00 25 36.2	+0.4
SLTI	Sal'it	7.45	127	Pn	Pn	00 25 38.1	+0.2
KSHT	Keshet	7.51	120	Pn	Pn	00 25 39.9	+1.0
MMLI	Mount Malkishu	7.57	124	Pn	Pn	00 25 39.2	-0.4
HMDT	Nahal Hemdat	7.75	125	Pn	Pn	00 25 42.5	+0.4
AMAZ	Amatzia	7.85	132	Pn	Pn	00 25 43.6	+0.1
KZIT	Kziot	8.02	137	Pn	Pn	00 25 45.7	-0.1
YTIR	Yattir	8.09	132	Pn	Pn	00 25 46.8	-0.1
MLR	Muntele Rosu	8.67	350	Pn	Pn	00 25 56.8	+2.0
	comp=E,0.0nm,0.3s,baz=145,slow=19,SNR=2.2						
ASF	Jabal al Asfar	8.72	121	Pn	Pn	00 25 57.2	+1.6
	comp=E,0.6nm,0.3s,baz=276,slow=9.2,SNR=5.2						
ASF				Sn	Sn	00 27 36.2	+2.1
	comp=E,0.2nm,0.3s,baz=234,slow=19,SNR=2.2						
PRNI	Paran	8.78	137	Pn	Pn	00 25 55.4	-0.9
HRFI	Mount Harif	9.04	138	Pn	Pn	00 25 59.5	-0.4
MBRI	Mt Berech	9.17	139	Pn	Pn	00 26 02.2	+0.6
EIL	Elat	9.29	140	Pn	Pn	00 26 03.6	+0.4
	comp=E,0.9nm,0.3s,baz=20,slow=1.4,SNR=21						
EIL				Sn	Sn	00 27 42.0	-5.7
	comp=E,1.0nm,0.3s,baz=178,slow=11,SNR=2.9						
EIL	Elat	9.29	140	Pn	Pn	00 26 03.7	+0.5
ESDC	Sonseca Array	25.19	286	P	P	00 29 15.2	+0.2
	comp=E,0.1nm,0.4s,baz=85,slow=9.5,SNR=4.1						
TORD	Torodi Ar. Bea	33.43	232	P	P	00 30 27.5	-0.9
	comp=E,0.3nm,0.3s,baz=33,slow=8.7,SNR=11						
MKAR	Makanchi Array	40.84	59	P	P	00 31 30.9	-0.1
	comp=E,0.2nm,0.6s,baz=270,slow=9.8,SNR=2.4						

*IDC **14** 00:24:44.4±1.0, 35°.65N×29°.82E, h0km, mb3.6/7, mb1 3.7/14, mb1mx3.5/71, mbtmp3.6/14, ML3.5/7, MS2.7/1, Ms1 2.8/1, ms1mx2.1/55, Error ellipse: s-maj=19.4km s-min=15.7km az=176.0*

*ISK **14** 00:24:45.4, 35°.44N×29°.80E, h10km, ML3.5/19*

*CSEM **14** 00:24:46.7±0.3, 35°.48N×29°.81E, h10km, ML3.6, Error ellipse: s-maj=7.3km s-min=3.8km az=21.0*

*ISCJB **14** 00:24:47.1±0.9, 35°.42N±0°.03×29°.81E±0°.03, h29km±8km, mb3.4/7, MS2.6/1, Error ellipse: s-maj=5.2km s-min=3.4km az=27.6*

*DDA **14** 00:24:48.4, 35°.65N×29°.65E, h25km, MI3.6*

ISC 14 00:24:45.8±1.3, 35°.45N±0°.04×29°.76E±0°.03, h13km±8km, n90, σ1s02/124, mb3.5/7, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKAS	Kas	0.80	351	PG	Pg	00 25 01.5	+0.3
AKAS				SG	Sb	00 25 12.9	+0.6
AKAS	Kas	0.80	351	*i* P	Pg	00 24 59.6	-1.6
AKAS				*i* S	Sg	00 25 12.0	+0.4
AKAS	Kas	0.80	351	P	Pg	00 24 59.6	-1.6
AKAS	Kas	0.80	351	*e*Pg	Pg	00 25 01.5	+0.3
AKAS				S	Sg	00 25 12.0	+0.4
ELL	Elmali	1.30	5	PN	Pn	00 25 10.0	+0.1
ELL				SN	Sg	00 25 28.1	+0.2
ELL	Elmali	1.30	5	*e*Pn	Pn	00 25 10.0	+0.1
ELL				*e*Sn	Sg	00 25 28.1	+0.2
FETY	Fethiye	1.31	335	PN	Pn	00 25 09.7	-0.1
FETY	Fethiye	1.31	335	*e*Pn	Pn	00 25 09.7	-0.1
ARG	Arkhangelos	1.53	301	PN	Pb	00 25 14.1	0.0
ARG				SN	Sg	00 25 34.9	-0.3
ARG	Arkhangelos	1.53	301	*e*Pn	Pb	00 25 14.1	0.0
ARG				*e*Sn	Sg	00 25 34.9	-0.3
KORT	Korkueli	1.62	17	PN	Pn	00 25 14.7	+0.5
KORT				SN	Sb	00 25 36.2	+0.1
KORT	Korkueli	1.62	17	*i* P	Pn	00 25 14.1	-0.2
KORT				*i* S	Sb	00 25 35.8	-0.3
KORT	Korkueli	1.62	17	P	Pn	00 25 14.1	-0.2
KORT	Korkueli	1.62	17	*e*Pn	Pn	00 25 14.7	+0.5
KORT				S	Sb	00 25 35.8	-0.3
KORT				*e*Sn	Sb	00 25 36.2	+0.1
DALY	Dalyan (Mu¨la	1.64	327	PN	Pb	00 25 15.5	-0.3
DALY	Dalyan (Mu¨la	1.64	327	*i* P	Pb	00 25 16.1	+0.3
DALY				*i* S	Sg	00 25 38.3	-0.1
DALY	Dalyan (Mu¨la	1.64	327	*e*Pn	Pb	00 25 15.5	-0.3
DALY	Dalyan (Mu¨la	1.64	327	P	Pb	00 25 16.1	+0.3
DALY				S	Sg	00 25 38.3	-0.1
TURN	Turunc	1.70	327	PN	Pb	00 25 17.8	+0.8
TURN	Turunc	1.70	327	*i* P	Pb	00 25 17.0	0.0
TURN				*i* S	Sb	00 25 39.7	+1.4
TURN	Turunc	1.70	327	P	Pb	00 25 17.0	0.0
TURN	Turunc	1.70	327	*e*Pn	Pb	00 25 17.8	+0.8
TURN				S	Sb	00 25 39.7	+1.4
GLHS	Glhisar (BURDU	1.72	353	PN	Pn	00 25 16.4	+0.8
GLHS	Glhisar (BURDU	1.72	353	*e*Pn	Pn	00 25 16.4	+0.8
GOLH	Golhisar	1.79	355	*i* P	Pb	00 25 19.1	+0.5
GOLH				*i* S	Sn	00 25 39.5	+0.2
GOLH	Golhisar	1.79	355	P	Pb	00 25 19.1	+0.5
GOLH				S	Sn	00 25 39.5	+0.2
YER	Yerkesik	2.06	325	PN	Pn	00 25 21.4	+1.1
YER	Yerkesik	2.06	325	*e*Pn	Pn	00 25 21.4	+1.1
TAVA	DENIZLI_Tavas	2.13	342	*i* P	Pb	00 25 24.4	+0.2
TAVA				*i* S	Sn	00 25 46.9	-0.6
TAVA	DENIZLI_Tavas	2.13	342	P	Pb	00 25 24.5	+0.2
TAVA				S	Sn	00 25 46.9	-0.6
DAT	Datca	2.18	307	PN	Pn	00 25 23.1	+1.2
DAT	Datca	2.18	307	*i* P	Pn	00 25 22.4	+0.5
DAT				*i* S	Sn	00 25 48.1	-0.8
DAT	Datca	2.18	307	P	Pn	00 25 22.4	+0.5
DAT	Datca	2.18	307	*e*Pn	Pn	00 25 23.1	+1.2
DAT				S	Sn	00 25 48.1	-0.8
GAZI	Gazipasa	2.22	69	*i* P	Pn	00 25 22.0	-0.4
GAZI				*i* S	Sn	00 25 48.9	-0.9
GAZI	Gazipasa	2.22	69	P	Pn	00 25 22.0	-0.4
GAZI				S	Sn	00 25 48.8	-0.9
BRDR	BURDUR-Merkez	2.26	6	*i* P	Pn	00 25 24.8	+1.9
BRDR				*i* S	Sg	00 26 01.1	+2.7
BRDR	BURDUR-Merkez	2.26	6	P	Pn	00 25 24.8	+1.9
SUTC	Sutluce-Ispart	2.26	26	PN	Pn	00 25 23.4	+0.4
SUTC	Sutluce-Ispart	2.26	26	*e*Pn	Pn	00 25 23.4	+0.4
DNZL	Cakiroluk	2.31	346	*i* P	Pb	00 25 28.9	+1.4
DNZL				*i* S	Sg	00 25 59.4	-0.7
ISP	Isparta	2.45	14	PN	Pn	00 25 26.9	+1.3
ISP	Isparta	2.45	14	*e*Pn	Pn	00 25 26.9	+1.3
BODT	Bodrum	2.55	310	PN	Pn	00 25 27.9	+1.0
BODT	Bodrum	2.55	310	*e*Pn	Pn	00 25 27.9	+1.0
LEF	Lefka	2.58	96	PN	Pn	00 25 28.1	+0.8
LEF	Lefka	2.58	96	*e*Pn	Pn	00 25 28.1	+0.8
AYDN	Tasoluk	2.68	326	*i* P	Pn	00 25 30.2	+1.5
AYDN				*i* S	Sn	00 26 01.9	+0.8
AYDN	Tasoluk	2.68	326	P	Pn	00 25 30.2	+1.5
AYDN				S	Sn	00 26 01.9	+0.8
TEKE	Tekeli-Mersin	2.81	75	PN	Pn	00 25 31.5	+1.0
TEKE	Tekeli-Mersin	2.81	75	*e*Pn	Pn	00 25 31.5	+1.0
AYDB	Zeytinkoy-Aydi	2.91	329	PN	Pn	00 25 33.5	+1.5
AYDB	Zeytinkoy-Aydi	2.91	329	*e*Pn	Pn	00 25 33.5	+1.5
BERE	Bereket-Mersin	2.95	71	PN	Pn	00 25 33.2	+0.7
BERE	Bereket-Mersin	2.95	71	*e*Pn	Pn	00 25 33.2	+0.7
CSS	Mathiatis	2.96	98	PN	Pn	00 25 33.0	+0.4
CSS	Mathiatis	2.96	98	*e*Pn	Pn	00 25 33.0	+0.4
DOGA	KONYA_Doganhis	3.06	29	*i* P	Pn	00 25 34.3	+0.2
DOGA				*i* S	Sn	00 26 12.5	+1.8
DOGA	KONYA_Doganhis	3.06	29	P	Pn	00 25 34.3	+0.2
DOGA				S	Sn	00 26 12.5	+1.8
KULA	Kula-Manisa	3.19	344	PN	Pn	00 25 37.2	+1.5
KULA	Kula-Manisa	3.19	344	*e*Pn	Pn	00 25 37.2	+1.5
IKL	Isikli	3.29	75	PN	Pn	00 25 37.8	+0.8
IKL	Isikli	3.29	75	*e*Pn	Pn	00 25 37.8	+0.8
KEBE	Keben-Mersin	3.36	72	PN	Pn	00 25 39.1	+1.1
KEBE	Keben-Mersin	3.36	72	*e*Pn	Pn	00 25 39.1	+1.1
LADK	Ladik-KONYA	3.45	36	PN	Pn	00 25 40.8	+1.4
LADK	Ladik-KONYA	3.45	36	*e*Pn	Pn	00 25 40.8	+1.4
KDHN	Kadinhani	3.60	31	*i* P	Pn	00 25 41.9	+0.5
KDHN				*i* S	Sn	00 26 23.3	-0.6
KDHN	Kadinhani	3.60	31	P	Pn	00 25 41.9	+0.5
KDHN				S	Sn	00 26 23.3	-0.6
KIZK	Mersin	3.70	73	PN	Pn	00 25 43.9	+1.2
KIZT	Kizilcal	3.82	26	*e*Pn	Pn	00 25 43.9	-0.6
IDI	Anoyia	3.98	269	Pn	Pn	00 25 48.9	+2.3
	3.7nm,0.3s,baz=134,slow=6.7,SNR=7.0						
IDI				Sn	Sn	00 26 33.8	+0.5
	4.7nm,0.3s,baz=193,slow=18,SNR=3.9						
MERS	Mersin	4.11	68	PN	Pn	00 25 49.9	+1.6
MERS	Mersin	4.11	68	*e*Pn	Pn	00 25 49.9	+1.6
BRTR	Keskin Array B	5.26	35	Pn	Pn	00 26 03.8	-0.5
	0.8nm,0.3s,baz=199,slow=15,SNR=13						
BRTR				Sn	Sn	00 27 02.9	-2.1
	0.9nm,0.3s,baz=197,slow=9.4,SNR=7.2						
MMAI	Mount Meron Ar	5.26	116	Pn	Pn	00 26 05.7	+1.5
	4.9nm,0.3s,baz=270,slow=8.6,SNR=9.1						
MMAI				Sn	Sn	00 27 06.0	+1.1
	6.9nm,0.3s,baz=328,slow=32,SNR=7.5						
ASF	Jabal al Asfar	6.78	117	Pn	Pn	00 26 28.1	+3.0
	0.2nm,0.3s,baz=274,slow=14,SNR=2.2						
ASF				Sn	Sn	00 27 43.0	+0.8
	0.4nm,0.3s,baz=90,slow=20,SNR=3.2						
EIL	Elat	7.24	141	Pn	Pn	00 26 33.4	+2.1
	1.0nm,0.3s,baz=335,slow=14,SNR=8.3						
STON	Ston	11.93	312	*e*Pn	Pn	00 27 34.0	-1.6
KBZ	Khabaz	13.07	47	Pn	Pn	00 27 52.0	+1.0
	0.1nm,0.3s,baz=286,slow=6.9,SNR=2.6						
KEST	Kesra	16.61	277	Pn	P	00 28 41.6	+0.7
	0.2nm,0.3s,baz=66,slow=5.5,SNR=6.0						
GERES	GERESS Array B	17.87	323	P	Pn	00 28 54.1	0.0
	0.2nm,0.3s,baz=126,slow=11,SNR=3.9						
AKTO	Aktyubinsk	25.34	45	P	P	00 30 11.4	-0.9
	1.2nm,0.4s,baz=227,slow=9.9,SNR=3.0						
FINES	FINESS Array B	26.12	356	P	P	00 30 18.5	-0.8
	1.2nm,0.8s,baz=156,slow=15,SNR=5.6						
HFS	Hagfors	26.81	342	P	P	00 30 24.5	-0.9
	1.5nm,0.8s,baz=152,slow=6.5,SNR=3.9						
ESDC	Sonseca Array	26.97	289	P	P	00 30 27.1	-0.1
	0.6nm,0.5s,baz=82,slow=9.3,SNR=7.1						
NOA	NORSAR Array B	28.22	341	LR	LR	00 42 14.2	
	comp=Z,13nm,18.4s,baz=145,slow=37						
TORD	Torodi Ar. Bea	33.66	236	P	P	00 31 27.6	+1.1
	0.1nm,0.4s,baz=28,slow=8.2,SNR=2.3						
KURBB	Kurchatov Arra	38.01	51	P	P	00 32 02.2	-1.2
	0.4nm,0.7s,baz=273,slow=8.4,SNR=3.8						
MKAR	Makanchi Array	40.47	57	P	P	00 32 23.0	-1.1
	0.3nm,0.6s,baz=275,slow=7.1,SNR=3.9						

IDC 14 00:31:06.5±2.2, 3°.79N×89°.80E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.3/68, mbtmp3.6/5, ML3.3/1, Error ellipse: s-maj=60.6km s-min=31.4km az=45.0, North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	Pallekele	9.70	291	Pn	Pn	00 33 27.6	+0.2
	0.3nm,0.3s,baz=115,slow=19,SNR=2.3						
PALK				Sn	Sn	00 35 07.8	-9.4
	0.7nm,0.3s,baz=116,slow=14,SNR=1.4						
H08S3	Diego Garcia H	20.67	237	T	T	00 56 24.1	
	baz=58,slow=74,SNR=12						
H08S2	Diego Garcia H	20.67	237	T	T	00 56 23.3	
	baz=58,slow=74,SNR=5.2						
H08S1	Diego Garcia H	20.68	237	T	T	00 56 25.6	
	baz=58,slow=74,SNR=4.8						
MKAR	Makanchi Array	43.33	352	P	P	00 39 10.3	-0.1
	0.5nm,0.7s,baz=178,slow=8.5,SNR=5.0						
H01W3	Cape Leeuwin H	44.76	151	T	T	01 26 12.3	
	baz=325,slow=76,SNR=6.4						
H01W2	Cape Leeuwin H	44.77	151	T	T	01 26 10.7	
	baz=325,slow=76,SNR=6.5						
H01W1	Cape Leeuwin H	44.77	151	T	T	01 26 07.1	
	baz=325,slow=76,SNR=5.6						
SONM	Songino Array	46.15	15	P	P	00 39 33.2	+0.2
	0.7nm,0.5s,baz=200,slow=9.4,SNR=4.2						
KURBB	Kurchatov Arra	47.63	350	P	P	00 39 43.8	-0.5
	0.3nm,0.5s,baz=178,slow=7.4,SNR=2.8						
WRA	Warramunga Arr	49.69	120	P	P	00 40 00.6	-0.2
	0.3nm,0.9s,baz=300,slow=8.6,SNR=1.6						

IDC 14 00:34:27.6±13.0, 4°.46N×89°.91E, h0km, mb3.8/4, mb1 3.8/5, mb1mx3.4/65, mbtmp3.8/5, ML3.5/1, MS3.0/1, Ms1 3.0/1, ms1mx2.3/63, Error ellipse: s-maj=261.2km s-min=39.0km az=172.0, North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	Pallekele	9.58	287	Pn	Pn	00 36 47.2	+0.3
	0.5nm,0.3s,baz=117,slow=9.0,SNR=1.7						
PALK				Sn	Sn	00 38 35.3	0.0
	1.1nm,0.3s,baz=115,slow=16,SNR=2.7						
H08S3	Diego Garcia H	21.13	235	T	T	00 59 50.5	
	baz=59,slow=74,SNR=15						
H08S2	Diego Garcia H	21.14	235	T	T	01 00 03.0	
	baz=59,slow=74,SNR=5.7						
H08S1	Diego Garcia H	21.15	235	T	T	00 59 49.5	
	baz=59,slow=74,SNR=4.7						
DAV	Davao City (W)	35.58	84	LR	LR	00 59 48.0	
	comp=Z,20nm,18.2s,baz=28,slow=43						
MKAR	Makanchi Array	42.68	352	P	P	00 42 26.2	+0.1
	0.5nm,0.5s,baz=175,slow=9.5,SNR=6.7						
H01W3	Cape Leeuwin H	45.29	152	T	T	01 32 05.3	
	baz=327						
H01W2	Cape Leeuwin H	45.30	152	T	T	01 32 24.0	
	baz=327						
H01W1	Cape Leeuwin H	45.31	152	T	T	01 32 15.1	
	baz=327						
SONM	Songino Array	45.47	16	P	P	00 42 48.3	-0.4
	0.9nm,0.5s,baz=190,slow=10,SNR=6.2						
KURBB	Kurchatov Arra	46.99	350	P	P	00 43 00.7	+0.3
	0.4nm,0.6s,baz=173,slow=8.2,SNR=2.4						
ZALV	Zalesovo Beam	49.51	356	P	P	00 43 19.3	-0.4
	0.8nm,0.4s,baz=171,slow=7.8,SNR=3.7						

*IDC **14** 00:35:31.0±0.8, 55°.72S×26°.82W, h0km, mb4.2/6, mb1 4.2/7, mb1mx4.0/31, mbtmp4.1/7, ML3.7/1, MS3.2/2, Ms1 3.2/2, ms1mx2.8/30, Error ellipse: s-maj=35.8km s-min=19.0km az=70.0*

*NEIC **14** 00:35:32.5±7.5, 55°.73S×26°.77W, h11km±46km, mb4.2/2, Error ellipse: s-maj=26.5km s-min=9.6km az=54.0*

*ISCJB **14** 00:35:34.8±0.7, 55°.80S±0°.10×27°.2W±0°.2, h35km, mb4.2/8, MS3.6/1, Error ellipse: s-maj=17.4km s-min=8.1km az=40.7*

ISC 14 00:35:36.2±0.7, 55°.8S±0°.1×27°.0W±0°.1, h35km, n24, σ0s92/18, mb4.3/8, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	5.65	282	*e*Pn	Pn	00 36 57.8	+0.4
HOPE				*e*Sn	Sn	00 37 59.2	-1.8
VNA1	Neumayer--Stat	16.99	158	P	P	00 39 31.2	-1.0
VNA3	Neumayer Olymp	17.19	161	P	P	00 39 34.5	0.0
SNAA	Sanae	18.93	156	P	Pn	00 39 53.8	-0.7
SNAA	Sanae	18.93	156	P	P	00 39 52.5	-1.2
	0.2nm,0.3s,baz=318,slow=12,SNR=9.2						
SNAA				LR	LR	00 45 36.8	
	comp=Z,31nm,21.3s,baz=274,slow=32						
TRQA	Tornquist	29.31	293	*e*P	P	00 41 36.1	+1.0
	2.3nm,0.6s						
QSPA	South Pole Qui	34.45	180	P	P	00 42 20.2	0.0
	2.3nm,0.6s,baz=178,slow=2.3,SNR=6.9						
CPUP	Villa Florida	36.72	311	P	P	00 42 40.3	+0.5
	1.3nm,0.6s,baz=149,slow=5.9,SNR=3.5						
BOSA	Boshof	45.83	76	LR	LR	01 01 07.3	
	comp=Z,61nm,19.0s,baz=132,slow=34						
VNDA	Vanda	46.82	183	P	P	00 44 03.5	+1.7
	3.4nm,0.6s,baz=194,slow=5.9,SNR=8.3						
H10S2	ASCENSION HYDR	47.74	17	T	T	01 35 36.4	
	baz=193						
H10S3	ASCENSION HYDR	47.74	17	T	T	01 35 36.6	
	baz=193						
H10S1	ASCENSION HYDR	47.76	17	T	T	01 35 37.7	
	baz=193						
H10N1	ASCENSION HYDR	48.86	17	T	T	01 37 00.4	
	baz=197						
H10N3	ASCENSION HYDR	48.86	17	T	T	01 37 00.5	
	baz=197						
H10N2	ASCENSION HYDR	48.87	17	T	T	01 37 01.8	
	baz=197						
LPAZ	La Paz	50.31	305	P	P	00 44 29.6	-0.4
	1.5nm,0.5s,baz=353,slow=13,SNR=14						
SAML	Samuel	54.69	314	*e*P	P	00 45 01.5	-0.2
	1.8nm,0.6s						
TORD	Torodi Ar. Bea	72.80	29	P	P	00 47 00.5	-0.4
	0.3nm,0.4s,baz=202,slow=6.4,SNR=11						
PCRV	Puerto La Cruz	72.81	321	P	P	00 47 01.6	+0.5
	4.3nm,0.5s,baz=173,slow=3.8,SNR=3.9						
YKA	Yellowknife Ar	136.05	318	PKP	PKPdf	00 54 50.9	-1.0
	0.3nm,0.6s,baz=115,slow=1.8,SNR=3.6						
INK	Inuvik	145.67	321	*e*PKPbc	PKPab	00 55 09.2	-0.6
ILAR	Eielson Array	150.02	312	PKPbc	PKPbc	00 55 21.5	+0.2
	1.8nm,0.8s,baz=118,slow=1.8,SNR=17						
SONM	Songino Array	150.62	86	PKPbc	PKPbc	00 55 23.4	-0.1
	0.8nm,0.5s,baz=216,slow=2.9,SNR=3.2						

*ISK **14** 01:04:25.5, 39°.91N×39°.61E, h6km, ML2.7/8*

*DDA **14** 01:04:26.1, 39°.86N×39°.60E, h18km, MI3.3*

*CSEM **14** 01:04:26.2±0.1, 39°.89N×39°.64E, h2km, ML3.3, Error ellipse: s-maj=3.6km s-min=3.2km az=27.0*

ISC 14 01:04:26.4±0.9, 39°.89N±0°.02×39°.60E±0°.01, h7km±8km, n85, σ1s09/130, 3C-2D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EUZM	Uzumlu	0.20	158	*e*P	Pg	01 04 31.1	+0.6
EUZM				*e*S	Sg	01 04 34.0	+0.7
EUZM				IAML		01 04 34.6	
	comp=Z,452

SVRC	**Sivrice-ELAZID**	**1.53 189**	PN	**Pn**	**01 04 53.7**	**-0.6**
SVRC	**Sivrice-ELAZID**	**1.53 189**	*e*Pn	**Pn**	**01 04 53.7**	**-0.6**
HANI	**Diyarbakir_Han**	**1.60 157**	*i* P	**Pb**	**01 04 55.9**	**-0.5**
HANI		*i* S		**Sg**	**01 05 18.5**	**+0.6**
HANI	**Diyarbakir_Han**	**1.60 157**	P	**Pb**	**01 04 55.8**	**-0.5**
HANI		S		**Sg**	**01 05 18.5**	**+0.6**
VRTB	**Varto-Mus**	**1.61 116**	PN	**Pb**	**01 04 55.9**	**-0.6**
VRTB	**Varto-Mus**	**1.61 116**	*e*Pn	**Pb**	**01 04 55.9**	**-0.6**
HEKM	**Malatya_Hekimh**	**1.63 232**	*i* P	**Pb**	**01 04 56.6**	**-0.2**
HEKM		*i* S		**Sg**	**01 05 20.2**	**+1.5**
HEKM	**Malatya_Hekimh**	**1.63 232**	P	**Pb**	**01 04 56.6**	**-0.2**
HEKM		S		**Sg**	**01 05 20.2**	**+1.5**
ORDU	**Ordu-Boztepe**	**1.72 310**	*i* P	**Pn**	**01 04 57.6**	**+0.8**
ORDU		*i* S		**Sg**	**01 05 22.0**	**+0.2**
ORDU	**Ordu-Boztepe**	**1.72 310**	P	**Pn**	**01 04 57.6**	**+0.8**
ORDU		S		**Sg**	**01 05 22.0**	**+0.2**
CUKAN	**kangal_SIVAS**	**1.75 251**	*i* P	**Pb**	**01 04 58.7**	**-0.1**
CUKAN		*i* S		**Sg**	**01 05 25.5**	**+3.0**
CUKAN	**kangal_SIVAS**	**1.75 251**	P	**Pb**	**01 04 58.7**	**-0.1**
HOMI	**Horasan**	**1.78 84**	*e*P	**Pn**	**01 04 58.2**	**+0.5**
RSDY	**Resadiye-TOKAT**	**1.81 287**	PN	**Pn**	**01 04 58.2**	**+0.1**
RSDY	**Resadiye-TOKAT**	**1.81 287**	*e*Pn	**Pn**	**01 04 58.2**	**+0.1**
MALT	**Malatya**	**1.82 210**	PN	**Pn**	**01 04 58.3**	**+0.1**
MALT	**Malatya**	**1.82 210**	*e*Pn	**Pn**	**01 04 58.3**	**+0.1**
EKAR	**Karacoban**	**2.01 108**	*e*P	**Pb**	**01 05 02.9**	**-0.4**
EKAR		*e*S		**Sg**	**01 05 29.5**	**-1.4**
AKCD	**Akcadag**	**2.06 220**	*i* P	**Pn**	**01 05 02.9**	**+1.3**
AKCD		*i* S		**Sg**	**01 05 33.3**	**+0.7**
AKCD	**Akcadag**	**2.06 220**	P	**Pn**	**01 05 02.8**	**+1.3**
CUGUR	**Gurin_S¨VAS**	**2.15 238**	*i* P	**Pb**	**01 05 05.4**	**-0.4**
CUGUR		*i* S		**Sg**	**01 05 35.0**	**-0.5**
CUGUR	**Gurin_S¨VAS**	**2.15 238**	P	**Pb**	**01 05 05.4**	**-0.4**
BCA	**Borcka**	**2.18 44**	PN	**Pn**	**01 05 03.6**	**+0.5**
BCA	**Borcka**	**2.18 44**	*e*Pn	**Pn**	**01 05 03.6**	**+0.5**
CUALT	**Altinyayla-SIV**	**2.28 255**	*i* P	**Pb**	**01 05 08.2**	**+0.2**
CUALT		*i* S		**Sg**	**01 05 42.1**	**+2.3**
CUALT	**Altinyayla-SIV**	**2.28 255**	P	**Pb**	**01 05 08.2**	**+0.2**
TOKT	**Tokat**	**2.38 281**	PN	**Pn**	**01 05 06.9**	**+1.0**
TOKT	**Tokat**	**2.38 281**	*e*Pn	**Pn**	**01 05 06.9**	**+1.0**
ELBS	**KAHRAMANMARAS**	**2.48 232**	*i* P	**Pb**	**01 05 11.6**	**+0.3**
ELBS		*i* S		**Sg**	**01 05 44.9**	**-1.1**
TUTA	**Tutak**	**2.53 100**	*e*P	**Pn**	**01 05 09.5**	**+1.4**
AGRB	**Hanur-Agry**	**2.63 96**	PN	**Pn**	**01 05 09.5**	**0.0**
AGRB	**Hanur-Agry**	**2.63 96**	*e*Pn	**Pn**	**01 05 09.5**	**0.0**
CUSAR	**Sarkisla-SIVAS**	**2.63 261**	*e*P	**Pn**	**01 05 10.7**	**+1.2**
CUSAR		*i* S		**Sg**	**01 05 51.8**	**+0.7**
CUSAR	**Sarkisla-SIVAS**	**2.63 261**	P	**Pn**	**01 05 10.6**	**+1.2**
EPOS	**Posof**	**2.87 55**	*e*P	**Pn**	**01 05 08.4**	**-4.3**

*ISCJB **14** 01:26:26.4±1.7, 44°.37N±0°.07×81°.9E±0°.1, h6km±13km, Error ellipse: s-maj=17.7km s-min=5.7km az=35.3*
*NNC **14** 01:26:26.8±1.6, 44°.37N×81°.75E, h9km±5km, mb2.8, mpv2.4, Error ellipse: s-maj=24.2km s-min=3.2km az=122.0*
*SOME **14** 01:26:27.2, 44°.32N×81°.75E, h20km*
ISC 14 01:26:27.5±3.8, 44°.33N±0°.08×82°.0E±0°.1, h14km±29km, n11, σ2°.9 01/20, 6C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.60 271**		*e*P	**Pn**	**01 26 53.2**	**-2.3**
DJR	9.0nm,0.5s			*e*S	**Sn**	**01 27 11.6**	**-4.4**
	25nm,0.6s						
PDGK	**Podgornoye**	**2.09 242**		⇓Sn	**Sn**	**01 27 25.6**	**-2.5**
	9.8nm,0.5s						
KAPS	**Kapalarasan**	**2.12 298**		*e*P	**Pn**	**01 27 02.3**	**-0.3**
KAPS	1.7nm,0.3s			*e*S	**Sn**	**01 27 27.6**	**-1.2**
	45nm,0.5s						
SHLS	**Shalkode**	**2.19 239**		*e*P	Pn	01 26 58.8	-4.9
SHLS	8.1nm,0.3s			*e*S	Sn	01 27 21.3	-9.4
	91nm,0.3s						
MK31	**Makanchi Array**	**2.47**	**4**	⇑Pn	**Pn**	**01 27 07.4**	**+0.1**
MK31	1.4nm,0.3s,baz=340,slow=22,SNR=50			⇓Pg	**Pb**	**01 27 11.1**	**-0.6**
MK31	1.5nm,0.3s			⇑Sn	**Sn**	**01 27 37.7**	**+0.4**
MK31	6.8nm,0.6s,baz=181,slow=28,SNR=7.2			⇑Lg	Lg	01 27 45.2	
MAKZ	**Makanchi**	**2.48 359**		⇓Pn	**Pn**	**01 27 07.4**	**0.0**
MAKZ	1.4nm,1.1s			⇑Pg	Pb	01 27 11.1	-0.7
MAKZ	1.8nm,0.6s			⇑Sn	**Sn**	**01 27 37.8**	**+0.3**
MAKZ	1.2nm,0.4s			⇑Lg	Lg	01 27 45.6	
UZB	**Uzynbulak**	**2.48 242**		*e*P	**Pn**	**01 27 07.7**	**+0.2**
UZB	1.0nm,0.1s			*e*S	**Sn**	**01 27 36.5**	**-1.1**
	12nm,0.3s						
KPKS	**Kokpek**	**2.56 251**		*e*P	**Pn**	**01 27 09.2**	**+0.5**
KPKS	5.1nm,0.1s			*e*S	**Sn**	**01 27 38.9**	**-0.8**
	38nm,0.3s						
TDK	**Taldyqorghan**	**2.66 286**		*e*P	**Pn**	**01 27 12.3**	**+2.3**
TDK	5.4nm,0.1s			*e*S	**Sn**	**01 27 44.5**	**+2.4**
SATY	**Saty**	**2.91 245**		*e*P	**Pn**	**01 27 15.9**	**+2.3**
SATY	5.4nm,0.3s			*e*S	**Sn**	**01 27 50.5**	**+2.0**
	54nm,0.3s						
ARXS	**Arharly**	**3.02 269**		*e*P	**Pn**	**01 27 17.1**	**+2.2**
ARXS	0.7nm,0.2s			*e*S	**Sn**	**01 27 53.0**	**+2.1**
	8.2nm,0.4s						

*NIED **14** 01:32:00, 31°.70N×131°.80E, h17km, Mw3.7 Best double couple: M0=3.84000×10^14 NP1:φ=137.00000°, δ=23.00000°, λ=35.00000°. NP2:φ=114.00000°, δ=77.00000°, λ=109.00000°.*
*IDC **14** 01:32:13.6±2.1, 31°.31N×131°.65E, h0km, mb3.5/7, mb1 3.7/7, mb1mx3.4/61, mbtmp3.5/7, MS2.8/1, Ms1 2.8/1, ms1mx2.3/51, Error ellipse: s-maj=45.4km s-min=32.9km az=21.0*
*ISCJB **14** 01:32:18.4±1.1, 31°.63N±0°.05×131°.92E±0°.06, h29km±6km, mb3.4/7, Error ellipse: s-maj=9.9km s-min=6.9km az=142.3*
*JMA **14** 01:32:20.2±0.1, 31°.66N×131°.82E, h27km±1km, M3.5*
ISC 14 01:32:18.2±1.7, 31°.71N±0°.05×131°.87E±0°.05, h17km±10km, n23, σ0°.92 /24, mb3.5/7, 3C-2D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNAR	**Kushima--Naru**	**0.54 251**		⇓P	**Pb**	**01 32 30.1**	**+0.9**
JNAR				*e*S	**Sb**	**01 32 37.2**	**+0.5**
JTSN	**Tsuno**	**0.62 330**		⇑P	**Pn**	**01 32 32.4**	**+0.2**
JTSN				S	**Sn**	**01 32 41.3**	**-0.5**
JTZ	**Takazaki**	**0.69 287**		⇓P	**Pn**	**01 32 32.8**	**-0.4**
JTZ				S	**Sb**	**01 32 41.9**	**+0.8**
JZO	**Okuchi**	**1.17 292**		⇑P	**Pn**	**01 32 40.2**	**+0.5**
JZO				*e*S	**Sn**	**01 32 55.7**	**+0.4**
JSU	**Suzuyama**	**1.22 261**		P	**Pg**	**01 32 41.2**	**-0.6**
JSU				*e*S	**Sn**	**01 32 57.2**	**+0.5**
JIU2	**Izumi 2**	**1.23 313**		⇑P	**Pg**	**01 32 42.0**	**+0.1**
JIU2				S	**Sn**	**01 32 58.5**	**+1.7**
JTN	**Tanegashima 3**	**1.30 216**		P	**Pn**	**01 32 42.0**	**+0.5**
JTO	**Tosashimizu**	**1.40 34**		P	**Pn**	**01 32 43.6**	**+0.7**
JTO				S	**Sb**	**01 33 01.1**	**-0.2**
JNU	**Nakatsue**	**1.64 330**		Pn	**Pb**	**01 32 48.4**	**+0.3**
JNU	57nm,0.3s,baz=46,slow=5.7,SNR=72			Sn	**Sg**	**01 33 11.8**	**+0.6**
	28nm,0.3s,baz=18,slow=20,SNR=8.3						
JNU				LR	LR	01 33 17.1	
	comp=Z,69nm,18.9s,baz=184,slow=33						
KSRS	**Korea Array**	**6.59 332**		LR	LR	01 36 46.8	
	comp=Z,70nm,19.3s,baz=150,slow=40						
SONM	**Songino Array**	**25.19 317**		P	**P**	**01 37 42.9**	**0.0**
	1.0nm,0.7s,baz=123,slow=10,SNR=5.6						
H11N2	**WAKE ISLAND Hy 33.59 102**			T	T	02 14 41.2	
	baz=311						
H11N1	**WAKE ISLAND Hy 33.59 102**			T	T	02 14 42.0	
	baz=311						
H11N3	**WAKE ISLAND Hy 33.61 102**			T	T	02 14 50.5	
	baz=311						
H11S3	**WAKE ISLAND Hy 34.01 104**			T	T	02 15 22.6	
	baz=309						
H11S1	**WAKE ISLAND Hy 34.01 104**			T	T	02 15 32.6	
	baz=309						
H11S2	**WAKE ISLAND Hy 34.02 104**			T	T	02 15 32.5	
	baz=309						
MKAR	**Makanchi Array**	**40.56 306**		P	**P**	**01 39 56.0**	**-0.6**
	0.4nm,0.8s,baz=92,slow=9.9,SNR=4.4						
KURBB	**Kurchatov Arra**	**43.34 312**		P	**P**	**01 40 18.7**	**-0.5**
	0.3nm,0.9s,baz=100,slow=9.3,SNR=1.9						
ILAR	**Eielson Array**	**58.12 30**		P	**P**	**01 42 11.8**	**+1.4**
	0.3nm,0.8s,baz=260,slow=5.4,SNR=4.1						
FINES	**FINESS Array B**	**69.68 330**		P	**P**	**01 43 24.7**	**-1.8**
	0.4nm,0.4s,baz=44,slow=8.3,SNR=2.2						
YKA	**Yellowknife Ar**	**72.23 27**		P	**P**	**01 43 43.2**	**+1.2**
	0.3nm,0.7s,baz=312,slow=5.6,SNR=4.1						
AKASG	**Malin Array Be**	**73.44 320**		P	**P**	**01 43 48.0**	**-1.5**
	0.4nm,0.4s,baz=75,slow=4.2,SNR=1.5						

*IDC **14** 01:40:30.4±1.4, 31°.55N×131°.75E, h0km, mb3.5/4, mb1 3.6/5, mb1mx3.3/68, mbtmp3.4/5, ML2.6/1, MS2.8/2, Ms1 2.8/2, ms1mx2.4/47, Error ellipse: s-maj=44.4km s-min=22.4km az=70.0*
*ISCJB **14** 01:40:32.6±1.3, 31°.61N±0°.05×131°.95E±0°.07, h23km±8km, mb3.4/4, Error ellipse: s-maj=11.6km s-min=7.1km az=39.1*
*JMA **14** 01:40:34.4±0.1, 31°.65N×131°.84E, h25km±1km, M3.2*
ISC 14 01:40:32.4±1.8, 31°.64N±0°.05×131°.89E±0°.07, h14km±12km, n16, σ0°.82 /20, mb3.5/4, 1C-3D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNAR	**Kushima--Naru**	**0.54 258**		⇓P	**Pb**	**01 40 44.5**	**+0.9**
JNAR				S	**Sb**	**01 40 51.6**	**+0.3**
JTSN	**Tsuno**	**0.69 332**		⇓P	**Pb**	**01 40 46.9**	**+0.8**
JTSN				*e*S	**Sb**	**01 40 55.8**	**+0.3**
JTZ	**Takazaki**	**0.73 291**		⇓P	**Pb**	**01 40 47.3**	**+0.4**
JTZ				*e*S	**Sb**	**01 40 56.8**	**0.0**
JZO	**Okuchi**	**1.21 295**		P	**Pn**	**01 40 54.7**	**-0.2**
JSU	**Suzuyama**	**1.23 264**		P	**Pb**	**01 40 55.6**	**+0.1**
JSU				S	**Sg**	**01 41 11.6**	**-0.6**
JTN	**Tanegashima 3**	**1.26 219**		P	**Pg**	**01 40 56.4**	**-0.2**
JIU2	**Izumi 2**	**1.28 315**		⇑P	**Pb**	**01 40 56.5**	**+0.2**
JTO	**Tosashimizu**	**1.44 32**		P	**Pn**	**01 40 58.1**	**0.0**
JTO				S	**Sn**	**01 41 15.5**	**-1.3**
JNU	**Nakatsue**	**1.71 330**		Pn	**Pn**	**01 41 02.9**	**+1.1**
JNU	19nm,0.3s,baz=142,slow=5.7,SNR=35			Sn	**Sg**	**01 41 26.7**	**-0.6**
	19nm,0.3s,baz=232,slow=19,SNR=9.4						
JNU				LR	LR	01 41 55.3	
	comp=Z,320nm,18.3s,baz=144,slow=49						
KSRS	**Korea Array**	**6.66 332**		LR	LR	01 45 09.4	
	comp=Z,108nm,18.1s,baz=148,slow=42						
ASAJ	**Asahikawa**	**15.03 31**		LR	LR	01 50 22.6	
	comp=Z,28nm,21.4s,baz=16,slow=39						
KLR	**Kul'dur**	**17.57 360**		P	**P**	**01 44 39.0**	**+1.3**
	0.0nm,0.3s,baz=182,slow=6.4,SNR=7.9						
SONM	**Songino Array**	**25.25 317**		P	**P**	**01 45 58.1**	**+0.1**
	1.3nm,0.8s,baz=130,slow=10,SNR=5.9						
KURBB	**Kurchatov Arra**	**43.39 312**		P	**P**	**01 48 32.5**	**-1.8**
	0.2nm,0.3s,baz=100,slow=9.2,SNR=2.7						
WRA	**Warramunga Arr**	**51.34 177**		P	**P**	**01 49 36.8**	**+0.3**
	0.6nm,0.9s,baz=354,slow=7.7,SNR=3.5						
ILAR	**Eielson Array**	**58.17 30**		P	**P**	**01 50 26.0**	**+0.5**
	0.3nm,0.9s,baz=260,slow=5.4,SNR=5.1						

*NIED **14** 01:53:00, 37°.90N×144°.40E, h8km, Mw3.6 Best double couple: M0=3.12000×10^14 NP1:φ=28.00000°, δ=26.00000°, λ=-58.00000°. NP2:φ=174.00000°, δ=68.00000°, λ=-104.00000°.*
*IDC **14** 01:53:23.0±0.9, 37°.59N×144°.70E, h0km, mb3.7/8, mb1 3.9/10, mb1mx3.6/66, mbtmp3.8/10, ML4.2/2, MS2.7/3, Ms1 2.7/3, ms1mx2.3/62, Error ellipse: s-maj=24.5km s-min=21.1km az=129.0*
*JMA **14** 01:53:26.9±0.2, 37°.92N×144°.37E, h44km, M3.5*
*ISCJB **14** 01:53:27.1±0.7, 37°.96N±0°.05×144°.39E±0°.05, h33km, mb3.6/8, MS3.4/1, Error ellipse: s-maj=7.4km s-min=5.8km az=177.8*
ISC 14 01:53:28.7±0.9, 37°.94N±0°.06×144°.44E±0°.07, h35km, n33, σ2°.37 /38, mb3.6/8, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.45 299**		P	**Pn**	**01 54 05.4**	**-0.7**
OFUJ				*e*S	**Sn**	**01 54 34.1**	**-0.8**
JIO	**Ouri**	**2.48 283**		P	**Pn**	**01 54 05.6**	**-1.0**
JIO				*e*S	**Sn**	**01 54 34.0**	**-1.7**
MIYJ	**Miyakonagasawa**	**2.62 309**		P	**Pn**	**01 54 06.9**	**-1.5**
MIYJ				*e*S	**Sn**	**01 54 37.6**	**-1.4**
JMK	**Ichinoseki**	**2.72 293**		P	**Pn**	**01 54 09.3**	**-0.5**
JMK				*e*S	**Sn**	**01 54 41.1**	**-0.4**
JOM	**Ohasama**	**2.90 303**		P	**Pn**	**01 54 12.1**	**-0.2**
JOM				*e*S	**Sn**	**01 54 45.4**	**-0.5**
JFT	**Otama**	**3.28 264**		P	**Pn**	**01 54 17.1**	**-0.4**
JFT				*e*S	**Sn**	**01 54 53.8**	**-1.5**
JANG	**Nango**	**3.33 318**		P	**Pn**	**01 54 18.5**	**+0.3**
JANG				*e*S	**Sn**	**01 54 55.9**	**-0.6**
JYK	**Kaneyama**	**3.35 288**		P	**Pn**	**01 54 18.5**	**0.0**
JYK				*e*S	**Sn**	**01 54 57.0**	**0.0**
JKB	**Kayabe**	**4.73 328**		*e*S	**Sn**	**01 55 29.4**	**-1.7**
JCH	**Churui**	**4.74 350**		P	**Pn**	**01 54 36.8**	**-0.8**
JCH				*e*S	**Sn**	**01 55 28.6**	**-2.7**
JRY	**Ryogami san**	**4.83 248**		P	**Pn**	**01 54 37.1**	**-1.8**
JRY				*e*S	**Sn**	**01 55 28.7**	**-4.9**
JOD2	**Odawara 2**	**5.06 240**		*e*S	**Sn**	**01 55 34.5**	**-4.8**
MJAR	**Matsushiro Arr**	**5.16 256**		Pn	**Pn**	**01 54 43.3**	**-0.1**
	2.4nm,0.3s,baz=80,slow=15,SNR=15						
MJAR				Sn	**Sn**	**01 55 39.3**	**-2.4**
	0.6nm,0.3s,baz=92,slow=24,SNR=2.7						
MJAR				LR	LR	01 57 16.9	
	comp=Z,38nm,18.3s,baz=95,slow=44						
MAT	**Matsushiro**	**5.16 256**		P	**Pn**	**01 54 43.8**	**+0.4**
MAT				*e*S	**Sn**	**01 55 38.0**	**-3.7**
NEM2	**Nemuro 2**	**5.51 10**		P	**Pn**	**01 54 44.8**	**-3.4**
NEM2				*e*S	**Sn**	**01 55 43.8**	**-6.5**
JTKR	**Abashiri--Toko**	**6.04 356**		P	**Pn**	**01 54 54.4**	**-1.0**
JTKR				*e*S	**Sn**	**01 55 59.4**	**-3.9**
JCJ	**Chichijima**	**10.98 191**		Pn	Pn	01 55 56.5	-6.7
	6.1nm,0.3s,baz=261,slow=23,SNR=8.3						
KSRS	**Korea Array**	**13.09 273**		LR	LR	02 01 35.0	
	comp=Z,13nm,20.7s,baz=95,slow=37						
H11N2	**WAKE ISLAND Hy 26.65 127**			T	T	02 26 39.5	
	baz=323,slow=75						
H11N1	**WAKE ISLAND Hy 26.66 127**			T	T	02 26 43.1	
	baz=323						
H11N3	**WAKE ISLAND Hy 26.67 127**			T	T	02 26 49.9	
	baz=323,slow=75						
H11S1	**WAKE ISLAND Hy 27.44 129**			T	T	02 27 42.1	
	baz=316						
H11S3	**WAKE ISLAND Hy 27.44 129**			T	T	02 27 47.1	
	baz=316						
H11S2	**WAKE ISLAND Hy 27.45 129**			T	T	02 27 39.2	
	baz=316						
KDAK	**Kodiak Island**	**44.81 43**		P	**P**	**02 01 38.6**	**-0.2**
	2.7nm,0.7s,baz=285,slow=12,SNR=4.3						
MKAR	**Makanchi Array**	**45.68 302**		P	**P**	**02 01 47.9**	**+2.0**
	0.2nm,0.4s,baz=85,slow=5.1,SNR=2.4						
KURBB	**Kurchatov Arra**	**47.34 308**		P	**P**	**02 02 01.7**	**+2.8**
	0.9nm,0.6s,baz=81,slow=7.9,SNR=5.7						
ILAR	**Eielson Array**	**47.44 33**		P	**P**	**02 01 59.8**	**+0.3**
	0.4nm,0.8s,baz=267,slow=7.2,SNR=4.7						
BVAR	**Borovoye Array**	**51.74 312**		P	**P**	**02 02 35.8**	**+3.5**
	0.1nm,0.3s,baz=64,slow=13,SNR=2.3						
WRA	**Warramunga Arr**	**58.35 191**		P	**P**	**02 03 17.8**	**-2.6**
	0.5nm,0.7s,baz=11,slow=7.2,SNR=9.9						
NVAR	**Mina Array Bea**	**72.51 55**		P	**P**	**02 04 53.6**	**+1.4**
	0.3nm,0.7s,baz=296,slow=7.0,SNR=4.3						
HFS	**Hagfors**	**74.23 337**		P	**P**	**02 05 02.8**	**+1.2**
	1.7nm,0.9s,baz=66,slow=18,SNR=2.4						
SFJD	**Kangerlussuaq**	**74.76 6**		LR	LR	02 41 46.4	
	comp=Z,17nm,18.1s,baz=192,slow=39						

*IDC **14** 02:17:21.6±0.5, 3°.76S×128°.56E, h0km, mb4.6/22, mb1 4.7/25, mb1mx4.5/53, mbtmp4.6/25, ML3.6/3, MS3.6/24, Ms1 3.6/24, ms1mx3.4/58, Error ellipse: s-maj=20.0km s-min=11.4km az=73.0*
*MOS **14** 02:17:23.7±1.0, 3°.73S×128°.68E, h25km, mb5.1/27, Error ellipse: s-maj=14.7km s-min=6.7km az=108.9*
*DJA **14** 02:17:25.6±0.3, 4°.5±2°×12°.9E±°, h13km±3km, M4.8/21, mB5.4/9, mb4.8/21, MLv4.9/13, Mw(mB)4.8/9*
*ISCJB **14** 02:17:25.5±0.2, 3°.73S±0°.03×128°.81E±0°.03, h37km, mb4.8/74, MS3.7/25, Error ellipse: s-maj=4.1km s-min=3.5km az=142.0*
*NEIC **14** 02:17:26.6±2.4, 3°.72S×128°.76E, h34km±17km, mb4.8/42, Error ellipse: s-maj=7.5km s-min=5.4km az=67.0*
*BJI **14** 02:17:27.7, 3°.66S×129°.24E, h63km, mb4.8/35, mB5.0/22, Ms4.5/5, Ms7 4.2/2*
ISC 14 02:17:27.4±0.3, 3°.74S±0°.04×128°.85E±0°.05, h37km, n194, σ1°.64 /200, mb4.8/74, MS3.5/25, 12C-5D, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.40 11**		P	Pn	02 17 30.7	-5.8
AAI	**Ambon**	**0.66 275**		P	Pn	02 17 34.5	-5.8
BNDI	**Bandanaira**	**1.30 126**		P	**Pn**	**02 17 48.3**	**-0.8**
NLAI	**Namlea**	**1.82 286**		P	**Pn**	**02 17 53.4**	**-2.8**
SANI	**Sanana**	**3.32 300**		P	**Pn**	**02 18 14.6**	**-2.2**
LBMI	**Labuha**	**3.37 336**		P	**Pn**	**02 18 16.4**	**-1.1**
FAKI	**Fak Fak**	**3.49 77**		P	**Pn**	**02 18 20.4**	**+1.2**
FAKI	**Fak Fak**	**3.49 77**		*e*Pn	**Pn**	**02 18 20.8**	**+1.6**
FAKI				*e*Sn	**Sn**	**02 19 01.5**	**+2.2**
SIJI	**Sorong**	**3.74 40**		Pn	**Pn**	**02 18 22.6**	**0.0**
	27nm,0.3s,baz=255,slow=23,SNR=43						
SIJI				Sn	**Sn**	**02 19 05.8**	**+0.4**
	24nm,0.3s,baz=74,slow=19,SNR=7.8						
SIJI				LR	LR	02 20 34.3	
	comp=Z,1μm,18.1s,baz=220,slow=49						
KMPI	**Kaimana, Papua**	**4.84 89**		P	**Pn**	**02 18 40.3**	**+2.5**
RKPI	**Ransiki, Papua**	**5.76 68**		P	**Pn**	**02 18 50.0**	**-0.5**
KDI	**Kendari**	**6.22 268**		P	Pn	02 19 09.6	+13
LUWI	**Luwuk**	**6.64 294**		P	**Pn**	**02 19 01.0**	**-1.5**
LUWI	**Luwuk**	**6.64 294**		*e*Pn	**Pn**	**02 19 03.8**	**+1.3**
SOEI	**Soe**	**7.51 217**		P	**Pn**	**02 19 18.6**	**+4.0**
SOEI	**Soe**	**7.51 217**		*e*Pn	**Pn**	**02 19 17.6**	**+3.0**
APSI	**Ampana**	**7.73 291**		P	**Pn**	**02 19 18.6**	**+1.2**
MRSI	**Marisa**	**8.08 301**		P	**Pn**	**02 19 23.9**	**+1.6**
BATI	**Baumata**	**8.23 218**		Pn	**Pn**	**02 19 27.6**	**+3.2**
	8.1nm,0.3s,baz=180,slow=3.0,SNR=7.4						
BATI	**Baumata**	**8.23 218**		P	**Pn**	**02 19 27.0**	**+2.6**
BKSI	**Bulukumba**	**8.84 259**		P	**Pn**	**02 19 36.0**	**+3.3**
TTSI	**Tana Toraja**	**9.04 274**		P	**Pn**	**02 19 37.2**	**+1.7**
SPSI	**Sidrap Palu**	**9.06 268**		P	**Pn**	**02 19 34.6**	**-1.2**
MTN	**Manton Dam**	**9.32 166**		*e*Pn	**Pn**	**02 19 39.8**	**+0.5**
MTN				*e*Sn	**Sn**	**02 21 25.2**	**+2.3**
PCI	**Palu**	**9.44 287**		P	**Pn**	**02 19 41.6**	**+0.7**
PCI	**Palu**	**9.44 287**		P	**Pn**	**02 19 44.6**	**+3.7**
PCI				pmax	pmax		
	comp=Z,150nm,1.1s						
MPSI	**Mapaga**	**9.82 294**		P	**Pn**	**02 19 47.0**	**+0.8**
WRAB	**Tennant Creek**	**16.96 162**		*e*Pn	**Pn**	**02 21 20.7**	**-1.3**
	comp=Z,48nm,1.3s						
WRAB	**Tennant Creek**	**16.96 162**		⇓*e*P	**Pn**	**02 21 20.6**	**-1.4**
WRAB				pmax	pmax		
	comp=Z,33nm,1.2s						
WR1	**Warramunga Arr**	**16.97 162**		*e*Pn	**Pn**	**02 21 19.9**	**-2.2**
	comp=Z,69nm,1.4s						
WR1				*e*Sn	**Sn**	**02 24 21.2**	**-8.5**
WRA	**Warramunga Arr**	**16.97 162**		P	**Pn**	**02 21 19.9**	**-2.2**
	comp=Z,0.4nm,0.3s,baz=344,slow=12,SNR=30						
WRA				S	**Sn**	**02 24 21.2**	**-8.5**
	baz=339,slow=26,SNR=2.4						
WB2	**Warramunga Arr**	**16.97 162**		*e*Pn	**Pn**	**02 21 22.2**	**+0.1**
	comp=Z,33nm,1.0s						
COEN	**Coen**	**17.40 127**		*e*Pn	**Pn**	**02 21 26.0**	**-1.5**
	comp=Z,60nm,0.9s						
WOJI	**Wonogiri, Jawa**	**18.29 256**		P	**Pn**	**02 21 41.7**	**+3.2**
PMG	**Port Moresby**	**19.03 108**		P	**P**	**02 21 47.2**	**+0.7**
	comp=Z,0.9nm,0.3s,baz=318,slow=6.3,SNR=6.8						
PMG				LR	LR	02 31 37.6	
	comp=Z,393nm,18.5s,baz=301,slow=44						
PMG	**Port Moresby**	**19.03 108**		*e*P	**P**	**02 21 47.7**	**+1.2**
	comp=Z,43nm,1.2s						
PMG	**Port Moresby**	**19.03 108**		*e*P	**P**	**02 21 47.7**	**+1.2**
PMG				pmax	pmax		
	comp=Z,43nm,1.2s						
KSM	**Kuching**	**19.24 285**		*e*P	**Pn**	**02 21 49.5**	**-0.5**
	comp=Z,28nm,1.3s						
MBWA	**Marble Bar**	**19.45 206**		*e*P	**Pn**	**02 21 52.5**	**+0.1**
	comp=Z,52nm,1.4s						
KPJI	**Karang Pucung**	**20.14 259**		P	Pn	02 21 59.7	-0.9
AS31	**Alice Springs**	**20.40 167**		*e*P	**P**	**02 22 02.6**	**+1.3**
	comp=Z,27nm,0.9s						
AS31				*e*S	**S**	**02 25 50.3**	**+2.3**
AS31				*e*PcP	**PcP**	**02 26 12.7**	**-0.5**
ASAR	**Alice Springs**	**20.40 167**		P	**P**	**02 22 02.6**	**+1.3**
	comp=Z,87nm,0.9s,baz=350,slow=11,SNR=179					

comp=Z,3.4nm,0.7s,baz=177,slow=11,SNR=14
KSRS LR LR 02 41 05.8
comp=Z,68nm,21.5s,baz=189,slow=35
KS01 Wonju Array Si 41.02 359 *eP* **P 02 25 06.9 -0.2**
MAJO Matsushiro 41.02 12 *eP* **P 02 25 07.1 0.0**
comp=Z,18nm,1.0s
MAJO Matsushiro 41.02 12⇑ *eP* **P 02 25 06.0 -1.1**
MAJO pmax pmax
comp=Z,14nm,1.1s
MAT Matsushiro 41.02 12 P **P 02 25 06.1 -1.0**
MJAR Matsushiro Arr 41.02 12 P **P 02 25 06.1 -1.0**
comp=Z,9.9nm,0.9s,baz=191,slow=11,SNR=14
MJB9 Matsu-Tunnel 41.02 12 *eP* **P 02 25 07.2 0.0**
comp=Z,18nm,1.0s
INCN Inchon 41.07 357 *eP* **P 02 25 05.5 -2.0**
comp=Z,76nm,1.4s
INCN Inchon 41.07 357 *eP* **P 02 25 05.5 -2.0**
INCN pmax pmax
comp=Z,76nm,1.4s
CD2 Chengdu 41.96 327 P **P 02 25 14.8 -0.2**
CD2 pmax pmax
comp=Z,20nm,0.9s
BJI Beijing 45.10 346 *eP* **P 02 25 39.1 -0.9**
BJI pmax pmax
comp=Z,15nm,0.9s
LZH Lanzhou 46.01 332 *eP* **P 02 25 50.8 +3.2**
LZH pP sP 02 26 05.8 +3.0
LZH sP pP 02 26 11.5 +13
LZH *e*PP **PP 02 27 38.0 +2.0**
LZH pmax pmax
comp=Z,20nm,1.0s
LZH pmax pmax
comp=Z,150nm,4.8s
LZH LR LR
comp=Z,280nm,14.9s
LZH LR LR
comp=Z,280nm,15.2s
LZH LR LR
comp=Z,360nm,16.0s
HHC Hu-ho-hao-te 47.11 342 *eP* **P 02 25 57.6 +1.5**
HHC S **S 02 32 46.1 +0.1**
HHC pmax pmax
comp=Z,19nm,1.3s
HHC pmax pmax
comp=Z,42nm,3.7s
USRK Ussuriysk Ar. 47.81 3 P **P 02 25 59.9 -1.4**
comp=Z,5.6nm,0.9s,baz=197,slow=6.0,SNR=10
ASAJ Asahikawa 49.22 13 P **P 02 26 12.3 +0.2**
comp=Z,4.4nm,0.3s,baz=240,slow=14,SNR=8.2
ASAJ LR LR 02 46 57.7
comp=Z,55nm,21.2s,baz=253,slow=36
ASAJ Asahikawa 49.22 13 *eP* **P 02 26 11.7 -0.5**
comp=Z,13nm,0.9s
PALK Pallekele 49.28 283 LR LR 02 50 01.8
comp=Z,62nm,18.0s,baz=101,slow=40
GTA Gaotai 50.59 331 *eP* **P 02 26 23.1 +0.3**
GTA pP sP 02 26 38.8 +0.7
GTA sP pP 02 26 45.6 +12
GTA pmax pmax
comp=Z,5.0nm,0.7s
YSS Yuzh-Sakhalins 51.95 12⇑ *eP* **P 02 26 32.6 -0.1**
YSS pmax pmax
comp=Z,29nm,2.5s
KLR Kul'dur 52.82 2 *ceP* **P 02 26 39.3 +0.2**
LBZ Lake Benmore 54.38 144 *eP* **P 02 26 52.2 +1.6**
comp=Z,38nm,1.3s
THZ Tophouse 54.58 140 *eP* **P 02 26 53.7 +1.5**
comp=Z,64nm,1.5s
ULN Ulaanbaatar 54.83 342 *eP* **P 02 26 53.4 -0.7**
comp=Z,6.1nm,1.1s
ULN Ulaanbaatar 54.83 342 *ceP* **P 02 26 53.8 -0.3**
ULN pmax pmax
comp=Z,5.0nm,1.0s
SONA0 Songino Array 55.01 342 *eP* **P 02 26 54.8 -0.5**
SONM Songino Array 55.01 342 P **P 02 26 54.8 -0.5**
comp=Z,3.6nm,1.1s,baz=150,slow=6.3,SNR=13
SONA1 Songino Array 55.02 342 *eP* **P 02 26 54.7 -0.7**
ZEA Zeya 57.29 359 *eP* **P 02 27 11.2 -0.1**
ZEA pmax pmax
comp=Z,23nm,1.0s
TLY Talaya 59.24 342 *eP* **P 02 27 26.3 +1.3**
TLY pmax pmax
comp=Z,5.0nm,1.1s
WMQ Urumqi 60.06 327 P **P 02 27 32.9 +2.0**
WMQ pP sP 02 27 48.6 +2.2
WMQ sP pP 02 27 55.3 +13
WMQ pmax pmax
comp=Z,190nm,4.1s
WMQ LR LR
comp=Z,190nm,27.9s
WMQ LR LR
comp=Z,220nm,24.1s
PEA0B Petropavlovsk- 61.63 19 *eP* **P 02 27 41.3 0.0**
comp=Z,24nm,1.0s
PETK Petropavlovsk- 61.63 19 P **P 02 27 42.2 +0.9**
comp=Z,11nm,0.9s,baz=191,slow=3.0,SNR=12
PETK Petropavlovsk- 61.63 19 *eP* **P 02 27 41.8 +0.5**
PETK Petropavlovsk- 61.63 19 *eP* **P 02 27 41.8 +0.5**
PEA1 Petropavlovsk- 61.63 19 *eP* **P 02 27 42.2 +0.9**
PET Petropavlovsk 61.88 20 *eP* **P 02 27 43.4 +0.5**
PET pmax pmax
comp=Z,48nm,2.5s
HVS Khovu-Aksy 62.37 336⇑ *eP* **P 02 27 46.9 +0.5**
HVS pmax pmax
comp=Z,20nm,1.0s
JOHN Johnston Islan 64.16 70 *eP* **P 02 27 58.0 -0.7**
comp=Z,154nm,1.0s
KSH Kashi 64.86 317 P **P 02 28 05.6 +2.4**
MK01 Makanchi Array 64.87 327 *eP* **P 02 28 01.6 -1.4**
MK31 Makanchi Array 64.89 327 *eP* **P 02 28 02.1 -1.0**
MK31 Makanchi Array 64.89 327 *eP* **P 02 28 02.1 -1.0**
MK32 Makanchi Array 64.89 327 *eP* **P 02 28 01.7 -1.4**
MKAR Makanchi Array 64.89 327 P **P 02 28 01.7 -1.4**
comp=Z,3.3nm,0.8s,baz=122,slow=8.0,SNR=24
MKAR LR LR 02 58 55.1
comp=Z,28nm,18.1s,baz=124,slow=38
MKAR Makanchi Array 64.89 327 *eP* **P 02 28 02.1 -1.0**
comp=Z,18nm,0.8s
MKAR Makanchi Array 64.89 327 *i* P **P 02 28 02.0 -1.0**
MKAR pmax pmax
comp=Z,3.0nm,0.8s
MAKZ Makanchi 65.08 326 *eP* **P 02 28 03.2 -1.0**
comp=Z,6.1nm,1.1s
MAKZ Makanchi 65.08 326 *eP* **P 02 28 03.2 -1.0**
MAKZ pmax pmax
comp=Z,6.0nm,1.1s
MA2 Magadan 65.46 12⇑ *eP* **P 02 28 07.7 +1.3**
MA2 pmax pmax
comp=Z,11nm,1.0s
YAK Yakutsk 65.59 0 *eP* **P 02 28 06.3 -0.9**
comp=Z,99nm,0.9s
YAK Yakutsk 65.59 0 *eP* **P 02 28 06.8 -0.4**
YAK *e**PP **sP 02 28 21.2 -1.6**
YAK *e* 02 28 37.5
YAK *e* 02 30 30.9
YAK *e*PPP PPP 02 32 02.6
YAK *e*S **S 02 36 49.7 -0.1**
YAK *e**SS **sS 02 37 09.1 +0.7**
YAK *e* 02 37 54.4
YAK *e*SS **SS 02 41 04.3 -0.1**
YAK pmax pmax
comp=Z,79nm,0.9s
YAK pmax pmax
comp=N,18nm,1.0s
YAK pmax pmax
comp=E,3.0nm,1.1s
YAK pmax pmax
comp=Z,53nm,3.3s
YAK pmax pmax
comp=N,41nm,3.4s
YAK pmax pmax
comp=E,35nm,3.0s
YAK smax smax
comp=N,22nm,2.0s
YAK smax smax
comp=E,15nm,1.7s
ZAA0 Zalesovo Array 68.17 334 *eP* **P 02 28 23.1 -0.7**
comp=E,16nm,1.2s
ZALV Zalesovo Beam 68.17 334 P **P 02 28 22.1 -1.7**
comp=E,7.8nm,1.0s,baz=117,slow=5.2,SNR=20
ZALV LR LR 03 00 04.8
comp=E,25nm,20.7s,baz=68,slow=38
ZALV Zalesovo Beam 68.17 334 *eP* **P 02 28 22.5 -1.3**
ZALV Zalesovo Beam 68.17 334 *eP* **P 02 28 22.5 -1.3**
ZAA1 Zalesovo Array 68.18 334 *eP* **P 02 28 22.1 -1.7**
SEY Seymchan 68.85 11 P **P 02 28 28.7 +0.8**
comp=E,18nm,0.9s,baz=204,slow=7.0,SNR=32
SEY Seymchan 68.85 11 *ceP* **P 02 28 29.0 +1.2**
KURBB Kurchatov Arra 69.15 328 P **P 02 28 28.8 -1.2**
comp=E,5.2nm,0.8s,baz=129,slow=5.6,SNR=32
KURK Kurchatov 69.16 328 *eP* **P 02 28 28.8 -1.3**
KURK Kurchatov 69.16 328 *deP* **P 02 28 28.5 -1.5**
KURK pmax pmax
comp=Z,18nm,1.7s
NVS Novosibirsk 69.46 334 *eP* **P 02 28 31.0 -0.8**
NVS pmax pmax
comp=N,9.0nm,1.3s
NVS pmax pmax
comp=E,15nm,1.3s
NVS pmax pmax
comp=Z,15nm,1.3s
RAR Rarotonga 71.30 111 LR LR 02 58 50.1
comp=Z,23nm,20.0s,baz=306,slow=35
BVAR Borovoye Array 74.72 328 P **P 02 29 02.2 -1.1**
comp=Z,0.8nm,0.7s,baz=101,slow=3.1,SNR=4.1
BRVK Borovoye 74.79 328 *deP* **P 02 29 04.1 +0.4**
BRVK *i* *PP **sP 02 29 19.1 -0.3**
BRVK pmax pmax
comp=Z,9.0nm,1.7s
TIXI Tiksi 75.25 0 *eP* **P 02 29 04.6 -1.4**
comp=Z,12nm,0.9s
TIXI Tiksi 75.25 0 *ceP* **P 02 29 05.3 -0.7**
TIXI pmax pmax
comp=Z,13nm,1.0s
VNDA Vanda 75.80 173 P **P 02 29 08.6 -0.5**
comp=Z,2.1nm,0.7s,baz=356,slow=4.8,SNR=4.1
VNDA LR LR 03 02 49.5
comp=Z,50nm,18.2s,baz=329,slow=36
BILL Bilibino 76.23 14⇓ *eP* **P 02 29 12.0 +0.3**
BILL *e* 02 29 20.3
BILL pmax pmax
comp=Z,1.0nm,0.6s
BILL MLR MLR
comp=Z,404nm,24.0s
GEYT Alibeck 77.25 310 LR LR 03 08 28.0
comp=Z,30nm,19.1s,baz=125,slow=40
NRIK Noril'sk 78.14 346 P **P 02 29 22.9 +0.5**
comp=Z,13nm,0.8s,baz=140,slow=6.4,SNR=14
NRIK LR LR 03 06 31.6
comp=Z,22nm,18.3s,baz=72,slow=38
ABKAR Akbulak array 79.26 322 *eP* **P 02 29 27.6 -1.4**
AKTO Aktyubinsk 80.81 322 P **P 02 29 36.0 -1.3**
comp=Z,3.5nm,1.0s,baz=82,slow=4.8,SNR=5.1
AKTO LR LR 03 09 33.4
comp=Z,19nm,18.2s,baz=121,slow=39
OPO Ambohidratompo 80.92 252 P **P 02 29 37.2 -1.6**
comp=Z,2.3nm,0.6s,baz=84,slow=10,SNR=2.9
ARU Arti 82.35 328 *c i* P **P 02 29 45.5 +0.2**
ARU 02 32 49.2
ARU S **S 02 39 59.9 +1.3**
ARU SS **SS 02 45 19.1 -0.6**
ARU pmax pmax
comp=Z,10.0nm,1.7s
RAYN Ar Rayn 85.39 294 *eP* **P 02 30 01.4 -0.2**
comp=Z,9.3nm,1.3s
RAYN Ar Rayn 85.39 294 *eP* **P 02 30 01.4 -0.2**
RAYN pmax pmax
comp=Z,9.0nm,1.3s
QSPA South Pole Qui 86.21 180 P **P 02 30 03.2 -1.7**
comp=Z,4.5nm,0.9s,baz=258,slow=2.5,SNR=6.7
SYO Syowa Base 86.27 201⇓ *eX* P 02 30 16.5 +12
OHAK Old Harbor 86.58 32 *eP* **P 02 30 07.6 +0.9**
comp=Z,20nm,1.0s
KDAK Kodiak Island 87.06 32 *eP* **P 02 30 08.6 -0.4**
comp=Z,28nm,1.2s
KDAK Kodiak Island 87.06 32 *eP* **P 02 30 08.6 -0.4**
KDAK pmax pmax
comp=Z,28nm,1.2s
RSO Redoubt South 87.53 29 *eP* **P 02 30 11.2 -0.4**
GNI Garni 87.89 310 LR LR 03 17 05.4
comp=Z,19nm,19.5s,baz=112,slow=41
MLY Manley 89.32 25 *eP* **P 02 30 19.7 0.0**
comp=Z,2.9nm,1.0s
KIV Kislovodsk 89.81 314 *eP* **P 02 30 22.1 -0.4**
KIV pmax pmax
comp=Z,3.0nm,1.0s
RND Reindeer 89.87 26 *eP* **P 02 30 21.5 -0.8**
comp=Z,12nm,1.2s
RND Reindeer 89.87 26 *eP* **P 02 30 21.5 -0.8**
RND pmax pmax
comp=Z,13nm,1.2s
SML Sawmill 89.87 28 *eP* **P 02 30 22.1 -0.2**
comp=Z,11nm,1.1s
SML Sawmill 89.87 28 *eP* **P 02 30 22.1 -0.2**
SML pmax pmax
comp=Z,11nm,1.1s
WRH Wood River Hil 90.36 25 *eP* **P 02 30 23.5 -1.0**
comp=Z,3.4nm,1.0s
DHY Denali Highway 90.49 27 *eP* **P 02 30 25.1 -0.2**
comp=Z,8.2nm,1.2s
CCB Clear Creek Bu 90.50 25 *eP* **P 02 30 23.9 -1.2**
comp=Z,4.7nm,1.1s
ILAR Eielson Array 90.91 25 P **P 02 30 24.7 -2.4**
comp=Z,1.3nm,0.9s,baz=263,slow=4.2,SNR=9.5
ILB Eielson Array 90.91 25 *eP* **P 02 30 24.7 -2.4**
IL1 Eielson Array 90.91 25 *eP* **P 02 30 24.4 -2.7**
KMBO Kilima Mbogo 91.52 269 LR LR 03 08 41.8
comp=Z,40nm,18.9s,baz=87,slow=34
RIDG Independ'e Rid 91.69 26 *eP* **P 02 30 31.1 +0.3**
comp=Z,11nm,1.3s
KLMR Klimovskoe 92.92 331 *eP* P 02 30 29.9 -6.5
KLMR pmax pmax
comp=Z,25nm,2.1s
KLMR Klimovskoe 92.92 331 *eP* P 02 30 30.0 -6.4
KLMR AMP 02 30 45.7
comp=Z,25nm,2.1s
EGAK Eagle 93.36 25 *eP* **P 02 30 37.3 -1.1**
comp=Z,3.0nm,0.4s
DAWY Dawson 94.11 26 *eP* **P 02 30 42.5 +0.6**
comp=Z,10nm,1.1s
MMAI Mount Meron Ar 94.91 303 LR LR 03 23 60.0
comp=Z,20nm,18.7s,baz=305,slow=42
INK Inuvik 96.28 22 P **P 02 30 50.9 -0.8**
comp=Z,5.6nm,1.0s,baz=310,slow=4.0,SNR=6.2
INK Inuvik 96.28 22 *eP* **P 02 30 51.7 +0.1**
comp=Z,7.8nm,1.0s
INK Inuvik 96.28 22 *eP* **P 02 30 51.7 +0.1**
INK pmax pmax
comp=Z,8.0nm,1.0s
BR101 Keskin Array S 96.38 309 *eP* **P 02 30 52.6 -0.5**
BRTR Keskin Array B 96.38 309 P **P 02 30 52.6 -0.5**
comp=Z,0.3nm,0.8s,baz=52,slow=7.5,SNR=2.4
BRTR LR LR 03 24 32.4
comp=Z,10.0nm,18.1s,baz=86,slow=42
TOA0 Torodi Ar. Sit 127.00 284 *e*PKPdf **PKPdf 02 36 28.2 -0.4**
TORD Torodi Ar. Bea 127.00 284 PKP **PKPdf 02 36 27.3 -1.3**
comp=Z,1.6nm,0.8s,baz=66,slow=1.8,SNR=7.5
TOA1 Torodi Ar. Sit 127.00 284 *e*PKPdf **PKPdf 02 36 27.3 -1.3**
S39A Bolivar 128.77 43 *e*PKPdf **PKPdf 02 36 33.0 +1.6**
JTS JuntasAbangare 145.85 77 PKPbc **PKPab 02 37 05.2 +0.8**
comp=Z,7.0nm,0.9s,baz=326,slow=8.3,SNR=6.6
CPUP Villa Florida 149.51 169 PKPbc **PKPbc 02 37 12.8 -0.8**
comp=Z,5.6nm,1.0s,baz=145,slow=3.0,SNR=5.8
CPUP Villa Florida 149.51 169 *e*PKPbc **PKPbc 02 37 13.8 +0.2**
CPUP Villa Florida 149.51 169 *e*PKP2 **PKPbc 02 37 13.8 +0.2**
LPAZ La Paz 153.96 140 PKP **PKPdf 02 37 16.8 0.0**
comp=Z,0.5nm,0.7s,baz=214,slow=13,SNR=2.3
LPAZ PKPbc **PKiKP 02 37 26.3 +1.4**
comp=Z,0.6nm,0.7s,baz=158,slow=2.4,SNR=4.3
LPAZ PKPab **sPKPbc 02 37 40.0 -1.0**
comp=Z,1.5nm,0.8s,baz=240,slow=1.7,SNR=5.1
LPAZ La Paz 153.96 140 *e*PKPdf **PKPdf 02 37 16.8 0.0**
LPAZ *e*PKPbc **PKPbc 02 37 22.4 -2.4**
LPAZ PKPbc **PKiKP 02 37 26.3 +1.4**
LPAZ PKPab **sPKPbc 02 37 40.0 -1.0**
LPAZ La Paz 153.96 140 *e*PKIKP **PKPdf 02 37 16.8 0.0**
LPAZ *e* 02 37 22.4
LPAZ 02 37 26.3

*IDC **14** 02:46:54.9±0.9, 15°.33S×35°.30E, h0km, mb4.0/13, mb1 4.1/19, mb1mx3.9/60, mbtmp4.0/19, ML3.8/4, MS3.2/3, Ms1 3.2/3, ms1mx2.7/57, Error ellipse: s-maj=25.2km s-min=17.1km az=147.0*
*ISCJB **14** 02:46:55.7±0.6, 15°.41S±0°.05×35°.25E±0°.05, h21km±4km, mb4.0/15, Error ellipse: s-maj=9.2km s-min=5.2km az=137.4*
*NEIC **14** 02:46:56.3±0.3, 15°.37S×35°.26E, h10km, mb4.3/7, Error ellipse: s-maj=6.9km s-min=5.4km az=150.0*
*EAF **14** 02:46:56.1±0.7, 15°.19S×35°.39E, h6km±399km*

ISC 14 02:46:56.7±0.7, 15°.39S±0°.06×35°.28E±0°.05, h17km±4km, n52, σ1°80/67, mb4.1/15, Malawi

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ZOMB	**Zomba**	**0.07**	**86**	*i* P		**Pg**	**02 46 59.8**	**-0.3**
ZOMB				S		**Sg**	**02 47 02.6**	**+0.1**
ZOMB	**Zomba**	**0.07**	**86**	*i* P		**Pg**	**02 46 59.8**	**-0.3**
ZOMB				*i* S		**Sg**	**02 47 02.6**	**+0.1**
LSZ	**Lusaka**	**6.84**	**270**	Pn		**Pn**	**02 48 37.4**	**+0.9**
	5.4nm,0.3s,baz=94,slow=12,SNR=48							
LSZ				Sn		**Sn**	**02 49 53.7**	**-0.4**
	7.4nm,0.3s,baz=107,slow=21,SNR=10							
LSZ				Lg		Lg	02 50 23.3	
	18nm,0.3s,baz=21,slow=20,SNR=6.6							
LSZ				LR		LR	02 51 22.6	
	comp=Z,266nm,19.1s,baz=59,slow=39							
LSZ	**Lusaka**	**6.84**	**270**	*e*Pn		**Pn**	**02 48 37.0**	**+0.5**
LSZ				*e*Sn		**Sn**	**02 49 53.7**	**-0.4**
LSZ				Lg		Lg	02 50 23.3	
BLWY	**Bulawayo**	**7.92**	**232**	*i* P		**Pn**	**02 48 52.6**	**+1.3**
BLWY	**Bulawayo**	**7.92**	**232**	*i* P		**Pn**	**02 48 52.6**	**+1.3**
MATP	**Matopo**	**8.17**	**231**	Pn		**Pn**	**02 48 56.1**	**+1.4**
	1.0nm,0.3s,baz=60,slow=14,SNR=24							
MATP				Sn		**Sn**	**02 50 27.2**	**+0.5**
	2.8nm,0.3s,baz=3.3,slow=8.9,SNR=8.5							
MATP				Lg		Lg	02 51 07.0	
	10nm,0.3s,baz=317,slow=19,SNR=8.5							
MATP				LR		LR	02 51 59.7	
	comp=Z,75nm,21.4s,baz=48,slow=37							
MATP	**Matopo**	**8.17**	**231**	*i* P		**Pn**	**02 48 57.0**	**+2.4**
MATP	**Matopo**	**8.17**	**231**	*i* P		**Pn**	**02 48 57.0**	**+2.4**
OPO	**Ambohidratompo**	**11.82**	**107**	Pn		**Pn**	**02 49 45.5**	**+0.7**
	1.7nm,0.3s,baz=284,slow=11,SNR=14							
OPO				Sn		**Sn**	**02 51 53.8**	**-2.7**
	1.4nm,0.3s,baz=266,slow=16,SNR=4.2							
ABPO	**Ambohimpanom**	**11.97**	**109**	*e*Pn		**Pn**	**02 49 47.6**	**+0.8**
ABPO				*e*Sn		**Sn**	**02 51 57.4**	**-2.7**
LBTB	**Lobatse**	**13.20**	**222**	Pn		**Pn**	**02 50 04.0**	**+0.5**
	0.6nm,0.3s,baz=37,slow=13,SNR=13							
LBTB				Sn		**Sn**	**02 52 33.8**	**+3.8**
	0.3nm,0.3s,baz=112,slow=17,SNR=2.3							
LBTB				Lg		Lg	02 53 44.3	
	1.5nm,0.3s,baz=128,slow=23,SNR=8.1							
LBTB	**Lobatse**	**13.20**	**222**	*e*Pn		**Pn**	**02 50 04.0**	**+0.5**
LBTB				*e*Sn		**Sn**	**02 52 26.6**	**-3.4**
LBTB				Sn		**Sn**	**02 52 33.8**	**+3.8**
LBTB				Lg		Lg	02 53 44.3	
KMBO	**Kilima Mbogo**	**14.30**	**8**	Pn		**P**	**02 50 23.2**	**-2.7**
	0.1nm,0.3s,baz=233,slow=20,SNR=2.7							
KMBO				Sn		**Sn**	**02 52 57.5**	**+0.2**
	0.2nm,0.3s,baz=252,slow=20,SNR=2.9							
KMBO				Lg		Lg	02 54 25.1	
	0.4nm,0.3s,baz=285,slow=18,SNR=4.6							
KMBO	**Kilima Mbogo**	**14.30**	**8**	*e*Pn		**Pn**	**02 50 14.9**	**-3.9**
KMBO				*e*Sn		**Sn**	**02 52 57.5**	**+0.2**
KMBO				Lg		Lg	02 54 25.1	
MBAR	**Mbarara**	**15.36**	**343**	*e*Pn		**Pn**	**02 50 32.0**	**-1.0**
	10nm,1.1s							
BOSA	**Boshof**	**16.10**	**213**	Pn		**Pn**	**02 50 42.2**	**-0.2**
	0.2nm,0.3s,baz=44,slow=12,SNR=4.0							
BOSA				Sn		**Sn**	**02 53 38.1**	**-2.6**
	0.1nm,0.3s,baz=128,slow=17,SNR=2.9							
BOSA				Lg		Lg	02 55 16.3	
	0.3nm,0.3s,baz=119,slow=19,SNR=2.6							
BOSA	**Boshof**	**16.10**	**213**	*e*Pn		**Pn**	**02 50 42.2**	**-0.2**
	8.8nm,1.1s							
BOSA				*e*Sn		**Sn**	**02 53 38.1**	**-2.6**
BOSA				Lg		Lg	02 55 16.3	
TSUM	**Tsumeb**	**17.32**	**255**	P		**P**	**02 51 00.0**	**+0.8**
	0.5nm,0.3s,baz=61,slow=11,SNR=6.0							
TSUM				S		**Sn**	**02 54 03.2**	**-7.2**
	0.1nm,0.3s,baz=120,slow=20,SNR=2.4							
TSUM				Lg		Lg	02 56 06.9	
	0.3nm,0.3s,baz=144,slow=14,SNR=4.9							
TSUM				LR		LR	02 57 59.5	
	comp=Z,110nm,20.0s,baz=334,slow=38							
TSUM	**Tsumeb**	**17.32**	**255**	*e*Pn		**Pn**	**02 50 57.9**	**0.0**
	5.5nm,1.2s							
TSUM				*e*Sn		**Sn**	**02 54 07.5**	**-2.9**
TSUM				Lg		Lg	02 56 06.9	
SUR	**Sutherland**	**21.43**	**215**	Lg		Lg	02 57 56.9	
	0.7nm,0.9s,baz=315,slow=20,SNR=2.6							
TORD	**Torodi Ar. Bea**	**43.68**	**309**	P		**P**	**02 55 01.4**	**+0.4**
	0.6nm,0.7s,baz=125,slow=7.8,SNR=7.5							
TOA1	**Torodi Ar. Sit**	**43.69**	**309**	*e*P		**P**	**02 55 01.4**	**+0.4**
DBIC	**Dimbokro**	**45.40**	**296**	*e*P		**P**	**02 55 13.8**	**-1.0**
	23nm,1.4s							
ASF	**Jabal al Asfar**	**47.31**	**2**	P		**P**	**02 55 30.6**	**+1.0**
	0.7nm,0.4s,baz=179,slow=6.8,SNR=5.6							
MMAI	**Mount Meron Ar**	**48.13**	**0**	P		**P**	**02 55 35.5**	**-0.4**
	1.2nm,0.6s,baz=175,slow=7.2,SNR=4.5							
IDI	**Anoyia**	**51.35**	**349**	P		**P**	**02 56 01.4**	**+1.0**
	4.7nm,0.9s,baz=138,slow=12,SNR=3.6							
IDI	**Anoyia**	**51.35**	**349**	*e*P		**P**	**02 56 01.4**	**+1.0**
	6.3nm,1.0s							
BRTR	**Keskin Array B**	**54.85**	**358**	P		**P**	**02 56 27.9**	**+1.7**
	0.5nm,0.7s,baz=175,slow=11,SNR=4.4							
BR101	**Keskin Array S**	**54.85**	**358**	*e*P		**P**	**02 56 27.9**	**+1.7**
DIVS	**Divibare**	**60.82**	**347**	*e*P		**P**	**02 57 10.4**	**+2.4**
	2.9nm,1.0s							
BUR04	**Bucovina Ar. S**	**63.36**	**352**	*e*P		**P**	**02 57 25.9**	**+0.9**
ES19	**SONSECA Array**	**65.85**	**328**	*e*P		**P**	**02 57 43.2**	**+1.8**
ESDC	**Sonseca Array**	**65.86**	**328**	P		**P**	**02 57 41.2**	**-0.3**
	1.4nm,0.9s,baz=150,slow=4.9,SNR=6.0							
KK31	**Karatay Array**	**66.58**	**27**	*e*P		**P**	**02 57 46.5**	**+0.6**
KKAR	**Karatay Array**	**66.58**	**27**	*e*P		**P**	**02 57 46.5**	**+0.6**
GEC2	**GERESS Array S**	**66.76**	**345**	*e*P		**P**	**02 57 47.9**	**+0.9**
	5.4nm,1.5s							
GERES	**GERESS Array B**	**66.76**	**345**	P		**P**	**02 57 47.9**	**+0.9**
	0.7nm,0.8s,baz=142,slow=3.7,SNR=4.9							
ABKAR	**Akbulak array**	**67.97**	**17**	*e*P		**P**	**02 57 54.4**	**-0.2**
AKTO	**Aktyubinsk**	**68.52**	**15**	P		**P**	**02 57 57.5**	**-0.6**
	1.0nm,0.6s,baz=194,slow=7.2,SNR=5.7							
CM31	**Chiang Mai Arr**	**71.14**	**64**	*e*P		**P**	**02 58 15.7**	**+0.8**
CMAR	**Chiang Mai Arr**	**71.14**	**64**	P		**P**	**02 58 15.7**	**+0.8**
	1.8nm,0.4s,baz=249,slow=8.1,SNR=4.9							
MK32	**Makanchi Array**	**74.91**	**31**	*e*P		**P**	**02 58 37.2**	**+0.6**
MKAR	**Makanchi Array**	**74.91**	**31**	P		**P**	**02 58 37.2**	**+0.6**
	0.7nm,0.9s,baz=212,slow=6.5,SNR=4.0							
KURBB	**Kurchatov Arra**	**75.86**	**27**	P		**P**	**02 58 42.6**	**+0.7**
	0.7nm,0.5s,baz=233,slow=5.8,SNR=6.2							
KURK	**Kurchatov**	**75.97**	**27**	*e*P		**P**	**02 58 42.6**	**+0.1**
ZALV	**Zalesovo Beam**	**80.95**	**27**	P		**P**	**02 59 10.5**	**+0.6**
	0.8nm,0.3s,baz=204,slow=3.2,SNR=3.3							
ZAA1	**Zalesovo Array**	**80.95**	**27**	*e*P		**P**	**02 59 10.5**	**+0.5**
SONA0	**Songino Array**	**89.11**	**40**	*e*P		**P**	**02 59 52.7**	**+1.4**
SONM	**Songino Array**	**89.11**	**40**	P		**P**	**02 59 52.7**	**+1.4**
	0.3nm,0.6s,baz=245,slow=6.2,SNR=2.1							
NV01	**Mina Array Sit**	**147.32**	**320**	*e*PKPdf		**PKPab**	**03 06 42.4**	**+0.5**
NVAR	**Mina Array Bea**	**147.32**	**320**	PKPbc		**PKPab**	**03 06 41.4**	**-0.4**
	0.6nm,0.7s,baz=54,slow=1.6,SNR=3.6							

*IDC **14** 02:54:30.3±2.0, 0°.75S×133°.41E, h0km, mb3.4/2, mb1 3.6/4, mb1mx3.4/53, mbtmp3.5/4, ML3.9/2, MS3.0/1, Ms1 3.0/1, ms1mx2.4/26, Error ellipse: s-maj=39.8km s-min=25.5km az=54.0*
*ISCJB **14** 02:54:34.5±1.1, 0°.7S±0°.1×133°.30E±0°.06, h29km, mb3.4/2, MS2.8/1, Error ellipse: s-maj=17.7km s-min=7.3km az=16.5*
*DJA **14** 02:54:35.7±0.7, 1°.S±8°.×13°.3E±°, h24km±11km, M3.9/6, mb3.9/1, MLv3.9/6*
ISC 14 02:54:32.7±1.3, 0°.6S±0°.1×133°.32E±0°.05, h29km, n10, σ2°11/9, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**1.25**	**137**	P		**Pb**	**02 54 56.3**	**+0.6**
RKPI				S		**Sb**	**02 55 11.9**	**+0.4**
SIJI	**Sorong**	**2.07**	**262**	Pn		**Pb**	**02 55 08.1**	**-1.6**
	82nm,0.3s,baz=44,slow=22,SNR=141							
SIJI				Sn		**Sb**	**02 55 34.4**	**-0.7**
	32nm,0.3s,baz=233,slow=22,SNR=8.2							
FAKI	**Fak Fak**	**2.55**	**205**	P		**Pn**	**02 55 12.2**	**+0.1**
BAKI	**Biak**	**2.85**	**102**	P		**Pb**	**02 55 20.0**	**-2.9**
WRA	**Warramunga Arr**	**19.26**	**177**	P		**Pn**	**02 58 54.0**	**-2.2**
	0.2nm,0.3s,baz=358,slow=12,SNR=20							
ASAR	**Alice Springs**	**22.94**	**179**	P		**P**	**02 59 35.4**	**+0.6**
	0.8nm,0.6s,baz=2.9,slow=11,SNR=9.1							
ASAR				LR		LR	03 10 35.3	
	comp=Z,35nm,19.5s,baz=182,slow=42							
H11N1	**WAKE ISLAND Hy**	**38.60**	**57**	T		T	03 43 01.4	
	baz=243,slow=75,SNR=8.8							
H11N2	**WAKE ISLAND Hy**	**38.62**	**57**	T		T	03 43 08.2	

baz=243,slow=75,SNR=10
H11N3 WAKE ISLAND Hy 38.62 57 T T 03 43 04.8
baz=243,slow=75,SNR=8.5
MKAR Makanchi Array 64.87 324 P **P** **03 05 12.5 +3.1**
0.2nm,0.4s,baz=120,slow=8.1,SNR=4.2

MOS ***14*** *03:08:06.9±1.1, 40°.11N×78°.05E, h5km, mb4.4/19, Error ellipse: s-maj=8.3km s-min=4.9km az=105.7*
IDC ***14*** *03:08:07.8±1.0, 40°.20N×78°.04E, h0km, mb3.9/17, mb1 4.0/23, mb1mx3.8/80, mbtmp3.9/23, ML3.4/6, MS2.9/8, Ms1 2.9/8, ms1mx2.6/70, Error ellipse: s-maj=16.9km s-min=13.1km az=136.0*
SOME ***14*** *03:08:08.5, 40°.33N×78°.12E, h15km, MS3.6*
ISCJB ***14*** *03:08:09.4±1.0, 40°.15N±0°.02×78°.11E±0°.03, h28km±8km, mb4.0/24, Error ellipse: s-maj=4.1km s-min=3.2km az=150.2*
BJI ***14*** *03:08:09.3, 40°.30N×78°.06E, h9km, mb4.2/10, mB4.2/7, ML4.0/10, Ms3.8/2*
KRNET ***14*** *03:08:09.9±0.1, 40°.04N×77°.95E, mb4.5*
NEIC ***14*** *03:08:11.4±1.9, 40°.19N×77°.98E, h24km±13km, mb4.1/8, Error ellipse: s-maj=8.3km s-min=5.8km az=161.0*
NNC ***14*** *03:08:11.9±1.0, 40°.46N×77°.97E, h0km±5km, mb4.3, mpv4.1, Error ellipse: s-maj=6.9km s-min=3.4km az=139.0*
ISC 14 03:08:10.0±1.3, 40°.28N±0°.03×78°.07E±0°.03, h12km±9km, n186, σ1$72/240, mb4.0/23, 47C-21D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.46**	**352**	*e*Pn		**Pn**	**Pn**	**03 08 34.6**	**-2.0**
TARG				*e*Sn		**Sn**	**Sn**	**03 08 53.9**	**-2.0**
KSH	**Kashi**	**1.78**	**245**	Pn		**Pg**	**Pg**	**03 08 48.4**	**+4.3**
KSH				Sn		Sg	Sg	03 09 19.1	+12
KSH	comp=N,3μm,1.0s			smax		smax	smax		
KSH	comp=E,5μm,0.9s			smax		smax	smax		
NRN	**Naryn**	**1.95**	**307**	*e*Pn		**Pn**	**Pn**	**03 08 42.6**	**-0.5**
NRN				*e*Sn		**Sn**	**Sn**	**03 09 06.5**	**-1.2**
NRN	**Naryn**	**1.95**	**307**	⇓*i*P		**Pn**	**Pn**	**03 08 42.6**	**-0.5**
NRN	baz=13			⇓*i*S		**Sn**	**Sn**	**03 09 07.5**	**-0.2**
NRN	**Naryn**	**1.95**	**307**	*e*PN		**Pn**	**Pn**	**03 08 42.6**	**-0.5**
NRN				*e*				03 09 06.5	
PRZ	**Przheval'sk**	**2.22**	**6**	*e*Pn		**Pb**	**Pb**	**03 08 50.0**	**-0.1**
PRZ				*e*Sn		**Sn**	**Sn**	**03 09 14.4**	**+0.2**
PRZ	**Przheval'sk**	**2.22**	**6**	⇑*i*P		**Pn**	**Pn**	**03 08 49.0**	**+2.3**
PRZ	baz=8.0			⇑*i*S		**Sb**	**Sb**	**03 09 17.4**	**-0.2**
PRZ	**Przheval'sk**	**2.22**	**6**	*e*PN		**Pb**	**Pb**	**03 08 50.0**	**-0.1**
PRZ				*e*				03 09 14.4	
ULHL	**Ulahol**	**2.40**	**326**	P		**Pn**	**Pn**	**03 08 51.1**	**+1.9**
ULHL	SNR=222 **Ulahol**	**2.40**	**326**	⇑*i*P		**Pn**	**Pn**	**03 08 50.6**	**+1.3**
ULHL	baz=30			⇑*i*S		**Sn**	**Sn**	**03 09 20.0**	**+1.3**
BOOM	**Boomskoye usch**	**2.73**	**325**	⇑*i*P		**Pn**	**Pn**	**03 08 55.6**	**+1.9**
BOOM	baz=29			⇑*i*S		**Sb**	**Sb**	**03 09 31.9**	**-0.3**
KZA	**Kyzart**	**2.78**	**311**	P		**Pn**	**Pn**	**03 08 56.5**	**+1.8**
KZA	SNR=41 **Kyzart**	**2.78**	**311**	⇑*i*P		**Pn**	**Pn**	**03 08 55.9**	**+1.2**
KZA	baz=16			⇑*i*S		**Sn**	**Sn**	**03 09 29.4**	**+0.9**
SATY	**Saty**	**2.79**	**5**	*e*P		**Pb**	**Pb**	**03 08 58.8**	**-1.0**
SATY	394nm,1.1s			*e*S		**Sb**	**Sb**	**03 09 35.3**	**+1.3**
TNSS	**Tian-Shan**	**2.88**	**343**	*e*P		**Pb**	**Pb**	**03 08 60.0**	**-1.6**
TNSS	195nm,0.5s			*e*S		**Sb**	**Sb**	**03 09 37.1**	**+0.3**
ZHN	**Zhinishke**	**2.90**	**5**	*e*P		**Pb**	**Pb**	**03 09 01.0**	**-0.7**
ZHN	117nm,0.5s			*e*S		**Sb**	**Sb**	**03 09 38.7**	**+1.6**
UZB	**Uzynbulak**	**2.95**	**14**	*e*P		**Pb**	**Pb**	**03 09 01.9**	**-0.8**
UZB	95nm,0.8s			*e*S		**Sb**	**Sb**	**03 09 40.0**	**+1.3**
IZV	**Izvestkoviy**	**2.96**	**339**	*e*P		**Pb**	**Pb**	**03 09 01.5**	**-1.3**
IZV	221nm,0.7s			*e*S		**Sb**	**Sb**	**03 09 39.9**	**+0.9**
MDOK	**Medeo**	**2.98**	**346**	⇑Pn		**Pn**	**Pn**	**03 08 57.4**	**+0.1**
MDOK	128nm,0.6s			⇑Lg		Lg	Lg	03 09 40.6	
MDOK	**Medeo**	**2.98**	**346**	*e*P		**Pb**	**Pb**	**03 09 01.3**	**-1.8**
MDOK	141nm,0.5s			*e*S		**Sb**	**Sb**	**03 09 39.5**	**0.0**
KOTS	**Kotyrbulak**	**3.04**	**347**	*e*P		**Pb**	**Pb**	**03 09 03.1**	**-0.9**
KOTS	75nm,0.4s			*e*S		**Sb**	**Sb**	**03 09 42.7**	**+1.5**
KNDC	**Almaty**	**3.05**	**345**	⇑Pn		**Pn**	**Pn**	**03 08 59.1**	**+1.1**
KNDC	133nm,0.5s			⇑Lg		Lg	Lg	03 09 42.5	
AAA	**Alma-Ata**	**3.05**	**344**	*e*PN		**Pb**	**Pb**	**03 09 04.0**	**-0.2**
AAA				*e*S		**Sb**	**Sb**	**03 09 43.5**	**+2.0**
AAA	comp=Z,147nm,0.3s			pmax		pmax	pmax		
AAA	comp=E,1μm,0.8s			smax		smax	smax		
AAA	**Alma-Ata**	**3.05**	**344**	*e*P		**Pb**	**Pb**	**03 09 03.9**	**-0.4**
AAA	comp=E,140nm,0.5s			*e*S		**Sb**	**Sb**	**03 09 43.9**	**+2.4**
SHLS	**Shalkode**	**3.06**	**20**	*e*P		**Pb**	**Pb**	**03 09 04.2**	**-0.2**
SHLS	comp=E,82nm,0.8s			*e*S		**Sb**	**Sb**	**03 09 44.1**	**+2.3**
MTBS	**Maitube**	**3.10**	**337**	*e*P		**Pb**	**Pb**	**03 09 03.5**	**-1.6**
MTBS	comp=E,70nm,0.3s			*e*S		**Sb**	**Sb**	**03 09 43.3**	**+0.4**
KST	**Kastek**	**3.18**	**331**	*e*P		**Pb**	**Pb**	**03 09 05.1**	**-1.4**
KST	comp=E,305nm,1.0s			*e*S		**Sb**	**Sb**	**03 09 45.9**	**+0.7**
KURS	**Kuram**	**3.21**	**1**	*e*P		**Pb**	**Pb**	**03 09 06.4**	**-0.5**
KURS	comp=E,326nm,0.7s			*e*S		**Sb**	**Sb**	**03 09 47.7**	**+1.8**
KPKS	**Kokpek**	**3.22**	**8**	*e*P		**Pb**	**Pb**	**03 09 06.7**	**-0.4**
KPKS	comp=E,149nm,1.0s			*e*S		**Sb**	**Sb**	**03 09 48.2**	**+1.9**
TKM2	**Tokmak 2**	**3.22**	**326**	⇓Pn		**Pn**	**Pn**	**03 09 02.5**	**+1.9**
TKM2	comp=E,182nm,1.2s			⇑Lg		Lg	Lg	03 09 47.3	
TKM2	**Tokmak 2**	**3.22**	**326**	P		**Pn**	**Pn**	**03 09 02.6**	**+2.0**
TKM2	SNR=30 **Tokmak 2**	**3.22**	**326**	⇑*i*P		**Pn**	**Pn**	**03 09 01.5**	**+0.9**
TKM2	baz=29			⇑*i*S		**Sn**	**Sn**	**03 09 39.9**	**+0.9**
TKM2	**Tokmak 2**	**3.22**	**326**	PN		**Pn**	**Pn**	**03 09 02.5**	**+1.9**
TKM2								03 09 47.3	
TKM2	comp=Z,182nm,1.2s			pmax		pmax	pmax		
TKM2	comp=N,310nm,0.9s			smax		smax	smax		
PDGK	**Podgornoye**	**3.23**	**19**	⇓Pn		**Pn**	**Pn**	**03 09 02.6**	**+2.0**
PDGK	comp=N,48nm,0.5s			⇑Lg		Lg	Lg	03 09 50.0	
PDGK	**Podgornoye**	**3.23**	**19**	⇑*i*P		**Pn**	**Pn**	**03 09 03.1**	**+2.5**
PDGK	baz=19			⇑*i*S		**Sn**	**Sn**	**03 09 42.6**	**+3.6**
PDGK	**Podgornoye**	**3.23**	**19**	PN		**Pn**	**Pn**	**03 09 02.5**	**+2.0**
PDGK								03 09 44.4	
PDGK	comp=Z,48nm,0.5s			pmax		pmax	pmax		
PDGK	comp=N,449nm,0.8s			smax		smax	smax		
UCH	**Uchtor**	**3.31**	**307**	P		**Pn**	**Pn**	**03 09 03.8**	**+1.7**
UCH	SNR=34 **Uchtor**	**3.31**	**307**	⇑*e*P		**Pn**	**Pn**	**03 09 03.2**	**+1.2**
UCH	baz=11			⇑*i*S		**Sn**	**Sn**	**03 09 42.0**	**+0.5**
KBK	**Karagaybulak**	**3.34**	**316**	P		**Pn**	**Pn**	**03 09 05.0**	**+2.8**
KBK	SNR=84 **Karagaybulak**	**3.34**	**316**	⇑*i*P		**Pn**	**Pn**	**03 09 03.1**	**+1.0**
KBK	baz=20			⇑*i*S		**Sn**	**Sn**	**03 09 42.1**	**+0.3**
DGS	**Degeres**	**3.42**	**331**	*e*P		**Pb**	**Pb**	**03 09 09.4**	**-1.2**
DGS	comp=N,211nm,0.7s			*e*S		**Sb**	**Sb**	**03 09 53.4**	**+1.2**
SFK	**Sufi-Kurgan**	**3.51**	**267**	⇑Pn		**Pn**	**Pn**	**03 09 05.8**	**+1.2**
SFK	comp=N,40nm,1.0s			⇓Pg		**Pg**	**Pg**	**03 09 15.5**	**-1.6**
SFK	comp=N,80nm,0.8s			⇓Lg		Lg	Lg	03 10 00.8	
SFK	**Sufi-Kurgan**	**3.51**	**267**	PN		**Pn**	**Pn**	**03 09 05.9**	**+1.4**
SFK								03 09 49.6	
SFK	comp=Z,80nm,0.8s			pmax		pmax	pmax		
SFK	comp=N,293nm,0.7s			smax		smax	smax		
AAK	**Ala-Archa**	**3.57**	**312**	Pn		**Pn**	**Pn**	**03 09 07.6**	**+2.2**
AAK	comp=N,16nm,0.3s,baz=126,slow=9.3,SNR=32			Pg		**Pb**	**Pb**	**03 09 13.5**	**+0.3**
AAK	comp=N,15nm,0.3s,baz=125,slow=12,SNR=58			Lg		Lg	Lg	03 09 56.4	
AAK	comp=N,29nm,0.3s,baz=299,slow=22,SNR=20			LR		LR	LR	03 10 34.8	
AAK	**Ala-Archa**	**3.57**	**312**	Pn		**Pn**	**Pn**	**03 09 06.7**	**+1.4**
AAK	comp=N,203nm,18.9s,baz=98,slow=41 comp=N,191nm,1.1s			⇑Lg		Lg	Lg	03 09 59.3	
AAK	**Ala-Archa**	**3.57**	**312**	P		**Pn**	**Pn**	**03 09 07.6**	**+2.2**
AAK	comp=N,592nm,0.7s **Ala-Archa**	**3.57**	**312**	P		**Pn**	**Pn**	**03 09 07.6**	**+2.2**
AAK	SNR=26 **Ala-Archa**	**3.57**	**312**	*e*Pn		**Pn**	**Pn**	**03 09 07.5**	**+2.2**
AAK				*e*Sn		**Sn**	**Sn**	**03 09 46.0**	**-1.5**
AAK				Lg		Lg	Lg	03 09 56.4	
AAK	**Ala-Archa**	**3.57**	**312**	⇑*i*P		**Pn**	**Pn**	**03 09 06.6**	**+1.3**
AAK	baz=16			⇑*i*S		**Sn**	**Sn**	**03 09 47.7**	**+0.2**
AAK	**Ala-Archa**	**3.57**	**312**	*d i*PN		**Pn**	**Pn**	**03 09 07.3**	**+2.0**
KTBS	**Karatobe**	**3.58**	**344**	*e*P		**Pb**	**Pb**	**03 09 11.8**	**-1.5**
KTBS	comp=N,89nm,0.6s			*e*S		**Sb**	**Sb**	**03 09 57.5**	**+0.8**
KTBS	comp=N,632nm,0.7s								
CHKK	**Chushkaly**	**3.66**	**348**	*e*P		**Pb**	**Pb**	**03 09 14.4**	**-0.2**
CHKK	comp=N,45nm,0.6s			*e*S		**Sb**	**Sb**	**03 10 01.8**	**+2.8**
CHKK	comp=N,372nm,0.4s								
CHMS	**Chumysh**	**3.68**	**319**	P		**Pn**	**Pn**	**03 09 09.1**	**+2.4**
CHMS	SNR=15 **Chumysh**	**3.68**	**319**	⇑*i*P		**Pn**	**Pn**	**03 09 07.8**	**+1.1**
CHMS	baz=22			⇑*i*S		**Sn**	**Sn**	**03 09 50.0**	**-0.1**
AML	**Almayashu**	**3.78**	**301**	P		**Pn**	**Pn**	**03 09 10.6**	**+2.2**
AML	SNR=14 **Almayashu**	**3.78**	**301**	⇓*i*P		**Pn**	**Pn**	**03 09 09.3**	**+0.9**
AML	baz=4.0			⇓*i*S		**Sn**	**Sn**	**03 09 53.2**	**+0.1**
KUU	**Kurty**	**3.83**	**341**	*e*P		**Pb**	**Pb**	**03 09 16.3**	**-1.2**
KUU	comp=N,30nm,0.7s			*e*S		**Sb**	**Sb**	**03 10 05.2**	**+1.3**
KUU	comp=N,495nm,0.9s								
ARXS	**Arharly**	**3.94**	**357**	*e*P		**Pb**	**Pb**	**03 09 18.0**	**-1.3**
ARXS	comp=N,54nm,0.8s			*e*S		**Sb**	**Sb**	**03 10 08.2**	**+1.3**
ARXS	comp=N,300nm,0.6s								
USP	**Ospenovka**	**4.00**	**319**	P		**Pb**	**Pb**	**03 09 20.0**	**-0.4**
USP	SNR=69 **Ospenovka**	**4.00**	**319**	⇑*i*P		**Pn**	**Pn**	**03 09 12.2**	**+1.0**
USP	baz=22			⇑*i*S		**Sn**	**Sn**	**03 09 57.7**	**-0.3**
EKS2	**Erkin-Say**	**4.01**	**308**	P		**Pn**	**Pn**	**03 09 13.8**	**+2.6**
EKS2	SNR=52 **Erkin-Say**	**4.01**	**308**	⇓*e*P		**Pn**	**Pn**	**03 09 12.6**	**+1.3**
EKS2	baz=11			⇓*i*S		**Sn**	**Sn**	**03 09 58.2**	**0.0**
DJR	**Jarkent**	**4.25**	**17**	*e*P		**Pb**	**Pb**	**03 09 25.0**	**+0.4**
DJR	comp=N,58nm,0.9s			*e*S		**Sb**	**Sb**	**03 10 20.2**	**+4.4**
DJR	comp=N,184nm,1.3s								
MRKS	**Merke**	**4.39**	**306**	*e*P		**Pb**	**Pb**	**03 09 27.0**	**-0.1**
MRKS	comp=N,50nm,0.8s			*e*S		**Sb**	**Sb**	**03 10 23.6**	**+3.6**
MRKS	comp=N,118nm,0.9s								
MNAS	**Manas**	**4.73**	**300**	⇑Pn		**Pn**	**Pn**	**03 09 22.7**	**+1.5**
MNAS	comp=N,15nm,1.0s			⇓Pg		**Pb**	**Pb**	**03 09 35.8**	**+2.9**
MNAS	comp=N,140nm,1.4s			⇓Lg		Lg	Lg	03 10 38.0	
MNAS	comp=N,104nm,0.9s								
MNAS	**Manas**	**4.73**	**300**	PN		**Pn**	**Pn**	**03 09 22.7**	**+1.5**
MNAS								03 09 35.8	
MNAS								03 10 34.0	
MNAS	comp=Z,9.0nm,0.5s			pmax		pmax	pmax		
MNAS	comp=N,104nm,0.9s			smax		smax	smax		
KAPS	**Kapalarasan**	**5.09**	**10**	*e*P		**Pb**	**Pb**	**03 09 42.1**	**+3.1**
KAPS	comp=N,28nm,0.9s			*e*S		**Sg**	**Sg**	**03 10 49.5**	**-3.8**
KAPS	comp=N,113nm,0.9s								
KK31	**Karatay Array**	**6.32**	**299**	⇑Pn		**Pn**	**Pn**	**03 09 43.9**	**+1.0**
KK31	comp=N,0.8nm,0.5s,baz=111,slow=13,SNR=6.8			⇓Pg		Pb	Pb	03 10 04.3	+4.4
KK31	comp=N,18nm,0.8s,baz=123,slow=15,SNR=41			⇓Lg		Lg	Lg	03 11 27.7	
KK31	comp=N,66nm,0.8s,baz=117,slow=26,SNR=10								
KK31	**Karatay Array**	**6.32**	**299**	*e*Pn		**Pn**	**Pn**	**03 09 43.6**	**+0.7**
KK31	**Karatay Array**	**6.32**	**299**	*e*PN		**Pn**	**Pn**	**03 09 46.0**	**+3.1**
KK31	comp=Z,2.0nm,0.7s			pmax		pmax	pmax		
KKAR	**Karatay Array**	**6.32**	**299**	*e*Pn		**Pn**	**Pn**	**03 09 44.2**	**+1.3**
KKAR				*e*Sn		**Sn**	**Sn**	**03 10 54.7**	**-0.4**
KKAR	**Karatay Array**	**6.32**	**299**	*e*PN		**Pn**	**Pn**	**03 09 44.2**	**+1.3**
KKAR				*e*				03 10 54.7	
MAKZ	**Makanchi**	**7.12**	**22**	⇓Pn		**Pn**	**Pn**	**03 09 54.9**	**+1.0**
MAKZ	comp=Z,4.9nm,0.9s			⇑Pg		Pb	Pb	03 10 18.0	+4.5
MAKZ	comp=Z,9.7nm,1.2s			⇓Lg		Lg	Lg	03 11 52.8	
MAKZ	comp=Z,28nm,1.0s								
MAKZ	**Makanchi**	**7.12**	**22**	*e*Pn		**Pn**	**Pn**	**03 09 56.1**	**+2.2**
MAKZ	**Makanchi**	**7.12**	**22**	*e*P		**Pn**	**Pn**	**03 09 56.1**	**+2.2**
MK01	**Makanchi Array**	**7.18**	**24**	*e*Pn		**Pn**	**Pn**	**03 09 56.2**	**+1.5**
MK01				*e*Sn		**Sn**	**Sn**	**03 11 12.4**	**-3.8**
MK31	**Makanchi Array**	**7.20**	**24**	⇑Pn		**Pn**	**Pn**	**03 09 56.3**	**+1.3**
MK31	comp=Z,3.1nm,0.7s,baz=207,slow=13,SNR=33			⇓Pg		Pb	Pb	03 10 20.3	+5.5
MK31	comp=Z,15nm,1.1s,baz=194,slow=13,SNR=5.4			⇑Sn		**Sn**	**Sn**	**03 11 18.4**	**+1.7**
MK31	comp=Z,28nm,0.9s			⇑Lg		Lg	Lg	03 11 56.1	
MK31	comp=Z,28nm,0.8s								
MK31	**Makanchi Array**	**7.20**	**24**	*e*Pn		**Pn**	**Pn**	**03 09 56.9**	**+1.9**
MK31	**Makanchi Array**	**7.20**	**24**	*e*P		**Pn**	**Pn**	**03 09 56.9**	**+1.9**
MK32	**Makanchi Array**	**7.20**	**24**	*e*Pn		**Pn**	**Pn**	**03 09 56.5**	**+1.5**
MK32				*e*Sn		**Sn**	**Sn**	**03 11 14.7**	**-1.9**
MKAR	**Makanchi Array**	**7.20**	**24**	Pn		**Pn**	**Pn**	**03 09 56.5**	**+1.5**
MKAR	comp=Z,0.6nm,0.3s,baz=206,slow=14,SNR=29			Pg		**Pb**	**Pb**	**03 10 18.6**	**+3.8**
MKAR	comp=Z,0.7nm,0.3s,baz=200,slow=13,SNR=7.2			Sn		**Sn**	**Sn**	**03 11 14.7**	**-1.9**
MKAR	comp=Z,0.7nm,0.3s,baz=202,slow=22,SNR=6.2			Lg		Lg	Lg	03 11 58.1	
MKAR	comp=Z,0.7nm,0.3s,baz=211,slow=23,SNR=3.2								
MKAR	**Makanchi Array**	**7.20**	**24**	*e*Pn		**Pn**	**Pn**	**03 09 56.9**	**+1.9**
MKAR				Pg		**Pb**	**Pb**	**03 10 18.6**	**+3.8**
MKAR				Sn		**Sn**	**Sn**	**03 11 14.7**	**-1.9**
MKAR				Lg		Lg	Lg	03 11 58.1	
MKAR	**Makanchi Array**	**7.20**	**24**	*e*P		**Pn**	**Pn**	**03 09 56.9**	**+1.9**
MKAR								03 11 14.7	
CHCP	**Chirah Chowk**	**7.64**	**212**	P		**Pn**	**Pn**	**03 10 03.2**	**+2.0**
NIL	**Nilore**	**7.66**	**212**	*e*Pn		**Pn**	**Pn**	**03 10 00.2**	**-1.1**
NIL				*e*Sn		**Sn**	**Sn**	**03 11 29.5**	**+1.5**
NIL	**Nilore**	**7.66**	**212**	*e*P		**Pn**	**Pn**	**03 10 00.2**	**-1.1**
NIL				*e*				03 11 29.5	
WMQ	**Urumqi**	**7.99**	**61**	P		**Pn**	**Pn**	**03 10 05.6**	**-0.3**
WMQ				pP		Pb	Pb	03 10 08.8	-20
WMQ				S		**Sn**	**Sn**	**03 11 36.4**	**+0.2**
WMQ	comp=Z,41nm,1.1s			pmax		pmax	pmax		
WMQ	comp=Z,170nm,4.7s			pmax		pmax	pmax		
WMQ	comp=Z,93nm,0.9s			smax		smax	smax		
WMQ	comp=Z,90nm,1.1s			smax		smax	smax		
CEP	**Cherat**	**8.11**	**219**	P		**Pn**	**Pn**	**03 10 09.0**	**+1.4**
OTUK	**Ortayu**	**8.96**	**335**	⇑Pn		**Pn**	**Pn**	**03 10 19.7**	**+0.6**
OTUK	comp=Z,3.1nm,1.2s			⇑Pg		Pg	Pg	03 10 51.0	-10
OTUK	comp=Z,9.0nm,1.1s			⇓Lg		Lg	Lg	03 12 50.6	
OTUK	comp=Z,167nm,1.1s								
OTUK	**Ortayu**	**8.96**	**335**	P		**Pn**	**Pn**	**03 10 19.7**	**+0.6**
OTUK	comp=Z,9.0nm,1.1s			pmax		pmax	pmax		
THW	**Thamme Wali**	**9.04**	**216**	P		**Pn**	**Pn**	**03 10 21.3**	**+1.0**
KBL	**Kabul**	**9.18**	**234**	*e*Pn		**Pn**	**Pn**	**03 10 19.8**	**-2.6**
KBL				*e*Sn		**Sn**	**Sn**	**03 12 05.4**	**-0.3**
KBL	**Kabul**	**9.18**	**234**	*e*P		**Pn**	**Pn**	**03 10 19.8**	**-2.6**
KBL				*e*				03 12 05.4	
KURBB	**Kurchatov Arra**	**10.35**	**2**	Pn		**Pn**	**Pn**	**03 10 37.2**	**-1.0**
KURBB	comp=Z,0.1nm,0.3s,baz=189,slow=12,SNR=10			Pg				03 11 22.0	
KURBB	comp=Z,0.1nm,0.3s,baz=184,slow=14,SNR=4.0			Sn		**Sn**	**Sn**	**03 12 32.7**	**-1.3**
KURBB	comp=Z,0.1nm,0.3s,baz=209,slow=28,SNR=4.4			Lg		Lg	Lg	03 13 34.4	
KURBB	comp=Z,0.2nm,0.3s,baz=191,slow=30,SNR=7.2								
KURBB	**Kurchatov Arra**	**10.35**	**2**	⇑Lg		Lg	Lg	03 13 35.7	
KURK	comp=Z,80nm,0.8s **Kurchatov**	**10.44**	**2**	⇑Pn		**Pn**	**Pn**	**03 10 38.8**	**-0.6**
KURK	comp=Z,3.7nm,0.9s			⇑Lg		Lg	Lg	03 13 38.3	
KURK	comp=Z,115nm,1.4s								
KURK	**Kurchatov**	**10.44**	**2**	*e*Pn		**Pn**	**Pn**	**03 10 39.4**	**0.0**
KURK				Pg				03 11 22.0	
KURK				Sn		**Sn**	**Sn**	**03 12 32.7**	**-3.6**
KURK				Lg		Lg	Lg	03 13 34.4	
KURK	**Kurchatov**	**10.44**	**2**	*c i*P		**Pn**	**Pn**	**03 10 39.5**	**+0.1**
DANN	**Dangsing**	**12.79**	**157**	*e*P		**Pn**	**Pn**	**03 11 08.8**	**-3.1**
PYUN	comp=Z,26nm,0.7s **Piuthan**	**12.81**	**160**	*e*P		**Pn**	**Pn**	**03 11 09.0**	**-3.1**
KOLN	comp=Z,41nm,0.7s **Koldanda**	**13.29**	**158**	*e*P		**Pn**	**Pn**	**03 11 15.2**	**-3.4**
GKN	comp=Z,21nm,0.8s **Gorkha**	**13.39**	**154**	*e*P		**Pn**	**Pn**	**03 11 17.5**	**-2.5**
BVA0	comp=Z,19nm,0.5s **Borovoye Array**	**13.78**	**340**	Pn		**Pn**	**Pn**	**03 11 25.9**	**+0.8**
BVA0	comp=Z,0.2nm,0.6s,baz=153,slow=14,SNR=7.8			⇓Lg		Lg	Lg	03 15 24.1	
BVA0	comp=Z,46nm,1.3s **Borovoye Array**	**13.78**	**340**	P		**Pn**	**Pn**	**03 11 25.9**	**+0.8**
BVA0	comp=Z,2.0nm,0.6s			pmax		pmax	pmax		
BVAR	**Borovoye Array**	**13.78**	**340**	Pn		**Pn**	**Pn**	**03 11 22.5**	**-2.6**
BVAR	comp=Z,0.2nm,0.3s,baz=166,slow=15,SNR=6.3			Lg		Lg	Lg	03 15 15.4	
BVAR	comp=Z,0.2nm,0.3s,baz=142,slow=26,SNR=3.8			LR		LR	LR	03 16 41.9	
BVAR	comp=Z,96nm,19.2s,baz=162,slow=37								
BRVK	**Borovoye**	**13.84**	**340**	⇑Lg		Lg	Lg	03 15 24.2	
BRVK	comp=Z,62nm,1.4s **Borovoye**	**13.84**	**340**	*e*Pn		**Pn**	**Pn**	**03 11 27.0**	**+1.2**
BRVK	**Borovoye**	**13.84**	**340**	⇑*e*P		Pn	Pn	03 11 30.5	+4.7
DMN	**Daman**	**13.91**	**153**	*e*P		**Pn**	**Pn**	**03 11 24.6**	**-2.6**
GUN	comp=Z,31nm,0.9s **Gumba**	**13.92**	**150**	*e*P		**Pn**	**Pn**	**03 11 24.8**	**-2.6**
PKIN	comp=Z,30nm,0.6s **Phulchoki**	**14.05**	**152**	*e*P		**Pn**	**Pn**	**03 11 26.1**	**-2.9**
PKIN	comp=Z,37nm,0.8s **Phulchoki**	**14.05**	**152**	*e*P		**Pn**	**Pn**	**03 11 26.2**	**-2.8**
JIRN	**Jiri**	**14.27**	**149**	*e*P		**Pn**	**Pn**	**03 11 29.9**	**-2.3**
ZAA0	comp=Z,48nm,0.7s **Zalesovo Array**	**14.41**	**16**	*e*Pn		**Pn**	**Pn**	**03 11 35.8**	**+2.1**
ZALV	**Zalesovo Beam**	**14.41**	**16**	Pn		**Pn**	**Pn**	**03 11 32.4**	**-1.3**
ZALV	comp=Z,0.6nm,0.3s,baz=194,slow=12,SNR=3.5			Lg		Lg	Lg	03 15 47.9	
ZALV	baz=213,slow=26,SNR=2.6 **Zalesovo Beam**	**14.41**	**16**	*e*Pn		**Pn**	**Pn**	**03 11 36.4**	**+2.7**
ZALV				Lg		Lg	Lg	03 15 47.9	
ZALV	**Zalesovo Beam**	**14.41**	**16**	*e*P		**Pn**	**Pn**	**03 11 36.4**	**+2.7**
ZAA1	**Zalesovo Array**	**14.42**	**16**	*e*Pn		**Pn**	**Pn**	**03 11 32.4**	**-1.4**
NVS	**Novosibirsk**	**14.97**	**12**	*e*P		**Pn**	**Pn**	**03 11 41.0**	**-0.2**
NVS				*e*S		**Sn**	**Sn**	**03 14 23.4**	**-3.5**
NVS	comp=N,19nm,1.4s			pmax		pmax	pmax		
NVS	comp=E,10.0nm,1.4s			pmax		pmax	pmax		
NVS	comp=Z,15nm,1.4s			pmax		pmax	pmax		
NVS	comp=N,11nm,2.0s			smax		smax	smax		
NVS	comp=E,12nm,2.0s			smax		smax	smax		
RAMN	**Ramite**	**15.06**	**149**	*e*P		**Pn**	**Pn**	**03 11 39.4**	**-3.5**
ODAN	comp=E,93nm,0.9s **Odare**	**15.46**	**147**	*e*P		**Pn**	**Pn**	**03 11 45.6**	**-2.5**
AB31	comp=E,31nm,0.8s **Akbulak array**	**15.66**	**311**	Pn		**Pn**	**Pn**	**03 11 49.7**	**-0.6**
AB31	comp=E,4.6nm,1.2s,baz=116,slow=12,SNR=16 **Akbulak array**	**15.66**	**311**	P		**Pn**	**Pn**	**03 11 49.7**	**-0.6**
AB31	comp=Z,5.0nm,1.3s			pmax		pmax	pmax		
ABKAR	**Akbulak array**	**15.66**	**311**	*e*Pn		**Pn**	**Pn**	**03 11 48.2**	**-2.1**
AKTO	**Aktyubinsk**	**17.32**	**313**	P		**Pn**	**Pn**	**03 12 10.3**	**-1.1**
AKTO	comp=Z,0.2nm,0.3s,baz=108,slow=10,SNR=10			S		**S**	**S**	**03 15 38.9**	**+6.3**
AKTO	comp=Z,0.1nm,0.3s,baz=22,slow=19,SNR=1.6			Lg		Lg	Lg	03 17 15.4	
AKTO	comp=Z,0.1nm,0.3s,baz=84,slow=19,SNR=3.3			LR		LR	LR	03 18 23.5	
AKTO

comp=Z,1.0nm,0.3s
KLMR Klimovskoe 31.30 324 *e*P **P** **03 14 26.6 -3.0**
KLMR pmax pmax
comp=Z,23nm,1.7s
KLMR Klimovskoe 31.30 324 *e*P **P** **03 14 26.6 -3.0**
KLMR AMP 03 14 31.5
comp=Z,23nm,1.7s
BR101 Keskin Array S 33.77 284 *e*P **P** **03 14 52.2 +0.6**
BRTR Keskin Array B 33.77 284 P **P** **03 14 52.2 +0.6**
comp=Z,2.5nm,0.7s,baz=93,slow=8.5,SNR=19
BRTR Keskin Array B 33.77 284 *i* P **P** **03 14 52.5 +0.8**
BRTR pmax pmax
comp=Z,3.0nm,0.7s
AKASG Malin Array Be 35.20 304 P **P** **03 15 03.8 +0.1**
comp=Z,0.2nm,0.4s,baz=88,slow=9.2,SNR=2.7
AKBB Malin Array Si 35.20 304 *e*P **P** **03 15 03.8 +0.1**
comp=Z,1.6nm,0.6s
AKBB Malin Array Si 35.20 304 *e*P **P** **03 15 03.8 +0.1**
AKBB pmax pmax
comp=Z,2.0nm,0.6s
FIA0 FINESS Array S 37.71 322 *e*P **P** **03 15 25.4 +0.5**
FIA0 FINESS Array S 37.71 322 *e*P **P** **03 15 25.5 +0.5**
FIA1 FINESS Array S 37.71 322 *e*P **P** **03 15 25.4 +0.5**
FINES FINESS Array B 37.71 322 P **P** **03 15 25.4 +0.5**
comp=Z,3.6nm,0.6s,baz=105,slow=9.1,SNR=22
MLR Muntele Rosu 37.99 296 P **P** **03 15 28.2 +0.4**
comp=Z,0.3nm,0.6s,baz=63,slow=2.3,SNR=3.6
MLR LR LR 03 34 06.0
comp=Z,8.8nm,19.5s,baz=74,slow=41
MLR Muntele Rosu 37.99 296 *e*P **P** **03 15 27.9 +0.2**
comp=Z,3.4nm,1.1s
MLR Muntele Rosu 37.99 296 *e*P **P** **03 15 27.9 +0.2**
MLR pmax pmax
comp=Z,3.0nm,1.1s
ARA0 ARCESS Array S 39.97 334 *e*P **P** **03 15 43.0 -0.8**
ARCES ARCESS Array B 39.97 334 P **P** **03 15 43.0 -0.9**
comp=Z,2.1nm,0.6s,baz=100,slow=10,SNR=6.6
ARCES ARCESS Array B 39.97 334 *e*P **P** **03 15 44.4 +0.5**
ARCES ARCESS Array B 39.97 334 *e*P **P** **03 15 44.4 +0.5**
PSI Prapat 41.81 148 *e*P **P** **03 15 59.0 -0.7**
comp=Z,8.8nm,1.4s
PSI Prapat 41.81 148 *e*P **P** **03 15 59.1 -0.7**
PSI pmax pmax
comp=Z,9.0nm,1.4s
HFS Hagfors 43.69 319 P **P** **03 16 14.8 +0.5**
comp=Z,3.7nm,0.7s,baz=98,slow=9.3,SNR=11
NC405 NORSAR Array S 44.60 321 *e*P **P** **03 16 19.9 -1.8**
NB2 NORSAR Subarra 44.85 321 P **P** **03 16 23.4 -0.3**
comp=Z,2.3nm,0.7s,baz=86,slow=7.9
NB2 NORSAR Subarra 44.85 321 P **P** **03 16 23.3 -0.4**
NB2 pmax pmax
comp=Z,3.0nm,0.7s
NB200 NORSAR Array S 44.85 321 *e*P **P** **03 16 22.9 -0.9**
NOA NORSAR Array B 44.85 321 P **P** **03 16 22.9 -0.9**
comp=Z,3.5nm,0.8s,baz=82,slow=9.3,SNR=3.3
NAO01 NORSAR Array S 45.03 320 *e*P **P** **03 16 24.7 -0.4**
CLL Collm 45.27 307 *i* P **P** **03 16 26.9 -0.2**
comp=Z,3.0nm,0.8s
CLL *e*PP **PP** **03 18 13.0 +0.2**
CLL Collm 45.27 307 *i* P **P** **03 16 26.9 -0.2**
CLL pmax pmax
comp=Z,3.0nm,0.8s
GEC2 GERESS Array S 45.40 303 *e*P **P** **03 16 28.6 +0.2**
comp=Z,3.9nm,1.2s
GEC2 GERESS Array S 45.40 303 *e*P **P** **03 16 28.6 +0.2**
GEC2 pmax pmax
comp=Z,4.0nm,1.2s
GERES GERESS Array B 45.40 303 P **P** **03 16 28.6 +0.2**
comp=Z,1.0nm,0.8s,baz=74,slow=7.1,SNR=7.7
GERES LR LR 03 37 58.2
comp=Z,40nm,20.9s,baz=270,slow=39
GEA0 GERESS Array S 45.41 303 *e*P **P** **03 16 28.9 +0.6**
KONO Kongsberg 45.78 319 *e*P **P** **03 16 31.4 +0.3**
comp=Z,7.4nm,0.9s
KONO Kongsberg 45.78 319 *e*P **P** **03 16 31.4 +0.3**
KONO pmax pmax
comp=Z,7.0nm,0.9s
PEA0B Petropavlovsk- 53.36 48 *e*P **P** **03 17 28.0 -1.0**
EKA Eskdalemuir Ar 53.47 315 P **P** **03 17 29.7 0.0**
comp=Z,1.9nm,0.7s,baz=78,slow=8.1,SNR=6.3
ESDC Sonseca Array 60.57 299 P **P** **03 18 19.8 -0.6**
comp=Z,0.6nm,0.6s,baz=59,slow=6.9,SNR=6.3
ILAR Eielson Array 69.52 19 P **P** **03 19 17.5 -0.5**
comp=Z,0.3nm,0.9s,baz=135,slow=0.4,SNR=3.1
ILB Eielson Array 69.52 19 *e*P **P** **03 19 17.5 -0.5**
TOA1 Torodi Ar. Sit 71.27 272 *e*P **P** **03 19 28.4 -1.0**
TOA0 Torodi Ar. Sit 71.27 272 *e*P **P** **03 19 28.4 -1.1**
TORD Torodi Ar. Bea 71.27 272 P **P** **03 19 28.4 -1.1**
comp=Z,0.8nm,0.6s,baz=44,slow=5.4,SNR=17
KOWA Kowa 74.80 276 P **P** **03 19 49.6 -0.7**
comp=Z,1.4nm,0.8s,baz=14,slow=8.3,SNR=3.6
AS31 Alice Springs 82.13 130 *e*P **P** **03 20 28.6 -2.1**
comp=Z,1.1nm,1.2s
ASAR Alice Springs 82.14 130 P **P** **03 20 30.2 -0.4**
comp=Z,0.4nm,0.8s,baz=327,slow=6.6,SNR=2.8

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*ISCJB **14** 03:17:14.5±0.2,33°.87N±0°.01×117°.79W±0°.01,h8km±1km, mb3.4/1,Error ellipse: s-maj=2.2km s-min=1.4km az=34.3*
*NEIC **14** 03:17:15.7±0.0,33°.91N×117°.79W,h10km,ML4.0(PAS), After PAS.*
NEIC Felt [IV] at Anaheim and Yorba Linda and [III] in the Covina-Seal Beach-Riverside area. Felt in much of the Los Angeles Basin and San Diego County. Also felt at Tijuana, Baja California.
*IDC **14** 03:17:15.1±1.9,33°.77N×117°.57W,h0km,mb3.2/1, mb1 3.6/5,mb1mx3.4/60,mbtmp3.2/5,ML3.6/4,Error ellipse: s-maj=23.7km s-min=13.2km az=55.0*
ISC 14 03:17:15.6±0.8,33°.88N±0°.01×117°.78W±0°.01,h14km±6km, n175,σ1§20/243,Southern California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FULC	**Fullerton**	**0.12**	**267**	*e*Pg	**Pg**	**03 17 19.0**	**+0.1**
CHNC	**Chino**	**0.15**	**35**	*e*Pg	**Pg**	**03 17 18.7**	**-0.6**
BREC	**Barre Substati**	**0.18**	**247**	*e*Pg	**Pg**	**03 17 20.4**	**+0.7**
CRNC	**Corona**	**0.18**	**90**	*e*Pg	**Pg**	**03 17 19.8**	**0.0**
PSRC	**Puddingstone R**	**0.21**	**355**	*e*Pg	**Pg**	**03 17 19.5**	**-0.9**
DLAC	**Del Amo**	**0.26**	**264**	*e*Pg	**Pg**	**03 17 22.0**	**+0.9**
PEM	**Pine Mountain**	**0.30**	**346**	*e*Pg	**Pg**	**03 17 21.0**	**-0.8**
GVRC	**Garvey Reservo**	**0.33**	**302**	*e*Pg	**Pg**	**03 17 22.1**	**-0.2**
RVR	**Riverside**	**0.36**	**71**	*e*Pg	**Pg**	**03 17 22.3**	**-0.6**
BFSC	**Mount Baldy Ra**	**0.38**	**16**	P	**Pg**	**03 17 22.3**	**-0.9**
	baz=198,SNR=1000						
BFSC				S	**Sg**	**03 17 27.2**	**-1.2**
	baz=198						
BFSC	**Mount Baldy Ra**	**0.38**	**16**	*e*Pg	**Pg**	**03 17 22.3**	**-0.9**
MWC	**Mount Wilson**	**0.41**	**327**	*e*Pg	**Pg**	**03 17 22.6**	**-1.3**
MWC				*e*Sg	**Sg**	**03 17 28.2**	**-1.4**
CLTC	**Calectric**	**0.44**	**61**	*e*Pg	**Pg**	**03 17 24.1**	**-0.3**
PASC	**Pasadena Art C**	**0.45**	**311**	*e*Pg	**Pg**	**03 17 23.2**	**-1.2**
PASC				*e*Sg	**Sg**	**03 17 28.8**	**-1.6**
FMP	**Fort Macarthur**	**0.46**	**249**	P	**Pg**	**03 17 24.2**	**-0.5**
	baz=65,SNR=32						
FMP	**Fort Macarthur**	**0.46**	**249**	*e*Pg	**Pg**	**03 17 24.3**	**-0.3**
CHFC	**Chilao Flat St**	**0.50**	**336**	*e*Pg	**Pg**	**03 17 24.2**	**-1.3**
HLNC	**Highland**	**0.53**	**62**	*e*Pg	**Pg**	**03 17 25.6**	**-0.4**
RPV	**Rancho Palos V**	**0.53**	**256**	*e*Pg	**Pg**	**03 17 25.7**	**-0.4**
MURC	**Murrieta**	**0.56**	**119**	P	**Pg**	**03 17 26.5**	**-0.1**
	baz=302,SNR=879						
MURC				S	**Sg**	**03 17 33.3**	**-0.9**
	baz=302						
HOLC	**Holcomb Ridge**	**0.58**	**355**	*e*Pg	**Pg**	**03 17 25.8**	**-1.3**
JNH	**Juniper Hills**	**0.59**	**346**	*e*Pg	**Pg**	**03 17 25.8**	**-1.4**
DECC	**Green Verdugo**	**0.59**	**310**	P	**Pg**	**03 17 25.9**	**-1.3**
	baz=127,SNR=103						
DECC				S	**Sg**	**03 17 33.6**	**-1.5**
	baz=127						
DECC	**Green Verdugo**	**0.59**	**310**	*e*Pg	**Pg**	**03 17 26.6**	**-0.6**
DJJ	**Donna J Jenkin**	**0.60**	**292**	*e*Pg	**Pg**	**03 17 26.6**	**-0.9**
SVD	**Seven Oaks Dam**	**0.61**	**68**	*e*Pg	**Pg**	**03 17 27.2**	**-0.4**
BBSC	**Beaumont Base**	**0.67**	**86**	*e*Pg	**Pg**	**03 17 28.4**	**-0.2**
BACC	**Bachelor Mtn.**	**0.67**	**113**	*e*Pg	**Pg**	**03 17 28.2**	**-0.5**
EL2	**El Mirage 2**	**0.68**	**17**	*e*Pg	**Pg**	**03 17 27.5**	**-1.4**
DGR	**Domenigoni Val**	**0.68**	**109**	*e*Pg	**Pg**	**03 17 28.4**	**-0.5**
CIAC	**Catalina I. Ai**	**0.71**	**228**	*e*Pn	Pn	03 17 39.7	+8.4
CIS	**Catalina Islan**	**0.71**	**228**	P	**Pg**	**03 17 28.7**	**-0.7**
	baz=46,SNR=232						
CIS				Sb	**Sg**	**03 17 39.2**	**+0.4**
	baz=46						
VTV	**Victorville**	**0.78**	**29**	*e*Pg	**Pg**	**03 17 29.6**	**-1.1**
VTV				*e*Sn	**Sg**	**03 17 39.2**	**-1.8**
BBRC	**Big Bear Solar**	**0.81**	**62**	P	**Pg**	**03 17 30.4**	**-1.0**
	baz=244,SNR=167						
BBRC				S	**Sg**	**03 17 41.2**	**-0.9**
	baz=244						
BBRC	**Big Bear Solar**	**0.81**	**62**	*e*Pg	**Pg**	**03 17 30.8**	**-0.6**
ALPC	**Antelope**	**0.91**	**332**	*e*Pn	**Pg**	**03 17 33.2**	**-0.1**
CRY	**Cary Ranch**	**0.93**	**109**	*e*Pg	**Pg**	**03 17 32.7**	**-0.8**
CRY				*e*Sg	**Sg**	**03 17 45.0**	**-0.6**
PLM	**Palomar**	**0.93**	**124**	*e*Pg	**Pg**	**03 17 32.9**	**-0.8**
PLM				*e*Sg	**Sb**	**03 17 46.3**	**+0.4**
FOXC	**Fox Airport**	**0.94**	**337**	*e*Pg	**Pb**	**03 17 32.4**	**-1.4**
GVDA	**Garner Valley**	**0.95**	**102**	*e*Pg	**Pg**	**03 17 33.1**	**-0.8**
GVDA				*e*Sg	**Sb**	**03 17 46.2**	**-0.1**
DEVC	**Devers**	**1.00**	**86**	*e*Pg	**Pb**	**03 17 34.6**	**-0.2**
DNR	**Dunn Ranch,Anz**	**1.01**	**108**	*e*Pg	**Pb**	**03 17 34.7**	**-0.3**
DNR				*e*Sn	**Sn**	**03 17 48.9**	**-0.7**
EDW2	**Edwards Air Fo**	**1.02**	**350**	P	**Pb**	**03 17 33.6**	**-1.5**
	baz=170,SNR=579						
EDW2				S	**Sb**	**03 17 48.3**	**-0.1**
	baz=170						
EDW2	**Edwards Air Fo**	**1.02**	**350**	*e*Pg	**Pb**	**03 17 33.7**	**-1.4**
SNDA	**J Saunders Pla**	**1.03**	**108**	*e*Pg	**Pb**	**03 17 34.9**	**-0.4**
SNDA				*e*Sn	**Sn**	**03 17 49.1**	**-1.0**
BTPC	**Burnt Peak**	**1.04**	**321**	*e*Pg	**Pb**	**03 17 34.9**	**-0.6**
FRD	**Ford Ranch, An**	**1.06**	**111**	*e*Pg	**Pb**	**03 17 35.1**	**-0.7**
FRD				*e*Sg	**Sg**	**03 17 49.2**	**-0.6**
TPO	**Tropico Hills**	**1.06**	**340**	*e*Pg	**Pb**	**03 17 34.4**	**-1.5**
OSI	**Osito Audit: C**	**1.07**	**314**	P	**Pb**	**03 17 34.4**	**-1.6**
	baz=132,SNR=56						
OSI				S	**Sb**	**03 17 48.7**	**-1.2**
	baz=132						
OSI	**Osito Audit: C**	**1.07**	**314**	*e*Pg	**Pb**	**03 17 34.7**	**-1.3**
OSI				*e*Sg	**Sb**	**03 17 48.6**	**-1.2**
BLG	**Laguna Peak, P**	**1.09**	**283**	P	**Pb**	**03 17 34.6**	**-1.7**
	baz=100,SNR=46						
BLG				S	**Sb**	**03 17 49.6**	**-0.8**
	baz=100						
HWB	**Hans Werner Br**	**1.09**	**141**	*e*Pg	**Pb**	**03 17 35.2**	**-1.1**
HWB				*e*Sg	**Sb**	**03 17 50.1**	**-0.3**
SCI2	**San Clemente I**	**1.10**	**216**	P	**Pb**	**03 17 35.5**	**-1.0**
	baz=34,SNR=63						
SCI2				S	**Sb**	**03 17 50.1**	**-0.5**
	baz=34						
SBI	**Santa Barbara**	**1.11**	**250**	*e*Pg	**Pb**	**03 17 35.2**	**-1.4**
DPP	**Dos Picos Cty**	**1.12**	**141**	*e*Pn	**Pb**	**03 17 35.8**	**-1.0**
DPP				*e*Sn	**Sg**	**03 17 51.5**	**-0.4**
PFO	**Pinyon Flats O**	**1.13**	**103**	P	**Pb**	**03 17 36.3**	**-0.8**
	baz=285,SNR=786						
PFO				S	**Sb**	**03 17 51.0**	**-0.8**
	baz=285						
PFO	**Pinyon Flats O**	**1.13**	**103**	*e*Pg	**Pb**	**03 17 36.3**	**-0.8**
PFO				*e*Sn	**Sb**	**03 17 51.0**	**-0.8**
PFO				*e*Sn	**Sg**	**03 17 51.6**	**-0.7**
109C	**Camp Elliot, M**	**1.14**	**150**	P	**Pb**	**03 17 35.9**	**-1.1**
	baz=331,SNR=375						
109C				S	**Sb**	**03 17 51.1**	**-0.6**
	baz=331						
CPE	**Camp Elliot**	**1.14**	**150**	*e*Pn	**Pb**	**03 17 36.2**	**-0.9**
CPE				*e*Sn	**Sb**	**03 17 51.1**	**-0.6**
RRX	**Edison Barstow**	**1.19**	**33**	P	**Pn**	**03 17 37.1**	**-0.8**
	baz=214,SNR=89						
RRX				S	**Sb**	**03 17 52.9**	**-0.4**
	baz=214						
STCC	**Santa Clara**	**1.24**	**290**	*e*Pn	**Pn**	**03 17 38.5**	**-0.1**
EML	**El Monte Cty P**	**1.26**	**141**	*e*Pn	**Pn**	**03 17 38.1**	**-0.7**
EML				*e*Sn	**Sn**	**03 17 55.1**	**-0.4**
BORC	**Borrego Spring**	**1.29**	**118**	*e*Pn	**Pb**	**03 17 39.6**	**-0.1**
BLKC	**Black Mountain**	**1.29**	**21**	*e*Pn	**Pn**	**03 17 38.9**	**-0.5**
TJR	**Tejon Ranch**	**1.40**	**326**	*e*Pn	**Pn**	**03 17 40.2**	**-0.5**
TJR				*e*Sn	**Sn**	**03 17 58.6**	**-0.4**
TPC	**Twentynine Pal**	**1.46**	**81**	*e*Pn	**Pn**	**03 17 41.8**	**+0.2**
BELC	**Belle Mtn. Jos**	**1.49**	**85**	Pb	**Pn**	**03 17 42.1**	**0.0**
	baz=267,SNR=1000						
BELC				S	**Sb**	**03 18 02.1**	**+0.1**
	baz=267						
BELC	**Belle Mtn. Jos**	**1.49**	**85**	*e*Pn	**Pb**	**03 17 42.6**	**-0.6**
BELC				*e*Sn	**Sg**	**03 18 03.2**	**-0.4**
MONP2	**Monument Peak**	**1.50**	**130**	Pb	**Pn**	**03 17 42.4**	**0.0**
	baz=312,SNR=431						
MONP2				S	**Sb**	**03 18 02.2**	**-0.3**
	baz=312						
RYS	**Reyes Peak**	**1.51**	**301**	*e*Pn	**Pn**	**03 17 42.6**	**+0.2**
CTCC	**Cactus City**	**1.51**	**98**	*e*Sn	**Sg**	**03 18 04.9**	**+0.7**
BAR	**Barrett**	**1.51**	**142**	*e*Pn	**Pn**	**03 17 42.1**	**-0.2**
BAR				*e*Sn	**Sn**	**03 18 01.9**	**-0.1**
BAR				*e*Sg	**Sb**	**03 18 02.4**	**-0.2**
ARVC	**Arvin**	**1.52**	**326**	P	**Pn**	**03 17 41.6**	**-0.8**
	baz=145,SNR=133						
ARVC				S	**Sn**	**03 18 02.1**	**+0.2**
	baz=145						
ARVC	**Arvin**	**1.52**	**326**	*e*Pn	**Pn**	**03 17 42.1**	**-0.3**
ARVC				*e*Sn	**Sn**	**03 18 02.4**	**+0.4**
HEC	**Hector,Ludlow**	**1.53**	**51**	P	**Pn**	**03 17 42.4**	**-0.2**
	baz=233,SNR=205						
HEC				S	**Sb**	**03 18 02.7**	**-0.4**
	baz=233						
HEC	**Hector,Ludlow**	**1.53**	**51**	*e*Pn	**Pb**	**03 17 43.4**	**-0.4**
ABL	**Mount Abel**	**1.54**	**310**	*e*Pn	**Pn**	**03 17 42.5**	**-0.4**
SCZ2	**Santa Cruz Isl**	**1.54**	**275**	P	**Pn**	**03 17 41.1**	**-1.7**
	baz=93,SNR=58						
SCZ2				S	**Sn**	**03 18 02.9**	**+0.2**
	baz=93						
SNCC	**San Nicolas Is**	**1.58**	**247**	P	**Pn**	**03 17 41.7**	**-1.6**
	baz=65,SNR=10						
SNCC	**San Nicolas Is**	**1.58**	**247**	*e*Pn	**Pn**	**03 17 42.0**	**-1.3**
SNCC				*e*Sn	**Sn**	**03 18 01.6**	**-2.0**
LRMC	**Laurel Mtn Rad**	**1.60**	**3**	P	**Pn**	**03 17 43.3**	**-0.4**
	baz=183,SNR=137						
LRMC				S	**Sn**	**03 18 03.9**	**-0.4**
	baz=183						
CTW	**Cottonwood Mou**	**1.60**	**97**	*e*Sn	**Sn**	**03 18 01.7**	**-2.5**
CBKC	**Canebrake**	**1.61**	**127**	*e*Pn	**Pb**	**03 17 44.8**	**-0.3**
GSC	**Goldstone, Bar**	**1.63**	**29**	P	**Pn**	**03 17 44.2**	**+0.1**
	baz=210,SNR=552						
GSC				S	**Sn**	**03 18 05.3**	**+0.3**
	baz=210						
GSC	**Goldstone, Bar**	**1.63**	**29**	*e*Pn	**Pn**	**03 17 44.0**	**-0.1**
GSC				*e*Sn	**Sn**	**03 18 02.6**	**-2.4**
BATC	**Bat Cave Butte**	**1.67**	**104**	*e*Pn	**Pg**	**03 17 46.6**	**-1.1**
CCCA	**Chr Cany lake**	**1.68**	**12**	*e*Pn	**Pn**	**03 17 44.7**	**+0.1**
SBC	**Santa Barbara**	**1.70**	**290**	P	**Pn**	**03 17 44.1**	**-0.7**
	baz=108,SNR=12						
SBC				Sb	**Sb**	**03 18 08.4**	**+0.6**
	baz=108						
BCW	**Bitter Crk WRg**	**1.71**	**309**	*e*Pn	**Pn**	**03 17 45.7**	**+0.5**
HAY	**Hayfield**	**1.76**	**95**	*e*Pn	**Pn**	**03 17 46.4**	**+0.7**
CRR	**Carrizo Plain**	**1.81**	**123**	*e*Pn	**Pb**	**03 17 47.4**	**-1.1**
CBX	**Cerro Bola**	**1.82**	**149**	P	**Pn**	**03 17 46.8**	**+0.1**
CBX				S	**Sn**	**03 18 08.9**	**-0.7**
BAKC	**Calstate**	**1.82**	**324**	*e*Sn	**Sn**	**03 18 09.8**	**+0.3**
FRK	**Frink**	**1.85**	**104**	*e*Pn	**Pn**	**03 17 46.8**	**-0.2**
IKP	**In-Ko-Pah, Jac**	**1.86**	**131**	P	**Pn**	**03 17 47.4**	**+0.2**
	baz=312,SNR=149						
ISA	**Isabella, Lake**	**1.87**	**342**	P	**Pn**	**03 17 46.8**	**-0.5**
	baz=162,SNR=159						
ISA	**Isabella, Lake**	**1.87**	**342**	*e*Pn	**Pn**	**03 17 46.0**	**-1.3**
ISA				*e*Sn	**Sn**	**03 18 09.2**	**-1.6**
WHFM	**Hanning Flat**	**1.87**	**346**	*e*Pn	**Pn**	**03 17 46.8**	**-0.5**
SWSC	**Sam W. Stewart**	**1.90**	**119**	P	**Pn**	**03 17 47.7**	**0.0**
	baz=301,SNR=92						
SWSC				Sb	**Sg**	**03 18 15.2**	**-1.6**
	baz=301						
SWSC	**Sam W. Stewart**	**1.90**	**119**	*e*Sn	**Sb**	**03 18 12.3**	**-1.4**
SYP	**Santa Ynez Pea**	**1.93**	**290**	*e*Pn	**Pn**	**03 17 47.4**	**-0.8**
CLC	**China Lake**	**1.94**	**4**	*e*Pn	**Pn**	**03 17 47.9**	**-0.3**
BC3	**Big Chuckawall**	**1.95**	**96**	P	**Pn**	**03 17 48.2**	**-0.3**
	baz=278,SNR=229						
BC3				Sb	**Sg**	**03 18 16.4**	**-2.0**
	baz=278						
PKM	**Mcpherson Peak**	**1.96**	**302**	P	**Pn**	**03 17 47.9**	**-0.7**
	baz=120,SNR=25						
PKM				Sb	**Sb**	**03 18 15.9**	**+0.3**
	baz=120						
WASM	**Alta Sierra Ca**	**1.96**	**341**	*e*Pn	**Pn**	**03 17 48.3**	**-0.4**
GMRC	**Granite Mounta**	**1.98**	**62**	P	**Pn**	**03 17 48.4**	**-0.4**
	baz=244,SNR=263						
GMRC				Sb	**Sb**	**03 18 17.1**	**+1.1**
	baz=244						
FIGC	**Figueroa Mtn.**	**2.01**	**296**	*e*Pn	**Pn**	**03 17 51.0**	**+1.7**
RCWM	**Renegade Canyo**	**2.07**	**3**	*e*Pn	**Pn**	**03 17 49.9**	**-0.2**
CRGC	**Crocker Grade**	**2.10**	**311**	*e*Pn	**Pn**	**03 17 50.3**	**-0.3**
TUQ	**Turquoise Moun**	**2.18**	**44**	P	**Pn**	**03 17 51.4**	**-0.3**
	baz=226,SNR=80						
TUQ				Sb	**Sb**	**03 18 22.9**	**+1.0**
	baz=226						
MPMC	**Manual Prospec**	**2.19**	**6**	P	**Pn**	**03 17 51.6**	**-0.2**
	baz=187,SNR=644						
MPMC				Sb	**Sb**	**03 18 23.6**	**+1.4**
	baz=187						
IRM	**Iron Mountain**	**2.21**	**82**	P	**Pn**	**03 17 51.7**	**-0.2**
	baz=264,SNR=362						
IRM				S	**Sn**	**03 18 18.3**	**-0.8**
	baz=264						
IRM	**Iron Mountain**	**2.21**	**82**	*e*Pn	**Pn**	**03 17 51.8**	**-0.1**
VES	**Vestal, Richgr**	**2.23**	**332**	P	**Pn**	**03 17 52.0**	**-0.2**
	baz=151,SNR=65						
VES				S	**Sn**	**03 18 19.6**	**0.0**
	baz=151						
BCH	**Branch Mountai**	**2.30**	**305**	*e*Pn	**Pn**	**03 17 53.1**	**-0.2**
SMMC	**Simmler**	**2.32**	**309**	P	**Pn**	**03 17 52.9**	**-0.6**
	baz=127						
SMMC				S	**Sn**	**03 18 22.4**	**+0.5**
	baz=127						
GATR	**Gnd/Air Tx Cnt**	**2.35**	**287**	*e*Pn	**Pn**	**03 17 54.0**	**+0.1**
SHOC	**Shoshone, Teco**	**2.37**	**31**	P	**Pn**	**03 17 54.1**	**0.0**
	baz=212,SNR=22						
SHOC				S	**Sn**	**03 18 23.2**	**+0.2**
	baz=212						
DAC	**Darwin (Calif)**	**2.40**	**4**	*e*Pn	**Pn**	**03 17 54.7**	**0.0**
DAC				*e*Sn	**Sn**	**03 18 24.5**	**+0.5**
LDFC	**Landfair**	**2.51**	**61**	*e*Pn	**Pn**	**03 17 56.1**	**-0.1**
LDFC				*e*Sn	**Sn**	**03 18 22.9**	**-3.8**
CWC	**Cottonwood Cre**	**2.57**	**355**	P	**Pn**	**03 17 56.7**	**-0.3**
	baz=175						
CWC				Sb	**Sb**	**03 18 34.9**	**+1.8**
	baz=175						
GLA	**Glamis**	**2.60**	**108**	P	**Pn**	**03 17 57.2**	**-0.2**
	baz=290						
GLA	**Glamis**	**2.60**	**108**	*e*Pn	**Pn**	**03 17 58.0**	**+0.6**
GLA				*e*Sn	**Sn**	**03 18 29.3**	**+0.5**
FURC	**Furnace Creek,**	**2.69**	**16**	P	**Pn**	**03 17 58.4**	**-0.1**
	baz=197,SNR=20						
BLYC	**Blythe**	**2.72**	**92**	*e*Pn	**Pn**	**03 17 59.3**	**+0.4**
Y12C	**Blythe**	**2.72**	**92**	P	**Pn**	**03 17 58.6**	**-0.2**
	baz=274,SNR=41						
Y12C	**Blythe**	**2.72**	**92**	*e*Pn	**Pn**	**03 17 58.7**	**-0.2**
Y12C				*e*Sn	**Sn**	**03 18 31.0**	**-0.5**
PAGB	**Antelope Grade**	**2.75**	**313**	*e*Pn	**Pn**	**03 17 59.8**	**+0.5**
PAGB				*e*Sn	**Sn**	**03 18 30.1**	**-2.2**
NEE2	**Needles Airpor**	**2.77**	**70**	P	**Pn**	**03 17 59.7**	**+0.2**
	baz=253						
NEE2				Sb	**Sg**	**03 18 41.5**	**-3.0**
	baz=253						
PDMCI	**Parker Dam,Lak**	**3.05**	**81**	P	**Pn**	**03 18 03.5**	**0.0**
	baz=264,SNR=22						
GRAC	**Grapevine Rang**	**3.13**	**6**	P	**Pn**	**03 18 05.7**	**+1.1**
	baz=186,SNR=61						
TIN	**Tinemaha, Big**	**3.19**	**354**	P	**Pn**	**03 18 06.1**	**+0.6**
	baz=173						
TPNV	**Topopah Spring**	**3.31**	**22**	P	**Pn**	**03 18 08.0**	**+0.8**
	baz=203,SNR=132						
TPNV	**Topopah Spring**	**3.31**	**22**	*e*Pn	**Pn**	**03 18 08.0**	**+0.8**
TPNV				*e*Sn	**Sn**	**03 18 43.9**	**-2.5**
SHPR	**Sheep Range**	**3.39**	**39**	*e*Pn	**Pn**	**03 18 09.4**	**+1.1**
PMPB	**Monarch Peak**	**3.40**	**314**	*e*Pn	**Pn**	**03 18 08.3**	**-0.1**
SPIG	**San Pedro Mart**	**3.44**	**145**	P	**Pn**	**03 18 10.6**	**+1.5**
SPIG				S	**Sb**	**03 18 58.2**	**0.0**
SPX	**San Pedro Mart**	**3.44**	**145**	P	**Pn**	**03 18 10.6**	**+1.5**
SPX				S	**Sb**	**03 18 58.8**	**+0.4**
W13A	**Hualapai Mount**	**3.44**	**68**	*e*Pn	**Pn**	**03 18 09.2**	**+0.1**
113A	**Mohawk Valley,**	**3.54**	**107**	*e*Pg	**Pb**	**03 18 16.4**	**-1.6**
PAPM	**Alder Peak**	**3.57**	**306**	*e*Pn	**Pn**	**03 18 09.4**	**-1.4**
OMMB	**Old Mammoth Mi**	**3.86**	**345**	*e*Pn	**Pn**	**03 18 16.7**	**+1.9**
Y14A	**Wickenburg**	**3.97**	**88**	*e*Pn	**Pn**	**03 18 16.6**	**+0.4**
NV11	**Mina Array Sit**	**4.55**	**356**	*e*Pn	**Pn**	**03 18 26.3**	**+2.0**
NV01	**Mina Array Sit**	**4.56**	**355**	*e*Pn	**Pn**	**03 18 25.8**	**+1.4**
NV01				*e*Pg	**Pb**	**03 18 38.6**	**+3.0**
NV01				*e*Lg	Lg	03 19 43.8	
NVAR	**Mina Array Bea**	**4.56**	**355**	Pn	**Pn**	**03 18 25.8**	**+1.4**
	baz=178,slow=15,SNR=13						
NVAR				Pg	**Pb**	**03 18 38.6**	**+3.0**
	baz=176,slow=14,SNR=42						
NVAR				Lg	Lg	03 19 43.8	
	baz=259,slow=18,SNR=2.7						
CMB	**Columbia Colle**	**4.66**	**334**	*e*Pn	**Pn**	**03 18 26.3**	**+0.8**
R11A	**Troy Canyon, C**	**4.80**	**21**	P	**Pn**	**03 18 28.7**	**+0.9**
	baz=202						
R11A	**Troy Canyon, C**	**4.80**	**21**	*e*Pn	**Pn**	**03 18 28.9**	**+1.1**
**LCM

	comp=E,3991μm,0.7s						
KSL				AML	AML	03 26 09.8	
	comp=N,1130μm,0.3s						
KSL	**Kastellorizon**	**0.52**	**115**	P	**Pg**	**03 25 59.3**	**+0.7**
KSL				S	**Sn**	**03 26 07.9**	**-0.9**
DALY	**Dalyan (Mu¨la**	**0.53**	**327**	PG	**Pg**	**03 25 58.8**	**+0.1**
DALY				SG	**Sb**	**03 26 06.9**	**+1.1**
DALY	**Dalyan (Mu¨la**	**0.53**	**327**	*i* P	**Pg**	**03 25 59.3**	**+0.6**
DALY				*i* S	**Sn**	**03 26 07.3**	**-1.7**
DALY	**Dalyan (Mu¨la**	**0.53**	**327**	*i* Pg	**Pg**	**03 25 58.8**	**+0.1**
DALY	**Dalyan (Mu¨la**	**0.53**	**327**	P	**Pg**	**03 25 59.3**	**+0.6**
DALY				*i* Sg	**Sb**	**03 26 06.9**	**+1.1**
DALY				S	**Sn**	**03 26 07.3**	**-1.7**
TURN	**Turunc**	**0.59**	**327**	PG	**Pn**	**03 26 02.7**	**+1.2**
TURN				SG	**Sn**	**03 26 13.5**	**+2.9**
TURN	**Turunc**	**0.59**	**327**	*i* P	**Pn**	**03 26 02.9**	**+1.3**
TURN				*i* S	**Sn**	**03 26 13.2**	**+2.6**
TURN	**Turunc**	**0.59**	**327**	*e*Pg	**Pn**	**03 26 02.7**	**+1.2**
ARG	**Arkhangelos**	**0.73**	**258**	PG	**Pg**	**03 26 02.5**	**+0.1**
ARG				SG	**Sn**	**03 26 13.2**	**-0.8**
ARG	**Arkhangelos**	**0.73**	**258**	P	**Pn**	**03 26 02.9**	**-0.5**
ARG				S	**Sn**	**03 26 14.0**	**0.0**
ARG				AML	AML	03 26 18.9	
	comp=N,337μm,0.3s						
ARG				AML	AML	03 26 18.9	
	comp=E,446μm,0.4s						
ARG	**Arkhangelos**	**0.73**	**258**	P	**Pn**	**03 26 02.9**	**-0.5**
ARG				S	**Sg**	**03 26 12.1**	**0.0**
ARG	**Arkhangelos**	**0.73**	**258**	*e*Pg	**Pg**	**03 26 02.5**	**+0.1**
ARG	**Arkhangelos**	**0.73**	**258**	P	**Pn**	**03 26 02.9**	**-0.5**
ARG				S	**Sg**	**03 26 12.1**	**0.0**
ARG				*e*Sg	**Sn**	**03 26 13.2**	**-0.8**
MRSB	**Marmaris-Mugla**	**0.73**	**298**	PG	**Pg**	**03 26 02.7**	**+0.1**
MRSB	**Marmaris-Mugla**	**0.73**	**298**	*e*Pg	**Pg**	**03 26 02.7**	**+0.1**
ELL	**Elmali**	**0.82**	**63**	PG	**Pn**	**03 26 04.3**	**-0.4**
ELL	**Elmali**	**0.82**	**63**	*e*Pg	**Pn**	**03 26 04.3**	**-0.4**
GLHS	**Gihisar (BURDU**	**0.87**	**27**	PG	**Pg**	**03 26 04.9**	**-0.3**
GLHS	**Gihisar (BURDU**	**0.87**	**27**	*e*Pg	**Pg**	**03 26 04.9**	**-0.3**
YER	**Yerkesik**	**0.95**	**323**	PG	**Pg**	**03 26 06.7**	**0.0**
YER	**Yerkesik**	**0.95**	**323**	P	**Pg**	**03 26 06.6**	**-0.1**
YER				S	**Sn**	**03 26 19.5**	**-0.2**
YER	**Yerkesik**	**0.95**	**323**	*e*Pg	**Pg**	**03 26 06.7**	**0.0**
YER				S	**Sn**	**03 26 19.5**	**-0.2**
GOLH	**Golhisar**	**0.97**	**27**	*i* P	**Pb**	**03 26 05.1**	**-1.2**
GOLH				*i* S	**Sb**	**03 26 19.1**	**+0.3**
GOLH	**Golhisar**	**0.97**	**27**	P	**Pb**	**03 26 05.1**	**-1.2**
GOLH				S	**Sb**	**03 26 19.1**	**+0.3**
TAVA	**DENIZLI_Tavas**	**1.09**	**356**	*i* P	**Pn**	**03 26 08.4**	**-0.1**
TAVA				*i* S	**Sg**	**03 26 23.3**	**-0.4**
TAVA	**DENIZLI_Tavas**	**1.09**	**356**	P	**Pn**	**03 26 08.4**	**-0.1**
TAVA				S	**Sg**	**03 26 23.3**	**-0.4**
DATC	**Datca-Mugla**	**1.15**	**290**	PN	**Pb**	**03 26 09.5**	**+0.2**
DATC	**Datca-Mugla**	**1.15**	**290**	*e*Pn	**Pb**	**03 26 09.5**	**+0.2**
DAT	**Datca**	**1.20**	**288**	PN	**Pb**	**03 26 10.2**	**-0.1**
DAT	**Datca**	**1.20**	**288**	*i* P	**Pb**	**03 26 10.4**	**0.0**
DAT				*i* S	**Sg**	**03 26 27.1**	**-0.1**
DAT	**Datca**	**1.20**	**288**	P	**Pb**	**03 26 10.4**	**0.0**
DAT				S	**Sg**	**03 26 27.1**	**-0.1**
KORT	**Korkueli**	**1.25**	**60**	PN	**Pn**	**03 26 10.7**	**0.0**
KORT	**Korkueli**	**1.25**	**60**	*i* P	**Pb**	**03 26 11.3**	**+0.2**
KORT				*i* S	**Sg**	**03 26 28.7**	**+0.1**
KORT	**Korkueli**	**1.25**	**60**	*e*Pn	**Pn**	**03 26 10.7**	**0.0**
KORT	**Korkueli**	**1.25**	**60**	P	**Pb**	**03 26 11.4**	**+0.2**
KORT				S	**Sg**	**03 26 28.7**	**+0.1**
DNZL	**Cakiroluk**	**1.31**	**1**	*i* P	**Pn**	**03 26 11.2**	**-0.5**
DNZL				*i* S	**Sb**	**03 26 28.8**	**0.0**
DNZL	**Cakiroluk**	**1.31**	**1**	P	**Pn**	**03 26 11.1**	**-0.5**
DNZL				S	**Sb**	**03 26 28.8**	**0.0**
MLSB	**Milas**	**1.35**	**313**	PN	**Pb**	**03 26 12.5**	**-0.3**
MLSB	**Milas**	**1.35**	**313**	*e*Pn	**Pb**	**03 26 12.5**	**-0.3**
DENT	**Denizli**	**1.38**	**1**	PN	**Pn**	**03 26 12.4**	**0.0**
DENT	**Denizli**	**1.38**	**1**	*e*Pn	**Pn**	**03 26 12.4**	**0.0**
ANTB	**Antalya**	**1.43**	**68**	PN	**Pn**	**03 26 13.3**	**+0.4**
ANTB	**Antalya**	**1.43**	**68**	*e*Pn	**Pn**	**03 26 13.3**	**+0.4**
BDRM	**Kayabasi**	**1.43**	**299**	*i* P	**Pn**	**03 26 12.7**	**-0.4**
BDRM				*i* S	**Sg**	**03 26 33.3**	**-1.1**
BDRM	**Kayabasi**	**1.43**	**299**	P	**Pn**	**03 26 12.7**	**-0.4**
BDRM				S	**Sg**	**03 26 33.3**	**-1.1**
BODT	**Bodrum**	**1.52**	**297**	PN	**Pn**	**03 26 14.8**	**+0.4**
BODT	**Bodrum**	**1.52**	**297**	P	**Pn**	**03 26 13.5**	**-0.9**
BODT				S	**Sn**	**03 26 32.7**	**-1.0**
BODT	**Bodrum**	**1.52**	**297**	P	**Pn**	**03 26 13.5**	**-0.9**
BODT	**Bodrum**	**1.52**	**297**	*e*Pn	**Pn**	**03 26 14.8**	**+0.4**
BODT				S	**Sn**	**03 26 32.7**	**-1.0**
AYDN	**Tasoluk**	**1.57**	**325**	*i* P	**Pb**	**03 26 16.6**	**0.0**
AYDN				*i* S	**Sg**	**03 26 37.5**	**-1.3**
AYDN	**Tasoluk**	**1.57**	**325**	P	**Pb**	**03 26 16.6**	**0.0**
AYDN				S	**Sg**	**03 26 37.5**	**-1.3**
KARP	**Karpathos**	**1.71**	**242**	PN	**Pn**	**03 26 17.5**	**+0.6**
KARP	**Karpathos**	**1.71**	**242**	P	**Pn**	**03 26 17.4**	**+0.4**
KARP				S	**Sn**	**03 26 38.2**	**-0.1**
KARP				AML	AML	03 26 39.6	
	comp=N,387μm,0.2s						
KARP				AML	AML	03 26 40.4	
	comp=E,293μm,0.2s						
KARP	**Karpathos**	**1.71**	**242**	P	**Pn**	**03 26 17.2**	**+0.3**
KARP				S	**Sn**	**03 26 38.1**	**-0.1**
KARP	**Karpathos**	**1.71**	**242**	P	**Pn**	**03 26 17.3**	**+0.4**
KARP				S	**Sn**	**03 26 38.4**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**1.80**	**331**	PN	**Pn**	**03 26 18.8**	**+0.5**
AYDB	**Zeytinkoy-Aydi**	**1.80**	**331**	*e*Pn	**Pn**	**03 26 18.8**	**+0.5**
ISP	**Isparta**	**1.89**	**40**	PN	**Pn**	**03 26 20.2**	**+0.8**
ISP	**Isparta**	**1.89**	**40**	*e*Pn	**Pn**	**03 26 20.2**	**+0.8**
GCAM	**G?zelcaml?**	**1.94**	**314**	PN	**Pn**	**03 26 20.8**	**+0.8**
GCAM	**G?zelcaml?**	**1.94**	**314**	*e*Pn	**Pn**	**03 26 20.8**	**+0.8**
SUTC	**Sutluce-Ispart**	**1.94**	**55**	PN	**Pn**	**03 26 20.6**	**+0.4**
SUTC	**Sutluce-Ispart**	**1.94**	**55**	*e*Pn	**Pn**	**03 26 20.6**	**+0.4**
KULA	**Kula-Manisa**	**2.15**	**353**	PN	**Pn**	**03 26 22.1**	**-1.0**
KULA	**Kula-Manisa**	**2.15**	**353**	*e*Pn	**Pn**	**03 26 22.1**	**-1.0**
SMG	**Samos**	**2.19**	**308**	P	**Pn**	**03 26 24.0**	**+0.5**
SMG				S	**Sn**	**03 26 49.4**	**-0.6**
SMG	**Samos**	**2.19**	**308**	P	**Pn**	**03 26 23.8**	**+0.3**
SMG				S	**Sn**	**03 26 49.6**	**-0.4**
ZKR	**Zakros**	**2.59**	**242**	P	**Pn**	**03 26 30.3**	**+1.3**
ZKR	**Zakros**	**2.59**	**242**	P	**Pn**	**03 26 30.0**	**+1.0**
SIMA	**Simav-Kutahya**	**2.70**	**360**	PN	**Pn**	**03 26 31.4**	**+0.8**
SIMA	**Simav-Kutahya**	**2.70**	**360**	*e*Pn	**Pn**	**03 26 31.4**	**+0.8**
URLA	**Izmir**	**2.76**	**317**	PN	**Pn**	**03 26 32.2**	**+0.8**
URLA	**Izmir**	**2.76**	**317**	*e*Pn	**Pn**	**03 26 32.2**	**+0.8**
NPS	**Neapolis**	**2.97**	**249**	P	**Pn**	**03 26 33.2**	**-1.0**
NPS	**Neapolis**	**2.97**	**249**	P	**Pn**	**03 26 34.1**	**-0.2**
LAST	**Lasithi**	**3.11**	**248**	P	**Pn**	**03 26 35.6**	**-0.6**
LAST	**Lasithi**	**3.11**	**248**	P	**Pn**	**03 26 36.3**	**0.0**

IDC ***14*** *03:36:42.8±16.0, 52°.83N×174°.52W, h0km, mb3.5/3, mb1 3.9/4, mb1mx3.3/76, mbtmp3.5/4, ML3.4/1, Error ellipse: s-maj=409.6km s-min=79.6km az=124.0*
ISCJB ***14*** *03:37:00.4±0.8, 52°.0N±0°.1×171°.75W±0°.07, h50km, mb3.2/3, Error ellipse: s-maj=20.4km s-min=3.8km az=166.5*
NEIC ***14*** *03:37:01.3±0.0, 52°.13N×171°.82W, h26km, ML3.3(AEIC), After AEIC.*
ISC 14 03:37:02.0±1.1, 52°.1N±0°.2×171°.83W±0°.06, h50km, n30, σ0°93/28, mb3.2/3, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOFP	**Korovin Flat P**	**1.41**	**279**	P	**Pn**	**03 37 25.5**	**+0.2**
ATKA	**Atka Island**	**1.46**	**276**	P	**Pn**	**03 37 25.6**	**-0.3**
ATKA				S	**Sn**	**03 37 44.1**	**+0.2**
KOKL	**Mount Kliuchef**	**1.48**	**280**	P	**Pn**	**03 37 25.3**	**-0.9**
KOWE	**Korovin West**	**1.52**	**282**	P	**Pn**	**03 37 27.3**	**+0.6**
NIKH	**Nikolski High**	**2.03**	**63**	P	**Pn**	**03 37 33.5**	**-0.1**
NIKH				S	**Sn**	**03 37 58.0**	**+0.2**
OKAK	**Okmok**	**2.59**	**53**	P	**Pn**	**03 37 40.2**	**-1.1**
GSMY	**Great Sitkin M**	**2.61**	**271**	P	**Pn**	**03 37 42.5**	**+0.9**
OKTU	**Okmok Mt. Tuli**	**2.65**	**59**	P	**Pn**	**03 37 42.6**	**+0.4**
OKID	**Okmok Mt. Idak**	**2.81**	**59**	P	**Pn**	**03 37 45.0**	**+0.6**
ETKA	**Kagalaska Isla**	**2.84**	**267**	P	**Pn**	**03 37 45.6**	**+0.8**
ADAG	**Mount Adagdak**	**2.95**	**270**	P	**Pn**	**03 37 47.4**	**+1.1**
KINC	**Kanaga Island**	**3.28**	**269**	P	**Pn**	**03 37 51.5**	**+0.7**
MSOM	**Makushin Julie**	**3.43**	**58**	P	**Pn**	**03 37 53.5**	**+0.7**
MSW	**Makushin Switc**	**3.56**	**57**	P	**Pn**	**03 37 54.9**	**+0.2**
MTBL	**Makushin Table**	**3.64**	**57**	P	**Pn**	**03 37 56.1**	**+0.3**
UNV	**Unalaska Valle**	**3.67**	**59**	P	**Pn**	**03 37 56.7**	**+0.5**
UNV				S	**Sn**	**03 38 40.6**	**+2.4**
AKMO	**Akutan Morgan**	**4.04**	**58**	P	**Pn**	**03 38 02.2**	**+0.9**
AKMO				S	**Sn**	**03 38 49.0**	**+1.7**
AHB	**Akutan Harbor**	**4.16**	**58**	P	**Pn**	**03 38 03.7**	**+0.9**
AKSA	**Akutan Strait**	**4.23**	**58**	P	**Pn**	**03 38 03.2**	**-0.6**
WESP	**Westdahl Peak**	**4.90**	**58**	P	**Pn**	**03 38 12.2**	**-0.9**
KDAK	**Kodiak Island**	**12.43**	**55**	Pn	**Pn**	**03 39 55.0**	**-0.9**
	0.2nm,0.3s,baz=259,slow=10,SNR=1.2						
H11N2	**WAKE ISLAND Hy**	**36.31**	**215**	T	T	04 22 20.7	
	baz=21						
H11N3	**WAKE ISLAND Hy**	**36.32**	**215**	T	T	04 22 21.3	
	baz=21						
H11N1	**WAKE ISLAND Hy**	**36.33**	**215**	T	T	04 22 22.1	
	baz=21						
H11S1	**WAKE ISLAND Hy**	**37.51**	**215**	T	T	04 24 01.1	
	baz=27						
H11S2	**WAKE ISLAND Hy**	**37.53**	**215**	T	T	04 23 56.4	
	baz=27						
H11S3	**WAKE ISLAND Hy**	**37.53**	**215**	T	T	04 23 53.9	
	baz=27						
NVAR	**Mina Array Bea**	**39.18**	**89**	P	**P**	**03 44 25.8**	**+0.7**
	0.1nm,0.3s,baz=317,slow=5.2,SNR=1.6						
PDAR	**Pinedale Array**	**41.94**	**77**	P	**P**	**03 44 47.0**	**-0.9**
	0.7nm,0.6s,baz=298,slow=3.5,SNR=7.8						
TXAR	**Lajitas Array**	**54.27**	**87**	P	**P**	**03 46 21.8**	**-1.2**
	0.1nm,0.4s,baz=321,slow=7.1,SNR=4.5						

ISK ***14*** *03:40:58.9, 38°.60N×43°.14E, h16km±1km, ML2.1/3*
CSEM ***14*** *03:40:59.9±0.2, 38°.62N×43°.15E, h10km, ML2.1, Error ellipse: s-maj=5.7km s-min=4.4km az=173.0*
DDA ***14*** *03:41:00.7, 38°.62N×43°.18E, h7km, Md2.7*
ISC 14 03:41:00.2±1.2, 38°.63N±0°.03×43°.13E±0°.03, h3km±12km, n18, σ0°98/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.21**	**100**	PG	**Pg**	**03 41 04.4**	**+0.1**
VANB				SG	**Sg**	**03 41 08.4**	**+1.4**
VANB	**Van**	**0.21**	**100**	*e*Pg	**Pg**	**03 41 04.4**	**+0.1**
VANB				*e*Sg	**Sg**	**03 41 08.4**	**+1.4**
TVAN	**Van**	**0.24**	**115**	*i* P	**Pg**	**03 41 04.5**	**-0.3**
TVAN				*i* S	**Sg**	**03 41 08.7**	**+0.6**
TVAN	**Van**	**0.24**	**115**	P	**Pg**	**03 41 04.6**	**-0.3**
TVAN				S	**Sg**	**03 41 08.7**	**+0.6**
GEVA	**Gevas**	**0.32**	**190**	*i* P	**Pg**	**03 41 06.9**	**+0.4**
GEVA				*i* S	**Sb**	**03 41 13.3**	**-1.1**
GEVA	**Gevas**	**0.32**	**190**	P	**Pg**	**03 41 06.9**	**+0.4**
GEVA				S	**Sb**	**03 41 13.3**	**-1.1**
ADCV	**BITLIS_Adilcev**	**0.36**	**299**	*i* P	**Pb**	**03 41 08.4**	**-1.0**
ADCV				*i* S	**Sb**	**03 41 15.6**	**0.0**
ADCV	**BITLIS_Adilcev**	**0.36**	**299**	P	**Pb**	**03 41 08.4**	**-1.0**
ADCV				S	**Sb**	**03 41 15.6**	**0.0**
VMUR	**Van-Muradiye**	**0.50**	**44**	*i* P	**Pg**	**03 41 09.7**	**-0.1**
VMUR				*i* S	**Sb**	**03 41 18.4**	**-1.0**
VMUR	**Van-Muradiye**	**0.50**	**44**	P	**Pg**	**03 41 09.7**	**-0.1**
VMUR				S	**Sb**	**03 41 18.5**	**-1.0**
CLDR	**Caldiran**	**0.80**	**50**	PG	**Pg**	**03 41 15.1**	**-0.5**
CLDR				SG	**Sb**	**03 41 26.9**	**-1.4**
CLDR	**Caldiran**	**0.80**	**50**	*e*Pg	**Pg**	**03 41 15.1**	**-0.5**
CLDR				*e*Sg	**Sb**	**03 41 26.9**	**-1.4**
GURO	**Guroymak-BITLI**	**0.86**	**265**	PG	**Pg**	**03 41 16.0**	**-0.8**
GURO				SG	**Sb**	**03 41 28.7**	**-1.2**
GURO	**Guroymak-BITLI**	**0.86**	**265**	*e*Pg	**Pg**	**03 41 16.0**	**-0.8**
GURO				*e*Sg	**Sb**	**03 41 28.7**	**-1.2**
AGRB	**Hanur-Agry**	**0.95**	**354**	PG	**Pg**	**03 41 18.2**	**-0.3**
AGRB				SG	**Sb**	**03 41 32.3**	**-0.2**
AGRB	**Hanur-Agry**	**0.95**	**354**	*e*Pg	**Pg**	**03 41 18.2**	**-0.3**
AGRB				*e*Sg	**Sb**	**03 41 32.3**	**-0.2**
EKAR	**Karacoban**	**1.04**	**307**	*i* P	**Pg**	**03 41 20.2**	**0.0**
EKAR				*i* S	**Sn**	**03 41 39.3**	**+2.2**
EKAR	**Karacoban**	**1.04**	**307**	P	**Pg**	**03 41 20.2**	**0.0**
EKAR				S	**Sn**	**03 41 39.3**	**+2.2**

NIED ***14*** *04:07:00, 23°.70N×121°.60E, h5km, Mw4.1 Best double couple: M∘1.48000×10^15 NP1:φ∘165.00000°, δ7.00000°, λ15.00000°. NP2:φ∘59.00000°, δ88.00000°, λ97.00000°.*
IDC ***14*** *04:07:57.8±0.6, 23°.63N×121°.66E, h0km, mb3.9/16, mb1 4.1/18, mb1mx4.0/62, mbtmp4.0/18, ML4.0/2, MS2.9/7, Ms1 2.9/7, ms1mx2.7/63, Error ellipse: s-maj=18.9km s-min=14.0km az=68.0*
JMA ***14*** *04:07:58.8±0.1, 23°.69N×121°.64E, h0km, M4.0*
ISCJB ***14*** *04:07:59.1±0.3, 23°.69N±0°.01×121°.63E±0°.01, h5km±2km, mb4.1/32, Error ellipse: s-maj=2.2km s-min=1.5km az=39.4*
NEIC ***14*** *04:07:59.9±0.0, 23°.72N×121°.53E, h6km, mb4.4/18, ML4.5(TAP), After TAP.*
NEIC Recorded [5 TAP] in Hualien and [1 TAP] in Changhua, Chiayi, Taitung, Yilan and Yunlin.
TAP ***14*** *04:07:59.9, 23°.72N×121°.53E, h6km, ML4.5, B*
BJI ***14*** *04:08:01.6, 23°.82N×121°.48E, h14km, mb4.0/9, mB4.3/8, ML4.2/9, Ms4.1/8, Ms7 4.0/7*
ISC 14 04:07:59.0±1.0, 23°.68N±0°.01×121°.62E±0°.02, h5km±6km, n180, σ1°01/241, mb4.2/32, 21C-11D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	**Guangfu**	**0.17**	**265**	⇓*i*P	**Pg**	**04 08 02.6**	**+0.2**
	baz=250						
EGFH				S	**Sg**	**04 08 04.7**	**-0.1**
	baz=250						
ESL	**Shilin**	**0.21**	**308**	⇓*i*P	**Pg**	**04 08 02.9**	**-0.3**
	baz=308						
ESL				*i* S	**Sg**	**04 08 04.9**	**-1.1**
	baz=308						
HGSD	**Ruisui**	**0.26**	**223**	⇓P	**Pb**	**04 08 05.9**	**-0.2**
	baz=210						
HWA	**Hwalien**	**0.29**	**358**	P	**Pb**	**04 08 06.2**	**-0.5**
HWA				S	**Sb**	**04 08 11.2**	**-0.7**
EHY	**Hungye**	**0.32**	**237**	⇑*i*P	**Pg**	**04 08 05.7**	**+0.5**
	baz=231						
EHY				*e*S	**Sg**	**04 08 10.3**	**+0.8**
	baz=231						
TWD	**Chiawan**	**0.40**	**357**	⇑*i*P	**Pg**	**04 08 07.5**	**+0.8**
	baz=357						
TWD				*e*S	**Sg**	**04 08 12.7**	**+0.9**
	baz=357						
YULB	**Yu-li**	**0.41**	**225**	⇑P	**Pg**	**04 08 07.8**	**+0.8**
	baz=225						
YULB				*e*S	**Sg**	**04 08 13.8**	**+1.5**
	baz=225						
YULB	**Yu-li**	**0.41**	**225**	*e*Pg	**Pg**	**04 08 07.8**	**+0.8**
TWF1	**Yuli**	**0.44**	**222**	⇑P	**Pb**	**04 08 08.6**	**-0.7**
	baz=225						
TWF1				*e*S	**Sb**	**04 08 15.6**	**-0.5**
	baz=225						
NACB	**Ninganchiao**	**0.49**	**358**	⇑P	**Pg**	**04 08 08.8**	**+0.4**
	baz=355						
NACB				S	**Sg**	**04 08 15.5**	**+0.8**
	baz=355						
NACB	**Ninganchiao**	**0.49**	**358**	*e*Pg	**Pg**	**04 08 08.1**	**-0.3**
CHGB	**Renai**	**0.55**	**313**	⇑P	**Pg**	**04 08 09.7**	**0.0**
	baz=313						
CHGB				S	**Sg**	**04 08 15.8**	**-1.0**
	baz=313						
FULB	**Fuli**	**0.57**	**212**	⇓*e*P	**Pb**	**04 08 11.6**	**+0.2**
	baz=224						
SSLB	**Suanglung**	**0.61**	**280**	⇑P	**Pg**	**04 08 10.7**	**-0.2**
	baz=276						
SSLB				*e*S	**Sg**	**04 08 16.8**	**-2.1**
	baz=276						
SSLB	**Suanglung**	**0.61**	**280**	*e*Pg	**Pg**	**04 08 10.7**	**-0.2**
CHKT	**Chengkung**	**0.63**	**202**	⇓*i*P	**Pb**	**04 08 12.4**	**+0.1**
	baz=196						
CHKT				*e*S	**Sb**	**04 08 22.9**	**+1.5**
	baz=196						
SMLT	**Sun Moon Lake**	**0.69**	**287**	⇑*i*P	**Pg**	**04 08 12.1**	**0.0**
	baz=285						
SMLT				S	**Sg**	**04 08 20.1**	**-1.0**
	baz=285						
TYC	**Yuchr**	**0.73**	**288**	⇑*i*P	**Pg**	**04 08 12.7**	**-0.2**
	baz=286						
ELDTW	**Lidau**	**0.74**	**228**	P	**Pg**	**04 08 13.4**	**+0.2**
	baz=223						
ELDTW				*e*S	**Sg**	**04 08 22.9**	**+0.1**
	baz=223						
NANB	**Nanao**	**0.75**	**9**	⇓P	**Pb**	**04 08 14.2**	**-0.3**
	baz=1.0						
NANB				*e*S	**Sb**	**04 08 24.7**	**-0.3**
	baz=1.0						
NNSB	**Datong**	**0.77**	**344**	⇑P	**Pg**	**04 08 14.2**	**+0.4**
	baz=338						
NNSB				*e*S	**Sg**	**04 08 22.8**	**-1.0**
	baz=338						
NNSH	**Datong**	**0.77**	**344**	*e*P	**Pg**	**04 08 14.1**	**+0.3**
	baz=346						
NNSH				S	**Sg**	**04 08 23.1**	**-0.8**
	baz=346						
ENAH	**Nanao**	**0.78**	**13**	*e*P	**Pb**	**04 08 14.9**	**-0.2**
	baz=6.0						
NNS	**Nan Shan**	**0.79**	**344**	⇑*i*P	**Pg**	**04 08 14.4**	**+0.3**
	baz=338						
NNS				*e*S	**Sg**	**04 08 23.4**	**-0.9**
	baz=338						
WJS	**Zhushan**	**0.82**	**280**	*e*P	**Pb**	**04 08 15.9**	**+0.1**
	baz=277						
WJS				*e*S	**Sb**	**04 08 27.4**	**+0.2**
	baz=277						
TWC	**Suao**	**0.94**	**13**	*e*P	**Pb**	**04 08 17.9**	**+0.1**
	baz=8.0						
TWC				*e*S	**Sb**	**04 08 31.5**	**+0.8**
	baz=8.0						
ENTT	**Nioudou**	**0.95**	**357**	*e*P	**Pg**	**04 08 17.6**	**+0.3**
	baz=359						
WGK	**Gukeng**	**0.97**	**270**	⇑*i*P	**Pn**	**04 08 18.8**	**-0.4**
	baz=268						
WGK				S	**Sn**	**04 08 32.5**	**-0.7**
	baz=268						
TCU	**Taichung**	**0.98**	**298**	⇑*e*P	**Pn**	**04 08 19.0**	**-0.3**
	baz=296						
TWH	**Lutao**	**0.98**	**188**	*e*P	**Pg**	**04 08 17.3**	**-0.4**
	baz=170						
EOS1	**EOS1**	**0.98**	**28**	*e*P	**Pn**	**04 08 20.0**	**+0.7**
	baz=49						
EOS1				*e*S	**Sn**	**04 08 35.8**	**+2.2**
	baz=49						
TPUB	**Ta-pu**	**0.98**	**247**	⇑P	**Pb**	**04 08 18.8**	**+0.3**
	baz=253						
TPUB				S	**Sb**	**04 08 31.9**	**+0.1**
	baz=253						
TPUB	**Ta-pu**	**0.98**	**247**	*e*Pn	**Pb**	**04 08 18.8**	**+0.3**
TPUB				*e*Sg	**Sg**	**04 08 30.7**	**+0.1**
WDLH	**Douliu**	**0.99**	**270**	⇑P	**Pn**	**04 08 19.2**	**-0.2**
	baz=268						
WDLH				*e*S	**Sn**	**04 08 32.9**	**-0.9**
	baz=268						
TWGBT	**Beinan**	**0.99**	**210**	*e*P	**Pg**	**04 08 17.3**	**-0.7**
	baz=209						
TWG	**Pinlang**	**0.99**	**210**	*e*P	**Pg**	**04 08 17.1**	**-0.9**
	baz=209						
TWG	**Pinlang**	**0.99**	**210**	*e*Pg	**Pg**	**04 08 16.1**	**-1.9**
YHNB	**Yeheng**	**1.00**	**347**	⇑P	**Pb**	**04 08 18.6**	**-0.3**
	baz=338						
YHNB				S	**Sg**	**04 08 30.4**	**-1.0**
	baz=338						
YHNB	**Yeheng**	**1.00**	**347**	*e*Pn	**Pb**	**04 08 19.2**	**+0.3**
YHNB				*e*Sn	**Sg**	**04 08 30.6**	**-0.8**
NSK	**Sanguang**	**1.01**	**347**	⇓*i*P	**Pb**	**04 08 19.0**	**0.0**
	baz=338						
NSK				*e*S	**Sg**	**04 08 30.8**	**-0.9**
	baz=338						
WTP	**Ta-pu**	**1.02**	**245**	⇑*i*P	**Pb**	**04 08 19.5**	**+0.4**
	baz=250						
WTP				S	**Sb**	**04 08 33.2**	**+0.4**
	baz=250						
TTN	**Taitung**	**1.02**	**205**	*e*P	**Pb**	**04 08 19.1**	**0.0**
	baz=205						
TWE	**Neicheng**	**1.03**	**3**	*e*P	**Pb**	**04 08 19.2**	**-0.1**
	baz=5.0						
TWE				S	**Sb**	**04 08 33.0**	**-0.2**
	baz=5.0						
WCHH	**Zhanghua**	**1.04**	**292**	*e*P	**Pn**	**04 08 19.8**	**-0.4**
	baz=289						
WCHH				*e*S	**Sn**	**04 08 34.9**	**-0.3**
	baz=289						
CHN2	**Minshiung**	**1.06**	**262**	*e*P	**Pn**	**04 08 20.6**	**+0.2**
	baz=260						
CHN2				*e*S	**Sn**	**04 08 35.2**	**-0.3**
	baz=260						
SLBB	**Yuanshan**	**1.06**	**1**	*e*P	**Pb**	**04 08 20.0**	**+0.1**
	baz=2.0						
NSY	**Sanyi**	**1.07**	**313**	⇑P	**Pn**	**04 08 21.1**	**+0.5**
	baz=312						
NSY				S	**Sn**	**04 08 34.8**	**-1.0**
	baz=312						
ILA	**Ilan**	**1.08**	**6**	*e*P	**Pn**	**04 08 21.4**	**+0.7**
	baz=353						
NWLT	**Wulai**	**1.09**	**355**	*e*P	**Pb**	**04 08 20.4**	**0.0**
	baz=355						
NSTT	**Nanjuang**	**1.10**	**329**	P	**Pb**	**04 08 20.5**	**+0.1**
	baz=321						
NSTT				S	**Sg**	**04 08 33.4**

baz=2.0
NWF Wu-fen Shan 1.39 6 *e*P **Pg 04 08 26.7 +1.0**
baz=5.0
WFSB Wu-fen Shan 1.39 6 *e*P **Pb 04 08 25.3 -0.1**
baz=5.0
MASBT Mashibuluo 1.40 220 *e*P **Pn 04 08 25.3 +0.1**
baz=214
MASBT *e*S **Sg 04 08 45.1 +1.1**
baz=214
SCLT Jiali 1.40 249 *e*P **Pg 04 08 25.8 0.0**
baz=249
SCLT S **Sg 04 08 46.5 +2.5**
baz=249
SGLT Jiouru 1.41 228 *e*P **Pg 04 08 27.5 +1.5**
baz=228
TAI1 Yung-k'ang 1.43 244 *e*P **Pg 04 08 28.1 +1.8**
baz=242
JYNG Yonaguni jima 1.44 58 P **Pb 04 08 26.5 +0.3**
JYNG S **Sg 04 08 45.7 +0.6**
YM04 YM04 1.47 357 *e*P **Pn 04 08 25.9 -0.1**
baz=356
YM10 YM10 1.47 358 *e*P **Pn 04 08 25.8 -0.3**
baz=354
YM11 YM11 1.48 359 *e*P **Pg 04 08 27.8 +0.5**
baz=355
TAW Tawu 1.48 207 *e*P **Pn 04 08 25.1 -1.0**
baz=194
NTST Danshui 1.48 354 *e*P **Pg 04 08 27.2 -0.2**
baz=352
YM07 YM07 1.48 0 *e*P **Pn 04 08 26.0 -0.4**
baz=357
YM03 YM03 1.49 357 *e*P **Pb 04 08 27.4 +0.2**
baz=356
YM12 YM12 1.49 358 *e*P **Pg 04 08 27.9 +0.3**
baz=357
YOJ Yonaguni jima 1.49 58 *e*P **Pb 04 08 27.4 +0.2**
baz=60
YOJ *e*S **Sb 04 08 46.8 +0.4**
baz=60
YOJ Yonaguni jima 1.49 58 *e*Pn **Pb 04 08 27.0 -0.2**
YOJ *e*Sn **Sn 04 08 46.0 -0.2**
YOJ Yonaguni jima 1.49 58 P **Pb 04 08 27.0 -0.2**
YOJ *e*S **Sg 04 08 47.3 +0.4**
YM08 YM08 1.50 359 *e*P **Pb 04 08 27.5 +0.2**
baz=356
TWY Chenhua 1.58 359 *e*P **Pg 04 08 30.0 +0.6**
baz=355
SCZT Fangliau 1.60 215 *e*P **Pb 04 08 28.8 -0.1**
baz=217
LAY Lan-yu 1.64 182 *e*P **Pn 04 08 26.5 -1.9**
baz=184
WLCH Liuqiu 1.75 221 *e*P **Pg 04 08 33.7 +1.2**
baz=226
TWP Hsiaoliuchiu 1.76 221 *e*P **Pg 04 08 34.1 +1.4**
baz=227
HEN Hengchun 1.86 206 *e*P **Pb 04 08 33.9 +0.6**
baz=196
PHUB P'eng-hu 1.88 265 *e*P **Pn 04 08 31.2 -0.6**
baz=265
PHUB *e*S **Sn 04 08 56.2 +0.4**
baz=265
TWK1 Hengchun 1.89 204 *e*P **Pb 04 08 33.8 -0.1**
baz=193
TWKBT Hengchun 1.89 203 *e*P **Pn 04 08 32.4 +0.5**
baz=193
PNG Penghu 1.89 267 *e*P **Pn 04 08 32.0 +0.1**
baz=267
PNG *e*S **Sb 04 08 57.0 -0.9**
baz=267
TSEB Hengchuen, Pin 1.89 201 *e*P **Pg 04 08 34.9 -0.4**
baz=192
HATJ Hateruma jima 2.04 79 P **Pn 04 08 34.1 +0.2**
HATJ S **Sb 04 09 01.4 -0.7**
IRIF Iriomote-Funau 2.04 71 P **Pn 04 08 34.5 +0.6**
IRIF *e*S **Sn 04 09 01.0 +1.3**
JKRS Kuro-shima 2.26 75 P **Pn 04 08 38.0 +1.1**
JKRS *e*S **Sn 04 09 07.0 +1.9**
JIJ Ishigaki jima 2.41 73 P **Pn 04 08 39.1 +0.1**
JIJ S **Sn 04 09 09.7 +0.8**
JISG Ishigakijimahi 2.62 69 P **Pn 04 08 42.3 +0.4**
JISG S **Sn 04 09 15.3 +1.2**
MATB Ma-tsu 2.89 329 *e*P **Pn 04 08 45.0 -0.6**
baz=324
JTJ Tarama 2.98 71 P **Pn 04 08 47.9 +1.1**
JTJ *e*S **Sn 04 09 24.9 +2.0**
KNM Kinmen 3.00 285⇓*e*P **Pn 04 08 48.7 +1.6**
baz=280
QZH Quanzhou 3.03 295⇑*i*Pn **Pn 04 08 47.3 -0.3**
QZH Sn **Sn 04 09 22.3 -1.9**
QZH smax smax
comp=N,430nm,0.7s
QZH smax smax
comp=E,350nm,0.4s
KNMB Chin-men Tao 3.05 285 *e*P **Pn 04 08 47.5 -0.3**
baz=281
JIRB Irabujima 3.44 70 S **Sn 04 09 34.5 +0.1**
JIKM Ikemajima 3.54 69 *e*S **Sn 04 09 38.8 +2.1**
JOW Kunigami 6.79 61 Pn **Pn 04 09 38.9 -0.5**
6.3nm,0.3s,baz=24,slow=11,SNR=11
JOW Sn **Sn 04 10 54.6 -2.4**
baz=282,slow=26,SNR=1.3
GZH Guangzhou 7.62 267 Pn **Pn 04 09 47.6 -3.1**
GZH smax smax
comp=N,180nm,0.8s
GZH smax smax
comp=E,79nm,0.8s
NJ2 Nanjing 8.69 344 *e*P Pn 04 10 11.8 +6.5
NJ2 S **Sn 04 11 46.5 +2.9**
NJ2 smax smax
comp=N,83nm,1.0s
NJ2 smax smax
comp=E,64nm,1.0s
NJ2 LR LR
comp=N,710nm,8.3s
NJ2 LR LR
comp=E,470nm,4.9s
NJ2 LR LR
comp=Z,720nm,8.3s
WHN Wuhan 9.41 318 ⇓P **Pn 04 10 15.8 +0.6**
WHN S **Sn 04 12 05.8 +4.4**
WHN LR LR
comp=N,1μm,8.4s
WHN LR LR
comp=E,1μm,11.7s
WHN LR LR
comp=Z,1μm,10.1s
JNU Nakatsue 12.44 39 LR LR 04 16 41.4
comp=Z,48nm,21.1s,baz=293,slow=42
KS15 Wonju Array Si 14.73 20 *e*Pn **Pn 04 11 26.0 -2.0**
KSAR Wonju Array Be 14.73 20 Pn **P 04 11 35.3 +1.1**
KSRS Korea Array 14.75 20 Pn **P 04 11 35.3 +0.9**
0.5nm,0.3s,baz=198,slow=12,SNR=19
KSRS LR LR 04 18 43.7
comp=Z,39nm,18.1s,baz=213,slow=44
DAV Davao City (W) 16.95 166 LR LR 04 18 08.7
comp=Z,69nm,18.5s,baz=185,slow=36
MAJO Matsushiro 19.20 44 *e*P **P 04 12 23.3 -0.4**
MJAR Matsushiro Arr 19.20 44 P **P 04 12 23.3 -0.5**
0.6nm,0.3s,baz=235,slow=10,SNR=3.5
MJAR LR LR 04 19 45.5
comp=Z,30nm,19.1s,baz=80,slow=37
CHTO Chiang Mai 21.67 261 *e*P **P 04 12 50.9 +0.3**
6.1nm,0.9s
CM01 Chiang Mai Arr 21.77 260 *e*P **P 04 12 52.9 +1.2**
CM31 Chiang Mai Arr 21.78 260 *e*P **P 04 12 52.4 +0.6**
CMAR Chiang Mai Arr 21.78 260 P **P 04 12 52.4 +0.6**
1.7nm,0.3s,baz=66,slow=9.0,SNR=7.4
CMAR LR LR 04 20 34.6
comp=Z,23nm,21.4s,baz=245,slow=35
USRK Ussuriysk Ar. 22.16 20 P **P 04 12 56.2 +0.5**
1.8nm,0.6s,baz=206,slow=13,SNR=2.5
USRK LR LR 04 20 46.9
comp=Z,42nm,21.9s,baz=158,slow=35
SBUM Sibu 22.98 205 *e*P **P 04 13 06.7 +2.1**
5.0nm,0.7s
GUMO Guam 24.18 110 *e*P **P 04 13 13.8 -2.6**
106nm,1.3s
ASAJ Asahikawa 26.67 35 LR LR 04 25 06.0
comp=Z,28nm,18.3s,baz=122,slow=38
KLR Kul'dur 26.72 15 P **P 04 13 39.3 +0.2**
0.2nm,0.7s,baz=269,slow=11,SNR=5.3
WMQ Urumqi 34.28 314 P **P 04 14 48.4 +2.2**
MK01 Makanchi Array 38.95 316 *e*P **P 04 15 26.4 +0.5**
MK31 Makanchi Array 38.97 316 *e*P **P 04 15 26.8 +0.8**
MK32 Makanchi Array 38.97 316 *e*P **P 04 15 26.1 0.0**
MKAR Makanchi Array 38.97 316 P **P 04 15 26.1 0.0**
2.3nm,0.7s,baz=111,slow=8.9,SNR=13
MKAR Makanchi Array 38.97 316 *e*P **P 04 15 26.8 +0.8**
14nm,0.6s
MAKZ Makanchi 39.17 316 *e*P **P 04 15 28.8 +1.0**
2.8nm,0.9s
ZAA0 Zalesovo Array 40.88 327 *e*P **P 04 15 40.7 -1.0**
2.9nm,0.8s
ZALV Zalesovo Beam 40.88 327 P **P 04 15 41.4 -0.4**
3.5nm,0.8s,baz=113,slow=8.2,SNR=7.9
ZALV Zalesovo Beam 40.88 327 *e*P **P 04 15 40.5 -1.3**
ZAA1 Zalesovo Array 40.88 327 *e*P **P 04 15 41.4 -0.4**
H11N1 WAKE ISLAND Hy 42.12 86 T T 05 00 50.1
baz=283,slow=75
H11N2 WAKE ISLAND Hy 42.12 86 T T 05 00 50.6
baz=283,slow=75
H11N3 WAKE ISLAND Hy 42.14 86 T T 05 00 50.1
baz=283,slow=75
H11S3 WAKE ISLAND Hy 42.24 88 T T 05 00 57.3
baz=284,slow=74
H11S1 WAKE ISLAND Hy 42.25 88 T T 05 00 57.9
baz=284,slow=74
H11S2 WAKE ISLAND Hy 42.26 88 T T 05 00 58.6
baz=284,slow=74
KURBB Kurchatov Arra 42.74 320 P **P 04 15 57.3 +0.2**
1.4nm,0.7s,baz=110,slow=9.0,SNR=11
WR1 Warramunga Arr 45.10 163 *e*P **P 04 16 15.1 -1.3**
9.7nm,1.4s
WR1 *e*PcP **PcP 04 17 55.8 -1.3**
WRA Warramunga Arr 45.10 163 P **P 04 16 15.1 -1.2**
2.5nm,0.5s,baz=344,slow=8.7,SNR=48
WRA PcP **PcP 04 17 55.8 -1.3**
1.2nm,1.2s,baz=343,slow=3.5,SNR=3.4
BVAR Borovoye Array 48.31 321 P **P 04 16 42.2 +1.0**
1.1nm,0.6s,baz=111,slow=8.0,SNR=5.6
AS31 Alice Springs 48.56 165 *e*P **P 04 16 42.8 -0.5**
1.1nm,0.6s
ASAR Alice Springs 48.56 165 P **P 04 16 42.8 -0.5**
1.0nm,0.5s,baz=338,slow=6.5,SNR=10
ABKAR Akbulak array 54.07 315 *e*P **P 04 17 25.2 +0.7**
STKA Stephens Creek 58.46 160 P **P 04 17 55.4 -0.5**
3.5nm,0.7s,baz=335,slow=6.3,SNR=6.6
KBZ Khabaz 66.10 309 P **P 04 18 48.5 +1.4**
0.6nm,0.4s,baz=31,slow=5.9,SNR=3.0
TOLK Toolik Lake Re 67.75 23 *e*P **P 04 18 59.0 +1.7**
2.5nm,0.8s
MLY Manley 67.81 27 *e*P **P 04 18 59.2 +1.5**
3.9nm,0.9s
BPAW Bear Paw Mtn. 67.84 28 *e*P **P 04 18 59.3 +1.4**
1.9nm,0.8s
MDM Murphy Dome 68.88 27 *e*P **P 04 19 05.6 +1.3**
7.1nm,0.9s
RND Reindeer 68.90 29 *e*P **P 04 19 05.1 +0.5**
8.0nm,0.8s
ILAR Eielson Array 69.47 27 P **P 04 19 08.8 +0.8**
0.6nm,0.6s,baz=293,slow=7.1,SNR=11
ILB Eielson Array 69.47 27 *e*P **P 04 19 11.1 +3.0**
SCM Sheep Creek Mo 69.91 30 *e*P **P 04 19 12.3 +1.4**
13nm,0.6s
SCRK Sand Creek 70.89 28 *e*P **P 04 19 18.1 +1.2**
2.3nm,0.8s
EGAK Eagle 71.85 27 *e*P **P 04 19 23.7 +1.1**
2.9nm,0.9s
FIA0 FINESS Array S 72.07 330 *e*P **P 04 19 23.7 -0.2**
FINES FINESS Array B 72.07 330 P **P 04 19 23.7 -0.2**
0.4nm,0.4s,baz=93,slow=4.7,SNR=5.2
DAWY Dawson 72.80 27 *e*P **P 04 19 29.6 +1.4**
3.3nm,1.0s
AKASG Malin Array Be 73.50 318 P **P 04 19 31.1 -1.5**
0.1nm,0.3s,baz=62,slow=6.1,SNR=3.0
AKBB Malin Array Si 73.50 318 *e*P **P 04 19 31.1 -1.5**
5.3nm,1.5s
BR101 Keskin Array S 73.79 307 *e*P **P 04 19 34.5 -0.1**
BRTR Keskin Array B 73.79 307 P **P 04 19 34.5 -0.1**
0.5nm,0.6s,baz=66,slow=3.6,SNR=3.1
HFS Hagfors 78.19 331 P **P 04 19 59.1 -0.1**
1.2nm,0.8s,baz=46,slow=4.8,SNR=2.4
YKA Yellowknife Ar 83.28 23 P **P 04 20 25.5 -0.9**
1.1nm,0.7s,baz=312,slow=5.1,SNR=10

MOS ***14*** *04:09:05.8±0.8, 55°.84N×110°.27E, h11km, mb3.9/2, Error ellipse: s-maj=15.6km s-min=11.0km az=68.4*
BYKL ***14*** *04:09:07.2±0.3, 55°.76N×110°.16E, h8km±4km*
IDC ***14*** *04:09:07.2±4.8, 55°.78N×109°.99E, h0km, mb3.4/2, mb1 3.5/6, mb1mx3.2/70, mbtmp3.4/6, ML3.2/4, Error ellipse: s-maj=74.3km s-min=28.3km az=89.0*
ISC 14 04:09:06.6±1.1, 55.79N±0.03×110.36E±0.02, h4km±9km, n48, σ2=87/90, 6C-1D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NIZ	**Nizh Angarsk**	**0.46**	**268**	⇑*i*Pg			**Pg**	**04 09 14.7**	**-0.7**
NIZ				*e*Sg			**Sg**	**04 09 20.1**	**-1.3**
NIZ				Pmax					
207nm,0.3s									
NIZ				Smax					
3μm,0.4s									
NIZ	**Nizh Angarsk**	**0.46**	**268**	⇑*i*PG			**Pg**	**04 09 14.6**	**-0.8**
NIZ				*e*				04 09 20.0	
NIZ				pmax	pmax				
comp=Z,422nm,0.2s									
NIZ				smax	smax				
comp=E,3μm,0.5s									
KMO	**Kumora**	**0.49**	**78**	*e*Pg			**Pb**	**04 09 17.9**	**+0.2**
KMO				*e*Sg			**Sb**	**04 09 26.0**	**+0.8**
KMO				Pmax					
comp=E,116nm,0.3s									
KMO				Smax					
comp=E,817μm,1.0s									
KMO	**Kumora**	**0.49**	**78**	*e*PG			**Pb**	**04 09 17.8**	**+0.1**
KMO				*e*				04 09 25.3	
KMO				pmax	pmax				
comp=Z,76nm,0.3s									
KMO				smax	smax				
comp=N,817nm,1.0s									
YLYR	**Ulyunkhan**	**1.02**	**153**	⇓*i*Pg			**Pg**	**04 09 26.0**	**-0.2**
comp=N,138nm,0.5s									
YLYR				⇑*i*Pg			**Pg**	**04 09 26.0**	**-0.2**
comp=N,85nm,0.5s									
YLYR				⇑*i*Pg			**Pg**	**04 09 26.0**	**-0.2**
comp=N,166nm,0.5s									
YLYR				*e*Sg			**Sg**	**04 09 39.3**	**-0.2**
YLYR				*e*				04 09 45.0	
YLYR				Pmax					
comp=N,144nm,0.3s									
YLYR				max					
comp=N,366nm,0.1s									
YLYR	**Ulyunkhan**	**1.02**	**153**	⇑*i*PG			**Pg**	**04 09 26.0**	**-0.2**
YLYR				*e*				04 09 40.3	
YLYR				pmax	pmax				
comp=Z,145nm,0.3s									
YLYR				smax	smax				
comp=N,370nm,0.1s									
SVKR	**Severomuysk**	**1.83**	**78**	*e*			**Pg**	**04 09 44.1**	**+2.5**
SVKR				*e*Sg			**Sg**	**04 10 06.6**	**+1.3**
SVKR				Smax					
comp=N,1μm,0.6s									
SYVR	**Suvo**	**2.15**	**186**	⇑*i*Pg			**Pb**	**04 09 44.9**	**-1.0**
SYVR				*i* Sg			**Sb**	**04 10 13.9**	**+1.0**
SYVR				Pmax					
comp=N,127nm,0.6s									
SYVR				Smax					
comp=N,981nm,0.7s									
SYVR	**Suvo**	**2.15**	**186**	*e*PN			**Pb**	**04 09 44.7**	**-1.2**
SYVR				*e*				04 10 13.3	
SYVR				pmax	pmax				
comp=Z,129nm,0.6s									
SYVR				smax	smax				
comp=E,1μm,0.5s									
OGRR	**Ongureny**	**2.68**	**218**	*e*Pn			**Pn**	**04 09 50.8**	**+0.3**
OGRR				*e*Pg			**Pb**	**04 09 53.0**	**-2.1**
OGRR				*e*				04 10 24.1	
OGRR				*e*Sg			**Sb**	**04 10 27.6**	**-0.7**
OGRR				Pmax					
comp=E,27nm,0.3s									
OGRR				Smax					
comp=E,194nm,0.2s									
OGRR	**Ongureny**	**2.68**	**218**	*e*PN			**Pn**	**04 09 50.8**	**+0.3**
OGRR				*e*				04 09 53.9	
MXMB	**Maximikha**	**2.70**	**201**	*e*			**Pb**	**04 09 54.2**	**-1.2**
MXMB				*e*Sg			**Sb**	**04 10 30.1**	**+1.3**
MXMB				*e*				04 10 36.4	
BOD	**Bodaibo**	**2.86**	**43**	*e*Pg			**Pg**	**04 10 00.3**	**-1.0**
BOD				*e*				04 10 32.0	
BOD				*e*Sg			**Sg**	**04 10 39.4**	**+1.2**
BOD				Pmax					
comp=E,26nm,0.9s									
BOD				Smax					
comp=E,88nm,0.4s									
NLYR	**Nelyaty**	**3.07**	**75**	*e*Pn			**Pn**	**04 09 58.4**	**+2.5**
NLYR				*e*				04 10 06.5	
NLYR				*e*				04 10 28.0	
NLYR				*e*Sg			**Sg**	**04 10 45.3**	**+0.1**
NLYR				max					
comp=E,43nm,0.7s									
NLYR				Smax					
comp=E,142nm,1.1s									
KELR	**Kotokel**	**3.32**	**205**	*e*Pn			**Pn**	**04 09 58.5**	**-0.7**
KELR				Pg			**Pb**	**04 10 04.9**	**-1.0**
KELR				*e*Sg			**Sb**	**04 10 47.5**	**+1.0**
ZRHB	**Zarechye**	**3.75**	**211**	*e*Sg			**Sb**	**04 11 00.6**	**+1.6**
ZRHB				Smax					
comp=E,290nm,1.4s									
TRG	**Tyrgan**	**3.84**	**219**	*e*Pn			**Pn**	**04 10 06.6**	**+0.2**
TRG				*e*Sn			**Sn**	**04 10 50.4**	**-1.5**
TRG				*e*Sg			**Sb**	**04 11 02.9**	**+1.3**
TRG				max					
comp=E,18nm,0.5s									
TRG				Smax					
comp=E,132nm,0.4s									
CIT	**Chita**	**4.22**	**152**	*e*Sg			**Sb**	**04 11 16.8**	**+4.2**
CIT				Smax					
comp=E,108nm,0.2s									
CIT	**Chita**	**4.22**	**152**	*e*PN			**Pb**	**04 10 23.3**	**+2.0**
CIT				*e*S			**Sn**	**04 11 01.7**	**+0.3**
CIT				*e*				04 11 19.0	
CIT				pmax	pmax				
comp=Z,38nm,0.8s									
CIT				smax	smax				
comp=E,76nm,1.2s									
UUDB	**Ulan-Yde**	**4.24**	**203**	*e*Pg			**Pb**	**04 10 21.6**	**-0.1**
UUDB				*e*				04 10 49.4	
UUDB				*e*Sg			**Sb**	**04 11 16.4**	**+3.2**
UUDB				Pmax					
comp=E,27nm,0.8s									
UUDB				Smax					
comp=E,76nm,0.7s									
FFNB	**Fofonovo**	**4.31**	**211**	*e*Pn			**Pn**	**04 10 11.8**	**-1.0**
FFNB				Pg			**Pb**	**04 10 22.8**	**0.0**
FFNB				*e*				04 11 01.0	
FFNB				*e*Sg			**Sb**	**04 11 17.8**	**+2.7**
FFNB				Pmax					
comp=E,19nm,0.6s									
FFNB				Smax					
comp=E,49nm,0.4s									
KAB	**Kabansk**	**4.34**	**212**	Sg			**Sb**	**04 11 20.4**	**+4.5**
KAB				*e*				04 11 25.1	
KAB				max					
comp=E,268nm,0.7s									
CRS	**Chara**	**4.54**	**73**	*e*Pg			**Pg**	**04 10 31.3**	**-2.2**
CRS				*e*Sg			**Sg**	**04 11 31.1**	**-1.2**
CRS				*e*				04 11 40.9	
CRS				Pmax					
comp=E,27nm,1.1s									
CRS				Smax					
comp=E,61nm,1.3s									
CRS	**Chara**	**4.54**	**73**	*e*PN			**Pg**	**04 10 32.8**	**-0.7**
CRS				*e*				04 11 31.2	
CRS				pmax	pmax				
comp=Z,25nm,0.7s									
CRS				smax	smax				
comp=E,58nm,0.7s									
HRMR	**Khuramsha**	**4.63**	**207**	*e*			**Sn**	**04 11 19.9**	**+8.4**
HRMR				*e*Sg			**Sb**	**04 11 27.8**	**+3.4**
BGT	**Bolshoye Golou**	**4.76**	**220**	*e*Pn			**Pn**	**04 10 19.7**	**+0.7**
BGT				*e*				04 10 28.8	
BGT				*e*				04 11 15.2	
BGT				*e*Sg			**Sb**	**04 11 31.2**	**+3.2**
BGT				max					
comp=E,9.0nm,0.4s									
BGT				Smax					
comp=E,50nm,0.6s									
LSTR	**Listvyanka**	**5.11**	**222**	*e*Pn			**Pn**	**04 10 23.9**	**+0.1**
LSTR				*e*Sn			**Sn**	**04 11 19.7**	**-3.5**
LSTR				*e*				04 11 37.9	
LSTR				*e*Sg			**Sb**	**04 11 41.4**	**+3.2**
LSTR				Smax					
comp=E,46nm,0.5s									
IVK	**Ivanovka**	**5.33**	**224**	*e*Pn			**Pn**	**04 10 24.7**	**-2.1**
IVK				Pg			**Pb**	**04 10 41.1**	**+1.0**
IVK				*e*Sn			**Sn**	**04 11 23.5**	**-5.0**
IVK				*e*Sg			**Sb**	**04 11 49.0**	**+4.7**
IVK				Pmax					
comp=E,3.0nm,0.2s									
IVK				Smax					
comp=E,58nm,1.1s									
TUP	**Tupik**	**5.68**	**100**	*e*Pn			**Pn**	**04 10 33.3**	**+1.7**
TUP				*e*Pg			**Pg**	**04 10 51.0**	**-4.2**
TUP				*e*Sn			**Sn**	**04 11 36.7**	**-0.5**
TUP				*e*Sg			**Sg**	**04 12 06.9**	**-1.8**
TUP				Pmax					
comp=E,9.0nm,0.9s									
TUP				Smax					
comp=E,96nm,1.1s									
TUP	**Tupik**	**5.68**	**100**	*e*PN			**Pn**	**04 10 31.6**	**0.0**
TUP				*e*				04 10 49.2	
TUP				*e*S			**Sn**	**04 11 36.6**	**-0.6**
TUP				*e*				04 12 05.1	
TUP				pmax	pmax				
comp=Z,9.0nm,0.6s									
TUP				smax	smax				
comp=N,96nm,1.1s									
TLY	**Talaya**	**5.73**	**227**	Sn			**Sn**	**04 11 32.3**	**-6.1**
comp=N,0.0nm,0.3s,baz=156,slow=12,SNR=2.0									
TLY				Lg	Lg			04 11 58.5	
comp=N,0.1nm,0.3s,baz=267,slow=21,SNR=4.1									
TLY	**Talaya**	**5.73**	**227**	*e*Pn			**Pn**	**04 10 31.1**	**-1.2**
TLY				*e*				04 11 34.1	
TLY				*e*				04 11 53.3	
TLY				*e*Sg			**Sb**	**04 12 00.7**	**+4.8**
TLY				max					
comp=N,9.0nm,0.9s									
TLY				Smax					
comp=N,45nm,0.6s									
ARS	**Arshan**	**6.09**	**234**	*e*Pn			**Pn**	**04 10 35.6**	**-1.7**
ARS				*e*				04 10 52.5	
ARS				*e*Sn			**Sn**	**04 11 42.3**	**-5.0**
ARS				*e*Sg			**Sb**	**04 12 10.5**	**+4.3**
ARS				max					
comp=N,22nm,0.4s									
ARS				Smax					
comp=N,215nm,0.9s									
ARS	**Arshan**	**6.09**	**234**	*e*PN			**Pn**	**04 10 37.2**	**-0.1**
ARS				*e*S			**Sn**	**04 11 40.6**	**-6.7**
ZAK	**Zakamensk**	**6.89**	**221**	*e*Pn			**Pn**	**04 10 49.1**	**+0.8**
ZAK				*e*Pg			**Pb**	**04 11 09.4**	**+2.6**
ZAK				*e*				04 12 09.4	
ZAK				*e*Sg			**Sb**	**04 12 38.0**	**+8.6**
ZAK				Pmax					
comp=N,4.0nm,0.3s									
ZAK				Smax					
comp=N,31nm,1.3s									
MOY	**Mondy**	**6.92**	**237**	*e*Pn			**Pn**	**04 10 49.3**	**+0.6**
MOY				*e*				04 10 58.7	
MOY				*e*				04 11 07.6	
MOY				*e*Sn			**Sn**	**04 12 05.0**	**-2.9**
MOY				*e*Sg			**Sb**	**04 12 37.4**	**+7.2**
MOY				max					
comp=N,24nm,1.1s									
MOY				Smax					
comp=N,61nm,1.3s									
MOY	**Mondy**	**6.92**	**237**	*e*PN			**Pn**	**04 10 49.7**	**+1.0**
MOY				*e*				04 11 11.3	
MOY				*e*S			**Sn**	**04 12 04.9**	**-2.9**
MOY				*e*				04 12 38.3	
MOY				pmax	pmax				
comp=Z,11nm,0.7s									
MOY				smax	smax				
comp=E,61nm,1.4s									
ORL	**Orlik**	**7.00**	**247**	*e*Pn			**Pn**	**04 10 50.4**	**+0.6**
ORL				*e*Sn			**Sn**	**04 12 05.3**	**-4.4**
ORL				*e*Sg			**Sb**	**04 12 40.5**	**+8.1**
ORL				max					
comp=E,6.0nm,0.7s									
ORL				Smax					
comp=E,30nm,1.2s									
ORL	**Orlik**	**7.00**	**247**	*e*PN			**Pn**	**04 10 49.8**	**0.0**
ORL				*e*				04 11 12.3	
ORL				*e*S			**Sn**	**04 12 06.5**	**-3.2**

ORL				*e*		04 12 43.1	
ORL				pmax	pmax		
comp=Z,5.0nm,0.8s							
ORL				smax	smax		
comp=N,31nm,1.4s							
ULN	**Ulaanbaatar**	**8.20**	**196**	*e*Sg	Sg	04 13 20.2	-9.3
ULN				*e*		04 13 24.6	
SONM	**Songino Array**	**8.34**	**199**	Pn	**Pn**	**04 11 09.9**	**+1.7**
comp=N,0.2nm,0.3s,baz=17,slow=10,SNR=2.9							
SONM				Lg	Lg	04 13 26.8	
comp=N,1.6nm,0.3s,baz=13,slow=28,SNR=12							
KNGR	**Kungurtug, Tuv**	**9.29**	**241**	*e*		04 13 17.7	
KNGR				*e*		04 13 28.7	
KNGR				*e*Sg	Sn	04 13 49.0	+43
ZALV	**Zalesovo Beam**	**14.79**	**273**	Pn	**Pn**	**04 12 36.5**	**+0.2**
comp=N,0.3nm,0.3s,baz=83,slow=12,SNR=2.7							
KURK	**Kurchatov**	**19.55**	**268**	P	**Pn**	**04 13 35.5**	**-0.6**
MKAR	**Makanchi Array**	**19.60**	**254**	P	**P**	**04 13 34.8**	**-0.8**
comp=N,0.2nm,0.3s,baz=59,slow=9.8,SNR=12							
KURBB	**Kurchatov Arra**	**19.64**	**268**	P	**P**	**04 13 35.5**	**-0.4**
comp=N,0.1nm,0.3s,baz=65,slow=12,SNR=4.5							
BVAR	**Borovoye Array**	**23.20**	**280**	P	**P**	**04 14 12.4**	**-1.7**
comp=N,0.5nm,0.4s,baz=54,slow=9.7,SNR=3.6							
FINES	**FINESS Array B**	**41.34**	**314**	P	**P**	**04 16 52.6**	**-0.3**
comp=N,0.7nm,0.8s,baz=62,slow=9.6,SNR=2.5							

IDC ***14*** *04:19:32.9±0.6, 8°.41N×39°.63W, h0km, mb4.1/12, mb1 4.2/12, mb1mx3.8/69, mbtmp4.1/12, MS3.5/23, Ms1 3.5/23, ms1mx3.3/51, Error ellipse: s-maj=27.2km s-min=14.9km az=144.0*
ISCJB ***14*** *04:19:33.6±0.4, 8°.36N±0°.09×39°.64W±0°.07, h15km, mb4.4/25, MS3.5/23, Error ellipse: s-maj=14.5km s-min=8.2km az=155.0*
CSEM ***14*** *04:19:34.6, 8°.41N×39°.66W, h10km, mb4.7/15*
NEIC ***14*** *04:19:34.6±0.4, 8°.41N×39°.66W, h10km, mb4.7/15, Error ellipse: s-maj=16.6km s-min=9.3km az=156.0*
ISC 14 04:19:35.3±0.6, 8°.4N±0°.1×39°.70W±0°.10, h15km, n60, σ1§41/36, mb4.4/25, MS3.5/23, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTGA	**Pitinga**	**22.15**	**247**	P	**P**	**04 24 30.6**	**-0.2**
18nm,1.1s,baz=83,slow=12,SNR=16							
PTGA				LR	LR	04 33 29.7	
comp=Z,150nm,19.3s,baz=64,slow=38							
PTGA	**Pitinga**	**22.15**	**247**	*e*P	**P**	**04 24 31.1**	**+0.3**
21nm,1.0s							
SEUS	**St. Eustatius**	**24.40**	**294**	*e*P	**P**	**04 24 52.3**	**-1.0**
85nm,1.0s							
SJG	**San Juan**	**27.46**	**293**	LR	LR	04 34 21.4	
comp=Z,124nm,20.8s,baz=87,slow=32							
SAML	**Samuel**	**29.06**	**234**	*e*P	**P**	**04 25 36.6**	**+1.2**
13nm,1.4s							
H10N3	**ASCENSION HYDR**	**29.85**	**122**	T	T	04 56 39.6	
baz=302,slow=75,SNR=22							
H10N2	**ASCENSION HYDR**	**29.86**	**122**	T	T	04 56 45.1	
baz=302,slow=75,SNR=25							
H10N1	**ASCENSION HYDR**	**29.87**	**122**	T	T	04 56 41.2	
baz=302,slow=75,SNR=27							
H10S3	**ASCENSION HYDR**	**30.32**	**124**	T	T	04 57 23.7	
baz=304,slow=75,SNR=20							
H10S1	**ASCENSION HYDR**	**30.33**	**124**	T	T	04 57 26.5	
baz=304,slow=75,SNR=15							
H10S2	**ASCENSION HYDR**	**30.34**	**124**	T	T	04 57 27.5	
baz=304,slow=75,SNR=16							
SIV	**San Ignacio**	**32.18**	**221**	P	**P**	**04 26 03.6**	**+0.7**
4.2nm,1.0s,baz=75,slow=7.1,SNR=15							
ROSC	**El Rosal**	**34.56**	**266**	LR	LR	04 40 24.4	
comp=Z,93nm,21.1s,baz=223,slow=36							
KOWA	**Kowa**	**35.46**	**77**	P	**P**	**04 26 30.5**	**-1.0**
0.7nm,0.3s,baz=288,slow=6.4,SNR=3.0							
KOWA				LR	LR	04 39 40.1	
comp=Z,163nm,19.1s,baz=218,slow=34							
LPAZ	**La Paz**	**37.34**	**229**	P	**P**	**04 26 48.5**	**+0.4**
8.2nm,1.2s,baz=46,slow=8.5,SNR=9.2							
LPAZ				LR	LR	04 41 53.6	
comp=Z,38nm,19.5s,baz=52,slow=36							
LPAZ	**La Paz**	**37.34**	**229**	*e*P	**P**	**04 26 49.2**	**+1.0**
6.9nm,1.1s							
CPUP	**Villa Florida**	**38.55**	**206**	LR	LR	04 42 55.9	
comp=Z,75nm,18.4s,baz=32,slow=36							
PFVI	**Vila Bisbo**	**40.01**	**40**	*e*P	**P**	**04 27 07.7**	**-1.9**
86nm,1.4s							
MDT	**Midelt**	**40.53**	**48**	LR	LR	04 42 02.1	
comp=Z,72nm,18.2s,baz=233,slow=33							
TOA1	**Torodi Ar. Sit**	**40.90**	**80**	*e*P	**P**	**04 27 15.6**	**-1.7**
TOA0	**Torodi Ar. Sit**	**40.90**	**80**	*e*P	**P**	**04 27 16.4**	**-0.9**
4.8nm,1.1s							
TORD	**Torodi Ar. Bea**	**40.90**	**80**	P	**P**	**04 27 15.6**	**-1.7**
1.4nm,0.8s,baz=277,slow=8.8,SNR=6.8							
TORD				LR	LR	04 42 23.6	
comp=Z,138nm,19.2s,baz=200,slow=34							
FSCY	**Frank Sound, G**	**41.61**	**290**	*e*P	**P**	**04 27 23.4**	**+0.3**
86nm,1.1s							
ESDC	**Sonseca Array**	**44.59**	**40**	LR	LR	04 43 33.7	
comp=Z,63nm,20.8s,baz=235,slow=32							
JTS	**JuntasAbangare**	**44.67**	**276**	LR	LR	04 47 22.4	
comp=Z,44nm,20.7s,baz=186,slow=37							
APG	**El Apazote**	**50.05**	**282**	LR	LR	04 49 11.0	
comp=Z,44nm,21.5s,baz=113,slow=36							
ROC1	**El Roble**	**50.82**	**214**	*e*P	**P**	**04 28 35.0**	**-0.7**
20nm,0.6s							
KEST	**Kesra**	**52.26**	**51**	LR	LR	04 51 01.4	
comp=Z,96nm,18.5s,baz=258,slow=36							
PLCA	**Paso Flores**	**56.56**	**208**	P	**P**	**04 29 17.0**	**-0.4**
3.2nm,1.1s,baz=14,slow=8.3,SNR=2.5							
VAE	**Valguarnera**	**56.67**	**50**	LR	LR	04 53 21.0	
comp=Z,72nm,18.3s,baz=334,slow=36							
GERES	**GERESS Array B**	**60.08**	**38**	LR	LR	04 54 54.0	
comp=Z,23nm,18.1s,baz=280,slow=35							
TTG	**Podgorica**	**61.61**	**46**	*e*P	**P**	**04 29 54.0**	**+1.6**
10nm,1.0s							
ULM	**Lac du Bonnet**	**62.30**	**323**	LR	LR	04 53 34.3	
comp=Z,38nm,20.3s,baz=69,slow=33							
DIVS	**Divibare**	**62.58**	**44**	*e*P	**P**	**04 30 00.4**	**+1.4**
3.0nm,0.9s							
IDI	**Anoyia**	**64.48**	**55**	LR	LR	04 57 17.7	
comp=Z,34nm,21.7s,baz=268,slow=35							
IDI	**Anoyia**	**64.48**	**55**	*e*P	**P**	**04 30 13.1**	**+1.4**
17nm,1.3s							
SDCO	**Great Sand Dun**	**65.80**	**308**	*e*P	**P**	**04 30 22.3**	**+1.8**
1.5nm,0.8s							
ANMO	**Albuquerque**	**66.20**	**304**	LR	LR	04 55 31.1	
comp=Z,31nm,21.8s,baz=75,slow=33							
MLR	**Muntele Rosu**	**67.03**	**44**	*e*P	**P**	**04 30 29.1**	**+1.0**
12nm,1.3s							
PDAR	**Pinedale Array**	**69.57**	**312**	LR	LR	04 57 29.5	
comp=Z,53nm,21.2s,baz=102,slow=33							
AKASG	**Malin Array Be**	**70.22**	**39**	P	**P**	**04 30 47.5**	**-0.2**
1.5nm,0.8s,baz=258,slow=7.2,SNR=6.5							
AKBB	**Malin Array Si**	**70.22**	**39**	*e*P	**P**	**04 30 47.5**	**-0.2**
8.0nm,1.4s							
HWUT	**Hardware Ranch**	**70.91**	**311**	*e*P	**P**	**04 30 55.2**	**+2.9**
3.6nm,0.9s							
FIA0	**FINESS Array S**	**71.19**	**28**	*e*P	**P**	**04 30 53.1**	**-0.2**
FINES	**FINESS Array B**	**71.19**	**28**	P	**P**	**04 30 53.1**	**-0.2**
1.7nm,1.0s,baz=253,slow=9.5,SNR=3.3							
FINES				LR	LR	04 58 17.1	
comp=Z,16nm,19.5s,baz=152,slow=33							
BR101	**Keskin Array S**	**71.86**	**51**	*e*P	**P**	**04 30 58.2**	**+0.1**
BRTR	**Keskin Array B**	**71.86**	**51**	P	**P**	**04 30 58.3**	**+0.1**
1.4nm,0.9s,baz=258,slow=5.9,SNR=8.3							
MATP	**Matopo**	**72.89**	**114**	P	**P**	**04 31 05.0**	**+0.6**
1.4nm,0.5s,baz=302,slow=9.5,SNR=6.8							
PLM	**Palomar**	**74.72**	**302**	*e*P	**P**	**04 31 11.1**	**-4.1**
DGR	**Domenigoni Val**	**74.85**	**303**	*e*P	**P**	**04 31 13.2**	**-2.5**
CCCA	**Chr Cany lake**	**75.14**	**304**	*e*P	**P**	**04 31 15.7**	**-1.7**
SPITS	**Spitsbergen Ar**	**75.17**	**10**	LR	LR	04 56 50.7	
comp=Z,18nm,21.6s,baz=315,slow=30							
YKA	**Yellowknife Ar**	**75.63**	**332**	P	**P**	**04 31 19.8**	**+0.3**
0.2nm,0.7s,baz=102,slow=5.7,SNR=3.1							
YKB5	**Yellowknife Ar**	**75.63**	**332**	*e*P	**P**	**04 31 19.8**	**+0.3**
GNI	**Garni**	**80.40**	**51**	LR	LR	05 09 32.0	
comp=Z,15nm,18.2s,baz=213,slow=37							
AKTO	**Aktyubinsk**	**88.47**	**39**	LR	LR	05 10 09.9	
comp=Z,15nm,19.9s,baz=303,slow=34							
ILAR	**Eielson Array**	**89.66**	**336**	P	**P**	**04 32 32.9**	**+0.5**
0.6nm,1.1s,baz=73,slow=3.0,SNR=3.3							
ILB	**Eielson Array**	**89.66**	**336**	*e*P	**P**	**04 32 33.0**	**+0.5**
ABKAR	**Akbulak array**	**89.93**	**40**	*e*P	**P**	**04 32 35.8**	**+1.8**
WSAR	**Wadi Sarin**	**94.29**	**66**	LR	LR	05 17 57.2	
comp=Z,52nm,19.0s,baz=282,slow=37							

IDC ***14*** *04:19:28.2±1.4, 0°.05N×121°.24E, h0km, mb3.9/4, mb1 3.9/4, mb1mx3.5/64, mbtmp3.9/4, Error ellipse: s-maj=148.6km s-min=25.3km az=61.0*
ISCJB ***14*** *04:19:46.1±0.8, 0°.4N±0°.1×122°.0E±0°.1, h174km±6km, mb3.6/4, Error ellipse: s-maj=26.2km s-min=13.4km az=150.0*
DJA ***14*** *04:19:48.3±1.0, 0°N±5°×12°2E±°, h157km±7km, M2.9/5, MLv2.9/5*
ISC 14 04:19:47.4±1.0, 0°.4N±0°.1×122°.0E±0°.1, h169km±8km, n8, σ0§67/11, mb3.6/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.12**	**316**	P	**Pn**	**04 20 09.8**	**0.0**
MRSI				S	**Sn**	**04 20 26.5**	**-0.4**
APSI	**Ampana**	**1.35**	**196**	P	**Pn**	**04 20 17.3**	**+0.4**
APSI				S	**Sn**	**04 20 39.8**	**0.0**
LUWI	**Luwuk**	**1.61**	**152**	P	**Pn**	**04 20 20.0**	**+0.5**
LUWI				S	**Sn**	**04 20 44.4**	**0.0**
MPSI	**Mapaga**	**2.12**	**269**	P	**Pn**	**04 20 25.2**	**+0.2**
WRA	**Warramunga Arr**	**23.54**	**150**	P	**P**	**04 24 41.4**	**-1.1**
0.3nm,0.4s,baz=325,slow=11,SNR=8.7							
SONM	**Songino Array**	**49.17**	**346**	P	**P**	**04 28 19.3**	**+1.0**
0.8nm,0.6s,baz=164,slow=9.2,SNR=4.0							
MKAR	**Makanchi Array**	**57.77**	**329**	P	**P**	**04 29 20.4**	**-0.5**
0.5nm,0.3s,baz=123,slow=8.2,SNR=8.4							
KURBB	**Kurchatov Arra**	**62.14**	**330**	P	**P**	**04 29 50.2**	**-0.2**
0.5nm,0.2s,baz=137,slow=6.9,SNR=2.2							

MEX 14 04:42:10.9±0.4, 17°.78N×103°.13W, h12km±36km, MD3.9, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.55**	**338**	*e*P	Pg	04 42 20.4	-1.3
MMIG				*e*S	Sg	04 42 27.9	-1.1
ZIIG	**Zihuatanejo**	**1.59**	**96**	*e*P	Pn	04 42 36.2	-2.8
ZIIG				*e*S	Sn	04 42 54.6	-4.9
R15V		**1.61**	**330**	*e*P	Pn	04 42 36.1	-3.1
R15V				*e*S	Sn	04 42 55.1	-4.8
EZ5V		**1.75**	**345**	*e*P	Pn	04 42 38.4	-3.0
EZ5V				*e*S	Sn	04 42 59.0	-4.8
ARIG	**Puente Sto Nin**	**2.69**	**79**	*e*P	Pn	04 42 51.2	-3.0
ARIG				*e*S	Sn	04 43 22.6	-4.1

IDC ***14*** *04:44:47.8±1.2, 6°.65S×104°.94E, h0km, mb3.7/8, mb1 3.9/9, mb1mx3.7/64, mbtmp3.8/9, ML3.9/1, MS3.2/2, Ms1 3.3/2, ms1mx2.6/56, Error ellipse: s-maj=45.0km s-min=15.8km az=44.0*
ISCJB ***14*** *04:44:48.2±1.2, 6°.84S±0°.05×105°.02E±0°.04, h1km±7km, mb3.8/8, MS2.9/1, Error ellipse: s-maj=8.9km s-min=4.5km az=31.1*
DJA ***14*** *04:44:52.0±0.4, 7°S±3°×10°5E±°, h10km, M4.8/13, mb4.9/2, MLv4.8/13*
ISC 14 04:44:49.3±1.8, 6°.73S±0°.08×105°.01E±0°.05, h8km±10km, n29, σ1§22/33, mb3.9/8, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGJI	**Cibinong**	**0.69**	**80**	P	**Pg**	**04 45 02.6**	**+0.1**
CGJI				S	**Sg**	**04 45 10.1**	**-1.4**
KASI	**Kota Agung**	**1.30**	**337**	P	**Pb**	**04 45 15.8**	**+1.7**
KASI				S	**Sn**	**04 45 33.0**	**+1.5**
BLSI	**Bandar Lampung**	**1.37**	**10**	P	**Pb**	**04 45 15.5**	**+0.2**
BLSI				S	**Sn**	**04 45 33.3**	**+0.1**
SKJI	**Sukabumi**	**1.56**	**100**	P	**Pn**	**04 45 17.9**	**+0.5**
SKJI				S	**Sn**	**04 45 37.5**	**-0.3**
TNG	**Tangerang**	**1.72**	**71**	P	**Pn**	**04 45 20.6**	**+1.1**
TNG				P	**Pb**	**04 45 20.7**	**-0.4**
TNG				S	**Sn**	**04 45 41.8**	**+0.1**
TNG				S	**Sn**	**04 45 41.8**	**+0.1**
DBJI	**Dramaga**	**1.74**	**84**	P	**Pn**	**04 45 20.2**	**+0.4**
DBJI				S	**Sn**	**04 45 42.0**	**-0.2**
KLI	**Kotabumi**	**1.86**	**355**	P	**Pg**	**04 45 25.0**	**0.0**
KLI				S	**Sg**	**04 45 50.1**	**+1.0**
LWLI	**Liwa**	**1.95**	**331**	P	**Pg**	**04 45 26.4**	**-0.2**
LWLI				S	**Sg**	**04 45 51.9**	**0.0**
MDSI	**Maura Dua**	**2.38**	**340**	P	**Pb**	**04 45 31.5**	**-0.9**
LEM	**Lembang**	**2.59**	**92**	Pn	**Pn**	**04 45 33.7**	**+2.0**
21nm,0.3s,baz=286,slow=18,SNR=16							
LEM				Sn	**Sn**	**04 46 06.2**	**+2.7**
63nm,0.3s,baz=288,slow=20,SNR=5.8							
CISI	**Cisompet, Garu**	**2.90**	**107**	P	**Pn**	**04 45 36.6**	**+0.7**
MNAI	**Manna**	**3.12**	**319**	P	**Pn**	**04 45 37.7**	**-1.1**
MASI	**Maura Aman, Be**	**4.51**	**322**	P	**Pn**	**04 45 58.4**	**+0.4**
PPSI	**Pulau Pagai**	**6.35**	**308**	P	**Pn**	**04 46 26.3**	**+3.0**
BATI	**Baumata**	**18.77**	**102**	LR	LR	04 56 32.9	
comp=Z,129nm,18.9s,baz=323,slow=37							
CMAR	**Chiang Mai Arr**	**25.73**	**347**	P	**P**	**04 50 20.7**	**+0.2**
0.7nm,0.3s,baz=181,slow=12,SNR=3.2							
CMAR				LR	LR	05 02 16.8	
comp=Z,32nm,18.3s,baz=260,slow=41							
H01W3	**Cape Leeuwin H**	**29.25**	**165**	T	T	05 21 09.0	
baz=344,slow=76,SNR=217							
H01W1	**Cape Leeuwin H**	**29.27**	**165**	T	T	05 21 16.9	
baz=344,slow=76,SNR=200							
H01W2	**Cape Leeuwin H**	**29.27**	**165**	T	T	05 21 10.1	
baz=344,slow=76,SNR=232							
WRA	**Warramunga Arr**	**31.34**	**118**	P	**P**	**04 51 10.5**	**-0.2**
0.5nm,0.5s,baz=290,slow=9.9,SNR=3.8							
H08S2	**Diego Garcia H**	**32.27**	**266**	T	T	05 25 27.2	
baz=90,slow=76,SNR=341							
H08S3	**Diego Garcia H**	**32.28**	**266**	T	T	05 25 28.4	
baz=90,slow=76,SNR=581							
H08S1	**Diego Carcia H**	**32.29**	**266**	T	T	05 25 28.6	
baz=90,slow=76,SNR=203							
ASAR	**Alice Springs**	**32.46**	**124**	P	**P**	**04 51 20.8**	**+0.3**
0.2nm,0.5s,baz=304,slow=8.5,SNR=2.8							
STKA	**Stephens Creek**	**42.30**	**131**	P	**P**	**04 52 44.9**	**+1.2**
2.3nm,0.6s,baz=291,slow=9.9,SNR=4.6							
SONM	**Songino Array**	**54.34**	**1**	P	**P**	**04 54 15.2**	**-1.3**
0.2nm,0.4s,baz=179,slow=9.3,SNR=2.5							
MKAR	**Makanchi Array**	**56.98**	**342**	P	**P**	**04 54 33.7**	**-1.7**
0.5nm,0.4s,baz=151,slow=8.6,SNR=7.8							
KURBB	**Kurchatov Arra**	**61.54**	**341**	P	**P**	**04 55 05.0**	**-1.8**
0.3nm,0.3s,baz=168,slow=6.1,SNR=3.2							
BRTR	**Keskin Array B**	**80.18**	**312**	P	**P**	**04 57 00.8**	**+0.1**
0.8nm,0.6s,baz=113,slow=7.0,SNR=5.6							

ISCJB ***14*** *04:45:51.8±0.4, 23°.70N±0°.02×121°.62E±0°.02, h2km±3km, Error ellipse: s-maj=3.5km s-min=2.2km az=39.7*
JMA ***14*** *04:45:51.0±0.1, 23°.66N×121°.69E, h0km, M3.0*
TAP ***14*** *04:45:52.0, 23°.72N×121°.54E, h2km, ML3.5, C*
ISC 14 04:45:51.4±1.1, 23°.68N±0°.02×121°.62E±0°.02, h2km±10km, n76, σ0§73/101, 6C-8D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	**Guangfu**	**0.18**	**266**	*e*P	**Pg**	**04 45 55.0**	**+0.2**
baz=254							
EGFH				*e*S	**Sg**	**04 45 57.5**	**+0.2**
baz=254							
ESL	**Shilin**	**0.22**	**307**	↓*i*P	**Pg**	**04 45 55.5**	**-0.1**
baz=314							
ESL				*i* S	**Sg**	**04 45 57.6**	**-0.9**
baz=314							
HGSD	**Ruisui**	**0.26**	**224**	↓P	**Pb**	**04 45 58.4**	**-0.4**
baz=194							
HGSD				*e*S	**Sb**	**04 46 03.7**	**-0.1**
baz=194							
HWA	**Hwalien**	**0.29**	**357**	*e*P	**Pb**	**04 45 59.0**	**-0.4**
baz=19							
EHY	**Hungye**	**0.33**	**238**	↑P	**Pg**	**04 45 58.2**	**+0.6**
baz=230							
TWD	**Chiawan**	**0.40**	**356**	*e*P	**Pb**	**04 46 00.2**	**-0.9**
baz=354							
TWD				*e*S	**Sb**	**04 46 06.0**	**-1.7**
baz=354							
YULB	**Yu-li**	**0.41**	**226**	↑P	**Pg**	**04 46 00.2**	**+0.9**
baz=231							
YULB				S	**Sb**	**04 46 07.6**	**-0.5**
baz=231							
TWF1	**Yuli**	**0.44**	**223**	↑P	**Pg**	**04 46 01.0**	**+1.1**
baz=218							
VWDT	**VWDT**	**0.45**	**279**	↑P	**Pg**	**04 46 00.1**	**+0.2**
baz=276							
VWDT				S	**Sg**	**04 46 05.8**	**0.0**
baz=276							
NACB	**Ninganchiao**	**0.49**	**357**	↓*e*P	**Pg**	**04 46 01.4**	**+0.6**
baz=351							
NACB				S	**Sg**	**04 46 08.5**	**+1.2**
baz=351							
CHGB	**Renai**	**0.56**	**313**	↓P	**Pg**	**04 46 02.3**	**+0.2**
baz=315							
CHGB				*e*S	**Sg**	**04 46 08.4**	**-1.0**
baz=315							
FULB	**Fuli**	**0.57**	**212**	*e*P	**Pb**	**04 46 04.5**	**+0.4**
baz=183							
SSLB	**Suanglung**	**0.62**	**280**	↑P	**Pg**	**04 46 03.2**	**-0.1**
baz=279							
SSLB				*e*S	**Sg**	**04 46 10.3**	**-1.1**
baz=279							
CHKT	**Chengkung**	**0.62**	**202**	*e*P	**Pb**	**04 46 05.3**	**+0.3**
baz=177							
SMLT	**Sun Moon Lake**	**0.69**	**287**	↑P	**Pg**	**04 46 04.6**	**-0.1**
baz=285							
SMLT				*e*S	**Sg**	**04 46 13.1**	**-0.6**
baz=285							
TYC	**Yuchr**	**0.74**	**288**	*e*P	**Pg**	**04 46 05.3**	**-0.2**
baz=286							
ELDTW	**Lidau**	**0.74**	**229**	*e*P	**Pg**	**04 46 05.9**	**+0.3**
baz=232							
ENA	**Nanau**	**0.75**	**8**	*e*P	**Pb**	**04 46 07.0**	**-0.1**
baz=5.0							
NANB	**Nanao**	**0.75**	**9**	*e*P	**Pb**	**04 46 06.6**	**-0.5**
baz=5.0							
NNSB	**Datong**	**0.78**	**344**	↓P	**Pg**	**04 46 06.8**	**+0.5**
baz=337							
NNSB				*e*S	**Sg**	**04 46 16.0**	**-0.4**
baz=337							
NNSH	**Datong**	**0.78**	**344**	*e*P	**Pg**	**04 46 06.4**	**+0.1**
baz=340							
ENAH	**Nanao**	**0.78**	**13**	*e*P	**Pb**	**04 46 07.5**	**-0.2**
baz=21							
NNS	**Nan Shan**	**0.79**	**343**	*e*P	**Pg**	**04 46 06.8**	**+0.2**
baz=341							
WJS	**Zhushan**	**0.83**	**280**	*e*P	**Pb**	**04 46 08.6**	**0.0**
baz=278							
TWC	**Suao**	**0.95**	**13**	*e*P	**Pb**	**04 46 10.4**	**-0.1**
baz=12							
ENTT	**Nioudou**	**0.96**	**357**	*e*P	**Pb**	**04 46 11.1**	**+0.4**
baz=5.0							
WGK	**Gukeng**	**0.97**	**271**	*e*P	**Pb**	**04 46 11.3**	**+0.4**
baz=269							
WGK				S	**Sb**	**04 46 25.3**	**+1.1**
baz=269							
TWH	**Lutao**	**0.97**	**188**	*e*P	**Pg**	**04 46 10.6**	**+0.5**
baz=165							
EOS1	**EOS1**	**0.98**	**28**	*e*P	**Pn**	**04 46 12.9**	**+0.9**
baz=61							
TCU	**Taichung**	**0.98**	**298**	*e*P	**Pb**	**04 46 11.5**	**+0.4**
baz=298							
TPUB	**Ta-pu**	**0.99**	**248**	*e*P	**Pb**	**04 46 11.2**	**0.0**
baz=255							
TPUB				*e*S	**Sb**	**04 46 24.5**	**-0.2**
baz=255							
TWGBT	**Beinan**	**0.99**	**210**	*e*P	**Pb**	**04 46 11.2**	**-0.1**
baz=202							
TWG	**Pinlang**	**0.99**	**211**	*e*P	**Pg**	**04 46 10.2**	**-0.2**
baz=202							
WDLH	**Douliu**	**0.99**	**271**	*e*P	**Pn**	**04 46 12.0**	**-0.3**
baz=269							
WDLH				*e*S	**Sb**	**04 46 26.0**	**+1.1**
baz=269							
YHNB	**Yeheng**	**1.01**	**347**	↓P	**Pb**	**04 46 11.5**	**-0.1**
baz=338							
YHNB				S	**Sb**	**04 46 24.7**	**-0.7**
baz=338							
NSK	**Sanguang**	**1.02**	**346**	*e*P	**Pb**	**04 46 11.6**	**-0.2**
baz=338							
NSK				*e*S	**Sg**	**04 46 23.3**	**-0.9**
baz=338							
WTP	**Ta-pu**	**1.02**	**245**	↓P	**Pb**	**04 46 12.2**	**+0.4**
baz=253							
WTP				*e*S	**Sb**	**04 46 25.7**	**0.0**
baz=253							
TWE	**Neicheng**	**1.04**	**2**	*e*P	**Pb**	**04 46 12.4**	**+0.3**
baz=11							
WCHH	**Zhanghua**	**1.05**	**292**	*e*P	**Pb**	**04 46 12.6**	**+0.3**
baz=290							
NSY	**Sanyi**	**1.08**	**313**	*e*P	**Pn**	**04 46 13.6**	**+0.1**
baz=314							
NSTT	**Nanjuang**	**1.10**	**329**	*e*P	**Pb**	**04 46 13.3**	**+0.1**
baz=322							
NSTT				*e*S	**Sg**	**04 46 27.3**	**+0.4**
baz=322							
LIOB	**Emei**	**1.11**	**330**	*e*P	**Pn**	**04 46 13.7**	**-0.2**
baz=332							
CHY	**Chiayi**	**1.11**	**261**	*e*P	**Pg**	**04 46 12.8**	**0.0**
baz=255							
CHN1	**Nanshi**	**1.12**	**244**	↓P	**Pn**	**04 46 14.2**	**+0.2**
baz=241							
CHN1				*e*S	**Sn**	**04 46 29.9**	**-0.1**
baz=241							
TWK	**Hsinying**	**1.12**	**249**	*e*P	**Pb**	**04 46 13.6**	**+0.1**
baz=246							
TWK				*e*S	**Sn**	**04 46 30.4**	**+0.2**
baz=246							
SGST	**Jiashian**	**1.13**	**238**	*e*P	**Pn**	**04 46 14.2**	**0.0**
baz=230							
SLGT	**Liugui**	**1.13**	**233**	*e*P	**Pn**	**04 46 14.2**	**0.0**
baz=225							
NMLH	**Miaoli**	**1.14**	**318**	*e*P	**Pn**	**04 46 14.8**	**+0.5**
baz=319							
RLNB	**Erlin**	**1.18**	**281**	*e*P	**Pb**	**04 46 14.6**	**+0.2**
baz=277							
NTC	**Toucheng**	**1.18**	**9**	*e*P	**Pn**	**04 46 17.1**	**+2.2**
baz=358							
TATO	**Taipei**	**1.29**	**355**	*e*P	**Pb**	**04 46 16.4**	**0.0**
baz=1.0							

ISCJB 14 04:47:46.9±0.2,22°.81S±0°.03×63°.78W±0°.03,h535km, mb4.2/84, Error ellipse: s-maj=3.9km s-min=3.7km az=174.3
NEIC 14 04:47:47.5±0.3,22°.81S×63°.72W,h528km±4km,mb4.1/58, MD4.6(SJA), Error ellipse: s-maj=6.5km s-min=4.9km az=66.0
IDC 14 04:47:47.8±1.1,22°.79S×63°.65W,h532km±11km,mb3.8/18, mb1 3.8/23,mb1mx3.7/43,mbtmp4.6/23, Error ellipse: s-maj=14.0km s-min=10.1km az=62.0
ISC 14 04:47:47.4±0.3,22°.79S±0°.05×63°.79W±0°.06,h535km, n182,σ1°49/212,mb4.2/84,2C-10D,Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HJA	**Humahuaca**	**1.55**	**254**	*i* P	**P**	**04 48 55.6**	**+1.2**
YJA	**Yavi**	**1.71**	**291**	*i* P	**P**	**04 48 56.7**	**+1.6**
YJA				IAML		04 48 57.0	
	comp=Z,371nm,0.4s						
MOCB	**Mochara**	**2.30**	**311**	*e*Pn	**P**	**04 48 59.2**	**+1.3**
MOCB				*e*Sn	**S**	**04 49 54.7**	**-0.2**
SLA	**San Lorenzo**	**2.48**	**219**	*i* P	**P**	**04 48 57.9**	**-0.5**
SLA				IAML		04 48 58.9	
	comp=Z,165nm,0.5s						
SLA	**San Lorenzo**	**2.48**	**219**	⇓*i* P	**P**	**04 48 58.5**	**+0.2**
SLA				*i* S	**S**	**04 49 54.0**	**-2.1**
AHML	**Horco Molle**	**4.21**	**199**	*i* P	**P**	**04 49 08.5**	**-1.4**
AHML				IAML		04 49 10.7	
	comp=Z,63nm,0.5s						
PB15	**IPOC Station P**	**5.25**	**264**	⇓*i* P	**P**	**04 49 18.2**	**-0.6**
PB15				*i* S	**S**	**04 50 30.1**	**-3.3**
PB06	**IPOC Station P**	**5.34**	**270**	⇓*i* P	**P**	**04 49 19.0**	**-0.6**
PB06				*e*S	**S**	**04 50 31.4**	**-3.3**
PB01	**IPOC Station P**	**5.57**	**287**	*e*P	**P**	**04 49 21.7**	**+0.1**
PB01				*e*S	**S**	**04 50 37.4**	**-1.0**
PB01	**IPOC Station P**	**5.57**	**287**	⇓*i* P	**P**	**04 49 21.5**	**0.0**
PB01				*i* S	**S**	**04 50 35.9**	**-2.5**
PB08	**IPOC Station P**	**5.65**	**297**	⇓*i* P	**P**	**04 49 23.4**	**+0.8**
PB08				*i* S	**S**	**04 50 38.2**	**-2.1**
PB07	**IPOC Station P**	**5.74**	**279**	⇓*i* P	**P**	**04 49 22.9**	**-0.3**
PB07				*i* S	**S**	**04 50 38.1**	**-3.4**
GO02	**Mina Guanaco**	**5.80**	**245**	*e*P	**P**	**04 49 23.8**	**-0.1**
GO02				*e*S	**S**	**04 50 43.1**	**+0.4**
GO02	**Mina Guanaco**	**5.80**	**245**	⇓*i* P	**P**	**04 49 23.7**	**-0.1**
PB02	**IPOC Station P**	**5.85**	**283**	⇓*i* P	**P**	**04 49 23.7**	**-0.4**
PB02				*i* S	**S**	**04 50 39.9**	**-3.2**
PB04	**IPOC Station P**	**5.89**	**273**	*e*P	**P**	**04 49 24.7**	**+0.1**
PB04				*e*S	**S**	**04 50 45.3**	**+1.3**
PB04	**IPOC Station P**	**5.89**	**273**	⇓*i* P	**P**	**04 49 24.1**	**-0.5**
CYA	**Choya**	**5.91**	**197**	*i* P	**P**	**04 49 22.6**	**-1.9**
CYA				IAmb	IAmb	04 49 24.3	
CYA				IAML		04 49 24.5	
	comp=Z,87nm,0.4s						
CYA				*i* S	**S**	**04 50 39.7**	**-4.2**
PB10	**IPOC Station P**	**6.26**	**262**	*e*P	**P**	**04 49 27.4**	**-0.3**
PB10	**IPOC Station P**	**6.26**	**262**	*i* P	**P**	**04 49 27.5**	**-0.3**
PB10				*i* S	**S**	**04 50 48.6**	**-1.3**
PB14	**IPOC Station P**	**6.33**	**252**	*i* P	**P**	**04 49 28.4**	**-0.4**
PB14				*i* S	**S**	**04 50 49.8**	**-1.8**
PB14	**IPOC Station P**	**6.33**	**252**	⇑*i* P	**P**	**04 49 28.7**	**-0.1**
PB14				*i* S	**S**	**04 50 50.0**	**-1.6**
MNMC	**Minye Minye**	**6.53**	**303**	*e*P	**P**	**04 49 31.3**	**+0.6**
MNMC				*e*S	**S**	**04 50 54.8**	**-0.4**
MNMC	**Minye Minye**	**6.53**	**303**	⇓*i* P	**P**	**04 49 31.3**	**+0.6**
MNMC				*i* S	**S**	**04 50 53.9**	**-1.2**
PSGC	**Pisagua**	**6.71**	**297**	*i* P	**P**	**04 49 32.0**	**-0.2**
PSGC				*i* S	**S**	**04 50 55.2**	**-2.7**
CPUP	**Villa Florida**	**6.86**	**122**	P	**P**	**04 49 33.6**	**+0.2**
	comp=Z,19nm,0.3s,baz=316,slow=9.4,SNR=454						
SIV	**San Ignacio**	**7.24**	**21**	P	**P**	**04 49 38.4**	**+1.1**
	comp=Z,2.5nm,0.3s,baz=215,slow=8.5,SNR=48						
SIV	**San Ignacio**	**7.24**	**21**	*e*P	**P**	**04 49 38.2**	**+0.9**
GO03	**Copiap**	**7.54**	**229**	*e*P	**P**	**04 49 40.3**	**+0.1**
GO03				*e*S	**S**	**04 51 14.6**	**+2.0**
LPAZ	**La Paz**	**7.65**	**327**	P	**P**	**04 49 43.2**	**+1.2**
	comp=Z,9.4nm,0.3s,baz=112,slow=4.9,SNR=220						
LPAZ				S	**S**	**04 51 13.8**	**-2.0**
	comp=Z,3.5nm,0.3s,baz=54,slow=22,SNR=10						
LPAZ	**La Paz**	**7.65**	**327**	*e*P	**P**	**04 49 43.3**	**+1.2**
LPAZ				*e*S	**S**	**04 51 15.0**	**-0.8**
LPAZ	**La Paz**	**7.65**	**327**	*e*Pn	**P**	**04 49 43.1**	**+1.0**
LPAZ				*e*Sn	**S**	**04 51 13.1**	**-2.7**
BBOB	**La Paz, Bander**	**7.78**	**327**	*e*Pn	**P**	**04 49 44.1**	**+0.9**
BBOB				*e*Sn	**S**	**04 51 14.6**	**-3.3**
	comp=Z,73nm,0.7s						
LCO	**Las Campanas**	**8.78**	**224**	*e*P	**P**	**04 49 53.0**	**+0.2**
LCO				*e*S	**S**	**04 51 34.9**	**-0.8**
GO04	**Tololo Observa**	**9.66**	**219**	*e*P	**P**	**04 50 01.8**	**-0.1**
ROC1	**El Roble**	**11.98**	**211**	*e*P	**P**	**04 50 25.1**	**-0.8**
SAML	**Samuel**	**13.78**	**3**	*e*P	**P**	**04 50 44.6**	**0.0**
SAML				*e*S	**S**	**04 53 11.9**	**+1.4**
GO05	**Hualaæø**	**14.10**	**208**	*e*P	**P**	**04 50 49.5**	**+1.8**
NNA	**Nana**	**16.43**	**309**	P	**P**	**04 51 12.7**	**+0.9**
	comp=Z,5.9nm,0.3s,baz=138,slow=7.6,SNR=16						
PLCA	**Paso Flores**	**18.78**	**196**	P	**P**	**04 51 33.0**	**0.0**
	comp=Z,0.1nm,0.3s,baz=33,slow=9.6,SNR=3.0						
PLCA	**Paso Flores**	**18.78**	**196**	*e*P	**P**	**04 51 33.0**	**0.0**
	comp=Z,27nm,1.7s						
PTGA	**Pitinga**	**22.24**	**10**	P	**P**	**04 52 04.5**	**-0.1**
	comp=Z,7.8nm,0.4s,baz=353,slow=23,SNR=30						
PTGA	**Pitinga**	**22.24**	**10**	*e*P	**P**	**04 52 04.6**	**-0.1**
	comp=Z,15nm,1.1s						
CHRN	**Cochrane**	**25.41**	**194**	*e*P	**P**	**04 52 32.8**	**+0.4**
	comp=Z,5.3nm,1.0s						
OTAV	**Otavalo**	**26.98**	**326**	*e*P	**P**	**04 52 47.3**	**+0.2**
	comp=Z,3.4nm,0.6s						
POPC	**Popayan, Colom**	**28.14**	**332**	*e*P	**P**	**04 52 57.8**	**+0.8**
VILC	**Villavicencio,**	**28.44**	**339**	*e*P	**P**	**04 53 00.1**	**+0.6**
PRAC	**Prado**	**28.49**	**336**	*e*P	**P**	**04 52 59.1**	**-0.8**
	comp=Z,10nm,0.5s						
PRAC	**Prado**	**28.49**	**336**	*e*P	**P**	**04 52 59.0**	**-0.8**
CHIC	**Chingaza**	**28.93**	**339**	*e*P	**P**	**04 53 04.1**	**0.0**
HORQ	**Saladito**	**28.97**	**333**	*e*P	**P**	**04 53 03.3**	**-1.0**
YOTC	**Yotoco, Valle**	**29.30**	**334**	*e*P	**P**	**04 53 05.6**	**-1.4**
ROSC	**El Rosal**	**29.33**	**338**	P	**P**	**04 53 08.4**	**+0.8**
	comp=Z,4.4nm,0.3s,baz=225,slow=23,SNR=4.3						
ROSC	**El Rosal**	**29.33**	**338**	*e*P	**P**	**04 53 08.0**	**+0.5**
	comp=Z,3.7nm,0.6s						
RUSC	**La Rusia**	**29.92**	**341**	*e*P	**P**	**04 53 12.4**	**-0.4**
	comp=Z,3.7nm,0.6s						
RUSC				*e*S	**S**	**04 57 33.4**	**+0.3**
RUSC	**La Rusia**	**29.92**	**341**	*e*P	**P**	**04 53 12.4**	**-0.4**
PLMC	**San Jos¨ del**	**30.11**	**335**	*e*P	**P**	**04 53 12.8**	**-1.2**
BARC	**Barichara**	**30.61**	**341**	*e*P	**P**	**04 53 17.1**	**-1.3**
PTBC	**PUERTO BERRIO,**	**30.96**	**339**	*e*P	**P**	**04 53 18.5**	**-2.7**
HELC	**Santa Helena**	**31.01**	**337**	*e*P	**P**	**04 53 20.6**	**-1.4**
	comp=Z,27nm,0.5s						
HELC	**Santa Helena**	**31.01**	**337**	*e*P	**P**	**04 53 19.9**	**-2.1**
PAMC	**Pamplona, Colo**	**31.19**	**343**	*e*P	**P**	**04 53 22.8**	**-0.9**
RCBR	**Riachuelo**	**31.75**	**62**	*e*P	**P**	**04 53 28.6**	**+0.6**
	comp=Z,21nm,0.7s						
ZARC	**Zaragoza, Cauc**	**31.99**	**339**	*e*P	**P**	**04 53 27.8**	**-2.2**
OCAC	**Ocana**	**32.22**	**342**	*e*P	P	04 53 23.5	-8.6
MOTC	**Monteria, Cord**	**33.46**	**338**	*e*P	**P**	**04 53 40.4**	**-2.0**
PAYG	**Puerto Ayora**	**33.86**	**307**	*e*P	**P**	**04 53 45.0**	**-0.9**
	comp=Z,50nm,1.0s						
SJCC	**San Jacinto, C**	**34.35**	**340**	*e*P	**P**	**04 53 47.7**	**-2.3**
CRPR	**Cabo Rojo, PR**	**40.68**	**355**	*e*P	**P**	**04 54 42.9**	**+1.4**
	comp=Z,93nm,1.5s						
OBIP	**Obispado Ponce**	**40.68**	**356**	*e*P	**P**	**04 54 42.8**	**+1.3**
	comp=Z,25nm,1.2s						
ESTN	**Estel**	**41.97**	**326**	*e*P	**P**	**04 54 52.3**	**+0.4**
	comp=Z,42nm,1.4s						
APG	**El Apazote**	**45.75**	**323**	P	**P**	**04 55 22.2**	**+0.8**
	comp=Z,4.0nm,0.6s,baz=160,slow=15,SNR=2.9						
TLIG	**Tlapa**	**52.58**	**317**	*e*P	**P**	**04 56 12.9**	**+1.1**
	comp=Z,9.2nm,0.9s						
VNA3	**Neumayer Olymp**	**57.36**	**162**	P	**P**	**04 56 44.5**	**+0.3**
VNA1	**Neumayer--Stat**	**57.50**	**161**	P	**P**	**04 56 46.5**	**+1.4**
LNIG	**Linares**	**58.70**	**322**	*e*P	**P**	**04 56 53.9**	**0.0**
	comp=Z,6.4nm,1.1s						
ZAIG	**Zacatecas**	**58.95**	**318**	*e*P	**P**	**04 56 56.5**	**+0.5**
	comp=Z,7.6nm,1.2s						
SNAA	**Sanae**	**59.53**	**161**	P	**P**	**04 56 59.1**	**+0.3**
SNAA	**Sanae**	**59.53**	**161**	P	**P**	**04 56 58.9**	**+0.1**
	comp=Z,2.6nm,0.7s,baz=280,slow=6.1,SNR=40						
SNAA	**Sanae**	**59.53**	**161**	*e*P	**P**	**04 56 58.9**	**+0.1**
	comp=Z,17nm,1.8s						
Z50A	**Ashland**	**59.60**	**339**	*e*P	**P**	**04 56 59.9**	**+0.1**
	comp=Z,5.0nm,0.8s						
541A	**Lake Charles**	**59.66**	**330**	*e*P	**P**	**04 57 00.4**	**+0.2**
	comp=Z,217nm,1.3s						
Y49A	**Blount Mountai**	**60.31**	**338**	*e*P	**P**	**04 57 03.9**	**-0.6**
	comp=Z,5.7nm,0.7s						
HKT	**Hockley**	**60.82**	**328**	*e*P	**P**	**04 57 09.2**	**+1.4**
	comp=Z,3.6nm,0.9s						
833A	**Chaparral WMA,**	**61.33**	**324**	*e*P	**P**	**04 57 12.2**	**+0.9**
	comp=Z,26nm,1.1s						
WVT	**Waverly**	**62.86**	**338**	*e*P	**P**	**04 57 20.6**	**-0.5**
	comp=Z,6.0nm,0.6s						
JCT	**Junction City**	**63.25**	**325**	*e*P	**P**	**04 57 24.4**	**+0.6**
	comp=Z,5.8nm,0.6s						
T47A	**Sharon Grove**	**63.40**	**339**	*e*P	**P**	**04 57 24.3**	**-0.2**
	comp=Z,5.5nm,0.6s						
HPIG		**63.90**	**318**	*e*P	**P**	**04 57 29.0**	**+0.8**
	comp=Z,4.9nm,0.6s						
LIC	**Lamto**	**64.26**	**71**	*e*P	**P**	**04 57 30.1**	**-0.4**
	comp=Z,43nm,0.6s						
V40A	**Witts Springs**	**64.43**	**334**	*e*P	**P**	**04 57 32.6**	**+1.4**
	comp=Z,13nm,1.6s						
TIC	**Toumodi**	**64.47**	**70**	*e*P	**P**	**04 57 31.4**	**-0.5**
TXAR	**Lajitas Array**	**64.49**	**322**	P	**P**	**04 57 32.3**	**+0.5**
	comp=Z,1.3nm,0.5s,baz=161,slow=8.6,SNR=4.2						
KIC	**Kosan Boka**	**64.58**	**71**	*e*P	**P**	**04 57 32.3**	**-0.2**
	comp=Z,63nm,0.7s						
DBIC	**Dimbokro**	**64.62**	**70**	P	**P**	**04 57 32.9**	**0.0**
	comp=Z,13nm,0.4s,baz=217,slow=4.3,SNR=54						
DBIC	**Dimbokro**	**64.62**	**70**	*e*P	**P**	**04 57 32.8**	**0.0**
	comp=Z,22nm,0.8s						
S39A	**Bolivar**	**66.27**	**335**	*e*P	**P**	**04 57 43.2**	**+0.6**
	comp=Z,4.9nm,0.6s						
MNTX	**Cerro Cuadas Mount**	**67.24**	**322**	*e*P	**P**	**04 57 49.0**	**+0.2**
	comp=Z,3.2nm,0.8s						
QSPA	**South Pole Qui**	**67.41**	**180**	P	**P**	**04 57 50.3**	**+0.9**
	comp=Z,3.1nm,0.6s,baz=146,slow=3.5,SNR=7.3						
P38A	**Dawn**	**68.03**	**336**	*e*P	**P**	**04 57 53.6**	**+0.3**
	comp=Z,5.7nm,0.6s						
KOWA	**Kowa**	**69.26**	**63**	P	**P**	**04 58 01.3**	**-0.1**
	comp=Z,13nm,0.3s,baz=250,slow=7.3,SNR=100						
KOWA	**Kowa**	**69.26**	**63**	*e*P	**P**	**04 58 01.4**	**0.0**
319A	**Douglas**	**69.28**	**319**	*e*P	**P**	**04 58 01.5**	**+0.2**
	comp=Z,5.5nm,0.8s						
ANMO	**Albuquerque**	**70.26**	**324**	P	**P**	**04 58 08.7**	**+1.6**
	comp=Z,1.1nm,0.4s,baz=148,slow=7.9,SNR=7.7						
ANMO	**Albuquerque**	**70.26**	**324**	*e*P	**P**	**04 58 09.2**	**+2.1**
	comp=Z,3.7nm,1.1s						
SDCO	**Great Sand Dun**	**71.86**	**326**	*e*P	**P**	**04 58 17.5**	**+0.9**
	comp=Z,2.5nm,1.0s						
X18A	**Snowflake**	**71.92**	**321**	*e*P	**P**	**04 58 17.1**	**+0.2**
	comp=Z,4.1nm,1.0s						
X16A	**Lo Mia Camp, P**	**72.71**	**320**	*e*P	**P**	**04 58 22.6**	**+1.1**
	comp=Z,2.9nm,0.9s						
MVCO	**Mesa Verde**	**73.04**	**324**	*e*P	**P**	**04 58 23.6**	**+0.2**
	comp=Z,6.9nm,1.4s						
Y14A	**Wickenburg**	**73.31**	**319**	*e*P	**P**	**04 58 26.1**	**+1.3**
	comp=Z,3.3nm,0.9s						
TOA0	**Torodi Ar. Sit**	**73.39**	**68**	*e*P	**P**	**04 58 25.3**	**-0.2**
TOA1	**Torodi Ar. Sit**	**73.39**	**68**	*e*P	**P**	**04 58 25.2**	**-0.3**
TOA1				*e*pP	**pP**	**05 00 18.5**	**+0.9**
TORD	**Torodi Ar. Bea**	**73.39**	**68**	P	**P**	**04 58 25.2**	**-0.3**
	comp=Z,26nm,0.5s,baz=260,slow=5.7,SNR=559						
TORD				pP	**pP**	**05 00 18.5**	**+0.9**
	comp=Z,1.4nm,0.8s,baz=247,slow=5.7,SNR=3.5						
ISCO	**Idaho Springs**	**73.49**	**328**	*e*P	**P**	**04 58 26.4**	**+0.5**
	comp=Z,8.4nm,1.4s						
SYO	**Syowa Base**	**73.60**	**159**	⇑*e*P	**P**	**04 58 25.0**	**-0.8**
PV01	**Paradox Valley**	**73.76**	**325**	*e*P	**P**	**04 58 28.9**	**+1.4**
	comp=Z,3.4nm,1.1s						
PV13	**Radium Mtn., P**	**73.91**	**325**	*e*P	**P**	**04 58 29.8**	**+1.5**
	comp=Z,4.8nm,1.2s						
PV22	**Blue Mesa, Par**	**74.17**	**325**	*e*P	**P**	**04 58 31.5**	**+1.8**
	comp=Z,5.4nm,0.8s						
U15A	**North Rim**	**74.61**	**321**	*e*P	**P**	**04 58 34.5**	**+2.1**
	comp=Z,3.6nm,0.9s						
TSUM	**Tsumeb**	**75.12**	**105**	*e*P	**P**	**04 58 35.6**	**+0.1**
	comp=Z,12nm,0.9s						
PFO	**Pinyon Flats O**	**75.24**	**317**	*e*P	**P**	**04 58 35.9**	**+0.1**
KNB	**Kanab**	**75.32**	**321**	*e*P	**P**	**04 58 37.8**	**+1.6**
	comp=Z,6.9nm,0.8s						
LCMT	**Little Creek M**	**75.56**	**321**	*e*P	**P**	**04 58 40.0**	**+2.5**
	comp=Z,1.7nm,0.7s						
MTPU	**Mount Pierson**	**75.67**	**322**	*e*P	**P**	**04 58 40.7**	**+2.3**
	comp=Z,3.2nm,0.8s						
P18A	**Preston Nutter**	**75.74**	**325**	*e*P	**P**	**04 58 35.4**	**-3.2**
	comp=Z,24nm,0.3s						
P17A	**Butcher Ranch,**	**75.89**	**324**	*e*P	**P**	**04 58 41.7**	**+2.4**
	comp=Z,2.9nm,0.7s						
MSU	**Marysvale**	**76.00**	**323**	*e*P	**P**	**04 58 42.6**	**+2.6**
CCUT	**Cedar City**	**76.00**	**321**	*e*P	**P**	**04 58 43.1**	**+3.0**
	comp=Z,2.9nm,1.0s						
PSUT	**Pine Spring**	**76.96**	**322**	*e*P	**P**	**04 58 47.9**	**+2.6**
	comp=Z,3.0nm,0.7s						
JLU	**Jordanelle**	**77.08**	**325**	*e*P	**P**	**04 58 48.3**	**+2.4**
	comp=Z,3.2nm,0.5s						
PD31	**Pinedale Array**	**77.67**	**327**	*e*P	**P**	**04 58 50.2**	**+1.2**
PDAR	**Pinedale Array**	**77.67**	**327**	P	**P**	**04 58 50.2**	**+1.2**
	comp=Z,1.3nm,0.7s,baz=124,slow=7.6,SNR=16						
PDAR	**Pinedale Array**	**77.67**	**327**	*e*P	**P**	**04 58 50.0**	**+0.9**
R11A	**Troy Canyon, ,**	**77.83**	**321**	*e*P	**P**	**04 58 52.5**	**+2.6**
	comp=Z,2.3nm,0.8s						
HWUT	**Hardware Ranch**	**77.86**	**325**	*e*P	**P**	**04 58 51.8**	**+1.8**
	comp=Z,3.1nm,0.6s						
BOSA	**Boshof**	**78.64**	**116**	P	**P**	**04 58 53.9**	**-0.7**
	comp=Z,5.4nm,0.6s,baz=262,slow=4.1,SNR=15						
MDT	**Midelt**	**79.02**	**47**	P	**P**	**04 58 56.6**	**+0.2**
	comp=Z,4.5nm,0.7s,baz=233,slow=6.9,SNR=5.8						
NV01	**Mina Array Sit**	**79.49**	**319**	*e*P	**P**	**04 59 00.2**	**+1.4**
NVAR	**Mina Array Bea**	**79.49**	**319**	P	**P**	**04 59 00.2**	**+1.4**
	comp=Z,2.3nm,1.1s,baz=149,slow=3.6,SNR=5.3						
PCVE	**Castro Verde**	**79.74**	**42**	*e*P	**P**	**04 59 00.4**	**+0.5**
	comp=Z,38nm,1.8s						
MESJ	**Messejana**	**79.76**	**42**	*e*P	**P**	**04 59 01.2**	**+1.3**
	comp=Z,26nm,1.3s						
KVN	**Kaiserville**	**79.77**	**320**	*e*P	**P**	**04 59 02.0**	**+1.8**
	comp=Z,12nm,1.7s						
PMTG	**Montargil**	**80.53**	**41**	*e*P	**P**	**04 59 04.6**	**+0.6**
	comp=Z,22nm,2.0s						
PBAR	**Barrancos**	**80.69**	**42**	*e*P	**P**	**04 59 05.8**	**+1.0**
	comp=Z,23nm,1.8s						
HLID	**Hailey**	**80.73**	**325**	*e*P	**P**	**04 59 07.4**	**+2.3**
	comp=Z,3.2nm,0.8s						
PTOM	**Tomar**	**80.77**	**40**	*e*P	**P**	**04 59 06.4**	**+1.2**
	comp=Z,25nm,1.8s						
PCAS	**Casmilo, Conde**	**81.00**	**40**	*e*P	**P**	**04 59 07.5**	**+1.1**
	comp=Z,32nm,1.5s						
TAM	**Tamanrasset**	**81.23**	**61**	*e*P	**P**	**04 59 08.9**	**+0.8**
	comp=Z,6.1nm,0.9s						
MAW	**Mawson**	**81.69**	**162**	P	**P**	**04 59 09.6**	**+0.2**
	comp=Z,4.3nm,0.6s,baz=211,slow=6.3,SNR=5.0						
MAW	**Mawson**	**81.69**	**162**	*e*P	**P**	**04 59 09.6**	**+0.2**
	comp=Z,7.6nm,1.8s						
PVIS	**Viseu**	**81.78**	**39**	*e*P	**P**	**04 59 11.1**	**+0.7**
	comp=Z,35nm,2.0s						
PVRL	**Vila Real**	**82.24**	**39**	*e*P	**P**	**04 59 13.8**	**+1.1**
	comp=Z,28nm,2.0s						
MVO	**Moncorvo**	**82.57**	**40**	*e*P	**P**	**04 59 15.4**	**+1.0**
	comp=Z,17nm,1.4s						
J08A	**Circle Bar Ran**	**82.78**	**323**	*e*P	**P**	**04 59 17.8**	**+2.2**
	comp=Z,3.8nm,0.6s						
PBRG	**Braganca**	**83.14**	**39**	*e*P	**P**	**04 59 18.2**	**+0.9**
	comp=Z,28nm,1.9s						
PAB	**San Pablo**	**83.19**	**42**	*e*P	**P**	**04 59 18.7**	**+1.1**
	comp=Z,7.3nm,0.8s						
ESDC	**Sonseca Array**	**83.51**	**42**	P	**P**	**04 59 19.9**	**+0.7**
	comp=Z,3.5nm,0.7s,baz=239,slow=4.8,SNR=17						
ES19	**SONSECA Array**	**83.56**	**42**	*e*P	**P**	**04 59 20.1**	**+0.6**
MATP	**Matopo**	**84.32**	**110**	P	**P**	**04 59 23.9**	**+0.2**
	comp=Z,12nm,0.5s,baz=267,slow=5.5,SNR=49						
LSZ	**Lusaka**	**85.98**	**105**	*e*P	**P**	**04 59 33.6**	**+1.7**
	comp=Z,4.8nm,0.7s						
EKA	**Eskdalemuir Ar**	**93.30**	**30**	P	**P**	**05 00 03.2**	**-1.5**
	comp=Z,0.5nm,0.5s,baz=243,slow=4.7,SNR=3.9						
ABKAR	**Akbulak array**	**128.81**	**44**	*e*PKPdf	**PKPdf**	**05 05 55.3**	**+1.3**
AS31	**Alice Springs**	**130.72**	**202**	*e*PKPdf	**PKPdf**	**05 05 58.7**	**+0.2**
AS31				*e*SKPbc	**SKPbc**	**05 08 32.6**	**-0.2**
ASAR	**Alice Springs**	**130.72**	**202**	PKP	**PKPdf**	**05 05 58.7**	**+0.2**
	comp=Z,0.6nm,0.8s,baz=134,slow=2.7,SNR=4.8						
ASAR				SKPbc	**SKPbc**	**05 08 33.1**	**+0.3**
	comp=Z,4.6nm,0.7s,baz=148,slow=3.5,SNR=33						
WR1	**Warramunga Arr**	**133.99**	**204**	*e*PKPdf	**PKPdf**	**05 06 04.3**	**-0.4**
WR1				*e*PP	**PP**	**05 08 44.6**	**+3.4**
WRA	**Warramunga Arr**	**133.99**	**204**	PKP	**PKPdf**	**05 06 04.3**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=164,slow=1.6,SNR=22						
WRA				SKPbc	**SKPbc**	**05 08 44.6**	**+0.6**
	comp=Z,4.2nm,0.8s,baz=152,slow=3.1,SNR=21						
BVAR	**Borovoye Array**	**134.06**	**37**	PKP	**PKPdf**	**05 06 03.9**	**+0.1**
	comp=Z,1.1nm,0.8s,baz=316,slow=4.0,SNR=4.5						
KURBB	**Kurchatov Arra**	**139.66**	**37**	PKP	**PKPdf**	**05 06 13.7**	**-0.4**
	comp=Z,1.2nm,0.6s,baz=294,slow=2.4,SNR=5.9						
KURK	**Kurchatov**	**139.66**	**37**	*e*PKPdf	**PKPdf**	**05 06 13.7**	**-0.4**
ZAA1	**Zalesovo Array**	**140.92**	**29**	*e*PKPdf	**PKPdf**	**05 06 15.3**	**-1.0**
ZALV	**Zalesovo Beam**	**140.93**	**29**	PKP	**PKPdf**	**05 06 15.3**	**-1.0**
	comp=Z,1.8nm,0.4s,baz=287,slow=3.2,SNR=8.4						
ZALV	**Zalesovo Beam**	**140.93**	**29**	*e*PKPdf	**PKPdf**	**05 06 17.4**	**+1.1**
KSH	**Kashi**	**142.10**	**54**	PKP	**PKPdf**	**05 06 15.3**	**-3.8**
KSH				PP	**PP**	**05 09 26.5**	**-5.7**
KSH				PKS	**PKSdf**	**05 09 50.8**	**-4.1**
KSH				SKS	**SKSdf**	**05 12 32.3**	**-6.1**
KSH				AMB	AMB		
	comp=Z,130nm,4.2s						
MAKZ	**Makanchi**	**143.51**	**41**	*e*PKPbc	PKPbc	05 06 20.5	+0.7
MK31	**Makanchi Array**	**143.71**	**40**	*e*PKPbc	**PKPdf**	**05 06 21.2**	**-0.3**
MK32	**Makanchi Array**	**143.71**	**40**	*e*PKPbc	PKPbc	05 06 21.1	+0.6
MKAR	**Makanchi Array**	**143.71**	**40**	PKP	PKPbc	05 06 21.1	+0.6
	comp=Z,6.4nm,0.5s,baz=304,slow=3.9,SNR=97						
MKAR	**Makanchi Array**	**143.71**	**40**	*e*PKPbc	**PKPdf**	**05 06 21.2**	**-0.3**
MK01	**Makanchi Array**	**143.73**	**40**	*e*PKPbc	PKPbc	05 06 21.0	+0.5
LEM	**Lembang**	**149.39**	**163**	PKPbc	**PKPbc**	**05 06 38.5**	**+1.3**
	comp=Z,28nm,0.6s,baz=209,slow=18,SNR=3.0						
LZH	**Lanzhou**	**162.95**	**36**	*e*PKP	**PKPdf**	**05 06 47.3**	**-1.6**
LZH				pPKP	pPKPdf	05 08 55.8	+0.2
LZH				sPKP		05 09 46.3	
CD2	**Chengdu**	**166.26**	**51**	PKP	**PKPdf**	**05 06 50.5**	**-1.2**

TAP 14 05:38:25.8,24°.63N×122°.57E,h107km,ML3.7,C
ISCJB 14 05:38:26.6±0.4,24°.58N±0°.03×122°.56E±0°.02,h96km±4km, Error ellipse: s-maj=4.3km s-min=2.6km az=172.8
JMA 14 05:38:26.6±0.1,24°.52N×122°.55E,h100km±1km,M3.0
ISC 14 05:38:26.5±1.4,24°.59N±0°.04×122°.55E±0°.02,h100km±8km, n79,σ0°82/133,11C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.38**	**111**	P	**Pn**	**05 38 41.6**	**+0.2**
JYNG				S	**Sn**	**05 38 52.8**	**+0.2**
EOS1	**EOS1**	**0.39**	**264**	⇑P	**Pn**	**05 38 41.9**	**+0.5**
	baz=255						
EOS1				S	**Sn**	**05 38 53.6**	**+1.0**
	baz=255						
YOJ	**Yonaguni jima**	**0.44**	**107**	⇑P	**Pn**	**05 38 41.9**	**+0.2**
	baz=118						
YOJ				*e*S	**Sn**	**05 38 52.2**	**-1.0**
	baz=118						
YOJ	**Yonaguni

NSTT					*e*S		**Sn**	05 39 10.8	0.0
	baz=270								
SBCB	**Hsinchu**	**1.44**	**278**	*e*P			**Pn**	05 38 52.3	+0.3
	baz=277								
SBCB					*e*S		**Sn**	05 39 11.6	+0.3
	baz=277								
JIJ	**Ishigaki jima**	**1.47**	**99**	P			**Pn**	05 38 52.5	+0.2
JIJ				S			**Sn**	05 39 11.1	-0.8
HGSD	**Ruisui**	**1.51**	**224**	P			**Pn**	05 38 53.1	+0.3
	baz=223								
HGSD					*e*S		**Sn**	05 39 12.0	-0.8
	baz=223								
VWDT	**VWDT**	**1.54**	**237**	P			**Pn**	05 38 54.0	+0.8
	baz=232								
VWDT					*e*S		**Sn**	05 39 13.3	-0.1
	baz=232								
EHY	**Hungye**	**1.56**	**226**	*e*P			**Pn**	05 38 53.2	-0.3
	baz=226								
EHY					*e*S		**Sn**	05 39 12.4	-1.6
	baz=226								
JISG	**Ishigakijimahi**	**1.60**	**90**	P			**Pn**	05 38 54.1	+0.2
JISG				S			**Sn**	05 39 14.2	-0.6
NMLH	**Miaoli**	**1.61**	**268**	*e*P			**Pn**	05 38 55.1	+1.0
	baz=267								
TWQ1	**Liyutan**	**1.64**	**262**	*e*P			**Pn**	05 38 55.1	+0.6
	baz=261								
TWQ1					*e*S		**Sn**	05 39 15.6	-0.2
	baz=261								
NSY	**Sanyi**	**1.64**	**264**	*e*P			**Pn**	05 38 54.9	+0.4
	baz=263								
YULB	**Yu-li**	**1.66**	**224**	P			**Pn**	05 38 54.5	-0.2
	baz=231								
SSLB	**Suanglung**	**1.67**	**242**	⇑*e*P			**Pn**	05 38 56.2	+1.4
	baz=239								
SSLB					*e*S		**Sn**	05 39 16.3	-0.1
	baz=239								
SMLT	**Sun Moon Lake**	**1.67**	**245**	*e*P			**Pn**	05 38 56.6	+1.7
	baz=239								
SMLT					*e*S		**Sn**	05 39 18.0	+1.5
	baz=239								
TWF1	**Yuli**	**1.69**	**223**	P			**Pn**	05 38 55.1	0.0
	baz=229								
TWF1					*e*S		**Sn**	05 39 15.8	-1.0
	baz=229								
TYC	**Yuchr**	**1.69**	**247**	⇑P			**Pn**	05 38 56.6	+1.5
	baz=241								
TYC					*e*S		**Sn**	05 39 18.0	+1.1
	baz=241								
FULB	**Fuli**	**1.80**	**220**	P			**Pn**	05 38 56.6	+0.1
	baz=214								
FULB					*e*S		**Sn**	05 39 18.7	-0.8
	baz=214								
WJS	**Zhushan**	**1.83**	**246**	*e*P			**Pn**	05 38 57.8	+0.8
	baz=245								
WJS					*e*S		**Sn**	05 39 21.6	+1.4
	baz=245								
CHKT	**Chengkung**	**1.84**	**216**	*e*P			**Pn**	05 38 56.3	-0.7
	baz=211								
CHKT					*e*S		**Sn**	05 39 18.7	-1.6
	baz=211								
ALS	**Alishan**	**1.93**	**236**	*e*P			**Pn**	05 38 59.8	+1.3
	baz=231								
ALS					*e*S		**Sn**	05 39 22.8	0.0
	baz=231								
JTJ	**Tarama**	**1.96**	**88**	P			**Pn**	05 38 59.0	+0.6
JTJ				S			**Sn**	05 39 23.1	+0.2
ELDTW	**Lidau**	**1.98**	**226**	*e*P			**Pn**	05 38 58.9	-0.1
	baz=224								
ELDTW					*e*S		**Sn**	05 39 22.5	-1.2
	baz=224								
WDLH	**Douliu**	**2.05**	**244**	*e*P			**Pn**	05 39 01.4	+1.7
	baz=254								
TWH	**Lutao**	**2.12**	**208**	P			**Pn**	05 39 00.6	0.0
	baz=212								
TWH					*e*S		**Sn**	05 39 25.7	-0.9
	baz=212								
RLNB	**Erlin**	**2.12**	**251**	*e*P			**Pn**	05 39 01.1	+0.5
	baz=259								
RLNB					*e*S		**Sn**	05 39 27.1	+0.5
	baz=259								
TPUB	**Ta-pu**	**2.18**	**234**	*e*P			**Pn**	05 39 01.9	+0.4
	baz=234								
TWGBT	**Beinan**	**2.22**	**218**	*e*P			**Pn**	05 39 01.6	-0.4
	baz=218								
TWGBT					*e*S		**Sn**	05 39 28.2	-0.9
	baz=218								
WTP	**Ta-pu**	**2.22**	**233**	*e*P			**Pn**	05 39 02.5	+0.5
	baz=233								
WTP					*e*S		**Sn**	05 39 30.7	+1.5
	baz=233								
TWG	**Pinlang**	**2.23**	**218**	*e*P			**Pn**	05 39 01.6	-0.5
	baz=218								
TWG					*e*S		**Sn**	05 39 27.9	-1.3
	baz=218								
TWK	**Hsinying**	**2.31**	**236**	*e*P			**Pn**	05 39 04.7	+1.6
	baz=235								
CHN1	**Nanshi**	**2.32**	**233**	*e*P			**Pn**	05 39 04.9	+1.6
	baz=233								
SLGT	**Liugui**	**2.36**	**228**	*e*P			**Pn**	05 39 05.4	+1.6
	baz=237								
SLGT					*e*S		**Sn**	05 39 34.5	+2.1
	baz=237								
JIRB	**Irabujima**	**2.39**	**84**	*e*S			**Sn**	05 39 32.6	-0.5
SSD	**Sandimen**	**2.55**	**224**	*e*P			**Pn**	05 39 07.1	+0.8
	baz=231								
MASBT	**Mashibuluo**	**2.64**	**222**	*e*P			**Pn**	05 39 08.9	+1.4
	baz=222								
VWUC	**VWUC**	**2.85**	**279**	*e*P			**Pn**	05 39 09.1	-1.4
	baz=271								
PHUB	**P'eng-hu**	**2.93**	**249**	*e*P			**Pn**	05 39 10.0	-1.3
	baz=249								
PHUB					*e*S		**Sn**	05 39 42.8	-3.1
	baz=249								
WDGT	**Dungji**	**2.96**	**244**	*e*P			**Pn**	05 39 11.2	-0.5
	baz=244								

JMA 14 05:43:54.3±0.1, 38°.28N×144°.48E, h35km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.34**	**291**	P		Pn 05 44 31.9	+1.6
MIYJ	**Miyakonagasawa**	**2.45**	**303**	P		Pn 05 44 33.2	+1.5
MIYJ				*e*S		Sn 05 45 02.3	+1.9
JIO	**Ouri**	**2.47**	**275**	P		Pn 05 44 33.6	+1.6
JIO				*e*S		Sn 05 45 02.7	+1.8
JMK	**Ichinoseki**	**2.64**	**286**	P		Pn 05 44 36.3	+1.9
JOM	**Ohasama**	**2.76**	**297**	P		Pn 05 44 37.9	+1.9
JYK	**Kaneyama**	**3.29**	**282**	P		Pn 05 44 46.0	+2.7
JYK				*e*S		Sn 05 45 23.9	+2.7
JFT	**Otama**	**3.36**	**258**	P		Pn 05 44 46.6	+2.2
JFT				*e*S		Sn 05 45 25.4	+2.3
JOT	**Ohata**	**4.07**	**321**	P		Pn 05 44 56.6	+2.6
JOT				*e*S		Sn 05 45 40.8	+0.4
JCH	**Churui**	**4.41**	**349**	P		Pn 05 44 59.2	+0.5
JCH				*e*S		Sn 05 45 47.4	-1.5
JRY	**Ryogami san**	**5.00**	**245**	P		Pn 05 45 07.9	+1.1
JRY				*e*S		Sn 05 46 02.6	-0.7
NEM2	**Nemuro 2**	**5.17**	**10**	P		Pn 05 45 06.5	-2.6
NEM2				*e*S		Sn 05 46 02.3	-5.2
JTKR	**Abashiri--Toko**	**5.70**	**356**	P		Pn 05 45 16.5	+0.1
JTKR				*e*S		Sn 05 46 17.2	-3.4

IDC ***14*** *05:50:01.1±1.7, 37°.21N×42°.44E, h0km, mb3.8/2, mb1 3.6/9, mb1mx3.4/60, mbtmp3.5/9, ML3.1/5, Error ellipse: s-maj=30.5km s-min=18.1km az=145.0*
DDA ***14*** *05:50:01.3, 37°.22N×42°.44E, h11km, Ml4.0*
ISN ***14*** *05:50:01.4±1.1, 37°.12N×42°.41E, h0km±4km, ML4.0*
CSEM ***14*** *05:50:01.9±0.2, 37°.24N×42°.44E, h2km, ML4.0, Error ellipse: s-maj=4.1km s-min=3.5km az=36.0*
ISK ***14*** *05:50:02.0, 37°.29N×42°.39E, h5km, ML4.0/11*
ISC 14 05:50:00.7±1.2,**37°.19N**±0°.03×**42°.41E**±0°.02,**h1**km±9km, **n80**,σ1¶**08**/125,**5C-4D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRN	**S¯–rnak**	**0.30**	**1**	⇓*i*P		**Pg**	05 50 06.7	+0.1
SIRN				*i* S		**Sg**	05 50 10.6	+0.1
SIRN	**S¯–rnak**	**0.30**	**1**	P		**Pg**	05 50 06.7	+0.1
SIRN				S		**Sg**	05 50 10.6	+0.1
SIRT	**Sirnak**	**0.31**	**5**	PG		**Pg**	05 50 06.7	0.0
SIRT				SG		**Sg**	05 50 10.4	-0.3
SIRT	**Sirnak**	**0.31**	**5**	*i* Pg		**Pg**	05 50 06.7	0.0
SIRT				*i* Sg		**Sg**	05 50 10.4	-0.3
SRTM	**Siirt_Merkez**	**0.89**	**334**	⇓*i*P		**Pg**	05 50 17.9	+0.2
SRTM				*i* S		**Sb**	05 50 30.7	-0.6
SRTM	**Siirt_Merkez**	**0.89**	**334**	P		**Pg**	05 50 17.9	+0.2
SRTM				S		**Sb**	05 50 30.7	-0.6
HAKT	**HAKKARI**	**1.10**	**70**	⇓*i*P		**Pg**	05 50 21.5	-0.3
HAKT				*i* S		**Sg**	05 50 36.4	+0.4
HAKT	**HAKKARI**	**1.10**	**70**	P		**Pg**	05 50 21.5	-0.3
HAKT				S		**Sg**	05 50 36.4	+0.4
BTMN	**Batman**	**1.14**	**308**	⇑*i*P		**Pn**	05 50 24.5	+0.6
BTMN				*i* S		**Sn**	05 50 40.6	+0.3
BTMN	**Batman**	**1.14**	**308**	P		**Pn**	05 50 24.5	+0.6
BTMN				S		**Sn**	05 50 40.6	+0.3
GEVA	**Gevas**	**1.23**	**25**	*i* P		**Pg**	05 50 23.2	-1.1
GEVA				*i* S		**Sg**	05 50 40.1	-0.2
GEVA	**Gevas**	**1.23**	**25**	P		**Pg**	05 50 23.2	-1.1
GEVA				S		**Sg**	05 50 40.1	-0.2
MARD	**Mardin**	**1.30**	**276**	⇓*i*P		**Pg**	05 50 26.0	+0.3
MARD				*i* S		**Sn**	05 50 45.0	+0.6
SVAN	**Silvan-Diyarba**	**1.35**	**315**	PN		**Pg**	05 50 25.7	-0.9
SVAN				SN		**Sb**	05 50 45.0	+0.2
SVAN	**Silvan-Diyarba**	**1.35**	**315**	*i* P		**Pg**	05 50 25.8	-0.9
SVAN				*i* S		**Sn**	05 50 45.5	+0.1
SVAN	**Silvan-Diyarba**	**1.35**	**315**	P		**Pg**	05 50 25.8	-0.9
SVAN				*i* Sn		**Sb**	05 50 45.0	+0.2
GURO	**Guroymak-BITLI**	**1.39**	**348**	PN		**Pg**	05 50 27.1	-0.2
GURO				SN		**Sg**	05 50 45.3	0.0
GURO	**Guroymak-BITLI**	**1.39**	**348**	*i* Pn		**Pg**	05 50 27.1	-0.2
GURO				*i* Sn		**Sg**	05 50 45.3	0.0
TVAN	**Van**	**1.55**	**30**	⇑*i*P		**Pg**	05 50 31.2	+0.8
TVAN				*i* S		**Sn**	05 50 53.5	+2.9
TVAN	**Van**	**1.55**	**30**	P		**Pg**	05 50 31.2	+0.8
TVAN				S		**Sn**	05 50 53.5	+2.9
YOVA	**Hakkari_Y¯…kse**	**1.55**	**75**	*i* P		**Pn**	05 50 29.8	+0.1
YOVA				*i* S		**Sn**	05 50 51.9	+1.3
YOVA	**Hakkari_Y¯…kse**	**1.55**	**75**	P		**Pn**	05 50 29.8	+0.1
YOVA				S		**Sn**	05 50 51.9	+1.3
MAZI	**Mazidag**	**1.58**	**280**	PN		**Pn**	05 50 30.9	+0.9
MAZI				SN		**Sn**	05 50 52.2	+1.0
MAZI	**Mazidag**	**1.58**	**280**	*e*Pn		**Pn**	05 50 30.9	+0.9
MAZI				*e*Sn		**Sn**	05 50 52.2	+1.0
VANB	**Van**	**1.60**	**29**	PN		**Pn**	05 50 29.8	-0.5
VANB				SN		**Sn**	05 50 49.9	-1.8
VANB	**Van**	**1.60**	**29**	*e*Pn		**Pn**	05 50 29.8	-0.5
VANB				*e*Sn		**Sn**	05 50 49.9	-1.8
ADCV	**BITLIS_Adilcev**	**1.63**	**9**	⇑*i*P		**Pg**	05 50 32.5	+0.5
ADCV				*i* S		**Sg**	05 50 53.6	+0.4
ADCV	**BITLIS_Adilcev**	**1.63**	**9**	P		**Pg**	05 50 32.5	+0.5
ADCV				S		**Sg**	05 50 53.6	+0.4
DIY	**Diyarbakir**	**1.87**	**293**	*e*Pn		**Pb**	05 50 36.0	+0.3
DYBB	**Diyarbakir**	**1.95**	**294**	PN		**Pn**	05 50 36.0	+0.9
DIYA	**Diyarbakir**	**1.96**	**293**	*i* P		**Pb**	05 50 37.0	-0.2
DIYA				*i* S		**Sg**	05 51 04.0	+0.4
DIYA	**Diyarbakir**	**1.96**	**293**	P		**Pb**	05 50 37.0	-0.2
DIYA				S		**Sg**	05 51 04.0	+0.4
HANI	**Diyarbakir_Han**	**2.00**	**308**	*i* P		**Pn**	05 50 35.8	0.0
HANI				*i* S		**Sn**	05 50 59.5	-2.1
HANI	**Diyarbakir_Han**	**2.00**	**308**	P		**Pn**	05 50 35.8	0.0
HANI				S		**Sn**	05 50 59.5	-2.1
BNGL	**BINGOL**	**2.02**	**331**	*i* P		**Pb**	05 50 37.8	-0.5
BNGL				*i* S		**Sg**	05 51 05.1	-0.4
VMUR	**Van-Muradiye**	**2.02**	**27**	⇑*i*P		**Pb**	05 50 37.9	-0.4
VMUR				*i* S		**Sg**	05 51 05.0	-0.5
VMUR	**Van-Muradiye**	**2.02**	**27**	P		**Pb**	05 50 37.9	-0.4
VMUR				S		**Sg**	05 51 05.0	-0.5
EKAR	**Karacoban**	**2.08**	**353**	*i* P		**Pn**	05 50 38.2	+1.3
EKAR				*i* S		**Sg**	05 51 07.3	-0.2
EKAR	**Karacoban**	**2.08**	**353**	P		**Pn**	05 50 38.2	+1.3
EKAR				S		**Sg**	05 51 07.3	-0.2
VRTB	**Varto-Mus**	**2.10**	**339**	PN		**Pn**	05 50 37.3	+0.1
VRTB	**Varto-Mus**	**2.10**	**339**	*i* P		**Pg**	05 50 42.2	+1.2
VRTB				*i* S		**Sg**	05 51 07.5	-0.8
VRTB	**Varto-Mus**	**2.10**	**339**	*e*Pn		**Pn**	05 50 37.3	+0.1
VRTB	**Varto-Mus**	**2.10**	**339**	P		**Pg**	05 50 42.2	+1.2
VRTB				S		**Sg**	05 51 07.5	-0.8
TUTA	**Tutak**	**2.23**	**8**	⇑*i*P		**Pn**	05 50 40.2	+1.2
TUTA				*i* S		**Sg**	05 51 13.1	+0.8
TUTA	**Tutak**	**2.23**	**8**	P		**Pn**	05 50 40.2	+1.2
BNGB	**Bing¯¶l**	**2.25**	**323**	PN		**Pn**	05 50 39.8	+0.5
BINT	**Bingol**	**2.26**	**319**	*e*Pn		**Pn**	05 50 39.8	+0.4
CLDR	**Caldiran**	**2.28**	**31**	PN		**Pn**	05 50 40.4	+0.6
CLDR	**Caldiran**	**2.28**	**31**	*i* P		**Pn**	05 50 41.0	+1.2
CLDR	**Caldiran**	**2.28**	**31**	*e*Pn		**Pn**	05 50 40.4	+0.6
CLDR	**Caldiran**	**2.28**	**31**	P		**Pn**	05 50 41.0	+1.2
AGRB	**Hanur-Agry**	**2.42**	**11**	PN		**Pn**	05 50 42.1	+0.4
AGRB	**Hanur-Agry**	**2.42**	**11**	*e*Pn		**Pn**	05 50 42.1	+0.4
YEDI	**Yedisu-Bingol**	**2.68**	**327**	PN		**Pn**	05 50 45.7	+0.6
YEDI	**Yedisu-Bingol**	**2.68**	**327**	*e*Pn		**Pn**	05 50 45.7	+0.6
SVRC	**Sivrice-ELAZID**	**2.73**	**297**	PN		**Pn**	05 50 46.9	+1.1
SVRC	**Sivrice-ELAZID**	**2.73**	**297**	*e*Pn		**Pn**	05 50 46.9	+1.1
ERZM	**Erzurum**	**2.83**	**344**	*i* P		**Pb**	05 50 51.7	-0.5
ERZM	**Erzurum**	**2.83**	**344**	P		**Pb**	05 50 51.7	-0.5
URFA	**Urfa**	**2.87**	**276**	PN		**Pn**	05 50 49.4	+1.7
URFA	**Urfa**	**2.87**	**276**	*e*Pn		**Pn**	05 50 49.4	+1.7
PTK	**Pertek**	**2.92**	**306**	PN		**Pn**	05 50 49.5	+1.0
PTK	**Pertek**	**2.92**	**306**	*e*Pn		**Pn**	05 50 49.5	+1.0
MALT	**Malatya**	**3.35**	**291**	PN		**Pn**	05 50 55.9	+1.6
MALT	**Malatya**	**3.35**	**291**	*e*Pn		**Pn**	05 50 55.9	+1.6
GNI	**Garni**	**3.47**	**31**	Pn		**Pn**	05 50 58.5	+2.4
	3.0nm,0.3s,baz=211,slow=5.9,SNR=4.3								
GNI				Pg		**Pg**	05 51 08.9	+1.7
	2.2nm,0.3s,baz=217,slow=2.5,SNR=7.1								
GNI	**Garni**	**3.47**	**31**	PN		**Pn**	05 50 57.3	+1.2
GNI	**Garni**	**3.47**	**31**	*e*Pn		**Pn**	05 50 57.3	+1.2
BAYT	**Ayd¯–ntepe-Bay**	**3.65**	**332**	PN		**Pn**	05 50 59.3	+0.8
BAYT	**Ayd¯–ntepe-Bay**	**3.65**	**332**	*e*Pn		**Pn**	05 50 59.3	+0.8
BHD	**Baghdad**	**4.23**	**157**	*e*Pn		**Pn**	05 51 07.5	+1.2
	SNR=39								
BHD				*e*Sn		**Sn**	05 51 54.8	-1.6
	SNR=39								
RTB	**Rutbah**	**4.49**	**203**	*e*Pn		**Pn**	05 51 11.8	+1.8
RTB				*e*Sn		**Sn**	05 52 01.1	-1.8
	SNR=39								
KBZ	**Khabaz**	**6.54**	**3**	Pn		**Pn**	05 51 41.0	+3.0
	0.1nm,0.3s,baz=184,slow=13,SNR=2.3								
ASF	**Jabal al Asfar**	**6.76**	**224**	Pn		**Pn**	05 51 42.4	+1.3
	0.6nm,0.3s,baz=19,slow=9.7,SNR=3.7								
ASF				Pg		**Pg**	05 52 12.9	+2.7
	0.6nm,0.3s,baz=23,slow=7.7,SNR=11								
ASF				Lg		Lg	05 53 39.1	
	1.3nm,0.3s,baz=351,slow=22,SNR=5.7								
MMAI	**Mount Meron Ar**	**7.09**	**236**	Pn		**Pn**	05 51 48.2	+2.5
	2.9nm,0.3s,baz=52,slow=16,SNR=4.1								
MMAI				Lg		Lg	05 53 53.6	
	3.6nm,0.3s,baz=61,slow=30,SNR=2.1								
BRTR	**Keskin Array B**	**7.33**	**293**	Pn		**Pn**	05 51 50.7	+1.7
	0.1nm,0.3s,baz=114,slow=14,SNR=1.5								
BRTR				Pg		**Pg**	05 52 19.0	-2.1
	0.1nm,0.3s,baz=127,slow=16,SNR=6.5								
BRTR				Lg		Lg	05 53 56.1	
	baz=110,slow=29,SNR=1.8								
AKASG	**Malin Array Be**	**16.47**	**329**	Pn		**Pn**	05 53 51.8	-1.1
	0.3nm,0.3s,baz=139,slow=11,SNR=1.6								
AKTO	**Aktyubinsk**	**17.33**	**35**	P		**Pn**	05 54 04.6	+0.8
	0.2nm,0.3s,baz=228,slow=13,SNR=5.8								
ARU	**Arti**	**22.09**	**24**	P		**P**	05 54 56.6	-0.5
	2.6nm,0.2s,baz=221,slow=5.9,SNR=5.3								
MKAR	**Makanchi Array**	**30.87**	**59**	P		**P**	05 56 18.1	-0.4
	0.5nm,0.9s,baz=275,slow=7.1,SNR=3.2								

GII ***14*** *05:52:31.2±0.0, 38°.15N×44°.52E, h20km*
AZER ***14*** *05:52:41.6±1.1, 36°.54N×41°.50E, h6km, ml5.7/5, Error ellipse: s-maj=14.9km s-min=10.1km az=169.0*
TEH ***14*** *05:52:50.7, 37°.25N×42°.05E, h10km, ML5.5*
ISN ***14*** *05:52:50.4±1.3, 37°.25N×42°.52E, h0km±4km, ML5.3*
ISK ***14*** *05:52:51.9, 37°.25N×42°.43E, h5km, ML5.5/30*
IDC ***14*** *05:52:51.9±0.4, 37°.19N×42°.52E, h0km, mb4.9/36, mb1 4.9/45, mb1mx4.9/60, mbtmp4.9/45, ML4.1/8, MS4.5/40, Ms1 4.5/40, ms1mx4.4/56, Error ellipse: s-maj=10.2km s-min=7.7km az=147.0*
ATA ***14*** *05:52:51.6±0.4, 37°.21N×42°.52E, h15km±50km, ML5.9, MW5.4*
DDA ***14*** *05:52:51.7, 37°.16N×42°.44E, h12km, Ml5.5*
BJI ***14*** *05:52:52.0, 37°.30N×42°.50E, h10km, mb5.3/70, mB5.2/46, Ms5.0/56, Ms7 4.7/57*
MOS ***14*** *05:52:52.4±1.1, 37°.15N×42°.45E, h13km, mb5.5/103, MS4.6/38, Error ellipse: s-maj=3.9km s-min=2.7km az=109.7*
DSN ***14*** *05:52:53.5±0.4, 36°.91N×42°.61E, h10km, mb5.7/16, Error ellipse: s-maj=7.8km s-min=5.4km az=63.0*
ISCJB ***14*** *05:52:53.9±0.3, 37°.12N±0°.01×42°.50E±0°.01, h25km±2km, mb5.2/348, MS4.6/62, Error ellipse: s-maj=1.9km s-min=1.5km az=179.8*
NEIC ***14*** *05:52:53.6±0.0, 37°.29N×42°.33E, h5km, mb5.3/244, ML5.5(DDA), ML5.5(ISK), After ISK.*
NEIC At least 23 people slightly injured and 25 buildings damaged in Sirnak, Turkey. Felt [IV] at Erbil and [III] at Dahuk, Iraq. Also felt at Mosul.
GCMT ***14*** *05:52:53.6±0.2, 37°.11N×42°.44E, h12km, MW5.2/109, Moment Tensor Solution. s56,c84; s109,c195; Duration: 1¶0 Moment tensor: Scale 10^17Nm; Mrr0.44±.02; Mθθ-0.65±.01; Mφφ0.21±.01; Mrθ0.48±.04; Mθφ0.55±.01; Mφr-0.18±.04; Best double couple: M0.85300×10^17 NP1:φs103.00000°, δ65.00000°, λ73.00000°. NP2:φs318.00000°, δ30.00000°, λ121.00000°. Principal axes: T 0.6220, Plg66.0000°, Azm343.0000°; N 0.4640, Plg15.0000°, Azm110.0000°; P -1.0850, Plg18.0000°, Azm205.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
CSEM ***14*** *05:52:54.2±0.1, 37°.22N×42°.51E, h12km, mb5.3/99, Ms4.9 Error ellipse: s-maj=2.4km s-min=1.8km az=6.0*
HLW ***14*** *05:53:22.9, 36°.38N×39°.37E, h10km±21km, Md5.5, Ml5.7*
ISC 14 05:52:53.7±0.5,**37°.22N**±0°.02×**42°.48E**±0°.01,**h11**km±2km, **n1648**,σ1¶**60**/1782,**mb5.3**/351,**MS4.6**/63,**101C-54D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRN	**S¯–rnak**	**0.28**	**349**	⇓*i*P		**Pg**	05 52 57.9	-1.7
SIRN				*i* S		**Sg**	05 53 01.9	-1.6
SIRN	**S¯–rnak**	**0.28**	**349**	*i* P		**Pg**	05 52 58.1	-1.5
SIRN	**S¯–rnak**	**0.28**	**349**	*i* P		**Pg**	05 52 58.1	-1.5
SIRN				S		**Sg**	05 53 01.9	-1.6
SIRT	**Sirnak**	**0.29**	**353**	PG		**Pg**	05 52 58.1	-1.5
SIRT				SG		**Sg**	05 53 02.5	-1.1
SIRT	**Sirnak**	**0.29**	**353**	*i* Pg		**Pg**	05 52 58.1	-1.5
SIRT				*i* Sg		**Sg**	05 53 02.5	-1.1
SRTM	**Siirt_Merkez**	**0.89**	**330**	⇓*i*P		**Pg**	05 53 09.3	-1.6
SRTM				*i* S		**Sb**	05 53 23.2	0.0
SRTM	**Siirt_Merkez**	**0.89**	**330**	P		**Pg**	05 53 09.3	-1.6
SRTM				S		**Sb**	05 53 23.2	0.0
HAKT	**HAKKARI**	**1.03**	**70**	⇓*i*P		**Pg**	05 53 12.7	-0.9
HAKT				*i* S		**Sg**	05 53 27.1	0.0
HAKT	**HAKKARI**	**1.03**	**70**	P		**Pg**	05 53 12.7	-0.9
HAKT				S		**Sg**	05 53 27.0	0.0
BTMN	**Batman**	**1.18**	**305**	⇓*i*P		**Pb**	05 53 14.9	-1.1
BTMN				*i* S		**Sn**	05 53 31.8	-0.4
BTMN	**Batman**	**1.18**	**305**	P		**Pb**	05 53 14.9	-1.1
BTMN				S		**Sn**	05 53 31.8	-0.4
GEVA	**Gevas**	**1.19**	**22**	⇓*e*P		**Pb**	05 53 14.4	-1.8
GEVA				*e*S		**Sn**	05 53 32.2	-0.3
GEVA				IAML			05 53 37.7	
	comp=Z,21μm,0.5s							
GEVA	**Gevas**	**1.19**	**22**	⇓*i*P		**Pb**	05 53 14.7	-1.6
GEVA				*i* S		**Sn**	05 53 33.0	+0.4
GEVA	**Gevas**	**1.19**	**22**	P		**Pb**	05 53 14.7	-1.6
GEVA				S		**Sn**	05 53 33.0	+0.4
MARD	**Mardin**	**1.36**	**275**	⇓*i*P		**Pn**	05 53 17.2	-1.6
MARD				*i* S		**Sb**	05 53 36.0	-0.8
GURO	**Guroymak-BITLI**	**1.38**	**345**	PN		**Pn**	05 53 18.5	-0.5
GURO				SN		**Sg**	05 53 37.9	-0.2
GURO	**Guroymak-BITLI**	**1.38**	**345**	*i* Pn		**Pn**	05 53 18.5	-0.5
GURO				*i* Sn		**Sg**	05 53 37.9	-0.2
SVAN	**Silvan-Diyarba**	**1.38**	**313**	PN		**Pn**	05 53 18.2	-0.7
SVAN				SN		**Sg**	05 53 37.5	-0.7
SVAN	**Silvan-Diyarba**	**1.38**	**313**	⇑*i*P		**Pn**	05 53 18.2	-0.7
SVAN				*i* S		**Sg**	05 53 37.5	-0.7
SVAN	**Silvan-Diyarba**	**1.38**	**313**	Pn		**Pn**	05 53 17.9	-1.0
SVAN	**Silvan-Diyarba**	**1.38**	**313**	Pn		**Pn**	05 53 17.9	-1.0
SVAN	**Silvan-Diyarba**	**1.38**	**313**	P		**Pn**

YEDI	**Yedisu-Bingol**	**2.69**	**326**	*i* Pn	**Pn**	**05 53 37.5 +0.5**
ISHB	**Shabestar**	**2.70**	**66**	*e*Pn	**Pn**	**05 53 38.3 +1.1**
ISHB				*e*		05 53 52.6
	comp=Z,59µm,0.3s					
SVRC	**Sivrice-ELAZID**	**2.77**	**296**	PN	**Pn**	**05 53 37.5 -0.6**
SVRC	**Sivrice-ELAZID**	**2.77**	**296**	*i* Pn	**Pn**	**05 53 37.5 -0.6**
SANL	**SANLIURFA_Merk**	**2.79**	**270**	⇓*i*P	**Pn**	**05 53 37.9 -0.3**
SANL				*i* S	**Sg**	**05 54 22.7 -0.6**
SANL	**SANLIURFA_Merk**	**2.79**	**270**	P	**Pn**	**05 53 37.9 -0.3**
ERZM	**Erzurum**	**2.83**	**342**	*e*P	**Pn**	**05 53 39.4 +0.4**
ERZM	**Erzurum**	**2.83**	**342**	⇑*i*P	**Pn**	**05 53 39.4 +0.4**
ERZM				*i* S	**Sg**	**05 54 22.9 -1.6**
ERZM	**Erzurum**	**2.83**	**342**	P	**Pn**	**05 53 39.4 +0.4**
HOMI	**Horasan**	**2.86**	**351**	⇑*e*P	**Pn**	**05 53 39.8 +0.4**
HOMI	**Horasan**	**2.86**	**351**	⇑*i*P	**Pn**	**05 53 39.8 +0.4**
HOMI				*i* S	**Sg**	**05 54 24.3 -1.3**
IGDI	**IGDIR**	**2.93**	**25**	⇑*i*P	**Pn**	**05 53 42.3 +2.1**
IGDI				*i* Pg	**Pg**	**05 53 49.2 -0.6**
IGDI	**IGDIR**	**2.93**	**25**	⇑*i*P	**Pn**	**05 53 42.3 +2.1**
IGDI				*i* S	**Sg**	**05 54 34.8 +7.1**
URFA	**Urfa**	**2.93**	**276**	PN	**Pn**	**05 53 40.8 +0.6**
URFA	**Urfa**	**2.93**	**276**	*i* Pn	**Pn**	**05 53 40.8 +0.6**
PTK	**Pertek**	**2.96**	**305**	PN	**Pn**	**05 53 40.4 -0.3**
PTK	**Pertek**	**2.96**	**305**	*i* Pn	**Pn**	**05 53 40.4 -0.3**
TNCL	**Tunceli-Merkez**	**2.99**	**310**	*e*P	**Pn**	**05 53 40.4 -0.7**
TNCL	**Tunceli-Merkez**	**2.99**	**310**	⇑*i*P	**Pn**	**05 53 39.2 -2.0**
TNCL				*i* S	**Sg**	**05 54 27.9 -2.0**
TNCL	**Tunceli-Merkez**	**2.99**	**310**	P	**Pn**	**05 53 39.2 -2.0**
ELZG	**Elazig**	**3.05**	**296**	⇑*i*P	**Pn**	**05 53 41.3 -0.7**
ELZG				*i* S	**Sg**	**05 54 30.7 -1.0**
ELZG	**Elazig**	**3.05**	**296**	P	**Pn**	**05 53 41.3 -0.7**
NAX	**Nakhchivan**	**3.07**	**50**	P	**Pb**	**05 53 45.2 -3.2**
NAX	**Nakhchivan**	**3.07**	**50**	P	**Pb**	**05 53 45.2 -3.2**
NAX	**Nakhchivan**	**3.07**	**50**	P	**Pb**	**05 53 45.3 -3.2**
	SNR=128					
NAX				⇑S	**Sg**	**05 54 34.8 +2.3**
ITBZ	**Tabriz**	**3.08**	**70**	*e*Pn	**Pn**	**05 53 43.3 +1.0**
ITBZ				*e*		05 54 42.3
	comp=Z,33µm,0.4s					
ITBZ	**Tabriz**	**3.08**	**70**	*e*Pn	**Pn**	**05 53 43.3 +1.0**
HYR	**Heyderabad**	**3.12**	**36**	⇓P	**Pn**	**05 53 45.0 +2.3**
HYR	**Heyderabad**	**3.12**	**36**	⇓P	**Pn**	**05 53 45.0 +2.3**
HYR				⇓S	**Sg**	**05 54 34.8 +1.1**
KOPT	**Kop Dagi**	**3.20**	**332**	*e*P	**Pn**	**05 53 44.4 +0.2**
KOPT	**Kop Dagi**	**3.20**	**332**	⇑*i*P	**Pn**	**05 53 45.2 +1.1**
KOPT				*i* S	**Sg**	**05 54 40.0 +3.5**
KOPT	**Kop Dagi**	**3.20**	**332**	P	**Pn**	**05 53 45.2 +1.1**
SBZ	**Shahbuz**	**3.25**	**47**	⇑P	**Pn**	**05 53 47.0 +2.3**
SBZ	**Shahbuz**	**3.25**	**47**	⇑P	**Pn**	**05 53 47.0 +2.3**
SBZ				⇓S	**Sg**	**05 54 39.0 +0.9**
ORD	**Ordubad**	**3.25**	**57**	⇑P	**Pn**	**05 53 47.5 +2.8**
ORD	**Ordubad**	**3.25**	**57**	⇑P	**Pn**	**05 53 47.5 +2.8**
ORD				⇑S	**Sg**	**05 54 38.9 +0.6**
DIGO	**Kars**	**3.27**	**12**	⇑*e*P	**Pn**	**05 53 45.9 +0.8**
DIGO	**Kars**	**3.27**	**12**	⇑*i*P	**Pn**	**05 53 46.5 +1.4**
DIGO				*i* S	**Sg**	**05 54 41.3 +2.6**
DIGO	**Kars**	**3.27**	**12**	P	**Pn**	**05 53 46.5 +1.4**
EUZM	**Uzumlu**	**3.31**	**320**	*e*P	**Pn**	**05 53 48.2 +2.7**
EUZM	**Uzumlu**	**3.31**	**320**	*i* P	**Pb**	**05 53 49.9 -2.5**
EUZM				*i* S	**Sg**	**05 54 41.8 +1.7**
EUZM	**Uzumlu**	**3.31**	**320**	P	**Pb**	**05 53 49.9 -2.5**
MALT	**Malatya**	**3.40**	**290**	PN	**Pn**	**05 53 46.8 +0.1**
MALT	**Malatya**	**3.40**	**290**	P	**Pn**	**05 53 46.7 +0.1**
MALT	**Malatya**	**3.40**	**290**	*i* Pn	**Pn**	**05 53 46.8 +0.1**
GNI	**Garni**	**3.42**	**30**	Pn	**Pn**	**05 53 50.2 +3.2**
	comp=Z,49nm,0.3s,baz=278,slow=3.7,SNR=51					
GNI				Pg	**Pg**	**05 54 01.7 +2.5**
	comp=Z,93nm,0.3s,baz=238,slow=16,SNR=24					
GNI				Lg	Lg	05 54 42.3
	comp=Z,14nm,0.3s,baz=197,slow=19,SNR=2.9					
GNI	**Garni**	**3.42**	**30**	PN	**Pn**	**05 53 48.2 +1.2**
GNI	**Garni**	**3.42**	**30**	*e*Pn	**Pn**	**05 53 49.7 +2.6**
GNI				Pg	**Pg**	**05 54 01.7 +2.5**
GNI				Lg	Lg	05 54 42.4
GNI	**Garni**	**3.42**	**30**	P	**Pn**	**05 53 49.9 +2.9**
	SNR=176					
GNI	**Garni**	**3.42**	**30**	*i* P	**Pn**	**05 53 50.0 +2.9**
	SNR=116					
GNI	**Garni**	**3.42**	**30***c*	*i* P	**Pn**	**05 53 49.5 +2.5**
GNI				pmax	pmax	
	comp=Z,6µm,2.5s					
GNI	**Garni**	**3.42**	**30**	*i* Pn	**Pn**	**05 53 48.2 +1.2**
GNI	**Garni**	**3.42**	**30**	*i* P	**Pn**	**05 53 49.5 +2.5**
	comp=Z,6µm,2.5s					
KARS	**Kars**	**3.44**	**8**	PN	**Pn**	**05 53 46.8 -0.5**
KARS	**Kars**	**3.44**	**8**	*i* Pn	**Pn**	**05 53 46.8 -0.5**
IBST	**Bostanabad**	**3.54**	**81**	*e*Pn	**Pn**	**05 53 50.0 +1.2**
IBST				*e*		05 54 54.4
	comp=Z,45µm,0.5s					
IBST	**Bostanabad**	**3.54**	**81**	*e*Pn	**Pn**	**05 53 50.0 +1.2**
EAK	**Akyaka**	**3.57**	**14**	*e*P	**Pn**	**05 53 50.5 +1.3**
EAK	**Akyaka**	**3.57**	**14**	⇑*i*P	**Pn**	**05 53 50.9 +1.7**
EAK				*i* S	**Sg**	**05 54 45.9 -2.5**
EAK	**Akyaka**	**3.57**	**14**	P	**Pn**	**05 53 50.9 +1.7**
REFA	**Refahiye_ERZ¨**	**3.65**	**308**	⇓*e*P	**Pn**	**05 53 49.7 -0.4**
BAYT	**Ayd¨–ntepe-Bay**	**3.66**	**331**	PN	**Pn**	**05 53 50.4 0.0**
BAYT	**Ayd¨–ntepe-Bay**	**3.66**	**331**	*i* Pn	**Pn**	**05 53 50.4 0.0**
DDEM	**Demirkent**	**3.71**	**351**	⇑*i*P	**Pn**	**05 53 52.6 +1.6**
DDEM				*i* S	**Sg**	**05 54 55.6 +2.6**
DDEM	**Demirkent**	**3.71**	**351**	P	**Pn**	**05 53 52.6 +1.6**
KEMA	**Kemaliye**	**3.75**	**304**	*e*P	**Pn**	**05 53 51.3 -0.2**
KEMA				IAML		05 55 35.6
	comp=Z,103nm,0.7s					
KEMA	**Kemaliye**	**3.75**	**304**	*i* P	**Pn**	**05 53 51.0 -0.5**
KEMA				*i* S	**Sg**	**05 54 55.1 +1.0**
KEMA	**Kemaliye**	**3.75**	**304**	P	**Pn**	**05 53 51.0 -0.5**
IHRS	**Heris**	**3.78**	**72**	*e*Pn	**Pn**	**05 53 53.5 +1.5**
IHRS				*e*		05 55 19.6
	comp=Z,57µm,0.5s					
IHRS	**Heris**	**3.78**	**72**	*e*Pn	**Pn**	**05 53 53.5 +1.5**
ILIC	**ilic-Erzincan**	**3.80**	**307**	PN	**Pn**	**05 53 53.3 +1.0**
ILIC	**ilic-Erzincan**	**3.80**	**307**	*i* Pn	**Pn**	**05 53 53.3 +1.0**
KELT	**Kelkit**	**3.87**	**320**	*e*P	**Pn**	**05 53 54.7 +1.5**
IDHR	**Dehrash**	**4.04**	**127**	*e*Pn	**Pn**	**05 53 56.7 +1.1**
IDHR				*e*		05 55 15.5
	comp=Z,33µm,0.4s					
IDHR	**Dehrash**	**4.04**	**127**	*e*Pn	**Pn**	**05 53 56.7 +1.1**
CHOM	**Cayeli-Rize**	**4.10**	**341**	PN	**Pn**	**05 53 57.8 +1.6**
CHOM	**Cayeli-Rize**	**4.10**	**341**	*i* Pn	**Pn**	**05 53 57.8 +1.6**
GAZ	**Gaziantep**	**4.21**	**271**	PN	**Pn**	**05 53 59.2 +1.4**
GAZ	**Gaziantep**	**4.21**	**271**	*i* Pn	**Pn**	**05 53 59.2 +1.4**
BHD	**Baghdad**	**4.23**	**158**	*e*Pn	**Pn**	**05 53 58.0 0.0**
	SNR=39					
BHD				*e*Sn	**Sn**	**05 54 45.6 -1.8**
	SNR=39					
BCA	**Borcka**	**4.28**	**351**	PN	**Pn**	**05 53 59.9 +1.2**
BCA	**Borcka**	**4.28**	**351**	*i* Pn	**Pn**	**05 53 59.9 +1.2**
EPOS	**Posof**	**4.29**	**2**	*e*P	**Pn**	**05 54 01.0 +2.1**
ILIN	**Lien**	**4.29**	**121**	*e*Pn	**Pn**	**05 53 59.9 +0.8**
ILIN				*e*		05 55 21.0
	comp=Z,61µm,0.4s					
ILIN	**Lien**	**4.29**	**121**	*e*Pn	**Pn**	**05 53 59.9 +0.8**
GDB	**GEDABAY**	**4.33**	**35**	⇑P	**Pn**	**05 54 02.2 +2.6**
GDB	**GEDABAY**	**4.33**	**35**	⇑P	**Pn**	**05 54 02.2 +2.6**
GDB				⇑S	**Sb**	**05 55 05.0 +2.8**
QZX	**Qazax, Azerbai**	**4.45**	**29**	⇑P	**Pn**	**05 54 03.1 +2.1**
QZX	**Qazax, Azerbai**	**4.45**	**29**	⇑P	**Pn**	**05 54 03.1 +2.1**
IVIS	**Veis**	**4.45**	**126**	*e*Pn	**Pn**	**05 54 02.0 +0.9**
IVIS				*e*		05 55 28.4
	comp=Z,65µm,0.5s					
IVIS	**Veis**	**4.45**	**126**	*e*Pn	**Pn**	**05 54 02.0 +0.9**
KMRS	**Kahramanmaras**	**4.46**	**275**	PN	**Pn**	**05 54 02.8 +1.6**
KMRS	**Kahramanmaras**	**4.46**	**275**	*i* Pn	**Pn**	**05 54 02.8 +1.6**
RTB	**Rutbah**	**4.54**	**204**	*e*Pn	**Pn**	**05 54 02.0 -0.3**
	SNR=39					
RTB				Sn	**Sn**	**05 54 53.9 -1.2**
	SNR=39					
GANJ	**Ganja**	**4.55**	**40**	P	**Pn**	**05 54 05.4 +3.0**
GANJ	**Ganja**	**4.55**	**40**	P	**Pn**	**05 54 05.4 +3.0**
	SNR=348					
GANJ	**Ganja**	**4.55**	**40**	P	**Pn**	**05 54 05.4 +3.0**
	SNR=348					
ESPY	**Espiye-Giresun**	**4.71**	**323**	PN	**Pn**	**05 54 04.8 +0.2**
ESPY	**Espiye-Giresun**	**4.71**	**323**	*i* Pn	**Pn**	**05 54 04.8 +0.2**
BRDA	**Brd**	**4.77**	**49**	⇑P	**Pn**	**05 54 08.4 +3.0**
	SNR=55					
BRDA	**Brd**	**4.77**	**49**	⇑P	**Pn**	**05 54 08.4 +3.0**
	SNR=55					
LRK	**Lerik**	**4.84**	**71**	⇓P	**Pn**	**05 54 08.2 +1.6**
LRK	**Lerik**	**4.84**	**71**	⇓P	**Pn**	**05 54 08.2 +1.6**
LRK				⇑S	**Sb**	**05 55 16.6 -0.3**
SARI	**SarD1z-Kayseri**	**4.95**	**286**	PN	**Pn**	**05 54 08.8 +0.8**
MNGR	**Mingechevir, A**	**5.05**	**44**	P	**Pn**	**05 54 11.8 +2.6**
MNGR	**Mingechevir, A**	**5.05**	**44**	⇓P	**Pn**	**05 54 11.8 +2.6**
	SNR=30					
MNGR	**Mingechevir, A**	**5.05**	**44**	⇓P	**Pn**	**05 54 11.8 +2.6**
	SNR=30					
GLBA	**Cilabad**	**5.07**	**65**	⇑P	**Pn**	**05 54 12.2 +2.6**
	SNR=35					
GLBA	**Cilabad**	**5.07**	**65**	⇑P	**Pn**	**05 54 12.2 +2.6**
	SNR=35					
GLBA				⇑S	**Sb**	**05 55 23.1 -0.3**
TAHT	**Tahtakopru-Hat**	**5.12**	**262**	PN	**Pn**	**05 54 10.9 +0.6**
TAHT	**Tahtakopru-Hat**	**5.12**	**262**	*i* Pn	**Pn**	**05 54 10.9 +0.6**
RSDY	**Resadiye-TOKAT**	**5.13**	**310**	PN	**Pn**	**05 54 12.5 +2.1**
RSDY	**Resadiye-TOKAT**	**5.13**	**310**	*i* Pn	**Pn**	**05 54 12.5 +2.1**
ASTR	**Astara**	**5.17**	**73**	⇑P	**Pn**	**05 54 12.9 +2.0**
ASTR	**Astara**	**5.17**	**73**	⇑P	**Pn**	**05 54 12.9 +2.0**
ASTR				⇓S	**Sb**	**05 55 24.3 -1.7**
LKRN	**Lenkeran, Azer**	**5.19**	**71**	P	**Pn**	**05 54 12.5 +1.3**
LKRN	**Lenkeran, Azer**	**5.19**	**71**	⇓P	**Pn**	**05 54 12.5 +1.3**
LKRN	**Lenkeran, Azer**	**5.19**	**71**	⇓P	**Pn**	**05 54 12.5 +1.3**
LKRN				⇑S	**Sb**	**05 55 24.1 -2.7**
YAYL	**Yayladag**	**5.26**	**259**	PN	**Pn**	**05 54 13.2 +0.9**
YAYL	**Yayladag**	**5.26**	**259**	*i* Pn	**Pn**	**05 54 13.2 +0.9**
KOZT	**Kozan**	**5.31**	**275**	PN	**Pn**	**05 54 15.4 +2.5**
KOZT	**Kozan**	**5.31**	**275**	*i* Pn	**Pn**	**05 54 15.4 +2.5**
CEYT	**Ceyhan**	**5.39**	**270**	PN	**Pn**	**05 54 16.1 +2.2**
SEKA	**Sheki**	**5.41**	**41**	P	**Pn**	**05 54 17.2 +2.9**
SEKA	**Sheki**	**5.41**	**41**	P	**Pn**	**05 54 17.2 +2.9**
SEKA	**Sheki**	**5.41**	**41**	P	**Pn**	**05 54 17.3 +2.9**
	SNR=86					
ZKTA	**Zakatala**	**5.46**	**35**	P	**Pn**	**05 54 17.5 +2.7**
ZKTA	**Zakatala**	**5.46**	**35**	P	**Pn**	**05 54 17.5 +2.7**
ZKTA	**Zakatala**	**5.46**	**35**	⇑P	**Pn**	**05 54 17.6 +2.7**
	SNR=76					
BNN	**Bunyan**	**5.49**	**289**	PN	**Pn**	**05 54 17.6 +2.2**
YURE	**YUREGIR**	**5.50**	**268**	PN	**Pn**	**05 54 17.6 +2.2**
TOKT	**Tokat**	**5.58**	**306**	PN	**Pn**	**05 54 18.3 +1.7**
TOKT	**Tokat**	**5.58**	**306**	*i* Pn	**Pn**	**05 54 18.3 +1.7**
QBL	**Gabala**	**5.59**	**47**	⇑P	**Pn**	**05 54 19.6 +2.9**
	SNR=8.2					
ZEI	**Tsey**	**5.67**	**11**	*e*P	**Pn**	**05 54 19.7 +1.7**
ZEI				pmax	pmax	
	comp=Z,141nm,0.9s					
IML	**Ismayilli**	**5.70**	**49**	⇓P	**Pn**	**05 54 21.1 +2.9**
	SNR=25					
IML				⇓S	**Sb**	**05 55 38.5 -2.8**
KRTD	**Karatas-Adana**	**5.70**	**266**	PN	**Pn**	**05 54 19.8 +1.6**
KRTD	**Karatas-Adana**	**5.70**	**266**	*e*Pn	**Pn**	**05 54 19.8 +1.6**
KRTS	**Karatas**	**5.73**	**266**	PN	**Pn**	**05 54 20.6 +2.0**
KRTS	**Karatas**	**5.73**	**266**	*e*Pn	**Pn**	**05 54 20.6 +2.0**
FKH	**Fakeheh**	**5.76**	**241**	*e*P	**Pn**	**05 54 19.6 +0.4**
ALIB	**Äli-Bayra**	**5.80**	**60**	⇑P	**Pn**	**05 54 22.5 +3.0**
ALIB				⇑S	**Sb**	**05 55 41.5 -2.6**
AKT	**Akhty**	**5.89**	**42**	*e*P	**Pn**	**05 54 23.8 +2.9**
AKT				*e*S	**Sn**	**05 55 29.8 +1.4**
AKT				pmax	pmax	
	comp=Z,94nm,0.6s					
AKT				smax	smax	
	comp=E,196nm,0.8s					
AKT				smax	smax	
	comp=N,144nm,0.7s					
XNQ	**Khinaliq**	**5.91**	**46**	⇑P	**Pn**	**05 54 24.1 +2.8**
	SNR=8.7					
PQL	**Pirkuli**	**5.95**	**51**	⇑P	**Pn**	**05 54 24.5 +2.8**
PQL				⇓S	**Sb**	**05 55 46.2 -2.5**
NEY	**Neytrino**	**6.03**	**2***d*	*i*P	Pn	05 54 27.9 +5.0
GBS	**Qobustan**	**6.03**	**55**	⇑P	**Pn**	**05 54 25.7 +2.9**
	SNR=21					
HWQ	**Hawqa**	**6.07**	**243**	*e*P	**Pn**	**05 54 24.1 +0.6**
YOZ	**Yozgat**	**6.12**	**295**	PN	**Pn**	**05 54 26.4 +2.3**
ATGJ	**Altiaghaj**	**6.20**	**52**	⇓P	**Pn**	**05 54 28.1 +2.9**
ATGJ				⇑S	**Sb**	**05 55 51.5 -4.4**
QSAR	**Qusar**	**6.20**	**44**	⇓P	**Pn**	**05 54 27.9 +2.7**
	SNR=56					
QUBA	**Quba, Azerbaij**	**6.23**	**47**	⇑P	**Pn**	**05 54 28.5 +3.0**
	SNR=90					
IGZV	**Ghazvin**	**6.26**	**95**	*e*Pn	**Pn**	**05 54 26.9 +0.7**
IGZV				*e*		05 54 59.1
	comp=Z,7µm,0.4s					
IGZV	**Ghazvin**	**6.26**	**95**	*e*Pn	**Pn**	**05 54 26.9 +0.7**
SIZA	**Siyzn**	**6.30**	**50**	⇑P	**Pn**	**05 54 29.4 +2.9**
	SNR=60					
NIG	**Nigde**	**6.31**	**281**	PN	**Pn**	**05 54 28.6 +1.8**
NIG	**Nigde**	**6.31**	**281**	*e*Pn	**Pn**	**05 54 28.6 +1.8**
KVT	**Kavak**	**6.32**	**310**	PN	**Pn**	**05 54 28.8 +2.1**
NCK	**Nalchik**	**6.33**	**7**	*i* P	**Pn**	**05 54 29.2 +2.3**
MERS	**Mersin**	**6.38**	**269**	PN	**Pn**	**05 54 30.1 +2.5**
MERS	**Mersin**	**6.38**	**269**	*e*Pn	**Pn**	**05 54 30.1 +2.5**
BHL	**Bhannes**	**6.47**	**241**	*e*P	**Pn**	**05 54 29.4 +0.5**
KBZ	**Khabaz**	**6.51**	**3**	Pn	Pn	05 54 34.4 +5.1
	comp=Z,0.6nm,0.3s,baz=188,slow=10,SNR=69					
KBZ				Lg	Lg	05 56 23.9
	comp=Z,0.2nm,0.3s,baz=159,slow=8.6,SNR=2.0					
GULA	**Gulagac**	**6.63**	**282**	PN	**Pn**	**05 54 33.1 +2.0**
GULA	**Gulagac**	**6.63**	**282**	*e*Pn	**Pn**	**05 54 33.1 +2.0**
DQRL	**Deir Qamar**	**6.64**	**240**	*e*P	**Pn**	**05 54 32.3 +1.0**
QRWL	**Qaraoun**	**6.65**	**239**	*e*P	**Pn**	**05 54 32.7 +1.4**
SOC	**Sochi**	**6.70**	**343**	*e*P	**Pn**	**05 54 32.6 +0.7**
SOC				*e*		05 55 48.1
SOC				pmax	pmax	
	comp=Z,47nm,0.6s					
SOC				MLR	MLR	
	comp=Z,6µm,10.0s					
SOC	**Sochi**	**6.70**	**343**	*e*P	**Pn**	**05 54 32.6 +0.7**
	comp=Z,47nm,0.6s					
SOC				*e*S	**Sn**	**05 55 48.1 -0.1**
	comp=Z,6µm,10.0s					
SHBL	**Chebaa**	**6.73**	**237**	*e*P	**Pn**	**05 54 33.5 +1.0**
KIZK	**Mersin**	**6.73**	**266**	PN	**Pn**	**05 54 35.4 +3.1**
KIV	**Kislovodsk**	**6.73**	**1**	*e*Pn	Pn	05 54 37.1 +4.6
KIV	**Kislovodsk**	**6.73**	**1**	*i* P	Pn	05 54 37.2 +4.7
	SNR=13					
KIV	**Kislovodsk**	**6.73**	**1**	*e*P	Pn	05 54 37.4 +4.9
KIV				pmax	pmax	
	comp=Z,132nm,1.1s					
KIV				MLR	MLR	
	comp=Z,3µm,9.0s					
KIV	**Kislovodsk**	**6.73**	**1**	*e*Pn	Pn	05 54 37.1 +4.6
KVAR	**Kislovodsk Arr**	**6.74**	**1**	LR	LR	05 57 24.8
	comp=Z,8µm,20.5s,baz=164,slow=40					
ASF	**Jabal al Asfar**	**6.82**	**224**	Pn	**Pn**	**05 54 34.3 +0.7**
	comp=Z,7.1nm,0.3s,baz=345,slow=11,SNR=18					
ASF				Pg	**Pg**	**05 55 03.0 -1.2**
	comp=Z,13nm,0.3s,baz=356,slow=15,SNR=8.6					
ASF				Lg	Lg	05 56 30.2
	comp=Z,18nm,0.3s,baz=168,slow=23,SNR=6.2					
ASF				LR	LR	05 57 38.9
	comp=Z,5µm,20.8s,baz=0.5,slow=42					
CORM	**Corum**	**6.82**	**298**	PN	**Pn**	**05 54 36.0 +2.3**
CORM	**Corum**	**6.82**	**298**	*e*Pn	**Pn**	**05 54 36.0 +2.3**
KSDI	**Kefar Szold**	**6.88**	**236**	Pn	**Pn**	**05 54 35.5 +1.1**
NSR	**Nassriya**	**6.89**	**153**	*e*Pn	**Pn**	**05 54 36.3 +1.7**
	SNR=39					
KSHT	**Keshet**	**6.91**	**234**	Pn	**Pn**	**05 54 35.9 +1.0**
MAK	**Makhachkala**	**6.91**	**32**	*e*P	Pn	05 54 39.8 +5.0
MAK				*e*S	**Sn**	**05 55 59.8 +6.5**
MAK				pmax	pmax	
	comp=Z,797nm,1.4s					
MAK				MLR	MLR	
	comp=Z,17µm,14.0s					
EREN	**Erenkoy**	**6.92**	**258**	PN	**Pn**	**05 54 37.8 +2.9**
EREN	**Erenkoy**	**6.92**	**258**	*e*Pn	**Pn**	**05 54 37.8 +2.9**
YAYX	**Yaylak**	**7.05**	**287**	PN	**Pn**	**05 54 39.7 +2.8**
YAYX	**Yaylak**	**7.05**	**287**	*e*Pn	**Pn**	**05 54 39.7 +2.8**
KEBE	**Keben-Mersin**	**7.08**	**266**	PN	**Pn**	**05 54 39.8 +2.6**
KEBE	**Keben-Mersin**	**7.08**	**266**	*e*Pn	**Pn**	**05 54 39.8 +2.6**
DIKM	**Dikmen**	**7.13**	**311**	PN	**Pn**	**05 54 40.4 +2.5**
DIKM	**Dikmen**	**7.13**	**311**	*e*Pn	**Pn**	**05 54 40.4 +2.5**
IKL	**Isikli**	**7.13**	**265**	PN	**Pn**	**05 54 40.0 +2.1**
IKL	**Isikli**	**7.13**	**265**	*e*Pn	**Pn**	**05 54 40.0 +2.1**
MMAI	**Mount Meron Ar**	**7.16**	**236**	Pn	**Pn**	**05 54 40.2 +1.9**
	comp=Z,42nm,0.3s,baz=57,slow=15,SNR=28					
MMAI				Pg	**Pg**	**05 55 07.4 -3.3**
	comp=Z,33nm,0.3s,baz=53,slow=13,SNR=5.1					
MMAI				Lg	Lg	05 56 33.1
	comp=Z,15nm,0.3s,baz=59,slow=45,SNR=2.3					
MMAI				LR	LR	05 57 39.4
	comp=Z,6µm,21.0s,baz=55,slow=40					
YESI	**Yesilovacik-Me**	**7.17**	**264**	PN	**Pn**	**05 54 39.8 +1.4**
YESI	**Yesilovacik-Me**	**7.17**	**264**	*e*Pn	**Pn**	**05 54 39.8 +1.4**
SULT	**Sultanhani-AKS**	**7.18**	**281**	PN	**Pn**	**05 54 40.4 +1.8**
SULT	**Sultanhani-AKS**	**7.18**	**281**	*e*Pn	**Pn**	**05 54 40.4 +1.8**
SERE	**Sereflikochisa**	**7.24**	**287**	PN	**Pn**	**05 54 41.8 +2.3**
SERE	**Sereflikochisa**	**7.24**	**287**	*e*Pn	**Pn**	**05 54 41.8 +2.3**
AKKU	**Akkuyu-Mersin**	**7.25**	**264**	PN	**Pn**	**05 54 41.9 +2.3**
AKKU	**Akkuyu-Mersin**	**7.25**	**264**	*e*Pn	**Pn**	**05 54 41.9 +2.3**
AKK2	**Akkuyu-Mersin**	**7.26**	**264**	PN	**Pn**	**05 54 41.9 +2.3**
AKK2	**Akkuyu-Mersin**	**7.26**	**264**	*e*Pn	**Pn**	**05 54 41.9 +2.3**
AKK1	**Akkuyu-Mersin**	**7.27**	**264**	PN	**Pn**	**05 54 42.6 +2.9**
AKK1	**Akkuyu-Mersin**	**7.27**	**264**	*e*Pn	**Pn**	**05 54 42.6 +2.9**
HNTI	**Hanita**	**7.27**	**238**	Pn	**Pn**	**05 54 41.1 +1.3**
TEVE	**Tevekalti-Mers**	**7.29**	**267**	PN	**Pn**	**05 54 42.6 +2.4**
TEVE	**Tevekalti-Mers**	**7.29**	**267**	*e*Pn	**Pn**	**05 54 42.6 +2.4**
OREN	**Orenkoy-Mersin**	**7.32**	**265**	PN	**Pn**	**05 54 42.6 +2.2**
OREN	**Orenkoy-Mersin**	**7.32**	**265**	*e*Pn	**Pn**	**05 54 42.6 +2.2**
BR131	**Keskin Array S**	**7.38**	**293**	*e*Pn	**Pn**	**05 54 42.1 +0.8**
BR131	**Keskin Array S**	**7.38**	**293**	*e*Pn	**Pn**	**05 54 42.2 +0.8**
BRTR	**Keskin Array B**	**7.38**	**293**	Pn	**Pn**	**05 54 42.4 +1.0**
	comp=Z,2.0nm,0.3s,baz=113,slow=15,SNR=23					
BRTR				Pg	Pg	05 55 09.3 -5.6
	comp=Z,2.2nm,0.3s,baz=126,slow=14,SNR=16					
BRTR				Lg	Lg	05 56 47.6
	baz=104,slow=24,SNR=1.7					
BRTR				LR	LR	05 58 07.6
	comp=Z,3µm,21.8s,baz=113,slow=43					
SNOP	**Sinop**	**7.38**	**313**	PN	**Pn**	**05 54 43.8 +2.5**
SNOP	**Sinop**	**7.38**	**313**	*e*Pn	**Pn**	**05 54 43.8 +2.5**
BLGI	**Bet Lehem HaGe**	**7.47**	**235**	Pn	**Pn**	**05 54 44.4 +1.9**
BERE	**Bereket-Mersin**	**7.48**	**266**	PN	**Pn**	**05 54 44.8 +2.0**
BERE	**Bereket-Mersin**	**7.48**	**266**	*e*Pn	**Pn**	**05 54 44.8 +2.0**
MMLI	**Mount Malkishu**	**7.51**	**233**	PN	**Pn**	**05 54 45.2 +2.1**
MMLI	**Mount Malkishu**	**7.51**	**233**	Pn	**Pn**	**05 54 44.1 +1.0**
MMLI	**Mount Malkishu**	**7.51**	**233**	*e*Pn	**Pn**	**05 54 45.2 +2.1**
HMDT	**Nahal Hemdat**	**7.57**	**231**	Pn	**Pn**	**05 54 45.3 +1.4**
TOS	**Tosya**	**7.60**	**303**	PN	**Pn**	**05 54 46.3 +1.9**
TOS	**Tosya**	**7.60**	**303**	*e*Pn	**Pn**	**05 54 46.3 +1.9**
TEKE	**Tekeli-Mersin**	**7.61**	**265**	PN	**Pn**	**05 54 45.8 +1.4**
TEKE	**Tekeli-Mersin**	**7.61**	**265**	*e*Pn	**Pn**	**05 54 45.8 +1.4**
AKIN	**Ak¨–nc¨–lar- K**	**7.62**	**256**	PN	**Pn**	**05 54 46.3 +1.7**
AKIN	**Ak¨–n

MANT	Manisa	11.09 281	ePn	Pn	05 55 33.4	+1.1
HKAT	Jabal Katrina	11.22 222	P	Pn	05 55 35.4	+1.2
	baz=212					
HKAT	Jabal Katrina	11.22 222	P	Pn	05 55 35.4	+1.2
KOT	Kottamia	11.47 234	P	Pn	05 55 34.9	-2.6
	baz=227					
KOT	Kottamia	11.47 234	P	Pn	05 55 34.9	-2.6
GEYT	Alibeck	12.43 82	Pn	Pn	05 55 49.3	-1.1
	comp=Z,1.9nm,0.3s,baz=278,slow=12,SNR=2.0					
GEYT			LR	LR	06 01 11.5	
	comp=Z,1µm,21.7s,baz=300,slow=40					
GYA0B	ALIBECK ARRAY	12.43 82	ePn	Pn	05 55 51.1	+0.6
GYA0B	ALIBECK ARRAY	12.43 82	ePn	Pn	05 55 51.1	+0.6
KARP	Karpathos	12.46 267	ePn	Pn	05 55 52.7	+1.8
KARP	Karpathos	12.46 267	P	Pn	05 55 52.4	+1.5
KARP	Karpathos	12.46 267	ePn	Pn	05 55 52.7	+1.8
HHRG	Al Ghardaqah	12.49 220	P	Pn	05 55 55.3	+3.9
	baz=210					
HHRG	Al Ghardaqah	12.49 220	P	Pn	05 55 55.3	+3.9
TIRR	Tirgusor	12.87 309	ePn	Pn	05 55 58.1	+1.7
TIRR	Tirgusor	12.87 309	eP	Pn	05 55 58.1	+1.7
TIRR	Tirgusor	12.87 309	eP	Pn	05 55 58.1	+1.7
PRD	Provadia	12.98 302	i P	P	05 56 04.6	-3.9
CHOS	Chios island	13.05 280	P	Pn	05 56 03.5	+4.5
CHOS	Chios island	13.05 280	P	Pn	05 56 03.5	+4.5
CHOS	Chios island	13.05 280	P	Pn	05 56 03.5	+4.5
TLB	Topalu	13.16 308	⇓iP	P	05 56 08.2	-2.3
SIGR	SIGRI	13.23 284	P	P	05 56 07.7	-3.6
HARR	Harsova	13.28 309	⇑iP	P	05 56 09.4	-2.4
GADA	Gvkgeada	13.29 288	P	P	05 56 12.2	+0.2
ALN	Alexandroupoli	13.29 291	ePn	Pn	05 56 01.6	-0.5
ALN	Alexandroupoli	13.29 291	P	P	05 56 15.1	+3.1
ALN	Alexandroupoli	13.29 291	eP	Pn	05 56 01.7	-0.5
ALN	Alexandroupoli	13.29 291	eP	Pn	05 56 01.7	-0.5
CFR	Carcaliu	13.40 311	⇑iP	P	05 56 10.3	-2.9
APE	Apeiranthos	13.53 275	⇓iP	P	05 56 18.0	+3.3
APE	Apeiranthos	13.53 275	i P	Pn	05 56 09.8	+4.3
SMTH	Samothraki Isl	13.61 289	P	P	05 56 13.5	-2.0
TAMRE	El Minia	13.62 229	P	Pn	05 56 05.7	-1.0
	baz=222					
SANT	Santorini	13.67 272	ePn	P	05 56 12.7	-3.6
SANT	Santorini	13.67 272	ePn	P	05 56 12.7	-3.6
RDO	Rodhopi	13.72 292	P	P	05 56 14.1	-2.6
LIA	Limnos Island	13.80 286	P	P	05 56 21.0	+3.4
LAST	Lasithi	13.89 267	P	Pn	05 56 08.5	-2.0
RAYN	Ar Rayn	13.89 168	ePn	Pn	05 56 07.4	-3.2
RAYN	Ar Rayn	13.89 168	i P	Pn	05 56 07.7	-2.8
	SNR=27					
RAYN	Ar Rayn	13.89 168	ePn	Pn	05 56 07.4	-3.2
RAYN	Ar Rayn	13.89 168	P	Pn	05 56 07.7	-2.8
	SNR=27					
KDZ	Kurdzhali	13.91 294	P	P	05 56 17.8	-1.1
VORD	Divnogorie	13.93 352	eP	Pn	05 56 11.6	+0.7
VORD			pmax	pmax		
	comp=Z,40nm,1.3s					
VORD	Divnogorie	13.93 352	eP	Pn	05 56 11.6	+0.7
	comp=Z,40nm,1.3s					
SZH	Strazhica	14.00 301	i P	P	05 56 19.5	-0.4
KIS	Kishinev	14.07 318	eP	Pn	05 56 15.0	+2.3
KIS			⇓iS	S	05 59 11.0	+0.9
KIS			eLi		06 00 18.0	
KIS			eLQ	LQ	06 01 10.0	
KIS			eLR	LR	06 02 18.0	
	comp=Z,2µm,15.0s					
KIS	Kishinev	14.07 318	eP	Pn	05 56 15.0	+2.3
KIS			MLR	MLR		
	comp=Z,2µm,15.0s					
KIS			MLR	MLR		
	comp=N,1µm,13.0s					
KIS			MLR	MLR		
	comp=E,2µm,12.0s					
KIS			MLR	MLR		
	comp=Z,2µm,16.0s					
KIS	Kishinev	14.07 318	eP	Pn	05 56 15.0	+2.3
	comp=Z,2µm,16.0s					
VSR	Storozhevoye	14.20 351	eP	Pn	05 56 15.3	+0.8
VSR			eS	Sn	05 58 52.5	+0.7
VSR			pmax	pmax		
	comp=Z,30nm,0.9s					
VSR			smax	smax		
	comp=N,110nm,1.2s					
VSR			MLR	MLR		
	comp=Z,6µm,17.0s					
VSR	Storozhevoye	14.20 351	eP	Pn	05 56 15.3	+0.8
	comp=Z,110nm,1.2s					
IDI	Anoyia	14.33 268	Pn	Pn	05 56 17.1	+0.6
	comp=Z,1.2nm,0.3s,baz=94,slow=11,SNR=21					
IDI			Sn	Sn	05 58 57.5	+2.1
	baz=76,slow=8.3,SNR=1.7					
IDI	Anoyia	14.33 268	⇓iP	Pn	05 56 19.4	+2.9
SGRR	Singureni	14.33 304	⇓iP	P	05 56 24.1	+0.6
ISR	Istrita	14.35 308	⇓iP	P	05 56 23.9	+0.1
ISR	Istrita	14.35 308	P	P	05 56 23.8	0.0
ISR	Istrita	14.35 308	P	P	05 56 23.8	0.0
RZN	Rozhen	14.43 294	i P	P	05 56 34.5	+10
ZIMR		14.53 302	⇑iP	P	05 56 26.3	+0.6
PLD	Plovdiv	14.54 295	P	P	05 56 27.6	+1.8
PLD	Plovdiv	14.54 295	P	P	05 56 27.6	+1.8
VRI	Vrincioaia	14.61 311	⇑iP	P	05 56 27.4	+0.8
VRI	Vrincioaia	14.61 311	P	P	05 56 28.4	+1.8
VRI			pmax	pmax		
	comp=Z,308nm,1.7s					
VRI	Vrincioaia	14.61 311	P	P	05 56 28.4	+1.8
	comp=Z,308nm,1.7s					
VORR	Voronezh	14.64 352	eP	Pn	05 56 21.0	+0.5
PLOR	Plostina	14.64 311	⇓iP	P	05 56 27.3	+0.2
PLOR	Plostina	14.64 311	P	P	05 56 27.2	+0.2
PLOR	Plostina	14.64 311	P	P	05 56 27.2	+0.2
VAM	Vamos	14.85 269	P	P	05 56 31.4	+2.0
VAM	Vamos	14.85 269	P	P	05 56 31.4	+2.0
VAM	Vamos	14.85 269	P	P	05 56 31.4	+2.0
VAM	Vamos	14.85 269	P	P	05 56 31.4	+2.0
MLR	Muntele Rosu	14.90 309	Pn	P	05 56 27.4	-2.5
	comp=Z,0.0nm,0.3s,baz=114,slow=3.4,SNR=2.4					
MLR	Muntele Rosu	14.90 309	⇑iP	P	05 56 31.0	+1.0
MLR	Muntele Rosu	14.90 309	ePn	P	05 56 31.4	+1.4
MLR	Muntele Rosu	14.90 309	⇑iP	P	05 56 31.0	+1.0
MLR	Muntele Rosu	14.90 309	ePn	P	05 56 31.4	+1.4
TESR	Tescani	14.99 313	⇑iP	P	05 56 31.6	+0.8
SORM	Soroca	15.04 321	⇑iP	P	05 56 31.6	+0.2
SORM	Soroca	15.04 321	P	P	05 56 31.6	+0.2
SORM	Soroca	15.04 321	P	P	05 56 31.6	+0.2
HUMR	Humele	15.11 304	⇓iP	P	05 56 34.8	+2.7
MMB	Musomiste	15.14 293	i P	P	05 56 34.9	+2.3
SRS	Serrai	15.16 291	P	P	05 56 31.1	-1.7
SOH	Sokhos	15.30 289	P	P	05 56 35.5	+1.2
SOH	Sokhos	15.30 289	P	P	05 56 37.6	+3.3
SOH			pmax	pmax		
	comp=Z,31nm,1.0s					
SOH	Sokhos	15.30 289	P	P	05 56 37.6	+3.3
	comp=Z,31nm,1.0s					
DID	Didima	15.31 277	P	Pn	05 56 30.5	+0.8
DID	Didima	15.31 277	P	Pn	05 56 30.5	+0.8
DID	Didima	15.31 277	P	Pn	05 56 30.5	+0.8
SLUM	Salum	15.36 253	P	Pn	05 56 27.1	-3.2
	baz=252					
SLUM	Salum	15.36 253	P	Pn	05 56 27.1	-3.2
VOIR		15.44 308	⇑iP	P	05 56 38.4	+2.5
VOIR		15.44 308	P	P	05 56 37.6	+1.7
VOIR			pmax	pmax		
	comp=Z,125nm,1.7s					
VOIR		15.44 308	P	P	05 56 37.6	+1.7
	comp=Z,125nm,1.7s					
DOPR	Dopca	15.47 310	⇓iP	P	05 56 37.5	+1.3
MPEP	Malo Peshtene	15.55 299	P	P	05 56 35.3	-1.8
THE	Thessaloniki	15.57 289	P	P	05 56 41.9	+4.6
KYTH	Kithira	15.61 272	P	P	05 56 36.1	-1.8
KYTH	Kithira	15.61 272	P	P	05 56 36.1	-1.8
KYTH	Kithira	15.61 272	P	P	05 56 36.1	-1.8
HFRF	Wahat Farafira	15.63 234	P	Pn	05 56 32.5	-1.3
	baz=229					
HFRF	Wahat Farafira	15.63 234	P	Pn	05 56 32.5	-1.3
VLI	Velial	15.63 274	P	P	05 56 40.0	+1.9
KKB	Krupnik	15.66 293	P	P	05 56 37.0	-1.4
PRAR	RASCA	15.70 315	⇑iP	P	05 56 37.8	-0.9
VTS	Vitosha	15.73 296	⇓iP	P	05 56 39.8	+0.6
VTS	Vitosha	15.73 296	ePn	Pn	05 56 35.0	-0.2
	comp=Z,21nm,1.0s					
VTS	Vitosha	15.73 296	P	P	05 56 39.2	0.0
VTS	Vitosha	15.73 296	eP	Pn	05 56 35.0	-0.2
VTS			pmax	pmax		
	comp=Z,21nm,1.0s					
VTS	Vitosha	15.73 296	ePn	Pn	05 56 35.0	-0.2
	comp=Z,21nm,1.0s					
VTS	Vitosha	15.73 296	⇓iP	P	05 56 39.8	+0.6
DSF	Desfina	15.82 280	P	P	05 56 40.8	+0.6
LIT	Litokhoron	15.88 287	ePn	Pn	05 56 38.2	+1.1
	comp=Z,98nm,1.2s					
LIT	Litokhoron	15.88 287	P	P	05 56 41.0	+0.2
LIT	Litokhoron	15.88 287	eP	Pn	05 56 38.2	+1.1
LIT			pmax	pmax		
	comp=Z,98nm,1.2s					
LIT	Litokhoron	15.88 287	ePn	Pn	05 56 38.2	+1.1
	comp=Z,98nm,1.2s					
LIT	Litokhoron	15.88 287	P	P	05 56 41.0	+0.2
VAY	Valandovo	15.95 291	i P	P	05 56 46.0	+4.5
AGG	Agios Georgios	15.96 283	ePn	Pn	05 56 39.1	+0.9
	comp=Z,331nm,1.5s					
AGG	Agios Georgios	15.96 283	P	Pn	05 56 39.4	+1.2
AGG	Agios Georgios	15.96 283	eP	Pn	05 56 39.1	+0.9
AGG			pmax	pmax		
	comp=Z,331nm,1.5s					
AGG	Agios Georgios	15.96 283	ePn	Pn	05 56 39.1	+0.9
	comp=Z,331nm,1.5s					
TRIP	Tripoli	16.07 277	P	P	05 56 43.6	+0.6
SHME	Shamm	16.08 130	i P	Pn	05 56 34.7	-5.0
	SNR=18					
KLV	Kalavryta, Ach	16.13 279	P	P	05 56 43.0	-0.6
TRIZ	Trizonía	16.18 280	P	P	05 56 45.0	+1.0
SERG	Sergoula	16.19 280	P	P	05 56 43.7	-0.5
THL	Klokotos Trika	16.22 285	P	P	05 56 44.5	0.0
LAKA	Lakka	16.26 280	P	P	05 56 44.7	-0.3
LOT	Lotru	16.26 306	⇓iP	P	05 56 46.3	+1.2
BANOM	Banah	16.27 130	i P	Pn	05 56 37.8	-4.4
	SNR=24					
BANOM	Banah	16.27 130	P	Pn	05 56 37.8	-4.4
	SNR=24					
ANX	Ano Chora	16.29 281	P	P	05 56 44.5	-0.9
STIP	Stip	16.30 292	i P	P	05 56 45.2	-0.1
SWA2		16.30 246	P	Pn	05 56 41.0	-1.6
	baz=243					
SWA2		16.30 246	P	Pn	05 56 40.9	-1.6
EVR	Evrytania	16.37 282	P	P	05 56 48.9	+2.6
BURAR	Bucovina Array	16.41 315	⇓iP	P	05 56 47.8	+1.1
BURAR	Bucovina Array	16.41 315	P	P	05 56 47.8	+1.1
BUR04	Bucovina Ar. S	16.42 315	ePn	Pn	05 56 44.9	+0.9
BUR04	Bucovina Ar. S	16.42 315	ePn	Pn	05 56 44.9	+0.9
BUR08	Bucovina Ar. S	16.44 315	ePn	Pn	05 56 45.3	+1.0
BUR08	Bucovina Ar. S	16.44 315	ePn	Pn	05 56 45.3	+1.0
KZN	Kozani	16.45 287	P	P	05 56 51.6	+4.5
AKASG	Malin Array Be	16.48 329	Pn	Pn	05 56 44.7	0.0
	comp=Z,1.7nm,0.3s,baz=137,slow=12,SNR=101					
AKASG			Sn	S	05 59 57.2	-2.2
	comp=Z,0.9nm,0.3s,baz=136,slow=11,SNR=4.6					
AKASG			LR	LR	06 04 05.1	
	comp=Z,271nm,21.9s,baz=150,slow=41					
AKASG	Malin Array Be	16.48 329	i P	Pn	05 56 43.9	-0.8
AKASG			pmax	pmax		
	comp=Z,36nm,0.7s					
AKBB	Malin Array Si	16.48 329	ePn	Pn	05 56 44.0	-0.6
	comp=Z,122nm,0.8s					
AKBB	Malin Array Si	16.48 329	eP	Pn	05 56 44.1	-0.6
AKBB			pmax	pmax		
	comp=Z,122nm,0.8s					
AKBB	Malin Array Si	16.48 329	ePn	Pn	05 56 44.0	-0.6
	comp=Z,122nm,0.8s					
KIEV	Kiev	16.48 329	ePn	Pn	05 56 44.3	-0.4
KIEV	Kiev	16.48 329	c i P	Pn	05 56 43.0	-1.7
KIEV			pmax	pmax		
	comp=Z,33nm,1.2s					
KIEV	Kiev	16.48 329	ePn	Pn	05 56 44.3	-0.4
AK11	Malin Array Si	16.49 329	ePn	Pn	05 56 42.8	-2.0
AK11	Malin Array Si	16.49 329	ePn	Pn	05 56 42.8	-2.0
AMT	Artemida-Makis	16.52 277	P	P	05 56 51.8	+3.9
AJN	Ajban	16.54 136	i P	Pn	05 56 42.4	-3.2
	SNR=14					
NAZ	Nazwa, Dubai	16.59 134	P	Pn	05 56 43.6	-2.6
	SNR=32					
NAZ	Nazwa, Dubai	16.59 134	i P	Pn	05 56 44.0	-2.2
	SNR=26					
NAZ	Nazwa, Dubai	16.59 134	P	Pn	05 56 44.0	-2.2
	SNR=26					
PVO	Paravola	16.60 281	P	P	05 56 49.1	+0.4
MSFE	Esma-Masafi	16.60 132	i P	Pn	05 56 42.0	-4.4
	SNR=46					
ARCR	ARCALIA	16.64 312	⇓iP	P	05 56 51.8	+2.7
ASUD	Al Ashush, Dub	16.68 135	P	Pn	05 56 47.5	+0.1
	SNR=7.4					
ASUD	Al Ashush, Dub	16.68 135	i P	Pn	05 56 44.6	-2.7
	SNR=12					
ASUD	Al Ashush, Dub	16.68 135	P	Pn	05 56 44.6	-2.7
	SNR=12					
HORU	Horodok	16.71 321	P	P	05 56 50.7	+0.8
HORU	Horodok	16.71 321	P	P	05 56 50.7	+0.8
MDH	Madha	16.73 131	i P	Pn	05 56 45.0	-3.0
	SNR=36					
MDH	Madha	16.73 131	P	Pn	05 56 45.0	-3.0
	SNR=36					
KPRO	Kipourio	16.74 286	P	P	05 56 54.8	+4.5
FNA	Florina	16.79 289	ePn	Pn	05 56 48.9	+0.2
	comp=Z,82nm,1.4s					
FNA	Florina	16.79 289	eP	Pn	05 56 48.9	+0.2
FNA			pmax	pmax		
	comp=Z,82nm,1.4s					
FNA	Florina	16.79 289	ePn	Pn	05 56 48.9	+0.2
	comp=Z,82nm,1.4s					
PDO	Prodromos	16.87 281	P	P	05 56 53.1	+1.4
SKO	Skopje	16.89 293	i P	P	05 56 55.4	+3.5
CJR	Cluj-Napoca	16.91 310	⇑iP	P	05 56 54.5	+2.3
CJR	Cluj-Napoca	16.91 310	P	P	05 56 54.5	+2.3
CJR	Cluj-Napoca	16.91 310	P	P	05 56 54.5	+2.3
DSL	Palaion Diasel	16.93 283	P	P	05 56 54.2	+1.8
UOSS	Minazif	16.94 132	ePn	Pn	05 56 45.8	-4.8
	comp=Z,302nm,0.8s					
UOSS	Minazif	16.94 132	i P	Pn	05 56 46.0	-4.6
	SNR=35					
UOSS	Minazif	16.94 132	ePn	Pn	05 56 45.8	-4.8
	comp=Z,302nm,0.8s					
HATD	Hatta, Dubai	16.99 133	P	Pn	05 56 48.1	-3.1
	SNR=32					
HATD	Hatta, Dubai	16.99 133	i P	Pn	05 56 47.0	-4.3
	SNR=32					
HATD	Hatta, Dubai	16.99 133	P	Pn	05 56 47.0	-4.3
	SNR=32					
MZR	Muzera	17.04 143	i P	Pn	05 56 49.6	-2.4
	SNR=22					
JAN	Janina	17.12 285	P	P	05 56 57.5	+3.0
KBN	Korca	17.22 288	P	P	05 56 59.8	+4.2
OHR	Ohrid	17.25 290	i P	P	05 56 58.1	+2.1
AKTK	Aktyubinsk	17.28 35	P	Pn	05 56 54.0	-0.7
	comp=Z,1.0nm,0.3s					
AKTO	Aktyubinsk	17.28 35	P	Pn	05 56 54.0	-0.8
	comp=Z,1.0nm,0.3s,baz=224,slow=12,SNR=59					
AKTO			S	Sn	05 59 58.7	-8.1
	baz=255,slow=16,SNR=1.3					
AKTO			LR	LR	06 05 11.5	
	comp=Z,3µm,19.7s,baz=211,slow=43					
ALNE	Al Ain	17.36 135	i P	Pn	05 56 52.2	-3.8
	SNR=7.7					
MDVR	Moldovita	17.38 302	⇓iP	P	05 56 59.1	+1.7
AB31	Akbulak array	17.46 41	i P	Pn	05 56 54.3	-2.7
AB31			pmax	pmax		
	comp=Z,24nm,0.7s					
ABKAR	Akbulak array	17.46 41	ePn	Pn	05 56 55.1	-1.9
ABKAR	Akbulak array	17.46 41	ePn	Pn	05 56 55.1	-1.9
DRGR		17.49 309	⇑iP	P	05 57 01.2	+2.5
DRGR		17.49 309	P	P	05 57 01.4	+2.7
DRGR		17.49 309	P	P	05 57 01.4	+2.7
PHP	Peshkopia	17.59 292	P	P	05 57 01.2	+1.5
SGD	Sagiada	17.59 285	P	P	05 57 02.4	+2.7
BZS	Buzias	17.72 305	⇑iP	P	05 57 01.8	+0.7
BZS	Buzias	17.72 305	P	P	05 57 01.8	+0.7
BZS			pmax	pmax		
	comp=Z,16nm,1.4s					
BZS	Buzias	17.72 305	P	P	05 57 01.8	+0.7
	comp=Z,16nm,1.4s					
SOHO	SOHO	17.75 133	i P	Pn	05 56 57.0	-3.7
	SNR=17					
SOHO	SOHO	17.75 133	P	Pn	05 56 57.0	-3.7
	SNR=17					
KEK	Kerkira	17.93 285	P	P	05 57 05.7	+2.2
SIRR	Siria	17.94 307	⇓iP	P	05 57 05.6	+2.1
TIR	Tirane	17.98 290	ePn	P	05 57 04.5	+0.5
	comp=Z,56nm,1.1s					
TIR	Tirane	17.98 290	eP	P	05 57 04.5	+0.5
TIR			pmax	pmax		
	comp=Z,56nm,1.1s					
TIR	Tirane	17.98 290	eP	P	05 57 04.5	+0.5
	comp=Z,56nm,1.1s					
TRPA	Tarpa	18.22 313	⇓iP	P	05 57 07.7	+1.1
TRPA	Tarpa	18.22 313	ePn	P	05 57 07.3	+0.7
BEO	Beograd	18.23 301	ePn	Pn	05 57 06.0	-0.5
BEO	Beograd	18.23 301	eP	Pn	05 57 06.0	-0.5
LVV	L'vov	18.32 319	eP	P	05 57 09.4	+1.8
LVV			eS	Sn	06 00 31.2	-0.7
OBN	Obninsk	18.35 349	ePn	Pn	05 57 06.6	-1.3
	comp=Z,238nm,1.0s					
OBN	Obninsk	18.35 349	ceP	Pn	05 57 06.0	-1.9
OBN			i S	Sn	06 00 32.4	-0.2
OBN			pmax	pmax		
	comp=Z,222nm,1.7s					
OBN			MLR	MLR		
	comp=Z,2µm,17.0s					
ARQ	Araqi	18.36 135	P	P	05 57 07.7	-0.6
	SNR=28					
ARQ	Araqi	18.36 135	P	P	05 57 07.7	-0.6
	SNR=28					
DIVS	Divibare	18.37 299	ePn	P	05 57 09.3	+1.0
	comp=Z,77nm,1.1s					
DIVS	Divibare	18.37 299	ePn	P	05 57 09.3	+1.0
	comp=Z,77nm,1.1s					
PDG	Podgorica	18.57 293	⇑iP	Pn	05 57 12.0	+1.4
PDG	Podgorica	18.57 293	eP	Pn	05 57 12.8	+2.2
TTG	Podgorica	18.57 293	eP	Pn	05 57 11.0	+0.4
	comp=Z,33nm,1.0s					
TTG	Podgorica	18.57 293	eP	Pn	05 57 11.0	+0.4
TTG			pmax	pmax		
	comp=Z,33nm,1.0s					
TTG	Podgorica	18.57 293	eP	Pn	05 57 11.0	+0.4
	comp=Z,33nm,1.0s					
UZH	Uzhgorod	18.61 314	eP	Pn	05 57 13.1	+2.0
UZH			eS	Sn	06 00 38.5	-0.6
UZH			MLR	MLR		
	comp=N,200nm,13.0s					
UZH			MLR	MLR		
	comp=Z,100nm,13.0s					
UZH	Uzhgorod	18.61 314	eP	Pn	05 57 13.1	+2.0
HOQ	Hoqain	18.63 133	P	P	05 57 10.9	-0.3
	SNR=30					
HOQ	Hoqain	18.63 133	P	P	05 57 10.9	-0.3
	SNR=30					
BBLS	Lazići	18.72 298	⇑iP	Pn	05 57 13.5	+0.9
TEKS	Tekeris	18.80 300	eP	Pn	05 57 14.4	+0.9
MOS	Moscow	18.82 351	α iP	P	05 57 12.0	-1.1
MOS			eS	S	06 00 47.6	+0.8
MOS			pmax	pmax		
	comp=Z,700nm,1.9s					
MOS			pmax	pmax		
	comp=Z,312nm,1.7s					
MOS			smax	smax		
	comp=N,900nm,3.4s					
MOS			smax	smax		
	comp=E,700nm,4.7s					
MOS			MLR	MLR		
	comp=N,2µm,17.0s					
MOS			MLR	MLR		
	comp=Z,2µm,17.0s					
KWP	Kalwaria Pacla	18.91 317	eP	Pn	05 57 15.1	+0.3
KWP	Kalwaria Pacla	18.91 317	eP	P	05 57 13.7	-0.5
KWP	Kalwaria Pacla	18.91 317	eP	P	05 57 13.7	-0.5
KWP	Kalwaria Pacla	18.91 317	eP	P	05 57 13.7	-0.5
BIDO	Bidbid	19.16 131	P	P	05 57 16.1	-1.0
	SNR=12					
BIDO	Bidbid	19.16 131	P	P	05 57 16.1	-1.0
	SNR=12					
BSY	Bisya	19.21 135	P	P	05 57 15.7	-1.9
	SNR=60					
CRVS	Cervenica-Dubn	19.23 314	eP	Pn	05 57 18.9	+0.3
CRVS			pmax	pmax		
	comp=Z,46nm,1.3s					
CRVS	Cervenica-Dubn	19.23 314	eP	Pn	05 57 18.9	+0.3
CRVS			eS	S	06 00 58.2	+3.0
SMDO	Samad	19.46 132	P	P	05 57 18.7	-1.8
	SNR=37					
SMDO	Samad	19.46 132	P	P	05 57 18.7	-1.8
	SNR=37					
KECS	Kecovo	19.60 312	eP	Pn	05 57 25.1	+2.1
KECS	Kecovo	19.60 312	eP	Pn	05 57 25.1	+2.1
WSAR	Wadi Sarin	19.68 131	P	P	05 57 22.1	-0.6
	comp=Z,2.2nm,0.3s,baz=333,slow=6.7,SNR=22					
WSAR			S	S	06 00 45.9	-19
	comp=Z,7.1nm,0.3s,baz=157,slow=22,SNR=10.0					
WSAR			LR	LR	06 06 14.7	
	comp=Z,3µm,21.6s,baz=326,slow=41					
PSZ	Piszkesteto	19.71 310	⇑iP	Pn	05 57 24.5	0.0
PSZ	Piszkesteto	19.71 310	eP	Pn	05 57 24.4	0.0
PSZ	Piszkesteto	19.71 310	eP	P	05 57 23.4	+0.4
	comp=Z,116nm,1.5s					
PSZ	Piszkesteto	19.71 310	eP	P	05 57 23.4	+0.4
PSZ			pmax	pmax		
	comp=Z,117nm,1.5s					
PSZ	Piszkesteto	19.71 310	eP	P	05 57 23.4	+0.4
	comp=Z,117nm,1.5s					
MICGM	Minsk	19.98 335	⇑iP	P	05 57 26.0	+0.2
MICGM			PM		05 27 29.0	
	comp=Z,0.6nm,1.5s					
MICGM			PM		05 57 30.0	
	comp=E,0.4nm,1.5s					
MICGM			PM		05 57 31.0	
	comp=N,0.8nm,1.5s					
MICGM			ePP	PnPn	05 57 42.0	+0.3
MICGM			ePPP	PPP	05 57 56.0	
MICGM			eS	S	06 01 03.0	-7.3
MICGM			eSS	SnSn	06 01 24.0	-2.5
MICGM			eLQ	LQ	06 03 34.0	
MICGM			eLR	LR	06 05 24.0	
MICGM			LRM	MLR	06 06 20.0	
	comp=Z,3.5nm,12.0s					
MICGM			LRM	MLR	06 06 24.0	
	comp=E,2.3nm,12.0s					
MNK	Minsk	19.98 335	⇑eP	P	05 57 26.0	+0.2
MNK			e		05 57 42.0	
MNK			e		05 57 56.0	
MNK			eS	S	06 01 03.0	-7.3
MNK			pmax	pmax		
	comp=Z,610nm,1.5s					
MNK			pmax	pmax		
	comp=E,360nm,1.5s					
MNK			pmax	pmax		
	comp=N,770nm,1.5s					
MNK			MLR	MLR		
	comp=Z,3µm,12.0s					
MNK			MLR	MLR		
	comp=E,2µm,12.0s					
MNK	Minsk	19.98 335	eP	P	05 57 26.0	+0.2
	comp=E,770nm,1.5s					
NIE	Niedzica	20.14 314	eP	Pn	05 57 29.3	-0.2
NIE			eS	Sn	06 01 17.8	+1.7
NIE	Niedzica	20.14 314	eP	Pn	05 57 29.3	-0.2
NIE			eS	Sn	06 01 17.8	+1.7
TIP	Timpagrande	20.30 283	⇓iP	P	05 57 30.0	+0.5
TIP	Timpagrande	20.30 283	eP	P	05 57 29.9	+0.5
	comp=E,122nm,1.2s					
TIP	Timpagrande	20.30 283	P	P	05 57 28.9	-0.6
TIP	Timpagrande	20.30 283	eP	P	05 57 29.9	+0.5
	comp=E,122nm,1.2s					
MATE

comp=Z,66nm,1.0s
OJC Ojcow 20.82 316 *e*P **P 05 57 35.4 +0.4**
comp=Z,66nm,1.0s
CUC Castrocucco 21.00 286 *e*P Pn 05 57 38.6 -1.0
comp=Z,116nm,1.0s
CUC Castrocucco 21.00 286 *e*P Pn 05 57 38.6 -1.0
comp=Z,116nm,1.0s
IDID Didziasalis 21.03 334 *e*P **P 05 57 37.7 +0.5**
IDID IAmb IAmb 05 57 42.1
comp=Z,91nm,1.1s
CEL Celeste 21.03 281 *e*P **P 05 57 38.1 +0.6**
comp=Z,44nm,0.9s
CEL Celeste 21.03 281 *e*P **P 05 57 38.1 +0.6**
comp=Z,44nm,0.9s
TAS Tashkent 21.12 70 P **P 05 57 39.7 +1.4**
TAS Tashkent 21.12 70 P **P 05 57 39.7 +1.4**
BEL Belsk 21.16 321 *e*P **P 05 57 39.0 +0.3**
BEL *e*S Sn 06 01 40.4 -0.1
BEL Belsk 21.16 321 *e*P **P 05 57 39.0 +0.3**
BEL *e*S Sn 06 01 40.4 -0.1
BEL Belsk 21.16 321 *e*P **P 05 57 39.0 +0.3**
BEHE Becsehely 21.19 304 *e*P **P 05 57 39.9 +0.9**
BEHE Becsehely 21.19 304 *e*P **P 05 57 39.9 +0.9**
IIGN Ignalina 21.24 334 *e*P **P 05 57 40.0 +0.5**
IIGN IAmb IAmb 05 57 44.6
comp=Z,83nm,0.9s
SUW Suwalki 21.43 328 *e*P **P 05 57 41.8 +0.3**
SUW Suwalki 21.43 328 *e*P **P 05 57 42.2 +0.7**
comp=Z,481nm,1.0s
SUW Suwalki 21.43 328 *e*P **P 05 57 42.2 +0.7**
SUW pmax pmax
comp=Z,481nm,1.0s
JAVC Velka Javorina 21.44 311 *e*P **P 05 57 42.8 +1.0**
ISAL Salakas 21.45 334 *e*P **P 05 57 41.9 +0.2**
ISAL IAmb IAmb 05 57 48.7
comp=Z,129nm,1.6s
ISAL Salakas 21.45 334 *e*P **P 05 57 41.9 +0.2**
SNR=35
MODS Modra-Piesok 21.50 309 *e*P **P 05 57 42.0 -0.3**
MODS pmax pmax
comp=Z,74nm,1.4s
MODS Modra-Piesok 21.50 309 *e*P **P 05 57 42.0 -0.3**
MODS *e*S **S 06 01 43.1 +2.6**
MODS Modra-Piesok 21.50 309 *e*P **P 05 57 42.0 -0.3**
comp=Z,74nm,1.4s
ZST Bratislava 21.54 309 *e*P **P 05 57 43.0 +0.2**
ZST Bratislava 21.54 309 *e*P **P 05 57 42.9 +0.2**
ZST Bratislava 21.54 309 *e*P **P 05 57 43.0 +0.2**
comp=Z,4.1nm,1.1s
IZAR Zarasai 21.55 335 *e*P **P 05 57 43.1 +0.3**
IZAR IAmb IAmb 05 57 46.3
comp=Z,97nm,1.2s
IZAR Zarasai 21.55 335 *e*P **P 05 57 43.1 +0.3**
SNR=35
OKC Ostrava-Krasne 21.58 313 *e*P **P 05 57 46.6 +3.5**
OKC *e*pP **sP 05 57 49.8 +2.0**
OKC *e*S Sn 06 01 50.9 +0.4
OKC AMS AMS 06 09 20.0
comp=Z,1μm,13.1s
OKC Ostrava-Krasne 21.58 313 *e*P **P 05 57 46.6 +3.5**
OKC *e* 05 57 49.8
OKC *e*S Sn 06 01 50.9 +0.4
OKC MLR MLR
comp=Z,1μm,13.1s
WHFO Wadi Hawf 21.64 150 P **P 05 57 43.8 -0.2**
SNR=5.3
WHFO Wadi Hawf 21.64 150 P **P 05 57 43.8 -0.2**
SNR=5.3
KBL Kabul 21.66 89 *e*P **P 05 57 46.0 +1.6**
comp=Z,184nm,1.1s
KBL Kabul 21.66 89 *e*P **P 05 57 46.0 +1.6**
KBL pmax pmax
comp=Z,184nm,1.1s
KBL Kabul 21.66 89 *e*P **P 05 57 46.0 +1.6**
comp=Z,184nm,1.1s
SOP Sopron 21.71 307 P **P 05 57 48.1 +3.6**
MORC Moravsky Berou 21.90 313 *j i*P **P 05 57 47.8 +1.1**
MORC Moravsky Berou 21.90 313 *e*P **P 05 57 46.8 +0.1**
comp=Z,315nm,1.1s
MORC Moravsky Berou 21.90 313 *e*P **P 05 57 46.8 +0.1**
MORC pmax pmax
comp=Z,315nm,1.1s
MORC Moravsky Berou 21.90 313 *e*P **P 05 57 46.8 +0.1**
comp=Z,315nm,1.1s
MORC Moravsky Berou 21.90 313 *e*P **P 05 57 46.6 -0.1**
BOJS Bojanci 21.98 301 *i*P **P 05 57 48.3 +0.9**
ARU Arti 22.04 24 P **P 05 57 48.1 0.0**
comp=Z,183nm,0.8s,baz=220,slow=8.0,SNR=160
ARU S **S 06 01 47.3 -3.6**
comp=Z,3.8nm,0.3s,baz=263,slow=19,SNR=2.2
ARU LR LR 06 09 12.7
comp=Z,3μm,19.0s,baz=220,slow=44
ARU Arti 22.04 24 *e*P **P 05 57 48.3 +0.3**
comp=Z,353nm,1.0s
ARU S **S 06 01 47.3 -3.6**
ARU Arti 22.04 24*c i*P **P 05 57 47.9 -0.1**
ARU S **S 06 01 48.8 -2.1**
ARU pmax pmax
comp=Z,519nm,1.7s
ARU MLR MLR
comp=Z,3μm,17.0s
KK31 Karatay Array 22.16 66 *e*P **P 05 57 49.5 +0.1**
KK31 Karatay Array 22.16 66 *i*P **P 05 57 49.8 +0.4**
KK31 pmax pmax
comp=Z,316nm,1.2s
KK31 Karatay Array 22.16 66 *e*P **P 05 57 49.5 +0.1**
KKAR Karatay Array 22.16 66 *e*P **P 05 57 49.5 +0.1**
KKAR Karatay Array 22.16 66 *e*P **P 05 57 49.6 +0.1**
KKAR Karatay Array 22.16 66 *e*P **P 05 57 49.5 +0.1**
PABE Paberze 22.19 331 *e*P **P 05 57 49.1 -0.5**
SNR=35
CONA Conrad Observa 22.23 307 *i*P **P 05 57 50.9 +0.7**
comp=Z,48nm,1.0s,SNR=16
CONA Conrad Observa 22.23 307 P **P 05 57 50.9 +0.7**
comp=Z,48nm,1.0s,SNR=16
ARSA Arzberg 22.24 305 *i*pP **P 05 57 52.7 +2.4**
comp=Z,33nm,1.3s,SNR=13
VRAC Vranov 22.27 311 *e*P **P 05 57 51.0 +0.4**
VAE Valguarnera 22.29 279 P **P 05 57 52.1 +1.2**
comp=Z,6.2nm,0.3s,baz=53,slow=5.1,SNR=2.6
VAE S Sn 06 02 05.6 -2.3
comp=Z,14nm,0.3s,baz=175,slow=6.1,SNR=2.3
VAE LR LR 06 07 03.0
comp=Z,881nm,18.1s,baz=96,slow=38
KRUC Moravsky 22.30 310 *e*P **P 05 57 51.1 +0.2**
VISS Visnje 22.32 301 *i*P **P 05 57 51.8 +0.6**
PERS Pernice 22.34 304 *e*P **P 05 57 53.3 +1.9**
SHAO Shalim 22.34 145 *i*P **P 05 57 49.1 -2.4**
SNR=9.0
SOKA Soboth 22.40 304 *i*P **P 05 57 54.2 +2.1**
comp=Z,13nm,1.2s,SNR=10.0
KRLC Kraliky 22.48 313 *e*P **P 05 57 55.1 +2.3**
KRLC *ex* x 05 58 00.2
KRLC Kraliky 22.48 313 *e*P **P 05 57 55.1 +2.3**
KRLC *e* 05 58 00.2
DAMY Dhamar 22.62 175 *e*P **P 05 57 56.0 +1.2**
comp=Z,107nm,1.0s
OBKA Obir 22.68 303 *i*pP **P 05 57 57.8 +2.7**
comp=Z,26nm,1.4s,SNR=7.9
DPC Dobruska-Polom 22.86 313 *e*P **P 05 57 57.3 +0.4**
DPC *e*S **S 06 02 09.7 +3.5**
DPC AMS AMS 06 10 50.0
comp=Z,1μm,13.6s
DPC Dobruska-Polom 22.86 313 *e*P **P 05 57 57.3 +0.4**
DPC *e*S **S 06 02 09.7 +3.5**
DPC MLR MLR
comp=Z,1μm,13.6s
AQU L'Aquila 22.87 292 *e*P **P 05 57 57.4 +0.3**
comp=Z,120nm,1.1s
AQU L'Aquila 22.87 292 *e*P **P 05 57 57.4 +0.3**
AQU pmax pmax
comp=Z,120nm,1.1s
AQU L'Aquila 22.87 292 *e*P **P 05 57 57.4 +0.3**
comp=Z,120nm,1.1s
JAVS Javornik 22.87 301 *e*P **P 05 57 58.2 +1.2**
SVE Sverdlovsk 23.06 26*d i*P **P 05 57 58.9 +0.1**
SVE *e*S **S 06 02 10.5 +1.1**
SVE pmax pmax
comp=Z,219nm,1.3s
SVE MLR MLR
comp=Z,4μm,18.0s
KSP Ksiaz 23.09 314 *e*P **P 05 57 59.1 -0.1**
KSP *e*S **S 06 02 16.0 +6.0**
KSP Ksiaz 23.09 314 *e*P **P 05 57 59.1 -0.1**
UPC Upice 23.11 314 *e*P **P 05 57 59.0 -0.4**

UPC *e*S **S 06 02 17.3 +6.9**
UPC AMS AMS 06 11 00.0
comp=Z,1μm,13.3s
UPC Upice 23.11 314 *e*P **P 05 57 59.0 -0.4**
UPC MLR MLR
comp=Z,1μm,13.3s
KLNR Kaliningrad 23.13 326*c i*P **P 05 58 00.1 +0.6**
KLNR pmax pmax
comp=Z,121nm,1.0s
CLTB Caltabellotta 23.22 280 *e*P **P 05 58 01.5 +0.8**
comp=Z,113nm,1.5s
CLTB Caltabellotta 23.22 280 *e*P **P 05 58 01.5 +0.8**
comp=Z,113nm,1.5s
MOA Molln 23.23 306 *i*P **P 05 58 02.1 +1.4**
comp=Z,95nm,1.1s,SNR=24
MOA Molln 23.23 306 P **P 05 58 02.1 +1.4**
comp=Z,95nm,1.1s,SNR=24
MYKA Terra Mystica 23.32 303 *i*P **P 05 58 02.2 +0.5**
comp=Z,18nm,1.2s
MYKA Terra Mystica 23.32 303 P **P 05 58 02.2 +0.5**
comp=Z,18nm,1.2s
PBUR Paburg 23.36 330 *e*P **P 05 58 01.8 0.0**
SNR=34
MNAS Manas 23.57 68 P **P 05 58 03.8 -0.5**
MNAS pmax pmax
comp=Z,197nm,1.5s
GOPC GO Pecny, Ondr 23.59 311 *e*P **P 05 58 04.0 -0.3**
GOPC *e*S **S 06 02 26.7 +8.4**
GOPC AMS AMS 06 10 10.0
comp=Z,1μm,15.0s
GOPC GO Pecny, Ondr 23.59 311 *e*P **P 05 58 04.0 -0.3**
GOPC MLR MLR
comp=Z,1μm,15.0s
GOPC GO Pecny, Ondr 23.59 311 P **P 05 58 04.0 -0.3**
KBA Koelnbreinsper 23.62 304 *i*P **P 05 58 05.9 +1.1**
comp=Z,66nm,1.1s,SNR=21
VSU Vasula 23.62 339*c i*P **P 05 58 04.1 -0.3**
VSU pmax pmax
comp=Z,206nm,1.0s
KLMR Klimovskoe 23.73 356 *e*P **P 05 58 01.7 -3.8**
KLMR S S 06 02 08.4 -12
KLMR pmax pmax
comp=Z,253nm,1.1s
KLMR MLR MLR
comp=Z,3μm,13.0s
KLMR Klimovskoe 23.73 356 *e*P **P 05 58 01.7 -3.8**
KLMR *e*P **P 05 58 01.7 -3.8**
KLMR *e*P **P 05 58 01.7 -3.8**
KLMR AMP 05 58 16.3
comp=Z,253nm,1.1s
KLMR S S 06 02 08.5 -12
KLMR S S 06 02 08.5 -12
KLMR LQ LQ 06 05 07.6
KLMR LQ LQ 06 05 07.6
KLMR LR LR 06 05 28.1
KLMR AMP 06 08 11.9
comp=Z,3μm,12.6s
GKP Gorka Klasztor 23.77 321 *e*P **P 05 58 06.1 +0.2**
GKP Gorka Klasztor 23.77 321 *e*P **P 05 58 06.1 +0.2**
PRA Prague 23.86 311 *e*S Sn 06 02 33.8 -11
PRA AMS AMS 06 11 20.0
comp=Z,1μm,14.9s
GEA0 GERESS Array S 23.89 308 *e*P **P 05 58 06.8 -0.4**
PUL Pulkovo 23.89 345 *i*P **P 05 58 06.5 -0.4**
PUL pmax pmax
comp=Z,117nm,1.0s
GEC2 GERESS Array S 23.89 308 *e*P **P 05 58 07.2 0.0**
comp=Z,90nm,1.6s
GEC2 GERESS Array S 23.89 308 *e*P **P 05 58 07.3 0.0**
GEC2 pmax pmax
comp=Z,91nm,1.6s
GEC2 GERESS Array S 23.89 308 *e*P **P 05 58 07.2 0.0**
comp=Z,90nm,1.6s
GERES GERESS Array B 23.89 308 P **P 05 58 07.2 0.0**
comp=Z,4.4nm,0.6s,baz=116,slow=7.7,SNR=34
GERES S **S 06 02 26.7 +3.5**
comp=Z,0.2nm,0.2s,baz=116,slow=13,SNR=1.9
GERES LR LR 06 08 43.3
comp=Z,520nm,18.5s,baz=110,slow=40
PVCC Panska Ves 23.95 313 *e*P **P 05 58 08.4 +0.7**
PVCC *e*S S 06 02 34.9 +11
PVCC AMS AMS 06 10 10.0
comp=Z,1μm,12.9s
PVCC Panska Ves 23.95 313 *e*P **P 05 58 08.4 +0.7**
PVCC MLR MLR
comp=Z,1μm,12.9s
KHC Kasperske Hory 24.06 309 *e*P **P 05 58 07.9 -0.9**
KHC *e*S **S 06 02 28.1 +2.3**
KHC AMS AMS 06 11 10.0
comp=Z,1μm,12.6s
KHC Kasperske Hory 24.06 309 *e*P **P 05 58 08.8 +0.1**
comp=Z,21nm,1.3s
KHC Kasperske Hory 24.06 309 *e*P **P 05 58 07.9 -0.9**
KHC *e*S **S 06 02 28.1 +2.3**
KHC MLR MLR
comp=Z,1μm,12.6s
ABTA Abfaltersbach 24.10 303 *i*P **P 05 58 08.8 -0.5**
comp=Z,35nm,1.0s
SFK Sufi-Kurgan 24.34 74 P **P 05 58 12.1 +0.4**
SFK pmax pmax
comp=Z,88nm,1.3s
OTUK Ortayu 24.39 54 P **P 05 58 12.1 +0.2**
OTUK pmax pmax
comp=Z,204nm,1.3s
AML Almayashu 24.44 69 P **P 05 58 13.8 +1.0**
SNR=65
BRG Berggiesshubel 24.46 313 *e*P **P 05 58 12.6 +0.3**
comp=Z,11nm,0.8s
BRG *e* 05 58 18.1
comp=Z,22nm,1.0s
comp=Z,2μm,14.7s
comp=N,895nm,13.1s
comp=E,848nm,13.1s
BRG Berggiesshubel 24.46 313 *e*P **P 05 58 12.6 +0.3**
BRG *e* 05 58 18.1
BRG pmax pmax
comp=Z,11nm,0.8s
BRG MLR MLR
comp=Z,2μm,14.7s
BRG MLR MLR
comp=N,895nm,13.1s
BRG MLR MLR
comp=E,848nm,13.1s
WET Wettzell 24.50 309 P **P 05 58 13.2 +0.4**
EKS2 Erkin-Say 24.52 67 P **P 05 58 14.3 +1.1**
SNR=107
PRGR Permogore 24.52 4 *e*P **P 05 58 11.2 -1.6**
PRGR pmax pmax
comp=Z,59nm,0.6s
WTTA Wattenberg 24.80 304 *i*P **P 05 58 16.1 +0.3**
comp=Z,49nm,1.0s,SNR=11
WATA Walderalm 24.86 304 *i*P **P 05 58 16.4 +0.2**
comp=Z,62nm,1.1s,SNR=12
WATA Walderalm 24.86 304 P **P 05 58 16.4 +0.2**
comp=Z,62nm,1.1s,SNR=12
BRVK Borovoye 24.99 42 *e*P **P 05 58 17.3 +0.2**
comp=Z,60nm,1.1s
BRVK Borovoye 24.99 42 P **P 05 58 17.6 +0.5**
SNR=39
BRVK Borovoye 24.99 42*c i*P **P 05 58 17.3 +0.2**
BRVK pmax pmax
comp=Z,100nm,1.7s
BVA0 Borovoye Array 25.03 42 *i*P **P 05 58 17.4 -0.1**
BVA0 pmax pmax
comp=Z,107nm,1.4s
BVAR Borovoye Array 25.03 42 S **S 06 02 41.9 +0.6**
comp=Z,1.6nm,0.8s,baz=251,slow=21,SNR=2.1
BVAR LR LR 06 10 58.1
comp=Z,736nm,18.7s,baz=252,slow=43
AAK Ala-Archa 25.05 68 P **P 05 58 18.0 0.0**
comp=Z,57nm,1.1s,baz=235,slow=9.4,SNR=34
AAK S **S 06 02 41.6 -0.5**
comp=Z,2.7nm,0.8s,baz=231,slow=6.5,SNR=1.6
AAK LR LR 06 09 51.1
comp=Z,702nm,20.3s,baz=267,slow=41
AAK Ala-Archa 25.05 68 P **P 05 58 19.3 +1.3**
SNR=38
AAK Ala-Archa 25.05 68 *e*P **P 05 58 19.3 +1.3**
comp=Z,110nm,1.3s
AAK S **S 06 02 41.6 -0.5**
AAK Ala-Archa 25.05 68 *i*P **P 05 58 18.3 +0.3**
SNR=45
AAK Ala-Archa 25.05 68 *e*P **P 05 58 19.3 +1.3**
AAK S **S 06 02 41.6 -0.5**
AAK pmax pmax
comp=Z,110nm,1.3s

UCH Uchtor 25.05 68 P **P 05 58 19.3 +1.0**
SNR=37
USP Ospenovka 25.08 66 P **P 05 58 20.1 +2.0**
SNR=22
NKC Novy Kostel 25.11 311 *e*P **P 05 58 19.1 +0.8**
NKC *e*pP **sP 05 58 23.4 +0.2**
NKC *e*S **S 06 02 51.8 +9.0**
NKC AMS AMS 06 11 00.0
comp=Z,2μm,14.9s
NKC Novy Kostel 25.11 311 *e*P **P 05 58 19.1 +0.8**
NKC *e* 05 58 23.4
NKC MLR MLR
comp=Z,2μm,14.9s
FRU Bishkek 25.14 67 *e*P **P 05 58 19.0 +0.3**
FRU *e* 05 58 56.0
FRU pmax pmax
comp=Z,310nm,2.0s
CLL Collm 25.17 313 *i*P **P 05 58 19.0 +0.2**
comp=Z,56nm,1.2s
CLL *e*Pmax 05 58 23.0
CLL *e* 05 58 25.0
CLL *i* 05 58 28.9
comp=Z,53nm,1.1s
CLL *e*PPP PPP 05 59 02.0
CLL *e* 06 01 24.0
CLL *e*S S 06 02 54.0 +10
comp=N,500nm,20.4s
CLL *e*S S 06 02 54.0 +10
comp=E,500nm,20.3s
CLL *e*SSS SSS 06 03 53.0
CLL LmH 06 09 00.0
comp=N,900nm,18.4s
CLL LmH 06 09 00.0
comp=E,900nm,19.9s
CLL Lmax 06 12 00.0
CLL Collm 25.17 313 *e*P **P 05 58 19.2 +0.4**
comp=E,40nm,0.9s
CLL Collm 25.17 313 *e*P **P 05 58 19.2 +0.4**
CLL pmax pmax
comp=Z,40nm,0.9s
CLL Collm 25.17 313 *e*P **P 05 58 19.2 +0.4**
comp=Z,40nm,0.9s
MOTA Moosalm 25.17 304 *i*P **P 05 58 18.2 -0.8**
comp=Z,52nm,0.9s,SNR=15
VLC Villacollemand 25.20 296 *e*P **P 05 58 19.4 +0.2**
comp=Z,49nm,0.9s
VLC Villacollemand 25.20 296 *e*P **P 05 58 19.4 +0.2**
comp=Z,49nm,0.9s
FUR Furstenfeldbru 25.25 306 P **P 05 58 21.2 +1.6**
CHMS Chumysh 25.25 67 P **P 05 58 20.8 +1.2**
SNR=45
NIL Nilore 25.27 89 *e*P **P 05 58 21.2 +1.3**
comp=Z,292nm,1.1s
NIL Nilore 25.27 89 *e*P **P 05 58 21.2 +1.3**
NIL pmax pmax
comp=Z,292nm,1.1s
NIL Nilore 25.27 89 *e*P **P 05 58 21.2 +1.3**
comp=Z,292nm,1.1s
FETA Feichten 25.36 303 *i*P **P 05 58 21.0 +0.3**
comp=Z,51nm,0.9s,SNR=26
FETA Feichten 25.36 303 P **P 05 58 21.0 +0.3**
comp=Z,51nm,0.9s,SNR=26
KBK Karagaybulak 25.38 67 P **P 05 58 22.5 +1.4**
SNR=128
RETA Reutte 25.43 304 *i*P **P 05 58 20.6 -0.7**
comp=Z,36nm,1.0s
RETA Reutte 25.43 304 P **P 05 58 20.6 -0.7**
comp=Z,36nm,1.0s
ATD Arta Tunnel 25.58 179 P **P 05 58 24.4 +1.6**
comp=Z,4.4nm,0.3s,baz=355,slow=3.7,SNR=2.7
ATD S S 06 03 03.3 +13
comp=Z,3.1nm,0.3s,baz=233,slow=20,SNR=2.5
ATD LR LR 06 08 36.1
comp=Z,2μm,18.6s,baz=1.5,slow=37
ATD Arta Tunnel 25.58 179 *e*P **P 05 58 26.9 +4.1**
ATD S S 06 03 03.3 +13
FUORN Ofenpass-Fuorn 25.60 302 *e*P **P 05 58 23.4 +0.4**
comp=Z,38nm,1.1s
FUORN Ofenpass-Fuorn 25.60 302 *e*P **P 05 58 23.4 +0.4**
comp=Z,38nm,1.1s
KZA Kyzart 25.60 69 P **P 05 58 25.0 +1.7**
SNR=81
GRF Grafenberg Arr 25.69 309 P **P 05 58 24.9 +1.3**
GRFO Grafenberg 25.69 309 *e*P **P 05 58 24.6 +1.1**
comp=Z,57nm,0.9s
GRFO Grafenberg 25.69 309 *e*P **P 05 58 24.7 +1.1**
GRFO pmax pmax
comp=Z,57nm,0.9s
MOX Moxa 25.75 311 P **P 05 58 25.1 +1.0**
TKM2 Tokmak 2 25.87 67 P **P 05 58 26.3 +0.9**
SNR=81
TKM2 Tokmak 2 25.87 67 P **P 05 58 26.0 +0.5**
TKM2 pmax pmax
comp=Z,112nm,1.3s
BSD Bornholm Skovb 25.91 323 *i*P **P 05 58 25.1 -0.3**
comp=Z,62nm,0.9s
DAVA Damuels 25.98 303 *i*P **P 05 58 26.2 -0.2**
comp=Z,38nm,0.7s,SNR=8.4
DAVA Damuels 25.98 303 P **P 05 58 26.2 -0.2**
comp=Z,38nm,0.7s,SNR=8.4
PGF Pioggiola 26.13 292 *e*P **P 05 58 29.5 +1.7**
PGF pmax pmax
comp=Z,98nm,1.3s
NRN Naryn 26.17 70 *e*P **P 05 58 29.7 +1.3**
comp=Z,98nm,1.1s
NRN Naryn 26.17 70 *e*P **P 05 58 29.7 +1.3**
NRN pmax pmax
comp=Z,98nm,1.1s
NRN Naryn 26.17 70 *e*P **P 05 58 29.7 +1.3**
comp=Z,98nm,1.1s
TUE Stuetta 26.20 301 *e*P **P 05 58 28.7 +0.3**
comp=Z,26nm,1.2s
TUE Stuetta 26.20 301 *e*P **P 05 58 28.7 +0.3**
comp=Z,26nm,1.2s
KSH Kashi 26.27 75 P **P 05 58 28.1 -1.0**
KSH sP sP 05 58 35.5 +1.5
KSH PP **PnPn 05 59 09.1 +1.1**
KSH S **S 06 02 56.1 -5.5**
KSH sS pS 06 03 02.8 -2.5
KSH SS **SnSn 06 04 03.6 +2.7**
KSH pmax pmax
comp=Z,92nm,1.3s
KSH LR LR
comp=Z,3μm,11.0s
KSH LR LR
comp=Z,3μm,12.0s
KSH LR LR
comp=Z,3μm,14.8s
ULHL Ulahol 26.34 68 P **P 05 58 31.3 +1.6**
SNR=59
FIA1 FINESS Array S 26.34 342 *e*P **P 05 58 29.3 0.0**
comp=Z,51nm,1.2s
FINES FINESS Array B 26.34 342 P **P 05 58 29.2 -0.1**
comp=Z,4.9nm,0.4s,baz=145,slow=11,SNR=52
FINES S **S 06 02 59.1 -2.9**
comp=Z,1.3nm,0.7s,baz=144,slow=31,SNR=2.5
FINES LR LR 06 09 51.6
comp=Z,2μm,18.2s,baz=146,slow=39
KEST Kesra 26.62 277 P **P 05 58 34.2 +2.1**
comp=Z,16nm,1.1s,baz=42,slow=4.3,SNR=8.8
KEST S S 06 03 18.1 +11
comp=Z,2.1nm,0.8s,baz=307,slow=12,SNR=1.4
KEST Kesra 26.62 277 *e*P **P 05 58 34.3 +2.1**
comp=Z,72nm,1.3s
KEST S S 06 03 18.1 +11
KEST Kesra 26.62 277 *e*P **P 05 58 34.3 +2.1**
comp=Z,72nm,1.3s
KEST S S 06 03 18.0 +11
JOF Joensuu 26.63 349 P **P 05 58 32.5 +0.6**
STU Stuttgart 26.73 306 *e*P **P 05 58 31.8 -1.2**
comp=Z,21nm,0.6s
STU Stuttgart 26.73 306 *e*P **P 05 58 31.8 -1.2**
STU pmax pmax
comp=Z,21nm,0.6s
TMCR Tamitsa 27.11 356 *e*P **P 05 58 35.4 -0.8**
TMCR pmax pmax
comp=Z,53nm,0.6s
SBF Sospel 27.30 295 *e*P **P 05 58 40.2 +1.9**
SBF pmax pmax
comp=Z,25nm,0.9s
LLD Lille Linde 27.35 321 *i*P **P 05 58 39.6 +1.2**
comp=Z,86nm,1.0s
COP Copenhagen 27.42 322 *i*P **P 05 58 40.0 +1.0**
TARG Taragay, Kyrgy 27.51 70 *e*P **P 05 58 42.2 +1.7**
comp=Z,69nm,1.3s
SENIN Lac Senin/Sane 27.59 300 *e*P **P 05 58 41.2 +0.2**

comp=Z,15nm,0.9s
SENIN Lac Senin/Sane 27.59 300 *e*P **P 05 58 41.2 +0.2**
comp=Z,15nm,0.9s
BNI Bardonecchia 27.90 298 *e*P **P 05 58 43.9 +0.2**
comp=Z,45nm,1.1s
BNI Bardonecchia 27.90 298 *e*P **P 05 58 43.9 +0.2**
BNI pmax pmax
comp=Z,45nm,1.1s
ECH Echery 27.95 304 *e*P **P 05 58 43.1 -0.9**
comp=Z,11nm,1.0s
ECH Echery 27.95 304 *e*P **P 05 58 43.1 -0.9**
ECH pmax pmax
comp=Z,11nm,1.0s
CABF La Chapelle 28.45 301 *e*P **P 05 58 47.9 -0.6**
CABF pmax pmax
comp=Z,32nm,1.2s
PDGK Podgornoye 28.72 66 P **P 05 58 51.0 0.0**
PDGK pmax pmax
comp=Z,77nm,1.5s
WLF Walferdange 28.88 307 ⇓P **P 05 58 52.5 +0.4**
KURBB Kurchatov Arra 28.91 51 P **P 05 58 53.3 +0.9**
comp=Z,27nm,1.1s,baz=263,slow=9.6,SNR=99
KURBB PcP **PcP 06 02 00.7 -0.6**
comp=Z,6.4nm,1.0s,baz=256,slow=3.1,SNR=5.4
KURK Kurchatov 28.98 51 *e*P **P 05 58 54.0 +0.9**
comp=Z,61nm,1.2s
KURK PcP **PcP 06 02 00.7 -0.7**
KURK Kurchatov 28.98 51*c i*P **P 05 58 53.6 +0.5**
KURK pmax pmax
comp=Z,67nm,1.2s
KURK MLR MLR
comp=Z,1μm,16.0s
VIVF Saint-Julien-l 29.32 297 *e*P **P 05 58 55.0 -1.2**
VIVF pmax pmax
comp=Z,25nm,1.2s
HFS Hagfors 29.36 331 P **P 05 58 56.9 +0.6**
comp=Z,30nm,0.8s,baz=134,slow=8.5,SNR=43
HFS S **S 06 03 46.2 -3.2**
comp=Z,1.9nm,0.9s,baz=123,slow=17,SNR=1.9
HFS LR LR 06 11 20.1
comp=Z,688nm,18.4s,baz=122,slow=38
MUD Monsted U'grnd 29.39 322 *i* P **P 05 58 58.5 +1.9**
comp=Z,98nm,1.3s
OUL Oulu 29.58 346 *e*P **P 05 58 58.1 -0.1**
DOU Dourbes 29.95 308 ⇓P **P 05 59 01.9 +0.3**
NC602 NORSAR Array S 30.58 330 *e*P **P 05 59 07.0 -0.1**
MAKZ Makanchi 30.59 59 *e*P **P 05 59 08.3 +0.9**
comp=Z,65nm,1.3s
MAKZ Makanchi 30.59 59 P **P 05 59 08.1 +0.7**
NC405 NORSAR Array S 30.73 331 *e*P **P 05 59 07.6 -0.9**
KONO Kongsberg 30.77 327 *e*P **P 05 59 09.1 +0.3**
comp=Z,55nm,1.3s
KONO Kongsberg 30.77 327*c i*P **P 05 59 08.3 -0.4**
KONO pmax pmax
comp=Z,14nm,0.8s
MK31 Makanchi Array 30.80 59 *e*P **P 05 59 10.1 +0.8**
MK31 Makanchi Array 30.80 59 *i* P **P 05 59 09.7 +0.4**
MK31 pmax pmax
comp=Z,53nm,1.1s
MKAR Makanchi Array 30.80 59 P **P 05 59 10.0 +0.8**
comp=Z,25nm,0.9s,baz=268,slow=6.1,SNR=160
MKAR S **S 06 04 14.9 +2.4**
comp=Z,2.5nm,1.2s,baz=266,slow=23,SNR=2.1
MKAR LR LR 06 13 48.3
comp=Z,1μm,18.1s,baz=258,slow=41
MKAR Makanchi Array 30.80 59 *e*P **P 05 59 10.1 +0.8**
comp=Z,160nm,0.9s
MKAR S **S 06 04 14.9 +2.4**
MKAR Makanchi Array 30.80 59 *e*P **P 05 59 10.1 +0.8**
MKAR S **S 06 04 14.9 +2.4**
MKAR pmax pmax
comp=Z,160nm,0.9s
MK01 Makanchi Array 30.81 59 *e*P **P 05 59 09.2 -0.1**
APA Apatity 30.83 353⇑*i*P **P 05 59 09.0 -0.2**
APA *i* 06 00 10.0
APA pmax pmax
comp=Z,16nm,0.9s
APA MLR MLR
comp=Z,2μm,15.0s
NB2 NORSAR Subarra 30.89 331 P **P 05 59 08.7 -1.1**
comp=Z,12nm,0.9s,baz=125,slow=9.3
NOA NORSAR Array B 30.89 331 P **P 05 59 09.6 -0.2**
comp=Z,8.0nm,0.9s,baz=128,slow=8.5,SNR=4.7
NOA LR LR 06 12 15.9
comp=Z,642nm,18.1s,baz=140,slow=38
NAO01 NORSAR Array S 30.90 330 *e*P **P 05 59 09.2 -0.7**
TCF Toulx Ste Croi 31.10 300 *e*P **P 05 59 11.0 -0.9**
TCF pmax pmax
comp=Z,16nm,1.1s
CAF Calviac 31.17 297 *e*P **P 05 59 13.0 +0.4**
CAF pmax pmax
comp=Z,11nm,1.1s
NC204 NORSAR Array S 31.20 331 *e*P **P 05 59 12.6 -0.1**
EPF Esparros 32.48 294 *e*P **P 05 59 25.1 +1.0**
EPF pmax pmax
comp=Z,10.0nm,1.3s
NVS Novosibirsk 32.74 44⇑*i*P **P 05 59 27.6 +1.4**
NVS *e* 06 00 31.2
NVS *e*S **S 06 04 46.4 +3.9**
NVS pmax pmax
comp=N,78nm,1.7s
NVS pmax pmax
comp=E,53nm,1.7s
NVS pmax pmax
comp=Z,148nm,1.7s
NVS pmax pmax
comp=N,44nm,1.8s
NVS pmax pmax
comp=E,45nm,1.8s
NVS pmax pmax
comp=Z,68nm,1.8s
NVS smax smax
comp=N,33nm,1.8s
NVS smax smax
comp=E,19nm,1.8s
GRR Gorron 33.29 304 *e*P **P 05 59 29.4 -1.6**
GRR pmax pmax
comp=Z,22nm,1.1s
ZAA0 Zalesovo Array 33.43 46 *e*P **P 05 59 32.3 +0.1**
comp=Z,52nm,1.4s
ZALV Zalesovo Beam 33.43 46 P **P 05 59 32.7 +0.6**
comp=Z,4.1nm,0.4s,baz=265,slow=10,SNR=35
ZALV S **S 06 04 56.6 +3.5**
comp=Z,0.4nm,0.3s,baz=268,slow=17,SNR=2.7
ZALV LR LR 06 13 59.2
comp=Z,410nm,19.5s,baz=254,slow=38
ZALV Zalesovo Beam 33.43 46 *e*P **P 05 59 32.1 -0.1**
ZALV S **S 06 04 56.6 +3.5**
ZALV Zalesovo Beam 33.43 46 *e*P **P 05 59 32.1 -0.1**
ZALV S **S 06 04 56.6 +3.5**
KEV Kevo 33.66 350 *e*P **P 05 59 34.5 +0.5**
KEV Kevo 33.66 350 *e*P **P 05 59 34.5 +0.5**
ARCES ARCESS Array B 33.66 349 P **P 05 59 34.4 +0.3**
comp=Z,17nm,0.9s,baz=154,slow=9.6,SNR=35
ARCES LR LR 06 13 59.0
comp=Z,1μm,18.2s,baz=150,slow=38
ARCES ARCESS Array B 33.66 349 *e*P **P 05 59 34.2 +0.1**
ARCES ARCESS Array B 33.66 349 *e*P **P 05 59 34.2 +0.1**
ARE0 ARCESS Array S 33.66 349 *e*P **P 05 59 35.9 +1.8**
comp=Z,68nm,1.4s
WMQ Urumqi 34.65 65 P **P 05 59 44.3 +1.3**
WMQ pP sP 05 59 48.0 +0.1
WMQ PcP **PcP 06 02 19.9 +2.8**
WMQ S **S 06 05 13.8 +1.3**
WMQ pmax pmax
comp=Z,190nm,1.3s
WMQ pmax pmax
comp=Z,740nm,3.8s
WMQ LR LR
comp=Z,3μm,15.1s
WMQ LR LR
comp=Z,2μm,15.1s
WMQ LR LR
comp=Z,1μm,28.5s
QUIF Quistinic 34.81 303 *e*P **P 05 59 45.1 +0.9**
QUIF pmax pmax
comp=Z,29nm,1.1s
TAM Tamanrasset 34.85 256 *e*P **P 05 59 46.1 +1.1**
comp=Z,72nm,1.3s
TAM Tamanrasset 34.85 256 *e*P **P 05 59 46.1 +1.1**
TAM pmax pmax
comp=Z,72nm,1.3s
TAM Tamanrasset 34.85 256 *e*P **P 05 59 46.1 +1.1**
comp=Z,72nm,1.3s
PYUN Piuthan 35.07 93 *e*P **P 05 59 47.4 +0.4**
comp=Z,408nm,1.5s

DANN Dangsing 35.58 92 *e*P **P 05 59 52.4 +0.9**
comp=Z,190nm,0.7s
EKA Eskdalemuir Ar 35.59 315 P **P 05 59 51.1 +0.2**
comp=Z,2.2nm,0.4s,baz=107,slow=8.6,SNR=20
KOLN Koldanda 35.70 93 *e*P **P 05 59 52.9 +0.5**
comp=Z,168nm,1.3s
ES19 SONSECA Array 36.09 289 *e*P **P 05 59 55.4 -0.1**
ES19 SONSECA Array 36.09 289 *e*P **P 05 59 55.4 -0.1**
ESDC Sonseca Array 36.15 289 P **P 05 59 55.8 -0.2**
comp=Z,5.5nm,0.8s,baz=67,slow=8.7,SNR=17
ESLA Sonseca Array 36.15 289 *e*P **P 05 59 55.8 -0.1**
comp=Z,15nm,1.2s
GKN Gorkha 36.43 92 *e*P **P 05 59 59.0 +0.4**
comp=Z,222nm,0.9s
PAB San Pablo 36.47 288 *e*P **P 05 59 58.9 +0.2**
PAB San Pablo 36.47 288 *e*P **P 05 59 58.9 +0.2**
PAB San Pablo 36.47 288 *e*P **P 05 59 58.9 +0.2**
DMN Daman 36.97 92 *e*P **P 06 00 03.8 +0.5**
comp=Z,396nm,1.2s
KKN Kakani 37.03 92 *e*P **P 06 00 04.3 +0.5**
comp=Z,219nm,1.3s
PKIN Phulchoki 37.22 92 *e*P **P 06 00 06.2 +0.8**
comp=Z,94nm,0.8s
HYB Hyderabad 37.32 112 *i* P **P 06 00 05.5 -0.6**
GUN Gumba 37.46 91 *e*P **P 06 00 08.0 +0.4**
comp=Z,435nm,1.1s
JIRN Jiri 37.82 92 *e*P **P 06 00 11.1 +0.5**
comp=Z,492nm,1.2s
MVO Moncorvo 38.16 292 *e*S **S 06 06 02.4 -3.8**
MVO *e*LR LR 06 09 01.2
comp=Z,372nm,18.0s
MVO Moncorvo 38.16 292 *e*S **S 06 06 02.4 -3.8**
KMBO Kilima Mbogo 38.46 188 LR LR 06 16 34.9
comp=Z,2μm,18.6s,baz=1.0,slow=37
RAMN Ramite 38.46 92 *e*P **P 06 00 16.1 +0.2**
comp=Z,154nm,0.7s
HVS Khovu-Aksy 38.49 52 *i* P **P 06 00 17.9 +2.2**
HVS pmax pmax
comp=Z,80nm,1.0s
MDT Midelt 38.51 278 P **P 06 00 16.8 +0.6**
comp=Z,9.4nm,1.0s,baz=100,slow=11,SNR=5.6
PVRL Vila Real 38.65 292 *e*P **P 06 00 16.7 -0.4**
comp=Z,48nm,1.6s
POLO Lamas de Olo 38.69 292 *e*P **P 06 00 18.0 +0.5**
comp=Z,23nm,1.6s
MTE Manteigas 38.70 291 *e*P **P 06 00 17.7 +0.2**
comp=Z,45nm,1.6s
MTE *e*S **S 06 06 09.5 -4.8**
MTE *e*LR LR 06 09 14.1
comp=Z,344nm,18.0s
MTE Manteigas 38.70 291 *e*P **P 06 00 17.5 0.0**
comp=Z,34nm,1.1s
MTE Manteigas 38.70 291 *e*P **P 06 00 17.7 +0.2**
MTE *e*S **S 06 06 09.5 -4.8**
PCBR Castelo Branco 38.77 290 *e*P **P 06 00 17.9 -0.1**
comp=Z,54nm,1.6s
PCBR Castelo Branco 38.77 290 *e*P **P 06 00 17.9 -0.1**
PMRV Marv??o 38.79 289 *e*P **P 06 00 17.8 -0.5**
comp=Z,35nm,1.5s
PMRV *e*S **S 06 06 18.0 +2.4**
PMRV *e*LR LR 06 09 11.9
comp=Z,221nm,18.0s
PMRV Marv??o 38.79 289 *e*P **P 06 00 17.8 -0.5**
PMRV *e*S **S 06 06 18.0 +2.4**
PBAR Barrancos 38.82 287 *e*P **P 06 00 18.1 -0.4**
comp=Z,86nm,1.6s
PGAV Gavieira, Arco 38.93 293 *e*LR LR 06 08 28.9
comp=Z,324nm,20.0s
PESTR Estremoz 39.07 288 *e*P **P 06 00 20.4 -0.2**
comp=Z,45nm,1.5s
PESTR Estremoz 39.07 288 *e*P **P 06 00 20.0 -0.6**
comp=Z,14nm,0.9s
PESTR Estremoz 39.07 288 *e*P **P 06 00 20.4 -0.2**
ODAN Odare 39.13 92 *e*P **P 06 00 22.0 +0.5**
comp=Z,719nm,1.5s
TAPN Taplejung 39.16 91 *e*P **P 06 00 22.5 +0.6**
comp=Z,34nm,0.6s
MBAR Mbarara 39.17 199 *e*P **P 06 00 23.3 +1.5**
comp=Z,16nm,1.3s
MBAR Mbarara 39.17 199 *e*P **P 06 00 23.3 +1.5**
MBAR pmax pmax
comp=Z,16nm,1.3s
COI Coimbra 39.39 291 *e*P **P 06 00 23.4 +0.2**
EVO Evora 39.47 288 *e*P **P 06 00 23.8 -0.2**
comp=Z,19nm,1.4s
EVO Evora 39.47 288 *e*P **P 06 00 23.8 -0.2**
PBEJ Beja 39.49 287 *e*P **P 06 00 24.1 0.0**
comp=Z,49nm,2.7s
PMTG Montargil 39.51 289 *e*P **P 06 00 24.0 -0.2**
comp=Z,36nm,1.5s
PMTG Montargil 39.51 289 *e*P **P 06 00 24.0 -0.2**
PTOM Tomar 39.52 290 *e*P **P 06 00 24.8 +0.5**
comp=Z,70nm,2.1s
PTOM Tomar 39.52 290 *e*P **P 06 00 24.8 +0.5**
PVAQ Vaqueiros 39.54 286 *e*P **P 06 00 24.6 +0.1**
comp=Z,51nm,1.3s
PVAQ *e*S **S 06 06 26.7 -0.1**
PVAQ A A 06 19 46.0
comp=Z,196nm,18.0s
PCVE Castro Verde 39.72 286 *e*P **P 06 00 25.8 -0.3**
comp=Z,56nm,1.2s
PCVE Castro Verde 39.72 286 *e*P **P 06 00 25.8 -0.3**
PBDV Barranco-do-Ve 39.75 286 *e*P **P 06 00 26.6 +0.3**
comp=Z,70nm,1.5s
PBDV Barranco-do-Ve 39.75 286 *e*P **P 06 00 26.6 +0.3**
PNCL Nicolau / Gran 39.97 287 *e*P **P 06 00 28.7 +0.6**
comp=Z,23nm,1.2s
PNCL Nicolau / Gran 39.97 287 *e*P **P 06 00 28.7 +0.6**
NRIK Noril'sk 40.26 23 P **P 06 00 30.8 +0.7**
comp=Z,29nm,1.0s,baz=236,slow=6.8,SNR=34
NRIK LR LR 06 19 43.3
comp=Z,904nm,19.5s,baz=238,slow=40
PFVI Vila Bisbo 40.46 286 *e*P **P 06 00 31.8 -0.4**
comp=Z,87nm,1.3s
PFVI Vila Bisbo 40.46 286 *e*P **P 06 00 31.8 -0.4**
LSA Lhasa 40.92 86 *e*P **P 06 00 37.0 +0.4**
comp=Z,74nm,1.1s
LSA Lhasa 40.92 86 P **P 06 00 35.0 -1.6**
LSA Lhasa 40.92 86 *e*P **P 06 00 37.0 +0.4**
LSA pmax pmax
comp=Z,74nm,1.1s
LSA Lhasa 40.92 86 *e*P **P 06 00 37.0 +0.4**
comp=Z,74nm,1.1s
SPA0 Spitsbergen Ar 42.51 352 *e*P **P 06 00 50.2 +1.6**
SPITS Spitsbergen Ar 42.51 352 P **P 06 00 49.4 +0.9**
comp=Z,38nm,0.9s,baz=138,slow=11,SNR=15
SPITS LR LR 06 19 25.8
comp=Z,661nm,19.2s,baz=155,slow=38
SPITS Spitsbergen Ar 42.51 352 P **P 06 00 49.4 +0.9**
SPITS pmax pmax
comp=Z,37nm,0.9s
SPITS MLR MLR
comp=Z,661nm,19.2s
MOY Mondy 43.04 51 *e*P **P 06 00 54.7 +1.4**
MOY pmax pmax
comp=Z,125nm,1.8s
SHL Shillong 43.30 91 *e*P **P 06 00 54.0 -1.8**
TOA0 Torodi Ar. Sit 43.54 247 *e*P **P 06 00 57.4 -0.1**
TORD Torodi Ar. Bea 43.54 247 P **P 06 00 57.0 -0.5**
comp=Z,17nm,1.1s,baz=43,slow=3.2,SNR=30
TORD PcP **PcP 06 02 44.7 -0.7**
comp=Z,3.0nm,0.9s,baz=35,slow=4.9,SNR=2.1
TORD LR LR 06 23 30.5
comp=Z,339nm,18.0s,baz=25,slow=42
KBS Kingsbay 43.63 352 *e*P **P 06 00 58.3 +0.8**
comp=Z,27nm,1.1s
KBS Kingsbay 43.63 352 *e*P **P 06 00 58.3 +0.8**
KBS pmax pmax
comp=Z,27nm,1.1s
GTA Gaotai 44.39 69 ⇓P **P 06 01 05.3 +1.0**
GTA pP sP 06 01 09.8 +0.6
GTA sP pP 06 01 12.5 +4.7
GTA S **S 06 07 38.3 -0.4**
GTA sS sS 06 07 47.1 +2.5
GTA SS **SS 06 10 50.8 -6.5**
GTA pmax pmax
comp=Z,34nm,1.3s
GTA pmax pmax
comp=Z,170nm,4.6s
GTA LR LR
comp=Z,630nm,16.8s
GTA LR LR
comp=Z,560nm,13.9s
GTA LR LR
comp=Z,930nm,15.1s
ZAK Zakamensk 44.60 53 *e*P **P 06 01 06.8 +1.0**

ZAK pmax pmax
comp=Z,48nm,1.4s
TLY Talaya 44.68 51*c i*P **P 06 01 07.8 +1.5**
TLY *e*S **S 06 07 46.8 +4.3**
TLY pmax pmax
comp=Z,82nm,1.5s
TLY MLR MLR
comp=Z,505nm,12.0s
IRK Irkutsk 45.01 50 *e*P **P 06 01 09.4 +0.5**
IRK *e* 06 02 49.9
IRK pmax pmax
comp=Z,255nm,1.8s
PALK Pallekele 45.74 121 *i* P **P 06 01 16.6 +1.5**
SCO Scoresbysund 46.92 335 *i* P **P 06 01 25.6 +1.9**
SCO Scoresbysund 46.92 335 *e*P **P 06 01 24.8 +1.1**
comp=Z,46nm,1.4s
SCO Scoresbysund 46.92 335 *e*P **P 06 01 24.8 +1.1**
SCO pmax pmax
comp=Z,46nm,1.4s
KOWA Kowa 46.99 254 P **P 06 01 25.0 0.0**
comp=Z,31nm,0.9s,baz=58,slow=9.5,SNR=52
KOWA LR LR 06 24 29.1
comp=Z,602nm,18.2s,baz=48,slow=40
KOWA Kowa 46.99 254 *e*P **P 06 01 25.0 0.0**
comp=Z,32nm,0.8s
SONM Songino Array 47.03 56 P **P 06 01 25.6 +0.5**
comp=Z,6.4nm,0.7s,baz=280,slow=11,SNR=36
SONM LR LR 06 23 33.9
comp=Z,1μm,18.1s,baz=282,slow=39
SONA1 Songino Array 47.04 56 *e*P **P 06 01 24.9 -0.2**
ULN Ulaanbaatar 47.46 56 *e*P **P 06 01 29.5 +1.0**
comp=Z,149nm,1.2s
ULN Ulaanbaatar 47.46 56*c i*P **P 06 01 29.3 +0.8**
ULN pmax pmax
comp=Z,148nm,1.2s
ULN MLR MLR
comp=Z,2μm,18.0s
DAG Danmarks Havn 47.56 344⇑*i*P **P 06 01 28.9 +0.3**
comp=Z,33nm,1.1s
DAG Danmarks Havn 47.56 344 P **P 06 01 28.9 +0.3**
LZH Lanzhou 48.46 72 ⇑P **P 06 01 37.0 +0.6**
LZH pP sP 06 01 42.0 +0.6
LZH sP pP 06 01 43.8 +3.8
LZH PP **PP 06 03 28.0 -0.9**
LZH S **S 06 08 34.3 -3.0**
LZH SS **SS 06 11 58.5 -8.4**
LZH pmax pmax
comp=Z,120nm,1.2s
LZH pmax pmax
comp=Z,370nm,6.0s
LZH LR LR
comp=Z,1μm,16.8s
LZH LR LR
comp=Z,1μm,19.5s
LZH LR LR
comp=Z,2μm,19.9s
CD2 Chengdu 50.39 78 P **P 06 01 50.9 -0.1**
CD2 sP sP 06 01 57.6 +1.6
CD2 PP **PP 06 03 46.4 0.0**
CD2 S **S 06 09 03.6 -0.6**
CD2 sS sS 06 09 11.5 +1.4
CD2 SS **SS 06 12 37.3 -0.4**
CD2 pmax pmax
comp=Z,100nm,1.2s
CD2 pmax pmax
comp=Z,230nm,4.3s
CD2 LR LR
comp=Z,1μm,21.6s
CD2 LR LR
comp=Z,980nm,13.8s
BTO Baotou 51.49 64 *e*P **P 06 01 59.6 +0.4**
KMI Kunming 52.17 85 P **P 06 02 05.3 +0.6**
KMI pP pP 06 02 07.9 -0.4
KMI S **S 06 09 29.0 -0.3**
KMI SS **SS 06 13 04.3 -2.2**
KMI pmax pmax
comp=Z,13nm,0.5s
KMI pmax pmax
comp=Z,190nm,5.8s
KMI LR LR
comp=Z,510nm,22.4s
KMI LR LR
comp=Z,320nm,16.4s
KMI LR LR
comp=Z,570nm,20.3s
SUMG Summit 52.26 338⇑*i*P **P 06 02 05.8 +1.0**
comp=Z,61nm,1.1s
SUMG Summit 52.26 338 *e*P **P 06 02 05.4 +0.6**
comp=Z,62nm,1.1s
SUMG Summit 52.26 338 *e*P **P 06 02 05.4 +0.6**
SUMG pmax pmax
comp=Z,62nm,1.1s
CHTO Chiang Mai 52.35 94 P **P 06 02 05.2 -0.6**
comp=Z,149nm,1.6s,comp=Z,2μm
CHTO Chiang Mai 52.35 94 *e*P **P 06 02 04.9 -0.9**
comp=Z,89nm,1.6s
CHTO Chiang Mai 52.35 94 *e*P **P 06 02 04.9 -0.9**
CHTO pmax pmax
comp=Z,89nm,1.6s
CM31 Chiang Mai Arr 52.54 95 *e*P **P 06 02 07.2 0.0**
CMAR Chiang Mai Arr 52.54 95 P **P 06 02 06.8 -0.4**
comp=Z,9.0nm,0.7s,baz=299,slow=7.6,SNR=56
CMAR PP **PP 06 04 06.2 +0.1**
comp=Z,4.2nm,0.9s,baz=291,slow=10.0,SNR=4.3
CMAR LR LR 06 29 48.6
comp=Z,300nm,18.9s,baz=296,slow=42
CM01 Chiang Mai Arr 52.57 95 *e*P **P 06 02 06.8 -0.6**
DBIC Dimbokro 52.64 247 P **P 06 02 07.1 -0.8**
comp=Z,20nm,1.0s,baz=43,slow=7.2,SNR=9.6
DBIC PcP **PcP 06 03 17.4 -0.5**
comp=Z,5.1nm,0.8s,baz=27,slow=6.8,SNR=2.1
DBIC Dimbokro 52.64 247 *e*P **P 06 02 07.7 -0.2**
comp=Z,38nm,1.3s
DBIC PcP **PcP 06 03 17.4 -0.5**
KIC Kosan Boka 52.76 246 *e*P **P 06 02 07.6 -1.3**
comp=Z,212nm,1.4s
TIC Toumodi 52.77 247 *e*P **P 06 02 07.4 -1.6**
LAMP Lampang 53.05 94 P **P 06 02 11.3 +0.3**
comp=Z,13nm,1.2s,comp=Z,132nm
LIC Lamto 53.06 247 *e*P **P 06 02 09.6 -1.5**
comp=Z,86nm,0.9s
XAN Xi'an 53.09 72 P **P 06 02 11.1 -0.1**
XAN pmax pmax
comp=Z,40nm,1.0s
XAN pmax pmax
comp=Z,230nm,7.2s
XAN LR LR
comp=Z,470nm,14.4s
XAN LR LR
comp=Z,920nm,17.3s
XAN LR LR
comp=Z,880nm,21.1s
NANT Nan 53.76 93 P **P 06 02 15.6 -0.6**
comp=Z,7.8nm,1.1s,comp=Z,112nm
LSZ Lusaka 53.92 197 *e*P **P 06 02 19.5 +2.1**
comp=Z,21nm,1.2s
LSZ Lusaka 53.92 197 *e*P **P 06 02 19.5 +2.1**
LSZ pmax pmax
comp=Z,21nm,1.2s
TIXI Tiksi 54.04 23 *e*P **P 06 02 17.4 -0.1**
comp=Z,39nm,1.1s
TIXI Tiksi 54.04 23*c i*P **P 06 02 17.4 -0.1**
TIXI pmax pmax
comp=Z,40nm,1.0s
PHIT Phitsanulok 54.41 95 P **P 06 02 21.7 +0.8**
comp=Z,52nm,1.1s
GYA Guiyang 54.65 82⇑*i*P **P 06 02 21.8 -1.0**
GYA PcP **PcP 06 03 27.5 +1.9**
GYA PP **PP 06 04 28.8 +3.7**
GYA ScP **ScP 06 07 23.8 -0.1**
GYA S **S 06 10 02.5 -0.3**
GYA SS **SS 06 13 44.0 -1.4**
GYA pmax pmax
comp=Z,30nm,1.0s
GYA pmax pmax
comp=Z,140nm,5.3s
GYA LR LR
comp=Z,610nm,18.0s
GYA LR LR
comp=Z,550nm,18.4s
GYA LR LR
comp=Z,570nm,18.9s
ENH Enshi 55.12 76 *e*P **P 06 02 26.0 0.0**
comp=Z,64nm,1.3s
ENH Enshi 55.12 76 *e*P **P 06 02 26.0 0.0**
comp=Z,64nm,1.3s

PBKT Sadao Pong 55.19 95 P **P 06 02 25.4 -1.2**
comp=Z,55nm,1.4s,comp=Z,3µm
PBKT Sadao Pong 55.19 95 *e*P **P 06 02 25.9 -0.7**
HIA Hailar 55.22 51 *e*P **P 06 02 27.2 +0.7**
comp=Z,130nm,1.4s
HIA Hailar 55.22 51 *e*P **P 06 02 27.2 +0.7**
HIA pmax pmax
comp=Z,130nm,1.4s
OPO Ambohidratompo 55.66 175 P **P 06 02 31.4 +1.5**
comp=Z,16nm,1.0s,baz=344,slow=7.9,SNR=5.7
OPO LR LR 06 26 07.1
comp=Z,624nm,19.7s,baz=349,slow=36
BJI Beijing 56.08 63⇑ *i*P **P 06 02 33.1 +0.4**
BJI S **S 06 10 29.4 +8.1**
BJI pmax pmax
comp=Z,29nm,1.2s
BJI LR LR
comp=Z,1µm,19.2s
BJI LR LR
comp=Z,680nm,15.9s
BJI LR LR
comp=Z,2µm,62.5s
BJT Baijiatuau 56.09 63 *e*P **P 06 02 32.8 0.0**
comp=Z,81nm,1.9s
BJT Baijiatuau 56.09 63 *e*P **P 06 02 32.8 0.0**
BJT pmax pmax
comp=Z,81nm,1.9s
ABPO Ambohimpanom 56.11 175 *e*P **P 06 02 34.9 +1.7**
comp=Z,28nm,1.0s
ABPO Ambohimpanom 56.11 175 *e*P **P 06 02 34.9 +1.7**
ABPO pmax pmax
comp=Z,28nm,1.0s
PHET Kaeng Krachan 56.22 100 P **P 06 02 33.8 -0.2**
comp=Z,19nm,1.1s,comp=Z,194nm
CHAI Chaiyaphum 56.37 95 P **P 06 02 34.7 -0.4**
comp=Z,9.4nm,1.4s
YAK Yakutsk 56.67 34 *e*P **P 06 02 35.7 -0.8**
comp=Z,54nm,0.8s
YAK Yakutsk 56.67 34 *e*P **P 06 02 34.4 -2.1**
YAK *e**PP **pP 06 02 38.3 -1.8**
YAK *e* 06 03 32.1
YAK *e* 06 04 39.9
YAK *e*PPP PPP 06 05 56.9
YAK *e*S **S 06 10 27.4 -1.0**
YAK *e* 06 12 22.6
YAK *e*SS **SS 06 14 11.2 -4.2**
YAK *e*SSS SSS 06 16 32.4
YAK pmax pmax
comp=Z,39nm,0.9s
YAK pmax pmax
comp=N,9.0nm,1.1s
YAK pmax pmax
comp=E,18nm,1.3s
YAK pmax pmax
comp=Z,55nm,2.1s
YAK pmax pmax
comp=N,22nm,2.0s
YAK pmax pmax
comp=E,18nm,2.1s
YAK smax smax
comp=N,26nm,1.8s
YAK smax smax
comp=E,27nm,1.9s
YAK MLR MLR
comp=Z,528nm,22.0s
YAK MLR MLR
comp=N,874nm,20.0s
YAK MLR MLR
comp=E,171nm,16.0s
ILULI Ilulissat 56.99 335 *i*P **P 06 02 39.0 +0.3**
comp=E,96nm,1.4s
ILULI Ilulissat 56.99 335 *e*P **P 06 02 39.2 +0.4**
comp=E,77nm,1.3s
ILULI Ilulissat 56.99 335 *e*P **P 06 02 39.2 +0.4**
ILULI pmax pmax
comp=Z,77nm,1.3s
KULLO Kullorsuaq 57.02 342⇑ *i*P **P 06 02 39.0 +0.1**
comp=Z,56nm,1.2s
SKNT Sakolnakorn 57.36 93 P **P 06 02 40.5 -1.6**
comp=Z,22nm,1.1s,comp=Z,1µm
SRAK Srakaew 57.49 97 P **P 06 02 45.9 +2.9**
comp=Z,207nm,1.0s,comp=Z,2µm
ZEA Zeya 58.15 44 *e*P **P 06 02 48.2 +1.1**
ZEA *e*S **S 06 10 52.0 +3.8**
ZEA *e* 06 11 15.0
ZEA pmax pmax
comp=E,24nm,1.2s
ZEA pmax pmax
comp=Z,43nm,1.2s
ZEA smax smax
comp=E,200nm,10.0s
ZEA MLR MLR
comp=Z,2µm,14.0s
ZEA MLR MLR
comp=E,1µm,15.0s
TIA Tai'an 58.32 66 P **P 06 02 48.6 0.0**
TIA pmax pmax
comp=E,15nm,1.2s
WHN Wuhan 58.74 74 ⇓*i*P **P 06 02 52.3 +0.7**
WHN S **S 06 11 02.3 +5.8**
WHN pmax pmax
comp=E,140nm,1.2s
WHN LR LR
comp=E,2µm,18.8s
MATP Matopo 58.83 195 P **P 06 02 51.6 -0.7**
comp=E,14nm,1.0s,baz=17,slow=9.5,SNR=17
MATP LR LR 06 29 09.5
comp=E,1µm,18.4s,baz=26,slow=37
TSUM Tsumeb 60.83 207 *e*P **P 06 03 07.9 +1.8**
comp=E,15nm,1.4s
CN2 Changchun 60.91 55 *e*P **P 06 03 06.3 -0.1**
CN2 *e*pP pP 06 03 10.5 +0.5
CN2 *e*S **S 06 11 22.8 -1.3**
CN2 pmax pmax
comp=E,20nm,1.2s
CN2 pmax pmax
comp=E,200nm,3.0s
CN2 LR LR
comp=E,760nm,18.0s
CN2 LR LR
comp=E,800nm,18.0s
CN2 LR LR
comp=E,1µm,18.0s
QIZ Qiongzhong 60.93 87 P **P 06 03 07.9 +1.1**
QIZ S **S 06 11 27.3 +2.3**
QIZ LR LR
comp=E,340nm,17.6s
QIZ LR LR
comp=E,370nm,12.6s
QIZ LR LR
comp=E,260nm,11.8s
NJ2 Nanjing 61.46 70 *e*P **P 06 03 11.0 +0.8**
NJ2 pmax pmax
comp=E,36nm,0.5s
KULM Kulim 61.68 106 *e*P **P 06 03 09.3 -2.6**
comp=E,60nm,1.2s
GSI Gunungsitoli 61.94 112 *e*P **P 06 03 13.9 +0.2**
comp=E,65nm,1.1s
PSI Prapat 61.96 109 P **P 06 03 12.0 -2.0**
comp=E,26nm,1.1s,baz=358,slow=1.4,SNR=23
PSI LR LR 06 33 58.4
comp=E,209nm,18.4s,baz=271,slow=40
PSI Prapat 61.96 109 *e*P **P 06 03 12.2 -1.8**
comp=E,66nm,1.3s
PSI Prapat 61.96 109 *e*P **P 06 03 12.2 -1.8**
PSI pmax pmax
comp=Z,66nm,1.3s
IPM Ipoh 62.48 106 *e*P **P 06 03 15.3 -2.0**
comp=Z,74nm,1.3s
KLR Kul'dur 62.52 48*c* *i*P **P 06 03 16.9 -0.2**
MNSI Mandailing Nat 63.77 111 P **P 06 03 24.5 -1.4**
LBTB Lobatse 63.91 197 *e*P **P 06 03 28.6 +2.0**
comp=Z,20nm,1.1s
LBTB Lobatse 63.91 197 *e*P **P 06 03 28.6 +2.0**
LBTB pmax pmax
comp=Z,20nm,1.1s
GRNR Gornyy 64.51 45 *e*P **P 06 03 30.9 +0.7**
GRNR pmax pmax
comp=Z,76nm,1.0s
USRK Ussuriysk Ar. 64.95 53 P **P 06 03 31.6 -1.6**
comp=Z,13nm,0.9s,baz=286,slow=5.4,SNR=24
USRK LR LR 06 34 48.6
comp=Z,460nm,21.5s,baz=296,slow=39
BKNI Bangkinang 65.17 110 P **P 06 03 33.6 -1.5**
MSHR Mys Shultsa 65.19 54 *i*P **P 06 03 33.7 -1.1**
PPI Padang Panjang 65.21 111 P **P 06 03 34.1 -1.2**

KS01 Wonju Array Si 65.44 61 *e*P **P 06 03 35.1 -1.4**
KS15 Wonju Array Si 65.45 61 *e*P **P 06 03 36.6 0.0**
KSAR Wonju Array Be 65.45 61 P **P 06 03 36.1 -0.4**
KSAR Wonju Array Be 65.45 61 P **P 06 03 36.2 -0.4**
KSRS Korea Array 65.47 61 P **P 06 03 36.1 -0.5**
comp=Z,19nm,0.8s,baz=287,slow=6.1,SNR=41
KSRS LR LR 06 34 56.2
comp=Z,163nm,19.4s,baz=302,slow=39
PDSI Padang 65.56 111 P **P 06 03 36.2 -1.4**
TJN Taejon 65.60 62*c*e**P** **P 06 03 36.1 -1.4**
NKL Nikolayevsk 65.66 41 *e*P **P 06 03 37.0 -0.6**
NKL pmax pmax
comp=E,43nm,1.0s
NKL pmax pmax
comp=Z,51nm,1.0s
NKL pmax pmax
comp=Z,300nm,8.0s
NKL MLR MLR
comp=E,600nm,16.0s
NKL MLR MLR
comp=Z,1µm,16.0s
SEY Seymchan 65.72 28*c* *i*P **P 06 03 38.7 +0.8**
RGRI Rengat 66.59 110 P **P 06 03 42.1 -2.1**
BILL Bilibino 66.98 20 *e*P **P 06 03 46.2 +0.3**
comp=Z,40nm,1.2s
BILL Bilibino 66.98 20*c* *i*P **P 06 03 46.0 +0.1**
BILL *e* 06 04 15.5
BILL *e*S **S 06 12 35.8 -2.9**
BILL *e*SS **SS 06 16 56.5 +0.2**
BILL pmax pmax
comp=Z,42nm,1.2s
MA2 Magadan 66.99 32 *e*P **P 06 03 46.9 +0.8**
comp=Z,60nm,1.1s
MA2 Magadan 66.99 32 *i*P **P 06 03 46.5 +0.4**
MA2 pmax pmax
comp=Z,98nm,1.7s
YHNB Yeheng 67.05 76 *e*P **P 06 03 47.5 +0.3**
comp=Z,94nm,1.2s
YHNB Yeheng 67.05 76 *e*P **P 06 03 47.5 +0.3**
comp=Z,94nm,1.2s
KRJI Kerinci 67.09 112 P **P 06 03 46.5 -1.0**
TEY Ternei 67.42 50 *e*P **P 06 03 48.2 -0.8**
TPRI Tanjung Pinang 67.43 107 P **P 06 03 47.6 -1.9**
BOSA Boshof 67.45 196 P **P 06 03 49.9 +0.5**
comp=Z,9.8nm,0.9s,baz=22,slow=6.6,SNR=9.0
BOSA Boshof 67.45 196 *e*P **P 06 03 50.2 +0.8**
comp=Z,15nm,1.0s
YULB Yu-li 67.66 77 *e*P **P 06 03 52.3 +1.3**
comp=Z,59nm,1.3s
YULB Yu-li 67.66 77 *e*P **P 06 03 52.3 +1.3**
comp=Z,59nm,1.3s
TYV Tymovskoe 67.88 42 *e*P **P 06 03 52.3 +0.4**
TYV *e* 06 12 49.7
TYV pmax pmax
comp=Z,300nm,2.3s
TYV pmax pmax
comp=Z,35nm,1.8s
MASI Maura Aman, Be 68.36 112 P **P 06 03 57.1 +1.7**
JNU Nakatsue 69.74 63 LR LR 06 39 28.8
comp=Z,193nm,19.4s,baz=300,slow=40
YSS Yuzh-Sakhalins 70.05 46 *e*P **P 06 04 05.6 +0.2**
comp=Z,133nm,1.5s
YSS Yuzh-Sakhalins 70.05 46 *e*P **P 06 04 05.4 0.0**
YSS *e* 06 04 09.4
YSS *e* 06 04 24.2
YSS *e*S **S 06 13 12.0 -3.8**
YSS pmax pmax
comp=Z,70nm,1.5s
YSS pmax pmax
comp=Z,300nm,2.0s
SCHQ Schefferville 70.22 325 P **P 06 04 06.5 +0.2**
comp=Z,16nm,0.7s,baz=64,slow=7.1,SNR=7.6
SCHQ LR LR 06 36 46.4
comp=Z,163nm,18.1s,baz=38,slow=38
SCHQ Schefferville 70.22 325 *e*P **P 06 04 06.8 +0.5**
comp=Z,97nm,1.5s
MDSI Maura Dua 70.69 112 P **P 06 04 06.9 -2.9**
ASAJ Asahikawa 71.53 48 P **P 06 04 14.2 -0.3**
comp=Z,6.0nm,0.6s,baz=304,slow=11,SNR=6.4
ASAJ LR LR 06 36 34.8
comp=Z,456nm,19.8s,baz=328,slow=37
ASAJ Asahikawa 71.53 48 *e*P **P 06 04 14.4 0.0**
comp=Z,38nm,1.2s
SBUM Sibu 72.43 101 *e*P **P 06 04 20.2 -0.1**
MJB9 Matsu-Tunnel 72.96 57 *e*P **P 06 04 23.3 +0.1**
comp=Z,57nm,1.7s
MAJO Matsushiro 72.97 57 *e*P **P 06 04 22.8 -0.4**
comp=Z,53nm,1.6s
MAJO Matsushiro 72.97 57*c* *i*P **P 06 04 22.2 -1.1**
MAJO pmax pmax
comp=Z,18nm,1.4s
MAT Matsushiro 72.97 57 P **P 06 04 22.6 -0.7**
MAT *e*S **S 06 13 42.8 -7.2**
MJAR Matsushiro Arr 72.97 57 P **P 06 04 22.8 -0.5**
comp=Z,16nm,1.2s,baz=302,slow=6.9,SNR=19
MJAR Matsushiro Arr 72.97 57 P **P 06 04 22.8 -0.5**
MJAR pmax pmax
comp=Z,15nm,1.2s
ERM Erimo 73.06 50 *e*P **P 06 04 24.2 +0.6**
comp=Z,58nm,1.1s
ERM Erimo 73.06 50 *i*P **P 06 04 23.5 -0.1**
ERM pmax pmax
comp=Z,97nm,1.7s
CGJI Cibinong 73.23 112 P **P 06 04 22.6 -2.4**
RDOG Red Dog Mine 73.32 10 *e*P **P 06 04 26.0 +1.2**
comp=Z,35nm,1.2s
STKI Sintang 73.33 103 P **P 06 04 26.0 +0.4**
KKM Kota Kinabalu 73.42 95 *e*P **P 06 04 26.4 +0.1**
comp=Z,50nm,1.3s
KUR Kuril'sk 73.95 45 *i*P **P 06 04 26.4 -2.4**
PEA0B Petropavlovsk- 74.01 35 *e*P **P 06 04 28.2 -0.8**
comp=Z,54nm,1.4s
PETK Petropavlovsk- 74.01 35 P **P 06 04 27.6 -1.5**
comp=Z,6.2nm,0.7s,baz=329,slow=1.3,SNR=12
PETK Petropavlovsk- 74.01 35 *e*P **P 06 04 27.3 -1.8**
PETK Petropavlovsk- 74.01 35 *e*P **P 06 04 27.3 -1.8**
TOLK Toolik Lake Re 74.08 5 P **P 06 04 29.9 +0.7**
baz=350
TOLK Toolik Lake Re 74.08 5 *e*P **P 06 04 30.0 +0.7**
comp=Z,78nm,1.4s
PET Petropavlovsk 74.50 34 *e*P **P 06 04 32.2 +0.3**
PET *e* 06 07 23.0
PET *e*S **S 06 14 02.9 -3.7**
PET pmax pmax
comp=Z,100nm,13.5s
PET MLR MLR
comp=Z,400nm,18.0s
PQI Presque Isle 75.87 318 *e*P **P 06 04 40.9 +1.0**
comp=Z,57nm,1.0s
JHJ Hachijo jima 2 75.97 59 LR LR 06 42 30.9
comp=Z,146nm,18.4s,baz=288,slow=39
EMMW East Machias 76.81 316 *e*P **P 06 04 46.3 +1.0**
comp=Z,35nm,1.1s
PKME Peaks-Kenny Pk 77.45 318 P **P 06 04 49.6 +0.7**
baz=49,SNR=6.4
PKME Peaks-Kenny Pk 77.45 318 *e*P **P 06 04 50.3 +1.4**
comp=Z,30nm,1.1s
MLY Manley 77.56 6 *e*P **P 06 04 49.9 +0.7**
comp=Z,41nm,1.3s
FCC Fort Churchill 77.77 338 *e*P **P 06 04 51.1 +0.8**
comp=Z,41nm,1.3s
FCC Fort Churchill 77.77 338 *e*P **P 06 04 51.1 +0.8**
FCC pmax pmax
comp=Z,41nm,1.3s
MDM Murphy Dome 77.81 5 *e*P **P 06 04 51.5 +0.9**
comp=Z,76nm,1.4s
COLA College 77.92 4 *e*P **P 06 04 51.9 +0.8**
comp=Z,52nm,1.1s
COLA College 77.92 4 *e*P **P 06 04 51.9 +0.8**
COLA pmax pmax
comp=Z,52nm,1.1s
IL1 Eielson Array 78.08 4 *e*P **P 06 04 51.6 -0.5**
ILAR Eielson Array 78.08 4 P **P 06 04 52.0 -0.1**
comp=Z,4.1nm,1.0s,baz=326,slow=3.7,SNR=32
ILAR PP **PP 06 07 44.3 -3.3**
comp=Z,0.8nm,0.9s,baz=345,slow=5.8,SNR=3.7
ILAR LR LR 06 42 15.8
comp=Z,179nm,21.0s,baz=345,slow=38
ILAR Eielson Array 78.08 4 P **P 06 04 52.0 -0.1**
ILAR 06 07 44.3
ILAR pmax pmax
comp=Z,5.0nm,1.0s
ILAR MLR MLR
comp=Z,179nm,21.0s
ILB Eielson Array 78.08 4 *e*P **P 06 04 52.3 +0.3**
CCB Clear Creek Bu 78.15 5 *e*P **P 06 04 52.3 -0.1**

comp=Z,40nm,1.3s
EGAK Eagle 78.30 2 *e*P **P 06 04 53.9 +0.6**
comp=Z,34nm,1.0s
WRH Wood River Hil 78.30 5 *e*P **P 06 04 53.0 -0.2**
comp=Z,29nm,1.4s
HDA Harding Lake 78.44 4 *e*P **P 06 04 54.0 0.0**
comp=Z,21nm,0.8s
BPAW Bear Paw Mtn. 78.46 6 *e*P **P 06 04 54.1 -0.1**
comp=Z,49nm,1.3s
YKW3 Yellowknife Ar 78.87 349 *e*P **P 06 04 56.3 -0.1**
comp=Z,37nm,1.3s
YKA Yellowknife Ar 78.93 349 P **P 06 04 57.0 +0.3**
comp=Z,12nm,0.9s,baz=17,slow=6.0,SNR=70
YKA LR LR 06 44 29.8
comp=Z,22nm,18.7s,baz=16,slow=39
YKA Yellowknife Ar 78.93 349 *i*P **P 06 04 56.5 -0.2**
YKA pmax pmax
comp=Z,12nm,0.9s
MCK McKinley 78.98 5 *e*P **P 06 04 57.3 +0.2**
comp=Z,51nm,1.4s
MCK McKinley 78.98 5 *e*P **P 06 04 57.3 +0.2**
MCK pmax pmax
comp=Z,51nm,1.4s
DAWY Dawson 79.04 1 *e*P **P 06 04 57.6 +0.2**
comp=Z,52nm,1.3s
TRF Thorofare Moun 79.16 6 *e*P **P 06 04 58.2 0.0**
comp=Z,15nm,1.0s
RIDG Independ'e Rid 79.21 3 *e*P **P 06 04 59.0 +0.7**
comp=Z,66nm,1.3s
RND Reindeer 79.31 5 *e*P **P 06 04 58.5 -0.4**
comp=Z,36nm,1.2s
RND Reindeer 79.31 5 *e*P **P 06 04 58.5 -0.4**
RND pmax pmax
comp=Z,36nm,1.2s
DOT Dot Lake 79.34 3 *e*P **P 06 05 00.1 +1.0**
comp=Z,221nm,1.5s
PPLA Purkeypile 79.53 7 *e*P **P 06 05 00.4 +0.1**
comp=Z,20nm,1.3s
LBNH Lisbon 79.54 318 P **P 06 05 01.2 +0.8**
baz=48,SNR=7.0
LBNH Lisbon 79.54 318 *e*P **P 06 05 02.0 +1.6**
comp=Z,49nm,1.3s
LBNH Lisbon 79.54 318 *e*P **P 06 05 02.0 +1.6**
LBNH pmax pmax
comp=Z,49nm,1.3s
TRQ Mont Tremblant 79.54 321 *e*P **P 06 05 01.1 +0.6**
DHY Denali Highway 79.74 5 *e*P **P 06 05 01.4 0.0**
comp=Z,27nm,1.3s
MPSI Mapaga 79.78 97 P **P 06 05 03.1 +0.9**
VT1 Waterbury 79.91 319 *e*P **P 06 05 03.9 +1.4**
comp=Z,30nm,1.3s
FRNY Flat Rock 80.01 320 *e*P **P 06 05 03.6 +0.7**
comp=Z,31nm,1.2s
DAV Davao City (W) 80.28 89 LR LR 06 46 10.7
comp=Z,71nm,18.1s,baz=338,slow=40
BCX Boston College 80.41 316 *e*P **P 06 05 06.2 +1.1**
comp=Z,25nm,1.0s
SKT Skwentna 80.50 7 *e*P **P 06 05 05.1 -0.2**
comp=Z,25nm,1.2s
HRV Adam Dziewonsk 80.51 317 P **P 06 05 04.9 -0.8**
baz=48
M65A Busby, Falmout 80.64 316 P **P 06 05 06.6 +0.2**
baz=48
LONY Lake Ozonia 80.67 320 P **P 06 05 07.0 +0.5**
baz=46,SNR=14
LONY Lake Ozonia 80.67 320 *e*P **P 06 05 07.5 +0.9**
comp=Z,39nm,1.1s
BRYW Bryant College 80.89 316 *e*P **P 06 05 08.3 +0.5**
comp=Z,60nm,1.3s
GHO Glory Hole Cre 80.92 5 *e*P **P 06 05 08.2 +0.6**
comp=Z,26nm,1.2s
SVW2 Sparrevohn 80.93 9 *e*P **P 06 05 08.8 +1.1**
comp=Z,39nm,1.4s
SML Sawmill 80.93 5 *e*P **P 06 05 08.0 +0.3**
comp=Z,26nm,0.8s
SML Sawmill 80.93 5 *e*P **P 06 05 08.0 +0.3**
SML pmax pmax
comp=Z,26nm,0.8s
SCM Sheep Creek Mo 80.97 5 *e*P **P 06 05 08.7 +0.7**
comp=Z,57nm,1.3s
SCM Sheep Creek Mo 80.97 5 *e*P **P 06 05 08.7 +0.7**
SCM pmax pmax
comp=Z,57nm,1.3s
ACCN Adirondack Com 81.04 319 *e*P **P 06 05 09.3 +0.8**
comp=Z,44nm,1.3s
SUA Susitna One 81.08 6 *e*P **P 06 05 09.1 +0.5**
comp=Z,40nm,1.2s
PMR Palmer 81.08 6 *e*P **P 06 05 08.3 -0.1**
comp=Z,37nm,1.4s
PMR Palmer 81.08 6 *e*P **P 06 05 08.3 -0.1**
PMR pmax pmax
comp=Z,37nm,1.4s
QUA2 Belchertown 81.09 317 *e*P **P 06 05 10.1 +1.3**
comp=Z,62nm,1.6s
MRSI Marisa 81.31 96 P **P 06 05 10.6 +0.2**
KLU Klutina 81.40 4 *e*P **P 06 05 11.3 +1.1**
comp=Z,49nm,1.2s
RC01 Rabbit Creek A 81.53 6 *e*P **P 06 05 11.3 +0.5**
comp=Z,16nm,0.7s
PLVO Plevna 81.63 321 *e*P **P 06 05 12.7 +1.1**
comp=Z,8.3nm,0.7s
DIV Divide 81.77 4 *e*P **P 06 05 13.2 +1.0**
comp=Z,46nm,1.2s
CRQM Cirque 82.27 3 *e*P **P 06 05 15.6 +0.6**
comp=Z,31nm,1.1s
SEW Seward 82.53 6 *e*P **P 06 05 16.8 +0.7**
comp=Z,36nm,1.3s
PAL Palisades 82.81 317 P **P 06 05 17.6 -0.2**
baz=46
SADO Sadowa 82.85 322 *e*P **P 06 05 18.5 +0.5**
comp=Z,17nm,1.0s
BINY Binghamton 83.09 319 P **P 06 05 19.4 +0.1**
baz=45
BINY Binghamton 83.09 319 *e*P **P 06 05 20.1 +0.7**
comp=Z,49nm,1.2s
ODNJ Ogdensburg 83.14 317 *e*P **P 06 05 20.4 +0.8**
comp=Z,29nm,1.1s
KSPA Keystone Colle 83.43 318 *e*P **P 06 05 21.9 +0.8**
comp=Z,50nm,1.2s
FFC Flin Flon 83.47 340 *e*P **P 06 05 21.2 +0.2**
comp=Z,34nm,1.2s
FFC Flin Flon 83.47 340 *e*P **P 06 05 21.2 +0.2**
FFC pmax pmax
comp=Z,34nm,1.2s
MMNY Mt. Morris Dam 83.71 320 *e*P **P 06 05 23.0 +0.5**
comp=Z,48nm,0.9s
N59A State Game Lan 83.88 318 P **P 06 05 23.3 -0.2**
baz=45
N59A State Game Lan 83.88 318 *e*P **P 06 05 24.3 +0.8**
comp=Z,46nm,1.2s
LUPA Lehigh Univers 83.89 317 *e*P **P 06 05 24.1 +0.6**
comp=Z,3.9nm,1.3s
PSUB Penn St. - Bra 84.41 317 *e*P **P 06 05 26.3 +0.2**
comp=Z,24nm,1.0s
E45A Wooded Hills, 84.46 327 P **P 06 05 26.4 +0.2**
baz=39,SNR=7.7
DLBC Dease Lake 84.50 356 *e*P **P 06 05 27.8 +1.4**
comp=Z,30nm,1.4s
KDAK Kodiak Island 84.52 8 *e*P **P 06 05 27.3 +1.0**
comp=Z,23nm,0.8s
KDAK Kodiak Island 84.52 8 *i*P **P 06 05 26.9 +0.6**
E44A Grand Marais A 84.58 327 P **P 06 05 27.6 +0.7**
baz=39
E44A Grand Marais A 84.58 327 *e*P **P 06 05 28.0 +1.2**
comp=Z,82nm,1.0s
F46A Macinaw City C 84.72 326 P **P 06 05 27.4 -0.2**
baz=40
JIS Juneau Island 84.83 358 *e*P **P 06 05 29.3 +1.5**
comp=Z,32nm,1.4s
MVL Millersville 84.85 317 *e*P **P 06 05 28.8 +0.5**
comp=Z,51nm,1.4s
C40A Isle Royale Na 84.90 330 P **P 06 05 28.1 -0.4**
baz=37
OHAK Old Harbor 84.98 9 *e*P **P 06 05 29.7 +1.0**
comp=Z,26nm,1.1s
F45A CMU Biological 85.13 326 P **P 06 05 27.9 -1.7**
baz=39
ERPA Erie 85.21 321 P **P 06 05 29.5 -0.6**
baz=42
ERPA Erie 85.21 321 *e*P **P 06 05 30.4 +0.3**
comp=Z,41nm,0.9s
SSPA Standing Stone 85.21 319 P **P 06 05 29.7 -0.4**
baz=44
SSPA Standing Stone 85.21 319 *e*P **P 06 05 30.6 +0.5**
comp=Z,47nm,1.3s
E43A Lone Tree Farm 85.23 328 P **P 06 05 30.0 -0.1**
baz=38,SNR=5.4
E43A Lone Tree Farm 85.23 328 *e*P **P 06 05 30.6 +0.5**

comp=Z,35nm,1.1s
F44A Big Bay de Noc 85.30 327 P P 06 05 30.2 -0.3
baz=38,SNR=7.2
D41A Chassel 85.35 329 P P 06 05 30.5 -0.2
baz=37
D41A Chassel 85.35 329 eP P 06 05 31.5 +0.8
comp=Z,65nm,1.4s
C39A Grand Marais 85.38 330 P P 06 05 30.4 -0.4
baz=36
ULM Lac du Bonnet 85.48 335 P P 06 05 31.3 0.0
comp=Z,26nm,1.0s,baz=41,slow=5.3,SNR=20
ULM Lac du Bonnet 85.48 335 eP P 06 05 31.6 +0.3
comp=Z,31nm,0.9s
ULM Lac du Bonnet 85.48 335 eP P 06 05 31.6 +0.3
ULM pmax pmax
comp=Z,31nm,0.9s
M54A Oil Creek Stat 85.49 320 P P 06 05 31.4 -0.2
baz=43
M54A Oil Creek Stat 85.49 320 eP P 06 05 31.9 +0.3
comp=Z,28nm,0.9s
SDMD Soldier's Deli 85.53 317 eP P 06 05 32.5 +0.7
comp=Z,18nm,1.3s
E42A Champion 85.58 328 P P 06 05 31.8 -0.2
baz=38,SNR=5.5
ALLY Alegheny Colle 85.63 321 eP P 06 05 32.5 +0.2
comp=Z,20nm,0.8s
F43A Flat Rock, Esc 85.73 327 P P 06 05 32.6 -0.1
baz=38,SNR=5.6
EYMN Ely 85.81 331 P P 06 05 33.0 0.0
baz=35,SNR=8.7
EYMN Ely 85.81 331 eP P 06 05 33.5 +0.5
comp=Z,54nm,1.5s
O56A Blue Knob Stat 85.83 319 P P 06 05 33.2 -0.1
baz=43
O56A Blue Knob Stat 85.83 319 eP P 06 05 33.6 +0.2
comp=Z,79nm,1.6s
C38A Sawbill Land. 85.91 331 P P 06 05 32.7 -0.8
baz=35
E41A Kenton 85.99 329 P P 06 05 33.7 -0.3
baz=37,SNR=6.2
N54A Moraine State 86.06 320 P P 06 05 34.3 -0.1
baz=42
F42A Maple Grove Fa 86.20 328 P P 06 05 34.7 -0.3
baz=37
C37A Embarrass 86.25 331 P P 06 05 35.0 -0.2
baz=35,SNR=11
B35A Bob, Littlefor 86.31 332 P P 06 05 35.2 -0.3
baz=34,SNR=7.3
B35A Bob, Littlefor 86.31 332 eP P 06 05 35.7 +0.2
comp=Z,19nm,0.9s
E40A Wakefield 86.39 329 P P 06 05 35.8 -0.1
baz=36,SNR=13
G43A Wallace 86.41 327 P P 06 05 35.8 -0.2
baz=38
A33A Warroad 86.42 334 P P 06 05 35.8 -0.2
baz=32,SNR=18
C36A Pine Crest Far 86.47 332 P P 06 05 36.3 0.0
baz=34,SNR=9.2
B34A Aery, Baudette 86.54 333 P P 06 05 36.2 -0.4
baz=33,SNR=8.6
WRAK Wrangell Islan 86.62 357 eP P 06 05 38.1 +1.3
comp=Z,39nm,1.4s
F41A Three Lakes 86.63 328 P P 06 05 36.8 -0.4
baz=37,SNR=7.7
F41A Three Lakes 86.63 328 eP P 06 05 37.3 +0.1
comp=Z,22nm,1.4s
CBN Corbin Frederi 86.69 317 P P 06 05 36.7 -0.8
baz=44
E39A Mellen 86.71 330 P P 06 05 37.3 -0.2
baz=36,SNR=10
G42A Mountain 86.74 328 P P 06 05 37.5 -0.1
baz=37
G42A Mountain 86.74 328 eP P 06 05 37.9 +0.3
comp=Z,20nm,1.3s
D37A Cotton 86.81 331 P P 06 05 37.6 -0.3
baz=34,SNR=5.8
AAM Ann Arbor 86.87 323 P P 06 05 37.7 -0.6
baz=40
F40A Park Falls 86.91 329 P P 06 05 37.4 -1.1
baz=36
E38A The Farm, Brul 86.93 330 P P 06 05 37.9 -0.6
baz=35,SNR=5.1
E38A The Farm, Brul 86.93 330 eP P 06 05 38.6 +0.1
comp=Z,22nm,1.1s
MCWV Mont Chateau 86.95 319 P P 06 05 38.6 -0.2
baz=42
MCWV Mont Chateau 86.95 319 eP P 06 05 39.8 +1.0
comp=Z,14nm,0.8s
C35A Jirik Farms, M 86.95 332 P P 06 05 38.0 -0.7
baz=33,SNR=7.5
A31A Linda, St. Vin 87.06 335 P P 06 05 38.5 -0.5
baz=31
D36A Goodland 87.08 331 P P 06 05 39.1 -0.2
baz=34,SNR=9.9
D36A Goodland 87.08 331 eP P 06 05 39.5 +0.2
comp=Z,32nm,1.1s
G41A Antigo 87.08 328 P P 06 05 38.1 -1.2
baz=37
AGMN Agassiz Nation 87.13 334 P P 06 05 39.2 -0.3
baz=32,SNR=10
AGMN Agassiz Nation 87.13 334 eP P 06 05 39.6 +0.1
comp=Z,23nm,1.1s
IP01 Cuckoo 87.16 317 eP P 06 05 40.0 +0.2
comp=Z,18nm,1.2s
IP05 Hopewell Churc 87.16 317 eP P 06 05 40.3 +0.5
comp=Z,34nm,1.3s
URVA University of 87.23 316 eP P 06 05 40.3 +0.2
F39A Loretta 87.23 329 P P 06 05 39.7 -0.3
baz=36,SNR=8.0
IP07 Quail 87.25 317 eP P 06 05 40.3 +0.1
E37A Wrenshall 87.29 331 P P 06 05 40.2 -0.1
baz=34
C34A RKJ Ranch, Bem 87.34 333 P P 06 05 40.2 -0.3
baz=33
H42A Shiocton 87.37 327 P P 06 05 39.9 -0.8
baz=37
H42A Shiocton 87.37 327 eP P 06 05 40.7 0.0
comp=Z,14nm,1.0s
G40A Rib Lake 87.47 329 P P 06 05 41.0 -0.2
baz=36,SNR=7.5
G40A Rib Lake 87.47 329 eP P 06 05 41.4 +0.2
comp=Z,18nm,1.1s
D35A Remer 87.50 332 P P 06 05 40.9 -0.4
baz=33
C33A Trail 87.56 333 P P 06 05 41.3 -0.3
baz=32,SNR=7.1
F38A Pierce - Schro 87.58 330 P P 06 05 41.9 +0.2
baz=35,SNR=7.0
B31A Greenbush Farm 87.65 335 P P 06 05 41.8 -0.2
baz=31,SNR=5.8
E36A McGregor 87.66 331 P P 06 05 41.7 -0.4
baz=34
I43A Langenfeld Bro 87.70 327 P P 06 05 41.9 -0.4
baz=37
H41A Junction City 87.76 328 P P 06 05 42.2 -0.4
baz=36
G39A Holcombe 87.85 329 P P 06 05 42.4 -0.6
baz=35,SNR=7.9
D34A Park Rapids 87.92 333 P P 06 05 42.7 -0.6
baz=32
D34A Park Rapids 87.92 333 eP P 06 05 43.4 0.0
comp=Z,34nm,1.3s
I42A Draeger Farm, 88.03 327 P P 06 05 43.3 -0.6
baz=37,SNR=5.5
I42A Draeger Farm, 88.03 327 eP P 06 05 43.8 -0.1
comp=Z,13nm,0.9s
E35A Pequot Lakes 88.07 332 P P 06 05 43.9 -0.1
baz=33,SNR=8.7
H40A Chili 88.07 328 P P 06 05 43.8 -0.3
baz=36
F37A Hinrichs Farm, 88.08 330 P P 06 05 43.8 -0.3
baz=34
D33A AnnSam, Waubun 88.11 333 P P 06 05 43.5 -0.7
baz=32
ACSO Alum Creek Sta 88.12 321 P P 06 05 43.6 -0.8
baz=40
ACSO Alum Creek Sta 88.12 321 eP P 06 05 44.4 0.0
comp=Z,24nm,1.0s
C31A Landman Farms, 88.22 334 P P 06 05 44.4 -0.4
baz=31,SNR=8.4
J43A Natural Harves 88.22 327 P P 06 05 44.1 -0.7
baz=37
G38A Ridgeland 88.22 330 P P 06 05 44.0 -0.8
baz=35,SNR=6.2
I41A Arkdale 88.30 328 P P 06 05 44.8 -0.4
baz=36
I41A Arkdale 88.30 328 eP P 06 05 45.4 +0.2
comp=Z,14nm,1.0s

F36A Milaca 88.31 331 P P 06 05 44.8 -0.4
baz=34,SNR=9.5
F36A Milaca 88.31 331 eP P 06 05 45.2 +0.1
comp=Z,15nm,0.9s
E34A Wadena 88.39 332 P P 06 05 45.1 -0.5
baz=32,SNR=6.8
H39A Augusta 88.39 329 P P 06 05 45.0 -0.5
baz=35
SPMN Marine on St. 88.56 330 P P 06 05 46.1 -0.3
baz=34
SPMN Marine on St. 88.56 330 eP P 06 05 46.6 +0.3
comp=Z,35nm,1.4s
J42A Columbus 88.58 327 P P 06 05 46.1 -0.4
baz=37
E33A Westby DABS, E 88.71 333 P P 06 05 46.6 -0.4
baz=32
F35A Swanville 88.72 332 P P 06 05 46.5 -0.6
baz=33
K43A Burlington 88.72 326 P P 06 05 46.9 -0.3
baz=37
I40A Norwalk 88.76 328 P P 06 05 46.8 -0.6
baz=36
G36A St. Michael 88.92 331 P P 06 05 47.4 -0.6
baz=34,SNR=5.2
J41A Loganville 88.92 327 P P 06 05 47.3 -0.8
baz=36,SNR=6.7
F34A Alexandria 89.03 332 P P 06 05 47.9 -0.7
baz=32
K42A Prairie Point, 89.11 327 P P 06 05 48.3 -0.7
baz=36
CNNC Cliffs of the 89.11 315 P P 06 05 48.6 -0.5
baz=43
H37A Dierke Farm, C 89.14 330 P P 06 05 48.9 -0.2
baz=34
I39A Houston 89.17 329 P P 06 05 48.7 -0.6
baz=35
BATI Baumata 89.17 103 LR LR 06 50 46.9
comp=Z,142nm,18.7s,baz=294,slow=39
G35A Watkins 89.22 331 P P 06 05 49.4 0.0
baz=33
G35A Watkins 89.22 331 eP P 06 05 50.0 +0.5
comp=Z,29nm,1.4s
L43A Garden Prairie 89.32 326 P P 06 05 49.1 -0.9
baz=37
E31A Nome 89.33 334 P P 06 05 49.5 -0.5
baz=31
I38A Scanlan Farm, 89.34 329 P P 06 05 49.5 -0.6
baz=34
JFWS Jewell Farm 89.39 327 P P 06 05 49.4 -0.9
baz=36
JFWS Jewell Farm 89.39 327 eP P 06 05 50.0 -0.3
comp=Z,18nm,1.3s
JFWS Jewell Farm 89.39 327 eP P 06 05 50.0 -0.3
JFWS pmax pmax
comp=Z,18nm,1.3s
N46A Monticello 89.42 324 P P 06 05 49.7 -0.8
baz=38
H36A Jessenland, He 89.54 330 P P 06 05 50.8 -0.2
baz=33,SNR=5.9
M44A Midewin, Midew 89.64 325 P P 06 05 51.0 -0.5
baz=37
G34A Benson 89.64 332 P P 06 05 50.7 -0.7
baz=32
K41A Shullsburg 89.66 327 P P 06 05 50.9 -0.7
baz=36
J39A Decorah 89.67 328 P P 06 05 50.8 -0.8
baz=35
O47A Sheridan 89.67 323 P P 06 05 50.8 -0.9
baz=38
DGMT Dagmar 89.68 339 P P 06 05 51.4 -0.3
baz=26
DGMT Dagmar 89.68 339 eP P 06 05 52.8 +1.2
comp=Z,57nm,1.5s
H35A Sunnyside Ranc 89.79 331 P P 06 05 52.3 +0.2
baz=33,SNR=11
I37A Lemond, Waseca 89.80 330 P P 06 05 52.2 -0.1
baz=34,SNR=6.8
I37A Lemond, Waseca 89.80 330 eP P 06 05 52.8 +0.5
comp=Z,52nm,1.2s
L42A Oliver, Polo 89.87 326 P P 06 05 52.1 -0.5
baz=36,SNR=7.5
L42A Oliver, Polo 89.87 326 eP P 06 05 52.6 0.0
comp=Z,37nm,1.1s
K40A Colesburg 89.95 328 P P 06 05 52.0 -1.0
baz=35
G33A Ortonville 89.98 332 P P 06 05 52.7 -0.3
baz=32
SFIN Lafayette 90.00 324 P P 06 05 52.3 -0.9
baz=38
J38A Wedel Dairy, R 90.00 329 P P 06 05 52.3 -0.8
baz=34
M43A Waltham Townsh 90.01 326 P P 06 05 52.7 -0.5
baz=37
I36A Fitzsimmons Fa 90.04 330 P P 06 05 52.8 -0.6
baz=33
S52A Salyersville 90.10 320 P P 06 05 53.3 -0.5
baz=40
N44A Piper City 90.15 325 P P 06 05 53.4 -0.5
baz=37
L41A Preston 90.18 327 P P 06 05 53.2 -0.8
baz=36,SNR=10
K39A Oelwein 90.26 328 P P 06 05 53.3 -1.1
baz=35
P47A Martinsville 90.30 323 P P 06 05 53.9 -0.8
baz=38
M42A Sheffield 90.36 326 P P 06 05 54.2 -0.7
baz=36
O45A Potomac 90.39 324 P P 06 05 54.3 -0.8
baz=38
S51A Beattyville 90.40 320 P P 06 05 55.0 -0.1
baz=40
J37A Redenius Farm, 90.45 330 P P 06 05 54.9 -0.3
baz=34
T52A Hallie 90.49 319 P P 06 05 54.7 -0.9
baz=40
L40A Anamosa 90.50 327 P P 06 05 54.3 -1.2
baz=35,SNR=6.9
L40A Anamosa 90.50 327 eP P 06 05 55.1 -0.5
comp=Z,20nm,1.1s
P46A Rosedale 90.65 324 P P 06 05 55.5 -0.8
baz=38
BLO Bloomington 90.67 323 eP P 06 05 56.1 -0.3
comp=Z,21nm,1.2s
BLO Bloomington 90.67 323 eP P 06 05 56.1 -0.3
BLO pmax pmax
comp=Z,21nm,1.2s
K38A Parkersburg 90.68 329 P P 06 05 55.4 -1.0
baz=34
K38A Parkersburg 90.68 329 eP P 06 05 56.0 -0.4
comp=Z,32nm,1.3s
J36A Seneca 1, Swea 90.75 330 P P 06 05 56.6 -0.1
baz=33
J36A Seneca 1, Swea 90.75 330 eP P 06 05 57.3 +0.6
comp=Z,46nm,1.1s
M41A Milan 90.77 327 P P 06 05 55.9 -0.8
baz=36
L39A Vinton 90.78 328 P P 06 05 56.0 -0.8
baz=35,SNR=5.1
Q47A Bedord North L 90.81 323 P P 06 05 56.1 -0.9
baz=38
O44A Mansfield 90.81 325 P P 06 05 56.5 -0.5
baz=37
U53A Fall Branch 90.84 319 P P 06 05 56.4 -0.8
baz=41
HDIL Hopedale 90.87 325 P P 06 05 56.8 -0.5
baz=36,SNR=5.1
HDIL Hopedale 90.87 325 eP P 06 05 57.3 0.0
comp=Z,44nm,1.3s
K37A Belmond 90.93 329 P P 06 05 57.1 -0.5
baz=34
H32A Carlson Farm, 90.94 333 P P 06 05 56.9 -0.6
baz=31
R48A Northridge Ran 90.96 322 P P 06 05 56.9 -0.8
baz=39
P45A Graceland, Par 90.97 324 P P 06 05 57.0 -0.7
baz=38,SNR=8.9
P45A Graceland, Par 90.97 324 eP P 06 05 57.6 -0.2
comp=Z,62nm,1.3s
N42A Yates City 90.98 326 P P 06 05 57.4 -0.4
baz=36
KMSC Kings Mountain 91.09 317 P P 06 05 58.3 -0.1
baz=42
KMSC Kings Mountain 91.09 317 eP P 06 05 58.8 +0.4
comp=Z,12nm,0.9s
O43A Sugar Creek Fa 91.10 325 P P 06 05 57.4 -0.9
baz=36
M40A Post Highland 91.16 327 P P 06 05 57.6 -1.0
baz=35

L38A Oak Wood Farm, 91.17 329 P P 06 05 57.8 -0.9
baz=34
Q46A CEJHS Indians, 91.19 323 P P 06 05 58.0 -0.8
baz=38
TZTN Tazewell 91.21 319 P P 06 05 59.0 0.0
baz=40
TZTN Tazewell 91.21 319 eP P 06 05 59.4 +0.4
comp=Z,35nm,1.5s
ECSD EROS Data Cent 91.29 332 P P 06 05 58.9 -0.2
baz=32,SNR=13
ECSD EROS Data Cent 91.29 332 eP P 06 05 59.5 +0.3
comp=Z,18nm,1.1s
WCI Wyandotte Cave 91.30 322 P P 06 05 58.8 -0.5
baz=38
WCI Wyandotte Cave 91.30 322 eP P 06 05 59.0 -0.3
comp=Z,19nm,1.0s
WCI Wyandotte Cave 91.30 322 eP P 06 05 59.0 -0.3
WCI pmax pmax
comp=Z,19nm,1.0s
R47A Wooly Knot Far 91.36 322 P P 06 05 58.4 -1.2
baz=38,SNR=5.2
K36A Gilmore City 91.37 330 P P 06 05 59.0 -0.6
baz=33
M39A Webster 91.39 328 P P 06 05 59.1 -0.6
baz=35
P44A Sand Creek, Wi 91.43 324 P P 06 05 59.6 -0.3
baz=37,SNR=9.2
N41A Harden Midland 91.45 326 P P 06 05 59.1 -0.8
baz=36
N41A Harden Midland 91.45 326 eP P 06 05 59.5 -0.5
comp=Z,25nm,1.0s
LLLB Lillooet 91.47 350 eP P 06 06 00.8 +0.9
comp=Z,22nm,1.3s
SCIA State Center 91.47 329 P P 06 05 59.3 -0.7
baz=34
V53A Saluda 91.49 318 P P 06 06 00.3 0.0
baz=41,SNR=6.1
T50A Nancy 91.51 320 P P 06 06 00.1 -0.2
baz=39,SNR=9.9
L37A Phoenix Point, 91.52 329 P P 06 05 59.1 -1.1
baz=34
O42A Bath 91.52 326 P P 06 05 58.9 -1.3
baz=36
SUSD Miller 91.54 333 P P 06 05 59.7 -0.7
baz=30
WALA Waterton Lakes 91.58 345 eP P 06 06 01.0 +0.4
comp=Z,32nm,1.4s
PAULI Pauline 91.59 317 eP P 06 06 01.3 +0.6
comp=Z,25nm,1.1s
EGMT Eagleton 91.60 342 P P 06 06 00.4 -0.2
baz=22
N40A Mertquake, Sal 91.62 327 P P 06 05 59.8 -1.0
baz=35
S48A Wiedeman Farm, 91.63 322 P P 06 06 00.0 -0.8
baz=39,SNR=9.0
Q45A Warren Harvey, 91.67 324 P P 06 06 00.4 -0.6
baz=37,SNR=22
P43A Skaggs, Pawnee 91.71 325 P P 06 06 00.7 -0.4
baz=36
OLIL Olney 91.77 324 eP P 06 06 01.4 -0.1
V52A Sevierville 91.77 319 P P 06 06 00.8 -0.7
baz=40,SNR=5.4
V52A Sevierville 91.77 319 eP P 06 06 01.9 +0.3
comp=Z,43nm,1.5s
T49A Edmonton 91.79 321 P P 06 06 00.8 -0.8
baz=39,SNR=12
M38A Pleasantville 91.87 328 P P 06 06 01.2 -0.7
baz=34,SNR=11
LAO LASA Array 91.88 339 P P 06 06 02.8 +0.9
baz=24
LAO LASA Array 91.88 339 eP P 06 06 03.8 +1.8
comp=Z,80nm,1.3s
R46A Gibon Southern 91.90 323 P P 06 06 01.3 -0.8
baz=38
L36A Harm Buss Farm 91.91 330 P P 06 06 01.3 -0.7
baz=33
O41A Passleys Farm, 91.94 326 P P 06 06 01.4 -0.8
baz=36,SNR=5.4
NHSC New Hope 91.96 315 P P 06 06 02.0 -0.4
baz=42
N39A Derby Farms, D 92.02 328 P P 06 06 01.9 -0.7
baz=34,SNR=8.8
N39A Derby Farms, D 92.02 328 eP P 06 06 02.5 -0.1
comp=Z,36nm,1.0s
W53A Cullowhee 92.05 318 P P 06 06 03.0 0.0
baz=40,SNR=6.8
BG3 Lake Jocassee 92.06 318 eP P 06 06 03.5 +0.5
comp=Z,34nm,1.2s
Q44A Meyer Farm, Va 92.07 324 P P 06 06 02.4 -0.5
baz=37,SNR=8.4
P42A Winchester 92.13 325 P P 06 06 02.1 -1.0
baz=36
P42A Winchester 92.13 325 eP P 06 06 02.9 -0.3
comp=Z,27nm,1.4s
V51A Loudon 92.19 319 P P 06 06 03.1 -0.4
baz=40
V51A Loudon 92.19 319 eP P 06 06 03.9 +0.4
comp=Z,23nm,1.3s
R45A Skylar, Fairfi 92.21 323 P P 06 06 03.1 -0.4
baz=37,SNR=21
T48A Bowling Green 92.22 321 P P 06 06 03.0 -0.6
baz=38,SNR=29
M37A Trindle Farm, 92.24 329 P P 06 06 03.1 -0.5
baz=33
HODGE Hodges 92.28 317 eP P 06 06 04.3 +0.5
comp=Z,19nm,1.1s
Q43A New Douglas 92.35 325 P P 06 06 03.9 -0.3
baz=36,SNR=8.2
O40A La Belle 92.37 327 P P 06 06 03.5 -0.7
baz=35
U49A Red Boiling Sp 92.38 321 P P 06 06 03.6 -0.7
baz=39,SNR=12
P41A Barry, Barry 92.38 326 P P 06 06 03.2 -1.1
baz=35
N38A Joes South For 92.41 328 P P 06 06 03.6 -0.7
baz=34
S46A Don Dixon Farm 92.42 323 P P 06 06 03.4 -1.1
baz=38,SNR=8.8
CPCT Cooper Cave 92.55 319 eP P 06 06 05.5 +0.3
comp=Z,26nm,1.2s
O39A Kirksville 92.56 327 P P 06 06 04.2 -0.9
baz=34
R44A Waltonville 92.62 324 P P 06 06 04.9 -0.5
baz=37,SNR=14
X53A Estanollee 92.63 318 P P 06 06 05.3 -0.2
baz=40,SNR=5.4
T47A Sharon Grove 92.67 322 P P 06 06 05.0 -0.7
baz=38
T47A Sharon Grove 92.67 322 eP P 06 06 05.2 -0.5
comp=Z,41nm,1.3s
V50A Pikevile 92.68 320 P P 06 06 05.2 -0.6
baz=39,SNR=9.3
Q42A Golden Eagle 92.76 325 P P 06 06 05.5 -0.5
baz=36,SNR=5.6
U48A Cassie Pea, Po 92.76 321 P P 06 06 05.2 -0.9
baz=38,SNR=12
Y54A Tignall 92.79 317 P P 06 06 05.9 -0.3
baz=41,SNR=14
S45A Carrier Mills 92.84 323 P P 06 06 05.6 -0.8
baz=37,SNR=6.0
N37A Lee Faris, Mou 92.84 329 P P 06 06 06.2 -0.2
baz=33
N37A Lee Faris, Mou 92.84 329 eP P 06 06 06.5 0.0
comp=Z,24nm,0.9s
X52A Dahlonega 92.87 318 P P 06 06 06.3 -0.4
baz=40
P40A Paris 92.94 326 P P 06 06 06.1 -0.7
baz=35
P40A Paris 92.94 326 eP P 06 06 06.9 0.0
comp=Z,25nm,1.1s
NEW Newport 92.98 347 P P 06 06 07.4 +0.4
baz=16
NEW Newport 92.98 347 eP P 06 06 08.1 +1.2
comp=Z,19nm,1.1s
NEW Newport 92.98 347 eP P 06 06 08.1 +1.2
NEW pmax pmax
comp=Z,19nm,1.1s
R43A Red Bud 93.00 324 P P 06 06 06.5 -0.7
baz=36,SNR=7.0
T46A Princeton 93.01 322 P P 06 06 06.6 -0.7
baz=38
V49A McMinnville 93.02 320 P P 06 06 06.3 -1.1
baz=39,SNR=5.5
Q41A Truxton 93.04 326 P P 06 06 07.0 -0.4
baz=35,SNR=11
O38A Galt 93.06 328 P P 06 06 06.7 -0.7
baz=34
S44A Carbondale 93.15 324 P P 06 06 07.3 -0.6

	baz=37,SNR=7.4					
W50A	Signal Mountai	93.16 320	P	P	06 06 07.4	-0.6
	baz=39,SNR=7.1					
W50A	Signal Mountai	93.16 320	eP	P	06 06 07.9	-0.1
	comp=Z,18nm,1.0s					
U47A	Clarksville	93.19 322	P	P	06 06 06.8	-1.2
	baz=38,SNR=8.7					
Y53A	Monroe	93.28 318	P	P	06 06 08.0	-0.5
	baz=40,SNR=5.4					
P39B	Salisbury	93.28 327	P	P	06 06 07.8	-0.6
	baz=34,SNR=6.8					
O37A	Wolven Farm, M	93.31 328	P	P	06 06 07.3	-1.3
	baz=33					
HRY	Holter Researc	93.33 343	eP	P	06 06 09.7	+1.0
Z54A	Sparta	93.34 317	P	P	06 06 08.6	-0.2
	baz=41					
Q40A	Laux Farm, Aux	93.39 326	P	P	06 06 08.6	-0.3
	baz=35,SNR=12					
R42A	Luebbering	93.39 325	P	P	06 06 08.4	-0.6
	baz=36					
T45A	Paducah	93.39 323	P	P	06 06 08.2	-0.8
	baz=37					
X51A	Calhoun	93.41 319	P	P	06 06 08.5	-0.7
	baz=39					
X51A	Calhoun	93.41 319	eP	P	06 06 10.5	+1.4
	comp=Z,31nm,1.4s					
FVM	French Village	93.46 325	eP	P	06 06 09.2	-0.1
	comp=Z,15nm,1.0s					
FVM	French Village	93.46 325	eP	P	06 06 09.2	-0.1
FVM			pmax	pmax		
	comp=Z,15nm,1.0s					
P38A	Dawn	93.50 327	P	P	06 06 08.7	-0.8
	baz=34,SNR=5.4					
P38A	Dawn	93.50 327	eP	P	06 06 09.3	-0.1
	comp=Z,14nm,0.9s					
V48A	Smith Brothers	93.51 321	P	P	06 06 08.2	-1.3
	baz=38,SNR=7.2					
V48A	Smith Brothers	93.51 321	eP	P	06 06 08.8	-0.7
	comp=Z,13nm,1.0s					
Y52A	Lilburn	93.53 318	P	P	06 06 09.6	-0.1
	baz=40					
Y52A	Lilburn	93.53 318	eP	P	06 06 10.0	+0.3
	comp=Z,12nm,1.0s					
RSSD	Black Hills	93.54 337	P	P	06 06 08.8	-1.0
	baz=26					
RSSD	Black Hills	93.54 337	eP	P	06 06 10.5	+0.7
	comp=Z,9.1nm,0.8s					
RSSD	Black Hills	93.54 337	eP	P	06 06 10.5	+0.7
RSSD			pmax	pmax		
	comp=Z,9.0nm,0.8s					
GOGA	Godfrey	93.55 317	P	P	06 06 09.1	-0.6
	baz=40					
155A	Kite	93.60 316	P	P	06 06 09.8	-0.2
	baz=41					
R41A	Rosebud	93.64 325	P	P	06 06 09.3	-0.8
	baz=35,SNR=9.8					
GCMT	Greycliff	93.65 341	eP	P	06 06 11.2	+1.1
U46A	Springville	93.69 322	P	P	06 06 09.5	-0.8
	baz=37					
MSO	Missoula	93.70 344	P	P	06 06 10.3	-0.1
	baz=19					
MSO	Missoula	93.70 344	eP	P	06 06 10.8	+0.4
	comp=Z,11nm,1.2s					
WVT	Waverly	93.70 322	P	P	06 06 09.5	-1.0
	baz=38					
WVT	Waverly	93.70 322	eP	P	06 06 09.5	-1.0
	comp=Z,17nm,1.3s					
WVT	Waverly	93.70 322	eP	P	06 06 09.5	-1.0
WVT			pmax	pmax		
	comp=Z,17nm,1.3s					
W49A	Belvidere	93.71 320	P	P	06 06 09.4	-1.1
	baz=38,SNR=5.1					
Q39A	Willow Grove F	93.74 327	P	P	06 06 10.1	-0.5
	baz=34					
256A	Glennville	93.76 315	P	P	06 06 10.0	-0.7
	baz=41					
CCM	Cathedral Cave	93.78 325	P	P	06 06 10.0	-0.7
	baz=35					
CCM	Cathedral Cave	93.78 325	eP	P	06 06 10.4	-0.3
	comp=Z,16nm,1.2s					
CCM	Cathedral Cave	93.78 325	eP	P	06 06 10.4	-0.3
CCM			pmax	pmax		
	comp=Z,16nm,1.2s					
V47A	Nunnelly	93.79 321	P	P	06 06 09.5	-1.4
	baz=38,SNR=6.6					
T44A	Benton	93.79 323	P	P	06 06 10.0	-0.8
	baz=36					
S42A	Caledonia	93.81 325	P	P	06 06 09.8	-1.1
	baz=36,SNR=8.0					
BGNE	Belgrade	93.87 331	P	P	06 06 10.8	-0.3
	baz=30					
P37A	Lathrop	93.88 328	P	P	06 06 10.6	-0.6
	baz=39					
X50B	Fort Payne	93.90 319	P	P	06 06 10.7	-0.7
	baz=39					
154A	Montrose	93.96 317	P	P	06 06 11.2	-0.5
	baz=40					
U45A	Rockin P Farm,	93.99 323	P	P	06 06 11.1	-0.6
	baz=37,SNR=5.4					
Y51A	Rockmart	94.03 319	P	P	06 06 11.3	-0.7
	baz=39					
W48A	Pulaski	94.03 321	P	P	06 06 11.0	-1.0
	baz=38					
R40A	Maddies Statio	94.05 326	P	P	06 06 11.4	-0.6
	baz=35,SNR=9.6					
R40A	Maddies Statio	94.05 326	eP	P	06 06 12.0	0.0
	comp=Z,20nm,1.1s					
Q38A	Cooks Store, C	94.09 327	P	P	06 06 11.1	-1.1
	baz=34,SNR=9.3					
V46A	Holladay	94.11 322	P	P	06 06 10.9	-1.4
	baz=37,SNR=5.5					
T43A	Greenville	94.13 324	P	P	06 06 11.7	-0.6
	baz=36,SNR=8.9					
255A	Hazlehurst	94.13 316	P	P	06 06 12.0	-0.5
	baz=41					
RLMT	Red Lodge	94.16 340	P	P	06 06 11.5	-1.2
	baz=22					
RLMT	Red Lodge	94.16 340	eP	P	06 06 14.0	+1.3
	comp=Z,12nm,0.8s					
X49A	Woodville	94.21 320	P	P	06 06 12.2	-0.7
	baz=38,SNR=6.9					
Z52A	Williamson	94.23 318	P	P	06 06 12.4	-0.5
	baz=40					
U44B	Burton Farm, H	94.28 323	P	P	06 06 12.3	-0.7
	baz=36					
W47A	Westpoint	94.28 321	P	P	06 06 11.7	-1.5
	baz=38,SNR=6.1					
U44A	Portageville	94.31 323	P	P	06 06 12.6	-0.6
	baz=36					
BOZ	Bozeman (W)	94.32 342	P	P	06 06 13.4	0.0
	baz=20					
BOZ	Bozeman (W)	94.32 342	eP	P	06 06 14.2	+0.9
	comp=Z,4.8nm,1.0s					
BOZ	Bozeman (W)	94.32 342	eP	P	06 06 14.2	+0.9
BOZ			pmax	pmax		
	comp=Z,5.0nm,1.0s					
R39A	Chumby, Stover	94.37 326	P	P	06 06 12.6	-0.9
	baz=34					
S41A	Jillco Farms,	94.39 325	P	P	06 06 13.2	-0.4
	baz=35,SNR=9.4					
Y50A	Piedmont	94.39 319	P	P	06 06 12.9	-0.7
	baz=39					
PBMO	Poplar Bluff	94.44 324	eP	P	06 06 13.2	-0.6
	comp=Z,20nm,1.0s					
Q37A	Longview Farm,	94.52 328	P	P	06 06 13.4	-0.8
	baz=33					
Z51A	Franklin	94.54 318	P	P	06 06 13.9	-0.4
	baz=39					
T42A	Van Buren	94.55 324	P	P	06 06 13.8	-0.5
	baz=35,SNR=9.1					
T42A	Van Buren	94.55 324	eP	P	06 06 14.1	-0.2
	comp=Z,14nm,1.1s					
254A	Abbeville	94.57 316	P	P	06 06 13.4	-1.0
	baz=40					
V45A	Humboldt	94.57 322	P	P	06 06 13.1	-1.3
	baz=37					
X48A	Hartselle	94.63 320	P	P	06 06 13.1	-1.6
	baz=38					
X48A	Hartselle	94.63 320	eP	P	06 06 13.7	-1.0
	comp=Z,5.8nm,0.9s					
S40A	Lebanon	94.72 326	P	P	06 06 14.7	-0.4
	baz=34					
PLAL	Pickwick Lake	94.73 321	eP	P	06 06 14.2	-1.0
	comp=Z,17nm,1.1s					
U43A	Rector	94.76 324	P	P	06 06 14.4	-0.9
	baz=36					
W46A	Michie	94.76 322	P	P	06 06 14.3	-1.0
	baz=37					
Y49A	Blount Mountai	94.77 319	P	P	06 06 14.5	-0.9
	baz=38					
DLMT	Dillon	94.78 343	eP	P	06 06 16.1	+0.7
	comp=Z,14nm,1.4s					
152A	Waverly Hall	94.80 318	P	P	06 06 15.0	-0.6
	baz=40					
T41A	Mountain View	94.84 325	P	P	06 06 15.2	-0.5
	baz=35,SNR=9.9					
R38A	Fenwick Farm,	94.86 327	P	P	06 06 14.8	-0.9
	baz=34					
Z50A	Ashland	94.98 319	P	P	06 06 15.5	-0.9
	baz=39					
X47A	Russelville	94.99 321	P	P	06 06 15.2	-1.1
	baz=38					
S39A	Bolivar	95.01 326	P	P	06 06 15.2	-1.2
	baz=34,SNR=8.6					
S39A	Bolivar	95.01 326	eP	P	06 06 16.0	-0.4
	comp=Z,16nm,1.3s					
T40A	Mansfield	95.10 325	P	P	06 06 16.2	-0.7
	baz=34					
W45A	Hickory Valley	95.14 322	P	P	06 06 15.3	-1.8
	baz=37					
U42A	Revenden	95.16 324	P	P	06 06 16.5	-0.6
	baz=35,SNR=12					
H17A	Grant Village	95.18 341	P	P	06 06 19.6	+2.2
	baz=21					
H17A	Grant Village	95.18 341	eP	P	06 06 20.9	+3.4
	comp=Z,12nm,1.2s					
YFT	Old Faithful	95.20 341	eP	P	06 06 20.9	+3.4
	comp=Z,16nm,1.1s					
151A	Opelika	95.23 318	P	P	06 06 16.9	-0.6
	baz=39					
KSU1	Kansas State U	95.23 329	P	P	06 06 16.7	-0.7
	baz=32					
V43A	Jonesboro	95.30 323	P	P	06 06 17.0	-0.7
	baz=36					
252A	Lumpkin	95.32 317	P	P	06 06 17.0	-1.0
	baz=40					
S38A	Stockton	95.32 327	P	P	06 06 16.8	-1.0
	baz=34,SNR=9.4					
X46A	Booneville	95.33 321	P	P	06 06 16.4	-1.5
	baz=37					
MCMT	McKenzie Canyo	95.34 343	eP	P	06 06 19.6	+1.5
Z49A	Columbiana	95.35 319	P	P	06 06 16.9	-1.1
	baz=38					
YPP	Pitchstone Pla	95.36 341	eP	P	06 06 20.9	+2.6
	comp=Z,15nm,1.4s					
Y47A	UCPARC, Winfie	95.47 320	P	P	06 06 17.3	-1.3
	baz=38					
150A	Eclectic	95.54 318	P	P	06 06 17.7	-1.2
	baz=39					
T39A	Clever	95.59 326	P	P	06 06 18.1	-1.0
	baz=34					
251A	Midway	95.61 318	P	P	06 06 18.4	-0.8
	baz=39					
K22A	Casper	95.64 338	P	P	06 06 18.6	-0.9
	baz=24					
K22A	Casper	95.64 338	eP	P	06 06 19.1	-0.3
	comp=Z,19nm,1.4s					
V42A	Cord	95.68 324	P	P	06 06 18.7	-0.8
	baz=35					
LRAL	Lakeview Retre	95.72 319	P	P	06 06 18.7	-1.0
	baz=38					
LRAL	Lakew Retre	95.72 319	eP	P	06 06 19.1	-0.6
	comp=Z,20nm,1.4s					
IMW	Indian Meadow	95.74 341	eP	P	06 06 22.0	+2.0
	comp=Z,11nm,1.3s					
OXF	Oxford	95.77 322	P	P	06 06 18.6	-1.3
	baz=37					
OXF	Oxford	95.77 322	eP	P	06 06 19.5	-0.4
	comp=Z,18nm,1.0s					
OXF	Oxford	95.77 322	eP	P	06 06 19.5	-0.4
OXF			pmax	pmax		
	comp=Z,18nm,1.0s					
MOOW	Moose Ponds	95.83 341	eP	P	06 06 21.9	+1.6
	comp=Z,15nm,1.4s					
X45A	UM Field Stati	95.83 322	P	P	06 06 19.3	-0.9
	baz=37					
U40A	Yellville	95.91 325	P	P	06 06 19.5	-1.1
	baz=34					
LOHW	Long Hollow	95.92 341	eP	P	06 06 22.3	+1.6
	comp=Z,9.7nm,1.5s					
149A	Jones	95.95 319	P	P	06 06 20.1	-0.7
	baz=38					
T38A	Diamond	95.99 327	P	P	06 06 20.0	-0.9
	baz=33,SNR=5.8					
Y46A	Houston	96.00 321	P	P	06 06 19.7	-1.3
	baz=37,SNR=7.9					
FXWY	Fox Creek	96.00 341	eP	P	06 06 22.7	+1.5
	comp=Z,11nm,1.3s					
V41A	Mountainview	96.05 324	P	P	06 06 19.9	-1.4
	baz=35					
SNOW	Snow King Moun	96.10 341	eP	P	06 06 23.3	+1.7
	comp=Z,17nm,1.4s					
TPAW	Teton Pass	96.12 341	eP	P	06 06 23.4	+1.7
	comp=Z,18nm,1.4s					
Z47A	Carrollton	96.14 320	P	P	06 06 19.8	-1.8
	baz=38					
U39A	Green Forest	96.17 326	P	P	06 06 20.7	-1.1
	baz=34,SNR=5.3					
REDW	Red Top Meadow	96.22 341	eP	P	06 06 23.5	+1.4
	comp=Z,20nm,1.4s					
BMO	Blue Mountains	96.29 346	eP	P	06 06 21.8	-0.5
	comp=Z,9.9nm,1.5s					
BMO	Blue Mountains	96.29 346	eP	P	06 06 21.8	-0.5
BMO			pmax	pmax		
	comp=Z,10.0nm,1.5s					
V40A	Witts Springs	96.35 325	P	P	06 06 20.6	-1.9
	baz=34					
Y45A	Yeager Farm, C	96.35 322	P	P	06 06 21.6	-1.0
	baz=37,SNR=6.6					
BW06	Boulder Array	96.42 340	P	P	06 06 22.3	-0.7
	baz=22					
BW06	Boulder Array	96.42 340	eP	P	06 06 23.0	0.0
	comp=Z,3.2nm,1.0s					
PDAR	Pinedale Array	96.42 340	P	P	06 06 22.9	-0.2
	comp=Z,1.6nm,1.0s,baz=46,slow=4.3,SNR=10.0					
PDAR			PP	PP	06 10 11.1	-4.6
	comp=Z,1.9nm,1.2s,baz=32,slow=8.6,SNR=4.7					
PDAR			PKKPbc	PKKPdf	06 23 04.0	-2.9
	comp=Z,0.5nm,0.8s,baz=189,slow=3.4,SNR=4.4					
PDAR	Pinedale Array	96.42 340	eP	P	06 06 22.4	-0.6
PDAR			PP	PP	06 10 11.1	-4.6
PDAR			PKKPbc	PKKPdf	06 23 04.0	-2.9
WHAR	Wooly Hollow	96.52 324	eP	P	06 06 23.4	+0.1
	comp=Z,13nm,1.3s					
PHWY	Pilot Hill	96.53 336	eP	P	06 06 23.5	-0.2
	comp=Z,10nm,1.2s					
W41B	Gary Mavity, V	96.60 324	P	P	06 06 22.5	-1.2
	baz=35					
350A	Dozier	96.63 318	P	P	06 06 23.0	-0.9
	baz=39					
V39A	Pettigrew	96.69 325	P	P	06 06 23.1	-1.1
	baz=34					
CBKS	Cedar Bluff	96.72 331	P	P	06 06 23.5	-0.7
	baz=30					
248A	Dixon Mills	96.84 319	P	P	06 06 24.1	-0.8
	baz=38					
W40A	Ferguson Farm,	96.96 325	P	P	06 06 24.8	-0.6
	baz=34					
N23A	Red Feather La	97.06 336	P	P	06 06 25.4	-0.6
	baz=25					
349A	Repton	97.14 318	P	P	06 06 25.8	-0.4
	baz=38					
TUL1	Leonard	97.59 327	P	P	06 06 27.3	-0.9
	baz=32					
MIAR	Mount Ida	97.73 325	P	P	06 06 28.6	-0.2
	baz=34					
347A	Saraland	97.81 319	P	P	06 06 28.5	-0.6
	baz=37					
ISCO	Idaho Springs	97.94 336	P	P	06 06 29.2	-0.9
	baz=25					
ISCO	Idaho Springs	97.94 336	eP	Pdif	06 06 30.2	+0.1
	comp=Z,5.3nm,1.4s					
ISCO	Idaho Springs	97.94 336	eP	Pdif	06 06 30.3	+0.2
ISCO			pmax	pmax		
	comp=Z,5.0nm,1.4s					
X39A	Fountain Ranch	98.01 325	P	P	06 06 28.9	-1.2
	baz=34					
Z42A	Norrel Spur, H	98.01 323	P	P	06 06 29.5	-0.6
	baz=35					
HWUT	Hardware Ranch	98.04 341	eP	Pdif	06 06 31.8	+1.4
	comp=Z,8.6nm,1.2s					
143A	Socs Landing,	98.21 322	P	P	06 06 30.8	-0.2
	baz=36					
244A	Avery, Jackson	98.39 321	P	Pdif	06 06 31.8	-0.1
	baz=36					
TCUT	Toone Canyon	98.46 340	eP	Pdif	06 06 33.6	+1.3
	comp=Z,17nm,1.3s					
O20A	White River Ci	98.46 338	P	P	06 06 32.1	-0.2
	baz=23					
Q24A	Divide	98.54 335	P	P	06 06 31.9	-0.9
	baz=26					
SDCO	Great Sand Dun	99.76 335	P	Pdif	06 06 37.2	-1.0
	baz=25					
S22A	4UR Ranch, Cre	100.20 336	P	Pdif	06 06 39.5	-0.7
	baz=24					
ANMO	Albuquerque	102.61 334	P	Pdif	06 06 50.0	-0.8
	baz=25					
TASL	Snake Pit, Alb	102.61 334	P	Pdif	06 06 50.2	-0.7
	baz=25					
TASM	ASL Pad, Albuq	102.61 334	P	Pdif	06 06 50.0	-0.8
	baz=25					
WRA	Warramunga Arr	103.21 105	Pdiff	Pdif	06 06 54.4	+1.1
	comp=Z,0.3nm,0.8s,baz=319,slow=4.4,SNR=2.8					
WRA			PP	PP	06 11 07.0	-1.8
	comp=Z,5.8nm,1.0s,baz=311,slow=7.6,SNR=12					
ASAR	Alice Springs	104.98 108	PP	PP	06 11 19.2	-2.8
	comp=Z,2.3nm,1.1s,baz=309,slow=5.9,SNR=4.9					
TUC	Tucson	106.46 337	P	Pdif	06 07 05.3	-2.6
PLCA	Paso Flores	128.96 244	PKP	PKPdf	06 12 01.2	-0.1
	comp=Z,6.8nm,1.1s,baz=85,slow=2.9,SNR=5.3					
DZM	Mont Dzumac	129.69 89	eLR	LR	06 53 08.0	
	comp=Z,265nm,24.9s					
TAOE	Nuku Hiva Isla	151.66 5	eLR	LR	07 03 15.3	
	comp=Z,262nm,23.0s					
PPT2	Papeete2	157.75 32	eLR	LR	07 06 02.9	
	comp=Z,559nm,23.5s					
TBI	Tubuai	162.78 40	eLR	LR	07 08 28.7	
	comp=Z,291nm,25.0s					

WEL 14 06:01:11.2±1.2, 42°S±8°×17°8E±°, h33km, ML4.0/11, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PXZ	Pawanui	2.19	327	P	Pn	06 01 45.1	-0.3
PXZ				S	Sn	06 02 11.7	+0.3
PAWZ	Paruwai Farm	2.29	282	P	Pn	06 01 46.4	-0.2
PAWZ				S	Sn	06 02 14.9	+1.2
MTW	Mount Morrison	2.30	288	P	Pn	06 01 46.6	-0.2
MTW				S	Sn	06 02 13.9	0.0
PLWZ	Palliser	2.38	277	P	Pn	06 01 47.7	-0.2
PLWZ				S	Sn	06 02 15.9	0.0
CAW	Cannon Point	2.62	286	P	Pn	06 01 51.3	0.0
CAW				S	Sn	06 02 22.8	+0.8
OGWZ	Otaki Gorge	2.66	293	P	Pn	06 01 52.2	+0.4
OGWZ				S	Sn	06 02 24.2	+1.4
KIW	Kapiti Island	2.82	290	P	Pn	06 01 54.4	+0.4
KIW				S	Sn	06 02 27.8	+0.9
TCW	Tory Channel	3.17	281	P	Pn	06 01 59.5	+0.7
TCW				S	Sn	06 02 36.3	+0.8
TUWZ	Tuamarina	3.37	276	P	Pn	06 02 02.6	+1.1
TUWZ				S	Sn	06 02 40.1	-0.3
BSWZ	Blackbirch Sta	3.39	272	P	Pn	06 02 02.1	+0.4
BSWZ				S	Sn	06 02 42.0	+1.2
KHZ	Kahutara	3.65	260	P	Pn	06 02 04.0	-1.3
NNZ	Nelson	3.83	279	P	Pn	06 02 08.8	+1.0
THZ	Tophouse	4.11	270	P	Pn	06 02 11.2	-0.5
THZ				S	Sn	06 02 59.5	+0.8
NEZ	North Egmont	4.20	307	P	Pn	06 02 15.6	+2.7
OKCZ	Okains Bay	4.33	243	P	Pn	06 02 13.6	-1.2
OKCZ				S	Sn	06 03 02.3	-1.9
QRZ	Quartz Range	4.54	282	P	Pn	06 02 18.6	+0.9
QRZ				S	Sn	06 03 11.4	+2.1
MQZ	McQueen's Vall	4.60	245	P	Pn	06 02 16.4	-2.0
MQZ				S	Sn	06 03 07.7	-3.0
LTZ	Lake Taylor	4.63	257	P	Pn	06 02 18.1	-0.8
LTZ				S	Sn	06 03 10.3	-1.2
OXZ	Oxford	4.91	251	P	Pn	06 02 21.0	-1.6
OXZ				S	Sn	06 03 16.0	-2.3
DSZ	Denniston Nort	4.93	270	P	Pn	06 02 23.1	+0.1
DSZ				S	Sn	06 03 20.0	+1.1
INZ	Inchbonnie	5.22	259	P	Pn	06 02 26.4	-0.6
RPZ	Rata Peaks	5.70	249	P	Pn	06 02 32.4	-1.2
WVZ	Waitaha Valley	5.79	256	P	Pn	06 02 34.3	-0.4
LBZ	Lake Benmore	6.50	245	P	Pn	06 02 44.3	-0.3
FOZ	Fox Glacier	6.53	253	P	Pn	06 02 45.2	+0.3

ISK 14 06:05:53.5, 36°.42N±28°.86E, h14km, ML2.4/9
ATH 14 06:05:54.0, 36°.47N±28°.86E, h43km±2km, ML1.9/2, Error ellipse: s-maj=3.8km s-min=1.2km az=181.0
ISCJB 14 06:05:54.7±0.4, 36°.43N±0°.03×28°.88E±0°.03, h25km±4km, Error ellipse: s-maj=5.0km s-min=4.0km az=177.0
CSEM 14 06:05:54.5±0.2, 36°.43N±28°.88E, h20km, ML2.8, Error ellipse: s-maj=4.1km s-min=3.0km az=1.0
DDA 14 06:05:54.2, 36°.51N±28°.86E, h7km, Ml2.8

ISC 14 06:05:54.0±1.0, 36°.43N±0°.03×28°.86E±0°.02, h16km±8km, n57, o0°48/88, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	Fethiye	0.27	41	PG	Pg	06 05 59.8	-0.1
FETY				SG	Sb	06 06 04.5	-0.5
FETY	Fethiye	0.27	41	P	Pg	06 05 59.8	-0.1
FETY				eSg	Sb	06 06 04.5	-0.5
DALY	Dalyan (Mu¨la	0.42	337	PG	Pg	06 06 02.6	+0.1
DALY				SG	Sb	06 06 09.2	0.0
DALY	Dalyan (Mu¨la	0.42	337	iP	Pg	06 06 02.8	+0.3
DALY				iS	Sb	06 06 09.1	0.0
DALY	Dalyan (Mu¨la	0.42	337	P	Pg	06 06 02.8	+0.3
DALY				eSg	Sb	06 06 09.2	0.0
TURN	Turunc	0.49	335	PG	Pn	06 06 05.9	-0.5
TURN				SG	Sn	06 06 14.9	+0.4
TURN	Turunc	0.49	335	iP	Pn	06 06 06.4	0.0
TURN				iS	Sn	06 06 14.9	+0.4
TURN	Turunc	0.49	335	ePg	Pn	06 06 05.9	-0.5
TURN	Turunc	0.49	335	P	Pn	06 06 06.4	0.0
TURN				eSg	Sn	06 06 14.9	+0.4
MRSB	Marmaris-Mugla	0.60	298	PG	Pg	06 06 05.9	-0.1
MRSB				SG	Sb	06 06 14.9	+0.3
MRSB	Marmaris-Mugla	0.60	298	ePg	Pg	06 06 05.9	-0.1
MRSB				eSg	Sb	06 06 14.9	+0.3
ARG	Arkhangelos	0.63	250	PG	Pg	06 06 06.2	-0.2
ARG	Arkhangelos	0.63	250	P	Pn	06 06 07.9	-0.5
ARG				S	Sn	06 06 17.6	-0.5
ARG				AML	AML	06 06 19.0	
	comp=N,146μm,0.2s						
ARG				AML	AML	06 06 20.3	
	comp=E,199μm,0.3s						
ARG	Arkhangelos	0.63	250	ePg	Pg	06 06 06.2	-0.2
ARG	Arkhangelos	0.63	250	P	Pn	06 06 07.8	-0.5
ARG				S	Sn	06 06 17.6	-0.5
AKAS	Kas	0.63	108	PG	Pg	06 06 06.1	-0.4
AKAS				SG	Sb	06 06 15.5	0.0
AKAS	Kas	0.63	108	iP	Pg	06 06 06.2	-0.3
AKAS				iS	Sb	06 06 16.4	+0.9
AKAS	Kas	0.63	108	P	Pg	06 06 06.2	-0.3
AKAS				eSg	Sb	06 06 15.5	0.0
AKAS				S	Sb	06 06 16.4	+0.9
KSL	Kastellorizon	0.65	116	P	Pg	06 06 06.8	+0.1
KSL				S	Sn	06 06 18.6	+0.1
KSL				AML	AML	06 06 18.9	
	comp=E,310μm,0.7s						
KSL				AML	AML	06 06 19.8	
	comp=N,154μm,0.5s						
YER	Yerkesik	0.84	327	PG	Pb	06 06 09.6	-0.7
YER	Yerkesik	0.84	327	ePg	Pb	06 06 09.6	-0.7
GLHS	Gihisar (BURDU	0.89	35	PG	Pb	06 06 11.2	+0.1
GLHS	Gihisar (BURDU	0.89	35	ePg	Pb	06 06 11.2	+0.1
ELL	Elmali	0.90	69	PG	Pb	06 06 11.3	-0.1
ELL	Elmali	0.90	69	ePg	Pb	06 06 11.3	-0.1
GOLH	Golhisar	0.98	35	iP	Pb	06 06 12.2	-0.5
GOLH				iS	Sg	06 06 26.3	+0.4
GOLH	Golhisar	0.98	35	P	Pb	06 06 12.2	-0.5
GOLH				S	Sg	06 06 26.3	+0.4
DATC	Datca-Mugla	1.02	289	PG	Pb	06 06 13.6	+0.3
DATC	Datca-Mugla	1.02	289	ePg	Pb	06 06 13.6	+0.3
TAVA	DENIZLI_Tavas	1.03	2	iP	Pb	06 06 13.0	-0.6
TAVA				iS	Sg	06 06 27.5	-0.1
TAVA	DENIZLI_Tavas	1.03	2	P	Pb	06 06 13.0	-0.6
TAVA				S	Sg	06 06 27.5	-0.1
DAT	Datca	1.07	286	PN	Pn	06 06 14.7	+0.1
DAT	Datca	1.07	286	iP	Pn	06 06 14.7	+0.1
DAT				iS	Sn	06 06 29.9	+0.6
DAT	Datca	1.07	286	ePn	Pn	06 06 14.7	+0.1
DAT

DNZL				*i* S		**Sb**	06 06 33.3	-0.4
DNZL	**Cakiroluk**	**1.26**	**7**	P		**Pn**	06 06 16.6	-0.6
DNZL				S		**Sb**	06 06 33.3	-0.4
BDRM	**Kayabasi**	**1.30**	**299**	*i* P		**Pn**	06 06 17.8	+0.2
BDRM				*i* S		**Sn**	06 06 35.1	+0.4
BDRM	**Kayabasi**	**1.30**	**299**	P		**Pn**	06 06 17.8	+0.2
BDRM				S		**Sn**	06 06 35.1	+0.4
KORT	**Korkueli**	**1.32**	**64**	PN		**Pn**	06 06 18.3	+0.3
KORT	**Korkueli**	**1.32**	**64**	*e*Pn		**Pn**	06 06 18.3	+0.3
BODT	**Bodrum**	**1.40**	**297**	PN		**Pn**	06 06 18.6	-0.3
BODT	**Bodrum**	**1.40**	**297**	*e*Pn		**Pn**	06 06 18.6	-0.3
AYDN	**Tasoluk**	**1.46**	**328**	*i* P		**Pb**	06 06 20.6	-0.2
AYDN				*i* S		**Sb**	06 06 39.3	+0.1
AYDN	**Tasoluk**	**1.46**	**328**	P		**Pb**	06 06 20.6	-0.2
AYDN				S		**Sb**	06 06 39.3	+0.1
KARP	**Karpathos**	**1.64**	**238**	PN		**Pn**	06 06 22.4	+0.1
KARP	**Karpathos**	**1.64**	**238**	P		**Pn**	06 06 22.3	+0.1
KARP				S		**Sn**	06 06 42.4	-0.6
KARP	**Karpathos**	**1.64**	**238**	P		**Pn**	06 06 22.2	0.0
KARP				S		**Sn**	06 06 42.4	-0.6
AYDB	**Zeytinkoy-Aydi**	**1.70**	**333**	PN		**Pn**	06 06 23.4	+0.2
AYDB	**Zeytinkoy-Aydi**	**1.70**	**333**	*e*Pn		**Pn**	06 06 23.4	+0.2
SMG	**Samos**	**2.06**	**309**	P		**Pn**	06 06 26.6	-1.5
SMG	**Samos**	**2.06**	**309**	P		**Pn**	06 06 27.0	-1.0
URLA	**Izmir**	**2.64**	**318**	PN		**Pn**	06 06 36.9	+0.9
URLA	**Izmir**	**2.64**	**318**	*e*Pn		**Pn**	06 06 36.9	+0.9
CHOS	**Chios island**	**2.97**	**312**	P		**Pn**	06 06 42.1	+1.5
CHOS	**Chios island**	**2.97**	**312**	P		**Pn**	06 06 41.1	+0.5
LAST	**Lasithi**	**3.03**	**246**	P		**Pn**	06 06 41.9	+0.5
LAST	**Lasithi**	**3.03**	**246**	P		**Pn**	06 06 41.7	+0.3

IDC 14 06:07:24.2±1.3, 51°.67N×96°.09E, h0km, mb1 3.0/3, mb1mx2.8/75, mbtmp3.0/3, ML2.4/2, Error ellipse: s-maj=39.4km s-min=10.7km az=178.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLY	**Talaya**	**4.71**	**87**	Pg	Pb	06 08 47.8	+0.3
	0.0nm,0.3s,baz=273,slow=13,SNR=3.7						
TLY				Lg	Lg	06 09 50.4	
	0.1nm,0.3s,baz=58,slow=9.5,SNR=8.0						
ZALV	**Zalesovo Beam**	**7.20**	**293**	Pn	Pn	06 09 08.5	-2.2
	0.3nm,0.3s,baz=103,slow=12,SNR=3.0						
ZALV				Lg	Lg	06 11 00.5	
	1.3nm,0.3s,baz=120,slow=26,SNR=7.1						
SONM	**Songino Array**	**7.70**	**116**	Pg	Pb	06 09 43.3	+4.7
	0.3nm,0.3s,baz=300,slow=18,SNR=6.4						
SONM				Lg	Lg	06 11 27.6	
	1.7nm,0.3s,baz=302,slow=30,SNR=12						
MKAR	**Makanchi Array**	**10.25**	**247**	Pn	Pn	06 09 53.3	+0.8
	baz=61,slow=12,SNR=1.9						
MKAR				Lg	Lg	06 12 46.0	
	0.1nm,0.3s,baz=39,slow=28,SNR=3.7						
KURBB	**Kurchatov Arra**	**11.08**	**271**	Pn	Pn	06 10 03.3	-0.5
	0.0nm,0.3s,baz=77,slow=16,SNR=2.8						
KURBB				Lg	Lg	06 13 04.2	
	0.0nm,0.3s,baz=329,slow=20,SNR=4.1						

ISN 14 06:09:40.0±0.3, 37°.21N×42°.59E, h0km, ML2.9
DDA 14 06:09:41.8, 37°.25N×42°.52E, h5km, Ml3.0
CSEM 14 06:09:42.2±0.3, 37°.25N×42°.59E, h2km, ML2.8, Error ellipse: s-maj=7.2km s-min=5.0km az=16.0
ISK 14 06:09:42.4, 37°.31N×42°.48E, h5km, ML2.8/8

ISC 14 06:09:41.8±1.5, 37°.24N±0°.05×42°.56E±0°.02, h2km±10km, n39, σ0°.95/66, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRT	**Sirnak**	**0.28**	**339**	PG	**Pg**	06 09 47.0	-0.2
SIRT				SG	**Sg**	06 09 50.5	-0.3
SIRT	**Sirnak**	**0.28**	**339**	*e*Pg	**Pg**	06 09 47.0	-0.2
SIRT				*e*Sg	**Sg**	06 09 50.5	-0.3
SIRN	**S¨–rnak**	**0.28**	**335**	*i* P	**Pg**	06 09 47.0	-0.2
SIRN				*i* S	**Sg**	06 09 50.8	-0.1
SIRN	**S¨–rnak**	**0.28**	**335**	P	**Pg**	06 09 47.0	-0.2
SIRN				S	**Sg**	06 09 50.8	-0.1
SRTM	**Siirt_Merkez**	**0.91**	**326**	*i* P	**Pg**	06 09 58.9	-0.3
SRTM				*i* S	**Sn**	06 10 14.7	-0.8
SRTM	**Siirt_Merkez**	**0.91**	**326**	P	**Pg**	06 09 58.9	-0.3
SRTM				S	**Sn**	06 10 14.7	-0.8
HAKT	**HAKKARI**	**0.96**	**71**	*i* P	**Pb**	06 10 00.9	-0.5
HAKT				*i* S	**Sn**	06 10 15.3	-1.8
HAKT	**HAKKARI**	**0.96**	**71**	P	**Pb**	06 10 00.9	-0.5
HAKT				S	**Sn**	06 10 15.3	-1.8
GEVA	**Gevas**	**1.14**	**20**	*i* P	**Pg**	06 10 02.6	-1.0
GEVA				*i* S	**Sb**	06 10 18.9	-0.8
GEVA	**Gevas**	**1.14**	**20**	P	**Pg**	06 10 02.6	-1.0
GEVA				S	**Sb**	06 10 18.9	-0.8
BTMN	**Batman**	**1.22**	**303**	*i* P	**Pg**	06 10 05.1	0.0
BTMN				*i* S	**Sb**	06 10 22.3	+0.5
BTMN	**Batman**	**1.22**	**303**	P	**Pg**	06 10 05.1	0.0
BTMN				S	**Sb**	06 10 22.3	+0.5
GURO	**Guroymak-BITLI**	**1.37**	**342**	PN	**Pn**	06 10 07.9	-0.3
GURO				SN	**Sn**	06 10 26.6	-0.5
GURO	**Guroymak-BITLI**	**1.37**	**342**	*e*Pn	**Pn**	06 10 07.9	-0.3
GURO				*e*Sn	**Sn**	06 10 26.6	-0.5
SVAN	**Silvan-Diyarba**	**1.41**	**310**	PN	**Pn**	06 10 08.5	-0.1
SVAN				SN	**Sb**	06 10 27.6	+0.1
SVAN	**Silvan-Diyarba**	**1.41**	**310**	*i* P	**Pn**	06 10 08.6	-0.1
SVAN				*i* S	**Sg**	06 10 27.8	+0.6
SVAN	**Silvan-Diyarba**	**1.41**	**310**	P	**Pn**	06 10 08.6	-0.1
SVAN				S	**Sg**	06 10 27.8	+0.6
YOVA	**Hakkari_Y¨…kse**	**1.42**	**75**	*i* P	**Pn**	06 10 08.6	-0.3
YOVA				*i* S	**Sn**	06 10 31.1	+2.9
YOVA	**Hakkari_Y¨…kse**	**1.42**	**75**	P	**Pn**	06 10 08.6	-0.3
YOVA				S	**Sn**	06 10 31.1	+2.9
MARD	**Mardin**	**1.43**	**273**	*i* P	**Pn**	06 10 07.8	-1.2
MARD				*i* S	**Sb**	06 10 27.0	-1.0
ADCV	**BITLIS_Adilcev**	**1.57**	**5**	*i* P	**Pg**	06 10 12.1	+0.2
ADCV				*i* S	**Sg**	06 10 35.1	+2.9
ADCV	**BITLIS_Adilcev**	**1.57**	**5**	P	**Pg**	06 10 12.1	+0.2
ADCV				S	**Sg**	06 10 35.1	+2.9
MAZI	**Mazidag**	**1.70**	**278**	PN	**Pn**	06 10 13.0	+0.3
MAZI	**Mazidag**	**1.70**	**278**	*e*Pn	**Pn**	06 10 13.0	+0.3
DIY	**Diyarbakir**	**1.97**	**290**	*e*Pn	**Pb**	06 10 17.9	-0.6
BNGL	**BINGOL**	**2.04**	**327**	*i* P	**Pn**	06 10 18.1	+0.6
BNGL				*i* S	**Sb**	06 10 45.9	+0.2
EKAR	**Karacoban**	**2.05**	**349**	*i* P	**Pb**	06 10 18.9	-1.0
EKAR				*i* S	**Sg**	06 10 48.0	+0.3
EKAR	**Karacoban**	**2.05**	**349**	P	**Pb**	06 10 18.9	-1.0
EKAR				S	**Sg**	06 10 48.0	+0.3
DYBB	**Diyarbakir**	**2.05**	**291**	PN	**Pn**	06 10 17.9	+0.4
DIYA	**Diyarbakir**	**2.06**	**290**	*i* P	**Pg**	06 10 21.1	-0.1
DIYA				*i* S	**Sb**	06 10 46.2	+0.2
DIYA	**Diyarbakir**	**2.06**	**290**	P	**Pg**	06 10 21.1	-0.1
DIYA				S	**Sb**	06 10 46.2	+0.2
HANI	**Diyarbakir_Han**	**2.08**	**305**	*i* P	**Pb**	06 10 20.7	+0.4
HANI	**Diyarbakir_Han**	**2.08**	**305**	P	**Pb**	06 10 20.7	+0.4
BNGB	**Bing¨¶l**	**2.29**	**320**	PN	**Pn**	06 10 21.0	+0.2
BINT	**Bingol**	**2.31**	**316**	*e*Pn	**Pn**	06 10 21.0	-0.1
AGRB	**Hanur-Agry**	**2.35**	**8**	PN	**Pn**	06 10 22.7	+1.0
AGRB	**Hanur-Agry**	**2.35**	**8**	*e*Pn	**Pn**	06 10 22.7	+1.0
SVRC	**Sivrice-ELAZID**	**2.82**	**295**	PN	**Pn**	06 10 28.8	+0.7
SVRC	**Sivrice-ELAZID**	**2.82**	**295**	*e*Pn	**Pn**	06 10 28.8	+0.7

NIED 14 06:11:00, 40°.90N×145°.40E, h5km, Mw3.7 Best double couple: M0=4.51000×10^14 NP1:φ=265.00000°, δ=31.00000°, λ=-85.00000°. NP2:φ=80.00000°, δ=60.00000°, λ=-93.00000°.
IDC 14 06:11:39.6±0.8, 40°.76N×145°.25E, h0km, mb3.9/15, mb1 4.0/17, mb1mx3.8/67, mbtmp3.9/17, ML3.1/2, MS3.5/3, Ms1 3.5/3, ms1mx2.8/68, Error ellipse: s-maj=20.5km s-min=19.0km az=65.0
JMA 14 06:11:41.5±0.2, 40°.90N×145°.36E, h65km±3km, M3.7
ISCJB 14 06:11:43.2±0.5, 40°.93N±0°.04×145°.14E±0°.05, h33km, mb3.8/16, MS3.8/2, Error ellipse: s-maj=5.9km s-min=5.2km az=159.1
NEIC 14 06:11:45.0±0.6, 40°.81N×145°.21E, h35km, mb4.0/1, Error ellipse: s-maj=13.0km s-min=11.7km az=105.0

ISC 14 06:11:44.9±0.8, 40°.91N±0°.06×145°.20E±0°.06, h35km, n37, σ1°.75/46, mb3.9/16, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERM	**Erimo**	**1.89**	**307**	*e*Pn	**Pn**	06 12 13.8	-0.9
ERM				*e*Sn	**Sn**	06 12 35.5	-1.8
JEM	**Erimo**	**1.90**	**307**	P	**Pn**	06 12 13.7	-1.0
JEM				*e*S	**Sn**	06 12 36.8	-0.6
JAK	**Akkeshi**	**2.12**	**350**	P	**Pn**	06 12 16.0	-1.9
JAK				*e*S	**Sn**	06 12 41.1	-1.9
JCH	**Churui**	**2.19**	**322**	P	**Pn**	06 12 17.5	-1.3
JCH				*e*S	**Sn**	06 12 42.8	-1.9
JOB	**Onbets**	**2.24**	**333**	*e*S	**Sn**	06 12 44.4	-1.5
JNBK	**Urakawa-nobuka**	**2.29**	**308**	P	**Pn**	06 12 19.9	-0.3
JNBK				*e*S	**Sn**	06 12 47.3	+0.1
NEM2	**Nemuro 2**	**2.49**	**9**	P	**Pn**	06 12 20.9	-2.0
NEM2				*e*S	**Sn**	06 12 48.7	-3.4
JAR	**Ashorobuto**	**2.62**	**336**	P	**Pn**	06 12 22.8	-1.9
JAR				*e*S	**Sn**	06 12 52.8	-2.4
JNK	**Nakash**	**2.70**	**353**	P	**Pn**	06 12 23.4	-2.5
JNK				*e*S	**Sn**	06 12 53.0	-4.3
JBT2	**Biratori 2**	**2.83**	**312**	P	**Pn**	06 12 26.6	-1.0
JANG	**Nango**	**2.85**	**260**	P	**Pn**	06 12 25.1	-2.8
JOT	**Ohata**	**3.17**	**280**	P	**Pn**	06 12 30.7	-1.6
JOT				*e*S	**Sn**	06 13 05.6	-3.3
JTKR	**Abashiri--Toko**	**3.21**	**343**	P	**Pn**	06 12 32.0	-0.8
JTKR				*e*S	**Sn**	06 13 08.3	-1.5
JKB	**Kayabe**	**3.29**	**289**	P	**Pn**	06 12 32.8	-1.0
JKB				*e*S	**Sn**	06 13 08.8	-2.9
ASAJ	**Asahikawa**	**3.74**	**330**	Pn	**Pn**	06 12 40.4	+0.2
	1.9nm,0.3s,baz=184,slow=8.5,SNR=5.2						
ASAJ				Sn	**Sn**	06 13 23.5	+0.5
	2.1nm,0.3s,baz=107,slow=19,SNR=4.7						
ASAJ				LR	LR	06 14 34.9	
	comp=Z,182nm,18.3s,baz=204,slow=45						
MAJO	**Matsushiro**	**6.99**	**234**	Pn	**Pn**	06 13 23.2	-1.6
USRK	**Ussuriysk Ar.**	**10.29**	**293**	Pn	**Pn**	06 14 10.7	+0.7
	0.3nm,0.3s,baz=99,slow=16,SNR=7.1						
SEY	**Seymchan**	**22.47**	**9**	P	**P**	06 16 40.6	-0.2
	0.9nm,0.2s,baz=161,slow=18,SNR=3.5						
ULN	**Ulaanbaatar**	**27.92**	**297**	*e*P	**P**	06 17 35.0	+3.3
	1.3nm,0.4s						
SONM	**Songino Array**	**28.36**	**297**	P	**P**	06 17 37.1	+1.4
	4.8nm,1.2s,baz=94,slow=8.9,SNR=8.0						
ZALV	**Zalesovo Beam**	**41.62**	**309**	P	**P**	06 19 30.5	+1.2
	0.6nm,0.3s,baz=104,slow=6.1,SNR=3.4						
KDAK	**Kodiak Island**	**42.26**	**45**	P	**P**	06 19 35.0	+0.5
	2.5nm,0.6s,baz=280,slow=6.1,SNR=3.4						
ILAR	**Eielson Array**	**44.64**	**34**	P	**P**	06 19 54.6	+1.0
	0.7nm,0.8s,baz=254,slow=7.4,SNR=8.7						
MKAR	**Makanchi Array**	**44.67**	**300**	P	**P**	06 19 54.8	+0.6
	0.4nm,0.7s,baz=91,slow=7.3,SNR=3.5						
KURK	**Kurchatov**	**45.97**	**306**	P	**P**	06 20 05.2	+0.9
KURBB	**Kurchatov Arra**	**46.05**	**306**	P	**P**	06 20 05.2	+0.3
	2.2nm,0.7s,baz=76,slow=8.7,SNR=12						
BVAR	**Borovoye Array**	**50.22**	**311**	P	**P**	06 20 38.0	+0.9
	0.7nm,0.5s,baz=82,slow=10,SNR=4.5						
WRA	**Warramunga Arr**	**61.37**	**192**	P	**P**	06 21 56.2	-1.1
	0.8nm,0.8s,baz=13,slow=7.4,SNR=4.6						
ASAR	**Alice Springs**	**65.09**	**191**	P	**P**	06 22 20.7	-1.2
	0.4nm,0.6s,baz=14,slow=7.1,SNR=4.2						
FINES	**FINESS Array B**	**66.75**	**333**	P	**P**	06 22 32.8	+0.6
	0.7nm,0.5s,baz=61,slow=8.6,SNR=6.0						
NVAR	**Mina Array Bea**	**70.34**	**56**	P	**P**	06 22 56.5	+1.2
	0.2nm,0.4s,baz=266,slow=7.0,SNR=2.6						
KBZ	**Khabaz**	**70.60**	**311**	P	**P**	06 22 57.7	+1.3
	0.5nm,0.4s,baz=41,slow=20,SNR=4.2						
AKASG	**Malin Array Be**	**73.00**	**323**	P	**P**	06 23 10.3	-0.5
	1.6nm,0.8s,baz=45,slow=6.4,SNR=6.3						
MLR	**Muntele Rosu**	**78.28**	**321**	LR	LR	07 00 33.1	
	comp=Z,20nm,18.0s,baz=82,slow=37						
ANMO	**Albuquerque**	**79.86**	**52**	LR	LR	06 54 35.1	
	comp=Z,116nm,21.8s,baz=32,slow=32						
MMAI	**Mount Meron Ar**	**82.07**	**307**	P	P	06 24 04.1	+2.3
	0.6nm,0.2s,baz=40,slow=12,SNR=1.3						
SNAA	**Sanae**	**145.31**	**197**	PKPbc	**PKPdf**	**06 31 16.9**	**-0.8**
	1.4nm,1.0s,baz=180,slow=4.0,SNR=6.5						

DJA 14 06:17:17.6±6.2, 7°.5S±50°.×12°.4E±3°.0, h515km±50km, M4.2/6, mB5.0/1, mb4.2/2, MLv4.1/6, Mw(mB)4.3/1
IDC 14 06:17:29.1±1.4, 7°.48S×124°.26E, h416km±35km, mb3.4/3, mb1 3.5/5, mb1mx3.0/52, mbtmp4.1/5, Error ellipse: s-maj=66.0km s-min=19.5km az=32.0

ISC 14 06:17:28.3±1.0, 7°.3S±0°.1×124°.2E±0°.1, h400km, n10, σ2°.03/12, mb3.6/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**2.40**	**179**	P	**Pn**	**06 18 29.1**	**+2.0**
EDFI	**Ende, Flores**	**2.87**	**241**	P	**Pn**	**06 18 32.0**	**+1.4**
BATI	**Baumata**	**2.90**	**191**	P	**Pn**	**06 18 33.1**	**+2.3**
	51nm,0.3s,baz=298,slow=4.2,SNR=38						
BATI				S	**S**	**06 19 22.5**	**+1.2**
	23nm,0.3s,baz=306,slow=19,SNR=4.2						
BATI	**Baumata**	**2.90**	**191**	P	**Pn**	**06 18 33.0**	**+2.3**
BASI	**Baing, Sumba**	**4.60**	**231**	P	**Pn**	**06 18 46.7**	**+0.4**
WBSI	**Waikabubak, Su**	**5.30**	**244**	P	**Pn**	**06 18 52.3**	**-1.2**
WRA	**Warramunga Arr**	**15.91**	**143**	P	**P**	**06 20 50.3**	**-0.4**
	0.7nm,0.3s,baz=320,slow=11,SNR=76						
WRA				S	**S**	**06 23 34.1**	**-4.1**
	0.1nm,0.3s,baz=321,slow=21,SNR=3.4						
PMG	**Port Moresby**	**22.78**	**97**	P	**P**	**06 21 57.4**	**-0.9**
	7.9nm,0.3s,baz=277,slow=14,SNR=4.5						
SONM	**Songino Array**	**57.15**	**346**	P	**P**	**06 26 35.2**	**+0.1**
	0.4nm,0.5s,baz=160,slow=8.9,SNR=2.8						
MKAR	**Makanchi Array**	**65.49**	**330**	P	**P**	**06 27 30.4**	**+0.1**
	0.7nm,0.5s,baz=129,slow=6.8,SNR=12						

IDC 14 06:24:50.6±3.2, 62°.10N×152°.78W, h0km, mb3.1/1, mb1 3.6/4, mb1mx3.2/76, mbtmp3.2/4, ML2.9/3, Error ellipse: s-maj=44.6km s-min=19.8km az=102.0
ISCJB 14 06:25:04.3±0.5, 63°.08N±0°.02×151°.57W±0°.06, h10km±5km, mb3.3/1, Error ellipse: s-maj=4.6km s-min=2.9km az=21.4
NEIC 14 06:25:05.0±0.0, 63°.08N×151°.61W, h14km, ML3.4(AEIC), After AEIC.

ISC 14 06:25:04.1±1.2, 63°.09N±0°.03×151°.65W±0°.03, h11km±10km, n66, σ1°.09/79, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPLA	**Purkeypile**	**0.31**	**232**	P	**Pb**	**06 25 11.2**	**-0.6**
PPLA				S	**Sb**	**06 25 15.7**	**-1.2**
CAST	**Castle Rocks**	**0.39**	**330**	P	**Pb**	**06 25 13.2**	**+0.3**
CAST				S	**Sb**	**06 25 19.1**	**+0.2**
KTH	**Kantishna Hill**	**0.57**	**35**	P	**Pb**	**06 25 16.0**	**-0.1**
KTH				S	**Sg**	**06 25 23.7**	**+0.9**
TRF	**Thorofare Moun**	**0.72**	**59**	P	**Pg**	**06 25 18.6**	**+0.6**
TRF				S	**Sg**	**06 25 28.0**	**+0.6**
CHUM	**Lake Minchumin**	**0.85**	**340**	P	**Pn**	**06 25 22.0**	**0.0**
CHUM				S	**Sn**	**06 25 33.5**	**-0.9**
HUR	**Hurricane**	**0.93**	**96**	P	**Pg**	**06 25 21.7**	**-0.3**
BPAW	**Bear Paw Mtn.**	**1.06**	**16**	P	**Pn**	**06 25 24.8**	**-0.1**
BPAW				S	**Sn**	**06 25 39.4**	**-0.2**
SKT	**Skwentna**	**1.11**	**177**	P	**Pb**	**06 25 25.1**	**-0.3**
SKT				S	**Sb**	**06 25 39.3**	**-0.5**
RND	**Reindeer**	**1.30**	**75**	P	**Pn**	**06 25 28.1**	**-0.2**
RND				S	**Sb**	**06 25 45.0**	**-0.4**
MCK	**McKinley**	**1.38**	**61**	P	**Pn**	**06 25 29.9**	**+0.5**
MCK				S	**Sn**	**06 25 48.3**	**+0.7**
BWN	**Browne**	**1.46**	**41**	P	**Pn**	**06 25 31.0**	**+0.6**
SUA	**Susitna One**	**1.69**	**165**	P	**Pn**	**06 25 34.0**	**+0.4**
SUA				S	**Sn**	**06 25 56.6**	**+1.4**
SPCG	**Spurr Capps Gl**	**1.81**	**186**	P	**Pn**	**06 25 35.8**	**+0.5**
GHO	**Glory Hole Cre**	**1.83**	**135**	P	**Pn**	**06 25 35.7**	**+0.2**
SPCP	**Crater Peak Br**	**1.84**	**188**	P	**Pn**	**06 25 36.5**	**+0.7**
SPWE	**Spurr West**	**1.87**	**194**	P	**Pn**	**06 25 37.3**	**+1.2**
NEA	**Nenana**	**1.88**	**36**	P	**Pn**	**06 25 35.6**	**-0.6**
PMR	**Palmer**	**1.91**	**141**	P	**Pn**	**06 25 36.8**	**+0.4**
CKT	**Bend**	**1.91**	**188**	P	**Pn**	**06 25 37.7**	**+1.0**
CKL	**Chakachamna La**	**1.93**	**190**	P	**Pn**	**06 25 37.8**	**+0.9**
DHY	**Denali Highway**	**1.95**	**88**	P	**Pn**	**06 25 37.5**	**+0.3**
MLY	**Manley**	**1.99**	**11**	P	**Pn**	**06 25 38.5**	**+0.8**
TT01	**Tatalina**	**2.00**	**267**	P	**Pn**	**06 25 38.1**	**+0.3**
SML	**Sawmill**	**2.01**	**128**	P	**Pn**	**06 25 38.5**	**+0.6**
FIB	**Fire Island**	**2.05**	**160**	P	**Pn**	**06 25 38.7**	**+0.3**
WRH	**Wood River Hil**	**2.10**	**47**	P	**Pn**	**06 25 38.7**	**-0.5**
RC01	**Rabbit Creek A**	**2.20**	**155**	P	**Pn**	**06 25 41.4**	**+0.9**
KNK	**Knik Glacier**	**2.25**	**137**	P	**Pn**	**06 25 42.5**	**+1.2**
CCB	**Clear Creek Bu**	**2.31**	**46**	P	**Pn**	**06 25 41.5**	**-0.6**
SCM	**Sheep Creek Mo**	**2.37**	**120**	P	**Pn**	**06 25 43.8**	**+0.8**
MDM	**Murphy Dome**	**2.41**	**37**	P	**Pn**	**06 25 43.0**	**-0.5**
HDA	**Harding Lake**	**2.48**	**56**	P	**Pn**	**06 25 44.6**	**+0.3**
DFR	**Drift River**	**2.55**	**192**	P	**Pn**	**06 25 47.0**	**+1.5**
PS08	**TAPS Pump Stn8**	**2.59**	**54**	P	**Pn**	**06 25 46.6**	**+0.7**
NCT	**North Crescent**	**2.61**	**194**	P	**Pn**	**06 25 47.0**	**+0.8**
RDWB	**Redoubt West**	**2.67**	**193**	P	**Pn**	**06 25 48.6**	**+1.5**
SLKM	**Skilak Lake**	**2.68**	**165**	P	**Pn**	**06 25 47.9**	**+0.8**
ILAR	**Eielson Array**	**2.70**	**49**	Pn	**Pn**	**06 25 46.9**	**-0.4**
	1.2nm,0.3s,baz=232,slow=14,SNR=28						
ILAR				Pg	**Pg**	**06 25 56.0**	**+0.2**
	7.2nm,0.3s,baz=224,slow=18,SNR=49						
ILAR				Sn	**Sb**	**06 26 28.5**	**+3.1**
	19nm,0.3s,baz=229,slow=28,SNR=19						
ILB	**Eielson Array**	**2.70**	**49**	P	**Pn**	**06 25 47.0**	**-0.4**
SVW2	**Sparrevohn**	**2.72**	**225**	P	**Pn**	**06 25 48.6**	**+0.9**
PAX	**Paxson**	**2.82**	**90**	P	**Pn**	**06 25 50.5**	**+1.4**
PS06	**TAPS Pump Stn6**	**2.90**	**16**	P	**Pn**	**06 25 51.5**	**+1.4**
PS11	**TAPS Pump St11**	**3.03**	**107**	P	**Pn**	**06 25 52.8**	**+0.8**
IM04	**Indian Mountai**	**3.04**	**343**	P	**Pn**	**06 25 53.2**	**+1.1**
HARP	**HAARP**	**3.07**	**100**	P	**Pn**	**06 25 53.6**	**+1.2**
KLU	**Klutina**	**3.12**	**118**	P	**Pn**	**06 25 54.7**	**+1.5**
RIDG	**Independ'e Rid**	**3.13**	**75**	P	**Pn**	**06 25 54.5**	**+1.1**
JPK	**Jack Peak**	**3.13**	**128**	P	**Pn**	**06 25 54.6**	**+1.2**
SEW	**Seward**	**3.17**	**160**	P	**Pn**	**06 25 55.9**	**+2.0**
VLZ	**Valdez**	**3.18**	**126**	P	**Pn**	**06 25 55.3**	**+1.4**
DIV	**Divide**	**3.39**	**123**	P	**Pn**	**06 25 58.1**	**+1.1**
DOT	**Dot Lake**	**3.46**	**77**	P	**Pn**	**06 25 58.0**	**+0.1**
SCRK	**Sand Creek**	**3.55**	**72**	P	**Pn**	**06 25 59.4**	**+0.2**
BMRM	**Bremner River**	**3.94**	**120**	P	**Pn**	**06 26 05.7**	**+1.2**
VRDI	**Verde Repeater**	**4.27**	**112**	P	**Pn**	**06 26 10.3**	**+1.1**
BCA3	**Beaver Creek A**	**4.49**	**86**	P	**Pn**	**06 26 13.4**	**+1.4**
BALM	**Baldy**	**4.84**	**111**	P	**Pn**	**06 26 18.2**	**+1.4**
KIAG	**Kiagna River**	**4.89**	**112**	P	**Pn**	**06 26 18.2**	**+0.6**
EGAK	**Eagle**	**4.93**	**65**	*e*Pn	**Pn**	**06 26 18.6**	**+0.6**
BARN	**Barnard Glacie**	**5.12**	**109**	P	**Pn**	**06 26 21.6**	**+1.0**
BM3	**Burnt Mountain**	**5.26**	**31**	P	**Pn**	**06 26 22.6**	**+0.1**
DAWY	**Dawson**	**5.56**	**74**	*e*Pn	**Pn**	**06 26 27.0**	**+0.3**
	6.3nm,0.6s						
DAWY				*e*Sg	**Sg**	**06 27 58.1**	**-4.3**
TOLK	**Toolik Lake Re**	**5.64**	**8**	P	**Pn**	**06 26 29.5**	**+1.7**
INK	**Inuvik**	**9.10**	**47**	Pn	**Pn**	**06 27 16.4**	**+1.3**
	0.2nm,0.3s,baz=236,slow=18,SNR=2.9						
INK				Sn	**Sn**	**06 28 56.2**	**-1.0**
	baz=289,slow=14,SNR=1.7						
YKA	**Yellowknife Ar**	**16.80**	**75**	Pn	**Pn**	**06 28 57.5**	**-1.5**
	0.0nm,0.3s,baz=286,slow=10,SNR=2.5						
NVAR	**Mina Array Bea**	**31.82**	**125**	P	P	06 31 14.8	-14
	0.2nm,0.4s,baz=341,slow=15,SNR=3.7						

DDA 14 06:25:54.7, 37°.24N×42°.53E, h10km, Ml3.7
ISN 14 06:25:54.3±0.7, 37°.18N×42°.56E, h0km±2km, ML3.6
ISK 14 06:25:55.4, 37°.31N×42°.48E, h6km, ML3.5/12
CSEM 14 06:25:55.2±0.2, 37°.25N×42°.55E, h2km, ML3.5, Error ellipse: s-maj=4.3km s-min=3.4km az=42.0
ATA 14 06:25:57.3±0.6, 37°.49N×42°.51E, h13km±16km, ML4.3, MW4.1

**ISC 14 06:25:54.4±1.2, 37°.22N±0°.03×42°.52E±0°.02, h2

ELZG	**Elazig**	**3.08 296**	*i* P	**Pn**	**06 26 44.5**	**+0.3**
ELZG	**Elazig**	**3.08 296**	P	**Pn**	**06 26 44.5**	**+0.3**
MALT	**Malatya**	**3.42 290**	PN	**Pn**	**06 26 49.3**	**+0.4**
MALT	**Malatya**	**3.42 290**	*e*Pn	**Pn**	**06 26 49.3**	**+0.4**
BHD	**Baghdad**	**4.22 158**	*e*Pn	**Pn**	**06 27 01.0**	**+1.3**
	SNR=3.0					
BHD			*e*Sn	**Sn**	**06 27 48.0**	**-1.6**
	SNR=3.0					
RTB	**Rutbah**	**4.55 204**	*e*Pn	**Pn**	**06 27 06.0**	**+1.7**
	SNR=3.0					
RTB			*e*Sn	**Sn**	**06 27 56.0**	**-1.9**
	SNR=3.0					

IDC 14 06:34:18.0±2.8, 53°.42N×87°.44E, h0km, mb1 2.9/2, mb1mx2.8/68, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=24.0km s-min=13.9km az=65.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.65**	**290**	*i*		06 44 30.0	
	baz=110,slow=332,SNR=1.2						
ZALV	**Zalesovo Beam**	**1.65**	**290**	Pg	Pn	06 34 46.6	-1.6
	2.3nm,0.3s,baz=110,slow=18,SNR=9.0						
ZALV				Lg	Lg	06 35 10.4	
	2.3nm,0.3s,baz=109,slow=26,SNR=6.6						
KURBB	**Kurchatov Arra**	**6.17**	**247**	Pn	Pn	06 35 51.3	+1.0
	0.1nm,0.3s,baz=63,slow=14,SNR=6.5						
KURBB				Sn	Sn	06 37 00.7	-0.8
	0.0nm,0.3s,baz=64,slow=25,SNR=2.8						
KURBB				Lg	Lg	06 37 33.4	
	0.1nm,0.3s,baz=63,slow=32,SNR=8.2						
MKAR	**Makanchi Array**	**7.41**	**209**	Pn	Pn	06 36 08.2	+0.9
	0.2nm,0.3s,baz=27,slow=13,SNR=6.7						
MKAR				Sn	Sn	06 37 33.0	+1.0
	0.3nm,0.3s,baz=22,slow=9.3,SNR=3.6						
MKAR				Lg	Lg	06 38 12.8	
	0.2nm,0.3s,baz=31,slow=31,SNR=6.2						

ISN 14 06:38:46.9±1.0, 37°.23N×42°.59E, h0km±4km, ML3.1
CSEM 14 06:38:49.1±0.2, 37°.20N×42°.52E, h2km, ML3.1, Error ellipse: s-maj=5.5km s-min=4.7km az=47.0
ISK 14 06:38:49.9, 37°.28N×42°.44E, h6km, ML3.1/8
DDA 14 06:38:49.2, 37°.22N×42°.44E, h8km, Ml3.1
ISC 14 06:38:49.8±1.2, 37°.24N±0°.04×42°.49E±0°.02, h8km±9km, n52, σ0°89/70, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRN	**S¨–rnak**	**0.26**	**346**	*i* P	**Pg**	**06 38 54.5**	**-0.6**
SIRN				*i* S	**Sg**	**06 38 59.2**	**+0.5**
SIRN	**S¨–rnak**	**0.26**	**346**	P	**Pg**	**06 38 54.5**	**-0.6**
SIRN				S	**Sg**	**06 38 59.2**	**+0.5**
SIRT	**Sirnak**	**0.26**	**350**	PG	**Pg**	**06 38 54.7**	**-0.4**
SIRT				SG	**Sg**	**06 38 58.8**	**+0.1**
SIRT	**Sirnak**	**0.26**	**350**	*e*Pg	**Pg**	**06 38 54.7**	**-0.4**
SIRT				*e*Sg	**Sg**	**06 38 58.8**	**+0.1**
SRTM	**Siirt_Merkez**	**0.88**	**329**	*i* P	**Pg**	**06 39 06.5**	**-0.2**
SRTM				*i* S	**Sg**	**06 39 18.1**	**0.0**
SRTM	**Siirt_Merkez**	**0.88**	**329**	P	**Pg**	**06 39 06.5**	**-0.2**
SRTM				S	**Sg**	**06 39 18.1**	**0.0**
HAKT	**HAKKARI**	**1.02**	**72**	*i* P	**Pb**	**06 39 09.4**	**-0.4**
HAKT				*i* S	**Sn**	**06 39 24.6**	**-0.6**
HAKT	**HAKKARI**	**1.02**	**72**	P	**Pb**	**06 39 09.4**	**-0.4**
HAKT				S	**Sn**	**06 39 24.6**	**-0.6**
GEVA	**Gevas**	**1.16**	**23**	*i* P	**Pn**	**06 39 11.9**	**-0.6**
GEVA				*i* S	**Sn**	**06 39 29.0**	**+0.4**
GEVA	**Gevas**	**1.16**	**23**	P	**Pn**	**06 39 11.9**	**-0.6**
GEVA				S	**Sn**	**06 39 29.0**	**+0.4**
BTMN	**Batman**	**1.17**	**304**	*i* P	**Pg**	**06 39 12.1**	**-0.2**
BTMN				*i* S	**Sb**	**06 39 28.1**	**+0.4**
BTMN	**Batman**	**1.17**	**304**	P	**Pg**	**06 39 12.1**	**-0.2**
BTMN				S	**Sb**	**06 39 28.1**	**+0.4**
GURO	**Guroymak-BITLI**	**1.36**	**345**	PN	**Pb**	**06 39 15.3**	**-0.3**
GURO				SN	**Sn**	**06 39 33.7**	**+0.2**
GURO	**Guroymak-BITLI**	**1.36**	**345**	*e*Pn	**Pb**	**06 39 15.3**	**-0.3**
GURO				*e*Sn	**Sn**	**06 39 33.7**	**+0.2**
MARD	**Mardin**	**1.37**	**274**	*i* P	**Pn**	**06 39 13.9**	**-1.4**
MARD				*i* S	**Sb**	**06 39 33.0**	**-0.5**
SVAN	**Silvan-Diyarba**	**1.37**	**312**	PN	**Pn**	**06 39 15.4**	**0.0**
SVAN	**Silvan-Diyarba**	**1.37**	**312**	*i* P	**Pn**	**06 39 15.3**	**0.0**
SVAN	**Silvan-Diyarba**	**1.37**	**312**	P	**Pn**	**06 39 15.3**	**0.0**
YOVA	**Hakkari_Y¨…kse**	**1.47**	**76**	*i* P	**Pg**	**06 39 17.5**	**-0.6**
YOVA				*i* S	**Sg**	**06 39 39.8**	**+2.7**
YOVA	**Hakkari_Y¨…kse**	**1.47**	**76**	P	**Pg**	**06 39 17.5**	**-0.6**
YOVA				S	**Sg**	**06 39 39.8**	**+2.7**
TVAN	**Van**	**1.47**	**29**	*i* P	**Pn**	**06 39 15.0**	**-1.9**
TVAN	**Van**	**1.47**	**29**	P	**Pn**	**06 39 15.0**	**-1.9**
VANB	**Van**	**1.53**	**27**	PN	**Pn**	**06 39 17.2**	**-0.3**
VANB	**Van**	**1.53**	**27**	*e*Pn	**Pn**	**06 39 17.2**	**-0.3**
MAZI	**Mazidag**	**1.65**	**278**	PN	**Pn**	**06 39 19.1**	**-0.1**
MAZI	**Mazidag**	**1.65**	**278**	*e*Pn	**Pn**	**06 39 19.1**	**-0.1**
DIY	**Diyarbakir**	**1.92**	**291**	*e*Pn	**Pb**	**06 39 24.6**	**-0.5**
DYBB	**Diyarbakir**	**2.00**	**292**	PN	**Pn**	**06 39 24.6**	**+0.6**
DIYA	**Diyarbakir**	**2.00**	**291**	*i* P	**Pn**	**06 39 24.5**	**+0.5**
DIYA	**Diyarbakir**	**2.00**	**291**	P	**Pn**	**06 39 24.5**	**+0.5**
BNGL	**BINGOL**	**2.01**	**329**	*i* P	**Pn**	**06 39 25.0**	**+0.7**
HANI	**Diyarbakir_Han**	**2.03**	**306**	*i* P	**Pb**	**06 39 27.6**	**+0.6**
HANI	**Diyarbakir_Han**	**2.03**	**306**	P	**Pb**	**06 39 27.6**	**+0.6**
EKAR	**Karacoban**	**2.04**	**351**	*i* P	**Pb**	**06 39 26.7**	**-0.6**
EKAR	**Karacoban**	**2.04**	**351**	P	**Pb**	**06 39 26.7**	**-0.6**
VRTB	**Varto-Mus**	**2.08**	**337**	PN	**Pn**	**06 39 25.6**	**+0.4**
VRTB	**Varto-Mus**	**2.08**	**337**	*e*Pn	**Pn**	**06 39 25.6**	**+0.4**
TUTA	**Tutak**	**2.17**	**7**	*i* P	**Pb**	**06 39 28.4**	**-1.1**
TUTA	**Tutak**	**2.17**	**7**	P	**Pb**	**06 39 28.4**	**-1.1**
CLDR	**Caldiran**	**2.21**	**30**	PN	**Pn**	**06 39 27.9**	**+0.9**
CLDR	**Caldiran**	**2.21**	**30**	*e*Pn	**Pn**	**06 39 27.9**	**+0.9**
AGRB	**Hanur-Agry**	**2.36**	**9**	PN	**Pn**	**06 39 29.9**	**+0.8**
AGRB	**Hanur-Agry**	**2.36**	**9**	*e*Pn	**Pn**	**06 39 29.9**	**+0.8**
SVRC	**Sivrice-ELAZID**	**2.77**	**295**	PN	**Pn**	**06 39 35.4**	**+0.8**
SVRC	**Sivrice-ELAZID**	**2.77**	**295**	*e*Pn	**Pn**	**06 39 35.4**	**+0.8**
URFA	**Urfa**	**2.93**	**275**	PN	**Pn**	**06 39 37.9**	**+1.1**
URFA	**Urfa**	**2.93**	**275**	*e*Pn	**Pn**	**06 39 37.9**	**+1.1**
PTK	**Pertek**	**2.95**	**305**	PN	**Pn**	**06 39 36.9**	**-0.3**
PTK	**Pertek**	**2.95**	**305**	*e*Pn	**Pn**	**06 39 36.9**	**-0.3**
MALT	**Malatya**	**3.40**	**290**	PN	**Pn**	**06 39 44.5**	**+1.3**
MALT	**Malatya**	**3.40**	**290**	*e*Pn	**Pn**	**06 39 44.5**	**+1.3**
RTB	**Rutbah**	**4.57**	**204**	*e*Pn	**Pn**	**06 40 00.0**	**+0.7**
	SNR=3.0						
RTB				*e*Sn	**Sn**	**06 40 50.0**	**-2.5**
	SNR=3.0						

ISN 14 06:41:12.8±0.3, 37°.28N×42°.49E, h0km, ML2.6
DDA 14 06:41:20.0, 37°.23N×42°.57E, h7km, Ml2.8
CSEM 14 06:41:20.6±0.3, 37°.28N×42°.60E, h2km, ML2.7, Error ellipse: s-maj=6.0km s-min=4.6km az=3.0
ISK 14 06:41:20.8, 37°.34N×42°.51E, h5km, ML2.7/8
ISC 14 06:41:20.7±1.5, 37°.30N±0°.06×42°.58E±0°.03, h2km±10km, n30, σ0°52/46, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRT	**Sirnak**	**0.23**	**330**	PG	**Pg**	**06 41 24.9**	**-0.2**
SIRT				SG	**Sg**	**06 41 28.2**	**+0.1**
SIRT	**Sirnak**	**0.23**	**330**	*e*Pg	**Pg**	**06 41 24.9**	**-0.2**
SIRT				*e*Sg	**Sg**	**06 41 28.2**	**+0.1**
SIRN	**S¨–rnak**	**0.24**	**325**	*i* P	**Pg**	**06 41 25.1**	**-0.1**
SIRN				*i* S	**Sg**	**06 41 29.0**	**+0.6**
SIRN	**S¨–rnak**	**0.24**	**325**	P	**Pg**	**06 41 25.1**	**-0.1**
SIRN				S	**Sg**	**06 41 29.0**	**+0.6**
SRTM	**Siirt_Merkez**	**0.86**	**323**	*i* P	**Pg**	**06 41 37.4**	**+0.1**
SRTM				*i* S	**Sb**	**06 41 51.4**	**+0.8**
SRTM	**Siirt_Merkez**	**0.86**	**323**	P	**Pg**	**06 41 37.4**	**+0.1**
SRTM				S	**Sb**	**06 41 51.4**	**+0.8**
HAKT	**HAKKARI**	**0.93**	**74**	*i* P	**Pg**	**06 41 38.7**	**+0.2**
HAKT				*i* S	**Sb**	**06 41 52.6**	**0.0**
HAKT	**HAKKARI**	**0.93**	**74**	P	**Pg**	**06 41 38.7**	**+0.2**
HAKT				S	**Sb**	**06 41 52.6**	**0.0**
GEVA	**Gevas**	**1.08**	**20**	*i* P	**Pg**	**06 41 41.5**	**+0.2**
GEVA				*i* S	**Sn**	**06 41 58.4**	**-0.2**
GEVA	**Gevas**	**1.08**	**20**	P	**Pg**	**06 41 41.5**	**+0.2**
GEVA				S	**Sn**	**06 41 58.4**	**-0.2**
BTMN	**Batman**	**1.20**	**300**	*i* P	**Pg**	**06 41 43.6**	**0.0**
BTMN	**Batman**	**1.20**	**300**	P	**Pg**	**06 41 43.6**	**0.0**
GURO	**Guroymak-BITLI**	**1.32**	**341**	PN	**Pn**	**06 41 45.9**	**-0.4**
GURO				SN	**Sn**	**06 42 04.4**	**-0.1**
GURO	**Guroymak-BITLI**	**1.32**	**341**	*e*Pn	**Pn**	**06 41 45.9**	**-0.4**
GURO				*e*Sn	**Sn**	**06 42 04.4**	**-0.1**
SVAN	**Silvan-Diyarba**	**1.39**	**308**	PN	**Pn**	**06 41 46.9**	**-0.2**
SVAN	**Silvan-Diyarba**	**1.39**	**308**	*i* P	**Pn**	**06 41 46.9**	**-0.2**
SVAN				*i* S	**Sn**	**06 42 06.1**	**+0.1**
SVAN	**Silvan-Diyarba**	**1.39**	**308**	P	**Pn**	**06 41 46.9**	**-0.2**
SVAN				S	**Sn**	**06 42 06.1**	**+0.1**
MAZI	**Mazidag**	**1.71**	**276**	PN	**Pb**	**06 41 51.8**	**-1.1**
MAZI				SN	**Sb**	**06 42 14.5**	**-0.3**
MAZI	**Mazidag**	**1.71**	**276**	*e*Pn	**Pb**	**06 41 51.8**	**-1.1**
MAZI				*e*Sn	**Sb**	**06 42 14.5**	**-0.3**
DIY	**Diyarbakir**	**1.96**	**288**	*e*Pn	**Pb**	**06 41 56.5**	**-0.7**
BNGL	**BINGOL**	**2.00**	**326**	*i* P	**Pn**	**06 41 56.3**	**+0.6**
DYBB	**Diyarbakir**	**2.05**	**289**	PN	**Pn**	**06 41 56.5**	**+0.3**
HANI	**Diyarbakir_Han**	**2.06**	**303**	*i* P	**Pn**	**06 41 57.0**	**+0.7**
HANI	**Diyarbakir_Han**	**2.06**	**303**	P	**Pn**	**06 41 57.0**	**+0.7**
SVRC	**Sivrice-ELAZID**	**2.81**	**294**	PN	**Pn**	**06 42 07.3**	**+0.6**
SVRC	**Sivrice-ELAZID**	**2.81**	**294**	*e*Pn	**Pn**	**06 42 07.3**	**+0.6**
PTK	**Pertek**	**2.98**	**303**	PN	**Pn**	**06 42 09.8**	**+0.7**
PTK	**Pertek**	**2.98**	**303**	*e*Pn	**Pn**	**06 42 09.8**	**+0.7**
URFA	**Urfa**	**3.00**	**274**	PN	**Pn**	**06 42 10.4**	**+1.1**
URFA	**Urfa**	**3.00**	**274**	*e*Pn	**Pn**	**06 42 10.4**	**+1.1**

UCR 14 06:43:17.3±2.7, 12°.05N×85°.16W, h17km±7km, MD4.1, 18C-1D, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRZ1	**La Cruz**	**1.07**	**206**	⇑*e*P	Pb	06 43 36.9	-0.6
CRZ1				*e*S	Sn	06 43 52.6	+0.3
BUAI	**Buenos Aires**	**1.17**	**188**	⇑*i*P	Pb	06 43 39.4	+0.2
BUAI				*e*S	Sg	06 43 56.5	+1.1
GB1A	**Borinquen Arri**	**1.24**	**191**	⇓*e*P	Pn	06 43 39.4	-0.7
GB1A				*e*S	Sg	06 43 57.1	-0.5
BUEV	**Buena Vista**	**1.26**	**191**	⇑*i*P	Pn	06 43 39.3	-1.0
BUEV				*e*S	Sb	06 43 56.5	-0.3
GPS1	**Guardaparques**	**1.28**	**188**	⇑*e*P	Pn	06 43 39.8	-0.8
GPS1				*e*S	Sb	06 43 57.3	+0.1
GBS3	**Finca Las lm¨¡**	**1.29**	**193**	⇑*e*P	Pn	06 43 38.9	-1.7
GBS3				*e*S	Sb	06 43 56.1	-1.4
MESS	**Mesas**	**1.30**	**182**	⇑*i*P	Pn	06 43 40.6	-0.2
MESS				⇑*i*P	Pb	06 43 40.7	-0.7
MESS				*e*S	Sn	06 43 58.3	+0.5
MESS				*e*S	Sg	06 43 58.9	-0.4
GPS3	**Bodega del ICE**	**1.30**	**189**	⇑*i*P	Pn	06 43 39.6	-1.2
GPS3				*e*S	Sb	06 43 57.5	-0.4
LAPC	**Finca la Perla**	**1.30**	**192**	⇑*e*P	Pn	06 43 39.0	-1.7
LAPC				*e*S	Sb	06 43 56.1	-1.7
GPS2	**Hotel Rinc¨‡n**	**1.30**	**188**	⇑*i*P	Pn	06 43 39.7	-1.1
GPS2				*e*S	Sb	06 43 57.4	-0.5
HORNC	**Hornillas**	**1.32**	**181**	*e*P	Pn	06 43 41.0	-0.2
HORNC				*e*S	Sb	06 43 59.0	+0.4
GUAB	**Guayabo de Bag**	**1.33**	**183**	⇑*i*P	Pn	06 43 40.6	-0.6
GUAB				*e*S	Sg	06 43 59.7	-0.7
PTEN	**Parque Tenorio**	**1.33**	**173**	⇑*i*P	Pb	06 43 42.5	+0.5
LIM1	**Limonal**	**1.34**	**184**	⇑*i*P	Pn	06 43 40.6	-0.8
LIM1				*e*S	Sn	06 43 58.7	-0.2
COLC	**Colonia**	**1.37**	**182**	*e*P	Pn	06 43 41.0	-0.8
COLC				*e*S	Sb	06 44 00.2	+0.3
MOMN	**Momotombo**	**1.40**	**285**	*e*P	Pb	06 43 42.7	-0.3
ACAL	**Aguas Claras**	**1.41**	**175**	⇑*e*P	Pn	06 43 42.5	+0.2
ACAL				*e*S	Sg	06 44 03.2	+0.3
COPN	**Copaltepe**	**1.41**	**276**	*e*P	Pn	06 43 41.4	-0.8
COPN				*e*S	Sn	06 44 00.6	+0.2
AMAS	**Alto Masis**	**1.44**	**174**	⇑*i*P	Pn	06 43 42.9	+0.2
AMAS				*e*S	Sb	06 44 02.5	+0.8
CNGN	**Cerro Negro**	**1.57**	**287**	*e*P	Pn	06 43 44.6	+0.1
CNGN				*e*S	Sb	06 44 05.7	0.0
CEDE	**Laguna Cede¨–o**	**1.61**	**164**	⇑*i*P	Pn	06 43 45.9	+0.8
CEDE				*e*S	Sg	06 44 08.3	-1.1
FORC	**Fortuna**	**1.64**	**163**	⇑*i*P	Pb	06 43 46.5	-0.6
FORC				*e*S	Sb	06 44 08.7	+1.0
CASO	**Castillo**	**1.66**	**165**	⇑*i*P	Pn	06 43 46.1	+0.4
CASO				*e*S	Sb	06 44 08.2	+0.2
JTS	**JuntasAbangare**	**1.76**	**173**	*e*P	Pn	06 43 45.0	-2.0
SRA1	**San Ram¨‡n**	**2.06**	**161**	*e*P	Pn	06 43 51.1	-0.2
SRA1				*e*S	Sn	06 44 15.3	-1.4
CGA2	**Cerro Gallo 2**	**2.13**	**161**	*e*P	Pn	06 43 51.6	-0.7
CGA2				*e*S	Sn	06 44 17.0	-1.4
HDC	**Heredia**	**2.28**	**153**	*e*P	Pn	06 43 53.4	-0.9
HDC				*e*S	Sn	06 44 22.7	+0.7
SJS	**Escuela Geolog**	**2.36**	**153**	*e*S	Sn	06 44 24.7	+0.6
QCR1	**Quepos**	**2.78**	**159**	*e*P	Pn	06 43 59.0	-2.1
BUS	**Buena Vista**	**2.83**	**151**	*e*P	Pn	06 44 02.3	+0.1

IDC 14 06:48:28.8±1.2, 44°.87N×11°.01E, h0km, mb3.8/2, mb1 3.7/7, mb1mx3.4/63, mbtmp3.6/7, ML3.5/5, MS2.7/1, Ms1 2.8/1, ms1mx2.2/73, Error ellipse: s-maj=40.7km s-min=12.0km az=113.0
CSEM 14 06:48:30.7±0.1, 44°.92N×11°.00E, h10km, ML4.0/21, Error ellipse: s-maj=2.9km s-min=2.0km az=177.0
ROM 14 06:48:30.9±0.2, 44°.878N±0°.007×10°.99E±0°.01, h9km±3km, ML3.6/78
ISCJB 14 06:48:30.3±0.2, 44°.86N±0°.02×10°.98E±0°.01, h25km±2km, mb3.9/2, Error ellipse: s-maj=2.8km s-min=1.8km az=6.6
LDG 14 06:48:30.4±0.1, 44°.94N×11°.14E, h2km, Ml4.1/29, Error ellipse: s-maj=2.2km s-min=1.9km az=39.0
PRU 14 06:48:31.1, 44°.72N×11°.13E, h22km
PDG 14 06:48:31.1±0.9, 44°.94N×10°.99E, h19km±1km, ML3.8/6, Error ellipse: s-maj=0.6km s-min=0.9km az=0.0
STR 14 06:48:38.8±0.6, 45°.N±3°.×1°.1E±°., h171km±49km, M4.3/17, mB4.8/3, mb4.3/4, MLv4.3/17, Mw(mB)4.1/3
ISC 14 06:48:30.9±0.7, 44°.90N±0°.02×10°.99E±0°.02, h14km±4km, n307, σ1°39/374, 21C-11D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NDIM	**Novi di Modena**	**0.07**	**255**	*e*P	**Pg**	**06 48 32.2**	**-1.5**
NDIM				*e*S	**Sg**	**06 48 34.8**	**-0.8**
T0825	**Gonzaga (MN)**	**0.12**	**304**	AML	AML		
T0825				AML	AML		
T0825				AML	AML		
T0825				AML	AML		
T0825				AML	AML		
T0825				AML	AML		
T0825				AML	AML		
T0825				AML	AML		
T0802	**SanFelice sul**	**0.14**	**102**	⇑*e*P	**Pg**	**06 48 33.8**	**-0.7**
T0802	**SanFelice sul**	**0.14**	**102**	*e*P	**Pg**	**06 48 33.8**	**-0.7**
T0826	**Rio Saliceto (**	**0.14**	**243**	AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
T0826				AML	AML		
SBPO	**S.Benedetto Po**	**0.15**	**341**	*e*P	**Pg**	**06 48 35.2**	**+0.4**
SBPO	**S.Benedetto Po**	**0.15**	**341**	*e*P	**Pg**	**06 48 35.2**	**+0.4**
RAVA	**Ravarino**	**0.17**	**148**	⇑*e*P	**Pg**	**06 48 34.2**	**-0.8**
RAVA				⇑*e*S	**Sg**	**06 48 38.6**	**+0.8**
RAVA	**Ravarino**	**0.17**	**148**	*e*P	**Pg**	**06 48 34.2**	**-0.8**
RAVA				*e*S	**Sg**	**06 48 38.6**	**+0.8**
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
T0800	**Massa Finalese**	**0.19**	**107**	⇑*e*P	**Pg**	**06 48 34.5**	**-0.8**
T0800				⇑*e*S	**Sb**	**06 48 39.4**	**-0.3**
T0800	**Massa Finalese**	**0.19**	**107**	*e*P	**Pg**	**06 48 34.5**	**-0.8**
T0800				*e*S	**Sb**	**06 48 39.4**	**-0.3**
T0800				AML	AML		
	comp=N,78000μm,0.4s						
T0800				AML	AML		
	comp=N,92100μm,0.5s						
T0800				AML	AML		
	comp=E,71450μm,0.4s						
T0800				AML	AML		
	comp=N,81350μm,0.2s						
T0800				AML	AML		
	comp=E,77950μm,0.4s						
T0800				AML	AML		
	comp=N,92150μm,0.5s						
T0800				AML	AML		
	comp=E,71400μm,0.4s						
T0800				AML	AML		
	comp=N,81350μm,0.2s						
T0800				AML	AML		
	comp=E,77950μm,0.4s						
T0800				AML	AML		
	comp=E,71400μm,0.4s						
T0800				AML	AML		
	comp=N,81350μm,0.2s						
T0800				AML	AML		
	comp=N,91700μm,0.5s						
T0800				AML	AML		
	comp=N,81350μm,0.2s						
T0800				AML	AML		
	comp=E,77950μm,0.4s						
T0800				AML	AML		
	comp=E,71400μm,0.4s						
NOVE	**Novellara**	**0.22**	**242**	*e*P	**Pg**	**06 48 35.2**	**-0.6**
NOVE				*e*S	**Sb**	**06 48 40.6**	**0.0**
NOVE	**Novellara**	**0.22**	**242**	*e*P	**Pg**	**06 48 35.2**	**-0.6**
NOVE				*e*S	**Sb**	**06 48 40.6**	**0.0**
NOVE				AML	AML		
NOVE				AML	AML		
NOVE				AML	AML		
NOVE				AML	AML		
NOVE				AML	AML		
NOVE				AML	AML		
NOVE				AML	AML		
NOVE				AML	AML		
T0805	**Bondeno (FE)**	**0.24**	**86**	*e*P	**Pg**	**06 48 35.5**	**-0.6**
T0805	**Bondeno (FE)**	**0.24**	**86**	*e*P	**Pg**	**06 48 35.5**	**-0.6**
T0805				AML	AML		
	comp=E,45100μm,0.5s						
T0805				AML	AML		
	comp=N,36100μm,0.4s						
T0805				AML	AML		
	comp=E,45150μm,0.5s						
T0805				AML	AML		
	comp=N,36050μm,0.4s						
T0805				AML	AML		
	comp=N,36050μm,0.4s						
T0805				AML	AML		
	comp=E,45150μm,0.5s						
SERM	**Sermide**	**0.24**	**64**	*e*P	**Pg**	**06 48 36.3**	**+0.2**
SERM	**Sermide**	**0.24**	**64**	*e*P	**Pg**	**06 48 36.3**	**+0.2**
SERM				AML	AML		
	comp=E,10270μm,0.6s						
SERM				AML	AML		
	comp=N,10950μm,0.9s						
SERM				AML	AML		
	comp=E,15500μm,0.9s						
SERM				AML	AML		
	comp=N,17550μm,0.6s						
SERM				AML	AML		
	comp=E,10320μm,0.6s						
SERM				AML	AML		
	comp=N,10950μm,0.9s						
SERM				AML	AML		
	comp=E,15450μm,0.9s						
SERM				AML	AML		
	comp=N,17550μm,0.6s						
SERM				AML	AML		
	comp=E,10315μm,0.6s						
SERM				AML	AML		
	comp=N,10950μm,0.9s						
SERM				AML	AML		
	comp=E,15450μm,0.9s						
SERM				AML	AML		
	comp=N,17550μm,0.6s						
SERM				AML	AML		
	comp=E,15450μm,0.9s						
SERM				AML	AML		
	comp=E,10315μm,0.6s						
SERM				AML	AML		
	comp=N,10950μm,0.9s						
SERM				AML	AML		
	comp=N,17550μm,0.6s						
T0822	**Casumaru (Bond**	**0.26**	**106**	*e*P	**Pg**	**06 48 35.9**	**-0.6**
T0822				*e*S	**Sb**	**06 48 41.8**	**0.0**
T0822	**Casumaru (Bond**	**0.26**	**106**	*e*P	**Pg**	**06 48 35.9**	**-0.6**
T0822				*e*S	**Sb**	**06 48 41.8**	**0.0**
T0822				AML	AML		
	comp=E,35750μm,0.5s						
T0822				AML	AML		
	comp=N,31250μm,0.5s						
T0822				AML	AML		
	comp=E,35750μm,0.5s						
T0822				AML	AML		
	comp=N,31300μm,0.5s						
T0822				AML	AML		
	comp=E,35750μm,0.5s						
T0822				AML	AML		
	comp=N,31250μm,0.5s						
T0822				AML	AML		
	comp=N,31250μm,0.5s						
T0822				AML	AML		
	comp=E,35750μm,0.5s						
MODE	**Modena**	**0.28**	**186**	AML	AML		
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
MODE				AML	AML		
T0803	**Dosso, Cento (**	**0.29**	**118**	⇑*e*P	**Pg**	**06 48 36.4**	**-0.6**
T0803	**Dosso, Cento (**	**0.29**	**118**	*e*P	**Pg**	**06 48 36.4**	**-0.6**
T0821	**Loc. Casaglia**	**0.39**	**90**	AML	AML		
	comp=E,8915μm,1.4s						
T0821				AML	AML		
	comp=E,8640μm,1.4s						
T0821				AML	AML		
	comp=N,8170μm,0.8s						
T0821				AML	AML		
	comp=N,8385μm,0.8s						
T0821				AML	AML		
	comp=E,8640μm,1.4s						
T0821				AML	AML		
	comp=N,8165μm,0.8s						
T0821				AML	AML		
	comp=E,8915μm,1.4s						
T0821				AML	AML		
	comp=N,8385μm,0.8s						
T0821				AML	AML		
	comp=N,8385μm,0.8s						
T0821				AML	AML		
	comp=N,8165μm,0.8s						
T0821				AML	AML		
	comp=E,8915μm,1.4s						
T0821				AML	AML		
	comp=E,8640μm

comp=N,18900µm,0.9s
ZCCA AML AML
comp=E,13950µm,1.6s
ZCCA AML AML
comp=N,20650µm,1.0s
ZCCA AML AML
comp=E,13950µm,1.6s
ZCCA AML AML
comp=E,14850µm,1.6s
ZCCA AML AML
comp=N,20650µm,1.0s
ZCCA AML AML
comp=N,18900µm,0.9s
MTRZ Monterenzio 0.63 147 AML AML
comp=N,8710µm,1.6s
MTRZ AML AML
comp=E,7835µm,0.9s
MTRZ AML AML
comp=N,8570µm,1.6s
MTRZ AML AML
comp=E,8085µm,0.8s
MTRZ AML AML
comp=N,8710µm,1.6s
MTRZ AML AML
comp=N,8570µm,1.6s
MTRZ AML AML
comp=E,8085µm,0.8s
MTRZ AML AML
comp=E,7835µm,0.9s
ERBM Eremo 0.64 221 AML AML
comp=N,6485µm,1.0s
ERBM AML AML
comp=E,6135µm,0.7s
ERBM AML AML
comp=N,6485µm,1.0s
ERBM AML AML
comp=E,6135µm,0.7s
ERBM AML AML
comp=E,6135µm,0.7s
ERBM AML AML
comp=N,6485µm,1.0s
TEOL Teolo 0.66 46⇓ *e*Pg **Pg 06 48 43.8 -0.1**
TEOL *e*Sg **Sn 06 48 54.9 -1.2**
TEOL Teolo 0.66 46 *e*Pg **Pg 06 48 43.8 -0.1**
TEOL *e*Sg **Sn 06 48 54.9 -1.2**
TEOL Teolo 0.66 46 AML AML
comp=E,13750µm,1.0s
TEOL AML AML
comp=E,13750µm,1.0s
TEOL AML AML
comp=N,8770µm,0.5s
TEOL AML AML
comp=N,8770µm,0.5s
TEOL AML AML
comp=E,13750µm,1.0s
TEOL AML AML
comp=N,8770µm,0.5s
ADRI Adria, Italy 0.74 79 *e*Pg **Pn 06 48 46.7 -0.2**
ADRI Adria, Italy 0.74 79 *e*Pg **Pn 06 48 46.7 -0.2**
ROVR Rover¯¤ Verone 0.74 4 AML AML
comp=N,15300µm,0.9s
ROVR AML AML
comp=E,8205µm,0.9s
ROVR AML AML
comp=E,8205µm,0.9s
ROVR AML AML
comp=N,15300µm,0.9s
ROVR AML AML
comp=E,8205µm,0.9s
ROVR AML AML
comp=N,15300µm,0.9s
MARN Marana (Italy) 0.75 12⇓ *e*Pg **Pg 06 48 45.4 -0.1**
MARN Marana (Italy) 0.75 12 *e*Pg **Pg 06 48 45.4 -0.1**
IMOL Imola, Italy 0.77 135 AML AML
comp=E,5155µm,0.8s
IMOL AML AML
comp=E,5155µm,0.8s
IMOL AML AML
comp=N,5330µm,1.4s
IMOL AML AML
comp=E,892µm,0.7s
IMOL AML AML
comp=N,701µm,0.5s
IMOL AML AML
comp=E,892µm,0.7s
IMOL AML AML
comp=N,5330µm,1.4s
IMOL AML AML
comp=N,701µm,0.5s
BALD Monte Baldo 0.79 351⇑ *e*Pg **Pg 06 48 46.1 -0.2**
BALD *e*Sg **Sn 06 48 58.5 -1.0**
BALD Monte Baldo 0.79 351 *e*Pg **Pg 06 48 46.1 -0.2**
BALD *e*Sg **Sn 06 48 58.5 -1.0**
VOBA Vobarno 0.81 335 AML AML
comp=E,11650µm,0.2s
VOBA AML AML
comp=E,11650µm,0.2s
VOBA AML AML
comp=N,12790µm,0.2s
VOBA AML AML
comp=N,12790µm,0.2s
LEOD Capriano del C 0.83 312 AML AML
comp=N,14600µm,0.4s
LEOD AML AML
comp=E,14250µm,0.3s
LEOD AML AML
comp=N,14600µm,0.4s
LEOD AML AML
comp=E,14250µm,0.3s
VLC Villacollemand 0.86 210 AML AML
comp=N,4710µm,0.7s
VLC AML AML
comp=E,4555µm,0.7s
VLC AML AML
comp=E,4555µm,0.7s
VLC AML AML
comp=N,4710µm,0.7s
VLC AML AML
comp=N,4710µm,0.7s
VLC AML AML
comp=E,4555µm,0.7s
POPM Popiglio 0.88 191 AML AML
comp=E,3745µm,1.5s
POPM AML AML
comp=N,6110µm,0.4s
POPM AML AML
comp=E,3745µm,1.5s
POPM AML AML
comp=N,6110µm,0.4s
POPM AML AML
comp=N,6110µm,0.4s
POPM AML AML
comp=E,3745µm,1.5s
BDI Bagni Di Lucca 0.89 199 AML AML
comp=N,5545µm,0.6s
BDI AML AML
comp=E,7525µm,0.9s
BDI AML AML
comp=E,7185µm,0.6s
BDI AML AML
comp=N,6915µm,0.8s
BDI AML AML
comp=N,5545µm,0.6s
BDI AML AML
comp=E,7185µm,0.6s
BDI AML AML
comp=E,7525µm,0.9s
BDI AML AML
comp=N,6915µm,0.8s
MAGA Magasa 0.91 344 AML AML
comp=N,46550µm,0.5s
MAGA AML AML
comp=E,67100µm,0.4s
MAGA AML AML
comp=N,46550µm,0.5s
MAGA AML AML
comp=E,67100µm,0.4s
MAGA AML AML
comp=N,46550µm,0.5s
MAGA AML AML
comp=E,67100µm,0.4s
CTL8 Castelleone 0.95 294 AML AML
comp=N,16650µm,0.7s
CTL8 AML AML
comp=E,15550µm,0.3s
CTL8 AML AML
comp=N,16650µm,0.7s
CTL8 AML AML
comp=E,4580µm,1.2s
CTL8 AML AML
comp=N,4085µm,0.8s
CTL8 AML AML
comp=E,15550µm,0.3s
CTL8 AML AML
comp=N,16650µm,0.7s
CTL8 AML AML
comp=E,4580µm,1.2s
CTL8 AML AML
comp=N,4085µm,0.8s
CTL8 AML AML
comp=E,4580µm,1.2s
CTL8 AML AML
comp=N,4085µm,0.8s
CTL8 AML AML
comp=E,15550µm,0.3s
DOSS Dosso del Somm 0.99 8⇓ *e*Pg **Pb 06 48 49.5 -0.4**
DOSS *e*Sg **Sn 06 49 04.4 0.0**
DOSS Dosso del Somm 0.99 8 *e*Pg **Pb 06 48 49.5 -0.4**
DOSS *e*Sg **Sn 06 49 04.4 0.0**
MAIM Mastiano 1.05 200 AML AML
comp=E,3550µm,1.0s
MAIM AML AML
comp=E,3550µm,1.0s
MAIM AML AML
comp=N,6075µm,0.5s
MAIM AML AML
comp=E,3550µm,1.0s
MAIM AML AML
comp=N,6075µm,0.5s
MAIM AML AML
comp=N,6075µm,0.5s
BOB Bobbio (Coli) 1.11 263 AML AML
BOB AML AML
BOB AML AML
BOB AML AML
comp=E,8895µm,0.5s
BOB AML AML
comp=N,12050µm,1.4s
BOB AML AML
BOB AML AML
BOB AML AML
comp=E,8895µm,0.5s
BOB AML AML
comp=N,12050µm,1.4s
BOB AML AML
BOB AML AML
comp=N,12050µm,1.4s
BOB AML AML
comp=E,8895µm,0.5s
RNI Roncone 1.11 347 *e*Pg **Pb 06 48 50.8 -1.2**
RNI Roncone 1.11 347 *e*Pg **Pb 06 48 50.8 -1.2**
CRMI Carmignano 1.11 181 AML AML
comp=N,1255µm,1.6s
CRMI AML AML
comp=E,1390µm,1.5s
CRMI AML AML
comp=N,1255µm,1.6s
CRMI AML AML
comp=E,1390µm,1.5s
CRMI AML AML
comp=N,1255µm,1.6s
CRMI AML AML
comp=E,1390µm,1.5s
CGRP Cima Grappa 1.13 30⇓ *e*Pg **Pb 06 48 52.0 -0.4**
CGRP *e*Sg **Sn 06 49 09.1 +1.2**
CGRP Cima Grappa 1.13 30 *e*Pg **Pb 06 48 52.0 -0.4**
CGRP *e*Sg **Sn 06 49 09.1 +1.2**
CGRP Cima Grappa 1.13 30 AML AML
comp=N,2330µm,0.6s
CGRP AML AML
comp=E,2615µm,1.2s
CGRP AML AML
comp=N,2330µm,0.6s
CGRP AML AML
comp=E,2615µm,1.2s
CGRP AML AML
comp=N,2330µm,0.6s
CGRP AML AML
comp=E,2615µm,1.2s
PANI Panarotta 1.17 12 *e*Pg **Pb 06 48 52.9 -0.2**
PANI Panarotta 1.17 12 *e*Pg **Pb 06 48 52.9 -0.2**
SFI Santa Sofia 1.17 148 AML AML
comp=N,2365µm,1.3s
SFI AML AML
comp=E,1500µm,1.0s
SFI AML AML
comp=E,1545µm,1.0s
SFI AML AML
comp=N,2475µm,1.3s
SFI AML AML
comp=N,2365µm,1.3s
SFI AML AML
comp=N,2475µm,1.3s
SFI AML AML
comp=E,1500µm,1.0s
SFI AML AML
comp=E,1545µm,1.0s
PLMA Palmaria, Port 1.18 224 AML AML
comp=E,5080µm,0.9s
PLMA AML AML
comp=E,5080µm,0.9s
PLMA AML AML
comp=N,7705µm,0.4s
PLMA AML AML
comp=E,5080µm,0.9s
PLMA AML AML
comp=N,7705µm,0.4s
PLMA AML AML
comp=N,7705µm,0.4s
MABI Malga Bissina 1.20 344 AML AML
comp=N,1360µm,0.4s
MABI AML AML
comp=E,2115µm,0.3s
MABI AML AML
comp=E,2115µm,0.3s
MABI AML AML
comp=N,1360µm,0.4s
MABI AML AML
comp=N,1360µm,0.4s
MABI AML AML
comp=E,2115µm,0.3s
MTLO Montello 1.20 40⇑ *e*Pg **Pn 06 48 53.4 +0.1**
MTLO Montello 1.20 40 *e*Pg **Pn 06 48 53.4 +0.1**
MSSA Maissana 1.21 241 AML AML
comp=N,5340µm,0.7s
MSSA AML AML
comp=E,3455µm,1.6s
MSSA AML AML
comp=E,3455µm,1.6s
MSSA AML AML
comp=N,5340µm,0.7s
CTI Castel Tesino 1.23 22 AML AML
comp=N,6500µm,0.3s
CTI AML AML
comp=E,4040µm,0.5s
CTI AML AML
comp=E,4040µm,0.5s
CTI AML AML
comp=N,6500µm,0.3s
CTI AML AML
comp=N,6500µm,0.3s
CTI AML AML
comp=E,4040µm,0.5s
ASQU Asqua 1.25 152 AML AML
comp=N,1112µm,1.3s
ASQU AML AML
comp=E,1364µm,0.5s
ASQU AML AML
comp=E,1364µm,0.5s
ASQU AML AML
comp=N,1112µm,1.3s
VARN Col Varnada, M 1.34 35⇑ *e*Pg **Pn 06 48 55.0 -0.3**
VARN Col Varnada, M 1.34 35 *e*Pg **Pn 06 48 55.0 -0.3**
CRE Caprese Michel 1.46 151 AML AML
comp=N,1070µm,1.0s
CRE AML AML
comp=E,1320µm,0.7s
CRE AML AML
comp=N,1070µm,1.0s
CRE AML AML
comp=E,1320µm,0.7s
CPGN Carpegna, Ital 1.46 139 AML AML
comp=N,2465µm,1.2s
CPGN AML AML
comp=E,1775µm,1.0s
CPGN AML AML
comp=N,2465µm,1.2s
CPGN AML AML
comp=E,1775µm,1.0s
CAE Caneva 1.50 42 *e*Pg **Pn 06 48 57.4 -0.1**
CAE Caneva 1.50 42 *e*Pg **Pn 06 48 57.4 -0.1**
OZOL Ozolo 1.50 2⇑ *e*Pg **Pn 06 48 57.2 -0.3**
OZOL Ozolo 1.50 2 *e*Pg **Pn 06 48 57.2 -0.3**
CARE Lago del Cares 1.54 352⇓ *e*Pg **Pn 06 48 57.9 -0.3**
CARE Lago del Cares 1.54 352 *e*Pg **Pn 06 48 57.9 -0.3**
POLC Polcenigo 1.54 43 AML AML
comp=N,2330µm,1.5s
POLC AML AML
comp=E,2405µm,0.7s
POLC AML AML
comp=E,2405µm,0.7s
POLC AML AML
comp=N,2330µm,1.5s
SSP9 Sansepolcro 1.56 148 AML AML
comp=N,1380µm,0.8s
SSP9 AML AML
comp=E,1448µm,1.4s
SSP9 AML AML
comp=N,1380µm,0.8s
SSP9 AML AML
comp=E,1448µm,1.4s
AGOR Agordo 1.57 28⇓ *e*Pg **Pn 06 48 58.4 +0.1**
AGOR Agordo 1.57 28 AML AML
comp=E,1130µm,0.6s
AGOR AML AML
comp=N,1275µm,1.1s
AGOR AML AML
comp=E,1130µm,0.6s
AGOR AML AML
comp=N,1275µm,1.1s
KOSI Kohlern 1.58 10 AML AML
comp=N,2165µm,0.5s
KOSI AML AML
comp=E,2565µm,0.9s
KOSI AML AML
comp=E,2565µm,0.9s
KOSI AML AML
comp=N,2165µm,0.5s
APPI Appiano 1.58 6 AML AML
comp=E,3740µm,0.4s
APPI AML AML
comp=E,3740µm,0.4s
APPI AML AML
comp=N,3290µm,0.4s
APPI AML AML
comp=N,3290µm,0.4s
BOSI Bolzano 1.61 8 AML AML
comp=N,6475µm,0.6s
BOSI AML AML
comp=E,4295µm,0.7s
BOSI AML AML
comp=N,6475µm,0.6s
BOSI AML AML
comp=E,4295µm,0.7s
BRMO Bormio 1.63 345 AML AML
comp=N,1980µm,0.7s
BRMO AML AML
comp=E,1110µm,0.9s
BRMO AML AML
comp=N,1980µm,0.7s
BRMO AML AML
comp=E,1110µm,0.9s
PESA Pesaro 1.64 125 AML AML
comp=E,1245µm,1.0s
PESA AML AML
comp=E,1245µm,1.0s
PESA AML AML
comp=N,1345µm,0.9s
PESA AML AML
comp=N,1345µm,0.9s
BADI Badiali 1.66 147 AML AML
comp=E,1290µm,0.9s
BADI AML AML
comp=E,1290µm,0.9s
BADI AML AML
comp=N,762µm,0.8s
BADI AML AML
comp=N,762µm,0.8s
MLNI Malnisio 1.69 42⇑ *e*Pg **Pn 06 48 59.9 -0.2**
MLNI Malnisio 1.69 42 *e*Pg **Pn 06 48 59.9 -0.2**
ATMC Monte Cedrone 1.69 149 AML AML
comp=N,1295µm,0.6s
ATMC AML AML
comp=E,975µm,1.6s
ATMC AML AML
comp=N,1295µm,0.6s
ATMC AML AML
comp=E,975µm,1.6s
FROS Frosini 1.70 176 AML AML
comp=N,890µm,0.5s
FROS AML AML
comp=E,750µm,0.6s
FROS AML AML
comp=N,890µm,0.5s
FROS AML AML
comp=E,750µm,0.6s
CAFI Castiglion Fio 1.73 156 AML AML
comp=N,400µm,1.1s
CAFI AML AML
comp=E,626µm,1.2s
CAFI AML AML
comp=N,400µm,1.1s
CAFI AML AML
comp=E,626µm,1.2s
CIMO Cimolais 1.73 35⇓ *e*Pn **Pn 06 49 00.2 -0.5**
CIMO Cimolais 1.73 35 *e*Pn **Pn 06 49 00.2 -0.5**
MOSI Grossmontoni 1.74 350 AML AML
comp=E,3260µm,0.9s
MOSI AML AML
comp=E,3260µm,0.9s
MOSI AML AML
comp=N,5345µm,0.9s
MOSI AML AML
comp=N,5345µm,0.9s
ATPC Poggio Castell 1.77 143 AML AML
comp=N,936µm,0.6s
ATPC AML AML
comp=E,1094µm,1.4s
ATPC AML AML
comp=N,936µm,0.6s
ATPC AML AML
comp=E,1094µm,1.4s
ATPI Pietralunga - 1.77 145 AML AML
comp=N,778µm,0.9s
ATPI AML AML
comp=E,616µm,1.4s
ATPI AML AML
comp=E,616µm,1.4s
ATPI AML AML
comp=N,778µm,0.9s
TRIF Trifonti 1.79 182 AML AML
comp=E,540µm,0.7s
TRIF AML AML
comp=N,619µm,1.0s
TRIF AML AML
comp=N,619µm,1.0s
TRIF AML AML
comp=E,540µm,0.7s
MPAG Monte Paganucc 1.80 134 AML AML
comp=N,833µm,1.3s
MPAG AML AML
comp=E,810µm,1.2s
MPAG AML AML
comp=N,833µm,1.3s
MPAG AML AML
comp=E,810µm,1.2s
STAL STALIGIAL 1.82 41 AML AML
comp=E,1375µm,0.7s
STAL AML AML
comp=E,1325µm,0.6s
STAL AML AML
comp=N,1300µm,0.3s
STAL AML AML
comp=N,1295µm,0.6s
STAL AML AML
comp=N,1300µm,0.3s
STAL AML AML
comp=E,1375µm,0.7s
STAL AML AML
comp=E,1325µm,0.6s
STAL AML AML
comp=N,1295µm,0.6s
VARE Varese 1.84 302 AML AML

comp=E,1825µm,0.2s
VARE AML AML
comp=N,1980µm,0.7s
VARE AML AML
comp=E,1825µm,0.2s
VARE AML AML
comp=N,1980µm,0.7s
ABSI Aberstueckl 1.84 7 AML AML
comp=E,4155µm,0.8s
ABSI AML AML
comp=E,4155µm,0.8s
ABSI AML AML
comp=N,3095µm,0.7s
ABSI AML AML
comp=N,3095µm,0.7s
ATVA AVT- Monte Val 1.87 150 AML AML
comp=N,347µm,0.6s
ATVA AML AML
comp=E,410µm,0.7s
ATVA AML AML
comp=N,347µm,0.6s
ATVA AML AML
comp=E,410µm,0.7s
MPRI Monte Prat 1.94 46 *e*Pn **Pn 06 49 03.8 +0.3**
MPRI Monte Prat 1.94 46 *e*Pn **Pn 06 49 03.8 +0.3**
TUE Stuetta 1.94 324 AML AML
comp=E,1350µm,1.4s
TUE AML AML
comp=E,1350µm,1.4s
TUE AML AML
comp=N,1069µm,0.4s
TUE AML AML
comp=N,1069µm,0.4s
SSFR Montelago di S 1.95 138 AML AML
comp=E,863µm,0.5s
SSFR AML AML
comp=N,849µm,1.2s
SSFR AML AML
comp=E,863µm,0.5s
SSFR AML AML
comp=N,849µm,1.2s
QLNO Quiliano 1.98 254 AML AML
comp=N,861µm,0.4s
QLNO AML AML
comp=E,834µm,0.5s
QLNO AML AML
comp=N,861µm,0.4s
QLNO AML AML
comp=E,834µm,0.5s
MURB Monte Urbino 1.98 145 AML AML
comp=N,890µm,0.4s
MURB AML AML
comp=E,1230µm,0.9s
MURB AML AML
comp=N,890µm,0.4s
MURB AML AML
comp=E,1305µm,0.9s
MURB AML AML
comp=N,904µm,0.4s
MURB AML AML
comp=N,904µm,0.4s
MURB AML AML
comp=E,1305µm,0.9s
MURB AML AML
comp=E,1230µm,0.9s
GEPF Gemona 2.04 47 AML AML
comp=E,612µm,0.6s
GEPF AML AML
comp=N,561µm,0.6s
GEPF AML AML
comp=E,612µm,0.6s
GEPF AML AML
comp=N,561µm,0.6s
ROSI Rosskopf 2.04 8 AML AML
comp=E,1860µm,0.8s
ROSI AML AML
comp=N,2270µm,0.8s
ROSI AML AML
comp=N,2270µm,0.8s
ROSI AML AML
comp=E,1860µm,0.8s
BAD Bernadia 2.07 49 *e*Pn **Pn 06 49 04.8 -0.5**
BAD Bernadia 2.07 49 *e*Pn **Pn 06 49 04.8 -0.5**
VINO Villanova 2.10 49 AML AML
comp=E,462µm,0.6s
VINO AML AML
comp=E,462µm,0.6s
VINO AML AML
comp=N,798µm,0.7s
VINO AML AML
comp=N,798µm,0.7s
CASP Castiglione de 2.12 182 AML AML
comp=E,352µm,1.0s
CASP AML AML
comp=N,433µm,0.4s
CASP AML AML
comp=E,352µm,1.0s
CASP AML AML
comp=N,433µm,0.4s
FETA Feichten 2.12 355 *e*Pn **Pb 06 49 08.1 -1.2**
comp=N,139nm,0.6s,SNR=119
FETA *i* Sg **Sg 06 49 39.7 +0.4**
comp=N,63nm,0.3s
FETA Feichten 2.12 355 Pn **Pb 06 49 08.1 -1.2**
comp=N,139nm,0.6s,SNR=119
FETA Sg **Sg 06 49 39.7 +0.4**
comp=N,63nm,0.3s
ABTA Abfaltersbach 2.13 29 *e*Pn **Pn 06 49 07.7 +1.6**
comp=N,22nm,0.6s,SNR=30
ABTA *i* Sn **Sg 06 49 37.4 -1.9**
comp=N,91nm,0.5s
ABTA Abfaltersbach 2.13 29 Pn **Pn 06 49 07.7 +1.6**
comp=N,22nm,0.6s,SNR=30
ABTA Sn **Sg 06 49 37.4 -1.9**
comp=N,91nm,0.5s
MGAB Montegabbione 2.15 157 AML AML
comp=N,496µm,0.7s
MGAB AML AML
comp=E,483µm,1.6s
MGAB AML AML
comp=E,556µm,1.6s
MGAB AML AML
comp=N,424µm,0.7s
MGAB AML AML
comp=N,424µm,0.7s
MGAB AML AML
comp=N,496µm,0.7s
MGAB AML AML
comp=E,556µm,1.6s
MGAB AML AML
comp=E,483µm,1.6s
SACS San Casciano d 2.16 162 AML AML
comp=E,246µm,1.5s
SACS AML AML
comp=N,261µm,1.4s
SACS AML AML
comp=N,261µm,1.4s
SACS AML AML
comp=E,246µm,1.5s
RISI Rein 2.18 20 AML AML
comp=E,2165µm,0.5s
RISI AML AML
comp=N,2040µm,0.4s
RISI AML AML
comp=E,2165µm,0.5s
RISI AML AML
comp=N,2040µm,0.4s
SKDS Skadanscina 2.23 72 *i* Pn **Pn 06 49 06.4 -1.1**
SKDS *i* Sn **Sn 06 49 33.9 -0.9**
comp=Z,79nm,0.3s
PTCC Patocco-Chiusa 2.24 47 AML AML
comp=E,525µm,1.0s
PTCC AML AML
comp=E,525µm,1.0s
PTCC AML AML
comp=N,489µm,0.9s
PTCC AML AML
comp=N,489µm,0.9s
RORO Rocca Rossa 2.24 250 AML AML
comp=E,598µm,0.6s
RORO AML AML
comp=E,598µm,0.6s
RORO AML AML
comp=N,546µm,0.3s
RORO AML AML
comp=N,546µm,0.3s
AOI Ancona 2.31 125 AML AML
comp=N,306µm,0.6s
AOI AML AML
comp=E,228µm,0.6s
AOI AML AML
comp=N,306µm,0.6s
AOI AML AML
comp=E,228µm,0.6s
JAVS Javornik 2.38 64 *i* Pn **Pn 06 49 09.1 -0.5**
JAVS *i* Sn **Sn 06 49 37.9 -0.7**
comp=Z,69nm,0.4s
MOMA Monte Martano 2.39 151 AML AML
comp=N,349µm,0.7s
MOMA AML AML
comp=E,299µm,0.6s
MOMA AML AML
comp=N,349µm,0.7s
MOMA AML AML
comp=E,299µm,0.6s
WTTA Wattenberg 2.40 11 *e*Pn **Pb 06 49 12.4 -1.7**
comp=E,1.7nm,0.1s,SNR=42
WTTA *i* Sn **Sb 06 49 45.7 +2.1**
comp=E,94nm,0.3s
WTTA Wattenberg 2.40 11 Pn **Pb 06 49 12.4 -1.7**
comp=E,1.7nm,0.1s,SNR=42
WTTA Wattenberg 2.40 11 AML AML
comp=E,834µm,0.8s
WTTA AML AML
comp=E,834µm,0.8s
WTTA AML AML
comp=N,475µm,0.6s
WTTA AML AML
comp=N,475µm,0.6s
FDMO Fiordimonte 2.40 140 AML AML
comp=N,316µm,0.6s
FDMO AML AML
comp=E,274µm,1.2s
FDMO AML AML
comp=N,316µm,0.6s
FDMO AML AML
comp=E,274µm,1.2s
MOTA Moosalm 2.44 2 *e*Pn **Pn 06 49 12.0 +1.5**
comp=E,40nm,0.4s,SNR=77
MOTA Moosalm 2.44 2 Pn **Pn 06 49 12.0 +1.5**
comp=E,40nm,0.4s,SNR=77
WATA Walderalm 2.47 9 *e*Pn **Pb 06 49 13.1 -2.0**
comp=E,44nm,0.2s,SNR=37
WATA *i* Sn **Sb 06 49 47.6 +2.2**
comp=E,25nm,0.2s
WATA Walderalm 2.47 9 Pn **Pb 06 49 13.1 -2.0**
comp=E,44nm,0.2s,SNR=37
MAON Monte Argentar 2.48 178 AML AML
comp=E,148µm,1.3s
MAON AML AML
comp=E,148µm,1.3s
MAON AML AML
comp=N,150µm,0.7s
MAON AML AML
comp=N,150µm,0.7s
DAVA Damuels 2.50 342 *e*Pn **Pb 06 49 13.7 -2.1**
comp=N,34nm,0.3s,SNR=46
DAVA Sn **Sb 06 49 46.8 +0.3**
comp=N,121nm,0.5s
DAVA Damuels 2.50 342 Pn **Pb 06 49 13.7 -2.1**
comp=N,34nm,0.3s,SNR=46
DAVA Sn **Sb 06 49 46.8 +0.3**
comp=N,121nm,0.5s
MYKA Terra Mystica 2.53 46 *i* Pg **Pg 06 49 18.4 -1.1**
comp=N,49nm,0.5s
MYKA *i* Sg **Sg 06 49 54.9 +2.5**
comp=N,110nm,0.6s
MYKA Terra Mystica 2.53 46 Pg **Pg 06 49 18.4 -1.1**
comp=N,49nm,0.5s
MYKA Sg **Sg 06 49 54.9 +2.5**
comp=N,110nm,0.6s
CEY Cerknica 2.56 70 *e*Pn **Pn 06 49 11.2 -0.9**
RETA Reutte 2.59 357 *e*Pn **Pb 06 49 15.0 -2.1**
comp=N,31nm,0.4s,SNR=30
RETA *i* Sn **Sb 06 49 48.8 0.0**
comp=N,37nm,0.2s
RETA Reutte 2.59 357 Pn **Pb 06 49 15.0 -2.1**
comp=N,31nm,0.4s,SNR=30
RETA Sn **Sb 06 49 48.8 0.0**
comp=N,37nm,0.2s
ARRO Arrone 2.66 150 AML AML
comp=E,306µm,1.3s
ARRO AML AML
comp=E,306µm,1.3s
ARRO AML AML
comp=N,274µm,0.9s
ARRO AML AML
comp=N,274µm,0.9s
KBA Koelnbreinsper 2.72 36 Pn **Pn 06 49 15.3 +0.9**
comp=N,6.0nm,0.3s,SNR=14
KBA *i* Sg **Sg 06 49 57.8 -0.6**
comp=N,82nm,0.7s
KBA Koelnbreinsper 2.72 36 Pn **Pn 06 49 15.3 +0.9**
comp=N,6.0nm,0.3s,SNR=14
KBA Sg **Sg 06 49 57.8 -0.6**
comp=N,82nm,0.7s
LJU Ljubljana 2.74 64 *e*Pn **Pn 06 49 14.3 -0.1**
SBF Sospel 2.75 249 *e*Pn **Pn 06 49 15.3 +0.6**
SBF *e*Sn **Sn 06 49 50.1 +2.3**
comp=N,768nm,0.4s
SBF Sospel 2.75 249 *e*Pn **Pn 06 49 15.3 +0.6**
SBF *e*Sn **Sn 06 49 50.1 +2.3**
comp=N,384nm,0.4s
PGF Pioggiola 2.76 212 *e*Pn **Pn 06 49 15.3 +0.4**
PGF *e*Sn **Sn 06 49 48.5 +0.4**
comp=N,140nm,0.3s
PGF Pioggiola 2.76 212 *e*Pn **Pn 06 49 15.3 +0.4**
PGF *e*Sn **Sn 06 49 48.5 +0.4**
comp=N,70nm,0.3s
NVLJ Novalja 2.79 96 *e*Pn **Pn 06 49 15.2 +0.1**
NVLJ Sn **Sn 06 49 47.3 -1.1**
LUCF Luceram 2.80 250 P **Pn 06 49 16.6 +1.2**
LUCF Luceram 2.80 250 P **Pn 06 49 16.6 +1.2**
LUCF S **Sn 06 49 51.3 +2.3**
ISO Isola 2.91 257 P **Pn 06 49 17.6 +0.8**
ISO Isola 2.91 257 P **Pn 06 49 17.6 +0.8**
ISO S **Sn 06 49 54.5 +2.9**
OBKA Obir 2.96 56 *e*Pn **Pn 06 49 18.0 +0.4**
comp=N,2.3nm,0.1s,SNR=7.1
OBKA *i* Sg **Sg 06 50 09.2 +3.0**
comp=N,94nm,0.6s
OBKA Obir 2.96 56 Pn **Pn 06 49 18.0 +0.4**
comp=N,2.3nm,0.1s,SNR=7.1
OBKA Sg **Sg 06 50 09.2 +3.0**
comp=N,94nm,0.6s
MBDF Montbardon 3.01 268 *e*Pn **Pn 06 49 17.9 -0.4**
MBDF *e*Sn **Sn 06 49 53.9 -0.3**
comp=N,209nm,0.6s
MBDF *e*Sg **Sg 06 50 08.1 +0.6**
comp=N,139nm,0.4s,SNR=1.0
MBDF Montbardon 3.01 268 *e*Pn **Pn 06 49 17.9 -0.4**
MBDF *e*Sn **Sn 06 49 53.9 -0.3**
comp=N,104nm,0.6s
MBDF *e*Sg **Sg 06 50 08.1 +0.6**
comp=N,69nm,0.4s,SNR=1.0
SURF Saint Ours 3.01 263 P **Pn 06 49 18.7 +0.4**
SURF Saint Ours 3.01 263 P **Pn 06 49 18.7 +0.4**
LPG La Plagne 3.06 283 *e*Pn **Pn 06 49 21.1 +2.1**
LPG *e*Sn **Sn 06 49 56.2 +0.7**
comp=N,257nm,0.6s
LPG *e*Sg **Sg 06 50 09.1 0.0**
comp=N,180nm,0.5s,SNR=1.0
LPG La Plagne 3.06 283 *e*Pn **Pn 06 49 21.1 +2.1**
LPG *e*Sn **Sn 06 49 56.2 +0.7**
comp=N,128nm,0.6s
LPG *e*Sg **Sg 06 50 09.1 0.0**
comp=N,90nm,0.5s,SNR=1.0
LPL La Plagne 3.07 283 *e*Pn **Pn 06 49 20.2 +1.0**
LPL *e*Sn **Sn 06 49 56.0 +0.2**
comp=N,111nm,0.4s
LPL La Plagne 3.07 283 *e*Pn **Pn 06 49 20.2 +1.0**
LPL *e*Sn **Sn 06 49 56.0 +0.2**
comp=N,56nm,0.4s
RSL Roselend 3.18 286 P **Pn 06 49 23.3 +2.7**
RSL Roselend 3.18 286 P **Pn 06 49 23.3 +2.7**
OZLJ Ozalj 3.24 76 *e*Pn **Pn 06 49 20.7 -0.7**
OZLJ Sn **Sn 06 49 55.9 -3.7**
OZLJ Ozalj 3.24 76 *e*Pn **Pn 06 49 20.6 -0.7**
OZLJ Sn **Sn 06 49 55.9 -3.7**
CRES Cresnjev 3.28 72 *e*Pn **Pn 06 49 21.4 -0.5**
SOKA Soboth 3.34 56 *i* Pn **Pn 06 49 23.3 +0.5**
comp=N,6.8nm,0.4s,SNR=12
SOKA *i* Sg **Sg 06 50 18.0 -0.1**
comp=N,64nm,0.8s
SOKA Soboth 3.34 56 Pn **Pn 06 49 23.3 +0.5**
comp=N,6.8nm,0.4s,SNR=12
SOKA Sg **Sg 06 50 18.0 -0.1**
comp=N,64nm,0.8s
FRF La Foret Royal 3.40 248 *e*Pn **Pn 06 49 23.0 -0.5**
FRF *e*Sn **Sn 06 50 04.2 +0.6**
comp=N,267nm,0.4s
FRF La Foret Royal 3.40 248 *e*Pn **Pn 06 49 23.0 -0.5**
FRF *e*Sn **Sn 06 50 04.2 +0.6**
comp=N,133nm,0.4s
UDBI Udbina 3.42 95 *e*Pn **Pn 06 49 23.0 -0.9**
UDBI Udbina 3.42 95 *e*Pn **Pn 06 49 23.0 -0.9**
LMR La Mourre 3.59 246 *e*Pn **Pn 06 49 26.7 +0.6**
LMR *e*Sn **Sn 06 50 08.2 -0.1**
comp=N,288nm,0.3s
LMR La Mourre 3.59 246 *e*Pn **Pn 06 49 26.7 +0.6**
LMR *e*Sn **Sn 06 50 08.2 -0.1**
comp=N,144nm,0.3s
ORIF Oris-en-Rattie 3.63 272 *e*Pn **Pn 06 49 28.3 +1.5**
ORIF *e*Sn **Sn 06 50 09.0 -0.5**
comp=N,192nm,0.6s
ORIF Oris-en-Rattie 3.63 272 P **Pn 06 49 28.1 +1.3**
ORIF S **Sn 06 50 11.5 +2.0**
ORIF Oris-en-Rattie 3.63 272 *e*Pn **Pn 06 49 28.3 +1.5**
ORIF *e*Sn **Sn 06 50 09.0 -0.5**
comp=N,96nm,0.6s
MOA Molln 3.72 36 *e*Pn **Pn 06 49 29.4 +1.5**
comp=N,4.2nm,0.3s,SNR=8.8
MOA Molln 3.72 36 Pn **Pn 06 49 29.4 +1.5**
comp=N,4.2nm,0.3s,SNR=8.8
KIZ Kirchzarten 3.72 326 P **Pn 06 49 27.8 -0.1**
KIZ Kirchzarten 3.72 326 P **Pn 06 49 27.8 -0.1**
KIZ S **Sn 06 50 11.2 -0.3**
LOMF Lomont 3.79 312 P **Pn 06 49 29.6 +0.7**
LOMF Lomont 3.79 312 P **Pn 06 49 29.6 +0.7**
LOMF S **Sn 06 50 11.8 -1.6**
CABF La Chapelle 3.83 298 *e*Pn **Pn 06 49 30.4 +0.8**
CABF *e*Sn **Sn 06 50 12.6 -1.8**
comp=N,69nm,0.5s,SNR=1.0
CABF La Chapelle 3.83 298 *e*Pn **Pn 06 49 30.4 +0.8**
CABF *e*Sn **Sn 06 50 12.6 -1.8**
comp=N,34nm,0.5s,SNR=1.0
ARSA Arzberg 3.93 52 *i* Pn **Pn 06 49 30.8 0.0**
comp=N,6.0nm,0.3s,SNR=8.1
ARSA Arzberg 3.93 52 Pn **Pn 06 49 30.8 0.0**
comp=N,6.0nm,0.3s,SNR=8.1
MOF Molkenrain 3.98 319 P **Pn 06 49 31.9 +0.3**
MOF Molkenrain 3.98 319 P **Pn 06 49 31.9 +0.3**
MOF S **Sn 06 50 16.7 -1.3**
OG35 Corcelles 3.98 289 P **Pn 06 49 32.6 +1.1**
OG35 Corcelles 3.98 289 P **Pn 06 49 32.6 +1.1**
OG35 S **Sn 06 50 18.1 +0.1**
SMRF Simiane la Rot 3.99 258 *e*Pn **Pn 06 49 32.9 +1.3**
SMRF *e*Sn **Sn 06 50 17.7 -0.5**
comp=N,79nm,0.5s
SMRF Simiane la Rot 3.99 258 *e*Pn **Pn 06 49 32.9 +1.3**
SMRF *e*Sn **Sn 06 50 17.7 -0.5**
comp=N,40nm,0.5s
OPP Oppenau 4.08 333 P **Pn 06 49 33.2 +0.4**
OPP Oppenau 4.08 333 P **Pn 06 49 33.2 +0.4**
OPP S **Sn 06 50 18.4 -2.0**
HINF Hinteralfeld 4.08 317 *e*Pn **Pn 06 49 33.0 0.0**
HINF *e*Sn **Sn 06 50 18.3 -2.3**
comp=N,103nm,0.4s
HINF Hinteralfeld 4.08 317 *e*Pn **Pn 06 49 33.0 0.0**
HINF *e*Sn **Sn 06 50 18.3 -2.3**
comp=N,52nm,0.4s
ECH Echery 4.24 323 P **Pn 06 49 35.3 +0.2**
ECH Echery 4.24 323 P **Pn 06 49 35.3 +0.2**
ECH S **Sn 06 50 22.7 -1.6**
WLS Welschbruch 4.31 326 P **Pn 06 49 37.1 +1.0**
WLS Welschbruch 4.31 326 P **Pn 06 49 37.1 +1.0**
WLS S **Sn 06 50 24.4 -1.8**
CDF Champ du Feu 4.34 325 *e*Pn **Pn 06 49 36.6 +0.1**
CDF *e*Sn **Sn 06 50 24.7 -2.3**
comp=N,111nm,0.6s
CDF Champ du Feu 4.34 325 *e*Pn **Pn 06 49 36.6 +0.1**
CDF *e*Sn **Sn 06 50 24.7 -2.3**
comp=N,56nm,0.6s
BEHE Becsehely 4.35 67 *e*Pn **Pn 06 49 32.6 -3.9**
GERES GERESS Array B 4.36 24 Pn **Pn 06 49 36.6 -0.1**
comp=N,1.4nm,0.3s,baz=204,slow=13,SNR=16
GERES Pg **Pb 06 49 49.9 +2.6**
comp=N,3.7nm,0.3s,baz=203,slow=13,SNR=11
GERES Sn **Sn 06 50 25.6 -1.8**
comp=N,3.8nm,0.3s,baz=212,slow=12,SNR=4.4
GERES Lg Lg 06 50 45.1
comp=N,3.0nm,0.3s,baz=208,slow=25,SNR=2.5
BLY Banja Luka 4.41 90 *e*Pn **Pn 06 49 37.3 -0.1**
HAU Haudompre 4.46 316 *e*Pn **Pn 06 49 38.2 +0.1**
HAU *e*Sn **Sn 06 50 27.3 -2.6**
comp=N,313nm,0.4s
HAU Haudompre 4.46 316 *e*Pn **Pn 06 49 38.2 +0.1**
HAU *e*Sn **Sn 06 50 27.3 -2.6**
comp=N,157nm,0.4s
VIVF Saint-Julien-l 4.49 272 *e*Pn **Pn 06 49 38.3 -0.2**
VIVF *e*Sn **Sn 06 50 29.2 -1.4**
comp=N,17nm,0.2s
VIVF Saint-Julien-l 4.49 272 *e*Pn **Pn 06 49 38.3 -0.2**
VIVF *e*Sn **Sn 06 50 29.2 -1.4**
comp=N,8.4nm,0.2s
CONA Conrad Observa 4.53 46 *i* Pn **Pn 06 49 39.5 +0.4**
comp=N,14nm,0.7s,SNR=9.6
CONA Conrad Observa 4.53 46 Pn **Pn 06 49 39.5 +0.4**
comp=N,14nm,0.7s,SNR=9.6
SUBF Surbourg 4.55 333 P **Pn 06 49 39.8 +0.5**
SUBF Surbourg 4.55 333 P **Pn 06 49 39.8 +0.5**
KHC Kasperske Hory 4.58 22 *e*PN **Pn 06 49 39.9 +0.1**
KHC *e*PG **Pg 06 49 55.9 -2.8**
KHC *e*SN **Sn 06 50 33.8 +0.9**
KHC *e*SG **Sg 06 51 01.2 +3.2**
comp=N,75nm,0.8s
KHC AMS AMS 06 51 30.0
comp=N,500nm,9.3s
KHC Kasperske Hory 4.58 22 Pn **Pn 06 49 39.9 +0.1**
THEF They Montfort 4.79 316 P **Pn 06 49 43.4 +0.8**
THEF They Montfort 4.79 316 P **Pn 06 49 43.4 +0.8**
THEF S **Sn 06 50 37.7 -0.2**
TRBF Trabuc cave 5.09 263 P **Pn 06 49 45.6 -1.1**
TRBF Trabuc cave 5.09 263 P **Pn 06 49 45.6 -1.1**
TRBF S **Sn 06 50 43.4 -1.9**
LASF Ste Croix 5.17 263 *e*Pn **Pn 06 49 47.7 -0.2**
LASF *e*Sn **Sn 06 50 46.0 -1.3**
comp=N,31nm,0.6s
LASF Ste Croix 5.17 263 *e*Pn **Pn 06 49 47.7 -0.2**
LASF *e*Sn **Sn 06 50 46.0 -1.3**
comp=N,15nm,0.6s
STON Ston 5.26 110 *e*Pn **Pn 06 49 48.6 -0.4**
STON Sn **Sn 06 50 47.1 -2.3**
STON Ston 5.26 110 *e*Pn **Pn 06 49 48.6 -0.4**
STON Sn **Sn 06 50 47.1 -2.3**
SFTF Sexfontaines 5.27 311 *e*Pn **Pn 06 49 49.8 +0.6**
SFTF *e*Sn **Sn 06 50 47.1 -2.6**
comp=N,34nm,0.3s
SFTF Sexfontaines 5.27 311 *e*Pn **Pn 06 49 49.8 +0.6**
SFTF *e*Sn **Sn 06 50 47.1 -2.6**
comp=N,17nm,0.3s
SMF Signal de Mont 5.30 292 *e*Pn **Pn 06 49 48.2 -1.4**
SMF *e*Sn **Sn 06 50 48.2 -2.2**
comp=N,110nm,0.5s
SMF Signal de Mont 5.30 292 *e*Pn **Pn 06 49 48.2 -1.4**
SMF *e*Sn **Sn 06 50 48.2 -2.2**
comp=N,55nm,0.5s
NKC Novy Kostel 5.42 10 *e*PN **Pn 06 49 51.2 -0.1**
NKC *e*PG **Pg 06 50 11.4 -3.3**
NKC AMS AMS 06 52 10.0
comp=N,400nm,8.1s
NKC Novy Kostel 5.42 10 Pn **Pn 06 49 51.2 -0.1**
MEZF Maizieres J'vi 5.44 313 *e*Sn **Sn 06 50 51.3 -2.6**
comp=N,40nm,0.4s
LBL Lubilhac 5.50 276 P **Pn 06 49 53.3 +0.9**
LBL Lubilhac 5.50 276 P **Pn 06 49 53.3 +0.9**
LOR Lormes 5.50 298 *e*Pn **Pn 06 49 52.8 +0.5**
LOR *e*Sn **Sn 06 50 52.5 -2.8**
comp=N,34nm,0.2s
LOR Lormes 5.50 298 P **Pn 06 49 53.0 +0.6**
LOR S **Sn 06 50 53.3 -2.0**
LOR Lormes 5.50 298 *e*Pn **Pn 06 49 52.8 +0.5**
ABH Alteburg 5.50 336 P **Pn 06 49 53.3 +0.9**
ABH Alteburg 5.50 336 P **Pn 06 49 53.3 +0.9**
MODS Modra-Piesok 5.55 49 *e*PN **Pn 06 49 51.1 -1.9**
MODS *e*PG **Pg 06 50 12.9 -4.2**
MODS *e*SG **Sg 06 51 28.7 -0.2**
KRUC Moravsky 5.56 40 *e*PN **Pn 06 49 52.6 -0.6**
KRUC *e*PG **Pg 06 50 14.9 -2.5**

KRUC				*e*SG	**Sg**	**06 51 33.1**	**+3.7**
GOPC	**GO Pecny, Ondr**	**5.63**	**26**	*e*PN	**Pn**	**06 49 55.2**	**+1.0**
GOPC				*e*PG	**Pg**	**06 50 14.7**	**-4.1**
GOPC				*e*SG	**Sg**	**06 51 33.7**	**+2.0**
	comp=N,87nm,1.3s						
GOPC				AMS	AMS	06 52 20.0	
	comp=N,600nm,9.2s						
GOPC	**GO Pecny, Ondr**	**5.63**	**26**	Pn	**Pn**	**06 49 55.2**	**+1.0**
GOPC				Sg	**Sg**	**06 51 33.7**	**+2.0**
	comp=N,87nm,1.3s						
SSF	**Saint Saulge**	**5.64**	**295**	*e*Pn	**Pn**	**06 49 54.7**	**+0.3**
SSF				*e*Sn	**Sn**	**06 50 56.8**	**-2.1**
	comp=N,39nm,0.6s						
SSF	**Saint Saulge**	**5.64**	**295**	*e*Pn	**Pn**	**06 49 54.7**	**+0.3**
AGO	**Saint Agoulin**	**5.64**	**285**	P	**Pn**	**06 49 54.9**	**+0.5**
AGO	**Saint Agoulin**	**5.64**	**285**	P	**Pn**	**06 49 54.9**	**+0.5**
AVF	**Avril sur Loir**	**5.66**	**292**	*e*Pn	**Pn**	**06 49 55.0**	**+0.5**
AVF				*e*Sn	**Sn**	**06 50 55.5**	**-3.8**
	comp=N,25nm,0.6s						
AVF	**Avril sur Loir**	**5.66**	**292**	*e*Pn	**Pn**	**06 49 55.0**	**+0.5**
TREB	**Trebinje**	**5.76**	**110**	*e*Pn	**Pn**	**06 49 54.2**	**-1.7**
BRY	**Bratogost**	**5.81**	**108**	⇓*i*Pn	**Pn**	**06 49 57.8**	**+1.0**
BRY				*e*Sn	**Sn**	**06 51 03.1**	**-0.1**
BRY	**Bratogost**	**5.81**	**108**	⇓*i*Pn	**Pn**	**06 49 57.8**	**+1.0**
BRY				*e*Sn	**Sn**	**06 51 03.1**	**-0.1**
VRAC	**Vranov**	**5.83**	**39**	*e*SG	**Sg**	**06 51 40.8**	**+2.8**
BGF	**Bois d'Agland**	**5.94**	**289**	*e*Pn	**Pn**	**06 49 58.9**	**+0.5**
BGF				*e*Sn	**Sn**	**06 51 05.1**	**-1.0**
	comp=N,196nm,0.5s						
BGF	**Bois d'Agland**	**5.94**	**289**	*e*Pn	**Pn**	**06 49 58.9**	**+0.5**
BGF				*e*Sn	**Sn**	**06 51 05.1**	**-1.0**
	comp=N,98nm,0.5s						
UPM	**Unac-Piva**	**5.95**	**104**	⇑*i*Pn	**Pn**	**06 50 00.5**	**+1.7**
UPM				*e*Sn	**Sn**	**06 51 06.9**	**+0.1**
UPM	**Unac-Piva**	**5.95**	**104**	⇑*i*Pn	**Pn**	**06 50 00.5**	**+1.7**
UPM				*e*Sn	**Sn**	**06 51 06.9**	**+0.1**
HCY	**Herceg Novi**	**5.97**	**112**	⇑*i*Pn	**Pn**	**06 50 00.2**	**+1.4**
HCY				*e*Sn	**Sn**	**06 51 06.8**	**-0.2**
HCY	**Herceg Novi**	**5.97**	**112**	⇑*i*Pn	**Pn**	**06 50 00.2**	**+1.4**
HCY				*e*Sn	**Sn**	**06 51 06.8**	**-0.2**
JAVC	**Velka Javorina**	**6.05**	**47**	*e*Pn	**Pn**	**06 50 01.6**	**+1.6**
JAVC	**Velka Javorina**	**6.05**	**47**	*e*PN	**Pn**	**06 50 01.6**	**+1.6**
JAVC				*e*SG	Sg	06 51 59.7	+15
BBLS	**Lazići**	**6.12**	**97**	*e*Pn	**Pn**	**06 50 00.8**	**-0.1**
CEME	**Cevo**	**6.21**	**110**	⇓*i*Pn	**Pn**	**06 50 03.1**	**+0.9**
CEME				*e*Sn	**Sn**	**06 51 13.2**	**+0.3**
CEME	**Cevo**	**6.21**	**110**	⇓*i*Pn	**Pn**	**06 50 03.1**	**+0.9**
CEME				*e*Sn	**Sn**	**06 51 13.2**	**+0.3**
HYF	**Humbligny**	**6.27**	**295**	*e*Pn	**Pn**	**06 50 03.4**	**+0.4**
HYF				*e*Sn	**Sn**	**06 51 11.6**	**-2.8**
HYF	**Humbligny**	**6.27**	**295**	*e*Pn	**Pn**	**06 50 03.4**	**+0.4**
BRG	**Berggiesshubel**	**6.29**	**17**	PN	**Pn**	**06 50 03.8**	**+0.6**
	comp=N,9.1nm,0.6s						
BRG				PG	**Pg**	**06 50 29.4**	**-1.9**
BRG				SG	**Sg**	**06 51 56.4**	**+3.6**
	comp=N,318nm,2.4s						
	comp=Z,594nm,9.4s						
	comp=N,320nm,9.9s						
	comp=E,271nm,9.9s						
BUM	**Brajici-Budva**	**6.30**	**112**	*e*Pn	**Pn**	**06 50 04.6**	**+1.2**
BUM				*e*Sn	**Sn**	**06 51 15.0**	**-0.2**
BUM	**Brajici-Budva**	**6.30**	**112**	*e*Pn	**Pn**	**06 50 04.6**	**+1.2**
BUM				*e*Sn	**Sn**	**06 51 15.0**	**-0.2**
TCF	**Toulx Ste Croi**	**6.32**	**286**	*e*Pn	**Pn**	**06 50 04.3**	**+0.7**
TCF				*e*Sn	**Sn**	**06 51 13.4**	**-2.1**
	comp=E,66nm,0.8s						
TCF	**Toulx Ste Croi**	**6.32**	**286**	*e*Pn	**Pn**	**06 50 04.3**	**+0.7**
CAF	**Calviac**	**6.34**	**273**	*e*Pn	**Pn**	**06 50 03.8**	**-0.1**
CAF				*e*Sn	**Sn**	**06 51 12.3**	**-3.8**
	comp=E,16nm,0.6s						
CAF	**Calviac**	**6.34**	**273**	*e*Pn	**Pn**	**06 50 03.8**	**-0.1**
VYHS	**Vyhne**	**6.48**	**54**	*e*PN	**Pn**	**06 50 05.1**	**-0.7**
VYHS	**Vyhne**	**6.48**	**54**	*e*Pn	**Pn**	**06 50 05.1**	**-0.7**
PDG	**Podgorica**	**6.48**	**110**	⇑*i*Pn	**Pn**	**06 50 07.0**	**+1.1**
PDG				*e*Sn	**Sn**	**06 51 20.1**	**+0.5**
TTG	**Podgorica**	**6.48**	**110**	⇑*i*Pn	**Pn**	**06 50 07.0**	**+1.1**
TTG				*e*Sn	**Sn**	**06 51 20.1**	**+0.5**
KOME	**Kolasin**	**6.49**	**105**	*e*Pn	**Pn**	**06 50 07.5**	**+1.4**
KOME				*e*Sn	**Sn**	**06 51 20.0**	**0.0**
KOME	**Kolasin**	**6.49**	**105**	*e*Pn	**Pn**	**06 50 07.5**	**+1.4**
KOME				*e*Sn	**Sn**	**06 51 20.0**	**0.0**
MTLF	**Montolieu**	**6.50**	**259**	*e*Pn	**Pn**	**06 50 08.6**	**+2.4**
	SNR=1.0						
MTLF				*e*Sn	**Sn**	**06 51 19.8**	**-0.4**
	SNR=1.0						
MTLF				*e*Sg	**Sg**	**06 51 54.4**	**-5.2**
	comp=E,5.1nm,0.5s,SNR=1.0						
MTLF	**Montolieu**	**6.50**	**259**	*e*Pn	**Pn**	**06 50 08.6**	**+2.4**
	SNR=1.0						
MTLF				*e*Sn	**Sn**	**06 51 19.8**	**-0.4**
	SNR=1.0						
DPC	**Dobruska-Polom**	**6.53**	**32**	AMS	AMS	06 52 40.0	
	comp=E,300nm,8.7s						
DRME	**Dracevica, Mon**	**6.54**	**112**	⇑*i*Pn	**Pn**	**06 50 07.9**	**+1.2**
DRME				*e*Sn	**Sn**	**06 51 21.2**	**+0.1**
DRME	**Dracevica, Mon**	**6.54**	**112**	⇑*i*Pn	**Pn**	**06 50 07.9**	**+1.2**
DRME				*e*Sn	**Sn**	**06 51 21.2**	**+0.1**
CLL	**Collm**	**6.55**	**11**	*e*Pn	**Pn**	**06 50 06.0**	**-0.7**
	comp=Z,11nm,1.0s						
CLL				*e*Pg	**Pg**	**06 50 35.0**	**-1.2**
CLL				*e*		06 51 45.0	
CLL				*e*Sg	**Sg**	**06 52 07.0**	**+6.1**
	comp=Z,196nm,2.0s						
UPC	**Upice**	**6.55**	**29**	AMS	AMS	06 52 50.0	
	comp=Z,500nm,8.0s						
MORC	**Moravsky Berou**	**6.60**	**40**	*e*SG	**Sg**	**06 52 05.2**	**+2.6**
ULC	**Ulcinj**	**6.69**	**113**	⇑*i*Pn	**Pn**	**06 50 09.6**	**+0.9**
ULC				*e*Sn	**Sn**	**06 51 25.0**	**+0.3**
ULC	**Ulcinj**	**6.69**	**113**	⇑*i*Pn	**Pn**	**06 50 09.6**	**+0.9**
ULC				*e*Sn	**Sn**	**06 51 25.0**	**+0.3**
MFF	**Saint Martin d**	**7.97**	**286**	*e*Pn	**Pn**	**06 50 24.6**	**-1.7**
	SNR=1.0						
MFF				*e*Sn	**Sn**	**06 51 54.4**	**-1.8**
	comp=Z,16nm,0.5s,SNR=1.0						
MFF	**Saint Martin d**	**7.97**	**286**	*e*Pn	**Pn**	**06 50 24.6**	**-1.7**
	SNR=1.0						
FLN	**La Foliniere**	**8.76**	**300**	*e*Pn	**Pn**	**06 50 37.7**	**+0.6**
	SNR=1.0						
FLN	**La Foliniere**	**8.76**	**300**	*e*Pn	**Pn**	**06 50 37.7**	**+0.6**
	SNR=1.0						
GRR	**Gorron**	**8.86**	**297**	*e*Pn	**Pn**	**06 50 39.7**	**+1.2**
	SNR=1.0						
GRR	**Gorron**	**8.86**	**297**	*e*Pn	**Pn**	**06 50 39.7**	**+1.2**
	SNR=1.0						
KEST	**Kesra**	**9.25**	**188**	Pn	**Pn**	**06 50 44.7**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=0.0,slow=5.1,SNR=2.1						
ROSF	**Rostrenen**	**10.39**	**294**	*e*Pn	**Pn**	**06 51 01.3**	**+1.8**
	SNR=1.0						
ROSF	**Rostrenen**	**10.39**	**294**	*e*Pn	**Pn**	**06 51 01.3**	**+1.8**
	SNR=1.0						
ESDC	**Sonseca Array**	**12.24**	**250**	Pn	**Pn**	**06 51 24.9**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=57,slow=14,SNR=4.8						
ESDC				LR	LR	06 56 53.6	
	comp=Z,37nm,18.7s,baz=345,slow=41						
EKA	**Eskdalemuir Ar**	**13.80**	**324**	Pn	**Pn**	**06 51 46.4**	**+0.4**
	baz=136,slow=14,SNR=3.6						
FINES	**FINESS Array B**	**18.79**	**23**	P	**Pn**	**06 52 50.9**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=210,slow=16,SNR=3.4						
TORD	**Torodi Ar. Bea**	**32.63**	**197**	P	**P**	**06 55 00.4**	**-1.8**
	comp=Z,1.1nm,0.7s,baz=11,slow=8.9,SNR=7.2						
MKAR	**Makanchi Array**	**48.11**	**61**	P	**P**	**06 57 10.5**	**+0.5**
	comp=Z,1.2nm,0.9s,baz=292,slow=7.9,SNR=7.9						

*ISN **14** 06:49:35.5±1.1,37°.14N×42°.54E, h0km±3km, ML3.8*
*CSEM **14** 06:49:37.1±0.2,37°.14N×42°.48E, h2km, ML3.8, Error ellipse: s-maj=6.8km s-min=4.5km az=64.0*
*DDA **14** 06:49:37.8,37°.24N×42°.50E, h8km, Ml3.8*
*ATA **14** 06:49:44.9±1.2,37°.79N×42°.41E, h22km±15km, ML4.3, MW4.2*
ISC 14 06:49:37.3±1.1,37°.19N±0°.03×42°.49E±0°.03, h12km±8km, n60,σ1§33/73, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRN	**S¨–rnak**	**0.31**	**348**	*i* P	**Pg**	**06 49 42.9**	**-0.8**
SIRN				*i* S	**Sg**	**06 49 47.2**	**-0.8**
SIRN	**S¨–rnak**	**0.31**	**348**	P	**Pg**	**06 49 42.9**	**-0.8**
SIRN				S	**Sg**	**06 49 47.2**	**-0.8**
SRTM	**Siirt_Merkez**	**0.92**	**330**	*i* P	**Pg**	**06 49 54.9**	**-0.2**
SRTM				*i* S	**Sg**	**06 50 07.9**	**+0.8**
SRTM	**Siirt_Merkez**	**0.92**	**330**	P	**Pg**	**06 49 54.9**	**-0.2**
SRTM				S	**Sg**	**06 50 07.9**	**+0.8**
HAKT	**HAKKARI**	**1.03**	**69**	*i* P	**Pg**	**06 49 57.0**	**-0.3**
HAKT	**HAKKARI**	**1.03**	**69**	P	**Pg**	**06 49 57.0**	**-0.3**
BTMN	**Batman**	**1.20**	**306**	*i* P	**Pg**	**06 50 00.3**	**-0.1**
BTMN	**Batman**	**1.20**	**306**	P	**Pg**	**06 50 00.3**	**-0.1**
GEVA	**Gevas**	**1.20**	**22**	*e*P	**Pn**	**06 49 59.3**	**-0.9**
GEVA				IAML		06 50 34.0	
	comp=Z,346nm,0.5s						
GEVA	**Gevas**	**1.20**	**22**	*i* P	**Pn**	**06 50 00.1**	**0.0**
GEVA				*i* S	**Sb**	**06 50 16.7**	**+1.0**
GEVA	**Gevas**	**1.20**	**22**	P	**Pn**	**06 50 00.1**	**0.0**
GEVA				S	**Sb**	**06 50 16.7**	**+1.0**
SVAN	**Silvan-Diyarba**	**1.40**	**313**	*i* P	**Pb**	**06 50 04.0**	**+0.5**
SVAN	**Silvan-Diyarba**	**1.40**	**313**	P	**Pb**	**06 50 04.0**	**+0.5**
YOVA	**Hakkari_Y¨…kse**	**1.48**	**74**	*i* P	**Pb**	**06 50 05.5**	**+0.5**
YOVA	**Hakkari_Y¨…kse**	**1.48**	**74**	P	**Pb**	**06 50 05.5**	**+0.5**
TVAN	**Van**	**1.52**	**28**	*i* P	**Pg**	**06 50 07.5**	**+1.0**
TVAN	**Van**	**1.52**	**28**	P	**Pg**	**06 50 07.5**	**+1.0**
ADCV	**BITLIS_Adilcev**	**1.62**	**6**	*i* P	**Pg**	**06 50 08.6**	**+0.1**
ADCV	**BITLIS_Adilcev**	**1.62**	**6**	P	**Pg**	**06 50 08.6**	**+0.1**
DIYA	**Diyarbakir**	**2.02**	**292**	*i* P	**Pb**	**06 50 14.3**	**+0.3**
DIYA	**Diyarbakir**	**2.02**	**292**	P	**Pb**	**06 50 14.3**	**+0.3**
BNGL	**BINGOL**	**2.05**	**329**	*e*P	**Pb**	**06 50 14.0**	**-0.6**
BNGL				*e*S	**Sn**	**06 50 36.0**	**-1.4**
BNGL				IAML		06 50 54.6	
	comp=Z,1μm,0.3s						
BNGL	**BINGOL**	**2.05**	**329**	*i* P	**Pb**	**06 50 14.4**	**-0.2**
HANI	**Diyarbakir_Han**	**2.06**	**307**	*i* P	**Pn**	**06 50 12.2**	**+0.4**
HANI	**Diyarbakir_Han**	**2.06**	**307**	P	**Pn**	**06 50 12.2**	**+0.4**
EKAR	**Karacoban**	**2.09**	**351**	*e*P	**Pn**	**06 50 12.1**	**-0.2**
EKAR				*i* Pg	**Pb**	**06 50 14.6**	**-0.7**
EKAR				*e*S	**Sn**	**06 50 35.5**	**-2.8**
EKAR				IAML		06 51 02.0	
	comp=Z,150nm,0.6s						
EKAR	**Karacoban**	**2.09**	**351**	*i* P	**Pb**	**06 50 14.9**	**-0.4**
EKAR	**Karacoban**	**2.09**	**351**	P	**Pb**	**06 50 14.9**	**-0.4**
TUTA	**Tutak**	**2.22**	**6**	*e*P	**Pn**	**06 50 16.0**	**+1.9**
TUTA	**Tutak**	**2.22**	**6**	*i* P	**Pb**	**06 50 16.7**	**-0.8**
TUTA	**Tutak**	**2.22**	**6**	P	**Pb**	**06 50 16.7**	**-0.8**
CLDR	**Caldiran**	**2.25**	**30**	*i* P	**Pb**	**06 50 17.6**	**-0.4**
CLDR	**Caldiran**	**2.25**	**30**	P	**Pb**	**06 50 17.6**	**-0.4**
DYDN	**Diyadin**	**2.53**	**21**	*e*P	**Pb**	**06 50 21.5**	**-1.3**
EATA	**Eleskirt**	**2.67**	**360**	*e*P	**Pn**	**06 50 22.5**	**+2.2**
EATA				*e*S	**Sn**	**06 50 51.2**	**-1.5**
EATA				IAML		06 51 16.8	
	comp=Z,18nm,0.6s						
EATA	**Eleskirt**	**2.67**	**360**	*i* P	**Pb**	**06 50 23.6**	**-1.6**
EATA	**Eleskirt**	**2.67**	**360**	P	**Pb**	**06 50 23.6**	**-1.6**
ECAT	**Cat-ERZURUM**	**2.69**	**334**	*e*P	**Pn**	**06 50 22.8**	**+2.2**
SANL	**SANLIURFA_Merk**	**2.80**	**271**	*i* P	**Pn**	**06 50 23.2**	**+1.3**
SANL	**SANLIURFA_Merk**	**2.80**	**271**	P	**Pn**	**06 50 23.2**	**+1.3**
ERZM	**Erzurum**	**2.85**	**342**	*e*P	**Pn**	**06 50 25.5**	**+2.7**
ERZM	**Erzurum**	**2.85**	**342**	*i* P	**Pb**	**06 50 27.8**	**-0.4**
ERZM	**Erzurum**	**2.85**	**342**	P	**Pb**	**06 50 27.8**	**-0.4**
HOMI	**Horasan**	**2.88**	**351**	*e*P	**Pn**	**06 50 26.0**	**+2.7**
HOMI	**Horasan**	**2.88**	**351**	*i* P	**Pb**	**06 50 28.6**	**-0.2**
IGDI	**IGDIR**	**2.94**	**24**	*e*P	**Pn**	**06 50 26.2**	**+2.2**
TNCL	**Tunceli-Merkez**	**3.02**	**310**	*e*P	**Pn**	**06 50 27.2**	**+2.2**
TNCL	**Tunceli-Merkez**	**3.02**	**310**	*i* P	**Pn**	**06 50 24.8**	**-0.2**
TNCL	**Tunceli-Merkez**	**3.02**	**310**	P	**Pn**	**06 50 24.8**	**-0.2**
KOPT	**Kop Dagi**	**3.23**	**332**	*e*P	**Pb**	**06 50 35.5**	**+0.8**
EUZM	**Uzumlu**	**3.33**	**320**	*e*P	**Pg**	**06 50 39.8**	**-1.5**
ATAB	**Bozova**	**3.36**	**276**	*i* P	**Pn**	**06 50 30.2**	**+0.6**
ATAB	**Bozova**	**3.36**	**276**	P	**Pn**	**06 50 30.2**	**+0.6**
EAK	**Akyaka**	**3.59**	**14**	*e*P	**Pb**	**06 50 44.0**	**+3.1**
REFA	**Refahiye_ERZ¨**	**3.67**	**308**	*e*P	**Pg**	**06 50 49.1**	**+1.5**
KEMA	**Kemaliye**	**3.77**	**305**	*e*P	**Pn**	**06 50 36.5**	**+1.2**
KELT	**Kelkit**	**3.89**	**320**	*e*P	**Pn**	**06 50 40.2**	**+3.1**
BHD	**Baghdad**	**4.21**	**158**	*e*Pn	**Pn**	**06 50 42.0**	**+0.8**
	SNR=3.0						
BHD				*e*Sn	**Sn**	**06 51 28.0**	**-2.3**
	SNR=3.0						
RTB	**Rutbah**	**4.52**	**204**	*e*Pn	**Pn**	**06 50 47.0**	**+1.3**
	SNR=3.0						
RTB				*e*Sn	**Sn**	**06 51 36.0**	**-2.2**
	SNR=3.0						
NSR	**Nassriya**	**6.87**	**153**	*e*Pn	**Pn**	**06 51 19.0**	**+1.2**
	SNR=3.0						
NSR				*e*Sn	**Sn**	**06 52 33.0**	**-2.9**
	SNR=3.0						

*CSEM **14** 06:49:48.9±0.5,37°.25N×42°.48E, h4km±3km, ML4.0, Error ellipse: s-maj=10.5km s-min=5.4km az=10.0*
*DDA **14** 06:49:48.9,37°.25N×42°.46E, h8km, Ml4.1*
*ISK **14** 06:49:48.9,37°.29N×42°.41E, h6km, ML4.0/6*
*ISCJB **14** 06:49:49.0±1.1,37°.25N±0°.05×42°.47E±0°.06, h5km±6km, Error ellipse: s-maj=8.9km s-min=7.3km az=27.5*
ISC 14 06:49:49.6±1.6,37°.28N±0°.07×42°.50E±0°.03, h7km±10km, n30,σ0§75/41, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRN	**S¨–rnak**	**0.22**	**343**	*e*P	**Pg**	**06 49 54.0**	**-0.1**
SIRN				*i* S	**Sg**	**06 49 57.8**	**+0.6**
SIRN	**S¨–rnak**	**0.22**	**343**	P	**Pg**	**06 49 54.0**	**-0.1**
SIRN				S	**Sg**	**06 49 57.8**	**+0.6**
SIRT	**Sirnak**	**0.22**	**348**	PG	**Pg**	**06 49 53.6**	**-0.5**
SIRT				SG	**Sg**	**06 49 57.3**	**+0.1**
SIRT	**Sirnak**	**0.22**	**348**	*e*Pg	**Pg**	**06 49 53.6**	**-0.5**
SIRT				*e*Sg	**Sg**	**06 49 57.3**	**+0.1**
SRTM	**Siirt_Merkez**	**0.84**	**327**	*e*P	**Pg**	**06 50 05.9**	**+0.1**
SRTM				*e*S	**Sg**	**06 50 17.5**	**+0.7**
SRTM	**Siirt_Merkez**	**0.84**	**327**	P	**Pg**	**06 50 05.9**	**+0.1**
SRTM				S	**Sg**	**06 50 17.5**	**+0.7**
HAKT	**HAKKARI**	**1.00**	**74**	*e*P	**Pg**	**06 50 09.1**	**+0.2**
HAKT	**HAKKARI**	**1.00**	**74**	P	**Pg**	**06 50 09.1**	**+0.2**
BTMN	**Batman**	**1.15**	**302**	*e*P	**Pg**	**06 50 11.2**	**-0.4**
BTMN				*e*S	**Sg**	**06 50 26.9**	**+0.3**
BTMN	**Batman**	**1.15**	**302**	P	**Pg**	**06 50 11.2**	**-0.4**
BTMN				S	**Sg**	**06 50 26.9**	**+0.3**
GURO	**Guroymak-BITLI**	**1.32**	**344**	PN	**Pn**	**06 50 14.1**	**-0.4**
GURO				SN	**Sg**	**06 50 32.3**	**+0.2**
GURO	**Guroymak-BITLI**	**1.32**	**344**	*e*Pn	**Pn**	**06 50 14.1**	**-0.4**
GURO				*e*Sn	**Sg**	**06 50 32.3**	**+0.2**
SVAN	**Silvan-Diyarba**	**1.35**	**311**	PN	**Pn**	**06 50 14.1**	**-0.7**
SVAN	**Silvan-Diyarba**	**1.35**	**311**	*e*P	**Pn**	**06 50 14.6**	**-0.2**
SVAN	**Silvan-Diyarba**	**1.35**	**311**	*e*Pn	**Pn**	**06 50 14.1**	**-0.7**
SVAN	**Silvan-Diyarba**	**1.35**	**311**	P	**Pn**	**06 50 14.6**	**-0.2**
MARD	**Mardin**	**1.37**	**272**	*e*P	**Pn**	**06 50 13.7**	**-1.5**
YOVA	**Hakkari_Y¨…kse**	**1.46**	**77**	*e*P	**Pn**	**06 50 16.6**	**+0.1**
YOVA	**Hakkari_Y¨…kse**	**1.46**	**77**	P	**Pn**	**06 50 16.6**	**+0.1**
VANB	**Van**	**1.49**	**28**	PN	**Pn**	**06 50 16.4**	**-0.4**
VANB	**Van**	**1.49**	**28**	*e*Pn	**Pn**	**06 50 16.4**	**-0.4**
MAZI	**Mazidag**	**1.64**	**277**	PN	**Pn**	**06 50 18.1**	**-0.8**
MAZI	**Mazidag**	**1.64**	**277**	*e*Pn	**Pn**	**06 50 18.1**	**-0.8**
DIY	**Diyarbakir**	**1.91**	**289**	*e*Pn	**Pn**	**06 50 23.1**	**+0.6**
BNGL	**BINGOL**	**1.98**	**328**	*e*P	**Pb**	**06 50 25.1**	**-0.9**
BNGL				*e*S	**Sn**	**06 50 48.8**	**0.0**
DYBB	**Diyarbakir**	**1.99**	**290**	PN	**Pn**	**06 50 23.1**	**-0.5**
EKAR	**Karacoban**	**2.00**	**350**	*e*P	**Pb**	**06 50 26.4**	**0.0**
EKAR	**Karacoban**	**2.00**	**350**	P	**Pb**	**06 50 26.4**	**0.0**
HANI	**Diyarbakir_Han**	**2.01**	**305**	*e*P	**Pg**	**06 50 30.4**	**+2.3**
HANI	**Diyarbakir_Han**	**2.01**	**305**	P	**Pg**	**06 50 30.4**	**+2.3**

*ISCJB **14** 06:51:38.5±0.5,7°.81S±0°.06×120°.39E±0°.09, h35km, mb3.9/6, Error ellipse: s-maj=12.8km s-min=8.0km az=163.0*
*DJA **14** 06:51:40.1±0.7,8°.5S±3°.×12°.0E±°, h19km±9km, M3.9/9, MLv3.9/9*
*IDC **14** 06:51:41.9±0.9,7°.74S×120°.49E, h52km±7km, mb3.6/7, mb1 3.7/8, mb1mx3.4/60, mbtmp3.8/8, Error ellipse: s-maj=70.8km s-min=15.1km az=60.0*
ISC 14 06:51:39.9±0.7,7°.80S±0°.05×120°.29E±0°.07, h35km, n18, σ1§63/20, mb4.1/6, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDFI	**Ende, Flores**	**1.68**	**124**	P	**Pn**	**06 52 05.2**	**-1.7**
WSI	**Waingapu**	**1.86**	**180**	P	**Pn**	**06 52 10.4**	**+1.1**
WBSI	**Waikabubak, Su**	**2.04**	**206**	P	**Pn**	**06 52 12.2**	**+0.4**
MMRI	**Maumere**	**2.10**	**114**	P	**Pn**	**06 52 14.9**	**+2.3**
BASI	**Baing, Sumba**	**2.42**	**173**	P	**Pn**	**06 52 21.2**	**+4.2**
BKSI	**Bulukumba**	**2.47**	**356**	P	**Pn**	**06 52 18.3**	**+0.7**
PLAI	**Plampang**	**2.69**	**247**	P	**Pn**	**06 52 20.7**	**-0.1**
TWSI	**Taliwang, Sumb**	**3.50**	**254**	P	Pn	06 52 45.0	+13
SPSI	**Sidrap Palu**	**3.84**	**352**	P	**Pn**	**06 52 38.6**	**+2.0**
TTSI	**Tana Toraja**	**4.75**	**354**	P	Pn	06 52 59.9	+11
WRA	**Warramunga Arr**	**18.19**	**133**	P	**Pn**	**06 55 47.8**	**-2.1**
	0.2nm,0.3s,baz=307,slow=12,SNR=19						
WRA				S	Sn	06 58 59.5	-13
	0.0nm,0.3s,baz=304,slow=20,SNR=3.2						
ASAR	**Alice Springs**	**20.48**	**142**	P	**P**	**06 56 15.2**	**+0.4**
	1.6nm,0.6s,baz=327,slow=13,SNR=15						
ASAR				pP	**sP**	**06 56 27.2**	**-1.4**
	1.7nm,0.9s,baz=331,slow=14,SNR=4.3						
STKA	**Stephens Creek**	**31.10**	**143**	P	**P**	**06 57 56.0**	**+0.9**
	2.4nm,0.6s,baz=307,slow=8.5,SNR=3.1						
SONM	**Songino Array**	**56.74**	**349**	P	**P**	**07 01 19.1**	**-1.3**
	0.2nm,0.3s,baz=150,slow=1.2,SNR=3.0						
MKAR	**Makanchi Array**	**63.99**	**332**	P	**P**	**07 02 11.6**	**+1.8**
	0.6nm,0.6s,baz=138,slow=7.7,SNR=6.6						
MKAR				pP	**sP**	**07 02 24.4**	**-0.3**
	0.7nm,0.5s,baz=142,slow=7.6,SNR=5.7						
ZALV	**Zalesovo Beam**	**68.39**	**338**	P	**P**	**07 02 38.0**	**+0.1**
	0.9nm,0.4s,baz=146,slow=3.1,SNR=4.2						
ZALV				pP	**sP**	**07 02 52.3**	**-0.4**
	1.0nm,0.6s,baz=133,slow=5.2,SNR=1.6						
KURBB	**Kurchatov Arra**	**68.48**	**333**	P	**P**	**07 02 39.3**	**+0.9**
	0.2nm,0.4s,baz=143,slow=5.9,SNR=4.6						
KURBB				pP	**sP**	**07 02 53.9**	**+0.5**
	0.4nm,0.5s,baz=137,slow=5.3,SNR=2.7						
SNAA	**Sanae**	**92.49**	**195**	P	**P**	**07 04 46.3**	**-0.9**
	0.9nm,0.9s,baz=124,slow=3.6,SNR=3.7						

*ISN **14** 07:18:48.1±0.3,37°.24N×42°.35E, h0km, ML2.3*
*ISCJB **14** 07:18:51.8±1.3,37°.21N±0°.06×42°.49E±0°.05, h5km±6km, Error ellipse: s-maj=9.4km s-min=6.5km az=1.4*
*CSEM **14** 07:18:51.7±0.4,37°.20N×42°.49E, h10km, ML2.4, Error ellipse: s-maj=10.7km s-min=7.3km az=38.0*
*DDA **14** 07:18:51.9,37°.25N×42°.50E, h7km, Ml2.7*
*ISK **14** 07:18:51.7,37°.25N×42°.34E, h8km, ML2.4/5*
ISC 14 07:18:51.7±1.5,37°.23N±0°.07×42°.51E±0°.04, h11km±8km, n19,σ0§86/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRN	**S¨–rnak**	**0.28**	**345**	*i* P	**Pg**	**07 18 57.3**	**-0.2**
SIRN				*i* S	**Sg**	**07 19 01.4**	**0.0**
SIRN	**S¨–rnak**	**0.28**	**345**	P	**Pg**	**07 18 57.3**	**-0.2**
SIRN				S	**Sg**	**07 19 01.4**	**0.0**
SIRT	**Sirnak**	**0.28**	**349**	PG	**Pg**	**07 18 57.4**	**-0.1**
SIRT				SG	**Sg**	**07 19 01.8**	**+0.4**
SIRT	**Sirnak**	**0.28**	**349**	*e*Pg	**Pg**	**07 18 57.4**	**-0.1**
SIRT				*e*Sg	**Sg**	**07 19 01.8**	**+0.4**
SRTM	**Siirt_Merkez**	**0.89**	**329**	*i* P	**Pn**	**07 19 11.9**	**+1.5**
SRTM				*i* S	**Sn**	**

HAKT	**HAKKARI**	**0.88**	**78**	*i* P	**Pg**	**07 44 23.1**	**0.0**
HAKT				*i* S	**Sb**	**07 44 37.1**	**+1.9**
HAKT	**HAKKARI**	**0.88**	**78**	P	**Pg**	**07 44 23.0**	**0.0**
HAKT				S	**Sb**	**07 44 37.1**	**+1.9**
BTMN	**Batman**	**1.19**	**296**	*i* P	**Pb**	**07 44 28.1**	**-0.6**
BTMN				*i* S	**Sb**	**07 44 45.8**	**+1.7**
BTMN	**Batman**	**1.19**	**296**	P	**Pb**	**07 44 28.1**	**-0.6**
BTMN				S	**Sb**	**07 44 45.8**	**+1.7**
GURO	**Guroymak-BITLI**	**1.26**	**338**	PG	**Pn**	**07 44 27.7**	**-2.0**
SVAN	**Silvan-Diyarba**	**1.37**	**305**	PN	**Pn**	**07 44 30.1**	**-1.0**
SVAN	**Silvan-Diyarba**	**1.37**	**305**	*i* P	**Pn**	**07 44 29.6**	**-1.5**
SVAN	**Silvan-Diyarba**	**1.37**	**305**	P	**Pn**	**07 44 29.6**	**-1.5**
SVAN	**Silvan-Diyarba**	**1.37**	**305**	*e*Pn	**Pn**	**07 44 30.1**	**-1.0**
MARD	**Mardin**	**1.47**	**268**	*i* P	**Pn**	**07 44 30.8**	**-1.8**
MARD				*i* S	**Sn**	**07 44 50.5**	**-1.5**
MAZI	**Mazidag**	**1.74**	**273**	PN	**Pn**	**07 44 37.0**	**+0.8**
MAZI	**Mazidag**	**1.74**	**273**	*e*Pn	**Pn**	**07 44 37.0**	**+0.8**
SVRC	**Sivrice-ELAZID**	**2.81**	**292**	PN	**Pn**	**07 44 51.4**	**+0.4**
SVRC	**Sivrice-ELAZID**	**2.81**	**292**	*e*Pn	**Pn**	**07 44 51.4**	**+0.4**

CSEM ***14*** *07:51:44.4, 39°.17N×29°.16W, h5km, ML2.6*
PDA 14 07:51:44.4±1.0, **39°.17N**±**29°.16W, h5**km, **MD3.5, ML2.6, Error ellipse: s-maj=10.3km s-min=4.9km az=94.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCED	**Cedros**	**0.65**	**146**	*e*P	Pg	07 51 54.7	-2.1
PCED				*e*S	Sg	07 52 03.0	-2.2
PCED				A	A	07 52 04.1	
	85nm,0.3s						
PCED	**Cedros**	**0.65**	**146**	*e*P	Pg	07 51 54.7	-2.1
PCED				*e*S	Sg	07 52 03.0	-2.2
CALA	**Caldeira**	**0.69**	**148**	*e*S	Sg	07 52 04.9	-1.5
CALA	**Caldeira**	**0.69**	**148**	*e*S	Sg	07 52 04.9	-1.5
HOR	**Horta**	**0.76**	**147**	*e*S	Sg	07 52 05.9	-3.0
HOR				A	A	07 52 07.3	
	138nm,0.2s						
HOR	**Horta**	**0.76**	**147**	*e*S	Sg	07 52 05.9	-3.0
ROSA	**Rosais**	**0.84**	**121**	*e*P	Pg	07 51 58.2	-2.4
ROSA	**Rosais**	**0.84**	**121**	*e*P	Pg	07 51 58.2	-2.4
PCAN	**Candelaria**	**0.88**	**143**	*e*P	Pg	07 51 58.5	-2.7
PCAN				*e*S	Sg	07 52 09.0	-3.6
PCAN				A	A	07 52 13.4	
	217nm,0.2s						
PCAN	**Candelaria**	**0.88**	**143**	*e*P	Pg	07 51 58.5	-2.7
PCAN				*e*S	Sg	07 52 09.0	-3.6
PICO	**Pico**	**0.88**	**139**	*e*P	Pg	07 51 58.7	-2.5
PICO				*e*S	Sg	07 52 09.4	-3.2
PICO				A	A	07 52 10.7	
	163nm,0.5s						
PICO	**Pico**	**0.88**	**139**	*e*P	Pg	07 51 58.7	-2.5
PICO				*e*S	Sg	07 52 09.4	-3.2
PGRA	**Graciosa**	**0.93**	**98**	*e*P	Pg	07 51 58.8	-3.4
PGRA				*e*S	Sg	07 52 10.2	-4.1
PGRA				A	A	07 52 11.8	
	19nm,0.1s						
PGRA	**Graciosa**	**0.93**	**98**	*e*P	Pg	07 51 58.8	-3.4
PGRA				*e*S	Sg	07 52 10.2	-4.1
PSMA	**Santa Maria**	**3.85**	**123**	*e*P	Pn	07 52 40.1	-4.2
PSMN	**Pico do Norte,**	**3.89**	**122**	*e*P	Pn	07 52 40.6	-4.2
PSMN	**Pico do Norte,**	**3.89**	**122**	*e*P	Pn	07 52 40.6	-4.2

CNRM ***14*** *07:52:31.2, 32°.84N×5°.25W, h2km, ML3.6*
INMG ***14*** *07:52:32.7±1.4, 33°.02N×5°.09W, h0km, ML2.6, Error ellipse: s-maj=6.1km s-min=3.0km az=53.0*
MDD ***14*** *07:52:33.0±2.1, 32°.94N×5°.29W, h0km, mb4.0/12, Error ellipse: s-maj=18.9km s-min=17.0km az=4.0, PRXIMO*
SFS ***14*** *07:52:33.0, 32°.94N×5°.29W, h0km, ML4.3*
ISCJB ***14*** *07:52:34.1±0.7, 33°.19N±0°.04×5°.25W±0°.05, h14km, Error ellipse: s-maj=7.0km s-min=4.9km az=142.9*
CSEM ***14*** *07:52:36.1±0.5, 33°.21N×5°.36W, h5km, ML3.6, Error ellipse: s-maj=10.1km s-min=7.2km az=150.0*
ISC 14 07:52:33.3±1.5, **33°.00N**±0°.07×**5°.26W**±0°.04, **h14**km, **n68,** σ**19/54**/122, **Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CZD	**Col de Zad**	**0.19**	**79**	S	**Sg**	**07 52 40.5**	**-0.4**
RTC	**Rabat Centre**	**1.66**	**307**	P	**Pb**	**07 53 03.8**	**+0.1**
RTC				S	**Sg**	**07 53 28.0**	**+1.2**
AVE	**Averroes**	**1.83**	**280**	*e*P	**Pn**	**07 53 05.0**	**+0.6**
AVE				S	**Sg**	**07 53 30.9**	**-1.3**
PVLZ	**Peæn de**	**2.31**	**20**	*e*P	**Pb**	**07 53 14.2**	**-0.6**
PVLZ				*e*S	**Sb**	**07 53 45.2**	**+2.0**
OUK	**Oukaimeden**	**2.84**	**232**	P	**Pn**	**07 53 16.6**	**-2.0**
OUK				S	**Sn**	**07 53 52.0**	**-0.8**
EMIJ	**Mijas**	**3.58**	**6**	P	**Pn**	**07 53 31.4**	**+2.9**
	1.3nm,0.2s,SNR=7.9						
EMIJ				S	**Sn**	**07 54 11.4**	**+0.8**
	4.8nm,0.2s,SNR=7.9						
EMIJ	**Mijas**	**3.58**	**6**	P	**Pn**	**07 53 31.4**	**+2.9**
	1.3nm,0.2s,SNR=7.9						
EMIJ				S	**Sn**	**07 54 11.4**	**+0.8**
	4.8nm,0.2s,SNR=7.9						
ELGU	**Los Guajares,**	**4.09**	**19**	P	**Pn**	**07 53 35.7**	**+0.3**
	0.9nm,0.2s,SNR=7.9						
ELGU				S	**Sn**	**07 54 24.7**	**+1.6**
	4.7nm,0.2s,SNR=7.9						
ELGU	**Los Guajares,**	**4.09**	**19**	P	**Pn**	**07 53 35.7**	**+0.3**
	0.9nm,0.2s,SNR=7.9						
ELGU				S	**Sn**	**07 54 24.7**	**+1.6**
	4.7nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**4.46**	**19**	P	**Pn**	**07 53 43.1**	**+2.6**
	1.1nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**4.46**	**19**	P	**Pn**	**07 53 43.1**	**+2.6**
	1.1nm,0.3s,SNR=7.9						
PBDV	**Barranco-do-Ve**	**4.77**	**333**	*e*Pn	**Pn**	**07 53 44.6**	**-0.2**
PBDV				*e*Sn	**Sn**	**07 54 38.0**	**-1.8**
PBDV				A	A	07 54 45.7	
	5.0nm,0.4s						
PBDV	**Barranco-do-Ve**	**4.77**	**333**	P	**Pn**	**07 53 44.6**	**-0.2**
PBDV				S	**Sn**	**07 54 38.0**	**-1.8**
	5.0nm,0.4s						
PBDV	**Barranco-do-Ve**	**4.77**	**333**	P	**Pn**	**07 53 44.6**	**-0.2**
PBDV				S	**Sn**	**07 54 38.0**	**-1.8**
	5.0nm,0.4s						
PVAQ	**Vaqueiros**	**4.83**	**336**	*e*Pn	**Pn**	**07 53 46.2**	**+0.6**
PVAQ				*e*Sn	**Sn**	**07 54 40.0**	**-1.4**
PVAQ				A	A	07 54 46.0	
	8.1nm,0.3s						
PVAQ	**Vaqueiros**	**4.83**	**336**	P	**Pn**	**07 53 46.2**	**+0.6**
PVAQ				S	**Sn**	**07 54 40.0**	**-1.4**
	8.1nm,0.3s						
PVAQ	**Vaqueiros**	**4.83**	**336**	P	**Pn**	**07 53 46.2**	**+0.6**
PVAQ				S	**Sn**	**07 54 40.0**	**-1.4**
	8.1nm,0.3s						
EGRO	**El Granado**	**4.88**	**339**	P	**Pn**	**07 53 46.5**	**+0.3**
	3.4nm,0.1s,SNR=21						
EGRO				S	**Sn**	**07 54 41.8**	**-0.7**
	4.4nm,0.1s,SNR=5.8						
EGRO	**El Granado**	**4.88**	**339**	P	**Pn**	**07 53 46.5**	**+0.3**
	3.4nm,0.1s,SNR=21						
EGRO				S	**Sn**	**07 54 41.8**	**-0.7**
	4.4nm,0.1s,SNR=5.8						
EMIN	**Mina Concepcio**	**4.90**	**347**	P	**Pn**	**07 53 47.0**	**+0.5**
	1.0nm,0.1s,SNR=11						
EMIN				S	**Sn**	**07 54 43.0**	**0.0**
	2.3nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.90**	**347**	P	**Pn**	**07 53 47.0**	**+0.5**
	1.0nm,0.1s,SNR=11						
EMIN				S	**Sn**	**07 54 43.0**	**0.0**
	2.3nm,0.2s,SNR=7.9						
PFVI	**Vila Bisbo**	**5.06**	**326**	*e*Pn	**Pn**	**07 53 51.4**	**+2.7**
PFVI				*e*Sn	**Sn**	**07 54 46.0**	**-0.9**
PFVI				A	A	07 54 53.4	
	7.6nm,0.8s						
PFVI	**Vila Bisbo**	**5.06**	**326**	P	**Pn**	**07 53 51.1**	**+2.4**
	3.2nm,0.2s,SNR=4.0						
PFVI				S	**Sn**	**07 54 46.2**	**-0.7**
	5.1nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**5.06**	**326**	P	**Pn**	**07 53 51.1**	**+2.4**
	3.2nm,0.2s,SNR=4.0						
PFVI	**Vila Bisbo**	**5.06**	**326**	*e*Pn	**Pn**	**07 53 51.4**	**+2.7**
PFVI				S	**Sn**	**07 54 46.2**	**-0.7**
	5.1nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**5.07**	**359**	P	**Pn**	**07 53 49.2**	**+0.3**
	1.4nm,0.3s,SNR=6.2						
ECAB				S	**Sn**	**07 54 46.0**	**-1.2**
	1.6nm,0.2s,SNR=5.6						
ECAB	**El Cabril**	**5.07**	**359**	P	**Pn**	**07 53 49.2**	**+0.3**
	1.4nm,0.3s,SNR=6.2						
ECAB				S	**Sn**	**07 54 46.0**	**-1.2**
	1.6nm,0.2s,SNR=5.6						
MORF	**Marmelete**	**5.12**	**328**	*e*Pn	**Pn**	**07 53 51.2**	**+1.6**
MORF				*e*Sn	**Sn**	**07 54 49.5**	**+1.0**
MORF				A	A	07 54 52.4	
	6.0nm,0.2s						
MORF	**Marmelete**	**5.12**	**328**	P	**Pn**	**07 53 51.2**	**+1.6**
MORF				S	**Sn**	**07 54 49.5**	**+1.0**
	6.0nm,0.2s						
MORF	**Marmelete**	**5.12**	**328**	P	**Pn**	**07 53 51.2**	**+1.6**
MORF				S	**Sn**	**07 54 49.5**	**+1.0**
	6.0nm,0.2s						
PCVE	**Castro Verde**	**5.15**	**335**	*e*Pn	**Pn**	**07 53 51.1**	**+1.1**
PCVE				*e*Sn	**Sn**	**07 54 47.4**	**-1.8**
PCVE				A	A	07 54 53.9	
	4.7nm,0.3s						
PCVE	**Castro Verde**	**5.15**	**335**	P	**Pn**	**07 53 51.1**	**+1.1**
PCVE				S	**Sn**	**07 54 47.4**	**-1.8**
	4.7nm,0.3s						
PCVE	**Castro Verde**	**5.15**	**335**	P	**Pn**	**07 53 51.1**	**+1.1**
PCVE				S	**Sn**	**07 54 47.4**	**-1.8**
	4.7nm,0.3s						
EADA	**Adamuz**	**5.19**	**6**	P	**Pn**	**07 53 51.7**	**+1.2**
	1.0nm,0.3s,SNR=7.9						
EADA				S	**Sn**	**07 54 49.1**	**-1.1**
	1.7nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**5.19**	**6**	P	**Pn**	**07 53 51.7**	**+1.2**
	1.0nm,0.3s,SNR=7.9						
EADA				S	**Sn**	**07 54 49.1**	**-1.1**
	1.7nm,0.1s,SNR=7.9						
PTEO	**Sao Teotonio**	**5.35**	**329**	*e*Pn	**Pn**	**07 53 53.1**	**+0.4**
PTEO				*e*Sn	**Sn**	**07 54 52.4**	**-1.7**
PTEO				A	A	07 54 57.7	
	5.7nm,0.6s						
PTEO	**Sao Teotonio**	**5.35**	**329**	P	**Pn**	**07 53 53.1**	**+0.4**
PTEO				S	**Sn**	**07 54 52.4**	**-1.7**
	2.8nm,0.6s						
PTEO	**Sao Teotonio**	**5.35**	**329**	P	**Pn**	**07 53 53.1**	**+0.4**
PTEO				S	**Sn**	**07 54 52.4**	**-1.7**
	2.8nm,0.6s						
PBAR	**Barrancos**	**5.37**	**345**	*e*Pn	**Pn**	**07 53 53.6**	**+0.7**
PBAR				*e*Sn	**Sn**	**07 54 53.1**	**-1.4**
PBAR				A	A	07 54 57.0	
	8.9nm,0.4s						
PBAR	**Barrancos**	**5.37**	**345**	P	**Pn**	**07 53 53.6**	**+0.7**
PBAR				S	**Sn**	**07 54 53.1**	**-1.4**
	8.9nm,0.4s						
PBAR	**Barrancos**	**5.37**	**345**	P	**Pn**	**07 53 53.6**	**+0.7**
PBAR				S	**Sn**	**07 54 53.1**	**-1.4**
	8.9nm,0.4s						
MESJ	**Messejana**	**5.40**	**334**	*e*Pn	**Pn**	**07 53 53.9**	**+0.5**
MESJ				*e*Sn	**Sn**	**07 54 55.1**	**-0.3**
MESJ				A	A	07 55 02.8	
	6.1nm,0.5s						
MESJ	**Messejana**	**5.40**	**334**	P	**Pn**	**07 53 53.9**	**+0.5**
MESJ				S	**Sn**	**07 54 55.1**	**-0.3**
	6.1nm,0.5s						
MESJ	**Messejana**	**5.40**	**334**	P	**Pn**	**07 53 53.9**	**+0.5**
MESJ				S	**Sn**	**07 54 55.1**	**-0.3**
	6.1nm,0.5s						
PNCL	**Nicolau / Gran**	**5.76**	**333**	*e*Pn	**Pn**	**07 53 58.9**	**+0.6**
PNCL				*e*Sn	**Sn**	**07 55 02.0**	**-2.1**
PNCL				A	A	07 55 15.8	
	3.0nm,0.5s						
PNCL	**Nicolau / Gran**	**5.76**	**333**	*e*Pn	**Pn**	**07 53 58.9**	**+0.6**
EBAD	**Badajoz**	**5.92**	**347**	P	**Pn**	**07 54 00.9**	**+0.4**
	2.7nm,0.1s,SNR=6.7						
EBAD				S	**Sn**	**07 55 06.6**	**-1.5**
	2.5nm,0.1s,SNR=5.0						
EBAD	**Badajoz**	**5.92**	**347**	P	**Pn**	**07 54 00.9**	**+0.4**
	2.7nm,0.1s,SNR=6.7						
EBAD				S	**Sn**	**07 55 06.6**	**-1.5**
	2.5nm,0.1s,SNR=5.0						
EVO	**Evora**	**5.96**	**339**	*e*Pn	**Pn**	**07 54 02.3**	**+1.2**
EVO	**Evora**	**5.96**	**339**	Pn	**Pn**	**07 54 02.3**	**+1.2**
EVO	**Evora**	**5.96**	**339**	Pn	**Pn**	**07 54 02.3**	**+1.2**
PESTR	**Estremoz**	**6.15**	**343**	*e*Pn	**Pn**	**07 54 04.2**	**+0.4**
PESTR				*e*Sn	**Sn**	**07 55 12.6**	**-1.4**
PESTR				A	A	07 55 20.0	
	3.3nm,0.7s						
PMTG	**Montargil**	**6.52**	**339**	*e*Pn	**Pn**	**07 54 09.0**	**+0.3**
PMTG				*e*Sn	**Sn**	**07 55 21.0**	**-1.9**
PMTG				A	A	07 55 37.4	
	2.6nm,0.6s						
PAB	**San Pablo**	**6.58**	**6**	P	**Pn**	**07 54 10.0**	**+0.3**
	0.4nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**07 55 20.8**	**-3.7**
	0.7nm,0.2s,SNR=7.9						
PAB	**San Pablo**	**6.58**	**6**	P	**Pn**	**07 54 10.0**	**+0.3**
	0.4nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**07 55 20.8**	**-3.7**
	0.7nm,0.2s,SNR=7.9						
PMRV	**Marv??o**	**6.64**	**346**	*e*Pn	**Pn**	**07 54 10.9**	**+0.4**
PMRV	**Marv??o**	**6.64**	**346**	P	**Pn**	**07 54 10.9**	**+0.4**
PMRV	**Marv??o**	**6.64**	**346**	P	**Pn**	**07 54 10.9**	**+0.4**
ESDC	**Sonseca Array**	**6.74**	**9**	S	**Sn**	**07 55 26.4**	**-2.2**
	0.7nm,0.1s,SNR=7.9						
ESDC	**Sonseca Array**	**6.74**	**9**	S	**Sn**	**07 55 26.4**	**-2.2**
	0.7nm,0.1s,SNR=7.9						
EPLA	**Plasencia**	**7.08**	**355**	P	**Pn**	**07 54 16.5**	**-0.1**
	2.9nm,0.2s,SNR=7.9						
EPLA				S	**Sn**	**07 55 34.6**	**-2.3**
	0.1nm,0.4s,SNR=7.9						
EPLA	**Plasencia**	**7.08**	**355**	P	**Pn**	**07 54 16.5**	**-0.1**
	2.9nm,0.2s,SNR=7.9						
EPLA				S	**Sn**	**07 55 34.6**	**-2.3**
	0.1nm,0.4s,SNR=7.9						
GUD	**Guadarrama**	**7.68**	**6**	P	**Pn**	**07 54 23.1**	**-1.8**
	1.6nm,0.6s,SNR=7.9						
GUD				S	**Sn**	**07 55 46.9**	**-4.8**
	0.1nm,0.0s,SNR=4.0						
GUD	**Guadarrama**	**7.68**	**6**	P	**Pn**	**07 54 23.1**	**-1.8**
	1.6nm,0.6s,SNR=7.9						
GUD				S	**Sn**	**07 55 46.9**	**-4.8**
	0.1nm,0.0s,SNR=4.0						
MVO	**Moncorvo**	**8.27**	**351**	*e*Pn	**Pn**	**07 54 33.8**	**+0.9**
MVO				*e*Sn	**Sn**	**07 56 05.6**	**-0.6**
MVO	**Moncorvo**	**8.27**	**351**	P	**Pn**	**07 54 33.8**	**+0.9**
	2.1nm,0.1s,SNR=7.9						
MVO				S	**Sn**	**07 56 05.0**	**-1.2**
	0.4nm,0.1s,SNR=4.0						
MVO	**Moncorvo**	**8.27**	**351**	P	**Pn**	**07 54 33.8**	**+0.9**
	2.1nm,0.1s,SNR=7.9						
MVO				S	**Sn**	**07 56 05.0**	**-1.2**
	0.4nm,0.1s,SNR=4.0						
POLO	**Lamas de Olo**	**8.60**	**347**	*e*Pn	**Pn**	**07 54 40.2**	**+2.8**

ISN ***14*** *07:52:31.6±0.3, 37°.24N×42°.49E, h0km, ML2.8*
CSEM ***14*** *07:52:34.8±0.3, 37°.22N×42°.51E, h2km, ML2.6, Error ellipse: s-maj=5.9km s-min=4.5km az=32.0*
DDA ***14*** *07:52:34.9, 37°.21N×42°.47E, h7km, Ml3.0*
ISK ***14*** *07:52:34.6, 37°.26N×42°.50E, h6km, ML2.6/6*
ISC 14 07:52:34.0±1.6, **37°.20N**±0°.06×**42°.50E**±0°.03, **h1**km±11km, **n31,** σ**0/79**/56, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRN	**S¨–rnak**	**0.30**	**347**	*i* P	**Pg**	**07 52 39.7**	**-0.2**
SIRN				*i* S	**Sg**	**07 52 43.3**	**-0.5**
SIRN	**S¨–rnak**	**0.30**	**347**	P	**Pg**	**07 52 39.7**	**-0.2**
SIRN				S	**Sg**	**07 52 43.3**	**-0.5**
SIRT	**Sirnak**	**0.30**	**351**	PG	**Pg**	**07 52 40.0**	**+0.1**
SIRT				SG	**Sg**	**07 52 43.9**	**0.0**
SIRT	**Sirnak**	**0.30**	**351**	*e*Pg	**Pg**	**07 52 40.0**	**+0.1**
SIRT				*e*Sg	**Sg**	**07 52 43.9**	**0.0**
SRTM	**Siirt_Merkez**	**0.91**	**330**	*i* P	**Pb**	**07 52 53.1**	**+0.4**
SRTM				*i* S	**Sb**	**07 53 05.1**	**-0.3**
SRTM	**Siirt_Merkez**	**0.91**	**330**	P	**Pb**	**07 52 53.1**	**+0.4**
SRTM				S	**Sb**	**07 53 05.1**	**-0.3**
HAKT	**HAKKARI**	**1.02**	**69**	*i* P	**Pb**	**07 52 54.9**	**+0.2**
HAKT				*i* S	**Sb**	**07 53 08.7**	**-0.1**
HAKT	**HAKKARI**	**1.02**	**69**	P	**Pb**	**07 52 54.9**	**+0.2**
HAKT				S	**Sb**	**07 53 08.7**	**-0.1**
GEVA	**Gevas**	**1.20**	**22**	*i* P	**Pg**	**07 52 57.2**	**+0.3**
GEVA				*i* S	**Sg**	**07 53 09.8**	**-2.7**
GEVA	**Gevas**	**1.20**	**22**	P	**Pg**	**07 52 57.2**	**+0.3**
GEVA				S	**Sg**	**07 53 09.8**	**-2.7**
BTMN	**Batman**	**1.20**	**306**	*i* P	**Pn**	**07 52 58.0**	**0.0**
BTMN				*i* S	**Sn**	**07 53 14.3**	**-0.6**
BTMN	**Batman**	**1.20**	**306**	P	**Pn**	**07 52 58.0**	**0.0**
BTMN				S	**Sn**	**07 53 14.3**	**-0.6**
MARD	**Mardin**	**1.38**	**275**	*i* P	**Pn**	**07 52 59.8**	**-0.7**
MARD				*i* S	**Sn**	**07 53 19.3**	**-0.1**
GURO	**Guroymak-BITLI**	**1.40**	**345**	PN	**Pn**	**07 53 00.4**	**-0.4**
GURO				SN	**Sn**	**07 53 19.4**	**-0.6**
GURO	**Guroymak-BITLI**	**1.40**	**345**	*e*Pn	**Pn**	**07 53 00.4**	**-0.4**
GURO				*e*Sn	**Sn**	**07 53 19.4**	**-0.6**
SVAN	**Silvan-Diyarba**	**1.40**	**313**	PN	**Pb**	**07 53 00.8**	**-0.2**
SVAN				SN	**Sn**	**07 53 19.8**	**-0.1**
SVAN	**Silvan-Diyarba**	**1.40**	**313**	*i* P	**Pg**	**07 53 01.1**	**+0.2**
SVAN				*i* S	**Sn**	**07 53 20.2**	**+0.3**
SVAN	**Silvan-Diyarba**	**1.40**	**313**	*e*Pn	**Pb**	**07 53 00.8**	**-0.2**
SVAN	**Silvan-Diyarba**	**1.40**	**313**	P	**Pg**	**07 53 01.1**	**+0.2**
SVAN				*e*Sn	**Sn**	**07 53 19.8**	**-0.1**
SVAN				S	**Sn**	**07 53 20.2**	**+0.3**
ADCV	**BITLIS_Adilcev**	**1.61**	**6**	*i* P	**Pg**	**07 53 06.2**	**+1.2**
ADCV				*i* S	**Sg**	**07 53 28.1**	**+2.2**
ADCV	**BITLIS_Adilcev**	**1.61**	**6**	P	**Pg**	**07 53 06.2**	**+1.2**
ADCV				S	**Sg**	**07 53 28.1**	**+2.2**
MAZI	**Mazidag**	**1.66**	**280**	PN	**Pn**	**07 53 04.5**	**+0.2**
MAZI				SN	**Sb**	**07 53 26.8**	**0.0**
MAZI	**Mazidag**	**1.66**	**280**	*e*Pn	**Pn**	**07 53 04.5**	**+0.2**
MAZI				*e*Sn	**Sb**	**07 53 26.8**	**0.0**
DIY	**Diyarbakir**	**1.94**	**292**	*e*Pn	**Pb**	**07 53 09.9**	**-0.2**
DYBB	**Diyarbakir**	**2.02**	**293**	PN	**Pn**	**07 53 09.9**	**+0.6**
HANI	**Diyarbakir_Han**	**2.06**	**307**	*i* P	**Pg**	**07 53 13.6**	**+0.1**
HANI				*i* S	**Sb**	**07 53 38.3**	**-0.1**
HANI	**Diyarbakir_Han**	**2.06**	**307**	P	**Pg**	**07 53 13.6**	**+0.1**
HANI				S	**Sb**	**07 53 38.3**	**-0.1**
BNGB	**Bing¨¶l**	**2.29**	**322**	PN	**Pn**	**07 53 13.3**	**+0.2**
BINT	**Bingol**	**2.31**	**317**	*e*Pn	**Pn**	**07 53 13.3**	**0.0**
SVRC	**Sivrice-ELAZID**	**2.79**	**296**	PN	**Pn**	**07 53 20.8**	**+0.8**
SVRC	**Sivrice-ELAZID**	**2.79**	**296**	*e*Pn	**Pn**	**07 53 20.8**	**+0.8**

IDC 14 07:54:34.9±1.7, **6°.49S**×**128°.60E, h0**km, **mb4.0**/2, **mb1 3.7**/4, **mb1mx3.3**/56, **mbtmp3.6**/4, **ML3.3**/2, **Error ellipse: s-maj=82.3km s-min=30.1km az=76.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.49**	**158**	Pn	Pn	07 57 59.4	-2.1
	0.1nm,0.3s,baz=351,slow=13,SNR=11						
WRA				Sn	Sn	08 00 29.6	-13
	0.3nm,0.3s,baz=342,slow=22,SNR=7.5						
ASAR	**Alice Springs**	**17.83**	**164**	P	P	07 58 45.9	+0.5
	0.1nm,0.3s,baz=344,slow=9.3,SNR=9.5						
PETK	**Petropavlovsk-**	**64.28**	**19**	P	P	08 05 12.0	+0.1
	3.8nm,0.5s,baz=177,slow=5.3,SNR=6.9						
MKAR	**Makanchi Array**	**67.04**	**327**	P	P	08 05 29.8	-0.1
	0.2nm,0.4s,baz=124,slow=7.8,SNR=3.4						

ISK ***14*** *07:58:27.9, 40°.04N×39°.53E, h10km, ML2.5/4*
ISCJB ***14*** *07:58:28.5±0.7, 40°.03N±0°.03×39°.54E±0°.04, h8km±6km, Error ellipse: s-maj=5.8km s-min=4.6km az=10.6*
CSEM ***14*** *07:58:28.1±0.2, 40°.03N×39°.52E, h12km, ML2.5, Error ellipse: s-maj=4.7km s-min=3.6km az=172.0*
DDA ***14*** *07:58:28.3, 40°.01N×39°.51E, h7km, Ml2.5*
ISC 14 07:58:28.5±1.0, **40°.03N**±0°.03×**39°.53E**±0°.03, **h15**km±8km, **n20,** σ**0/74**/35, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KELT	**Kelkit**	**0.24**	**299**	*i* P	**Pb**	**07 58 34.1**	**-0.5**
KELT				*i* S	**Sg**	**07 58 38.7**	**+1.1**
KELT	**Kelkit**	**0.24**	**299**	P	**Pb**	**07 58 34.1**	**-0.5**
KELT				S	**Sg**	**07 58 38.7**	**+1.1**
BAYT	**Ayd¨–ntepe-Bay**	**0.59**	**52**	PG	**Pg**	**07 58 39.8**	**-0.4**
BAYT				SG	**Sg**	**07 58 48.4**	**+0.3**
BAYT	**Ayd¨–ntepe-Bay**	**0.59**	**52**	*e*Pg	**Pg**	**07 58 39.8**	**-0.4**
BAYT				*e*Sg	**Sg**	**07 58 48.4**	**+0.3**
KOPT	**Kop Dagi**	**0.74**	**91**	*i* P	**Pg**	**07 58 42.2**	**-0.8**
KOPT				*i* S	**Sn**	**07 58 55.3**	**-0.6**
KOPT	**Kop Dagi**	**0.74**	**91**	P	**Pg**	**07 58 42.2**	**-0.8**
KOPT				S	**Sn**	**07 58 55.3**	**-0.6**
MACK	**Trabzon**	**0.93**	**11**	*i* P	**Pg**	**07 58 45.6**	**-0.8**
MACK				*i* S	**Sn**	**07 59 01.0**	**+1.0**
MACK	**Trabzon**	**0.93**	**11**	P	**Pg**	**07 58 45.7**	**-0.8**
SUSE	**Susehri**	**1.03**	**280**	*i* P	**Pg**	**07 58 47.4**	**-1.1**
SUSE				*i* S	**Sn**	**07 59 02.7**	**-0.1**
SUSE	**Susehri**	**1.03**	**280**

TSZ	Takapari Road	3.15	47	P	Pn	08 04 13.1	+0.1
DREZ	Durham Road	3.19	18	P	Pb	08 04 17.3	-2.8
ODZ	Otahua Downs	3.27	210	P	Pn	08 04 14.4	-0.3
MHEZ	Mangahewa	3.32	19	P	Pb	08 04 19.5	-2.9
PNHZ	Pukenui	3.38	48	P	Pn	08 04 16.4	+0.3
VRZ	Vera Road	3.40	24	P	Pb	08 04 20.0	-3.6
MTVZ	Mangateitei	3.43	35	P	Pb	08 04 21.7	-2.6
PKVZ	Pokaka	3.46	33	P	Pn	08 04 20.8	+3.5
TRVZ	Turoa	3.53	35	P	Pn	08 04 20.9	+2.4
MOVZ	Moawhango	3.54	38	P	Pn	08 04 21.2	+2.8
WHVZ	Whangaehu Hut	3.56	35	P	Pn	08 04 21.2	+2.3
FWVZ	Far West T-bar	3.57	34	P	Pn	08 04 21.2	+2.2
TUVZ	Tukino	3.61	36	P	Pn	08 04 21.7	+2.3
COVZ	Chateau Observ	3.62	34	P	Pb	08 04 23.8	-3.6
BHVZ	Black Hill Sta	3.62	42	P	Pn	08 04 20.4	+0.9
NGZ	Ngauruhoe	3.66	34	P	Pn	08 04 22.5	+2.4
TWVZ	Taurewa	3.68	32	P	Pn	08 04 23.0	+2.6
WTVZ	West Tongariro	3.71	34	P	Pn	08 04 23.1	+2.4
HIZ	Hauiti	3.99	22	P	Pn	08 04 26.5	+2.0
BKZ	Black Stump Fm	4.08	42	P	Pn	08 04 25.8	0.0
NMHZ	Naumai	4.29	44	P	Pn	08 04 31.6	+2.9
MRHZ	Matea Rd	4.30	39	P	Pn	08 04 28.5	-0.4
TLZ	Tolley Road	4.37	28	P	Pn	08 04 32.5	+2.6
TUZ	Tuapeka	4.42	212	P	Pn	08 04 31.2	+0.8
TOZ	Tahuroa Road	4.91	24	P	Pn	08 04 39.2	+2.1
URZ	Urewera	5.09	40	P	Pn	08 04 39.9	+0.3
MKAZ	Moumakai	5.40	19	P	Pn	08 04 46.0	+2.1
ETAZ	East Tamaki Re	5.49	17	P	Pn	08 04 48.4	+3.3

*ISCJB **14** 08:06:56.8±0.3, 35°.10N±0°.02×33°.85E±0°.04, h52km±5km, Error ellipse: s-maj=5.3km s-min=3.5km az=155.8*
*CSEM **14** 08:06:57.8±0.1, 35°.12N×33°.83E, h40km, ML3.5, Error ellipse: s-maj=3.8km s-min=2.5km az=68.0*
*GII **14** 08:06:57.3±0.0, 34°.97N×33°.97E, h8km, MD2.3/2*
*NIC **14** 08:06:57.9±0.3, 35°.24N×33°.83E, h35km, ML3.5*
*ISK **14** 08:06:58.6, 35°.30N×33°.67E, h22km, ML3.1/21*

ISC 14 08:06:57.8±1.2, 35°.11N±0°.03×33°.82E±0°.03, h45km±6km, n81, σ0°83/104, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHNC	Paralimni	0.20	123	P	Pn	08 07 05.7	0.0
	baz=325						
PHNC				S	Sn	08 07 11.8	+0.6
PHNC	Paralimni	0.20	123	P	Pn	08 07 05.7	0.0
PHNC				S	Sn	08 07 11.8	+0.6
AKIN	Ak¨–nc¨–lar- K	0.31	251	PG	Pn	08 07 06.3	-0.3
AKIN				SG	Sn	08 07 11.9	-0.9
AKIN	Ak¨–nc¨–lar- K	0.31	251	*e*Pg	Pn	08 07 06.3	-0.3
AKIN				*e*Sg	Sn	08 07 11.9	-0.9
CSS	Mathiatis	0.43	250	PG	Pn	08 07 08.2	+0.2
CSS				SG	Sn	08 07 15.1	-0.1
CSS	Mathiatis	0.43	250	P	Pn	08 07 08.1	+0.1
	baz=55						
CSS				S	Sn	08 07 16.1	+0.9
CSS	Mathiatis	0.43	250	Pg	Pn	08 07 08.0	+0.1
CSS	Mathiatis	0.43	250	Pg	Pn	08 07 08.0	+0.1
CSS				*e*Sg	Sn	08 07 15.1	-0.1
CSS				S		08 07 16.1	
EREN	Erenkoy	0.50	34	PG	Pn	08 07 08.8	0.0
EREN				SG	Sn	08 07 16.3	-0.4
EREN	Erenkoy	0.50	34	*e*Pg	Pn	08 07 08.8	0.0
EREN				*e*Sg	Sn	08 07 16.3	-0.4
AKDN	Akdeniz- K¨–br	0.72	285	PG	Pn	08 07 10.6	-1.1
AKDN	Akdeniz- K¨–br	0.72	285	*e*Pg	Pn	08 07 10.6	-1.1
LEF	Lefka	0.76	271	PG	Pn	08 07 12.8	+0.6
LEF				SG	Sn	08 07 23.3	+0.6
LEF	Lefka	0.76	271	*e*Pg	Pn	08 07 12.8	+0.6
LEF				*e*Sg	Sn	08 07 23.3	+0.6
SZAC	Souni	0.85	245	P	Pn	08 07 14.4	+0.9
	baz=57						
SZAC	Souni	0.85	245	P	Pn	08 07 14.4	+0.9
ALFC	Alefka	1.00	273	P	Pn	08 07 15.6	+0.1
	baz=84						
ALFC				S	Sn	08 07 29.3	+0.8
ALFC	Alefka	1.00	273	P	Pn	08 07 15.6	+0.1
ALFC				S	Sn	08 07 29.3	+0.8
AKK2	Akkuyu-Mersin	1.04	348	PG	Pn	08 07 15.5	-0.5
AKK2	Akkuyu-Mersin	1.04	348	*e*Pg	Pn	08 07 15.5	-0.5
AKK1	Akkuyu-Mersin	1.05	347	PG	Pn	08 07 15.4	-0.7
AKK1	Akkuyu-Mersin	1.05	347	*e*Pg	Pn	08 07 15.4	-0.7
AKKU	Akkuyu-Mersin	1.07	348	PG	Pn	08 07 15.8	-0.5
AKKU	Akkuyu-Mersin	1.07	348	*e*Pg	Pn	08 07 15.8	-0.5
YESI	Yesilovacik-Me	1.09	352	PG	Pn	08 07 16.0	-0.6
YESI	Yesilovacik-Me	1.09	352	*e*Pg	Pn	08 07 16.0	-0.6
IKL	Isikli	1.13	354	PG	Pn	08 07 16.8	-0.4
IKL				SG	Sn	08 07 30.0	-1.5
IKL	Isikli	1.13	354	*e*Pg	Pn	08 07 16.8	-0.4
IKL				*e*Sg	Sn	08 07 30.0	-1.5
OREN	Orenkoy-Mersin	1.13	345	PG	Pn	08 07 16.7	-0.5
OREN	Orenkoy-Mersin	1.13	345	*e*Pg	Pn	08 07 16.7	-0.5
TEKE	Tekeli-Mersin	1.18	331	PG	Pn	08 07 17.1	-0.7
TEKE	Tekeli-Mersin	1.18	331	*e*Pg	Pn	08 07 17.1	-0.7
BOZY	Bozyazi-Mersin	1.21	325	PG	Pn	08 07 17.5	-0.7
BOZY	Bozyazi-Mersin	1.21	325	*e*Pg	Pn	08 07 17.5	-0.7
AKMC	Akamas	1.23	266	P	Pn	08 07 19.6	+1.1
	baz=79						
AKMC	Akamas	1.23	266	P	Pn	08 07 19.6	+1.1
BERE	Bereket-Mersin	1.32	339	PN	Pn	08 07 19.2	-0.8
BERE	Bereket-Mersin	1.32	339	*e*Pn	Pn	08 07 19.2	-0.8
KEBE	Keben-Mersin	1.33	356	PN	Pn	08 07 19.8	-0.2
KEBE	Keben-Mersin	1.33	356	*e*Pn	Pn	08 07 19.8	-0.2
TEVE	Tevekalti-Mers	1.35	347	PN	Pn	08 07 19.9	-0.5
TEVE	Tevekalti-Mers	1.35	347	*e*Pn	Pn	08 07 19.9	-0.5
KIZK	Mersin	1.39	11	PN	Pn	08 07 20.5	-0.2
MERS	Mersin	1.84	18	PN	Pn	08 07 26.8	-0.2
MERS	Mersin	1.84	18	*e*Pn	Pn	08 07 26.8	-0.2
KRTS	Karatas	1.93	40	PN	Pn	08 07 30.3	+2.2
KRTS	Karatas	1.93	40	*e*Pn	Pn	08 07 30.3	+2.2
HWQ	Hawqa	1.94	115	*e*P	Pn	08 07 27.8	-0.6
YURE	YUREGIR	2.25	40	PN	Pn	08 07 34.3	+1.7
YURE	YUREGIR	2.25	40	*e*Pn	Pn	08 07 34.3	+1.7
TAHT	Tahtakopru-Hat	2.30	56	PN	Pn	08 07 35.9	+2.7
TAHT	Tahtakopru-Hat	2.30	56	*e*Pn	Pn	08 07 35.9	+2.7
HNTI	Hanita	2.32	151	Pn	Pn	08 07 33.0	-0.5
HNTI	Hanita	2.32	151	Pn	Pn	08 07 33.0	-0.5
RCY	Rachaya	2.32	134	*e*P	Pn	08 07 32.6	-1.1
KSDI	Kefar Szold	2.45	141	Pn	Pn	08 07 34.6	-0.7
KSDI				Sn	Sn	08 08 02.6	-1.4
KSDI	Kefar Szold	2.45	141	Pn	Pn	08 07 34.6	-0.7
KSDI				Sn	Sn	08 08 02.6	-1.4
MMA0B	Mount Meron ar	2.47	147	Pn	Pn	08 07 35.0	-0.6
MMA0B	Mount Meron ar	2.47	147	Pn	Pn	08 07 35.0	-0.6
BLGI	Bet Lehem HaGe	2.63	154	Pn	Pn	08 07 37.5	-0.3
BLGI	Bet Lehem HaGe	2.63	154	Pn	Pn	08 07 37.5	-0.3
OFRI	'Ofer	2.67	158	Pn	Pn	08 07 37.4	-0.9
OFRI				Sn	Sn	08 08 08.4	-1.0
OFRI	'Ofer	2.67	158	Pn	Pn	08 07 37.4	-0.9
OFRI				Sn	Sn	08 08 08.4	-1.0
KSHT	Keshet	2.69	142	Pn	Pn	08 07 38.8	+0.1
KSHT	Keshet	2.69	142	Pn	Pn	08 07 38.8	+0.1
MMLI	Mount Malkishu	2.98	153	Pn	Pn	08 07 42.5	-0.1
MMLI				Sn	Sn	08 08 16.9	-0.3
MMLI	Mount Malkishu	2.98	153	Pn	Pn	08 07 42.5	-0.1
MMLI				Sn	Sn	08 08 16.9	-0.3
KONT	Konya--Tatoy	3.06	338	PN	Pn	08 07 44.1	+0.4
KONT	Konya--Tatoy	3.06	338	*e*Pn	Pn	08 07 44.1	+0.4
HMDT	Nahal Hemdat	3.19	153	Pn	Pn	08 07 45.5	+0.1
HMDT				Sn	Sn	08 08 21.8	-0.4
HMDT	Nahal Hemdat	3.19	153	Pn	Pn	08 07 45.5	+0.1
HMDT				Sn	Sn	08 08 21.8	-0.4
SUTC	Sutluce-Ispart	3.28	317	PN	Pn	08 07 47.0	+0.2
SUTC	Sutluce-Ispart	3.28	317	*e*Pn	Pn	08 07 47.0	+0.2
DSI	Dead Sea	3.77	159	Pn	Pn	08 07 54.0	+0.6
DSI	Dead Sea	3.77	159	Pn	Pn	08 07 54.0	+0.6
YTIR	Yattir	3.90	163	Pn	Pn	08 07 55.7	+0.5
YTIR	Yattir	3.90	163	Pn	Pn	08 07 55.7	+0.5
KRMI	Paran Flat	5.04	171	Pn	Pn	08 08 11.4	+0.5
KRMI	Paran Flat	5.04	171	Pn	Pn	08 08 11.4	+0.5
MBRI	Mt Berech	5.38	170	Pn	Pn	08 08 15.7	0.0
MBRI	Mt Berech	5.38	170	Pn	Pn	08 08 15.7	0.0

IDC 14 08:11:06.3±1.6, 5°.06N×127°.78E, h0km, mb3.8/6, mb1 4.0/6, mb1mx3.7/55, mbtmp3.8/6, MS3.3/2, Ms1 3.3/2, ms1mx2.5/60, Error ellipse: s-maj=158.0km s-min=17.1km az=67.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	18.86	62	LR	LR	08 20 52.5	
	comp=Z,66nm,21.1s,baz=252,slow=31						
WRA	Warramunga Arr	25.66	166	P	P	08 16 37.9	-0.3
	0.5nm,0.3s,baz=346,slow=10,SNR=25						
ASAR	Alice Springs	29.17	168	P	P	08 17 09.8	+0.2
	0.4nm,0.4s,baz=355,slow=8.1,SNR=14						
STKA	Stephens Creek	39.02	161	P	P	08 18 34.6	-0.2
	3.7nm,0.4s,baz=336,slow=8.4,SNR=22						
MKAR	Makanchi Array	57.08	324	P	P	08 20 53.6	-1.0
	0.4nm,0.6s,baz=127,slow=8.4,SNR=5.3						
KURBB	Kurchatov Arra	61.20	327	P	P	08 21 21.6	-1.4
	0.6nm,0.8s,baz=124,slow=7.0,SNR=3.9						
BVAR	Borovoye Array	66.79	326	P	P	08 22 01.7	+2.0
	0.6nm,0.6s,baz=106,slow=7.7,SNR=4.3						
KVAR	Kislovodsk Arr	82.98	314	LR	LR	09 05 38.7	
	comp=Z,28nm,18.5s,slow=39						

*DDA **14** 08:12:50.7, 37°.18N×42°.52E, h7km, Ml2.7*
*ISK **14** 08:12:51.8, 37°.70N×42°.55E, h10km, ML2.4/5*
*ISCJB **14** 08:12:52.3±1.0, 37°.72N±0°.06×42°.50E±0°.05, h8km±8km, Error ellipse: s-maj=9.9km s-min=6.7km az=4.7*
*CSEM **14** 08:12:52.5±0.4, 37°.70N×42°.56E, h10km, ML2.4, Error ellipse: s-maj=11.8km s-min=8.9km az=18.0*

ISC 14 08:12:52.7±1.2, 37°.67N±0°.05×42°.58E±0°.04, h11km±9km, n17, σ1°32/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRT	Sirnak	0.20	214	PG	Pg	08 12 56.7	-0.3
SIRT				SG	Sg	08 13 00.4	+0.5
SIRT	Sirnak	0.20	214	*e*Pg	Pg	08 12 56.7	-0.3
SIRT				*e*Sg	Sg	08 13 00.4	+0.5
SRTM	Siirt_Merkez	0.61	302	*i* P	Pn	08 13 09.3	+1.8
SRTM	Siirt_Merkez	0.61	302	P	Pn	08 13 09.3	+1.8
HAKT	HAKKARI	0.90	96	*i* P	Pg	08 13 10.2	0.0
HAKT				*i* S	Sn	08 13 24.4	-0.4
HAKT	HAKKARI	0.90	96	P	Pg	08 13 10.2	0.0
HAKT				S	Sn	08 13 24.4	-0.4
GURO	Guroymak-BITLI	0.98	334	PG	Pg	08 13 10.3	-1.4
GURO	Guroymak-BITLI	0.98	334	*e*Pg	Pg	08 13 10.3	-1.4
BTMN	Batman	1.06	283	*i* P	Pn	08 13 14.4	+0.8
BTMN				*i* S	Sn	08 13 30.8	+2.4
BTMN	Batman	1.06	283	P	Pn	08 13 14.4	+0.8
BTMN				S	Sn	08 13 30.8	+2.4
SVAN	Silvan-Diyarba	1.19	294	PN	Pn	08 13 14.4	-1.0
SVAN	Silvan-Diyarba	1.19	294	*e*Pn	Pn	08 13 14.4	-1.0
MARD	Mardin	1.47	257	*i* P	Pn	08 13 17.4	-1.9
MARD				*i* S	Sn	08 13 36.6	-2.1
MAZI	Mazidag	1.71	264	PN	Pn	08 13 22.0	-0.5
MAZI	Mazidag	1.71	264	*e*Pn	Pn	08 13 22.0	-0.5
SVRC	Sivrice-ELAZID	2.68	286	PN	Pn	08 13 35.9	0.0
SVRC	Sivrice-ELAZID	2.68	286	*e*Pn	Pn	08 13 35.9	0.0

*IDC **14** 08:18:26.8±0.9, 12°.30N×143°.84E, h0km, mb3.8/8, mb1 4.0/8, mb1mx3.7/58, mbtmp3.7/8, MS2.6/2, Ms1 2.6/2, ms1mx2.4/58, Error ellipse: s-maj=29.9km s-min=16.9km az=113.0*
*ISCJB **14** 08:18:29.1±0.7, 12°.3N±0°.1×143°.8E±0°.1, h27km, mb3.8/8, MS2.4/1, Error ellipse: s-maj=24.8km s-min=9.7km az=37.7*

ISC 14 08:18:30.8±0.9, 12°.3N±0°.2×143°.9E±0°.2, h27km, n11, σ0°84/10, mb3.7/8, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	1.62	38	Pn	Pn	08 18 57.0	-0.6
	19nm,0.3s,baz=88,slow=5.1,SNR=55						
GUMO				Sn	Sn	08 19 17.4	-0.1
	54nm,0.3s,baz=51,slow=20,SNR=17						
DAV	Davao City (W)	18.74	256	LR	LR	08 28 43.6	
	comp=Z,26nm,21.2s,baz=146,slow=33						
MJAR	Matsushiro Arr	24.66	349	LR	LR	08 32 35.1	
	comp=Z,11nm,18.4s,baz=135,slow=34						
WRA	Warramunga Arr	33.38	196	P	P	08 25 06.6	-0.6
	0.2nm,0.2s,baz=20,slow=9.8,SNR=12						
ASAR	Alice Springs	37.05	195	P	P	08 25 38.9	+0.2
	0.6nm,0.6s,baz=22,slow=11,SNR=11						
MKAR	Makanchi Array	61.73	317	P	P	08 28 47.3	+0.4
	0.3nm,0.7s,baz=99,slow=7.4,SNR=2.9						
KURBB	Kurchatov Arra	64.97	320	P	P	08 29 08.7	+0.5
	0.8nm,0.8s,baz=100,slow=6.6,SNR=6.7						
ILAR	Eielson Array	70.15	25	P	P	08 29 41.7	+1.0
	0.4nm,0.8s,baz=258,slow=5.0,SNR=4.1						
BVAR	Borovoye Array	70.32	322	P	P	08 29 42.3	+0.4
	0.8nm,0.5s,baz=135,slow=6.0,SNR=3.9						
NVAR	Mina Array Bea	88.49	51	P	P	08 31 22.1	+0.7
	0.6nm,0.8s,baz=254,slow=6.5,SNR=4.8						
FINES	FINESS Array B	91.90	335	P	P	08 31 35.0	-1.5
	1.3nm,0.8s,baz=64,slow=3.2,SNR=3.3						

*ISCJB **14** 08:20:41.2±1.5, 37°.3N±0°.1×42°.79E±0°.09, h15km, Error ellipse: s-maj=16.5km s-min=10.6km az=5.3*
*ISK **14** 08:20:41.1, 37°.35N×42°.77E, h15km, ML2.6/5*
*CSEM **14** 08:20:43.9±0.4, 37°.32N×42°.57E, h15km, ML2.7, Error ellipse: s-maj=14.8km s-min=7.9km az=47.0*
*DDA **14** 08:20:43.2, 37°.22N×42°.48E, h7km, Ml2.7*
*ISN **14** 08:20:46.9±0.3, 37°.08N×42°.63E, h0km, ML2.6*

ISC 14 08:20:44.5±1.3, 37°.49N±0°.09×42°.65E±0°.05, h15km, n21, σ1°30/25, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRT	Sirnak	0.17	273	PG	Pg	08 20 47.9	-0.8
SIRT				SG	Sg	08 20 52.8	+1.2
SIRT	Sirnak	0.17	273	*i* Pg	Pg	08 20 47.9	-0.8
SIRT				*i* Sg	Sg	08 20 52.8	+1.2
SIRN	S¨–rnak	0.19	271	*i* P	Pg	08 20 49.1	+0.1
SIRN				*i* S	Sg	08 20 53.0	+0.9
SIRN	S¨–rnak	0.19	271	P	Pg	08 20 49.1	+0.1
SIRN				S	Sg	08 20 53.0	+0.9
SRTM	Siirt_Merkez	0.76	311	*i* P	Pn	08 21 01.5	+0.7
SRTM	Siirt_Merkez	0.76	311	P	Pn	08 21 01.5	+0.7
HAKT	HAKKARI	0.84	85	*i* P	Pn	08 21 02.9	+0.9
HAKT	HAKKARI	0.84	85	P	Pn	08 21 02.9	+0.9
GURO	Guroymak-BITLI	1.16	335	PN	Pn	08 21 05.9	-0.4
GURO	Guroymak-BITLI	1.16	335	*e*Pn	Pn	08 21 05.9	-0.4
BTMN	Batman	1.17	290	*i* P	Pg	08 21 07.7	+0.8
BTMN	Batman	1.17	290	P	Pg	08 21 07.7	+0.8
VANB	Van	1.24	28	PN	Pn	08 21 04.8	-2.6
VANB	Van	1.24	28	*e*Pn	Pn	08 21 04.8	-2.6
SVAN	Silvan-Diyarba	1.32	300	PN	Pn	08 21 07.8	-0.7
SVAN	Silvan-Diyarba	1.32	300	*e*Pn	Pn	08 21 07.8	-0.7
MARD	Mardin	1.50	264	*i* P	Pn	08 21 08.3	-2.6
MAZI	Mazidag	1.75	270	PN	Pn	08 21 12.8	-1.6
MAZI	Mazidag	1.75	270	*e*Pn	Pn	08 21 12.8	-1.6
SVRC	Sivrice-ELAZID	2.79	289	PN	Pn	08 21 28.7	0.0
SVRC	Sivrice-ELAZID	2.79	289	*e*Pn	Pn	08 21 28.7	0.0

*ISCJB **14** 08:35:37.8±0.5, 38°.75N±0°.03×38°.96E±0°.04, h5km±7km, Error ellipse: s-maj=5.7km s-min=4.5km az=154.5*
*CSEM **14** 08:35:37.8±0.1, 38°.75N×38°.96E, h5km, ML2.5, Error ellipse: s-maj=3.0km s-min=2.5km az=60.0*
*DDA **14** 08:35:37.8, 38°.75N×38°.96E, h7km, Ml2.5*
*ISK **14** 08:35:37.3, 38°.75N×38°.96E, h6km, ML2.5/7*

ISC 14 08:35:38.0±1.0, 38°.76N±0°.03×38°.96E±0°.03, h10km±11km, n25, σ0°40/35, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	Elazig	0.26	176	*i* P	Pg	08 35 43.2	-0.2
ELZG	Elazig	0.26	176	P	Pg	08 35 43.2	-0.2
PTK	Pertek	0.36	68	PG	Pg	08 35 45.0	-0.3
PTK				SG	Sg	08 35 50.5	+0.4
PTK	Pertek	0.36	68	*e*Pg	Pg	08 35 45.0	-0.3
PTK				*e*Sg	Sg	08 35 50.5	+0.4
SVRC	Sivrice-ELAZID	0.47	145	PG	Pg	08 35 46.8	-0.4
SVRC				SG	Sg	08 35 53.7	+0.3
SVRC	Sivrice-ELAZID	0.47	145	*e*Pg	Pg	08 35 46.8	-0.4
SVRC				*e*Sg	Sg	08 35 53.7	+0.3
MALT	Malatya	0.61	223	PG	Pg	08 35 49.5	-0.4
MALT				SG	Sg	08 35 58.4	+0.4
MALT	Malatya	0.61	223	*e*Pg	Pg	08 35 49.5	-0.4
MALT				*e*Sg	Sg	08 35 58.4	+0.4
KEMA	Kemaliye	0.63	324	*i* P	Pg	08 35 49.9	-0.3
KEMA				*i* S	Sb	08 35 59.8	-0.3
KEMA	Kemaliye	0.63	324	P	Pg	08 35 49.9	-0.3
KEMA				S	Sb	08 35 59.8	-0.3
ILIC	ilic-Erzincan	0.76	336	PG	Pg	08 35 52.0	-0.7
ILIC				SG	Sb	08 36 03.4	-0.4
ILIC	ilic-Erzincan	0.76	336	*e*Pg	Pg	08 35 52.0	-0.7
ILIC				*e*Sg	Sb	08 36 03.4	-0.4
HEKM	Malatya_Hekimh	0.79	279	*i* P	Pg	08 35 52.9	-0.5
HEKM	Malatya_Hekimh	0.79	279	P	Pg	08 35 52.9	-0.5
AKCD	Akcadag	0.94	241	*i* P	Pg	08 35 55.8	-0.3
AKCD	Akcadag	0.94	241	P	Pg	08 35 55.8	-0.3
CUKAN	kangal_SIVAS	1.29	296	*i* P	Pg	08 36 03.3	+0.5
CUKAN	kangal_SIVAS	1.29	296	P	Pg	08 36 03.3	+0.5
URFA	Urfa	1.32	185	PN	Pb	08 36 02.8	-0.2
URFA	Urfa	1.32	185	*e*Pn	Pb	08 36 02.8	-0.2
KELT	Kelkit	1.41	9	*i* P	Pb	08 36 04.6	+0.1
KELT	Kelkit	1.41	9	P	Pb	08 36 04.6	+0.1
MAZI	Mazidag	1.75	138	PN	Pn	08 36 08.9	+0.3
MAZI	Mazidag	1.75	138	*e*Pn	Pn	08 36 08.9	+0.3
SARI	SarD1z-Kayseri	2.02	261	PN	Pn	08 36 12.7	+0.3

*ISN **14** 08:39:50.6±0.3, 37°.23N×42°.48E, h0km, ML2.7*
*CSEM **14** 08:39:53.7±0.3, 37°.23N×42°.53E, h5km, ML2.8, Error ellipse: s-maj=9.5km s-min=4.3km az=59.0*
*ISK **14** 08:39:53.3, 37°.24N×42°.47E, h5km, ML2.8/6*
*DDA **14** 08:39:54.5, 37°.18N×42°.36E, h7km, Ml2.9*

ISC 14 08:39:52.7±2.9, 37°.2N±0°.1×42°.5E±0°.1, h3km±11km, n25, σ0°35/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRT	Sirnak	0.32	352	PG	Pg	08 39 58.9	0.0
SIRT				SG	Sg	08 40 03.1	-0.1
SIRT	Sirnak	0.32	352	*e*Pg	Pg	08 39 58.9	0.0
SIRT				*e*Sg	Sg	08 40 03.1	-0.1
SRTM	Siirt_Merkez	0.93	331	*i* P	Pb	08 40 11.6	+0.1
SRTM				*i* S	Sb	08 40 24.2	0.0
SRTM	Siirt_Merkez	0.93	331	P	Pb	08 40 11.6	+0.1
SRTM				S	Sb	08 40 24.2	0.0
BTMN	Batman	1.21	306	*i* P	Pb	08 40 16.3	+0.1
BTMN				*i* S	Sb	08 40 32.0	-0.2
BTMN	Batman	1.21	306	P	Pb	08 40 16.3	+0.1
BTMN				S	Sb	08 40 32.0	-0.2
MARD	Mardin	1.38	276	*i* P	Pn	08 40 18.4	-0.5
MARD				*i* S	Sg	08 40 36.8	-0.1
SVAN	Silvan-Diyarba	1.41	314	PN	Pn	08 40 19.5	+0.2
SVAN	Silvan-Diyarba	1.41	314	*i* P	Pb	08 40 19.9	+0.2
SVAN	Silvan-Diyarba	1.41	314	*e*Pn	Pn	08 40 19.5	+0.2
SVAN	Silvan-Diyarba	1.41	314	P	Pb	08 40 19.9	+0.2
GURO	Guroymak-BITLI	1.42	345	PN	Pn	08 40 19.4	-0.1
GURO				SN	Sn	08 40 38.4	-0.3
GURO	Guroymak-BITLI	1.42	345	*e*Pn	Pn	08 40 19.4	-0.1
GURO				*e*Sn	Sn	08 40 38.4	-0.3
MAZI	Mazidag	1.66	280	PN	Pn	08 40 23.0	+0.2
MAZI	Mazidag	1.66	280	*e*Pn	Pn	08 40 23.0	+0.2
DIY	Diyarbakir	1.94	292	*e*Pn	Pb	08 40 28.5	-0.2
DYBB	Diyarbakir	2.03	293	PN	Pn	08 40 28.5	+0.7
DIYA	Diyarbakir	2.03	292	*i* P	Pn	08 40 28.1	+0.3
DIYA	Diyarbakir	2.03	292	P	Pn	08 40 28.1	+0.3
HANI	Diyarbakir_Han	2.07	307	*i* P	Pb	08 40 30.6	-0.3
HANI	Diyarbakir_Han	2.07	307	P	Pb	08 40 30.6	-0.3
BNGB	Bing¨¶l	2.31	322	PN	Pn	08 40 32.2	+0.5
BINT	Bingol	2.32	317	*e*Pn	Pn	08 40 32.2	+0.3
SVRC	Sivrice-ELAZID	2.80	296	PN	Pn	08 40 39.4	+0.9
SVRC	Sivrice-ELAZID	2.80	296	*e*Pn	Pn	08 40 39.4	+0.9

*ISN **14** 08:41:19.6±0.3, 37°.24N×42°.51E, h0km, ML2.8*
*ISK **14** 08:41:23.5, 37°.30N×42°.53E, h6km, ML2.9/7*
*CSEM **14** 08:41:23.5±0.2, 37°.25N×42°.57E, h2km, MD2.8, Error ellipse: s-maj=7.2km s-min=4.3km az=35.0*
*DDA **14** 08:41:23.7, 37°.24N×42°.52E, h24km, Md2.8*

**ISC 14 08:41:23.6±1.5, 37°.28N±0°.06×42°.52E±0°.04, h2km±11km, n33, σ0°69/44

Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.39**	**163**	P	P	08 59 26.9	-0.9
	0.9nm,0.3s,baz=341,slow=10,SNR=27						
ASAR	**Alice Springs**	**26.83**	**166**	P	P	09 00 00.5	+1.0
	0.5nm,0.3s,baz=347,slow=7.6,SNR=9.5						
STKA	**Stephens Creek**	**36.83**	**159**	P	P	09 01 26.8	-0.3
	1.0nm,0.3s,baz=4.7,slow=11,SNR=4.7						

*SKHL **14** 08:55:35.6±0.5, 46°.82N×152°.46E, h73km±3km, mb4.3/2*
*IDC **14** 08:55:36.7±3.2, 46°.78N×152°.77E, h74km±26km, mb3.4/5, mb1 3.4/9, mb1mx3.2/81, mbtmp3.6/9, MS3.0/4, Ms1 3.0/4, ms1mx2.5/49, Error ellipse: s-maj=37.9km s-min=23.1km az=118.0*
*JMA **14** 08:55:37.2±0.5, 46°.71N×152°.27E, h30km, M4.1*
ISC 14 08:55:31.5±1.2, 46°.4N±0°.1×153°.0E±0°.1, h35km, n33, σ2s67/30, mb3.8/5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.77**	**254**	*e*P	**Pn**	**08 56 29.9**	**+2.8**
KUR				AMB	AMB	08 56 30.3	
	51nm,0.3s						
KUR				*i* S	**Sn**	**08 57 10.3**	**0.0**
KUR				A	A	08 57 22.6	
	102nm,0.4s						
KUR				A	A	08 57 22.6	
	49nm,0.4s						
SKR	**Severo-Kuril's**	**4.75**	**25**	*e*P	**Pn**	**08 56 42.0**	**+1.6**
SKR				*e*S	**Sn**	**08 57 32.2**	**-1.9**
SKR				A	A	08 57 33.5	
	41nm,0.7s						
SKR				A	A	08 57 33.5	
	39nm,0.7s						
SHO	**Shikotan**	**5.05**	**242**	*e*P	**Pn**	**08 56 46.0**	**+1.4**
SHO				AMB	AMB	08 57 03.4	
	15nm,0.5s						
SHO				*i* S	**Sn**	**08 57 41.0**	**-0.7**
SHO				A	A	08 57 59.0	
	16nm,0.3s						
SHO				A	A	08 57 59.0	
	39nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**5.57**	**247**	*e*P	**Pn**	**08 56 53.9**	**+2.1**
YUK				*e*S	**Sn**	**08 57 55.2**	**+0.6**
NEM2	**Nemuro 2**	**5.99**	**242**	P	**Pn**	**08 56 59.0**	**+1.5**
NEM2				*e*S	**Sn**	**08 57 59.4**	**-5.4**
JRA	**Rausu**	**6.09**	**249**	P	**Pn**	**08 57 03.1**	**+4.2**
JNK	**Nakash**	**6.51**	**247**	P	**Pn**	**08 57 07.6**	**+2.8**
JAK	**Akkeshi**	**6.83**	**243**	P	**Pn**	**08 57 10.3**	**+1.2**
JAK				*e*S	**Sn**	**08 58 19.5**	**-6.0**
JTKR	**Abashiri--Toko**	**6.87**	**252**	P	**Pn**	**08 57 13.3**	**+3.7**
JAR	**Ashorobuto**	**7.26**	**248**	P	**Pn**	**08 57 16.9**	**+1.9**
PETK	**Petropavlovsk-**	**7.36**	**23**	P	**Pn**	**08 57 17.3**	**+1.0**
	0.1nm,0.3s,baz=191,slow=13,SNR=3.7						
JKK2	**Kamakawa 2**	**7.68**	**254**	P	**Pn**	**08 57 24.7**	**+4.0**
ASAJ	**Asahikawa**	**7.69**	**256**	P	**Pn**	**08 57 25.5**	**+4.6**
	0.4nm,0.3s,baz=70,slow=10.0,SNR=9.3						
JCH	**Churui**	**7.86**	**245**	P	**Pn**	**08 57 24.8**	**+1.5**
MYR	**Moyori**	**8.09**	**243**	*e*P	**Pn**	**08 57 28.0**	**+1.7**
JNBK	**Urakawa-nobuka**	**8.42**	**244**	P	**Pn**	**08 57 31.5**	**+0.6**
JKB	**Kayabe**	**9.71**	**247**	P	**Pn**	**08 57 49.3**	**+0.7**
MA2	**Magadan**	**13.25**	**355**	LR	LR	09 02 48.6	
	comp=Z,27nm,20.2s,baz=118,slow=34						
MJAR	**Matsushiro Arr**	**14.81**	**233**	P	**P**	**08 59 03.9**	**+0.1**
	0.1nm,0.3s,baz=34,slow=19,SNR=2.7						
USRK	**Ussuriysk Ar.**	**14.94**	**269**	P	**Pn**	**08 59 01.1**	**+1.2**
	0.1nm,0.3s,baz=78,slow=13,SNR=2.7						
USRK				LR	LR	09 05 03.3	
	comp=Z,40nm,20.7s,baz=6.9,slow=38						
H11N2	**WAKE ISLAND Hy 28.96**	**152**		T	T	09 32 58.0	
	baz=340,slow=76,SNR=34						
H11N1	**WAKE ISLAND Hy 28.98**	**152**		T	T	09 32 51.8	
	baz=340,slow=76,SNR=39						
H11N3	**WAKE ISLAND Hy 28.98**	**152**		T	T	09 32 59.4	
	baz=340,slow=76,SNR=29						
H11S1	**WAKE ISLAND Hy 30.05**	**153**		T	T	09 34 21.1	
	baz=341,slow=76,SNR=32						
H11S3	**WAKE ISLAND Hy 30.05**	**153**		T	T	09 34 31.5	
	baz=341,slow=76,SNR=43						
H11S2	**WAKE ISLAND Hy 30.07**	**153**		T	T	09 34 14.5	
	baz=341,slow=76,SNR=34						
ZALV	**Zalesovo Beam**	**42.74**	**306**	LR	LR	09 21 16.7	
	comp=Z,22nm,18.3s,baz=66,slow=36						
MKAR	**Makanchi Array**	**47.02**	**298**	P	**P**	**09 03 57.7**	**-1.5**
	0.2nm,0.4s,baz=58,slow=6.1,SNR=3.8						
KURBB	**Kurchatov Arra**	**47.57**	**304**	P	**P**	**09 04 01.7**	**-1.6**
	0.6nm,0.6s,baz=71,slow=8.3,SNR=3.7						
AKTO	**Aktyubinsk**	**58.89**	**312**	LR	LR	09 33 08.1	
	comp=Z,32nm,18.0s,baz=264,slow=38						
FINES	**FINESS Array B**	**64.31**	**335**	P	**P**	**09 06 01.3**	**-1.6**
	1.0nm,0.6s,baz=46,slow=8.2,SNR=4.7						
HFS	**Hagfors**	**68.74**	**340**	P	**P**	**09 06 29.8**	**-1.4**
	1.3nm,0.5s,baz=37,slow=6.0,SNR=6.7						
ASAR	**Alice Springs**	**71.87**	**198**	P	**P**	**09 06 53.2**	**+2.5**
	0.3nm,0.7s,baz=7.0,slow=3.8,SNR=4.1						

TAP 14 09:00:12.9, 24°.87N×121°.76E, h77km±1km, ML2.4, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIPB	**Shuangxi**	**0.12**	**32**	P	Pn	09 00 23.5	-0.6
	baz=32						
TIPB				S	Sn	09 00 32.5	+0.1
	baz=32						
EGS		**0.16**	**99**	*e*P	Pn	09 00 24.1	0.0
	baz=99						
TWE	**Neicheng**	**0.17**	**208**	*e*P	Pn	09 00 24.7	+0.5
	baz=203						
TWA	**Mucha**	**0.19**	**305**	*e*P	Pn	09 00 24.7	+0.3
	baz=305						
TWA				*e*S	Sn	09 00 33.2	+0.5
	baz=305						
NWF	**Wu-fen Shan**	**0.20**	**6**	*e*P	Pn	09 00 25.1	+0.6
	baz=6.0						
WFSB	**Wu-fen Shan**	**0.20**	**6**	P	Pn	09 00 24.6	+0.2
	baz=6.0						
TWB1	**Santiao Chiao**	**0.25**	**57**	*e*P	Pn	09 00 24.9	+0.4
	baz=58						
TWB1				*e*S	Sn	09 00 33.5	+0.3
	baz=58						
TWC	**Suao**	**0.27**	**162**	*i* P	Pn	09 00 25.1	+0.4
	baz=160						
TWC				S	Sn	09 00 34.0	+0.6
	baz=160						
ENTT	**Nioudou**	**0.29**	**217**	*e*P	Pn	09 00 24.9	+0.1
	baz=215						
ENTT				*e*S	Sn	09 00 33.9	+0.3
	baz=215						
YM07	**YM07**	**0.33**	**338**	*e*P	Pn	09 00 25.0	-0.1
	baz=337						
YM07				*e*S	Sn	09 00 34.6	+0.5
	baz=337						
YM10	**YM10**	**0.33**	**328**	*e*P	Pn	09 00 25.8	+0.7
	baz=327						
YM10				*e*S	Sn	09 00 35.0	+0.8
	baz=327						
YM11	**YM11**	**0.34**	**331**	*e*P	Pn	09 00 24.9	-0.3
	baz=330						
YM04	**YM04**	**0.34**	**325**	*e*P	Pn	09 00 25.4	+0.2
	baz=324						
YM04				*e*S	Sn	09 00 35.5	+1.2
	baz=324						
YM12	**YM12**	**0.35**	**331**	*e*P	Pn	09 00 24.9	-0.4
	baz=331						
YM03	**YM03**	**0.36**	**327**	*e*P	Pn	09 00 26.1	+0.7
	baz=327						
YHNB	**Yeheng**	**0.40**	**240**	*e*P	Pn	09 00 25.5	-0.1
	baz=239						
NSK	**Sanguang**	**0.41**	**242**	P	Pn	09 00 26.0	+0.3
	baz=240						
ENAH	**Nanao**	**0.42**	**173**	*e*P	Pn	09 00 26.0	+0.3
	baz=173						
ENAH				*e*S	Sn	09 00 35.9	+0.7
	baz=173						
TWY	**Chenhua**	**0.43**	**341**	*e*P	Pn	09 00 25.6	-0.2
	baz=341						
ENA	**Nanau**	**0.44**	**182**	*e*P	Pn	09 00 26.4	+0.6
	baz=180						
ENA				*e*S	Sn	09 00 36.2	+0.8
	baz=180						
NANB	**Nanao**	**0.44**	**181**	*e*P	Pn	09 00 26.3	+0.4
	baz=180						
NANB				*e*S	Sn	09 00 36.2	+0.8
	baz=180						
EOS1	**EOS1**	**0.47**	**133**	*e*P	Pn	09 00 26.0	0.0
	baz=133						
EOS1				*e*S	Sn	09 00 36.4	+0.7
	baz=133						
NCUH	**Zhongli**	**0.53**	**281**	*e*P	Pn	09 00 27.3	+0.7
	baz=280						
NNSB	**Datong**	**0.56**	**218**	*e*P	Pn	09 00 27.0	0.0
	baz=217						
LIOB	**Emei**	**0.71**	**252**	*e*P	Pn	09 00 29.7	+1.3
	baz=251						
NSTT	**Nanjuang**	**0.73**	**251**	*e*P	Pn	09 00 29.4	+0.9
	baz=250						
TWD	**Chiawan**	**0.80**	**191**	*e*P	Pn	09 00 28.4	-1.0
	baz=189						

*ISCJB **14** 09:01:14.8±0.9, 37°.94N±0°.10×134°.44E±0°.08, h407km, mb2.8/1, Error ellipse: s-maj=12.9km s-min=8.3km az=179.0*
*IDC **14** 09:01:14.3±1.3, 37°.81N×134°.25E, h422km±23km, mb2.4/1, mb1 2.5/5, mb1mx2.3/81, mbtmp3.2/5, Error ellipse: s-maj=30.6km s-min=29.8km az=148.0*
*JMA **14** 09:01:15.1±0.3, 37°.71N×134°.59E, h425km±3km, M3.2*
ISC 14 09:01:13.9±1.2, 37°.9N±0°.1×134°.43E±0°.09, h407km, n15, σ2s09/21, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**3.31**	**113**	P	**P**	**09 02 22.9**	**+2.7**
	0.2nm,0.3s,baz=306,slow=9.7,SNR=5.2						
JHO	**Hitachi**	**5.06**	**103**	*e*S	**S**	**09 03 42.5**	**-1.9**
JFK	**Kawauchi**	**5.14**	**94**	*e*S	**S**	**09 03 44.5**	**-1.5**
KSRS	**Korea Array**	**5.18**	**267**	P	**P**	**09 02 37.9**	**0.0**
	0.2nm,0.3s,baz=84,slow=11,SNR=5.2						
JMK	**Ichinoseki**	**5.43**	**77**	P	**P**	**09 02 42.8**	**+2.4**
JIO	**Ouri**	**5.48**	**82**	P	**P**	**09 02 42.7**	**+1.8**
JIO				*e*S	**S**	**09 03 51.4**	**-0.8**
JOM	**Ohasama**	**5.59**	**72**	P	**P**	**09 02 44.7**	**+2.6**
JOM				*e*S	**S**	**09 03 55.4**	**+1.0**
JKZ	**Kuzumaki**	**5.76**	**67**	P	**P**	**09 02 46.1**	**+2.1**
OFUJ	**Ofunato**	**5.80**	**76**	P	**P**	**09 02 46.4**	**+2.1**
OFUJ				S	**S**	**09 03 56.9**	**-1.5**
JTH	**Tanohata**	**6.14**	**68**	P	**P**	**09 02 50.0**	**+2.1**
JTH				*e*S	**S**	**09 04 03.9**	**-1.3**
USRK	**Ussuriysk Ar.**	**6.55**	**344**	P	**P**	**09 02 54.4**	**+1.2**
	0.2nm,0.3s,baz=158,slow=5.8,SNR=5.4						
JNBK	**Urakawa-nobuka**	**7.73**	**53**	P	**P**	**09 03 08.1**	**+2.0**
JNBK				*e*S	**S**	**09 04 35.8**	**-1.6**
ASAJ	**Asahikawa**	**8.75**	**42**	P	**P**	**09 03 19.6**	**+2.2**
	1.0nm,0.3s,baz=219,slow=4.1,SNR=7.5						
JAR	**Ashorobuto**	**8.91**	**50**	P	**P**	**09 03 20.5**	**+1.4**
JAR				*e*S	**S**	**09 04 58.5**	**-3.6**
WRA	**Warramunga Arr**	**57.54**	**180**	P	**P**	**09 10 21.2**	**-1.7**
	0.2nm,0.4s,baz=354,slow=7.5,SNR=5.4						

MAN 14 09:06:58.4, 7°.93N×122°.51E, h17km, mb4.3, ML3.1, MS2.8, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAGZ	**Pagadian**	**0.87**	**95**	*e*P	Pb	09 07 14.6	-0.5
PAGZ				*e*S	Sb	09 07 24.2	-2.2
TBP	**Tagbilaran**	**2.20**	**37**	*e*P	Pn	09 07 34.7	+0.5
TBP				*i* S	Sn	09 08 02.1	+0.9
SKMP	**Bagumbayan, Su**	**2.46**	**125**	*e*P	Pn	09 07 39.5	+1.8
SKMP				*e*S	Sn	09 08 07.9	+0.5
BUKP	**Musuan**	**2.53**	**91**	*e*P	Pb	09 07 42.3	-1.2
GUIM	**Jordan**	**2.68**	**2**	*e*P	Pn	09 07 41.0	+0.2
GUIM				*e*S	Sn	09 08 14.4	+1.5
CUYO	**Cuyo Island**	**3.25**	**333**	*e*P	Pn	09 07 49.6	+0.8
CUYO				*e*S	Sn	09 08 25.3	-1.8

*ISCJB **14** 09:08:34.3±0.8, 7°.22S±0°.08×124°.59E±0°.07, h500km, mb3.4/2, Error ellipse: s-maj=10.7km s-min=9.1km az=32.4*
*IDC **14** 09:08:34.7±1.4, 7°.22S×124°.77E, h513km±25km, mb2.9/2, mb1 2.9/5, mb1mx2.6/58, mbtmp3.7/5, Error ellipse: s-maj=60.9km s-min=20.8km az=65.0*
*DJA **14** 09:08:42.2±2.4, 7°.S±35°.×12°.4E±1°.5, h451km±19km, M4.1/6, mb4.4/1, MLv3.9/6*
ISC 14 09:08:34.1±1.0, 7°.2S±0°.1×124°.6E±0°.1, h500km, n13, σ2s35/20, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**2.53**	**187**	P	**P**	**09 09 45.2**	**+2.9**
SOEI				S	**S**	**09 10 36.1**	**-1.6**
MMRI	**Maumere**	**2.71**	**239**	P	**P**	**09 09 47.6**	**+4.3**
BATI	**Baumata**	**3.10**	**197**	P	**P**	**09 09 49.1**	**+3.2**
	85nm,0.3s,baz=80,slow=1.9,SNR=36						
BATI				S	**S**	**09 10 47.4**	**+3.2**
	9.1nm,0.3s,baz=198,slow=20,SNR=4.2						
BATI	**Baumata**	**3.10**	**197**	P	**P**	**09 09 48.8**	**+3.0**
BATI				S	**S**	**09 10 44.8**	**+0.7**
EDFI	**Ende, Flores**	**3.24**	**242**	P	**P**	**09 09 48.9**	**+2.0**
EDFI				S	**S**	**09 10 44.7**	**-1.4**
NLAI	**Namlea**	**4.69**	**32**	P	P	09 10 01.7	+3.3
BASI	**Baing, Sumba**	**4.95**	**233**	P	**P**	**09 10 02.8**	**+2.1**
BASI				S	**S**	**09 11 12.4**	**+1.1**
WBSI	**Waikabubak, Su**	**5.67**	**245**	P	**P**	**09 10 07.6**	**+0.2**
WBSI				S	**S**	**09 11 20.6**	**-2.9**
FITZ	**Fitzroy Crossi**	**10.86**	**175**	P	**P**	**09 11 00.8**	**+0.2**
	0.1nm,0.3s,baz=353,slow=11,SNR=7.4						
FITZ				S	**S**	**09 12 59.9**	**-1.2**
	baz=335,slow=19						
WRA	**Warramunga Arr**	**15.79**	**144**	P	**P**	**09 11 51.2**	**-1.5**
	0.8nm,0.3s,baz=323,slow=11,SNR=67						
WRA				S	**S**	**09 14 33.4**	**-3.0**
	0.1nm,0.3s,baz=326,slow=16,SNR=4.3						
ASAR	**Alice Springs**	**18.64**	**152**	P	**P**	**09 12 20.4**	**0.0**
	0.2nm,0.3s,baz=344,slow=14,SNR=16						
MKAR	**Makanchi Array**	**65.58**	**329**	P	**P**	**09 18 27.6**	**-0.3**
	0.2nm,0.6s,baz=116,slow=6.6,SNR=2.7						
PETK	**Petropavlovsk-**	**66.34**	**21**	P	**P**	**09 18 31.5**	**-1.0**
	1.2nm,0.5s,baz=220,slow=3.7,SNR=4.0						

*ISCJB **14** 09:12:56.1±0.6, 58°.60N±0°.06×156°.1W±0°.1, h190km±6km, mb2.8/1, Error ellipse: s-maj=12.9km s-min=6.6km az=43.4*
*IDC **14** 09:12:57.1±4.9, 58°.84N×155°.99W, h169km±20km, mb2.7/2, mb1 2.9/5, mb1mx2.7/76, mbtmp3.2/5, Error ellipse: s-maj=60.7km s-min=17.9km az=83.0*
*NEIC **14** 09:12:58.4±0.0, 58°.59N×156°.08W, h181km, ML2.9(AEIC), After AEIC.*
ISC 14 09:12:56.4±1.0, 58°.66N±0°.06×156°.14W±0°.07, h186km±8km, n33, σ1s30/40, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KELA	**Mount Kelaz**	**0.30**	**136**	P	**Pn**	**09 13 21.8**	**+0.5**
KAHC	**Katmai Hardscr**	**0.59**	**90**	P	**Pn**	**09 13 22.9**	**+0.5**
KABU	**Katmai Buttres**	**0.60**	**130**	P	**Pn**	**09 13 22.9**	**+0.6**
KABU				S	**Sn**	**09 13 42.8**	**+0.5**
KAKN	**Katmai Knife C**	**0.67**	**122**	P	**Pn**	**09 13 23.3**	**+0.6**
KAKN				S	**Sn**	**09 13 43.8**	**+0.8**
CAHL	**Cahill**	**0.75**	**144**	P	**Pn**	**09 13 23.6**	**+0.5**
PLK5	**Peulik 5**	**0.77**	**211**	P	**Pn**	**09 13 23.7**	**+0.6**
PLK1	**Peulik 1**	**0.89**	**196**	P	**Pn**	**09 13 24.4**	**+0.5**
PLK3	**Peulik 3**	**0.97**	**184**	P	**Pn**	**09 13 25.0**	**+0.5**
PLK4	**Peulik 4**	**1.03**	**186**	P	**Pn**	**09 13 25.6**	**+0.6**
MCNL	**McNeil River**	**1.07**	**60**	P	**Pn**	**09 13 26.1**	**+1.0**
CDD	**Cape Douglas**	**1.33**	**77**	P	**Pn**	**09 13 28.1**	**+0.8**
AUH	**Augustine H**	**1.57**	**62**	P	**Pn**	**09 13 30.3**	**+0.8**
ANNW	**Aniakchak Nort**	**2.03**	**214**	P	**Pn**	**09 13 34.9**	**+0.7**
KDAK	**Kodiak Island**	**2.08**	**113**	P	**Pn**	**09 13 34.6**	**0.0**
	4.1nm,0.3s,baz=333,slow=2.3,SNR=70						
KDAK				S	**Sn**	**09 14 03.4**	**-0.9**
	16nm,0.3s,baz=326,slow=23,SNR=63						
KDAK	**Kodiak Island**	**2.08**	**113**	P	**Pn**	**09 13 34.8**	**+0.2**
KDAK				S	**Sn**	**09 14 03.2**	**-1.1**
SVW2	**Sparrevohn**	**2.46**	**6**	P	**Pn**	**09 13 40.2**	**+1.3**
CHGN	**Chignik**	**2.66**	**208**	P	**Pn**	**09 13 40.6**	**-0.6**
CHGN				S	**Sn**	**09 14 14.3**	**-1.8**
CNPM	**China Poot**	**2.68**	**69**	P	**Pn**	**09 13 42.3**	**+0.9**
BRLK	**Bradley Lake**	**2.92**	**65**	P	**Pn**	**09 13 45.1**	**+0.8**
SLKM	**Skilak Lake**	**3.54**	**56**	P	**Pn**	**09 13 53.3**	**+1.6**
SEW	**Seward**	**3.72**	**64**	P	**Pn**	**09 13 54.8**	**+0.9**
SKT	**Skwentna**	**4.04**	**33**	P	**Pn**	**09 13 59.9**	**+1.8**
RC01	**Rabbit Creek A**	**4.05**	**50**	P	**Pn**	**09 13 58.4**	**+0.3**
RC01				S	**Sn**	**09 14 44.9**	**-1.6**
TT01	**Tatalina**	**4.26**	**1**	P	**Pn**	**09 14 02.5**	**+1.6**
PMR	**Palmer**	**4.58**	**47**	P	**Pn**	**09 14 06.2**	**+1.4**
KNK	**Knik Glacier**	**4.74**	**51**	P	**Pn**	**09 14 07.7**	**+0.7**
DRIA	**Deer Island**	**5.00**	**225**	P	**Pn**	**09 14 10.2**	**-0.1**
JPK	**Jack Peak**	**5.38**	**59**	P	**Pn**	**09 14 15.8**	**+0.5**
SCM	**Sheep Creek Mo**	**5.42**	**50**	P	**Pn**	**09 14 16.6**	**+0.8**
ILAR	**Eielson Array**	**7.54**	**32**	P	**Pn**	**09 14 41.2**	**-2.1**
	0.1nm,0.3s,baz=223,slow=12,SNR=4.9						
ILAR				S	**Sn**	**09 16 03.9**	**-4.3**
	0.3nm,0.3s,baz=220,slow=22,SNR=8.4						
INK	**Inuvik**	**13.88**	**37**	P	**Pn**	**09 16 03.2**	**-1.8**
	0.1nm,0.3s,baz=216,slow=11,SNR=5.0						
YKA	**Yellowknife Ar**	**20.49**	**62**	P	**P**	**09 17 20.5**	**+1.0**
	0.5nm,0.4s,baz=274,slow=9.5,SNR=9.9						
TXAR	**Lajitas Array**	**46.09**	**106**	P	**P**	**09 21 03.5**	**+1.8**
	0.2nm,0.8s,baz=322,slow=6.9,SNR=2.8						

TEH 14 09:13:51.2, 29°.77N×50°.80E, h7km, ML2.7, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKAZ	**Kazeroun**	**0.90**	**89**	*e*		09 14 23.7	
	comp=Z,3μm,0.2s						
IKAZ				*e*Pg	Pg	09 14 07.6	-1.0
IPAR	**Pars**	**1.95**	**87**	*e*Pn	Pn	09 14 24.8	-0.2
IPAR				*e*Sg	Sb	09 14 52.1	+0.1
IPAR				*e*		09 14 55.9	
	comp=Z,302nm,0.3s						
ZNGN	**Zangian**	**2.34**	**1**	*e*Pn	Pn	09 14 29.9	-0.4
ZNGN				*e*		09 14 59.9	
	comp=Z,99nm,0.2s						
IRAM	**Ramesheh**	**2.44**	**33**	*e*Pn	Pn	09 14 31.5	-0.2
IRAM				*e*		09 14 36.4	
	comp=Z,402nm,0.2s						

IDC 14 09:18:01.9±2.6, 5°.99N×127°.08E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.1/62, mbtmp3.3/3, MS3.2/1, Ms1 3.2/1, ms1mx2.3/29, Error ellipse: s-maj=193.2km s-min=28.5km az=66.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.74**	**165**	P	P	09 23 44.5	+1.0
	0.3nm,0.9s,baz=346,slow=10,SNR=8.6						
ASAR	**Alice Springs**	**30.22**	**167**	P	P	09 24 13.3	-1.2
	0.2nm,0.6s,baz=341,slow=7.6,SNR=5.7						
SONM	**Songino Array**	**45.29**	**340**	LR	LR	09 46 37.7	
	comp=Z,26nm,18.2s,baz=154,slow=38						
MKAR	**Makanchi Array**	**55.92**	**324**	P	P	09 27 41.8	-0.1
	0.4nm,0.5s,baz=120,slow=8.5,SNR=3.7						

KRSC 14 09:25:10.7±0.8, 52°.61N×159°.73E, h43km±10km, ML3.8, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.53**	**20**	*e*P	Pn	09 25 23.3	+1.4
SPN				*e*S	Sn	09 25 31.4	+1.6
NLC	**Nalytchevo**	**0.61**	**338**	*i* P	Pn	09 25 24.0	+1.0
NLC				*i* S	Sn	09 25 33.6	+1.8
DALK	**Dalny**	**0.73**	**306**	*e*P	Pn	09 25 25.3	+0.7
DALK				*e*S	Sn	09 25 34.7	+0.1
RUS	**Russkaya**	**0.76**	**257**	*e*P	Pn	09 25 25.8	+0.8
RUS				*e*S	Sn	09 25 36.1	+0.7
UGLR	**Uglovaya**	**0.82**	**318**	*e*P	Pn	09 25 27.1	+1.2
UGLR				*e*S	Sn	09 25 38.2	+1.3
SDLR	**Sedlovina**	**0.85**	**323**	*e*P	Pn	09 25 27.2	+0.9
AVH	**Avacha**	**0.89**	**318**	*e*P	Pn	09 25 28.2	+1.3
AVH				*e*S	Sn	09 25 40.4	+1.7
KRER	**Koryakskii**	**0.92**	**320**	*e*P	Pn	09 25 28.4	+1.1
MTVR	**Mutnovka**	**0.95**	**263**	*i* P	Pn	09 25 28.7	+1.0
MTVR				*e*S	Sn	09 25 41.3	+1.1
KOK	**Koryaka**	**0.95**	**317**	*e*P	Pn	09 25 29.1	+1.4
KRX	**Arik**	**1.00**	**320**	*e*P	Pn	09 25 29.5	+1.1
KRX				*e*S	Sn	09 25 41.8	+0.4
KRMR	**Karymshinskiy**	**1.00**	**284**	*e*P	Pn	09 25 29.0	+0.8
KRMR				*e*S	Sn	09 25 41.2	+0.1
GRL	**Gorelyy**	**1.01**	**268**	*e*P	Pn	09 25 30.2	+1.7
ASAK	**Asacha**	**1.14**	**259**	*e*P	Pn	09 25 31.7	+1.4
KDTR	**Khodutka, Kamc**	**1.29**	**233**	*e*P	Pn	09 25 33.5	+1.3
KDTR				*e*S	Sn	09 25 49.8	+1.5
KII	**Karymskiy**	**1.44**	**353**	*e*P	Pn	09 25 36.2	+1.8
KII				*e*S	Sn	09 25 54.4	+2.2
GNL	**Ganaly**	**1.53**	**316**	*e*P	Pn	09 25 37.6	+1.9
GNL				*e*S	Sn	09 25 56.9	+2.5
APC	**Apacha**	**1.59**	**283**	*e*P	Pn	09 25 38.2	+1.8
APC				*e*S	Sn	09 25 58.8	+3.1
MIPR	**Malaya Ipel'ka**	**1.85**	**261**	*e*P	Pn	09 25 41.6	+1.7
PAU	**Pauzhetka**	**2.13**	**239**	*e*P	Pn	09 25 47.2	+3.4
MKZ	**Mys Kozlova**	**2.29**	**31**	*e*P	Pn	09 25 48.0	+2.1
MKZ				*e*S	Sn	09 26 15.0	+2.2
KZV	**Kizimen**	**2.54**	**7**	*e*P	Pn	09 25 52.1	+2.7
TUMR	**Tumrok**	**2.69**	**5**	*e*P	Pn	09 25 55.1	+3.5
SKR	**Severo-Kuril's**	**2.96**	**231**	P	Pn	09 25 58.3	+3.2
KMNR	**Kamenistaya**	**3.17**	**5**	*e*P	Pn	09 26 01.8	+3.7
KPT	**Kopyto**	**3.38**	**5**	*e*P	Pn	09 26 05.5	+4.5
ESO	**Esso**	**3.38**	**350**	*e*P	Pn	09 26 04.8	+3.9
BZWR	**Bezymyannyi-We**	**3.40**	**7**	*e*P	Pn	09 26 05.0	+3.7
KOZ	**Kozyrevsk**	**3.46**	**1**	*e*P	Pn	09 26 06.7	+4.7
ZLN	**Zelenaya**	**3.48**	**10**	*e*P	Pn	09 26 06

DALK				*e*S	Sn	09 27 21.8	+2.0
DALK	**Dalny**	**2.83**	**356**	PN	Pn	09 26 49.5	+2.7
DALK				S	Sn	09 27 21.8	+2.0
SPN	**Mys Shipunski**	**2.95**	**12**	*e*P	Pn	09 26 51.1	+2.6
SPN				*e*S	Sn	09 27 25.0	+2.1
SPN	**Mys Shipunski**	**2.95**	**12**	PN	Pn	09 26 51.1	+2.6
SPN				S	Sn	09 27 25.0	+2.1
APC	**Apacha**	**2.96**	**337**	*e*P	Pn	09 26 51.2	+2.6
APC				*e*S	Sn	09 27 26.1	+3.1
APC	**Apacha**	**2.96**	**337**	PN	Pn	09 26 51.2	+2.6
APC				S	Sn	09 27 26.1	+3.1
NLC	**Nalytchevo**	**2.96**	**4**	*e*P	Pn	09 26 50.7	+2.0
NLC				*e*S	Sn	09 27 24.4	+1.2
NLC	**Nalytchevo**	**2.96**	**4**	PN	Pn	09 26 50.7	+2.0
NLC				S	Sn	09 27 24.4	+1.2
UGLR	**Uglovaya**	**3.00**	**357**	*e*P	Pn	09 26 52.7	+3.4
UGLR	**Uglovaya**	**3.00**	**357**	PN	Pn	09 26 52.7	+3.4
AVH	**Avacha**	**3.06**	**357**	*e*P	Pn	09 26 52.5	+2.5
AVH				*e*S	Sn	09 27 27.6	+1.9
AVH	**Avacha**	**3.06**	**357**	PN	Pn	09 26 52.5	+2.5
AVH				S	Sn	09 27 27.6	+1.9
SDLR	**Sedlovina**	**3.07**	**358**	*e*P	Pn	09 26 52.5	+2.3
SDLR	**Sedlovina**	**3.07**	**358**	PN	Pn	09 26 52.5	+2.3
KOK	**Koryaka**	**3.09**	**355**	*e*S	Sn	09 27 29.6	+3.1
KRER	**Koryakskii**	**3.10**	**357**	*e*P	Pn	09 26 53.1	+2.4
KRER	**Koryakskii**	**3.10**	**357**	PN	Pn	09 26 53.1	+2.4
KRX	**Arik**	**3.16**	**356**	*e*P	Pn	09 26 54.6	+3.2
KRX	**Arik**	**3.16**	**356**	PN	Pn	09 26 54.6	+3.2
GNL	**Ganaly**	**3.55**	**349**	*e*P	Pn	09 27 00.0	+3.3
GNL	**Ganaly**	**3.55**	**349**	PN	Pn	09 27 00.0	+3.3
KII	**Karymskiy**	**3.83**	**4**	*e*P	Pn	09 27 04.2	+3.7
KII				*e*S	Sn	09 27 48.5	+4.1
KII	**Karymskiy**	**3.83**	**4**	PN	Pn	09 27 04.2	+3.7
KII				S	Sn	09 27 48.5	+4.1
MKZ	**Mys Kozlova**	**4.65**	**20**	*e*P	Pn	09 27 13.9	+2.4
MKZ				*e*S	Sn	09 28 04.9	+0.8
MKZ	**Mys Kozlova**	**4.65**	**20**	PN	Pn	09 27 13.9	+2.4
MKZ				S	Sn	09 28 04.9	+0.8
KZV	**Kizimen**	**4.96**	**8**	*e*P	Pn	09 27 19.8	+3.8
KZV				*e*S	Sn	09 28 14.4	+2.3
KZV	**Kizimen**	**4.96**	**8**	PN	Pn	09 27 19.8	+3.8
KZV				S	Sn	09 28 14.4	+2.3
TUMR	**Tumrok**	**5.12**	**7**	*e*P	Pn	09 27 22.8	+4.8
TUMR	**Tumrok**	**5.12**	**7**	PN	Pn	09 27 22.8	+4.8
KBTR	**Krutoberegovo**	**6.42**	**19**	*e*P	Pn	09 27 38.9	+3.3
KBTR	**Krutoberegovo**	**6.42**	**19**	PN	Pn	09 27 38.9	+3.3
BKI	**Bering**	**6.53**	**37**	*e*P	Pn	09 27 39.6	+2.5
BKI				*e*S	Sn	09 28 48.0	-2.0
BKI	**Bering**	**6.53**	**37**	PN	Pn	09 27 39.6	+2.5

*IDC **14** 09:28:56.5±1.0, 34°.79N×137°.98E, h0km, mb3.5/5, mb1 3.6/6, mb1mx3.4/71, mbtmp3.5/6, ML3.4/1, MS3.7/1, Ms1 3.7/1, ms1mx2.2/57, Error ellipse: s-maj=32.0km s-min=15.3km az=69.0*
*ISCJB **14** 09:28:57.1±0.7, 35°.50N±0°.05×140°.13E±0°.08, h75km±6km, mb3.5/5, Error ellipse: s-maj=12.0km s-min=6.4km az=147.7*
*JMA **14** 09:28:57.8±0.1, 35°.59N×140°.14E, h63km±2km, M2.6*
ISC 14 09:28:58.0±1.1, 35°.52N±0°.06×140°.13E±0°.07, h66km±9km, n17, σ0°.78/22, mb3.7/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCN	**Nagara**	**0.12**	**151**	P	**Pn**	**09 29 08.1**	**+0.3**
BSO3	**Boso 3**	**0.78**	**156**	P	**Pn**	**09 29 13.5**	**+0.2**
JOD2	**Odawara 2**	**0.89**	**253**	P	**Pn**	**09 29 14.8**	**-0.1**
JOD2				S	**Sn**	**09 29 27.0**	**-0.5**
JIM2	**Oshima 3**	**0.99**	**216**	P	**Pn**	**09 29 15.9**	**-0.3**
JIM2				S	**Sn**	**09 29 29.4**	**-0.2**
JAG	**Ashikaga**	**1.06**	**329**	P	**Pn**	**09 29 16.3**	**-0.7**
BSO1	**Boso 1**	**1.11**	**141**	P	**Pn**	**09 29 16.9**	**-0.3**
JRY	**Ryogami san**	**1.11**	**297**	P	**Pn**	**09 29 18.0**	**+0.2**
JYN	**Shimob**	**1.29**	**269**	P	**Pn**	**09 29 20.2**	**0.0**
JYN				S	**Sn**	**09 29 37.1**	**+0.3**
MJAR	**Matsushiro Arr**	**1.86**	**304**	Pn	**Pn**	**09 29 28.0**	**+0.3**
	10nm,0.3s,baz=48,slow=13,SNR=83						
MJAR				Sn	**Sn**	**09 29 51.1**	**+0.8**
	5.5nm,0.3s,baz=267,slow=32,SNR=6.2						
MAT	**Matsushiro**	**1.86**	**304**	P	**Pn**	**09 29 28.0**	**+0.3**
MAT				S	**Sn**	**09 29 50.5**	**+0.2**
JHJ	**Hachijo jima 2**	**2.41**	**187**	Pn	**Pn**	**09 29 35.5**	**+0.3**
	24nm,0.3s,baz=63,slow=18,SNR=4.6						
JHJ				Sn	**Sn**	**09 30 03.4**	**-0.2**
	19nm,0.3s,baz=66,slow=20,SNR=3.8						
MKAR	**Makanchi Array**	**44.06**	**303**	P	**P**	**09 36 57.3**	**-2.0**
	0.2nm,0.4s,baz=88,slow=9.0,SNR=2.5						
KURBB	**Kurchatov Arra**	**46.13**	**309**	P	**P**	**09 37 15.3**	**-0.4**
	0.5nm,0.3s,baz=89,slow=7.5,SNR=4.0						
BVAR	**Borovoye Array**	**50.83**	**313**	P	**P**	**09 37 52.3**	**+0.6**
	0.5nm,0.5s,baz=79,slow=7.5,SNR=2.8						
LEM	**Lembang**	**52.06**	**223**	LR	LR	09 59 51.4	
	comp=Z,69nm,18.5s,baz=154,slow=37						
WRA	**Warramunga Arr**	**55.43**	**187**	P	**P**	**09 38 25.3**	**-0.5**
	0.4nm,0.5s,baz=0.4,slow=7.8,SNR=15						
ASAR	**Alice Springs**	**59.16**	**187**	P	**P**	**09 38 54.0**	**+2.0**
	0.1nm,0.3s,baz=12,slow=9.6,SNR=5.9						

MAN 14 09:33:47.1, 8°.49N×124°.19E, h17km, mb4.1, ML2.9, MS2.5, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAGZ	**Pagadian**	**1.03**	**231**	*e*P	Pb	09 34 06.2	-0.2
PAGZ				*e*S	Sg	09 34 20.2	-0.3
BUKP	**Musuan**	**1.05**	**125**	*e*P	Pb	09 34 06.6	-0.3
BUKP				*e*S	Sn	09 34 21.8	+0.3
TBP	**Tagbilaran**	**1.23**	**345**	*e*P	Pn	09 34 08.9	-0.7

*ISCJB **14** 09:41:05.4±0.5, 34°.59N±0°.04×139°.74E±0°.08, h112km±4km, mb3.7/5, Error ellipse: s-maj=11.0km s-min=6.0km az=156.7*
*IDC **14** 09:41:06.3±1.7, 34°.57N×139°.79E, h109km±8km, mb3.4/5, mb1 3.5/7, mb1mx3.2/74, mbtmp3.8/7, Error ellipse: s-maj=46.1km s-min=6.3km az=72.0*
*JMA **14** 09:41:06.8±0.1, 34°.61N×139°.74E, h96km±2km, M3.3*
ISC 14 09:41:06.2±0.9, 34°.60N±0°.05×139°.74E±0°.06, h104km±7km, n21, σ0°.80/30, mb3.6/5, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIM2	**Oshima 3**	**0.28**	**295**	P	**Pn**	**09 41 20.9**	**-0.3**
JIM2				S	**Sn**	**09 41 32.0**	**-0.5**
BSO3	**Boso 3**	**0.66**	**72**	P	**Pn**	**09 41 24.5**	**+1.2**
JIZS	**Izushimoda**	**0.72**	**280**	P	**Pn**	**09 41 24.3**	**+0.1**
JIZS				S	**Sn**	**09 41 37.4**	**-0.3**
JOD2	**Odawara 2**	**0.86**	**321**	P	**Pn**	**09 41 25.5**	**0.0**
JOD2				S	**Sn**	**09 41 39.0**	**-1.0**
BSO1	**Boso 1**	**1.02**	**86**	P	**Pn**	**09 41 27.6**	**+1.1**
JYN	**Shimob**	**1.33**	**313**	P	**Pn**	**09 41 31.4**	**+0.7**
JYN				*e*S	**Sn**	**09 41 50.0**	**+0.7**
SHZ3	**Shizuoka 3**	**1.35**	**291**	P	**Pn**	**09 41 31.5**	**+0.6**
SHZ3				*e*S	**Sn**	**09 41 50.6**	**+1.0**
JHJ	**Hachijo jima 2**	**1.47**	**179**	P	**Pn**	**09 41 33.2**	**+0.8**
	214nm,0.3s,baz=299,slow=19,SNR=65						
JHJ				S	**Sn**	**09 41 52.2**	**0.0**
	243nm,0.3s,baz=263,slow=23,SNR=14						
JHJ2	**Mitsune**	**1.48**	**178**	P	**Pn**	**09 41 33.1**	**+0.6**
TK04	**Tokai 4**	**1.56**	**263**	P	**Pn**	**09 41 34.3**	**+1.1**
TK04				*e*X		09 41 54.9	
JRY	**Ryogami san**	**1.58**	**334**	P	**Pn**	**09 41 34.4**	**+0.8**
JRY				*e*S	**Sn**	**09 41 54.5**	**+0.1**
TK02	**Tokai 2**	**1.77**	**249**	P	**Pn**	**09 41 36.6**	**+0.8**
TK02				*e*X		09 41 59.6	
JAG	**Ashikaga**	**1.84**	**353**	P	**Pn**	**09 41 37.0**	**+0.1**
MJAR	**Matsushiro Arr**	**2.31**	**328**	P	**Pn**	**09 41 42.6**	**-0.3**
	21nm,0.3s,baz=150,slow=14,SNR=215						
MJAR				S	**Sn**	**09 42 12.5**	**+1.4**
	14nm,0.3s,baz=128,slow=21,SNR=12						
MAT	**Matsushiro**	**2.31**	**328**	P	**Pn**	**09 41 44.0**	**+1.0**
MAT				S	**Sn**	**09 42 11.6**	**+0.5**
JNU	**Nakatsue**	**7.52**	**261**	P	**Pn**	**09 42 53.9**	**+0.7**
	0.6nm,0.3s,baz=90,slow=4.0,SNR=4.9						
MKAR	**Makanchi Array**	**44.31**	**304**	P	**P**	**09 49 06.3**	**+0.7**
	0.3nm,0.5s,baz=83,slow=9.3,SNR=6.2						
KURBB	**Kurchatov Arra**	**46.47**	**310**	P	**P**	**09 49 22.3**	**-0.3**
	0.8nm,0.2s,baz=87,slow=7.5,SNR=6.7						
WRA	**Warramunga Arr**	**54.48**	**186**	P	**P**	**09 50 21.6**	**-1.6**
	0.8nm,0.4s,baz=3.1,slow=7.8,SNR=35						
ASAR	**Alice Springs**	**58.21**	**186**	P	**P**	**09 50 49.3**	**-0.2**
	0.2nm,0.3s,baz=16,slow=13,SNR=8.6						
FINES	**FINESS Array B**	**70.33**	**332**	P	**P**	**09 52 07.7**	**-0.5**
	0.4nm,0.4s,baz=53,slow=7.1,SNR=4.2						

*EAF **14** 09:51:15.5±2.5, 29°.11S×31°.12E, h0km±125km, MD3.6, ML3.8*
ISC 14 09:51:28.9±1.7, 26°.9S±0°.1×29°.5E±0°.1, h10km, n7, σ0°.25/9, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBTN	**Chibotane**	**3.88**	**39**	*e*P	**Pb**	**09 52 37.3**	**-0.1**
CBTN				*e*		09 52 40.0	
	baz=45,slow=22						
CBTN				*e*S	Sn	09 52 48.8	-25
CBTN				IAML		09 52 54.6	
	comp=Z,160nm,0.3s						
BOSA	**Boshof**	**4.15**	**245**	*i* P	**Pn**	**09 52 32.6**	**+0.2**
BOSA				*i* S	**Sb**	**09 53 32.0**	**-0.3**
BOSA	**Boshof**	**4.15**	**245**	*i* P	**Pn**	**09 52 32.6**	**+0.2**
BOSA				*i* S	**Sb**	**09 53 32.0**	**-0.3**
MATP	**Matopo**	**6.50**	**352**	*i* P	**Pb**	**09 53 22.3**	**+0.1**
MATP	**Matopo**	**6.50**	**352**	*i* P	**Pb**	**09 53 22.3**	**+0.1**
BLWY	**Bulawayo**	**6.77**	**353**	*i* P	**Pb**	**09 53 26.6**	**-0.2**
BLWY	**Bulawayo**	**6.77**	**353**	*i* P	**Pb**	**09 53 26.6**	**-0.2**

CSEM 14 09:57:28.9, 43°.01N×18°.33E, h7km, ML1.7/4, 1C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRY	**Bratogost**	**0.19**	**124**	*i* P*g*	Pg	09 57 33.0	+0.3
BRY				*e*Sg	Sg	09 57 36.5	+1.1
TREB	**Trebinje**	**0.29**	**177**	*e*P*g*	Pg	09 57 34.6	0.0
TREB				*e*Sg	Sg	09 57 39.7	+1.2
UPM	**Unac-Piva**	**0.47**	**65**	*e*P*g*	Pg	09 57 37.5	-0.5
UPM				*e*Sg	Sg	09 57 44.9	+0.8
STON	**Ston**	**0.48**	**254**	*e*P*g*	Pg	09 57 37.7	-0.5
STON				Sg	Sb	09 57 45.7	-1.2
STON	**Ston**	**0.48**	**254**	*e*P*g*	Pg	09 57 37.2	-1.0
STON				*e*Sg	Sg	09 57 45.5	+1.1
HCY	**Herceg Novi**	**0.57**	**168**	*e*P*g*	Pg	09 57 39.3	-0.7
HCY				*e*Sg	Sg	09 57 48.2	+0.8
PDG	**Podgorica**	**0.90**	**130**	*e*Sg	Sg	09 57 57.7	0.0
DRME	**Dracevica, Mon**	**1.04**	**142**	*e*P*g*	Pg	09 57 47.3	-1.5
DRME				*e*Sg	Sg	09 58 02.2	0.0

*NEIC **14** 10:04:30.3±0.0, 18°.11N×68°.43W, h115km, MD3.6(RSPR), After RSPR.*
RSPR 14 10:04:30.3, 18°.11N×68°.43W, h115km±1km, MD3.6/14, 13C-20D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMPR	**Mona Island, P**	**0.47**	**94**	*e*P	Pn	10 04 47.6	+0.1
IMPR	**Mona Island, P**	**0.47**	**94**	*e*S	Sn	10 05 00.6	+0.1
IDE	**Isla Desecheo**	**0.95**	**73**	*e*P	Pn	10 04 50.8	-0.6
IDE	**Isla Desecheo**	**0.95**	**73**	*e*S	Sn	10 05 06.6	-0.7
IDE	**Isla Desecheo**	**0.95**	**73**	*e*P	Pn	10 04 50.8	-0.6
IDE				*e*S	Sn	10 05 06.6	-0.7
DR12	**Loma Pena Alta**	**1.13**	**307**	*e*P	Pn	10 04 52.5	-0.8
DR12				*e*S	Sn	10 05 10.5	-0.2
DR12	**Loma Pena Alta**	**1.13**	**307**	*e*P	Pn	10 04 52.5	-0.8
CRPR	**Cabo Rojo, PR**	**1.26**	**94**	*e*P	Pn	10 04 54.2	-0.4
CRPR	**Cabo Rojo, PR**	**1.26**	**94**	*e*S	Sn	10 05 13.0	-0.1
CRPR	**Cabo Rojo, PR**	**1.26**	**94**	*e*P	Pn	10 04 54.2	-0.4
CRPR				*e*S	Sn	10 05 13.0	-0.1
LSP	**Las Mesas**	**1.28**	**87**	*e*P	Pn	10 04 54.4	-0.5
LSP	**Las Mesas**	**1.28**	**87**	*e*S	Sn	10 05 15.5	+2.0
LSP	**Las Mesas**	**1.28**	**87**	*e*P	Pn	10 04 54.4	-0.5
LSP				*e*S	Sn	10 05 15.5	+2.0
AGPR	**Aguadilla, PR**	**1.30**	**74**	*e*P	Pn	10 04 55.2	+0.1
AGPR	**Aguadilla, PR**	**1.30**	**74**	*e*S	Sn	10 05 14.3	+0.3
AGPR	**Aguadilla, PR**	**1.30**	**74**	*e*P	Pn	10 04 55.2	+0.1
AGPR				*e*S	Sn	10 05 14.3	+0.3
AOPR	**Arecibo Observ**	**1.61**	**81**	*e*P	Pn	10 04 58.6	-0.1
AOPR	**Arecibo Observ**	**1.61**	**81**	*e*P	Pn	10 04 58.9	+0.2
AOPR				*e*S	Sn	10 05 18.8	-1.6
AOPR	**Arecibo Observ**	**1.61**	**81**	*e*S	Sn	10 05 20.5	+0.1
AOPR	**Arecibo Observ**	**1.61**	**81**	*e*P	Pn	10 04 58.6	-0.1
AOPR				*e*P		10 04 58.9	
OBIP	**Obispado Ponce**	**1.73**	**92**	*e*P	Pn	10 04 59.7	-0.5
OBIP	**Obispado Ponce**	**1.73**	**92**	*e*S	Sn	10 05 22.3	-0.7
OBIP	**Obispado Ponce**	**1.73**	**92**	*e*P	Pn	10 04 59.7	-0.5
OBIP				*e*S	Sn	10 05 22.3	-0.7
SJG	**San Juan**	**2.17**	**90**	*e*S	Sn	10 05 32.1	-0.6
SJG	**San Juan**	**2.17**	**90**	*e*P	Pn	10 05 05.5	-0.1
SJG	**San Juan**	**2.17**	**90**	*e*P	Pn	10 05 05.5	-0.1
SJG				*e*S	Sn	10 05 32.1	-0.6
CBYP	**Canovanas**	**2.45**	**86**	*e*S	Sn	10 05 39.7	+0.4
CBYP	**Canovanas**	**2.45**	**86**	*e*P	Pn	10 05 08.5	-0.8
CBYP	**Canovanas**	**2.45**	**86**	*e*P	Pn	10 05 08.5	-0.8
CBYP				*e*S	Sn	10 05 39.7	+0.4
HUMP	**Col San Antoni**	**2.45**	**89**	*e*P	Pn	10 05 09.3	0.0
HUMP	**Col San Antoni**	**2.45**	**89**	*e*P	Pn	10 05 09.6	+0.3
HUMP				*e*S	Sn	10 05 40.3	+1.1
HUMP	**Col San Antoni**	**2.45**	**89**	*e*P	Pn	10 05 09.3	0.0
HUMP				*e*P		10 05 09.6	
HUMP				*e*S	Sn	10 05 40.1	+0.9
MTP	**Monte Pirata**	**2.73**	**90**	*e*P	Pn	10 05 13.1	+0.1
MTP	**Monte Pirata**	**2.73**	**90**	*e*S	Sn	10 05 47.9	+2.1
MTP	**Monte Pirata**	**2.73**	**90**	*e*P	Pn	10 05 13.1	+0.1
MTP				*e*S	Sn	10 05 47.9	+2.1
CUPR	**Culebra, Puert**	**3.00**	**86**	*e*P	Pn	10 05 15.0	-1.4
CUPR	**Culebra, Puert**	**3.00**	**86**	*e*S	Sn	10 05 50.2	-1.7
CUPR	**Culebra, Puert**	**3.00**	**86**	*e*P	Pn	10 05 15.0	-1.4
CUPR				*e*S	Sn	10 05 50.2	-1.7
STVI	**Saint Thomas**	**3.31**	**85**	*e*P	Pn	10 05 19.4	-1.1
STVI	**Saint Thomas**	**3.31**	**85**	*e*S	Sn	10 05 57.8	-1.5
STVI	**Saint Thomas**	**3.31**	**85**	*e*P	Pn	10 05 19.4	-1.1
STVI				*e*S	Sn	10 05 57.8	-1.5
ABV	**Anegada**	**3.94**	**80**	*e*P	Pn	10 05 27.8	-1.1
ABV	**Anegada**	**3.94**	**80**	*e*S	Sn	10 06 13.8	-0.5
ABVI	**Anegada Island**	**3.94**	**80**	*e*P	Pn	10 05 27.8	-1.1
ABVI				*e*S	Sn	10 06 13.8	-0.5

*ISCJB **14** 10:04:56.8±1.0, 60°.2S±0°.1×26°.3W±0°.4, h26km, mb4.0/4, Error ellipse: s-maj=35.4km s-min=8.3km az=147.8*
*IDC **14** 10:04:56.2±1.0, 59°.75S×26°.33W, h0km, mb4.0/4, mb1 4.2/5, mb1mx3.8/34, mbtmp4.1/5, ML4.5/1, Error ellipse: s-maj=41.5km s-min=28.7km az=33.0*
ISC 14 10:04:59.3±0.9, 60°.2S±0°.2×26°.4W±0°.2, h26km, n16, σ1°.89/14, mb4.0/4, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**12.85**	**152**	P	**P**	**10 08 07.0**	**-3.4**
VNA1				S	**Sn**	**10 10 23.1**	**+1.4**
VNA3	**Neumayer Olymp**	**12.98**	**155**	P	**P**	**10 08 08.6**	**-3.3**
VNA3				S	**Sn**	**10 10 23.6**	**-1.5**
SNAA	**Sanae**	**14.84**	**150**	P	**P**	**10 08 33.4**	**+0.7**
SNAA				S	**Sn**	**10 11 11.7**	**+1.2**
SNAA	**Sanae**	**14.84**	**150**	Pn	**P**	**10 08 33.3**	**+0.6**
	2.0nm,0.3s,baz=316,slow=16,SNR=85						
SNAA				Sn	**Sn**	**10 11 10.5**	**+0.1**
	0.4nm,0.3s,baz=338,slow=19,SNR=4.9						
PLCA	**Paso Flores**	**33.32**	**286**	P	**P**	**10 11 35.1**	**+0.4**
	0.7nm,0.5s,baz=135,slow=9.5,SNR=4.3						
H10S2	**ASCENSION HYDR**	**51.89**	**15**	T	T	11 09 41.0	
	baz=188,slow=75,SNR=12						
H10S3	**ASCENSION HYDR**	**51.90**	**15**	T	T	11 09 45.1	
	baz=188,slow=75,SNR=11						
H10S1	**ASCENSION HYDR**	**51.91**	**15**	T	T	11 09 42.6	
	baz=188,slow=75,SNR=9.2						
H10N1	**ASCENSION HYDR**	**53.01**	**15**	T	T	11 11 05.6	
	baz=188						
H10N3	**ASCENSION HYDR**	**53.01**	**15**	T	T	11 11 08.4	
	baz=188						
H10N2	**ASCENSION HYDR**	**53.03**	**15**	T	T	11 11 08.0	
	baz=188						
LPAZ	**La Paz**	**53.15**	**307**	P	**P**	**10 14 15.0**	**-0.5**
	0.9nm,0.4s,baz=91,slow=6.0,SNR=10						
TORD	**Torodi Ar. Bea**	**76.51**	**28**	P	**P**	**10 16 45.6**	**-1.1**
	0.7nm,0.4s,baz=197,slow=6.0,SNR=14						
ASAR	**Alice Springs**	**94.91**	**162**	P	**P**	**10 18 21.8**	**+2.8**
	0.4nm,0.7s,baz=180,slow=4.2,SNR=5.7						
SONM	**Songino Array**	**150.34**	**93**	PKPbc	**PKPbc**	**10 24 48.0**	**+0.9**
	1.4nm,0.6s,baz=216,slow=1.9,SNR=7.7						
ILAR	**Eielson Array**	**153.03**	**305**	PKPbc	**PKPbc**	**10 24 52.2**	**-0.3**
	0.2nm,0.4s,baz=154,slow=4.5,SNR=4.1						

TAP 14 10:09:05.8, 23°.73N×121°.48E, h7km, ML1.9, 1D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	**Guangfu**	**0.08**	**222**	P	Pg	10 09 08.3	+0.5
	baz=222						
ESL	**Shilin**	**0.10**	**332**	↓*i*P	Pg	10 09 08.7	+0.6
	baz=335						
HGSD	**Ruisui**	**0.24**	**193**	*e*P	Pg	10 09 11.6	+1.0
	baz=193						
EHY	**Hungye**	**0.27**	**214**	*e*P	Pb	10 09 12.0	-0.9
	baz=212						
HWA	**Hwalien**	**0.27**	**24**	*e*P	Pg	10 09 12.0	+0.8
	baz=25						
TWD	**Chiawan**	**0.37**	**16**	*e*P	Pg	10 09 13.7	+0.8
	baz=17						
TWD				*e*S	Sb	10 09 19.7	-0.8
	baz=17						
YULB	**Yu-li**	**0.38**	**207**	*e*P	Pb	10 09 14.0	-0.7
	baz=207						
YULB				*e*S	Sb	10 09 20.5	-0.2
	baz=207						
TWF1	**Yuli**	**0.41**	**205**	*e*P	Pb	10 09 14.8	-0.5
	baz=203						
TWF1				*e*S	Sb	10 09 21.7	-0.1
	baz=203						
CHGB	**Renai**	**0.44**	**320**	*e*P	Pb	10 09 15.6	-0.3
	baz=319						
CHGB				*e*S	Sb	10 09 22.3	-0.4
	baz=319						
NACB	**Ninganchiao**	**0.46**	**13**	*e*P	Pg	10 09 14.6	-0.1
	baz=12						
SSLB	**Suanglung**	**0.49**	**277**	*e*P	Pb	10 09 16.3	-0.4
	baz=277						
SSLB				*e*S	Sb	10 09 23.3	-0.8
	baz=277						
FULB	**Fuli**	**0.55**	**198**	*e*P	Pb	10 09 18.6	+0.8
	baz=198						
SMLT	**Sun Moon Lake**	**0.56**	**286**	*e*P	Pb	10 09 18.4	+0.5
	baz=286						
TYC	**Yuchr**	**0.60**	**287**	*e*P	Pb	10 09 18.9	+0.3
	baz=287						
NNSB	**Datong**	**0.70**	**352**	*e*P	Pg	10 09 19.6	+0.2
	baz=352						
NNSB				*e*S	Sb	10 09 30.1	-0.3
	baz=352						
NNSH	**Datong**	**0.70**	**352**	*e*P	Pg	10 09 19.8	+0.4
	baz=352						
NNS	**Nan Shan**	**0.72**	**352**	*e*P	Pb	10 09 20.4	-0.3
	baz=352						
NNS				*e*S	Sb	10 09 31.5	+0.8
	baz=352						
ENA	**Nanau**	**0.74**	**19**	*e*P	Pn	10 09 21.9	-0.7
	baz=19						
ENA				*e*S	Sb	10 09 31.8	+0.6
	baz=19						
NANB	**Nanao**	**0.74**	**19**	*e*P	Pb	10 09 21.2	+0.2
	baz=19						
NANB				*e*S	Sb	10 09 32.0	+0.7
	baz=19						
YHNB	**Yeheng**	**0.94**	**354**	*e*P	Pb	10 09 24.4	-0.1
	baz=353						
YHNB				*e*S	Sn	10 09 38.4	-0.9
	baz=353						
NSK	**Sanguang**	**0.95**	**353**	*e*P	Pb	10 09 24.6	0.0
	baz=353						
NSK				*e*S	Sn	10 09 38.8	-0.6
	baz=353						
TIPB	**Shuangxi**	**1.28**	**14**	*e*P	Pn	10 09 29.9	-0.2
	baz=14						
TIPB				*e*S	Sn	10 09 48.2	+0.8
	baz=14						

*ATA **14** 10:20:35.7±0.8, 39°.87N×40°.60E, h20km±5km, ML2.5, MW2.7*
*ISK **14** 10:20:35.5, 39°.84N×40°.71E, h5km, ML2.1/3*
*ISCJB **14** 10:20:37.2±0.6, 39°.84N±0°.04×40°.67E±0°.05, h7km±6km, Error ellipse: s-maj=7.7km s-min=4.8km az=138.8*
ISC 14 10:20:36.4±1.0, 39°.85N±0°.04×40°.65E±0°.03, h18km±8km, n11, σ0°.37/16, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOPT	**Kop Dagi**	**0.21**	**327**	*e*P	**Pb**	**10 20 41.8**	**0.0**
KOPT				*e*S	**Sg**	**10 20 45.3**	**+0.1**
KOPT				IAML		10 20 49.1	
	comp=Z,144nm,0.7s						
ECAT	**Cat-ERZURUM**	**0.35**	**133**	*e*P	**Pb**	**10 20 44.1**	**-0.1**
YEDI	**Yedisu-Bingol**	**0.41**	**191**	PG	**Pg**	**10 20 44.8**	**-0.2**
YEDI				SG	**Sb**	**10 20 51.7**	**+0

IDC 14 10:47:56.4±700.0, 49.00N×42.99E, h0km, Error ellipse: s-maj=310.8km s-min=155.3km az=141.0, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**8.49**	**338**	*i*		11 40 50.0	
baz=154,slow=321,SNR=1.0							
I26DE	**FREYUNG INFRAS**	**19.19**	**281**	*i*		12 48 05.1	
baz=78,slow=317,SNR=0.4							
I48TN	**KESRA INFRASON**	**27.89**	**254**	*i*		13 39 30.0	
baz=54,slow=293,SNR=0.3							

*IDC **14** 10:58:23.9±0.6, 2.73N×91.39E, h0km, mb4.1/22, mb1 4.3/25, mb1mx4.1/68, mbtmp4.2/25, ML4.4/3, MS3.8/37, Ms1 3.8/37, ms1mx3.6/75, Error ellipse: s-maj=16.7km s-min=14.0km az=37.0*

*NEIC **14** 10:58:25.3±0.2, 2.76N×91.43E, h10km, mb4.7/9, Error ellipse: s-maj=6.3km s-min=4.6km az=193.0*

*BJI **14** 10:58:25.6, 2.70N×91.40E, h10km, mb4.6/24, mB4.8/15, Ms4.4/11, Ms7 4.1/9*

*ISCJB **14** 10:58:26.6±0.3, 2.74N±0.04×91.48E±0.03, h33km, mb4.4/36, MS3.9/37, Error ellipse: s-maj=6.7km s-min=3.8km az=24.8*

*DJA **14** 10:58:27.4±0.6, 3.1N±5.5×9.1E±, h33km±5km, M5.0/17, mB5.4/10, mb5.0/17, MLv5.2/7, Mw(mB)4.9/10*

ISC 14 10:58:29.0±0.5, 2.72N±0.06×91.46E±0.05, h35km, n155, σ1§57/132, mb4.5/39, MS3.9/37, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**4.72**	**54**	P	**Pn**	**10 59 36.3**	**-1.4**
BSI				S	**Sn**	**11 00 25.6**	**-5.7**
MLSI	**Meulaboh, Aceh**	**5.17**	**73**	P	**Pn**	**10 59 43.0**	**-0.9**
404nm,0.6s,6μm2.7nm							
LHMI	**Lhok Sumawe**	**6.02**	**65**	P	**Pn**	**10 59 55.8**	**+0.2**
328nm,0.9s,3μm1.7nm							
LHMI	**Lhok Sumawe**	**6.02**	**65**	*e*Pn	**Pn**	**10 59 54.8**	**-0.8**
GSI	**Gunungsitoli**	**6.28**	**103**	P	**Pn**	**10 59 58.1**	**-1.0**
263nm,0.8s,3μm0.9nm							
GSI	**Gunungsitoli**	**6.28**	**103**	*e*Pn	**Pn**	**10 59 58.3**	**-0.8**
KCSI	**Kotacane, Aceh**	**6.36**	**83**	P	**Pn**	**11 00 00.8**	**+0.6**
434nm,0.8s,5μm1.5nm							
TSI	**Tuntungan**	**7.14**	**84**	P	**Pn**	**11 00 12.3**	**+1.3**
279nm,0.6s,1.4nm							
PSI	**Prapat**	**7.46**	**89**	Pn	**Pn**	**11 00 15.2**	**-0.2**
4.9nm,0.3s,baz=358,slow=1.5,SNR=28							
PSI				Sn	**Sn**	**11 01 36.1**	**-2.9**
4.2nm,0.3s,baz=180,slow=20,SNR=3.4							
PSI	**Prapat**	**7.46**	**89**	*e*Pn	**Pn**	**11 00 14.9**	**-0.6**
PSI				*e*Sn	**Sn**	**11 01 36.1**	**-2.9**
MNSI	**Mandailing Nat**	**8.34**	**103**	P	**Pn**	**11 00 26.9**	**-0.6**
PKDT	**Phuket**	**8.56**	**53**	P	**Pn**	**11 00 29.0**	**-1.5**
81nm,0.9s,0.3nm							
SISI	**Saibi**	**8.62**	**118**	P	**Pn**	**11 00 31.7**	**+0.3**
PPI	**Padang Panjang**	**9.48**	**109**	P	**Pn**	**11 00 42.7**	**-0.4**
KULM	**Kulim**	**9.52**	**74**	*e*Pn	**Pn**	**11 00 42.7**	**-1.0**
TRTT	**Trang**	**9.65**	**58**	P	**Pn**	**11 00 43.2**	**-2.2**
48nm,0.8s,0.2nm							
PDSI	**Padang**	**9.70**	**112**	P	**Pn**	**11 00 44.6**	**-1.5**
22nm,0.6s,9μm							
PALK	**Pallekele**	**11.63**	**293**	Pn	**Pn**	**11 01 09.4**	**-3.1**
8.6nm,0.3s,baz=116,slow=13,SNR=33							
PALK				Sn	Sn	11 03 07.6	-14
11nm,0.3s,baz=296,slow=3.3,SNR=15							
PALK				LR	LR	11 05 06.2	
comp=Z,471nm,18.8s,baz=116,slow=35							
PALK	**Pallekele**	**11.63**	**293**	*e*Pn	**Pn**	**11 01 09.9**	**-2.7**
PALK				*e*Sn	Sn	11 03 07.8	-13
PHET	**Kaeng Krachan**	**12.96**	**38**	P	**P**	**11 01 38.8**	**-2.0**
MDSI	**Maura Dua**	**14.59**	**119**	P	**Pn**	**11 01 51.8**	**-1.2**
14nm,0.9s							
SKHT	**Srikalahasti**	**15.96**	**314**	*e*P	**Pn**	**11 02 08.5**	**-2.5**
SKHT				IAmb	IAmb	11 02 11.3	
comp=Z,31nm,0.6s							
PBKT	**Sadao Pong**	**16.64**	**34**	P	**Pn**	**11 02 20.6**	**+0.9**
comp=Z,18nm,1.3s,comp=Z,3μm							
PBKT	**Sadao Pong**	**16.64**	**34**	*e*Pn	**Pn**	**11 02 17.4**	**-2.3**
comp=Z,12nm,0.8s							
CHAI	**Chaiyaphum**	**16.71**	**38**	P	**Pn**	**11 02 19.8**	**-0.7**
comp=Z,6.2nm,0.9s							
PHIT	**Phitsanulok**	**16.86**	**31**	P	P	11 02 33.5	+9.3
CM01	**Chiang Mai Arr**	**17.25**	**25**	*e*Pn	**Pn**	**11 02 27.0**	**-0.3**
CMAR	**Chiang Mai Arr**	**17.28**	**25**	P	**Pn**	**11 02 25.6**	**-2.1**
comp=Z,0.2nm,0.3s,baz=218,slow=12,SNR=13							
CMAR				LR	LR	11 08 58.2	
comp=Z,125nm,20.6s,baz=208,slow=37							
CHLP	**Challavanipeta**	**17.29**	**336**	*e*P	**Pn**	**11 02 25.7**	**-1.9**
CHLP				IAmb	IAmb	11 02 27.4	
comp=Z,39nm,0.7s							
PVM	**Polavaram**	**17.37**	**327**	*e*P	**Pn**	**11 02 26.3**	**-2.5**
PVM				IAmb	IAmb	11 02 29.4	
comp=Z,22nm,1.0s							
CHTO	**Chiang Mai**	**17.60**	**24**	P	**P**	**11 02 33.3**	**+1.0**
comp=Z,41nm,1.2s							
CHTO	**Chiang Mai**	**17.60**	**24**	*e*Pn	**Pn**	**11 02 31.5**	**-0.1**
comp=Z,9.4nm,1.1s							
LAMP	**Lampang**	**17.63**	**26**	P	**P**	**11 02 34.0**	**+1.3**
comp=Z,7.8nm,0.9s							
SRLM	**Srisailam**	**18.16**	**318**	*e*P	**Pn**	**11 02 36.9**	**-1.7**
SRLM				IAmb	IAmb	11 02 40.5	
comp=Z,13nm,0.5s							
NJS	**Nagarjunasagar**	**18.22**	**320**	*e*P	**P**	**11 02 37.0**	**-2.1**
NJS				IAmb	IAmb	11 02 38.9	
comp=Z,10nm,0.9s							
BWNR	**Bhubaneshwar**	**18.32**	**343**	*e*P	**P**	**11 02 38.2**	**-2.1**
BWNR				IAmb	IAmb	11 02 41.3	
comp=Z,44nm,1.1s							
URV	**Uravakonda**	**18.54**	**312**	*e*P	**P**	**11 02 41.9**	**-0.9**
URV				IAmb	IAmb	11 02 45.3	
comp=Z,24nm,1.1s							
LEM	**Lembang**	**18.71**	**121**	LR	LR	11 09 27.1	
comp=Z,249nm,18.6s,baz=340,slow=35							
HYB	**Hyderabad**	**19.34**	**320**	*i* P	**Pn**	**11 02 52.5**	**-0.3**
HYB	**Hyderabad**	**19.34**	**320**	*e*P	**P**	**11 02 51.4**	**-0.1**
HYB				IAmb	IAmb	11 03 02.0	
comp=Z,21nm,1.1s							
HYBB	**Hyderabad (bro**	**19.34**	**320**	*e*P	**P**	**11 02 50.8**	**-0.8**
HYBB				IAmb	IAmb	11 02 53.0	
comp=Z,12nm,0.9s							
SAIH	**SAIHA**	**19.71**	**4**	*e*P	**P**	**11 02 54.7**	**-1.0**
SAIH				IAmb	IAmb	11 03 11.3	
comp=Z,777nm,0.1s							
BRDH	**Bariadhala**	**19.84**	**1**	LR	LR	11 10 31.5	
comp=Z,286nm,20.3s,baz=148,slow=37							
RPR	**Rampur**	**19.98**	**324**	*e*P	**P**	**11 02 57.2**	**-1.2**
RPR				IAmb	IAmb	11 02 59.9	
comp=Z,32nm,1.4s							
SRSP	**Sriramsagar**	**20.60**	**322**	*e*P	**P**	**11 03 03.9**	**-1.4**
SRSP				IAmb	IAmb	11 03 08.9	
comp=Z,12nm,0.9s							
SBUM	**Sibu**	**20.75**	**90**	*e*P	**P**	**11 03 07.2**	**+0.3**
comp=Z,20nm,1.0s							
AZL	**Aizawl**	**20.93**	**3**	*e*P	**P**	**11 03 09.0**	**+0.1**
AZL				IAmb	IAmb	11 03 17.3	
comp=Z,327nm,3.1s							
KLRI	**Killari**	**21.10**	**317**	*e*P	**P**	**11 03 09.6**	**-1.0**
KLRI				IAmb	IAmb	11 03 14.1	
comp=Z,9.4nm,0.8s							
H08S2	**Diego Garcia H**	**21.54**	**241**	T	T	11 25 22.4	
baz=60,slow=75,SNR=134							
H08S3	**Diego Garcia H**	**21.54**	**241**	T	T	11 25 22.3	
baz=60,slow=75,SNR=346							
H08S1	**Diego Carcia H**	**21.55**	**241**	T	T	11 25 14.7	
baz=60,slow=75,SNR=34							
BOK	**Bokaro**	**21.64**	**346**	*e*P	**P**	**11 03 17.3**	**+0.9**
BOK				IAmb	IAmb	11 03 28.1	
comp=Z,373nm,2.7s							
NGP	**Nagpur**	**21.95**	**328**	*e*P	**P**	**11 03 17.9**	**-1.8**
NGP				IAmb	IAmb	11 03 32.4	
comp=Z,11nm,0.6s							
IMP	**Imphal**	**22.12**	**6**	*e*P	**P**	**11 03 19.8**	**-1.8**
SHL	**Shillong**	**22.72**	**1**	*e*P	**P**	**11 03 28.0**	**-0.2**
MOKO	**MOKOCHONG**	**23.65**	**7**	*e*P	**P**	**11 03 35.8**	**-1.7**
TEZP	**TEZPUR**	**23.80**	**3**	*e*P	**P**	**11 03 37.2**	**-1.4**
ODAN	**Odare**	**24.32**	**351**	*e*P	**P**	**11 03 44.8**	**+1.1**
comp=Z,57nm,1.1s							
RAMN	**Ramite**	**24.54**	**350**	*e*P	**P**	**11 03 47.9**	**+2.1**
ZIRO	**ZIRO**	**24.78**	**5**	*e*P	**P**	**11 03 46.9**	**-0.9**
KMI	**Kunming**	**24.79**	**25**	P	**P**	**11 03 50.8**	**+2.8**
KMI				pP	pP	11 03 57.5	-0.5
KMI				sP	sP	11 03 59.8	-2.5
KMI				S	**S**	**11 08 13.4**	**+4.9**
KMI				sS	sS	11 08 25.1	+0.1
KMI				pmax	pmax		
comp=Z,20nm,1.0s							
KMI				pmax	pmax		
comp=Z,82nm,3.8s							
KMI				LR	LR		
comp=Z,120nm,4.8s							
KMI				LR	LR		
comp=Z,330nm,10.8s							
KMI				LR	LR		
comp=Z,210nm,12.5s							
JIRN	**Jiri**	**25.31**	**349**	*e*P	**P**	**11 03 54.0**	**+1.1**
comp=Z,116nm,1.1s							
GUN	**Gumba**	**25.61**	**349**	*e*P	**P**	**11 03 56.3**	**+0.7**
comp=Z,51nm,0.7s							
KOLN	**Koldanda**	**26.02**	**344**	*e*P	**P**	**11 04 02.1**	**+3.0**
comp=Z,16nm,0.7s							
DANN	**Dangsing**	**26.53**	**345**	*e*P	**P**	**11 04 05.1**	**+1.3**
comp=Z,21nm,0.7s							
LSA	**Lhasa**	**26.84**	**359**	*e*P	**P**	**11 04 09.3**	**+2.5**
comp=Z,8.8nm,0.6s							
GYA	**Guiyang**	**27.75**	**30**	P	**P**	**11 04 15.6**	**+0.9**
GYA				pmax	pmax		
comp=Z,10.0nm,0.8s							
CD2	**Chengdu**	**30.36**	**21**	P	**P**	**11 04 37.8**	**+0.2**
CD2				pmax	pmax		
comp=Z,20nm,0.5s							
TGY	**Tagaytay City**	**31.23**	**67**	LR	LR	11 16 29.9	
comp=Z,138nm,21.8s,baz=95,slow=35							
SMLA	**Simla**	**31.32**	**336**	*e*P	**P**	**11 04 45.8**	**-0.3**
DHRM	**DHARAMSHALA**	**32.65**	**336**	*e*P	**P**	**11 04 57.2**	**-0.9**
LZH	**Lanzhou**	**35.13**	**18**	*e*P	**P**	**11 05 23.3**	**+3.9**
LZH				pP	pP	11 05 27.3	-2.3
LZH				sP	sP	11 05 30.8	-3.0
LZH				*e*PP	**PP**	**11 06 41.0**	**+1.4**
LZH				*e*S	**S**	**11 10 55.5**	**+5.3**
LZH				sS	sS	11 11 02.3	-4.6
LZH				SS	**SnSn**	**11 13 10.1**	**+1.5**
LZH				pmax	pmax		
comp=Z,16nm,1.3s							
LZH				pmax	pmax		
comp=Z,110nm,4.8s							
LZH				LR	LR		
comp=Z,360nm,14.1s							
LZH				LR	LR		
comp=Z,480nm,16.8s							
LZH				LR	LR		
comp=Z,460nm,16.8s							
XAN	**Xi'an**	**35.17**	**26**	P	**P**	**11 05 18.4**	**-1.3**
XAN				pP	pP	11 05 27.3	-2.5
XAN				pmax	pmax		
comp=Z,6.0nm,0.8s							
GTA	**Gaotai**	**37.31**	**11**	*e*P	**P**	**11 05 38.3**	**+0.3**
GTA				pP	pP	11 05 42.3	-5.9
GTA				sP	sP	11 05 45.4	-7.0
GTA				pmax	pmax		
comp=Z,6.0nm,0.8s							
NJ2	**Nanjing**	**38.93**	**38**	*e*P	**P**	**11 05 53.4**	**+1.8**
NJ2				pmax	pmax		
comp=Z,10.0nm,0.5s							
KSH	**Kashi**	**39.24**	**341**	P	**P**	**11 05 54.4**	**+0.1**
KSH				pmax	pmax		
comp=Z,170nm,4.8s							
FITZ	**Fitzroy Crossi**	**39.52**	**123**	P	**P**	**11 05 56.8**	**+0.1**
comp=Z,1.1nm,0.5s,baz=322,slow=7.7,SNR=5.6							
WMQ	**Urumqi**	**41.07**	**356**	P	**P**	**11 06 11.1**	**+1.9**
WMQ				pP	pP	11 06 15.6	-3.9
WMQ				pmax	pmax		
comp=Z,43nm,1.3s							
WMQ				pmax	pmax		
comp=Z,230nm,4.1s							
WMQ				LR	LR		
comp=Z,280nm,26.1s							
WMQ				LR	LR		
comp=Z,550nm,26.1s							
WMQ				LR	LR		
comp=Z,250nm,26.1s							
HHC	**Hu-ho-hao-te**	**42.08**	**23**	*e*P	**P**	**11 06 19.3**	**+1.7**
HHC				*e*S	**S**	**11 12 38.8**	**+4.0**
HHC				pmax	pmax		
comp=Z,19nm,0.5s							
HHC				LR	LR		
comp=Z,140nm,9.5s							
HHC				LR	LR		
comp=Z,130nm,10.4s							
HHC				LR	LR		
comp=Z,120nm,10.4s							
AAK	**Ala-Archa**	**42.54**	**341**	P	**P**	**11 06 23.8**	**+2.4**
comp=Z,0.9nm,0.3s,baz=198,slow=19,SNR=2.2							
JOW	**Kunigami**	**42.64**	**52**	LR	LR	11 24 22.0	
comp=Z,135nm,20.3s,baz=246,slow=36							
H01W3	**Cape Leeuwin H**	**43.04**	**152**	T	T	11 52 20.5	
baz=325							
H01W2	**Cape Leeuwin H**	**43.05**	**152**	T	T	11 52 20.9	
baz=325							
H01W1	**Cape Leeuwin H**	**43.05**	**152**	T	T	11 52 21.4	
baz=325							
KK31	**Karatay Array**	**44.33**	**338**	*e*P	**P**	**11 06 34.7**	**-1.0**
KKAR	**Karatay Array**	**44.33**	**338**	*e*P	**P**	**11 06 35.5**	**-0.2**
MK01	**Makanchi Array**	**44.60**	**351**	*e*P	**P**	**11 06 37.2**	**-0.6**
MK31	**Makanchi Array**	**44.62**	**351**	*e*P	**P**	**11 06 37.8**	**-0.2**
MK32	**Makanchi Array**	**44.62**	**351**	*e*P	**P**	**11 06 37.6**	**-0.4**
MKAR	**Makanchi Array**	**44.62**	**351**	P	**P**	**11 06 37.6**	**-0.4**
comp=Z,1.9nm,0.7s,baz=173,slow=8.8,SNR=17							
MKAR				LR	LR	11 25 56.8	
comp=Z,109nm,21.7s,baz=178,slow=37							
MKAR	**Makanchi Array**	**44.62**	**351**	*e*P	**P**	**11 06 37.8**	**-0.2**
comp=Z,22nm,0.9s							
GEYT	**Alibeck**	**46.47**	**323**	P	**P**	**11 06 53.2**	**+0.4**
comp=Z,587nm,1.2s,baz=129,slow=8.2,SNR=4.6							
GEYT				LR	LR	11 27 09.5	
comp=Z,146nm,21.0s,baz=125,slow=37							
SONA0	**Songino Array**	**46.76**	**14**	*e*P	**P**	**11 06 55.4**	**+0.4**
SONM	**Songino Array**	**46.76**	**14**	P	**P**	**11 06 55.4**	**+0.4**
comp=Z,5.8nm,0.7s,baz=195,slow=8.9,SNR=29							
SONM				LR	LR	11 28 33.0	
comp=Z,125nm,19.7s,baz=196,slow=39							
SONA1	**Songino Array**	**46.77**	**14**	*e*P	**P**	**11 06 55.1**	**0.0**
JNU	**Nakatsue**	**47.69**	**46**	LR	LR	11 29 38.5	
comp=Z,197nm,18.0s,baz=213,slow=39							
WRA	**Warramunga Arr**	**47.73**	**120**	P	**P**	**11 07 03.5**	**+0.6**
comp=Z,1.9nm,0.8s,baz=301,slow=8.6,SNR=15							
WR1	**Warramunga Arr**	**47.73**	**120**	*e*P	**P**	**11 07 03.5**	**+0.6**
comp=Z,6.8nm,1.1s							
KSRS	**Korea Array**	**48.10**	**39**	LR	LR	11 31 00.9	
comp=Z,125nm,18.8s,baz=228,slow=41							
OPO	**Ambohidratompo**	**48.42**	**242**	P	**P**	**11 07 08.5**	**+0.1**
comp=Z,3.8nm,0.8s,baz=66,slow=8.4,SNR=4.2							
ASAR	**Alice Springs**	**48.93**	**125**	P	**P**	**11 07 12.5**	**+0.5**
comp=Z,0.9nm,1.0s,baz=290,slow=7.7,SNR=4.6							
ASAR				LR	LR	11 27 53.9	
comp=Z,104nm,19.4s,baz=184,slow=36							
ATD	**Arta Tunnel**	**48.95**	**283**	LR	LR	11 23 52.9	
comp=Z,52nm,19.4s,baz=8.5,slow=31							
KURBB	**Kurchatov Arra**	**48.97**	**349**	P	**P**	**11 07 11.3**	**-0.5**
comp=Z,1.0nm,0.6s,baz=171,slow=7.0,SNR=10							
KURK	**Kurchatov**	**49.04**	**349**	*e*P	**P**	**11 07 11.3**	**-1.1**
TLY	**Talaya**	**49.85**	**10**	P	**P**	**11 07 18.0**	**-0.6**
comp=Z,2.2nm,0.5s,baz=0.0,slow=16,SNR=3.4							
CN2	**Changchun**	**50.79**	**31**	*e*P	**P**	**11 07 28.5**	**+2.6**
ZALV	**Zalesovo Beam**	**51.36**	**355**	P	**P**	**11 07 29.6**	**-0.3**
comp=Z,2.0nm,0.4s,baz=183,slow=7.2,SNR=4.5							
ZAA1	**Zalesovo Array**	**51.36**	**355**	*e*P	**P**	**11 07 29.6**	**-0.4**
BVAR	**Borovoye Array**	**53.09**	**344**	P	**P**	**11 07 40.9**	**-1.9**
comp=Z,2.1nm,0.8s,baz=149,slow=6.9,SNR=8.3							
BVAR				LR	LR	11 30 34.8	
comp=Z,243nm,21.7s,baz=162,slow=36							
ABKAR	**Akbulak array**	**53.59**	**335**	*e*P	**P**	**11 07 46.0**	**-0.6**
GUMO	**Guam**	**53.85**	**75**	LR	LR	11 29 41.5	
comp=Z,51nm,21.6s,baz=266,slow=35							
KMBO	**Kilima Mbogo**	**54.32**	**267**	LR	LR	11 28 26.5	
comp=Z,170nm,18.9s,baz=95,slow=33							
USRK	**Ussuriysk Ar.**	**54.64**	**35**	LR	LR	11 32 35.4	
comp=Z,110nm,19.2s,baz=243,slow=38							
AKTO	**Aktyubinsk**	**55.30**	**335**	LR	LR	11 32 41.5	
comp=Z,69nm,19.5s,baz=154,slow=37							
GNI	**Garni**	**56.28**	**318**	LR	LR	11 34 01.5	
comp=Z,50nm,21.1s,baz=92,slow=38							
KBZ	**Khabaz**	**59.22**	**321**	P	**P**	**11 08 26.8**	**+0.1**
comp=Z,3.0nm,0.8s,baz=189,slow=8.6,SNR=6.8							
KBZ				LR	LR	11 37 42.5	
comp=Z,19nm,18.1s,baz=124,slow=40							
KVAR	**Kislovodsk Arr**	**59.46**	**321**	LR	LR	11 35 42.6	
comp=Z,46nm,21.3s,baz=149,slow=38							
ARU	**Arti**	**59.66**	**340**	LR	LR	11 35 38.7	
comp=Z,129nm,18.6s,baz=154,slow=38							
EIL	**Elat**	**59.80**	**303**	LR	LR	11 34 41.3	
comp=Z,134nm,19.1s,baz=58,slow=36							
ASAJ	**Asahikawa**	**61.05**	**40**	P	**P**	**11 08 37.8**	**-1.5**
comp=Z,1.6nm,0.7s,baz=270,slow=7.1,SNR=3.2							
ASAJ				LR	LR	11 37 38.2	
comp=Z,88nm,18.1s,baz=190,slow=38							
BR101	**Keskin Array S**	**63.88**	**313**	*e*P	**P**	**11 08 57.8**	**-0.7**
BRTR	**Keskin Array B**	**63.88**	**313**	P	**P**	**11 08 57.8**	**-0.7**
comp=Z,1.2nm,0.8s,baz=120,slow=7.3,SNR=7.9							
MATP	**Matopo**	**65.82**	**246**	P	**P**	**11 09 11.5**	**+0.1**
comp=Z,3.8nm,0.8s,baz=68,slow=9.6,SNR=5.7							
MATP				LR	LR	11 33 34.2	
comp=Z,121nm,21.6s,baz=94,slow=32							
NRIK	**Noril'sk**	**66.56**	**358**	LR	LR	11 44 21.9	
comp=Z,50nm,18.3s,baz=189,slow=41							
AKASG	**Malin Array Be**	**70.59**	**323**	P	**P**	**11 09 41.9**	**+1.3**
comp=Z,0.2nm,0.3s,baz=100,slow=4.0,SNR=5.3							
BOSA	**Boshof**	**70.61**	**239**	P	**P**	**11 09 41.2**	**-0.2**
comp=Z,4.3nm,1.1s,baz=71,slow=18,SNR=2.6							
BOSA				LR	LR	11 35 45.9	
comp=Z,60nm,20.8s,baz=40,slow=32							
MLR	**Muntele Rosu**	**71.05**	**317**	P	**P**	**11 09 44.2**	**+0.5**
comp=Z,1.1nm,0.7s,baz=243,slow=2.3,SNR=7.8							
MLR	**Muntele Rosu**	**71.05**	**317**	*e*P	**P**	**11 09 43.5**	**-0.2**
comp=Z,7.0nm,0.7s							
MLR				*e*P	**P**	**11 09 44.2**	**+0.5**
BUR04	**Bucovina Ar. S**	**72.13**	**319**	*e*P	**P**	**11 09 50.4**	**+0.2**
BUR08	**Bucovina Ar. S**	**72.14**	**319**	*e*P	**P**	**11 09 49.7**	**-0.6**
MA2	**Magadan**	**72.54**	**27**	LR	LR	11 45 07.4	
comp=Z,47nm,18.1s,baz=214,slow=39							
TIXI	**Tiksi**	**72.78**	**12**	*e*P	**P**	**11 09 52.3**	**-1.1**
comp=Z,8.4nm,0.8s							
MAW	**Mawson**	**72.98**	**191**	LR	LR	11 36 34.1	
comp=Z,83nm,19.1s,baz=58,slow=31							
FIA0	**FINESS Array S**	**76.04**	**333**	*e*P	**P**	**11 10 11.8**	**-0.7**
FINES	**FINESS Array B**	**76.04**	**333**	P	**P**	**11 10 11.8**	**-0.7**
comp=Z,3.0nm,1.0s,baz=82,slow=10.0,SNR=4.3							
FINES				LR	LR	11 45 42.1	
comp=Z,67nm,19.7s,baz=155,slow=37							
DZM	**Mont Dzumac**	**77.15**	**113**	LR	LR	11 46 29.3	
comp=Z,45nm,19.1s,baz=248,slow=37							
GEA0	**GERESS Array S**	**79.90**	**319**	*e*P	**P**	**11 10 34.5**	**+0.1**
GEC2	**GERESS Array S**	**79.90**	**319**	*e*P	**P**	**11 10 35.1**	**+0.6**
comp=Z,8.0nm,0.8s							
GERES	**GERESS Array B**	**79.90**	**319**	P	**P**	**11 10 34.7**	**+0.3**
comp=Z,4.4nm,0.8s,baz=100,slow=5.5,SNR=19							
CLL	**Collm**	**80.67**	**321**	*e*(PcP)	**PcP**	**11 10 46.0**	**+1.0**
comp=Z,4.0nm,0.6s							
KEST	**Kesra**	**82.01**	**306**	P	**P**	**11 10 46.7**	**+0.8**
comp=Z,3.0nm,0.7s,baz=77,slow=6.3,SNR=2.9							
NOA	**NORSAR Array B**	**82.90**	**331**	LR	LR	11 49 30.9	
comp=Z,35nm,21.3s,baz=100,slow=37							
SPITS	**Spitsbergen Ar**	**84.31**	**348**	LR	LR	11 52 15.0	
comp=Z,116nm,21.9s,baz=285,slow=38							
VNDA	**Vanda**	**88.46**	**168**	LR	LR	11 47 47.7	
comp=Z,72nm,19.5s,baz=296,slow=34							
TORD	**Torodi Ar. Bea**	**89.16**	**283**	P	**P**	**11 11 22.4**	**+0.7**
comp=Z,0.2nm,0.5s,baz=94,slow=6.3,SNR=2.7							
TORD				LR	LR	11 49 11.4	
comp=Z,97nm,19.2s,baz=130,slow=34							
TOA1	**Torodi Ar. Sit**	**89.16**	**283**	*e*P	**P**	**11 11 22.4**	**+0.7**
EKA	**Eskdalemuir Ar**	**90.42**	**325**	P	**P**	**11 11 27.5**	**+0.7**
comp=Z,0.3nm,0.4s,baz=98,slow=5.3,SNR=3.2							
KOWA	**Kowa**	**94.62**	**285**	LR	LR	11 53 56.0	
comp=Z,107nm,18.0s,baz=66,slow=35							
DBIC	**Dimbokro**	**95.95**	**277**	LR	LR	11 53 36.1	
comp=Z,52nm,18.9s,baz=98,slow=34							
NVAR	**Mina Array Bea**	**130.69**	**31**	PKP	**PKPdf**	**11 17 37.3**	**+0.1**
comp=Z,1.1nm,1.0s,baz=228,slow=9.5,SNR=2.4							
PDAR	**Pinedale Array**	**130.91**	**20**	PKP	**PKPdf**	**11 17 37.4**	**0.0**
comp=Z,0.4nm,0.6s,baz=336,slow=2.0,SNR=2.3							
TX31	**Lajitas Ar. Si**	**144.99**	**23**	*e*PKPdf	**PKPdf**	**11 18 03.0**	**-0.4**
TXAR	**Lajitas Array**	**144.99**	**23**	PKPbc	PKPbc	11 18 03.0	+0.3
comp=Z,1.0nm,0.7s,baz=128,slow=0.2,SNR=6.5							
JCT	**Junction City**	**145.28**	**17**	*e*PKPbc	**PKPbc**	**11 18 03.5**	**0.0**
HPIG		**146.20**	**28**	*e*PKPdf	**PKPab**	**11 18 07.4**	**0.0**

*BJI **14** 11:04:02.5, 22.20S×179.70E, h562km, mb5.0/41, mB5.0/25*

*ISCJB **14** 11:04:03.6±0.4, 22.27S±0.03×179.64E±0.02, h578km±5km, mb5.0/313, Error ellipse: s-maj=4.1km s-min=3.2km az=145.1*

*MOS **14** 11:04:03.5±0.9, 22.17S×179.66E, h576km, mb5.1/53, Error ellipse: s-maj=9.3km s-min=7.2km az=67.4*

*WEL **14** 11:04:04.0, 22.25S×179.63E, h584km*

*GCMT **14** 11:04:04.8±0.4, 21.99S×179.69E, h600km±2km, MW5.3/76, Moment Tensor Solution. s76,c101; Duration: 1§1 Moment tensor: Scale 1017Nm; Mrr-0.58±.03; Mθθ0.49±.05; Mφφ

RUGZ	Raukumara Rang	15.80	186	P	P	11 07 17.7	-2.7
RUGZ				S	S	11 09 54.1	-6.6
RUGZ	Raukumara Rang	15.80	186	P	S	11 09 54.3	-6.4
OPRZ	Ohinepanea	15.83	190	P	P	11 07 18.0	-2.4
PUZ	Puketiti	15.86	185	P	P	11 07 18.4	-2.4
PUZ				S	S	11 09 56.2	-5.2
PUZ	Puketiti	15.86	185	P	S	11 09 55.8	-5.6
KMRZ	Kaimai	15.93	191	P	P	11 07 22.7	+1.2
MARZ	Manawahe	15.95	189	P	P	11 07 21.7	+0.1
TWGZ	Tauwhareparae	15.98	185	P	P	11 07 19.8	-2.2
TWGZ				S	S	11 09 57.9	-5.6
TWGZ	Tauwhareparae	15.98	185	P	S	11 09 57.8	-5.8
KARZ	Kaharoa	16.05	190	P	P	11 07 22.8	+0.2
EDRZ	Edgecumbe	16.06	189	P	P	11 07 22.8	+0.1
OMRZ	Omania	16.11	190	P	P	11 07 24.2	+1.0
URZ	Urewera	16.16	188	P	P	11 07 20.7	-2.8
	28nm,0.3s,baz=269,slow=2.3,SNR=98						
URZ				S	S	11 10 01.2	-5.0
	5.4nm,0.3s,baz=233,slow=20,SNR=18						
URZ	Urewera	16.16	188	eP	P	11 07 20.7	-2.8
URZ				eP	P	11 07 21.2	-2.3
URZ				eS	S	11 10 01.2	-5.0
URZ	Urewera	16.16	188	P	S	11 07 20.8	-2.7
URZ				S	S	11 10 01.0	-5.2
URZ	Urewera	16.16	188	P	S	11 10 02.4	-3.8
MWZ	Matawai	16.18	187	P	P	11 07 21.7	-2.1
MWZ				S	S	11 10 02.0	-4.8
MWZ	Matawai	16.18	187	P	S	11 10 00.1	-6.7
UTU	Utuhina	16.21	190	P	P	11 07 26.4	+2.0
TARZ	Mount Tarawera	16.22	189	P	P	11 07 24.2	0.0
TKGZ	Te Karaka	16.26	186	P	P	11 07 22.6	-1.8
TKGZ				P	S	11 10 04.5	-3.3
TKGZ	Te Karaka	16.26	186	P	S	11 10 04.5	-3.3
HLRZ	Highlands Stat	16.26	190	P	P	11 07 25.2	+0.7
CNGZ	Carnagh Statio	16.27	185	P	P	11 07 23.5	-1.1
CNGZ				S	S	11 10 05.9	-2.2
CNGZ	Carnagh Statio	16.27	185	P	S	11 10 07.1	-1.0
RRRZ	Republican Roa	16.32	189	P	P	11 07 24.7	-0.3
RAGZ	Rawiri	16.36	187	P	P	11 07 23.7	-1.8
RAGZ	Rawiri	16.36	187	P	S	11 10 07.8	-1.8
GRRZ	Galatos Road	16.39	190	P	P	11 07 26.9	+1.1
HRRZ	Handcock Road	16.40	190	P	P	11 07 25.7	-0.1
MUGZ	Murupara	16.42	189	P	P	11 07 24.2	-1.7
MUGZ	Murupara	16.42	189	P	S	11 10 06.9	-3.6
TLZ	Tolley Road	16.48	192	P	P	11 07 28.0	+1.5
PRRZ	Plateau Road	16.49	190	P	P	11 07 25.6	-1.0
RTZ	Ruatahuna	16.52	188	P	P	11 07 25.5	-1.5
RTZ	Ruatahuna	16.52	188	P	S	11 10 08.8	-3.6
RIGZ	Rimuhau	16.53	186	P	P	11 07 24.8	-2.2
RIGZ	Rimuhau	16.53	186	P	S	11 10 07.7	-4.7
WPRZ	Whakapapatarin	16.55	190	P	P	11 07 27.3	+0.2
ALRZ	Allen Road	16.56	190	P	P	11 07 26.5	-0.7
SNGZ	Shannon Statio	16.65	187	P	P	11 07 27.1	-1.0
SNGZ	Shannon Statio	16.65	187	P	S	11 10 08.0	-6.3
WHTZ	Whakaora	16.73	191	P	P	11 07 29.5	+0.7
PRGZ	Paritu Road	16.73	185	P	P	11 07 29.6	+0.8
PRGZ	Paritu Road	16.73	185	P	S	11 10 14.7	-1.0
HIZ	Hauiti	16.79	194	eP	P	11 07 31.2	+1.9
	206nm,0.9s						
WATZ	Wairara	16.81	191	P	P	11 07 30.4	+0.9
RAHZ	Arahi	16.81	187	P	P	11 07 27.1	-2.4
RAHZ	Arahi	16.81	187	P	S	11 10 14.2	-2.7
RAHZ				P	S	11 10 15.4	-1.5
HATZ	Hinemaiaia	16.92	190	P	P	11 07 29.6	-0.9
WHHZ	Waihua	16.95	187	P	S	11 10 15.4	-3.7
RATZ	Rangitukua	16.95	191	P	P	11 07 31.0	+0.2
NMHZ	Naumai	17.02	188	P	P	11 07 29.7	-1.7
NMHZ	Naumai	17.02	188	P	S	11 10 21.0	+0.5
BKZ	Black Stump Fm	17.13	189	eP	P	11 07 30.7	-1.7
	78nm,0.7s						
BKZ				eS	S	11 10 19.9	-2.3
BKZ	Black Stump Fm	17.13	189	P	S	11 10 18.8	-3.4
TWVZ	Taurewa	17.21	192	P	P	11 07 33.2	-0.1
MCHZ	McNeill Hill	17.38	188	P	P	11 07 33.1	-1.5
MCHZ	McNeill Hill	17.38	188	P	S	11 10 22.7	-3.4
KWHZ	Kaweka Forest	17.39	189	P	S	11 10 24.5	-2.1
MOVZ	Moawhango	17.48	191	P	S	11 10 26.0	-1.9
BHHZ	Black Hill Sta	17.51	190	P	P	11 07 33.4	-2.5
BHHZ	Black Hill Sta	17.51	190	P	S	11 10 27.0	-1.4
KRHZ	Kereru	17.62	189	P	P	11 07 34.4	-2.4
KRHZ	Kereru	17.62	189	P	S	11 10 30.6	+0.5
PNHZ	Pukenui	17.91	189	P	S	11 10 31.8	-3.0
PXZ	Pawanui	17.93	187	P	S	11 10 30.0	-5.1
PXZ				P	S	11 10 33.7	-1.4
TSZ	Takapari Road	18.09	190	P	S	11 10 37.0	-0.7
PRHZ	Porangahau	18.20	188	P	S	11 10 38.0	-1.4
DVHZ	Dannevirke	18.29	189	P	S	11 10 40.7	-0.3
POWZ	Post Office Ro	18.44	190	P	S	11 10 42.0	-1.3
BFZ	Birch Farm	18.66	189	eP	P	11 07 45.4	-0.9
	139nm,0.7s						
BFZ				eS	S	11 10 49.9	+3.1
MRZ	Mangatainoka R	18.73	190	P	S	11 10 45.6	-2.4
DUWZ	D'Urville Isla	19.19	194	P	S	11 10 57.0	+1.6
CAW	Cannon Point	19.26	191	P	S	11 10 54.7	-1.7
PAWZ	Paruwai Farm	19.46	190	P	S	11 10 51.3	-8.5
TCW	Tory Channel	19.51	193	P	S	11 11 02.4	+2.0
SNZO	South Karori	19.52	192	eP	P	11 07 52.6	-1.4
	144nm,0.7s						
QRZ	Quartz Range	19.55	197	P	P	11 07 54.6	+0.2
NNZ	Nelson	19.71	195	P	P	11 07 55.0	-0.8
NNZ	Nelson	19.71	195	P	S	11 11 00.8	-2.8
TUWZ	Tuamarina	19.79	193	P	S	11 11 01.7	-3.1
TUWZ				P	S	11 11 01.0	-3.8
BSWZ	Blackbirch Sta	20.07	193	P	P	11 07 58.7	-0.4
THZ	Tophouse	20.34	195	eP	P	11 08 00.3	-1.3
	74nm,0.7s						
THZ				eS	S	11 11 10.3	-3.4
THZ	Tophouse	20.34	195	P	P	11 07 52.5	-9.0
THZ	Tophouse	20.34	195	P	S	11 11 10.6	-3.1
THZ				P	S	11 11 10.5	-3.3
DSZ	Denniston Nort	20.61	197	P	P	11 07 57.5	-6.4
KHZ	Kahutara	20.82	193	eP	P	11 08 04.1	-1.7
	91nm,0.8s						
KHZ	Kahutara	20.82	193	P	P	11 08 04.5	-1.3
KNTN	Kanton	21.00	24	eP	P	11 08 07.7	-0.1
	164nm,0.8s						
LTZ	Lake Taylor	21.45	195	eP	P	11 08 10.1	-1.5
	62nm,0.6s						
LTZ	Lake Taylor	21.45	195	P	P	11 08 10.2	-1.5
INZ	Inchbonnie	21.61	197	P	P	11 08 12.1	-0.9
OXZ	Oxford	22.02	195	eP	P	11 08 15.1	-1.5
	110nm,0.9s						
OXZ	Oxford	22.02	195	P	P	11 08 15.5	-1.2
WVZ	Waitaha Valley	22.13	198	P	P	11 08 17.1	-0.5
MQZ	McQueen's Vall	22.24	194	eP	P	11 08 17.1	-1.4
	178nm,1.4s						
MQZ	McQueen's Vall	22.24	194	P	P	11 08 17.3	-1.2
RPZ	Rata Peaks	22.64	197	P	P	11 08 20.9	-1.2
	19nm,0.4s,baz=337,slow=1.3,SNR=18						
RPZ	Rata Peaks	22.64	197	eP	P	11 08 20.9	-1.2
RPZ				eP	P	11 08 21.6	-0.5
RPZ	Rata Peaks	22.64	197	P	P	11 08 21.8	-0.3
FOZ	Fox Glacier	22.82	199	eP	P	11 08 23.2	-0.5
	102nm,0.9s						
LBZ	Lake Benmore	23.50	198	eP	P	11 08 29.6	-0.1
	56nm,1.1s						
WKZ	Wanaka	24.24	199	eP	P	11 08 35.4	-0.9
	210nm,1.5s						
TARA	Tarawa	24.38	343	eP	P	11 08 38.3	+0.3
	312nm,0.8s						
MLZ	Mavora Lakes	25.00	200	eP	P	11 08 43.4	+0.4
	115nm,0.8s						
DCZ	Deep Cove	25.40	201	eP	P	11 08 47.4	+0.9
	55nm,1.0s						
WHZ	Wether Hill Ro	25.53	200	eP	P	11 08 47.4	-0.2
	313nm,1.2s						
EIDS	Eidsvold	26.47	257	P	P	11 08 56.8	+0.5
	baz=26,SNR=19						
EIDS	Eidsvold	26.47	257	eP	P	11 08 56.3	0.0
	35nm,0.6s						
ARMA	Armidale	26.52	246	P	P	11 08 58.2	+1.5
	baz=27						
ARMA	Armidale	26.52	246	eP	P	11 08 57.9	+1.2
	51nm,0.6s						
MGCD	Mangrove Creek	27.60	240	P	P	11 09 07.7	+1.6
	baz=28,SNR=17						
RMQ	Roma	28.59	255	P	P	11 09 16.3	+1.5
	baz=29,SNR=35						
CNB	Canberra Magne	29.60	237	P	P	11 09 24.8	+1.3
	baz=30,SNR=13						
CAN	Canberra	29.88	237	eP	P	11 09 24.4	-1.4
	40nm,0.9s						
CAN	Canberra	29.88	237	eP	P	11 09 24.5	-1.4
CAN				pmax	pmax		
	comp=Z,40nm,0.9s						
YNG	Young	30.07	240	P	P	11 09 28.5	+1.1
	baz=30,SNR=13						
CTA	Charters Tower	31.36	268	P	P	11 09 39.0	+0.4
	comp=Z,79nm,0.5s,baz=96,slow=12,SNR=220						
CTA				PcP	PcP	11 12 14.9	+0.5
	comp=Z,8.8nm,0.6s,baz=95,slow=4.0,SNR=6.1						
CTAO	Charters Tower	31.36	268	eP	P	11 09 39.0	+0.4
	comp=Z,90nm,0.6s						
CTAO				ePcP	PcP	11 12 14.9	+0.5
CTAO	Charters Tower	31.36	268	eP	P	11 09 39.0	+0.4
CTAO				e		11 12 14.9	
CTAO				pmax	pmax		
	comp=Z,90nm,0.6s						
VAH	Vaihoa	31.54	83	eP	P	11 09 41.7	+1.5
	comp=Z,77nm,1.0s						
CMSA	Cobar Meteorol	31.73	246	P	P	11 09 42.3	+0.7
	baz=32,SNR=44						
QLP	Quilpie	32.64	255	P	P	11 09 49.8	+0.3
	baz=33,SNR=58						
XMAS	Kiritimati	32.77	45	eP	P	11 09 51.3	+0.7
	comp=Z,180nm,0.8s						
TOO	Toolangi	33.26	235	P	P	11 09 55.3	+0.8
	baz=33,SNR=30						
TOO	Toolangi	33.26	235	P	P	11 09 55.4	+0.9
TOO				pmax	pmax		
	comp=Z,87nm,0.9s						
MTSU	Mount Surprise	33.54	270	P	P	11 09 57.3	+0.3
	baz=34,SNR=75						
PMG	Port Moresby	33.83	287	P	P	11 09 59.6	+0.1
	comp=Z,32nm,0.7s,baz=91,slow=6.5,SNR=15						
PMG	Port Moresby	33.83	287	eP	P	11 09 59.7	+0.1
	comp=Z,40nm,0.8s						
PMG	Port Moresby	33.83	287	eP	P	11 09 59.7	+0.1
PMG				pmax	pmax		
	comp=Z,40nm,0.8s						
STKA	Stephens Creek	35.24	246	P	P	11 10 11.7	+0.7
	comp=Z,45nm,0.6s,baz=92,slow=10,SNR=87						
STKA	Stephens Creek	35.24	246	P	P	11 10 11.8	+0.7
	baz=35,SNR=75						
STKA	Stephens Creek	35.24	246	eP	P	11 10 11.8	+0.7
	comp=Z,11nm,0.8s						
STKA	Stephens Creek	35.24	246	eP	P	11 10 11.8	+0.7
STKA				pmax	pmax		
	comp=Z,11nm,0.8s						
COEN	Coen	35.73	277	P	P	11 10 15.8	+0.4
	baz=36,SNR=37						
COEN	Coen	35.73	277	eP	P	11 10 15.7	+0.4
	comp=Z,15nm,0.6s						
PATS	Pohnpei	35.76	321	P	P	11 10 17.0	+1.5
	baz=36						
ARPS	Mount Arapiles	35.86	238	P	P	11 10 16.5	+0.4
	baz=36,SNR=7.7						
QIS	Mount Isa	37.42	265	P	P	11 10 28.6	-0.6
	baz=38,SNR=12						
HTT	Hallett	37.65	244	P	P	11 10 31.1	+0.2
	baz=38,SNR=20						
BBOO	Buckleboo	39.99	245	P	P	11 10 49.4	-0.2
	baz=40,SNR=27						
BBOO	Buckleboo	39.99	245	eP	P	11 10 49.5	-0.2
	comp=Z,52nm,0.8s						
AS01	Alice Springs	42.14	259	eP	P	11 11 06.4	-0.5
AS31	Alice Springs	42.18	259	eP	P	11 11 06.6	-0.6
	comp=Z,25nm,0.6s						
AS31				ePcP	PcP	11 12 47.8	-0.1
AS31				eS	S	11 16 43.1	-3.4
ASAR	Alice Springs	42.18	259	P	P	11 11 06.6	-0.6
	comp=Z,87nm,0.7s,baz=98,slow=8.1,SNR=892						
ASAR				PcP	PcP	11 12 47.8	-0.1
	comp=Z,12nm,0.7s,baz=104,slow=3.9,SNR=11						
ASAR				ScP	ScP	11 15 45.6	+1.7
	comp=Z,3.7nm,1.1s,baz=119,slow=4.9,SNR=4.5						
ASAR				S	S	11 16 43.1	-3.4
	comp=Z,4.4nm,0.8s,baz=96,slow=15,SNR=10						
ASAR				PKiKP	PKiKP	11 19 49.6	-1.7
	comp=Z,0.4nm,0.6s,baz=96,slow=1.6,SNR=5.7						
ASAR				ScS	ScS	11 20 04.8	+0.2
	comp=Z,1.4nm,1.1s,baz=106,slow=5.9,SNR=4.5						
WRAB	Tennant Creek	42.38	264	eP	P	11 11 07.8	-1.1
	comp=Z,42nm,0.8s						
WRAB	Tennant Creek	42.38	264	ceP	P	11 11 08.0	-0.8
WRAB				pmax	pmax		
	comp=Z,42nm,0.9s						
WR1	Warramunga Arr	42.39	264	eP	P	11 11 07.8	-1.1
	comp=Z,61nm,0.6s						
WR1				ePcP	PcP	11 12 48.8	+0.2
WR1				eS	S	11 16 44.1	-5.5
WRA	Warramunga Arr	42.39	264	P	P	11 11 07.8	-1.1
	comp=Z,23nm,0.4s,baz=98,slow=7.6,SNR=287						
WRA				PcP	PcP	11 12 48.8	+0.2
	comp=Z,5.4nm,0.7s,baz=99,slow=3.7,SNR=7.5						
WRA				ScP	ScP	11 15 46.2	+1.4
	comp=Z,1.3nm,1.0s,baz=96,slow=4.6,SNR=4.7						
WRA				S	S	11 16 44.1	-5.5
	comp=Z,3.0nm,0.9s,baz=97,slow=14,SNR=6.4						
WRA				PKiKP	PKiKP	11 19 50.1	-1.5
	comp=Z,0.5nm,0.5s,baz=81,slow=0.5,SNR=5.8						
JAY	Jayapura	42.73	292	P	P	11 11 11.3	-0.3
GENI	Genyem	43.16	291	P	P	11 11 14.6	-0.3
KDU	Kakadu	46.01	274	P	P	11 11 35.9	-0.8
	baz=46,SNR=88						
FORT	Forrest	46.77	248	P	P	11 11 41.8	-0.5
	baz=47,SNR=22						
FORT	Forrest	46.77	248	eP	P	11 11 41.6	-0.7
	comp=Z,136nm,0.7s						
WRKA	Warakurna	47.07	256	P	P	11 11 44.3	-0.4
	baz=47,SNR=34						
MTN	Manton Dam	47.20	273	P	P	11 11 44.7	-1.0
	baz=47,SNR=20						
MTN	Manton Dam	47.20	273	eP	P	11 11 44.5	-1.2
	comp=Z,47nm,0.6s						
MTN				eS	S	11 17 52.8	-4.3
KHLU	Kahalu'u	47.85	32	eP	P	11 11 51.4	+0.8
	comp=Z,140nm,0.8s						
MLH	Mauna Loa	48.01	32	eP	P	11 11 53.2	+1.3
	comp=Z,205nm,1.1s						
MLH	Mauna Loa	48.01	32	eP	P	11 11 53.2	+1.3
MLH				pmax	pmax		
	comp=Z,205nm,1.1s						
HMH	Humu'ula Sheep	48.06	32	eP	P	11 11 51.2	-1.1
	comp=Z,338nm,0.9s						
POHA	Pohakuloa	48.17	32	eP	P	11 11 54.6	+1.5
	comp=Z,88nm,0.8s						
KEKH	Kekaha	48.25	26	eP	P	11 11 54.5	+1.2
	comp=Z,164nm,0.9s						
HPAH	Hawaii Prepara	48.32	31	eP	P	11 11 54.4	+0.4
	comp=Z,291nm,0.9s						
KMPI	Kaimana, Papua	48.34	286	P	P	11 11 53.5	-0.7
HON	Honolulu	48.38	28	eP	P	11 11 55.6	+1.3
	comp=Z,123nm,0.8s						
HON	Honolulu	48.38	28	eP	P	11 11 55.6	+1.3
HON				pmax	pmax		
	comp=Z,123nm,0.8s						
KIP	Kipapa	48.46	28	eP	P	11 11 54.0	-0.9
	comp=Z,131nm,1.1s						
KIP	Kipapa	48.46	28	eP	P	11 11 54.0	-0.9
KIP				pmax	pmax		
	comp=Z,131nm,1.1s						
KNRA	Kununurra	48.56	268	P	P	11 11 55.5	-0.4
	baz=49,SNR=38						
OPA	Opana	48.70	28	eP	P	11 11 57.2	+0.6
	comp=Z,100nm,1.0s						
OPA	Opana	48.70	28	eP	P	11 11 57.3	+0.6
OPA				pmax	pmax		
	comp=Z,100nm,1.0s						
KHLH	Kahului Airpor	48.72	30	eP	P	11 11 58.8	+2.0
	comp=Z,209nm,1.1s						
GUMO	Guam	49.41	313	P	P	11 12 02.1	+0.1
	comp=Z,23nm,0.4s,baz=152,slow=17,SNR=5.4						
FITZ	Fitzroy Crossi	50.82	264	P	P	11 12 12.2	-0.2
	comp=Z,26nm,0.5s,baz=111,slow=4.4,SNR=126						
FITZ				S	S	11 18 44.0	-2.4
	comp=Z,3.0nm,1.0s,baz=279,slow=19,SNR=6.4						
FITZ	Fitzroy Crossi	50.82	264	P	P	11 12 12.1	-0.2
	baz=51,SNR=59						
KMBL	Kambalda	52.02	247	P	P	11 12 20.2	-0.7
	baz=52,SNR=5.3						
AAI	Ambon	53.28	283	P	P	11 12 28.8	-1.2
	comp=Z,76nm,1.3s						
SOEI	Soe	54.57	274	P	P	11 12 40.4	+1.2
	comp=Z,162nm,1.1s						
SOEI	Soe	54.57	274	eP	P	11 12 40.0	+0.8
	comp=Z,122nm,0.8s						
BATI	Baumata	54.97	273	P	P	11 12 43.1	+1.2
	comp=Z,74nm,0.6s,baz=175,slow=3.7,SNR=15						
BATI	Baumata	54.97	273	P	P	11 12 43.1	+1.2
MEEK	Meekatharra	55.46	252	P	P	11 12 44.1	-1.1
	baz=56,SNR=22						
KLBR	Kellerberrin	55.51	246	P	P	11 12 44.8	-0.6
	baz=56,SNR=34						
MBWA	Marble Bar	55.53	259	eP	P	11 12 45.0	-0.7
	comp=Z,83nm,0.6s						
NWAO	Narrogin (SRO)	55.80	245	P	P	11 12 47.0	-0.4
	comp=Z,18nm,0.6s,baz=2.6,slow=9.0,SNR=11						
NWAO	Narrogin (SRO)	55.80	245	P	P	11 12 47.2	-0.2
	baz=56,SNR=8.8						
SANI	Sanana	55.97	283	P	P	11 12 47.9	-0.9
TNTI	Ternate	55.98	287	eP	P	11 12 48.7	-0.3
	comp=Z,41nm,1.0s						
VNDA	Vanda	56.03	185	P	P	11 12 50.1	+2.0
	comp=Z,8.7nm,0.5s,baz=18,slow=8.0,SNR=30						
VNDA	Vanda	56.03	185	eP	P	11 12 50.2	+2.0
	comp=Z,154nm,2.0s						
VNDA	Vanda	56.03	185	eP	P	11 12 50.2	+2.0
VNDA				pmax	pmax		
	comp=Z,154nm,2.0s						
SBA	Scott Base	56.04	183	eP	P	11 12 51.1	+2.9
	comp=Z,103nm,1.0s						
SBA	Scott Base	56.04	183	eP	P	11 12 51.1	+2.9
SBA				pmax	pmax		
	comp=Z,103nm,1.0s						
BLDU	Balliduu	56.52	247	P	P	11 12 51.7	-0.7
	baz=56,SNR=54						
MUN	Mundaring	56.77	246	P	P	11 12 53.9	-0.2
	baz=57,SNR=13						
EDFI	Ende, Flores	57.30	274	P	P	11 12 57.6	-0.5
	comp=Z,72nm,1.2s						
MORW	Morawa	57.32	249	P	P	11 12 57.3	-0.6
	baz=57,SNR=9.1						
WBSI	Waikabubak, Su	59.12	272	P	P	11 13 13.3	+3.1
BKSI	Bulukumba	60.00	277	P	P	11 13 15.1	-0.9
GIRL	Giralia	60.16	256	P	P	11 13 17.6	+0.6
	baz=60,SNR=5.5						
APSI	Ampana	60.37	282	P	P	11 13 18.7	+0.2
MRSI	Marisa	60.70	284	P	P	11 13 19.3	-1.4
SPSI	Sidrap Palu	60.85	278	P	P	11 13 20.0	-1.6
PLAI	Plampang	60.89	272	P	P	11 13 21.5	-0.4
	comp=Z,112nm,0.8s						
CASY	Casey	61.55	205	eP	P	11 13 25.4	+0.1
	comp=Z,25nm,1.0s						
TWSI	Taliwang, Sumb	61.75	272	P	P	11 13 26.3	-1.2
MPSI	Mapaga	62.48	283	P	P	11 13 31.4	-0.9
	comp=Z,37nm,0.8s,comp=Z,321nm						
QSPA	South Pole Qui	67.86	180	P	P	11 14 06.5	+1.3
	comp=Z,90nm,1.0s,baz=42,slow=1.6,SNR=113						
QSPA	South Pole Qui	67.86	180	eP	P	11 14 06.5	+1.3
QSPA				eP	P	11 14 06.7	+1.5
MIR	Mirnyy	68.58	205	⇑eP	P	11 14 10.5	+1.2
MIR				pmax	pmax		
	comp=Z,54nm,1.5s						
JOW	Kunigami	69.76	312	P	P	11 14 17.6	+0.5
	comp=Z,16nm,0.4s,baz=320,slow=7.9,SNR=7.9						
SBUM	Sibu	70.33	281	eP	P	11 14 20.4	-0.4
	comp=Z,10nm,1.1s						
MJAR	Matsushiro Arr	70.43	325	P	P	11 14 20.6	-0.3
	comp=Z,16nm,0.9s,baz=166,slow=5.9,SNR=31						
MAJO	Matsushiro	70.43	325	eP	P	11 14 21.3	+0.4
	comp=Z,24nm,0.9s						
MAJO	Matsushiro	70.43	325	d eP	P	11 14 20.8	-0.1
MAJO				pmax	pmax		
	comp=Z,23nm,1.0s						
MAT	Matsushiro	70.43	325	P	P	11 14 20.8	-0.1
MAT				S	S	11 22 50.2	+1.8
MJB9	Matsu-Tunnel	70.44	325	eP	P	11 14 18.8	-2.1
	comp=Z,25nm,1.0s						
LEM	Lembang	71.01	270	P	P	11 14 24.8	-0.1
	comp=Z,110nm,0.7s,baz=56,slow=5.0,SNR=22						
KSM	Kuching	71.67	279	eP	P	11 14 28.5	-0.2
JNU	Nakatsue	72.17	318	P	P	11 14 31.6	+0.4
	comp=Z,29nm,1.1s,baz=105,slow=8.2,SNR=4.5						
ERM	Erimo	72.36	332	eP	P	11 14 31.1	-0.7
	comp=Z,28nm,1.1s						
ERM	Erimo	72.36	332	ceP	P	11 14 33.6	+1.7
ERM				pmax	pmax		
	comp=Z,22nm,1.1s						
TWG	Pinlang	72.64	304	eP	P	11 14 31.7	-2.3
	comp=Z,109nm,0.7s						
NACB	Ninganchiao	73.00	306	eP	P	11 14 34.2	-1.8
	comp=Z,117nm,1.2s						
SSLB	Suanglung	73.27	305	eP	P	11 14 35.6	-2.0
	comp=Z,44nm,0.8s						
ASAJ	Asahikawa	74.31	333	P	P	11 14 45.0	+2.0
	comp=Z,41nm,1.0s,baz=210,slow=7.0,SNR=43						
ASAJ	Asahikawa	74.31	333	eP	P	11 14 44.9	+2.0
	comp=Z,65nm,1.0s						
TJN	Taejon	76.50	319	ceP	P	11 14 56.2	+0.9
YSS	Yuzh-Sakhalins	76.56	335	eP	P	11 14 56.8	+1.4
	comp=Z,58nm,1.0s						
YSS	Yuzh-Sakhalins	76.56	335	‖eP	P	11 14 56.7	+1.4
YSS				e		11 15 01.0	
YSS				e*PP	pP	11 16 55.0	-0.9
YSS				e*SP	sP	11 17 51.2	-3.7
YSS				eS	S	11 23 56.5	+1.6
YSS				eSS	SS	11 29 04.0	-3.5
YSS				pmax	pmax		
	comp=Z,50nm,1.3s						
YSS				pmax	pmax		
	comp=N,30μm,1.4s						
YSS				pmax	pmax		
	comp=E,20μm,1.2s						
YSS				pmax	pmax		
	comp=Z,200nm,2.9s						
YSS				MLR	MLR		
	comp=Z,100nm,14.0s						
KSRS	Korea Array	76.87	320	P	P	11 14 58.1	+0.9
	comp=Z,8.3nm,0.9s,baz=137,slow=6.0,SNR=22						
KS15	Wonju Array Si	76.88

baz=234
MDJ Mudanjiang 80.79 326 P P 11 15 16.4 -1.5
MDJ pmax pmax
comp=Z,46nm,1.1s
MDJ pmax pmax
comp=Z,120nm,6.1s
MDJ Mudanjiang 80.79 326 *eP* **P 11 15 19.5 +1.6**
comp=Z,52nm,1.1s
PAGB Antelope Grade 80.83 45 *eP* **P 11 15 20.8 +2.4**
comp=Z,38nm,1.3s
FMP Fort Macarthur 81.00 48 P **P 11 15 21.0 +1.7**
baz=236
OSI Osito Audit: C 81.21 47 P **P 11 15 22.2 +1.8**
baz=235
OSI Osito Audit: C 81.21 47 *eP* **P 11 15 18.5 -1.9**
comp=Z,43nm,1.3s
OSI *eS* **S 11 24 42.9 -0.9**
DECC Green Verdugo 81.28 48 P **P 11 15 21.9 +1.2**
baz=236
PASC Pasadena Art C 81.33 48 *eP* **P 11 15 20.1 -0.9**
comp=Z,22nm,0.9s
KMRM Mail Ridge 81.36 40 *eP* **P 11 15 23.2 +2.2**
comp=Z,156nm,1.0s
109C Camp Elliot, M 81.37 49 P **P 11 15 22.5 +1.4**
baz=237
CPE Camp Elliot 81.37 49 *eP* **P 11 15 23.1 +1.9**
comp=Z,42nm,1.1s
ARVC Arvin 81.43 47 P **P 11 15 23.0 +1.5**
baz=235,SNR=7.3
MWC Mount Wilson 81.45 48 *eP* **P 11 15 21.5 -0.3**
comp=Z,25nm,0.9s
MWC Mount Wilson 81.45 48 *eP* **P 11 15 21.5 -0.3**
MWC pmax pmax
comp=Z,25nm,0.9s
BAR Barrett 81.56 50 *eP* **P 11 15 22.4 +0.1**
comp=Z,16nm,1.1s
VES Vestal, Richgr 81.67 46 P **P 11 15 23.8 +1.2**
baz=235,SNR=12
MURC Murrieta 81.70 49 P **P 11 15 24.3 +1.4**
baz=236,SNR=7.9
BFSC Mount Baldy Ra 81.73 48 P **P 11 15 24.4 +1.2**
baz=236
KHMM Horse Mountain 81.75 40 *eP* **P 11 15 25.2 +2.0**
comp=Z,68nm,1.0s
MONP2 Monument Peak 81.86 50 P **P 11 15 25.7 +1.8**
baz=237,SNR=15
EDW2 Edwards Air Fo 81.86 47 P **P 11 15 25.2 +1.5**
baz=236,SNR=14
WHN Wuhan 81.86 308 ⇑P **P 11 15 24.9 +1.2**
IKP In-Ko-Pah, Jac 81.94 50 P **P 11 15 26.1 +1.8**
baz=237,SNR=8.9
ISA Isabella, Lake 81.98 46 P **P 11 15 26.0 +1.7**
baz=236,SNR=35
ISA Isabella, Lake 81.98 46 *eP* **P 11 15 26.1 +1.8**
comp=Z,55nm,1.0s
ISA Isabella, Lake 81.98 46 *eP* **P 11 15 26.1 +1.8**
ISA pmax pmax
comp=Z,55nm,1.0s
KULM Kulim 82.03 279 *eP* **P 11 15 25.0 +0.1**
comp=Z,20nm,0.8s
CMB Columbia Colle 82.09 44 *eP* **P 11 15 26.3 +1.5**
comp=Z,39nm,0.9s
CMB Columbia Colle 82.09 44 *eP* **P 11 15 26.3 +1.5**
CMB pmax pmax
comp=Z,39nm,0.9s
GRNR Gornyy 82.13 334 *eP* **P 11 15 27.0 +2.4**
GRNR pmax pmax
comp=Z,78nm,1.0s
PFO Pinyon Flats O 82.22 49 P **P 11 15 27.1 +1.5**
baz=237,SNR=6.4
PFO Pinyon Flats O 82.22 49 *eP* **P 11 15 27.1 +1.5**
comp=Z,44nm,1.5s
PFO Pinyon Flats O 82.22 49 *eP* **P 11 15 27.1 +1.5**
PFO pmax pmax
comp=Z,44nm,1.5s
BBRC Big Bear Solar 82.25 48 P **P 11 15 27.3 +1.4**
baz=237
AFDM Forest Hills D 82.26 43 *eP* **P 11 15 27.4 +1.8**
comp=Z,44nm,1.0s
WDC Whiskeytown Da 82.28 40 *eP* **P 11 15 27.6 +2.0**
comp=Z,65nm,1.1s
WDC Whiskeytown Da 82.28 40 *eP* **P 11 15 27.6 +2.0**
WDC pmax pmax
comp=Z,65nm,1.1s
OHAK Old Harbor 82.29 14 *eP* **P 11 15 26.0 +0.7**
comp=Z,50nm,1.0s
ORV Oroville 82.30 42 *eP* **P 11 15 27.4 +1.7**
comp=Z,49nm,1.1s
ORV Oroville 82.30 42 *eP* **P 11 15 27.4 +1.7**
ORV pmax pmax
comp=Z,49nm,1.1s
SWSC Sam W. Stewart 82.32 50 P **P 11 15 27.7 +1.7**
baz=237,SNR=10
NKL Nikolayevsk 82.38 337 *eP* **P 11 15 26.2 +0.5**
NKL pmax pmax
comp=N,13nm,1.1s
NKL pmax pmax
comp=Z,55nm,1.1s
LRMC Laurel Mtn Rad 82.41 47 P **P 11 15 28.1 +1.5**
baz=236,SNR=12
N02D Trinity Center 82.43 40 P **P 11 15 28.7 +2.3**
baz=232,SNR=11
CN2 Changchun 82.45 324 *eP* **P 11 15 26.9 +0.5**
CN2 *eS* **S 11 24 58.4 +2.8**
CN2 pmax pmax
comp=Z,70nm,1.2s
CN2 pmax pmax
comp=Z,200nm,3.0s
RRX Edison Barstow 82.54 48 P **P 11 15 28.6 +1.5**
baz=236
O03D Paynes Creek 82.56 41 P **P 11 15 28.5 +1.3**
baz=233,SNR=14
M02C Callahan 82.60 40 P **P 11 15 29.8 +2.5**
baz=232,SNR=15
L02D Cave Junction, 82.63 39 P **P 11 15 29.2 +1.9**
baz=231
PSI Prapat 82.65 276 P **P 11 15 26.9 -1.3**
comp=Z,15nm,0.9s,baz=180,slow=6.4,SNR=7.6
PSI Prapat 82.65 276 *eP* **P 11 15 27.1 -1.1**
comp=Z,24nm,0.9s
PSI Prapat 82.65 276 *eP* **P 11 15 27.1 -1.1**
PSI pmax pmax
comp=Z,24nm,0.9s
CWC Cottonwood Cre 82.68 46 P **P 11 15 29.4 +1.4**
baz=236
OMMB Old Mammoth Mi 82.74 45 *eP* **P 11 15 30.3 +1.9**
comp=Z,34nm,1.3s
BELC Belle Mtn. Jos 82.75 49 P **P 11 15 30.1 +1.7**
baz=237,SNR=17
RUBR Rubicon Trail 82.83 43 *eP* **P 11 15 30.5 +1.7**
comp=Z,62nm,1.2s
MLAC Mammoth, Mammo 82.86 45 P **P 11 15 30.6 +1.8**
baz=235,SNR=6.4
MPMC Manual Prospec 82.86 47 P **P 11 15 30.2 +1.4**
baz=236,SNR=27
YBH Yreka Blue Hor 82.89 39 P **P 11 15 30.6 +1.8**
comp=Z,22nm,0.9s,baz=218,slow=2.6,SNR=24
YBH Yreka Blue Hor 82.89 39 *eP* **P 11 15 30.8 +2.0**
comp=Z,52nm,1.2s
YBH Yreka Blue Hor 82.89 39 *eP* **P 11 15 30.8 +2.0**
YBH pmax pmax
comp=Z,52nm,1.2s
GSC Goldstone, Bar 82.90 47 P **P 11 15 30.4 +1.4**
baz=237,SNR=21
GSC Goldstone, Bar 82.90 47 *eP* **P 11 15 30.4 +1.4**
comp=Z,38nm,1.1s
GSC Goldstone, Bar 82.90 47 *eP* **P 11 15 30.4 +1.4**
GSC pmax pmax
comp=Z,39nm,1.1s
DAC Darwin (Calif) 82.91 46 *eP* **P 11 15 30.5 +1.3**
comp=Z,16nm,1.0s
DAC Darwin (Calif) 82.91 46 *eP* **P 11 15 30.5 +1.3**
DAC pmax pmax
comp=Z,16nm,1.0s
TIN Tinemaha, Big 82.92 45 P **P 11 15 30.7 +1.6**
baz=236
BC3 Big Chuckawall 82.95 49 P **P 11 15 31.1 +1.8**
baz=238,SNR=14
KDAK Kodiak Island 82.96 14 P **P 11 15 29.0 +0.4**
comp=Z,17nm,0.9s,baz=149,slow=3.2,SNR=12
KDAK Kodiak Island 82.96 14 *i P* **P 11 15 29.1 +0.5**
TIA Tai'an 82.97 314 P **P 11 15 30.1 +0.9**
TIA pmax pmax
comp=Z,26nm,1.1s
HEC Hector,Ludlow 82.97 48 P **P 11 15 30.7 +1.4**
baz=237,SNR=16
WAKR Walker 82.97 44 *eP* **P 11 15 31.1 +1.7**
comp=Z,76nm,1.2s
KLR Kul'dur 83.00 331 PKKPbc PKKPbc 11 33 45.7 -2.8
comp=Z,0.2nm,0.8s,baz=356,slow=4.6,SNR=5.9
KLR Kul'dur 83.00 331 *d iP* **P 11 15 30.1 +1.1**
GLA Glamis 83.07 50 P **P 11 15 31.9 +2.1**
baz=238,SNR=14
GLA Glamis 83.07 50 *eP* **P 11 15 32.1 +2.3**
comp=Z,69nm,1.1s
GLA Glamis 83.07 50 *eP* **P 11 15 32.1 +2.3**
GLA pmax pmax
comp=Z,69nm,1.1s
BEKR Beckworth 83.19 42 *eP* **P 11 15 31.9 +1.5**
comp=Z,36nm,1.2s
PNTR Pine Nut 83.21 43 *eP* **P 11 15 32.3 +1.7**
comp=Z,65nm,1.0s
HUMO Hull Mountain 83.29 39 *eP* **P 11 15 33.0 +2.3**
comp=Z,67nm,1.1s
VCNR Virginia City 83.30 43 *eP* **P 11 15 32.6 +1.6**
comp=Z,33nm,1.2s
GSI Gunungsitoli 83.32 274 *eP* **P 11 15 31.3 -0.2**
comp=Z,37nm,0.6s
YERR Yerington 83.38 43 *eP* **P 11 15 32.9 +1.5**
comp=Z,58nm,1.2s
GMRC Granite Mounta 83.41 48 P **P 11 15 33.0 +1.4**
baz=237,SNR=16
IRM Iron Mountain 83.43 49 P **P 11 15 33.4 +1.8**
baz=238,SNR=34
M04C Macdoel 83.44 40 P **P 11 15 33.3 +1.8**
baz=233,SNR=10
GRAC Grapevine Rang 83.46 46 P **P 11 15 33.3 +1.6**
baz=236,SNR=12
FURC Furnace Creek, 83.51 46 P **P 11 15 33.3 +1.5**
baz=236,SNR=8.8
TUQ Turquoise Moun 83.58 48 P **P 11 15 33.9 +1.5**
baz=237,SNR=10.0
SHOC Shoshone, Teco 83.59 47 P **P 11 15 33.5 +1.2**
baz=237,SNR=14
RYN Ryan 83.63 44 *eP* **P 11 15 34.1 +1.5**
comp=Z,32nm,1.3s
Y12C Blythe 83.66 50 P **P 11 15 34.4 +1.8**
baz=238,SNR=12
Y12C Blythe 83.66 50 *eP* **P 11 15 34.6 +1.9**
comp=Z,47nm,1.3s
NV01 Mina Array Sit 83.66 44 *eP* **P 11 15 33.3 +0.4**
NVAR Mina Array Bea 83.66 44 P **P 11 15 34.1 +1.3**
comp=Z,20nm,0.9s,baz=223,slow=7.6,SNR=74
113A Mohawk Valley, 83.68 51 *eP* **P 11 15 35.1 +2.3**
comp=Z,34nm,1.1s
PAHR Pah Rah Range 83.70 43 *eP* **P 11 15 34.4 +1.5**
comp=Z,30nm,1.1s
I03D Drain, OR 83.74 38 P **P 11 15 34.7 +1.9**
baz=231
NV11 Mina Array Sit 83.75 44 *eP* **P 11 15 34.5 +1.3**
comp=Z,2.9nm,1.2s
SKNT Sakolnakorn 83.82 291 P **P 11 15 33.4 -0.4**
comp=Z,51nm,0.9s
HSIG 83.89 55 *eP* **P 11 15 35.7 +1.8**
comp=Z,53nm,1.2s
TRTT Trang 83.90 281 P **P 11 15 34.7 +0.4**
comp=Z,14nm,1.0s
LDFC Landfair 83.95 48 *eP* **P 11 15 36.2 +2.0**
comp=Z,125nm,1.3s
214A Organ Pipe Nat 83.96 52 P **P 11 15 36.2 +2.0**
baz=239,SNR=7.8
K04D Chiloquin, OR 84.00 39 P **P 11 15 36.0 +1.7**
baz=233
NEE2 Needles Airpor 84.12 49 P **P 11 15 36.7 +1.8**
baz=238,SNR=6.6
KVN Kaiserville 84.14 44 *eP* **P 11 15 36.3 +1.1**
comp=Z,19nm,1.1s
KVN Kaiserville 84.14 44 *eP* **P 11 15 36.3 +1.1**
KVN pmax pmax
comp=Z,19nm,1.1s
J04D Umpqua Nationa 84.17 39 P **P 11 15 37.0 +1.8**
baz=232,SNR=25
TPNV Topopah Spring 84.18 46 P **P 11 15 36.7 +1.3**
baz=237,SNR=15
PDMCI Parker Dam,Lak 84.22 49 P **P 11 15 37.1 +1.7**
baz=238,SNR=13
SRAK Srakaew 84.28 288 P **P 11 15 35.6 -0.5**
comp=Z,32nm,1.1s
I04A Tendick Farm, 84.33 38 P **P 11 15 37.2 +1.4**
baz=232
MOD Modoc Plateau 84.43 40 *eP* **P 11 15 38.0 +1.6**
comp=Z,53nm,1.3s
K05A Summer Lake 84.56 40 *eP* **P 11 15 39.2 +2.0**
comp=Z,90nm,1.1s
SYO Syowa Base 84.60 193⇑*eP* P 11 15 24.8 -12
SYO Syowa Base 84.60 193⇓*iP* **P 11 15 35.0 -1.7**
SHPR Sheep Range 84.68 47 *eP* **P 11 15 39.5 +1.7**
comp=Z,46nm,1.7s
J05D Fort Rock, OR 84.70 39 P **P 11 15 39.6 +1.8**
baz=233
G03D McMinnville, O 84.74 36 P **P 11 15 39.5 +1.8**
baz=231
W13A Hualapai Mount 84.81 49 *eP* **P 11 15 39.6 +1.0**
comp=Z,20nm,1.1s
Y14A Wickenburg 84.83 50 *eP* **P 11 15 40.5 +2.0**
comp=Z,14nm,0.4s
HOM Homer 84.87 14 *eP* **P 11 15 39.0 +1.1**
comp=Z,196nm,1.0s
MA2 Magadan 84.92 346 P **P 11 15 38.0 -0.2**
comp=Z,39nm,1.1s,baz=139,slow=3.3,SNR=11
MA2 Magadan 84.92 346 *eP* **P 11 15 37.1 -1.1**
comp=Z,68nm,1.2s
MA2 Magadan 84.92 346⇑*eP* **P 11 15 37.9 -0.3**
MA2 pmax pmax
comp=Z,46nm,1.1s
H04A Detroit Lake 85.01 37 *eP* **P 11 15 40.4 +1.3**
comp=Z,138nm,1.8s
CHAI Chaiyaphum 85.11 289 P **P 11 15 41.3 +1.2**
comp=Z,4.2nm,1.3s
BRLK Bradley Lake 85.14 14 *eP* **P 11 15 39.5 +0.2**
comp=Z,90nm,1.2s
PINE Pine Mountain 85.18 39 *eP* **P 11 15 42.0 +1.9**
comp=Z,87nm,1.3s
I05D Terrebonne, OR 85.28 38 P **P 11 15 41.9 +1.5**
baz=233
ENH Enshi 85.35 305 *eP* **P 11 15 41.2 +0.1**
comp=Z,66nm,1.0s
RSO Redoubt South 85.35 13 *eP* **P 11 15 40.4 -0.1**
SVW2 Sparrevohn 85.37 12 *eP* **P 11 15 40.3 0.0**
R11A Troy Canyon, C 85.39 45 P **P 11 15 42.0 +0.8**
baz=237,SNR=7.7
R11A Troy Canyon, C 85.39 45 *eP* **P 11 15 42.1 +0.9**
comp=Z,7.4nm,1.3s
E03A Lebam 85.41 35 *eP* **P 11 15 42.1 +1.2**
comp=Z,69nm,1.0s
F04D Rainier, OR 85.42 36 P **P 11 15 43.1 +2.2**
baz=231
BMN Battle Mountai 85.48 43 *eP* **P 11 15 43.0 +1.4**
comp=Z,34nm,1.3s
BMN Battle Mountai 85.48 43 *eP* **P 11 15 43.0 +1.4**
BMN pmax pmax
comp=Z,34nm,1.3s
TUC Tucson 85.62 53 P **P 11 15 44.3 +1.9**
baz=240
TUC Tucson 85.62 53 *eP* **P 11 15 44.6 +2.2**
comp=Z,39nm,1.3s
TUC Tucson 85.62 53 *eP* **P 11 15 44.6 +2.2**
TUC pmax pmax
comp=Z,39nm,1.3s
DIB Dawson Inlet, 85.70 26 *eP* **P 11 15 43.7 +1.6**
comp=Z,50nm,1.2s
BJI Beijing 85.72 316⇓*iP* **P 11 15 42.9 +0.4**
BJI pmax pmax
comp=Z,34nm,1.0s
WVOR Wild Horse Val 85.74 41 *eP* **P 11 15 44.3 +1.5**
comp=Z,44nm,1.2s
WVOR Wild Horse Val 85.74 41 *eP* **P 11 15 44.3 +1.5**
WVOR pmax pmax
comp=Z,44nm,1.2s
GYA Guiyang 85.76 301 P **P 11 15 45.0 +1.8**
GYA pP pP 11 17 47.3 -0.2
GYA sP sP 11 18 43.8 -1.8
GYA PP **PP 11 19 17.5 +3.8**
GYA SKS **SKSac 11 25 15.0 +0.6**
GYA S **S 11 25 30.3 +1.5**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,140nm,6.3s
SEW Seward 85.78 15 *eP* **P 11 15 42.6 +0.4**
comp=Z,53nm,1.2s
NLWA Neilton Lookou 85.79 35 *eP* **P 11 15 44.3 +1.6**
comp=Z,49nm,1.4s
G05D Wamic, OR 85.84 37 P **P 11 15 44.6 +1.6**
baz=233
PHET Kaeng Krachan 85.97 286 P **P 11 15 46.2 +1.9**
comp=Z,14nm,1.0s
I07A Izee 86.19 39 *eP* **P 11 15 46.4 +1.6**
comp=Z,35nm,1.1s
X16A Lo Mia Camp, P 86.19 51 *eP* **P 11 15 47.1 +1.9**
comp=Z,26nm,1.3s
G06A Carlson Farm, 86.22 38 *eP* **P 11 15 46.3 +1.4**
comp=Z,51nm,1.3s
LCMT Little Creek M 86.25 48 *eP* **P 11 15 46.8 +1.5**
comp=Z,20nm,1.1s
PBKT Sadao Pong 86.27 289 P **P 11 15 46.0 +0.4**
comp=Z,19nm,1.3s
PBKT Sadao Pong 86.27 289 *eP* **P 11 15 45.7 +0.1**
comp=Z,31nm,1.4s
319A Douglas 86.29 54 *eP* **P 11 15 48.0 +2.5**
comp=Z,62nm,1.1s
SNAA Sanae 86.34 179 P **P 11 15 44.8 -0.3**
SNAA Sanae 86.34 179 P **P 11 15 44.2 -0.9**
comp=Z,8.2nm,0.5s,baz=206,slow=5.9,SNR=189
SNAA Sanae 86.34 179 *eP* **P 11 15 44.7 -0.4**
SNAA *e*pP **pP 11 17 50.2 +0.7**
SNAA Sanae 86.34 179 *eP* **P 11 15 44.7 -0.4**
SNAA *e**PP **pP 11 17 50.2 +0.7**
J08A Circle Bar Ran 86.37 40 *eP* **P 11 15 47.1 +1.5**
comp=Z,60nm,1.1s
CCUT Cedar City 86.45 47 *eP* **P 11 15 48.2 +1.8**
comp=Z,22nm,1.2s
LON Longmire 86.49 36 *eP* **P 11 15 47.2 +1.1**
comp=Z,45nm,1.5s
LON Longmire 86.49 36 *eP* **P 11 15 47.2 +1.1**
LON pmax pmax
comp=Z,45nm,1.5s
KNB Kanab 86.54 48 *eP* **P 11 15 48.5 +1.8**
comp=Z,35nm,1.2s
KNB Kanab 86.54 48 *eP* **P 11 15 48.5 +1.8**
KNB pmax pmax
comp=Z,35nm,1.2s
VNA3 Neumayer Olymp 86.55 177 P **P 11 15 45.8 -0.2**
RC01 Rabbit Creek A 86.58 14 *eP* **P 11 15 46.6 +0.6**
comp=Z,92nm,1.2s
U15A North Rim 86.61 48 *eP* **P 11 15 49.1 +1.9**
comp=Z,35nm,0.9s
PSUT Pine Spring 86.63 46 *eP* **P 11 15 48.5 +1.3**
comp=Z,8.8nm,1.0s
D05A Enumclaw 86.66 35 *eP* **P 11 15 48.9 +2.1**
comp=Z,209nm,1.3s
SZCU Shurtz Canyon 86.66 47 *eP* **P 11 15 49.1 +1.8**
comp=Z,22nm,1.2s
SUA Susitna One 86.69 14 *eP* **P 11 15 46.7 -0.1**
comp=Z,45nm,1.0s
WUAZ Wupatki 86.79 50 P **P 11 15 49.5 +1.7**
baz=240
WUAZ Wupatki 86.79 50 *eP* **P 11 15 49.6 +1.7**
comp=Z,23nm,1.0s
PGC Sidney 86.80 34 *eP* **P 11 15 48.9 +1.5**
comp=Z,74nm,1.2s
BBB Bella Bella 86.87 29 *eP* **P 11 15 49.5 +1.9**
comp=Z,57nm,1.1s
NVL N'lazarevskaya 86.88 184⇓*iP* **P 11 15 46.6 -0.9**
NVL pmax pmax
comp=Z,25nm,0.7s
TIY Taiyuan 86.94 313 *eP* **P 11 15 50.0 +1.5**
SKT Skwentna 86.98 13 *eP* **P 11 15 47.1 -0.9**
comp=Z,32nm,1.3s
SRDT SRDT 87.00 287 P **P 11 15 50.2 +1.1**
comp=Z,37nm,1.0s
F07A Phinny Hill Vi 87.01 37 *eP* **P 11 15 50.5 +2.1**
comp=Z,36nm,1.1s
HPIG 87.04 59 *eP* **P 11 15 50.0 +0.7**
comp=Z,22nm,1.0s
CRAG Craig 87.11 25 *eP* **P 11 15 50.8 +2.1**
comp=Z,42nm,1.2s
PKCU Pink Cliffs 87.11 48 *eP* **P 11 15 51.5 +1.9**
comp=Z,14nm,1.0s
PMR Palmer 87.16 14 *eP* **P 11 15 48.8 +0.1**
comp=Z,62nm,1.1s
PMR Palmer 87.16 14 *eP* **P 11 15 48.8 +0.1**
PMR pmax pmax
comp=Z,62nm,1.1s
G08A Pilot Rock 87.21 38 *eP* **P 11 15 51.2 +1.6**
comp=Z,74nm,1.3s
VNA1 Neumayer--Stat 87.21 177 P **P 11 15 49.3 +0.2**
A04D Lummi Island 87.23 34 P **P 11 15 51.2 +1.8**
baz=232,SNR=15
B05A Bryant 87.26 35 P **P 11 15 51.1 +1.6**
baz=232,SNR=20
X18A Snowflake 87.32 51 *eP* **P 11 15 52.0 +1.5**
comp=Z,24nm,1.3s
GHO Glory Hole Cre 87.37 14 *eP* **P 11 15 50.2 +0.3**
comp=Z,98nm,1.0s
LTY Liberty 87.41 36 *eP* **P 11 15 51.5 +1.1**
comp=Z,40nm,1.0s
NANT Nan 87.42 291 P **P 11 15 53.1 +2.1**
comp=Z,6.1nm,1.3s
MTPU Mount Pierson 87.50 47 *eP* **P 11 15 53.8 +2.3**
comp=Z,74nm,1.6s
HAWA Hanford 87.53 37 *eP* **P 11 15 52.7 +1.8**
comp=Z,61nm,1.0s
SML Sawmill 87.54 15 *eP* **P 11 15 50.7 +0.1**
comp=Z,27nm,1.0s
SML Sawmill 87.54 15 *eP* **P 11 15 50.7 +0.1**
SML pmax pmax
comp=Z,27nm,1.0s
DIV Divide 87.57 16 *eP* **P 11 15 51.1 +0.3**
comp=Z,68nm,1.0s
SEY Seymchan 87.60 348 P **P 11 15 51.1 +0.3**
comp=Z,27nm,0.9s,baz=149,slow=5.0,SNR=55
PPLA Purkeypile 87.67 12 *eP* **P 11 15 50.2 -1.1**
comp=Z,19nm,1.3s
BMRM Bremner River 87.74 16 *eP* **P 11 15 52.2 +0.6**
comp=Z,63nm,1.0s
B06A Marblemount 87.74 35 *eP* **P 11 15 53.2 +1.5**
comp=Z,33nm,0.9s
MSU Marysvale 87.75 47 *eP* **P 11 15 54.4 +2.0**
MSU Marysvale 87.75 47 *eP* **P 11 15 54.4 +2.0**
W18A Petrified Fore 87.76 51 P **P 11 15 53.9 +1.4**
baz=241
ZAIG Zacatecas 87.77 64 *eP* **P 11 15 55.2 +2.3**
comp=Z,20nm,1.0s
SCM Sheep Creek Mo 87.80 15 *eP* **P 11 15 52.4 +0.5**
comp=Z,101nm,1.0s
SCM Sheep Creek Mo 87.80 15 *eP* **P 11 15 52.4 +0.5**
SCM pmax pmax
comp=Z,101nm,1.0s
KLU Klutina 87.85 16 *eP* **P 11 15 52.5 +0.4**
comp=Z,38nm,1.1s
E08A Dider Farm, El 87.85 37 *eP* **P 11 15 54.3 +1.9**
comp=Z,52nm,1.1s
BMO Blue Mountains 87.92 39 *eP* **P 11 15 53.9 +1.0**
comp=Z,30nm,1.3s
BMO Blue Mountains 87.92 39 *eP* **P 11 15 53.9 +1.0**
BMO pmax pmax
comp=Z,31nm,1.3s
121A Cookes Peak, D 87.95 54 P **P 11 15 55.5 +2.1**
baz=242
CRQM Cirque 87.95 17 *eP* **P 11 15 53.8 +1.0**
comp=Z,72nm,1.1s
MFID Camas Ranch 88.00 41 *eP* **P 11 15 54.1 +0.8**
comp=Z,42nm,1.0s
TGL Tana Glacier 88.04 17 *eP* **P 11 15 54.1 +1.1**
comp=Z,60nm,1.1s
WRAK Wrangell Islan 88.10 24 *eP* **P 11 15 54.8 +1.6**
comp=Z,39nm,1.1s
ZEA Zeya 88.17 332 *eP* **P 11 15 54.6 +0.9**
ZEA pmax pmax
comp=N,29nm,1.2s
ZEA pmax pmax
comp=Z,43nm,1.2s
DUG Dugway, Tooele 88.19 45 P **P 11 15 55.5 +1.2**
baz=239
DUG Dugway, Tooele 88.19 45 *eP* **P 11 15 55.8 +1.5**
comp=Z,23nm,1.4s
DUG Dugway, Tooele 88.19 45 *eP* **P 11 15 55.8 +1.5**
DUG pmax pmax
comp=Z,23nm,1.4s
LAMP Lampang 88.23 291 P **P 11 15 56.4 +1.6**
comp=Z,12nm,1.1s
D08A Wollman Farm, 88.26 37 *eP* **P 11 15 55.9 +1.6**
comp=Z,45nm,1.0s
KMI Kunming 88.35 298 P **P 11 15 56.9 +1.4**
KMI pmax pmax
comp=Z,11nm,0.5s
PAYA Payao 88.36 292 P **P 11 15 56.7 +1.3**
comp=Z,8.8nm,0.9s
E09A Wood Farm, Sta 88.38 38 *eP* **P 11 15 55.9 +1.0**
comp=Z,42nm,1.1s

BGU	**Big Grassy Mou**	88.43	44	*e*P		**P**	11 15 56.2 +0.8
	comp=Z,17nm,1.2s						
NLU	**North Lily Min**	88.55	46	*e*P		**P**	11 15 58.0 +1.9
	comp=Z,23nm,1.3s						
TRF	**Thorofare Moun**	88.56	13	*e*P		**P**	11 15 54.9 -0.7
	comp=Z,45nm,0.9s						
EPT	**El Paso**	88.56	55	*e*P		**P**	11 15 58.2 +1.9
	comp=Z,48nm,1.1s						
F10A	**Beach Ranch, E**	88.59	38	*e*P		**P**	11 15 56.6 +0.6
	comp=Z,34nm,1.0s						
JIS	**Juneau Island**	88.73	22	*e*P		**P**	11 15 57.7 +1.6
	comp=Z,21nm,1.2s						
BESE	**Bessie Mountai**	88.79	22	*e*P		**P**	11 15 58.3 +1.7
	comp=Z,33nm,1.1s						
B08A	**Colville Reser**	88.79	36	*e*P		**P**	11 15 57.5 +0.8
	comp=Z,35nm,1.1s						
TMUT	**Trail Mountain**	88.80	46	*e*P		**P**	11 15 59.4 +2.0
	comp=Z,70nm,1.1s						
CM31	**Chiang Mai Arr**	88.80	290	*e*P		**P**	11 15 58.8 +1.3
CMAR	**Chiang Mai Arr**	88.80	290	P		**P**	11 15 58.8 +1.3
	comp=Z,11nm,0.9s,baz=125,slow=3.0,SNR=50						
HARP	**HAARP**	88.82	15	*e*P		**P**	11 15 57.6 +1.0
	comp=Z,28nm,0.9s						
LLLB	**Lillooet**	88.82	33	*e*P		**P**	11 15 58.4 +1.5
	comp=Z,37nm,1.2s						
RND	**Reindeer**	88.82	14	*e*P		**P**	11 15 56.6 0.0
	comp=Z,78nm,1.0s						
RND	**Reindeer**	88.82	14	*e*P		**P**	11 15 56.6 0.0
RND				pmax	pmax		
	comp=Z,78nm,1.0s						
DHY	**Denali Highway**	88.86	14	*e*P		**P**	11 15 57.2 +0.3
	comp=Z,41nm,1.4s						
MPU	**Maple Canyon**	88.88	46	*e*P		**P**	11 15 59.1 +1.5
	comp=Z,28nm,1.1s						
HLID	**Hailey**	88.94	42	P		**P**	11 15 59.4 +1.6
	baz=238,SNR=28						
HLID	**Hailey**	88.94	42	*e*P		**P**	11 15 59.4 +1.6
	comp=Z,19nm,1.1s						
CHTO	**Chiang Mai**	88.94	291	*e*P		**P**	11 15 59.4 +1.2
	comp=Z,30nm,1.0s						
CHTO	**Chiang Mai**	88.94	291	*e*P		**P**	11 15 59.4 +1.2
CHTO				pmax	pmax		
	comp=Z,30nm,1.0s						
BPAW	**Bear Paw Mtn.**	89.00	12	*e*P		**P**	11 15 56.4 -0.9
	comp=Z,15nm,1.3s						
HVU	**Hansel Valley**	89.03	44	*e*P		**P**	11 15 59.7 +1.5
	comp=Z,58nm,1.2s						
HVU	**Hansel Valley**	89.03	44	*e*P		**P**	11 15 59.7 +1.5
HVU				pmax	pmax		
	comp=Z,58nm,1.2s						
C09A	**Chrisman Ranch**	89.05	36	*e*P		**P**	11 15 59.4 +1.4
	comp=Z,30nm,1.1s						
TLIG	**Tlapa**	89.06	71	*e*P		**P**	11 16 00.9 +2.1
	comp=Z,20nm,1.0s						
MCK	**McKinley**	89.09	13	*e*P		**P**	11 15 57.5 -0.3
	comp=Z,30nm,1.0s						
MCK	**McKinley**	89.09	13	*e*P		**P**	11 15 57.5 -0.3
MCK				pmax	pmax		
	comp=Z,30nm,1.0s						
HHC	**Hu-ho-hao-te**	89.12	315	*e*P		**P**	11 16 02.5 +3.9
HHC				S		**S**	11 26 03.5 +4.2
HHC				pmax	pmax		
	comp=Z,24nm,1.0s						
HHC				pmax	pmax		
	comp=Z,94nm,4.2s						
CTU	**Camp Tracy**	89.14	45	*e*P		**P**	11 16 00.1 +1.3
	comp=Z,38nm,1.1s						
SRU	**San Rafael Swe**	89.17	47	*e*P		**P**	11 16 00.3 +1.4
	comp=Z,60nm,1.0s						
SRU	**San Rafael Swe**	89.17	47	*e*P		**P**	11 16 00.4 +1.4
SRU				pmax	pmax		
	comp=Z,60nm,1.0s						
P17A	**Butcher Ranch,**	89.20	46	*e*P		**P**	11 16 00.7 +1.6
	comp=Z,51nm,1.2s						
PAX	**Paxson**	89.22	15	*e*P		**P**	11 15 58.7 +0.2
	comp=Z,28nm,1.3s						
PAX	**Paxson**	89.22	15	*e*P		**P**	11 15 58.7 +0.2
PAX				pmax	pmax		
	comp=Z,28nm,1.3s						
JLU	**Jordanelle**	89.29	45	*e*P		**P**	11 16 01.0 +1.4
	comp=Z,32nm,1.2s						
SKAG	**Skagway**	89.30	21	*e*P		**P**	11 16 00.8 +2.1
	comp=Z,38nm,1.4s						
LAZ	**Ladron**	89.30	52	*e*P		**P**	11 16 01.4 +1.7
CMAI	**Chiengmai2**	89.31	292	P		**P**	11 16 02.3 +2.3
	comp=Z,263nm,1.1s						
Y22D	**IRIS PASSCAL I**	89.31	53	P		**P**	11 16 01.3 +1.6
	baz=242						
Y22D	**IRIS PASSCAL I**	89.31	53	*e*P		**P**	11 16 01.8 +2.1
	comp=Z,44nm,1.1s						
Y22E	**IRIS PASSCAL I**	89.31	53	P		**P**	11 16 01.3 +1.6
	baz=242						
BWN	**Browne**	89.37	13	*e*P		**P**	11 15 59.1 +0.1
	comp=Z,132nm,1.4s						
MNTX	**Cornudas Mount**	89.39	55	P		**P**	11 16 01.5 +1.6
	baz=243,SNR=44						
MNTX	**Cornudas Mount**	89.39	55	*e*P		**P**	11 16 01.5 +1.6
	comp=Z,27nm,1.0s						
PLCA	**Paso Flores**	89.54	134	P		**P**	11 16 02.5 +1.8
	comp=Z,6.5nm,0.8s,baz=251,slow=5.4,SNR=11						
PLCA	**Paso Flores**	89.54	134	*e*P		**P**	11 16 02.5 +1.8
	comp=Z,28nm,1.4s						
PLCA	**Paso Flores**	89.54	134	*e*P		**P**	11 16 02.5 +1.8
PLCA				pmax	pmax		
	comp=Z,28nm,1.4s						
BNM	**Barren Site**	89.56	53	*e*P		**P**	11 16 02.4 +1.4
TCUT	**Toone Canyon**	89.58	45	*e*P		**P**	11 16 02.6 +1.7
	comp=Z,75nm,0.9s						
P18A	**Preston Nutter**	89.61	46	*e*P		**P**	11 16 02.6 +1.5
	comp=Z,26nm,1.0s						
LPM	**Los Pinos Moun**	89.63	53	*e*P		**P**	11 16 02.7 +1.5
MVCO	**Mesa Verde**	89.64	49	P		**P**	11 16 02.3 +1.0
	baz=242						
MVCO	**Mesa Verde**	89.64	49	*e*P		**P**	11 16 02.6 +1.3
	comp=Z,6.7nm,1.1s						
TX31	**Lajitas Ar. Si**	89.68	58	*e*P		**P**	11 16 02.6 +1.1
TX31				*e*P		**PcP**	11 16 03.4 +1.1
TXAR	**Lajitas Array**	89.68	58	P		**P**	11 16 03.1 +1.6
	comp=Z,11nm,0.8s,baz=215,slow=5.8,SNR=118						
TXAR				PKKPbc		**PKKPbc**	11 33 31.6 0.0
	comp=Z,0.7nm,0.7s,baz=96,slow=3.6,SNR=9.8						
TXAR				PKPPKP		**P'P'df**	11 41 39.8 -0.2
	comp=Z,0.4nm,1.0s,baz=29,slow=2.1,SNR=3.4						
HWUT	**Hardware Ranch**	89.72	44	*e*P		**P**	11 16 02.4 +0.9
	comp=Z,17nm,1.0s						
PV09	**Paradox Valley**	89.81	48	*e*P		**P**	11 16 03.8 +1.6
PV19	**Morning Glory**	89.83	48	*e*P		**P**	11 16 03.7 +1.6
	comp=Z,23nm,1.3s						
PV17	**East Wray Mesa**	89.83	48	*e*P		**P**	11 16 03.4 +1.4
	comp=Z,26nm,1.3s						
PV14	**Lion Creek, Pa**	89.83	48	*e*P		**P**	11 16 03.3 +1.2
	comp=Z,19nm,1.1s						
PV18	**Skein Mesa, Pa**	89.85	48	*e*P		**P**	11 16 03.5 +1.3
	comp=Z,15nm,1.2s						
PV13	**Radium Mtn., P**	89.87	48	*e*P		**P**	11 16 03.1 +0.8
	comp=Z,16nm,1.2s						
PV16	**Nyswonger Mesa**	89.87	48	*e*P		**P**	11 16 03.7 +1.4
	comp=Z,24nm,1.6s						
PV23	**Carpenter Ridg**	89.88	48	*e*P		**P**	11 16 03.5 +1.1
	comp=Z,20nm,1.0s						
MLY	**Manley**	89.88	12	*e*P		**P**	11 16 01.1 -0.3
	comp=Z,17nm,1.1s						
PV11	**David Mesa, Pa**	89.90	48	*e*P		**P**	11 16 04.0 +1.6
	comp=Z,26nm,1.4s						
WRH	**Wood River Hil**	89.92	13	*e*P		**P**	11 16 01.1 -0.5
	comp=Z,45nm,1.1s						
NEW	**Newport**	89.95	37	P		**P**	11 16 02.8 +0.7
	baz=236						
PV02	**Paradox Valley**	89.95	48	*e*P		**P**	11 16 03.5 +0.8
	comp=Z,18nm,1.3s						
PV21	**Cone Mtn., Par**	89.95	48	*e*P		**P**	11 16 04.3 +1.6
	comp=Z,32nm,1.4s						
PV12	**Saucer Basin,**	89.96	48	*e*P		**P**	11 16 03.9 +1.2
	comp=Z,36nm,1.3s						
RIDG	**Independ'e Rid**	90.03	15	*e*P		**P**	11 16 02.3 +0.1
	comp=Z,31nm,1.1s						
CD2	**Chengdu**	90.03	303	P		**P**	11 16 03.4 +0.4
CD2				pP		pP	11 18 06.1 -2.5
CD2				sP		sP	11 19 02.8 -3.5
CD2				PP		**PP**	11 19 46.8 -0.4
CD2				SKS		**SKSac**	11 25 40.0 +0.7
CD2				S		**ScS**	11 26 09.3 -0.8
CD2				sS		sS	11 29 49.3 -2.9
CD2				SS		**SS**	11 32 26.4 +1.6
CD2				pmax	pmax		
	comp=Z,40nm,1.3s						
CD2				pmax	pmax		
	comp=Z,260nm,5.1s						
TASM	**ASL Pad, Albuq**	90.05	52	P		**P**	11 16 04.4 +1.2
	baz=243,SNR=20						
ANMO	**Albuquerque**	90.05	52	P		**P**	11 16 04.3 +1.2
	comp=Z,13nm,1.0s,baz=219,slow=7.5,SNR=35						
ANMO	**Albuquerque**	90.05	52	P		**P**	11 16 04.4 +1.2
	baz=243						
ANMO	**Albuquerque**	90.05	52	*e*P		**P**	11 16 04.3 +1.2
	comp=Z,21nm,1.1s						
ANMO	**Albuquerque**	90.05	52	*d i*P		**P**	11 16 00.1 -3.1
ANMO				pmax	pmax		
	comp=Z,18nm,1.1s						
TASL	**Snake Pit, Alb**	90.05	52	P		**P**	11 16 04.4 +1.2
	baz=243,SNR=20						
PV22	**Blue Mesa, Par**	90.07	48	*e*P		**P**	11 16 04.0 +0.8
	comp=Z,19nm,1.1s						
HDA	**Harding Lake**	90.11	14	*e*P		**P**	11 16 02.6 +0.1
	comp=Z,25nm,1.1s						
CCB	**Clear Creek Bu**	90.14	13	*e*P		**P**	11 16 01.9 -0.6
	comp=Z,50nm,1.3s						
CCB				*e*pP		**pP**	11 18 13.8 +5.6
DOT	**Dot Lake**	90.14	15	*e*P		**P**	11 16 03.2 +0.6
	comp=Z,67nm,1.1s						
MDM	**Murphy Dome**	90.32	13	*e*P		**P**	11 16 02.8 -0.7
	comp=Z,41nm,1.2s						
COLA	**College**	90.32	13	*e*P		**P**	11 16 02.9 -0.5
	comp=Z,63nm,1.3s						
COLA	**College**	90.32	13	*e*P		**P**	11 16 02.9 -0.5
COLA				pmax	pmax		
	comp=Z,63nm,1.3s						
GDL2	**Guadalupe Moun**	90.38	55	*e*P		**P**	11 16 06.8 +2.1
DLBC	**Dease Lake**	90.42	24	*e*P		**P**	11 16 05.2 +1.1
	comp=Z,21nm,1.4s						
SCRK	**Sand Creek**	90.43	15	*e*P		**P**	11 16 04.3 +0.2
	comp=Z,15nm,1.1s						
ILAR	**Eielson Array**	90.44	14	P		**P**	11 16 03.3 -0.7
	comp=Z,5.8nm,0.9s,baz=212,slow=4.8,SNR=50						
ILB	**Eielson Array**	90.44	14	*e*P		**P**	11 16 03.5 -0.5
ILB				*e*S		**S**	11 26 14.5 +4.6
IL1	**Eielson Array**	90.44	14	*e*P		**P**	11 16 03.2 -0.8
IL1				*e*pP		**pP**	11 18 14.9 +5.2
IL1				*e*S		**S**	11 26 13.8 +3.9
BILL	**Bilibino**	90.55	355	*e*P		**P**	11 16 03.9 -0.5
	comp=Z,32nm,1.2s						
BILL	**Bilibino**	90.55	355	*d i*P		**P**	11 16 04.5 +0.1
BILL				*e**PP		**pP**	11 18 11.1 +0.9
BILL				*e*			11 19 53.3
BILL				pmax	pmax		
	comp=Z,22nm,1.1s						
MCMT	**McKenzie Canyo**	90.57	41	*e*P		**P**	11 16 06.8 +1.4
AHID	**Auburn Hatcher**	90.61	43	*e*P		**P**	11 16 06.8 +1.2
	comp=Z,21nm,1.0s						
RDOG	**Red Dog Mine**	90.91	6	*e*P		**P**	11 16 06.8 +0.7
	comp=Z,23nm,1.1s						
DLMT	**Dillon**	91.00	41	*e*P		**P**	11 16 08.4 +1.1
	comp=Z,11nm,1.3s						
REDW	**Red Top Meadow**	91.06	43	*e*P		**P**	11 16 08.8 +1.2
	comp=Z,24nm,1.1s						
TPAW	**Teton Pass**	91.06	43	*e*P		**P**	11 16 09.1 +1.3
	comp=Z,12nm,1.1s						
S22A	**4UR Ranch, Cre**	91.06	49	P		**P**	11 16 09.1 +1.2
	baz=243,SNR=20						
S22A	**4UR Ranch, Cre**	91.06	49	*e*P		**P**	11 16 09.3 +1.4
	comp=Z,20nm,1.1s						
FXWY	**Fox Creek**	91.09	43	*e*P		**P**	11 16 09.3 +1.5
	comp=Z,18nm,1.6s						
SNOW	**Snow King Moun**	91.17	43	*e*P		**P**	11 16 08.9 +0.7
	comp=Z,15nm,1.1s						
O20A	**White River Ci**	91.20	47	P		**P**	11 16 09.3 +0.9
	baz=242,SNR=7.4						
O20A	**White River Ci**	91.20	47	*e*P		**P**	11 16 09.6 +1.2
	comp=Z,23nm,1.0s						
LNIG	**Linares**	91.23	64	*e*P		**P**	11 16 09.1 +0.5
	comp=Z,19nm,1.0s						
IMW	**Indian Meadow**	91.27	43	*e*P		**P**	11 16 10.1 +1.4
	comp=Z,24nm,1.4s						
LRM	**Limekiln Ridge**	91.32	40	*e*P		**P**	11 16 09.9 +1.1
MOOW	**Moose Ponds**	91.32	43	*e*P		**P**	11 16 10.3 +1.4
	comp=Z,11nm,1.5s						
LOHW	**Long Hollow**	91.34	43	*e*P		**P**	11 16 10.1 +1.1
	comp=Z,6.9nm,1.1s						
YPP	**Pitchstone Pla**	91.54	42	*e*P		**P**	11 16 11.7 +1.7
	comp=Z,8.8nm,1.6s						
BW06	**Boulder Array**	91.59	44	P		**P**	11 16 10.6 +0.5
	baz=241,SNR=13						
BW06	**Boulder Array**	91.59	44	*e*P		**P**	11 16 10.7 +0.5
	comp=Z,11nm,1.1s						
PD31	**Pinedale Array**	91.59	44	*e*P		**P**	11 16 11.0 +0.9
PD31				*e*PP		**PP**	11 19 53.4 -6.0
PDAR	**Pinedale Array**	91.59	44	P		**P**	11 16 10.6 +0.4
	comp=Z,6.0nm,0.9s,baz=207,slow=2.9,SNR=33						
PDAR				PP		**PP**	11 19 53.4 -6.0
	comp=Z,0.5nm,0.8s,baz=219,slow=3.8,SNR=3.7						
PDAR				PKKP		**PKKPdf**	11 33 26.0 +1.2
	comp=Z,0.6nm,0.7s,baz=36,slow=3.8,SNR=5.5						
SMCO	**Snowmass**	91.62	48	*e*P		**P**	11 16 12.0 +1.5
	comp=Z,24nm,1.4s						
DAWY	**Dawson**	91.67	17	*e*P		**P**	11 16 10.3 +0.6
	comp=Z,15nm,1.0s						
BOZ	**Bozeman (W)**	91.70	41	P		**P**	11 16 11.3 +0.9
	baz=240,SNR=12						
BOZ	**Bozeman (W)**	91.70	41	*e*P		**P**	11 16 11.5 +1.0
	comp=Z,15nm,1.3s						
BOZ	**Bozeman (W)**	91.70	41	*e*P		**P**	11 16 11.5 +1.0
BOZ				pmax	pmax		
	comp=Z,15nm,1.3s						
H17A	**Grant Village**	91.75	42	P		**P**	11 16 12.4 +1.6
	baz=240						
H17A	**Grant Village**	91.75	42	*e*P		**P**	11 16 13.6 +2.8
	comp=Z,6.6nm,1.1s						
EGAK	**Eagle**	91.79	16	*e*P		**P**	11 16 10.4 +0.2
	comp=Z,18nm,1.1s						
SDCO	**Great Sand Dun**	92.00	50	P		**P**	11 16 13.1 +0.9
	baz=243,SNR=16						
SDCO	**Great Sand Dun**	92.00	50	*e*P		**P**	11 16 13.1 +0.9
	comp=Z,11nm,1.0s						
LZH	**Lanzhou**	92.22	308	‖P		**P**	11 16 14.5 +1.4
LZH				pP		pP	11 18 15.9 -3.1
LZH				sP		sP	11 19 09.4 -7.2
LZH				*e*PP		**PP**	11 20 09.8 +5.6
LZH				*e*S		**S**	11 26 20.1 -7.0
LZH				sS		sS	11 30 02.3 -11
LZH				pmax	pmax		
	comp=Z,44nm,1.0s						
LZH				pmax	pmax		
	comp=Z,230nm,5.4s						
MSTX	**Muleshoe**	92.35	54	P		**P**	11 16 14.4 +0.7
	baz=245						
MSTX	**Muleshoe**	92.35	54	*e*P		**P**	11 16 14.8 +1.2
	comp=Z,17nm,1.2s						
T25A	**Trinidad**	92.51	51	P		**P**	11 16 14.9 +0.4
	baz=244,SNR=9.4						
T25A	**Trinidad**	92.51	51	*e*P		**P**	11 16 15.5 +1.0
	comp=Z,13nm,1.0s						
RWWY	**Rawlins**	92.62	46	*e*P		**P**	11 16 15.7 +0.8
	comp=Z,19nm,1.2s						
833A	**Chaparral WMA,**	92.66	61	P		**P**	11 16 16.0 +0.9
	baz=246						
833A	**Chaparral WMA,**	92.66	61	*e*P		**P**	11 16 16.8 +1.7
	comp=Z,15nm,0.9s						
Q24A	**Divide**	92.79	49	P		**P**	11 16 16.9 +1.0
	baz=244						
ISCO	**Idaho Springs**	92.84	48	P		**P**	11 16 17.2 +1.1
	baz=243						
ISCO	**Idaho Springs**	92.84	48	*e*P		**P**	11 16 17.1 +1.1
	comp=Z,3.5nm,1.1s						
ISCO	**Idaho Springs**	92.84	48	*e*P		**P**	11 16 17.1 +1.1
ISCO				pmax	pmax		
	comp=Z,4.0nm,1.1s						
RLMT	**Red Lodge**	92.92	42	P		**P**	11 16 17.3 +1.1
	baz=241						
RLMT	**Red Lodge**	92.92	42	*e*P		**P**	11 16 17.8 +1.7
	comp=Z,5.3nm,1.1s						
YAK	**Yakutsk**	92.96	339	*e*P		**P**	11 16 13.8 -1.8
YAK				pmax	pmax		
	comp=Z,21nm,0.9s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.3s						
N23A	**Red Feather La**	93.11	47	P		**P**	11 16 18.1 +0.9
	baz=243,SNR=6.4						
N23A	**Red Feather La**	93.11	47	*e*P		**P**	11 16 18.4 +1.2
	comp=E,13nm,1.2s						
JCT	**Junction City**	93.20	58	P		**P**	11 16 17.8 +0.2
	baz=246						
TOLK	**Toolik Lake Re**	93.30	11	P		**P**	11 16 19.0 +1.8
	baz=208						
TOLK	**Toolik Lake Re**	93.30	11	*e*P		**P**	11 16 17.9 +0.8
	comp=E,19nm,1.5s						
K22A	**Casper**	93.51	45	P		**P**	11 16 19.3 +0.5
	baz=243						
K22A	**Casper**	93.51	45	*e*P		**P**	11 16 20.0 +1.2
	comp=E,9.3nm,1.3s						
AMTX	**Amarillo**	93.55	54	P		**P**	11 16 19.4 +0.3
	baz=246						
EGMT	**Eagleton**	94.02	39	P		**P**	11 16 21.6 +0.7
	baz=241						
ABTX	**Abilene, Hawle**	94.19	57	P		**P**	11 16 22.5 +0.5
	baz=246						
ABTX	**Abilene, Hawle**	94.19	57	*e*P		**P**	11 16 23.1 +1.1
	comp=E,12nm,1.1s						
KSCO	**Kaye Shedlock'**	94.58	50	P		**P**	11 16 24.1 +0.3
	baz=245						
KSCO	**Kaye Shedlock'**	94.58	50	*e*P		**P**	11 16 25.1 +1.3
	comp=E,36nm,1.1s						
ULN	**Ulaanbaatar**	95.35	320	*e*P		**P**	11 16 27.0 -0.1
	comp=E,3.4nm,0.8s						
ULN	**Ulaanbaatar**	95.35	320	*d i*P		**P**	11 16 26.9 -0.1
ULN				pmax	pmax		
	comp=Z,5.0nm,1.4s						
LAO	**LASA Array**	95.53	42	P		**P**	11 16 28.8 +1.0
	baz=244						
SONA0	**Songino Array**	95.73	320	*e*P		**P**	11 16 28.2 -0.6
SONA0				*e*PP		**PP**	11 20 27.5 -3.3
SONM	**Songino Array**	95.73	320	P		**P**	11 16 28.2 -0.6
	comp=Z,1.1nm,0.7s,baz=125,slow=3.5,SNR=12						
SONM				PP		**PP**	11 20 27.5 -3.3
	comp=Z,0.3nm,0.4s,baz=108,slow=9.5,SNR=3.9						
SONM				PKKPbc		**PKKPbc**	11 33 15.9 -1.1
	comp=Z,0.2nm,0.3s,baz=90,slow=1.4,SNR=3.7						
SONA1	**Songino Array**	95.73	320	*e*P		**P**	11 16 28.4 -0.4
RSSD	**Black Hills**	95.79	45	P		**P**	11 16 30.2 +1.0
	baz=245						
RSSD	**Black Hills**	95.79	45	*e*P		**P**	11 16 29.8 +0.6
	comp=Z,6.0nm,0.9s						
RSSD	**Black Hills**	95.79	45	*e*P		**P**	11 16 29.8 +0.6
RSSD				pmax	pmax		
	comp=Z,6.0nm,0.9s						
INK	**Inuvik**	96.46	16	P		**P**	11 16 30.8 -0.5
	comp=Z,4.1nm,0.8s,baz=204,slow=5.7,SNR=6.8						
INK	**Inuvik**	96.46	16	*e*P		**P**	11 16 31.0 -0.3
	comp=Z,9.5nm,1.1s						
INK	**Inuvik**	96.46	16	*e*P		**P**	11 16 31.0 -0.3
INK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
GTA	**Gaotai**	96.51	310	*e*P		**P**	11 16 33.3 +0.9
GTA				pP	pP		11 18 33.3 -5.4
GTA				sP	sP		11 19 26.5 -10
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
YKA	**Yellowknife Ar**	98.92	25	P	Pdif		11 16 41.8 -0.6
	comp=Z,1.2nm,0.8s,baz=239,slow=4.5,SNR=6.3						
YKA				PP		**PP**	11 20 51.5 -2.7
	comp=Z,2.0nm,0.9s,baz=239,slow=7.4,SNR=7.4						
YKB5	**Yellowknife Ar**	98.92	25	*e*PP	PP		11 20 51.5 -2.7
ZALV	**Zalesovo Beam**	110.56	321	PKiKP		**PKiKP**	11 21 29.4 -1.6
	comp=Z,2.6nm,0.7s,baz=174,slow=0.8,SNR=8.9						
MK32	**Makanchi Array**	110.90	313	*e*Pdif		**Pdif**	11 17 35.1 -1.0
MKAR	**Makanchi Array**	110.90	313	Pdiff		**Pdif**	11 17 35.1 -1.0
	comp=Z,0.4nm,0.7s,baz=108,slow=3.8,SNR=3.9						
MKAR				PKiKP		**PKiKP**	11 21 30.9 -1.1
	comp=Z,2.4nm,0.7s,baz=114,slow=0.4,SNR=27						
MKAR				PKKPbc		**PKKPbc**	11 32 31.4 -0.7
	comp=Z,1.3nm,0.8s,baz=285,slow=3.1,SNR=9.3						
KURK	**Kurchatov**	113.88	317	PKiKP		**PKiKP**	11 21 36.5 -0.9
KURK	**Kurchatov**	113.88	317	PKIKP			11 21 36.5
KURBB	**Kurchatov Arra**	113.92	317	PKiKP		**PKiKP**	11 21 36.5 -1.0
	comp=Z,3.8nm,0.6s,baz=110,slow=1.5,SNR=28						
KSH	**Kashi**	114.20	305	PKP	PKPdf		11 21 41.1 +2.4
KSH				PP	PP		11 22 54.9 +10
AAK	**Ala-Archa**	115.76	308	PKKPbc	PKKPbc		11 32 15.5 -0.5
	comp=Z,3.2nm,0.7s,baz=188,slow=8.4,SNR=7.5						
OPO	**Ambohidratompo**	118.45	233	PKP		**PKPdf**	11 21 47.6 0.0
	comp=Z,6.0nm,0.7s,baz=131,slow=0.2,SNR=5.7						
HUMP	**Col San Antoni**	118.63	81	*e*PKPdf		**PKPdf**	11 21 46.9 -0.7
KK31	**Karatay Array**	118.72	308	*e*PKPdf		**PKPdf**	11 21 46.6 -0.5
KK31	**Karatay Array**	118.72	308	*e*PKIKP		**PKPdf**	11 21 46.6 -0.5
KKAR	**Karatay Array**	118.72	308	*e*PKPdf		**PKPdf**	11 21 46.6 -0.5
KKAR	**Karatay Array**	118.72	308	*e*PKIKP		**PKPdf**	11 21 46.6 -0.5
KBL	**Kabul**	118.93	298	*e*PKPdf		**PKPdf**	11 21 48.0 0.0
KBL	**Kabul**	118.93	298	*e*PKIKP		**PKPdf**	11 21 48.0 0.0
BVAR	**Borovoye Array**	119.08	319	PKP		**PKPdf**	11 21 46.2 -1.2
	comp=Z,7.2nm,0.6s,baz=101,slow=3.0,SNR=38						
BRVK	**Borovoye**	119.14	319	*e*PKPdf		**PKPdf**	11 21 46.8 -0.7
BRVK	**Borovoye**	119.14	319	*d i*PKIKP		**PKPdf**	11 21 46.5 -1.0
PQI	**Presque Isle**	120.88	48	*e*PKPdf		**PKPdf**	11 21 50.1 -1.0

comp=Z,5.0nm,0.8s,baz=14,slow=3.5
NAO01 NORSAR Array S 140.64 351 *e*PKPpre PKPpre 11 22 22.2
HFS Hagfors 140.88 349 PKhKP PKPpre 11 22 22.1
comp=Z,7.1nm,0.3s,baz=54,slow=2.5,SNR=58
BER Bergen 141.67 356 *e*P PKPpre 11 22 24.4
ANN Anapa 141.88 315 *i* PKHKP PKPpre 11 22 26.5
ANN pmax pmax
comp=Z,33nm,1.2s
KONO Kongsberg 141.97 352 *e*PKPpre PKPpre 11 22 26.2
KONO Kongsberg 141.97 352 *e*PKHKP PKPpre 11 22 26.2
KONO Kongsberg 141.97 352 *e*P PKPpre 11 22 25.9
STRU Stroemstad 142.33 350 *e*P PKPpre 11 22 27.3
STAV Stavanger 143.08 355 *e*P PKPab 11 22 29.8 -0.2
HOMB Homborsund 143.45 352 *e*P PKPbc 11 22 31.6 0.0
AKASG Malin Array Be 143.47 328 PKP PKPab 11 22 30.9 -0.9
comp=Z,28nm,0.5s,baz=42,slow=4.3,SNR=119
AKASG SKPbc **SKPbc 11 25 17.8 +0.1**
AKBB Malin Array Si 143.47 328 *e*PKPbc PKPab 11 22 31.1 -0.7
AKBB Malin Array Si 143.47 328 *e*PKIKP PKPab 11 22 31.1 -0.7
KIEV Kiev 143.49 328 *e*PKPbc PKPab 11 22 30.8 -1.0
KIEV Kiev 143.49 328 *d i* PKIKP PKPab 11 22 31.0 -0.8
AK11 Malin Array Si 143.52 328 *e*PKPbc PKPab 11 22 31.1 -0.9
SNART Snartemo 143.53 353 *e*P PKPab 11 22 31.4 -0.4
SUW Suwalki 143.67 337 *e*PKPdf PKPbc 11 22 32.2 -0.2
SUW Suwalki 143.67 337 *e*PKPbc PKPbc 11 22 32.4 0.0
SUW Suwalki 143.67 337 *e*PKIKP PKPbc 11 22 32.4 0.0
SIM Simferopol' 143.94 317 *d i* PKIKP **PKPdf 11 22 34.1 -0.1**
SIM pmax pmax
comp=Z,107nm,1.0s
KLNR Kaliningrad 144.21 340 *i* PKIKP PKPbc 11 22 32.3 -1.7
KPL Plockton 144.69 5 *e*P PKPbc 11 22 35.4 -0.1
MUD Monsted U'grnd 145.12 351 *i* P **PKPbc 11 22 36.8 +0.1**
comp=Z,65nm,1.1s
SORM Soroca 145.54 326 ⇑*i* P **PKPdf 11 22 36.4 -0.4**
SORM Soroca 145.54 326 ⇑PKIKP **PKPdf 11 22 36.4 -0.4**
LLD Lille Linde 145.66 347 *i* P **PKPbc 11 22 38.6 +0.3**
ASF Jabal al Asfar 145.72 295 PKPbc **PKPbc 11 22 40.0 +0.5**
comp=Z,21nm,0.8s,baz=74,slow=1.1,SNR=24
ASF Jabal al Asfar 145.72 295 *e*PKP2 **PKPbc 11 22 40.0 +0.5**
ILGA Ilgaz 145.87 311 *e*PKPdf **PKPdf 11 22 38.6 +0.8**
EDI Edinburgh 146.27 3 *e*P **PKPbc 11 22 40.2 +0.2**
GKP Gorka Klasztor 146.27 341 *e*PKPdf **PKPbc 11 22 40.3 +0.2**
GKP Gorka Klasztor 146.27 341⇓*e*PKP2 **PKPbc 11 22 40.3 +0.2**
BEL Belsk 146.28 336 *e*PKPdf **PKPbc 11 22 40.8 +0.6**
BEL Belsk 146.28 336⇓*e*PKP2 **PKPbc 11 22 40.8 +0.6**
BR101 Keskin Array S 146.43 309 *e*PKPdf **PKPdf 11 22 37.8 -1.0**
BR101 *e*PKPbc **PKPbc 11 22 40.6 -0.6**
BR131 Keskin Array S 146.43 309 *e*PKPdf **PKPdf 11 22 38.3 -0.5**
BRTR Keskin Array B 146.43 309 PKP **PKPdf 11 22 37.8 -1.0**
comp=Z,14nm,0.7s,baz=119,slow=3.1,SNR=66
BRTR PKPbc **PKPbc 11 22 40.6 -0.6**
comp=Z,14nm,0.7s,baz=135,slow=4.5,SNR=53
LVV L'vov 146.50 331 *e*PKIKP **PKPbc 11 22 40.1 -0.8**
LEOM Leova 146.62 323⇓*i* P **PKPbc 11 22 40.9 -0.4**
LEOM Leova 146.62 323⇓PKP2 **PKPbc 11 22 40.9 -0.4**
MMAI Mount Meron Ar 146.84 297 PKPbc **PKPbc 11 22 43.0 +0.5**
comp=Z,40nm,0.6s,baz=72,slow=4.7,SNR=55
EKA Eskdalemuir Ar 146.86 3 PKPbc **PKPbc 11 22 40.9 -0.7**
comp=Z,21nm,0.7s,baz=4.4,slow=2.9,SNR=48
ESK Eskdalemuir 146.87 3 *e*PKPdf **PKPbc 11 22 41.5 -0.2**
ESK Eskdalemuir 146.87 3 *e*PKP2 **PKPbc 11 22 41.5 -0.2**
ANTO Ankara 146.98 310⇓*i* P **PKPbc 11 22 42.9 +0.3**
ANTO Ankara 146.98 310 *e*PKPdf **PKPdf 11 22 39.5 0.0**
ANTO *e*PKPbc **PKPbc 11 22 42.7 +0.1**
ANTO Ankara 146.98 310 *e*PKIKP **PKPdf 11 22 39.6 0.0**
ANTO *e* 11 22 42.7
BR231 Keskin MP Arra 147.00 310 *e*PKPbc **PKPbc 11 22 43.0 +0.3**
TLCR 147.04 321⇓*i* P **PKPbc 11 22 42.2 -0.3**
TLCR 147.04 321⇓PKP2 **PKPbc 11 22 42.2 -0.3**
KWP Kalwaria Pacla 147.22 332 *e*PKPdf **PKPbc 11 22 43.1 +0.3**
KWP Kalwaria Pacla 147.22 332⇓*e*PKP2 **PKPbc 11 22 43.1 +0.3**
CFR Carcaliu 147.44 321⇓PKP2 **PKPbc 11 22 43.4 -0.1**
BUR08 Bucovina Ar. S 147.48 327 *e*PKPbc **PKPbc 11 22 44.5 +0.8**
BUR04 Bucovina Ar. S 147.49 327 *e*PKPdf **PKPdf 11 22 40.2 0.0**
BUR04 *e*PKPbc **PKPbc 11 22 44.4 +0.7**
BURAR Bucovina Array 147.49 327⇓PKP2 **PKPbc 11 22 44.1 +0.4**
EIL Elat 147.66 291 PKPbc **PKPbc 11 22 44.9 +0.3**
comp=Z,36nm,0.8s,baz=328,slow=3.5,SNR=20
TIRR Tirgusor 147.69 320⇓*i* P **PKPbc 11 22 44.2 0.0**
TIRR Tirgusor 147.69 320⇓PKP2 **PKPbc 11 22 44.2 0.0**
VRI Vrincioaia 147.82 324⇓PKP2 **PKPbc 11 22 44.4 -0.1**
TLB Topalu 147.84 321⇓PKP2 **PKPbc 11 22 44.7 +0.2**
HARR Harsova 147.84 321⇓PKP2 **PKPbc 11 22 44.8 +0.2**
PLOR Plostina 147.88 324⇓*i* P **PKPbc 11 22 44.3 -0.4**
PLOR Plostina 147.88 324⇓PKP2 **PKPbc 11 22 44.3 -0.4**
OJC Ojcow 147.96 336 *e*PKPdf **PKPbc 11 22 44.8 +0.1**
OJC Ojcow 147.96 336 *e*PKPbc **PKPbc 11 22 44.8 +0.1**
OJC Ojcow 147.96 336⇓*e*PKP2 **PKPbc 11 22 44.8 +0.1**
CSS Mathiatis 148.12 301 *e*PKPbc **PKPbc 11 22 45.4 -0.2**
UZH Uzhgorod 148.15 331 *e*PKHKP **PKPbc 11 22 43.3 -1.9**
UZH *e* 11 22 49.9
CRVS Cervenica-Dubn 148.31 332 *e*PKP2 **PKPbc 11 22 46.2 +0.6**
CRVS Cervenica-Dubn 148.31 332 *e*PKP **PKPbc 11 22 46.2 +0.6**
CRVS *e* 11 22 51.7
ISR Istrita 148.38 323⇑PKP2 **PKPbc 11 22 46.3 +0.3**
NIE Niedzica 148.40 334 *e*PKPdf **PKPbc 11 22 46.7 +0.8**
NIE Niedzica 148.40 334⇓*e*PKP2 **PKPbc 11 22 46.7 +0.8**
MLR Muntele Rosu 148.49 324 PKP **PKPdf 11 22 41.4 -0.5**
comp=Z,2.3nm,0.9s,baz=12,slow=4.0,SNR=5.5
MLR PKPbc **PKPbc 11 22 46.0 -0.3**
comp=Z,6.2nm,1.0s,baz=358,slow=4.6,SNR=28
MLR Muntele Rosu 148.49 324⇑*i* P **PKPdf 11 22 41.1 -0.8**
KSP Ksiaz 148.67 340 *e*PKPdf **PKPbc 11 22 47.0 +0.5**
KSP Ksiaz 148.67 340⇓*e*PKP2 **PKPbc 11 22 47.0 +0.5**
SECR 148.70 323⇑*i* P **PKPbc 11 22 46.8 +0.1**
OKC Ostrava-Krasne 148.88 337⇑*e*PKP **PKPbc 11 22 47.4 +0.4**
OKC Ostrava-Krasne 148.88 337 *e*PKHKP **PKPbc 11 22 47.4 +0.4**
CJR Cluj-Napoca 148.91 328⇓PKHKP **PKPbc 11 22 47.5 +0.3**
LANS Liptovska Anna 148.94 335 *e*PKP2 **PKPbc 11 22 48.5 +1.3**
LANS Liptovska Anna 148.94 335 *e*PKP **PKPbc 11 22 48.5 +1.3**
LANS *e* 11 22 55.0
VOIR 149.01 324⇑PKHKP **PKPbc 11 22 47.2 -0.4**
KECS Kecovo 149.05 333 *e*PKP2 **PKPbc 11 22 48.5 +1.1**
KECS Kecovo 149.05 333 *e*PKP **PKPbc 11 22 48.5 +1.1**
UPC Upice 149.05 340⇑*e*PKP **PKPbc 11 22 47.9 +0.5**
UPC Upice 149.05 340 *e*PKHKP **PKPbc 11 22 47.9 +0.5**
DPC Dobruska-Polom 149.08 339⇑*e*PKP **PKPbc 11 22 48.3 +0.8**
DPC *e*PKPAB **PKPab 11 22 52.6 -1.6**
DPC Dobruska-Polom 149.08 339 *e*PKP2 **PKPbc 11 22 48.3 +0.8**
MORC Moravsky Berou 149.15 337⇓*i* P **PKPbc 11 22 47.9 +0.2**
MORC Moravsky Berou 149.15 337 *e*PKPdf **PKPdf 11 22 42.9 +0.2**
MORC Moravsky Berou 149.15 337 *e*PKHKP **PKPdf 11 22 42.9 +0.2**
MORC Moravsky Berou 149.15 337 *e*PKP **PKPbc 11 22 48.0 +0.3**
MORC *e* 11 22 55.1
MORC Moravsky Berou 149.15 337 *e*PG 11 31 16.9
KRLC Kraliky 149.16 339⇑*e*PKP **PKPbc 11 22 48.2 +0.5**
KRLC Kraliky 149.16 339 *e*PKHKP **PKPbc 11 22 48.2 +0.5**
CLL Collm 149.21 344 *e*PKPdf **PKPdf 11 22 42.0 -0.7**
CLL ⇓*i* PKPbc **PKPbc 11 22 48.0 +0.3**
comp=Z,123nm,1.1s
CLL *i* PKPab **PKPab 11 22 54.0 -0.6**
comp=Z,47nm,1.2s
CLL Collm 149.21 344 *e*PKPbc **PKPbc 11 22 48.0 +0.3**
CLL Collm 149.21 344⇓*e*PKIKP **PKPdf 11 22 42.0 -0.7**
CLL *i* 11 22 54.0
CLL pmax pmax
comp=Z,47nm,1.2s
DRGR 149.29 328⇓PKHKP **PKPbc 11 22 48.2 0.0**
BRG Berggiesshubel 149.35 342 *e*PKP **PKPdf 11 22 43.1 +0.2**
comp=Z,9.6nm,1.3s
BRG *e* 11 22 55.5
comp=Z,44nm,1.2s
BRG Berggiesshubel 149.35 342 *e*PKHKP **PKPdf 11 22 43.2 +0.2**
BRG *e* 11 22 55.5
BRG pmax pmax
comp=Z,10.0nm,1.3s
BRG pmax pmax
comp=Z,44nm,1.2s
ISP Isparta 149.39 307 *e*PKPbc **PKPbc 11 22 48.1 -0.6**
ISP Isparta 149.39 307 *e*PKHKP **PKPbc 11 22 48.1 -0.6**
PVCC Panska Ves 149.47 341⇑*e*PKP **PKPbc 11 22 49.1 +0.7**
PVCC Panska Ves 149.47 341 *e*PKHKP **PKPbc 11 22 49.1 +0.7**
VYHS Vyhne 149.72 335 *e*PKHKP **PKPbc 11 22 49.3 +0.2**
VYHS *e* 11 22 57.7
VYHS Vyhne 149.72 335 *e*PKP **PKPbc 11 22 49.3 +0.2**
VYHS *e* 11 22 57.7
PSZ Piszkesteto 149.74 333⇓*i* P **PKPbc 11 22 49.1 -0.1**
PSZ Piszkesteto 149.74 333 *e*PKPbc **PKPbc 11 22 49.2 0.0**
PSZ Piszkesteto 149.74 333⇓PKHKP **PKPbc 11 22 49.1 -0.1**
WTSB Winterswijk 149.82 351 *e*PKPbc **PKPbc 11 22 49.2 +0.1**
WTSB *e*PKPab **PKPab 11 22 57.1 0.0**

JAVC Velka Javorina 149.87 336 *e*PKP **PKPbc 11 22 50.9 +1.4**
VRAC Vranov 149.88 338⇓PKHKP **PKPbc 11 22 49.6 +0.1**
VRAC Vranov 149.88 338 *e*PKP **PKPbc 11 22 49.5 +0.1**
VRAC *e* 11 22 58.4
PRA Prague 149.92 341⇑*e*PKP **PKPbc 11 22 50.0 +0.6**
PRA Prague 149.92 341 *e*PKHKP **PKPbc 11 22 50.0 +0.6**
GOPC GO Pecny, Ondr 149.95 341⇑*e*PKP **PKPbc 11 22 50.0 +0.4**
GOPC GO Pecny, Ondr 149.95 341 *e*PKHKP **PKPbc 11 22 50.0 +0.4**
KRUC Moravsky 150.16 338 *e*PKP **PKPbc 11 22 50.1 +0.1**
KRUC *e* 11 22 59.3
SIRR Siria 150.17 329⇑*i* P **PKPbc 11 22 50.2 0.0**
NKC Novy Kostel 150.33 344⇑*e*PKP **PKPbc 11 22 51.0 +0.6**
NKC *e*PKPAB **PKPab 11 22 55.6 -3.8**
NKC Novy Kostel 150.33 344 *e*PKIKP **PKPbc 11 22 51.0 +0.6**
MODS Modra-Piesok 150.42 336 *e*PKIKP **PKPbc 11 22 50.4 -0.3**
MODS *e* 11 23 00.0
MODS Modra-Piesok 150.42 336 *e*PKP **PKPbc 11 22 50.4 -0.3**
MODS *e* 11 23 00.0
MANT Manisa 150.54 310 *e*PKPbc **PKPbc 11 22 51.6 0.0**
BZS Buzias 150.66 328⇓PKIKP **PKPbc 11 22 51.3 0.0**
KHC Kasperske Hory 151.01 341⇑*e*PKP **PKPbc 11 22 52.3 +0.2**
KHC *ex* x 11 22 56.3
KHC Kasperske Hory 151.01 341 *e*PKIKP **PKPbc 11 22 52.3 +0.2**
ALN Alexandroupoli 151.09 316 *e*PKPbc **PKPbc 11 22 51.7 -0.7**
ALN Alexandroupoli 151.09 316 *e*PKIKP **PKPbc 11 22 51.7 -0.7**
HGN Heimansgroeve 151.11 352 *e*PKPbc **PKPbc 11 22 52.2 +0.1**
HGN *e*PKPab **PKPab 11 23 02.6 0.0**
MDVR Moldovita 151.20 327⇑*i* P **PKPbc 11 22 52.3 -0.3**
GEC2 GERESS Array S 151.23 341 *e*PKPdf **PKPdf 11 22 44.3 -1.7**
GEC2 *e*PKPbc **PKPbc 11 22 51.5 -1.1**
GEC2 GERESS Array S 151.23 341 *e*PKIKP **PKPdf 11 22 44.3 -1.7**
GEC2 *e* 11 22 51.5
GERES GERESS Array B 151.23 341 PKP **PKPdf 11 22 44.3 -1.7**
comp=Z,0.9nm,0.3s,baz=292,slow=16,SNR=8.4
GERES PKPbc **PKPbc 11 22 52.2 -0.4**
comp=Z,11nm,0.8s,baz=48,slow=2.2,SNR=54
GEA0 GERESS Array S 151.24 341 *e*PKPdf **PKPdf 11 22 44.0 -2.1**
GEA0 *e*PKPbc **PKPbc 11 22 52.5 -0.1**
MEM Membach 151.25 352⇓PKPbc **PKPbc 11 22 52.5 0.0**
MEM ⇑PKPab **PKPab 11 23 03.0 -0.1**
CONA Conrad Observa 151.31 337 *i* PKPdf **PKPdf 11 22 45.8 -0.3**
comp=Z,6.8nm,1.5s
CONA *i* PKPbc **PKiKP 11 22 53.1 0.0**
comp=Z,32nm,1.0s,SNR=12
CONA *i* PKPab **PKPab 11 23 04.9 +1.2**
comp=Z,23nm,1.1s
SNF Seneffe 151.55 354⇑PKPbc **PKPbc 11 22 53.4 +0.3**
SNF ⇓PKPab **PKPab 11 23 05.0 +0.6**
VTS Vitosha 151.84 322 *e*PKPdf **PKPdf 11 22 46.9 -0.3**
VTS *e*PKPbc **PKPbc 11 22 54.2 -0.1**
VTS *e*PKPab **PKPab 11 23 07.4 +1.2**
VTS Vitosha 151.84 322 *e*PKIKP **PKPdf 11 22 46.9 -0.3**
DOU Dourbes 151.93 353⇓PKPbc **PKPbc 11 22 54.0 +0.1**
DOU ⇑PKPab **PKPab 11 23 05.8 -0.2**
MOA Molln 151.93 339 *i* PKPdf **PKPdf 11 22 46.4 -0.6**
comp=Z,2.4nm,0.7s
MOA *i* PKPbc **PKPbc 11 22 54.2 0.0**
comp=Z,12nm,1.1s
MOA *i* PKPab **PKPab 11 23 07.2 +1.0**
comp=Z,18nm,1.3s
ARSA Arzberg 152.00 337 *i* PKPdf **PKPdf 11 22 47.0 -0.2**
comp=Z,2.2nm,0.6s
ARSA *i* PKPbc **PKPbc 11 22 53.9 -0.4**
comp=Z,4.2nm,0.8s
ARSA *i* PKPab **PKPab 11 23 06.5 -0.1**
comp=Z,12nm,1.1s
WLF Walferdange 152.16 351⇓PKPbc **PKPbc 11 22 55.4 +0.9**
WLF ⇑PKPab **PKPab 11 23 07.1 0.0**
WLF Walferdange 152.16 351 *e*PKPdf **PKPdf 11 22 47.9 +0.6**
WLF *e*PKPbc **PKiKP 11 22 55.3 +0.6**
WLF *e*PKPab **PKPab 11 23 07.3 +0.2**
WLF Walferdange 152.16 351 *e*PKIKP **PKPdf 11 22 47.9 +0.6**
WLF *e* 11 23 07.3
DIVS Divibare 152.56 327 *e*PKPdf **PKPdf 11 22 47.9 -0.2**
DIVS *e*PKPbc **PKPbc 11 22 55.5 -0.2**
DIVS *e*PKPab **PKPab 11 23 09.1 0.0**
SOKA Soboth 152.67 337 *i* PKPdf **PKPdf 11 22 47.5 -0.7**
comp=Z,4.2nm,1.2s
SOKA *i* PKPbc **PKPbc 11 22 55.5 -0.3**
comp=Z,16nm,1.2s,SNR=7.2
SOKA *i* PKPab **PKPab 11 23 10.3 +0.8**
comp=Z,20nm,1.3s
KARP Karpathos 152.74 305 *e*PKPdf **PKPdf 11 22 48.8 +0.1**
KBA Koelnbreinsper 152.90 339 *i* PKPbc **PKPbc 11 22 55.8 -0.6**
comp=Z,10nm,0.8s
OBKA Obir 152.99 337 *i* PKPbc **PKPbc 11 22 56.0 -0.6**
comp=Z,6.2nm,1.1s
STIP Stip 153.00 321 *i* PKP **PKPab 11 23 10.2 -0.8**
VAY Valandovo 153.00 320 *i* PKP **PKPab 11 23 11.6 +0.6**
MYKA Terra Mystica 153.20 339 *i* PKPdf **PKPdf 11 22 48.0 -1.0**
comp=Z,1.5nm,0.6s
MYKA *i* PKPbc **PKPbc 11 22 56.0 -1.0**
comp=Z,5.4nm,0.6s
MYKA *i* PKPab **PKPab 11 23 11.9 +0.2**
comp=Z,15nm,1.0s
WATA Walderalm 153.21 342 *i* PKPbc **PKPbc 11 22 56.9 -0.2**
comp=Z,6.3nm,0.5s
SKO Skopje 153.25 322 *i* PKP **PKPab 11 23 13.2 +1.1**
WTTA Wattenberg 153.26 342 *i* PKPdf **PKPdf 11 22 49.1 -0.1**
comp=Z,4.4nm,0.6s
WTTA *i* PKPbc **PKiKP 11 22 57.4 +0.1**
comp=Z,8.3nm,0.6s
WTTA *i* PKPab **PKPab 11 23 12.8 +0.7**
comp=Z,9.6nm,0.5s
RETA Reutte 153.30 343 *i* PKPdf **PKPdf 11 22 48.7 -0.4**
comp=Z,3.9nm,0.7s
RETA *i* PKPbc **PKPbc 11 22 57.1 -0.1**
comp=Z,8.7nm,1.1s
RETA *i* PKPab **PKPab 11 23 12.8 +0.7**
comp=Z,31nm,1.1s,SNR=5.2
MOTA Moosalm 153.34 343 *i* PKPdf **PKPdf 11 22 47.9 -1.4**
comp=Z,2.3nm,0.5s
MOTA *i* PKPbc **PKPbc 11 22 56.9 -0.5**
comp=Z,12nm,1.1s
MOTA *i* PKPab **PKPab 11 23 12.2 -0.2**
comp=Z,20nm,1.0s
ECH Echery 153.41 349 *e*PKPbc **PKPbc 11 22 57.4 +0.1**
ECH *e*PKPab **PKPab 11 23 12.3 -0.2**
ECH Echery 153.41 349 *e*PKIKP **PKPbc 11 22 57.4 +0.1**
ECH *e* 11 23 12.3
ABTA Abfaltersbach 153.46 340 *i* PKPdf **PKPdf 11 22 48.6 -0.8**
comp=Z,12nm,1.2s
ABTA *i* PKPbc **PKPbc 11 22 57.1 -0.5**
comp=Z,14nm,0.8s
ABTA *i* PKPab **PKPab 11 23 12.1 -0.7**
comp=Z,20nm,1.1s
VISS Visnje 153.48 336 *e*PKPdf **PKPdf 11 22 48.7 -0.6**
VISS *i* PKPbc **PKPbc 11 22 57.1 -0.4**
VISS *i* PKPab **PKPab 11 23 12.6 -0.2**
BOJS Bojanci 153.57 335 *i* PKPdf **PKPdf 11 22 49.0 -0.4**
BOJS *e*PKPbc **PKiKP 11 22 57.8 0.0**
BOJS *i* PKPab **PKPab 11 23 13.4 +0.2**
BOJS *e* 11 25 18.3
JAVS Javornik 153.69 337 *e*PKPdf **PKPdf 11 22 48.5 -1.2**
JAVS *i* PKPbc **PKPbc 11 22 57.1 -1.0**
JAVS *e*PKPab **PKPab 11 23 12.9 -1.0**
JAVS *i* 11 24 51.7
DAVA Damuels 153.71 344 *i* PKPdf **PKPdf 11 22 48.9 -0.9**
comp=Z,7.0nm,0.9s
DAVA *i* PKPbc **PKiKP 11 22 58.3 +0.1**
comp=Z,10nm,1.2s
DAVA *i* PKPab **PKPab 11 23 14.5 +0.5**
comp=Z,28nm,1.1s
FETA Feichten 153.74 343 *i* PKPdf **PKPdf 11 22 49.8 0.0**
comp=Z,12nm,0.9s
FETA *i* PKPbc **PKPbc 11 22 57.6 -0.7**
comp=Z,6.5nm,0.9s
FETA *i* PKPab **PKPab 11 23 14.8 +0.7**
comp=Z,22nm,1.1s
FNA Florina 154.04 320 *e*PKPbc **PKPbc 11 22 58.1 -0.9**
FNA Florina 154.04 320 *e*PKIKP **PKPbc 11 22 58.1 -0.9**
TTG Podgorica 154.12 326 *e*PKPdf **PKPdf 11 22 48.5 -1.8**
TTG *e*PKPbc **PKPbc 11 22 57.7 -1.3**
TTG *e*PKPab **PKPab 11 23 15.5 -0.2**
TTG Podgorica 154.12 326 *e*PKIKP **PKPdf 11 22 48.5 -1.8**
TTG *e* 11 23 15.5
OHR Ohrid 154.17 322 *i* PKP **PKPab 11 23 16.4 +0.3**
FUORN Ofenpass-Fuorn 154.23 343 *e*PKPdf **PKPdf 11 22 50.8 +0.1**
FUORN *e*PKPbc **PKPbc 11 22 59.9 +0.4**
FUORN *e*PKPab **PKPab 11 23 17.4 +1.1**
IDI Anoyia 154.55 306 PKPbc **PKPbc 11 23 00.7 +0.5**
comp=Z,6.6nm,0.8s,baz=211,slow=5.9,SNR=5.1
IDI PKPab **PKPab 11 23 17.8 -0.1**
comp=Z,4.1nm,0.4s,baz=43,slow=23,SNR=4.2

TUE Stuetta 154.60 345 *e*PKPdf **PKPdf 11 22 50.9 -0.2**
TUE *e*PKPab **PKPab 11 23 18.4 +0.5**
ES19 SONSECA Array 162.29 10 *e*PKPdf **PKPdf 11 23 00.6 +0.4**
ESDC Sonseca Array 162.30 10 PKPab **PKPab 11 23 51.6 +0.2**
comp=Z,6.2nm,0.8s,baz=346,slow=4.1,SNR=23
LIC Lamto 163.42 163 *e*PKIKP **PKPdf 11 23 00.9 -1.0**
comp=Z,121nm,2.2s
LIC Lamto 163.42 163 *e*P **PKPab 11 23 57.3 +0.5**
comp=Z,38nm,1.0s
KIC Kosan Boka 163.62 164 *e*PKIKP **PKPdf 11 23 01.4 -0.7**
comp=Z,124nm,1.9s
TIC Toumodi 163.82 162 *e*PKIKP **PKPdf 11 23 01.5 -0.8**
DBIC Dimbokro 163.89 163 PKP **PKPdf 11 23 01.9 -0.5**
comp=Z,6.8nm,0.7s,baz=138,slow=0.3,SNR=5.9
DBIC PKPab **PKPab 11 23 59.8 +0.9**
comp=Z,5.2nm,0.8s,baz=219,slow=6.5,SNR=4.0
KEST Kesra 164.19 330 PKPab **PKPab 11 24 00.2 +0.3**
comp=Z,10.0nm,0.9s,baz=352,slow=7.1,SNR=6.1
MDT Midelt 168.73 20 PKP **PKPdf 11 23 06.3 +0.7**
comp=Z,6.7nm,0.9s,baz=335,slow=1.2,SNR=5.2
MDT PKPab **PKPab 11 24 21.3 +1.3**
comp=Z,16nm,1.0s,baz=353,slow=7.1,SNR=11
TOA0 Torodi Ar. Sit 170.81 191 *e*PKPdf **PKPdf 11 23 06.0 -1.2**
TOA0 *e*PKPdf PKPdf 11 23 06.5 -0.7
TOA0 *e*PKPab **PKPab 11 24 29.4 0.0**
TOA0 *e*PKPab **PKPab 11 24 29.7 +0.3**
TORD Torodi Ar. Bea 170.81 191 PKP **PKPdf 11 23 06.0 -1.2**
comp=Z,6.2nm,0.9s,baz=270,slow=0.4,SNR=21
TORD PKPab **PKPab 11 24 29.3 -0.1**
comp=Z,8.8nm,0.9s,baz=168,slow=4.1,SNR=23
TOA1 Torodi Ar. Sit 170.81 191 *e*PKPdf **PKPdf 11 23 06.0 -1.2**
TOA1 *e*PKPab **PKPab 11 24 29.3 -0.1**
TAM Tamanrasset 174.71 277 *e*PKPdf **PKPdf 11 23 09.3 +0.5**
TAM Tamanrasset 174.71 277 *e*PKIKP **PKPdf 11 23 09.3 +0.5**

MAN 14 11:10:44.3, 9°.52N×125°.48E, h30km, mb4.0, ML2.8, MS2.4, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.57**	**165**	*e*P	Pb	11 10 55.8	-0.1
BUTP				*e*S	Sn	11 11 06.4	+1.7
MSLP	**Maasin**	**0.86**	**315**	*e*P	Pn	11 11 00.1	-0.3
MSLP				*e*S	Sn	11 11 13.3	+1.4
TBP	**Tagbilaran**	**1.60**	**276**	*e*P	Pn	11 11 10.6	0.0
TBP				*i* S	Sn	11 11 30.2	0.0

*MAN **14** 11:27:05.3, 8°.00N×122°.45E, h3km, mb5.3, ML4.3, MS4.5*
*IDC **14** 11:27:07.7±0.6, 7°.80N×122°.35E, h0km, mb4.1/11, mb1 4.3/12, mb1mx3.9/74, mbtmp4.1/12, ML4.6/1, MS3.1/5, Ms1 3.1/5, ms1mx2.8/59, Error ellipse: s-maj=30.0km s-min=13.2km az=64.0*
*ISCJB **14** 11:27:08.0±1.3, 8°.04N±0°.03×122°.59E±0°.03, h9km±9km, mb4.3/24, Error ellipse: s-maj=5.6km s-min=4.0km az=150.3*
*NEIC **14** 11:27:19.8±1.6, 7°.88N×122°.94E, h96km±17km, mb4.5/13, Error ellipse: s-maj=16.6km s-min=8.7km az=71.0*
NEIC Felt [V PIVS] at Ipil; [IV PIVS] at Labason and Liloy; [III PIVS] at Kalawit and Salug; [II PIVS] at Manucan, Pagadian, Sandagan and Zamboanga City.
*DJA **14** 11:27:21.7±0.9, 8°N±7°×12°3E±°, h75km±10km, M4.7/12, mb4.6/12, mB5.2/6, MLv4.9/5, Mw(mB)4.6/6*
ISC 14 11:27:08.1±1.6, 8°.02N±0°.04×122°.61E±0°.04, h3km±10km, n75, σ2°.9±41/85, mb4.4/24, 3C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAGZ	**Pagadian**	**0.79**	**102**	*e*P	**Pg**	**11 27 22.9**	**-0.3**
PAGZ				*e*S	**Sg**	**11 27 32.8**	**-0.6**
TBP	**Tagbilaran**	**2.07**	**37**	*e*P	**Pb**	**11 27 45.9**	**-0.6**
TBP				*i* S	**Sb**	**11 28 10.1**	**-2.6**
SKMP	**Bagumbayan, Su**	**2.43**	**128**	*e*P	**Pn**	**11 27 48.1**	**-0.7**
SKMP				*e*S	**Sn**	**11 28 17.6**	**-1.4**
BUKP	**Musuan**	**2.43**	**93**	*e*P	**Pn**	**11 27 49.2**	**+0.3**
BUKP				*e*S	**Sb**	**11 28 22.9**	**-0.2**
GUIM	**Jordan**	**2.59**	**360**	*e*P	**Pn**	**11 27 49.9**	**-1.1**
GUIM				*e*S	**Sn**	**11 28 20.5**	**-2.6**
LLP	**Lapu-Lapu**	**2.65**	**30**⇑	*e*P	**Pn**	**11 27 51.2**	**-0.7**
LLP				*e*S	**Sn**	**11 28 22.6**	**-1.9**
JAP	**San Jose, Anti**	**2.79**	**347**⇑	*e*P	**Pn**	**11 27 51.1**	**-2.7**
MSLP	**Maasin**	**3.06**	**46**	*e*P	**Pn**	**11 27 57.7**	**+0.2**
MSLP				*e*S	**Sn**	**11 28 34.8**	**+0.2**
DAV	**Davao City (W)**	**3.09**	**108**	Pn	**Pb**	**11 28 01.6**	**-2.2**
	70nm,0.3s,baz=312,slow=1.7,SNR=11						
DAV				Sn	**Sb**	**11 28 39.7**	**-2.3**
	52nm,0.3s,baz=120,slow=20,SNR=4.9						
DAV	**Davao City (W)**	**3.09**	**108**	*e*Pn	**Pb**	**11 28 01.7**	**-2.2**
DAV				*e*Sn	**Sb**	**11 28 37.3**	**-4.8**
BUTP	**Butuan**	**3.13**	**72**	*e*P	**Pn**	**11 27 59.1**	**+0.7**
BUTP				*e*S	**Sb**	**11 28 39.6**	**-3.4**
CUYO	**Cuyo Island**	**3.22**	**331**	*e*P	**Pn**	**11 27 59.1**	**-0.6**
CUYO				*e*S	**Sn**	**11 28 34.7**	**-4.0**
RCP	**Roxas**	**3.52**	**2**⇑	*e*P	**Pn**	**11 28 05.2**	**+1.3**
PPR	**Puerto Princes**	**4.21**	**295**⇓	*e*P	**Sn**	**11 28 59.6**	**-3.5**
OTRP	**Odiongan**	**4.36**	**352**	*e*P	**Pn**	**11 28 14.5**	**-0.8**
OTRP				*e*S	**Sn**	**11 29 06.3**	**-0.3**
ENPP	**El Nido**	**4.46**	**316**	*e*P	**Pn**	**11 28 15.1**	**-1.6**
ENPP				*e*S	**Sn**	**11 29 03.1**	**-6.1**
BUSP	**Coron**	**4.62**	**329**	*e*P	**Pn**	**11 28 17.2**	**-1.7**
BUSP				*e*S	**Sn**	**11 29 08.5**	**-4.6**
SJMP	**San Jose**	**4.65**	**342**	*e*P	**Pn**	**11 28 17.6**	**-1.8**
SJMP				*e*S	**Sn**	**11 29 14.3**	**+0.3**
BATP	**Bataraza**	**4.82**	**280**	*e*P	**Pn**	**11 28 18.6**	**-3.1**
BATP				*e*S	**Sn**	**11 29 13.3**	**-4.8**
SGSI	**Sangihe**	**5.19**	**146**	P	**Pn**	**11 28 27.0**	**+0.2**
KMSI	**Cibinong**	**7.52**	**169**	P	Pn	11 29 05.2	+6.4
MRSI	**Marisa**	**7.52**	**185**	P	**Pn**	**11 29 01.0**	**+2.2**
MPSI	**Mapaga**	**8.09**	**200**	P	Pn	11 29 15.8	+9.1
APSI	**Ampana**	**8.92**	**186**	P	**Pn**	**11 29 22.2**	**+4.2**
LUWI	**Luwuk**	**9.00**	**179**	P	**Pn**	**11 29 23.3**	**+4.2**
LUWI	**Luwuk**	**9.00**	**179**	*e*Pn

0.7nm,0.5s,baz=344,slow=2.7,SNR=8.8
AS01 Alice Springs 33.38 161 *e*P P 11 33 47.0 -1.0
SONA0 Songino Array 42.01 344 *e*P P 11 35 02.2 +1.3
SONM Songino Array 42.01 344 P **P 11 35 02.2 +1.3**
1.0nm,0.7s,baz=164,slow=5.8,SNR=5.2
SONA1 Songino Array 42.01 344 *e*P **P 11 35 04.0 +3.1**
SONA1 *e*S **S 11 41 17.0 -3.7**
STKA Stephens Creek 43.62 156 P **P 11 35 13.7 -0.3**
11nm,0.9s,baz=329,slow=8.9,SNR=12
MK01 Makanchi Array 51.70 325 *e*P **P 11 36 19.2 +2.5**
MK31 Makanchi Array 51.72 326 *e*P **P 11 36 20.5 +3.6**
MK32 Makanchi Array 51.72 326 *e*P **P 11 36 17.0 +0.2**
MK32 *e*PcP **PcP 11 37 30.5 +0.2**
MKAR Makanchi Array 51.72 326 P **P 11 36 17.0 +0.2**
0.2nm,0.3s,baz=128,slow=9.3,SNR=5.1
MKAR PcP **PcP 11 37 30.5 +0.2**
1.0nm,0.6s,baz=106,slow=3.1,SNR=4.1
MKAR Makanchi Array 51.72 326 *e*P **P 11 36 20.4 +3.5**
19nm,1.0s
MKAR PcP **PcP 11 37 30.5 +0.2**
MAKZ Makanchi 51.91 325 *e*P **P 11 36 21.1 +2.8**
1.8nm,0.9s
NIL Nilore 52.09 307 *e*P P 11 36 24.2 +4.4
12nm,0.9s
ZALV Zalesovo Beam 54.94 334 P **P 11 36 42.5 +2.1**
1.2nm,0.6s,baz=131,slow=6.2,SNR=4.4
ZAA1 Zalesovo Array 54.95 334 *e*P **P 11 36 42.5 +2.1**
KURBB Kurchatov Arra 55.95 328 P **P 11 36 47.8 +0.2**
2.6nm,0.9s,baz=130,slow=6.3,SNR=7.6
KURK Kurchatov 55.95 328 *e*P **P 11 36 47.1 -0.6**
7.4nm,1.0s
KK31 Karatay Array 57.32 317 *e*P P 11 37 02.8 +5.1
KKAR Karatay Array 57.32 317 *e*P **P 11 37 00.8 +3.2**
BVAR Borovoye Array 61.52 327 P P 11 37 30.3 +3.9
1.6nm,0.8s,baz=132,slow=6.6,SNR=8.2
BRVK Borovoye 61.59 327 *e*P **P 11 37 30.5 +3.6**
5.8nm,1.0s
ABKAR Akbulak array 66.26 321 *e*P **P 11 37 59.8 +2.1**
BR101 Keskin Array S 84.15 309 *e*P **P 11 39 39.9 -1.4**
BRTR Keskin Array B 84.15 309 P **P 11 39 39.9 -1.4**
0.6nm,0.8s,baz=106,slow=4.8,SNR=3.2
FIA0 FINESS Array S 86.14 331 *e*P **P 11 39 51.5 +1.0**
FINES FINESS Array B 86.14 331 P **P 11 39 51.5 +1.0**
0.5nm,0.5s,baz=90,slow=6.9,SNR=2.3

MAN 14 11:31:42.9,15°.59N×120°.05E,h35km,mb4.3,ML3.1, MS2.9,1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCZP	**Santa Cruz**	**0.23**	**325**	*e*P	Pn	11 31 51.8	+1.7
SCZP				*e*S	Sn	11 31 57.3	+2.3
BOLP	**Bolinao**	**0.80**	**351**	*e*P	Pn	11 31 58.3	+0.5
BOLP				*e*S	Sn	11 32 09.4	+0.9
PCPH	**Palayan**	**1.01**	**91**	⇓*e*P	Pn	11 32 00.2	-0.4
PCPH				*i* S	Sn	11 32 11.6	-2.0
BALP	**Baler**	**1.48**	**84**	*e*P	Pn	11 32 06.9	-0.2
BALP				*e*S	Sn	11 32 26.2	+1.0

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*DDA **14** 11:36:31.8,37°.14N×42°.42E,h18km, MI3.5*
*ISN **14** 11:36:32.5±1.4,37°.15N×42°.50E,h0km±5km,ML3.4*
*ISK **14** 11:36:32.8,37°.27N×42°.39E,h5km,ML3.2/14*
*CSEM **14** 11:36:32.8±0.2,37°.22N×42°.42E,h2km,ML3.2, Error ellipse: s-maj=4.6km s-min=3.4km az=60.0*
*ATA **14** 11:36:33.1±0.3,37°.32N×42°.44E,h15km±22km,ML4.3, MW4.0*
ISC 14 11:36:32.4±1.3,37°.21N±0°.04×42°.42E±0°.03,h4km±10km, n61,σ0°.86/85,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRT	**Sirnak**	**0.29**	**2**	PG	**Pg**	**11 36 38.0**	**-0.1**
SIRT				SG	**Sg**	**11 36 41.7**	**-0.3**
SIRT	**Sirnak**	**0.29**	**2**	*e*Pg	**Pg**	**11 36 38.0**	**-0.1**
SIRT				*e*Sg	**Sg**	**11 36 41.7**	**-0.3**
SRTM	**Siirt_Merkez**	**0.88**	**333**	*i* P	**Pg**	**11 36 49.3**	**0.0**
SRTM				*i* S	**Sb**	**11 37 01.9**	**-0.5**
SRTM	**Siirt_Merkez**	**0.88**	**333**	P	**Pg**	**11 36 49.3**	**0.0**
SRTM				S	**Sb**	**11 37 01.9**	**-0.5**
HAKT	**HAKKARI**	**1.08**	**71**	*i* P	**Pg**	**11 36 52.6**	**-0.5**
HAKT				*i* S	**Sb**	**11 37 08.1**	**-0.2**
BTMN	**Batman**	**1.14**	**307**	*i* P	**Pg**	**11 36 54.7**	**+0.4**
BTMN				*i* S	**Sn**	**11 37 10.9**	**-0.5**
BTMN	**Batman**	**1.14**	**307**	P	**Pg**	**11 36 54.7**	**+0.4**
BTMN				S	**Sn**	**11 37 10.9**	**-0.5**
GEVA	**Gevas**	**1.21**	**24**	*e*P	**Pg**	**11 36 54.5**	**-1.2**
GEVA				*e*S	**Sg**	**11 37 11.1**	**-0.3**
GEVA				IAML		11 37 15.7	
comp=Z,81nm,0.4s
GEVA	**Gevas**	**1.21**	**24**	*i* P	**Pg**	**11 36 55.6**	**-0.1**
GEVA				*i* S	**Sb**	**11 37 12.0**	**-0.1**
GEVA	**Gevas**	**1.21**	**24**	P	**Pg**	**11 36 55.6**	**-0.1**
GEVA				S	**Sb**	**11 37 12.0**	**-0.1**
MARD	**Mardin**	**1.32**	**275**	*i* P	**Pn**	**11 36 56.8**	**-0.9**
MARD				*i* S	**Sn**	**11 37 15.9**	**+0.2**
SVAN	**Silvan-Diyarba**	**1.35**	**315**	PN	**Pn**	**11 36 57.8**	**-0.3**
SVAN				SN	**Sb**	**11 37 16.3**	**+0.3**
SVAN	**Silvan-Diyarba**	**1.35**	**315**	*i* P	**Pn**	**11 36 58.4**	**+0.3**
SVAN				*i* S	**Sn**	**11 37 17.2**	**+0.7**
SVAN	**Silvan-Diyarba**	**1.35**	**315**	*e*Pn	**Pn**	**11 36 57.8**	**-0.3**
SVAN	**Silvan-Diyarba**	**1.35**	**315**	P	**Pn**	**11 36 58.4**	**+0.3**
SVAN				*e*Sn	**Sb**	**11 37 16.3**	**+0.3**
SVAN				S	**Sn**	**11 37 17.2**	**+0.7**
GURO	**Guroymak-BITLI**	**1.38**	**347**	PN	**Pn**	**11 36 58.3**	**-0.2**
GURO	**Guroymak-BITLI**	**1.38**	**347**	*e*Pn	**Pn**	**11 36 58.3**	**-0.2**
TVAN	**Van**	**1.53**	**30**	*i* P	**Pg**	**11 37 02.1**	**+0.3**
TVAN	**Van**	**1.53**	**30**	P	**Pg**	**11 37 02.1**	**+0.3**
YOVA	**Hakkari_Y¨…kse**	**1.53**	**75**	*i* P	**Pn**	**11 37 00.8**	**+0.1**
YOVA				*i* S	**Sg**	**11 37 23.1**	**+1.4**
VANB	**Van**	**1.58**	**29**	PN	**Pn**	**11 37 00.7**	**-0.6**
VANB	**Van**	**1.58**	**29**	*e*Pn	**Pn**	**11 37 00.7**	**-0.6**
MAZI	**Mazidag**	**1.60**	**280**	PN	**Pn**	**11 37 01.7**	**+0.2**
MAZI				SN	**Sb**	**11 37 23.1**	**+0.1**
MAZI	**Mazidag**	**1.60**	**280**	*e*Pn	**Pn**	**11 37 01.7**	**+0.2**
MAZI				*e*Sn	**Sb**	**11 37 23.1**	**+0.1**
ADCV	**BITLIS_Adilcev**	**1.62**	**8**	*i* P	**Pb**	**11 37 03.1**	**+0.2**
ADCV				*i* S	**Sg**	**11 37 26.5**	**+2.2**
ADCV	**BITLIS_Adilcev**	**1.62**	**8**	P	**Pb**	**11 37 03.1**	**+0.2**
ADCV				S	**Sg**	**11 37 26.5**	**+2.2**
DIY	**Diyarbakir**	**1.88**	**292**	*e*Pn	**Pb**	**11 37 06.9**	**-0.3**
DYBB	**Diyarbakir**	**1.96**	**293**	PN	**Pn**	**11 37 06.9**	**+0.4**
HANI	**Diyarbakir_Han**	**2.01**	**308**	*i* P	**Pn**	**11 37 07.5**	**+0.4**
HANI				*i* S	**Sn**	**11 37 32.1**	**-0.6**
HANI	**Diyarbakir_Han**	**2.01**	**308**	P	**Pn**	**11 37 07.5**	**+0.4**
HANI				S	**Sn**	**11 37 32.1**	**-0.6**
BNGL	**BINGOL**	**2.01**	**330**	*e*P	**Pn**	**11 37 08.6**	**+1.3**
BNGL				IAML		11 37 37.4	
comp=Z,430nm,0.3s
BNGL	**BINGOL**	**2.01**	**330**	*i* P	**Pn**	**11 37 08.6**	**+1.3**
BNGL				*i* S	**Sb**	**11 37 35.3**	**+0.2**
EKAR	**Karacoban**	**2.07**	**352**	*e*P	**Pn**	**11 37 09.3**	**+1.3**
EKAR	**Karacoban**	**2.07**	**352**	*i* P	**Pn**	**11 37 09.5**	**+1.4**
EKAR	**Karacoban**	**2.07**	**352**	P	**Pn**	**11 37 09.5**	**+1.4**
TUTA	**Tutak**	**2.21**	**8**	*e*P	**Pn**	**11 37 11.0**	**+0.9**
TUTA				IAML		11 37 14.2	
comp=Z,50nm,0.5s
TUTA	**Tutak**	**2.21**	**8**	*i* P	**Pn**	**11 37 11.3**	**+1.2**
BNGB	**Bing¨¶l**	**2.25**	**323**	PN	**Pn**	**11 37 10.9**	**+0.4**
BGOL	**Bingol**	**2.25**	**323**	*i* P	**Pn**	**11 37 10.7**	**+0.2**
BGOL	**Bingol**	**2.25**	**323**	P	**Pn**	**11 37 10.7**	**+0.2**
BINT	**Bingol**	**2.26**	**318**	*e*Pn	**Pn**	**11 37 10.9**	**+0.3**
CLDR	**Caldiran**	**2.26**	**31**	PN	**Pn**	**11 37 11.4**	**+0.6**
CLDR	**Caldiran**	**2.26**	**31**	*e*Pn	**Pn**	**11 37 11.4**	**+0.6**
AGRB	**Hanur-Agry**	**2.41**	**11**	PN	**Pn**	**11 37 13.2**	**+0.5**
AGRB	**Hanur-Agry**	**2.41**	**11**	*e*Pn	**Pn**	**11 37 13.2**	**+0.5**
EATA	**Eleskirt**	**2.65**	**1**	*e*P	**Pn**	**11 37 17.6**	**+1.4**
YEDI	**Yedisu-Bingol**	**2.67**	**327**	PN	**Pn**	**11 37 16.7**	**+0.4**
YEDI	**Yedisu-Bingol**	**2.67**	**327**	*e*Pn	**Pn**	**11 37 16.7**	**+0.4**
SVRC	**Sivrice-ELAZID**	**2.73**	**296**	PN	**Pn**	**11 37 17.5**	**+0.3**
SVRC	**Sivrice-ELAZID**	**2.73**	**296**	*e*Pn	**Pn**	**11 37 17.5**	**+0.3**
HOMI	**Horasan**	**2.86**	**352**	*e*P	**Pb**	**11 37 22.8**	**-1.3**
URFA	**Urfa**	**2.88**	**276**	PN	**Pn**	**11 37 20.3**	**+1.2**
URFA	**Urfa**	**2.88**	**276**	*e*Pn	**Pn**	**11 37 20.3**	**+1.2**
PTK	**Pertek**	**2.93**	**306**	PN	**Pn**	**11 37 20.1**	**+0.3**
PTK	**Pertek**	**2.93**	**306**	*e*Pn	**Pn**	**11 37 20.1**	**+0.3**
KOPT	**Kop Dagi**	**3.19**	**332**	*e*P	**Pb**	**11 37 27.2**	**-2.5**
MALT	**Malatya**	**3.35**	**290**	PN	**Pn**	**11 37 26.8**	**+1.2**
MALT	**Malatya**	**3.35**	**290**	*e*Pn	**Pn**	**11 37 26.8**	**+1.2**
KEMA	**Kemaliye**	**3.72**	**305**	*e*P	**Pn**	**11 37 32.4**	**+1.8**
KELT	**Kelkit**	**3.84**	**321**	*e*P	**Pb**	**11 37 38.1**	**-2.7**
RTB	**Rutbah**	**4.51**	**203**	*e*Pn	**Pn**	**11 37 42.5**	**+1.0**
SNR=3.0
RTB				*e*Sn	**Sn**	**11 38 34.0**	**-0.5**
SNR=3.0

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*MOS **14** 11:36:47.8±1.6,55°.69N×110°.13E,h10km,mb4.2/1,Error ellipse: s-maj=16.9km s-min=10.0km az=69.9*
BYKL 14 11:36:47.5±0.3,55°.70N×110°.11E,h12km±4km,6C-2D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIZ	**Nizh Angarsk**	**0.33**	**283**	⇑*i*Pg	Pg	11 36 54.4	+0.2
NIZ				*e*		11 36 57.9	
NIZ				*e*Sg	Sb	11 36 59.7	-0.9
NIZ				Pmax			
132nm,0.3s
NIZ				Smax			
1μm,0.2s
NIZ	**Nizh Angarsk**	**0.33**	**283**	*e*PG	Pg	11 36 54.5	+0.3
NIZ				*e*		11 36 59.7	
NIZ				pmax	pmax		
comp=Z,133nm,0.3s
NIZ				smax	smax		
comp=N,1μm,0.2s
KMO	**Kumora**	**0.64**	**73**	⇑*i*Pg	Pg	11 36 58.8	-1.2
KMO				*e*		11 36 59.6	
KMO				*e*Sg	Sg	11 37 07.2	-1.3
KMO				max			
comp=N,65nm,0.2s
KMO				Smax			
comp=N,473nm,0.7s
KMO	**Kumora**	**0.64**	**73**	⇑*i*PG	Pg	11 36 58.8	-1.2
KMO				*e*		11 37 07.1	
KMO				pmax	pmax		
comp=Z,77nm,0.3s
KMO				smax	smax		
comp=N,465nm,0.8s
YOA	**Uoyan**	**1.01**	**64**	*e*Pg	Pb	11 37 05.0	-1.9
YOA				*e*Sg	Sg	11 37 19.7	-0.3
YOA				*e*		11 37 26.6	
YOA				Pmax			
comp=N,211nm,0.2s
YOA				Smax			
comp=N,1μm,0.4s
YOA	**Uoyan**	**1.01**	**64**	*e*PG	Pb	11 37 05.8	-1.1
YOA				*e*		11 37 20.6	
YOA				pmax	pmax		
comp=Z,120nm,0.2s
YOA				smax	smax		
comp=E,1μm,0.5s
YLYR	**Ulyunkhan**	**1.02**	**143**	⇑*i*Pg	Pb	11 37 05.9	-1.2
YLYR				*e*		11 37 06.5	
YLYR				*e*Sg	Sg	11 37 20.2	-0.3
YLYR				max			
comp=E,122nm,0.1s
YLYR				Smax			
comp=E,500nm,0.1s
YLYR	**Ulyunkhan**	**1.02**	**143**	⇑*i*PG	Pb	11 37 05.9	-1.2
YLYR				*e*		11 37 19.1	
YLYR				pmax	pmax		
comp=Z,123nm,0.1s
YLYR				smax	smax		
comp=N,484nm,0.1s
SVKR	**Severomuysk**	**1.99**	**76**	*e*Pn	Pn	11 37 21.1	+0.1
SVKR				*e*Pg	Pb	11 37 22.3	-1.3
SVKR				*e*Sg	Sb	11 37 49.1	+0.8
SVKR				*e*		11 37 55.9	
SVKR				Pmax			
comp=N,150nm,0.3s
SVKR				Smax			
comp=N,1μm,0.4s
SYVR	**Suvo**	**2.05**	**182**	⇓*i*Pg	Pb	11 37 24.5	-0.1
comp=N,126nm,0.6s
SYVR				⇓*i*Pg	Pb	11 37 24.5	-0.1
comp=N,41nm,0.6s
SYVR				⇑*i*Pg	Pb	11 37 24.5	-0.1
comp=N,198nm,0.6s
SYVR				*e*Sg	Sg	11 37 52.5	-0.7
SYVR				Pmax			
comp=N,287nm,0.5s
SYVR				Smax			
comp=N,528nm,1.1s
SYVR	**Suvo**	**2.05**	**182**	*e*PN	Pb	11 37 24.4	-0.2
SYVR				*e*		11 37 52.9	
SYVR				pmax	pmax		
comp=Z,291nm,0.5s
SYVR				smax	smax		
comp=N,543nm,0.8s
OGRR	**Ongureny**	**2.53**	**216**	*e*Pn	Pn	11 37 30.2	+1.9
OGRR				*e*Pg	Pb	11 37 32.1	-0.6
OGRR				*e*		11 37 54.4	
OGRR				*e*Sg	Sb	11 38 05.9	+2.1
OGRR				Pmax			
comp=N,53nm,0.3s
OGRR				Smax			
comp=N,320nm,0.5s
OGRR	**Ongureny**	**2.53**	**216**	*e*PN	Pn	11 37 30.2	+1.9
OGRR				*e*		11 37 33.4	
OGRR				*e*		11 38 03.6	
OGRR				pmax	pmax		
comp=Z,52nm,0.4s
OGRR				smax	smax		
comp=E,320nm,0.6s
MXMB	**Maximikha**	**2.57**	**199**	*e*Pn	Pn	11 37 28.6	-0.3
MXMB				*e*Pg	Pb	11 37 33.1	-0.4
MXMB				*e*Sg	Sg	11 38 08.0	-2.0
MXMB				*e*		11 38 12.5	
KELR	**Kotokel**	**3.18**	**203**	*e*	Pb	11 37 41.0	-2.9
KELR				*e*Pg	Pg	11 37 44.6	-3.7
KELR				*e*Sg	Sb	11 38 25.9	+3.4
NLYR	**Nelyaty**	**3.23**	**73**	*e*Pn	Pn	11 37 38.8	+0.8
NLYR				*e*Pg	Pb	11 37 44.6	-0.2
NLYR				*e*Sn	Sn	11 38 15.0	-1.4
NLYR				*e*Sg	Sb	11 38 27.5	+3.4
NLYR				Pmax			
comp=E,22nm,0.7s
NLYR				Smax			
comp=E,169nm,1.3s
ZRHB	**Zarechye**	**3.60**	**210**	*e*Sg	Sg	11 38 39.0	-4.0
ZRHB				Smax			
comp=E,354nm,0.9s
TRG	**Tyrgan**	**3.68**	**218**	*e*Pn	Pn	11 37 45.6	+1.4
TRG				*e*		11 37 57.9	
TRG				*e*Sn	Sn	11 38 27.5	0.0
TRG				*e*Sg	Sg	11 38 41.5	-4.1
TRG				max			
comp=E,31nm,0.3s
TRG				Smax			
comp=E,113nm,0.4s
TRG	**Tyrgan**	**3.68**	**218**	*e*PN	Pn	11 37 46.4	+2.2
TRG				*e*		11 37 54.7	
TRG				*e*S	Sn	11 38 29.0	+1.5
TRG				*e*		11 38 42.2	
TRG				pmax	pmax		
comp=Z,37nm,0.6s
TRG				smax	smax		
comp=E,114nm,0.4s
UUDB	**Ulan-Yde**	**4.11**	**202**	*e*	Pn	11 37 54.2	+4.2
UUDB				*e*Pg	Pb	11 38 00.5	+0.8
UUDB				*e*		11 38 30.0	
UUDB				*e*Sg	Sg	11 38 54.4	-4.8
UUDB				Pmax			
comp=E,31nm,0.5s
UUDB				Smax			
comp=E,66nm,0.7s
CIT	**Chita**	**4.21**	**150**	*e*Sg	Sb	11 38 57.1	+4.8
CIT				Smax			
comp=E,155nm,0.3s
HRMR	**Khuramsha**	**4.49**	**206**	Sg	Sb	11 39 05.1	+4.8
BGT	**Bolshoye Golou**	**4.60**	**219**	*e*Pn	Pn	11 37 58.8	+2.0
BGT				*e*Pg	Pb	11 38 10.6	+2.5
BGT				*e*Sn	Sn	11 38 50.3	+0.2
BGT				*e*Sg	Sg	11 39 10.1	-4.9
BGT				Pmax			
comp=E,22nm,0.5s
BGT				Smax			
comp=E,66nm,0.6s
CRS	**Chara**	**4.70**	**72**	*e*Pn	Pn	11 37 59.1	+0.9
CRS				*e*Pg	Pb	11 38 11.7	+1.9
CRS				*e*Sg	Sg	11 39 13.5	-4.8
CRS				Pmax			
comp=E,16nm,1.0s
CRS				Smax			
comp=E,78nm,1.6s
CRS	**Chara**	**4.70**	**72**	*e*PN	Pn	11 38 03.2	+5.0
CRS				*e*		11 38 09.6	
CRS				*e*		11 39 13.1	
CRS				pmax	pmax		
comp=Z,13nm,0.9s
CRS				smax	smax		
comp=E,75nm,0.9s
IRK	**Irkutsk**	**4.88**	**227**	*e*Sn	Sn	11 38 57.0	-0.2
IRK				*e*Sg	Sb	11 39 17.7	+6.1
IRK				Smax			
comp=E,205nm,0.5s
IRK	**Irkutsk**	**4.88**	**227**	*e*PN	Pn	11 38 01.5	+0.8
IRK				*e*		11 38 15.8	
IRK				*e*S	Sn	11 38 58.0	+0.8
IRK				*e*		11 39 17.1	
IRK				pmax	pmax		
comp=Z,80nm,0.1s
IRK				smax	smax		
comp=N,205nm,0.5s
LSTR	**Listvyanka**	**4.95**	**221**	*e*Pn	Pn	11 38 02.2	+0.6
LSTR				*e*		11 38 06.6	
LSTR				*e*		11 38 18.2	
LSTR				*e*Sn	Sn	11 38 56.3	-2.5
LSTR				*e*Sg	Sb	11 39 19.4	+5.9
LSTR				max			
comp=N,10.0nm,0.6s
LSTR				Smax			
comp=N,64nm,1.3s
TLY	**Talaya**	**5.56**	**226**	*e*Pn	Pn	11 38 08.9	-1.2
TLY				*e*		11 38 19.1	
TLY				*e*Pg	Pb	11 38 25.9	+1.4
TLY				*e*Sn	Sn	11 39 12.4	-1.5
TLY				*e*Sg	Sg	11 39 38.9	-7.1
TLY				Pmax			
comp=N,7.0nm,0.4s
TLY				Smax			
comp=N,55nm,1.0s
TLY	**Talaya**	**5.56**	**226**	*e*PN	Pb	11 38 28.4	+3.9
TLY				*e*		11 39 39.4	
TLY				pmax	pmax		
comp=Z,6.0nm,0.5s
TLY				smax	smax		
comp=E,29nm,0.6s
TUP	**Tupik**	**5.80**	**99**	*e*PN	Pn	11 38 13.5	+0.2
TUP				*e*		11 38 30.6	
TUP				*e*S	Sn	11 39 16.7	-3.0
TUP				*e*		11 39 46.3	
TUP				pmax	pmax		
comp=Z,4.0nm,0.5s
TUP				smax	smax		
comp=N,46nm,1.0s
ARS	**Arshan**	**5.92**	**233**	*e*Pn	Pn	11 38 15.2	+0.2
ARS				*e*		11 38 20.1	
ARS				*e*		11 38 29.7	
ARS				*e*Sn	Sn	11 39 21.2	-1.6
ARS				*e*Sg	Sg	11 39 50.0	-7.4
ARS				max			
comp=N,15nm,0.4s
ARS				Smax			
comp=N,198nm,0.7s
KPC	**Khapcheranga**	**6.16**	**166**	*e*Pn	Pn	11 38 18.5	+0.2
KPC				*e*Pg	Pb	11 38 39.1	+4.4
KPC				*e*Sn	Sn	11 39 25.7	-3.0
KPC				*e*Sg	Sg	11 39 58.8	-6.4
KPC				Pmax			
comp=N,10.0nm,0.6s
KPC				Smax			
comp=N,37nm,1.9s
KPC	**Khapcheranga**	**6.16**	**166**	*e*PN	Pn	11 38 19.7	+1.4
KPC				*e*		11 38 39.5	
KPC				*e*		11 39 59.1	
KPC				pmax	pmax		
comp=Z,10.0nm,0.6s
KPC				smax	smax		
comp=E,36nm,1.4s
ZAK	**Zakamensk**	**6.73**	**221**	*e*Pn	Pn	11 38 27.8	+1.6
ZAK				*e*		11 39 00.5	
ZAK				*e*		11 39 46.0	
ZAK				*e*Sg	Sg	11 40 15.9	-7.5
ZAK				max			
comp=E,15nm,1.0s
ZAK				Smax			
comp=E,30nm,1.4s
MOY	**Mondy**	**6.75**	**237**	*e*Pn	Pn	11 38 27.3	+0.8
MOY				*e*		11 38 30.7	
MOY				*e*		11 38 35.5	
MOY				Sn	Sn	11 39 40.5	-2.8
MOY				*e*Sg	Sg	11 40 15.2	-8.9
MOY				max			
comp=E,13nm,0.8s
MOY				Smax			
comp=E,51nm,1.3s
MOY	**Mondy**	**6.75**	**237**	*e*PN	Pn	11 38 30.6	+4.1
MOY				*e*		11 38 51.5	
MOY				*e*S	Sn	11 39 43.1	-0.2
MOY				*e*		11 40 15.6	
MOY				pmax	pmax		
comp=Z,8.0nm,0.6s
MOY				smax	smax		
comp=E,50nm,1.3s
ORL	**Orlik**	**6.83**	**247**	*e*Pn	Pn	11 38 29.9	+2.4
ORL				*e*Sn	Sn	11 39 44.6	-0.6
ORL				*e*		11 40 15.4	
ORL				*e*Sg	Sg	11 40 18.0	-8.6
ORL				max			
comp=E,6.0nm,0.8s
ORL				Smax			
comp=E,25nm,1.3s
ULN	**Ulaanbaatar**	**8.07**	**195**	*e*	Pn	11 38 36.0	-8.6
ULN				*e*Sg	Sg	11 40 59.8	-6.5
TDJR	**Todzha**	**8.88**	**254**	*e*		11 40 56.9	
TDJR				*e*Sg	Sg	11 41 22.7	-9.4
TDJR				*e*		11 41 35.0	
KNGR	**Kungurtug, Tuv**	**9.12**	**241**	*e*		11 40 53.0	
KNGR				*e*		11 40 58.4	
KNGR				Sg	Sn	11 41 30.7	+49

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*ISCJB **14** 11:41:52.1±0.5,21°.11S±0°.03×68°.66W±0°.09,h136km±5km, mb4.4/10,Error ellipse: s-maj=13.6km s-min=5.7km az=1.5*
*NEIC **14** 11:41:52.2±0.6,21°.14S×68°.40W,h112km±7km,mb4.3/5, ML4.0(GUC),Error ellipse: s-maj=13.4km s-min=7.7km az=101.0*
*GUC **14** 11:41:53.2±0.6,21°.10S×68°.84W,h133km±4km,ML4.0*
*IDC **14** 11:41:54.3±2.5,21°.11S×68°.14W,h119km±23km,mb3.9/6, mb1 3.9/9,mb1mx3.5/42,mbtmp4.2/9,Error ellipse: s-maj=37.6km s-min=16.7km az=116.0*
ISC 14 11:41:52.4±0.8,21°.15S±0°.04×68°.48W±0°.08,h118km±7km, n38,σ1°.89/55,mb4.5/10,8C,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.94**	**276**	*e*Pn	**Pn**	**11 42 13.9**	**0.0**
PB01				*e*Sn	**Sn**	**11 42 29.9**	**-0.1**
PB01	**IPOC Station P**	**0.94**	**276**	⇑*i*P	**Pn**	**11 42 13.9**	**0.0**
PB01				*i* S	**Sn**	**11 42 29.7**	**-0.4**
PB01				IAML		11 42 32.8	
comp=E,4μm,0.3s
PB09	**IPOC Station P**	**0.96**	**227**	⇑*i*P	**Pn**	**11 42 15.3**	**+1.2**
PB09				*i* S	**Sn**	**11 42 31.9**	**+1.4**
PB09				IAML		11 42 33.7	
comp=E,4μm,0.3s
PB08	**IPOC Station P**	**1.18**	**328**	⇑*i*P	**Pn**	**11 42 17.5**	**+0.9**
PB08				*i* S	**Sn**	**11 42 35.7**	**+0.9**
PB08				IAML		11 42 37.9	
comp=N,4μm,0.5s
PB02	**IPOC Station P**	**1.33**	**262**	⇑*i*P	**Pn**	**11 42 18.0**	**+0.1**
PB02				*i* S	**Sn**	**11 42 36.7**	**-0.6**
PB02				IAML		11 42 40.2	
comp=E,6μm,0.1s
PB07	**IPOC Station P**	**1.43**	**246**	⇑*i*P	**Pn**	**11 42 19.3**	**+0.2**
PB07				*i* S	**Sn**	**11 42 38.4**	**-1.0**
PB07				IAML		11 42 39.9	
comp=N,3μm,0.2s
PB04	**IPOC Station P**	**1.95**	**232**	*e*Pn	**Pn**	**11 42 25.3**	**-0.1**
PB04				*e*Sn	**Sn**	**11 42 49.4**	**-1.0**
PB04	**IPOC Station P**	**1.95**	**232**	⇑*i*P	**Pn**	**11 42 25.1**	**-0.3**
PB04				*i* S	**Sn**	**11 42 49.2**	**-1.3**

PB04					IAML			11 42 53.8
	comp=E,1μm,0.2s							
PSGC	**Pisagua**	**2.18**	**315**	⇑*i*P		**Pn**	**11 42 27.2**	**-0.9**
PSGC				*i* S		**Sn**	**11 42 53.0**	**-2.5**
PSGC					IAML			11 42 58.6
	comp=E,1μm,0.4s							
MNMC	**Minye Minye**	**2.26**	**332**	*e*Pn		**Pn**	**11 42 29.8**	**+0.4**
MNMC				*e*Sn		**Sn**	**11 42 57.7**	**+0.1**
MNMC	**Minye Minye**	**2.26**	**332**	⇑*i*P		**Pn**	**11 42 29.8**	**+0.4**
MNMC				*i* S		**Sn**	**11 42 57.0**	**-0.7**
PB10	**IPOC Station P**	**3.04**	**219**	*e*Pn		**Pn**	**11 42 39.4**	**+0.2**
PB10				*e*Sn		**Sn**	**11 43 08.5**	**-6.8**
PB12	**IPOC Station P**	**3.06**	**325**	*i* P		**Pn**	**11 42 38.0**	**-1.6**
PB12				*i* S		**Sn**	**11 43 12.4**	**-3.5**
PB12					IAML			11 43 21.5
	comp=E,595nm,0.5s							
GO02	**Mina Guanaco**	**4.13**	**194**	*e*Pn		**Pn**	**11 42 54.3**	**+0.3**
LPAZ	**La Paz**	**4.84**	**4**	P		**Pn**	**11 43 06.2**	**+2.3**
	comp=E,2.7nm,0.3s,baz=218,slow=4.0,SNR=57							
LPAZ	**La Paz**	**4.84**	**4**	*e*Pn		**Pn**	**11 43 05.8**	**+1.9**
GO03	**Copiap**	**6.62**	**194**	*e*Pn		**Pn**	**11 43 25.6**	**-1.7**
GO03				*e*Sn		**Sn**	**11 44 36.5**	**-4.8**
SIV	**San Ignacio**	**8.70**	**55**	P		**Pn**	**11 43 54.1**	**-1.4**
	comp=E,4.3nm,0.3s,baz=251,slow=12,SNR=45							
SIV				S		**Sn**	**11 45 26.9**	**-5.0**
	baz=319,slow=18,SNR=7.0							
PLCA	**Paso Flores**	**19.61**	**185**	P		**Pn**	**11 46 13.1**	**-0.9**
	comp=E,0.2nm,0.3s,baz=21,slow=12,SNR=6.6							
PTGA	**Pitinga**	**21.93**	**23**	P		**P**	**11 46 35.1**	**-1.4**
	comp=E,2.6nm,0.4s,baz=207,slow=16,SNR=8.5							
PTGA	**Pitinga**	**21.93**	**23**	*e*P		**P**	**11 46 34.6**	**-1.9**
	comp=E,2.7nm,0.6s							
RUSC	**La Rusia**	**27.25**	**350**	*e*P		**P**	**11 47 26.7**	**+0.5**
	comp=E,1.6nm,0.7s							
152A	**Waverly Hall**	**55.72**	**343**	*e*P		**P**	**11 51 15.4**	**-1.3**
	comp=E,18nm,0.4s							
152A				*e*S		**S**	**11 58 57.0**	**+2.9**
CNNC	**Cliffs of the**	**56.78**	**351**	*e*P		**P**	**11 51 24.4**	**+0.2**
	comp=E,106nm,0.3s							
SNAA	**Sanae**	**62.48**	**161**	P		**P**	**11 52 04.0**	**+1.0**
	comp=E,0.5nm,0.7s,baz=284,slow=8.3,SNR=3.8							
DBIC	**Dimbokro**	**68.25**	**73**	P		**P**	**11 52 41.1**	**+0.1**
	comp=E,4.6nm,0.6s,baz=231,slow=8.3,SNR=5.5							
DBIC	**Dimbokro**	**68.25**	**73**	*e*P		**P**	**11 52 40.6**	**-0.4**
	comp=E,5.0nm,0.8s							
QSPA	**South Pole Qui**	**69.04**	**180**	P		**P**	**11 52 47.6**	**+2.4**
	comp=E,0.6nm,0.4s,baz=123,slow=8.3,SNR=3.7							
IRM	**Iron Mountain**	**70.68**	**320**	*e*P		**P**	**11 52 54.9**	**-0.7**
EML	**El Monte Cty P**	**70.85**	**318**	*e*P		**P**	**11 52 56.7**	**+0.1**
PLM	**Palomar**	**71.17**	**319**	*e*P		**P**	**11 52 55.8**	**-2.9**
KOWA	**Kowa**	**72.51**	**66**	P		**P**	**11 53 07.0**	**+0.2**
	comp=E,4.4nm,0.6s,baz=248,slow=6.6,SNR=12							
TOA0	**Torodi Ar. Sit**	**76.86**	**70**	*e*P		**P**	**11 53 31.4**	**-0.6**
	comp=E,8.8nm,0.8s							
TOA0				*e*P		**P**	**11 53 32.1**	**+0.2**
TOA1	**Torodi Ar. Sit**	**76.86**	**70**	*e*P		**P**	**11 53 31.9**	**0.0**
TORD	**Torodi Ar. Bea**	**76.86**	**70**	P		**P**	**11 53 31.9**	**0.0**
	comp=E,6.6nm,0.7s,baz=257,slow=5.4,SNR=38							
KBNM	**Bluenose Ridge**	**79.29**	**320**	*e*P		**P**	**11 53 47.8**	**+2.7**
MK32	**Makanchi Array**	**145.12**	**36**	*e*PKPbc		**PKPdf**	**12 01 16.9**	**+1.0**
MKAR	**Makanchi Array**	**145.12**	**36**	PKP		**PKPdf**	**12 01 16.9**	**+1.0**
	comp=E,2.3nm,0.8s,baz=316,slow=3.2,SNR=10.0							

*WEL **14** 11:52:16.9±0.6, 33°S±9°×17°9W±2°1, h240km±10km*
*IDC **14** 11:52:16.2±4.4, 32.56S×179.84E, h271km±36km, mb3.4/5, mb1 3.6/6, mb1mx3.3/44, mbtmp4.1/6, Error ellipse: s-maj=41.2km s-min=19.0km az=42.0*
ISC 14 11:52:13.7±1.1, 32.90S±0.08×179.3W±0.2, h300km, n64, σ2°31/71, mb3.7/5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.82**	**19**	P	**Pn**	**11 53 19.2**	**+1.2**
GLKZ				S	**S**	**11 54 06.6**	**-2.9**
MXZ	**Matakaoa Point**	**5.04**	**202**	P	**Pn**	**11 53 33.5**	**+1.9**
MXZ				S	**S**	**11 54 33.7**	**-0.5**
WMGZ	**Waiomatatini S**	**5.25**	**200**	P	**Pn**	**11 53 36.7**	**+2.8**
HAZ	**Te Kaha**	**5.39**	**205**	P	**Pn**	**11 53 37.2**	**+1.6**
HAZ				S	**S**	**11 54 40.9**	**-0.7**
PKGZ	**Pakihiroa**	**5.41**	**202**	P	**Pn**	**11 53 37.5**	**+1.6**
PKGZ				S	**S**	**11 54 42.8**	**+0.6**
PUZ	**Puketiti**	**5.53**	**200**	P	**Pn**	**11 53 39.0**	**+1.7**
PUZ				S	**S**	**11 54 44.6**	**+0.1**
RUGZ	**Raukumara Rang**	**5.62**	**205**	P	**Pn**	**11 53 39.7**	**+1.3**
RUGZ				S	**S**	**11 54 44.5**	**-2.2**
TWGZ	**Tauwhareparae**	**5.71**	**202**	P	**Pn**	**11 53 41.2**	**+1.8**
TWGZ				S	**S**	**11 54 50.4**	**+1.9**
CNGZ	**Carnagh Statio**	**5.92**	**199**	P	**Pn**	**11 53 44.2**	**+2.3**
TKGZ	**Te Karaka**	**5.99**	**202**	P	**Pn**	**11 53 43.8**	**+1.1**
TKGZ				S	**S**	**11 54 54.4**	**-0.1**
MWZ	**Matawai**	**6.00**	**204**	P	**Pn**	**11 53 43.9**	**+1.1**
MWZ				S	**S**	**11 54 54.1**	**-0.8**
URZ	**Urewera**	**6.09**	**207**	P	**Pn**	**11 53 47.3**	**+3.5**
	12nm,0.3s,baz=260,slow=2.7,SNR=73						
URZ				S	**S**	**11 54 56.5**	**-0.1**
	24nm,0.3s,baz=322,slow=17,SNR=22						
URZ	**Urewera**	**6.09**	**207**	P	**Pn**	**11 53 44.6**	**+0.7**
URZ				S	**S**	**11 54 55.0**	**-1.6**
RAGZ	**Rawiri**	**6.18**	**204**	P	**Pn**	**11 53 47.8**	**+2.7**
RAGZ				S	**S**	**11 54 59.1**	**+0.2**
KARZ	**Kaharoa**	**6.26**	**214**	P	Pn	11 53 51.1	+5.1
RIGZ	**Rimuhau**	**6.26**	**201**	P	**Pn**	**11 53 47.4**	**+1.4**
KMRZ	**Kaimai**	**6.27**	**217**	P	**Pn**	**11 53 49.5**	**+3.4**
RRRZ	**Republican Roa**	**6.40**	**211**	P	Pn	11 53 52.6	+5.0
MUGZ	**Murupara**	**6.41**	**209**	P	**Pn**	**11 53 48.6**	**+0.9**
PRGZ	**Paritu Road**	**6.42**	**200**	P	**Pn**	**11 53 50.8**	**+2.8**
RTZ	**Ruatahuna**	**6.45**	**207**	P	**Pn**	**11 53 48.5**	**+0.2**
SNGZ	**Shannon Statio**	**6.47**	**204**	P	**Pn**	**11 53 50.8**	**+2.4**
HRRZ	**Handcock Road**	**6.54**	**212**	P	**Pn**	**11 53 54.0**	**+4.6**
MHGZ	**Mahia Peninsul**	**6.63**	**199**	P	Pn	11 53 54.2	+3.8
ALRZ	**Allen Road**	**6.66**	**211**	P	**Pn**	**11 53 54.5**	**+3.7**
RAHZ	**Arahi**	**6.67**	**205**	P	**Pn**	**11 53 53.1**	**+2.1**
MTHZ	**Maungataniwha**	**6.71**	**207**	P	**Pn**	**11 53 53.3**	**+1.8**
KUTZ	**Kaahu Road**	**6.83**	**214**	P	**Pn**	**11 53 57.5**	**+4.6**
TLZ	**Tolley Road**	**6.85**	**216**	P	**Pn**	**11 53 57.8**	**+4.7**
MRHZ	**Matea Rd**	**6.86**	**209**	P	**Pn**	**11 53 55.9**	**+2.7**
NMHZ	**Naumai**	**6.94**	**206**	P	**Pn**	**11 53 54.9**	**+0.7**
ARHZ	**Aropaoanui**	**7.02**	**204**	P	**Pn**	**11 53 57.8**	**+2.7**
HATZ	**Hinemaiaia**	**7.04**	**211**	P	**Pn**	**11 53 58.1**	**+2.6**
BKZ	**Black Stump Fm**	**7.11**	**207**	P	**Pn**	**11 53 56.5**	**+0.1**
MCHZ	**McNeill Hill**	**7.28**	**205**	P	**Pn**	**11 53 59.8**	**+1.5**
KWHZ	**Kaweka Forest**	**7.37**	**207**	P	**Pn**	**11 54 01.0**	**+1.6**
KRVZ	**Karewarewa**	**7.41**	**212**	P	**Pn**	**11 54 03.2**	**+3.3**
WTVZ	**West Tongariro**	**7.45**	**212**	P	**Pn**	**11 54 03.4**	**+2.9**
WTVZ				P		11 54 03.5	
TWVZ	**Taurewa**	**7.48**	**213**	P	**Pn**	**11 54 04.0**	**+3.1**
NGZ	**Ngauruhoe**	**7.49**	**212**	P	**Pn**	**11 54 03.9**	**+2.9**
KAHZ	**Kahuranaki**	**7.53**	**203**	P	**Pn**	**11 54 03.1**	**+1.6**
COVZ	**Chateau Observ**	**7.54**	**212**	P	**Pn**	**11 54 04.4**	**+2.8**
TUVZ	**Tukino**	**7.54**	**211**	P	**Pn**	**11 54 03.7**	**+2.0**
BHHZ	**Black Hill Sta**	**7.56**	**208**	P	**Pn**	**11 54 03.4**	**+1.6**
FWVZ	**Far West T-bar**	**7.58**	**212**	P	**Pn**	**11 54 03.8**	**+1.6**
WHVZ	**Whangaehu Hut**	**7.58**	**211**	P	**Pn**	**11 54 05.0**	**+2.7**
TRVZ	**Turoa**	**7.62**	**212**	P	**Pn**	**11 54 05.4**	**+2.8**
MOVZ	**Moawhango**	**7.62**	**210**	P	**Pn**	**11 54 03.8**	**+1.3**
MTVZ	**Mangateitei**	**7.72**	**212**	P	**Pn**	**11 54 06.5**	**+2.7**
PXZ	**Pawanui**	**7.75**	**202**	P	**Pn**	**11 54 06.9**	**+2.8**
WPHZ	**Waipukurau**	**7.92**	**204**	P	**Pn**	**11 54 09.4**	**+3.2**
PRHZ	**Porangahau**	**8.04**	**203**	P	**Pn**	**11 54 10.2**	**+2.6**
DVHZ	**Dannevirke**	**8.23**	**205**	P	**Pn**	**11 54 11.7**	**+1.8**
ANWZ	**Angora Road**	**8.27**	**203**	P	**Pn**	**11 54 13.3**	**+3.0**
PRWZ	**Pori Road**	**8.52**	**205**	P	**P**	**11 54 15.6**	**-3.2**
RPZ	**Rata Peaks**	**13.17**	**212**	P	**Pn**	**11 55 09.4**	**-0.7**
	1.2nm,0.3s,baz=310,slow=1.7,SNR=9.3						
RPZ				S	S	11 57 22.7	-13
	2.1nm,0.3s,baz=162,slow=20,SNR=11						
CTA	**Charters Tower**	**33.19**	**284**	P	**P**	**11 58 22.8**	**-0.2**
	2.0nm,0.6s,baz=107,slow=9.8,SNR=3.3						
ASAR	**Alice Springs**	**41.92**	**270**	P	**P**	**11 59 35.0**	**-0.6**
	1.0nm,0.6s,baz=109,slow=7.6,SNR=24						
WRA	**Warramunga Arr**	**43.13**	**276**	P	**P**	**11 59 44.5**	**-0.9**
	1.8nm,0.4s,baz=114,slow=8.0,SNR=78						
FITZ	**Fitzroy Crossi**	**51.28**	**273**	P	**P**	**12 00 46.4**	**-1.5**
	0.7nm,0.6s,baz=108,slow=5.3,SNR=5.5						
SNAA	**Sanae**	**75.69**	**179**	P	P	12 03 33.7	+7.7
	2.1nm,1.1s,baz=283,slow=4.4,SNR=9.0						
FINES	**FINESS Array B**	**147.06**	**338**	PKPbc	**PKPab**	**12 11 23.8**	**+0.9**
	1.0nm,0.3s,baz=41,slow=3.9,SNR=13						
HFS	**Hagfors**	**151.43**	**346**	PKPbc	**PKPbc**	**12 11 35.3**	**+4.0**
	1.0nm,0.4s,baz=64,slow=3.4,SNR=11						
TORD	**Torodi Ar. Bea**	**160.32**	**183**	PKPab	PKPab	12 12 27.4	+7.3
	0.3nm,0.5s,baz=194,slow=3.1,SNR=4.4						

*NNC **14** 11:58:38.8±4.1, 44.18N×83.33E, h0km, mb2.6, mpv2.2, Error ellipse: s-maj=34.3km s-min=15.5km az=128.0*
*SOME **14** 11:58:43.0, 44.30N×83.00E, h15km*
ISC 14 11:58:43.6±3.0, 44.2N±0.1×83.2E±0.2, h24km, n5, σ1°16/7, 1C-1D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**2.43**	**273**	*e*P	**Pb**	**11 59 25.9**	**-0.7**
	7.7nm,0.5s						
DJR				*e*S	**Sb**	**11 59 56.5**	**+0.3**
	9.7nm,0.5s						
MK31	**Makanchi Array**	**2.63**	**347**	⇓Pg	**Pb**	**11 59 29.3**	**-0.8**
	0.2nm,0.2s,baz=163,slow=18,SNR=46						
MK31				Lg	Lg	12 00 03.5	
	5.3nm,0.6s,baz=162,slow=26,SNR=12						
MAKZ	**Makanchi**	**2.71**	**342**	⇑Pg	**Pb**	**11 59 30.7**	**-0.7**
	0.8nm,0.5s						
MAKZ				Lg	Lg	12 00 05.7	
	1.2nm,0.3s						
PDGK	**Podgornoye**	**2.82**	**253**	Pg	**Pb**	**11 59 31.8**	**-1.5**
PDGK				Lg	Lg	12 00 09.3	
	2.9nm,0.5s						
SHLS	**Shalkode**	**2.90**	**249**	*e*P	**Pn**	**11 59 29.6**	**+1.2**
	9.6nm,0.2s						
SHLS				*e*S	**Sn**	**12 00 02.9**	**+0.3**
	18nm,0.3s						

MAN 14 12:30:27.5, 10.84N×124.91E, h9km, mb4.5, ML3.3, MS3.1, 2C-1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLP	**Palo**	**0.33**	**11**	⇑*i*P	Pg	12 30 34.6	+0.6
PLP				*i* S	Sg	12 30 39.5	+1.2
OCLP	**Ormoc**	**0.36**	**305**	*e*P	Pg	12 30 34.4	-0.3
OCLP				*e*S	Sg	12 30 39.5	0.0
MSLP	**Maasin**	**0.71**	**184**	*e*P	Pb	12 30 42.9	+0.8
MSLP				*e*S	Sn	12 30 55.6	+0.8
BESP	**Borongan**	**0.91**	**34**	*e*P	Pb	12 30 45.4	-0.1
BESP				*e*S	Sb	12 30 58.8	+1.0
LLP	**Lapu-Lapu**	**1.07**	**241**	⇓*e*P	Pg	12 30 46.4	-1.6
LLP				*e*S	Sg	12 31 01.6	-0.3
CNP	**Catarman**	**1.67**	**352**	*e*P	Pn	12 30 56.6	-0.4
CNP				*e*S	Sb	12 31 20.3	+0.6
RCP	**Roxas**	**2.24**	**289**	⇑*e*P	Pn	12 31 05.3	+0.5
RCP				*e*S	Sn	12 31 34.4	+1.7
GUIM	**Jordan**	**2.29**	**265**	*e*P	Pn	12 31 05.3	-0.2
GUIM				*e*S	Sn	12 31 31.7	-2.3

*MOS **14** 12:41:12.6±2.2, 49.20N×156.99E, h48km, mb4.3/1, Error ellipse: s-maj=42.5km s-min=5.2km az=82.4*
KRSC 14 12:41:12.6±1.9, 49.21N×156.99E, h48km±25km, ML4.2, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.58**	**340**	*e*P	Pn	12 41 37.8	-0.3
SKR				*e*S	Sn	12 41 57.2	-0.2
SKR	**Severo-Kuril's**	**1.58**	**340**	PN	Pn	12 41 37.8	-0.3
SKR				S	Sn	12 41 57.2	-0.2
PAU	**Pauzhetka**	**2.27**	**357**	*e*P	Pn	12 41 49.8	+2.3
PAU				*e*S	Sn	12 42 17.9	+3.7
PAU	**Pauzhetka**	**2.27**	**357**	PN	Pn	12 41 49.8	+2.3
PAU				S	Sn	12 42 17.9	+3.7
KDTR	**Khodutka, Kamc**	**2.70**	**15**	*e*P	Pn	12 41 56.9	+3.5
KDTR				*e*S	Sn	12 42 29.7	+4.9
MIPR	**Malaya Ipel'ka**	**3.08**	**357**	*e*P	Pn	12 42 00.4	+1.8
MIPR				*e*S	Sn	12 42 37.1	+2.9
MIPR	**Malaya Ipel'ka**	**3.08**	**357**	PN	Pn	12 42 00.4	+1.8
MIPR				S	Sn	12 42 37.1	+2.9
ASAK	**Asacha**	**3.23**	**10**	*e*P	Pn	12 42 04.7	+3.9
ASAK				*e*S	Sn	12 42 43.0	+4.9
ASAK	**Asacha**	**3.23**	**10**	PN	Pn	12 42 04.7	+3.9
ASAK				S	Sn	12 42 43.0	+4.9
MTVR	**Mutnovka**	**3.37**	**13**	*e*P	Pn	12 42 06.8	+4.1
MTVR				*e*S	Sn	12 42 45.8	+4.3
MTVR	**Mutnovka**	**3.37**	**13**	PN	Pn	12 42 06.8	+4.1
MTVR				S	Sn	12 42 45.8	+4.3
RUS	**Russkaya**	**3.37**	**16**	*e*P	Pn	12 42 05.9	+3.2
RUS				*e*S	Sn	12 42 46.4	+5.0
RUS	**Russkaya**	**3.37**	**16**	PN	Pn	12 42 05.9	+3.2
RUS				S	Sn	12 42 46.4	+5.0
KRMR	**Karymshinskiy**	**3.70**	**11**	P	Pn	12 42 11.1	+4.0
KRMR				*e*S	Sn	12 42 54.2	+4.8
KRMR	**Karymshinskiy**	**3.70**	**11**	PN	Pn	12 42 11.1	+4.0
KRMR				S	Sn	12 42 54.2	+4.8
APC	**Apacha**	**3.73**	**2**	*e*P	Pn	12 42 11.0	+3.5
APC	**Apacha**	**3.73**	**2**	PN	Pn	12 42 11.0	+3.5
PET	**Petropavlovsk**	**3.97**	**15**	⇓*i*PN	Pn	12 42 15.0	+4.2
PET				*e*S	Sn	12 43 02.1	+6.2
PET				smax	smax		
	comp=E,51nm,0.6s						
PET				smax	smax		
	comp=N,45nm,0.4s						
DALK	**Dalny**	**3.99**	**16**	*e*P	Pn	12 42 15.2	+4.1
DALK				*e*S	Sn	12 43 02.0	+5.5
DALK	**Dalny**	**3.99**	**16**	PN	Pn	12 42 15.2	+4.1
DALK				S	Sn	12 43 02.0	+5.5
UGLR	**Uglovaya**	**4.17**	**15**	*e*P	Pn	12 42 18.2	+4.5
UGLR	**Uglovaya**	**4.17**	**15**	PN	Pn	12 42 18.2	+4.5
AVH	**Avacha**	**4.21**	**14**	*e*P	Pn	12 42 19.9	+5.7
AVH				*e*S	Sn	12 43 06.4	+4.3
AVH	**Avacha**	**4.21**	**14**	PN	Pn	12 42 19.9	+5.7
AVH				S	Sn	12 43 06.4	+4.3
NLC	**Nalytchevo**	**4.24**	**20**	*e*S	Sn	12 43 06.0	+3.3
SDLR	**Sedlovina**	**4.25**	**16**	*e*P	Pn	12 42 18.7	+3.9
SDLR	**Sedlovina**	**4.25**	**16**	PN	Pn	12 42 18.7	+3.9
KRER	**Koryakskii**	**4.25**	**14**	*e*P	Pn	12 42 19.1	+4.2
KRER	**Koryakskii**	**4.25**	**14**	PN	Pn	12 42 19.1	+4.2
KRX	**Arik**	**4.29**	**13**	*e*P	Pn	12 42 20.1	+4.8
KRX	**Arik**	**4.29**	**13**	PN	Pn	12 42 20.1	+4.8
SPN	**Mys Shipunski**	**4.34**	**25**	*e*P	Pn	12 42 20.1	+4.2
SPN				*e*S	Sn	12 43 10.8	+5.6
SPN	**Mys Shipunski**	**4.34**	**25**	PN	Pn	12 42 20.1	+4.2
SPN				S	Sn	12 43 10.8	+5.6
GNL	**Ganaly**	**4.54**	**7**	*e*P	Pn	12 42 23.0	+4.3
GNL	**Ganaly**	**4.54**	**7**	PN	Pn	12 42 23.0	+4.3
MKZ	**Mys Kozlova**	**6.11**	**27**	*e*P	Pn	12 42 44.2	+4.1
MKZ				*e*S	Sn	12 43 52.5	+3.9
MKZ	**Mys Kozlova**	**6.11**	**27**	PN	Pn	12 42 44.2	+4.1
MKZ				S	Sn	12 43 52.5	+3.9
KZV	**Kizimen**	**6.26**	**18**	*e*P	Pn	12 42 47.2	+4.9
KZV	**Kizimen**	**6.26**	**18**	PN	Pn	12 42 47.2	+4.9
KBTR	**Krutoberegovo**	**7.86**	**25**	*e*P	Pn	12 43 07.3	+3.2
KBTR	**Krutoberegovo**	**7.86**	**25**	PN	Pn	12 43 07.3	+3.2
BKI	**Bering**	**8.15**	**39**	*e*S	Sn	12 44 40.4	+1.6

MEX 14 13:09:30.7±1.1, 16.47N×98.39W, h17km±999km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.10**	**351**	*e*P	Pb	13 09 47.8	-3.6
TLIG				*e*S	Sb	13 10 00.5	-5.0
ACX	**Acapulco**	**1.47**	**286**	*e*P	Pn	13 09 52.8	-3.6
ACX				*e*S	Sn	13 10 10.4	-4.8
ACP2	**Acapulco**	**1.49**	**286**	*e*P	Pn	13 09 53.9	-2.9
ACP2				*i* S	Sn	13 10 11.3	-4.5
VHO	**Vista Hermosa**	**1.69**	**69**	*e*P	Pn	13 09 56.1	-3.6
VHO				*e*S	Sn	13 10 15.6	-5.5
CAIG	**El Cayaco**	**1.89**	**288**	*e*P	Pn	13 09 58.5	-3.7
CAIG				*e*S	Sn	13 10 21.4	-4.3
PLIG	**Platanillo**	**2.19**	**331**	*e*P	Pn	13 10 03.1	-3.3
PLIG				*e*S	Sn	13 10 29.2	-4.0
HUIG	**Huatulco**	**2.30**	**107**	*e*P	Pn	13 10 04.4	-3.4
HUIG				*e*S	Sn	13 10 31.6	-4.2

*KRNET **14** 13:15:34.3±0.1, 39.04N×70.50E, mb2.9*
*NNC **14** 13:15:35.6±2.5, 38.71N×70.86E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=34.9km s-min=8.0km az=163.0*
*ISCJB **14** 13:15:38.9±0.9, 39.10N±0.07×70.67E±0.06, h10km, Error ellipse: s-maj=11.4km s-min=5.3km az=150.9*
ISC 14 13:15:37.8±1.2, 39.06N±0.07×70.68E±0.05, h10km, n13, σ2°14/26, 13C-10D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	**Batken**	**1.00**	**6**	⇓*i*P	**Pg**	**13 15 55.1**	**-2.1**
	baz=14						
BTK				⇓*i*S	**Sb**	**13 16 09.8**	**-0.9**
	baz=14						
DZET	**Dzherino**	**1.47**	**261**	P	**Pn**	**13 16 04.6**	**+0.1**
	22nm,0.3s						
DZET				S	**Sg**	**13 16 26.7**	**+1.6**
	128nm,0.5s						
SFK	**Sufi-Kurgan**	**2.38**	**66**	⇑Pn	**Pn**	**13 16 14.6**	**-2.5**
	3.5nm,0.2s						
SFK				⇓Sn	**Sb**	**13 16 50.6**	**+0.2**
	15nm,0.4s						
SFK	**Sufi-Kurgan**	**2.38**	**66**	⇓*i*P	**Pb**	**13 16 18.9**	**-2.0**
	baz=66						
SFK				⇓*i*S	**Sb**	**13 16 51.5**	**+1.1**
	baz=66						
ARSB	**Arslanbob**	**2.87**	**37**	⇓*e*P	**Pn**	**13 16 25.4**	**+1.6**
	baz=39						
ARSB				⇓*i*S	**Sb**	**13 17 01.8**	**-2.6**
	baz=39						
MNAS	**Manas**	**3.69**	**21**	⇑Pn	**Pn**	**13 16 37.9**	**+2.8**
	2.1nm,0.4s						
MNAS				⇓Sn	**Sb**	**13 17 26.3**	**-1.9**
	9.0nm,0.7s						
MNAS	**Manas**	**3.69**	**21**	⇑*i*P	**Pn**	**13 16 35.9**	**+0.8**
	baz=23						
MNAS				⇑*i*S	**Sn**	**13 17 20.1**	**+1.3**
	baz=23						
AML	**Almayashu**	**3.83**	**36**	⇓*e*P	**Pn**	**13 16 38.2**	**+1.0**
	baz=37						
AML				⇓*i*S	**Sn**	**13 17 25.3**	**+2.8**
	baz=37						
KK31	**Karatay Array**	**4.04**	**358**	Pn	**Pn**	**13 16 42.6**	**+2.9**
	0.9nm,0.4s,baz=180,slow=13,SNR=11						
KK31				⇑Sn	**Sb**	**13 17 34.7**	**-3.3**
	2.9nm,0.7s,baz=194,slow=25,SNR=4.1						
UCH	**Uchtor**	**4.30**	**41**	⇑*i*P	**Pn**	**13 16 45.3**	**+1.5**
	baz=43						
UCH				⇑*i*S	**Sn**	**13 17 37.1**	**+2.9**
	baz=43						
KZA	**Kyzart**	**4.60**	**48**	⇑*e*P	**Pn**	**13 16 49.8**	**+2.0**
	baz=49						
KZA				⇑*e*S	**Sn**	**13 17 44.0**	**+2.4**
	baz=49						
NRN	**Naryn**	**4.71**	**58**	⇑*i*P	**Pn**	**13 16 50.6**	**+1.4**
	baz=59						
NRN				⇑*i*S	**Sn**	**13 17 47.0**	**+2.9**
	baz=59						
USP	**Ospenovka**	**5.10**	**33**	⇑*i*P	**Pn**	**13 16 55.4**	**+1.1**
	baz=34						
USP				⇑*i*S	**Sn**	**13 17 54.9**	**+1.7**
	baz=34						

*DDA **14** 13:25:05.8, 37.17N×42.52E, h7km, Md2.7*
*CSEM **14** 13:25:07.8±1.4, 37.15N×42.41E, h2km, ML2.6, Error ellipse: s-maj=27.4km s-min=14.2km az=141.0*
*ISK **14** 13:25:08.6, 37.16N×42.47E, h15km, ML2.6/4*
ISC 14 13:25:07.1±2.8, 37.1N±0.1×42.5E±0.1, h12km±13km, n13, σ1°01/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRN	**S¨–rnak**	**0.38**	**347**	*i* P	**Pg**	**13 25 13.1**	**-1.6**
SIRN	**S¨–rnak**	**0.38**	**347**	P	**Pg**	**13 25 13.1**	**-1.6**
SIRT	**Sirnak**	**0.38**	**351**	PG	**Pg**	**13 25 15.9**	**+1.3**
SIRT				SG	**Sb**	**13 25 21.4**	**-0.2**
SIRT	**Sirnak**	**0.38**	**351**	*e*Pg	**Pg**	**13 25 15.9**	**+1.3**
SIRT				*e*Sg	**Sb**	**13 25 21.4**	**-0.2**
BTMN	**Batman**	**1.25**	**308**	*i* P	**Pn**	**13 25 28.9**	**-1.5**
BTMN				*i* S	**Sb**	**13 25 46.5**	**-0.1**
BTMN	**Batman**	**1.25**	**308**	P	**Pn

HEF				MSG		14 14 50.0	
	comp=Z,2.5nm,0.2s						
HEF				SG	Sg	14 14 51.2	-1.5
ERTU	**Ertsjaerv**	**1.52**	**149**	PG	Pn	14 14 35.0	-1.1
ERTU				SG	Sg	14 14 54.9	-1.5
KALU	**Kalix**	**2.36**	**147**	PB	Pn	14 14 48.3	+0.7
KALU				SB	Sn	14 15 18.2	+1.0
TOF	**Tornio**	**2.41**	**136**	MSG		14 15 19.1	
	comp=Z,2.5nm,0.2s						
TOF				SG	Sb	14 15 21.1	-0.9
RNF	**Rovaniemi**	**2.58**	**116**	PB	Pn	14 14 52.3	+1.6
RNF				SN	Sn	14 15 23.1	+0.4

*NEIC **14** 14:14:38.1±0.0, 16°.35N×98°.43W, h20km, MD4.0(MEX), After MEX.*
MEX 14 14:14:38.1±1.0, **16°.35N×98°.43W, h20**km±47km, **MD4.0, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.21**	**354**	*e*P	Pn	14 14 57.2	-2.9
TLIG				*e*S	Sb	14 15 11.1	-4.7
TLIG	**Tlapa**	**1.21**	**354**	*e*P	Pn	14 14 57.2	-2.9
TLIG				*e*S	Sb	14 15 11.1	-4.7
ACX	**Acapulco**	**1.46**	**291**	*i* P	Pn	14 14 59.0	-4.5
ACX				*i* S	Sn	14 15 15.7	-6.3
ACX	**Acapulco**	**1.46**	**291**	*i* P	Pn	14 14 59.0	-4.5
ACX				*i* S	Sn	14 15 15.7	-6.3
VHO	**Vista Hermosa**	**1.78**	**66**	*e*P	Pn	14 15 04.6	-3.3
VHO				*e*S	Sn	14 15 27.3	-2.7
VHO	**Vista Hermosa**	**1.78**	**66**	*e*P	Pn	14 15 04.6	-3.3
VHO				*e*S	Sn	14 15 27.3	-2.7
HUIG	**Huatulco**	**2.31**	**104**	*e*P	Pn	14 15 10.0	-5.0
HUIG				*i* S	Sn	14 15 35.2	-7.6
HUIG	**Huatulco**	**2.31**	**104**	*e*P	Pn	14 15 10.0	-5.0
HUIG				*i* S	Sn	14 15 35.2	-7.6

*ISCJB **14** 14:32:36.9±0.5, 40°.87N±0°.03×35°.79E±0°.04, h0km, Error ellipse: s-maj=4.5km s-min=3.9km az=24.9*
*CSEM **14** 14:32:37.1±0.2, 40°.88N×35°.80E, h1km, ML2.0, Error ellipse: s-maj=4.3km s-min=3.4km az=122.0, Suspected Mining explosion.*
*DDA **14** 14:32:37.5, 40°.90N×35°.82E, h7km, Ml2.5, Suspected Mining explosion.*
*ISK **14** 14:32:37.2, 40°.96N×35°.86E, h22km±1km, ML2.0/4*
ISC 14 14:32:37.2±0.8, **40°.87N**±0°.04×**35°.78E**±0°.03, **h0**km, **n22,** σ0§**49**/39, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAVZ	**Havza**	**0.21**	**347**	*i* P	**Pg**	**14 32 40.9**	**-0.4**
HAVZ				*i* S	**Sg**	**14 32 44.9**	**+0.8**
HAVZ	**Havza**	**0.21**	**347**	P	**Pg**	**14 32 40.9**	**-0.4**
HAVZ				S	**Sg**	**14 32 44.9**	**+0.8**
KVT	**Kavak**	**0.29**	**43**	PG	**Pg**	**14 32 42.5**	**-0.4**
KVT				SG	**Sg**	**14 32 46.5**	**-0.2**
KVT	**Kavak**	**0.29**	**43**	*e*Pg	**Pg**	**14 32 42.5**	**-0.4**
KVT				*e*Sg	**Sg**	**14 32 46.5**	**-0.2**
SAMS	**Samsun-Alacam**	**0.58**	**32**	*i* P	**Pg**	**14 32 47.9**	**-0.5**
SAMS				*i* S	**Sg**	**14 32 56.8**	**+0.8**
SAMS	**Samsun-Alacam**	**0.58**	**32**	P	**Pg**	**14 32 47.9**	**-0.5**
SAMS				S	**Sg**	**14 32 56.8**	**+0.8**
ERBA	**Erbaa**	**0.76**	**104**	*i* P	**Pg**	**14 32 51.7**	**-0.1**
ERBA				*i* S	**Sg**	**14 33 01.9**	**+0.2**
ERBA	**Erbaa**	**0.76**	**104**	P	**Pg**	**14 32 51.7**	**-0.1**
ERBA				S	**Sg**	**14 33 01.9**	**+0.2**
CTAK	**Corum_Osmancik**	**0.78**	**254**	*i* P	**Pb**	**14 32 53.7**	**-0.1**
CTAK				*i* S	**Sn**	**14 33 09.7**	**+1.5**
CTAK	**Corum_Osmancik**	**0.78**	**254**	P	**Pb**	**14 32 53.7**	**-0.1**
COAL	**Corum-Alaca**	**0.86**	**225**	*i* P	**Pb**	**14 32 55.1**	**0.0**
COAL				*i* S	**Sn**	**14 33 10.2**	**+0.2**
COAL	**Corum-Alaca**	**0.86**	**225**	P	**Pb**	**14 32 55.1**	**0.0**
COAL				S	**Sn**	**14 33 10.1**	**+0.2**
DIKM	**Dikmen**	**0.88**	**334**	PG	**Pg**	**14 32 53.6**	**-0.4**
DIKM				SG	**Sg**	**14 33 05.8**	**+0.4**
DIKM	**Dikmen**	**0.88**	**334**	*e*Pg	**Pg**	**14 32 53.6**	**-0.4**
DIKM				*e*Sg	**Sg**	**14 33 05.8**	**+0.4**
CORM	**Corum**	**1.11**	**232**	PN	**Pb**	**14 32 59.3**	**-0.1**
CORM				SN	**Sn**	**14 33 15.6**	**-0.7**
CORM	**Corum**	**1.11**	**232**	*e*Pn	**Pb**	**14 32 59.3**	**-0.1**
CORM				*e*Sn	**Sn**	**14 33 15.6**	**-0.7**
SNOP	**Sinop**	**1.23**	**340**	PN	**Pg**	**14 33 00.3**	**-0.5**
SNOP	**Sinop**	**1.23**	**340**	*e*Pn	**Pg**	**14 33 00.3**	**-0.5**
SINO	**SINOP_Merkez**	**1.23**	**340**	*i* P	**Pg**	**14 33 00.4**	**-0.4**
SINO				*i* S	**Sg**	**14 33 16.8**	**0.0**
SINO	**SINOP_Merkez**	**1.23**	**340**	P	**Pg**	**14 33 00.4**	**-0.4**
SINO				S	**Sg**	**14 33 16.8**	**0.0**
YOZ	**Yozgat**	**1.27**	**196**	PN	**Pn**	**14 33 02.4**	**0.0**
YOZ	**Yozgat**	**1.27**	**196**	*e*Pn	**Pn**	**14 33 02.4**	**0.0**

*ISK **14** 14:45:38.9, 36°.43N×28°.96E, h17km, ML3.2/20*
*DDA **14** 14:45:39.4, 36°.49N×28°.94E, h7km, Ml3.4.*
*CSEM **14** 14:45:39.5±0.2, 36°.40N×28°.99E, h22km±1km, ML3.4, Error ellipse: s-maj=3.7km s-min=2.3km az=17.0*
*ISCJB **14** 14:45:39.4±0.4, 36°.38N±0°.03×29°.01E±0°.02, h30km±3km, Error ellipse: s-maj=4.7km s-min=2.9km az=20.0*
*NIC **14** 14:45:39.8±0.4, 36°.55N×29°.04E, h25km, ML3.4*
*ATH **14** 14:45:39.4, 36°.45N×28°.97E, h39km±3km, ML2.8/6, Error ellipse: s-maj=3.6km s-min=1.3km az=143.0*
*THE **14** 14:45:39.7, 36°.42N×28°.93E, h7km±3km, ML2.6/1, Error ellipse: s-maj=3.1km s-min=0.9km az=73.0*
ISC 14 14:45:39.1±1.1, **36°.41N**±0°.02×**28°.99E**±0°.02, **h18**km±6km, **n90,** σ0§**72**/136, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.24**	**19**	PG	**Pb**	**14 45 44.5**	**-0.3**
FETY	**Fethiye**	**0.24**	**19**	P	**Pb**	**14 45 44.5**	**-0.3**
FETY				S	**Sb**	**14 45 49.6**	**+1.0**
FETY	**Fethiye**	**0.24**	**19**	*e*Pg	**Pb**	**14 45 44.5**	**-0.3**
FETY				S	**Sb**	**14 45 49.6**	**+1.0**
DALY	**Dalyan (Mu¨la**	**0.48**	**327**	PG	**Pb**	**14 45 48.6**	**-0.6**
DALY				SG	**Sb**	**14 45 55.6**	**-0.4**
DALY	**Dalyan (Mu¨la**	**0.48**	**327**	*i* P	**Pb**	**14 45 48.8**	**-0.3**
DALY				*i* S	**Sb**	**14 45 56.0**	**+0.1**
DALY	**Dalyan (Mu¨la**	**0.48**	**327**	P	**Pb**	**14 45 48.8**	**-0.3**
DALY				*e*Sg	**Sb**	**14 45 55.6**	**-0.4**
DALY				S	**Sb**	**14 45 56.0**	**+0.1**
AKAS	**Kas**	**0.53**	**110**	PG	**Pb**	**14 45 50.2**	**+0.2**
AKAS				SG	**Sb**	**14 45 58.7**	**+1.3**
AKAS	**Kas**	**0.53**	**110**	*i* P	**Pb**	**14 45 50.1**	**+0.1**
AKAS				*i* S	**Sn**	**14 45 59.9**	**-0.6**
AKAS	**Kas**	**0.53**	**110**	*e*Pg	**Pb**	**14 45 50.2**	**+0.2**
AKAS				*e*Sg	**Sb**	**14 45 58.7**	**+1.3**
AKAS				S	**Sn**	**14 45 59.9**	**-0.6**
KSL	**Kastellorizon**	**0.55**	**118**	P	**Pb**	**14 45 50.8**	**+0.6**
KSL				S	**Sn**	**14 46 02.0**	**+1.3**
KSL				AML	AML	14 46 02.2	
	comp=E,1889μm,0.4s						
KSL				AML	AML	14 46 02.9	
	comp=N,1166μm,0.4s						
KSL	**Kastellorizon**	**0.55**	**118**	P	**Pb**	**14 45 51.2**	**+1.0**
KSL				S	**Sn**	**14 46 00.8**	**0.0**
TURN	**Turunc**	**0.55**	**326**	PG	**Pn**	**14 45 52.5**	**+0.4**
TURN				SG	**Sn**	**14 46 02.4**	**+1.5**
TURN	**Turunc**	**0.55**	**326**	*i* P	**Pn**	**14 45 52.6**	**+0.4**
TURN				*i* S	**Sn**	**14 46 02.5**	**+1.6**
TURN	**Turunc**	**0.55**	**326**	*e*Pg	**Pn**	**14 45 52.5**	**+0.4**
TURN				*e*Sg	**Sn**	**14 46 02.4**	**+1.5**
MRSB	**Marmaris-Mugla**	**0.70**	**296**	PG	**Pb**	**14 45 52.9**	**0.0**
MRSB				SG	**Sb**	**14 46 02.5**	**+0.2**
MRSB	**Marmaris-Mugla**	**0.70**	**296**	*e*Pg	**Pb**	**14 45 52.9**	**0.0**
MRSB				*e*Sg	**Sb**	**14 46 02.5**	**+0.2**
ARG	**Arkhangelos**	**0.72**	**255**	PG	**Pb**	**14 45 53.0**	**-0.2**
ARG	**Arkhangelos**	**0.72**	**255**	P	**Pg**	**14 45 52.6**	**-0.7**
ARG				S	**Sn**	**14 46 05.6**	**+0.5**
ARG				AML	AML	14 46 07.2	
	comp=E,980μm,0.3s						
ARG				AML	AML	14 46 09.2	
	comp=N,770μm,0.3s						
ARG	**Arkhangelos**	**0.72**	**255**	P	**Pb**	**14 45 53.3**	**+0.1**
ARG	**Arkhangelos**	**0.72**	**255**	*e*Pg	**Pb**	**14 45 53.0**	**-0.2**
ARG	**Arkhangelos**	**0.72**	**255**	P	**Pb**	**14 45 53.3**	**+0.1**
ARG				S	**Sn**	**14 46 05.1**	**0.0**
ELL	**Elmali**	**0.81**	**65**	PG	**Pn**	**14 45 55.7**	**-0.2**
ELL	**Elmali**	**0.81**	**65**	*e*Pg	**Pn**	**14 45 55.7**	**-0.2**
GLHS	**Glhisar (BURDU**	**0.85**	**29**	PG	**Pb**	**14 45 55.2**	**-0.2**
GLHS	**Glhisar (BURDU**	**0.85**	**29**	*e*Pg	**Pb**	**14 45 55.2**	**-0.2**
YER	**Yerkesik**	**0.92**	**322**	PG	**Pn**	**14 45 56.7**	**-0.5**
YER	**Yerkesik**	**0.92**	**322**	P	**Pg**	**14 45 56.6**	**-0.4**
YER				S	**Sn**	**14 46 09.8**	**-0.2**
YER	**Yerkesik**	**0.92**	**322**	*e*Pg	**Pn**	**14 45 56.7**	**-0.5**
YER				S	**Sn**	**14 46 09.8**	**-0.2**
GOLH	**Golhisar**	**0.94**	**29**	*i* P	**Pb**	**14 45 56.1**	**-1.0**
GOLH				*i* S	**Sn**	**14 46 10.4**	**-0.3**
GOLH	**Golhisar**	**0.94**	**29**	P	**Pb**	**14 45 56.1**	**-1.0**
GOLH				S	**Sn**	**14 46 10.4**	**-0.3**
DATC	**Datca-Mugla**	**1.12**	**288**	PN	**Pn**	**14 45 59.9**	**-0.1**
DATC	**Datca-Mugla**	**1.12**	**288**	*e*Pn	**Pn**	**14 45 59.9**	**-0.1**
DAT	**Datca**	**1.18**	**286**	PN	**Pb**	**14 46 00.7**	**-0.3**
DAT	**Datca**	**1.18**	**286**	*i* P	**Pn**	**14 46 00.6**	**-0.3**
DAT				*i* S	**Sn**	**14 46 17.2**	**+0.7**
DAT	**Datca**	**1.18**	**286**	*e*Pn	**Pb**	**14 46 00.7**	**-0.3**
DAT				S	**Sn**	**14 46 17.2**	**+0.7**
KORT	**Korkueli**	**1.24**	**61**	PN	**Pg**	**14 46 02.5**	**-0.7**
KORT	**Korkueli**	**1.24**	**61**	*i* P	**Pg**	**14 46 03.0**	**-0.2**
KORT				*i* S	**Sg**	**14 46 21.4**	**+1.9**
KORT	**Korkueli**	**1.24**	**61**	*e*Pn	**Pg**	**14 46 02.5**	**-0.7**
KORT	**Korkueli**	**1.24**	**61**	P	**Pg**	**14 46 03.0**	**-0.2**
DNZL	**Cakiroluk**	**1.28**	**2**	*i* P	**Pb**	**14 46 02.7**	**-0.1**
DNZL				*i* S	**Sn**	**14 46 19.1**	**+0.1**
DNZL	**Cakiroluk**	**1.28**	**2**	P	**Pb**	**14 46 02.7**	**-0.1**
DNZL				S	**Sn**	**14 46 19.1**	**+0.1**
MLSB	**Milas**	**1.31**	**313**	PN	**Pb**	**14 46 02.7**	**-0.6**
MLSB	**Milas**	**1.31**	**313**	*e*Pn	**Pb**	**14 46 02.7**	**-0.6**
DENT	**Denizli**	**1.34**	**2**	PN	**Pb**	**14 46 03.2**	**-0.6**
DENT	**Denizli**	**1.34**	**2**	*e*Pn	**Pb**	**14 46 03.2**	**-0.6**
BDRM	**Kayabasi**	**1.40**	**298**	*i* P	**Pn**	**14 46 03.8**	**0.0**
BDRM				*i* S	**Sn**	**14 46 21.3**	**-0.5**
BDRM	**Kayabasi**	**1.40**	**298**	P	**Pn**	**14 46 03.8**	**0.0**
BDRM				S	**Sn**	**14 46 21.3**	**-0.5**
ANTB	**Antalya**	**1.43**	**70**	PN	**Pb**	**14 46 05.3**	**+0.1**
ANTB	**Antalya**	**1.43**	**70**	*e*Pn	**Pb**	**14 46 05.3**	**+0.1**
BODT	**Bodrum**	**1.50**	**296**	PN	**Pn**	**14 46 04.2**	**-0.9**
BODT	**Bodrum**	**1.50**	**296**	P	**Pn**	**14 46 03.7**	**-1.4**
BODT	**Bodrum**	**1.50**	**296**	P	**Pn**	**14 46 03.7**	**-1.4**
BODT	**Bodrum**	**1.50**	**296**	*e*Pn	**Pn**	**14 46 04.2**	**-0.9**
AYDN	**Tasoluk**	**1.53**	**325**	*i* P	**Pb**	**14 46 06.6**	**-0.4**
AYDN				*i* S	**Sb**	**14 46 26.1**	**-0.1**
AYDN	**Tasoluk**	**1.53**	**325**	P	**Pb**	**14 46 06.6**	**-0.4**
AYDN				S	**Sb**	**14 46 26.0**	**-0.1**
YKAV	**Yalikavak-Bodr**	**1.54**	**298**	PN	**Pn**	**14 46 05.8**	**0.0**
YKAV	**Yalikavak-Bodr**	**1.54**	**298**	*e*Pn	**Pn**	**14 46 05.8**	**0.0**
KARP	**Karpathos**	**1.71**	**240**	PN	**Pn**	**14 46 08.7**	**+0.6**
KARP	**Karpathos**	**1.71**	**240**	P	**Pn**	**14 46 07.9**	**-0.3**
KARP				S	**Sn**	**14 46 30.2**	**+0.6**
KARP				AML	AML	14 46 30.4	
	comp=N,300μm,0.2s						
KARP				AML	AML	14 46 31.4	
	comp=E,308μm,0.3s						
KARP	**Karpathos**	**1.71**	**240**	P	**Pn**	**14 46 08.0**	**-0.1**
KARP	**Karpathos**	**1.71**	**240**	P	**Pn**	**14 46 08.2**	**+0.1**
KARP	**Karpathos**	**1.71**	**240**	*e*Pn	**Pn**	**14 46 08.7**	**+0.6**
KARP				S	**Sn**	**14 46 30.0**	**+0.4**
AYDB	**Zeytinkoy-Aydi**	**1.76**	**331**	PN	**Pn**	**14 46 09.3**	**+0.4**
AYDB	**Zeytinkoy-Aydi**	**1.76**	**331**	*e*Pn	**Pn**	**14 46 09.3**	**+0.4**
ISP	**Isparta**	**1.87**	**41**	PN	**Pn**	**14 46 10.6**	**+0.3**
ISP	**Isparta**	**1.87**	**41**	*e*Pn	**Pn**	**14 46 10.6**	**+0.3**
GCAM	**G?zelcaml?**	**1.90**	**313**	PN	**Pn**	**14 46 10.7**	**0.0**
GCAM	**G?zelcaml?**	**1.90**	**313**	*e*Pn	**Pn**	**14 46 10.7**	**0.0**
SUTC	**Sutluce-Ispart**	**1.93**	**56**	PN	**Pn**	**14 46 12.4**	**+1.2**
SUTC	**Sutluce-Ispart**	**1.93**	**56**	*e*Pn	**Pn**	**14 46 12.4**	**+1.2**
KULA	**Kula-Manisa**	**2.12**	**353**	PN	**Pn**	**14 46 14.6**	**+0.9**
KULA	**Kula-Manisa**	**2.12**	**353**	*e*Pn	**Pn**	**14 46 14.6**	**+0.9**
SMG	**Samos**	**2.15**	**308**	P	**Pn**	**14 46 14.9**	**+0.7**
SMG				S	**Sn**	**14 46 38.9**	**-1.5**
SMG				AML	AML	14 46 42.3	
	comp=N,760μm,0.3s						
SMG				AML	AML	14 46 42.9	
	comp=E,724μm,0.2s						
SMG	**Samos**	**2.15**	**308**	P	**Pn**	**14 46 14.5**	**+0.3**
SMG				S	**Sn**	**14 46 39.2**	**-1.2**
ZKR	**Zakros**	**2.60**	**241**	P	**Pn**	**14 46 20.9**	**+0.7**
ZKR				S	**Sn**	**14 46 51.5**	**+0.1**
ZKR				AML	AML	14 46 53.9	
	comp=N,90μm,0.5s						
ZKR				AML	AML	14 46 54.8	
	comp=E,144μm,0.3s						
ZKR	**Zakros**	**2.60**	**241**	P	**Pn**	**14 46 21.0**	**+0.7**
ZKR				S	**Sn**	**14 46 51.5**	**+0.1**
URLA	**Izmir**	**2.72**	**316**	PN	**Pn**	**14 46 22.7**	**+0.7**
URLA	**Izmir**	**2.72**	**316**	*e*Pn	**Pn**	**14 46 22.7**	**+0.7**
AKMC	**Akamas**	**3.05**	**116**	P	**Pn**	**14 46 25.6**	**-0.9**
	baz=300						
AKMC	**Akamas**	**3.05**	**116**	P	**Pn**	**14 46 25.6**	**-0.9**
CHOS	**Chios island**	**3.06**	**311**	P	**Pn**	**14 46 26.8**	**+0.2**
CHOS				S	**Sn**	**14 47 03.0**	**+0.2**
CHOS				AML	AML	14 47 05.8	
	comp=E,214μm,0.2s						
CHOS				AML	AML	14 47 06.6	
	comp=N,129μm,0.3s						
CHOS	**Chios island**	**3.06**	**311**	P	**Pn**	**14 46 26.9**	**+0.2**
CHOS				S	**Sn**	**14 47 02.3**	**-0.5**
PPCY	**Paphos**	**3.13**	**118**	P	**Pn**	**14 46 27.0**	**-0.6**
	baz=302						
PPCY	**Paphos**	**3.13**	**118**	P	**Pn**	**14 46 27.0**	**-0.6**
ALFC	**Alefka**	**3.19**	**112**	P	**Pn**	**14 46 27.1**	**-1.4**
	baz=296						
ALFC				S	**Sn**	**14 47 04.1**	**-2.0**
ALFC	**Alefka**	**3.19**	**112**	P	**Pn**	**14 46 27.1**	**-1.4**
ALFC				S	**Sn**	**14 47 04.1**	**-2.0**
SZAC	**Souni**	**3.58**	**116**	P	**Pn**	**14 46 32.6**	**-1.2**
	baz=300						
SZAC				S	**Sn**	**14 47 14.7**	**-0.9**
SZAC	**Souni**	**3.58**	**116**	P	**Pn**	**14 46 32.6**	**-1.2**
SZAC				S	**Sn**	**14 47 14.7**	**-0.9**
CSS	**Mathiatis**	**3.82**	**111**	P	**Pn**	**14 46 36.5**	**-0.6**
	baz=295						
CSS				S	**Sn**	**14 47 20.8**	**-0.8**
CSS	**Mathiatis**	**3.82**	**111**	P	**Pn**	**14 46 36.5**	**-0.6**
CSS				S	**Sn**	**14 47 20.8**	**-0.8**

*ISCJB **14** 14:54:11.0±0.3, 8°.73S±0°.04×110°.30E±0°.03, h100km, mb4.4/34, Error ellipse: s-maj=6.2km s-min=4.3km az=13.0*
*DJA **14** 14:54:12.3±0.3, 9°.5S±5°.11°0E±°, h71km±5km, M4.7/20, mB5.1/4, mb4.7/11, MLv4.8/20, Mw(mB)4.5/4*
*NEIC **14** 14:54:14.1±1.2, 8°.53S×110°.49E, h110km±11km, mb4.3/4, Error ellipse: s-maj=10.7km s-min=6.6km az=56.0*
*IDC **14** 14:54:14.3±1.6, 8°.56S×110°.47E, h111km±14km, mb4.2/30, mb1 4.3/32, mb1mx4.1/62, mbtmp4.6/32, MS2.9/4, Ms1 3.0/4, ms1mx2.6/56, Error ellipse: s-maj=13.2km s-min=8.8km az=61.0*
ISC 14 14:54:12.7±0.4, **8°.70S**±0°.06×**110°.37E**±0°.05, **h100**km, **n87,** σ1§**46**/85, **mb4.4**/34, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UGM	**Wanagama**	**0.80**	**11**	P	**Pn**	**14 54 31.6**	**+0.5**
UGM				S	**Sn**	**14 54 45.6**	**+0.7**
PCJI	**Pacitan**	**0.94**	**58**	P	**Pn**	**14 54 32.4**	**-0.1**
PCJI				S	**Sn**	**14 54 47.4**	**0.0**
WOJI	**Wonogiri, Jawa**	**1.02**	**32**	P	**Pn**	**14 54 33.4**	**+0.1**
WOJI				S	**Sn**	**14 54 48.5**	**-0.4**
PWJI	**Pagerwojo**	**1.57**	**65**	P	**Pn**	**14 54 40.4**	**+0.6**
SMRI	**Semarang**	**1.64**	**2**	P	**Pn**	**14 54 42.8**	**+2.0**
NGJI	**Ngawi**	**1.71**	**39**	P	**Pn**	**14 54 45.1**	**+3.5**
KPJI	**Karang Pucung**	**1.97**	**314**	P	**Pn**	**14 54 45.8**	**+0.9**
CMJI	**Cimerak**	**2.11**	**295**	P	**Pn**	**14 54 45.5**	**-1.2**
TBJI	**Tambak Boyo**	**2.38**	**38**	P	**Pn**	**14 54 51.9**	**+1.7**
GRJI	**Gresik**	**2.74**	**50**	P	**Pn**	**14 54 56.6**	**+1.6**
CISI	**Cisompet, Garu**	**2.78**	**294**	P	**Pn**	**14 54 54.4**	**-1.2**
GMJI	**Gumukmas**	**3.07**	**82**	P	**Pn**	**14 55 00.1**	**+0.7**
LEM	**Lembang**	**3.31**	**304**	P	Pn	14 55 04.6	+1.9
	9.7nm,0.3s,baz=114,slow=8.7,SNR=13						
LEM				S	**Sn**	**14 55 44.1**	**+2.8**
	62nm,0.3s,baz=108,slow=20,SNR=11						
LEM				LR	LR	14 56 25.9	
	comp=Z,114nm,21.2s,baz=142,slow=40						
LEM	**Lembang**	**3.31**	**304**	P	Pn	14 55 03.9	+1.2
BLJI	**Banyuglugur**	**3.33**	**74**	P	**Pn**	**14 55 04.3**	**+1.4**
JAGI	**Jajag, Banyuwa**	**3.75**	**87**	P	**Pn**	**14 55 08.8**	**+0.3**
DBJI	**Dramaga**	**4.18**	**300**	P	**Pn**	**14 55 15.2**	**+0.9**
SRBI	**Singaraja**	**4.83**	**83**	P	**Pn**	**14 55 23.6**	**+0.5**
PBKI	**Pangkalan Bun**	**6.10**	**12**	P	**Pn**	**14 55 43.1**	**+2.7**
TWSI	**Taliwang, Sumb**	**6.43**	**91**	P	**Pn**	**14 55 45.8**	**+0.8**
	22nm,0.7s,2μm0.3nm						
PLAI	**Plampang**	**7.32**	**92**	P	**Pn**	**14 55 58.0**	**+1.0**
	52nm,0.6s,0.3nm						
MDSI	**Maura Dua**	**7.44**	**304**	P	**Pn**	**14 55 58.6**	**-0.1**
	23nm,1.0s,0.1nm						
STKI	**Sintang**	**8.78**	**7**	P	**Pn**	**14 56 20.7**	**+3.8**
	24nm,0.8s						
MASI	**Maura Aman, Be**	**9.79**	**304**	P	**Pn**	**14 56 30.8**	**+0.1**
	104nm,0.7s						
PCI	**Palu**	**12.20**	**51**	P	P	14 57 16.5	+5.1
PDSI	**Padang**	**12.54**	**308**	P	P	14 57 18.8	+3.5
MPSI	**Mapaga**	**13.07**	**47**	P	**Pn**	**14 57 17.8**	**+3.2**
APSI	**Ampana**	**13.64**	**56**	P	**P**	**14 57 25.9**	**-1.5**
MBWA	**Marble Bar**	**15.32**	**145**	*e*Pn	**Pn**	**14 57 40.5**	**-3.1**
	32nm,0.4s						
PSI	**Prapat**	**16.15**	**315**	LR	LR	15 04 29.7	
	comp=Z,76nm,19.0s,baz=263,slow=38						
FITZ	**Fitzroy Crossi**	**17.53**	**124**	P	**Pn**	**14 58 12.0**	**+1.1**
	0.6nm,0.3s,baz=291,slow=6.2,SNR=22						
FITZ				S	Sn	15 01 10.1	-16
	0.3nm,0.3s,baz=208,slow=18,SNR=4.8						
DAV	**Davao City (W)**	**21.80**	**45**	LR	LR	15 07 52.5	
	comp=Z,18nm,21.1s,baz=146,slow=38						
WRA	**Warramunga Arr**	**25.73**	**118**	P	**P**	**14 59 34.3**	**+0.2**
	5.0nm,0.8s,baz=291,slow=11,SNR=59						
WRA				PcP	**PcP**	**15 03 02.1**	**+0.3**
	0.6nm,0.7s,baz=291,slow=2.2,SNR=3.4						
WRAB	**Tennant Creek**	**25.73**	**118**	*e*P	**P**	**14 59 33.6**	**-0.5**
	2.0nm,0.6s						
ASAR	**Alice Springs**	**26.99**	**126**	P	**P**	**14 59 45.8**	**+0.3**
	3.1nm,0.7s,baz=303,slow=9.1,SNR=56						
ASAR				PcP	**PcP**	**15 03 05.7**	**+0.9**
	0.4nm,0.4s,baz=302,slow=1.9,SNR=4.1						
CMAR	**Chiang Mai Arr**	**29.25**	**337**	P	**P**	**15 00 04.2**	**-1.3**
	1.8nm,0.5s,baz=172,slow=8.0,SNR=13						
CMAR				LR	LR	15 13 19.0	
	comp=Z,36nm,18.5s,baz=194,slow=39						
STKA	**Stephens Creek**	**37.03**	**133**	P	**P**	**15 01 13.9**	**+0.9**
	11nm,0.6s,baz=312,slow=9.2,SNR=27						
STKA				PcP	**PcP**	**15 03 32.8**	**+0.8**
	2.6nm,0.6s,baz=352,slow=5.1,SNR=4.0						
H08S2	**Diego Garcia H**	**37.50**	**269**	T	T	15 40 31.2	
	baz=94,slow=75,SNR=18						
H08S3	**Diego Garcia H**	**37.51**	**269**	T	T	15 40 32.2	
	baz=94,slow=75,SNR=16						
H08S1	**Diego Garcia H**	**37.52**	**269**	T	T	15 40 30.1	
	baz=94,slow=75,SNR=14						
ODAN	**Odare**	**41.80**	**328**	*e*P	**P**	**15 01 51.6**	**-1.3**
RAMN	**Ramite**	**42.28**	**328**	*e*P	**P**	**15 01 55.8**	**-1.1**
	6.3nm,0.4s						
LSA	**Lhasa**	**42.43**	**335**	*e*P	**P**	**15 01 54.2**	**-4.0**
	2.2nm,0.5s						
JIRN	**Jiri**	**43.07**	**328**	*e*P	**P**	**15 02 02.5**	**-0.9**
	42nm,0.6s						
PKIN	**Phulchoki**	**43.42**	**327**	*e*P	**P**	**15 02 03.9**	**-2.2**
	8.2nm,0.6s						
GUN	**Gumba**	**43.43**	**328**	*e*P	**P**	**15 02 05.5**	**-0.8**
	34nm,0.6s						
DMN	**Daman**	**43.61**	**327**	*e*P	**P**	**15 02 06.2**	**-1.4**
	21nm,0.7s						
KKN	**Kakani**	**43.66**	**327**	*e*P	**P**	**15 02 06.6**	**-1.3**
	15nm,0.8s						
GKN	**Gorkha**	**44.17**	**327**	*e*P	**P**	**15 02 10.6**	**-1.4**
	12nm,0.3s						
KOLN	**Koldanda**	**44.56**	**325**	*e*P	**P**	**15 02 13.6**	**-1.6**
	27nm,0.6s						
DANN	**Dangsing**	**44.92**	**326**	*e*P	**P**	**15 02 16.5**	**-1.6**
	40nm,0.6s						
PYUN	**Piuthan**	**45.16**	**325**	*e*P	**P**	**15 02 18.4**	**-1.5**
	44nm,1.0s						
JNU	**Nakatsue**	**45.95**	**24**	P	**P**	**15 02 24.9**	**-0.9**
	8.1nm,0.6s,baz=

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAKT	HAKKARI	1.00	70	P	Pg	14 58 30.7	0.0
HAKT				S	Sn	14 58 46.6	-0.1
BTMN	Batman	1.19	304	*i* P	Pb	14 58 34.8	+0.3
BTMN				*i* S	Sb	14 58 50.5	+0.3
BTMN	Batman	1.19	304	P	Pb	14 58 34.8	+0.3
BTMN				S	Sb	14 58 50.5	+0.3
GURO	Guroymak-BITLI	1.38	344	PN	Pb	14 58 37.5	-0.2
GURO				SN	Sn	14 58 55.9	0.0
GURO	Guroymak-BITLI	1.38	344	*e*Pn	Pb	14 58 37.5	-0.2
GURO				*e*Sn	Sn	14 58 55.9	0.0
SVAN	Silvan-Diyarba	1.40	312	PN	Pn	14 58 37.4	-0.1
SVAN				SN	Sb	14 58 55.7	-0.3
SVAN	Silvan-Diyarba	1.40	312	*i* P	Pn	14 58 37.4	-0.1
SVAN				*i* S	Sn	14 58 56.0	-0.2
SVAN	Silvan-Diyarba	1.40	312	P	Pn	14 58 37.4	-0.1
SVAN				*e*Sn	Sb	14 58 55.7	-0.3
SVAN				S	Sn	14 58 56.0	-0.2
MAZI	Mazidag	1.67	279	PN	Pn	14 58 41.2	-0.1
MAZI				SN	Sn	14 59 02.5	-0.6
MAZI	Mazidag	1.67	279	*e*Pn	Pn	14 58 41.2	-0.1
MAZI				*e*Sn	Sn	14 59 02.5	-0.6
DIY	Diyarbakir	1.94	291	*e*Pn	Pn	14 58 46.3	+1.3
DYBB	Diyarbakir	2.03	292	PN	Pn	14 58 46.3	+0.1

NNC 14 14:58:18.4±0.5, 40°.46N×62°.96E, h6km±3km, mb3.7, mpv3.5, 8C-5D, Error ellipse: s-maj=7.1km s-min=2.3km az=147.0, Northwestern Uzbekistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GYA0B	ALIBECK ARRAY	4.53	238	⇑Pn	Pn	14 59 28.0	+0.4
	4.9nm,0.6s						
GYA0B				⇑Pg	Pb	14 59 41.0	+2.6
	12nm,0.4s						
GYA0B				⇓Sn	Sn	15 00 21.5	+0.8
	32nm,0.5s						
GYA0B				⇓Lg	Lg	15 00 42.0	
	82nm,0.8s						
KK31	Karatay Array	6.23	62	⇑Pn	Pn	14 59 51.3	+0.4
	0.4nm,0.3s,baz=19,slow=54,SNR=3.7						
KK31				⇑Pg	Pb	15 00 12.2	+4.9
	2.0nm,0.5s,baz=250,slow=14,SNR=3.7						
KK31				⇓Lg	Lg	15 01 35.6	
	6.1nm,0.4s,baz=239,slow=24,SNR=9.3						
MNAS	Manas	7.45	71	⇑Pn	Pn	15 00 07.5	-0.2
	2.1nm,1.2s						
MNAS				⇑Pg	Pb	15 00 33.9	+5.8
	2.6nm,0.8s						
MNAS				⇑Lg	Lg	15 02 13.1	
	13nm,0.7s						
AB31	Akbulak array	9.05	347	⇓Pn	Pn	15 00 29.2	-0.3
	0.1nm,0.2s,baz=164,slow=14,SNR=7.6						
AB31				⇓Lg	Lg	15 03 06.5	
	4.6nm,0.7s,baz=152,slow=27,SNR=5.4						
AKTO	Aktyubinsk	10.56	342	⇑Lg	Lg	15 03 54.8	
	9.0nm,1.2s						

IDC 14 15:07:47.3±0.9, 17°.46S×173°.95W, h0km, mb4.0/8, mb1 4.3/9, mb1mx3.9/52, mbtmp4.0/9, ML3.7/1, MS3.2/7, Ms1 3.2/7, ms1mx2.9/46, Error ellipse: s-maj=39.1km s-min=18.8km az=144.0
ISCJB 14 15:07:48.2±0.5, 17°.12S±0°.09×174°.22W±0°.09, h10km, mb4.6/19, MS3.2/5, Error ellipse: s-maj=15.8km s-min=9.0km az=43.1
NEIC 14 15:07:53.9±1.8, 17°.11S×174°.16W, h39km±17km, mb5.0/8, Error ellipse: s-maj=17.9km s-min=10.4km az=138.0
ISC 14 15:07:49.1±0.7, 17°.2S±0°.1×174°.0W±0°.1, h10km, n43, σ1°69/29, mb4.6/19, MS3.1/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	3.89	34	P	Pn	15 08 50.9	+1.9
	4.7nm,0.3s,baz=227,slow=3.3,SNR=17						
AFI				Sn	Sn	15 09 32.4	-2.4
	32nm,0.3s,baz=46,slow=20,SNR=6.8						
AFI				LR	LR	15 10 19.2	
	comp=Z,93nm,21.4s,baz=74,slow=37						
AFI	Afiamalu	3.89	34	*e*Pn	Pn	15 08 50.1	+1.1
AFI				*e*Sn	Sn	15 09 30.0	-4.8
AFI				*e*Sg	Sb	15 09 31.0	-14
FUNA	Funafuti	10.85	322	*e*Pn	Pn	15 10 26.4	+1.8
DZM	Mont Dzumac	19.05	252	LR	LR	15 18 25.7	
	comp=Z,250nm,18.9s,baz=122,slow=34						
PAE	Paea	23.30	95	*e*T	T	15 36 09.2	
	3.6nm,0.3s						
PPT2	Papeete2	23.31	95	*e*T	T	15 36 12.2	
	3.2nm,0.3s						
PPT	Papeete	23.31	95	LR	LR	15 19 19.8	
	comp=Z,43nm,21.1s,baz=262,slow=30						
TVO	Taravao	23.61	95	*e*T	T	15 36 33.9	
	1.3nm,0.3s						
TBI	Tubuai	23.81	109	*e*T	T	15 36 44.8	
	9.6nm,0.4s						
VAH	Vaihoa	25.39	89	*e*T	T	15 38 47.8	
	6.0nm,0.3s						
THZ	Tophouse	26.96	202	*e*P	P	15 13 33.2	+2.2
	309nm,2.0s						
LTZ	Lake Taylor	28.08	202	*e*P	P	15 13 42.7	+1.7
	293nm,2.0s						
OXZ	Oxford	28.64	202	*e*P	P	15 13 49.3	+3.4
	64nm,1.2s						
TAOE	Nuku Hiva Isla	33.96	80	*e*LR	LR	15 23 02.5	
	134nm,29.3s						
RKT	Rikitea	37.03	106	*e*T	T	15 53 16.0	
	4.5nm,0.4s						
CTA	Charters Tower	37.72	259	P	P	15 15 06.1	+0.8
	1.9nm,0.5s,baz=88,slow=11,SNR=5.6						
CTAO	Charters Tower	37.72	259	*e*P	P	15 15 04.6	-0.7
	11nm,1.4s						
PMG	Port Moresby	38.52	276	*e*P	P	15 15 09.9	-2.2
	13nm,1.0s						
HUH	Hualalai	40.74	27	*e*P	P	15 15 32.9	+2.1
	195nm,1.4s						
WRAB	Tennant Creek	48.89	258	*e*P	P	15 16 34.7	-0.9
	26nm,1.8s						
WR1	Warramunga Arr	48.90	258	*e*P	P	15 16 34.4	-1.3
	29nm,1.9s						
WRA	Warramunga Arr	48.90	258	P	P	15 16 34.4	-1.3
	1.3nm,0.3s,baz=98,slow=6.9,SNR=45						
AS01	Alice Springs	48.99	253	*e*P	P	15 16 35.0	-1.3
AS31	Alice Springs	49.03	253	*e*P	P	15 16 36.2	-0.5
	4.6nm,0.9s						
ASAR	Alice Springs	49.03	253	P	P	15 16 35.6	-1.1
	15nm,0.8s,baz=89,slow=7.6,SNR=60						
GUMO	Guam	50.83	304	LR	LR	15 35 48.5	
	comp=Z,15nm,20.7s,baz=141,slow=33						
FITZ	Fitzroy Crossi	57.30	259	P	P	15 17 37.4	-0.2
	1.2nm,0.8s,baz=165,slow=14,SNR=3.5						
FITZ	Fitzroy Crossi	57.30	259	*e*P	P	15 17 37.6	0.0
CASY	Casey	68.57	205	*e*P	P	15 18 51.5	-0.3
	40nm,1.7s						
MJAR	Matsushiro Arr	69.92	321	LR	LR	15 45 05.1	
	comp=Z,11nm,21.2s,baz=65,slow=32						
QSPA	South Pole Qui	72.88	180	P	P	15 19 16.3	-2.0
	3.1nm,0.7s,baz=91,slow=1.8,SNR=7.3						
SAO	San Andreas Ge	73.03	42	*e*P	P	15 19 21.0	+1.6
	31nm,1.2s						
ALPC	Antelope	73.88	45	*e*P	P	15 19 24.6	+0.1
PETK	Petropavlovsk-	74.14	343	P	P	15 19 31.2	+5.7
	0.9nm,0.7s,baz=163,slow=10,SNR=2.7						
PEA1	Petropavlovsk-	74.14	343	*e*P	P	15 19 31.2	+5.6
NVAR	Mina Array Bea	76.02	42	P	P	15 19 38.6	+1.6
	0.8nm,0.9s,baz=231,slow=8.7,SNR=3.6						
PDAR	Pinedale Array	83.96	42	P	P	15 20 20.9	+1.0
	0.2nm,0.5s,baz=232,slow=4.4,SNR=2.4						
ILAR	Eielson Array	84.28	11	P	P	15 20 20.0	-0.7
	0.2nm,0.7s,baz=235,slow=8.2,SNR=4.0						
SNAA	Sanae	91.18	177	LR	LR	16 02 59.1	
	comp=Z,16nm,18.1s,baz=140,slow=36						
ULM	Lac du Bonnet	95.66	39	LR	LR	15 58 35.6	
	comp=Z,20nm,18.2s,baz=44,slow=32						
BR101	Keskin Array S	147.13	319	*e*PKPbc	PKPab	15 27 34.0	-0.5
BRTR	Keskin Array B	147.13	319	PKPbc	PKPab	15 27 34.0	-0.5
	0.9nm,0.8s,baz=139,slow=4.1,SNR=6.0						
MMAI	Mount Meron Ar	149.19	306	PKPbc	PKPbc	15 27 39.0	+0.5
	3.2nm,0.9s,baz=83,slow=4.9,SNR=2.9						

DDA 14 15:16:05.6, 37°.93N×41°.73E, h7km, Ml2.7
ISK 14 15:16:05.4, 37°.99N×41°.70E, h5km, ML2.6/8
ISCJB 14 15:16:06.1±0.7, 37°.94N±0°.03×41°.71E±0°.03, h1km±6km, Error ellipse: s-maj=5.8km s-min=4.4km az=175.5
CSEM 14 15:16:06.3±0.2, 37°.96N×41°.70E, h2km, ML2.7, Error ellipse: s-maj=6.2km s-min=3.5km az=9.0
ISC 14 15:16:06.6±1.0, 37°.98N±0°.03×41°.74E±0°.02, h8km±9km, n32, σ0°90/47, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRTM	Siirt_Merkez	0.14	84	*i* P	Pg	15 16 09.7	0.0
SRTM				*i* S	Sg	15 16 19.6	+7.7
SRTM	Siirt_Merkez	0.14	84	P	Pg	15 16 09.7	0.0
BTMN	Batman	0.38	257	*i* P	Pg	15 16 13.9	-0.1
BTMN				*i* S	Sb	15 16 24.8	+3.0
BTMN	Batman	0.38	257	P	Pg	15 16 13.9	-0.1
SVAN	Silvan-Diyarba	0.46	292	PG	Pg	15 16 14.9	-0.7
SVAN				SG	Sg	15 16 21.9	+0.3
SVAN	Silvan-Diyarba	0.46	292	*i* P	Pg	15 16 14.6	-1.0
SVAN				*i* S	Sg	15 16 22.3	+0.7
SVAN	Silvan-Diyarba	0.46	292	P	Pg	15 16 14.6	-1.0
SVAN	Silvan-Diyarba	0.46	292	*e*Pg	Pg	15 16 14.9	-0.7
SVAN				*e*Sg	Sg	15 16 21.9	+0.3
SVAN				S	Sg	15 16 22.3	+0.7
GURO	Guroymak-BITLI	0.62	22	PG	Pg	15 16 18.5	0.0
GURO				SG	Sb	15 16 28.1	-0.5
GURO	Guroymak-BITLI	0.62	22	*e*Pg	Pg	15 16 18.5	0.0
GURO				*e*Sg	Sb	15 16 28.1	-0.5
SIRT	Sirnak	0.73	130	PG	Pb	15 16 21.4	-0.2
SIRT	Sirnak	0.73	130	*e*Pg	Pb	15 16 21.4	-0.2
MARD	Mardin	1.01	229	*i* P	Pg	15 16 25.1	-0.9
MARD				*i* S	Sg	15 16 38.5	-0.6
BNGL	BINGOL	1.08	335	*i* P	Pg	15 16 26.0	-1.3
BNGL				*i* S	Sn	15 16 44.1	+0.6
HANI	Diyarbakir_Han	1.14	293	*i* P	Pg	15 16 27.8	-0.7
HANI				*i* S	Sb	15 16 44.0	+0.3
HANI	Diyarbakir_Han	1.14	293	P	Pg	15 16 27.8	-0.7
HANI				S	Sb	15 16 44.0	+0.3
MAZI	Mazidag	1.15	244	PN	Pg	15 16 27.7	-0.9
MAZI	Mazidag	1.15	244	*e*Pn	Pg	15 16 27.7	-0.9
DIY	Diyarbakir	1.20	267	*e*Pn	Pn	15 16 30.1	+0.4
DYBB	Diyarbakir	1.27	269	PN	Pg	15 16 30.1	-0.7
DIYA	Diyarbakir	1.28	268	*i* P	Pg	15 16 29.0	-2.2
DIYA				*i* S	Sg	15 16 47.2	-0.6
DIYA	Diyarbakir	1.28	268	P	Pg	15 16 29.0	-2.2
DIYA				S	Sg	15 16 47.2	-0.6
HAKT	HAKKARI	1.61	104	*i* P	Pg	15 16 36.7	-0.8
HAKT				*i* S	Sg	15 16 57.9	-0.6
HAKT	HAKKARI	1.61	104	P	Pg	15 16 36.7	-0.8
HAKT				S	Sg	15 16 57.9	-0.6
SVRC	Sivrice-ELAZID	1.96	283	PN	Pn	15 16 40.3	0.0
SVRC	Sivrice-ELAZID	1.96	283	*e*Pn	Pn	15 16 40.3	0.0
PTK	Pertek	2.06	297	PN	Pn	15 16 42.1	+0.4
PTK	Pertek	2.06	297	*e*Pn	Pn	15 16 42.1	+0.4
URFA	Urfa	2.38	258	PN	Pn	15 16 46.8	+0.9
URFA	Urfa	2.38	258	*e*Pn	Pn	15 16 46.8	+0.9
MALT	Malatya	2.63	278	PN	Pn	15 16 50.0	+0.5
MALT	Malatya	2.63	278	*e*Pn	Pn	15 16 50.0	+0.5

JMA 14 15:17:48.2±0.2, 23°.64N×121°.68E, h0km, M2.9
ISCJB 14 15:17:49.7±0.3, 23°.70N±0°.01×121°.61E±0°.02, h7km±2km, Error ellipse: s-maj=3.0km s-min=2.1km az=33.8
TAP 14 15:17:49.8, 23°.71N×121°.52E, h10km, ML3.4, C
ISC 14 15:17:49.8±0.8, 23°.69N±0°.02×121°.56E±0°.02, h12km±5km, n88, σ0°86/116, 2C-15D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	Guangfu	0.13	259	⇓*i* P	Pg	15 17 52.6	-0.5
	baz=254						
EGFH				*e*S	Sg	15 17 54.8	-0.6
	baz=254						
ESL	Shilin	0.17	315	⇓*i* P	Pg	15 17 53.1	-0.6
	baz=314						
ESL				*i* S	Sg	15 17 55.2	-1.2
	baz=314						
ENLB	Shoufeng	0.21	9	⇓*e*P	Pg	15 17 55.0	+0.6
	baz=18						
ENLB				*e*S	Sg	15 17 59.7	+2.2
	baz=18						
HGSD	Ruisui	0.24	213	⇓P	Pg	15 17 55.7	+0.8
	baz=194						
HGSD				S	Sg	15 18 00.1	+1.9
	baz=194						
HWA	Hwalien	0.28	8	*e*P	Pb	15 17 56.4	-0.5
	baz=7.0						
EHY	Hungye	0.29	230	⇑*i* P	Pg	15 17 55.6	-0.1
	baz=229						
TWD	Chiawan	0.39	4	⇓*i* P	Pg	15 17 57.7	+0.2
	baz=2.0						
TWD				*e*S	Sg	15 18 02.8	+0.1
	baz=2.0						
YULB	Yu-li	0.39	219	P	Pg	15 17 57.7	+0.2
	baz=225						
YULB				*e*S	Sb	15 18 03.9	-0.7
	baz=225						
VWDT	VWDT	0.39	279	⇓P	Pb	15 17 57.7	-1.0
	baz=279						
TWF1	Yuli	0.42	216	⇑P	Pg	15 17 58.4	+0.3
	baz=220						
TWF1				S	Sg	15 18 04.1	+0.4
	baz=220						
NACB	Ninganchiao	0.48	3	*e*P	Pg	15 17 58.9	-0.3
	baz=358						
CHGB	Renai	0.51	316	⇓P	Pb	15 17 59.9	-1.0
	baz=323						
CHGB				S	Sg	15 18 06.3	-0.4
	baz=323						
FULB	Fuli	0.55	207	*e*P	Pb	15 18 02.1	+0.7
	baz=220						
SSLB	Suanglung	0.57	280	⇓P	Pb	15 18 00.7	-1.0
	baz=280						
SSLB				S	Sg	15 18 07.2	-1.2
	baz=280						
CHKT	Chengkung	0.62	197	⇓P	Pg	15 18 02.4	+0.5
	baz=193						
CHKT				S	Sb	15 18 12.3	+1.0
	baz=193						
SMLT	Sun Moon Lake	0.64	287	⇓P	Pb	15 18 02.3	-0.7
	baz=287						
SMLT				S	Sb	15 18 10.7	-1.2
	baz=287						
TYC	Yuchr	0.68	288	⇓P	Pb	15 18 02.8	-0.8
	baz=288						
ELDTW	Lidau	0.71	225	*e*P	Pg	15 18 03.4	-0.3
	baz=232						
ENA	Nanau	0.75	12	*e*P	Pg	15 18 04.1	-0.3
	baz=359						
NNSB	Datong	0.75	347	⇓P	Pb	15 18 04.4	-0.5
	baz=339						
NNSB				S	Sg	15 18 13.6	-0.7
	baz=339						
NNSH	Datong	0.75	347	*e*P	Pg	15 18 04.2	-0.2
	baz=341						
NNSH				*e*S	Sg	15 18 13.7	-0.6
	baz=341						
NANB	Nanao	0.75	13	*e*P	Pg	15 18 04.3	-0.1
	baz=359						
NNS	Nan Shan	0.76	347	*e*P	Pg	15 18 03.5	-1.2
	baz=339						
NNS				*e*S	Sg	15 18 13.8	-0.9
	baz=339						
WJS	Zhushan	0.78	280	*e*P	Pn	15 18 06.3	-0.3
	baz=274						
WGK	Gukeng	0.92	270	*e*P	Pn	15 18 08.9	+0.4
	baz=270						
TCU	Taichung	0.93	299	*e*P	Pn	15 18 08.9	+0.2
	baz=298						
WDLH	Douliu	0.94	270	*e*P	Pn	15 18 09.2	+0.3
	baz=271						
ENTT	Nioudou	0.94	0	*e*P	Pb	15 18 07.8	-0.3
	baz=1.0						
TPUB	Ta-pu	0.94	246	*e*P	Pn	15 18 08.7	-0.3
	baz=233						
TWC	Suao	0.95	16	*e*P	Pb	15 18 08.1	-0.1
	baz=2.0						
TWGBT	Beinan	0.98	207	*e*P	Pg	15 18 07.2	-1.6
	baz=205						
TWG	Pinlang	0.98	208	*e*P	Pg	15 18 07.3	-1.4
	baz=205						
WTP	Ta-pu	0.98	243	*e*P	Pn	15 18 09.2	-0.3
	baz=232						
TWH	Lutao	0.98	185	*e*P	Pg	15 18 07.3	-1.5
	baz=166						
YHNB	Yeheng	0.99	350	⇓P	Pn	15 18 09.1	-0.5
	baz=339						
YHNB				*e*S	Sg	15 18 21.1	-0.6
	baz=339						
EOS1	EOS1	0.99	31	*e*P	Pn	15 18 09.7	+0.1
	baz=56						
NSK	Sanguang	0.99	349	⇓P	Pb	15 18 09.1	+0.1
	baz=338						
NSK				*e*S	Sg	15 18 21.3	-0.7
	baz=338						
WCHH	Zhanghua	1.00	293	*e*P	Pn	15 18 10.2	+0.5
	baz=291						
CHN2	Minshiung	1.01	261	*e*P	Pn	15 18 10.4	+0.6
	baz=262						
NSY	Sanyi	1.03	315	⇓*e*P	Pn	15 18 11.4	+1.3
	baz=315						
TWE	Neicheng	1.03	5	*e*P	Pb	15 18 09.6	0.0
	baz=7.0						
SLBB	Yuanshan	1.06	4	*e*P	Pb	15 18 10.1	0.0
	baz=4.0						
CHY	Chiayi	1.06	260	*e*P	Pn	15 18 11.2	+0.7
	baz=260						
NSTT	Nanjuang	1.06	331	*e*P	Pn	15 18 10.9	+0.4
	baz=329						
NSTT				*e*S	Sg	15 18 22.6	-1.7
	baz=329						
LIOB	Emei	1.07	332	P	Pn	15 18 11.3	+0.6
	baz=332						
TWK	Hsinying	1.08	247	P	Pn	15 18 11.0	+0.2
	baz=247						
TWK				*e*S	Sn	15 18 25.5	-0.1
	baz=247						
CHN1	Nanshi	1.08	242	P	Pn	15 18 11.4	+0.7
	baz=243						
CHN1				*e*S	Sn	15 18 26.4	+0.7
	baz=243						
SGST	Jiashian	1.09	236	*e*P	Pn	15 18 11.8	+0.9
	baz=236						
SGST				*e*S	Sn	15 18 28.2	+2.3
	baz=236						
SLGT	Liugui	1.09	231	*e*P	Pg	15 18 09.9	-1.0
	baz=231						
NMLH	Miaoli	1.10	320	*e*P	Pn	15 18 12.7	+1.6
	baz=319						
RLNB	Erlin	1.12	280	*e*P	Pn	15 18 12.1	+0.8
	baz=281						
RLNB				*e*S	Sn	15 18 28.4	+1.7
	baz=281						
WLGB	Puzi	1.18	260	*e*P	Pn	15 18 13.1	+0.9
	baz=272						
NTC	Toucheng	1.18	12	*e*P	Pg	15 18 13.5	+0.9
	baz=357						
SBCB	Hsinchu	1.21	334	*e*P	Pg	15 18 13.8	+0.6
	baz=333						
ECL	Taimali	1.23	207	*e*P	Pg	15 18 13.8	+0.4
	baz=189						
WSF	Szhu	1.23	268	*e*P	Pg	15 18 13.5	0.0
	baz=268						
CHN3	Shinhua	1.26	241	*e*P	Pg	15 18 15.5	+1.4
	baz=243						
SSD	Sandimen	1.27	222	*e*P	Pg	15 18 14.0	-0.4
	baz=215						
TATO	Taipei	1.28	357	*e*P	Pg	15 18 13.9	-0.5
	baz=356						
CHN8	Yiju	1.29	255	*e*P	Pg	15 18 14.6	0.0
	baz=256						
TIPB	Shuangxi	1.29	11	*e*P	Pn	15 18 12.6	-1.1
	baz=357						
NCUH	Zhongli	1.31	345	*e*P	Pg	15 18 15.8	+0.7
SCLT	Jiali	1.36	248	*e*P	Pb	15 18 15.1	-0.1
	baz=250						
MASBT	Mashibuluo	1.38	219	*e*P	Pn	15 18 14.8	0.0
	baz=220						
NWF	Wu-fen Shan	1.39	8	*e*P	Pg	15 18 18.1	+1.6
	baz=13						
WFSB	Wu-fen Shan	1.39	8	*e*P	Pg	15 18 17.0	+0.5
	baz=12						
YM04	YM04	1.45	359	*e*P	Pg	15 18 18.0	+0.2
	baz=359						
YM10	YM10	1.46	360	*e*P	Pn	15 18 16.2	+0.2
	baz=1.0						
YM11	YM11	1.47	0	*e*P	Pg	15 18 18.4	+0.4
	baz=1.0						
JYNG	Yonaguni jima	1.47	59	P	Pn	15 18 15.5	-0.6
JYNG				S	Sn	15 18 36.4	+1.1
YM07	YM07	1.48	2	*e*P	Pb	15 18 17.0	-0.2
	baz=3.0						
YM03	YM03	1.48	359	*e*P	Pg	15 18 18.8	+0.6
	baz=358						
YOJ	Yonaguni jima	1.53	60	*e*P	Pn	15 18 17.2	+0.3
	baz=64						
YOJ	Yonaguni jima	1.53	60	P	Pn	15 18 17.1	+0.2
YOJ				*e*S	Sn	15 18 36.8	+0.1
SCZT	Fangliau	1.58	214	*e*P	Pb	15 18 19.0	0.0
	baz=215						
LAY	Lan-yu	1.65	180	*e*P	Pn	15 18 16.1	-2.5
	baz=164						
WDGT	Dungji	1.80	256	*e*P	Pn	15 18 20.8	+0.1
	baz=267						
PHUB	P'eng-hu	1.84	265	*e*P	Pb	15 18 22.4	-1.0
	baz=265						
PNG	Penghu	1.85	266	*e*P	Pn	15 18 21.9	+0.5
	baz=267						
IRIF	Iriomote-Funau	2.08	72	P	Pn	15 18 24.8	+0.3
HATJ	Hateruma jima	2.08	80	*e*S	Sn	15 18 50.3	-0.1
JKRS	Kuro-shima	2.30	76	P	Pn	15 18 28.0	+0.4
JKRS				S	Sn	15 18 56.8	+1.0
JIJ	Ishigaki jima	2.45	74	P	Pn	15 18 29.6	0.0
JIJ				S	Sn	15 18 59.2	-0.3
JISG	Ishigakijimahi	2.66	70	P	Pn	15 18 32.3	-0.2
JISG				*e*S	Sn	15 19 04.6	-0.1
KNM	Kinmen	2.95	285	*e*P	Pn	15 18 38.7	+2.2
	baz=283						
JTJ	Tarama	3.02	71	P	Pn	15 18 38.6	+1.2
JTJ				*e*S	Sn	15 19 13.6	+0.1
JIRB	Irabujima	3.48	70	*e*S	Sn	15 19 24.2	-0.8
JIKM	Ikemajima	3.58	69	P	Pn	15 18 45.5	+0.4
JIKM				*e*S	Sn	15 19 27.5	+0.2

MAN 14 15:30:24.3, 16°.76N×120°.26E, h15km, mb4.4, ML3.3, MS3.1, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	Bolinao	0.50	221	*e*P	Pb	15 30 35.4	+0.6
BOLP				*e*S	Sn	15 30 43.8	-1.6
ABRA	Dolores	0.98	26	*e*P	Pb	15 30 42.1	-0.9
ABRA				*e*S	Sn	15 31 02.7	+5.5
SCZP	Santa Cruz	1.04	199	*e*P	Pb	15 30 43.0	-1.0
SCZP				*e*S	Sn	15 30 58.4	-0.1
APYP	Conner	1.44	41	*e*P	Pn	15 30 49.4	-0.5
APYP				*e*S	Sb	15 31 09.2	+0.1
CAUP	Cauayan	1.51	83	*e*P	Pg	15 30 53.2	-0.1
CAUP				*e*S	Sg	15 31 15.9	+2.9
BALP	Baler	1.62	129	*e*P	Pn	15 30 51.0	-1.4
BALP				*e*S	Sb	15 31 14.9	+0.7

DJA 14 15:33:15.2±3.6, 2°N±9°×9°2E±3°1, h10km, M4.3/7, mB4.9/1, mb4.3/7, MLv4.3/5, Mw(mB)4.2/1
*IDC 14 15:33:17.9±1.1, 2°.20N×92°.00E, h0km, mb3.7/7, mb1 3.9/10, mb1mx3.6/67, m

PALK				Sn		Sn	15 38 18.9	-7.9
	1.3nm,0.3s,baz=290,slow=0.1,SNR=4.7							
CMAR	**Chiang Mai Arr**	**17.58**	**23**	P		**Pn**	15 37 22.2	-1.5
	baz=221,slow=10,SNR=4.5							
FITZ	**Fitzroy Crossi**	**38.97**	**123**	P		**P**	15 40 43.8	-1.1
	1.1nm,0.8s,baz=320,slow=7.9,SNR=4.1							
MKAR	**Makanchi Array**	**45.15**	**351**	P		**P**	15 41 36.7	+1.6
	0.5nm,0.7s,baz=148,slow=7.1,SNR=4.2							
SONM	**Songino Array**	**47.15**	**13**	P		**P**	15 41 52.4	+1.4
	1.0nm,0.6s,baz=200,slow=8.3,SNR=4.8							
WRA	**Warramunga Arr**	**47.19**	**120**	P		**P**	15 41 51.2	-0.4
	1.7nm,0.6s,baz=299,slow=8.7,SNR=25							
ASAR	**Alice Springs**	**48.37**	**125**	P		**P**	15 42 00.5	-0.2
	0.2nm,0.4s,baz=296,slow=7.7,SNR=9.8							
ZALV	**Zalesovo Beam**	**51.87**	**355**	P		**P**	15 42 27.9	+1.2
	1.0nm,0.4s,baz=174,slow=5.8,SNR=6.6							
BRTR	**Keskin Array B**	**64.46**	**313**	P		**P**	15 43 57.7	+2.3
	0.5nm,0.6s,baz=126,slow=3.5,SNR=2.3							
TXAR	**Lajitas Array**	**145.29**	**24**	PKPbc		**PKPdf**	15 52 58.5	+1.4
	0.4nm,0.5s,baz=275,slow=1.7,SNR=5.7							

*ISN **14** 15:47:39.6±0.3,37°.23N×42°.47E,h0km,ML2.5*
*ISCJB **14** 15:47:40.6±1.1,37°.21N±0°.05×42°.49E±0°.04,h7km±6km,*
Error ellipse: s-maj=8.6km s-min=6.0km az=3.3
*DDA **14** 15:47:40.6,37°.23N×42°.49E,h7km,Ml2.7*
*CSEM **14** 15:47:41.4±0.2,37°.25N×42°.50E,h10km,ML2.5,Error*
ellipse: s-maj=5.8km s-min=3.6km az=40.0
*ISK **14** 15:47:41.4,37°.28N×42°.34E,h6km,ML2.5/3*
ISC 14 15:47:40.8±1.5,37°.22N±0°.06×42°.48E±0°.04,h7km±10km,
n25,σ0s94/44,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRN	**S¨–rnak**	**0.28**	**350**	*i* P	**Pg**	15 47 46.9	+0.5
SIRN				*i* S	**Sg**	15 47 50.2	0.0
SIRN	**S¨–rnak**	**0.28**	**350**	P	**Pg**	15 47 46.9	+0.5
SIRN				S	**Sg**	15 47 50.2	0.0
SIRT	**Sirnak**	**0.28**	**354**	PG	**Pg**	15 47 46.5	+0.1
SIRT				SG	**Sg**	15 47 50.2	-0.1
SIRT	**Sirnak**	**0.28**	**354**	*e*Pg	**Pg**	15 47 46.5	+0.1
SIRT				*e*Sg	**Sg**	15 47 50.2	-0.1
SRTM	**Siirt_Merkez**	**0.89**	**331**	*i* P	**Pb**	15 47 58.5	-0.1
SRTM				*i* S	**Sb**	15 48 11.0	+0.3
SRTM	**Siirt_Merkez**	**0.89**	**331**	P	**Pb**	15 47 58.5	-0.1
SRTM				S	**Sb**	15 48 11.0	+0.3
HAKT	**HAKKARI**	**1.04**	**71**	*i* P	**Pg**	15 48 00.7	0.0
HAKT				*i* S	**Sg**	15 48 14.2	0.0
HAKT	**HAKKARI**	**1.04**	**71**	P	**Pg**	15 48 00.7	0.0
HAKT				S	**Sg**	15 48 14.2	0.0
BTMN	**Batman**	**1.17**	**305**	*i* P	**Pg**	15 48 03.3	+0.1
BTMN				*i* S	**Sb**	15 48 19.6	+0.8
BTMN	**Batman**	**1.17**	**305**	P	**Pg**	15 48 03.3	+0.1
BTMN				S	**Sb**	15 48 19.6	+0.8
MARD	**Mardin**	**1.36**	**275**	*i* P	**Pn**	15 48 05.8	-0.4
MARD				*i* S	**Sb**	15 48 24.6	+0.5
GURO	**Guroymak-BITLI**	**1.38**	**345**	PN	**Pn**	15 48 06.7	+0.2
GURO				SN	**Sg**	15 48 24.6	-0.5
GURO	**Guroymak-BITLI**	**1.38**	**345**	*e*Pn	**Pn**	15 48 06.7	+0.2
GURO				*e*Sn	**Sg**	15 48 24.6	-0.5
SVAN	**Silvan-Diyarba**	**1.38**	**313**	PN	**Pn**	15 48 05.7	-0.8
SVAN				SN	**Sb**	15 48 23.4	-1.3
SVAN	**Silvan-Diyarba**	**1.38**	**313**	*i* P	**Pn**	15 48 03.2	-3.3
SVAN				*i* S	**Sn**	15 48 26.0	+1.0
SVAN	**Silvan-Diyarba**	**1.38**	**313**	P	**Pn**	15 48 03.2	-3.3
SVAN	**Silvan-Diyarba**	**1.38**	**313**	*e*Pn	**Pn**	15 48 05.7	-0.8
SVAN				*e*Sn	**Sb**	15 48 23.4	-1.3
SVAN				S	**Sn**	15 48 26.0	+1.0
MAZI	**Mazidag**	**1.64**	**279**	PN	**Pn**	15 48 09.6	-0.5
MAZI	**Mazidag**	**1.64**	**279**	*e*Pn	**Pn**	15 48 09.6	-0.5
DIY	**Diyarbakir**	**1.91**	**291**	*e*Pn	**Pn**	15 48 14.6	+0.8
DYBB	**Diyarbakir**	**2.00**	**292**	PN	**Pn**	15 48 14.6	-0.4
HANI	**Diyarbakir_Han**	**2.03**	**307**	*i* P	**Pn**	15 48 16.8	+1.3
HANI				*i* S	**Sn**	15 48 41.2	0.0
HANI	**Diyarbakir_Han**	**2.03**	**307**	P	**Pn**	15 48 16.8	+1.3
HANI				S	**Sn**	15 48 41.2	0.0
SVRC	**Sivrice-ELAZID**	**2.77**	**296**	PN	**Pn**	15 48 25.3	-0.4
SVRC	**Sivrice-ELAZID**	**2.77**	**296**	*e*Pn	**Pn**	15 48 25.3	-0.4

*ISCJB **14** 15:49:32.6±0.5,50°.19N±0°.03×18°.92E±0°.03,h0km,Error*
ellipse: s-maj=4.0km s-min=2.7km az=8.9
*CSEM **14** 15:49:33.0±0.4,50°.23N×18°.99E,h2km,ML2.6/5,Error*
ellipse: s-maj=9.3km s-min=4.6km az=15.0
*PRU **14** 15:49:33.9,50°.22N×18°.99E,h0km*
ISC 14 15:49:33.0±0.8,50°.14N±0°.03×18°.99E±0°.02,h0km,n30,
σ0s71/53,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHZP	**Chorzow**	**0.15**	**2**	*e*Pg	**Pg**	15 49 36.1	+0.1
CHZP				*e*Sg	**Sg**	15 49 36.9	-1.0
OJC	**Ojcow**	**0.53**	**81**	*e*Pg	**Pg**	15 49 42.8	-0.3
OJC				*e*Sg	**Sg**	15 49 49.7	-0.3
OJC	**Ojcow**	**0.53**	**81**	*e*Pg	**Pg**	15 49 42.8	-0.3
OJC				*e*Sg	**Sg**	15 49 49.7	-0.3
OKC	**Ostrava-Krasne**	**0.62**	**241**	*e*PG	**Pn**	15 49 48.4	-0.6
OKC				*e*SG	**Sb**	15 49 57.0	+1.1
	comp=Z,9.3nm,0.4s						
OKC	**Ostrava-Krasne**	**0.62**	**241**	Pg	**Pn**	15 49 48.4	-0.6
OKC				Sg	**Sb**	15 49 57.0	+1.1
	9.3nm,0.4s						
MORC	**Moravsky Berou**	**1.00**	**249**	*e*Pg	**Pb**	15 49 53.2	0.0
MORC				*e*Sg	**Sb**	15 50 07.1	+0.2
MORC	**Moravsky Berou**	**1.00**	**249**	*e*PG	**Pb**	15 49 53.2	0.0
MORC				*e*SG	**Sb**	15 50 07.1	+0.2
LANS	**Liptovska Anna**	**1.04**	**162**	*e*PG	**Pn**	15 49 54.7	-0.1
LANS				*e*SG	**Sn**	15 50 09.3	-0.7
LANS	**Liptovska Anna**	**1.04**	**162**	*e*Pg	**Pn**	15 49 54.7	-0.1
LANS				*e*Sg	**Sn**	15 50 09.3	-0.7
NIE	**Niedzica**	**1.12**	**130**	*e*Pg	**Pn**	15 49 56.2	+0.3
NIE				*e*Sg	**Sn**	15 50 12.1	+0.1
NIE	**Niedzica**	**1.12**	**130**	*e*Pg	**Pn**	15 49 56.2	+0.3
NIE				*e*Sg	**Sn**	15 50 12.1	+0.1
KRLC	**Kraliky**	**1.42**	**268**	*e*PG	**Pn**	15 49 59.9	-0.2
KRLC				*e*SG	**Sg**	15 50 18.7	+0.1
	comp=Z,4.2nm,0.4s						
KRLC	**Kraliky**	**1.42**	**268**	Pg	**Pn**	15 49 59.9	-0.2
KRLC				Sg	**Sg**	15 50 18.7	+0.1
	4.2nm,0.4s						
VYHS	**Vyhne**	**1.65**	**183**	*e*PN	**Pb**	15 50 04.1	-0.1
VYHS				*e*SN	**Sg**	15 50 26.8	+0.9
VYHS				*e*LG	Lg	15 50 30.5	
VYHS	**Vyhne**	**1.65**	**183**	*e*Pg	**Pb**	15 50 04.1	-0.1
VYHS				*e*Sn	**Sg**	15 50 26.8	+0.9
DPC	**Dobruska-Polom**	**1.72**	**278**	*e*PG	**Pn**	15 50 04.6	+0.4
DPC				*e*SG	**Sg**	15 50 28.3	0.0
	comp=Z,15nm,0.7s						
DPC	**Dobruska-Polom**	**1.72**	**278**	Pg	**Pn**	15 50 04.6	+0.4
DPC				Sg	**Sg**	15 50 28.3	0.0
	15nm,0.7s						
VRAC	**Vranov**	**1.76**	**243**	*e*Pn	**Pb**	15 50 06.4	+0.3
VRAC				*e*Sg	**Sg**	15 50 29.8	+0.3
VRAC	**Vranov**	**1.76**	**243**	*e*PN	**Pb**	15 50 06.4	+0.3
VRAC				*e*SG	**Sg**	15 50 29.8	+0.3
KSP	**Ksiaz**	**1.86**	**293**	*e*Pg	**Pg**	15 50 08.5	-0.1
KSP				*e*Sg	**Sg**	15 50 33.0	+0.4
KSP	**Ksiaz**	**1.86**	**293**	*e*Pg	**Pg**	15 50 08.5	-0.1
KSP				*e*Sg	**Sg**	15 50 33.0	+0.4
UPC	**Upice**	**1.94**	**282**	*e*SG	**Sg**	15 50 36.4	+1.1
UPC	**Upice**	**1.94**	**282**	Sg	**Sg**	15 50 36.4	+1.1
KRUC	**Moravsky**	**2.00**	**238**	*e*Sg	**Sg**	15 50 37.4	+0.2
KRUC	**Moravsky**	**2.00**	**238**	*e*SG	**Sg**	15 50 37.4	+0.2
GOPC	**GO Pecny, Ondr**	**2.72**	**267**	*e*PG	**Pg**	15 50 24.0	-1.0
GOPC				*e*SG	**Sg**	15 50 58.7	-1.5
	comp=Z,4.7nm,0.4s						
GOPC	**GO Pecny, Ondr**	**2.72**	**267**	Pg	**Pg**	15 50 24.0	-1.0
GOPC				Sg	**Sg**	15 50 58.7	-1.5
	4.7nm,0.4s						
PVCC	**Panska Ves**	**2.86**	**280**	*e*SG	**Sg**	15 51 06.0	+1.3
	comp=Z,10nm,0.3s						
PVCC	**Panska Ves**	**2.86**	**280**	Sg	**Sg**	15 51 06.0	+1.3
	10nm,0.3s						
KHC	**Kasperske Hory**	**3.66**	**256**	*e*SG	**Sg**	15 51 28.4	-2.0
	comp=Z,2.7nm,0.6s						

*ISCJB **14** 15:52:00.0±0.3,29°.98N±0°.03×139°.29E±0°.05,h421km,*
mb3.6/30,Error ellipse: s-maj=6.3km s-min=3.7km
az=176.2
*JMA **14** 15:52:01.0±0.1,30°.03N×139°.59E,h420km,M3.5*
*NEIC **14** 15:52:01.2±0.6,29°.89N×138°.87E,h399km±10km,*
mb4.1/11,Error ellipse: s-maj=23.5km s-min=7.9km
az=73.0
*IDC **14** 15:52:01.1±0.8,29°.99N×139°.02E,h402km±8km,mb3.3/20,*
mb1 3.3/25,mb1mx3.2/71,mbtmp4.1/25,Error ellipse:
s-maj=16.0km s-min=9.1km az=81.0
ISC 14 15:52:01.7±0.5,29°.98N±0°.06×139°.19E±0°.08,h421km,n75,
σ2s09/91,mb3.7/30,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**3.12**	**9**	*e*S	**S**	15 53 58.3	-2.5
JHJ2	**Mitsune**	**3.17**	**10**	*e*Pn	**P**	15 53 08.2	+0.5
JHJ2				*e*S	**S**	15 53 59.3	-2.1
JHJ2	**Mitsune**	**3.17**	**10**	S	**S**	15 53 58.7	-2.7
JHJ	**Hachijo jima 2**	**3.17**	**9**	P	**P**	15 53 07.5	-0.1
	26nm,0.3s,baz=54,slow=18,SNR=6.2						
JHJ				S	**S**	15 53 58.3	-3.1
	36nm,0.3s,baz=238,slow=22,SNR=11						
CBIJ	**Chichi jima**	**3.90**	**137**	*e*Pn	**P**	15 53 11.8	-2.3
CBIJ				*e*S	**S**	15 54 08.5	-4.5
CBIJ	**Chichi jima**	**3.90**	**137**	P	**P**	15 53 11.9	-2.3
CBIJ				S	**S**	15 54 07.9	-5.1
JCJ	**Chichijima**	**3.90**	**137**	P	**P**	15 53 12.2	-1.9
	31nm,0.3s,baz=332,slow=5.8,SNR=12						
JCJ				S	**S**	15 54 07.0	-6.1
	111nm,0.3s,baz=273,slow=21,SNR=20						
JHHJ	**Haha-jima-NKT**	**4.25**	**141**	P	**P**	15 53 15.6	-1.8
JHHJ				S	**S**	15 54 13.0	-6.0
JIE	**Ise**	**4.88**	**335**	P	**P**	15 53 24.7	+1.5
BSO1	**Boso 1**	**4.90**	**18**	P	**P**	15 53 22.8	0.0
BSO1				*e*S	**S**	15 54 26.8	-2.5
BSO3	**Boso 3**	**4.94**	**13**	P	**P**	15 53 22.9	-0.6
BSO3				*e*S	**S**	15 54 26.5	-3.9
JHMK	**Hamakita**	**4.97**	**346**	P	**P**	15 53 24.8	+0.8
HMMJ	**Hamamatsu 2**	**5.02**	**346**	P	**P**	15 53 25.3	+0.7
BSO4	**Boso 4**	**5.09**	**11**	P	**P**	15 53 24.9	-0.3
BSO4				*e*S	**S**	15 54 30.1	-3.4
JOD2	**Odawara 2**	**5.27**	**359**	P	**P**	15 53 26.5	-0.6
JOD2				S	**S**	15 54 34.2	-2.9
JNY	**Yasuok**	**5.48**	**349**	P	**P**	15 53 30.0	+0.6
INU	**Inuyama**	**5.66**	**342**	*e*Pn	**P**	15 53 31.7	+0.6
JHU	**Hanno**	**5.86**	**1**	P	**P**	15 53 31.9	-1.3
JHU				*e*S	**S**	15 54 41.8	-6.4
MJAR	**Matsushiro Arr**	**6.59**	**353**	P	**P**	15 53 40.3	-1.2
	2.4nm,0.3s,baz=174,slow=11,SNR=37						
MJAR				S	**S**	15 54 59.0	-3.7
	0.6nm,0.3s,baz=279,slow=30,SNR=4.1						
MAJO	**Matsushiro**	**6.59**	**353**	*e*Pn	**P**	15 53 40.4	-1.2
MAJO				*e*S	**S**	15 55 00.4	-2.3
MAT	**Matsushiro**	**6.59**	**353**	P	**P**	15 53 40.3	-1.3
MAT				*e*S	**S**	15 54 57.7	-5.0
MJB9	**Matsu-Tunnel**	**6.60**	**353**	*e*Pn	**P**	15 53 40.5	-1.1
JNU	**Nakatsue**	**7.75**	**296**	P	**P**	15 53 54.5	+0.2
	0.4nm,0.3s,baz=104,slow=4.2,SNR=3.7						
KSRS	**Korea Array**	**11.97**	**311**	P	**P**	15 54 40.6	+0.2
	0.1nm,0.3s,baz=128,slow=11,SNR=8.8						
ERM	**Erimo**	**12.43**	**14**	*e*P	**P**	15 54 47.4	+2.0
	31nm,1.5s						
ERM				*e*S	**S**	15 57 06.8	+6.2
ASAJ	**Asahikawa**	**14.37**	**10**	P	**P**	15 55 08.4	+1.9
	0.6nm,0.3s,baz=204,slow=14,SNR=14						
ASAJ	**Asahikawa**	**14.37**	**10**	*e*P	**P**	15 55 08.0	+1.5
	4.4nm,0.7s						
KLR	**Kul'dur**	**20.04**	**346**	P	**P**	15 56 05.8	+0.9
	0.1nm,0.5s,baz=187,slow=9.1,SNR=3.9						
SONM	**Songino Array**	**30.82**	**315**	P	**P**	15 57 41.3	+0.3
	1.1nm,0.8s,baz=105,slow=6.9,SNR=4.0						
GTA	**Gaotai**	**33.49**	**297**	*e*P	**P**	15 58 03.6	-0.5
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**38.27**	**262**	P	**P**	15 58 43.2	-1.0
	comp=Z,0.4nm,0.6s,baz=53,slow=7.3,SNR=5.0						
ODAN	**Odare**	**45.35**	**279**	*e*P	**P**	15 59 40.7	-0.1
	comp=Z,11nm,0.6s						
ZALV	**Zalesovo Beam**	**45.59**	**318**	P	**P**	15 59 41.9	0.0
	comp=Z,1.0nm,0.4s,baz=102,slow=8.8,SNR=6.7						
ZALV				PcP	**PcP**	16 01 10.8	-1.2
	comp=Z,0.3nm,0.3s,baz=114,slow=3.6,SNR=2.7						
RAMN	**Ramite**	**46.00**	**280**	*e*P	**P**	15 59 46.3	+0.4
	comp=Z,14nm,0.5s						
JIRN	**Jiri**	**46.15**	**281**	*e*P	**P**	15 59 47.5	+0.3
	comp=Z,30nm,0.5s						
GUN	**Gumba**	**46.35**	**281**	*e*P	**P**	15 59 48.9	+0.3
MK01	**Makanchi Array**	**46.61**	**308**	*e*P	**P**	15 59 49.5	-0.5
MK31	**Makanchi Array**	**46.62**	**308**	*e*P	**P**	15 59 50.4	+0.3
MKAR	**Makanchi Array**	**46.62**	**308**	P	**P**	15 59 50.0	0.0
	comp=Z,1.2nm,0.6s,baz=86,slow=9.6,SNR=12						
MKAR	**Makanchi Array**	**46.62**	**308**	*e*P	**P**	15 59 50.4	+0.3
	comp=Z,10nm,0.6s						
MAKZ	**Makanchi**	**46.84**	**308**	*e*P	**P**	15 59 51.0	-0.7
	comp=Z,1.9nm,0.6s						
PKIN	**Phulchoki**	**46.85**	**281**	*e*P	**P**	15 59 52.3	-0.1
KKN	**Kakani**	**46.89**	**281**	*e*P	**P**	15 59 52.7	+0.1
GKN	**Gorkha**	**47.38**	**282**	*e*P	**P**	15 59 56.2	-0.1
	comp=Z,4.4nm,0.3s						
DANN	**Dangsing**	**48.02**	**283**	*e*P	**P**	16 00 01.7	+0.4
	comp=Z,9.9nm,0.4s						
KOLN	**Koldanda**	**48.32**	**282**	*e*P	**P**	16 00 03.6	+0.1
	comp=Z,3.9nm,0.3s						
PYUN	**Piuthan**	**48.75**	**282**	*e*P	**P**	16 00 06.9	+0.3
	comp=Z,28nm,0.4s						
NRIK	**Noril'sk**	**49.01**	**338**	P	**P**	16 00 08.5	+0.8
	comp=Z,1.3nm,0.5s,baz=113,slow=7.7,SNR=3.0						
KURK	**Kurchatov**	**49.09**	**313**	*e*P	**P**	16 00 08.7	+0.2
	comp=Z,17nm,1.8s						
KURBB	**Kurchatov Arra**	**49.15**	**313**	P	**P**	16 00 08.9	-0.1
	comp=Z,1.8nm,0.3s,baz=91,slow=8.3,SNR=12						
FITZ	**Fitzroy Crossi**	**49.55**	**197**	P	**P**	16 00 13.7	+1.3
	comp=Z,1.4nm,1.1s,baz=45,slow=2.9,SNR=2.6						
WRAB	**Tennant Creek**	**49.84**	**186**	*e*P	**P**	16 00 14.9	+0.4
	comp=Z,31nm,1.8s						
WB2	**Warramunga Arr**	**49.85**	**186**	*e*P	**P**	16 00 15.0	+0.4
	comp=Z,33nm,2.0s						
WRA	**Warramunga Arr**	**49.85**	**186**	P	**P**	16 00 14.8	+0.3
	comp=Z,0.3nm,0.4s,baz=1.6,slow=7.9,SNR=12						
WC3	**Warramunga Arr**	**49.87**	**186**	*e*P	**P**	16 00 14.7	0.0
	comp=Z,22nm,1.8s						
AS01	**Alice Springs**	**53.58**	**186**	*e*P	**P**	16 00 43.6	+1.9
AS31	**Alice Springs**	**53.58**	**186**	*e*P	**P**	16 00 43.5	+1.8
	comp=Z,4.3nm,1.8s						
ASAR	**Alice Springs**	**53.58**	**186**	P	**P**	16 00 43.1	+1.4
	comp=Z,0.2nm,0.4s,baz=23,slow=11,SNR=9.4						
KDAK	**Kodiak Island**	**53.68**	**38**	P	**P**	16 00 44.6	+2.7
	comp=Z,3.0nm,0.9s,baz=304,slow=7.3,SNR=3.5						
BVAR	**Borovoye Array**	**54.14**	**316**	P	**P**	16 00 45.8	+0.4
	comp=Z,3.4nm,0.5s,baz=94,slow=7.6,SNR=27						
BRVK	**Borovoye**	**54.20**	**316**	*e*P	**P**	16 00 46.6	+0.8
	comp=Z,2.5nm,0.6s						
KK31	**Karatay Array**	**55.28**	**304**	*e*P	**P**	16 00 53.8	+0.2
KKAR	**Karatay Array**	**55.28**	**304**	*e*P	**P**	16 00 53.5	-0.1
NIL	**Nilore**	**55.30**	**292**	*e*P	**P**	16 00 52.4	-1.5
	comp=Z,4.1nm,0.8s						
ILAR	**Eielson Array**	**56.48**	**30**	P	**P**	16 01 02.0	+0.4
	comp=Z,0.3nm,0.6s,baz=281,slow=5.4,SNR=3.6						
ARU	**Arti**	**60.53**	**321**	P	**P**	16 01 29.8	+0.5
	comp=Z,3.9nm,0.5s,baz=67,slow=4.3,SNR=4.7						
ABKAR	**Akbulak array**	**61.20**	**313**	*e*P	**P**	16 01 34.1	+0.3
AKTO	**Aktyubinsk**	**62.13**	**314**	P	**P**	16 01 39.9	-0.1
	comp=Z,1.3nm,0.5s,baz=73,slow=15,SNR=5.2						
ARCES	**ARCESS Array B**	**69.95**	**340**	P	**P**	16 02 30.1	+1.4
	comp=Z,1.8nm,0.6s,baz=64,slow=9.5,SNR=9.2						
KBZ	**Khabaz**	**74.12**	**311**	P	**P**	16 02 53.7	+0.2
	comp=Z,1.3nm,0.5s,baz=96,slow=6.8,SNR=5.9						
FINES	**FINESS Array B**	**74.19**	**333**	P	**P**	16 02 54.5	+0.9
	comp=Z,0.9nm,0.3s,baz=69,slow=4.3,SNR=13						
AKASG	**Malin Array Be**	**78.74**	**322**	P	**P**	16 03 19.2	+0.3
	comp=Z,0.3nm,0.3s,baz=55,slow=6.5,SNR=4.2						
HFS	**Hagfors**	**79.73**	**336**	P	**P**	16 03 24.7	+0.6
	comp=Z,1.3nm,0.4s,baz=72,slow=4.7,SNR=10						
NB2	**NORSAR Subarra**	**79.95**	**337**	P	**P**	16 03 25.7	+0.4
	comp=Z,0.5nm,0.5s,baz=44,slow=5.3						
BRTR	**Keskin Array B**	**82.12**	**311**	P	**P**	16 03 37.8	+0.6
	comp=Z,1.3nm,0.8s,baz=96,slow=3.7,SNR=7.5						

IDC 14 15:53:03.0±2.3,6°.14S×148°.74E,h0km,mb3.5/3,
mb1 3.7/5,mb1mx3.4/49,mbtmp3.6/5,ML3.6/1,Error
ellipse: s-maj=89.2km s-min=22.1km az=115.0,New
Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.61**	**206**	Pn	Pn	15 54 02.1	+1.9
	4.8nm,0.3s,baz=16,slow=5.0,SNR=16						
PMG				Sn	Sn	15 54 43.8	+0.2
	4.0nm,0.3s,baz=67,slow=20,SNR=7.7						
WRA	**Warramunga Arr**	**19.60**	**224**	P	P	15 57 32.8	-0.2
	0.2nm,0.3s,baz=49,slow=10,SNR=20						
ASAR	**Alice Springs**	**22.53**	**218**	P	P	15 58 04.0	-0.8
	0.2nm,0.5s,baz=57,slow=9.4,SNR=18						
FITZ	**Fitzroy Crossi**	**25.48**	**240**	P	P	15 58 33.2	0.0
	1.2nm,0.6s,baz=164,slow=18,SNR=5.2						
PETK	**Petropavlovsk-**	**59.51**	**6**	P	P	16 03 08.0	+0.1
	1.0nm,0.8s,baz=164,slow=5.1,SNR=5.5						

*ISN **14** 15:59:09.1±0.3,37°.30N×42°.47E,h0km,ML2.4*
*ISCJB **14** 15:59:14.9±1.2,37°.25N±0°.06×42°.62E±0°.05,h3km±7km,*
Error ellipse: s-maj=10.4km s-min=5.8km az=13.2
*CSEM **14** 15:59:14.9±0.2,37°.25N×42°.64E,h2km,ML2.4,Error*
ellipse: s-maj=6.5km s-min=3.8km az=40.0
*DDA **14** 15:59:14.7,37°.26N×42°.61E,h7km,Ml2.6*
*ISK **14** 15:59:15.9,37°.30N×42°.54E,h6km,ML2.4/3*
ISC 14 15:59:14.5±1.5,37°.23N±0°.07×42°.61E±0°.03,h4km±10km,
n19,σ0s45/34,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRT	**Sirnak**	**0.30**	**333**	PG	**Pg**	15 59 20.7	+0.3
SIRT				SG	**Sg**	15 59 24.3	-0.1
SIRT	**Sirnak**	**0.30**	**333**	*e*Pg	**Pg**	15 59 20.7	+0.3
SIRT				*e*Sg	**Sg**	15 59 24.3	-0.1
SIRN	**S¨–rnak**	**0.31**	**329**	*i* P	**Pg**	15 59 20.9	+0.4
SIRN				*i* S	**Sg**	15 59 24.6	+0.1
SIRN	**S¨–rnak**	**0.31**	**329**	P	**Pg**	15 59 20.9	+0.4
SIRN				S	**Sg**	15 59 24.6	+0.1
HAKT	**HAKKARI**	**0.93**	**69**	*i* P	**Pg**	15 59 32.6	+0.2
HAKT				*i* S	**Sb**	15 59 45.7	-0.5
HAKT	**HAKKARI**	**0.93**	**69**	P	**Pg**	15 59 32.6	+0.2
HAKT				S	**Sb**	15 59 45.7	-0.5
SRTM	**Siirt_Merkez**	**0.93**	**324**	*i* P	**Pb**	15 59 32.6	-0.7
SRTM				*i* S	**Sb**	15 59 45.7	-0.5
SRTM	**Siirt_Merkez**	**0.93**	**324**	P	**Pb**	15 59 32.6	-0.7
SRTM				S	**Sb**	15 59 45.7	-0.5
BTMN	**Batman**	**1.25**	**302**	*i* P	**Pb**	15 59 38.5	-0.3
BTMN				*i* S	**Sn**	15 59 57.0	+0.8
BTMN	**Batman**	**1.25**	**302**	P	**Pb**	15 59 38.5	-0.3
BTMN				S	**Sn**	15 59 57.0	+0.8
GURO	**Guroymak-BITLI**	**1.39**	**341**	PN	**Pg**	15 59 41.5	+0.3
GURO				SN	**Sn**	15 59 59.9	+0.1
GURO	**Guroymak-BITLI**	**1.39**	**341**	*e*Pn	**Pg**	15 59 41.5	+0.3
GURO				*e*Sn	**Sn**	15 59 59.9	+0.1
SVAN	**Silvan-Diyarba**	**1.45**	**310**	PN	**Pg**	15 59 42.1	-0.2
SVAN				SN	**Sn**	16 00 01.2	+0.2
SVAN	**Silvan-Diyarba**	**1.45**	**310**	*e*Pn	**Pg**	15 59 42.1	-0.2
SVAN				*e*Sn	**Sn**	16 00 01.2	+0.2
MARD	**Mardin**	**1.47**	**274**	*i* P	**Pn**	15 59 41.9	0.0
MARD				*i* S	**Sb**	16 00 00.9	-0.6
MAZI	**Mazidag**	**1.74**	**278**	PN	**Pb**	15 59 46.6	-0.5
MAZI	**Mazidag**	**1.74**	**278**	*e*Pn	**Pb**	15 59 46.6	-

CHKT	**Chengkung**	**0.63**	**200**	*e*P	**Pg**	**16 15 26.0**	**-0.7**
	baz=198						
CHKT				S	**Sb**	**16 15 36.1**	**+0.3**
	baz=198						
SMLT	**Sun Moon Lake**	**0.67**	**287**	⇓*i*P	**Pg**	**16 15 25.9**	**-1.5**
	baz=286						
SMLT				S	**Sg**	**16 15 34.0**	**-2.3**
	baz=286						
TYC	**Yuchr**	**0.71**	**287**	⇓*i*P	**Pg**	**16 15 26.5**	**-1.7**
	baz=287						
TYC				S	**Sg**	**16 15 35.5**	**-2.1**
	baz=287						
ELDTW	**Lidau**	**0.73**	**227**	⇑P	**Pg**	**16 15 26.9**	**-1.7**
	baz=225						
ELDTW				*e*S	**Sg**	**16 15 37.4**	**-0.9**
	baz=225						
ENA	**Nanau**	**0.74**	**10**	⇓*e*P	**Pg**	**16 15 27.9**	**-1.0**
	baz=23						
ENA				*e*S	**Sb**	**16 15 38.9**	**-0.2**
	baz=23						
NANB	**Nanao**	**0.74**	**11**	⇓P	**Pg**	**16 15 28.0**	**-0.9**
	baz=23						
NANB				*e*S	**Sb**	**16 15 39.0**	**-0.1**
	baz=23						
ALS	**Alishan**	**0.75**	**256**	*e*P	**Pg**	**16 15 27.9**	**-1.2**
	baz=255						
ALS				S	**Sg**	**16 15 37.7**	**-1.3**
	baz=255						
NNSB	**Datong**	**0.76**	**345**	⇓P	**Pg**	**16 15 28.0**	**-1.1**
	baz=338						
NNSB				*e*S	**Sg**	**16 15 37.5**	**-1.7**
	baz=338						
NNSH	**Datong**	**0.76**	**345**	⇓*e*P	**Pg**	**16 15 28.0**	**-1.2**
	baz=346						
NNSH				S	**Sg**	**16 15 37.5**	**-1.7**
	baz=346						
NNS	**Nan Shan**	**0.77**	**344**	⇓*i*P	**Pg**	**16 15 28.3**	**-1.2**
	baz=338						
NNS				S	**Sg**	**16 15 38.1**	**-1.5**
	baz=338						
ENAH	**Nanao**	**0.78**	**14**	*e*P	**Pg**	**16 15 29.1**	**-0.4**
	baz=25						
ENAH				*e*S	**Sb**	**16 15 40.4**	**+0.3**
	baz=25						
WJS	**Zhushan**	**0.81**	**279**	⇓*e*P	**Pg**	**16 15 29.4**	**-0.7**
	baz=278						
WJS				*e*S	**Sb**	**16 15 41.8**	**+0.8**
	baz=278						
TWC	**Suao**	**0.94**	**14**	⇓*e*P	**Pb**	**16 15 31.9**	**-0.6**
	baz=7.0						
TWC				S	**Sn**	**16 15 45.7**	**-0.7**
	baz=7.0						
ENTT	**Nioudou**	**0.94**	**358**	⇓P	**Pb**	**16 15 32.0**	**-0.6**
	baz=350						
ENTT				S	**Sb**	**16 15 44.0**	**-0.9**
	baz=350						
WGK	**Gukeng**	**0.95**	**270**	⇑*i*P	**Pb**	**16 15 32.5**	**-0.2**
	baz=269						
WGK				S	**Sn**	**16 15 46.2**	**-0.4**
	baz=269						
TCU	**Taichung**	**0.96**	**298**	*e*P	**Pn**	**16 15 33.2**	**-0.2**
	baz=297						
TCU				*e*S	**Sg**	**16 15 46.0**	**+0.5**
	baz=297						
TPUB	**Ta-pu**	**0.97**	**247**	⇑P	**Pb**	**16 15 32.4**	**-0.7**
	baz=254						
TPUB				S	**Sb**	**16 15 45.2**	**-0.5**
	baz=254						
TPUB	**Ta-pu**	**0.97**	**247**	*e*Pg	**Pb**	**16 15 32.3**	**-0.7**
TPUB				*e*Sg	**Sg**	**16 15 45.8**	**-0.1**
WDLH	**Douliu**	**0.97**	**270**	*e*P	**Pb**	**16 15 32.8**	**-0.2**
	baz=270						
WDLH				*e*S	**Sn**	**16 15 47.0**	**-0.2**
	baz=270						
EOS1	**EOS1**	**0.98**	**29**	⇑*e*P	**Pn**	**16 15 33.7**	**+0.1**
	baz=53						
EOS1				*e*S	**Sn**	**16 15 49.1**	**+1.7**
	baz=53						
TWH	**Lutao**	**0.98**	**187**	*e*P	**Pb**	**16 15 31.2**	**-1.9**
	baz=173						
TWH				*e*S	**Sg**	**16 15 46.1**	**-0.1**
	baz=173						
TWGBT	**Beinan**	**0.99**	**209**	*e*P	**Pb**	**16 15 31.0**	**-2.3**
	baz=210						
TWGBT				*e*S	**Sn**	**16 15 47.0**	**-0.7**
	baz=210						
TWG	**Pinlang**	**0.99**	**209**	*e*P	**Pb**	**16 15 31.0**	**-2.4**
	baz=210						
TWG				*e*S	**Sg**	**16 15 47.0**	**+0.4**
	baz=210						
TWG	**Pinlang**	**0.99**	**209**	*e*Pg	**Pb**	**16 15 31.2**	**-2.1**
YHNB	**Yeheng**	**0.99**	**348**	⇑P	**Pb**	**16 15 32.5**	**-1.0**
	baz=336						
YHNB				*e*S	**Sb**	**16 15 45.4**	**-1.0**
	baz=336						
YHNB	**Yeheng**	**0.99**	**348**	*e*Pg	**Pb**	**16 15 32.4**	**-1.0**
YHNB				*e*Sg	**Sb**	**16 15 44.5**	**-2.0**
NSK	**Sanguang**	**1.00**	**347**	⇓P	**Pb**	**16 15 32.9**	**-0.7**
	baz=336						
NSK				*e*S	**Sb**	**16 15 44.9**	**-1.8**
	baz=336						
WTP	**Ta-pu**	**1.01**	**244**	⇑*i*P	**Pb**	**16 15 33.0**	**-0.7**
	baz=252						
WTP				S	**Sg**	**16 15 47.0**	**0.0**
	baz=252						
TTN	**Taitung**	**1.02**	**204**	*e*P	**Pb**	**16 15 33.3**	**-0.5**
	baz=206						
WCHH	**Zhanghua**	**1.03**	**292**	*e*P	**Pg**	**16 15 34.0**	**-0.2**
	baz=290						
WCHH				*e*S	**Sn**	**16 15 48.5**	**0.0**
	baz=290						
CHN2	**Minshiung**	**1.04**	**261**	*e*P	**Pb**	**16 15 34.2**	**0.0**
	baz=262						
CHN2				S	**Sn**	**16 15 49.3**	**+0.4**
	baz=262						
NSY	**Sanyi**	**1.05**	**313**	⇓P	**Pb**	**16 15 34.4**	**0.0**
	baz=312						
NSY				*e*S	**Sn**	**16 15 49.4**	**+0.2**
	baz=312						
ILA	**Ilan**	**1.08**	**7**	*e*P	**Pb**	**16 15 34.6**	**-0.2**
	baz=360						
ILA				*e*S	**Sn**	**16 15 49.8**	**0.0**
	baz=360						
NSTT	**Nanjuang**	**1.08**	**330**	⇓P	**Pb**	**16 15 34.3**	**-0.6**
	baz=328						
NSTT				S	**Sb**	**16 15 47.9**	**-1.0**
	baz=328						
LIOB	**Emei**	**1.09**	**331**	⇓*i*P	**Pb**	**16 15 34.5**	**-0.5**
	baz=329						
LIOB				S	**Sb**	**16 15 48.1**	**-0.9**
	baz=329						
CHY	**Chiayi**	**1.10**	**260**	*e*P	**Pb**	**16 15 34.9**	**-0.2**
	baz=260						
CHY				*e*S	**Sg**	**16 15 49.8**	**0.0**
	baz=260						
TWK	**Hsinying**	**1.10**	**248**	⇑P	**Pb**	**16 15 34.8**	**-0.5**
	baz=248						
TWK				S	**Sn**	**16 15 50.9**	**+0.3**
	baz=248						
CHN1	**Nanshi**	**1.11**	**243**	⇑*i*P	**Pb**	**16 15 34.8**	**-0.5**
	baz=243						
CHN1				S	**Sn**	**16 15 51.4**	**+0.9**
	baz=243						
SGST	**Jiashian**	**1.11**	**237**	⇑*e*P	**Pb**	**16 15 34.9**	**-0.6**
	baz=237						
SGST				S	**Sn**	**16 15 51.7**	**+0.9**
	baz=237						
SLGT	**Liugui**	**1.12**	**232**	*e*P	**Pb**	**16 15 34.5**	**-1.0**
	baz=227						
SLGT				*e*S	**Sn**	**16 15 51.6**	**+0.7**
	baz=227						
NMLH	**Miaoli**	**1.12**	**319**	⇓*e*P	**Pg**	**16 15 35.9**	**-0.1**
	baz=317						
NMLH				S	**Sn**	**16 15 50.9**	**0.0**
	baz=317						
RLNB	**Erlin**	**1.15**	**280**	⇑P	**Pb**	**16 15 35.7**	**-0.3**
	baz=279						
RLNB				S	**Sn**	**16 15 51.8**	**+0.2**
	baz=279						
NTC	**Toucheng**	**1.18**	**10**	*e*P	**Pb**	**16 15 36.6**	**+0.1**
	baz=352						
EGS		**1.19**	**15**	⇓P	**Pg**	**16 15 37.0**	**-0.3**
	baz=25						
WLGB	**Puzi**	**1.21**	**260**	⇑P	**Pb**	**16 15 37.1**	**0.0**
	baz=261						
WLGB				S	**Sg**	**16 15 54.4**	**+0.9**
	baz=261						
SBCB	**Hsinchu**	**1.23**	**333**	⇑P	**Pb**	**16 15 37.7**	**+0.3**
	baz=324						
SBCB				S	**Sg**	**16 15 54.2**	**0.0**
	baz=324						
ECL	**Taimali**	**1.24**	**209**	*e*P	**Pn**	**16 15 35.2**	**-2.1**
	baz=211						
HSN	**Hsinchu**	**1.25**	**333**	*e*P	**Pg**	**16 15 38.0**	**-0.3**
	baz=342						
HSN				S	**Sg**	**16 15 55.1**	**+0.5**
	baz=342						
WSF	**Szhu**	**1.26**	**268**	*e*P	**Pn**	**16 15 37.4**	**-0.2**
	baz=268						
WSF				S	**Sg**	**16 15 54.8**	**-0.4**
	baz=268						
TATO	**Taipei**	**1.28**	**355**	⇑P	**Pn**	**16 15 37.5**	**-0.3**
	baz=354						
TATO				S	**Sb**	**16 15 54.5**	**-0.2**
	baz=354						
TATO	**Taipei**	**1.28**	**355**	*e*Pn	**Pn**	**16 15 37.3**	**-0.6**
TATO				*e*Sg	**Sg**	**16 15 55.8**	**0.0**
TWA	**Mucha**	**1.28**	**359**	⇑P	**Pn**	**16 15 37.6**	**-0.3**
	baz=348						
TWA				*e*S	**Sg**	**16 15 55.7**	**-0.1**
	baz=348						
CHN3	**Shinhua**	**1.29**	**242**	⇑P	**Pg**	**16 15 38.8**	**-0.4**
	baz=254						
CHN3				*e*S	**Sg**	**16 15 58.8**	**+2.8**
	baz=254						
TIPB	**Shuangxi**	**1.29**	**9**	⇓P	**Pn**	**16 15 37.4**	**-0.7**
	baz=359						
TIPB				*e*S	**Sb**	**16 15 55.0**	**+0.1**
	baz=359						
SSD	**Sandimen**	**1.30**	**224**	*e*P	**Pn**	**16 15 37.1**	**-0.9**
	baz=214						
CHN8	**Yiju**	**1.32**	**255**	P	**Pn**	**16 15 38.3**	**-0.1**
	baz=268						
CHN8				S	**Sg**	**16 15 57.3**	**+0.3**
	baz=268						
NCUH	**Zhongli**	**1.32**	**343**	*e*P	**Pb**	**16 15 39.2**	**+0.2**
	baz=340						
NCUH				*e*S	**Sg**	**16 15 58.5**	**+1.4**
	baz=340						
NCU	**National Centr**	**1.33**	**344**	*e*P	**Pb**	**16 15 39.1**	**0.0**
	baz=340						
NCU				S	**Sg**	**16 15 58.0**	**+0.8**
	baz=340						
TAP1	**Taipei**	**1.34**	**357**	*e*P	**Pn**	**16 15 38.7**	**0.0**
	baz=354						
TAP1				*e*S	**Sb**	**16 15 56.7**	**+0.4**
	baz=354						
TWB1	**Santiao Chiao**	**1.36**	**15**	*e*P	**Pb**	**16 15 39.8**	**+0.2**
	baz=6.0						
TWB1				*e*S	**Sg**	**16 15 59.4**	**+1.2**
	baz=6.0						
WFSB	**Wu-fen Shan**	**1.38**	**7**	*e*P	**Pn**	**16 15 39.3**	**+0.1**
	baz=6.0						
WFSB				*e*S	**Sg**	**16 15 59.2**	**+0.2**
	baz=6.0						
SCLT	**Jiali**	**1.39**	**249**	*e*P	**Pb**	**16 15 40.0**	**-0.1**
	baz=251						
SCLT				S	**Sg**	**16 15 59.9**	**+0.7**
	baz=251						
MASBT	**Mashibuluo**	**1.40**	**220**	*e*P	**Pn**	**16 15 38.7**	**-0.8**
	baz=215						
MASBT				*e*S	**Sg**	**16 16 00.4**	**+1.0**
	baz=215						
SGLT	**Jiouru**	**1.40**	**227**	*e*P	**Pg**	**16 15 41.4**	**+0.1**
	baz=230						
TAI1	**Yung-k'ang**	**1.42**	**243**	*e*P	**Pb**	**16 15 40.7**	**+0.2**
	baz=246						
TAI1				*e*S	**Sg**	**16 16 02.1**	**+2.0**
	baz=246						
JYNG	**Yonagunijimaku**	**1.44**	**58**	P	**Pb**	**16 15 40.6**	**-0.4**
JYNG				S	**Sb**	**16 15 59.4**	**+0.1**
YM04	**YM04**	**1.46**	**358**	*e*P	**Pn**	**16 15 39.9**	**-0.4**
	baz=355						
YM04				*e*S	**Sg**	**16 16 00.7**	**-0.7**
	baz=355						
YM10	**YM10**	**1.46**	**359**	*e*P	**Pn**	**16 15 40.0**	**-0.4**
	baz=356						
YM11	**YM11**	**1.47**	**359**	*e*P	**Pn**	**16 15 40.8**	**+0.3**
	baz=356						
NTST	**Danshui**	**1.47**	**355**	*e*P	**Pb**	**16 15 41.9**	**+0.4**
	baz=10.0						
NTST				*e*S	**Sg**	**16 16 02.3**	**+0.5**
	baz=10.0						
YM07	**YM07**	**1.48**	**1**	*e*P	**Pn**	**16 15 38.9**	**-1.7**
	baz=359						
YM07				*e*S	**Sb**	**16 16 00.7**	**+0.4**
	baz=359						
TAW	**Tawu**	**1.48**	**206**	*e*P	**Pn**	**16 15 39.0**	**-1.5**
	baz=208						
YM03	**YM03**	**1.48**	**358**	*e*P	**Pn**	**16 15 40.3**	**-0.4**
	baz=355						
YM03				*e*S	**Sg**	**16 16 02.8**	**+0.6**
	baz=355						
YM12	**YM12**	**1.48**	**359**	*e*P	**Pn**	**16 15 40.8**	**+0.1**
	baz=356						
YM08	**YM08**	**1.49**	**360**	*e*P	**Pn**	**16 15 40.6**	**-0.2**
	baz=357						
YM08				*e*S	**Sb**	**16 16 01.3**	**+0.7**
	baz=357						
YOJ	**Yonaguni jima**	**1.50**	**59**	⇓P	**Pn**	**16 15 40.9**	**0.0**
	baz=57						
YOJ				*e*S	**Sn**	**16 16 00.1**	**-0.1**
	baz=57						
YOJ	**Yonaguni jima**	**1.50**	**59**	*e*Pn	**Pn**	**16 15 40.8**	**0.0**
YOJ				*e*Sn	**Sb**	**16 16 00.9**	**0.0**
YOJ	**Yonaguni jima**	**1.50**	**59**	P	**Pn**	**16 15 40.8**	**0.0**
YOJ				S	**Sb**	**16 16 01.7**	**+0.8**
YOJ	**Yonaguni jima**	**1.50**	**59**	*e*P	**Pn**	**16 15 40.8**	**0.0**
YOJ				*e*		16 16 00.9	
SSPT	**Xinbi**	**1.53**	**218**	*e*P	**Pb**	**16 15 42.9**	**+0.4**
	baz=207						
SSPT				S	**Sg**	**16 16 04.7**	**+0.9**
	baz=207						
TWY	**Chenhua**	**1.58**	**360**	*e*P	**Pn**	**16 15 42.1**	**+0.2**
	baz=358						
SCZT	**Fangliau**	**1.59**	**215**	*e*P	**Pb**	**16 15 42.8**	**-0.8**
	baz=216						
SCZT				*e*S	**Sg**	**16 16 05.4**	**-0.3**
	baz=216						
KAU	**Kaohsiung**	**1.63**	**227**	*e*P	**Pb**	**16 15 44.1**	**-0.2**
	baz=256						
LAY	**Lan-yu**	**1.65**	**182**	⇓*e*P	**Pn**	**16 15 40.2**	**-2.7**
	baz=184						
WLCH	**Liuqiu**	**1.75**	**220**	*e*P	**Pg**	**16 15 47.6**	**-0.3**
	baz=225						
TWP	**Hsiaoliuchiu**	**1.76**	**221**	*e*P	**Pg**	**16 15 47.4**	**-0.7**
	baz=225						
HEN	**Hengchun**	**1.86**	**206**	*e*P	**Pb**	**16 15 46.9**	**-1.2**
	baz=196						
PHUB	**P'eng-hu**	**1.87**	**265**	⇑P	**Pn**	**16 15 45.8**	**-0.1**
	baz=267						
PHUB				S	**Sn**	**16 16 09.6**	**+0.2**
	baz=267						
PNG	**Penghu**	**1.88**	**267**	⇑*e*P	**Pn**	**16 15 45.6**	**-0.4**
	baz=268						
PNG				S	**Sb**	**16 16 10.8**	**-1.0**
	baz=268						
TWK1	**Hengchun**	**1.89**	**203**	*e*P	**Pn**	**16 15 47.3**	**+1.1**
	baz=194						
TWKBT	**Hengchun**	**1.89**	**203**	*e*P	**Pb**	**16 15 47.4**	**-1.3**
	baz=194						
TWKBT				*e*S	**Sn**	**16 16 09.2**	**-0.6**
	baz=194						
TSEB	**Hengchuen, Pin**	**1.90**	**200**	*e*P	**Pb**	**16 15 47.8**	**-0.9**
	baz=192						
IRIF	**Iriomote-Funau**	**2.05**	**71**	P	**Pn**	**16 15 48.7**	**+0.3**
IRIF				*e*S	**Sb**	**16 16 15.3**	**-1.4**
VCHM	**Qimei**	**2.05**	**257**	*e*P	**Pn**	**16 15 48.4**	**0.0**
	baz=261						
VCHM				*e*S	**Sb**	**16 16 16.0**	**-0.7**
	baz=261						
HATJ	**Hateruma jima**	**2.05**	**79**	P	**Pn**	**16 15 48.0**	**-0.4**
HATJ				*e*S	**Sn**	**16 16 14.5**	**+0.7**
JKRS	**Kuro-shima**	**2.27**	**76**	P	**Pn**	**16 15 51.8**	**+0.4**
JKRS				*e*S	**Sn**	**16 16 20.9**	**+1.7**
VWUC	**VWUC**	**2.35**	**304**	*e*P	**Pn**	**16 15 51.9**	**-0.6**
	baz=300						
JIJ	**Ishigaki jima**	**2.42**	**73**	P	**Pn**	**16 15 53.3**	**-0.2**
JIJ				S	**Sn**	**16 16 23.6**	**+0.7**
JISG	**Ishigakijimahi**	**2.63**	**70**	P	**Pn**	**16 15 55.8**	**-0.6**
JISG				*e*S	**Sn**	**16 16 28.2**	**0.0**
MATB	**Ma-tsu**	**2.87**	**329**	⇑*e*P	**Pn**	**16 15 58.6**	**-1.1**
	baz=321						
KNM	**Kinmen**	**2.98**	**285**	⇑*e*P	**Pn**	**16 16 02.3**	**+1.1**
	baz=280						
JTJ	**Tarama**	**2.99**	**71**	P	**Pn**	**16 16 01.3**	**0.0**
JTJ				S	**Sn**	**16 16 38.6**	**+1.7**
QZH	**Quanzhou**	**3.01**	**295**	⇑*i*Pn	**Pn**	**16 16 00.8**	**-0.9**
QZH				Sn	**Sn**	**16 16 37.4**	**-0.2**
QZH				smax	smax		
	comp=N,4μm,0.9s						
QZH				smax	smax		
	comp=E,3μm,0.8s						
KNMB	**Chin-men Tao**	**3.03**	**285**	⇑*e*P	**Pn**	**16 16 01.3**	**-0.6**
	baz=281						
JIRB	**Irabujima**	**3.45**	**70**	P	**Pn**	**16 16 07.8**	**+0.1**
JIRB				S	**Sn**	**16 16 48.3**	**-0.1**
JIKM	**Ikemajima**	**3.55**	**69**	P	**Pn**	**16 16 09.0**	**0.0**
JIKM				*e*S	**Sn**	**16 16 51.5**	**+0.8**
JMJ	**Miyako jima 2**	**3.55**	**71**	*e*P	**Pn**	**16 16 09.3**	**+0.3**
	baz=68						
JMJ	**Miyako jima 2**	**3.55**	**71**	P	**Pn**	**16 16 10.0**	**+0.9**
JMJ				*e*S	**Sn**	**16 16 51.2**	**+0.3**
JOGS	**Gusukube**	**3.63**	**72**	P	**Pn**	**16 16 10.5**	**+0.3**
JOGS				*e*S	**Sn**	**16 16 54.1**	**+1.2**
JOW	**Kunigami**	**6.80**	**61**	Pn	**Pn**	**16 16 52.8**	**-1.0**
	22nm,0.3s,baz=66,slow=6.7,SNR=34						
JOW				Sn	**Sn**	**16 18 10.4**	**-0.6**
	baz=305,slow=19,SNR=2.3						
JOW	**Kunigami**	**6.80**	**61**	*e*P	**Pn**	**16 16 53.7**	**-0.1**
	baz=66						
JOW	**Kunigami**	**6.80**	**61**	*e*Pn	**Pn**	**16 16 53.8**	**0.0**
SSE	**Sheshan**	**7.38**	**357**	Pn	**Pn**	**16 17 03.8**	**+2.1**
SSE				Sn	**Sn**	**16 18 25.8**	**+0.5**
SSE				LR	LR		
	comp=N,5μm,8.5s						
SSE				LR	LR		
	comp=E,4μm,7.9s						
SSE				LR	LR		
	comp=Z,5μm,7.3s						
MCO	**Taipa Grande**	**7.58**	**260**	P	**Pn**	**16 17 05.0**	**+0.6**
GZH	**Guangzhou**	**7.61**	**267**	Pn	**Pn**	**16 17 01.6**	**-3.2**
GZH				smax	smax		
	comp=N,2μm,1.0s						
GZH				smax	smax		
	comp=E,2μm,1.0s						
NJ2	**Nanjing**	**8.67**	**344**	*e*P	**Pn**	**16 17 18.8**	**-0.6**
NJ2				S	**Sn**	**16 18 54.8**	**-2.3**
NJ2				pmax	pmax		
	comp=Z,33nm,0.7s						
NJ2				LR	LR		
	comp=N,19μm,9.2s						
NJ2				LR	LR		
	comp=E,13μm,9.2s						
NJ2				LR	LR		
	comp=Z,22μm,8.9s						
WHN	**Wuhan**	**9.39**	**318**	P	**Pn**	**16 17 29.4**	**+0.1**
WHN				S	**Sn**	**16 19 10.5**	**-4.2**
WHN				LR	LR		
	comp=N,31μm,8.3s						
WHN				LR	LR		
	comp=E,22μm,8.9s						
WHN				LR	LR		
	comp=Z,25μm,6.5s						
TGY	**Tagaytay City**	**9.56**	**184**	LR	LR	16 21 56.9	
	comp=Z,2μm,18.9s,baz=1.5,slow=43						
QIZ	**Qiongzhong**	**11.89**	**249**	P	**Pn**	**16 18 04.4**	**+0.8**
QIZ				S	**Sn**	**16 20 17.8**	**+1.6**
QIZ				pmax	pmax		
	comp=Z,22nm,1.7s						
QIZ				LR	LR		
	comp=N,6μm,14.7s						
QIZ				LR	LR		
	comp=E,4μm,10.3s						
QIZ				LR	LR		
	comp=Z,5μm,8.4s						
QIZ	**Qiongzhong**	**11.89**	**249**	*e*Pn	**Pn**	**16 18 06.2**	**+2.6**
JNU	**Nakatsue**	**12.44**	**39**	Pn	**Pn**	**16 18 12.2**	**+1.1**
	1.0nm,0.3s,baz=278,slow=3.0,SNR=11						
JNU	**Nakatsue**	**12.44**	**39**	*e*Pn	**Pn**	**16 18 14.2**	**+3.1**
ENH	**Enshi**	**12.63**	**304**	*e*Pn	**Pn**	**16 18 13.9**	**+0.2**
TIA	**Tai'an**	**13.06**	**344**	P	**P**	**16 18 28.6**	**-1.3**
TIA				S	S	16 20 59.8	-10
TIA				pmax	pmax		
	comp=Z,270nm,4.5s						
TIA				LR	LR		
	comp=N,5μm,8.9s						
TIA				LR	LR		
	comp=E,3μm,9.2s						
TIA				LR	LR		
	comp=Z,7μm,9.3s						
TJN	**Taejon**	**13.59**	**20**	*c*e*e*P	**Pn**	**16 18 29.1**	**+2.4**
GYA	**Guiyang**	**13.81**	**285**	⇑*i*P	**Pn**	**16 18 30.0**	**+0.1**
GYA				S	**Sn**	**16 20 55.9**	**-7.4**
GYA				pmax	pmax		
	comp=Z,90nm,0.9s						
GYA				pmax	pmax		
	comp=Z,300nm,4.4s						
GYA				LR	LR		
	comp=Z,8μm,10.9s						
GYA				LR	LR		
	comp=Z,13μm,12.4s						
GYA				LR	LR		
	comp=Z,18μm,10.9s						
INCN	**Inchon**	**14.41**	**16**	*e*Pn	**P**	**16 18 41.4**	**-3.4**
KS15	**Wonju Array Si**	**14.73**	**20**	*e*Pn	**Pn**	**16 18 44.9**	**+2.6**
KSAR	**Wonju Array Be**	**14.73**	**20**	Pn	**Pn**	**16 18 44.0**	**+1.7**
KSAR	**Wonju Array Be**	**14.73**	**20**	P	**Pn**	**16 18 44.0**	**+1.7**
KSRS	**Korea Array**	**14.75**	**20**	Pn	**Pn**	**16 18 44.0**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=191,slow=12,SNR=11						
KSRS				LR	LR	16 24 30.0	
	comp=Z,484nm,21.9s,baz=205,slow=38						
KS01	**Wonju Array Si**	**14.76**	**20**	*e*Pn	**Pn**	**16 18 44.4**	**+1.6**
XAN	**Xi'an**	**15.14**	**316**	P	**Pn**	**16 18 47.9**	**0.0**
XAN				pP	pP	16 18 55.0	-2.0
XAN				pmax	pmax		
	comp=Z,620nm,5.3s						
XAN				LR	LR		
	comp=Z,8μm,9.1s						
XAN				LR	LR		
	comp=Z,5μm,12.5s						
XAN				LR	LR		
	comp=Z,9μm,10.1s						
TIY	**Taiyuan**	**16.03**	**333**	*e*P	**P**	**16 19 03.1**	**+0.2**
TIY				pmax	pmax		
	comp=Z,1μm,4.5s						
TIY				LR	LR		
	comp=Z,9μm,10.8s						
TIY				LR	LR		
	comp=Z,5μm,6.6s						
TIY				LR	LR		
	comp=Z,8μm,10.5s						
BJT	**Baijiatuau**	**16.91**	**346**	*e*Pn	**P**	**16 19 12.3**	**-0.3**
	comp=Z,42nm,1.1s						
BJT	**Baijiatuau**	**16.91**	**346**	*e*P	**P**	**16 19 12.3**	**-0.3**
BJT				pmax	pmax		
	comp=Z,42nm,1.1s						
BJI	**Beijing**	**16.93**	**346**	⇑*i*P	**P**	**16 19 14.4**	**+1.6**
BJI				S	**S**	**16 22 26.8**	**-2.2**
BJI				pmax	pmax		
	comp=Z,29nm,1.6s						
BJI				pmax	pmax		
	comp=Z,1μm,6.9s						
BJI				LR	LR		
	comp=Z,7μm,9.1s						
BJI				LR	LR		
	comp=Z,5μm,7.4s						
BJI				LR	LR		
	comp=Z,2μm,14.2s						
DAV	**Davao City (W)**	**16.96**	**166**	LR	LR	16 25 29.7	
	comp=Z,2μm,21.3s,baz=1.5,slow=36						
KMI	**Kunming**	**17.24**	**279**	P	**P**	**16 19 17.3**	**+0.8**
KMI				pP	pP	16 19 19.0	-1.5
KMI				S	**Sn**	**16 22 27.4**	**+0.6**
KMI				pmax	pmax		
	comp=Z,33nm,1.3s						
KMI				pmax	pmax		
	comp=Z,740nm,5.1s						
KMI				LR	LR		
	comp=Z,7μm,8.5s						
KMI				LR	LR		
	comp=Z,12μm,8.5s						
KMI				LR	LR		
	comp=Z,15μm,9.9s						
CD2	**Chengdu**	**17.40**	**298**	P	**Pn**	**16 19 16.8**	**0.0**
CD2				sP	pP	16 19 22.8	+0.7
CD2				PP	**PnPn**	**16 19 31.4**	**+4.4**
CD2				S	**Sn**	**16 22 33.6**	**+3.2**
CD2				SS	**SnSn**	**16 22 50.1**	**+6.3**
CD2				pmax	pmax

CD2				pmax	pmax		
	comp=Z,1μm,3.5s						
CD2				LR	LR		
	comp=Z,25μm,7.4s						
CD2				LR	LR		
	comp=Z,36μm,9.2s						
INU	**Inuyama**	**17.72**	**46**	*e*Pn	**P**	**16 19 22.5**	**+1.0**
	comp=Z,35nm,1.4s						
SKNT	**Sakolnakorn**	**17.81**	**251**	P	**P**	**16 19 25.9**	**+3.2**
	comp=Z,21nm,1.9s						
NONG	**Nongkai**	**18.12**	**255**	P	**P**	**16 19 30.3**	**+4.2**
	comp=Z,57nm,1.7s						
SNY	**Shenyang**	**18.16**	**5**	⇓P	**P**	**16 19 28.8**	**+2.5**
SNY				S	**S**	**16 22 53.5**	**-0.4**
SNY				pmax	pmax		
	comp=Z,710nm,9.0s						
SNY				LR	LR		
	comp=Z,2μm,18.0s						
SNY				LR	LR		
	comp=Z,6μm,17.5s						
SNY				LR	LR		
	comp=Z,7μm,12.2s						
KKM	**Kota Kinabalu**	**18.30**	**197**	*e*Pn	**P**	**16 19 30.3**	**+2.2**
	comp=Z,165nm,1.5s						
JHJ	**Hachijo jima 2**	**18.53**	**56**	LR	LR	16 26 39.5	
	comp=Z,1μm,20.8s,baz=280,slow=37						
CBIJ	**Chichi jima**	**18.90**	**75**	*e*P	**P**	**16 19 32.6**	**-2.0**
	comp=Z,247nm,1.1s						
JCJ	**Chichijima**	**18.90**	**75**	LR	LR	16 26 41.1	
	comp=Z,936nm,18.7s,baz=281,slow=36						
HHC	**Hu-ho-hao-te**	**19.07**	**336**	*e*P	**Pn**	**16 19 40.6**	**+3.3**
HHC				pP	sP	16 19 43.8	+1.5
HHC				sP	pP	16 19 48.0	+7.5
HHC				PP	**PnPn**	**16 19 55.5**	**+5.5**
HHC				S	**S**	**16 23 12.9**	**+0.3**
HHC				sS	sS	16 23 20.0	+1.1
HHC				pmax	pmax		
	comp=Z,32nm,1.0s						
HHC				pmax	pmax		
	comp=Z,2μm,4.8s						
HHC				LR	LR		
	comp=Z,6μm,8.2s						
HHC				LR	LR		
	comp=Z,2μm,9.0s						
HHC				LR	LR		
	comp=Z,4μm,8.5s						
MAJO	**Matsushiro**	**19.21**	**44**	*e*P	**P**	**16 19 38.2**	**+0.2**
	comp=Z,14nm,1.0s						
MAJO	**Matsushiro**	**19.21**	**44**	*i* P	**Pn**	**16 19 38.9**	**0.0**
MAJO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MAT	**Matsushiro**	**19.21**	**44**	P	**Pn**	**16 19 38.9**	**0.0**
MAT				*e*S	**S**	**16 23 16.8**	**+1.5**
MJB9	**Matsu-Tunnel**	**19.21**	**44**	*e*P	**P**	**16 19 37.8**	**-0.2**
	comp=Z,15nm,1.1s						
MJAR	**Matsushiro Arr**	**19.21**	**44**	P	**P**	**16 19 37.2**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=241,slow=10,SNR=14						
MJAR				LR	LR	16 28 07.0	
	comp=Z,731nm,19.9s,baz=230,slow=40						
BTO	**Baotou**	**19.48**	**333**	*e*P	**Pn**	**16 19 44.5**	**+2.4**
LZH	**Lanzhou**	**19.70**	**313**	⇑P	**Pn**	**16 19 45.6**	**+0.7**
LZH				pP	sP	16 19 49.8	+0.5
LZH				sP	pP	16 19 52.6	+5.1
LZH				PP	**PnPn**	**16 20 06.5**	**+7.9**
LZH				S	**Sn**	**16 23 27.8**	**+1.7**
LZH				sS	sS	16 23 34.4	+2.6
LZH				pmax	pmax		
	comp=Z,160nm,1.4s						
LZH				pmax	pmax		
	comp=Z,4μm,4.3s						
LZH				LR	LR		
	comp=Z,7μm,13.0s						
LZH				LR	LR		
	comp=Z,12μm,12.5s						
LZH				LR	LR		
	comp=Z,16μm,12.5s						
CN2	**Changchun**	**20.31**	**8**	*e*P	**P**	**16 19 49.6**	**-0.2**
CN2				*es*P	sP	16 19 56.3	+0.7
CN2				*e*S	**S**	**16 23 33.9**	**-3.2**
CN2				LR	LR		
	comp=Z,3μm,16.0s						
CN2				LR	LR		
	comp=Z,5μm,16.0s						
CN2				LR	LR		
	comp=Z,3μm,14.0s						
MSHR	**Mys Shultsa**	**20.44**	**21**	*ce*P	Pn	16 19 53.3	-0.1
PBKT	**Sadao Pong**	**20.61**	**254**	P	Pn	16 19 54.5	-1.1
	comp=Z,56nm,1.1s,comp=Z,962nm						
PBKT	**Sadao Pong**	**20.61**	**254**	*e*P	**P**	**16 19 54.0**	**+0.7**
	comp=Z,64nm,1.1s						
PHIT	**Phitsanulok**	**20.86**	**256**	P	Pn	16 19 59.1	+0.5
	comp=Z,52nm,1.0s						
LAMP	**Lampang**	**21.12**	**260**	P	**P**	**16 20 01.5**	**+2.6**
	comp=Z,17nm,1.0s,comp=Z,183nm						
CHTO	**Chiang Mai**	**21.66**	**261**	P	**P**	**16 20 06.4**	**+1.8**
	comp=Z,349nm,1.2s,comp=Z,5μm						
CHTO	**Chiang Mai**	**21.66**	**261**	*e*P	**P**	**16 20 06.1**	**+1.5**
	comp=Z,78nm,1.1s						
CHTO	**Chiang Mai**	**21.66**	**261**	P	**P**	**16 20 06.1**	**+1.5**
	SNR=21						
CHTO	**Chiang Mai**	**21.66**	**261**	*e*P	**P**	**16 20 06.1**	**+1.5**
CHTO				pmax	pmax		
	comp=Z,78nm,1.1s						
CM01	**Chiang Mai Arr**	**21.76**	**260**	*e*P	**P**	**16 20 06.8**	**+1.1**
CM31	**Chiang Mai Arr**	**21.76**	**260**	*e*P	**P**	**16 20 07.2**	**+1.4**
CM31	**Chiang Mai Arr**	**21.76**	**260**	P	**P**	**16 20 07.7**	**+2.0**
CMAR	**Chiang Mai Arr**	**21.76**	**260**	P	**P**	**16 20 07.0**	**+1.2**
	comp=Z,34nm,1.2s,baz=64,slow=8.3,SNR=70						
CMAR				LR	LR	16 27 57.1	
	comp=Z,1μm,19.7s,baz=74,slow=35						
CMAR	**Chiang Mai Arr**	**21.76**	**260**	P	**P**	**16 20 07.0**	**+1.2**
MDJ	**Mudanjiang**	**21.87**	**15**	P	**P**	**16 20 03.5**	**-3.2**
MDJ				S	**S**	**16 24 11.3**	**+3.3**
MDJ				sS	pS	16 24 15.3	+0.7
MDJ				SS	**SnSn**	**16 24 39.4**	**+5.9**
MDJ				pmax	pmax		
	comp=Z,20nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,290nm,4.7s						
MDJ				LR	LR		
	comp=Z,3μm,11.1s						
MDJ				LR	LR		
	comp=Z,8μm,15.8s						
MDJ				LR	LR		
	comp=Z,3μm,12.4s						
MDJ	**Mudanjiang**	**21.87**	**15**	*e*P	**P**	**16 20 06.5**	**-0.2**
	comp=Z,73nm,1.1s						
USRK	**Ussuriysk Ar.**	**22.16**	**20**	P	**P**	**16 20 09.9**	**+0.1**
	comp=Z,3.5nm,0.5s,baz=210,slow=11,SNR=9.7						
USRK				LR	LR	16 30 01.4	
	comp=Z,722nm,18.4s,baz=188,slow=40						
MRSI	**Marisa**	**23.08**	**179**	P	**P**	**16 20 20.7**	**+1.0**
SRDT	**SRDT**	**23.17**	**250**	P	**P**	**16 20 23.8**	**+3.1**
	comp=Z,35nm,2.2s,comp=Z,2μm						
MPSI	**Mapaga**	**23.27**	**184**	P	**P**	**16 20 22.2**	**+0.5**
TNTI	**Ternate**	**23.46**	**165**	*e*P	**P**	**16 20 24.1**	**+0.5**
	comp=Z,77nm,1.5s						
GUMO	**Guam**	**24.20**	**110**	LR	LR	16 27 57.6	
	comp=Z,900nm,21.0s,baz=254,slow=32						
GTA	**Gaotai**	**24.20**	**315**	⇑P	**P**	**16 20 30.3**	**-0.4**
GTA				pP	pP	16 20 34.6	-0.4
GTA				sP	sP	16 20 37.8	+1.1
GTA				S	**S**	**16 24 53.9**	**+5.2**
GTA				pmax	pmax		
	comp=Z,770nm,5.0s						
GTA				LR	LR		
	comp=Z,2μm,9.5s						
GTA				LR	LR		
	comp=Z,5μm,11.3s						
GTA				LR	LR		
	comp=Z,6μm,12.9s						
APSI	**Ampana**	**24.46**	**180**	P	**P**	**16 20 33.7**	**+0.7**
PCI	**Palu**	**24.51**	**184**	P	**P**	**16 20 34.3**	**+0.8**
PCI	**Palu**	**24.51**	**184**	P	**P**	**16 20 35.4**	**+1.9**
PCI				pmax	pmax		
	comp=Z,140nm,1.5s						
LUWI	**Luwuk**	**24.61**	**177**	P	**P**	**16 20 35.7**	**+1.3**
LUWI	**Luwuk**	**24.61**	**177**	*e*P	**P**	**16 20 34.3**	**-0.1**
	comp=Z,148nm,1.0s						
LBMI	**Labuha**	**24.86**	**166**	P	**P**	**16 20 38.1**	**+1.5**
MTKI	**Muara Teweh, K**	**25.34**	**196**	P	**P**	**16 20 42.1**	**+1.1**
STKI	**Sintang**	**25.46**	**204**	P	**P**	**16 20 41.3**	**-0.8**
HIA	**Hailar**	**25.57**	**357**	*e*P	**P**	**16 20 41.2**	**-1.5**
	comp=Z,40nm,1.4s						
HIA	**Hailar**	**25.57**	**357**	*e*P	**P**	**16 20 41.3**	**-1.5**
HIA				pmax	pmax		
	comp=Z,40nm,1.4s						
ERM	**Erimo**	**25.61**	**39**	*e*P	**P**	**16 20 41.9**	**-1.3**
	comp=Z,17nm,0.9s						
ERM	**Erimo**	**25.61**	**39**	*ce*P	**P**	**16 20 44.6**	**+1.4**
ERM				pmax	pmax		
	comp=Z,27nm,1.2s						
SIJI	**Sorong**	**26.16**	**158**	LR	LR	16 28 50.1	
	comp=Z,641nm,21.4s,baz=34,slow=31						
TTSI	**Tana Toraja**	**26.63**	**184**	P	**P**	**16 20 57.0**	**+4.3**
ASAJ	**Asahikawa**	**26.67**	**35**	P	**P**	**16 20 53.6**	**+0.8**
	comp=Z,4.1nm,0.4s,baz=254,slow=14,SNR=11						
ASAJ				LR	LR	16 31 07.1	
	comp=Z,764nm,21.8s,baz=236,slow=36						
ASAJ	**Asahikawa**	**26.67**	**35**	*e*P	**P**	**16 20 51.9**	**-0.9**
	comp=Z,22nm,1.3s						
KLR	**Kul'dur**	**26.71**	**15**	P	**P**	**16 20 52.7**	**-0.4**
	comp=Z,1.8nm,1.0s,baz=233,slow=9.9,SNR=31						
KLR				LR	LR	16 33 45.8	
	comp=Z,55nm,18.1s,baz=199,slow=42						
KLR	**Kul'dur**	**26.71**	**15**	*i* P	**P**	**16 20 52.4**	**-0.8**
ULN	**Ulaanbaatar**	**26.76**	**338**	*e*P	**P**	**16 20 53.3**	**-0.5**
	comp=Z,16nm,0.9s						
ULN	**Ulaanbaatar**	**26.76**	**338**	P	**P**	**16 20 53.2**	**-0.5**
	SNR=14						
ULN	**Ulaanbaatar**	**26.76**	**338**	*ce*P	**P**	**16 20 53.3**	**-0.5**
ULN				pmax	pmax		
	comp=Z,18nm,1.2s						
SONA0	**Songino Array**	**26.97**	**337**	*e*P	**P**	**16 20 55.6**	**0.0**
SONM	**Songino Array**	**26.97**	**337**	P	**P**	**16 20 55.6**	**0.0**
	comp=Z,5.1nm,0.7s,baz=158,slow=9.3,SNR=16						
SONM				LR	LR	16 32 49.9	
	comp=Z,2μm,20.3s,baz=144,slow=39						
SONA1	**Songino Array**	**26.97**	**337**	*e*P	**P**	**16 20 54.0**	**-1.7**
SHL	**Shillong**	**27.05**	**280**	*e*P	**P**	**16 20 58.0**	**+1.3**
SHL	**Shillong**	**27.05**	**280**	*e*P	**P**	**16 20 56.4**	**-0.3**
	comp=Z,64nm,0.9s						
SHL	**Shillong**	**27.05**	**280**	*e*P	**P**	**16 20 56.4**	**-0.3**
SHL				pmax	pmax		
	comp=Z,64nm,0.9s						
KULM	**Kulim**	**27.24**	**231**	*e*P	**P**	**16 20 59.0**	**+0.8**
	comp=Z,54nm,1.8s						
NLAI	**Namlea**	**27.30**	**168**	P	**P**	**16 21 00.2**	**+1.5**
BRDH	**Bariadhala**	**27.54**	**274**	LR	LR	16 31 53.0	
	comp=Z,584nm,18.1s,baz=166,slow=36						
IPM	**Ipoh**	**27.55**	**229**	*e*P	**P**	**16 21 01.2**	**+0.2**
	comp=Z,20nm,1.1s						
SPSI	**Sidrap Palu**	**27.55**	**184**	P	**P**	**16 21 01.0**	**+0.1**
LSA	**Lhasa**	**27.80**	**289**	*e*P	**P**	**16 21 04.3**	**+0.6**
	comp=Z,16nm,0.6s						
LSA	**Lhasa**	**27.80**	**289**	*e*P	**P**	**16 21 04.3**	**+0.6**
LSA				pmax	pmax		
	comp=Z,16nm,0.6s						
FAKI	**Fak Fak**	**28.41**	**157**	*e*P	**P**	**16 21 09.6**	**+0.9**
	comp=Z,27nm,1.1s						
YUK	**Yuzh-Kuril'sk**	**28.41**	**39**	*e*P	**P**	**16 21 08.2**	**-0.2**
YUK				S	**S**	**16 25 54.8**	**-0.2**
YUK				pmax	pmax		
	comp=N,4.0nm,1.6s						
YUK				pmax	pmax		
	comp=Z,11nm,1.6s						
YUK				MLR	MLR		
	comp=Z,648nm,18.0s						
YSS	**Yuzh-Sakhalins**	**28.75**	**31**	*e*P	**P**	**16 21 13.3**	**+2.0**
	comp=Z,30nm,1.1s						
YSS	**Yuzh-Sakhalins**	**28.75**	**31**	⇑*i* P	**P**	**16 21 13.0**	**+1.6**
YSS				*e*S	**S**	**16 26 00.8**	**+0.5**
YSS				pmax	pmax		
	comp=Z,20nm,1.3s						
YSS				pmax	pmax		
	comp=N,10μm,1.3s						
YSS				MLR	MLR		
	comp=E,700nm,15.0s						
PSI	**Prapat**	**30.20**	**230**	P	**P**	**16 21 26.0**	**+1.2**
	comp=E,4.0nm,0.4s,baz=20,slow=0.2,SNR=8.8						
PSI				LR	LR	16 34 16.9	
	comp=E,503nm,19.0s,baz=89,slow=38						
PSI	**Prapat**	**30.20**	**230**	*e*P	**P**	**16 21 25.4**	**+0.6**
	comp=E,26nm,1.2s						
PSI	**Prapat**	**30.20**	**230**	*e*P	**P**	**16 21 25.4**	**+0.6**
PSI				pmax	pmax		
	comp=Z,26nm,1.2s						
ZAK	**Zakamensk**	**30.22**	**336**	*e*P	**P**	**16 21 22.4**	**-2.2**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ZEA	**Zeya**	**30.30**	**7**	*e*P	**P**	**16 21 24.4**	**-0.7**
ZEA				pmax	pmax		
	comp=N,35nm,1.0s						
ZEA				pmax	pmax		
	comp=E,29nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,43nm,1.2s						
ZEA				MLR	MLR		
	comp=Z,4μm,13.0s						
ZEA				MLR	MLR		
	comp=E,2μm,12.0s						
ZEA				MLR	MLR		
	comp=N,3μm,13.0s						
ODAN	**Odare**	**31.04**	**283**	*e*P	**P**	**16 21 33.2**	**+1.0**
	comp=N,103nm,1.4s						
ODAN	**Odare**	**31.04**	**283**	*e*P	**P**	**16 21 33.2**	**+1.0**
	comp=N,103nm,1.4s						
TLY	**Talaya**	**31.17**	**338**	*e*P	P	16 21 27.2	-5.6
TLY				*e*PPP	PPP	16 22 43.5	
TLY				*e*S	**S**	**16 26 31.3**	**-7.0**
TLY				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TLY				MLR	MLR		
	comp=Z,2μm,17.0s						
MNSI	**Mandailing Nat**	**31.21**	**226**	P	**P**	**16 21 32.4**	**-1.1**
IRK	**Irkutsk**	**31.44**	**339**	*e*P	**P**	**16 21 34.1**	**-1.1**
IRK				pmax	pmax		
	comp=Z,28nm,1.8s						
TYV	**Tymovskoe**	**31.65**	**26**	*e*P	**P**	**16 21 40.8**	**+3.8**
TYV				pmax	pmax		
	comp=Z,10.0nm,1.9s						
TYV				pmax	pmax		
	comp=Z,100nm,3.8s						
TYV				MLR	MLR		
	comp=E,800nm,13.0s						
TYV				MLR	MLR		
	comp=Z,1μm,13.0s						
RAMN	**Ramite**	**31.74**	**283**	*e*P	**P**	**16 21 39.4**	**+1.0**
	comp=Z,125nm,1.2s						
RAMN	**Ramite**	**31.74**	**283**	*e*P	**P**	**16 21 39.5**	**+1.0**
	comp=Z,125nm,1.2s						
JIRN	**Jiri**	**32.09**	**285**	*e*P	**P**	**16 21 42.7**	**+1.1**
	comp=Z,169nm,1.2s						
JIRN	**Jiri**	**32.09**	**285**	*e*P	**P**	**16 21 42.8**	**+1.1**
	comp=Z,169nm,1.2s						
MOY	**Mondy**	**32.11**	**336**	*e*P	**P**	**16 21 40.7**	**-0.5**
MMRI	**Maumere**	**32.14**	**179**	*e*P	**P**	**16 21 41.7**	**+0.2**
	comp=Z,42nm,0.9s						
GSI	**Gunungsitoli**	**32.21**	**230**	*e*P	**P**	**16 21 43.5**	**+1.3**
	comp=Z,17nm,1.2s						
EDFI	**Ende, Flores**	**32.24**	**180**	P	**P**	**16 21 42.0**	**-0.6**
GUN	**Gumba**	**32.36**	**285**	*e*P	**P**	**16 21 44.8**	**+0.8**
	comp=Z,36nm,0.8s						
GUN	**Gumba**	**32.36**	**285**	*e*P	**P**	**16 21 44.8**	**+0.8**
	comp=Z,107nm,1.3s						
NGJI	**Ngawi**	**32.42**	**199**	P	**P**	**16 21 45.8**	**+1.7**
SMRI	**Semarang**	**32.44**	**201**	*e*P	**P**	**16 21 45.8**	**+1.5**
	comp=Z,81nm,1.2s						
TWSI	**Taliwang, Sumb**	**32.56**	**189**	P	**P**	**16 21 46.9**	**+1.6**
	comp=Z,26nm,1.1s						
MDSI	**Maura Dua**	**32.76**	**213**	P	**P**	**16 21 47.0**	**-0.1**
PKIN	**Phulchoki**	**32.80**	**285**	*e*P	**P**	**16 21 47.9**	**+0.2**
	comp=Z,84nm,1.5s						
PKIN	**Phulchoki**	**32.80**	**285**	*e*P	**P**	**16 21 48.2**	**+0.5**
	comp=Z,52nm,1.0s						
KKN	**Kakani**	**32.89**	**285**	*e*P	**P**	**16 21 49.1**	**+0.6**
	comp=Z,80nm,1.1s						
KKN	**Kakani**	**32.89**	**285**	*e*P	**P**	**16 21 49.1**	**+0.6**
	comp=Z,80nm,1.1s						
WOJI	**Wonogiri, Jawa**	**33.03**	**200**	P	**P**	**16 21 49.4**	**0.0**
DMN	**Daman**	**33.05**	**285**	*e*P	**P**	**16 21 50.3**	**+0.4**
	comp=Z,100nm,1.2s						
DMN	**Daman**	**33.05**	**285**	*e*P	**P**	**16 21 50.4**	**+0.5**
	comp=Z,100nm,1.2s						
KPJI	**Karang Pucung**	**33.23**	**203**	P	**P**	**16 21 51.3**	**+0.2**
LEM	**Lembang**	**33.27**	**206**	P	**P**	**16 21 51.9**	**+0.3**
	comp=Z,40nm,0.9s,baz=127,slow=20,SNR=6.6						
SOEI	**Soe**	**33.34**	**175**	P	P	16 21 59.9	+7.6
DBJI	**Dramaga**	**33.38**	**208**	P	**P**	**16 21 52.2**	**-0.3**
GKN	**Gorkha**	**33.46**	**285**	*e*P	**P**	**16 21 53.6**	**+0.3**
	comp=Z,78nm,1.2s						
GKN	**Gorkha**	**33.46**	**285**	*e*P	**P**	**16 21 53.6**	**+0.3**
	comp=Z,78nm,1.2s						
BATI	**Baumata**	**33.75**	**176**	LR	LR	16 37 23.5	
	comp=Z,385nm,21.4s,baz=346,slow=40						
DANN	**Dangsing**	**34.23**	**286**	*e*P	**P**	**16 22 00.6**	**+0.4**
	comp=Z,91nm,1.0s						
DANN	**Dangsing**	**34.23**	**286**	*e*P	**P**	**16 22 01.0**	**+0.8**
	comp=Z,91nm,1.0s						
WMQ	**Urumqi**	**34.27**	**314**	P	**P**	**16 22 01.3**	**+1.2**
WMQ				pP	sP	16 22 06.5	+0.3
WMQ				PP	**PP**	**16 23 17.0**	**-0.7**
WMQ				S	**S**	**16 27 28.3**	**+1.5**
WMQ				SS	**SnSn**	**16 29 36.5**	**+0.7**
WMQ				ScS	**ScS**	**16 32 24.5**	**+1.0**
WMQ				pmax	pmax		
	comp=Z,48nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,810nm,5.1s						
WMQ				LR	LR		
	comp=Z,5μm,13.9s						
WMQ				LR	LR		
	comp=Z,6μm,13.9s						
WMQ				LR	LR		
	comp=Z,2μm,14.9s						
KOLN	**Koldanda**	**34.38**	**285**	*e*P	**P**	**16 22 01.8**	**+0.4**
	comp=Z,50nm,0.8s						
KOLN	**Koldanda**	**34.38**	**285**	*e*P	**P**	**16 22 01.8**	**+0.4**
	comp=Z,50nm,0.8s						
PYUN	**Piuthan**	**34.91**	**286**	*e*P	**P**	**16 22 06.5**	**+0.5**
	comp=Z,111nm,1.1s						
PYUN	**Piuthan**	**34.91**	**286**	*e*P	**P**	**16 22 06.6**	**+0.5**
	comp=Z,111nm,1.1s						
MTN	**Manton Dam**	**37.49**	**165**	*e*P	**P**	**16 22 26.5**	**-1.3**
	comp=Z,12nm,0.6s						
SKR	**Severo-Kuril's**	**37.93**	**36**	⇑*e*P	**P**	**16 22 31.6**	**+0.4**
YAK	**Yakutsk**	**38.72**	**6**	*e*P	**P**	**16 22 35.8**	**-1.9**
	comp=Z,10nm,0.7s						
YAK	**Yakutsk**	**38.72**	**6**	*e*P	**P**	**16 22 34.1**	**-3.6**
YAK				*e**PP	**pP**	**16 22 39.7**	**-2.3**
YAK				*e*		16 24 07.9	
YAK				*e*		16 24 46.0	
YAK				*e*S	**S**	**16 28 31.9**	**-2.1**
YAK				*e*SS	**SnSn**	**16 31 20.9**	**-1.8**
YAK				*e*SSS	SSS	16 31 44.0	
YAK				*e*		16 32 45.5	
YAK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,83nm,3.1s						
YAK				pmax	pmax		
	comp=N,56nm,3.3s						
YAK				pmax	pmax		
	comp=E,24nm,3.4s						
YAK				smax	smax		
	comp=N,32nm,2.5s						
YAK				smax	smax		
	comp=E,34nm,3.0s						
YAK				MLR	MLR		
	comp=Z,1μm,16.0s						
YAK				MLR	MLR		
	comp=E,508nm,17.0s						
YAK				MLR	MLR		
	comp=N,1μm,17.0s						
MK01	**Makanchi Array**	**38.94**	**316**	*e*P	**P**	**16 22 39.6**	**-0.2**
MK31	**Makanchi Array**	**38.95**	**316**	*e*P	**P**	**16 22 40.2**	**+0.2**
MK31	**Makanchi Array**	**38.95**	**316**	*i* P	**P**	**16 22 40.0**	**0.0**
MK31				pmax	pmax		
	comp=Z,21nm,1.0s						
MK32	**Makanchi Array**	**38.95**	**316**	*e*P	**P**	**16 22 39.9**	**-0.1**
MK32				*e*PcP	**PcP**	**16 24 49.9**	**-0.5**
MKAR	**Makanchi Array**	**38.95**	**316**	P	**P**	**16 22 39.9**	**-0.1**
	comp=Z,8.4nm,0.8s,baz=108,slow=9.4,SNR=43						
MKAR				PcP	**PcP**	**16 24 49.9**	**-0.5**
	comp=Z,4.2nm,1.0s,baz=103,slow=5.4,SNR=3.7						
MKAR				LR	LR	16 39 59.5	
	comp=Z,1μm,19.6s,baz=89,slow=38						
MKAR	**Makanchi Array**	**38.95**	**316**	*e*P	**P**	**16 22 40.0**	**+0.1**
	comp=Z,78nm,0.8s						
MKAR				PcP	**PcP**	**16 24 49.9**	**-0.5**
MKAR	**Makanchi Array**	**38.95**	**316**	*i* P	**P**	**16 22 40.5**	**+0.5**
MKAR				pmax	pmax		
	comp=Z,11nm,0.7s						
PATS	**Pohnpei**	**39.02**	**109**	*e*P	**P**	**16 22 42.0**	**+1.2**
	comp=Z,260nm,1.5s						
MAKZ	**Makanchi**	**39.16**	**316**	*e*P	**P**	**16 22 41.8**	**+0.1**
	comp=Z,18nm,1.0s						
MAKZ	**Makanchi**	**39.16**	**316**	P	**P**	**16 22 41.7**	**+0.1**
MAKZ				pmax	pmax		
	comp=Z,22nm,1.1s						
PEA0B	**Petropavlovsk-**	**40.06**	**33**	*e*P	**P**	**16 22 49.9**	**+0.8**
	comp=Z,24nm,1.3s						
PETK	**Petropavlovsk-**	**40.06**	**33**	P	**P**	**16 22 50.2**	**+1.1**
	comp=Z,2.2nm,0.9s,baz=188,slow=2.0,SNR=7.3						
PETK				LR	LR	16 39 53.2	
	comp=Z,102nm,20.4s,baz=228,slow=37						
PETK	**Petropavlovsk-**	**40.06**	**33**	*e*P	**P**	**16 22 49.7**	**+0.6**
PETK	**Petropavlovsk-**	**40.06**	**33**	*e*P	**P**	**16 22 49.7**	**+0.6**
PEA1	**Petropavlovsk-**	**40.06**	**33**	*e*P	**P**	**16 22 50.2**	**+1.1**
PRZ	**Przheval'sk**	**40.25**	**308**	*e*P	**P**	**16 22 50.7**	**-0.3**
	comp=Z,71nm,1.9s						
PRZ	**Przheval'sk**	**40.25**	**308**	*e*P	**P**	**16 22 50.7**	**-0.3**
PRZ				pmax	pmax		
	comp=Z,71nm,1.9s						
PET	**Petropavlovsk**	**40.50**	**34**	*e*P	**P**	**16 22 52.4**	**-0.2**
	comp=Z,37nm,1.2s						
PET	**Petropavlovsk**	**40.50**	**34**	*e*P	**P**	**16 22 53.0**	**+0.3**
PET				*e*		16 24 31.5	
PET				*e*S	**S**	**16 28 59.8**	**-1.3**
PET				*e*SS	**SS**	**16 31 53.9**	**-6.7**
PET						16 32 55.4	
PET				pmax	pmax		
	comp=Z,30nm,1.1s						
PET				MLR	MLR		
	comp=Z,600nm,17.0s						
PET				MLR	MLR		
	comp=Z,500nm,16.0s						
TARG	**Taragay, Kyrgy**	**40.51**	**307**	*e*P	**P**	**16 22 52.0**	**-1.5**
	comp=Z,7.4nm,0.9s						
RABL	**Rabaul**	**40.69**	**129**	*e*P	**P**	**16 22 55.7**	**+1.0**
	comp=Z,68nm,0.8s						
ZAA0	**Zalesovo Array**	**40.86**	**327**	*e*P	**P**	**16 22 54.5**	**-1.1**
	comp=Z,16nm,0.9s						
ZALV	**Zalesovo Beam**	**40.86**	**327**	P	**P**	**16 22 55.1**	**-0.5**
	comp=Z,6.2nm,0.6s,baz=116,slow=6.8,SNR=27						
ZALV				PcP	**PcP**	**16 24 54.6**	**-1.6**
	comp=Z,1.6nm,0.6s,baz=116,slow=4.0,SNR=3.1						
ZALV				LR	LR	16 41 01.5	
	comp=Z,1μm,19.0s,baz=102,slow=38						
ZALV	**Zalesovo Beam**	**40.86**	**327**	*e*P	**P**	**16 22 54.0**	**-1.7**
ZALV				PcP	**PcP**	**16 24 54.6**	**-1.6**
**

comp=Z,8,4nm,1.1s
NRN Naryn 41.78 306 *e*P **P 16 23 04.3 +0.5**
comp=Z,37nm,1.4s
NRN Naryn 41.78 306 *e*P **P 16 23 04.3 +0.5**
NRN pmax pmax
comp=Z,37nm,1.4s
NVS Novosibirsk 42.12 328 *e*P **P 16 23 05.1 -0.9**
NVS pmax pmax
comp=N,10.0nm,1.3s
NVS pmax pmax
comp=E,11nm,1.3s
NVS pmax pmax
comp=Z,16nm,1.3s
H11N1 WAKE ISLAND Hy 42.14 86 T T 17 08 05.2
baz=283,slow=75,SNR=551
H11N2 WAKE ISLAND Hy 42.14 86 T T 17 08 05.2
baz=283,slow=75,SNR=414
H11N3 WAKE ISLAND Hy 42.15 86 T T 17 08 06.6
baz=283,slow=75,SNR=545
H11S3 WAKE ISLAND Hy 42.25 88 T T 17 08 13.9
baz=284,slow=74,SNR=3950
H11S1 WAKE ISLAND Hy 42.26 88 T T 17 08 14.5
baz=284,slow=74,SNR=854
H11S2 WAKE ISLAND Hy 42.27 88 T T 17 08 15.1
baz=284,slow=74,SNR=1401
TKM2 Tokmak 2 42.37 308 P **P 16 23 10.0 +1.5**
SNR=16
TKM2 Tokmak 2 42.37 308 P **P 16 23 09.3 +0.9**
TKM2 pmax pmax
comp=Z,16nm,0.9s
PALK Pallekele 42.47 254 LR LR 16 41 55.1
comp=Z,486nm,19.7s,baz=48,slow=38
KURK Kurchatov 42.71 320 *e*P **P 16 23 09.9 -0.9**
comp=Z,21nm,1.1s
KURK Kurchatov 42.71 320 P **P 16 23 10.6 -0.2**
SNR=12
KURK Kurchatov 42.71 320 *ce*P **P 16 23 10.5 -0.3**
KURK pmax pmax
comp=Z,17nm,1.2s
KURBB Kurchatov Arra 42.73 320 P **P 16 23 10.7 -0.3**
comp=Z,5.2nm,0.8s,baz=118,slow=7.4,SNR=25
KBK Karagaybulak 42.78 308 P **P 16 23 13.5 +1.7**
SNR=6.1
COEN Coen 42.96 148 *e*P **P 16 23 13.3 +0.2**
comp=Z,22nm,0.8s
CHMS Chumysh 42.99 308 P **P 16 23 14.4 +1.1**
SNR=8.0
UCH Uchtor 43.02 307 P **P 16 23 16.2 +2.2**
SNR=16
FRU Bishkek 43.05 308 *e*P **P 16 23 13.5 -0.3**
FRU *e* 16 25 07.5
AAK Ala-Archa 43.11 308 P **P 16 23 15.2 +0.8**
comp=Z,3.0nm,0.7s,baz=116,slow=5.7,SNR=7.5
AAK Ala-Archa 43.11 308 *e*P **P 16 23 14.7 +0.3**
comp=Z,12nm,1.1s
AAK Ala-Archa 43.11 308 *e*P **P 16 23 14.7 +0.3**
AAK pmax pmax
comp=Z,12nm,1.1s
NIL Nilore 43.23 295 *e*P **P 16 23 15.5 +0.1**
comp=Z,14nm,0.9s
NIL Nilore 43.23 295 *e*P **P 16 23 15.5 +0.1**
NIL pmax pmax
comp=Z,14nm,0.9s
SFK Sufi-Kurgan 43.44 304 P **P 16 23 18.1 +0.9**
SFK pmax pmax
comp=Z,13nm,1.4s
AML Almayashu 43.60 307 P **P 16 23 20.1 +1.4**
SNR=12
MNAS Manas 44.53 307 P **P 16 23 26.7 +0.9**
MNAS pmax pmax
comp=Z,22nm,1.3s
MBWA Marble Bar 44.62 182 *e*P **P 16 23 25.8 -0.6**
comp=Z,11nm,0.8s
WRAB Tennant Creek 45.11 163 *e*P **P 16 23 28.9 -1.4**
comp=Z,14nm,0.8s
WRAB Tennant Creek 45.11 163 *e*P **P 16 23 29.0 -1.4**
WRAB pmax pmax
comp=Z,14nm,0.8s
WR1 Warramunga Arr 45.11 163 *e*P **P 16 23 29.0 -1.5**
comp=Z,17nm,0.8s
WRA Warramunga Arr 45.11 163 P **P 16 23 29.0 -1.5**
comp=Z,9.4nm,0.6s,baz=344,slow=8.7,SNR=77
WRA Warramunga Arr 45.11 163 P **P 16 23 29.0 -1.5**
WB2 Warramunga Arr 45.12 163 *e*P **P 16 23 28.6 -1.9**
OTUK Ortayu 45.81 315 P **P 16 23 35.9 +0.2**
OTUK pmax pmax
comp=Z,22nm,1.4s
KK31 Karatay Array 46.07 308 *e*P **P 16 23 37.7 -0.1**
KK31 Karatay Array 46.07 308 *i* P **P 16 23 37.8 -0.1**
KK31 pmax pmax
comp=Z,6.0nm,0.9s
KKAR Karatay Array 46.07 308 *e*P **P 16 23 38.1 +0.2**
KKAR Karatay Array 46.07 308 *e*P **P 16 23 38.1 +0.2**
KBL Kabul 46.72 296 *e*P **P 16 23 43.6 +0.3**
comp=Z,18nm,0.9s
KBL Kabul 46.72 296 *e*P **P 16 23 43.6 +0.3**
KBL pmax pmax
comp=Z,18nm,0.9s
TIXI Tiksi 48.16 3 *e*P **P 16 23 51.8 -1.9**
comp=Z,38nm,1.4s
TIXI Tiksi 48.16 3 *i* P **P 16 23 52.4 -1.3**
TIXI pmax pmax
comp=Z,20nm,1.2s
BVA0 Borovoye Array 48.29 321 *i* P **P 16 23 54.7 -0.3**
BVA0 pmax pmax
comp=Z,15nm,1.4s
BVAR Borovoye Array 48.29 321 P **P 16 23 55.1 0.0**
comp=Z,3.4nm,0.6s,baz=112,slow=8.3,SNR=22
BVAR PcP **PcP 16 25 20.8 -1.0**
comp=Z,2.3nm,0.6s,baz=131,slow=4.0,SNR=4.9
BVAR LR LR 16 43 43.6
comp=Z,382nm,21.1s,baz=114,slow=35
BRVK Borovoye 48.36 321 *e*P **P 16 23 54.8 -0.8**
comp=Z,12nm,0.9s
BRVK Borovoye 48.36 321 P **P 16 23 55.8 +0.2**
SNR=11
BRVK Borovoye 48.36 321 *ce*P **P 16 23 54.8 -0.8**
BRVK pmax pmax
comp=Z,14nm,1.0s
AS31 Alice Springs 48.57 165 *e*P **P 16 23 57.0 -0.5**
comp=Z,2.7nm,0.9s
ASAR Alice Springs 48.57 165 P **P 16 23 56.9 -0.6**
comp=Z,8.5nm,0.9s,baz=340,slow=7.3,SNR=37
ASAR LR LR 16 44 34.4
comp=Z,236nm,21.4s,baz=6.5,slow=36
AS01 Alice Springs 48.58 165 *e*P **P 16 23 57.3 -0.2**
CTA Charters Tower 49.71 149 P **P 16 24 06.7 +0.4**
comp=Z,5.6nm,0.8s,baz=339,slow=13,SNR=6.7
CTA LR LR 16 42 54.6
comp=Z,950nm,21.2s,baz=341,slow=34
CTAO Charters Tower 49.71 149 *e*P **P 16 24 06.8 +0.6**
comp=Z,11nm,1.1s
CTAO Charters Tower 49.71 149 *e*P **P 16 24 06.8 +0.6**
CTAO pmax pmax
comp=Z,11nm,1.1s
HNR Honiara 49.89 127 LR LR 16 43 23.5
comp=Z,366nm,20.6s,baz=341,slow=34
NRIK Noril'sk 49.97 345 P **P 16 24 07.8 +0.2**
comp=Z,3.5nm,0.7s,baz=139,slow=7.3,SNR=4.4
NRIK LR LR 16 46 35.7
comp=Z,514nm,18.8s,baz=147,slow=38
BILL Bilibino 52.02 20 *e*P **P 16 24 21.9 -1.1**
comp=Z,21nm,1.1s
BILL Bilibino 52.02 20 ⇓ *e*P **P 16 24 21.9 -1.1**
BILL *e* 16 25 35.9
BILL *e* 16 26 22.5
BILL *e*S **S 16 31 44.3 -1.6**
BILL pmax pmax
comp=Z,20nm,1.1s
BILL MLR MLR
comp=Z,605nm,16.0s
AB31 Akbulak array 54.05 315 *i* P **P 16 24 38.4 0.0**
AB31 pmax pmax
comp=Z,11nm,0.8s
ABKAR Akbulak array 54.05 315 *e*P **P 16 24 38.2 -0.1**
FORT Forrest 54.51 173 *e*P **P 16 24 41.5 -0.2**
comp=Z,34nm,0.9s
SVE Sverdlovsk 54.66 324 ⇑ *i*P **P 16 24 42.9 +0.2**
SVE pmax pmax
comp=Z,27nm,1.1s
SVE MLR MLR
comp=Z,922nm,13.0s
GEYT Alibeck 55.37 301 P **P 16 24 48.7 +0.5**
comp=Z,19nm,1.1s,baz=64,slow=3.4,SNR=1.7
GEYT LR LR 16 52 51.6
comp=Z,680nm,18.6s,baz=110,slow=41
GYA0B ALIBECK ARRAY 55.37 301 *e*P **P 16 24 49.4 +1.3**
comp=Z,24nm,1.0s
AKTO Aktyubinsk 55.39 316 P **P 16 24 47.9 -0.2**
comp=Z,1.9nm,0.4s,baz=93,slow=7.9,SNR=6.4
AKTO LR LR 16 50 11.6
comp=Z,885nm,18.1s,baz=94,slow=38
ARU Arti 55.73 323 P **P 16 24 50.1 -0.3**
comp=Z,6.1nm,0.5s,baz=84,slow=3.6
ARU Arti 55.73 323 *e*P **P 16 24 49.0 -1.3**
comp=Z,14nm,0.7s
ARU Arti 55.73 323 *c i*P **P 16 24 49.5 -0.8**
ARU 16 25 44.9
ARU S **S 16 32 35.5 -0.9**
ARU SS **SS 16 36 14.3 -7.2**
ARU pmax pmax
comp=Z,18nm,1.0s
NWAO Narrogin (SRO) 56.46 184 P **P 16 24 55.1 -0.7**
comp=Z,10.0nm,0.9s,baz=221,slow=9.3,SNR=3.1
NWAO LR LR 16 52 33.6
comp=Z,77nm,18.0s,baz=246,slow=40
EIDS Eidsvold 56.52 148 *e*P **P 16 24 56.7 +0.4**
comp=Z,27nm,1.6s
BBOO Buckleboo 57.86 166 *e*P **P 16 25 05.7 +0.1**
comp=Z,67nm,1.2s
STKA Stephens Creek 58.47 160 P **P 16 25 08.5 -1.5**
comp=Z,22nm,0.9s,baz=339,slow=6.8,SNR=25
STKA LR LR 16 51 36.8
comp=Z,270nm,20.8s,baz=5.2,slow=37
STKA Stephens Creek 58.47 160 *e*P **P 16 25 09.4 -0.6**
comp=Z,3.7nm,0.8s
STKA Stephens Creek 58.47 160 *e*P **P 16 25 09.4 -0.6**
STKA pmax pmax
comp=Z,4.0nm,0.8s
SPIA Saint Paul Isl 58.61 36 *e*P **P 16 25 10.8 +0.1**
comp=Z,254nm,1.6s
NIKH Nikolski High 59.21 41 *e*P **P 16 25 15.1 +0.2**
comp=Z,421nm,1.5s
ARMA Armidale 61.03 150 *e*P **P 16 25 30.2 +2.4**
comp=Z,60nm,1.8s
ANM Nome 61.58 28 *e*P **P 16 25 33.0 +2.0**
comp=Z,50nm,1.2s
ANM Nome 61.58 28 *e*P **P 16 25 33.0 +2.0**
ANM pmax pmax
comp=Z,50nm,1.2s
FALS False Pass 62.40 39 *e*P **P 16 25 37.1 +0.5**
comp=Z,375nm,0.4s
PRGR Permogore 62.80 329 *e*P **P 16 25 37.1 -2.0**
PRGR pmax pmax
comp=Z,15nm,0.6s
RDOG Red Dog Mine 62.83 24 *e*P **P 16 25 39.4 0.0**
comp=Z,38nm,1.8s
MAK Makhachkala 62.89 308 *e*P **P 16 25 40.7 +0.6**
MAK *e* 16 27 55.8
MAK *e*S **S 16 34 10.8 +1.4**
MAK pmax pmax
comp=Z,138nm,1.8s
DZM Mont Dzumac 63.02 133 *e*S **S 16 34 05.8 -5.9**
comp=Z,306nm,27.4s
DZM Mont Dzumac 63.02 133 *e*LR LR 16 44 28.5
comp=Z,1μm,24.6s
DZM Mont Dzumac 63.02 133 LR LR 16 50 24.3
comp=Z,352nm,19.5s,baz=318,slow=34
DZM Mont Dzumac 63.02 133 *e*P **P 16 25 42.6 +1.3**
comp=Z,163nm,1.8s
SDPT Sand Point 64.05 38 *e*P **P 16 25 49.6 +2.0**
comp=Z,23nm,0.9s
CAN Canberra 64.18 155 *e*P **P 16 25 49.4 +0.8**
comp=Z,77nm,1.8s
CAN Canberra 64.18 155 *e*P **P 16 25 49.4 +0.8**
CAN pmax pmax
comp=Z,77nm,1.8s
FUNA Funafuti 64.72 113 *e*P **P 16 25 52.8 +0.3**
comp=Z,72nm,1.2s
CHGN Chignik 65.13 37 *e*P **P 16 25 54.5 0.0**
comp=Z,30nm,1.4s
GNI Garni 65.39 305 *e*P **P 16 25 56.0 -0.9**
comp=Z,19nm,1.0s
GNI Garni 65.39 305 *ce*P **P 16 25 55.8 -1.1**
GNI pmax pmax
comp=Z,43nm,1.2s
ZEI Tsey 65.53 308 *e*P **P 16 25 56.6 -1.1**
ZEI pmax pmax
comp=Z,12nm,0.3s
LHI Lord Howe Isla 65.57 145 *e*P **P 16 25 58.2 +0.5**
comp=Z,496nm,1.7s
NCK Nalchik 65.62 309 *i* P **P 16 25 56.1 -2.0**
NCK pmax pmax
comp=Z,5.0nm,0.6s
KLMR Klimovskoe 65.78 328 *e*P **P 16 25 55.0 -3.7**
KLMR pmax pmax
comp=Z,31nm,1.4s
KLMR Klimovskoe 65.78 328 *e*P **P 16 25 55.0 -3.7**
KLMR AMP 16 25 59.2
comp=Z,31nm,1.4s
KBZ Khabaz 66.08 309 P **P 16 26 01.4 +0.5**
comp=Z,5.0nm,0.9s,baz=171,slow=5.2,SNR=10
KBZ LR LR 16 59 25.2
comp=Z,326nm,18.5s,baz=82,slow=40
SVW2 Sparrevohn 66.11 32 *e*P **P 16 26 01.6 +0.6**
comp=Z,37nm,1.3s
TMCR Tamitsa 66.16 332 *e*P **P 16 25 59.9 -1.2**
TMCR pmax pmax
comp=Z,25nm,1.1s
KVAR Kislovodsk Arr 66.19 309 LR LR 16 58 23.1
comp=Z,375nm,18.2s,slow=39
KIV Kislovodsk 66.19 309 *e*P **P 16 26 01.2 -0.6**
comp=Z,34nm,1.2s
KIV Kislovodsk 66.19 309 *e*P **P 16 26 01.2 -0.6**
KIV *e* 16 26 30.9
KIV *e*S **S 16 34 48.3 -2.1**
KIV *e*SS **SS 16 39 06.3 +0.3**
KIV pmax pmax
comp=Z,23nm,1.0s
KIV MLR MLR
comp=Z,348nm,17.0s
NEY Neytrino 66.30 308 *i* P **P 16 26 01.2 -1.4**
NEY pmax pmax
comp=Z,1.0nm,0.9s
VORD Divnogorie 67.22 317 *e*P **P 16 26 07.5 -0.6**
VORD pmax pmax
comp=Z,5.0nm,0.3s
VSR Storozhevoye 67.26 317 *e*P **P 16 26 07.7 -0.7**
VSR pmax pmax
comp=Z,10.0nm,1.5s
CAST Castle Rocks 67.46 29 *e*P **P 16 26 09.8 +0.4**
PPLA Purkeypile 67.48 30 *e*P **P 16 26 10.7 +0.9**
comp=Z,181nm,1.6s
RSO Redoubt South 67.57 32 *e*P **P 16 26 11.0 +0.5**
APA Apatity 67.66 336 ⇓ *i*P **P 16 26 06.8 -3.8**
APA *i* 16 26 14.0
APA *i* S S 16 34 58.0 -9.2
APA *i* SS **SS 16 39 23.0 -4.6**
APA *i* SSS SSS 16 42 33.0
APA pmax pmax
comp=Z,8.0nm,1.1s
APA MLR MLR
comp=Z,900nm,12.0s
COLD Coldfoot 67.71 25 *e*P **P 16 26 11.4 +0.4**
comp=Z,34nm,1.4s
TOLK Toolik Lake Re 67.75 23 P **P 16 26 10.7 -0.5**
baz=278
TOLK Toolik Lake Re 67.75 23 *e*P **P 16 26 11.1 -0.1**
comp=Z,33nm,1.3s
OHAK Old Harbor 67.81 36 *e*P **P 16 26 10.7 -1.0**
comp=Z,39nm,1.2s
MLY Manley 67.81 27 *e*P **P 16 26 12.6 +0.9**
comp=Z,58nm,1.2s
BPAW Bear Paw Mtn. 67.84 28 *e*P **P 16 26 12.3 +0.4**
comp=Z,109nm,1.6s
SKT Skwentna 67.92 31 *e*P **P 16 26 11.8 -0.6**
comp=Z,74nm,1.5s
KTH Kantishna Hill 67.95 29 *e*P **P 16 26 12.6 -0.1**
comp=Z,51nm,1.4s
KDAK Kodiak Island 68.09 35 *e*P **P 16 26 14.0 +0.5**
comp=Z,130nm,1.4s
KDAK Kodiak Island 68.09 35 *i* P **P 16 26 14.4 +1.0**
OBN Obninsk 68.12 322 ⇑ *e*P **P 16 26 13.0 -0.7**
OBN *e* 16 26 38.5
OBN *e* 16 28 46.0
OBN *i* S **S 16 35 10.4 -2.6**
OBN pmax pmax
comp=Z,43nm,3.0s
OBN MLR MLR
comp=Z,322nm,19.0s
HOM Homer 68.25 33 *e*P **P 16 26 14.1 -0.3**
comp=Z,167nm,0.3s
TRF Thorofare Moun 68.25 29 *e*P **P 16 26 15.0 +0.3**
comp=Z,81nm,1.8s
SOC Sochi 68.37 309 *e*P P 16 26 07.3 -8.2
SOC *e* 16 28 50.2
SOC *e*PPP PPP 16 30 32.8
SOC *e*S **S 16 35 14.3 -2.2**
SOC *e*SS **SS 16 39 38.0 -1.6**
SOC MLR MLR
comp=Z,372nm,17.0s
SUA Susitna One 68.38 31 *e*P **P 16 26 15.1 -0.3**
comp=Z,118nm,1.2s
CNPM China Poot 68.48 33 *e*P **P 16 26 16.3 +0.3**
comp=Z,46nm,1.6s
BWN Browne 68.49 28 *e*P **P 16 26 16.9 +1.0**
comp=Z,33nm,0.9s
BRLK Bradley Lake 68.61 33 *e*P **P 16 26 17.6 +0.8**
comp=Z,50nm,1.1s
MCK McKinley 68.80 29 *e*P **P 16 26 18.2 +0.4**
comp=Z,63nm,1.2s
MCK McKinley 68.80 29 *e*P **P 16 26 18.3 +0.4**
MCK pmax pmax
comp=Z,63nm,1.2s
RAYN Ar Rayn 68.85 287 *e*P **P 16 26 18.4 -0.6**
comp=Z,7.7nm,0.9s
MDM Murphy Dome 68.88 27 *e*P **P 16 26 18.9 +0.6**
comp=Z,134nm,1.2s
RND Reindeer 68.90 29 *e*P **P 16 26 17.9 -0.6**
comp=Z,124nm,1.2s
RND Reindeer 68.90 29 *e*P **P 16 26 17.9 -0.6**
RND pmax pmax
comp=Z,124nm,1.2s
RC01 Rabbit Creek A 68.92 31 *e*P **P 16 26 18.1 -0.5**
comp=Z,48nm,1.4s
WRH Wood River Hil 69.03 28 *e*P **P 16 26 19.8 +0.6**
comp=Z,44nm,1.2s
COLA College 69.05 27 *e*P **P 16 26 20.2 +0.9**
comp=Z,82nm,0.3s
COLA College 69.05 27 *e*P **P 16 26 20.2 +0.9**
COLA pmax pmax
comp=Z,82nm,0.3s
CCB Clear Creek Bu 69.11 27 *e*P **P 16 26 19.0 -0.7**
comp=Z,18nm,1.1s
PMR Palmer 69.11 31 *e*P **P 16 26 19.5 -0.3**
comp=Z,86nm,1.7s
PMR Palmer 69.11 31 *e*P **P 16 26 19.5 -0.3**
PMR pmax pmax
comp=Z,86nm,1.7s
GHO Glory Hole Cre 69.18 31 *e*P **P 16 26 20.0 -0.4**
comp=Z,79nm,1.6s
SEW Seward 69.25 32 *e*P **P 16 26 20.3 -0.4**
comp=Z,88nm,1.3s
SML Sawmill 69.44 30 *e*P **P 16 26 21.6 -0.3**
comp=Z,159nm,1.6s
SML Sawmill 69.44 30 *e*P **P 16 26 21.6 -0.3**
SML pmax pmax
comp=Z,159nm,1.6s
IL1 Eielson Array 69.47 27 *e*P **P 16 26 20.7 -1.3**
ILAR Eielson Array 69.47 27 P **P 16 26 21.4 -0.7**
comp=Z,2.4nm,0.6s,baz=284,slow=4.8,SNR=26
ILAR LR LR 16 59 25.5
comp=Z,142nm,19.4s,baz=308,slow=38
ILB Eielson Array 69.47 27 *e*P **P 16 26 21.0 -1.0**
HDA Harding Lake 69.52 28 *e*P **P 16 26 21.9 -0.5**
comp=Z,38nm,1.2s
DHY Denali Highway 69.62 29 *e*P **P 16 26 22.4 -0.7**
comp=Z,40nm,1.6s
ANN Anapa 69.70 311 *e*P **P 16 26 23.3 -0.4**
ANN *e*S **S 16 35 33.2 +1.1**
ANN pmax pmax
comp=Z,35nm,1.0s
ANN MLR MLR
comp=Z,257nm,15.0s
FYU Fort Yukon 69.76 25 *e*P **P 16 26 23.7 0.0**
comp=Z,190nm,1.9s
SCM Sheep Creek Mo 69.91 30 *e*P **P 16 26 25.0 +0.2**
comp=Z,150nm,1.3s
SCM Sheep Creek Mo 69.91 30 *e*P **P 16 26 25.0 +0.2**
SCM pmax pmax
comp=Z,150nm,1.3s
SPA0 Spitsbergen Ar 70.04 348 *e*P **P 16 26 26.2 +0.9**
SPITS Spitsbergen Ar 70.04 348 P **P 16 26 26.3 +0.9**
comp=Z,3.5nm,0.7s,baz=67,slow=11,SNR=2.8
SPITS LR LR 17 00 55.9
comp=Z,310nm,18.4s,baz=25,slow=39
ARA0 ARCESS Array S 70.14 338 *e*P **P 16 26 26.8 +0.8**
ARCES ARCESS Array B 70.14 338 P **P 16 26 26.8 +0.8**
comp=Z,6.1nm,0.9s,baz=78,slow=8.4,SNR=3.9
ARCES LR LR 17 02 23.9
comp=Z,315nm,18.4s,baz=66,slow=40
ARCES ARCESS Array B 70.14 338 *e*P **P 16 26 25.5 -0.5**
ARCES ARCESS Array B 70.14 338 *e*P **P 16 26 25.5 -0.5**
PAX Paxson 70.49 29 *e*P **P 16 26 28.9 +0.6**
comp=Z,31nm,1.2s
PAX Paxson 70.49 29 *e*P **P 16 26 29.0 +0.6**
PAX pmax pmax
comp=Z,31nm,1.2s
RIDG Independ'e Rid 70.58 28 *e*P **P 16 26 28.7 -0.2**
comp=Z,72nm,1.3s
KBS Kingsbay 70.58 349 *e*P **P 16 26 27.8 -0.8**
comp=Z,74nm,1.8s
KBS Kingsbay 70.58 349 *e*P **P 16 26 27.8 -0.8**
KBS pmax pmax
comp=Z,74nm,1.8s
KLU Klutina 70.64 31 *e*P **P 16 26 29.7 +0.4**
comp=Z,66nm,1.5s
HARP HAARP 70.77 29 *e*P **P 16 26 31.2 +1.2**
comp=Z,80nm,1.3s
DIV Divide 70.80 31 *e*P **P 16 26 30.7 +0.4**
comp=Z,66nm,1.2s
SCRK Sand Creek 70.89 28 *e*P **P 16 26 30.4 -0.4**
comp=Z,172nm,2.0s
DOT Dot Lake 70.94 28 *e*P **P 16 26 30.7 -0.3**
comp=Z,112nm,1.2s
BMRM Bremner River 71.39 31 *e*P **P 16 26 34.3 +0.4**
comp=Z,45nm,1.1s
RAGM Ragged Mountai 71.50 32 *e*P **P 16 26 35.5 +1.0**
comp=Z,107nm,1.3s
EGAK Eagle 71.85 27 *e*P **P 16 26 36.1 -0.4**
comp=Z,19nm,0.8s
FIA1 FINESS Array S 72.06 330 *e*P **P 16 26 36.9 -0.9**
FIA0 FINESS Array S 72.06 330 *e*P **P 16 26 38.5 +0.8**
FIA0 FINESS Array S 72.06 330 *e*P **P 16 26 38.5 +0.8**
FINES FINESS Array B 72.06 330 P **P 16 26 38.5 +0.8**
comp=Z,1.2nm,0.4s,baz=55,slow=6.1,SNR=11
FINES LR LR 17 01 08.3
comp=Z,837nm,18.8s,baz=76,slow=38
FINES FINESS Array B 72.06 330 *i* P **P 16 26 39.9 +2.1**
FINES pmax pmax
comp=Z,2.0nm,0.6s
CRQM Cirque 72.13 31 *e*P **P 16 26 38.9 +0.4**
comp=Z,69nm,1.2s
TGL Tana Glacier 72.28 31 *e*P **P 16 26 39.6 +0.4**
comp=Z,47nm,1.2s
BALM Baldy 72.42 31 *e*P **P 16 26 40.1 0.0**
comp=Z,38nm,1.2s
BALM Baldy 72.42 31 *e*P **P 16 26 40.1 0.0**
BALM pmax pmax
comp=Z,39nm,1.2s
VSU Vasula 72.60 327 *ce*P **P 16 26 40.1 -0.9**
VSU pmax pmax
comp=Z,30nm,1.7s
DAWY Dawson 72.80 27 *e*P **P 16 26 42.6 +0.3**
comp=Z,42nm,1.1s
AKASG Malin Array Be 73.49 318 P **P 16 26 45.2 -1.2**
comp=Z,1.3nm,0.5s,baz=68,slow=6.4,SNR=5.8
AKASG Malin Array Be 73.49 318 *i* P **P 16 26 47.9 +1.4**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKBB Malin Array Si 73.49 318 *e*P **P 16 26 47.3 +0.8**
comp=Z,6.1nm,0.9s
AKBB Malin Array Si 73.49 318 *e*P **P 16 26 47.3 +0.8**
AKBB pmax pmax
comp=Z,6.0nm,0.9s
KIEV Kiev 73.50 318 *e*P **P 16 26 46.2 -0.3**
comp=Z,42nm,2.0s
KIEV Kiev 73.50 318 *i* P **P 16 26 45.2 -1.3**
KIEV pmax pmax
comp=Z,3.0nm,1.0s
AK11 Malin Array Si 73.53 318 *e*P **P 16 26 46.0 -0.7**
ASF Jabal al Asfar 73.53 298 P **P 16 26 48.3 +1.1**
comp=Z,2.7nm,0.7s,baz=96,slow=6.2,SNR=4.5
INK Inuvik 73.54 22 P **P 16 26 46.2 -0.2**
comp=Z,14nm,0.8s,baz=281,slow=7.0,SNR=20
INK Inuvik 73.54 22 *e*P **P 16 26 46.0 -0.4**
comp=Z,83nm,1.6s
INK Inuvik 73.54 22 *e*P **P 16 26 46.0 -0.4**
INK pmax pmax
comp=Z,83nm,1.6s

NACGM	**Naroch**	73.64	323	*e*	P	16 26 46.0	-1.3
BR101	**Keskin Array S**	73.77	307	*e*P	P	16 26 48.7	+0.1
BR131	**Keskin Array S**	73.77	307	*e*P	P	16 26 48.3	-0.3
BRTR	**Keskin Array B**	73.77	307	P	P	16 26 48.7	+0.1
	comp=Z,2.6nm,0.9s,baz=100,slow=5.5,SNR=15						
BRTR	**Keskin Array B**	73.77	307	*i* P	P	16 26 48.4	-0.2
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ANTO	**Ankara**	74.35	307	*e*P	P	16 26 50.8	-1.0
	comp=Z,12nm,0.8s						
ANTO	**Ankara**	74.35	307	*e*P	P	16 26 50.8	-1.0
ANTO				pmax	pmax		
	comp=Z,11nm,0.8s						
SORM	**Soroca**	74.82	316	⇓*i*P	P	16 26 58.6	+4.3
SORM	**Soroca**	74.82	316	⇓P	P	16 26 58.6	+4.3
AFI	**Afiamalu**	75.06	113	LR	LR	16 56 39.6	
	comp=Z,139nm,19.1s,baz=324,slow=33						
ATD	**Arta Tunnel**	75.25	276	LR	LR	16 59 31.1	
	comp=Z,91nm,19.5s,baz=29,slow=35						
CSS	**Mathiatis**	75.48	302	*e*P	P	16 26 57.5	-0.9
	comp=Z,4.1nm,0.8s						
HPAH	**Hawaii Prepara**	75.79	74	*e*P	P	16 26 59.9	-0.6
	comp=Z,67nm,0.5s						
SUW	**Suwalki**	75.92	323	*e*P	P	16 26 59.6	-0.9
	comp=Z,47nm,1.1s						
SUW	**Suwalki**	75.92	323	*e*P	P	16 26 59.6	-0.9
SUW				pmax	pmax		
	comp=Z,47nm,1.1s						
POHA	**Pohakuloa**	76.03	74	*e*P	P	16 27 01.1	-0.9
	comp=Z,88nm,1.3s						
LPH	**Laupahoehoe**	76.06	74	*e*P	P	16 27 00.9	-1.0
HMH	**Humu'ula Sheep**	76.12	75	*e*P	P	16 27 01.5	-1.1
	comp=Z,403nm,2.0s						
HARR	**Harsova**	76.22	313	⇓*i*P	P	16 27 09.5	+7.1
HARR	**Harsova**	76.22	313	⇓P	P	16 27 09.5	+7.1
SKAG	**Skagway**	76.25	31	*e*P	P	16 27 02.1	-0.2
	comp=Z,62nm,1.2s						
ICOR	**Ion Corvin**	76.50	312	⇑*i*P	P	16 27 05.6	+1.6
VRI	**Vrincioaia**	76.62	314	⇑*i*P	P	16 27 05.2	+0.5
VRI	**Vrincioaia**	76.62	314	⇑P	P	16 27 05.2	+0.5
PLOR	**Plostina**	76.67	314	⇑*i*P	P	16 27 12.1	+7.1
PLOR	**Plostina**	76.67	314	⇑P	P	16 27 12.1	+7.1
BESE	**Bessie Mountai**	76.83	32	*e*P	P	16 27 06.2	+0.5
	comp=Z,38nm,1.2s						
BUR08	**Bucovina Ar. S**	76.98	316	*e*P	P	16 27 08.0	+1.1
BURAR	**Bucovina Array**	76.98	316	⇓*i*P	P	16 27 06.8	0.0
BUR04	**Bucovina Ar. S**	76.98	316	*e*P	P	16 27 06.2	-0.6
MLR	**Muntele Rosu**	77.26	314	P	P	16 27 07.4	-1.1
	comp=Z,1.1nm,0.8s,baz=48,slow=5.6,SNR=7.5						
MLR	**Muntele Rosu**	77.26	314	⇑*i*P	P	16 27 08.9	+0.4
KLNR	**Kaliningrad**	77.31	324	*i* P	P	16 27 06.4	-1.9
KLNR				pmax	pmax		
	comp=Z,57nm,0.7s						
DOPR	**Dopca**	77.46	315	⇑*i*P	P	16 27 15.3	+5.9
VOIR		77.87	314	⇓*i*P	P	16 27 13.7	+1.9
VOIR		77.87	314	⇓P	P	16 27 13.7	+1.9
ARR	**Arges**	78.17	314	⇓*i*P	P	16 27 14.6	+1.2
HFS	**Hagfors**	78.18	331	P	P	16 27 12.6	-0.5
	comp=Z,2.4nm,0.7s,baz=108,slow=7.7,SNR=4.0						
HFS				LR	LR	17 04 49.0	
	comp=Z,1μm,19.0s,baz=61,slow=38						
CJR	**Cluj-Napoca**	78.34	316	⇓*i*P	P	16 27 11.8	-2.5
CJR	**Cluj-Napoca**	78.34	316	⇓P	P	16 27 11.8	-2.5
NC405	**NORSAR Array S**	78.59	332	*e*P	P	16 27 13.6	-1.7
NB2	**NORSAR Subarra**	78.83	332	P	P	16 27 16.5	-0.3
	comp=Z,3.0nm,0.9s,baz=61,slow=5.6						
WRAK	**Wrangell Islan**	78.97	33	*e*P	P	16 27 17.4	-0.1
	comp=Z,16nm,1.1s						
CRAG	**Craig**	78.99	34	*e*P	P	16 27 18.6	+1.0
	comp=Z,55nm,1.6s						
KDZ	**Kurdzhali**	79.02	311	*e*P	P	16 27 19.7	+1.6
DLBC	**Dease Lake**	79.17	31	*e*P	P	16 27 19.3	+0.6
	comp=Z,33nm,1.3s						
OJC	**Ojcow**	79.29	320	*e*P	P	16 27 18.8	-0.7
	comp=Z,18nm,1.3s						
OJC	**Ojcow**	79.29	320	*e*P	P	16 27 18.8	-0.7
OJC				pmax	pmax		
	comp=Z,18nm,1.3s						
VTS	**Vitosha**	80.17	312	⇓*i*P	P	16 27 25.0	+0.4
VTS	**Vitosha**	80.17	312	*e*P	P	16 27 23.8	-0.8
	comp=Z,13nm,0.9s						
VTS	**Vitosha**	80.17	312	*e*P	P	16 27 24.6	0.0
VTS	**Vitosha**	80.17	312	*e*P	P	16 27 23.8	-0.8
VTS				pmax	pmax		
	comp=Z,13nm,0.9s						
MMB	**Musomiste**	80.21	311	*e*P	P	16 27 29.0	+4.4
KKB	**Krupnik**	80.55	312	*e*P	P	16 27 25.4	-1.0
VYHS	**Vyhne**	80.58	319	*e*P	P	16 27 27.1	+0.6
VYHS				pmax	pmax		
	comp=Z,6.0nm,1.2s						
VYHS	**Vyhne**	80.58	319	*e*P	P	16 27 27.1	+0.6
DPC	**Dobruska-Polom**	81.25	321	*e*P	P	16 27 33.1	+3.0
DPC				AMS	AMS	17 05 30.0	
	comp=Z,500nm,13.1s						
DPC	**Dobruska-Polom**	81.25	321	*e*P	P	16 27 33.1	+3.0
DPC				MLR	MLR		
	comp=Z,500nm,13.1s						
UPC	**Upice**	81.36	322	AMS	AMS	17 08 30.0	
	comp=Z,700nm,12.9s						
LIT	**Litokhoron**	81.66	310	*e*P	P	16 27 31.2	-1.2
	comp=Z,10.0nm,1.0s						
LIT	**Litokhoron**	81.66	310	*e*P	P	16 27 31.2	-1.2
LIT				pmax	pmax		
	comp=Z,10.0nm,1.0s						
DIVS	**Divibare**	81.71	315	*e*P	P	16 27 31.9	-0.8
	comp=Z,12nm,1.4s						
PVCC	**Panska Ves**	82.17	322	AMS	AMS	17 08 40.0	
	comp=Z,500nm,13.7s						
GOPC	**GO Pecny, Ondr**	82.33	321	AMS	AMS	17 09 00.0	
	comp=Z,500nm,12.3s						
BRG	**Berggiesshubel**	82.36	322	*e*P	P	16 27 39.7	+3.9
	comp=Z,38nm,2.2s						
BRG	**Berggiesshubel**	82.36	322	S	S	16 37 53.0	+1.6
BRG				SS	SS	16 43 43.0	+32
	comp=Z,1μm,13.0s						
	comp=N,721nm,19.1s						
	comp=E,570nm,19.1s						
BRG	**Berggiesshubel**	82.36	322	*e*P	P	16 27 39.7	+3.9
BRG				S	S	16 37 53.0	+1.6
BRG				pmax	pmax		
	comp=Z,38nm,2.2s						
BRG				MLR	MLR		
	comp=Z,1μm,13.0s						
BRG				MLR	MLR		
	comp=N,721nm,19.1s						
BRG				MLR	MLR		
	comp=E,570nm,19.1s						
CONA	**Conrad Observa**	82.62	319	*i* pP	P	16 27 38.1	+0.7
	comp=E,7.4nm,1.4s						
CLL	**Collm**	82.67	323	*e*P	P	16 27 39.0	+1.6
CLL				*e*PP	PP	16 30 48.0	+1.3
CLL				*e*S	S	16 37 54.0	-0.6
CLL				*e*SS	SS	16 43 24.0	+8.3
CLL				*e*		16 47 36.0	
CLL				*e*SSSS		16 49 24.0	
CLL	**Collm**	82.67	323	*e*P	P	16 27 40.0	+2.6
CLL				*e*S	S	16 37 50.0	-4.5
ARSA	**Arzberg**	83.13	319	P	P	16 27 39.9	-0.1
	comp=E,3.3nm,1.3s						
YKW3	**Yellowknife Ar**	83.22	23	*e*P	P	16 27 39.1	-1.0
	comp=E,34nm,1.4s						
YKA	**Yellowknife Ar**	83.27	23	P	P	16 27 39.9	-0.4
	comp=E,5.4nm,0.6s,baz=315,slow=5.0,SNR=32						
YKA				LR	LR	17 09 23.5	
	comp=E,12nm,18.2s,baz=322,slow=39						
YKA	**Yellowknife Ar**	83.27	23	*i* P	P	16 27 39.5	-0.8
YKA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
YKB5	**Yellowknife Ar**	83.27	23	*e*P	P	16 27 39.9	-0.4
KHC	**Kasperske Hory**	83.40	321	*e*P	P	16 27 40.5	-0.8
KHC				AMS	AMS	17 06 50.0	
	comp=Z,500nm,12.6s						
KHC	**Kasperske Hory**	83.40	321	*e*P	P	16 27 40.4	-0.8
	comp=Z,4.3nm,1.4s						
KHC	**Kasperske Hory**	83.40	321	*e*P	P	16 27 40.5	-0.8
KHC				MLR	MLR		
	comp=Z,500nm,12.6s						
GEC2	**GERESS Array S**	83.46	321	*e*P	P	16 27 40.7	-1.0
	comp=Z,8.3nm,1.2s						
GEC2	**GERESS Array S**	83.46	321	*e*P	P	16 27 40.7	-1.0
GEC2				pmax	pmax		
	comp=Z,8.0nm,1.2s						
GERES	**GERESS Array B**	83.46	321	P	P	16 27 41.2	-0.5
	comp=Z,2.6nm,0.8s,baz=54,slow=5.0,SNR=14						
GERES				LR	LR	17 08 13.3	
	comp=Z,293nm,19.0s,baz=80,slow=38						
GEA0	**GERESS Array S**	83.47	321	*e*P	P	16 27 40.4	-1.4
NKC	**Novy Kostel**	83.50	322	AMS	AMS	17 09 40.0	
	comp=Z,700nm,12.1s						
MOA	**Molln**	83.61	320	pP	P	16 27 43.1	+0.7
	comp=Z,8.2nm,0.9s						
SOKA	**Soboth**	83.70	318	*i* P	P	16 27 43.0	0.0
	comp=Z,7.5nm,1.2s						
OPO	**Ambohidratompo**	83.85	247	P	P	16 27 44.5	+0.3
	comp=Z,15nm,1.0s,baz=84,slow=9.0,SNR=6.9						
OPO				LR	LR	17 02 15.3	
	comp=Z,179nm,18.9s,baz=91,slow=34						
ABPO	**Ambohimpanom**	84.02	246	*e*P	P	16 27 45.6	+0.6
	comp=Z,29nm,1.3s						
ABPO	**Ambohimpanom**	84.02	246	*e*P	P	16 27 45.7	+0.6
ABPO				pmax	pmax		
	comp=Z,29nm,1.3s						
ABTA	**Abfaltersbach**	85.18	319	*e*P	P	16 27 49.5	-1.0
	comp=Z,6.0nm,1.1s						
LLLB	**Lillooet**	87.30	35	*e*P	P	16 28 01.1	+0.4
	comp=Z,10nm,0.8s						
NLWA	**Neilton Lookou**	88.02	38	*e*P	P	16 28 03.1	-1.2
	comp=Z,60nm,1.9s						
EKA	**Eskdalemuir Ar**	88.32	332	LR	LR	17 11 42.4	
	comp=Z,510nm,18.1s,baz=40,slow=38						
B05A	**Bryant**	88.52	37	P	P	16 28 05.8	-0.7
	baz=305						
RAR	**Rarotonga**	88.57	114	LR	LR	17 00 43.1	
	comp=Z,174nm,21.6s,baz=287,slow=31						
E03A	**Lebam**	88.66	39	*e*P	P	16 28 06.8	-0.4
	comp=Z,26nm,1.0s						
D05A	**Enumclaw**	89.19	38	*e*P	P	16 28 10.4	+0.7
	comp=Z,48nm,1.3s						
SFJD	**Kangerlussuaq**	89.40	357	LR	LR	17 08 53.5	
	comp=Z,94nm,21.2s,baz=358,slow=36						
LON	**Longmire**	89.54	38	*e*P	P	16 28 12.3	+0.8
	comp=Z,10nm,1.0s						
LON	**Longmire**	89.54	38	*e*P	P	16 28 12.3	+0.8
LON				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LTY	**Liberty**	89.89	37	*e*P	P	16 28 13.6	+0.4
	comp=Z,6.8nm,0.8s						
B08A	**Colville Reser**	89.96	36	*e*P	P	16 28 13.9	+0.5
	comp=Z,13nm,1.0s						
I03D	**Drain, OR**	90.37	41	P	P	16 28 15.8	+0.4
	baz=304						
H04A	**Detroit Lake**	90.51	40	*e*P	P	16 28 16.6	+0.5
	comp=Z,26nm,1.4s						
G05D	**Wamic, OR**	90.69	39	P	P	16 28 16.9	+0.1
	baz=305						
C09A	**Chrisman Ranch**	90.86	36	*e*P	P	16 28 19.2	+1.6
	comp=Z,10nm,1.1s						
I04A	**Tendick Farm,**	90.88	41	P	P	16 28 17.0	-0.7
	baz=305						
D08A	**Wollman Farm,**	90.97	37	*e*P	P	16 28 16.9	-1.1
	comp=Z,34nm,1.8s						
HAWA	**Hanford**	91.03	37	*e*P	P	16 28 18.6	+0.2
	comp=Z,16nm,1.3s						
G06A	**Carlson Farm,**	91.09	39	*e*P	P	16 28 19.4	+0.7
	comp=Z,12nm,1.0s						
NEW	**Newport**	91.19	35	P	P	16 28 18.5	-0.6
	baz=308						
NEW	**Newport**	91.19	35	*e*P	P	16 28 19.3	+0.2
	comp=Z,9.8nm,1.2s						
NEW	**Newport**	91.19	35	*e*P	P	16 28 19.3	+0.2
NEW				pmax	pmax		
	comp=Z,10.0nm,1.2s						
I05D	**Terrebonne, OR**	91.20	40	P	P	16 28 19.1	-0.2
	baz=305						
J04D	**Umpqua Nationa**	91.37	41	P	P	16 28 20.9	+0.6
	baz=305,SNR=7.4						
PINE	**Pine Mountain**	91.75	40	*e*P	P	16 28 23.7	+1.7
	comp=Z,30nm,1.2s						
YBH	**Yreka Blue Hor**	91.86	42	P	P	16 28 22.1	-0.4
	comp=Z,7.3nm,1.0s,baz=105,slow=2.1,SNR=6.5						
YBH				LR	LR	17 09 31.4	
	comp=Z,48nm,20.0s,baz=320,slow=36						
YBH	**Yreka Blue Hor**	91.86	42	*e*P	P	16 28 22.6	+0.2
	comp=Z,12nm,1.1s						
YBH	**Yreka Blue Hor**	91.86	42	*e*P	P	16 28 22.6	+0.2
YBH				pmax	pmax		
	comp=Z,12nm,1.1s						
J05D	**Fort Rock, OR**	91.87	41	P	P	16 28 22.2	-0.4
	baz=305,SNR=7.1						
M02C	**Callahan**	91.96	43	P	P	16 28 23.5	+0.6
	baz=304						
N02D	**Trinity Center**	92.29	43	P	P	16 28 24.5	+0.1
	baz=304						
WALA	**Waterton Lakes**	92.32	33	*e*P	P	16 28 24.7	+0.2
	comp=Z,25nm,1.4s						
M04C	**Macdoel**	92.37	42	P	P	16 28 24.4	-0.5
	baz=305,SNR=6.0						
K05A	**Summer Lake**	92.40	41	*e*P	P	16 28 26.2	+1.1
	comp=Z,27nm,1.1s						
FCC	**Fort Churchill**	92.69	18	*e*P	P	16 28 25.1	-0.6
	comp=Z,16nm,1.4s						
FCC	**Fort Churchill**	92.69	18	*e*P	P	16 28 25.1	-0.6
FCC				pmax	pmax		
	comp=Z,16nm,1.4s						
KEST	**Kesra**	92.87	311	LR	LR	17 16 17.0	
	comp=Z,160nm,18.7s,baz=356,slow=39						
BMO	**Blue Mountains**	93.20	38	*e*P	P	16 28 29.2	+0.6
	comp=Z,5.6nm,1.1s						
BMO	**Blue Mountains**	93.20	38	*e*P	P	16 28 29.2	+0.6
BMO				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MOD	**Modoc Plateau**	93.23	41	*e*P	P	16 28 29.8	+0.9
	comp=Z,18nm,1.2s						
FFC	**Flin Flon**	93.43	24	*e*P	P	16 28 29.6	+0.3
	comp=Z,12nm,1.4s						
FFC	**Flin Flon**	93.43	24	*e*P	P	16 28 29.6	+0.3
FFC				pmax	pmax		
	comp=Z,12nm,1.4s						
J08A	**Circle Bar Ran**	93.45	39	*e*P	P	16 28 30.2	+0.4
	comp=Z,5.4nm,0.7s						
MSO	**Missoula**	93.76	35	P	P	16 28 31.4	+0.3
	baz=311						
ORV	**Oroville**	93.85	44	*e*P	P	16 28 31.7	+0.1
	comp=Z,7.6nm,1.1s						
ORV	**Oroville**	93.85	44	*e*P	P	16 28 31.7	+0.1
ORV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BEKR	**Beckworth**	94.39	43	*e*P	P	16 28 34.5	+0.3
	comp=Z,9.9nm,1.2s						
AFDM	**Forest Hills D**	94.54	44	*e*P	P	16 28 34.3	-0.5
	comp=Z,11nm,1.3s						
MFID	**Camas Ranch**	94.93	38	*e*P	P	16 28 36.7	+0.1
	comp=Z,3.8nm,1.0s						
PAHR	**Pah Rah Range**	95.09	43	*e*P	P	16 28 37.9	+0.4
	comp=Z,10nm,1.1s						
LRM	**Limekiln Ridge**	95.20	35	*e*P	P	16 28 38.5	+0.6
DLMT	**Dillon**	95.44	35	*e*P	P	16 28 39.4	+0.5
	comp=Z,3.9nm,0.8s						
CMB	**Columbia Colle**	95.44	44	*e*P	P	16 28 39.5	+0.6
	comp=Z,9.7nm,1.1s						
CMB	**Columbia Colle**	95.44	44	*e*P	P	16 28 39.5	+0.6
CMB				pmax	pmax		
	comp=Z,10.0nm,1.1s						
YERR	**Yerington**	95.61	43	*e*P	P	16 28 40.6	+0.8
	comp=Z,10nm,1.3s						
HLID	**Hailey**	95.63	37	P	P	16 28 40.3	+0.4
	baz=310						
HLID	**Hailey**	95.63	37	*e*P	P	16 28 40.9	+1.0
	comp=Z,5.5nm,1.2s						
BOZ	**Bozeman (W)**	95.78	34	P	P	16 28 40.0	-0.5
	baz=313						
BOZ	**Bozeman (W)**	95.78	34	*e*P	P	16 28 41.0	+0.5
	comp=Z,10.0nm,1.8s						
BOZ	**Bozeman (W)**	95.78	34	*e*P	P	16 28 41.0	+0.5
BOZ				pmax	pmax		
	comp=Z,10.0nm,1.8s						
PPT	**Papeete**	95.85	107	LR	LR	17 02 44.8	
	comp=Z,284nm,21.8s,baz=298,slow=30						
PPT2	**Papeete2**	95.86	107	*e*S	S	16 39 53.5	-5.8
	comp=Z,128nm,29.0s						
PPT2	**Papeete2**	95.86	107	*e*LR	LR	16 59 38.6	
	comp=Z,608nm,23.5s,baz=292						
BMN	**Battle Mountai**	95.98	41	*e*P	P	16 28 42.5	+1.0
	comp=Z,5.4nm,1.0s						
BMN	**Battle Mountai**	95.98	41	*e*P	P	16 28 42.5	+1.0
BMN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KVN	**Kaiserville**	96.28	43	*e*P	P	16 28 43.9	+0.9
	comp=Z,8.4nm,1.1s						
KVN	**Kaiserville**	96.28	43	*e*P	P	16 28 43.9	+0.9
KVN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
PMOR	**Pomariorio Ree**	96.35	104	*e*T	T	18 15 46.4	
	comp=Z,3.9nm,0.2s						
NV01	**Mina Array Sit**	96.53	43	*e*P	P	16 28 44.1	+0.1
NVAR	**Mina Array Bea**	96.53	43	P	P	16 28 45.0	+0.9
	comp=Z,2.6nm,1.0s,baz=277,slow=3.9,SNR=12						
NVAR				LR	LR	17 08 23.9	
	comp=Z,91nm,19.8s,baz=90,slow=33						
NV11	**Mina Array Sit**	96.62	43	*e*P	P	16 28 45.2	+0.8
	comp=Z,0.5nm,1.4s						
SMMC	**Simmler**	97.28	46	P	Pdif	16 28 48.1	+0.7
	baz=306						
DGMT	**Dagmar**	97.30	29	P	Pdif	16 28 47.5	+0.3
	baz=319						
RLMT	**Red Lodge**	97.32	34	P	Pdif	16 28 47.7	+0.1
	baz=314						
ISA	**Isabella, Lake**	98.08	45	P	P	16 28 50.4	-0.6
	baz=307						
TBI	**Tubuai**	98.16	112	*e*LR	LR	17 00 36.8	
	comp=Z,329nm,33.5s						
TBI	**Tubuai**	98.16	112	*e*T	T	18 18 00.3	
	comp=Z,9.8nm,0.3s						
MPMC	**Manual Prospec**	98.48	45	P	Pdif	16 28 53.8	+0.9
	baz=308						
TPNV	**Topopah Spring**	98.72	43	P	Pdif	16 28 54.3	+0.3
	baz=308						
ALPC	**Antelope**	98.77	46	*e*P	Pdif	16 28 54.6	+0.5
EDW2	**Edwards Air Fo**	98.86	46	P	Pdif	16 28 54.8	+0.3
	baz=307						
ULM	**Lac du Bonnet**	99.25	23	LR	LR	17 17 18.6	
	comp=Z,243nm,19.0s,baz=40,slow=38						
GSC	**Goldstone, Bar**	99.38	45	P	Pdif	16 28 57.4	+0.6
	baz=308						
TUQ	**Turquoise Moun**	99.86	44	P	Pdif	16 28 59.2	+0.2
	baz=308						
A33A	**Warroad**	100.51	24	P	Pdif	16 29 02.4	+1.0
	baz=326						
TAOE	**Nuku Hiva Isla**	101.02	95	*e*LR	LR	17 02 03.1	
	comp=Z,208nm,23.1s						
TAOE	**Nuku Hiva Isla**	101.02	95	*e*T	T	18 21 33.5	
	comp=Z,22nm,0.2s						
RUSC	**La Rusia**	147.29	28	*e*PKPdf	PKPdf	16 34 57.7	+1.1
PRAC	**Prado**	148.37	33	*e*PKPdf	PKPdf	16 34 58.5	+0.6
GO09	**Cerro Castillo**	150.44	162	*e*PKPbc	PKPbc	16 35 05.0	-0.3
LPAZ	**La Paz**	168.26	53	PKP	PKPdf	16 35 22.3	+0.1
	comp=Z,1.9nm,0.9s,baz=315,slow=2.2,SNR=8.3						
LPAZ				PKPab	PKPab	16 36 30.4	-0.1
	comp=Z,2.7nm,1.0s,baz=331,slow=3.9,SNR=3.7						

ISCJB ***14*** *16:19:11.8±0.5, 23°.70N±0°.02×121°.55E±0°.04, h3km±3km, mb3.6/10, Error ellipse: s-maj=6.0km s-min=3.0km az=25.5*

TAP ***14*** *16:19:11.4, 23°.72N×121°.51E, h7km, ML3.5, C*

IDC ***14*** *16:19:11.5±0.9, 23°.44N×121°.49E, h0km, mb3.7/9, mb1 3.9/10, mb1mx3.6/66, mbtmp3.8/10, ML3.7/1, Error ellipse: s-maj=31.5km s-min=18.3km az=62.0*

ISC 14 16:19:12.1±1.2, 23°.72N±0°.02×121°.49E±0°.03, h2km±9km, n60, σ1.9 54/65, mb3.7/10, 1C-6D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	**Guangfu**	**0.08**	**226**	P	**Pg**	**16 19 14.1**	**+0.4**
EGFH	baz=233			S	**Sg**	**16 19 15.8**	**+1.1**
ESL	**Shilin**	**0.10**	**330**	⇓*i*P	**Pg**	**16 19 14.7**	**+0.6**
ESL	baz=327			*i* S	**Sg**	**16 19 16.6**	**+1.1**
ENLB	**Shoufeng**	**0.21**	**30**	⇓P	**Pg**	**16 19 16.9**	**+0.8**
	baz=26						
HGSD	**Ruisui**	**0.24**	**195**	*e*P	**Pg**	**16 19 17.7**	**+1.0**
	baz=198						
EHY	**Hungye**	**0.27**	**215**	*e*P	**Pg**	**16 19 17.5**	**+0.3**
	baz=216						
HWA	**Hwalien**	**0.27**	**23**	*e*P	**Pb**	**16 19 18.2**	**-1.5**
	baz=21						
VWDT	**VWDT**	**0.32**	**275**	*e*P	**Pb**	**16 19 19.2**	**-1.4**
	baz=275						
TWD	**Chiawan**	**0.37**	**15**	⇓*i*P	**Pb**	**16 19 19.5**	**-1.9**
	baz=14						
TWD				*e*S	**Sb**	**16 19 25.0**	**-2.5**
	baz=14						
YULB	**Yu-li**	**0.38**	**208**	*e*P	**Pg**	**16 19 19.5**	**+0.2**
	baz=210						
TWF1	**Yuli**	**0.41**	**206**	*e*P	**Pb**	**16 19 20.2**	**-1.9**
	baz=206						
CHGB	**Renai**	**0.44**	**319**	⇓*e*P	**Pb**	**16 19 21.4**	**-1.3**
	baz=318						
NACB	**Ninganchiao**	**0.46**	**12**	⇓P	**Pg**	**16 19 20.8**	**-0.1**
	baz=10.0						
NACB				*e*S	**Sb**	**16 19 29.1**	**-1.1**
	baz=10.0						
SSLB	**Suanglung**	**0.50**	**277**	⇑P	**Pb**	**16 19 22.2**	**-1.4**
	baz=277						
FULB	**Fuli**	**0.55**	**199**	*e*P	**Pb**	**16 19 24.1**	**-0.4**
	baz=200						
SMLT	**Sun Moon Lake**	**0.56**	**286**	*e*P	**Pb**	**16 19 23.8**	**-1.0**
	baz=286						
TYC	**Yuchr**	**0.61**	**287**	*e*P	**Pb**	**16 19 24.4**	**-1.1**
	baz=287						
CHKT	**Chengkung**	**0.63**	**190**	*e*P	**Pb**	**16 19 25.1**	**-0.8**
	baz=191						
ALS	**Alishan**	**0.66**	**251**	*e*P	**Pb**	**16 19 25.8**	**-0.8**
	baz=251						
ELDTW	**Lidau**	**0.69**	**219**	*e*P	**Pg**	**16 19 24.9**	**-0.3**
	baz=219						
WJS	**Zhushan**	**0.70**	**278**	*e*P	**Pn**	**16 19 27.4**	**-1.7**
	baz=277						
NNSB	**Datong**	**0.71**	**352**	⇓P	**Pb**	**16 19 26.0**	**-1.3**
	baz=350						
NNSH	**Datong**	**0.71**	**352**	*e*P	**Pb**	**16 19 26.1**	**-1.2**
	baz=350						
NNS	**Nan Shan**	**0.72**	**351**	P	**Pb**	**16 19 26.2**	**-1.2**
	baz=351						
ENA	**Nanau**	**0.74**	**18**

comp=E,260nm,0.7s
JOW Kunigami 6.88 62 Pn **Pn 16 20 53.4 -0.6**
comp=E,2.8nm,0.3s,baz=161,slow=18,SNR=6.9
KSRS Korea Array 14.76 20 Pn **P 16 22 49.1 +1.0**
comp=E,0.5nm,0.3s,baz=203,slow=12,SNR=8.2
CMAR Chiang Mai Arr 21.67 260 P **P 16 24 07.2 +3.0**
comp=E,1.4nm,0.9s,baz=61,slow=9.6,SNR=4.6
SONM Songino Array 26.90 337 P **P 16 24 56.8 +2.2**
comp=E,0.6nm,0.4s,baz=140,slow=7.6,SNR=2.8
MKAR Makanchi Array 38.86 316 P **P 16 26 39.8 +1.0**
comp=E,0.9nm,0.8s,baz=106,slow=9.8,SNR=4.1
ZALV Zalesovo Beam 40.78 327 P **P 16 26 56.4 +1.8**
comp=E,0.7nm,0.4s,baz=125,slow=9.4,SNR=2.6
KURBB Kurchatov Arra 42.64 320 P **P 16 27 09.6 -0.3**
comp=E,0.3nm,0.5s,baz=108,slow=9.2,SNR=3.1
WRA Warramunga Arr 45.17 163 P **P 16 27 27.3 -3.3**
comp=E,1.4nm,0.7s,baz=344,slow=8.8,SNR=4.9
BVAR Borovoye Array 48.20 321 P **P 16 27 56.3 +2.2**
comp=E,0.5nm,0.6s,baz=124,slow=13,SNR=3.2
ASAR Alice Springs 48.63 165 P **P 16 27 55.5 -2.1**
comp=E,0.3nm,0.4s,baz=339,slow=7.0,SNR=5.3
ILAR Eielson Array 69.49 27 P **P 16 30 23.6 +1.8**
comp=E,0.5nm,0.6s,baz=287,slow=7.4,SNR=3.9
INK Inuvik 73.55 22 P **P 16 30 48.2 +2.0**
comp=E,1.7nm,0.7s,baz=248,slow=2.5,SNR=3.7

TAP 14 16:19:14.6, 23.72N×121.51E, h4km, ML4.3, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	**Guangfu** baz=249	**0.09**	**236**	P	Pg	16 19 16.8	+0.5
EGFH	baz=249			S	Sg	16 19 18.6	+1.0
ESL	**Shilin** baz=318	**0.12**	**325**	P	Pg	16 19 17.4	+0.5
ESL	baz=318			S	Sg	16 19 19.2	+0.6
ENLB	**Shoufeng** baz=4.0	**0.20**	**25**	*e*P	Pg	16 19 20.1	+1.6
HGSD	**Ruisui** baz=213	**0.24**	**199**	*e*P	Pg	16 19 20.9	+1.8
HGSD	**Ruisui** baz=198	**0.24**	**199**	*e*S	Pg	16 19 21.4	+2.3
EHY	**Hungye** baz=230	**0.27**	**219**	*e*P	Pg	16 19 20.1	+0.3
HWA	**Hwalien** baz=2.0	**0.27**	**19**	*e*P	Pb	16 19 21.1	-1.0
VWDT	**VWDT** baz=276	**0.34**	**276**	*e*P	Pg	16 19 21.8	+0.8
TWD	**Chiawan** baz=353	**0.37**	**13**	*e*P	Pb	16 19 23.3	-0.5
TWD	baz=353			*e*S	Sg	16 19 27.5	+0.9
YULB	**Yu-li** baz=230	**0.38**	**211**	*e*P	Pg	16 19 22.5	+0.6
YULB	baz=230			*e*S	Sb	16 19 28.8	-1.3
TWF1	**Yuli** baz=217	**0.41**	**208**	*e*P	Pg	16 19 22.9	+0.4
CHGB	**Renai** baz=316	**0.46**	**318**	*e*P	Pg	16 19 24.1	+0.7
NACB	**Ninganchiao** baz=353	**0.46**	**10**	*e*P	Pb	16 19 24.6	-0.8
SSLB	**Suanglung** baz=280	**0.51**	**278**	P	Pg	16 19 24.9	+0.5
SSLB	baz=280			*e*S	Sg	16 19 31.3	+0.2
FULB	**Fuli** baz=223	**0.55**	**201**	*e*P	Pb	16 19 26.9	0.0
SMLT	**Sun Moon Lake** baz=288	**0.58**	**287**	*e*P	Pg	16 19 26.3	+0.6
SMLT	baz=288			*e*S	Sg	16 19 34.4	+1.1
TYC	**Yuchr** baz=289	**0.62**	**288**	*e*P	Pg	16 19 26.9	+0.3
TYC	baz=289			*e*S	Sg	16 19 35.2	+0.5
CHKT	**Chengkung** baz=179	**0.63**	**192**	*e*P	Pb	16 19 27.8	-0.3
ALS	**Alishan** baz=253	**0.68**	**252**	*e*P	Pb	16 19 28.5	-0.6
ELDTW	**Lidau** baz=223	**0.69**	**221**	*e*P	Pg	16 19 27.9	+0.1
NNSB	**Datong** baz=336	**0.72**	**351**	*e*P	Pg	16 19 29.0	+0.7
NNSB	baz=336			*e*S	Sg	16 19 38.6	+0.9
NNSH	**Datong** baz=340	**0.72**	**351**	*e*P	Pg	16 19 28.8	+0.4
WJS	**Zhushan** baz=278	**0.72**	**278**	*e*P	Pb	16 19 30.3	+0.6
NNS	**Nan Shan** baz=336	**0.73**	**350**	*e*P	Pg	16 19 29.3	+0.6
NNS	baz=336			*e*S	Sg	16 19 39.0	+0.9
ENA	**Nanau** baz=2.0	**0.74**	**17**	*e*P	Pg	16 19 28.5	-0.3
NANB	**Nanao** baz=2.0	**0.74**	**17**	*e*P	Pb	16 19 29.8	-0.3
WGK	**Gukeng** baz=268	**0.87**	**268**	*e*P	Pb	16 19 32.9	+0.6
WDLH	**Douliu** baz=268	**0.89**	**268**	*e*P	Pn	16 19 33.8	-0.1
TPUB	**Ta-pu** baz=238	**0.91**	**243**	*e*P	Pb	16 19 33.0	+0.1
TWQ1	**Liyutan** baz=311	**0.92**	**313**	*e*P	Pn	16 19 34.4	0.0
ENTT	**Nioudou** baz=359	**0.92**	**3**	*e*P	Pb	16 19 33.3	+0.1
TWC	**Suao** baz=359	**0.94**	**19**	*e*P	Pn	16 19 34.5	-0.2
WTP	**Ta-pu** baz=254	**0.94**	**240**	*e*P	Pb	16 19 34.0	+0.4
WTP	baz=254			*e*S	Sn	16 19 47.8	-0.9
YHNB	**Yeheng** baz=336	**0.96**	**353**	*e*P	Pg	16 19 33.1	+0.2
YHNB	baz=336			*e*S	Sb	16 19 46.3	-0.6
NSK	**Sanguang** baz=336	**0.96**	**352**	*e*P	Pb	16 19 34.1	+0.2
NSK	baz=336			*e*S	Sg	16 19 45.8	+0.2
NSY	**Sanyi** baz=313	**0.97**	**316**	*e*P	Pn	16 19 35.2	+0.1
TWG	**Pinlang** baz=221	**0.98**	**204**	*e*P	Pb	16 19 34.4	+0.3
TWGBT	**Beinan** baz=221	**0.98**	**204**	*e*P	Pb	16 19 34.0	-0.2
EOS1	**EOS1** baz=54	**1.00**	**34**	*e*P	Pn	16 19 36.0	+0.5
TWE	**Neicheng** baz=5.0	**1.01**	**8**	*e*P	Pg	16 19 33.9	-0.1
CHY	**Chiayi** baz=258	**1.02**	**258**	*e*P	Pn	16 19 35.9	+0.2
NSTT	**Nanjuang** baz=330	**1.02**	**333**	*e*P	Pb	16 19 34.9	0.0
LIOB	**Emei** baz=331	**1.03**	**334**	*e*P	Pb	16 19 35.2	+0.2
TWK	**Hsinying** baz=250	**1.04**	**245**	*e*P	Pn	16 19 35.9	-0.2
TWK	baz=250			*e*S	Sn	16 19 51.6	+0.5
CHN1	**Nanshi** baz=241	**1.04**	**240**	*e*P	Pb	16 19 35.5	+0.3
NMLH	**Miaoli** baz=318	**1.05**	**321**	*e*P	Pn	16 19 36.7	+0.6
SGST	**Jiashian** baz=239	**1.06**	**233**	*e*P	Pn	16 19 36.6	+0.3
SGST	baz=239			*e*S	Sn	16 19 52.6	+1.1
RLNB	**Erlin** baz=279	**1.06**	**280**	*e*P	Pb	16 19 35.9	+0.3
WLGB	**Puzi** baz=259	**1.13**	**258**	*e*P	Pn	16 19 37.2	0.0
SBCB	**Hsinchu** baz=332	**1.17**	**336**	*e*P	Pn	16 19 38.7	+0.9
WSF	**Szhu** baz=266	**1.18**	**266**	*e*P	Pn	16 19 38.3	+0.3
HSN	**Hsinchu** baz=325	**1.19**	**336**	*e*P	Pn	16 19 39.5	+1.5
HSN	baz=325			*e*S	Sn	16 19 55.5	+0.9
ECL	**Taimali** baz=190	**1.23**	**205**	*e*P	Pg	16 19 37.6	-0.5
CHN3	**Shinhua** baz=241	**1.23**	**239**	*e*P	Pn	16 19 40.1	+1.5
CHN8	**Yiju** baz=254	**1.25**	**253**	*e*P	Pn	16 19 39.2	+0.4
SSD	**Sandimen** baz=214	**1.26**	**220**	*e*P	Pn	16 19 39.7	+0.7
TIPB	**Shuangxi** baz=9.0	**1.28**	**13**	*e*P	Pn	16 19 40.8	+1.4
TAP1	**Taipei** baz=355	**1.32**	**1**	*e*P	Pn	16 19 39.6	-0.2
SCLT	**Jiali** baz=248	**1.32**	**246**	*e*P	Pb	16 19 40.5	+0.5
SGLT	**Jiouru** baz=226	**1.36**	**224**	*e*P	Pg	16 19 42.4	+1.8
MASBT	**Mashibuluo** baz=220	**1.36**	**216**	*e*P	Pb	16 19 40.6	-0.1

TAP 14 16:19:30.3, 23.72N×121.48E, h8km, ML3.8, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	**Guangfu** baz=221	**0.07**	**222**	P	Pg	16 19 33.0	+0.8
EGFH	baz=221			S	Sg	16 19 34.5	+0.9
ESL	**Shilin** baz=340	**0.10**	**336**	P	Pg	16 19 33.3	+0.6
ESL	baz=340			S	Sg	16 19 35.2	+0.8
ENLB	**Shoufeng** baz=31	**0.21**	**32**	*e*P	Pg	16 19 36.1	+1.5
EHY	**Hungye** baz=212	**0.26**	**214**	*e*P	Pg	16 19 36.1	+0.7
HWA	**Hwalien** baz=26	**0.28**	**25**	*e*P	Pb	16 19 37.6	0.0
YULB	**Yu-li** baz=206	**0.37**	**207**	*e*P	Pb	16 19 38.4	-0.7
YULB	baz=206			*e*S	Sb	16 19 44.4	-0.5
TWD	**Chiawan** baz=17	**0.37**	**17**	*e*P	Pb	16 19 38.5	-0.6
TWF1	**Yuli** baz=203	**0.40**	**204**	*e*P	Pb	16 19 39.1	-0.6
CHGB	**Renai** baz=320	**0.44**	**321**	*e*P	Pb	16 19 39.7	-0.7
CHGB	baz=320			*e*S	Sb	16 19 47.1	-0.1
SSLB	**Suanglung** baz=277	**0.48**	**278**	*e*P	Pb	16 19 41.1	0.0

*JMA **14** 16:21:57.9±0.1, 23.71N×121.63E, h0km, M2.9*
*ISCJB **14** 16:21:58.7±0.3, 23.72N±0.01×121.59E±0.02, h4km±2km,*
Error ellipse: s-maj=2.8km s-min=1.6km az=34.7
*TAP **14** 16:21:58.8, 23.73N×121.53E, h6km, ML3.8, C*
ISC 14 16:21:58.8±0.9, 23.72N±0.02×121.58E±0.02, h7km±7km, n95, σ0.957/136, 1C-10D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	**Guangfu** baz=245	**0.14**	**250**	P	**Pg**	**16 22 01.3**	**-0.5**
EGFH	baz=245			S	**Sg**	**16 22 03.9**	**-0.1**
ESL	**Shilin** baz=304	**0.16**	**306**	⇓*i*P	**Pg**	**16 22 01.6**	**-0.5**
ESL	baz=304			*i* S	**Sg**	**16 22 03.5**	**-0.9**
ENLB	**Shoufeng** baz=27	**0.19**	**7**	⇓*e*P	**Pg**	**16 22 03.4**	**+0.8**
ENLB	baz=27			*e*S	**Sg**	**16 22 07.4**	**+2.2**
HWA	**Hwalien** baz=16	**0.26**	**6**	P	**Pb**	**16 22 04.9**	**-0.9**
HGSD	**Ruisui** baz=218	**0.27**	**212**	⇓P	**Pb**	**16 22 04.8**	**-1.1**
HGSD	baz=218			*e*S	**Sb**	**16 22 09.9**	**-0.7**
EHY	**Hungye** baz=229	**0.32**	**228**	*e*P	**Pg**	**16 22 04.6**	**-0.4**
EHY	baz=229			*e*S	**Sg**	**16 22 09.7**	**+0.5**
TWD	**Chiawan** baz=357	**0.36**	**3**	⇓P	**Pg**	**16 22 06.1**	**+0.3**
TWD	baz=357			*e*S	**Sg**	**16 22 11.2**	**+0.6**
VWDT	**VWDT** baz=272	**0.40**	**275**	⇓P	**Pg**	**16 22 06.3**	**-0.3**
VWDT	baz=272			*e*S	**Sg**	**16 22 11.7**	**-0.2**
YULB	**Yu-li** baz=224	**0.41**	**218**	*e*P	**Pg**	**16 22 06.8**	**0.0**
YULB	baz=224			*e*S	**Sg**	**16 22 12.8**	**+0.6**
TWF1	**Yuli** baz=223	**0.45**	**215**	*e*P	**Pg**	**16 22 07.7**	**+0.3**
TWF1	baz=223			*e*S	**Sb**	**16 22 14.8**	**-1.0**
NACB	**Ninganchiao** baz=355	**0.45**	**2**	P	**Pg**	**16 22 07.6**	**0.0**
NACB	baz=355			S	**Sb**	**16 22 14.5**	**-1.6**
CHGB	**Renai** baz=312	**0.50**	**313**	⇓P	**Pg**	**16 22 08.4**	**-0.2**
CHGB	baz=312			S	**Sg**	**16 22 14.8**	**-0.3**
SSLB	**Suanglung** baz=275	**0.57**	**277**	⇓P	**Pg**	**16 22 09.4**	**-0.5**
SSLB	baz=275			*e*S	**Sg**	**16 22 15.8**	**-1.6**
FULB	**Fuli** baz=221	**0.58**	**207**	*e*P	**Pb**	**16 22 11.4**	**+0.2**
SMLT	**Sun Moon Lake** baz=284	**0.64**	**285**	P	**Pg**	**16 22 11.0**	**-0.1**
SMLT	baz=284			*e*S	**Sg**	**16 22 19.2**	**-0.3**
CHKT	**Chengkung** baz=195	**0.65**	**197**	*e*P	**Pb**	**16 22 11.6**	**-0.7**
CHKT	baz=195			*e*S	**Sb**	**16 22 22.3**	**+0.7**
TYC	**Yuchr** baz=285	**0.68**	**286**	P	**Pg**	**16 22 11.8**	**-0.2**
TYC	baz=285			*e*S	**Sg**	**16 22 20.6**	**-0.3**
ENA	**Nanau** baz=1.0	**0.72**	**12**	*e*P	**Pb**	**16 22 12.9**	**-0.8**
ENA	baz=1.0			S	**Sb**	**16 22 24.2**	**+0.4**
NANB	**Nanao** baz=1.0	**0.72**	**13**	⇑P	**Pg**	**16 22 12.8**	**0.0**
NANB	baz=1.0			*e*S	**Sb**	**16 22 23.7**	**-0.1**
NNSB	**Datong** baz=346	**0.73**	**346**	⇓P	**Pg**	**16 22 12.8**	**0.0**
NNSB	baz=346			*e*S	**Sg**	**16 22 22.1**	**-0.3**
NNSH	**Datong** baz=346	**0.73**	**346**	P	**Pg**	**16 22 12.8**	**-0.1**
NNSH	baz=346			S	**Sg**	**16 22 22.2**	**-0.1**
ELDTW	**Lidau** baz=231	**0.74**	**224**	P	**Pg**	**16 22 12.5**	**-0.5**
ALS	**Alishan** baz=252	**0.74**	**254**	P	**Pg**	**16 22 13.2**	**+0.2**
ALS	baz=252			S	**Sg**	**16 22 22.9**	**+0.3**
NNS	**Nan Shan** baz=346	**0.74**	**346**	⇓P	**Pg**	**16 22 13.1**	**0.0**
NNS	baz=346			*e*S	**Sg**	**16 22 22.6**	**-0.2**
ENAH	**Nanao** baz=7.0	**0.76**	**16**	P	**Pb**	**16 22 13.5**	**-0.7**
ENAH	baz=7.0			S	**Sb**	**16 22 24.8**	**0.0**
WJS	**Zhushan** baz=276	**0.78**	**278**	*e*P	**Pb**	**16 22 14.8**	**+0.1**
ENTT	**Nioudou** baz=350	**0.92**	**359**	P	**Pb**	**16 22 16.6**	**-0.4**
ENTT	baz=350			*e*S	**Sg**	**16 22 28.3**	**-0.1**
TWC	**Suao** baz=9.0	**0.92**	**16**	*e*P	**Pb**	**16 22 16.7**	**-0.4**
TWC	baz=9.0			*e*S	**Sb**	**16 22 30.1**	**+0.6**
TCU	**Taichung** baz=296	**0.93**	**298**	*e*P	**Pb**	**16 22 17.2**	**0.0**
WGK	**Gukeng** baz=265	**0.93**	**268**	*e*P	**Pb**	**16 22 17.6**	**+0.4**
WDLH	**Douliu** baz=267	**0.95**	**268**	*e*P	**Pb**	**16 22 17.9**	**+0.3**
WDLH	baz=267			*e*S	**Sb**	**16 22 31.5**	**+1.2**
TPUB	**Ta-pu** baz=251	**0.96**	**245**	P	**Pb**	**16 22 17.4**	**-0.4**
TPUB	baz=251			*e*S	**Sb**	**16 22 30.4**	**-0.4**
YHNB	**Yeheng** baz=336	**0.96**	**349**	P	**Pb**	**16 22 17.5**	**-0.3**
YHNB	baz=336			*e*S	**Sg**	**16 22 29.6**	**-0.3**
EOS1	**EOS1** baz=54	**0.97**	**31**	*e*P	**Pn**	**16 22 18.6**	**-0.1**
NSK	**Sanguang** baz=337	**0.97**	**348**	⇓P	**Pb**	**16 22 17.6**	**-0.4**
NSK	baz=337			S	**Sg**	**16 22 29.8**	**-0.4**
WCHH	**Zhanghua** baz=289	**1.00**	**291**	*e*P	**Pn**	**16 22 18.9**	**-0.2**
WTP	**Ta-pu** baz=249	**1.00**	**242**	*e*P	**Pb**	**16 22 18.5**	**0.0**
WTP	baz=249			*e*S	**Sb**	**16 22 32.5**	**+0.6**
TWE	**Neicheng** baz=6.0	**1.00**	**5**	*e*P	**Pg**	**16 22 17.7**	**-0.4**
TWE	baz=6.0			*e*S	**Sb**	**16 22 31.5**	**-0.4**
TWGBT	**Beinan** baz=209	**1.01**	**207**	*e*P	**Pg**	**16 22 18.1**	**0.0**
TWG	**Pinlang** baz=209	**1.01**	**208**	*e*P	**Pg**	**16 22 18.0**	**-0.2**
TWH	**Lutao** baz=171	**1.01**	**185**	*e*P	**Pb**	**16 22 18.6**	**+0.1**
NSY	**Sanyi** baz=313	**1.02**	**313**	*e*P	**Pn**	**16 22 19.8**	**+0.3**
CHN2	**Minshiung** baz=259	**1.03**	**260**	*e*P	**Pn**	**16 22 19.4**	**-0.1**
CHN2	baz=259			*e*S	**Sn**	**16 22 34.2**	**+0.1**
TTN	**Taitung** baz=204	**1.04**	**202**	*e*P	**Pb**	**16 22 19.1**	**+0.1**
NSTT	**Nanjuang** baz=317	**1.05**	**330**	*e*P	**Pb**	**16 22 19.3**	**0.0**
ILA	**Ilan** baz=8.0	**1.05**	**9**	*e*P	**Pg**	**16 22 17.7**	**-1.4**
LIOB	**Emei** baz=328	**1.06**	**331**	*e*P	**Pn**	**16 22 19.9**	**-0.1**
LIOB	baz=328			*e*S	**Sg**	**16 22 32.7**	**-0.1**
CHY	**Chiayi** baz=256	**1.08**	**258**	*e*P	**Pn**	**16 22 20.5**	**+0.2**
NMLH	**Miaoli** baz=317	**1.09**	**319**	*e*P	**Pn**	**16 22 20.8**	**+0.4**
TWK	**Hsinying** baz=245	**1.09**	**246**	*e*P	**Pb**	**16 22 20.2**	**+0.1**
TWK	baz=245			*e*S	**Sn**	**16 22 35.7**	**-0.3**
CHN1	**Nanshi** baz=241	**1.10**	**241**	*e*P	**Pb**	**16 22 20.3**	**+0.1**
CHN1	baz=241			*e*S	**Sb**	**16 22 35.4**	**+0.8**
SGST	**Jiashian** baz=235	**1.11**	**235**	*e*P	**Pn**	**16 22 20.9**	**+0.2**
SGST	baz=235			*e*S	**Sn**	**16 22 36.6**	**+0.3**
SLGT	**Liugui** baz=228	**1.12**	**230**	*e*P	**Pg**	**16 22 20.1**	**-0.2**
RLNB	**Erlin** baz=276	**1.13**	**279**	*e*P	**Pb**	**16 22 20.7**	**+0.1**
EGS	baz=1.0	**1.17**	**16**	*e*P	**Pb**	**16 22 21.3**	**0.0**
WLGB	**Puzi** baz=256	**1.20**	**259**	*e*P	**Pb**	**16 22 21.7**	**-0.1**
SBCB	**Hsinchu** baz=340	**1.20**	**333**	*e*P	**Pn**	**16 22 22.5**	**+0.6**
HSN	**Hsinchu** baz=334	**1.21**	**333**	*e*P	**Pg**	**16 22 21.7**	**-0.4**
WSF	**Szhu** baz=266	**1.24**	**267**	*e*P	**Pb**	**16 22 22.4**	**-0.1**
WSF	baz=266			*e*S	**Sn**	**16 22 39.7**	**+0.1**
ECL	**Taimali** baz=195	**1.25**	**207**	*e*P	**Pg**	**16 22 22.6**	**-0.3**
TATO	**Taipei** baz=355	**1.25**	**356**	*e*P	**Pn**	**16 22 23.0**	**+0.4**
TIPB	**Shuangxi** baz=355	**1.27**	**10**	*e*P	**Pn**	**16 22 23.0**	**+0.1**
CHN3	**Shinhua** baz=239	**1.28**	**240**	*e*P	**Pn**	**16 22 23.7**	**+0.6**
NCUH	**Zhongli** baz=356	**1.29**	**344**	*e*P	**Pn**	**16 22 24.4**	**+1.1**
NCU	**National Centr** baz=355	**1.30**	**344**	*e*P	**Pn**	**16 22 24.2**	**+1.0**
SSD	**Sandimen** baz=214	**1.30**	**222**	*e*P	**Pb**	**16 22 23.6**	**+0.1**
CHN8	**Yiju** baz=264	**1.31**	**254**	*e*P	**Pb**	**16 22 24.0**	**+0.4**
TAP1	**Taipei** baz=356	**1.32**	**358**	*e*P	**Pg**	**16 22 23.3**	**-0.7**
NWF	**Wu-fen Shan** baz=6.0	**1.36**	**8**	*e*P	**Pb**	**16 22 25.2**	**+0.6**
WFSB	**Wu-fen Shan** baz=6.0	**1.36**	**8**	*e*P	**Pb**	**16 22 25.2**	**+0.6**
SCLT	**Jiali** baz=249	**1.38**	**247**	*e*P	**Pn**	**16 22 23.2**	**-1.2**
SCLT	baz=249			*e*S	**Sn**	**16 22 44.7**	**+1.8**
MASBT	**Mashibuluo** baz=218	**1.40**	**218**	*e*P	**Pn**	**16 22 24.6**	**-0.1**
SGLT	**Jiouru** baz=225	**1.41**	**225**	*e*P	**Pg**	**16 22 26.1**	**+0.4**
YM04	**YM04** baz=357	**1.43**	**359**	*e*P	**Pg**	**16 22 25.7**	**-0.5**
YM10	**YM10** baz=358	**1.43**	**359**	*e*P	**Pg**	**16 22 25.8**	**-0.4**
YM11	**YM11** baz=358	**1.44**	**360**	*e*P	**Pg**	**16 22 27.6**	**+1.1**
NTST	**Danshui** baz=353	**1.44**	**355**	*e*P	**Pg**	**16 22 26.9**	**+0.4**
JYNG	**Yonagunijimaku**	**1.45**	**59**	P	**Pn**	**16 22 25.1**	**-0.3**
JYNG				S	**Sn**	**16 22 44.8**	**+0.2**
YM07	**YM07** baz=10.0	**1.45**	**2**	*e*P	**Pb**	**16 22 25.7**	**-0.4**
YM03	**YM03** baz=357	**1.46**	**359**	*e*P	**Pb**	**16 22 26.0**	**-0.2**
YM12	**YM12** baz=358	**1.46**	**360**	*e*P	**Pg**	**16 22 26.4**	**-0.4**
YM08	**YM08** baz=358	**1.46**	**0**	*e*P	**Pb**	**16 22 26.1**	**-0.2**
YOJ	**Yonaguni jima** baz=59	**1.51**	**60**	*e*P	**Pg**	**16 22 27.1**	**-0.6**
YOJ	**Yonaguni jima**	**1.51**	**60**	P	**Pn**	**16 22 25.9**	**-0.2**
YOJ				*e*S	**Sn**	**16 22 45.7**	**-0.3**
SCZT	**Fangliau** baz=215	**1.60**	**214**	*e*P	**Pb**	**16 22 28.6**	**-0.1**
WDGT	**Dungji** baz=253	**1.82**	**256**	*e*P	**Pn**	**16 22 29.9**	**-0.5**
PHUB	**P'eng-hu** baz=261	**1.85**	**264**	*e*P	**Pn**	**16 22 30.3**	**-0.5**
PNG	**Penghu** baz=262	**1.86**	**266**	*e*P	**Pn**	**16 22 30.9**	**-0.1**
IRIF	**Iriomote-Funau**	**2.06**	**72**	P	**Pn**	**16 22 33.7**	**-0.1**
IRIF				*e*S	**Sn**	**16 23 00.1**	**+0.3**
HATJ	**Hateruma jima**	**2.07**	**80**	*e*S	**Sn**	**16 22 59.9**	**0.0**
JKRS	**Kuro-shima**	**2.29**	**76**	*e*S	**Sn**	**16 23 06.0**	**+0.8**
JIJ	**Ishigaki jima**	**2.43**	**74**	P	**Pn**	**16 22 39.8**	**+0.9**
JIJ				*e*S	**Sn**	**16 23 08.1**	**-0.8**
JISG	**Ishigakijimahi**	**2.64**	**70**	P	**Pn**	**16 22 41.8**	**0.0**
JTJ	**Tarama**	**3.00**	**72**	*e*S	**Sn**	**16 23 23.6**	**+0.7**
JIRB	**Irabujima**	**3.46**	**71**	*e*S	**Sn**	**16 23 34.3**	**0.0**

*ISCJB **14** 16:30:06.3±0.5, 49.82N±0.03×18.47E±0.03, h0km, Error ellipse: s-maj=4.5km s-min=2.5km az=16.6*
*IPEC **14** 16:30:07.2±0.2, 49.82N×18.58E, h0km, ML1.8/3, Error ellipse: s-maj=2.1km s-min=1.1km az=161.0*
*CSEM **14** 16:30:07.0±0.2, 49.84N×18.52E, h1km, ML2.6/8, Error ellipse: s-maj=5.5km s-min=2.9km az=16.0*
*PRU **14** 16:30:08.2, 49.80N×18.49E, h0km*
ISC 14 16:30:06.3±0.8, 49.84N±0.04×18.55E±0.02, h0km, n35, σ0.970/64, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.26**	**270**	*e*PG	**Pb**	**16 30 13.4**	**-0.4**
OKC	comp=Z,50nm,0.4s			*e*SG	**Sb**	**16 30 17.1**	**-1.7**

OKC	**Ostrava-Krasne**	**0.26 270**	Pg	**Pb**	**16 30 13.4**	**-0.4**
OKC			Sg	**Sb**	**16 30 17.1**	**-1.7**
	50nm,0.4s					
MORC	**Moravsky Berou**	**0.65 265**	*e*Pg	**Pb**	**16 30 20.3**	**-0.3**
	baz=86					
MORC			*e*Sg	**Sg**	**16 30 28.1**	**+0.9**
	25nm,0.4s,baz=86					
MORC	**Moravsky Berou**	**0.65 265**	*e*PG	**Pb**	**16 30 20.4**	**-0.2**
MORC			*e*SG	**Sg**	**16 30 28.1**	**+0.9**
MORC	**Moravsky Berou**	**0.65 265**	*e*Pg	**Pb**	**16 30 20.3**	**-0.3**
	baz=86					
MORC			*e*Sg	**Sg**	**16 30 28.1**	**+0.9**
	25nm,0.4s,baz=86					
OJC	**Ojcow**	**0.89 64**	*e*Pg	**Pb**	**16 30 24.1**	**-0.5**
OJC			*e*Sg	**Sn**	**16 30 39.5**	**-0.3**
OJC	**Ojcow**	**0.89 64**	*e*Pg	**Pb**	**16 30 24.1**	**-0.5**
OJC			*e*Sg	**Sn**	**16 30 39.5**	**-0.3**
LANS	**Liptovska Anna**	**0.92 139**	*e*PG	**Pb**	**16 30 24.6**	**-0.4**
LANS			*e*SG	**Sb**	**16 30 37.7**	**-0.1**
LANS	**Liptovska Anna**	**0.92 139**	*e*Pg	**Pb**	**16 30 24.6**	**-0.4**
LANS			*e*Sg	**Sb**	**16 30 37.7**	**-0.1**
JAVC	**Velka Javorina**	**1.14 211**	*e*Pg	**Pn**	**16 30 30.0**	**+0.5**
JAVC			*e*Sg	**Sb**	**16 30 44.0**	**-0.1**
JAVC	**Velka Javorina**	**1.14 211**	*e*PG	**Pn**	**16 30 30.0**	**+0.5**
JAVC			*e*SG	**Sb**	**16 30 44.0**	**-0.1**
KRLC	**Kraliky**	**1.16 282**	*e*PG	**Pg**	**16 30 28.5**	**-0.1**
KRLC			*e*SG	**Sg**	**16 30 44.2**	**+0.6**
	comp=Z,5.6nm,0.2s					
KRLC	**Kraliky**	**1.16 282**	Pg	**Pg**	**16 30 28.5**	**-0.1**
KRLC			Sg	**Sg**	**16 30 44.2**	**+0.6**
	5.6nm,0.2s					
NIE	**Niedzica**	**1.22 110**	*e*Pg	**Pn**	**16 30 31.1**	**+0.5**
NIE			*e*Sg	**Sn**	**16 30 48.5**	**+0.8**
NIE	**Niedzica**	**1.22 110**	*e*Pg	**Pn**	**16 30 31.1**	**+0.5**
NIE			*e*Sg	**Sn**	**16 30 48.5**	**+0.8**
VYHS	**Vyhne**	**1.36 172**	*e*PG	**Pb**	**16 30 32.5**	**-0.1**
VYHS			*e*SG	**Sb**	**16 30 50.4**	**-0.1**
VYHS			eLg		16 30 58.8	
VYHS	**Vyhne**	**1.36 172**	*e*Pg	**Pb**	**16 30 32.5**	**-0.1**
VYHS			*e*Sn	**Sb**	**16 30 50.4**	**-0.1**
VRAC	**Vranov**	**1.38 248**	*e*Pg	**Pb**	**16 30 33.1**	**+0.2**
VRAC			*e*Sg	**Sg**	**16 30 50.7**	**+0.2**
	9.5nm,0.3s,baz=68					
VRAC	**Vranov**	**1.38 248**	*e*PG	**Pb**	**16 30 33.1**	**+0.2**
VRAC			*e*SG	**Sg**	**16 30 50.8**	**+0.2**
VRAC	**Vranov**	**1.38 248**	*e*Pg	**Pb**	**16 30 33.1**	**+0.2**
	baz=68					
VRAC			*e*Sg	**Sg**	**16 30 50.7**	**+0.2**
	9.5nm,0.3s,baz=68					
DPC	**Dobruska-Polom**	**1.52 291**	*e*PG	**Pg**	**16 30 35.6**	**+0.2**
DPC			*e*SG	**Sn**	**16 30 56.2**	**+0.9**
	comp=Z,8.2nm,0.3s					
DPC	**Dobruska-Polom**	**1.52 291**	Pg	**Pg**	**16 30 35.6**	**+0.2**
DPC			Sg	**Sn**	**16 30 56.2**	**+0.9**
	8.2nm,0.3s					
KRUC	**Moravsky**	**1.60 242**	*e*Pg	**Pb**	**16 30 36.5**	**-0.3**
KRUC			*e*Sg	**Sb**	**16 30 57.7**	**+0.1**
	8.6nm,0.2s,baz=61					
KRUC	**Moravsky**	**1.60 242**	*e*PG	**Pb**	**16 30 36.5**	**-0.3**
KRUC			*e*SG	**Sb**	**16 30 57.7**	**+0.1**
KRUC	**Moravsky**	**1.60 242**	*e*Pg	**Pb**	**16 30 36.5**	**-0.3**
	baz=61					
KRUC			*e*Sg	**Sb**	**16 30 57.7**	**+0.1**
	8.6nm,0.2s,baz=61					
UPC	**Upice**	**1.76 293**	*e*PG	**Pg**	**16 30 40.2**	**+0.2**
UPC			*e*SG	**Sg**	**16 31 03.2**	**+0.4**
	comp=Z,4.6nm,0.3s					
UPC	**Upice**	**1.76 293**	Pg	**Pg**	**16 30 40.2**	**+0.2**
UPC			Sg	**Sg**	**16 31 03.2**	**+0.4**
	4.6nm,0.3s					
KECS	**Kecovo**	**1.86 136**	*e*SN	**Sn**	**16 31 03.5**	**-0.1**
KECS	**Kecovo**	**1.86 136**	*e*Sn	**Sn**	**16 31 03.5**	**-0.1**
GOPC	**GO Pecny, Ondr**	**2.43 273**	*e*SG	**Sg**	**16 31 23.4**	**-1.0**
GOPC	**GO Pecny, Ondr**	**2.43 273**	Sg	**Sg**	**16 31 23.4**	**-1.0**
PVCC	**Panska Ves**	**2.65 287**	*e*SG	**Sg**	**16 31 32.3**	**+1.0**
	comp=Z,5.6nm,0.3s					
PVCC	**Panska Ves**	**2.65 287**	Sg	**Sg**	**16 31 32.3**	**+1.0**
	5.6nm,0.3s					
KHC	**Kasperske Hory**	**3.32 260**	*e*PG	**Pg**	**16 31 09.1**	**-0.7**
KHC			*e*SG	**Sg**	**16 31 50.6**	**-2.2**
KHC	**Kasperske Hory**	**3.32 260**	Pg	**Pg**	**16 31 09.1**	**-0.7**
KHC			Sg	**Sg**	**16 31 50.6**	**-2.2**

ROM ***14*** *16:35:07.3±0.1, 44°.892N±0°.006×10°.910E±0°.009, h8km, ML2.6/32*
IASPEI ***14*** *16:35:09.5±0.8, 44°.92N±0°.02×10°.90E±0°.02, h9km±5km, Error ellipse: s-maj=3.1km s-min=2.7km az=107.1, GT5 selection from ISC bulletin GT5 identified by Bond¨¡r and McLaughlin (2009) selection criteria Bond¨¡r and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
ISCJB ***14*** *16:35:09.4±0.3, 44°.92N±0°.01×10°.90E±0°.02, h15km±2km, Error ellipse: s-maj=3.0km s-min=2.3km az=19.1*
CSEM ***14*** *16:35:09.5±0.1, 44°.92N×10°.94E, h10km, ML2.6/16, Error ellipse: s-maj=3.6km s-min=2.9km az=112.0*
LDG ***14*** *16:35:09.4±0.2, 44°.84N×11°.13E, h2km, Ml2.7/15, Error ellipse: s-maj=6.0km s-min=3.3km az=116.0*
ISC 14 16:35:09.8±0.8, 44°.90N±0°.01×10°.92E±0°.02, h12km±4km, n135, σ1=02/182, 5C-8D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NDIM	**Novi di Modena**	**0.02**	**236**	P	P		**Pg**	**16 35 10.2**	**-1.7**
NDIM				S	S		**Sg**	**16 35 11.9**	**-1.4**
T0825	**Gonzaga (MN)**	**0.09**	**323**	⇑P	P		**Pg**	**16 35 12.3**	**-0.2**
T0825				S	S		**Sg**	**16 35 16.2**	**+1.7**
T0825	**Gonzaga (MN)**	**0.09**	**323**	P	P		**Pg**	**16 35 12.3**	**-0.2**
T0825				S	S		**Sg**	**16 35 16.2**	**+1.7**
T0825				AML	AML				
	comp=E,35450μm,0.7s								
T0825				AML	AML				
	comp=N,69400μm,1.1s								
T0825				AML	AML				
	comp=E,35450μm,0.7s								
T0825				AML	AML				
	comp=N,69400μm,1.1s								
T0826	**Rio Saliceto (**	**0.10**	**233**	⇓P	P		**Pg**	**16 35 11.2**	**-1.4**
T0826				S	S		**Sg**	**16 35 14.0**	**-0.6**
T0826	**Rio Saliceto (**	**0.10**	**233**	P	P		**Pg**	**16 35 11.2**	**-1.4**
T0826				S	S		**Sg**	**16 35 14.0**	**-0.6**
T0826				AML	AML				
	comp=E,54950μm,0.2s								
T0826				AML	AML				
	comp=N,41250μm,0.1s								
T0826				AML	AML				
	comp=E,54950μm,0.2s								
T0826				AML	AML				
	comp=N,41250μm,0.1s								
T0826				AML	AML				
	comp=N,41250μm,0.1s								
T0826				AML	AML				
	comp=E,54950μm,0.2s								
SBPO	**S.Benedetto Po**	**0.15**	**359**	P	P		**Pg**	**16 35 13.5**	**+0.2**
SBPO	**S.Benedetto Po**	**0.15**	**359**	P	P		**Pg**	**16 35 13.5**	**+0.2**
SBPO				AML	AML				
	comp=E,3385μm,0.3s								
SBPO				AML	AML				
	comp=N,17650μm,0.4s								
SBPO				AML	AML				
	comp=E,3385μm,0.3s								
SBPO				AML	AML				
	comp=N,17650μm,0.4s								
SBPO				AML	AML				
	comp=E,3385μm,0.3s								
SBPO				AML	AML				
	comp=N,17650μm,0.4s								
SBPO				AML	AML				
	comp=E,3385μm,0.3s								
NOVE	**Novellara**	**0.18**	**236**	⇓P	P		**Pg**	**16 35 12.8**	**-1.0**
NOVE				S	S		**Sg**	**16 35 16.8**	**+0.3**
NOVE	**Novellara**	**0.18**	**236**	P	P		**Pg**	**16 35 12.8**	**-1.0**
NOVE				S	S		**Sg**	**16 35 16.8**	**+0.3**
NOVE				AML	AML				
	comp=E,6690μm,0.9s								
NOVE				AML	AML				
	comp=N,10450μm,0.4s								
NOVE				AML	AML				
	comp=E,6685μm,0.9s								
NOVE				AML	AML				
	comp=N,10460μm,0.4s								
NOVE				AML	AML				
	comp=E,6690μm,0.9s								
NOVE				AML	AML				
	comp=N,10450μm,0.4s								
NOVE				AML	AML				
	comp=E,6690μm,0.9s								
NOVE				AML	AML				
	comp=N,10450μm,0.4s								
T0802	**SanFelice sul**	**0.18**	**98**	P	P		**Pg**	**16 35 13.8**	**-0.1**
T0802				S	S		**Sg**	**16 35 18.6**	**+1.9**
T0802	**SanFelice sul**	**0.18**	**98**	P	P		**Pg**	**16 35 13.8**	**-0.1**
T0802				S	S		**Sg**	**16 35 18.6**	**+1.9**
RAVA	**Ravarino**	**0.20**	**136**	P	P		**Pg**	**16 35 13.9**	**-0.2**
RAVA				S	S		**Sg**	**16 35 19.1**	**+2.0**
RAVA	**Ravarino**	**0.20**	**136**	P	P		**Pg**	**16 35 13.9**	**-0.2**
RAVA				S	S		**Sg**	**16 35 19.1**	**+2.0**
RAVA				AML	AML				
	comp=E,5170μm,0.3s								
RAVA				AML	AML				
	comp=N,3185μm,0.5s								
RAVA				AML	AML				
	comp=E,5170μm,0.3s								
RAVA				AML	AML				
	comp=N,3180μm,0.5s								
RAVA				AML	AML				
	comp=E,5170μm,0.3s								
RAVA				AML	AML				
	comp=N,3185μm,0.5s								
RAVA				AML	AML				
	comp=N,3185μm,0.5s								
RAVA				AML	AML				
	comp=E,5170μm,0.3s								
T0800	**Massa Finalese**	**0.24**	**102**	P	P		**Pg**	**16 35 14.4**	**-0.3**
T0800	**Massa Finalese**	**0.24**	**102**	P	P		**Pg**	**16 35 14.4**	**-0.3**
T0800				AML	AML				
	comp=E,4630μm,0.2s								
T0800				AML	AML				
	comp=N,2500μm,1.6s								
T0800				AML	AML				
	comp=E,4500μm,0.2s								
T0800				AML	AML				
	comp=N,2320μm,0.6s								
T0800				AML	AML				
	comp=E,4630μm,0.2s								
T0800				AML	AML				
	comp=N,2500μm,1.6s								
T0800				AML	AML				
	comp=E,4500μm,0.2s								
T0800				AML	AML				
	comp=N,2320μm,0.6s								
T0800				AML	AML				
	comp=E,4635μm,0.2s								
T0800				AML	AML				
	comp=N,2500μm,1.6s								
T0800				AML	AML				
	comp=E,4505μm,0.2s								
T0800				AML	AML				
	comp=N,2320μm,0.6s								
T0800				AML	AML				
	comp=N,2500μm,1.6s								
T0800				AML	AML				
	comp=E,4505μm,0.2s								
T0800				AML	AML				
	comp=N,2320μm,0.6s								
T0800				AML	AML				
	comp=E,4635μm,0.2s								
MODE	**Modena**	**0.27**	**176**	⇓P	P		**Pg**	**16 35 15.2**	**-0.2**
MODE	**Modena**	**0.27**	**176**	P	P		**Pg**	**16 35 15.2**	**-0.2**
MODE				AML	AML				
	comp=E,6770μm,0.6s								
MODE				AML	AML				
	comp=N,4275μm,0.7s								
MODE				AML	AML				
	comp=E,6770μm,0.6s								
MODE				AML	AML				
	comp=N,4280μm,0.7s								
MODE				AML	AML				
	comp=E,6765μm,0.6s								
MODE				AML	AML				
	comp=N,4280μm,0.7s								
MODE				AML	AML				
	comp=N,4280μm,0.7s								
MODE				AML	AML				
	comp=E,6765μm,0.6s								
T0805	**Bondeno (FE)**	**0.28**	**86**	P	P		**Pg**	**16 35 15.5**	**-0.1**
T0805	**Bondeno (FE)**	**0.28**	**86**	P	P		**Pg**	**16 35 15.5**	**-0.1**
T0803	**Dosso, Cento (**	**0.33**	**114**	P	P		**Pb**	**16 35 16.6**	**-1.0**
T0803	**Dosso, Cento (**	**0.33**	**114**	P	P		**Pb**	**16 35 16.6**	**-1.0**
ZCCA	**Zocca**	**0.55**	**176**	⇑P	P		**Pb**	**16 35 21.9**	**+0.5**
ZCCA	**Zocca**	**0.55**	**176**	P	P		**Pb**	**16 35 21.9**	**+0.5**
ZCCA				AML	AML				
	comp=E,442μm,1.3s								
ZCCA				AML	AML				
	comp=N,350μm,1.0s								
ZCCA				AML	AML				
	comp=E,386μm,0.9s								
ZCCA				AML	AML				
	comp=N,410μm,1.1s								
ZCCA				AML	AML				
	comp=E,442μm,1.3s								
ZCCA				AML	AML				
	comp=N,350μm,1.0s								
ZCCA				AML	AML				
	comp=E,386μm,0.9s								
ZCCA				AML	AML				
	comp=N,410μm,1.1s								
ZCCA				AML	AML				
	comp=E,442μm,1.3s								
ZCCA				AML	AML				
	comp=N,350μm,1.0s								
ZCCA				AML	AML				
	comp=E,386μm,0.9s								
ZCCA				AML	AML				
	comp=N,410μm,1.1s								
ZCCA				AML	AML				
	comp=E,442μm,1.3s								
TEOL	**Teolo**	**0.70**	**49**	⇑*e*Pg	P		**Pg**	**16 35 23.2**	**-0.3**
TEOL				*e*Sg	S		**Sn**	**16 35 36.1**	**-0.3**
TEOL	**Teolo**	**0.70**	**49**	P	P		**Pg**	**16 35 23.1**	**-0.3**
TEOL				*e*Sg	S		**Sn**	**16 35 36.1**	**-0.3**
TEOL	**Teolo**	**0.70**	**49**	P	P		**Pg**	**16 35 23.1**	**-0.3**
TEOL				AML	AML				
	comp=E,1115μm,0.6s								
TEOL				AML	AML				
	comp=N,834μm,0.4s								
TEOL				AML	AML				
	comp=E,1115μm,0.6s								
TEOL				AML	AML				
	comp=N,834μm,0.4s								
TEOL				AML	AML				
	comp=N,834μm,0.4s								
TEOL				AML	AML				
	comp=E,1115μm,0.6s								
CMPO	**Campotto Po**	**0.70**	**117**	P	P		**Pn**	**16 35 25.3**	**-0.3**
CMPO	**Campotto Po**	**0.70**	**117**	P	P		**Pn**	**16 35 25.3**	**-0.3**
CMPO				AML	AML				
	comp=E,806μm,0.8s								
CMPO				AML	AML				
	comp=N,677μm,1.3s								
CMPO				AML	AML				
	comp=E,806μm,0.8s								
CMPO				AML	AML				
	comp=N,677μm,1.3s								
CMPO				AML	AML				
	comp=N,677μm,1.3s								
CMPO				AML	AML				
	comp=E,806μm,0.8s								
ROVR	**Rover¨¤ Verone**	**0.75**	**8**	P	P		**Pg**	**16 35 24.0**	**-0.4**
ROVR	**Rover¨¤ Verone**	**0.75**	**8**	P	P		**Pg**	**16 35 24.0**	**-0.4**
ROVR				AML	AML				
	comp=E,624μm,0.3s								
ROVR				AML	AML				
	comp=N,1315μm,0.7s								
ROVR				AML	AML				
	comp=E,624μm,0.3s								
ROVR				AML	AML				
	comp=N,1315μm,0.7s								
ROVR				AML	AML				
	comp=N,1315μm,0.7s								
ROVR				AML	AML				
	comp=E,624μm,0.3s								
MARN	**Marana (Italy)**	**0.77**	**15**	⇓*e*Pg	P		**Pg**	**16 35 24.3**	**-0.3**
MARN				*e*Sg	S		**Sn**	**16 35 37.6**	**-0.4**
MARN	**Marana (Italy)**	**0.77**	**15**	*e*Pg	P		**Pg**	**16 35 24.3**	**-0.3**
MARN				*e*Sg	S		**Sn**	**16 35 37.6**	**-0.4**
SALO	**Salr**	**0.77**	**339**	P	P		**Pg**	**16 35 24.6**	**-0.2**
SALO	**Salr**	**0.77**	**339**	P	P		**Pg**	**16 35 24.6**	**-0.2**
IMOL	**Imola, Italy**	**0.80**	**132**	AML	AML				
	comp=E,736μm,0.2s								
IMOL				AML	AML				
	comp=N,804μm,0.4s								
VLC	**Villacollemand**	**0.83**	**208**	AML	AML				
	comp=E,104μm,1.3s								
VLC				AML	AML				
	comp=E,104μm,1.3s								
VLC				AML	AML				
	comp=N,130μm,1.0s								
VLC				AML	AML				
	comp=E,104μm,1.3s								
VLC				AML	AML				
	comp=N,130μm,1.0s								
VLC				AML	AML				
	comp=N,130μm,1.0s								
POPM	**Popiglio**	**0.86**	**188**	P	P		**Pb**	**16 35 26.4**	**-0.3**
POPM	**Popiglio**	**0.86**	**188**	P	P		**Pb**	**16 35 26.4**	**-0.3**
POPM				AML	AML				
	comp=E,234μm,0.7s								
POPM				AML	AML				
	comp=N,338μm,1.5s								
POPM				AML	AML				
	comp=E,234μm,0.7s								
POPM				AML	AML				
	comp=N,338μm,1.5s								
POPM				AML	AML				
	comp=N,338μm,1.5s								
POPM				AML	AML				
	comp=E,234μm,0.7s								
MAGA	**Magasa**	**0.90**	**347**	⇓P	P		**Pg**	**16 35 26.1**	**-1.1**
MAGA	**Magasa**	**0.90**	**347**	P	P		**Pg**	**16 35 26.1**	**-1.1**
MAGA				AML	AML				
	comp=E,2095μm,0.5s								
MAGA				AML	AML				
	comp=N,1735μm,0.5s								
MAGA				AML	AML				
	comp=E,2095μm,0.5s								
MAGA				AML	AML				
	comp=N,1735μm,0.5s								
MAGA				AML	AML				
	comp=E,2095μm,0.5s								
MAGA				AML	AML				
	comp=N,1735μm,0.5s								
DOSS	**Dosso del Somm**	**1.00**	**11**	⇑*e*Pg	P		**Pg**	**16 35 28.1**	**-1.0**
DOSS				*e*Sg	S		**Sn**	**16 35 44.2**	**+0.3**
DOSS	**Dosso del Somm**	**1.00**	**11**	*e*Pg	P		**Pg**	**16 35 28.1**	**-1.0**
DOSS				*e*Sg	S		**Sn**	**16 35 44.2**	**+0.3**
MAIM	**Mastiano**	**1.03**	**198**	P	P		**Pb**	**16 35 29.7**	**+0.1**
MAIM	**Mastiano**	**1.03**	**198**	P	P		**Pb**	**16 35 29.7**	**+0.1**
MAIM				AML	AML				
	comp=E,312μm,0.3s								
MAIM				AML	AML				
	comp=N,312μm,0.8s								
MAIM				AML	AML				
	comp=E,312μm,0.3s								
MAIM				AML	AML				
	comp=N,312μm,0.8s								
MAIM				AML	AML				
	comp=N,312μm,0.8s								
MAIM				AML	AML				
	comp=E,312μm,0.3s								
BOB	**Bobbio (Coli)**	**1.06**	**263**	P	P		**Pb**	**16 35 30.2**	**+0.1**
BOB	**Bobbio (Coli)**	**1.06**	**263**	P	P		**Pb**	**16 35 30.2**	**+0.1**
BOB				AML	AML				
BOB				AML	AML				
BOB				AML	AML				
	comp=E,190μm,1.4s								
BOB				AML	AML				
	comp=N,181μm,0.3s								
BOB				AML	AML				
BOB				AML	AML				
BOB				AML	AML				
	comp=E,190μm,1.4s								
BOB				AML	AML				
	comp=N,181μm,0.3s								
BOB				AML	AML				
BOB				AML	AML				
BOB				AML	AML				
	comp=E,190μm,1.4s								
BOB				AML	AML				
	comp=N,181μm,0.3s								
RNI	**Roncone**	**1.10**	**349**	⇓*e*Pg	P		**Pg**	**16 35 28.9**	**-2.1**
RNI				*e*Sg	S		**Sn**	**16 35 46.5**	**-0.1**
RNI	**Roncone**	**1.10**	**349**	*e*Pg	P		**Pg**	**16 35 28.9**	**-2.1**
RNI				*e*Sg	S		**Sn**	**16 35 46.5**	**-0.1**
PLMA	**Palmaria, Port**	**1.15**	**223**	P	P		**Pg**	**16 35 31.2**	**-0.6**
PLMA	**Palmaria, Port**	**1.15**	**223**	P	P		**Pg**	**16 35 31.2**	**-0.6**
PLMA				AML	AML				
	comp=E,322μm,0.2s								
PLMA				AML	AML				
	comp=N,661μm,0.5s								
PLMA				AML	AML				
	comp=E,322μm,0.2s								
PLMA				AML	AML				
	comp=N,661μm,0.5s								
PLMA				AML	AML				
	comp=E,322μm,0.2s								
PLMA				AML	AML				
	comp=N,661μm,0.5s								
CGRP	**Cima Grappa**	**1.16**	**32**	⇓*e*Pg	P		**Pg**	**16 35 31.0**	**-1.1**
CGRP				*e*Sg	S		**Sn**	**16 35 49.0**	**+1.1**
CGRP	**Cima Grappa**	**1.16**	**32**	P	P		**Pg**	**16 35 30.0**	**-2.1**
CGRP	**Cima Grappa**	**1.16**	**32**	*e*Pg	P		**Pg**	**16 35 31.0**	**-1.1**
CGRP				*e*Sg	S		**Sn**	**16 35 49.0**	**+1.1**
CGRP	**Cima Grappa**	**1.16**	**32**	P	P		**Pg**	**16 35 30.9**	**-1.1**
CGRP				AML	AML				
	comp=E,191μm,0.8s								
CGRP				AML	AML				
	comp=N,176μm,1.1s								
CGRP				AML	AML				
	comp=E,191μm,0.8s								
CGRP				AML	AML				
	comp=N,176μm,1.1s								
CGRP				AML	AML				
	comp=E,191μm,0.8s								
CGRP				AML	AML				
	comp=N,176μm,1.1s								
MSSA	**Maissana**	**1.16**	**240**	P	P		**Pg**	**16 35 31.5**	**-0.6**
MSSA	**Maissana**	**1.16**	**240**	P	P		**Pg**	**16 35 31.6**	**-0.6**
MSSA				AML	AML				
	comp=E,203μm,1.4s								
MSSA				AML	AML				
	comp=N,160μm,0.5s								
MSSA				AML	AML				
	comp=E,203μm,1.4s								
MSSA				AML	AML				
	comp=N,160μm,0.5s								
MSSA				AML	AML				
	comp=E,203μm,1.4s								
MSSA				AML	AML				
	comp=N,160μm,0.5s								
PANI	**Panarotta**	**1.19**	**14**	⇑*e*Pg	P		**Pg**	**16 35 31.6**	**-1.1**
PANI				*e*Sg	S		**Sn**	**16 35 49.0**	**+0.4**
MABI	**Malga Bissina**	**1.19**	**346**	P	P		**Pg**	**16 35 31.1**	**-1.6**
MABI	**Malga Bissina**	**1.19**	**346**	P	P		**Pg**	**16 35 31.1**	**-1.6**
MABI				AML	AML				
	comp=E,131μm,0.2s								
MABI				AML	AML				
	comp=N,133μm,0.2s								
MABI				AML	AML				
	comp=E,131μm,0.2s								
MABI				AML	AML				
	comp=N,133μm,0.2s								
MABI				AML	AML				
	comp=N,133μm,0.2s								
MABI				AML	AML				
	comp=E,131μm,0.2s								
SFI	**Santa Sofia**	**1.20**	**146**	AML	AML				
	comp=N,225μm,0.8s								
SFI				AML	AML				
	comp=E,140μm,0.8s								
SFI				AML	AML				
	comp=N,224μm,0.8s								
SFI				AML	AML				
	comp=E,140μm,0.8s								
SFI				AML	AML				
	comp=E,140μm,0.8s								

SFI					AML	AML		
	comp=N,225μm,0.8s							
CTI	**Castel Tesino**	**1.26**	**24**		AML	AML		
	comp=N,616μm,0.2s							
CTI					AML	AML		
	comp=E,524μm,0.9s							
CTI					AML	AML		
	comp=N,616μm,0.2s							
CTI					AML	AML		
	comp=E,524μm,0.9s							
CTI					AML	AML		
	comp=N,616μm,0.2s							
CTI					AML	AML		
	comp=E,524μm,0.9s							
ASQU	**Asqua**	**1.27**	**150**		P	**Pg**	**16 35 34.1**	**0.0**
ASQU	**Asqua**	**1.27**	**150**		P	**Pg**	**16 35 34.1**	**0.0**
ASQU					AML	AML		
	comp=E,133μm,0.7s							
ASQU					AML	AML		
	comp=N,104μm,0.7s							
ASQU					AML	AML		
	comp=E,133μm,0.7s							
ASQU					AML	AML		
	comp=N,104μm,0.7s							
VARN	**Col Varnada, M**	**1.37**	**37**	⇓	*e*Pg	**Pb**	**16 35 35.2**	**-0.3**
VARN					*e*Sg	**Sg**	**16 35 55.2**	**+1.2**
VARN	**Col Varnada, M**	**1.37**	**37**		*e*Pg	**Pb**	**16 35 35.2**	**-0.3**
VARN					*e*Sg	**Sg**	**16 35 55.2**	**+1.2**
CRE	**Caprese Michel**	**1.48**	**150**		P	**Pg**	**16 35 37.6**	**-0.6**
CRE	**Caprese Michel**	**1.48**	**150**		P	**Pg**	**16 35 37.6**	**-0.6**
CRE					AML	AML		
	comp=E,70μm,0.3s							
CRE					AML	AML		
	comp=N,124μm,0.3s							
CRE					AML	AML		
	comp=E,70μm,0.3s							
CRE					AML	AML		
	comp=N,124μm,0.3s							
CRE					AML	AML		
	comp=N,124μm,0.3s							
CRE					AML	AML		
	comp=E,70μm,0.3s							
OZOL	**Ozolo**	**1.51**	**3**		*e*Pg	**Pn**	**16 35 35.8**	**-1.0**
OZOL	**Ozolo**	**1.51**	**3**		*e*Pg	**Pn**	**16 35 35.8**	**-1.0**
CARE	**Lago del Cares**	**1.53**	**354**		*e*Pg	**Pn**	**16 35 36.5**	**-0.8**
CARE	**Lago del Cares**	**1.53**	**354**		*e*Pg	**Pn**	**16 35 36.5**	**-0.8**
AGOR	**Agordo**	**1.59**	**29**		AML	AML		
	comp=N,98μm,0.4s							
AGOR					AML	AML		
	comp=E,88μm,1.6s							
AGOR					AML	AML		
	comp=N,98μm,0.4s							
AGOR					AML	AML		
	comp=E,88μm,1.6s							
APPI	**Appiano**	**1.59**	**8**		P	**Pn**	**16 35 37.9**	**0.0**
APPI	**Appiano**	**1.59**	**8**		P	**Pn**	**16 35 37.9**	**0.0**
APPI					AML	AML		
	comp=E,298μm,0.3s							
APPI					AML	AML		
	comp=N,176μm,0.3s							
APPI					AML	AML		
	comp=E,298μm,0.3s							
APPI					AML	AML		
	comp=N,176μm,0.3s							
APPI					AML	AML		
	comp=E,298μm,0.3s							
APPI					AML	AML		
	comp=N,176μm,0.3s							
KOSI	**Kohlern**	**1.59**	**11**		P	**Pn**	**16 35 37.7**	**-0.3**
KOSI	**Kohlern**	**1.59**	**11**		P	**Pn**	**16 35 37.7**	**-0.3**
KOSI					AML	AML		
	comp=E,189μm,0.5s							
KOSI					AML	AML		
	comp=N,209μm,0.8s							
KOSI					AML	AML		
	comp=E,189μm,0.5s							
KOSI					AML	AML		
	comp=N,209μm,0.8s							
KOSI					AML	AML		
	comp=N,209μm,0.8s							
KOSI					AML	AML		
	comp=E,189μm,0.5s							
BRMO	**Bormio**	**1.62**	**346**		AML	AML		
	comp=N,83μm,0.6s							
BRMO					AML	AML		
	comp=E,94μm,0.4s							
BRMO					AML	AML		
	comp=N,83μm,0.6s							
BRMO					AML	AML		
	comp=E,94μm,0.4s							
BRMO					AML	AML		
	comp=N,83μm,0.6s							
BRMO					AML	AML		
	comp=E,94μm,0.4s							
GROG	**Isola di Gorgo**	**1.65**	**207**		AML	AML		
	comp=E,79μm,1.3s							
GROG					AML	AML		
	comp=N,75μm,0.9s							
GROG					AML	AML		
	comp=E,79μm,1.3s							
GROG					AML	AML		
	comp=N,75μm,0.9s							
MOSI	**Grossmontoni**	**1.74**	**351**		AML	AML		
	comp=N,248μm,1.1s							
MOSI					AML	AML		
	comp=E,167μm,1.1s							
MOSI					AML	AML		
	comp=E,167μm,1.1s							
MOSI					AML	AML		
	comp=N,248μm,1.1s							
NARO	**Abbazia di Nar**	**1.75**	**137**		AML	AML		
	comp=N,30μm,1.5s							
NARO					AML	AML		
	comp=E,33μm,1.0s							
NARO					AML	AML		
	comp=E,33μm,1.0s							
NARO					AML	AML		
	comp=N,30μm,1.5s							
NARO					AML	AML		
	comp=E,33μm,1.0s							
NARO					AML	AML		
	comp=N,30μm,1.5s							
ABSI	**Aberstueckl**	**1.85**	**8**		AML	AML		
	comp=E,227μm,0.7s							
ABSI					AML	AML		
	comp=N,175μm,0.5s							
ABSI					AML	AML		
	comp=N,175μm,0.5s							
ABSI					AML	AML		
	comp=E,227μm,0.7s							
ROSI	**Rosskopf**	**2.06**	**9**		AML	AML		
	comp=E,134μm,0.5s							
ROSI					AML	AML		
	comp=N,181μm,0.5s							
ROSI					AML	AML		
	comp=N,181μm,0.5s							
ROSI					AML	AML		
	comp=E,134μm,0.5s							
FETA	**Feichten**	**2.13**	**356**		*i* Pn	**Pb**	**16 35 47.9**	**-0.5**
	comp=E,6.6nm,0.4s							
FETA					*i* Sn	**Sg**	**16 36 17.2**	**-1.0**
	comp=E,1.5nm,0.2s							
FETA	**Feichten**	**2.13**	**356**		Pn	**Pb**	**16 35 47.9**	**-0.5**
	comp=E,6.6nm,0.4s							
FETA					Sg	**Sg**	**16 36 17.2**	**-1.0**
	comp=E,1.5nm,0.2s							
SKDS	**Skadanscina**	**2.28**	**72**		*i* Pn	**Pn**	**16 35 46.3**	**-1.0**
SKDS					*i* Sn	**Sn**	**16 36 13.9**	**-1.4**
	comp=Z,2.0nm,0.1s							
SKDS	**Skadanscina**	**2.28**	**72**		Pn	**Pn**	**16 35 46.3**	**-1.0**
SKDS					*i* Sn	**Sn**	**16 36 13.9**	**-1.4**
	comp=Z,2.0nm,0.1s							
WTTA	**Wattenberg**	**2.42**	**12**		*i* Pn	**Pb**	**16 35 52.2**	**-1.1**
	comp=Z,2.0nm,0.1s							
WTTA	**Wattenberg**	**2.42**	**12**		Pn	**Pb**	**16 35 52.2**	**-1.1**
	comp=Z,2.0nm,0.1s							
JAVS	**Javornik**	**2.42**	**65**		*i* Pn	**Pn**	**16 35 48.5**	**-0.9**
JAVS					*i* Sn	**Sn**	**16 36 19.1**	**+0.1**
	comp=Z,1.0nm,0.1s							
JAVS	**Javornik**	**2.42**	**65**		*i* Pn	**Pn**	**16 35 48.5**	**-0.9**
JAVS					*i* Sn	**Sn**	**16 36 19.1**	**+0.1**
	comp=Z,1.0nm,0.1s							
MOTA	**Moosalm**	**2.45**	**3**		*e*Pn	**Pn**	**16 35 50.7**	**+1.0**
	comp=Z,1.8nm,0.2s,SNR=4.6							
MOTA					*i* Sn	**Sb**	**16 36 26.1**	**+2.0**
	comp=Z,5.3nm,0.4s							
MOTA	**Moosalm**	**2.45**	**3**		Pn	**Pn**	**16 35 50.7**	**+1.0**
	comp=Z,1.8nm,0.2s,SNR=4.6							
MOTA					Sg	**Sb**	**16 36 26.1**	**+2.0**
	comp=Z,5.3nm,0.4s							
WATA	**Walderalm**	**2.48**	**10**		*e*Pn	**Pn**	**16 35 52.0**	**+1.9**
	comp=Z,6.5nm,0.3s,SNR=6.1							
WATA	**Walderalm**	**2.48**	**10**		Pn	**Pn**	**16 35 52.0**	**+1.9**
	comp=Z,6.5nm,0.3s,SNR=6.1							
RETA	**Reutte**	**2.59**	**358**		*i* Pn	**Pn**	**16 35 53.8**	**+2.2**
	comp=Z,1.3nm,0.2s							
RETA	**Reutte**	**2.59**	**358**		Pn	**Pn**	**16 35 53.8**	**+2.2**
	comp=Z,1.3nm,0.2s							
SBF	**Sospel**	**2.71**	**249**		*e*Pn	**Pn**	**16 35 53.8**	**+0.6**
SBF					*e*Sn	**Sn**	**16 36 25.9**	**0.0**
	comp=Z,24nm,0.5s							
SBF	**Sospel**	**2.71**	**249**		*e*Pn	**Pn**	**16 35 53.8**	**+0.6**
SBF					*e*Sn	**Sn**	**16 36 25.9**	**0.0**
	comp=Z,12nm,0.5s							
PGF	**Pioggiola**	**2.73**	**211**		*e*Pn	**Pn**	**16 35 53.6**	**0.0**
PGF					*e*Sn	**Sn**	**16 36 25.3**	**-1.3**
	comp=Z,12nm,0.4s							
PGF	**Pioggiola**	**2.73**	**211**		*e*Pn	**Pn**	**16 35 53.6**	**0.0**
PGF					*e*Sn	**Sn**	**16 36 25.3**	**-1.3**
	comp=Z,6.2nm,0.4s							
KBA	**Koelnbreinsper**	**2.76**	**37**		*i* Pn	**Pb**	**16 36 00.0**	**+0.9**
	comp=Z,5.7nm,0.5s							
NVLJ	**Novalja**	**2.83**	**95**		*e*Pn	**Pn**	**16 35 52.8**	**-2.0**
NVLJ					Sn	**Sn**	**16 36 26.8**	**-2.2**
NVLJ	**Novalja**	**2.83**	**95**		*e*Pn	**Pn**	**16 35 52.8**	**-2.0**
NVLJ					Sn	**Sn**	**16 36 26.7**	**-2.2**
MBDF	**Montbardon**	**2.96**	**268**		*e*Pn	**Pn**	**16 35 58.5**	**+1.7**
MBDF					*e*Sn	**Sn**	**16 36 33.2**	**+0.9**
	comp=Z,1.4nm,0.2s							
MBDF	**Montbardon**	**2.96**	**268**		*e*Pn	**Pn**	**16 35 58.5**	**+1.7**
MBDF					*e*Sn	**Sn**	**16 36 33.2**	**+0.9**
	comp=Z,0.7nm,0.2s							
LPL	**La Plagne**	**3.03**	**283**		*e*Pn	**Pn**	**16 36 00.2**	**+2.5**
LPL					*e*Sn	**Sn**	**16 36 35.3**	**+1.3**
	comp=Z,1.9nm,0.3s							
LPL	**La Plagne**	**3.03**	**283**		*e*Pn	**Pn**	**16 36 00.2**	**+2.5**
LPL					*e*Sn	**Sn**	**16 36 35.3**	**+1.3**
	comp=Z,0.9nm,0.3s							
FRF	**La Foret Royal**	**3.35**	**248**		*e*Pn	**Pn**	**16 36 02.1**	**+0.1**
FRF					*e*Sn	**Sn**	**16 36 41.0**	**-0.8**
	comp=Z,3.4nm,0.2s							
FRF	**La Foret Royal**	**3.35**	**248**		*e*Pn	**Pn**	**16 36 02.1**	**+0.1**
FRF					*e*Sn	**Sn**	**16 36 41.0**	**-0.8**
	comp=Z,1.7nm,0.2s							
LMR	**La Mourre**	**3.54**	**245**		*e*Pn	**Pn**	**16 36 04.3**	**-0.3**
LMR					*e*Sn	**Sn**	**16 36 46.4**	**-0.1**
	comp=Z,4.8nm,0.3s							
LMR	**La Mourre**	**3.54**	**245**		*e*Pn	**Pn**	**16 36 04.3**	**-0.3**
LMR					*e*Sn	**Sn**	**16 36 46.4**	**-0.1**
	comp=Z,2.4nm,0.3s							
ORIF	**Oris-en-Rattie**	**3.58**	**272**		*e*Pn	**Pn**	**16 36 06.2**	**+0.9**
ORIF					*e*Sn	**Sn**	**16 36 48.2**	**+0.6**
	comp=Z,4.7nm,0.4s							
ORIF	**Oris-en-Rattie**	**3.58**	**272**		*e*Pn	**Pn**	**16 36 06.2**	**+0.9**
ORIF					*e*Sn	**Sn**	**16 36 48.2**	**+0.6**
	comp=Z,2.3nm,0.4s							
SMRF	**Simiane la Rot**	**3.94**	**258**		*e*Pn	**Pn**	**16 36 10.7**	**+0.6**
SMRF					*e*Sn	**Sn**	**16 36 56.1**	**-0.2**
	comp=Z,1.1nm,0.3s							
SMRF	**Simiane la Rot**	**3.94**	**258**		*e*Pn	**Pn**	**16 36 10.7**	**+0.6**
SMRF					*e*Sn	**Sn**	**16 36 56.1**	**-0.2**
	comp=Z,0.6nm,0.3s							
HINF	**Hinteralfeld**	**4.06**	**317**		*e*Pn	**Pn**	**16 36 12.4**	**+0.7**
HINF					*e*Sn	**Sn**	**16 36 57.6**	**-1.6**
	comp=Z,1.4nm,0.2s							
HINF	**Hinteralfeld**	**4.06**	**317**		*e*Pn	**Pn**	**16 36 12.4**	**+0.7**
HINF					*e*Sn	**Sn**	**16 36 57.6**	**-1.6**
	comp=Z,0.7nm,0.2s							
CDF	**Champ du Feu**	**4.32**	**326**		*e*Pn	**Pn**	**16 36 14.6**	**-0.8**
CDF					*e*Sn	**Sn**	**16 37 05.4**	**-0.3**
	comp=Z,2.8nm,0.3s							
CDF	**Champ du Feu**	**4.32**	**326**		*e*Pn	**Pn**	**16 36 14.6**	**-0.8**
CDF					*e*Sn	**Sn**	**16 37 05.4**	**-0.3**
	comp=Z,1.4nm,0.3s							
KHC	**Kasperske Hory**	**4.61**	**22**		*e*PN	**Pn**	**16 36 20.4**	**+1.1**
KHC					*e*PG	**Pg**	**16 36 36.3**	**-1.7**
KHC					*e*SN	**Sn**	**16 37 11.5**	**-1.2**
KHC					*ex*	x	16 37 33.8	
KHC	**Kasperske Hory**	**4.61**	**22**		Pn	**Pn**	**16 36 20.4**	**+1.1**
PAGF	**Fort de Pagny**	**5.11**	**317**		*e*Sn	**Sn**	**16 37 24.7**	**-0.4**
	comp=Z,2.7nm,0.2s							
PAGF	**Fort de Pagny**	**5.11**	**317**		*e*Sn	**Sn**	**16 37 24.7**	**-0.4**
	comp=Z,1.4nm,0.2s							
SFTF	**Sexfontaines**	**5.24**	**311**		*e*Pn	**Pn**	**16 36 26.5**	**-1.4**
SFTF					*e*Sn	**Sn**	**16 37 27.7**	**-0.5**
	comp=Z,3.4nm,0.2s							
SFTF	**Sexfontaines**	**5.24**	**311**		*e*Pn	**Pn**	**16 36 26.5**	**-1.4**
SFTF					*e*Sn	**Sn**	**16 37 27.7**	**-0.5**
	comp=Z,1.7nm,0.2s							
SMF	**Signal de Mont**	**5.25**	**292**		*e*Pn	**Pn**	**16 36 27.9**	**-0.3**
SMF	**Signal de Mont**	**5.25**	**292**		*e*Pn	**Pn**	**16 36 27.9**	**-0.3**
LOR	**Lormes**	**5.46**	**298**		*e*Pn	**Pn**	**16 36 31.6**	**+0.7**
LOR	**Lormes**	**5.46**	**298**		*e*Pn	**Pn**	**16 36 31.6**	**+0.7**
AVF	**Avril sur Loir**	**5.62**	**292**		*e*Pn	**Pn**	**16 36 33.2**	**+0.1**
AVF	**Avril sur Loir**	**5.62**	**292**		*e*Pn	**Pn**	**16 36 33.2**	**+0.1**
GIVF	**Givet**	**6.64**	**324**		*e*Pn	**Pn**	**16 36 47.3**	**+0.1**
GIVF	**Givet**	**6.64**	**324**		*e*Pn	**Pn**	**16 36 47.3**	**+0.1**
BAIF	**Baives**	**6.88**	**321**		*e*Pn	**Pn**	**16 36 50.8**	**+0.4**
BAIF	**Baives**	**6.88**	**321**		*e*Pn	**Pn**	**16 36 50.8**	**+0.4**

IDC ***14*** *16:46:01.9±0.6, 36°.29N×29°.17E, h0km, mb4.1/20, mb1 4.3/29, mb1mx4.1/64, mbtmp4.2/29, ML4.2/7, MS3.6/6, Ms1 3.6/6, ms1mx3.2/59, Error ellipse: s-maj=16.2km s-min=10.3km az=156.0*
MOS ***14*** *16:46:02.2±1.4, 36°.21N×29°.21E, h11km, mb4.4/27, Error ellipse: s-maj=4.4km s-min=2.9km az=102.0*
BJI ***14*** *16:46:05.9, 36°.30N×29°.10E, h47km, mb4.7/16, mB5.1/10, Ms4.5/2, Ms7 4.4/1*
HLW ***14*** *16:46:06.2, 36°.20N×29°.28E, h15km±12km, Ml4.6*
NEIC ***14*** *16:46:06.8±0.0, 36°.39N×29°.06E, h20km, mb4.4/39, ML4.5(THE), ML4.8(ISK), After ISK.*
NEIC Felt at Antalya, Fethiye and Marmaris.
ATH ***14*** *16:46:06.8, 36°.37N×29°.06E, h42km±1km, ML4.4/15, Error ellipse: s-maj=1.4km s-min=0.4km az=126.0*
DDA ***14*** *16:46:06.2, 36°.37N×29°.06E, h33km, Ml4.8*
ISK ***14*** *16:46:06.8, 36°.39N×29°.06E, h20km, ML4.9/17*
NIC ***14*** *16:46:06.3±0.3, 36°.50N×29°.02E, h25km, mb4.6, ML4.3*
CSEM ***14*** *16:46:06.0±0.1, 36°.26N×29°.18E, h20km, mb4.4/37, Error ellipse: s-maj=2.9km s-min=2.2km az=178.0*
THE ***14*** *16:46:07.7, 36°.39N×29°.02E, h5km±1km, ML4.5/4, Error ellipse: s-maj=1.3km s-min=0.4km az=100.0*
ISC 14 16:46:05.6±0.7, 36°.26N±0°.02×29°.10E±0°.02, h26km±5km, n915, σ1§86/1011, mb4.4/55, MS3.8/9, 54C-42D, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.38**	**358**		PG		**Pb**	**16 46 12.9**	**-1.0**
FETY					SG		**Sb**	**16 46 17.3**	**-2.2**
FETY	**Fethiye**	**0.38**	**358**		*e*Pn		**Pb**	**16 46 12.8**	**-1.1**
FETY	**Fethiye**	**0.38**	**358**		P		**Pb**	**16 46 12.8**	**-1.1**
FETY	**Fethiye**	**0.38**	**358**		*i* Pg		**Pb**	**16 46 12.9**	**-1.0**
FETY					*i* Sg		**Sb**	**16 46 17.3**	**-2.2**
FETY					S		**Sn**	**16 46 18.3**	**-3.6**
KSL	**Kastellorizon**	**0.41**	**105**		P		**Pn**	**16 46 17.9**	**+2.0**
KSL					S		**Sn**	**16 46 25.9**	**+3.3**
KSL					AML		AML	16 46 27.9	
KSL					AML		AML	16 46 29.6	
KSL	**Kastellorizon**	**0.41**	**105**		*e*Pn		**Pn**	**16 46 17.8**	**+2.0**
KSL					*e*Sn		**Sn**	**16 46 26.5**	**+3.8**
KSL	**Kastellorizon**	**0.41**	**105**		P		**Pn**	**16 46 17.8**	**+2.0**
KSL					S		**Sn**	**16 46 26.5**	**+3.8**
KSL	**Kastellorizon**	**0.41**	**105**		P		**Pn**	**16 46 17.8**	**+2.0**
KSL					S		**Sn**	**16 46 26.5**	**+3.8**
AKAS	**Kas**	**0.41**	**94**		PG		**Pn**	**16 46 16.4**	**+0.4**
AKAS					SG		**Sn**	**16 46 24.3**	**+1.3**
AKAS	**Kas**	**0.41**	**94**	⇑	*i*P		**Pn**	**16 46 16.4**	**+0.4**
AKAS					*i* S		**Sn**	**16 46 23.7**	**+0.7**
AKAS	**Kas**	**0.41**	**94**		Pg		**Pn**	**16 46 16.4**	**+0.4**
AKAS	**Kas**	**0.41**	**94**		P		**Pn**	**16 46 16.5**	**+0.4**
AKAS					S		**Sn**	**16 46 23.7**	**+0.7**
AKAS					*i* Sg		**Sn**	**16 46 24.3**	**+1.3**
DALY	**Dalyan (Mu¨la**	**0.66**	**327**		PG		**Pb**	**16 46 18.2**	**-0.3**
DALY					SG		**Sb**	**16 46 26.2**	**-1.2**
DALY	**Dalyan (Mu¨la**	**0.66**	**327**	⇓	*i*P		**Pb**	**16 46 18.3**	**-0.3**
DALY					*i* S		**Sb**	**16 46 26.4**	**-0.9**
DALY	**Dalyan (Mu¨la**	**0.66**	**327**		*i* Pg		**Pb**	**16 46 18.2**	**-0.3**
DALY					*i* Sg		**Sb**	**16 46 26.2**	**-1.2**
TURN	**Turunc**	**0.73**	**327**		PG		**Pn**	**16 46 22.2**	**+1.8**
TURN	**Turunc**	**0.73**	**327**	⇑	*i*P		**Pn**	**16 46 22.1**	**+1.8**
TURN					*i* S		**Sn**	**16 46 32.7**	**+2.1**
TURN	**Turunc**	**0.73**	**327**		P		**Pn**	**16 46 22.1**	**+1.8**
TURN					S		**Sn**	**16 46 32.7**	**+2.1**
ARG	**Arkhangelos**	**0.79**	**267**		PG		**Pn**	**16 46 22.2**	**+1.1**
ARG	**Arkhangelos**	**0.79**	**267**		P		**Pn**	**16 46 22.6**	**+1.5**
ARG					S		**Sn**	**16 46 35.2**	**+3.2**
ARG					AML		AML	16 46 35.3	
	comp=E,32593μm,1.0s								
ARG					AML		AML	16 46 35.5	
	comp=N,28732μm,0.5s								
ARG	**Arkhangelos**	**0.79**	**267**		*e*Pn		**Pn**	**16 46 22.4**	**+1.3**
ARG					*e*Sn		**Sn**	**16 46 34.0**	**+2.0**
ARG	**Arkhangelos**	**0.79**	**267**		P		**Pn**	**16 46 22.4**	**+1.3**
ARG					S		**Sn**	**16 46 34.0**	**+2.0**
ARG	**Arkhangelos**	**0.79**	**267**		*e*P		**Pn**	**16 46 22.4**	**+1.3**
ARG					*e*			16 46 34.0	
ARG	**Arkhangelos**	**0.79**	**267**		*i* Pg		**Pn**	**16 46 22.2**	**+1.1**
ARG					S		**Sn**	**16 46 34.0**	**+2.0**
ELL	**Elmali**	**0.82**	**53**		PG		**Pn**	**16 46 22.2**	**+0.6**
ELL	**Elmali**	**0.82**	**53**		Pg		**Pn**	**16 46 22.0**	**+0.4**
ELL	**Elmali**	**0.82**	**53**		P		**Pn**	**16 46 22.0**	**+0.4**
ELL	**Elmali**	**0.82**	**53**		P		**Pn**	**16 46 22.0**	**+0.4**
MRSB	**Marmaris-Mugla**	**0.86**	**302**		PG		**Pn**	**16 46 22.2**	**+0.1**
MRSB	**Marmaris-Mugla**	**0.86**	**302**		*i* Pg		**Pn**	**16 46 22.2**	**+0.1**
GLHS	**Glhisar (BURDU**	**0.95**	**20**		PG		**Pn**	**16 46 23.6**	**+0.1**
GLHS	**Glhisar (BURDU**	**0.95**	**20**		*i* Pg		**Pn**	**16 46 23.6**	**+0.1**
GOLH	**Golhisar**	**1.04**	**21**	⇓	*i*P		**Pb**	**16 46 24.3**	**-0.8**
GOLH					*i* S		**Sn**	**16 46 39.4**	**+0.8**
GOLH	**Golhisar**	**1.04**	**21**		P		**Pb**	**16 46 24.3**	**-0.8**
GOLH					S		**Sn**	**16 46 39.4**	**+0.8**
YER	**Yerkesik**	**1.09**	**323**		PG		**Pb**	**16 46 26.0**	**+0.1**
YER	**Yerkesik**	**1.09**	**323**		*e*Pn		**Pb**	**16 46 26.2**	**+0.3**
YER					*e*Sn		**Sn**	**16 46 39.8**	**+0.1**
YER	**Yerkesik**	**1.09**	**323**		P		**Pb**	**16 46 26.2**	**+0.3**
YER					S		**Sn**	**16 46 39.8**	**+0.1**
YER	**Yerkesik**	**1.09**	**323**		*e*P		**Pb**	**16 46 26.2**	**+0.3**
YER					*e*			16 46 39.8	
YER	**Yerkesik**	**1.09**	**323**		P		**Pb**	**16 46 26.2**	**+0.3**
YER					S		**Sn**	**16 46 39.8**	**+0.1**
TAVA	**DENIZLI_Tavas**	**1.21**	**353**	⇓	*i*P		**Pb**	**16 46 27.8**	**-0.2**
TAVA					*i* S		**Sn**	**16 46 43.1**	**+0.4**
TAVA	**DENIZLI_Tavas**	**1.21**	**353**		P		**Pb**	**16 46 27.8**	**-0.2**
TAVA					S		**Sn**	**16 46 43.1**	**+0.4**
DATC	**Datca-Mugla**	**1.26**	**294**		PN		**Pb**	**16 46 28.9**	**+0.2**
DATC	**Datca-Mugla**	**1.26**	**294**		*i* Pn		**Pb**	**16 46 28.9**	**+0.2**
DAT	**Datca**	**1.31**	**291**		PN		**Pb**	**16 46 29.8**	**+0.1**
DAT	**Datca**	**1.31**	**291**	⇑	*i*P		**Pb**	**16 46 29.7**	**+0.1**
DAT					*i* S		**Sb**	**16 46 47.4**	**+1.3**
DAT	**Datca**	**1.31**	**291**		*i* Pn		**Pb**	**16 46 29.8**	**+0.1**
DAT					S		**Sb**	**16 46 47.4**	**+1.3**
ANTB	**Antalya**	**1.41**	**63**		PN		**Pb**	**16 46 31.9**	**+0.7**
ANTB	**Antalya**	**1.41**	**63**		*i* Pn		**Pb**	**16 46 31.9**	**+0.7**
DNZL	**Cakiroluk**	**1.43**	**358**	⇓	*i*P		**Pb**	**16 46 31.1**	**-0.6**
DNZL					*i* S		**Sb**	**16 46 48.9**	**-0.6**
DNZL	**Cakiroluk**	**1.43**	**358**		P		**Pb**	**16 46 31.1**	**-0.6**
DNZL					S		**Sb**	**16 46 48.9**	**-0.6**
MLSB	**Milas**	**1.48**	**315**		PN		**Pb**	**16 46 31.5**	**-1.0**
MLSB	**Milas**	**1.48**	**315**		*i* Pn		**Pb**	**16 46 31.5**	**-1.0**
DENT	**Denizli**	**1.49**	**358**		PN		**Pb**	**16 46 31.5**	**-1.2**
DENT	**Denizli**	**1.49**	**358**		*i* Pn		**Pb**	**16 46 31.5**	**-1.2**
BDRM	**Kayabasi**	**1.55**	**302**	⇑	*i*P		**Pb**	**16 46 32.9**	**-0.8**
BDRM					*i* S		**Sb**	**16 46 53.4**	**+0.4**
BDRM	**Kayabasi**	**1.55**	**302**		P		**Pb**	**16 46 32.9**	**-0.8**
BDRM					S		**Sb**	**16 46 53.4**	**+0.4**
BRDR	**BURDUR-Merkez**	**1.63**	**28**	⇓	*i*P		**Pb**	**16 46 34.9**	**-0.1**
BRDR					*i* S		**Sb**	**16 46 55.2**	**0.0**
BRDR	**BURDUR-Merkez**	**1.63**	**28**		P		**Pb**	**16 46 34.9**	**-0.1**
BRDR					S		**Sb**	**16 46 55.2**	**0.0**
BODT	**Bodrum**	**1.65**	**300**		PN		**Pn**	**16 46 32.9**	**0.0**
BODT	**Bodrum**	**1.65**	**300**		*e*Pn		**Pn**	**16 46 33.2**	**+0.3**
BODT	**Bodrum**	**1.65**	**300**		P		**Pn**	**16 46 33.2**	**+0.3**
BODT	**Bodrum**	**1.65**	**300**		*i* Pn		**Pn**	**16 46 32.9**	**0.0**
BODT	**Bodrum**	**1.65**	**300**		P		**Pn**	**16 46 33.2**	**+0.3**
YKAV	**Yalikavak-Bodr**	**1.70**	**301**		PN		**Pn**	**16 46 34.5**	**+0.9**
YKAV	**Yalikavak-Bodr**	**1.70**	**301**		*e*Pn		**Pn**	**16 46 34.5**	**+0.9**
AYDN	**Tasoluk**	**1.71**	**325**	⇓	*i*P		**Pb**	**16 46 34.8**	**-1.5**
AYDN					*i* S		**Sn**	**16 46 55.5**	**+0.7**
AYDN	**Tasoluk**	**1.71**	**325**		P		**Pb**	**16 46 34.8**	**-1.5**
AYDN					S		**Sn**	**16 46 55.5**	**+0.7**
KARP	**Karpathos**	**1.73**	**246**		PN		**Pb**	**16 46 37.1**	**+0.5**
KARP	**Karpathos**	**1.73**	**246**		P		**Pb**	**16 46 37.7**	**+1.0**
KARP					S		**Sn**	**16 46 55.7**	**+0.4**
KARP					AML		AML	16 47 00.1	
	comp=E,9936μm,0.3s								
KARP					AML		AML	16 47 00.

ZKR S Sn 16 47 19.7 +2.7
AMGA Amorgos Island 2.64 283 P Pn 16 46 47.0 +0.3
AMGA AML AML 16 47 48.9
comp=N,3849µm,0.7s
AMGA AML AML 16 47 50.8
comp=E,3395µm,0.9s
AMGA Amorgos Island 2.64 283 P Pn 16 46 47.5 +0.9
DOGA KONYA_Doganhis 2.76 47⇑*i*P Pn 16 46 50.8 +2.4
DOGA *i*S Sn 16 47 23.5 +2.6
DOGA KONYA_Doganhis 2.76 47 P Pn 16 46 50.8 +2.4
DOGA S Sn 16 47 23.5 +2.6
SHAP Saphane-Kutahy 2.76 2 PN Pn 16 46 48.9 +0.6
SHAP Saphane-Kutahy 2.76 2 *e*Pn Pn 16 46 48.9 +0.6
GEDZ Gediz 2.79 5 PN Pn 16 46 49.4 +0.7
GEDZ Gediz 2.79 5 *e*Pn Pn 16 46 49.4 +0.7
DEMI Demirci 2.79 354⇓*i*P Pn 16 46 49.0 +0.2
DEMI *i*S Sn 16 47 20.5 -1.2
DEMI Demirci 2.79 354 P Pn 16 46 49.0 +0.2
DEMI S Sn 16 47 20.5 -1.2
AKHS Akhisar 2.81 339⇓*i*P Pn 16 46 48.8 -0.1
AKHS *i*S Sn 16 47 24.0 +2.1
AKHS Akhisar 2.81 339 P Pn 16 46 48.8 -0.1
AKHS S Sn 16 47 24.0 +2.1
AKS Akhisar 2.81 339 PN Pn 16 46 48.7 -0.2
AKS Akhisar 2.81 339 *e*Pn Pn 16 46 48.7 -0.2
SIMA Simav-Kutahya 2.82 358 PN Pn 16 46 49.4 +0.3
SIMA Simav-Kutahya 2.82 358 *e*Pn Pn 16 46 49.4 +0.3
SMAA Simav-Kutahya 2.84 358 PN Pn 16 46 50.0 +0.6
SMAA Simav-Kutahya 2.84 358 *e*Pn Pn 16 46 50.0 +0.6
ZEY ¨zmir 2.86 314 *i*P Pn 16 46 49.9 +0.3
ZEY *i*S Sn 16 47 21.2 -2.0
BOLV Bolvadin 2.86 30⇓*i*P Pn 16 46 51.5 +1.7
BOLV *i*S Sn 16 47 23.0 -0.4
BOLV Bolvadin 2.86 30 P Pn 16 46 51.5 +1.7
BOLV S Sn 16 47 23.0 -0.4
URLA Izmir 2.89 317 PN Pn 16 46 51.6 +1.5
URLA Izmir 2.89 317⇑*i*P Pn 16 46 50.1 0.0
URLA *i*S Sn 16 47 24.9 +0.8
URLA Izmir 2.89 317 P Pn 16 46 50.1 0.0
URLA Izmir 2.89 317 *e*Pn Pn 16 46 51.6 +1.5
URLA S Sn 16 47 24.9 +0.8
AKMC Akamas 2.91 114 P Pn 16 46 51.9 +1.6
baz=299
AKMC Akamas 2.91 114 P Pn 16 46 51.9 +1.6
THR8 Santorini-Mono 2.92 274 P Pn 16 46 51.9 +1.5
THR8 Santorini-Mono 2.92 274 P Pn 16 46 52.1 +1.6
SANT Santorini 2.94 273⇓*i*P Pn 16 46 52.2 +1.5
SANT Santorini 2.94 273 P Pn 16 46 51.5 +0.7
SANT AML AML 16 47 57.2
comp=N,2638µm,0.8s
SANT AML AML 16 47 59.7
comp=E,2598µm,1.0s
SANT Santorini 2.94 273 *e*Pn Pn 16 46 51.6 +0.9
SANT Santorini 2.94 273 P Pn 16 46 51.9 +1.2
SANT Santorini 2.94 273 *e*Pn Pn 16 46 51.6 +0.9
SANT Santorini 2.94 273 P Pn 16 46 51.9 +1.2
SANT S Sb 16 47 30.2 -2.7
SAP2K Karterados 2.95 274 P Pn 16 46 52.6 +1.7
THR2 Thira Island, 2.96 275 P Pn 16 46 52.7 +1.7
THR2 Thira Island, 2.96 275 *e*Pn Pn 16 46 52.4 +1.4
THR2 Thira Island, 2.96 275 P Pn 16 46 52.4 +1.4
THR2 Thira Island, 2.96 275 P Pn 16 46 52.7 +1.7
THT1 Athinios (Pele 2.96 274 P Pn 16 46 51.2 +0.2
THT1 Athinios (Pele 2.96 274 P Pn 16 46 51.9 +0.9
THT1 Athinios (Pele 2.96 274 P Pn 16 46 52.0 +0.9
APE Apeiranthos 2.98 287⇓*i*P Pn 16 46 53.0 +1.7
APE Apeiranthos 2.98 287 P Pn 16 46 51.8 +0.6
APE AML AML 16 47 45.1
comp=N,1775µm,0.7s
APE AML AML 16 47 53.7
comp=E,1641µm,0.6s
APE Apeiranthos 2.98 287 *e*Pn Pn 16 46 52.0 +0.7
APE Apeiranthos 2.98 287 P Pn 16 46 52.0 +0.7
APE Apeiranthos 2.98 287 *i*P Pn 16 46 52.1 +0.7
APE Apeiranthos 2.98 287 P Pn 16 46 52.0 +0.7
APE S Sb 16 47 31.1 -2.9
PPCY Paphos 2.98 116 P Pn 16 46 53.3 +2.0
baz=301
PPCY Paphos 2.98 116 P Pn 16 46 53.3 +2.0
THR3 Thira Island, 2.99 274 P Pn 16 46 53.1 +1.8
THR3 Thira Island, 2.99 274 *e*Pn Pn 16 46 52.6 +1.3
THR3 Thira Island, 2.99 274 P Pn 16 46 52.6 +1.3
THR3 Thira Island, 2.99 274 P Pn 16 46 53.1 +1.8
THR6 Thira Island, 2.99 273 P Pn 16 46 53.2 +1.8
THR6 Thira Island, 2.99 273 *e*Pn Pn 16 46 53.0 +1.6
THR6 Thira Island, 2.99 273 P Pn 16 46 53.0 +1.6
THR6 Thira Island, 2.99 273 P Pn 16 46 53.2 +1.8
SAP1 Santorini-Akro 2.99 273 P Pn 16 46 52.1 +0.7
SAP1 Santorini-Akro 2.99 273 P Pn 16 46 52.6 +1.2
SAP1 Santorini-Akro 2.99 273 P Pn 16 46 52.6 +1.2
NPS Neapolis 3.00 252 P Pn 16 46 52.6 +1.1
NPS S Sn 16 47 26.6 -0.2
NPS AML AML 16 47 31.2
comp=N,5335µm,0.4s
NPS AML AML 16 47 31.3
comp=E,6861µm,0.6s
NPS Neapolis 3.00 252 *e*Pn Pn 16 46 53.2 +1.6
NPS Neapolis 3.00 252 P Pn 16 46 53.2 +1.6
NPS Neapolis 3.00 252 *e*P Pn 16 46 53.2 +1.6
NPS Neapolis 3.00 252 P Pn 16 46 53.3 +1.6
NPS S Sn 16 47 27.5 +0.7
KMER Konya-Meram 3.02 59⇑*i*P Pn 16 46 55.1 +3.2
KMER *i*S Sn 16 47 28.7 +1.4
KMER Konya-Meram 3.02 59 P Pn 16 46 55.1 +3.2
KMER S Sn 16 47 28.7 +1.4
THR9 Santorini-Faro 3.02 273 P Pn 16 46 52.7 +0.9
THR9 Santorini-Faro 3.02 273 P Pn 16 46 53.2 +1.4
THR5 Thira Island, 3.03 274 P Pn 16 46 52.6 +0.7
THR5 Thira Island, 3.03 274 P Pn 16 46 52.7 +0.7
THR5 Thira Island, 3.03 274 P Pn 16 46 53.2 +1.3
SAP3 Santorini-Thir 3.03 274 P Pn 16 46 53.5 +1.5
ALFC Alefka 3.06 110 P Pn 16 46 53.7 +1.4
baz=295
ALFC S Sn 16 47 30.8 +2.7
ALFC Alefka 3.06 110 P Pn 16 46 53.7 +1.4
ALFC S Sn 16 47 30.8 +2.7
ERMK Ermenek 3.10 82⇑*i*P Pn 16 46 56.3 +3.2
ERMK *i*S Sb 16 47 34.1 -3.5
ERMK Ermenek 3.10 82 P Pn 16 46 56.3 +3.2
ERMK S Sb 16 47 34.1 -3.5
KONT Konya--Tatoy 3.10 56⇑*i*P Pn 16 46 56.1 +3.2
KONT *i*S Sn 16 47 29.7 +0.4
LAST Lasithi 3.14 251 P Pn 16 46 56.2 +2.6
LAST S Sn 16 47 33.9 +3.6
LAST AML AML 16 47 37.6
comp=N,1954µm,0.5s
LAST AML AML 16 47 39.0
comp=E,2076µm,0.5s
LAST Lasithi 3.14 251 *e*Pn Pn 16 46 55.7 +2.1
LAST Lasithi 3.14 251 P Pn 16 46 55.7 +2.1
LAST Lasithi 3.14 251 P Pn 16 46 55.7 +2.1
LAST S Sn 16 47 32.8 +2.5
CHOS Chios island 3.22 312 P Pn 16 46 56.5 +1.8
CHOS S Sn 16 47 30.5 -1.8
CHOS AML AML 16 47 37.3
comp=E,6955µm,0.4s
CHOS AML AML 16 47 37.3
comp=N,8278µm,0.5s
CHOS Chios island 3.22 312 *e*Pn Pn 16 46 55.7 +1.0
CHOS Chios island 3.22 312 P Pn 16 46 55.7 +1.0
CHOS Chios island 3.22 312 P Pn 16 46 55.7 +1.0
CHOS S Sn 16 47 30.9 -1.4
STEP BALIKESIR_Sava 3.30 341⇓*i*P Pn 16 46 55.8 +0.1
STEP *i*S Sb 16 47 42.1 -1.0
STEP BALIKESIR_Sava 3.30 341 P Pn 16 46 55.8 +0.1
STEP S Sb 16 47 42.1 -1.0
DURS Dursunbey 3.37 352⇓*i*P Pn 16 46 57.0 +0.3
DURS *i*S Sb 16 47 48.3 +3.0
DURS Dursunbey 3.37 352 P Pn 16 46 57.0 +0.3
DURS S Sb 16 47 48.3 +3.0
TNSA Tinos 3.40 293 P Pn 16 46 57.0 -0.1
TNSA Tinos 3.40 293 P Pn 16 46 57.7 +0.7
IACM Heraklion 3.41 255 P Pn 16 46 59.1 +2.0
IACM Heraklion 3.41 255 P Pn 16 46 59.3 +2.2
SZAC Souni 3.43 115 P Pn 16 46 59.4 +1.9
baz=300
SZAC Souni 3.43 115 P Pn 16 46 59.4 +1.9
MAMC Mammari 3.52 107 P Pn 16 47 00.7 +2.0
baz=292
MAMC Mammari 3.52 107 P Pn 16 47 00.7 +2.0
ESKT Eskisehir 3.54 23⇓*i*P Pn 16 46 58.9 -0.1
ESKT *i*S Sn 16 47 41.5 +1.4
SEYT Eskypehyr 3.54 23 P Pn 16 46 58.9 -0.1
SEYT S Sn 16 47 41.5 +1.4
IDI Anoyia 3.56 255 Pn Pn 16 47 01.0 +1.8
comp=N,62nm,0.3s,baz=62,slow=12,SNR=252
IDI Sn Sn 16 47 40.8 +0.4
comp=N,112nm,0.3s,baz=213,slow=22,SNR=7.5
IDI Anoyia 3.56 255⇑*i*P Pn 16 47 00.3 +1.1
IDI Anoyia 3.56 255 *e*Pn Pn 16 47 00.6 +1.4
IDI *e*Sn Sn 16 47 38.3 -2.1
IDI Anoyia 3.56 255⇑*i*P Pn 16 47 00.3 +1.1
IDI Anoyia 3.56 255 *e*Pn Pn 16 47 00.6 +1.4
IDI *e*Sn Sn 16 47 38.3 -2.1
IDI S Sb 16 47 43.7 -6.9
AYVA Ayvalik 3.59 329 *i*P Pn 16 47 00.7 +1.1
AYVA *i*S Sb 16 47 55.3 +3.8
AYVA Ayvalik 3.59 329 P Pn 16 47 00.7 +1.1
AYVA S Sb 16 47 55.3 +3.8
PSRA Psara 3.62 310 P Pn 16 47 03.4 +3.3
PSRA Psara 3.62 310 P Pn 16 47 02.3 +2.3
CSS Mathiatis 3.68 109 *e*Pn Pn 16 47 01.8 +0.8
CSS *e*Sn Sn 16 47 43.3 -0.3
CSS Mathiatis 3.68 109 P Pn 16 47 02.1 +1.1
baz=294
CSS S Sn 16 47 47.0 +3.4
CSS Mathiatis 3.68 109 *e*Pn Pn 16 47 01.8 +0.8
CSS Mathiatis 3.68 109 P Pn 16 47 02.1 +1.1
CSS *e*Sn Sn 16 47 43.3 -0.3
CSS S Sn 16 47 47.0 +3.4
SIVA Sivas 3.71 252 P Pn 16 47 04.7 +3.5
SIVA S Sn 16 47 44.4 +0.3
SIVA AML AML 16 47 51.8
comp=E,5100µm,0.6s
SIVA AML AML 16 47 53.0
comp=N,4101µm,0.6s
SIVA Sivas 3.71 252 *e*Pn Pn 16 47 04.4 +3.2
SIVA Sivas 3.71 252 P Pn 16 47 04.4 +3.2
SIVA Sivas 3.71 252 P Pn 16 47 04.4 +3.2
SIVA S Sn 16 47 44.9 +0.9
PRK Paraskevi 3.73 324 P Pn 16 47 02.7 +1.2
PRK Paraskevi 3.73 324 *e*Pn Pn 16 47 02.8 +1.3
PRK Paraskevi 3.73 324 P Pn 16 47 02.8 +1.3
PRK Paraskevi 3.73 324 *e*P Pn 16 47 02.8 +1.3
PRK Paraskevi 3.73 324 P Pn 16 47 02.8 +1.3
AUKUT KUTAHYA 3.76 11⇓*i*P Pn 16 46 55.4 -6.7
AUKUT KUTAHYA 3.76 11 P Pn 16 46 55.4 -6.7
MHLA Plaka, Milos I 3.80 279 P Pn 16 47 04.2 +1.7
MHLA Plaka, Milos I 3.80 279 P Pn 16 47 04.3 +1.8
SERI Serifos 3.81 285 P Pn 16 47 04.0 +1.3
SERI Serifos 3.81 285 P Pn 16 47 04.2 +1.5
SIGR SIGRI 3.91 320 P Pn 16 47 04.8 +0.8
SIGR SIGRI 3.91 320 P Pn 16 47 05.0 +1.0
VAM Vamos 4.07 259 P Pn 16 47 07.0 +0.7
VAM Vamos 4.07 259 *e*Pn Pn 16 47 08.1 +1.9
VAM Vamos 4.07 259 P Pn 16 47 08.1 +1.9
VAM Vamos 4.07 259 *e*P Pn 16 47 08.1 +1.9
VAM Vamos 4.07 259 P Pn 16 47 08.1 +1.9
KARY Karystos 4.12 297 P Pn 16 47 08.6 +1.7
KARY Karystos 4.12 297 P Pn 16 47 08.6 +1.7
IMMV Iera Moni Meta 4.23 261 P Pn 16 47 09.9 +1.4
IMMV S Sn 16 47 59.9 +2.9
IMMV AML AML 16 48 02.4
comp=E,3242µm,0.9s
IMMV AML AML 16 48 11.2
comp=N,2613µm,0.6s
IMMV Iera Moni Meta 4.23 261 P Pn 16 47 10.2 +1.8
IMMV Iera Moni Meta 4.23 261 P Pn 16 47 10.4 +1.9
IMMV S Sn 16 47 58.9 +1.9
GVD Gavdhos 4.32 252 P Pn 16 47 12.3 +2.6
GVD S Sn 16 47 59.9 +0.6
GVD Gavdhos 4.32 252 P Pn 16 47 12.4 +2.7
GVD S Sn 16 48 00.2 +0.9
SKY Skiros Island 4.46 307 P Pn 16 47 14.1 +2.6
SKY Skiros Island 4.46 307 P Pn 16 47 13.6 +2.0
DION Dionisos Attik 4.51 295 P Pn 16 47 14.1 +1.8
DION AML AML 16 48 08.4
comp=E,2184µm,0.6s
DION AML AML 16 48 09.1
comp=N,1462µm,0.6s
DION Dionisos Attik 4.51 295 P Pn 16 47 14.0 +1.8
VLY Voula,Athens 4.53 292 P Pn 16 47 13.8 +1.3
VLY Voula,Athens 4.53 292 P Pn 16 47 14.1 +1.6
PTL Penteli 4.54 295 P Pn 16 47 14.6 +1.8
PTL Penteli 4.54 295 P Pn 16 47 14.6 +1.8
ATHU Athens Univers 4.58 293 P Pn 16 47 12.8 -0.4
ATHU Athens Univers 4.58 293 P Pn 16 47 13.9 +0.7
BR231 Keskin MP Arra 4.61 38 *e*Pn Pn 16 47 15.3 +1.6
BR231 *e*Sn Sn 16 48 02.1 -4.3
BR231 Keskin MP Arra 4.61 38 *e*Pn Pn 16 47 15.3 +1.6
BR231 *e*Sn Sn 16 48 02.1 -4.3
ATH Athens Observa 4.63 293 P Pn 16 47 15.7 +1.8
ATH Athens Observa 4.63 293 P Pn 16 47 15.7 +1.8
ANTO Ankara 4.64 38⇓*i*P Pn 16 47 15.1 +1.0
ANTO Ankara 4.64 38 *e*Pn Pn 16 47 15.5 +1.4
ANTO Ankara 4.64 38 *e*P Pn 16 47 15.5 +1.4
ANTO Ankara 4.64 38 *e*P Pn 16 47 15.5 +1.4
EREA Eretria 4.65 299 P Pn 16 47 16.4 +2.2
EREA S Sn 16 48 07.0 -0.3
EREA AML AML 16 48 09.8
comp=E,1724µm,0.7s
EREA AML AML 16 48 10.0
comp=N,2094µm,0.5s
EREA Eretria 4.65 299 P Pn 16 47 16.1 +1.9
EREA S Sn 16 48 06.7 -0.6
GADA Gvkgeada 4.66 328 *e*Pn Pn 16 47 14.8 +0.4
GADA Gvkgeada 4.66 328 P Pn 16 47 14.8 +0.4
GADA Gvkgeada 4.66 328 P Pn 16 47 14.8 +0.4
ANKY Antikythira Is 4.71 267 P Pn 16 47 16.9 +1.8
ANKY Antikythira Is 4.71 267 *e*Pn Pn 16 47 17.0 +2.0
ANKY Antikythira Is 4.71 267 P Pn 16 47 17.0 +2.0
ANKY Antikythira Is 4.71 267 P Pn 16 47 17.0 +2.0
LIA Limnos Island 4.77 321 P Pn 16 47 16.4 +0.6
LIA Limnos Island 4.77 321 P Pn 16 47 16.8 +1.0
DID Didima 4.86 287 P Pn 16 47 19.3 +2.2
DID Didima 4.86 287 *e*Pn Pn 16 47 19.0 +1.9
DID Didima 4.86 287 P Pn 16 47 19.0 +1.9
DID Didima 4.86 287 P Pn 16 47 19.0 +1.9
KYTH Kithira 4.89 272 P Pn 16 47 19.5 +2.0
KYTH Kithira 4.89 272 *e*Pn Pn 16 47 19.8 +2.3
KYTH Kithira 4.89 272 P Pn 16 47 19.8 +2.3
KRND KRANIDI 4.90 285 P Pn 16 47 20.1 +2.4
KRND KRANIDI 4.90 285 P Pn 16 47 19.9 +2.3
MNVA Monemvasia 4.90 277 P Pn 16 47 22.0 +4.3
MNVA Monemvasia 4.90 277 P Pn 16 47 21.0 +3.4
BR131 Keskin Array S 4.98 45 *e*Pn Pn 16 47 20.3 +1.4
BR131 *e*Sn Sn 16 48 15.0 -0.8
BR131 Keskin Array S 4.98 45 *e*Pn Pn 16 47 20.3 +1.4
BR131 *e*Sn Sn 16 48 15.0 -0.8
BRTR Keskin Array B 4.98 45 Pn Pn 16 47 20.4 +1.4
comp=N,9.6nm,0.3s,baz=221,slow=14,SNR=164
BRTR Sn Sn 16 48 15.6 -0.2
comp=N,26nm,0.3s,baz=213,slow=25,SNR=12
BRTR Keskin Array B 4.98 45 *i*P Pn 16 47 20.3 +1.4
BRTR pmax pmax
comp=Z,39nm,0.5s
BRTR Keskin Array B 4.98 45 *i*P Pn 16 47 20.3 +1.4
comp=Z,39nm,0.5s
BRTR Sn Sn 16 48 15.6 -0.2
BR101 Keskin Array S 4.98 45 *e*Pn Pn 16 47 20.4 +1.5
BR101 *e*Sn Sn 16 48 15.6 -0.2
BR101 Keskin Array S 4.98 45 *e*Pn Pn 16 47 20.4 +1.5
BR101 *e*Sn Sn 16 48 15.6 -0.2
VLI Veliai 4.98 277 P Pn 16 47 21.4 +2.6
VLI Veliai 4.98 277 *e*Pn Pn 16 47 20.9 +2.1
VLI Veliai 4.98 277 P Pn 16 47 20.9 +2.1
VLI Veliai 4.98 277 P Pn 16 47 20.9 +2.1
VILL Villia 4.99 294 P Pn 16 47 20.7 +1.7
VILL Villia 4.99 294 P Pn 16 47 20.7 +1.7
VIL2 Platees 5.04 294 P Pn 16 47 21.1 +1.5
SMTH Samothraki Isl 5.05 327 P Pn 16 47 19.6 -0.2
SMTH S Sn 16 48 17.7 +0.4
SMTH Samothraki Isl 5.05 327 P Pn 16 47 20.4 +0.7
SMTH S Sn 16 48 16.6 -0.7
MATC Matruh 5.14 198 P Pn 16 47 24.0 +3.0
baz=201
LOUT Loutraki 5.19 291 P Pn 16 47 24.4 +2.9
LOUT Loutraki 5.19 291 P Pn 16 47 24.1 +2.5
LTK Loutraki 5.20 292 P Pn 16 47 24.3 +2.5
LTK Loutraki 5.20 292 P Pn 16 47 24.1 +2.3
ALN Alexandroupoli 5.21 334 P Pn 16 47 21.5 -0.4
ALN Alexandroupoli 5.21 334 *e*Pn Pn 16 47 22.2 +0.3
ALN Alexandroupoli 5.21 334 P Pn 16 47 22.2 +0.3
ALN Alexandroupoli 5.21 334 *e*P Pn 16 47 22.2 +0.3
ALN Alexandroupoli 5.21 334 P Pn 16 47 22.2 +0.3
SKIA Skiathos 5.32 305 P Pn 16 47 26.0 +2.6
SKIA Skiathos 5.32 305 P Pn 16 47 25.7 +2.2
PROD Prodromos 5.33 294 P Pn 16 47 25.4 +1.9
PROD Prodromos 5.33 294 P Pn 16 47 24.7 +1.1
PROD Prodromos 5.33 294 P Pn 16 47 25.5 +1.9
SMIA Simia 5.36 301 P Pn 16 47 27.2 +3.2
SMIA Simia 5.36 301 P Pn 16 47 26.5 +2.5
LKR Lokris 5.41 298 P Pn 16 47 27.2 +2.6
LKR Lokris 5.41 298 P Pn 16 47 26.9 +2.3
HMAT Matruh 5.42 199 P Pn 16 47 24.0 -0.7
DYR Agios Nikonas 5.47 277 P Pn 16 47 30.2 +4.7
DYR Agios Nikonas 5.47 277 P Pn 16 47 29.2 +3.7
DYR Agios Nikonas 5.47 277 P Pn 16 47 29.2 +3.7
VLX Vlachokerasia 5.50 284 P Pn 16 47 30.0 +4.0
VLX Vlachokerasia 5.50 284 P Pn 16 47 29.2 +3.2
XOR Xorichti 5.61 305 P Pn 16 47 29.2 +1.8
XOR Xorichti 5.61 305 *e*Pn Pn 16 47 29.3 +1.9
XOR Xorichti 5.61 305 P Pn 16 47 29.3 +1.9
XOR Xorichti 5.61 305 P Pn 16 47 29.3 +1.9
RDO Rodhopi 5.62 331 P Pn 16 47 27.1 -0.4
RDO Rodhopi 5.62 331 *e*Pn Pn 16 47 29.4 +1.9
RDO Rodhopi 5.62 331 P Pn 16 47 29.4 +1.9
RDO Rodhopi 5.62 331 P Pn 16 47 29.4 +1.9
PAIG Paliouri 5.63 312 P Pn 16 47 29.7 +2.1
PAIG Paliouri 5.63 312 P Pn 16 47 29.8 +2.1
PAIG Paliouri 5.63 312 P Pn 16 47 29.7 +2.1
GUR Goura 5.65 289 P Pn 16 47 31.6 +3.5
GUR Goura 5.65 289 *e*Pn Pn 16 47 30.8 +2.7
GUR Goura 5.65 289 P Pn 16 47 30.8 +2.7
GUR Goura 5.65 289 P Pn 16 47 30.8 +2.7
DSF Desfina 5.66 294 P Pn 16 47 31.9 +3.8
DSF Desfina 5.66 294 P Pn 16 47 31.1 +3.0
OUR Ouranopolis 5.72 317 P Pn 16 47 31.7 +2.9
OUR Ouranopolis 5.72 317 P Pn 16 47 32.0 +3.1
OUR Ouranopolis 5.72 317 P Pn 16 47 31.2 +2.3
SLUM Salum 5.75 215 P Pn 16 47 31.8 +2.5
baz=217
SLUM Salum 5.75 215 P Pn 16 47 31.8 +2.5
FYTO Fytoko, Volos 5.80 305 P Pn 16 47 32.3 +2.3
FYTO Fytoko, Volos 5.80 305 P Pn 16 47 32.2 +2.3
KLV Kalavryta, Ach 5.83 290 P Pn 16 47 33.2 +2.7
KLV Kalavryta, Ach 5.83 290 P Pn 16 47 33.0 +2.6
ITM Ithomi 5.83 281 P Pn 16 47 34.9 +4.4
ITM Ithomi 5.83 281 *e*Pn Pn 16 47 34.0 +3.5
ITM Ithomi 5.83 281 P Pn 16 47 34.7 +4.2
ITM Ithomi 5.83 281 P Pn 16 47 34.0 +3.5
BHL Bhamnes 5.87 112 *e*P Pn 16 47 30.8 -0.2
DQRL Deir Qamar 5.89 114 *e*P Pn 16 47 31.7 +0.3
HWQ Hawqa 5.94 107 *e*P Pn 16 47 33.6 +1.5
PYL PYLOS 5.95 278 P Pn 16 47 34.3 +2.2
PYL PYLOS 5.95 278 P Pn 16 47 34.6 +2.5
TRIZ Trizonia 5.98 293 P Pn 16 47 36.2 +3.8
TRIZ Trizonia 5.98 293 P Pn 16 47 35.5 +3.0
ILGA Ilgaz 6.00 36 *e*Pn Pn 16 47 35.0 +2.1
ILGA Ilgaz 6.00 36 *e*Pn Pn 16 47 35.0 +2.1
SERG Sergoula 6.01 293 P Pn 16 47 36.0 +3.2
SERG Sergoula 6.01 293 P Pn 16 47 35.6 +2.7
LAKA Lakka 6.01 291 P Pn 16 47 36.0 +3.1
LAKA Lakka 6.01 291 *e*Pn Pn 16 47 35.6 +2.6
LAKA Lakka 6.01 291 P Pn 16 47 35.6 +2.6
LAKA Lakka 6.01 291 P Pn 16 47 35.6 +2.6
AGG Agios Georgios 6.04 299 *e*Pn Pn 16 47 36.6 +3.3
AGG Agios Georgios 6.04 299 *e*P Pn 16 47 36.6 +3.3
AGG Agios Georgios 6.04 299 *e*P Pn 16 47 36.6 +3.3
MES3 Kyparissia 6.04 282 P Pn 16 47 36.9 +3.6
MES3 Kyparissia 6.04 282 P Pn 16 47 36.4 +3.1
QRWL Qaraoun 6.05 115 *e*P Pn 16 47 34.7 +1.2
PLG Polygyros 6.05 314 P Pn 16 47 35.9 +2.4
PLG Polygyros 6.05 314 P Pn 16 47 35.6 +2.1
AMT Artemida-Makis 6.06 284 P Pn 16 47 37.2 +3.7
AMT Artemida-Makis 6.06 284 P Pn 16 47 38.2 +4.7
AMT Artemida-Makis 6.06 284 P Pn 16 47 36.7 +3.2
MMAI Mount Meron Ar 6.12 120 Pn Pn 16 47 35.4 +0.8
comp=Z,84nm,0.3s,baz=304,slow=12,SNR=197
MMAI Sn Sn 16 48 41.0 -2.8
comp=Z,116nm,0.3s,baz=301,slow=14,SNR=12
EFP Efpalio 6.12 293 P Pn 16 47 38.6 +4.1
EFP Efpalio 6.12 293 P Pn 16 47 38.0 +3.6
EFP Efpalio 6.12 293 P Pn 16 47 37.7 +3.3
DRO Drossia 6.14 288 P Pn 16 47 39.4 +4.7
DRO Drossia 6.14 288 P Pn 16 47 38.3 +3.6
ANX Ano Chora 6.17 294 P Pn 16 47 39.6 +4.4
ANX Ano Chora 6.17 294 P Pn 16 47 38.3 +3.2
ANX Ano Chora 6.17 294 P Pn 16 47 38.3 +3.2
RCY Rachaya 6.19 115 *e*P Pn 16 47 36.2 +0.8
SHBL Chebaa 6.19 116 *e*P Pn 16 47 36.4 +0.9
FKH Fakeheh 6.31 106 *e*P Pn 16 47 38.6 +1.4
EVR Evrytania 6.37 297 P Pn 16 47 42.1 +4.2
EVR Evrytania 6.37 297 *e*Pn Pn 16 47 41.4 +3.5
EVR Evrytania 6.37 297 P Pn 16 47 41.4 +3.5
EVR Evrytania 6.37 297 P Pn 16 47 41.2 +3.3
HORT Hortiatis 6.40 314 P Pn 16 47 42.1 +3.9
HORT Hortiatis 6.40 314 P Pn 16 47 41.2 +2.9
SOH Sokhos 6.40 317 P Pn 16 47 42.4 +4.1
SOH Sokhos 6.40 317 P Pn 16 47 42.4 +4.1
LIT Litokhoron 6.46 308 P Pn 16 47 42.5 +3.3
LIT Litokhoron 6.46 308 *e*Pn Pn 16 47 41.5 +2.4
LIT *e*Sn Sn 16 48 56.2 +4.1
LIT Litokhoron 6.46 308 *e*P Pn 16 47 41.5 +2.4
LIT *e* 16 48 56.2
LIT Litokhoron 6.46 308 *e*P Pn 16 47 41.5 +2.4
LIT *e*S Sn 16 48 56.2 +4.1
PVO Paravola 6.47 294 P Pn 16 47 43.8 +4.6
PVO Paravola 6.47 294 P Pn 16 47 42.7 +3.5
SRS Serrai 6.48 320 P Pn 16 47 42.4 +3.0
SRS Serrai 6.48 320 *e*Pn Pn 16 47 42.3 +2.9
SRS Serrai 6.48 320 P Pn 16 47 42.3 +2.9
SRS Serrai 6.48 320 *e*P Pn 16 47 42.3 +2.9
SRS Serrai 6.48 320 P Pn 16 47 41.9 +2.5
THL Klokotos Trika 6.50 303 P Pn 16 47 42.0 +2.5
THL Klokotos Trika 6.50 303 P Pn 16 47 41.8 +2.2
THL Klokotos Trika 6.50 303 P Pn 16 47 41.8 +2.2
NVR Nevrokopi 6.52 323 P Pn 16 47 43.1 +3.1
NVR Nevrokopi 6.52 323 *e*Pn Pn 16 47 40.0 +0.1
NVR Nevrokopi 6.52 323 P Pn 16 47 40.0 +0.1
NVR Nevrokopi 6.52 323 P Pn 16 47 42.5 +2.6
RSH 6.54 143 P Pn 16 47 41.5 +1.3
baz=143
RSH 6.54 143 P Pn 16 47 41.5 +1.3
SQR Saqqara 6.60 164 P Pn 16 47 41.7 +0.7
baz=165
SQR Saqqara 6.60 164 P Pn 16 47 41.7 +0.7
HMYD Mayadein 6.60 167 P Pn 16 47 41.7 +0.6
baz=168
HMYD Mayadein 6.60 167 P Pn 16 47 41.7 +0.6
HLW Helwan 6.66 163 S Sn 16 48 53.1 -3.7
baz=164
HLW AMP 16 49 00.0
baz=164
PDO Prodromos 6.72 293 P Pn 16 47 48.3 +5.7
PDO Prodromos 6.72 293 P Pn 16 47 48.3 +5.7
KOT Kottamia 6.72 159 P Pn 16 47 44.1 +1.4
baz=160
KOT AMP 16 48 00.0
baz=160
KOT S Sn 16 48 55.2 -3.2
baz=160
KOT Kottamia 6.72 159 P Pn 16 47 44.1 +1.4
PLD Plovdiv 6.76 331 P Pn 16 47 47.6 +4.4
KFL Anninata 6.88 288 P Pn 16 47 49.6 +4.7
KFL Anninata 6.88 288 P Pn 16 47 48.7 +3.8
KNT Kendrikon 6.89 317 P Pn 16 47 49.9 +5.0
KNT Kendrikon 6.89 317 P Pn 16 47 48.5 +3.6
HSAF As Saff 6.94 162 P Pn 16 47 46.5 +0.8
baz=163
HSAF As Saff 6.94 162 P Pn 16 47 46.5 +0.8
DSL Palaion Diasel 6.96 297 P Pn 16 47 50.0 +4.0
DSL Palaion Diasel 6.96 297 P Pn 16 47 49.3 +3.3
GLL Jalalah 7.02 161 P Pn 16 47 48.0 +1.2
baz=162
GLL Jalalah 7.02 161 P Pn 16 47 48.0 +1.2
GRG Griva 7.03 314 P Pn 16 47 50.0 +3.1
GRG Griva 7.03 314 P Pn 16 47 50.3 +3.3
GRG pmax pmax
comp=Z,56nm,1.0s
GRG Griva 7.03 314 P Pn 16 47 49.6 +2.6
KZN Kozani 7.04 307 P Pn 16 47 51.4 +4.3
KZN Kozani 7.04 307 P Pn 16 47 50.4 +3.4

VLS	Valsamata	7.05 288	P	Pn	16 47 50.9	+3.7
VLS	Valsamata	7.05 288	P	Pn	16 47 50.5	+3.3
KPRO	Kipourio	7.13 303	P	Pn	16 47 52.2	+3.9
KPRO	Kipourio	7.13 303	P	Pn	16 47 51.5	+3.2
LKD2	Lefkada island	7.17 293	P	Pn	16 47 53.0	+4.2
LKD2	Lefkada island	7.17 293	P	Pn	16 47 52.3	+3.5
VAY	Valandovo	7.18 317	*i* Pn	Pn	16 47 55.2	+6.3
PENT	Pentalofos	7.39 304	P	Pn	16 47 56.1	+4.2
PENT	Pentalofos	7.39 304	P	Pn	16 47 55.3	+3.3
HNKL	Nakhl	7.52 146	S	Sn	16 49 13.6	-4.6
	baz=146					
FNA	Florina	7.55 309	P	Pn	16 47 58.7	+4.6
FNA	Florina	7.55 309	*e*Pn	Pn	16 47 57.6	+3.5
FNA	Florina	7.55 309	P	Pn	16 47 58.0	+3.9
FNA	Florina	7.55 309	*e*P	Pn	16 47 57.6	+3.5
FNA	Florina	7.55 309	P	Pn	16 47 57.6	+3.5
NEST	Nestorio	7.56 306	P	Pn	16 47 58.5	+4.2
NEST	Nestorio	7.56 306	P	Pn	16 47 57.6	+3.3
ZNM	Zenema	7.56 154	P	Pn	16 47 56.4	+2.1
	baz=155					
ZNM			AMP		16 49 00.0	
	baz=155					
ZNM			S	Sn	16 49 10.5	-8.7
	baz=155					
ASF	Jabal al Asfar	7.64 120	Pn	Pn	16 47 57.1	+1.8
	comp=Z,2.6nm,0.3s,baz=268,slow=3.2,SNR=14					
STIP	Stip	7.64 317	*i* Pn	Pn	16 47 56.0	+0.7
BIA	Bitola	7.72 310	*i* Pn	Pn	16 47 57.1	+0.8
VTS	Vitosha	7.79 326	⇑*i*P	Pn	16 48 00.7	+3.2
VTS	Vitosha	7.79 326	S	Sn	16 49 30.5	+5.6
VTS	Vitosha	7.79 326	*e*Pn	Pn	16 48 00.4	+2.9
VTS			*e*Sn	Sn	16 49 21.0	-3.9
VTS	Vitosha	7.79 326	*e*P	Pn	16 48 00.4	+2.9
VTS			*e*		16 49 21.0	
VTS	Vitosha	7.79 326	*e*P	Pn	16 48 00.4	+2.9
ICOR	Ion Corvin	7.91 353	⇓*i*P	Pn	16 48 01.8	+2.9
ICOR	Ion Corvin	7.91 353	⇓*i*P	Pn	16 48 01.8	+2.9
OHR	Ohrid	8.10 309	*i* Pn	Pn	16 48 07.5	+5.9
KEK	Kerkira	8.11 298	P	Pn	16 48 06.9	+5.1
KEK	Kerkira	8.11 298	*e*Pn	Pn	16 48 05.6	+3.9
KEK	Kerkira	8.11 298	P	Pn	16 48 05.6	+3.9
KEK	Kerkira	8.11 298	P	Pn	16 48 05.6	+3.9
EIL	Elat	8.21 142	Pn	Pn	16 48 07.7	+4.7
	comp=Z,7.0nm,0.3s,baz=343,slow=4.6,SNR=110					
EIL			Sn	Sn	16 49 34.0	-1.0
	comp=Z,15nm,0.3s,baz=12,slow=16,SNR=7.6					
EIL	Elat	8.21 142	*e*Sn	Sn	16 49 34.0	-1.0
TIRR	Tirgusor	8.21 357	⇑*i*P	Pn	16 48 03.7	+0.7
TIRR	Tirgusor	8.21 357	*e*Pn	Pn	16 48 03.3	+0.3
TIRR	Tirgusor	8.21 357	*e*P	Pn	16 48 03.3	+0.3
TIRR	Tirgusor	8.21 357	*e*P	Pn	16 48 03.3	+0.3
SKO	Skopje	8.24 316	*i* Pn	Pn	16 48 07.2	+3.7
SGRR	Singureni	8.30 344	⇑*i*P	Pn	16 48 06.8	+2.5
SGRR	Singureni	8.30 344	⇑*i*P	Pn	16 48 06.8	+2.5
TLB	Topalu	8.36 355	⇑*i*P	Pn	16 48 07.2	+2.2
TLB	Topalu	8.36 355	⇑*i*P	Pn	16 48 07.2	+2.2
HARR	Harsova	8.47 354	⇑*i*P	Pn	16 48 07.8	+1.2
HARR	Harsova	8.47 354	⇑*i*P	Pn	16 48 07.8	+1.2
HBST	Basata	8.47 144	P	Pn	16 48 07.5	+0.7
	baz=145					
HBST	Basata	8.47 144	P	Pn	16 48 07.4	+0.7
HQLS		8.56 142	P	Pn	16 48 09.2	+1.2
HQLS			S	Sn	16 49 35.8	-8.0
NUB		8.60 145	P	Pn	16 48 09.6	+1.2
	baz=146					
BARS	Barje	8.63 322	*e*Pn	Pn	16 48 12.8	+4.0
SULR		8.68 346	⇑*i*P	Pn	16 48 11.7	+2.2
SULR		8.68 346	⇑*i*P	Pn	16 48 11.7	+2.2
HAQS	Haql	8.70 144	P	Pn	16 48 09.9	0.0
HAQS			S	Sn	16 49 42.5	-4.7
TIR	Tirane	8.81 308	⇓*i*P	Pn	16 48 14.6	+3.2
TIR	Tirane	8.81 308	*e*Pn	Pn	16 48 14.4	+3.1
TIR	Tirane	8.81 308	*e*P	Pn	16 48 14.4	+3.1
TIR	Tirane	8.81 308	*e*P	Pn	16 48 14.4	+3.1
TLCR		8.92 359	⇑*i*P	Pn	16 48 14.0	+1.2
TLCR		8.92 359	⇑*i*P	Pn	16 48 14.0	+1.2
SEV	Sevastopol'	8.98 21	*e*P	Pn	16 48 12.6	-1.0
SEV	Sevastopol'	8.98 21	*e*P	Pn	16 48 12.6	-1.0
ISR	Istrita	9.06 348	⇓*i*P	Pn	16 48 17.4	+2.6
ISR	Istrita	9.06 348	⇓*i*P	Pn	16 48 17.4	+2.6
SECR		9.06 346	⇑*i*P	Pn	16 48 16.8	+2.0
SECR		9.06 346	⇑*i*P	Pn	16 48 16.8	+2.0
YAL	Yalta	9.08 24	*e*P	Pn	16 48 16.8	+1.9
YAL			*e*S	Sn	16 49 54.7	-1.5
YAL	Yalta	9.08 24	*e*P	Pn	16 48 16.8	+1.9
YAL			*e*S	Sn	16 49 54.7	-1.5
ZAGS	Zajecar	9.20 327	*e*Pn	Pn	16 48 19.4	+2.8
GIUM	Giurgiulesti	9.24 356	⇓*i*P	Pn	16 48 19.4	+2.2
GIUM	Giurgiulesti	9.24 356	⇓*i*P	Pn	16 48 19.4	+2.2
JLOS		9.24 142	P	Pn	16 48 17.6	+0.2
RSHS		9.29 147	P	Pn	16 48 18.2	+0.4
RSHS			S	Sn	16 49 51.1	-10
BOVS	Bovan	9.29 325	*e*Pn	Pn	16 48 21.3	+3.4
BDAS	Al Bad'	9.31 145	P	Pn	16 48 18.1	-0.1
BDAS			S	Sn	16 49 51.8	-10
ALU	Alushta	9.33 24	*e*P	Pn	16 48 20.0	+1.6
ALU			*e*S	Sn	16 50 00.5	-2.0
ALU	Alushta	9.33 24	*e*P	Pn	16 48 20.0	+1.6
ALU			*e*S	Sn	16 50 00.5	-2.0
SIM	Simferopol'	9.48 22	*e*P	Pn	16 48 22.6	+2.1
SIM			*e*S	Sn	16 50 05.0	-1.1
SIM			pmax	pmax		
	comp=Z,84nm,0.7s					
SIM			smax	smax		
	comp=E,133nm,0.9s					
SIM	Simferopol'	9.48 22	*e*P	Pn	16 48 22.6	+2.1
	comp=E,84nm,0.7s					
SIM			*e*S	Sn	16 50 05.0	-1.1
MLR	Muntele Rosu	9.53 346	Pn	Pn	16 48 22.9	+1.6
	comp=E,0.7nm,0.3s,baz=297,slow=1.0,SNR=20					
MLR	Muntele Rosu	9.53 346	⇓*i*P	Pn	16 48 22.8	+1.6
MLR	Muntele Rosu	9.53 346	*e*Pn	Pn	16 48 21.6	+0.3
MLR	Muntele Rosu	9.53 346	*e*Pn	Pn	16 48 21.5	+0.3
VOIR		9.66 343	⇑*i*P	Pn	16 48 26.0	+2.9
VOIR		9.66 343	P	Pn	16 48 27.8	+4.7
VOIR			pmax	pmax		
	comp=Z,20nm,0.8s					
VOIR		9.66 343	⇑*i*P	Pn	16 48 26.0	+2.9
ARR	Arges	9.71 341	⇑*i*P	Pn	16 48 25.7	+2.1
ARR	Arges	9.71 341	⇑*i*P	Pn	16 48 25.7	+2.1
SUDU	Sudak	9.72 26	*e*P	Pn	16 48 26.3	+2.6
SUDU			*e*S	Sn	16 50 09.6	-2.3
SUDU	Sudak	9.72 26	*e*P	Pn	16 48 26.3	+2.6
PLOR	Plostina	9.76 350	⇓*i*P	Pn	16 48 26.6	+2.3
PLOR	Plostina	9.76 350	⇓*i*P	Pn	16 48 26.6	+2.3
VRI	Vrincioaia	9.76 350	⇑*i*P	Pn	16 48 26.3	+2.0
VRI	Vrincioaia	9.76 350	P	Pn	16 48 28.1	+3.8
VRI			pmax	pmax		
	comp=Z,564nm,1.0s					
VRI	Vrincioaia	9.76 350	P	Pn	16 48 28.1	+3.8
	comp=Z,564nm,1.0s					
PDG	Podgorica	9.80 312	⇓*i*P	Pn	16 48 27.5	+2.7
PDG	Podgorica	9.80 312	⇓*i*P	Pn	16 48 27.5	+2.7
TTG	Podgorica	9.80 312	*e*Pn	Pn	16 48 29.0	+4.2
TTG	Podgorica	9.80 312	*e*P	Pn	16 48 29.0	+4.2
TTG	Podgorica	9.80 312	*e*P	Pn	16 48 29.0	+4.2
KUBS	Kucevo	9.91 327	*e*Pn	Pn	16 48 27.0	+0.6
LOT	Lotru	10.02 338	⇑*i*P	Pn	16 48 30.3	+2.3
LOT	Lotru	10.02 338	⇑*i*P	Pn	16 48 30.3	+2.3
DOPR	Dopca	10.09 345	⇓*i*P	Pn	16 48 30.3	+1.4
DOPR	Dopca	10.09 345	⇓*i*P	Pn	16 48 30.3	+1.4
TBKS	Tabuk	10.19 140	P	Pn	16 48 30.7	+0.4
MDVR	Moldovita	10.20 329	⇓*i*P	Pn	16 48 33.3	+3.0
MDVR	Moldovita	10.20 329	⇓*i*P	Pn	16 48 33.3	+3.0
TIP	Timpagrande	10.20 290	⇓*i*P	Pn	16 48 32.1	+1.7
TIP	Timpagrande	10.20 290	S	Sn	16 50 21.8	-2.2
TIP	Timpagrande	10.20 290	*e*Pn	Pn	16 48 31.2	+0.8
TIP			*e*Sn	Sn	16 50 22.5	-1.4
TIP	Timpagrande	10.20 290	*e*Pn	Pn	16 48 31.2	+0.8
TIP	Timpagrande	10.20 290	⇓*i*P	Pn	16 48 32.1	+1.7
TAR1	Taranto	10.20 298	*e*Pn	Pn	16 48 31.8	+1.5
LEOM	Leova	10.22 357	⇑*i*P	Pn	16 48 32.7	+2.1
LEOM	Leova	10.22 357	⇑*i*P	Pn	16 48 32.7	+2.1
FASA	Fasano	10.26 300	*e*Pn	Pn	16 48 34.1	+2.9
HCY	Herceg Novi	10.27 310	*e*Pn	Pn	16 48 35.5	+4.2
MASS	Massafra	10.34 299	*e*Pn	Pn	16 48 34.7	+2.4
GRI	Girifalco	10.39 288	P	Pn	16 48 38.3	+5.4
TESR	Tescani	10.41 351	⇑*i*P	Pn	16 48 36.1	+3.0
TESR	Tescani	10.41 351	⇑*i*P	Pn	16 48 36.1	+3.0
UPM	Unac-Piva	10.47 315	*e*Pn	Pn	16 48 38.0	+3.8
DIVS	Divibare	10.47 321	*e*Pn	Pn	16 48 37.2	+3.0
DIVS	Divibare	10.47 321	*e*Pn	Pn	16 48 37.2	+3.0
ANN	Anapa	10.62 34	*e*P	Pn	16 48 35.1	-1.0
ANN			*e*S	Sn	16 50 33.7	-0.5
ANN			pmax	pmax		
	comp=Z,8.0nm,0.7s					
ANN			MLR	MLR		
	comp=Z,279nm,17.0s					
ANN	Anapa	10.62 34	*e*P	Pn	16 48 35.1	-1.0
	comp=Z,8.0nm,0.7s					
ANN			*e*S	Sn	16 50 33.7	-0.5
	comp=Z,279nm,17.0s					
MILM	Milestii Mici	10.65 359	⇑*i*P	Pn	16 48 37.7	+1.2
MILM	Milestii Mici	10.65 359	⇑*i*P	Pn	16 48 37.7	+1.2
ORI	Oriolo Calabro	10.66 295	P	Pn	16 48 39.6	+3.0
ORI			pmax	pmax		
	comp=Z,4.0nm,0.5s					
ORI	Oriolo Calabro	10.66 295	P	Pn	16 48 39.6	+3.0
	comp=Z,4.0nm,0.5s					
BAI	Bari	10.70 301	*e*Pn	Pn	16 48 40.4	+3.2
CEL	Celeste	10.71 285	*e*Pn	Pn	16 48 37.4	0.0
CEL	Celeste	10.71 285	*e*Pn	Pn	16 48 37.4	0.0
KIS	Kishinev	10.73 359	*e*P	Pn	16 48 46.0	+8.4
KIS			LRM	MLR	16 53 12.0	
	comp=Z,500nm,16.0s					
KIS	Kishinev	10.73 359	*e*P	Pn	16 48 46.0	+8.4
KIS			*e*		16 50 40.0	
KIS			MLR	MLR		
	comp=Z,500nm,13.0s					
KIS			MLR	MLR		
	comp=Z,500nm,16.0s					
KIS	Kishinev	10.73 359	*e*S	Sn	16 50 40.0	+3.2
	comp=Z,500nm,16.0s					
SG1	Sgolgore (BA)	10.74 299	*e*Pn	Pn	16 48 38.4	+0.6
BZS	Buzias	10.92 331	⇓*i*P	Pn	16 48 42.0	+1.8
BZS	Buzias	10.92 331	P	Pn	16 48 44.8	+4.6
BZS			pmax	pmax		
	comp=Z,10.0nm,0.9s					
BZS	Buzias	10.92 331	⇓*i*P	Pn	16 48 42.0	+1.8
SOC	Sochi	10.95 45	*e*P	Pn	16 48 40.5	-0.1
SOC			*e*		16 50 43.5	
SOC			MLR	MLR		
	comp=Z,314nm,14.0s					
SOC	Sochi	10.95 45	*e*P	Pn	16 48 40.5	-0.1
SOC			*e*S	Sn	16 50 43.5	+1.4
	comp=Z,314nm,14.0s					
HAPS	Han Pijesak,BI	11.01 318	*e*Pn	Pn	16 48 45.7	+4.2
CUC	Castrocucco	11.11 294	*e*Pn	Pn	16 48 43.8	+1.0
CUC	Castrocucco	11.11 294	*e*Pn	Pn	16 48 43.8	+1.0
SIRR	Siria	11.45 333	⇑*i*P	Pn	16 48 50.4	+2.9
SIRR	Siria	11.45 333	⇑*i*P	Pn	16 48 50.4	+2.9
BIDS	Bi'r al Bayda'	11.51 142	P	Pn	16 48 48.7	+0.4
DRGR		11.55 338	⇑*i*P	Pn	16 48 51.2	+2.3
DRGR		11.55 338	⇑*i*P	Pn	16 48 51.2	+2.3
BURAR	Bucovina Array	11.71 347	⇓*i*P	Pn	16 48 53.1	+2.1
BURAR	Bucovina Array	11.71 347	⇓*i*P	Pn	16 48 53.1	+2.1
BUR04	Bucovina Ar. S	11.71 347	*e*Pn	Pn	16 48 52.4	+1.3
BUR04	Bucovina Ar. S	11.71 347	*e*Pn	Pn	16 48 52.4	+1.3
BUR08	Bucovina Ar. S	11.74 347	*e*Pn	Pn	16 48 53.2	+1.7
BUR08	Bucovina Ar. S	11.74 347	*e*Pn	Pn	16 48 53.2	+1.7
VAE	Valguarnera	11.83 280	Pn	Pn	16 48 54.3	+1.6
	comp=Z,7.8nm,0.3s,baz=164,slow=5.1,SNR=7.7					
VAE			Sn	Sn	16 51 02.4	-1.5
	comp=Z,2.3nm,0.3s,baz=270,slow=11,SNR=4.3					
SORM	Soroca	11.88 358	⇑*i*P	Pn	16 48 54.3	+1.0
SORM	Soroca	11.88 358	⇑*i*P	Pn	16 48 54.3	+1.0
BLY	Banja Luka	12.40 317	⇑*i*P	Pn	16 49 02.4	+2.0
BLY	Banja Luka	12.40 317	*e*Pn	Pn	16 49 00.1	-0.3
BLY	Banja Luka	12.40 317	*e*Pn	Pn	16 49 00.1	-0.3
BLY	Banja Luka	12.40 317	⇑*i*P	Pn	16 49 02.4	+2.0
NEY	Neytrino	12.59 52	*i* P	Pn	16 49 03.6	+0.5
NEY	Neytrino	12.59 52	*i* P	Pn	16 49 03.6	+0.5
CLTB	Caltabellotta	12.78 281	*e*Pn	Pn	16 49 06.7	+1.0
CLTB	Caltabellotta	12.78 281	*e*Pn	Pn	16 49 06.7	+1.0
GNI	Garni	12.90 68	*e*Pn	Pn	16 49 07.9	+0.5
GNI	Garni	12.90 68	*i* P	Pn	16 49 09.3	+1.8
GNI	Garni	12.90 68	*e*Pn	Pn	16 49 07.9	+0.5
GNI	Garni	12.90 68	*i* P	Pn	16 49 09.3	+1.8
KIV	Kislovodsk	12.92 49	*e*Pn	Pn	16 49 07.9	+0.2
KIV	Kislovodsk	12.92 49	*e*P	Pn	16 49 07.8	+0.1
KIV			pmax	pmax		
	comp=Z,6.0nm,1.1s					
KIV	Kislovodsk	12.92 49	*e*Pn	Pn	16 49 07.9	+0.2
KBZ	Khabaz	12.94 51	Pn	Pn	16 49 08.2	+0.5
	comp=Z,0.1nm,0.3s,baz=217,slow=5.1,SNR=2.1					
ZEI	Tsey	13.15 56	*e*P	P	16 49 21.5	+0.8
NCK	Nalchik	13.26 53	*e*P	Pn	16 49 13.4	+1.2
NCK	Nalchik	13.26 53	*e*P	Pn	16 49 13.4	+1.2
UZH	Uzhgorod	13.34 340	*e*P	Pn	16 49 17.5	+4.3
UZH	Uzhgorod	13.34 340	*e*P	Pn	16 49 17.5	+4.3
PSZ	Piszkesteto	13.49 333	*e*Pn	Pn	16 49 11.4	-4.0
PSZ	Piszkesteto	13.49 333	*e*P	Pn	16 49 11.4	-4.0
AQU	L'Aquila	13.58 301	*e*Pn	Pn	16 49 14.5	-2.1
AQU	L'Aquila	13.58 301	*e*P	Pn	16 49 14.5	-2.1
BOJS	Bojanci	13.95 316	*e*Pn	P	16 49 27.2	-2.1
CRES	Cresnjev	14.03 317	*e*Pn	Pn	16 49 25.1	+2.5
KWP	Kalwaria Pacla	14.15 343	*e*Pn	Pn	16 49 26.1	+1.8
KWP	Kalwaria Pacla	14.15 343	*e*P	Pn	16 49 26.1	+1.8
KWP	Kalwaria Pacla	14.15 343	*e*Pn	Pn	16 49 26.1	+1.8
VISS	Visnje	14.36 316	*e*Pn	P	16 49 32.8	-1.2
VYHS	Vyhne	14.37 331	*e*P	P	16 49 35.0	+1.0
VYHS	Vyhne	14.37 331	*e*P	P	16 49 35.0	+1.0
VYHS	Vyhne	14.37 331	*e*P	P	16 49 35.0	+1.0
AK11	Malin Array Si	14.41 0	*e*Pn	Pn	16 49 25.9	-1.9
KIEV	Kiev	14.43 0	*e*Pn	Pn	16 49 27.0	-1.1
KIEV	Kiev	14.43 0	*e*P	Pn	16 49 27.0	-1.1
KIEV	Kiev	14.43 0	*e*Pn	Pn	16 49 27.0	-1.1
AKASG	Malin Array Be	14.44 0	Pn	Pn	16 49 27.0	-1.2
	comp=Z,0.9nm,0.3s,baz=183,slow=12,SNR=11					
AKASG	Malin Array Be	14.44 0	P	Pn	16 49 27.0	-1.2
AKASG			pmax	pmax		
	comp=Z,9.0nm,0.3s					
AKBB	Malin Array Si	14.44 0	*e*Pn	Pn	16 49 26.8	-1.3
AKBB	Malin Array Si	14.44 0	*e*P	Pn	16 49 26.8	-1.3
CEY	Cerknica	14.55 315	*e*Pn	P	16 49 33.1	-3.0
NIE	Niedzica	14.63 337	*e*P	P	16 49 34.0	-3.0
NIE	Niedzica	14.63 337	*e*P	P	16 49 34.0	-3.0
SOKA	Soboth	14.79 319	*i* P	P	16 49 39.2	+0.4
	comp=Z,1.8nm,0.6s					
SOKA	Soboth	14.79 319	P	P	16 49 39.2	+0.4
	comp=Z,1.8nm,0.6s					
JAVS	Javornik	14.85 315	*e*Pn	P	16 49 38.5	-1.0
MODS	Modra-Piesok	14.91 328	*e*P	P	16 49 38.8	-1.2
MODS	Modra-Piesok	14.91 328	*e*P	P	16 49 38.8	-1.2
MODS	Modra-Piesok	14.91 328	*e*P	P	16 49 38.8	-1.2
ARSA	Arzberg	14.92 322	*i* P	P	16 49 43.3	+3.1
	comp=Z,7.3nm,1.0s					
OBKA	Obir	14.95 318	*i* P	P	16 49 41.4	+0.9
	comp=Z,4.5nm,0.9s					
OBKA	Obir	14.95 318	P	P	16 49 41.4	+0.9
	comp=Z,4.5nm,0.9s					
JAVC	Velka Javorina	15.12 330	*e*PN	P	16 49 41.3	-1.2
CONA	Conrad Observa	15.22 324	*i* P	P	16 49 44.5	+0.9
	comp=Z,2.9nm,1.0s					
OJC	Ojcow	15.49 337	*e*Pn	Pn	16 49 42.8	+0.5
	comp=Z,52nm,1.9s					
OJC	Ojcow	15.49 337	*e*P	Pn	16 49 42.8	+0.5
OJC			pmax	pmax		
	comp=Z,52nm,1.9s					
OJC	Ojcow	15.49 337	*e*Pn	Pn	16 49 42.8	+0.5
	comp=Z,52nm,1.9s					
MAK	Makhachkala	15.67 59	*e*P	Pn	16 49 46.1	+1.5
MAK			*e*S	Sn	16 52 42.9	+5.5
MAK			pmax	pmax		
	comp=Z,161nm,1.4s					
MAK			MLR	MLR		
	comp=Z,307nm,13.0s					
MAK	Makhachkala	15.67 59	*e*P	Pn	16 49 46.1	+1.5
	comp=Z,161nm,1.4s					
KRUC	Moravsky	15.81 328	*e*Pn	P	16 49 49.9	-0.1
KRUC	Moravsky	15.81 328	*e*PN	P	16 49 49.9	-0.1
MORC	Moravsky Berou	15.91 332	*e*Pn	Pn	16 49 46.7	-1.0
	comp=Z,86nm,1.8s					
MORC	Moravsky Berou	15.91 332	*e*P	Pn	16 49 46.7	-1.0
MORC			pmax	pmax		
	comp=Z,86nm,1.8s					
MORC	Moravsky Berou	15.91 332	*e*Pn	Pn	16 49 46.7	-1.0
	comp=Z,86nm,1.8s					
KBA	Koelnbreinsper	15.95 318	*i* Pn	Pn	16 49 49.8	+1.4
	comp=Z,9.0nm,1.0s					
KBA	Koelnbreinsper	15.95 318	P	P	16 49 52.4	+0.6
KBA			pmax	pmax		
	comp=Z,26nm,1.2s					
KBA	Koelnbreinsper	15.95 318	Pn	Pn	16 49 49.8	+1.4
	comp=Z,9.0nm,1.0s					
KBA	Koelnbreinsper	15.95 318	P	P	16 49 52.4	+0.6
	comp=Z,26nm,1.2s					
MOA	Molln	15.95 321	*i* P	P	16 49 53.0	+1.4
	comp=Z,3.9nm,0.8s					
MOA	Molln	15.95 321	P	P	16 49 53.0	+1.4
	comp=Z,3.9nm,0.8s					
KEST	Kesra	16.00 274	Pn	Pn	16 49 48.4	-0.6
	comp=Z,0.2nm,0.3s,baz=40,slow=8.6,SNR=5.2					
KEST	Kesra	16.00 274	*e*Pn	Pn	16 49 49.0	0.0
	comp=Z,38nm,0.9s					
KEST	Kesra	16.00 274	*e*Pn	Pn	16 49 49.0	0.0
	comp=Z,38nm,0.9s					
ABTA	Abfaltersbach	16.22 315	*i* P	P	16 49 55.7	+1.0
	comp=Z,2.6nm,0.7s					
ABTA	Abfaltersbach	16.22 315	P	P	16 49 55.7	+1.0
	comp=Z,2.6nm,0.7s					
VORD	Divnogorie	16.43 23	*e*P	P	16 49 56.6	-0.2
VORD			pmax	pmax		
	comp=Z,9.0nm,0.6s					
VORD	Divnogorie	16.43 23	*e*P	P	16 49 56.6	-0.2
	comp=Z,9.0nm,0.6s					
THTN	Thala	16.55 274	*e*Pn	P	16 49 59.1	+0.6
	comp=Z,55nm,1.7s					
THTN	Thala	16.55 274	*e*Pn	P	16 49 59.1	+0.6
	comp=Z,55nm,1.7s					
VSR	Storozhevoye	16.60 23	*e*P	Pn	16 49 56.6	+0.1
VSR			pmax	pmax		
	comp=Z,4.0nm,0.5s					
VSR	Storozhevoye	16.60 23	*e*P	Pn	16 49 56.6	+0.1
	comp=Z,4.0nm,0.5s					
DPC	Dobruska-Polom	16.84 331	*e*P	P	16 50 12.8	+11
DPC			*ex*	x	16 50 18.0	
GEA0	GERESS Array S	16.89 323	*e*Pn	Pn	16 50 01.2	+1.0
GEA0	GERESS Array S	16.89 323	*e*Pn	Pn	16 50 01.2	+1.0
GEC2	GERESS Array S	16.89 323	*e*Pn	P	16 50 02.1	-0.1
	comp=Z,22nm,1.1s					
GEC2	GERESS Array S	16.89 323	*e*P	P	16 50 02.1	-0.1
GEC2			pmax	pmax		
	comp=Z,22nm,1.1s					
GEC2	GERESS Array S	16.89 323	*e*P	P	16 50 02.1	-0.1
	comp=Z,22nm,1.1s					
GERES	GERESS Array B	16.89 323	Pn	P	16 50 02.3	+0.1
	comp=Z,0.4nm,0.3s,baz=136,slow=10,SNR=12					
WTTA	Wattenberg	17.00 316	*i* Pn	P	16 50 05.0	+1.5
	comp=Z,8.6nm,1.0s					
WTTA	Wattenberg	17.00 316	P	P	16 50 05.0	+1.5
	comp=Z,8.6nm,1.0s					
GOPC	GO Pecny, Ondr	17.15 327	AMS	AMS	16 56 50.0	
	comp=Z,300nm,7.6s					
KHC	Kasperske Hory	17.15 323	*e*P	P	16 50 05.8	+0.9
KHC			*ex*	x	16 50 17.3	
KHC			AMS	AMS	16 56 30.0	
	comp=Z,300nm,10.2s					
KHC	Kasperske Hory	17.15 323	*e*Pn	P	16 50 05.5	+0.6
	comp=Z,9.9nm,1.5s					
KHC	Kasperske Hory	17.15 323	*e*P	P	16 50 05.8	+0.9
KHC			MLR	MLR		
	comp=Z,300nm,10.2s					
KHC	Kasperske Hory	17.15 323	*e*Pn	P	16 50 05.5	+0.6
	comp=Z,9.9nm,1.5s					
KHC	Kasperske Hory	17.15 323	*e*P	P	16 50 05.8	+0.9
	comp=Z,300nm,10.2s					
MOTA	Moosalm	17.35 315	*i* Pn	Pn	16 50 06.7	+0.6
	comp=Z,13nm,1.2s					
FETA	Feichten	17.39 314	*i* Pn	P	16 50 09.6	+1.8
	comp=Z,16nm,1.1s,SNR=6.9					
FETA	Feichten	17.39 314	P	P	16 50 09.6	+1.8
	comp=Z,16nm,1.1s,SNR=6.9					
FUORN	Ofenpass-Fuorn	17.47 312	*e*Pn	P	16 50 08.8	+0.2
	comp=Z,22nm,1.1s					
FUORN	Ofenpass-Fuorn	17.47 312	*e*Pn	P	16 50 08.8	+0.2
	comp=Z,22nm,1.1s					
WET	Wettzell	17.50 322	P	P	16 50 09.3	+0.6
WET			pmax	pmax		
	comp=Z,19nm,1.0s					
WET	Wettzell	17.50 322	P	P	16 50 09.3	+0.6
	comp=Z,19nm,1.0s					
TUE	Stuetta	17.95 311	*e*Pn	Pn	16 50 13.7	+0.2
	comp=Z,19nm,1.3s					
TUE	Stuetta	17.95 311	*e*Pn	Pn	16 50 13.7	+0.2
	comp=Z,19nm,1.3s					
DAVA	Damuels	18.03 314	*i* Pn	P	16 50 15.1	+0.4
	comp=Z,3.8nm,0.5s					
DAVA	Damuels

KLNR pmax pmax
comp=Z,109nm,1.0s
KLNR Kaliningrad 19.35 344 *i* P **P 16 50 29.1 +0.2**
comp=Z,109nm,1.0s
OBN Obninsk 19.54 13⇑ *e*P **P 16 50 30.2 -0.9**
OBN *e*S **S 16 54 03.8 -6.4**
OBN pmax pmax
comp=Z,16nm,1.2s
OBN MLR MLR
comp=Z,322nm,19.0s
OBN Obninsk 19.54 13 *e*P **P 16 50 30.2 -0.9**
comp=Z,322nm,19.0s
ORIF Oris-en-Rattie 19.59 303 *e*P **P 16 50 30.9 -0.9**
ORIF pmax pmax
comp=Z,34nm,1.6s
ORIF Oris-en-Rattie 19.59 303 *e*P **P 16 50 30.9 -0.9**
comp=Z,34nm,1.6s
ECH Echery 20.08 313 *e*P **P 16 50 36.2 -0.9**
comp=Z,8.5nm,0.9s
ECH Echery 20.08 313 *e*P **P 16 50 36.2 -0.9**
ECH pmax pmax
comp=Z,9.0nm,0.9s
ECH Echery 20.08 313 *e*P **P 16 50 36.2 -0.9**
comp=Z,8.5nm,0.9s
CDF Champ du Feu 20.11 314 *e*P **P 16 50 36.7 -0.8**
CDF pmax pmax
comp=Z,7.0nm,1.0s
CDF Champ du Feu 20.11 314 *e*P **P 16 50 36.7 -0.8**
comp=Z,7.0nm,1.0s
MOS Moscow 20.33 14 *e*P Pn 16 50 41.7 -0.1
MOS *e* 16 51 06.6
MOS pmax pmax
comp=Z,42nm,1.1s
HAU Haudompre 20.47 312 *e*P **P 16 50 40.9 -0.4**
HAU Haudompre 20.47 312 *e*P **P 16 50 40.9 -0.4**
VSU Vasula 22.27 357 *c i*P **P 16 51 01.2 +0.7**
VSU pmax pmax
comp=Z,29nm,0.9s
GEYT Alibeck 23.17 77 P **P 16 51 09.6 -0.6**
comp=Z,84nm,1.3s,baz=248,slow=8.5,SNR=4.9
GYA0B ALIBECK ARRAY 23.17 77 *e*P **P 16 51 09.6 -0.6**
comp=Z,23nm,0.9s
GYA0B ALIBECK ARRAY 23.17 77 *e*P **P 16 51 09.6 -0.6**
comp=Z,23nm,0.9s
SJPF Ste Jean 24.23 296 *e*P **P 16 51 19.5 -0.8**
SJPF pmax pmax
comp=Z,10.0nm,1.0s
SJPF Ste Jean 24.23 296 *e*P **P 16 51 19.5 -0.8**
comp=Z,10.0nm,1.0s
TAM Tamanrasset 24.43 243 *e*P **P 16 51 23.3 +0.8**
comp=Z,17nm,1.3s
TAM Tamanrasset 24.43 243 *e*P **P 16 51 23.3 +0.8**
TAM pmax pmax
comp=Z,17nm,1.3s
TAM Tamanrasset 24.43 243 *e*P **P 16 51 23.3 +0.8**
comp=Z,17nm,1.3s
AKTK Aktyubinsk 25.16 47 P **P 16 51 28.0 -0.7**
comp=Z,3.0nm,0.5s
AKTO Aktyubinsk 25.16 47 P **P 16 51 28.0 -0.7**
comp=Z,2.5nm,0.5s,baz=255,slow=9.7,SNR=9.0
AKTO Aktyubinsk 25.16 47 P **P 16 51 28.0 -0.7**
AKTO pmax pmax
comp=Z,3.0nm,0.5s
AKTO Aktyubinsk 25.16 47 *e*P **P 16 51 28.0 -0.7**
FIA0 FINESS Array S 25.28 357 *e*P **P 16 51 29.4 -0.2**
FIA0 FINESS Array S 25.28 357 *e*P **P 16 51 29.4 -0.2**
FINES FINESS Array B 25.28 357 P **P 16 51 29.4 -0.2**
comp=Z,2.6nm,0.7s,baz=148,slow=11,SNR=9.3
FINES FINESS Array B 25.28 357 *i*P **P 16 51 31.0 +1.4**
FINES pmax pmax
comp=Z,3.0nm,0.7s
FIA1 FINESS Array S 25.28 357 *e*P **P 16 51 31.0 +1.5**
KLMR Klimovskoe 25.50 12 *e*P **P 16 51 30.2 -1.4**
KLMR pmax pmax
comp=Z,42nm,1.2s
KLMR Klimovskoe 25.50 12 *e*P **P 16 51 30.2 -1.4**
KLMR AMP 16 51 49.2
comp=Z,42nm,1.2s
DAMY Dhamar 25.57 144 *e*P **P 16 51 33.9 +0.9**
comp=Z,24nm,1.2s
UOSS Minazif 25.83 108 *e*P **P 16 51 35.3 +0.4**
comp=Z,22nm,0.9s
UOSS Minazif 25.83 108 *e*P **P 16 51 35.3 +0.4**
comp=Z,22nm,0.9s
HFS Hagfors 25.87 342 P **P 16 51 34.7 -0.2**
comp=Z,1.6nm,0.7s,baz=138,slow=14,SNR=2.9
ABKAR Akbulak array 25.91 50 *e*P **P 16 51 34.3 -1.1**
ES19 SONSECA Array 26.15 288 *e*P **P 16 51 36.8 -1.0**
ES19 SONSECA Array 26.15 288 *e*P **P 16 51 36.8 -1.0**
ESDC Sonseca Array 26.20 288 P **P 16 51 37.6 -0.7**
comp=Z,2.1nm,0.5s,baz=80,slow=10,SNR=17
ESLA Sonseca Array 26.20 288 *e*P **P 16 51 37.9 -0.4**
comp=Z,7.1nm,0.9s
ESLA Sonseca Array 26.20 288 *e*P **P 16 51 37.9 -0.4**
comp=Z,7.1nm,0.9s
PAB San Pablo 26.51 287 *e*P **P 16 51 40.2 -0.9**
comp=Z,12nm,1.3s
PAB San Pablo 26.51 287 *e*P **P 16 51 40.2 -0.9**
PAB pmax pmax
comp=Z,12nm,1.3s
PAB San Pablo 26.51 287 *e*P **P 16 51 40.2 -0.9**
comp=Z,12nm,1.3s
KONO Kongsberg 26.60 338 *e*P **P 16 51 39.3 -2.2**
comp=Z,80nm,1.9s
KONO Kongsberg 26.60 338 *e*P **P 16 51 39.3 -2.2**
KONO pmax pmax
comp=Z,80nm,1.9s
NC602 NORSAR Array S 26.94 341 *e*P **P 16 51 44.1 -0.5**
NB2 NORSAR Subarra 27.28 341 P **P 16 51 46.6 -1.1**
comp=Z,3.4nm,0.9s,baz=147,slow=9.3
NBO00 NORSAR Array S 27.39 341 *e*P **P 16 51 49.0 +0.3**
ARU Arti 28.29 35 P **P 16 51 56.2 -0.5**
comp=Z,1.0nm,0.4s,baz=90,slow=20,SNR=2.9
ARU Arti 28.29 35 *e*P **P 16 51 56.5 -0.3**
comp=Z,9.5nm,0.8s
ARU Arti 28.29 35 *d i*P **P 16 51 57.0 +0.3**
ARU 16 52 43.5
ARU S **S 16 56 43.3 +2.0**
ARU pmax pmax
comp=Z,19nm,3.0s
SVE Sverdlovsk 29.47 36 *e*P P 16 52 24.9 +18
KK31 Karatay Array 32.34 65 *e*P **P 16 52 32.1 -0.7**
KK31 Karatay Array 32.34 65 *e*P **P 16 52 32.1 -0.7**
KK31 Karatay Array 32.34 65 *e*P **P 16 52 32.1 -0.7**
KKAR Karatay Array 32.34 65 *e*P **P 16 52 31.8 -1.0**
KKAR Karatay Array 32.34 65 *e*P **P 16 52 31.8 -1.0**
KKAR Karatay Array 32.34 65 *e*P **P 16 52 31.8 -1.0**
KBL Kabul 32.45 81 *e*P **P 16 52 34.2 +0.2**
comp=Z,3.9nm,0.6s
KBL Kabul 32.45 81 *e*P **P 16 52 34.2 +0.2**
KBL pmax pmax
comp=Z,4.0nm,0.6s
KBL Kabul 32.45 81 *e*P **P 16 52 34.2 +0.2**
comp=Z,3.9nm,0.6s
BRVK Borovoye 33.21 47 *e*P **P 16 52 40.0 -0.2**
comp=Z,12nm,1.7s
BRVK Borovoye 33.21 47 *i*P **P 16 52 39.8 -0.4**
BRVK pmax pmax
comp=Z,2.0nm,1.2s
BVAR Borovoye Array 33.27 47 P **P 16 52 40.4 -0.3**
comp=Z,0.6nm,0.7s,baz=248,slow=7.8,SNR=4.3
ARA0 ARCESS Array S 33.39 358 *e*P **P 16 52 43.3 +1.7**
ARCES ARCESS Array B 33.39 358 P **P 16 52 43.3 +1.7**
comp=Z,4.7nm,0.9s,baz=173,slow=8.9,SNR=4.3
TOA1 Torodi Ar. Sit 33.69 234 *e*P **P 16 52 45.8 +1.1**
TOA0 Torodi Ar. Sit 33.69 234 *e*P **P 16 52 44.9 +0.2**
TORD Torodi Ar. Bea 33.69 234 P **P 16 52 45.8 +1.0**
comp=Z,9.7nm,0.6s,baz=35,slow=9.7,SNR=56
AAK Ala-Archa 35.29 65 *e*P **P 16 52 58.9 +0.3**
comp=Z,4.1nm,0.8s
AAK Ala-Archa 35.29 65 *i*P **P 16 52 59.2 +0.6**
AAK pmax pmax
comp=Z,2.0nm,1.1s
FRU Bishkek 35.37 65 *e*P P 16 53 17.5 +18
NIL Nilore 36.05 81 *e*P **P 16 53 05.1 +0.1**
comp=Z,14nm,0.8s
NIL Nilore 36.05 81 *e*P **P 16 53 05.1 +0.1**
NIL pmax pmax
comp=Z,14nm,0.8s
NIL Nilore 36.05 81 *e*P **P 16 53 05.1 +0.1**
comp=Z,14nm,0.8s
NRN Naryn 36.54 67 *e*P **P 16 53 10.8 +1.3**
comp=Z,4.2nm,0.8s
NRN Naryn 36.54 67 *e*P **P 16 53 10.8 +1.3**
NRN pmax pmax
comp=Z,4.0nm,0.8s
NRN Naryn 36.54 67 *e*P **P 16 53 10.8 +1.3**
comp=Z,4.2nm,0.8s
KOWA Kowa 36.66 242 P **P 16 53 11.0 +0.6**
comp=Z,4.2nm,0.7s,baz=52,slow=8.7,SNR=9.9
KOWA Kowa 36.66 242 *e*P **P 16 53 10.7 +0.3**
comp=Z,16nm,1.4s
KURBB Kurchatov Arra 37.93 52 P **P 16 53 20.5 -0.3**
comp=Z,4.3nm,0.7s,baz=275,slow=8.8,SNR=41
KURK Kurchatov 37.99 52 *e*P **P 16 53 20.5 -0.8**
KURK Kurchatov 37.99 52 *i*P **P 16 53 20.6 -0.7**
KURK pmax pmax
comp=Z,3.0nm,0.9s
MAKZ Makanchi 40.27 58 *e*P **P 16 53 39.2 -1.2**
comp=Z,3.2nm,0.8s
MAKZ Makanchi 40.27 58 *e*P **P 16 53 39.2 -1.2**
MAKZ pmax pmax
comp=Z,3.0nm,0.8s
MK31 Makanchi Array 40.49 58 *e*P **P 16 53 41.8 -0.4**
MK31 Makanchi Array 40.49 58 *e*P **P 16 53 41.8 -0.4**
MK32 Makanchi Array 40.49 58 *e*P **P 16 53 41.6 -0.6**
MKAR Makanchi Array 40.49 58 P **P 16 53 41.6 -0.6**
comp=Z,3.4nm,0.6s,baz=279,slow=6.4,SNR=24
MKAR Makanchi Array 40.49 58 *e*P **P 16 53 41.8 -0.5**
comp=Z,36nm,0.6s
MKAR Makanchi Array 40.49 58 *i*P **P 16 53 41.5 -0.7**
MKAR pmax pmax
comp=Z,3.0nm,0.6s
MK01 Makanchi Array 40.49 58 *e*P **P 16 53 41.7 -0.6**
NVS Novosibirsk 41.04 46 *e*P P 16 53 55.4 +8.8
ZAA0 Zalesovo Array 41.92 47 *e*P **P 16 53 52.1 -1.7**
comp=Z,3.1nm,0.8s
ZAA1 Zalesovo Array 41.92 47 *e*P **P 16 53 53.0 -0.9**
ZALV Zalesovo Beam 41.92 47 P **P 16 53 53.0 -0.9**
comp=Z,0.6nm,0.3s,baz=286,slow=10,SNR=5.0
ZALV LR LR 17 13 13.4
comp=Z,78nm,20.4s,baz=248,slow=39
ZALV Zalesovo Beam 41.92 47 *e*P **P 16 53 52.3 -1.6**
ZALV Zalesovo Beam 41.92 47 P **P 16 53 53.0 -0.9**
ZALV pmax pmax
comp=Z,1.0nm,0.3s
ZALV MLR MLR
comp=Z,78nm,20.5s
DBIC Dimbokro 42.79 235 P **P 16 54 01.9 +0.6**
comp=Z,5.5nm,0.6s,baz=21,slow=11,SNR=6.1
DBIC Dimbokro 42.79 235 *e*P **P 16 54 01.6 +0.3**
comp=Z,37nm,1.6s
TIC Toumodi 42.91 235 *e*P **P 16 54 02.8 +0.4**
KIC Kosan Boka 42.94 234 *e*P **P 16 54 03.2 +0.6**
comp=Z,208nm,2.2s
LIC Lamto 43.23 235 *e*P **P 16 54 05.4 +0.5**
comp=Z,96nm,1.8s
SCO Scoresbysund 43.50 338 *e*P **P 16 54 06.9 +0.5**
comp=Z,3.3nm,0.9s
SCO Scoresbysund 43.50 338 *e*P **P 16 54 06.9 +0.5**
SCO pmax pmax
comp=Z,3.0nm,0.9s
WMQ Urumqi 44.67 61 P **P 16 54 17.5 +1.2**
WMQ pP sP 16 54 30.1 +2.9
WMQ pmax pmax
comp=Z,44nm,1.3s
WMQ pmax pmax
comp=Z,380nm,5.3s
WMQ LR LR
comp=Z,290nm,22.9s
WMQ LR LR
comp=Z,230nm,21.7s
PYUN Piuthan 45.84 84 *e*P **P 16 54 26.6 +0.7**
comp=Z,23nm,0.6s
DANN Dangsing 46.35 84 *e*P **P 16 54 30.8 +0.7**
comp=Z,127nm,1.0s
KOLN Koldanda 46.47 84 *e*P **P 16 54 32.7 +1.8**
GKN Gorkha 47.20 84 *e*P **P 16 54 41.2 +4.6**
comp=Z,76nm,1.1s
HYB Hyderabad 47.41 100 *i*P **P 16 54 39.5 +1.4**
HYB *e*sP **sP 16 54 50.0 +1.0**
KKN Kakani 47.81 83 *e*P P 16 54 47.8 +6.5
comp=Z,17nm,0.6s
PKIN Phulchoki 47.99 84 *e*P P 16 54 49.0 +6.2
comp=Z,34nm,0.9s
GUN Gumba 48.24 83 *e*P P 16 54 51.4 +6.6
comp=Z,27nm,0.7s
JIRN Jiri 48.59 83 *e*P P 16 54 56.0 +8.4
comp=Z,66nm,0.9s
RAMN Ramite 49.23 84 *e*P P 16 55 03.4 +11
comp=Z,42nm,1.1s
ODAN Odare 49.90 83 *e*P P 16 55 09.0 +12
comp=Z,46nm,1.2s
TLY Talaya 53.49 48 *e*P **P 16 55 22.0 -1.7**
comp=Z,4.4nm,1.0s
TLY Talaya 53.49 48 *i*P **P 16 55 24.4 +0.7**
TLY pmax pmax
comp=Z,2.0nm,1.0s
ZAK Zakamensk 53.60 50 *e*P **P 16 55 24.3 -0.3**
ZAK pmax pmax
comp=Z,4.0nm,1.2s
GTA Gaotai 54.61 64 *e*P **P 16 55 29.8 -2.3**
GTA pmax pmax
comp=Z,4.0nm,0.4s
SONA0 Songino Array 56.30 52 *e*P **P 16 55 44.9 +0.8**
SONM Songino Array 56.30 52 P **P 16 55 44.9 +0.8**
comp=Z,0.6nm,0.5s,baz=256,slow=5.8,SNR=3.4
SONM LR LR 17 24 11.5
comp=Z,72nm,18.6s,baz=269,slow=41
SONA1 Songino Array 56.30 52 *e*P **P 16 55 42.5 -1.7**
ULN Ulaanbaatar 56.71 52 *e*P **P 16 55 46.5 -0.6**
comp=Z,4.4nm,1.1s
ULN Ulaanbaatar 56.71 52 *e*P **P 16 55 46.5 -0.6**
ULN pmax pmax
comp=Z,4.0nm,1.1s
LZH Lanzhou 58.83 66 *e*P **P 16 56 02.1 -0.1**
LZH pP sP 16 56 15.0 +1.8
LZH sP pP 16 56 20.8 +11
LZH *e*PP **PP 16 58 13.3 +1.1**
LZH pmax pmax
comp=Z,16nm,1.1s
LZH pmax pmax
comp=Z,280nm,5.4s
LZH LR LR
comp=Z,180nm,14.0s
LZH LR LR
comp=Z,190nm,14.3s
LZH LR LR
comp=Z,230nm,16.8s
CD2 Chengdu 61.00 71 P **P 16 56 14.5 -2.6**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
HHC Hu-ho-hao-te 62.35 58 *e*P **P 16 56 24.0 -2.1**
HHC pmax pmax
comp=Z,22nm,1.0s
HHC pmax pmax
comp=Z,98nm,4.2s
KMI Kunming 62.94 78 P **P 16 56 30.6 +0.3**
KMI pmax pmax
comp=Z,10.0nm,0.5s
CM31 Chiang Mai Arr 63.28 86 *e*P **P 16 56 31.9 -0.5**
CMAR Chiang Mai Arr 63.28 86 P **P 16 56 32.0 -0.4**
comp=Z,2.7nm,0.9s,baz=295,slow=8.0,SNR=16
CM01 Chiang Mai Arr 63.31 86 *e*P **P 16 56 31.6 -1.0**
BILL Bilibino 71.18 16 *e*P **P 16 57 21.9 +0.2**
comp=Z,13nm,1.6s
BILL Bilibino 71.18 16⇑ *e*P **P 16 57 21.7 0.0**
BILL *e* 16 59 57.0
BILL *e*SS SS 17 11 07.7 -1.8
BILL pmax pmax
comp=Z,1.0nm,1.3s
BILL MLR MLR
comp=Z,141nm,23.0s
KULM Kulim 72.03 97 *e*P **P 16 57 27.3 -0.4**
comp=Z,8.9nm,1.1s
USRK Ussuriysk Ar. 73.78 47 P **P 16 57 36.8 -0.8**
comp=Z,3.0nm,0.7s,baz=276,slow=3.2,SNR=6.1
KS01 Wonju Array Si 75.02 54 *e*P **P 16 57 44.4 -0.6**
KS15 Wonju Array Si 75.04 55 *e*P **P 16 57 44.6 -0.5**
KSAR Wonju Array Be 75.04 55 P **P 16 57 45.0 0.0**
KSAR Wonju Array Be 75.04 55 P **P 16 57 45.0 0.0**
KSRS Korea Array 75.06 54 P **P 16 57 45.0 -0.1**
comp=Z,2.4nm,0.8s,baz=298,slow=5.3,SNR=7.1
KSRS LR LR 17 33 51.4
comp=Z,45nm,19.5s,baz=313,slow=38
YSS Yuzh-Sakhalins 78.06 40 *e*P P 16 57 55.8 -6.2
ILAR Eielson Array 79.25 358 P **P 16 58 07.3 -0.9**
comp=Z,0.2nm,0.7s,baz=353,slow=5.6,SNR=3.0
JNU Nakatsue 79.53 57 LR LR 17 40 05.3
comp=Z,28nm,19.4s,baz=296,slow=41
ASAJ Asahikawa 79.84 42 LR LR 17 37 40.7
comp=Z,30nm,21.8s,baz=357,slow=39
MAJO Matsushiro 82.18 50 *e*P **P 16 58 25.4 +0.9**
MAJO Matsushiro 82.18 50 *e*P **P 16 58 25.4 +0.9**
MJAR Matsushiro Arr 82.18 50 P **P 16 58 25.4 +0.9**
comp=Z,2.3nm,0.9s,baz=302,slow=5.7,SNR=4.3
MJAR LR LR 17 37 54.2
comp=Z,29nm,18.5s,baz=235,slow=38
PDAR Pinedale Array 92.78 331 P **P 16 59 14.5 -1.6**
comp=Z,0.4nm,0.7s,baz=30,slow=2.2,SNR=3.5

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*JMA **14** 16:53:19.4±0.1, 23°.58N×121°.47E, h3km, M3.3*
*ISCJB **14** 16:53:21.4±0.3, 23°.68N±0°.01×121°.58E±0°.01, h3km±2km,*
Error ellipse: s-maj=2.5km s-min=1.4km az=35.0
*TAP **14** 16:53:21.6, 23°.70N×121°.51E, h7km, ML3.6, B*
ISC 14 16:53:21.4±0.9, 23°.67N±0°.01×121°.57E±0°.02, h8km±6km,
n92, σ0.9 71/157, 1C-9D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
EGFH	**Guangfu**	**0.13**	**271**	⇓*i*P		**Pg**	**16 53 23.9**	**-0.4**
EGFH	baz=261			S		**Sg**	**16 53 25.7**	**-0.5**
ESL	**Shilin**	**0.19**	**320**	*i*P		**Pg**	**16 53 24.7**	**-0.6**
ESL	baz=321			*i*S		**Sg**	**16 53 26.7**	**-1.3**
HGSD	**Ruisui**	**0.22**	**217**	⇓P		**Pg**	**16 53 27.2**	**+1.3**
HGSD	baz=214			S		**Sg**	**16 53 31.2**	**+2.4**
ENLB	**Shoufeng**	**0.24**	**8**	P		**Pg**	**16 53 27.1**	**+0.9**
ENLB	baz=20			*e*S		**Sg**	**16 53 31.2**	**+1.7**
EHY	**Hungye**	**0.28**	**234**	P		**Pg**	**16 53 26.9**	**0.0**
EHY	baz=233			*e*S		**Sg**	**16 53 30.5**	**-0.1**
HWA	**Hwalien**	**0.31**	**7**	*e*P		**Pb**	**16 53 28.6**	**-0.7**
HWA	baz=3.0			*e*S		**Sb**	**16 53 34.2**	**-0.3**
YULB	**Yu-li**	**0.37**	**222**	P		**Pg**	**16 53 28.9**	**+0.3**
YULB	baz=226			S		**Sb**	**16 53 34.5**	**-1.6**
VWDT	**VWDT**	**0.40**	**283**	⇓P		**Pg**	**16 53 29.0**	**-0.2**
VWDT	baz=281			*e*S		**Sg**	**16 53 33.5**	**-0.9**
TWF1	**Yuli**	**0.40**	**218**	⇓*i*P		**Pg**	**16 53 29.7**	**+0.5**
TWF1	baz=222			S		**Sb**	**16 53 35.5**	**-1.5**
TWD	**Chiawan**	**0.41**	**4**	P		**Pg**	**16 53 29.6**	**+0.1**
TWD	baz=359			S		**Sg**	**16 53 36.2**	**+1.2**
NACB	**Ninganchiao**	**0.51**	**3**	*e*P		**Pg**	**16 53 31.2**	**-0.1**
NACB	baz=357			*e*S		**Sg**	**16 53 38.1**	**+0.2**
FULB	**Fuli**	**0.53**	**208**	*e*P		**Pb**	**16 53 33.4**	**+0.4**
FULB	baz=224			*e*S		**Sb**	**16 53 41.1**	**+0.3**
CHGB	**Renai**	**0.53**	**318**	⇓*i*P		**Pg**	**16 53 31.5**	**-0.3**
CHGB	baz=327			S		**Sg**	**16 53 37.9**	**-0.9**
SSLB	**Suanglung**	**0.57**	**282**	⇓*i*P		**Pg**	**16 53 32.2**	**-0.3**
SSLB	baz=282			S		**Sg**	**16 53 38.8**	**-1.2**
CHKT	**Chengkung**	**0.59**	**198**	*e*P		**Pb**	**16 53 34.0**	**-0.1**
CHKT	baz=181			*e*S		**Sn**	**16 53 43.8**	**-2.2**
SMLT	**Sun Moon Lake**	**0.65**	**290**	⇓*i*P		**Pg**	**16 53 33.7**	**-0.3**
SMLT	baz=289			S		**Sg**	**16 53 42.0**	**-0.4**
ELDTW	**Lidau**	**0.69**	**227**	P		**Pg**	**16 53 34.7**	**-0.2**
ELDTW	baz=224			S		**Sg**	**16 53 43.8**	**-0.1**
ENA	**Nanau**	**0.77**	**12**	P		**Pg**	**16 53 36.4**	**+0.1**
ENA	baz=2.0			*e*S		**Sb**	**16 53 48.0**	**+0.2**
NANB	**Nanao**	**0.78**	**13**	P		**Pg**	**16 53 36.3**	**-0.1**
NANB	baz=2.0			*e*S		**Sb**	**16 53 48.0**	**+0.1**
NNSB	**Datong**	**0.78**	**348**	*e*P		**Pg**	**16 53 36.1**	**-0.3**
NNSB	baz=340			*e*S		**Sg**	**16 53 46.2**	**-0.3**
NNSH	**Datong**	**0.78**	**348**	*e*P		**Pg**	**16 53 36.3**	**-0.1**
NNSH	baz=342			*e*S		**Sg**	**16 53 46.8**	**+0.2**
WJS	**Zhushan**	**0.78**	**282**	*e*P		**Pb**	**16 53 37.3**	**0.0**
WJS	baz=287			*e*S		**Sb**	**16 53 48.2**	**+0.2**
NNS	**Nan Shan**	**0.79**	**347**	P		**Pg**	**16 53 36.6**	**0.0**
NNS	baz=341			S		**Sg**	**16 53 46.8**	**-0.2**
ENAH	**Nanao**	**0.81**	**16**	*e*P		**Pg**	**16 53 37.3**	**+0.3**
ENAH	baz=26			*e*S		**Sb**	**16 53 49.3**	**+0.5**
WGK	**Gukeng**	**0.92**	**271**	P		**Pn**	**16 53 40.3**	**-0.3**
WGK	baz=271			*e*S		**Sb**	**16 53 52.8**	**+0.8**
TPUB	**Ta-pu**	**0.93**	**247**	⇑P		**Pb**	**16 53 40.1**	**+0.2**
TPUB	baz=255			S		**Sb**	**16 53 52.2**	**-0.2**
WDLH	**Douliu**	**0.94**	**271**	*e*P		**Pn**	**16 53 40.5**	**-0.5**
WDLH	baz=272			*e*S		**Sn**	**16 53 53.9**	**-0.7**
TCU	**Taichung**	**0.94**	**301**	*e*P		**Pn**	**16 53 40.5**	**-0.5**
TWGBT	**Beinan**	**0.96**	**208**	*e*P		**Pg**	**16 53 38.6**	**-1.2**
TWH	**Lutao**	**0.96**	**185**	*e*P		**Pb**	**16 53 40.1**	**-0.2**
TWH	baz=168			*e*S		**Sn**	**16 53 54.0**	**-1.0**
TWG	**Pinlang**	**0.96**	**208**	*e*P		**Pg**	**16 53 39.1**	**-0.8**
TWG	baz=221			*e*S		**Sn**	**16 53 54.4**	**-0.6**
ENTT	**Nioudou**	**0.97**	**0**	P		**Pg**	**16 53 40.0**	**-0.1**
ENTT	baz=350			*i*S		**Sb**	**16 53 53.6**	**+0.1**
WTP	**Ta-pu**	**0.97**	**245**	P		**Pn**	**16 53 40.7**	**-0.7**
WTP	baz=252			*e*S		**Sb**	**16 53 54.1**	**+0.6**
TWC	**Suao**	**0.97**	**15**	*e*P		**Pg**	**16 53 40.3**	**+0.1**
TWC	baz=1.0			*e*S		**Sn**	**16 53 55.2**	**-0.2**
CHN2	**Minshiung**	**1.01**	**263**	*e*P		**Pn**	**16 53 42.0**	**+0.1**
CHN2	baz=263			*e*S		**Sn**	**16 53 55.5**	**-0.7**
WCHH	**Zhanghua**	**1.01**	**294**	*e*P		**Pn**	**16 53 41.5**	**-0.4**
WCHH	baz=294			*e*S		**Sn**	**16 53 56.3**	**0.0**
YHNB	**Yeheng**	**1.01**	**350**	⇓P		**Pg**	**16 53 41.0**	**+0.1**
YHNB	baz=349			*e*S		**Sg**	**16 53 53.0**	**-1.2**
EOS1	**EOS1**	**1.02**	**30**	*e*P		**Pn**	**16 53 42.2**	**+0.2**
EOS1	baz=52			*e*S		**Sn**	**16 53 57.0**	**+0.6**
NSK	**Sanguang**	**1.02**	**349**	*e*P		**Pg**	**16 53 41.2**	**+0.1**

NSK	baz=349			eS	Sg	16 53 53.5	-0.9
NSY	**Sanyi** baz=349	**1.05**	**316**	eP	Pn	16 53 42.6	+0.2
TWE	**Neicheng** baz=317	**1.05**	**5**	eP	Pg	16 53 41.7	0.0
TWE	baz=353			eS	Sb	16 53 56.4	+0.5
CHY	**Chiayi** baz=353	**1.06**	**261**	eP	Pn	16 53 42.5	-0.1
CHY	baz=262			eS	Sb	16 53 56.5	+0.4
TWK	**Hsinying** baz=262	**1.07**	**248**	P	Pn	16 53 42.5	-0.3
TWK	baz=249			eS	Sn	16 53 57.2	-0.6
CHN1	**Nanshi** baz=249	**1.07**	**243**	⇓P	Pn	16 53 42.8	+0.1
CHN1	baz=244			eS	Sn	16 53 57.7	-0.1
SGST	**Jiashian** baz=244	**1.07**	**237**	eP	Pn	16 53 42.5	-0.3
SGST	baz=238			eS	Sn	16 53 58.1	+0.2
SLGT	**Liugui** baz=238	**1.08**	**232**	eP	Pn	16 53 42.5	-0.3
NSTT	**Nanjuang** baz=232	**1.09**	**332**	eP	Pg	16 53 42.4	0.0
NSTT	baz=331			S	Sg	16 53 56.3	-0.2
LIOB	**Emei** baz=331	**1.09**	**333**	P	Pn	16 53 43.1	-0.1
LIOB	baz=331			eS	Sg	16 53 56.8	+0.1
NMLH	**Miaoli** baz=327	**1.12**	**321**	eP	Pn	16 53 43.6	+0.2
NMLH	baz=327			eS	Sn	16 53 59.0	0.0
RLNB	**Erlin** baz=282	**1.13**	**282**	eP	Pn	16 53 43.6	+0.1
RLNB	baz=282			eS	Sn	16 53 59.7	+0.6
WLGB	**Puzi** baz=262	**1.18**	**261**	eP	Pg	16 53 44.5	+0.5
WLGB	baz=262			eS	Sn	16 54 00.3	0.0
ECL	**Taimali** baz=191	**1.21**	**208**	eP	Pg	16 53 44.2	-0.3
NTC	**Toucheng**	**1.21**	**12**	eP	Pg	16 53 45.4	+0.8
WSF	**Szhu** baz=270	**1.23**	**269**	eP	Pb	16 53 44.8	-0.2
WSF	baz=270			eS	Sb	16 54 00.9	-0.1
SBCB	**Hsinchu** baz=327	**1.24**	**335**	eP	Pg	16 53 46.0	+0.7
SBCB	baz=327			eS	Sn	16 54 02.3	+0.3
CHN3	**Shinhua** baz=255	**1.25**	**242**	eP	Pg	16 53 46.0	+0.5
CHN3	baz=255			eS	Sn	16 54 04.4	+2.2
HSN	**Hsinchu** baz=339	**1.25**	**334**	eP	Pg	16 53 46.2	+0.6
SSD	**Sandimen** baz=216	**1.26**	**223**	eP	Pb	16 53 45.2	-0.2
CHN8	**Yiju** baz=257	**1.28**	**256**	eP	Pg	16 53 46.2	+0.2
CHN8	baz=257			eS	Sg	16 54 04.6	+1.9
TATO	**Taipei** baz=354	**1.30**	**357**	eP	Pn	16 53 45.7	-0.3
TATO	baz=354			eS	Sg	16 54 03.6	+0.2
TWA	**Mucha** baz=349	**1.31**	**1**	eP	Pn	16 53 46.0	-0.1
TWA	baz=349			eS	Sb	16 54 03.1	-0.1
TIPB	**Shuangxi** baz=354	**1.32**	**10**	eP	Pn	16 53 45.8	-0.4
TIPB	baz=354			eS	Sg	16 54 04.4	+0.4
NCUH	**Zhongli** baz=4.0	**1.34**	**345**	eP	Pb	16 53 46.8	0.0
NCU	**National Centr** baz=359	**1.34**	**345**	eP	Pb	16 53 46.7	-0.1
SCLT	**Jiali** baz=252	**1.35**	**249**	eP	Pg	16 53 47.2	-0.1
SCLT	baz=252			eS	Sg	16 54 06.9	+2.0
MASBT	**Mashibuluo** baz=220	**1.36**	**219**	eP	Pg	16 53 47.3	-0.2
SGLT	**Jiouru** baz=229	**1.36**	**227**	eP	Pg	16 53 48.6	+1.0
NWF	**Wu-fen Shan** baz=8.0	**1.41**	**8**	eP	Pg	16 53 48.6	0.0
WFSB	**Wu-fen Shan** baz=8.0	**1.41**	**8**	eP	Pb	16 53 47.8	-0.2
TAW	**Tawu** baz=188	**1.44**	**205**	eP	Pb	16 53 48.4	-0.1
YM04	**YM04** baz=1.0	**1.48**	**359**	eP	Pb	16 53 49.3	+0.1
YM10	**YM10** baz=1.0	**1.48**	**360**	eP	Pb	16 53 48.8	-0.5
JYNG	**Yonagunijimaku**	**1.48**	**58**	P	Pb	16 53 48.9	-0.4
JYNG				eS	Sg	16 54 08.7	-0.5
YM11	**YM11** baz=2.0	**1.49**	**0**	eP	Pg	16 53 50.4	+0.3
YM07	**YM07** baz=3.0	**1.50**	**2**	eP	Pn	16 53 48.2	-0.5
YM03	**YM03** baz=1.0	**1.50**	**359**	eP	Pn	16 53 49.0	+0.2
YM12	**YM12** baz=1.0	**1.51**	**0**	eP	Pg	16 53 50.1	-0.3
YOJ	**Yonaguni jima** baz=59	**1.54**	**59**	eP	Pb	16 53 49.5	-0.7
YOJ	baz=59			eS	Sb	16 54 09.8	-0.1
YOJ	**Yonaguni jima**	**1.54**	**59**	P	Pb	16 53 49.9	-0.3
YOJ				eS	Sb	16 54 09.8	-0.1
SCZT	**Fangliau** baz=217	**1.56**	**214**	eP	Pb	16 53 50.6	+0.1
SCZT	baz=217			eS	Sg	16 54 11.5	0.0
WDGT	**Dungji** baz=260	**1.80**	**257**	eP	Pn	16 53 53.0	+0.3
WDGT	baz=260			eS	Sn	16 54 16.2	+0.5
PHUB	**P'eng-hu** baz=267	**1.83**	**266**	eP	Pn	16 53 52.8	-0.5
PNG	**Penghu** baz=270	**1.85**	**267**	eP	Pn	16 53 53.7	+0.3
PNG	baz=270			eS	Sb	16 54 18.7	0.0
VCHM	**Qimei** baz=260	**2.01**	**257**	eP	Pn	16 53 55.1	-0.6
HATJ	**Hateruma jima**	**2.09**	**79**	eS	Sb	16 54 23.8	-1.8
IRIF	**Iriomote-Funau**	**2.09**	**71**	P	Pn	16 53 57.1	+0.4
IRIF				S	Sn	16 54 23.7	+0.8
JKRS	**Kuro-shima**	**2.31**	**75**	P	Pn	16 54 00.4	+0.7
JKRS				eS	Sn	16 54 28.9	+0.6
JIJ	**Ishigaki jima**	**2.46**	**73**	P	Pn	16 54 01.3	-0.5
JIJ				eS	Sn	16 54 31.3	-0.7
JISG	**Ishigakijimahi**	**2.67**	**69**	P	Pn	16 54 04.3	-0.4
JISG				S	Sn	16 54 36.8	-0.5
KNM	**Kinmen** baz=284	**2.96**	**285**	eP	Pn	16 54 09.5	+0.1
KNMB	**Chin-men Tao** baz=286	**3.01**	**286**	eP	Pn	16 54 09.5	+0.1
JTJ	**Tarama**	**3.02**	**71**	eS	Sn	16 54 48.3	+2.3

*ISCJB **14** 17:01:45.4±0.7, 31°.69N±0'.05×141°.5E±0'.1, h26km, mb3.7/5, Error ellipse: s-maj=14.2km s-min=5.3km az=160.0*
*IDC **14** 17:01:47.4±1.8, 31°.27N×140°.00E, h0km, mb3.7/5, mb1 3.8/6, mb1mx3.5/61, mbtmp3.6/6, ML3.7/1, Error ellipse: s-maj=70.9km s-min=17.5km az=78.0*
*JMA **14** 17:01:50.4±0.2, 31°.95N×141°.44E, h72km, M3.5*
ISC 14 17:01:46.6±1.0, 31°.75N±0'.06×141°.6E±0'.1, h26km, n19, σ1.9/61/26, mb3.7/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**1.98**	**312**	eS	Sn	17 02 41.4	-1.0
JHJ2	**Mitsune**	**1.99**	**313**	P	Pn	17 02 19.8	+1.2
JHJ2				eS	Sn	17 02 42.0	-0.7
JHJ	**Hachijo jima 2** 12nm,0.3s,baz=288,slow=6.4,SNR=5.4	**2.02**	**313**	Pn	Pn	17 02 20.8	+1.8
JHJ	41nm,0.3s,baz=102,slow=23,SNR=7.0			Sn	Sn	17 02 42.1	-1.3
BSO1	**Boso 1**	**2.93**	**351**	P	Pn	17 02 32.9	+1.9
BSO1				eS	Sn	17 03 05.0	-0.1
BSO3	**Boso 3**	**3.16**	**344**	P	Pn	17 02 36.0	+1.5
JOD2	**Odawara 2**	**4.06**	**330**	P	Pn	17 02 48.5	+1.4
JHU	**Hanno**	**4.50**	**336**	P	Pn	17 02 54.7	+1.6
JYT	**Yasato**	**4.60**	**346**	P	Pn	17 02 56.3	+1.8
JCJ	**Chichijima** 26nm,0.3s,baz=278,slow=23,SNR=8.7	**4.68**	**173**	Sn	Sn	17 03 48.8	-0.2
JRY	**Ryogami san**	**4.79**	**333**	P	Pn	17 02 59.4	+2.3
JHO	**Hitachi**	**4.91**	**351**	P	Pn	17 02 59.6	+0.8
JHO				S	Sn	17 03 52.9	-1.9
JAG	**Ashikaga**	**4.97**	**340**	P	Pn	17 03 01.0	+1.4
JAG				eS	Sn	17 03 54.7	-1.5
MJAR	**Matsushiro Arr** 2.3nm,0.3s,baz=158,slow=11,SNR=26	**5.52**	**331**	Pn	Pn	17 03 09.9	+2.8
MJAR	0.6nm,0.3s,baz=166,slow=15,SNR=4.3			Sn	Sn	17 04 09.0	-0.7
MAT	**Matsushiro**	**5.52**	**331**	P	Pn	17 03 10.4	+3.2
MAT				eS	Sn	17 04 08.2	-1.6
SONM	**Songino Array** 0.3nm,0.5s,baz=101,slow=7.6,SNR=2.7	**31.10**	**311**	P	P	17 08 02.6	-0.3
ZALV	**Zalesovo Beam** 0.3nm,0.3s,baz=92,slow=8.7,SNR=2.5	**45.68**	**316**	P	P	17 10 04.8	-0.2
KURBB	**Kurchatov Arra** 0.4nm,0.6s,baz=89,slow=7.0,SNR=5.5	**49.46**	**312**	P	P	17 10 32.9	-1.5
WRA	**Warramunga Arr** 0.8nm,0.5s,baz=6.6,slow=7.7,SNR=21	**51.87**	**189**	P	P	17 10 52.9	0.0
ASAR	**Alice Springs** 0.4nm,0.5s,baz=2.7,slow=6.7,SNR=26	**55.59**	**188**	P	P	17 11 20.1	0.0

*IDC **14** 17:09:29.9±1.0, 23°.49N×121°.64E, h0km, mb3.6/8, mb1 3.7/10, mb1mx3.5/63, mbtmp3.7/10, ML3.6/2, Error ellipse: s-maj=29.9km s-min=17.5km az=65.0*
*JMA **14** 17:09:30.4±0.1, 23°.66N×121°.68E, h0km, M3.5*
*ISCJB **14** 17:09:31.1±0.3, 23°.696N±0°.009×121°.63E±0°.01, h2km±2km, mb3.6/8, Error ellipse: s-maj=2.1km s-min=1.3km az=32.4*
*TAP **14** 17:09:31.4, 23°.72N×121°.55E, h6km, ML4.1, C*
ISC 14 17:09:30.9±1.0, 23°.68N±0°.01×121°.62E±0°.02, h5km±7km, n123, σ0.9/79/206, mb3.6/8, 9C-20D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	**Guangfu** baz=255	**0.18**	**268**	P	Pg	17 09 34.4	0.0
EGFH	baz=255			eS	Sg	17 09 36.7	0.0
ESL	**Shilin** baz=303	**0.22**	**309**	⇓iP	Pg	17 09 34.7	-0.5
ESL	baz=303			i S	Sg	17 09 36.8	-1.3
ENLB	**Shoufeng** baz=21	**0.23**	**356**	⇓P	Pg	17 09 36.4	+1.1
ENLB	baz=21			S	Sg	17 09 40.5	+2.2
HGSD	**Ruisui** baz=204	**0.26**	**225**	⇓P	Pb	17 09 37.6	-0.4
HGSD	baz=204			S	Sb	17 09 42.3	-0.4
HWA	**Hwalien** baz=12	**0.30**	**357**	eP	Pb	17 09 37.9	-0.8
HWA	baz=12			S	Sb	17 09 42.9	-1.1
EHY	**Hungye** baz=238	**0.32**	**238**	⇑P	Pg	17 09 37.5	+0.4
EHY	baz=238			eS	Sg	17 09 42.4	+1.1
TWD	**Chiawan** baz=355	**0.40**	**357**	⇓iP	Pg	17 09 39.1	+0.5
TWD	baz=355			eS	Sg	17 09 44.3	+0.4
YULB	**Yu-li** baz=230	**0.41**	**226**	⇑P	Pb	17 09 39.6	-1.0
YULB	baz=230			eS	Sb	17 09 46.1	-1.1
TWF1	**Yuli** baz=226	**0.44**	**223**	⇑iP	Pb	17 09 40.3	-0.8
TWF1	baz=226			i S	Sb	17 09 47.5	-0.5
VWDT	**VWDT** baz=274	**0.45**	**280**	⇓iP	Pg	17 09 39.5	0.0
VWDT	baz=274			S	Sg	17 09 44.8	-0.5
NACB	**Ninganchiao** baz=354	**0.50**	**357**	⇓P	Pg	17 09 40.5	+0.1
NACB	baz=354			S	Sg	17 09 46.8	-0.1
CHGB	**Renai** baz=312	**0.56**	**313**	⇓P	Pg	17 09 41.4	-0.2
CHGB	baz=312			S	Sg	17 09 48.0	-1.0
FULB	**Fuli** baz=227	**0.56**	**212**	eP	Pb	17 09 43.4	+0.2
FULB	baz=227			eS	Sb	17 09 53.5	+1.9
CHKT	**Chengkung** baz=197	**0.62**	**202**	P	Pb	17 09 44.6	+0.4
CHKT	baz=197			eS	Sb	17 09 54.4	+1.2
SSLB	**Suanglung** baz=276	**0.62**	**280**	⇓P	Pg	17 09 42.5	-0.3
SSLB	baz=276			S	Sg	17 09 49.6	-1.3
SMLT	**Sun Moon Lake** baz=285	**0.69**	**287**	⇓P	Pg	17 09 44.0	-0.2
SMLT	baz=285			eS	Sg	17 09 51.9	-1.3
TYC	**Yuchr** baz=286	**0.73**	**288**	⇓P	Pg	17 09 44.6	-0.4
TYC	baz=286			S	Sg	17 09 53.5	-1.0
ELDTW	**Lidau** baz=224	**0.74**	**229**	⇑P	Pg	17 09 45.1	+0.1
ELDTW	baz=224			eS	Sg	17 09 54.9	+0.3
ENA	**Nanau** baz=24	**0.76**	**8**	⇓P	Pg	17 09 45.8	+0.3
ENA	baz=24			eS	Sb	17 09 56.8	-0.4
NANB	**Nanao** baz=24	**0.76**	**9**	⇓P	Pg	17 09 45.8	+0.4
NANB	baz=24			S	Sb	17 09 56.9	-0.3
NNSB	**Datong** baz=337	**0.78**	**344**	⇓P	Pg	17 09 45.8	0.0
NNSB	baz=337			eS	Sg	17 09 54.8	-1.2
NNSH	**Datong** baz=346	**0.78**	**344**	⇓P	Pg	17 09 45.9	0.0
NNSH	baz=346			eS	Sg	17 09 55.1	-1.0
ENAH	**Nanao** baz=16	**0.79**	**13**	eP	Pb	17 09 46.5	-0.5
ENAH	baz=16			eS	Sb	17 09 57.8	-0.3
NNS	**Nan Shan** baz=338	**0.79**	**343**	⇓iP	Pg	17 09 46.1	0.0
NNS	baz=338			S	Sg	17 09 55.6	-0.8
WJS	**Zhushan** baz=277	**0.83**	**280**	eP	Pb	17 09 48.1	+0.3
WJS	baz=277			eS	Sb	17 09 58.9	-0.4
TWC	**Suao** baz=7.0	**0.95**	**13**	⇓P	Pb	17 09 49.7	-0.2
TWC	baz=7.0			eS	Sb	17 10 03.4	+0.6
ENTT	**Nioudou** baz=351	**0.96**	**357**	⇓P	Pg	17 09 49.5	+0.2
ENTT	baz=351			eS	Sg	17 10 02.0	+0.2
TWH	**Lutao** baz=173	**0.97**	**188**	eP	Pb	17 09 49.3	-0.8
TWH	baz=173			eS	Sb	17 10 04.2	+0.9
WGK	**Gukeng** baz=268	**0.97**	**271**	⇑P	Pb	17 09 50.4	+0.2
WGK	baz=268			eS	Sb	17 10 04.0	+0.7
TCU	**Taichung** baz=296	**0.98**	**299**	eP	Pb	17 09 50.7	+0.3
TCU	baz=296			eS	Sb	17 10 04.5	+0.9
TPUB	**Ta-pu** baz=253	**0.98**	**248**	⇑P	Pb	17 09 50.4	0.0
TPUB	baz=253			S	Sb	17 10 03.2	-0.5
EOS1	**EOS1** baz=48	**0.99**	**28**	eP	Pn	17 09 51.7	+0.4
EOS1	baz=48			eS	Sn	17 10 06.5	+0.8
TWGBT	**Beinan** baz=210	**0.99**	**210**	eP	Pg	17 09 49.3	-0.6
TWGBT	baz=210			eS	Sn	17 10 05.3	-0.4
TWG	**Pinlang** baz=210	**0.99**	**211**	eP	Pg	17 09 49.7	-0.2
TWG	baz=210			eS	Sb	17 10 04.7	+0.9
WDLH	**Douliu** baz=268	**0.99**	**271**	eP	Pb	17 09 50.8	+0.2
WDLH	baz=268			eS	Sb	17 10 04.8	+0.9
YHNB	**Yeheng** baz=336	**1.01**	**347**	⇓P	Pg	17 09 50.5	+0.2
YHNB	baz=336			eS	Sg	17 10 02.4	-1.1
TTN	**Taitung** baz=193	**1.02**	**205**	eP	Pn	17 09 52.2	+0.4
TTN	baz=193			eS	Sn	17 10 07.4	+1.0
WTP	**Ta-pu** baz=252	**1.02**	**245**	⇑P	Pb	17 09 51.0	0.0
WTP	baz=252			eS	Sb	17 10 05.3	+0.6
NSK	**Sanguang** baz=336	**1.02**	**347**	⇓P	Pg	17 09 50.6	+0.1
NSK	baz=336			eS	Sg	17 10 02.9	-0.9
TWQ1	**Liyutan** baz=318	**1.02**	**311**	eP	Pb	17 09 51.2	+0.1
TWQ1	baz=318			eS	Sg	17 10 03.8	0.0
TWE	**Neicheng** baz=5.0	**1.04**	**2**	eP	Pg	17 09 50.9	+0.1
TWE	baz=5.0			eS	Sg	17 10 05.0	+0.6
WCHH	**Zhanghua** baz=289	**1.05**	**293**	eP	Pb	17 09 51.6	0.0
WCHH	baz=289			eS	Sb	17 10 05.9	+0.3
CHN2	**Minshiung** baz=260	**1.06**	**262**	eP	Pb	17 09 51.7	0.0
CHN2	baz=260			eS	Sb	17 10 07.1	+1.2
NSY	**Sanyi** baz=312	**1.08**	**313**	⇑P	Pn	17 09 52.9	+0.2
NSY	baz=312			eS	Sg	17 10 06.4	+0.9
ILA	**Ilan** baz=7.0	**1.09**	**6**	eP	Pb	17 09 52.2	0.0
NSTT	**Nanjuang** baz=321	**1.11**	**329**	P	Pg	17 09 52.3	+0.2
NSTT	baz=321			S	Sg	17 10 05.3	-1.2
CHY	**Chiayi** baz=259	**1.11**	**261**	eP	Pb	17 09 52.7	+0.1
CHY	baz=259			eS	Sb	17 10 08.4	+1.1
LIOB	**Emei** baz=322	**1.11**	**330**	P	Pg	17 09 52.3	+0.1
LIOB	baz=322			eS	Sg	17 10 06.1	-0.5
CHN1	**Nanshi** baz=243	**1.12**	**244**	P	Pb	17 09 53.0	+0.4
CHN1	baz=243			eS	Sb	17 10 08.6	+1.1
TWK	**Hsinying** baz=247	**1.12**	**249**	P	Pb	17 09 52.9	+0.2
TWK	baz=247			eS	Sn	17 10 08.9	-0.1
SGST	**Jiashian** baz=237	**1.12**	**238**	eP	Pn	17 09 53.6	+0.4
SGST	baz=237			eS	Sn	17 10 09.8	+0.8
SLGT	**Liugui** baz=227	**1.12**	**233**	eP	Pn	17 09 53.1	-0.1
SLGT	baz=227			eS	Sn	17 10 09.2	0.0
NMLH	**Miaoli** baz=317	**1.14**	**319**	eP	Pn	17 09 54.0	+0.4
NMLH	baz=317			eS	Sb	17 10 08.6	+0.2
RLNB	**Erlin** baz=278	**1.18**	**281**	eP	Pb	17 09 53.6	-0.1
RLNB	baz=278			eS	Sb	17 10 09.6	+0.4
NTC	**Toucheng** baz=352	**1.19**	**9**	eP	Pn	17 09 55.0	+0.8
EGS	baz=14	**1.20**	**14**	eP	Pn	17 09 54.6	+0.4
WLGB	**Puzi** baz=259	**1.23**	**261**	⇑P	Pn	17 09 54.9	+0.2
WLGB	baz=259			eS	Sn	17 10 11.9	+0.3
ECL	**Taimali** baz=210	**1.24**	**210**	eP	Pn	17 09 55.4	+0.6
ECL	baz=210			eS	Sb	17 10 11.3	+0.4
SBCB	**Hsinchu** baz=324	**1.25**	**333**	⇓P	Pn	17 09 55.9	+0.9
SBCB	baz=324			eS	Sb	17 10 12.4	+1.0
HSN	**Hsinchu** baz=342	**1.27**	**332**	eP	Pn	17 09 56.3	+1.0
HSN	baz=342			eS	Sb	17 10 12.4	+0.5
WSF	**Szhu** baz=266	**1.28**	**269**	eP	Pg	17 09 55.4	-0.1
WSF	baz=266			eS	Sg	17 10 11.8	-0.3
SSD	**Sandimen** baz=228	**1.30**	**225**	P	Pb	17 09 55.7	0.0
SSD	baz=228			eS	Sn	17 10 14.7	+1.3
CHN3	**Shinhua** baz=254	**1.30**	**243**	eP	Pn	17 09 56.5	+0.8
CHN3	baz=254			eS	Sn	17 10 15.6	+2.2
TATO	**Taipei** baz=354	**1.30**	**355**	P	Pg	17 09 55.5	-0.3
TATO	baz=354			eS	Sg	17 10 12.5	-0.2
TIPB	**Shuangxi** baz=360	**1.30**	**8**	eP	Pg	17 09 54.9	-1.0
TIPB	baz=360			eS	Sg	17 10 11.7	-1.1
CHN8	**Yiju** baz=255	**1.33**	**256**	eP	Pb	17 09 56.7	+0.3
CHN8	baz=255			S	Sn	17 10 15.4	+1.2
NCUH	**Zhongli** baz=340	**1.35**	**343**	eP	Pb	17 09 57.3	+0.7
NCUH	baz=340			eS	Sn	17 10 16.1	+1.5
NCU	**National Centr** baz=352	**1.35**	**343**	eP	Pb	17 09 57.2	+0.6
NCU	baz=352			eS	Sn	17 10 15.5	+0.8
TAP	**Taipei** baz=355	**1.36**	**356**	eP	Pb	17 09 57.8	+1.0
TAP	baz=355			eS	Sg	17 10 14.9	+0.2
TWB1	**Santiao Chiao** baz=2.0	**1.37**	**14**	eP	Pb	17 09 57.6	+0.7
MASBT	**Mashibuluo** baz=215	**1.40**	**221**	eP	Pb	17 09 57.5	+0.1
MASBT	baz=215			eS	Sn	17 10 17.5	+1.7
NWF	**Wu-fen Shan** baz=6.0	**1.40**	**6**	eP	Pb	17 09 57.8	+0.3
NWF	baz=6.0			eS	Sn	17 10 16.8	+0.8
WFSB	**Wu-fen Shan** baz=356	**1.40**	**6**	eP	Pb	17 09 58.0	+0.6
WFSB	baz=356			eS	Sn	17 10 16.5	+0.6
SCLT	**Jiali** baz=249	**1.40**	**249**	eP	Pb	17 09 57.6	+0.1

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
SCLT				eS	Sn	17 10 17.3	+1.4
	baz=249						
SGLT	**Jiouru**	**1.41**	**228**	eP	Pb	17 09 59.1	+1.5
	baz=230						
JYNG	**Yonagunijimaku**	**1.44**	**57**	P	Pb	17 09 58.3	+0.2
JYNG				eS	Sg	17 10 16.4	-0.7
TAW	**Tawu**	**1.47**	**207**	eP	Pb	17 09 59.1	+0.4
	baz=209						
YM04	**YM04**	**1.47**	**357**	eP	Pn	17 09 58.3	+0.2
	baz=354						
YM10	**YM10**	**1.47**	**358**	eP	Pg	17 09 59.0	-0.2
	baz=356						
YM11	**YM11**	**1.48**	**358**	eP	Pn	17 09 58.7	+0.4
	baz=357						
YM11				eS	Sb	17 10 18.8	+0.7
	baz=357						
NTST	**Danshui**	**1.49**	**354**	eP	Pb	17 09 59.1	+0.1
	baz=351						
NTST				eS	Sn	17 10 20.3	+2.1
	baz=351						
YOJ	**Yonaguni jima**	**1.49**	**58**	eP	Pg	17 09 59.2	-0.3
	baz=57						
YOJ				eS	Sn	17 10 18.8	+0.6
	baz=57						
YOJ	**Yonaguni jima**	**1.49**	**58**	P	Pn	17 09 58.6	+0.3
YOJ				eS	Sg	17 10 18.2	-0.7
YM07	**YM07**	**1.49**	**0**	eP	Pn	17 09 58.1	-0.3
	baz=358						
YM07				eS	Sg	17 10 18.9	0.0
	baz=358						
YM03	**YM03**	**1.50**	**357**	eP	Pn	17 09 58.5	0.0
	baz=355						
YM03				eS	Sg	17 10 19.0	-0.1
	baz=355						
YM12	**YM12**	**1.50**	**358**	eP	Pb	17 09 59.3	+0.1
	baz=356						
YM12				eS	Sg	17 10 18.8	-0.3
	baz=356						
YM08	**YM08**	**1.50**	**359**	eP	Pn	17 09 58.3	-0.2
	baz=357						
YM08				eS	Sg	17 10 19.0	-0.3
	baz=357						
SCZT	**Fangliau**	**1.59**	**216**	eP	Pg	17 10 01.1	-0.3
	baz=216						
SCZT				eS	Sg	17 10 22.2	+0.2
	baz=216						
TWY	**Chenhua**	**1.59**	**359**	eP	Pg	17 10 01.4	0.0
	baz=358						
WDGT	**Dungji**	**1.85**	**257**	eP	Pn	17 10 02.9	-0.3
	baz=259						
WDGT				eS	Sn	17 10 27.5	+0.6
	baz=259						
TWK1	**Hengchun**	**1.88**	**204**	eP	Pb	17 10 05.0	-0.7
	baz=195						
TWKBT	**Hengchun**	**1.88**	**204**	eP	Pb	17 10 05.7	0.0
	baz=195						
PHUB	**P'eng-hu**	**1.89**	**265**	eP	Pn	17 10 03.4	-0.3
	baz=265						
PHUB				eS	Sn	17 10 28.0	+0.1
	baz=265						
PNG	**Penghu**	**1.90**	**267**	eP	Pn	17 10 03.7	-0.2
	baz=266						
PNG				eS	Sn	17 10 28.8	+0.6
	baz=266						
HATJ	**Hateruma jima**	**2.04**	**79**	P	Pn	17 10 06.6	+0.8
HATJ				S	Sn	17 10 31.3	-0.3
IRIF	**Iriomote-Funau**	**2.04**	**71**	P	Pn	17 10 06.4	+0.6
IRIF				eS	Sn	17 10 32.6	+1.0
JKRS	**Kuro-shima**	**2.26**	**75**	P	Pn	17 10 09.8	+1.0
JKRS				eS	Sn	17 10 37.8	+0.8
VWUC	**VWUC**	**2.37**	**304**	eP	Pn	17 10 09.3	-1.1
	baz=299						
JIJ	**Ishigaki jima**	**2.41**	**73**	P	Pn	17 10 11.6	+0.7
JIJ				S	Sn	17 10 40.7	-0.1
JISG	**Ishigakijimahi**	**2.62**	**69**	P	Pn	17 10 13.8	0.0
JISG				eS	Sn	17 10 45.1	-0.9
MATB	**Ma-tsu**	**2.90**	**329**	eP	Pn	17 10 16.8	-0.9
	baz=322						
JTJ	**Tarama**	**2.97**	**71**	P	Pn	17 10 19.4	+0.7
JTJ				S	Sn	17 10 56.5	+1.7
KNM	**Kinmen**	**3.00**	**285**	eP	Pn	17 10 20.6	+1.4
	baz=280						
KNMB	**Chin-men Tao**	**3.06**	**286**	eP	Pn	17 10 19.4	-0.4
	baz=281						
JIRB	**Irabujima**	**3.44**	**70**	eS	Sn	17 11 06.9	+0.6
JIKM	**Ikemajima**	**3.54**	**69**	eS	Sn	17 11 09.2	+0.6
JOW	**Kunigami**	**6.79**	**61**	Pn	Pn	17 11 11.2	-0.1
	2.5nm,0.3s,baz=294,slow=22,SNR=6.1						
JOW	**Kunigami**	**6.79**	**61**	eP	Pn	17 11 12.6	+1.3
	baz=65						
KSRS	**Korea Array**	**14.76**	**20**	Pn	P	17 13 03.7	-2.7
	0.2nm,0.3s,baz=199,slow=11,SNR=8.5						
CMAR	**Chiang Mai Arr**	**21.78**	**261**	P	P	17 14 23.8	+0.1
	1.3nm,1.0s,baz=58,slow=8.4,SNR=6.3						
SONM	**Songino Array**	**26.99**	**337**	P	P	17 15 16.7	+3.0
	0.6nm,0.6s,baz=146,slow=8.0,SNR=3.4						
MKAR	**Makanchi Array**	**38.98**	**316**	P	P	17 16 59.1	+1.1
	1.0nm,0.6s,baz=106,slow=12,SNR=5.8						
ZALV	**Zalesovo Beam**	**40.89**	**327**	P	P	17 17 14.2	+0.4
	1.0nm,0.6s,baz=123,slow=8.8,SNR=4.8						
H11N1	**WAKE ISLAND Hy 42.12**	**86**		T	T	18 02 20.5	
	baz=283,slow=74,SNR=19						
H11N2	**WAKE ISLAND Hy 42.12**	**86**		T	T	18 02 22.7	
	baz=283,slow=74,SNR=22						
H11N3	**WAKE ISLAND Hy 42.13**	**86**		T	T	18 02 22.5	
	baz=283,slow=74,SNR=18						
H11S3	**WAKE ISLAND Hy 42.23**	**88**		T	T	18 02 31.2	
	baz=284,slow=74,SNR=112						
H11S1	**WAKE ISLAND Hy 42.24**	**88**		T	T	18 02 31.8	
	baz=284,slow=74,SNR=46						
H11S2	**WAKE ISLAND Hy 42.25**	**88**		T	T	18 02 32.8	
	baz=284,slow=74,SNR=35						
KURBB	**Kurchatov Arra**	**42.75**	**320**	P	P	17 17 29.7	+0.6
	0.5nm,0.3s,baz=108,slow=9.8,SNR=3.0						
WRA	**Warramunga Arr**	**45.09**	**163**	P	P	17 17 46.3	-1.9
	0.5nm,0.5s,baz=345,slow=8.7,SNR=11						
BVAR	**Borovoye Array**	**48.32**	**321**	P	P	17 18 13.1	-0.1
	0.4nm,0.7s,baz=123,slow=10,SNR=3.1						
ASAR	**Alice Springs**	**48.55**	**165**	P	P	17 18 13.9	-1.3
	0.3nm,0.5s,baz=342,slow=6.5,SNR=7.9						

*ISN **14** 17:17:33.4±1.2, 37°.22N×42°.63E, h0km±4km, ML3.4*
*DDA **14** 17:17:34.7, 37°.27N×42°.56E, h13km, Ml3.4*
*CSEM **14** 17:17:34.9±0.2, 37°.25N×42°.60E, h2km, ML3.4, Error ellipse: s-maj=4.4km s-min=3.5km az=51.0*
*ISCJB **14** 17:17:34.4±0.8, 37°.25N±0°.03×42°.59E±0°.03, h1km±5km, Error ellipse: s-maj=5.6km s-min=4.2km az=163.7*
*ATA **14** 17:17:36.5±0.5, 37°.37N×43°.02E, h47km±18km, ML4.3, MW3.7*
*ISK **14** 17:17:36.6, 37°.33N×42°.44E, h7km, ML3.4/9*

ISC 14 17:17:34.9±1.2, 37°.27N±0°.04×42°.60E±0°.02, h7km±9km, n60, σ0=84/94, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIRT	**Sirnak**	**0.27**	**331**	PG	Pg	17 17 40.1	-0.1
SIRT				SG	Sg	17 17 43.7	-0.1
SIRT	**Sirnak**	**0.27**	**331**	ePg	Pg	17 17 40.1	-0.1
SIRT				eSg	Sg	17 17 43.7	-0.1
SIRN	**S¨–rnak**	**0.27**	**326**	iP	Pg	17 17 40.1	-0.2
SIRN				iS	Sg	17 17 44.0	0.0
SIRN	**S¨–rnak**	**0.27**	**326**	P	Pg	17 17 40.1	-0.2
SIRN				S	Sg	17 17 44.0	0.0
SRTM	**Siirt_Merkez**	**0.90**	**323**	iP	Pg	17 17 52.3	+0.1
SRTM				iS	Sg	17 18 04.2	+0.3
SRTM	**Siirt_Merkez**	**0.90**	**323**	P	Pg	17 17 52.3	+0.1
SRTM				S	Sg	17 18 04.2	+0.3
HAKT	**HAKKARI**	**0.93**	**71**	iP	Pg	17 17 52.7	0.0
HAKT				iS	Sb	17 18 05.9	0.0
HAKT	**HAKKARI**	**0.93**	**71**	P	Pg	17 17 52.7	0.0
HAKT				S	Sb	17 18 05.9	0.0
GEVA	**Gevas**	**1.10**	**19**	eP	Pg	17 17 55.5	-0.6
GEVA				eS	Sg	17 18 10.2	-0.2
GEVA				IAML		17 18 18.2	
	comp=Z,91nm,0.4s						
GEVA	**Gevas**	**1.10**	**19**	iP	Pg	17 17 55.5	-0.6
GEVA				iS	Sg	17 18 10.4	0.0
GEVA	**Gevas**	**1.10**	**19**	P	Pg	17 17 55.5	-0.6
GEVA				S	Sg	17 18 10.4	0.0
BTMN	**Batman**	**1.23**	**301**	iP	Pn	17 17 58.6	+0.1
BTMN				iS	Sg	17 18 14.2	-0.2
BTMN	**Batman**	**1.23**	**301**	P	Pn	17 17 58.6	+0.1
BTMN				S	Sg	17 18 14.2	-0.2
GURO	**Guroymak-BITLI**	**1.36**	**341**	PN	Pg	17 18 01.2	+0.3
GURO				SN	Sn	17 18 19.2	+0.6
GURO	**Guroymak-BITLI**	**1.36**	**341**	ePn	Pg	17 18 01.2	+0.3
GURO				eSn	Sn	17 18 19.2	+0.6
SVAN	**Silvan-Diyarba**	**1.42**	**309**	PN	Pb	17 18 01.6	-0.2
SVAN				SN	Sb	17 18 19.8	-0.2
SVAN	**Silvan-Diyarba**	**1.42**	**309**	iP	Pb	17 18 01.5	-0.2
SVAN				iS	Sg	17 18 20.4	-0.2
SVAN	**Silvan-Diyarba**	**1.42**	**309**	P	Pb	17 18 01.5	-0.2
SVAN				eSn	Sb	17 18 19.8	-0.2
SVAN				S	Sg	17 18 20.4	-0.2
MARD	**Mardin**	**1.46**	**272**	iP	Pn	17 18 01.2	-0.5
MARD				iS	Sg	17 18 21.6	-0.1
VANB	**Van**	**1.46**	**25**	PN	Pg	17 18 03.3	+0.4
VANB				SN	Sg	17 18 22.8	+0.9
VANB	**Van**	**1.46**	**25**	ePn	Pg	17 18 03.3	+0.4
VANB				eSn	Sg	17 18 22.8	+0.9
ADCV	**BITLIS_Adilcev**	**1.54**	**4**	iP	Pg	17 18 05.0	+0.6
ADCV				iS	Sg	17 18 25.4	+1.0
ADCV	**BITLIS_Adilcev**	**1.54**	**4**	P	Pg	17 18 05.0	+0.6
ADCV				S	Sg	17 18 25.4	+1.0
MAZI	**Mazidag**	**1.73**	**277**	PN	Pn	17 18 05.9	+0.5
MAZI				SN	Sn	17 18 27.4	-0.4
MAZI	**Mazidag**	**1.73**	**277**	ePn	Pn	17 18 05.9	+0.5
MAZI				eSn	Sn	17 18 27.4	-0.4
DIY	**Diyarbakir**	**1.99**	**289**	ePn	Pb	17 18 10.8	-0.6
EKAR	**Karacoban**	**2.03**	**348**	eP	Pb	17 18 11.5	-0.7
EKAR				IAML		17 18 46.4	
	comp=Z,36nm,0.6s						
EKAR	**Karacoban**	**2.03**	**348**	iP	Pb	17 18 11.5	-0.7
EKAR				iS	Sg	17 18 41.2	+1.1
EKAR	**Karacoban**	**2.03**	**348**	P	Pb	17 18 11.5	-0.7
BNGL	**BINGOL**	**2.04**	**326**	eP	Pn	17 18 10.9	+1.2
BNGL				IAML		17 18 45.2	
	comp=Z,426nm,0.5s						
BNGL	**BINGOL**	**2.04**	**326**	iP	Pb	17 18 11.5	-0.7
BNGL				iS	Sb	17 18 37.5	-0.3
DYBB	**Diyarbakir**	**2.07**	**290**	PN	Pn	17 18 10.8	+0.7
DIYA	**Diyarbakir**	**2.08**	**289**	iP	Pn	17 18 10.9	+0.7
DIYA				iS	Sb	17 18 39.2	+0.3
DIYA	**Diyarbakir**	**2.08**	**289**	P	Pn	17 18 10.9	+0.7
DIYA				S	Sb	17 18 39.2	+0.3
HANI	**Diyarbakir_Han**	**2.09**	**304**	iP	Pn	17 18 09.7	-0.6
HANI				iS	Sn	17 18 35.7	-0.8
HANI	**Diyarbakir_Han**	**2.09**	**304**	P	Pn	17 18 09.7	-0.6
HANI				S	Sn	17 18 35.7	-0.8
VRTB	**Varto-Mus**	**2.09**	**335**	PN	Pn	17 18 11.5	+1.0
VRTB	**Varto-Mus**	**2.09**	**335**	ePn	Pn	17 18 11.5	+1.0
TUTA	**Tutak**	**2.14**	**4**	eP	Pn	17 18 09.5	-1.6
TUTA				iPg	Pb	17 18 13.4	-0.6
CLDR	**Caldiran**	**2.14**	**29**	PN	Pb	17 18 14.2	+0.2
CLDR	**Caldiran**	**2.14**	**29**	ePn	Pb	17 18 14.2	+0.2
BNGB	**Bing¨¶l**	**2.29**	**319**	PN	Pn	17 18 14.0	+0.8
BINT	**Bingol**	**2.31**	**315**	ePn	Pn	17 18 14.0	+0.5
EATA	**Eleskirt**	**2.59**	**358**	eP	Pn	17 18 15.9	-1.5
SVRC	**Sivrice-ELAZID**	**2.84**	**294**	PN	Pn	17 18 21.6	+0.9
SVRC	**Sivrice-ELAZID**	**2.84**	**294**	ePn	Pn	17 18 21.6	+0.9
PTK	**Pertek**	**3.01**	**304**	PN	Pn	17 18 24.2	+1.1
PTK	**Pertek**	**3.01**	**304**	ePn	Pn	17 18 24.2	+1.1
URFA	**Urfa**	**3.02**	**274**	PN	Pn	17 18 24.5	+1.4
URFA	**Urfa**	**3.02**	**274**	ePn	Pn	17 18 24.5	+1.4
KOPT	**Kop Dagi**	**3.20**	**330**	eP	Pb	17 18 32.3	+0.1
MALT	**Malatya**	**3.47**	**289**	PN	Pn	17 18 30.5	+1.2
MALT	**Malatya**	**3.47**	**289**	ePn	Pn	17 18 30.5	+1.2
KEMA	**Kemaliye**	**3.80**	**303**	eP	Pn	17 18 34.4	+0.6
KELT	**Kelkit**	**3.89**	**319**	eP	Pb	17 18 41.7	-2.2
GAZ	**Gaziantep**	**4.30**	**270**	PN	Pn	17 18 42.9	+2.1
GAZ	**Gaziantep**	**4.30**	**270**	ePn	Pn	17 18 42.9	+2.1
KMRS	**Kahramanmaras**	**4.55**	**275**	PN	Pn	17 18 46.1	+2.0
KMRS	**Kahramanmaras**	**4.55**	**275**	ePn	Pn	17 18 46.1	+2.0
RTB	**Rutbah**	**4.63**	**205**	ePn	Pn	17 18 46.0	+0.8
	SNR=3.0						
RTB				eSn	Sn	17 19 37.0	-2.2
	SNR=3.0						

*ISCJB **14** 17:30:58.8±0.3, 67°.09N±0°.02×20°.92E±0°.08, h0km, Error ellipse: s-maj=4.6km s-min=2.9km az=174.6*
*CSEM **14** 17:30:59.4±0.2, 67°.10N×20°.92E, h2km, ML1.8, Error ellipse: s-maj=5.4km s-min=4.2km az=78.0, Mining explosion.*
*IDC **14** 17:30:59.4±0.9, 67°.17N×20°.89E, h0km, mb1 2.8/3, mb1mx2.8/66, mbtmp2.9/3, ML2.0/3, Error ellipse: s-maj=18.8km s-min=7.5km az=112.0*
*NAO **14** 17:30:59.6±1.0, 67°.10N×20°.75E, ML2.6*
*UPP **14** 17:30:59.3±0.1, 67°.09N×20°.95E, h0km, ML1.8*
*HEL **14** 17:31:00.0±0.1, 67°.09N×20°.93E, h0km, ML2.2, ML1.8(UPP), Explosion*
*BER **14** 17:31:03.1±4.0, 67°.05N×20°.70E, h0km, ML1.4, ML2.6(NAO), Suspected explosion*

ISC 14 17:30:58.8±0.7, 67°.09N±0°.02×20°.90E±0°.02, h0km, n75, σ1=44/106, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MASU	**Masugnsbyn**	**0.57**	**48**	P	Pg	17 31 09.8	+0.1
MASU	**Masugnsbyn**	**0.57**	**48**	iP	Pg	17 31 09.8	+0.1
MASU	**Masugnsbyn**	**0.57**	**48**	P	Pg	17 31 09.8	+0.1
ERTU	**Ertsjaerv**	**0.74**	**136**	P	Pg	17 31 13.2	+0.2
ERTU	**Ertsjaerv**	**0.74**	**136**	iP	Pg	17 31 13.2	+0.2
ERTU	**Ertsjaerv**	**0.74**	**136**	P	Pg	17 31 13.1	+0.2
PAJU	**Pajala**	**0.87**	**93**	P	Pg	17 31 15.4	0.0
PAJU	**Pajala**	**0.87**	**93**	iP	Pg	17 31 15.4	0.0
PAJU	**Pajala**	**0.87**	**93**	P	Pg	17 31 15.4	0.0
RATU	**Laukkuluspa**	**0.90**	**326**	P	Pg	17 31 16.4	+0.4
RATU	**Laukkuluspa**	**0.90**	**326**	eP	Pg	17 31 16.4	+0.4
RATU	**Laukkuluspa**	**0.90**	**326**	P	Pg	17 31 16.4	+0.4
KUA	**Kurravaara**	**0.90**	**346**	P	Pg	17 31 16.3	+0.3
KUA				S	Sg	17 31 27.7	0.0
KUA	**Kurravaara**	**0.90**	**346**	eP	Pg	17 31 16.3	+0.3
KUA				eS	Sg	17 31 27.7	0.0
KUA	**Kurravaara**	**0.90**	**346**	P	Pg	17 31 16.3	+0.3
KUA				S	Sg	17 31 27.7	0.0
SALU	**Saltoluokta**	**0.98**	**289**	P	Pg	17 31 18.0	+0.5
SALU	**Saltoluokta**	**0.98**	**289**	eP	Pg	17 31 18.0	+0.5
SALU	**Saltoluokta**	**0.98**	**289**	P	Pg	17 31 18.0	+0.5
LANU	**Lannavaara**	**1.05**	**23**	P	Pg	17 31 18.8	-0.2
LANU	**Lannavaara**	**1.05**	**23**	eP	Pg	17 31 18.8	-0.2
LANU	**Lannavaara**	**1.05**	**23**	P	Pg	17 31 18.8	-0.2
NIKU	**Nikkaluokta**	**1.06**	**318**	P	Pg	17 31 18.9	-0.3
NIKU	**Nikkaluokta**	**1.06**	**318**	eP	Pg	17 31 18.9	-0.3
NIKU	**Nikkaluokta**	**1.06**	**318**	P	Pg	17 31 18.9	-0.3
KALU	**Kalix**	**1.58**	**140**	P	Pn	17 31 28.3	+0.3
KALU	**Kalix**	**1.58**	**140**	eP	Pn	17 31 28.3	+0.3
KALU	**Kalix**	**1.58**	**140**	P	Pn	17 31 28.3	+0.3
SJUU	**Sjulsmark**	**1.61**	**169**	P	Pn	17 31 28.5	+0.1
SJUU	**Sjulsmark**	**1.61**	**169**	eP	Pn	17 31 28.5	+0.1
SJUU	**Sjulsmark**	**1.61**	**169**	P	Pn	17 31 28.5	+0.1
HEF	**Hetta**	**1.69**	**37**	eP	Pn	17 31 29.3	-0.3
HEF				MSG		17 31 50.4	
	comp=Z,15nm,0.2s						
HEF				eSN	Sg	17 31 54.0	+0.8
HEF	**Hetta**	**1.69**	**37**	eP	Pn	17 31 29.3	-0.3
HEF				eSn	Sg	17 31 54.0	+0.8
HEF	**Hetta**	**1.69**	**37**	eP	Pg	17 31 31.9	+0.6
TOF	**Tornio**	**1.70**	**125**	eP	Pn	17 31 29.2	-0.5
TOF				MSG		17 31 50.6	
	comp=Z,27nm,0.2s						
TOF				eSN	Sg	17 31 54.9	+1.6
TOF	**Tornio**	**1.70**	**125**	eP	Pn	17 31 29.2	-0.5
TOF				eSn	Sg	17 31 54.9	+1.6
LILU	**Lilltraesk**	**1.86**	**194**	P	Pn	17 31 32.0	+0.2
LILU				S	Sg	17 31 58.4	0.0
LILU	**Lilltraesk**	**1.86**	**194**	eP	Pn	17 31 32.0	+0.2
LILU				eS	Sg	17 31 58.4	0.0
LILU	**Lilltraesk**	**1.86**	**194**	P	Pn	17 31 32.0	+0.2
LILU				S	Sg	17 31 58.4	0.0
KIF	**Kilpisjarvi**	**1.93**	**359**	Pn	Pb	17 31 34.5	-0.3
KIF				Sn	Sg	17 32 01.4	+0.7
KIF	**Kilpisjarvi**	**1.93**	**359**	eP	Pb	17 31 34.4	-0.4
KIF				MSG		17 31 57.4	
	comp=Z,20nm,0.2s						
KIF				eSG	Sg	17 32 02.0	+1.3
KIF	**Kilpisjarvi**	**1.93**	**359**	eP	Pb	17 31 34.4	-0.4
KIF				Sn	Sg	17 32 01.4	+0.7
KIF				eSg	Sg	17 32 02.0	+1.3
	comp=Z,20nm,0.2s						
KIF	**Kilpisjarvi**	**1.93**	**359**	Sn	Sg	17 32 01.4	+0.7
RNF	**Rovaniemi**	**2.08**	**101**	eP	Pn	17 31 35.1	+0.3
RNF	**Rovaniemi**	**2.08**	**101**	eP	Pn	17 31 35.1	+0.3
SGF	**Sodankyl**	**2.21**	**78**	eP	Pn	17 31 37.5	+0.8
	baz=258						
SGF				eSG	Sb	17 32 07.9	+0.3
SGF	**Sodankyl**	**2.21**	**78**	eP	Pn	17 31 37.5	+0.8
SGF				eSg	Sb	17 32 07.9	+0.3
STEI	**Steigen**	**2.33**	**294**	eP	Pn	17 31 40.0	+1.6
STEI				IAML		17 32 20.2	
	comp=Z,5.1nm,0.5s						
SVAU	**Svanoeiden**	**2.66**	**192**	P	Pn	17 31 44.5	+1.7
SVAU	**Svanoeiden**	**2.66**	**192**	eP	Pn	17 31 44.5	+1.7
SVAU	**Svanoeiden**	**2.66**	**192**	P	Pn	17 31 44.5	+1.7
ARA0	**ARCESS Array S**	**3.00**	**33**	Pn	Pn	17 31 48.3	+0.8
	baz=208,slow=16						
ARA0				Sn	Sn	17 32 27.0	+2.9
	baz=216,slow=28						
ARA0	**ARCESS Array S**	**3.00**	**33**	Pn	Pn	17 31 48.3	+0.8
	SNR=148						
ARA0				Sn	Sn	17 32 27.0	+2.9
	SNR=7.4						
ARA0	**ARCESS Array S**	**3.00**	**33**	Pn	Pn	17 31 48.3	+0.8
	baz=208,slow=16						
ARA0				Sn	Sn	17 32 27.0	+2.9
	baz=216,slow=28						
ARCES	**ARCESS Array B**	**3.00**	**33**	Pn	Pn	17 31 47.5	0.0
	comp=Z,0.3nm,0.3s,baz=217,slow=15,SNR=23						
ARCES				Pg	Pb	17 31 50.9	-2.1
	comp=Z,0.6nm,0.3s,baz=221,slow=14,SNR=44						
ARCES				Sn	Sn	17 32 23.7	-0.3
	comp=Z,0.5nm,0.3s,baz=224,slow=21,SNR=3.5						
ARE0	**ARCESS Array S**	**3.00**	**33**	eP	Pn	17 31 48.3	+0.8
	baz=221						
ARE0				eSB	Sb	17 32 28.1	-2.0
ARE0	**ARCESS Array S**	**3.00**	**33**	eP	Pn	17 31 48.3	+0.8
ARE0				eSb	Sb	17 32 28.1	-2.0
LOF	**Lofoten**	**3.01**	**294**	eP	Pn	17 31 50.6	+3.0
LOF				IAML		17 32 46.1	
	comp=Z,2.9nm,0.5s						
OUF	**Merijarvi**	**3.15**	**148**	ePB	Pb	17 31 53.1	-2.6
OUF				MSG		17 32 32.1	
	comp=Z,3.2nm,0.2s						
OUF	**Merijarvi**	**3.15**	**148**	ePb	Pb	17 31 53.1	-2.6
VRF	**Varrio**	**3.43**	**75**	eP	Pn	17 31 56.2	+2.8
	baz=257						
VRF				eSG	Sg	17 32 46.3	-2.4
VRF	**Varrio**	**3.43**	**75**	eP	Pn	17 31 56.2	+2.8
VRF				eSg	Sg	17 32 46.3	-2.4
MSF	**Maaselka**	**3.47**	**106**	ePG	Pb	17 32 02.0	+1.0
	baz=287						
MSF	**Maaselka**	**3.47**	**106**	ePg	Pb	17 32 02.0	+1.0
KU6	**Riekki**	**3.75**	**102**	eP	Pn	17 32 01.1	+3.3
	baz=291						
KU6	**Riekki**	**3.75**	**102**	eP	Pn	17 32 01.1	+3.3
VAF	**Ylistaro**	**4.13**	**169**	eP	Pn	17 32 04.6	+1.6
	baz=349						
VAF	**Ylistaro**	**4.13**	**169**	eP	Pn	17 32 04.6	+1.6
FIA0	**FINESS Array S**	**6.09**	**156**	Pn	Pn	17 32 31.6	+1.5
	baz=348,slow=16						
FIA0				Sn	Sn	17 33 42.4	+2.0
	baz=340,slow=22						
FIA0	**FINESS Array S**	**6.09**	**156**	Pn	Pn	17 32 31.5	+1.5
	SNR=5.6						
FIA0				Sn	Sn	17 33 42.3	+2.0
	SNR=6.4						
FIA0	**FINESS Array S**	**6.09**	**156**	Pn	Pn	17 32 31.6	+1.5
	baz=348,slow=16						
FIA0				Sn	Sn	17 33 42.4	+2.0
	baz=340,slow=22						
FINES	**FINESS Array B**	**6.09**	**156**	Pn	Pn	17 32 31.2	+1.3
	comp=Z,0.1nm,0.3s,baz=346,slow=11,SNR=11						
FINES				Sn	Sn	17 33 43.1	+2.8
	comp=Z,0.3nm,0.3s,baz=342,slow=21,SNR=9.6						
NOA	**NORSAR Array B**	**7.40**	**219**	Pn	Pn	17 32 47.4	-0.6
HFS	**Hagfors**	**7.67**	**208**	Pn	Pn	17 32 50.7	-1.0
	baz=30,slow=14						
HFS				Sn	Sn	17 34 15.0	-4.2
HFS	**Hagfors**	**7.67**	**208**	Pn	Pn	17 32 52.4	+0.7
	comp=Z,0.1nm,0.3s,baz=25,slow=14,SNR=4.3						
HFS	**Hagfors**	**7.67**	**208**	Pn	Pn	17 32 50.7	-1.0
	baz=30,slow=14						
HFS				Sn	Sn	17 34 15.0	-4.2

MAN 14 17:31:25.9, 17°.00N×120°.82E, h2km, mb4.3, ML3.1, MS2.8, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABRA	**Dolores**	**0.65**	**351**	eP	Pb	17 31 39.2	-0.8
ABRA				eS	Sn	17 31 53.5	+0.5
CAUP	**Cauayan**	**0.96**	**93**	eP	Pb	17 31 45.0	-0.3
CAUP				eS	Sn	17 32 04.5	+3.8

*JMA **14** 17:37:48.5±0.3, 23°.67N×121°.68E, h0km±3km, M3.0*
*ISCJB **14** 17:37:49.1±0.4, 23°.69N±0°.02×121°.63E±0°.02, h3km±3km, Error ellipse: s-maj=3.3km s-min=1.9km az=40.0*
*TAP **14** 17:37:49.6, 23°.71N×121°.54E, h9km, ML3.5, B*

**ISC 14 17:37:49.1±1.0, 23°.69N±0°.02×121°.62E±0

	baz=254						
NNSB	Datong	0.77	344	⇑P		Pg	17 38 04.1 +0.2
	baz=337						
NNSB				eS		Sg	17 38 13.3 -0.6
	baz=337						
NNSH	Datong	0.77	344	eP		Pg	17 38 04.0 +0.1
	baz=341						
ENAH	Nanao	0.78	13	eP		Pb	17 38 05.0 -0.1
	baz=25						
NNS	Nan Shan	0.78	344	⇑P		Pg	17 38 04.4 +0.2
	baz=338						
NNS				eS		Sg	17 38 14.1 -0.3
	baz=338						
WJS	Zhushan	0.82	280	eP		Pb	17 38 06.1 +0.3
	baz=272						
TWC	Suao	0.94	13	eP		Pb	17 38 07.7 -0.2
	baz=1.0						
ENTT	Nioudou	0.95	357	eP		Pb	17 38 07.8 -0.1
	baz=347						
ENTT				eS		Sb	17 38 21.1 +0.3
	baz=347						
WGK	Gukeng	0.96	270	eP		Pb	17 38 08.6 +0.4
	baz=269						
TCU	Taichung	0.97	298	eP		Pn	17 38 08.9 -0.3
	baz=297						
EOS1	EOS1	0.98	29	eP		Pn	17 38 09.8 +0.5
	baz=53						
TWH	Lutao	0.98	187	eP		Pg	17 38 08.0 0.0
	baz=170						
TPUB	Ta-pu	0.98	247	eP		Pb	17 38 08.6 0.0
	baz=246						
TPUB				eS		Sb	17 38 21.4 -0.3
	baz=246						
WDLH	Douliu	0.99	270	eP		Pb	17 38 08.9 +0.3
	baz=269						
WDLH				eS		Sn	17 38 23.4 -0.3
	baz=269						
TWGBT	Beinan	0.99	210	eP		Pg	17 38 07.1 -1.1
	baz=209						
TWG	Pinlang	1.00	210	eP		Pg	17 38 06.8 -1.4
	baz=209						
YHNB	Yeheng	1.00	347	eP		Pb	17 38 08.6 -0.3
	baz=338						
YHNB				eS		Sg	17 38 21.4 0.0
	baz=338						
NSK	Sanguang	1.01	347	eP		Pb	17 38 08.9 -0.2
	baz=338						
NSK				eS		Sg	17 38 21.3 -0.5
	baz=338						
WTP	Ta-pu	1.02	245	eP		Pb	17 38 09.3 +0.2
	baz=251						
WTP				eS		Sb	17 38 22.5 -0.3
	baz=251						
TWE	Neicheng	1.03	3	eP		Pn	17 38 10.0 0.0
	baz=5.0						
WCHH	Zhanghua	1.04	292	eP		Pn	17 38 10.1 -0.1
	baz=291						
NSY	Sanyi	1.07	313	eP		Pn	17 38 10.8 +0.2
	baz=313						
NSTT	Nanjuang	1.09	329	eP		Pb	17 38 10.4 0.0
	baz=328						
NSTT				eS		Sg	17 38 23.9 -0.4
	baz=328						
LIOB	Emei	1.10	330	eP		Pn	17 38 11.0 -0.1
	baz=330						
CHY	Chiayi	1.11	260	eP		Pn	17 38 11.1 0.0
	baz=272						
CHY				eS		Sn	17 38 27.8 +1.1
	baz=272						
CHN1	Nanshi	1.12	244	eP		Pn	17 38 11.3 0.0
	baz=243						
CHN1				eS		Sn	17 38 27.3 +0.4
	baz=243						
TWK	Hsinying	1.12	248	eP		Pb	17 38 10.8 0.0
	baz=247						
TWK				eS		Sn	17 38 27.2 +0.3
	baz=247						
SGST	Jiashian	1.12	238	eP		Pb	17 38 11.2 +0.2
	baz=237						
SGST				eS		Sn	17 38 28.9 +1.8
	baz=237						
SLGT	Liugui	1.13	232	eP		Pb	17 38 11.2 +0.3
	baz=233						
NMLH	Miaoli	1.13	319	eP		Pn	17 38 11.9 +0.4
	baz=317						
RLNB	Erlin	1.17	280	eP		Pn	17 38 12.0 0.0
	baz=278						
NTC	Toucheng	1.18	10	eP		Pn	17 38 12.5 +0.4
	baz=355						
EGS		1.19	14	eP		Pn	17 38 12.7 +0.5
	baz=1.0						
WLGB	Puzi	1.22	260	eP		Pn	17 38 13.0 +0.3
	baz=272						
SBCB	Hsinchu	1.24	333	eP		Pn	17 38 13.5 +0.5
	baz=331						
WSF	Szhu	1.28	268	eP		Pb	17 38 13.6 0.0
	baz=268						
WSF				eS		Sn	17 38 31.4 +0.6
	baz=268						
TATO	Taipei	1.29	355	eP		Pg	17 38 13.6 -0.2
	baz=354						
TIPB	Shuangxi	1.29	8	eP		Pg	17 38 12.8 -1.2
	baz=355						
CHN3	Shinhua	1.30	242	eP		Pb	17 38 14.1 +0.2
	baz=243						
SSD	Sandimen	1.30	224	eP		Pn	17 38 13.4 -0.4
	baz=215						
CHN8	Yiju	1.33	256	eP		Pg	17 38 14.6 -0.1
	baz=267						
NCUH	Zhongli	1.33	343	eP		Pn	17 38 14.4 +0.1
	baz=354						
NCU	National Centr	1.34	343	eP		Pg	17 38 15.9 +1.2
	baz=354						
TAP1	Taipei	1.35	356	eP		Pg	17 38 14.9 -0.1
	baz=357						
NWF	Wu-fen Shan	1.39	6	eP		Pg	17 38 15.6 -0.2
	baz=6.0						
WFSB	Wu-fen Shan	1.39	6	eP		Pb	17 38 15.4 0.0
	baz=7.0						
MASBT	Mashibuluo	1.40	220	eP		Pn	17 38 14.3 -0.8
	baz=222						
JYNG	Yonagunijimaku	1.43	58	P		Pn	17 38 14.9 -0.7
YM04	YM04	1.46	357	eP		Pb	17 38 16.5 -0.2
	baz=358						
YM10	YM10	1.46	358	eP		Pn	17 38 15.8 -0.2
	baz=2.0						
YM11	YM11	1.47	359	eP		Pg	17 38 17.3 -0.1
	baz=2.0						
NTST	Danshui	1.48	354	eP		Pg	17 38 18.1 +0.6
	baz=354						
YM07	YM07	1.48	0	eP		Pn	17 38 15.0 -1.3
	baz=4.0						
YM03	YM03	1.49	357	eP		Pb	17 38 17.1 -0.1
	baz=360						
YM12	YM12	1.49	358	eP		Pg	17 38 18.6 +0.9
	baz=2.0						
YOJ	Yonaguni jima	1.49	59	eP		Pn	17 38 16.8 +0.5
	baz=64						
YOJ				eS		Sb	17 38 36.6 +0.3
	baz=64						
YOJ	Yonaguni jima	1.49	59	P		Pn	17 38 16.9 +0.5
YOJ				eS		Sn	17 38 35.9 -0.2
SCZT	Fangliau	1.60	215	eP		Pb	17 38 19.2 +0.2
	baz=216						
SCZT				eS		Sg	17 38 41.7 +1.2
	baz=216						
WDGT	Dungji	1.84	257	eP		Pn	17 38 21.0 -0.3
	baz=268						
PHUB	P'eng-hu	1.88	265	eP		Pn	17 38 22.1 +0.3
	baz=266						
PNG	Penghu	1.89	267	eP		Pn	17 38 22.2 +0.3
	baz=268						
HATJ	Hateruma jima	2.04	79	eS		Sn	17 38 49.8 +0.1
IRIF	Iriomote-Funau	2.04	71	P		Pn	17 38 24.4 +0.5
JKRS	Kuro-shima	2.26	75	P		Pn	17 38 27.8 +0.9
JKRS				eS		Sn	17 38 55.4 +0.3
JIJ	Ishigaki jima	2.41	73	P		Pn	17 38 29.0 0.0
JIJ				eS		Sn	17 38 59.4 +0.6
JISG	Ishigakijimahi	2.62	69	P		Pn	17 38 31.9 0.0
JISG				eS		Sn	17 39 03.4 -0.6
MATB	Ma-tsu	2.88	329	eP		Pn	17 38 35.9 +0.3
	baz=323						
JTJ	Tarama	2.98	71	eS		Sn	17 39 13.3 +0.5
KNM	Kinmen	3.00	285	eP		Pn	17 38 38.5 +1.4
	baz=280						
KNMB	Chin-men Tao	3.05	285	eP		Pn	17 38 37.8 0.0
	baz=281						

ISN **14** *17:38:10.8±0.3, 37.°20N×42.°49E, h0km, ML2.5*
CSEM **14** *17:38:12.5±0.1, 37.°28N×42.°57E, h5km, ML2.5, Error ellipse: s-maj=5.8km s-min=2.0km az=60.0*

ISK 14 17:38:12.6, 37.°29N×42.°51E, h6km, ML2.5/6, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRT	Sirnak	0.21	346	PG	Pg	17 38 17.3	+0.4
SIRT				SG	Sg	17 38 20.9	+1.1
SIRT	Sirnak	0.21	346	ePg	Pg	17 38 17.3	+0.4
SIRT				eSg	Sg	17 38 20.9	+1.1
GURO	Guroymak-BITLI	1.31	344	PN	Pb	17 38 38.0	+0.2
GURO				SN	Sn	17 38 56.6	+1.0
GURO	Guroymak-BITLI	1.31	344	ePn	Pb	17 38 38.0	+0.2
GURO				eSn	Sn	17 38 56.6	+1.0
SVAN	Silvan-Diyarba	1.34	310	PN	Pg	17 38 38.5	+0.1
SVAN				SN	Sn	17 38 57.4	+1.1
SVAN	Silvan-Diyarba	1.34	310	ePn	Pg	17 38 38.5	+0.1
SVAN				eSn	Sn	17 38 57.4	+1.1
MAZI	Mazidag	1.65	276	PN	Pn	17 38 42.8	+0.5
MAZI	Mazidag	1.65	276	ePn	Pn	17 38 42.8	+0.5
BNGB	Bing¶l	2.23	320	PN	Pn	17 38 51.1	+0.9
BINT	Bingol	2.24	315	ePn	Pn	17 38 51.1	+0.6
SVRC	Sivrice-ELAZID	2.75	294	PN	Pn	17 38 58.6	+1.1
SVRC	Sivrice-ELAZID	2.75	294	ePn	Pn	17 38 58.6	+1.1
PTK	Pertek	2.93	304	PN	Pn	17 39 00.9	+0.9
PTK	Pertek	2.93	304	ePn	Pn	17 39 00.9	+0.9

ISCJB **14** *17:47:38.1±0.5, 30.°79N±0.°04×130.°1E±0.°1, h165km±4km, mb3.4/4, Error ellipse: s-maj=15.9km s-min=5.8km az=13.6*
IDC **14** *17:47:38.7±0.8, 30.°86N×129.°82E, h154km±9km, mb3.2/4, mb1 3.3/6, mb1mx2.9/67, mbtmp3.7/6, Error ellipse: s-maj=33.0km s-min=8.7km az=103.0*
JMA **14** *17:47:40.3±0.1, 30.°83N×130.°22E, h156km±1km, M3.1*

ISC 14 17:47:39.0±0.9, 30.°80N±0.°05×130.°12E±0.°10, h163km±7km, n17, σ0°81/29, mb3.4/4, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKC	Kuchinoerabu	0.34	169	P	Pn	17 48 01.7	+0.5
JKC				S	Sn	17 48 19.0	+0.8
JYAK	Yakushimahirau	0.65	149	P	Pn	17 48 03.2	+0.6
JYAK				eS	Sn	17 48 20.2	-0.5
JTN	Tanegashima 3	0.75	101	P	Pn	17 48 03.5	+0.3
JTN				S	Sn	17 48 21.4	-0.3
JSU	Suzuyama	0.76	22	P	Pn	17 48 03.7	+0.4
JSU				eS	Sn	17 48 21.7	-0.3
JTSR	Tashiro 2	0.78	62	P	Pn	17 48 03.3	-0.1
JTSR				S	Sn	17 48 20.7	-1.4
JSJ	Shimokoshiki	0.94	338	P	Pn	17 48 04.8	+0.3
JSJ				S	Sn	17 48 23.9	-0.3
JNAR	Kushima--Naru	1.22	53	P	Pn	17 48 07.2	+0.4
JNAR				S	Sn	17 48 27.6	-0.7
JTZ	Takazaki	1.37	37	P	Pn	17 48 08.6	+0.3
JTZ				eS	Sn	17 48 29.3	-1.6
JZO	Okuchi	1.40	17	P	Pn	17 48 09.1	+0.6
JZO				S	Sn	17 48 31.0	-0.4
JIU2	Izumi 2	1.84	19	P	Pn	17 48 13.8	+0.7
JIU2				S	Sn	17 48 39.4	-0.1
JNU	Nakatsue	2.40	15	P	Pn	17 48 20.2	+0.6
	3.0nm,0.3s,baz=200,slow=8.6,SNR=32						
JNU				S	Sn	17 48 50.6	-0.4
	4.2nm,0.3s,baz=6.3,slow=9.2,SNR=11						
JAM	Amami Oshima	2.42	191	S	Sn	17 48 51.2	-0.3
JOW	Kunigami	4.27	203	P	Pn	17 48 43.6	+0.4
	3.7nm,0.3s,baz=109,slow=14,SNR=19						
JOW				S	Sn	17 49 31.2	-2.0
	6.2nm,0.3s,baz=78,slow=30,SNR=8.9						
WRA	Warramunga Arr	50.62	175	P	P	17 56 22.1	+0.7
	0.2nm,0.3s,baz=353,slow=7.8,SNR=6.1						
ASAR	Alice Springs	54.28	176	P	P	17 56 49.5	+1.2
	0.3nm,0.8s,baz=352,slow=5.6,SNR=14						
FINES	FINESS Array B	69.73	330	P	P	17 58 30.8	0.0
	0.7nm,0.4s,baz=67,slow=4.7,SNR=9.7						
AKASG	Malin Array Be	73.16	319	P	P	17 58 50.6	-1.0
	0.4nm,0.4s,baz=60,slow=6.3,SNR=5.2						

NIED **14** *17:52:00, 37.°60N×142.°50E, h29km, Mw3.5 Best double couple: M0:2.22000×10^14 NP1:φ=23.00000°, δ=43.00000°, λ=-92.00000°. NP2:φ=205.00000°, δ=47.00000°, λ=-88.00000°.*
IDC **14** *17:52:00.7±1.1, 37.°72N×142.°70E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.4/67, mbtmp3.5/6, ML2.9/1, MS3.5/2, Ms1 3.5/2, ms1mx2.5/61, Error ellipse: s-maj=35.9km s-min=21.3km az=105.0*
ISCJB **14** *17:52:01.6±0.8, 37.°66N±0.°07×142.°72E±0.°07, h14km, mb3.6/5, MS3.5/2, Error ellipse: s-maj=10.4km s-min=7.5km az=15.4*
JMA **14** *17:52:04.2±0.4, 37.°58N×142.°51E, h22km, M3.5*

ISC 14 17:52:03.5±1.1, 37.°72N±0.°08×142.°63E±0.°08, h14km, n20, σ1°53/14, mb3.7/5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	Ouri	1.25	306	P	Pn	17 52 26.8	+0.3
JIO				eS	Sb	17 52 42.4	-0.5
JMM	Marumori	1.47	276	eS	Sn	17 52 46.7	-1.8
JOU	Okura	1.69	293	eS	Sn	17 52 54.1	+0.2
JOM	Ohasama	2.04	329	P	Pn	17 52 40.2	+2.8
JYK	Kaneyama	2.15	305	P	Pn	17 52 40.1	+1.2
MJAR	Matsushiro Arr	3.73	253	Pn	Pn	17 53 01.8	+1.2
	1.0nm,0.3s,baz=81,slow=17,SNR=8.0						
MAT	Matsushiro	3.73	253	P	Pn	17 53 02.6	+2.0
MAT				eS	Sn	17 53 45.6	+1.3
SEY	Seymchan	25.94	10	P	P	17 57 33.1	-1.9
	0.6nm,0.7s,baz=149,slow=19,SNR=2.1						
H11N2	WAKE ISLAND Hy	27.69	124	T	T	18 26 52.7	
	baz=316,slow=75,SNR=29						
H11N1	WAKE ISLAND Hy	27.70	124	T	T	18 26 55.9	
	baz=316,slow=75,SNR=8.6						
H11N3	WAKE ISLAND Hy	27.71	124	T	T	18 26 59.4	
	baz=316,slow=75,SNR=17						
H11S1	WAKE ISLAND Hy	28.44	126	T	T	18 27 58.4	
	baz=317,slow=76,SNR=6.7						
H11S3	WAKE ISLAND Hy	28.44	126	T	T	18 27 50.5	
	baz=317,slow=76,SNR=9.5						
H11S2	WAKE ISLAND Hy	28.46	126	T	T	18 27 51.7	
	baz=317,slow=76,SNR=6.3						
BRDH	Bariadhala	46.01	266	LR	LR	18 22 26.2	
	comp=Z,84nm,19.9s,baz=208,slow=40						
KURBB	Kurchatov Arra	46.35	308	P	P	18 00 28.2	-0.7
	0.4nm,0.7s,baz=80,slow=8.1,SNR=3.0						
ILAR	Eielson Array	48.40	33	P	P	18 00 45.5	+0.9
	0.6nm,0.9s,baz=251,slow=5.6,SNR=4.8						
PSI	Prapat	52.98	240	LR	LR	18 23 13.6	
	comp=Z,31nm,20.5s,baz=89,slow=35						
WRA	Warramunga Arr	57.88	189	P	P	18 01 53.8	-1.1
	1.7nm,1.0s,baz=6.1,slow=7.2,SNR=11						
ASAR	Alice Springs	61.61	189	P	P	18 02 20.2	-0.3
	0.4nm,0.7s,baz=17,slow=7.4,SNR=4.6						

NIED **14** *18:25:00, 23.°60N×121.°60E, h8km, Mw4.0 Best double couple: M0:1.16000×10^15 NP1:φ=216.00000°, δ=55.00000°, λ=140.00000°. NP2:φ=332.00000°, δ=58.00000°, λ=43.00000°.*
IDC **14** *18:25:58.9±0.6, 23.°71N×121.°72E, h0km, mb3.8/15, mb1 4.0/16, mb1mx3.8/62, mbtmp3.8/16, ML3.6/1, MS3.2/11, Ms1 3.2/11, ms1mx2.9/65, Error ellipse: s-maj=22.5km s-min=13.5km az=70.0*
JMA **14** *18:25:58.9±0.1, 23.°65N×121.°65E, h0km, M3.8*
ISCJB **14** *18:25:59.6±0.3, 23.°68N±0.°01×121.°62E±0.°01, h5km±2km, mb3.8/20, MS3.3/9, Error ellipse: s-maj=2.3km s-min=1.5km az=38.2*
NEIC **14** *18:25:59.7±4.8, 23.°71N×121.°71E, h5km±30km, mb4.4/4, Error ellipse: s-maj=10.7km s-min=8.5km az=74.0*
TAP **14** *18:26:00.0, 23.°69N×121.°53E, h6km, ML4.4, C*
BJI **14** *18:26:01.3, 23.°66N×121.°58E, h16km, mb4.0/17, mB4.4/14, ML3.9/4, Ms4.0/12, Ms7 3.9/13*

ISC 14 18:25:59.7±1.0, 23.°67N±0.°01×121.°62E±0.°02, h4km±7km, n152, σ0°94/201, mb3.9/20, MS3.3/9, 13C-18D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	Guangfu	0.18	270	⇓P	Pg	18 26 02.5	-0.6
	baz=266						
EGFH				S	Sg	18 26 04.7	-0.8
	baz=266						
ESL	Shilin	0.22	311	⇓iP	Pg	18 26 03.4	-0.6
	baz=316						
ESL				i S	Sg	18 26 05.8	-1.3
	baz=316						
ENLB	Shoufeng	0.23	356	P	Pg	18 26 05.5	+1.2
	baz=15						
ENLB				S	Sg	18 26 10.4	+3.0
	baz=15						
HGSD	Ruisui	0.25	226	⇓P	Pg	18 26 05.5	+1.0
	baz=202						
HGSD				S	Sb	18 26 10.6	-0.9
	baz=202						
HWA	Hwalien	0.31	358	eP	Pb	18 26 07.1	-0.6
	baz=360						
HWA				S	Sb	18 26 12.4	-0.7
	baz=360						
EHY	Hungye	0.32	239	⇓iP	Pg	18 26 05.6	-0.2
	baz=236						
EHY				S	Sg	18 26 09.9	-0.1
	baz=236						
YULB	Yu-li	0.40	227	⇓P	Pg	18 26 07.7	+0.2
	baz=228						
YULB				S	Sg	18 26 13.7	+1.0
	baz=228						
TWD	Chiawan	0.41	357	P	Pg	18 26 08.3	+0.7
	baz=357						
TWD				eS	Sg	18 26 13.8	+0.8
	baz=357						
TWF1	Yuli	0.43	223	⇓iP	Pg	18 26 08.4	+0.5
	baz=231						
VWDT	VWDT	0.45	281	⇓P	Pg	18 26 07.9	-0.4
	baz=281						
VWDT				eS	Sg	18 26 12.9	-1.2
	baz=281						
NACB	Ninganchiao	0.50	357	eP	Pg	18 26 09.5	+0.1
	baz=355						
NACB				S	Sg	18 26 16.4	+0.4
	baz=355						
FULB	Fuli	0.55	213	eP	Pb	18 26 12.1	+0.1
	baz=225						
CHGB	Renai	0.56	314	⇓P	Pg	18 26 10.3	-0.3
	baz=317						
CHGB				S	Sg	18 26 16.6	-1.3
	baz=317						
CHKT	Chengkung	0.61	202	⇓P	Pb	18 26 12.4	-0.5
	baz=196						
CHKT				S	Sb	18 26 22.5	+0.7
	baz=196						
SSLB	Suanglung	0.62	281	⇓P	Pg	18 26 11.0	-0.6
	baz=282						
SSLB				S	Sg	18 26 17.9	-1.8
	baz=282						
SMLT	Sun Moon Lake	0.69	288	⇓iP	Pg	18 26 12.5	-0.5
	baz=289						
SMLT				eS	Sg	18 26 19.6	-2.4
	baz=289						
ELDTW	Lidau	0.73	229	⇑P	Pg	18 26 13.3	-0.4
	baz=224						
ELDTW				eS	Sg	18 26 22.9	-0.3
	baz=224						
TYC	Yuchr	0.74	289	⇓iP	Pg	18 26 13.1	-0.7
	baz=290						
TYC				eS	Sg	18 26 22.2	-1.2
	baz=290						
ENA	Nanau	0.77	8	⇓P	Pb	18 26 14.8	-0.8
	baz=2.0						
NANB	Nanao	0.77	9	⇑P	Pg	18 26 14.8	+0.4
	baz=23						
NANB				eS	Sg	18 26 25.0	+0.7
	baz=23						
NNSB	Datong	0.79	344	⇑P	Pg	18 26 14.8	0.0
	baz=339						
NNSB				eS	Sg	18 26 23.5	-1.5
	baz=339						
NNSH	Datong	0.79	344	eP	Pg	18 26 14.5	-0.3
	baz=339						
NNSH				S	Sg	18 26 24.2	-0.8
	baz=339						
ENAH	Nanao	0.80	13	eP	Pb	18 26 15.6	-0.6
	baz=15						
NNS	Nan Shan	0.80	344	⇓iP	Pg	18 26 15.2	+0.1
	baz=339						
NNS				S	Sg	18 26 24.9	-0.6
	baz=339						
WJS	Zhushan	0.83	281	eP	Pb	18 26 16.8	+0.1
	baz=287						
WJS				eS	Sb	18 26 28.7	+0.4
	baz=287						
TWC	Suao	0.96	13	eP	Pb	18 26 18.7	-0.2
	baz=7.0						
TWC				eS	Sn	18 26 34.5	+0.4
	baz=7.0						
TWH	Lutao	0.96	188	eP	Pg	18 26 17.3	-0.8
	baz=172						
ENTT	Nioudou	0.97	357	⇓P	Pb	18 26 18.6	-0.4
	baz=351						
ENTT				S	Sg	18 26 31.3	+0.4
	baz=351						
WGK	Gukeng	0.97	271	⇑P	Pb	18 26 19.0	-0.1
	baz=271						
WGK				S	Sb	18 26 32.8	+0.6
	baz=271						
TPUB	Ta-pu	0.98	248	⇑P	Pg	18 26 18.8	+0.4
	baz=255						
TPUB				eS	Sg	18 26 30.6	-0.6
	baz=255						
TWGBT	Beinan	0.98	210	eP	Pg	18 26 16.9	-1.6
	baz=208						
TWG	Pinlang	0.98	211	eP	Pg	18 26 17.5	-1.0
	baz=208						
TCU	Taichung	0.99	299	eP	Pb	18 26 19.2	-0.1
	baz=302						
WDLH	Douliu	0.99	271	⇑P	Pb	18 26 19.4	0.0
	baz=272						
WDLH				eS	Sb	18 26 33.9	+1.1
	baz=272						
EOS1	EOS1	0.99	28	eP	Pn	18 26 21.0	+0.6
	baz=48						
TTN	Taitung	1.01	206	eP	Pb	18 26 19.7	0.0
	baz=203						
WTP	Ta-pu	1.01	246	⇑P	Pg	18 26 19.4	+0.3
	baz=252						
WTP				eS	Sg	18 26 33.2	+0.9
	baz=252						
YHNB	Yeheng	1.02	347	P	Pg	18 26 19.5	+0.2
	baz=338						
YHNB				eS	Sg	18 26 31.4	-1.2
	baz=338						
TWQ1	Liyutan	1.03	311	⇑P	Pb	18 26 19.9	-0.1
	baz=314						
NSK	Sanguang	1.03	347	⇓iP	Pb	18 26 19.8	-0.4
	baz=337						
NSK				i S	Sg	18 26 31.9	-1.0
	baz=337						
TWE	Neicheng	1.05	2	P	Pg	18 26 19.7	-0.1
	baz=353						
TWE				eS	Sb	18 26 33.9	-0.6
	baz=353						
WCHH	Zhanghua	1.05	293	eP	Pb	18 26 20.2	-0.2
	baz=294						
ILA	Ilan	1.10	6	eP	Pb	18 26 21.1	-0.1
	baz=352						
CHY	Chiayi	1.11	261	eP	Pb	18 26 21.6	+0.1
	baz=263						
CHN1	Nanshi	1.11	245	⇑iP	Pg	18 26 21.0	0.0
	baz=244						
CHN1				S	Sb	18 26 37.3	+1.0
	baz=244						
NSTT	Nanjuang	1.11	330	eP	Pg	18 26 20.9	-0.1
	baz=323						
NSTT				eS	Sg	18 26 34.4	-1.1
	baz=323						
TWK	Hsinying	1.11	249	eP	Pg	18 26 20.8	-0.2
	baz=248						
TWK				eS	Sb	18 26 37.4	+1.0
	baz=248						
SGST	Jiashian	1.12	239	P	Pg	18 26 21.4	+0.3
	baz=237						
SGST				S	Sb	18 26 37.5	+1.0
	baz=237						
SLGT	Liugui	1.12	233	eP	Pg	18 26 20.9	-0.2
	baz=234						
LIOB	Emei	1.12	331	⇓P	Pb	18 26 21.4	-0.2
	baz=324						
LIOB				S	Sg	18 26 34.9	-0.8
	baz=324						
NMLH	Miaoli	1.15	319	eP	Pn	18 26 22.6	+0.1
	baz=319						

NMLH				*e*S	**Sb**	**18 26 37.0**	**-0.4**
	baz=319						
RLNB	**Erlin**	**1.18**	**281**	*e*P	**Pg**	**18 26 21.9**	**-0.3**
	baz=282						
RLNB				*e*S	**Sb**	**18 26 38.7**	**+0.6**
	baz=282						
NTC	**Toucheng**	**1.20**	**9**	*e*P	**Pn**	**18 26 23.1**	**-0.1**
	baz=352						
EGS		**1.21**	**14**	*e*P	**Pn**	**18 26 24.3**	**+1.0**
	baz=25						
WLGB	**Puzi**	**1.23**	**261**	⇑P	**Pg**	**18 26 23.4**	**+0.2**
	baz=262						
WLGB				*e*S	**Sn**	**18 26 40.6**	**+0.1**
	baz=262						
ECL	**Taimali**	**1.23**	**210**	*e*P	**Pg**	**18 26 22.0**	**-1.2**
	baz=192						
SBCB	**Hsinchu**	**1.26**	**333**	P	**Pn**	**18 26 24.9**	**+0.8**
	baz=326						
SBCB				*e*S	**Sn**	**18 26 41.9**	**+0.4**
	baz=326						
HSN	**Hsinchu**	**1.28**	**332**	*e*P	**Pn**	**18 26 25.0**	**+0.7**
	baz=333						
HSN				S	**Sn**	**18 26 42.4**	**+0.5**
	baz=333						
WSF	**Szhu**	**1.28**	**269**	*e*P	**Pg**	**18 26 23.4**	**-0.8**
	baz=270						
WSF				*e*S	**Sg**	**18 26 40.1**	**-0.8**
	baz=270						
SSD	**Sandimen**	**1.29**	**225**	*e*P	**Pg**	**18 26 23.7**	**-0.7**
	baz=224						
CHN3	**Shinhua**	**1.29**	**243**	⇑P	**Pb**	**18 26 24.9**	**+0.4**
	baz=243						
CHN3				*e*S	**Sn**	**18 26 44.9**	**+2.6**
	baz=243						
TATO	**Taipei**	**1.31**	**355**	⇑*e*P	**Pg**	**18 26 23.9**	**-0.9**
	baz=354						
TATO				S	**Sb**	**18 26 41.9**	**0.0**
	baz=354						
TATO	**Taipei**	**1.31**	**355**	*e*Pn	**Pg**	**18 26 24.0**	**-0.8**
TIPB	**Shuangxi**	**1.31**	**8**	*e*P	**Pg**	**18 26 23.9**	**-0.9**
	baz=352						
CHN8	**Yiju**	**1.33**	**256**	⇑P	**Pn**	**18 26 24.6**	**-0.4**
	baz=257						
CHN8				S	**Sn**	**18 26 43.7**	**+0.5**
	baz=257						
NCUH	**Zhongli**	**1.35**	**343**	*e*P	**Pg**	**18 26 25.7**	**0.0**
	baz=354						
NCU	**National Centr**	**1.35**	**343**	*e*P	**Pg**	**18 26 26.7**	**+1.0**
	baz=341						
NCU				*e*S	**Sn**	**18 26 44.3**	**+0.5**
	baz=341						
TWB1	**Santiao Chiao**	**1.38**	**14**	*e*P	**Pn**	**18 26 25.6**	**-0.1**
	baz=355						
MASBT	**Mashibuluo**	**1.39**	**221**	*e*P	**Pn**	**18 26 24.8**	**-1.1**
	baz=213						
MASBT				*e*S	**Sn**	**18 26 45.7**	**+1.0**
	baz=213						
SCLT	**Jiali**	**1.40**	**250**	*e*P	**Pn**	**18 26 25.1**	**-0.8**
	baz=251						
SCLT				*e*S	**Sn**	**18 26 46.5**	**+1.7**
	baz=251						
SGLT	**Jiouru**	**1.40**	**228**	*e*P	**Pg**	**18 26 27.6**	**+1.0**
	baz=230						
NWF	**Wu-fen Shan**	**1.41**	**6**	*e*P	**Pg**	**18 26 27.4**	**+0.8**
	baz=4.0						
WFSB	**Wu-fen Shan**	**1.41**	**6**	*e*P	**Pg**	**18 26 27.7**	**+1.1**
	baz=4.0						
TAI1	**Yung-k'ang**	**1.42**	**244**	*e*P	**Pg**	**18 26 27.1**	**+0.2**
	baz=247						
JYNG	**Yonagunijimaku**	**1.44**	**57**	P	**Pn**	**18 26 25.1**	**-1.5**
JYNG				S	**Sn**	**18 26 46.7**	**+0.8**
YM04	**YM04**	**1.48**	**357**	*e*P	**Pg**	**18 26 27.8**	**-0.3**
	baz=354						
YM10	**YM10**	**1.48**	**358**	*e*P	**Pn**	**18 26 27.0**	**-0.2**
	baz=355						
YM11	**YM11**	**1.49**	**358**	*e*P	**Pb**	**18 26 27.7**	**-0.3**
	baz=355						
NTST	**Danshui**	**1.50**	**354**	*e*P	**Pb**	**18 26 28.0**	**-0.1**
	baz=351						
YOJ	**Yonaguni jima**	**1.50**	**58**	*e*P	**Pg**	**18 26 28.1**	**-0.3**
	baz=56						
YOJ				*e*S	**Sg**	**18 26 47.5**	**-0.3**
	baz=56						
YOJ	**Yonaguni jima**	**1.50**	**58**	P	**Pg**	**18 26 28.1**	**-0.3**
YOJ				*e*S	**Sg**	**18 26 48.2**	**+0.4**
YM07	**YM07**	**1.50**	**0**	*e*P	**Pn**	**18 26 26.6**	**-0.8**
	baz=357						
YM03	**YM03**	**1.51**	**357**	*e*P	**Pb**	**18 26 28.0**	**-0.2**
	baz=354						
YM12	**YM12**	**1.51**	**358**	*e*P	**Pb**	**18 26 27.9**	**-0.4**
	baz=355						
YM08	**YM08**	**1.51**	**359**	*e*P	**Pn**	**18 26 27.7**	**+0.1**
	baz=356						
SCZT	**Fanqliau**	**1.58**	**216**	*e*P	**Pb**	**18 26 29.4**	**-0.1**
	baz=213						
SCZT				*e*S	**Sb**	**18 26 50.4**	**+0.5**
	baz=213						
TWY	**Chenhua**	**1.60**	**359**	*e*P	**Pb**	**18 26 29.6**	**-0.2**
	baz=357						
LAY	**Lan-yu**	**1.62**	**182**	*e*P	**Pn**	**18 26 25.8**	**-3.2**
	baz=169						
WLCH	**Liuqiu**	**1.74**	**221**	*e*P	**Pb**	**18 26 32.7**	**+0.5**
	baz=224						
TWP	**Hsiaoliuchiu**	**1.75**	**222**	*e*P	**Pg**	**18 26 33.3**	**0.0**
	baz=224						
HEN	**Hengchun**	**1.84**	**206**	*e*P	**Pb**	**18 26 33.7**	**-0.2**
	baz=193						
WDGT	**Dungji**	**1.84**	**258**	*e*P	**Pn**	**18 26 30.5**	**-1.6**
	baz=260						
WDGT				*e*S	**Sn**	**18 26 55.0**	**-0.8**
	baz=260						
TWK1	**Hengchun**	**1.87**	**204**	*e*P	**Pb**	**18 26 34.0**	**-0.5**
	baz=191						
TWKBT	**Hengchun**	**1.87**	**204**	*e*P	**Pn**	**18 26 32.7**	**+0.2**
	baz=191						
TSEB	**Hengchuen, Pin**	**1.88**	**201**	*e*P	**Pn**	**18 26 33.5**	**+0.9**
	baz=188						
PHUB	**P'eng-hu**	**1.88**	**266**	*e*P	**Pn**	**18 26 31.5**	**-1.2**
	baz=269						
PNG	**Penghu**	**1.90**	**267**	*e*P	**Pn**	**18 26 32.1**	**-0.7**
	baz=270						
PNG				*e*S	**Sn**	**18 26 58.1**	**+1.0**
	baz=270						
HATJ	**Hateruma jima**	**2.04**	**79**	P	**Pn**	**18 26 35.1**	**+0.3**
HATJ				*e*S	**Sn**	**18 27 01.0**	**+0.3**
IRIF	**Iriomote-Funau**	**2.04**	**71**	P	**Pn**	**18 26 35.3**	**+0.5**
IRIF				S	**Sb**	**18 27 01.9**	**-1.2**
VCHM	**Qimei**	**2.06**	**258**	*e*P	**Pn**	**18 26 33.4**	**-1.7**
	baz=261						
VCHM				*e*S	**Sn**	**18 27 02.1**	**+0.9**
	baz=261						
JKRS	**Kuro-shima**	**2.26**	**75**	P	**Pn**	**18 26 38.3**	**+0.5**
JKRS				S	**Sn**	**18 27 07.5**	**+1.4**
VWUC	**VWUC**	**2.38**	**304**	*e*P	**Pn**	**18 26 38.1**	**-1.3**
	baz=307						
JIJ	**Ishigaki jima**	**2.41**	**73**	P	**Pn**	**18 26 39.9**	**0.0**
JIJ				*e*S	**Sn**	**18 27 09.5**	**-0.3**
JISG	**Ishigakijimahi**	**2.62**	**69**	P	**Pn**	**18 26 42.6**	**-0.2**
JISG				S	**Sn**	**18 27 15.4**	**+0.3**
MATB	**Ma-tsu**	**2.90**	**329**	*e*P	**Pn**	**18 26 46.8**	**+0.1**
	baz=325						
JTJ	**Tarama**	**2.98**	**70**	P	**Pn**	**18 26 48.1**	**+0.4**
JTJ				*e*S	**Sn**	**18 27 23.9**	**0.0**
KNM	**Kinmen**	**3.01**	**285**	*e*P	**Pn**	**18 26 49.1**	**+1.0**
	baz=287						
QZH	**Quanzhou**	**3.04**	**295**	⇓*i*Pn	**Pn**	**18 26 48.0**	**-0.5**
QZH				Sn	**Sn**	**18 27 24.0**	**-1.4**
QZH				smax	smax		
	comp=N,440nm,0.7s						
QZH				smax	smax		
	comp=E,320nm,1.2s						
QZH				LR	LR		
	comp=N,2μm,6.6s						
QZH				LR	LR		
	comp=Z,2μm,4.7s						
KNMB	**Chin-men Tao**	**3.06**	**286**	*e*P	**Pn**	**18 26 47.8**	**-1.0**
	baz=288						
JIRB	**Irabujima**	**3.44**	**70**	S	**Sn**	**18 27 35.4**	**0.0**
JIKM	**Ikemajima**	**3.54**	**69**	*e*S	**Sn**	**18 27 38.2**	**+0.5**
JOW	**Kunigami**	**6.80**	**61**	Pn	**Pn**	**18 27 39.5**	**-0.8**
	2.4nm,0.3s,baz=288,slow=19,SNR=4.1						
NJ2	**Nanjing**	**8.70**	**344**	*e*P	Pn	18 28 14.3	+8.0
NJ2				S	**Sn**	**18 29 46.4**	**+1.5**
NJ2				LR	LR		
	comp=E,730nm,8.9s						
NJ2				LR	LR		
	comp=Z,570nm,8.9s						
KSAR	**Wonju Array Be**	**14.74**	**20**	Pn	**P**	**18 29 32.8**	**-2.5**
KSRS	**Korea Array**	**14.77**	**20**	Pn	**P**	**18 29 32.8**	**-2.7**
	0.4nm,0.3s,baz=198,slow=11,SNR=16						
KSRS				LR	LR	18 35 57.3	
	comp=Z,47nm,18.6s,baz=208,slow=41						
XAN	**Xi'an**	**15.17**	**316**	P	**Pn**	**18 29 35.3**	**+0.5**
XAN				pP	sP	18 29 41.4	-0.3
XAN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
XAN				LR	LR		
	comp=E,250nm,6.7s						
XAN				LR	LR		
	comp=Z,360nm,9.6s						
DAV	**Davao City (W)**	**16.94**	**166**	LR	LR	18 35 52.0	
	comp=Z,83nm,22.0s,baz=344,slow=35						
MJAR	**Matsushiro Arr**	**19.21**	**44**	LR	LR	18 39 13.3	
	comp=Z,29nm,18.6s,baz=85,slow=42						
LZH	**Lanzhou**	**19.73**	**313**	*e*P	**Pn**	**18 30 35.4**	**+3.5**
LZH				pP	sP	18 30 38.8	+6.6
LZH				sP	pP	18 30 41.5	+10
LZH				pmax	pmax		
	comp=Z,27nm,1.0s						
CHTO	**Chiang Mai**	**21.67**	**261**	*e*P	**P**	**18 30 52.5**	**+1.0**
	13nm,1.3s						
CMAR	**Chiang Mai Arr**	**21.78**	**261**	P	**P**	**18 30 54.3**	**+1.6**
	2.8nm,0.9s,baz=66,slow=8.5,SNR=19						
CMAR				LR	LR	18 39 20.3	
	comp=Z,43nm,18.3s,baz=56,slow=37						
GTA	**Gaotai**	**24.23**	**315**	*e*P	**P**	**18 31 18.3**	**+0.5**
GTA				pP	sP	18 31 22.9	+3.4
GTA				sP	pP	18 31 25.8	+6.8
GTA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
KLR	**Kul'dur**	**26.73**	**15**	P	**P**	**18 31 39.5**	**-0.7**
	0.3nm,0.9s,baz=238,slow=4.5,SNR=8.2						
SONM	**Songino Array**	**27.00**	**337**	P	**P**	**18 31 42.2**	**-0.5**
	1.9nm,1.0s,baz=161,slow=6.3,SNR=3.6						
SONM				LR	LR	18 43 16.9	
	comp=Z,83nm,19.4s,baz=140,slow=38						
TLY	**Talaya**	**31.20**	**338**	LR	LR	18 45 54.3	
	comp=Z,64nm,18.2s,baz=97,slow=38						
WMQ	**Urumqi**	**34.30**	**314**	P	**P**	**18 32 49.3**	**+2.1**
WMQ				LR	LR		
	comp=N,61nm,15.7s						
WMQ				LR	LR		
	comp=E,79nm,16.7s						
WMQ				LR	LR		
	comp=Z,94nm,16.7s						
MKAR	**Makanchi Array**	**38.98**	**316**	P	**P**	**18 33 27.1**	**0.0**
	2.3nm,0.8s,baz=112,slow=9.7,SNR=15						
MKAR				LR	LR	18 50 44.7	
	comp=Z,41nm,20.1s,baz=64,slow=38						
ZALV	**Zalesovo Beam**	**40.89**	**327**	P	**P**	**18 33 41.7**	**-1.1**
	2.3nm,0.7s,baz=123,slow=7.3,SNR=10						
ZALV				LR	LR	18 50 57.9	
	comp=Z,18nm,20.9s,baz=70,slow=37						
FITZ	**Fitzroy Crossi**	**41.70**	**174**	P	**P**	**18 33 49.2**	**-0.5**
	1.3nm,0.9s,baz=0,slow=14,SNR=3.2						
H11N1	**WAKE ISLAND Hy**	**42.12**	**86**	T	T	19 18 50.1	
	baz=283,slow=75,SNR=41						
H11N2	**WAKE ISLAND Hy**	**42.12**	**86**	T	T	19 18 50.2	
	baz=283,slow=75,SNR=41						
H11N3	**WAKE ISLAND Hy**	**42.14**	**86**	T	T	19 18 50.4	
	baz=283,slow=75,SNR=49						
H11S3	**WAKE ISLAND Hy**	**42.24**	**88**	T	T	19 18 57.9	
	baz=284,slow=74,SNR=70						
H11S1	**WAKE ISLAND Hy**	**42.24**	**88**	T	T	19 18 58.5	
	baz=284,slow=74,SNR=37						
H11S2	**WAKE ISLAND Hy**	**42.25**	**88**	T	T	19 19 00.3	
	baz=284,slow=74,SNR=41						
KURK	**Kurchatov**	**42.74**	**320**	*e*P	**P**	**18 33 57.3**	**-0.6**
KURBB	**Kurchatov Arra**	**42.76**	**320**	P	**P**	**18 33 57.7**	**-0.3**
	0.8nm,0.6s,baz=112,slow=9.3,SNR=7.2						
AAK	**Ala-Archa**	**43.13**	**308**	LR	LR	18 53 58.6	
	comp=Z,17nm,18.0s,baz=120,slow=39						
WRAB	**Tennant Creek**	**45.08**	**163**	*e*P	**P**	**18 34 17.1**	**0.0**
WRA	**Warramunga Arr**	**45.09**	**163**	P	**P**	**18 34 15.4**	**-1.6**
	1.6nm,0.6s,baz=345,slow=8.7,SNR=25						
TIXI	**Tiksi**	**48.19**	**3**	*e*P	**P**	**18 34 38.8**	**-2.0**
	2.5nm,1.0s						
BVAR	**Borovoye Array**	**48.32**	**321**	P	**P**	**18 34 42.1**	**-0.1**
	0.4nm,0.5s,baz=131,slow=8.2,SNR=3.3						
ASAR	**Alice Springs**	**48.54**	**165**	P	**P**	**18 34 44.0**	**-0.1**
	1.7nm,1.0s,baz=355,slow=7.7,SNR=7.9						
ARU	**Arti**	**55.76**	**323**	P	**P**	**18 35 39.1**	**+1.7**
	6.2nm,1.3s						
STKA	**Stephens Creek**	**58.44**	**160**	P	**P**	**18 35 58.4**	**+1.7**
	1.2nm,0.6s,baz=359,slow=5.1,SNR=5.6						
ILAR	**Eielson Array**	**69.49**	**27**	P	**P**	**18 37 08.9**	**-0.1**
	0.5nm,0.7s,baz=278,slow=5.4,SNR=6.3						
FINES	**FINESS Array B**	**72.09**	**330**	P	**P**	**18 37 26.2**	**+1.4**
	0.5nm,0.5s,baz=44,slow=11,SNR=3.5						
DAWY	**Dawson**	**72.81**	**27**	*e*P	**P**	**18 37 29.5**	**+0.2**
	7.4nm,1.3s						
BRTR	**Keskin Array B**	**73.80**	**307**	P	**P**	**18 37 35.9**	**+0.2**
	1.2nm,1.0s,baz=120,slow=7.3,SNR=4.7						
HFS	**Hagfors**	**78.21**	**331**	LR	LR	19 13 34.5	
	comp=Z,35nm,19.7s,baz=101,slow=36						
NOA	**NORSAR Array B**	**78.86**	**332**	LR	LR	19 14 41.6	
	comp=Z,18nm,19.9s,baz=95,slow=37						
YKA	**Yellowknife Ar**	**83.29**	**23**	P	**P**	**18 38 26.2**	**-1.2**
	0.8nm,0.8s,baz=311,slow=4.7,SNR=5.0						

NNC 14 18:26:32.3±3.7, 36°.61N×70°.05E, h0km, mb3.9, mpv3.4, 3C-4D, Error ellipse: s-maj=30.9km s-min=22.9km az=153.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**4.35**	**38**	⇓P	Pn	18 27 39.3	-0.6
	4.9nm,0.5s						
SFK				⇓S	Sn	18 28 33.6	+2.2
	6.7nm,0.3s						
MNAS	**Manas**	**6.17**	**17**	⇑P	Pn	18 28 04.8	0.0
	0.8nm,0.4s						
MNAS				⇑S	Sn	18 29 16.1	0.0
	8.1nm,0.6s						
KK31	**Karatay Array**	**6.50**	**3**	P	Pn	18 28 10.2	+1.1
	1.5nm,0.4s,baz=177,slow=13,SNR=20						
KK31				⇓S	Sn	18 29 26.2	+2.2
	0.9nm,0.3s,baz=192,slow=25,SNR=6.5						
AAK	**Ala-Archa**	**6.93**	**28**	⇓S	Sn	18 29 34.0	-0.8
	6.0nm,1.1s						
AB31	**Akbulak array**	**14.63**	**333**	⇑P	Pn	18 29 59.4	-1.0
	2.1nm,0.5s,baz=152,slow=13,SNR=32						

*JMA **14** 18:28:07.8±0.1, 23°.65N×121°.65E, h1km, M3.2*
*ISCJB **14** 18:28:08.4±0.4, 23°.68N±0°.01×121°.61E±0°.02, h1km±3km,*
Error ellipse: s-maj=3.1km s-min=2.0km az=39.4
*TAP **14** 18:28:09.0, 23°.71N×121°.52E, h7km, ML3.6, B*
ISC 14 18:28:09.2±0.9, 23°.69N±0°.02×121°.57E±0°.02, h9km±6km, n89, σ0°.65/118, 3C-16D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	**Guangfu**	**0.13**	**259**	⇓*i*P	**Pg**	**18 28 11.5**	**-0.6**
	baz=257						
EGFH				*e*S	**Sg**	**18 28 13.5**	**-0.6**
	baz=257						
ESL	**Shilin**	**0.17**	**315**	⇓*i*P	**Pg**	**18 28 12.2**	**-0.6**
	baz=314						
ESL				*i* S	**Sg**	**18 28 14.2**	**-1.0**
	baz=314						
ENLB	**Shoufeng**	**0.21**	**9**	P	**Pg**	**18 28 14.2**	**+0.7**
	baz=18						
ENLB				S	**Sg**	**18 28 19.1**	**+2.6**
	baz=18						
HGSD	**Ruisui**	**0.24**	**213**	⇑P	**Pg**	**18 28 14.7**	**+0.7**
	baz=215						
HGSD				S	**Sg**	**18 28 19.6**	**+2.4**
	baz=215						
HWA	**Hwalien**	**0.28**	**7**	*e*P	**Pg**	**18 28 15.6**	**+0.7**
	baz=14						
EHY	**Hungye**	**0.29**	**230**	⇓P	**Pg**	**18 28 14.6**	**-0.4**
	baz=232						
EHY				S	**Sg**	**18 28 18.9**	**+0.1**
	baz=232						
TWD	**Chiawan**	**0.39**	**4**	⇑*i*P	**Pg**	**18 28 16.9**	**+0.2**
	baz=358						
TWD				*e*S	**Sg**	**18 28 22.4**	**+0.5**
	baz=358						
YULB	**Yu-li**	**0.39**	**219**	⇓P	**Pg**	**18 28 16.6**	**-0.2**
	baz=226						
YULB				*e*S	**Sg**	**18 28 22.7**	**+0.8**
	baz=226						
VWDT	**VWDT**	**0.39**	**279**	⇓P	**Pg**	**18 28 16.6**	**-0.3**
	baz=278						
TWF1	**Yuli**	**0.42**	**216**	⇓P	**Pg**	**18 28 17.4**	**0.0**
	baz=228						
NACB	**Ninganchiao**	**0.48**	**3**	*e*P	**Pg**	**18 28 18.1**	**-0.4**
	baz=356						
CHGB	**Renai**	**0.51**	**316**	⇓P	**Pg**	**18 28 18.9**	**-0.2**
	baz=323						
CHGB				S	**Sg**	**18 28 25.4**	**-0.5**
	baz=323						
FULB	**Fuli**	**0.55**	**207**	*e*P	**Pb**	**18 28 21.2**	**+0.1**
	baz=226						
SSLB	**Suanglung**	**0.57**	**280**	⇓P	**Pg**	**18 28 19.7**	**-0.5**
	baz=280						
SSLB				*e*S	**Sg**	**18 28 26.8**	**-0.8**
	baz=280						
CHKT	**Chengkung**	**0.62**	**197**	*e*P	**Pg**	**18 28 21.4**	**+0.2**
	baz=182						
SMLT	**Sun Moon Lake**	**0.64**	**287**	⇓P	**Pg**	**18 28 21.2**	**-0.4**
	baz=288						
SMLT				*e*S	**Sg**	**18 28 30.1**	**+0.2**
	baz=288						
TYC	**Yuchr**	**0.68**	**288**	⇓*i*P	**Pg**	**18 28 21.8**	**-0.6**
	baz=289						
TYC				*e*S	**Sg**	**18 28 31.5**	**+0.3**
	baz=289						
ELDTW	**Lidau**	**0.71**	**225**	*e*P	**Pg**	**18 28 22.3**	**-0.6**
	baz=235						
ENA	**Nanau**	**0.75**	**12**	*e*P	**Pg**	**18 28 23.6**	**0.0**
	baz=357						
NANB	**Nanao**	**0.75**	**13**	⇓P	**Pg**	**18 28 23.6**	**0.0**
	baz=1.0						
NANB				*e*S	**Sb**	**18 28 34.7**	**-0.1**
	baz=1.0						
NNSB	**Datong**	**0.75**	**347**	⇓P	**Pg**	**18 28 23.5**	**-0.2**
	baz=339						
NNSB				*e*S	**Sg**	**18 28 32.5**	**-1.0**
	baz=339						
NNSH	**Datong**	**0.75**	**347**	*e*P	**Pg**	**18 28 22.8**	**-0.9**
	baz=343						
NNS	**Nan Shan**	**0.76**	**347**	⇓P	**Pg**	**18 28 23.8**	**-0.1**
	baz=342						
WJS	**Zhushan**	**0.78**	**280**	*e*P	**Pb**	**18 28 24.7**	**-0.2**
	baz=280						
ENAH	**Nanao**	**0.79**	**17**	*e*P	**Pg**	**18 28 24.1**	**-0.3**
	baz=16						
WGK	**Gukeng**	**0.92**	**270**	*e*P	**Pn**	**18 28 27.9**	**-0.4**
	baz=272						
TCU	**Taichung**	**0.93**	**299**	*e*P	**Pn**	**18 28 28.2**	**-0.3**
	baz=299						
WDLH	**Douliu**	**0.94**	**270**	*e*P	**Pn**	**18 28 28.5**	**-0.1**
	baz=272						
ENTT	**Nioudou**	**0.94**	**0**	⇓P	**Pg**	**18 28 27.3**	**0.0**
	baz=358						
TPUB	**Ta-pu**	**0.94**	**246**	P	**Pb**	**18 28 27.9**	**+0.2**
	baz=255						
TPUB				*e*S	**Sb**	**18 28 40.7**	**+0.3**
	baz=255						
TWC	**Suao**	**0.95**	**16**	*e*P	**Pg**	**18 28 27.4**	**-0.1**
	baz=359						
TWQ1	**Liyutan**	**0.97**	**312**	*e*P	**Pn**	**18 28 29.1**	**0.0**
	baz=319						
TWQ1				*e*S	**Sn**	**18 28 42.8**	**-0.2**
	baz=319						
TWGBT	**Beinan**	**0.98**	**207**	*e*P	**Pg**	**18 28 27.1**	**-0.9**
	baz=208						
TWG	**Pinlang**	**0.98**	**208**	*e*P	**Pg**	**18 28 26.5**	**-1.5**
	baz=208						
WTP	**Ta-pu**	**0.98**	**243**	⇑P	**Pb**	**18 28 28.4**	**0.0**
	baz=252						
WTP				*e*S	**Sb**	**18 28 42.0**	**+0.5**
	baz=252						
TWH	**Lutao**	**0.98**	**185**	*e*P	**Pg**	**18 28 27.4**	**-0.6**
	baz=169						
YHNB	**Yeheng**	**0.99**	**350**	⇓P	**Pg**	**18 28 28.2**	**0.0**
	baz=339						
YHNB				*e*S	**Sg**	**18 28 39.6**	**-1.4**
	baz=339						
EOS1	**EOS1**	**1.00**	**31**	*e*P	**Pn**	**18 28 30.0**	**+0.7**
	baz=50						
NSK	**Sanguang**	**1.00**	**349**	⇓*e*P	**Pg**	**18 28 28.2**	**-0.1**
	baz=338						
NSK				*e*S	**Sg**	**18 28 40.5**	**-0.9**
	baz=338						
WCHH	**Zhanghua**	**1.00**	**293**	*e*P	**Pn**	**18 28 29.2**	**-0.1**
	baz=294						
TWE	**Neicheng**	**1.03**	**5**	*e*P	**Pg**	**18 28 28.9**	**0.0**
	baz=353						
TWE				*e*S	**Sn**	**18 28 44.9**	**+0.6**
	baz=353						
NSY	**Sanyi**	**1.03**	**315**	*e*P	**Pn**	**18 28 30.3**	**+0.5**
	baz=313						
NSY				*e*S	**Sn**	**18 28 44.8**	**+0.3**
	baz=313						
CHY	**Chiayi**	**1.06**	**260**	*e*P	**Pn**	**18 28 30.3**	**0.0**
	baz=262						
NSTT	**Nanjuang**	**1.07**	**331**	*e*P	**Pg**	**18 28 30.0**	**+0.3**
	baz=331						
LIOB	**Emei**	**1.07**	**332**	*e*P	**Pg**	**18 28 30.1**	**+0.3**
	baz=332						
CHN1	**Nanshi**	**1.08**	**242**	*e*P	**Pn**	**18 28 30.7**	**+0.1**
	baz=244						
CHN1				*e*S	**Sn**	**18 28 47.0**	**+1.4**
	baz=244						
SGST	**Jiashian**	**1.09**	**236**	*e*P	**Pn**	**18 28 30.4**	**-0.3**
	baz=237						
SGST				*e*S	**Sn**	**18 28 47.4**	**+1.5**
	baz=237						
SLGT	**Liugui**	**1.09**	**231**	*e*P	**Pb**	**18 28 29.9**	**-0.4**
	baz=234						
NMLH	**Miaoli**	**1.10**	**320**	*e*P	**Pn**	**18 28 31.7**	**+0.9**
	baz=319						
RLNB	**Erlin**	**1.12**	**280**	*e*P	**Pn**	**18 28 31.1**	**0.0**
	baz=282						
RLNB				*e*S	**Sn**	**18 28 47.9**	**+1.2**
	baz=282						
WLGB	**Puzi**	**1.18**	**260**	*e*P	**Pg**	**18 28 32.1**	**+0.3**
	baz=262						
NTC	**Toucheng**	**1.18**	**12**	*e*P	**Pb**	**18 28 31.6**	**-0.2**
	baz=356						
SBCB	**Hsinchu**	**1.22**	**334**	*e*P	**Pb**	**18 28 32.4**	**0.0**
	baz=333						
ECL	**Taimali**	**1.23**	**207**	*e*P	**Pn**	**18 28 31.8**	**-0.7**
	baz=193						
WSF	**Szhu**	**1.23**	**268**	*e*P	**Pg**	**18 28 32.8**	**-0.1**
	baz=270						
CHN3	**Shinhua**	**1.26**	**241**	*e*P	**Pg**	**18 28 34.1**	**+0.7**
	baz=246						
SSD	**Sandimen**	**1.27**	**222**	*e*P	**Pn**	**18 28 32.8**	**-0.4**
	baz=217						
TATO	**Taipei**	**1.28**	**357**	*e*P	**Pn**	**18 28 33.1**	**-0.1**
	baz=355						
TWA	**Mucha**	**1.28**	**1**	*e*P	**Pg**	**18 28 34.2**	**+0.4**
	baz=358						
CHN8	**Yiju**	**1.29**	**255**	*e

YOJ				*e*S	**Sb**	**18 28 56.5**	**-0.7**
SCZT	**Fangliau**	**1.58**	**214**	*e*P	**Pb**	**18 28 38.5**	**-0.1**
	baz=218						
WDGT	**Dungji**	**1.80**	**257**	*e*P	**Pn**	**18 28 40.2**	**-0.3**
	baz=269						
PHUB	**P'eng-hu**	**1.84**	**265**	*e*P	**Pn**	**18 28 40.5**	**-0.4**
	baz=267						
PNG	**Penghu**	**1.85**	**266**	*e*P	**Pn**	**18 28 40.8**	**-0.3**
	baz=268						
VCHM	**Qimei**	**2.02**	**257**	*e*P	**Pn**	**18 28 42.2**	**-1.2**
	baz=260						
IRIF	**Iriomote-Funau**	**2.08**	**72**	P	**Pn**	**18 28 43.9**	**-0.4**
IRIF				*e*S	**Sn**	**18 29 10.3**	**0.0**
JKRS	**Kuro-shima**	**2.30**	**76**	P	**Pn**	**18 28 47.5**	**+0.2**
JKRS				*e*S	**Sn**	**18 29 16.0**	**+0.2**
VWUC	**VWUC**	**2.32**	**304**	*e*P	**Pn**	**18 28 47.5**	**-0.2**
	baz=301						
JIJ	**Ishigaki jima**	**2.45**	**74**	P	**Pn**	**18 28 49.1**	**-0.3**
JIJ				S	**Sn**	**18 29 19.1**	**-0.4**
JISG	**Ishigakijimahi**	**2.66**	**70**	P	**Pn**	**18 28 51.6**	**-0.7**
JISG				*e*S	**Sn**	**18 29 24.3**	**-0.4**
JTJ	**Tarama**	**3.02**	**71**	P	**Pn**	**18 28 57.1**	**-0.1**
JTJ				*e*S	**Sn**	**18 29 34.5**	**+1.1**
JIRB	**Irabujima**	**3.48**	**70**	*e*S	**Sn**	**18 29 44.6**	**-0.3**

IDC 14 18:37:34.4±1.4,**31°.39N**×**97°.79E**,**h0**^{km},**mb3.6**/4,
mb1 3.6/5,**mb1mx3.2**/78,**mbtmp3.5**/5,**ML2.8**/1,**MS3.2**/1,
Ms1 3.2/1,**ms1mx2.3**/62,**Error ellipse: s-maj=50.2km**
s-min=22.5km az=60.0,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.47**	**327**	P	Pn	18 42 03.8	-0.1
	0.0nm,0.3s,baz=133,slow=15,SNR=3.9						
ZALV	**Zalesovo Beam**	**24.40**	**341**	P	P	18 42 53.6	-0.7
	0.6nm,0.6s,baz=140,slow=7.6,SNR=3.2						
KSRS	**Korea Array**	**25.52**	**68**	P	P	18 43 04.5	-0.1
	0.9nm,0.6s,baz=256,slow=9.5,SNR=5.4						
AKTO	**Aktyubinsk**	**35.03**	**315**	LR	LR	19 00 58.5	
	comp=Z,38nm,18.1s,baz=84,slow=40						
WRA	**Warramunga Arr**	**61.93**	**141**	P	P	18 47 56.0	-0.1
	0.7nm,0.7s,baz=333,slow=7.2,SNR=13						
ASAR	**Alice Springs**	**64.75**	**143**	P	P	18 48 14.8	0.0
	0.2nm,0.4s,baz=325,slow=6.2,SNR=6.1						

IASPEI ***14*** *18:39:43.8±0.8,46°.13N±0°.02×7°.01E±0°.02,h12*^{km}*±5*^{km}*,*
Error ellipse: s-maj=3.4km s-min=2.3km az=78.5,GT5
selection from ISC bulletin GT5 identified by Bond˙¡r and
McLaughlin (2009) selection criteria Bond˙¡r and
McLaughlin, A new ground truth data set for seismic
studies, Seism. Res. Let., 80, 465-472,
2009
ISCJB ***14*** *18:39:43.2±0.2,46°.16N±0°.01×6°.93E±0°.02,h14*^{km}*±1*^{km}*,*
Error ellipse: s-maj=2.1km s-min=1.9km az=167.0
CSEM ***14*** *18:39:43.9±0.1,46°.13N×6°.99E,h12*^{km}*,ML2.4/28,Error*
ellipse: s-maj=1.5km s-min=1.3km az=90.0
LDG ***14*** *18:39:44.6±0.0,46°.13N×7°.04E,h3*^{km}*,Md2.7/2,Ml2.5/27,*
Error ellipse: s-maj=0.6km s-min=0.5km az=91.0
ROM ***14*** *18:39:44.9±0.2,46°.12N±0°.01×7°.07E±0°.02,h10*^{km}*,*
ML2.0/6
ZUR ***14*** *18:39:44.8,46°.14N×7°.04E,h5*^{km}*±1*^{km}*,ML2.2/18*
GEN ***14*** *18:39:45.2,46°.12N×7°.07E,h10*^{km}*,ML1.8*
ISC 14 18:39:43.9±0.8,**46°.14N**±0°.01×**6°.99E**±0°.01,**h14**^{km}±4^{km},
n141,$_{\sigma}$**0°72/226,24C-8D,Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SALAN	**Lac Salanfe**	**0.02**	**305**	⇓*i*Pg	**Pg**	**18 39 46.5**	**-0.1**
	2μm,0.1s						
SALAN				*e*Sg	**Sg**	**18 39 47.5**	**-1.0**
	2μm,0.1s						
SALAN	**Lac Salanfe**	**0.02**	**305**	⇓*i*Pg	**Pg**	**18 39 46.5**	**-0.1**
SALAN				*e*Sg	**Sg**	**18 39 47.5**	**-1.0**
GRYON	**Gryon**	**0.14**	**35**	⇑*i*Pg	**Pg**	**18 39 47.7**	**0.0**
	361nm,0.2s						
GRYON				*e*Sg	**Sg**	**18 39 49.6**	**-0.6**
	361nm,0.2s						
GRYON	**Gryon**	**0.14**	**35**	⇑*i*Pg	**Pg**	**18 39 47.7**	**0.0**
GRYON				*e*Sg	**Sg**	**18 39 49.6**	**-0.6**
SAIG	**Aigle Rue de l**	**0.18**	**354**	⇑*e*Pn	**Pg**	**18 39 48.6**	**+0.4**
SAIG	**Aigle Rue de l**	**0.18**	**354**	⇑*e*P	**Pg**	**18 39 48.6**	**+0.4**
AIGLE	**Aigle**	**0.21**	**353**	⇑*i*Pg	**Pg**	**18 39 49.0**	**+0.4**
	1μm,0.2s						
AIGLE				*e*Sg	**Sg**	**18 39 52.0**	**+0.2**
	1μm,0.2s						
AIGLE	**Aigle**	**0.21**	**353**	⇑*i*Pg	**Pg**	**18 39 49.0**	**+0.4**
AIGLE				*e*Sg	**Sg**	**18 39 52.0**	**+0.2**
NOV2	**NOV2**	**0.25**	**341**	⇑*i*Pn	**Pg**	**18 39 49.9**	**+0.6**
	1μm,0.4s						
NOV2				*e*Sg	**Sg**	**18 39 53.5**	**+0.6**
	1μm,0.4s						
NOV2	**NOV2**	**0.25**	**341**	⇑*i*P	**Pg**	**18 39 49.9**	**+0.6**
NOV2				*e*Sg	**Sg**	**18 39 53.5**	**+0.6**
NOV1	**NOV1**	**0.28**	**334**	⇓*e*Pn	**Pn**	**18 39 54.8**	**+1.1**
	2μm,0.2s						
NOV1	**NOV1**	**0.28**	**334**	⇓*e*P	**Pb**	**18 39 50.5**	**-0.3**
DIX	**Grande Dixence**	**0.29**	**101**	⇓*i*Pg	**Pg**	**18 39 50.5**	**+0.4**
	455nm,0.2s						
DIX	**Grande Dixence**	**0.29**	**101**	⇓P	**Pg**	**18 39 50.6**	**+0.4**
DIX				S	**Sg**	**18 39 54.3**	**-0.1**
DIX	**Grande Dixence**	**0.29**	**101**	P	**Pg**	**18 39 50.6**	**+0.4**
DIX				S	**Sg**	**18 39 54.3**	**-0.1**
NOV3	**NOV3**	**0.30**	**353**	⇑*i*Pg	**Pg**	**18 39 50.8**	**+0.6**
	998nm,0.2s						
NOV3	**NOV3**	**0.30**	**353**	⇑*i*Pg	**Pg**	**18 39 50.8**	**+0.6**
SENIN	**Lac Senin/Sane**	**0.31**	**43**	⇑*i*Pg	**Pg**	**18 39 50.6**	**+0.1**
	415nm,0.2s						
SENIN				*e*Sg	**Pg**	**18 39 50.7**	**+0.2**
	415nm,0.2s						
SENIN	**Lac Senin/Sane**	**0.31**	**43**	⇑*i*Pg	**Pg**	**18 39 50.7**	**+0.2**
SENIN				*e*Sg	**Sg**	**18 39 54.8**	**-0.1**
MRGE	**Morge**	**0.37**	**173**	⇑*i*Pg	**Pg**	**18 39 52.2**	**+0.8**
	890nm,0.2s						
MRGE				*e*Sg	**Sg**	**18 39 57.3**	**+0.8**
	890nm,0.2s						
MRGE	**Morge**	**0.37**	**173**	⇑P	**Pg**	**18 39 52.2**	**+0.8**
MRGE				S	**Sg**	**18 39 57.2**	**+0.8**
MRGE	**Morge**	**0.37**	**173**	P	**Pg**	**18 39 52.2**	**+0.8**
MRGE				S	**Sg**	**18 39 57.2**	**+0.8**
MRGE				AML	AML		
	comp=E,721μm,0.2s						
MRGE				AML	AML		
	comp=N,458μm,0.1s						
MRGE				AML	AML		
	comp=E,721μm,0.2s						
MRGE				AML	AML		
	comp=N,458μm,0.1s						
MRGE				AML	AML		
	comp=E,721μm,0.2s						
MRGE				AML	AML		
	comp=N,458μm,0.1s						
LKBD	**Leukerbad**	**0.51**	**60**	⇑*e*Pg	**Pg**	**18 39 54.2**	**+0.3**
	comp=N,54nm,0.3s						
LKBD				*e*Sg	**Sg**	**18 40 00.4**	**-0.4**
	comp=N,54nm,0.3s						
LKBD	**Leukerbad**	**0.51**	**60**	⇑*e*Pg	**Pg**	**18 39 54.2**	**+0.3**
LKBD				*e*Sg	**Sg**	**18 40 00.4**	**-0.4**
LKBD2	**Leukerbad 2**	**0.51**	**62**	⇑*i*Pg	**Pg**	**18 39 54.3**	**+0.2**
LKBD2				*e*Sg	**Sg**	**18 40 00.8**	**-0.1**
LKBD2	**Leukerbad 2**	**0.51**	**62**	⇑*i*Pg	**Pg**	**18 39 54.3**	**+0.2**
LKBD2				*e*Sg	**Sg**	**18 40 00.8**	**-0.1**
RSL	**Roselend**	**0.52**	**210**	⇑*i*Pg	**Pb**	**18 39 54.9**	**+0.1**
RSL	**Roselend**	**0.52**	**210**	⇑*i*Pg	**Pb**	**18 39 54.9**	**+0.1**
EMBD	**Embd, Matterta**	**0.59**	**82**	*e*Pg	**Pg**	**18 39 55.5**	**0.0**
	comp=N,117nm,0.3s						
EMBD	**Embd, Matterta**	**0.59**	**82**	*e*Pg	**Pg**	**18 39 55.5**	**0.0**
LAUCH	**Lauchernalp**	**0.61**	**62**	⇑*i*Pg	**Pg**	**18 39 56.1**	**+0.2**
	comp=N,597nm,0.2s						
LAUCH	**Lauchernalp**	**0.61**	**62**	⇑*i*Pg	**Pg**	**18 39 56.1**	**+0.2**
TORNY	**Torny/Romont**	**0.64**	**358**	*e*Pn	**Pb**	**18 39 57.0**	**+0.1**
	comp=N,303nm,0.2s						
TORNY	**Torny/Romont**	**0.64**	**358**	*e*P	**Pb**	**18 39 57.4**	**+0.5**
GIMEL	**St. Georges /**	**0.64**	**309**	⇓*e*Pn	**Pb**	**18 39 57.5**	**+0.5**
	comp=N,71nm,0.3s						
GIMEL	**St. Georges /**	**0.64**	**309**	⇓*e*P	**Pb**	**18 39 57.8**	**+0.8**
GIMEL	**St. Georges /**	**0.64**	**309**	P	**Pb**	**18 39 57.8**	**+0.8**
LPL	**La Plagne**	**0.65**	**196**	*e*Pg	**Pb**	**18 39 57.4**	**+0.3**
	SNR=1.0						
LPL				*e*Sg	**Sg**	**18 40 05.6**	**+0.5**
	comp=N,16nm,0.4s,SNR=1.0						
LPL	**La Plagne**	**0.65**	**196**	*e*Pg	**Pb**	**18 39 57.4**	**+0.3**
	SNR=1.0						
LPL				*e*Sg	**Sg**	**18 40 05.6**	**+0.5**
	comp=N,7.8nm,0.4s,SNR=1.0						
LPG	**La Plagne**	**0.66**	**195**	*e*Pg	**Pb**	**18 39 57.5**	**+0.1**
	SNR=1.0						
LPG				*e*Sg	**Sb**	**18 40 06.4**	**-0.1**
	comp=N,14nm,0.3s,SNR=1.0						
LPG	**La Plagne**	**0.66**	**195**	*e*Pg	**Pb**	**18 39 57.5**	**+0.1**
	SNR=1.0						
LPG				*e*Sg	**Sb**	**18 40 06.4**	**-0.1**
	comp=N,7.1nm,0.3s,SNR=1.0						
SATI	**Passo dei Sala**	**0.66**	**113**	*i* Pg	**Pg**	**18 39 56.7**	**-0.2**
	comp=N,156nm,0.2s						
SATI	**Passo dei Sala**	**0.66**	**113**	P	**Pg**	**18 39 56.7**	**-0.2**
SATI	**Passo dei Sala**	**0.66**	**113**	P	**Pg**	**18 39 56.7**	**-0.2**
SATI				AML	AML		
	comp=E,41μm,1.2s						
SATI				AML	AML		
	comp=N,44μm,0.7s						
SATI				AML	AML		
	comp=E,41μm,1.2s						
SATI				AML	AML		
	comp=N,44μm,0.7s						
SATI				AML	AML		
	comp=E,41μm,1.2s						
SATI				AML	AML		
	comp=N,44μm,0.7s						
CIRO	**Champorcher**	**0.67**	**143**	P	**Pb**	**18 39 57.9**	**+0.4**
MMK	**Mattmark**	**0.68**	**97**	*e*Pn	**Pg**	**18 39 57.4**	**+0.2**
	comp=N,54nm,10.0s						
MMK	**Mattmark**	**0.68**	**97**	*e*P	**Pg**	**18 39 57.0**	**-0.2**
MMK				S	**Sg**	**18 40 05.5**	**-0.7**
MMK	**Mattmark**	**0.68**	**97**	P	**Pg**	**18 39 57.0**	**-0.2**
MMK				S	**Sg**	**18 40 05.5**	**-0.7**
LSD	**Lago del Serru**	**0.68**	**172**	⇑*i*Pn	**Pb**	**18 39 57.9**	**+0.2**
	comp=N,222nm,0.1s						
LSD	**Lago del Serru**	**0.68**	**172**	⇑*i*P	**Pb**	**18 39 57.9**	**+0.2**
LSD				S	**Sg**	**18 40 06.7**	**+0.4**
LSD	**Lago del Serru**	**0.68**	**172**	P	**Pb**	**18 39 57.9**	**+0.2**
LSD				S	**Sg**	**18 40 06.7**	**+0.4**
LSD				AML	AML		
	comp=E,156μm,0.1s						
LSD				AML	AML		
	comp=N,75μm,0.2s						
LSD				AML	AML		
	comp=E,156μm,0.1s						
LSD				AML	AML		
	comp=N,75μm,0.2s						
LSD				AML	AML		
	comp=E,156μm,0.1s						
LSD				AML	AML		
	comp=N,75μm,0.2s						
WIMIS	**Wimmis**	**0.69**	**39**	*e*Pn	**Pg**	**18 39 57.8**	**+0.5**
	comp=N,62nm,0.3s						
WIMIS	**Wimmis**	**0.69**	**39**	*e*P	**Pg**	**18 39 57.5**	**+0.2**
SIMPL	**Simplonpass**	**0.72**	**81**	*e*Pn	**Pg**	**18 39 57.9**	**-0.1**
	comp=N,103nm,0.2s						
SIMPL	**Simplonpass**	**0.72**	**81**	*e*P	**Pg**	**18 39 57.9**	**-0.1**
CABF	**La Chapelle**	**0.79**	**308**	*e*Pg	**Pb**	**18 40 00.1**	**+0.7**
	SNR=1.0						
CABF				*e*Sg	**Sb**	**18 40 10.6**	**+0.6**
	comp=N,7.6nm,0.2s,SNR=1.0						
CABF	**La Chapelle**	**0.79**	**308**	*e*Pg	**Pb**	**18 40 00.1**	**+0.7**
	SNR=1.0						
CABF				*e*Sg	**Sb**	**18 40 10.6**	**+0.6**
	comp=N,3.8nm,0.2s,SNR=1.0						
TRAV	**Traversella**	**0.82**	**139**	P	**Pg**	**18 39 59.7**	**0.0**
TRAV				S	**Sg**	**18 40 09.9**	**-0.5**
TRAV	**Traversella**	**0.82**	**139**	P	**Pb**	**18 40 00.3**	**+0.4**
TRAV				S	**Sg**	**18 40 09.9**	**-0.5**
TRAV				AML	AML		
	comp=E,114μm,0.6s						
TRAV				AML	AML		
	comp=N,120μm,0.2s						
TRAV				AML	AML		
	comp=E,114μm,0.6s						
TRAV				AML	AML		
	comp=N,120μm,0.2s						
TRAV				AML	AML		
	comp=E,114μm,0.6s						
TRAV				AML	AML		
	comp=N,120μm,0.2s						
RSP	**Reno Superiore**	**1.00**	**169**	P	**Pb**	**18 40 03.2**	**0.0**
RSP				S	**Sb**	**18 40 15.5**	**-0.8**
RSP	**Reno Superiore**	**1.00**	**169**	P	**Pg**	**18 40 03.7**	**+0.4**
RSP				AML	AML		
	comp=E,92μm,0.9s						
RSP				AML	AML		
	comp=N,63μm,1.2s						
RSP				AML	AML		
	comp=N,63μm,1.2s						
RSP				AML	AML		
	comp=E,92μm,0.9s						
BNI	**Bardonecchia**	**1.10**	**192**	P	**Pg**	**18 40 05.4**	**+0.2**
BNI	**Bardonecchia**	**1.10**	**192**	P	**Pg**	**18 40 05.4**	**+0.2**
BHB	**Bricherasio**	**1.31**	**172**	P	**Pg**	**18 40 09.2**	**+0.2**
BHB	**Bricherasio**	**1.31**	**172**	P	**Pg**	**18 40 09.2**	**+0.2**
MBDF	**Montbardon**	**1.42**	**186**	*e*Pg	**Pg**	**18 40 11.2**	**+0.1**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**18 40 29.7**	**+0.2**
	comp=E,18nm,0.6s,SNR=1.0						
MBDF	**Montbardon**	**1.42**	**186**	*e*Pg	**Pg**	**18 40 11.2**	**+0.1**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**18 40 29.7**	**+0.2**
	comp=E,9.2nm,0.6s,SNR=1.0						
MUGIO	**Muggio**	**1.44**	**98**	P	**Pb**	**18 40 11.3**	**+0.7**
MUGIO	**Muggio**	**1.44**	**98**	P	**Pb**	**18 40 11.3**	**+0.7**
ORIF	**Oris-en-Rattie**	**1.45**	**213**	*e*Pg	**Pg**	**18 40 11.9**	**+0.2**
	SNR=1.0						
ORIF				*e*Sn	**Sb**	**18 40 29.5**	**+0.5**
	SNR=1.0						
ORIF				*e*Sg	**Sg**	**18 40 32.5**	**+2.0**
	comp=E,8.4nm,0.2s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**1.45**	**213**	*e*Pg	**Pg**	**18 40 11.9**	**+0.2**
	SNR=1.0						
ORIF				*e*Sn	**Sb**	**18 40 29.5**	**+0.5**
	SNR=1.0						
ORIF				*e*Sg	**Sg**	**18 40 32.5**	**+2.0**
	comp=E,4.2nm,0.2s,SNR=1.0						
PZZ	**Stroppo**	**1.63**	**177**	P	**Pg**	**18 40 15.1**	**-0.1**
PZZ	**Stroppo**	**1.63**	**177**	P	**Pg**	**18 40 15.1**	**-0.1**
PZZ				AML	AML		
	comp=E,48μm,0.8s						
PZZ				AML	AML		
	comp=N,51μm,0.7s						
PZZ				AML	AML		
	comp=E,48μm,0.8s						
PZZ				AML	AML		
	comp=N,51μm,0.7s						
HINF	**Hinteralfeld**	**1.69**	**357**	*e*Pn	**Pn**	**18 40 13.5**	**+0.5**
HINF	**Hinteralfeld**	**1.69**	**357**	*e*Pg	**Pg**	**18 40 16.4**	**+0.2**
	SNR=1.0						
HINF				*e*Sn	**Sn**	**18 40 34.4**	**0.0**
HINF				*e*Sg	**Sg**	**18 40 37.7**	**-0.4**
	comp=N,12nm,0.2s						
HINF	**Hinteralfeld**	**1.69**	**357**	*e*Pn	**Pn**	**18 40 13.5**	**+0.5**
HINF	**Hinteralfeld**	**1.69**	**357**	*e*Pg	**Pg**	**18 40 16.4**	**+0.2**
	SNR=1.0						
HINF				*e*Sn	**Sn**	**18 40 34.4**	**0.0**
HINF				*e*Sg	**Sg**	**18 40 37.7**	**-0.4**
	comp=N,6.2nm,0.2s						
HAU	**Haudompre**	**1.92**	**347**	*e*Pg	**Pg**	**18 40 20.5**	**-0.3**
HAU				*e*Sg	**Sg**	**18 40 45.3**	**-0.4**
	comp=N,14nm,0.2s,SNR=1.0						
HAU	**Haudompre**	**1.92**	**347**	*e*Pg	**Pg**	**18 40 20.5**	**-0.3**
HAU				*e*Sg	**Sg**	**18 40 45.3**	**-0.4**
	comp=N,6.8nm,0.2s,SNR=1.0						
VIVF	**Saint-Julien-I**	**2.07**	**233**	*e*Pg	**Pg**	**18 40 23.7**	**+0.1**
	SNR=1.0						
VIVF				*e*Sg	**Sg**	**18 40 50.1**	**-0.4**
	comp=N,15nm,0.3s,SNR=1.0						
VIVF	**Saint-Julien-I**	**2.07**	**233**	*e*Pg	**Pg**	**18 40 23.7**	**+0.1**
	SNR=1.0						
VIVF				*e*Sg	**Sg**	**18 40 50.1**	**-0.4**
	comp=N,7.4nm,0.3s,SNR=1.0						
SMF	**Signal de Mont**	**2.24**	**284**	*e*Pg	**Pg**	**18 40 26.5**	**-0.3**
	SNR=1.0						
SMF				*e*Sg	**Sg**	**18 40 55.8**	**-0.1**
	comp=N,8.2nm,0.2s,SNR=1.0						
SMF	**Signal de Mont**	**2.24**	**284**	*e*Pg	**Pg**	**18 40 26.5**	**-0.3**
	SNR=1.0						
SMF				*e*Sg	**Sg**	**18 40 55.8**	**-0.1**
	comp=N,4.1nm,0.2s,SNR=1.0						
CDF	**Champ du Feu**	**2.29**	**5**	*e*Pn	**Pn**	**18 40 20.9**	**-0.4**
	SNR=1.0						
CDF	**Champ du Feu**	**2.29**	**5**	*e*Pg	**Pg**	**18 40 27.4**	**-0.3**
	SNR=1.0						
CDF				*e*Sg	**Sg**	**18 40 56.6**	**-0.8**
	comp=N,2.5nm,0.2s,SNR=1.0						
CDF	**Champ du Feu**	**2.29**	**5**	*e*Pn	**Pn**	**18 40 20.9**	**-0.4**
	SNR=1.0						
CDF	**Champ du Feu**	**2.29**	**5**	*e*Pg	**Pg**	**18 40 27.4**	**-0.3**
	SNR=1.0						
CDF				*e*Sg	**Sg**	**18 40 56.6**	**-0.8**
	comp=N,1.2nm,0.2s,SNR=1.0						
SBF	**Sospel**	**2.29**	**172**	*e*Pn	**Pn**	**18 40 21.5**	**+0.1**
SBF	**Sospel**	**2.29**	**172**	*e*Pg	**Pg**	**18 40 28.0**	**+0.2**
SBF				*e*Sg	**Sg**	**18 40 56.3**	**-1.3**
	comp=N,18nm,0.6s,SNR=1.0						
SBF	**Sospel**	**2.29**	**172**	*e*Pn	**Pn**	**18 40 21.5**	**+0.1**
SBF	**Sospel**	**2.29**	**172**	*e*Pg	**Pg**	**18 40 28.0**	**+0.2**
SBF				*e*Sg	**Sg**	**18 40 56.3**	**-1.3**
	comp=N,9.1nm,0.6s,SNR=1.0						
DAVA	**Damuels**	**2.30**	**59**	*i* Pg	**Pg**	**18 40 28.8**	**+0.9**
	comp=N,0.7nm,0.2s						
DAVA				Sg	**Sg**	**18 40 58.9**	**+1.2**
	comp=N,4.0nm,0.2s						
DAVA	**Damuels**	**2.30**	**59**	Pg	**Pg**	**18 40 28.8**	**+0.9**
	comp=N,0.7nm,0.2s						
DAVA				Sg	**Sg**	**18 40 58.9**	**+1.2**
	comp=N,4.0nm,0.2s						
SMRF	**Simiane la Rot**	**2.38**	**205**	*e*Pn	**Pn**	**18 40 23.5**	**+0.9**
SMRF	**Simiane la Rot**	**2.38**	**205**	*e*Pg	**Pb**	**18 40 28.0**	**+1.4**
	SNR=1.0						
SMRF				*e*Sn	**Sn**	**18 40 51.4**	**-0.2**
	comp=N,0.7nm,0.2s						
SMRF	**Simiane la Rot**	**2.38**	**205**	*e*Pn	**Pn**	**18 40 23.5**	**+0.9**
SMRF	**Simiane la Rot**	**2.38**	**205**	*e*Pg	**Pb**	**18 40 28.0**	**+1.4**
	SNR=1.0						
SMRF				*e*Sn	**Sn**	**18 40 51.4**	**-0.2**
	comp=N,0.3nm,0.2s						
LOR	**Lormes**	**2.44**	**299**	*e*Pn	**Pn**	**18 40 24.0**	**+0.7**
LOR	**Lormes**	**2.44**	**299**	*e*Pg	**Pg**	**18 40 31.5**	**+0.9**
	baz=119,SNR=1.0						
LOR				*e*Sn	**Sn**	**18 40 53.0**	**+0.1**
	comp=N,6.1nm,0.5s,SNR=1.0						
LOR				*e*Sg	**Sg**	**18 41 02.1**	**-0.1**
	comp=N,1.6nm,0.2s						
LOR	**Lormes**	**2.44**	**299**	*e*Pn	**Pn**	**18 40 24.0**	**+0.7**
LOR	**Lormes**	**2.44**	**299**	*e*Pg	**Pg**	**18 40 31.5**	**+0.9**
	SNR=1.0						
LOR				*e*Sn	**Sn**	**18 40 53.0**	**+0.1**
	comp=N,3.0nm,0.5s,SNR=1.0						
LOR				*e*Sg	**Sg**	**18 41 02.1**	**-0.1**
	comp=N,0.8nm,0.2s						
SFTF	**Sexfontaines**	**2.46**	**328**	*e*Pn	**Pn**	**18 40 24.3**	**+0.6**
SFTF				*e*Sg	**Sg**	**18 41 02.4**	**-0.6**
	comp=N,3.2nm,0.2s						
SFTF	**Sexfontaines**	**2.46**	**328**	*e*Pn	**Pn**	**18 40 24.3**	**+0.6**
SFTF				*e*Sg	**Sg**	**18 41 02.4**	**-0.6**
	comp=N,1.6nm,0.2s						
PAGF	**Fort de Pagny**	**2.57**	**341**	*e*Pn	**Pn**	**18 40 25.4**	**+0.3**
PAGF				*e*Sn	**Sn**	**18 40 55.2**	**-1.0**
	comp=N,2.8nm,0.2s						
PAGF	**Fort de Pagny**	**2.57**	**341**	*e*Pn	**Pn**	**18 40 25.4**	**+0.3**
PAGF				*e*Sn	**Sn**	**18 40 55.2**	**-1.0**
	comp=N,1.4nm,0.2s						
SSF	**Saint Saulge**	**2.58**	**292**	*e*Pn	**Pn**	**18 40 25.7**	**+0.5**
SSF	**Saint Saulge**	**2.58**	**292**	*e*Pg	**Pg**	**18 40 33.9**	**+0.7**
SSF				*e*Sg	**Sg**	**18 41 05.6**	**-1.0**
	comp=N,1.6nm,0.2s,SNR=1.0						
SSF	**Saint Saulge**	**2.58**	**292**	*e*Pn	**Pn**	**18 40 25.7**	**+0.5**
SSF	**Saint Saulge**	**2.58**	**292**	*e*Pg	**Pg**	**18 40 33.9**	**+0.7**
SSF				*e*Sg	**Sg**	**18 41 05.6**	**-1.0**
	comp=N,0.8nm,0.2s,SNR=1.0						
FRF	**La Foret Royal**	**2.59**	**186**	*e*Pg	**Pb**	**18 40 31.0**	**+1.0**
	SNR=1.0						
FRF	**La Foret Royal**	**2.59**	**186**	*e*Pg	**Pb**	**18 40 31.0**	**+1.0**
	SNR=1.0						
AVF	**Avril sur Loir**	**2.60**	**286**	*e*Pn	**Pn**	**18 40 26.2**	**+0.7**
AVF	**Avril sur Loir**	**2.60**	**286**	*e*Pg	**Pg**	**18 40 33.5**	**-0.2**
AVF				*e*Sg	**Sg**	**18 41 07.1**	**-0.3**
	comp=N,2.4nm,0.2s						
AVF	**Avril sur Loir**	**2.60**	**286**	*e*Pn	**Pn**	**18 40 26.2**	**+0.7**
AVF	**Avril sur Loir**	**2.60**	**286**	*e*Pg	**Pg**	**18 40 33.5**	**-0.2**
AVF				*e*Sg	**Sg**	**18 41 07.1**	**-0.3**
	comp=N,1.2nm,0.2s						
MEZF	**Maizieres J'vi**	**2.71**	**332**	*e*Pn	**Pn**	**18 40 27.5**	**+0.5**
MEZF				*e*Sn	**Sn**	**18 40 59.3**	**-0.3**
MEZF				*e*Sg	**Sg**	**18 41 10.4**	**-0.6**
	comp=N,5.0nm,0.3s						
MEZF	**Maizieres J'vi**	**2.71**	**332**	*e*Pn	**Pn**	**18 40 27.5**	**+0.5**
MEZF				*e*Sn	**Sn**	**18 40 59.3**	**-0.3**
MEZF				*e*Sg	**Sg**	**18 41 10.4**	**-0.6**
	comp=N,2.5nm,0.3s						
FETA	**Feichten**	**2.73**	**70**	*i* Sg	**Sg**	**18 41 12.9**	**+1.5**
	comp=N,3.9nm,0.6s						
FETA	**Feichten**	**2.73**	**70**	Sg	**Sg**	**18 41 12.9**	**+1.5**
	comp=N,3.9nm,0.6s						
LMR	**La Mour

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSZ	**Lusaka**	**5.94**	**180**	Pn	**Pn**	**18 41 38.7**	**+2.8**
	4.5nm,0.3s,baz=7.0,slow=11,SNR=11						
LSZ				Sn	**Sn**	**18 42 45.8**	**+1.8**
	31nm,0.3s,baz=128,slow=23,SNR=7.6						
LSZ				Lg	Lg	18 43 14.2	
	67nm,0.3s,baz=293,slow=15,SNR=6.3						
LSZ	**Lusaka**	**5.94**	**180**	Pn	**Pn**	**18 41 38.7**	**+2.8**
	21nm,0.6s						
LSZ				Sn	**Sn**	**18 42 45.8**	**+1.8**
LSZ				Lg	Lg	18 43 14.2	
BLWY	**Bulawayo**	**10.78**	**178**	*i* P	**Pn**	**18 42 45.2**	**+2.8**
BLWY	**Bulawayo**	**10.78**	**178**	*i* P	**Pn**	**18 42 45.1**	**+2.7**
MATP	**Matopo**	**11.06**	**178**	Pn	**Pn**	**18 42 47.0**	**+0.8**
	5.4nm,0.3s,baz=354,slow=13,SNR=53						
MATP				Sn	**Sn**	**18 44 47.0**	**-3.2**
	3.6nm,0.3s,baz=274,slow=19,SNR=3.6						
MATP				Lg	Lg	18 45 57.8	
	7.7nm,0.3s,baz=270,slow=23,SNR=3.7						
MATP	**Matopo**	**11.06**	**178**	*i* P	**Pn**	**18 42 47.1**	**+0.9**
KMBO	**Kilima Mbogo**	**12.15**	**49**	Pn	**Pn**	**18 43 05.4**	**+4.2**
	1.1nm,0.3s,baz=215,slow=15,SNR=13						
KMBO				Sn	**Sn**	**18 45 11.2**	**-5.8**
	1.4nm,0.3s,baz=142,slow=18,SNR=3.5						
KMBO				Lg	Lg	18 46 25.3	
	2.0nm,0.3s,baz=120,slow=20,SNR=3.3						
KMBO	**Kilima Mbogo**	**12.15**	**49**	*i* P	**Pn**	**18 43 00.6**	**-0.6**
TSUM	**Tsumeb**	**14.21**	**225**	Pn	**Pn**	**18 43 29.7**	**+0.4**
	2.1nm,0.3s,baz=23,slow=12,SNR=46						
TSUM				Sn	**Sn**	**18 46 02.6**	**-4.7**
	1.7nm,0.3s,baz=291,slow=20,SNR=3.5						
TSUM				Lg	Lg	18 47 46.2	
	2.2nm,0.3s,baz=303,slow=16,SNR=3.7						
TSUM				LR	LR	18 49 31.0	
	comp=Z,760nm,18.9s,baz=34,slow=39						
TSUM	**Tsumeb**	**14.21**	**225**	*e*P	**Pn**	**18 43 29.4**	**+0.1**
	18nm,0.6s						
TSUM				Sn	**Sn**	**18 46 02.6**	**-4.7**
TSUM				Lg	Lg	18 47 46.2	
LBTB	**Lobatse**	**15.81**	**189**	Pn	**Pn**	**18 43 50.7**	**0.0**
	1.1nm,0.3s,baz=357,slow=15,SNR=8.8						
LBTB				Sn	**Sn**	**18 46 44.5**	**-1.7**
	1.7nm,0.3s,baz=104,slow=22,SNR=3.6						
LBTB				Lg	Lg	18 48 24.5	
	1.1nm,0.3s,baz=72,slow=19,SNR=4.3						
LBTB				LR	LR	18 49 27.1	
	comp=Z,124nm,18.2s,baz=12,slow=35						
BOSA	**Boshof**	**19.40**	**188**	P	**P**	**18 44 34.1**	**-0.1**
	1.4nm,0.3s,baz=8.5,slow=11,SNR=23						
BOSA				S	**Sn**	**18 48 09.7**	**-3.5**
	0.5nm,0.3s,baz=270,slow=20,SNR=3.3						
BOSA				Lg	Lg	18 50 18.9	
	0.6nm,0.3s,baz=204,slow=10.0,SNR=2.6						
BOSA				LR	LR	18 52 18.5	
	comp=Z,225nm,18.3s,baz=7.0,slow=38						
BOSA	**Boshof**	**19.40**	**188**	*i* P	**Pn**	**18 44 36.2**	**+0.9**
OPO	**Ambohidratompo**	**20.60**	**119**	P	Pn	18 44 50.8	+1.2
	3.2nm,0.4s,baz=280,slow=14,SNR=5.1						
ABPO	**Ambohimpanom**	**20.82**	**120**	*e*P	Pn	18 44 51.6	-0.6
	25nm,0.6s						
SUR	**Sutherland**	**23.95**	**195**	P	**P**	**18 45 24.3**	**+1.8**
	0.6nm,1.0s,baz=100,slow=12,SNR=3.6						
SUR				LR	LR	18 54 49.5	
	comp=Z,15nm,21.6s,baz=26,slow=37						
ATD	**Arta Tunnel**	**25.32**	**35**	LR	LR	18 55 54.0	
	comp=Z,83nm,19.3s,baz=172,slow=38						
TORD	**Torodi Ar. Bea**	**34.48**	**310**	P	**P**	**18 46 57.9**	**+1.7**
	9.3nm,0.6s,baz=120,slow=8.1,SNR=24						
TORD				LR	LR	19 00 28.7	
	comp=Z,97nm,21.2s,baz=210,slow=35						
KIC	**Kosan Boka**	**36.31**	**294**	*e*P	**P**	**18 47 12.2**	**+0.2**
	48nm,1.3s						
LIC	**Lamto**	**36.51**	**294**	*e*P	**P**	**18 47 14.3**	**+0.6**
	61nm,1.5s						
DBIC	**Dimbokro**	**36.54**	**295**	P	**P**	**18 47 14.1**	**+0.2**
	3.5nm,0.8s,baz=139,slow=11,SNR=2.5						
DBIC				LR	LR	19 01 10.9	
	comp=Z,59nm,19.6s,baz=105,slow=34						
TIC	**Toumodi**	**36.68**	**294**	*e*P	**P**	**18 47 16.2**	**+1.1**
KOWA	**Kowa**	**39.73**	**306**	P	**P**	**18 47 42.8**	**+2.0**
	1.9nm,0.6s,baz=102,slow=8.4,SNR=4.1						
KOWA				LR	LR	19 05 21.8	
	comp=Z,89nm,19.9s,baz=208,slow=38						
WSAR	**Wadi Sarin**	**43.98**	**42**	LR	LR	19 05 56.6	
	comp=Z,71nm,20.0s,baz=224,slow=35						
BRTR	**Keskin Array B**	**49.04**	**6**	P	**P**	**18 48 55.4**	**+0.3**
	2.6nm,0.7s,baz=176,slow=9.3,SNR=20						
MDT	**Midelt**	**52.26**	**325**	LR	LR	19 10 25.4	
	comp=Z,69nm,22.0s,baz=158,slow=35						
MLR	**Muntele Rosu**	**54.58**	**358**	P	**P**	**18 49 37.3**	**+0.9**
	1.1nm,0.8s,baz=176,slow=12,SNR=8.9						
PALK	**Pallekele**	**54.86**	**74**	LR	LR	19 09 11.5	
	comp=Z,62nm,18.5s,baz=291,slow=32						
ESDC	**Sonseca Array**	**57.12**	**331**	P	**P**	**18 49 54.1**	**-0.5**
	0.3nm,0.4s,baz=149,slow=8.1,SNR=4.2						
GERES	**GERESS Array B**	**59.29**	**349**	P	**P**	**18 50 11.3**	**+1.7**
	1.1nm,0.9s,baz=170,slow=4.1,SNR=5.0						
KIEV	**Kiev**	**59.76**	**1**	*e*P	**P**	**18 50 11.8**	**-0.9**
	3.9nm,0.8s						
AKASG	**Malin Array Be**	**59.76**	**1**	P	**P**	**18 50 12.2**	**-0.6**
	3.2nm,0.6s,baz=183,slow=6.3,SNR=20						
AKTO	**Aktyubinsk**	**64.91**	**21**	P	**P**	**18 50 46.4**	**-0.9**
	1.5nm,0.7s,baz=176,slow=5.6,SNR=5.5						
AAK	**Ala-Archa**	**66.76**	**36**	LR	LR	19 23 00.8	
	comp=Z,66nm,18.6s,baz=210,slow=39						
ARU	**Arti**	**70.16**	**17**	P	**P**	**18 51 19.6**	**-0.7**
	1.2nm,0.4s,baz=172,slow=3.5,SNR=4.4						
ARU				LR	LR	19 25 10.1	
	comp=Z,36nm,18.6s,baz=214,slow=39						
FINES	**FINESS Array B**	**70.55**	**359**	P	**P**	**18 51 22.9**	**+0.3**
	2.0nm,0.8s,baz=132,slow=8.0,SNR=7.3						
BVAR	**Borovoye Array**	**71.73**	**25**	P	**P**	**18 51 29.1**	**-0.8**
	0.7nm,0.7s,baz=145,slow=5.4,SNR=4.6						
MKAR	**Makanchi Array**	**73.69**	**35**	P	**P**	**18 51 40.7**	**-1.1**
	1.7nm,0.9s,baz=241,slow=5.5,SNR=8.8						
MKAR				LR	LR	19 26 57.1	
	comp=Z,31nm,20.5s,baz=236,slow=38						
KURBB	**Kurchatov Arra**	**73.90**	**31**	P	**P**	**18 51 41.5**	**-1.4**
	0.9nm,0.8s,baz=240,slow=6.3,SNR=5.0						
KURK	**Kurchatov**	**74.00**	**31**	P	**P**	**18 51 41.5**	**-1.9**
CMAR	**Chiang Mai Arr**	**75.04**	**68**	P	**P**	**18 51 50.2**	**0.0**
	0.5nm,0.8s,baz=265,slow=8.5,SNR=4.7						
ARCES	**ARCESS Array B**	**78.67**	**359**	P	**P**	**18 52 10.3**	**+0.6**
	3.7nm,0.8s,baz=184,slow=3.3,SNR=8.8						
PLCA	**Paso Flores**	**90.54**	**229**	LR	LR	19 31 02.8	
	comp=Z,34nm,18.7s,baz=149,slow=34						
LPAZ	**La Paz**	**93.40**	**253**	LR	LR	19 34 13.0	
	comp=Z,28nm,18.4s,baz=142,slow=35						
PDAR	**Pinedale Array**	**130.28**	**320**	PKP	**PKPdf**	**18 59 20.0**	**+1.1**
	0.5nm,0.6s,baz=79,slow=6.9,SNR=3.9						
NVAR	**Mina Array Bea**	**138.22**	**319**	PKP	**PKPdf**	**18 59 32.2**	**-1.7**
	0.4nm,0.6s,baz=67,slow=3.2,SNR=2.7						

*KRSC **14** 18:40:38.5±1.9, 51.°96N×159.°09E, h45km±16km, ML4.6*
*MOS **14** 18:40:39.6±0.9, 51.°93N×158.°80E, h58km, mb4.0/10, Error ellipse: s-maj=11.9km s-min=3.5km az=85.1*
*ISCJB **14** 18:40:40.4±0.5, 51.°99N±0.°04×158.°88E±0.°07, h63km±4km, mb3.8/19, Error ellipse: s-maj=8.9km s-min=3.8km az=41.2*
*IDC **14** 18:40:44.5±1.6, 52.°23N×158.°56E, h82km±14km, mb3.5/18, mb1 3.7/19, mb1mx3.5/75, mbtmp3.9/19, MS2.9/3, Ms1 2.9/3, ms1mx2.4/60, Error ellipse: s-maj=18.2km s-min=12.8km az=141.0*

ISC 14 18:40:39.6±0.9, 51.°97N±0.°04×158.°99E±0.°04, h49km±8km, n121, σ2°17/139, mb3.8/19, 1C-2D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**0.55**	**328**	*e*P	**Pn**	**18 40 52.0**	**+0.6**
RUS				*e*S	**Sn**	**18 40 59.9**	**+0.1**
RUS	**Russkaya**	**0.55**	**328**	PN	**Pn**	**18 40 52.0**	**+0.6**
RUS				S	**Sn**	**18 40 59.9**	**+0.1**
KDTR	**Khodutka, Kamc**	**0.59**	**254**	*i* P	**Pn**	**18 40 53.0**	**+1.2**
KDTR				*i* S	**Sn**	**18 41 01.3**	**+0.7**
MTVR	**Mutnovka**	**0.71**	**316**	*i* P	**Pn**	**18 40 54.5**	**+0.9**
MTVR	**Mutnovka**	**0.71**	**316**	PN	**Pn**	**18 40 54.5**	**+0.9**
ASAK	**Asacha**	**0.79**	**302**	*e*P	**Pn**	**18 40 55.9**	**+1.3**
ASAK				*e*S	**Sn**	**18 41 06.0**	**+0.6**
ASAK	**Asacha**	**0.79**	**302**	PN	**Pn**	**18 40 55.9**	**+1.3**
ASAK				S	**Sn**	**18 41 06.0**	**+0.6**
GRL	**Gorelyy**	**0.81**	**316**	*e*P	**Pn**	**18 40 56.2**	**+1.3**
GRL				*e*S	**Sn**	**18 41 07.5**	**+1.5**
GRL	**Gorelyy**	**0.81**	**316**	PN	**Pn**	**18 40 56.2**	**+1.3**
GRL				S	**Sn**	**18 41 07.5**	**+1.5**
KRMR	**Karymshinskiy**	**1.01**	**329**	*i* P	**Pn**	**18 40 58.3**	**+0.9**
KRMR				*e*S	**Sn**	**18 41 11.1**	**+0.6**
KRMR	**Karymshinskiy**	**1.01**	**329**	PN	**Pn**	**18 40 58.3**	**+0.9**
KRMR				S	**Sn**	**18 41 11.1**	**+0.6**
DALK	**Dalny**	**1.07**	**352**	*e*P	**Pn**	**18 40 58.7**	**+0.4**
DALK				*e*S	**Sn**	**18 41 11.6**	**-0.5**
DALK	**Dalny**	**1.07**	**352**	PN	**Pn**	**18 40 58.7**	**+0.4**
DALK				S	**Sn**	**18 41 11.6**	**-0.5**
PET	**Petropavlovsk**	**1.08**	**349**	*i* P	**Pn**	**18 40 58.9**	**+0.6**
PET	**Petropavlovsk**	**1.08**	**349**k	*i* PN	**Pn**	**18 40 58.4**	**+0.1**
PET				*e*S	**Sn**	**18 41 10.9**	**-1.2**
PET				pmax	pmax		
	comp=Z,410nm,0.5s						
PET				pmax	pmax		
	comp=Z,400nm,0.2s						
PET				smax	smax		
	comp=N,3μm,0.4s						
PET				smax	smax		
	comp=E,1μm,0.3s						
PET				smax	smax		
	comp=N,4μm,0.4s						
NLC	**Nalytchevo**	**1.22**	**10**	*i* P	**Pn**	**18 41 00.0**	**-0.3**
NLC				*e*S	**Sn**	**18 41 14.0**	**-1.7**
NLC	**Nalytchevo**	**1.22**	**10**	PN	**Pn**	**18 41 00.0**	**-0.3**
NLC				S	**Sn**	**18 41 14.0**	**-1.7**
UGLR	**Uglovaya**	**1.25**	**355**	*e*P	**Pn**	**18 41 01.6**	**+0.9**
UGLR	**Uglovaya**	**1.25**	**355**	PN	**Pn**	**18 41 01.6**	**+0.9**
SPN	**Mys Shipunski**	**1.29**	**29**	*i* P	**Pn**	**18 41 03.1**	**+1.8**
SPN				*e*S	**Sn**	**18 41 18.9**	**+1.4**
SPN	**Mys Shipunski**	**1.29**	**29**	PN	**Pn**	**18 41 03.1**	**+1.8**
SPN				S	**Sn**	**18 41 18.9**	**+1.4**
AVH	**Avacha**	**1.31**	**353**	*e*P	**Pn**	**18 41 02.6**	**+1.1**
AVH				*e*S	**Sn**	**18 41 18.3**	**+0.4**
AVH	**Avacha**	**1.31**	**353**	PN	**Pn**	**18 41 02.6**	**+1.1**
AVH				S	**Sn**	**18 41 18.3**	**+0.4**
SDLR	**Sedlovina**	**1.31**	**357**	*i* P	**Pn**	**18 41 02.0**	**+0.3**
SDLR	**Sedlovina**	**1.31**	**357**	PN	**Pn**	**18 41 02.0**	**+0.3**
KOK	**Koryaka**	**1.34**	**351**	*e*P	**Pn**	**18 41 03.2**	**+1.2**
KOK	**Koryaka**	**1.34**	**351**	PN	**Pn**	**18 41 03.2**	**+1.2**
KRER	**Koryakskii**	**1.34**	**354**	*e*P	**Pn**	**18 41 02.9**	**+0.7**
KRER	**Koryakskii**	**1.34**	**354**	PN	**Pn**	**18 41 02.9**	**+0.7**
PETK	**Petropavlovsk-**	**1.39**	**326**	P	**Pn**	**18 41 03.9**	**+1.3**
	comp=N,234nm,0.3s,baz=130,slow=18,SNR=7168						
PETK				LR	LR	18 41 10.3	
	comp=N,22nm,18.2s,baz=95,slow=25						
PETK				S	**Sn**	**18 41 21.5**	**+1.7**
	comp=N,114nm,0.3s,baz=129,slow=24,SNR=11						
KRX	**Arik**	**1.41**	**352**	*e*P	**Pn**	**18 41 03.9**	**+0.9**
KRX	**Arik**	**1.41**	**352**	PN	**Pn**	**18 41 03.9**	**+0.9**
MIPR	**Malaya Ipel'ka**	**1.41**	**283**	*e*P	**Pn**	**18 41 04.5**	**+1.6**
MIPR	**Malaya Ipel'ka**	**1.41**	**283**	PN	**Pn**	**18 41 04.5**	**+1.6**
PAU	**Pauzhetka**	**1.45**	**250**	*e*S	**Sn**	**18 41 22.6**	**+1.5**
APC	**Apacha**	**1.47**	**311**	*i* P	**Pn**	**18 41 05.2**	**+1.5**
APC				*i* S	**Sn**	**18 41 24.9**	**+3.1**
APC	**Apacha**	**1.47**	**311**	PN	**Pn**	**18 41 05.2**	**+1.5**
APC				S	**Sn**	**18 41 24.9**	**+3.1**
GNL	**Ganaly**	**1.84**	**340**	*e*P	**Pn**	**18 41 10.3**	**+1.4**
GNL	**Ganaly**	**1.84**	**340**	PN	**Pn**	**18 41 10.3**	**+1.4**
KII	**Karymskiy**	**2.09**	**7**	*e*P	**Pn**	**18 41 14.1**	**+1.9**
KII				*e*S	**Sn**	**18 41 38.7**	**+1.7**
KII	**Karymskiy**	**2.09**	**7**	PN	**Pn**	**18 41 14.1**	**+1.9**
KII				S	**Sn**	**18 41 38.7**	**+1.7**
SKR	**Severo-Kuril's**	**2.21**	**236**	*i* P	**Pn**	**18 41 15.2**	**+1.4**
SKR				*e*S	**Sn**	**18 41 41.0**	**+1.0**
SKR	**Severo-Kuril's**	**2.21**	**236**	PN	**Pn**	**18 41 15.2**	**+1.4**
SKR				S	**Sn**	**18 41 41.0**	**+1.0**
MKZ	**Mys Kozlova**	**3.07**	**31**	*e*P	**Pn**	**18 41 26.9**	**+1.4**
MKZ				*e*S	**Sn**	**18 42 02.0**	**+1.0**
MKZ	**Mys Kozlova**	**3.07**	**31**	PN	**Pn**	**18 41 26.9**	**+1.4**
MKZ				S	**Sn**	**18 42 02.0**	**+1.0**
KZV	**Kizimen**	**3.24**	**13**	*e*P	**Pn**	**18 41 31.1**	**+3.0**
KZV	**Kizimen**	**3.24**	**13**	PN	**Pn**	**18 41 31.1**	**+3.0**
TUMR	**Tumrok**	**3.39**	**11**	*e*P	**Pn**	**18 41 33.8**	**+3.7**
TUMR	**Tumrok**	**3.39**	**11**	PN	**Pn**	**18 41 33.8**	**+3.7**
KMNR	**Kamenistaya**	**3.87**	**11**	*e*P	**Pn**	**18 41 38.8**	**+2.2**
KMNR	**Kamenistaya**	**3.87**	**11**	PN	**Pn**	**18 41 38.8**	**+2.2**
ESO	**Esso**	**3.97**	**358**	*e*P	**Pn**	**18 41 40.2**	**+2.3**
ESO	**Esso**	**3.97**	**358**	PN	**Pn**	**18 41 40.2**	**+2.3**
KPT	**Kopyto**	**4.07**	**10**	*e*P	**Pn**	**18 41 42.1**	**+2.7**
KPT	**Kopyto**	**4.07**	**10**	PN	**Pn**	**18 41 42.1**	**+2.7**
BZMR	**Bezymyannaya**	**4.07**	**12**	*e*P	**Pn**	**18 41 43.3**	**+3.9**
BZMR	**Bezymyannaya**	**4.07**	**12**	PN	**Pn**	**18 41 43.3**	**+3.9**
KIRR	**Kirishev**	**4.07**	**11**	*e*P	**Pn**	**18 41 42.4**	**+3.0**
KIRR	**Kirishev**	**4.07**	**11**	PN	**Pn**	**18 41 42.4**	**+3.0**
BZWR	**Bezymyannyi-We**	**4.10**	**12**	*e*P	**Pn**	**18 41 43.7**	**+3.8**
BZWR	**Bezymyannyi-We**	**4.10**	**12**	PN	**Pn**	**18 41 43.7**	**+3.8**
KOZ	**Kozyrevsk**	**4.13**	**7**	*e*P	**Pn**	**18 41 41.7**	**+1.6**
KOZ	**Kozyrevsk**	**4.13**	**7**	PN	**Pn**	**18 41 41.7**	**+1.6**
ZLN	**Zelenaya**	**4.20**	**14**	*e*P	**Pn**	**18 41 45.6**	**+4.5**
ZLN	**Zelenaya**	**4.20**	**14**	PN	**Pn**	**18 41 45.6**	**+4.5**
LGNR	**Loginova**	**4.24**	**13**	*e*P	**Pn**	**18 41 46.4**	**+4.5**
LGNR	**Loginova**	**4.24**	**13**	PN	**Pn**	**18 41 46.4**	**+4.5**
CIRR	**Tsirk**	**4.28**	**13**	*e*P	**Pn**	**18 41 45.9**	**+3.6**
CIRR	**Tsirk**	**4.28**	**13**	PN	**Pn**	**18 41 45.9**	**+3.6**
KRSR	**Krestovskiy**	**4.36**	**12**	*e*P	**Pn**	**18 41 47.4**	**+4.1**
KRSR	**Krestovskiy**	**4.36**	**12**	PN	**Pn**	**18 41 47.4**	**+4.1**
KLY	**Klyuchi**	**4.46**	**12**	*e*P	**Pn**	**18 41 47.6**	**+3.0**
KLY	**Klyuchi**	**4.46**	**12**	PN	**Pn**	**18 41 47.6**	**+3.0**
BDR	**Baidarnaya**	**4.79**	**15**	*e*P	**Pn**	**18 41 53.5**	**+4.3**
BDR	**Baidarnaya**	**4.79**	**15**	PN	**Pn**	**18 41 53.5**	**+4.3**
KBTR	**Krutoberegovo**	**4.81**	**26**	*e*P	**Pn**	**18 41 51.7**	**+2.3**
KBTR	**Krutoberegovo**	**4.81**	**26**	PN	**Pn**	**18 41 51.7**	**+2.3**
SMKR	**Semkarok**	**4.84**	**16**	*e*P	**Pn**	**18 41 54.2**	**+4.2**
SMKR	**Semkarok**	**4.84**	**16**	PN	**Pn**	**18 41 54.2**	**+4.2**
SRKR	**Sorokina**	**4.86**	**14**	*e*P	Pn	18 41 55.1	+4.9
SRKR	**Sorokina**	**4.86**	**14**	PN	Pn	18 41 55.1	+4.9
BKI	**Bering**	**5.27**	**49**	*e*P	**Pn**	**18 41 56.9**	**+1.2**
BKI				*e*S	**Sn**	**18 42 50.8**	**-4.3**
BKI	**Bering**	**5.27**	**49**	PN	**Pn**	**18 41 56.9**	**+1.2**
MA2	**Magadan**	**8.91**	**332**	LR	LR	18 46 42.4	
	comp=N,34nm,18.2s,baz=116,slow=42						
SHO	**Shikotan**	**11.49**	**230**	*e*PN	**Pn**	**18 43 20.6**	**-0.2**
SHO				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ASAJ	**Asahikawa**	**13.47**	**241**	P	**P**	**18 43 51.6**	**-4.3**
	comp=Z,0.2nm,0.3s,baz=76,slow=14,SNR=5.0						
ERM	**Erimo**	**14.66**	**233**	*i* P	**Pn**	**18 44 02.1**	**-1.8**
BILL	**Bilibino**	**16.50**	**10**	⇑*i* P	**P**	**18 44 29.2**	**-0.2**
BILL				pmax	pmax		
	comp=Z,11nm,3.9s						
YAK	**Yakutsk**	**18.70**	**314**	*e*P	**Pn**	**18 44 53.4**	**-1.0**
YAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MSHR	**Mys Shultsa**	**20.98**	**254**	*i* P	**P**	**18 45 17.7**	**-0.8**
MJAR	**Matsushiro Arr**	**21.32**	**232**	P	**P**	**18 45 22.6**	**+0.3**
	comp=Z,1.7nm,0.8s,baz=24,slow=10,SNR=3.1						
TIXI	**Tiksi**	**23.84**	**337**	P	**P**	**18 45 47.9**	**+0.2**
	comp=Z,1.8nm,0.5s,baz=124,slow=11,SNR=20						
TIXI	**Tiksi**	**23.84**	**337**	*i* P	**P**	**18 45 45.8**	**-1.9**
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ILAR	**Eielson Array**	**30.09**	**44**	P	**P**	**18 46 45.1**	**+1.1**
	comp=Z,2.0nm,0.7s,baz=262,slow=7.7,SNR=27						
H11N2	**WAKE ISLAND Hy**	**32.77**	**166**	T	T	19 22 09.7	
	baz=351,slow=76,SNR=22						
H11N3	**WAKE ISLAND Hy**	**32.78**	**166**	T	T	19 22 08.7	
	baz=351,slow=76,SNR=21						
H11N1	**WAKE ISLAND Hy**	**32.78**	**166**	T	T	19 22 11.0	
	baz=351,slow=76,SNR=28						
SONM	**Songino Array**	**33.51**	**284**	LR	LR	19 01 04.8	
	comp=Z,26nm,20.4s,baz=38,slow=37						
H11S1	**WAKE ISLAND Hy**	**33.94**	**167**	T	T	19 23 37.4	
	baz=352,slow=76,SNR=16						
H11S3	**WAKE ISLAND Hy**	**33.95**	**167**	T	T	19 23 43.0	
	baz=352,slow=76,SNR=36						
H11S2	**WAKE ISLAND Hy**	**33.96**	**167**	T	T	19 23 40.4	
	baz=352,slow=76,SNR=1.5						
INK	**Inuvik**	**35.17**	**37**	P	**P**	**18 47 30.2**	**+1.9**
	comp=Z,1.8nm,0.6s,baz=287,slow=7.1,SNR=5.3						
ZALV	**Zalesovo Beam**	**42.82**	**303**	LR	LR	19 06 04.0	
	comp=Z,24nm,18.9s,baz=68,slow=36						
YKA	**Yellowknife Ar**	**44.45**	**41**	P	**P**	**18 48 47.0**	**+1.7**
	comp=Z,1.1nm,0.6s,baz=298,slow=7.7,SNR=4.9						
YKA	**Yellowknife Ar**	**44.45**	**41**	P	**P**	**18 48 47.0**	**+1.7**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**48.04**	**296**	P	**P**	**18 49 11.4**	**-2.3**
	comp=Z,0.3nm,0.5s,baz=52,slow=7.0,SNR=4.8						
MKAR	**Makanchi Array**	**48.04**	**296**	*i* P	**P**	**18 49 14.1**	**+0.4**
SPITS	**Spitsbergen Ar**	**48.13**	**350**	P	**P**	**18 49 13.7**	**-0.4**
	comp=Z,5.8nm,0.9s,baz=57,slow=6.0,SNR=4.6						
BVAR	**Borovoye Array**	**50.56**	**309**	P	**P**	**18 49 29.5**	**-3.4**
	comp=Z,0.3nm,0.4s,baz=65,slow=6.1,SNR=5.1						
BVAR				PcP	**PcP**	**18 50 48.8**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=83,slow=2.0,SNR=3.9						
BRVK	**Borovoye**	**50.59**	**309**	*i* P	**P**	**18 49 29.7**	**-3.4**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
NVAR	**Mina Array Bea**	**56.77**	**69**	P	**P**	**18 50 21.7**	**+2.9**
	comp=Z,0.5nm,0.4s,baz=304,slow=7.0,SNR=4.5						
CMAR	**Chiang Mai Arr**	**57.29**	**258**	P	**P**	**18 50 23.9**	**+1.6**
	comp=Z,0.7nm,0.7s,baz=34,slow=6.1,SNR=7.3						
PDAR	**Pinedale Array**	**58.67**	**60**	P	**P**	**18 50 32.3**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=299,slow=3.1,SNR=6.4						
FINES	**FINESS Array B**	**60.88**	**336**	P	**P**	**18 50 45.4**	**-1.2**
	comp=Z,0.4nm,0.6s,baz=60,slow=6.7,SNR=3.3						
FINES	**FINESS Array B**	**60.88**	**336**	*i* P	**P**	**18 50 47.7**	**+1.1**
HFS	**Hagfors**	**64.81**	**342**	P	**P**	**18 51 12.5**	**-0.2**
	comp=Z,1.0nm,0.4s,baz=30,slow=7.0,SNR=12						
AKASG	**Malin Array Be**	**69.22**	**328**	P	**P**	**18 51 38.8**	**-2.1**
	comp=Z,0.2nm,0.4s,baz=28,slow=7.0,SNR=2.8						
TXAR	**Lajitas Array**	**71.71**	**66**	P	**P**	**18 51 58.8**	**+2.3**
	comp=Z,1.6nm,0.6s,baz=302,slow=4.7,SNR=16						
EKA	**Eskdalemuir Ar**	**72.04**	**349**	P	**P**	**18 51 57.3**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=24,slow=5.4,SNR=3.6						
WRA	**Warramunga Arr**	**74.78**	**204**	P	**P**	**18 52 15.8**	**+1.4**
	comp=Z,0.7nm,0.9s,baz=18,slow=6.0,SNR=5.1						
ASAR	**Alice Springs**	**78.46**	**203**	P	**P**	**18 52 37.5**	**+2.4**
	comp=Z,0.5nm,0.7s,baz=17,slow=5.6,SNR=9.4						

*MOS **14** 18:40:43.3±1.8, 51.°68N×103.°94E, h10km, mb4.2/1, Error ellipse: s-maj=16.5km s-min=10.9km az=55.6*

BYKL 14 18:40:43.2±0.2, 51.°67N×103.°97E, h17km±4km, 5C-2D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLY	**Talaya**	**0.20**	**273**	⇑*i* PG	Pg	18 40 47.7	-0.4
TLY				*e*Sg	Sg	18 40 50.5	-0.9
TLY				Pmax			
	3μm,0.1s						
TLY				Smax			
	6μm,0.1s						
TLY	**Talaya**	**0.20**	**273***c*	*i* PG	Pg	18 40 47.4	-0.7
TLY				*e*		18 40 50.5	
TLY				pmax	pmax		
	comp=Z,546nm,0.2s						
TLY				smax	smax		
	comp=E,6.0nm,0.3s						
IVK	**Ivanovka**	**0.31**	**64**	*e*PG	Pg	18 40 49.7	-0.1
IVK				*e*		18 40 54.0	
IVK				pmax	pmax		
	comp=Z,82nm,0.1s						
IVK				smax	smax		
	comp=N,2μm,0.4s						
LSTR	**Listvy

UUDB				max			
	comp=E,59nm,0.5s						
UUDB				Smax			
	comp=E,252nm,0.9s						
ORL	**Orlik**	**2.71**	**290**	⇓*i*Pg	Pb	18 41 31.2	-0.1
ORL				*e*Sg	Sb	18 42 06.9	+2.7
ORL				*e*		18 42 10.2	
ORL				Pmax			
	comp=E,23nm,0.3s						
ORL				max			
	comp=E,328nm,1.3s						
ORL	**Orlik**	**2.71**	**290**	*e*PN	Pb	18 41 31.1	-0.2
ORL				*e*		18 42 06.1	
ORL				pmax	pmax		
	comp=Z,25nm,0.2s						
ORL				smax	smax		
	comp=N,325nm,1.4s						
KELR	**Kotokel**	**2.75**	**65**	*e*Pn	Pn	18 41 27.3	+0.7
KELR				Pg	Pb	18 41 32.2	+0.3
KELR				*e*Sg	Sb	18 42 07.7	+2.3
KELR				*e*		18 42 09.4	
OGRR	**Ongureny**	**2.96**	**47**	*e*Pn	Pn	18 41 30.7	+1.3
OGRR				*e*		18 41 33.5	
OGRR				Pg	Pb	18 41 35.9	+0.4
OGRR				*e*Sn	Sn	18 42 04.0	-0.6
OGRR				*e*Sg	Sb	18 42 13.0	+1.6
OGRR				*e*		18 42 16.1	
OGRR				Pmax			
	comp=N,44nm,0.7s						
OGRR				max			
	comp=N,342nm,0.7s						
OGRR	**Ongureny**	**2.96**	**47**	*e*PN	Pn	18 41 30.9	+1.5
OGRR				*e*		18 41 36.2	
OGRR				*e*		18 42 13.0	
OGRR				pmax	pmax		
	comp=Z,44nm,0.6s						
OGRR				smax	smax		
	comp=E,358nm,1.0s						
MXMB	**Maximikha**	**3.33**	**59**	Pg	Pb	18 41 42.4	+0.7
MXMB				*e*		18 42 15.4	
MXMB				*e*Sg	Sg	18 42 27.1	-2.9
SYVR	**Suvo**	**4.17**	**59**	*e*Pn	Pn	18 41 47.7	+1.6
SYVR				Pg	Pb	18 41 58.5	+2.3
SYVR				*e*Sg	Sg	18 42 53.0	-4.2
SYVR				Pmax			
	comp=E,5.0nm,0.5s						
SYVR				Smax			
	comp=E,33nm,1.0s						
KNGR	**Kungurtug, Tuv**	**4.20**	**258**	*e*Pn	Pn	18 41 47.6	+1.0
KNGR				Pg	Pb	18 41 59.6	+2.9
KNGR				*e*Sg	Sg	18 42 55.1	-2.9
ULN	**Ulaanbaatar**	**4.30**	**151**	*e*Pn	Pn	18 41 50.2	+2.2
ULN				*e*Pg	Pb	18 41 59.7	+1.3
ULN				*e*Sg	Sg	18 42 56.1	-5.1
TDJR	**Todzha**	**4.91**	**282**	*e*	Pb	18 42 08.4	-0.4
TDJR				Pg	Pg	18 42 11.4	-5.8
TDJR				*e*Sg	Sg	18 43 15.4	-5.4
TDJR				*e*		18 43 18.5	
TDJR				*e*		18 43 25.0	
NIZ	**Nizh Angarsk**	**5.28**	**37**	*e*	Pn	18 42 01.7	+0.5
NIZ				Pg	Pb	18 42 17.4	+2.5
NIZ				Sn	Sn	18 43 01.1	-0.5
NIZ				*e*Sg	Sg	18 43 25.2	-7.2
NIZ				*e*		18 43 29.7	
NIZ				Pmax			
	comp=E,9.0nm,0.6s						
NIZ				max			
	comp=E,97nm,0.9s						
NIZ	**Nizh Angarsk**	**5.28**	**37**	*e*PN	Pn	18 42 02.5	+1.3
NIZ				*e*		18 42 21.1	
NIZ				*e*S	Sn	18 43 02.0	+0.4
NIZ				*e*		18 43 25.1	
NIZ				pmax	pmax		
	comp=Z,7.0nm,0.6s						
NIZ				smax	smax		
	comp=N,78nm,0.6s						
KPC	**Khapcheranga**	**5.70**	**107**	*e*Pn	Pn	18 42 06.7	-0.3
KPC				*e*		18 42 12.0	
KPC				*e*Pg	Pb	18 42 24.6	+2.5
KPC				*e*Sn	Sn	18 43 11.7	-0.3
KPC				*e*Sg	Sg	18 43 39.5	-6.4
KPC				*e*		18 43 43.9	
KPC				Pmax			
	comp=N,5.0nm,0.7s						
KPC				max			
	comp=N,50nm,1.5s						
KPC	**Khapcheranga**	**5.70**	**107**	*e*PN	Pn	18 42 06.7	-0.3
KPC				*e*		18 42 25.1	
KPC				*e*S	Sn	18 43 11.5	-0.5
KPC				*e*		18 43 41.3	
KPC				pmax	pmax		
	comp=Z,15nm,1.4s						
KPC				smax	smax		
	comp=N,50nm,1.4s						
ERNS	**Erzin**	**5.75**	**259**	*e*Sg	Sg	18 43 41.6	-5.9
ERNS				*e*		18 43 46.1	
KMO	**Kumora**	**6.02**	**43**	*e*	Pn	18 42 18.2	+6.8
KMO				*e*Pg	Pb	18 42 31.0	+3.5
KMO				*e*		18 42 33.5	
KMO				*e*		18 43 25.8	
KMO				*e*Sg	Sg	18 43 49.0	-7.1
KMO				max			
	comp=N,9.0nm,0.8s						
KMO				Smax			
	comp=N,101nm,1.2s						
YOA	**Uoyan**	**6.40**	**43**	*e*Sg	Sg	18 44 03.5	-4.9
YOA				Smax			
	comp=N,32nm,1.2s						
SVKR	**Severomuysk**	**7.21**	**48**	*e*Sg	Sg	18 44 28.0	-6.2
SVKR				Smax			
	comp=N,86nm,0.5s						
NLYR	**Nelyaty**	**8.42**	**50**	*e*	Pb	18 43 53.9	+46
NLYR				*e*Sg	Sb	18 45 02.3	+14
NLYR				*e*		18 45 43.5	
NLYR				Smax			
	comp=N,46nm,1.6s						
CRS	**Chara**	**9.86**	**52**	*e*Sg	Sn	18 45 49.2	+55
CRS				*e*		18 45 54.3	
CRS				max			
	comp=N,18nm,1.4s						
TUP	**Tupik**	**10.01**	**68**	*e*		18 44 30.9	
TUP				*e*Sg	Sn	18 45 52.8	+55
TUP				Smax			
	comp=N,22nm,1.7s						

MEX 14 18:59:24.3±0.7, 14°69N×93°28W, h16km±54km, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.01**	**3**	*e*P	Pb	18 59 39.9	-3.6
PCIG				*e*S	Sb	18 59 52.0	-4.6
CCIG	**Comitan**	**1.93**	**35**	*e*P	Pn	18 59 54.1	-2.5
TGIG		**2.08**	**4**	*e*P	Pn	18 59 54.4	-4.3

IDC 14 19:10:05.1±2.1, 17°90S×177°95W, h0km, mb4.0/7, mb1 4.2/7, mb1mx3.8/54, mbtmp4.0/7, Error ellipse: s-maj=117.8km s-min=22.1km az=149.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**33.88**	**260**	P	P	19 16 51.5	+1.6
	1.3nm,0.3s,baz=90,slow=12,SNR=5.2						
STKA	**Stephens Creek**	**39.02**	**241**	P	P	19 17 33.9	+0.3
	2.0nm,0.7s,baz=80,slow=11,SNR=5.3						
WRA	**Warramunga Arr**	**45.06**	**259**	P	P	19 18 22.7	-0.5
	0.8nm,0.6s,baz=98,slow=6.6,SNR=24						
ASAR	**Alice Springs**	**45.21**	**254**	P	P	19 18 24.0	-0.4
	3.6nm,0.5s,baz=90,slow=8.7,SNR=64						
FITZ	**Fitzroy Crossi**	**53.46**	**260**	P	P	19 19 26.3	-1.2
	1.4nm,0.6s,baz=91,slow=4.9,SNR=7.5						
NVAR	**Mina Array Bea**	**79.12**	**44**	P	P	19 22 12.9	+0.9
	0.3nm,0.6s,baz=226,slow=7.4,SNR=2.7						
ILAR	**Eielson Array**	**85.78**	**13**	P	P	19 22 44.5	-1.3
	0.3nm,0.5s,baz=223,slow=6.1,SNR=4.5						

*ATA **14** 19:17:30.9±0.9, 38°10N×42°64E, h0km±93km, ML4.9, MW4.8*
*CSEM **14** 19:17:31.4, 38°05N×42°60E, h23km, ML3.2*
*DDA **14** 19:17:31.4, 38°05N×42°60E, h23km, Ml3.2*
*ISCJB **14** 19:17:32.0±0.5, 37°99N±0°04×42°63E±0°05, h8km, Error ellipse: s-maj=6.7km s-min=5.2km az=154.6*

ISC 14 19:17:31.0±1.0, 38°06N±0°03×42°61E±0°02, h8km, n59, σ1§25/59, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEVA	**Gevas**	**0.43**	**55**	*i*P	**Pg**	**19 17 39.6**	**+0.2**
GEVA	**Gevas**	**0.43**	**55**	*i*P	**Pg**	**19 17 39.7**	**+0.2**
GEVA	**Gevas**	**0.43**	**55**	P	**Pg**	**19 17 39.7**	**+0.2**
SRTM	**Siirt_Merkez**	**0.55**	**263**	*i*P	**Pb**	**19 17 42.7**	**-0.2**
SRTM	**Siirt_Merkez**	**0.55**	**263**	P	**Pb**	**19 17 42.7**	**-0.2**
SIRN	**S¨–rnak**	**0.59**	**196**	*i*P	**Pb**	**19 17 42.6**	**-1.0**
SIRN	**S¨–rnak**	**0.59**	**196**	P	**Pb**	**19 17 42.6**	**-1.0**
ADCV	**BITLIS_Adilcev**	**0.75**	**7**	*i*P	**Pb**	**19 17 46.5**	**+0.1**
ADCV	**BITLIS_Adilcev**	**0.75**	**7**	P	**Pb**	**19 17 46.5**	**+0.1**
TVAN	**Van**	**0.78**	**53**	*i*P	**Pb**	**19 17 46.4**	**-0.5**
TVAN	**Van**	**0.78**	**53**	P	**Pb**	**19 17 46.4**	**-0.5**
HAKT	**HAKKARI**	**1.00**	**120**	*i*P	**Pn**	**19 17 51.2**	**-0.4**
HAKT	**HAKKARI**	**1.00**	**120**	P	**Pn**	**19 17 51.2**	**-0.4**
BTMN	**Batman**	**1.07**	**261**	*i*P	**Pn**	**19 17 52.7**	**+0.3**
BTMN	**Batman**	**1.07**	**261**	P	**Pn**	**19 17 52.7**	**+0.3**
VMUR	**Van-Muradiye**	**1.19**	**39**	*i*P	**Pn**	**19 17 55.8**	**+1.7**
VMUR	**Van-Muradiye**	**1.19**	**39**	P	**Pn**	**19 17 55.8**	**+1.7**
EKAR	**Karacoban**	**1.27**	**340**	*e*P	**Pg**	**19 17 55.2**	**-0.1**
EKAR				IAML		19 18 47.7	
	comp=Z,649nm,0.6s						
EKAR	**Karacoban**	**1.27**	**340**	*i*P	**Pg**	**19 17 55.0**	**-0.3**
EKAR	**Karacoban**	**1.27**	**340**	P	**Pg**	**19 17 55.0**	**-0.3**
TUTA	**Tutak**	**1.35**	**7**	*e*P	**Pg**	**19 17 57.1**	**+0.3**
TUTA	**Tutak**	**1.35**	**7**	*i*P	**Pg**	**19 17 56.7**	**-0.1**
TUTA	**Tutak**	**1.35**	**7**	P	**Pg**	**19 17 56.7**	**-0.1**
YOVA	**Hakkari_Y¨…kse**	**1.41**	**109**	*i*P	**Pg**	**19 17 58.1**	**+0.1**
YOVA	**Hakkari_Y¨…kse**	**1.41**	**109**	P	**Pg**	**19 17 58.1**	**+0.1**
BNGL	**BINGOL**	**1.45**	**308**	*e*P	**Pg**	**19 17 59.7**	**+0.9**
BNGL	**BINGOL**	**1.45**	**308**	*i*P	**Pg**	**19 18 00.4**	**+1.6**
MARD	**Mardin**	**1.64**	**243**	*i*P	**Pb**	**19 18 00.1**	**-1.3**
DYDN	**Diyadin**	**1.70**	**29**	*e*P	**Pg**	**19 18 04.2**	**+0.6**
HANI	**Diyarbakir_Han**	**1.78**	**282**	*i*P	**Pb**	**19 18 02.6**	**-1.2**
HANI	**Diyarbakir_Han**	**1.78**	**282**	P	**Pb**	**19 18 02.6**	**-1.2**
BGOL	**Bingol**	**1.78**	**302**	*i*P	**Pg**	**19 18 04.0**	**-1.1**
BGOL	**Bingol**	**1.78**	**302**	P	**Pg**	**19 18 04.0**	**-1.1**
EATA	**Eleskirt**	**1.80**	**357**	*e*P	**Pg**	**19 18 05.2**	**-0.3**
EATA	**Eleskirt**	**1.80**	**357**	*i*P	**Pb**	**19 18 04.5**	**+0.1**
EATA	**Eleskirt**	**1.80**	**357**	P	**Pb**	**19 18 04.5**	**+0.1**
DIYA	**Diyarbakir**	**1.97**	**267**	*i*P	**Pb**	**19 18 05.7**	**-1.5**
DIYA	**Diyarbakir**	**1.97**	**267**	P	**Pb**	**19 18 05.7**	**-1.5**
ECAT	**Cat-ERZURUM**	**2.00**	**321**	*e*P	**Pg**	**19 18 08.5**	**-0.9**
ECAT	**Cat-ERZURUM**	**2.00**	**321**	*i*P	**Pg**	**19 18 08.2**	**-1.1**
ECAT	**Cat-ERZURUM**	**2.00**	**321**	P	**Pg**	**19 18 08.2**	**-1.1**
HOMI	**Horasan**	**2.05**	**345**	*e*P	**Pg**	**19 18 09.4**	**-0.9**
HOMI				IAML		19 18 56.3	
	comp=Z,205nm,0.7s						
ERZM	**Erzurum**	**2.08**	**333**	*e*P	**Pg**	**19 18 10.8**	**0.0**
ERZM	**Erzurum**	**2.08**	**333**	*i*P	**Pb**	**19 18 09.3**	**+0.2**
ERZM	**Erzurum**	**2.08**	**333**	P	**Pb**	**19 18 09.3**	**+0.2**
IGDI	**IGDIR**	**2.13**	**32**	*e*P	**Pg**	**19 18 12.8**	**+0.9**
DIGO	**Kars**	**2.42**	**14**	*e*P	**Pg**	**19 18 16.2**	**-1.2**
KOPT	**Kop Dagi**	**2.55**	**321**	*e*P	**Pg**	**19 18 19.2**	**-0.7**
TNCL	**Tunceli-Merkez**	**2.62**	**295**	*e*P	**Pg**	**19 18 19.7**	**-1.6**
TNCL				IAML		19 19 10.1	
	comp=Z,262nm,0.5s						
TNCL	**Tunceli-Merkez**	**2.62**	**295**	*i*P	**Pb**	**19 18 15.4**	**-2.9**
TNCL	**Tunceli-Merkez**	**2.62**	**295**	P	**Pb**	**19 18 15.4**	**-2.9**
EAK	**Akyaka**	**2.73**	**16**	*e*P	**Pb**	**19 18 17.5**	**-2.7**
EUZM	**Uzumlu**	**2.81**	**307**	*e*P	**Pb**	**19 18 21.5**	**+0.1**
SANL	**SANLIURFA_Merk**	**3.01**	**254**	*i*P	**Pg**	**19 18 31.7**	**+3.0**
SANL	**SANLIURFA_Merk**	**3.01**	**254**	P	**Pg**	**19 18 31.7**	**+3.0**
REFA	**Refahiye_ERZ¨**	**3.29**	**295**	*e*P	**Pg**	**19 18 37.1**	**+3.1**
KELT	**Kelkit**	**3.34**	**310**	*e*P	**Pb**	**19 18 31.4**	**+0.9**
EPOS	**Posof**	**3.44**	**1**	*e*P	**Pg**	**19 18 37.3**	**+0.5**
KEMA	**Kemaliye**	**3.44**	**292**	*e*P	**Pg**	**19 18 36.0**	**-0.9**

*ISN **14** 19:17:38.0±1.1, 38°28N×42°52E, h14km±5km, ML4.2*
*ISCJB **14** 19:17:42.8±0.6, 37°93N±0°02×42°63E±0°03, h3km±4km, mb3.9/29, Error ellipse: s-maj=4.0km s-min=3.0km az=139.3*
*IDC **14** 19:17:42.6±0.8, 37°76N×42°53E, h0km, mb3.8/16, mb1 3.9/24, mb1mx3.8/69, mbtmp3.8/24, ML3.2/5, MS3.0/11, Ms1 3.0/11, ms1mx2.8/70, Error ellipse: s-maj=16.0km s-min=10.4km az=159.0*
*DDA **14** 19:17:43.2, 38°02N×42°52E, h4km, Ml4.2*
*CSEM **14** 19:17:43.7±0.1, 37°97N×42°64E, h2km, mb4.1/21, Error ellipse: s-maj=3.8km s-min=3.6km az=121.0*
*NSSP **14** 19:17:43.6, 38°08N×42°62E, h5km, Ms3.8*
*NEIC **14** 19:17:43.7±0.0, 38°06N×42°55E, h2km, mb4.2/2, ML4.2(DDA), ML4.2(ISK), After ISK.*
*ISK **14** 19:17:44.3, 38°06N×42°56E, h6km, ML4.2/16*
*MOS **14** 19:17:44.0±1.6, 37°88N×42°58E, h16km, mb4.2/18, Error ellipse: s-maj=8.8km s-min=5.0km az=88.0*

ISC 14 19:17:43.9±1.1, 37°99N±0°02×42°59E±0°02, h3km±8km, n186, σ1§51/192, mb4.1/32, 22C-8D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEVA	**Gevas**	**0.49**	**49**	*i*P	**Pg**	**19 17 52.7**	**-0.7**
GEVA	**Gevas**	**0.49**	**49**	P	**Pg**	**19 17 52.7**	**-0.7**
SIRT	**Sirnak**	**0.50**	**194**	PG	**Pb**	**19 17 55.5**	**0.0**
SIRT				SG	**Sb**	**19 18 04.1**	**+0.9**
SIRT	**Sirnak**	**0.50**	**194**	*e*Pg	**Pb**	**19 17 55.5**	**0.0**
SIRN	**S¨–rnak**	**0.51**	**196**	*i*P	**Pg**	**19 17 51.2**	**-2.6**
SIRN	**S¨–rnak**	**0.51**	**196**	P	**Pg**	**19 17 51.2**	**-2.6**
GURO	**Guroymak-BITLI**	**0.71**	**322**	PG	**Pg**	**19 17 56.9**	**-0.7**
GURO				SG	**Sg**	**19 18 06.7**	**-0.2**
GURO	**Guroymak-BITLI**	**0.71**	**322**	*e*Pg	**Pg**	**19 17 56.9**	**-0.7**
GURO				*e*Sg	**Sg**	**19 18 06.7**	**-0.2**
ADCV	**BITLIS_Adilcev**	**0.82**	**7**	*i*P	**Pg**	**19 17 58.8**	**-1.0**
ADCV	**BITLIS_Adilcev**	**0.82**	**7**	P	**Pg**	**19 17 58.8**	**-1.0**
TVAN	**Van**	**0.84**	**50**	*i*P	**Pg**	**19 18 00.1**	**+0.1**
TVAN	**Van**	**0.84**	**50**	P	**Pg**	**19 18 00.2**	**+0.1**
VANB	**Van**	**0.87**	**46**	PG	**Pg**	**19 18 00.1**	**-0.6**
VANB				SG	**Sg**	**19 18 12.1**	**+0.1**
VANB	**Van**	**0.87**	**46**	*e*Pg	**Pg**	**19 18 00.1**	**-0.6**
VANB				*e*Sg	**Sg**	**19 18 12.1**	**+0.1**
HAKT	**HAKKARI**	**0.98**	**116**	*i*P	**Pb**	**19 18 03.7**	**-0.1**
HAKT	**HAKKARI**	**0.98**	**116**	P	**Pb**	**19 18 03.7**	**-0.1**
BTMN	**Batman**	**1.05**	**265**	*i*P	**Pb**	**19 18 05.1**	**+0.3**
BTMN	**Batman**	**1.05**	**265**	P	**Pb**	**19 18 05.1**	**+0.3**
SVAN	**Silvan-Diyarba**	**1.11**	**279**	PG	**Pg**	**19 18 05.1**	**-0.1**
SVAN				SG	**Sb**	**19 18 20.8**	**+0.1**
SVAN	**Silvan-Diyarba**	**1.11**	**279**	*e*Pg	**Pg**	**19 18 05.1**	**-0.1**
SVAN				*e*Sg	**Sb**	**19 18 20.8**	**+0.1**
ERCV	**ERCIS-VAN**	**1.19**	**29**	PN	**Pg**	**19 18 06.3**	**-0.4**
ERCV	**ERCIS-VAN**	**1.19**	**29**	*e*Pn	**Pg**	**19 18 06.3**	**-0.4**
VMUR	**Van-Muradiye**	**1.26**	**37**	*i*P	**Pg**	**19 18 08.0**	**-0.2**
VMUR	**Van-Muradiye**	**1.26**	**37**	P	**Pg**	**19 18 08.0**	**-0.2**
EKAR	**Karacoban**	**1.33**	**342**	*i*P	**Pg**	**19 18 07.8**	**-1.7**
EKAR	**Karacoban**	**1.33**	**342**	P	**Pg**	**19 18 07.8**	**-1.7**
YOVA	**Hakkari_Y¨…kse**	**1.41**	**106**	*i*P	**Pg**	**19 18 10.8**	**-0.1**
YOVA	**Hakkari_Y¨…kse**	**1.41**	**106**	P	**Pg**	**19 18 10.8**	**-0.1**
TUTA	**Tutak**	**1.42**	**7**	*i*P	**Pn**	**19 18 10.3**	**-0.6**
TUTA	**Tutak**	**1.42**	**7**	P	**Pn**	**19 18 10.3**	**-0.6**
BNGL	**BINGOL**	**1.48**	**311**	*i*P	**Pn**	**19 18 12.0**	**+0.2**
CLDR	**Caldiran**	**1.55**	**42**	PN	**Pn**	**19 18 12.7**	**0.0**
CLDR	**Caldiran**	**1.55**	**42**	*e*Pn	**Pn**	**19 18 12.7**	**0.0**
MARD	**Mardin**	**1.59**	**245**	*i*P	**Pn**	**19 18 12.8**	**-0.3**
AGRB	**Hanur-Agry**	**1.61**	**11**	PN	**Pn**	**19 18 13.3**	**-0.2**
AGRB	**Hanur-Agry**	**1.61**	**11**	*e*Pn	**Pn**	**19 18 13.3**	**-0.2**
HANI	**Diyarbakir_Han**	**1.78**	**285**	*i*P	**Pn**	**19 18 15.3**	**-0.3**
HANI	**Diyarbakir_Han**	**1.78**	**285**	P	**Pn**	**19 18 15.4**	**-0.3**
MAZI	**Mazidag**	**1.78**	**253**	PN	**Pn**	**19 18 16.3**	**+0.6**
MAZI	**Mazidag**	**1.78**	**253**	*e*Pn	**Pn**	**19 18 16.3**	**+0.6**
BNGB	**Bing¶l**	**1.80**	**304**	PN	**Pn**	**19 18 15.8**	**-0.2**
BGOL	**Bingol**	**1.81**	**304**	*i*P	**Pb**	**19 18 17.2**	**-0.5**
BGOL	**Bingol**	**1.81**	**304**	P	**Pb**	**19 18 17.2**	**-0.5**
DIY	**Diyarbakir**	**1.87**	**268**	*e*Pn	**Pb**	**19 18 18.3**	**-0.5**
BINT	**Bingol**	**1.87**	**299**	P	**Pn**	**19 18 15.9**	**-1.1**
BINT	**Bingol**	**1.87**	**299**	P	**Pn**	**19 18 15.9**	**-1.1**
EATA	**Eleskirt**	**1.87**	**358**	*i*P	**Pn**	**19 18 17.4**	**+0.2**
EATA	**Eleskirt**	**1.87**	**358**	P	**Pn**	**19 18 17.4**	**+0.2**
DYBB	**Diyarbakir**	**1.94**	**270**	PN	**Pn**	**19 18 18.3**	**+0.5**
DIYA	**Diyarbakir**	**1.95**	**269**	*i*P	**Pn**	**19 18 18.2**	**+0.2**
DIYA	**Diyarbakir**	**1.95**	**269**	P	**Pn**	**19 18 18.2**	**+0.2**
ECAT	**Cat-ERZURUM**	**2.05**	**322**	*i*P	**Pb**	**19 18 21.1**	**-0.8**
ECAT	**Cat-ERZURUM**	**2.05**	**322**	P	**Pb**	**19 18 21.1**	**-0.8**
IGDI	**IGDIR**	**2.21**	**31**	*i*P	**Pb**	**19 18 23.4**	**-1.1**
SVRC	**Sivrice-ELAZID**	**2.62**	**280**	PN	**Pn**	**19 18 27.6**	**+0.3**
SVRC	**Sivrice-ELAZID**	**2.62**	**280**	*e*Pn	**Pn**	**19 18 27.6**	**+0.3**
TNCL	**Tunceli-Merkez**	**2.64**	**296**	*i*P	**Pn**	**19 18 29.7**	**+2.2**
TNCL	**Tunceli-Merkez**	**2.64**	**296**	P	**Pn**	**19 18 29.7**	**+2.2**
KARS	**Kars**	**2.66**	**8**	PN	**Pn**	**19 18 27.9**	**0.0**
KARS	**Kars**	**2.66**	**8**	*e*Pn	**Pn**	**19 18 27.9**	**0.0**
PTK	**Pertek**	**2.67**	**291**	PN	**Pn**	**19 18 28.3**	**+0.3**
PTK	**Pertek**	**2.67**	**291**	*e*Pn	**Pn**	**19 18 28.3**	**+0.3**
GNI	**Garni**	**2.73**	**37**	Pn	**Pn**	**19 18 31.0**	**+2.2**
	2.2nm,0.3s,baz=236,slow=5.3,SNR=9.6						
GNI				LR	LR	19 20 05.0	
	comp=Z,134nm,20.8s,baz=214,slow=48						
GNI	**Garni**	**2.73**	**37**	PN	**Pn**	**19 18 29.6**	**+0.8**
GNI	**Garni**	**2.73**	**37**	⇑*i*P	**Pn**	**19 18 31.0**	**+2.2**
GNI				⇑*i*S	**Sb**	**19 19 05.5**	**-2.0**
GNI	**Garni**	**2.73**	**37**	*ce*P	**Pn**	**19 18 29.0**	**+0.2**
GNI				pmax	pmax		
	comp=Z,93nm,1.0s						
GNI	**Garni**	**2.73**	**37**	*e*P	**Pn**	**19 18 29.0**	**+0.2**
	comp=Z,93nm,1.0s						
GNI	**Garni**	**2.73**	**37**	*e*Pn	**Pn**	**19 18 29.6**	**+0.8**
GNI				S	**Sb**	**19 19 05.5**	**-2.0**
URFA	**Urfa**	**3.04**	**261**	PN	**Pn**	**19 18 34.0**	**+1.0**
URFA	**Urfa**	**3.04**	**261**	*e*Pn	**Pn**	**19 18 34.0**	**+1.0**
BAYT	**Ayd¨–ntepe-Bay**	**3.06**	**322**	PN	**Pn**	**19 18 33.7**	**+0.3**
BAYT	**Ayd¨–ntepe-Bay**	**3.06**	**322**	*e*Pn	**Pn**	**19 18 33.7**	**+0.3**
MALT	**Malatya**	**3.30**	**277**	PN	**Pn**	**19 18 37.6**	**+1.0**
MALT	**Malatya**	**3.30**	**277**	P	**Pn**	**19 18 37.6**	**+1.0**
MALT	**Malatya**	**3.30**	**277**	*e*Pn	**Pn**	**19 18 37.6**	**+1.0**
ZEI	**Tsey**	**4.90**	**11**	*e*P	Pb	19 19 04.5	-6.0
ZEI				pmax	pmax		
	comp=Z,16nm,0.6s						
BHD	**Baghdad**	**4.93**	**162**	*e*Pn	**Pn**	**19 18 58.0**	**-0.9**
	SNR=5.0						
BHD				*e*Sn	**Sn**	**19 19 56.0**	**-0.4**
	SNR=5.0						
NEY	**Neytrino**	**5.25**	**1**	*i*P	**Pn**	**19 19 04.3**	**+0.8**
NEY	**Neytrino**	**5.25**	**1**	*i*P	**Pn**	**19 19 04.3**	**+0.8**
AKT	**Akhty**	**5.28**	**47**	*e*P	**Pn**	**19 19 07.7**	**+3.9**
AKT				*e*S	**Sn**	**19 20 08.4**	**+3.2**
AKT				pmax	pmax		
	comp=Z,4.0nm,0.2s						
AKT				smax	smax		
	comp=E,13nm,0.5s						
AKT				smax	smax		
	comp=N,16nm,0.2s						
AKT				smax	smax		
	comp=N,12nm,0.2s						
RTB	**Rutbah**	**5.29**	**201**	*e*Pn	**Pn**	**19 19 02.0**	**-1.9**
	SNR=5.0						
RTB				*e*Sn	**Sn**	**19 20 04.0**	**-1.3**
	SNR=5.0						
NCK	**Nalchik**	**5.55**	**8**	*i*P	**Pn**	**19 19 06.0**	**-1.5**
NCK	**Nalchik**	**5.55**	**8**	*i*P	**Pn**	**19 19 06.0**	**-1.5**
KBZ	**Khabaz**	**5.74**	**2**	Pn	Pn	19 19 16.7	+6.7
	comp=N,0.1nm,0.3s,baz=197,slow=7.8,SNR=3.7						
GROC	**Groznyy**	**5.75**	**24**	*e*P	**Pn**	**19 19 12.7**	**+2.5**
GROC				*e*S	**Sn**	**19 20 18.4**	**+1.8**
GROC				pmax	pmax		
	comp=Z,34nm,0.3s						
GROC				smax	smax		
	comp=N,17nm,0.6s						
KIV	**Kislovodsk**	**5.96**	**1**	*e*P	**Pn**	**19 19 12.1**	**-1.0**
KIV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KIV	**Kislovodsk**	**5.96**	**1**	*e*P	**Pn**	**19 19 12.1**	**-1.0**
	comp=Z,3.0nm,1.0s						
KVAR	**Kislovodsk Arr**	**5.96**	**1**	Pn	Pn	19 19 19.0	+5.8
	baz=297,slow=9.0,SNR=2.2						
KVAR				LR	LR	19 22 10.4	
	comp=Z,57nm,20.1s,baz=200,slow=43						
MAK	**Makhachkala**	**6.22**	**35**	*e*P	**Pn**	**19 19 15.3**	**-1.3**
MAK				*e*S	**Sn**	**19 20 26.4**	**-1.8**
MAK				pmax	pmax		
	comp=Z,145nm,1.9s						
MAK	**Makhachkala**	**6.22**	**35**	*e*P	**Pn**	**19 19 15.3**	**-1.3**
	comp=Z,145nm,1.9s						
MAK				*e*S	**Sn**	**19 20 26.4**	**-1.8**
HWQ	**Hawqa**	**6.53**	**237**	*e*P	**Pn**	**19 19 22.6**	**+1.6**
BHL	**Bhannes**	**6.95**	**236**	*e*P	**Pn**	**19 19 30.2**	**+3.5**
DQRL	**Deir Qamar**	**7.12**	**235**	*e*P	**Pn**	**19 19 31.6**	**+2.5**
BRTR	**Keskin Array B**	**7.20**	**287**	Pn	**Pn**	**19 19 30.5**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=112,slow=13,SNR=6.4						
BRTR				LR	LR	19 22

comp=Z,32nm,2.4s
VYHS Vyhne 20.16 309 *e*P Pn 19 22 21.3 +0.2
VYHS Vyhne 20.16 309 *e*P Pn 19 22 21.3 +0.2
comp=Z,32nm,2.4s
TIP Timpagrande 20.21 281 ⇓*i*P **P 19 22 20.5 +0.5**
TIP Timpagrande 20.21 281 ⇓*i*P **P 19 22 20.5 +0.5**
ARU Arti 21.30 25 P **P 19 22 31.7 +0.2**
comp=Z,6.0nm,0.7s,baz=233,slow=6.2,SNR=7.3
ARU Arti 21.30 25 *e*P **P 19 22 31.6 0.0**
comp=Z,9.0nm,0.8s
ARU Arti 21.30 25 *c i*P **P 19 22 31.9 +0.3**
ARU 19 22 50.6
ARU S **S 19 26 28.3 -0.3**
ARU pmax pmax
comp=Z,10.0nm,1.0s
CONA Conrad Observa 21.84 306 *i* pP **P 19 22 39.5 +2.0**
comp=Z,2.8nm,0.8s
CONA Conrad Observa 21.84 306 P **P 19 22 39.5 +2.0**
comp=Z,2.8nm,0.8s
ARSA Arzberg 21.87 304 *i* pP **P 19 22 41.4 +3.7**
comp=Z,3.3nm,0.8s
SOKA Soboth 22.05 302 *i* pP **P 19 22 43.1 +3.2**
comp=Z,3.4nm,1.2s
MOA Molln 22.85 305 *i* pP **P 19 22 50.1 +1.9**
comp=Z,4.7nm,0.9s
MOA Molln 22.85 305 P **P 19 22 50.1 +1.9**
comp=Z,4.7nm,0.9s
VSU Vasula 22.93 338 *ce*P **P 19 22 49.8 +0.9**
VSU pmax pmax
comp=Z,24nm,1.1s
KLMR Klimovskoe 22.97 356 *e*P **P 19 22 49.1 -0.2**
KLMR pmax pmax
comp=Z,30nm,1.8s
KLMR Klimovskoe 22.97 356 *e*P **P 19 22 49.2 -0.1**
KLMR AMP 19 22 51.7
comp=Z,30nm,1.8s
KBA Koelnbreinsper 23.27 302 *i* pP **P 19 22 54.2 +1.4**
GERES GERESS Array B 23.48 307 P **P 19 22 53.4 -1.4**
comp=Z,0.6nm,0.6s,baz=108,slow=8.7,SNR=6.4
GERES LR LR 19 33 50.1
comp=Z,30nm,18.2s,baz=126,slow=41
PRGR Permogore 23.75 4 *e*P **P 19 22 55.5 -1.6**
PRGR pmax pmax
comp=Z,6.0nm,0.9s
BRVK Borovoye 24.36 43 *e*P **P 19 23 03.1 +0.1**
BRVK Borovoye 24.36 43 *ce*P **P 19 23 05.4 +2.4**
BRVK pmax pmax
comp=Z,3.0nm,1.2s
BVAR Borovoye Array 24.40 43 P **P 19 23 05.2 +1.9**
comp=Z,0.6nm,0.8s,baz=220,slow=3.9,SNR=3.9
AAK Ala-Archa 24.68 69 LR LR 19 35 47.3
comp=Z,30nm,21.6s,baz=196,slow=44
AAK Ala-Archa 24.68 69 *i* P **P 19 23 11.7 +5.5**
AAK pmax pmax
comp=Z,1.0nm,0.9s
CLL Collm 24.71 312 *i* (P) **P 19 23 06.9 +0.7**
comp=Z,6.0nm,1.0s
CLL Collm 24.71 312 *i* P **P 19 23 06.9 +0.7**
CLL pmax pmax
comp=Z,6.0nm,1.0s
MOTA Moosalm 24.82 302 *i* pP **P 19 23 06.3 -1.2**
comp=Z,9.2nm,0.9s
FETA Feichten 25.02 301 *i* pP **P 19 23 09.5 +0.3**
comp=Z,3.9nm,0.7s
FETA Feichten 25.02 301 P **P 19 23 09.5 +0.3**
comp=Z,3.9nm,0.7s
DAVA Damuels 25.63 302 *i* P **P 19 23 14.7 -0.1**
comp=Z,6.2nm,0.6s
FINES FINESS Array B 25.64 342 P **P 19 23 14.4 0.0**
comp=Z,1.7nm,0.7s,baz=147,slow=10,SNR=8.0
KURBB Kurchatov Arra 28.38 52 P **P 19 23 39.5 +0.4**
comp=Z,0.7nm,0.8s,baz=265,slow=9.2,SNR=5.6
KURK Kurchatov 28.44 52 P **P 19 23 39.5 -0.2**
KURK Kurchatov 28.44 52 P **P 19 23 39.5 -0.2**
KURK pmax pmax
comp=Z,1.0nm,0.8s
HFS Hagfors 28.73 330 P **P 19 23 41.5 -0.8**
comp=Z,5.9nm,1.0s,baz=134,slow=6.4,SNR=6.0
HFS LR LR 19 35 17.7
comp=Z,43nm,19.9s,baz=141,slow=36
MKAR Makanchi Array 30.34 60 P **P 19 23 58.4 +1.6**
comp=Z,2.2nm,0.8s,baz=268,slow=5.8,SNR=18
MKAR LR LR 19 38 35.2
comp=Z,29nm,20.2s,baz=286,slow=41
ZALV Zalesovo Beam 32.84 47 P **P 19 24 19.8 +1.3**
comp=Z,0.3nm,0.3s,baz=249,slow=12,SNR=2.7
ARCES ARCESS Array B 32.92 349 P **P 19 24 19.8 +0.7**
comp=Z,1.0nm,0.4s,baz=153,slow=9.0,SNR=9.2
EKA Eskdalemuir Ar 35.11 315 P **P 19 24 38.4 +0.1**
comp=Z,1.3nm,0.4s,baz=107,slow=8.5,SNR=11
ESDC Sonseca Array 35.99 288 P **P 19 24 44.8 -1.4**
comp=Z,0.3nm,0.4s,baz=66,slow=8.8,SNR=3.6
TORD Torodi Ar. Bea 43.92 247 P **P 19 25 51.6 -0.5**
comp=Z,1.1nm,0.8s,baz=57,slow=9.0,SNR=5.8
ULN Ulaanbaatar 46.96 56 *ce*P P 19 26 21.0 +4.9
ULN pmax pmax
comp=Z,2.0nm,1.0s
KOWA Kowa 47.29 253 P **P 19 26 18.1 -0.8**
comp=Z,1.3nm,0.6s,baz=66,slow=10.0,SNR=3.8
CMAR Chiang Mai Arr 52.52 95 P **P 19 26 57.2 -1.4**
comp=Z,0.5nm,0.7s,baz=296,slow=8.2,SNR=5.9
DBIC Dimbokro 53.02 246 P **P 19 27 00.5 -1.8**
comp=Z,1.4nm,0.5s,baz=22,slow=5.4,SNR=3.6
KSAR Wonju Array Be 65.00 61 P **P 19 28 25.6 +0.4**
KSAR Wonju Array Be 65.00 61 P **P 19 28 25.6 +0.4**
KSRS Korea Array 65.02 61 P **P 19 28 25.6 +0.2**
comp=Z,1.2nm,0.9s,baz=264,slow=5.3,SNR=4.6
BILL Bilibino 66.23 20 ⇓*e*P P 19 28 38.3 +5.6
BILL *e* 19 31 04.2
BILL pmax pmax
comp=Z,2.0nm,1.3s

*IDC **14** 19:30:54.4±0.5, 23°.62N×121°.61E, h0km, mb4.1/23, mb1 4.2/26, mb1mx4.1/63, mbtmp4.1/26, ML3.7/3, MS3.8/27, Ms1 3.8/27, ms1mx3.5/70, Error ellipse: s-maj=15.4km s-min=10.7km az=77.0*
*BJI **14** 19:30:55.4, 23°.73N×121°.63E, h7km, mb4.2/24, mB4.6/19, ML4.6/7, Ms4.6/27, Ms7 4.6/23*
*ISCJB **14** 19:30:55.4±0.3, 23°.70N±0°.01×121°.60E±0°.01, h5km±2km, mb4.3/44, MS3.8/23, Error ellipse: s-maj=2.2km s-min=1.6km az=42.2*
*JMA **14** 19:30:55.0±0.1, 23°.70N×121°.61E, h0km, M4.2*
*TAP **14** 19:30:55.8, 23°.74N×121°.53E, h5km, ML4.8, C*
*NEIC **14** 19:30:57.3±4.4, 23°.64N×121°.66E, h17km±27km, mb4.5/12, ML4.9(TAP), Error ellipse: s-maj=9.5km s-min=7.8km az=74.0*
NEIC Recorded [5 TAP] in Hualien and [1 TAP] in Changhua, Chiayi, Taitung, Yilan and Yunlin.
ISC 14 19:30:55.6±1.0, 23°.70N±0°.02×121°.60E±0°.02, h5km±6km, n198, σ1§15/236, mb4.3/44, MS3.8/23, 9C-27D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	**Guangfu**	**0.16**	**261**	P	**Pg**	**19 30 58.6**	**-0.2**
	baz=245						
EGFH				*e*S	**Sg**	**19 31 00.7**	**-0.3**
	baz=245						
ESL	**Shilin**	**0.19**	**307**	⇓*i*P	**Pg**	**19 30 58.6**	**-0.9**
	baz=304						
ESL				S	**Sg**	**19 31 00.4**	**-1.7**
	baz=304						
ENLB	**Shoufeng**	**0.21**	**0**	⇓P	**Pg**	**19 31 00.6**	**+0.9**
	baz=21						
ENLB				*e*S	**Sg**	**19 31 04.9**	**+2.4**
	baz=21						
HGSD	**Ruisui**	**0.26**	**219**	⇓P	**Pb**	**19 31 02.3**	**-0.4**
	baz=212						
HWA	**Hwalien**	**0.28**	**1**	*e*P	**Pb**	**19 31 02.1**	**-1.0**
	baz=17						
EHY	**Hungye**	**0.32**	**234**	⇓P	**Pg**	**19 31 01.7**	**-0.1**
	baz=229						
EHY				*e*S	**Sg**	**19 31 06.6**	**+0.6**
	baz=229						
TWD	**Chiawan**	**0.38**	**359**	⇓P	**Pg**	**19 31 03.3**	**+0.3**
	baz=357						
TWD				*e*S	**Sb**	**19 31 09.4**	**-1.6**
	baz=357						
YULB	**Yu-li**	**0.41**	**223**	P	**Pg**	**19 31 04.1**	**+0.6**
	baz=219						
VWDT	**VWDT**	**0.43**	**278**	⇓P	**Pg**	**19 31 03.3**	**-0.5**
	baz=273						
VWDT				S	**Sg**	**19 31 08.9**	**-0.5**
	baz=273						
TWF1	**Yuli**	**0.44**	**219**	*e*P	**Pg**	**19 31 04.6**	**+0.5**
	baz=215						
NACB	**Ninganchiao**	**0.48**	**359**	⇓P	**Pg**	**19 31 04.6**	**-0.2**
	baz=351						
NACB				*e*S	**Sg**	**19 31 11.8**	**+0.8**
	baz=351						
CHGB	**Renai**	**0.53**	**313**	⇓P	**Pg**	**19 31 05.3**	**-0.6**
	baz=312						
CHGB				*e*S	**Sg**	**19 31 11.6**	**-1.3**
	baz=312						
FULB	**Fuli**	**0.57**	**210**	⇓P	**Pb**	**19 31 08.1**	**0.0**
	baz=185						
SSLB	**Suanglung**	**0.60**	**279**	⇓P	**Pg**	**19 31 06.4**	**-0.8**
	baz=275						
SSLB				*e*S	**Sg**	**19 31 12.8**	**-2.1**
	baz=275						
CHKT	**Chengkung**	**0.63**	**200**	⇓P	**Pb**	**19 31 08.8**	**-0.3**
	baz=195						
CHKT				*e*S	**Sn**	**19 31 21.5**	**-0.1**
	baz=195						
SMLT	**Sun Moon Lake**	**0.67**	**286**	⇓P	**Pg**	**19 31 07.8**	**-0.7**
	baz=284						
SMLT				*e*S	**Sg**	**19 31 17.3**	**+0.1**
	baz=284						
TYC	**Yuchr**	**0.71**	**287**	⇓P	**Pg**	**19 31 08.4**	**-0.9**
	baz=284						
ELDTW	**Lidau**	**0.74**	**227**	*e*P	**Pg**	**19 31 09.7**	**0.0**
	baz=221						
ELDTW				*e*S	**Sg**	**19 31 20.1**	**+0.8**
	baz=221						
ENA	**Nanau**	**0.74**	**10**	⇓P	**Pg**	**19 31 09.9**	**0.0**
	baz=4.0						
NANB	**Nanao**	**0.74**	**11**	⇓P	**Pg**	**19 31 09.9**	**0.0**
	baz=4.0						
ALS	**Alishan**	**0.75**	**256**	⇑P	**Pg**	**19 31 10.3**	**+0.2**
	baz=252						
ALS				*e*S	**Sg**	**19 31 19.8**	**-0.1**
	baz=252						
NNSB	**Datong**	**0.76**	**345**	⇓P	**Pg**	**19 31 09.8**	**-0.4**
	baz=347						
NNSB				S	**Sg**	**19 31 19.9**	**-0.2**
	baz=347						
NNSH	**Datong**	**0.76**	**345**	⇓*i*P	**Pg**	**19 31 09.8**	**-0.4**
	baz=346						
NNSH				*e*S	**Sg**	**19 31 19.6**	**-0.4**
	baz=346						
NNS	**Nan Shan**	**0.77**	**344**	⇓*i*P	**Pg**	**19 31 10.1**	**-0.3**
	baz=347						
NNS				*e*S	**Sg**	**19 31 20.6**	**+0.2**
	baz=347						
ENAH	**Nanao**	**0.77**	**14**	⇓*e*P	**Pg**	**19 31 10.6**	**+0.1**
	baz=8.0						
WJS	**Zhushan**	**0.81**	**279**	*e*P	**Pb**	**19 31 12.0**	**-0.2**
	baz=276						
WJS				*e*S	**Sb**	**19 31 24.1**	**+0.7**
	baz=276						
TWC	**Suao**	**0.94**	**14**	*e*P	**Pb**	**19 31 13.8**	**-0.5**
	baz=9.0						
ENTT	**Nioudou**	**0.94**	**358**	⇓P	**Pg**	**19 31 13.6**	**-0.1**
	baz=350						
ENTT				*e*S	**Sb**	**19 31 26.3**	**-0.8**
	baz=350						
WGK	**Gukeng**	**0.95**	**270**	⇑P	**Pb**	**19 31 14.4**	**-0.2**
	baz=265						
TCU	**Taichung**	**0.96**	**298**	⇑*e*P	**Pb**	**19 31 14.7**	**0.0**
	baz=296						
TCU				*e*S	**Sb**	**19 31 28.3**	**+0.6**
	baz=296						
TPUB	**Ta-pu**	**0.97**	**246**	⇑P	**Pb**	**19 31 14.7**	**-0.2**
	baz=253						
TPUB				S	**Sg**	**19 31 27.5**	**+0.5**
	baz=253						
WDLH	**Douliu**	**0.97**	**270**	⇑P	**Pb**	**19 31 15.0**	**+0.1**
	baz=267						
WDLH				*e*S	**Sb**	**19 31 28.9**	**+0.8**
	baz=267						
EOS1	**EOS1**	**0.98**	**29**	*e*P	**Pn**	**19 31 16.1**	**+0.2**
	baz=54						
TWH	**Lutao**	**0.99**	**187**	*e*P	**Pg**	**19 31 14.4**	**-0.2**
	baz=171						
YHNB	**Yeheng**	**0.99**	**348**	⇓P	**Pg**	**19 31 14.5**	**-0.2**
	baz=336						
YHNB				*e*S	**Sb**	**19 31 28.1**	**-0.6**
	baz=336						
TWGBT	**Beinan**	**1.00**	**209**	*e*P	**Pg**	**19 31 13.4**	**-1.3**
	baz=208						
TWG	**Pinlang**	**1.00**	**209**	*e*P	**Pg**	**19 31 14.4**	**-0.4**
	baz=208						
TWQ1	**Liyutan**	**1.00**	**311**	*e*P	**Pb**	**19 31 15.1**	**-0.3**
	baz=310						
NSK	**Sanguang**	**1.00**	**347**	⇓*i*P	**Pg**	**19 31 14.6**	**-0.2**
	baz=335						
NSK				S	**Sg**	**19 31 26.9**	**-1.0**
	baz=335						
WTP	**Ta-pu**	**1.01**	**244**	⇓P	**Pb**	**19 31 15.5**	**-0.1**
	baz=250						
WTP				*e*S	**Sb**	**19 31 29.9**	**+0.7**
	baz=250						
TWE	**Neicheng**	**1.02**	**3**	*e*P	**Pg**	**19 31 14.9**	**-0.3**
	baz=5.0						
TTN	**Taung**	**1.03**	**204**	*e*P	**Pn**	**19 31 16.2**	**-0.4**
	baz=204						
WCHH	**Zhanghua**	**1.03**	**292**	*e*P	**Pb**	**19 31 15.8**	**0.0**
	baz=289						
NSY	**Sanyi**	**1.05**	**313**	*e*P	**Pn**	**19 31 16.7**	**-0.3**
	baz=313						
ILA	**Ilan**	**1.07**	**7**	*e*P	**Pn**	**19 31 17.5**	**+0.2**
	baz=9.0						
NSTT	**Nanjuang**	**1.08**	**330**	⇓P	**Pg**	**19 31 16.0**	**-0.3**
	baz=320						
NSTT				*e*S	**Sg**	**19 31 30.1**	**-0.2**
	baz=320						
LIOB	**Emei**	**1.09**	**331**	*e*P	**Pb**	**19 31 16.6**	**-0.3**
	baz=319						
LIOB				*e*S	**Sg**	**19 31 30.3**	**-0.2**
	baz=319						
CHY	**Chiayi**	**1.10**	**260**	*e*P	**Pb**	**19 31 17.1**	**0.0**
	baz=258						
CHY				*e*S	**Sb**	**19 31 32.4**	**+0.7**
	baz=258						
TWK	**Hsinying**	**1.11**	**248**	*e*P	**Pb**	**19 31 17.3**	**+0.1**
	baz=245						
TWK				*e*S	**Sb**	**19 31 32.3**	**+0.3**
	baz=245						
CHN1	**Nanshi**	**1.11**	**243**	*e*P	**Pb**	**19 31 17.3**	**0.0**
	baz=241						
CHN1				*e*S	**Sn**	**19 31 33.9**	**+0.5**
	baz=241						
SGST	**Jiashian**	**1.12**	**237**	*e*P	**Pn**	**19 31 17.7**	**-0.2**
	baz=235						
SGST				*e*S	**Sn**	**19 31 34.8**	**+1.2**
	baz=235						
NMLH	**Miaoli**	**1.12**	**319**	⇑P	**Pn**	**19 31 17.8**	**-0.1**
	baz=316						
NMLH				*e*S	**Sn**	**19 31 33.4**	**-0.2**
	baz=316						
SLGT	**Liugui**	**1.12**	**232**	*e*P	**Pg**	**19 31 16.8**	**-0.4**
	baz=227						
RLNB	**Erlin**	**1.15**	**280**	⇑P	**Pg**	**19 31 17.4**	**-0.4**
	baz=277						
RLNB				S	**Sb**	**19 31 33.3**	**+0.1**
	baz=277						
NTC	**Toucheng**	**1.17**	**10**	*e*P	**Pn**	**19 31 18.3**	**-0.3**
	baz=354						
EGS		**1.18**	**15**	*e*P	**Pn**	**19 31 18.5**	**-0.3**
	baz=360						
WLGB	**Puzi**	**1.21**	**260**	*e*P	**Pg**	**19 31 18.3**	**-0.6**
	baz=258						
WLGB				*e*S	**Sb**	**19 31 35.3**	**+0.3**
	baz=258						
SBCB	**Hsinchu**	**1.23**	**333**	*e*P	**Pn**	**19 31 19.8**	**+0.4**
	baz=322						
SBCB				*e*S	**Sn**	**19 31 37.3**	**+1.0**
	baz=322						
HSN	**Hsinchu**	**1.24**	**332**	*e*P	**Pn**	**19 31 20.2**	**+0.6**
	baz=341						
HSN				*e*S	**Sn**	**19 31 37.5**	**+0.8**
	baz=341						
ECL	**Taimali**	**1.25**	**209**	*e*P	**Pg**	**19 31 17.2**	**-2.2**
	baz=194						
WSF	**Szhu**	**1.27**	**268**	*e*P	**Pn**	**19 31 19.5**	**-0.4**
	baz=266						
WSF				*e*S	**Sg**	**19 31 35.8**	**-0.5**
	baz=266						
TATO	**Taipei**	**1.28**	**355**	*e*P	**Pn**	**19 31 19.3**	**-0.7**
	baz=355						
TATO	**Taipei**	**1.28**	**355**	*e*Pn	**Pn**	**19 31 19.5**	**-0.6**
TIPB	**Shuangxi**	**1.29**	**9**	*e*P	**Pn**	**19 31 18.6**	**-1.7**
	baz=358						
TIPB				*e*S	**Sg**	**19 31 36.4**	**-0.6**
	baz=358						
CHN3	**Shinhua**	**1.29**	**242**	*e*P	**Pg**	**19 31 21.1**	**+0.7**
	baz=240						
CHN3				*e*S	**Sn**	**19 31 40.3**	**+2.4**
	baz=240						
SSD	**Sandimen**	**1.30**	**224**	*e*P	**Pg**	**19 31 20.6**	**+0.1**
	baz=213						
NCUH	**Zhongli**	**1.32**	**343**	*e*P	**Pg**	**19 31 21.2**	**+0.2**
	baz=339						
NCUH				*e*S	**Sn**	**19 31 39.6**	**+0.9**
	baz=339						
CHN8	**Yiju**	**1.32**	**255**	⇑P	**Pn**	**19 31 20.2**	**-0.5**
	baz=254						
CHN8				*e*S	**Sn**	**19 31 39.1**	**+0.4**
	baz=254						
NCU	**National Centr**	**1.32**	**343**	*e*P	**Pg**	**19 31 20.8**	**-0.2**
	baz=350						
NCU				*e*S	**Sn**	**19 31 40.3**	**+1.6**
	baz=350						
TAP1	**Taipei**	**1.34**	**357**	*e*P	**Pn**	**19 31 20.2**	**-0.7**
	baz=353						
TAP1				*e*S	**Sb**	**19 31 38.3**	**-0.3**
	baz=353						
TWB1	**Santiao Chiao**	**1.35**	**15**	*e*P	**Pg**	**19 31 22.1**	**+0.5**
	baz=359						
NWF	**Wu-fen Shan**	**1.38**	**7**	*e*P	**Pg**	**19 31 21.9**	**-0.2**
	baz=6.0						
WFSB	**Wu-fen Shan**	**1.38**	**7**	*e*P	**Pg**	**19 31 22.1**	**0.0**
	baz=7.0						
SCLT	**Jiali**	**1.39**	**248**	*e*P	**Pb**	**19 31 21.8**	**-0.2**
	baz=248						
SCLT				*e*S	**Sg**	**19 31 43.0**	**+2.6**
	baz=248						
MASBT	**Mashibuluo**	**1.40**	**220**	*e*P	**Pn**	**19 31 21.6**	**-0.1**
	baz=208						
SGLT	**Jiouru**	**1.41**	**227**	*e*P	**Pg**	**19 31 23.3**	**+0.7**
	baz=224						
TAI1	**Yung-k'ang**	**1.42**	**243**	*e*P	**Pn**	**19 31 21.7**	**-0.3**
	baz=239						
JYNG	**Yonagunijimaku**	**1.44**	**58**	P	**Pb**	**19 31 22.5**	**-0.4**
JYNG				*e*S	**Sg**	**19 31 43.0**	**+1.1**
YM04	**YM04**	**1.45**	**358**	*e*P	**Pg**	**19 31 23.2**	**-0.3**
	baz=356						
YM10	**YM10**	**1.45**	**359**	*e*P	**Pn**	**19 31 22.5**	**0.0**
	baz=357						
YM11	**YM11**	**1.46**	**359**	*e*P	**Pg**	**19 31 23.7**	**0.0**
	baz=358						
NTST	**Danshui**	**1.47**	**355**	*e*P	**Pn**	**19 31 22.5**	**-0.2**
	baz=353						
YM07	**YM07**	**1.47**	**1**	*e*P	**Pn**	**19 31 22.2**	**-0.6**
	baz=359						
YM12	**YM12**	**1.48**	**359**	*e*P	**Pg**	**19 31 24.8**	**+0.8**
	baz=358						
TAW	**Tawu**	**1.48**	**206**	*e*P	**Pn**	**19 31 23.1**	**+0.2**
	baz=193						
YM08	**YM08**	**1.49**	**360**	*e*P	**Pg**	**19 31 23.8**	**-0.3**
	baz=358						
YOJ	**Yonaguni jima**	**1.50**	**59**	*e*P	**Pn**	**19 31 23.1**	**+0.1**
	baz=59						
YOJ	**Yonaguni jima**	**1.50**	**59**	P	**Pg**	**19 31 23.9**	**-0.4**
YOJ				*e*S	**Sg**	**19 31 44.8**	**+1.1**
SSPT	**Xinbi**	**1.54**	**218**	*e*P	**Pg**	**19 31 25.4**	**+0.3**
	baz=210						
TWY	**Chenhua**	**1.57**	**360**	*e*P	**Pb**	**19 31 25.1**	**0.0**
	baz=358						
SCZT	**Fangliau**	**1.60**	**215**	*e*P	**Pb**	**19 31 25.5**	**0.0**
	baz=202						
LAY	**Lan-yu**	**1.65**	**182**	*e*P	**Pn**	**19 31 23.8**	**-1.4**
	baz=185						
WLCH	**Liuqiu**	**1.75**	**220**	*e*P	**Pg**	**19 31 28.8**	**-0.4**
	baz=222						
TWP	**Hsiaoliuchiu**	**1.76**	**221**	*e*P	**Pg**	**19 31 28.9**	**-0.5**
	baz=222						
WDGT	**Dungji**	**1.83**	**257**	⇓*e*P	**Pn**	**19 31 27.1**	**-0.6**
	baz=252						
PHUB	**P'eng-hu**	**1.87**	**265**	*e*P	**Pn**	**19 31 27.9**	**-0.4**
	baz=264						
PHUB				*e*S	**Sn**	**19 31 52.5**	**+0.3**
	baz=264						
PNG	**Penghu**	**1.88**	**267**	*e*P	**Pn**	**19 31 27.7**	**-0.7**
	baz=265						
PNG				*e*S	**Sn**	**19 31 52.6**	**+0.2**
	baz=265						
TWK1	**Hengchun**	**1.89**	**203**	*e*P	**Pn**	**19 31 28.8**	**+0.2**
	baz=194						
TWKBT	**Hengchun**	**1.89**	**203**	*e*P	**Pb**	**19 31 30.0**	**-0.6**
	baz=194						
TWKBT				*e*S	**Sb**	**19 31 54.6**	**+0.1**
	baz=194						
TSEB	**Hengchuen, Pin**	**1.90**	**200**	*e*P	**Pb**	**19 31 29.8**	**-1.0**
	baz=190						
IRIF	**Iriomote-Funau**	**2.05**	**71**	P	**Pn**	**19 31 31.5**	**+0.8**
IRIF				*e*S	**Sb**	**19 31 58.0**	**-1.0**
HATJ	**Hateruma jima**	**2.05**	**79**	P	**Pn**	**19 31 31.4**	**+0.7**
HATJ				*e*S	**Sn**	**19 31 57.3**	**+0.7**
VCHM	**Qimei**	**2.05**	**257**	*e*P	**Pn**	**19 31 30.1**	**-0.6**
	baz=253						
JKRS	**Kuro-shima**	**2.27**	**76**	P	**Pn**	**19 31 35.0**	**+1.3**
JKRS				*e*S	**Sb**	**19 32 03.4**	**-1.9**
VWUC	**VWUC**	**2.35**	**304**	*e*P	**Pn**	**19 31 33.9**	**-0.9**
	baz=300						
JIJ	**Ishigaki jima**	**2.42**	**74**	P	**Pn**	**19 31 36.2**	**+0.5**
JIJ				*e*S	**Sn**	**19 32 06.9**	**+1.2**
JISG	**Ishigakijimahi**	**2.63**	**70**	P	**Pn**	**19 31 38.3**	**-0.4**
JISG				S	**Sb**	**19 32 13.3**	**-2.5**
MATB	**Ma-tsu**	**2.87**	**329**	*e*P	**Pn**	**19 31 41.8**	**-0.2**
	baz=324						
JTJ	**Tarama**	**2.98**	**71**	P	**Pn**	**19 31 44.9**	**+1.4**
JTJ				S	**Sn**	**19 32 21.6**	**+1.9**
KNM	**Kinmen**	**2.98**	**285**	*e*P	**Pn**	**19 31 44.3**	**+0.8**
	baz=280						
QZH	**Quanzhou**	**3.01**	**295**	⇓*i*Pn	**Pn**	**19 31 43.3**	**-0.6**
QZH				Sn	**Sn**	**19 32 18.3**	**-2.1**
QZH				smax	smax		
	comp=N,1μm,0.9s						
QZH				smax	smax		
	comp=E,940nm,1.0s						
QZH				LR	LR		
	comp=N,8μm,9.2s						
QZH				LR	LR		
	comp=E,7μm,9.0s						
QZH				LR	LR		
	comp=Z,10μm,9.5s						
KNMB	**Chin-men Tao**	**3.04**	**285**	*e*P	**Pn**	**19 31 43.2**	**-1.0**
	baz=282						
JIRB	**Irabujima**	**3.45**	**70**	P	**Pn**	**19 31 51.2**	**+1.3**
JIRB				*e*S	**Sn**	**19 32 32.6**	**+1.4**
JIKM	**Ikemajima**	**3.54**	**69**	P	**Pn**	**19 31 52.4**	**+1.2**
JIKM				*e*S	**Sn**	**19 32 35.1**	**+1.6**
JMJ	**Miyako jima 2**	**3.55**	**71**	*e*S	**Sn**	**19 32 35.4**	**+1.8**
JOGS	**Gusukube**	**3.63**	**72**	*e*S	**Sn**	**19 32 37.4**	**+1.7**
JOW	**Kunigami**	**6.80**	**61**	Pn	**Pn**	**19 32 35.7**	**-0.3**
	6.3nm,0.3s,baz=138,slow=17,SNR=14						
JOW				Sn	**Sn**	**19 33 54.0**	**+0.1**
	1.0nm,0.3s,baz=257,slow=18,SNR=2.4						
GZH	**Guangzhou**	**7.61**	**267**	Pn	**Pn**	**19 32 43.9**	**-3.2**
GZH				smax	smax		
	comp=N,340nm,1.0s						
GZH				smax	smax		
	comp=E,440nm,0.9s						
NJ2	**Nanjing**	**8.67**	**344**	*e*P	**Pn**	**19 33 04.5**	**+2.8**
NJ2				S	**Sn**	**19 34 41.9**	**+2.1**
NJ2				pmax	pmax		
	comp=Z,22nm,0.5s						
NJ2				LR	LR		
	comp=N,4μm,8.1s						
NJ2				LR	LR		
	comp=E,2μm,9.8s						
NJ2				LR	LR		
	comp=Z,4μm,10.6s						
WHN	**Wuhan**	**9.39**	**318**	⇓P	**Pn**	**19 33 16.1**	**+4.5**
WHN				S	**Sn**	**19 34 54.6**	**-3.0**
WHN				LR	LR		
	comp=N,6μm,8.5s						
WHN				LR	LR		
	comp=E,4μm,9.2s						
WHN				LR	LR		
	comp=Z,8μm,10.1s						
TGY	**Tagaytay City**	**9.56**	**184**	LR	LR	19 37 39.0	
	comp=Z,211nm,18.3s,baz=20,slow=43						
JNU	**Nakatsue**	**12.44**	**39**	Pn	**Pn**	**19 33 54.1**	**+0.8**
	0.2nm,0.3s,baz=233,slow=5.1,SNR=3.1						
JNU				LR	LR	19 39 37.3	
	comp=Z,404nm,18.4s,baz=232,slow=42						
GYA	**Guiyang**	**13.81**	**285**	⇑*i*P	**Pn**	**19 34 13.8**	**+1.6**
GYA				S	**Sn**	**19 36 46.5**	**+0.4**

GYA pmax pmax
comp=Z,10.0nm,0.6s
GYA LR LR
comp=E,1μm,12.8s
GYA LR LR
comp=Z,3μm,10.6s
KSAR Wonju Array Be 14.72 20 Pn **P 19 34 28.1 -2.6**
KSRS Korea Array 14.75 20 Pn **P 19 34 28.1 -2.9**
0.2nm,0.3s,baz=196,slow=12,SNR=9.2
KSRS LR LR 19 40 41.1
comp=Z,247nm,18.8s,baz=202,slow=40
XAN Xi'an 15.14 316 P **P 19 34 32.8 -2.6**
XAN pP sP 19 34 39.0 +1.3
XAN pmax pmax
comp=Z,5.0nm,1.0s
XAN LR LR
comp=E,1μm,12.5s
XAN LR LR
comp=Z,2μm,10.6s
DAV Davao City (W) 16.97 166 LR LR 19 41 13.2
comp=Z,250nm,18.3s,baz=338,slow=37
MJAR Matsushiro Arr 19.21 44 P **Pn 19 35 22.5 +1.2**
0.1nm,0.3s,baz=242,slow=9.5,SNR=5.6
MJAR LR LR 19 43 49.3
comp=Z,223nm,19.6s,baz=245,slow=40
LAMP Lampang 21.12 260 P P 19 35 50.0 +8.6
3.2nm,0.9s
CHTO Chiang Mai 21.66 261 P **P 19 35 51.6 +4.5**
42nm,0.8s
CHTO Chiang Mai 21.66 261 *eP* **P 19 35 49.0 +1.9**
5.3nm,0.7s
CMAR Chiang Mai Arr 21.77 260 P **P 19 35 49.6 +1.3**
4.9nm,0.8s,baz=66,slow=8.6,SNR=30
CMAR PcP **PcP 19 39 48.5 -0.4**
0.6nm,0.7s,baz=50,slow=1.4,SNR=5.7
MDJ Mudanjiang 21.87 15 *eP* **P 19 35 50.7 +1.5**
USRK Ussuriysk Ar. 22.16 20 P **P 19 35 51.9 -0.3**
0.9nm,0.4s,baz=180,slow=8.6,SNR=2.9
USRK LR LR 19 44 54.5
comp=Z,180nm,19.0s,baz=186,slow=38
MRSI Marisa 23.08 179 P **P 19 36 04.0 +1.8**
12nm,0.8s
GUMO Guam 24.20 110 LR LR 19 43 52.9
comp=Z,151nm,21.4s,baz=274,slow=32
GTA Gaotai 24.20 315 *eP* **P 19 36 13.4 +0.2**
GTA pP sP 19 36 17.5 +2.0
GTA sP pP 19 36 20.8 +5.9
GTA pmax pmax
comp=Z,2.0nm,0.7s
GTA pmax pmax
comp=Z,70nm,5.5s
GTA LR LR
comp=N,450nm,10.8s
GTA LR LR
comp=E,980nm,10.8s
GTA LR LR
comp=Z,1μm,12.5s
APSI Ampana 24.46 180 P **P 19 36 12.9 -2.6**
28nm,1.2s
PCI Palu 24.51 184 P **P 19 36 16.1 0.0**
22nm,0.9s
LUWI Luwuk 24.61 177 P **P 19 36 18.9 +1.9**
65nm,0.6s
LBMI Labuha 24.86 166 P **P 19 36 18.2 -1.0**
37nm,1.0s
ASAJ Asahikawa 26.67 35 P **P 19 36 35.4 +0.1**
1.4nm,0.4s,baz=192,slow=8.7,SNR=5.0
ASAJ LR LR 19 47 27.9
comp=Z,128nm,19.0s,baz=237,slow=37
KLR Kul'dur 26.71 15 P **P 19 36 35.4 -0.3**
0.3nm,0.7s,baz=227,slow=6.9,SNR=13
KLR LR LR 19 47 13.1
comp=Z,21nm,20.1s,baz=198,slow=36
ULN Ulaanbaatar 26.76 338 *eP* **P 19 36 37.1 +0.8**
5.2nm,0.8s
SONM Songino Array 26.96 337 P **P 19 36 38.5 +0.3**
2.3nm,0.7s,baz=152,slow=10.0,SNR=7.7
LSA Lhasa 27.80 289 *eP* **P 19 36 47.6 +1.3**
3.5nm,0.6s
JAY Jayapura 32.01 142 LR LR 19 48 09.5
comp=Z,120nm,20.8s,baz=306,slow=32
MDSI Maura Dua 32.76 213 P P 19 37 35.2 +5.6
BATI Baumata 33.75 176 P **P 19 37 35.6 -2.7**
13nm,0.6s,baz=267,slow=3.2,SNR=6.6
BATI LR LR 19 53 16.7
comp=Z,75nm,18.8s,baz=14,slow=40
WMQ Urumqi 34.27 314 P **P 19 37 45.1 +2.4**
WMQ pP sP 19 37 49.5 +4.5
WMQ pmax pmax
comp=Z,29nm,1.3s
WMQ pmax pmax
comp=Z,200nm,5.5s
MKAR Makanchi Array 38.95 316 P **P 19 38 22.4 -0.2**
1.8nm,0.7s,baz=111,slow=9.9,SNR=22
MKAR LR LR 19 55 40.3
comp=Z,240nm,19.1s,baz=104,slow=38
PETK Petropavlovsk- 40.06 33 LR LR 19 56 04.9
comp=Z,114nm,18.5s,baz=224,slow=38
ZALV Zalesovo Beam 40.86 327 P **P 19 38 38.4 +0.2**
3.8nm,0.7s,baz=119,slow=7.9,SNR=13
ZALV LR LR 19 55 41.6
comp=Z,120nm,21.3s,baz=70,slow=36
PMG Port Moresby 41.31 140 LR LR 19 55 25.6
comp=Z,69nm,18.6s,baz=300,slow=36
FITZ Fitzroy Crossi 41.73 174 P **P 19 38 43.5 -2.1**
2.1nm,0.6s,baz=355,slow=8.2,SNR=17
H11N1 WAKE ISLAND Hy 42.13 86 T T 20 23 47.4
baz=283,slow=75,SNR=133
H11N2 WAKE ISLAND Hy 42.14 86 T T 20 23 47.5
baz=283,slow=75,SNR=301
H11N3 WAKE ISLAND Hy 42.15 86 T T 20 23 48.7
baz=283,slow=75,SNR=220
H11S3 WAKE ISLAND Hy 42.25 88 T T 20 23 55.8
baz=284,slow=74,SNR=870
H11S1 WAKE ISLAND Hy 42.26 88 T T 20 23 56.6
baz=284,slow=74,SNR=316
H11S2 WAKE ISLAND Hy 42.27 88 T T 20 23 57.6
baz=284,slow=74,SNR=320
KURK Kurchatov 42.71 320 *eP* **P 19 38 53.7 +0.3**
19nm,0.6s
KURBB Kurchatov Arra 42.73 320 P **P 19 38 53.5 -0.1**
1.4nm,0.7s,baz=113,slow=9.4,SNR=8.6
WRAB Tennant Creek 45.11 163 *eP* **P 19 39 11.8 -1.2**
3.8nm,0.6s
WRA Warramunga Arr 45.12 163 P **P 19 39 11.3 -1.7**
5.5nm,0.6s,baz=345,slow=8.7,SNR=84
TIXI Tiksi 48.16 3 *eP* **P 19 39 34.5 -1.8**
3.7nm,0.9s
BVAR Borovoye Array 48.29 321 P **P 19 39 38.7 +1.0**
1.0nm,0.5s,baz=112,slow=9.0,SNR=8.9
BRVK Borovoye 48.36 321 *eP* **P 19 39 40.4 +2.3**
11nm,0.9s
ASAR Alice Springs 48.57 165 P **P 19 39 39.1 -1.0**
2.4nm,0.5s,baz=345,slow=7.3,SNR=39
CTA Charters Tower 49.71 149 P **P 19 39 49.8 +0.9**
3.5nm,0.9s,baz=318,slow=13,SNR=4.5
CTAO Charters Tower 49.71 149 *eP* **P 19 39 50.1 +1.3**
HNR Honiara 49.89 127 LR LR 19 59 27.7
comp=Z,49nm,19.8s,baz=81,slow=34
NRIK Noril'sk 49.97 345 LR LR 20 02 04.6
comp=Z,85nm,18.7s,baz=198,slow=37
GEYT Alibeck 55.37 301 LR LR 20 08 23.0
comp=Z,160nm,18.8s,baz=75,slow=41
AKTO Aktyubinsk 55.39 316 P **P 19 40 31.8 +1.2**
0.9nm,0.6s,baz=116,slow=17,SNR=3.1
AKTO LR LR 20 05 52.7
comp=Z,151nm,18.3s,baz=101,slow=38
ARU Arti 55.73 323 *eP* **P 19 40 32.4 -0.5**
3.4nm,0.6s
WSAR Wadi Sarin 57.32 283 LR LR 20 07 43.6
comp=Z,88nm,19.1s,baz=122,slow=38
STKA Stephens Creek 58.48 160 P **P 19 40 52.0 -0.7**
5.5nm,0.6s,baz=337,slow=6.3,SNR=14
KLMR Klimovskoe 65.78 328 *eP* P 19 41 47.6 +6.3
KLMR AMP 19 42 01.6
comp=Z,16nm,1.7s
KBZ Khabaz 66.08 309 P **P 19 41 47.1 +3.5**
comp=Z,3.7nm,0.8s,baz=100,slow=3.7,SNR=10
KIV Kislovodsk 66.19 309 P **P 19 41 45.8 +1.4**
comp=Z,6.5nm,0.9s
ILAR Eielson Array 69.47 27 P **P 19 42 04.5 -0.1**
comp=Z,1.3nm,0.7s,baz=279,slow=7.6,SNR=7.0
SPITS Spitsbergen Ar 70.04 348 LR LR 20 16 16.9
comp=Z,82nm,18.1s,baz=65,slow=39
FINES FINESS Array B 72.06 330 P **P 19 42 18.6 -1.8**
comp=Z,1.3nm,0.7s,baz=46,slow=8.2,SNR=6.3
FINES LR LR 20 16 50.0
comp=Z,155nm,20.5s,baz=74,slow=38

DAWY Dawson 72.80 27 *eP* **P 19 42 24.7 -0.2**
comp=Z,6.3nm,0.8s
AKASG Malin Array Be 73.49 318 P **P 19 42 28.3 -0.8**
comp=Z,0.5nm,0.5s,baz=57,slow=7.5,SNR=3.7
INK Inuvik 73.53 22 P **P 19 42 30.0 +0.9**
comp=Z,6.4nm,0.9s,baz=294,slow=12,SNR=8.4
INK Inuvik 73.53 22 *eP* **P 19 42 29.9 +0.9**
comp=Z,7.6nm,0.9s
BRTR Keskin Array B 73.77 307 P **P 19 42 30.4 -0.9**
comp=Z,0.4nm,0.5s,baz=101,slow=1.5,SNR=3.0
BRTR LR LR 20 19 26.7
comp=Z,41nm,18.4s,baz=34,slow=40
HFS Hagfors 78.18 331 LR LR 20 20 29.9
comp=Z,187nm,20.6s,baz=64,slow=38
NOA NORSAR Array B 78.83 332 LR LR 20 20 11.4
comp=Z,121nm,18.7s,baz=65,slow=38
DLBC Dease Lake 79.17 31 *eP* **P 19 43 01.3 0.0**
comp=Z,2.5nm,0.7s
JMIC Jan Mayen 79.40 345 LR LR 20 21 10.7
comp=Z,44nm,18.0s,baz=59,slow=38
YKA Yellowknife Ar 83.27 23 P **P 19 43 21.6 -1.3**
comp=Z,1.0nm,0.7s,baz=314,slow=4.5,SNR=6.0
GERES GERESS Array B 83.46 321 P **P 19 43 25.4 +1.1**
comp=Z,1.0nm,0.7s,baz=61,slow=6.3,SNR=7.5
EKA Eskdalemuir Ar 88.32 332 LR LR 20 27 31.4
comp=Z,99nm,18.3s,baz=45,slow=38
NVAR Mina Array Bea 96.53 43 P **P 19 44 28.4 +1.6**
comp=Z,0.9nm,0.8s,baz=272,slow=5.0,SNR=5.0
SDV Santo Domingo 145.48 22 PKPbc **PKPbc 19 50 35.4 -0.5**
comp=Z,3.8nm,0.5s,baz=342,slow=3.2,SNR=6.8

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*IDC **14** 19:30:27.6±1.6, 1°.07N×126°.07E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.4/58, mbtmp3.7/5, ML3.7/1, Error ellipse: s-maj=102.9km s-min=22.3km az=67.0*
*DJA **14** 19:31:13.1±0.5, 3°S±4°×12°7E±°, h10km, M3.0/6, MLv3.0/6*
ISC 14 19:31:12.1±1.1, 2°.85S±0°.09×126°.5E±0°.1, h10km, n8, σ2.50/9, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.75**	**121**	P	**Pg**	**19 31 27.0**	**+0.4**
NLAI				S	**Sg**	**19 31 36.7**	**+0.2**
SANI	**Sanana**	**0.92**	**330**	P	**Pg**	**19 31 29.7**	**-0.2**
SANI				S	**Sg**	**19 31 42.9**	**+1.0**
AAI	**Ambon**	**1.93**	**116**	Pn	**Pn**	**19 31 45.7**	**+0.7**
LBMI	**Labuha**	**2.44**	**25**	P	**Pn**	**19 31 52.3**	**+0.3**
FITZ	**Fitzroy Crossi**	**15.17**	**183**	P	**Pn**	**19 34 50.0**	**+3.3**
0.2nm,0.3s,baz=1.5,slow=10,SNR=8.6							
WRA	**Warramunga Arr**	**18.65**	**156**	P	**P**	**19 35 27.5**	**-2.8**
0.8nm,0.5s,baz=339,slow=11,SNR=30							
ASAR	**Alice Springs**	**21.91**	**161**	P	**P**	**19 36 01.6**	**-4.1**
0.4nm,0.5s,baz=344,slow=12,SNR=11							
STKA	**Stephens Creek**	**32.20**	**155**	P	P	19 37 29.2	-11
0.6nm,0.3s,baz=333,slow=14,SNR=3.1							

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*DDA **14** 19:46:08.8, 36°.87N×34°.19E, h7km, Ml2.7*
*ISCJB **14** 19:46:09.3±0.5, 36°.87N±0°.03×34°.18E±0°.03, h5km±5km, Error ellipse: s-maj=5.7km s-min=3.2km az=44.8*
*CSEM **14** 19:46:09.3±0.1, 36°.88N×34°.18E, h5km, ML2.3, Error ellipse: s-maj=3.2km s-min=2.0km az=142.0*
*ISK **14** 19:46:09.3, 36°.85N×34°.20E, h6km, ML2.3/10*
ISC 14 19:46:09.6±1.0, 36°.88N±0°.02×34°.18E±0°.02, h8km±9km, n38, σ0.68/59, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MERS	**Mersin**	**0.27**	**92**	PG	**Pg**	**19 46 14.7**	**-0.3**
MERS				SG	**Sg**	**19 46 19.0**	**+0.3**
MERS	**Mersin**	**0.27**	**92**	*i* Pg	**Pg**	**19 46 14.7**	**-0.3**
MERS				*i* Sg	**Sg**	**19 46 19.0**	**+0.3**
KIZK	**Mersin**	**0.40**	**185**	PG	**Pg**	**19 46 17.2**	**-0.1**
KIZK				SG	**Sg**	**19 46 22.9**	**+0.4**
KIZK	**Mersin**	**0.40**	**185**	*i* P	**Pg**	**19 46 17.0**	**-0.3**
KIZK				*i* S	**Sg**	**19 46 23.0**	**+0.4**
KIZK	**Mersin**	**0.40**	**185**	P	**Pg**	**19 46 17.0**	**-0.3**
KIZK				S	**Sg**	**19 46 23.0**	**+0.4**
KERG	**Konya-Eregli**	**0.54**	**355**	*i* P	**Pg**	**19 46 19.6**	**-0.6**
KERG				*i* S	**Sg**	**19 46 27.5**	**+0.3**
KERG	**Konya-Eregli**	**0.54**	**355**	P	**Pg**	**19 46 19.5**	**-0.6**
KERG				S	**Sg**	**19 46 27.5**	**+0.3**
KEBE	**Keben-Mersin**	**0.57**	**222**	PG	**Pg**	**19 46 20.7**	**0.0**
KEBE				SG	**Sb**	**19 46 29.1**	**-1.1**
KEBE	**Keben-Mersin**	**0.57**	**222**	*i* Pg	**Pg**	**19 46 20.7**	**0.0**
KEBE				*e*Sg	**Sb**	**19 46 29.1**	**-1.1**
GULE	**Gulek**	**0.62**	**49**	*i* P	**Pg**	**19 46 21.0**	**-0.7**
GULE				*i* S	**Sg**	**19 46 30.5**	**+0.6**
GULE	**Gulek**	**0.62**	**49**	P	**Pg**	**19 46 21.0**	**-0.7**
GULE				S	**Sg**	**19 46 30.5**	**+0.6**
GULN	**MERSIN_Gulnar**	**0.86**	**217**	*i* P	**Pg**	**19 46 24.8**	**-1.4**
GULN				*i* S	**Sg**	**19 46 37.3**	**-0.1**
GULN	**MERSIN_Gulnar**	**0.86**	**217**	P	**Pg**	**19 46 24.8**	**-1.4**
GULN				S	**Sg**	**19 46 37.3**	**-0.1**
AKKU	**Akkuyu-Mersin**	**0.88**	**216**	PG	**Pg**	**19 46 26.5**	**0.0**
AKKU				SG	**Sb**	**19 46 38.9**	**-0.1**
AKKU	**Akkuyu-Mersin**	**0.88**	**216**	*i* Pg	**Pg**	**19 46 26.5**	**0.0**
AKKU				*e*Sg	**Sb**	**19 46 38.9**	**-0.1**
BERE	**Bereket-Mersin**	**0.94**	**236**	PG	**Pb**	**19 46 27.7**	**-0.4**
BERE	**Bereket-Mersin**	**0.94**	**236**	*i* Pg	**Pb**	**19 46 27.7**	**-0.4**
KRTS	**Karatas**	**1.00**	**107**	PG	**Pg**	**19 46 28.7**	**-0.2**
KRTS	**Karatas**	**1.00**	**107**	*e*Pg	**Pg**	**19 46 28.7**	**-0.2**
ERMK	**Ermenek**	**1.05**	**257**	*i* P	**Pg**	**19 46 28.9**	**-0.8**
ERMK				*i* S	**Sb**	**19 46 44.3**	**+0.3**
ERMK	**Ermenek**	**1.05**	**257**	P	**Pg**	**19 46 28.9**	**-0.8**
ERMK				S	**Sb**	**19 46 44.3**	**+0.3**
TEKE	**Tekeli-Mersin**	**1.13**	**230**	PN	**Pb**	**19 46 31.2**	**-0.2**
TEKE	**Tekeli-Mersin**	**1.13**	**230**	*e*Pn	**Pb**	**19 46 31.2**	**-0.2**
YURE	**YUREGIR**	**1.16**	**92**	PN	**Pb**	**19 46 31.8**	**-0.1**
YURE	**YUREGIR**	**1.16**	**92**	*e*Pn	**Pb**	**19 46 31.8**	**-0.1**
CEYT	**Ceyhan**	**1.26**	**83**	PN	**Pn**	**19 46 33.8**	**+0.4**
CEYT	**Ceyhan**	**1.26**	**83**	*e*Pn	**Pn**	**19 46 33.8**	**+0.4**
SULT	**Sultanhani-AKS**	**1.42**	**338**	PN	**Pg**	**19 46 36.9**	**0.0**
SULT	**Sultanhani-AKS**	**1.42**	**338**	*e*Pn	**Pg**	**19 46 36.9**	**0.0**
YAHY	**KAYSERI_Yahyal**	**1.54**	**37**	*i* P	**Pn**	**19 46 37.1**	**-0.3**
YAHY				*i* S	**Sn**	**19 46 57.5**	**-0.1**
YAHY	**KAYSERI_Yahyal**	**1.54**	**37**	P	**Pn**	**19 46 37.1**	**-0.3**
YAHY				S	**Sn**	**19 46 57.5**	**-0.1**
GAZI	**Gazipasa**	**1.64**	**247**	*i* P	**Pn**	**19 46 38.6**	**0.0**
GAZI				*i* S	**Sg**	**19 47 04.6**	**+2.4**
GAZI	**Gazipasa**	**1.64**	**247**	P	**Pn**	**19 46 38.6**	**0.0**
GAZI				S	**Sg**	**19 47 04.6**	**+2.4**
TAHT	**Tahtakopru-Hat**	**1.69**	**107**	PN	**Pn**	**19 46 39.8**	**+0.5**
TAHT	**Tahtakopru-Hat**	**1.69**	**107**	*e*Pn	**Pn**	**19 46 39.8**	**+0.5**
YAYL	**Yayladag**	**1.76**	**118**	PN	**Pn**	**19 46 40.9**	**+0.4**
YAYL	**Yayladag**	**1.76**	**118**	*e*Pn	**Pn**	**19 46 40.9**	**+0.4**
SARI	**SarD1z-Kayseri**	**2.34**	**49**	PN	**Pn**	**19 46 49.5**	**+1.0**

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*BJI **14** 20:17:19.5, 0°.92N×126°.90E, h59km, mb5.4/72, mB5.6/60, Ms4.8/69, Ms7 4.6/69*
*MOS **14** 20:17:22.3±1.1, 1°.37N×126°.81E, h52km, mb5.8/94, MS4.4/30, Error ellipse: s-maj=6.5km s-min=4.0km az=111.2*
*ISCJB **14** 20:17:23.9±0.3, 1°.32N±0°.01×126°.85E±0°.02, h70km±2km, mb5.5/256, Error ellipse: s-maj=3.0km s-min=2.1km az=162.1*
*NEIC **14** 20:17:23.0±0.0, 1°.32N×126°.92E, h80km, Moment Tensor Solution. s31 Moment tensor: Scale 10^{17}Nm; M_{rr}1.08; $M_{\theta\theta}$-0.07; $M_{\phi\phi}$-1.01; $M_{r\theta}$1.77; $M_{\theta\phi}$-0.45; $M_{\phi r}$1.32; Best double couple: $M_0$2.50000×10^{17} NP1:ϕ_s49.00000°, δ78.00000°, λ103.00000°. NP2:ϕ_s182.00000°, δ18.00000°, λ45.00000°. Principal axes: T 2.5700, Plg55.0000°, Azm334.0000°; N -0.1700, Plg12.0000°, Azm226.0000°; P -2.4000, Plg31.0000°, Azm128.0000°;*
*GCMT **14** 20:17:24.5±0.1, 1°.35N×126°.90E, h76km±1km, MW5.5/126, Moment Tensor Solution. s121,c228; s126,c273; Duration: 1s4 Moment tensor: Scale 10^{17}Nm; M_{rr}1.19±.03; $M_{\theta\theta}$0.07±.03; $M_{\phi\phi}$-1.26±.03; $M_{r\theta}$1.16±.02; $M_{\theta\phi}$-0.67±.02; $M_{\phi r}$1.33±.02; Best double couple: $M_0$2.24100×10^{17} NP1:ϕ_s38.00000°, δ72.00000°, λ103.00000°. NP2:ϕ_s182.00000°, δ22.00000°, λ56.00000°. Principal axes: T 2.1300, Plg61.0000°, Azm327.0000°; N 0.2190, Plg12.0000°, Azm214.0000°; P -2.3530, Plg26.0000°, Azm118.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **14** 20:17:24.5±0.4, 1°.29N×126°.83E, h61km±3km, mb5.6/136, MW5.6, MW5.5 Error ellipse: s-maj=3.2km s-min=2.5km az=59.0, Moment Tensor Solution. s24 Moment tensor: Scale 10^{17}Nm; M_{rr}2.66; $M_{\theta\theta}$0.31; $M_{\phi\phi}$-2.97; $M_{r\theta}$-0.18; $M_{\theta\phi}$1.50; $M_{\phi r}$1.12; Best double couple: $M_0$3.40000×10^{17} NP1:ϕ_s151.00000°, δ36.00000°, λ79.00000°. NP2: ϕ_s345.00000°, δ55.00000°, λ98.00000°. Principal axes: T 2.8800, Plg78.0000°, Azm283.0000°; N 0.8700, Plg6.0000°, Azm160.0000°; P -3.7400, Plg10.0000°, Azm69.0000°;*
*IDC **14** 20:17:24.6±0.8, 1°.27N×126°.84E, h61km±6km, mb5.1/58, mb1 5.1/64, mb1mx5.0/71, mbtmp5.4/64, MS4.4/46, Ms1 4.4/46, ms1mx4.3/57 Error ellipse: s-maj=8.5km s-min=5.6km az=65.0*
*DJA **14** 20:17:26.8±0.2, 1°N±2°×12°7E±°, h70km±2km, M5.4/85, mb5.6/85, mB5.8/61, MLv5.8/17, Mw(mB)5.4/61, Mwp5.5/3*
ISC 14 20:17:24.4±0.3, 1°.33N±0°.03×126°.82E±0°.03, h61km±2km, h61km:pP-P, n1295, σ1.39/1462, mb5.5/263, 73C-14D, Northern Moluccа Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.78**	**136**	*e*Pn	**Pn**	**20 17 40.4**	**+0.8**
LBMI	**Labuha**	**2.07**	**161**	P	**Pn**	**20 17 58.2**	**+1.4**
LBMI				S	**Sn**	**20 18 22.2**	**+0.7**
SGSI	**Sangihe**	**2.67**	**331**	P	**Pn**	**20 18 06.9**	**+1.8**
KMSI	**Cibinong**	**2.94**	**255**	P	**Pn**	**20 18 11.3**	**+2.6**
SANI	**Sanana**	**3.46**	**194**	P	**Pn**	**20 18 16.0**	**+0.2**
NLAI	**Namlea**	**4.55**	**177**	P	**Pn**	**20 18 32.5**	**+1.8**
LUWI	**Luwuk**	**4.69**	**240**	P	**Pn**	**20 18 34.4**	**+1.8**
LUWI	**Luwuk**	**4.69**	**240**	*e*Pn	**Pn**	**20 18 33.8**	**+1.2**
SIJI	**Sorong**	**4.95**	**116**	P	**Pn**	**20 18 37.7**	**+1.5**
13nm,0.3s,baz=310,slow=9.4,SNR=107							
SIJI				S	**Sn**	**20 19 32.4**	**+0.2**
9.9nm,0.3s,baz=341,slow=22,SNR=5.8							
SIJI				LR	LR	20 20 52.9	
comp=Z,29μm,18.7s,baz=304,slow=42							
MRSI	**Marisa**	**4.96**	**260**	P	**Pn**	**20 18 38.3**	**+2.0**
MSAI	**Masohi**	**5.10**	**156**	P	**Pn**	**20 18 41.8**	**+3.5**
459nm,1.0s,6μm1.7nm							
AAI	**Ambon**	**5.17**	**165**	P	**Pn**	**20 18 41.4**	**+2.2**
1μm,0.9s,14μm9.1nm							
AAI	**Ambon**	**5.17**	**165**	P	**Pn**	**20 18 42.5**	**+3.3**
AAI				pmax	pmax		
comp=Z,1μm,0.9s							
MATI	**Mati**	**5.61**	**354**	*e*P	**Pn**	**20 18 46.6**	**+1.3**
MATI				*e*S	**Sn**	**20 19 52.5**	**+4.1**
APSI	**Ampana**	**5.63**	**247**	P	**Pn**	**20 18 47.6**	**+2.0**
comp=Z,1μm,0.7s,comp=Z,21μmcomp=Z,12nm							
SKMP	**Bagumbayan, Su**	**5.63**	**336**	*e*P	**Pn**	**20 18 47.1**	**+1.5**
SKMP				*e*S	**Sn**	**20 19 49.8**	**+0.8**
DAV	**Davao City (W)**	**5.84**	**348**	P	**Pn**	**20 18 50.0**	**+1.6**
comp=Z,26nm,0.3s,baz=100,slow=3.1,SNR=11							
DAV				S	**Sn**	**20 19 57.2**	**+3.2**
comp=Z,95nm,0.3s,baz=120,slow=13,SNR=5.0							
DAV	**Davao City (W)**	**5.84**	**348**	↑*i*P	**Pn**	**20 18 50.1**	**+1.7**
DAV	**Davao City (W)**	**5.84**	**348**	*e*Pn	**Pn**	**20 18 49.4**	**+1.0**
DAV				S	**Sn**	**20 19 57.1**	**+3.2**
DAV	**Davao City (W)**	**5.84**	**348**	P	**Pn**	**20 18 50.8**	**+2.4**
SNR=16							
BNDI	**Bandanaira**	**6.58**	**152**	P	**Pn**	**20 18 59.7**	**+1.2**
comp=Z,1μm,1.1s,comp=Z,19μmcomp=Z,5.4nm							
KDI	**Kendari**	**6.73**	**219**	P	**Pn**	**20 19 01.2**	**+0.7**
BUKP	**Musuan**	**6.74**	**345**	*e*P	**Pn**	**20 19 02.4**	**+1.6**
BUKP				*e*S	**Sn**	**20 20 17.1**	**+0.9**
FAKI	**Fak Fak**	**6.87**	**128**	*e*Pn	**Pn**	**20 19 03.7**	**+1.2**
MPSI	**Mapaga**	**6.99**	**262**	P	**Pn**	**20 19 06.7**	**+2.5**
comp=Z,282nm,1.0s,comp=Z,3μmcomp=Z,13μmcomp=Z,1.2nm							
PAGZ	**Pagadian**	**7.33**	**332**	*e*P	**Pn**	**20 19 08.4**	**-0.4**
PAGZ				*e*S	**Sn**	**20 20 27.0**	**-3.5**
PCI	**Palu**	**7.33**	**252**	P	**Pn**	**20 19 10.3**	**+1.5**
comp=Z,506nm,1.1s,comp=Z,5μmcomp=Z,2.9nm							
PCI	**Palu**	**7.33**	**252**	P	**Pn**	**20 19 11.8**	**+3.0**
PCI				pmax	pmax		
comp=Z,506nm,1.1s							
BUTP	**Butuan**	**7.68**	**351**	*e*P	**Pn**	**20 19 16.4**	**+2.7**
BUTP				*e*S	**Sn**	**20 20 43.0**	**+3.7**
RKPI	**Ransiki, Papua**	**7.88**	**111**	P	**Pn**	**20 19 19.4**	**+3.1**
comp=Z,394nm,1.1s,comp=Z,5μmcomp=Z,1.3nm							
TTSI	**Tana Toraja**	**8.24**	**238**	P	**Pn**	**20 19 22.6**	**+1.3**
comp=Z,562nm,0.9s,comp=Z,5μm							
KMPI	**Kaimana, Papua**	**8.48**	**126**	P	**Pn**	**20 19 27.2**	**+2.7**
comp=Z,1μm,1.5s,comp=Z,17μm							
SPSI	**Sidrap Palu**	**8.79**	**233**	P	**Pn**	**20 19 30.1**	**+1.2**
comp=Z,324nm,0.8s,comp=Z,3μm							
BNSI	**Bone**	**8.80**	**230**	P	**Pn**	**20 19 31.5**	**+2.5**
MSLP	**Maasin**	**8.96**	**347**	*e*P	**Pn**	**20 19 31.6**	**+0.4**
MSLP				*e*S	Sn	20 21 23.3	+13
LLP	**Lapu-Lapu**	**9.37**	**342**	↑*e*P	**Pn**	**20 19 37.5**	**+0.7**
LLP				*e*S	**Sn**	**20 21 23.8**	**+3.1**
BKSI	**Bulukumba**	**9.40**	**225**	P	**Pn**	**20 19 38.6**	**+1.4**
comp=Z,663nm,0.6s,comp=Z,6μm							
BAKI	**Biak**	**9.62**	**105**	P	Pn	20 19 45.4	+5.3
comp=Z,4μm,1.7s,comp=Z,62μm							
SRPI	**Serui, Papua**	**9.94**	**109**	P	**Pn**	**20 19 48.5**	**+4.0**
SAUI	**Saumlaki**	**10.27**	**154**	*e*Pn	**Pn**	**20 19 49.0**	**-0.1**
MMRI	**Maumere**	**10.90**	**205**	P	**Pn**	**20 19 58.8**	**+1.1**
comp=Z,224nm,1.5s,comp=Z,3μm							
MMRI	**Maumere**	**10.90**	**205**	*e*Pn	**Pn**	**20 19 57.7**	**0.0**
RCP	**Roxas**	**10.94**	**338**	*i*P	**Pn**	**20 20 01.3**	**+3.1**
CUYO	**Cuyo Island**	**11.08**	**329**	*e*P	**Pn**	**20 20 00.2**	**+0.1**
EDFI	**Ende, Flores**	**11.24**	**207**	P	**Pn**	**20 20 03.9**	**+1.4**
comp=Z,131nm,0.8s,comp=Z,2μm							
SOEI	**Soe**	**11.30**	**193**	P	**Pn**	**20 20 06.6**	**+3.3**
comp=Z,828nm,0.9s,comp=Z,8μm							
SOEI	**Soe**	**11.30**	**193**	*e*Pn	**Pn**	**20 20 07.7**	**+4.4**
CNP	**Catarman**	**11.31**	**349**	*e*P	**Pn**	**20 20 04.9**	**+1.6**
CNP				*e*S	**Sn**	**20 22 01.2**	**-7.0**
KKM	**Kota Kinabalu**	**11.57**	**294**	*e*Pn	**Pn**	**20 20 10.2**	**+3.2**
KBKI	**Kotabaru**	**11.60**	**247**	P	**Pn**	**20 20 08.7**	**+1.4**
comp=Z,48nm,1.0s,comp=Z,535nm							
BATP	**Bataraza**	**11.65**	**310**	*e*P	**Pn**	**20 20 09.6**	**+1.7**
BATI	**Baumata**	**11.88**	**195**	P	**Pn**	**20 20 12.4**	**+1.2**
comp=Z,2.7nm,0.3s,baz=78,slow=1.2,SNR=9.0							
BATI				LR	LR	20 26 03.4	
comp=Z,3μm,21.3s,baz=8.0,slow=44							
BATI	**Baumata**	**11.88**	**195**	P	**Pn**	**20 20 13.7**	**+2.6**
comp=Z,133nm,1.0s,comp=Z,2μm							
MTKI	**Muara Teweh, K**	**12.14**	**259**	P	**Pn**	**20 20 17.5**	**+2.9**
ENPP	**El Nido**	**12.26**	**323**	*e*P	**Pn**	**20 20 11.4**	**-4.8**
ENPP				*e*S	**S**	**20 22 53.1**	**-3.2**
PVCP	**Virac**	**12.47**	**348**	*e*P	**Pn**	**20 20 18.0**	**-1.1**
BUSP	**Coron**	**12.47**	**328**	*e*P	**Pn**	**20 20 18.0**	**-1.1**
AUQP	**San Andres**	**12.60**	**341**	*e*P	**Pn**	**20 20 26.9**	**-3.4**
WSI	**Waingapu**	**12.71**	**211**	P	**Pn**	**20 20 25.6**	**+3.2**
comp=Z,619nm,0.7s,comp=Z,10μm							
BASI	**Baing, Sumba**	**13.05

BLJI	**Banyuglugur**	**15.98 235**	P	**P**	**20 21 10.0**	**+2.1**
	comp=Z,339nm,1.2s,comp=Z,5µm					
GMJI	**Gumukmas**	**16.40 234**	P	**P**	**20 21 12.7**	**+0.1**
	comp=Z,309nm,1.5s,comp=Z,6µm					
KSM	**Kuching**	**16.51 271**	*e*Pn	**P**	**20 21 13.1**	**-0.8**
	comp=Z,216nm,0.8s					
TBJI	**Tambak Boyo**	**17.00 241**	P	**P**	**20 21 19.0**	**-0.2**
	comp=Z,258nm,1.0s,comp=Z,4µm					
KNRA	**Kununurra**	**17.01 174**	P	**Pn**	**20 21 17.6**	**-0.6**
	baz=17,SNR=78					
ABRA	**Dolores**	**17.29 340**	*e*P	**P**	**20 21 22.2**	**-0.2**
APYP	**Conner**	**17.32 342**	*e*P	**Pn**	**20 21 21.5**	**-0.6**
NGJI	**Ngawi**	**17.59 240**	P	**P**	**20 21 28.2**	**+2.4**
	comp=Z,346nm,1.0s,comp=Z,6µm					
PWJI	**Pagerwojo**	**17.62 238**	P	**P**	**20 21 26.8**	**+0.7**
	comp=Z,786nm,0.9s,comp=Z,8µm					
PCJI	**Pacitan**	**18.25 239**	P	**Pn**	**20 21 35.6**	**+2.1**
	comp=Z,1µm,1.4s,comp=Z,16µm					
WOJI	**Wonogiri, Jawa**	**18.29 240**	P	**Pn**	**20 21 35.9**	**+1.9**
	comp=Z,181nm,1.4s,comp=Z,3µm					
SMRI	**Semarang**	**18.34 243**	P	**Pn**	**20 21 35.9**	**+1.2**
	comp=Z,286nm,1.1s					
SMRI	**Semarang**	**18.34 243**	*e*P	**Pn**	**20 21 34.4**	**-0.3**
	comp=Z,1µm,1.8s					
UGM	**Wanagama**	**18.67 240**	P	**Pn**	**20 21 45.4**	**+6.8**
UGM	**Wanagama**	**18.67 240**	*e*P	**P**	**20 21 37.7**	**0.0**
	comp=Z,2µm,2.0s					
FITZ	**Fitzroy Crossi**	**19.34 183**	P	**P**	**20 21 44.3**	**-0.7**
	comp=Z,4.9nm,0.3s,baz=13,slow=10,SNR=100					
FITZ			S	**S**	**20 25 14.8**	**-5.9**
	comp=Z,0.6nm,0.3s,baz=108,slow=22,SNR=4.5					
FITZ			ScP	**ScP**	**20 29 36.1**	**0.0**
	comp=Z,0.4nm,0.3s,baz=215,slow=2.5,SNR=4.7					
FITZ			LR	LR	20 30 06.6	
	comp=Z,678nm,20.2s,baz=14,slow=40					
FITZ	**Fitzroy Crossi**	**19.34 183**	P	**P**	**20 21 43.8**	**-1.1**
	baz=19,SNR=162					
FITZ	**Fitzroy Crossi**	**19.34 183**	*e*P	**P**	**20 21 44.2**	**-0.7**
	comp=Z,225nm,1.6s					
FITZ			S	**S**	**20 25 14.8**	**-5.9**
FITZ			ScP	**ScP**	**20 29 36.1**	**0.0**
KPJI	**Karang Pucung**	**19.82 244**	P	**P**	**20 21 50.6**	**+0.4**
	comp=Z,561nm,0.8s,comp=Z,4µm					
JCJI	**Jatiwangi**	**20.08 247**	P	Pn	20 21 57.3	+1.9
CMJI	**Cimerak**	**20.44 243**	P	**P**	**20 21 58.1**	**+1.2**
	comp=Z,465nm,0.8s,comp=Z,4µm					
LEM	**Lembang**	**20.81 247**	P	**P**	**20 22 01.0**	**-0.1**
	comp=Z,72nm,0.7s,baz=42,slow=8.8,SNR=16					
LEM			LR	LR	20 31 03.3	
	comp=Z,1µm,19.9s,baz=70,slow=39					
LEM	**Lembang**	**20.81 247**	P	**P**	**20 22 01.0**	**-0.1**
LEM			pmax	pmax		
	comp=Z,72nm,0.7s					
LEM			MLR	MLR		
	comp=Z,1µm,19.9s					
MANU	**Manus Island**	**20.81 99**	*e*P	**P**	**20 22 00.1**	**-0.9**
	comp=Z,257nm,1.4s					
CISI	**Cisompet, Garu**	**20.91 245**	P	**P**	**20 22 01.9**	**-0.2**
	comp=Z,507nm,0.7s,comp=Z,5µm					
CISI	**Cisompet, Garu**	**20.91 245**	*e*P	**P**	**20 22 00.5**	**-1.6**
	comp=Z,338nm,0.7s					
PPBI	**Pangkal Pinang**	**20.97 261**	P	**P**	**20 22 02.6**	**-0.1**
	comp=Z,0.8nm,0.8s					
DBJI	**Dramaga**	**21.51 248**	P	**P**	**20 22 09.8**	**+1.3**
	comp=Z,278nm,1.4s,comp=Z,4µm					
GUMO	**Guam**	**21.62 55**	P	**P**	**20 22 08.6**	**-1.0**
	comp=Z,85nm,1.0s,baz=175,slow=4.3,SNR=4.4					
GUMO			LR	LR	20 30 01.8	
	comp=Z,755nm,20.5s,baz=235,slow=35					
SKJI	**Sukabumi**	**21.85 247**	P	**P**	**20 22 14.1**	**+2.0**
	comp=Z,461nm,0.6s,comp=Z,4µm					
SBJI	**Serang**	**21.95 250**	P	**P**	**20 22 16.9**	**+3.8**
	comp=Z,424nm,0.8s,comp=Z,6µm					
COEN	**Coen**	**22.21 134**	P	**P**	**20 22 14.9**	**-1.0**
	baz=22,SNR=36					
COEN	**Coen**	**22.21 134**	*e*P	**P**	**20 22 14.9**	**-1.0**
	comp=Z,183nm,0.9s					
TPRI	**Tanjung Pinang**	**22.30 269**	P	**P**	**20 22 18.2**	**+1.3**
	comp=Z,59nm,1.5s,comp=Z,1µm					
WRAB	**Tennant Creek**	**22.38 161**	*e*P	**P**	**20 22 16.8**	**-1.0**
	comp=Z,438nm,1.3s					
WRAB	**Tennant Creek**	**22.38 161**	*d i*P	**P**	**20 22 15.9**	**-1.9**
WRAB			pmax	pmax		
	comp=Z,401nm,1.2s					
WRA	**Warramunga Arr**	**22.39 161**	P	**P**	**20 22 16.7**	**-1.1**
	comp=Z,130nm,0.8s,baz=334,slow=11,SNR=112					
WRA			S	**S**	**20 26 14.8**	**-5.2**
	comp=Z,13nm,0.8s,baz=343,slow=21,SNR=9.1					
WRA			ScP	**ScP**	**20 29 42.0**	**-1.6**
	comp=Z,15nm,0.9s,baz=345,slow=3.1,SNR=11					
WRA			ScS	**ScS**	**20 33 26.5**	**-2.5**
	comp=Z,3.8nm,0.9s,baz=324,slow=3.7,SNR=8.4					
WRA			P3KPbc		20 55 57.8	
	comp=Z,1.7nm,1.0s,baz=157,slow=3.6,SNR=4.6					
WRA	**Warramunga Arr**	**22.39 161**	*i* P	**P**	**20 22 16.2**	**-1.7**
WRA			pmax	pmax		
	comp=Z,109nm,0.6s					
WB2	**Warramunga Arr**	**22.39 161**	*e*P	**P**	**20 22 15.7**	**-2.2**
PMBI	**Palembang**	**22.45 259**	P	**P**	**20 22 23.1**	**+4.6**
	comp=Z,305nm,1.2s,comp=Z,4µm					
CGJI	**Cibinong**	**22.52 249**	P	**P**	**20 22 19.5**	**+0.2**
	comp=Z,259nm,1.1s,comp=Z,3µm					
BLSI	**Bandar Lampung**	**22.56 253**	P	**P**	**20 22 25.5**	**+5.8**
KLI	**Kotabumi**	**22.79 254**	P	**P**	**20 22 27.8**	**+5.6**
KLI	**Kotabumi**	**22.79 254**	P	**P**	**20 22 23.2**	**+1.0**
PMG	**Port Moresby**	**22.89 118**	P	**P**	**20 22 22.2**	**-1.0**
	comp=Z,32nm,0.7s,baz=331,slow=7.1,SNR=11					
PMG			ScP	**ScP**	**20 29 45.4**	**+0.5**
	comp=Z,33nm,1.0s,baz=7.1,slow=6.1,SNR=9.5					
PMG	**Port Moresby**	**22.89 118**	*e*P	**P**	**20 22 21.8**	**-1.4**
	comp=Z,74nm,0.9s					
PMG			ScP	**ScP**	**20 29 45.4**	**+0.5**
KASI	**Kota Agung**	**23.32 253**	P	**P**	**20 22 28.5**	**+1.1**
	comp=Z,268nm,1.0s,comp=Z,2µm					
MDSI	**Maura Dua**	**23.35 256**	P	**P**	**20 22 27.2**	**-0.5**
	comp=Z,84nm,1.0s,comp=Z,1µm					
MBWA	**Marble Bar**	**23.40 197**	*e*P	**P**	**20 22 26.5**	**-1.5**
	comp=Z,281nm,0.7s					
LWLI	**Liwa**	**23.60 254**	P	**P**	**20 22 31.0**	**+0.9**
	comp=Z,202nm,0.7s					
QIZ	**Qiongzhong**	**24.21 318**	P	**P**	**20 22 35.3**	**-0.2**
QIZ			S	**S**	**20 26 54.8**	**+4.9**
QIZ			sS	**sS**	**20 27 15.4**	**+0.2**
QIZ			pmax	pmax		
	comp=Z,180nm,1.2s					
QIZ			pmax	pmax		
	comp=Z,680nm,4.5s					
QIZ			LR	LR		
	comp=Z,2µm,24.0s					
QIZ			LR	LR		
	comp=Z,2µm,20.6s					
QIZ			LR	LR		
	comp=Z,2µm,22.6s					
QIZ	**Qiongzhong**	**24.21 318**	*e*P	**P**	**20 22 35.0**	**-0.5**
	comp=Z,267nm,1.2s					
QZH	**Quanzhou**	**24.79 342⇑**	*i*P	**P**	**20 22 41.1**	**+0.5**
QZH			S	**S**	**20 26 57.3**	**-1.6**
QZH			LR	LR		
	comp=Z,3µm,36.9s					
MASI	**Maura Aman, Be**	**24.97 260**	P	**P**	**20 22 45.4**	**+2.8**
	comp=Z,533nm,0.9s,comp=Z,6µm					
QIS	**Mount Isa**	**25.10 151**	P	**P**	**20 22 43.5**	**-0.1**
	baz=25,SNR=51					
GZH	**Guangzhou**	**25.28 330**	P	**P**	**20 22 48.5**	**+3.4**
GZH			S	**S**	**20 27 11.6**	**+4.8**
GZH			pmax	pmax		
	comp=Z,990nm,5.3s					
JOW	**Kunigami**	**25.39 3**	P	**P**	**20 22 47.5**	**+1.4**
	comp=Z,99nm,1.0s,baz=179,slow=3.0,SNR=9.9					
JOW	**Kunigami**	**25.39 3**	*e*P	**P**	**20 22 46.5**	**+0.3**
	comp=Z,211nm,1.2s					
KRJI	**Kerinci**	**25.58 262**	P	**P**	**20 22 49.1**	**+0.9**
	comp=Z,395nm,1.2s,comp=Z,5µm					
AS31	**Alice Springs**	**25.78 165**	*e*P	**P**	**20 22 49.1**	**-0.6**
	comp=Z,45nm,0.8s					
ASAR	**Alice Springs**	**25.78 165**	P	**P**	**20 22 49.4**	**-0.4**
	comp=Z,130nm,0.8s,baz=347,slow=7.2,SNR=155					
ASAR			PcP	**PcP**	**20 26 18.2**	**-0.1**
	comp=Z,11nm,0.7s,baz=326,slow=2.0,SNR=5.0					
ASAR			S	**S**	**20 27 13.6**	**-1.3**
	comp=Z,36nm,0.8s,baz=350,slow=19,SNR=6.1					
ASAR			ScP	**ScP**	**20 29 51.9**	**-0.9**
	comp=Z,7.0nm,0.7s,baz=356,slow=3.0,SNR=7.0					
ASAR			ScS	**ScS**	**20 33 39.7**	**-2.8**
	comp=Z,4.4nm,0.9s,baz=334,slow=5.1,SNR=10					
ASAR			PKiKP	**PKiKP**	**20 33 57.2**	**-1.3**
	comp=Z,2.0nm,0.8s,baz=17,slow=1.3,SNR=4.5					
ASAR			P3KPbc		20 55 43.1	
	comp=Z,1.0nm,1.0s,baz=157,slow=6.8,SNR=5.2					
AS01	**Alice Springs**	**25.79 165**	*e*P	**P**	**20 22 49.3**	**-0.6**
MTSU	**Mount Surprise**	**25.89 139**	P	**P**	**20 22 50.9**	**+0.1**
	baz=26,SNR=40					
WRKA	**Warakurna**	**26.25 177**	P	**P**	**20 22 53.7**	**-0.3**
	baz=26,SNR=172					
KULM	**Kulim**	**26.42 279**	*e*P	**P**	**20 22 54.8**	**-0.8**
	comp=Z,149nm,1.7s					
PDSI	**Padang**	**26.45 265**	P	**P**	**20 22 55.5**	**-0.5**
	comp=Z,60nm,0.7s					
CHBT	**CHBT**	**26.79 296**	P	**P**	**20 22 59.6**	**+0.7**
	comp=Z,163nm,0.7s,comp=Z,77µm					
GIRL	**Giralia**	**26.80 207**	P	**P**	**20 22 59.1**	**+0.1**
	baz=27,SNR=9.9					
PPSI	**Pulau Pagai**	**27.11 261**	P	P	20 23 13.8	+12
MNSI	**Mandailing Nat**	**27.24 269**	P	**P**	**20 23 03.6**	**+0.6**
	comp=Z,50nm,0.9s					
SKNT	**Sakolnakorn**	**27.33 306**	P	**P**	**20 23 02.6**	**-1.2**
	comp=Z,28nm,1.6s					
SRAK	**Srakaew**	**27.56 298**	P	**P**	**20 23 00.9**	**-4.9**
TRTT	**Trang**	**27.79 284**	P	**P**	**20 23 06.9**	**-1.0**
	comp=Z,22nm,1.5s					
SISI	**Saibi**	**27.86 265**	P	**P**	**20 23 08.2**	**-0.3**
	comp=Z,81nm,1.3s					
PSI	**Prapat**	**27.92 273**	P	**P**	**20 23 08.6**	**-0.6**
	comp=Z,28nm,0.8s,baz=174,slow=0.4,SNR=31					
PSI			PcP	**PcP**	**20 26 24.0**	**+0.2**
	comp=Z,16nm,0.9s,baz=180,slow=3.3,SNR=4.5					
PSI			ScP	**ScP**	**20 29 58.9**	**-0.6**
	comp=Z,2.5nm,0.5s,baz=180,slow=6.4,SNR=4.2					
PSI			LR	LR	20 35 28.7	
	comp=Z,689nm,19.8s,baz=90,slow=39					
PSI	**Prapat**	**27.92 273**	*e*P	**P**	**20 23 08.5**	**-0.8**
	comp=Z,68nm,1.1s					
PSI			*e*PcP	**PcP**	**20 26 23.4**	**-0.3**
PSI			ScP	**ScP**	**20 29 58.9**	**-0.6**
CTA	**Charters Tower**	**28.57 139**	P	**P**	**20 23 13.9**	**-0.9**
	comp=Z,28nm,0.9s,baz=321,slow=11,SNR=23					
CTA			PcP	**PcP**	**20 26 25.8**	**+0.8**
	comp=Z,13nm,0.8s,baz=11,slow=22,SNR=3.5					
CTA			ScP	**ScP**	**20 30 01.3**	**+0.1**
	comp=Z,36nm,0.8s,baz=322,slow=3.3,SNR=19					
CTA			LR	LR	20 35 59.7	
	comp=Z,2µm,21.1s,baz=318,slow=39					
CTAO	**Charters Tower**	**28.57 139**	*e*P	**P**	**20 23 14.4**	**-0.4**
	comp=Z,171nm,1.5s					
CTAO	**Charters Tower**	**28.57 139**	*e*P	**P**	**20 23 14.4**	**-0.4**
CTAO			pmax	pmax		
	comp=Z,171nm,1.5s					
NONG	**Nongkai**	**28.59 307**	P	**P**	**20 23 14.5**	**-0.4**
	comp=Z,68nm,1.6s,comp=Z,797nm					
MEEK	**Meekatharra**	**28.91 195**	P	**P**	**20 23 17.1**	**-0.7**
	baz=29,SNR=73					
KCSI	**Kotacane, Aceh**	**29.11 275**	P	**P**	**20 23 17.9**	**-1.8**
	comp=Z,43nm,0.7s					
PKDT	**Phuket**	**29.12 284**	P	**P**	**20 23 19.0**	**-0.8**
	comp=Z,29nm,1.4s					
GSI	**Gunungsitoli**	**29.24 270**	P	**P**	**20 23 19.1**	**-1.8**
	comp=Z,44nm,0.7s					
GSI	**Gunungsitoli**	**29.24 270**	*e*P	**P**	**20 23 19.7**	**-1.2**
	comp=Z,73nm,1.2s					
PHET	**Kaeng Krachan**	**29.29 294**	P	**P**	**20 23 21.9**	**+0.7**
	comp=Z,14nm,1.0s					
CBIJ	**Chichi jima**	**29.56 29**	*e*P	**P**	**20 23 23.5**	**0.0**
	comp=Z,210nm,1.2s					
JCJ	**Chichijima**	**29.56 29**	P	**P**	**20 23 22.7**	**-0.7**
	comp=Z,75nm,0.7s,baz=168,slow=3.4,SNR=6.2					
JCJ			LR	LR	20 32 50.3	
	comp=Z,715nm,20.0s,baz=246,slow=31					
PBKT	**Sadao Pong**	**29.62 302**	*e*PcP	**PcP**	**20 26 27.6**	**-0.1**
SSE	**Sheshan**	**30.08 350**	P	**P**	**20 23 29.8**	**+1.8**
SSE			S	**S**	**20 28 23.9**	**+1.6**
SSE			pmax	pmax		
	comp=Z,38nm,1.6s					
SSE			pmax	pmax		
	comp=Z,490nm,3.7s					
SSE			LR	LR		
	comp=Z,300nm,20.4s					
SSE			LR	LR		
	comp=Z,390nm,19.4s					
SRDT	**SRDT**	**30.28 297**	P	**P**	**20 23 29.6**	**-0.4**
	comp=Z,86nm,1.3s					
PHIT	**Phitsanulok**	**30.38 303**	P	**P**	**20 23 31.4**	**+0.5**
	comp=Z,90nm,0.9s,comp=Z,818nm					
MLSI	**Meulaboh, Aceh**	**30.52 276**	P	**P**	**20 23 35.2**	**+3.0**
	comp=Z,54nm,1.4s					
WHN	**Wuhan**	**31.37 339**	⇓P	**P**	**20 23 40.9**	**+1.5**
WHN			S	**S**	**20 28 43.6**	**+1.0**
WHN			LR	LR		
	comp=Z,8µm,36.9s					
GYA	**Guiyang**	**31.62 324⇑**	*i*P	**P**	**20 23 41.8**	**-0.1**
GYA			pP	pP	20 23 58.8	+1.9
GYA			sP	sP	20 24 05.0	+0.9
GYA			PP	**PP**	**20 24 51.5**	**-2.8**
GYA			PcP	**PcP**	**20 26 34.3**	**+1.3**
GYA			S	**S**	**20 28 49.0**	**+2.1**
GYA			sS	sS	20 29 14.4	+1.9
GYA			ScP	**ScP**	**20 30 12.0**	**+0.8**
GYA			SS	**SnSn**	**20 30 41.5**	**+3.4**
GYA			pmax	pmax		
	comp=Z,30nm,1.0s					
GYA			pmax	pmax		
	comp=Z,130nm,5.6s					
GYA			LR	LR		
	comp=Z,2µm,16.4s					
GYA			LR	LR		
	comp=Z,2µm,16.8s					
GYA			LR	LR		
	comp=Z,3µm,16.6s					
LAMP	**Lampang**	**31.68 304**	P	**P**	**20 23 42.9**	**+0.6**
	comp=Z,11nm,1.2s,comp=Z,117nm					
JNU	**Nakatsue**	**31.85 6**	P	**P**	**20 23 43.9**	**+0.2**
	comp=Z,33nm,1.0s,baz=300,slow=1.7,SNR=9.6					
JNU			LR	LR	20 37 16.4	
	comp=Z,461nm,21.6s,baz=148,slow=37					
JNU	**Nakatsue**	**31.85 6**	*e*P	**P**	**20 23 43.5**	**-0.2**
	comp=Z,92nm,1.2s					
MORW	**Morawa**	**31.94 198**	P	**P**	**20 23 44.2**	**-0.2**
	baz=32,SNR=17					
FORT	**Forrest**	**31.95 178**	P	**P**	**20 23 44.0**	**-0.5**
	baz=32,SNR=105					
FORT	**Forrest**	**31.95 178**	*e*P	**P**	**20 23 44.2**	**-0.3**
	comp=Z,304nm,0.6s					
FORT			*e*PcP	**PcP**	**20 26 33.3**	**-0.3**
CM01	**Chiang Mai Arr**	**32.19 304**	*e*P	**P**	**20 23 45.8**	**-1.0**
CM31	**Chiang Mai Arr**	**32.22 304**	*e*P	**P**	**20 23 45.3**	**-1.8**
CMAR	**Chiang Mai Arr**	**32.22 304**	P	**P**	**20 23 47.5**	**+0.4**
	comp=Z,22nm,1.0s,baz=122,slow=7.0,SNR=94					
CMAR			PcP	**PcP**	**20 26 36.4**	**+1.7**
	comp=Z,13nm,0.9s,baz=159,slow=1.9,SNR=14					
CMAR			ScP	**ScP**	**20 30 13.6**	**+0.3**
	comp=Z,5.9nm,1.1s,baz=137,slow=2.2,SNR=8.2					
CMAR			PKiKP	**PKiKP**	**20 34 02.4**	**-0.4**
	comp=Z,1.2nm,0.8s,baz=260,slow=1.1,SNR=7.6					
CMAR			LR	LR	20 37 46.8	
	comp=Z,551nm,18.9s,baz=120,slow=38					
CMAR	**Chiang Mai Arr**	**32.22 304**	*i* P	**P**	**20 23 47.2**	**+0.2**
CMAR			pmax	pmax		
	comp=Z,22nm,1.0s					
CHTO	**Chiang Mai**	**32.39 304**	P	**P**	**20 23 48.3**	**-0.2**
	comp=Z,275nm,1.4s,comp=Z,4µm					
CHTO	**Chiang Mai**	**32.39 304**	*e*P	**P**	**20 23 47.1**	**-1.4**
	comp=Z,55nm,1.1s					
CHTO	**Chiang Mai**	**32.39 304**	*e*P	**P**	**20 23 47.1**	**-1.4**
CHTO			pmax	pmax		
	comp=Z,55nm,1.1s					
QLP	**Quilpie**	**32.44 150**	P	**P**	**20 23 48.6**	**-0.3**
	baz=32,SNR=25					
COCO	**West Island**	**32.67 245**	*e*P	**P**	**20 23 49.0**	**-2.0**
	comp=Z,239nm,1.0s					
COCO	**West Island**	**32.67 245**	*e*P	**P**	**20 23 49.0**	**-2.0**
COCO			pmax	pmax		
	comp=Z,239nm,1.0s					
KMBL	**Kambalda**	**32.85 188**	P	**P**	**20 23 52.1**	**-0.3**
	baz=33,SNR=40					
CMAI	**Chiengmai2**	**32.86 306**	P	**P**	**20 23 54.9**	**+2.0**
	comp=Z,449nm,1.1s					
ENH	**Enshi**	**33.16 332**	*e*P	**P**	**20 23 53.0**	**-2.2**
	comp=Z,114nm,1.3s					
KMI	**Kunming**	**33.17 317**	P	**P**	**20 23 57.1**	**+1.6**
KMI			sP	sP	20 24 16.8	-1.0
KMI			PcP	**PcP**	**20 26 39.1**	**+1.7**
KMI			S	**S**	**20 29 11.6**	**+0.5**
KMI			SS	**SnSn**	**20 31 16.8**	**+1.1**
KMI			pmax	pmax		
	comp=Z,63nm,1.5s					
KMI			pmax	pmax		
	comp=Z,490nm,3.1s					
KMI			LR	LR		
	comp=Z,430nm,15.1s					
KMI			LR	LR		
	comp=Z,720nm,18.2s					
KMI			LR	LR		
	comp=Z,800nm,19.7s					
BLDU	**Ballidu**	**33.20 196**	P	**P**	**20 23 55.0**	**-0.4**
	baz=33,SNR=52					
KLBR	**Kellerberrin**	**33.85 194**	P	**P**	**20 24 00.8**	**-0.3**
	baz=34,SNR=147					
JHJ	**Hachijo jima 2**	**33.89 20**	LR	LR	20 34 18.5	
	comp=Z,412nm,21.6s,baz=256,slow=30					
MUN	**Mundaring**	**34.62 196**	P	**P**	**20 24 07.6**	**-0.2**
	baz=35,SNR=22					
HNR	**Honiara**	**34.68 109**	P	**P**	**20 24 07.8**	**-0.8**
	comp=Z,62nm,0.7s,baz=118,slow=2.1,SNR=6.3					
HNR			LR	LR	20 38 46.0	
	comp=Z,1µm,21.3s,baz=272,slow=37					
HNR	**Honiara**	**34.68 109**	*e*P	**P**	**20 24 06.7**	**-1.8**
	comp=Z,113nm,1.1s					
RMQ	**Roma**	**34.82 144**	P	**P**	**20 24 09.2**	**-0.4**
	baz=35,SNR=6.1					
TJN	**Taejon**	**34.88 1**	*c e*P	**P**	**20 24 10.6**	**+0.7**
BBOO	**Buckleboo**	**35.06 166**	P	**P**	**20 24 10.8**	**-0.7**
	baz=35,SNR=25					
BBOO	**Buckleboo**	**35.06 166**	*e*P	**P**	**20 24 10.5**	**-1.1**
	comp=Z,103nm,1.0s					
INU	**Inuyama**	**35.15 15**	*e*P	**P**	**20 24 11.5**	**-0.8**
	comp=Z,109nm,1.1s					
NWAO	**Narrogin (SRO)**	**35.26 194**	P	**P**	**20 24 13.2**	**0.0**
	comp=Z,73nm,0.7s,baz=258,slow=8.8,SNR=46					
NWAO			PcP	**PcP**	**20 26 43.5**	**+0.5**
	comp=Z,28nm,0.8s,baz=231,slow=5.5,SNR=3.6					
NWAO	**Narrogin (SRO)**	**35.26 194**	P	**P**	**20 24 13.1**	**-0.2**
	baz=35,SNR=32					
NWAO	**Narrogin (SRO)**	**35.26 194**	*e*P	**P**	**20 24 13.0**	**-0.3**
	comp=Z,93nm,0.8s					
NWAO			PcP	**PcP**	**20 26 43.5**	**+0.5**
EIDS	**Eidsvold**	**35.44 140**	P	**P**	**20 24 14.8**	**-0.1**
	baz=35,SNR=14					
EIDS	**Eidsvold**	**35.44 140**	*e*P	**P**	**20 24 13.8**	**-1.1**
	comp=Z,93nm,1.0s					
TIA	**Tai'an**	**35.85 347**	P	**P**	**20 24 19.4**	**+1.1**
TIA			S	**S**	**20 29 47.6**	**-4.2**
TIA			pmax	pmax		
	comp=Z,58nm,1.2s					
TIA			pmax	pmax		
	comp=Z,500nm,5.4s					
TIA			LR	LR		
	comp=Z,250nm,18.0s					
TIA			LR	LR		
	comp=Z,200nm,14.9s					
TIA			LR	LR		
	comp=Z,340nm,23.5s					
STKA	**Stephens Creek**	**35.87 158**	P	**P**	**20 24 18.3**	**-0.2**
	comp=Z,38nm,0.6s,baz=331,slow=9.1,SNR=107					
STKA			PP	**PnPn**	**20 25 40.4**	**-0.3**
	comp=Z,23nm,0.8s,baz=323,slow=14,SNR=3.2					
STKA			PcP	**PcP**	**20 26 44.9**	**+0.1**
	comp=Z,16nm,0.8s,baz=357,slow=4.9,SNR=2.4					
STKA			S	**S**	**20 29 49.9**	**-2.3**
	comp=Z,7.4nm,1.0s,baz=92,slow=19,SNR=3.6					
STKA			LR	LR	20 40 54.7	
	comp=Z,876nm,19.0s,baz=341,slow=39					
STKA	**Stephens Creek**	**35.87 158**	P	**P**	**20 24 18.0**	**-0.6**
	baz=36,SNR=70					
STKA	**Stephens Creek**	**35.87 158**	*e*P	**P**	**20 24 17.6**	**-0.9**
	comp=Z,8.7nm,0.8s					
STKA			PP	**PnPn**	**20 25 40.4**	**-0.3**
STKA			PcP	**PcP**	**20 26 44.9**	**+0.1**
STKA			S	**S**	**20 29 49.9**	**-2.3**
KSAR	**Wonju Array Be**	**35.95 1**	P	**P**	**20 24 20.4**	**+1.3**
KSAR			PcP	**PcP**	**20 26 45.9**	**+1.0**
KSAR			ScP	**ScP**	**20 30 25.3**	**-0.8**
KSAR	**Wonju Array Be**	**35.95 1**	P	**P**	**20 24 20.4**	**+1.3**
KSAR					20 26 45.9	
KSRS	**Korea Array**	**35.96 1**	P	**P**	**20 24 20.4**	**+1.2**
	comp=Z,9.9nm,0.7s,baz=179,slow=10,SNR=48					
KSRS			PcP	**PcP**	**20 26 45.9**	**+1.0**
	comp=Z,11nm,0.8s,baz=187,slow=3.0,SNR=13					
KSRS			ScP	**ScP**	**20 30 25.3**	**-0.8**
	comp=Z,1.8nm,0.7s,baz=177,slow=3.7,SNR=5.4					
KSRS			LR	LR	20 40 59.9	
	comp=Z,276nm,19.1s,baz=196,slow=39					
KS01	**Wonju Array Si**	**35.98 1**	*e*P	**P**	**20 24 19.7**	**+0.3**
KS01			*e*PcP	**PcP**	**20 26 45.2**	**+0.2**
HTT	**Hallett**	**36.41 163**	P	**P**	**20 24 23.2**	**+0.1**
	baz=36,SNR=22					
MAJO	**Matsushiro**	**36.59 15**	*e*P	**P**	**20 24 23.6**	**-1.0**
	comp=Z,88nm,1.1s					
MAJO	**Matsushiro**	**36.59 15**	*c i*P	**P**	**20 24 23.6**	**-1.0**
MAJO			pmax	pmax		
	comp=Z,50nm,1.1s					
MAT	**Matsushiro**	**36.59 15**	P	**P**	**20 24 23.7**	**-0.9**
MAT			S	**S**	**20 29 57.6**	**-5.5**
MJAR	**Matsushiro Arr**	**36.59 15**	P	**P**	**20 24 23.7**	**-0.9**
	comp=Z,16nm,0.6s,baz=189,slow=9.8,SNR=37					
MJAR			PcP	**PcP**	**20 26 47.9**	**+1.0**
	comp=Z,15nm,0.9s,baz=181,slow=3.3,SNR=10					
MJAR			ScP	**ScP**	**20 30 27.8**	**-0.7**
	comp=Z,2.4nm,0.9s,baz=190,slow=5.0,SNR=4.2					
MJAR			LR	LR	20 37 55.9	
	comp=Z,736nm,21.7s,baz=195,slow=34					
MJB9	**Matsu-Tunnel**	**36.59 15**	*e*P	**P**	**20 24 23.5**	**-1.2**
	comp=Z,90nm,1.1s					
MJB9			*e*PcP	**PcP**	**20 26 47.6**	**+0.7**
XAN	**Xi'an**	**36.60 335**	P	**P**	**20 24 24.6**	**-0.2**
XAN			PP	**PnPn**	**20 25 49.6**	**+0.1**
XAN			pmax

comp=Z,1μm,39.2s
BRDH Bariadhala 40.22 305 P P 20 24 56.6 +1.3
comp=Z,103nm,0.4s,baz=66,slow=5.8,SNR=5.2
BRDH LR LR 20 42 27.7
comp=Z,306nm,19.0s,baz=140,slow=37
ARPS Mount Arapiles 40.39 161 P P 20 24 56.8 +0.3
baz=40,SNR=14
SNY Shenyang 40.42 356 ⇑P P 20 24 57.6 +1.0
SNY pP **pP 20 25 14.3 +2.2**
SNY PP **PP 20 26 30.0 -0.8**
SNY S **S 20 31 00.8 +0.1**
SNY SS **SS 20 33 57.3 -4.7**
SNY pmax pmax
comp=Z,87nm,1.2s
SNY pmax pmax
comp=Z,950nm,3.5s
SNY LR LR
comp=Z,380nm,24.1s
SNY LR LR
comp=Z,590nm,19.0s
SNY LR LR
comp=Z,890nm,23.7s
LZH Lanzhou 40.62 331 ⇑P P 20 24 59.8 +1.2
LZH pP pP 20 25 15.8 +1.7
LZH sP sP 20 25 21.1 0.0
LZH PP **PnPn 20 26 38.4 +0.7**
LZH S **S 20 31 03.8 -0.4**
LZH sS sS 20 31 33.5 +3.1
LZH SS **SS 20 34 05.5 -1.0**
LZH pmax pmax
comp=Z,99nm,1.4s
LZH pmax pmax
comp=Z,850nm,6.5s
LZH LR LR
comp=Z,1μm,15.3s
LZH LR LR
comp=Z,1μm,15.7s
LZH LR LR
comp=Z,3μm,16.2s
YNG Young 40.82 152 P P 20 25 00.2 0.0
baz=41,SNR=27
MSHR Mys Shultsa 41.25 5c *i*P **P 20 25 04.7 +1.2**
MGCD Mangrove Creek 41.29 148 P P 20 25 05.2 +1.3
baz=41,SNR=12
SHL Shillong 41.40 309⇑ *i*P **P 20 25 06.5 +1.3**
comp=Z,12nm,0.7s
SHL *e*S **S 20 31 14.0 -2.1**
SHL Shillong 41.40 309 *e*P **P 20 25 04.3 -0.9**
comp=Z,117nm,1.1s
SHL *e*PcP **PcP 20 27 02.5 0.0**
SHL Shillong 41.40 309 *e*P **P 20 25 04.3 -0.9**
SHL *e* 20 27 02.5
SHL pmax pmax
comp=Z,117nm,1.1s
HHC Hu-ho-hao-te 41.70 343 *e*P **P 20 25 08.5 +1.2**
HHC pP pP 20 25 25.6 +2.8
HHC sP sP 20 25 32.3 +2.4
HHC S **S 20 31 18.5 -1.4**
HHC SS **SS 20 34 30.9 +3.3**
HHC pmax pmax
comp=Z,160nm,1.2s
HHC pmax pmax
comp=Z,730nm,3.8s
HHC LR LR
comp=Z,680nm,17.3s
HHC LR LR
comp=Z,380nm,15.6s
HHC LR LR
comp=Z,760nm,14.7s
CAN Canberra 41.94 152 *e*P **P 20 25 10.2 +0.8**
comp=Z,129nm,1.1s
CAN Canberra 41.94 152 *e*P **P 20 25 10.2 +0.8**
CAN pmax pmax
comp=Z,129nm,1.1s
BTO Baotou 41.96 341 *e*P **P 20 25 09.1 -0.4**
CNB Canberra Magne 42.11 152 P P 20 25 11.6 +0.9
baz=42,SNR=9.6
TOO Toolangi 42.39 158 P P 20 25 13.1 +0.2
baz=42,SNR=12
USRK Ussuriysk Ar. 42.93 5 P P 20 25 18.2 +1.1
comp=Z,58nm,1.0s,baz=189,slow=7.1,SNR=98
ERM Erimo 43.09 18 *e*P **P 20 25 19.5 +1.1**
comp=Z,168nm,1.8s
ERM Erimo 43.09 18d *i*P **P 20 25 19.2 +0.8**
ERM pmax pmax
comp=Z,88nm,1.7s
MDJ Mudanjiang 43.17 3 P P 20 25 17.3 -1.8
MDJ pP pP 20 25 31.8 -2.9
MDJ sP sP 20 25 38.8 -2.9
MDJ S **S 20 31 39.5 -1.8**
MDJ SS **SS 20 34 55.6 -0.6**
MDJ ScS **ScS 20 35 10.4 -3.3**
MDJ pmax pmax
comp=Z,93nm,1.0s
MDJ pmax pmax
comp=Z,780nm,4.2s
MDJ LR LR
comp=Z,430nm,17.5s
MDJ LR LR
comp=Z,460nm,16.3s
MDJ LR LR
comp=Z,760nm,18.7s
MDJ Mudanjiang 43.17 3 *e*P **P 20 25 20.2 +1.1**
comp=Z,160nm,1.3s
LSA Lhasa 44.11 313 *e*P **P 20 25 28.4 +0.9**
comp=Z,34nm,0.9s
LSA Lhasa 44.11 313 *e*P **P 20 25 28.4 +0.9**
LSA pmax pmax
comp=Z,34nm,0.9s
TEY Ternei 44.37 10 *e*P **P 20 25 30.0 +1.3**
TEY pmax pmax
comp=Z,800nm,2.0s
TEY pmax pmax
comp=N,55nm,1.1s
TEY pmax pmax
comp=Z,139nm,1.2s
ASAJ Asahikawa 44.85 16 P P 20 25 33.7 +1.2
comp=Z,77nm,1.1s,baz=233,slow=14,SNR=39
ASAJ LR LR 20 44 29.4
comp=Z,720nm,21.6s,baz=218,slow=36
ASAJ Asahikawa 44.85 16 *e*P **P 20 25 33.6 +1.0**
comp=Z,146nm,1.2s
DZM Mont Dzumac 45.11 123 *e*P **P 20 25 35.4 +0.3**
comp=Z,140nm,1.1s
DZM Mont Dzumac 45.11 123 *e*LR LR 20 38 15.3
comp=Z,3μm,36.7s
DZM Mont Dzumac 45.11 123 P P 20 25 35.4 +0.3
comp=Z,26nm,0.7s,baz=288,slow=9.6,SNR=12
DZM LR LR 20 45 47.7
comp=Z,1μm,20.4s,baz=324,slow=38
DZM Mont Dzumac 45.11 123 *e*P **P 20 25 35.5 +0.3**
comp=Z,48nm,1.0s
GTA Gaotai 45.20 330 ⇑P P 20 25 35.9 +0.3
GTA pP pP 20 25 51.3 0.0
GTA sP sP 20 25 58.3 0.0
GTA PcP **PcP 20 27 16.4 +1.4**
GTA S **S 20 32 12.9 +1.6**
GTA sS sS 20 32 41.1 +3.3
GTA ScS **ScS 20 35 25.6 -1.5**
GTA SS **SS 20 35 30.6 -5.0**
GTA pmax pmax
comp=Z,17nm,1.0s
GTA pmax pmax
comp=Z,550nm,7.6s
GTA LR LR
comp=Z,490nm,17.0s
GTA LR LR
comp=Z,510nm,19.1s
GTA LR LR
comp=Z,1μm,23.2s
CHLP Challavanipeta 45.27 295 *e*P **P 20 25 35.7 -0.6**
CHLP IAmb IAmb 20 25 37.7
comp=Z,127nm,1.4s
ODAN Odare 45.56 307 *e*P **P 20 25 38.8 0.0**
comp=Z,97nm,1.0s
YUK Yuzh-Kuril'sk 45.77 19 *e*P P 20 25 34.4 -5.4
YUK *e* 20 27 21.0
YUK *e*S **S 20 32 13.4 -5.5**
YUK *e*SS **ScS 20 35 31.2 +1.0**
YUK pmax pmax
comp=Z,299nm,2.2s
YUK pmax pmax
comp=Z,198nm,1.2s
RAMN Ramite 46.23 307 *e*P **P 20 25 44.2 +0.1**
comp=Z,192nm,1.2s
PALK Pallekele 46.34 279 P P 20 25 44.2 -0.7
comp=Z,29nm,1.2s,baz=116,slow=8.3,SNR=2.6
PALK PcP **PcP 20 27 20.5 +1.2**
comp=Z,13nm,0.9s,baz=277,slow=0.9,SNR=5.1
PALK LR LR 20 46 33.5
comp=Z,415nm,20.4s,baz=58,slow=38
JIRN Jiri 46.88 308 *e*P **P 20 25 49.3 +0.1**
comp=Z,163nm,0.9s
PVM Polavaram 47.16 292 *e*P **P 20 25 50.1 -1.1**
PVM IAmb IAmb 20 25 51.6
comp=Z,29nm,1.0s
GUN Gumba 47.23 308 *e*P **P 20 25 51.9 -0.1**
comp=Z,124nm,0.9s
PKIN Phulchoki 47.47 307 *e*P **P 20 25 53.7 0.0**
comp=Z,65nm,1.0s
KUR Kuril'sk 47.50 20c *i*P **P 20 25 53.8 +0.5**
KUR *e**PP **pP 20 26 09.6 +0.5**
KUR *e* 20 27 45.1
KUR *i* PPP PPP 20 28 32.3
KUR *i* S **S 20 32 44.6 +1.0**
KUR *e*SSS SSS 20 37 22.6
KUR pmax pmax
comp=Z,239nm,1.3s
KUR pmax pmax
comp=E,23nm,0.9s
KUR pmax pmax
comp=N,83nm,1.7s
KUR pmax pmax
comp=Z,489nm,2.7s
KUR MLR MLR
comp=Z,471nm,23.0s
YSS Yuzh-Sakhalins 47.52 15 *e*P **P 20 25 54.0 +0.6**
comp=Z,108nm,1.2s
YSS Yuzh-Sakhalins 47.52 15⇑ *e*P **P 20 25 54.1 +0.7**
YSS pmax pmax
comp=Z,152nm,1.7s
KKN Kakani 47.65 307 *e*P **P 20 25 54.8 -0.3**
comp=Z,65nm,0.9s
DMN Daman 47.71 307 *e*P **P 20 25 55.4 -0.2**
comp=Z,85nm,1.1s
KLR Kul'dur 47.91 4 P **P 20 25 57.0 +0.6**
comp=Z,4.7nm,1.0s,baz=206,slow=6.1,SNR=75
KLR PcP **PcP 20 27 25.1 +1.0**
comp=Z,2.0nm,1.0s,baz=217,slow=3.6,SNR=3.3
KLR Kul'dur 47.91 4d *i*P **P 20 25 56.1 -0.3**
HIA Hailar 48.14 354 *e*P **P 20 25 59.5 +1.2**
comp=Z,137nm,1.4s
HIA Hailar 48.14 354 *e*P **P 20 25 59.5 +1.2**
HIA pmax pmax
comp=Z,137nm,1.4s
SKHT Srikalahasti 48.20 287 *e*P **P 20 25 58.5 -0.7**
SKHT IAmb IAmb 20 26 02.3
comp=Z,48nm,1.2s
GKN Gorkha 48.26 307 *e*P **P 20 25 59.3 -0.4**
comp=Z,93nm,1.2s
KOLN Koldanda 48.99 306 *e*P **P 20 26 05.5 +0.1**
comp=Z,74nm,0.6s
DANN Dangsing 49.11 307 *e*P **P 20 26 06.1 -0.3**
comp=Z,90nm,0.6s
NJS Nagarjunasagar 49.15 291 *e*P **P 20 26 05.5 -1.0**
NJS IAmb IAmb 20 26 06.2
comp=Z,31nm,1.1s
ULN Ulaanbaatar 49.42 343 *e*P **P 20 26 09.3 +1.0**
comp=Z,457nm,1.3s
ULN Ulaanbaatar 49.42 343 P **P 20 26 09.9 +1.6**
SNR=190
ULN Ulaanbaatar 49.42 343c *i*P **P 20 26 09.7 +1.4**
ULN pmax pmax
comp=Z,254nm,1.2s
SRLM Srisailam 49.44 290 *e*P **P 20 26 07.7 -1.1**
SRLM IAmb IAmb 20 26 11.0
comp=Z,39nm,1.0s
SONM Songino Array 49.59 342 P **P 20 26 11.2 +1.6**
comp=Z,111nm,1.1s,baz=162,slow=6.7,SNR=304
SONM PcP **PcP 20 27 31.2 +0.8**
comp=Z,18nm,0.9s,baz=150,slow=2.5,SNR=3.8
SONM LR LR 20 47 34.1
comp=Z,220nm,21.5s,baz=152,slow=36
SONA1 Songino Array 49.60 342 *e*P **P 20 26 09.5 -0.2**
PYUN Piuthan 49.62 307 *e*P **P 20 26 10.3 +0.1**
comp=Z,100nm,0.5s
RPR Rampur 49.71 294 *e*P **P 20 26 09.4 -1.4**
RPR IAmb IAmb 20 26 11.2
comp=Z,27nm,0.9s
GRNR Gornyy 49.93 8 *e*P **P 20 26 13.4 +1.5**
GRNR *e* 20 27 34.0
GRNR pmax pmax
comp=N,84nm,1.0s
GRNR pmax pmax
comp=Z,110nm,1.0s
HYB Hyderabad 50.05 292 *i*P **P 20 26 13.0 -0.4**
HYB *e*PcP **PcP 20 27 33.0 +0.4**
HYB *e* 20 28 12.5
HYBB Hyderabad (bro 50.05 292 *e*P **P 20 26 11.9 -1.5**
HYBB IAmb IAmb 20 26 13.6
comp=Z,47nm,0.9s
SRSP Sriramsagar 50.60 293 *e*P **P 20 26 15.6 -1.9**
SRSP IAmb IAmb 20 26 17.1
comp=Z,31nm,1.1s
URV Uravakonda 50.75 288 *e*P **P 20 26 16.3 -2.4**
URV IAmb IAmb 20 26 19.4
comp=Z,29nm,1.0s
TYV Tymovskoe 51.15 13 *e*P **P 20 26 21.8 +0.8**
TYV *e* 20 33 39.5
TYV pmax pmax
comp=Z,700nm,4.9s
TYV pmax pmax
comp=Z,31nm,1.9s
TYV MLR MLR
comp=Z,500nm,13.0s
CIT Chita 51.73 350 *e*P **P 20 26 27.0 +1.5**
CIT *e* 20 26 39.0
CIT *e* 20 27 39.7
CIT pmax pmax
comp=Z,179nm,1.2s
KLRI Killari 52.01 292 *e*P **P 20 26 26.7 -1.4**
KLRI IAmb IAmb 20 26 27.9
comp=Z,56nm,1.1s
ZEA Zeya 52.23 0 *e*P **P 20 26 29.2 +0.1**
ZEA *e*S S 20 34 04.0 +15
ZEA *e* 20 36 14.0
ZEA pmax pmax
comp=N,43nm,1.2s
ZEA pmax pmax
comp=Z,43nm,1.2s
ZEA pmax pmax
comp=Z,500nm,10.0s
ZEA MLR MLR
comp=N,400nm,16.0s
ZEA MLR MLR
comp=Z,500nm,16.0s
ZAK Zakamensk 52.81 341 *e*P **P 20 26 33.6 0.0**
ZAK pmax pmax
comp=Z,59nm,1.6s
NKL Nikolayevsk 52.91 10 *i*P **P 20 26 34.8 +0.7**
NKL *e* 20 33 58.0
NKL *e* 20 36 19.0
NKL pmax pmax
comp=N,43nm,1.1s
NKL pmax pmax
comp=Z,130nm,1.1s
NKL pmax pmax
comp=Z,600nm,6.0s
TLY Talaya 53.83 342 *e*P **P 20 26 42.9 +2.0**
comp=Z,116nm,1.3s
TLY Talaya 53.83 342 P **P 20 26 42.4 +1.5**
SNR=24
TLY Talaya 53.83 342c *i*P **P 20 26 41.6 +0.7**
TLY *e*S **S 20 34 10.2 -1.0**
TLY pmax pmax
comp=Z,143nm,1.8s
TLY MLR MLR
comp=Z,320nm,17.0s
IRK Irkutsk 54.13 343 *e*P **P 20 26 44.0 +0.9**
IRK *e*S **S 20 34 14.6 -0.7**
IRK pmax pmax
comp=Z,205nm,2.6s
MOY Mondy 54.66 341 *e*P **P 20 26 48.4 +1.3**
MOY pmax pmax
comp=Z,470nm,2.0s
WMQ Urumqi 54.74 326 P **P 20 26 49.8 +2.0**
WMQ pP pP 20 27 05.0 +1.1
WMQ PcP **PcP 20 27 49.9 +0.1**
WMQ S **S 20 34 24.0 0.0**
WMQ ScS **ScS 20 36 28.4 -3.3**
WMQ pmax pmax
comp=Z,390nm,1.5s
WMQ LR LR
comp=Z,2μm,17.5s
WMQ LR LR
comp=Z,1μm,16.3s
WMQ LR LR
comp=Z,1μm,23.1s
SKR Severo-Kuril's 55.08 22 *e*P **P 20 26 46.9 -3.0**
SKR *e*S **S 20 34 27.4 -0.6**
SKR pmax pmax
comp=Z,100nm,5.0s
SKR pmax pmax
comp=Z,400nm,4.1s
SKR pmax pmax
comp=Z,66nm,1.2s
SKR MLR MLR
comp=Z,300nm,16.0s
SKR MLR MLR
comp=Z,200nm,16.0s
CLNS Chul'man 55.36 359 *e*P **P 20 26 52.0 0.0**
CLNS pmax pmax
comp=N,28nm,1.1s
CLNS pmax pmax
comp=Z,32nm,1.1s
CLNS pmax pmax
comp=E,14nm,0.9s
HVS Khovu-Aksy 56.95 336d *i*P **P 20 27 03.6 +0.2**
BOD Bodaibo 57.24 352 *e*P **P 20 27 05.6 +0.4**
BOD pmax pmax
comp=Z,104nm,1.6s
PEA0B Petropavlovsk- 57.61 21 *e*P **P 20 27 09.0 +1.1**
comp=Z,110nm,1.3s
PETK Petropavlovsk- 57.61 21 P **P 20 27 08.9 +1.0**
comp=Z,24nm,0.7s,baz=194,slow=4.3,SNR=25
PETK PcP **PcP 20 28 01.4 +0.8**
comp=Z,29nm,1.0s,baz=197,slow=4.5,SNR=4.0
PETK LR LR 20 50 50.0
comp=Z,231nm,21.8s,baz=215,slow=35
PETK Petropavlovsk- 57.61 21 *e*P **P 20 27 08.4 +0.5**
PETK PcP **PcP 20 28 01.4 +0.8**
PETK Petropavlovsk- 57.61 21 P **P 20 27 09.0 +1.0**
PETK 20 28 01.4
PETK pmax pmax
comp=Z,41nm,1.0s
PETK MLR MLR
comp=Z,231nm,21.8s
PET Petropavlovsk 57.90 22 *e*P **P 20 27 10.7 +0.8**
comp=Z,121nm,1.2s
PET Petropavlovsk 57.90 22c *i*P **P 20 27 10.8 +0.8**
PET *e**SP **sP 20 27 32.2 -0.8**
PET *e*S **S 20 35 04.6 -0.6**
PET *e*SP **SPn 20 35 20.7 +5.8**
PET pmax pmax
comp=Z,500nm,5.4s
PET pmax pmax
comp=Z,97nm,1.2s
PET pmax pmax
comp=Z,300nm,14.7s
PET MLR MLR
comp=Z,400nm,20.0s
ZSN Zaisan 58.57 328⇑ *i*P **P 20 27 15.8 +1.0**
comp=Z,33nm,1.3s
ZSN *i* pP **pP 20 27 25.9 -5.2**
ZSN *i* sP sP 20 27 30.0 -7.9
ZSN *i* PP **PP 20 29 25.6 +0.7**
ZSN *e*S **S 20 35 18.0 +3.8**
SHLS Shalkode 59.25 321⇑ *i*P **P 20 27 19.2 -0.6**
comp=Z,137nm,1.2s
SHLS *e*S **S 20 35 23.1 -0.5**
NIL Nilore 59.48 309 *e*P **P 20 27 21.9 +0.5**
comp=Z,72nm,1.0s
NIL Nilore 59.48 309 *e*P **P 20 27 21.9 +0.5**
NIL pmax pmax
comp=Z,72nm,1.0s
UZB Uzynbulak 59.52 321⇑ *i*P **P 20 27 22.6 +0.9**
comp=Z,108nm,1.5s
MK01 Makanchi Array 59.56 326 *e*P **P 20 27 21.6 0.0**
MK31 Makanchi Array 59.58 326 *e*P **P 20 27 22.8 +1.0**
MK31 Makanchi Array 59.58 326 *e*P **P 20 27 22.8 +1.0**
MKAR Makanchi Array 59.58 326 P **P 20 27 23.4 +1.6**
comp=Z,97nm,0.7s,baz=120,slow=7.7,SNR=691
MKAR LR LR 20 54 05.7
comp=Z,617nm,21.1s,baz=104,slow=37
MKAR PKP2bc 20 56 58.6
comp=Z,0.9nm,0.8s,baz=315,slow=2.4,SNR=4.9
MKAR Makanchi Array 59.58 326 *e*P **P 20 27 22.8 +1.0**
comp=Z,1μm,1.1s
MKAR ⇑*e* 20 56 58.6
MKAR Makanchi Array 59.58 326 *i*P **P 20 27 22.8 +1.0**
MKAR pmax pmax
comp=Z,97nm,0.7s
PRZ Przheval'sk 59.58 320 *e*P **P 20 27 24.3 +2.1**
comp=Z,394nm,1.5s
PRZ Przheval'sk 59.58 320 *e*P **P 20 27 24.3 +2.1**
PRZ pmax pmax
comp=Z,394nm,1.5s
LBZ Lake Benmore 59.66 145 *e*P **P 20 27 22.5 0.0**
comp=Z,79nm,0.7s
MAKZ Makanchi 59.76 326 *e*P **P 20 27 24.0 +0.9**
comp=Z,543nm,1.4s
MAKZ Makanchi 59.76 326 *e*P **P 20 27 24.0 +0.9**
MAKZ pmax pmax
comp=Z,543nm,1.4s
RPZ Rata Peaks 59.76 144 LR LR 20 52 22.1
comp=Z,809nm,21.8s,baz=313,slow=35
RPZ Rata Peaks 59.76 144 *e*P **P 20 27 23.4 +0.3**
comp=Z,316nm,1.7s
THZ Tophouse 59.77 141 *e*P **P 20 27 22.7 -0.6**
comp=Z,71nm,0.7s
KSH Kashi 59.81 316⇑ *i*P **P 20 27 25.0 +1.3**
KSH pP pP 20 27 43.3 +3.3
KSH S **S 20 35 32.3 +1.4**
KSH sS sS 20 35 59.8 +1.5
KSH SS **SS 20 39 28.0 +0.1**
KSH pmax pmax
comp=Z,180nm,1.2s
KSH LR LR
comp=Z,310nm,6.9s
KSH LR LR
comp=Z,630nm,14.9s
KSH LR LR
comp=Z,640nm,16.6s
SATY Saty 59.87 321⇑ *i*P **P 20 27 25.2 +1.2**
comp=Z,214nm,1.1s
KPKS Kokpek 59.90 321⇑ *i*P **P 20 27 25.1 +0.9**
comp=Z,205nm,1.3s
ZHN Zhinishke 59.90 321⇑ *i*P **P 20 27 25.0 +0.8**
comp=Z,85nm,1.3s
OXZ Oxford 60.12 143 *e*P **P 20 27 25.0 -0.5**
comp=Z,39nm,0.8s
FWVZ Far West T-bar 60.17 138 P P 20 27 27.6 +1.3
MOVZ Moawhango 60.38 138 P P 20 27 26.6 -0.9
KHZ Kahutara 60.52 142 *e*P **P 20 27 27.8 -0.4**
comp=Z,66nm,0.7s
YAK Yakutsk 60.59 2 *e*P **P 20 27 28.8 +0.4**
comp=Z,338nm,1.5s
YAK Yakutsk 60.59 2 *e*P **P 20 27 28.2 -0.2**
YAK *e**PP **pP 20 27 43.6 -1.1**
YAK *e* 20 28 12.3
YAK *e* 20 29 41.9
YAK *e*S **S 20 35 39.8 +0.1**
YAK *e**SS **sS 20 36 06.6 -0.6**
YAK *e* 20 37 11.3
YAK *e*SS **SS 20 39 36.2 -2.7**
YAK *e*SSS SSS 20 42 12.8
YAK pmax pmax
comp=Z,115nm,1.1s
YAK pmax pmax
comp=N,50nm,1.4s
YAK pmax pmax
comp=E,12nm,1.5s
YAK pmax pmax
comp=Z,41nm,2.3s
YAK pmax pmax
comp=N,36nm,2.2s
YAK pmax pmax
comp=E,24nm,1.7s
YAK smax smax
comp=N,92nm,2.0s
YAK smax smax
comp=E,89nm,2.0s
BHHZ Black Hill Sta 60.63 138 P P 20 27 28.8 -0.4
NRN Naryn 60.66 318 *e*P **P 20 27 30.6 +0.9**
comp=E,45nm,0.9s
NRN Naryn 60.66 318 *e*P **P 20 27 30.6 +0.9**
NRN pmax pmax
comp=Z,45nm,0.9s

URZ **Urewera** 60.75 136 LR LR 20 56 58.9
comp=Z,705nm,18.3s,baz=312,slow=39
URZ **Urewera** 60.75 136 *e*P P 20 27 28.9 -1.0
comp=Z,56nm,0.9s
BKZ **Black Stump Fm** 60.76 137 *e*P P 20 27 29.6 -0.5
comp=Z,49nm,0.7s
BKZ **Black Stump Fm** 60.76 137 P P 20 27 29.4 -0.7
MDOK **Medeo** 60.78 320 *i* P P 20 27 31.7 +1.3
comp=Z,2µm,3.2s
RTZ **Ruatahuna** 60.83 136 P P 20 27 29.8 -0.8
KWHZ **Kaweka Forest** 60.84 138 P P 20 27 30.5 -0.1
TSZ **Takapari Road** 60.84 138 P P 20 27 30.3 -0.3
TDK **Taldyqorghan** 60.86 323 *i* P P 20 27 31.8 +1.2
comp=Z,544nm,1.6s
ULHL **Ulahol** 60.87 319 P P 20 27 33.4 +2.4
SNR=5.9
AAA **Alma-Ata** 60.89 320⇑ *e*P P 20 27 32.5 +1.6
comp=Z,74nm,1.1s
KRHZ **Kereru** 60.91 138 P P 20 27 30.3 -0.7
PNHZ **Pukenui** 60.93 138 P P 20 27 30.0 -1.2
MA2 **Magadan** 61.00 14 P P 20 27 32.5 +1.3
comp=Z,76nm,1.0s,baz=196,slow=7.3,SNR=20
MA2 **Magadan** 61.00 14 *e*P P 20 27 32.4 +1.1
comp=Z,97nm,1.0s
MA2 **Magadan** 61.00 14⇑ *e*P P 20 27 32.5 +1.3
MA2 pmax pmax
comp=Z,183nm,1.7s
RAHZ **Arahi** 61.04 137 P P 20 27 31.8 -0.2
RAGZ **Rawiri** 61.07 136 P P 20 27 31.9 -0.4
SNGZ **Shannon Statio** 61.15 136 P P 20 27 32.6 -0.1
KZA **Kyzart** 61.45 318 P P 20 27 36.8 +1.7
SNR=86
KUU **Kurty** 61.59 321⇑ *i*P P 20 27 36.7 +1.1
comp=Z,506nm,1.3s
KUU *e*S S 20 35 56.9 +3.7
TKM2 **Tokmak 2** 61.61 319 P P 20 27 37.0 +1.1
SNR=96
KBK **Karagaybulak** 61.91 319 P P 20 27 39.3 +1.4
SNR=64
UCH **Uchtor** 62.00 318 P P 20 27 40.5 +1.6
SNR=98
CHMS **Chumysh** 62.19 319 P P 20 27 41.4 +1.8
SNR=33
AAK **Ala-Archa** 62.20 319 P P 20 27 40.9 +1.1
comp=Z,41nm,1.1s,baz=107,slow=5.7,SNR=94
AAK **Ala-Archa** 62.20 319 P P 20 27 42.1 +2.2
SNR=34
AAK **Ala-Archa** 62.20 319 *e*P P 20 27 40.8 +0.9
comp=Z,148nm,1.4s
AAK **Ala-Archa** 62.20 319 P P 20 27 41.5 +1.6
SNR=75
AAK P P 20 27 41.5 +1.6
SNR=75
AAK **Ala-Archa** 62.20 319 *i* P P 20 27 42.1 +2.2
SNR=45
AAK **Ala-Archa** 62.20 319 *i* P P 20 27 42.1 +2.2
SNR=45
AAK **Ala-Archa** 62.20 319 *i* P P 20 27 41.8 +1.9
SNR=30
AAK **Ala-Archa** 62.20 319 *i* P P 20 27 41.8 +1.9
SNR=30
AAK **Ala-Archa** 62.20 319 *i* P P 20 27 42.1 +2.2
SNR=45
AAK **Ala-Archa** 62.20 319 *i* P P 20 27 41.8 +1.9
SNR=30
AAK **Ala-Archa** 62.20 319 *i* P P 20 27 41.8 +1.9
SNR=30
AAK **Ala-Archa** 62.20 319 *i* P P 20 27 41.8 +1.9
SNR=30
AAK **Ala-Archa** 62.20 319 *i* P P 20 27 42.1 +2.2
SNR=45
AAK **Ala-Archa** 62.20 319 *c*i P P 20 27 41.0 +1.1
AAK pmax pmax
comp=Z,54nm,1.2s
FRU **Bishkek** 62.21 319 *e*P P 20 27 41.0 +1.2
FRU *e* 20 28 05.0
FRU pmax pmax
comp=Z,450nm,2.5s
USP **Ospenovka** 62.48 319 P P 20 27 42.6 +1.0
SNR=95
AML **Almayashu** 62.51 318 P P 20 27 43.5 +1.3
SNR=108
AFI **Afiamalu** 62.66 106 P P 20 27 43.6 +0.3
comp=Z,6.1nm,0.3s,baz=245,slow=19,SNR=2.5
AFI LR LR 20 53 58.2
comp=Z,384nm,19.4s,baz=286,slow=35
EKS2 **Erkin-Say** 62.69 318 P P 20 27 43.7 +0.7
SNR=127
ZAA0 **Zalesovo Array** 62.76 334 *e*P P 20 27 43.1 0.0
comp=Z,270nm,1.6s
ZALV **Zalesovo Beam** 62.76 334 P P 20 27 43.3 +0.2
comp=Z,20nm,0.6s,baz=123,slow=5.1,SNR=70
ZALV LR LR 20 56 06.2
comp=Z,219nm,20.5s,baz=70,slow=37
ZALV PKP2bc 20 56 49.3
comp=Z,1.6nm,0.8s,baz=298,slow=3.2,SNR=7.0
ZALV **Zalesovo Beam** 62.76 334 *e*P P 20 27 42.3 -0.9
ZALV ⇑ *e* 20 56 49.3
SEM **Semipalatinsk** 62.78 328⇑ *i*P P 20 27 45.0 +1.3
comp=Z,171nm,1.7s
SEM *i* S S 20 36 12.4 +4.1
KBL **Kabul** 63.06 308 *e*P P 20 27 46.1 +0.2
comp=Z,109nm,1.4s
KBL **Kabul** 63.06 308 *e*P P 20 27 46.1 +0.2
KBL pmax pmax
comp=Z,109nm,1.4s
BTLS **Baital** 63.58 321⇑ *i*P P 20 27 49.6 +0.8
comp=Z,108nm,1.4s
BTLS *e*S S 20 36 21.6 +3.6
KURBB **Kurchatov Arra** 63.80 328 P P 20 27 51.0 +0.9
comp=Z,185nm,0.9s,baz=124,slow=6.1,SNR=637
KURK **Kurchatov** 63.81 328 *e*P P 20 27 51.1 +0.9
comp=Z,738nm,1.2s
KURK **Kurchatov** 63.81 328 P P 20 27 51.4 +1.3
SNR=253
KURK **Kurchatov** 63.81 328 *c*e P P 20 27 50.9 +0.7
KURK pmax pmax
comp=Z,428nm,1.0s
NVS **Novosibirsk** 64.05 334⇑ *i*P P 20 27 51.6 0.0
NVS *e*S S 20 36 22.9 -0.5
NVS *e* 20 37 41.8
NVS pmax pmax
comp=N,140nm,1.7s
NVS pmax pmax
comp=E,150nm,1.7s
NVS pmax pmax
comp=Z,236nm,1.7s
NVS smax smax
comp=N,27nm,1.7s
NVS smax smax
comp=E,46nm,1.7s
SEY **Seymchan** 64.34 13 P P 20 27 55.2 +1.8
comp=E,64nm,1.0s,baz=216,slow=5.3,SNR=104
IUG **Iuzhnay** 65.00 317⇑ *i*P P 20 27 59.4 +1.0
comp=E,149nm,1.2s
KK31 **Karatay Array** 65.05 318 *e*P P 20 27 59.2 +0.7
KK31 **Karatay Array** 65.05 318 *e*P P 20 27 59.2 +0.7
KKAR **Karatay Array** 65.05 318 *e*P P 20 27 59.2 +0.7
KKAR **Karatay Array** 65.05 318 *e*P P 20 27 59.2 +0.7
BRZS **Berezniki** 66.69 325⇑ *i*P P 20 28 09.9 +1.0
comp=E,346nm,1.4s
BRZS *e*S S 20 36 59.9 +3.8
CASY **Casey** 68.46 187 *e*P P 20 28 20.1 +0.5
comp=E,70nm,0.8s
BVAR **Borovoye Array** 69.38 327 P P 20 28 26.4 +0.7
comp=E,57nm,0.9s,baz=124,slow=7.4,SNR=148
BVAR LR LR 21 00 34.4
comp=E,118nm,19.6s,baz=123,slow=37
BRVK **Borovoye** 69.45 327 *e*P P 20 28 26.8 +0.7
comp=E,162nm,1.1s
BRVK **Borovoye** 69.45 327 P P 20 28 26.4 +0.3
SNR=76
BRVK P P 20 28 26.4 +0.3
SNR=76
BRVK **Borovoye** 69.45 327 *c*e P P 20 28 26.7 +0.7
BRVK pmax pmax
comp=Z,263nm,1.7s
WSAR **Wadi Sarin** 69.47 294 P P 20 28 26.8 0.0
comp=Z,31nm,1.1s,baz=118,slow=5.4,SNR=19
WSAR LR LR 21 04 52.9
comp=Z,128nm,18.3s,baz=110,slow=41
WSAR **Wadi Sarin** 69.47 294 P P 20 28 27.5 +0.6
BIDO **Bidbid** 69.97 294 P P 20 28 30.2 +0.3
SNR=12
BIDO P P 20 28 30.2 +0.3
SNR=12
TIXI **Tiksi** 70.22 1 P P 20 28 29.7 -0.7
comp=Z,28nm,1.0s,baz=163,slow=3.8,SNR=88
TIXI **Tiksi** 70.22 1 *e*P P 20 28 29.8 -0.7
comp=Z,87nm,1.3s
TIXI **Tiksi** 70.22 1 *i* P P 20 28 29.7 -0.7
TIXI pmax pmax
comp=Z,47nm,1.2s
ARQ **Araqi** 71.41 294 P P 20 28 40.2 +1.5
SNR=7.9
SOHO **SOHO** 71.49 295 *i* P P 20 28 40.1 +1.0
SNR=18
SOHO **SOHO** 71.49 295 *i* P P 20 28 40.1 +1.0
SNR=14
SOHO **SOHO** 71.49 295 *i* P P 20 28 40.1 +1.0
SNR=18
SOHO **SOHO** 71.49 295 *i* P P 20 28 40.1 +1.0
SNR=18
SOHO **SOHO** 71.49 295 *i* P P 20 28 40.1 +1.0
SNR=14
SOHO **SOHO** 71.49 295 *i* P P 20 28 40.1 +1.0
SNR=18
SOHO **SOHO** 71.49 295 *i* P P 20 28 40.1 +1.0
SNR=18
SOHO **SOHO** 71.49 295 *i* P P 20 28 40.1 +1.0
SNR=18
SOHO **SOHO** 71.49 295 *i* P P 20 28 40.1 +1.0
SNR=18
BILL **Bilibino** 71.84 15 *e*P P 20 28 40.5 +0.1
comp=Z,80nm,1.6s
BILL **Bilibino** 71.84 15 *c*i P P 20 28 40.4 +0.1
BILL *e* 20 31 19.7
BILL pmax pmax
comp=Z,24nm,1.2s
MIR **Mirnyy** 71.86 194⇑ *i*P P 20 28 42.0 +1.6
MIR *i* 20 28 57.0
MIR pmax pmax
comp=Z,168nm,1.0s
UOSS **Minazif** 71.89 296 *e*P P 20 28 41.9 +0.4
comp=Z,68nm,1.0s
UOSS **Minazif** 71.89 296 *i* P P 20 28 42.6 +1.1
SNR=9.8
UOSS **Minazif** 71.89 296 *i* P P 20 28 42.6 +1.1
SNR=9.8
UOSS **Minazif** 71.89 296 *i* P P 20 28 42.6 +1.1
SNR=9.8
UOSS **Minazif** 71.89 296 *i* P P 20 28 42.6 +1.1
SNR=9.8
UOSS **Minazif** 71.89 296 *i* P P 20 28 42.1 +0.6
SNR=10
BANOM **Banah** 71.93 297 P P 20 28 42.2 +0.4
SNR=7.5
BANOM **Banah** 71.93 297 *i* P P 20 28 43.7 +1.9
SNR=10.0
BANOM **Banah** 71.93 297 *i* P P 20 28 43.7 +1.9
SNR=10.0
BANOM **Banah** 71.93 297 *i* P P 20 28 43.7 +1.9
SNR=10.0
BANOM **Banah** 71.93 297 *i* P P 20 28 43.7 +1.9
SNR=10.0
BANOM **Banah** 71.93 297 *i* P P 20 28 43.7 +1.9
SNR=10.0
BANOM **Banah** 71.93 297 *i* P P 20 28 43.7 +1.9
SNR=10.0
BANOM **Banah** 71.93 297 *i* P P 20 28 43.7 +1.9
SNR=10.0
BANOM **Banah** 71.93 297 *i* P P 20 28 43.7 +1.9
SNR=10.0
HATD **Hatta, Dubai** 71.94 296 P P 20 28 42.7 +0.8
SNR=21
HATD **Hatta, Dubai** 71.94 296 *i* P P 20 28 43.0 +1.1
SNR=27
HATD **Hatta, Dubai** 71.94 296 *i* P P 20 28 43.0 +1.1
SNR=27
HATD **Hatta, Dubai** 71.94 296 *i* P P 20 28 43.0 +1.1
SNR=27
HATD **Hatta, Dubai** 71.94 296 *i* P P 20 28 43.0 +1.1
SNR=27
HATD **Hatta, Dubai** 71.94 296 *i* P P 20 28 43.0 +1.1
SNR=27
HATD **Hatta, Dubai** 71.94 296 *i* P P 20 28 43.0 +1.1
SNR=27
HATD **Hatta, Dubai** 71.94 296 *i* P P 20 28 43.0 +1.1
SNR=27
HATD **Hatta, Dubai** 71.94 296 *i* P P 20 28 43.0 +1.1
SNR=27
HATD **Hatta, Dubai** 71.94 296 *i* P P 20 28 43.0 +1.1
SNR=20
MSFE **Esma-Masafi** 71.98 296 *i* P P 20 28 44.0 +1.8
SNR=22
MSFE **Esma-Masafi** 71.98 296 *i* P P 20 28 43.9 +1.8
SNR=17
MSFE **Esma-Masafi** 71.98 296 *i* P P 20 28 43.9 +1.8
SNR=17
MSFE **Esma-Masafi** 71.98 296 *i* P P 20 28 43.9 +1.8
SNR=17
MSFE **Esma-Masafi** 71.98 296 *i* P P 20 28 43.9 +1.8
SNR=17
MSFE **Esma-Masafi** 71.98 296 *i* P P 20 28 43.9 +1.8
SNR=17
MSFE **Esma-Masafi** 71.98 296 *i* P P 20 28 43.9 +1.8
SNR=17
MSFE **Esma-Masafi** 71.98 296 *i* P P 20 28 44.0 +1.8
SNR=22
MSFE **Esma-Masafi** 71.98 296 *i* P P 20 28 43.9 +1.8
SNR=17
SHME **Shamm** 72.09 297 *i* P P 20 28 44.4 +1.6
SNR=21
SHME **Shamm** 72.09 297 *i* P P 20 28 44.4 +1.6
SNR=21
SHME **Shamm** 72.09 297 *i* P P 20 28 44.4 +1.6
SNR=21
SHME **Shamm** 72.09 297 *i* P P 20 28 44.4 +1.6
SNR=21
SHME **Shamm** 72.09 297 *i* P P 20 28 44.4 +1.6
SNR=21
SHME **Shamm** 72.09 297 *i* P P 20 28 44.4 +1.6
SNR=21
SHME **Shamm** 72.09 297 *i* P P 20 28 44.4 +1.6
SNR=21
SHME **Shamm** 72.09 297 *i* P P 20 28 44.4 +1.6
SNR=21
SHME **Shamm** 72.09 297 *i* P P 20 28 44.4 +1.6
SNR=21
ALNE **Al Ain** 72.19 295 *i* P P 20 28 43.8 +0.4
SNR=146
ALNE **Al Ain** 72.19 295 *i* P P 20 28 45.2 +1.8
SNR=35
ALNE **Al Ain** 72.19 295 *i* P P 20 28 45.2 +1.8
SNR=35
ALNE **Al Ain** 72.19 295 *i* P P 20 28 45.2 +1.8
SNR=35
ALNE **Al Ain** 72.19 295 *i* P P 20 28 45.2 +1.8
SNR=35
ALNE **Al Ain** 72.19 295 *i* P P 20 28 45.2 +1.8
SNR=35
ALNE **Al Ain** 72.19 295 *i* P P 20 28 45.2 +1.8
SNR=35
ALNE **Al Ain** 72.19 295 *i* P P 20 28 43.8 +0.4
SNR=146
ALNE **Al Ain** 72.19 295 *i* P P 20 28 45.2 +1.8
SNR=35
NAZ **Nazwa, Dubai** 72.39 296 P P 20 28 45.0 +0.5
SNR=26
NAZ **Nazwa, Dubai** 72.39 296 *i* P P 20 28 45.0 +0.5
SNR=25
NAZ **Nazwa, Dubai** 72.39 296 *i* P P 20 28 46.0 +1.5
SNR=12
NAZ **Nazwa, Dubai** 72.39 296 *i* P P 20 28 46.0 +1.5
SNR=12
NAZ **Nazwa, Dubai** 72.39 296 *i* P P 20 28 46.0 +1.5
SNR=12
NAZ **Nazwa, Dubai** 72.39 296 *i* P P 20 28 46.0 +1.5
SNR=12
NAZ **Nazwa, Dubai** 72.39 296 *i* P P 20 28 46.0 +1.5
SNR=12
NAZ **Nazwa, Dubai** 72.39 296 *i* P P 20 28 46.0 +1.5
SNR=12
NAZ **Nazwa, Dubai** 72.39 296 *i* P P 20 28 45.0 +0.5
SNR=25
NAZ **Nazwa, Dubai** 72.39 296 *i* P P 20 28 46.0 +1.5
SNR=12
UMQ **Umm Al-Quwin** 72.45 296 *i* P P 20 28 46.7 +1.9
SNR=9.2
UMQ **Umm Al-Quwin** 72.45 296 *i* P P 20 28 46.7 +1.9
SNR=9.2
UMQ **Umm Al-Quwin** 72.45 296 *i* P P 20 28 46.7 +1.9
SNR=9.2
UMQ **Umm Al-Quwin** 72.45 296 *i* P P 20 28 46.7 +1.9
SNR=9.2
UMQ **Umm Al-Quwin** 72.45 296 *i* P P 20 28 46.7 +1.9
SNR=9.2
UMQ **Umm Al-Quwin** 72.45 296 *i* P P 20 28 46.7 +1.9
SNR=9.2
UMQ **Umm Al-Quwin** 72.45 296 *i* P P 20 28 46.7 +1.9
SNR=9.2
UMQ **Umm Al-Quwin** 72.45 296 *i* P P 20 28 46.7 +1.9
SNR=9.2
GEYT **Alibeck** 72.47 309 P P 20 28 46.3 +1.5
comp=Z,103nm,0.8s,baz=91,slow=5.8,SNR=17
GYA0B **ALIBECK ARRAY** 72.47 309 *e*P P 20 28 46.3 +1.5
comp=Z,281nm,1.1s
ASUD **Al Ashush, Dub** 72.64 295 P P 20 28 46.6 +0.6
SNR=36
ASUD **Al Ashush, Dub** 72.64 295 *i* P P 20 28 48.0 +2.0
SNR=12
ASUD **Al Ashush, Dub** 72.64 295 *i* P P 20 28 48.0 +2.0
SNR=12
ASUD **Al Ashush, Dub** 72.64 295 *i* P P 20 28 48.0 +2.0
SNR=12
ASUD **Al Ashush, Dub** 72.64 295 *i* P P 20 28 48.0 +2.0
SNR=12
ASUD **Al Ashush, Dub** 72.64 295 *i* P P 20 28 48.0 +2.0
SNR=12
ASUD **Al Ashush, Dub** 72.64 295 *i* P P 20 28 48.0 +2.0
SNR=12
ASUD **Al Ashush, Dub** 72.64 295 *i* P P 20 28 48.0 +2.0
SNR=12
ASUD **Al Ashush, Dub** 72.64 295 *i* P P 20 28 48.0 +2.0
SNR=12
NRIK **Noril'sk** 72.77 346 P P 20 28 45.6 -0.2
comp=Z,54nm,0.8s,baz=135,slow=6.1,SNR=48
NRIK LR LR 21 04 23.0
comp=Z,214nm,18.5s,baz=145,slow=39
AJN **Ajban** 72.94 295 *i* P P 20 28 48.8 +1.0
SNR=26
AJN **Ajban** 72.94 295 *i* P P 20 28 48.8 +1.0
SNR=26
AJN **Ajban** 72.94 295 *i* P P 20 28 48.8 +1.0
SNR=26
AJN **Ajban** 72.94 295 *i* P P 20 28 49.0 +1.2
SNR=25
AJN **Ajban** 72.94 295 *i* P P 20 28 48.8 +1.0
SNR=26
AJN **Ajban** 72.94 295 *i* P P 20 28 48.8 +1.0
SNR=26
WHFO **Wadi Hawf** 73.47 288 P P 20 28 51.3 +0.3
SNR=5.1
ABKAR **Akbulak array** 74.06 321 *e*P P 20 28 54.1 +0.2
MZR **Muzera** 74.16 293 *i* P P 20 28 56.4 +1.4
SNR=14
MZR **Muzera** 74.16 293 *i* P P 20 28 56.4 +1.4
SNR=14
MZR **Muzera** 74.16 293 *i* P P 20 28 56.4 +1.4
SNR=14
MZR **Muzera** 74.16 293 *i* P P 20 28 56.4 +1.4
SNR=14
MZR **Muzera** 74.16 293 *i* P P 20 28 56.4 +1.4
SNR=14
AKTO **Aktyubinsk** 75.59 322 P P 20 29 03.1 +0.4
comp=Z,36nm,0.9s,baz=103,slow=7.0,SNR=82
AKTO LR LR 21 05 47.8
comp=Z,250nm,19.5s,baz=109,slow=38
KIP **Kipapa** 75.71 68 *c*e P P 20 29 04.9 +1.0
KIP pmax pmax
comp=Z,852nm,2.5s
AKUT **Akutan** 75.84 34 *e*P P 20 29 04.8 +0.8
comp=Z,529nm,1.6s
SVE **Sverdlovsk** 76.05 329 *d*i P P 20 29 05.4 +0.3
SVE *e*S S 20 38 41.5 -2.2
SVE pmax pmax
comp=Z,115nm,1.2s
ARU **Arti** 77.00 328 P P 20 29 10.2 -0.4
comp=Z,33nm,0.9s,baz=107,slow=3.1,SNR=54
ARU **Arti** 77.00 328 *e*P P 20 29 10.2 -0.4
comp=Z,70nm,1.1s
ARU **Arti** 77.00 328 *c*i P P 20 29 10.0 -0.5
ARU S S 20 38 56.2 +2.0
ARU SS SS 20 43 49.3 -2.9
ARU pmax pmax
comp=Z,107nm,1.7s
MUKL **Al Mukalla** 77.84 284⇑ *e*P P 20 29 17.2 +1.1
SDPT **Sand Point** 79.12 34 *e*P P 20 29 22.8 +0.5
comp=Z,173nm,0.7s
ANM **Nome** 79.40 24 *e*P P 20 29 25.1 +1.4
comp=Z,60nm,1.3s
ANM **Nome** 79.40 24 *e*P P 20 29 25.1 +1.4
ANM pmax pmax
comp=Z,60nm,1.3s
CHGN **Chignik** 80.47 33 *e*P P 20 29 29.7 +0.1
comp=Z,100nm,1.4s
ABPO **Ambohimpanom** 80.60 251 *e*P P 20 29 31.5 +0.2
comp=Z,19nm,0.8s
ABPO **Ambohimpanom** 80.60 251 *e*P P 20 29 31.5 +0.2
ABPO pmax pmax
comp=Z,19nm,0.8s
OPO **Ambohidratompo** 80.60 251 P P 20 29 31.7 +0.4
comp=Z,30nm,0.8s,baz=90,slow=2.4,SNR=23
OPO LR LR 21 02 43.1
comp=Z,89nm,19.3s,baz=90,slow=34
AKT **Akhty** 80.95 312⇑ *i*P P 20 29 33.1 +0.5
AKT *e* 20 32 37.1
AKT *e*S S 20 39 36.7 -0.4
AKT pmax pmax
comp=Z,39nm,0.8s
VNDA **Vanda** 81.05 173 P P 20 29 32.1 -0.1
comp=Z,30nm,0.8s,baz=317,slow=6.5,SNR=84
VNDA LR LR 21 05 40.3
comp=Z,354nm,20.1s,baz=346,slow=36
VNDA **Vanda** 81.05 173 *e*P P 20 29 32.2 -0.1
comp=Z,44nm,1.0s
VNDA **Vanda** 81.05 173 *e*P P 20 29 32.3 0.0
VNDA pmax pmax
comp=Z,45nm,1.0s
MAK **Makhachkala** 81.28 313 *e*P P 20 29 34.6 +0.5
MAK *e* 20 32 38.8
MAK *e*S S 20 39 42.0 +1.9
MAK pmax pmax
comp=Z,153nm,1.4s
RDOG **Red Dog Mine** 81.48 21 *e*P P 20 29 36.2 +1.5
comp=Z,102nm,1.2s
RAYN **Ar Rayn** 81.51 293 *e*P P 20 29 36.3 +0.4
comp=Z,106nm,1.0s
RAYN **Ar Rayn** 81.51 293 *i* P P 20 29 36.8 +0.9
SNR=33
RAYN **Ar Rayn** 81.51 293 *i* P P 20 29 36.8 +0.9
SNR=33
RAYN **Ar Rayn** 81.51 293 *i* P P 20 29 36.8 +0.9
SNR=33
RAYN **Ar Rayn** 81.51 293 *i* P P 20 29 36.8 +0.9
SNR=33
MAW **Mawson** 81.55 200 P P 20 29 35.7 +0.7
comp=Z,47nm,0.7s,baz=73,slow=5.6,SNR=96
MAW **Mawson** 81.55 200 P P 20 29 35.7 +0.7
baz=82,SNR=27
MAW **Mawson** 81.55 200 *e*P P 20 29 35.7 +0.7
comp=Z,12nm,0.8s
SBA **Scott Base** 81.96 172 *e*P P 20 29 37.9 +0.8
comp=Z,26nm,0.9s
SBA **Scott Base** 81.96 172 *e*P P 20 29 37.9 +0.8
SBA pmax pmax
comp=Z,26nm,0.9s
DDFL **Dedoflistskaro** 82.15 312 P P 20 29 41.5 +2.5
DAMY **Dhamar** 82.34 284 *e*P P 20 29 42.4 +1.7
comp=Z,158nm,1.3s
GROC **Groznyy** 82.55 313 *e*P P 20 29 41.1 +0.3
GROC *e*S S 20 39 51.6 -1.6
GROC pmax pmax
comp=Z,84nm,1.1s
DGRG **David-gareji** 82.71 311 P P 20 29 42.4 +0.6
DGRG **David-gareji** 82.71 311 *e*P P 20 29 42.4 +0.6
SVW2 **Sparrevohn** 82.85 29 *e*P P 20 29 43.6 +1.5
comp=Z,81nm,1.1s
GNI **Garni** 83.09 310 P P 20 29 45.2 +1.2
comp=Z,22nm,0.9s,baz=162,slow=5.3,SNR=15
GNI **Garni** 83.09 310 *e*P P 20 29 45.7 +1.8
comp=Z,52nm,1.0s
GNI **Garni** 83.09 310 P P 20 29 44.8 +0.9
SNR=14
GNI **Garni** 83.09 310 *i* P P 20 29 45.5 +1.6
SNR=14
GNI **Garni** 83.09 310 *i* P P 20 29 45.5 +1.6
SNR=14
GNI **Garni** 83.09 310 *i* P P 20 29 45.5 +1.6
SNR=14

GNI	Garni	83.09	310	*i* P		P	20 29 45.5	+1.6
	SNR=14							
GNI	Garni	83.09	310	*c i* P		P	20 29 44.9	+0.9
GNI				pmax	pmax			
	comp=Z,92nm,1.6s							
TBLG	Delisi	83.20	312	P		P	20 29 45.2	+0.9
TBLG	Delisi	83.20	312	*e*P		P	20 29 45.2	+0.9
DUS	Dusheti	83.26	312	P		P	20 29 46.0	+1.3
DUS	Dusheti	83.26	312	*e*P		P	20 29 46.0	+1.3
OHAK	Old Harbor	83.41	33	*e*P		P	20 29 45.8	+0.8
	comp=Z,46nm,0.8s							
GUDG	Gudauri	83.45	312	P		P	20 29 47.2	+1.4
ATD	Arta Tunnel	83.83	281	P		P	20 29 50.0	+1.8
	comp=Z,24nm,0.9s,baz=85,slow=2.1,SNR=13							
ATD				LR	LR		21 04 17.6	
	comp=Z,70nm,21.9s,baz=88,slow=34							
ATD	Arta Tunnel	83.83	281	*e*P		P	20 29 49.4	+1.3
	comp=Z,42nm,1.0s							
KDAK	Kodiak Island	83.86	32	P		P	20 29 48.0	+0.8
	comp=Z,57nm,1.0s,baz=245,slow=2.1,SNR=27							
KDAK	Kodiak Island	83.86	32	*e*P		P	20 29 48.2	+0.9
	comp=Z,137nm,1.3s							
KDAK	Kodiak Island	83.86	32	*e*P		P	20 29 48.2	+0.9
KDAK				pmax	pmax			
	comp=Z,137nm,1.3s							
ZEI	Tsey	83.90	313	*e*P		P	20 29 46.2	-1.9
ZEI				pmax	pmax			
	comp=Z,130nm,1.3s							
BGD	Bogdanovka	84.03	311	P		P	20 29 50.5	+1.6
AKH	Akhalkalaki	84.12	311	P		P	20 29 51.1	+2.0
AKH	Akhalkalaki	84.12	311	*e*P		P	20 29 51.2	+2.0
RSO	Redoubt South	84.12	29	*e*P		P	20 29 48.8	0.0
NCK	Nalchik	84.17	313	*i* P		P	20 29 50.1	+0.9
NCK				pmax	pmax			
	comp=Z,41nm,1.1s							
PPT	Papeete	84.30	108	LR		LR	21 04 44.8	
	comp=Z,225nm,19.5s,baz=236,slow=34							
PPT2	Papeete2	84.30	108	*e*S		S	20 40 14.6	+2.7
	comp=Z,404nm,26.8s							
PPT2				*e*SS		SS	20 45 43.4	+0.4
	comp=Z,346nm,29.2s							
PPT2	Papeete2	84.30	108	*e*LR		LR	20 56 24.3	
	comp=Z,1μm,28.8s							
HOM	Homer	84.57	30	*e*P		P	20 29 51.6	+0.8
	comp=Z,226nm,0.9s							
PRGR	Permogore	84.64	332	⇑*i* P		P	20 29 49.4	-1.8
PRGR				*e*S		S	20 40 17.3	+3.8
PRGR				pmax	pmax			
	comp=Z,93nm,1.5s							
GOF	Gofitskoye	84.66	315	*e*P		P	20 29 52.3	+0.6
GOF				pmax	pmax			
	comp=Z,130nm,1.1s							
KBZ	Khabaz	84.69	314	P		P	20 29 52.3	+0.5
	comp=Z,23nm,1.0s,baz=85,slow=2.3,SNR=46							
KBZ				LR		LR	21 11 35.6	
	comp=Z,102nm,21.6s,baz=82,slow=38							
PPLA	Purkeypile	84.71	27	*e*P		P	20 29 52.5	+0.8
	comp=Z,219nm,1.8s							
TBI	Tubuai	84.75	113	*e*S		S	20 40 17.7	+1.6
TBI				*e*SS		SS	20 45 49.2	-0.1
	comp=Z,241nm,34.5s							
TBI	Tubuai	84.75	113	*e*LR		LR	20 56 37.6	
	comp=Z,2μm,38.2s							
NEY	Neytrino	84.79	313	*i* P		P	20 29 53.9	+1.3
NEY				pmax	pmax			
	comp=Z,11nm,1.1s							
KIV	Kislovodsk	84.85	314	*e*P		P	20 29 52.6	-0.2
	comp=Z,34nm,1.0s							
KIV	Kislovodsk	84.85	314	P		P	20 29 53.2	+0.4
	SNR=19							
KIV	Kislovodsk	84.85	314	*i* P		P	20 29 53.9	+1.1
	SNR=12							
KIV	Kislovodsk	84.85	314	*e*P		P	20 29 52.9	+0.1
KIV				*e*			20 40 13.6	
KIV				pmax	pmax			
	comp=Z,172nm,3.5s							
KIV				pmax	pmax			
	comp=Z,34nm,1.0s							
SKT	Skwentna	84.90	28	*e*P		P	20 29 52.4	-0.1
	comp=Z,76nm,1.0s							
BRLK	Bradley Lake	84.97	30	*e*P		P	20 29 53.1	+0.2
	comp=Z,156nm,1.0s							
SUA	Susitna One	85.21	29	*e*P		P	20 29 54.0	-0.2
	comp=Z,128nm,1.0s							
BPAW	Bear Paw Mtn.	85.39	26	*e*P		P	20 29 55.4	+0.4
	comp=Z,17nm,1.1s							
MLY	Manley	85.60	25	*e*P		P	20 29 56.6	+0.6
	comp=Z,14nm,0.9s							
TRF	Thorofare Moun	85.63	27	*e*P		P	20 29 56.4	0.0
	comp=Z,41nm,1.2s							
RC01	Rabbit Creek A	85.66	29	*e*P		P	20 29 56.5	+0.2
	comp=Z,95nm,1.0s							
SEW	Seward	85.72	30	*e*P		P	20 29 57.2	+0.7
	comp=Z,83nm,1.0s							
PMR	Palmer	86.00	28	*e*P		P	20 29 58.0	+0.1
	comp=Z,85nm,1.0s							
PMR	Palmer	86.00	28	*e*P		P	20 29 58.0	+0.1
PMR				pmax	pmax			
	comp=Z,85nm,1.0s							
BWN	Browne	86.06	26	*e*P		P	20 29 59.5	+1.3
	comp=Z,37nm,1.0s							
GHO	Glory Hole Cre	86.11	28	*e*P		P	20 29 58.8	+0.2
	comp=Z,32nm,0.9s							
MCK	McKinley	86.26	26	*e*P		P	20 29 59.2	0.0
	comp=Z,32nm,1.0s							
MCK	McKinley	86.26	26	*e*P		P	20 29 59.2	0.0
MCK				pmax	pmax			
	comp=Z,32nm,1.0s							
RND	Reindeer	86.27	27	*e*P		P	20 29 58.6	-0.7
	comp=Z,18nm,0.7s							
RND	Reindeer	86.27	27	*e*P		P	20 29 58.6	-0.7
RND				pmax	pmax			
	comp=Z,19nm,0.7s							
SML	Sawmill	86.39	28	*e*P		P	20 30 00.1	+0.2
	comp=Z,140nm,1.2s							
SML	Sawmill	86.39	28	*e*P		P	20 30 00.1	+0.2
SML				pmax	pmax			
	comp=Z,140nm,1.2s							
TOLK	Toolik Lake Re	86.43	21	P		P	20 30 00.9	+0.9
	baz=264							
TOLK	Toolik Lake Re	86.43	21	*e*P		P	20 30 00.9	+0.9
	comp=Z,40nm,0.9s							
MDM	Murphy Dome	86.66	25	*e*P		P	20 30 00.4	-0.8
	comp=Z,12nm,0.9s							
WRH	Wood River Hil	86.68	26	*e*P		P	20 30 00.9	-0.3
	comp=Z,26nm,1.0s							
CCB	Clear Creek Bu	86.82	25	*e*P		P	20 30 00.8	-1.1
	comp=Z,29nm,1.0s							
SCM	Sheep Creek Mo	86.87	28	*e*P		P	20 30 02.5	+0.2
	comp=Z,87nm,1.2s							
SCM	Sheep Creek Mo	86.87	28	*e*P		P	20 30 02.5	+0.2
SCM				pmax	pmax			
	comp=Z,87nm,1.2s							
DHY	Denali Highway	86.92	27	*e*P		P	20 30 02.9	+0.3
	comp=Z,14nm,1.0s							
SOC	Sochi	86.99	313	*c i* P		P	20 30 02.0	-1.2
SOC				*e*PPP	PPP		20 35 18.6	
SOC				*e*S		SKSac	20 40 25.6	+0.3
SOC				*e*SS		SS	20 46 18.2	-3.0
SOC				pmax	pmax			
	comp=Z,40nm,1.2s							
SOC				MLR	MLR			
	comp=Z,67nm,15.0s							
HDA	Harding Lake	87.17	26	*e*P		P	20 30 02.8	-0.9
	comp=Z,32nm,1.0s							
IL1	Eielson Array	87.22	25	*e*P		P	20 30 02.0	-1.9
ILAR	Eielson Array	87.22	25	P		P	20 30 02.5	-1.3
	comp=Z,12nm,1.1s,baz=260,slow=4.1,SNR=57							
ILAR				PP		PP	20 33 25.1	-3.2
	comp=Z,4.8nm,1.2s,baz=260,slow=6.9,SNR=6.8							
ILAR				PKKPbc		PKKPbc	20 47 55.1	-2.6
	comp=Z,2.1nm,0.8s,baz=48,slow=1.3,SNR=16							
ILAR				LR		LR	21 05 41.4	
	comp=Z,91nm,21.8s,baz=267,slow=33							
ILB	Eielson Array	87.22	25	*e*P		P	20 30 02.1	-1.8
VORD	Divnogorie	87.42	321	*e*P		P	20 30 04.1	-1.0
VORD				pmax	pmax			
	comp=Z,60nm,1.2s							
VSR	Storozhevoye	87.50	321	*e*P		P	20 30 04.4	-1.1
VSR				*e*S		S	20 40 40.0	-1.9
VSR				pmax	pmax			
	comp=Z,20nm,1.0s							
VSR				smax	smax			
	comp=N,120nm,1.5s							
KLU	Klutina	87.53	29	*e*P		P	20 30 06.1	+0.6
	comp=N,27nm,1.2s							
KLMR	Klimovskoe	87.53	331	*e*P		P	20 30 01.7	-3.7
KLMR				*e*S		SKSac	20 40 28.8	+0.9
KLMR				pmax	pmax			
	comp=Z,114nm,1.4s							
KLMR	Klimovskoe	87.53	331	*e*P		P	20 30 01.7	-3.7
KLMR				*e*P		P	20 30 01.7	-3.7
KLMR				*e*P		P	20 30 01.7	-3.7
KLMR				AMP			20 30 10.9	
	comp=Z,114nm,1.4s							
KLMR				*e*S		SKSac	20 40 28.9	+1.1
KLMR				*e*S		SKSac	20 40 28.9	+1.1
DIV	Divide	87.59	29	*e*P		P	20 30 06.7	+0.9
	comp=Z,39nm,1.0s							
PAX	Paxson	87.78	27	*e*P		P	20 30 06.7	0.0
	comp=Z,43nm,1.2s							
PAX	Paxson	87.78	27	*e*P		P	20 30 06.7	0.0
PAX				pmax	pmax			
	comp=Z,43nm,1.2s							
HARP	HAARP	87.91	28	*e*P		P	20 30 08.3	+1.0
	comp=Z,66nm,1.2s							
RIDG	Independ'e Rid	88.08	26	*e*P		P	20 30 07.8	-0.2
	comp=Z,46nm,0.9s							
BMRM	Bremner River	88.15	29	*e*P		P	20 30 09.1	+0.6
	comp=Z,29nm,1.2s							
TMCR	Tamitsa	88.28	334	*e*P		P	20 30 06.3	-2.6
TMCR				pmax	pmax			
	comp=Z,57nm,1.0s							
DOT	Dot Lake	88.42	27	*e*P		P	20 30 09.7	0.0
	comp=Z,61nm,0.9s							
MOS	Moscow	88.46	326	*e*P		P	20 30 07.3	-2.6
MOS				*e*			20 30 32.0	
MOS				*e*			20 40 32.7	
MOS				*e*			20 40 45.5	
MOS				*e*PS		PnS	20 41 54.7	-6.2
MOS				pmax	pmax			
	comp=Z,200nm,1.6s							
MOS				pmax	pmax			
	comp=Z,100nm,1.5s							
SCRK	Sand Creek	88.46	26	*e*P		P	20 30 09.7	-0.2
	comp=Z,12nm,0.9s							
ANN	Anapa	88.64	315	*c i* P		P	20 30 10.0	-1.0
ANN				*e*S		SKSac	20 40 38.4	+3.2
ANN				pmax	pmax			
	comp=Z,64nm,0.9s							
ANN				MLR	MLR			
	comp=Z,337nm,26.0s							
CRQM	Cirque	88.87	29	*e*P		P	20 30 13.3	+1.2
	comp=Z,34nm,1.2s							
TGL	Tana Glacier	89.02	29	*e*P		P	20 30 13.5	+0.9
	comp=Z,33nm,1.3s							
OBN	Obninsk	89.06	325	*e*P		P	20 30 11.2	-1.5
	comp=Z,414nm,1.5s							
OBN	Obninsk	89.06	325	*c e*P		P	20 30 11.6	-1.2
OBN				*e*			20 33 40.3	
OBN				*i* S		SKSac	20 40 43.2	+6.0
OBN				pmax	pmax			
	comp=Z,134nm,1.6s							
OBN				MLR	MLR			
	comp=Z,393nm,22.0s							
ASF	Jabal al Asfar	89.24	302	P		P	20 30 15.3	+1.1
	comp=Z,22nm,1.1s,baz=54,slow=1.6,SNR=19							
ASF				LR	LR		21 14 44.4	
	comp=Z,130nm,21.9s,baz=68,slow=38							
KMBO	Kilima Mbogo	89.60	269	LR	LR		21 08 09.9	
	comp=Z,102nm,18.9s,baz=95,slow=34							
EGAK	Eagle	89.67	25	*e*P		P	20 30 15.5	+0.1
	comp=Z,512nm,1.1s							
APA	Apatity	90.09	337	⇑*i* P		P	20 30 10.5	-6.8
APA				*i* S		SKSac	20 40 49.0	+6.2
APA				pmax	pmax			
	comp=Z,13nm,1.0s							
MMAI	Mount Meron Ar	90.48	303	P		P	20 30 19.7	-0.3
	comp=Z,16nm,1.0s,baz=84,slow=7.6,SNR=13							
MMAI				LR	LR		21 15 44.7	
	comp=Z,110nm,21.5s,baz=50,slow=39							
SIM	Simferopol'	90.99	315	*e*P		P	20 30 21.4	-0.6
SIM				*e*			20 40 53.0	
SIM				*e*S		S	20 41 17.0	+2.2
SIM				pmax	pmax			
	comp=Z,19nm,1.1s							
SIM				pmax	pmax			
	comp=Z,40nm,8.5s							
QSPA	South Pole Qui	91.25	180	P		P	20 30 22.9	0.0
	comp=Z,13nm,0.8s,baz=302,slow=2.1,SNR=38							
ILGA	Ilgaz	91.48	311	*e*P		P	20 30 24.9	+0.2
	comp=Z,24nm,1.3s							
BR131	Keskin Array S	91.61	310	*e*P		P	20 30 24.6	-0.6
BRTR	Keskin Array B	91.61	310	P		P	20 30 24.2	-1.0
	comp=Z,6.5nm,0.9s,baz=116,slow=5.6,SNR=34							
CSS	Mathiatis	92.11	305	*e*P		P	20 30 27.0	-0.5
	comp=Z,4.7nm,0.9s							
INK	Inuvik	92.35	22	P		P	20 30 27.6	-0.3
	comp=Z,25nm,1.1s,baz=282,slow=6.3,SNR=34							
INK	Inuvik	92.35	22	*e*P		P	20 30 27.5	-0.3
	comp=Z,53nm,1.2s							
ARCES	ARCESS Array B	92.72	340	P		P	20 30 28.8	-0.7
	comp=Z,37nm,1.0s,baz=76,slow=5.1,SNR=31							
ARCES	ARCESS Array B	92.72	340	*e*P		P	20 30 28.4	-1.2
ARE0	ARCESS Array S	92.72	340	*e*P		P	20 30 28.9	-0.6
	comp=Z,68nm,1.1s							
SPITS	Spitsbergen Ar	92.84	349	P		P	20 30 29.4	-0.6
	comp=Z,13nm,0.8s,baz=112,slow=6.9,SNR=6.0							
SPITS				LR	LR		21 16 37.5	
	comp=Z,235nm,22.0s,baz=50,slow=38							
SKAG	Skagway	92.86	30	*e*P		P	20 30 31.3	+1.0
	comp=Z,57nm,1.0s							
TAOE	Nuku Hiva Isla	93.19	99	*e*PS		PS	20 42 56.1	-0.2
	comp=Z,306nm,30.3s							
TAOE	Nuku Hiva Isla	93.19	99	*e*LR		LR	21 00 36.4	
	comp=Z,1μm,25.2s							
BESE	Bessie Mountai	93.22	31	*e*P		P	20 30 33.5	+1.4
	comp=Z,62nm,1.1s							
JIS	Juneau Island	93.51	32	*e*P		P	20 30 34.7	+1.4
	comp=Z,43nm,0.9s							
AKASG	Malin Array Be	93.80	321	P		P	20 30 33.5	-1.3
	comp=Z,0.5nm,0.3s,baz=67,slow=4.6,SNR=24							
AKASG				LR	LR		21 16 28.8	
	comp=Z,116nm,19.8s,baz=70,slow=38							
AKBB	Malin Array Si	93.80	321	*e*P		P	20 30 34.0	-0.9
	comp=Z,12nm,1.0s							
AKBB	Malin Array Si	93.80	321	*e*P		P	20 30 34.0	-0.9
AKBB				pmax	pmax			
	comp=Z,12nm,1.0s							
KIEV	Kiev	93.81	321	*e*P		P	20 30 33.6	-1.3
	comp=Z,12nm,1.1s							
KIEV	Kiev	93.81	321	*i* P		P	20 30 33.2	-1.7
KIEV				pmax	pmax			
	comp=Z,11nm,1.5s							
AK11	Malin Array Si	93.84	321	*e*P		P	20 30 34.9	-0.1
FIA1	FINESS Array S	93.98	332	*e*P		P	20 30 34.0	-1.4
FINES	FINESS Array B	93.98	332	P		P	20 30 34.1	-1.3
	comp=Z,5.8nm,0.9s,baz=72,slow=8.6,SNR=12							
FINES				LR	LR		21 16 29.9	
	comp=Z,203nm,19.3s,baz=78,slow=38							
FINES	FINESS Array B	93.98	332	*i* P		P	20 30 34.2	-1.2
FINES				pmax	pmax			
	comp=Z,6.0nm,0.9s							
VSU	Vasula	94.15	329	*i* P		P	20 30 36.0	-0.3
VSU				pmax	pmax			
	comp=Z,33nm,1.2s							
SORM	Soroca	94.68	318	⇓*i* P		P	20 30 37.7	-1.2
SORM	Soroca	94.68	318	⇓P		P	20 30 37.7	-1.2
WRAK	Wrangell Islan	94.89	33	*e*P		P	20 30 40.3	+0.6
	comp=Z,38nm,0.9s							
TIRR	Tirgusor	95.08	315	⇑*i* P		P	20 30 40.1	-0.8
TIRR	Tirgusor	95.08	315	⇑P		P	20 30 40.1	-0.8
TLB	Topalu	95.33	315	⇓*i* P		P	20 30 41.1	-0.9
TLB	Topalu	95.33	315	⇓P		P	20 30 41.1	-0.9
HARR	Harsova	95.40	315	⇑*i* P		P	20 30 41.6	-0.7
HARR	Harsova	95.40	315	⇑P		P	20 30 41.6	-0.7
DLBC	Dease Lake	95.74	31	P		P	20 30 44.5	+0.8
	comp=Z,12nm,0.9s,baz=289,slow=5.5,SNR=21							
DLBC	Dease Lake	95.74	31	*e*P		P	20 30 44.5	+0.8
	comp=Z,25nm,1.1s							
TESR	Tescani	96.04	317	⇑*i* P		P	20 30 44.0	-1.3
VRI	Vrincioaia	96.08	316	⇑*i* P		P	20 30 45.4	-0.1
VRI	Vrincioaia	96.08	316	⇑P		P	20 30 45.4	-0.1
PLOR	Plostina	96.14	316	⇓*i* P		P	20 30 45.3	-0.5
PLOR	Plostina	96.14	316	⇓P		P	20 30 45.3	-0.5
MLR	Muntele Rosu	96.68	316	P		P	20 30 48.0	-0.3
	comp=Z,3.0nm,1.0s							
MLR				LR	LR		21 21 06.1	
	comp=Z,16nm,20.0s,baz=72,slow=40							
MLR	Muntele Rosu	96.68	316	⇑*i* P		P	20 30 48.0	-0.3
MLR	Muntele Rosu	96.68	316	*e*P		P	20 30 47.9	-0.5
	comp=Z,35nm,1.3s							
BURAR	Bucovina Array	96.84	318	⇑*i* P		P	20 30 48.8	-0.2
BURAR	Bucovina Array	96.84	318	⇑P		P	20 30 48.8	-0.2
BUR04	Bucovina Ar. S	96.84	318	*e*P		P	20 30 48.2	-0.8
BUR08	Bucovina Ar. S	96.85	318	*e*P		P	20 30 49.2	+0.2
SUW	Suwalki	96.92	325	*e*P		P	20 30 47.9	-1.1
SUW	Suwalki	96.92	325	*e*P		P	20 30 48.4	-0.7
	comp=Z,54nm,1.1s							
SUW	Suwalki	96.92	325	*e*P		P	20 30 48.4	-0.7
SUW				pmax	pmax			
	comp=Z,54nm,1.1s							
DOPR	Dopca	96.99	316	⇑*i* P		P	20 30 49.0	-0.6
VOIR		97.31	316	⇑*i* P		P	20 30 50.7	-0.4
VOIR		97.31	316	⇑P		P	20 30 50.7	-0.4
ARR	Arges	97.61	316	⇑*i* P		P	20 30 52.1	-0.4
RKT	Rikitea	98.07	113	*e*LR		LR	21 02 56.7	
	comp=Z,1μm,38.0s							
KWP	Kalwaria Pacla	98.11	320	*e*P		P	20 30 54.2	-0.3
KWP	Kalwaria Pacla	98.11	320	*e*P		P	20 30 54.2	-0.3
MATP	Matopo	98.26	250	P		P	20 30 56.0	0.0
	comp=Z,12nm,0.9s,baz=111,slow=4.4,SNR=17							
MATP				LR	LR		21 11 20.0	
	comp=Z,231nm,21.2s,baz=82,slow=33							
TRPA	Tarpa	98.52	319	⇑*i* P		P	20 30 55.9	-0.4
UZH	Uzhgorod	98.58	320	*e*P		P	20 30 55.5	-1.1
UZH				*e*			20 31 14.7	
LSZ	Lusaka	98.68	255	P		Pdif	20 30 58.0	0.0
	comp=Z,7.6nm,0.8s,baz=71,slow=4.1,SNR=15							
LSZ	Lusaka	98.68	255	*e*P		P	20 30 57.7	-0.3
	comp=Z,13nm,1.0s							
LSZ	Lusaka	98.68	255	P		Pdif	20 30 58.0	+0.1
LSZ				pmax	pmax			
	comp=Z,8.0nm,0.8s							
IDI	Anoyia	98.97	306	P		Pdif	20 31 00.3	+1.6
	comp=Z,6.3nm,0.8s,baz=32,slow=6.5,SNR=3.4							
IDI				LR	LR		21 22 32.9	
	comp=Z,59nm,20.9s,baz=71,slow=40							
CRVS	Cervenica-Dubn	99.06	320	*e*P		Pdif	20 30 59.1	+0.3
CRVS	Cervenica-Dubn	99.06	320	*e*PDIFF		Pdif	20 30 59.1	+0.3
VTS	Vitosha	99.11	313	⇑*i* P		Pdif	20 30 58.6	-0.7
VTS	Vitosha	99.11	313	*e*P		Pdif	20 30 58.4	-0.9
	comp=Z,7.1nm,0.9s							
VTS	Vitosha	99.11	313	⇑P		Pdif	20 30 58.6	-0.7
SIRR	Siria	99.49	317	⇑*i* P		Pdif	20 31 00.4	-0.4
DAG	Danmarks Havn	99.63	352	⇑*i* P		Pdif	20 30 59.7	-1.0
	comp=Z,19nm,0.9s							
BZS	Buzias	99.65	317	⇑*i* P		Pdif	20 31 00.9	-0.6
BZS	Buzias	99.65	317	⇑P		Pdif	20 31 00.9	-0.6
MDVR	Moldovita	99.75	316	⇓*i* P		Pdif	20 31 01.7	-0.3
LIT	Litokhoron	100.08	311	*e*Pdif		Pdif	20 31 02.2	-1.4
LIT	Litokhoron	100.08	311	*e*P		Pdif	20 31 02.2	-1.4
RES	Resolute Bay	100.14	10	P		Pdif	20 31 02.6	-0.5
	comp=Z,12nm,1.0s,baz=316,slow=4.4,SNR=9.9							
RES	Resolute Bay	100.14	10	*e*Pdif		Pdif	20 31 03.4	+0.4
RES	Resolute Bay	100.14	10	*e*P		Pdif	20 31 03.4	+0.4
HFS	Hagfors	100.17	332	P		Pdif	20 31 02.2	-1.2
	comp=Z,5.5nm,1.0s,baz=316,slow=4.1,SNR=5.5							
PSZ	Piszkesteto	100.30	319	⇑*i* P		Pdif	20 31 04.2	-0.2
PSZ	Piszkesteto	100.30	319	⇑P		Pdif	20 31 04.2	-0.2
LBTB	Lobatse	100.74	245	P		Pdif	20 31 06.6	-0.4
	comp=Z,4.3nm,1.0s,baz=93,slow=7.4,SNR=3.3							
BOSA	Boshof	100.79	241	P		Pdif	20 31 07.0	-0.1
	comp=Z,6.1nm,1.0s,baz=84,slow=2.0,SNR=4.9							
NB2	NORSAR Subarra	100.96	333	P		Pdif	20 31 05.3	-1.7
	comp=Z,10.0nm,1.1s,baz=69,slow=4.4							
NB2	NORSAR Subarra	100.96	333	P		Pdif	20 31 05.3	-1.7
NB2				pmax	pmax			
	comp=Z,3.0nm,1.1s							
NB2	NORSAR Subarra	100.96	333	P		Pdif	20 31 05.3	-1.7
	baz=69,slow=4.4							
NOA	NORSAR Array B	100.96	333	P		Pdif	20 31 05.9	-1.1
NC204	NORSAR Array S	101.07	334	*e*Pdif		Pdif	20 31 07.1	-0.5
DIVS	Divibare	101.10	315	*e*Pdif		Pdif	20 31 08.1	0.0
YKW3	Yellowknife Ar	101.59	25	*e*Pdif		Pdif	20 31 10.3	+0.6
YKA	Yellowknife Ar	101.63	25	P		Pdif	20 31 10.1	+0.3
	comp=Z,8.0nm,1.0s,baz=296,slow=4.8,SNR=21							
YKA				PKiKP		PKiKP	20 35 33.1	0.0
	comp=Z,2.2nm,0.9s,baz=307,slow=2.0,SNR=6.0							
YKA				PKKPbc		PKKPbc	20 47 15.5	-3.8
	comp=Z,2.3nm,0.7s,baz=116,slow=2.8,SNR=10.0							
KSP	Ksiaz	101.80	323	*e*P		Pdif	20 31 11.6	+0.7
KSP	Ksiaz	101.80	323	*e*P		Pdif	20 31 11.6	+0.7
SNAA	Sanae	102.93	194	P		Pdif	20 31 16.4	+0.8
SNAA	Sanae	102.93	194	Pdiff		Pdif	20 31 16.1	+0.5
	comp=Z,1.7nm,0.6s,baz=198,slow=8.7,SNR=9.8							
SNAA				PKKPbc		PKKPbc	20 47 12.9	-3.0
	comp=Z,3.6nm,0.9s,baz=335,slow=2.6,SNR=9.7							
SNAA	Sanae	102.93	194	*e*Pdif		Pdif	20 31 16.5	+0.9
SNAA				PKKPbc		PKKPbc	20 47 12.9	-3.0
GOPC	GO Pecny, Ondr	103.00	322	AMS		AMS	21 19 10.0	
	comp=Z,300nm,15.8s							
BRG	Berggiesshubel	103.21	323	*i* P		Pdif	20 31 17.2	0.0
	comp=Z,10nm,1.1s							
BRG				*e*			20 35 32.3	
	comp=Z,18nm,1.6s							
BRG	Berggiesshubel	103.21	323	*i* P

EGMT	Eagleton	110.64	37	P	PKiKP	20 35 50.6	+0.2
	baz=297						
PFO	Pinyon Flats O	111.25	53	P	PKiKP	20 35 52.5	+0.5
	baz=287						
TPFO	Pinon Flats	111.25	53	P	PKiKP	20 35 52.5	+0.4
	baz=287						
FFC	Flin Flon	111.30	28	eP	PKiKP	20 35 51.1	-0.2
FFC	Flin Flon	111.30	28	ePKIKP	PKiKP	20 35 51.2	-0.2
MONP2	Monument Peak	111.48	54	P	PKiKP	20 35 53.8	+1.1
	baz=286						
BELC	Belle Mtn. Jos	111.50	53	P	PKiKP	20 35 53.2	+0.6
	baz=287						
GMRC	Granite Mounta	111.54	52	P	PKiKP	20 35 53.6	+1.0
	baz=288						
DUG	Dugway, Tooele	111.86	45	P	PKiKP	20 35 53.3	+0.2
	baz=292						
RLMT	Red Lodge	112.25	39	P	PKiKP	20 35 54.3	+0.5
	baz=296						
PDAR	Pinedale Array	113.08	42	PKiKP	PKiKP	20 35 56.1	+0.6
	comp=Z,1.0nm,0.7s,baz=222,slow=3.6,SNR=7.3						
PDAR				PKKPbc	PKKPbc	20 46 41.5	-1.7
	comp=Z,2.3nm,0.7s,baz=110,slow=6.5,SNR=14						
LAO	LASA Array	113.39	37	P	PKiKP	20 35 56.5	+0.8
	baz=300						
WUAZ	Wupatki	114.61	50	P	PKPdf	20 35 59.3	+0.7
	baz=291						
WUAZ	Wupatki	114.61	50	eP	PKPdf	20 35 59.2	+0.7
O20A	White River Ci	115.09	44	P	PKPdf	20 35 59.7	+0.4
	baz=295						
PV03	Paradox Valley	115.44	46	ePKPdf	PKPdf	20 36 01.0	+0.9
PV07	Paradox Valley	115.52	46	ePKPdf	PKPdf	20 36 01.4	+1.1
PV02	Paradox Valley	115.54	46	ePKPdf	PKPdf	20 36 01.4	+1.0
PV15	Paradox Valley	115.67	46	ePKPdf	PKPdf	20 36 01.7	+1.1
PV01	Paradox Valley	115.69	46	ePKPdf	PKPdf	20 36 01.6	+1.0
W18A	Petrified Fore	116.00	50	P	PKPdf	20 36 02.1	+0.9
	baz=292						
W18A	Petrified Fore	116.00	50	ePKPdf	PKPdf	20 36 02.6	+1.4
MVCO	Mesa Verde	116.12	47	P	PKPdf	20 36 02.5	+1.0
	baz=294						
MVCO	Mesa Verde	116.12	47	ePKPdf	PKPdf	20 36 02.8	+1.3
TUC	Tucson	116.18	53	P	PKPdf	20 36 02.2	+0.7
	baz=290						
ULM	Lac du Bonnet	117.00	29	PKP	PKPdf	20 36 01.9	-0.5
	comp=Z,11nm,0.8s,baz=309,slow=1.0,SNR=8.2						
ULM				PKKPbc	PKKPbc	20 46 27.2	-2.4
	comp=Z,5.3nm,0.8s,baz=86,slow=2.1,SNR=2.9						
ULM				PKKPab	PKKPab	20 46 31.4	-1.3
	comp=Z,3.2nm,0.8s,baz=70,slow=8.7,SNR=3.6						
ULM	Lac du Bonnet	117.00	29	PKiKP	PKPdf	20 36 02.0	-0.5
ULM				pmax	pmax		
	comp=Z,11nm,0.8s						
ISCO	Idaho Springs	117.06	43	P	PKPdf	20 36 03.4	+0.1
	baz=297						
ISCO	Idaho Springs	117.06	43	ePKPdf	PKPdf	20 36 03.9	+0.6
ISCO	Idaho Springs	117.06	43	ePKIKP	PKPdf	20 36 03.9	+0.6
S22A	4UR Ranch, Cre	117.11	46	P	PKPdf	20 36 04.7	+1.2
	baz=295						
C31A	Landman Farms,	117.60	32	P	PKPdf	20 36 03.1	-0.6
	baz=308						
319A	Douglas	117.71	53	ePKPdf	PKPdf	20 36 05.9	+1.3
SDCO	Great Sand Dun	118.06	45	P	PKPdf	20 36 05.4	+0.2
	baz=296						
SDCO	Great Sand Dun	118.06	45	ePKPdf	PKPdf	20 36 06.0	+0.8
TAM	Tamanrasset	118.06	297	ePKPdf	PKPdf	20 36 06.4	+0.9
TAM	Tamanrasset	118.06	297	ePKIKP	PKPdf	20 36 06.4	+0.9
A33A	Warroad	118.09	30	P	PKPdf	20 36 04.0	-0.6
	baz=310						
AGMN	Agassiz Nation	118.27	31	P	PKPdf	20 36 03.8	-1.1
	baz=310						
E31A	Nome	118.27	33	P	PKPdf	20 36 04.6	-0.4
	baz=307						
121A	Cookes Peak, D	118.47	52	P	PKPdf	20 36 06.9	+0.9
	baz=292						
TASM	ASL Pad, Albuq	118.55	49	P	PKPdf	20 36 06.7	+0.6
	baz=294						
ANMO	Albuquerque	118.55	49	PKP	PKPdf	20 36 06.8	+0.7
	comp=Z,8.7nm,0.9s,baz=210,slow=3.7,SNR=14						
ANMO	Albuquerque	118.55	49	P	PKPdf	20 36 06.7	+0.6
	baz=294						
ANMO	Albuquerque	118.55	49	ePKPdf	PKPdf	20 36 07.0	+0.8
ANMO	Albuquerque	118.55	49	ePKIKP	PKPdf	20 36 07.0	+0.8
TASL	Snake Pit, Alb	118.55	49	P	PKPdf	20 36 06.7	+0.5
	baz=294						
LPM	Los Pinos Moun	118.67	49	ePKPdf	PKPdf	20 36 07.3	+0.9
BNM	Barren Site	118.74	49	ePKPdf	PKPdf	20 36 07.3	+0.7
B34A	Aery, Baudette	118.76	30	P	PKPdf	20 36 05.2	-0.7
	baz=311						
T25A	Trinidad	119.10	45	P	PKPdf	20 36 07.6	+0.4
	baz=297						
ES19	SONSECA Array	119.24	318	ePKPdf	PKPdf	20 36 07.7	+0.5
G32A	Webster	119.27	34	P	PKPdf	20 36 06.3	-0.7
	baz=307						
ESDC	Sonseca Array	119.30	318	PKP	PKPdf	20 36 07.2	-0.1
	comp=Z,1.3nm,0.8s,baz=3.8,slow=4.5,SNR=8.9						
ESDC				PP	PP	20 37 27.2	-1.1
	comp=Z,1.4nm,0.8s,baz=60,slow=7.4,SNR=4.2						
E33A	Westby DABS, E	119.33	33	P	PKPdf	20 36 06.4	-0.7
	baz=309						
D34A	Park Rapids	119.39	32	P	PKPdf	20 36 06.3	-0.8
	baz=310						
D34A	Park Rapids	119.39	32	ePKPdf	PKPdf	20 36 06.8	-0.4
C35A	Jirik Farms, M	119.62	31	P	PKPdf	20 36 06.7	-0.9
	baz=311						
PAB	San Pablo	119.62	318	ePKPdf	PKPdf	20 36 08.7	+0.8
PAB	San Pablo	119.62	318	ePKIKP	PKPdf	20 36 08.7	+0.8
H32A	Carlson Farm,	119.75	35	P	PKPdf	20 36 07.5	-0.5
	baz=307						
E34A	Wadena	119.77	32	P	PKPdf	20 36 07.3	-0.6
	baz=310						
D35A	Remer	119.99	31	P	PKPdf	20 36 07.1	-1.2
	baz=311						
E35A	Pequot Lakes	120.14	32	P	PKPdf	20 36 07.9	-0.7
	baz=310						
C36A	Pine Crest Far	120.15	30	P	PKPdf	20 36 08.3	-0.3
	baz=312						
F35A	Swanville	120.50	32	P	PKPdf	20 36 08.8	-0.5
	baz=310						
MVO	Moncorvo	120.52	321	ePKPdf	PKPdf	20 36 10.4	+0.8
MNTX	Cornudas Mount	120.68	52	P	PKPdf	20 36 10.4	+0.3
	baz=293						
MNTX	Cornudas Mount	120.68	52	ePKPdf	PKPdf	20 36 10.7	+0.6
ECSD	EROS Data Cent	120.69	35	P	PKPdf	20 36 09.3	-0.4
	baz=307						
ECSD	EROS Data Cent	120.69	35	ePKPdf	PKPdf	20 36 09.3	-0.4
D37A	Cotton	120.76	30	P	PKPdf	20 36 08.8	-1.0
	baz=313						
E36A	McGregor	120.77	31	P	PKPdf	20 36 09.1	-0.7
	baz=312						
PCAB	Cabril	120.84	322	ePKPdf	PKPdf	20 36 11.3	+1.2
PGAV	Gavieira, Arco	120.84	322	ePKPdf	PKPdf	20 36 11.1	+0.9
POLO	Lamas de Olo	120.88	321	ePKPdf	PKPdf	20 36 11.1	+0.8
PVRL	Vila Real	120.89	321	ePKPdf	PKPdf	20 36 11.4	+1.1
G35A	Watkins	120.96	33	P	PKPdf	20 36 10.1	-0.1
	baz=310						
G35A	Watkins	120.96	33	ePKPdf	PKPdf	20 36 10.7	+0.5
F36A	Milaca	121.06	32	P	PKPdf	20 36 09.7	-0.7
	baz=311						
F36A	Milaca	121.06	32	ePKPdf	PKPdf	20 36 10.0	-0.4
H35A	Sunnyside Ranc	121.10	34	P	PKPdf	20 36 10.3	-0.2
	baz=309						
BGNE	Belgrade	121.12	38	P	PKPdf	20 36 09.6	-1.0
	baz=304						
BGNE	Belgrade	121.12	38	ePKPdf	PKPdf	20 36 10.3	-0.4
MTE	Manteigas	121.27	320	ePKPdf	PKPdf	20 36 11.8	+0.8
PVIS	Viseu	121.31	321	ePKPdf	PKPdf	20 36 12.1	+1.0
G36A	St. Michael	121.35	33	P	PKPdf	20 36 11.1	+0.2
	baz=310						
CBKS	Cedar Bluff	121.51	42	P	PKPdf	20 36 11.3	-0.2
	baz=302						
PCBR	Castelo Branco	121.53	320	ePKPdf	PKPdf	20 36 12.3	+0.9
E38A	The Farm, Brul	121.58	30	P	PKPdf	20 36 11.2	-0.1
	baz=313						
E38A	The Farm, Brul	121.58	30	ePKPdf	PKPdf	20 36 11.6	+0.2
F37A	Hinrichs Farm,	121.62	32	P	PKPdf	20 36 11.1	-0.3
	baz=312						
PMRV	Marv??o	121.69	319	ePKPdf	PKPdf	20 36 12.2	+0.4
MSTX	Muleshoe	121.72	48	P	PKPdf	20 36 12.2	+0.1
	baz=297						
MSTX	Muleshoe	121.72	48	ePKPdf	PKPdf	20 36 12.5	+0.3
C40A	Isle Royale Na	121.82	28	P	PKPdf	20 36 11.5	-0.3
	baz=316						
F38A	Pierce - Schro	121.85	31	P	PKPdf	20 36 11.8	-0.1
	baz=313						
SPMN	Marine on St.	121.86	32	P	PKPdf	20 36 11.6	-0.3
	baz=311						
SPMN	Marine on St.	121.86	32	ePKPdf	PKPdf	20 36 11.8	-0.1
I36A	Fitzsimmons Fa	121.99	34	P	PKPdf	20 36 11.8	-0.4
	baz=310						
PCAS	Casmilo, Conde	122.06	320	ePKPdf	PKPdf	20 36 13.1	+0.6
AMTX	Amarillo	122.10	47	P	PKPdf	20 36 13.2	+0.4
	baz=298						
AMTX	Amarillo	122.10	47	ePKPdf	PKPdf	20 36 13.5	+0.6
PBAR	Barrancos	122.13	318	ePKPdf	PKPdf	20 36 13.5	+0.8
HPIG		122.21	57	ePKPdf	PKPdf	20 36 13.9	+0.4
H37A	Dierke Farm, C	122.22	33	P	PKPdf	20 36 12.6	0.0
	baz=311						
E39A	Mellen	122.23	30	P	PKPdf	20 36 12.1	-0.5
	baz=314						
J36A	Seneca 1, Swea	122.24	35	P	PKPdf	20 36 12.5	-0.2
	baz=309						
J36A	Seneca 1, Swea	122.24	35	ePKPdf	PKPdf	20 36 12.7	-0.1
PTOM	Tomar	122.25	320	ePKPdf	PKPdf	20 36 14.0	+1.1
I37A	Lemond, Waseca	122.33	33	P	PKPdf	20 36 12.6	-0.3
	baz=310						
I37A	Lemond, Waseca	122.33	33	ePKPdf	PKPdf	20 36 13.2	+0.3
F39A	Loretta	122.37	30	P	PKPdf	20 36 12.4	-0.6
	baz=314						
G38A	Ridgeland	122.40	32	P	PKPdf	20 36 12.0	-1.0
	baz=312						
PMTG	Montargil	122.43	319	ePKPdf	PKPdf	20 36 13.6	+0.4
H38A	Maiden Rock	122.50	32	P	PKPdf	20 36 12.4	-0.8
	baz=312						
E40A	Wakefield	122.51	29	P	PKPdf	20 36 13.1	-0.1
	baz=315						
EVO	Evora	122.58	319	ePKPdf	PKPdf	20 36 14.4	+0.9
K36A	Gilmore City	122.61	35	P	PKPdf	20 36 13.1	-0.4
	baz=309						
ALMR	Almeirim	122.61	320	ePKP	PKPdf	20 36 13.5	-0.1
ALMR	Almeirim	122.61	320	ePKPdf	PKPdf	20 36 14.5	+0.9
G39A	Holcombe	122.67	31	P	PKPdf	20 36 13.0	-0.5
	baz=313						
J37A	Redenius Farm,	122.70	34	P	PKPdf	20 36 13.2	-0.4
	baz=310						
D41A	Chassel	122.71	28	P	PKPdf	20 36 13.5	0.0
	baz=317						
PBEJ	Beja	122.76	318	ePKPdf	PKPdf	20 36 14.8	+0.9
F40A	Park Falls	122.77	30	P	PKPdf	20 36 13.2	-0.5
	baz=314						
L36A	Harm Buss Farm	122.81	36	P	PKPdf	20 36 13.6	-0.2
	baz=308						
I38A	Scanlan Farm,	122.90	33	P	PKPdf	20 36 12.9	-1.1
	baz=311						
SCHQ	Schefferville	122.91	9	PKP	PKPdf	20 36 14.1	+0.4
	comp=Z,16nm,0.9s,baz=308,slow=2.4,SNR=5.5						
E41A	Kenton	122.95	29	P	PKPdf	20 36 13.9	-0.2
	baz=316						
TX31	Lajitas Ar. Si	122.97	53	ePKPdf	PKPdf	20 36 15.1	+0.4
TXAR	Lajitas Array	122.97	53	PKP	PKPdf	20 36 15.0	+0.4
	comp=Z,5.8nm,0.7s,baz=229,slow=0.7,SNR=40						
TXAR				PKKPbc	PKKPbc	20 46 07.2	+0.2
	comp=Z,1.8nm,0.8s,baz=141,slow=5.8,SNR=14						
PVAQ	Vaqueiros	122.99	317	ePKPdf	PKPdf	20 36 15.1	+0.8
K37A	Belmond	122.99	35	P	PKPdf	20 36 14.0	-0.2
	baz=309						
MDT	Midelt	123.00	311	PKP	PKPdf	20 36 14.6	-0.1
	comp=Z,7.0nm,0.7s,baz=19,slow=0.7,SNR=5.9						
PCVE	Castro Verde	123.08	318	ePKPdf	PKPdf	20 36 15.5	+1.0
MESJ	Messejana	123.09	318	ePKP	PKPdf	20 36 14.2	-0.3
MESJ	Messejana	123.09	318	ePKPdf	PKPdf	20 36 15.3	+0.8
COWI	Conover	123.13	29	ePKPdf	PKPdf	20 36 14.6	+0.2
PNCL	Nicolau / Gran	123.15	319	ePKPdf	PKPdf	20 36 15.6	+1.0
G40A	Rib Lake	123.18	31	P	PKPdf	20 36 14.2	-0.3
	baz=314						
G40A	Rib Lake	123.18	31	ePKPdf	PKPdf	20 36 14.6	+0.1
PBDV	Barranco-do-Ve	123.22	317	ePKPdf	PKPdf	20 36 16.4	+1.6
J38A	Wedel Dairy, R	123.29	34	P	PKPdf	20 36 14.5	-0.2
	baz=311						
KSU1	Kansas State U	123.40	40	P	PKPdf	20 36 14.7	-0.4
	baz=305						
KSU1	Kansas State U	123.40	40	ePKPdf	PKPdf	20 36 15.4	+0.3
F41A	Three Lakes	123.40	29	P	PKPdf	20 36 15.1	+0.2
	baz=315						
F41A	Three Lakes	123.40	29	ePKPdf	PKPdf	20 36 14.9	0.0
N36A	Muff Farm, Cla	123.42	37	P	PKPdf	20 36 14.5	-0.6
	baz=307						
I39A	Houston	123.46	33	P	PKPdf	20 36 14.0	-1.1
	baz=312						
I39A	Houston	123.46	33	ePKPdf	PKPdf	20 36 14.5	-0.6
E42A	Champion	123.48	28	P	PKPdf	20 36 14.6	-0.4
	baz=317						
H40A	Chili	123.53	31	P	PKPdf	20 36 14.6	-0.6
	baz=314						
PTEO	Sao Teotonio	123.59	318	ePKPdf	PKPdf	20 36 16.9	+1.4
M37A	Trindle Farm,	123.60	36	P	PKPdf	20 36 15.2	-0.2
	baz=308						
MORF	Marmelete	123.67	318	ePKPdf	PKPdf	20 36 17.3	+1.6
J39A	Decorah	123.70	33	P	PKPdf	20 36 14.1	-1.4
	baz=312						
TOA0	Torodi Ar. Sit	123.72	287	ePKPdf	PKPdf	20 36 16.1	-0.2
TOA0				ePKPdf	PKiKP	20 36 16.5	-0.1
TORD	Torodi Ar. Bea	123.72	287	PKP	PKPdf	20 36 16.0	-0.3
	comp=Z,21nm,0.8s,baz=62,slow=2.0,SNR=94						
TORD				PP	PP	20 37 52.2	-7.3
	comp=Z,6.1nm,1.1s,baz=68,slow=5.8,SNR=4.7						
TORD				PKKPbc	PKKPab	20 46 03.9	+0.2
	comp=Z,4.5nm,0.7s,baz=276,slow=3.7,SNR=21						
L38A	Oak Wood Farm,	123.78	35	P	PKPdf	20 36 15.0	-0.7
	baz=310						
F42A	Maple Grove Fa	123.86	29	P	PKPdf	20 36 15.8	0.0
	baz=316						
I40A	Norwalk	123.91	32	P	PKPdf	20 36 14.8	-1.1
	baz=313						
H41A	Junction City	123.92	31	P	PKPdf	20 36 15.2	-0.7
	baz=314						
H41A	Junction City	123.92	31	ePKPdf	PKPdf	20 36 15.7	-0.2
E43A	Lone Tree Farm	123.95	28	P	PKPdf	20 36 15.7	-0.2
	baz=318						
E43A	Lone Tree Farm	123.95	28	ePKPdf	PKPdf	20 36 16.1	+0.2
K39A	Oelwein	124.02	34	P	PKPdf	20 36 14.7	-1.4
	baz=311						
G42A	Mountain	124.09	29	P	PKPdf	20 36 15.7	-0.5
	baz=316						
G42A	Mountain	124.09	29	ePKPdf	PKPdf	20 36 16.0	-0.2
M38A	Pleasantville	124.10	36	P	PKPdf	20 36 16.0	-0.3
	baz=309						
J40A	Soldiers Grove	124.18	32	P	PKPdf	20 36 15.1	-1.4
	baz=313						
WMOK	Wichita Mounta	124.26	45	P	PKPdf	20 36 16.5	-0.4
	baz=300						
WMOK	Wichita Mounta	124.26	45	ePKPdf	PKPdf	20 36 17.1	+0.2
WMOK	Wichita Mounta	124.26	45	ePKIKP	PKPdf	20 36 17.1	+0.2
F43A	Flat Rock, Esc	124.27	28	P	PKPdf	20 36 16.5	0.0
	baz=318						
O37A	Wolven Farm, M	124.31	37	P	PKPdf	20 36 16.1	-0.7
	baz=308						
L39A	Vinton	124.33	34	P	PKPdf	20 36 15.9	-0.9
	baz=311						
K40A	Colesburg	124.44	33	P	PKPdf	20 36 16.0	-1.0
	baz=312						
G43A	Wallace	124.44	29	P	PKPdf	20 36 16.2	-0.6
	baz=317						
G43A	Wallace	124.44	29	ePKPdf	PKPdf	20 36 16.9	0.0
F44A	Big Bay de Noc	124.51	28	P	PKPdf	20 36 16.9	0.0
	baz=318						
P37A	Lathrop	124.53	38	P	PKPdf	20 36 16.3	-1.0
	baz=307						
J41A	Loganville	124.59	32	P	PKPdf	20 36 16.1	-1.2
	baz=313						
M39A	Webster	124.65	35	P	PKPdf	20 36 17.3	-0.2
	baz=310						
ABTX	Abilene, Hawle	124.66	48	ePKPdf	PKPdf	20 36 18.3	+0.6
JFWS	Jewell Farm	124.78	33	P	PKPdf	20 36 16.4	-1.2
	baz=313						
JFWS	Jewell Farm	124.78	33	ePKPdf	PKPdf	20 36 17.1	-0.5
JFWS	Jewell Farm	124.78	33	ePKIKP	PKPdf	20 36 17.1	-0.5
E45A	Wooded Hills,	124.79	27	P	PKPdf	20 36 18.1	+0.6
	baz=320						
I42A	Draeger Farm,	124.80	31	P	PKPdf	20 36 16.6	-1.0
	baz=315						
I42A	Draeger Farm,	124.80	31	ePKPdf	PKPdf	20 36 17.2	-0.4
L40A	Anamosa	124.81	34	P	PKPdf	20 36 16.8	-0.9
	baz=308						
L40A	Anamosa	124.81	34	ePKPdf	PKPdf	20 36 17.1	-0.5
N39A	Derby Farms, D	124.85	36	P	PKPdf	20 36 17.2	-0.6
	baz=310						
N39A	Derby Farms, D	124.85	36	ePKPdf	PKPdf	20 36 17.2	-0.6
K41A	Shullsburg	124.95	33	P	PKPdf	20 36 16.8	-1.1
	baz=313						
H43A	Windswept, Lux	124.97	30	P	PKPdf	20 36 17.2	-0.7
	baz=316						
P38A	Dawn	125.01	38	P	PKPdf	20 36 17.2	-0.9
	baz=308						
P38A	Dawn	125.01	38	ePKPdf	PKPdf	20 36 18.1	0.0
M40A	Post Highland	125.08	35	P	PKPdf	20 36 17.8	-0.4
	baz=311						
J42A	Columbus	125.10	32	P	PKPdf	20 36 17.0	-1.2
	baz=314						
F45A	CMU Biological	125.15	27	P	PKPdf	20 36 17.8	-0.4
	baz=319						
I43A	Langenfeld Bro	125.20	30	P	PKPdf	20 36 17.4	-1.0
	baz=316						
L41A	Preston	125.21	34	P	PKPdf	20 36 17.5	-1.0
	baz=312						
O39A	Kirksville	125.22	36	P	PKPdf	20 36 17.8	-0.8
	baz=309						
K42A	Prairie Point,	125.35	32	P	PKPdf	20 36 17.4	-1.3
	baz=314						
Q38A	Cooks Store, C	125.36	38	P	PKPdf	20 36 17.7	-1.1
	baz=307						
N40A	Mertquake, Sal	125.38	35	P	PKPdf	20 36 18.0	-0.8
	baz=310						
J43A	Natural Harves	125.42	31	P	PKPdf	20 36 17.7	-1.1
	baz=315						
F46A	Macinaw City C	125.42	27	P	PKPdf	20 36 18.4	-0.3
	baz=320						
JCT	Junction City	125.53	50	P	PKPdf	20 36 19.4	-0.1
	baz=297						
JCT	Junction City	125.53	50	ePKPdf	PKPdf	20 36 19.7	+0.2
JCT	Junction City	125.53	50	ePKIKP	PKPdf	20 36 19.7	+0.2
P39B	Salisbury	125.57	37	P	PKPdf	20 36 18.5	-0.7
	baz=308						
R38A	Fenwick Farm,	125.65	39	P	PKPdf	20 36 18.3	-1.2
	baz=307						
M41A	Milan	125.65	34	P	PKPdf	20 36 18.1	-1.2
	baz=312						
O40A	La Belle	125.70	36	P	PKPdf	20 36 18.9	-0.6
	baz=310						
Q39A	Willow Grove F	125.71	38	P	PKPdf	20 36 18.8	-0.7
	baz=308						
L42A	Oliver, Polo	125.71	33	P	PKPdf	20 36 18.2	-1.3
	baz=313						
L42A	Oliver, Polo	125.71	33	ePKPdf	PKPdf	20 36 19.0	-0.4
TUL1	Leonard	125.72	43	P	PKPdf	20 36 19.3	-0.4
	baz=304						
N41A	Harden Midland	125.91	35	P	PKPdf	20 36 18.7	-1.1
	baz=311						
N41A	Harden Midland	125.91	35	ePKPdf	PKPdf	20 36 19.4	-0.4
K43A	Burlington	125.94	32	P	PKPdf	20 36 19.2	-0.6
	baz=315						
P40A	Paris	125.97	37	P	PKPdf	20 36 19.3	-0.7
	baz=309						
P40A	Paris	125.97	37	ePKPdf	PKPdf	20 36 20.0	0.0
S38A	Stockton	125.98	40	P	PKPdf	20 36 19.5	-0.6
	baz=306						
M42A	Sheffield	126.03	34	P	PKPdf	20 36 19.1	-1.0
	baz=313						
T38A	Diamond	126.08	41	P	PKPdf	20 36 19.7	-0.6
	baz=306						
L43A	Garden Prairie	126.09	32	P	PKPdf	20 36 19.1	-1.0
	baz=314						
R39A	Chumby, Stover	126.12	39	P	PKPdf	20 36 19.7	-0.7
	baz=308						
O41A	Passleys Farm,	126.28	36	P	PKPdf	20 36 19.8	-0.7
	baz=311						
Q40A	Laux Farm, Aux	126.29	37	P	PKPdf	20 36 20.1	-0.6
	baz=309						
N42A	Yates City	126.30	34	P	PKPdf	20 36 19.7	-0.9
	baz=312						
S39A	Bolivar	126.31	39	P	PKPdf	20 36 20.2	-0.5
	baz=307						
S39A	Bolivar	126.31	39	ePKPdf	PKPdf	20 36 20.3	-0.4
P41A	Barry, Barry	126.46	36	P	PKPdf	20 36 20.4	-0.5
	baz=310						
WHTX	Lake Whitney,	126.59	48	P	PKPdf	20 36 21.7	+0.3
	baz=300						
R40A	Maddies Statio	126.61	38	P	PKPdf	20 36 20.6	-0.6
	baz=308						
R40A	Maddies Statio	126.61	38	ePKPdf	PKPdf	20 36 20.7	-0.6
T39A	Clever	126.68	40	P	PKPdf	20 36 21.0	-0.5
	baz=306						
N43A	Stutzman Famil	126.71	34	P	PKPdf	20 36 21.2	-0.2
	baz=313						
HHAR	Hobbs	126.75	41	ePKPdf	PKPdf	20 36 21.4	-0.2
833A	Chaparral WMA,	126.80	53	P	PKPdf	20 36 22.6	+0.8
	baz=296						
833A	Chaparral WMA,	126.80	53	ePKPdf	PKPdf	20 36 23.0	+1.1
Q41A	Truxton	126.82	37	P	PKPdf	20 36 21.3	-0.4
	baz=310						
S40A	Lebanon	126.89	39	P	PKPdf	20 36 20.9	-0.9
	baz=308						
HDIL	Hopedale	126.90	34	P	PKPdf	20 36 21.3	-0.4
	baz=313						
HDIL	Hopedale	126.90	34	ePKPdf	PKPdf	20 36 21.8	+0.1
P42A	Winchester	126.94	36	P	PKPdf	20 36 21.2	-0.6
	baz=311						
P42A	Winchester	126.94	36	ePKPdf	PKPdf	20 36 21.8	-0.1
U39A	Green Forest	126.99	41	P	PKPdf	20 36 21.2	-0.8
	baz=306						
M44A	Midewin, Midew	127.02	33	P	PKPdf	20 36 21.7	-0.2
	baz=314						
M44A	Midewin, Midew	127.02	33	ePKPdf	PKPdf	20 36 21.4	-0.6
O43A	Sugar Creek Fa	127.07

	baz=307							
SFIN	Lafayette	128.23	33	P	PKPdf	20 36 24.0	-0.3	
	baz=315							
SFIN	Lafayette	128.23	33	*e*PKPdf	PKPdf	20 36 25.1	+0.8	
S43A	Fulton Ridge,	128.41	38	P	PKPdf	20 36 24.3	-0.4	
	baz=310							
U42A	Revenden	128.45	39	P	PKPdf	20 36 24.1	-0.7	
	baz=308							
P45A	Graceland, Par	128.47	34	P	PKPdf	20 36 24.7	0.0	
	baz=314							
Y40A	Okolona	128.49	43	P	PKPdf	20 36 25.1	+0.1	
	baz=305							
W41B	Gary Mavity, V	128.51	41	P	PKPdf	20 36 24.2	-0.7	
	baz=306							
R44A	Waltonville	128.56	36	P	PKPdf	20 36 25.2	+0.2	
	baz=312							
AAM	Ann Arbor	128.59	29	P	PKPdf	20 36 24.7	-0.2	
	baz=320							
T43A	Greenville	128.59	38	P	PKPdf	20 36 24.2	-0.9	
	baz=310							
SADO	Sadowa	128.61	24	PKP	PKPdf	20 36 24.8	0.0	
	comp=Z,22nm,0.9s,baz=340,slow=3.5,SNR=15							
Q45A	Warren Harvey,	128.67	35	P	PKPdf	20 36 25.0	-0.1	
	baz=313							
V42A	Cord	128.69	40	P	PKPdf	20 36 24.4	-0.9	
	baz=308							
P46A	Rosedale	128.71	34	P	PKPdf	20 36 24.8	-0.4	
	baz=314							
OLIL	Olney	128.81	35	*e*PKPdf	PKPdf	20 36 26.0	+0.6	
S44A	Carbondale	128.82	37	P	PKPdf	20 36 25.4	-0.1	
	baz=311							
O47A	Sheridan	128.83	32	P	PKPdf	20 36 25.0	-0.4	
	baz=316							
KOWA	Kowa	128.87	290	PKP	PKPdf	20 36 26.6	+0.5	
	comp=Z,13nm,1.0s,baz=107,slow=1.0,SNR=17							
KOWA	Kowa	128.87	290	*e*PKPdf	PKPdf	20 36 27.0	+0.8	
R45A	Skylar, Fairfi	129.00	36	P	PKPdf	20 36 26.3	+0.5	
	baz=312							
Y41A	Eaglette Beard	129.02	43	P	PKPdf	20 36 26.5	+0.5	
	baz=305							
TRQ	Mont Tremblant	129.03	19	*e*PKPdf	PKPdf	20 36 25.6	-0.1	
PARMO	Parma	129.19	38	*e*PKPdf	PKPdf	20 36 26.4	+0.2	
P47A	Martinsville	129.31	33	P	PKPdf	20 36 25.9	-0.5	
	baz=315							
R46A	Gibon Southern	129.50	35	P	PKPdf	20 36 26.5	-0.3	
	baz=313							
S46A	Don Dixon Farm	129.74	36	P	PKPdf	20 36 27.4	+0.1	
	baz=313							
R47A	Wooly Knot Far	130.01	34	P	PKPdf	20 36 28.1	+0.4	
	baz=314							
341A	Kurthwood	130.05	46	P	PKPdf	20 36 28.5	+0.5	
	baz=303							
341A	Kurthwood	130.05	46	*e*PKPdf	PKPdf	20 36 29.1	+1.1	
T46A	Princeton	130.07	37	P	PKPdf	20 36 28.2	+0.4	
	baz=312							
WCI	Wyandotte Cave	130.18	34	P	PKPdf	20 36 28.5	+0.4	
	baz=314							
R48A	Northridge Ran	130.30	34	P	PKPdf	20 36 28.9	+0.6	
	baz=315							
LONY	Lake Ozonia	130.43	20	P	PKPdf	20 36 28.1	-0.2	
	baz=331							
LONY	Lake Ozonia	130.43	20	*e*PKPdf	PKPdf	20 36 27.9	-0.5	
PQI	Presque Isle	130.45	13	*e*PKPdf	PKPdf	20 36 28.0	-0.3	
ACSO	Alum Creek Sta	130.49	30	P	PKPdf	20 36 28.9	+0.3	
	baz=319							
ACSO	Alum Creek Sta	130.49	30	*e*PKPdf	PKPdf	20 36 29.5	+0.9	
T47A	Sharon Grove	130.57	36	*e*PKPdf	PKPdf	20 36 29.9	+1.0	
FRNY	Flat Rock	130.58	19	*e*PKPdf	PKPdf	20 36 28.4	-0.2	
WVT	Waverly	130.71	37	P	PKPdf	20 36 29.2	+0.1	
	baz=312							
WVT	Waverly	130.71	37	*e*PKPdf	PKPdf	20 36 28.9	-0.2	
WVT	Waverly	130.71	37	*e*PKIKP	PKPdf	20 36 28.9	-0.2	
V46A	Holladay	130.75	38	P	PKPdf	20 36 29.2	0.0	
	baz=311							
OXF	Oxford	130.76	40	P	PKPdf	20 36 29.3	0.0	
	baz=309							
OXF	Oxford	130.76	40	*e*PKPdf	PKPdf	20 36 30.6	+1.3	
OXF	Oxford	130.76	40	*e*PKIKP	PKPdf	20 36 30.6	+1.3	
MMNY	Mt. Morris Dam	130.80	24	*e*PKPdf	PKPdf	20 36 29.1	0.0	
X45A	UM Field Stati	130.83	40	P	PKPdf	20 36 29.7	+0.3	
	baz=309							
U47A	Clarksville	130.83	37	P	PKPdf	20 36 29.7	+0.3	
	baz=312							
T48A	Bowling Green	130.90	35	P	PKPdf	20 36 29.2	-0.2	
	baz=314							
KIC	Kosan Boka	131.05	280	*e*PKIKP	PKPdf	20 36 31.3	+0.9	
	comp=Z,26nm,0.7s							
M54A	Oil Creek Stat	131.06	26	P	PKPdf	20 36 29.4	-0.2	
	baz=324							
M54A	Oil Creek Stat	131.06	26	*e*PKPdf	PKPdf	20 36 29.7	0.0	
V47A	Nunnelly	131.10	37	P	PKPdf	20 36 29.6	-0.3	
	baz=312							
DBIC	Dimbokro	131.12	280	PKP	PKPdf	20 36 31.6	+1.1	
	comp=Z,13nm,0.7s,baz=84,slow=1.7,SNR=16							
DBIC				SKPbc	SKPbc	20 39 49.9	-0.2	
	comp=Z,14nm,1.0s,baz=64,slow=1.2,SNR=8.4							
DBIC	Dimbokro	131.12	280	*e*PKIKP	PKPdf	20 36 31.8	+1.3	
NCB	Newcomb	131.13	20	*e*PKPdf	PKPdf	20 36 30.3	+0.5	
TIC	Toumodi	131.29	280	*e*PKIKP	PKPdf	20 36 31.7	+0.9	
PLAL	Pickwick Lake	131.31	39	*e*PKPdf	PKPdf	20 36 29.7	-0.6	
LIC	Lamto	131.35	279	*e*PKIKP	PKPdf	20 36 31.8	+0.9	
	comp=Z,42nm,0.7s							
N54A	Moraine State	131.35	27	P	PKPdf	20 36 30.1	-0.2	
	baz=323							
N54A	Moraine State	131.35	27	*e*PKPdf	PKPdf	20 36 30.4	+0.1	
T49A	Edmonton	131.40	35	P	PKPdf	20 36 30.7	+0.3	
	baz=315							
W47A	Westpoint	131.43	38	P	PKPdf	20 36 30.5	-0.1	
	baz=311							
Y46A	Houston	131.51	40	P	PKPdf	20 36 30.9	+0.2	
	baz=309							
V48A	Smith Brothers	131.58	37	P	PKPdf	20 36 30.8	0.0	
	baz=312							
V48A	Smith Brothers	131.58	37	*e*PKPdf	PKPdf	20 36 31.4	+0.7	
U49A	Red Boiling Sp	131.67	36	P	PKPdf	20 36 31.3	+0.4	
	baz=314							
543A	St. Martinvill	131.68	46	*e*PKPpre	PKPpre	20 36 23.4		
X47A	Russelville	131.75	39	P	PKPdf	20 36 31.0	-0.1	
	baz=310							
T50A	Nancy	131.85	34	P	PKPdf	20 36 31.2	-0.1	
	baz=315							
W48A	Pulaski	131.91	38	P	PKPdf	20 36 31.0	-0.4	
	baz=312							
BINY	Binghamton	132.02	23	*e*PKPdf	PKPdf	20 36 31.8	+0.4	
S51A	Beattyville	132.10	33	P	PKPdf	20 36 31.1	-0.6	
	baz=317							
Y47A	UCPARC, Winfie	132.15	40	P	PKPdf	20 36 31.6	-0.3	
	baz=310							
W49A	Belvidere	132.33	37	P	PKPdf	20 36 32.0	-0.2	
	baz=312							
SSPA	Standing Stone	132.55	26	P	PKPdf	20 36 32.4	0.0	
	baz=326							
SSPA	Standing Stone	132.55	26	*e*PKPdf	PKPdf	20 36 32.9	+0.5	
O56A	Blue Knob Stat	132.55	26	P	PKPdf	20 36 32.4	-0.2	
	baz=324							
O56A	Blue Knob Stat	132.55	26	*e*PKPdf	PKPdf	20 36 33.2	+0.7	
KSPA	Keystone Colle	132.65	23	*e*PKPdf	PKPdf	20 36 33.0	+0.3	
Z48A	Northport	132.67	40	P	PKPdf	20 36 33.0	+0.1	
	baz=310							
X49A	Woodville	132.70	38	P	PKPdf	20 36 33.0	+0.1	
	baz=312							
N59A	State Game Lan	133.19	24	P	PKPdf	20 36 33.9	+0.2	
	baz=328							
LRAL	Lakeview Retre	133.25	40	P	PKPdf	20 36 34.0	-0.1	
	baz=310							
LRAL	Lakeview Retre	133.25	40	*e*PKPdf	PKPdf	20 36 34.2	+0.2	
PAGS	Pennsylvania G	133.38	25	*e*PKPdf	PKPdf	20 36 34.0	0.0	
V52A	Sevierville	133.40	34	P	PKPdf	20 36 34.1	-0.1	
	baz=316							
V52A	Sevierville	133.40	34	*e*PKPdf	PKPdf	20 36 34.9	+0.7	
Z49A	Columbiana	133.44	39	P	PKPdf	20 36 33.9	-0.5	
	baz=311							
ODNJ	Ogdensburg	133.50	22	*e*PKPdf	PKPdf	20 36 35.0	+0.8	
149A	Jones	133.66	40	P	PKPdf	20 36 34.9	+0.1	
	baz=310							
MVL	Millersville	133.73	25	*e*PKPdf	PKPdf	20 36 35.2	+0.5	
W52A	Murphy	133.74	35	P	PKPdf	20 36 34.8	-0.1	
	baz=315							
W52A	Murphy	133.74	35	*e*PKPdf	PKPdf	20 36 35.8	+0.8	
Z50A	Ashland	133.79	39	P	PKPdf	20 36 34.8	-0.2	
	baz=312							
Z50A	Ashland	133.79	39	*e*PKPdf	PKPdf	20 36 35.1	+0.1	
PAL	Palisades	133.83	22	*e*PKPdf	PKPdf	20 36 35.9	+1.0	
PAL	Palisades	133.83	22	*e*PKIKP	PKPdf	20 36 35.9	+1.0	
V53A	Saluda	133.96	34	P	PKPdf	20 36 36.2	+0.8	
	baz=317							
BLA	Blacksburg	134.09	31	*e*PKPdf	PKPdf	20 36 36.1	+0.6	
BLA	Blacksburg	134.09	31	*e*PKIKP	PKPdf	20 36 36.2	+0.6	
W53A	Cullowhee	134.12	35	P	PKPdf	20 36 36.3	+0.6	
	baz=316							
150A	Eclectic	134.15	40	P	PKPdf	20 36 35.9	+0.2	
	baz=311							
BG3	Lake Jocassee	134.38	35	*e*PKPpre	PKPpre	20 36 25.5		
BG3				*e*PKPdf	PKiKP	20 36 38.2	+0.8	
Y52A	Lilburn	134.52	37	P	PKPdf	20 36 37.3	+0.9	
	baz=314							
Y52A	Lilburn	134.52	37	*e*PKPdf	PKPdf	20 36 37.0	+0.6	
IP04	Greensprings	134.53	28	*e*PKPdf	PKPdf	20 36 38.1	+1.8	
IP03	Louisa	134.62	28	*e*PKPdf	PKPdf	20 36 37.0	+0.6	
CVRD	Centerville Ro	134.68	28	*e*PKPdf	PKPdf	20 36 38.3	+1.8	
SPRD	Spring Road, M	134.68	28	*e*PKPdf	PKPdf	20 36 37.1	+0.6	
IP06	Yanceyville	134.71	28	*e*PKPdf	PKPdf	20 36 37.2	+0.6	
IP01	Cuckoo	134.72	28	*e*PKPdf	PKPdf	20 36 37.7	+1.1	
251A	Midway	134.88	40	P	PKPdf	20 36 37.3	+0.2	
	baz=311							
IP05	Hopewell Churc	134.89	28	*e*PKPdf	PKPdf	20 36 37.7	+0.8	
152A	Waverly Hall	134.93	39	*e*PKPdf	PKPdf	20 36 38.1	+0.9	
JSRW	J. Sargeant Re	134.95	28	*e*PKPdf	PKPdf	20 36 37.7	+0.6	
CMIG	Matias Romero	135.00	64	PKP	PKPdf	20 36 39.2	+1.5	
	comp=Z,6.2nm,0.8s,baz=306,slow=1.5,SNR=7.3							
CMIG				SKPbc	SKPbc	20 40 03.3	+0.1	
	comp=Z,5.7nm,0.8s,baz=199,slow=4.4,SNR=4.9							
KMSC	Kings Mountain	135.17	33	P	PKPdf	20 36 38.0	+0.4	
	baz=318							
KMSC	Kings Mountain	135.17	33	*e*PKPdf	PKPdf	20 36 38.5	+0.9	
GOGA	Godfrey	135.19	37	*e*PKPdf	PKPdf	20 36 38.5	+0.8	
GOGA	Godfrey	135.19	37	*e*PKIKP	PKPdf	20 36 38.5	+0.8	
Z53A	Monticello	135.22	37	P	PKPdf	20 36 37.3	-0.4	
	baz=314							
Y54A	Tignall	135.33	36	P	PKPdf	20 36 37.7	-0.2	
	baz=316							
PLCA	Paso Flores	137.74	160	PKhKP	PKPpre	20 36 31.3		
	comp=Z,1.3nm,0.7s,baz=304,slow=4.0,SNR=3.7							
PLCA				PKP	PKiKP	20 36 43.3	-0.9	
	comp=Z,12nm,0.7s,baz=294,slow=1.0,SNR=19							
PLCA				SKPbc	SKPbc	20 40 10.9	-0.1	
	comp=Z,23nm,1.1s,baz=221,slow=4.7,SNR=13							
PLCA	Paso Flores	137.74	160	PKPpre	PKPpre	20 36 31.3		
PLCA				*e*PKPdf	PKiKP	20 36 43.6	-0.6	
PLCA				SKPbc	SKPbc	20 40 10.9	-0.1	
APG	El Apazote	139.70	65	PKP	PKPdf	20 36 47.0	+0.3	
	comp=Z,5.1nm,0.5s,baz=297,slow=13,SNR=4.0							
APG				SKPbc	SKPbc	20 40 16.8	-0.6	
	comp=Z,5.6nm,0.5s,baz=315,slow=6.0,SNR=5.0							
TRQA	Tornquist	142.56	169	*e*PKPpre	PKPpre	20 36 47.1		
ROC1	El Roble	144.33	154	*e*PKPdf	PKPbc	20 36 53.6	+0.6	
BBSR	BB Station	144.75	17	*e*PKPdf	PKPdf	20 36 54.9	-0.1	
AVIZ	Vizcacheras	144.94	157	*i* P	PKPdf	20 36 55.5	+0.1	
AAGR	Agrelo	145.16	157	*i* P	PKPdf	20 36 56.0	+0.2	
ARCO	CERRO ARCO	145.33	156	*i* P	PKPdf	20 36 56.3	+0.1	
WBCY	West Bay, Gran	145.49	52	*e*PKPdf	PKPab	20 36 57.5	+0.6	
ASAL	Salagasta	145.59	156	*i* P	PKPab	20 36 57.2	+0.2	
AUSP	Uspallata	145.68	155	*i* P	PKPab	20 36 57.9	+0.2	
FSCY	Frank Sound, G	145.69	52	*e*PKPdf	PKPab	20 36 57.8	+0.1	
RTLS	Leoncito	146.09	155	*i* P	PKPbc	20 36 58.8	+0.2	
RTLS				IAML		20 37 00.0		
	comp=Z,51nm,0.6s							
JTS	JuntasAbangare	146.34	69	PKPbc	PKPdf	20 36 58.5	+0.3	
	comp=Z,36nm,0.9s,baz=25,slow=4.5,SNR=25							
RTCV	Cerro Valdivia	146.34	156	*i* P	PKPbc	20 36 58.5	-0.5	
LCCY	Blossom Villag	146.35	50	*e*PKPdf	PKPbc	20 36 59.4	+0.1	
ACAN	Cantantal	146.51	158	*e*P	PKPdf	20 36 58.5	+0.4	
CBCY	The Bluff, Cay	146.56	50	*e*PKPdf	PKPbc	20 36 59.1	-0.8	
SACV	Santiago Islan	146.56	300	*e*PKPdf	PKPbc	20 37 00.4	+0.4	
GO04	Tololo Observa	146.79	151	*e*PKPdf	PKPbc	20 37 00.4	-0.3	
RTLL	Cerro Villicun	146.84	156	*e*P	PKPdf	20 36 59.0	+0.3	
RTLL				IAML		20 37 01.1		
	comp=Z,25nm,0.6s							
MRA	San Martin	146.90	160	*e*P	PKPdf	20 36 58.6	-0.2	
MRA				IAML		20 37 03.5		
	comp=Z,15nm,0.6s							
AMOG	MOGNA	147.17	155	*i* P	PKPdf	20 37 00.1	+0.9	
ACDV	Cuesta del Vie	147.56	154	*e*P	PKPbc	20 37 01.5	-1.2	
LCO	Las Campanas	147.79	150	*e*PKPdf	PKPdf	20 37 01.7	+1.1	
LCO	Las Campanas	147.79	150	PKIKP	PKPdf	20 37 01.7	+1.1	
TCA	Tanti	148.26	161	*e*P	PKPdf	20 37 01.9	+0.8	
AGUA	GUANDACOL	148.43	154	*e*P	PKPdf	20 37 02.4	+1.0	
APLL	PUNTA DE LOS L	148.44	158	*e*P	PKPdf	20 37 01.6	+0.2	
ACLC	CERRO LA CRUZ	149.13	156	*i* P	PKPdf	20 37 03.2	+0.5	
GO03	Copiap	149.19	149	*e*PKPdf	PKPdf	20 37 04.2	+1.6	
VCA	Vinchina	149.20	154	*e*P	PKPdf	20 37 03.5	+0.7	
CYA	Choya	150.46	157	*i* P	PKPdf	20 37 04.8	+0.2	
BCIP	Isla Barro Col	151.47	68	*e*PKPbc	PKPbc	20 37 12.4	-0.1	
BCIP	Isla Barro Col	151.47	68	*e*P	PKPdf	20 37 09.2	+2.8	
PB14	IPOC Station P	151.47	146	*i* P	PKPbc	20 37 13.3	+0.5	
GO02	Mina Guanaco	151.50	148	*e*PKPdf	PKPdf	20 37 07.6	+1.0	
AHML	Horco Molle	152.12	156	*e*P	PKPdf	20 37 07.9	+0.7	
PB10	IPOC Station P	152.25	144	*e*PKPbc	PKPbc	20 37 14.7	+0.6	
SLA	San Lorenzo	153.87	154	*i* P	PKPbc	20 37 18.6	+0.7	
ATAH	Atahualpa	154.21	104	PKP	PKPdf	20 37 10.6	-0.4	
	comp=Z,11nm,0.9s,baz=309,slow=1.5,SNR=5.9							
ATAH				PKPbc	PKiKP	20 37 20.8	+1.5	
	comp=Z,28nm,0.7s,baz=207,slow=1.2,SNR=17							
ATAH				PKPab	PKPab	20 37 32.0	-1.1	
	comp=Z,18nm,0.8s,baz=124,slow=4.5,SNR=6.7							
NNA	Nana	154.25	115	PKP	PKPdf	20 37 10.4	-0.1	
	comp=Z,5.0nm,0.4s,baz=290,slow=2.3,SNR=4.7							
NNA				PKPbc	PKiKP	20 37 19.7	+0.8	
	comp=Z,28nm,0.9s,baz=253,slow=6.6,SNR=9.3							
NNA	Nana	154.25	115	PKP	PKPdf	20 37 10.4	-0.1	
NNA				*e*PKPbc	PKiKP	20 37 19.1	+0.2	
OTAV	Otavalo	154.68	87	*e*PKPdf	PKPdf	20 37 13.4	+1.6	
OTAV	Otavalo	154.68	87	PKIKP	PKPdf	20 37 13.3	+1.6	
CPUP	Villa Florida	154.82	171	PKP	PKPdf	20 37 11.5	+0.5	
	comp=Z,8.0nm,0.8s,baz=146,slow=1.0,SNR=16							
CPUP				PKPab	PKPab	20 37 34.7	0.0	
	comp=Z,18nm,0.8s,baz=194,slow=5.0,SNR=9.7							
CPUP	Villa Florida	154.82	171	*e*PKPdf	PKPdf	20 37 11.9	+0.9	
CPUP				PKPab	PKPab	20 37 34.7	0.0	
CPUP	Villa Florida	154.82	171	*e*PKIKP	PKPdf	20 37 11.9	+0.9	
CPUP						20 37 34.7		
HJA	Humahuaca	155.22	152	*i* P	PKPdf	20 37 13.8	+1.7	
YJA	Yavi	156.05	151	*i* P	PKPdf	20 37 14.6	+1.3	
HORQ	Saladito	156.08	78	*e*P	PKPdf	20 37 12.6	-0.9	
MNMC	Minye Minye	156.09	139	*e*PKPdf	PKPdf	20 37 13.9	+0.7	
YOTC	Yotoco, Valle	156.25	77	*e*P	PKPdf	20 37 12.6	-0.9	
AOPR	Arecibo Observ	156.32	34	*e*PKPab	PKPab	20 37 41.5	+0.1	
SOTA	Rioblanco	156.32	82	*e*P	PKPdf	20 37 12.6	-1.4	
OBIP	Obispado Ponce	156.65	34	*e*PKPab	PKPab	20 37 41.8	-1.0	
ZARC	Zaragoza, Cauc	156.66	68	*e*P	PKPdf	20 37 13.2	-0.6	
SJG	San Juan	156.84	33	PKPab	PKPab	20 37 44.2	+0.6	
	comp=Z,20nm,0.6s,baz=9.0,slow=4.7,SNR=9.0							
CODC	Agust´n Codaz	156.93	61	*e*P	PKPdf	20 37 13.9	-0.2	
HUMP	Col San Antoni	156.98	32	*e*PKPdf	PKPdf	20 37 13.5	-0.5	
ANIL	Santa Ana	157.05	75	*e*P	PKPdf	20 37 12.6	-2.1	
MTP	Monte Pirata	157.17	32	*e*PKPab	PKPab	20 37 45.1	+0.1	
STVI	Saint Thomas	157.27	30	*e*PKPdf	PKPdf	20 37 13.8	-0.6	
PTBC	PUERTO BERRIO	157.37	70	*e*P	PKPdf	20 37 12.6	-2.1	
PRAC	Prado	157.73	77	*e*P	PKPdf	20 37 07.9	-7.3	
CDVI	St. Croix	157.87	31	*e*PKPab	PKPab	20 37 48.2	+0.2	
ROSC	El Rosal	158.00	74	PKP	PKPdf	20 37 16.5	+0.6	
	comp=Z,11nm,0.7s,baz=243,slow=3.5,SNR=6.7							
ROSC				PKPab	PKPab	20 37 49.9	+0.5	
	comp=Z,5.0nm,0.4s,baz=337,slow=21,SNR=4.0							
ROSC	El Rosal	158.00	74	*e*PKPdf	PKPdf	20 37 16.9	+0.9	
ROSC				PKPab	PKPab	20 37 49.9	+0.5	
ROSC	El Rosal	158.00	74	*e*P	PKPdf	20 37 15.2	-0.8	
SMRT	St. Maarten	158.42	26	*e*PKPdf	PKPdf	20 37 16.0	+0.1	
CHIC	Chingaza	158.63	74	*e*P	PKPdf	20 37 16.5	-0.2	
RUSC	La Rusia	158.87	70	*e*PKPdf	PKPdf	20 37 16.6	-0.5	
RUSC	La Rusia	158.87	70	*e*P	PKPdf	20 37 15.9	-1.2	
LPAZ	La Paz	159.07	136	PKP	PKPdf	20 37 18.2	+0.8	
	comp=Z,7.2nm,0.8s,baz=341,slow=0.8,SNR=30							
SDV	Santo Domingo	159.86	59	PKP	PKPdf	20 37 18.0	+0.1	
	comp=Z,30nm,0.8s,baz=273,slow=1.6,SNR=20							
SDV	Santo Domingo	159.86	59	*e*PKPdf	PKPdf	20 37 18.1	+0.2	
RCBR	Riachuelo	162.19	255	PKP	PKPdf	20 37 21.5	+1.3	
	comp=Z,86nm,1.1s,baz=48,slow=0.7,SNR=2.5							
SIV	San Ignacio	163.48	152	PKP	PKPdf	20 37 21.8	+0.5	
	comp=Z,12nm,0.8s,baz=211,slow=1.0,SNR=65							
SIV				PKPab	PKPab	20 38 12.7	+0.1	
	comp=Z,9.0nm,0.8s,baz=213,slow=4.4,SNR=9.8							
PTGA	Pitinga	173.19	85	PKP	PKPdf	20 37 27.7	-0.2	
	comp=Z,7.7nm,1.0s,baz=22,slow=1.0,SNR=8.7							

JMA ***14*** *20:21:31.5±0.1,23°.67N×121°.68E,h0km,M3.5*
ISCJB ***14*** *20:21:32.5±0.3,23°.70N±0°.01×121°.61E±0°.02,h2km±2km,*
Error ellipse: s-maj=2.7km s-min=1.6km az=36.1
TAP ***14*** *20:21:33.4,23°.75N×121°.51E,h8km,ML4.0,C*
BJI ***14*** *20:21:34.0,23°.70N×121°.50E,h10km,ML3.4/3*
ISC 14 20:21:33.1±0.8,**23°.70N**±0°.02×**121°.56E**±0°.02,**h11**km±6km,
n108,$_{n0}$**0°99/**161,**1C-15D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	**Guangfu**	**0.13**	**258**	P	**Pg**	**20 21 35.7**	**-0.5**
	baz=234						
EGFH				S	**Sg**	**20 21 37.8**	**-0.6**
	baz=234						
ESL	**Shilin**	**0.17**	**314**	⇓*i*P	**Pg**	**20 21 35.9**	**-1.0**
	baz=313						
ESL				*i* S	**Sg**	**20 21 37.7**	**-1.8**
	baz=313						
ENLB	**Shoufeng**	**0.21**	**9**	⇓P	**Pg**	**20 21 38.0**	**+0.5**
	baz=19						
ENLB				*e*S	**Sg**	**20 21 42.3**	**+1.7**
	baz=19						
HGSD	**Ruisui**	**0.24**	**212**	⇓*i*P	**Pg**	**20 21 39.4**	**+1.3**
	baz=210						
HGSD				S	**Sg**	**20 21 44.6**	**+3.2**
	baz=210						
HWA	**Hwalien**	**0.28**	**8**	*e*P	**Pg**	**20 21 39.3**	**+0.5**
	baz=10.0						
HWA				*e*S	**Sg**	**20 21 44.1**	**+1.4**
	baz=10.0						
EHY	**Hungye**	**0.29**	**230**	*e*P	**Pg**	**20 21 38.7**	**-0.3**
	baz=225						
EHY				*e*S	**Sb**	**20 21 43.6**	**-1.7**
	baz=225						
TWD	**Chiawan**	**0.38**	**4**	⇓P	**Pg**	**20 21 40.5**	**-0.3**
TWD				S	**Sg**	**20 21 45.8**	**0.0**
YULB	**Yu-li**	**0.39**	**219**	⇓P	**Pg**	**20 21 40.9**	**+0.1**
	baz=221						
YULB				S	**Sb**	**20 21 47.1**	**-1.0**
	baz=221						
VWDT	**VWDT**	**0.39**	**279**	⇓P	**Pg**	**20 21 40.6**	**-0.3**
	baz=271						
VWDT				*e*S	**Sg**	**20 21 44.4**	**-1.6**
	baz=271						
TWF1	**Yuli**	**0.42**	**216**	*e*P	**Pg**	**20 21 41.6**	**+0.1**
	baz=220						
TWF1				S	**Sb**	**20 21 49.0**	**0.0**
	baz=220						
NACB	**Ninganchiao**	**0.48**	**3**	P	**Pg**	**20 21 41.8**	**-0.7**
	baz=357						
NACB				*e*S	**Sg**	**20 21 48.7**	**-0.1**
	baz=357						
CHGB	**Renai**	**0.51**	**316**	P	**Pg**	**20 21 42.6**	**-0.6**
	baz=322						
CHGB				*e*S	**Sg**	**20 21 49.1**	**-0.8**
	baz=322						
FULB	**Fuli**	**0.55**	**207**	*e*P	**Pb**	**20 21 45.0**	**+0.1**
	baz=215						
SSLB	**Suanglung**	**0.57**	**279**	⇓P	**Pg**	**20 21 43.7**	**-0.5**
	baz=274						
SSLB				S	**Sg**	**20 21 50.6**	**-1.1**
	baz=274						
CHKT	**Chengkung**	**0.62**	**197**	*e*P	**Pb**	**20 21 46.0**	**0.0**
	baz=180						
CHKT				*e*S	**Sn**	**20 21 57.5**	**-0.4**

SGST	Jiashian	1.09	236	eP	Pn	20 21 54.6 +0.2
	baz=234					
SGST				eS	Sn	20 22 10.9 +1.4
	baz=234					
NMLH	Miaoli	1.10	320	eP	Pn	20 21 55.1 +0.6
	baz=319					
SLGT	Liugui	1.10	231	eP	Pb	20 21 54.1 -0.1
	baz=215					
RLNB	Erlin	1.12	280	eP	Pn	20 21 54.9 +0.1
	baz=277					
RLNB				eS	Sn	20 22 11.3 +1.1
	baz=277					
NTC	Toucheng	1.18	12	eP	Pb	20 21 55.9 +0.4
WLGB	Puzi	1.18	260	P	Pn	20 21 56.4 +0.8
	baz=257					
WLGB				eS	Sn	20 22 13.3 +1.6
	baz=257					
EGS		1.19	16	eP	Pn	20 21 56.9 +1.1
	baz=4.0					
SBCB	Hsinchu	1.21	334	eP	Pn	20 21 57.6 +1.6
	baz=334					
HSN	Hsinchu	1.23	334	eP	Pn	20 21 57.0 +0.7
	baz=342					
HSN				eS	Sn	20 22 13.0 +0.1
	baz=342					
ECL	Taimali	1.23	207	eP	Pb	20 21 54.7 -1.7
	baz=189					
WSF	Szhu	1.23	268	eP	Pn	20 21 56.3 0.0
	baz=265					
WSF				eS	Sn	20 22 13.6 +0.7
	baz=265					
CHN3	Shinhua	1.26	241	eP	Pg	20 21 57.5 +0.1
	baz=251					
CHN3				eS	Sn	20 22 17.6 +3.9
	baz=251					
SSD	Sandimen	1.28	222	eP	Pg	20 21 57.4 -0.2
	baz=210					
TATO	Taipei	1.28	357	eP	Pn	20 21 57.1 +0.2
	baz=354					
TATO				eS	Sb	20 22 14.0 +0.4
	baz=354					
CHN8	Yiju	1.29	255	eP	Pg	20 21 57.9 0.0
	baz=253					
CHN8				eS	Sn	20 22 16.6 +2.1
	baz=253					
TIPB	Shuangxi	1.29	11	eP	Pn	20 21 56.4 -0.8
	baz=12					
NCUH	Zhongli	1.31	345	eP	Pb	20 21 58.1 +0.3
	baz=357					
NCU	National Centr	1.31	345	eP	Pb	20 21 57.9 +0.1
	baz=340					
NCU				eS	Sn	20 22 17.3 +2.2
	baz=340					
TAP	Taipei	1.34	358	eP	Pn	20 21 58.4 +0.6
	baz=359					
SCLT	Jiali	1.36	248	eP	Pg	20 21 59.0 -0.3
	baz=248					
SCLT				eS	Sn	20 22 19.5 +3.3
	baz=248					
TWB1	Santiao Chiao	1.36	16	eP	Pg	20 22 00.4 +1.1
	baz=4.0					
MASBT	Mashibuluo	1.38	219	eP	Pn	20 21 58.3 0.0
	baz=215					
MASBT				eS	Sg	20 22 17.7 +0.2
	baz=215					
SGLT	Jiouru	1.38	226	eP	Pg	20 21 60.0 +0.3
	baz=223					
NWF	Wu-fen Shan	1.38	8	eP	Pg	20 22 00.1 +0.3
	baz=9.0					
WFSB	Wu-fen Shan	1.38	8	eP	Pg	20 22 00.4 +0.7
	baz=9.0					
TAI1	Yung-k'ang	1.39	242	eP	Pg	20 22 01.0 +1.1
	baz=238					
YM04	YM04	1.45	359	eP	Pn	20 22 00.1 +0.7
	baz=359					
YM10	YM10	1.45	360	eP	Pb	20 22 00.7 +0.5
	baz=359					
YM11	YM11	1.46	0	eP	Pn	20 22 00.2 +0.6
	baz=360					
NTST	Danshui	1.47	356	eP	Pn	20 22 00.1 +0.6
	baz=11					
JYNG	Yonagunijimaku	1.47	59	P	Pn	20 21 59.9 +0.3
JYNG				S	Sn	20 22 18.3 -0.5
YM07	YM07	1.47	2	eP	Pn	20 21 58.7 -1.0
	baz=1.0					
YM03	YM03	1.48	359	eP	Pn	20 22 00.0 +0.3
	baz=359					
YM12	YM12	1.48	0	eP	Pb	20 22 00.7 0.0
	baz=359					
YM08	YM08	1.49	1	eP	Pn	20 21 58.7 -1.1
	baz=1.0					
YOJ	Yonaguni jima	1.53	60	eP	Pn	20 22 00.4 0.0
	baz=64					
YOJ	Yonaguni jima	1.53	60	P	Pn	20 22 00.5 +0.1
YOJ				eS	Sn	20 22 18.8 -1.5
TWY	Chenhua	1.57	1	eP	Pb	20 22 02.5 +0.3
	baz=1.0					
SCZT	Fangliau	1.58	214	eP	Pb	20 22 02.5 +0.1
	baz=211					
SCZT				eS	Sg	20 22 25.2 +1.3
	baz=211					
LAY	Lan-yu	1.65	180	eP	Pn	20 22 00.3 -1.8
	baz=166					
WDGT	Dungji	1.80	256	eP	Pn	20 22 03.9 -0.3
	baz=256					
WDGT				eS	Sn	20 22 26.0 -1.0
	baz=256					
PHUB	P'eng-hu	1.84	265	eP	Pn	20 22 04.6 -0.1
	baz=262					
PHUB				eS	Sb	20 22 29.1 -0.7
	baz=262					
HEN	Hengchun	1.85	205	eP	Pb	20 22 07.0 0.0
	baz=193					
PNG	Penghu	1.85	266	eP	Pn	20 22 05.1 +0.3
	baz=264					
PNG				eS	Sb	20 22 29.2 -0.9
	baz=264					
TWK1	Hengchun	1.88	202	eP	Pn	20 22 05.8 +0.6
	baz=189					
TWKBT	Hengchun	1.88	202	eP	Pn	20 22 04.9 -0.4
	baz=189					
VCHM	Qimei	2.02	257	eP	Pn	20 22 07.1 -0.1
	baz=252					
IRIF	Iriomote-Funau	2.08	72	P	Pn	20 22 08.9 +0.9
HATJ	Hateruma jima	2.08	80	eS	Sn	20 22 31.6 -2.4
JKRS	Kuro-shima	2.30	76	P	Pn	20 22 10.2 -0.8
VWUC	VWUC	2.32	304	eP	Pn	20 22 10.2 -1.1
	baz=301					
JIJ	Ishigaki jima	2.45	74	P	Pn	20 22 12.3 -0.8
JIJ				eS	Sn	20 22 41.7 -1.4
JISG	Ishigakijimahi	2.66	70	P	Pn	20 22 15.9 -0.1
JISG				eS	Sn	20 22 48.4 +0.1
MATB	Ma-tsu	2.85	329	eP	Pn	20 22 18.3 -0.4
	baz=325					
KNM	Kinmen	2.95	285	eP	Pn	20 22 22.2 +2.2
	baz=280					
QZH	Quanzhou	2.98	295	Pn	Pn	20 22 20.8 +0.4
QZH				Sn	Sn	20 22 55.0 -1.2
QZH				smax	smax	
	comp=N,170nm,0.7s					
QZH				smax	smax	
	comp=E,170nm,0.6s					
KNMB	Chin-men Tao	3.00	285	eP	Pn	20 22 21.0 +0.4
	baz=268					
JTJ	Tarama	3.02	71	P	Pn	20 22 22.3 +1.4
JTJ				eS	Sn	20 22 56.8 -0.2
NJ2	Nanjing	8.66	345	eP	Pn	20 23 42.3 +3.9

ISCJB **14** *20:28:06.8±0.7, 3°.16S±0°.09×135°.59E±0°.06, h100km, mb3.1/1, Error ellipse: s-maj=12.8km s-min=7.6km az=10.6*
IDC **14** *20:28:08.4±1.5, 3°.11S×135°.60E, h104km±24km, mb3.3/2, mb1 3.5/6, mb1mx3.1/57, mbtmp3.8/6, Error ellipse: s-maj=23.0km s-min=12.0km az=14.0*
ISC 14 20:28:08.4±0.9, 3°.2S±0°.1×135°.60E±0°.07, h100km, n6, σ1§04/8, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	4.89	298	P	Pn	20 29 20.4	+0.6
	3.2nm,0.3s,baz=142,slow=19,SNR=24						
SIJI				S	Sn	20 30 14.7	-0.6
	3.3nm,0.3s,baz=121,slow=23,SNR=6.8						
JAY	Jayapura	5.14	83	P	Pn	20 29 23.4	+0.2
	0.2nm,0.3s,baz=254,slow=18,SNR=2.9						
JAY				S	Sn	20 30 21.6	+0.3
	0.2nm,0.3s,baz=157,slow=20,SNR=1.9						
WRA	Warramunga Arr	16.72	184	P	Pn	20 31 55.4	-1.3
	0.3nm,0.3s,baz=6.3,slow=12,SNR=5.8						
WRA				S	Sn	20 34 44.6	-18
	0.1nm,0.3s,baz=1.5,slow=24,SNR=3.5						
FITZ	Fitzroy Crossi	17.76	213	P	Pn	20 32 10.9	+1.6
	0.1nm,0.3s,baz=16,slow=11,SNR=3.8						
ASAR	Alice Springs	20.44	184	P	P	20 32 37.9	-0.1
	2.8nm,0.6s,baz=9.0,slow=11,SNR=15						
MKAR	Makanchi Array	68.28	324	P	P	20 38 58.1	-0.7
	0.2nm,0.6s,baz=124,slow=5.5,SNR=2.6						

ISK **14** *20:41:27.5, 36°.44N×28°.92E, h19km, ML3.9/20*
ATH **14** *20:41:27.8, 36°.46N×28°.90E, h36km±3km, ML3.4/8, Error ellipse: s-maj=3.5km s-min=1.1km az=139.0*
DDA **14** *20:41:27.9, 36°.48N×28°.92E, h7km, Ml3.9*
THE **14** *20:41:27.7, 36°.42N×28°.91E, h0km±1km, ML3.3/2, Error ellipse: s-maj=1.6km s-min=1.0km az=193.0*
CSEM **14** *20:41:28.1±0.1, 36°.38N×28°.95E, h20km, ML3.9, Error ellipse: s-maj=3.8km s-min=2.6km az=179.0*
IDC **14** *20:41:28.1±3.2, 36°.37N×29°.02E, h35km±29km, mb3.5/5, mb1 3.5/10, mb1mx3.3/59, mbtmp3.6/10, ML3.7/5, Error ellipse: s-maj=21.2km s-min=16.5km az=165.0*
NIC **14** *20:41:30.9±0.4, 36°.29N×29°.06E, h25km, mb4.0, ML3.5*
ISC 14 20:41:27.5±0.8, 36°.41N±0°.03×28°.96E±0°.02, h24km±6km, n189, σ1§50/246, mb3.7/5, 10C-15D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	Fethiye	0.25	24	PG	Pb	20 41 33.2	-0.6
FETY				SG	Sb	20 41 37.9	-0.2
FETY	Fethiye	0.25	24	P	Pb	20 41 33.2	-0.6
FETY				S	Sb	20 41 38.3	+0.2
FETY	Fethiye	0.25	24	P	Pb	20 41 33.2	-0.6
FETY				i Sg	Sb	20 41 37.9	-0.2
FETY				S		20 41 38.2	
DALY	Dalyan (Mu¨la	0.48	329	PG	Pb	20 41 37.1	-0.2
DALY				SG	Sb	20 41 43.3	-0.6
DALY	Dalyan (Mu¨la	0.48	329	i P	Pb	20 41 37.1	-0.2
DALY				i S	Sb	20 41 43.7	-0.2
DALY	Dalyan (Mu¨la	0.48	329	P	Pb	20 41 37.1	-0.2
DALY				i Sg	Sb	20 41 43.3	-0.6
TURN	Turunc	0.54	328	PG	Pn	20 41 40.4	+0.7
TURN	Turunc	0.54	328	i P	Pn	20 41 40.7	+1.0
TURN				i S	Sn	20 41 49.9	+1.9
TURN	Turunc	0.54	328	ePg	Pn	20 41 40.4	+0.7
TURN	Turunc	0.54	328	P	Pn	20 41 40.7	+1.0
AKAS	Kas	0.55	108	PG	Pb	20 41 39.4	+0.7
AKAS	Kas	0.55	108	i P	Pb	20 41 39.4	+0.7
AKAS				i S	Sn	20 41 49.7	+1.3
AKAS	Kas	0.55	108	P	Pb	20 41 39.4	+0.7
AKAS				S	Sn	20 41 49.7	+1.3
KSL	Kastellorizon	0.57	117	P	Pn	20 41 40.2	+0.2
KSL				S	Sn	20 41 51.6	+3.0
KSL				AML	AML	20 41 52.3	
	comp=E,10748μm,0.4s						
KSL				AML	AML	20 41 53.5	
	comp=N,6449μm,0.4s						
KSL	Kastellorizon	0.57	117	P	Pn	20 41 40.6	+0.6
KSL				S	Sn	20 41 51.7	+3.1
MRSB	Marmaris-Mugla	0.69	297	PG	Pb	20 41 40.5	-0.3
MRSB	Marmaris-Mugla	0.69	297	ePg	Pb	20 41 40.5	-0.3
ARG	Arkhangelos	0.70	254	PG	Pb	20 41 41.6	+0.6
ARG	Arkhangelos	0.70	254	P	Pn	20 41 42.0	+0.1
ARG				S	Sb	20 41 51.2	+1.0
ARG				AML	AML	20 41 53.6	
	comp=N,4826μm,0.2s						
ARG				AML	AML	20 41 55.2	
	comp=E,7829μm,0.3s						
ARG	Arkhangelos	0.70	254	P	Pn	20 41 41.7	-0.1
ARG				S	Sn	20 41 51.9	0.0
ARG	Arkhangelos	0.70	254	ePg	Pb	20 41 41.6	+0.6
ARG				S	Sn	20 41 51.4	-0.5
ELL	Elmali	0.84	66	PG	Pn	20 41 44.3	+0.4
ELL	Elmali	0.84	66	ePg	Pn	20 41 44.3	+0.4
GLHS	Glhisar (BURDU	0.86	30	PG	Pb	20 41 44.1	+0.2
GLHS	Glhisar (BURDU	0.86	30	ePg	Pb	20 41 44.1	+0.2
YER	Yerkesik	0.91	323	PG	Pb	20 41 44.4	-0.2
YER	Yerkesik	0.91	323	P	Pb	20 41 44.4	-0.2
YER				S	Sn	20 41 59.8	+2.7
YER	Yerkesik	0.91	323	P	Pb	20 41 44.4	-0.2
YER				S	Sn	20 41 59.8	+2.7
GOLH	Golhisar	0.96	30	i P	Pn	20 41 45.0	-0.6
GOLH				i S	Sn	20 41 59.3	+0.9
GOLH	Golhisar	0.96	30	P	Pn	20 41 45.0	-0.6
GOLH				S	Sn	20 41 59.3	+0.9
TAVA	DENIZLI_Tavas	1.06	358	i P	Pn	20 41 46.6	-0.3
TAVA				i S	Sb	20 42 00.3	-0.3
TAVA	DENIZLI_Tavas	1.06	358	P	Pn	20 41 46.6	-0.3
TAVA				S	Sb	20 42 00.3	-0.3
DATC	Datca-Mugla	1.10	289	PG	Pn	20 41 47.8	+0.4
DATC	Datca-Mugla	1.10	289	ePg	Pn	20 41 47.8	+0.4
DAT	Datca	1.16	286	PN	Pn	20 41 48.7	+0.5
DAT	Datca	1.16	286	i P	Pb	20 41 49.1	+0.2
DAT				i S	Sb	20 42 04.7	+1.2
DAT	Datca	1.16	286	ePn	Pn	20 41 48.7	+0.5
DAT	Datca	1.16	286	P	Pb	20 41 49.1	+0.2
DAT				S	Sb	20 42 04.7	+1.2
KORT	Korkueli	1.27	62	PN	Pb	20 41 51.1	+0.3
KORT	Korkueli	1.27	62	i P	Pb	20 41 51.9	+1.2
KORT				i S	Sb	20 42 10.3	+3.6
KORT	Korkueli	1.27	62	ePn	Pb	20 41 51.1	+0.3
KORT	Korkueli	1.27	62	P	Pb	20 41 51.9	+1.2
MLSB	Milas	1.30	313	PN	Pn	20 41 50.6	+0.5
MLSB	Milas	1.30	313	ePn	Pn	20 41 50.6	+0.5
DENT	Denizli	1.34	3	PN	Pn	20 41 50.8	0.0
DENT	Denizli	1.34	3	ePn	Pn	20 41 50.8	0.0
BDRM	Kayabasi	1.38	299	i P	Pb	20 41 52.4	-0.3
BDRM				i S	Sb	20 42 10.0	+0.1
BDRM	Kayabasi	1.38	299	P	Pb	20 41 52.4	-0.3
BDRM				S	Sb	20 42 10.0	+0.1
ANTB	Antalya	1.45	70	PN	Pb	20 41 53.9	+0.1
ANTB	Antalya	1.45	70	ePn	Pb	20 41 53.9	+0.1
BODT	Bodrum	1.48	297	PN	Pn	20 41 52.6	+0.1
BODT	Bodrum	1.48	297	P	Pn	20 41 52.2	-0.3
BODT	Bodrum	1.48	297	P	Pn	20 41 52.2	-0.3
BODT	Bodrum	1.48	297	ePn	Pn	20 41 52.6	+0.1
NISR	Nisiros	1.49	278	P	Pn	20 41 52.2	-0.5
NISR				S	Sb	20 42 12.8	-0.1
NISR				AML	AML	20 42 19.4	
	comp=N,1794μm,0.6s						
NISR				AML	AML	20 42 21.2	
	comp=E,2858μm,0.5s						
NISR	Nisiros	1.49	278	P	Pn	20 41 52.7	0.0
NISR				S	Sn	20 42 12.2	+0.9
AYDN	Tasoluk	1.52	326	i P	Pb	20 41 54.3	-0.7
AYDN				i S	Sn	20 42 13.2	+0.9
AYDN	Tasoluk	1.52	326	P	Pb	20 41 54.3	-0.7
AYDN				S	Sn	20 42 13.1	+0.9
YKAV	Yalikavak-Bodr	1.52	298	PN	Pn	20 41 54.1	+0.9
YKAV	Yalikavak-Bodr	1.52	298	ePn	Pn	20 41 54.1	+0.9
BRDR	BURDUR-Merkez	1.56	34	i P	Pb	20 41 55.3	-0.4
BRDR				i S	Sb	20 42 16.1	+1.0
BRDR	BURDUR-Merkez	1.56	34	P	Pb	20 41 55.3	-0.4
BRDR				S	Sb	20 42 16.1	+1.0
KARP	Karpathos	1.69	240	PN	Pn	20 41 56.7	+1.2
KARP	Karpathos	1.69	240	P	Pn	20 41 56.5	+1.0
KARP				S	Sn	20 42 16.8	+0.4
KARP				AML	AML	20 42 18.6	
	comp=N,1622μm,0.4s						
KARP				AML	AML	20 42 28.4	
	comp=E,1421μm,0.4s						
KARP	Karpathos	1.69	240	P	Pn	20 41 56.6	+1.0
KARP	Karpathos	1.69	240	P	Pn	20 41 56.6	+1.0
KARP				S	Sn	20 42 17.3	+0.9
ISP	Isparta	1.89	41	PN	Pb	20 42 00.2	-1.1
ISP	Isparta	1.89	41	‖ i P	Pb	20 42 00.8	-0.5
ISP	Isparta	1.89	41	S	Sb	20 42 28.7	+4.2
ISP	Isparta	1.89	41	P	Pn	20 41 59.5	+1.2
ISP	Isparta	1.89	41	P	Pn	20 41 59.5	+1.2
ISP	Isparta	1.89	41	ePn	Pb	20 42 00.2	-1.1
GCAM	G?zelcaml?	1.89	314	PN	Pn	20 41 59.2	+1.0
GCAM	G?zelcaml?	1.89	314	ePn	Pn	20 41 59.2	+1.0
SUTC	Sutluce-Ispart	1.95	56	PN	Pn	20 42 00.8	+1.6
SUTC	Sutluce-Ispart	1.95	56	ePn	Pn	20 42 00.8	+1.6
KHL	Karahalli	1.96	13	PN	Pn	20 42 00.3	+1.0
KHL	Karahalli	1.96	13	ePn	Pn	20 42 00.3	+1.0
KULA	Kula-Manisa	2.12	354	PN	Pn	20 42 01.3	-0.1
KULA	Kula-Manisa	2.12	354	ePn	Pn	20 42 01.3	-0.1
SMG	Samos	2.14	308	P	Pn	20 42 02.1	+0.5
SMG				S	Sn	20 42 26.6	-0.8
SMG				AML	AML	20 42 30.1	
	comp=N,8234μm,0.3s						
SMG				AML	AML	20 42 30.3	
	comp=E,7121μm,0.3s						
SMG	Samos	2.14	308	P	Pn	20 42 02.1	+0.5
SMG	Samos	2.14	308	P	Pn	20 42 02.1	+0.5
SMG				S	Sn	20 42 26.8	-0.6
KEPZ	Antalya-Kepez	2.18	76	i P	Pb	20 42 05.2	-1.1
KEPZ				i S	Sb	20 42 32.3	-0.7
KEPZ	Antalya-Kepez	2.18	76	P	Pb	20 42 05.2	-1.1
KEPZ				S	Sb	20 42 32.3	-0.7
AMGA	Amorgos Island	2.50	281	P	Pn	20 42 08.6	+2.0
AMGA				S	Sn	20 42 35.0	-1.4
AMGA	Amorgos Island	2.50	281	P	Pn	20 42 08.0	+1.4
AMGA				S	Sn	20 42 35.7	-0.7
ZKR	Zakros	2.58	241	P	Pn	20 42 09.6	+1.9
ZKR				S	Sn	20 42 40.9	+2.6
ZKR				AML	AML	20 42 42.6	
	comp=N,285μm,0.5s						
ZKR				AML	AML	20 43 01.5	
	comp=E,524μm,0.7s						
ZKR	Zakros	2.58	241	P	Pn	20 42 09.2	+1.5
ZKR	Zakros	2.58	241	P	Pn	20 42 09.2	+1.5
ZKR				S	Sn	20 42 40.1	+1.9
SHAP	Saphane-Kutahy	2.62	5	PN	Pn	20 42 09.6	+1.2
SHAP	Saphane-Kutahy	2.62	5	ePn	Pn	20 42 09.6	+1.2
AKS	Akhisar	2.63	340	PN	Pn	20 42 09.6	+1.2
AKS	Akhisar	2.63	340	ePn	Pn	20 42 09.6	+1.2
GEDZ	Gediz	2.66	8	PN	Pn	20 42 10.2	+1.4
GEDZ	Gediz	2.66	8	ePn	Pn	20 42 10.2	+1.4
SIMA	Simav-Kutahya	2.67	0	PN	Pn	20 42 10.2	+1.1
SIMA	Simav-Kutahya	2.67	0	ePn	Pn	20 42 10.2	+1.1
URLA	Izmir	2.71	317	PN	Pn	20 42 09.9	+0.4
URLA	Izmir	2.71	317	ePn	Pn	20 42 09.9	+0.4
SANT	Santorini	2.82	270	‖ i P	Pn	20 42 10.9	-0.2
SANT	Santorini	2.82	270	P	Pn	20 42 11.0	-0.1
SANT	Santorini	2.82	270	P	Pn	20 42 11.6	+0.5
SANT				S	Sn	20 42 45.6	+1.2
APE	Apeiranthos	2.83	284	‖ i P	Pn	20 42 12.1	+0.9
APE	Apeiranthos	2.83	284	S	Sn	20 42 48.1	+3.5
APE	Apeiranthos	2.83	284	P	Pn	20 42 12.1	+0.9
APE				S	Sn	20 42 46.0	+1.5
APE				AML	AML	20 42 49.0	
	comp=E,213μm,0.3s						
APE				AML	AML	20 42 50.0	
	comp=N,224μm,0.3s						
APE	Apeiranthos	2.83	284	P	Pn	20 42 12.1	+0.9
APE				S	Sn	20 42 45.3	+0.7
CHOS	Chios island	3.04	311	P	Pn	20 42 14.3	+0.2
CHOS				AML	AML	20 42 53.5	
	comp=N,1333μm,0.5s						
CHOS				AML	AML	20 42 53.9	
	comp=E,1225μm,0.2s						
CHOS	Chios island	3.04	311	P	Pn	20 42 14.6	+0.5
CHOS	Chios island	3.04	311	P	Pn	20 42 14.6	+0.5
AKMC	Akamas	3.07	116	P	Pn	20 42 14.5	0.0
	baz=296						
AKMC	Akamas	3.07	116	P	Pn	20 42 14.5	0.0
LAST	Lasithi	3.09	247	P	Pn	20 42 15.5	+0.6
LAST	Lasithi	3.09	247	P	Pn	20 42 15.8	+1.0
LAST	Lasithi	3.09	247	P	Pn	20 42 15.8	+1.0
PPCY	Paphos	3.15	118	P	Pn	20 42 16.1	+0.6
	baz=298						
PPCY	Paphos	3.15	118	P	Pn	20 42 16.1	+0.6
ALFC	Alefka	3.21	112	P	Pn	20 42 16.4	-0.1
	baz=292						
ALFC				S	Sn	20 42 53.2	-0.8
ALFC	Alefka	3.21	112	P	Pn	20 42 16.4	-0.1
ALFC				S	Sn	20 42 53.2	-0.8
TNSA	Tinos	3.24	292	P	Pn	20 42 19.3	+2.5
TNSA	Tinos	3.24	292	P	Pn	20 42 18.5	+1.7
IDI	Anoyia	3.49	253	Pn	Pn	20 42 20.5	+0.3
	comp=E,6.1nm,0.3s,baz=71,slow=16,SNR=38						
IDI				Sn	Sn	20 42 58.7	-2.1
	comp=E,15nm,0.3s,baz=272,slow=19,SNR=12						
IDI	Anoyia	3.49	253	⇑ i P	Pn	20 42 19.3	-1.0
IDI	Anoyia	3.49	253	⇑ i P	Pn	20 42 19.3	-1.0
IDI				S	Sn	20 43 00.1	-0.7
SZAC	Souni	3.60	116	P	Pn	20 42 21.9	+0.1
	baz=297						
SZAC				S	Sn	20 43 02.7	-0.8
SZAC	Souni	3.60	116	P	Pn	20 42 21.9	+0.1
SZAC				S	Sn	20 43 02.7	-0.8
SIVA	Sivas	3.65	249	P	Pn	20 42 24.7	+2.3
SIVA	Sivas	3.65	249	P	Pn	20 42 24.4	+2.0
MHLA	Plaka, Milos I	3.67	277	P	Pn	20 42 23.0	+0.3
MHLA	Plaka, Milos I	3.67	277	P	Pn	20 42 23.4	+0.8
MAMC	Mammari	3.68	108	P	Pn	20 42 23.8	+1.0
	baz=289						
MAMC	Mammari	3.68	108	P	Pn	20 42 23.8	+1.0
CSS	Mathiatis	3.84	111	P	Pn	20 42 26.1	+1.0
	baz=292						
CSS				S	Sn	20 43 08.1	-1.3
CSS	Mathiatis	3.84	111	P	Pn	20 42 25.6	+0.5
CSS	Mathiatis	3.84	111	P	Pn	20 42 26.1	+1.0
CSS				S	Sn	20 43 08.1	-1.3
KARY	Karystos	3.96	296	P	Pn	20 42 29.3	+2.7
KARY	Karystos	3.96	296	P	Pn	20 42 28.5	+1.9
VAM	Vamos	3.99	257	P	Pn	20 42 28.7	+1.6
VAM	Vamos	3.99	257	P	Pn	20 42 28.7	+1.6
IMMV	Iera Moni Meta	4.15	258	P	Pn	20 42 29.9	+0.6
IMMV	Iera Moni Meta	4.15	258	P	Pn	20 42 30.3	+1.0
IMMV	Iera Moni Meta	4.15	258	P	Pn	20 42 30.4	+1.1
GVD	Gavdhos	4.26	250	P	Pn	20 42 31.8	+0.9
GVD				S	Sn	20 43 19.0	-0.9
GVD	Gavdhos	4.26	250	P	Pn	20 42 32.3	+1.4
GVD				S	Sn	20 43 19.6	-0.3
EREA	Eretria	4.48	298	P	Pn	20 42 35.9	+2.1
EREA	Eretria	4.48	298	P	Pn	20 42 35.9	+2.1
ANTO	Ankara	4.59	40	⇑ i P	Pn	20 42 37.8	+2.4
ANTO	Ankara	4.59	40	⇑ i P	Pn	20 42 37.8	+2.4
VILL	Villia	4.83	293	P	Pn	20 42 41.0	+2.3
VLI	Veliai	4.86	275	P	Pn	20 42 40.7	+1.7
VLI	Veliai	4.86	275	P	Pn	20 42 40.7	+1.7
VIL2	Platees	4.88	293	P	Pn	20 42 41.9	+2.6
BRTR	Keskin Array B	4.96	47	Pn	Pn	20 42 41.5	+1.0
	comp=E,0.6nm,0.3s,baz=224,slow=16,SNR=18						
BRTR				Sn	Sn	20 43 37.6	+0.4
	comp=E,1.5nm,0.3s,baz=221,slow=26,SNR=15						
SKIA	Skiathos	5.15	304	P	Pn	20 42 45.5	+2.5
SKIA	Skiathos	5.15	304	P	Pn	20 42 45.5	+2.5

GERES **GERESS Array B 16.71 323** Pn **P** **20 45 21.9 -0.2**
comp=E,0.1nm,0.3s,baz=151,slow=8.4,SNR=2.4
FINES **FINESS Array B 25.12 357** P **P** **20 46 49.3 -0.9**
comp=E,1.9nm,1.0s,baz=161,slow=10.0,SNR=4.8
TORD **Torodi Ar. Bea 33.69 234** P **P** **20 48 05.7 -1.0**
comp=E,0.9nm,0.5s,baz=32,slow=8.8,SNR=7.6
KURBB **Kurchatov Arra 37.93 52** P **P** **20 48 41.6 -1.1**
comp=E,0.5nm,0.5s,baz=274,slow=8.7,SNR=6.5
MKAR **Makanchi Array 40.50 58** P **P** **20 49 03.2 -1.2**
comp=E,0.5nm,0.6s,baz=276,slow=7.4,SNR=6.9
MKAR PcP **PcP** **20 51 06.0 -0.6**
comp=E,0.1nm,0.5s,baz=291,slow=4.0,SNR=2.5
CMAR **Chiang Mai Arr 63.38 86** P **P** **20 51 53.8 -1.4**
comp=E,0.4nm,0.7s,baz=306,slow=7.7,SNR=3.3

*ISCJB **14** 20:42:21.0±0.3, 1°.44N±0°.03×126°.96E±0°.04, h53km, mb4.3/27, Error ellipse: s-maj=5.1km s-min=4.7km az=156.5*
*NEIC **14** 20:42:22.8±2.6, 1°.28N×126°.84E, h61km±25km, mb4.5/5, Error ellipse: s-maj=14.3km s-min=6.8km az=81.0*
*IDC **14** 20:42:22.2±1.8, 1°.26N×126°.79E, h53km±15km, mb3.9/21, mb1 4.0/23, mb1mx3.9/58, mbtmp4.2/23, ML3.6/2, Error ellipse: s-maj=17.8km s-min=7.6km az=67.0*
*DJA **14** 20:42:24.7±0.3, 1°N±4°×12°7E±°, h46km±26km, M4.3/10, mb4.4/5, mB4.8/3, MLv4.3/10, Mw(mB)4.1/3*
ISC 14 20:42:22.4±0.4, 1°.36N±0°.05×126°.93E±0°.05, h53km, n50, σ1§57/60, mb4.2/27, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**2.07**	**164**	P	**Pn**	**20 42 56.7**	**+1.9**
LBMI				S	**Sn**	**20 43 21.8**	**+2.4**
SGSI	**Sangihe**	**2.70**	**329**	P	**Pn**	**20 43 05.7**	**+2.3**
KMSI	**Cibinong**	**3.05**	**255**	P	**Pn**	**20 43 10.0**	**+1.8**
KMSI				S	**Sn**	**20 43 45.6**	**+2.1**
SANI	**Sanana**	**3.52**	**196**	P	**Pn**	**20 43 15.3**	**+0.7**
NLAI	**Namlea**	**4.58**	**178**	P	**Pn**	**20 43 31.4**	**+2.3**
LUWI	**Luwuk**	**4.80**	**240**	P	Pn	20 43 34.4	+2.2
LUWI				S	**Sn**	**20 44 29.0**	**+2.5**
SIJI	**Sorong**	**4.87**	**117**	P	**Pn**	**20 43 33.8**	**+0.6**
	1.7nm,0.3s,baz=315,slow=20,SNR=4.7						
SIJI				S	**Sn**	**20 44 31.5**	**+3.2**
	0.6nm,0.3s,baz=288,slow=20,SNR=1.9						
MRSI	**Marisa**	**5.07**	**260**	P	**Pn**	**20 43 38.1**	**+2.2**
	16nm,0.6s,409nm0.1nm						
APSI	**Ampana**	**5.74**	**247**	P	**Pn**	**20 43 46.9**	**+1.7**
	48nm,1.2s,585nm0.3nm						
SPSI	**Sidrap Palu**	**8.90**	**233**	P	**Pn**	**20 44 29.9**	**+1.4**
	9.1nm,0.5s						
BKSI	**Bulukumba**	**9.51**	**226**	P	Pn	20 44 39.2	+2.5
BAKI	**Biak**	**9.52**	**105**	P	**Pn**	**20 44 38.4**	**+1.4**
FITZ	**Fitzroy Crossi**	**19.38**	**184**	P	**P**	**20 46 43.2**	**-0.9**
	0.2nm,0.3s,baz=354,slow=8.1,SNR=10						
WRAB	**Tennant Creek**	**22.38**	**161**	*eP*	**P**	**20 47 14.7**	**-1.8**
	8.2nm,0.8s						
WRA	**Warramunga Arr**	**22.39**	**161**	P	**P**	**20 47 14.7**	**-1.8**
	5.2nm,0.7s,baz=340,slow=11,SNR=67						
WRA				S	**S**	**20 51 13.9**	**-5.3**
	0.3nm,0.6s,baz=332,slow=21,SNR=3.4						
WRA				ScP	**ScP**	**20 54 42.5**	**-0.9**
	1.0nm,1.0s,baz=340,slow=3.2,SNR=5.0						
ASAR	**Alice Springs**	**25.79**	**165**	P	**P**	**20 47 48.6**	**0.0**
	3.7nm,0.7s,baz=347,slow=13,SNR=41						
ASAR				PcP	**PcP**	**20 51 16.9**	**-0.5**
	0.3nm,0.6s,baz=345,slow=2.0,SNR=4.8						
ASAR				S	**S**	**20 52 17.6**	**+3.3**
	2.5nm,0.8s,baz=346,slow=21,SNR=11						
ASAR				ScP	**ScP**	**20 54 51.2**	**-1.5**
	0.2nm,0.4s,baz=344,slow=3.1,SNR=3.4						
CMAR	**Chiang Mai Arr**	**32.29**	**303**	P	**P**	**20 48 45.8**	**-0.7**
	0.8nm,1.0s,baz=138,slow=7.5,SNR=4.8						
STKA	**Stephens Creek**	**35.87**	**158**	P	**P**	**20 49 17.3**	**0.0**
	0.9nm,0.3s,baz=326,slow=9.6,SNR=8.7						
KSAR	**Wonju Array Be**	**35.91**	**1**	P	**P**	**20 49 18.7**	**+1.1**
KSAR				PcP	**PcP**	**20 51 44.9**	**+1.1**
KSRS	**Korea Array**	**35.92**	**1**	P	**P**	**20 49 18.7**	**+1.0**
	1.6nm,0.7s,baz=180,slow=10.0,SNR=6.2						
KSRS				PcP	**PcP**	**20 51 44.9**	**+1.1**
	1.5nm,1.0s,baz=172,slow=2.5,SNR=2.9						
MJAR	**Matsushiro Arr**	**36.53**	**15**	P	**P**	**20 49 22.0**	**-0.9**
	1.4nm,0.4s,baz=193,slow=10.0,SNR=9.8						
USRK	**Ussuriysk Ar.**	**37.89**	**5**	P	**P**	**20 50 16.5**	**+0.8**
	3.7nm,0.9s,baz=206,slow=8.5,SNR=6.7						
LSA	**Lhasa**	**44.17**	**313**	*eP*	**P**	**20 50 26.3**	**-0.4**
	2.7nm,0.8s						
ASAJ	**Asahikawa**	**44.79**	**16**	P	**P**	**20 50 31.8**	**+0.9**
	3.6nm,0.8s,baz=217,slow=16,SNR=4.3						
ULN	**Ulaanbaatar**	**49.42**	**342**	*eP*	**P**	**20 51 07.7**	**+0.6**
	9.5nm,0.9s						
SONM	**Songino Array**	**49.59**	**342**	P	**P**	**20 51 09.4**	**+0.9**
	4.0nm,0.9s,baz=162,slow=8.8,SNR=20						
SONM				PcP	**PcP**	**20 52 29.8**	**+0.4**
	0.9nm,0.8s,baz=153,slow=3.6,SNR=3.1						
PETK	**Petropavlovsk-**	**57.54**	**21**	P	**P**	**20 52 07.0**	**+0.6**
	4.1nm,0.8s,baz=233,slow=1.5,SNR=5.0						
MKAR	**Makanchi Array**	**59.61**	**326**	P	**P**	**20 52 21.3**	**+0.4**
	5.5nm,0.4s,baz=120,slow=8.1,SNR=102						
KZA	**Kyzart**	**61.49**	**318**	P	**P**	**20 52 35.7**	**+1.3**
	SNR=5.0						
TKM2	**Tokmak 2**	**61.65**	**319**	P	**P**	**20 52 35.9**	**+0.8**
	SNR=9.0						
UCH	**Uchtor**	**62.05**	**318**	P	**P**	**20 52 40.1**	**+1.9**
	SNR=5.9						
USP	**Ospenovka**	**62.52**	**319**	P	**P**	**20 52 41.1**	**+0.3**
	SNR=6.9						
AML	**Almayashu**	**62.55**	**318**	P	**P**	**20 52 42.3**	**+0.8**
	SNR=6.1						
EKS2	**Erkin-Say**	**62.73**	**318**	P	**P**	**20 52 43.2**	**+0.9**
	SNR=8.5						
ZALV	**Zalesovo Beam**	**62.78**	**334**	P	**P**	**20 52 41.3**	**-0.8**
	0.9nm,0.4s,baz=114,slow=5.8,SNR=5.5						
KURBB	**Kurchatov Arra**	**63.83**	**328**	P	**P**	**20 52 49.3**	**+0.1**
	9.3nm,0.7s,baz=129,slow=6.0,SNR=66						
KURK	**Kurchatov**	**63.84**	**328**	P	**P**	**20 52 49.3**	**+0.1**
BVAR	**Borovoye Array**	**69.40**	**327**	P	**P**	**20 53 24.7**	**0.0**
	4.0nm,0.9s,baz=122,slow=7.4,SNR=16						
BRVK	**Borovoye**	**69.48**	**327**	*eP*	**P**	**20 53 24.6**	**-0.6**
	11nm,0.9s						
GEYT	**Alibeck**	**72.53**	**309**	P	**P**	**20 53 43.3**	**-0.8**
	208nm,0.8s,baz=108,slow=4.8,SNR=7.4						
AKTO	**Aktyubinsk**	**75.63**	**322**	P	**P**	**20 54 01.2**	**-0.7**
	1.9nm,0.5s,baz=101,slow=7.9,SNR=7.8						
ARU	**Arti**	**77.03**	**328**	P	**P**	**20 54 08.3**	**-1.4**
	1.3nm,0.4s,baz=337,slow=6.3,SNR=4.1						
OPO	**Ambohidratompo**	**80.71**	**251**	P	**P**	**20 54 29.1**	**-1.7**
	2.6nm,0.8s,baz=18,slow=11,SNR=2.5						
VNDA	**Vanda**	**81.07**	**173**	P	**P**	**20 54 30.9**	**-0.4**
	1.3nm,0.8s,baz=299,slow=10,SNR=3.7						
RAYN	**Ar Rayn**	**81.59**	**293**	*eP*	**P**	**20 54 34.2**	**-1.0**
	5.2nm,0.9s						
MAW	**Mawson**	**81.62**	**200**	P	**P**	**20 54 33.9**	**-0.5**
	1.2nm,0.5s,baz=121,slow=5.0,SNR=3.7						
ILAR	**Eielson Array**	**87.14**	**25**	P	**P**	**20 55 02.1**	**-0.4**
	0.4nm,0.7s,baz=248,slow=4.8,SNR=3.8						
BRTR	**Keskin Array B**	**91.67**	**310**	P	**P**	**20 55 23.5**	**-1.0**
	0.2nm,0.4s,baz=64,slow=3.4,SNR=2.8						
FFC	**Flin Flon**	**111.22**	**28**	*eP*	**Pdif**	**20 56 49.1**	**-2.6**
TORD	**Torodi Ar. Bea**	**123.81**	**287**	PKP	**PKPdf**	**21 01 14.4**	**-1.1**
	0.8nm,0.6s,baz=68,slow=1.2,SNR=5.4						

*ISCJB **14** 20:56:39.3±0.4, 32°.28N±0°.02×115°.34W±0°.02, h12km±2km, Error ellipse: s-maj=3.5km s-min=2.8km az=149.5*
*NEIC **14** 20:56:39.8±0.0, 32°.28N×115°.36W, h10km, ML3.1(PAS), After PAS.*
*ECX **14** 20:56:40.8±0.6, 32°.30N×115°.36W, h5km, MD2.9, ML3.1*
*MEX **14** 20:56:42.2±0.4, 32°.36N×115°.29W, h13km±4km, MD3.9*
ISC 14 20:56:38.7±1.0, 32°.30N±0°.02×115°.35W±0°.02, h15km±8km, n78, σ1§15/106, 4C-4D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPBX	**Cerro Prieto**	**0.13**	**19**	*eP*	**Pb**	**20 56 42.9**	**+0.1**
CPBX				*eS*	**Sb**	**20 56 45.5**	**0.0**
CPBX				IAML		20 56 46.8	
	comp=E,24μm,0.2s						
CPBX				⇑*e*		20 56 46.8	
CPBX				⇑*e*		20 56 48.1	
CPBX				IAML		20 56 48.1	
	comp=N,15μm,0.3s						
MBIG	**Mexicali**	**0.17**	**50**	*eP*	**Pb**	**20 56 44.2**	**+0.7**
MBIG				*eS*	**Sb**	**20 56 46.4**	**-0.3**
DREC	**Desert Rsrch C**	**0.51**	**351**	*i* P	**Pn**	**20 56 50.3**	**-1.1**
DREC	**Desert Rsrch C**	**0.51**	**351**	*eSg*	**Sn**	**20 56 59.9**	**0.0**
ERPC	**Ernies Place**	**0.52**	**330**	⇓*i*P	**Pb**	**20 56 50.2**	**+0.8**
ERPC	**Ernies Place**	**0.52**	**330**	*ePg*	**Pb**	**20 56 50.2**	**+0.8**
WESC	**Westside Schoo**	**0.56**	**325**	*i* P	**Pb**	**20 56 50.7**	**+0.5**
WESC	**Westside Schoo**	**0.56**	**325**	*ePg*	**Pn**	**20 56 51.9**	**-0.1**
WESC				*eSg*	**Sn**	**20 56 59.4**	**-1.7**
YUH	**Yuha Desert**	**0.59**	**306**	⇓*i*P	**Pb**	**20 56 50.7**	**0.0**
YUH	**Yuha Desert**	**0.59**	**306**	*ePg*	**Pb**	**20 56 50.8**	**0.0**
COA	**Coachella**	**0.60**	**19**	*i* P	**Pn**	**20 56 51.5**	**-1.0**
COA	**Coachella**	**0.60**	**19**	*ePg*	**Pn**	**20 56 51.6**	**-1.0**
COK	**Cook Ranch**	**0.63**	**330**	⇑*i*P	**Pb**	**20 56 51.9**	**+0.5**
RMX	**La Rumorosa**	**0.69**	**297**	*eP*	**Pg**	**20 56 51.9**	**-0.2**
RMX				*eS*	**Sg**	**20 57 00.5**	**-0.8**
IKP	**In-Ko-Pah, Jac**	**0.73**	**299**	P	**Pb**	**20 56 53.3**	**+0.2**
	baz=120,SNR=49						
IKP				S	**Sb**	**20 57 02.7**	**-0.2**
	baz=120						
IKP	**In-Ko-Pah, Jac**	**0.73**	**299**	*e*P	**Pb**	**20 56 53.3**	**+0.2**
YMD	**Yuma Desert**	**0.73**	**69**	⇓*i*P	**Pn**	**20 56 53.8**	**-0.6**
SWSC	**Sam W. Stewart**	**0.75**	**330**	P	**Pg**	**20 56 53.3**	**0.0**
	baz=151,SNR=24						
SWSC				S	**Sg**	**20 57 03.8**	**+0.7**
	baz=151						
SWSC	**Sam W. Stewart**	**0.75**	**330**	⇓*e*P	**Pg**	**20 56 53.5**	**+0.2**
SWSC	**Sam W. Stewart**	**0.75**	**330**	*e*Pg	**Pn**	**20 56 53.8**	**-0.8**
CRR	**Carrizo Plain**	**0.78**	**319**	*e*Pg	**Pg**	**20 56 54.4**	**+0.4**
ECBX	**El Chinero**	**0.86**	**163**	*e*P	**Pn**	**20 56 55.9**	**-0.3**
ECBX				*e*S	**Sn**	**20 57 07.7**	**-0.8**
GLA	**Glamis**	**0.87**	**30**	P	**Pb**	**20 56 55.3**	**-0.2**
	baz=210,SNR=16						
GLA				S	**Sg**	**20 57 07.2**	**+0.1**
	baz=210						
GLA	**Glamis**	**0.87**	**30**	*e*Pg	**Pg**	**20 56 55.7**	**+0.1**
CBKC	**Canebrake**	**0.97**	**309**	*e*Pg	**Pn**	**20 56 58.0**	**+0.3**
MONP2	**Monument Peak**	**1.08**	**304**	Pb	**Pg**	**20 56 59.3**	**-0.2**
	baz=124,SNR=38						
MONP2				Sb	**Sg**	**20 57 13.4**	**-0.3**
	baz=124						
ZAX	**El Zacaton**	**1.11**	**225**	*e*P	**Pg**	**20 57 00.2**	**+0.2**
ZAX				*e*S	**Sg**	**20 57 14.8**	**+0.3**
CBX	**Cerro Bola**	**1.11**	**271**	*e*P	**Pg**	**20 57 00.4**	**+0.2**
CBX				*e*S	**Sg**	**20 57 14.8**	**+0.2**
CBX				IAML		20 57 17.0	
	comp=N,516nm,0.4s						
CBX				⇑*e*		20 57 17.0	
CBX	**Cerro Bola**	**1.11**	**271**	*e*P	**Pg**	**20 57 00.5**	**+0.3**
CBX				*i* S	**Sg**	**20 57 14.9**	**+0.2**
TJIG	**Tijuana**	**1.13**	**277**	*e*P	**Pg**	**20 57 00.4**	**0.0**
TJIG	**Tijuana**	**1.13**	**277**	*e*P	**Pg**	**20 57 00.4**	**0.0**
TJIG				*i* S	**Sn**	**20 57 14.5**	**-0.6**
BAR	**Barrett**	**1.18**	**289**	*e*P	**Pg**	**20 57 01.2**	**-0.2**
BAR	**Barrett**	**1.18**	**289**	*e*Pg	**Pg**	**20 57 01.1**	**-0.2**
BAR				*e*Sn	**Sg**	**20 57 16.5**	**-0.3**
ECNX	**Esteban Cantu**	**1.24**	**239**	*e*P	**Pg**	**20 57 02.4**	**-0.2**
SPIG	**San Pedro Mart**	**1.25**	**184**	*e*P	**Pg**	**20 57 02.5**	**-0.4**
SPIG	**San Pedro Mart**	**1.25**	**184**	*e*Sn	**Sg**	**20 57 19.1**	**-0.1**
SPIG	**San Pedro Mart**	**1.25**	**184**	*e*P	**Pg**	**20 57 03.0**	**+0.1**
SPIG				*e*S	**Sg**	**20 57 19.1**	**-0.1**
SPX	**San Pedro Mart**	**1.25**	**184**	*e*P	**Pg**	**20 57 03.0**	**+0.1**
SPX	**San Pedro Mart**	**1.25**	**184**	*e*Pn	**Pg**	**20 57 02.8**	**-0.1**
SPX				*e*Sn	**Sg**	**20 57 19.2**	**-0.1**
SPX	**San Pedro Mart**	**1.25**	**184**	*e*P	**Pg**	**20 57 02.8**	**-0.1**
SPX				*e*S	**Sg**	**20 57 19.2**	**-0.1**
PBX	**Punta Banda**	**1.29**	**245**	*e*P	**Pg**	**20 57 03.0**	**-0.5**
BC3	**Big Chuckawall**	**1.36**	**356**	S	**Sn**	**20 57 18.9**	**-2.0**
	baz=177						
EML	**El Monte Cty P**	**1.39**	**296**	*e*Pn	**Pg**	**20 57 05.9**	**+0.4**
EML				*e*Sn	**Sg**	**20 57 22.9**	**-0.7**
113A	**Mohawk Valley,**	**1.42**	**70**	*e*Pn	**Pb**	**20 57 04.4**	**-0.4**
DPP	**Dos Picos Cty**	**1.51**	**298**	*e*Pn	**Pg**	**20 57 07.3**	**-0.4**
DPP				*e*Sn	**Sg**	**20 57 26.3**	**-1.1**
HWB	**Hans Werner Br**	**1.54**	**299**	*e*Pn	**Pg**	**20 57 08.2**	**-0.1**
HWB				*e*Sn	**Sb**	**20 57 26.9**	**+0.7**
FRD	**Ford Ranch, An**	**1.59**	**319**	*e*Sn	**Sg**	**20 57 29.4**	**-0.5**
109C	**Camp Elliot, M**	**1.59**	**292**	Sb	**Sb**	**20 57 28.6**	**+0.9**
	baz=112						
CPE	**Camp Elliot**	**1.59**	**292**	*e*Pn	**Pb**	**20 57 06.9**	**-0.9**
CPE				*e*Sn	**Sg**	**20 57 28.6**	**-1.4**
PFO	**Pinyon Flats O**	**1.61**	**325**	P	**Pn**	**20 57 05.9**	**-0.7**
	baz=145,SNR=9.4						
PFO				S	**Sn**	**20 57 25.5**	**-1.6**
	baz=145						
PFO	**Pinyon Flats O**	**1.61**	**325**	*e*Pn	**Pn**	**20 57 06.3**	**-0.3**
Y12C	**Blythe**	**1.61**	**25**	*e*Pn	**Pg**	**20 57 11.9**	**+2.3**
CRY	**Cary Ranch**	**1.72**	**318**	*e*Pn	**Pg**	**20 57 11.4**	**-0.3**
CRY				*e*Sn	**Sg**	**20 57 33.6**	**-0.5**
IRM	**Iron Mountain**	**1.86**	**5**	Sb	**Sg**	**20 57 37.9**	**-0.7**
	baz=186						
BACC	**Bachelor Mtn.**	**1.93**	**313**	*e*Pn	**Pg**	**20 57 15.1**	**-0.6**
DGR	**Domenigoni Val**	**1.94**	**315**	*e*Pn	**Pg**	**20 57 15.9**	**+0.1**
DGR				*e*Sn	**Sg**	**20 57 39.8**	**-1.2**
HMTC	**Hemet**	**1.98**	**316**	*e*Pn	**Pg**	**20 57 16.7**	**+0.1**
HMTC				*e*Sn	**Sg**	**20 57 41.0**	**-1.3**
MURC	**Murrieta**	**2.02**	**310**	P	**Pn**	**20 57 11.8**	**-0.4**
	baz=130,SNR=10.0						
MURC				Sb	**Sg**	**20 57 41.8**	**-1.9**
	baz=130						
214A	**Organ Pipe Nat**	**2.18**	**98**	P	**Pn**	**20 57 14.1**	**-0.3**
	baz=279						
214A	**Organ Pipe Nat**	**2.18**	**98**	*e*P	**Pn**	**20 57 14.5**	**0.0**
214A				*i* S	**Sn**	**20 57 39.8**	**-1.4**
DANC	**Danby, Needles**	**2.33**	**359**	*e*Pn	**Pb**	**20 57 21.7**	**+1.3**
CRNC	**Corona**	**2.43**	**311**	*e*Pn	**Pg**	**20 57 25.5**	**+0.2**
GMRC	**Granite Mounta**	**2.49**	**354**	*e*Pn	**Pn**	**20 57 19.6**	**+0.8**
GMRC				*e*Pg	**Pb**	**20 57 23.5**	**+0.3**
BFSC	**Mount Baldy Ra**	**2.73**	**316**	Sb	**Sb**	**20 58 03.1**	**+2.4**
	baz=135						
SCI2	**San Clemente I**	**2.78**	**285**	Sb	**Sb**	**20 58 04.0**	**+2.2**
	baz=104						
CIS	**Catalina Islan**	**2.80**	**294**	Sb	**Sb**	**20 58 04.4**	**+1.8**
	baz=113						
RPV	**Rancho Palos V**	**2.94**	**300**	*e*Sn	**Sn**	**20 58 02.6**	**+2.7**
MWC	**Mount Wilson**	**2.97**	**311**	*e*Pn	**Pb**	**20 57 33.2**	**+1.9**
PASC	**Pasadena Art C**	**3.02**	**309**	*e*Pn	**Pn**	**20 57 25.7**	**-0.2**
LRRC	**Littlerock Res**	**3.15**	**316**	*e*Pn	**Pn**	**20 57 24.6**	**-3.1**
SBI	**Santa Barbara**	**3.31**	**292**	*e*Pn	**Pb**	**20 57 39.2**	**+2.2**
SBI				*e*Pg	**Pg**	**20 57 41.1**	**-1.0**
EDW2	**Edwards Air Fo**	**3.39**	**320**	Sb	**Sb**	**20 58 23.0**	**+3.5**
	baz=139						
FURC	**Furnace Creek,**	**4.34**	**344**	*e*Sn	**Sn**	**20 58 35.0**	**+0.6**
BAKC	**Calstate**	**4.36**	**315**	*e*Pg	**Pb**	**20 57 53.2**	**-1.7**
CWC	**Cottonwood Cre**	**4.71**	**332**	*e*Lg	Lg	20 59 13.6	
PSNM	**Stone Corral**	**5.38**	**312**	*e*Pg	**Pg**	**20 58 19.3**	**-2.4**
MCDM	**Chidago Canyon**	**5.82**	**335**	*e*Sn	**Sn**	**20 59 08.7**	**-2.3**
MMSM	**Mammoth Summit**	**6.12**	**331**	*e*Sn	**Sn**	**20 59 23.5**	**+4.8**

*ISCJB **14** 21:07:13.9±0.7, 44°.00N±0°.05×105°.50W±0°.08, h0km, mb3.7/1, Error ellipse: s-maj=8.3km s-min=6.8km az=176.2*
*NEIC **14** 21:07:15.1±0.9, 44°.02N×105°.45W, h0km, ML3.3, Error ellipse: s-maj=13.0km s-min=11.2km az=189.0, Suspected Mining explosion.*
NEIC 31 km [19 miles] S of Gillette.
*IDC **14** 21:07:17.0±1.0, 43°.97N×105°.55W, h0km, mb3.7/1, mb1 3.7/5, mb1mx3.4/65, mbtmp3.4/5, ML3.4/4, Error ellipse: s-maj=23.6km s-min=8.6km az=149.0*
ISC 14 21:07:15.7±0.8, 44°.01N±0°.05×105°.51W±0°.05, h0km, n15, σ1§52/21, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLMT	**Red Lodge**	**2.91**	**294**	*e*Pn	**Pn**	**21 08 02.0**	**-1.3**
RLMT				*e*Pg	**Pb**	**21 08 08.3**	**-0.5**
RLMT				*e*Sg	**Sb**	**21 08 44.3**	**-0.4**
PDAR	**Pinedale Array**	**3.20**	**249**	Pn	**Pb**	**21 08 10.0**	**-3.5**
	4.0nm,0.3s,baz=70,slow=16,SNR=25						
PDAR				Pg	**Pg**	**21 08 19.4**	**+2.4**
	11nm,0.3s,baz=70,slow=21,SNR=25						
PDAR				Lg	Lg	21 08 54.4	
	18nm,0.3s,baz=66,slow=33,SNR=7.9						
BW06	**Boulder Array**	**3.20**	**249**	*e*Pn	**Pn**	**21 08 07.1**	**-0.3**
BW06				*e*Sg	**Sb**	**21 08 54.5**	**+1.3**
OGNE	**Ogallala**	**4.00**	**139**	*e*Pn	**Pn**	**21 08 16.6**	**-1.6**
ISCO	**Idaho Springs**	**4.21**	**181**	*e*Pn	**Pn**	**21 08 20.1**	**-1.3**
ISCO				*e*Sn	**Sn**	**21 09 11.2**	**-0.2**
AHID	**Auburn Hatcher**	**4.26**	**255**	*e*Pn	**Pn**	**21 08 22.5**	**+0.6**
AHID				*e*Pg	**Pg**	**21 08 36.9**	**-0.4**
O20A	**White River Ci**	**4.37**	**209**	*e*Pn	**Pn**	**21 08 23.2**	**-0.3**
O20A				*e*Pb	**Pb**	**21 08 32.9**	**-0.6**
O20A				*e*Sn	**Sn**	**21 09 12.7**	**-2.6**
BOZ	**Bozeman (W)**	**4.63**	**292**	*e*Pn	**Pn**	**21 08 25.4**	**-1.7**
HWUT	**Hardware Ranch**	**5.06**	**244**	*e*Pn	**Pn**	**21 08 33.0**	**+0.1**
	9.9nm,0.5s						
HLID	**Hailey**	**6.46**	**269**	*e*Pn	Pn	21 08 46.3	-5.8
ULM	**Lac du Bonnet**	**9.06**	**43**	Pn	**Pn**	**21 09 27.6**	**0.0**
	1.1nm,0.3s,baz=236,slow=11,SNR=8.6						
I56US	**NEWPORT INFRAS**	**9.12**	**302**	*i*		22 05 50.0	
	baz=114,slow=320,SNR=1.2						
TXAR	**Lajitas Array**	**14.72**	**174**	Pn	**Pn**	**21 10 46.9**	**+1.7**
	0.1nm,0.3s,baz=358,slow=20,SNR=3.8						
YKA	**Yellowknife Ar**	**19.26**	**347**	P	**Pn**	**21 11 43.7**	**+1.3**
	0.1nm,0.3s,baz=159,slow=12,SNR=2.9						
MKAR	**Makanchi Array**	**89.32**	**355**	P	**P**	**21 20 14.3**	**+0.6**
	0.3nm,0.7s,baz=0.8,slow=3.4,SNR=3.8						

*ISCJB **14** 21:28:48.6±0.3, 50°.00N±0°.02×17°.16E±0°.02, h3km±4km, Error ellipse: s-maj=3.4km s-min=2.3km az=19.4*
*IPEC **14** 21:28:49.9±0.1, 50°.02N×17°.18E, h2km, ML2.3/7, Error ellipse: s-maj=0.4km s-min=0.4km az=30.0*
*CSEM **14** 21:28:49.3±0.1, 50°.01N×17°.18E, h5km, ML3.1/10, Error ellipse: s-maj=3.4km s-min=2.3km az=16.0*
ISC 14 21:28:49.8±0.8, 50°.02N±0°.02×17°.19E±0°.01, h10km±6km, n54, σ0§78/105, 17C-2D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANAC	**Anensky vrch**	**0.13**	**67**	⇑*i*Pg	**Pg**	**21 28 52.9**	**0.0**
ANAC				*e*Sg	**Sg**	**21 28 54.8**	**-0.3**
	534nm,0.1s						
ANAC	**Anensky vrch**	**0.13**	**67**	⇑*i*Pg	**Pg**	**21 28 52.9**	**0.0**
	baz=248						
ANAC				*e*Sg	**Sg**	**21 28 54.8**	**-0.3**
	534nm,0.1s,baz=248						
MUTC	**Mutkov**	**0.23**	**165**	⇓*i*Pg	**Pg**	**21 28 54.5**	**0.0**
MUTC				*e*Sg	**Sg**	**21 28 57.5**	**-0.3**
MUTC	**Mutkov**	**0.23**	**165**	⇓*i*Pg	**Pg**	**21 28 54.5**	**0.0**
	baz=344						
MUTC				*e*Sg	**Sg**	**21 28 57.5**	**-0.3**
	baz=344						
KRLC	**Kraliky**	**0.27**	**282**	⇑*i*PG	**Pg**	**21 28 55.0**	**-0.3**
KRLC				*e*SG	**Sg**	**21 28 58.5**	**-0.4**
	comp=Z,44nm,0.2s						
KRLC	**Kraliky**	**0.27**	**282**	Pg	**Pg**	**21 28 55.0**	**-0.3**
KRLC				Sg	**Sg**	**21 28 58.5**	**-0.4**
	44nm,0.2s						
MORC	**Moravsky Berou**	**0.34**	**137**	⇑*i*Pg	**Pg**	**21 28 56.2**	**-0.2**
MORC				*e*Sg	**Sg**	**21 29 00.5**	**-0.4**
	84nm,0.1s						
MORC	**Moravsky Berou**	**0.34**	**137**	⇑*i*PG	**Pg**	**21 28 56.3**	**-0.2**
MORC				*e*SG	**Sg**	**21 29 00.6**	**-0.4**
MORC	**Moravsky Berou**	**0.34**	**137**	⇑*i*Pg	**Pg**	**21 28 56.2**	**-0.2**
	baz=316						
MORC				*e*Sg	**Sg**	**21 29 00.5**	**-0.4**
	84nm,0.1s,baz=316						
OKC	**Ostrava-Krasne**	**0.65**	**106**	⇑*e*PG	**Pg**	**21 29 02.1**	**-0.2**
OKC				*e*SG	**Sg**	**21 29 10.4**	**-0.3**
	comp=Z,55nm,0.4s						
OKC	**Ostrava-Krasne**	**0.65**	**106**	Pg	**Pg**	**21 29 02.1**	**-0.2**
OKC				Sg	**Sg**	**21 29 10.4**	**-0.3**
	55nm,0.4s						
DPC	**Dobruska-Polom**	**0.65**	**301**	*e*PG	**Pg**	**21 29 02.3**	**0.0**
DPC				*e*SG	**Sg**	**21 29 10.6**	**-0.2**
	comp=Z,28nm,0.2s						
**D

CLL	**Collm**	**2.96 297**	*e*Pn	**Pn**	**21 29 37.0**	**+0.2**
CLL			*e*Pg	**Pg**	**21 29 47.0**	**+0.6**
CLL			*e*Sg	**Sg**	**21 30 22.0**	**-2.8**
	comp=Z,11nm,0.4s					
ARSA	**Arzberg**	**2.99 202**	*i* Pn	**Pb**	**21 29 43.0**	**0.0**
	comp=Z,1.1nm,0.3s					
ARSA			*i* Sg	**Sg**	**21 30 24.1**	**-1.5**
	comp=Z,3.0nm,0.3s					
NKC	**Novy Kostel**	**3.06 276**⇑	*e*SG	**Sg**	**21 30 25.9**	**-2.1**
	comp=Z,11nm,0.4s					
NKC	**Novy Kostel**	**3.06 276**	Sg	**Sg**	**21 30 25.9**	**-2.1**
	comp=Z,11nm,0.4s					

IDC ***14*** *21:51:24.1±0.3, 42°.20N×84°.30E, h0km, mb5.1/60, mb1 5.2/67, mb1mx5.2/76, mbtmp5.1/67, ML4.5/7, MS4.7/58, Ms1 4.7/58, ms1mx4.7/75, Error ellipse: s-maj=7.8km s-min=5.9km az=37.0*

ISCJB ***14*** *21:51:24.9±0.6, 42°.17N±0°.01×84°.27E±0°.02, h15km±4km, mb5.3/309, MS5.0/185, Error ellipse: s-maj=2.6km s-min=1.9km az=23.8*

NNC ***14*** *21:51:25.7±1.6, 42°.17N×84°.32E, h4km±6km, mb5.7, mpv5.4, Error ellipse: s-maj=12.2km s-min=6.7km az=138.0*

MOS ***14*** *21:51:25.1±0.9, 42°.20N×84°.27E, h16km, mb5.6/125, MS5.0/63, Error ellipse: s-maj=4.5km s-min=3.0km az=134.0*

BJI ***14*** *21:51:25.9, 42°.17N×84°.22E, h10km, mb5.1/65, mB5.3/40, ML5.6/10, Ms5.3/73, Ms7 5.2/64*

GCMT ***14*** *21:51:26.3±0.1, 42°.21N×84°.21E, h27km, MW5.3/108, Moment Tensor Solution. s89,c134; s108,c208; Duration: 1§1 Moment tensor: Scale 10^17^Nm; Mrr0.98±.02; Mθθ-1.01±.01; Mφφ0.02±.01; Mrθ0.09±.02; Mθφ-0.20±.01; Mφr-0.16±.03; Best double couple: M0 1.03000×10^17^ NP1:φs89.00000°, δ47.00000°, λ104.00000°. NP2:φs249.00000°, δ44.00000°, λ75.00000°. Principal axes: T 1.0110, Plg80.0000°, Azm71.0000°; N 0.0330, Plg10.0000°, Azm260.0000°; P -1.0490, Plg2.0000°, Azm170.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***14*** *21:51:26.3±1.0, 42°.17N×84°.28E, h13km±6km, mb5.4/134, MS5.1/99, MW5.2 Error ellipse: s-maj=2.4km s-min=1.9km az=192.0, Moment Tensor Solution. s24 Moment tensor: Scale 10^16^Nm; Mrr6.66; Mθθ-6.91; Mφφ0.25; Mrθ-1.10; Mθφ2.03; Mφr-0.65; Best double couple: M0 7.20000×10^16^ NP1:φs276.00000°, δ49.00000°, λ79.00000°. NP2: φs113.00000°, δ42.00000°, λ103.00000°. Principal axes: T 6.8600, Plg81.0000°, Azm127.0000°; N 0.6500, Plg8.0000°, Azm284.0000°; P -7.5100, Plg4.0000°, Azm14.0000°;*

NEIC Felt strongly at Korla, Luntai and Yangxiazhen. Also felt at Shihezi and Urumqi.

SOME ***14*** *21:51:28.7, 43°.13N×84°.13E, h10km, MS5.2*

ISC 14 21:51:27.3±0.3, 42°.26N±0°.03×84°.21E±0°.02, h20km±1km, h20km:pP-P, n1275, σ1§52/1349, mb5.4/327, MS5.1/206, 135C-46D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**3.00**	**57**	Pn	**Pb**	**21 52 17.8**	**-2.3**
WMQ				Sg	**Sg**	**21 53 00.9**	**-2.7**
WMQ				LR	LR		
	comp=N,137μm,7.3s						
WMQ				LR	LR		
	comp=E,64μm,6.1s						
WMQ				LR	LR		
	comp=Z,36μm,14.1s						
SHLS	**Shalkode**	**3.61**	**286**	*e*P	**Pb**	**21 52 26.7**	**-3.9**
	5μm,0.7s						
SHLS				*e*S	**Sb**	**21 53 11.9**	**-2.1**
	34μm,0.8s						
PDGK	**Podgornoye**	**3.63**	**289**	⇓Pn	**Pn**	**21 52 24.8**	**+2.2**
	563nm,0.7s						
PDGK				⇓Pg	**Pb**	**21 52 33.8**	**+2.9**
	4μm,1.0s						
PDGK				⇑Lg	Lg	21 53 23.3	
	25μm,0.9s						
PDGK	**Podgornoye**	**3.63**	**289**	P	**Pn**	**21 52 24.8**	**+2.2**
PDGK				pmax	pmax		
	comp=Z,563nm,0.7s						
DJR	**Jarkent**	**3.83**	**304**	*e*P	**Pb**	**21 52 30.7**	**-3.6**
	comp=Z,4μm,0.7s						
DJR				*e*S	**Sb**	**21 53 19.1**	**-1.3**
	comp=Z,6μm,0.5s						
UZB	**Uzynbulak**	**3.92**	**285**	*e*P	**Pb**	**21 52 35.4**	**-0.5**
	comp=Z,438nm,0.4s						
UZB				*e*S	**Sb**	**21 53 27.6**	**+4.5**
	comp=Z,8μm,0.9s						
KPKS	**Kokpek**	**4.24**	**288**	*e*P	**Pb**	**21 52 41.5**	**+0.3**
	comp=Z,2μm,0.7s						
KPKS				*e*S	**Sg**	**21 53 38.7**	**-4.7**
	comp=Z,16μm,0.9s						
PRZ	**Przheval'sk**	**4.31**	**275**	*e*Pn	**Pn**	**21 52 34.9**	**+3.0**
PRZ	**Przheval'sk**	**4.31**	**275**	*e*P	**Pn**	**21 52 34.9**	**+3.0**
ZHN	**Zhinishke**	**4.35**	**284**	*e*P	**Pb**	**21 52 44.6**	**+1.5**
	comp=Z,817nm,0.7s						
ZHN				*e*S	**Sg**	**21 53 43.7**	**-3.3**
	comp=Z,9μm,0.7s						
SATY	**Saty**	**4.35**	**283**	*e*P	**Pb**	**21 52 45.1**	**+1.9**
	comp=Z,3μm,0.8s						
SATY				*e*S	**Sg**	**21 53 44.4**	**-2.7**
	comp=Z,10μm,0.8s						
KURS	**Kuram**	**4.61**	**288**	*e*P	**Pb**	**21 52 50.1**	**+2.6**
	comp=Z,301nm,0.8s						
KURS				*e*S	**Sg**	**21 53 53.9**	**-1.2**
	comp=Z,6μm,0.8s						
KAPS	**Kapalarasan**	**4.64**	**312**	*e*P	Pb	21 52 42.4	-5.7
	comp=Z,1μm,0.8s						
KAPS				*e*S	**Sb**	**21 53 39.5**	**-4.0**
	comp=Z,2μm,0.5s						
MK01	**Makanchi Array**	**4.71**	**344**	*e*Pn	**Pn**	**21 52 39.5**	**+2.2**
MK31	**Makanchi Array**	**4.74**	**344**	⇓Pn	**Pn**	**21 52 39.8**	**+2.1**
	comp=Z,148nm,0.7s,baz=90,slow=9.4,SNR=3.2						
MK31				⇑Pg	**Pg**	**21 52 54.6**	**-3.4**
	comp=Z,668nm,0.5s,baz=161,slow=16,SNR=27						
MK31				⇑Lg	Lg	21 53 59.0	
	comp=Z,5μm,0.7s,baz=166,slow=27,SNR=13						
MK31	**Makanchi Array**	**4.74**	**344**	*e*Pn	**Pn**	**21 52 40.2**	**+2.5**
MK31	**Makanchi Array**	**4.74**	**344**	*e*P	**Pn**	**21 52 40.2**	**+2.5**
MKAR	**Makanchi Array**	**4.74**	**344**	Pn	**Pn**	**21 52 40.2**	**+2.5**
	comp=Z,21nm,0.3s,baz=163,slow=13,SNR=331						
MKAR				Pg	**Pg**	**21 52 55.3**	**-2.8**
	comp=Z,335nm,0.3s,baz=162,slow=16,SNR=58						
MKAR				Sn	**Sn**	**21 53 35.5**	**+3.4**
	comp=Z,258nm,0.3s,baz=151,slow=24,SNR=5.3						
MKAR				Lg	Lg	21 53 57.1	
	comp=Z,1μm,0.3s,baz=177,slow=28,SNR=8.2						
MKAR				LR	LR	21 54 48.4	
	comp=Z,23μm,19.1s,baz=164,slow=42						
MAKZ	**Makanchi**	**4.82**	**341**	⇓Pn	**Pn**	**21 52 41.8**	**+3.0**
	comp=Z,159nm,0.7s						
MAKZ				⇑Pg	**Pg**	**21 52 56.0**	**-3.7**
	comp=Z,2μm,0.8s						
MAKZ				⇑Lg	Lg	21 54 00.7	
	comp=Z,7μm,1.1s						
MAKZ	**Makanchi**	**4.82**	**341**	*e*Pn	**Pn**	**21 52 41.3**	**+2.5**
MAKZ	**Makanchi**	**4.82**	**341**	*e*P	**Pn**	**21 52 41.3**	**+2.5**
TDK	**Taldyqorghan**	**5.03**	**305**	*e*P	**Pb**	**21 52 51.5**	**-3.1**
	comp=Z,8μm,0.8s						
TDK				*e*S	**Sb**	**21 53 56.0**	**+1.4**
	comp=Z,22μm,0.9s						
ARXS	**Arharly**	**5.05**	**295**	*e*P	**Pb**	**21 52 55.1**	**-0.1**
	comp=Z,732nm,0.4s						
ARXS				*e*S	**Sg**	**21 54 02.8**	**-6.7**
	comp=Z,8μm,0.9s						
ZSN	**Zaisan**	**5.21**	**5**	*e*P	**Pn**	**21 52 47.2**	**+3.0**
	comp=Z,254nm,0.8s						
ZSN				*e*S	**Sn**	**21 53 48.3**	**+4.5**
	comp=Z,5μm,0.8s						
MDOK	**Medeo**	**5.35**	**282**	⇑Pn	**Pn**	**21 52 48.0**	**+1.8**
	comp=Z,92nm,0.7s						
MDOK				⇑Pg	**Pg**	**21 53 05.2**	**-4.5**
	comp=Z,1μm,0.8s						
MDOK				⇓Sn	**Sn**	**21 53 52.7**	**+5.3**
	comp=Z,2μm,0.8s						
MDOK				⇓Lg	Lg	21 54 18.0	
	comp=Z,5μm,1.0s						
MDOK	**Medeo**	**5.35**	**282**	*e*P	**Pb**	**21 53 00.9**	**+0.6**
	comp=Z,238nm,0.6s						
MDOK				*e*S	**Sg**	**21 54 12.8**	**-6.3**
	comp=Z,3μm,0.8s						
TNSS	**Tian-Shan**	**5.41**	**281**	*e*P	**Pb**	**21 53 01.7**	**+0.2**
	comp=Z,301nm,0.3s						
TNSS				*e*S	**Sg**	**21 54 13.8**	**-7.2**
	comp=Z,4μm,0.8s						
KNDC	**Almaty**	**5.42**	**283**	⇑Pn	**Pn**	**21 52 49.7**	**+2.6**
	comp=Z,180nm,0.7s						
KNDC				⇑Pg	**Pg**	**21 53 06.9**	**-4.2**
	comp=Z,1μm,0.8s						
KNDC				⇑Lg	Lg	21 54 20.3	
	comp=Z,6μm,1.1s						
AAA	**Alma-Ata**	**5.46**	**283**	*e*P	**Pn**	**21 52 50.3**	**+2.7**
AAA				*e*S	**Sn**	**21 53 55.0**	**+5.2**
AAA				pmax	pmax		
	comp=Z,138nm,0.3s						
AAA				smax	smax		
	comp=N,2μm,1.0s						
CHKK	**Chushkaly**	**5.53**	**289**	*e*P	**Pb**	**21 53 05.4**	**+2.3**
	comp=N,214nm,0.7s						
CHKK				*e*S	**Sg**	**21 54 21.0**	**-3.6**
	comp=N,3μm,0.7s						
IZV	**Izvestkoviy**	**5.66**	**280**	*e*P	**Pb**	**21 53 09.7**	**+4.3**
	comp=N,958nm,0.5s						
IZV				*e*S	**Sg**	**21 54 29.1**	**+0.3**
	comp=N,3μm,0.5s						
KTBS	**Karatobe**	**5.71**	**287**	*e*P	**Pb**	**21 53 09.2**	**+2.9**
	comp=N,502nm,0.6s						
KTBS				*e*S	**Sg**	**21 54 27.9**	**-2.6**
	comp=N,3μm,0.8s						
ULHL	**Ulahol**	**5.91**	**273**	P	**Pn**	**21 52 55.6**	**+1.6**
	SNR=76						
KUU	**Kurty**	**5.99**	**289**	*e*P	**Pb**	**21 53 12.4**	**+1.4**
	comp=N,166nm,0.4s						
KUU				*e*S	**Sg**	**21 54 33.6**	**-5.8**
	comp=N,3μm,0.9s						
NRN	**Naryn**	**6.18**	**265**	*e*Pn	**Pn**	**21 52 58.6**	**+0.9**
NRN	**Naryn**	**6.18**	**265**	*e*P	**Pn**	**21 52 58.7**	**+0.9**
DGS	**Degeres**	**6.29**	**282**	*e*P	Pg	21 53 22.6	-5.1
	comp=N,782nm,0.6s						
DGS				*e*S	**Sg**	**21 54 51.0**	**+2.0**
	comp=N,3μm,0.8s						
TKM2	**Tokmak 2**	**6.39**	**279**	⇑Pn	**Pn**	**21 53 02.7**	**+2.1**
	comp=N,85nm,0.3s						
TKM2				⇑Sn	**Sn**	**21 54 18.9**	**+5.9**
	comp=N,2μm,0.8s						
TKM2				⇑Lg	Lg	21 54 51.4	
	comp=N,3μm,0.8s						
TKM2	**Tokmak 2**	**6.39**	**279**	P	**Pn**	**21 53 02.6**	**+2.1**
	SNR=470						
TKM2	**Tokmak 2**	**6.39**	**279**	P	**Pn**	**21 53 02.7**	**+2.1**
TKM2				S	**Sn**	**21 54 18.9**	**+5.9**
TKM2				pmax	pmax		
	comp=Z,85nm,0.4s						
TKM2				smax	smax		
	comp=N,2μm,0.8s						
KZA	**Kyzart**	**6.66**	**271**	P	**Pn**	**21 53 06.1**	**+1.6**
	SNR=134						
KSH	**Kashi**	**6.81**	**249**	Pn	Pn	21 53 13.5	+7.2
KSH				Sn	Sn	21 54 34.0	+11
KSH				LR	LR		
	comp=N,18μm,5.1s						
KSH				LR	LR		
	comp=N,17μm,3.1s						
KBK	**Karagaybulak**	**6.86**	**276**	P	**Pn**	**21 53 08.7**	**+1.7**
	SNR=254						
CHMS	**Chumysh**	**7.01**	**279**	P	**Pn**	**21 53 10.3**	**+1.3**
	SNR=33						
FRU	**Bishkek**	**7.11**	**278**	*e*P	**Pn**	**21 53 11.5**	**+1.3**
UCH	**Uchtor**	**7.20**	**273**	P	**Pn**	**21 53 13.6**	**+1.8**
	SNR=42						
AAK	**Ala-Archa**	**7.20**	**276**	Pn	**Pn**	**21 53 13.7**	**+2.2**
	comp=N,11nm,0.3s,baz=91,slow=8.2,SNR=64						
AAK				Sn	**Sn**	**21 54 34.9**	**+2.1**
	comp=N,30nm,0.3s,baz=53,slow=13,SNR=2.1						
AAK				Lg	Lg	21 55 17.5	
	comp=N,53nm,0.3s,baz=219,slow=21,SNR=6.2						
AAK	**Ala-Archa**	**7.20**	**276**	⇑Pn	**Pn**	**21 53 15.5**	**+3.9**
	comp=N,209nm,1.0s						
AAK				⇑Pg	Pb	21 53 37.9	+6.3
	comp=N,322nm,0.7s						
AAK				⇓Lg	Lg	21 55 17.1	
	comp=N,2μm,1.1s						
AAK	**Ala-Archa**	**7.20**	**276**	P	**Pn**	**21 53 13.3**	**+1.7**
	SNR=42						
AAK	**Ala-Archa**	**7.20**	**276**	*e*Pn	**Pn**	**21 53 13.3**	**+1.7**
AAK				Sn	**Sn**	**21 54 34.9**	**+2.1**
AAK	**Ala-Archa**	**7.20**	**276**	P	**Pn**	**21 53 13.1**	**+1.6**
	SNR=19						
AAK	**Ala-Archa**	**7.20**	**276**	*i* P	**Pn**	**21 53 14.0**	**+2.5**
	SNR=18						
AAK	**Ala-Archa**	**7.20**	**276**	*d* iP	**Pn**	**21 53 13.5**	**+2.0**
USP	**Ospenovka**	**7.22**	**281**	P	**Pn**	**21 53 13.3**	**+1.6**
	SNR=84						
EKS2	**Erkin-Say**	**7.72**	**277**	P	**Pn**	**21 53 20.6**	**+1.8**
	SNR=40						
AML	**Almayashu**	**7.81**	**273**	P	**Pn**	**21 53 22.2**	**+2.0**
	SNR=38						
SFK	**Sufi-Kurgan**	**8.38**	**258**	⇓Pn	**Pn**	**21 53 29.6**	**+1.7**
	comp=N,103nm,1.0s						
SFK				⇓Pg	Pb	21 54 01.1	+9.2
	comp=N,201nm,1.0s						
SFK				⇓Lg	Lg	21 55 54.7	
	comp=N,720nm,1.1s						
SFK	**Sufi-Kurgan**	**8.38**	**258**	P	**Pn**	**21 53 29.6**	**+1.7**
SFK				pmax	pmax		
	comp=Z,103nm,1.0s						
MNAS	**Manas**	**8.67**	**275**	⇑Pn	**Pn**	**21 53 33.4**	**+1.6**
	comp=Z,35nm,0.6s						
MNAS				⇑Pg		21 54 06.1	
	comp=Z,140nm,0.9s						
MNAS				⇓Lg	Lg	21 56 04.2	
	comp=Z,738nm,1.1s						
MNAS	**Manas**	**8.67**	**275**	P	**Pn**	**21 53 33.4**	**+1.6**
MNAS				pmax	pmax		
	comp=Z,35nm,0.6s						
KURBB	**Kurchatov Arra**	**9.24**	**337**	Pn	**Pn**	**21 53 39.9**	**+0.5**
	comp=Z,1.7nm,0.3s,baz=152,slow=13,SNR=75						
KURBB				Sn	**Sn**	**21 55 22.8**	**+0.2**
	comp=Z,8.5nm,0.3s,baz=157,slow=28,SNR=4.7						
KURBB				Lg	Lg	21 56 20.0	
	comp=Z,15nm,0.3s,baz=156,slow=30,SNR=6.0						
KURBB	**Kurchatov Arra**	**9.24**	**337**	⇓Pn	**Pn**	**21 53 43.6**	**+4.2**
	comp=Z,113nm,0.6s						
KURBB				⇑Lg	Lg	21 56 20.9	
	comp=Z,5μm,0.8s						
KURK	**Kurchatov**	**9.29**	**337**	⇑Pn	**Pn**	**21 53 41.4**	**+1.3**
	comp=Z,128nm,1.0s						
KURK				⇑Lg	Lg	21 56 23.9	
	comp=Z,2μm,0.9s						
KURK	**Kurchatov**	**9.29**	**337**	*e*Pn	**Pn**	**21 53 40.5**	**+0.4**
KURK				Sn	**Sn**	**21 55 22.8**	**-1.2**
KURK	**Kurchatov**	**9.29**	**337**	*ce*P	**Pn**	**21 53 40.3**	**+0.2**
KURK				pmax	pmax		
	comp=Z,16nm,0.7s						
KK31	**Karatay Array**	**10.12**	**279**	⇓Pn	**Pn**	**21 53 53.1**	**+1.6**
	comp=Z,29nm,0.8s,baz=103,slow=11,SNR=236						
KK31				⇑Pg		21 54 32.2	
	comp=Z,98nm,0.9s,baz=85,slow=16,SNR=6.5						
KK31				⇑Lg	Lg	21 56 49.6	
	comp=Z,203nm,0.7s,baz=79,slow=27,SNR=4.7						
KK31	**Karatay Array**	**10.12**	**279**	*e*Pn	**Pn**	**21 53 52.7**	**+1.2**
KK31	**Karatay Array**	**10.12**	**279**	*e*P	**Pn**	**21 53 52.7**	**+1.2**
KKAR	**Karatay Array**	**10.12**	**279**	*e*Pn	**Pn**	**21 53 52.7**	**+1.2**
KKAR	**Karatay Array**	**10.12**	**279**	*e*P	**Pn**	**21 53 52.7**	**+1.2**
OTUK	**Ortayu**	**10.29**	**310**	⇓Pn	**Pn**	**21 53 56.5**	**+2.7**
	comp=Z,130nm,1.2s						
OTUK				⇑Lg	Lg	21 56 55.2	
	comp=Z,2μm,1.3s						
OTUK	**Ortayu**	**10.29**	**310**	P	**Pn**	**21 53 56.5**	**+2.7**
OTUK				pmax	pmax		
	comp=Z,130nm,1.2s						
HVS	**Khovu-Aksy**	**11.01**	**33**	*c* iP	**Pn**	**21 54 05.5**	**+1.8**
TAS	**Tashkent**	**11.18**	**270**	P	**Pn**	**21 54 08.1**	**+2.1**
TAS				pmax	pmax		
	comp=Z,85nm,1.0s						
ZAA0	**Zalesovo Array**	**11.71**	**2**	⇑Pn	**Pn**	**21 54 14.7**	**+1.5**
	comp=Z,225nm,0.8s						
ZAA0				⇑Sn	**Sn**	**21 56 27.7**	**+4.6**
	comp=Z,244nm,0.8s						
ZAA0				⇑Lg	Lg	21 57 40.6	
	comp=Z,4μm,1.8s						
ZAA0	**Zalesovo Array**	**11.71**	**2**	*e*Pn	**Pn**	**21 54 12.7**	**-0.4**
ZALV	**Zalesovo Beam**	**11.71**	**2**	Pn	**Pn**	**21 54 12.7**	**-0.4**
	comp=Z,11nm,0.3s,baz=183,slow=14,SNR=98						
ZALV				Sn	**Sn**	**21 56 20.2**	**-2.9**
	comp=Z,33nm,0.3s,baz=181,slow=25,SNR=8.5						
ZALV				Lg	Lg	21 57 37.7	
	baz=197,slow=28,SNR=3.1						
ZALV				LR	LR	21 59 13.3	
	comp=Z,8μm,19.5s,baz=174,slow=40						
DHRM	**DHARAMSHALA**	**11.80**	**215**	*e*P	**Pn**	**21 54 12.8**	**-2.0**
DHRM				*e*S	Sn	21 56 15.4	-11
DHRM				IAML		21 58 28.4	
	comp=E,146nm,0.5s						
DHRM				IAML		21 58 31.4	
	comp=N,108nm,0.5s						
GTA	**Gaotai**	**12.16**	**98**	⇑P	**Pn**	**21 54 17.9**	**-1.6**
GTA				pP	P	21 54 25.3	-6.7
GTA				sP		21 54 28.3	
GTA				pmax	pmax		
	comp=N,50nm,1.4s						
GTA				pmax	pmax		
	comp=N,220nm,4.6s						
GTA				LR	LR		
	comp=N,9μm,8.1s						
GTA				LR	LR		
	comp=N,10μm,10.0s						
GTA				LR	LR		
	comp=N,13μm,13.1s						
CHCP	**Chirah Chowk**	**12.17**	**229**	P	**Pn**	**21 54 18.3**	**-1.2**
CHCP				S	**Sn**	**21 56 29.0**	**-5.6**
NIL	**Nilore**	**12.18**	**229**	*e*Pn	**Pn**	**21 54 18.2**	**-1.5**
	comp=N,617nm,0.6s						
NIL				*e*Sn	**Sn**	**21 56 32.4**	**-2.6**
NIL	**Nilore**	**12.18**	**229**	*e*P	**Pn**	**21 54 18.2**	**-1.5**
NIL				*e*		21 56 32.4	
NIL				pmax	pmax		
	comp=Z,617nm,0.6s						
SMLA	**Simla**	**12.45**	**209**	*e*P	**Pn**	**21 54 21.4**	**-2.1**
SMLA				*e*S	Sn	21 56 30.1	-11
SMLA				IAML		21 58 13.6	
	comp=N,9μm,1.4s						
SMLA				IAML		21 58 14.1	
	comp=E,295nm,0.7s						
NVS	**Novosibirsk**	**12.61**	**357**	*e*P	**Pn**	**21 54 25.2**	**-0.2**
NVS				*e*		21 56 42.9	
CEP	**Cherat**	**12.83**	**233**	P	**Pn**	**21 54 26.2**	**-2.5**
DDI	**Dehra Dun**	**12.89**	**205**	*e*P	**Pn**	**21 54 28.7**	**-0.9**
DDI				*e*S	Sn	21 56 42.6	-10
THW	**Thamme Wali**	**13.66**	**230**	P	**Pn**	**21 54 36.5**	**-3.5**
LSA	**Lhasa**	**13.72**	**154**	P	**Pn**	**21 54 43.3**	**+2.1**
LSA				pP	**P**	**21 54 51.8**	**+2.0**
LSA				pmax	pmax		
	comp=E,20nm,1.6s						
LSA				LR	LR		
	comp=E,5μm,14.3s						
LSA				LR	LR		
	comp=E,2μm,12.5s						
LSA				LR	LR		
	comp=E,13μm,13.7s						
LSA	**Lhasa**	**13.72**	**154**	*e*Pn	**Pn**	**21 54 38.5**	**-2.7**
	comp=E,66nm,1.0s						
LSA	**Lhasa**	**13.72**	**154**	*i* P	**Pn**	**21 54 43.6**	**+2.4**
	SNR=11						
LSA	**Lhasa**	**13.72**	**154**	*e*P	**Pn**	**21 54 38.5**	**-2.7**
LSA				pmax	pmax		
	comp=Z,66nm,1.0s						
SARP	**Sargodha**	**13.81**	**225**	P	**Pn**	**21 54 38.4**	**-3.6**
DANN	**Dangsing**	**13.88**	**182**	*e*P	**Pn**	**21 54 41.1**	**-2.1**
	comp=Z,184nm,0.5s						
KBL	**Kabul**	**14.15**	**242**	*e*Pn	**Pn**	**21 54 44.5**	**-2.4**
KBL	**Kabul**	**14.15**	**242**	*e*P	**Pn**	**21 54 44.5**	**-2.4**
PYUN	**Piuthan**	**14.16**	**184**	*e*P	**Pn**	**21 54 43.5**	**-3.4**
	comp=Z,162nm,0.7s						
BVA0	**Borovoye Array**	**14.21**	**324**	⇓Pn	**Pn**	**21 54 47.5**	**+0.1**
	comp=Z,180nm,1.5s,baz=135,slow=12,SNR=396						
BVA0				⇑Lg	Lg	21 58 58.0	
	comp=Z,4μm,1.6s						
BVAR	**Borovoye Array**	**14.21**	**324**	Pn	**Pn**	**21 54 47.6**	**+0.2**
	comp=Z,2.7nm,0.3s,baz=130,slow=13,SNR=100						
BVAR				Sn	**Sn**	**21 57 23.1**	**-1.2**
	comp=Z,3.3nm,0.3s,baz=131,slow=18,SNR=3.1						
BVAR				Lg	Lg	21 58 54.6	
	comp=Z,6.6nm,0.3s,baz=128,slow=26,SNR=3.4						
BVAR				LR	LR	22 00 28.7	
	comp=Z,16μm,18.2s,baz=132,slow=38						
GKN	**Gorkha**	**14.22**	**178**	*e*P	**Pn**	**21 54 45.9**	**-1.9**
	comp=Z,130nm,0.4s						
BRVK	**Borovoye**	**14.28**	**324**	⇑Pn	**Pn**	**21 54 49.4**	**+1.2**
	comp=Z,168nm,0.8s						
BRVK				⇓Lg	Lg	21 59 01.9	
	comp=Z,1μm,1.7s						
BRVK	**Borovoye**	**14.28**	**324**	*e*Pn	**Pn**	**21 54 49.2**	**+0.9**
BRVK	**Borovoye**	**14.28**	**324**	*ce*P	**Pn**	**21 54 49.5**	**+1.2**
BRVK				pmax	pmax		
	comp=Z,16nm,0.6s						
GUN	**Gumba**	**14.38**	**174**	*e*P	**Pn**	**21 54 49.1**	**-1.0**
	comp=Z,566nm,0.8s						
KKN	**Kakani**	**14.46**	**176**	*e*P	**Pn**	**21 54 48.7**	**-2.4**
	comp=Z,209nm,0.7s						
KOLN	**Koldanda**	**14.46**	**182**	*e*P	**Pn**	**21 54 48.3**	**-2.8**
	comp=Z,135nm,0.6s						
DMN	**Daman**	**14.63**	**177**	*e*P	**Pn**	**21 54 52.4**	**-1.1**
	comp=Z,123nm,0.7s						
JIRN	**Jiri**	**14.65**	**173**	*e*P	**Pn**	**21 54 53.0**	**-0.8**
	comp=Z,432nm,0.4s						
PKIN	**Phulchoki**	**14.68**	**176**	*e*P	**Pn**	**21 54 51.5**	**-2.6**
	comp=Z,228nm,0.6s						
NDI	**New Delhi**	**14.68**	**205**	*e*P	**Pn**	**21 54 51.5**	**-2.4**
MOY	**Mondy**	**14.80**	**45**	*e*P	**Pn**	**21 54 57.0**	**+1.5**
MOY				pmax	pmax		
	comp=Z,245nm,2.4s						
TAPN	**Taplejung**	**15.14**	**168**	*e*P	**Pn**	**21 55 00.6**	**+0.2**
	comp=Z,174nm,0.6s						
GTK	**Tadong**	**15.33**	**165**	*e*P	**Pn**	**21 55 00.8**	**-1.8**
GTK				IAmb	IAmb	21 55 10.0	
	comp=Z,214nm,2.0s						
RAMN	**Ramite**	**15.39**	**172**	*e*P	**Pn**	**21 55 01.0**	**-2.6**
	comp=Z,188nm,0.4s						
ZAK	**Zakamensk**	**15.45**	**52**	*e*P	**Pn**	**21 55 04.4**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,192nm,1.2s						
ODAN	**Odare**	**15.58**	**169**	*e*P	**Pn**	**21 55 05.0**	**-1.0**
	comp=Z,202nm,0.5s						
TLY	**Talaya**	**16.23**	**48**	Pn	**Pn**	**21 55 14.8**	**+0.8**
	comp=Z,0.0nm,0.3s,baz=230,slow=7.8,SNR=42						
TLY				LR	LR	22 02 02.4	
	comp=Z,6μm,19.9s,baz=238,slow=39						
TLY	**Talaya**	**16.23**	**48**	*e*Pn	**Pn**	**21 55 14.7**	**+0.6**
	comp=

TEZP	**TEZPUR**	**17.12 153**	*e*P	**Pn**	**21 55 22.1**	**-3.3**
GUWA	**GUWAHATI**	**17.16 157**	*e*P	**Pn**	**21 55 23.5**	**-2.4**
JORH	**JORHAT**	**17.53 149**	*e*P	**Pn**	**21 55 25.9**	**-4.5**
JORH			IAmb	IAmb	21 55 32.5	
	comp=Z,140nm,0.3s					
SHL	**Shillong**	**17.81 157**	*e*P	**Pn**	**21 55 33.5**	**-0.7**
SHL			*e*P	**P**	**21 55 34.0**	**-0.8**
SHL			*i* S	**Sn**	**21 58 52.0**	**-0.2**
SHL	**Shillong**	**17.81 157**	*e*Pn	**Pn**	**21 55 32.6**	**-1.6**
	comp=Z,119nm,0.8s					
SHL	**Shillong**	**17.81 157**	*e*P	**Pn**	**21 55 32.6**	**-1.6**
SHL			pmax	pmax		
	comp=Z,119nm,0.8s					
MOKO	**MOKOCHONG**	**18.01 149**	*e*P	**Pn**	**21 55 35.6**	**-1.0**
AB31	**Akbulak array**	**18.27 301**	Pn	**Pn**	**21 55 38.7**	**-0.8**
	comp=Z,77nm,1.0s,baz=102,slow=11,SNR=266					
AB31			⇑Lg	Lg	22 01 09.0	
	comp=Z,862nm,1.6s					
AB31	**Akbulak array**	**18.27 301**	P	**Pn**	**21 55 38.7**	**-0.8**
AB31			pmax	pmax		
	comp=Z,77nm,1.0s					
ABKAR	**Akbulak array**	**18.27 301**	*e*P	**Pn**	**21 55 38.9**	**-0.7**
BOK	**Bokaro**	**18.46 175**	*e*P	**P**	**21 55 39.9**	**-2.0**
BOK			IAmb	IAmb	21 55 43.3	
	comp=Z,363nm,2.2s					
CD2	**Chengdu**	**19.31 120**	P	**Pn**	**21 55 51.8**	**-0.5**
CD2			sP	sP	21 55 57.8	-1.5
CD2			PP	**PnPn**	**21 56 08.8**	**+3.5**
CD2			S	**Sn**	**21 59 25.3**	**-2.9**
CD2			SS	**SnSn**	**21 59 48.3**	**+6.0**
CD2			pmax	pmax		
	comp=Z,100nm,1.2s					
CD2			pmax	pmax		
	comp=Z,1μm,7.0s					
CD2			LR	LR		
	comp=Z,7μm,12.0s					
CD2			LR	LR		
	comp=Z,8μm,11.0s					
BTO	**Baotou**	**19.41 86**	*e*P	**P**	**21 55 51.0**	**-1.2**
BTO			LR	LR		
	comp=Z,550nm,4.7s					
AKTO	**Aktyubinsk**	**19.77 303**	P	**P**	**21 55 56.4**	**+0.4**
	comp=Z,1.8nm,0.3s,baz=105,slow=11,SNR=46					
AKTO			S	**S**	**21 59 36.2**	**-1.5**
	baz=155,slow=24,SNR=2.3					
AKTO			Lg	Lg	22 01 54.3	
	comp=Z,0.2nm,0.3s,baz=358,slow=23,SNR=3.0					
AKTO			LR	LR	22 04 05.3	
	comp=Z,7μm,18.6s,baz=113,slow=38					
AKTO	**Aktyubinsk**	**19.77 303**	⇑Pn	**P**	**21 55 56.0**	**0.0**
	comp=Z,128nm,0.9s					
AKTO			⇑Lg	Lg	22 01 54.9	
BHPL	**Bhopal**	**19.79 199**	*e*P	**P**	**21 55 54.6**	**-1.8**
BHPL			IAmb	IAmb	21 55 55.8	
	comp=Z,59nm,0.3s					
ASHT	**Ashkhabad**	**20.19 266**	P	Pn	21 56 03.5	+0.9
ASHT			pmax	pmax		
	comp=Z,156nm,0.8s					
GEYT	**Alibeck**	**20.39 266**	P	**P**	**21 56 03.6**	**+0.7**
	comp=Z,46nm,0.8s,baz=70,slow=8.3,SNR=16					
GEYT			LR	LR	22 05 09.1	
	comp=Z,5μm,19.6s,baz=45,slow=40					
GYA0B	**ALIBECK ARRAY**	**20.39 266**	⇓Pn	Pn	21 56 04.1	-0.9
	comp=Z,167nm,0.8s					
GYA0B			⇑Lg	Lg	22 02 16.4	
GYA0B	**ALIBECK ARRAY**	**20.39 266**	*e*P	Pn	21 56 04.1	-0.9
	comp=Z,106nm,0.8s					
BRDH	**Bariadhala**	**20.49 160**	P	**P**	**21 56 03.1**	**-0.8**
	comp=Z,85nm,0.4s,baz=31,slow=7.5,SNR=5.2					
BRDH			LR	LR	22 06 17.4	
	comp=Z,3μm,18.7s,baz=352,slow=44					
HHC	**Hu-ho-hao-te**	**20.49 85**	*e*P	**P**	**21 56 04.5**	**+0.4**
HHC			PP	**PnPn**	**21 56 23.3**	**+1.9**
HHC			pmax	pmax		
	comp=Z,130nm,0.9s					
HHC			pmax	pmax		
	comp=Z,940nm,4.0s					
HHC			LR	LR		
	comp=Z,3μm,9.2s					
HHC			LR	LR		
	comp=Z,4μm,10.5s					
HHC			LR	LR		
	comp=Z,5μm,10.2s					
SVE	**Sverdlovsk**	**20.98 322***d*	*i*P	**P**	**21 56 10.1**	**+1.1**
SVE			*e*S	**S**	**22 00 00.5**	**-1.2**
SVE			pmax	pmax		
	comp=Z,310nm,0.6s					
SVE			MLR	MLR		
	comp=Z,11μm,11.0s					
SAIH	**SAIHA**	**21.04 157**	*e*P	**P**	**21 56 10.0**	**-0.1**
NGP	**Nagpur**	**21.49 193**	*e*P	**P**	**21 56 13.6**	**-1.2**
NGP			*ex*	x	22 00 12.7	
ARU	**Arti**	**21.74 320**	P	**P**	**21 56 17.8**	**+0.6**
	comp=Z,103nm,0.6s,baz=114,slow=4.4,SNR=107					
ARU			S	**S**	**22 00 20.3**	**+3.6**
	comp=Z,8.2nm,0.7s,baz=70,slow=21,SNR=2.5					
ARU			LR	LR	22 05 08.6	
	comp=Z,7μm,18.4s,baz=113,slow=38					
ARU	**Arti**	**21.74 320**	*e*P	**P**	**21 56 17.5**	**+0.3**
	comp=Z,332nm,1.3s					
ARU			S	**S**	**22 00 20.3**	**+3.6**
ARU			LR	LR		
	comp=Z,7μm,19.0s					
ARU	**Arti**	**21.74 320***c*	*i*P	**P**	**21 56 17.5**	**+0.3**
ARU			*PP	**sP**	**21 56 26.2**	**+0.8**
ARU			PPP	PPP	21 56 47.6	
ARU			S	**S**	**22 00 18.4**	**+1.7**
ARU			SSS	SSS	22 00 54.0	
ARU			pmax	pmax		
	comp=Z,138nm,0.7s					
ARU			MLR	MLR		
	comp=Z,7μm,19.0s					
BWNR	**Bhubaneshwar**	**21.93 176**	*ex*	**P**	**21 56 13.2**	**-6.4**
BWNR			IAmb	IAmb	21 56 15.3	
	comp=Z,64nm,0.7s					
TIY	**Taiyuan**	**22.05 92**	*e*P	**P**	**21 56 20.4**	**-0.4**
TIY			pP	**sP**	**21 56 29.3**	**+0.3**
TIY			S	**S**	**22 00 19.5**	**-3.7**
TIY			sS	**pS**	**22 00 29.5**	**-1.9**
TIY			pmax	pmax		
	comp=Z,94nm,1.0s					
TIY			LR	LR		
	comp=Z,940nm,4.6s					
TIY			LR	LR		
	comp=Z,2μm,10.4s					
TIY			LR	LR		
	comp=Z,4μm,14.9s					
CIT	**Chita**	**22.08 54**	*e*P	**P**	**21 56 20.9**	**-0.1**
CIT			*e*		21 57 01.6	
CIT			pmax	pmax		
	comp=Z,377nm,1.3s					
BHJ	**Bhuj**	**22.50 217**	*e*P	**P**	**21 56 24.2**	**-1.4**
KMI	**Kunming**	**22.93 132**	P	**P**	**21 56 29.6**	**-0.8**
KMI			pP	sP	21 56 38.9	+0.2
KMI			sP	pP	21 56 43.8	+7.7
KMI			S	**S**	**22 00 31.3**	**-8.4**
KMI			sS	sS	22 00 49.1	-0.4
KMI			pmax	pmax		
	comp=Z,64nm,0.8s					
KMI			pmax	pmax		
	comp=Z,330nm,3.4s					
KMI			LR	LR		
	comp=Z,1μm,12.9s					
KMI			LR	LR		
	comp=Z,1μm,14.3s					
KMI			LR	LR		
	comp=Z,2μm,14.3s					
ENH	**Enshi**	**23.54 112**	*e*P	**P**	**21 56 35.0**	**-1.3**
	comp=Z,123nm,1.1s					
ENH			LR	LR		
	comp=Z,3μm,19.0s					
BJI	**Beijing**	**24.10 84**	⇑*i*P	**P**	**21 56 41.8**	**+0.3**
BJI			S	**S**	**22 01 07.0**	**+9.0**
BJI			pmax	pmax		
	comp=Z,44nm,0.8s					
BJI			pmax	pmax		
	comp=Z,870nm,3.9s					
BJI			LR	LR		
	comp=Z,5μm,9.4s					
BJI			LR	LR		
	comp=Z,4μm,4.8s					
BJI			LR	LR		
	comp=Z,4μm,19.6s					
BJT	**Baijiatuau**	**24.10 85**	*e*P	**P**	**21 56 41.3**	**-0.2**
	comp=Z,105nm,1.2s					
BJT			LR	LR		
	comp=Z,4μm,20.0s					
BJT	**Baijiatuau**	**24.10 85**	*e*P	**P**	**21 56 41.3**	**-0.2**
BJT			pmax	pmax		
	comp=Z,105nm,1.2s					
BJT			MLR	MLR		
	comp=Z,4μm,20.0s					
GYA	**Guiyang**	**24.22 123**	⇑*i*P	**P**	**21 56 42.8**	**-0.1**
GYA			pP	sP	21 56 53.0	+1.6
GYA			PP	**PnPn**	**21 57 18.3**	**+5.6**
GYA			PcP	**PcP**	**22 00 25.5**	**+2.5**
GYA			S	**S**	**22 00 53.3**	**-7.2**
GYA			sS	sS	22 01 12.0	+1.7
GYA			SS	**SnSn**	**22 01 49.8**	**+6.8**
GYA			pmax	pmax		
	comp=Z,100nm,1.0s					
GYA			pmax	pmax		
	comp=Z,180nm,5.2s					
GYA			LR	LR		
	comp=Z,2μm,16.5s					
GYA			LR	LR		
	comp=Z,2μm,14.0s					
GYA			LR	LR		
	comp=Z,2μm,14.6s					
BOD	**Bodaibo**	**24.39 40**	*e*P	**P**	**21 56 44.3**	**+0.2**
BOD			pmax	pmax		
	comp=Z,129nm,1.3s					
HYB	**Hyderabad**	**25.23 193**	*i* P	**P**	**21 56 51.0**	**-0.9**
	comp=Z,93nm,0.8s					
HYB			*e*sP	**pP**	**21 56 57.5**	**-0.4**
HYB			*e*S	**S**	**22 01 14.0**	**-2.4**
HYB	**Hyderabad**	**25.23 193**	*e*P	**P**	**21 56 50.2**	**-1.7**
HYB			IAmb	IAmb	21 56 51.9	
	comp=Z,38nm,0.5s					
POO	**Poona**	**25.24 204**	*e*P	**P**	**21 56 51.4**	**-0.6**
POO			*i* PP	**PnPn**	**21 57 26.0**	**-0.6**
POO			*i* PCS	**PcS**	**22 04 04.0**	**-1.9**
CMAI	**Chiengmai2**	**25.55 146**	P	**P**	**21 56 55.5**	**+0.5**
	comp=Z,857nm,0.8s,comp=Z,44μm					
HIA	**Hailar**	**25.58 62**	*e*P	**P**	**21 56 54.8**	**-0.2**
	comp=Z,69nm,1.1s					
HIA			LR	LR		
	comp=Z,2μm,19.0s					
HIA	**Hailar**	**25.58 62**	*e*P	**P**	**21 56 54.8**	**-0.2**
HIA			pmax	pmax		
	comp=Z,69nm,1.1s					
HIA			MLR	MLR		
	comp=Z,2μm,19.0s					
TIA	**Tai'an**	**26.09 92**	P	**P**	**21 57 00.0**	**+0.3**
TIA			S	**S**	**22 01 35.4**	**+5.4**
TIA			pmax	pmax		
	comp=Z,15nm,0.6s					
TIA			LR	LR		
	comp=Z,1μm,11.7s					
TIA			LR	LR		
	comp=Z,2μm,14.2s					
TIA			LR	LR		
	comp=Z,3μm,15.8s					
CHTO	**Chiang Mai**	**26.51 147**	P	**P**	**21 57 03.2**	**-0.4**
	comp=Z,192nm,1.4s,comp=Z,3μm					
CHTO	**Chiang Mai**	**26.51 147**	*e*P	**P**	**21 57 03.1**	**-0.4**
	comp=Z,30nm,0.9s					
CHTO			LR	LR		
	comp=Z,1μm,20.0s					
CHTO	**Chiang Mai**	**26.51 147**	P	**P**	**21 57 03.2**	**-0.4**
	SNR=16					
CHTO	**Chiang Mai**	**26.51 147**	*e*P	**P**	**21 57 03.1**	**-0.5**
CHTO			pmax	pmax		
	comp=Z,30nm,0.9s					
CHTO			MLR	MLR		
	comp=Z,1μm,20.0s					
WHN	**Wuhan**	**26.79 106**	⇑P	**P**	**21 57 06.3**	**+0.3**
WHN			S	**S**	**22 01 43.8**	**+2.8**
WHN			LR	LR		
	comp=Z,9μm,10.9s					
WHN			LR	LR		
	comp=Z,7μm,12.5s					
WHN			LR	LR		
	comp=Z,13μm,13.3s					
CM31	**Chiang Mai Arr**	**26.83 148**	*e*P	**P**	**21 57 06.7**	**+0.3**
CM31	**Chiang Mai Arr**	**26.83 148**	P	**P**	**21 57 06.4**	**-0.1**
CMAR	**Chiang Mai Arr**	**26.83 148**	P	**P**	**21 57 06.3**	**-0.1**
	comp=Z,39nm,0.8s,baz=324,slow=8.9,SNR=232					
CMAR			PcP	**PcP**	**22 00 29.7**	**+0.8**
	comp=Z,3.9nm,0.7s,baz=339,slow=3.3,SNR=5.2					
CMAR	**Chiang Mai Arr**	**26.83 148**	P	**P**	**21 57 06.4**	**-0.1**
CMAR					22 00 29.7	
CMAR			pmax	pmax		
	comp=Z,42nm,0.8s					
CM01	**Chiang Mai Arr**	**26.87 148**	*e*P	**P**	**21 57 05.6**	**-1.2**
MAK	**Makhachkala**	**26.89 284**	*e*P	**P**	**21 57 06.5**	**-0.3**
MAK			*e*		21 57 49.0	
MAK			*e*S	**S**	**22 01 42.2**	**-0.2**
MAK			pmax	pmax		
	comp=Z,121nm,1.6s					
MAK			MLR	MLR		
	comp=Z,2μm,14.0s					
LAMP	**Lampang**	**27.05 146**	P	**P**	**21 57 08.7**	**+0.3**
	comp=Z,12nm,0.9s,comp=Z,137nm					
NRIK	**Noril'sk**	**27.20 3**	P	**P**	**21 57 09.8**	**+0.5**
	comp=Z,28nm,0.5s,baz=180,slow=7.0,SNR=36					
NRIK			LR	LR	22 08 04.0	
	comp=Z,920nm,18.4s,baz=186,slow=37					
GROC	**Groznyy**	**28.07 285**	*e*P	**P**	**21 57 18.0**	**+0.6**
GROC			*e*		21 58 05.7	
GROC			*e*PPP	PPP	21 58 13.9	
GROC			*e*S	**S**	**22 01 56.6**	**-4.4**
GROC			pmax	pmax		
	comp=Z,70nm,0.9s					
BANOM	**Banah**	**28.10 243**	P	**P**	**21 57 18.8**	**+1.0**
BANOM	**Banah**	**28.10 243**	P	**P**	**21 57 19.3**	**+1.4**
SHME	**Shamm**	**28.12 244**	*i* P	**P**	**21 57 19.4**	**+1.3**
	SNR=13					
WSAR	**Wadi Sarin**	**28.50 236**	P	**P**	**21 57 21.7**	**+0.3**
	comp=Z,27nm,1.0s,baz=67,slow=4.9,SNR=13					
WSAR			LR	LR	22 12 26.4	
	comp=Z,975nm,18.4s,baz=79,slow=44					
MDH	**Madha**	**28.53 243**	P	**P**	**21 57 22.9**	**+1.3**
MSFE	**Esma-Masafi**	**28.58 243**	P	**P**	**21 57 23.7**	**+1.6**
UMQ	**Umm Al-Quwin**	**28.80 244**	P	**P**	**21 57 26.1**	**+2.1**
UOSS	**Minazif**	**28.83 242**	*e*P	**P**	**21 57 24.5**	**+0.2**
	comp=Z,16nm,0.9s					
UOSS	**Minazif**	**28.83 242**	P	**P**	**21 57 25.5**	**+1.2**
HATD	**Hatta, Dubai**	**28.96 242**	P	**P**	**21 57 27.7**	**+2.2**
NONG	**Nongkai**	**29.01 140**	P	**P**	**21 57 26.2**	**+0.3**
	comp=Z,32nm,1.6s,comp=Z,872nm					
SNY	**Shenyang**	**29.07 77**	⇑P	**P**	**21 57 26.0**	**-0.2**
SNY			S	**S**	**22 02 15.3**	**-1.4**
SNY			pmax	pmax		
	comp=Z,40nm,1.0s					
SNY			pmax	pmax		
	comp=Z,370nm,7.9s					
SNY			LR	LR		
	comp=Z,2μm,12.0s					
SNY			LR	LR		
	comp=Z,6μm,14.9s					
SNY			LR	LR		
	comp=Z,8μm,16.1s					
NAZ	**Nazwa, Dubai**	**29.16 243**	P	**P**	**21 57 28.9**	**+1.6**
NJ2	**Nanjing**	**29.25 99**	*e*P	**P**	**21 57 27.8**	**-0.2**
NJ2			S	**S**	**22 02 20.3**	**+0.5**
NJ2			sS	**sS**	**22 02 33.9**	**+4.2**
NJ2			pmax	pmax		
	comp=Z,22nm,0.7s					
NJ2			LR	LR		
	comp=Z,3μm,13.0s					
NJ2			LR	LR		
	comp=Z,4μm,14.1s					
NJ2			LR	LR		
	comp=Z,5μm,16.3s					
PBKT	**Sadao Pong**	**29.36 146**	P	**P**	**21 57 28.5**	**-0.4**
	comp=Z,19nm,1.4s					
PBKT	**Sadao Pong**	**29.36 146**	*e*P	**P**	**21 57 28.6**	**-0.3**
	comp=Z,14nm,0.7s					
NCK	**Nalchik**	**29.58 286**	*i* P	**P**	**21 57 31.1**	**+0.2**
NCK			pmax	pmax		
	comp=Z,16nm,0.8s					
GNI	**Garni**	**29.59 279**	P	**P**	**21 57 31.4**	**+0.3**
	comp=Z,16nm,0.8s,baz=169,slow=2.3,SNR=18					
GNI			LR	LR	22 10 30.6	
	comp=Z,413nm,21.1s,baz=89,slow=39					
GNI	**Garni**	**29.59 279**	*e*P	**P**	**21 57 33.4**	**+2.3**
	comp=Z,39nm,0.9s					
GNI			LR	LR		
	comp=Z,1μm,20.0s					
GNI	**Garni**	**29.59 279**	*i* P	**P**	**21 57 33.6**	**+2.5**
	SNR=15					
GNI	**Garni**	**29.59 279***ce*P		**P**	**21 57 33.2**	**+2.1**
GNI			pmax	pmax		
	comp=Z,71nm,0.7s					
ASUD	**Al Ashush, Dub**	**29.63 243**	P	**P**	**21 57 33.3**	**+1.9**
CLNS	**Chul'man**	**29.64 46**	*e*P	**P**	**21 57 31.4**	**+0.1**
CLNS			*e*		21 58 30.0	
CLNS			*e*		22 00 31.4	
CLNS			*e*S	**S**	**22 02 22.0**	**-3.6**
CLNS			*e*SS	**SnSn**	**22 03 53.2**	**-1.4**
CLNS			pmax	pmax		
	comp=Z,35nm,1.2s					
CLNS			pmax	pmax		
	comp=N,7.0nm,1.0s					
CLNS			pmax	pmax		
	comp=E,22nm,1.1s					
CLNS			pmax	pmax		
	comp=Z,18nm,1.0s					
CLNS			pmax	pmax		
	comp=N,9.0nm,1.0s					
CLNS			pmax	pmax		
	comp=E,19nm,0.9s					
CLNS			smax	smax		
	comp=N,34nm,10.4s					
CLNS			smax	smax		
	comp=E,165nm,11.8s					
CLNS			MLR	MLR		
	comp=N,2μm,13.0s					
CLNS			MLR	MLR		
	comp=Z,5μm,13.0s					
CLNS			MLR	MLR		
	comp=E,4μm,13.0s					
GOF	**Gofitskoye**	**29.69 290**	*e*P	**P**	**21 57 33.0**	**+1.3**
GOF			pmax	pmax		
	comp=Z,60nm,0.7s					
ALNE	**Al Ain**	**29.75 241**	P	**P**	**21 57 34.3**	**+1.9**
CN2	**Changchun**	**29.97 73**	*e*P	**P**	**21 57 33.9**	**-0.3**
CN2			*e*pP	sP	21 57 41.0	-1.7
CN2			*e*S	**S**	**22 02 29.1**	**-1.7**
CN2			pmax	pmax		
	comp=Z,20nm,1.2s					
CN2			pmax	pmax		
	comp=Z,200nm,5.0s					
CN2			LR	LR		
	comp=Z,2μm,15.0s					
CN2			LR	LR		
	comp=Z,3μm,15.0s					
CN2			LR	LR		
	comp=Z,4μm,16.0s					
PRGR	**Permogore**	**30.03 323**	*e*P	**P**	**21 57 34.1**	**-0.4**
PRGR			pmax	pmax		
	comp=Z,31nm,0.7s					
KBZ	**Khabaz**	**30.03 287**	P	**P**	**21 57 35.5**	**+0.7**
	comp=Z,16nm,0.8s,baz=99,slow=6.7,SNR=39					
KBZ			LR	LR	22 11 33.2	
	comp=Z,2μm,19.9s,baz=74,slow=40					
KIV	**Kislovodsk**	**30.14 288**	*e*P	**P**	**21 57 37.2**	**+1.3**
	comp=Z,30nm,0.8s					
KIV			LR	LR		
	comp=Z,2μm,20.0s					
KIV	**Kislovodsk**	**30.14 288**	P	**P**	**21 57 37.1**	**+1.3**
	SNR=6.0					
KIV	**Kislovodsk**	**30.14 288**	*e*P	**P**	**21 57 36.7**	**+0.9**
KIV			*e*S	**S**	**22 02 34.5**	**+0.8**
KIV			pmax	pmax		
	comp=Z,24nm,1.1s					
KIV			MLR	MLR		
	comp=Z,1μm,15.0s					
NEY	**Neytrino**	**30.26 286***d*	*i* P	**P**	**21 57 39.2**	**+2.2**
NEY			pmax	pmax		
	comp=Z,4.0nm,0.8s					
SKNT	**Sakolnakorn**	**30.35 140**	P	**P**	**21 57 37.2**	**-0.6**
	comp=Z,9.6nm,1.1s					
ZEA	**Zeya**	**30.54 53***ce*P		**P**	**21 57 40.4**	**+1.2**
ZEA			*e*		21 57 40.4	
ZEA			*e*		22 04 22.0	
ZEA			pmax	pmax		
	comp=N,72nm,1.2s					
ZEA			pmax	pmax		
	comp=E,100nm,1.2s					
ZEA			pmax	pmax		
	comp=Z,190nm,1.2s					
ZEA			MLR	MLR		
	comp=Z,5μm,12.0s					
ZEA			MLR	MLR		
	comp=E,4μm,10.0s					
ZEA			MLR	MLR		
	comp=N,1μm,11.0s					
SRDT	**SRDT**	**30.65 151**	P	**P**	**21 57 40.6**	**+0.2**
	comp=N,33nm,0.7s					
GZH	**Guangzhou**	**30.87 119**	P	**P**	**21 57 40.8**	**-1.5**
GZH			LR	LR		
	comp=N,2μm,10.1s					
GZH			LR	LR		
	comp=N,2μm,10.9s					
SSE	**Sheshan**	**31.45 99**	P	**P**	**21 57 48.0**	**+0.6**
SSE			S	**S**	**22 02 53.1**	**-1.2**
SSE			pmax	pmax		
	comp=N,44nm,0.9s					
SSE			pmax	pmax		
	comp=N,250nm,3.5s					
SSE			LR	LR		
	comp=N,820nm,13.9s					
SSE			LR	LR		
	comp=N,2μm,13.9s					
VORD	**Divnogorie**	**31.63 302**	*e*P	**P**	**21 57 48.9**	**+0.1**
VORD			pmax	pmax		
	comp=Z,50nm,0.7s					
VORR	**Voronezh**	**31.67 303**	*e*P	**P**	**21 57 49.0**	**-0.1**
VSR	**Storozhevoye**	**31.70 302**	*e*P	**P**	**21 57 49.6**	**+0.2**
VSR			*e*S	**S**	**22 02 53.5**	**-4.3**
VSR			pmax	pmax		
	comp=Z,70nm,0.7s					
VSR			smax	smax		
	comp=N,70nm,1.4s					
VSR			MLR	MLR		
	comp=Z,5μm,15.0s					
QIZ	**Qiongzhong**	**31.75 129**	P	**P**	**21 57 50.6**	**+0.4**
QIZ			pP	**sP**	**21 57 59.4**	**+0.7**
QIZ			S	**S**	**22 03 00.5**	**+1.4**
QIZ			LR	LR		
	comp=Z,2μm,19.1s					
QIZ			LR	LR		
	comp=Z,2μm,12.3s					
MZR	**Muzera**	**31.97 243**	*i* P	**P**	**21 57 52.8**	**+0.7**
	SNR=11					
SRAK	**Srakaew**	**32.10 146**	P	P	21 57 58.9	+5.7
PHET	**Kaeng Krachan**	**32.16 151**	P	**P**	**21 57 54.7**	**+1.0**
	comp=Z,17nm,0.9s					
SOC	**Sochi**	**32.32 288***c*	*i*P	**P**	**21 57 55.2**	**+0.3**
SOC			*e*		21 58 58.8	
SOC			*e*S	**S**	**22 03 05.6**	**-2.0**
SOC			*e*SS	**SnSn**	**22 05 05.5**	**+5.7**
SOC			pmax	pmax		
	comp=Z,67nm,0.9s					
SOC			MLR	MLR		
	comp=Z,961nm,11.0s					
KLMR	**Klimovskoe**	**32.59 320***c*	*i*P	**P**	**21 57 57.9**	**+0.8**
KLMR			pmax	pmax		
	comp=Z,136nm,1.0s					
KLMR	**Klimovskoe**	**32.59 320**	⇑*i*P	**P**	**21 57 57.9**	**+0.8**
KLMR			⇓*i*P	**P**	**21 57 57.9**	**+0.8**
KLMR			⇓*i*P	**P**	**21 57 57.9**	**+0.8**
KLMR			AMP		21 58 11.9	
	comp=Z,136nm,1.0s					
INCN	**Inchon**	**32.66 84**	PFAKE		21 58 10.0	+12
INCN			LR	LR		
	comp=Z,3μm,21.0s					
MDJ	**Mudanjiang**	**32.72 70**	P	**P**	**21 57 56.9**	**-1.5**
MDJ			pP	sP	21 58 07.0	+0.1
MDJ			sP	pP	21 58 11.8	+7.3
MDJ			S	**S**	**22 03 12.6**	**-1.2**
MDJ			sS	sS	22 03 31.0	+7.2
MDJ			SS	**SnSn**	**22 05 12.3**	**+2.8**
MDJ			pmax	pmax		
	comp=Z,38nm,1.1s					
MDJ			pmax	pmax		
	comp=Z,230nm,5.7s					
MDJ			LR	LR		
	comp=Z,2μm,10.0s					
MDJ			LR	LR		
	comp=Z,6μm,11.7s					
MDJ			LR	LR		
	comp=Z,9μm,14.2s					
MDJ	**Mudanjiang**	**32.72 70**	*e*P	**P**	**21 57 59.4**	**+1.0**
	comp=Z,27nm,1.2s					
MDJ			LR	LR		

comp=Z,252nm,20.0s
MOS Moscow 32.74 311 *e*P **P 21 57 57.9 -0.6**
MOS *e*PPP PPP 21 59 19.4
MOS *e*S **S 22 03 11.8 -2.1**
MOS pmax pmax
comp=Z,162nm,1.1s
MOS pmax pmax
comp=Z,500nm,1.6s
MOS MLR MLR
comp=N,1μm,18.0s
MOS MLR MLR
comp=E,4μm,18.0s
MOS MLR MLR
comp=Z,5μm,18.0s
QZH Quanzhou 33.16 110 ⇑P **P 21 58 03.9 +1.5**
QZH S **S 22 03 18.4 -2.5**
QZH LR LR
comp=Z,2μm,18.9s
YAK Yakutsk 33.25 38 *e*P **P 21 58 02.9 +0.1**
comp=Z,146nm,0.6s
YAK LR LR
comp=Z,2μm,20.0s
YAK Yakutsk 33.25 38*c i*P **P 21 58 02.8 0.0**
YAK *e**PP **sP 21 58 12.0 +0.6**
YAK *e* 21 59 14.7
YAK *e*PPP PPP 21 59 25.3
YAK *e* 22 00 41.1
YAK *e*S **S 22 03 20.9 -0.8**
YAK *e**SS **sS 22 03 32.3 +0.7**
YAK *e*SS **SnSn 22 05 20.7 -1.2**
YAK *e* 22 08 26.0
YAK pmax pmax
comp=Z,70nm,0.6s
YAK pmax pmax
comp=N,11nm,1.0s
YAK pmax pmax
comp=E,32nm,0.9s
YAK pmax pmax
comp=Z,55nm,1.2s
YAK pmax pmax
comp=N,24nm,1.4s
YAK pmax pmax
comp=E,141nm,1.5s
YAK smax smax
comp=N,155nm,1.6s
YAK smax smax
comp=E,29nm,1.9s
YAK MLR MLR
comp=Z,4μm,16.0s
YAK MLR MLR
comp=N,2μm,18.0s
YAK MLR MLR
comp=E,2μm,18.0s
OBN Obninsk 33.31 309 *e*P **P 21 58 03.7 +0.3**
comp=E,769nm,1.7s
OBN LR LR
comp=Z,3μm,20.0s
OBN Obninsk 33.31 309*c i*P **P 21 58 03.7 +0.3**
OBN *e* 21 59 17.1
OBN *i* S **S 22 03 28.8 +6.2**
OBN pmax pmax
comp=Z,176nm,1.6s
OBN MLR MLR
comp=Z,4μm,18.0s
KLR Kul'dur 33.44 61 LR LR 22 12 35.0
comp=Z,180nm,21.2s,slow=38
KLR Kul'dur 33.44 61*c i*P **P 21 58 04.8 +0.1**
KS01 Wonju Array Si 33.59 83 *e*P **P 21 58 04.0 -2.1**
KS01 *e*PcP **PcP 22 00 45.7 -0.5**
KS15 Wonju Array Si 33.60 83 *e*P **P 21 58 05.5 -0.7**
KSAR Wonju Array Be 33.60 83 P **P 21 58 05.5 -0.7**
KSAR PcP **PcP 22 00 46.1 0.0**
KSAR Wonju Array Be 33.60 83 P **P 21 58 05.5 -0.7**
KSAR 22 00 46.2
KSRS Korea Array 33.62 83 P **P 21 58 05.5 -0.8**
comp=Z,12nm,0.7s,baz=289,slow=8.9,SNR=44
KSRS PcP **PcP 22 00 46.1 -0.1**
comp=Z,3.8nm,0.8s,baz=295,slow=2.5,SNR=5.1
KSRS LR LR 22 12 36.1
comp=Z,1μm,19.5s,baz=287,slow=38
ANN Anapa 33.65 291 *e*P **P 21 58 06.9 +0.4**
ANN *e*S **S 22 03 28.4 +0.2**
ANN pmax pmax
comp=Z,229nm,0.9s
ANN MLR MLR
comp=Z,2μm,15.0s
ANN MLR MLR
comp=E,366nm,15.0s
ANN MLR MLR
comp=N,2μm,15.0s
TMCR Tamitsa 34.16 326 *e*P **P 21 58 10.2 -0.5**
TMCR pmax pmax
comp=Z,81nm,0.9s
MSHR Mys Shultsa 34.31 73*ce*P **P 21 58 12.6 +0.3**
USRK Ussuriysk Ar. 34.49 70 P **P 21 58 13.2 -0.6**
comp=Z,1.4nm,0.3s,baz=324,slow=9.4,SNR=10.0
USRK LR LR 22 13 34.4
comp=Z,3μm,18.9s,baz=272,slow=39
PALK Pallekele 34.98 186 P **P 21 58 18.1 -0.2**
comp=Z,14nm,0.8s,baz=113,slow=4.3,SNR=4.5
PALK LR LR 22 14 35.6
comp=Z,1μm,18.0s,baz=303,slow=40
YHNB Yeheng 35.28 108 *e*P **P 21 58 21.3 +0.3**
comp=Z,456nm,1.9s
SIM Simferopol' 35.91 292*c i*P **P 21 58 27.0 +0.9**
SIM *e* 21 59 42.0
SIM *e*S **S 22 04 08.0 +4.9**
SIM *e*SS **SnSn 22 06 27.0 +0.2**
SIM pmax pmax
comp=Z,79nm,0.7s
GRNR Gornyy 36.25 58 *e*P **P 21 58 30.0 +1.0**
GRNR *e* 22 00 54.0
GRNR pmax pmax
comp=Z,130nm,1.0s
TWG Pinlang 36.26 111 *e*P **P 21 58 29.3 +0.1**
comp=Z,286nm,0.8s
TIXI Tiksi 36.61 22 P **P 21 58 31.7 0.0**
comp=Z,16nm,0.4s,baz=251,slow=5.3,SNR=48
TIXI Tiksi 36.61 22 *e*P **P 21 58 31.6 0.0**
comp=Z,31nm,0.9s
TIXI LR LR
comp=Z,7μm,20.0s
TIXI Tiksi 36.61 22*ce*P **P 21 58 31.5 -0.2**
TIXI pmax pmax
comp=Z,67nm,1.7s
APA Apatity 36.99 330⇓*i*P **P 21 58 34.2 -0.8**
APA *i* 22 00 00.5
APA *i* S **S 22 04 14.0 -5.1**
APA pmax pmax
comp=Z,28nm,0.6s
RAYN Ar Rayn 37.09 252 *e*P **P 21 58 37.0 +0.5**
comp=Z,72nm,0.8s
RAYN LR LR
comp=Z,1μm,19.0s
RAYN Ar Rayn 37.09 252 *i* P **P 21 58 37.1 +0.7**
SNR=93
RAYN Ar Rayn 37.09 252 P **P 21 58 36.9 +0.5**
RAYN pmax pmax
comp=Z,72nm,0.9s
ILGA Ilgaz 37.30 286 *e*P **P 21 58 40.0 +1.8**
comp=Z,50nm,0.8s
TEY Ternei 37.47 67 *e*P **P 21 58 38.9 -0.4**
TEY MLR MLR
comp=Z,4μm,11.0s
JNU Nakatsue 37.64 88 P **P 21 58 40.4 -0.6**
comp=Z,15nm,0.8s,baz=320,slow=0.6,SNR=12
JNU PcP **PcP 22 00 57.8 -0.5**
comp=Z,9.9nm,0.6s,baz=16,slow=3.7,SNR=4.2
JNU LR LR 22 13 37.1
comp=Z,437nm,18.1s,baz=298,slow=36
JNU Nakatsue 37.64 88 *e*P **P 21 58 39.5 -1.5**
comp=Z,18nm,0.8s
JNU PcP **PcP 22 00 57.8 -0.5**
BR131 Keskin Array S 37.80 284 *e*P **P 21 58 43.6 +1.2**
BRTR Keskin Array B 37.80 284 P **P 21 58 43.6 +1.2**
comp=Z,22nm,0.7s,baz=101,slow=9.9,SNR=176
BRTR Keskin Array B 37.80 284 *i* P **P 21 58 43.5 +1.2**
BRTR pmax pmax
comp=Z,24nm,0.7s
AKASG Malin Array Be 38.01 302 P **P 21 58 44.0 +0.2**
comp=Z,20nm,0.8s,baz=68,slow=8.8,SNR=81
AKASG PcP **PcP 22 00 59.9 +0.9**
comp=Z,2.4nm,0.6s,baz=63,slow=11,SNR=3.5
AKASG LR LR 22 15 21.1
comp=Z,2μm,19.6s,baz=95,slow=38
AKASG Malin Array Be 38.01 302 P **P 21 58 44.0 +0.2**
AKASG 22 00 59.9
AKASG pmax pmax
comp=Z,27nm,0.7s
AKASG MLR MLR
comp=Z,2μm,19.6s
AKBB Malin Array Si 38.01 302 *e*P **P 21 58 43.4 -0.4**
comp=Z,50nm,0.8s
AKBB Malin Array Si 38.01 302 *e*P **P 21 58 43.4 -0.4**
AKBB pmax pmax
comp=Z,50nm,0.8s
KIEV Kiev 38.02 302 *e*P **P 21 58 43.3 -0.6**
comp=Z,51nm,0.8s
KIEV LR LR
comp=Z,3μm,20.0s
KIEV Kiev 38.02 302 *i* P **P 21 58 44.3 +0.5**
SNR=31
KIEV Kiev 38.02 302*c i*P **P 21 58 43.5 -0.4**
KIEV pmax pmax
comp=Z,41nm,0.8s
AK11 Malin Array Si 38.05 302 *e*P **P 21 58 44.1 0.0**
MICGM Minsk 38.34 309⇓*e*P **P 21 58 47.0 +0.4**
MICGM PM 21 58 48.0
comp=Z,0.3nm,1.0s
MICGM *e*LR LR 22 11 54.0
MICGM LRM MLR 22 15 04.0
comp=Z,5.1nm,8.0s
MICGM LRM MLR 22 15 08.0
comp=E,3.8nm,8.0s
MNK Minsk 38.34 309⇓*e*P **P 21 58 47.0 +0.4**
MNK pmax pmax
comp=Z,260nm,1.0s
MNK MLR MLR
comp=E,4μm,8.0s
MNK MLR MLR
comp=Z,5μm,8.0s
ANTO Ankara 38.36 284⇑*i*P **P 21 58 48.4 +1.4**
ANTO Ankara 38.36 284 *e*P **P 21 58 48.6 +1.6**
comp=Z,33nm,0.7s
ANTO LR LR
comp=Z,613nm,20.0s
ANTO Ankara 38.36 284 P **P 21 58 48.6 +1.6**
SNR=7.9
ANTO Ankara 38.36 284 *e*P **P 21 58 48.6 +1.6**
ANTO pmax pmax
comp=Z,33nm,0.7s
ANTO MLR MLR
comp=Z,613nm,20.0s
BR231 Keskin MP Arra 38.38 284 *e*P **P 21 58 49.0 +1.7**
ASF Jabal al Asfar 38.56 271 P **P 21 58 49.2 +0.4**
comp=Z,31nm,0.9s,baz=19,slow=5.6,SNR=54
LHMI Lhok Sumawe 38.58 159 *e*P **P 21 58 49.2 +0.3**
comp=Z,137nm,0.8s
NKL Nikolayevsk 38.58 54 *i* P **P 21 58 49.0 +0.5**
NKL *e* 22 04 48.0
NKL pmax pmax
comp=E,500nm,7.0s
NKL pmax pmax
comp=Z,600nm,7.0s
NKL pmax pmax
comp=N,100nm,1.4s
NKL pmax pmax
comp=Z,370nm,1.4s
NKL MLR MLR
comp=N,2μm,13.0s
NKL MLR MLR
comp=E,4μm,13.0s
NKL MLR MLR
comp=Z,5μm,13.0s
VSU Vasula 38.76 315*ce*P **P 21 58 51.0 +1.0**
VSU pmax pmax
comp=Z,114nm,0.8s
IDID Didziasalis 38.93 310 *e*P **P 21 58 52.8 +1.3**
IDID IAmb IAmb 21 58 54.0
comp=Z,36nm,0.8s
NACGM Naroch 38.94 309 *e*P **P 21 58 51.0 -0.6**
NACGM *e*LR LR 22 13 44.0
JOW Kunigami 38.97 99 P **P 21 58 50.8 -1.4**
comp=Z,46nm,0.8s,baz=318,slow=23,SNR=9.8
JOW Kunigami 38.97 99 *e*P **P 21 58 51.6 -0.6**
comp=Z,103nm,1.1s
KIS Kishinev 39.01 296⇑*i*P **P 21 58 51.0 -1.3**
comp=Z,200nm,2.0s
KIS Kishinev 39.01 296 *e*PP PP 22 00 50.0 +28
KIS Kishinev 39.01 296α*i*P **P 21 58 51.0 -1.3**
KIS *e* 22 00 20.0
KIS *e*PPP PPP 22 00 50.0
KIS *e*S **S 22 04 50.0 0.0**
KIS *e*SS **SnSn 22 07 36.0 -5.6**
KIS *i* 22 59 01.0
KIS pmax pmax
comp=Z,200nm,2.0s
KIS pmax pmax
comp=Z,200nm,2.0s
KIS MLR MLR
comp=E,2μm,15.0s
KIS MLR MLR
comp=Z,2μm,15.0s
KIS MLR MLR
comp=N,1μm,14.0s
KIS MLR MLR
comp=Z,2μm,16.0s
SORM Soroca 39.05 298⇑*i*P **P 21 58 52.7 +0.1**
SORM Soroca 39.05 298 P **P 21 58 52.6 0.0**
FIA1 FINESS Array S 39.11 320 *e*P **P 21 58 53.7 +0.7**
FINES FINESS Array B 39.11 320 P **P 21 58 53.5 +0.6**
comp=Z,8.5nm,0.4s,baz=102,slow=9.9,SNR=94
FINES PcP **PcP 22 01 02.8 +0.6**
comp=Z,9.2nm,0.6s,baz=91,slow=5.7,SNR=3.4
FINES LR LR 22 15 39.3
comp=Z,2μm,21.6s,baz=90,slow=37
IZAR Zarasai 39.17 311 *e*P **P 21 58 54.9 +1.4**
IZAR IAmb IAmb 21 58 55.3
comp=Z,30nm,0.7s
IIGN Ignalina 39.22 310 *e*P **P 21 58 55.4 +1.5**
IIGN IAmb IAmb 21 58 56.6
comp=Z,50nm,0.9s
ISAL Salakas 39.26 310 *e*P **P 21 58 55.7 +1.5**
ISAL IAmb IAmb 21 58 57.0
comp=Z,54nm,0.9s
MMAI Mount Meron Ar 39.27 273 P **P 21 58 56.6 +1.8**
comp=Z,24nm,0.9s,baz=71,slow=8.9,SNR=24
MMAI PcP **PcP 22 01 04.6 +1.2**
comp=Z,7.7nm,0.7s,baz=67,slow=4.6,SNR=5.7
MMAI LR LR 22 18 06.0
comp=Z,383nm,18.2s,baz=65,slow=41
TLCR 39.48 294⇑*i*P **P 21 58 56.9 +0.7**
KULM Kulim 39.61 154 *e*P **P 21 58 56.8 -0.8**
comp=Z,30nm,0.8s
KEV Kevo 39.82 333 *e*P **P 21 58 59.9 +1.1**
comp=Z,67nm,0.7s
KEV Kevo 39.82 333 *e*P **P 21 58 59.9 +1.1**
KEV pmax pmax
comp=Z,67nm,0.7s
MAMC Mammari 39.91 277 P **P 21 59 00.6 +0.6**
CSS Mathiatis 39.92 277 *e*P **P 21 59 00.5 +0.5**
comp=Z,8.8nm,0.8s
CSS Mathiatis 39.92 277 P **P 21 59 00.4 +0.3**
CSS Mathiatis 39.92 277 P **P 21 58 59.9 -0.2**
TIRR Tirgusor 39.96 293⇑*i*P **P 21 59 01.1 +0.9**
TIRR Tirgusor 39.96 293 *e*P **P 21 59 00.9 +0.7**
comp=Z,20nm,0.8s
TIRR Tirgusor 39.96 293 *e*P **P 21 59 00.9 +0.7**
TIRR pmax pmax
comp=Z,21nm,0.8s
TYV Tymovskoe 40.14 57 *e*P **P 21 59 02.5 +0.8**
TYV *e* 22 05 08.6
TYV pmax pmax
comp=Z,400nm,2.2s
TYV pmax pmax
comp=Z,60nm,1.7s
TYV MLR MLR
comp=Z,2μm,11.0s
TLB Topalu 40.18 293⇓*i*P **P 21 59 02.9 +0.9**
HARR Harsova 40.22 293⇑*i*P **P 21 59 03.5 +1.1**
HARR Harsova 40.22 293 P **P 21 59 03.5 +1.1**
ARCES ARCESS Array B 40.29 332 P **P 21 59 03.8 +1.1**
comp=Z,66nm,0.5s,baz=90,slow=8.4,SNR=418
ARCES LR LR 22 16 38.0
comp=Z,3μm,18.9s,baz=107,slow=38
ARE0 ARCESS Array S 40.29 332 *e*P **P 21 59 03.9 +1.2**
comp=Z,79nm,0.6s
SZAC Souni 40.34 277 P **P 21 59 04.3 +0.7**
ALFC Alefka 40.38 278 P **P 21 59 04.5 +0.7**
KCSI Kotacane, Aceh 40.43 159 P **P 21 59 05.2 +0.8**
comp=Z,12nm,0.8s
ICOR Ion Corvin 40.48 292⇑*i*P **P 21 59 06.1 +1.6**
IPM Ipoh 40.49 154 *e*P **P 21 59 03.1 -1.8**
TESR Tescani 40.57 296⇓*i*P **P 21 59 05.5 +0.2**
AKMC Akamas 40.63 277 P **P 21 59 06.3 +0.4**
PRAR RASCA 40.63 298⇓*i*P **P 21 59 06.6 +0.8**
PPCY Paphos 40.68 277 P **P 21 59 06.0 -0.3**
VRI Vrincioaia 40.70 295⇓*i*P **P 21 59 07.6 +1.2**
VRI Vrincioaia 40.70 295 P **P 21 59 07.5 +1.2**
PLOR Plostina 40.76 295⇑*i*P **P 21 59 08.4 +1.5**
PLOR Plostina 40.76 295 P **P 21 59 08.3 +1.4**
ISP Isparta 40.77 282⇑*i*P **P 21 59 07.9 +0.7**
ISP Isparta 40.77 282 *e*P **P 21 59 08.2 +0.9**
comp=Z,57nm,0.8s
ISP Isparta 40.77 282*c i*P **P 21 59 08.1 +0.9**
ISP pmax pmax
comp=Z,56nm,0.9s
ISR Istrita 41.04 294⇓*i*P **P 21 59 11.6 +2.4**
YSS Yuzh-Sakhalins 41.11 63 *e*P **P 21 59 10.1 +0.4**
comp=Z,135nm,1.5s
YSS LR LR
comp=Z,1μm,19.0s
YSS Yuzh-Sakhalins 41.11 63⇓*e*P **P 21 59 09.8 +0.1**
YSS *e* 21 59 15.6
YSS *e* 22 00 47.0
YSS *e* 22 01 24.1
YSS *e*S **S 22 05 19.4 -2.1**
YSS pmax pmax
comp=Z,30nm,0.6s
YSS MLR MLR
comp=E,2μm,15.0s
HAMF Hammerfest 41.11 334 *e*P **P 21 59 10.8 +1.4**
SUW Suwalki 41.14 308 *e*P **P 21 59 10.3 +0.4**
SUW Suwalki 41.14 308 *e*P **P 21 59 10.4 +0.5**
comp=E,135nm,0.8s
SUW Suwalki 41.14 308⇑*e*P **P 21 59 10.3 +0.4**
INU Inuyama 41.17 82 *e*P **P 21 59 09.7 -0.6**
comp=E,14nm,0.8s
BURAR Bucovina Array 41.23 298⇑*i*P **P 21 59 12.4 +1.6**
BURAR Bucovina Array 41.23 298 P **P 21 59 12.4 +1.6**
BUR04 Bucovina Ar. S 41.23 298 *e*P **P 21 59 11.1 +0.3**
BUR08 Bucovina Ar. S 41.23 298 *e*P **P 21 59 11.6 +0.8**
MLR Muntele Rosu 41.33 295 P **P 21 59 12.9 +1.1**
comp=E,6.8nm,0.8s,baz=359,slow=4.6,SNR=54
MLR LR LR 22 18 22.0
comp=E,511nm,20.0s,baz=52,slow=39
MLR Muntele Rosu 41.33 295⇓*i*P **P 21 59 12.8 +1.1**
MLR Muntele Rosu 41.33 295 *e*P **P 21 59 13.3 +1.6**
comp=E,35nm,0.8s
PSI Prapat 41.43 157 P **P 21 59 11.5 -1.3**
comp=E,10nm,0.7s,baz=360,slow=7.6,SNR=17
PSI PcP **PcP 22 01 10.7 +0.1**
comp=E,12nm,0.7s,baz=360,slow=7.2,SNR=5.1
PSI LR LR 22 19 18.3
comp=E,898nm,19.2s,baz=273,slow=40
PSI Prapat 41.43 157 *e*P **P 21 59 10.9 -1.9**
comp=E,13nm,0.7s
PSI PcP **PcP 22 01 10.7 +0.1**
LVV L'vov 41.45 302 *e*P **P 21 59 13.3 +0.9**
LVV *e* 22 00 52.5
LVV *e*S **S 22 05 24.5 -1.9**
LVV pmax pmax
comp=Z,100nm,1.5s
LVV MLR MLR
comp=E,1μm,15.0s
LVV MLR MLR
comp=N,500nm,14.0s
LVV MLR MLR
comp=Z,1μm,14.0s
MJB9 Matsu-Tunnel 41.53 79 *e*P **P 21 59 12.0 -1.3**
comp=Z,17nm,0.9s
MAJO Matsushiro 41.53 79 *e*P **P 21 59 12.0 -1.3**
comp=Z,16nm,0.9s
MAJO LR LR
comp=Z,1μm,19.0s
MAJO Matsushiro 41.53 79*c i*P **P 21 59 11.4 -1.9**
MAJO pmax pmax
comp=Z,15nm,0.9s
MAT Matsushiro 41.53 79 P **P 21 59 11.3 -2.0**
MAT S **S 22 05 35.8 +7.8**
MJAR Matsushiro Arr 41.53 79 P **P 21 59 11.9 -1.5**
comp=Z,9.4nm,0.7s,baz=290,slow=10,SNR=16
MJAR PcP **PcP 22 01 10.4 -0.1**
comp=Z,5.1nm,0.8s,baz=273,slow=4.1,SNR=4.6
MJAR LR LR 22 17 10.7
comp=Z,963nm,18.6s,baz=280,slow=37
MJAR Matsushiro Arr 41.53 79 P **P 21 59 11.9 -1.5**
MJAR 22 01 10.4
MJAR pmax pmax
comp=Z,10.0nm,0.7s
MJAR MLR MLR
comp=Z,963nm,18.6s
ASAJ Asahikawa 41.84 67 P **P 21 59 15.3 -0.4**
comp=Z,20nm,0.7s,baz=301,slow=5.1,SNR=34
ASAJ LR LR 22 15 54.3
comp=Z,524nm,19.4s,baz=291,slow=35
ASAJ Asahikawa 41.84 67 *e*P **P 21 59 14.8 -0.9**
comp=Z,51nm,1.0s
JMB Yambol 41.86 291 *e*P **P 21 59 18.2 +2.3**
KIF Kilpisjarvi 41.87 331 *e*P **P 21 59 16.6 +1.1**
ARCR ARCALIA 41.94 298⇑*i*P **P 21 59 18.4 +1.9**
VOIR 41.95 295⇑*i*P **P 21 59 17.8 +1.1**
VOIR 41.95 295 P **P 21 59 17.8 +1.1**
GOLR 42.19 294⇑*i*P **P 21 59 20.3 +1.7**
ARR Arges 42.25 295⇑*i*P **P 21 59 20.5 +1.3**
HUMR Humele 42.28 294⇑*i*P **P 21 59 20.4 +1.1**
ZIMR 42.30 293⇓*i*P **P 21 59 21.1 +1.6**
TGY Tagaytay City 42.31 120 LR LR 22 17 49.8
comp=Z,652nm,18.6s,baz=90,slow=38
KWP Kalwaria Pacla 42.33 302 *e*P **P 21 59 21.1 +1.5**
KWP Kalwaria Pacla 42.33 302 *e*P **P 21 59 20.6 +0.9**
comp=Z,1μm,0.9s
KWP Kalwaria Pacla 42.33 302 *e*P **P 21 59 20.6 +0.9**
BMR Baia Mare 42.33 299⇓*i*P **P 21 59 20.7 +1.0**
GSI Gunungsitoli 42.50 160 P **P 21 59 20.9 -0.5**
comp=Z,93nm,0.7s
GSI Gunungsitoli 42.50 160 *e*P **P 21 59 20.6 -0.8**
comp=Z,66nm,0.7s
CJR Cluj-Napoca 42.54 298⇑*i*P **P 21 59 22.8 +1.3**
CJR Cluj-Napoca 42.54 298 P **P 21 59 22.8 +1.3**
TRO Tromso 42.59 332 *e*P **P 21 59 22.0 +0.6**
KLNR Kaliningrad 42.76 310*c i*P **P 21 59 23.4 +0.4**
KLNR pmax pmax
comp=Z,330nm,0.8s
ALN Alexandroupoli 42.79 289 *e*P **P 21 59 25.0 +1.5**
comp=Z,11nm,1.0s
ALN Alexandroupoli 42.79 289 *e*P **P 21 59 25.0 +1.5**
ALN pmax pmax
comp=Z,11nm,1.0s
LOT Lotru 42.80 296⇑*i*P **P 21 59 24.9 +1.2**
TRPA Tarpa 42.83 300⇓*i*P **P 21 59 24.9 +1.3**
TRPA Tarpa 42.83 300⇑*e*P **P 21 59 25.0 +1.3**
UZH Uzhgorod 42.85 301 *e*P **P 21 59 23.9 0.0**
UZH *e* 21 59 29.9
ERM Erimo 42.94 70 *e*P **P 21 59 24.1 -0.5**
comp=Z,27nm,0.7s
ERM LR LR
comp=Z,2μm,20.0s
ERM Erimo 42.94 70*ce*P **P 21 59 24.4 -0.3**
ERM pmax pmax
comp=Z,72nm,1.7s
BEL Belsk 42.99 306 *e*P **P 21 59 26.1 +1.2**
BEL Belsk 42.99 306 *e*P **P 21 59 26.1 +1.2**
DRGR 43.10 298⇑*i*P **P 21 59 27.4 +1.4**
ARG Arkhangelos 43.19 281 P **P 21 59 27.9 +1.1**
ARG Arkhangelos 43.19 281 P **P 21 59 27.9 +1.1**
ARG Arkhangelos 43.19 281 P **P 21 59 27.9 +1.1**
PRK Paraskevi 43.27 286 P **P 21 59 28.3 +0.9**
PRK Paraskevi 43.27 286 P **P 21 59 28.3 +0.9**
PRK Paraskevi 43.27 286 P **P 21 59 28.3 +0.9**
PLD Plovdiv 43.29 291 *e*P **P 21 59 28.3 +0.8**
CRVS Cervenica-Dubn 43.30 301 *e*P **P 21 59 28.0 +0.4**
CRVS pmax pmax
comp=Z,10.0nm,0.9s
CRVS Cervenica-Dubn 43.30 301 *e*P **P 21 59 28.0 +0.4**
CRVS *e*L L 22 20 37.9
MA2 Magadan 43.36 43 P **P 21 59 28.6 +0.6**
comp=Z,40nm,0.7s,baz=298,slow=10,SNR=16
MA2 PcP **PcP 22 01 16.4 +0.2**
comp=Z,12nm,0.6s,baz=87,slow=4.6,SNR=3.3
MA2 Magadan 43.36 43 *e*P **P 21 59 28.6 +0.6**
comp=Z,285nm,1.7s
MA2 PcP **PcP 22 01 16.4 +0.2**
MA2 LR LR
comp=Z,2μm,19.0s
MA2 Magadan 43.36 43⇑*e*P **P 21 59 28.2 +0.3**

MA2 pmax pmax
comp=Z,163nm,1.7s
RZN Rozhen 43.43 290 *eP* **P 21 59 30.1 +1.2**
PGB Panagyurishte 43.50 292 *eP* **P 21 59 30.9 +1.6**
MNSI Mandailing Nat 43.53 157 P **P 21 59 28.5 -1.2**
comp=Z,66nm,0.6s
SEY Seymchan 43.78 38 P **P 21 59 31.7 +0.5**
comp=Z,12nm,0.5s,baz=275,slow=5.5,SNR=35
SEY PcP **PcP 22 01 18.3 +0.8**
comp=Z,8.2nm,0.6s,baz=322,slow=12,SNR=3.7
SEY LR LR 22 19 02.3
comp=Z,2μm,19.8s,baz=320,slow=38
STEI Steigen 43.87 329 *eP* **P 21 59 32.7 +1.0**
NIE Niedzica 43.90 302 *eP* **P 21 59 34.1 +1.7**
NIE Niedzica 43.90 302⇑ *eP* **P 21 59 34.1 +1.7**
SIRR Siria 43.95 298⇓ *iP* **P 21 59 34.4 +1.6**
DAMY Dhamar 43.98 243 *eP* **P 21 59 34.8 +1.1**
comp=Z,38nm,0.8s
OJC Ojcow 43.99 303 *i P* **P 21 59 34.0 +0.9**
OJC Ojcow 43.99 303 *eP* **P 21 59 33.4 +0.3**
comp=Z,95nm,0.8s
OJC Ojcow 43.99 303 *eP* **P 21 59 33.4 +0.3**
OJC pmax pmax
comp=Z,95nm,0.8s
KECS Kecovo 44.04 301 *eP* **P 21 59 33.8 +0.3**
KECS Kecovo 44.04 301 *eP* **P 21 59 33.8 +0.3**
YUK Yuzh-Kuril'sk 44.09 66*d iP* **P 21 59 32.2 -1.7**
YUK *e* 22 01 14.9
YUK *i* S **S 22 06 02.2 -3.1**
YUK *e*SS **SS 22 09 21.0 -1.5**
YUK pmax pmax
comp=Z,205nm,1.2s
YUK pmax pmax
comp=Z,288nm,1.8s
YUK MLR MLR
comp=N,691nm,16.0s
YUK MLR MLR
comp=E,2μm,16.0s
YUK MLR MLR
comp=Z,2μm,16.0s
VTS Vitosha 44.15 292⇑ *iP* **P 21 59 36.0 +1.4**
VTS Vitosha 44.15 292 *eP* **P 21 59 36.0 +1.4**
comp=Z,24nm,0.8s
VTS Vitosha 44.15 292 *eP* **P 21 59 36.3 +1.7**
VTS Vitosha 44.15 292 *eP* **P 21 59 36.0 +1.4**
VTS pmax pmax
comp=Z,25nm,0.8s
NVR Nevrokopi 44.15 290 P **P 21 59 35.7 +1.1**
NVR Nevrokopi 44.15 290 P **P 21 59 35.7 +1.1**
MMB Musomiste 44.16 290 *eP* **P 21 59 34.9 +0.3**
BZS Buzias 44.19 297⇑ *iP* **P 21 59 35.8 +1.1**
BZS Buzias 44.19 297 P **P 21 59 35.7 +1.1**
KARP Karpathos 44.19 281 *eP* **P 21 59 35.6 +0.8**
comp=Z,30nm,0.9s
JHJ Hachijo jima 2 44.23 83 LR LR 22 19 02.0
comp=Z,768nm,18.6s,baz=286,slow=38
MOR8 Moi Rana 44.23 327 *eP* **P 21 59 34.7 -0.2**
MDVR Moldovita 44.40 295⇓ *iP* **P 21 59 37.7 +1.2**
SRS Serrai 44.43 290 P **P 21 59 37.6 +0.9**
SRS Serrai 44.43 290 P **P 21 59 37.6 +0.9**
SRS Serrai 44.43 290 P **P 21 59 37.4 +0.7**
LANS Liptovska Anna 44.49 302 *eP* **P 21 59 38.7 +1.5**
LANS Liptovska Anna 44.49 302 *eP* **P 21 59 38.7 +1.5**
SPA0 Spitsbergen Ar 44.49 344 *eP* **P 21 59 38.4 +1.6**
SPITS Spitsbergen Ar 44.49 344 P **P 21 59 38.0 +1.2**
comp=Z,3.2nm,0.3s,baz=110,slow=10.0,SNR=26
SPITS LR LR 22 22 32.2
comp=Z,2μm,18.2s,baz=125,slow=42
LOF Lofoten 44.50 330 *eP* **P 21 59 37.2 +0.3**
KKB Krupnik 44.50 291 *eP* **P 21 59 38.1 +0.8**
PSZ Piszkesteto 44.59 300⇑ *iP* **P 21 59 39.2 +1.2**
PSZ Piszkesteto 44.59 300 *eP* **P 21 59 38.5 +0.5**
comp=Z,18nm,0.9s
PSZ Piszkesteto 44.59 300 *eP* **P 21 59 38.5 +0.5**
PSZ pmax pmax
comp=Z,18nm,0.9s
APE Apeiranthos 44.70 284⇑ *iP* **P 21 59 39.6 +0.6**
APE Apeiranthos 44.70 284*c iP* **P 21 59 40.1 +1.1**
APE pmax pmax
comp=Z,71nm,0.8s
KONS Konsvik 44.75 327 *eP* **P 21 59 39.5 +0.6**
GKP Gorka Klasztor 44.76 308 *eP* **P 21 59 40.4 +1.3**
GKP Gorka Klasztor 44.76 308⇑ *eP* **P 21 59 40.4 +1.3**
STOK Stokkvaagen 44.80 327 *eP* **P 21 59 39.8 +0.5**
PLG Polygyros 44.82 289 P **P 21 59 40.3 +0.4**
PLG Polygyros 44.82 289 P **P 21 59 40.3 +0.4**
PLG Polygyros 44.82 289 P **P 21 59 40.3 +0.4**
KNT Kendrikon 44.90 290 P **P 21 59 41.4 +0.9**
KNT Kendrikon 44.90 290 P **P 21 59 41.4 +0.9**
KNT Kendrikon 44.90 290 P **P 21 59 41.4 +0.9**
KUR Kuril'sk 45.02 64 *eP* **P 21 59 40.6 -0.7**
KUR *i* *PP **sP 21 59 49.5 -0.5**
KUR S **S 22 06 15.4 -3.5**
KUR pmax pmax
comp=Z,252nm,1.8s
KUR pmax pmax
comp=Z,117nm,1.4s
KUR MLR MLR
comp=Z,987nm,17.0s
KUR MLR MLR
comp=N,282nm,15.0s
KUR MLR MLR
comp=E,454nm,15.0s
SANT Santorini 45.06 283⇓ *iP* **P 21 59 42.5 +0.7**
VAY Valandovo 45.06 291 *i P* **P 21 59 42.8 +1.0**
VAY Valandovo 45.06 291 P **P 21 59 43.0 +1.2**
VYHS Vyhne 45.09 301 *eP* **P 21 59 43.2 +1.3**
VYHS pmax pmax
comp=Z,20nm,1.4s
VYHS Vyhne 45.09 301 *eP* **P 21 59 43.2 +1.3**
OKC Ostrava-Krasne 45.12 303 *eP* **P 21 59 43.2 +1.1**
OKC *ep*P **sP 21 59 50.3 -0.4**
OKC *e*SS SS 22 09 44.3 +2.0
OKC AMS AMS 22 19 10.0
comp=Z,2μm,14.0s
OKC Ostrava-Krasne 45.12 303 *eP* **P 21 59 43.2 +1.1**
OKC *e* 21 59 50.3
OKC *e*SS SS 22 09 44.3 +2.0
OKC MLR MLR
comp=Z,2μm,14.0s
STIP Stip 45.19 291 *i P* **P 21 59 42.0 -0.8**
HFS Hagfors 45.25 318 P **P 21 59 43.7 +0.7**
comp=Z,26nm,0.8s,baz=94,slow=7.8,SNR=128
HFS LR LR 22 19 38.1
comp=Z,3μm,18.7s,baz=79,slow=37
BUD Budapest 45.28 300 P **P 21 59 46.0 +2.6**
XOR Xorichti 45.40 288 P **P 21 59 44.9 +0.4**
XOR Xorichti 45.40 288 P **P 21 59 44.9 +0.4**
NSS Namsos 45.41 325 *eP* **P 21 59 44.3 +0.2**
RGRI Rengat 45.45 154 P P 21 59 53.7 +8.7
PTL Penteli 45.48 286 P **P 21 59 45.6 +0.5**
PTL Penteli 45.48 286 P **P 21 59 45.6 +0.5**
KBS Kingsbay 45.49 345 *eP* **P 21 59 45.6 +1.0**
comp=Z,19nm,0.7s
KBS LR LR
comp=Z,2μm,19.0s
KBS Kingsbay 45.49 345 *eP* **P 21 59 45.6 +1.0**
KBS pmax pmax
comp=Z,19nm,0.7s
KBS MLR MLR
comp=Z,2μm,19.0s
KBS Kingsbay 45.49 345 *eP* **P 21 59 46.0 +1.3**
MORC Moravsky Berou 45.51 303⇓ *iP* **P 21 59 46.5 +1.3**
MORC Moravsky Berou 45.51 303 *eP* **P 21 59 46.6 +1.3**
comp=Z,180nm,0.8s
MORC Moravsky Berou 45.51 303 *eP* **P 21 59 46.6 +1.3**
MORC pmax pmax
comp=Z,180nm,0.8s
MORC Moravsky Berou 45.51 303⇑ *iP* **P 21 59 46.6 +1.3**
ATHU Athens Univers 45.57 286 P **P 21 59 45.3 -0.5**
ATHU Athens Univers 45.57 286 P **P 21 59 45.3 -0.5**
LAST Lasithi 45.59 281 P **P 21 59 45.5 -0.6**
LAST Lasithi 45.59 281 P **P 21 59 45.5 -0.6**
SKO Skopje 45.60 292 *i P* **P 21 59 47.3 +1.3**
LIT Litokhoron 45.60 289 *eP* **P 21 59 46.6 +0.5**
comp=Z,22nm,0.8s
LIT Litokhoron 45.60 289 P **P 21 59 46.1 0.0**
LIT Litokhoron 45.60 289 *eP* **P 21 59 46.6 +0.5**
LIT pmax pmax
comp=Z,22nm,0.8s
VLY Voula,Athens 45.61 286 P **P 21 59 46.5 +0.3**
VLY Voula,Athens 45.61 286 P **P 21 59 46.5 +0.3**
BSD Bornholm Skovb 45.64 311⇑ *iP* **P 21 59 46.0 -0.1**
comp=Z,37nm,0.8s
JAVC Velka Javorina 45.71 302⇑ *iP* **P 21 59 49.3 +2.4**
DIVS Divibare 45.79 295 *eP* **P 21 59 48.5 +0.9**
comp=Z,33nm,0.7s
VILL Villia 45.82 286 P **P 21 59 48.0 +0.1**
KRLC Kraliky 45.89 304 *eP* **P 21 59 48.7 +0.4**
KRLC Kraliky 45.89 304 *eP* **P 21 59 48.7 +0.4**
IDI Anoyia 45.96 282 P **P 21 59 48.1 -0.9**
comp=Z,49nm,0.8s,baz=32,slow=10.0,SNR=31
IDI Anoyia 45.96 282⇓ *iP* **P 21 59 49.4 +0.4**
IDI Anoyia 45.96 282 *eP* **P 21 59 49.2 +0.2**
comp=Z,46nm,0.8s
KSP Ksiaz 45.97 305 *eP* **P 21 59 50.0 +1.2**
KSP Ksiaz 45.97 305 *eP* **P 21 59 50.0 +1.2**
SMOL Smolenice 45.97 302 *eP* **P 21 59 50.7 +1.8**
SMOL Smolenice 45.97 302 *eP* **P 21 59 50.7 +1.8**
BIA Bitola 46.05 291 *i P* **P 21 59 50.2 +0.6**
DPC Dobruska-Polom 46.09 305 *eP* **P 21 59 51.7 +1.8**
DPC *ep*P **pP 21 59 56.6 +0.5**
DPC *e*S **S 22 06 34.2 -0.2**
DPC *e*SS **SS 22 10 04.5 +5.4**
DPC AMS AMS 22 19 50.0
comp=Z,3μm,13.9s
DPC Dobruska-Polom 46.09 305 *eP* **P 21 59 51.7 +1.8**
DPC *e* 21 59 56.6
DPC *e*S **S 22 06 34.2 -0.2**
DPC MLR MLR
comp=Z,3μm,13.9s
FNA Florina 46.10 290 *eP* **P 21 59 50.4 +0.3**
comp=Z,19nm,0.9s
FNA Florina 46.10 290 *eP* **P 21 59 50.4 +0.3**
FNA pmax pmax
comp=Z,19nm,0.9s
MODS Modra-Piesok 46.11 302 *eP* **P 21 59 50.5 +0.5**
MODS pmax pmax
comp=Z,33nm,1.1s
MODS Modra-Piesok 46.11 302 *eP* **P 21 59 50.5 +0.5**
MODS *e*L L 22 20 22.5
SIVA Sivas 46.14 282 P **P 21 59 51.0 +0.7**
SIVA Sivas 46.14 282 P **P 21 59 51.0 +0.7**
AGG Agios Georgios 46.16 288 *eP* **P 21 59 50.5 0.0**
comp=Z,91nm,0.9s
AGG Agios Georgios 46.16 288 *eP* **P 21 59 50.5 0.0**
AGG pmax pmax
comp=Z,91nm,0.9s
NC303 NORSAR Array S 46.19 320 *eP* **P 21 59 51.4 +1.0**
NC602 NORSAR Array S 46.20 319 *eP* **P 21 59 51.1 +0.7**
UPC Upice 46.24 305 *eP* **P 21 59 52.6 +1.7**
UPC *ep*P **sP 21 59 58.9 -0.7**
UPC *e*S **S 22 06 36.4 +0.1**
UPC *e*SS **SS 22 09 59.8 -1.6**
UPC AMS AMS 22 19 50.0
comp=Z,3μm,12.3s
UPC Upice 46.24 305 *eP* **P 21 59 52.6 +1.7**
UPC *e* 21 59 58.9
UPC *e*S **S 22 06 36.4 +0.1**
UPC *e*SS **SS 22 09 59.8 -1.6**
UPC MLR MLR
comp=Z,3μm,12.3s
VRAC Vranov 46.24 303⇑ *iP* **P 21 59 52.5 +1.5**
VRAC Vranov 46.24 303⇑ *iP* **P 21 59 52.5 +1.5**
ZST Bratislava 46.28 301 *eP* **P 21 59 51.8 +0.5**
ZST pmax pmax
comp=Z,4.0nm,1.5s
ZST Bratislava 46.28 301 *eP* **P 21 59 51.8 +0.5**
NB2 NORSAR Subarra 46.30 320 P **P 21 59 51.8 +0.5**
comp=Z,54nm,0.8s,baz=78,slow=7.9
NB2 NORSAR Subarra 46.30 320 P **P 21 59 51.8 +0.5**
baz=78,slow=7
NOA NORSAR Array B 46.30 320 P **P 21 59 51.7 +0.5**
NOA LR LR 22 20 12.3
comp=Z,2μm,18.8s,baz=90,slow=37
TBLU Trondheim 46.34 323 *eP* **P 21 59 50.4 -1.1**
VAM Vamos 46.40 282 P **P 21 59 50.1 -2.3**
VAM Vamos 46.40 282 P **P 21 59 50.1 -2.3**
VAM Vamos 46.40 282 P **P 21 59 50.1 -2.3**
KRUC Moravsky 46.45 303⇑ *iP* **P 21 59 54.2 +1.6**
NC204 NORSAR Array S 46.47 320 *eP* **P 21 59 53.5 +0.8**
NAO01 NORSAR Array S 46.49 320 *eP* **P 21 59 53.2 +0.5**
NBO00 NORSAR Array S 46.51 320 *eP* **P 21 59 53.5 +0.6**
EVR Evrytania 46.57 288 P **P 21 59 53.8 0.0**
EVR Evrytania 46.57 288 P **P 21 59 53.8 0.0**
SERG Sergoula 46.61 287 P **P 21 59 51.7 -2.3**
ANX Ano Chora 46.63 287 P **P 21 59 54.2 -0.1**
RGN Rugen 46.67 311 *eP* **P 21 59 55.8 +1.5**
comp=Z,105nm,0.6s
EFP Efpalio 46.71 287 P **P 21 59 54.7 -0.1**
LAKA Lakka 46.74 287 P **P 21 59 55.0 -0.1**
LAKA Lakka 46.74 287 P **P 21 59 55.0 -0.1**
GVD Gavdhos 46.75 282 P **P 21 59 55.2 +0.1**
GVD Gavdhos 46.75 282 P **P 21 59 55.2 +0.1**
OSL Oslo 46.76 318 *eP* **P 21 59 55.9 +1.1**
SOP Sopron 46.79 301 P **P 21 59 56.2 +0.9**
COP Copenhagen 46.87 313⇑ *iP* **P 21 59 57.1 +1.3**
comp=Z,58nm,0.8s
SBUM Sibu 46.90 140 *eP* **P 21 59 57.7 +1.2**
comp=Z,34nm,0.7s
PDG Podgorica 46.92 293⇓ *iP* **P 21 59 57.0 +0.7**
TTG Podgorica 46.92 293 *eP* **P 21 59 56.4 +0.1**
comp=Z,29nm,0.8s
TTG Podgorica 46.92 293 *eP* **P 21 59 56.4 +0.1**
TTG pmax pmax
comp=Z,29nm,0.8s
DSL Palaion Diasel 46.98 288 P **P 21 59 56.6 -0.3**
DSL Palaion Diasel 46.98 288 P **P 21 59 56.6 -0.3**
LLD Lille Linde 47.08 312 *i P* **P 21 59 59.1 +1.7**
PVCC Panska Ves 47.11 305 *eP* **P 21 59 59.5 +1.8**
PVCC *ep*P **sP 22 00 06.2 -0.2**
PVCC *e*SS SS 22 10 13.0 -2.4
PVCC AMS AMS 22 20 30.0
comp=Z,2μm,12.4s
PVCC Panska Ves 47.11 305 *eP* **P 21 59 59.5 +1.8**
PVCC *e* 22 00 06.2
PVCC *e*SS SS 22 10 13.0 -2.4
PVCC MLR MLR
comp=Z,2μm,12.4s
DOMB Dombas 47.11 322 *eP* **P 21 59 58.4 +0.8**
PDO Prodromos 47.15 288 P **P 21 59 58.0 -0.2**
CONA Conrad Observa 47.15 302 *i P* **P 21 59 59.8 +1.6**
comp=Z,36nm,1.0s,SNR=20
GOPC GO Pecny, Ondr 47.17 304 *eP* **P 21 59 59.7 +1.4**
GOPC *ep*P **pP 22 00 04.4 -0.1**
GOPC *e*SS SS 22 10 17.4 +0.9
GOPC AMS AMS 22 20 30.0
comp=Z,3μm,13.3s
GOPC GO Pecny, Ondr 47.17 304 *eP* **P 21 59 59.7 +1.4**
GOPC *e* 22 00 04.4
GOPC *e*SS SS 22 10 17.4 +0.9
GOPC MLR MLR
comp=Z,3μm,13.3s
ATD Arta Tunnel 47.22 242 P **P 21 59 59.0 -0.1**
comp=Z,23nm,1.0s,baz=10,slow=7.8,SNR=11
ATD LR LR 22 23 55.6
comp=Z,616nm,19.0s,baz=38,slow=41
ATD Arta Tunnel 47.22 242 *eP* **P 21 59 58.8 -0.3**
comp=Z,25nm,1.0s
ITM Ithomi 47.24 286 *eP* **P 21 59 57.6 -1.4**
comp=Z,33nm,1.0s
PRA Prague 47.34 305 *eP* **P 22 00 01.4 +1.9**
PRA *ep*P **pP 22 00 05.8 +0.1**
PRA AMS AMS 22 20 30.0
comp=Z,4μm,13.0s
PRA Prague 47.34 305 *eP* **P 22 00 01.4 +1.9**
PRA *e* 22 00 05.8
PRA MLR MLR
comp=Z,4μm,13.0s
KONO Kongsberg 47.38 318 *eP* **P 22 00 00.9 +1.2**
comp=Z,116nm,1.4s
KONO Kongsberg 47.38 318*c eP* **P 22 00 00.0 +0.3**
KONO pmax pmax
comp=Z,50nm,1.2s
KONO Kongsberg 47.38 318 *eP* **P 22 00 00.7 +1.0**
BRG Berggiesshubel 47.38 306⇑ *iP* **P 22 00 01.1 +1.3**
comp=Z,39nm,0.9s
BRG *i* 22 00 07.6
comp=Z,25nm,0.8s
BRG *e* 22 00 14.8
comp=Z,29nm,0.9s
comp=Z,3μm,12.2s
comp=N,760nm,12.2s
comp=E,2μm,12.2s
BRG Berggiesshubel 47.38 306⇑ *iP* **P 22 00 01.1 +1.3**
BRG *i* 22 00 07.6
BRG pmax pmax
comp=Z,39nm,0.9s
BRG MLR MLR
comp=N,760nm,12.2s
BRG MLR MLR
comp=E,2μm,12.2s
BRG MLR MLR
comp=Z,3μm,12.2s
BLY Banja Luka 47.43 297⇑ *iP* **P 22 00 01.2 +0.9**
BLY Banja Luka 47.43 297 *eP* **P 22 00 00.8 +0.5**
comp=Z,12nm,0.8s
ARSA Arzberg 47.60 301 *i P* **P 22 00 02.7 +1.0**
comp=Z,16nm,0.9s,SNR=9.4
MOL Molde 47.69 322 *eP* **P 22 00 01.9 -0.2**
CLL Collm 47.80 307⇑ *iP* **P 22 00 03.9 +0.8**
comp=Z,112nm,0.7s
CLL *i* sP **sP 22 00 10.5 -1.3**
CLL *e* 22 00 14.0
CLL *e*PP **PP 22 01 54.0 -0.7**
CLL *e*S **S 22 07 01.0 +2.4**
CLL *e*SS **SS 22 10 30.0 +3.3**
CLL *e*SSSS 22 11 48.0
CLL LmV 22 22 00.0
comp=Z,2μm,18.2s
CLL Collm 47.80 307 *eP* **P 22 00 03.6 +0.5**
comp=Z,107nm,0.7s
CLL Collm 47.80 307 *eP* **P 22 00 03.6 +0.5**
CLL pmax pmax
comp=Z,107nm,0.7s
AKN Aaknes 48.03 322 *eP* **P 22 00 05.7 +0.9**
MASI Maura Aman, Be 48.05 155 P **P 22 00 06.8 +1.3**
comp=Z,90nm,0.7s
SOKA Soboth 48.12 300 *i P* **P 22 00 06.7 +0.9**
comp=Z,26nm,1.0s,SNR=29
KHC Kasperske Hory 48.17 304 *eP* **P 22 00 07.3 +1.2**
KHC *ep*P **pP 22 00 12.0 -0.3**
KHC *e*S **S 22 07 00.8 -3.2**
KHC *e*SS **SS 22 10 31.0 -1.8**
KHC AMS AMS 22 21 10.0
comp=Z,3μm,14.1s
KHC Kasperske Hory 48.17 304 *eP* **P 22 00 07.4 +1.2**
comp=Z,8.8nm,0.8s
KHC Kasperske Hory 48.17 304 *eP* **P 22 00 07.3 +1.2**
KHC *e* 22 00 12.0
KHC *e*S **S 22 07 00.8 -3.2**
KHC *e*SS **SS 22 10 31.0 -1.8**
KHC MLR MLR
comp=Z,3μm,14.1s
MOA Molln 48.19 302 *i P* **P 22 00 07.5 +1.3**
comp=Z,7.6nm,1.1s,SNR=8.7
GEC2 GERESS Array S 48.19 303 *eP* **P 22 00 07.7 +1.4**
comp=Z,21nm,0.8s
GEC2 GERESS Array S 48.19 303 *eP* **P 22 00 07.7 +1.4**
GEC2 pmax pmax
comp=Z,21nm,0.8s
GERES GERESS Array B 48.19 303 P **P 22 00 07.7 +1.4**
comp=Z,13nm,0.7s,baz=64,slow=7.7,SNR=132
GEA0 GERESS Array S 48.20 303 *eP* **P 22 00 07.1 +0.8**
OZLJ Ozalj 48.23 299 P **P 22 00 07.4 +1.0**
MUD Monsted U'grnd 48.42 314⇑ *iP* **P 22 00 09.3 +1.5**
SKR Severo-Kuril's 48.43 54 *eP* **P 22 00 04.2 -3.7**
SKR pmax pmax
comp=Z,300nm,5.8s
SKR pmax pmax
comp=Z,52nm,1.6s
SKR pmax pmax
comp=Z,200nm,9.2s
SKR MLR MLR
comp=Z,2μm,15.0s
SKR MLR MLR
comp=Z,2μm,15.0s
UDBI Udbina 48.45 297 P **P 22 00 08.4 +0.1**
NKC Novy Kostel 48.49 305 *eP* **P 22 00 10.1 +1.6**
NKC *ex* x 22 00 17.6
NKC *e*SS SS 22 10 36.8 -1.1
NKC AMS AMS 22 21 20.0
comp=Z,3μm,11.5s
NKC Novy Kostel 48.49 305 *eP* **P 22 00 10.1 +1.6**
NKC *e* 22 00 17.6
NKC *e*SS SS 22 10 36.8 -1.1
NKC MLR MLR
comp=Z,3μm,11.5s
OBKA Obir 48.49 300 *i P* **P 22 00 09.6 +1.0**
comp=Z,26nm,1.0s,SNR=15
PEA0B Petropavlovsk- 48.57 50 *eP* **P 22 00 09.5 +0.5**
comp=Z,88nm,1.3s
PETK Petropavlovsk- 48.57 50 P **P 22 00 08.8 -0.3**
comp=Z,7.1nm,0.5s,baz=288,slow=7.0,SNR=26
PETK LR LR 22 21 55.8
comp=Z,2μm,19.3s,baz=294,slow=38
PETK Petropavlovsk- 48.57 50 *eP* **P 22 00 09.0 0.0**
PETK Petropavlovsk- 48.57 50 *eP* **P 22 00 09.0 0.0**
HYA Hoyanger 48.65 321 *eP* **P 22 00 10.3 +0.8**
STKI Sintang 48.65 142 P **P 22 00 11.4 +1.4**
comp=Z,82nm,0.9s
BILL Bilibino 48.75 30 *eP* **P 22 00 11.1 +0.9**
comp=Z,39nm,1.2s
BILL LR LR
comp=Z,5μm,19.0s
BILL Bilibino 48.75 30*c iP* **P 22 00 11.0 +0.8**
BILL *i* 22 01 35.5
BILL *e* 22 02 04.4
BILL *e*PPP PPP 22 02 57.9
BILL pmax pmax
comp=Z,38nm,1.2s
BILL MLR MLR
comp=Z,5μm,19.0s
SNART Snartemo 48.91 317 *eP* **P 22 00 12.8 +1.2**
BLS5 Blasjo 48.98 319 *eP* **P 22 00 13.0 +0.9**
NVLJ Novalja 49.02 298 P **P 22 00 11.7 -0.9**
MYKA Terra Mystica 49.03 301 *i P* **P 22 00 13.3 +0.6**
comp=Z,9.7nm,0.8s
KBA Koelnbreinsper 49.05 301 *i P* **P 22 00 14.0 +0.9**
comp=Z,15nm,0.9s,SNR=12
KBA Koelnbreinsper 49.05 301 P **P 22 00 13.9 +0.9**
PET Petropavlovsk 49.14 50 *eP* **P 22 00 12.5 -0.9**
comp=Z,23nm,0.7s
PET LR LR
comp=Z,2μm,20.0s
PET Petropavlovsk 49.14 50*c iP* **P 22 00 12.3 -1.1**
PET *e* 22 01 33.3
PET *e* 22 02 09.8
PET *e*S **S 22 07 17.5 +0.1**
PET *e*SS **SS 22 10 46.9 -1.3**
PET 22 12 14.5
PET pmax pmax
comp=Z,37nm,0.9s
PET pmax pmax
comp=Z,300nm,12.5s
PET pmax pmax
comp=Z,200nm,13.3s
PET pmax pmax
comp=Z,200nm,16.8s
PET MLR MLR
comp=Z,2μm,17.0s
BER Bergen 49.26 320 *eP* **P 22 00 15.5 +1.3**
ASK Askoy 49.30 320 *eP* **P 22 00 15.6 +1.2**
MATE Matera 49.39 292⇑ *iP* **P 22 00 16.0 +0.5**
GRF Grafenberg Arr 49.42 305 P **P 22 00 17.6 +2.0**
GRFO Grafenberg 49.42 305 *eP* **P 22 00 17.4 +1.8**
comp=Z,87nm,0.7s
GRFO Grafenberg 49.42 305 *eP* **P 22 00 17.4 +1.8**
GRFO pmax pmax
comp=Z,87nm,0.7s
STAV Stavanger 49.49 318 *eP* **P 22 00 16.2 +0.3**
ABTA Abfaltersbach 49.70 301 *i P* **P 22 00 17.9 0.0**
comp=Z,7.8nm,0.9s,SNR=5.8
TIP Timpagrande 50.00 290⇑ *iP* **P 22 00 21.0 +0.8**
TIP Timpagrande 50.00 290 *eP* **P 22 00 20.8 +0.6**
comp=Z,106nm,1.4s
WTTA Wattenberg 50.06 302 *i P* **P 22 00 21.8 +1.1**
comp=Z,46nm,0.8s,SNR=20
WATA Walderalm 50.07 302 *i P* **P 22 00 21.8 +1.0**
comp=Z,38nm,0.9s,SNR=9.6
CUC Castrocucco 50.29 292 *eP* **P 22 00 23.3 +0.9**
comp=Z,55nm,0.8s
MOTA Moosalm 50.36 302 *i P* **P 22 00 22.8 -0.2**
comp=Z,54nm,0.9s,SNR=60
LWLI Liwa 50.40 154 P **P 22 00 21.4 -2.1**
comp=Z,58nm,0.7s
RETA Reutte 50.52 303 *i P* **P 22 00 25.3 +1.2**
comp=Z,41nm,1.0s,SNR=12
DAV Davao City (W) 50.59 122 LR LR 22 23 58.4
comp=Z,1μm,19.0s,baz=346,slow=39
DAV Davao City (W) 50.59 122 PFAKE 22 00 40.0 +15
DAV LR LR
comp=Z,844nm,22.0s

FETA Feichten 50.72 302 *i* P **P 22 00 26.5 +0.8**
comp=Z,35nm,0.9s,SNR=18
AQU L'Aquila 50.90 296 *e*P **P 22 00 27.7 +0.7**
comp=Z,28nm,0.8s
AQU L'Aquila 50.90 296 *e*P **P 22 00 27.7 +0.7**
AQU pmax pmax
comp=Z,28nm,0.8s
STU Stuttgart 50.99 305 *e*P **P 22 00 28.7 +1.2**
comp=Z,52nm,0.9s
STU Stuttgart 50.99 305 *e*P **P 22 00 28.7 +1.2**
STU pmax pmax
comp=Z,52nm,0.9s
CEL Celeste 51.02 290 *e*P **P 22 00 28.9 +0.9**
comp=Z,97nm,1.0s
MTKI Muara Teweh, K 51.14 139 P **P 22 00 31.1 +2.1**
DAVA Damuels 51.15 303 *i* P **P 22 00 29.6 +0.7**
comp=Z,27nm,1.0s,SNR=11
FUORN Ofenpass-Fuorn 51.18 302 *e*P **P 22 00 29.9 +0.6**
comp=Z,138nm,2.0s
TUE Stuetta 51.81 302 *e*P **P 22 00 33.8 -0.2**
comp=Z,30nm,0.8s
SLE Schleitheim 51.82 304 P **P 22 00 35.2 +1.4**
VLC Villacollemand 52.12 299 *e*P **P 22 00 36.2 +0.1**
comp=Z,53nm,0.8s
DAG Danmarks Havn 52.13 343⇑*i*P **P 22 00 36.1 +0.5**
comp=Z,1µm,20.0s
MEM Membach 52.19 308⇑P **P 22 00 37.6 +1.2**
comp=Z,19nm,1.1s
MEM Membach 52.19 308 P **P 22 00 38.0 +1.6**
BEBN Eben Emael 52.31 308⇑P **P 22 00 38.4 +1.1**
LRW Lerwick 52.42 321 *e*P **P 22 00 38.4 +0.5**
LRW lamb lamb 22 00 39.2
comp=Z,40nm,0.8s
LRW IAMs_20 IAMs_20 22 23 34.2
comp=Z,4µm,14.1s
VAE Valguarnera 52.42 290 P **P 22 00 40.6 +2.2**
comp=Z,9.6nm,0.3s,baz=12,slow=8.0,SNR=4.3
VAE LR LR 22 26 56.9
comp=Z,334nm,20.0s,baz=53,slow=41
ECH Echery 52.46 305 *e*P **P 22 00 39.0 +0.5**
comp=Z,30nm,0.9s
ECH Echery 52.46 305 *e*P **P 22 00 39.0 +0.5**
ECH pmax pmax
comp=Z,30nm,0.9s
WLF Walferdange 52.48 307⇓P **P 22 00 40.0 +1.4**
comp=Z,31nm,1.2s
WLF Walferdange 52.48 307 *e*P **P 22 00 39.6 +1.0**
comp=Z,52nm,1.2s
WLF Walferdange 52.48 307 *e*P **P 22 00 39.6 +1.0**
WLF pmax pmax
comp=Z,52nm,1.2s
MPSI Mapaga 52.64 133 P **P 22 00 41.2 +1.1**
comp=Z,29nm,1.6s,comp=Z,391nm
BCLA Clavier 52.67 308⇑P **P 22 00 41.1 +1.0**
HINF Hinteralfeld 52.81 304 *e*P **P 22 00 41.0 -0.1**
HINF pmax pmax
comp=Z,36nm,1.0s
HAU Haudompre 53.04 305 P **P 22 00 42.6 -0.2**
HAU pmax pmax
comp=Z,27nm,1.0s
UCC Uccle 53.07 309⇑P **P 22 00 43.1 +0.2**
GIVF Givet 53.09 308 *e*P **P 22 00 43.4 +0.3**
GIVF pmax pmax
comp=Z,49nm,1.0s
WDD Wied Dalam 53.13 288 *e*P **P 22 00 43.6 0.0**
comp=Z,85nm,0.9s
SENIN Lac Senin/Sane 53.15 303 *e*P **P 22 00 44.2 +0.3**
comp=Z,20nm,1.0s
DOU Dourbes 53.22 308⇑P **P 22 00 45.1 +1.0**
comp=Z,18nm,1.1s
BAIF Baives 53.46 308 *e*P **P 22 00 46.2 +0.4**
BAIF pmax pmax
comp=Z,43nm,0.9s
PCI Palu 53.64 134 P **P 22 00 48.8 +1.3**
comp=Z,67nm,1.9s,comp=Z,1µm
MRSI Marisa 53.65 131 P **P 22 00 48.7 +1.1**
comp=Z,40nm,1.5s,comp=Z,653nm
KBKI Kotabaru 53.80 139 P **P 22 00 49.7 +1.0**
comp=Z,33nm,0.7s,comp=Z,4µm
LPG La Plagne 53.87 302 *e*P **P 22 00 49.7 +0.4**
LPG pmax pmax
comp=Z,101nm,0.8s
LPL La Plagne 53.87 302 *e*P **P 22 00 49.7 +0.5**
LPL pmax pmax
comp=Z,85nm,0.8s
BNI Bardonecchia 54.11 301 *e*P **P 22 00 51.6 +0.7**
comp=Z,210nm,1.8s
BNI Bardonecchia 54.11 301 *e*P **P 22 00 51.6 +0.7**
BNI pmax pmax
comp=Z,210nm,1.8s
MLA1 Latheron 54.16 319⇑*e*P **P 22 00 51.7 +0.9**
BIGH Upper Bighouse 54.34 320 *e*P **P 22 00 52.9 +0.8**
BIGH lamb lamb 22 00 53.6
comp=Z,143nm,0.8s
BIGH IAMs_20 IAMs_20 22 25 10.0
comp=Z,5µm,13.0s
MME1 Meikle Cairn 54.36 318⇑*e*P **P 22 00 52.9 +0.6**
WACR West Acre 54.39 312 *e*P **P 22 00 53.3 +0.8**
WACR lamb lamb 22 00 54.3
comp=Z,191nm,0.9s
WACR IAMs_20 IAMs_20 22 25 46.9
comp=Z,4µm,15.3s
MCD Coleburn Disti 54.40 319⇑*e*P **P 22 00 53.4 +0.8**
APSI Ampana 54.63 132 P **P 22 00 58.1 +3.3**
ORIF Oris-en-Rattie 54.68 301 *e*P **P 22 00 55.3 +0.4**
ORIF pmax pmax
comp=Z,47nm,0.8s
EDU Dundee 54.71 317⇑*e*P **P 22 00 55.4 +0.6**
ESY Stoneypath 54.77 317⇑*e*P **P 22 00 55.8 +0.5**
MDO Dochfour 55.00 319⇑*e*P **P 22 00 57.4 +0.5**
EDI Edinburgh 55.06 317 *e*P **P 22 00 57.8 +0.4**
EDI lamb lamb 22 00 58.8
comp=Z,50nm,0.7s
EDI IAMs_20 IAMs_20 22 25 49.4
comp=Z,3µm,13.1s
HPK Haverah Park 55.09 314⇑*e*P **P 22 00 58.3 +0.7**
HPK lamb lamb 22 00 59.1
comp=Z,93nm,0.7s
HPK IAMs_20 IAMs_20 22 25 46.5
comp=Z,4µm,21.4s
INVG Invergeldie, C 55.28 317 *e*P **P 22 00 59.4 +0.4**
INVG lamb lamb 22 01 01.4
comp=Z,14nm,0.8s
INVG IAMs_20 IAMs_20 22 25 33.3
comp=Z,2µm,13.3s
EKA Eskdalemuir Ar 55.30 316 P **P 22 00 59.5 +0.3**
comp=Z,28nm,0.8s,baz=61,slow=9.3,SNR=58
EKA LR LR 22 26 17.2
comp=Z,2µm,19.2s,baz=50,slow=38
ESK Eskdalemuir 55.33 316 *e*P **P 22 01 00.2 +0.9**
comp=Z,67nm,1.0s
ESK LR LR
comp=Z,2µm,21.0s
ESK Eskdalemuir 55.33 316 *e*P **P 22 01 00.2 +0.9**
ESK pmax pmax
comp=Z,67nm,1.0s
ESK MLR MLR
comp=Z,2µm,21.0s
SSB Saint Sauveur 55.36 302 *e*P **P 22 01 00.1 +0.3**
comp=Z,174nm,2.0s
SSB Saint Sauveur 55.36 302 *e*P **P 22 01 00.1 +0.3**
SSB pmax pmax
comp=Z,174nm,2.0s
AVF Avril sur Loir 55.40 304 *e*P **P 22 00 59.6 -0.4**
AVF pmax pmax
comp=Z,69nm,1.0s
TTSI Tana Toraja 55.43 135 P **P 22 01 01.1 +0.6**
comp=Z,31nm,0.8s,comp=Z,1µm
VIVF Saint-Julien-I 55.47 302 *e*P **P 22 01 00.4 -0.2**
VIVF pmax pmax
comp=Z,28nm,1.0s
KESW Keswick, Cumbr 55.59 315 *e*P **P 22 01 01.7 +0.4**
KESW lamb lamb 22 01 03.1
comp=Z,48nm,0.8s
KESW IAMs_20 IAMs_20 22 26 47.2
comp=Z,7µm,14.1s
KPL Plockton 55.67 319 *e*P **P 22 01 02.4 +0.6**
KPL lamb lamb 22 01 03.1
comp=Z,30nm,0.7s
KPL IAMs_20 IAMs_20 22 25 52.3
comp=Z,4µm,14.3s
PGBU Glenifferbraes 55.77 317 *e*P **P 22 01 03.1 +0.7**
PGBU lamb lamb 22 01 04.2
comp=Z,50nm,0.9s
PGBU IAMs_20 IAMs_20 22 26 01.8
comp=Z,3µm,13.1s

BGF Bois d'Agland 55.82 304 *e*P **P 22 01 02.6 -0.4**
BGF pmax pmax
comp=Z,33nm,1.0s
SCO Scoresbysund 55.84 337⇑*i*P **P 22 01 04.4 +1.6**
comp=Z,15nm,0.8s
comp=Z,950nm,16.0s
SCO Scoresbysund 55.84 337 *e*P **P 22 01 04.3 +1.6**
comp=Z,106nm,1.9s
SCO Scoresbysund 55.84 337 *e*P **P 22 01 04.3 +1.6**
SCO pmax pmax
comp=Z,106nm,1.9s
SPSI Sidrap Palu 56.19 136 P **P 22 01 05.8 -0.1**
comp=Z,37nm,1.2s,comp=Z,514nm
STRD Stroud 56.35 312 *e*P **P 22 01 07.1 +0.5**
STRD lamb lamb 22 01 08.5
comp=Z,108nm,0.8s
STRD IAMs_20 IAMs_20 22 27 05.9
comp=Z,3µm,14.7s
HLM1 Long Mynd 56.40 313⇑*e*P **P 22 01 08.0 +0.9**
HLM1 IAMs_20 IAMs_20 22 26 59.5
comp=Z,4µm,15.4s
FOEL Foel Wylfa 56.41 313⇑*e*P **P 22 01 07.0 -0.2**
FOEL lamb lamb 22 01 07.9
comp=Z,62nm,0.8s
FOEL IAMs_20 IAMs_20 22 26 57.4
comp=Z,4µm,16.0s
TNTI Ternate 56.60 125 *e*P **P 22 01 09.6 +0.6**
comp=Z,300nm,1.8s
OLDB Oldbury-Upon-S 56.62 312⇑*e*P **P 22 01 09.1 +0.6**
OLDB lamb lamb 22 01 10.1
comp=Z,156nm,1.0s
OLDB IAMs_20 IAMs_20 22 27 15.3
comp=Z,3µm,13.4s
WPM1 Penmaenmawr 56.62 314⇑*e*P **P 22 01 08.9 +0.4**
MONM Monmouth 56.67 312⇑*e*P **P 22 01 09.7 +0.7**
MONM lamb lamb 22 01 10.5
comp=Z,92nm,0.8s
MONM IAMs_20 IAMs_20 22 27 34.2
comp=Z,3µm,14.0s
LLW Llanwychllyn 56.67 314⇑*e*P **P 22 01 09.6 +0.7**
MCH1 Michaelchurch 56.70 312⇑*e*P **P 22 01 09.9 +0.7**
MCH1 lamb lamb 22 01 10.7
comp=Z,105nm,0.9s
MCH1 IAMs_20 IAMs_20 22 27 09.3
comp=Z,3µm,16.1s
WME Myndd Eilian 56.76 314⇑*e*P **P 22 01 10.1 +0.5**
FLN La Foliniere 56.78 308 *e*P **P 22 01 09.2 -0.6**
FLN pmax pmax
comp=Z,27nm,0.8s
KEST Kesra 56.82 290 P **P 22 01 10.7 +0.2**
comp=Z,11nm,0.7s,baz=272,slow=1.0,SNR=12
KEST LR LR 22 30 12.6
comp=Z,344nm,18.2s,baz=2.5,slow=41
KEST Kesra 56.82 290 *e*P **P 22 01 11.3 +0.9**
comp=Z,19nm,0.9s
WLF1 Llynfaes 56.86 314⇑*e*P **P 22 01 10.4 +0.1**
WLF1 lamb lamb 22 01 11.4
comp=Z,137nm,1.0s
WLF1 IAMs_20 IAMs_20 22 27 19.4
comp=Z,7µm,16.8s
YRC Rhoscolyn 56.98 314 *e*P **P 22 01 12.0 +0.9**
CAF Calviac 57.07 303 *e*P **P 22 01 12.3 +0.3**
CAF pmax pmax
comp=Z,45nm,1.4s
GRR Gorron 57.18 308 *e*P **P 22 01 12.1 -0.6**
GRR pmax pmax
comp=Z,60nm,0.8s
RJF Les Rejaudoux 57.23 304 *e*P **P 22 01 13.4 +0.3**
RJF pmax pmax
comp=Z,50nm,0.9s
JAGI Jajag, Banyuwa 57.43 144 *e*P **P 22 01 12.8 -2.0**
comp=Z,207nm,1.8s
JRS Jersey 57.52 309 *e*P **P 22 01 15.4 +0.5**
BKSI Bulukumba 57.52 136 P **P 22 01 16.6 +1.2**
comp=Z,17nm,1.4s,comp=Z,366nm
SMY Shemya 57.81 46 *e*P **P 22 01 16.9 -0.1**
comp=Z,271nm,1.5s
SMY Shemya 57.81 46 *e*P **P 22 01 16.9 -0.1**
SMY pmax pmax
comp=Z,271nm,1.5s
DSB Dublin 57.93 315 *e*P **P 22 01 18.0 +0.2**
comp=Z,208nm,1.9s
HTL Hartland 58.00 312 *e*P **P 22 01 19.1 +0.8**
HTL lamb lamb 22 01 19.9
comp=Z,55nm,0.8s
SANI Sanana 58.03 128 P **P 22 01 18.7 -0.3**
comp=Z,62nm,1.4s,comp=Z,1µm
BORG Borgarnes 58.67 331 *e*P **P 22 01 24.4 +1.5**
comp=Z,108nm,1.6s
BORG LR LR
comp=Z,192nm,20.0s
BORG Borgarnes 58.67 331 *e*P **P 22 01 24.4 +1.5**
BORG pmax pmax
comp=Z,108nm,1.6s
BORG MLR MLR
comp=Z,192nm,20.0s
QUIF Quistinic 58.76 308 *e*P **P 22 01 23.5 -0.2**
QUIF pmax pmax
comp=Z,67nm,1.0s
SUMG Summit 58.79 343⇑*i*P **P 22 01 25.1 +1.0**
SUMG Summit 58.79 343 *e*P **P 22 01 24.5 +0.4**
comp=Z,123nm,1.5s
SUMG Summit 58.79 343 *e*P **P 22 01 24.5 +0.4**
SUMG pmax pmax
comp=Z,123nm,1.5s
RDOG Red Dog Mine 59.18 24 *e*P **P 22 01 26.8 +0.4**
comp=Z,53nm,1.6s
GUMO Guam 59.33 100 LR LR 22 29 04.1
comp=Z,245nm,18.1s,baz=320,slow=38
SJPF Ste Jean 60.03 303 *e*P **P 22 01 33.1 +0.5**
KMBO Kilima Mbogo 60.43 237 P P 22 01 46.8 +11
comp=Z,4.5nm,0.7s,baz=34,slow=10,SNR=11
ANM Nome 60.50 28 *e*P **P 22 01 36.1 +0.6**
ANM Nome 60.50 28 *e*P **P 22 01 36.1 +0.6**
WBSI Waikabubak, Su 60.87 139 P **P 22 01 38.1 -0.5**
comp=Z,92nm,1.0s
TOLK Toolik Lake Re 62.44 19 P **P 22 01 49.1 +0.5**
baz=317,SNR=26
TOLK Toolik Lake Re 62.44 19 *e*P **P 22 01 48.9 +0.3**
FAKI Fak Fak 62.49 123 *e*P **P 22 01 48.3 -1.3**
comp=Z,115nm,1.4s
CART Cartagena 62.86 297 *e*P **P 22 01 52.2 +0.5**
comp=Z,54nm,1.2s
COLD Coldfoot 63.33 21 *e*P **P 22 01 55.2 +0.8**
comp=Z,36nm,0.8s
SOEI Soe 63.43 135 P P 22 02 03.7 +7.8
SOEI Soe 63.43 135 *e*P **P 22 01 54.4 -1.5**
ANGG Ammassalik, Gr 63.46 337 *e*P **P 22 01 55.8 +0.6**
BATI Baumata 63.49 136 P **P 22 01 55.1 -1.1**
comp=Z,27nm,0.7s,baz=277,slow=4.4,SNR=6.1
BATI LR LR 22 32 00.6
comp=Z,536nm,18.0s,baz=340,slow=38
BATI Baumata 63.49 136 P **P 22 01 58.1 +1.9**
comp=Z,18nm,0.7s
ES19 SONSECA Array 63.57 301 *e*P **P 22 01 56.6 +0.1**
ESDC Sonseca Array 63.62 301 P **P 22 01 57.1 +0.2**
comp=Z,11nm,0.6s,baz=52,slow=6.6,SNR=98
ESDC LR LR 22 32 19.2
comp=Z,498nm,19.6s,baz=55,slow=38
ESLA Sonseca Array 63.62 301 *e*P **P 22 01 57.6 +0.7**
comp=Z,26nm,0.9s
PAB San Pablo 63.94 301 *e*P **P 22 01 59.7 +0.7**
comp=Z,102nm,1.9s
PAB LR LR
comp=Z,609nm,19.0s
PAB San Pablo 63.94 301 *e*P **P 22 01 59.7 +0.7**
PAB pmax pmax
comp=Z,102nm,1.9s
PAB MLR MLR
comp=Z,609nm,19.0s
ILULI Ilulissat 64.06 344⇑*i*P **P 22 01 59.8 +0.6**
comp=Z,54nm,0.8s
ILULI Ilulissat 64.06 344 *e*P **P 22 01 59.2 0.0**
comp=Z,174nm,1.5s
ILULI Ilulissat 64.06 344 *e*P **P 22 01 59.2 0.0**
ILULI pmax pmax
comp=Z,174nm,1.5s
PBRG Braganca 64.17 304 *e*P **P 22 02 01.5 +1.0**
comp=Z,52nm,1.7s
MBAR Mbarara 64.22 243 *e*P **P 22 02 00.8 -0.4**
comp=Z,19nm,0.8s
MBAR LR LR
comp=Z,632nm,20.0s
MBAR Mbarara 64.22 243 *e*P **P 22 02 00.8 -0.4**
MBAR pmax pmax
comp=Z,19nm,0.8s

MBAR MLR MLR
comp=Z,632nm,20.0s
MVO Moncorvo 64.71 303 *e*P **P 22 02 05.1 +1.1**
comp=Z,81nm,1.6s
MVO Moncorvo 64.71 303 *e*LR LR 22 27 32.1
comp=Z,568nm,16.0s
MLY Manley 64.81 23 *e*P **P 22 02 04.6 +0.3**
PCAB Cabril 65.01 304 *e*P **P 22 02 07.3 +1.3**
comp=Z,78nm,1.5s
PGAV Gavieira, Arco 65.01 305 *e*P **P 22 02 07.4 +1.4**
comp=Z,76nm,1.9s
PGAV Gavieira, Arco 65.01 305 *e*LR LR 22 24 52.5
comp=Z,332nm,16.0s
POLO Lamas de Olo 65.06 304 *e*P **P 22 02 07.3 +0.9**
comp=Z,17nm,1.9s
PVRL Vila Real 65.07 304 *e*P **P 22 02 07.4 +1.0**
comp=Z,43nm,1.6s
BPAW Bear Paw Mtn. 65.43 23 *e*P **P 22 02 08.8 +0.5**
MTE Manteigas 65.47 303 *e*P **P 22 02 10.4 +1.4**
comp=Z,54nm,2.2s
MTE Manteigas 65.47 303 *e*LR LR 22 27 45.2
comp=Z,512nm,18.0s
MTE Manteigas 65.47 303 *e*P **P 22 02 10.2 +1.2**
PVIS Viseu 65.50 303 *e*P **P 22 02 10.4 +1.2**
comp=Z,34nm,1.7s
MDM Murphy Dome 65.57 22 *e*P **P 22 02 09.7 +0.6**
PTO Porto 65.69 304 *e*P **P 22 02 11.8 +1.5**
COLA College 65.74 22 *e*P **P 22 02 10.9 +0.8**
comp=Z,157nm,1.5s
COLA College 65.74 22 *e*P **P 22 02 10.9 +0.8**
COLA pmax pmax
comp=Z,157nm,1.5s
PCBR Castelo Branco 65.75 302 *e*P **P 22 02 11.8 +1.1**
comp=Z,26nm,1.6s
SFJD Kangerlussuaq 65.77 342 P **P 22 02 10.7 +0.3**
comp=Z,24nm,0.8s,baz=34,slow=8.4,SNR=7.5
SFJD LR LR 22 35 37.1
comp=Z,1µm,18.3s,baz=39,slow=40
SFJD Kangerlussuaq 65.77 342⇑*i*P **P 22 02 10.8 +0.4**
SFJD Kangerlussuaq 65.77 342 *e*P **P 22 02 11.2 +0.8**
comp=Z,269nm,2.0s
SFJD LR LR
comp=Z,1µm,20.0s
BWN Browne 65.82 23 *e*P **P 22 02 11.8 +1.1**
CCB Clear Creek Bu 65.92 22 *e*P **P 22 02 11.3 -0.1**
PMRV Marv??o 65.94 302 *e*P **P 22 02 13.1 +1.2**
comp=Z,56nm,1.7s
PMRV Marv??o 65.94 302 *e*LR LR 22 28 11.7
comp=Z,460nm,18.0s
PPLA Purkeypile 65.96 25 *e*P **P 22 02 12.8 +1.0**
WRH Wood River Hil 65.98 22 *e*P **P 22 02 11.6 -0.2**
IL1 Eielson Array 66.08 21 *e*P **P 22 02 11.1 -1.3**
ILAR Eielson Array 66.08 21 P **P 22 02 12.2 -0.3**
comp=Z,19nm,0.7s,baz=315,slow=5.0,SNR=165
ILAR PKP2bc 22 30 49.0
comp=Z,0.7nm,0.8s,baz=132,slow=1.3,SNR=5.8
ILAR LR LR 22 35 06.1
comp=Z,2µm,18.3s,baz=322,slow=40
ILB Eielson Array 66.08 21 *e*P **P 22 02 12.1 -0.3**
TRF Thorofare Moun 66.12 24 *e*P **P 22 02 13.3 +0.4**
SVW2 Sparrevohn 66.17 27 *e*P **P 22 02 14.8 +1.8**
INK Inuvik 66.19 14 P **P 22 02 13.3 +0.3**
comp=Z,21nm,0.9s,baz=332,slow=6.4,SNR=42
INK Inuvik 66.19 14 *e*P **P 22 02 13.5 +0.5**
PCAS Casmilo, Conde 66.27 303 *e*P **P 22 02 15.4 +1.4**
comp=Z,62nm,1.9s
MCK McKinley 66.31 23 *e*P **P 22 02 14.6 +0.7**
MCK McKinley 66.31 23 *e*P **P 22 02 14.6 +0.7**
PESTR Estremoz 66.39 302 *e*P **P 22 02 16.0 +1.1**
comp=Z,39nm,1.7s
PESTR Estremoz 66.39 302 *e*P **P 22 02 15.5 +0.7**
PBAR Barrancos 66.44 301 *e*P **P 22 02 16.0 +0.8**
comp=Z,148nm,1.9s
PMTG Montargil 66.67 302 *e*P **P 22 02 17.4 +0.8**
comp=Z,54nm,1.9s
ALMR Almeirim 66.84 302 *e*P **P 22 02 19.1 +1.3**
ALMR AMS AMS 22 31 52.4
comp=N,827nm,21.8s
ALMR Almeirim 66.84 302 *e*P **P 22 02 18.9 +1.2**
comp=N,67nm,1.9s
ALMR Almeirim 66.84 302 *e*P **P 22 02 19.0 +1.3**
SKT Skwentna 66.85 25 *e*P **P 22 02 17.9 +0.5**
EVO Evora 66.85 302 *e*P **P 22 02 18.7 +0.9**
comp=N,42nm,1.9s
TAM Tamanrasset 66.89 280 *e*P **P 22 02 18.9 +0.5**
TAM Tamanrasset 66.89 280 *e*P **P 22 02 18.9 +0.5**
PBEJ Beja 67.06 301 *e*P **P 22 02 20.3 +1.2**
comp=N,53nm,1.8s
DHY Denali Highway 67.26 23 *e*P **P 22 02 19.8 -0.4**
PVAQ Vaqueiros 67.33 300 *e*P **P 22 02 21.9 +1.0**
comp=N,45nm,1.7s
PVAQ Vaqueiros 67.33 300 *e*LR LR 22 26 38.8
comp=N,539nm,18.0s
GENI Genyem 67.35 116 P **P 22 02 23.9 +2.7**
comp=N,52nm,0.6s
MESJ Messejana 67.39 301 *e*P **P 22 02 22.4 +1.2**
MESJ AMS AMS 22 29 26.2
comp=N,710nm,19.7s
MESJ Messejana 67.39 301 *e*P **P 22 02 22.4 +1.2**
comp=N,48nm,2.0s
MESJ Messejana 67.39 301 *e*P **P 22 02 22.4 +1.2**
PMAFR Mafra 67.40 303 *e*P **P 22 02 22.5 +1.2**
comp=N,104nm,1.6s
PCVE Castro Verde 67.40 301 *e*P **P 22 02 22.4 +1.1**
comp=N,45nm,1.8s
PNCL Nicolau / Gran 67.43 301 *e*P **P 22 02 22.9 +1.5**
comp=N,51nm,1.7s
PNCL Nicolau / Gran 67.43 301 *e*LR LR 22 28 47.9
comp=N,798nm,18.0s
RIDG Independ'e Rid 67.44 21 *e*P **P 22 02 20.8 -0.4**
LIS Lisbon 67.46 302 *e*P **P 22 02 23.0 +1.4**
LIS AMS AMS 22 32 08.1
comp=N,786nm,18.7s
LIS Lisbon 67.46 302 *e*P **P 22 02 23.0 +1.4**
PMST Lisbon--Monsan 67.47 302 *e*P **P 22 02 23.4 +1.7**
comp=N,66nm,1.6s
SCRK Sand Creek 67.48 21 *e*P **P 22 02 21.7 +0.2**
SUA Susitna One 67.48 25 *e*P **P 22 02 21.7 +0.1**
PBDV Barranco-do-Ve 67.57 300 *e*P **P 22 02 23.7 +1.3**
comp=N,60nm,1.9s
RSO Redoubt South 67.58 27 *e*P **P 22 02 23.4 +1.1**
JAY Jayapura 67.65 116 P **P 22 02 23.2 +0.1**
comp=N,6.9nm,0.7s,baz=86,slow=6.7,SNR=3.0
DOT Dot Lake 67.73 21 *e*P **P 22 02 22.7 -0.2**
GHO Glory Hole Cre 67.81 24 *e*P **P 22 02 23.9 +0.3**
PAX Paxson 67.89 22 *e*P **P 22 02 24.0 0.0**
PAX Paxson 67.89 22 *e*P **P 22 02 24.0 0.0**
PMR Palmer 67.89 24 *e*P **P 22 02 23.8 -0.1**
PMR Palmer 67.89 24 *e*P **P 22 02 23.8 -0.1**
PTEO Sao Teotonio 67.89 301 *e*P **P 22 02 25.3 +0.9**
comp=N,60nm,1.9s
SML Sawmill 67.97 24 *e*P **P 22 02 24.8 +0.3**
SML Sawmill 67.97 24 *e*P **P 22 02 24.8 +0.3**
MORF Marmelete 67.99 301 *e*P **P 22 02 26.2 +1.1**
MORF AMS AMS 22 29 55.5
comp=N,738nm,23.0s
MORF Marmelete 67.99 301 *e*P **P 22 02 26.1 +1.1**
MDT Midelt 68.02 295 P **P 22 02 26.3 +0.8**
comp=N,8.3nm,0.8s,baz=76,slow=10.0,SNR=8.2
MDT LR LR 22 35 49.2
comp=N,237nm,18.9s,baz=46,slow=39
RC01 Rabbit Creek A 68.09 25 *e*P **P 22 02 25.4 +0.1**
PFVI Vila Bisbo 68.20 301 *e*P **P 22 02 27.9 +1.5**
comp=N,96nm,1.7s
SCM Sheep Creek Mo 68.25 24 *e*P **P 22 02 26.7 +0.4**
SCM Sheep Creek Mo 68.25 24 *e*P **P 22 02 26.7 +0.4**
HARP HAARP 68.42 22 *e*P **P 22 02 28.5 +1.2**
DAWY Dawson 68.57 19 *e*P **P 22 02 28.4 +0.1**
BRLK Bradley Lake 68.73 26 *e*P **P 22 02 29.4 +0.1**
KLU Klutina 68.93 23 *e*P **P 22 02 31.5 +0.9**
NRS Narsarsuaq 69.12 336⇑*i*P **P 22 02 32.1 +0.5**
comp=N,44nm,0.7s
DIV Divide 69.26 23 *e*P **P 22 02 33.4 +0.7**
OPO Ambohidratompo 69.50 218 P **P 22 02 35.1 +0.5**
comp=N,15nm,0.8s,baz=27,slow=7.4,SNR=13
KDAK Kodiak Island 69.64 29 PFAKE 22 02 50.0 +15
KDAK LR LR
comp=Z,916nm,19.0s
KDAK Kodiak Island 69.64 29 *i* P **P 22 02 35.3 +0.4**
MTN Manton Dam 69.72 131 *e*P **P 22 02 35.2 -0.7**
BMRM Bremner River 69.73 23 *e*P **P 22 02 36.6 +1.0**
OHAK Old Harbor 69.81 29 *e*P **P 22 02 36.8 +0.9**
IVI Ivigtut 69.88 338 *e*P **P 22 02 36.7 +0.4**
CRQM Cirque 70.33 23 *e*P **P 22 02 40.3 +0.9**
TGL Tana Glacier 70.42 22 *e*P **P 22 02 40.8 +1.0**

FITZ Fitzroy Crossi 71.18 138 P P 22 02 44.7 0.0
comp=Z,11nm,0.6s,baz=333,slow=7.2,SNR=42
FITZ LR LR 22 39 40.2
comp=Z,236nm,18.3s,baz=329,slow=41
WAKE Wake Island 71.81 80 PFAKE 22 03 00.0 +11
WAKE LR LR
comp=Z,1µm,19.0s
SKAG Skagway 73.52 20 *eP* **P 22 02 59.1 +0.9**
BESE Bessie Mountai 74.41 20 *eP* **P 22 03 05.3 +1.7**
YKA Yellowknife Ar 74.51 9 P **P 22 03 03.9 -0.1**
comp=Z,16nm,0.6s,baz=339,slow=6.0,SNR=71
YKA LR LR 22 36 59.8
comp=Z,100nm,21.2s,baz=338,slow=37
JIS Juneau Island 74.80 20 *eP* **P 22 03 07.3 +1.6**
DLBC Dease Lake 75.70 18 *eP* **P 22 03 12.0 +0.9**
comp=Z,73nm,1.5s
TORD Torodi Ar. Bea 75.78 275 P **P 22 03 11.6 -0.5**
comp=Z,24nm,0.7s,baz=46,slow=4.9,SNR=220
TORD LR LR 22 43 16.4
comp=Z,168nm,19.2s,baz=55,slow=41
WRAK Wrangell Islan 76.96 20 *eP* **P 22 03 19.8 +1.8**
WRAK LR LR
comp=Z,976nm,19.0s
LSZ Lusaka 77.00 235 *eP* **P 22 03 19.2 +0.3**
LSZ LR LR
comp=Z,487nm,21.0s
LSZ Lusaka 77.00 235 *eP* **P 22 03 19.2 +0.3**
LSZ MLR MLR
comp=Z,487nm,21.0s
PMG Port Moresby 77.04 116 P **P 22 03 17.6 -1.5**
comp=Z,20nm,0.6s,baz=16,slow=5.3,SNR=8.6
PMG LR LR 22 39 29.1
comp=Z,76nm,18.7s,baz=332,slow=38
PMG Port Moresby 77.04 116 *eP* **P 22 03 19.5 +0.4**
PMG LR LR
comp=Z,259nm,19.0s
WRAB Tennant Creek 77.26 132 *eP* **P 22 03 20.1 -0.1**
WRAB Tennant Creek 77.26 132 *dP* **P 22 03 19.7 -0.5**
WRAB pmax pmax
comp=Z,48nm,0.8s
WRA Warramunga Arr 77.26 132 P **P 22 03 20.0 -0.2**
comp=Z,52nm,0.7s,baz=331,slow=5.5,SNR=601
WRA Warramunga Arr 77.26 132 P **P 22 03 20.0 -0.2**
WRA pmax pmax
comp=Z,52nm,0.7s
CRAG Craig 77.61 21 *eP* **P 22 03 23.5 +1.8**
COEN Coen 77.82 122 *eP* **P 22 03 23.2 -0.3**
CMLA Cha da Macela 77.88 310 PFAKE 22 03 40.0 +16
CMLA LR LR
comp=Z,2µm,19.0s
KOWA Kowa 79.11 280 LR LR 22 42 20.3
comp=Z,185nm,20.0s,baz=36,slow=39
KOWA Kowa 79.11 280 *eP* **P 22 03 30.8 +0.1**
FCC Fort Churchill 79.33 359 *eP* **P 22 03 30.9 -0.3**
comp=Z,179nm,1.8s
FCC Fort Churchill 79.33 359 *eP* **P 22 03 30.9 -0.3**
FCC pmax pmax
comp=Z,179nm,1.8s
AS31 Alice Springs 80.04 135 *eP* **P 22 03 35.3 -0.2**
ASAR Alice Springs 80.05 135 P **P 22 03 35.4 -0.1**
comp=Z,38nm,0.7s,baz=330,slow=5.6,SNR=285
ASAR LR LR 22 43 18.1
comp=Z,139nm,18.9s,baz=321,slow=39
SCHQ Schefferville 80.18 343 P **P 22 03 35.6 -0.3**
comp=Z,12nm,0.7s,baz=24,slow=6.6,SNR=7.2
SCHQ LR LR 22 42 15.9
comp=Z,822nm,21.7s,baz=20,slow=38
NWAO Narrogin (SRO) 80.73 152 P **P 22 03 38.0 -1.0**
comp=Z,27nm,0.7s,baz=204,slow=4.1,SNR=14
NWAO LR LR 22 41 52.1
comp=Z,205nm,20.2s,baz=217,slow=38
NWAO Narrogin (SRO) 80.73 152 P **P 22 03 38.0 -1.0**
NWAO pmax pmax
comp=Z,27nm,0.7s
NWAO MLR MLR
comp=Z,205nm,20.2s
MATP Matopo 80.80 232 P **P 22 03 39.3 -0.4**
comp=Z,18nm,0.9s,baz=33,slow=5.3,SNR=31
FORT Forrest 83.13 143 *eP* **P 22 03 51.6 0.0**
CTA Charters Tower 84.36 123 P **P 22 03 57.9 -0.2**
comp=Z,26nm,0.6s,baz=319,slow=5.3,SNR=41
CTAO Charters Tower 84.36 123 *eP* **P 22 03 58.0 -0.2**
CTAO Charters Tower 84.36 123 *eP* **P 22 03 58.0 -0.2**
DBIC Dimbokro 84.87 274 P **P 22 04 00.6 -0.4**
comp=Z,17nm,0.9s,baz=50,slow=6.4,SNR=10
DBIC LR LR 22 47 35.1
comp=Z,332nm,18.4s,baz=30,slow=40
KIC Kosan Boka 84.99 274 *eP* **P 22 04 01.0 -0.6**
comp=Z,66nm,1.1s
TIC Toumodi 85.01 274 *eP* **P 22 04 00.8 -0.9**
LIC Lamto 85.30 274 *eP* **P 22 04 02.4 -0.7**
comp=Z,93nm,1.6s
A04D Lummi Island 86.35 17 P **P 22 04 08.8 +1.0**
baz=340
TSUM Tsumeb 86.60 240 *eP* **P 22 04 09.5 0.0**
comp=Z,12nm,1.3s
TSUM LR LR
comp=Z,659nm,20.0s
B05A Bryant 86.92 17 P **P 22 04 11.3 +0.8**
baz=341,SNR=9.3
NLWA Neilton Lookou 87.33 19 *eP* **P 22 04 14.1 +1.4**
comp=Z,42nm,1.1s
NLWA LR LR
comp=Z,519nm,19.0s
WALA Waterton Lakes 87.68 12 *eP* **P 22 04 14.6 +0.1**
comp=Z,8.8nm,0.7s
ULM Lac du Bonnet 87.88 0 P **P 22 04 14.1 -1.1**
comp=Z,14nm,0.7s,baz=2.7,slow=5.0,SNR=18
ULM LR LR 22 45 05.7
comp=Z,630nm,21.3s,baz=358,slow=37
NEW Newport 87.92 14 P **P 22 04 16.0 +0.5**
baz=344,SNR=15
NEW Newport 87.92 14 *eP* **P 22 04 16.0 +0.5**
comp=Z,30nm,0.8s
NEW LR LR
comp=Z,708nm,20.0s
NEW Newport 87.92 14 *eP* **P 22 04 16.0 +0.5**
NEW pmax pmax
comp=Z,30nm,0.8s
NEW MLR MLR
comp=Z,708nm,20.0s
B022 Seaside 88.67 19 *eP* **P 22 04 21.2 +2.3**
F04D Rainier, OR 88.77 19 P **P 22 04 20.9 +1.4**
baz=340
BOSA Boshof 89.00 229 P **P 22 04 20.7 -0.1**
comp=Z,7.8nm,0.8s,baz=34,slow=4.4,SNR=11
A31A Linda, St. Vin 89.19 1 P **P 22 04 20.7 -0.7**
baz=359
A33A Warroad 89.19 360 P **P 22 04 20.5 -0.9**
baz=0.2
HAWA Hanford 89.24 16 *eP* **P 22 04 22.2 +0.5**
comp=Z,27nm,1.4s
HAWA LR LR
comp=Z,1µm,19.0s
EGMT Eagleton 89.26 9 P **P 22 04 21.8 -0.1**
baz=350,SNR=30
EGMT Eagleton 89.26 9 *eP* **P 22 04 21.9 -0.1**
comp=Z,50nm,0.7s
EGMT LR LR
comp=Z,1µm,20.0s
DGMT Dagmar 89.35 6 P **P 22 04 22.8 +0.6**
baz=354
DGMT Dagmar 89.35 6 *eP* **P 22 04 22.9 +0.6**
comp=Z,136nm,1.3s
DGMT LR LR
comp=Z,637nm,20.0s
G03D McMinnville, O 89.53 19 P **P 22 04 24.9 +1.8**
baz=340,SNR=5.7
B34A Aery, Baudette 89.64 359 P **P 22 04 22.9 -0.6**
baz=0.8
B31A Greenbush Farm 89.69 1 P **P 22 04 23.2 -0.5**
baz=359
PKME Peaks-Kenny Pk 89.71 342 P **P 22 04 24.7 +0.8**
baz=19,SNR=6.8
PKME Peaks-Kenny Pk 89.71 342 *eP* **P 22 04 24.5 +0.7**
comp=Z,12nm,0.8s
PKME LR LR
comp=Z,1µm,20.0s
B35A Bob, Littlefor 89.75 359 P **P 22 04 23.5 -0.5**
baz=1.5
AGMN Agassiz Nation 89.83 0 P **P 22 04 23.8 -0.7**
baz=360
AGMN Agassiz Nation 89.83 0 *eP* **P 22 04 24.2 -0.2**
comp=Z,14nm,0.8s
AGMN LR LR
comp=Z,830nm,20.0s
MSO Missoula 89.85 12 P **P 22 04 24.6 -0.1**
baz=347,SNR=17
G05D Wamic, OR 89.95 18 P **P 22 04 26.4 +1.3**
baz=341
C40A Isle Royale Na 90.02 356 P **P 22 04 24.9 -0.4**
baz=4.9
EYMN Ely 90.10 357 P **P 22 04 25.6 -0.2**
baz=3.1
EYMN Ely 90.10 357 PFAKE 22 04 40.0 +14
EYMN LR LR
comp=Z,779nm,20.0s
COR Corvallis 90.10 19 *eP* **P 22 04 27.3 +1.6**
comp=Z,42nm,0.8s
COR Corvallis 90.10 19 *eP* **P 22 04 27.3 +1.6**
COR pmax pmax
comp=Z,42nm,0.8s
C39A Grand Marais 90.17 356 P **P 22 04 25.4 -0.6**
baz=4.1
MDND Maddock 90.22 3 P **P 22 04 26.2 -0.1**
baz=357
C31A Landman Farms, 90.32 1 P **P 22 04 26.3 -0.5**
baz=358,SNR=6.6
C38A Sawbill Land. 90.32 357 P **P 22 04 26.2 -0.6**
baz=3.3
C37A Embarrass 90.34 358 P **P 22 04 26.3 -0.5**
baz=2.6
C33A Trail 90.37 360 P **P 22 04 26.5 -0.5**
baz=360
C35A Jirik Farms, M 90.41 359 P **P 22 04 26.3 -0.9**
baz=1.3
C34A RKJ Ranch, Bem 90.47 359 P **P 22 04 27.0 -0.5**
baz=0.6
STKA Stephens Creek 90.67 134 P **P 22 04 27.9 -0.5**
comp=Z,17nm,0.7s,baz=320,slow=5.9,SNR=42
STKA LR LR 22 49 10.8
comp=Z,196nm,18.5s,baz=313,slow=38
I05D Terrebonne, OR 90.80 18 P **P 22 04 30.4 +1.3**
baz=341,SNR=7.5
D41A Chassel 90.84 355 P **P 22 04 29.7 +0.5**
baz=5.3
D37A Cotton 90.92 358 P **P 22 04 28.9 -0.6**
baz=2.4
D36A Goodland 90.92 358 P **P 22 04 29.0 -0.6**
baz=1.9
I03D Drain, OR 90.93 20 P **P 22 04 31.3 +1.7**
baz=340,SNR=10
LAO LASA Array 90.96 7 P **P 22 04 30.6 +0.8**
baz=352,SNR=9.7
LAO LASA Array 90.96 7 *eP* **P 22 04 30.1 +0.3**
comp=Z,126nm,1.6s
LAO LR LR
comp=Z,775nm,20.0s
D32A Dogwood Acres, 90.99 1 P **P 22 04 29.4 -0.4**
baz=359
D33A AnnSam, Waubun 90.99 0 P **P 22 04 29.4 -0.5**
baz=360
D35A Remer 91.03 359 P **P 22 04 29.5 -0.6**
baz=1.2
D34A Park Rapids 91.04 360 P **P 22 04 29.5 -0.6**
baz=0.4
D31A Mcclaflin, Tow 91.06 1 P **P 22 04 29.3 -0.9**
baz=358
I04A Tendick Farm, 91.06 19 P **P 22 04 31.3 +0.9**
baz=341,SNR=12
E44A Grand Marais A 91.07 353 P **P 22 04 28.3 -1.9**
baz=7.2
BMO Blue Mountains 91.17 15 *eP* **P 22 04 30.8 -0.1**
comp=Z,9.5nm,0.7s
BMO LR LR
comp=Z,1µm,19.0s
BMO Blue Mountains 91.17 15 *eP* **P 22 04 30.8 -0.1**
BMO pmax pmax
comp=Z,9.0nm,0.7s
BMO MLR MLR
comp=Z,1µm,19.0s
E45A Wooded Hills, 91.27 353 P **P 22 04 30.7 -0.4**
baz=7.8
LBNH Lisbon 91.27 343 P **P 22 04 31.7 +0.5**
baz=17
BOZ Bozeman (W) 91.40 11 P **P 22 04 32.3 +0.3**
baz=348,SNR=18
BOZ Bozeman (W) 91.40 11 *eP* **P 22 04 32.4 +0.4**
comp=Z,51nm,1.2s
BOZ LR LR
comp=Z,1µm,19.0s
BOZ Bozeman (W) 91.40 11 *eP* **P 22 04 32.4 +0.4**
BOZ pmax pmax
comp=Z,51nm,1.2s
BOZ MLR MLR
comp=Z,1µm,19.0s
E43A Lone Tree Farm 91.41 354 P **P 22 04 31.2 -0.6**
baz=6.5
E42A Champion 91.42 355 P **P 22 04 31.4 -0.5**
baz=5.8
E38A The Farm, Brul 91.44 357 P **P 22 04 31.4 -0.6**
baz=3.1
LONY Lake Ozonia 91.45 345 P **P 22 04 32.6 +0.5**
baz=16,SNR=11
LONY Lake Ozonia 91.45 345 *eP* **P 22 04 32.5 +0.5**
comp=Z,90nm,1.6s
LONY LR LR
comp=Z,726nm,19.0s
E41A Kenton 91.45 355 P **P 22 04 31.5 -0.5**
baz=5.0
E37A Wrenshall 91.51 358 P **P 22 04 31.8 -0.5**
baz=2.5
E40A Wakefield 91.53 356 P **P 22 04 32.2 -0.2**
baz=4.3
E31A Nome 91.55 1 P **P 22 04 32.0 -0.5**
baz=358
E35A Pequot Lakes 91.56 359 P **P 22 04 32.0 -0.6**
baz=1.0
E36A McGregor 91.58 358 P **P 22 04 32.4 -0.2**
baz=1.8,SNR=5.3
E34A Wadena 91.61 360 P **P 22 04 32.3 -0.5**
baz=0.4
E33A Westby DABS, E 91.62 0 P **P 22 04 32.5 -0.3**
baz=360
E39A Mellen 91.63 356 P **P 22 04 32.5 -0.3**
baz=3.8
J04D Umpqua Nationa 91.66 19 P **P 22 04 34.3 +1.0**
baz=341,SNR=5.2
F44A Big Bay de Noc 91.76 353 P **P 22 04 33.0 -0.4**
baz=6.9
F46A Macinaw City C 91.80 352 P **P 22 04 33.0 -0.6**
baz=8.1
J05D Fort Rock, OR 91.83 18 P **P 22 04 35.6 +1.6**
baz=341,SNR=17
COWI Conover 91.83 355 PFAKE 22 04 50.0 +16
COWI LR LR
comp=Z,1µm,21.0s
F43A Flat Rock, Esc 91.96 354 P **P 22 04 34.3 -0.1**
baz=6.3,SNR=6.2
F45A CMU Biological 91.97 353 P **P 22 04 34.2 -0.1**
baz=7.5
HUMO Hull Mountain 92.05 20 *eP* **P 22 04 36.3 +1.4**
comp=Z,309nm,1.4s
F40A Park Falls 92.06 356 P **P 22 04 34.1 -0.8**
baz=4.2
F38A Pierce - Schro 92.10 357 P **P 22 04 35.0 0.0**
baz=2.9,SNR=5.0
F42A Maple Grove Fa 92.10 355 P **P 22 04 34.1 -0.9**
baz=5.6
F39A Loretta 92.11 357 P **P 22 04 34.7 -0.4**
baz=3.6
RLMT Red Lodge 92.18 10 P **P 22 04 36.1 +0.5**
baz=350,SNR=20
RLMT Red Lodge 92.18 10 *eP* **P 22 04 36.1 +0.5**
comp=Z,74nm,1.4s
RLMT LR LR
comp=Z,815nm,21.0s
F41A Three Lakes 92.19 355 P **P 22 04 35.1 -0.3**
baz=4.9,SNR=6.0
F36A Milaca 92.24 358 P **P 22 04 35.1 -0.6**
baz=1.6,SNR=5.5
F32A Veblen 92.25 1 P **P 22 04 35.1 -0.6**
baz=359
F35A Swanville 92.26 359 P **P 22 04 35.2 -0.6**
baz=0.8
F34A Alexandria 92.33 360 P **P 22 04 35.6 -0.5**
baz=0.3
F37A Hinrichs Farm, 92.36 358 P **P 22 04 35.8 -0.4**
baz=2.3
G43A Wallace 92.57 354 P **P 22 04 37.1 -0.1**
baz=6.0,SNR=5.9
LKWY Lake 92.58 10 PFAKE 22 04 50.0 +12
LKWY LR LR
comp=Z,2µm,20.0s
G42A Mountain 92.64 355 P **P 22 04 37.1 -0.4**
baz=5.4
G41A Antigo 92.72 355 P **P 22 04 37.3 -0.7**
baz=4.8
G40A Rib Lake 92.72 356 P **P 22 04 37.4 -0.5**
baz=4.1,SNR=5.5
H17A Grant Village 92.72 11 P **P 22 04 40.1 +1.9**
baz=349,SNR=8.6
G39A Holcombe 92.74 357 P **P 22 04 37.5 -0.5**
baz=3.4
MFID Camas Ranch 92.83 14 *eP* **P 22 04 39.0 +0.4**
comp=Z,37nm,1.5s
HRV Adam Dziewonsk 92.84 342 P **P 22 04 38.8 +0.3**
baz=18
G32A Webster 92.86 1 P **P 22 04 38.2 -0.3**
baz=359
SPMN Marine on St. 92.86 358 P **P 22 04 38.2 -0.3**
baz=2.2
G36A St. Michael 92.88 359 P **P 22 04 38.3 -0.3**
baz=1.5
G31A Conde 92.88 2 P **P 22 04 38.5 -0.1**
baz=358
G34A Benson 92.89 360 P **P 22 04 37.8 -0.8**
baz=0.1
G38A Ridgeland 92.89 357 P **P 22 04 38.1 -0.6**
baz=2.9,SNR=5.2
G35A Watkins 92.90 359 P **P 22 04 38.7 0.0**
baz=0.9
G33A Ortonville 92.93 0 P **P 22 04 38.5 -0.4**
baz=360
YBH Yreka Blue Hor 92.93 20 P **P 22 04 39.7 +0.7**
comp=Z,5.0nm,0.7s,baz=7.8,slow=4.9,SNR=12
YBH LR LR 22 48 22.7
comp=Z,535nm,22.0s,baz=343,slow=37
HLID Hailey 92.94 13 P **P 22 04 39.8 +0.5**
baz=346
HLID Hailey 92.94 13 *eP* **P 22 04 39.7 +0.5**
comp=Z,7.1nm,0.7s
HLID LR LR
comp=Z,874nm,22.0s
M04C Macdoel 93.10 19 P **P 22 04 40.9 +1.0**
baz=341,SNR=7.1
WVOR Wild Horse Val 93.22 17 *eP* **P 22 04 41.2 +0.8**
comp=Z,30nm,1.2s
WVOR LR LR
comp=Z,568nm,21.0s
WVOR Wild Horse Val 93.22 17 *eP* **P 22 04 41.2 +0.8**
WVOR pmax pmax
comp=Z,30nm,1.2s
WVOR MLR MLR
comp=Z,568nm,21.0s
H41A Junction City 93.34 356 P **P 22 04 40.5 -0.2**
baz=4.5
MOD Modoc Plateau 93.35 18 *eP* **P 22 04 42.1 +1.1**
comp=Z,21nm,0.9s
H39A Augusta 93.36 357 P **P 22 04 40.6 -0.2**
baz=3.3
H43A Windswept, Lux 93.36 354 P **P 22 04 40.4 -0.5**
baz=5.9
H40A Chili 93.37 356 P **P 22 04 40.9 0.0**
baz=4.0,SNR=8.9
H42A Shiocton 93.38 355 P **P 22 04 40.7 -0.2**
baz=5.3
H38A Maiden Rock 93.40 357 P **P 22 04 40.9 -0.2**
baz=2.5
H35A Sunnyside Ranc 93.43 359 P **P 22 04 41.0 -0.1**
baz=0.7
H37A Dierke Farm, C 93.51 358 P **P 22 04 41.4 -0.1**
baz=2.1
H36A Jessenland, He 93.53 359 P **P 22 04 41.7 +0.1**
baz=1.3
H32A Carlson Farm, 93.61 1 P **P 22 04 42.0 -0.1**
baz=359,SNR=10.0
SUSD Miller 93.64 2 P **P 22 04 42.1 -0.1**
baz=358
N02D Trinity Center 93.65 20 P **P 22 04 43.6 +1.2**
baz=340
RSSD Black Hills 93.69 6 P **P 22 04 43.1 +0.5**
baz=354
RSSD Black Hills 93.69 6 *eP* **P 22 04 43.2 +0.5**
RSSD Black Hills 93.69 6 *eP* **P 22 04 43.2 +0.5**
I41A Arkdale 93.91 356 P **P 22 04 43.1 -0.2**
baz=4.3
I43A Langenfeld Bro 93.97 354 P **P 22 04 43.5 -0.2**
baz=5.6
I42A Draeger Farm, 94.02 355 P **P 22 04 43.7 -0.2**
baz=5.0,SNR=5.1
I38A Scanlan Farm, 94.03 357 P **P 22 04 43.7 -0.3**
baz=2.5
BINY Binghamton 94.05 345 P **P 22 04 44.4 +0.3**
baz=14
I37A Lemond, Waseca 94.09 358 P **P 22 04 44.4 +0.2**
baz=1.7
I36A Fitzsimmons Fa 94.09 359 P **P 22 04 44.4 +0.1**
baz=1.3
I40A Norwalk 94.11 356 P **P 22 04 44.1 -0.3**
baz=3.8
I39A Houston 94.19 357 P **P 22 04 44.2 -0.5**
baz=3.1,SNR=5.6
AHID Auburn Hatcher 94.25 11 *eP* **P 22 04 45.9 +0.7**
comp=Z,11nm,0.8s
AHID LR LR
comp=Z,665nm,19.0s
ECSD EROS Data Cent 94.39 1 P **P 22 04 45.7 0.0**
baz=359,SNR=19
ECSD EROS Data Cent 94.39 1 *eP* **P 22 04 45.7 0.0**
comp=Z,32nm,0.8s
ECSD LR LR
comp=Z,826nm,20.0s
BW06 Boulder Array 94.46 10 P **P 22 04 46.0 -0.2**
baz=350
BW06 Boulder Array 94.46 10 *eP* **P 22 04 46.3 +0.1**
comp=Z,3.7nm,0.6s
BW06 LR LR
comp=Z,987nm,19.0s
PDAR Pinedale Array 94.46 10 P **P 22 04 46.0 -0.3**
comp=Z,5.3nm,0.6s,baz=31,slow=3.0,SNR=45
PDAR LR LR 22 54 00.3
comp=Z,882nm,18.1s,baz=352,slow=40
J43A Natural Harves 94.49 355 P **P 22 04 45.8 -0.3**
baz=5.4
J42A Columbus 94.60 355 P **P 22 04 46.2 -0.4**
baz=4.9
J41A Loganville 94.60 356 P **P 22 04 46.5 -0.1**
baz=4.2,SNR=6.7
J40A Soldiers Grove 94.61 356 P **P 22 04 46.3 -0.4**
baz=3.7,SNR=6.2
J39A Decorah 94.71 357 P **P 22 04 46.5 -0.6**
baz=3.0,SNR=6.8
J38A Wedel Dairy, R 94.76 358 P **P 22 04 46.5 -0.8**
baz=2.4
PAL Palisades 94.79 344 P **P 22 04 47.3 -0.2**
baz=16
J36A Seneca 1, Swea 94.79 359 P **P 22 04 47.4 -0.1**
baz=1.0,SNR=6.7
J37A Redenius Farm, 94.79 358 P **P 22 04 47.6 +0.1**
baz=1.6
ERPA Erie 94.81 348 P **P 22 04 47.5 -0.1**
baz=12
K22A Casper 94.93 8 P **P 22 04 47.8 -0.6**
baz=352
JFWS Jewell Farm 95.07 356 P **P 22 04 48.3 -0.4**
baz=4.1,SNR=12
JFWS Jewell Farm 95.07 356 *eP* **P 22 04 48.5 -0.2**
comp=Z,47nm,0.6s
JFWS LR LR
comp=Z,1µm,22.0s
JFWS Jewell Farm 95.07 356 *eP* **P 22 04 48.5 -0.2**
JFWS pmax pmax
comp=Z,47nm,0.6s
JFWS MLR MLR
comp=Z,1µm,22.0s
AAM Ann Arbor 95.12 351 P **P 22 04 48.5 -0.4**
baz=8.9
AAM Ann Arbor 95.12 351 PFAKE 22 05 00.0 +11
AAM LR LR
comp=Z,627nm,20.0s
K42A Prairie Point, 95.15 355 P **P 22 04 48.5 -0.6**
baz=4.7
K43A Burlington 95.16 354 P **P 22 04 48.7 -0.5**
baz=5.5
N59A State Game Lan 95.25 345 P **P 22 04 49.6 0.0**
baz=15
HWUT Hardware Ranch 95.31 12 *eP* **P 22 04 51.3 +1.2**
comp=Z,39nm,0.7s
HWUT LR LR
comp=Z,722nm,20.0s
K40A Colesburg 95.32 357 P **P 22 04 49.5 -0.4**
baz=3.4,SNR=6.5

K39A	Oelwein	95.35	357	P	P	22 04 49.1	-1.0
	baz=2.9						
M54A	Oil Creek Stat	95.36	348	P	P	22 04 50.2	+0.1
	baz=12,SNR=6.7						
K41A	Shullsburg	95.38	356	P	P	22 04 49.5	-0.6
	baz=4.0						
BMN	Battle Mountai	95.44	16	eP	P	22 04 51.6	+0.9
	comp=Z,12nm,1.3s						
BMN	Battle Mountai	95.44	16	eP	P	22 04 51.6	+0.9
BMN				pmax	pmax		
	comp=Z,12nm,1.3s						
K38A	Parkersburg	95.44	358	P	P	22 04 49.6	-0.9
	baz=2.2						
K36A	Gilmore City	95.48	359	P	P	22 04 50.3	-0.4
	baz=0.9						
L43A	Garden Prairie	95.70	355	P	P	22 04 51.0	-0.6
	baz=5.2						
SSPA	Standing Stone	95.91	346	P	P	22 04 52.7	+0.1
	baz=13						
L41A	Preston	95.92	356	P	P	22 04 51.9	-0.7
	baz=3.9						
L39A	Vinton	95.93	357	P	P	22 04 51.8	-0.9
	baz=2.8,SNR=5.1						
N54A	Moraine State	95.94	348	P	P	22 04 52.7	-0.1
	baz=12						
L42A	Oliver, Polo	95.94	355	P	P	22 04 52.0	-0.7
	baz=4.5						
L38A	Oak Wood Farm,	95.95	358	P	P	22 04 52.2	-0.6
	baz=2.1						
L40A	Anamosa	95.96	357	P	P	22 04 51.9	-0.9
	baz=3.4						
L37A	Phoenix Point,	95.98	358	P	P	22 04 52.2	-0.7
	baz=1.5						
L36A	Harm Buss Farm	96.02	359	P	P	22 04 52.0	-1.1
	baz=0.8						
SCIA	State Center	96.19	358	PFAKE		22 05 10.0	+16
SCIA				LR	LR		
	comp=Z,1μm,21.0s						
M46A	Old House Fiel	96.28	353	P	P	22 04 53.8	-0.5
	baz=7.0						
M45A	Boilermakers S	96.38	354	P	P	22 04 54.6	-0.2
	baz=6.3						
O56A	Blue Knob Stat	96.39	347	P	P	22 04 54.6	-0.2
	baz=13						
M44A	Midewin, Midew	96.44	354	P	P	22 04 54.8	-0.2
	baz=5.7						
M43A	Waltham Townsh	96.46	355	P	P	22 04 54.4	-0.7
	baz=5.0						
DUG	Dugway, Tooele	96.49	13	P	P	22 04 56.2	+0.7
	baz=347,SNR=12						
DUG	Dugway, Tooele	96.49	13	eP	P	22 04 56.2	+0.7
	comp=Z,15nm,0.8s						
DUG				LR	LR		
	comp=Z,546nm,20.0s						
DUG	Dugway, Tooele	96.49	13	eP	P	22 04 56.2	+0.7
DUG				pmax	pmax		
	comp=Z,15nm,0.8s						
DUG				MLR	MLR		
	comp=Z,546nm,20.0s						
M39A	Webster	96.58	357	P	P	22 04 55.0	-0.7
	baz=2.6						
M41A	Milan	96.62	356	P	P	22 04 54.9	-0.9
	baz=3.9						
M40A	Post Highland	96.63	357	P	P	22 04 54.9	-1.0
	baz=3.1						
M36A	Felix, Anita	96.67	359	P	P	22 04 55.4	-0.6
	baz=0.7						
M38A	Pleasantville	96.68	358	P	P	22 04 56.1	0.0
	baz=1.9						
BGNE	Belgrade	96.69	2	P	P	22 04 56.1	0.0
	baz=358						
M37A	Trindle Farm,	96.71	359	P	P	22 04 56.1	-0.1
	baz=1.2						
N23A	Red Feather La	96.72	8	P	P	22 04 57.2	+0.6
	baz=352						
N46A	Monticello	96.83	353	P	P	22 04 56.5	-0.3
	baz=6.7						
N45A	Kentland	96.94	354	P	P	22 04 57.3	0.0
	baz=6.1						
OGNE	Ogallala	96.99	5	P	P	22 04 57.5	-0.2
	baz=355						
OGNE	Ogallala	96.99	5	PFAKE		22 05 10.0	+12
OGNE				LR	LR		
	comp=Z,783nm,19.0s						
N44A	Piper City	97.04	354	P	P	22 04 57.8	+0.1
	baz=5.7						
ACSO	Alum Creek Sta	97.08	350	P	P	22 04 57.6	-0.3
	baz=9.5						
ACSO	Alum Creek Sta	97.08	350	PFAKE		22 05 10.0	+12
ACSO				LR	LR		
	comp=Z,638nm,21.0s						
NVAR	Mina Array Bea	97.12	18	P	Pdif	22 04 59.1	+0.6
	comp=Z,6.3nm,0.9s,baz=314,slow=2.2,SNR=17						
NVAR				PKKPbc	PKKPdf	22 21 37.7	+0.5
	comp=Z,0.6nm,0.7s,baz=164,slow=3.6,SNR=4.0						
NVAR				LR	LR	22 53 36.2	
	comp=Z,482nm,18.2s,baz=24,slow=38						
N42A	Yates City	97.13	356	P	P	22 04 57.6	-0.5
	baz=4.2						
N40A	Mertquake, Sal	97.16	357	P	P	22 04 57.8	-0.4
	baz=3.1						
MCWV	Mont Chateau	97.19	348	P	P	22 04 57.1	-1.3
	baz=12						
N39A	Derby Farms, D	97.19	357	P	P	22 04 58.2	-0.2
	baz=2.4						
O20A	White River Ci	97.22	10	P	Pdif	22 04 59.4	+0.4
	baz=351						
N41A	Harden Midland	97.30	356	P	P	22 04 58.2	-0.7
	baz=3.6						
N38A	Joes South For	97.30	358	P	P	22 04 58.6	-0.3
	baz=1.9						
N36A	Muff Farm, Cla	97.31	359	P	P	22 04 58.9	-0.1
	baz=0.6						
POHA	Pohakuloa	97.31	55	PFAKE		22 05 10.0	+10
POHA				LR	LR		
	comp=Z,672nm,20.0s						
N37A	Lee Faris, Mou	97.36	359	P	P	22 04 58.8	-0.4
	baz=1.1						
HDIL	Hopedale	97.36	355	P	P	22 04 58.8	-0.4
	baz=4.8						
HDIL	Hopedale	97.36	355	PFAKE		22 05 10.0	+11
HDIL				LR	LR		
	comp=Z,1μm,19.0s						
SFIN	Lafayette	97.37	353	P	P	22 04 58.8	-0.5
	baz=6.4						
O47A	Sheridan	97.43	353	P	P	22 04 58.8	-0.7
	baz=7.1						
O45A	Potomac	97.55	354	P	Pdif	22 05 00.3	+0.2
	baz=6.0						
O43A	Sugar Creek Fa	97.63	355	P	P	22 04 59.9	-0.5
	baz=4.8						
O44A	Mansfield	97.70	354	P	P	22 05 00.4	-0.4
	baz=5.4						
O42A	Bath	97.77	356	P	P	22 05 00.5	-0.5
	baz=4.2						
R11A	Troy Canyon, C	97.78	16	P	Pdif	22 05 01.8	+0.4
	baz=345						
O39A	Kirksville	97.82	357	P	P	22 05 00.9	-0.3
	baz=2.4						
ISCO	Idaho Springs	97.84	8	P	Pdif	22 05 02.2	+0.4
	baz=353,SNR=6.2						
ISCO	Idaho Springs	97.84	8	eP	Pdif	22 05 02.2	+0.4
	comp=Z,4.4nm,0.8s						
ISCO				LR	LR		
	comp=Z,731nm,19.0s						
ISCO	Idaho Springs	97.84	8	eP	Pdif	22 05 02.3	+0.5
ISCO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ISCO				MLR	MLR		
	comp=Z,731nm,19.0s						
O41A	Passleys Farm,	97.89	356	P	P	22 05 00.9	-0.6
	baz=3.6,SNR=8.0						
O40A	La Belle	97.93	357	P	P	22 05 01.3	-0.4
	baz=2.9						
O37A	Wolven Farm, M	97.95	359	P	P	22 05 01.4	-0.4
	baz=1.2						
O38A	Galt	97.98	358	P	P	22 05 01.7	-0.3
	baz=1.7						
P47A	Martinsville	98.18	353	P	P	22 05 02.3	-0.6
	baz=7.1						
CBN	Corbin Frederi	98.18	345	P	P	22 05 02.8	-0.1
	baz=14						
CBN	Corbin Frederi	98.18	345	PFAKE		22 05 10.0	+7.1
CBN				LR	LR		
	comp=Z,754nm,20.0s						
P45A	Graceland, Par	98.27	354	P	P	22 05 02.6	-0.7
	baz=6.0						
P43A	Skaggs, Pawnee	98.28	355	P	P	22 05 02.9	-0.4
	baz=4.6						
P41A	Barry, Barry	98.34	356	P	P	22 05 03.1	-0.5
	baz=3.5						
P42A	Winchester	98.39	356	P	P	22 05 03.4	-0.4
	baz=4.0,SNR=5.4						
P44A	Sand Creek, Wi	98.40	354	P	P	22 05 03.8	-0.1
	baz=5.3						
P38A	Dawn	98.47	358	P	P	22 05 03.6	-0.6
	baz=1.6						
P40A	Paris	98.52	357	P	P	22 05 04.2	-0.2
	baz=2.8,SNR=6.1						
P37A	Lathrop	98.53	359	P	P	22 05 04.1	-0.3
	baz=1.0						
P39B	Salisbury	98.59	358	P	P	22 05 04.5	-0.2
	baz=2.2						
Q24A	Divide	98.71	7	Pdiff	P	22 05 05.4	-0.4
	baz=353						
Q46A	CEJHS Indians,	98.74	353	Pdiff	P	22 05 05.3	-0.1
	baz=6.3						
Q47A	Bedord North L	98.74	353	Pdiff	P	22 05 05.2	-0.2
	baz=7.0						
KSCO	Kaye Shedlock'	98.87	5	Pdiff	P	22 05 05.5	-0.7
	baz=355						
Q45A	Warren Harvey,	98.93	354	Pdiff	P	22 05 06.1	-0.2
	baz=5.7						
Q44A	Meyer Farm, Va	98.99	355	Pdiff	P	22 05 06.1	-0.4
	baz=5.0						
Q43A	New Douglas	98.99	355	Pdiff	Pdif	22 05 06.2	-0.3
	baz=4.5						
KSU1	Kansas State U	99.02	1	Pdiff	Pdif	22 05 06.3	-0.4
	baz=359						
KSU1	Kansas State U	99.02	1	PFAKE		22 05 20.0	+13
KSU1				LR	LR		
	comp=Z,721nm,19.0s						
Q39A	Willow Grove F	99.04	358	Pdiff	Pdif	22 05 06.5	-0.3
	baz=2.1						
DZM	Mont Dzumac	99.05	111	eLR	LR	22 37 31.9	
	comp=Z,290nm,25.4s						
Q40A	Laux Farm, Aux	99.06	357	Pdiff	Pdif	22 05 06.6	-0.2
	baz=2.7						
Q41A	Truxton	99.06	356	Pdiff	Pdif	22 05 06.8	0.0
	baz=3.4						
Q42A	Golden Eagle	99.07	356	Pdiff	Pdif	22 05 06.8	-0.1
	baz=3.9						
Q38A	Cooks Store, C	99.14	358	Pdiff	Pdif	22 05 06.8	-0.4
	baz=1.6						
R48A	Northridge Ran	99.22	352	Pdiff	Pdif	22 05 07.2	-0.4
	baz=7.4						
CBKS	Cedar Bluff	99.23	3	Pdiff	Pdif	22 05 07.4	-0.3
	baz=357						
CBKS	Cedar Bluff	99.23	3	PFAKE		22 05 20.0	+12
CBKS				LR	LR		
	comp=Z,688nm,19.0s						
Q37A	Longview Farm,	99.24	359	Pdiff	Pdif	22 05 07.1	-0.5
	baz=0.9						
FUNA	Funafuti	99.35	93	PFAKE		22 05 20.0	+12
FUNA				LR	LR		
	comp=Z,3μm,20.0s						
R47A	Wooly Knot Far	99.38	353	Pdiff	Pdif	22 05 08.1	-0.2
	baz=6.9						
WCI	Wyandotte Cave	99.43	352	Pdiff	Pdif	22 05 08.5	0.0
	baz=7.1						
R45A	Skylar, Fairfi	99.54	354	Pdiff	Pdif	22 05 08.8	-0.2
	baz=5.6						
R46A	Gibon Southern	99.56	353	Pdiff	Pdif	22 05 08.4	-0.7
	baz=6.2						
MPMC	Manual Prospec	99.58	18	Pdiff	Pdif	22 05 07.7	-1.7
	baz=344						
R44A	Waltonville	99.64	355	Pdiff	Pdif	22 05 09.4	0.0
	baz=5.0						
R43A	Red Bud	99.67	355	Pdiff	Pdif	22 05 09.2	-0.4
	baz=4.3						
BLA	Blacksburg	99.67	348	Pdiff	Pdif	22 05 09.2	-0.5
	baz=11						
BLA	Blacksburg	99.67	348	PFAKE		22 05 20.0	+10
BLA				LR	LR		
	comp=Z,769nm,20.0s						
S51A	Beattyville	99.71	350	Pdiff	Pdif	22 05 09.0	-0.8
	baz=9.1						
R42A	Luebbering	99.71	356	Pdiff	Pdif	22 05 08.9	-0.8
	baz=3.7						
ISA	Isabella, Lake	99.72	19	Pdiff	Pdif	22 05 09.4	-0.6
	baz=343						
R41A	Rosebud	99.72	356	Pdiff	Pdif	22 05 09.4	-0.5
	baz=3.3						
S22A	4UR Ranch, Cre	99.74	9	Pdiff	Pdif	22 05 10.5	+0.2
	baz=352						
R40A	Maddies Statio	99.77	357	Pdiff	Pdif	22 05 09.4	-0.6
	baz=2.6						
R39A	Chumby, Stover	99.77	358	Pdiff	Pdif	22 05 09.7	-0.3
	baz=2.0						
SDCO	Great Sand Dun	99.89	8	Pdiff	Pdif	22 05 10.9	0.0
	baz=353						
SDCO	Great Sand Dun	99.89	8	ePdif	Pdif	22 05 11.8	+0.9
	comp=Z,2.5nm,0.7s						
SDCO				LR	LR		
	comp=Z,664nm,19.0s						
R38A	Fenwick Farm,	99.92	358	Pdiff	Pdif	22 05 10.0	-0.7
	baz=1.4						
CCM	Cathedral Cave	99.96	356	Pdiff	Pdif	22 05 10.5	-0.4
	baz=3.4						
MVCO	Mesa Verde	100.06	10	PFAKE		22 05 20.0	+8.3
MVCO				LR	LR		
	comp=Z,643nm,20.0s						
S44A	Carbondale	100.20	355	Pdiff	Pdif	22 05 11.8	-0.1
	baz=4.9						
S42A	Caledonia	100.22	356	Pdiff	Pdif	22 05 11.5	-0.5
	baz=3.7						
S43A	Fulton Ridge,	100.38	355	Pdiff	Pdif	22 05 12.3	-0.5
	baz=4.2						
S39A	Bolivar	100.40	358	Pdiff	Pdif	22 05 12.1	-0.7
	baz=1.8						
BBSR	BB Station	100.43	334	PFAKE		22 05 20.0	+7.0
BBSR				LR	LR		
	comp=Z,545nm,21.0s						
S41A	Jillco Farms,	100.45	357	Pdiff	Pdif	22 05 12.5	-0.6
	baz=3.0						
S40A	Lebanon	100.47	357	Pdiff	Pdif	22 05 12.8	-0.4
	baz=2.4						
S38A	Stockton	100.47	358	Pdiff	Pdif	22 05 12.4	-0.7
	baz=1.4						
T48A	Bowling Green	100.55	352	Pdiff	Pdif	22 05 13.2	-0.3
	baz=7.0						
T47A	Sharon Grove	100.73	353	Pdiff	Pdif	22 05 14.1	-0.3
	baz=6.5						
T46A	Princeton	100.75	354	Pdiff	Pdif	22 05 14.1	-0.3
	baz=5.9						
T43A	Greenville	100.88	356	Pdiff	Pdif	22 05 14.1	-0.9
	baz=4.1						
T40A	Mansfield	100.91	357	Pdiff	Pdif	22 05 14.5	-0.6
	baz=2.4						
T42A	Van Buren	100.97	356	Pdiff	Pdif	22 05 14.9	-0.5
	baz=3.5						
T41A	Mountain View	100.99	357	Pdiff	Pdif	22 05 15.0	-0.5
	baz=3.0						
T39A	Clever	101.07	358	Pdiff	Pdif	22 05 15.0	-0.8
	baz=1.8						
CNNC	Cliffs of the	101.15	345	PFAKE		22 05 30.0	+14
CNNC				LR	LR		
	comp=Z,1μm,20.0s						
U47A	Clarksville	101.29	353	Pdiff	Pdif	22 05 16.6	-0.2
	baz=6.4						
U42A	Revenden	101.66	356	Pdiff	Pdif	22 05 18.0	-0.4
	baz=3.4						
U41A	Viola	101.69	357	Pdiff	Pdif	22 05 18.4	-0.3
	baz=2.9						
U39A	Green Forest	101.71	358	Pdiff	Pdif	22 05 17.9	-0.9
	baz=1.7						
U40A	Yellville	101.72	358	Pdiff	Pdif	22 05 18.1	-0.7
	baz=2.2						
V47A	Nunnelly	101.92	353	Pdiff	Pdif	22 05 19.6	0.0
	baz=6.2						
V48A	Smith Brothers	101.94	353	Pdiff	Pdif	22 05 19.6	-0.1
	baz=6.7						
V46A	Holladay	102.00	354	Pdiff	Pdif	22 05 19.8	-0.2
	baz=5.8						
PFO	Pinyon Flats O	102.15	18	PFAKE		22 05 30.0	+9.1
PFO				LR	LR		
	comp=Z,481nm,20.0s						
V39A	Pettigrew	102.25	358	Pdiff	Pdif	22 05 20.7	-0.6
	baz=1.6						
V41A	Mountainview	102.26	357	Pdiff	Pdif	22 05 20.6	-0.6
	baz=2.7						
ANMO	Albuquerque	102.55	9	Pdiff	Pdif	22 05 24.7	+2.0
	comp=Z,1.0nm,0.4s,baz=350,slow=9.3,SNR=6.5						
ANMO	Albuquerque	102.55	9	Pdiff	Pdif	22 05 23.3	+0.6
	baz=352						
ANMO	Albuquerque	102.55	9	Pdif	Pdif	22 05 24.7	+2.0
ANMO				LR	LR		
	comp=Z,619nm,21.0s						
TASM	ASL Pad, Albuq	102.55	9	Pdiff	Pdif	22 05 23.4	+0.7
	baz=352						
TASL	Snake Pit, Alb	102.55	9	Pdiff	Pdif	22 05 23.3	+0.6
	baz=352						
MONP2	Monument Peak	102.85	18	Pdiff	Pdif	22 05 25.1	+1.0
	baz=344						
X48A	Hartselle	103.24	353	Pdiff	Pdif	22 05 24.8	-0.8
	baz=6.6						
Y54A	Tignall	103.30	349	Pdiff	Pdif	22 05 25.3	-0.5
	baz=9.9						
WMOK	Wichita Mounta	103.33	3	Pdiff	Pdif	22 05 24.3	-1.7
	baz=358						
WMOK	Wichita Mounta	103.33	3	PFAKE		22 05 40.0	+14
WMOK				LR	LR		
	comp=Z,673nm,20.0s						
Y53A	Monroe	103.43	350	Pdiff	Pdif	22 05 25.8	-0.6
	baz=9.2						
MIAR	Mount Ida	103.54	358	Pdiff	Pdif	22 05 25.7	-1.2
	baz=1.6						
MIAR	Mount Ida	103.54	358	PFAKE		22 05 40.0	+13
MIAR				LR	LR		
	comp=Z,1μm,21.0s						
NHSC	New Hope	103.64	347	PFAKE		22 05 40.0	+13
NHSC				LR	LR		
	comp=Z,706nm,19.0s						
GOGA	Godfrey	103.86	349	PFAKE		22 05 40.0	+12
GOGA				LR	LR		
	comp=Z,653nm,20.0s						
TUC	Tucson	104.53	13	PFAKE		22 05 40.0	+8.6
TUC				LR	LR		
	comp=Z,1μm,19.0s						
MNTX	Cornudas Mount	105.88	8	PFAKE		22 10 00.0	
MNTX				LR	LR		
	comp=Z,729nm,20.0s						
NATX	Nacogdoches	106.34	359	PFAKE		22 10 00.0	
NATX				LR	LR		
	comp=Z,985nm,19.0s						
BRAL	Brewton	106.50	352	PFAKE		22 10 00.0	
BRAL				LR	LR		
	comp=Z,759nm,20.0s						
JCT	Junction City	107.53	4	PFAKE		22 10 00.0	
JCT				LR	LR		
	comp=Z,942nm,19.0s						
TXAR	Lajitas Array	108.40	7	Pdiff	Pdif	22 05 50.6	+1.9
	comp=Z,0.5nm,0.6s,baz=352,slow=2.7,SNR=7.7						
CASY	Casey	110.09	169	PFAKE		22 10 10.0	
CASY				LR	LR		
	comp=Z,108nm,20.0s						
KVTX	Kingsville	110.52	2	PFAKE		22 10 10.0	
KVTX				LR	LR		
	comp=Z,1μm,20.0s						
GRTK	Grand Turk	112.58	335	PFAKE		22 10 10.0	
GRTK				LR	LR		
	comp=Z,457nm,20.0s						
ANWB	Willy Bob	112.62	325	PFAKE		22 10 10.0	
ANWB				LR	LR		
	comp=Z,413nm,22.0s						
SJG	San Juan	114.00	329	PFAKE		22 10 20.0	
SJG				LR	LR		
	comp=Z,258nm,22.0s						
BBGH	Gun Hill	115.59	320	PFAKE		22 10 20.0	+12
BBGH				LR	LR		
	comp=Z,877nm,20.0s						
SYO	Syowa Base	115.76	196	‖eX		PKPdf	22 10 05.4 -1.6
GRGR	Grenville	117.45	322	PFAKE		22 10 20.0	+8.0
GRGR				LR	LR		
	comp=Z,308nm,19.0s						
MTDJ	Mount Denham	117.50	340	PFAKE		22 10 20.0	+7.8
MTDJ				LR	LR		
	comp=Z,331nm,22.0s						
SDV	Santo Domingo	124.14	329	PFAKE		22 10 40.0	+15
SDV				LR	LR		
	comp=Z,271nm,20.0s						
JTS	JuntasAbangare	126.77	347	PFAKE		22 10 40.0	+10
JTS				LR	LR		
	comp=Z,448nm,20.0s						
BCIP	Isla Barro Col	126.78	340	PFAKE		22 10 40.0	+10
BCIP				LR	LR		
	comp=Z,283nm,20.0s						
VNDA	Vanda	128.27	164	PKP	PKPdf	22 10 30.4	-0.5
	comp=Z,3.2nm,0.8s,baz=295,slow=4.5,SNR=12						
PPT2	Papeete2	128.29	79	eLR	LR	22 51 01.5	
	comp=Z,182nm,22.0s						
SNAA	Sanae	128.57	204	P	PKPdf	22 10 31.1	-0.6
SNAA	Sanae	128.57	204	PKP	PKPdf	22 10 31.0	-0.6
	comp=Z,3.4nm,0.8s,baz=168,slow=2.1,SNR=14						
TAOE	Nuku Hiva Isla	128.83	62	eLR	LR	22 51 30.5	
	comp=Z,324nm,24.0s						
SBA	Scott Base	129.37	164	PFAKE		22 10 40.0	+7.1
SBA				LR	LR		
	comp=Z,228nm,19.0s						
VNA1	Neumayer--Stat	129.97	206	P	PKPdf	22 10 35.6	+1.4
VNA3	Neumayer Olymp	130.56	205	P	PKPdf	22 10 35.6	+0.2
TBI	Tubuai	131.93	84	eLR	LR	22 52 43.8	
	comp=Z,212nm,22.5s						
QSPA	South Pole Qui	132.03	180	PKP	PKPdf	22 10 37.8	-0.5
	comp=Z,9.2nm,0.7s,baz=280,slow=1.3,SNR=33						
OTAV	Otavalo	134.90	335	ePKPdf	PKPdf	22 10 46.9	+1.0
OTAV				LR	LR		
	comp=Z,249nm,22.0s						
SAML	Samuel	136.17	310	ePKPdf	PKPdf	22 10 48.1	+0.4
SAML				LR	LR		
	comp=Z,357nm,22.0s						
CPUP	Villa Florida	144.81	284	PKP	PKPab	22 11 01.4	-0.4
	comp=Z,36nm,0.9s,baz=54,slow=3.7,SNR=79						
LPAZ	La Paz	144.91	309	PKP	PKPab	22 11 02.8	-0.4
	comp=Z,14nm,0.6s,baz=29,slow=2.9,SNR=63						
NNA	Nana	145.62	326	ePKPdf	PKPab	22 11 05.5	+0.3
NNA				LR	LR		
	comp=Z,214nm,22.0s						
NNA	Nana	145.62	326	ePKP2	PKPab	22 11 05.5	+0.3
NNA				MLR	MLR		
	comp=Z,214nm,22.0s						
PLCA	Paso Flores	161.05	266	PKP	PKPdf	22 11 26.7	+0.8
	comp=Z,2.4nm,0.7s,baz=127,slow=4.0,SNR=4.9						
PLCA				PKPab	PKPab	22 12 08.6	-0.6
	comp=Z,3.3nm,0.7s,baz=124,slow=3.8,SNR=5.4						
PLCA	Paso Flores	161.05	266	PKIKP	PKPdf	22 11 26.7	+0.8
PLCA						22 12 08.6	
PLCA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PLCA				pmax	pmax		
	comp=Z,3.0nm,0.7s						

JMA 14 22:06:03.0±0.2, 38°.29N×144°.48E, h36km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.34	291	P	Pn	22 06 40.5	+1.6
OFUJ				eS	Sn	22 07 08.2	+1.9
MIYJ	Miyakonagasawa	2.44	303	P	Pn	22 06 41.4	+1.1
MIYJ				eS	Sn	22 07 10.0	+1.1
JIO	Ouri	2.47	275	S	Sn	22 07 11.3	+1.8
JMK	Ichinoseki	2.64	286	P	Pn	22 06 46.3	+3.3
JMK				S	Sn	22 07 16.1	+2.4
JOM	Ohasama	2.75	296	P	Pn	22 06 46.5	+1.9
JOM				S	Sn	22 07 19.0	+2.4
JOU	Okura	3.00	273	P	Pn	22 06 49.9	+1.9
JOU				S	Sn	22 07 26.0	+3.2
JRG	Rokugo	3.20	291	P	Pn	22 06 53.5	+2.8
JRG				S	Sn	22 07 31.2	+3.6
JYK	Kaneyama	3.29	282	P	Pn	22 06 54.5	+2.6
JYK				eS	Sn	22 07 33.1	+3.3
JFT	Otama	3.37	258	S	Sn	22 07 34.6	+2.9
JAH	Hinai	3.54	304	eS	Sn	22 07 38.6	+2.7
JTM	Tenmabayashi	3.63	314	P	Pn	22 06 58.1	+1.5
JTM				S	Sn	22 07 38.6	+0.4
JOT	Ohata	4.06	321	P	Pn	22 07 04.5	+1.9
JOT				eS	Sn	22 07 48.7	-0.2
JCH	Churui	4.40	349	P	Pn	22 07 06.9	-0.3
JCH				eS	Sn	22 07 54.6	-2.6
JRY	Ryogami san	5.00	245	P	Pn	22 07 17.2	+1.7
JRY				S	Sn	22 08 11.6	-0.5
NEM2	Nemuro 2	5.16	10	P	Pn	22 07 14.0	-3.6
NEM2				eS	Sn	22 08 08.0	-7.8
JTKR	Abashiri--Toko	5.69	356	P	Pn	22 07 23.2	-1.7
JTKR				eS	Sn	22 08

Error ellipse: s-maj=20.7km s-min=12.5km az=162.3
IDC 14 22:08:04.7±2.5, 26°.11S×179°.39E, h508km±26km, mb3.4/6, mb1 3.6/8, mb1mx3.1/51, mbtmp4.4/8, Error ellipse: s-maj=36.7km s-min=18.5km az=174.0
ISC 14 22:08:03.4±0.9, 26°.25S±0°.1×179°.5E±0°.1, h503km, n14, σ1°20/16, mb4.1/6, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	12.17	189	P	P	22 10 44.5	+1.0
	1.0nm,0.3s,baz=303,slow=14,SNR=2.6						
URZ				S	S	22 12 53.5	-2.0
	0.5nm,0.3s,baz=216,slow=8.2,SNR=2.1						
DZM	Mont Dzumac	12.63	286	P	P	22 10 49.2	+0.4
	1.2nm,0.3s,baz=100,slow=18,SNR=7.5						
CTA	Charters Tower	31.14	274	P	P	22 13 40.8	+0.3
	4.5nm,0.5s,baz=97,slow=9.6,SNR=9.2						
STKA	Stephens Creek	33.51	251	P	P	22 14 01.5	+0.9
	1.4nm,0.5s,baz=69,slow=8.6,SNR=3.8						
ASAR	Alice Springs	41.28	263	P	P	22 15 04.4	-0.1
	3.0nm,0.4s,baz=90,slow=7.6,SNR=43						
WRA	Warramunga Arr	41.87	269	P	P	22 15 08.4	-0.8
	4.0nm,0.4s,baz=104,slow=7.8,SNR=79						
WRA				S	S	22 20 49.6	-1.0
	1.4nm,1.0s,baz=99,slow=14,SNR=4.5						
FITZ	Fitzroy Crossi	50.26	268	P	P	22 16 13.2	+0.1
	4.9nm,0.8s,baz=113,slow=8.1,SNR=15						
NVAR	Mina Array Bea	86.72	44	P	P	22 19 54.5	+0.7
	0.5nm,0.6s,baz=222,slow=8.6,SNR=4.9						
NB2	NORSAR Subarra	144.30	350	PKP	PKPdf	22 26 39.6	-1.6
	comp=Z,0.6nm,0.6s,baz=16,slow=3.2						
HFS	Hagfors	144.72	348	PKP	PKPab	22 26 40.9	-1.9
	comp=Z,1.3nm,0.4s,baz=90,slow=3.3,SNR=14						
AKASG	Malin Array Be	146.65	325	PKPbc	PKPbc	22 26 46.9	-1.1
	comp=Z,0.5nm,0.4s,baz=58,slow=3.3,SNR=4.0						
MMAI	Mount Meron Ar	148.19	291	PKPbc	PKPbc	22 26 53.8	+1.1
	comp=Z,1.3nm,0.7s,baz=87,slow=3.0,SNR=4.4						
BRTR	Keskin Array B	148.57	304	PKPbc	PKPbc	22 26 53.6	0.0
	comp=Z,0.3nm,0.5s,baz=96,slow=1.4,SNR=2.5						
TORD	Torodi Ar. Bea	166.83	189	PKPab	PKPab	22 28 19.4	+1.3
	comp=Z,0.3nm,0.7s,baz=195,slow=4.3,SNR=2.4						

ISCJB 14 22:11:56.9±1.5, 37°.61N±0°.04×141°.90E±0°.05, h14km±10km, mb3.5/6, Error ellipse: s-maj=7.7km s-min=5.7km az=30.5
JMA 14 22:11:58.1±0.1, 37°.61N×141°.85E, h25km±2km, M3.7
IDC 14 22:12:03.7±2.6, 37°.37N×141°.87E, h60km±25km, mb3.3/6, mb1 3.5/9, mb1mx3.3/67, mbtmp3.7/9, ML3.5/3, Error ellipse: s-maj=20.7km s-min=16.4km az=82.0
ISC 14 22:11:56.3±1.8, 37°.61N±0°.04×141°.88E±0°.06, h2km±11km, n26, σ1°28/31, mb3.4/6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	Kawauchi	0.83	253	P	Pb	22 12 13.2	-0.3
JFK				S	Sg	22 12 23.6	+0.5
JMM	Marumori	0.90	287	P	Pb	22 12 14.0	-0.5
JMM				S	Sg	22 12 25.3	+0.3
JIO	Ouri	0.94	334	P	Pb	22 12 15.0	-0.2
JIO				S	Sg	22 12 26.4	0.0
ONAJ	Iwakimizuishiy	1.00	240	P	Pg	22 12 15.6	+0.2
JOU	Okura	1.22	308	P	Pn	22 12 19.7	-0.6
JOU				S	Sb	22 12 35.4	-0.8
JFT	Otama	1.23	266	P	Pg	22 12 20.0	+0.2
JFT				S	Sg	22 12 34.9	-0.8
JMK	Ichinoseki	1.43	339	P	Pb	22 12 22.8	-0.9
JYS	Shiratake	1.56	293	P	Pb	22 12 24.9	-0.9
JYS				S	Sn	22 12 44.9	-0.8
JFY	Yanaizu	1.74	264	P	Pn	22 12 27.7	+0.2
JFY				S	Sn	22 12 49.3	-0.9
JYK	Kaneyama	1.77	318	P	Pn	22 12 27.5	-0.4
JYK				S	Sn	22 12 49.0	-1.9
MJAR	Matsushiro Arr	3.12	251	P	Pn	22 12 47.4	+0.9
	3.9nm,0.3s,baz=81,slow=16,SNR=17						
MJAR				S	Sn	22 13 25.9	+1.5
	3.4nm,0.3s,baz=79,slow=25,SNR=5.0						
MAT	Matsushiro	3.12	251	P	Pn	22 12 47.5	+1.0
MAT				S	Sn	22 13 25.9	+1.5
JHJ	Hachijo jima 2	4.80	201	P	Pn	22 13 09.8	+0.3
	15nm,0.3s,baz=35,slow=16,SNR=4.3						
JHJ				S	Sn	22 14 01.6	-4.1
	7.5nm,0.3s,baz=252,slow=23,SNR=3.1						
ASAJ	Asahikawa	6.52	5	P	Pb	22 13 41.7	-8.6
	0.8nm,0.3s,baz=203,slow=16,SNR=3.6						
ASAJ				S	Sn	22 14 50.2	+2.2
	0.9nm,0.3s,baz=201,slow=13,SNR=2.8						
SONM	Songino Array	27.77	303	P	P	22 17 47.4	+0.9
	0.3nm,0.7s,baz=115,slow=9.7,SNR=2.3						
H11N2	WAKE ISLAND Hy	28.14	122	T	T	22 47 21.8	
	baz=315,slow=75,SNR=117						
H11N1	WAKE ISLAND Hy	28.14	122	T	T	22 47 22.8	
	baz=315,slow=75,SNR=128						
H11N3	WAKE ISLAND Hy	28.15	122	T	T	22 47 23.0	
	baz=315,slow=75,SNR=134						
H11S1	WAKE ISLAND Hy	28.87	124	T	T	22 48 12.1	
	baz=317,slow=76,SNR=84						
H11S3	WAKE ISLAND Hy	28.87	124	T	T	22 48 13.5	
	baz=317,slow=76,SNR=88						
H11S2	WAKE ISLAND Hy	28.89	124	T	T	22 48 18.3	
	baz=317,slow=76,SNR=86						
ZALV	Zalesovo Beam	41.80	312	P	P	22 19 49.2	+2.2
	0.4nm,0.4s,baz=108,slow=4.7,SNR=3.7						
MKAR	Makanchi Array	44.13	302	P	P	22 20 06.0	-0.1
	0.3nm,0.6s,baz=73,slow=5.0,SNR=3.4						
KURBB	Kurchatov Arra	45.94	308	P	P	22 20 20.2	-0.1
	1.3nm,0.2s,baz=82,slow=7.0,SNR=5.1						
WRA	Warramunga Arr	57.69	188	P	P	22 21 47.4	-0.9
	0.2nm,0.5s,baz=6.0,slow=7.3,SNR=6.0						
PDAR	Pinedale Array	77.00	46	P	P	22 23 51.4	+0.6
	0.2nm,0.5s,baz=291,slow=5.7,SNR=3.2						

SOME 14 22:25:33.1, 44°.78N×80°.45E, h15km
NNC 14 22:25:34.1±2.2, 44°.69N×80°.63E, h7km±14km, mb2.8, mpv2.4, Error ellipse: s-maj=16.0km s-min=3.9km az=119.0
ISC 14 22:25:31.5±1.4, 44°.76N±0°.04×80°.54E±0°.05, h7km±13km, n13, σ0°93/26, 2C-2D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	Jarkent	0.69	231	eP	Pb	22 25 45.6	-0.3
	33nm,0.2s						
DJR				eS	Sg	22 25 54.8	+1.1
	9.5nm,0.2s						
KAPS	Kapalarasan	0.99	302	eP	Pg	22 25 50.5	0.0
	4.8nm,0.2s						
KAPS				eS	Sg	22 26 03.0	-0.3
	6.3nm,0.2s						
PDGK	Podgornoye	1.62	208	⇓P	Pg	22 26 02.2	-0.4
	4.6nm,0.5s						
PDGK				⇑S	Sg	22 26 23.9	+0.2
	5.1nm,0.3s						
SHLS	Shalkode	1.79	206	eP	Pn	22 26 03.0	+0.1
	6.6nm,0.1s						
SHLS				eS	Sn	22 26 24.6	-1.3
	28nm,0.3s						
KPKS	Kokpek	1.86	227	eP	Pb	22 26 06.1	+0.1
	19nm,0.2s						
KPKS				eS	Sb	22 26 30.0	+0.6
	16nm,0.2s						
UZB	Uzynbulak	1.95	215	eP	Pb	22 26 07.7	+0.2
	6.2nm,0.2s						
UZB				eS	Sb	22 26 32.9	+0.8
	13nm,0.2s						
ARXS	Arharly	2.02	255	eP	Pb	22 26 08.6	0.0
	6.9nm,0.4s						
ARXS				eS	Sb	22 26 34.3	+0.3
	14nm,0.4s						
MAKZ	Makanchi	2.28	26	⇓Pn	Pb	22 26 13.3	+0.3
	1.1nm,0.6s						
MAKZ				⇑Sn	Sb	22 26 42.3	+0.9
	5.3nm,0.5s						
MK31	Makanchi Array	2.37	30	Pn	Pb	22 26 14.1	-0.4
	0.2nm,0.2s,baz=207,slow=16,SNR=18						
MK31				Sn	Sb	22 26 44.5	+0.5
	4.4nm,0.5s,baz=210,slow=28,SNR=18						
CHKK	Chushkaly	2.71	252	eP	Pb	22 26 20.3	0.0
	1.7nm,0.3s						
CHKK				eS	Sb	22 26 54.1	+0.4
	9.8nm,0.3s						
KTBS	Karatobe	2.97	251	eP	Pb	22 26 24.2	-0.5
	0.9nm,0.4s						
KTBS				eS	Sb	22 27 00.8	-0.4
	7.4nm,0.3s						
TNSS	Tian-Shan	3.12	238	eP	Pb	22 26 29.1	+1.6
	2.0nm,0.7s						
TNSS				eS	Sg	22 27 09.4	-2.3
	5.7nm,0.4s						
DGS	Degeres	3.76	248	eP	Pb	22 26 39.1	+0.8
	1.8nm,0.3s						
DGS				eS	Sb	22 27 26.2	+2.1
	4.2nm,0.7s						

ISN 14 22:28:44.6±0.3, 37°.23N×42°.47E, h0km, ML2.1
ISCJB 14 22:28:46.9±1.5, 37°.21N±0°.06×42°.47E±0°.05, h5km±8km, Error ellipse: s-maj=10.0km s-min=6.3km az=177.5
DDA 14 22:28:46.2, 37°.16N×42°.45E, h8km, Ml2.5
CSEM 14 22:28:47.1±0.2, 37°.23N×42°.48E, h8km, ML2.3, Error ellipse: s-maj=4.9km s-min=3.0km az=45.0
ISK 14 22:28:47.2, 37°.27N×42°.44E, h10km, ML2.3/4
ISC 14 22:28:47.2±1.6, 37°.23N±0°.07×42°.46E±0°.04, h9km±9km, n17, σ0°38/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRN	S¨–rnak	0.27	351	iP	Pg	22 28 52.4	-0.2
SIRN				iS	Sg	22 28 56.2	0.0
SIRN	S¨–rnak	0.27	351	P	Pg	22 28 52.4	-0.2
SIRN				S	Sg	22 28 56.2	0.0
SIRT	Sirnak	0.27	356	PG	Pg	22 28 52.5	-0.1
SIRT				SG	Sg	22 28 56.3	0.0
SIRT	Sirnak	0.27	356	ePg	Pg	22 28 52.5	-0.1
SIRT				eSg	Sg	22 28 56.3	0.0
SRTM	Siirt_Merkez	0.87	331	iP	Pb	22 29 04.4	-0.1
SRTM				iS	Sn	22 29 17.8	-0.7
SRTM	Siirt_Merkez	0.87	331	P	Pb	22 29 04.4	-0.1
SRTM				S	Sn	22 29 17.8	-0.7
HAKT	HAKKARI	1.04	72	iP	Pg	22 29 07.2	-0.1
HAKT				iS	Sb	22 29 21.8	+0.5
HAKT	HAKKARI	1.04	72	P	Pg	22 29 07.2	-0.1
HAKT				S	Sb	22 29 21.8	+0.5
BTMN	Batman	1.15	305	iP	Pn	22 29 09.8	+0.2
BTMN				iS	Sb	22 29 25.2	+0.8
BTMN	Batman	1.15	305	P	Pn	22 29 09.8	+0.2
BTMN				S	Sb	22 29 25.2	+0.8
MARD	Mardin	1.35	274	iP	Pn	22 29 11.6	-0.6
MARD				iS	Sb	22 29 30.3	+0.3
GURO	Guroymak-BITLI	1.36	346	PN	Pn	22 29 12.4	0.0
GURO				SN	Sb	22 29 30.7	+0.3
GURO	Guroymak-BITLI	1.36	346	ePn	Pn	22 29 12.4	0.0
GURO				eSn	Sb	22 29 30.7	+0.3
SVAN	Silvan-Diyarba	1.36	313	PN	Pn	22 29 12.5	+0.2
SVAN	Silvan-Diyarba	1.36	313	ePn	Pn	22 29 12.5	+0.2
MAZI	Mazidag	1.62	279	PN	Pn	22 29 16.2	+0.2
MAZI	Mazidag	1.62	279	ePn	Pn	22 29 16.2	+0.2

DDA 14 22:37:21.5, 37°.19N×42°.44E, h14km, Ml3.5
ISK 14 22:37:21.6, 37°.28N×42°.40E, h5km, ML3.5/14
ISN 14 22:37:21.7±1.6, 37°.17N×42°.43E, h7km±7km, ML3.5
CSEM 14 22:37:22.9±0.2, 37°.22N×42°.46E, h10km, ML3.5, Error ellipse: s-maj=5.1km s-min=4.3km az=51.0
ATA 14 22:37:30.8±1.6, 37°.81N×42°.49E, h30km±18km, ML4.1, MW3.9
ISC 14 22:37:21.9±1.2, 37°.22N±0°.03×42°.43E±0°.02, h3km±9km, n82, σ1°07/121, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRN	S¨–rnak	0.27	358	iP	Pg	22 37 26.9	-0.3
SIRN				iS	Sg	22 37 30.8	0.0
SIRN	S¨–rnak	0.27	358	P	Pg	22 37 26.9	-0.3
SIRN				S	Sg	22 37 30.8	0.0
SIRT	Sirnak	0.28	2	PG	Pg	22 37 26.9	-0.4
SIRT				SG	Sg	22 37 31.2	+0.2
SIRT	Sirnak	0.28	2	ePg	Pg	22 37 26.9	-0.4
SIRT				eSg	Sg	22 37 31.2	+0.2
SRTM	Siirt_Merkez	0.87	333	iP	Pg	22 37 38.7	+0.2
SRTM				iS	Sb	22 37 51.5	-0.3
SRTM	Siirt_Merkez	0.87	333	P	Pg	22 37 38.7	+0.2
SRTM				S	Sb	22 37 51.5	-0.3
HAKT	HAKKARI	1.07	71	iP	Pg	22 37 42.0	-0.5
HAKT				iS	Sg	22 37 57.0	+0.5
HAKT	HAKKARI	1.07	71	P	Pg	22 37 42.0	-0.5
HAKT				S	Sg	22 37 57.0	+0.5
BTMN	Batman	1.14	306	iP	Pb	22 37 44.4	+0.1
BTMN				iS	Sb	22 37 59.8	+0.3
BTMN	Batman	1.14	306	P	Pb	22 37 44.4	+0.1
BTMN				S	Sb	22 37 59.8	+0.3
GEVA	Gevas	1.20	25	eP	Pg	22 37 44.1	-0.8
GEVA				iPg	Pn	22 37 45.8	+0.1
GEVA				IAML		22 38 09.5	
	comp=Z,155nm,0.5s						
GEVA	Gevas	1.20	25	iP	Pg	22 37 44.3	-0.6
GEVA				iS	Sn	22 38 04.0	+1.3
GEVA	Gevas	1.20	25	P	Pg	22 37 44.3	-0.6
GEVA				S	Sn	22 38 04.0	+1.3
MARD	Mardin	1.32	274	iP	Pg	22 37 46.3	-0.9
MARD				iS	Sb	22 38 05.0	+0.3
SVAN	Silvan-Diyarba	1.34	314	PN	Pn	22 37 47.3	-0.4
SVAN				SN	Sn	22 38 06.0	-0.1
SVAN	Silvan-Diyarba	1.34	314	iP	Pg	22 37 47.7	0.0
SVAN				iS	Sn	22 38 06.3	+0.2
SVAN	Silvan-Diyarba	1.34	314	ePn	Pn	22 37 47.3	-0.4
SVAN	Silvan-Diyarba	1.34	314	P	Pg	22 37 47.7	0.0
SVAN				eSn	Sn	22 38 06.0	-0.1
GURO	Guroymak-BITLI	1.36	347	PN	Pn	22 37 47.5	-0.5
GURO				SN	Sb	22 38 06.3	+0.2
GURO	Guroymak-BITLI	1.36	347	ePn	Pn	22 37 47.5	-0.5
GURO				eSn	Sb	22 38 06.3	+0.2
TVAN	Van	1.52	30	iP	Pg	22 37 51.0	0.0
TVAN				iS	Sg	22 38 12.7	+2.0
TVAN	Van	1.52	30	P	Pg	22 37 51.0	0.0
TVAN				S	Sg	22 38 12.7	+2.0
YOVA	Hakkari_Y¨…kse	1.53	76	iP	Pn	22 37 50.0	-0.3
YOVA				iS	Sg	22 38 11.8	+0.8
YOVA	Hakkari_Y¨…kse	1.53	76	P	Pn	22 37 50.0	-0.3
YOVA				S	Sg	22 38 11.8	+0.8
VANB	Van	1.57	29	PN	Pn	22 37 49.9	-0.9
VANB	Van	1.57	29	ePn	Pn	22 37 49.9	-0.9
MAZI	Mazidag	1.60	279	PN	Pn	22 37 50.5	-0.7
MAZI				SN	Sg	22 38 13.2	0.0
MAZI	Mazidag	1.60	279	ePn	Pn	22 37 50.5	-0.7
MAZI				eSn	Sg	22 38 13.2	0.0
ADCV	BITLIS_Adilcev	1.60	8	iP	Pg	22 37 52.6	0.0
ADCV				iS	Sg	22 38 15.2	+1.8
ADCV	BITLIS_Adilcev	1.60	8	P	Pg	22 37 52.6	0.0
ADCV				S	Sg	22 38 15.2	+1.8
DIY	Diyarbakir	1.87	292	ePn	Pb	22 37 56.5	-0.3
DYBB	Diyarbakir	1.96	293	PN	Pn	22 37 56.5	+0.4
VMUR	Van-Muradiye	1.98	27	iP	Pb	22 37 58.0	-0.8
VMUR				iS	Sb	22 38 23.4	-0.5
VMUR	Van-Muradiye	1.98	27	P	Pb	22 37 58.0	-0.8
VMUR				S	Sb	22 38 23.4	-0.5
HANI	Diyarbakir_Han	2.00	307	iP	Pn	22 37 55.8	-0.9
HANI				iS	Sn	22 38 21.9	-0.4
HANI	Diyarbakir_Han	2.00	307	P	Pn	22 37 55.8	-0.9
HANI				S	Sn	22 38 21.9	-0.4
BNGL	BINGOL	2.00	330	eP	Pb	22 37 58.2	-0.9
BNGL				eS	Sn	22 38 23.1	+0.6
BNGL				IAML		22 38 27.8	
	comp=Z,982nm,0.4s						
BNGL	BINGOL	2.00	330	iP	Pn	22 37 57.5	+0.7
BNGL				iS	Sb	22 38 24.7	+0.2
EKAR	Karacoban	2.05	352	eP	Pn	22 37 58.7	+1.2
EKAR				iPg	Pb	22 37 59.2	-0.7
EKAR				eS	Sn	22 38 19.4	-4.4
EKAR				IAML		22 38 31.9	
	comp=Z,70nm,0.6s						
VRTB	Varto-Mus	2.08	339	PN	Pn	22 37 57.8	-0.1
VRTB	Varto-Mus	2.08	339	iP	Pn	22 37 59.0	+1.1
VRTB				iS	Sb	22 38 27.1	+0.4
VRTB	Varto-Mus	2.08	339	ePn	Pn	22 37 57.8	-0.1
VRTB	Varto-Mus	2.08	339	P	Pn	22 37 59.0	+1.1
VRTB				S	Sb	22 38 27.1	+0.4
TUTA	Tutak	2.20	8	eP	Pn	22 38 00.6	+1.0
TUTA				IAML		22 38 36.3	
	comp=Z,56nm,0.4s						
TUTA	Tutak	2.20	8	iP	Pn	22 38 00.7	+1.0
TUTA	Tutak	2.20	8	P	Pn	22 38 00.6	+1.0
BNGB	Bing¨¶l	2.24	323	PN	Pn	22 38 00.2	+0.2
CLDR	Caldiran	2.25	31	PN	Pn	22 38 00.7	+0.4
CLDR	Caldiran	2.25	31	ePn	Pn	22 38 00.7	+0.4
BINT	Bingol	2.25	318	ePn	Pn	22 38 00.2	0.0
AGRB	Hanur-Agry	2.39	11	PN	Pn	22 38 02.5	+0.3
AGRB	Hanur-Agry	2.39	11	ePn	Pn	22 38 02.5	+0.3
DYDN	Diyadin	2.52	23	eP	Pn	22 38 05.8	+1.8
EATA	Eleskirt	2.64	1	eP	Pn	22 38 07.5	+1.8
EATA	Eleskirt	2.64	1	iP	Pn	22 38 07.8	+2.1
EATA	Eleskirt	2.64	1	P	Pn	22 38 07.8	+2.1
ECAT	Cat-ERZURUM	2.64	335	eP	Pb	22 38 08.6	-1.4
ERZM	Erzurum	2.81	343	eP	Pb	22 38 11.3	-1.5
HOMI	Horasan	2.85	352	eP	Pb	22 38 12.6	-0.9
URFA	Urfa	2.88	275	PN	Pn	22 38 10.0	+1.2
URFA	Urfa	2.88	275	ePn	Pn	22 38 10.0	+1.2
PTK	Pertek	2.92	306	PN	Pn	22 38 09.5	+0.1
PTK	Pertek	2.92	306	ePn	Pn	22 38 09.5	+0.1
IGDI	IGDIR	2.94	26	eP	Pn	22 38 11.4	+1.8
TNCL	Tunceli-Merkez	2.96	311	eP	Pb	22 38 14.8	-0.5
KOPT	Kop Dagi	3.17	332	ePN12	Pb	22 38 19.0	-0.1
DIGO	Kars	3.27	13	eP	Pn	22 38 16.3	+1.9
EUZM	Uzumlu	3.28	320	eP	Pb	22 38 18.3	-2.5
MALT	Malatya	3.35	290	PN	Pn	22 38 16.4	+1.1
MALT	Malatya	3.35	290	ePn	Pn	22 38 16.4	+1.1
GNI	Garni	3.44	31	PN	Pn	22 38 17.9	+1.3
GNI	Garni	3.44	31	ePn	Pn	22 38 17.9	+1.3
EAK	Akyaka	3.58	15	ePN12	Pb	22 38 23.3	-2.7
BAYT	Ayd¨–ntepe-Bay	3.63	331	PN	Pn	22 38 20.2	+0.9
BAYT	Ayd¨–ntepe-Bay	3.63	331	ePn	Pn	22 38 20.2	+0.9
KEMA	Kemaliye	3.71	305	eP	Pn	22 38 19.0	-1.2
GAZ	Gaziantep	4.16	271	PN	Pn	22 38 28.1	+1.7
GAZ	Gaziantep	4.16	271	ePn	Pn	22 38 28.1	+1.7
BHD	Baghdad	4.25	157	ePn	Pn	22 38 29.0	+1.4
	SNR=4.0						
BHD				eSn	Sn	22 39 17.0	-0.8
	SNR=4.0						
KMRS	Kahramanmaras	4.41	275	PN	Pn	22 38 31.8	+2.0
KMRS	Kahramanmaras	4.41	275	ePn	Pn	22 38 31.8	+2.0
RTB	Rutbah	4.53	203	ePn	Pn	22 38 33.0	+1.6
	SNR=4.0						
RTB				eSn	Sn	22 39 23.0	-1.6
	SNR=4.0						

IDC 14 22:56:48.9±2.1, 20°.41S×168°.72E, h0km, mb3.8/6, mb1 4.0/7, mb1mx3.8/44, mbtmp3.8/7, ML3.6/1, MS3.6/10, Ms1 3.5/10, ms1mx3.2/48, Error ellipse: s-maj=85.3km s-min=25.3km az=147.0
ISCJB 14 22:56:51.4±1.4, 20°.5S±0°.3×168°.7E±0°.3, h26km, mb3.8/6, MS3.6/8, Error ellipse: s-maj=54.3km s-min=10.7km az=138.3
ISC 14 22:56:52.4±1.8, 20°.6S±0°.4×168°.8E±0°.3, h26km, n13, σ0°73/8, mb3.9/6, MS3.5/8, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	2.62	237	Pn	Pn	22 57 32.9	-0.3
	11nm,0.3s,baz=66,slow=19,SNR=88						
DZM				Sn	Sn	22 58 04.0	-0.2
	65nm,0.3s,baz=98,slow=21,SNR=11						
DZM				LR	LR	22 58 11.4	
	comp=Z,622nm,18.0s,baz=24,slow=31						
AFI	Afiamalu	19.70	73	LR	LR	23 07 25.0	
	comp=Z,145nm,19.9s,baz=142,slow=32						
STKA	Stephens Creek	26.77	240	LR	LR	23 12 03.0	
	comp=Z,102nm,20.1s,baz=38,slow=34						
WRA	Warramunga Arr	32.30	265	P	P	23 03 18.8	-0.8
	0.3nm,0.5s,baz=90,slow=8.5,SNR=6.2						
WRA				LR	LR	23 17 20.9	
	comp=Z,155nm,18.9s,baz=115,slow=38						
ASAR	Alice Springs	32.42	258	P	P	23 03 20.9	+0.3
	1.3nm,0.6s,baz=86,slow=8.9,SNR=14						
ASAR				LR	LR	23 17 15.6	
	comp=Z,92nm,20.3s,baz=108,slow=38						
FITZ	Fitzroy Crossi	40.72	266	P	P	23 04 31.6	+0.3
	2.1nm,0.9s,baz=110,slow=7.8,SNR=3.9						
FITZ				LR	LR	23 20 27.0	
	comp=Z,63nm,19.5s,baz=116,slow=35						
GUMO	Guam	41.36	323	LR	LR	23 20 38.1	
	comp=Z,31nm,21.7s,baz=127,slow=35						
BATI	Baumata	44.60	276	LR	LR	23 23 45.6	
	comp=Z,108nm,18.1s,baz=132,slow=36						
PETK	Petropavlovsk-	74.07	353	LR	LR	23 35 02.2	
	comp=Z,32nm,20.3s,baz=93,slow=31						
SONM	Songino Array	88.09	323	P	P	23 09 41.2	+0.5
	0.3nm,0.4s,baz=134,slow=4.2,SNR=3.1						
NVAR	Mina Array Bea	90.03	49	P	P	23 09 50.7	+0.5
	0.2nm,0.5s,baz=243,slow=8.0,SNR=2.4						
ILAR	Eielson Array	91.69	17	P	P	23 09 55.8	-1.1
	0.3nm,0.6s,baz=227,slow=4.8,SNR=3.6						
DLBC	Dease Lake	93.47	27	LR	LR	23 47 10.6	
	comp=Z,44nm,18.7s,baz=138,slow=32						

IDC 14 23:59:10.9±18.0, 21°.88S×177°.46W, h238km±151km, mb3.1/5, mb1 3.3/5, mb1mx3.1/46, mbtmp3.7/5, Error ellipse: s-maj=114.2km s-min=51.7km az=134.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	37.67	246	P	P	00 06 03.9	+0.3
	2.0nm,0.8s,baz=94,slow=16,SNR=3.3						
ASAR	Alice Springs	44.72	258	P	P	00 07 00.9	-0.1
	0.5nm,0.6s,baz=99,slow=7.8,SNR=7.7						
WRA	Warramunga Arr	44.93	263	P	P	00 07 01.9	-0.7
	0.2nm,0.3s,baz=96,slow=8.0,SNR=22						
FITZ	Fitzroy Crossi	53.36	263	P	P	00 08 06.9	+0.5
	0.8nm,0.9s,baz=149,slow=5.9,SNR=3.3						
ILAR	Eielson Array	89.54	13	P	P	00 11 40.8	+0.1
	0.

TUTA	**Tutak**	**0.96 316**	*i* P	**Pb**	**00 18 55.8**	**-0.8**
TUTA			*i* S	**Sb**	**00 19 08.1**	**-1.1**
TUTA	**Tutak**	**0.96 316**	P	**Pb**	**00 18 55.8**	**-0.8**
TUTA			S	**Sb**	**00 19 08.1**	**-1.1**
AGRB	**Hanur-Agry**	**1.01 328**	PG	**Pb**	**00 18 57.0**	**-0.5**
AGRB	**Hanur-Agry**	**1.01 328**	*e*Pg	**Pb**	**00 18 57.0**	**-0.5**
GURO	**Guroymak-BITLI**	**1.30 263**	PN	**Pn**	**00 19 01.7**	**-0.1**
GURO	**Guroymak-BITLI**	**1.30 263**	*e*Pn	**Pn**	**00 19 01.7**	**-0.1**
EKAR	**Karacoban**	**1.37 294**	*i* P	**Pb**	**00 19 04.0**	**+0.4**
EKAR			*i* S	**Sb**	**00 19 22.3**	**+1.4**
EKAR	**Karacoban**	**1.37 294**	P	**Pb**	**00 19 04.0**	**+0.4**
EKAR			S	**Sb**	**00 19 22.3**	**+1.4**
EATA	**Eleskirt**	**1.47 322**	*i* P	**Pb**	**00 19 05.5**	**+0.2**
EATA			*i* S	**Sb**	**00 19 25.7**	**+1.8**
EATA	**Eleskirt**	**1.47 322**	P	**Pb**	**00 19 05.5**	**+0.2**
EATA			S	**Sb**	**00 19 25.7**	**+1.8**
GNI	**Garni**	**1.65 30**	PN	**Pg**	**00 19 10.7**	**+0.7**
GNI	**Garni**	**1.65 30**	*e*Pn	**Pg**	**00 19 10.7**	**+0.7**
VRTB	**Varto-Mus**	**1.79 285**	PN	**Pn**	**00 19 09.7**	**+1.2**
VRTB	**Varto-Mus**	**1.79 285**	*e*Pn	**Pn**	**00 19 09.7**	**+1.2**

*ISN **15** 00:20:42.4±1.0, 37°.22N×42°.63E, h0km±3km, ML3.3*
*DDA **15** 00:20:43.8, 37°.23N×42°.53E, h17km, Ml3.3*
*CSEM **15** 00:20:44.0±0.2, 37°.22N×42°.55E, h2km, ML3.4, Error ellipse: s-maj=4.0km s-min=3.4km az=39.0*
*ISK **15** 00:20:44.2, 37°.30N×42°.48E, h5km, ML3.4/7*
ISC 15 00:20:44.4±1.2, 37°.25N±0°.04×42°.54E±0°.02, h5km±9km, n66, σ1=14/98, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRT	**Sirnak**	**0.26 343**		PG	**Pg**	**00 20 49.2**	**-0.4**
SIRT				SG	**Sg**	**00 20 52.8**	**-0.3**
SIRT	**Sirnak**	**0.26 343**		*e*Pg	**Pg**	**00 20 49.2**	**-0.4**
SIRT				*e*Sg	**Sg**	**00 20 52.8**	**-0.3**
SIRN	**S¨–rnak**	**0.27 339**		*i* P	**Pg**	**00 20 49.6**	**0.0**
SIRN				*i* S	**Sg**	**00 20 53.0**	**-0.2**
SIRN	**S¨–rnak**	**0.27 339**		P	**Pg**	**00 20 49.6**	**0.0**
SIRN				S	**Sg**	**00 20 53.0**	**-0.2**
SRTM	**Siirt_Merkez**	**0.89 327**		*i* P	**Pg**	**00 21 01.4**	**+0.1**
SRTM				*i* S	**Sg**	**00 21 13.9**	**+0.9**
SRTM	**Siirt_Merkez**	**0.89 327**		P	**Pg**	**00 21 01.5**	**+0.1**
SRTM				S	**Sg**	**00 21 13.9**	**+0.9**
HAKT	**HAKKARI**	**0.98 71**		*i* P	**Pg**	**00 21 03.2**	**0.0**
HAKT				*i* S	**Sb**	**00 21 17.3**	**-0.1**
HAKT	**HAKKARI**	**0.98 71**		P	**Pg**	**00 21 03.2**	**0.0**
HAKT				S	**Sb**	**00 21 17.3**	**-0.1**
GEVA	**Gevas**	**1.14 21**		*i* P	**Pg**	**00 21 05.3**	**-1.0**
GEVA				*i* S	**Sg**	**00 21 19.1**	**-2.0**
GEVA	**Gevas**	**1.14 21**		P	**Pg**	**00 21 05.3**	**-1.0**
GEVA				S	**Sg**	**00 21 19.1**	**-2.0**
BTMN	**Batman**	**1.19 303**		*i* P	**Pg**	**00 21 07.3**	**+0.1**
BTMN				*i* S	**Sn**	**00 21 24.2**	**-0.2**
BTMN	**Batman**	**1.19 303**		P	**Pg**	**00 21 07.3**	**+0.1**
BTMN				S	**Sn**	**00 21 24.2**	**-0.2**
GURO	**Guroymak-BITLI**	**1.36 343**		PN	**Pn**	**00 21 10.0**	**-0.1**
GURO				SN	**Sb**	**00 21 28.5**	**+0.4**
GURO	**Guroymak-BITLI**	**1.36 343**		*e*Pn	**Pn**	**00 21 10.0**	**-0.1**
GURO				*e*Sn	**Sb**	**00 21 28.5**	**+0.4**
SVAN	**Silvan-Diyarba**	**1.39 311**		PN	**Pn**	**00 21 10.3**	**-0.2**
SVAN				SN	**Sn**	**00 21 29.8**	**+0.6**
SVAN	**Silvan-Diyarba**	**1.39 311**		*i* P	**Pn**	**00 21 10.6**	**+0.1**
SVAN				*i* S	**Sn**	**00 21 29.6**	**+0.4**
SVAN	**Silvan-Diyarba**	**1.39 311**		*e*Pn	**Pn**	**00 21 10.3**	**-0.2**
SVAN	**Silvan-Diyarba**	**1.39 311**		P	**Pn**	**00 21 10.6**	**+0.1**
SVAN				S	**Sn**	**00 21 29.6**	**+0.4**
MARD	**Mardin**	**1.40 273**		*i* P	**Pn**	**00 21 09.7**	**-1.0**
MARD				*i* S	**Sb**	**00 21 29.3**	**0.0**
YOVA	**Hakkari_Y¨…kse**	**1.44 76**		*i* P	**Pn**	**00 21 11.0**	**-0.2**
YOVA				*i* S	**Sn**	**00 21 31.0**	**+0.4**
YOVA	**Hakkari_Y¨…kse**	**1.44 76**		P	**Pn**	**00 21 11.0**	**-0.2**
YOVA				S	**Sn**	**00 21 31.0**	**+0.4**
TVAN	**Van**	**1.45 28**		*i* P	**Pb**	**00 21 11.8**	**-0.2**
TVAN				*i* S	**Sg**	**00 21 34.3**	**+3.2**
TVAN	**Van**	**1.45 28**		P	**Pb**	**00 21 11.8**	**-0.2**
TVAN				S	**Sg**	**00 21 34.3**	**+3.2**
VANB	**Van**	**1.50 26**		PN	**Pn**	**00 21 12.2**	**+0.1**
VANB	**Van**	**1.50 26**		*e*Pn	**Pn**	**00 21 12.2**	**+0.1**
ADCV	**BITLIS_Adilcev**	**1.56 5**		*i* P	**Pb**	**00 21 14.0**	**+0.1**
ADCV				*i* S	**Sg**	**00 21 35.5**	**+0.8**
ADCV	**BITLIS_Adilcev**	**1.56 5**		P	**Pb**	**00 21 14.0**	**+0.1**
ADCV				S	**Sg**	**00 21 35.5**	**+0.8**
MAZI	**Mazidag**	**1.68 278**		PN	**Pn**	**00 21 14.7**	**+0.3**
MAZI	**Mazidag**	**1.68 278**		*e*Pn	**Pn**	**00 21 14.7**	**+0.3**
VMUR	**Van-Muradiye**	**1.92 25**		*i* P	**Pb**	**00 21 19.1**	**-0.9**
VMUR				*i* S	**Sb**	**00 21 44.9**	**+0.5**
VMUR	**Van-Muradiye**	**1.92 25**		P	**Pb**	**00 21 19.1**	**-0.9**
VMUR				S	**Sb**	**00 21 44.8**	**+0.5**
DIY	**Diyarbakir**	**1.94 290**		*e*Pn	**Pb**	**00 21 19.9**	**-0.4**
BNGL	**BINGOL**	**2.02 328**		*i* P	**Pb**	**00 21 20.9**	**-0.9**
BNGL				*i* S	**Sn**	**00 21 44.0**	**-1.0**
DYBB	**Diyarbakir**	**2.03 291**		PN	**Pn**	**00 21 19.9**	**+0.7**
DIYA	**Diyarbakir**	**2.03 290**		*i* P	**Pn**	**00 21 17.2**	**-2.1**
DIYA				*i* S	**Sn**	**00 21 44.1**	**-0.9**
DIYA	**Diyarbakir**	**2.03 290**		P	**Pn**	**00 21 17.2**	**-2.1**
DIYA				S	**Sn**	**00 21 44.2**	**-0.9**
EKAR	**Karacoban**	**2.04 350**		*i* P	**Pb**	**00 21 20.8**	**-1.2**
EKAR	**Karacoban**	**2.04 350**		P	**Pb**	**00 21 20.8**	**-1.2**
HANI	**Diyarbakir_Han**	**2.05 305**		*i* P	**Pn**	**00 21 19.1**	**-0.5**
HANI				*i* S	**Sn**	**00 21 46.7**	**+1.1**
HANI	**Diyarbakir_Han**	**2.05 305**		P	**Pn**	**00 21 19.1**	**-0.5**
HANI				S	**Sn**	**00 21 46.7**	**+1.1**
VRTB	**Varto-Mus**	**2.09 336**		PN	**Pn**	**00 21 20.6**	**+0.4**
VRTB	**Varto-Mus**	**2.09 336**		*e*Pn	**Pn**	**00 21 20.6**	**+0.4**
TUTA	**Tutak**	**2.16 6**		*i* S	**Sn**	**00 21 42.8**	**-5.7**
CLDR	**Caldiran**	**2.18 30**		PN	**Pn**	**00 21 22.5**	**+1.0**
CLDR	**Caldiran**	**2.18 30**		*e*Pn	**Pn**	**00 21 22.5**	**+1.0**
BNGB	**Bing¨¶l**	**2.27 320**		PN	**Pn**	**00 21 23.1**	**+0.5**
BINT	**Bingol**	**2.29 316**		*e*Pn	**Pn**	**00 21 23.1**	**+0.2**
AGRB	**Hanur-Agry**	**2.35 9**		PN	**Pn**	**00 21 24.7**	**+0.9**
AGRB	**Hanur-Agry**	**2.35 9**		*e*Pn	**Pn**	**00 21 24.7**	**+0.9**
SVRC	**Sivrice-ELAZID**	**2.79 295**		PN	**Pn**	**00 21 29.8**	**-0.1**
SVRC	**Sivrice-ELAZID**	**2.79 295**		*e*Pn	**Pn**	**00 21 29.8**	**-0.1**
URFA	**Urfa**	**2.97 275**		PN	**Pn**	**00 21 32.4**	**+0.3**
URFA	**Urfa**	**2.97 275**		*e*Pn	**Pn**	**00 21 32.4**	**+0.3**
PTK	**Pertek**	**2.97 304**		PN	**Pn**	**00 21 33.1**	**+0.7**
PTK	**Pertek**	**2.97 304**		*e*Pn	**Pn**	**00 21 33.1**	**+0.7**
GNI	**Garni**	**3.37 30**		PN	**Pn**	**00 21 39.4**	**+1.6**
GNI	**Garni**	**3.37 30**		*e*Pn	**Pn**	**00 21 39.4**	**+1.6**
MALT	**Malatya**	**3.42 289**		PN	**Pn**	**00 21 39.5**	**+1.1**
MALT	**Malatya**	**3.42 289**		*e*Pn	**Pn**	**00 21 39.5**	**+1.1**
BAYT	**Ayd¨–ntepe-Bay**	**3.66 330**		PN	**Pn**	**00 21 42.9**	**+1.2**
BAYT	**Ayd¨–ntepe-Bay**	**3.66 330**		*e*Pn	**Pn**	**00 21 42.9**	**+1.2**
GAZ	**Gaziantep**	**4.25 271**		PN	**Pn**	**00 21 51.7**	**+1.9**
GAZ	**Gaziantep**	**4.25 271**		*e*Pn	**Pn**	**00 21 51.7**	**+1.9**
KMRS	**Kahramanmaras**	**4.50 275**		PN	**Pn**	**00 21 54.6**	**+1.5**
KMRS	**Kahramanmaras**	**4.50 275**		*e*Pn	**Pn**	**00 21 54.6**	**+1.5**
RTB	**Rutbah**	**4.59 204**		*e*Pn	**Pn**	**00 21 55.0**	**+0.6**
	SNR=3.0						
RTB				*e*Sn	**Sn**	**00 22 46.0**	**-2.1**
	SNR=3.0						

*CSEM **15** 00:34:16.2±1.0, 38°.77N×29°.32E, h5km, ML1.5, Error ellipse: s-maj=22.3km s-min=15.0km az=90.0*
*DDA **15** 00:34:20.1, 39°.06N×29°.18E, h7km, Ml2.3*
ISK 15 00:34:20.4, 39°.13N×29°.16E, h5km, ML1.5/2, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHAP	**Saphane-Kutahy**	**0.12 157**		PG	Pg	00 34 23.7	+0.9
SHAP				SG	Sg	00 34 25.4	+1.0
SHAP	**Saphane-Kutahy**	**0.12 157**		*e*Pg	Pg	00 34 23.7	+0.9
SHAP				*e*Sg	Sg	00 34 25.4	+1.0
SMAA	**Simav-Kutahya**	**0.14 259**		PG	Pg	00 34 24.4	+1.1
SMAA	**Simav-Kutahya**	**0.14 259**		*e*Pg	Pg	00 34 24.4	+1.1
SIMA	**Simav-Kutahya**	**0.15 252**		PG	Pg	00 34 24.2	+0.8
SIMA				SG	Sg	00 34 26.2	+0.8
SIMA	**Simav-Kutahya**	**0.15 252**		*e*Pg	Pg	00 34 24.2	+0.8
DEMI	**Demirci**	**0.36 256**		*i* P	Pg	00 34 28.3	+1.0
DEMI				*i* S	Sg	00 34 32.3	+0.2
DEMI	**Demirci**	**0.36 256**		P	Pg	00 34 28.3	+0.9
DEMI				S	Sg	00 34 32.3	+0.2
TVSB	**Tavsanli**	**0.40 36**		PG	Pg	00 34 28.4	+0.3
TVSB	**Tavsanli**	**0.40 36**		*e*Pg	Pg	00 34 28.4	+0.3
DURS	**Dursunbey**	**0.71 312**		*i* P	Pb	00 34 35.0	-0.4
DURS				*i* S	Sb	00 34 47.0	+1.4
DURS	**Dursunbey**	**0.71 312**		P	Pb	00 34 35.0	-0.4
DURS				S	Sb	00 34 47.0	+1.5
KULA	**Kula-Manisa**	**0.73 213**		PG	Pg	00 34 35.0	+0.6
MANT	**Manisa**	**0.79 217**		*i* P	Pg	00 34 35.0	-0.6
MANT				*i* S	Sg	00 34 45.1	-0.8
MANT	**Manisa**	**0.79 217**		P	Pg	00 34 35.0	-0.6
MANT				S	Sg	00 34 45.2	-0.7

*ISCJB **15** 01:03:56.0±0.5, 21°.92S±0°.05×68°.55W±0°.09, h130km±7km, mb3.9/5, Error ellipse: s-maj=14.0km s-min=7.3km az=7.5*
*GUC **15** 01:03:57.5±0.5, 21°.92S×68°.66W, h124km±3km, ML4.1*
*NEIC **15** 01:03:57.0±0.0, 21°.92S×68°.66W, h124km, mb3.9/1, ML4.1(GUC), After GUC.*
*IDC **15** 01:03:58.7±2.8, 21°.90S×68°.26W, h126km±22km, mb3.8/4, mb1 3.6/8, mb1mx3.3/42, mbtmp4.0/8, Error ellipse: s-maj=43.0km s-min=23.2km az=93.0*
ISC 15 01:03:56.8±0.8, 21°.92S±0°.05×68°.56W±0°.09, h125km±9km, n19, σ1=02/27, mb3.9/5, 5C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.65 280**		*e*P	**Pn**	**01 04 16.8**	**+0.3**
PB09				*i* S	**Sn**	**01 04 31.4**	**0.0**
PB06	**IPOC Station P**	**1.23 230**		↑*i* P	**Pn**	**01 04 22.1**	**+0.3**
PB06				*i* S	**Sn**	**01 04 40.4**	**-0.3**
PB06				IAML		01 04 42.5	
	comp=E,3μm,0.2s						
PB01	**IPOC Station P**	**1.23 315**		*e*P	**Pn**	**01 04 21.6**	**-0.1**
PB01				*i* S	**Sn**	**01 04 39.9**	**-0.7**
PB01				IAML		01 04 42.0	
	comp=E,4μm,0.2s						
PB07	**IPOC Station P**	**1.25 278**		↑*i* P	**Pn**	**01 04 22.2**	**+0.2**
PB07				*i* S	**Sn**	**01 04 41.0**	**-0.1**
PB07				IAML		01 04 42.4	
	comp=N,6μm,0.2s						
PB02	**IPOC Station P**	**1.38 295**		↑*i* P	**Pn**	**01 04 23.4**	**0.0**
PB02				*i* S	**Sn**	**01 04 42.9**	**-0.6**
PB02				IAML		01 04 46.7	
	comp=E,4μm,0.1s						
PB04	**IPOC Station P**	**1.53 254**		↑*i* P	**Pn**	**01 04 25.2**	**+0.1**
PB04				*i* S	**Sn**	**01 04 46.1**	**-0.6**
PB04				IAML		01 04 47.6	
	comp=N,3μm,0.1s						
PB15	**IPOC Station P**	**1.54 213**		↑*i* P	**Pn**	**01 04 25.7**	**+0.5**
PB15				*i* S	**Sn**	**01 04 47.3**	**+0.3**
PB08	**IPOC Station P**	**1.85 342**		*e*P	**Pn**	**01 04 30.3**	**+1.1**
PB08				*i* S	**Sn**	**01 04 54.9**	**+1.1**
PB08				IAML		01 04 55.9	
	comp=E,2μm,0.7s						
PB10	**IPOC Station P**	**2.44 229**		*e*P	**Pn**	**01 04 35.8**	**-0.2**
LPAZ	**La Paz**	**5.61 4**		P	**Pn**	**01 05 21.8**	**+3.1**
	comp=E,0.7nm,0.3s,baz=196,slow=6.6,SNR=16						
SIV	**San Ignacio**	**9.21 52**		P	**Pn**	**01 06 04.1**	**-2.6**
	comp=E,1.3nm,0.3s,baz=251,slow=11,SNR=26						
SIV				S	Sn	01 07 39.4	-9.2
	comp=E,0.3nm,0.3s,baz=240,slow=14,SNR=5.1						
CPUP	**Villa Florida**	**11.15 115**		P	**Pn**	**01 06 32.0**	**-0.6**
	comp=E,0.1nm,0.3s,baz=286,slow=15,SNR=3.2						
SAML	**Samuel**	**13.89 23**		*e*Pn	**Pn**	**01 07 07.2**	**-1.1**
PLCA	**Paso Flores**	**18.84 185**		P	**Pn**	**01 08 08.5**	**-0.3**
	comp=E,0.1nm,0.3s,baz=28,slow=14,SNR=4.2						
PTGA	**Pitinga**	**22.66 23**		P	**P**	**01 08 47.3**	**-0.3**
	comp=E,1.1nm,0.3s,baz=202,slow=16,SNR=5.3						
DBIC	**Dimbokro**	**68.54 73**		P	**P**	**01 14 47.2**	**+0.9**
	comp=E,3.4nm,0.6s,baz=246,slow=7.6,SNR=5.3						
KOWA	**Kowa**	**72.88 66**		P	**P**	**01 15 13.2**	**+0.7**
	comp=E,0.8nm,0.4s,baz=243,slow=8.9,SNR=5.2						
RSSD	**Black Hills**	**73.31 334**		*e*P	**P**	**01 15 14.3**	**-0.5**
	comp=E,1.1nm,0.5s						
TORD	**Torodi Ar. Bea**	**77.19 70**		P	**P**	**01 15 37.6**	**+0.3**
	comp=E,1.0nm,0.3s,baz=262,slow=5.3,SNR=40						

*NEIC **15** 01:14:01.5±0.0, 16°.45N×98°.45W, h17km, MD4.0(MEX), After MEX.*
MEX 15 01:14:01.5±0.8, 16°.45N×98°.45W, h17km±999km, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.12 354**		*e*P	Pb	01 14 18.8	-3.7
TLIG				*e*S	Sb	01 14 32.0	-4.8
TLIG	**Tlapa**	**1.12 354**		*e*P	Pb	01 14 18.8	-3.7
TLIG				*e*S	Sb	01 14 32.0	-4.8
VHO	**Vista Hermosa**	**1.75 69**		*e*P	Pn	01 14 27.9	-3.5
VHO				*e*S	Sn	01 14 48.3	-5.1
VHO	**Vista Hermosa**	**1.75 69**		*e*P	Pn	01 14 27.9	-3.5
VHO				*e*S	Sn	01 14 48.3	-5.1
CAIG	**El Cayaco**	**1.85 289**		*e*P	Pn	01 14 29.2	-3.2
CAIG	**El Cayaco**	**1.85 289**		*e*P	Pn	01 14 29.2	-3.2
PLIG	**Platanillo**	**2.18 333**		*e*P	Pn	01 14 36.1	-1.1
PLIG	**Platanillo**	**2.18 333**		*e*P	Pn	01 14 36.1	-1.1
TPIG	**Tehuac#an**	**2.22 28**		*e*P	Pn	01 14 34.5	-3.2
TPIG	**Tehuac#an**	**2.22 28**		*e*P	Pn	01 14 34.5	-3.2
HUIG	**Huatulco**	**2.34 106**		*e*P	Pn	01 14 34.8	-4.5
HUIG	**Huatulco**	**2.34 106**		*e*P	Pn	01 14 34.8	-4.5
YAIG	**Yautepec**	**2.48 346**		*e*P	Pn	01 14 41.7	+0.5
YAIG	**Yautepec**	**2.48 346**		*e*P	Pn	01 14 41.7	+0.5
ARIG	**Puente Sto Nin**	**2.58 315**		*e*P	Pn	01 14 41.9	-0.6
ARIG	**Puente Sto Nin**	**2.58 315**		*e*P	Pn	01 14 41.9	-0.6

*MOS **15** 01:14:05.2±0.8, 5°.74N×126°.47E, h37km, mb6.1/126, MS5.1/67, Error ellipse: s-maj=7.1km s-min=4.1km az=110.4*
*NEIC **15** 01:14:07.5±0.8, 5°.72N×126°.35E, h41km±6km, mb5.8/162, MS5.2/140, MW5.7, MW5.7, MW5.7, Error ellipse: s-maj=4.2km s-min=3.3km az=66.0, Moment Tensor Solution. s38 Moment tensor: Scale 10^{17}Nm; M_{rr}3.57; $M_{\theta\theta}$-0.66; $M_{\phi\phi}$-2.92; $M_{r\theta}$-1.17; $M_{\theta\phi}$-2.15; $M_{r\phi}$2.03; Best double couple: M_o4.50000×10^{17} NP1:$\phi_1$7.00000°, δ59.00000°, λ61.00000°. NP2:$\phi_2$234.00000°, δ41.00000°, λ129.00000°. Principal axes: T 4.6500, Plg64.0000°, Azm227.0000°; N -0.2400, Plg24.0000°, Azm23.0000°; P -4.4200, Plg9.0000°, Azm118.0000°;*
NEIC Felt [IV PIVS] at General Santos and Talagutong; [III PIVS] at Davao, Digos, Malita, Manay and Mati; [II PIVS] at Carmen, Koronadal, Magugpo and Santa Cruz.
*IDC **15** 01:14:07.2±1.1, 5°.75N×126°.48E, h37km±8km, mb5.4/53, mb1 5.4/57, mb1mx5.3/67, mbtmp5.6/57, ML5.4/3, MS4.9/55, Ms1 4.9/55, ms1mx4.9/59 Error ellipse: s-maj=10.5km s-min=7.2km az=77.0*
*MAN **15** 01:14:07.1, 5°.57N×126°.42E, h11km, mb6.3, ML5.4, MS6.0*
*GCMT **15** 01:14:07.5±0.1, 5°.66N×126°.68E, h43km, MW5.7/132, Moment Tensor Solution. s120, c222; s132, c311; Duration: 1=7 Moment tensor: Scale 10^{17}Nm; M_{rr}2.85±.04; $M_{\theta\theta}$0.10±.04; $M_{\phi\phi}$-2.96±.04; $M_{r\theta}$-0.93±.04; $M_{\theta\phi}$-3.04±.03; $M_{r\phi}$1.63±.05; Best double couple: M_o4.55700×10^{17} NP1:$\phi_1$1.00000°, δ61.00000°, λ48.00000°. NP2:$\phi_2$244.00000°, δ49.00000°, λ141.00000°. Principal axes: T 4.1710, Plg53.0000°, Azm219.0000°; N 0.7650, Plg36.0000°, Azm25.0000°; P -4.9420, Plg7.0000°, Azm120.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **15** 01:14:07.0±0.0, 5°.72N×126°.35E, h50km, Moment Tensor Solution. s18 Moment tensor: Scale 10^{17}Nm; M_{rr}2.83; $M_{\theta\theta}$-0.91; $M_{\phi\phi}$-1.92; $M_{r\theta}$-0.77; $M_{\theta\phi}$-2.04; $M_{r\phi}$3.39; Best double couple: M_o4.70000×10^{17} NP1:$\phi_1$6.00000°, δ70.00000°, λ63.00000°. NP2:$\phi_2$243.00000°, δ33.00000°, λ142.00000°. Principal axes: T 5.0500, Plg56.0000°, Azm240.0000°; N -0.7000, Plg25.0000°, Azm16.0000°; P -4.3600, Plg20.0000°, Azm116.0000°;*
*BJI **15** 01:14:09.7, 5°.70N×126°.40E, h64km, mb5.4/86, mB5.6/63, Ms5.4/96, Ms7 5.3/89*
*ISCJB **15** 01:14:09.8±0.2, 5°.66N±0°.01×126°.51E±0°.02, h80km±2km, mb5.7/305, Error ellipse: s-maj=3.1km s-min=2.0km az=168.0*
*DJA **15** 01:14:11.0±0.3, 6°N±2°×12°7E±°, h68km±3km, M6.0/93, mb6.0/93, mB6.2/84, MLv6.4/8, Mw(mB)6.0/84, Mwp5.7/6*
*NEIC **15** 01:14:21.7±0.0, 5°.21N×126°.31E, h45km, Moment Tensor Solution. s62 Moment tensor: Scale 10^{17}Nm; M_{rr}4.13; $M_{\theta\theta}$-0.81; $M_{\phi\phi}$-3.32; $M_{r\theta}$0.29; $M_{\theta\phi}$-2.49; $M_{r\phi}$1.18; Best double couple: M_o4.70000×10^{17} NP1:$\phi_1$218.00000°, δ38.00000°, λ99.00000°. NP2:$\phi_2$26.00000°, δ53.00000°, λ83.00000°. Principal axes: T 4.3100, Plg81.0000°, Azm263.0000°; N 0.6900, Plg6.0000°, Azm30.0000°; P -5.0000, Plg7.0000°, Azm121.0000°;*
ISC 15 01:14:10.4±0.3, 5°.69N±0°.02×126°.46E±0°.03, h68km±2km, h68km:pP-P, n1882, σ1=59/2073, mb5.8/313, 101C-30D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.26 351**		*e*P	**Pn**	**01 14 31.5**	**-0.7**
MATI				*e*S	**Sn**	**01 14 50.7**	**+2.1**
DAV	**Davao City (W)**	**1.63 328**		Pn	**Pn**	**01 14 38.3**	**+1.3**
	4μm,0.3s,baz=116,slow=1.3,SNR=678						
DAV				Sn	**Sn**	**01 15 00.2**	**+3.1**
	5μm,0.3s,baz=272,slow=12,SNR=16						
DAV	**Davao City (W)**	**1.63 328**		P	Pn	01 14 30.2	-6.9
DAV	**Davao City (W)**	**1.63 328**		P	**Pn**	**01 14 38.5**	**+1.4**
	SNR=1195						
DMPH	**Davao City--Mi**	**1.68 326**		↑*e*P	**Pn**	**01 14 39.2**	**+1.5**
DMPH				*e*S	Sn	01 15 08.0	+10
SKMP	**Bagumbayan, Su**	**2.08 294**		*e*P	**Pn**	**01 14 43.9**	**+0.9**
SKMP				*e*S	**Sn**	**01 15 11.9**	**+4.0**
SGSI	**Sangihe**	**2.19 205**		P	**Pn**	**01 14 44.4**	**-0.3**
BUKP	**Musuan**	**2.58 328**		*e*P	**Pn**	**01 14 50.9**	**+1.0**
BUKP				*e*S	**Sn**	**01 15 28.8**	**+8.5**
CTBH	**Cotabato--PC H**	**2.67 305**		↓*e*P	**Pn**	**01 14 52.0**	**+0.8**
CTBH				*i* S	**Sn**	**01 15 20.6**	**-1.9**
CGP	**Cagayan de Oro**	**3.26 328**		↑*e*P	**Pn**	**01 15 00.5**	**+1.3**
CGP				*i* S	**Sn**	**01 15 40.4**	**+3.6**
BUTP	**Butuan**	**3.36 346**		*e*P	**Pn**	**01 15 02.8**	**+2.2**
BUTP				*e*S	Sn	01 15 49.3	+10
PAGZ	**Pagadian**	**3.73 305**		*e*P	**Pn**	**01 15 06.7**	**+1.1**
PAGZ				*e*S	Sn	01 16 08.0	+20
SCPH	**Surigao**	**4.18 347**		↑*e*P	**Pn**	**01 15 15.1**	**+3.4**
ZCP	**Zamboanga City**	**4.53 286**		↑*i* P	**Pn**	**01 15 18.5**	**+2.0**
ZCP				*i* S	**Sn**	**01 16 13.7**	**+5.8**
MSLP	**Maasin**	**4.69 340**		*e*P	**Pn**	**01 15 20.1**	**+1.3**
TBP	**Tagbilaran**	**4.74 327**		*e*P	**Pn**	**01 15 22.1**	**+2.8**
TBP				*i* S	**Sn**	**01 16 20.5**	**+7.5**
SNPH	**Sibulan**	**4.83 319**		↓*i* P	**Pn**	**01 15 22.6**	**+1.8**
TNTI	**Ternate**	**4.97 169**		*e*Pn	**Pn**	**01 15 21.4**	**-1.2**
LLP	**Lapu-Lapu**	**5.22 332**		↑*e*P	**Pn**	**01 15 27.6**	**+1.6**
LLP				*e*S	**Sn**	**01 16 30.9**	**+6.0**
OCLP	**Ormoc**	**5.63 341**		*e*P	**Pn**	**01 15 33.9**	**+2.2**
PLP	**Palo**	**5.63 345**		↓*i* P	**Pn**	**01 15 33.7**	**+2.0**
PLP				*e*S	**Sn**	**01 16 35.3**	**+0.3**
KMSI	**Cibinong**	**5.65 206**		P	**Pn**	**01 15 33.8**	**+1.9**
GUIM	**Jordan**	**6.22 322**		*e*P	**Pn**	**01 15 41.0**	**+1.3**
LBMI	**Labuha**	**6.37 171**		P	**Pn**	**01 15 41.6**	**-0.2**
JAP	**San Jose, Anti**	**6.72 319**		↓*e*P	**Pn**	**01 15 50.0**	**+3.5**
MRSI	**Marisa**	**6.87 221**		P	**Pn**	**01 15 49.5**	**+1.0**
RCP	**Roxas**	**6.89 328**		↑*e*P	**Pn**	**01 15 51.2**	**+2.3**
CNP	**Catarman**	**7.00 345**		*e*P	**Pn**	**01 15 53.4**	**+3.0**
CUYO	**Cuyo Island**	**7.43 314**		*e*P	**Pn**	**01 15 58.4**	**+2.1**
LUWI	**Luwuk**	**7.63 209**		P	**Pn**	**01 16 01.5**	**+2.5**
LUWI	**Luwuk**	**7.63 209**		*e*Pn	**Pn**	**01 16 01.8**	**+2.8**
SANI	**Sanana**	**7.70 184**		P	**Pn**	**01 15 56.6**	**-3.4**
OTRP	**Odiongan**	**7.95 327**		*e*P	**Pn**	**01 16 06.6**	**+3.3**
SIJI	**Sorong**	**8.09 143**		Pn	**Pn**	**01 16 02.3**	**-3.1**
	35nm,0.3s,baz=342,slow=11,SNR=50						
APSI	**Ampana**	**8.13 216**

SSLB eSn Sn 01 22 03.8 +9.1
MTN Manton Dam 18.99 166 P P 01 18 24.5 -2.2
baz=19,SNR=90
MTN Manton Dam 18.99 166 eP P 01 18 24.5 -2.2
comp=Z,529nm,1.0s
GMJI Gumukmas 19.00 223 P Pn 01 18 28.2 0.0
TBJI Tambak Boyo 19.16 230 P Pn 01 18 30.6 +0.5
KDU Kakadu 19.21 162 P P 01 18 27.7 -1.4
baz=19,SNR=69
YHNB Yeheng 19.49 346 eP Pn 01 18 34.0 -0.1
comp=Z,234nm,1.2s
TATO Taipei 19.76 347 eP P 01 18 33.0 -2.1
comp=Z,111nm,0.8s
GUMO Guam 19.76 65 P P 01 18 33.1 -2.1
comp=Z,5.2nm,0.3s,baz=207,slow=6.6,SNR=7.5
GUMO LR LR 01 25 06.2
comp=Z,6μm,21.5s,baz=236,slow=33
GUMO Guam 19.76 65 eP P 01 18 34.3 -0.9
comp=Z,582nm,1.4s
GUMO Guam 19.76 65 eP P 01 18 34.3 -0.9
GUMO pmax pmax
comp=Z,582nm,1.4s
NGJI Ngawi 19.80 229 P Pn 01 18 37.8 +0.1
PWJI Pagerwojo 19.98 227 P P 01 18 38.1 +0.6
HKC Hong Kong Obse 20.34 325 ⇑P Pn 01 18 44.0 0.0
SMRI Semarang 20.39 232 P Pn 01 18 44.6 0.0
SMRI Semarang 20.39 232 eP Pn 01 18 44.1 -0.5
comp=Z,2μm,1.4s
SMRI LR LR
comp=Z,8μm,20.0s
WOJI Wonogiri, Jawa 20.51 229 P P 01 18 44.5 +1.2
MCO Taipa Grande 20.55 324 P Pn 01 18 46.0 -0.5
PCJI Pacitan 20.55 228 P P 01 18 44.9 +1.1
QZH Quanzhou 20.58 339 ⇓iP Pn 01 18 47.3 +0.6
QZH pP pP 01 19 02.3 +4.2
QZH S S 01 22 29.6 -0.7
QZH pmax pmax
comp=Z,250nm,1.3s
QZH pmax pmax
comp=Z,2μm,11.2s
QZH LR LR
comp=Z,4μm,19.0s
QZH LR LR
comp=Z,3μm,20.6s
QZH LR LR
comp=Z,6μm,18.2s
UGM Wanagama 20.86 230 P P 01 18 48.3 +1.2
UGM Wanagama 20.86 230 eP P 01 18 47.2 +0.1
comp=Z,2μm,1.2s
UGM LR LR
comp=Z,4μm,22.0s
QIZ Qiongzhong 20.93 311 P Pn 01 18 49.4 -1.6
QIZ pP pP 01 19 03.4 +1.4
QIZ S S 01 22 39.0 +1.6
QIZ pmax pmax
comp=Z,160nm,0.8s
QIZ LR LR
comp=Z,6μm,15.7s
QIZ LR LR
comp=Z,5μm,14.7s
QIZ LR LR
comp=Z,7μm,23.0s
QIZ Qiongzhong 20.93 311 eP P 01 18 46.3 -1.5
comp=Z,348nm,1.2s
QIZ LR LR
comp=Z,6μm,20.0s
JOW Kunigami 21.10 5 P P 01 18 48.9 -0.6
comp=Z,59nm,1.0s,baz=292,slow=5.9,SNR=5.8
JOW LR LR 01 27 57.0
comp=Z,2μm,18.6s,baz=160,slow=39
JOW Kunigami 21.10 5 eP P 01 18 52.3 +2.8
comp=Z,499nm,1.3s
KNRA Kununurra 21.35 174 P P 01 18 52.2 0.0
baz=21,SNR=504
GZH Guangzhou 21.43 325 P P 01 18 56.8 +3.8
GZH LR LR
comp=Z,9μm,17.7s
GZH LR LR
comp=Z,6μm,17.1s
PPBI Pangkal Pinang 21.74 250 P P 01 18 57.6 +1.1
KPJI Karang Pucung 21.75 234 P P 01 18 57.5 +0.9
JCJI Jatiwangi 21.82 237 P P 01 19 00.7 +3.4
MANU Manus Island 22.25 110 eP P 01 19 03.4 +1.4
comp=Z,361nm,1.1s
TPRI Tanjung Pinang 22.40 259 P P 01 19 04.8 +1.2
CMJI Cimerak 22.40 234 P P 01 19 01.3 -2.3
LEM Lembang 22.54 237 P P 01 19 05.4 +0.1
comp=Z,1μm,0.9s,baz=43,slow=7.3,SNR=94
LEM LR LR 01 27 59.7
comp=Z,3μm,21.8s,baz=41,slow=37
DSRI Dabo 22.69 255 P P 01 19 08.3 +1.6
CISI Cisompet, Garu 22.78 235 P P 01 19 06.6 -1.1
CISI Cisompet, Garu 22.78 235 eP P 01 19 06.7 -1.0
comp=Z,1μm,1.0s
CISI LR LR
comp=Z,5μm,22.0s
TNG Tangerang 23.02 240 P pP 01 19 12.3 -12
TNG P P 01 19 12.2 +2.1
DBJI Dramaga 23.13 239 P P 01 19 11.1 0.0
PMBI Palembang 23.29 249 P P 01 19 15.1 +2.4
SBJI Serang 23.44 240 P P 01 19 14.9 +0.9
SKJI Sukabumi 23.53 238 P P 01 19 14.8 0.0
FITZ Fitzroy Crossi 23.65 182 P P 01 19 15.8 -0.1
comp=Z,102nm,0.5s,baz=19,slow=8.6,SNR=284
FITZ Fitzroy Crossi 23.65 182 P P 01 19 14.9 -0.9
baz=24,SNR=239
FITZ Fitzroy Crossi 23.65 182 eP P 01 19 14.9 -0.9
FITZ eS S 01 23 28.9 +3.2
BLSI Bandar Lampung 23.86 243 P P 01 19 19.2 +1.3
KLI Kotabumi 23.98 244 P P 01 19 19.6 +0.6
KLI Kotabumi 23.98 244 P P 01 19 19.5 +0.6
KLI pmax pmax
comp=Z,2μm,0.8s
CGJI Cibinong 24.06 240 P P 01 19 18.9 -0.7
MDSI Maura Dua 24.44 246 P P 01 19 23.5 +0.4
KASI Kota Agung 24.59 243 P P 01 19 25.0 +0.5
SKNT Sakolnakorn 24.69 299 P P 01 19 24.3 -1.1
comp=Z,161nm,0.9s,comp=Z,3μm
LWLI Liwa 24.77 245 P P 01 19 27.2 +1.0
CHBT CHBT 24.81 288 P P 01 19 28.6 +2.1
comp=Z,226nm,0.9s,comp=Z,99μm
RGRI Rengat 24.82 257 P P 01 19 28.8 +2.2
IPM Ipoh 25.36 268 eP P 01 19 31.9 +0.4
IPM epP P 01 19 32.6 +1.1
IPM ePcP PcP 01 23 04.0 +1.1
IPM LR LR
comp=Z,3μm,19.0s
SRAK Srakaew 25.41 291 P P 01 19 27.7 -4.3
PMG Port Moresby 25.50 126 P P 01 19 32.2 -0.6
comp=Z,14nm,0.4s,baz=276,slow=9.2,SNR=4.7
PMG LR LR 01 30 19.6
comp=Z,2μm,22.0s,baz=320,slow=38
PMG Port Moresby 25.50 126 eP P 01 19 31.3 -1.5
comp=Z,79nm,0.9s
PMG Port Moresby 25.50 126 eP P 01 19 31.3 -1.5
PMG pmax pmax
comp=Z,79nm,0.9s
COEN Coen 25.62 140 P P 01 19 32.8 -1.0
baz=26,SNR=85
COEN Coen 25.62 140 eP P 01 19 32.9 -1.0
comp=Z,139nm,0.9s
KULM Kulim 25.69 270 eP P 01 19 34.7 +0.1
comp=Z,508nm,1.4s
KULM LR LR
comp=Z,3μm,22.0s
MASI Maura Aman, Be 25.73 251 P P 01 19 36.2 +1.3
SSE Sheshan 25.75 350 P P 01 19 36.8 +2.0
SSE S S 01 24 04.4 +5.3
SSE pmax pmax
comp=Z,44nm,1.3s
SSE pmax pmax
comp=Z,550nm,6.1s
SSE LR LR
comp=Z,2μm,21.9s
SSE LR LR
comp=Z,1μm,21.4s
NONG Nongkai 25.87 300 P P 01 19 35.7 -0.4
comp=Z,115nm,0.9s,comp=Z,2μm
BKNI Bangkinang 25.93 259 P P 01 19 37.0 +0.3
BKNI Bangkinang 25.93 259 eP P 01 19 37.6 +0.9
comp=Z,772nm,0.9s
BKNI LR LR
comp=Z,3μm,19.0s
CBIJ Chichi jima 26.03 33 eP P 01 19 34.8 -2.6
comp=Z,409nm,0.7s

JCJ Chichijima 26.03 33 P P 01 19 34.9 -2.6
comp=Z,288nm,0.4s,baz=261,slow=8.2,SNR=37
JCJ LR LR 01 28 37.9
comp=Z,3μm,21.8s,baz=248,slow=34
KRJI Kerinci 26.13 253 P P 01 19 39.5 +0.9
WRAB Tennant Creek 26.62 163 eP P 01 19 41.9 -0.9
comp=Z,373nm,0.9s
WRAB LR LR
comp=Z,4μm,22.0s
WRAB Tennant Creek 26.62 163 c iP P 01 19 41.9 -0.9
WRAB pmax pmax
comp=Z,86nm,0.7s
WRA Warramunga Arr 26.62 163 P P 01 19 41.9 -1.0
comp=Z,93nm,0.7s,baz=342,slow=10,SNR=253
WRA S S 01 24 12.1 -1.0
comp=Z,16nm,1.0s,baz=332,slow=16,SNR=7.3
WRA ScP ScP 01 26 42.3 +2.4
comp=Z,14nm,0.6s,baz=342,slow=3.1,SNR=9.0
WRA LR LR 01 31 50.5
comp=Z,3μm,20.7s,baz=340,slow=40
WB2 Warramunga Arr 26.63 163 eP P 01 19 41.9 -1.0
comp=Z,381nm,1.0s
TRTT Trang 26.66 276 P P 01 19 43.2 -0.1
comp=Z,50nm,1.2s,comp=Z,1μm
PDSI Padang 26.77 257 P P 01 19 44.4 +0.1
NJ2 Nanjing 27.18 346 eP P 01 19 49.5 +1.9
NJ2 pP pP 01 20 03.9 +0.1
NJ2 sP sP 01 20 12.8 +1.0
NJ2 S S 01 24 23.8 +2.2
NJ2 sS sS 01 24 51.8 +2.5
NJ2 pmax pmax
comp=Z,66nm,1.2s
NJ2 pmax pmax
comp=Z,830nm,4.3s
NJ2 LR LR
comp=Z,2μm,15.7s
NJ2 LR LR
comp=Z,3μm,15.9s
NJ2 LR LR
comp=Z,3μm,19.5s
PBKT Sadao Pong 27.21 295 P P 01 19 47.4 -0.7
comp=Z,233nm,0.9s,comp=Z,2μm
PBKT Sadao Pong 27.21 295 eP P 01 19 47.4 -0.7
comp=Z,147nm,0.8s
WHN Wuhan 27.22 337 ⇓P P 01 19 50.3 +2.2
WHN S S 01 24 22.8 +0.4
WHN pmax pmax
comp=Z,98nm,1.0s
WHN LR LR
comp=Z,14μm,18.8s
WHN LR LR
comp=Z,10μm,18.8s
WHN LR LR
comp=Z,18μm,21.7s
MNSI Mandailing Nat 27.26 261 P P 01 19 48.6 -0.1
PHET Kaeng Krachan 27.41 287 P P 01 19 50.9 +0.9
comp=Z,70nm,0.8s,comp=Z,560nm
MBWA Marble Bar 27.49 194 eP P 01 19 49.9 -0.6
comp=Z,2μm,1.0s
MBWA ePcP PcP 01 23 06.7 -0.9
MBWA eScP ScP 01 26 45.1 +2.6
JNU Nakatsue 27.60 8 P P 01 19 49.3 -2.3
comp=Z,21nm,0.8s,baz=196,slow=5.4,SNR=9.4
JNU LR LR 01 31 17.2
comp=Z,1μm,20.1s,baz=142,slow=37
JNU Nakatsue 27.60 8 eP P 01 19 51.1 -0.5
PSI Prapat 27.61 265 P P 01 19 52.2 +0.3
comp=Z,240nm,0.9s,baz=4.2,slow=0.5,SNR=143
PSI PcP PcP 01 23 08.4 +0.2
comp=Z,83nm,1.0s,baz=180,slow=2.5,SNR=7.7
PSI ScP ScP 01 26 46.4 +3.2
comp=Z,66nm,1.0s,baz=180,slow=2.0,SNR=17
PSI LR LR 01 33 22.8
comp=Z,1μm,19.8s,baz=90,slow=42
PSI Prapat 27.61 265 eP P 01 19 52.1 +0.2
comp=Z,278nm,0.9s
PSI ePcP PcP 01 23 08.8 +0.6
PSI ScP ScP 01 26 46.4 +3.2
PPSI Pulau Pagai 27.72 253 P P 01 19 59.2 +6.4
TSI Tuntungan 27.89 267 P P 01 19 58.0 +3.7
PHIT Phitsanulok 27.92 296 P P 01 19 55.6 +1.1
comp=Z,176nm,1.0s
GYA Guiyang 27.99 320 ⇑iP P 01 19 55.6 +0.4
GYA pP pP 01 20 15.0 +3.6
GYA sP sP 01 20 23.4 +4.1
GYA PP PnPn 01 20 50.3 +4.5
GYA PcP PcP 01 23 11.0 +2.0
GYA S S 01 24 36.8 +1.9
GYA SS SnSn 01 26 03.6 +7.9
GYA pmax pmax
comp=Z,50nm,1.0s
GYA pmax pmax
comp=Z,160nm,5.4s
GYA LR LR
comp=Z,3μm,16.5s
GYA LR LR
comp=Z,2μm,16.0s
GYA LR LR
comp=Z,3μm,16.6s
PKDT Phuket 28.01 276 P P 01 19 55.4 +0.1
comp=Z,82nm,0.8s,comp=Z,1μm
SISI Saibi 28.21 257 P P 01 19 56.8 -0.3
SRDT SRDT 28.23 290 P P 01 19 57.4 +0.1
comp=Z,149nm,0.9s,comp=Z,3μm
NANT Nan 28.29 300 P P 01 19 58.0 +0.2
comp=Z,53nm,0.6s,comp=Z,479nm
KCSI Kotacane, Aceh 28.67 267 P P 01 20 00.8 -0.5
QIS Mount Isa 29.11 154 P P 01 20 04.8 -0.2
baz=29,SNR=63
LAMP Lampang 29.11 298 P P 01 20 05.8 +0.7
comp=Z,44nm,0.9s,comp=Z,325nm
GSI Gunungsitoli 29.15 262 P P 01 20 04.2 -1.3
GSI Gunungsitoli 29.15 262 eP P 01 20 04.9 -0.6
comp=Z,871nm,0.9s
GSI LR LR
comp=Z,3μm,22.0s
ENH Enshi 29.21 329 eP P 01 20 05.8 -0.1
comp=Z,130nm,0.9s
ENH LR LR
comp=Z,9μm,22.0s
LHMI Lhok Sumawe 29.38 271 P P 01 20 10.0 +2.5
LHMI Lhok Sumawe 29.38 271 eP P 01 20 09.8 +2.2
comp=Z,146nm,0.7s
LHMI LR LR
comp=Z,4μm,21.0s
MTSU Mount Surprise 29.51 144 P P 01 20 08.4 -0.2
baz=30,SNR=39
CM01 Chiang Mai Arr 29.66 298 eP P 01 20 10.0 0.0
CM01 ePcP PcP 01 23 14.7 +1.6
CM31 Chiang Mai Arr 29.69 298 eP P 01 20 11.4 +1.1
CMAR Chiang Mai Arr 29.69 298 P P 01 20 10.8 +0.5
comp=Z,57nm,0.7s,baz=118,slow=7.8,SNR=61
CMAR PcP PcP 01 23 14.9 +1.7
comp=Z,35nm,1.0s,baz=152,slow=1.1,SNR=13
CMAR ScP ScP 01 26 52.4 +2.9
comp=Z,109nm,1.1s,baz=125,slow=1.1,SNR=33
CMAR LR LR 01 32 22.4
comp=Z,3μm,18.9s,baz=118,slow=37
CHTO Chiang Mai 29.82 298 P P 01 20 11.5 +0.1
comp=Z,645nm,0.8s,comp=Z,6μm
CHTO Chiang Mai 29.82 298 eP P 01 20 11.1 -0.3
comp=Z,106nm,0.6s
CHTO ePcP PcP 01 23 14.4 +0.9
CHTO eScP ScP 01 26 52.4 +2.4
CHTO LR LR
comp=Z,3μm,21.0s
CHTO Chiang Mai 29.82 298 P P 01 20 12.0 +0.6
SNR=17
CHTO Chiang Mai 29.82 298 eP P 01 20 11.1 -0.3
CHTO e 01 23 14.4
CHTO pmax pmax
comp=Z,106nm,0.6s
CHTO MLR MLR
comp=Z,3μm,21.0s
KMI Kunming 29.83 313 P P 01 20 13.5 +1.8
KMI pP pP 01 20 27.9 -0.1
KMI sP sP 01 20 38.3 +2.4
KMI PP PnPn 01 21 14.5 +4.2
KMI S S 01 25 05.3 +1.2
KMI SS ScP 01 26 45.6 -4.6
KMI pmax pmax
comp=Z,130nm,0.8s
KMI pmax pmax
comp=Z,740nm,8.6s
KMI LR LR
comp=Z,3μm,21.6s

KMI LR LR
comp=Z,4μm,25.4s
KMI LR LR
comp=Z,7μm,26.2s
MLSI Meulaboh, Aceh 29.97 269 P P 01 20 12.2 -0.6
JHJ Hachijo jima 2 29.98 23 LR LR 01 30 35.8
comp=Z,4μm,22.0s,baz=233,slow=33
AS31 Alice Springs 30.07 166 eP P 01 20 13.0 -0.6
comp=Z,30nm,0.8s
ASAR Alice Springs 30.07 166 P P 01 20 13.1 -0.5
comp=Z,40nm,0.5s,baz=350,slow=7.0,SNR=351
ASAR PcP PcP 01 23 14.2 +0.1
comp=Z,36nm,0.7s,baz=348,slow=2.4,SNR=8.2
ASAR S S 01 25 07.8 +0.5
comp=Z,13nm,1.0s,baz=343,slow=15,SNR=4.2
ASAR ScP ScP 01 26 53.0 +2.3
comp=Z,9.0nm,0.8s,baz=342,slow=3.1,SNR=6.1
ASAR LR LR 01 33 46.1
comp=Z,2μm,21.3s,baz=337,slow=39
ASAR Alice Springs 30.07 166 P P 01 20 13.1 -0.5
ASAR 01 23 14.2
ASAR S S 01 25 07.8 +0.5
ASAR 01 26 53.0
ASAR pmax pmax
comp=Z,39nm,0.5s
ASAR smax smax
comp=N,13nm,1.0s
ASAR MLR MLR
comp=Z,2μm,21.3s
AS01 Alice Springs 30.08 166 eP P 01 20 11.9 -1.7
CMAI Chiengmai2 30.18 300 P P 01 20 15.7 +1.0
comp=Z,818nm,0.8s,comp=Z,15μm
TJN Taejon 30.55 1 i P P 01 20 18.0 +0.4
GIRL Giralia 30.59 203 P P 01 20 19.3 +1.2
baz=31,SNR=22
WRKA Warakurna 30.59 177 P P 01 20 17.9 -0.2
baz=31,SNR=52
BSI Banda Aceh 31.01 271 P P 01 20 21.1 -0.9
INU Inuyama 31.08 17 eP P 01 20 20.3 -2.0
INU LR LR
comp=Z,4μm,22.0s
TIA Tai'an 31.56 345 P P 01 20 27.8 +1.3
TIA S S 01 25 32.1 +1.7
TIA pmax pmax
comp=Z,14nm,0.9s
TIA LR LR
comp=Z,1μm,21.0s
TIA LR LR
comp=Z,780nm,13.7s
TIA LR LR
comp=Z,2μm,18.8s
KS15 Wonju Array Si 31.63 2 eP P 01 20 30.4 +3.4
KSAR Wonju Array Be 31.63 2 P P 01 20 26.7 -0.4
KSAR PcP PcP 01 23 18.6 +0.6
KSAR ScP ScP 01 26 58.7 +3.2
KSAR Wonju Array Be 31.63 2 P P 01 20 26.7 -0.4
KSAR 01 23 18.6
KSRS Korea Array 31.64 2 P P 01 20 26.7 -0.5
comp=Z,8.4nm,0.6s,baz=179,slow=10,SNR=16
KSRS PcP PcP 01 23 18.6 +0.6
comp=Z,8.9nm,0.6s,baz=181,slow=2.4,SNR=12
KSRS ScP ScP 01 26 58.7 +3.1
comp=Z,4.4nm,0.8s,baz=199,slow=4.6,SNR=6.5
KSRS LR LR 01 36 02.7
comp=Z,2μm,18.2s,baz=182,slow=42
INCN Inchon 31.65 0 PFAKE 01 20 40.0 +13
INCN LR LR
comp=Z,6μm,22.0s
KS01 Wonju Array Si 31.67 2 eP P 01 20 28.9 +1.5
KS01 ePcP PcP 01 23 18.8 +0.8
CTA Charters Tower 32.17 143 P P 01 20 32.7 +0.6
comp=Z,43nm,0.7s,baz=324,slow=11,SNR=55
CTA PcP PcP 01 23 21.0 +1.3
comp=Z,31nm,1.1s,baz=195,slow=2.2,SNR=3.1
CTA ScP ScP 01 27 00.7 +3.0
comp=Z,9.9nm,0.8s,baz=296,slow=6.9,SNR=3.8
CTA LR LR 01 35 11.6
comp=Z,2μm,18.9s,baz=323,slow=39
CTA Charters Tower 32.17 143 P P 01 20 32.7 +0.6
baz=32
CTAO Charters Tower 32.17 143 eP P 01 20 32.6 +0.6
comp=Z,191nm,1.4s
CTAO eScP ScP 01 27 00.6 +2.9
CTAO LR LR
comp=Z,3μm,19.0s
CTAO Charters Tower 32.17 143 eP P 01 20 32.6 +0.6
CTAO pmax pmax
comp=Z,191nm,1.4s
CTAO MLR MLR
comp=Z,3μm,19.0s
MJAR Matsushiro Arr 32.54 18 P P 01 20 31.8 -3.4
comp=Z,5.5nm,0.7s,baz=195,slow=9.0,SNR=11
MJAR PcP PcP 01 23 21.5 +1.0
comp=Z,8.5nm,0.6s,baz=186,slow=3.1,SNR=4.2
MJAR ScP ScP 01 27 02.2 +3.5
comp=Z,14nm,1.1s,baz=215,slow=4.8,SNR=12
MJAR LR LR 01 32 06.6
comp=Z,4μm,21.6s,baz=205,slow=33
MAJO Matsushiro 32.54 18 eP P 01 20 34.0 -1.2
MAJO ePcP PcP 01 23 20.9 +0.4
MAJO eScP ScP 01 27 01.5 +2.8
MAJO LR LR
comp=Z,4μm,19.0s
MAJO Matsushiro 32.54 18 i P P 01 20 35.9 +0.8
MAJO pmax pmax
comp=Z,13nm,0.9s
MAT Matsushiro 32.54 18 P P 01 20 32.2 -2.9
MAT S S 01 25 38.7 -7.0
MJB9 Matsu-Tunnel 32.54 18 eP P 01 20 36.2 +1.0
comp=Z,42nm,1.0s
XAN Xi'an 32.56 332 P P 01 20 34.5 -0.9
XAN pP pP 01 20 54.3 +2.6
XAN sP sP 01 21 03.8 +4.2
XAN PcP PcP 01 23 21.1 +0.5
XAN S S 01 25 43.9 -2.2
XAN sS sS 01 26 12.3 -1.8
XAN ScP ScP 01 27 02.9 +4.1
XAN ScS ScS 01 31 00.1 +1.6
XAN pmax pmax
comp=Z,98nm,0.8s
XAN pmax pmax
comp=Z,710nm,3.5s
XAN LR LR
comp=Z,6μm,24.4s
XAN LR LR
comp=Z,3μm,26.0s
XAN LR LR
comp=Z,9μm,25.0s
CD2 Chengdu 32.92 322 P P 01 20 38.4 -0.2
CD2 PP PP 01 21 53.3 -0.9
CD2 PcP PcP 01 23 21.8 +0.1
CD2 S S 01 25 51.0 -0.9
CD2 pmax pmax
comp=Z,80nm,0.5s
CD2 pmax pmax
comp=Z,450nm,3.9s
CD2 LR LR
comp=Z,8μm,20.4s
CD2 LR LR
comp=Z,8μm,20.4s
MEEK Meekatharra 33.02 193 P P 01 20 39.1 -0.4
baz=33,SNR=90
DL2 Dalian 33.35 353 P P 01 20 43.5 +1.4
DL2 S S 01 26 00.5 +2.3
DL2 pmax pmax
comp=Z,280nm,0.7s
DL2 pmax pmax
comp=Z,840nm,5.7s
DL2 LR LR
comp=Z,1μm,14.3s
DL2 LR LR
comp=Z,4μm,17.0s
DL2 LR LR
comp=Z,4μm,22.5s
PBA Port Blair 33.83 282 PFAKE 01 21 00.0 +13
PBA LR LR
comp=Z,5μm,18.0s
TIY Taiyuan 34.34 340 eP P 01 20 52.8 +1.9
TIY S S 01 26 14.8 +1.1
TIY pmax pmax
comp=Z,60nm,0.9s
TIY LR LR
comp=Z,1μm,11.2s
TIY LR LR
comp=Z,1μm,11.8s

TIY				LR	LR	
	comp=Z,4μm,22.4s					
COCO	**West Island**	**34.40**	**239**	PFAKE		01 21 00.0 +8.5
COCO				LR	LR	
	comp=Z,2μm,19.0s					
BJT	**Baijiatuau**	**35.41**	**346**	*e*P	**P**	**01 21 00.1 +0.1**
BJT				*e*PcP	**PcP**	**01 23 28.7 +0.2**
BJT				*e*ScP	**ScP**	**01 27 11.7 +3.0**
BJT				LR	LR	
	comp=Z,4μm,20.0s					
BJT	**Baijiatuau**	**35.41**	**346**	*e*P	**P**	**01 21 00.1 +0.1**
BJT				*e*		01 23 28.7
BJT				MLR	MLR	
	comp=Z,4μm,20.0s					
BJI	**Beijing**	**35.43**	**346**	⇑*i*P	**P**	**01 21 00.9 +0.8**
BJI				sP	**sP**	**01 21 25.6 +1.2**
BJI				PcP	**PcP**	**01 23 29.9 +1.3**
BJI				S	**S**	**01 26 36.0 +5.8**
BJI				sS	**sS**	**01 26 55.3 -3.0**
BJI				pmax	pmax	
	comp=Z,320nm,0.9s					
BJI				pmax	pmax	
	comp=Z,1μm,3.6s					
BJI				LR	LR	
	comp=Z,4μm,19.6s					
BJI				LR	LR	
	comp=Z,3μm,21.0s					
BJI				LR	LR	
	comp=Z,5μm,21.1s					
MORW	**Morawa**	**35.98**	**196**	P	**P**	**01 21 04.7 -0.2**
	baz=36,SNR=78					
SNY	**Shenyang**	**36.08**	**356**	⇑P	**P**	**01 21 07.5 +1.9**
SNY				pP	**pP**	**01 21 24.5 +2.4**
SNY				S	**S**	**01 26 41.4 +1.4**
SNY				sS	**sS**	**01 27 05.9 -2.3**
SNY				pmax	pmax	
	comp=Z,100nm,1.0s					
SNY				LR	LR	
	comp=Z,3μm,20.3s					
SNY				LR	LR	
	comp=Z,2μm,15.3s					
SNY				LR	LR	
	comp=Z,6μm,20.3s					
FORT	**Forrest**	**36.29**	**178**	P	**P**	**01 21 07.5 -0.1**
	baz=36,SNR=68					
FORT	**Forrest**	**36.29**	**178**	*e*P	**P**	**01 21 07.5 -0.1**
	comp=Z,380nm,1.0s					
QLP	**Quilpie**	**36.41**	**153**	P	**P**	**01 21 08.0 -0.6**
	baz=36,SNR=20					
HNR	**Honiara**	**36.60**	**114**	LR	LR	01 34 41.0
	comp=Z,1μm,21.8s,baz=293,slow=34					
HNR	**Honiara**	**36.60**	**114**	PFAKE		01 21 20.0 +10
HNR				LR	LR	
	comp=Z,192μm,19.0s					
LZH	**Lanzhou**	**36.69**	**329**	⇑P	**P**	**01 21 11.8 +0.6**
LZH				pP	pP	01 21 27.9 +0.2
LZH				sP	sP	01 21 39.3 +3.7
LZH				PP	**PnPn**	**01 22 39.3 +2.8**
LZH				S	**S**	**01 26 50.3 +0.3**
LZH				sS	sS	01 27 22.0 +3.8
LZH				SS	**SnSn**	**01 29 19.0 -7.6**
LZH				pmax	pmax	
	comp=Z,170nm,1.5s					
LZH				pmax	pmax	
	comp=Z,1μm,4.9s					
LZH				LR	LR	
	comp=Z,10μm,17.5s					
LZH				LR	LR	
	comp=Z,13μm,17.1s					
LZH				LR	LR	
	comp=Z,20μm,18.9s					
MSHR	**Mys Shultsa**	**36.97**	**6**	*ce*P	**P**	**01 21 12.9 -0.3**
KMBL	**Kambalda**	**37.11**	**186**	P	**P**	**01 21 14.4 -0.1**
	baz=37,SNR=131					
BLDU	**Balidu**	**37.29**	**194**	P	**P**	**01 21 15.7 -0.3**
	baz=38,SNR=153					
HHC	**Hu-ho-hao-te**	**37.47**	**341**	*e*P	**P**	**01 21 18.0 +0.4**
HHC				S	**S**	**01 27 05.1 +3.6**
HHC				SS	**SnSn**	**01 29 38.6 -6.4**
HHC				ScS	**ScS**	**01 31 25.1 +0.3**
HHC				pmax	pmax	
	comp=Z,50nm,0.9s					
HHC				LR	LR	
	comp=Z,4μm,15.6s					
HHC				LR	LR	
	comp=Z,4μm,14.7s					
HHC				LR	LR	
	comp=Z,4μm,18.2s					
BRDH	**Bariadhala**	**37.59**	**300**	P	**P**	**01 21 19.9 +1.1**
	comp=Z,530nm,0.6s,baz=85,slow=8.3,SNR=21					
BRDH				PcP	**PcP**	**01 23 37.6 +2.1**
	comp=Z,140nm,0.4s,baz=78,slow=7.5,SNR=4.8					
BRDH				LR	LR	01 38 22.5
	comp=Z,3μm,19.3s,baz=124,slow=39					
BTO	**Baotou**	**37.76**	**339**	*e*P	**P**	**01 21 22.3 +2.2**
CN2	**Changchun**	**37.97**	**359**	⇓P	**P**	**01 21 23.1 +1.5**
CN2				*ep*P	pP	01 21 41.0 +2.8
CN2				*e*S	**S**	**01 27 10.8 +2.0**
CN2				pmax	pmax	
	comp=Z,50nm,1.0s					
CN2				pmax	pmax	
	comp=Z,300nm,6.0s					
CN2				LR	LR	
	comp=Z,2μm,17.0s					
CN2				LR	LR	
	comp=Z,3μm,17.0s					
CN2				LR	LR	
	comp=Z,3μm,19.0s					
KLBR	**Kellerberrin**	**37.99**	**192**	P	**P**	**01 21 21.9 -0.1**
	baz=38,SNR=164					
SHL	**Shillong**	**38.52**	**305**	*e*P	**P**	**01 21 28.0 +1.2**
SHL				*e*S	**ScS**	**01 31 30.0 -1.7**
SHL	**Shillong**	**38.52**	**305**	*e*P	**P**	**01 21 27.0 +0.2**
	comp=Z,246nm,0.6s					
SHL				*e*S	**S**	**01 27 18.4 +0.3**
SHL				LR	LR	
	comp=Z,3μm,20.0s					
SHL	**Shillong**	**38.52**	**305**	*e*P	**P**	**01 21 27.0 +0.2**
SHL				*e*S	**S**	**01 27 18.4 +0.3**
SHL				pmax	pmax	
	comp=Z,246nm,0.6s					
SHL				MLR	MLR	
	comp=Z,3μm,20.0s					
RMQ	**Roma**	**38.60**	**147**	P	**P**	**01 21 26.6 -0.6**
	baz=39,SNR=11					
USRK	**Ussuriysk Ar.**	**38.66**	**6**	P	**P**	**01 21 26.2 -1.2**
	comp=Z,12nm,0.5s,baz=180,slow=6.4,SNR=25					
USRK				S	**S**	**01 27 20.3 +1.1**
	comp=Z,1.5nm,0.7s,baz=188,slow=12,SNR=4.4					
MUN	**Mundaring**	**38.71**	**194**	P	**P**	**01 21 28.2 +0.2**
	baz=39,SNR=64					
MDJ	**Mudanjiang**	**38.87**	**4**	P	**P**	**01 21 26.9 -2.3**
MDJ				PP	**PnPn**	**01 23 04.1 +1.8**
MDJ				S	**S**	**01 27 19.3 -3.0**
MDJ				ScS	**ScS**	**01 31 30.6 -1.9**
MDJ				pmax	pmax	
	comp=Z,51nm,1.2s					
MDJ				LR	LR	
	comp=Z,3μm,21.9s					
MDJ				LR	LR	
	comp=Z,1μm,19.7s					
MDJ				LR	LR	
	comp=Z,5μm,21.3s					
MDJ	**Mudanjiang**	**38.87**	**4**	*e*P	**P**	**01 21 28.7 -0.5**
	comp=Z,113nm,0.9s					
MDJ				LR	LR	
	comp=Z,4μm,22.0s					
EIDS	**Eidsvold**	**39.06**	**143**	P	**P**	**01 21 30.3 -0.7**
	baz=39,SNR=12					
EIDS	**Eidsvold**	**39.06**	**143**	*e*P	**P**	**01 21 29.7 -1.4**
	comp=Z,92nm,0.9s					
EIDS				*e*S	**S**	**01 27 27.6 +1.9**
ERM	**Erimo**	**39.11**	**20**	*e*P	**P**	**01 21 29.7 -1.5**
	comp=Z,45nm,0.7s					
ERM				LR	LR	
	comp=Z,3μm,21.0s					
ERM	**Erimo**	**39.11**	**20**	*ce*P	**P**	**01 21 31.1 -0.1**
ERM				pmax	pmax	
	comp=Z,22nm,1.2s					
BBOO	**Buckleboo**	**39.36**	**167**	P	**P**	**01 21 33.6 +0.2**
	baz=40,SNR=151					
BBOO	**Buckleboo**	**39.36**	**167**	*e*P	**P**	**01 21 32.9 -0.5**
	comp=Z,483nm,0.9s					
BBOO				*e*S	**S**	**01 27 30.2 +0.3**
NWAO	**Narrogin (SRO)**	**39.39**	**192**	P	**P**	**01 21 34.1 +0.4**
	comp=Z,148nm,0.4s,baz=252,slow=8.1,SNR=150					
NWAO				LR	LR	01 40 46.5
	comp=Z,550nm,19.6s,baz=253,slow=40					
NWAO	**Narrogin (SRO)**	**39.39**	**192**	P	**P**	**01 21 34.0 +0.4**
	baz=40,SNR=98					
NWAO	**Narrogin (SRO)**	**39.39**	**192**	*e*P	**P**	**01 21 33.9 +0.2**
	comp=Z,445nm,1.3s					
NWAO	**Narrogin (SRO)**	**39.39**	**192**	P	**P**	**01 21 36.1 +2.4**
	SNR=10.0					
STKA	**Stephens Creek**	**40.05**	**160**	P	**P**	**01 21 39.2 +0.1**
	comp=Z,155nm,0.9s,baz=334,slow=8.4,SNR=155					
STKA				LR	LR	01 42 03.3
	comp=Z,2μm,18.3s,baz=329,slow=42					
STKA	**Stephens Creek**	**40.05**	**160**	P	**P**	**01 21 39.2 +0.1**
	baz=40,SNR=63					
STKA	**Stephens Creek**	**40.05**	**160**	*e*P	**P**	**01 21 39.1 0.0**
	comp=Z,54nm,1.0s					
TEY	**Ternei**	**40.18**	**11**	*e*P	**P**	**01 21 39.0 -1.1**
HTT	**Hallett**	**40.66**	**164**	P	**P**	**01 21 44.8 +0.5**
	baz=41,SNR=42					
ASAJ	**Asahikawa**	**40.81**	**18**	P	**P**	**01 21 44.9 -0.5**
	comp=Z,19nm,0.5s,baz=224,slow=12,SNR=23					
ASAJ	**Asahikawa**	**40.81**	**18**	*e*P	**P**	**01 21 44.8 -0.5**
ASAJ				LR	LR	
	comp=Z,4μm,21.0s					
LSA	**Lhasa**	**40.97**	**310**	P	**P**	**01 21 48.5 +1.1**
LSA				pmax	pmax	
	comp=Z,81nm,1.2s					
LSA				LR	LR	
	comp=Z,2μm,25.5s					
LSA	**Lhasa**	**40.97**	**310**	*e*P	**P**	**01 21 47.7 +0.3**
	comp=Z,230nm,1.7s					
LSA				*e*PcP	**PcP**	**01 23 47.3 +0.6**
LSA				*e*ScP	**ScP**	**01 27 33.4 +2.7**
LSA				LR	LR	
	comp=Z,2μm,19.0s					
LSA	**Lhasa**	**40.97**	**310**	P	**P**	**01 21 49.0 +1.6**
LSA	**Lhasa**	**40.97**	**310**	*e*P	**P**	**01 21 47.7 +0.3**
LSA				*e*		01 23 47.3
LSA				pmax	pmax	
	comp=Z,230nm,1.7s					
LSA				MLR	MLR	
	comp=Z,2μm,19.0s					
RKGY	**Rocky Gully**	**41.07**	**192**	P	**P**	**01 21 48.9 +1.4**
	baz=41,SNR=85					
GTA	**Gaotai**	**41.29**	**328**	⇑P	**P**	**01 21 49.6 +0.1**
GTA				pP	pP	01 22 06.8 +0.5
GTA				sP	sP	01 22 15.8 +1.7
GTA				PP	**PnPn**	**01 23 31.0 -0.1**
GTA				PcP	**PcP**	**01 23 49.0 +1.9**
GTA				PcS	**PcS**	**01 27 35.6 -2.8**
GTA				S	**S**	**01 27 58.6 -0.4**
GTA				sS	sS	01 28 28.6 +1.1
GTA				SS	**SS**	**01 31 02.8 -2.1**
GTA				ScS	**ScS**	**01 31 48.9 +1.5**
GTA				pmax	pmax	
	comp=Z,44nm,0.9s					
GTA				pmax	pmax	
	comp=Z,310nm,5.0s					
GTA				LR	LR	
	comp=Z,4μm,23.5s					
GTA				LR	LR	
	comp=Z,6μm,20.4s					
GTA				LR	LR	
	comp=Z,10μm,23.9s					
CMSA	**Cobar Meteorol**	**41.32**	**155**	P	**P**	**01 21 49.6 0.0**
	baz=41,SNR=27					
WAKE	**Wake Island**	**41.38**	**67**	*e*P	**P**	**01 21 49.0 -1.4**
	comp=Z,485nm,1.8s					
WAKE				LR	LR	
	comp=Z,2μm,22.0s					
H11N1	**WAKE ISLAND Hy**	**41.70**	**67**	T	T	02 07 08.4
	baz=265,slow=75,SNR=43					
H11N2	**WAKE ISLAND Hy**	**41.71**	**67**	T	T	02 07 00.1
	baz=265,slow=75,SNR=38					
H11N3	**WAKE ISLAND Hy**	**41.72**	**67**	T	T	02 06 37.3
	baz=265,slow=75,SNR=44					
YUK	**Yuzh-Kuril'sk**	**41.82**	**21**	*e*P	**P**	**01 21 50.8 -2.8**
YUK				*e*		01 23 39.0
YUK				*e*S	**S**	**01 28 02.9 -3.5**
YUK				*e*		01 31 44.6
YUK				pmax	pmax	
	comp=Z,275nm,1.4s					
YUK				MLR	MLR	
	comp=Z,1μm,19.0s					
YUK				MLR	MLR	
	comp=N,1μm,20.0s					
TAPN	**Taplejung**	**42.66**	**305**	*e*P	**P**	**01 22 01.2 +0.1**
	comp=N,263nm,0.5s					
ODAN	**Odare**	**42.74**	**304**	*e*P	**P**	**01 22 01.7 +0.1**
	comp=N,537nm,0.9s					
CHLP	**Challavanipeta**	**43.25**	**291**	*e*P	**P**	**01 22 05.8 +0.3**
CHLP				IAmb	IAmb	01 22 07.8
	comp=Z,177nm,1.1s					
ARMA	**Armidale**	**43.25**	**148**	P	**P**	**01 22 05.8 +0.3**
	baz=43,SNR=37					
ARMA	**Armidale**	**43.25**	**148**	*e*P	**P**	**01 22 05.7 +0.2**
	comp=Z,117nm,0.9s					
RAMN	**Ramite**	**43.42**	**304**	*e*P	**P**	**01 22 07.4 +0.2**
	comp=Z,744nm,0.9s					
YSS	**Yuzh-Sakhalins**	**43.44**	**16**	*e*P	**P**	**01 22 05.6 -1.1**
	comp=Z,56nm,0.9s					
YSS				LR	LR	
	comp=Z,800nm,22.0s					
YSS	**Yuzh-Sakhalins**	**43.44**	**16**	⇑*e*P	**P**	**01 22 05.9 -0.8**
YSS				*e*		01 23 58.0
YSS				*e*S	**S**	**01 28 37.0 +6.9**
YSS				pmax	pmax	
	comp=Z,40nm,1.4s					
YSS				MLR	MLR	
	comp=E,800nm,16.0s					
KUR	**Kuril'sk**	**43.59**	**22**	⇓*i*P	**P**	**01 22 08.6 +0.8**
KUR				*i* PPP	PPP	01 24 27.0
KUR				*i* S	**S**	**01 28 32.4 +0.2**
KUR				*i* SSS	SSS	01 32 27.9
KUR				pmax	pmax	
	comp=Z,643nm,4.2s					
KUR				pmax	pmax	
	comp=Z,161nm,1.0s					
KUR				pmax	pmax	
	comp=E,115nm,1.4s					
KUR				pmax	pmax	
	comp=N,110nm,0.9s					
KLR	**Kul'dur**	**43.62**	**5**	P	**P**	**01 22 07.0 -1.1**
	comp=N,1.9nm,0.7s,baz=197,slow=5.2,SNR=64					
KLR	**Kul'dur**	**43.62**	**5**	*c i*P	**P**	**01 22 06.6 -1.5**
HIA	**Hailar**	**43.80**	**354**	*e*P	**P**	**01 22 09.0 -0.5**
	comp=N,296nm,1.8s					
HIA				LR	LR	
	comp=Z,3μm,20.0s					
HIA	**Hailar**	**43.80**	**354**	*e*P	**P**	**01 22 09.0 -0.5**
HIA				pmax	pmax	
	comp=Z,296nm,1.8s					
HIA				MLR	MLR	
	comp=Z,3μm,20.0s					
JIRN	**Jiri**	**44.03**	**304**	*e*P	**P**	**01 22 12.3 +0.1**
	comp=Z,1μm,0.9s					
GUN	**Gumba**	**44.38**	**305**	*e*P	**P**	**01 22 14.9 0.0**
	comp=Z,1μm,0.9s					
ARPS	**Mount Arapiles**	**44.62**	**162**	P	**P**	**01 22 17.0 +0.8**
	baz=45,SNR=65					
PKIN	**Phulchoki**	**44.65**	**304**	*e*P	**P**	**01 22 17.2 +0.2**
	comp=Z,217nm,0.6s					
KKN	**Kakani**	**44.83**	**304**	*e*P	**P**	**01 22 17.9 -0.4**
	comp=Z,522nm,1.1s					
YNG	**Young**	**44.85**	**154**	P	**P**	**01 22 18.9 +0.7**
	baz=45,SNR=21					
DMN	**Daman**	**44.90**	**304**	*e*P	**P**	**01 22 18.8 -0.2**
	comp=Z,894nm,1.3s					
ULN	**Ulaanbaatar**	**45.19**	**342**	*e*P	**P**	**01 22 21.1 +0.3**
	comp=Z,154nm,1.0s					
ULN				*e*PcP	**PcP**	**01 24 00.5 +0.5**
ULN				*e*ScP	**ScP**	**01 27 49.9 +2.9**
ULN				LR	LR	
	comp=Z,2μm,20.0s					
ULN	**Ulaanbaatar**	**45.19**	**342**	P	**P**	**01 22 21.8 +1.0**
	SNR=71					
ULN	**Ulaanbaatar**	**45.19**	**342**	*ce*P	**P**	**01 22 21.3 +0.5**
ULN				pmax	pmax	
	comp=Z,81nm,1.0s					
MGCD	**Mangrove Creek**	**45.21**	**150**	P	**P**	**01 22 22.7 +1.8**
	baz=45,SNR=4.7					
PVM	**Polavaram**	**45.30**	**289**	*e*P	**P**	**01 22 22.1 +0.1**
PVM				IAmb	IAmb	01 22 23.7
	comp=Z,70nm,0.6s					
SONM	**Songino Array**	**45.37**	**341**	P	**P**	**01 22 22.6 +0.4**
	comp=Z,18nm,0.8s,baz=161,slow=8.0,SNR=73					
SONM				PcP	**PcP**	**01 24 01.5 +0.9**
	comp=Z,21nm,0.7s,baz=170,slow=4.2,SNR=5.5					
SONM				ScP	**ScP**	**01 27 50.7 +3.1**
	comp=Z,15nm,1.0s,baz=161,slow=5.0,SNR=7.6					
SONM				LR	LR	01 44 33.3
	comp=Z,2μm,18.2s,baz=154,slow=40					
SONA1	**Songino Array**	**45.38**	**341**	*e*P	**P**	**01 22 22.0 -0.3**
GKN	**Gorkha**	**45.43**	**304**	*e*P	**P**	**01 22 22.5 -0.6**
	comp=Z,317nm,0.9s					
PALK	**Pallekele**	**45.48**	**275**	P	**P**	**01 22 24.4 +0.9**
	comp=Z,15nm,0.7s,baz=117,slow=6.1,SNR=7.6					
PALK				PcP	**PcP**	**01 24 02.0 +0.4**
	comp=Z,14nm,0.6s,baz=298,slow=1.5,SNR=4.3					
PALK				ScP	**ScP**	**01 27 50.9 +2.1**
	comp=Z,30nm,0.8s,baz=117,slow=2.5,SNR=10					
PALK				LR	LR	01 41 19.6
	comp=Z,2μm,21.7s,baz=183,slow=36					
PALK	**Pallekele**	**45.48**	**275**	*e*P	**P**	**01 22 22.4 -1.0**
	comp=Z,213nm,1.9s					
PALK				*e*PcP	**PcP**	**01 24 01.9 +0.4**
PALK				*e*ScP	**ScP**	**01 27 50.6 +1.9**
PALK	**Pallekele**	**45.48**	**275**	P	**P**	**01 22 24.4 +0.9**
GRNR	**Gornyy**	**45.70**	**9**	*e*P	**P**	**01 22 24.6 0.0**
GRNR				*e*		01 24 02.7
GRNR				pmax	pmax	
	comp=Z,42nm,1.0s					
CAN	**Canberra**	**45.98**	**154**	*e*P	**P**	**01 22 28.5 +1.4**
	comp=Z,137nm,1.0s					
CAN	**Canberra**	**45.98**	**154**	*e*P	**P**	**01 22 28.5 +1.4**
CAN				pmax	pmax	
	comp=Z,137nm,1.0s					
CNB	**Canberra Magne**	**46.13**	**154**	P	**P**	**01 22 29.3 +1.0**
	baz=46,SNR=29					
KOLN	**Koldanda**	**46.21**	**303**	*e*P	**P**	**01 22 29.2 -0.1**
	comp=Z,852nm,0.8s					
DANN	**Dangsing**	**46.28**	**304**	*e*P	**P**	**01 22 29.7 -0.2**
	comp=Z,1μm,0.7s					
TOO	**Toolangi**	**46.55**	**159**	P	**P**	**01 22 32.9 +1.3**
	baz=47,SNR=12					
TOO	**Toolangi**	**46.55**	**159**	P	**P**	**01 22 32.8 +1.3**
TOO				pmax	pmax	
	comp=Z,122nm,1.3s					
TARA	**Tarawa**	**46.56**	**94**	PFAKE		01 22 40.0 +8.0
TARA				LR	LR	
	comp=Z,182nm,20.0s					
SKHT	**Srikalahasti**	**46.70**	**283**	*e*P	**P**	**01 22 33.0 0.0**
SKHT				IAmb	IAmb	01 22 36.6
	comp=Z,85nm,0.6s					
PYUN	**Piuthan**	**46.83**	**304**	*e*P	**P**	**01 22 34.3 +0.2**
	comp=Z,1μm,0.8s					
TYV	**Tymovskoe**	**47.02**	**14**	*e*P	**P**	**01 22 35.3 +0.4**
TYV				*e*S	**S**	**01 29 23.7 +2.2**
TYV				pmax	pmax	
	comp=Z,28nm,1.6s					
TYV				pmax	pmax	
	comp=Z,200nm,3.1s					
TYV				smax	smax	
	comp=E,500nm,8.3s					
TYV				smax	smax	
	comp=N,11nm,1.6s					
NJS	**Nagarjunasagar**	**47.40**	**287**	*e*P	**P**	**01 22 37.5 -0.9**
NJS				IAmb	IAmb	01 22 41.3
	comp=Z,64nm,0.6s					
CIT	**Chita**	**47.40**	**349**	*e*P	**P**	**01 22 38.5 +0.5**
CIT				*e*		01 22 54.1
CIT				*e*		01 24 14.8
CIT				pmax	pmax	
	comp=Z,195nm,1.6s					
SRLM	**Srisailam**	**47.73**	**287**	*e*P	**P**	**01 22 40.5 -0.6**
SRLM				IAmb	IAmb	01 22 52.0
	comp=Z,61nm,0.8s					
RPR	**Rampur**	**47.75**	**290**	*e*P	**P**	**01 22 41.1 0.0**
RPR				IAmb	IAmb	01 22 42.4
	comp=Z,94nm,0.6s					
DZM	**Mont Dzumac**	**47.90**	**127**	*e*P	**P**	**01 22 42.5 +0.2**
	comp=Z,157nm,1.4s					
DZM	**Mont Dzumac**	**47.90**	**127**	LR	LR	01 41 22.6
	comp=Z,1μm,21.4s,baz=310,slow=34					
ZEA	**Zeya**	**47.91**	**1**	*e*P	**P**	**01 22 40.5 -1.3**
ZEA				*e*		01 24 12.0
ZEA				*e*S	**S**	**01 29 33.0 -1.1**
ZEA				*e*		01 32 32.0
ZEA				*e*SS	**SS**	**01 32 54.0 -10**
ZEA				pmax	pmax	
	comp=Z,51nm,1.4s					
ZEA				smax	smax	
	comp=N,600nm,8.0s					
HYB	**Hyderabad**	**48.23**	**288**	*i* P	**P**	**01 22 44.5 -0.4**
	comp=N,71nm,0.8s					
HYB				*e*S	**S**	**01 29 40.0 +0.2**
HYBB	**Hyderabad (bro**	**48.23**	**288**	*e*P	**P**	**01 22 44.5 -0.5**
HYBB				IAmb	IAmb	01 22 47.4
	comp=Z,65nm,0.9s					
NGP	**Nagpur**	**48.40**	**293**	*e*P	**P**	**01 22 46.2 +0.1**
ZAK	**Zakamensk**	**48.60**	**340**	*e*P	**P**	**01 22 46.8 -0.5**
ZAK				*e*		01 24 10.2
ZAK				pmax	pmax	
	comp=Z,30nm,1.3s					
SRSP	**Sriramsagar**	**48.65**	**290**	*e*P	**P**	**01 22 47.5 -0.6**
SRSP				IAmb	IAmb	01 22 50.4
	comp=Z,102nm,0.8s					
NKL	**Nikolayevsk**	**48.73**	**11**	*e*P	**P**	**01 22 47.8 -0.3**
NKL				*e*		01 23 05.0
NKL				*e*S	**S**	**01 29 52.0 +6.3**
NKL				*e*		01 32 35.0
NKL				pmax	pmax	
	comp=Z,450nm,6.0s					
NKL				pmax	pmax	
	comp=Z,86nm,1.0s					
NKL				smax	smax	
	comp=E,500nm,14.0s					
URV	**Uravakonda**	**49.17**	**285**	*e*P	**P**	**01 22 51.6 -0.5**
URV				IAmb	IAmb	01 23 03.3
	comp=Z,41nm,0.9s					
TLY	**Talaya**	**49.60**	**342**	P	**P**	**01 22 55.9 +1.1**
	comp=Z,40nm,0.8s,baz=185,slow=4.7,SNR=53					
TLY	**Talaya**	**49.60**	**342**	*e*P	**P**	**01 22 54.7 -0.1**
TLY				LR	LR	
	comp=Z,1μm,20.0s					
TLY	**Talaya**	**49.60**	**342**	P	**P**	**01 22 55.9 +1.1**
	SNR=71					
TLY	**Talaya**	**49.60**	**342**	*c i*P	**P**	**01 22 55.6 +0.8**
TLY				*e*		01 24 14.1
TLY				*e*PPP	PPP	01 25 39.8
TLY				*e*S	**S**	**01 29 59.0 +1.0**
TLY				*e*		01 32 42.7
TLY				pmax	pmax	
	comp=Z,109nm,0.9s					
TLY				MLR	MLR	
	comp=Z,1μm,20.0s					
IRK	**Irkutsk**	**49.89**	**342**	*e*P	**P**	**01 22 53.2 -3.8**
IRK				pmax	pmax	
	comp=Z,233nm,2.1s					
KLRI	**Killari**	**50.16**	**289**	*e*P	**P**	**01 22 58.7 -1.0**
KLRI				IAmb	IAmb	01 23 01.7
	comp=Z,185nm,1.1s					
MOY	**Mondy**	**50.46**	**340**	*e*P	**P**	**01 23 02.4 +0.9**
MOY				pmax	pmax	
	comp=Z,218nm,3.3s					
WMQ	**Urumqi**	**50.98**	**324**	P	**P**	**01 23 05.4 -0.1**
WMQ				pP	sP	01 23 28.8 -1.6
WMQ				PcP	**PcP**	**01 24 21.4 +0.5**
WMQ				PP	**PP**	**01 25 01.8 -0.7**
WMQ				ScP	**ScP**	**01 28 12.8 +1.3**
WMQ				S	**S**	**01 30 16.6 -1.0**
WMQ				ScS	**ScS**	**01 32 48.3 -1.7**
WMQ				pmax	pmax	
	comp=Z,97nm,1.5s					
WMQ				pmax	pmax	
	comp=Z,750nm,3.7s					
WMQ				LR	LR	
	comp=Z,8μm,26.5s					
WMQ				LR	LR	
	comp=Z,7μm,24.9s					
WMQ				LR	LR	
	comp=Z,12μm,26.5s					
CLNS	**Chul'man**	**51.02**	**359**	*e*P	**P**	**01 23 05.3 -0.2**
CLNS				*e**PP	**pP**	**01 23 22.2 -0.6**
CLNS				*e*		01 24 17.8
CLNS				*e*		01 25 01.1
CLNS				*e*PPP	PPP	01 26 02.3
CLNS				*e*S	**S**	**01 30 21.3 +3.6**
CLNS				pmax	pmax	
	comp=Z,77nm,0.7s					
CLNS				pmax	pmax	

comp=E,27nm,0.8s
CLNS pmax pmax
comp=N,68nm,0.8s
CLNS pmax pmax
comp=Z,17nm,0.9s
CLNS pmax pmax
comp=E,22nm,1.1s
CLNS pmax pmax
comp=N,17nm,1.0s
CLNS smax smax
comp=N,613nm,12.8s
CLNS smax smax
comp=E,614nm,12.8s
CLNS MLR MLR
comp=N,983nm,16.0s
CLNS MLR MLR
comp=Z,845nm,16.0s
CLNS MLR MLR
comp=E,589nm,16.0s
SKR Severo-Kuril's 51.24 24 *e*P **P 01 23 05.1 -2.0**
SKR *e*S **S 01 30 22.8 +2.1**
SKR pmax pmax
comp=Z,300nm,3.1s
SKR pmax pmax
comp=Z,200nm,8.3s
SKR MLR MLR
comp=Z,800nm,18.0s
MOO Moorlands 51.49 160 P **P 01 23 10.5 +1.4**
baz=52,SNR=4.9
TAU Tasmania Unive 51.95 161 *e*P **P 01 23 13.0 +0.5**
comp=Z,76nm,1.0s
TAU Tasmania Unive 51.95 161 *e*P **P 01 23 13.0 +0.5**
TAU pmax pmax
comp=Z,76nm,1.0s
HVS Khovu-Aksy 52.86 335 *i* P **P 01 23 20.3 +0.9**
HVS pmax pmax
comp=Z,204nm,1.2s
BOD Bodaibo 52.90 352 *e*P **P 01 23 20.5 +1.1**
BOD pmax pmax
comp=Z,161nm,1.6s
PEA0B Petropavlovsk- 53.73 23 *e*P **P 01 23 26.6 +1.0**
comp=Z,58nm,0.8s
PEA0B LR LR
comp=Z,1μm,20.0s
PETK Petropavlovsk- 53.73 23 P **P 01 23 26.1 +0.5**
comp=Z,37nm,0.6s,baz=188,slow=4.0,SNR=101
PETK LR LR 01 47 08.0
comp=Z,586nm,19.4s,baz=226,slow=37
PETK Petropavlovsk- 53.73 23 *e*P **P 01 23 25.8 +0.1**
PET Petropavlovsk 54.04 23 *e*P **P 01 23 27.7 -0.1**
comp=Z,277nm,1.6s
PET LR LR
comp=Z,800nm,21.0s
PET Petropavlovsk 54.04 23 *ce*P **P 01 23 28.5 +0.7**
PET *e**PP **pP 01 23 46.5 +1.3**
PET *e* 01 25 32.7
PET *e*S **S 01 30 57.0 -1.9**
PET *e*SS **SS 01 34 38.3 -2.9**
PET pmax pmax
comp=Z,400nm,9.1s
PET pmax pmax
comp=Z,200nm,10.0s
PET pmax pmax
comp=Z,104nm,1.5s
FUNA Funafuti 54.45 105 PFAKE 01 23 40.0 +8.6
FUNA LR LR
comp=Z,4μm,20.0s
ZSN Zaisan 54.73 327⇑ *i*P **P 01 23 32.7 -0.3**
comp=Z,4.4nm,1.2s
ZSN *e*S **S 01 31 06.6 -1.8**
ZSN LR LR 01 49 07.6
comp=Z,65nm,13.5s
DGAR Diego Garcia 55.43 257 *e*P **P 01 23 36.4 -2.1**
comp=Z,225nm,1.1s
DGAR LR LR
comp=Z,708nm,22.0s
DGAR Diego Garcia 55.43 257 *e*P **P 01 23 36.4 -2.1**
DGAR pmax pmax
comp=Z,225nm,1.1s
DGAR MLR MLR
comp=Z,708nm,22.0s
SHLS Shalkode 55.68 320⇑ *i*P **P 01 23 38.4 -1.6**
comp=Z,82nm,0.8s
SHLS *es*P sP 01 24 14.3 +9.1
SHLS *i* S **S 01 31 16.8 -4.7**
SHLS LR LR 01 50 08.3
comp=Z,373nm,16.3s
PDGK Podgornoye 55.74 320 P **P 01 23 40.3 -0.2**
PDGK pmax pmax
comp=Z,135nm,0.8s
MK01 Makanchi Array 55.79 325 *e*P **P 01 23 40.8 +0.2**
MK31 Makanchi Array 55.81 325 *e*P **P 01 23 40.6 -0.2**
MK31 Makanchi Array 55.81 325 *e*P **P 01 23 40.6 -0.2**
MK31 pmax pmax
comp=Z,127nm,1.0s
MKAR Makanchi Array 55.81 325 P **P 01 23 40.6 -0.2**
comp=Z,75nm,0.6s,baz=124,slow=7.8,SNR=473
MKAR PcP **PcP 01 24 39.4 +0.3**
comp=Z,73nm,0.7s,baz=111,slow=4.8,SNR=8.5
MKAR ScP **ScP 01 28 33.9 +1.5**
comp=Z,8.8nm,0.7s,baz=123,slow=4.5,SNR=5.9
MKAR LR LR 01 49 07.9
comp=Z,4μm,21.7s,baz=94,slow=38
MKAR PKPPKP P'P'df 01 53 34.3 -8.3
comp=Z,4.0nm,1.1s,baz=318,slow=1.6,SNR=6.4
MKAR Makanchi Array 55.81 325 *e*P **P 01 23 40.6 -0.2**
comp=Z,533nm,0.6s
MKAR PcP **PcP 01 24 39.4 +0.3**
MKAR ScP **ScP 01 28 33.9 +1.5**
MKAR P'P' 01 53 34.3
UZB Uzynbulak 55.96 319 *i* P **P 01 23 42.1 +0.1**
comp=Z,46nm,0.7s
UZB *i* S **S 01 31 24.4 -0.9**
UZB LR LR 01 50 45.3
comp=Z,180nm,14.3s
MAKZ Makanchi 55.99 325 *e*P **P 01 23 41.9 -0.2**
comp=Z,127nm,1.0s
MAKZ LR LR
comp=Z,5μm,21.0s
MAKZ Makanchi 55.99 325 P **P 01 23 41.7 -0.4**
MAKZ pmax pmax
comp=Z,110nm,1.0s
PRZ Przheval'sk 56.06 318 *e*P **P 01 23 44.0 +1.1**
comp=Z,170nm,0.8s
PRZ LR LR
comp=Z,2μm,20.0s
PRZ Przheval'sk 56.06 318 *e*P **P 01 23 44.0 +1.1**
PRZ pmax pmax
comp=Z,170nm,0.8s
PRZ MLR MLR
comp=Z,2μm,20.0s
YAK Yakutsk 56.27 2 *e*P **P 01 23 43.4 -0.3**
comp=Z,296nm,0.8s
YAK LR LR
comp=Z,2μm,22.0s
YAK Yakutsk 56.27 2 *e*P **P 01 23 44.2 +0.5**
YAK *e* 01 23 57.4
YAK *e*S **S 01 31 28.5 +0.1**
YAK *e* 01 33 25.9
YAK pmax pmax
comp=Z,153nm,0.9s
YAK pmax pmax
comp=N,158nm,1.8s
YAK pmax pmax
comp=E,38nm,1.6s
YAK smax smax
comp=N,239nm,1.6s
YAK smax smax
comp=E,445nm,1.9s
SATY Saty 56.32 319⇑ *i*P **P 01 23 45.0 +0.4**
comp=E,140nm,0.8s
SATY *i* S **S 01 31 28.9 -1.2**
SATY LR LR 01 51 04.4
comp=E,433nm,16.3s
KPKS Kokpek 56.33 320⇑ *i*P **P 01 23 44.6 0.0**
comp=E,104nm,0.8s
KPKS *i* S **S 01 31 28.9 -1.2**
ZHN Zhinishke 56.35 319⇑ *i*P **P 01 23 44.9 0.0**
comp=E,34nm,0.8s
ZHN *i* S **S 01 31 29.0 -1.4**
KSH Kashi 56.48 314⇑ *i*P **P 01 23 47.3 +1.5**
KSH S **S 01 31 35.0 +2.7**
KSH pmax pmax
comp=E,220nm,0.8s
KSH LR LR
comp=E,2μm,14.0s
KSH LR LR
comp=E,2μm,14.6s
KSH LR LR
comp=E,5μm,21.1s
NIL Nilore 56.53 307 *e*P **P 01 23 46.1 -0.1**
NIL *e*ScP **ScP 01 28 37.2 +1.3**
NIL *e*S **S 01 31 31.9 -1.1**
NIL LR LR
comp=Z,1μm,22.0s
NIL Nilore 56.53 307 *e*P **P 01 23 46.1 -0.1**
NIL *e*S **S 01 31 31.9 -1.1**
NIL MLR MLR
comp=Z,1μm,22.0s
MA2 Magadan 56.88 14 P **P 01 23 48.1 0.0**
comp=Z,39nm,0.7s,baz=204,slow=6.5,SNR=23
MA2 Magadan 56.88 14 *e*P **P 01 23 48.2 0.0**
comp=Z,55nm,1.0s
MA2 LR LR
comp=Z,2μm,21.0s
MA2 Magadan 56.88 14 *i* P **P 01 23 48.7 +0.6**
MA2 pmax pmax
comp=Z,46nm,0.8s
NRN Naryn 57.23 316 *e*P **P 01 23 51.3 0.0**
comp=Z,148nm,1.3s
NRN Naryn 57.23 316 *e*P **P 01 23 51.3 0.0**
NRN pmax pmax
comp=Z,148nm,1.3s
MDOK Medeo 57.26 319 *i* P **P 01 23 51.7 +0.4**
comp=Z,764nm,0.7s
MDOK *i* S **S 01 31 41.3 -1.2**
MDOK LR LR 01 51 38.8
comp=Z,631nm,16.3s
AAA Alma-Ata 57.36 319 *e*P **P 01 23 52.2 +0.3**
comp=Z,82nm,1.1s
AAA *e*S **S 01 31 42.6 -1.1**
AAA LR LR 01 50 24.2
comp=Z,627nm,15.8s
AAA Alma-Ata 57.36 319 *e*P **P 01 23 51.9 0.0**
AAA *e*S **S 01 31 41.2 -2.5**
AAA pmax pmax
comp=Z,300nm,6.2s
AAA smax smax
comp=E,500nm,5.2s
ULHL Ulahol 57.40 317 P **P 01 23 52.6 +0.2**
SNR=58
MIDW Midway 57.64 60 PFAKE 01 24 10.0 +16
MIDW LR LR
comp=Z,4μm,22.0s
KZA Kyzart 58.00 317 P **P 01 23 57.5 +0.6**
SNR=158
KUU Kurty 58.04 319 *i* P **P 01 23 56.6 0.0**
comp=Z,227nm,1.0s
KUU *es*P sP 01 24 32.3 +11
KUU *e*S **S 01 31 50.9 -1.5**
KUU LR LR 01 52 11.1
comp=Z,714nm,18.0s
TKM2 Tokmak 2 58.11 318 P **P 01 23 57.5 +0.1**
SNR=123
TKM2 Tokmak 2 58.11 318 P **P 01 23 57.3 -0.1**
TKM2 pmax pmax
comp=Z,81nm,0.8s
SFK Sufi-Kurgan 58.43 314 P **P 01 23 59.6 -0.1**
SFK pmax pmax
comp=Z,121nm,1.1s
KBK Karagaybulak 58.44 317 P **P 01 24 00.1 +0.4**
SNR=94
UCH Uchtor 58.56 317 P **P 01 24 01.5 +0.7**
SNR=209
CHMS Chumysh 58.71 318 P **P 01 24 00.9 -0.4**
SNR=44
ZAA0 Zalesovo Array 58.73 333 *e*P **P 01 24 00.5 -0.7**
comp=Z,83nm,0.9s
ZAA0 LR LR
comp=Z,2μm,21.0s
ZALV Zalesovo Beam 58.73 333 P **P 01 24 00.3 -0.9**
comp=Z,72nm,0.8s,baz=123,slow=6.4,SNR=116
ZALV PcP **PcP 01 24 49.5 -0.9**
comp=Z,40nm,0.9s,baz=123,slow=5.5,SNR=4.3
ZALV LR LR 01 50 46.6
comp=Z,2μm,22.0s,baz=127,slow=38
ZALV PKPPKP **P'P'df 01 53 37.4 -0.3**
comp=Z,0.5nm,0.3s,baz=302,slow=3.3,SNR=5.5
ZALV PKP2bc 01 53 46.0
comp=Z,3.7nm,0.8s,baz=280,slow=4.2,SNR=9.2
ZALV Zalesovo Beam 58.73 333 *e*P **P 01 23 59.8 -1.4**
ZALV PcP **PcP 01 24 49.5 -0.9**
ZALV P'P' 01 53 37.4
ZALV ⇑*e* 01 53 46.0
FRU Bishkek 58.73 317 *e*P **P 01 24 01.5 0.0**
FRU *e*S **S 01 32 01.0 -0.5**
FRU *e* 01 36 04.0
FRU pmax pmax
comp=Z,100nm,2.0s
AAK Ala-Archa 58.74 317 P **P 01 24 02.0 +0.3**
comp=Z,23nm,0.5s,baz=107,slow=5.7,SNR=55
AAK Ala-Archa 58.74 317 P **P 01 24 02.0 +0.3**
SNR=37
AAK Ala-Archa 58.74 317 *e*P **P 01 24 01.9 +0.3**
comp=Z,49nm,1.0s
AAK *e*ScP **ScP 01 28 47.1 +1.5**
AAK LR LR
comp=Z,2μm,19.0s
AAK Ala-Archa 58.74 317 P **P 01 24 02.2 +0.5**
SNR=35
AAK Ala-Archa 58.74 317 *i* P **P 01 24 01.9 +0.3**
SNR=13
AAK Ala-Archa 58.74 317 P **P 01 24 02.0 +0.3**
AAK pmax pmax
comp=Z,23nm,0.5s
SEM Semipalatinsk 58.91 327 *e*P P 01 24 11.9 +9.1
comp=Z,16nm,0.7s
SEM *e*S **S 01 32 11.6 +7.7**
SEM LR LR 01 51 20.9
comp=Z,208nm,13.0s
USP Ospenovka 58.99 318 P **P 01 24 03.3 0.0**
SNR=96
AML Almayashu 59.09 316 P **P 01 24 04.8 +0.4**
SNR=170
EKS2 Erkin-Say 59.23 317 P **P 01 24 05.5 +0.4**
SNR=108
KURK Kurchatov 59.96 327 *e*P **P 01 24 09.3 -0.4**
KURK LR LR
comp=Z,2μm,19.0s
KURK Kurchatov 59.96 327 P **P 01 24 09.7 0.0**
SNR=87
KURK Kurchatov 59.96 327 *c i*P **P 01 24 09.3 -0.4**
KURK pmax pmax
comp=Z,129nm,0.5s
KURBB Kurchatov Arra 59.96 327 P **P 01 24 09.4 -0.3**
comp=Z,126nm,0.7s,baz=125,slow=6.2,SNR=711
BTLS Baital 60.01 320⇑ *i*P **P 01 24 09.8 -0.4**
comp=Z,31nm,0.8s
BTLS *e*S **S 01 32 16.4 -1.4**
NVS Novosibirsk 60.01 333⇓ *i*P **P 01 24 09.7 -0.3**
NVS *e**PP **pP 01 24 26.8 -0.9**
NVS *i* S **S 01 32 17.0 -0.5**
NVS *e* 01 33 51.1
NVS pmax pmax
comp=Z,110nm,1.2s
NVS pmax pmax
comp=N,78nm,1.3s
NVS pmax pmax
comp=E,79nm,1.1s
NVS smax smax
comp=N,137nm,2.1s
NVS smax smax
comp=E,212nm,2.0s
MNAS Manas 60.04 316 P **P 01 24 10.6 0.0**
MNAS pmax pmax
comp=Z,171nm,1.1s
KBL Kabul 60.13 307 P **P 01 24 11.0 -0.5**
KBL pmax pmax
comp=Z,410nm,0.7s
OUZ Omahuta 60.15 136 *e*P **P 01 24 11.6 +0.4**
comp=Z,48nm,1.0s
SEY Seymchan 60.20 13 P **P 01 24 11.7 +0.6**
comp=Z,23nm,0.8s,baz=235,slow=5.6,SNR=47
SEY PKPPKP **P'P'df 01 53 35.1 +0.3**
comp=Z,2.4nm,0.9s,baz=10,slow=9.0,SNR=4.4
SEY Seymchan 60.20 13 *ce*P **P 01 24 12.2 +1.1**
DZA Taraz 60.99 316 *e*S **S 01 32 30.2 -0.3**
KK31 Karatay Array 61.63 316 *e*P **P 01 24 20.9 -0.4**
KK31 Karatay Array 61.63 316 *e*P **P 01 24 20.9 -0.4**
KKAR Karatay Array 61.63 316 *e*P **P 01 24 20.9 -0.4**
KKAR Karatay Array 61.63 316 *e*P **P 01 24 20.9 -0.4**
IUG Iuzhnay 61.63 315⇑ *i*P **P 01 24 21.6 +0.1**
comp=Z,80nm,0.9s
IUG *e*S **S 01 32 37.4 -1.5**
IUG LR LR 01 54 17.2
comp=Z,606nm,18.1s
TAS Tashkent 61.90 314 P **P 01 24 23.3 +0.2**
CHM Chimkent 61.99 315 *e*P **P 01 24 23.9 +0.2**
comp=Z,39nm,1.0s
CHM *e*S **S 01 32 41.7 -1.5**
CHM LR LR 01 54 29.0
comp=Z,685nm,19.4s
BRLS Borolday 62.07 316 *e*S **S 01 32 43.1 -1.1**
OTUK Ortayu 62.41 322 P **P 01 24 25.8 -0.6**
OTUK pmax pmax
comp=Z,162nm,1.4s
DCZ Deep Cove 62.55 149 *e*P **P 01 24 27.9 +0.7**
comp=Z,96nm,0.9s
BRZS Berezniki 62.95 324⇑ *i*P **P 01 24 29.6 -0.3**
comp=Z,56nm,0.9s
BRZS *e*S **S 01 32 53.1 -1.8**
BRZS LR LR 01 54 11.9
comp=Z,428nm,17.2s
WHZ Wether Hill Ro 63.25 149 *e*P **P 01 24 32.3 +0.4**
comp=Z,67nm,1.0s
THZ Tophouse 63.41 143 *e*P **P 01 24 32.7 -0.4**
comp=Z,67nm,0.7s
LBZ Lake Benmore 63.45 146 *e*P **P 01 24 33.0 -0.3**
comp=Z,101nm,0.9s
RPZ Rata Peaks 63.51 145 LR LR 01 51 43.5
comp=Z,1μm,21.0s,baz=296,slow=36
RPZ Rata Peaks 63.51 145 *e*P **P 01 24 33.6 -0.1**
comp=Z,108nm,1.0s
LTZ Lake Taylor 63.64 144 *e*P **P 01 24 36.1 +1.4**
comp=Z,81nm,1.0s
OXZ Oxford 63.84 144 *e*P **P 01 24 35.7 -0.2**
comp=Z,113nm,1.4s
URZ Urewera 64.15 137 LR LR 01 53 53.0
comp=Z,952nm,18.7s,baz=314,slow=37
URZ Urewera 64.15 137 *e*P **P 01 24 38.3 +0.3**
comp=Z,88nm,1.3s
BKZ Black Stump Fm 64.22 139 *e*P **P 01 24 38.3 -0.2**
comp=Z,94nm,0.7s
SNZO South Karori 64.25 141 *e*P **P 01 24 36.4 -2.2**
SNZO LR LR
comp=Z,2μm,21.0s
AFI Afiamalu 64.30 108 LR LR 01 47 30.4
comp=Z,884nm,21.1s,baz=286,slow=31
AFI Afiamalu 64.30 108 PFAKE 01 24 50.0 +10
AFI LR LR
comp=Z,29μm,22.0s
BVA0 Borovoye Array 65.54 327 *i* P **P 01 24 46.3 -0.5**
BVA0 pmax pmax
comp=Z,100nm,1.0s
BVAR Borovoye Array 65.54 327 P **P 01 24 46.5 -0.4**
comp=Z,55nm,0.7s,baz=126,slow=9.3,SNR=297
BVAR LR LR 01 54 30.1
comp=Z,2μm,22.0s,baz=108,slow=37
BVAR Borovoye Array 65.54 327 P **P 01 24 46.5 -0.4**
BVAR pmax pmax
comp=Z,53nm,0.7s
BVAR MLR MLR
comp=Z,2μm,22.0s
BRVK Borovoye 65.61 327 *e*P **P 01 24 47.0 -0.3**
BRVK *e*S **S 01 33 26.6 -1.1**
BRVK LR LR
comp=Z,958nm,21.0s
BRVK Borovoye 65.61 327 P **P 01 24 47.3 0.0**
SNR=100
BRVK Borovoye 65.61 327 *c i*P **P 01 24 46.8 -0.5**
BRVK pmax pmax
comp=Z,219nm,1.2s
TIXI Tiksi 65.90 1 P **P 01 24 48.1 -0.6**
comp=Z,67nm,0.8s,baz=183,slow=4.1,SNR=94
TIXI Tiksi 65.90 1 *e*P **P 01 24 47.4 -1.3**
comp=Z,94nm,0.9s
TIXI LR LR
comp=Z,2μm,21.0s
TIXI Tiksi 65.90 1 *c i*P **P 01 24 47.7 -1.0**
TIXI pmax pmax
comp=Z,168nm,1.2s
WSAR Wadi Sarin 67.41 293 P **P 01 24 58.0 -1.4**
comp=Z,13nm,0.5s,baz=129,slow=5.8,SNR=22
WSAR LR LR 01 55 16.1
comp=Z,502nm,21.8s,baz=108,slow=37
BILL Bilibino 67.74 15 *e*P **P 01 25 00.4 -0.2**
comp=Z,69nm,1.3s
BILL LR LR
comp=Z,1μm,22.0s
BILL Bilibino 67.74 15 *c i*P **P 01 24 59.6 -1.0**
BILL *i* 01 25 28.6
BILL *e* 01 27 32.3
BILL *i* SS SS 01 38 15.0 -0.1
BILL pmax pmax
comp=Z,97nm,2.5s
BIDO Bidbid 67.89 293 P **P 01 25 02.1 -0.3**
SNR=15
NRIK Noril'sk 68.47 346 P **P 01 25 05.7 +0.6**
comp=Z,140nm,0.9s,baz=131,slow=6.1,SNR=172
NRIK S **S 01 34 02.6 +1.1**
comp=Z,3.3nm,0.4s,baz=352,slow=20,SNR=22
NRIK PKPPKP **P'P'df 01 53 19.1 -2.1**
comp=Z,2.9nm,0.5s,baz=263,slow=1.7,SNR=6.6
NRIK LR LR 01 57 31.8
comp=Z,2μm,21.0s,baz=144,slow=38
SOHO SOHO 69.38 294 *i* P **P 01 25 09.9 -1.7**
SNR=16
GEYT Alibeck 69.47 308 P **P 01 25 12.1 +0.1**
comp=Z,58nm,0.6s,baz=111,slow=3.3,SNR=42
GYA0B ALIBECK ARRAY 69.47 308 *e*P **P 01 25 12.2 +0.2**
MDH Madha 69.66 295 P **P 01 25 11.7 -1.6**
BANOM Banah 69.70 295 P **P 01 25 13.8 +0.2**
SNR=5.2
BANOM Banah 69.70 295 *i* P **P 01 25 12.9 -0.7**
SNR=9.5
UOSS Minazif 69.73 294 *e*P **P 01 25 12.6 -1.2**
comp=Z,69nm,1.3s
UOSS Minazif 69.73 294 *i* P **P 01 25 12.4 -1.3**
SNR=6.7
HATD Hatta, Dubai 69.78 294 P **P 01 25 14.0 -0.2**
SNR=12
HATD Hatta, Dubai 69.78 294 *i* P **P 01 25 12.9 -1.2**
SNR=20
MSFE Esma-Masafi 69.79 295 *i* P **P 01 25 13.4 -0.7**
SNR=9.4
SHME Shamm 69.85 296 *i* P **P 01 25 13.7 -0.8**
SNR=18
SHAO Shalim 70.05 287 *i* P **P 01 25 15.2 -0.7**
SNR=7.0
ALNE Al Ain 70.09 293 *i* P **P 01 25 15.2 -0.8**
SNR=50
NAZ Nazwa, Dubai 70.22 294 P **P 01 25 17.0 +0.2**
SNR=11
NAZ Nazwa, Dubai 70.22 294 *i* P **P 01 25 15.5 -1.3**
SNR=7.5
UMQ Umm Al-Quwin 70.25 295 *i* P **P 01 25 16.4 -0.5**
SNR=9.0
AB31 Akbulak array 70.47 320 *i* P **P 01 25 17.1 -0.7**
AB31 pmax pmax
comp=Z,56nm,0.6s
ABKAR Akbulak array 70.47 320 *e*P **P 01 25 16.9 -1.0**
ASUD Al Ashush, Dub 70.50 294 P **P 01 25 19.0 +0.5**
SNR=8.9
ASUD Al Ashush, Dub 70.50 294 *i* P **P 01 25 17.7 -0.8**
SNR=16
AJN Ajban 70.81 294 *i* P **P 01 25 19.4 -0.9**
SNR=9.6
AKTO Aktyubinsk 71.97 321 P **P 01 25 26.5 -0.3**
comp=Z,95nm,0.7s,baz=100,slow=7.5,SNR=203
AKTO S **S 01 34 40.8 -2.2**
comp=Z,1.2nm,0.5s,baz=314,slow=20,SNR=20
AKTO LR LR 01 59 46.3
comp=Z,3μm,21.6s,baz=103,slow=38
UNV Unalaska Valle 71.98 35 *e*P **P 01 25 26.7 -0.1**
comp=Z,100nm,0.9s
SVE Sverdlovsk 72.16 328 *d i*P **P 01 25 27.8 0.0**
SVE *e*S **S 01 34 42.4 -2.5**
SVE *e* 01 35 37.5
SVE pmax pmax
comp=Z,201nm,0.9s
AKUT Akutan 72.47 35 *e*P **P 01 25 29.8 +0.1**
comp=Z,317nm,1.3s
CASY Casey 72.72 187 *e*P **P 01 25 32.0 +1.2**
CASY LR LR
comp=Z,134nm,21.0s
ARU Arti 73.15 327 P **P 01 25 33.0 -0.7**
comp=Z,137nm,0.5s,baz=99,slow=3.4,SNR=128
ARU S **S 01 34 52.8 -3.4**
comp=Z,1.1nm,0.3s,baz=351,slow=24,SNR=7.7

ARU	**Arti**	**73.15 327**	*e*P	**P**	**01 25 32.9**	**-0.9**
ARU			*e*S	**S**	**01 34 50.5**	**-5.7**
ARU			LR	LR		
	comp=Z,2μm,20.0s					
ARU	**Arti**	**73.15 327***c*	*i*P	**P**	**01 25 32.8**	**-0.9**
ARU			*PP	**PcP**	**01 25 50.9**	**+0.9**
ARU					01 28 14.8	
ARU			PPP	PPP	01 29 58.7	
ARU			S	**SKiKP**	**01 34 58.0**	**-1.7**
ARU			SS	**SS**	**01 39 38.9**	**+0.4**
ARU			pmax	pmax		
	comp=Z,217nm,1.2s					
FALS	**False Pass**	**73.98 34**	*e*P	**P**	**01 25 38.4**	**-0.2**
	comp=Z,139nm,0.6s					
RER	**Riviere de l'E**	**74.25 246**	*e*P	**P**	**01 25 40.9**	**0.0**
	comp=Z,106nm,0.9s					
KIP	**Kipapa**	**74.49 69**	*i*P	**P**	**01 25 41.7**	**-0.5**
KIP			pmax	pmax		
	comp=Z,345nm,1.1s					
ANM	**Nome**	**75.60 24**	*e*P	**P**	**01 25 48.7**	**+0.9**
	comp=Z,112nm,1.8s					
ANM	**Nome**	**75.60 24**	*e*P	**P**	**01 25 48.7**	**+0.9**
ANM			pmax	pmax		
	comp=Z,112nm,1.8s					
MIR	**Mirnyy**	**75.99 193⇑**	*i*P	**P**	**01 25 52.0**	**+2.1**
MIR			pmax	pmax		
	comp=Z,63nm,1.0s					
POHA	**Pohakuloa**	**76.83 71**	*e*P	**P**	**01 25 55.8**	**-0.1**
	comp=Z,127nm,1.0s					
POHA			LR	LR		
	comp=Z,2μm,22.0s					
AIN	**Ainahou**	**76.91 72**	*e*P	**P**	**01 25 57.8**	**+1.4**
	comp=Z,236nm,1.2s					
MLH	**Mauna Loa**	**76.98 71**	*e*P	**P**	**01 25 56.5**	**-0.2**
	comp=Z,242nm,1.0s					
MLH	**Mauna Loa**	**76.98 71**	*e*P	**P**	**01 25 56.6**	**-0.2**
MLH			pmax	pmax		
	comp=Z,242nm,1.0s					
CHGN	**Chignik**	**77.05 34**	*e*P	**P**	**01 25 55.7**	**-0.5**
	comp=Z,106nm,1.2s					
PUH	**Pauahi**	**77.14 72**	*e*P	**P**	**01 25 56.5**	**-1.0**
	comp=Z,200nm,1.0s					
RDOG	**Red Dog Mine**	**77.57 21**	*e*P	**P**	**01 25 59.7**	**+0.9**
	comp=Z,79nm,1.1s					
AKT	**Akhty**	**77.81 311⇑**	*i*P	**P**	**01 26 00.8**	**-0.1**
AKT			*e*		01 26 09.1	
AKT			*e*S	**S**	**01 35 46.6**	**-2.0**
AKT			*e*		01 36 11.1	
AKT			pmax	pmax		
	comp=Z,226nm,0.6s					
MAK	**Makhachkala**	**78.06 313**	*e*P	**P**	**01 26 00.8**	**-1.3**
MAK			*e*S	**S**	**01 35 49.5**	**-1.4**
MAK			pmax	pmax		
	comp=Z,215nm,1.1s					
SVW2	**Sparrevohn**	**79.23 29**	*e*P	**P**	**01 26 09.0**	**+0.9**
	comp=Z,179nm,1.8s					
GROC	**Groznyy**	**79.32 313**	*e*P	**P**	**01 26 07.8**	**-1.2**
GROC			*e*		01 26 18.8	
GROC			*e**PP	**pP**	**01 26 27.2**	**-0.3**
GROC			*e*S	**S**	**01 36 02.1**	**-2.4**
GROC			pmax	pmax		
	comp=Z,243nm,0.8s					
RAYN	**Ar Rayn**	**79.47 293**	*e*P	**P**	**01 26 09.2**	**-1.1**
	comp=Z,68nm,0.8s					
RAYN			LR	LR		
	comp=Z,617nm,20.0s					
RAYN	**Ar Rayn**	**79.47 293**	*i*P	**P**	**01 26 09.1**	**-1.1**
	SNR=112					
RAYN	**Ar Rayn**	**79.47 293**	P	**P**	**01 26 09.2**	**-1.1**
OHAK	**Old Harbor**	**79.96 33**	*e*P	**P**	**01 26 12.8**	**+0.6**
	comp=Z,246nm,1.7s					
GNI	**Garni**	**80.03 310**	P	**P**	**01 26 13.5**	**+0.4**
	comp=Z,25nm,0.8s,baz=208,slow=1.2,SNR=42					
GNI			LR	LR	02 07 32.9	
	comp=Z,530nm,20.6s,baz=79,slow=40					
GNI	**Garni**	**80.03 310**	*e*P	**P**	**01 26 13.0**	**-0.1**
GNI	**Garni**	**80.03 310**	P	**P**	**01 26 13.7**	**+0.6**
	SNR=55					
GNI	**Garni**	**80.03 310**	*i*P	**P**	**01 26 13.4**	**+0.2**
	SNR=24					
GNI	**Garni**	**80.03 310***c*	*i*P	**P**	**01 26 13.4**	**+0.2**
GNI			pmax	pmax		
	comp=Z,588nm,1.7s					
KDAK	**Kodiak Island**	**80.39 32**	*e*P	**P**	**01 26 14.5**	**0.0**
KDAK			LR	LR		
	comp=Z,372nm,22.0s					
KDAK	**Kodiak Island**	**80.39 32**	*i*P	**P**	**01 26 14.2**	**-0.2**
RSO	**Redoubt South**	**80.53 30**	*e*P	**P**	**01 26 15.2**	**-0.3**
PRGR	**Permogore**	**80.66 331⇑**	*i*P	**P**	**01 26 15.1**	**-0.7**
PRGR			*e*S	**S**	**01 36 14.5**	**-3.3**
PRGR			pmax	pmax		
	comp=Z,168nm,0.7s					
DAMY	**Dhamar**	**80.93 284**	*e*P	**P**	**01 26 18.8**	**+0.2**
	comp=Z,42nm,0.9s					
NCK	**Nalchik**	**80.94 313***c*	*i*P	**P**	**01 26 17.1**	**-0.7**
NCK			pmax	pmax		
	comp=Z,106nm,0.8s					
PPLA	**Purkeypile**	**81.02 27**	*e*P	**P**	**01 26 18.3**	**+0.3**
	comp=Z,353nm,1.8s					
SKT	**Skwentna**	**81.25 28**	*e*P	**P**	**01 26 18.7**	**-0.4**
	comp=Z,70nm,1.0s					
GOF	**Gofitskoye**	**81.35 315⇑**	*i*P	**P**	**01 26 19.2**	**-0.7**
GOF			*e*S	**S**	**01 36 22.9**	**-2.8**
GOF			pmax	pmax		
	comp=Z,110nm,0.8s					
GOF			smax	smax		
	comp=N,70nm,1.5s					
GOF			smax	smax		
	comp=E,40nm,1.5s					
BRLK	**Bradley Lake**	**81.41 31**	*e*P	**P**	**01 26 19.2**	**-0.7**
	comp=E,164nm,1.4s					
KBZ	**Khabaz**	**81.45 313**	P	**P**	**01 26 19.9**	**-0.4**
	comp=E,78nm,0.9s,baz=106,slow=3.3,SNR=76					
KBZ			S	**S**	**01 36 24.7**	**-1.9**
	comp=E,6.7nm,1.2s,baz=356,slow=22,SNR=10					
KBZ			LR	LR	02 07 27.9	
	comp=E,1μm,21.9s,baz=70,slow=39					
NEY	**Neytrino**	**81.57 313**	*i*P	**P**	**01 26 21.6**	**+0.3**
NEY			pmax	pmax		
	comp=Z,16nm,0.8s					
SUA	**Susitna One**	**81.59 29**	*e*P	**P**	**01 26 20.1**	**-0.8**
	comp=Z,139nm,1.0s					
KVAR	**Kislovodsk Arr**	**81.59 313**	P	**P**	**01 26 20.7**	**-0.6**
	comp=Z,91nm,0.7s,baz=86,slow=5.4,SNR=51					
KIV	**Kislovodsk**	**81.60 313**	*e*P	**P**	**01 26 21.2**	**-0.2**
KIV			LR	LR		
	comp=Z,1μm,19.0s					
KIV	**Kislovodsk**	**81.60 313**	P	**P**	**01 26 21.2**	**-0.2**
	SNR=31					
KIV	**Kislovodsk**	**81.60 313**	*i*P	**P**	**01 26 21.1**	**-0.3**
	SNR=18					
KIV	**Kislovodsk**	**81.60 313**	*e*P	**P**	**01 26 20.4**	**-1.0**
KIV			*e*		01 29 28.7	
KIV			*e*S	**S**	**01 36 28.8**	**+0.3**
KIV			pmax	pmax		
	comp=Z,162nm,5.6s					
KIV			pmax	pmax		
	comp=Z,240nm,1.1s					
BPAW	**Bear Paw Mtn.**	**81.66 26**	*e*P	**P**	**01 26 21.1**	**-0.1**
	comp=Z,236nm,1.2s					
OPO	**Ambohidratompo**	**81.69 250**	P	**P**	**01 26 21.9**	**-0.5**
	comp=Z,17nm,0.5s,baz=67,slow=5.0,SNR=29					
OPO			LR	LR	01 59 26.8	
	comp=Z,659nm,21.5s,baz=44,slow=33					
ABPO	**Ambohimpanom**	**81.72 250**	*e*P	**P**	**01 26 21.2**	**-1.4**
	comp=Z,80nm,1.2s					
ABPO			LR	LR		
	comp=Z,367nm,19.0s					
ABPO	**Ambohimpanom**	**81.72 250**	*e*P	**P**	**01 26 21.2**	**-1.4**
ABPO			pmax	pmax		
	comp=Z,80nm,1.2s					
ABPO			MLR	MLR		
	comp=Z,367nm,19.0s					
MLY	**Manley**	**81.83 25**	*e*P	**P**	**01 26 22.2**	**+0.1**
	comp=Z,222nm,1.3s					
TRF	**Thorofare Moun**	**81.92 27**	*e*P	**P**	**01 26 22.3**	**-0.4**
	comp=Z,162nm,1.4s					
TRF			*e*S	**S**	**01 36 38.9**	**+7.7**
RC01	**Rabbit Creek A**	**82.05 29**	*e*P	**P**	**01 26 22.9**	**-0.4**
	comp=Z,264nm,1.9s					
BWN	**Browne**	**82.33 26**	*e*P	**P**	**01 26 26.1**	**+1.5**
	comp=Z,169nm,1.2s					
PMR	**Palmer**	**82.37 29**	*e*P	**P**	**01 26 24.2**	**-0.6**
	comp=Z,67nm,1.0s					
PMR	**Palmer**	**82.37 29**	*e*P	**P**	**01 26 24.2**	**-0.6**
PMR			pmax	pmax		
	comp=Z,67nm,1.0s					
GHO	**Glory Hole Cre**	**82.47 29**	*e*P	**P**	**01 26 25.7**	**+0.2**
	comp=Z,156nm,1.5s					
TOLK	**Toolik Lake Re**	**82.53 22**	P	**P**	**01 26 26.6**	**+0.9**
	baz=267					
TOLK	**Toolik Lake Re**	**82.53 22**	*e*P	**P**	**01 26 26.9**	**+1.3**
	comp=Z,416nm,1.9s					
MCK	**McKinley**	**82.54 27**	*e*P	**P**	**01 26 25.5**	**-0.3**
	comp=Z,257nm,1.2s					
MCK	**McKinley**	**82.54 27**	*e*P	**P**	**01 26 25.5**	**-0.3**
MCK			pmax	pmax		
	comp=Z,257nm,1.2s					
RND	**Reindeer**	**82.56 27**	*e*P	**P**	**01 26 25.6**	**-0.4**
	comp=Z,171nm,1.2s					
RND	**Reindeer**	**82.56 27**	*e*P	**P**	**01 26 25.6**	**-0.4**
RND			pmax	pmax		
	comp=Z,171nm,1.2s					
ATD	**Arta Tunnel**	**82.64 281**	P	**P**	**01 26 27.4**	**+0.1**
	comp=Z,39nm,0.9s,baz=151,slow=1.4,SNR=23					
ATD			LR	LR	02 02 16.2	
	comp=Z,148nm,20.6s,baz=78,slow=35					
ATD	**Arta Tunnel**	**82.64 281**	*e*P	**P**	**01 26 27.5**	**+0.1**
	comp=Z,63nm,1.2s					
SML	**Sawmill**	**82.75 28**	*e*P	**P**	**01 26 27.1**	**+0.2**
	comp=Z,204nm,1.1s					
SML	**Sawmill**	**82.75 28**	*e*P	**P**	**01 26 27.1**	**+0.2**
SML			pmax	pmax		
	comp=Z,204nm,1.1s					
MDM	**Murphy Dome**	**82.89 25**	*e*P	**P**	**01 26 27.4**	**-0.2**
	comp=Z,255nm,1.5s					
WRH	**Wood River Hil**	**82.94 26**	*e*P	**P**	**01 26 27.7**	**-0.1**
	comp=Z,302nm,1.5s					
CCB	**Clear Creek Bu**	**83.06 26**	*e*P	**P**	**01 26 27.9**	**-0.5**
	comp=Z,228nm,1.4s					
DHY	**Denali Highway**	**83.23 27**	*e*P	**P**	**01 26 29.7**	**+0.2**
	comp=Z,174nm,1.6s					
IL1	**Eielson Array**	**83.46 26**	*e*P	**P**	**01 26 28.0**	**-2.4**
ILAR	**Eielson Array**	**83.46 26**	P	**P**	**01 26 29.1**	**-1.4**
	comp=Z,53nm,1.1s,baz=249,slow=4.5,SNR=124					
ILAR			PKKP	**PKKPdf**	**01 44 42.0**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=313,slow=0.6,SNR=4.3					
ILAR			PKKPbc	**PKKPbc**	**01 44 48.9**	**-2.8**
	comp=Z,2.2nm,0.9s,baz=53,slow=1.7,SNR=9.7					
ILAR			PKPPKP	**P'P'df**	**01 52 49.1**	**-5.8**
	comp=Z,1.5nm,1.1s,baz=138,slow=0.8,SNR=7.7					
ILAR			LR	LR	02 02 56.2	
	comp=Z,516nm,21.5s,baz=258,slow=35					
ILB	**Eielson Array**	**83.46 26**	*e*P	**P**	**01 26 29.2**	**-1.3**
KLMR	**Klimovskoe**	**83.58 331***c*	*i*P	**P**	**01 26 30.8**	**-0.3**
KLMR			*e*S	**S**	**01 36 41.1**	**-6.6**
KLMR			pmax	pmax		
	comp=Z,441nm,1.1s					
KLMR			MLR	MLR		
	comp=Z,2μm,20.0s					
KLMR	**Klimovskoe**	**83.58 331⇑**	*i*P	**P**	**01 26 30.9**	**-0.2**
KLMR			*e*P	**P**	**01 26 30.9**	**-0.2**
KLMR			*e*P	**P**	**01 26 30.9**	**-0.2**
KLMR			AMP		01 26 34.7	
	comp=Z,441nm,1.1s					
KLMR			*e*S	**S**	**01 36 41.1**	**-6.6**
KLMR			*e*S	**S**	**01 36 41.1**	**-6.6**
KLMR			LQ	LQ	01 56 09.6	
KLMR			LQ	LQ	01 56 09.6	
KLMR			LR	LR	01 59 54.9	
KLMR			AMP		02 04 11.7	
	comp=Z,2μm,19.6s					
SOC	**Sochi**	**83.76 313**	*e*P	**P**	**01 26 30.8**	**-1.6**
SOC			*e**PP	**pP**	**01 26 50.7**	**-0.3**
SOC			*e*		01 29 48.6	
SOC			*e*PPP	PPP	01 31 39.4	
SOC			*e*S	**S**	**01 36 47.2**	**-3.0**
SOC			*e*SS	**SS**	**01 42 16.7**	**-1.8**
SOC			pmax	pmax		
	comp=Z,83nm,0.6s					
SOC			MLR	MLR		
	comp=Z,843nm,21.0s					
VORD	**Divnogorie**	**83.83 321**	*e*P	**P**	**01 26 31.7**	**-0.9**
VORD			pmax	pmax		
	comp=Z,160nm,0.8s					
VORR	**Voronezh**	**83.87 321**	*e*P	**P**	**01 26 31.0**	**-1.8**
KLU	**Klutina**	**83.90 29**	*e*P	**P**	**01 26 33.5**	**+0.6**
	comp=Z,222nm,1.6s					
VSR	**Storozhevoye**	**83.91 321**	*e*P	**P**	**01 26 31.9**	**-1.1**
VSR			*e*S	**S**	**01 36 45.7**	**-5.7**
VSR			pmax	pmax		
	comp=Z,210nm,0.9s					
VSR			pmax	pmax		
	comp=Z,90nm,0.4s					
VSR			smax	smax		
	comp=N,90nm,1.8s					
PAX	**Paxson**	**84.09 27**	*e*P	**P**	**01 26 34.6**	**+0.7**
	comp=N,194nm,1.4s					
PAX	**Paxson**	**84.09 27**	*e*P	**P**	**01 26 34.6**	**+0.7**
PAX			pmax	pmax		
	comp=Z,194nm,1.4s					
TMCR	**Tamitsa**	**84.23 334**	*e*P	**P**	**01 26 32.7**	**-1.7**
TMCR			pmax	pmax		
	comp=Z,610nm,1.5s					
HARP	**HAARP**	**84.25 28**	*e*P	**P**	**01 26 35.6**	**+1.0**
	comp=Z,205nm,1.3s					
MOS	**Moscow**	**84.68 325**	*e*P	**P**	**01 26 34.5**	**-2.3**
MOS			*e*		01 26 42.4	
MOS			*e*		01 29 53.0	
MOS			*e*S	**S**	**01 36 53.6**	**-5.3**
MOS			*e*		01 36 58.6	
MOS			pmax	pmax		
	comp=Z,300nm,0.8s					
MOS			pmax	pmax		
	comp=Z,290nm,0.7s					
MOS			MLR	MLR		
	comp=Z,2μm,21.0s					
MOS			MLR	MLR		
	comp=N,500nm,18.0s					
MOS			MLR	MLR		
	comp=Z,1μm,22.0s					
SCRK	**Sand Creek**	**84.73 26**	*e*P	**P**	**01 26 37.0**	**-0.1**
	comp=Z,114nm,1.3s					
OBN	**Obninsk**	**85.31 325**	*e*P	**P**	**01 26 39.5**	**-0.5**
OBN			LR	LR		
	comp=Z,785nm,22.0s					
OBN	**Obninsk**	**85.31 325***c*	*i*P	**P**	**01 26 39.3**	**-0.7**
OBN			*e*		01 30 04.8	
OBN			pmax	pmax		
	comp=Z,857nm,1.2s					
ANN	**Anapa**	**85.34 314**	*e*P	**P**	**01 26 37.9**	**-2.5**
ANN			*e**PP	**pP**	**01 26 53.0**	**-6.0**
ANN			*e*PPP	PPP	01 31 49.8	
ANN			*e*S	**S**	**01 36 58.5**	**-7.4**
ANN			pmax	pmax		
	comp=N,168nm,1.0s					
ANN			pmax	pmax		
	comp=E,101nm,1.0s					
ANN			pmax	pmax		
	comp=Z,651nm,1.0s					
ANN			smax	smax		
	comp=N,160nm,6.8s					
ANN			MLR	MLR		
	comp=N,468nm,24.0s					
ANN			MLR	MLR		
	comp=E,225nm,24.0s					
ANN			MLR	MLR		
	comp=Z,2μm,24.0s					
VNDA	**Vanda**	**85.39 173**	P	**P**	**01 26 40.1**	**+0.3**
	comp=Z,55nm,0.9s,baz=318,slow=5.9,SNR=152					
VNDA			PKKPbc	**PKKPbc**	**01 44 46.1**	**-1.8**
	comp=Z,1.3nm,0.7s,baz=323,slow=0.8,SNR=6.5					
VNDA	**Vanda**	**85.39 173**	*e*P	**P**	**01 26 40.2**	**+0.3**
	comp=Z,95nm,1.1s					
VNDA			PKKPbc	**PKKPbc**	**01 44 46.1**	**-1.8**
VNDA	**Vanda**	**85.39 173**	*e*P	**P**	**01 26 40.3**	**+0.4**
VNDA			pmax	pmax		
	comp=Z,95nm,1.1s					
MAW	**Mawson**	**85.49 200**	P	**P**	**01 26 41.2**	**+0.7**
	comp=Z,60nm,0.9s,baz=66,slow=5.7,SNR=85					
MAW			LR	LR	01 59 38.4	
	comp=Z,408nm,21.1s,baz=64,slow=32					
MAW	**Mawson**	**85.49 200**	P	**P**	**01 26 41.2**	**+0.7**
	baz=86,SNR=42					
MAW	**Mawson**	**85.49 200**	*e*P	**P**	**01 26 41.1**	**+0.6**
	comp=Z,16nm,0.9s					
EGAK	**Eagle**	**85.91 25**	*e*P	**P**	**01 26 42.7**	**-0.2**
	comp=Z,67nm,1.3s					
EGAK			LR	LR		
	comp=Z,913nm,22.0s					
APA	**Apatity**	**85.95 337⇑**	*i*P	**P**	**01 26 41.8**	**-1.1**
APA			*i*PPP	PPP	01 32 00.0	
APA			*i*S	**S**	**01 37 05.0**	**-6.0**
APA			*i*SSS	SSS	01 46 27.0	
APA			pmax	pmax		
	comp=Z,70nm,1.1s					
PPT	**Papeete**	**85.97 108**	LR	LR	01 56 57.8	
	comp=Z,442nm,21.6s,baz=270,slow=30					
PPT2	**Papeete2**	**85.97 108**	*e*S	**S**	**01 37 13.9**	**+0.7**
	comp=Z,2μm,29.0s					
PPT2			*e*SS	**SS**	**01 42 58.3**	**+5.7**
	comp=Z,783nm,25.8s					
PPT2			*e*LQ	LQ	01 49 50.0	
	comp=Z,2μm,33.5s					
PPT2			*e*LR	LR	01 53 55.9	
	comp=Z,3μm,27.5s,baz=282					
SBA	**Scott Base**	**86.30 172**	*e*P	**P**	**01 26 44.9**	**+0.5**
	comp=Z,60nm,1.1s					
SBA			LR	LR		
	comp=Z,653nm,20.0s					
SBA	**Scott Base**	**86.30 172**	*e*P	**P**	**01 26 44.9**	**+0.5**
SBA			pmax	pmax		
	comp=Z,60nm,1.1s					
SBA			MLR	MLR		
	comp=Z,653nm,20.0s					
ASF	**Jabal al Asfar**	**86.64 302**	P	**P**	**01 26 47.5**	**+0.3**
	comp=Z,55nm,0.8s,baz=48,slow=2.4,SNR=106					
ASF			LR	LR	02 11 47.0	
	comp=Z,260nm,18.9s,baz=46,slow=40					
DAWY	**Dawson**	**86.75 26**	*e*P	**P**	**01 26 47.4**	**+0.4**
	comp=Z,21nm,0.8s					
TBI	**Tubuai**	**86.82 114**	*e*S	**S**	**01 37 22.4**	**+1.3**
	comp=Z,594nm,26.8s					
TBI			*e*SS	**SS**	**01 43 09.2**	**+4.6**
	comp=Z,544nm,27.5s					
TBI			*e*LQ	LQ	01 50 40.6	
	comp=Z,1μm,35.2s					
TBI			*e*LR	LR	01 54 24.0	
	comp=Z,2μm,26.0s,baz=294					
FKH	**Fakeheh**	**86.88 304**	*e*P	**P**	**01 26 48.7**	**+0.3**
HWQ	**Hawqa**	**87.26 304**	*e*P	**P**	**01 26 49.6**	**-0.6**
PMOR	**Pomariorio Ree**	**87.27 105**	*e*T	T	03 03 13.5	
	comp=Z,3.9nm,0.2s					
JOF	**Joensuu**	**87.32 333**	P	**P**	**01 26 49.7**	**0.0**
JOF			pmax	pmax		
	comp=Z,177nm,0.8s					
RCY	**Rachaya**	**87.42 303**	*e*P	**P**	**01 26 50.8**	**-0.2**
BHL	**Bhannes**	**87.53 304**	*e*P	**P**	**01 26 51.1**	**-0.4**
DQRL	**Deir Qamar**	**87.62 303**	*e*P	**P**	**01 26 51.9**	**0.0**
SIM	**Simferopol'**	**87.68 315***c**e*P		**P**	**01 26 50.8**	**-1.0**
SIM			*e**PP	**pP**	**01 27 08.0**	**-2.6**
SIM			*e*		01 30 16.0	
SIM			*e*		01 37 12.0	
SIM			*e*S	**S**	**01 37 27.0**	**-1.7**
SIM			pmax	pmax		
	comp=Z,115nm,0.9s					
MMAI	**Mount Meron Ar**	**87.82 303**	P	**P**	**01 26 52.9**	**0.0**
	comp=Z,16nm,0.6s,baz=80,slow=6.0,SNR=36					
MMAI			LR	LR	02 12 35.4	
	comp=Z,489nm,20.3s,baz=90,slow=40					
MSF	**Maaselka**	**87.88 336**	P	**P**	**01 26 51.7**	**-0.6**
MSF			pmax	pmax		
	comp=Z,92nm,1.2s					
KEV	**Kevo**	**87.97 340**	*e*P	**P**	**01 26 52.1**	**-0.6**
KEV			LR	LR		
	comp=Z,1μm,21.0s					
KEV	**Kevo**	**87.97 340**	*e*P	**P**	**01 26 52.1**	**-0.6**
KEV			MLR	MLR		
	comp=Z,1μm,21.0s					
PUL	**Pulkovo**	**88.22 330***c**e*P		**P**	**01 26 54.3**	**+0.3**
PUL			pmax	pmax		
	comp=Z,135nm,0.8s					
ILGA	**Ilgaz**	**88.37 311**	*e*P	**P**	**01 26 54.9**	**-0.7**
	comp=Z,51nm,0.8s					
INK	**Inuvik**	**88.45 21**	P	**P**	**01 26 54.4**	**-0.5**
	comp=Z,65nm,1.2s,baz=277,slow=6.5,SNR=35					
INK	**Inuvik**	**88.45 21**	*e*P	**P**	**01 26 54.5**	**-0.5**
	comp=Z,95nm,1.4s					
INK	**Inuvik**	**88.45 21**	*e*P	**P**	**01 26 54.5**	**-0.5**
INK			pmax	pmax		
	comp=Z,95nm,1.4s					
SPA0	**Spitsbergen Ar**	**88.52 349**	*e*P	**P**	**01 26 56.1**	**+0.9**
SPA0	**Spitsbergen Ar**	**88.52 349**	*e*P	**P**	**01 26 55.9**	**+0.7**
SPITS	**Spitsbergen Ar**	**88.52 349**	LR	LR	02 11 12.6	
	comp=Z,730nm,20.4s,baz=55,slow=39					
ARCES	**ARCESS Array B**	**88.53 340**	P	**P**	**01 26 55.1**	**-0.3**
	comp=Z,71nm,0.8s,baz=78,slow=6.0,SNR=256					
ARCES			PKiKP	**PKiKP**	**01 31 56.8**	**+1.2**
	comp=Z,2.5nm,0.7s,baz=64,slow=2.8,SNR=4.0					
ARCES			PKKPbc	**PKKPbc**	**01 44 37.9**	**-1.8**
	comp=Z,2.9nm,0.9s,baz=249,slow=2.1,SNR=8.9					
ARCES			LR	LR	02 10 54.8	
	comp=Z,1μm,20.7s,baz=81,slow=38					
ARE0	**ARCESS Array S**	**88.53 340**	*e*P	**P**	**01 26 55.2**	**-0.2**
BR131	**Keskin Array S**	**88.57 310**	*e*P	**P**	**01 26 55.1**	**-1.4**
BRTR	**Keskin Array B**	**88.57 310**	P	**P**	**01 26 55.0**	**-1.4**
	comp=Z,45nm,0.8s,baz=111,slow=4.4,SNR=174					
BRTR			PP	**PP**	**01 30 24.9**	**-0.5**
	comp=Z,4.4nm,1.0s,baz=111,slow=6.8,SNR=3.8					
BRTR			LR	LR	02 11 29.4	
	comp=Z,307nm,22.0s,baz=66,slow=39					
BRTR	**Keskin Array B**	**88.57 310**	P	**P**	**01 26 55.0**	**-1.4**
BRTR					01 30 24.9	
BRTR			pmax	pmax		
	comp=Z,56nm,0.9s					
BRTR			pmax	pmax		
	comp=Z,4.0nm,1.0s					
SGF	**Sodankyl**	**88.59 338**	P	**P**	**01 26 55.2**	**-0.4**
SGF			pmax	pmax		
	comp=Z,65nm,1.0s					
HAMF	**Hammerfest**	**88.88 341**	*e*P	**P**	**01 26 56.9**	**-0.1**
KBS	**Kingsbay**	**89.04 350**	*e*P	**P**	**01 26 58.0**	**+0.4**
	comp=Z,26nm,0.8s					
KBS			LR	LR		
	comp=Z,2μm,21.0s					
KBS	**Kingsbay**	**89.04 350**	*e*P	**P**	**01 26 58.0**	**+0.4**
KBS			pmax	pmax		
	comp=Z,26nm,0.8s					
KBS			MLR	MLR		
	comp=Z,2μm,21.0s					
KBS	**Kingsbay**	**89.04 350**	*e*P	**P**	**01 26 58.2**	**+0.6**
HSPB	**Hornsund (broa**	**89.11 348**	*e*P	**P**	**01 26 58.7**	**+0.8**
ANTO	**Ankara**	**89.20 310**	*e*P	**P**	**01 26 58.2**	**-1.1**
	comp=Z,43nm,0.7s					
ANTO			LR	LR		
	comp=Z,700nm,21.0s					
ANTO	**Ankara**	**89.20 310**	P	**P**	**01 26 58.4**	**-0.8**
	SNR=13					
ANTO	**Ankara**	**89.20 310**	*e*P	**P**	**01 26 58.2**	**-1.1**
ANTO			pmax	pmax		
	comp=Z,43nm,0.7s					
ANTO			MLR	MLR		
	comp=Z,700nm,21.0s					
BR231	**Keskin MP Arra**	**89.22 310**	*e*P	**P**	**01 26 58.0**	**-1.4**
OUL	**Oulu**	**89.32 335**	P	**P**	**01 26 58.5**	**-0.6**
OUL			pmax	pmax		
	comp=Z,84nm,0.9s					
KMBO	**Kilima Mbogo**	**89.32 269**	LR	LR	02 07 51.1	
	comp=Z,267nm,19.4s,baz=92,slow=36					
CSS	**Mathiatis**	**89.34 305**	*e*P	**P**	**01 26 58.9**	**-1.0**
	comp=Z,14nm,0.8s					
CSS	**Mathiatis**	**89.34 305**	P	**P**	**01 26 58.7**	**-1.2**
BESE	**Bessie Mountai**	**89.70 31**	*e*P	**P**	**01 27 01.9**	**+0.8**
	comp=Z,19nm,1.0s					
FIA1	**FINESS Array S**	**89.99 332**	*e*P	**P**	**01 27 01.8**	**-0.5**
	comp=Z,82nm,0.8s					
FINES	**FINESS Array B**	**89.99 332**	P	**P**	**01 27 01.9**	**-0.4**
	comp=Z,44nm,0.6s,baz=50,slow=5.1,SNR=113					
FINES			PKKPbc	**PKKPbc**	**01 44 35.4**	**-0.4**
	comp=Z,3.8nm,1.0s,baz=214,slow=0.7,SNR=5.0					
FINES			LR	LR	02 10 26.3	
	comp=Z,2μm,21.6s,baz=80,slow=38					
FINES	**

KIEV Kiev 90.22 321 *e*P **P 01 27 01.7 -1.9**
comp=Z,61nm,1.2s
KIEV LR LR
comp=Z,1μm,20.0s
KIEV Kiev 90.22 321 *i* P **P 01 27 02.4 -1.2**
SNR=24
KIEV Kiev 90.22 321 *c i*P **P 01 27 01.8 -1.9**
KIEV pmax pmax
comp=Z,42nm,1.0s
AK11 Malin Array Si 90.25 321 *e*P **P 01 27 02.4 -1.4**
VSU Vasula 90.26 329 *c i*P **P 01 27 03.2 -0.4**
VSU pmax pmax
comp=Z,305nm,1.3s
MICGM Minsk 90.38 325⇓*e*P **P 01 27 05.0 +0.7**
MICGM PM 01 27 06.0
comp=Z,0.3nm,1.0s
MICGM *e*LR LR 02 07 20.0
MNK Minsk 90.38 325⇓*e*P **P 01 27 05.0 +0.7**
MNK pmax pmax
comp=Z,320nm,1.0s
TRO Tromso 90.73 340 *e*P **P 01 27 05.0 -0.6**
IDID Didziasalis 90.87 326 *e*P **P 01 27 05.8 -0.8**
IDID IAmb IAmb 01 27 09.3
comp=Z,28nm,0.9s
NACGM Naroch 90.93 325 *e*P **P 01 27 05.0 -1.8**
NACGM *e*SKS **SKSac 01 37 31.0 -1.8**
NACGM *e*S **S 01 37 56.0 -2.5**
NACGM *e*LQ LQ 02 02 14.0
NACGM *e*LR LR 02 08 00.0
IZAR Zarasai 91.06 326 *e*P **P 01 27 06.9 -0.5**
IZAR IAmb IAmb 01 27 10.3
comp=Z,31nm,1.2s
KIS Kishinev 91.08 317 *e*P **P 01 27 05.0 -2.7**
KIS Kishinev 91.08 317 *e*PP PP 01 30 42.0 -2.8
KIS Kishinev 91.08 317 *e*P **P 01 27 05.0 -2.7**
KIS *e* 01 30 42.0
KIS *e*PPP PPP 01 32 50.0
KIS *e* 01 37 32.0
KIS *e*S S 01 37 50.0 -10
KIS MLR MLR
comp=Z,2μm,25.0s
IIGN Ignalina 91.16 326 *e*P **P 01 27 07.3 -0.6**
IIGN IAmb IAmb 01 27 10.6
comp=Z,18nm,0.8s
ISAL Salakas 91.16 326 *e*P **P 01 27 07.3 -0.6**
ISAL IAmb IAmb 01 27 10.6
comp=Z,13nm,0.9s
VAF Ylistaro 91.17 334 P **P 01 27 07.3 -0.5**
VAF pmax pmax
comp=Z,57nm,1.1s
SORM Soroca 91.20 318⇑*i*P **P 01 27 07.2 -1.0**
SORM Soroca 91.20 318 P **P 01 27 07.1 -1.1**
ISP Isparta 91.22 308⇑*i*P **P 01 27 06.6 -2.1**
ISP Isparta 91.22 308 *e*P **P 01 27 06.7 -2.1**
comp=Z,46nm,0.7s
ISP Isparta 91.22 308 *c i*P **P 01 27 06.6 -2.1**
ISP pmax pmax
comp=Z,48nm,1.0s
CRAG Craig 91.23 34 *e*P **P 01 27 08.6 +0.4**
comp=Z,28nm,0.6s
TLCR 91.37 315⇓*i*P **P 01 27 08.4 -0.7**
WRAK Wrangell Islan 91.46 33 *e*P **P 01 27 09.6 +0.3**
comp=Z,106nm,1.6s
WRAK LR LR
comp=Z,590nm,21.0s
GIUM Giurgiulesti 91.75 316⇑*i*P **P 01 27 10.4 -0.4**
TIRR Tirgusor 91.78 315⇓*i*P **P 01 27 10.1 -1.0**
TIRR Tirgusor 91.78 315 *e*P **P 01 27 10.0 -1.0**
comp=Z,56nm,1.3s
TIRR Tirgusor 91.78 315 *e*P **P 01 27 10.0 -1.0**
TIRR pmax pmax
comp=Z,56nm,1.3s
IAS Iasi 91.89 318⇓*i*P **P 01 27 10.1 -1.4**
TLB Topalu 92.02 315⇑*i*P **P 01 27 11.2 -0.9**
PSN Preselentsi 92.07 314 *e*P **P 01 27 11.9 -0.5**
DIB Dawson Inlet, 92.08 36 *e*P **P 01 27 12.2 +0.1**
comp=Z,51nm,1.4s
H02S1 DAWSON INLET T 92.08 36 T T 03 09 41.4
HARR Harsova 92.08 315⇑*i*P **P 01 27 11.9 -0.5**
DLBC Dease Lake 92.21 31 *e*P **P 01 27 12.8 -0.1**
comp=Z,29nm,1.3s
ICOR Ion Corvin 92.27 315⇑*i*P **P 01 27 12.8 -0.5**
FETY Fethiye 92.53 307 P **P 01 27 10.8 -4.0**
FETY Fethiye 92.53 307 P **P 01 27 10.8 -4.0**
STEI Steigen 92.58 339 *e*P **P 01 27 13.4 -0.7**
GRER 92.62 316⇑*i*P **P 01 27 15.5 +0.6**
TESR Tescani 92.63 317⇑*i*P **P 01 27 13.7 -1.2**
VRI Vrincioaia 92.70 316⇑*i*P **P 01 27 14.9 -0.4**
VRI Vrincioaia 92.70 316 P **P 01 27 14.8 -0.5**
VRI pmax pmax
comp=Z,726nm,1.1s
PGOR Pogoanele 92.70 315⇑*i*P **P 01 27 15.2 -0.1**
PRAR RASCA 92.75 318⇓*i*P **P 01 27 14.4 -1.1**
PLOR Plostina 92.75 316⇑*i*P **P 01 27 15.1 -0.5**
PLOR Plostina 92.75 316 P **P 01 27 15.0 -0.5**
ISR Istrita 92.97 316⇑*i*P **P 01 27 16.6 0.0**
LOF Lofoten 93.09 340 *e*P **P 01 27 15.3 -1.2**
SUW Suwalki 93.17 325 *e*P **P 01 27 16.5 -0.7**
SUW Suwalki 93.17 325 *e*P **P 01 27 16.5 -0.7**
SULR 93.25 315⇑*i*P **P 01 27 17.6 -0.2**
MLR Muntele Rosu 93.31 316 P **P 01 27 17.7 -0.6**
comp=Z,12nm,0.8s,baz=11,slow=6.7,SNR=122
MLR LR LR 02 14 50.8
comp=Z,544nm,21.6s,baz=62,slow=39
MLR Muntele Rosu 93.31 316⇑*i*P **P 01 27 17.5 -0.8**
MLR Muntele Rosu 93.31 316 *e*P **P 01 27 17.4 -0.8**
comp=Z,56nm,0.8s
SECR 93.31 316⇓*i*P **P 01 27 18.2 +0.1**
ARG Arkhangelos 93.36 307 P **P 01 27 19.4 +0.9**
ARG pmax pmax
comp=Z,48nm,1.1s
BURAR Bucovina Array 93.37 318⇑*i*P **P 01 27 18.1 -0.4**
BURAR Bucovina Array 93.37 318 P **P 01 27 18.0 -0.4**
BUR04 Bucovina Ar. S 93.37 318 *e*P **P 01 27 17.4 -1.0**
BUR08 Bucovina Ar. S 93.37 318 *e*P **P 01 27 18.0 -0.5**
MOR8 Moi Rana 93.53 338 *e*P **P 01 27 16.9 -1.8**
SGRR Singureni 93.54 315⇑*i*P **P 01 27 18.2 -0.9**
LVV L'vov 93.65 321 *e*P **P 01 27 19.4 -0.2**
LVV *e* 01 31 06.5
LVV *e*PPP PPP 01 33 05.4
LVV *e*PS **PS 01 39 36.1 -9.2**
SZH Strazhica 93.76 314 *e*P **P 01 27 24.5 +4.3**
KONS Konsvik 93.89 338 *e*P **P 01 27 20.7 +0.4**
VOIR 93.94 316⇓*i*P **P 01 27 19.9 -1.2**
VOIR 93.94 316 P **P 01 27 20.1 -1.0**
VOIR pmax pmax
comp=Z,14nm,1.6s
ARCR ARCALIA 94.05 318⇑*i*P **P 01 27 21.6 +0.1**
GOLR 94.12 316⇓*i*P **P 01 27 20.9 -0.9**
ALN Alexandroupoli 94.14 312 *e*P **P 01 27 20.2 -1.7**
comp=Z,13nm,1.0s
ALN Alexandroupoli 94.14 312 *e*P **P 01 27 20.2 -1.7**
ALN pmax pmax
comp=Z,13nm,1.0s
SYO Syowa Base 94.14 201⇓*i*P **P 01 27 20.4 -0.9**
SYO Syowa Base 94.14 201⇓*i*PcP PcP 01 27 32.0 +10
HUMR Humele 94.17 315⇓*i*P **P 01 27 20.9 -1.2**
TAOE Nuku Hiva Isla 94.20 98 *e*PS PS 01 39 52.4 -0.6
comp=Z,694nm,28.0s
ARR Arges 94.24 316⇑*i*P **P 01 27 21.8 -0.7**
KARP Karpathos 94.25 306 *e*P **P 01 27 21.7 -0.9**
comp=Z,27nm,0.9s
PRK Paraskevi 94.28 310 P **P 01 27 20.9 -1.8**
PRK Paraskevi 94.28 310 P **P 01 27 20.9 -1.8**
PRK Paraskevi 94.28 310 P **P 01 27 20.9 -1.8**
RDO Rodhopi 94.46 312 P **P 01 27 21.4 -2.1**
RDO Rodhopi 94.46 312 P **P 01 27 21.4 -2.1**
BMR Baia Mare 94.49 319⇑*i*P **P 01 27 23.5 0.0**
KWP Kalwaria Pacla 94.53 321 *e*P **P 01 27 23.2 -0.4**
KWP Kalwaria Pacla 94.53 321 *e*P **P 01 27 23.2 -0.4**
SIGR SIGRI 94.60 310 P P 01 27 29.0 +4.9
SIGR SIGRI 94.60 310 P P 01 27 29.0 +4.9
CHOS Chios island 94.61 309 P P 01 27 37.2 +13
CJR Cluj-Napoca 94.64 318⇑*i*P **P 01 27 24.3 0.0**
CJR Cluj-Napoca 94.64 318 P **P 01 27 24.3 0.0**
KLNR Kaliningrad 94.70 326 *i* P **P 01 27 22.9 -1.3**
KLNR pmax pmax
comp=Z,127nm,1.2s
LOT Lotru 94.81 316⇓*i*P **P 01 27 24.6 -0.6**
PLD Plovdiv 94.88 313 P **P 01 27 24.0 -1.4**
BBB Bella Bella 94.90 37 *e*P **P 01 27 25.8 +0.6**
comp=Z,26nm,1.3s
TRPA Tarpa 95.00 319⇑*i*P **P 01 27 25.2 -0.6**
TRPA Tarpa 95.00 319⇑*e*P **P 01 27 25.1 -0.7**
UZH Uzhgorod 95.04 320⇑*i*P **P 01 27 26.0 +0.1**
UZH *e* 01 27 35.0
CRAR CRAIOVA 95.05 315⇓*i*P **P 01 27 25.2 -0.9**
BEL Belsk 95.14 323 *e*P **P 01 27 26.4 +0.1**
BEL Belsk 95.14 323 *e*P **P 01 27 26.4 +0.1**
NSS Namsos 95.14 337 *e*P **P 01 27 24.8 -1.2**
PGB Panagyurishte 95.17 314 *e*P **P 01 27 25.5 -1.3**
DRGR 95.22 318⇑*i*P **P 01 27 26.3 -0.6**
APE Apeiranthos 95.27 308⇑*i*P **P 01 27 25.1 -2.2**
APE Apeiranthos 95.27 308 *i* P **P 01 27 25.6 -1.7**
APE pmax pmax
comp=Z,27nm,1.0s
DAG Danmarks Havn 95.29 352⇑*i*P **P 01 27 25.7 -0.8**
comp=Z,33nm,0.7s
comp=Z,790nm,23.0s
DEV Deva 95.31 317⇑*i*P **P 01 27 27.1 -0.1**
DEV Deva 95.31 317 P **P 01 27 27.3 +0.1**
DEV pmax pmax
comp=Z,68nm,1.0s
SRE Strehaia 95.38 316⇑*i*P **P 01 27 27.5 -0.1**
CRVS Cervenica-Dubn 95.50 320 *e*P **P 01 27 28.2 +0.1**
CRVS Cervenica-Dubn 95.50 320 *e*P **P 01 27 28.2 +0.1**
NPS Neapolis 95.55 306 P **P 01 27 27.7 -0.9**
NPS Neapolis 95.55 306 P **P 01 27 27.7 -0.9**
NPS Neapolis 95.55 306 P **P 01 27 27.7 -0.9**
QSPA South Pole Qui 95.58 180 P **P 01 27 28.6 +0.4**
comp=Z,35nm,1.0s,baz=329,slow=1.3,SNR=46
QSPA PP **PP 01 31 18.5 -1.3**
comp=Z,15nm,1.1s,baz=188,slow=2.8,SNR=5.5
QSPA PKKPbc **PKKPdf 01 44 21.4 -1.0**
comp=Z,2.1nm,0.6s,baz=137,slow=1.4,SNR=7.1
QSPA LR LR 02 13 43.1
comp=Z,514nm,18.1s,baz=352,slow=37
NVR Nevrokopi 95.66 312 P **P 01 27 25.8 -3.2**
NVR Nevrokopi 95.66 312 P **P 01 27 25.8 -3.2**
LAST Lasithi 95.67 306 P **P 01 27 27.4 -1.9**
LAST Lasithi 95.67 306 P **P 01 27 27.4 -1.9**
MBAR Mbarara 95.75 270 PFAKE 01 27 40.0 +10
MBAR LR LR
comp=Z,1μm,21.0s
VTS Vitosha 95.86 314⇑*i*P **P 01 27 28.8 -1.3**
VTS Vitosha 95.86 314 *e*P **P 01 27 28.7 -1.3**
comp=Z,18nm,0.6s
VTS Vitosha 95.86 314 *e*P **P 01 27 28.7 -1.3**
VTS Vitosha 95.86 314 P **P 01 27 28.7 -1.3**
VTS Vitosha 95.86 314 *e*P **P 01 27 28.7 -1.3**
VTS pmax pmax
comp=Z,18nm,0.6s
SRS Serrai 95.91 312 P **P 01 27 27.5 -2.6**
SRS Serrai 95.91 312 P **P 01 27 27.5 -2.6**
SRS Serrai 95.91 312 P **P 01 27 27.5 -2.6**
RES Resolute Bay 95.94 10 *e*P **P 01 27 29.5 0.0**
comp=Z,92nm,1.8s
RES Resolute Bay 95.94 10 *e*P **P 01 27 29.5 0.0**
RES pmax pmax
comp=Z,91nm,1.8s
SIRR Siria 96.05 318⇑*i*P **P 01 27 30.1 -0.5**
NIE Niedzica 96.10 321 *e*P **P 01 27 31.0 +0.2**
NIE *e*S S 01 39 13.7 +29
NIE Niedzica 96.10 321 *e*P **P 01 27 31.0 +0.2**
PAIG Paliouri 96.10 311 P **P 01 27 28.7 -2.3**
PAIG Paliouri 96.10 311 P **P 01 27 28.7 -2.3**
PAIG Paliouri 96.10 311 P **P 01 27 28.7 -2.3**
KKB Krupnik 96.11 313 *e*P **P 01 27 29.5 -1.5**
IDI Anoyia 96.12 306 P **P 01 27 29.8 -1.5**
comp=Z,28nm,0.8s,baz=69,slow=5.7,SNR=14
IDI LR LR 02 18 09.8
comp=Z,122nm,20.3s,baz=64,slow=40
IDI Anoyia 96.12 306⇑*i*P **P 01 27 29.8 -1.5**
IDI Anoyia 96.12 306 *e*P **P 01 27 29.7 -1.6**
comp=Z,48nm,1.1s
SOH Sokhos 96.15 312 P **P 01 27 28.8 -2.5**
SOH Sokhos 96.15 312 P **P 01 27 28.8 -2.5**
SOH Sokhos 96.15 312 P **P 01 27 28.8 -2.5**
HFS Hagfors 96.17 332 P **P 01 27 29.8 -1.1**
comp=Z,38nm,0.8s,baz=86,slow=5.9,SNR=89
HFS LR LR 02 14 16.7
comp=Z,1μm,21.2s,baz=70,slow=38
OJC Ojcow 96.19 322 *e*P **P 01 27 30.9 -0.3**
OJC Ojcow 96.19 322 *e*P **P 01 27 31.2 0.0**
comp=Z,39nm,1.1s
OJC Ojcow 96.19 322 *e*P **P 01 27 31.2 0.0**
OJC pmax pmax
comp=Z,39nm,1.1s
KECS Kecovo 96.24 320 *e*P **P 01 27 31.2 -0.2**
KECS Kecovo 96.24 320 *e*P **P 01 27 31.2 -0.2**
BZS Buzias 96.24 317⇑*i*P **P 01 27 30.3 -1.2**
TBLU Trondheim 96.37 336 *e*P **P 01 27 29.5 -2.1**
MDVR Moldovita 96.39 316⇑*i*P **P 01 27 31.5 -0.8**
KNT Kendrikon 96.41 312 P **P 01 27 29.1 -3.3**
KNT Kendrikon 96.41 312 P **P 01 27 29.1 -3.3**
KNT Kendrikon 96.41 312 P **P 01 27 29.1 -3.3**
THE Thessaloniki 96.48 312 P **P 01 27 32.4 -0.3**
THE pmax pmax
comp=Z,31nm,0.9s
VAY Valandovo 96.61 313 P **P 01 27 31.0 -2.3**
VAY Valandovo 96.61 313 P **P 01 27 31.0 -2.3**
VAY Valandovo 96.61 313 *i* P **P 01 27 31.3 -2.0**
VAY Valandovo 96.61 313 P **P 01 27 31.0 -2.3**
BANR Banloc 96.63 317⇓*i*P **P 01 27 33.0 -0.2**
VAM Vamos 96.65 307 P **P 01 27 32.6 -1.0**
VAM Vamos 96.65 307 P **P 01 27 32.6 -1.0**
VAM Vamos 96.65 307 P **P 01 27 32.6 -1.0**
NC405 NORSAR Array S 96.67 334 *e*P **P 01 27 31.2 -1.9**
LANS Liptovska Anna 96.70 321 *e*P **P 01 27 33.8 +0.2**
LANS Liptovska Anna 96.70 321 *e*P **P 01 27 33.8 +0.2**
VILL Villia 96.77 309 P **P 01 27 31.1 -3.0**
PSZ Piszkesteto 96.77 320⇑*i*P **P 01 27 33.4 -0.6**
PSZ Piszkesteto 96.77 320⇑*e*P **P 01 27 33.2 -0.8**
PSZ Piszkesteto 96.77 320 *e*P **P 01 27 33.6 -0.4**
comp=Z,20nm,0.9s
PSZ Piszkesteto 96.77 320 *e*P **P 01 27 33.6 -0.4**
PSZ pmax pmax
comp=Z,20nm,0.9s
NC303 NORSAR Array S 96.78 334 *e*P **P 01 27 32.8 -0.8**
GKP Gorka Klasztor 96.78 325 *e*P **P 01 27 33.2 -0.5**
GKP Gorka Klasztor 96.78 325 *e*P **P 01 27 33.2 -0.5**
STIP Stip 96.80 313 *i* P **P 01 27 30.4 -3.7**
IMMV Iera Moni Meta 96.81 307 P **P 01 27 32.1 -2.2**
GRG Griva 96.82 312 P **P 01 27 32.0 -2.3**
GRG Griva 96.82 312 P **P 01 27 32.0 -2.3**
GRG Griva 96.82 312 P **P 01 27 32.0 -2.3**
GDR Gold River 96.84 39 *e*P **P 01 27 31.4 -2.7**
LKR Lokris 96.90 310 P **P 01 27 31.5 -3.1**
LKR Lokris 96.90 310 P **P 01 27 31.5 -3.1**
NB2 NORSAR Subarra 96.92 334 P **P 01 27 32.7 -1.6**
comp=Z,46nm,1.0s,baz=65,slow=4.6
NB2 NORSAR Subarra 96.92 334 P **P 01 27 32.7 -1.6**
comp=Z,49nm,1.0s,baz=65,slow=4.6
NB2 NORSAR Subarra 96.92 334 P **P 01 27 32.7 -1.6**
baz=65,slow=4.6
NB2 P **P 01 27 32.7 -1.6**
baz=65,slow=4.6
NOA NORSAR Array B 96.92 334 LR LR 02 15 55.4
comp=Z,2μm,20.8s,baz=65,slow=38
LIT Litokhoron 96.95 311 *e*P **P 01 27 32.5 -2.4**
comp=Z,44nm,0.8s
LIT Litokhoron 96.95 311 P **P 01 27 32.4 -2.5**
LIT Litokhoron 96.95 311 *e*P **P 01 27 32.5 -2.4**
LIT pmax pmax
comp=Z,44nm,0.8s
DID Didima 96.97 309 P **P 01 27 32.0 -3.0**
DID Didima 96.97 309 P **P 01 27 32.0 -3.0**
NC204 NORSAR Array S 97.02 334 *e*P **P 01 27 34.0 -0.8**
KRND KRANIDI 97.06 309 P **P 01 27 32.2 -3.2**
NBO00 NORSAR Array S 97.12 334 *e*P **P 01 27 34.2 -0.9**
NAO01 NORSAR Array S 97.15 334 *e*P **P 01 27 34.2 -1.0**
BEO Beograd 97.23 316 P **P 01 27 34.3 -1.7**
SKO Skopje 97.28 313 *i* P **P 01 27 34.6 -1.7**
VYHS Vyhne 97.29 320 *e*P **P 01 27 35.6 -0.6**
VYHS Vyhne 97.29 320 *e*P **P 01 27 35.6 -0.6**
DSF Desfina 97.31 310 P **P 01 27 33.0 -3.6**
DSF Desfina 97.31 310 P **P 01 27 33.0 -3.6**
OKC Ostrava-Krasne 97.32 322 *e*P Pdif 01 27 36.4 +0.1
OKC *e*pP PcP 01 27 45.1 +8.8
OKC *e*PP **PP 01 31 32.2 -1.1**
OKC *e*SKS **SKSac 01 38 08.3 +0.6**
OKC AMS AMS 02 19 40.0
comp=Z,700nm,21.0s
OKC Ostrava-Krasne 97.32 322 *e*P Pdif 01 27 36.4 +0.1
OKC *e* 01 27 45.1
OKC *e* 01 31 32.2
OKC *e* 01 38 08.3
OKC MLR MLR
comp=Z,700nm,21.0s
AGG Agios Georgios 97.32 310 *e*P **P 01 27 33.6 -2.9**
comp=Z,61nm,0.8s
AGG Agios Georgios 97.32 310 P **P 01 27 33.4 -3.2**
AGG Agios Georgios 97.32 310 *e*P **P 01 27 33.7 -2.9**
AGG pmax pmax
comp=Z,61nm,0.8s
DOMB Dombas 97.41 335 *e*P **P 01 27 35.6 -0.9**
BSD Bornholm Skovb 97.43 327 *i* P **P 01 27 34.8 -1.8**
comp=Z,59nm,1.1s
comp=Z,2μm,25.0s
THL Klokotos Trika 97.44 311 P **P 01 27 33.7 -3.3**
BUD Budapest 97.46 319 P **P 01 27 36.8 -0.2**
BUD pmax pmax
comp=Z,19nm,1.0s
GUR Goura 97.56 309 P **P 01 27 35.0 -2.8**
GUR Goura 97.56 309 P **P 01 27 35.0 -2.8**
BIA Bitola 97.60 313 P **P 01 27 35.9 -1.9**
BIA Bitola 97.60 313 P **P 01 27 35.9 -1.9**
BIA Bitola 97.60 313 *i* P **P 01 27 35.5 -2.3**
OSL Oslo 97.61 333 *e*P **P 01 27 37.3 0.0**
FNA Florina 97.62 312 *e*P **P 01 27 35.6 -2.3**
comp=Z,15nm,0.7s
FNA Florina 97.62 312 P **P 01 27 35.2 -2.7**
FNA Florina 97.62 312 *e*P **P 01 27 35.6 -2.3**
FNA pmax pmax
comp=Z,15nm,0.7s
VLX Vlachokerasia 97.66 309 P **P 01 27 35.6 -2.6**
VLX Vlachokerasia 97.66 309 P **P 01 27 35.6 -2.6**
TRIZ Trizonia 97.67 310 P **P 01 27 35.4 -2.7**
SERG Sergoula 97.67 310 P **P 01 27 36.0 -2.2**
KLV Kalavryta, Ach 97.69 309 P **P 01 27 35.5 -2.8**
KLV Kalavryta, Ach 97.69 309 P **P 01 27 35.5 -2.8**
MORC Moravsky Berou 97.71 322⇑*i*P **P 01 27 38.0 -0.2**
MORC Moravsky Berou 97.71 322 P Pdif 01 27 38.2 0.0
MORC pmax pmax
comp=Z,65nm,1.0s
MORC Moravsky Berou 97.71 322 *e*PDIFF **P 01 27 37.9 -0.2**
ANX Ano Chora 97.73 310 P **P 01 27 36.3 -2.2**
EVR Evrytania 97.74 310 P **P 01 27 36.1 -2.5**
EVR Evrytania 97.74 310 P **P 01 27 36.1 -2.5**
DIVS Divibare 97.75 316 *e*P **P 01 27 36.8 -1.7**
comp=Z,26nm,0.8s
LAKA Lakka 97.77 310 P **P 01 27 36.4 -2.2**
LAKA Lakka 97.77 310 P **P 01 27 36.4 -2.2**
MOL Molde 97.79 336 *e*P **P 01 27 37.0 -1.1**
YKW3 Yellowknife Ar 97.80 24 *e*P **P 01 27 38.1 0.0**
comp=Z,14nm,1.1s
KPRO Kipourio 97.83 311 P **P 01 27 35.7 -3.2**
YKA Yellowknife Ar 97.84 24 P **P 01 27 37.7 -0.5**
comp=Z,6.1nm,0.8s,baz=298,slow=4.7,SNR=20
YKA PKiKP **PKiKP 01 32 12.7 +1.0**
comp=Z,1.3nm,0.7s,baz=307,slow=2.0,SNR=6.2
YKA PKKPbc **PKKPbc 01 44 12.0 -3.3**
comp=Z,5.4nm,0.6s,baz=121,slow=2.9,SNR=30
YKA LR LR 02 13 07.3
comp=Z,23nm,21.1s,baz=306,slow=36
JAVC Velka Javorina 97.92 321 *e*PDIFF Pdif 01 27 39.8 +0.7
OHR Ohrid 97.96 313 *i* P **P 01 27 37.1 -2.3**
OHR Ohrid 97.96 313 P **P 01 27 38.4 -1.0**
OHR pmax pmax
comp=Z,31nm,1.1s
CSKK Cs˙‡kako 97.99 319⇓*e*P **P 01 27 38.9 -0.5**
PVO Paravola 98.03 310 P **P 01 27 37.8 -1.9**
ITM Ithomi 98.06 309 *e*P **P 01 27 38.1 -1.8**
comp=Z,64nm,1.4s
PHP Peshkopia 98.07 313 P **P 01 27 37.7 -2.2**
PHP Peshkopia 98.07 313 P **P 01 27 37.7 -2.2**
PHP Peshkopia 98.07 313 P **P 01 27 37.7 -2.2**
KRLC Kraliky 98.08 322 *e*P **P 01 27 37.2 -2.6**
KRLC *ex* x 01 27 46.4
KRLC Kraliky 98.08 322 *e*P **P 01 27 37.2 -2.6**
KRLC *e* 01 27 46.4
KBN Korca 98.09 312 P **P 01 27 37.4 -2.7**
KBN Korca 98.09 312 P **P 01 27 37.4 -2.7**
KBN Korca 98.09 312 P **P 01 27 37.4 -2.7**
KSP Ksiaz 98.12 323 *e*P Pdif 01 27 40.0 +0.1
KSP *e*S S 01 39 25.5 +24
KSP Ksiaz 98.12 323 *e*P Pdif 01 27 40.0 +0.1
AKN Aaknes 98.20 336 *e*P **P 01 27 39.8 -0.2**
RLS Riolos of Patr 98.21 310 P **P 01 27 38.3 -2.2**
RLS Riolos of Patr 98.21 310 P **P 01 27 38.3 -2.2**
DSL Palaion Diasel 98.23 311 P **P 01 27 38.5 -2.2**
DSL Palaion Diasel 98.23 311 P **P 01 27 38.5 -2.2**
KONO Kongsberg 98.25 333 *i* P **P 01 27 38.5 -1.7**
KONO pmax pmax
comp=Z,17nm,1.0s
KONO Kongsberg 98.25 333 *e*P **P 01 27 39.6 -0.6**
DPC Dobruska-Polom 98.27 323 *e*P Pdif 01 27 40.9 +0.3
DPC *ex* x 01 27 47.6
DPC *e*PP **PP 01 31 43.5 +2.8**
DPC *e*SKS **SKSac 01 38 14.5 +1.8**
DPC AMS AMS 02 15 50.0
comp=Z,800nm,18.9s
DPC Dobruska-Polom 98.27 323 *e*P Pdif 01 27 40.9 +0.3
DPC *e* 01 31 43.5
DPC *e* 01 38 14.5
DPC MLR MLR
comp=Z,800nm,18.9s
JAN Janina 98.28 311 P **P 01 27 38.9 -2.0**
JAN Janina 98.28 311 P **P 01 27 38.9 -2.0**
JAN Janina 98.28 311 P **P 01 27 38.9 -2.0**
PDO Prodromos 98.29 310 P **P 01 27 38.9 -2.0**
MODS Modra-Piesok 98.31 320 *e*P **P 01 27 36.8 -4.0**
MODS Modra-Piesok 98.31 320 *e*P **P 01 27 36.8 -4.0**
UPC Upice 98.41 323 *e*P Pdif 01 27 41.5 +0.3
UPC AMS AMS 02 17 10.0
comp=Z,1μm,19.2s
UPC Upice 98.41 323 *e*P Pdif 01 27 41.5 +0.3
UPC MLR MLR
comp=Z,1μm,19.2s
VRAC Vranov 98.44 322⇑*i*P Pdif 01 27 41.6 +0.2
VRAC Vranov 98.44 322 P Pdif 01 27 41.6 +0.2
VRAC Vranov 98.44 322 *e*PDIFF Pdif 01 27 41.4 0.0
TIR Tirane 98.58 313⇓*i*P **P 01 27 41.2 -0.9**
TIR Tirane 98.58 313 *e*P **P 01 27 40.9 -1.2**
comp=Z,25nm,0.7s
TIR Tirane 98.58 313 *e*P **P 01 27 40.9 -1.2**
TIR pmax pmax
comp=Z,25nm,0.7s
KRUC Moravsky 98.65 321 *e*PDIFF **P 01 27 42.1 -0.2**
KFL Anninata 98.71 310 P **P 01 27 40.0 -2.8**
PDG Podgorica 98.72 314⇑*i*P **P 01 27 41.3 -1.4**
PDG Podgorica 98.72 314 P **P 01 27 41.3 -1.4**
TTG Podgorica 98.72 314 *e*P **P 01 27 41.3 -1.4**
comp=Z,32nm,1.0s
TTG Podgorica 98.72 314 *e*P **P 01 27 41.3 -1.4**
TTG pmax pmax
comp=Z,32nm,1.0s
SGD Sagiada 98.76 311 P **P 01 27 40.8 -2.1**
PGC Sidney 98.80 39 *e*P Pdif 01 27 44.5 +1.6
comp=Z,20nm,1.1s
VLS Valsamata 98.85 310 P **P 01 27 41.2 -2.2**
VLS Valsamata 98.85 310 P **P 01 27 41.2 -2.2**
VLS Valsamata 98.85 310 P **P 01 27 41.2 -2.2**
NLWA Neilton Lookou 98.94 40 *e*P **P 01 27 43.4 -0.2**
comp=Z,26nm,1.3s
NLWA LR LR
comp=Z,536nm,20.0s
SOP Sopron 98.99 320 P **P 01 27 43.4 -0.4**
SOP pmax pmax
comp=Z,11nm,1.0s
HYA Hoyanger 99.03 335 *e*P **Pdif 01 27 44.2 +0.6**
KEK Kerkira 99.06 312 P **Pdif 01 27 40.4 -3.9**
KEK Kerkira 99.06 312 P **Pdif 01 27 40.4 -3.9**
LLLB Lillooet 99.10 37 *e*P **Pdif 01 27 44.8 +0.5**
comp=Z,29nm,1.4s
PVCC Panska Ves 99.26 323 *e*P **Pdif 01 27 45.1 +0.1**
PVCC *ex* x 01 27 51.9
PVCC AMS AMS 02 19 00.0
comp=Z,1μm,23.3s
PVCC Panska Ves 99.26 323 *e*P **Pdif 01 27 45.1 +0.1**
PVCC MLR MLR
comp=Z,1μm,23.3s
GOPC GO Pecny, Ondr 99.35 322 *e*P **Pdif 01 27 45.6 +0.2**
GOPC *e*PP PP 01 31 56.8 +7.9
GOPC AMS AMS 02 19 40.0
comp=Z,700nm,19.4s
GOPC GO Pecny, Ondr 99.35 322 *e*P **Pdif 01 27 45.6 +0.2**
GOPC *e* 01 31 56.8
GOPC MLR MLR

comp=Z,700nm,19.4s
CONA Conrad Observa 99.36 320 *i* Pdiff **Pdif 01 27 44.4 -1.1**
comp=Z,10nm,1.4s
CONA *e*PP **PP 01 31 47.7 -1.4**
comp=Z,18nm,1.4s
MATP Matopo 99.40 250 LR LR 02 10 43.3
comp=Z,583nm,19.6s,baz=62,slow=34
E03A Lebam 99.41 41 *e*P **Pdif 01 27 46.6 +0.9**
comp=Z,28nm,1.1s
LSZ Lusaka 99.44 256 *e*P **Pdif 01 27 45.0 -1.6**
comp=Z,16nm,1.0s
LSZ LR LR
comp=Z,674nm,20.0s
LSZ Lusaka 99.44 256 *e*P **Pdif 01 27 45.0 -1.6**
LSZ pmax pmax
comp=Z,16nm,1.0s
LSZ MLR MLR
comp=Z,674nm,20.0s
ODD1 Odda 99.46 334 *e*P **Pdif 01 27 45.7 0.0**
BLY Banja Luka 99.50 317⇑ *i*P **Pdif 01 27 45.6 -0.5**
BLY Banja Luka 99.50 317 *e*P **Pdif 01 27 46.0 -0.1**
comp=Z,16nm,0.9s
PRA Prague 99.51 323 *e*P **Pdif 01 27 46.6 +0.5**
PRA AMS AMS 02 18 10.0
comp=Z,900nm,16.4s
PRA Prague 99.51 323 *e*P **Pdif 01 27 46.6 +0.5**
PRA MLR MLR
comp=Z,900nm,16.4s
BRG Berggiesshubel 99.51 324 *i* P **Pdif 01 27 46.1 0.0**
comp=Z,30nm,0.9s
BRG pP **pP 01 28 07.0 +2.1**
BRG PP **PP 01 31 46.0 -4.0**
BRG S **S 01 39 13.0 -0.4**
BRG SS **SS 01 45 56.0 -8.3**
comp=N,804nm,23.4s
comp=E,823nm,22.8s
comp=Z,1μm,17.7s
BRG Berggiesshubel 99.51 324 *i* P **Pdif 01 27 46.1 0.0**
BRG 01 31 46.0
BRG S **S 01 39 13.0 -0.4**
BRG pmax pmax
comp=Z,30nm,0.9s
BRG MLR MLR
comp=N,804nm,23.4s
BRG MLR MLR
comp=E,823nm,22.8s
BRG MLR MLR
comp=Z,1μm,17.7s
STON Ston 99.70 315 P **Pdif 01 27 44.1 -3.0**
BLS5 Blasjo 99.77 333 *e*P **Pdif 01 27 47.2 +0.1**
B05A Bryant 99.78 39 P **Pdif 01 27 47.3 0.0**
baz=290
ARSA Arzberg 99.80 320 *i* Pdiff **Pdif 01 27 47.1 -0.4**
comp=Z,7.2nm,0.9s,SNR=5.5
ARSA *e*PP **PP 01 31 51.1 -1.3**
comp=Z,7.0nm,1.2s
ARSA *e*PKKPbc **PKKPbc 01 44 05.6 -3.7**
comp=Z,0.6nm,0.3s
CLL Collm 99.90 324 *i* Pdif **Pdif 01 27 47.0 -0.8**
comp=Z,131nm,2.3s
CLL *i* 01 27 53.8
CLL *es*Pdif **pP 01 28 05.0 -1.7**
CLL *e*PP **PP 01 31 47.0 -6.0**
CLL *es*PP 01 32 14.0
CLL *e* 01 37 06.0
CLL *e*SKSac **SKSac 01 38 23.0 +2.3**
CLL *e*Sdif **S 01 39 20.0 +3.3**
CLL *e*SP **SP 01 40 43.0 -1.2**
CLL *e*PPS PPS 01 41 35.0
CLL *e*SS SS 01 46 24.0 +14
CLL *e*SSS SSS 01 50 24.0
CLL Collm 99.90 324 *e*Pdif **Pdif 01 27 47.5 -0.3**
comp=Z,31nm,1.3s
CLL Collm 99.90 324 *i* P **Pdif 01 27 47.0 -0.8**
CLL *e* 01 38 23.0
CLL *e*S **S 01 39 20.0 +3.3**
CLL pmax pmax
comp=Z,131nm,2.3s
G03D McMinnville, O 100.03 42 P **Pdif 01 27 48.4 -0.1**
baz=289
RKT Rikitea 100.08 112 *e*LR LR 02 00 33.1
comp=Z,2μm,26.2s
PERS Pernice 100.26 319 *e*P **Pdif 01 27 49.0 -0.6**
PERS *e*S **SKSac 01 38 20.3 -2.5**
SOKA Soboth 100.30 319 *i* Pdiff **Pdif 01 27 49.1 -0.7**
comp=Z,9.5nm,1.0s,SNR=9.0
SOKA PP **PP 01 31 58.1 +1.8**
comp=Z,18nm,1.4s
SOKA *e*SKSac **SKSac 01 38 21.0 -2.1**
comp=Z,5.5nm,1.8s
STAV Stavanger 100.35 333 *e*P **Pdif 01 27 48.7 -0.9**
KHC Kasperske Hory 100.36 322 *e*P **Pdif 01 27 50.1 +0.1**
KHC *ex* x 01 27 57.8
KHC *ex* x 01 28 12.5
KHC *e*PP **PP 01 31 54.1 -2.5**
KHC *e*SKS 01 38 23.4
KHC AMS AMS 02 17 10.0
comp=Z,2μm,21.2s
KHC Kasperske Hory 100.36 322 *e*P **Pdif 01 27 50.1 +0.1**
KHC *e* 01 31 54.1
KHC *e* 01 38 23.4
KHC MLR MLR
comp=Z,2μm,21.2s
OZLJ Ozalj 100.37 318 P **Pdif 01 27 49.5 -0.4**
GEC2 GERESS Array S 100.39 322 *e*Pdif **Pdif 01 27 50.4 +0.2**
GEC2 GERESS Array S 100.39 322 *e*P **Pdif 01 27 50.4 +0.2**
GERES GERESS Array B 100.39 322 P **Pdif 01 27 49.6 -0.5**
comp=Z,7.2nm,0.8s,baz=73,slow=4.6,SNR=60
GERES PKiKP **PKiKP 01 32 18.0 +1.2**
comp=Z,1.7nm,0.6s,baz=90,slow=5.3,SNR=5.3
MOA Molln 100.39 321 *e*Pdiff **Pdif 01 27 49.7 -0.4**
comp=Z,17nm,0.8s,SNR=9.6
MOA *e*SKSac **SKSac 01 38 18.7 -4.6**
comp=Z,9.0nm,2.0s
MOA *e*PKKPbc **PKKPbc 01 44 05.0 -2.6**
comp=Z,0.9nm,0.5s
GEA0 GERESS Array S 100.39 322 *e*Pdif **Pdif 01 27 49.8 -0.4**
KMY Karmoy 100.42 333 *e*P **Pdif 01 27 50.1 +0.2**
I03D Drain, OR 100.45 44 P **Pdif 01 27 51.1 +0.7**
baz=289
UDBI Udbina 100.53 317 P **Pdif 01 27 49.7 -1.1**
BOJS Bojanci 100.55 318 *i* P **Pdif 01 27 50.7 -0.2**
BOJS *e*S **SKSac 01 38 24.6 +0.5**
NKC Novy Kostel 100.64 323 *e*P **Pdif 01 27 51.3 +0.2**
NKC AMS AMS 02 17 20.0
comp=Z,1μm,15.9s
NKC Novy Kostel 100.64 323 *e*P **Pdif 01 27 51.3 +0.2**
NKC MLR MLR
comp=Z,1μm,15.9s
OBKA Obir 100.67 319 *i* Pdiff **Pdif 01 27 51.0 -0.5**
comp=Z,9.2nm,0.9s
OBKA *e*PP **PP 01 32 00.3 +1.2**
comp=Z,12nm,1.6s
OBKA *e*SKSac **SKSac 01 38 16.9 -8.0**
comp=Z,5.5nm,1.2s
OBKA *e*PKKPbc **PKKPbc 01 44 02.0 -4.8**
comp=Z,0.4nm,0.1s
VISS Visnje 100.72 319 *e*P **Pdif 01 27 51.2 -0.4**
VISS *e*S **SKSac 01 38 24.2 -0.8**
WET Wettzell 100.79 322 P **Pdif 01 27 52.3 +0.5**
WET pmax pmax
comp=Z,10.0nm,1.6s
MOX Moxa 100.97 324 P **Pdif 01 27 52.7 +0.1**
MOX pmax pmax
comp=Z,15nm,1.0s
I04A Tendick Farm, 101.06 43 P **Pdif 01 27 52.6 -0.7**
baz=289
SCO Scoresbysund 101.08 350 *i* P **Pdif 01 27 54.7 +2.1**
comp=Z,8.8nm,0.9s
comp=Z,870nm,26.0s
SCO Scoresbysund 101.08 350 *e*Pdif **Pdif 01 27 53.3 +0.7**
SCO Scoresbysund 101.08 350 *e*P **Pdif 01 27 53.3 +0.7**
NVLJ Novalja 101.12 317 P **Pdif 01 27 51.5 -1.9**
JAVS Javornik 101.20 319 *e*P **Pdif 01 27 53.0 -0.9**
JAVS *e*S **SKSac 01 38 27.5 0.0**
MYKA Terra Mystica 101.22 320 *i* Pdiff **Pdif 01 27 53.5 -0.4**
comp=Z,3.6nm,0.9s
MYKA *e*SKSac **SKSac 01 38 26.8 -0.6**
comp=Z,1.6nm,0.4s
MYKA *i* PKKPdf **PKKPbc 01 44 04.6 -0.6**
comp=Z,1.6nm,0.3s
KBA Koelnbreinsper 101.25 320 *i* Pdiff **Pdif 01 27 52.8 -1.4**
comp=Z,10.0nm,1.1s
KBA SKSac **SKSac 01 38 25.6 -2.2**
comp=Z,7.8nm,1.2s
KBA *e*PKKPbc **PKKPbc 01 44 00.2 -5.2**
comp=Z,0.5nm,0.1s
KBA Koelnbreinsper 101.25 320 P **Pdif 01 27 54.6 +0.5**
SUMG Summit 101.28 355 *i* P **Pdif 01 27 56.4 +2.4**
J04D Umpqua Nationa 101.45 44 P **Pdif 01 27 54.4 -0.8**
baz=289
TIP Timpagrande 101.47 312⇑ *i*P **Pdif 01 27 54.3 -0.8**
TIP Timpagrande 101.47 312 *e*Pdif **Pdif 01 27 54.7 -0.5**
B08A Colville Reser 101.47 38 *e*Pdif **Pdif 01 27 55.1 +0.3**
YBH Yreka Blue Hor 101.51 46 *e*Pdif **Pdif 01 27 56.5 +1.2**
YBH Yreka Blue Hor 101.51 46 *e*P **Pdif 01 27 56.5 +1.2**
GRFO Grafenberg 101.58 323 *e*Pdif **Pdif 01 27 55.4 +0.1**
GRFO Grafenberg 101.58 323 *e*P **Pdif 01 27 55.4 +0.1**
ABTA Abfaltersbach 101.90 320 *i* Pdiff **Pdif 01 27 55.5 -1.5**
comp=Z,7.8nm,0.8s
ABTA PKiKP **PKiKP 01 32 15.1 -4.5**
comp=Z,7.7nm,1.3s
ABTA *e*SKSac **SKSac 01 38 28.2 -2.6**
comp=Z,9.0nm,1.2s
ABTA *e*PKKPdf **PKKPbc 01 44 02.8 -0.5**
comp=Z,0.4nm,0.3s
J05D Fort Rock, OR 102.04 44 P **Pdif 01 27 57.6 -0.1**
baz=290
PINE Pine Mountain 102.07 43 *e*Pdif **Pdif 01 27 58.6 +0.7**
HAWA Hanford 102.07 40 PFAKE 01 28 10.0 +12
HAWA LR LR
comp=Z,546nm,22.0s
M04C Macdoel 102.11 45 P **Pdif 01 27 57.8 -0.3**
baz=289
WTTA Wattenberg 102.26 321 *i* Pdiff **Pdif 01 27 58.2 -0.4**
comp=Z,11nm,0.8s
WTTA *e*PKiKP **PKiKP 01 32 18.2 -2.2**
comp=Z,16nm,1.3s
WTTA *e*SKSac **SKSac 01 38 32.2 -0.4**
comp=Z,4.2nm,0.7s
WATA Walderalm 102.27 321 *i* Pdiff **Pdif 01 27 57.7 -1.0**
comp=Z,7.6nm,0.8s
WATA PKiKP **PKiKP 01 32 18.1 -2.3**
comp=Z,6.7nm,0.7s
WATA *e*SKSac **SKSac 01 38 25.8 -6.9**
comp=Z,10nm,1.4s
BOSA Boshof 102.53 242 P **Pdif 01 28 00.0 -0.1**
comp=Z,4.4nm,1.0s,baz=102,slow=1.2,SNR=6.2
BOSA PKKPbc **PKKPbc 01 44 02.0 +1.0**
comp=Z,4.7nm,1.0s,baz=248,slow=3.1,SNR=6.5
MOTA Moosalm 102.57 321 *i* Pdiff **Pdif 01 27 58.2 -1.8**
comp=Z,15nm,0.8s,SNR=15
MOTA PKiKP **PKiKP 01 32 20.5 -0.4**
comp=Z,8.0nm,1.0s
MOTA *i* SKSac **SKSac 01 38 32.8 -1.2**
MOTA *e*PKKPdf **PKKPbc 01 44 02.2 +0.7**
comp=Z,0.8nm,0.4s
O03D Paynes Creek 102.62 47 P **Pdif 01 27 59.7 -0.6**
baz=289
RETA Reutte 102.72 321 Pdiff **Pdif 01 27 60.0 -0.6**
comp=Z,3.3nm,0.7s
RETA *e*PP **PP 01 32 11.6 -2.9**
comp=Z,12nm,1.3s
RETA *e*SKSac **SKSac 01 38 32.0 -2.6**
comp=Z,13nm,1.5s
NEW Newport 102.86 38 P **Pdif 01 28 01.1 -0.1**
baz=294
NEW Newport 102.86 38 *e*Pdif **Pdif 01 28 02.0 +0.9**
NEW LR LR
comp=Z,707nm,22.0s
NEW Newport 102.86 38 *e*P **Pdif 01 28 02.0 +0.9**
NEW MLR MLR
comp=Z,707nm,22.0s
AQU L'Aquila 102.87 316 *e*Pdif **Pdif 01 28 00.1 -1.2**
AQU L'Aquila 102.87 316 *e*P **Pdif 01 28 00.1 -1.2**
FETA Feichten 102.93 321 *i* Pdiff **Pdif 01 28 01.4 -0.2**
comp=Z,13nm,1.0s
FETA *e*PKiKP **PKiKP 01 32 19.0 -2.5**
comp=Z,5.5nm,0.9s
FETA *e*SKSac **SKSac 01 38 32.3 -3.5**
comp=Z,13nm,1.3s
FETA *e*PKKPbc **PKKPbc 01 43 59.5 -0.9**
comp=Z,1.2nm,0.6s
MOD Modoc Plateau 103.16 45 *e*Pdif **Pdif 01 28 03.5 +0.8**
DAVA Damuels 103.36 321 Pdiff **Pdif 01 28 03.7 +0.2**
comp=Z,8.4nm,1.4s
DAVA *e*PKiKP **PKiKP 01 32 21.0 -1.3**
comp=Z,11nm,1.1s
DAVA *e*SKSac **SKSac 01 38 34.7 -3.0**
comp=Z,7.7nm,1.1s
FUORN Ofenpass-Fuorn 103.38 321 *e*Pdif **Pdif 01 28 04.0 +0.3**
BMO Blue Mountains 104.10 41 PFAKE 01 28 20.0 +13
BMO LR LR
comp=Z,459nm,20.0s
WVOR Wild Horse Val 104.12 44 *e*PKKPbc PKKPbc 01 43 56.1 -0.6
WVOR *e*PKKPab **PKKPab 01 44 14.9 -0.9**
WVOR LR LR
comp=Z,507nm,22.0s
MEM Membach 104.21 325 ⇑P **Pdif 01 28 06.9 0.0**
MEM Membach 104.21 325 P **Pdif 01 28 09.7 +2.7**
MEM pmax pmax
comp=Z,15nm,1.1s
WLF Walferdange 104.56 325 ⇑P **Pdif 01 28 09.8 +1.2**
WLF Walferdange 104.56 325 *e*Pdif **Pdif 01 28 10.5 +1.9**
WLF Walferdange 104.56 325 *e*P **Pdif 01 28 10.5 +1.9**
MSO Missoula 105.42 38 P **PKiKP 01 32 26.4 +0.3**
baz=296
MFID Camas Ranch 105.65 42 *e*Pdif **Pdif 01 28 12.8 -1.0**
comp=Z,6.6nm,1.2s
KVN Kaiserville 105.73 47 *e*Pdif **Pdif 01 28 14.7 +0.4**
KVN Kaiserville 105.73 47 *e*P **Pdif 01 28 14.7 +0.4**
BORG Borgarnes 105.80 346 PFAKE 01 32 40.0
BORG LR LR
comp=Z,366nm,22.0s
NVAR Mina Array Bea 105.80 48 Pdiff **Pdif 01 28 14.8 +0.1**
comp=Z,2.2nm,0.8s,baz=266,slow=4.7,SNR=12
NVAR PKKPbc **PKKPbc 01 43 51.7 +0.1**
comp=Z,4.3nm,0.7s,baz=140,slow=4.4,SNR=22
NVAR PKKPab **PKKPab 01 44 07.2 -1.1**
comp=Z,6.5nm,0.7s,baz=126,slow=5.0,SNR=15
BMN Battle Mountai 105.85 45 *e*PKKPbc PKKPbc 01 43 50.3 -1.1
BMN *e*PKKPab **PKKPab 01 44 06.5 -1.6**
SUR Sutherland 106.23 238 *e*PKP **PKiKP 01 32 27.8 -0.2**
SUR LR LR
comp=Z,2μm,20.0s
BNI Bardonecchia 106.31 320 *e*Pdif **Pdif 01 28 16.5 -0.2**
BNI Bardonecchia 106.31 320 *e*P **Pdif 01 28 16.5 -0.2**
ESK Eskdalemuir 106.40 333 PFAKE 01 32 40.0
ESK LR LR
comp=Z,1μm,21.0s
HLID Hailey 106.53 41 P **PKiKP 01 32 28.5 +0.2**
baz=295
HLID Hailey 106.53 41 *e*Pdif **Pdif 01 28 18.9 +1.2**
HLID *e*PKKP **PKKPab 01 44 03.3 -1.8**
HLID LR LR
comp=Z,547nm,21.0s
BLG Laguna Peak, P 106.69 52 P **PKiKP 01 32 29.0 +0.4**
baz=289
SNAA Sanae 107.03 195 P **Pdif 01 28 20.0 +0.9**
SNAA Sanae 107.03 195 Pdiff **Pdif 01 28 20.0 +0.9**
comp=Z,2.4nm,0.6s,baz=166,slow=5.6,SNR=17
SNAA PKKPbc **PKKPbc 01 43 46.2 -2.5**
comp=Z,2.4nm,0.7s,baz=250,slow=2.6,SNR=13
SNAA PKKPab **PKKPdf 01 44 00.9 +0.1**
comp=Z,8.4nm,1.1s,baz=334,slow=4.4,SNR=5.5
DAC Darwin (Calif) 107.09 49 *e*PKKPbc PKKPbc 01 43 47.2 -0.3
DAC *e*PKKPab **PKKPdf 01 44 01.2 +1.3**
MPMC Manual Prospec 107.24 50 P **PKiKP 01 32 30.2 +0.3**
baz=291
EGMT Eagleton 107.37 36 P **PKiKP 01 32 30.0 +0.4**
baz=300
EGMT Eagleton 107.37 36 *e*PKP **PKiKP 01 32 29.8 +0.2**
EGMT LR LR
comp=Z,607nm,22.0s
BOZ Bozeman (W) 107.41 39 *e*PKKPbc PKKPbc 01 43 45.3 -1.5
BOZ *e*PKKP **PKKPdf 01 43 59.3 -0.1**
BOZ LR LR
comp=Z,420nm,20.0s
SFJD Kangerlussuaq 107.46 359 PFAKE 01 32 40.0
SFJD LR LR
comp=Z,1μm,22.0s
FFC Flin Flon 107.62 27 PFAKE 01 32 40.0
FFC LR LR
comp=Z,928nm,22.0s
GSC Goldstone, Bar 108.03 50 *e*Pdif **Pdif 01 28 25.6 +1.1**
GSC Goldstone, Bar 108.03 50 *e*P **Pdif 01 28 25.6 +1.1**
FCC Fort Churchill 108.06 21 *e*PKP **PKiKP 01 32 30.4 0.0**
HVU Hansel Valley 108.38 43 *e*Pdif **Pdif 01 28 28.7 +2.7**
HVU Hansel Valley 108.38 43 *e*P **Pdif 01 28 28.7 +2.7**
LKWY Lake 108.66 39 PFAKE 01 32 40.0
LKWY LR LR
comp=Z,2μm,20.0s
PFO Pinyon Flats O 108.89 52 PFAKE 01 32 50.0
PFO LR LR
comp=Z,815nm,19.0s
VNA3 Neumayer Olymp 108.98 194 P **Pdif 01 28 30.4 +2.7**
PSUT Pine Spring 108.99 46 *e*Pdif **Pdif 01 28 29.3 +0.5**
DUG Dugway, Tooele 109.04 44 P **PKiKP 01 32 33.5 +0.5**
baz=295
DUG Dugway, Tooele 109.04 44 *e*PKP **PKiKP 01 32 34.1 +1.1**
DUG *e*PKKPbc **PKKPbc 01 43 40.9 -0.5**
DUG *e*PKKPab **PKKPab 01 43 53.0 -1.0**
DUG LR LR
comp=Z,390nm,22.0s
VNA1 Neumayer--Stat 109.04 195 P **Pdif 01 28 31.1 +3.2**
AHID Auburn Hatcher 109.06 41 *e*PKKPab PKKPab 01 43 51.5 -2.5
AHID LR LR
comp=Z,658nm,22.0s
GMRC Granite Mounta 109.09 50 P **PKiKP 01 32 34.1 +0.8**
baz=292
RLMT Red Lodge 109.10 38 *e*PKKPab PKKPab 01 43 51.9 -1.9
RLMT LR LR
comp=Z,601nm,19.0s
BELC Belle Mtn. Jos 109.12 51 P **PKiKP 01 32 33.3 0.0**
baz=291
HWUT Hardware Ranch 109.27 42 *e*PKKPbc PKKPbc 01 43 39.4 -1.4
HWUT *e*PKKPab **PKKPab 01 43 51.1 -1.9**
HWUT LR LR
comp=Z,781nm,21.0s
TSUM Tsumeb 109.66 252 *e*PKP **PKiKP 01 32 34.7 0.0**
TSUM LR LR
comp=Z,727nm,20.0s
BW06 Boulder Array 110.06 41 P **PKiKP 01 32 34.6 -0.4**
baz=299
BW06 Boulder Array 110.06 41 *e*PKKPbc PKKPbc 01 43 36.0 -2.4
BW06 *e*PKKPab **PKKPab 01 43 47.3 -2.2**
BW06 LR LR
comp=Z,803nm,22.0s
PDAR Pinedale Array 110.06 41 PKiKP **PKiKP 01 32 35.2 +0.2**
comp=Z,1.0nm,0.6s,baz=256,slow=1.2,SNR=6.9
PDAR PKKPbc **PKKPbc 01 43 35.6 -2.8**
comp=Z,1.6nm,0.6s,baz=116,slow=3.4,SNR=10
PDAR PKKPab **PKKPab 01 43 47.4 -2.1**
comp=Z,5.7nm,0.7s,baz=111,slow=6.5,SNR=18
LAO LASA Array 110.11 36 P **PKiKP 01 32 35.1 +0.3**
baz=303
LAO LASA Array 110.11 36 *e*PKP **PKiKP 01 32 36.5 +1.7**
LAO LR LR
comp=Z,579nm,20.0s
DGMT Dagmar 110.27 33 PFAKE 01 32 50.0
DGMT LR LR
comp=Z,612nm,22.0s
WUAZ Wupatki 112.04 48 P **PKiKP 01 32 39.4 +0.6**
baz=295
WUAZ Wupatki 112.04 48 *e*PKKPbc PKKPbc 01 43 31.9 +0.3
WUAZ *e*PKKPab **PKKPab 01 43 40.1 -0.5**
WUAZ LR LR
comp=Z,739nm,20.0s
K22A Casper 112.06 39 P **PKiKP 01 32 38.4 -0.3**
baz=301
O20A White River Ci 112.19 43 P **PKiKP 01 32 39.1 0.0**
baz=299
O20A White River Ci 112.19 43 *e*PKP **PKiKP 01 32 39.1 0.0**
RSSD Black Hills 112.81 37 P **PKiKP 01 32 40.0 -0.2**
baz=304
RSSD Black Hills 112.81 37 *e*PKP **PKiKP 01 32 40.5 +0.3**
RSSD Black Hills 112.81 37 *e*PKIKP **PKiKP 01 32 40.5 +0.3**
ULM Lac du Bonnet 113.38 28 PKiKP **PKiKP 01 32 41.1 +0.4**
comp=Z,3.4nm,0.7s,baz=335,slow=3.7,SNR=5.6
ULM PKKPbc **PKKPbc 01 43 25.1 -2.3**
comp=Z,2.4nm,0.6s,baz=102,slow=2.6,SNR=4.0
MVCO Mesa Verde 113.38 45 P **PKiKP 01 32 41.9 +0.4**
baz=298
MVCO Mesa Verde 113.38 45 *e*PKP **PKiKP 01 32 42.4 +0.9**
MVCO *e*PKKPbc **PKKPbc 01 43 27.0 -0.2**
MVCO *e*PKKPab **PKKPab 01 43 34.1 -0.7**
MVCO LR LR
comp=Z,1μm,22.0s
TUC Tucson 113.80 51 *e*PKKPab PKKPab 01 43 31.7 -0.9
TUC LR LR
comp=Z,879nm,20.0s
C31A Landman Farms, 114.10 31 P PKPdf 01 32 42.2 -0.1
baz=311
ISCO Idaho Springs 114.11 42 P PKPdf 01 32 42.6 -0.3
baz=301
ISCO Idaho Springs 114.11 42 *e*PKP PKPdf 01 32 43.2 +0.3
ISCO *e*PKKPbc **PKKPbc 01 43 23.8 -1.2**
ISCO LR LR
comp=Z,824nm,22.0s
ISCO Idaho Springs 114.11 42 *e*PKIKP PKPdf 01 32 43.2 +0.3
ISCO MLR MLR
comp=Z,824nm,22.0s
S22A 4UR Ranch, Cre 114.30 44 P PKPdf 01 32 42.9 -0.4
baz=299
AGMN Agassiz Nation 114.71 30 P PKPdf 01 32 43.5 +0.2
baz=313
AGMN Agassiz Nation 114.71 30 *e*PKKPbc PKKPbc 01 43 20.8 -2.0
AGMN LR LR
comp=Z,465nm,20.0s
E31A Nome 114.82 32 P PKPdf 01 32 43.2 -0.5
baz=310
Q24A Divide 114.84 42 P PKPdf 01 32 44.2 -0.1
baz=301
B34A Aery, Baudette 115.17 29 P **PKPdf 01 32 44.0 -0.2**
baz=314
SDCO Great Sand Dun 115.22 44 P **PKPdf 01 32 44.6 -0.4**
baz=300
SDCO Great Sand Dun 115.22 44 *e*PKPdf **PKPdf 01 32 45.2 +0.1**
SDCO *e*PKKPbc **PKKPbc 01 43 20.4 -0.7**
SDCO *e*PKKPab **PKKPab 01 43 25.9 -0.8**
SDCO LR LR
comp=Z,610nm,20.0s
D33A AnnSam, Wauburn 115.50 31 P **PKPdf 01 32 45.0 0.0**
baz=312
C34A RKJ Ranch, Bem 115.62 30 P **PKPdf 01 32 45.1 -0.1**
baz=313
LAZ Ladron 115.65 48 *e*PKPdf **PKPdf 01 32 47.5 +1.7**
TAM Tamanrasset 115.73 299 *e*PKPdf **PKPdf 01 32 47.3 +1.1**
TAM Tamanrasset 115.73 299 *e*PKIKP **PKPdf 01 32 47.3 +1.1**
ES19 SONSECA Array 115.75 319 *e*PKPdf **PKPdf 01 32 46.4 +0.6**
OGNE Ogallala 115.80 39 PFAKE 01 33 00.0 +14
OGNE LR LR
comp=Z,473nm,22.0s
ESDC Sonseca Array 115.81 319 PKP **PKPdf 01 32 46.3 +0.4**
comp=Z,0.3nm,0.4s,baz=36,slow=3.8,SNR=7.9
ESDC PKKPbc **PKKPbc 01 43 18.6 -0.3**
comp=Z,1.4nm,0.8s,baz=255,slow=3.7,SNR=7.5
E33A Westby DABS, E 115.84 31 P **PKPdf 01 32 45.5 -0.1**
baz=312
TASM ASL Pad, Albuq 115.90 47 P **PKPdf 01 32 46.7 +0.3**
baz=298
ANMO Albuquerque 115.90 47 P **PKPdf 01 32 46.4 +0.1**
baz=298
ANMO Albuquerque 115.90 47 *e*PKPdf **PKPdf 01 32 47.4 +1.1**
ANMO *e*PKKPab **PKKPab 01 43 22.6 -0.9**
ANMO LR LR
comp=Z,519nm,20.0s
ANMO Albuquerque 115.90 47 *e*PKIKP **PKPdf 01 32 47.4 +1.1**
ANMO *e* 01 43 22.6
ANMO MLR MLR
comp=Z,519nm,20.0s
TASL Snake Pit, Alb 115.90 47 P **PKPdf 01 32 46.2 -0.1**
baz=298
121A Cookes Peak, D 116.01 50 P **PKPdf 01 32 46.4 -0.2**
baz=296
PAB San Pablo 116.13 319 *e*PKPdf **PKPdf 01 32 46.4 -0.1**
PAB LR LR
comp=Z,880nm,21.0s
PAB San Pablo 116.13 319 *e*PKIKP **PKPdf 01 32 46.4 -0.1**
PAB MLR MLR
comp=Z,880nm,21.0s
BNM Barren Site 116.14 48 *e*PKPdf **PKPdf 01 32 48.3 +1.4**
T25A Trinidad 116.27 44 P **PKPdf 01 32 47.5 +0.5**
baz=301
T25A Trinidad 116.27 44 *e*PKPdf **PKPdf 01 32 48.4 +1.3**
PBRG Braganca 116.35 323 *e*PKPdf **PKPdf 01 32 49.4 +2.6**
H32A Carlson Farm, 116.38 34 P **PKPdf 01 32 46.6 -0.2**
baz=310
D35A Remer 116.43 30 P **PKPdf 01 32 45.8 -0.9**
baz=314
G34A Benson 116.87 32 P **PKPdf 01 32 46.8 -0.9**
baz=312
C37A Embarrass 116.88 28 P **PKPdf 01 32 46.9 -0.7**
baz=316
MVO Moncorvo 116.90 322 *e*PKPdf **PKPdf 01 32 49.8 +1.9**
MVO Moncorvo 116.90 322 *e*LR LR 02 15 06.6

comp=Z,996nm,22.0s
F35A Swanville 117.01 31 P PKPdf 01 32 47.5 -0.3
baz=313
EYMN Ely 117.04 28 PFAKE 01 33 00.0 +12
EYMN LR LR
comp=Z,499nm,21.0s
PGAV Gavieira, Arco 117.17 323 ePKPdf PKPdf 01 32 50.7 +2.3
PGAV Gavieira, Arco 117.17 323 eLR LR 02 14 27.6
comp=Z,630nm,20.0s
E36A McGregor 117.22 30 P PKPdf 01 32 48.2 0.0
baz=315
POLO Lamas de Olo 117.24 323 ePKPdf PKPdf 01 32 49.8 +1.2
PVRL Vila Real 117.26 323 ePKPdf PKPdf 01 32 49.9 +1.3
ECSD EROS Data Cent 117.33 34 P PKPdf 01 32 48.4 -0.2
baz=310
ECSD EROS Data Cent 117.33 34 ePKPdf PKPdf 01 32 48.9 +0.3
ECSD ePKKPbc PKKPbc 01 43 13.1 -0.5
ECSD LR LR
comp=Z,479nm,20.0s
G35A Watkins 117.49 31 P PKPdf 01 32 48.8 -0.1
baz=313
G35A Watkins 117.49 31 ePKPdf PKPdf 01 32 49.6 +0.7
F36A Milaca 117.54 30 P PKPdf 01 32 48.9 0.0
baz=314
F36A Milaca 117.54 30 ePKPdf PKPdf 01 32 49.1 +0.2
H35A Sunnyside Ranc 117.66 32 P PKPdf 01 32 48.8 -0.4
baz=312
MTE Manteigas 117.67 322 ePKPdf PKPdf 01 32 50.4 +1.0
MTE Manteigas 117.67 322 eLQ LQ 02 11 29.6
MTE eLR LR 02 15 35.7
comp=Z,942nm,22.0s
MTE Manteigas 117.67 322 ePKPdf PKPdf 01 32 50.2 +0.8
PVIS Viseu 117.70 322 ePKPdf PKPdf 01 32 50.2 +0.8
C39A Grand Marais 117.76 27 P PKPdf 01 32 49.0 -0.3
baz=318
G36A St. Michael 117.86 31 P PKPdf 01 32 49.5 0.0
baz=314
PTO Porto 117.87 323 ePKPdf PKPdf 01 32 53.0 +3.4
BGNE Belgrade 117.91 37 P PKPdf 01 32 49.1 -0.7
baz=308
BGNE Belgrade 117.91 37 ePKPdf PKPdf 01 32 49.9 +0.1
PCBR Castelo Branco 117.96 321 ePKPdf PKPdf 01 32 50.9 +1.0
F37A Hinrichs Farm, 118.09 30 P PKPdf 01 32 49.9 0.0
baz=315
C40A Isle Royale Na 118.12 26 P PKPdf 01 32 50.0 +0.1
baz=319
PMRV Marv??o 118.14 321 ePKPdf PKPdf 01 32 52.5 +2.2
MNTX Cornudas Mount 118.20 50 P PKPdf 01 32 50.6 0.0
baz=298
MNTX Cornudas Mount 118.20 50 ePKPdf PKPdf 01 32 51.8 +1.2
MNTX ePKKPbc PKKPbc 01 43 08.9 -1.1
MNTX ePKKPab PKKPab 01 43 11.7 -1.4
MNTX LR LR
comp=Z,521nm,20.0s
F38A Pierce - Schro 118.29 29 P PKPdf 01 32 50.7 +0.4
baz=316
SPMN Marine on St. 118.35 31 P PKPdf 01 32 49.9 -0.6
baz=314
SPMN Marine on St. 118.35 31 ePKPdf PKPdf 01 32 50.9 +0.4
PCAS Casmilo, Conde 118.46 322 ePKPdf PKPdf 01 32 51.7 +0.8
CBKS Cedar Bluff 118.47 40 ePKPdf PKPdf 01 32 53.0 +2.0
CBKS LR LR
comp=Z,832nm,20.0s
CBKS Cedar Bluff 118.47 40 ePKIKP PKPdf 01 32 53.0 +2.0
CBKS MLR MLR
comp=Z,832nm,20.0s
I36A Fitzsimmons Fa 118.55 32 P PKPdf 01 32 50.5 -0.4
baz=313
PESTR Estremoz 118.59 320 ePKPdf PKPdf 01 32 53.5 +2.3
E39A Mellen 118.62 28 P PKPdf 01 32 50.6 -0.4
baz=317
PBAR Barrancos 118.64 319 ePKPdf PKPdf 01 32 52.5 +1.3
PTOM Tomar 118.67 321 ePKPdf PKPdf 01 32 52.3 +1.1
SCHQ Schefferville 118.69 9 PKP PKPdf 01 32 51.2 +0.3
comp=Z,4.8nm,0.6s,baz=248,slow=5.1,SNR=3.6
F39A Loretta 118.79 29 P PKPdf 01 32 50.8 -0.5
baz=317
J36A Seneca 1, Swea 118.84 33 ePKPdf PKPdf 01 32 51.7 +0.2
G38A Ridgeland 118.86 30 P PKPdf 01 32 51.1 -0.4
baz=315
PMTG Montargil 118.88 321 ePKPdf PKPdf 01 32 53.1 +1.4
E40A Wakefield 118.88 28 P PKPdf 01 32 51.7 +0.2
baz=318
H38A Maiden Rock 119.00 31 P PKPdf 01 32 51.3 -0.4
baz=315
D41A Chassel 119.03 27 P PKPdf 01 32 50.9 -0.9
baz=319
MSTX Muleshoe 119.03 46 P PKPdf 01 32 51.5 -0.7
baz=301
MSTX Muleshoe 119.03 46 ePKPdf PKPdf 01 32 53.0 +0.7
ALMR Almeirim 119.05 321 ePKP PKPdf 01 32 51.8 -0.2
ALMR AMS AMS 02 28 54.3
comp=Z,805nm,24.3s
ALMR Almeirim 119.05 321 ePKPdf PKPdf 01 32 51.7 -0.3
EVO Evora 119.06 320 ePKPdf PKPdf 01 32 48.8 -3.2
G39A Holcombe 119.12 30 P PKPdf 01 32 51.5 -0.5
baz=316
K36A Gilmore City 119.24 34 P PKPdf 01 32 52.1 -0.1
baz=312
PBEJ Beja 119.25 320 ePKPdf PKPdf 01 32 54.4 +2.0
J37A Redenius Farm, 119.28 33 P PKPdf 01 32 52.1 -0.3
baz=313
E41A Kenton 119.30 27 P PKPdf 01 32 52.1 -0.2
baz=319
I38A Scanlan Farm, 119.42 31 P PKPdf 01 32 52.0 -0.5
baz=314
L36A Harm Buss Farm 119.48 34 P PKPdf 01 32 52.3 -0.5
baz=312
COWI Conover 119.49 28 ePKPdf PKPdf 01 32 53.3 +0.6
COWI LR LR
comp=Z,590nm,22.0s
H39A Augusta 119.50 30 P PKPdf 01 32 52.6 -0.1
baz=316
PVAQ Vaqueiros 119.52 319 ePKPdf PKPdf 01 32 55.5 +2.6
PVAQ Vaqueiros 119.52 319 eLQ LQ 02 09 15.4
PVAQ eLR LR 02 18 50.7
comp=Z,571nm,22.0s
MESJ Messejana 119.59 320 ePKP PKPdf 01 32 52.8 -0.2
MESJ AMS AMS 02 30 28.4
comp=Z,846nm,19.0s
MESJ Messejana 119.59 320 ePKPdf PKPdf 01 32 54.5 +1.4
PCVE Castro Verde 119.59 319 ePKPdf PKPdf 01 32 55.6 +2.5
K37A Belmond 119.60 33 P PKPdf 01 32 52.2 -0.8
baz=313
G40A Rib Lake 119.60 29 P PKPdf 01 32 52.5 -0.4
baz=317
G40A Rib Lake 119.60 29 ePKPdf PKPdf 01 32 53.2 +0.3
PNCL Nicolau / Gran 119.63 320 ePKPdf PKPdf 01 32 54.0 +0.9
LIS Lisbon 119.67 321 ePKP PKPdf 01 32 53.0 -0.1
LIS AMS AMS 02 22 00.7
comp=E,1µm,19.3s
PBDV Barranco-do-Ve 119.75 319 ePKPdf PKPdf 01 32 55.4 +2.0
F41A Three Lakes 119.78 28 P PKPdf 01 32 52.8 -0.4
baz=318
F41A Three Lakes 119.78 28 ePKPdf PKPdf 01 32 53.5 +0.3
E42A Champion 119.80 27 P PKPdf 01 32 53.0 -0.2
baz=320
J38A Wedel Dairy, R 119.84 32 P PKPdf 01 32 52.8 -0.7
baz=314
I39A Houston 119.96 31 P PKPdf 01 32 53.0 -0.6
baz=315
I39A Houston 119.96 31 ePKPdf PKPdf 01 32 53.0 -0.6
H40A Chili 119.98 30 P PKPdf 01 32 53.4 -0.2
baz=317
HPIG 120.07 55 ePKPdf PKPdf 01 32 56.0 +1.4
N36A Muff Farm, Cla 120.15 35 P PKPdf 01 32 53.9 -0.2
baz=311
MORF Marmelete 120.18 319 ePKP PKPdf 01 32 54.0 -0.3
MORF AMS AMS 02 30 42.0
comp=E,990nm,19.9s
MORF Marmelete 120.18 319 ePKPdf PKPdf 01 32 55.7 +1.4
F42A Maple Grove Fa 120.21 27 P PKPdf 01 32 54.2 +0.1
baz=319
J39A Decorah 120.23 31 P PKPdf 01 32 53.5 -0.7
baz=315
E43A Lone Tree Farm 120.25 26 P PKPdf 01 32 54.1 0.0
baz=321
E43A Lone Tree Farm 120.25 26 ePKPdf PKPdf 01 32 52.1 -2.0
KSU1 Kansas State U 120.25 38 P PKPdf 01 32 54.1 -0.2
baz=308
KSU1 Kansas State U 120.25 38 ePKPdf PKPdf 01 32 54.9 +0.6
KSU1 ePKKPbc PKKPbc 01 43 01.5 -1.3
KSU1 LR LR
comp=Z,734nm,22.0s
M37A Trindle Farm, 120.28 34 P PKPdf 01 32 54.2 -0.1
baz=312

H41A Junction City 120.35 29 P PKPdf 01 32 54.0 -0.3
baz=317
H41A Junction City 120.35 29 ePKPdf PKPdf 01 32 54.4 0.0
L38A Oak Wood Farm, 120.39 33 P PKPdf 01 32 54.1 -0.4
baz=313
PFVI Vila Bisbo 120.39 319 ePKPdf PKPdf 01 32 57.8 +3.2
I40A Norwalk 120.40 30 P PKPdf 01 32 53.8 -0.7
baz=316
SCIA State Center 120.41 34 P PKPdf 01 32 54.0 -0.5
baz=313
SCIA State Center 120.41 34 ePKPdf PKPdf 01 32 54.9 +0.4
SCIA LR LR
comp=Z,445nm,20.0s
G42A Mountain 120.47 28 P PKPdf 01 32 54.5 -0.1
baz=319
G42A Mountain 120.47 28 ePKPdf PKPdf 01 32 54.9 +0.4
E44A Grand Marais A 120.53 25 P PKPdf 01 32 53.7 -0.9
baz=322
E44A Grand Marais A 120.53 25 ePKPdf PKPdf 01 32 56.5 +1.8
PMSA Palmer Station 120.55 175 PFAKE 01 33 10.0 +16
PMSA LR LR
comp=Z,560nm,22.0s
K39A Oelwein 120.58 32 P PKPdf 01 32 54.0 -0.9
baz=314
TX31 Lajitas Ar. Si 120.60 51 ePKPdf PKPdf 01 32 55.8 +0.4
TX31 ePKPdf PKiKP 01 32 56.2 +0.7
TXAR Lajitas Array 120.60 51 PKP PKPdf 01 32 55.8 +0.4
comp=Z,3.5nm,0.7s,baz=248,slow=1.1,SNR=34
TXAR PKKPbc PKKPbc 01 43 01.2 -0.1
comp=Z,10.0nm,0.9s,baz=122,slow=6.1,SNR=30
TXAR SKKP 01 46 59.3
comp=Z,2.7nm,1.1s,baz=122,slow=4.7,SNR=4.8
N37A Lee Faris, Mou 120.62 35 P PKPdf 01 32 54.1 -0.9
baz=311
N37A Lee Faris, Mou 120.62 35 ePKPdf PKPdf 01 32 57.0 +2.0
J40A Soldiers Grove 120.69 31 P PKPdf 01 32 54.2 -0.9
baz=316
M38A Pleasantville 120.75 34 P PKPdf 01 32 54.7 -0.5
baz=313
G43A Wallace 120.80 27 P PKPdf 01 32 54.7 -0.4
baz=320
G43A Wallace 120.80 27 ePKPdf PKPdf 01 32 55.4 +0.2
F44A Big Bay de Noc 120.81 26 P PKPdf 01 32 55.1 -0.1
baz=321
L39A Vinton 120.92 33 P PKPdf 01 32 55.0 -0.5
baz=314
H42A Shiocton 120.97 29 P PKPdf 01 32 55.0 -0.5
baz=318
H42A Shiocton 120.97 29 ePKPdf PKPdf 01 32 55.7 +0.2
K40A Colesburg 120.98 32 P PKPdf 01 32 54.8 -0.8
baz=315
O37A Wolven Farm, M 121.04 36 P PKPdf 01 32 54.9 -0.9
baz=311
E45A Wooded Hills, 121.05 25 P PKPdf 01 32 54.7 -1.0
baz=323
J41A Loganville 121.08 30 P PKPdf 01 32 55.0 -0.8
baz=316
I42A Draeger Farm, 121.24 29 P PKPdf 01 32 55.4 -0.7
baz=318
I42A Draeger Farm, 121.24 29 ePKPdf PKPdf 01 32 55.9 -0.2
M39A Webster 121.28 33 P PKPdf 01 32 55.9 -0.3
baz=314
JFWS Jewell Farm 121.28 31 P PKPdf 01 32 55.6 -0.6
baz=316
JFWS Jewell Farm 121.28 31 ePKPdf PKPdf 01 32 56.0 -0.2
JFWS ePKKP PKKPbc 01 42 56.5 -2.6
JFWS LR LR
comp=Z,713nm,20.0s
JFWS Jewell Farm 121.28 31 ePKIKP PKPdf 01 32 56.0 -0.2
JFWS MLR MLR
comp=Z,713nm,20.0s
P37A Lathrop 121.30 36 P PKPdf 01 32 55.8 -0.6
baz=311
H43A Windswept, Lux 121.36 28 P PKPdf 01 32 55.6 -0.6
baz=319
L40A Anamosa 121.38 32 P PKPdf 01 32 55.5 -0.9
baz=315
L40A Anamosa 121.38 32 ePKPdf PKPdf 01 32 56.0 -0.4
WMOK Wichita Mounta 121.41 43 P PKPdf 01 32 56.4 -0.3
baz=304
WMOK Wichita Mounta 121.41 43 ePKPdf PKPdf 01 32 57.2 +0.5
WMOK LR LR
comp=Z,1µm,22.0s
WMOK Wichita Mounta 121.41 43 ePKIKP PKPdf 01 32 57.2 +0.5
WMOK MLR MLR
comp=Z,1µm,22.0s
F45A CMU Biological 121.44 26 P PKPdf 01 32 56.0 -0.4
baz=322
O38A Galt 121.46 35 P PKPdf 01 32 56.1 -0.6
baz=312
K41A Shullsburg 121.48 31 P PKPdf 01 32 55.9 -0.7
baz=316
N39A Derby Farms, D 121.50 34 P PKPdf 01 32 55.8 -0.9
baz=313
N39A Derby Farms, D 121.50 34 ePKPdf PKPdf 01 32 56.7 0.0
J42A Columbus 121.56 30 P PKPdf 01 32 55.9 -0.8
baz=317
I43A Langenfeld Bro 121.62 29 P PKPdf 01 32 56.1 -0.7
baz=319
M40A Post Highland 121.69 33 P PKPdf 01 32 56.3 -0.7
baz=314
F46A Macinaw City C 121.69 25 P PKPdf 01 32 56.6 -0.2
baz=323
Q37A Longview Farm, 121.70 37 P PKPdf 01 32 55.6 -1.5
baz=310
L41A Preston 121.75 32 P PKPdf 01 32 56.4 -0.7
baz=316
P38A Dawn 121.76 36 P PKPdf 01 32 56.6 -0.6
baz=312
P38A Dawn 121.76 36 ePKPdf PKPdf 01 32 57.1 0.0
J43A Natural Harves 121.86 29 P PKPdf 01 32 56.6 -0.7
baz=318
O39A Kirksville 121.90 35 P PKPdf 01 32 56.8 -0.6
baz=313
ABTX Abilene, Hawle 121.97 46 P PKPdf 01 32 57.8 0.0
baz=302
ABTX Abilene, Hawle 121.97 46 ePKPdf PKPdf 01 32 58.4 +0.5
N40A Mertquake, Sal 122.01 33 P PKPdf 01 32 57.0 -0.6
baz=314
TOA0 Torodi Ar. Sit 122.04 289 ePKPdf PKPdf 01 32 58.0 -0.3
TOA0 ePKPdf PKiKP 01 32 58.2 -0.3
TORD Torodi Ar. Bea 122.04 289 PKP PKPdf 01 32 58.3 -0.1
comp=Z,42nm,0.7s,baz=38,slow=2.1,SNR=168
TORD SKP 01 36 32.3
comp=Z,5.8nm,0.8s,baz=45,slow=2.6,SNR=4.5
TORD PKKPbc PKKPab 01 42 56.3 -0.1
comp=Z,4.6nm,1.0s,baz=266,slow=3.2,SNR=11
Q38A Cooks Store, C 122.14 36 P PKPdf 01 32 57.0 -1.0
baz=311
M41A Milan 122.23 32 P PKPdf 01 32 57.1 -0.9
baz=315
L42A Oliver, Polo 122.24 31 P PKPdf 01 32 57.1 -0.9
baz=316
L42A Oliver, Polo 122.24 31 ePKPdf PKPdf 01 32 57.8 -0.2
P39B Salisbury 122.30 35 P PKPdf 01 32 57.9 -0.4
baz=312
O40A La Belle 122.37 34 P PKPdf 01 32 58.0 -0.3
baz=313
K43A Burlington 122.40 30 P PKPdf 01 32 57.5 -0.8
baz=318
K43A Burlington 122.40 30 ePKPdf PKPdf 01 32 59.2 +0.9
Q39A Willow Grove F 122.46 36 P PKPdf 01 32 58.4 -0.2
baz=312
R38A Fenwick Farm, 122.47 37 P PKPdf 01 32 57.8 -0.8
baz=310
N41A Harden Midland 122.53 33 P PKPdf 01 32 57.9 -0.7
baz=315
N41A Harden Midland 122.53 33 ePKPdf PKPdf 01 32 58.8 +0.2
L43A Garden Prairie 122.58 31 P PKPdf 01 32 58.0 -0.7
baz=317
P40A Paris 122.67 35 P PKPdf 01 32 58.5 -0.4
baz=313
P40A Paris 122.67 35 ePKPdf PKPdf 01 32 59.2 +0.3
TUL1 Leonard 122.72 40 P PKPdf 01 32 59.2 +0.1
baz=308
TUL1 Leonard 122.72 40 ePKPdf PKPdf 01 32 59.8 +0.6
S38A Stockton 122.83 38 P PKPdf 01 32 58.9 -0.5
baz=310
N42A Yates City 122.88 33 P PKPdf 01 32 58.7 -0.6
baz=315
R39A Chumby, Stover 122.91 37 P PKPdf 01 32 59.0 -0.4
baz=311
O41A Passleys Farm, 122.92 34 P PKPdf 01 32 58.8 -0.6
baz=314
T38A Diamond 122.97 39 P PKPdf 01 32 59.3 -0.3
baz=310
JCT Junction City 122.97 48 P PKPdf 01 32 60.0 +0.1

baz=301
JCT Junction City 122.97 48 ePKPdf PKPdf 01 33 00.3 +0.4
JCT eSKPdf SKiKP 01 36 32.2 +1.9
JCT ePKKP PKKPbc 01 42 51.4 -0.9
JCT LR LR
comp=Z,618nm,22.0s
JCT Junction City 122.97 48 ePKIKP PKPdf 01 33 00.3 +0.4
JCT MLR MLR
comp=Z,618nm,22.0s
L44A Lake County Fo 123.00 30 P PKPdf 01 32 59.3 -0.2
baz=318
M43A Waltham Townsh 123.02 31 P PKPdf 01 32 59.0 -0.6
baz=317
Q40A Laux Farm, Aux 123.02 35 P PKPdf 01 32 59.5 -0.2
baz=313
P41A Barry, Barry 123.13 34 P PKPdf 01 32 59.5 -0.4
baz=314
S39A Bolivar 123.14 37 P PKPdf 01 32 59.8 -0.1
baz=311
S39A Bolivar 123.14 37 ePKPdf PKPdf 01 32 59.7 -0.2
N43A Stutzman Famil 123.26 32 P PKPdf 01 32 59.5 -0.6
baz=316
R40A Maddies Statio 123.38 36 P PKPdf 01 32 59.8 -0.5
baz=312
R40A Maddies Statio 123.38 36 ePKPdf PKPdf 01 33 00.6 +0.3
HDIL Hopedale 123.47 32 P PKPdf 01 33 00.1 -0.4
baz=316
HDIL Hopedale 123.47 32 ePKPdf PKPdf 01 33 00.6 +0.2
HDIL LR LR
comp=Z,542nm,21.0s
M44A Midewin, Midew 123.52 31 P PKPdf 01 32 60.0 -0.6
baz=318
M44A Midewin, Midew 123.52 31 ePKPdf PKPdf 01 33 00.8 +0.3
Q41A Truxton 123.53 35 P PKPdf 01 33 00.5 -0.1
baz=313
T39A Clever 123.54 38 P PKPdf 01 33 00.4 -0.3
baz=310
O43A Sugar Creek Fa 123.66 32 P PKPdf 01 33 00.0 -0.8
baz=316
HHAR Hobbs 123.67 39 ePKPdf PKPdf 01 33 00.8 -0.2
S40A Lebanon 123.70 37 P PKPdf 01 33 00.3 -0.7
baz=312
WHTX Lake Whitney, 123.86 45 P PKPdf 01 33 01.4 0.0
baz=304
U39A Green Forest 123.89 39 P PKPdf 01 33 01.0 -0.4
baz=310
R41A Rosebud 123.89 36 P PKPdf 01 33 01.4 +0.1
baz=313
N44A Piper City 123.91 31 P PKPdf 01 33 00.7 -0.6
baz=317
M45A Boilermakers S 123.92 30 P PKPdf 01 33 00.7 -0.6
baz=318
Q42A Golden Eagle 123.95 34 P PKPdf 01 33 01.6 +0.1
baz=314
T40A Mansfield 123.98 37 P PKPdf 01 33 01.1 -0.5
baz=311
P43A Skaggs, Pawnee 124.00 33 P PKPdf 01 33 01.3 -0.2
baz=315
V39A Pettigrew 124.13 39 P PKPdf 01 33 01.3 -0.6
baz=310
CCM Cathedral Cave 124.13 36 P PKPdf 01 33 01.1 -0.6
baz=313
CCM Cathedral Cave 124.13 36 ePKPdf PKPdf 01 33 01.2 -0.6
CCM Cathedral Cave 124.13 36 ePKIKP PKPdf 01 33 01.2 -0.6
S41A Jillco Farms, 124.15 36 P PKPdf 01 33 01.6 -0.3
baz=312
N45A Kentland 124.19 31 P PKPdf 01 33 01.8 0.0
baz=318
O44A Mansfield 124.20 32 P PKPdf 01 33 01.3 -0.6
baz=317
R42A Luebbering 124.24 35 P PKPdf 01 33 01.7 -0.3
baz=314
U40A Yellville 124.29 38 P PKPdf 01 33 01.7 -0.5
baz=310
M46A Old House Fiel 124.35 30 P PKPdf 01 33 02.3 +0.2
baz=320
M46A Old House Fiel 124.35 30 ePKPdf PKPdf 01 33 02.9 +0.8
833A Chaparral WMA, 124.37 50 P PKPdf 01 33 03.0 +0.5
baz=300
833A Chaparral WMA, 124.37 50 ePKPdf PKPdf 01 33 04.1 +1.6
Q43A New Douglas 124.40 34 P PKPdf 01 33 01.8 -0.4
baz=315
435B Jarrell 124.44 47 P PKPdf 01 33 02.8 +0.2
baz=303
435B Jarrell 124.44 47 ePKPdf PKPdf 01 33 03.7 +1.1
W39A Magazine 124.44 40 P PKPdf 01 33 02.4 -0.1
baz=309
W39A Magazine 124.44 40 ePKPdf PKPdf 01 33 02.8 +0.3
T41A Mountain View 124.50 37 P PKPdf 01 33 02.3 -0.3
baz=312
O45A Potomac 124.52 31 P PKPdf 01 33 02.1 -0.4
baz=318
N46A Monticello 124.55 30 P PKPdf 01 33 02.3 -0.2
baz=319
S42A Caledonia 124.59 36 P PKPdf 01 33 02.2 -0.5
baz=313
P44A Sand Creek, Wi 124.61 33 P PKPdf 01 33 03.0 +0.3
baz=316
FVM French Village 124.65 35 ePKPdf PKPdf 01 33 02.4 -0.4
FVM French Village 124.65 35 ePKIKP PKPdf 01 33 02.4 -0.4
X39A Fountain Ranch 124.66 41 P PKPdf 01 33 03.3 +0.4
baz=308
V40A Witts Springs 124.67 39 P PKPdf 01 33 02.4 -0.6
baz=310
V40A Witts Springs 124.67 39 ePKPdf PKPdf 01 33 03.1 +0.2
R43A Red Bud 124.73 35 P PKPdf 01 33 02.4 -0.5
baz=314
SFIN Lafayette 124.75 31 P PKPdf 01 33 02.9 0.0
baz=318
SFIN Lafayette 124.75 31 ePKPdf PKPdf 01 33 03.4 +0.5
SADO Sadowa 124.76 22 ePKPdf PKPdf 01 33 03.1 +0.3
Q44A Meyer Farm, Va 124.80 33 P PKPdf 01 33 02.9 -0.1
baz=316
U41A Viola 124.87 38 P PKPdf 01 33 03.2 -0.1
baz=311
W40A Ferguson Farm, 124.90 39 P PKPdf 01 33 03.2 -0.1
baz=310
W40A Ferguson Farm, 124.90 39 ePKPdf PKPdf 01 33 03.8 +0.4
T42A Van Buren 124.91 36 P PKPdf 01 33 03.1 -0.2
baz=313
T42A Van Buren 124.91 36 ePKPdf PKPdf 01 33 03.4 +0.1
AAM Ann Arbor 124.93 27 ePKPdf PKPdf 01 33 04.0 +0.8
AAM LR LR
comp=Z,768nm,22.0s
AAM Ann Arbor 124.93 27 ePKIKP PKPdf 01 33 04.0 +0.8
AAM MLR MLR
comp=Z,768nm,22.0s
M1AR Mount Ida 124.98 40 P PKPdf 01 33 03.5 0.0
baz=309
M1AR Mount Ida 124.98 40 ePKPdf PKPdf 01 33 04.4 +0.8
M1AR LR LR
comp=Z,835nm,22.0s
M1AR Mount Ida 124.98 40 ePKIKP PKPdf 01 33 04.4 +0.8
M1AR MLR MLR
comp=Z,835nm,22.0s
TRQ Mont Tremblant 125.03 18 ePKPdf PKPdf 01 33 03.5 +0.1
P45A Graceland, Par 125.04 32 P PKPdf 01 33 03.2 -0.3
baz=317
P45A Graceland, Par 125.04 32 ePKPdf PKPdf 01 33 04.1 +0.6
V41A Mountainview 125.09 38 P PKPdf 01 33 03.2 -0.6
baz=311
S43A Fulton Ridge, 125.14 35 P PKPdf 01 33 03.2 -0.5
baz=314
R44A Waltonville 125.23 34 P PKPdf 01 33 03.6 -0.3
baz=315
PLVO Plevna 125.27 20 ePKPdf PKPdf 01 33 04.2 +0.5
Q45A Warren Harvey, 125.28 33 P PKPdf 01 33 03.9 0.0
baz=316
U42A Revenden 125.28 37 P PKPdf 01 33 03.9 -0.1
baz=312
O47A Sheridan 125.32 30 P PKPdf 01 33 03.8 -0.3
baz=319
WHAR Wooly Hollow 125.33 39 ePKPdf PKPdf 01 33 04.1 -0.1
T43A Greenville 125.35 36 P PKPdf 01 33 03.7 -0.5
baz=313
OLIL Olney 125.42 33 ePKPdf PKPdf 01 33 05.0 +0.7
W41B Gary Mavity, V 125.43 39 P PKPdf 01 33 03.6 -0.7
baz=310
W41B Gary Mavity, V 125.43 39 ePKPdf PKPdf 01 33 03.1 -1.3
PBMO Poplar Bluff 125.47 36 ePKPdf PKPdf 01 33 04.5 +0.1
X40A Basin Creek Fa 125.50 40 P PKPdf 01 33 04.2 -0.3
baz=310
Y40A Okolona 125.51 41 P PKPdf 01 33 04.7 +0.2
baz=309
S44A Carbondale 125.52 35 P PKPdf 01 33 04.3 -0.1
baz=315
V42A Cord 125.55 38 P PKPdf 01 33 04.2 -0.3

	baz=312						
Q46A	CEJHS Indians,	125.61	32	P	PKPdf	01 33 04.3	-0.3
	baz=317						
UALR	University of	125.63	39	ePKPdf	PKPdf	01 33 05.4	+0.7
R45A	Skylar, Fairfi	125.64	33	P	PKPdf	01 33 04.5	-0.2
	baz=316						
X41A	Kaden, Bauxite	125.70	40	P	PKPdf	01 33 04.7	-0.2
	baz=310						
T44A	Benton	125.75	35	P	PKPdf	01 33 04.8	-0.1
	baz=314						
U43A	Rector	125.76	37	P	PKPdf	01 33 04.7	-0.3
	baz=313						
W42A	Bald Knob	125.82	38	P	PKPdf	01 33 04.9	-0.2
	baz=311						
P47A	Martinsville	125.84	31	P	PKPdf	01 33 04.9	-0.1
	baz=319						
Z40A	Long Farm, Mag	125.90	42	P	PKPdf	01 33 05.5	+0.2
	baz=308						
KVTX	Kingsville	125.91	50	PFAKE		01 33 20.0	+15
KVTX				LR	LR		
	comp=Z,807nm,22.0s						
S45A	Carrier Mills	125.91	34	P	PKPdf	01 33 05.3	+0.1
	baz=315						
BLO	Bloomington	125.94	32	ePKPdf	PKPdf	01 33 05.8	+0.6
BLO	Bloomington	125.94	32	ePKIKP	PKPdf	01 33 05.8	+0.6
NATX	Nacogdoches	125.95	44	P	PKPdf	01 33 05.4	-0.1
	baz=306						
NATX	Nacogdoches	125.95	44	PFAKE		01 33 20.0	+15
NATX				LR	LR		
	comp=Z,633nm,20.0s						
PARMO	Parma	125.95	36	ePKPdf	PKPdf	01 33 06.6	+1.3
LNIG	Linares	125.97	54	ePKPdf	PKPdf	01 33 05.9	+0.2
Y41A	Eaglette Beard	126.02	40	P	PKPdf	01 33 05.3	-0.2
	baz=309						
V43A	Jonesboro	126.07	37	P	PKPdf	01 33 05.4	-0.2
	baz=312						
U44A	Portageville	126.10	36	P	PKPdf	01 33 05.2	-0.4
	baz=314						
R46A	Gibon Southern	126.12	33	P	PKPdf	01 33 05.3	-0.3
	baz=317						
HKT	Hockley	126.16	46	ePKPdf	PKPdf	01 33 06.3	+0.5
HKT	Hockley	126.16	46	ePKIKP	PKPdf	01 33 06.3	+0.5
140A	Cam and Jess,	126.16	42	P	PKPdf	01 33 06.0	+0.2
	baz=308						
Q47A	Bedord North L	126.17	32	P	PKPdf	01 33 05.6	0.0
	baz=318						
USIN	University of	126.21	33	ePKPdf	PKPdf	01 33 08.2	+2.4
GNAR	Gosnell	126.27	37	ePKPdf	PKPdf	01 33 08.6	+2.7
PQI	Presque Isle	126.31	12	ePKPdf	PKPdf	01 33 06.0	+0.3
T45A	Paducah	126.34	35	P	PKPdf	01 33 05.6	-0.4
	baz=315						
S46A	Don Dixon Farm	126.39	34	P	PKPdf	01 33 05.8	-0.3
	baz=316						
240A	Hunter Patters	126.39	43	P	PKPdf	01 33 06.1	-0.2
	baz=307						
U44B	Burton Farm, H	126.41	36	P	PKPdf	01 33 06.1	-0.1
	baz=314						
V44A	Blytheville	126.43	37	P	PKPdf	01 33 06.3	0.0
	baz=313						
LONY	Lake Ozonia	126.47	19	P	PKPdf	01 33 06.1	0.0
	baz=334						
LONY	Lake Ozonia	126.47	19	ePKPdf	PKPdf	01 33 06.6	+0.5
LONY				LR	LR		
	comp=Z,584nm,21.0s						
FRNY	Flat Rock	126.58	18	ePKPdf	PKPdf	01 33 06.5	+0.2
Y42A	Garnett, Star	126.58	40	P	PKPdf	01 33 06.8	+0.2
	baz=310						
R47A	Wooly Knot Far	126.59	32	P	PKPdf	01 33 06.3	-0.1
	baz=318						
141A	Papa Simpson,	126.63	42	P	PKPdf	01 33 07.2	+0.5
	baz=308						
ERPA	Erie	126.66	24	P	PKPdf	01 33 06.4	-0.2
	baz=327						
ERPA	Erie	126.66	24	ePKPdf	PKPdf	01 33 07.0	+0.4
X43A	Marvell	126.71	39	P	PKPdf	01 33 07.1	+0.3
	baz=311						
U45A	Rockin P Farm,	126.74	36	P	PKPdf	01 33 06.7	-0.2
	baz=314						
T46A	Princeton	126.75	34	P	PKPdf	01 33 07.2	+0.4
	baz=316						
WCI	Wyandotte Cave	126.76	32	P	PKPdf	01 33 06.8	0.0
	baz=318						
WCI	Wyandotte Cave	126.76	32	ePKPdf	PKPdf	01 33 07.5	+0.7
WCI	Wyandotte Cave	126.76	32	ePKIKP	PKPdf	01 33 07.5	+0.7
Z42A	Norrel Spur, H	126.83	41	P	PKPdf	01 33 07.2	+0.2
	baz=310						
R48A	Northridge Ran	126.85	32	P	PKPdf	01 33 06.9	-0.1
	baz=319						
ACSO	Alum Creek Sta	126.88	28	P	PKPdf	01 33 06.5	-0.5
	baz=322						
ACSO	Alum Creek Sta	126.88	28	ePKPdf	PKPdf	01 33 07.5	+0.5
ACSO				LR	LR		
	comp=Z,612nm,20.0s						
W44A	Shelby Farms P	126.95	37	P	PKPdf	01 33 06.7	-0.6
	baz=313						
KOWA	Kowa	126.95	293	PKP	PKPdf	01 33 08.5	+0.7
	comp=Z,31nm,0.6s,baz=67,slow=1.8,SNR=72						
KOWA	Kowa	126.95	293	ePKPdf	PKPdf	01 33 08.2	+0.4
MMNY	Mt. Morris Dam	126.97	22	ePKPdf	PKPdf	01 33 08.9	+1.9
241A	Mo Tay, Goldon	126.97	42	P	PKPdf	01 33 07.9	+0.5
	baz=308						
U46A	Springville	127.07	35	P	PKPdf	01 33 07.1	-0.4
	baz=315						
Y43A	Makayla and Ka	127.08	39	P	PKPdf	01 33 07.1	-0.4
	baz=311						
NCB	Newcomb	127.16	19	ePKPdf	PKPdf	01 33 07.9	+0.4
X44A	Crenshaw	127.18	38	P	PKPdf	01 33 07.7	-0.1
	baz=312						
341A	Kurthwood	127.22	43	P	PKPdf	01 33 08.4	+0.5
	baz=307						
341A	Kurthwood	127.22	43	ePKPdf	PKPdf	01 33 09.6	+1.7
T47A	Sharon Grove	127.23	34	P	PKPdf	01 33 08.0	+0.2
	baz=317						
T47A	Sharon Grove	127.23	34	ePKPdf	PKPdf	01 33 08.4	+0.7
VT1	Waterbury	127.29	17	ePKPdf	PKPdf	01 33 10.2	+2.5
142A	Monroe	127.29	41	P	PKPdf	01 33 08.3	+0.4
	baz=309						
M54A	Oil Creek Stat	127.31	25	P	PKPdf	01 33 07.8	0.0
	baz=327						
M54A	Oil Creek Stat	127.31	25	ePKPdf	PKPdf	01 33 08.3	+0.5
S48A	Wiedeman Farm,	127.31	32	P	PKPdf	01 33 07.7	-0.2
	baz=318						
W45A	Hickory Valley	127.31	37	P	PKPdf	01 33 07.4	-0.5
	baz=313						
Z43A	Armstrong Fami	127.33	40	P	PKPdf	01 33 07.7	-0.3
	baz=310						
PKME	Peaks-Kenny Pk	127.35	14	P	PKPdf	01 33 07.9	+0.2
	baz=340						
PKME	Peaks-Kenny Pk	127.35	14	ePKPdf	PKPdf	01 33 08.6	+0.9
PKME				eSKPdf	SKiKP	01 36 38.2	-0.3
PKME				LR	LR		
	comp=Z,551nm,22.0s						
WVT	Waverly	127.43	35	P	PKPdf	01 33 08.0	-0.2
	baz=315						
WVT	Waverly	127.43	35	ePKPdf	PKPdf	01 33 08.5	+0.3
WVT	Waverly	127.43	35	ePKIKP	PKPdf	01 33 08.5	+0.3
242A	Grayson	127.46	42	P	PKPdf	01 33 08.3	0.0
	baz=309						
Y44A	Strider, Charl	127.49	39	P	PKPdf	01 33 08.3	0.0
	baz=312						
V46A	Holladay	127.50	36	P	PKPdf	01 33 07.7	-0.6
	baz=315						
U47A	Clarksville	127.52	34	P	PKPdf	01 33 08.3	0.0
	baz=316						
T48A	Bowling Green	127.53	33	P	PKPdf	01 33 08.3	0.0
	baz=317						
143A	Socs Landing,	127.55	41	P	PKPdf	01 33 08.2	-0.3
	baz=310						
143A	Socs Landing,	127.55	41	ePKPdf	PKPdf	01 33 09.9	+1.5
441A	DeRidder	127.56	44	P	PKPdf	01 33 07.8	-0.7
	baz=307						
LBNH	Lisbon	127.61	17	P	PKPdf	01 33 08.5	+0.2
	baz=337						
LBNH	Lisbon	127.61	17	ePKPdf	PKPdf	01 33 08.9	+0.6
LBNH	Lisbon	127.61	17	ePKIKP	PKPdf	01 33 08.9	+0.6
OXF	Oxford	127.62	38	P	PKPdf	01 33 08.2	-0.4
	baz=313						
OXF	Oxford	127.62	38	ePKPdf	PKPdf	01 33 09.1	+0.5
OXF	Oxford	127.62	38	ePKIKP	PKPdf	01 33 09.1	+0.5
N54A	Moraine State	127.62	25	P	PKPdf	01 33 07.9	-0.5
	baz=326						
N54A	Moraine State	127.62	25	ePKPdf	PKPdf	01 33 09.1	+0.7
X45A	UM Field Stati	127.69	38	P	PKPdf	01 33 07.7	-1.0
	baz=313						
342A	Flagon Creek P	127.77	43	P	PKPdf	01 33 08.3	-0.6
	baz=308						
342A	Flagon Creek P	127.77	43	ePKPdf	PKPdf	01 33 11.3	+2.4
Z44A	Pea Ridge, Bel	127.80	40	P	PKPdf	01 33 09.0	0.0
	baz=311						
W46A	Michie	127.81	36	P	PKPdf	01 33 08.3	-0.6
	baz=314						
V47A	Nunnelly	127.82	35	P	PKPdf	01 33 08.6	-0.3
	baz=316						
ACCN	Adirondack Com	127.87	19	ePKPdf	PKPdf	01 33 08.9	+0.2
U48A	Cassie Pea, Po	127.88	34	P	PKPdf	01 33 08.8	-0.2
	baz=317						
WVL	Waterville	127.92	15	ePKPdf	PKPdf	01 33 10.2	+1.4
Y45A	Yeager Farm, C	127.97	38	P	PKPdf	01 33 09.0	-0.3
	baz=312						
T49A	Edmonton	128.00	33	P	PKPdf	01 33 09.0	-0.2
	baz=318						
243A	Waterproof	128.02	42	P	PKPdf	01 33 09.5	+0.1
	baz=309						
X46A	Booneville	128.09	37	P	PKPdf	01 33 08.9	-0.5
	baz=314						
PLAL	Pickwick Lake	128.09	36	ePKPdf	PKPdf	01 33 09.1	-0.3
BINY	Binghamton	128.13	21	P	PKPdf	01 33 09.4	+0.1
	baz=331						
BINY	Binghamton	128.13	21	ePKPdf	PKPdf	01 33 10.1	+0.7
BINY				LR	LR		
	comp=Z,657nm,21.0s						
W47A	Westpoint	128.19	36	P	PKPdf	01 33 09.1	-0.5
	baz=315						
Z45A	Winona	128.21	39	P	PKPdf	01 33 09.4	-0.4
	baz=312						
Z45A	Winona	128.21	39	ePKPdf	PKPdf	01 33 11.8	+2.1
144A	Alexander Plac	128.23	40	P	PKPdf	01 33 09.7	-0.1
	baz=311						
V48A	Smith Brothers	128.28	35	P	PKPdf	01 33 09.2	-0.6
	baz=316						
V48A	Smith Brothers	128.28	35	ePKPdf	PKPdf	01 33 10.2	+0.3
EMMW	East Machias	128.29	13	ePKPdf	PKPdf	01 33 10.6	+1.1
U49A	Red Boiling Sp	128.30	33	P	PKPdf	01 33 09.4	-0.4
	baz=318						
PMAR	Madeira	128.33	320	ePKPdf	PKPdf	01 33 13.1	+2.9
542A	Morse	128.37	44	P	PKPdf	01 33 10.6	+0.5
	baz=307						
Y46A	Houston	128.38	38	P	PKPdf	01 33 09.7	-0.3
	baz=313						
T50A	Nancy	128.43	32	P	PKPdf	01 33 09.9	-0.2
	baz=319						
VBMS	Vicksburg	128.43	41	P	PKPdf	01 33 10.2	0.0
	baz=310						
244A	Avery, Jackson	128.44	41	P	PKPdf	01 33 09.7	-0.5
	baz=310						
PMOZ	Porto Moniz, M	128.45	320	ePKPdf	PKPdf	01 33 14.3	+4.0
PMOZ	Porto Moniz, M	128.45	320	eLR	LR	02 19 21.6	
	comp=Z,372nm,20.0s						
TRY	Troy	128.45	19	ePKPdf	PKPdf	01 33 11.3	+1.4
443A	Delano Plantat	128.51	43	P	PKPdf	01 33 10.8	+0.5
	baz=308						
X47A	Russelville	128.55	37	P	PKPdf	01 33 09.7	-0.6
	baz=314						
145A	Houston Renfro	128.56	40	P	PKPdf	01 33 10.1	-0.3
	baz=311						
S51A	Beattyville	128.60	31	P	PKPdf	01 33 10.4	0.0
	baz=321						
W48A	Pulaski	128.65	35	P	PKPdf	01 33 10.1	-0.4
	baz=316						
MCWV	Mont Chateau	128.76	26	P	PKPdf	01 33 10.4	-0.2
	baz=326						
SSPA	Standing Stone	128.76	24	P	PKPdf	01 33 10.2	-0.3
	baz=328						
SSPA	Standing Stone	128.76	24	ePKPdf	PKPdf	01 33 11.3	+0.7
SSPA				eSKP		01 36 28.6	
KSPA	Keystone Colle	128.78	21	ePKPdf	PKPdf	01 33 12.8	+2.2
V49A	McMinnville	128.78	34	P	PKPdf	01 33 10.1	-0.6
	baz=317						
344A	Westbrook Farm	128.78	42	P	PKPdf	01 33 10.6	-0.2
	baz=310						
344A	Westbrook Farm	128.78	42	ePKPdf	PKPdf	01 33 12.8	+1.9
Z46A	Louisville	128.79	39	P	PKPdf	01 33 10.7	-0.2
	baz=313						
O56A	Blue Knob Stat	128.80	25	P	PKPdf	01 33 10.7	0.0
	baz=328						
O56A	Blue Knob Stat	128.80	25	ePKPdf	PKPdf	01 33 11.7	+0.9
S52A	Salyersville	128.83	30	P	PKPdf	01 33 10.4	-0.4
	baz=321						
245A	Little AP, Sta	128.96	40	P	PKPdf	01 33 10.9	-0.3
	baz=311						
Y47A	UCPARC, Winfie	128.98	37	P	PKPdf	01 33 10.1	-1.1
	baz=314						
W49A	Belvidere	129.04	35	P	PKPdf	01 33 10.4	-0.9
	baz=316						
X48A	Hartselle	129.07	36	P	PKPdf	01 33 10.5	-0.8
	baz=315						
X48A	Hartselle	129.07	36	ePKPdf	PKPdf	01 33 11.4	+0.1
146A	Union	129.09	39	P	PKPdf	01 33 11.1	-0.3
	baz=312						
146A	Union	129.09	39	ePKPdf	PKPdf	01 33 14.3	+2.9
444A	Pine Grove	129.24	42	P	PKPdf	01 33 11.6	-0.2
	baz=309						
V50A	Pikeville	129.29	33	P	PKPdf	01 33 11.1	-0.6
	baz=318						
HRV	Adam Dziewonsk	129.31	17	P	PKPdf	01 33 11.4	-0.1
	baz=337						
HRV	Adam Dziewonsk	129.31	17	ePKPdf	PKPdf	01 33 13.1	+1.5
HRV				eSKP		01 36 31.0	
HRV	Adam Dziewonsk	129.31	17	ePKIKP	PKPdf	01 33 13.1	+1.5
T52A	Hallie	129.32	31	P	PKPdf	01 33 11.7	-0.1
	baz=321						
Z47A	Carrollton	129.33	38	P	PKPdf	01 33 11.4	-0.4
	baz=313						
N59A	State Game Lan	129.34	22	P	PKPdf	01 33 11.7	0.0
	baz=331						
N59A	State Game Lan	129.34	22	ePKPdf	PKPdf	01 33 14.3	+2.6
345A	Thompson Farm,	129.34	41	P	PKPdf	01 33 11.8	-0.1
	baz=310						
Y48A	Jasper	129.38	37	P	PKPdf	01 33 11.3	-0.7
	baz=315						
X49A	Woodville	129.44	35	P	PKPdf	01 33 11.7	-0.4
	baz=316						
TZTN	Tazewell	129.46	31	P	PKPdf	01 33 11.6	-0.5
	baz=320						
TZTN	Tazewell	129.46	31	ePKPdf	PKPdf	01 33 13.4	+1.4
TZTN				eSKP		01 36 30.4	
WES	Weston	129.49	17	ePKPdf	PKPdf	01 33 13.6	+1.7
WES	Weston	129.49	17	ePKIKP	PKPdf	01 33 13.6	+1.7
445A	Amite	129.50	42	P	PKPdf	01 33 12.2	-0.1
	baz=310						
CMLA	Cha da Macela	129.51	331	PFAKE		01 33 20.0	+7.9
CMLA				LR	LR		
	comp=Z,1μm,22.0s						
Z48A	Northport	129.52	37	P	PKPdf	01 33 11.9	-0.3
	baz=314						
W50A	Signal Mountai	129.52	34	P	PKPdf	01 33 12.0	-0.2
	baz=318						
W50A	Signal Mountai	129.52	34	ePKPdf	PKPdf	01 33 13.3	+1.0
147A	Livingston	129.56	39	P	PKPdf	01 33 12.1	-0.2
	baz=313						
147A	Livingston	129.56	39	ePKPdf	PKPdf	01 33 13.4	+1.1
PAGS	Pennsylvania G	129.57	23	ePKPdf	PKPdf	01 33 14.3	+2.2
V51A	Loudon	129.60	33	P	PKPdf	01 33 11.8	-0.5
	baz=319						
V51A	Loudon	129.60	33	ePKPdf	PKPdf	01 33 14.2	+1.9
ODNJ	Ogdensburg	129.61	21	ePKPdf	PKPdf	01 33 14.7	+2.6
346A	Big Creek Wild	129.65	41	P	PKPdf	01 33 12.2	-0.4
	baz=311						
247A	Quitman	129.76	39	P	PKPdf	01 33 13.0	+0.3
	baz=312						
CPCT	Cooper Cave	129.77	33	ePKPdf	PKPdf	01 33 14.0	+1.3
KIC	Kosan Boka	129.84	283	ePKP1	PKPdf	01 33 13.1	-0.2
	comp=Z,210nm,1.0s						
Y49A	Blount Mountai	129.86	36	P	PKPdf	01 33 12.4	-0.5
	baz=316						
Y49A	Blount Mountai	129.86	36	ePKPdf	PKPdf	01 33 13.8	+0.9
X50B	Fort Payne	129.87	35	P	PKPdf	01 33 11.9	-1.0
	baz=317						
DBIC	Dimbokro	129.88	284	PKP	PKPdf	01 33 13.8	+0.4
	comp=Z,45nm,0.8s,baz=59,slow=2.0,SNR=28						
DBIC	Dimbokro	129.88	284	ePKPdf	PKPdf	01 33 14.2	+0.8
DBIC	Dimbokro	129.88	284	ePKIKP	PKPdf	01 33 14.2	+0.8
MVL	Millersville	129.91	23	ePKPdf	PKPdf	01 33 14.3	+1.6
PAL	Palisades	129.92	20	P	PKPdf	01 33 12.8	+0.1
	baz=333						
PAL	Palisades	129.92	20	ePKPdf	PKPdf	01 33 15.5	+2.8
PAL	Palisades	129.92	20	ePKIKP	PKPdf	01 33 15.5	+2.8
V52A	Sevierville	129.97	32	P	PKPdf	01 33 13.0	0.0
	baz=320						
V52A	Sevierville	129.97	32	ePKPdf	PKPdf	01 33 14.8	+1.7
148A	Greensboro	130.01	38	P	PKPdf	01 33 12.9	-0.3
	baz=314						
TIC	Toumodi	130.05	284	ePKP1	PKPdf	01 33 12.8	-1.0
LRAL	Lakeview Retre	130.09	37	P	PKPdf	01 33 13.2	-0.1
	baz=314						
LRAL	Lakeview Retre	130.09	37	ePKPdf	PKPdf	01 33 13.5	+0.2
LRAL				eSKPdf	SKPbc	01 36 32.5	+2.0
U53A	Fall Branch	130.10	31	P	PKPdf	01 33 12.8	-0.6
	baz=321						
446A	Poplarville	130.11	41	P	PKPdf	01 33 13.6	+0.2
	baz=311						
LIC	Lamto	130.15	283	ePKP1	PKPdf	01 33 14.0	+0.1
	comp=Z,239nm,0.9s						
SDMD	Soldier's Deli	130.23	24	ePKPdf	PKPdf	01 33 16.0	+2.6
Y50A	Piedmont	130.23	35	P	PKPdf	01 33 13.0	-0.6
	baz=316						
X51A	Calhoun	130.24	34	P	PKPdf	01 33 13.3	-0.2
	baz=318						
X51A	Calhoun	130.24	34	ePKPdf	PKPdf	01 33 14.2	+0.7
347A	Saraland	130.24	40	P	PKPdf	01 33 13.6	-0.1
	baz=312						
Z49A	Columbiana	130.26	37	P	PKPdf	01 33 13.1	-0.6
	baz=315						
248A	Dixon Mills	130.28	39	P	PKPdf	01 33 13.4	-0.3
	baz=313						
PSUB	Penn St. - Bra	130.32	22	ePKPdf	PKPdf	01 33 15.7	+2.2
W52A	Murphy	130.36	33	ePKPdf	PKPdf	01 33 15.6	+1.8
BLA	Blacksburg	130.49	28	P	PKPdf	01 33 13.6	-0.4
	baz=324						
BLA	Blacksburg	130.49	28	ePKPdf	PKPdf	01 33 14.8	+0.8
BLA				eSKPbc	SKPbc	01 36 34.2	+2.3
BLA				LR	LR		
	comp=Z,1μm,22.0s						
BLA	Blacksburg	130.49	28	ePKIKP	PKPdf	01 33 14.8	+0.8
BLA				MLR	MLR		
	comp=Z,1μm,22.0s						
V53A	Saluda	130.52	32	P	PKPdf	01 33 13.9	-0.2
	baz=320						
149A	Jones	130.52	38	P	PKPdf	01 33 13.8	-0.3
	baz=314						
Z50A	Ashland	130.58	36	P	PKPdf	01 33 14.0	-0.3
	baz=316						
Z50A	Ashland	130.58	36	ePKPdf	PKPdf	01 33 15.3	+1.0
Y51A	Rockmart	130.61	35	P	PKPdf	01 33 13.9	-0.4
	baz=317						
348A	Jackson	130.64	39	P	PKPdf	01 33 14.7	+0.3
	baz=312						
W53A	Cullowhee	130.71	32	P	PKPdf	01 33 14.9	+0.3
	baz=320						
249A	Camden	130.75	38	P	PKPdf	01 33 14.3	-0.3
	baz=314						
X52A	Dahlonega	130.75	33	P	PKPdf	01 33 14.7	+0.1
	baz=319						
IP04	Greensprings	130.82	26	ePKPdf	PKPdf	01 33 16.3	+1.8
IP03	Louisa	130.91	26	ePKPdf	PKPdf	01 33 16.1	+1.4
CVRD	Centerville Ro	130.96	25	ePKPdf	PKPdf	01 33 16.8	+2.0
Z51A	Franklin	130.97	36	P	PKPdf	01 33 14.7	-0.3
	baz=316						
BG3	Lake Jocassee	130.97	32	ePKPdf	PKPdf	01 33 17.0	+2.1
SPRD	Spring Road, M	130.97	26	ePKPdf	PKPdf	01 33 17.2	+2.4
150A	Eclectic	130.97	37	P	PKPdf	01 33 14.8	-0.2
	baz=315						
448A	Bay Minette	130.99	40	P	PKPdf	01 33 15.0	-0.1
	baz=312						
IP07	Quail	130.99	26	ePKPdf	PKPdf	01 33 16.5	+1.6
IP01	Cuckoo	131.01	26	ePKPpre	PKPpre	01 33 06.2	
CBN	Corbin Frederi	131.03	25	P	PKPdf	01 33 14.7	-0.2
	baz=328						
CBN	Corbin Frederi	131.03	25	ePKPdf	PKPdf	01 33 15.1	+0.2
CBN				eSKPbc	SKPab	01 36 37.0	+3.0
CBN				LR	LR		
	comp=Z,557nm,21.0s						
349A	Repton	131.13	39	P	PKPdf	01 33 15.3	0.0
	baz=313						
X53A	Estanollee	131.14	33	P	PKPdf	01 33 15.2	-0.1
	baz=319						
IP05	Hopewell Churc	131.19	26	ePKPpre	PKPpre	01 33 08.5	
Y52A	Lilburn	131.20	34	P	PKPdf	01 33 15.5	+0.1
	baz=318						
Y52A	Lilburn	131.20	34	ePKPdf	PKPdf	01 33 17.4	+2.0
JSRW	J. Sargeant Re	131.25	26	ePKPdf	PKPdf	01 33 17.3	+1.9
250A	Grady	131.27	38	P	PKPdf	01 33 15.7	+0.1
	baz=315						
250A	Grady	131.27	38	ePKPdf	PKPdf	01 33 16.3	+0.7
BRAL	Brewton	131.34	39	P	PKPdf	01 33 16.1	+0.4
	baz=313						
BRAL	Brewton	131.34	39	PFAKE		01 33 30.0	+14
BRAL				LR	LR		
	comp=Z,685nm,21.0s						
151A	Opelika	131.44	36	P	PKPdf	01 33 16.1	+0.2
	baz=316						
Y53A	Monroe	131.47	34	P	PKPdf	01 33 16.0	+0.1
	baz=319						
Z52A	Williamson	131.50	35	P	PKPdf	01 33 16.3	+0.3
	baz=317						
350A	Dozier	131.61	38	P	PKPdf	01 33 16.2	0.0
	baz=314						
KMSC	Kings Mountain	131.69	31	P	PKPdf	01 33 16.3	0.0
	baz=322						
KMSC	Kings Mountain	131.69	31	ePKPdf	PKPdf	01 33 17.9	+1.7
PAULI	Pauline	131.69	31	ePKPdf	PKPdf	01 33 18.1	+1.8
152A	Waverly Hall	131.70	36	P	PKPdf	01 33 16.5	+0.1
	baz=317						
152A	Waverly Hall	131.70	36	ePKPdf	PKPdf	01 33 18.2	+1.8
251A	Midway	131.70	37	P	PKPdf	01 33 16.8	+0.4
	baz=316						
GOGA	Godfrey	131.87	34	P	PKPdf	01 33 16.9	+0.2
	baz=318						
GOGA	Godfrey	131.87	34	ePKPdf	PKPdf	01 33 18.3	+1.6
GOGA				eSKPbc	SKPab	01 36 38.3	+0.6
GOGA				LR	LR		
	comp=Z,624nm,20.0s						
GOGA	Godfrey	131.87	34	ePKIKP	PKPdf	01 33 18.3	+1.6
GOGA				MLR	MLR		
	comp=Z,624nm,20.0s						
Z53A	Monticello	131.91	34	P	PKPdf	01 33 16.8	+0.1
	baz=318						
HODGE	Hodges	131.91	32	ePKPdf	PKPdf	01 33 16.8	+0.1
GO09	Cerro Castillo	131.95	164	ePKPdf	PKPdf	01 33 19.6	+3.3
Y54A	Tignall	131.96	33	P	PKPdf	01 33 17.4	+0.5
	baz

	baz=319						
NHSC	New Hope	133.87	31	P	PKPdf	01 33 21.3	+0.9
	baz=322						
NHSC	New Hope	133.87	31	PFAKE		01 33 30.0	+10
NHSC				LR	LR		
	comp=Z,553nm,21.0s						
554A	Perry	134.17	37	P	PKPdf	01 33 21.7	+0.7
	baz=316						
356A	Blackshear	134.18	35	P	PKPdf	01 33 21.2	+0.2
	baz=319						
257A	Skidaway Islan	134.30	33	P	PKPdf	01 33 22.3	+1.0
	baz=320						
456A	Hilliard	134.68	35	P	PKPdf	01 33 22.7	+0.7
	baz=318						
655A	Horseshoe Beac	134.84	38	P	PKPdf	01 33 23.2	+0.9
	baz=316						
556A	Lake Butler	134.99	36	P	PKPdf	01 33 22.7	+0.1
	baz=318						
457A	Yulee	135.03	35	P	PKPdf	01 33 23.2	+0.5
	baz=319						
656A	Willston	135.38	37	P	PKPdf	01 33 23.7	+0.4
	baz=317						
557A	Orange Park	135.38	36	P	PKPdf	01 33 23.7	+0.3
	baz=318						
657A	Interlachen	135.62	36	P	PKPdf	01 33 24.2	+0.4
	baz=318						
757A	Oxford	135.97	37	P	PKPdf	01 33 25.4	+1.0
	baz=317						
658A	Bunnell	136.09	36	P	PKPdf	01 33 25.4	+0.7
	baz=318						
857A	Zephyrhills	136.36	38	P	PKPdf	01 33 25.7	+0.5
	baz=316						
758A	Lake Helen	136.47	36	P	PKPdf	01 33 25.9	+0.5
	baz=318						
957A	Wimauma	136.78	38	P	PKPdf	01 33 26.7	+0.7
	baz=316						
858A	St. Cloud	136.92	37	P	PKPdf	01 33 26.6	+0.3
	baz=318						
DWPF	Disney Wildern	136.95	37	P	PKPdf	01 33 26.6	+0.3
	baz=317						
DWPF	Disney Wildern	136.95	37	ePKPdf	PKPdf	01 33 28.6	+2.3
958A	Wauchula	137.14	38	P	PKPdf	01 33 27.3	+0.7
	baz=316						
859A	Kempfer Cattle	137.31	37	P	PKPdf	01 33 27.5	+0.6
	baz=318						
058A	Arcadia	137.49	39	P	PKPdf	01 33 28.1	+0.8
	baz=316						
959A	Okeechobee	137.71	37	P	PKPdf	01 33 28.0	+0.3
	baz=318						
059A	Moore Haven	137.96	38	P	PKPdf	01 33 28.6	+0.4
	baz=317						
059Z	Ave Maria	138.22	39	P	PKPdf	01 33 29.4	+0.7
	baz=316						
060A	Indiantown	138.38	37	P	PKPdf	01 33 29.2	+0.2
	baz=318						
060Z	West Palm Beac	138.72	38	P	PKPdf	01 33 30.0	+0.4
	baz=317						
061Z	Ochoppi	138.90	39	P	PKPdf	01 33 30.2	+0.3
	baz=316						
062Z	Marathon	139.61	40	P	PKPdf	01 33 32.3	+1.0
	baz=315						
BBSR	BB Station	140.69	15	PFAKE		01 33 50.0	+17
BBSR				LR	LR		
	comp=Z,467nm,21.0s						
PLCA	Paso Flores	141.92	159	PKhKP	PKPpre	01 33 30.4	
	comp=Z,16nm,0.9s,baz=235,slow=4.5,SNR=15						
PLCA	Paso Flores	141.92	159	ePKPpre	PKPpre	01 33 30.6	
PLCA	Paso Flores	141.92	159	eP	PKPpre	01 33 30.4	
PAYG	Puerto Ayora	142.99	84	PFAKE		01 33 50.0	+12
PAYG				LR	LR		
	comp=Z,735nm,20.0s						
FSCY	Frank Sound, G	143.15	47	ePKPdf	PKPdf	01 33 36.8	-1.0
CBCY	The Bluff, Cay	143.89	45	ePKPdf	PKPdf	01 33 39.4	+0.3
SACV	Santiago Islan	143.92	305	ePKPdf	PKPbc	01 33 37.2	+0.1
SACV				eSKPbc	SKiKP	01 37 13.8	+0.5
SACV				LR	LR		
	comp=Z,346nm,21.0s						
CRZ1	La Cruz	143.98	62	eP	PKPbc	01 33 37.4	0.0
NY14	Universidad de	144.25	63	eP	PKPdf	01 33 39.8	-0.1
GBS3	Finca Las lm¨¡	144.26	63	eP	PKPab	01 33 38.0	+0.1
LAPC	Finca la Perla	144.29	63	eP	PKPbc	01 33 38.7	+0.4
GB1A	Borinquen Arri	144.30	63	eP	PKPbc	01 33 38.5	+0.1
BUEV	Buena Vista	144.30	63	eP	PKPbc	01 33 38.7	+0.3
BUAI	Buenos Aires	144.33	63	eP	PKPbc	01 33 38.5	+0.1
GPS3	Bodega del ICE	144.35	63	eP	PKPbc	01 33 39.2	+0.7
GPS2	Hotel Rinc¨‡n	144.37	63	eP	PKPbc	01 33 39.1	+0.4
LIM1	Limonal	144.48	63	eP	PKPbc	01 33 39.1	+0.1
GUAB	Guayabo de Bag	144.50	63	eP	PKPab	01 33 38.9	+0.1
MESS	Mesas	144.51	63	eP	PKPab	01 33 38.7	-0.1
MESS				eP	PKPbc	01 33 39.1	0.0
COLC	Colonia	144.53	63	eP	PKPab	01 33 38.9	0.0
HORNC	Hornillas	144.54	63	eP	PKPab	01 33 39.1	+0.1
CUI	Cuipilapa	144.57	63	eP	PKPbc	01 33 39.5	+0.2
ACAL	Aguas Claras	144.70	63	eP	PKPbc	01 33 40.0	+0.2
PTEN	Parque Tenorio	144.71	63	eP	PKPbc	01 33 39.8	0.0
AMAS	Alto Masis	144.75	63	eP	PKPbc	01 33 40.3	+0.4
JTS	JuntasAbangare	144.92	63	PKP	PKPdf	01 33 40.9	-0.1
	comp=Z,105nm,0.7s,baz=323,slow=5.1,SNR=72						
JTS	JuntasAbangare	144.92	63	ePKPdf	PKPbc	01 33 40.5	+0.1
JTS				LR	LR		
	comp=Z,652nm,22.0s						
JTS	JuntasAbangare	144.92	63	eP	PKPab	01 33 39.9	-0.4
CASO	Castillo	145.05	63	eP	PKPbc	01 33 40.6	-0.2
CEDE	Laguna Cede¨–o	145.06	63	eP	PKPdf	01 33 41.4	0.0
FORC	Fortuna	145.09	63	eP	PKPdf	01 33 41.4	0.0
SRA1	San Ram¨‡n	145.43	63	eP	PKPab	01 33 43.9	+1.6
CGA2	Cerro Gallo 2	145.47	63	eP	PKPab	01 33 43.0	+0.5
HDC	Heredia	145.79	63	ePKPdf	PKPab	01 33 45.8	+2.1
QCR1	Quepos	145.99	64	eP	PKPab	01 33 44.5	+0.2
CVTR	Volcan Turrial	146.09	63	eP	PKPdf	01 33 42.6	-1.0
GO05	HualaæØ	146.24	152	ePKPdf	PKPab	01 33 44.4	-0.3
BUS	Buena Vista	146.30	63	eP	PKPab	01 33 45.6	-0.4
MTDJ	Mount Denham	146.46	44	ePKPbc	PKPbc	01 33 44.8	-0.3
MTDJ				LR	LR		
	comp=Z,423nm,22.0s						
MTDJ	Mount Denham	146.46	44	eP	PKPdf	01 33 42.6	-1.1
BBJ	Bamboo Saint A	146.54	44	iP	PKPbc	01 33 45.5	+0.3
MCJ	Malvern	146.56	45	iP	PKPdf	01 33 44.4	+0.6
TRQA	Tornquist	146.88	168	ePKPbc	PKPbc	01 33 45.3	-0.4
TRQA				LR	LR		
	comp=Z,489nm,19.0s						
TRQA	Tornquist	146.88	168	PKP2	PKPbc	01 33 45.3	-0.4
STH	Stony Hill	147.06	44	iP	PKPbc	01 33 47.2	+0.5
GWJ	Greenwich	147.12	44	iP	PKPbc	01 33 47.5	+0.4
PTJ1	Puerto Jim¨ne	147.13	65	eP	PKPdf	01 33 45.3	+0.5
BRU2	Volcan	147.57	64	eP	PKPbc	01 33 47.4	-1.1
GRTK	Grand Turk	147.93	32	ePKPbc	PKPbc	01 33 48.8	-0.1
GRTK				LR	LR		
	comp=Z,515nm,22.0s						
RFA	San Rafael	147.94	156	iP	PKPbc	01 33 49.7	+0.9
ROC1	El Roble	148.34	151	ePKPbc	PKPbc	01 33 50.4	+0.3
ROC1	El Roble	148.34	151	eP	PKPbc	01 33 50.6	+0.5
AVIZ	Vizcacheras	149.05	155	eP	PKPbc	01 33 53.1	+1.4
AAGR	Agrelo	149.25	154	eP	PKPdf	01 33 49.2	+1.3
ARCO	CERRO ARCO	149.41	154	eP	PKPbc	01 33 52.8	+0.1
LGNH	LOogne	149.48	38	ePKPbc	PKPbc	01 33 54.8	+1.8
ASAL	Salagasta	149.67	154	eP	PKPdf	01 33 50.0	+1.4
AUSP	Uspallata	149.73	153	eP	PKPdf	01 33 50.8	+1.8
BCIP	Isla Barro Col	149.92	61	ePKPbc	PKPbc	01 33 54.3	+0.1
BCIP				LR	LR		
	comp=Z,635nm,22.0s						
BCIP	Isla Barro Col	149.92	61	eP	PKPdf	01 33 47.8	-1.6
BCIP	Isla Barro Col	149.92	61	eP	PKPdf	01 33 49.7	+0.4
RTLS	Leoncito	150.13	152	eP	PKPdf	01 33 50.8	+1.2
RTCV	Cerro Valdivia	150.42	154	eP	PKPdf	01 33 51.1	+1.4
SUCO	SUCO	150.53	160	eP	PKPdf	01 33 50.1	+0.3
ACAN	Cantantal	150.64	156	eP	PKPdf	01 33 51.1	+1.1
GO04	Tololo Observa	150.72	148	ePKPdf	PKPdf	01 33 53.0	+2.6
MRA	San Martin	151.08	158	eP	PKPdf	01 33 52.0	+1.2
AMOG	MOGNA	151.22	153	eP	PKPdf	01 33 51.1	+0.1
AROD	Rodeo	151.40	150	iP	PKPbc	01 33 59.1	+1.4
ACDV	Cuesta del Vie	151.57	151	eP	PKPdf	01 33 53.7	+2.0
LCO	Las Campanas	151.69	147	ePKPbc	PKPbc	01 33 59.0	+0.7
LCO				ePKPab	PKPab	01 34 07.2	+0.1
LCO				LR	LR		
	comp=Z,1μm,22.0s						
LCO	Las Campanas	151.69	147	iP	PKPbc	01 33 59.5	+1.2
CAPC	Capurgana	152.32	59	eP	PKPdf	01 33 52.7	-0.3
AGUA	GUANDACOL	152.44	151	eP	PKPdf	01 33 53.7	+0.8
TCA	Tanti	152.46	159	eP	PKPdf	01 33 53.9	+1.0
APLL	PUNTA DE LOS L	152.55	155	eP	PKPdf	01 33 52.7	-0.3
AOPR	Arecibo Observ	152.79	28	ePKPbc	PKPbc	01 34 01.5	+0.7
CRPR	Cabo Rojo, PR	152.91	29	ePKPbc	PKPbc	01 34 01.0	0.0
GO03	Copiap	153.05	146	ePKPdf	PKPdf	01 33 55.5	+1.7
OBIP	Obispado Ponce	153.12	28	ePKPbc	PKPbc	01 34 01.3	-0.1
VCA	Vinchina	153.20	150	eP	PKPbc	01 34 00.2	-1.4
ACLC	CERRO LA CRUZ	153.21	153	eP	PKPdf	01 33 55.3	+1.2
CBYP	Canovanas	153.27	27	ePKPbc	PKPbc	01 34 02.7	+0.9
SJG	San Juan	153.28	27	ePKPbc	PKPbc	01 34 02.5	+0.8
	comp=Z,20nm,0.7s,baz=263,slow=3.6,SNR=7.5						
SJG	San Juan	153.28	27	ePKPbc	PKPbc	01 34 02.0	+0.2
SJG				LR	LR		
	comp=Z,286nm,22.0s						
SJG	San Juan	153.28	27	eP	PKPbc	01 34 00.5	-1.2
SJG	San Juan	153.28	27	ePKIKP	PKPbc	01 34 02.0	+0.2
SJG				MLR	MLR		
	comp=Z,286nm,22.0s						
ICMP	Isla Caja de M	153.30	28	ePKPbc	PKPbc	01 34 02.2	+0.3
HUMP	Col San Antoni	153.39	27	ePKPbc	PKPbc	01 34 02.5	+0.5
SJCC	San Jacinto, C	153.46	54	eP	PKPdf	01 33 56.5	+1.8
MTP	Monte Pirata	153.56	26	ePKPdf	PKPdf	01 33 56.0	+1.3
STVI	Saint Thomas	153.59	25	ePKPbc	PKPbc	01 34 02.3	-0.2
MOTC	Monteria, Cord	153.67	57	eP	PKPdf	01 33 51.9	-3.1
CDVI	St. Croix	154.21	25	ePKPbc	PKPbc	01 34 05.2	+1.4
MALC	Bahia Malaga	154.36	68	eP	PKPdf	01 33 57.0	+1.0
OTAV	Otavalo	154.44	77	ePKPdf	PKPdf	01 33 58.1	+1.4
OTAV				ePKPbc	PKPbc	01 34 04.4	-0.7
OTAV				LR	LR		
	comp=Z,530nm,22.0s						
OTAV	Otavalo	154.44	77	eP	PKPdf	01 33 55.9	-0.8
OTAV	Otavalo	154.44	77	PKIKP	PKPdf	01 33 59.0	+2.3
CYA	Choya	154.56	154	eP	PKPdf	01 33 56.6	+0.7
SMRT	St. Maarten	154.60	22	ePKPbc	PKPbc	01 34 05.1	+0.5
CODC	Agust¨›n Codaz	154.82	52	eP	PKPdf	01 33 55.9	-0.7
PLMC	San Jos¨ del	154.97	66	eP	PKPdf	01 33 55.2	-1.7
ZARC	Zaragoza, Cauc	155.03	59	eP	PKPdf	01 33 55.2	-1.7
HELC	Santa Helena	155.08	62	ePKPdf	PKPdf	01 33 58.3	+0.9
HELC	Santa Helena	155.08	62	eP	PKPdf	01 33 57.0	-0.4
HORQ	Saladito	155.21	69	eP	PKPdf	01 33 57.0	-0.5
GCUF	Volcan Galeras	155.26	75	eP	PKPdf	01 33 58.3	+0.5
ATAH	Atahualpa	155.26	95	PKP	PKPdf	01 33 59.9	+2.1
	comp=Z,8.7nm,0.9s,baz=283,slow=0.6,SNR=11						
GO02	Mina Guanaco	155.27	143	ePKPdf	PKPdf	01 33 59.8	+2.5
YOTC	Yotoco, Valle	155.28	68	eP	PKPdf	01 33 56.5	-0.9
ANWB	Willy Bob	155.40	19	PFAKE		01 34 10.0	-13
ANWB				LR	LR		
	comp=Z,624nm,21.0s						
POPC	Popayan, Colom	155.49	71	eP	PKPdf	01 33 55.2	-2.6
SOTA	Rioblanco	155.69	72	eP	PKPdf	01 33 55.9	-2.5
PCON	Cinco Dias	155.82	71	eP	PKPdf	01 33 56.5	-2.1
PTBC	PUERTO BERRIO	155.85	60	eP	PKPdf	01 33 57.9	-0.1
OCAC	Ocana	155.91	55	eP	PKPdf	01 33 55.9	-2.4
ANIL	Santa Ana	155.94	66	eP	PKPdf	01 33 58.3	-0.2
NNA	Nana	156.15	107	PKP	PKPdf	01 33 59.3	+0.9
	comp=Z,6.0nm,0.6s,baz=240,slow=2.3,SNR=4.2						
NNA	Nana	156.15	107	ePKPdf	PKPdf	01 33 58.7	+0.3
NNA				LR	LR		
	comp=Z,471nm,21.0s						
AHML	Horco Molle	156.20	153	eP	PKPdf	01 33 59.0	+0.8
GDHS	Morne Mazeau,	156.71	20	ePKPab	PKPab	01 34 28.9	+0.5
PRAC	Prado	156.73	67	ePKPdf	PKPdf	01 33 59.5	+0.3
PRAC	Prado	156.73	67	eP	PKPdf	01 33 55.2	-4.0
ROSC	El Rosal	156.76	64	PKP	PKPdf	01 34 01.1	+1.5
	comp=Z,8.1nm,0.8s,baz=121,slow=3.9,SNR=11						
ROSC	El Rosal	156.76	64	ePKPdf	PKPdf	01 34 01.3	+1.6
FLOC	Florencia	156.77	73	eP	PKPdf	01 33 59.1	-0.1
BARC	Barichara	156.91	58	eP	PKPdf	01 34 00.2	+0.5
PAMC	Pamplona, Colo	156.92	56	eP	PKPdf	01 33 56.5	-3.4
RUSC	La Rusia	157.35	60	ePKPdf	PKPdf	01 34 00.5	-0.1
RUSC	La Rusia	157.35	60	eP	PKPdf	01 33 59.9	-0.7
CHIC	Chingaza	157.38	63	eP	PKPdf	01 33 59.9	-0.6
SDV	Santo Domingo	157.64	51	PKP	PKPdf	01 34 00.8	+0.3
	comp=Z,34nm,0.7s,baz=267,slow=2.0,SNR=14						
SDV	Santo Domingo	157.64	50	ePKPdf	PKPdf	01 34 00.9	+0.3
SDV				LR	LR		
	comp=Z,439nm,21.0s						
SDV	Santo Domingo	157.64	50	eP	PKPdf	01 34 00.5	0.0
PB01	IPOC Station P	158.27	136	ePKPdf	PKPdf	01 34 02.5	+1.5
FDF	Fort de France	158.35	20	ePKPab	PKPab	01 34 35.7	+0.2
FDF	Fort de France	158.35	20	ePKP2	PKPab	01 34 35.7	+0.2
CPUP	Villa Florida	159.16	170	PKP	PKPdf	01 34 03.1	+1.4
	comp=Z,17nm,1.1s,baz=146,slow=2.0,SNR=14						
CPUP				PKPab	PKPab	01 34 39.8	+1.2
	comp=Z,44nm,1.0s,baz=185,slow=4.0,SNR=16						
CPUP				PP	PP	01 38 19.4	+1.2
	comp=Z,6.8nm,0.9s,baz=179,slow=8.6,SNR=3.5						
HJA	Humahuaca	159.16	148	iP	PKPdf	01 34 04.5	+2.1
MNMC	Minye Minye	159.43	132	ePKPdf	PKPdf	01 34 03.9	+1.3
BBGH	Gun Hill	160.36	18	PFAKE		01 34 10.0	+6.6
BBGH				LR	LR		
	comp=Z,2μm,22.0s						
GRGR	Grenville	160.54	24	PFAKE		01 34 10.0	+6.4
GRGR				LR	LR		
	comp=Z,469nm,20.0s						
SPB	Sao Paulo	161.25	198	ePKPdf	PKPdf	01 34 05.5	+1.4
LPAZ	La Paz	162.24	128	PKP	PKPdf	01 34 07.5	+1.3
	comp=Z,16nm,1.1s,baz=16,slow=1.3,SNR=24						
LPAZ	La Paz	162.24	128	ePKPdf	PKPdf	01 34 07.3	+1.2
SIV	San Ignacio	167.38	145	PKP	PKPdf	01 34 10.7	+0.8
	comp=Z,10nm,0.9s,baz=194,slow=1.6,SNR=41						
SIV				PKPab	PKPab	01 35 15.9	+0.8
	comp=Z,6.5nm,0.9s,baz=257,slow=2.6,SNR=3.0						
SIV				PP	PP	01 39 03.4	+0.9
	comp=Z,3.3nm,1.1s,baz=274,slow=11,SNR=2.9						
SAML	Samuel	169.90	109	ePKPdf	PKPdf	01 34 11.1	-0.4
SAML				ePKPab	PKPab	01 35 26.4	-0.1
SAML				LR	LR		
	comp=Z,644nm,21.0s						
PTGA	Pitinga	171.91	53	PKP	PKPdf	01 34 12.6	-0.1
	comp=Z,6.9nm,0.8s,baz=350,slow=2.4,SNR=14						

MAN 15 01:22:30.3, 13°.36N×122°.17E, h32km, mb3.6, ML2.3, MS1.7, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOAC	Boac	0.34	287	eP	Pn	01 22 39.8	+0.8
BOAC				eS	Sn	01 22 46.9	+2.1
AUQP	San Andres	0.49	94	eP	Pn	01 22 41.5	+0.4
AUQP				eS	Sn	01 22 50.2	+1.7
OTRP	Odiongan	1.00	189	eP	Pb	01 22 49.0	-0.2
OTRP				eS	Sn	01 23 00.7	-0.5

IDC 15 01:29:26.4±6.5, 15°.76S×173°.12W, h0km, mb3.9/3, mb1 4.2/4, mb1mx3.8/52, mbtmp3.9/4, ML4.3/1, MS4.6/3, Ms1 4.7/3, ms1mx3.6/47, Error ellipse: s-maj=293.2km s-min=24.5km az=139.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.25	35	Pn	Pn	01 30 02.9	-2.1
	74nm,0.3s,baz=217,slow=10,SNR=27						
AFI				Sn	Sn	01 30 24.9	-8.7
	214nm,0.3s,baz=43,slow=23,SNR=22						
AFI				LR	LR	01 30 27.2	
	comp=Z,83nm,21.4s,baz=219,slow=27						
H11S2	WAKE ISLAND Hy	39.41	329	T	T	02 18 46.8	
	baz=149,slow=76,SNR=6.9						
H11S3	WAKE ISLAND Hy	39.42	329	T	T	02 18 43.2	
	baz=149,slow=76,SNR=5.5						
H11S1	WAKE ISLAND Hy	39.42	329	T	T	02 18 44.9	
	baz=149,slow=76,SNR=5.7						
H11N3	WAKE ISLAND Hy	40.35	330	T	T	02 19 55.8	
	baz=150,slow=76,SNR=4.5						
H11N1	WAKE ISLAND Hy	40.36	330	T	T	02 19 46.5	
	baz=150,slow=76,SNR=4.7						
H11N2	WAKE ISLAND Hy	40.37	330	T	T	02 19 49.9	
	baz=150,slow=76,SNR=5.0						
WRA	Warramunga Arr	50.02	257	P	P	01 38 22.3	-0.8
	0.4nm,0.6s,baz=96,slow=7.2,SNR=6.6						
ASAR	Alice Springs	50.25	252	P	P	01 38 24.4	-0.4
	3.6nm,0.7s,baz=87,slow=7.9,SNR=33						
YBH	Yreka Blue Hor	73.72	37	LR	LR	02 07 44.5	
	comp=Z,198nm,21.2s,baz=293,slow=31						
NVAR	Mina Array Bea	74.42	42	LR	LR	02 07 50.1	
	comp=Z,721nm,21.9s,baz=86,slow=31						
PDAR	Pinedale Array	82.35	42	LR	LR	02 10 42.7	
	comp=Z,516nm,22.0s,baz=326,slow=30						
ILAR	Eielson Array	82.75	11	P	P	01 41 52.8	+1.0
	0.3nm,0.5s,baz=220,slow=5.6,SNR=6.0						
BRTR	Keskin Array B	146.60	321	PKPbc	PKPbc	01 49 10.8	+0.4
	0.4nm,0.5s,baz=29,slow=5.6,SNR=3.8						

ISN 15 01:37:10.0±0.8, 37°.30N×42°.46E, h2km±3km, ML2.8
ISK 15 01:37:12.8, 37°.25N×42°.43E, h3km, ML2.7/7

CSEM 15 01:37:12.8±0.2, 37°.20N×42°.49E, h2km, ML2.7, Error ellipse: s-maj=3.9km s-min=3.3km az=36.0
DDA 15 01:37:12.4, 37°.21N×42°.45E, h11km, Ml3.0
ISC 15 01:37:12.7±1.3, 37°.20N±0°.04×42°.45E±0°.02, h4km±10km, n44, σ0s96/67, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRN	S¨–rnak	0.29	354	iP	Pg	01 37 18.3	-0.2
SIRN				iS	Sg	01 37 22.3	-0.1
SIRN	S¨–rnak	0.29	354	P	Pg	01 37 18.3	-0.2
SIRN				S	Sg	01 37 22.3	-0.1
SIRT	Sirnak	0.30	358	PG	Pg	01 37 18.4	-0.1
SIRT				SG	Sg	01 37 22.6	+0.1
SIRT	Sirnak	0.30	358	ePg	Pg	01 37 18.4	-0.1
SIRT				eSg	Sg	01 37 22.6	+0.1
SRTM	Siirt_Merkez	0.89	332	iP	Pb	01 37 30.0	-0.9
SRTM				iS	Sb	01 37 42.1	-1.1
HAKT	HAKKARI	1.06	70	iP	Pb	01 37 33.3	-0.5
HAKT				iS	Sb	01 37 47.3	-0.8
HAKT	HAKKARI	1.06	70	P	Pb	01 37 33.3	-0.5
HAKT				S	Sb	01 37 47.3	-0.8
BTMN	Batman	1.17	307	iS	Sb	01 37 51.0	0.0
BTMN	Batman	1.17	307	S	Sb	01 37 51.0	0.0
GEVA	Gevas	1.21	23	iP	Pb	01 37 35.5	-0.7
GEVA				iS	Sn	01 37 51.8	-1.7
GEVA	Gevas	1.21	23	P	Pb	01 37 35.5	-0.7
GEVA				S	Sn	01 37 51.8	-1.7
MARD	Mardin	1.34	275	iP	Pg	01 37 37.2	-1.2
MARD				iS	Sb	01 37 56.2	+0.2
SVAN	Silvan-Diyarba	1.37	314	PN	Pb	01 37 38.8	-0.2
SVAN				SN	Sn	01 37 58.1	+0.7
SVAN	Silvan-Diyarba	1.37	314	iP	Pb	01 37 38.8	-0.2
SVAN				iS	Sn	01 37 57.9	+0.4
SVAN	Silvan-Diyarba	1.37	314	P	Pb	01 37 38.8	-0.2
SVAN				S	Sn	01 37 57.8	+0.4
SVAN				eSn	Sn	01 37 58.1	+0.7
GURO	Guroymak-BITLI	1.39	346	PN	Pb	01 37 39.2	-0.1
GURO	Guroymak-BITLI	1.39	346	ePn	Pb	01 37 39.2	-0.1
YOVA	Hakkari_Y¨…kse	1.51	75	iP	Pn	01 37 40.5	-0.3
YOVA				iS	Sn	01 38 03.6	+2.5
YOVA	Hakkari_Y¨…kse	1.51	75	P	Pn	01 37 40.5	-0.3
YOVA				S	Sn	01 38 03.6	+2.5
VANB	Van	1.57	28	PN	Pb	01 37 41.5	-1.0
VANB	Van	1.57	28	ePn	Pb	01 37 41.5	-1.0
ADCV	BITLIS_Adilcev	1.62	8	iP	Pg	01 37 43.8	+0.1
ADCV				iS	Sg	01 38 06.9	+2.2
ADCV	BITLIS_Adilcev	1.62	8	P	Pg	01 37 43.8	+0.1
ADCV				S	Sg	01 38 06.9	+2.2
MAZI	Mazidag	1.62	280	PN	Pn	01 37 42.6	+0.4
MAZI	Mazidag	1.62	280	ePn	Pn	01 37 42.6	+0.4
DIY	Diyarbakir	1.90	292	ePn	Pb	01 37 48.1	+0.1
DYBB	Diyarbakir	1.98	293	PN	Pn	01 37 48.1	+0.9
DIYA	Diyarbakir	1.99	292	iP	Pn	01 37 48.1	+0.9
DIYA				iS	Sb	01 38 14.8	+0.1
DIYA	Diyarbakir	1.99	292	P	Pn	01 37 48.1	+0.9
DIYA				S	Sb	01 38 14.8	+0.1
HANI	Diyarbakir_Han	2.03	307	iP	Pb	01 37 49.0	-1.2
HANI				iS	Sn	01 38 12.7	-0.9
HANI	Diyarbakir_Han	2.03	307	P	Pb	01 37 49.0	-1.2
HANI				S	Sn	01 38 12.7	-0.9
BNGB	Bing¨¶l	2.27	322	PN	Pn	01 37 50.9	-0.2
BINT	Bingol	2.28	318	ePn	Pn	01 37 50.9	-0.4
AGRB	Hanur-Agry	2.41	10	PN	Pn	01 37 53.6	+0.5
AGRB	Hanur-Agry	2.41	10	ePn	Pn	01 37 53.6	+0.5
SVRC	Sivrice-ELAZID	2.75	296	PN	Pn	01 37 58.3	+0.4
SVRC	Sivrice-ELAZID	2.75	296	ePn	Pn	01 37 58.3	+0.4
URFA	Urfa	2.91	276	PN	Pn	01 38 01.2	+1.4
URFA	Urfa	2.91	276	ePn	Pn	01 38 01.2	+1.4
PTK	Pertek	2.95	306	PN	Pn	01 38 00.9	+0.4
PTK	Pertek	2.95	306	ePn	Pn	01 38 00.9	+0.4
MALT	Malatya	3.38	290

	baz=268						
EGFH				eS	Sg	02 38 54.8	-0.4
	baz=268						
HGSD	**Ruisui**	**1.36**	**261**	eP	Pn	02 38 37.8	+0.6
	baz=261						
EGS		**1.41**	**322**	eP	Pg	02 38 39.1	-0.3
	baz=331						
EHY	**Hungye**	**1.45**	**262**	eP	Pb	02 38 39.6	+0.3
	baz=262						
EHY				eS	Sb	02 38 57.7	-0.1
	baz=262						
TWE	**Neicheng**	**1.49**	**312**	eP	Pg	02 38 40.8	-0.1
	baz=311						
YULB	**Yu-li**	**1.49**	**258**	eP	Pb	02 38 40.2	+0.1
	baz=248						
YULB				eS	Sn	02 38 59.1	+0.5
	baz=248						
TWF1	**Yuli**	**1.50**	**256**	eP	Pn	02 38 40.2	+1.0
	baz=257						
CHKT	**Chengkung**	**1.52**	**246**	eS	Sn	02 38 57.8	-1.6
	baz=247						
SLBB	**Yuanshan**	**1.53**	**312**	eP	Pg	02 38 41.8	+0.2
	baz=310						
SLBB				eS	Sg	02 39 01.1	-0.5
	baz=310						
NNSB	**Datong**	**1.54**	**297**	eP	Pg	02 38 41.3	-0.5
	baz=283						
NNSB				eS	Sn	02 38 59.6	-0.3
	baz=283						
NNSH	**Datong**	**1.54**	**297**	eP	Pg	02 38 41.2	-0.6
	baz=284						
NNSH				eS	Sn	02 38 59.6	-0.4
	baz=284						
FULB	**Fuli**	**1.55**	**251**	eP	Pn	02 38 40.5	+0.6
	baz=251						
NNS	**Nan Shan**	**1.55**	**298**	eP	Pg	02 38 41.7	-0.3
	baz=284						
NNS				eS	Sb	02 39 00.3	-0.6
	baz=284						
JISG	**Ishigakijimahi**	**1.56**	**56**	eS	Sn	02 38 58.0	-2.3
TIPB	**Shuangxi**	**1.57**	**322**	eP	Pb	02 38 40.9	-0.6
	baz=320						
TIPB				eS	Sg	02 39 01.6	-1.3
	baz=320						
VWDT	**VWDT**	**1.60**	**271**	eP	Pb	02 38 41.8	+0.1
	baz=271						
VWDT				eS	Sn	02 39 00.9	-0.2
	baz=271						
CHGB	**Renai**	**1.60**	**282**	eP	Pb	02 38 42.2	+0.2
	baz=282						
CHGB				eS	Sb	02 39 02.0	-0.4
	baz=282						
TWH	**Lutao**	**1.64**	**232**	eP	Pn	02 38 41.8	+0.7
	baz=232						
TWH				eS	Sn	02 39 00.7	-1.5
	baz=232						
SSLB	**Suanglung**	**1.77**	**272**	eS	Sn	02 39 05.6	+0.2
	baz=272						
ELDTW	**Lidau**	**1.79**	**253**	eS	Sn	02 39 05.0	-1.2
	baz=253						
SMLT	**Sun Moon Lake**	**1.82**	**275**	eP	Pb	02 38 45.6	-0.1
	baz=275						
SMLT				eS	Sn	02 39 07.4	+0.5
	baz=275						
TWGBT	**Beinan**	**1.89**	**242**	eP	Pn	02 38 44.7	+0.2
	baz=242						
TWGBT				eS	Sn	02 39 07.9	-0.5
	baz=242						
TWG	**Pinlang**	**1.89**	**242**	eP	Pn	02 38 45.1	+0.5
	baz=242						
TWG				eS	Sn	02 39 08.1	-0.4
	baz=242						
JTJ	**Tarama**	**1.90**	**61**	P	Pn	02 38 46.2	+1.6
JTJ				eS	Sn	02 39 06.9	-1.7
ALS	**Alishan**	**1.92**	**264**	eP	Pb	02 38 47.4	0.0
	baz=264						
ALS				eS	Sn	02 39 10.4	+0.9
	baz=264						
LIOB	**Emei**	**1.94**	**299**	eP	Pb	02 38 47.9	+0.3
	baz=289						
LIOB				eS	Sb	02 39 11.4	-0.5
	baz=289						
TWY	**Chenhua**	**1.94**	**323**	eP	Pb	02 38 46.6	-1.0
	baz=321						
TWY				eS	Sn	02 39 09.3	-0.3
	baz=321						
NSTT	**Nanjuang**	**1.94**	**298**	eP	Pb	02 38 47.6	0.0
	baz=288						
NSTT				eS	Sb	02 39 11.3	-0.7
	baz=288						
WJS	**Zhushan**	**1.98**	**273**	eP	Pg	02 38 49.5	-0.7
	baz=273						
WJS				eS	Sb	02 39 13.4	+0.5
	baz=273						
TWQ1	**Liyutan**	**2.03**	**288**	eP	Pb	02 38 49.6	+0.5
	baz=287						
TWQ1				eS	Sb	02 39 14.0	-0.4
	baz=287						
TCU	**Taichung**	**2.06**	**282**	eS	Sb	02 39 15.9	+0.5
	baz=282						
LAY	**Lan-yu**	**2.08**	**216**	eP	Pn	02 38 47.7	+0.6
	baz=227						
LAY				eS	Sn	02 39 11.4	-1.7
	baz=227						
TPUB	**Ta-pu**	**2.11**	**259**	eP	Pb	02 38 49.8	-0.8
	baz=259						
TPUB				eS	Sb	02 39 16.1	-0.7
	baz=259						
CHN4	**Tsaushan**	**2.13**	**260**	eP	Pb	02 38 50.7	-0.3
	baz=260						
CHN4				eS	Sb	02 39 17.2	-0.3
	baz=260						
WTP	**Ta-pu**	**2.14**	**258**	eP	Pb	02 38 50.3	-0.7
	baz=257						
WTP				eS	Sn	02 39 16.3	+1.8
	baz=257						
WDLH	**Douliu**	**2.15**	**270**	eS	Sb	02 39 17.5	-0.4
	baz=269						
WCHH	**Zhanghua**	**2.16**	**280**	eS	Sb	02 39 18.2	+0.1
	baz=279						
SGST	**Jiashian**	**2.21**	**254**	eS	Sn	02 39 18.6	+2.3
	baz=244						
CHN1	**Nanshi**	**2.23**	**257**	eP	Pb	02 38 52.3	-0.3
	baz=256						
CHN1				eS	Sb	02 39 19.8	-0.4
	baz=256						
TWK	**Hsinying**	**2.24**	**259**	eP	Pb	02 38 52.1	-0.7
	baz=259						
TWK				eS	Sb	02 39 19.8	-1.0
	baz=259						
CHY	**Chiayi**	**2.27**	**265**	eS	Sb	02 39 20.9	-0.3
	baz=264						
SSD	**Sandimen**	**2.29**	**245**	eP	Pn	02 38 51.0	+1.0
	baz=239						
RLNB	**Erlin**	**2.32**	**275**	eS	Sb	02 39 22.0	-0.7
	baz=264						
MASBT	**Mashibuluo**	**2.35**	**242**	eP	Pn	02 38 52.3	+1.5
	baz=237						
MASBT				eS	Sn	02 39 20.0	+0.3
	baz=237						
JIRB	**Irabujima**	**2.36**	**62**	eS	Sn	02 39 18.5	-1.6
SCZT	**Fangliau**	**2.48**	**238**	eP	Pn	02 38 54.0	+1.3
	baz=232						
TWK1	**Hengchun**	**2.61**	**228**	eS	Sn	02 39 26.5	+0.3
	baz=228						
WDGT	**Dungji**	**2.99**	**262**	eP	Pn	02 39 01.6	+1.9
	baz=261						
WDGT				eS	Sn	02 39 36.1	+0.4
	baz=261						
PHUB	**P'eng-hu**	**3.04**	**267**	eS	Sn	02 39 37.3	+0.4
	baz=266						

JMA ***15*** *02:52:26.6±0.2,23°.67N×121°.63E, h0km±3km, M3.2*
ISCJB ***15*** *02:52:27.4±0.4,23°.70N±0°.02×121°.61E±0°.02, h4km±2km,*
Error ellipse: s-maj=3.3km s-min=2.0km az=38.3
TAP ***15*** *02:52:27.8,23°.71N×121°.53E,h8km,ML3.6,C*
ISC 15 02:52:27.9±0.9,23°.68N±0°.02×121°.58E±0°.02,h12km±6km,
n77,σ0s97/106,5C-12D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	**Guangfu** baz=258	**0.14**	**266**	⇓iP	Pg	02 52 30.5	-0.8
EGFH	baz=258			S	Sg	02 52 32.6	-1.1
ESL	**Shilin** baz=313	**0.19**	**314**	⇓iP	Pg	02 52 31.0	-1.1
ESL	baz=313			iS	Sg	02 52 33.2	-1.8
ENLB	**Shoufeng** baz=16	**0.22**	**4**	P	Pg	02 52 34.0	+1.4
ENLB	baz=16			S	Sg	02 52 38.5	+2.7
HGSD	**Ruisui** baz=216	**0.24**	**218**	P	Pg	02 52 33.6	+0.7
HGSD	baz=216			S	Sg	02 52 38.1	+1.9
EHY	**Hungye** baz=233	**0.30**	**234**	⇑iP	Pg	02 52 33.6	-0.4
EHY	baz=233			eS	Sg	02 52 38.2	+0.3
HWA	**Hwalien** baz=12	**0.30**	**4**	eP	Pb	02 52 34.1	-1.1
YULB	**Yu-li** baz=227	**0.39**	**223**	⇑P	Pg	02 52 35.6	0.0
YULB	baz=227			eS	Sb	02 52 41.6	-1.1
TWD	**Chiawan** baz=357	**0.40**	**2**	⇓P	Pg	02 52 35.7	-0.2
TWD	baz=357			eS	Sg	02 52 41.0	-0.2
VWDT	**VWDT** baz=279	**0.41**	**280**	⇓P	Pg	02 52 35.6	-0.5
VWDT	baz=279			S	Sg	02 52 40.9	-0.7
TWF1	**Yuli** baz=229	**0.42**	**219**	⇑P	Pb	02 52 36.4	-0.8
NACB	**Ninganchiao** baz=355	**0.49**	**1**	⇓P	Pg	02 52 36.9	-0.7
CHGB	**Renai** baz=323	**0.53**	**315**	⇓P	Pg	02 52 37.9	-0.5
CHGB	baz=323			S	Sg	02 52 44.4	-1.1
FULB	**Fuli** baz=225	**0.55**	**209**	eP	Pb	02 52 39.6	+0.2
SSLB	**Suanglung** baz=280	**0.59**	**281**	⇓P	Pg	02 52 38.6	-0.7
SSLB	baz=280			S	Sg	02 52 45.3	-1.8
CHKT	**Chengkung** baz=196	**0.61**	**199**	P	Pb	02 52 40.3	-0.2
CHKT	baz=196			S	Sb	02 52 50.3	+1.2
SMLT	**Sun Moon Lake** baz=287	**0.66**	**288**	⇓iP	Pg	02 52 40.1	-0.6
SMLT	baz=287			eS	Sg	02 52 49.0	-0.5
DPDB	**Guoxing** baz=300	**0.70**	**301**	⇓P	Pg	02 52 40.9	-0.5
DPDB	baz=300			S	Sg	02 52 50.3	-0.3
TYC	**Yuchr** baz=290	**0.70**	**289**	⇓P	Pg	02 52 40.8	-0.7
ELDTW	**Lidau** baz=236	**0.71**	**227**	eP	Pg	02 52 41.1	-0.6
ENA	**Nanau** baz=356	**0.76**	**11**	eP	Pg	02 52 42.0	-0.6
NANB	**Nanao**	**0.76**	**11**	P	Pg	02 52 42.0	-0.7
NANB				eS	Sb	02 52 53.4	0.0
NNSB	**Datong** baz=338	**0.77**	**346**	⇓P	Pg	02 52 42.2	-0.6
NNSB	baz=338			S	Sg	02 52 51.7	-1.2
NNSH	**Datong** baz=342	**0.77**	**346**	eP	Pg	02 52 42.0	-0.8
NNS	**Nan Shan** baz=339	**0.78**	**346**	eP	Pg	02 52 42.3	-0.7
NNS	baz=339			eS	Sg	02 52 51.8	-1.5
WJS	**Zhushan** baz=281	**0.80**	**280**	eP	Pb	02 52 44.2	+0.5
WGK	**Gukeng** baz=272	**0.94**	**271**	eP	Pb	02 52 46.5	+0.4
TCU	**Taichung** baz=299	**0.95**	**299**	eP	Pn	02 52 46.9	-0.2
TPUB	**Ta-pu** baz=255	**0.95**	**247**	P	Pb	02 52 46.5	+0.1
TPUB	baz=255			eS	Sb	02 52 59.6	+0.6
ENTT	**Nioudou** baz=358	**0.96**	**359**	eP	Pb	02 52 45.9	-0.6
TWC	**Suao** baz=358	**0.96**	**15**	eP	Pb	02 52 46.1	-0.3
WDLH	**Douliu** baz=273	**0.96**	**271**	eP	Pb	02 52 46.5	+0.1
CHN4	**Tsaushan** baz=250	**0.97**	**250**	⇑iP	Pb	02 52 46.9	+0.3
CHN4	baz=250			eS	Sn	02 53 01.1	+0.1
TWH	**Lutao** baz=169	**0.97**	**186**	eP	Pg	02 52 45.4	-1.2
TWG	**Pinlang** baz=208	**0.97**	**209**	eP	Pg	02 52 45.2	-1.5
TWGBT	**Beinan** baz=208	**0.97**	**208**	eP	Pg	02 52 44.4	-2.2
WTP	**Ta-pu** baz=252	**0.99**	**244**	⇑iP	Pb	02 52 47.2	+0.2
WTP	baz=252			eS	Sb	02 53 00.7	+0.7
EOS1	**EOS1** baz=51	**1.00**	**30**	eP	Pn	02 52 48.5	+0.8
WCHH	**Zhanghua** baz=295	**1.02**	**293**	eP	Pn	02 52 48.0	-0.1
TWE	**Neicheng** baz=4.0	**1.04**	**4**	eP	Pg	02 52 46.7	-1.3
NSY	**Sanyi** baz=314	**1.05**	**314**	eP	Pn	02 52 48.9	+0.4
SLBB	**Yuanshan** baz=1.0	**1.07**	**3**	eP	Pb	02 52 48.3	-0.1
CHN1	**Nanshi** baz=244	**1.09**	**243**	⇓iP	Pn	02 52 49.3	+0.3
CHN1	baz=244			eS	Sn	02 53 05.5	+1.5
NSTT	**Nanjuang** baz=329	**1.09**	**331**	eP	Pb	02 52 48.6	-0.1
NSTT	baz=329			eS	Sg	02 53 02.2	-0.8
TWK	**Hsinying** baz=248	**1.09**	**248**	eP	Pn	02 52 49.2	+0.2
TWK	baz=248			eS	Sn	02 53 05.5	+1.5
LIOB	**Emei** baz=331	**1.09**	**332**	eP	Pn	02 52 49.1	+0.1
SGST	**Jiashian** baz=237	**1.09**	**237**	eP	Pn	02 52 49.2	+0.2
SGST	baz=237			eS	Sn	02 53 06.0	+1.9
SLGT	**Liugui** baz=234	**1.10**	**232**	eP	Pg	02 52 48.6	-0.5
NMLH	**Miaoli** baz=319	**1.12**	**320**	eP	Pn	02 52 50.5	+1.1
RLNB	**Erlin** baz=283	**1.14**	**281**	eP	Pb	02 52 49.6	0.0
SBCB	**Hsinchu** baz=332	**1.24**	**334**	eP	Pn	02 52 51.9	+0.9
SSD	**Sandimen** baz=216	**1.28**	**224**	eP	Pg	02 52 51.6	-0.9
TATO	**Taipei** baz=354	**1.29**	**356**	P	Pn	02 52 51.9	+0.1
CHN8	**Yiju** baz=258	**1.30**	**256**	eP	Pb	02 52 52.4	+0.1
CHN8	baz=258			eS	Sn	02 53 12.5	+3.2
TIPB	**Shuangxi** baz=354	**1.31**	**10**	eP	Pg	02 52 51.4	-1.6
MASBT	**Mashibuluo** baz=222	**1.38**	**220**	eP	Pn	02 52 52.6	-0.3
NWF	**Wu-fen Shan** baz=5.0	**1.40**	**7**	eP	Pg	02 52 54.9	+0.2
WFSB	**Wu-fen Shan** baz=5.0	**1.40**	**7**	eP	Pg	02 52 55.3	+0.5
YM04	**YM04** baz=355	**1.47**	**358**	eP	Pb	02 52 55.1	-0.1
YM11	**YM11** baz=356	**1.48**	**360**	eP	Pg	02 52 57.1	+0.8
YM07	**YM07** baz=359	**1.49**	**1**	eP	Pn	02 52 53.9	-0.6
YM03	**YM03** baz=355	**1.49**	**358**	eP	Pg	02 52 55.9	-0.7
YM08	**YM08** baz=357	**1.50**	**0**	eP	Pg	02 52 56.6	-0.2
YOJ	**Yonaguni jima** baz=59	**1.52**	**59**	eP	Pn	02 52 55.0	+0.1
YOJ	**Yonaguni jima**	**1.52**	**59**	P	Pn	02 52 55.2	+0.3
YOJ				S	Sn	02 53 14.9	+0.3
SCZT	**Fangliau** baz=217	**1.57**	**215**	eP	Pn	02 52 56.2	+0.5
LAY	**Lan-yu** baz=167	**1.63**	**181**	eP	Pn	02 52 54.0	-2.5
WDGT	**Dungji** baz=270	**1.81**	**257**	eP	Pn	02 52 59.0	0.0
PHUB	**P'eng-hu** baz=268	**1.85**	**265**	eP	Pn	02 52 59.4	-0.1
PNG	**Penghu** baz=270	**1.86**	**267**	eP	Pn	02 52 59.9	+0.3
VCHM	**Qimei** baz=262	**2.03**	**257**	eP	Pn	02 53 02.1	+0.1
HATJ	**Hateruma jima**	**2.07**	**79**	eS	Sn	02 53 28.6	+0.4
IRIF	**Iriomote-Funau**	**2.07**	**71**	P	Pn	02 53 03.4	+0.9
IRIF				eS	Sn	02 53 29.2	+1.0
JKRS	**Kuro-shima**	**2.29**	**75**	eS	Sn	02 53 35.2	+1.6
VWUC	**VWUC** baz=301	**2.34**	**304**	eP	Pn	02 53 05.2	-1.1
JIJ	**Ishigaki jima**	**2.44**	**73**	P	Pn	02 53 07.5	0.0
JIJ				eS	Sn	02 53 37.1	-0.2
JISG	**Ishigakijimahi**	**2.65**	**70**	P	Pn	02 53 10.3	-0.2
JISG				eS	Sn	02 53 41.4	-1.1
JTJ	**Tarama**	**3.00**	**71**	P	Pn	02 53 16.9	+1.6
JTJ				eS	Sn	02 53 52.3	+1.0

IDC 15 02:52:59.7±4.1,5°.74S×146°.44E,h0km,mb3.2/2,
mb1 3.5/3,mb1mx3.2/48,mbtmp3.3/3,ML3.2/1,Error
ellipse: s-maj=138.4km s-min=56.4km az=121.0,
Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby** 6.5nm,0.3s,baz=324,slow=19,SNR=10	**3.71**	**169**	Sn	Sn	02 54 38.2	-4.5
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=37,slow=12,SNR=7.9	**18.38**	**219**	P	Pn	02 57 16.0	-0.2
ASAR	**Alice Springs** 0.4nm,0.6s,baz=50,slow=7.3,SNR=5.2	**21.52**	**213**	P	P	02 57 50.4	-0.2
FITZ	**Fitzroy Crossi** 2.3nm,1.0s,baz=66,slow=11	**23.73**	**237**	P	P	02 58 13.7	-0.1
TORD	**Torodi Ar. Bea** 0.3nm,0.7s,baz=63,slow=5.5,SNR=2.9	**144.49**	**285**	PKP	PKPdf	03 12 39.2	-0.1

ISCJB ***15*** *02:53:25.6±0.4,23°.71N±0°.02×121°.59E±0°.02, h5km±3km,*
Error ellipse: s-maj=3.8km s-min=2.2km az=33.4
JMA ***15*** *02:53:25.9±0.1,23°.72N×121°.48E, h13km, M3.0*
TAP ***15*** *02:53:25.7,23°.71N×121°.52E, h8km, ML3.1, C*
ISC 15 02:53:26.0±0.8,23°.72N±0°.02×121°.51E±0°.02,h13km±5km,
n59,σ0s65/80,1D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	**Guangfu** baz=254	**0.09**	**238**	P	Pg	02 53 28.2	-0.6
EGFH	baz=254			S	Sg	02 53 30.5	-0.4
ESL	**Shilin** baz=315	**0.12**	**324**	⇓iP	Pg	02 53 28.8	-0.4
ESL	baz=315			iS	Sg	02 53 30.9	-0.6
ENLB	**Shoufeng** baz=19	**0.20**	**24**	P	Pb	02 53 31.5	-0.1
ENLB	baz=19			S	Sg	02 53 35.9	+2.3
HGSD	**Ruisui** baz=214	**0.24**	**200**	P	Pg	02 53 31.2	+0.1
HGSD	baz=214			S	Sg	02 53 35.9	+1.4
EHY	**Hungye** baz=231	**0.27**	**220**	P	Pg	02 53 31.2	-0.4
EHY	baz=231			eS	Sb	02 53 36.5	-0.8
HWA	**Hwalien** baz=14	**0.27**	**18**	eP	Pg	02 53 32.1	+0.4
VWDT	**VWDT** baz=278	**0.34**	**276**	P	Pb	02 53 33.6	-0.4
TWD	**Chiawan** baz=358	**0.37**	**12**	P	Pg	02 53 33.5	0.0
TWD	baz=358			S	Sg	02 53 39.2	+0.8
YULB	**Yu-li** baz=226	**0.38**	**211**	P	Pg	02 53 33.4	-0.2
YULB	baz=226			S	Sb	02 53 39.8	-0.6
TWF1	**Yuli** baz=225	**0.41**	**208**	eP	Pg	02 53 34.1	-0.1
CHGB	**Renai** baz=324	**0.46**	**318**	P	Pb	02 53 35.6	-0.5
CHGB	baz=324			S	Sg	02 53 41.9	+0.5
NACB	**Ninganchiao** baz=358	**0.46**	**10**	eP	Pg	02 53 34.6	-0.6
SSLB	**Suanglung** baz=280	**0.52**	**278**	P	Pb	02 53 36.6	-0.4
SSLB	baz=280			eS	Sg	02 53 43.1	0.0
FULB	**Fuli** baz=224	**0.55**	**201**	eP	Pb	02 53 38.2	+0.6
SMLT	**Sun Moon Lake** baz=289	**0.58**	**287**	eP	Pg	02 53 37.5	+0.1
DPDB	**Guoxing** baz=301	**0.62**	**301**	eP	Pb	02 53 38.8	0.0
TYC	**Yuchr** baz=290	**0.63**	**287**	eP	Pb	02 53 38.6	-0.3
CHKT	**Chengkung** baz=195	**0.63**	**192**	eP	Pg	02 53 38.1	-0.2
CHKT	baz=195			eS	Sb	02 53 48.0	+0.4
NNSB	**Datong** baz=339	**0.72**	**351**	P	Pg	02 53 40.0	0.0
NNSB	baz=339			eS	Sg	02 53 49.2	-0.2
NNSH	**Datong** baz=344	**0.72**	**351**	eP	Pg	02 53 40.0	0.0
WJS	**Zhushan** baz=280	**0.72**	**278**	eP	Pn	02 53 41.7	-0.3
NNS	**Nan Shan** baz=339	**0.73**	**350**	eP	Pg	02 53 40.1	-0.2
NNS	baz=339			S	Sg	02 53 50.0	+0.1
ENA	**Nanau** baz=358	**0.74**	**16**	eP	Pg	02 53 39.8	-0.5
NANB	**Nanao** baz=358	**0.74**	**17**	eP	Pg	02 53 40.0	-0.4
TCU	**Taichung** baz=298	**0.88**	**299**	eP	Pn	02 53 44.0	-0.1
WDLH	**Douliu** baz=271	**0.89**	**268**	eP	Pn	02 53 44.4	+0.1
TPUB	**Ta-pu** baz=254	**0.91**	**243**	eP	Pn	02 53 44.4	-0.2
TPUB	baz=254			eS	Sn	02 53 57.5	-0.1
CHN4	**Tsaushan** baz=256	**0.92**	**247**	eP	Pn	02 53 45.2	+0.5
CHN4	baz=256			eS	Sn	02 53 58.7	+1.0
ENTT	**Nioudou**	**0.92**	**3**	eP	Pb	02 53 44.1	+0.3
TWC	**Suao**	**0.94**	**19**	eP	Pg	02 53 43.4	-0.8
WCHH	**Zhanghua** baz=294	**0.94**	**293**	eP	Pn	02 53 45.8	+0.8
WTP	**Ta-pu** baz=251	**0.95**	**241**	eP	Pn	02 53 44.9	-0.2
WTP	baz=251			eS	Sn	02 53 58.6	+0.1
NSY	**Sanyi** baz=315	**0.98**	**316**	eP	Pn	02 53 46.7	+1.2
TWG	**Pinlang** baz=208	**0.98**	**204**	eP	Pg	02 53 44.1	-0.8
TWGBT	**Beinan** baz=208	**0.98**	**204**	eP	Pg	02 53 43.9	-1.0
TWE	**Neicheng** baz=5.0	**1.01**	**8**	eP	Pb	02 53 45.5	+0.1
CHY	**Chiayi** baz=274	**1.02**	**258**	eP	Pn	02 53 47.1	+1.1
NSTT	**Nanjuang** baz=329	**1.02**	**333**	eP	Pn	02 53 46.5	+0.4
NSTT	baz=329			eS	Sn	02 54 00.1	-0.3
LIOB	**Emei** baz=333	**1.03**	**334**	eP	Pn	02 53 46.7	+0.5
SLBB	**Yuanshan** baz=2.0	**1.04**	**6**	eP	Pg	02 53 45.5	-0.5
TWK	**Hsinying** baz=248	**1.04**	**245**	eP	Pn	02 53 46.7	+0.4
TWK				eS	Sn	02 54 02.2	+1.4

	baz=248						
CHN1	Nanshi	1.05	240	eP	Pn	02 53 47.2	+0.8
	baz=243						
SGST	Jiashian	1.06	234	eP	Pn	02 53 47.5	+0.9
	baz=238						
RLNB	Erlin	1.07	280	eP	Pn	02 53 46.8	+0.1
	baz=282						
SLGT	Liugui	1.07	228	eP	Pn	02 53 47.5	+0.7
	baz=233						
TATO	Taipei	1.25	359	eP	Pb	02 53 49.5	0.0
	baz=356						
SSD	Sandimen	1.26	220	eP	Pg	02 53 50.2	-0.1
	baz=217						
TIPB	Shuangxi	1.28	13	eP	Pn	02 53 49.9	+0.2
	baz=357						
MASBT	Mashibuluo	1.36	216	eP	Pg	02 53 51.8	-0.4
	baz=222						
NWF	Wu-fen Shan	1.37	10	eP	Pg	02 53 52.9	+0.5
	baz=6.0						
WFSB	Wu-fen Shan	1.37	10	eP	Pg	02 53 52.2	-0.2
	baz=6.0						
JYNG	Yonagunijimaku	1.50	61	P	Pn	02 53 53.4	+0.7
JYNG				eS	Sn	02 54 12.4	+0.3
YOJ	Yonaguni jima	1.56	61	eP	Pb	02 53 55.1	+0.4
	baz=60						
SCZT	Fangliau	1.57	212	eP	Pn	02 53 54.2	+0.6
	baz=199						
PHUB	P'eng-hu	1.79	264	eP	Pb	02 53 58.0	-0.7
	baz=266						
IRIF	Iriomote-Funau	2.12	73	eS	Sn	02 54 27.7	+0.3
JIJ	Ishigaki jima	2.49	74	P	Pn	02 54 05.3	-1.0
JIJ				eS	Sn	02 54 35.4	-1.2
JISG	Ishigakijimahi	2.70	71	P	Pn	02 54 08.2	-1.0
JISG				eS	Sn	02 54 40.4	-1.3
JTJ	Tarama	3.06	72	P	Pn	02 54 14.2	+0.2
JTJ				S	Sn	02 54 50.3	-0.2

NIED ***15*** *02:56:00, 37°.00N×142°.40E, h20km, Mw3.7 Best double couple: M0=3.90000×10^14 NP1:φ=129.00000°, δ=45.00000°, λ=43.00000°. NP2:φ=6.00000°, δ=62.00000°, λ=126.00000°.*
IDC ***15*** *02:56:34.2±1.3, 37°.02N×142°.44E, h0km, mb3.4/4, mb1 3.7/7, mb1mx3.5/68, mbtmp3.6/7, ML3.7/3, MS3.4/2, Ms1 3.4/2, ms1mx2.5/49, Error ellipse: s-maj=32.2km s-min=22.8km az=109.0*
JMA ***15*** *02:56:36.2±0.2, 36°.97N×142°.35E, h27km, M3.7*
ISC 15 02:56:35.1±3.4, 37°.00N±0°.04×142°.28E±0°.07, h5km±22km, n25, σ0=96/32, mb3.4/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	Kawauchi	1.18	288	P	Pb	02 56 57.8	-0.2
JFK				eS	Sn	02 57 14.4	-0.3
ONAJ	Iwakimizuishiy	1.19	275	P	Pb	02 56 57.9	-0.2
JHO	Hitachi	1.43	255	P	Pn	02 57 01.4	-0.2
JHO				eS	Sn	02 57 20.4	-0.4
JMM	Marumori	1.46	306	P	Pn	02 57 02.3	+0.2
JMM				eS	Sn	02 57 21.3	-0.4
JIO	Ouri	1.63	333	P	Pn	02 57 04.5	+0.1
JIO				eS	Sn	02 57 25.6	-0.1
JFT	Otama	1.63	289	P	Pb	02 57 05.5	-0.2
JFT				eS	Sb	02 57 26.7	+0.1
JOU	Okura	1.87	317	P	Pb	02 57 09.1	-0.6
JOU				eS	Sn	02 57 32.5	+0.8
JMK	Ichinoseki	2.12	337	P	Pn	02 57 12.1	+1.0
JMK				eS	Sn	02 57 38.2	+0.4
JAG	Ashikaga	2.34	257	P	Pn	02 57 15.4	+1.2
JAG				eS	Sn	02 57 44.1	+0.7
JYK	Kaneyama	2.44	322	P	Pn	02 57 16.8	+1.2
JYK				S	Sn	02 57 46.2	+0.4
JOM	Ohasama	2.58	343	P	Pn	02 57 18.5	+0.9
JRY	Ryogami san	2.89	251	P	Pn	02 57 22.9	+1.1
JRY				eS	Sn	02 57 56.7	-0.3
MJAR	Matsushiro Arr	3.30	263	Pn	Pn	02 57 29.4	+2.0
	5.8nm,0.3s,baz=88,slow=14,SNR=31						
MAT	Matsushiro	3.30	263	P	Pn	02 57 29.7	+2.3
MAT				S	Sb	02 58 12.4	-2.2
JHJ	Hachijo jima 2	4.38	209	Pn	Pn	02 57 43.8	+1.5
	8.0nm,0.3s,baz=117,slow=21,SNR=3.2						
JHJ				Sn	Sn	02 58 33.1	-0.6
	14nm,0.3s,baz=108,slow=23,SNR=3.4						
ASAJ	Asahikawa	7.11	2	Pn	Pn	02 58 19.6	-0.1
	1.6nm,0.3s,baz=219,slow=17,SNR=5.3						
H11N2	WAKE ISLAND Hy	27.54	122	T	T	03 31 32.6	
	baz=319						
H11N1	WAKE ISLAND Hy	27.55	122	T	T	03 31 19.1	
	baz=319						
H11N3	WAKE ISLAND Hy	27.56	122	T	T	03 31 26.8	
	baz=319						
MKAR	Makanchi Array	44.72	302	P	P	03 04 49.4	+0.3
	0.2nm,0.5s,baz=81,slow=8.9,SNR=2.8						
PMG	Port Moresby	46.39	173	LR	LR	03 24 31.1	
	comp=Z,22nm,20.4s,baz=9.0,slow=36						
KURBB	Kurchatov Arra	46.57	308	P	P	03 05 04.0	+0.4
	0.8nm,0.5s,baz=83,slow=8.3,SNR=4.4						
ILAR	Eielson Array	49.15	32	P	P	03 05 23.0	-0.4
	0.4nm,0.9s,baz=255,slow=7.1,SNR=3.3						
WRA	Warramunga Arr	57.13	189	P	P	03 06 22.4	-0.3
	0.4nm,0.9s,baz=7.4,slow=6.8,SNR=5.3						
GNI	Garni	72.28	307	LR	LR	03 41 48.4	
	comp=Z,42nm,21.5s,baz=264,slow=38						

GUC 15 02:57:54.2±0.3, 23°.02S×67°.32W, h219km±10km, ML3.8, 8C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB15	IPOC Station P	1.99	264	⇑iP	Pn	02 58 35.6	+1.4
PB06	IPOC Station P	2.10	278	eP	Pn	02 58 36.8	+1.5
PB06				IAML		02 59 11.0	
	comp=N,105nm,0.2s						
PB09	IPOC Station P	2.15	304	⇑iP	Pn	02 58 38.1	+2.2
PB09				IAML		02 59 13.9	
	comp=E,110nm,0.7s						
PB04	IPOC Station P	2.70	284	eP	Pn	02 58 43.3	+1.7
PB04				iS	S	02 59 20.8	+2.3
PB04				IAML		02 59 23.7	
	comp=N,124nm,0.1s						
PB07	IPOC Station P	2.70	298	⇑iP	Pn	02 58 43.6	+1.9
PB07				iS	S	02 59 21.0	+2.5
PB07				IAML		02 59 21.9	
	comp=N,436nm,0.2s						
PB01	IPOC Station P	2.81	314	⇑iP	Pn	02 58 44.5	+1.7
PB01				iS	S	02 59 24.0	+3.3
PB01				IAML		02 59 26.1	
	comp=E,265nm,0.3s						
ANCH	Antofagasta	2.91	256	⇑iP	Pn	02 59 15.6	+32
ANCH				iS	S	02 59 54.5	+32
PB02	IPOC Station P	2.93	305	⇑iP	Pn	02 58 45.9	+1.7
PB02				iS	S	02 59 25.4	+2.4
PB02				IAML		02 59 31.3	
	comp=E,237nm,0.2s						
GO02	Mina Guanaco	2.97	224	⇓iP	Pn	02 58 45.1	+0.3
GO02				iS	S	02 59 25.4	+1.1
PB10	IPOC Station P	3.01	260	⇑iP	Pn	02 58 46.8	+1.8
PB10				iS	S	02 59 26.8	+2.3
PB14	IPOC Station P	3.24	240	⇑iP	Pn	02 58 48.7	+0.7

SOME ***15*** *02:59:17.4, 42°.90N×80°.88E, h10km*
KRNET ***15*** *02:59:17.6±0.1, 42°.91N×80°.88E, h22km, mb3.2*
NNC ***15*** *02:59:19.2±3.0, 42°.87N×80°.72E, h0km, mb3.0, mpv2.8, Error ellipse: s-maj=25.0km s-min=15.2km az=171.0*
ISC 15 02:59:22.7±1.8, 43°.07N±0°.05×80°.42E±0°.06, h3km±11km, n30, σ2=45/58, 21C-13D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	Shalkode	0.70	278	⇑iP	Pg	02 59 33.3	-2.9
	baz=89						
SHLS				⇓iS	Sg	02 59 44.4	-1.0
	baz=89						
SHLS	Shalkode	0.70	278	⇑iP	Pg	02 59 33.2	-2.9
	87nm,0.1s						
SHLS				⇓iS	Sg	02 59 44.3	-1.0
	418nm,0.3s						
PDGK	Podgornoye	0.72	291	⇑P	Pn	02 59 38.4	-1.6
	21nm,0.3s						
PDGK				⇑S	Sn	02 59 53.1	+1.5
	54nm,0.4s						
PDGK	Podgornoye	0.72	291	⇑iP	Pn	02 59 38.3	-1.6
	baz=93						
PDGK				⇑iS	Sn	02 59 52.7	+1.0
	baz=93						
UZB	Uzynbulak	1.02	275	eP	Pn	02 59 43.0	-1.1
	32nm,0.2s						
UZB				eS	Sn	03 00 01.2	+2.1
	129nm,0.1s						
KPKS	Kokpek	1.33	288	eP	Pb	02 59 47.9	-0.4
	87nm,0.3s						
KPKS				eS	Sg	03 00 10.3	+5.0
	285nm,0.3s						
DJR	Jarkent	1.34	340	⇓iP	Pb	02 59 47.9	-0.7
	18nm,0.1s						
DJR				⇓iS	Sg	03 00 10.3	+4.5
	81nm,0.4s						
ZHN	Zhinishke	1.45	275	⇓iP	Pb	02 59 49.6	-0.9
	24nm,0.3s						
ZHN				⇓iS	Sg	03 00 13.6	+4.2
	311nm,0.2s						
SATY	Saty	1.47	270	eP	Pg	02 59 50.9	-0.1
	30nm,0.1s						
SATY				eS	Sg	03 00 14.8	+4.8
	248nm,0.1s						
PRZ	Przheval'sk	1.59	249	⇓iP	Pb	02 59 51.5	-1.4
	baz=58						
PRZ				⇓iS	Sg	03 00 16.7	+2.7
	baz=58						
KURS	Kuram	1.69	285	eP	Pg	02 59 54.8	-0.3
	4.6nm,0.3s						
KURS				⇑iS	Sg	03 00 22.2	+5.1
	22nm,0.6s						
ARXS	Arharly	2.20	302	eP	Pb	03 00 03.5	+0.3
	4.6nm,0.2s						
ARXS				eS	Sg	03 00 36.8	+3.4
	28nm,0.3s						
KAPS	Kapalarasan	2.34	341	eP	Pb	03 00 04.5	-1.1
	3.0nm,0.3s						
KAPS				eS	Sg	03 00 38.5	+0.5
	25nm,0.3s						
TARG	Taragay, Kyrgy	2.35	236	⇑iP	Pn	03 00 02.2	-0.4
	baz=44						
TARG				⇑iS	Sb	03 00 35.3	-0.2
	baz=44						
MDOK	Medeo	2.47	273	Pg	Pb	03 00 08.2	+0.5
	5.1nm,0.5s						
MDOK				⇓Lg	Lg	03 00 45.3	
	7.2nm,0.4s						
MDOK	Medeo	2.47	273	eP	Pb	03 00 08.3	+0.6
	4.1nm,0.3s						
MDOK				eS	Sg	03 00 44.6	+2.7
	17nm,0.4s						
TNSS	Tian-Shan	2.54	270	eP	Pb	03 00 09.6	+0.4
	6.7nm,0.2s						
TNSS				⇓iS	Sg	03 00 47.9	+3.5
	19nm,0.3s						
IZV	Izvestkoviy	2.79	271	eP	Pb	03 00 13.9	+0.6
	6.4nm,0.2s						
IZV				eS	Sg	03 00 55.0	+2.7
	47nm,0.4s						
KTBS	Karatobe	2.80	285	eP	Pb	03 00 14.0	+0.7
	2.5nm,0.2s						
KTBS				eS	Sg	03 00 54.5	+1.9
	20nm,0.3s						
MTBS	Maitube	2.92	273	eP	Pg	03 00 16.8	-1.9
	7.9nm,0.5s						
MTBS				eS	Sg	03 00 59.2	+2.7
	18nm,0.3s						
KUU	Kurty	3.08	287	eP	Pb	03 00 18.4	+0.3
	2.0nm,0.2s						
KUU				⇓iS	Sg	03 01 02.6	+1.1
	23nm,0.5s						
ULHL	Ulahol	3.19	256	⇑iP	Pn	03 00 14.9	+1.0
	baz=61						
ULHL				⇑iS	Sb	03 00 57.0	-2.4
	baz=61						
KST	Kastek	3.26	271	eP	Pb	03 00 22.9	+1.6
	7.5nm,0.5s						
KST				eS	Sg	03 01 09.8	+2.2
	15nm,0.6s						
BOOM	Boomskoye usch	3.34	262	⇑iP	Pn	03 00 17.3	+1.3
	baz=65						
BOOM				⇑iS	Sb	03 01 00.5	-3.4
	baz=65						
DGS	Degeres	3.40	274	eP	Pb	03 00 24.4	+0.7
	5.5nm,0.4s						
DGS				eS	Sg	03 01 12.8	+0.9
	16nm,0.3s						
TKM2	Tokmak 2	3.54	269	⇑iP	Pn	03 00 20.0	+1.3
	baz=72						
TKM2				⇑iS	Sb	03 01 05.9	-3.6
	baz=72						
KZA	Kyzart	3.94	257	⇑iP	Pn	03 00 25.6	+1.1
	baz=61						
KZA				⇑iS	Sn	03 01 15.2	+3.8
	baz=61						
MK31	Makanchi Array	3.96	19	⇑Pn	Pn	03 00 23.6	-0.7
	0.1nm,0.3s,baz=202,slow=13,SNR=5.8						
MK31				Pg	Pg	03 00 38.6	+0.1
	0.2nm,0.2s,baz=193,slow=15,SNR=7.1						
MK31				⇑Lg	Lg	03 01 22.8	
	0.7nm,0.3s,baz=190,slow=26,SNR=13						
KBK	Karagaybulak	4.04	266	⇑iP	Pn	03 00 27.0	+1.4
	baz=69						
KBK				⇑iS	Sb	03 01 17.9	-6.0
	baz=69						
AAK	Ala-Archa	4.38	266	⇓Pg	Pg	03 00 43.2	-3.4
	0.8nm,0.5s						
AAK				⇓Lg	Lg	03 01 43.5	
	5.3nm,0.7s						

ISCJB ***15*** *03:04:58.6±0.8, 20°.1S±0°.2×177°.0W±0°.1, h400km, mb4.2/22, Error ellipse: s-maj=25.9km s-min=7.8km az=146.2*
IDC ***15*** *03:05:00.3±2.0, 19°.97S×177°.66W, h345km±23km, mb3.6/9, mb1 3.9/11, mb1mx3.5/48, mbtmp4.4/11, Error ellipse: s-maj=31.7km s-min=12.0km az=148.0*
NEIC ***15*** *03:05:01.4±2.0, 20°.14S×176°.85W, h436km±19km, mb4.3/11, Error ellipse: s-maj=49.9km s-min=10.7km az=155.0*
ISC 15 03:04:59.4±0.8, 20°.0S±0°.1×177°.0W±0°.1, h400km, n32, σ2=36/35, mb4.2/22, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	7.87	40	P	P	03 06 57.6	+4.2
	6.7nm,0.3s,baz=242,slow=17,SNR=7.0						
AFI				S	S	03 08 26.9	+0.8
	17nm,0.3s,baz=269,slow=18,SNR=6.3						
AFI	Afiamalu	7.87	40	eP	P	03 06 56.0	+2.5
AFI				eS	S	03 08 27.1	+1.0
DZM	Mont Dzumac	15.59	260	P	P	03 08 19.2	+0.8
	1.8nm,0.3s,baz=81,slow=19,SNR=17						
DZM	Mont Dzumac	15.59	260	eP	P	03 08 19.2	+0.8
	41nm,0.8s						
URZ	Urewera	18.88	194	P	P	03 08 55.1	+2.1
	2.0nm,0.3s,baz=35,slow=4.0,SNR=5.5						
CTA	Charters Tower	34.48	263	P	P	03 11 12.7	+0.9
	19nm,0.7s,baz=91,slow=12,SNR=22						
CTAO	Charters Tower	34.48	263	eP	P	03 11 12.6	+0.7
	26nm,1.0s						
PMG	Port Moresby	36.16	282	eP	P	03 11 26.9	+0.8
	7.2nm,0.6s						
COEN	Coen	38.50	273	eP	P	03 11 46.6	+1.2
	13nm,0.8s						
STKA	Stephens Creek	38.84	244	P	P	03 11 49.4	+1.3
	6.4nm,0.5s,baz=87,slow=8.7,SNR=14						
STKA	Stephens Creek	38.84	244	eP	P	03 11 47.8	-0.3
	1.8nm,0.6s						
AS01	Alice Springs	45.50	256	eP	P	03 12 41.5	+0.3
AS31	Alice Springs	45.54	256	eP	P	03 12 41.9	+0.3
	5.8nm,0.6s						
ASAR	Alice Springs	45.55	256	P	P	03 12 42.2	+0.6
	18nm,0.6s,baz=97,slow=8.4,SNR=215						
ASAR				S	S	03 18 50.0	-3.2
	0.4nm,0.8s,baz=93,slow=17,SNR=4.8						
WRAB	Tennant Creek	45.59	261	eP	P	03 12 41.4	-0.5
	3.3nm,0.5s						
WRA	Warramunga Arr	45.60	261	P	P	03 12 41.7	-0.3
	4.7nm,0.6s,baz=98,slow=5.7,SNR=121						
WRA				S	S	03 18 55.5	+1.4
	0.7nm,0.8s,baz=94,slow=14,SNR=5.1						
MTN	Manton Dam	50.10	270	eP	P	03 13 15.8	-0.3
	10.0nm,0.8s						
SOEI	Soe	57.43	271	eP	P	03 14 10.5	+1.8
	27nm,0.9s						
PETK	Petropavlovsk-	76.06	345	P	P	03 16 09.4	+5.5
	3.0nm,0.7s,baz=128,slow=9.6,SNR=4.0						
JHUM	Huhtala Lane,	76.85	42	eP	P	03 16 08.0	-0.6
HWB	Hans Werner Br	77.89	48	eP	P	03 16 13.6	-0.8
WDC	Whiskeytown Da	78.71	39	eP	P	03 16 14.6	-4.1
	7.6nm,1.0s						
NVAR	Mina Array Bea	80.04	43	P	P	03 16 35.4	+9.3
	0.5nm,0.6s,baz=214,slow=9.1,SNR=4.8						
CN2	Changchun	82.50	322	eP	P	03 16 35.9	-2.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TXAR	Lajitas Array	86.01	57	P	P	03 17 06.2	+10
	comp=Z,0.6nm,0.7s,baz=230,slow=5.4,SNR=7.1						
GYA	Guiyang	87.24	299	eP	P	03 17 01.0	-1.3
GYA				pP	pP	03 18 45.4	+11
GYA				sP	sP	03 19 31.6	+16
GYA				PP	PP	03 20 35.0	+1.7
GYA				SKS	SKSac	03 26 42.3	-8.9
GYA				S	SKKSac	03 27 01.8	0.0
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ILAR	Eielson Array	87.65	12	P	P	03 17 08.7	+5.5
	comp=Z,0.3nm,0.5s,baz=213,slow=5.1,SNR=10						
PDAR	Pinedale Array	87.97	43	P	P	03 17 13.5	+8.0
	comp=Z,0.3nm,0.7s,baz=253,slow=5.3,SNR=3.4						
HHC	Hu-ho-hao-te	89.70	314	eP	P	03 17 13.5	0.0
HHC				pmax	pmax		
	comp=Z,31nm,0.5s						
HHC				pmax	pmax		
	comp=Z,83nm,5.4s						
LZH	Lanzhou	93.23	307	eP	P	03 17 30.6	+0.6
LZH				pP	pP	03 19 13.9	+11
LZH				sP	sP	03 19 56.0	+12
LZH				ePP	PP	03 21 23.4	+3.1
LZH				pmax	pmax		
	comp=Z,26nm,1.0s						
LZH				pmax	pmax		
	comp=Z,190nm,4.3s						
INK	Inuvik	93.57	15	eP	P	03 17 28.6	-1.9
	comp=Z,1.1nm,0.6s						
JTS	JuntasAbangare	95.36	81	eP	P	03 17 38.4	-1.6
	comp=Z,3.5nm,0.6s						

IDC 15 03:27:35.3±3.0, 1°.66N×127°.53E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/54, mbtmp3.4/3, Error ellipse: s-maj=271.5km s-min=25.7km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.48	163	P	P	03 32 35.0	-1.5
	0.5nm,0.6s,baz=343,slow=10,SNR=9.6						
ASAR	Alice Springs	25.93	167	P	P	03 33 10.8	+1.3
	0.5nm,0.7s,baz=335,slow=10,SNR=4.7						
MKAR	Makanchi Array	59.70	326	P	P	03 37 41.7	0.0
	0.3nm,0.4s,baz=117,slow=6.9,SNR=6.7						

MEX ***15*** *03:28:33.9±1.4, 32°.46N×114°.84W, h20km, MD3.8*
ISCJB ***15*** *03:28:36.1±0.5, 32°.21N±0°.03×115°.22W±0°.04, h22km±5km, Error ellipse: s-maj=6.0km s-min=4.5km az=154.2*
ECX ***15*** *03:28:37.2±0.5, 32°.18N×115°.24W, h9km, MD2.5, ML2.7*
ISC 15 03:28:35.8±1.0, 32°.17N±0°.03×115°.25W±0°.04, h12km±9km, n18, σ0=92/31, 3C-2D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MBIG	Mexicali	0.24	12	eP	Pg	03 28 42.0	+1.2
MBIG	Mexicali	0.24	12	eP	Pg	03 28 38.7	-2.2
MBIG				eS	Sg	03 28 44.2	0.0
CPBX	Cerro Prieto	0.25	350	eP	Pg	03 28 42.0	+1.0
CPBX				eS	Sg	03 28 45.9	+1.4
CPBX				⇓e		03 28 48.6	
CPBX				IAML		03 28 48.6	
	comp=N,3μm,0.3s						
WESC	Westside Schoo	0.71	325	eP	Pg	03 28 50.0	+0.4
YMD	Yuma Desert	0.71	57	⇑eP	Pg	03 28 49.2	-0.4
YMD				eS	Sg	03 28 58.5	-0.4
ECBX	El Chinero	0.72	166	eP	Pg	03 28 49.8	0.0
ECBX				eS	Sg	03 28 60.0	+0.8
ECBX				IAML		03 29 02.0	
	comp=E,380nm,0.2s						
YUH	Yuha Desert	0.74	310	⇑iP	Pg	03 28 50.2	+0.1
YUH				eS	Sg	03 29 00.0	+0.2
RMX	La Rumorosa	0.82	302	eP	Pg	03 28 50.8	-0.9
RMX				eS	Sg	03 29 00.8	-1.7
RMX				IAML		03 29 01.4	
	comp=E,256nm,0.4s						
RMX				⇑e		03 29 01.4	
IKP	In-Ko-Pah, Jac	0.86	304	eP	Pg	03 28 52.6	+0.1
ZAX	El Zacaton	1.09	233	eP	Pg	03 28 56.3	-0.5
ZAX				eS	Sg	03 29 11.1	+0.1
SPIG	San Pedro Mart	1.14	189	⇓eP	Pg	03 28 57.3	-0.5
SPIG				eS	Sg	03 29 13.1	+0.5
SPIG	San Pedro Mart	1.14	189	eP	Pg	03 28 57.3	-0.5
SPIG				eS	Sn	03 29 15.1	+1.4
SPX	San Pedro Mart	1.14	189	eP	Pg	03 28 57.4	-0.4
SPX				eS	Sg	03 29 12.8	+0.1
CBX	Cerro Bola	1.20	277	eP	Pb	03 28 58.0	-0.7
CBX				eS	Sb	03 29 15.0	+0.8
CBX				e		03 29 15.7	
CBX				IAML		03 29 15.7	
	comp=N,143nm,0.5s						
CBX	Cerro Bola	1.20	277	eP	Pb	03 28 58.0	-0.7
CBX				eS	Sb	03 29 15.8	+1.6
TJIG	Tijuana	1.23	283	eP	Pn	03 28 58.1	-0.8
TJIG				eS	Sb	03 29 16.0	+1.1
ECNX	Esteban Cantu	1.25	246	eP	Pn	03 28 59.0	-0.2
BAR	Barrett	1.30	293	eP	Pn	03 28 59.3	-0.6

SCB ***15*** *03:33:00.5±0.8, 15°.88S×69°.59W, h200km, Ml4.5/1, Error ellipse: s-maj=23.1km s-min=11.0km az=126.0*
NEIC ***15*** *03:33:02.8±0.5, 16°.29S×69°.57W, h175km±5km, mb4.3/58, Error ellipse: s-maj=7.4km s-min=4.7km az=70.0*
ISCJB ***15*** *03:33:03.5±0.3, 16°.42S±0°.03×69°.70W±0°.04, h201km±3km, mb4.1/68, Error ellipse: s-maj=6.8km s-min=4.9km az=6.6*
GUC ***15*** *03:33:05.3±0.5, 16°.74S×70°.08W, h219km±4km, ML4.5*
IDC ***15*** *03:33:05.7±0.8, 16°.22S×69°.56W, h202km±6km, mb3.9/15, mb1 4.1/18, mb1mx3.9/42, mbtmp4.5/18, Error ellipse: s-maj=13.5km s-min=10.2km az=65.0*
ISC 15 03:33:03.4±0.6, 16°.39S±0°.04×69°.79W±0°.05, h190km±5km, n131, σ1=95/150, mb4.2/68, 9C-1D, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBOD	La Paz, Gloria	1.17	102	⇑iPn	Pn	03 33 36.6	+2.6
I08BO	LAS PENAS INFR	1.29	83	P	Pn	03 33 38.1	+3.1
	baz=272,slow=12,SNR=0.5						
LPAZ	La Paz	1.59	87	P	Pn	03 33 39.9	+2.1
	283nm,0.3s,baz=284,slow=6.4,SNR=9967						
LPAZ				S	Sn	03 34 05.4	+1.1
	78nm,0.3s,baz=181,slow=24,SNR=9.0						
LPAZ	La Paz	1.59	87	⇑iPn	Pn	03 33 38.4	+0.6
LPAZ				eSn	Sn	03 34 05.4	+1.1
	2μm,0.7s						
BBOB	La Paz, Bander	1.61	81	⇓iPn	Pn	03 33 38.1	+0.3
BBOB				⇑iSn	Sn	03 34 05.6	+1.2
BBOJ	La Paz, Jacaqu	1.64	111	⇑iPn	Pn	03 33 41.0	+2.9
PB16	IPOC Station P	1.96	172	⇑iP	Pn	03 33 44.0	+2.6
PB16				iS	Sn	03 34 13.9	+3.0
PB16				IAML		03 34 17.5	
	comp=E,434nm,0.4s						
PB12	IPOC Station P	2.27	193	⇑iP	Pn	03 33 44.8	+0.5
PB12				iS	Sn	03 34 14.8	-1.3
PB12				IAML		03 34 16.7	
	comp=N,2μm,0.6s						
MNMC	Minye Minye	2.73	176	ePn	Pn	03 33 51.0	+1.3
MNMC

PB01			*i* S	Sn	03 35 03.8	-4.0
PB04	**IPOC Station P**	**5.92 183**	*e*Pn	**Pn**	03 34 29.6	-0.1
PB04			*e*Sn	**Sn**	03 35 31.9	-6.0
MOCB	**Mochara**	**6.23 142**	*e*P	**Pn**	03 34 36.2	+2.2
PB10	**IPOC Station P**	**7.12 186**	*e*Pn	**Pn**	03 34 44.2	-1.0
PB10			*e*Sn	**Sn**	03 36 00.5	-5.4
NNA	**Nana**	**8.12 302**	P	**Pn**	03 34 58.7	+0.2
comp=N,8.2nm,0.3s,baz=141,slow=9.6,SNR=21						
NNA			S	**Sn**	03 36 26.9	-2.8
comp=N,13nm,0.3s,baz=207,slow=21,SNR=8.7						
NNA	**Nana**	**8.12 302**	*e*Pn	**Pn**	03 34 58.6	+0.2
NNA			*e*Sn	**Sn**	03 36 24.4	-5.3
SIV	**San Ignacio**	**8.38 89**	P	**Pn**	03 35 00.0	-1.8
comp=N,4.9nm,0.3s,baz=286,slow=10,SNR=66						
SIV			S	**Sn**	03 36 32.8	-3.2
comp=N,1.4nm,0.3s,baz=323,slow=9.2,SNR=7.9						
SIV	**San Ignacio**	**8.38 89**	*e*P	**Pn**	03 34 57.5	-4.3
GO02	**Mina Guanaco**	**8.73 179**	*e*Pn	**Pn**	03 35 06.2	-0.4
GO02			*e*Sn	**Sn**	03 36 40.4	-4.2
SAML	**Samuel**	**9.81 42**	*e*Pn	**Pn**	03 35 18.3	-2.1
GO03	**Copiap**	**11.16 182**	*e*Pn	**Pn**	03 35 37.4	-0.5
GO03			*e*Sn	**Sn**	03 37 36.5	-5.7
ATAH	**Atahualpa**	**12.47 317**	P	**Pn**	03 35 56.1	+1.1
comp=N,0.5nm,0.3s,baz=139,slow=12,SNR=12						
LCO	**Las Campanas**	**12.59 184**	*e*Pn	**Pn**	03 35 58.1	+1.7
GO04	**Tololo Observa**	**13.75 184**	*e*Pn	**Pn**	03 36 12.7	+1.7
CPUP	**Villa Florida**	**15.24 133**	P	**Pn**	03 36 27.8	-1.3
comp=N,0.2nm,0.3s,baz=316,slow=12,SNR=6.9						
CPUP	**Villa Florida**	**15.24 133**	*e*Pn	**Pn**	03 36 27.8	-1.3
comp=N,8.6nm,1.0s						
PTGA	**Pitinga**	**18.32 33**	P	**P**	03 37 03.6	-0.1
comp=N,2.9nm,0.3s,baz=205,slow=12,SNR=40						
OTAV	**Otavalo**	**18.60 332**	*e*P	**P**	03 37 07.6	+0.5
comp=N,6.9nm,0.9s						
OTAV	**Otavalo**	**18.60 332**	*e*P	**P**	03 37 07.7	+0.6
RUSC	**La Rusia**	**22.38 351**	*e*P	**P**	03 37 44.7	-2.0
comp=N,5.2nm,0.6s						
RUSC	**La Rusia**	**22.38 351**	*e*P	**P**	03 37 45.1	-1.6
TRQA	**Tornquist**	**22.66 164**	*e*P	**P**	03 37 48.7	+0.1
comp=N,3.8nm,0.5s						
BARC	**Barichara**	**23.08 351**	*e*P	**P**	03 37 51.0	-1.8
HELC	**Santa Helena**	**23.14 345**	*e*P	**P**	03 37 52.7	-0.8
comp=N,17nm,0.5s						
HELC	**Santa Helena**	**23.14 345**	*e*P	**P**	03 37 52.2	-1.3
PTBC	**PUERTO BERRIO,**	**23.24 348**	*e*P	**P**	03 37 51.1	-3.0
ZARC	**Zaragoza, Cauc**	**24.25 348**	*e*P	**P**	03 38 01.0	-2.3
PLCA	**Paso Flores**	**24.27 181**	P	**P**	03 38 04.7	+1.4
comp=N,10nm,0.9s,baz=34,slow=11,SNR=14						
PLCA	**Paso Flores**	**24.27 181**	*e*P	**P**	03 38 05.1	+1.8
comp=N,23nm,1.1s						
JTS	**JuntasAbangare**	**30.46 329**	*e*P	**P**	03 38 59.6	+1.0
comp=N,3.8nm,0.6s						
MTP	**Monte Pirata**	**34.52 7**	*e*P	**P**	03 39 31.5	-2.4
comp=N,20nm,1.1s						
CBYP	**Canovanas**	**34.66 7**	*e*P	**P**	03 39 32.6	-2.5
comp=N,13nm,0.9s						
CMIG	**Matias Romero**	**41.46 322**	P	**P**	03 40 32.3	+0.5
comp=N,2.5nm,0.7s,baz=113,slow=6.2,SNR=5.8						
LNIG	**Linares**	**50.21 324**	*e*P	**P**	03 41 40.3	0.0
comp=N,6.1nm,0.7s						
JCT	**Junction City**	**54.83 328**	*e*P	**P**	03 42 15.4	+1.3
comp=N,6.9nm,1.0s						
TX31	**Lajitas Ar. Si**	**56.00 324**	*e*P	**P**	03 42 23.3	+0.7
TXAR	**Lajitas Array**	**56.00 324**	P	**P**	03 42 23.0	+0.4
comp=N,1.0nm,0.6s,baz=152,slow=9.4,SNR=13						
FVM	**French Village**	**57.45 341**	*e*P	**P**	03 42 31.5	-1.0
comp=N,10nm,0.9s						
WMOK	**Wichita Mounta**	**57.83 332**	*e*P	**P**	03 42 35.7	+0.4
comp=N,3.0nm,0.8s						
MNTX	**Cornudas Mount**	**58.75 325**	*e*P	**P**	03 42 41.8	+0.1
comp=N,3.3nm,1.0s						
SDCO	**Great Sand Dun**	**63.45 329**	*e*P	**P**	03 43 14.6	+1.0
comp=N,4.9nm,0.9s						
X16A	**Lo Mia Camp, P**	**64.20 322**	*e*P	**P**	03 43 20.3	+1.9
comp=N,3.7nm,0.9s						
ECSD	**EROS Data Cent**	**64.67 339**	*e*P	**P**	03 43 19.8	-1.2
comp=N,2.0nm,0.6s						
WUAZ	**Wupatki**	**64.94 323**	*e*P	**P**	03 43 25.6	+2.5
comp=N,4.1nm,0.8s						
ISCO	**Idaho Springs**	**65.11 330**	*e*P	**P**	03 43 25.7	+1.4
comp=N,2.8nm,0.8s						
SMCO	**Snowmass**	**65.29 329**	*e*P	**P**	03 43 27.2	+1.6
comp=N,3.8nm,0.9s						
U15A	**North Rim**	**66.11 323**	*e*P	**P**	03 43 33.0	+2.2
comp=N,2.4nm,0.8s						
KNB	**Kanab**	**66.83 324**	*e*P	**P**	03 43 37.4	+2.2
comp=N,8.4nm,0.9s						
LCMT	**Little Creek M**	**67.07 323**	*e*P	**P**	03 43 38.7	+2.1
comp=N,2.2nm,1.0s						
MTPU	**Mount Pierson**	**67.19 325**	*e*P	**P**	03 43 39.4	+1.8
comp=N,11nm,1.8s						
SNAA	**Sanae**	**67.36 162**	P	**P**	03 43 39.3	+1.5
comp=N,2.9nm,0.7s,baz=277,slow=5.8,SNR=20						
SNAA	**Sanae**	**67.36 162**	*e*P	**P**	03 43 39.2	+1.4
comp=N,15nm,1.6s						
CCUT	**Cedar City**	**67.51 324**	*e*P	**P**	03 43 42.1	+2.6
comp=N,4.1nm,1.0s						
MSU	**Marysvale**	**67.52 325**	*e*P	**P**	03 43 41.5	+2.0
SHPR	**Sheep Range**	**67.84 322**	*e*P	**P**	03 43 43.7	+2.3
comp=N,2.3nm,0.7s						
RSSD	**Black Hills**	**67.86 334**	*e*P	**P**	03 43 41.8	+0.3
comp=N,4.1nm,0.7s						
LIC	**Lamto**	**67.87 76**	*e*P	**P**	03 43 41.3	-0.6
comp=N,33nm,0.6s						
TIC	**Toumodi**	**68.02 76**	*e*P	**P**	03 43 41.9	-1.0
DBIC	**Dimbokro**	**68.18 76**	P	**P**	03 43 43.0	-0.9
comp=N,10nm,0.4s,baz=238,slow=6.6,SNR=30						
DBIC	**Dimbokro**	**68.18 76**	*e*P	**P**	03 43 42.9	-0.9
comp=N,54nm,1.6s						
KIC	**Kosan Boka**	**68.18 76**	*e*P	**P**	03 43 42.8	-1.1
comp=N,27nm,0.4s						
MPU	**Maple Canyon**	**68.31 327**	*e*P	**P**	03 43 43.9	-0.5
comp=N,12nm,1.9s						
AGMN	**Agassiz Nation**	**68.47 342**	*e*P	**P**	03 43 43.9	-1.0
comp=N,3.7nm,0.7s						
PSUT	**Pine Spring**	**68.47 324**	*e*P	**P**	03 43 47.5	+2.1
comp=N,3.2nm,0.7s						
TPNV	**Topopah Spring**	**68.78 321**	*e*P	**P**	03 43 49.6	+2.2
comp=N,9.7nm,1.2s						
SRTC	**Snort**	**68.88 320**	*e*P	**P**	03 43 51.1	+3.3
DUG	**Dugway, Tooele**	**69.07 326**	*e*P	**P**	03 43 51.0	+2.0
comp=N,2.3nm,0.9s						
DAC	**Darwin (Calif)**	**69.16 320**	*e*P	**P**	03 43 52.1	+2.4
comp=N,4.4nm,1.1s						
BW06	**Boulder Array**	**69.29 330**	*e*P	**P**	03 43 50.4	-0.1
comp=N,7.5nm,1.6s						
PD31	**Pinedale Array**	**69.29 330**	*e*P	**P**	03 43 50.7	+0.2
PDAR	**Pinedale Array**	**69.29 330**	P	**P**	03 43 50.6	+0.2
comp=N,0.5nm,0.6s,baz=134,slow=6.4,SNR=6.7						
BGU	**Big Grassy Mou**	**69.70 326**	*e*P	**P**	03 43 54.3	+1.4
comp=N,2.1nm,0.8s						
ULM	**Lac du Bonnet**	**70.22 343**	P	**P**	03 43 54.6	-0.9
comp=N,7.2nm,0.5s,baz=153,slow=5.8,SNR=17						
ULM	**Lac du Bonnet**	**70.22 343**	*e*P	**P**	03 43 54.8	-0.9
comp=N,7.6nm,0.6s						
REDW	**Red Top Meadow**	**70.37 329**	*e*P	**P**	03 43 58.0	+1.0
comp=N,3.7nm,1.1s						
TPAW	**Teton Pass**	**70.51 329**	*e*P	**P**	03 43 59.3	+1.4
comp=N,2.2nm,0.9s						
FXWY	**Fox Creek**	**70.66 330**	*e*P	**P**	03 44 00.0	+1.3
comp=N,2.5nm,0.9s						
IMW	**Indian Meadow**	**70.81 330**	*e*P	**P**	03 44 01.2	+1.5
comp=N,7.7nm,1.4s						
RLMT	**Red Lodge**	**70.94 332**	*e*P	**P**	03 44 01.8	+1.4
comp=N,15nm,1.8s						
NV01	**Mina Array Sit**	**70.98 322**	*e*P	**P**	03 44 01.2	+0.4
NVAR	**Mina Array Bea**	**70.98 322**	P	**P**	03 44 02.3	+1.5
comp=N,1.0nm,0.7s,baz=137,slow=6.4,SNR=8.3						
GCMT	**Greycliff**	**71.64 332**	*e*P	**P**	03 44 04.6	+0.2
KOWA	**Kowa**	**71.83 68**	P	**P**	03 44 05.1	-0.9
comp=N,4.1nm,0.3s,baz=236,slow=10,SNR=36						
KOWA	**Kowa**	**71.83 68**	*e*P	**P**	03 44 05.1	-0.9
comp=N,8.8nm,1.0s						
YERR	**Yerington**	**71.90 321**	*e*P	**P**	03 44 08.7	+2.4
comp=N,12nm,1.4s						
HJGM	**San Juan Grade**	**71.98 318**	*e*P	**P**	03 44 08.8	+2.3
HLID	**Hailey**	**72.30 328**	*e*P	**P**	03 44 10.4	+1.9
comp=N,3.8nm,1.1s						
BOZ	**Bozeman (W)**	**72.40 331**	*e*P	**P**	03 44 09.7	+0.7
comp=N,2.9nm,1.0s						
MCMT	**McKenzie Canyo**	**72.42 329**	*e*P	**P**	03 44 11.2	+1.9
PAHR	**Pah Rah Range**	**72.45 322**	*e*P	**P**	03 44 11.6	+2.2
comp=N,10nm,0.9s						
DLMT	**Dillon**	**72.69 330**	*e*P	**P**	03 44 12.1	+1.4
comp=N,5.5nm,1.4s						
AFDM	**Forest Hills D**	**72.92 321**	*e*P	**P**	03 44 13.1	+1.0
comp=N,20nm,1.9s						
MFID	**Camas Ranch**	**72.93 327**	*e*P	**P**	03 44 13.6	+1.4
comp=N,5.3nm,1.0s						
EGMT	**Eagleton**	**73.38 333**	*e*P	**P**	03 44 15.1	+0.5
comp=N,1.9nm,0.6s						
QSPA	**South Pole Qui**	**73.78 180**	P	**P**	03 44 19.0	+2.2
comp=N,4.6nm,0.6s,baz=149,slow=3.1,SNR=15						
MOD	**Modoc Plateau**	**74.39 323**	*e*P	**P**	03 44 22.8	+2.1
comp=N,7.8nm,1.1s						
BMO	**Blue Mountains**	**74.69 327**	*e*P	**P**	03 44 23.2	+0.9
comp=N,2.5nm,0.6s						
LGPM	**Granite Peak**	**75.26 321**	*e*P	**P**	03 44 27.4	+1.8
F10A	**Beach Ranch, E**	**75.42 328**	*e*P	**P**	03 44 26.9	+0.5
comp=N,3.3nm,1.0s						
PINE	**Pine Mountain**	**75.96 324**	*e*P	**P**	03 44 32.2	+2.5
comp=N,4.9nm,0.8s						
TOA0	**Torodi Ar. Sit**	**76.49 72**	*e*P	**P**	03 44 32.0	-1.0
comp=N,9.7nm,0.7s						
TORD	**Torodi Ar. Bea**	**76.49 72**	P	**P**	03 44 31.9	-1.2
comp=N,7.9nm,0.6s,baz=269,slow=4.8,SNR=128						
TORD			pP	**pP**	03 45 21.5	+2.8
comp=N,2.7nm,0.8s,baz=256,slow=5.1,SNR=2.8						
VNDA	**Vanda**	**81.71 190**	P	**P**	03 45 02.7	+2.5
comp=N,0.8nm,0.7s,baz=112,slow=7.0,SNR=5.2						
TSUM	**Tsumeb**	**82.34 108**	*e*P	**P**	03 45 05.0	+0.2
comp=N,3.6nm,0.7s						
ESDC	**Sonseca Array**	**82.81 45**	P	**P**	03 45 06.6	-0.1
comp=N,1.1nm,0.6s,baz=252,slow=5.7,SNR=7.5						
ES19	**SONSECA Array**	**82.87 45**	*e*P	**P**	03 45 07.1	+0.2
YKA	**Yellowknife Ar**	**86.11 341**	P	**P**	03 45 22.8	+0.3
comp=N,2.7nm,0.6s,baz=137,slow=4.7,SNR=18						
MAW	**Mawson**	**89.44 164**	P	**P**	03 45 40.2	+1.8
comp=N,3.1nm,0.7s,baz=235,slow=9.2,SNR=5.7						
ASAR	**Alice Springs**	**133.95 211**	PKP	**PKPdf**	03 51 59.4	+0.5
comp=N,0.9nm,0.6s,baz=139,slow=2.5,SNR=8.1						
WRA	**Warramunga Arr**	**136.81 214**	PKP	**PKPdf**	03 52 05.4	+1.1
comp=N,1.4nm,0.6s,baz=151,slow=1.7,SNR=13						
WRAB	**Tennant Creek**	**136.81 214**	*e*PKPdf	**PKPdf**	03 52 05.2	+0.9
ZALV	**Zalesovo Beam**	**137.62 22**	PKP	**PKPdf**	03 52 05.9	+1.2
comp=N,3.5nm,0.7s,baz=277,slow=3.1,SNR=11						
USRK	**Ussuriysk Ar.**	**146.71 331**	PKPbc	**PKPab**	03 52 24.4	-0.3
comp=N,5.1nm,0.7s,baz=55,slow=1.6,SNR=11						
SONM	**Songino Array**	**148.48 5**	PKPbc	**PKPbc**	03 52 29.1	+1.2
comp=N,6.8nm,0.6s,baz=324,slow=1.8,SNR=40						
ULN	**Ulaanbaatar**	**148.50 4**	*e*PKPbc	**PKPbc**	03 52 28.8	+0.8
KSRS	**Korea Array**	**153.83 327**	PKPbc	**PKPbc**	03 52 41.7	+1.3
comp=N,1.5nm,0.7s,baz=5.9,slow=2.3,SNR=6.5						
KSAR	**Wonju Array Be**	**153.86 327**	PKPbc	**PKPbc**	03 52 41.8	+1.3
LZH	**Lanzhou**	**159.58 15**	*e*PKP	**PKPdf**	03 52 35.1	-4.9
LZH			pPKP	sPKPdf	03 53 46.5	-2.4
LZH			sPKP		03 53 57.8	

*MAN **15** 03:41:31.8, 5.52N×126.86E, h74km, mb4.8, ML3.7, MS3.6*
*NEIC **15** 03:41:32.6±0.7, 6.01N×127.40E, h35km, mb4.2/1, Error ellipse: s-maj=28.5km s-min=9.2km az=66.0*
*IDC **15** 03:41:35.7±5.3, 5.88N×127.10E, h61km±43km, mb3.9/7, mb1 4.2/8, mb1mx3.6/56, mbtmp4.4/8, ML5.3/1, MS2.9/3, Ms1 3.0/3, ms1mx2.5/57, Error ellipse: s-maj=83.8km s-min=12.4km az=64.0*
*ISCJB **15** 03:41:36.1±0.9, 5.59N±0.04×126.62E±0.08, h77km±9km, mb4.1/8, Error ellipse: s-maj=14.0km s-min=6.4km az=177.7*
*DJA **15** 03:41:42.3±0.7, 6°N±6°×12°6E±°, h43km±20km, M4.5/7, mb4.7/7, mB4.8/4, MLv4.5/5, Mw(mB)4.1/4*

ISC 15 03:41:37.6±1.4, 5.63N±0.05×126.6E±0.1, h70km±13km, n28, σ1°38/34, mb4.2/8, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.35**	**346**	*e*P	**Pn**	03 41 58.6	-2.0
MATI				*e*S	**Sn**	03 42 17.9	+0.1
DAV	**Davao City (W)**	**1.75**	**325**	P	**Pn**	03 42 05.6	-0.3
157nm,0.3s,baz=105,slow=3.7,SNR=8.6							
DAV				S	**Sn**	03 42 29.8	+2.4
144nm,0.3s,baz=277,slow=23,SNR=7.3							
DMPH	**Davao City--Mi**	**1.80**	**323**	*e*P	**Pn**	03 42 05.0	-1.6
DMPH				*e*S	**Sn**	03 42 30.5	+1.9
SGSI	**Sangihe**	**2.20**	**209**	P	**Pn**	03 42 11.4	-0.7
SKMP	**Bagumbayan, Su**	**2.22**	**294**	*e*P	**Pn**	03 42 10.6	-1.6
SKMP				*e*S	**Sn**	03 42 39.9	+1.2
BUKP	**Musuan**	**2.70**	**326**	*e*P	**Pn**	03 42 17.5	-1.3
BUKP				*e*S	**Sn**	03 42 51.7	+1.2
CGP	**Cagayan de Oro**	**3.38**	**326**	*e*P	**Pn**	03 42 30.6	+2.6
CGP				*e*S	**Sn**	03 43 08.6	+1.7
PAGZ	**Pagadian**	**3.87**	**305**	*e*P	**Pn**	03 42 34.3	-0.5
MRSI	**Marisa**	**6.91**	**222**	P	**Pn**	03 43 16.7	+0.4
MRSI				S	**Sn**	03 44 32.4	-1.1
APSI	**Ampana**	**8.16**	**217**	P	**Pn**	03 43 36.0	+2.6
47nm,0.7s,0.2nm							
MPSI	**Mapaga**	**8.50**	**232**	P	**Pn**	03 43 37.5	-0.5
MPSI				S	**Pn**	03 43 37.6	-0.5
MTKI	**Muara Teweh, K**	**13.38**	**241**	P	**P**	03 44 49.6	-2.0
BATI	**Baumata**	**16.00**	**190**	P	**P**	03 45 22.6	+1.9
10nm,0.3s,baz=310,slow=2.4,SNR=6.2							
BATI	**Baumata**	**16.00**	**190**	P	**P**	03 45 22.3	+1.5
FITZ	**Fitzroy Crossi**	**23.60**	**182**	P	**P**	03 46 42.8	+0.5
4.4nm,0.4s,baz=1.8,slow=7.6,SNR=37							
WRAB	**Tennant Creek**	**26.53**	**163**	*e*P	**P**	03 47 08.3	-0.6
4.7nm,0.6s							
WRA	**Warramunga Arr**	**26.53**	**164**	P	**P**	03 47 08.4	-0.5
2.0nm,0.5s,baz=341,slow=10,SNR=66							
JNU	**Nakatsue**	**27.64**	**8**	LR	LR	04 03 44.8	
comp=Z,11nm,18.0s,baz=118,slow=49							
CMAR	**Chiang Mai Arr**	**29.83**	**298**	LR	LR	04 00 49.3	
comp=Z,9.9nm,18.5s,baz=295,slow=38							
ASAR	**Alice Springs**	**29.98**	**166**	P	**P**	03 47 39.5	-0.2
1.9nm,0.4s,baz=348,slow=7.2,SNR=41							
ASAR				PcP	**PcP**	03 50 41.0	+0.2
0.4nm,0.4s,baz=354,slow=2.5,SNR=4.4							
STKA	**Stephens Creek**	**39.95**	**160**	P	**P**	03 49 06.0	+0.7
9.7nm,1.2s,baz=324,slow=10.0,SNR=5.5							
MKAR	**Makanchi Array**	**55.93**	**325**	P	**P**	03 51 07.4	-1.1
0.6nm,0.5s,baz=118,slow=7.8,SNR=7.0							
KURBB	**Kurchatov Arra**	**60.08**	**327**	P	**P**	03 51 36.6	-0.8
2.3nm,0.7s,baz=126,slow=6.3,SNR=20							
KURK	**Kurchatov**	**60.08**	**327**	P	**P**	03 51 36.6	-0.8
BRVK	**Borovoye**	**65.73**	**327**	*e*P	**P**	03 52 15.4	+0.5
FINES	**FINESS Array B**	**90.10**	**332**	P	**P**	03 54 29.6	0.0
1.0nm,0.7s,baz=45,slow=5.7,SNR=4.5							
BBB	**Bella Bella**	**94.87**	**37**	LR	LR	04 34 54.9	
comp=Z,30nm,18.9s,baz=188,slow=34							
TORD	**Torodi Ar. Bea**	**122.18**	**289**	PKP	**PKPdf**	04 00 25.6	+0.1
0.2nm,0.4s,baz=57,slow=1.8,SNR=7.3							

ISC 15 03:42:19.4±1.3, 48.97N±0.04×20.29E±0.04, h8km±22km, n5, σ0°24/10, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIE	**Niedzica**	**0.45**	**1**	*e*Pg	**Pg**	03 42 28.2	+0.1
NIE				*e*Sg	**Sg**	03 42 33.6	-0.4
KECS	**Kecovo**	**0.50**	**165**	*e*PG	**Pg**	03 42 29.1	0.0
KECS				*e*SG	**Sg**	03 42 35.5	-0.2
KECS				*e*LG	Lg	03 42 36.6	
LANS	**Liptovska Anna**	**0.57**	**289**	*e*PG	**Pg**	03 42 30.6	+0.2
LANS				*e*SG	**Sg**	03 42 38.0	+0.1
CRVS	**Cervenica-Dubn**	**0.78**	**94**	*e*PG	**Pg**	03 42 34.4	+0.1
CRVS				*e*SG	**Sg**	03 42 44.6	+0.2
CRVS				*e*LG	Lg	03 42 46.7	
VYHS	**Vyhne**	**1.07**	**244**	*e*PG	**Pg**	03 42 39.9	0.0
VYHS				*e*SG	**Sb**	03 42 54.3	0.0
VYHS				*e*LG	Lg	03 42 55.5	

UCR 15 03:45:13.4±1.9, 8.72N×83.26W, h11km±5km, MD3.9, 2C-1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.11**	**126**	*i*P	Pg	03 45 16.3	0.0
ACR				*e*S	Sg	03 45 18.5	+0.1
PTJ1	**Puerto Jim¨ne**	**0.18**	**195**	*e*P	Pg	03 45 17.5	0.0
PTJ1				*e*S	Sg	03 45 21.8	+1.5
EDSV	**San Vito**	**0.30**	**70**	*e*S	Sb	03 45 25.9	+0.1
EDPN	**Palmar Norte**	**0.32**	**321**	*e*P	Pg	03 45 20.4	+0.5
EDPN				*e*S	Sb	03 45 26.5	+0.3
BRU2	**Volcan**	**0.56**	**82**	*i*,*i*P	Pg	03 45 24.7	+0.3
BRU2				*e*S	Sb	03 45 33.3	-0.1
BUS	**Buena Vista**	**0.97**	**329**	*e*P	Pg	03 45 31.0	-1.3
BUS				*e*S	Sg	03 45 43.9	-1.1
QCR1	**Quepos**	**1.15**	**308**	*e*P	Pb	03 45 33.0	-2.2
QCR1				*e*S	Sb	03 45 49.8	-0.3
CVTR	**Volcan Turrial**	**1.39**	**339**	*e*P	Pn	03 45 37.7	-1.4
HDC	**Heredia**	**1.53**	**327**	*e*S	Sg	03 46 03.9	+1.1

MAN 15 03:54:03.6, 15.45N×119.87E, h36km, mb4.0, ML2.8, MS2.4, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCZP	**Santa Cruz**	**0.32**	**8**	*e*P	Pn	03 54 13.1	+1.3
SCZP				*e*S	Sn	03 54 20.1	+1.7
BOLP	**Bolinao**	**0.92**	**3**	*e*P	Pn	03 54 20.9	+0.9
BOLP				*e*S	Sn	03 54 34.6	+2.5
PCPH	**Palayan**	**1.19**	**85**	*e*P	Pn	03 54 23.6	-0.1
PCPH				*e*S	Sn	03 54 39.1	+0.5
BALP	**Baler**	**1.67**	**80**	*e*P	Pn	03 54 31.1	+0.8
BALP				*e*S	Sn	03 54 52.1	+1.6
LUBP	**Lubang**	**1.75**	**168**	*e*P	Pn	03 54 32.1	+0.8

*IDC **15** 04:00:30.9±0.8, 27.98N×139.68E, h496km±29km, mb2.8/4, mb1 3.0/7, mb1mx2.6/60, mbtmp3.7/7, Error ellipse: s-maj=76.9km s-min=14.1km az=79.0*
*JMA **15** 04:00:31.2±0.2, 28.10N×140.12E, h520km, M3.9*

ISC 15 04:00:30.9±0.9, 27.97N±0.08×139.4E±0.2, h478km, n16, σ1°97/21, mb3.2/4, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.58**	**109**	P	**P**	04 01 38.9	+1.6
JCJ	**Chichijima**	**2.58**	**109**	P	**P**	04 01 39.0	+1.7
12nm,0.3s,baz=279,slow=17,SNR=4.7							
JCJ				S	**S**	04 02 32.0	+0.6
BSO1	**Boso 1**	**6.79**	**11**	P	**P**	04 02 15.4	+2.0
BSO1				*e*S	**S**	04 03 39.5	+1.8
JIE	**Ise**	**6.82**	**341**	P	**P**	04 02 19.0	+4.7
BSO3	**Boso 3**	**6.87**	**7**	P	**P**	04 02 16.5	+1.9
BSO3				*e*S	**S**	04 03 39.2	-0.5
BSO4	**Boso 4**	**7.04**	**6**	*e*S	**S**	04 03 43.2	0.0
JOD2	**Odawara 2**	**7.28**	**358**	P	**P**	04 02 21.4	+2.3
JRY	**Ryogami san**	**8.04**	**357**	P	**P**	04 02 28.3	+1.3
JAG	**Ashikaga**	**8.43**	**0**	P	**P**	04 02 31.2	+0.1
JAG				*e*S	**S**	04 04 06.6	-3.4
MJAR	**Matsushiro Arr**	**8.61**	**353**	P	**P**	04 02 33.7	+0.7
0.9nm,0.3s,baz=179,slow=11,SNR=9.6							
JHO	**Hitachi**	**8.67**	**6**	P	**P**	04 02 34.7	+1.0
JHO				*e*S	**S**	04 04 12.2	-2.4
USRK	**Ussuriysk Ar.**	**17.27**	**342**	P	**P**	04 04 05.4	+0.4
0.3nm,0.3s,baz=158,slow=8.5,SNR=6.9							
FITZ	**Fitzroy Crossi**	**47.71**	**198**	P	**P**	04 08 22.9	-0.4
1.3nm,0.9s,baz=12,slow=9.3,SNR=3.9							
WRA	**Warramunga Arr**	**47.88**	**186**	P	**P**	04 08 23.4	-1.3
0.2nm,0.3s,baz=1.2,slow=7.6,SNR=17							
KURBB	**Kurchatov Arra**	**50.69**	**314**	P	**P**	04 08 44.9	-0.3
0.2nm,0.4s,baz=89,slow=7.5,SNR=3.3							
FINES	**FINESS Array B**	**76.08**	**333**	P	**P**	04 11 26.7	-1.5
0.5nm,0.3s,baz=65,slow=5.0,SNR=8.1							

*ISCJB **15** 04:19:48.6±0.9, 31.32N±0.05×103.26E±0.10, h15km, mb3.5/5, MS2.7/3, Error ellipse: s-maj=12.5km s-min=5.5km az=158.3*
*IDC **15** 04:19:49.1±1.3, 31.04N×103.16E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.3/74, mbtmp3.6/5, ML2.7/1, MS2.9/3, Ms1 2.9/3, ms1mx2.5/61, Error ellipse: s-maj=44.0km s-min=24.1km az=64.0*
*BJI **15** 04:19:52.9, 31.28N×103.20E, h16km, ML3.6/12, Ms3.5/4, Ms7 3.2/2*

**ISC 15 04:19:51.1±1.1, 31

H10N3	ASCENSION HYDR	2.74	316	Pn		Pn	04 48 34.7	0.0
DBIC	Dimbokro	18.09	25	LR		LR	04 56 36.9	
	comp=Z,46nm,19.4s,baz=174,slow=29							
KOWA	Kowa	25.60	19	P		P	04 53 20.7	+0.1
	2.5nm,0.8s,baz=193,slow=11,SNR=6.3							
KOWA				LR		LR	05 01 07.8	
	comp=Z,112nm,20.8s,baz=206,slow=31							
TORD	Torodi Ar. Bea	26.85	32	P		P	04 53 31.4	-0.5
	1.8nm,0.7s,baz=217,slow=8.3,SNR=10							
TORD				LR		LR	05 02 15.9	
	comp=Z,80nm,18.7s,baz=140,slow=32							
MATP	Matopo	40.91	110	LR		LR	05 09 50.1	
	comp=Z,71nm,19.2s,baz=316,slow=32							
CPUP	Villa Florida	45.36	243	LR		LR	05 13 01.6	
	comp=Z,28nm,18.3s,baz=70,slow=33							
ESDC	Sonseca Array	49.88	9	LR		LR	05 17 12.7	
	comp=Z,56nm,18.3s,baz=175,slow=35							
IDI	Anoyia	57.13	36	LR		LR	05 21 43.6	
	comp=Z,26nm,19.4s,baz=253,slow=36							
SNAA	Sanae	62.10	177	P		P	04 58 11.6	0.0
	1.5nm,1.0s,baz=343,slow=6.1,SNR=3.7							
GERES	GERESS Array B	62.83	19	P		P	04 58 17.1	+0.3
	1.1nm,0.8s,baz=185,slow=6.6,SNR=8.2							
GERES				LR		LR	05 24 58.9	
	comp=Z,31nm,20.8s,baz=280,slow=36							
BRTR	Keskin Array B	65.28	38	P		P	04 58 33.9	+0.7
	0.8nm,1.0s,baz=209,slow=8.3,SNR=3.5							
BRTR				LR		LR	05 28 48.2	
	comp=Z,20nm,18.1s,baz=240,slow=38							
AKASG	Malin Array Be	70.33	27	P		P	04 59 04.0	-0.6
	3.7nm,0.7s,baz=225,slow=7.1,SNR=19							
NOA	NORSAR Array B	73.08	12	LR		LR	05 31 06.7	
	comp=Z,11nm,19.1s,baz=220,slow=36							
FINES	FINESS Array B	77.21	18	P		P	04 59 44.5	-0.2
	0.9nm,0.7s,baz=207,slow=5.9,SNR=3.8							

*NNC **15** 04:48:31.3±0.9, 40°.89N×72°.80E, h0km, mb3.5, mpv3.3,*
Error ellipse: s-maj=14.6km s-min=5.8km az=72.0
*SOME **15** 04:48:33.0, 40°.98N×72°.95E, h5km*
*KRNET **15** 04:48:33.3±0.1, 40°.97N×72°.79E, h26km, mb3.4*
*KNET **15** 04:48:34.2±0.3, 41°.01N×72°.96E, h23km±2km, ml3.1, Error ellipse: s-maj=4.7km s-min=2.7km az=104.0*

ISC 15 04:48:33.4±1.2, 40°.95N±0°.02×72°.83E±0°.03, h1km±10km, n45, σ1§43/88, 48C-15D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	Arslanbob	0.39	17	⇓iP	Pg	04 48 41.4	+0.4
	baz=22						
ARSB				⇓iS	Sg	04 48 46.9	+0.8
	baz=22						
TOKL	Toktogul	0.99	2	⇓iP	Pg	04 48 52.0	-0.4
	baz=4.0						
TOKL				⇓iS	Sg	04 49 05.0	-0.2
	baz=4.0						
SFK	Sufi-Kurgan	1.07	151	⇓Pn	Pg	04 48 53.3	-0.6
	25nm,0.2s						
SFK				⇑Sn	Sg	04 49 08.6	+0.8
	267nm,0.2s						
SFK	Sufi-Kurgan	1.07	151	⇓iP	Pg	04 48 53.3	-0.6
	baz=50						
SFK				⇓iS	Sg	04 49 08.5	+0.7
	baz=50						
AML	Almayashu	1.35	29	P	Pn	04 48 57.5	-2.2
	30nm,0.2s,SNR=56						
AML				⇑S	Sg	04 49 15.5	-1.2
	261nm,0.2s						
AML	Almayashu	1.35	29	⇓iP	Pn	04 48 57.7	-2.0
	baz=30						
AML				⇓iS	Sg	04 49 15.4	-1.3
	baz=30						
MNAS	Manas	1.55	351	⇑Pn	Pn	04 49 01.7	-0.6
	34nm,0.4s						
MNAS				⇓Sn	Sn	04 49 22.4	-0.8
	221nm,0.4s						
MNAS	Manas	1.55	351	⇑iP	Pn	04 49 01.4	-0.9
	baz=52						
MNAS				⇑iS	Sn	04 49 21.7	-1.5
	baz=52						
DRK	Karamyk	1.67	208	⇑iP	Pn	04 49 03.2	-0.8
	baz=7.0						
DRK				⇑iS	Sn	04 49 24.8	-1.4
	baz=7.0						
BTK	Batken	1.77	240	⇑iP	Pn	04 49 04.8	-0.5
	baz=39						
BTK				⇑iS	Sn	04 49 27.4	-1.1
	baz=39						
UCH	Uchtor	1.80	44	⇑P	Pn	04 49 05.4	-0.6
	30nm,0.2s,SNR=62						
UCH				⇑S	Sn	04 49 29.0	-0.6
	177nm,0.2s						
UCH	Uchtor	1.80	44	⇑iP	Pn	04 49 05.3	-0.6
	baz=45						
UCH				⇑iS	Sn	04 49 28.3	-1.3
	baz=45						
MRKS	Merke	1.82	9	eP	Pn	04 49 06.1	+0.2
	129nm,0.4s						
MRKS				eS	Sn	04 49 29.6	0.0
	344nm,0.3s						
EKS2	Erkin-Say	1.85	22	⇑P	Pn	04 49 06.3	-0.1
	8.6nm,0.2s,SNR=26						
EKS2				⇓S	Sn	04 49 30.4	-0.1
	49nm,0.2s						
EKS2	Erkin-Say	1.85	22	⇑iP	Pn	04 49 05.9	-0.5
	baz=23						
EKS2				⇑iS	Sn	04 49 29.3	-1.2
	baz=23						
AAK	Ala-Archa	2.10	36	⇑Pn	Pn	04 49 09.5	-0.4
	12nm,0.4s						
AAK				⇑Sn	Sn	04 49 37.6	+1.0
	130nm,0.5s						
AAK	Ala-Archa	2.10	36	⇑P	Pn	04 49 09.7	-0.1
	15nm,0.2s,SNR=26						
AAK				⇑S	Sn	04 49 37.3	+0.7
	136nm,0.2s						
AAK	Ala-Archa	2.10	36	⇑iP	Pn	04 49 09.6	-0.2
	baz=37						
AAK				⇑iS	Sn	04 49 35.7	-0.9
	baz=37						
KZA	Kyzart	2.14	57	⇑P	Pn	04 49 10.0	-0.6
	7.0nm,0.2s,SNR=15						
KZA				⇑S	Sn	04 49 38.3	+0.3
	45nm,0.2s						
KZA	Kyzart	2.14	57	⇑iP	Pn	04 49 10.1	-0.6
	baz=58						
KZA				⇑iS	Sn	04 49 37.4	-0.6
	baz=58						
KBK	Karagaybulak	2.33	42	⇑P	Pn	04 49 13.5	+0.5
	7.6nm,0.2s,SNR=13						
KBK	Karagaybulak	2.33	42	⇑iP	Pn	04 49 12.7	-0.3
	baz=43						
KBK				⇑iS	Sn	04 49 41.2	-1.1
	baz=43						
IUG	Iuzhnay	2.41	301	eP	Pb	04 49 18.3	+0.6
	93nm,0.2s						
IUG				eS	Sg	04 49 50.6	-0.4
	408nm,0.4s						
NRN	Naryn	2.44	78	⇓iP	Pn	04 49 14.5	-0.2
	baz=78						
NRN				⇓iS	Sn	04 49 44.2	-1.2
	baz=78						
CHMS	Chumysh	2.50	34	⇑P	Pn	04 49 15.2	-0.1
	6.3nm,0.2s,SNR=6.4						
CHMS				⇓S	Sn	04 49 46.8	+0.5
	11nm,0.2s						
CHMS	Chumysh	2.50	34	⇑iP	Pn	04 49 15.1	-0.1
	baz=35						
CHMS				⇑iS	Sn	04 49 45.2	-1.1
	baz=35						
USP	Ospenovka	2.63	28	⇑P	Pn	04 49 16.6	-0.5
	2.6nm,0.1s,SNR=9.9						
USP				⇑S	Sn	04 49 49.5	0.0
	39nm,0.3s						
USP	Ospenovka	2.63	28	⇑iP	Pn	04 49 16.5	-0.5
	baz=28						
USP				⇑iS	Sn	04 49 48.3	-1.2
	baz=28						
KK31	Karatay Array	2.76	322	Pn	Pn	04 49 18.6	-0.2
	0.5nm,0.2s,baz=125,slow=13,SNR=75						
KK31				⇑Pg	Pb	04 49 23.8	+0.3
	3.6nm,0.2s,baz=144,slow=16,SNR=7.0						
KK31				⇑Lg	Lg	04 49 59.6	
	19nm,0.3s,baz=139,slow=29,SNR=9.1						
BOOM	Boomskoye usch	2.79	56	⇑iP	Pn	04 49 19.0	-0.4
	baz=56						
BOOM				⇑iS	Sn	04 49 52.7	-1.1
	baz=56						
TKM2	Tokmak 2	2.85	45	⇑P	Pn	04 49 19.0	-1.3
	4.2nm,0.2s,SNR=14						
TKM2	Tokmak 2	2.85	45	⇑iP	Pn	04 49 19.9	-0.4
	baz=46						
TKM2				⇑iS	Sn	04 49 54.3	-1.0
	baz=46						
ULHL	Ulahol	2.87	62	⇑iP	Pn	04 49 20.1	-0.4
	baz=63						
ULHL				⇑iS	Sn	04 49 54.8	-0.9
	baz=63						
BRLS	Borolday	3.05	314	eP	Pb	04 49 28.8	+0.3
	0.6nm,0.6s						
BRLS				eS	Sb	04 50 08.4	+2.3
	19nm,0.4s						
KST	Kastek	3.14	47	⇑iP	Pb	04 49 29.0	-1.0
	17nm,0.8s						
KST				⇑iS	Sb	04 50 09.6	+0.8
	32nm,0.8s						
DGS	Degeres	3.17	43	eP	Pb	04 49 29.1	-1.5
	9.9nm,0.5s						
DGS				eS	Sb	04 50 09.9	+0.1
	47nm,0.6s						
MTBS	Maitube	3.46	50	eP	Pb	04 49 34.7	-0.7
	5.2nm,0.2s						
MTBS				eS	Sb	04 50 19.4	+1.4
	21nm,0.3s						
IZV	Izvestkoviy	3.51	52	eP	Pb	04 49 33.4	-3.0
	9.9nm,0.7s						
IZV				eS	Sb	04 50 17.1	-2.4
	22nm,0.7s						
TNSS	Tian-Shan	3.71	54	eP	Pb	04 49 40.6	+0.6
	5.1nm,0.4s						
TNSS				eS	Sb	04 50 29.1	+3.5
	21nm,0.6s						
MDOK	Medeo	3.84	53	eP	Pb	04 49 41.0	-1.1
	6.3nm,0.6s						
MDOK				eS	Sb	04 50 30.6	+1.5
	18nm,0.7s						
KUU	Kurty	3.92	40	eP	Pb	04 49 41.4	-2.0
	1.9nm,0.3s						
KUU				⇓iS	Sb	04 50 29.7	-1.7
	20nm,0.5s						
KTBS	Karatobe	3.97	45	eP	Pb	04 49 43.3	-1.0
	3.2nm,0.4s						
KTBS				eS	Sb	04 50 33.5	+0.7
	20nm,0.4s						
CHKK	Chushkaly	4.23	45	eP	Pb	04 49 49.2	+0.6
	3.5nm,0.5s						
CHKK				eS	Sb	04 50 43.7	+3.5
	24nm,0.2s						
ARXS	Arharly	4.92	47	eP	Pb	04 50 01.7	+1.3
	3.1nm,0.5s						
ARXS				eS	Sb	04 51 05.5	+5.3
	18nm,0.4s						
UZB	Uzynbulak	5.11	63	eP	Pb	04 50 05.2	+1.6
	1.7nm,0.4s						
UZB				⇑iS	Sb	04 51 11.2	+5.7
	6.3nm,0.4s						

IDC 15 04:55:30.1±2.2, 1°.36N×126°.94E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/56, mbtmp3.4/3, MS3.7/1, Ms1 3.7/1, ms1mx2.6/25, Error ellipse: s-maj=188.2km s-min=25.6km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.38	161	P	P	05 00 28.9	-1.2
	0.3nm,0.5s,baz=340,slow=11,SNR=8.5						
ASAR	Alice Springs	25.78	165	P	P	05 01 03.9	+1.0
	0.4nm,0.8s,baz=346,slow=11,SNR=3.3						
JHJ	Hachijo jima 2	33.82	20	LR	LR	05 13 19.0	
	comp=Z,120nm,20.1s,baz=336,slow=32						
MKAR	Makanchi Array	59.62	326	P	P	05 05 35.8	-0.1
	0.6nm,0.4s,baz=123,slow=7.5,SNR=6.2						

*DDA **15** 04:58:28.9, 36°.36N×29°.01E, h7km, Ml3.4*
*ISK **15** 04:58:28.9, 36°.36N×29°.06E, h15km, ML3.1/6*
*ATH **15** 04:58:29.5, 36°.32N×29°.07E, h38km±2km, ML2.8/6, Error ellipse: s-maj=3.3km s-min=1.3km az=171.0*
*ISCJB **15** 04:58:29.1±0.5, 36°.34N±0°.03×29°.04E±0°.03, h13km±3km, Error ellipse: s-maj=4.3km s-min=3.4km az=174.3*
*CSEM **15** 04:58:29.7±0.2, 36°.35N×29°.07E, h20km, ML2.9, Error ellipse: s-maj=4.4km s-min=3.1km az=172.0*
*THE **15** 04:58:29.9, 36°.42N×29°.07E, h13km, ML2.9/4, Error ellipse: s-maj=0.9km s-min=0.3km az=55.0*

ISC 15 04:58:29.3±0.9, 36°.36N±0°.02×29°.07E±0°.02, h17km±6km, n85, σ1§02/128, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	Fethiye	0.27	3	PG	Pg	04 58 34.9	-0.4
FETY				SG	Sg	04 58 39.9	+0.4
FETY	Fethiye	0.27	3	P	Pg	04 58 34.9	-0.4
FETY				S	Sg	04 58 38.5	-1.0
FETY	Fethiye	0.27	3	P	Pg	04 58 34.9	-0.4
FETY				S	Sg	04 58 39.9	+0.4
AKAS	Kas	0.45	106	PG	Pg	04 58 38.6	+0.1
AKAS	Kas	0.45	106	iP	Pg	04 58 38.5	+0.1
AKAS				iS	Sb	04 58 47.6	+2.2
AKAS	Kas	0.45	106	ePg	Pg	04 58 38.6	+0.1
AKAS				S	Sb	04 58 47.6	+2.2
KSL	Kastellorizon	0.47	117	P	Pb	04 58 39.6	+0.6
KSL				S	Sn	04 58 48.9	-0.2
KSL				AML	AML	04 58 49.7	
	comp=E,2554μm,0.4s						
KSL				AML	AML	04 58 51.4	
	comp=N,2200μm,0.6s						
KSL	Kastellorizon	0.47	117	P	Pb	04 58 39.8	+0.7
KSL				S	Sb	04 58 47.5	+1.8
DALY	Dalyan (Mu¨la	0.56	324	PG	Pg	04 58 40.5	-0.1
DALY	Dalyan (Mu¨la	0.56	324	iP	Pg	04 58 40.4	-0.1
DALY				iS	Sb	04 58 48.6	+0.2
DALY	Dalyan (Mu¨la	0.56	324	P	Pg	04 58 40.4	-0.1
DALY				S	Sb	04 58 48.7	+0.2
TURN	Turunc	0.63	324	PG	Pn	04 58 44.5	+1.0
TURN	Turunc	0.63	324	iP	Pn	04 58 44.3	+0.8
TURN				iS	Sn	04 58 55.1	+1.9
TURN	Turunc	0.63	324	P	Pn	04 58 44.3	+0.8
ARG	Arkhangelos	0.78	259	PG	Pg	04 58 44.2	-0.2
ARG	Arkhangelos	0.78	259	P	Pg	04 58 44.5	+0.1
ARG				S	Sn	04 58 56.4	-0.4
ARG				AML	AML	04 58 58.1	
	comp=E,1125μm,0.3s						
ARG				AML	AML	04 58 58.8	
	comp=N,826μm,0.3s						
ARG	Arkhangelos	0.78	259	P	Pg	04 58 44.6	+0.1
ARG				S	Sn	04 58 56.3	-0.4
ARG	Arkhangelos	0.78	259	ePg	Pg	04 58 44.2	-0.2
ARG	Arkhangelos	0.78	259	P	Pg	04 58 44.6	+0.1
ARG				S	Sn	04 58 56.2	-0.5
MRSB	Marmaris-Mugla	0.79	297	PG	Pg	04 58 44.8	+0.1
MRSB	Marmaris-Mugla	0.79	297	ePg	Pg	04 58 44.8	+0.1
GLHS	Gihisar (BURDU	0.86	23	PG	Pg	04 58 46.1	-0.1
GLHS	Gihisar (BURDU	0.86	23	ePg	Pg	04 58 46.1	-0.1
GOLH	Golhisar	0.96	24	iP	Pb	04 58 46.5	-1.0
GOLH				iS	Sg	04 59 01.1	+0.5
GOLH	Golhisar	0.96	24	P	Pb	04 58 46.5	-1.0
GOLH				S	Sg	04 59 01.1	+0.5
TAVA	DENIZLI_Tavas	1.11	354	iP	Pb	04 58 49.8	-0.3
TAVA				iS	Sb	04 59 05.0	+0.7
TAVA	DENIZLI_Tavas	1.11	354	P	Pb	04 58 49.8	-0.3
TAVA				S	Sb	04 59 05.0	+0.7
DATC	Datca-Mugla	1.20	290	PN	Pn	04 58 51.8	+0.5
DATC	Datca-Mugla	1.20	290	ePn	Pn	04 58 51.8	+0.5
KORT	Korkueli	1.21	58	PN	Pb	04 58 52.3	+0.4
KORT	Korkueli	1.21	58	ePn	Pb	04 58 52.3	+0.4
DAT	Datca	1.25	287	PN	Pn	04 58 52.3	+0.1
DAT	Datca	1.25	287	iP	Pn	04 58 51.4	-0.8
DAT				iS	Sb	04 59 08.5	0.0
DAT	Datca	1.25	287	P	Pn	04 58 51.4	-0.8
DAT	Datca	1.25	287	ePn	Pn	04 58 52.3	+0.1
DAT				S	Sb	04 59 08.5	0.0
DNZL	Cakiroluk	1.32	359	iP	Pn	04 58 53.5	+0.3
DNZL				iS	Sb	04 59 10.8	+0.2
DNZL	Cakiroluk	1.32	359	P	Pn	04 58 53.5	+0.3
DNZL				S	Sb	04 59 10.8	+0.2
ANTB	Antalya	1.38	67	PN	Pb	04 58 54.9	+0.2
ANTB	Antalya	1.38	67	ePn	Pb	04 58 54.9	+0.2
DENT	Denizli	1.39	359	PN	Pn	04 58 54.3	+0.3
DENT	Denizli	1.39	359	ePn	Pn	04 58 54.3	+0.3
MLSB	Milas	1.39	312	PN	Pn	04 58 54.9	+0.9
MLSB	Milas	1.39	312	ePn	Pn	04 58 54.9	+0.9
BDRM	Kayabasi	1.48	299	iP	Pn	04 58 55.3	+0.1
BDRM				iS	Sb	04 59 15.5	+0.6
BDRM	Kayabasi	1.48	299	P	Pn	04 58 55.3	+0.1
BDRM				S	Sb	04 59 15.5	+0.6
BRDR	BURDUR-Merkez	1.55	31	iP	Pn	04 58 57.0	+0.8
BRDR				iS	Sb	04 59 17.9	+0.9
BRDR	BURDUR-Merkez	1.55	31	P	Pn	04 58 57.0	+0.8
BRDR				S	Sb	04 59 17.9	+0.9
BODT	Bodrum	1.58	297	PN	Pn	04 58 55.9	-0.6
BODT	Bodrum	1.58	297	P	Pn	04 58 55.3	-1.2
BODT				S	Sn	04 59 15.3	-1.2
BODT	Bodrum	1.58	297	P	Pn	04 58 55.3	-1.2
BODT	Bodrum	1.58	297	ePn	Pn	04 58 55.9	-0.6
BODT				S	Sn	04 59 15.3	-1.2
AYDN	Tasoluk	1.61	324	iP	Pn	04 58 57.4	+0.4
AYDN				iS	Sb	04 59 19.4	+0.8
AYDN	Tasoluk	1.61	324	P	Pn	04 58 57.4	+0.4
AYDN				S	Sb	04 59 19.4	+0.8
YKAV	Yalikavak-Bodr	1.62	298	PN	Pn	04 58 57.9	+0.8
YKAV	Yalikavak-Bodr	1.62	298	ePn	Pn	04 58 57.9	+0.8
KARP	Karpathos	1.75	243	PN	Pn	04 58 58.9	0.0
KARP	Karpathos	1.75	243	P	Pn	04 58 59.3	+0.4
KARP				S	Sn	04 59 20.4	-0.4
KARP				AML	AML	04 59 21.9	
	comp=N,323μm,0.2s						
KARP				AML	AML	04 59 23.1	
	comp=E,338μm,0.1s						
KARP	Karpathos	1.75	243	P	Pn	04 58 59.1	+0.2
KARP				S	Sn	04 59 20.9	+0.1
KARP	Karpathos	1.75	243	P	Pn	04 58 59.1	+0.2
KARP				S	Sn	04 59 20.9	+0.1
AYDB	Zeytinkoy-Aydi	1.84	330	PN	Pn	04 59 00.9	+0.7
AYDB	Zeytinkoy-Aydi	1.84	330	ePn	Pn	04 59 00.9	+0.7
ISP	Isparta	1.86	38	PN	Pn	04 59 01.1	+0.5
ISP	Isparta	1.86	38	P	Pn	04 58 59.1	-1.5
ISP				S	Sn	04 59 22.2	-1.6
ISP	Isparta	1.86	38	P	Pn	04 58 59.1	-1.5
ISP	Isparta	1.86	38	ePn	Pn	04 59 01.1	+0.5
ISP				S	Sn	04 59 22.2	-1.6
SUTC	Sutluce-Ispart	1.91	54	PN	Pn	04 59 02.4	+1.3
SUTC	Sutluce-Ispart	1.91	54	ePn	Pn	04 59 02.4	+1.3
KULA	Kula-Manisa	2.17	352	PN	Pn	04 59 04.7	-0.1
KULA	Kula-Manisa	2.17	352	ePn	Pn	04 59 04.7	-0.1
SMG	Samos	2.23	308	P	Pn	04 59 05.3	-0.3
SMG				S	Sn	04 59 34.5	+1.8
SMG				AML	AML	04 59 35.7	
	comp=N,823μm,0.4s						
SMG				AML	AML	04 59 35.8	
	comp=E,596μm,0.2s						
SMG	Samos	2.23	308	P	Pn	04 59 04.6	-1.0
SMG				S	Sn	04 59 31.8	-1.0
SMG	Samos	2.23	308	P	Pn	04 59 05.8	+0.2
SMG				S	Sn	04 59 33.9	+1.1
GAZI	Gazipasa	2.63	92	iP	Pn	04 59 09.3	-1.6
GAZI				iS	Sn	04 59 38.1	-4.4
GAZI	Gazipasa	2.63	92	P	Pn	04 59 09.3	-1.6
ZKR	Zakros	2.63	243	P	Pn	04 59 12.2	+1.2
ZKR				S	Sn	04 59 38.3	-4.3
ZKR				AML	AML	04 59 44.3	
	comp=E,134μm,0.5s						
ZKR				AML	AML	04 59 46.1	
	comp=N,59μm,0.2s						
ZKR	Zakros	2.63	243	P	Pn	04 59 11.7	+0.7
ZKR				S	Sn	04 59 40.1	-2.5
URLA	Izmir	2.80	316	PN	Pn	04 59 14.5	+1.1
URLA	Izmir	2.80	316	ePn	Pn	04 59 14.5	+1.1
NPS	Neapolis	3.02	250	P	Pn	04 59 16.1	-0.2
NPS	Neapolis	3.02	250	P	Pn	04 59 16.4	+0.1
CHOS	Chios island	3.14	311	P	Pn	04 59 20.9	+2.8
CHOS				S	Sn	04 59 55.4	+0.3
CHOS				AML	AML	04 59 59.5	
	comp=N,173μm,0.4s						
CHOS				AML	AML	05 00 00.2	
	comp=Z,65μm,0.4s						
CHOS	Chios island	3.14	311	P	Pn	04 59 17.4	-0.6
CHOS				S	Sn	04 59 53.8	-1.3
CHOS	Chios island	3.14	311	P	Pn	04 59 17.4	-0.6
CHOS				S	Sn	04 59 55.4	+0.3
LAST	Lasithi	3.16	249	P	Pn	04 59 17.4	-0.9
LAST	Lasithi	3.16	249	P	Pn	04 59 18.1	-0.2

IDC 15 05:00:18.4±3.0, 30°.24S×177°.63W, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.5/46, mbtmp3.6/2, MS3.8/1, Ms1 3.8/1, ms1mx2.6/39, Error ellipse: s-maj=63.6km s-min=24.2km az=101.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.02	346	Pn	Pn	05 00 40.1	+0.2
	642nm,0.3s,baz=104,slow=8.7,SNR=14						
RAO				Sn	Sn	05 00 55.5	+0.6
	461nm,0.3s,baz=123,slow=23,SNR=5.8						
ASAR	Alice Springs	43.44	267	P	P	05 08 23.8	+0.5
	0.3nm,0.4s,baz=103,slow=7.2,SNR=4.2						
WRA	Warramunga Arr	44.41	272	P	P	05 08 30.5	-0.6
	0.6nm,0.4s,baz=110,slow=8.0,SNR=16						
SIJI	Sorong	56.57	291	LR	LR	05 32 27.9	
	comp=Z,88nm,21.9s,baz=115,slow=34						
FINES	FINESS Array B	145.11	340	PKPbc	PKPbc	05 19 55.6	-0.9
	0.4nm,0.3s,baz=14,slow=6.3,SNR=3.6						

*NIED **15** 05:09:00, 37°.00N×141°.40E, h44km, Mw4.2 Best double couple: M0:2.44000×10^15 NP1:φ8:137.00000°, δ18.00000°, λ-31.00000°. NP2:φ8:257.00000°, δ81.00000°, λ-106.00000°.*
*ISCJB **15** 05:09:44.9±0.5, 37°.00N±0°.02×141°.41E±0°.04, h41km±4km, mb4.4/53, MS3.5/21, Error ellipse: s-maj=6.0km s-min=3.7km az=18.9*
*MOS **15** 05:09:45.2±1.1, 37°.07N×141°.36E, h45km, mb4.4/18, Error ellipse: s-maj=11.5km s-min=6.9km az=83.7*
*BJI **15** 05:09:45.8, 36°.63N×141°.21E, h46km, mb4.6/12, mB4.9/7, Ms4.0/5, Ms7 3.7/2*
*JMA **15** 05:09:46.0±0.1, 37°.04N×141°.33E, h49km±1km, M4.3*
JMA Felt II J1.
*NEIC **15** 05:09:46.8±0.6, 37°.03N×141°.34E, h40km±5km, mb4.4/30, Error ellipse: s-maj=6.0km s-min=4.4km az=128.0*
NEIC Recorded [2 JMA] in Fukushima and Ibaraki.
*IDC **15** 05:09:46.8±1.7, 36°.98N×141°.29E, h45km±18km, mb3.8/14, mb1 4.1/19, mb1mx3.8/73, mbtmp4.2/19, ML4.3/4, MS3.4/22, Ms1 3.4/22, ms1mx3.2/64, Error ellipse: s-maj=17.1km s-min=11.9km az=94.0*

ISC 15 05:09:45.7±1.2, 37°.01N±0°.03×141°.39E±0°.05, h33km±6km, n142, σ0§92/128, mb4.4/53, MS3.5/22, 7C-1D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.48	281	P	Pb	05 09 56.4	+0.4
ONAJ				eS	Sb	05 10 03.6	+0.5
JFK	Kawauchi	0.54	311	P	Pb	05 09 56.9	0.0
JFK				eS	Sb	05 10 04.2	-0.5
JHO	Hitachi	0.77

INU	Inuyama	3.91	246	*e*Pn	Pn	05 10 45.5	+2.1
JHJ2	Mitsune	4.10	199	*e*Pn	Pn	05 10 47.0	+1.0
JHJ2				*e*Sn	Sn	05 11 32.2	-0.7
JHJ	Hachijo jima 2	4.10	199	P	Pn	05 10 46.7	+0.6
	76nm,0.3s,baz=342,slow=20,SNR=20						
JHJ				S	Sn	05 11 32.6	-0.3
	236nm,0.3s,baz=58,slow=24,SNR=15						
ERM	Erimo	5.18	15	*e*Pn	Pn	05 11 00.3	-0.5
ERM				*e*Sn	Sn	05 12 00.6	+1.2
ERM	Erimo	5.18	15	*c*e*P	Pn	05 11 00.0	-0.8
ERM				pmax	pmax		
	comp=Z,12nm,0.7s						
ASAJ	Asahikawa	7.15	7	P	Pn	05 11 27.5	-0.4
	comp=Z,4.2nm,0.3s,baz=224,slow=11,SNR=7.8						
ASAJ	Asahikawa	7.15	7	*e*Pn	Pn	05 11 27.1	-0.9
YUK	Yuzh-Kuril'sk	7.79	25	*e*P	Pn	05 11 37.0	+0.3
YUK				*e*S	Sn	05 12 56.3	-7.5
YUK				pmax	pmax		
	comp=Z,24nm,0.1s						
YUK				pmax	pmax		
	comp=N,87nm,0.2s						
SHO	Shikotan	8.01	30	P	Pn	05 11 32.5	-7.1
JNU	Nakatsue	9.45	249	LR	LR	05 15 50.6	
	comp=N,107nm,21.9s,baz=118,slow=39						
KUR	Kuril'sk	9.55	29	*e*P	Pn	05 12 02.9	+2.1
KUR				*e*S	Sn	05 13 40.4	-6.5
CBIJ	Chichi jima	9.91	176	*e*Pn	Pn	05 12 04.8	-1.0
CBIJ				S	Sn	05 13 45.1	-11
JCJ	Chichijima	9.91	176	P	Pn	05 12 05.0	-0.9
	comp=N,14nm,0.3s,baz=314,slow=18,SNR=5.4						
JCJ				S	Sn	05 13 45.1	-11
	comp=N,11nm,0.3s,baz=211,slow=22,SNR=3.8						
YSS	Yuzh-Sakhalins	9.98	5	*e*P	Pn	05 12 10.0	+3.3
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
USRK	Ussuriysk Ar.	10.12	318	P	Pn	05 12 14.7	+6.1
	comp=Z,0.6nm,0.3s,baz=130,slow=13,SNR=29						
USRK				LR	LR	05 15 51.9	
	comp=Z,190nm,18.8s,baz=131,slow=36						
KSRS	Korea Array	10.75	276	P	Pn	05 12 23.5	+6.3
	comp=Z,0.2nm,0.3s,baz=93,slow=13,SNR=9.9						
KSRS				LR	LR	05 16 24.7	
	comp=Z,116nm,18.5s,baz=97,slow=37						
KSAR	Wonju Array Be	10.78	276	P	Pn	05 12 23.5	+5.8
KSAR	Wonju Array Be	10.78	276	P	Pn	05 12 23.5	+5.9
CN2	Changchun	13.90	304	*e*P	Pn	05 13 00.8	+0.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KLR	Kul'dur	14.08	333	P	P	05 13 09.7	-0.2
	comp=Z,0.0nm,0.3s,baz=130,slow=13,SNR=13						
KLR				LR	LR	05 18 17.8	
	comp=Z,11nm,19.2s,baz=115,slow=36						
KLR	Kul'dur	14.08	333	*i* P	Pn	05 13 02.2	-0.5
ZEA	Zeya	19.39	334	*e*P	Pn	05 14 19.4	+9.5
PEA0B	Petropavlovsk-	19.71	30	*e*P	P	05 14 12.2	0.0
	comp=Z,16nm,1.4s						
PETK	Petropavlovsk-	19.71	30	P	P	05 14 12.9	+0.6
	comp=Z,0.2nm,0.3s,baz=207,slow=9.1,SNR=3.6						
PETK				LR	LR	05 22 22.4	
	comp=Z,31nm,18.2s,baz=221,slow=38						
MA2	Magadan	23.38	12	LR	LR	05 23 35.2	
	comp=Z,57nm,21.0s,baz=170,slow=35						
HHC	Hu-ho-hao-te	23.46	289	*e*P	P	05 14 51.8	-0.5
HHC				pmax	pmax		
	comp=Z,26nm,0.8s						
HHC				pmax	pmax		
	comp=Z,84nm,7.1s						
SEY	Seymchan	26.81	11	LR	LR	05 28 27.2	
	comp=Z,945nm,18.8s,baz=330,slow=42						
SEY	Seymchan	26.81	11	*i* P	P	05 15 23.8	+1.2
ULN	Ulaanbaatar	27.35	304	*e*P	P	05 15 27.8	0.0
	comp=Z,3.3nm,0.6s						
ULN	Ulaanbaatar	27.35	304	*c*e*P	P	05 15 28.5	+0.7
ULN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
SONA1	Songino Array	27.77	304	*e*P	P	05 15 30.6	-1.0
SONM	Songino Array	27.78	304	P	P	05 15 31.5	-0.1
	comp=Z,2.8nm,0.6s,baz=106,slow=8.6,SNR=14						
SONM				LR	LR	05 26 51.0	
	comp=Z,52nm,18.4s,baz=126,slow=37						
H11N2	WAKE ISLAND Hy	28.16	121	T	T	05 45 10.6	
	baz=313,slow=75,SNR=169						
H11N1	WAKE ISLAND Hy	28.16	121	T	T	05 45 31.9	
	baz=313,slow=75,SNR=195						
H11N3	WAKE ISLAND Hy	28.17	121	T	T	05 45 32.7	
	baz=313,slow=75,SNR=250						
H11S1	WAKE ISLAND Hy	28.87	123	T	T	05 46 32.9	
	baz=314,slow=76,SNR=211						
H11S3	WAKE ISLAND Hy	28.87	123	T	T	05 46 35.5	
	baz=314,slow=76,SNR=223						
H11S2	WAKE ISLAND Hy	28.88	123	T	T	05 46 34.0	
	baz=314,slow=76,SNR=203						
LZH	Lanzhou	30.05	280	*e*P	P	05 15 52.5	+0.6
LZH				pP	sP	05 16 03.8	-1.6
LZH				sP	pP	05 16 08.4	+7.0
LZH				*e*PP	PnPn	05 16 49.3	0.0
LZH				pmax	pmax		
	comp=Z,22nm,1.1s						
LZH				pmax	pmax		
	comp=Z,140nm,5.4s						
LZH				LR	LR		
	comp=Z,180nm,13.0s						
LZH				LR	LR		
	comp=Z,190nm,13.3s						
LZH				LR	LR		
	comp=Z,230nm,14.8s						
DAV	Davao City (W)	33.11	210	LR	LR	05 30 44.1	
	comp=Z,31nm,18.6s,baz=176,slow=38						
BILL	Bilibino	34.05	16	*e*P	P	05 16 26.3	-0.1
	comp=Z,3.3nm,1.2s						
BILL	Bilibino	34.05	16	*e*P	P	05 16 25.0	-1.4
BILL				*e*		05 17 41.4	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,75nm,24.0s						
TIXI	Tiksi	35.31	353	*i* P	P	05 16 36.1	-1.1
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.1s						
JAY	Jayapura	39.33	181	LR	LR	05 33 50.0	
	comp=Z,52nm,18.8s,baz=106,slow=37						
WMQ	Urumqi	40.83	297	P	P	05 17 27.4	+3.2
WMQ				LR	LR		
	comp=Z,260nm,32.7s						
WMQ				LR	LR		
	comp=Z,65nm,23.1s						
CMAR	Chiang Mai Arr	41.47	255	LR	LR	05 36 30.1	
	comp=Z,24nm,19.3s,baz=175,slow=39						
ZAA0	Zalesovo Array	41.91	312	*e*P	P	05 17 33.0	+0.2
	comp=Z,11nm,0.3s						
ZALV	Zalesovo Beam	41.91	312	P	P	05 17 32.8	-0.1
	comp=Z,1.7nm,0.3s,baz=92,slow=7.2,SNR=4.1						
ZALV				LR	LR	05 35 42.1	
	comp=Z,44nm,19.8s,baz=70,slow=37						
ZALV	Zalesovo Beam	41.91	312	*e*P	P	05 17 32.9	+0.1
ZALV	Zalesovo Beam	41.91	312	*e*P	P	05 17 32.9	+0.1
MK01	Makanchi Array	44.11	302	*e*P	P	05 17 50.4	-0.4
MK31	Makanchi Array	44.11	302	*e*P	P	05 17 50.1	-0.7
MK31	Makanchi Array	44.11	302	*e*P	P	05 17 50.1	-0.7
MKAR	Makanchi Array	44.11	302	P	P	05 17 50.1	-0.8
	comp=Z,1.0nm,0.6s,baz=87,slow=9.2,SNR=7.1						
MKAR				LR	LR	05 36 16.3	
	comp=Z,36nm,19.5s,baz=80,slow=36						
MKAR	Makanchi Array	44.11	302	*e*P	P	05 17 50.0	-0.8
	comp=Z,18nm,0.8s						
MAKZ	Makanchi	44.32	302	*e*P	P	05 17 52.1	-0.4
	comp=Z,2.8nm,0.7s						
MAKZ	Makanchi	44.32	302	*e*P	P	05 17 52.1	-0.4
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SVW2	Sparrevohn	45.55	37	*e*P	P	05 18 03.1	+1.1
	comp=Z,4.7nm,1.0s						
SAUI	Saumlaki	45.75	194	*e*P	P	05 18 03.5	-0.5
	comp=Z,1μm,0.4s						
KURK	Kurchatov	45.93	308	*e*P	P	05 18 04.3	-0.8
	comp=Z,5.8nm,0.9s						
KURK	Kurchatov	45.93	308	*c*e*P	P	05 18 04.2	-0.9
KURK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KURBB	Kurchatov Arra	46.00	308	P	P	05 18 04.6	-1.0
	comp=Z,2.8nm,0.7s,baz=84,slow=8.2,SNR=22						
KDAK	Kodiak Island	47.13	42	*e*P	P	05 18 14.6	+0.2
	comp=Z,17nm,1.2s						
KDAK	Kodiak Island	47.13	42	*i* P	P	05 18 14.3	-0.1
PPLA	Purkeypile	47.20	35	*e*P	P	05 18 16.5	+1.4
	comp=Z,7.4nm,1.2s						
SKT	Skwentna	47.50	36	*e*P	P	05 18 18.2	+0.9
	comp=Z,4.7nm,1.3s						
BPAW	Bear Paw Mtn.	47.75	33	*e*P	P	05 18 20.4	+1.2
	comp=Z,5.4nm,1.4s						
MLY	Manley	47.88	32	*e*P	P	05 18 20.9	+0.7
	comp=Z,2.8nm,0.7s						
SUA	Susitna One	47.89	37	*e*P	P	05 18 20.8	+0.4
	comp=Z,7.3nm,1.2s						
TRF	Thorofare Moun	48.06	34	*e*P	P	05 18 22.4	+0.6
	comp=Z,2.9nm,1.1s						
RND	Reindeer	48.71	34	*e*P	P	05 18 26.8	+0.2
	comp=Z,3.8nm,1.0s						
RND	Reindeer	48.71	34	*e*P	P	05 18 26.8	+0.2
RND				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GHO	Glory Hole Cre	48.74	36	*e*P	P	05 18 27.7	+0.7
	comp=Z,8.4nm,1.2s						
MDM	Murphy Dome	48.94	32	*e*P	P	05 18 29.5	+1.1
	comp=Z,4.6nm,0.9s						
WRH	Wood River Hil	49.01	33	*e*P	P	05 18 29.7	+0.8
	comp=Z,3.0nm,1.1s						
SCM	Sheep Creek Mo	49.49	36	*e*P	P	05 18 33.8	+1.1
	comp=Z,24nm,1.4s						
SCM	Sheep Creek Mo	49.49	36	*e*P	P	05 18 33.8	+1.1
SCM				pmax	pmax		
	comp=Z,24nm,1.4s						
HDA	Harding Lake	49.51	33	*e*P	P	05 18 32.7	0.0
	comp=Z,22nm,1.3s						
IL1	Eielson Array	49.52	32	*e*P	P	05 18 32.6	-0.2
ILAR	Eielson Array	49.52	32	P	P	05 18 32.8	0.0
	comp=Z,2.1nm,0.7s,baz=268,slow=6.4,SNR=30						
ILB	Eielson Array	49.52	32	*e*P	P	05 18 32.8	0.0
KLU	Klutina	50.19	37	*e*P	P	05 18 39.0	+0.9
	comp=Z,6.8nm,1.1s						
RIDG	Independ'e Rid	50.48	34	*e*P	P	05 18 39.9	-0.2
	comp=Z,7.4nm,1.4s						
AAK	Ala-Archa	50.48	298	*i* P	P	05 18 41.2	+0.6
AAK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BVAR	Borovoye Array	50.57	312	LR	LR	05 41 18.9	
	comp=Z,40nm,18.4s,baz=82,slow=37						
BRVK	Borovoye	50.63	312	*c*e*P	P	05 18 41.1	-0.2
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
COEN	Coen	50.73	178	*e*P	P	05 18 43.1	+0.7
	comp=Z,4.9nm,1.0s						
SCRK	Sand Creek	50.83	33	*e*P	P	05 18 43.3	+0.4
	comp=Z,5.0nm,1.1s						
EGAK	Eagle	51.97	32	*e*P	P	05 18 51.8	+0.6
	comp=Z,4.6nm,1.5s						
CTA	Charters Tower	56.98	175	LR	LR	05 43 54.5	
	comp=Z,125nm,19.4s,baz=212,slow=36						
WRAB	Tennant Creek	57.03	188	*c*e*P	P	05 19 34.3	+5.9
WRAB				pmax	pmax		
	comp=Z,39nm,0.6s						
WRA	Warramunga Arr	57.04	188	P	P	05 19 27.4	-1.0
	comp=Z,1.6nm,0.5s,baz=5.0,slow=6.8,SNR=17						
AKTO	Aktyubinsk	58.67	312	LR	LR	05 45 12.1	
	comp=Z,27nm,18.1s,baz=94,slow=36						
SPITS	Spitsbergen Ar	60.54	349	LR	LR	05 47 08.1	
	comp=Z,33nm,20.2s,baz=295,slow=37						
ASAR	Alice Springs	60.77	188	P	P	05 19 53.6	-0.7
	comp=Z,1.2nm,0.7s,baz=16,slow=7.1,SNR=6.9						
YKA	Yellowknife Ar	63.84	30	P	P	05 20 14.7	+0.3
	comp=Z,0.4nm,0.6s,baz=306,slow=7.8,SNR=3.3						
ARCES	ARCESS Array B	64.01	339	P	P	05 20 15.1	-0.3
	comp=Z,2.3nm,0.8s,baz=64,slow=8.1,SNR=3.6						
FORT	Forrest	68.59	192	*e*P	P	05 20 45.2	+0.1
	comp=Z,81nm,1.5s						
FIA1	FINESS Array S	68.82	332	*e*P	P	05 20 45.4	-0.9
FINES	FINESS Array B	68.82	332	P	P	05 20 45.0	-1.3
	comp=Z,2.1nm,1.0s,baz=37,slow=7.6,SNR=3.7						
FINES				LR	LR	05 53 13.7	
	comp=Z,42nm,18.5s,baz=28,slow=38						
FINES	FINESS Array B	68.82	332	P	P	05 20 45.0	-1.3
FINES				pmax	pmax		
	comp=Z,2.0nm,1.0s						
FINES				MLR	MLR		
	comp=Z,42nm,18.5s						
KIV	Kislovodsk	70.90	311	*e*P	P	05 20 58.4	-1.2
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,32nm,18.0s						
K05A	Summer Lake	70.97	51	*e*P	P	05 21 02.0	+1.8
	comp=Z,16nm,1.4s						
HFS	Hagfors	74.10	336	LR	LR	05 55 38.8	
	comp=Z,37nm,18.0s,baz=32,slow=37						
LRM	Limekiln Ridge	74.17	44	*e*P	P	05 21 20.0	+0.7
NB2	NORSAR Subarra	74.20	337	P	P	05 21 18.0	-0.8
	comp=Z,0.5nm,0.6s,baz=39,slow=6.2						
NOA	NORSAR Array B	74.20	337	LR	LR	05 57 09.0	
	comp=Z,27nm,20.0s,baz=35,slow=38						
AKASG	Malin Array Be	74.30	322	P	P	05 21 18.3	-1.2
	comp=Z,0.7nm,0.4s,baz=46,slow=6.1,SNR=12						
AKASG				LR	LR	05 56 09.0	
	comp=Z,32nm,18.2s,baz=225,slow=38						
DLMT	Dillon	74.37	45	*e*P	P	05 21 20.6	+0.3
	comp=Z,3.3nm,0.8s						
BOZ	Bozeman (W)	74.77	44	*e*P	P	05 21 23.2	+0.6
	comp=Z,2.2nm,0.8s						
BOZ	Bozeman (W)	74.77	44	*e*P	P	05 21 23.2	+0.6
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NVAR	Mina Array Bea	75.02	53	P	P	05 21 25.1	+0.9
	comp=Z,1.1nm,0.7s,baz=297,slow=4.0,SNR=2.0						
PDAR	Pinedale Array	77.69	45	P	P	05 21 39.5	+0.1
	comp=Z,0.7nm,0.6s,baz=281,slow=2.2,SNR=9.8						
PDAR	Pinedale Array	77.69	45	*e*P	P	05 21 39.6	+0.2
HWB	Hans Werner Br	79.09	57	*e*P	P	05 21 47.8	+0.8
MLR	Muntele Rosu	79.39	320	LR	LR	05 59 31.9	
	comp=Z,14nm,18.1s,baz=42,slow=38						
PV09	Paradox Valley	80.67	49	*e*P	P	05 21 56.6	+0.9
CLL	Collm	81.10	330	*i* pP	pP	05 22 09.9	+2.1
PV01	Paradox Valley	81.24	49	*e*P	P	05 21 58.4	-0.3
	comp=Z,3.6nm,1.2s						
MMAI	Mount Meron Ar	81.96	305	LR	LR	06 01 08.0	
	comp=Z,27nm,18.7s,baz=230,slow=38						
ANMO	Albuquerque	84.62	50	*c*e*P	P	05 22 16.4	+0.2
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KSU1	Kansas State U	87.34	41	*e*P	P	05 22 29.6	+0.3
	comp=Z,20nm,0.6s						
TXAR	Lajitas Array	90.15	52	P	P	05 22 43.3	+0.3
	comp=Z,0.7nm,0.5s,baz=304,slow=3.0,SNR=8.8						
LPAZ	La Paz	146.72	60	PKPbc	PKPbc	05 29 25.0	-0.4
	comp=Z,2.6nm,0.6s,baz=323,slow=2.1,SNR=18						
LPAZ	La Paz	146.72	60	*e*PKPdf	PKPbc	05 29 25.0	-0.4
MNMC	Minye Minye	147.57	65	*e*PKPbc	PKPbc	05 29 27.9	+0.6

ISCJB ***15*** *05:12:13.8±0.8, 5°.38S±0°.05×102°.48E±0°.05, h43km±7km, mb4.5/24, MS3.2/3, Error ellipse: s-maj=10.6km s-min=4.5km az=41.6*

IDC ***15*** *05:12:14.6±1.0, 5°.31S×102°.58E, h27km±3km, mb4.0/12, mb1 4.1/12, mb1mx3.7/69, mbtmp4.2/12, MS3.3/5, Ms1 3.4/5, ms1mx2.8/54, Error ellipse: s-maj=45.8km s-min=12.8km az=54.0*

DJA ***15*** *05:12:15.2±0.4, 5°S±3°×10°3E±°, h30km±6km, M4.8/12, mB5.2/2, mb4.9/6, MLv4.7/12, Mw(mB)4.6/2*

NEIC ***15*** *05:12:16.9±1.1, 5°.26S×102°.63E, h48km±8km, mb4.5/13, Error ellipse: s-maj=17.0km s-min=5.1km az=51.0*

ISC 15 05:12:14.4±0.7, 5°31S±0°.06×102°54E±0°.06, h28km±3km, h28km:pP-P, n82, σ1s14/90, mb4.5/24, MS3.0/3, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	Manna	1.03	24	P	Pb	05 12 34.1	+0.4
MNAI				S	Sb	05 12 47.9	+1.1
MNAI	Manna	1.03	24	*e*Pn	Pb	05 12 33.8	+0.1
MNAI				*e*Sn	Sb	05 12 47.1	+0.3
LWLI	Liwa	1.54	79	P	Pn	05 12 40.7	+0.6
LWLI				S	Sb	05 13 00.9	-0.7
MDSI	Maura Dua	1.83	64	P	Pn	05 12 45.0	+1.0
MDSI				S	Sb	05 13 08.1	-1.6
KASI	Kota Agung	1.96	96	P	Pn	05 12 46.7	+0.9
KASI				S	Sn	05 13 09.6	+0.1
MASI	Maura Aman, Be	2.17	352	P	Pn	05 12 50.5	+1.8
MASI				S	Sb	05 13 20.2	+0.5
KRJI	Kerinci	3.37	341	P	Pn	05 13 09.4	+4.1
CGJI	Cibinong	3.40	113	P	Pn	05 13 05.8	+0.3
PPSI	Pulau Pagai	3.57	315	P	Pn	05 13 09.5	+1.6
PDSI	Padang	4.83	335	P	Pn	05 13 26.3	+1.0
PDSI				S	Sn	05 14 20.2	-0.2
SISI	Saibi	5.24	319	P	Pn	05 13 31.4	+0.5
	104nm,0.8s,0.4nm						
SISI				S	Sn	05 14 25.2	-5.3
	104nm,0.8s,0.4nm						
LEM	Lembang	5.27	107	Pn	Pn	05 13 34.7	+3.2
	9.5nm,0.3s,baz=291,slow=14,SNR=9.6						
LEM				LR	LR	05 15 58.3	
	comp=Z,324nm,18.4s,baz=352,slow=43						
CISI	Cisompet, Garu	5.70	113	P	Pn	05 13 37.2	0.0
CISI	Cisompet, Garu	5.70	113	*e*Pn	Pn	05 13 37.3	0.0
CMJI	Cimerak	6.37	113	P	Pn	05 13 46.6	+0.2
KPJI	Karang Pucung	6.67	108	P	Pn	05 13 52.4	+1.9
MNSI	Mandailing Nat	6.75	334	P	Pn	05 13 52.3	+0.7
GSI	Gunungsitoli	8.23	323	P	Pn	05 14 11.9	-0.1
GSI	Gunungsitoli	8.23	323	*e*Pn	Pn	05 14 11.9	-0.1
UGM	Wanagama	8.35	108	P	Pn	05 14 13.8	+0.2
UGM	Wanagama	8.35	108	*e*Pn	Pn	05 14 15.7	+2.1
PSI	Prapat	8.83	336	LR	LR	05 18 00.1	
	comp=Z,266nm,20.2s,baz=98,slow=40						
PWJI	Pagerwojo	9.59	107	P	Pn	05 14 31.5	+0.8
JAGI	Jajag, Banyuwa	11.95	106	*e*Pn	Pn	05 15 03.2	+0.2
BATI	Baumata	21.49	104	P	P	05 17 00.5	-0.6
	22nm,0.4s,baz=265,slow=5.3,SNR=4.9						
MBWA	Marble Bar	22.94	135	*e*P	P	05 17 16.7	+0.2
	9.9nm,1.1s						
CM01	Chiang Mai Arr	23.84	352	*e*P	P	05 17 26.2	+0.8
CMAR	Chiang Mai Arr	23.88	352	P	P	05 17 25.8	+0.1
	1.0nm,0.4s,baz=182,slow=9.0,SNR=5.0						
CMAR				sP	sP	05 17 37.4	-0.1
	3.2nm,0.5s,baz=186,slow=8.8,SNR=4.5						
CMAR				LR	LR	05 26 50.0	
	comp=Z,50nm,18.7s,baz=192,slow=37						
PALK	Pallekele	25.12	300	LR	LR	05 25 31.2	
	comp=Z,54nm,20.4s,baz=116,slow=32						
FITZ	Fitzroy Crossi	25.90	121	P	P	05 17 43.9	-0.3
	2.6nm,0.7s,baz=318,slow=9.8,SNR=9.1						
DAV	Davao City (W)	26.08	62	*e*P	P	05 17 44.0	-1.9
	320nm,0.4s						
H08S2	Diego Garcia H	29.94	264	T	T	05 49 11.8	
	baz=86,slow=75,SNR=8.7						
H08S3	Diego Garcia H	29.95	264	T	T	05 49 14.1	
	baz=86,slow=75,SNR=15						
H08S1	Diego Carcia H	29.95	264	T	T	05 49 14.9	
	baz=86,slow=75,SNR=11						
H01W3	Cape Leeuwin H	31.32	161	T	T	05 51 14.8	
	baz=338,slow=76,SNR=8.4						
H01W2	Cape Leeuwin H	31.34	161	T	T	05 51 20.8	
	baz=338,slow=76,SNR=10.0						
H01W1	Cape Leeuwin H	31.34	161	T	T	05 51 11.4	
	baz=338,slow=76,SNR=10.0						
WRA	Warramunga Arr	34.18	118	P	P	05 18 57.4	-0.2
	1.6nm,0.4s,baz=305,slow=9.0,SNR=34						
WR1	Warramunga Arr	34.18	118	*e*P	P	05 18 57.4	-0.2
	3.4nm,0.8s						
WRAB	Tennant Creek	34.18	118	*e*P	P	05 18 57.5	-0.2
	6.1nm,1.0s						
WB2	Warramunga Arr	34.19	118	*e*P	P	05 18 57.1	-0.6
	6.8nm,1.0s						
ASAR	Alice Springs	35.29	124	P	P	05 19 07.2	+0.1
	2.5nm,0.8s,baz=297,slow=7.6,SNR=17						
AS31	Alice Springs	35.29	124	*e*P	P	05 19 07.2	+0.1
	2.1nm,0.3s						
AS01	Alice Springs	35.33	124	*e*P	P	05 19 08.5	+0.9
XAN	Xi'an	39.60	8	P	P	05 19 51.8	+8.3
XAN				sP	sP	05 20 01.6	+6.2
XAN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
COEN	Coen	40.92	105	*e*P	P	05 19 52.2	-2.6
	comp=Z,65nm,0.7s						
BBOO	Buckleboo	41.53	135	*e*P	P	05 19 59.5	0.0
	comp=Z,6.0nm,1.0s						
PMG	Port Moresby	44.42	98	*e*P	P	05 20 20.7	-2.4
	comp=Z,28nm,0.9s						
STKA	Stephens Creek	45.08	131	P	P	05 20 29.0	+0.8
	comp=Z,7.0nm,0.5s,baz=305,slow=7.6,SNR=17						
STKA				LR	LR	05 41 04.8	
	comp=Z,57nm,18.2s,baz=220,slow=38						
STKA	Stephens Creek	45.08	131	*e*P	P	05 20 29.1	+1.0
	comp=Z,1.4nm,0.6s						
SONA0	Songino Array	53.03	3	*e*P	P	05 21 29.6	+0.7
SONM	Songino Array	53.03	3	P	P	05 21 29.6	+0.7
	comp=Z,1.0nm,0.7s,baz=180,slow=9.3,SNR=6.1						
SONM				pP	pP	05 21 37.7	+0.1
	comp=Z,1.9nm,0.7s,baz=176,slow=10,SNR=9.2						
SONA1	Songino Array	53.04	3	*e*P	P	05 21 29.4	+0.4
MK01	Makanchi Array	54.87	343	*e*P	P	05 21 42.7	+0.4
MK31	Makanchi Array	54.89	343	*e*P	P	05 21 42.7	+0.3
MK32	Makanchi Array	54.89	343	*e*P	P	05 21 42.9	+0.5
MKAR	Makanchi Array	54.89	343	P	P	05 21 42.9	+0.5
	comp=Z,1.0nm,0.4s,baz=149,slow=8.0,SNR=11						
MKAR				sP	sP	05 21 54.8	+0.3
	comp=Z,5.1nm,0.6s,baz=153,slow=7.6,SNR=17						
MKAR	Makanchi Array	54.89	343	*e*P	P	05 21 42.7	+0.3
	comp=Z,32nm,0.6s						
MKAR				sP	sP	05 21 54.8	+0.3
KURBB	Kurchatov Arra	59.43	342	P	P	05 22 14.7	+0.3
	comp=Z,0.5nm,0.2s,baz=161,slow=7.0,SNR=5.4						
KURBB				sP	sP	05 22 26.9	+0.3
	comp=Z,2.3nm,0.8s,baz=160,slow=6.6,SNR=6.9						
KURK	Kurchatov	59.49	343	*e*P	P	05 22 14.7	-0.1
KURK				sP	sP	05 22 26.9	-

BATI	**Baumata**	**6.49 232**	P	**Pn**	**05 17 59.8**	**-2.0**	
	242nm,0.3s,baz=79,slow=2.3,SNR=85						
BATI			S	**S**	**05 19 14.5**	**-5.7**	
	87nm,0.3s,baz=353,slow=13,SNR=38						
BATI	**Baumata**	**6.49 232**	P	**Pn**	**05 18 00.3**	**-1.5**	
MRSI	**Marisa**	**9.63 314**	P	**P**	**05 18 39.6**	**-1.2**	
SGSI	**Sangihe**	**10.43 341**	P	**Pn**	**05 18 47.7**	**-0.9**	
FITZ	**Fitzroy Crossi**	**12.19 195**	P	**Pn**	**05 19 08.0**	**-1.4**	
	6.0nm,0.3s,baz=28,slow=9.0,SNR=52						
FITZ			S	**S**	**05 21 22.1**	**-2.4**	
	1.7nm,0.3s,baz=64,slow=20,SNR=3.5						
WRA	**Warramunga Arr**	**14.60 159**	P	**Pn**	**05 19 36.2**	**-1.4**	
	12nm,0.3s,baz=339,slow=12,SNR=155						
WRA			S	**S**	**05 22 11.6**	**-1.9**	
	0.8nm,0.3s,baz=342,slow=21,SNR=8.9						
ASAR	**Alice Springs**	**17.97 165**	P	**P**	**05 20 13.3**	**+1.2**	
	8.5nm,0.3s,baz=345,slow=11,SNR=18						
ASAR			S	**S**	**05 23 19.7**	**-0.4**	
	1.7nm,0.3s,baz=346,slow=21,SNR=54						
STKA	**Stephens Creek**	**28.12 157**	P	**P**	**05 21 48.2**	**+1.8**	
	2.7nm,0.7s,baz=337,slow=14,SNR=2.0						
CMAR	**Chiang Mai Arr**	**38.41 310**	P	**P**	**05 23 16.4**	**+1.8**	
	1.8nm,0.3s,baz=136,slow=8.0,SNR=7.8						
PETK	**Petropavlovsk-**	**63.98 19**	P	**P**	**05 26 25.1**	**+2.9**	
	0.9nm,0.5s,baz=164,slow=5.8,SNR=3.0						
MKAR	**Makanchi Array**	**67.00 327**	P	**P**	**05 26 43.8**	**+2.3**	
	1.1nm,0.6s,baz=124,slow=8.3,SNR=7.2						
ZALV	**Zalesovo Beam**	**70.43 334**	P	**P**	**05 27 04.1**	**+1.8**	
	0.5nm,0.5s,baz=120,slow=8.5,SNR=3.1						
KURBB	**Kurchatov Arra**	**71.30 329**	P	**P**	**05 27 10.1**	**+2.5**	
	0.4nm,0.3s,baz=128,slow=4.9,SNR=4.2						
VNDA	**Vanda**	**73.31 173**	P	**P**	**05 27 20.9**	**+1.9**	
	1.1nm,0.7s,baz=303,slow=8.5,SNR=6.1						
ILAR	**Eielson Array**	**93.16 25**	P	**P**	**05 29 00.8**	**+0.7**	
	0.1nm,0.5s,baz=261,slow=5.0,SNR=4.1						
TORD	**Torodi Ar. Bea**	**127.58 282**	PKP	**PKPdf**	**05 34 51.3**	**+1.0**	
	0.3nm,0.6s,baz=67,slow=1.7,SNR=5.2						
CPUP	**Villa Florida**	**147.05 170**	PKPbc	**PKPab**	**05 35 30.6**	**+0.1**	
	3.1nm,0.8s,baz=82,slow=1.3,SNR=6.8						
LPAZ	**La Paz**	**151.98 143**	PKPbc	**PKPbc**	**05 35 44.1**	**+2.9**	
	1.9nm,0.3s,baz=40,slow=4.5,SNR=11						

*ISCJB **15** 05:29:33.4±0.4,39°.07N±0°.04×29°.11E±0°.03,h8km±4km, Error ellipse: s-maj=6.7km s-min=4.3km az=175.6*
*CSEM **15** 05:29:33.4±0.1,39°.08N×29°.12E,h5km,ML2.5,Error ellipse: s-maj=3.4km s-min=2.5km az=160.0*
*DDA **15** 05:29:33.1,39°.10N×29°.10E,h7km,Ml2.8*
*ISK **15** 05:29:33.1,39°.09N×29°.11E,h5km,ML2.5/5*
ISC 15 05:29:33.4±0.9,39°.10N±0°.03×29°.11E±0°.02,h8km±6km, n46,σ0°.37/56,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIMA	**Simav-Kutahya**	**0.10**	**261**	PG	**Pg**	**05 29 35.7**	**-0.3**
SIMA				SG	**Sg**	**05 29 37.5**	**-0.3**
SIMA	**Simav-Kutahya**	**0.10**	**261**	*e*Pg	**Pg**	**05 29 35.7**	**-0.3**
SIMA				*e*Sg	**Sg**	**05 29 37.5**	**-0.3**
SMAA	**Simav-Kutahya**	**0.10**	**271**	PG	**Pg**	**05 29 35.8**	**-0.2**
SMAA				SG	**Sg**	**05 29 37.9**	**+0.2**
SMAA	**Simav-Kutahya**	**0.10**	**271**	*e*Pg	**Pg**	**05 29 35.8**	**-0.2**
SMAA				*e*Sg	**Sg**	**05 29 37.9**	**+0.2**
SHAP	**Saphane-Kutahy**	**0.11**	**132**	PG	**Pg**	**05 29 36.1**	**0.0**
SHAP				SG	**Sg**	**05 29 38.0**	**0.0**
SHAP	**Saphane-Kutahy**	**0.11**	**132**	*e*Pg	**Pg**	**05 29 36.1**	**0.0**
SHAP				*e*Sg	**Sg**	**05 29 38.0**	**0.0**
GEDZ	**Gediz**	**0.24**	**103**	PG	**Pg**	**05 29 38.6**	**+0.4**
GEDZ	**Gediz**	**0.24**	**103**	*e*Pg	**Pg**	**05 29 38.6**	**+0.4**
DEMI	**Demirci**	**0.31**	**260**	*i* P	**Pg**	**05 29 39.6**	**-0.1**
DEMI				*i* S	**Sg**	**05 29 43.9**	**+0.1**
DEMI	**Demirci**	**0.31**	**260**	P	**Pg**	**05 29 39.6**	**-0.1**
DEMI				S	**Sg**	**05 29 43.9**	**+0.1**
TVSB	**Tavsanli**	**0.44**	**38**	PG	**Pg**	**05 29 40.9**	**-1.2**
TVSB	**Tavsanli**	**0.44**	**38**	*e*Pg	**Pg**	**05 29 40.9**	**-1.2**
KULA	**Kula-Manisa**	**0.68**	**211**	PG	**Pg**	**05 29 46.3**	**-0.3**
KULA	**Kula-Manisa**	**0.68**	**211**	*e*Pg	**Pg**	**05 29 46.3**	**-0.3**
DURS	**Dursunbey**	**0.70**	**316**	*i* P	**Pg**	**05 29 47.0**	**-0.1**
DURS	**Dursunbey**	**0.70**	**316**	P	**Pg**	**05 29 47.0**	**-0.1**
MANT	**Manisa**	**0.75**	**216**	*i* P	**Pg**	**05 29 47.4**	**-0.4**
MANT				*i* S	**Sg**	**05 29 56.9**	**-0.7**
MANT	**Manisa**	**0.75**	**216**	P	**Pg**	**05 29 47.4**	**-0.4**
MANT				S	**Sg**	**05 29 56.9**	**-0.7**
KUTH	**Kutahya**	**0.77**	**67**	PG	**Pg**	**05 29 48.3**	**+0.1**
KUTH	**Kutahya**	**0.77**	**67**	*e*Pg	**Pg**	**05 29 48.3**	**+0.1**
AUBOZ	**BOZOYUK**	**1.08**	**41**	PN	**Pg**	**05 29 54.1**	**-0.1**
AUBOZ	**BOZOYUK**	**1.08**	**41**	*e*Pn	**Pg**	**05 29 54.1**	**-0.1**
BALB	**Balikesir**	**1.10**	**300**	PN	**Pn**	**05 29 55.2**	**+0.1**
BALB	**Balikesir**	**1.10**	**300**	*e*Pn	**Pn**	**05 29 55.2**	**+0.1**
CAVI	**Cavuskoy**	**1.24**	**27**	PN	**Pb**	**05 29 57.2**	**+0.2**
CAVI	**Cavuskoy**	**1.24**	**27**	*e*Pn	**Pb**	**05 29 57.2**	**+0.2**
BORA	**Eskisehir**	**1.30**	**53**	PN	**Pb**	**05 29 58.4**	**+0.3**
BORA	**Eskisehir**	**1.30**	**53**	*i* P	**Pn**	**05 29 57.9**	**0.0**
BORA	**Eskisehir**	**1.30**	**53**	P	**Pn**	**05 29 57.9**	**0.0**
BORA	**Eskisehir**	**1.30**	**53**	*e*Pn	**Pb**	**05 29 58.4**	**+0.3**
KCTX	**Karacabey (Bur**	**1.30**	**334**	PN	**Pg**	**05 29 58.4**	**0.0**
KCTX	**Karacabey (Bur**	**1.30**	**334**	*e*Pn	**Pg**	**05 29 58.4**	**0.0**
ADVT	**Abdulvahap**	**1.42**	**20**	PN	**Pg**	**05 30 00.4**	**-0.2**
ADVT	**Abdulvahap**	**1.42**	**20**	*e*Pn	**Pg**	**05 30 00.4**	**-0.2**
GONE	**Gonen-Balikesi**	**1.45**	**311**	PN	**Pg**	**05 30 01.4**	**+0.1**
GONE	**Gonen-Balikesi**	**1.45**	**311**	*e*Pn	**Pg**	**05 30 01.4**	**+0.1**
ARMT	**Armutlu**	**1.48**	**353**	PN	**Pg**	**05 30 01.6**	**-0.2**
ARMT	**Armutlu**	**1.48**	**353**	*e*Pn	**Pg**	**05 30 01.6**	**-0.2**
YLV	**Yalova**	**1.48**	**8**	PN	**Pb**	**05 30 01.4**	**+0.2**
YLV	**Yalova**	**1.48**	**8**	*e*Pn	**Pb**	**05 30 01.4**	**+0.2**
SBT5	**Esenkoy-Cinarc**	**1.54**	**353**	PN	**Pb**	**05 30 02.3**	**+0.1**
SBT5	**Esenkoy-Cinarc**	**1.54**	**353**	*e*Pn	**Pb**	**05 30 02.3**	**+0.1**
EDC	**Edincik**	**1.57**	**323**	PN	**Pn**	**05 30 02.3**	**+0.7**
EDC	**Edincik**	**1.57**	**323**	*e*Pn	**Pn**	**05 30 02.3**	**+0.7**
GULT	**Gulveren**	**1.71**	**39**	PN	**Pb**	**05 30 04.7**	**-0.5**
GULT	**Gulveren**	**1.71**	**39**	*e*Pn	**Pb**	**05 30 04.7**	**-0.5**

*ISCJB **15** 05:29:50.5±0.4,24°.69N±0°.02×122°.47E±0°.02, h111km±3km,Error ellipse: s-maj=3.7km s-min=2.3km az=167.2*
*JMA **15** 05:29:50.5±0.2,24°.67N×122°.44E,h113km±2km,M4.1*
*TAP **15** 05:29:50.4,24°.73N×122°.48E,h113km±1km,ML4.2,C*
ISC 15 05:29:50.6±1.3,24°.71N±0°.04×122°.46E±0°.02,h114km±6km, n87,σ0°.85/170,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.34**	**243**	P	**Pn**	**05 30 07.3**	**+0.5**
	baz=241						
EOS1				*e*S	**Sn**	**05 30 20.0**	**+0.9**
	baz=241						
JYNG	**Yonagunijimaku**	**0.51**	**120**	P	**Pn**	**05 30 07.9**	**+0.1**
JYNG				*e*S	**Sn**	**05 30 20.5**	**-0.3**
TWB1	**Santiao Chiao**	**0.53**	**305**	P	**Pn**	**05 30 08.0**	**+0.1**
	baz=302						
TWB1				S	**Sn**	**05 30 20.9**	**-0.2**
	baz=302						
YOJ	**Yonaguni jima**	**0.56**	**116**	P	**Pn**	**05 30 08.3**	**+0.1**
	baz=118						
YOJ				S	**Sn**	**05 30 20.9**	**-0.5**
	baz=118						
YOJ	**Yonaguni jima**	**0.56**	**116**	P	**Pn**	**05 30 08.3**	**+0.1**
YOJ				*e*S	**Sn**	**05 30 21.2**	**-0.2**
TWC	**Suao**	**0.56**	**260**	P	**Pn**	**05 30 08.0**	**-0.3**
	baz=258						
TWC				*e*S	**Sn**	**05 30 20.6**	**-0.9**
	baz=258						
NTC	**Toucheng**	**0.59**	**285**	*e*P	**Pn**	**05 30 08.4**	**0.0**
	baz=282						
NTC				*e*S	**Sn**	**05 30 20.2**	**-1.6**
	baz=282						
TIPB	**Shuangxi**	**0.64**	**295**	P	**Pn**	**05 30 07.9**	**-0.9**
	baz=292						
TIPB				S	**Sn**	**05 30 20.7**	**-1.8**
	baz=292						
ENAH	**Nanao**	**0.64**	**247**	*e*P	**Pn**	**05 30 09.2**	**+0.4**
	baz=245						
ENAH				*e*S	**Sn**	**05 30 23.3**	**+0.7**
	baz=245						
NANB	**Nanao**	**0.70**	**247**	P	**Pn**	**05 30 09.6**	**+0.3**
	baz=246						
NANB				S	**Sn**	**05 30 23.9**	**+0.5**
	baz=246						
ENA	**Nanau**	**0.71**	**247**	*i* P	**Pn**	**05 30 09.7**	**+0.3**
	baz=245						
ENA				S	**Sn**	**05 30 24.0**	**+0.5**
	baz=245						
NWF	**Wu-fen Shan**	**0.72**	**301**	*e*P	**Pn**	**05 30 09.8**	**+0.3**
	baz=298						
NWF				S	**Sn**	**05 30 23.6**	**-0.2**
	baz=298						
WFSB	**Wu-fen Shan**	**0.72**	**301**	*e*P	**Pn**	**05 30 09.7**	**+0.3**
	baz=298						
WFSB				S	**Sn**	**05 30 23.6**	**0.0**
	baz=298						
TWE	**Neicheng**	**0.72**	**271**	*i* P	**Pn**	**05 30 09.7**	**+0.3**
	baz=269						
TWE				*e*S	**Sn**	**05 30 23.0**	**-0.6**
	baz=269						
ENTT	**Nioudou**	**0.82**	**266**	*e*P	**Pn**	**05 30 10.9**	**+0.6**
	baz=264						
ENTT				*e*S	**Sn**	**05 30 25.4**	**+0.3**
	baz=264						
YM07	**YM07**	**0.90**	**302**	*e*P	**Pn**	**05 30 10.3**	**-0.8**
	baz=299						
YM07				*e*S	**Sn**	**05 30 26.0**	**-0.5**
	baz=299						
TATO	**Taipei**	**0.92**	**287**	*e*P	**Pn**	**05 30 11.2**	**0.0**
	baz=285						
TATO				*e*S	**Sn**	**05 30 25.4**	**-1.5**
	baz=285						
YM08	**YM08**	**0.93**	**301**	*e*S	**Sn**	**05 30 26.0**	**-1.0**
	baz=299						
YM11	**YM11**	**0.93**	**300**	*e*P	**Pn**	**05 30 12.3**	**+0.9**
	baz=298						
YM11				*e*S	**Sn**	**05 30 27.4**	**+0.2**
	baz=298						
YM10	**YM10**	**0.93**	**299**	*e*P	**Pn**	**05 30 11.6**	**+0.2**
	baz=297						
YM10				*e*S	**Sn**	**05 30 26.8**	**-0.4**
	baz=297						
NACB	**Ninganchiao**	**0.95**	**236**	*e*P	**Pn**	**05 30 11.6**	**+0.1**
	baz=235						
NACB				*e*S	**Sn**	**05 30 26.6**	**-0.7**
	baz=235						
YM04	**YM04**	**0.95**	**298**	*e*S	**Sn**	**05 30 26.7**	**-0.7**
	baz=296						
NSK	**Sanguang**	**1.00**	**269**	*e*P	**Pn**	**05 30 12.6**	**+0.4**
	baz=267						
NSK				S	**Sn**	**05 30 28.5**	**+0.1**
	baz=267						
TWD	**Chiawan**	**1.00**	**232**	*e*P	**Pn**	**05 30 11.9**	**-0.1**
	baz=231						
TWD				S	**Sn**	**05 30 28.3**	**0.0**
	baz=231						
NNSH	**Datong**	**1.02**	**255**	*e*P	**Pn**	**05 30 12.9**	**+0.6**
	baz=253						
NNSH				*e*S	**Sn**	**05 30 29.1**	**+0.3**
	baz=253						
NNS	**Nan Shan**	**1.02**	**255**	*e*P	**Pn**	**05 30 12.9**	**+0.5**
	baz=254						
NNS				*e*S	**Sn**	**05 30 29.2**	**+0.3**
	baz=254						
NTST	**Danshui**	**1.03**	**297**	*e*P	**Pn**	**05 30 12.9**	**+0.6**
	baz=295						
NTST				*e*S	**Sn**	**05 30 28.2**	**-0.5**
	baz=295						
HWA	**Hwalien**	**1.06**	**227**	*e*P	**Pn**	**05 30 13.6**	**+0.9**
	baz=226						
HWA				*e*S	**Sn**	**05 30 30.1**	**+0.6**
	baz=226						
ENLB	**Shoufeng**	**1.12**	**225**	P	**Pn**	**05 30 14.5**	**+1.3**
	baz=224						
ENLB				S	**Sn**	**05 30 31.8**	**+1.4**
	baz=224						
NCU	**National Centr**	**1.19**	**283**	*e*P	**Pn**	**05 30 15.1**	**+1.1**
	baz=281						
NCU				S	**Sn**	**05 30 32.8**	**+1.0**
	baz=281						
NCUH	**Zhongli**	**1.19**	**283**	*e*P	**Pn**	**05 30 14.7**	**+0.7**
	baz=281						
NCUH				*e*S	**Sn**	**05 30 32.3**	**+0.5**
	baz=281						
IRIF	**Iriomote-Funau**	**1.21**	**107**	P	**Pn**	**05 30 14.4**	**+0.1**
IRIF				S	**Sn**	**05 30 32.6**	**+0.4**
ESL	**Shilin**	**1.29**	**227**	*e*P	**Pn**	**05 30 14.6**	**-0.6**
	baz=226						
ESL				*e*S	**Sn**	**05 30 32.7**	**-1.1**
	baz=226						
LIOB	**Emei**	**1.32**	**268**	*e*P	**Pn**	**05 30 15.8**	**+0.3**
	baz=266						
LIOB				S	**Sn**	**05 30 34.4**	**0.0**
	baz=266						
NSTT	**Nanjuang**	**1.33**	**267**	*e*P	**Pn**	**05 30 15.9**	**+0.3**
	baz=265						
NSTT				S	**Sn**	**05 30 34.5**	**-0.1**
	baz=265						
CHGB	**Renai**	**1.34**	**242**	*e*P	**Pn**	**05 30 16.5**	**+0.5**
	baz=240						
CHGB				S	**Sn**	**05 30 35.0**	**-0.1**
	baz=240						
SBCB	**Hsinchu**	**1.34**	**274**	*e*P	**Pn**	**05 30 16.6**	**+0.8**
	baz=272						
SBCB				S	**Sn**	**05 30 35.0**	**+0.1**
	baz=272						
HSN	**Hsinchu**	**1.36**	**274**	*e*P	**Pn**	**05 30 16.1**	**+0.1**
	baz=274						
HSN				*e*S	**Sn**	**05 30 34.9**	**-0.3**
	baz=274						
HATJ	**Hateruma jima**	**1.39**	**117**	P	**Pn**	**05 30 16.7**	**+0.5**
HATJ				*e*S	**Sn**	**05 30 36.1**	**+0.4**
EGFH	**Guangfu**	**1.40**	**223**	*e*P	**Pn**	**05 30 16.0**	**-0.4**
	baz=222						
EGFH				*e*S	**Sn**	**05 30 34.6**	**-1.4**
	baz=222						
JKRS	**Kuro-shima**	**1.49**	**108**	P	**Pn**	**05 30 17.9**	**+0.5**
JKRS				*e*S	**Sn**	**05 30 38.2**	**+0.4**
NMLH	**Miaoli**	**1.53**	**264**	*e*P	**Pn**	**05 30 18.6**	**+0.7**
	baz=263						
NMLH				*e*S	**Sn**	**05 30 39.0**	**+0.3**
	baz=263						
VWDT	**VWDT**	**1.53**	**232**	*e*P	**Pn**	**05 30 18.5**	**+0.5**
	baz=231						
VWDT				S	**Sn**	**05 30 38.4**	**-0.3**
	baz=231						
HGSD	**Ruisui**	**1.54**	**218**	*e*P	**Pn**	**05 30 17.8**	**-0.2**
	baz=218						
HGSD				*e*S	**Sn**	**05 30 38.9**	**0.0**
	baz=218						
JIJ	**Ishigaki jima**	**1.57**	**102**	P	**Pn**	**05 30 18.4**	**0.0**
JIJ				S	**Sn**	**05 30 38.7**	**-0.9**
NSY	**Sanyi**	**1.57**	**260**	*e*P	**Pn**	**05 30 19.4**	**+0.9**
	baz=258						
NSY				S	**Sn**	**05 30 40.4**	**+0.7**
	baz=258						
TWQ1	**Liyutan**	**1.58**	**257**	*e*P	**Pn**	**05 30 19.1**	**+0.6**
	baz=256						
TWQ1				*i* S	**Sn**	**05 30 40.2**	**+0.5**
	baz=256						
EHY	**Hungye**	**1.58**	**221**	*e*P	**Pn**	**05 30 18.0**	**-0.6**
	baz=220						
EHY				*e*S	**Sn**	**05 30 38.0**	**-1.9**
	baz=220						
SMLT	**Sun Moon Lake**	**1.64**	**240**	P	**Pn**	**05 30 20.9**	**+1.5**
	baz=239						
SMLT				S	**Sn**	**05 30 43.4**	**+2.1**
	baz=239						
SSLB	**Suanglung**	**1.65**	**237**	P	**Pn**	**05 30 20.6**	**+1.2**
	baz=236						
SSLB				*e*S	**Sn**	**05 30 42.2**	**+0.8**
	baz=236						
TYC	**Yuchr**	**1.67**	**242**	P	**Pn**	**05 30 20.9**	**+1.3**
	baz=240						
TYC				S	**Sn**	**05 30 43.2**	**+1.6**
	baz=240						
YULB	**Yu-li**	**1.69**	**219**	*e*P	**Pn**	**05 30 19.3**	**-0.6**
	baz=219						
YULB				*e*S	**Sn**	**05 30 40.3**	**-1.9**
	baz=219						
JISG	**Ishigakijimahi**	**1.69**	**94**	P	**Pn**	**05 30 20.1**	**+0.3**
JISG				S	**Sn**	**05 30 41.5**	**-0.6**
TWF1	**Yuli**	**1.72**	**219**	*e*P	**Pn**	**05 30 19.8**	**-0.4**
	baz=218						
TWF1				*e*S	**Sn**	**05 30 41.4**	**-1.4**
	baz=218						
TCU	**Taichung**	**1.72**	**252**	*e*P	**Pn**	**05 30 20.8**	**+0.6**
	baz=250						
TCU				*e*S	**Sn**	**05 30 42.9**	**+0.1**
	baz=250						
WJS	**Zhushan**	**1.81**	**241**	*e*P	**Pn**	**05 30 22.9**	**+1.6**
	baz=240						
WJS				*e*S	**Sn**	**05 30 46.1**	**+1.3**
	baz=240						
FULB	**Fuli**	**1.84**	**216**	*e*P	**Pn**	**05 30 21.4**	**-0.4**
	baz=215						
FULB				*e*S	**Sn**	**05 30 44.9**	**-0.7**
	baz=215						
WCHH	**Zhanghua**	**1.84**	**251**	*e*P	**Pn**	**05 30 22.3**	**+0.6**
	baz=249						
WCHH				*e*S	**Sn**	**05 30 46.2**	**+0.7**
	baz=249						
CHKT	**Chengkung**	**1.89**	**212**	P	**Pn**	**05 30 21.9**	**-0.4**
	baz=212						
CHKT				S	**Sn**	**05 30 44.9**	**-1.6**
	baz=212						
ALS	**Alishan**	**1.92**	**232**	P	**Pn**	**05 30 24.2**	**+1.2**
	baz=231						
ALS				S	**Sn**	**05 30 49.4**	**+1.6**
	baz=231						
ELDTW	**Lidau**	**2.00**	**221**	*e*P	**Pn**	**05 30 23.8**	**-0.1**
	baz=221						
ELDTW				*e*S	**Sn**	**05 30 48.7**	**-0.7**
	baz=221						
WDLH	**Douliu**	**2.03**	**240**	*e*P	**Pn**	**05 30 25.0**	**+0.9**
	baz=239						
WDLH				*e*S	**Sn**	**05 30 50.3**	**+0.7**
	baz=239						
JTJ	**Tarama**	**2.04**	**91**	P	**Pn**	**05 30 24.7**	**+0.5**
JTJ				S	**Sn**	**05 30 50.7**	**+0.8**
RLNB	**Erlin**	**2.08**	**248**	*e*P	**Pn**	**05 30 25.1**	**+0.4**
	baz=246						
RLNB				*e*S	**Sn**	**05 30 51.2**	**+0.4**
	baz=246						
TWH	**Lutao**	**2.18**	**205**	P	**Pn**	**05 30 25.7**	**-0.3**
	baz=204						
TWH				S	**Sn**	**05 30 52.1**	**-1.1**
	baz=204						
TPUB	**Ta-pu**	**2.18**	**231**	*e*P	**Pn**	**05 30 27.0**	**+1.0**
	baz=230						
TPUB				*e*S	**Sn**	**05 30 54.4**	**+1.2**
	baz=230						
CHY	**Chiayi**	**2.21**	**238**	*e*P	**Pn**	**05 30 26.5**	**0.0**
	baz=236						
CHY				*e*S	**Sn**	**05 30 54.4**	**+0.4**
	baz=236						
WTP	**Ta-pu**	**2.23**	**230**	*e*P	**Pn**	**05 30 28.0**	**+1.3**
	baz=229						
WTP				*e*S	**Sn**	**05 30 54.6**	**+0.3**
	baz=229						
TWGBT	**Beinan**	**2.27**	**214**	*e*P	**Pn**	**05 30 26.3**	**-0.8**
	baz=214						
TWGBT				*e*S	**Sn**	**05 30 53.6**	**-1.5**
	baz=214						
TWG	**Pinlang**	**2.27**	**214**	*e*P	**Pn**	**05 30 26.1**	**-1.0**
	baz=214						
TWG				*e*S	**Sn**	**05 30 53.4**	**-1.7**
	baz=214						
TWK	**Hsinying**	**2.30**	**232**	*e*P	**Pn**	**05 30 29.1**	**+1.5**
	baz=231						
TWK				*e*S	**Sn**	**05 30 57.0**	**+1.0**
	baz=231						
WSF	**Szhu**	**2.30**	**243**	*e*P	**Pn**	**05 30 27.4**	**-0.2**
	baz=242						
WSF				S	**Sn**	**05 30 56.4**	**+0.5**
	baz=242						
WLGB	**Puzi**	**2.32**	**239**	*e*P	**Pn**	**05 30 28.0**	**+0.2**
	baz=238						
WLGB				*e*S	**Sn**	**05 30 57.0**	**+0.7**
	baz=238						
CHN1	**Nanshi**	**2.33**	**230**	*e*P	**Pn**	**05 30 28.9**	**+1.0**
	baz=229						
CHN1				*e*S	**Sn**	**05 30 57.6**	**+1.0**
	baz=229						
SLGT	**Liugui**	**2.38**	**225**	*e*P	**Pn**	**05 30 29.9**	**+1.3**
	baz=224						
SLGT				*e*S	**Sn**	**05 30 59.5**	**+1.7**
	baz=224						
JIRB	**Irabujima**	**2.47**	**87**	P	**Pn**	**05 30 30.4**	**+0.7**
JIRB				*e*S	**Sn**	**05 30 58.9**	**-0.8**
JIKM	**Ikemajima**	**2.54**	**85**	P	**Pn**	**05 30 31.5**	**+0.9**
JIKM				*e*S	**Sn**	**05 31 01.2**	**-0.2**
SSD	**Sandimen**	**2.57**	**221**	*e*P	**Pn**	**05 30 32.3**	**+1.2**
	baz=220						
JMJ	**Miyako jima 2**	**2.58**	**87**	*e*P	**Pn**	**05 30 31.8**	**+0.7**
	baz=87						
JMJ				*e*S	**Sn**	**05 31 01.9**	**-0.3**
	baz=87						
JMJ	**Miyako jima 2**	**2.58**	**87**	P	**Pn**	**05 30 32.1**	**+1.0**
JMJ				*e*S	**Sn**	**05 31 02.4**	**+0.1**
MASBT	**Mashibuluo**	**2.67**	**219**	*e*P	**Pn**	**05 30 33.1**	**+0.7**
	baz=218						
MASBT				*e*S	**Sn**	**05 31 05.4**	**+0.8**
	baz=218						
MATB	**Ma-tsu**	**2.69**	**303**	*e*P	**Pn**	**05 30 31.6**	**-1.0**
	baz=301						
VWUC	**VWUC**	**2.75**	**277**	*e*P	**Pn**	**05 30 32.5**	**-0.8**
	baz=275						
VWUC				*e*S	**Sn**	**05 31 05.0**	**-1.3**
	baz=275						
LAY	**Lan-yu**	**2.78**	**198**	*e*P	**Pn**	**05 30 34.1**	**+0.2**
	baz=197						
LAY				*e*S	**Sn**	**05 31 04.7**	**-2.5**
	baz=197						
SCZT	**Fangliau**	**2.87**	**216**	*e*P	**Pn**	**05 30 35.4**	**+0.4**
	baz=215						
SCZT				*e*S	**Sn**	**05 31 08.6**	**-0.6**
	baz=215						
PHUB	**P'eng-hu**	**2.89**	**246**	*e*P	**Pn**	**05 30 34.2**	**-1.0**
	baz=245						
PHUB				*e*S	**Sn**	**05 31 07.6**	**-2.0**
	baz=245						
WDGT	**Dungji**	**2.94**	**241**	*e*P	**Pn**	**05 30 35.6**	**-0.3**
	baz=240						
WDGT				*e*S	**Sn**	**05 31 09.7**	**-1.0**
	baz=240						

IDC 15 05:35:52.0±3.3,15°.16S×173°.70W,h0km,mb3.9/4, mb1 4.2/4,mb1mx3.7/49,mbtmp3.9/4,MS3.6/9,Ms1 3.6/9, ms1mx3.1/51,Error ellipse: s-maj=233.9km s-min=24.7km az=150.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.24**	**57**	Pn	Pn	05 36 26.0	-4.5
	75nm,0.3s,baz=217,slow=4.5,SNR=62						
AFI				Sn	Sn	05 36 45.9	-13
	244nm,0.3s,baz=66,slow=21,SNR=43						
AFI				LR	LR	05 37 23.7	
	comp=Z,524nm,21.7s,baz=230,slow=41						
DZM	**Mont Dzumac**	**20.02**	**247**	LR	LR	05 46 06.8	
	comp=Z,50nm,19.0s,baz=264,slow=31						
URZ	**Urewera**	**

ellipse: s-maj=16.2km s-min=9.6km az=108.4
GUC ***15*** *05:43:13.9±0.7,38°.19S×74°.70W,h22km±7km,ML4.3*
NEIC ***15*** *05:43:13.0±0.0,38°.19S×74°.70W,h22km,mb4.7/85, ML4.3(GUC),After GUC.*
ISC 15 05:43:12.6±0.3,38°.21S±0°.04×75°.06W±0°.07,h35km,n432, σ1°.09/443,mb4.7/91,MS3.7/14,6C-5D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TMU	**Temuco**	**2.00**	**106**	⇓*iP*	**Pn**	**05 43 43.3**	**-0.6**
TMU				*i* S	**Sn**	**05 44 05.6**	**-2.2**
TMU				IAML		05 44 14.9	
	comp=N,972nm,0.8s						
CCSP	**San Pedro de C**	**2.06**	**49**	*e*P	**Pn**	**05 43 42.4**	**-2.4**
CCSP				*e*S	**Sn**	**05 44 07.4**	**-1.9**
CCSP				IAML		05 44 10.9	
	comp=N,3μm,0.4s						
VLCH	**Valdivia**	**2.13**	**139**	⇑*iP*	**Pn**	**05 43 43.1**	**-2.6**
VLCH				*i* S	**Sn**	**05 44 06.9**	**-4.0**
VLCH				IAML		05 44 07.8	
	comp=N,8μm,0.2s						
CCHI	**Chillan**	**2.87**	**57**	*e*P	**Pn**	**05 43 55.4**	**-0.4**
CCHI				*i* S	**Sn**	**05 44 29.0**	**-0.1**
CCHI				IAML		05 44 36.0	
	comp=N,2μm,0.3s						
GO05	**HualaæØ**	**4.07**	**39**	*e*Pn	**Pn**	**05 44 10.3**	**-2.1**
GO05	**HualaæØ**	**4.07**	**39**	*e*P	**Pn**	**05 44 10.8**	**-1.6**
GO05				*e*S	**Sn**	**05 44 57.8**	**-0.9**
GO05	**HualaæØ**	**4.07**	**39**	*e*P	**Pn**	**05 44 10.7**	**-1.6**
GO05				*i* S	**Sn**	**05 44 57.6**	**-1.1**
PLCA	**Paso Flores**	**4.30**	**127**	Pn	**Pn**	**05 44 15.4**	**-0.3**
	comp=N,3.7nm,0.3s,baz=327,slow=11,SNR=80						
PLCA				Sn	**Sn**	**05 45 10.3**	**+5.6**
	comp=N,20nm,0.3s,baz=48,slow=21,SNR=10						
PLCA				LR	LR	05 45 57.4	
	comp=N,1μm,21.5s,baz=350,slow=39						
PLCA	**Paso Flores**	**4.30**	**127**	*e*Pn	**Pn**	**05 44 14.7**	**-1.0**
PLCA				*e*Sn	**Sn**	**05 45 10.7**	**+6.0**
PLCA	**Paso Flores**	**4.30**	**127**	*e*P	**Pn**	**05 44 16.0**	**+0.3**
ROC1	**El Roble**	**6.17**	**33**	*e*Pn	**Pn**	**05 44 40.0**	**-1.5**
ROC1				*e*Sn	**Sn**	**05 45 51.5**	**+0.5**
ROC1	**El Roble**	**6.17**	**33**	*e*P	**Pn**	**05 44 39.8**	**-1.7**
ROC1				*e*S	**Sn**	**05 45 49.7**	**-1.3**
AAGR	**Agrelo**	**7.20**	**47**	*e*P	**Pn**	**05 44 55.3**	**-0.2**
ARCO	**CERRO ARCO**	**7.32**	**45**	*e*P	**Pn**	**05 44 56.6**	**-0.6**
ARCO				IAML		05 45 10.9	
	comp=Z,41nm,0.5s						
AUSP	**Uspallata**	**7.56**	**40**	*e*P	**Pn**	**05 45 00.1**	**-0.5**
AUSP				*e*S	**Sn**	**05 46 26.9**	**+1.6**
ASAL	**Salagasta**	**7.56**	**44**	*e*P	**Pn**	**05 45 00.0**	**-0.5**
ASAL				*e*S	**Sn**	**05 46 25.2**	**+0.2**
RTLS	**Leoncito**	**7.95**	**38**	*e*P	**Pn**	**05 45 05.6**	**-0.4**
RTLS				IAML		05 45 14.9	
	comp=Z,88nm,0.4s						
RTCV	**Cerro Valdivia**	**8.28**	**42**	*e*P	**Pn**	**05 45 08.6**	**-1.7**
ACAN	**Cantantal**	**8.74**	**50**	*i* P	**Pn**	**05 45 15.4**	**-1.2**
GO04	**Tololo Observa**	**8.76**	**25**	*e*Pn	**Pn**	**05 45 14.5**	**-2.5**
GO04				*e*Sn	**Sn**	**05 46 55.4**	**+0.8**
AMOG	**MOGNA**	**9.05**	**39**	*e*P	**Pn**	**05 45 19.1**	**-1.7**
AMOG				*e*S	**Sn**	**05 47 00.6**	**-0.8**
CHRN	**Cochrane**	**9.22**	**169**	*e*Pn	**Pn**	**05 45 22.0**	**-1.0**
AROD	**Rodeo**	**9.26**	**32**	*e*P	**Pn**	**05 45 23.8**	**-0.2**
AROD				*e*S	**Sn**	**05 47 08.0**	**+1.0**
ACDV	**Cuesta del Vie**	**9.40**	**33**	*i* P	**Pn**	**05 45 24.9**	**-0.9**
ACDV				*e*S	**Sn**	**05 47 10.5**	**+0.1**
MRA	**San Martin**	**9.57**	**56**	*e*P	**Pn**	**05 45 26.8**	**-1.2**
LCO	**Las Campanas**	**9.86**	**23**	*e*Pn	**Pn**	**05 45 30.4**	**-1.8**
LCO	**Las Campanas**	**9.86**	**23**	*e*P	**Pn**	**05 45 30.4**	**-1.8**
AGUA	**GUANDACOL**	**10.27**	**34**	*e*P	**Pn**	**05 45 35.8**	**-1.7**
AGUA				*e*S	**Sn**	**05 47 27.7**	**-3.8**
TRQA	**Tornquist**	**10.31**	**93**	*e*Pn	**Pn**	**05 45 38.6**	**+0.6**
TRQA	**Tornquist**	**10.31**	**93**	*e*P	**Pn**	**05 45 38.6**	**+0.6**
APLL	**PUNTA DE LOS L**	**10.51**	**45**	*e*P	**Pn**	**05 45 36.8**	**-4.0**
APLL				IAML		05 45 38.5	
	comp=Z,20nm,0.3s						
APLL				*e*S	**Sn**	**05 47 32.2**	**-5.1**
VCA	**Vinchina**	**11.04**	**33**	*e*P	**Pn**	**05 45 45.9**	**-2.3**
ACLC	**CERRO LA CRUZ**	**11.05**	**40**	*e*P	**Pn**	**05 45 44.3**	**-4.0**
ACLC				*e*S	**Sn**	**05 47 47.4**	**-3.3**
GO03	**Copiap**	**11.33**	**22**	*e*Pn	**Pn**	**05 45 49.4**	**-2.7**
GO02	**Mina Guanaco**	**13.81**	**21**	*e*Pn	**Pn**	**05 46 22.9**	**-3.3**
PB01	**IPOC Station P**	**17.77**	**17**	*e*Pn	**P**	**05 47 19.9**	**+2.1**
	comp=Z,11nm,1.0s						
EFI	**East Falkland**	**18.00**	**144**	*e*Pn	**P**	**05 47 20.1**	**+0.1**
	comp=Z,98nm,1.4s						
EFI	**East Falkland**	**18.00**	**144**	⇓*iP*	**Pn**	**05 47 19.1**	**-0.7**
EFI				pmax	pmax		
	comp=Z,54nm,1.3s						
CPUP	**Villa Florida**	**19.07**	**57**	P	**Pn**	**05 47 33.1**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=235,slow=9.7,SNR=12						
CPUP	**Villa Florida**	**19.07**	**57**	*e*P	**Pn**	**05 47 33.0**	**0.0**
	comp=Z,14nm,1.1s						
CPUP	**Villa Florida**	**19.07**	**57**	*e*P	**Pn**	**05 47 33.0**	**0.0**
CPUP				pmax	pmax		
	comp=Z,14nm,1.1s						
MNMC	**Minye Minye**	**19.59**	**16**	*e*P	**Pn**	**05 47 39.9**	**+0.3**
	comp=Z,14nm,0.7s						
LPAZ	**La Paz**	**22.67**	**17**	P	**P**	**05 48 13.7**	**+2.1**
	comp=Z,1.6nm,0.6s,baz=226,slow=2.9,SNR=8.9						
LPAZ	**La Paz**	**22.67**	**17**	*e*P	**P**	**05 48 12.4**	**+0.7**
	comp=Z,6.3nm,1.0s						
LPAZ	**La Paz**	**22.67**	**17**	*e*P	**P**	**05 48 12.4**	**+0.7**
LPAZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SIV	**San Ignacio**	**25.33**	**33**	P	**P**	**05 48 38.1**	**+1.8**
	comp=Z,5.1nm,0.8s,baz=222,slow=8.9,SNR=36						
SIV				LR	LR	05 59 59.7	
	comp=Z,99nm,18.2s,baz=260,slow=40						
PMSA	**Palmer Station**	**27.39**	**170**	LR	LR	05 59 32.4	
	comp=Z,85nm,18.3s,baz=1.0,slow=36						
RPN	**Rapa Nui**	**30.73**	**281**	LR	LR	05 58 06.9	
	comp=Z,254nm,18.6s,baz=110,slow=29						
SAML	**Samuel**	**31.04**	**23**	*e*P	**P**	**05 49 27.8**	**+0.7**
	comp=Z,5.4nm,1.2s						
SAML	**Samuel**	**31.04**	**23**	*e*P	**P**	**05 49 27.8**	**+0.7**
SAML				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ATAH	**Atahualpa**	**31.08**	**354**	LR	LR	05 59 31.9	
	comp=Z,96nm,18.2s,baz=213,slow=32						
OTAV	**Otavalo**	**38.38**	**355**	*e*P	**P**	**05 50 32.9**	**+1.8**
	comp=Z,17nm,1.4s						
OTAV	**Otavalo**	**38.38**	**355**	*e*P	**P**	**05 50 32.9**	**+1.8**
OTAV				pmax	pmax		
	comp=Z,17nm,1.4s						
PTGA	**Pitinga**	**39.79**	**24**	P	**P**	**05 50 42.5**	**+0.1**
	comp=Z,1.5nm,0.6s,baz=213,slow=12,SNR=5.5						
PTGA	**Pitinga**	**39.79**	**24**	*e*P	**P**	**05 50 42.5**	**+0.1**
	comp=Z,4.9nm,1.0s						
PRAC	**Prado**	**41.71**	**0**	*e*P	**P**	**05 51 00.4**	**+2.2**
	comp=Z,19nm,1.1s						
RUSC	**La Rusia**	**43.91**	**3**	*e*P	**P**	**05 51 17.7**	**+1.1**
	comp=Z,8.3nm,1.0s						
HELC	**Santa Helena**	**44.17**	**359**	*e*P	**P**	**05 51 19.5**	**+1.0**
	comp=Z,32nm,0.8s						
VNA3	**Neumayer Olymp**	**46.45**	**156**	P	**P**	**05 51 35.6**	**0.0**
VNA1	**Neumayer--Stat**	**46.83**	**155**	P	**P**	**05 51 38.9**	**+0.4**
SNAA	**Sanae**	**48.67**	**156**	P	**P**	**05 51 52.9**	**0.0**
SNAA	**Sanae**	**48.67**	**156**	P	**P**	**05 51 52.8**	**-0.1**
	comp=Z,27nm,1.1s,baz=273,slow=7.8,SNR=42						
SNAA	**Sanae**	**48.67**	**156**	*e*P	**P**	**05 51 52.6**	**-0.3**
	comp=Z,30nm,1.1s						
SNAA	**Sanae**	**48.67**	**156**	*e*P	**P**	**05 51 52.6**	**-0.3**
SNAA				pmax	pmax		
	comp=Z,30nm,1.1s						
QSPA	**South Pole Qui**	**52.03**	**180**	P	**P**	**05 52 18.4**	**-0.1**
	comp=Z,17nm,0.9s,baz=139,slow=3.4,SNR=34						
QSPA	**South Pole Qui**	**52.03**	**180**	*e*P	**P**	**05 52 18.2**	**-0.3**
	comp=Z,20nm,0.9s						
APG	**El Apazote**	**54.87**	**342**	LR	LR	06 10 03.4	
	comp=Z,50nm,20.8s,baz=238,slow=29						
OBIP	**Obispado Ponce**	**56.51**	**10**	*e*P	**P**	**05 52 51.8**	**+0.5**
	comp=Z,20nm,1.2s						
VNDA	**Vanda**	**59.49**	**192**	P	**P**	**05 53 12.3**	**+0.7**
	comp=Z,1.6nm,0.9s,baz=136,slow=4.6,SNR=6.6						
VNDA	**Vanda**	**59.49**	**192**	*e*P	**P**	**05 53 12.1**	**+0.5**
	comp=Z,7.7nm,1.4s						
VNDA	**Vanda**	**59.49**	**192**	*e*P	**P**	**05 53 12.1**	**+0.5**
VNDA				pmax	pmax		
	comp=Z,8.0nm,1.4s						
SYO	**Syowa Base**	**62.86**	**158**	‖*e*P	**P**	**05 53 32.8**	**-1.6**
SYO	**Syowa Base**	**62.86**	**158**	‖*e*pP	pP	05 53 40.4	-4.7
TBI	**Tubuai**	**64.06**	**260**	*e*LR	LR	06 12 37.0	
	comp=Z,212nm,28.0s						
TAOE	**Nuku Hiva Isla**	**65.03**	**279**	*e*LR	LR	06 13 20.0	
	comp=Z,184nm,24.3s						
ZAIG	**Zacatecas**	**65.93**	**332**	*e*P	**P**	**05 53 55.7**	**+0.3**
	comp=Z,4.1nm,0.9s						
PPT2	**Papeete2**	**67.32**	**265**	*e*LR	LR	06 14 21.0	
	comp=Z,172nm,27.5s						
PPT	**Papeete**	**67.33**	**265**	LR	LR	06 15 18.2	
	comp=Z,79nm,19.6s,baz=130,slow=29						
656A	**Willston**	**67.59**	**353**	*e*P	**P**	**05 54 06.0**	**+0.5**
	comp=Z,109nm,1.4s						
MAW	**Mawson**	**69.83**	**164**	P	**P**	**05 54 18.9**	**-0.1**
	comp=Z,7.1nm,0.8s,baz=217,slow=8.1,SNR=13						
MAW	**Mawson**	**69.83**	**164**	*e*P	**P**	**05 54 19.0**	**-0.1**
	comp=Z,2.1nm,0.9s						
MAW	**Mawson**	**69.83**	**164**	*e*P	**P**	**05 54 19.0**	**-0.1**
MAW				pmax	pmax		
	comp=Z,2.0nm,0.9s						
445A	**Amite**	**70.05**	**346**	P	**P**	**05 54 21.3**	**+0.5**
	baz=167						
LPIG	**La Paz**	**70.26**	**326**	LR	LR	06 18 55.4	
	comp=Z,54nm,21.4s,baz=214,slow=31						
347A	**Saraland**	**70.38**	**348**	P	**P**	**05 54 23.4**	**+0.6**
	baz=168						
249A	**Camden**	**70.72**	**349**	P	**P**	**05 54 25.5**	**+0.7**
	baz=170						
155A	**Kite**	**70.81**	**353**	P	**P**	**05 54 27.3**	**+2.0**
	baz=174						
HPIG		**70.86**	**331**	*e*P	**P**	**05 54 27.1**	**+1.0**
	comp=Z,5.7nm,1.0s						
248A	**Dixon Mills**	**70.93**	**349**	P	**P**	**05 54 26.9**	**+0.7**
	baz=169						
342A	**Flagon Creek P**	**71.07**	**344**	P	**P**	**05 54 28.2**	**+1.2**
	baz=166						
342A	**Flagon Creek P**	**71.07**	**344**	*e*P	**P**	**05 54 28.4**	**+1.4**
	comp=Z,23nm,0.9s						
341A	**Kurthwood**	**71.22**	**344**	P	**P**	**05 54 28.7**	**+0.8**
	baz=165						
341A	**Kurthwood**	**71.22**	**344**	*e*P	**P**	**05 54 29.1**	**+1.3**
	comp=Z,26nm,0.9s						
148A	**Greensboro**	**71.45**	**349**	P	**P**	**05 54 29.2**	**0.0**
	baz=169						
242A	**Grayson**	**71.70**	**345**	P	**P**	**05 54 32.0**	**+1.2**
	baz=166						
LRAL	**Lakeview Retre**	**71.75**	**349**	P	**P**	**05 54 31.2**	**+0.2**
	baz=170						
LRAL	**Lakeview Retre**	**71.75**	**349**	*e*P	**P**	**05 54 31.3**	**+0.3**
	comp=Z,9.5nm,0.8s						
145A	**Houston Renfro**	**71.80**	**347**	P	**P**	**05 54 31.8**	**+0.5**
	baz=168						
Z50A	**Ashland**	**71.81**	**350**	P	**P**	**05 54 31.9**	**+0.4**
	baz=171						
241A	**Mo Tay, Goldon**	**71.83**	**344**	P	**P**	**05 54 32.1**	**+0.6**
	baz=165						
241A	**Mo Tay, Goldon**	**71.83**	**344**	*e*P	**P**	**05 54 32.5**	**+1.0**
	comp=Z,11nm,0.8s						
Z49A	**Columbiana**	**71.84**	**350**	P	**P**	**05 54 31.8**	**+0.3**
	baz=170						
Y54A	**Tignall**	**72.06**	**353**	P	**P**	**05 54 32.5**	**-0.3**
	baz=173						
Z47A	**Carrollton**	**72.07**	**349**	P	**P**	**05 54 32.9**	**0.0**
	baz=169						
JCT	**Junction City**	**72.13**	**338**	P	**P**	**05 54 33.6**	**+0.1**
	baz=160						
JCT	**Junction City**	**72.13**	**338**	*e*P	**P**	**05 54 34.3**	**+0.8**
	comp=Z,21nm,1.5s						
JCT	**Junction City**	**72.13**	**338**	*e*P	**P**	**05 54 34.3**	**+0.8**
JCT				pmax	pmax		
	comp=Z,21nm,1.5s						
Y53A	**Monroe**	**72.14**	**353**	P	**P**	**05 54 34.0**	**+0.7**
	baz=173						
Z48A	**Northport**	**72.16**	**349**	P	**P**	**05 54 33.5**	**0.0**
	baz=169						
143A	**Socs Landing,**	**72.17**	**346**	P	**P**	**05 54 34.2**	**+0.6**
	baz=166						
143A	**Socs Landing,**	**72.17**	**346**	*e*P	**P**	**05 54 33.8**	**+0.2**
	comp=Z,45nm,1.1s						
Y52A	**Lilburn**	**72.19**	**352**	P	**P**	**05 54 33.7**	**0.0**
	baz=172						
TXAR	**Lajitas Array**	**72.32**	**334**	P	**P**	**05 54 35.2**	**+0.5**
	comp=Z,2.5nm,0.8s,baz=153,slow=8.4,SNR=8.8						
TXAR				LR	LR	06 20 54.0	
	comp=Z,56nm,19.9s,baz=0.0,slow=31						
TX31	**Lajitas Ar. Si**	**72.32**	**334**	*e*P	**P**	**05 54 35.0**	**+0.3**
Y51A	**Rockmart**	**72.34**	**351**	P	**P**	**05 54 34.5**	**-0.1**
	baz=172						
Y49A	**Blount Mountai**	**72.47**	**350**	P	**P**	**05 54 35.4**	**0.0**
	baz=170						
Z45A	**Winona**	**72.50**	**347**	P	**P**	**05 54 35.3**	**-0.2**
	baz=168						
Z44A	**Pea Ridge, Bel**	**72.55**	**347**	P	**P**	**05 54 36.0**	**+0.2**
	baz=167						
140A	**Cam and Jess,**	**72.56**	**344**	P	**P**	**05 54 35.8**	**-0.1**
	baz=165						
Y48A	**Jasper**	**72.63**	**349**	P	**P**	**05 54 35.7**	**-0.6**
	baz=170						
Y47A	**UCPARC, Winfie**	**72.72**	**349**	P	**P**	**05 54 36.4**	**-0.5**
	baz=169						
X53A	**Estanollee**	**72.75**	**353**	P	**P**	**05 54 36.5**	**-0.5**
	baz=173						
Y46A	**Houston**	**72.86**	**348**	P	**P**	**05 54 37.5**	**-0.2**
	baz=168						
X52A	**Dahlonega**	**72.91**	**352**	P	**P**	**05 54 38.0**	**0.0**
	baz=172						
Y45A	**Yeager Farm, C**	**72.96**	**347**	P	**P**	**05 54 38.1**	**-0.1**
	baz=168						
X50B	**Fort Payne**	**72.97**	**351**	P	**P**	**05 54 38.1**	**-0.2**
	baz=171						
X51A	**Calhoun**	**72.98**	**352**	P	**P**	**05 54 38.6**	**+0.2**
	baz=172						
X49A	**Woodville**	**73.11**	**350**	P	**P**	**05 54 39.0**	**-0.1**
	baz=170						
X48A	**Hartselle**	**73.14**	**350**	P	**P**	**05 54 39.4**	**0.0**
	baz=170						
X48A	**Hartselle**	**73.14**	**350**	*e*P	**P**	**05 54 40.0**	**+0.7**
	comp=Z,13nm,1.1s						
X47A	**Russelville**	**73.33**	**349**	P	**P**	**05 54 39.6**	**-0.8**
	baz=169						
W53A	**Cullowhee**	**73.39**	**353**	P	**P**	**05 54 41.1**	**+0.1**
	baz=173						
W52A	**Murphy**	**73.40**	**352**	P	**P**	**05 54 40.9**	**+0.1**
	baz=172						
X46A	**Booneville**	**73.48**	**348**	P	**P**	**05 54 41.0**	**-0.3**
	baz=169						
X45A	**UM Field Stati**	**73.48**	**348**	P	**P**	**05 54 41.2**	**-0.1**
	baz=168						
Y41A	**Eaglette Beard**	**73.56**	**345**	P	**P**	**05 54 42.2**	**+0.5**
	baz=165						
W50A	**Signal Mountai**	**73.66**	**351**	P	**P**	**05 54 42.6**	**+0.2**
	baz=171,SNR=7.5						
W50A	**Signal Mountai**	**73.66**	**351**	*e*P	**P**	**05 54 43.0**	**+0.7**
	comp=Z,20nm,0.8s						
W49A	**Belvidere**	**73.69**	**350**	P	**P**	**05 54 42.3**	**-0.3**
	baz=171						
W48A	**Pulaski**	**73.80**	**350**	P	**P**	**05 54 42.9**	**-0.3**
	baz=170						
CPCT	**Cooper Cave**	**73.81**	**352**	*e*P	**P**	**05 54 43.8**	**+0.5**
	comp=Z,8.8nm,0.9s						
ABTX	**Abilene, Hawle**	**74.09**	**339**	P	**P**	**05 54 44.8**	**-0.2**
	baz=160						
ABTX	**Abilene, Hawle**	**74.09**	**339**	*e*P	**P**	**05 54 45.7**	**+0.7**
	comp=Z,14nm,1.2s						
V50A	**Pikevile**	**74.10**	**352**	P	**P**	**05 54 44.8**	**-0.1**
	baz=172						
V52A	**Sevierville**	**74.10**	**353**	*e*P	**P**	**05 54 45.0**	**0.0**
	comp=Z,9.4nm,1.0s						
X41A	**Kaden, Bauxite**	**74.13**	**345**	P	**P**	**05 54 45.1**	**0.0**
	baz=166						
W45A	**Hickory Valley**	**74.16**	**348**	P	**P**	**05 54 44.7**	**-0.6**
	baz=168						
V49A	**McMinnville**	**74.29**	**351**	P	**P**	**05 54 46.0**	**-0.1**
	baz=171						
V48A	**Smith Brothers**	**74.38**	**350**	P	**P**	**05 54 46.5**	**-0.1**
	baz=170,SNR=7.8						
V48A	**Smith Brothers**	**74.38**	**350**	*e*P	**P**	**05 54 47.0**	**+0.4**
	comp=Z,15nm,0.8s						
MIAR	**Mount Ida**	**74.40**	**344**	P	**P**	**05 54 46.5**	**-0.1**
	baz=165						
X39A	**Fountain Ranch**	**74.48**	**344**	P	**P**	**05 54 47.6**	**+0.4**
	baz=164						
V47A	**Nunnelly**	**74.56**	**350**	P	**P**	**05 54 46.7**	**-0.9**
	baz=170,SNR=6.3						
V46A	**Holladay**	**74.62**	**349**	P	**P**	**05 54 47.1**	**-0.8**
	baz=169						
V45A	**Humboldt**	**74.70**	**348**	P	**P**	**05 54 47.9**	**-0.5**
	baz=168						
W41B	**Gary Mavity, V**	**74.73**	**345**	P	**P**	**05 54 48.4**	**-0.2**
	baz=166						
W41B	**Gary Mavity, V**	**74.73**	**345**	*e*P	**P**	**05 54 48.8**	**+0.2**
	comp=Z,9.0nm,1.0s						
WHAR	**Wooly Hollow**	**74.85**	**345**	*e*P	**P**	**05 54 49.6**	**+0.3**
	comp=Z,9.8nm,0.9s						
WVT	**Waverly**	**74.91**	**349**	P	**P**	**05 54 49.0**	**-0.6**
	baz=169						
WVT	**Waverly**	**74.91**	**349**	*e*P	**P**	**05 54 49.0**	**-0.6**
	comp=Z,7.7nm,0.9s						
WVT	**Waverly**	**74.91**	**349**	*e*P	**P**	**05 54 49.0**	**-0.6**
WVT				pmax	pmax		
	comp=Z,8.0nm,0.9s						
W40A	**Ferguson Farm,**	**74.92**	**345**	P	**P**	**05 54 48.7**	**-0.9**
	baz=165						
U49A	**Red Boiling Sp**	**75.01**	**351**	P	**P**	**05 54 49.9**	**-0.3**
	baz=171						
W39A	**Magazine**	**75.07**	**344**	P	**P**	**05 54 50.9**	**+0.3**
	baz=165						
W39A	**Magazine**	**75.07**	**344**	*e*P	**P**	**05 54 51.4**	**+0.8**
	comp=Z,11nm,1.0s						
MNTX	**Cornudas Mount**	**75.07**	**334**	P	**P**	**05 54 50.1**	**-0.6**
	baz=156						
MNTX	**Cornudas Mount**	**75.07**	**334**	*e*P	**P**	**05 54 50.5**	**-0.2**
	comp=Z,3.3nm,1.2s						
U47A	**Clarksville**	**75.13**	**350**	P	**P**	**05 54 50.5**	**-0.4**
	baz=170,SNR=6.5						
U46A	**Springville**	**75.18**	**349**	P	**P**	**05 54 50.7**	**-0.4**
	baz=169						
V41A	**Mountainview**	**75.31**	**346**	P	**P**	**05 54 51.6**	**-0.3**
	baz=166						
U44B	**Burton Farm, H**	**75.34**	**348**	P	**P**	**05 54 51.7**	**-0.4**
	baz=168						
V40A	**Witts Springs**	**75.46**	**345**	P	**P**	**05 54 52.6**	**-0.3**
	baz=165						
U43A	**Rector**	**75.55**	**347**	P	**P**	**05 54 52.9**	**-0.4**
	baz=167						
T49A	**Edmonton**	**75.56**	**351**	P	**P**	**05 54 52.9**	**-0.4**
	baz=171						
T47A	**Sharon Grove**	**75.65**	**350**	P	**P**	**05 54 53.4**	**-0.5**
	baz=170						
V39A	**Pettigrew**	**75.66**	**344**	P	**P**	**05 54 53.8**	**-0.2**
	baz=165						
T48A	**Bowling Green**	**75.67**	**351**	P	**P**	**05 54 53.4**	**-0.6**
	baz=171						
U42A	**Revenden**	**75.68**	**347**	P	**P**	**05 54 53.6**	**-0.4**
	baz=167						
U41A	**Viola**	**75.80**	**346**	P	**P**	**05 54 54.0**	**-0.7**
	baz=166						
T46A	**Princeton**	**75.81**	**349**	P	**P**	**05 54 54.2**	**-0.5**
	baz=169						
WMOK	**Wichita Mounta**	**75.84**	**340**	P	**P**	**05 54 54.6**	**-0.5**
	baz=161						
WMOK	**Wichita Mounta**	**75.84**	**340**	*e*P	**P**	**05 54 54.8**	**-0.3**
	comp=Z,9.9nm,1.4s						
WMOK	**Wichita Mounta**	**75.84**	**340**	*e*P	**P**	**05 54 54.8**	**-0.3**
WMOK				pmax	pmax		
	comp=Z,10.0nm,1.4s						
PBMO	**Poplar Bluff**	**75.95**	**347**	*e*P	**P**	**05 54 55.3**	**-0.2**
	comp=Z,7.9nm,0.8s						
U40A	**Yellville**	**76.00**	**345**	P	**P**	**05 54 55.7**	**-0.2**
	baz=165						
T44A	**Benton**	**76.11**	**348**	P	**P**	**05 54 56.0**	**-0.5**
	baz=168						
HHAR	**Hobbs**	**76.15**	**344**	*e*P	**P**	**05 54 56.9**	**+0.1**
	comp=Z,5.0nm,0.9s						
U39A	**Green Forest**	**76.15**	**345**	P	**P**	**05 54 56.5**	**-0.2**
	baz=165						
TUL1	**Leonard**	**76.20**	**343**	P	**P**	**05 54 56.7**	**-0.3**
	baz=163						
TUL1	**Leonard**	**76.20**	**343**	*e*P	**P**	**05 54 57.3**	**+0.2**
	comp=Z,12nm,0.8s						
T43A	**Greenville**	**76.23**	**348**	P	**P**	**05 54 56.6**	**-0.5**
	baz=168						
MSTX	**Muleshoe**	**76.29**	**337**	P	**P**	**05 54 57.0**	**-0.7**
	baz=158						
T42A	**Van Buren**	**76.32**	**347**	P	**P**	**05 54 57.3**	**-0.4**
	baz=167						
T42A	**Van Buren**	**76.32**	**347**	*e*P	**P**	**05 54 58.1**	**+0.5**
	comp=Z,8.3nm,1.4s						
T41A	**Mountain View**	**76.45**	**346**	P	**P**	**05 54 57.8**	**-0.7**
	baz=166						
S43A	**Fulton Ridge,**	**76.67**	**348**	P	**P**	**05 54 59.0**	**-0.6**
	baz=168,SNR=7.3						
T40A	**Mansfield**	**76.70**	**346**	P	**P**	**05 54 59.7**	**-0.1**
	baz=166						
AMTX	**Amarillo**	**76.80**	**338**	P	**P**	**05 55 00.7**	**+0.2**
	baz=159						
AMTX	**Amarillo**	**76.80**	**338**	*e*P	**P**	**05 55 00.8**	**+0.2**
	comp=Z,13nm,0.9s						
R47A	**Wooly Knot Far**	**76.86**	**351**	P	**P**	**05 54 59.4**	**-1.2**
	baz=170						
T38A	**Diamond**	**76.95**	**344**	P	**P**	**05 55 01.0**	**-0.2**
	baz=164						
S41A	**Jillco Farms,**	**76.98**	**346**	P	**P**	**05 55 01.1**	**-0.3**
	baz=166						
S42A	**Caledonia**	**76.98**	**347**	P	**P**	**05 55 00.9**	**-0.5**
	baz=167						
R45A	**Skylar, Fairfi**	**77.09**	**349**	P	**P**	**05 55 01.1**	**-0.9**
	baz=169						
S40A	**Lebanon**	**77.13**	**346**	P	**P**	**05 55 02.0**	**-0.2**
	baz=166						
R43A	**Red Bud**	**77.33**	**348**	P	**P**	**05 55 03.1**

comp=Z,91nm,1.5s
DBIC Dimbokro 78.82 72 P **P 05 55 13.1 +0.9**
comp=Z,5.6nm,0.6s,baz=210,slow=4.9,SNR=7.5
DBIC LR LR 06 26 38.8
comp=Z,33nm,19.1s,baz=186,slow=33
DBIC Dimbokro 78.82 72 *e*P **P 05 55 13.3 +1.1**
comp=Z,14nm,1.1s
DBIC Dimbokro 78.82 72 *e*P **P 05 55 13.3 +1.1**
DBIC pmax pmax
comp=Z,14nm,1.1s
P40A Paris 78.92 347 P **P 05 55 11.9 -0.2**
baz=166,SNR=7.2
P40A Paris 78.92 347 *e*P **P 05 55 12.4 +0.3**
comp=Z,14nm,1.1s
P39B Salisbury 79.01 346 P **P 05 55 12.5 -0.1**
baz=166
O43A Sugar Creek Fa 79.20 349 P **P 05 55 13.3 -0.3**
baz=168
O41A Passleys Farm, 79.28 348 P **P 05 55 13.5 -0.6**
baz=167
P38A Dawn 79.29 346 P **P 05 55 13.5 -0.6**
baz=165
P38A Dawn 79.29 346 *e*P **P 05 55 13.8 -0.3**
comp=Z,8.0nm,0.8s
P37A Lathrop 79.42 345 P **P 05 55 13.8 -1.0**
baz=164
KSU1 Kansas State U 79.44 343 P **P 05 55 14.7 -0.3**
baz=163
O40A La Belle 79.46 347 P **P 05 55 13.8 -1.2**
baz=166
HDIL Hopedale 79.46 349 P **P 05 55 14.6 -0.5**
baz=168
N45A Kentland 79.50 350 P **P 05 55 15.0 -0.2**
baz=170
N44A Piper City 79.53 350 P **P 05 55 14.8 -0.6**
baz=169
T25A Trinidad 79.72 337 P **P 05 55 16.5 -0.3**
baz=157,SNR=7.4
T25A Trinidad 79.72 337 *e*P **P 05 55 18.4 +1.5**
comp=Z,11nm,1.0s
X16A Lo Mia Camp, P 79.76 330 *e*P **P 05 55 18.8 +1.7**
comp=Z,4.7nm,1.1s
BOSA Boshof 80.25 119 P **P 05 55 19.8 -0.1**
comp=Z,6.6nm,0.8s,baz=232,slow=6.3,SNR=9.6
BOSA LR LR 06 28 01.2
comp=Z,33nm,19.9s,baz=208,slow=34
BOSA Boshof 80.25 119 *e*P **P 05 55 19.9 -0.1**
comp=Z,11nm,0.9s
BOSA Boshof 80.25 119 *e*P **P 05 55 19.9 -0.1**
BOSA pmax pmax
comp=Z,11nm,0.9s
M43A Waltham Townsh 80.28 349 P **P 05 55 19.5 +0.1**
baz=169
N39A Derby Farms, D 80.31 347 P **P 05 55 19.2 -0.4**
baz=166
N39A Derby Farms, D 80.31 347 *e*P **P 05 55 19.8 +0.2**
comp=Z,12nm,1.0s
MONP2 Monument Peak 80.53 326 P **P 05 55 21.0 -0.3**
baz=148
SDCO Great Sand Dun 80.62 336 P **P 05 55 21.9 +0.1**
baz=156
SDCO Great Sand Dun 80.62 336 *e*P **P 05 55 22.6 +0.8**
comp=Z,2.1nm,0.9s
WUAZ Wupatki 80.70 331 P **P 05 55 22.0 -0.1**
baz=152
WUAZ Wupatki 80.70 331 *e*P **P 05 55 22.8 +0.7**
comp=Z,5.0nm,1.0s
M39A Webster 80.83 347 P **P 05 55 22.8 +0.4**
baz=166
S22A 4UR Ranch, Cre 81.06 335 P **P 05 55 23.9 -0.2**
baz=155
S22A 4UR Ranch, Cre 81.06 335 *e*P **P 05 55 25.6 +1.5**
comp=Z,6.1nm,1.4s
MVCO Mesa Verde 81.14 334 P **P 05 55 25.3 +0.7**
baz=154
PFO Pinyon Flats O 81.15 326 P **P 05 55 25.3 +0.8**
baz=148
PFO Pinyon Flats O 81.15 326 *e*P **P 05 55 25.6 +1.1**
comp=Z,7.6nm,1.1s
PFO Pinyon Flats O 81.15 326 *e*P **P 05 55 25.6 +1.1**
PFO pmax pmax
comp=Z,8.0nm,1.1s
Q24A Divide 81.62 337 P **P 05 55 27.2 +0.1**
baz=156
Q24A Divide 81.62 337 *e*P **P 05 55 28.1 +1.0**
comp=Z,11nm,1.3s
JFWS Jewell Farm 81.92 349 P **P 05 55 27.7 -0.4**
baz=168
PV01 Paradox Valley 82.00 334 *e*P **P 05 55 30.0 +1.0**
comp=Z,5.8nm,1.2s
J41A Loganville 82.32 349 P **P 05 55 29.8 -0.5**
baz=168
K36A Gilmore City 82.38 346 P **P 05 55 30.4 -0.1**
baz=164
J40A Soldiers Grove 82.46 349 P **P 05 55 31.1 +0.1**
baz=167
PV09 Paradox Valley 82.52 334 *e*P **P 05 55 32.8 +1.0**
ISCO Idaho Springs 82.53 337 P **P 05 55 32.6 +0.8**
baz=156
ISCO Idaho Springs 82.53 337 *e*P **P 05 55 32.4 +0.5**
comp=Z,2.5nm,1.0s
ISCO Idaho Springs 82.53 337 *e*P **P 05 55 32.4 +0.5**
ISCO pmax pmax
comp=Z,3.0nm,1.0s
KNB Kanab 82.57 330 *e*P **P 05 55 32.6 +0.7**
comp=Z,8.9nm,1.1s
KNB Kanab 82.57 330 *e*P **P 05 55 32.7 +0.7**
KNB pmax pmax
comp=Z,9.0nm,1.1s
LBTB Lobatse 82.71 116 *e*P **P 05 55 33.3 +0.2**
comp=Z,10nm,1.4s
J36A Seneca 1, Swea 83.02 346 P **P 05 55 33.7 -0.2**
baz=165
J36A Seneca 1, Swea 83.02 346 *e*P **P 05 55 34.0 +0.1**
comp=Z,7.1nm,0.9s
I39A Houston 83.03 348 P **P 05 55 33.6 -0.4**
baz=167
H43A Windswept, Lux 83.10 351 P **P 05 55 34.1 -0.1**
baz=170
SZCU Shurtz Canyon 83.18 330 *e*P **P 05 55 36.8 +1.6**
comp=Z,12nm,1.5s
CCUT Cedar City 83.25 330 *e*P **P 05 55 37.4 +1.9**
comp=Z,9.9nm,1.4s
H40A Chili 83.61 349 P **P 05 55 37.3 +0.5**
baz=168
I36A Fitzsimmons Fa 83.63 346 P **P 05 55 36.8 -0.2**
baz=165
MSU Marysvale 83.64 332 *e*P **P 05 55 38.6 +1.1**
MSU Marysvale 83.64 332 *e*P **P 05 55 38.6 +1.1**
N23A Red Feather La 83.64 337 P **P 05 55 37.1 -0.4**
baz=156
N23A Red Feather La 83.64 337 *e*P **P 05 55 38.4 +0.9**
comp=Z,7.0nm,1.2s
O20A White River Ci 83.68 335 P **P 05 55 38.0 +0.3**
baz=154
ISA Isabella, Lake 83.77 326 P **P 05 55 38.2 +0.1**
baz=147
H39A Augusta 83.80 348 P **P 05 55 40.1 +2.3**
baz=167
G43A Wallace 83.86 351 P **P 05 55 39.0 +0.9**
baz=170
ECSD EROS Data Cent 83.87 344 P **P 05 55 38.6 +0.3**
baz=163
ECSD EROS Data Cent 83.87 344 *e*P **P 05 55 38.4 +0.2**
comp=Z,9.9nm,1.1s
TPNV Topopah Spring 83.90 328 P **P 05 55 39.4 +0.6**
baz=148
TPNV Topopah Spring 83.90 328 *e*P **P 05 55 38.9 +0.1**
comp=Z,3.6nm,1.0s
TPNV Topopah Spring 83.90 328 *e*P **P 05 55 38.9 +0.1**
TPNV pmax pmax
comp=Z,4.0nm,1.0s
H36A Jessenland, He 84.15 347 P **P 05 55 40.6 +0.9**
baz=165
VES Vestal, Richgr 84.19 325 P **P 05 55 39.7 -0.3**
baz=146
CWC Cottonwood Cre 84.25 326 P **P 05 55 40.9 +0.3**
baz=147
PSUT Pine Spring 84.30 330 *e*P **P 05 55 41.5 +0.7**
comp=Z,4.8nm,1.1s
GRAC Grapevine Rang 84.41 327 P **P 05 55 42.3 +1.0**
baz=148
H35A Sunnyside Ranc 84.44 346 P **P 05 55 41.3 +0.2**
baz=164
F41A Three Lakes 84.52 350 P **P 05 55 43.1 +1.6**
baz=169
KOWA Kowa 84.57 67 P **P 05 55 43.3 +0.8**
comp=Z,14nm,0.9s,baz=227,slow=7.2,SNR=26
KOWA LR LR 06 32 23.6
comp=Z,73nm,18.4s,baz=190,slow=35
KOWA Kowa 84.57 67 *e*P **P 05 55 43.4 +1.0**
RWWY Rawlins 84.75 336 *e*P **P 05 55 43.5 +0.4**
comp=Z,14nm,1.4s
H32A Carlson Farm, 84.78 344 P **P 05 55 42.6 -0.3**
baz=162
R11A Troy Canyon, C 84.82 329 P **P 05 55 42.8 -0.7**
baz=149
F37A Hinrichs Farm, 85.03 348 P **P 05 55 42.9 -1.2**
baz=166
E42A Champion 85.04 351 P **P 05 55 44.5 +0.4**
baz=170
SUSD Miller 85.06 343 P **P 05 55 44.5 +0.2**
baz=161
G34A Benson 85.12 346 P **P 05 55 44.6 +0.1**
baz=164
F36A Milaca 85.32 347 P **P 05 55 45.1 -0.4**
baz=165
DUG Dugway, Tooele 85.35 332 P **P 05 55 46.5 +0.5**
baz=151
DUG Dugway, Tooele 85.35 332 *e*P **P 05 55 46.5 +0.5**
comp=Z,5.6nm,1.0s
DUG Dugway, Tooele 85.35 332 *e*P **P 05 55 46.5 +0.5**
DUG pmax pmax
comp=Z,6.0nm,1.0s
K22A Casper 85.42 337 P **P 05 55 45.1 -1.2**
baz=155
K22A Casper 85.42 337 *e*P **P 05 55 47.3 +1.0**
comp=Z,11nm,1.0s
F35A Swanville 85.51 346 P **P 05 55 45.9 -0.6**
baz=164
TCUT Toone Canyon 85.65 333 *e*P **P 05 55 48.3 +0.7**
comp=Z,19nm,1.5s
E37A Wrenshall 85.81 348 P **P 05 55 47.2 -0.7**
baz=166
E36A McGregor 85.91 348 P **P 05 55 48.3 -0.2**
baz=166
NV01 Mina Array Sit 86.02 327 *e*P **P 05 55 50.7 +1.2**
NVAR Mina Array Bea 86.02 327 P **P 05 55 50.9 +1.4**
comp=Z,0.6nm,0.7s,baz=185,slow=4.9,SNR=4.3
RSSD Black Hills 86.04 340 P **P 05 55 48.7 -0.8**
baz=157
BGU Big Grassy Mou 86.06 332 *e*P **P 05 55 49.2 -0.3**
comp=Z,5.4nm,1.4s
HWUT Hardware Ranch 86.13 333 *e*P **P 05 55 50.3 +0.3**
comp=Z,16nm,1.4s
E33A Westby DABS, E 86.40 346 P **P 05 55 50.2 -0.7**
baz=163
PD31 Pinedale Array 86.48 335 *e*P **P 05 55 51.8 +0.2**
PDAR Pinedale Array 86.48 335 P **P 05 55 52.0 +0.3**
comp=Z,1.2nm,0.8s,baz=158,slow=4.8,SNR=11
BW06 Boulder Array 86.48 335 P **P 05 55 51.0 -0.6**
baz=153
BW06 Boulder Array 86.48 335 *e*P **P 05 55 51.8 +0.2**
comp=Z,3.4nm,1.0s
D35A Remer 86.59 347 P **P 05 55 51.5 -0.3**
baz=165
AFI Afiamalu 86.69 255 LR LR 06 26 16.4
comp=Z,48nm,19.5s,baz=134,slow=30
D34A Park Rapids 86.80 346 P **P 05 55 52.2 -0.6**
baz=164
E31A Nome 86.83 344 P **P 05 55 52.5 -0.5**
baz=162
D33A AnnSam, Waubun 86.98 346 P **P 05 55 53.4 -0.3**
baz=164
C36A Pine Crest Far 87.04 348 P **P 05 55 55.4 +1.4**
baz=166
C35A Jirik Farms, M 87.18 347 P **P 05 55 54.1 -0.5**
baz=165
D31A Mcclaflin, Tow 87.27 345 P **P 05 55 54.9 -0.1**
baz=162
REDW Red Top Meadow 87.44 335 *e*P **P 05 55 56.4 +0.1**
comp=Z,4.6nm,1.0s
TPAW Teton Pass 87.59 335 *e*P **P 05 55 57.5 +0.4**
comp=Z,3.3nm,0.9s
FXWY Fox Creek 87.75 335 *e*P **P 05 55 58.4 +0.7**
comp=Z,1.8nm,1.1s
MOOW Moose Ponds 87.75 335 *e*P **P 05 55 57.8 +0.1**
comp=Z,1.4nm,0.8s
TOA0 Torodi Ar. Sit 87.90 72 *e*P **P 05 55 58.4 -0.5**
TORD Torodi Ar. Bea 87.90 72 P **P 05 55 58.9 0.0**
comp=Z,1.8nm,0.8s,baz=243,slow=4.0,SNR=8.5
TORD LR LR 06 32 33.4
comp=Z,29nm,19.2s,baz=160,slow=34
IMW Indian Meadow 87.94 335 *e*P **P 05 55 59.2 +0.4**
comp=Z,3.0nm,0.9s
C31A Landman Farms, 87.98 345 P **P 05 55 58.2 -0.3**
baz=162
B34A Aery, Baudette 88.06 347 P **P 05 55 58.9 +0.1**
baz=164
AGMN Agassiz Nation 88.09 346 P **P 05 55 58.7 -0.3**
baz=164
AGMN Agassiz Nation 88.09 346 *e*P **P 05 55 58.9 -0.1**
comp=Z,5.0nm,0.7s
MDND Maddock 88.43 344 P **P 05 56 00.5 -0.1**
baz=161
RLMT Red Lodge 88.50 337 P **P 05 56 01.3 +0.1**
baz=154
B31A Greenbush Farm 88.56 345 P **P 05 56 01.7 +0.5**
baz=162
A33A Warroad 88.62 347 P **P 05 56 01.9 +0.4**
baz=164
YMR Madison River 88.64 335 *e*P **P 05 56 03.5 +1.5**
comp=Z,5.4nm,0.9s
HLID Hailey 88.86 333 P **P 05 56 03.5 +0.5**
baz=150
HLID Hailey 88.86 333 *e*P **P 05 56 03.8 +0.8**
comp=Z,6.8nm,1.4s
MCMT McKenzie Canyo 89.41 334 *e*P **P 05 56 07.0 +1.4**
D05A Enumclaw 94.79 330 *e*P **P 05 56 30.3 +0.1**
comp=Z,18nm,0.5s
MDT Midelt 96.33 53 LR LR 06 40 04.1
comp=Z,91nm,18.6s,baz=221,slow=35
WB2 Warramunga Arr 115.90 211 *e*PKPdf **PKPdf 06 01 50.6 -1.5**
WRA Warramunga Arr 115.90 211 PKP **PKPdf 06 01 50.7 -1.4**
comp=Z,0.3nm,0.8s,baz=158,slow=1.5,SNR=9.6
GEA0 GERESS Array S 116.81 48 *e*PKPdf **PKPdf 06 01 52.7 -0.2**
GERES GERESS Array B 116.82 48 PKP **PKPdf 06 01 52.9 0.0**
comp=Z,1.2nm,0.8s,baz=304,slow=2.4,SNR=6.5
FITZ Fitzroy Crossi 120.71 203 *e*PKPdf **PKPdf 06 02 00.5 -0.8**
BUR04 Bucovina Ar. S 123.27 53 *e*PKPdf **PKPdf 06 02 05.5 +0.2**
CSS Mathiatis 123.75 70 *e*PKPdf **PKPdf 06 02 07.2 +0.6**
BRTR Keskin Array B 125.94 64 PKP **PKPdf 06 02 10.7 -0.1**
comp=Z,1.1nm,0.7s,baz=186,slow=5.0,SNR=6.1
KIEV Kiev 126.78 50 ⇓ *i*PKIKP **PKPdf 06 02 11.6 -0.2**
KLMR Klimovskoe 134.23 38 *e*PKIKP **PKPdf 06 02 21.5 -4.1**
KLMR pmax pmax
comp=Z,15nm,1.2s
KLMR Klimovskoe 134.23 38 *e*PKPdf **PKPdf 06 02 21.5 -4.1**
KLMR AMP 06 02 26.4
comp=Z,15nm,1.2s
SEY Seymchan 142.32 327 *c i*PKIKP **PKPdf 06 02 42.2 +1.8**
GYA0B ALIBECK ARRAY 143.45 76 *e*PKPpre PKPpre 06 02 40.7
TIXI Tiksi 144.32 347 *e*PKPdf **PKPab 06 02 41.1 -0.7**
TIXI Tiksi 144.32 347 *e*PKIKP **PKPab 06 02 41.1 -0.7**
PSI Prapat 144.33 170 PKP **PKPab 06 02 42.9 -0.8**
comp=Z,11nm,0.8s,baz=180,slow=3.1,SNR=12
PSI Prapat 144.33 170 *e*PKPdf **PKPab 06 02 42.5 -1.2**
ARU Arti 144.50 44 *e*PKPdf PKPbc 06 02 43.5 +0.4
ARU Arti 144.50 44 *i* PKIKP **PKPdf 06 02 43.8 -0.6**
AKTO Aktyubinsk 144.85 54 PKP PKPbc 06 02 44.7 +0.2
comp=Z,5.5nm,0.9s,baz=274,slow=4.3,SNR=17
ABKAR Abkulak array 146.13 56 *e*PKPdf **PKPbc 06 02 48.1 -0.4**
HYB Hyderabad 148.98 125 *i* PKP **PKPbc 06 02 58.0 +0.7**
ERM Erimo 150.69 290 *e*PKPdf **PKPdf 06 02 55.5 +0.4**
ERM *e*PKPbc **PKiKP 06 03 01.7 +0.4**
ERM Erimo 150.69 290 *e*PKIKP **PKPdf 06 02 55.5 +0.4**
ERM *e* 06 03 01.7
KBL Kabul 150.98 86 *e*PKPbc **PKPbc 06 03 01.7 -0.2**
ASAJ Asahikawa 151.22 294 PKPbc **PKPbc 06 03 01.9 +0.1**
comp=Z,14nm,0.9s,baz=244,slow=6.3,SNR=8.0
ASAJ Asahikawa 151.22 294 *e*PKPdf **PKPdf 06 02 57.1 +1.2**
NKL Nikolayevsk 151.26 313 *e*PKIKP **PKPbc 06 03 01.8 +0.2**
NKL pmax pmax
comp=Z,43nm,1.0s
YAK Yakutsk 151.70 335 *e*PKPbc **PKPbc 06 03 02.0 -0.3**
YAK Yakutsk 151.70 335 *e*PKIKP **PKPbc 06 03 00.6 -1.8**
YAK pmax pmax
comp=Z,30nm,0.9s
YAK pmax pmax
comp=N,4.0nm,1.1s
YAK pmax pmax
comp=E,4.0nm,1.1s
BRVK Borovoye 151.91 47 *e*PKPbc **PKPbc 06 03 04.0 +0.9**
BRVK Borovoye 151.91 47 ⇑ *i*PKIKP **PKPdf 06 02 57.6 +0.9**
BVAR Borovoye Array 151.98 47 PKPbc **PKPbc 06 03 03.8 +0.5**
comp=E,4.1nm,0.7s,baz=293,slow=4.1,SNR=20
KK31 Karatay Array 153.55 68 *e*PKPab **PKPab 06 03 18.6 -1.2**
KKAR Karatay Array 153.55 68 *e*PKPab **PKPab 06 03 18.6 -1.2**
AAK Ala-Archa 156.47 69 *e*PKPab **PKPab 06 03 33.3 +0.8**
AAK Ala-Archa 156.47 69 ⇑ *i*PKIKP **PKPdf 06 03 04.3 +0.7**
KSH Kashi 157.44 78 PKP **PKPdf 06 03 07.4 +2.5**
KSH PP **PP 06 07 17.0 +0.5**
KURBB Kurchatov Arra 157.56 48 PKP **PKPdf 06 03 04.7 +0.2**
comp=E,1.7nm,0.9s,baz=294,slow=1.9,SNR=13
KURK Kurchatov 157.57 48 PKP **PKPdf 06 03 04.7 +0.2**
KURK Kurchatov 157.57 48 PKIKP **PKPdf 06 03 04.7 +0.2**
KLR Kul'dur 157.83 308 ⇑ *i*PKIKP **PKPdf 06 03 04.2 -0.7**
TARG Taragay, Kyrgy 158.94 72 *e*PKPab **PKPab 06 03 43.9 +0.4**
ZAA0 Zalesovo Array 159.08 35 *e*PKPab **PKPab 06 03 43.6 +0.6**
ZALV Zalesovo Beam 159.08 35 PKP **PKPdf 06 03 05.5 -0.7**
comp=E,3.1nm,1.0s,baz=270,slow=3.0,SNR=4.8
ZALV PKPab **PKPab 06 03 43.9 +0.8**
comp=E,3.6nm,0.7s,baz=294,slow=4.7,SNR=9.6
MK31 Makanchi Array 161.27 56 *e*PKPdf **PKPdf 06 03 07.7 -1.3**
MK31 Makanchi Array 161.27 56 *e*PKIKP **PKPdf 06 03 07.7 -1.3**
MKAR Makanchi Array 161.27 56 PKP **PKPdf 06 03 08.3 -0.7**
comp=E,0.9nm,0.8s,baz=318,slow=1.6,SNR=7.4
MKAR PKPab **PKPab 06 03 53.0 -0.1**
comp=E,1.2nm,0.7s,baz=291,slow=3.7,SNR=7.3
MKAR PP **PP 06 07 37.8 +1.1**
comp=E,0.9nm,0.9s,baz=255,slow=4.6,SNR=4.1
MK01 Makanchi Array 161.29 56 *e*PKPdf **PKPdf 06 03 09.1 +0.1**
MK01 *e*PKPab **PKPab 06 03 53.0 -0.1**
WMQ Urumqi 165.83 61 PKP **PKPdf 06 03 13.9 +0.5**
NJ2 Nanjing 167.07 246 *e*PKP **PKPdf 06 03 15.3 +0.7**
SONM Songino Array 170.32 354 PKP **PKPdf 06 03 15.5 -1.0**
comp=E,0.3nm,0.3s,baz=203,slow=1.6,SNR=4.3
SONM PKPab **PKPab 06 04 34.0 +1.2**
comp=E,0.5nm,0.5s,baz=350,slow=5.9,SNR=3.3
CD2 Chengdu 172.66 172 PKP **PKPdf 06 03 17.8 -0.2**
HHC Hu-ho-hao-te 174.24 299 *e*PKP **PKPdf 06 03 14.6 -3.8**
LZH Lanzhou 177.71 157 *e*PKP **PKPdf 06 03 16.8 -2.6**
LZH pPKP pPKPdf 06 03 26.1 -4.8
LZH sPKP 06 03 30.1

MEX 15 05:45:47.5±0.7, 16°.07N×96°.90W, h12km±16km, MD3.7, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PANG	**Puerto Angel**	**0.57**	**135**	*e*P	Pg	05 45 56.4	-2.3
PANG				*e*S	Sg	05 46 04.4	-1.8
HUIG	**Huatulco**	**0.81**	**111**	*e*P	Pg	05 46 01.2	-2.1
HUIG				*e*S	Sg	05 46 11.6	-2.3
VHO	**Vista Hermosa**	**1.01**	**9**	*i* P	Pg	05 46 03.3	-3.7
VHO				*e*S	Sg	05 46 16.5	-3.7
TLIG	**Tlapa**	**2.18**	**313**	*e*P	Pn	05 46 21.1	-2.7
TLIG				*e*S	Sn	05 46 45.9	-4.9

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*ISCJB **15** 05:50:11.7±0.7, 21°.50S±0°.04×68°.4W±0°.1, h140km±7km, mb3.7/7, Error ellipse: s-maj=17.5km s-min=6.1km az=4.9*
*GUC **15** 05:50:12.1±0.6, 21°.51S×68°.42W, h134km±7km, ML3.9*
*IDC **15** 05:50:13.4±2.5, 21°.42S×68°.14W, h137km±22km, mb3.6/7, mb1 3.7/10, mb1mx3.4/39, mbtmp3.9/10, Error ellipse: s-maj=23.1km s-min=18.3km az=72.0*

ISC 15 05:50:12.0±0.9, 21°.43S±0°.06×68°.25W±0°.10, h127km±10km, n24, σ1s66/32, mb4.0/7, 9C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.99**	**248**	⇑ *i*P	**Pn**	**05 50 35.2**	**+0.3**
PB09				*i* S	**Sn**	**05 50 52.5**	**+0.4**
PB09				IAML		05 50 53.0	
comp=N,1μm,0.5s							
PB01	**IPOC Station P**	**1.22**	**288**	⇑ *i*P	**Pn**	**05 50 37.0**	**0.0**
PB01				*i* S	**Sn**	**05 50 56.0**	**+0.1**
PB01				IAML		05 50 57.0	
comp=N,3μm,0.4s							
PB01	**IPOC Station P**	**1.22**	**288**	*e*Sn	**Pn**	**05 50 36.8**	**-0.2**
PB08	**IPOC Station P**	**1.54**	**326**	⇑ *i*P	**Pn**	**05 50 42.3**	**+1.5**
PB08				*i* S	**Sn**	**05 51 04.5**	**+1.9**
PB08				IAML		05 51 05.4	
comp=E,1μm,0.7s							
PB02	**IPOC Station P**	**1.54**	**274**	⇑ *i*P	**Pn**	**05 50 40.1**	**-0.4**
PB02				*i* S	**Sn**	**05 51 01.2**	**-1.0**
PB02				IAML		05 51 01.4	
comp=N,3μm,0.4s							
PB07	**IPOC Station P**	**1.55**	**259**	⇑ *i*P	**Pn**	**05 50 40.2**	**-0.5**
PB07				*i* S	**Sn**	**05 51 01.1**	**-1.5**
PB07				IAML		05 51 01.4	
comp=N,3μm,0.9s							
PB06	**IPOC Station P**	**1.77**	**224**	⇑ *i*P	**Pn**	**05 50 42.6**	**-0.6**
PB06				*i* S	**Sn**	**05 51 05.6**	**-1.4**
PB06				IAML		05 51 07.0	
comp=E,1μm,0.5s							
PB04	**IPOC Station P**	**1.98**	**243**	⇑ *i*P	**Pn**	**05 50 44.8**	**-1.0**
PB04				*i* S	**Sn**	**05 51 08.6**	**-3.0**
PB04				IAML		05 51 15.0	
comp=N,600nm,0.2s							
PB15	**IPOC Station P**	**2.10**	**212**	⇑ *i*P	**Pn**	**05 50 46.9**	**-0.4**
PB15				*e*S	**Sn**	**05 51 13.1**	**-1.2**
PSGC	**Pisagua**	**2.53**	**316**	IAML		05 51 23.4	
comp=N,563nm,0.5s							
MNMC	**Minye Minye**	**2.62**	**331**	*e*P	**Pn**	**05 50 54.5**	**+0.6**
MNMC				*i* S	**Sn**	**05 51 27.1**	**+1.1**
MNMC				IAML		05 51 28.3	
comp=E,1μm,0.5s							
PB10	**IPOC Station P**	**2.97**	**225**	IAML		05 51 30.2	
comp=N,152nm,0.5s							
PB16	**IPOC Station P**	**3.30**	**339**	⇑ *i*P	**Pn**	**05 51 04.2**	**+1.1**
PB16				*i* S	**Sn**	**05 51 41.5**	**-0.9**
PB16				IAML		05 51 46.6	
comp=N,128nm,0.4s							
PB12	**IPOC Station P**	**3.42**	**325**	IAML		05 51 45.2	
comp=E,254nm,0.4s							
LPAZ	**La Paz**	**5.12**	**1**	P	**Pn**	**05 51 30.1**	**+2.8**
comp=E,1.4nm,0.3s,baz=182,slow=5.3,SNR=19							
SIV	**San Ignacio**	**8.69**	**53**	P	**Pn**	**05 52 13.2**	**-1.6**
comp=E,2.0nm,0.3s,baz=269,slow=10,SNR=41							
SIV				S	**Sn**	**05 53 45.0**	**-6.2**
comp=E,1.0nm,0.3s,baz=317,slow=21,SNR=9.5							
PLCA	**Paso Flores**	**19.34**	**185**	P	**P**	**05 54 28.2**	**+0.7**
comp=E,0.1nm,0.3s,baz=18,slow=13,SNR=2.5							
SNAA	**Sanae**	**62.14**	**161**	P	**P**	**06 00 19.6**	**+0.3**
comp=E,0.7nm,0.6s,baz=291,slow=6.3,SNR=6.6							
DBIC	**Dimbokro**	**68.12**	**73**	P	**P**	**06 00 59.0**	**+0.2**
comp=E,4.2nm,0.7s,baz=221,slow=7.4,SNR=3.9							
KOWA	**Kowa**	**72.42**	**66**	P	**P**	**06 01 24.8**	**-0.1**
comp=E,1.4nm,0.6s,baz=254,slow=7.4,SNR=3.8							
PDAR	**Pinedale Array**	**74.36**	**330**	P	**P**	**06 01 36.7**	**+0.7**
comp=E,0.1nm,0.4s,baz=105,slow=6.8,SNR=2.8							
NVAR	**Mina Array Bea**	**75.82**	**322**	P	**P**	**06 01 44.4**	**-0.1**
comp=E,0.3nm,0.5s,baz=149,slow=7.2,SNR=2.7							
TORD	**Torodi Ar. Bea**	**76.75**	**70**	P	**P**	**06 01 49.6**	**-0.3**
comp=E,2.3nm,0.5s,baz=255,slow=5.2,SNR=33							
YKA	**Yellowknife Ar**	**91.33**	**340**	P	**P**	**06 03 03.2**	**+0.4**
comp=E,1.2nm,0.6s,baz=134,slow=4.4,SNR=13							

IDC 15 05:57:47.0±5.7, 5°.38S×11°.53W, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.5/55, mbtmp3.8/4, Error ellipse: s-maj=197.9km s-min=94.4km az=128.0, Ascension Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**3.82**	**230**	T	T	06 02 35.1	
baz=51,slow=74,SNR=155							
H10N1	**ASCENSION HYDR**	**3.82**	**230**	T	T	06 02 35.4	
baz=51,slow=74,SNR=235							
H10N3	**ASCENSION HYDR**	**3.84**	**230**	T	T	06 02 38.2	
baz=51,slow=74,SNR=208							
H10S1	**ASCENSION HYDR**	**4.70**	**221**	T	T	06 03 43.8	
baz=42,slow=75,SNR=35							
H10S2	**ASCENSION HYDR**	**4.71**	**221**	T	T	06 03 43.8	
baz=42,slow=75,SNR=31							
H10S3	**ASCENSION HYDR**	**4.72**	**221**	T	T	06 03 44.5	
baz=42,slow=75,SNR=29							
KOWA	**Kowa**	**21.11**	**21**	P	P	06 02 32.9	-0.5
2.8nm,0.6s,baz=198,slow=13,SNR=6.6							
TORD	**Torodi Ar. Bea**	**22.61**	**35**	P	P	06 02 49.9	+0.3
0.7nm,0.5s,baz=214,slow=9.4,SNR=7.6							
GERES	**GERESS Array B**	**58.33**	**19**	P	P	06 07 44.4	+0.5
0.2nm,0.3s,baz=201,slow=5.2,SNR=3.1							
AKASG	**Malin Array Be**	**65.94**	**27**	P	P	06 08 34.4	-0.4

1.0nm,0.5s,baz=226,slow=7.0,SNR=7.2

NIED ***15*** *06:02:00,40.°10N×142.°70E,h35km,Mw3.9 Best double couple: M0 8.42000×10^14 NP1:φ0=215.00000°,δ18.00000°, λ107.00000°. NP2:φ0=18.00000°,δ72.00000°,λ85.00000°.*
IDC ***15*** *06:02:24.8±2.6,40.°30N×143.°26E,h0km,mb3.9/6, mb1 3.9/7,mb1mx3.5/66,mbtmp3.8/7,ML3.5/1,MS2.8/5, Ms1 2.8/5,ms1mx2.5/70,Error ellipse: s-maj=69.3km s-min=25.4km az=72.0*
ISCJB ***15*** *06:02:29.2±1.7,40.°19N±0.°06×142.°84E±0.°09,h28km±9km, mb3.8/6,MS3.1/2,Error ellipse: s-maj=12.1km s-min=9.6km az=179.9*
JMA ***15*** *06:02:31.1±0.2,40.°13N×142.°69E,h26km±2km,M3.8*
ISC 15 06:02:30.8±2.7,40.°16N±0.°06×142.°7E±0.°1,h26km±15km, n27,σ1§20/23,mb3.8/6,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.70**	**252**	P	**Pb**	**06 02 44.0**	**-0.3**
JTH				*e*S	**Sb**	**06 02 53.4**	**-0.1**
MIYJ	**Miyakonagasawa**	**0.91**	**231**	P	**Pn**	**06 02 46.8**	**-1.1**
JANG	**Nango**	**0.95**	**284**	P	**Pn**	**06 02 47.9**	**-0.6**
JKZ	**Kuzumaki**	**1.08**	**261**	P	**Pn**	**06 02 50.0**	**-0.4**
JOM	**Ohasama**	**1.30**	**239**	P	**Pn**	**06 02 53.2**	**-0.1**
JOM				*e*S	**Sn**	**06 03 09.5**	**-0.3**
OFUJ	**Ofunato**	**1.35**	**217**	P	**Pn**	**06 02 53.7**	**-0.3**
OFUJ				*e*S	**Sn**	**06 03 12.0**	**+0.9**
JTM	**Tenmabayashi**	**1.41**	**297**	P	**Pn**	**06 02 55.5**	**+0.7**
JTM				*e*S	**Sn**	**06 03 12.8**	**+0.2**
JAH	**Hinai**	**1.60**	**272**	P	**Pn**	**06 02 58.5**	**+1.1**
JAH				S	**Sn**	**06 03 18.4**	**+1.1**
JMK	**Ichinoseki**	**1.67**	**224**	P	**Pn**	**06 02 59.5**	**+1.1**
MAT	**Matsushiro**	**5.06**	**226**	P	**Pn**	**06 03 47.7**	**+2.6**
MAT				*e*S	**Sn**	**06 04 40.7**	**-2.0**
MJAR	**Matsushiro Arr**	**5.06**	**226**	Pn	**Pn**	**06 03 47.7**	**+2.6**
	1.6nm,0.3s,baz=31,slow=13,SNR=18						
MJAR				LR	LR	06 06 00.3	
	comp=Z,106nm,19.6s,baz=40,slow=40						
KSRS	**Korea Array**	**11.86**	**262**	LR	LR	06 09 30.0	
	comp=Z,61nm,19.4s,baz=90,slow=34						
KLR	**Kul'dur**	**11.96**	**323**	LR	LR	06 10 11.8	
	comp=Z,5.6nm,18.4s,baz=91,slow=39						
SONM	**Songino Array**	**27.04**	**299**	P	**P**	**06 08 11.6**	**+0.6**
	0.4nm,0.5s,baz=97,slow=7.1,SNR=3.1						
H11N2	**WAKE ISLAND Hy 29.05**	**127**		T	T	06 39 15.7	
	baz=318,slow=75,SNR=120						
H11N1	**WAKE ISLAND Hy 29.06**	**127**		T	T	06 39 16.4	
	baz=318,slow=75,SNR=121						
H11N3	**WAKE ISLAND Hy 29.06**	**127**		T	T	06 39 17.0	
	baz=318,slow=75,SNR=134						
TLY	**Talaya**	**29.18**	**306**	LR	LR	06 20 47.8	
	comp=Z,35nm,19.0s,baz=92,slow=38						
H11S1	**WAKE ISLAND Hy 29.87**	**129**		T	T	06 40 15.1	
	baz=321,slow=76,SNR=22						
H11S3	**WAKE ISLAND Hy 29.87**	**129**		T	T	06 40 02.0	
	baz=321,slow=76,SNR=24						
H11S2	**WAKE ISLAND Hy 29.88**	**129**		T	T	06 39 52.2	
	baz=321,slow=76,SNR=22						
ZALV	**Zalesovo Beam**	**40.64**	**310**	P	**P**	**06 10 08.5**	**0.0**
	1.7nm,0.5s,baz=104,slow=7.2,SNR=4.7						
MKAR	**Makanchi Array**	**43.40**	**300**	P	**P**	**06 10 29.9**	**-1.2**
	0.6nm,0.6s,baz=90,slow=6.2,SNR=3.7						
KURBB	**Kurchatov Arra**	**44.95**	**306**	P	**P**	**06 10 43.1**	**-0.3**
	2.6nm,0.4s,baz=80,slow=8.9,SNR=11						
BVAR	**Borovoye Array**	**49.28**	**311**	P	**P**	**06 11 17.2**	**0.0**
	1.7nm,0.4s,baz=60,slow=8.4,SNR=9.1						
WRA	**Warramunga Arr**	**60.30**	**189**	P	**P**	**06 12 36.6**	**-0.7**
	0.1nm,0.5s,baz=7.1,slow=6.9,SNR=4.0						
NOA	**NORSAR Array B**	**71.70**	**337**	LR	LR	06 49 38.6	
	comp=Z,11nm,18.3s,baz=235,slow=40						

IDC 15 06:16:53.8±2.3,6.°07S×130.°38E,h0km,mb4.0/1, mb1 3.7/4,mb1mx3.5/53,mbtmp3.6/4,ML3.6/3,MS3.1/2, Ms1 3.1/2,ms1mx2.5/47,Error ellipse: s-maj=99.7km s-min=27.7km az=77.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.82**	**201**	Pn	Pn	06 19 58.9	+1.4
	0.3nm,0.3s,baz=28,slow=12,SNR=22						
FITZ				Sn	Sn	06 22 09.4	-12
	0.2nm,0.3s,baz=139,slow=18,SNR=4.6						
WRA	**Warramunga Arr**	**14.32**	**165**	Pn	Pn	06 20 16.5	-1.5
	0.3nm,0.3s,baz=346,slow=13,SNR=10						
WRA				Sn	Sn	06 22 45.1	-13
	0.3nm,0.3s,baz=349,slow=22,SNR=3.3						
ASAR	**Alice Springs**	**17.82**	**169**	P	Pn	06 21 03.5	0.0
	0.2nm,0.3s,baz=342,slow=8.7,SNR=8.5						
ASAR				LR	LR	06 29 06.8	
	comp=Z,90nm,20.5s,baz=114,slow=41						
PSI	**Prapat**	**32.63**	**285**	LR	LR	06 36 38.0	
	comp=Z,26nm,20.2s,baz=268,slow=36						
MKAR	**Makanchi Array**	**67.66**	**326**	P	P	06 27 52.8	0.0
	0.7nm,0.5s,baz=124,slow=7.2,SNR=9.5						

ROM ***15*** *06:27:24.9±0.2,37.°46N±0.°01×16.°32E±0.°02,h33km±1km, ML3.9/43*
CSEM ***15*** *06:27:26.7±0.1,37.°68N×16.°38E,h30km,Mw3.7,Mw3.7, Error ellipse: s-maj=3.9km s-min=2.3km az=8.0*
IDC ***15*** *06:27:26.0±2.6,37.°74N×16.°12E,h24km±20km,mb3.7/10, mb1 3.8/13,mb1mx3.5/66,mbtmp3.8/13,ML3.8/3,MS2.3/1, Ms1 2.3/1,ms1mx2.0/66,Error ellipse: s-maj=25.2km s-min=14.4km az=152.0*
PDG ***15*** *06:27:27.6±0.1,37.°92N×16.°69E,h14km±1km,ML4.1/10, Error ellipse: s-maj=1.2km s-min=0.9km az=90.0*
THE ***15*** *06:27:28.5,37.°72N×16.°76E,h9km±3km,ML3.7/12,Error ellipse: s-maj=4.4km s-min=0.7km az=222.0*
ISC 15 06:27:26.2±1.2,37.°61N±0.°03×16.°36E±0.°03,h32km±10km, n243,σ1§72/305,mb3.9/9,32C-36D,Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPAZ	**Palizzi**	**0.45**	**321**	⇓P	**Pn**	**06 27 36.6**	**+0.2**
MPAZ				S	**Sn**	**06 27 45.6**	**+2.2**
MPAZ	**Palizzi**	**0.45**	**321**	P	**Pn**	**06 27 36.6**	**+0.2**
MPAZ				S	**Sn**	**06 27 45.6**	**+2.2**
MPAZ				AML	AML		
	comp=E,17500μm,0.4s						
MPAZ				AML	AML		
	comp=N,13750μm,0.4s						
MPAZ				AML	AML		
	comp=E,17500μm,0.4s						
MPAZ				AML	AML		
	comp=N,13750μm,0.4s						
MPAZ				AML	AML		
	comp=E,17500μm,0.4s						
MPAZ				AML	AML		
	comp=N,13750μm,0.4s						
MPAZ				AML	AML		
	comp=E,17500μm,0.4s						
MPAZ				AML	AML		
	comp=N,13750μm,0.4s						
SOI	**Samo**	**0.52**	**332**	⇓*i*P	**Pn**	**06 27 37.9**	**+0.4**
SOI				S	**Sn**	**06 27 46.7**	**+1.4**
SOI	**Samo**	**0.52**	**332**	*i* P	**Pn**	**06 27 37.9**	**+0.4**
SOI				S	**Sn**	**06 27 46.7**	**+1.4**
SOI				AML	AML		
	comp=E,5525μm,0.5s						
SOI				AML	AML		
	comp=N,6305μm,0.9s						
SOI				AML	AML		
	comp=E,5530μm,0.5s						
SOI				AML	AML		
	comp=N,6305μm,0.9s						
SOI				AML	AML		
	comp=E,5525μm,0.5s						
SOI				AML	AML		
	comp=N,6305μm,0.9s						
SOI				AML	AML		
	comp=N,6305μm,0.9s						
SOI				AML	AML		
	comp=E,5525μm,0.5s						
MTTG	**Motta San Giov**	**0.66**	**307**	⇓*i*P	**Pn**	**06 27 39.4**	**0.0**
MTTG	**Motta San Giov**	**0.66**	**307**	*i* P	**Pn**	**06 27 39.4**	**0.0**
MTTG				AML	AML		
	comp=E,3595μm,0.6s						
MTTG				AML	AML		
	comp=N,4800μm,0.6s						
MTTG				AML	AML		
	comp=E,3595μm,0.6s						
MTTG				AML	AML		
	comp=N,4800μm,0.6s						
MTTG				AML	AML		
	comp=E,3595μm,0.6s						
MTTG				AML	AML		
	comp=N,4800μm,0.6s						
GMB	**Gambarie**	**0.70**	**323**	⇓P	**Pn**	**06 27 40.3**	**+0.3**
GMB				S	**Sn**	**06 27 52.1**	**+2.3**
GMB	**Gambarie**	**0.70**	**323**	P	**Pn**	**06 27 40.3**	**+0.3**
GMB				S	**Sn**	**06 27 52.1**	**+2.3**
GMB				AML	AML		
	comp=E,31550μm,0.8s						
GMB				AML	AML		
	comp=N,19500μm,0.2s						
GMB				AML	AML		
	comp=E,31550μm,0.8s						
GMB				AML	AML		
	comp=N,19500μm,0.2s						
GMB				AML	AML		
	comp=N,19500μm,0.2s						
GMB				AML	AML		
	comp=E,31550μm,0.8s						
CEL	**Celeste**	**0.75**	**331**	⇓*i*P	**Pb**	**06 27 41.2**	**+0.4**
CEL				S	**Sn**	**06 27 53.3**	**+2.4**
CEL	**Celeste**	**0.75**	**331**	*i* P	**Pb**	**06 27 41.2**	**+0.4**
CEL				S	**Sn**	**06 27 53.3**	**+2.4**
CEL				AML	AML		
	comp=E,5940μm,1.2s						
CEL				AML	AML		
	comp=N,5450μm,0.8s						
CEL				AML	AML		
	comp=E,5940μm,1.2s						
CEL				AML	AML		
	comp=N,5450μm,0.8s						
CEL				AML	AML		
	comp=E,5940μm,1.2s						
CEL				AML	AML		
	comp=N,5450μm,0.8s						
CEL				AML	AML		
	comp=E,5940μm,1.2s						
CEL				AML	AML		
	comp=N,5450μm,0.8s						
MSCL	**Scilla**	**0.77**	**324**	⇓*i*P	**Pb**	**06 27 41.5**	**+0.3**
MSCL				S	**Sn**	**06 27 54.5**	**+3.0**
MSCL	**Scilla**	**0.77**	**324**	*i* P	**Pb**	**06 27 41.5**	**+0.3**
MSCL				S	**Sn**	**06 27 54.5**	**+3.0**
MSCL				AML	AML		
	comp=E,10290μm,0.5s						
MSCL				AML	AML		
	comp=N,11750μm,0.5s						
MSCL				AML	AML		
	comp=E,10290μm,0.5s						
MSCL				AML	AML		
	comp=N,11750μm,0.5s						
MSCL				AML	AML		
	comp=E,10290μm,0.5s						
MSCL				AML	AML		
	comp=N,11750μm,0.5s						
PLAC	**Placanica**	**0.84**	**4**	⇑*e*P	**Pb**	**06 27 43.2**	**+0.8**
PLAC	**Placanica**	**0.84**	**4**	*e*P	**Pb**	**06 27 43.2**	**+0.8**
PLAC				S	**Sn**	**06 27 55.8**	**+2.6**
PLAC				AML	AML		
	comp=E,2355μm,0.5s						
PLAC				AML	AML		
	comp=N,3010μm,0.6s						
PLAC				AML	AML		
	comp=E,2355μm,0.5s						
PLAC				AML	AML		
	comp=N,3010μm,0.6s						
PLAC				AML	AML		
	comp=N,3010μm,0.6s						
PLAC				AML	AML		
	comp=E,2355μm,0.5s						
ATN	**Antennamare**	**0.90**	**308**	⇓*e*P	**Pn**	**06 27 42.8**	**+0.1**
ATN	**Antennamare**	**0.90**	**308**	*e*P	**Pn**	**06 27 42.8**	**+0.1**
ATN				AML	AML		
	comp=E,6235μm,0.3s						
ATN				AML	AML		
	comp=N,5310μm,0.6s						
ATN				AML	AML		
	comp=E,6235μm,0.3s						
ATN				AML	AML		
	comp=N,5310μm,0.6s						
ATN				AML	AML		
	comp=E,6235μm,0.3s						
ATN				AML	AML		
	comp=N,5310μm,0.6s						
MSRU	**Castanea**	**0.94**	**314**	⇓*i*P	**Pb**	**06 27 43.6**	**-0.4**
MSRU	**Castanea**	**0.94**	**314**	*i* P	**Pb**	**06 27 43.6**	**-0.4**
MSRU				AML	AML		
	comp=E,5380μm,0.3s						
MSRU				AML	AML		
	comp=N,2910μm,0.3s						
MSRU				AML	AML		
	comp=E,5380μm,0.3s						
MSRU				AML	AML		
	comp=N,2910μm,0.3s						
MSRU				AML	AML		
	comp=N,2910μm,0.3s						
MSRU				AML	AML		
	comp=E,5380μm,0.3s						
MPNC	**Port Mandanici**	**0.96**	**304**	⇓*i*P	**Pn**	**06 27 43.8**	**+0.3**
MPNC	**Port Mandanici**	**0.96**	**304**	*i* P	**Pn**	**06 27 43.8**	**+0.3**
MPNC				AML	AML		
	comp=E,8750μm,0.4s						
MPNC				AML	AML		
	comp=N,6160μm,0.8s						
MPNC				AML	AML		
	comp=E,8750μm,0.4s						
MPNC				AML	AML		
	comp=N,6160μm,0.8s						
MPNC				AML	AML		
	comp=E,8750μm,0.4s						
MPNC				AML	AML		
	comp=N,6160μm,0.8s						
MCSR	**Castroreale**	**0.99**	**298**	⇓*i*P	**Pb**	**06 27 44.9**	**0.0**
MCSR	**Castroreale**	**0.99**	**298**	*i* P	**Pb**	**06 27 44.9**	**0.0**
MCSR				AML	AML		
	comp=E,8185μm,0.5s						
MCSR				AML	AML		
	comp=N,10600μm,0.2s						
MCSR				AML	AML		
	comp=E,8185μm,0.5s						
MCSR				AML	AML		
	comp=N,10600μm,0.2s						
MCSR				AML	AML		
	comp=N,10600μm,0.2s						
MCSR				AML	AML		
	comp=E,8185μm,0.5s						
NOV	**Novara**	**1.06**	**294**	*i* P	**Pn**	**06 27 44.7**	**-0.1**
NOV				AML	AML		
	comp=E,4095μm,0.6s						
NOV				AML	AML		
	comp=N,3240μm,0.6s						
NOV				AML	AML		
	comp=E,4095μm,0.6s						
NOV				AML	AML		
	comp=N,3240μm,0.6s						
NOV				AML	AML		
	comp=E,4095μm,0.6s						
NOV				AML	AML		
	comp=N,3240μm,0.6s						
JOPP	**Joppolo**	**1.07**	**340**	⇓*i*P	**Pb**	**06 27 46.2**	**0.0**
JOPP	**Joppolo**	**1.07**	**340**	*i* P	**Pb**	**06 27 46.2**	**0.0**
JOPP				AML	AML		
	comp=E,1400μm,0.6s						
JOPP				AML	AML		
	comp=N,1630μm,0.8s						
JOPP				AML	AML		
	comp=E,1400μm,0.6s						
JOPP				AML	AML		
	comp=N,1630μm,0.8s						
JOPP				AML	AML		
	comp=E,1400μm,0.6s						
JOPP				AML	AML		
	comp=N,1630μm,0.8s						
ESLN	**Serra La Nave**	**1.10**	**275**	P	**Pn**	**06 27 44.5**	**-1.1**
ESLN	**Serra La Nave**	**1.10**	**275**	P	**Pn**	**06 27 44.5**	**-1.1**
ESLN				AML	AML		
	comp=E,4310μm,0.4s						
ESLN				AML	AML		
	comp=N,4360μm,0.4s						
ESLN				AML	AML		
	comp=E,4310μm,0.4s						
ESLN				AML	AML		
	comp=N,4360μm,0.4s						
ESLN				AML	AML		
	comp=N,4360μm,0.4s						
ESLN				AML	AML		
	comp=E,4310μm,0.4s						
HCRL	**Carlentini**	**1.11**	**253**	*i* P	**Pn**	**06 27 43.6**	**-1.9**
HCRL				S	**Sn**	**06 27 56.6**	**-3.0**
HCRL				AML	AML		
	comp=E,81000μm,0.2s						
HCRL				AML	AML		
	comp=N,38950μm,1.2s						
HCRL				AML	AML		
	comp=E,81000μm,0.2s						
HCRL				AML	AML		
	comp=N,38950μm,1.2s						
HCRL				AML	AML		
	comp=N,38950μm,1.2s						
HCRL				AML	AML		
	comp=E,81000μm,0.2s						
SSY	**Sortino**	**1.12**	**247**	*e*P	**Pn**	**06 27 43.4**	**-2.3**
SSY				AML	AML		
	comp=E,7070μm,1.1s						
SSY				AML	AML		
	comp=N,12920μm,0.2s						
SSY				AML	AML		
	comp=E,7070μm,1.1s						
SSY				AML	AML		
	comp=N,12920μm,0.2s						
SSY				AML	AML		
	comp=E,7070μm,1.1s						
SSY				AML	AML		
	comp=N,12920μm,0.2s						
HAVL	**Avola**	**1.18**	**237**	*i* P	**Pn**	**06 27 44.2**	**-2.3**
HAVL				S	**Sn**	**06 27 57.6**	**-3.9**
HAVL				AML	AML		
	comp=E,12700μm,0.2s						
HAVL				AML	AML		
	comp=N,14300μm,0.8s						
HAVL				AML	AML		
	comp=E,12700μm,0.2s						
HAVL				AML	AML		
	comp=N,14300μm,0.8s						
HAVL				AML	AML		
	comp=E,12700μm,0.2s						
HAVL				AML	AML		
	comp=N,14300μm,0.8s						
HLNI	**Lentini**	**1.21**	**258**	*i* P	**Pn**	**06 27 45.1**	**-1.8**
HLNI				AML	AML		
	comp=E,30100μm,0.9s						
HLNI				AML	AML		
	comp=N,24750μm,1.6s						
HLNI				AML	AML		
	comp=E,30100μm,0.9s						
HLNI				AML	AML		
	comp=N,24750μm,1.6s						
HLNI				AML	AML		
	comp=E,30100μm,0.9s						
HLNI				AML	AML		
	comp=N,24750μm,1.6s						
ECNV	**Catenanuova**	**1.31**	**270**	P	**Pn**	**06 27 48.2**	**-0.1**
ECNV	**Catenanuova**	**1.31**	**270**	P	**Pn**	**06 27 48.2**	**-0.1**
ECNV				AML	AML		
	comp=E,9810μm,0.4s						
ECNV				AML	AML		
	comp=N,12150μm,0.6s						
ECNV				AML	AML		
	comp=E,9810μm,0.4s						
ECNV				AML	AML		
	comp=N,12150μm,0.6s						
ECNV				AML	AML		
	comp=E,9810μm,0.4s						
ECNV				AML	AML		
	comp=N,12150μm,0.6s						
VPL	**Vulcano Piano**	**1.33**	**306**	⇓*i*P	**Pn**	**06 27 48.9**	**+0.3**
VPL	**Vulcano Piano**	**1.33**	**306**	*i* P	**Pn**	**06 27 48.9**	**+0.3**
VPL				AML	AML		
	comp=E,15400μm,0.6s						
VPL				AML	AML		
	comp=N,14850μm,0.4s						
VPL				AML	AML		
	comp=E,15400μm,0.6s						
VPL				AML	AML		
	comp=N,14850μm,0.4s						
VPL				AML	AML		
	comp=E,15400μm,0.6s						
VPL				AML	AML		
	comp=N,14850μm,0.4s						
MNO	**Monte Soro**	**1.36**	**284**	P	**Pn**	**06 27 49.5**	**+0.4**
MNO	**Monte Soro**	**1.36**	**284**	P	**Pn**	**06 27 49.5**	**+0.4**
LLI	**Lipari**	**1.40**	**307**	P	**Pn**	**06 27 49.0**	**-0.4**
LLI	**Lipari**	**1.40**	**307**	P	**Pn**	**06 27 50.0**	**+0.5**
LLI				AML	AML		
	comp=E,6435μm,0.5s						
LLI				AML	AML		
	comp=N,8435μm,0.2s						
LLI				AML	AML		
	comp=E,6435μm,0.5s						
LLI				AML	AML		
	comp=N,8435μm,0.2s						
LLI				AML	AML		
	comp=N,8435μm,0.2s						
LLI				AML	AML		
	comp=E,6435μm,0.5s						
HMDC	**Modica**	**1.42**	**243**	*i* P	**Pn**	**06 27 47.8**	**-2.0**
HMDC				S	**Sn**	**06 28 04.3**	**-3.1**
HMDC				AML	AML		
	comp=E,9150μm,0.4s						
HMDC				AML	AML		
	comp=N,13000μm,0.3s						
HMDC				AML	AML		
	comp=E,9150μm,0.4s						
HMDC				AML	AML		
	comp=N,13000μm,0.3s						
HMDC				AML	AML		
	comp=E,9150μm,0.4s						
HMDC				AML	AML		
	comp=N,13000μm,0.3s						
GALF	**Gagliano Caste**	**1.43**	**275**	P	**Pn**	**06 27 50.2**	**+0.3**
GALF	**Gagliano Caste**	**1.43**	**275**	P	**Pn**	**06 27 50.2**	**+0.3**
GALF				AML	AML		
	comp=E,6390μm,0.3s						
GALF				AML	AML		
	comp=N,4170μm,0.6s						
GALF				AML	AML		
	comp=E,6390μm,0.3s						
GALF				AML	AML		
	comp=N,4170μm,0.6s						
GALF				AML	AML		
	comp=E,6390μm,0.3s						
GALF				AML	AML		
	comp=N,4170μm,0.6s						
SERS	**Sersale**	**1.45**	**10**	P	**Pb**	**06 27 51.8**	**-0.9**
SERS	**Sersale**	**1.45**	**10**	P	**Pb**	**06 27 51.8**	**-0.9**
SERS				AML	AML		
	comp=E,683μm,0.5s						
SERS				AML	AML		
	comp=N,710μm,0.4s						
SERS				AML	AML		
	comp=E,683μm,0.5s						
SERS				AML	AML		
	comp=N,710μm,0.4s						
SERS				AML	AML		
	comp=E,683μm,0.5s						
SERS				AML	AML		
	comp=N,710μm,0.4s						
MSFR	**San Fratello**	**1.47**	**287**	⇓*i*P	**Pn**	**06 27 50.8**	**+0.3**
MSFR	**San Fratello**	**1.47**	**287**	*i* P	**Pn**	**06 27 50.8**	**+0.3**
MSFR				AML	AML		
	comp=E,1430μm,1.0s						
MSFR				AML	AML		
	comp=N,1125μm,1.3s						
MSFR				AML	AML		
	comp=E,1430μm,1.0s						
MSFR				AML	AML		
	comp=N,1125μm,1.3s						
MSFR				AML	AML		
	comp=N,1125μm,1.3s						
MSFR				AML	AML		
	comp=E,1430μm,1.0s						
CAGR	**Agira**	**1.48**	**271**	P	**Pn**	**06 27 51.5**	**+0.9**
CAGR	**Agira**	**1.48**	**271**	P	**Pn**	**06 27 51.5**	**+0.9**
CAGR				AML	AML		
	comp=E,8055μm,0.4s						
CAGR				AML	AML		

comp=N,6680μm,0.5s
CAGR AML AML
comp=N,6680μm,0.5s
CAGR AML AML
comp=E,8055μm,0.4s
ISTR Stromboli Gino 1.50 322 P **Pn 06 27 50.0 -0.8**
ISTR Stromboli Gino 1.50 322 P **Pn 06 27 51.0 +0.2**
ISTR AML AML
comp=E,1385μm,0.5s
ISTR AML AML
comp=N,1700μm,0.3s
ISTR AML AML
comp=E,1385μm,0.5s
ISTR AML AML
comp=N,1700μm,0.3s
ISTR AML AML
comp=E,1385μm,0.5s
ISTR AML AML
comp=N,1700μm,0.3s
VAE Valguarnera 1.56 266 Pg **Pb 06 27 53.1 -1.3**
comp=N,22nm,0.3s,baz=63,slow=7.3,SNR=7.0
VAE Lg Lg 06 28 10.8
comp=N,113nm,0.3s,baz=346,slow=8.6,SNR=14
TIP Timpagrande 1.60 11 P **Pb 06 27 53.7 -1.5**
TIP S **Sb 06 28 14.5 -0.5**
TIP Timpagrande 1.60 11 P **Pn 06 27 53.5 +1.2**
TIP S **Sb 06 28 14.5 -0.5**
TIP Timpagrande 1.60 11 P **Pn 06 27 53.5 +1.2**
TIP AML AML
comp=E,430μm,0.4s
TIP AML AML
comp=N,560μm,1.3s
TIP AML AML
comp=N,560μm,1.3s
TIP AML AML
comp=E,430μm,0.4s
IFIL Filicudi I Eol 1.71 305 P **Pn 06 27 53.7 0.0**
IFIL Filicudi I Eol 1.71 305 P **Pn 06 27 53.7 0.0**
LADO San Nicola del 1.74 16 P **Pb 06 27 56.0 -1.6**
LADO San Nicola del 1.74 16 P **Pb 06 27 56.0 -1.6**
LADO AML AML
comp=E,234μm,0.4s
LADO AML AML
comp=N,219μm,0.3s
LADO AML AML
comp=N,219μm,0.3s
LADO AML AML
comp=E,234μm,0.4s
PLLN Pollina 1.80 283 P **Pn 06 27 55.7 +0.7**
PLLN Pollina 1.80 283 P **Pn 06 27 55.7 +0.7**
IACL Alicudi 1.83 301 ⇓*i*P **Pn 06 27 55.4 -0.1**
IACL Alicudi 1.83 301 *i* P **Pn 06 27 55.4 -0.1**
IACL AML AML
comp=E,1650μm,0.2s
IACL AML AML
comp=N,1865μm,0.3s
IACL AML AML
comp=E,1650μm,0.2s
IACL AML AML
comp=N,1865μm,0.3s
PIPA Pietrapaola 1.91 11 AML AML
comp=E,938μm,0.2s
PIPA AML AML
comp=E,914μm,0.2s
PIPA AML AML
comp=N,678μm,0.6s
PIPA AML AML
comp=N,642μm,0.6s
PIPA AML AML
comp=E,914μm,0.2s
PIPA AML AML
comp=E,938μm,0.2s
PIPA AML AML
comp=N,678μm,0.6s
PIPA AML AML
comp=N,642μm,0.6s
SOLUN Solunto 2.29 283 AML AML
comp=E,190μm,0.5s
SOLUN AML AML
comp=N,154μm,0.9s
SOLUN AML AML
comp=E,190μm,0.5s
SOLUN AML AML
comp=N,154μm,0.9s
WDD Wied Dalam 2.30 220 P **Pn 06 27 59.9 -2.0**
WDD AML AML
comp=E,3505μm,0.4s
WDD AML AML
comp=N,2520μm,0.4s
WDD AML AML
comp=N,2520μm,0.4s
WDD AML AML
comp=E,3505μm,0.4s
BULG Bulgheria - Ca 2.58 343 AML AML
comp=E,470μm,0.4s
BULG AML AML
comp=N,746μm,0.3s
BULG AML AML
comp=N,746μm,0.3s
BULG AML AML
comp=E,470μm,0.4s
USI Ustica 2.74 295 AML AML
comp=E,468μm,1.3s
USI AML AML
comp=N,644μm,0.4s
USI AML AML
comp=N,644μm,0.4s
USI AML AML
comp=E,468μm,1.3s
CRAC Craco 2.75 1 AML AML
comp=E,1230μm,0.6s
CRAC AML AML
comp=E,1230μm,0.6s
CRAC AML AML
comp=N,660μm,0.4s
CRAC AML AML
comp=N,660μm,0.4s
SCTE Santa Cesarea 2.96 33 AML AML
comp=N,162μm,0.8s
SCTE AML AML
comp=E,167μm,0.4s
SCTE AML AML
comp=E,167μm,0.4s
SCTE AML AML
comp=N,162μm,0.8s
MIGL Miglionico 2.99 1 AML AML
comp=E,1029μm,1.2s
MIGL AML AML
comp=E,1029μm,1.2s
MIGL AML AML
comp=N,1100μm,0.3s
MIGL AML AML
comp=N,1100μm,0.3s
TAR1 Taranto 3.00 14 *i* Pn **Pn 06 28 10.5 -1.0**
TAR1 Sn **Sn 06 28 43.7 -2.7**
MATE Matera 3.05 5 ⇓*i*P **Pn 06 28 13.2 +1.0**
MATE Matera 3.05 5 ⇓*i*P **Pn 06 28 13.2 +1.0**
MATE S **Sn 06 28 46.2 -1.3**
MATE Matera 3.05 5 AML AML
comp=N,604μm,0.4s
MATE AML AML
comp=E,566μm,1.1s
MATE AML AML
comp=N,604μm,0.4s
MATE AML AML
comp=E,566μm,1.1s
MASS Massafra 3.08 11 *i* Pn **Pn 06 28 12.6 0.0**
MASS Sn **Sn 06 28 47.4 -1.0**
CGL1 Ceglie Messapi 3.16 16 *e*Pn **Pn 06 28 14.0 +0.2**
CGL1 Sn **Sn 06 28 49.4 -1.0**
ACER Acerenza 3.19 354 AML AML
comp=N,590μm,0.5s
ACER AML AML
comp=E,692μm,0.5s
ACER AML AML
comp=N,590μm,0.5s
ACER AML AML
comp=E,692μm,0.5s
NOCI Noci 3.22 10 AML AML
comp=N,1145μm,0.2s
NOCI AML AML
comp=E,1008μm,0.3s
NOCI AML AML
comp=N,1145μm,0.2s
NOCI AML AML
comp=E,1008μm,0.3s
SG1 Sgolgore (BA) 3.24 4 *e*Pn **Pn 06 28 15.5 +0.7**
SG1 Sn **Sn 06 28 50.5 -1.8**
FASA Fasano 3.30 13 *e*Pn **Pn 06 28 15.8 +0.2**
FASA Sn **Sn 06 28 51.3 -2.3**
AMUR Altamura 3.30 3 AML AML
comp=E,1016μm,1.0s
AMUR AML AML
comp=N,831μm,0.4s
AMUR AML AML
comp=E,1016μm,1.0s
AMUR AML AML
comp=N,831μm,0.4s
VLS Valsamata 3.39 79 P **Pn 06 28 16.6 -0.3**
VLS S **Sn 06 28 54.4 -1.7**
VLS Valsamata 3.39 79 P **Pn 06 28 16.6 -0.3**
VLS S **Sn 06 28 54.4 -1.7**
VLS Valsamata 3.39 79 P **Pn 06 28 16.4 -0.5**
VLS AML AML
comp=E,138μm,0.2s
VLS AML AML
comp=N,158μm,0.6s
VLS AML AML
comp=E,138μm,0.2s
VLS AML AML
comp=N,158μm,0.6s
KEK Kerkira 3.41 51 P **Pn 06 28 16.6 -0.6**
KEK S **Sn 06 28 55.2 -1.4**
KEK Kerkira 3.41 51 P **Pn 06 28 16.6 -0.6**
KEK S **Sn 06 28 55.2 -1.4**
KEK Kerkira 3.41 51 AML AML
comp=N,39μm,0.7s
KEK AML AML
comp=E,64μm,0.8s
KEK AML AML
comp=N,39μm,0.7s
KEK AML AML
comp=E,64μm,0.8s
FSK Fiskardo 3.42 74 P **Pn 06 28 17.7 +0.4**
FSK S **Sn 06 28 54.7 -2.1**
MRVN Minervino Murg 3.45 358 AML AML
comp=E,366μm,1.5s
MRVN AML AML
comp=N,354μm,0.3s
MRVN AML AML
comp=E,366μm,1.5s
MRVN AML AML
comp=N,354μm,0.3s
BAI Bari 3.52 6 *e*Pn **Pn 06 28 19.0 +0.4**
BAI Sn **Sn 06 28 56.4 -2.7**
KFL Anninata 3.54 81 P **Pn 06 28 18.7 -0.2**
KFL S **Sn 06 28 58.1 -1.6**
KFL Anninata 3.54 81 P **Pn 06 28 18.7 -0.2**
KFL S **Sn 06 28 58.1 -1.6**
LKD2 Lefkada island 3.58 69 P **Pn 06 28 19.8 +0.2**
LKD2 S **Sn 06 28 59.6 -1.2**
LKD2 Lefkada island 3.58 69 P **Pn 06 28 19.8 +0.2**
LKD2 S **Sn 06 28 59.6 -1.2**
SGD Sagiada 3.63 55 P **Pn 06 28 20.2 0.0**
SGD Sagiada 3.63 55 P **Pn 06 28 20.2 0.0**
SRN Sarande 3.64 50 P **Pn 06 28 19.6 -0.7**
SRN S **Sn 06 29 00.9 -1.2**
SRN Sarande 3.64 50 P **Pn 06 28 19.6 -0.7**
SRN S **Sn 06 29 00.9 -1.2**
PDO Prodromos 3.93 74 P **Pn 06 28 25.1 +0.8**
PDO S **Sn 06 29 08.1 -1.2**
PDO Prodromos 3.93 74 P **Pn 06 28 25.1 +0.8**
PDO S **Sn 06 29 08.1 -1.2**
DSL Palaion Diasel 4.02 66 P **Pn 06 28 26.3 +0.7**
DSL S **Sn 06 29 10.2 -1.4**
DSL Palaion Diasel 4.02 66 P **Pn 06 28 26.3 +0.7**
DSL S **Sn 06 29 10.2 -1.4**
JAN Janina 4.07 58 P **Pn 06 28 26.4 +0.2**
JAN Janina 4.07 58 P **Pn 06 28 26.4 +0.2**
MS1 Monte Sant'Ang 4.11 356 *e*Pn **Pn 06 28 28.2 +1.4**
MS1 Sn **Sn 06 29 11.9 -1.8**
MSAG Monte S. Angel 4.11 355 P **Pn 06 28 27.5 +0.6**
MSAG Monte S. Angel 4.11 355 P **Pn 06 28 27.5 +0.6**
SGRT San Giovanni R 4.17 354 P **Pn 06 28 28.4 +0.8**
SGRT San Giovanni R 4.17 354 P **Pn 06 28 28.4 +0.8**
PVO Paravola 4.20 75 P **Pn 06 28 29.1 +1.2**
PVO S **Sn 06 29 14.5 -1.3**
PVO Paravola 4.20 75 P **Pn 06 28 29.1 +1.2**
PVO S **Sn 06 29 14.5 -1.3**
AMT Artemida-Makis 4.25 89 P **Pn 06 28 29.1 +0.4**
AMT S **Sn 06 29 16.3 -0.9**
AMT Artemida-Makis 4.25 89 P **Pn 06 28 29.1 +0.4**
AMT S **Sn 06 29 16.3 -0.9**
PYL PYLOS 4.35 98 P **Pn 06 28 30.1 0.0**
PYL S **Sn 06 29 19.2 -0.5**
PYL PYLOS 4.35 98 P **Pn 06 28 30.1 0.0**
PYL S **Sn 06 29 19.2 -0.5**
ITM Ithomi 4.45 94 P **Pn 06 28 32.0 +0.5**
ITM Ithomi 4.45 94 P **Pn 06 28 32.0 +0.5**
ITM Ithomi 4.45 94 P **Pn 06 28 31.9 +0.4**
EFP Efpalio 4.45 78 P **Pn 06 28 32.1 +0.6**
EFP Efpalio 4.45 78 P **Pn 06 28 32.1 +0.6**
EVR Evrytania 4.48 71 P **Pn 06 28 33.0 +1.0**
EVR Evrytania 4.48 71 P **Pn 06 28 33.0 +1.0**
ANX Ano Chora 4.49 76 P **Pn 06 28 33.3 +1.2**
ANX Ano Chora 4.49 76 P **Pn 06 28 33.3 +1.2**
PENT Pentalofos 4.54 54 P **Pn 06 28 33.3 +0.6**
PENT Pentalofos 4.54 54 P **Pn 06 28 33.3 +0.6**
SERG Sergoula 4.57 78 P **Pn 06 28 33.9 +0.8**
SERG Sergoula 4.57 78 P **Pn 06 28 33.9 +0.8**
NEST Nestorio 4.60 51 P **Pn 06 28 34.8 +1.2**
NEST Nestorio 4.60 51 P **Pn 06 28 34.8 +1.2**
TIR Tirane 4.62 35 ⇑*i*P **Pn 06 28 33.5 -0.2**
TIR Tirane 4.62 35 S **Sn 06 29 23.4 -2.8**
TIR Tirane 4.62 35 S **Sn 06 29 23.4 -2.8**
THL Klokotos Trika 4.84 64 P **Pn 06 28 37.8 +1.0**
THL Klokotos Trika 4.84 64 P **Pn 06 28 37.8 +1.0**
DYR Agios Nikonas 4.84 98 P **Pn 06 28 37.1 +0.2**
DYR S **Sn 06 29 31.6 -0.2**
DYR Agios Nikonas 4.84 98 P **Pn 06 28 37.1 +0.2**
DYR S **Sn 06 29 31.6 -0.2**
ULC Ulcinj 4.88 26 ⇓*i*Pn **Pn 06 28 36.4 -1.0**
ULC *e*Sn **Sn 06 29 28.9 -4.0**
ULC Ulcinj 4.88 26 ⇓*i*Pn **Pn 06 28 36.4 -1.0**
ULC *e*Sn **Sn 06 29 28.9 -4.0**
AGG Agios Georgios 4.90 71 P **Pn 06 28 39.3 +1.6**
AGG Agios Georgios 4.90 71 P **Pn 06 28 39.3 +1.6**
OHR Ohrid 4.91 43 *e*Pn **Pn 06 28 38.4 +0.7**
OHR *e*Sn **Sn 06 29 32.0 -1.4**
DSF Desfina 4.94 79 P **Pn 06 28 39.4 +1.3**
DSF Desfina 4.94 79 P **Pn 06 28 39.4 +1.3**
FNA Florina 5.02 49 P **Pn 06 28 40.4 +1.0**
DRME Dracevica, Mon 5.06 25 ⇑*i*Pn **Pn 06 28 39.2 -0.6**
DRME *e*Sn **Sn 06 29 33.3 -3.9**
DRME Dracevica, Mon 5.06 25 ⇑*i*Pn **Pn 06 28 39.2 -0.6**
DRME *e*Sn **Sn 06 29 33.3 -3.9**
BUM Brajici-Budva 5.08 22 ⇓*i*Pn **Pn 06 28 39.5 -0.6**
BUM *e*Sn **Sn 06 29 33.8 -3.8**
BUM Brajici-Budva 5.08 22 ⇓*i*Pn **Pn 06 28 39.5 -0.6**
BUM *e*Sn **Sn 06 29 33.8 -3.8**
HCY Herceg Novi 5.10 18 ⇑*i*Pn **Pn 06 28 39.6 -0.8**
HCY *e*Sn **Sn 06 29 34.4 -3.8**
HCY Herceg Novi 5.10 18 ⇑*i*Pn **Pn 06 28 39.6 -0.8**
HCY *e*Sn **Sn 06 29 34.4 -3.8**
PHP Peshkopia 5.15 36 P **Pn 06 28 41.1 0.0**
PHP Peshkopia 5.15 36 P **Pn 06 28 41.1 0.0**
PDG Podgorica 5.30 24 ⇓*i*P **Pn 06 28 42.5 -0.6**
PDG Podgorica 5.30 24 ⇓*i*P **Pn 06 28 42.5 -0.6**
PDG Podgorica 5.30 24 ⇑*i*Pn **Pn 06 28 42.7 -0.4**
PDG *e*Sn **Sn 06 29 39.2 -3.9**
PDG S **Sn 06 29 40.5 -2.6**
TTG Podgorica 5.30 24 ⇑*i*Pn **Pn 06 28 42.7 -0.4**
TTG *e*Sn **Sn 06 29 39.2 -3.9**
CEME Cevo 5.31 21 ⇓*i*Pn **Pn 06 28 42.7 -0.6**
CEME *e*Sn **Sn 06 29 39.1 -4.3**
CEME Cevo 5.31 21 ⇓*i*Pn **Pn 06 28 42.7 -0.6**
CEME *e*Sn **Sn 06 29 39.1 -4.3**
TREB Trebinje 5.33 16 *e*Pn **Pn 06 28 41.8 -1.7**
VLI Veliai 5.33 98 P **Pn 06 28 45.0 +1.5**
VLI Veliai 5.33 98 P **Pn 06 28 45.0 +1.5**
LKR Lokris 5.34 77 P **Pn 06 28 44.9 +1.3**
LKR Lokris 5.34 77 P **Pn 06 28 44.9 +1.3**
STON Ston 5.36 11 *e*Pn **Pn 06 28 42.5 -1.4**
STON Sn **Sn 06 29 38.8 -5.7**
STON Ston 5.36 11 *e*Pn **Pn 06 28 42.4 -1.4**
STON Sn **Sn 06 29 38.7 -5.7**
DID Didima 5.46 89 P **Pn 06 28 45.9 +0.5**
DID Didima 5.46 89 P **Pn 06 28 45.9 +0.5**
KYTH Kithira 5.52 102 P **Pn 06 28 47.3 +1.1**
NKME Niksic 5.52 20 ⇑*i*Pn **Pn 06 28 45.5 -0.7**
NKME *e*Sn **Sn 06 29 44.5 -4.1**
NKME Niksic 5.52 20 ⇑*i*Pn **Pn 06 28 45.5 -0.7**
NKME *e*Sn **Sn 06 29 44.5 -4.1**
VILL Villia 5.53 82 P **Pn 06 28 47.5 +1.2**
VILL Villia 5.53 82 P **Pn 06 28 47.5 +1.2**
BRY Bratogost 5.54 17 ⇑*i*Pn **Pn 06 28 45.8 -0.8**
BRY *e*Sn **Sn 06 29 45.3 -4.0**
BRY Bratogost 5.54 17 ⇑*i*Pn **Pn 06 28 45.8 -0.8**
BRY *e*Sn **Sn 06 29 45.3 -4.0**
NKY Niksic 5.58 20 ⇓*i*Pn **Pn 06 28 46.7 -0.3**
NKY *e*Sn **Sn 06 29 45.9 -4.1**
NKY Niksic 5.58 20 ⇓*i*Pn **Pn 06 28 46.7 -0.3**
NKY *e*Sn **Sn 06 29 45.9 -4.1**
NEO Neokhori 5.65 70 P **Pn 06 28 48.4 +0.5**
NEO Neokhori 5.65 70 P **Pn 06 28 48.4 +0.5**
PVY Plav 5.69 28 *e*Pn **Pn 06 28 48.0 -0.6**
PVY *e*Sn **Sn 06 29 48.1 -4.8**
PVY Plav 5.69 28 *e*Pn **Pn 06 28 48.0 -0.6**
KOME Kolasin 5.77 24 ⇑*i*Pn **Pn 06 28 49.4 -0.2**
KOME *e*Sn **Sn 06 29 50.2 -4.5**
KOME Kolasin 5.77 24 ⇑*i*Pn **Pn 06 28 49.4 -0.2**
BEY Berane 5.91 26 ⇑*i*Pn **Pn 06 28 51.2 -0.4**
IVA Berane 5.91 26 ⇑*i*Pn **Pn 06 28 51.2 -0.4**
IVA *e*Sn **Sn 06 29 53.3 -4.9**
UPM Unac-Piva 5.92 18 ⇓*i*Pn **Pn 06 28 51.7 0.0**
UPM *e*Sn **Sn 06 29 54.2 -4.3**
UPM Unac-Piva 5.92 18 ⇓*i*Pn **Pn 06 28 51.7 0.0**
KEST Kesra 5.94 254 Pn **Pn 06 28 52.6 +0.6**
comp=N,2.6nm,0.3s,baz=20,slow=6.9,SNR=25
KEST Sn **Sn 06 29 55.5 -3.6**
comp=N,0.7nm,0.3s,baz=48,slow=18,SNR=2.9
VAY Valandovo 6.07 50 *e*Pn Pn 06 28 47.7 -6.0
STIP Stip 6.07 46 *e*Pn **Pn 06 28 55.2 +1.6**
PLE Pljevlja 6.16 21 ⇑*i*Pn **Pn 06 28 55.0 -0.1**
PLE *e*Sn **Sn 06 30 00.6 -3.9**
PLE Pljevlja 6.16 21 ⇑*i*Pn **Pn 06 28 55.0 -0.1**
PLE *e*Sn **Sn 06 30 00.6 -3.9**
SJES Sjenica 6.28 25 *e*Pn **Pn 06 28 57.5 +0.8**
SRS Serrai 6.61 56 *e*Pn **Pn 06 29 01.4 +0.3**
IVAS Ivanjica 6.62 25 *e*Pn **Pn 06 29 00.8 -0.5**
BBLS Lazići 6.67 19 *e*Pn **Pn 06 29 02.0 +0.1**
BARS Barje 6.67 37 *e*Pn **Pn 06 29 01.5 -0.4**
HAPS Han Pijesak,BI 6.76 16 *e*Pn **Pn 06 29 02.7 -0.6**
NVLJ Novalja 7.04 351 Sn **Sn 06 30 22.0 -3.8**
NVLJ Novalja 7.04 351 Sn **Sn 06 30 22.0 -3.8**
DIVS Divibare 7.04 22 *e*Pn **Pn 06 29 06.3 -0.8**
GRUS Gruza 7.09 26 *e*Pn **Pn 06 29 08.1 +0.4**
BLY Banja Luka 7.16 5 ⇑*i*P **Pn 06 29 10.2 +1.6**
BLY Banja Luka 7.16 5 ⇑*i*P **Pn 06 29 10.2 +1.6**
VTS Vitosha 7.23 44 ⇓*i*P **Pn 06 29 10.5 +0.7**
VTS Vitosha 7.23 44 ⇓*i*P **Pn 06 29 10.5 +0.7**
IDI Anoyia 7.25 106 Pn **Pn 06 29 12.1 +2.1**
comp=N,1.7nm,0.3s,baz=300,slow=14,SNR=9.8
IDI Sn **Sn 06 30 26.8 -4.4**
comp=N,10nm,0.3s,baz=132,slow=24,SNR=14
IDI Anoyia 7.25 106 ⇑*i*P **Pn 06 29 10.3 +0.3**
IDI Anoyia 7.25 106 S **Sn 06 30 27.1 -4.2**
IDI Anoyia 7.25 106 ⇑*i*P **Pn 06 29 10.3 +0.3**
BOVS Bovan 7.26 32 *e*Pn **Pn 06 29 08.2 -1.8**
TRUS Trudelj 7.28 24 *e*Pn **Pn 06 29 10.0 -0.3**
APE Apeiranthos 7.33 91 ⇑*i*P **Pn 06 29 10.7 -0.3**
APE Apeiranthos 7.33 91 ⇑*i*P **Pn 06 29 10.7 -0.3**
ZAPS Zavoj 7.41 38 *e*Pn **Pn 06 29 12.3 +0.2**
ZAGS Zajecar 7.63 34 *e*Pn **Pn 06 29 14.2 -0.9**
MDVR Moldovita 8.22 28 ⇑*i*P **Pn 06 29 22.2 -1.1**
MDVR Moldovita 8.22 28 ⇑*i*P **Pn 06 29 22.2 -1.1**
BZS Buzias 8.92 25 ⇑*i*P **Pn 06 29 32.1 -0.6**
BZS Buzias 8.92 25 ⇑*i*P **Pn 06 29 32.1 -0.6**
SIRR Siria 9.51 23 ⇓*i*P **Pn 06 29 41.2 +0.4**
SIRR Siria 9.51 23 ⇓*i*P **Pn 06 29 41.2 +0.4**
ARR Arges 9.93 36 ⇓*i*P **Pn 06 29 46.0 -0.6**
ARR Arges 9.93 36 ⇓*i*P **Pn 06 29 46.0 -0.6**
VOIR 10.17 37 ⇓*i*P **Pn 06 29 49.9 -0.1**
VOIR 10.17 37 ⇓*i*P **Pn 06 29 49.9 -0.1**
MLR Muntele Rosu 10.65 39 Pn **Pn 06 29 58.8 +2.2**
comp=N,0.1nm,0.3s,baz=231,slow=9.2,SNR=5.3
MLR LR LR 06 35 40.9
comp=N,14nm,18.5s,baz=188,slow=46
MLR Muntele Rosu 10.65 39 ⇑*i*P **Pn 06 29 55.7 -0.9**
MLR Muntele Rosu 10.65 39 ⇑*i*P **Pn 06 29 55.7 -0.9**
VRI Vrincioaia 11.31 40 ⇑*i*P **Pn 06 30 05.2 -0.3**
VRI Vrincioaia 11.31 40 ⇑*i*P **Pn 06 30 05.2 -0.3**
AKASG Malin Array Be 15.98 31 Pn **P 06 31 11.8 +0.1**
comp=N,1.2nm,0.3s,baz=224,slow=10,SNR=20
ESDC Sonseca Array 16.02 284 Pn **P 06 31 13.6 +1.4**
comp=N,0.5nm,0.3s,baz=89,slow=12,SNR=6.4
KBZ Khabaz 20.99 65 P Pn 06 32 09.0 -0.3
comp=N,3.0nm,0.9s,baz=288,slow=7.3,SNR=4.2
HFS Hagfors 22.61 357 P **P 06 32 22.8 -1.1**
comp=N,0.9nm,0.6s,baz=172,slow=12,SNR=3.3
FINES FINESS Array B 24.62 11 P **P 06 32 43.6 +0.3**
comp=N,1.3nm,0.6s,baz=195,slow=10,SNR=6.6
TORD Torodi Ar. Bea 27.65 212 P **P 06 33 12.3 +1.2**
comp=N,0.3nm,0.7s,baz=28,slow=9.4,SNR=2.2
AKTO Aktyubinsk 32.15 53 P **P 06 33 51.6 +1.0**
comp=N,2.5nm,0.4s,baz=272,slow=9.3,SNR=7.0
BVAR Borovoye Array 40.00 50 P **P 06 34 59.4 +1.7**
comp=N,1.4nm,0.6s,baz=274,slow=5.6,SNR=8.9
KURBB Kurchatov Arra 45.20 53 P **P 06 35 41.3 +1.4**
comp=N,1.5nm,0.6s,baz=282,slow=9.0,SNR=8.5
MKAR Makanchi Array 48.39 57 P **P 06 36 06.0 +1.0**
comp=N,0.7nm,0.4s,baz=282,slow=6.4,SNR=15
ZALV Zalesovo Beam 48.51 47 P **P 06 36 07.2 +1.5**
comp=N,3.6nm,0.6s,baz=281,slow=8.9,SNR=7.9
YKA Yellowknife Ar 72.76 338 P **P 06 38 50.5 -0.4**
comp=N,0.2nm,0.6s,baz=37,slow=5.6,SNR=3.5

IDC 15 06:31:02.6±3.5, 2°.56N×90°.49E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.4/70, mbtmp3.8/4, MS2.9/1, Ms1 2.9/1, ms1mx2.4/63, Error ellipse: s-maj=127.6km s-min=30.2km az=59.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S3	**Diego Garcia H**	**20.61**	**240**	T	T	06 56 44.0	
baz=59,slow=74,SNR=13							
H08S2	**Diego Garcia H**	**20.62**	**240**	T	T	06 56 44.1	
baz=59,slow=74,SNR=7.2							
H08S1	**Diego Carcia H**	**20.63**	**240**	T	T	06 56 47.7	
baz=59,slow=74,SNR=6.0							
MKAR	**Makanchi Array**	**44.63**	**352**	P	P	06 39 16.6	-0.3
0.5nm,0.5s,baz=160,slow=9.5,SNR=3.4							
SONM	**Songino Array**	**47.15**	**15**	P	P	06 39 37.3	+0.4
2.5nm,0.6s,baz=195,slow=9.8,SNR=13							
WRA	**Warramunga Arr**	**48.49**	**120**	P	P	06 39 47.3	-0.4
0.5nm,0.7s,baz=297,slow=8.5,SNR=5.0							
KSRS	**Korea Array**	**48.84**	**40**	LR	LR	07 01 35.7	
comp=Z,13nm,18.6s,baz=35,slow=38							
KURBB	**Kurchatov Arra**	**48.95**	**350**	P	P	06 39 50.1	-0.5
0.8nm,0.7s,baz=167,slow=7.0,SNR=6.9							
TXAR	**Lajitas Array**	**145.51**	**22**	PKPbc	PKPbc	06 50 43.1	-0.6
0.4nm,0.6s,baz=231,slow=1.2,SNR=6.1							

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*SKHL **15** 06:39:59.9±0.1, 46°.07N×148°.39E, h35km±2km, mb4.4/6*
*IDC **15** 06:40:23.6±4.8, 45°.71N×146°.81E, h179km±46km, mb3.0/8, mb1 3.4/9, mb1mx3.1/66, mbtmp3.5/9, MS2.4/3, Ms1 2.4/3, ms1mx2.3/18, Error ellipse: s-maj=26.1km s-min=17.2km az=149.0*

ISC 15 06:40:01.2±3.7, 46°.01N±0°.05×148°.1E±0°.1, h17km±25km, n25, σ0°79/18, mb3.6/8, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.80**	**191**	*i* P	**Pb**	**06 40 16.0**	**-0.6**
KUR				AMB	AMB	06 40 18.0	
126nm,0.4s							
KUR				AMB	AMB	06 40 18.0	
32nm,0.4s							
KUR				AMB	AMB	06 40 18.0	
173nm,0.4s							
KUR				*e*S	**Sb**	**06 40 28.0**	**+0.9**
KUR				A	A	06 40 30.0	
579nm,0.2s							
KUR				A	A	06 40 30.0	
682nm,0.2s							
SHO	**Shikotan**	**2.32**	**203**	*i* P	**Pn**	**06 40 38.1**	**-0.6**
SHO				AMB	AMB	06 40 44.0	
51nm,0.4s							

SHO				AMB	AMB	06 40 44.0	
	40nm,0.4s						
SHO				AMB	AMB	06 40 44.0	
	64nm,0.4s						
SHO				*i* S	**Sn**	**06 41 06.8**	**0.0**
SHO				A	A	06 41 12.0	
	174nm,0.4s						
SHO				A	A	06 41 12.0	
	184nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**2.53**	**219**	*e*P	**Pn**	**06 40 41.3**	**-0.2**
YUK				AMB	AMB	06 40 49.0	
	98nm,0.4s						
YUK				AMB	AMB	06 40 49.0	
	105nm,0.4s						
YUK				*e*S	**Sn**	**06 41 12.0**	**0.0**
YUK				A	A	06 41 14.0	
	250nm,0.4s						
YUK				A	A	06 41 14.0	
	129nm,0.4s						
LAGR	**Lagunnoye**	**2.55**	**221**	*e*P	**Pn**	**06 40 42.4**	**+0.6**
LAGR				AMB	AMB	06 40 43.0	
	84nm,0.5s						
LAGR				AMB	AMB	06 40 43.0	
	181nm,0.5s						
LAGR				AMB	AMB	06 40 43.0	
	110nm,0.5s						
LAGR				*e*S	**Sn**	**06 41 12.0**	**-0.4**
LAGR				A	A	06 41 15.0	
	501nm,0.5s						
LAGR				A	A	06 41 15.0	
	285nm,0.5s						
GRPR	**Tuman**	**2.60**	**220**	*e*P	**Pn**	**06 40 42.0**	**-0.6**
GRPR				AMB	AMB	06 40 46.0	
	128nm,0.5s						
GRPR				*e*S	**Sn**	**06 41 13.0**	**-0.8**
GRPR				A	A	06 41 17.0	
	176nm,0.4s						
GRPR				A	A	06 41 17.0	
	187nm,0.4s						
YSS	**Yuzh-Sakhalins**	**3.80**	**286**	*i* P	**Pn**	**06 40 59.9**	**+0.9**
YSS				AMB	AMB	06 41 02.0	
	30nm,0.5s						
YSS				*e*S	**Sn**	**06 41 42.6**	**-0.7**
ASAJ	**Asahikawa**	**4.33**	**246**	LR	LR	06 42 52.3	
	comp=Z,110nm,18.1s,baz=153,slow=44						
TYV	**Tymovskoe**	**6.05**	**325**	*e*P	**Pn**	**06 41 30.4**	**+0.5**
TYV				*e*S	**Sn**	**06 42 36.8**	**-1.9**
KLR	**Kul'dur**	**11.49**	**292**	LR	LR	06 47 31.8	
	comp=Z,5.0nm,18.3s,baz=94,slow=40						
USRK	**Ussuriysk Ar.**	**11.52**	**267**	P	Pn	06 42 51.8	+6.9
	0.1nm,0.3s,baz=64,slow=13,SNR=5.9						
KSRS	**Korea Array**	**17.28**	**247**	LR	LR	06 49 39.5	
	comp=Z,27nm,18.9s,baz=162,slow=34						
H11N2	**WAKE ISLAND Hy**	**30.45**	**143**	T	T	07 17 11.5	
	baz=335,slow=76,SNR=70						
H11N1	**WAKE ISLAND Hy**	**30.46**	**143**	T	T	07 17 14.6	
	baz=335,slow=76,SNR=71						
H11N3	**WAKE ISLAND Hy**	**30.46**	**143**	T	T	07 17 12.7	
	baz=335,slow=76,SNR=67						
H11S1	**WAKE ISLAND Hy**	**31.46**	**145**	T	T	07 18 33.9	
	baz=336,slow=76,SNR=80						
H11S3	**WAKE ISLAND Hy**	**31.47**	**145**	T	T	07 18 27.2	
	baz=336,slow=76,SNR=61						
H11S2	**WAKE ISLAND Hy**	**31.48**	**145**	T	T	07 18 31.1	
	baz=336,slow=76,SNR=74						
ILAR	**Eielson Array**	**39.28**	**38**	P	P	06 47 39.9	+11
	0.4nm,0.8s,baz=278,slow=8.1,SNR=4.7						
MKAR	**Makanchi Array**	**44.16**	**296**	P	**P**	**06 48 09.3**	**+0.4**
	0.2nm,0.5s,baz=77,slow=8.1,SNR=3.2						
MKAR				PcP	**PcP**	**06 49 53.9**	**+0.4**
	0.4nm,0.7s,baz=85,slow=4.6,SNR=3.6						
KURBB	**Kurchatov Arra**	**44.94**	**302**	P	**P**	**06 48 14.7**	**-0.3**
	0.3nm,0.3s,baz=70,slow=7.9,SNR=3.5						
YKA	**Yellowknife Ar**	**53.56**	**35**	P	P	06 49 30.4	+10
	0.5nm,0.8s,baz=301,slow=6.8,SNR=2.9						
NVAR	**Mina Array Bea**	**65.83**	**59**	P	P	06 50 56.4	+11
	0.5nm,0.7s,baz=284,slow=6.9,SNR=4.1						
WRA	**Warramunga Arr**	**66.82**	**194**	P	**P**	**06 50 52.3**	**+0.4**
	0.5nm,0.9s,baz=12,slow=6.4,SNR=3.8						
PDAR	**Pinedale Array**	**67.95**	**51**	P	P	06 51 09.5	+10
	0.2nm,0.5s,baz=352,slow=3.2,SNR=3.4						
TXAR	**Lajitas Array**	**80.85**	**57**	P	P	06 52 22.2	+7.8
	0.6nm,0.7s,baz=327,slow=6.5,SNR=6.0						

NEIC ***15*** *06:53:34.6±0.0, 15°.75N×95°.08W, h18km, mb4.3/81, MD4.1(MEX), After MEX.*
NEIC Felt [IV] at Salina Cruz.
MEX ***15*** *06:53:34.6±0.7, 15°.75N×95°.08W, h18km±36km, MD4.1*
ISCJB ***15*** *06:53:35.9±0.4, 16°.05N±0°.03×94°.90W±0°.03, h70km±4km, mb4.1/63, Error ellipse: s-maj=6.2km s-min=3.2km az=41.2*
IDC ***15*** *06:53:35.4±2.8, 15°.96N×94°.73W, h44km±25km, mb3.6/10, mb1 3.9/11, mb1mx3.7/44, mbtmp3.8/11, ML3.9/1, MS3.3/4, Ms1 3.3/4, ms1mx2.9/38, Error ellipse: s-maj=40.7km s-min=14.4km az=57.0*

ISC 15 06:53:35.7±0.9, 15°.93N±0°.06×95°.04W±0°.04, h51km±9km, n312, σ1°.57/311, mb4.2/63, MS3.5/3, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.04**	**261**	*i* P	Pn	06 53 50.2	-3.8
HUIG				*i* S	Sn	06 54 01.4	-6.2
HUIG	**Huatulco**	**1.04**	**261**	*i* P	Pn	06 53 50.2	-3.8
HUIG				*i* S	Sn	06 54 01.4	-6.2
CMIG	**Matias Romero**	**1.16**	**7**	P	**Pn**	**06 53 54.0**	**-1.7**
	570nm,0.3s,baz=187,slow=14,SNR=734						
CMIG				LR	LR	06 54 00.7	
	comp=Z,82nm,20.1s,baz=85,slow=22						
CMIG				S	**Sn**	**06 54 09.4**	**-1.1**
	1μm,0.3s,baz=90,slow=16,SNR=30						
PANG	**Puerto Angel**	**1.40**	**259**	*e*P	Pn	06 53 54.9	-4.0
PANG				*e*S	Sn	06 54 11.0	-5.3
PCIG		**1.77**	**97**	*i* P	**Pn**	**06 54 01.6**	**-2.4**
PCIG		**1.77**	**97**	*i* P	**Pn**	**06 54 01.6**	**-2.4**
VHO	**Vista Hermosa**	**1.98**	**305**	*i* P	**Pn**	**06 54 06.4**	**-0.6**
VHO				*i* S	**Sn**	**06 54 29.7**	**-1.0**
VHO	**Vista Hermosa**	**1.98**	**305**	*i* P	**Pn**	**06 54 06.4**	**-0.6**
VHO				*i* S	**Sn**	**06 54 29.7**	**-1.0**
TGIG		**2.02**	**65**	*e*P	**Pn**	**06 54 06.5**	**-1.0**
TGIG				*e*S	**Sn**	**06 54 31.9**	**+0.2**
TGIG		**2.02**	**65**	*e*P	**Pn**	**06 54 06.5**	**-1.0**
TGIG				*e*S	**Sn**	**06 54 31.9**	**+0.2**
TGBT	**Tuxtla Gutierr**	**2.05**	**66**	*e*P	**Pn**	**06 54 07.5**	**-0.4**
TGBT				*e*S	**Sn**	**06 54 32.5**	**+0.3**
TUIG	**Tuzandepetl**	**2.17**	**16**	*e*P	**Pn**	**06 54 08.8**	**-0.7**
TUIG	**Tuzandepetl**	**2.17**	**16**	*e*P	**Pn**	**06 54 08.8**	**-0.7**
CCIG	**Comitan**	**2.81**	**83**	*e*Pn	**Pn**	**06 54 17.2**	**-1.2**
CCIG				*e*Sn	**Sn**	**06 54 51.1**	**-0.1**
CCIG	**Comitan**	**2.81**	**83**	*e*P	**Pn**	**06 54 17.1**	**-1.2**
CCIG				*e*S	**Sn**	**06 54 50.2**	**-1.0**
THIG		**2.87**	**110**	*e*P	**Pn**	**06 54 16.9**	**-2.0**
THIG		**2.87**	**110**	*e*P	**Pn**	**06 54 16.9**	**-2.0**
TLIG	**Tlapa**	**3.75**	**296**	*e*Pn	**Pn**	**06 54 31.1**	**0.0**
TLIG				*e*Sn	**Sn**	**06 55 11.8**	**-2.3**
LVIG	**Laguna Verde**	**3.99**	**341**	*e*Pn	**Pn**	**06 54 32.4**	**-1.9**
APG	**El Apazote**	**4.51**	**101**	P	**Pn**	**06 54 40.9**	**-0.8**
	12nm,0.3s,baz=247,slow=22,SNR=70						
IXG	**Ixpaco**	**4.76**	**111**	*e*P	**Pn**	**06 54 44.5**	**-0.6**
SBLS	**San Blas**	**5.64**	**111**	*e*P	**Pn**	**06 54 58.2**	**+0.9**
UEES	**San Salvador**	**6.02**	**111**	IAML		06 56 26.8	
	comp=Z,120nm,0.1s						
SNET	**Serv Nac Est T**	**6.05**	**111**	*e*Pn	**Pn**	**06 55 03.3**	**+0.6**
LOMA	**San Marcos**	**6.11**	**111**	*e*P	**Pn**	**06 55 05.4**	**+1.9**
LBRS	**Las Brisas**	**6.20**	**110**	*e*P	**Pn**	**06 55 06.9**	**+2.1**
LFRS	**El Faro**	**6.22**	**111**	*e*P	**Pn**	**06 55 06.9**	**+1.4**
MOIG	**Morelia**	**6.94**	**303**	*e*Pn	**Pn**	**06 55 17.0**	**+1.9**
JRQG	**Juriquilla Cam**	**6.99**	**314**	*e*Pn	**Pn**	**06 55 20.2**	**+4.5**
MYIG	**MØrida**	**7.09**	**44**	*e*Pn	**Pn**	**06 55 16.3**	**-0.6**
CNCH	**Conchagua**	**7.46**	**110**	*e*P	**Pn**	**06 55 25.3**	**+3.2**
TGUH	**Tegucigalpa,Un**	**7.74**	**103**	*e*Pn	**Pn**	**06 55 26.7**	**+1.0**
ESTN	**Estel**	**8.86**	**107**	*e*Pn	**Pn**	**06 55 40.6**	**-0.6**
ESTN	**Estel**	**8.86**	**107**	*e*P	**Pn**	**06 55 42.4**	**+1.2**
APYN	**Apoyeque**	**9.20**	**112**	*e*P	**Pn**	**06 55 46.0**	**+0.1**
ZAIG	**Zacatecas**	**9.83**	**315**	*e*Pn	**Pn**	**06 55 56.0**	**+1.3**
LNIG	**Linares**	**9.83**	**336**	*e*Pn	**Pn**	**06 55 56.9**	**+2.4**
ESPN	**Las Esperanzas**	**11.06**	**108**	*e*Pn	**Pn**	**06 56 11.0**	**-0.3**
JTS	**JuntasAbangare**	**11.31**	**118**	P	**Pn**	**06 56 14.5**	**-0.3**
	comp=Z,2.5nm,0.3s,baz=32,slow=16,SNR=19						
JTS	**JuntasAbangare**	**11.31**	**118**	*e*Pn	**Pn**	**06 56 14.9**	**+0.1**
	comp=Z,30nm,0.8s						
CGA2	**Cerro Gallo 2**	**11.87**	**118**	*e*P	**Pn**	**06 56 23.9**	**+1.4**
HDC	**Heredia**	**12.17**	**118**	*e*Pn	**Pn**	**06 56 26.5**	**-0.1**
HDC	**Heredia**	**12.17**	**118**	*e*P	**Pn**	**06 56 27.2**	**+0.6**
BUS	**Buena Vista**	**12.70**	**119**	*e*P	**Pn**	**06 56 34.9**	**+0.8**
833A	**Chaparral WMA,**	**12.97**	**343**	P	**Pn**	**06 56 37.8**	**+0.4**
	baz=162,SNR=11						
833A	**Chaparral WMA,**	**12.97**	**343**	*e*Pn	**Pn**	**06 56 38.4**	**+1.0**
EDLM	**Las Mercedes**	**12.98**	**119**	*e*P	**Pn**	**06 56 36.9**	**-0.8**
WBCY	**West Bay, Gran**	**13.45**	**73**	*e*Pn	**Pn**	**06 56 43.3**	**-0.7**
FSCY	**Frank Sound, G**	**13.63**	**74**	*e*Pn	**Pn**	**06 56 45.4**	**-1.0**
HKT	**Hockley**	**13.97**	**357**	*e*Pn	**Pn**	**06 56 50.8**	**-0.1**
LCCY	**Blossom Villag**	**14.72**	**73**	*e*Pn	**Pn**	**06 57 02.2**	**+1.2**
HPIG		**14.74**	**320**	*e*Pn	**Pn**	**06 57 02.5**	**+1.1**
435B	**Jarrell**	**14.96**	**351**	P	**Pn**	**06 57 04.7**	**+0.6**
	baz=171,SNR=19						
435B	**Jarrell**	**14.96**	**351**	*e*Pn	**Pn**	**06 57 04.3**	**+0.2**
CBCY	**The Bluff, Cay**	**15.03**	**73**	*e*Pn	**P**	**06 57 07.7**	**-1.8**
JCT	**Junction City**	**15.12**	**344**	P	**Pn**	**06 57 07.0**	**+0.8**
	baz=163						
JCT	**Junction City**	**15.12**	**344**	*e*Pn	**Pn**	**06 57 07.1**	**+0.9**
	comp=Z,33nm,0.6s						
341A	**Kurthwood**	**15.43**	**6**	P	**Pn**	**06 57 10.2**	**+0.2**
	baz=187						
341A	**Kurthwood**	**15.43**	**6**	*e*Pn	**Pn**	**06 57 10.8**	**+0.8**
	comp=Z,8.3nm,0.7s						
TX31	**Lajitas Ar. Si**	**15.52**	**331**	*e*Pn	**P**	**06 57 13.8**	**-1.2**
TXAR	**Lajitas Array**	**15.52**	**331**	P	**P**	**06 57 13.7**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=153,slow=14,SNR=29						
342A	**Flagon Creek P**	**15.57**	**9**	P	**Pn**	**06 57 11.8**	**-0.1**
	baz=190						
342A	**Flagon Creek P**	**15.57**	**9**	*e*Pn	**Pn**	**06 57 12.0**	**+0.1**
	comp=Z,23nm,0.8s						
NATX	**Nacogdoches**	**15.76**	**1**	P	**Pn**	**06 57 14.8**	**+0.4**
	baz=182						
NATX	**Nacogdoches**	**15.76**	**1**	*e*Pn	**Pn**	**06 57 14.7**	**+0.4**
	comp=Z,18nm,0.6s						
NATX				*e*pP	**pP**	**06 57 31.2**	**+2.2**
WHTX	**Lake Whitney,**	**16.14**	**353**	P	**Pn**	**06 57 19.8**	**+0.7**
	baz=172,SNR=12						
WHTX	**Lake Whitney,**	**16.14**	**353**	*e*Pn	**P**	**06 57 20.3**	**-1.3**
	comp=Z,73nm,0.6s						
243A	**Waterproof**	**16.20**	**11**	P	**Pn**	**06 57 19.6**	**-0.4**
	baz=192						
346A	**Big Creek Wild**	**16.20**	**17**	P	**Pn**	**06 57 19.9**	**-0.1**
	baz=199						
242A	**Grayson**	**16.27**	**9**	P	**Pn**	**06 57 20.3**	**-0.5**
	baz=190,SNR=8.2						
LPIG	**La Paz**	**16.48**	**302**	LR	LR	07 03 48.2	
	comp=Z,43nm,21.5s,baz=135,slow=37						
140A	**Cam and Jess,**	**16.69**	**4**	*e*P	**P**	**06 57 27.9**	**+0.3**
	comp=Z,25nm,0.8s						
ABTX	**Abilene, Hawle**	**17.13**	**347**	P	**P**	**06 57 32.0**	**-0.7**
	baz=165,SNR=16						
ABTX	**Abilene, Hawle**	**17.13**	**347**	*e*Pn	**P**	**06 57 33.5**	**+0.8**
	comp=Z,54nm,0.8s						
Y40A	**Okolona**	**18.07**	**5**	P	**P**	**06 57 43.0**	**+0.1**
	baz=186						
CCAR	**Cane Creek**	**18.15**	**9**	*e*P	**Pn**	**06 57 43.5**	**-0.5**
	comp=Z,14nm,0.7s						
149A	**Jones**	**18.20**	**23**	P	**P**	**06 57 43.4**	**-1.0**
	baz=206						
GDL2	**Guadalupe Moun**	**18.28**	**334**	*e*P	**Pn**	**06 57 47.0**	**+1.2**
MNTX	**Cornudas Mount**	**18.30**	**331**	P	**P**	**06 57 46.0**	**+0.5**
	baz=147						
MNTX	**Cornudas Mount**	**18.30**	**331**	*e*P	**Pn**	**06 57 46.3**	**+0.3**
	comp=Z,7.4nm,1.0s						
Z47A	**Carrollton**	**18.31**	**19**	P	**P**	**06 57 44.9**	**-0.7**
	baz=202						
251A	**Midway**	**18.32**	**27**	P	**P**	**06 57 44.8**	**-0.9**
	baz=210						
150A	**Eclectic**	**18.51**	**25**	P	**Pn**	**06 57 47.3**	**-1.1**
	baz=208						
X39A	**Fountain Ranch**	**18.52**	**2**	P	**Pn**	**06 57 48.0**	**-0.6**
	baz=183,SNR=7.0						
LRAL	**Lakeview Retre**	**18.52**	**22**	P	**P**	**06 57 47.3**	**-0.6**
	baz=205						
LRAL	**Lakeview Retre**	**18.52**	**22**	*e*P	**Pn**	**06 57 47.4**	**-1.1**
	comp=Z,11nm,1.2s						
Y45A	**Yeager Farm, C**	**18.53**	**15**	P	**P**	**06 57 47.4**	**-0.6**
	baz=197						
252A	**Lumpkin**	**18.54**	**29**	P	**Pn**	**06 57 47.6**	**-1.2**
	baz=212,SNR=5.3						
MIAR	**Mount Ida**	**18.58**	**4**	P	**Pn**	**06 57 48.6**	**-0.7**
	baz=184						
MIAR	**Mount Ida**	**18.58**	**4**	*e*P	**P**	**06 57 48.3**	**-0.3**
	comp=Z,9.0nm,0.6s						
X40A	**Basin Creek Fa**	**18.58**	**6**	P	**Pn**	**06 57 48.5**	**-0.7**
	baz=187						
X40A	**Basin Creek Fa**	**18.58**	**6**	*e*P	**Pn**	**06 57 48.6**	**-0.7**
	comp=Z,4.4nm,0.8s						
TIGA	**Tifton**	**18.64**	**32**	P	**P**	**06 57 48.4**	**-0.8**
	baz=216						
Z48A	**Northport**	**18.64**	**20**	P	**P**	**06 57 48.8**	**-0.5**
	baz=203						
Y46A	**Houston**	**18.72**	**16**	P	**Pn**	**06 57 49.8**	**-1.1**
	baz=199						
151A	**Opelika**	**18.73**	**26**	P	**P**	**06 57 49.3**	**-0.9**
	baz=210						
X43A	**Marvell**	**18.88**	**11**	*e*P	**Pn**	**06 57 52.5**	**-0.4**
	comp=Z,19nm,0.9s						
UALR	**University of**	**18.92**	**7**	*e*P	**Pn**	**06 57 52.2**	**-1.1**
	comp=Z,11nm,0.6s						
WMOK	**Wichita Mounta**	**19.02**	**351**	P	**Pn**	**06 57 53.9**	**-0.7**
	baz=169						
WMOK	**Wichita Mounta**	**19.02**	**351**	*e*P	**Pn**	**06 57 54.3**	**-0.3**
	comp=Z,15nm,1.0s						
Y47A	**UCPARC, Winfie**	**19.03**	**19**	P	**P**	**06 57 53.2**	**-0.3**
	baz=202						
152A	**Waverly Hall**	**19.11**	**27**	P	**P**	**06 57 53.9**	**-0.5**
	baz=212						
152A	**Waverly Hall**	**19.11**	**27**	*e*P	**P**	**06 57 54.1**	**-0.3**
	comp=Z,20nm,1.4s						
Z50A	**Ashland**	**19.12**	**24**	P	**P**	**06 57 54.0**	**-0.5**
	baz=208						
254A	**Abbeville**	**19.20**	**32**	P	**P**	**06 57 54.7**	**-0.6**
	baz=216						
W39A	**Magazine**	**19.22**	**3**	P	**P**	**06 57 55.6**	**0.0**
	baz=184,SNR=6.9						
W39A	**Magazine**	**19.22**	**3**	*e*P	**Pn**	**06 57 55.7**	**-1.2**
	comp=Z,20nm,0.6s						
W40A	**Ferguson Farm,**	**19.26**	**5**	P	**P**	**06 57 55.5**	**-0.5**
	baz=186						
W40A	**Ferguson Farm,**	**19.26**	**5**	*e*P	**Pn**	**06 57 56.7**	**-0.7**
	comp=Z,13nm,0.8s						
MSTX	**Muleshoe**	**19.26**	**340**	P	**P**	**06 57 56.7**	**+0.5**
	baz=157,SNR=14						
MSTX	**Muleshoe**	**19.26**	**340**	*e*P	**Pn**	**06 57 57.4**	**-0.2**
	comp=Z,36nm,0.9s						
W41B	**Gary Mavity, V**	**19.32**	**7**	P	**P**	**06 57 56.7**	**0.0**
	baz=188						
W41B	**Gary Mavity, V**	**19.32**	**7**	*e*P	**Pn**	**06 57 57.7**	**-0.4**
	comp=Z,6.8nm,0.8s						
WHAR	**Wooly Hollow**	**19.43**	**7**	*e*P	**Pn**	**06 57 58.8**	**-0.7**
	comp=Z,17nm,1.3s						
X47A	**Russelville**	**19.60**	**18**	P	**P**	**06 57 58.9**	**-0.9**
	baz=201						
Y50A	**Piedmont**	**19.75**	**23**	P	**P**	**06 58 00.8**	**-0.6**
	baz=207						
AMTX	**Amarillo**	**19.79**	**344**	P	**P**	**06 58 02.5**	**+0.7**
	baz=161						
AMTX	**Amarillo**	**19.79**	**344**	*e*P	**Pn**	**06 58 03.2**	**-0.6**
	comp=Z,15nm,0.6s						
V39A	**Pettigrew**	**19.86**	**3**	P	**P**	**06 58 02.1**	**-0.6**
	baz=184,SNR=14						
V40A	**Witts Springs**	**19.89**	**5**	P	**P**	**06 58 02.3**	**-0.6**
	baz=186						
V40A	**Witts Springs**	**19.89**	**5**	*e*P	**Pn**	**06 58 03.6**	**-1.3**
	comp=Z,14nm,0.6s						
TUL1	**Leonard**	**19.91**	**358**	P	**P**	**06 58 02.6**	**-0.4**
	baz=178						
TUL1	**Leonard**	**19.91**	**358**	*e*P	**P**	**06 58 03.2**	**+0.1**
	comp=Z,16nm,0.7s						
V41A	**Mountainview**	**19.94**	**7**	P	**P**	**06 58 02.6**	**-0.8**
	baz=188						
Y51A	**Rockmart**	**20.02**	**25**	P	**P**	**06 58 03.4**	**-1.0**
	baz=209						
V42A	**Cord**	**20.06**	**9**	P	**P**	**06 58 03.2**	**-1.5**
	baz=190						
X49A	**Woodville**	**20.09**	**21**	P	**P**	**06 58 03.9**	**-1.1**
	baz=205						
319A	**Douglas**	**20.12**	**322**	*e*P	**P**	**06 58 07.1**	**+1.5**
	comp=Z,13nm,0.9s						
121A	**Cookes Peak, D**	**20.17**	**327**	P	**P**	**06 58 07.0**	**+0.8**
	baz=142						
HHAR	**Hobbs**	**20.29**	**3**	*e*P	**P**	**06 58 07.5**	**+0.3**
	comp=Z,6.6nm,0.8s						
GOGA	**Godfrey**	**20.30**	**29**	P	**P**	**06 58 06.0**	**-1.4**
	baz=214						
GOGA	**Godfrey**	**20.30**	**29**	*e*P	Pn	06 58 08.7	-1.1
	comp=Z,6.5nm,0.8s						
W47A	**Westpoint**	**20.36**	**18**	P	**P**	**06 58 07.2**	**-0.8**
	baz=201						
U39A	**Green Forest**	**20.41**	**4**	P	**P**	**06 58 07.6**	**-1.0**
	baz=184,SNR=8.0						
U40A	**Yellville**	**20.43**	**5**	P	**P**	**06 58 07.7**	**-1.1**
	baz=186,SNR=16						
U41A	**Viola**	**20.52**	**7**	P	**P**	**06 58 08.3**	**-1.4**
	baz=189,SNR=7.4						
U42A	**Revenden**	**20.62**	**9**	P	**P**	**06 58 09.3**	**-1.4**
	baz=190						
Y53A	**Monroe**	**20.62**	**28**	P	**P**	**06 58 09.2**	**-1.6**
	baz=213						
X51A	**Calhoun**	**20.69**	**24**	P	**P**	**06 58 11.0**	**-0.5**
	baz=209						
V46A	**Holladay**	**20.73**	**16**	P	**P**	**06 58 11.4**	**-0.6**
	baz=199						
U43A	**Rector**	**20.77**	**11**	P	**P**	**06 58 11.6**	**-0.8**
	baz=193						
V47A	**Nunnelly**	**20.92**	**17**	P	**P**	**06 58 14.0**	**-0.1**
	baz=200						
BNM	**Barren Site**	**20.93**	**332**	*e*P	**P**	**06 58 15.8**	**+1.4**
Y22D	**IRIS PASSCAL I**	**21.00**	**332**	*e*P	Pn	06 58 22.3	+4.2
	comp=Z,54nm,0.9s						
T38A	**Diamond**	**21.03**	**2**	P	**P**	**06 58 15.6**	**+0.4**
	baz=182,SNR=17						
T39A	**Clever**	**21.06**	**4**	P	**P**	**06 58 14.5**	**-1.0**
	baz=184						
LPM	**Los Pinos Moun**	**21.06**	**332**	*e*P	**P**	**06 58 17.4**	**+1.6**
W50A	**Signal Mountai**	**21.07**	**23**	P	**P**	**06 58 15.5**	**-0.3**
	baz=207						
WVT	**Waverly**	**21.12**	**16**	P	**P**	**06 58 15.4**	**-0.7**
	baz=200						
PBMO	**Poplar Bluff**	**21.16**	**10**	*e*P	**P**	**06 58 17.4**	**+0.7**
	comp=Z,7.9nm,0.9s						
T41A	**Mountain View**	**21.23**	**7**	P	**P**	**06 58 16.3**	**-1.0**
	baz=189,SNR=15						
T40A	**Mansfield**	**21.25**	**6**	P	**P**	**06 58 16.4**	**-1.2**
	baz=187						
X53A	**Estanollee**	**21.29**	**28**	P	**P**	**06 58 16.3**	**-1.8**
	baz=212						
T42A	**Van Buren**	**21.30**	**9**	P	**P**	**06 58 17.5**	**-0.7**
	baz=190						
T42A	**Van Buren**	**21.30**	**9**	*e*P	**P**	**06 58 18.2**	**+0.1**
	comp=Z,5.4nm,0.9s						
LAZ	**Ladron**	**21.37**	**332**	*e*P	**P**	**06 58 21.1**	**+2.0**
HELC	**Santa Helena**	**21.44**	**115**	*e*P	**P**	**06 58 20.3**	**+0.2**
	comp=Z,12nm,0.9s						
T43A	**Greenville**	**21.48**	**10**	P	**P**	**06 58 19.0**	**-1.0**
	baz=192,SNR=8.1						
TASL	**Snake Pit, Alb**	**21.52**	**334**	P	**P**	**06 58 20.6**	**-0.2**
	baz=149						
ANMO	**Albuquerque**	**21.52**	**334**	P	**P**	**06 58 22.5**	**+1.8**
	comp=Z,2.3nm,0.6s,baz=150,slow=13,SNR=13						
ANMO	**Albuquerque**	**21.52**	**334**	P	**P**	**06 58 20.5**	**-0.3**
	baz=149						
ANMO	**Albuquerque**	**21.52**	**334**	*e*P	**P**	**06 58 22.0**	**+1.3**
	comp=Z,3.7nm,0.6s						
TASM	**ASL Pad, Albuq**	**21.52**	**334**	P	**P**	**06 58 20.1**	**-0.7**
	baz=149,SNR=8.5						
V50A	**Pikevile**	**21.57**	**22**	P	**P**	**06 58 20.0**	**-1.0**
	baz=207						
S38A	**Stockton**	**21.64**	**2**	P	**P**	**06 58 20.7**	**-0.9**
	baz=183,SNR=7.2						
TUC	**Tucson**	**21.68**	**322**	P	**P**	**06 58 22.4**	**+0.1**
	baz=136						
TUC	**Tucson**	**21.68**	**322**	*e*P	**P**	**06 58 23.8**	**+1.4**
	comp=Z,6.6nm,1.0s						
S40A	**Lebanon**	**21.70**	**5**	P	**P**	**06 58 20.7**	**-1.6**
	baz=187,SNR=7.5						
S39A	**Bolivar**	**21.73**	**4**	P	**P**	**06 58 21.3**	**-1.3**
	baz=184						
S39A	**Bolivar**	**21.73**	**4**	*e*P	**P**	**06 58 23.1**	**+0.5**
	comp=Z,5.9nm,0.7s						
U48A	**Cassie Pea, Po**	**21.85**	**19**	P	**P**	**06 58 21.8**	**-2.2**
	baz=202						
S43A	**Fulton Ridge,**	**22.00**	**11**	P	**P**	**06 58 23.6**	**-2.0**
	baz=193						
S42A	**Caledonia**	**22.07**	**9**	P	**P**	**06 58 24.1**	**-2.3**
	baz=191						
U49A	**Red Boiling Sp**	**22.09**	**20**	P	**P**	**06 58 24.5**	**-2.1**
	baz=204						
R38A	**Fenwick Farm,**	**22.19**	**2**	P	**P**	**06 58 25.7**	**-1.9**
	baz=183						
CCM	**Cathedral Cave**	**22.29**	**8**	P	**P**	**06 58 27.0**	**-1.7**
	baz=190						
CCM	**Cathedral Cave**	**22.29**	**8**	*e*P	**P**	**06 58 27.8**	**-0.9**
	comp=Z,5.4nm,0.6s						
R39A	**Chumby, Stover**	**22.36**	**4**	P	**P**	**06 58 27.7**	**-1.8**
	baz=185,SNR=9.1						
R40A

N39A	Derby Farms, D	24.95	5	eP	P	06 58 53.5	-0.8
	comp=Z,9.7nm,0.6s						
PV01	Paradox Valley	25.12	334	eP	P	06 58 58.9	+2.8
	comp=Z,8.4nm,1.2s						
PV02	Paradox Valley	25.26	334	eP	P	06 59 00.4	+3.0
	comp=Z,8.6nm,0.9s						
PV15	Paradox Valley	25.26	335	epP	pP	06 59 10.7	+0.2
PV03	Paradox Valley	25.34	334	eP	P	06 58 58.9	+0.8
	comp=Z,4.9nm,0.9s						
M37A	Trindle Farm,	25.39	2	P	P	06 58 56.3	-2.0
	baz=182						
M36A	Felix, Anita	25.43	0	P	P	06 58 56.5	-2.1
	baz=181						
M38A	Pleasantville	25.44	3	P	P	06 58 57.0	-1.7
	baz=184						
PV04	Paradox Valley	25.48	334	eP	P	06 59 05.3	+5.9
	comp=Z,15nm,1.1s						
ISCO	Idaho Springs	25.51	341	eP	P	06 59 03.0	+3.2
	comp=Z,8.1nm,1.4s						
U15A	North Rim	25.54	326	eP	P	06 59 00.8	+0.8
	comp=Z,3.4nm,0.9s						
M40A	Post Highland	25.57	6	P	P	06 58 58.4	-1.4
	baz=188						
M39A	Webster	25.58	5	P	P	06 58 58.1	-1.9
	baz=186						
M41A	Milan	25.65	8	P	P	06 58 58.1	-2.5
	baz=190						
PV09	Paradox Valley	25.67	334	eP	P	06 59 07.7	+6.5
SCIA	State Center	25.93	3	P	P	06 59 01.8	-1.4
	baz=184						
SCIA	State Center	25.93	3	eP	P	06 59 02.1	-1.0
	comp=Z,15nm,0.5s						
M43A	Waltham Townsh	25.95	10	P	P	06 59 01.7	-1.6
	baz=193						
PFO	Pinyon Flats O	26.14	316	P	P	06 59 06.0	+0.7
	baz=128						
L38A	Oak Wood Farm,	26.18	4	P	P	06 59 03.1	-2.3
	baz=185						
L40A	Anamosa	26.25	6	P	P	06 59 04.8	-1.2
	baz=188						
L40A	Anamosa	26.25	6	eP	P	06 59 05.1	-0.9
	comp=Z,6.3nm,0.8s						
K36A	Gilmore City	26.62	1	P	P	06 59 08.1	-1.3
	baz=181						
K38A	Parkersburg	26.69	4	P	P	06 59 08.3	-1.7
	baz=185						
K38A	Parkersburg	26.69	4	eP	P	06 59 10.3	+0.3
	comp=Z,8.2nm,0.6s						
MTPU	Mount Pierson	26.71	329	eP	P	06 59 11.7	+1.0
	comp=Z,3.3nm,1.0s						
L43A	Garden Prairie	26.71	10	P	P	06 59 08.4	-1.8
	baz=194						
K39A	Oelwein	26.82	5	P	P	06 59 09.2	-2.0
	baz=187						
PHWY	Pilot Hill	26.84	342	epP	pP	06 59 22.9	-1.9
L44A	Lake County Fo	26.86	12	P	P	06 59 09.4	-2.1
	baz=195						
K40A	Colesburg	26.89	6	P	P	06 59 09.6	-2.2
	baz=188						
K41A	Shullsburg	26.89	8	P	P	06 59 09.7	-2.1
	baz=190						
SHPR	Sheep Range	27.20	323	epP	pP	06 59 29.1	+1.2
JFWS	Jewell Farm	27.20	8	P	P	06 59 12.9	-1.7
	baz=190						
JFWS	Jewell Farm	27.20	8	eP	P	06 59 13.4	-1.2
	comp=Z,8.0nm,0.7s						
J36A	Seneca 1, Swea	27.31	1	P	P	06 59 14.3	-1.3
	baz=182						
J36A	Seneca 1, Swea	27.31	1	eP	P	06 59 14.8	-0.8
	comp=Z,6.9nm,0.7s						
J40A	Soldiers Grove	27.62	7	P	P	06 59 16.7	-1.6
	baz=189						
J41A	Loganville	27.68	8	P	P	06 59 17.7	-1.2
	baz=190						
SJG	San Juan	27.70	81	LR	LR	07 10 48.4	
	comp=Z,42nm,20.2s,baz=262,slow=38						
ECSD	EROS Data Cent	27.74	358	eP	P	06 59 18.7	-0.8
	comp=Z,5.8nm,1.4s						
I39A	Houston	27.99	5	P	P	06 59 19.6	-2.0
	baz=187						
I39A	Houston	27.99	5	eP	P	06 59 20.6	-1.0
	comp=Z,8.2nm,0.5s						
MTP	Monte Pirata	28.27	81	eP	P	06 59 24.4	0.0
	comp=Z,18nm,1.1s						
I41A	Arkdale	28.38	8	eP	P	06 59 24.6	-0.4
	comp=Z,12nm,1.5s						
H39A	Augusta	28.83	6	P	P	06 59 27.7	-1.4
	baz=188,SNR=8.0						
G36A	St. Michael	29.23	2	P	P	06 59 31.7	-0.9
	baz=183						
SPMN	Marine on St.	29.26	3	P	P	06 59 31.7	-1.2
	baz=184						
SPMN	Marine on St.	29.26	3	eP	P	06 59 32.0	-0.9
	comp=Z,5.8nm,0.6s						
G39A	Holcombe	29.44	6	P	P	06 59 32.5	-2.0
	baz=188						
PDAR	Pinedale Array	29.49	338	P	P	06 59 38.0	+2.7
	comp=Z,0.2nm,0.5s,baz=125,slow=7.4,SNR=3.7						
F38A	Pierce - Schro	30.05	4	P	P	06 59 37.3	-2.6
	baz=186						
F40A	Park Falls	30.18	7	P	P	06 59 38.9	-2.1
	baz=189						
NV01	Mina Array Sit	30.34	322	eP	P	06 59 44.9	+2.0
NVAR	Mina Array Bea	30.34	322	P	P	06 59 44.6	+1.8
	comp=Z,1.7nm,0.7s,baz=137,slow=9.1,SNR=11						
NVAR				LR	LR	07 12 42.1	
	comp=Z,112nm,18.9s,baz=253,slow=38						
REDW	Red Top Meadow	30.48	337	eP	P	06 59 45.0	+0.9
	comp=Z,3.3nm,1.0s						
SNOW	Snow King Moun	30.53	337	eP	P	06 59 45.8	+1.3
	comp=Z,5.3nm,0.7s						
TPAW	Teton Pass	30.63	337	eP	P	06 59 46.7	+1.3
	comp=Z,2.6nm,0.8s						
E38A	The Farm, Brul	30.72	5	P	P	06 59 43.7	-2.0
	baz=187						
E40A	Wakefield	30.72	7	P	P	06 59 43.5	-2.3
	baz=190						
D35A	Remer	31.07	1	P	P	06 59 47.1	-1.8
	baz=182						
D33A	AnnSam, Waubun	31.12	359	P	P	06 59 47.4	-1.9
	baz=179						
D37A	Cotton	31.21	3	P	P	06 59 47.6	-2.5
	baz=185						
C35A	Jirik Farms, M	31.69	1	P	P	06 59 51.0	-3.3
	baz=182						
VPK	Verdi Peak	32.04	322	eP	P	07 00 00.9	+3.1
EYMN	Ely	32.06	4	P	P	06 59 55.4	-2.1
	baz=186						
AGMN	Agassiz Nation	32.28	359	P	P	06 59 57.3	-2.2
	baz=179						
AGMN	Agassiz Nation	32.28	359	eP	P	06 59 58.4	-1.1
	comp=Z,6.3nm,0.8s						
B31A	Greenbush Farm	32.47	357	P	P	07 00 00.0	-1.1
	baz=175						
MCMT	McKenzie Canyo	32.49	336	eP	P	07 00 02.9	+1.2
GRGR	Grenville	32.59	92	eP	P	07 00 01.4	-1.2
	comp=Z,105nm,1.0s						
A33A	Warroad	32.91	360	P	P	07 00 03.2	-1.9
	baz=180						
LRM	Limekiln Ridge	33.18	338	eP	P	07 00 08.9	+1.2
J08A	Circle Bar Ran	33.85	329	eP	P	07 00 15.4	+2.0
	comp=Z,3.3nm,0.7s						
M04C	Macdoel	34.58	324	P	P	07 00 17.4	-2.4
	baz=130						
YBH	Yreka Blue Hor	35.05	323	LR	LR	07 16 01.1	
	comp=Z,94nm,20.0s,baz=144,slow=38						
KBO	Bosley Butte	36.23	322	eP	P	07 00 37.5	+3.6
	comp=Z,84nm,1.4s						
LON	Longmire	37.93	330	eP	P	07 00 49.7	+1.5
	comp=Z,2.6nm,0.8s						
PTGA	Pitinga	38.39	112	P	P	07 00 50.1	-2.3
	comp=Z,3.6nm,0.7s,baz=297,slow=8.6,SNR=7.3						
PTGA	Pitinga	38.39	112	eP	P	07 00 52.2	-0.2
	comp=Z,3.2nm,0.7s						
SAML	Samuel	40.08	126	eP	P	07 01 07.6	+1.1
	comp=Z,2.3nm,1.0s						
LPAZ	La Paz	41.60	139	P	P	07 01 19.2	-0.4
	comp=Z,0.7nm,0.7s,baz=323,slow=7.6,SNR=4.5						
FCC	Fort Churchill	42.76	1	eP	P	07 01 27.0	-0.8
	comp=Z,1.8nm,0.7s						
SIV	San Ignacio	46.16	132	P	P	07 01 53.7	-1.9
	comp=Z,1.2nm,0.5s,baz=319,slow=8.0,SNR=7.8						
YKA	Yellowknife Ar	48.51	348	P	P	07 02 12.5	-0.7
	comp=Z,1.0nm,0.7s,baz=154,slow=7.3,SNR=9.4						
YKW3	Yellowknife Ar	48.57	348	eP	P	07 02 12.9	-0.8
	comp=Z,1.6nm,0.7s						
INK	Inuvik	57.77	344	eP	P	07 03 21.7	+0.5
	comp=Z,7.9nm,1.4s						
ILAR	Eielson Array	59.92	337	P	P	07 03 36.5	+0.2
	comp=Z,0.5nm,0.9s,baz=133,slow=4.5,SNR=5.2						
PLCA	Paso Flores	60.79	159	P	P	07 03 42.8	+0.2
	comp=Z,2.4nm,0.9s,baz=294,slow=10.0,SNR=3.5						
ANGG	Ammassalik, Gr	62.40	23	eP	P	07 03 52.0	-1.0
	comp=Z,8.0nm,0.8s						
BORG	Borgarnes	68.77	26	eP	P	07 04 32.8	-1.3
	comp=Z,38nm,1.4s						
ESDC	Sonseca Array	80.82	51	P	P	07 05 44.4	0.0
	comp=Z,0.1nm,0.2s,baz=260,slow=3.1,SNR=5.5						
KSH	Kashi	124.20	8	PKP	PKPdf	07 12 30.9	+1.6
KSH				sPKP		07 12 46.1	
KSH				PP	PP	07 14 20.1	+7.1
KSH				AMB	AMB		
	comp=Z,190nm,3.8s						
LZH	Lanzhou	125.26	341	ePKP	PKPdf	07 12 33.0	+1.6
LZH				pPKP	pPKPdf	07 12 44.8	-2.1
LZH				sPKP		07 12 49.4	
CD2	Chengdu	130.04	339	PKP	PKPdf	07 12 41.1	+0.6

ISCJB ***15*** *06:59:20.0±0.2, 6°.80N±0°.03×73°.09W±0°.03, h161km±2km, mb4.2/24, Error ellipse: s-maj=5.4km s-min=3.5km az=35.8*

IDC ***15*** *06:59:21.0±0.6, 6°.75N×72°.95W, h166km±6km, mb3.8/8, mb1 3.8/13, mb1mx3.4/49, mbtmp4.2/13, MS3.6/1, Ms1 3.6/1, ms1mx2.5/40, Error ellipse: s-maj=15.4km s-min=7.1km az=133.0*

NEIC ***15*** *06:59:21.0±0.0, 6°.80N×73°.15W, h151km, mb4.4/20, ML4.1(RSNC), After RSNC.*

RSNC ***15*** *06:59:21.9±0.7, 6°.80N×73°.15W, h151km±4km, ML4.1, Mw4.0*

ISC 15 06:59:20.6±0.5, 6°.83N±0°.04×73°.08W±0°.04, h157km±5km, n95, σ1§46/120, mb4.2/24, 3C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.26	204	iP	Pn	06 59 42.3	0.0
BARC				eS	Sn	06 59 57.9	-0.8
BARC				i		06 59 59.4	
	comp=Z,4μm,0.4s						
PAMC	Pamplona, Colo	0.63	37	iP	Pn	06 59 45.1	+1.1
PAMC				eS	Sn	07 00 02.5	+0.6
RUSC	La Rusia	0.94	180	ePn	Pn	06 59 46.1	0.0
RUSC				eSn	Sn	07 00 04.4	-1.3
RUSC	La Rusia	0.94	180	i P	Pn	06 59 46.1	0.0
RUSC				eS	Sn	07 00 04.8	-0.8
RUSC				i		07 00 06.7	
	comp=Z,2μm,0.4s						
PTBC	PUERTO BERRIO,	1.40	258	iP	Pn	06 59 48.7	-1.0
PTBC				eS	Sn	07 00 10.3	-1.8
PTBC				i		07 00 12.6	
	comp=Z,2μm,0.4s						
OCAC	Ocana	1.42	350	eP	Pn	06 59 50.3	+0.3
OCAC				eS	Sn	07 00 12.7	-0.1
OCAC				i		07 00 18.3	
	comp=Z,2μm,0.3s						
ZARC	Zaragoza, Cauc	1.89	290	eP	Pn	06 59 54.5	-0.5
ZARC				eS	Sn	07 00 20.3	-0.9
ZARC				i		07 00 27.4	
	comp=Z,3μm,0.3s						
NORC	Norcasia	2.19	235	eP	Pn	06 59 57.9	-0.5
NORC				eS	Sn	07 00 25.8	-1.7
CHIC	Chingaza	2.29	197	iP	Pn	06 59 60.0	0.0
CHIC				eS	Sn	07 00 29.4	-0.9
CHIC				i		07 00 35.6	
	comp=Z,752nm,0.3s						
ROSC	El Rosal	2.34	212	P	Pn	07 00 01.6	+1.1
	comp=Z,158nm,0.3s,baz=25,slow=2.4,SNR=217						
ROSC				S	Sn	07 00 32.8	+1.5
	comp=Z,157nm,0.3s,baz=152,slow=17,SNR=9.4						
ROSC	El Rosal	2.34	212	ePn	Pn	07 00 01.8	+1.3
ROSC				eSn	Sn	07 00 30.9	-0.4
HELC	Santa Helena	2.52	255	ePn	Pn	07 00 03.6	+0.9
HELC				eSn	Sn	07 00 39.1	+3.9
HELC	Santa Helena	2.52	255	eP	Pn	07 00 02.1	-0.6
HELC				eS	Sn	07 00 34.2	-0.9
HELC				i		07 00 40.5	
	comp=Z,755nm,0.2s						
GUYC	Guyana, Colomb	2.80	235	eP	Pn	07 00 07.0	+0.7
GUYC				eS	Sn	07 00 40.6	-1.0
GUYC				i		07 00 47.8	
	comp=Z,1μm,0.5s						
CODC	Agust`›n Codaz	3.10	353	eP	Pn	07 00 09.7	+0.1
CODC				eS	Sn	07 00 47.9	+0.3
CODC				i		07 00 55.3	
	comp=Z,374nm,0.5s						
DBBC	Dabeiba	3.12	274	eP	Pn	07 00 10.4	+0.6
DBBC				eS	Sn	07 00 46.6	-1.3
TOLC	Tolima	3.16	225	eP	Pn	07 00 11.0	+0.4
TOLC				eS	Sn	07 00 48.0	-1.3
SDV	Santo Domingo	3.16	50	P	Pn	07 00 11.7	+1.2
	comp=Z,66nm,0.3s,baz=223,slow=3.9,SNR=40						
SDV				S	Sn	07 00 49.3	+0.1
	comp=Z,64nm,0.3s,baz=338,slow=15,SNR=24						
SDV	Santo Domingo	3.16	50	eP	Pn	07 00 11.5	+0.9
SDV				i		07 00 51.3	
	comp=Z,204nm,0.6s						
ANIL	Santa Ana	3.28	225	eP	Pn	07 00 12.6	+0.4
ANIL				eS	Sn	07 00 50.1	-2.0
PRAC	Prado	3.58	210	ePn	Pn	07 00 15.5	-0.3
PRAC				eSn	Sn	07 00 59.0	+0.4
PRAC	Prado	3.58	210	eP	Pn	07 00 15.4	-0.3
PRAC				eS	Sn	07 00 57.5	-1.1
YOTC	Yotoco, Valle	4.31	229	eP	Pn	07 00 24.6	-0.7
YOTC				i		07 00 28.0	
	comp=Z,129nm,0.5s						
YOTC				eS	Sn	07 01 13.7	-2.0
FLOC	Florencia	5.81	206	eP	Pn	07 00 44.4	-0.7
FLOC				i		07 02 24.9	
	comp=Z,91nm,0.7s						
BCIP	Isla Barro Col	7.09	290	ePn	Pn	07 00 59.6	-2.3
OTAV	Otavalo	8.47	220	ePn	Pn	07 01 22.1	+1.4
PCRV	Puerto La Cruz	8.98	68	P	Pn	07 01 28.4	+1.3
	comp=Z,1.5nm,0.3s,baz=294,slow=3.9,SNR=11						
PCRV				S	Sn	07 03 06.0	-1.1
	comp=Z,1.4nm,0.3s,baz=255,slow=8.4,SNR=2.7						
GWJ	Greenwich	11.73	343	iP	P	07 02 07.0	-3.2
STH	Stony Hill	11.75	342	iP	Pn	07 02 05.8	+2.2
STH				i S	Sn	07 04 10.5	-3.3
MTDJ	Mount Denham	12.13	339	ePn	Pn	07 02 11.3	+2.7
MTDJ	Mount Denham	12.13	339	iP	Pn	07 02 11.4	+2.9
BBJ	Bamboo Saint A	12.19	341	iP	P	07 02 13.3	-2.0
BBJ				i S	Sn	07 04 17.9	-6.3
JTS	JuntasAbangare	12.24	287	P	Pn	07 02 12.7	+2.8
	comp=Z,1.4nm,0.3s,baz=169,slow=2.5,SNR=4.8						
GRGR	Grenville	12.43	64	eP	P	07 02 18.0	+0.1
AOPR	Arecibo Observ	13.00	28	eP	P	07 02 24.6	+0.4
HUMP	Col San Antoni	13.27	31	ePn	Pn	07 02 22.9	-0.1
SVB	Belmont	13.28	60	ePn	Pn	07 02 25.2	+1.9
CBYP	Canovanas	13.37	31	ePn	Pn	07 02 24.0	-0.4
MTP	Monte Pirata	13.38	33	ePn	Pn	07 02 25.1	+0.5
CDVI	St. Croix	13.55	36	eP	P	07 02 31.2	+1.0
STVI	Saint Thomas	13.92	34	ePn	P	07 02 33.8	-0.6
FDF	Fort de France	14.10	55	ePn	Pn	07 02 33.6	0.0
CBCY	The Bluff, Cay	14.38	334	eP	P	07 02 41.6	+2.1
GRTK	Grand Turk	14.71	7	ePn	P	07 02 43.4	+0.2
WBCY	West Bay, Gran	14.86	328	ePn	P	07 02 47.2	+2.4
PTGA	Pitinga	15.09	119	P	Pn	07 02 44.8	-1.1
	comp=Z,0.3nm,0.3s,baz=315,slow=20,SNR=3.7						
PTGA	Pitinga	15.09	119	ePn	Pn	07 02 44.5	-1.4
SAML	Samuel	18.52	148	eP	P	07 03 24.3	-0.9
	comp=Z,5.1nm,1.1s						
APG	El Apazote	18.89	297	P	Pn	07 03 33.5	+1.6
	comp=Z,0.3nm,0.3s,baz=355,slow=11,SNR=5.1						
957A	Wimauma	22.47	338	eP	P	07 04 09.6	+2.7
	comp=Z,87nm,1.4s						
LPAZ	La Paz	23.49	168	P	P	07 04 16.9	-0.2
	comp=Z,1.0nm,0.8s,baz=333,slow=22,SNR=4.1						
LPAZ	La Paz	23.49	168	eP	P	07 04 16.5	-0.6
KSPA	Keystone Colle	34.66	356	eP	P	07 05 57.0	+2.0
	comp=Z,19nm,1.5s						
BINY	Binghamton	35.31	356	eP	P	07 06 03.1	+2.4
	comp=Z,7.6nm,1.2s						
NCB	Newcomb	37.00	359	eP	P	07 06 17.6	+2.6
	comp=Z,5.6nm,1.3s						
EMMW	East Machias	38.05	7	eP	P	07 06 25.2	+1.5
	comp=Z,8.8nm,0.6s						
SADO	Sadowa	38.16	353	P	P	07 06 24.7	0.0
	comp=Z,1.7nm,0.5s,baz=209,slow=7.1,SNR=4.1						
SADO	Sadowa	38.16	353	eP	P	07 06 25.0	+0.3
	comp=Z,3.9nm,1.0s						
PLVO	Plevna	38.22	355	eP	P	07 06 27.3	+2.1
	comp=Z,8.2nm,1.4s						
PKME	Peaks-Kenny Pk	38.42	4	eP	P	07 06 28.5	+1.6
	comp=Z,5.6nm,1.0s						
TRQ	Mont Tremblant	39.26	358	eP	P	07 06 35.0	+1.0
PQI	Presque Isle	39.93	5	eP	P	07 06 40.7	+1.3
	comp=Z,7.9nm,0.8s						
EYMN	Ely	43.87	342	eP	P	07 07 11.2	-0.1
	comp=Z,16nm,1.3s						
B35A	Bob, Littlefor	44.95	341	eP	P	07 07 20.5	+0.6
	comp=Z,5.5nm,1.4s						
ULM	Lac du Bonnet	47.29	340	P	P	07 07 38.3	+0.2
	comp=Z,2.3nm,0.5s,baz=164,slow=7.3,SNR=4.6						
ULM	Lac du Bonnet	47.29	340	eP	P	07 07 37.7	-0.4
	comp=Z,4.1nm,0.8s						
SCHQ	Schefferville	48.12	5	P	P	07 07 45.4	+0.9
	comp=Z,7.2nm,0.5s,baz=188,slow=6.3,SNR=13						
SCHQ	Schefferville	48.12	5	eP	P	07 07 45.5	+1.0
	comp=Z,8.6nm,0.6s						
DGMT	Dagmar	49.16	333	eP	P	07 07 54.3	+1.7
	comp=Z,12nm,1.1s						
DAC	Darwin (Calif)	50.08	312	eP	P	07 08 00.0	+0.1
	comp=Z,1.9nm,0.8s						
YBH	Yreka Blue Hor	55.96	317	LR	LR	07 36 44.9	
	comp=Z,46nm,19.0s,baz=328,slow=40						
YKA	Yellowknife Ar	63.27	340	P	P	07 09 32.1	-0.1
	comp=Z,1.6nm,0.5s,baz=133,slow=6.6,SNR=33						
DBIC	Dimbokro	67.69	86	P	P	07 10 00.2	-1.4
	comp=Z,2.5nm,0.6s,baz=256,slow=3.6,SNR=8.8						
DBIC	Dimbokro	67.69	86	eP	P	07 10 00.2	-1.4
	comp=Z,8.6nm,1.1s						
KOWA	Kowa	68.09	77	eP	P	07 10 03.5	-0.5
	comp=Z,11nm,1.5s						
SUMG	Summit	68.97	11	eP	P	07 10 09.0	0.0
	comp=Z,8.0nm,0.7s						
TOA1	Torodi Ar. Sit	73.69	78	eP	P	07 10 36.0	-1.8
TOA0	Torodi Ar. Sit	73.69	78	eP	P	07 10 36.2	-1.7
	comp=Z,2.6nm,1.4s						
TORD	Torodi Ar. Bea	73.69	78	P	P	07 10 36.0	-1.9
	comp=Z,0.4nm,0.3s,baz=284,slow=6.3,SNR=14						
NB2	NORSAR Subarra	81.30	29	P	P	07 11 19.5	+0.2
	comp=Z,0.7nm,0.6s,baz=270,slow=5.6						
ARA0	ARCESS Array S	86.64	20	eP	P	07 11 45.9	-0.3
ARCES	ARCESS Array B	86.64	20	P	P	07 11 45.9	-0.3
	comp=Z,2.2nm,0.8s,baz=293,slow=4.3,SNR=5.6						
MK31	Makanchi Array	122.30	20	ePKPdf	PKPdf	07 17 56.5	-0.8
MK32	Makanchi Array	122.30	20	ePKPdf	PKPdf	07 17 56.4	-0.9
MKAR	Makanchi Array	122.30	20	PKP	PKPdf	07 17 56.4	-0.9
	comp=Z,0.5nm,0.4s,baz=296,slow=2.5,SNR=11						
MK01	Makanchi Array	122.32	20	ePKPdf	PKPdf	07 17 56.4	-0.9
AS01	Alice Springs	149.12	234	ePKPbc	PKPbc	07 18 50.0	-1.4
AS31	Alice Springs	149.15	234	ePKPbc	PKPbc	07 18 50.1	-1.3
ASAR	Alice Springs	149.15	234	PKPbc	PKPbc	07 18 50.1	-1.3
	comp=Z,0.8nm,0.5s,baz=114,slow=3.7,SNR=14						
WC3	Warramunga Arr	150.35	241	ePKPbc	PKPbc	07 18 53.4	-0.9
WB2	Warramunga Arr	150.37	241	ePKPbc	PKPbc	07 18 53.4	-1.0
WRAB	Tennant Creek	150.38	241	ePKPbc	PKPbc	07 18 54.1	-0.3
WR1	Warramunga Arr	150.38	241	ePKPbc	PKPbc	07 18 53.5	-1.0
WRA	Warramunga Arr	150.38	241	PKPbc	PKPbc	07 18 53.5	-1.0
	comp=Z,0.9nm,0.5s,baz=109,slow=2.5,SNR=15						
WRA				pPKPbc	pPKPbc	07 19 36.4	+0.6
	comp=Z,0.7nm,0.5s,baz=109,slow=2.5,SNR=3.5						
CM01	Chiang Mai Arr	153.70	17	ePKPbc	PKPbc	07 19 02.2	+0.3

ISCJB ***15*** *07:02:31.0±0.6, 32°.51N±0°.02×97°.24W±0°.02, h6km±4km, mb3.5/2, MS2.8/1, Error ellipse: s-maj=3.1km s-min=2.4km az=162.8*

NEIC ***15*** *07:02:33.2±0.3, 32°.46N×97°.27W, h5km, MN3.3, Error ellipse: s-maj=4.4km s-min=3.6km az=159.0*

NEIC Felt [IV] at Cleburne and Joshua and [III] at Alvarado, Burleson and Keene. Also felt at Arlington, Cedar Hill, Denton, Euless, Fort Worth, Grandview, Grapevine, Irving, Lewisville, Mansfield, Plano, Southlake, Venus and Waco.

IDC ***15*** *07:02:34.1±3.6, 32°.54N×97°.31W, h10km±19km, mb3.6/2, mb1 3.9/6, mb1mx3.5/55, mbtmp3.6/6, ML3.9/3, MS2.9/1, Ms1 2.9/1, ms1mx2.3/48, Error ellipse: s-maj=31.8km s-min=13.5km az=122.0*

ISC 15 07:02:31.9±1.3, 32°.48N±0°.03×97°.25W±0°.04, h1km±10km, n165, σ1§10/200, Central Texas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHTX	Lake Whitney,	0.52	200	P	Pg	07 02 41.8	-0.1
	baz=20						
WHTX				S	Sg	07 02 48.3	-0.2
	baz=20						
WHTX	Lake Whitney,	0.52	200	ePg	Pg	07 02 42.2	+0.4
WHTX				eSg	Sg	07 02 45.8	-2.7
435B	Jarrell	1.71	190	P	Pn	07 03 02.9	0.0
	baz=9.4						
435B				Sb	Sb	07 03 26.2	0.0
	baz=9.4						
435B	Jarrell	1.71	190	ePn	Pn	07 03 03.0	0.0
435B				eSn	Sb	07 03 25.2	-1.0
ABTX	Abilene, Hawle	2.03	275	P	Pn	07 03 07.2	0.0
	baz=95						
ABTX				Sb	Sb	07 03 35.2	-0.1
	baz=95						
ABTX	Abilene, Hawle	2.03	275	ePn	Pn	07 03 08.0	+0.8
ABTX				eSn	Sb	07 03 34.9	-0.4
NATX	Nacogdoches	2.31	107	ePn	Pn	07 03 13.0	+2.0
WMOK	Wichita Mounta	2.59	331	P	Pn	07 03 15.9	+0.9
	baz=151						
WMOK				S	Sn	07 03 47.6	+0.5
	baz=151						
WMOK	Wichita Mounta	2.59	331	ePn	Pn	07 03 15.8	+0.9
WMOK				eSn	Sb	07 03 51.1	-0.4
HKT	Hockley	2.80	154	ePn	Pn	07 03 19.1	+1.4
JCT	Junction City	2.96	228	P	Pn	07 03 19.6	-0.4
	baz=47						
JCT				S	Sn	07 03 54.8	-1.3
	baz=47						
JCT	Junction City	2.96	228	ePn	Pn	07 03 19.9

X40A Basin Creek Fa 4.20 60 P Pn 07 03 37.9 +0.9
baz=242
X40A S Sn 07 04 25.2 -1.4
baz=242
X40A Basin Creek Fa 4.20 60 *e*Pn **Pn 07 03 38.4 +1.4**
541A Lake Charles 4.23 124 S **Sn 07 04 28.1 +0.6**
baz=305
342A Flagon Creek P 4.33 103 P Pn 07 03 38.8 0.0
342A S **Sn 07 04 30.4 +0.5**
baz=286
342A Flagon Creek P 4.33 103 *e*Pn **Pn 07 03 39.3 +0.5**
242A Grayson 4.34 94 P **Pn 07 03 38.7 -0.3**
baz=276
242A S **Sn 07 04 29.2 -0.9**
baz=276
AMTX Amarillo 4.41 304 P Pn 07 03 40.8 +0.8
baz=122
AMTX Amarillo 4.41 304 *e*Pn **Pn 07 03 40.7 +0.7**
AMTX *e*Sn **Sn 07 04 32.5 +0.5**
AMTX *e*Sg **Sg 07 04 52.1 -1.3**
W40A Ferguson Farm, 4.41 51 P **Pn 07 03 41.5 +1.6**
baz=233,SNR=7.2
W40A S **Sn 07 04 33.1 +1.3**
baz=233
W40A Ferguson Farm, 4.41 51 *e*Pn **Pn 07 03 42.1 +2.2**
X41A Kaden, Bauxite 4.44 62 P **Pn 07 03 41.4 +1.1**
baz=244
X41A S **Sn 07 04 31.8 -0.8**
baz=244
V39A Pettigrew 4.49 41 P **Pn 07 03 42.3 +1.2**
baz=222,SNR=8.2
V39A S **Sn 07 04 34.3 +0.3**
baz=222
Z42A Norrel Spur, H 4.53 78 P **Pn 07 03 42.0 +0.4**
baz=261
Z42A S **Sn 07 04 34.1 -0.8**
baz=261
833A Chaparral WMA, 4.54 205 P **Pn 07 03 41.4 -0.3**
baz=24
833A Chaparral WMA, 4.54 205 *e*Pn **Pn 07 03 41.7 0.0**
HHAR Hobbs 4.68 35 *e*Pn **Pn 07 03 44.7 +1.1**
UALR University of 4.69 59 *e*Pn **Pn 07 03 44.8 +1.0**
UALR *e*Sn **Sn 07 04 39.8 +1.0**
Y42A Garnett, Star 4.78 72 P **Pn 07 03 45.7 +0.8**
baz=255
CCAR Cane Creek 4.81 71 *e*Pn **Pn 07 03 46.9 +1.4**
MSTX Muleshoe 4.86 289 P **Pn 07 03 46.7 +0.4**
baz=107
MSTX Muleshoe 4.86 289 *e*Pn **Pn 07 03 47.9 +1.6**
MSTX *e*Pg **Pb 07 04 00.4 +2.5**
143A Socs Landing, 4.94 86 P **Pn 07 03 47.1 -0.1**
baz=268
143A Socs Landing, 4.94 86 *e*Pn **Pn 07 03 47.4 +0.2**
V40A Witts Springs 4.95 47 P **Pn 07 03 47.9 +0.6**
baz=229,SNR=13
V40A Witts Springs 4.95 47 *e*Pn **Pn 07 03 47.5 +0.1**
W41B Gary Mavity, V 4.95 56 P **Pn 07 03 48.6 +1.2**
baz=238
W41B S **Sn 07 04 45.3 0.0**
baz=238
W41B Gary Mavity, V 4.95 56 *e*Pn **Pn 07 03 48.9 +1.5**
443A Delano Plantat 4.97 109 P **Pn 07 03 47.4 -0.2**
baz=291
U39A Green Forest 4.99 38 P **Pn 07 03 48.7 +0.8**
baz=219
WHAR Wooly Hollow 4.99 54 *e*Pn **Pn 07 03 49.7 +1.8**
T38A Diamond 5.16 27 P **Pn 07 03 50.9 +0.7**
baz=209
U40A Yellville 5.30 42 P **Pn 07 03 53.4 +1.1**
baz=224,SNR=17
V41A Mountainview 5.36 51 P **Pn 07 03 53.9 +0.9**
baz=233,SNR=16
Y43A Makayla and Ka 5.49 73 P **Pn 07 03 54.9 +0.2**
baz=256
T39A Clever 5.54 34 P **Pn 07 03 56.0 +0.5**
baz=216
CPRX Cap Rock 5.60 277 *e*Pn **Pn 07 03 57.4 +0.9**
CLNB Carlsbad 5.61 270 *e*Pn **Pn 07 03 56.8 +0.2**
X43A Marvell 5.69 67 P **Pn 07 03 58.7 +1.1**
baz=250
X43A Marvell 5.69 67 *e*Sn **Sn 07 05 05.9 +2.3**
VBMS Vicksburg 5.70 91 *e*Pn **Pn 07 04 00.3 +2.7**
544A White Castle 5.72 113 P **Pn 07 03 57.2 -0.8**
baz=296
S38A Stockton 5.82 27 P **Pn 07 04 00.3 +0.9**
baz=209
V42A Cord 5.88 54 P **Pn 07 04 01.0 +0.8**
baz=237
GDL2 Guadalupe Moun 6.03 269 *e*Pn **Pn 07 04 02.0 -0.3**
GDL2 *e*Sn **Sn 07 05 08.8 -3.3**
T40A Mansfield 6.07 39 P **Pn 07 04 04.0 +1.2**
baz=221
Y44A Strider, Charl 6.08 74 P **Pn 07 04 03.3 +0.4**
baz=258
S39A Bolivar 6.12 31 P **Pn 07 04 04.1 +0.7**
baz=213
S39A Bolivar 6.12 31 *e*Pn **Pn 07 04 04.3 +0.9**
X44A Crenshaw 6.27 69 P **Pn 07 04 06.0 +0.5**
baz=253
U42A Revenden 6.29 50 P **Pn 07 04 05.7 0.0**
baz=234
R38A Fenwick Farm, 6.32 25 P **Pn 07 04 06.8 +0.7**
baz=206
TX31 Lajitas Ar. Si 6.34 242 *e*Pn **Pn 07 04 06.6 0.0**
TX31 *e*Sn **Sn 07 05 17.7 -2.0**
TXAR Lajitas Array 6.34 242 Pn **Pn 07 04 06.2 -0.4**
1.7nm,0.3s,baz=74,slow=13,SNR=103
TXAR Pg **Pb 07 04 24.4 +1.2**
2.9nm,0.3s,baz=68,slow=13,SNR=11
TXAR Sn **Sn 07 05 17.5 -2.3**
6.9nm,0.3s,baz=353,slow=29,SNR=7.7
TXAR Lg Lg 07 05 51.2
11nm,0.3s,baz=58,slow=26,SNR=4.0
T41A Mountain View 6.41 43 P **Pn 07 04 08.2 +0.7**
baz=226,SNR=15
Z45A Winona 6.42 80 P **Pn 07 04 07.9 +0.4**
baz=264
S40A Lebanon 6.42 36 P **Pn 07 04 08.6 +1.0**
baz=218
Y45A Yeager Farm, C 6.61 76 P **Pn 07 04 09.9 -0.2**
baz=260
KSU1 Kansas State U 6.63 4 P **Pn 07 04 09.6 -0.8**
baz=185
KSU1 Kansas State U 6.63 4 *e*Pn **Pn 07 04 10.1 -0.3**
CBKS Cedar Bluff 6.64 343 P **Pn 07 04 10.6 0.0**
baz=162
R39A Chumby, Stover 6.76 29 P **Pn 07 04 13.2 +0.9**
baz=212
T42A Van Buren 6.80 46 P **Pn 07 04 13.5 +0.7**
baz=230,SNR=18
T42A Van Buren 6.80 46 *e*Pn **Pn 07 04 13.3 +0.5**
X45A UM Field Stati 6.85 71 P **Pn 07 04 13.6 +0.2**
baz=255
OXF Oxford 6.86 71 P **Pn 07 04 14.3 +0.8**
baz=255
OXF Oxford 6.86 71 *e*Pn **Pn 07 04 13.1 -0.4**
U43A Rector 6.86 54 P **Pn 07 04 13.8 +0.2**
baz=237
MNTX Cornudas Mount 6.95 266 P **Pn 07 04 14.7 -0.2**
baz=82
MNTX Cornudas Mount 6.95 266 *e*Pn **Pn 07 04 14.6 -0.2**
PBMO Poplar Bluff 7.07 51 *e*Pn **Pn 07 04 17.7 +1.2**
PBMO *e*Sn **Sn 07 05 36.2 -1.2**
R40A Maddies Statio 7.08 34 P **Pn 07 04 17.6 +1.0**
baz=216
R40A Maddies Statio 7.08 34 *e*Pn **Pn 07 04 19.5 +2.9**
R40A *e*Sn **Sn 07 05 36.1 -1.6**
Q38A Cooks Store, C 7.11 24 P **Pn 07 04 16.7 -0.3**
baz=206
Y46A Houston 7.17 76 P **Pn 07 04 18.4 +0.5**
baz=261
W45A Hickory Valley 7.22 66 P **Pn 07 04 18.9 +0.3**
baz=250
T43A Greenville 7.34 49 P **Pn 07 04 20.9 +0.7**
baz=233
Q39A Willow Grove F 7.41 27 P **Pn 07 04 21.0 -0.2**
baz=209
CCM Cathedral Cave 7.42 40 P **Pn 07 04 21.7 +0.4**
baz=223
CCM Cathedral Cave 7.42 40 *e*Pn **Pn 07 04 21.9 +0.7**
CCM *e*Sn **Sn 07 05 43.4 -2.7**
S42A Caledonia 7.47 43 P **Pn 07 04 22.2 +0.2**
baz=227
P37A Lathrop 7.47 17 P **Pn 07 04 22.1 +0.1**
baz=199

T25A Trinidad 7.50 310 P **Pn 07 04 22.7 +0.1**
baz=127
T25A Trinidad 7.50 310 *e*Pn **Pn 07 04 22.9 +0.2**
R41A Rosebud 7.53 38 P **Pn 07 04 23.1 +0.3**
baz=221
X46A Booneville 7.53 72 P **Pn 07 04 22.2 -0.6**
baz=256
U44B Burton Farm, H 7.58 57 P **Pn 07 04 23.3 -0.1**
baz=241
147A Livingston 7.58 86 *e*Sn **Sn 07 05 50.4 +0.3**
V45A Humboldt 7.61 62 P **Pn 07 04 24.0 +0.2**
baz=247
P38A Dawn 7.74 22 P **Pn 07 04 25.5 -0.2**
baz=204
P38A Dawn 7.74 22 *e*Pn **Pn 07 04 25.9 +0.2**
P38A *e*Sn **Sn 07 05 50.4 -3.5**
Q40A Laux Farm, Aux 7.74 31 P **Pn 07 04 26.3 +0.6**
baz=214
S43A Fulton Ridge, 7.77 47 P **Pn 07 04 25.8 -0.3**
baz=231
T44A Benton 7.80 52 P **Pn 07 04 26.2 -0.3**
baz=236
LNIG Linares 7.80 195 *e*Pn **Pn 07 04 24.7 -1.9**
R42A Luebbering 7.83 41 P **Pn 07 04 26.9 +0.1**
baz=224
W46A Michie 7.84 68 P **Pn 07 04 26.6 -0.5**
baz=252
KSCO Kaye Shedlock' 7.85 328 P **Pn 07 04 27.3 0.0**
baz=145
KSCO Kaye Shedlock' 7.85 328 *e*Pn **Pn 07 04 27.3 0.0**
EPT El Paso 7.88 267 *e*Pg Pg 07 04 58.6 -4.3
BNM Barren Site 8.03 285 *e*Pn **Pn 07 04 30.5 +0.6**
BNM *e*Pg Pg 07 05 00.6 -5.1
PLAL Pickwick Lake 8.04 69 *e*Pn **Pn 07 04 29.2 -0.6**
ANMO Albuquerque 8.06 290 Pg Pb 07 04 59.6 +7.2
1.9nm,0.3s,baz=110,slow=19,SNR=41
ANMO Lg Lg 07 06 43.2
3.2nm,0.3s,baz=348,slow=7.8,SNR=8.9
ANMO Albuquerque 8.06 290 *e*Pn **Pn 07 04 30.7 +0.5**
ANMO *e*Pg Pb 07 04 59.8 +7.4
ANMO Lg Lg 07 06 43.2
LPM Los Pinos Moun 8.06 286 *e*Pg Pg 07 05 00.5 -5.8
Q41A Truxton 8.10 35 P **Pn 07 04 31.1 +0.5**
baz=219
X47A Russelville 8.10 73 P **Pn 07 04 30.5 -0.2**
baz=258
P40A Paris 8.20 29 *e*Pn **Pn 07 04 32.1 +0.1**
P40A *e*Sn **Sn 07 06 01.3 -3.9**
O38A Galt 8.21 21 P **Pn 07 04 32.9 +0.7**
baz=203
Y22D IRIS PASSCAL I 8.25 284 *e*Pg Pg 07 05 04.4 -5.7
V46A Holladay 8.26 64 P **Pn 07 04 32.6 -0.3**
baz=249
SDCO Great Sand Dun 8.56 310 P **Pn 07 04 38.3 +1.1**
baz=126
SDCO Great Sand Dun 8.56 310 *e*Pn **Pn 07 04 37.6 +0.4**
WVT Waverly 8.60 62 P **Pn 07 04 37.6 +0.1**
baz=247
WVT Waverly 8.60 62 *e*Pn **Pn 07 04 37.4 -0.1**
N37A Lee Faris, Mou 8.62 16 P **Pn 07 04 37.6 -0.1**
baz=197
N37A Lee Faris, Mou 8.62 16 *e*Pn **Pn 07 04 38.9 +1.2**
O39A Kirksville 8.64 25 P **Pn 07 04 37.3 -0.6**
baz=207
O40A La Belle 8.77 28 P **Pn 07 04 39.4 -0.4**
baz=211
BGNE Belgrade 8.94 356 P **Pn 07 04 40.9 -1.3**
baz=175
Y49A Blount Mountai 9.19 78 *e*Pn **Pn 07 04 44.3 -1.3**
N39A Derby Farms, D 9.21 23 P **Pn 07 04 45.4 -0.4**
baz=206
OGNE Ogallala 9.28 337 *e*Pn **Pn 07 04 48.8 +1.9**
M40A Post Highland 10.02 26 P **Pn 07 04 56.8 -0.1**
baz=209
L40A Anamosa 10.70 25 *e*Pn **Pn 07 05 06.2 0.0**
N23A Red Feather La 10.91 323 *e*Pn **Pn 07 05 09.6 +0.2**
ECSD EROS Data Cent 11.25 2 P **Pn 07 05 11.7 -2.0**
baz=183
ECSD EROS Data Cent 11.25 2 *e*Pn **Pn 07 05 11.8 -2.0**
J40A Soldiers Grove 12.04 23 P **Pn 07 05 22.5 -2.2**
baz=207
PDAR Pinedale Array 14.15 320 Pn **Pn 07 05 53.2 -0.4**
0.1nm,0.3s,baz=126,slow=12,SNR=3.9
CMIG Matias Romero 15.47 171 Pn **Pn 07 06 13.5 +2.2**
0.1nm,0.3s,baz=356,slow=13,SNR=4.4
NVAR Mina Array Bea 18.14 295 Pn **P 07 06 47.8 +2.1**
baz=93,slow=9.1,SNR=3.2
JTS JuntasAbangare 24.83 150 LR LR 07 20 52.0
comp=Z,25nm,18.1s,baz=312,slow=44
YKA Yellowknife Ar 32.02 345 P **P 07 08 59.4 -0.1**
0.8nm,0.9s,baz=149,slow=8.3,SNR=3.9
ILAR Eielson Array 44.16 332 P **P 07 10 43.1 +1.3**
1.0nm,1.0s,baz=118,slow=5.0,SNR=8.4

*ISK **15** 07:07:52.9, 37°.23N×42°.41E, h5km, ML2.8/3*
*ISCJB **15** 07:07:53.8±1.4, 37°.19N±0°.06×42°.46E±0°.06, h2km±9km, Error ellipse: s-maj=9.7km s-min=7.4km az=11.4*
*CSEM **15** 07:07:54.4±0.2, 37°.20N×42°.46E, h8km, ML2.8, Error ellipse: s-maj=6.4km s-min=3.8km az=41.0*
*ISN **15** 07:07:55.8±0.3, 37°.09N×42°.58E, h0km, ML2.3*
ISC 15 07:07:54.0±1.8, 37°.20N±0°.07×42°.47E±0°.04, h4km±11km, n21, σ0°51/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRT	**Sirnak**	**0.30**	**355**	PG	**Pg**	**07 07 59.6**	**-0.3**
SIRT				SG	**Sg**	**07 08 04.1**	**+0.2**
SIRT	**Sirnak**	**0.30**	**355**	*e*Pg	**Pg**	**07 07 59.6**	**-0.3**
SIRT				*e*Sg	**Sg**	**07 08 04.1**	**+0.2**
SRTM	**Siirt_Merkez**	**0.90**	**331**	*i* P	**Pb**	**07 08 12.5**	**+0.2**
SRTM				*i* S	**Sb**	**07 08 24.5**	**-0.3**
SRTM	**Siirt_Merkez**	**0.90**	**331**	P	**Pb**	**07 08 12.5**	**+0.2**
SRTM				S	**Sb**	**07 08 24.5**	**-0.3**
HAKT	**HAKKARI**	**1.05**	**70**	*i* P	**Pn**	**07 08 15.6**	**-0.1**
HAKT	**HAKKARI**	**1.05**	**70**	P	**Pn**	**07 08 15.6**	**-0.1**
BTMN	**Batman**	**1.18**	**306**	*i* P	**Pg**	**07 08 16.7**	**+0.1**
BTMN				*i* S	**Sb**	**07 08 32.6**	**-0.1**
BTMN	**Batman**	**1.18**	**306**	P	**Pg**	**07 08 16.7**	**+0.1**
BTMN				S	**Sb**	**07 08 32.6**	**-0.1**
MARD	**Mardin**	**1.35**	**275**	*i* P	**Pn**	**07 08 19.3**	**-0.5**
MARD				*i* S	**Sb**	**07 08 38.0**	**+0.2**
SVAN	**Silvan-Diyarba**	**1.39**	**314**	PN	**Pn**	**07 08 19.3**	**-0.9**
SVAN				SN	**Sn**	**07 08 38.9**	**-0.1**
SVAN	**Silvan-Diyarba**	**1.39**	**314**	*e*Pn	**Pn**	**07 08 19.3**	**-0.9**
SVAN				*e*Sn	**Sn**	**07 08 38.9**	**-0.1**
GURO	**Guroymak-BITLI**	**1.39**	**346**	PN	**Pn**	**07 08 19.9**	**-0.5**
GURO				SN	**Sn**	**07 08 39.7**	**+0.4**
GURO	**Guroymak-BITLI**	**1.39**	**346**	*e*Pn	**Pn**	**07 08 19.9**	**-0.5**
GURO				*e*Sn	**Sn**	**07 08 39.7**	**+0.4**
YOVA	**Hakkari_Y¨...kse**	**1.50**	**75**	*i* P	**Pn**	**07 08 21.8**	**-0.1**
YOVA	**Hakkari_Y¨...kse**	**1.50**	**75**	P	**Pn**	**07 08 21.8**	**-0.1**
MAZI	**Mazidag**	**1.63**	**280**	PN	**Pn**	**07 08 23.1**	**-0.6**
MAZI	**Mazidag**	**1.63**	**280**	*e*Pn	**Pn**	**07 08 23.1**	**-0.6**
HANI	**Diyarbakir_Han**	**2.04**	**307**	*i* P	**Pn**	**07 08 30.5**	**+1.3**
HANI	**Diyarbakir_Han**	**2.04**	**307**	P	**Pn**	**07 08 30.5**	**+1.3**
SVRC	**Sivrice-ELAZID**	**2.77**	**296**	PN	**Pn**	**07 08 39.1**	**-0.2**
SVRC	**Sivrice-ELAZID**	**2.77**	**296**	*e*Pn	**Pn**	**07 08 39.1**	**-0.2**

*IGIL **15** 07:19:22.9, 38°.77N×10°.92W, h68km, ML1.8*
*CSEM **15** 07:19:23.8±0.4, 38°.75N×10°.73W, h30km, mb3.6, Error ellipse: s-maj=7.7km s-min=4.3km az=73.0*
*MDD **15** 07:19:23.2±1.6, 38°.71N×10°.93W, h62km±49km, mb3.6/4, Error ellipse: s-maj=16.1km s-min=9.1km az=84.0, PRXIMO*
*INMG **15** 07:19:23.8±1.0, 38°.70N×11°.13W, h10km, ML1.9, Error ellipse: s-maj=5.9km s-min=2.9km az=77.0*
ISC 15 07:19:19.8±2.0, 38.72N±0°.04×11.05W±0.10, h35km, n73, σ1°64/120, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMAFR	**Mafra**	**1.40**	**80**	*e*P	**Pn**	**07 19 44.9**	**+2.1**
PMAFR				*e*S	**Sn**	**07 20 00.4**	**+0.3**
PMAFR				A	A	07 20 02.4	
14nm,0.3s							
PMAFR	**Mafra**	**1.40**	**80**	P	**Pn**	**07 19 45.0**	**+2.2**
4.8nm,0.1s,SNR=7.9							
PMAFR				S	**Sn**	**07 20 00.6**	**+0.5**
10.0nm,0.1s,SNR=7.9							
PMAFR	**Mafra**	**1.40**	**80**	P	**Pn**	**07 19 45.0**	**+2.2**
4.8nm,0.1s,SNR=7.9							
PMAFR				S	**Sn**	**07 20 00.6**	**+0.5**
10.0nm,0.1s,SNR=7.9							
PNCL	**Nicolau / Gran**	**2.07**	**106**	*e*Pn	**Pn**	**07 19 53.9**	**+1.8**
PNCL				*e*Sn	**Sn**	**07 20 15.0**	**-1.7**
PNCL				A	A	07 20 17.7	
3.8nm,0.4s							
PNCL	**Nicolau / Gran**	**2.07**	**106**	*e*Pn	**Pn**	**07 19 53.9**	**+1.8**
PNCL				*e*Sn	**Sn**	**07 20 15.0**	**-1.7**
PTEO	**Sao Teotonio**	**2.18**	**122**	*e*Sn	**Sn**	**07 20 17.5**	**-1.8**
PTEO	**Sao Teotonio**	**2.18**	**122**	S	**Sn**	**07 20 17.5**	**-1.8**
PTEO	**Sao Teotonio**	**2.18**	**122**	S	**Sn**	**07 20 17.5**	**-1.8**
PMTG	**Montargil**	**2.23**	**80**	*e*Pn	**Pn**	**07 19 55.5**	**+1.3**
PMTG				*e*Sn	**Sn**	**07 20 20.1**	**-0.5**
PMTG				A	A	07 20 31.1	
2.3nm,0.7s							
PMTG	**Montargil**	**2.23**	**80**	*e*Pn	**Pn**	**07 19 55.5**	**+1.3**
PMTG				*e*Sn	**Sn**	**07 20 20.1**	**-0.5**
MORF	**Marmelete**	**2.37**	**126**	*e*S	**Sn**	**07 20 23.1**	**-0.9**
MORF				AML	AML	07 20 25.9	
comp=E,8.0nm,0.2s							
MORF	**Marmelete**	**2.37**	**126**	*e*Pn	**Pn**	**07 19 54.8**	**-1.3**
MORF				*e*Sn	**Sn**	**07 20 22.4**	**-1.6**
MORF				A	A	07 20 27.7	
comp=E,6.2nm,0.1s							
MORF	**Marmelete**	**2.37**	**126**	*e*Pn	**Pn**	**07 19 54.8**	**-1.3**
MORF				*e*Sn	**Sn**	**07 20 22.4**	**-1.6**
MORF				S	**Sn**	**07 20 23.1**	**-0.9**
comp=E,8.0nm,0.2s							
PFVI	**Vila Bisbo**	**2.37**	**131**	*e*Sn	**Sn**	**07 20 22.1**	**-1.9**
PFVI				A	A	07 20 42.1	
comp=E,5.6nm,0.4s							
PFVI	**Vila Bisbo**	**2.37**	**131**	P	**Pn**	**07 19 58.8**	**+2.7**
comp=E,1.3nm,0.1s,SNR=4.0							
PFVI				S	**Sn**	**07 20 25.2**	**+1.2**
comp=E,6.6nm,0.1s,SNR=7.9							
PFVI	**Vila Bisbo**	**2.37**	**131**	P	**Pn**	**07 19 58.8**	**+2.7**
comp=E,1.3nm,0.1s,SNR=4.0							
PFVI				*e*Sn	**Sn**	**07 20 22.1**	**-1.9**
PFVI				S	**Sn**	**07 20 25.2**	**+1.2**
comp=E,6.6nm,0.1s,SNR=7.9							
PCAS	**Casmilo, Conde**	**2.38**	**55**	*e*Sn	**Sn**	**07 20 24.9**	**+0.6**
PCAS	**Casmilo, Conde**	**2.38**	**55**	*e*Sn	**Sn**	**07 20 24.9**	**+0.6**
EVO	**Evora**	**2.39**	**94**	*e*Sn	**Sn**	**07 20 23.7**	**-0.7**
EVO	**Evora**	**2.39**	**94**	S	**Sn**	**07 20 23.7**	**-0.7**
EVO	**Evora**	**2.39**	**94**	S	**Sn**	**07 20 23.7**	**-0.7**
MESJ	**Messejana**	**2.40**	**111**	*e*P	**Pn**	**07 19 57.6**	**+1.1**
MESJ				*e*S	**Sn**	**07 20 23.1**	**-1.5**
MESJ				AML	AML	07 20 23.7	
comp=N,3.6nm,0.2s							
MESJ	**Messejana**	**2.40**	**111**	*e*Pn	**Pn**	**07 19 57.9**	**+1.4**
MESJ				*e*Sn	**Sn**	**07 20 23.3**	**-1.3**
MESJ				A	A	07 20 26.9	
comp=N,3.3nm,0.1s							
MESJ	**Messejana**	**2.40**	**111**	P	**Pn**	**07 19 57.6**	**+1.1**
MESJ				P	**Pn**	**07 19 57.9**	**+1.4**
MESJ				S	**Sn**	**07 20 23.1**	**-1.5**
comp=N,3.6nm,0.2s							
MESJ	**Messejana**	**2.40**	**111**	P	**Pn**	**07 19 57.9**	**+1.4**
MESJ				*e*Sn	**Sn**	**07 20 23.3**	**-1.3**
PBEJ	**Beja**	**2.60**	**105**	*e*Sn	**Sn**	**07 20 28.3**	**-1.3**
PBEJ	**Beja**	**2.60**	**105**	S	**Sn**	**07 20 28.3**	**-1.3**
PBEJ	**Beja**	**2.60**	**105**	S	**Sn**	**07 20 28.3**	**-1.3**
PCVE	**Castro Verde**	**2.61**	**114**	*e*Sn	**Sn**	**07 20 28.5**	**-1.5**
PCVE				A	A	07 20 39.6	
comp=N,2.6nm,0.5s							
PCVE	**Castro Verde**	**2.61**	**114**	S	**Sn**	**07 20 28.5**	**-1.5**
comp=N,2.6nm,0.5s							
PCVE	**Castro Verde**	**2.61**	**114**	S	**Sn**	**07 20 28.5**	**-1.5**
comp=N,2.6nm,0.5s							
PESTR	**Estremoz**	**2.71**	**86**	*e*Pn	**Pn**	**07 20 02.2**	**+1.4**
PESTR				*e*Sn	**Sn**	**07 20 31.7**	**-0.7**
PESTR				A	A	07 20 35.9	
comp=N,3.5nm,0.6s							
PESTR	**Estremoz**	**2.71**	**86**	*e*Pn	**Pn**	**07 20 02.2**	**+1.4**
PESTR				*e*Sn	**Sn**	**07 20 31.7**	**-0.7**
PBDV	**Barranco-do-Ve**	**2.88**	**120**	*e*Sn	**Sn**	**07 20 35.6**	**-0.9**
PBDV				A	A	07 20 43.3	
comp=N,1.9nm,0.5s							
PBDV	**Barranco-do-Ve**	**2.88**	**120**	S	**Sn**	**07 20 35.6**	**-0.9**
comp=N,1.9nm,0.5s							
PBDV	**Barranco-do-Ve**	**2.88**	**120**	S	**Sn**	**07 20 35.6**	**-0.9**
comp=N,1.9nm,0.5s							
PMRV	**Marv??o**	**2.94**	**75**	*e*Pn	**Pn**	**07 20 05.4**	**+1.5**
PMRV				*e*Sn	**Sn**	**07 20 37.5**	**-0.5**
PMRV				A	A	07 20 39.2	
comp=N,1.9nm,0.2s							
PMRV	**Marv??o**	**2.94**	**75**	P	**Pn**	**07 20 05.4**	**+1.5**
PMRV				S	**Sn**	**07 20 37.5**	**-0.5**
comp=N,1.9nm,0.2s							
PMRV	**Marv??o**	**2.94**	**75**	P	**Pn**	**07 20 05.4**	**+1.5**
PMRV				S	**Sn**	**07 20 37.5**	**-0.5**
comp=N,1.9nm,0.2s							
PVAQ	**Vaqueiros**	**2.94**	**116**	*e*Pn	**Pn**	**07 20 05.5**	**+1.5**
PVAQ				*e*Sn	**Sn**	**07 20 36.9**	**-1.2**
PVAQ				A	A	07 20 39.0	
comp=N,2.9nm,0.5s							
PVAQ	**Vaqueiros**	**2.94**	**116**	P	**Pn**	**07 20 05.5**	**+1.5**
PVAQ				S	**Sn**	**07 20 36.9**	**-1.2**
comp=N,2.9nm,0.5s							
PVAQ	**Vaqueiros**	**2.94**	**116**	P	**Pn**	**07 20 05.5**	**+1.5**
PVAQ				S	**Sn**	**07 20 36.9**	**-1.2**
comp=N,2.9nm,0.5s							
EGRO	**El Granado**	**3.06**	**112**	P	**Pn**	**07 20 06.8**	**+1.3**
comp=N,0.4nm,0.1s,SNR=7.9							
EGRO				S	**Sn**	**07 20 39.5**	**-1.4**
comp=N,0.8nm,0.1s,SNR=7.9							
EGRO	**El Granado**	**3.06**	**112**	P	**Pn**	**07 20 06.8**	**+1.3**
comp=N,0.4nm,0.1s,SNR=7.9							
EGRO				S	**Sn**	**07 20 39.5**	**-1.4**
comp=N,0.8nm,0.1s,SNR=7.9							
PVIS	**Viseu**	**3.15**	**50**	*e*Sn	**Sn**	**07 20 42.5**	**-0.7**
PVIS				A	A	07 20 43.2	
comp=N,4.3nm,0.2s							
PVIS	**Viseu**	**3.15**	**50**	S	**Sn**	**07 20 42.5**	**-0.7**
comp=N,2.2nm,0.2s							
PVIS	**Viseu**	**3.15**	**50**	S	**Sn**	**07 20 42.5**	**-0.7**
comp=N,2.2nm,0.2s							
EBAD	**Badajoz**	**3.16**	**88**	P	**Pn**	**07 20 08.9**	**+1.9**
comp=N,0.5nm,0.1s,SNR=7.9							
EBAD				S	**Sn**	**07 20 41.8**	**-1.7**
comp=N,1.1nm,0.0s,SNR=7.9							
EBAD	**Badajoz**	**3.16**	**88**	P	**Pn**	**07 20 08.9**	**+1.9**
comp=N,0.5nm,0.1s,SNR=7.9							
EBAD				S	**Sn**	**07 20 41.8**	**-1.7**
comp=N,1.1nm,0.0s,SNR=7.9							
MTE	**Manteigas**	**3.19**	**57**	*e*Sn	**Sn**	**07 20 43.7**	**-0.6**
MTE	**Manteigas**	**3.19**	**57**	Sn	**Sn**	**07 20 43.7**	**-0.6**
MTE	**Manteigas**	**3.19**	**57**	Sn	**Sn**	**07 20 43.7**	**-0.6**
PBAR	**Barrancos**	**3.20**	**99**	*e*Pn	**Pn**	**07 20 09.4**	**+1.9**
PBAR				*e*Sn	**Sn**	**07 20 43.2**	**-1.2**
PBAR				A	A	07 20 52.5	
comp=N,3.4nm,0.3s							
PBAR	**Barrancos**	**3.20**	**99**	P	**Pn**	**07 20 09.4**	**+1.9**
PBAR				S	**Sn**	**07 20 43.2**	**-1.2**
comp=N,3.4nm,0.3s							
PBAR	**Barrancos**	**3.20**	**99**	P	**Pn**	**07 20 09.4**	**+1.9**
PBAR				S	**Sn**	**07 20 43.2**	**-1.2**
comp=N,3.4nm,0.3s							
EMIN	**Mina Concepcio**	**3.58**	**104**	P	**Pn**	**07 20 14.5**	**+1.8**
comp=N,0.1nm,0.1s,SNR=7.9							
EMIN				S	**Sn**	**07 20 51.8**	**-2.0**
comp=N,0.6nm,0.1s,SNR=7.9							
EMIN	**Mina Concepcio**	**3.58**	**104**	P	**Pn**	**07 20 14.5**	**+1.8**
comp=N,0.1nm,0.1s,SNR=7.9							
EMIN				S	**Sn**	**07 20 51.8**	**-2.0**
comp=N,0.6nm,0.1s,SNR=7.9							
POLO	**Lamas de Olo**	**3.64**	**42**	*e*Pn	**Pn**	**07 20 15.0**	**+1.3**
POLO				*e*Sn	**Sn**	**07 20 53.0**	**-2.5**
POLO				A	A	07 21 04.7	
comp=N,1.4nm,0.7s							
POLO	**Lamas de Olo**	**3.64**	**42**	*e*Pn	**Pn**	**07 20 15.0**	**+1.3**
POLO				*e*Sn	**Sn**	**07 20 53.0**	**-2.5**
PGAV	**Gavieira, Arco**	**3.88**	**32**	*e*Pn	**Pn**	**07 20 18.3**	**+1.4**
PGAV				*e*Sn	**Sn**	**07 20 58.6**	**-2.6**
PGAV				A	A	07 21 00.0	
comp=N,4.5nm,0.6s							
PGAV	**Gavieira, Arco**	**3.88**	**32**	*e*Pn	**Pn**	**07 20 18.3**	**+1.4**
PGAV				*e*Sn	**Sn**	**07 20 58.6**	**-2.6**
ELOB	**Lobios**	**3.89**	**35**	P	**Pn**	**07 20 18.4**	**+1.3**
comp=N,0.6nm,0.1s,SNR=7.9							
ELOB				S	**Sn**	**07 20 57.9**	**-3.6**
comp=N,1.9nm,0.1s,SNR=7.9							
ELOB	**Lobios**	**

comp=N,0.4nm,0.1s,SNR=7.9
EPLA S **Sn** **07 21 05.0 -1.2**
comp=N,1.1nm,0.2s,SNR=7.9
EPLA Plasencia 4.08 69 P **Pn** **07 20 21.5 +1.8**
comp=N,0.4nm,0.1s,SNR=7.9
EPLA S **Sn** **07 21 05.0 -1.2**
comp=N,1.1nm,0.2s,SNR=7.9
ECAB El Cabril 4.47 97 P **Pn** **07 20 26.7 +1.6**
comp=N,1.2nm,0.3s,SNR=7.9
ECAB S **Sn** **07 21 13.1 -2.8**
comp=N,1.4nm,0.2s,SNR=7.9
ECAB El Cabril 4.47 97 P **Pn** **07 20 26.7 +1.6**
comp=N,1.2nm,0.3s,SNR=7.9
ECAB S **Sn** **07 21 13.1 -2.8**
comp=N,1.4nm,0.2s,SNR=7.9
ECAL Calabor 4.61 44 P **Pn** **07 20 28.4 +1.4**
comp=N,1.9nm,0.2s,SNR=7.9
ECAL S **Sn** **07 21 16.9 -2.4**
comp=N,0.1nm,0.4s,SNR=7.9
ECAL Calabor 4.61 44 P **Pn** **07 20 28.4 +1.4**
comp=N,1.9nm,0.2s,SNR=7.9
EADA Adamuz 5.11 94 S **Sn** **07 21 28.5 -3.2**
comp=N,0.7nm,0.2s,SNR=7.9
EADA Adamuz 5.11 94 S **Sn** **07 21 28.5 -3.2**
comp=N,0.7nm,0.2s,SNR=7.9
PAB San Pablo 5.28 79 P **Pn** **07 20 37.3 +1.1**
comp=N,0.1nm,0.1s,SNR=7.9
PAB S **Sn** **07 21 32.6 -3.2**
comp=N,0.2nm,0.2s,SNR=7.9
PAB S **Sn** **07 21 32.6 -3.2**
comp=N,0.2nm,0.2s,SNR=7.9

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*ISCJB **15** 07:26:46.4±0.6, 38.°35N±0.°05×38.°98E±0.°05, h12km±6km, Error ellipse: s-maj=8.7km s-min=6.1km az=178.6*
*ISK **15** 07:26:46.0, 38.°36N×38.°98E, h8km, ML2.0/5*
*CSEM **15** 07:26:46.3±0.1, 38.°38N×38.°97E, h10km, ML2.0, Error ellipse: s-maj=2.7km s-min=2.1km az=179.0*
*DDA **15** 07:26:47.8, 38.°43N×38.°87E, h7km, Ml2.5*
ISC 15 07:26:46.3±1.1, 38.°38N±0.°04×38.°99E±0.°03, h16km±8km, n18, σ0.°24/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.12**	**360**	*i* P	**Pg**	**07 26 50.2**	**0.0**
ELZG				*i* S	**Sg**	**07 26 52.9**	**+0.2**
ELZG	**Elazig**	**0.12**	**360**	P	**Pg**	**07 26 50.2**	**0.0**
ELZG				S	**Sg**	**07 26 52.9**	**+0.2**
SVRC	**Sivrice-ELAZID**	**0.25**	**89**	PG	**Pg**	**07 26 51.8**	**-0.2**
SVRC				SG	**Sg**	**07 26 55.6**	**-0.3**
SVRC	**Sivrice-ELAZID**	**0.25**	**89**	*e*Pg	**Pg**	**07 26 51.8**	**-0.2**
SVRC				*e*Sg	**Sg**	**07 26 55.6**	**-0.3**
MALT	**Malatya**	**0.44**	**262**	PG	**Pg**	**07 26 55.3**	**0.0**
MALT				SG	**Sg**	**07 27 01.4**	**+0.1**
MALT	**Malatya**	**0.44**	**262**	*e*Pg	**Pg**	**07 26 55.3**	**0.0**
MALT				*e*Sg	**Sg**	**07 27 01.4**	**+0.1**
PTK	**Pertek**	**0.61**	**32**	PG	**Pg**	**07 26 58.6**	**+0.3**
PTK	**Pertek**	**0.61**	**32**	*e*Pg	**Pg**	**07 26 58.6**	**+0.3**
AKCD	**Akcadag**	**0.84**	**265**	*i* P	**Pg**	**07 27 02.3**	**-0.3**
AKCD	**Akcadag**	**0.84**	**265**	P	**Pg**	**07 27 02.3**	**-0.3**
URFA	**Urfa**	**0.94**	**188**	PG	**Pb**	**07 27 04.4**	**+0.1**
URFA	**Urfa**	**0.94**	**188**	*e*Pg	**Pb**	**07 27 04.4**	**+0.1**
HEKM	**Malatya_Hekimh**	**0.95**	**302**	*i* P	**Pb**	**07 27 04.7**	**+0.2**
HEKM	**Malatya_Hekimh**	**0.95**	**302**	P	**Pb**	**07 27 04.7**	**+0.2**
KEMA	**Kemaliye**	**0.97**	**337**	*i* P	**Pb**	**07 27 04.4**	**-0.4**
KEMA	**Kemaliye**	**0.97**	**337**	P	**Pb**	**07 27 04.4**	**-0.4**
MAZI	**Mazidag**	**1.47**	**128**	PN	**Pb**	**07 27 13.5**	**+0.2**
MAZI	**Mazidag**	**1.47**	**128**	*e*Pn	**Pb**	**07 27 13.5**	**+0.2**

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*CSEM **15** 07:29:31.4±0.2, 42.°97N×6.°40E, h1km, ML3.0, Error ellipse: s-maj=4.8km s-min=2.6km az=140.0, Mining explosion.*
*ROM **15** 07:29:32.1±0.3, 42.°96N±0.°01×6.°55E±0.°03, h5km, ML2.5/8*
*STR **15** 07:29:33.1±0.6, 43.°N±3.°×±.°, h30km, M3.0/13, MLv3.0/13*
ISC 15 07:29:34.0±1.4, 42.°96N±0.°03×6.°44E±0.°03, h25km±14km, n65, σ0.°95/85, 2C, Western Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CALF	**Calern**	**0.86**	**24**	Pg	**Pb**	**07 29 48.6**	**-1.9**
CALF				Sg	Sb	07 29 50.5	-11
CALF	**Calern**	**0.86**	**24**	Pg	**Pb**	**07 29 48.6**	**-1.9**
REVF	**Revere**	**1.03**	**41**	Pg	**Pb**	**07 29 52.9**	**-0.4**
REVF	**Revere**	**1.03**	**41**	Pg	**Pb**	**07 29 52.9**	**-0.4**
REVF				Sg	**Sn**	**07 30 06.9**	**+0.3**
MON	**Monaco**	**1.05**	**43**	Pg	**Pn**	**07 29 52.6**	**-0.5**
MON	**Monaco**	**1.05**	**43**	Pg	**Pn**	**07 29 52.6**	**-0.5**
LUCF	**Luceram**	**1.14**	**35**	Pg	**Pn**	**07 29 54.1**	**-0.4**
LUCF	**Luceram**	**1.14**	**35**	Pg	**Pn**	**07 29 54.1**	**-0.4**
LUCF				Sg	**Sb**	**07 30 10.6**	**+1.0**
OGDI	**Digne**	**1.15**	**355**	Pg	**Pn**	**07 29 54.1**	**-0.5**
OGDI	**Digne**	**1.15**	**355**	Pg	**Pn**	**07 29 54.1**	**-0.5**
OGDI				Sg	**Sn**	**07 30 09.1**	**-0.4**
RUSF	**Rustrel**	**1.20**	**325**	Pg	**Pn**	**07 29 54.8**	**-0.4**
RUSF	**Rustrel**	**1.20**	**325**	Pg	**Pn**	**07 29 54.8**	**-0.4**
RUSF				Sg	**Sn**	**07 30 08.9**	**-1.8**
NEGI	**Seborga**	**1.28**	**46**	⇑P	**Pn**	**07 29 55.3**	**-1.0**
NEGI				S	**Sn**	**07 30 12.4**	**-0.3**
NEGI	**Seborga**	**1.28**	**46**	P	**Pn**	**07 29 55.4**	**-1.0**
NEGI				S	**Sn**	**07 30 12.4**	**-0.3**
ISO	**Isola**	**1.30**	**20**	Pg	**Pn**	**07 29 56.2**	**-0.4**
ISO	**Isola**	**1.30**	**20**	Pg	**Pn**	**07 29 56.2**	**-0.4**
ISO				Sg	**Sn**	**07 30 13.1**	**-0.1**
SAOF	**Saorge**	**1.31**	**38**	P	**Pn**	**07 29 56.2**	**-0.5**
SAOF				S	**Sn**	**07 30 13.4**	**+0.1**
SAOF	**Saorge**	**1.31**	**38**	P	**Pn**	**07 29 56.2**	**-0.5**
SAOF				S	**Sn**	**07 30 13.4**	**+0.1**
SAOF				AML	AML		
	comp=E,204μm,0.7s						
SAOF				AML	AML		
	comp=N,119μm,0.3s						
SAOF				AML	AML		
	comp=E,204μm,0.7s						
SAOF				AML	AML		
	comp=N,119μm,0.3s						
IMI	**Imperia**	**1.42**	**48**	⇑P	**Pn**	**07 29 57.3**	**-1.0**
IMI	**Imperia**	**1.42**	**48**	P	**Pn**	**07 29 57.3**	**-1.0**
STV	**Sant Anna di V**	**1.43**	**26**	P	**Pn**	**07 29 58.4**	**-0.1**
STV	**Sant Anna di V**	**1.43**	**26**	P	**Pn**	**07 29 58.4**	**-0.1**
STV				AML	AML		
	comp=E,98μm,0.4s						
STV				AML	AML		
	comp=N,136μm,0.4s						
STV				AML	AML		
	comp=E,98μm,0.4s						
STV				AML	AML		
	comp=N,136μm,0.4s						
ENR	**Entracque**	**1.45**	**29**	P	**Pn**	**07 29 58.8**	**0.0**
ENR				S	**Sn**	**07 30 17.0**	**0.0**
ENR	**Entracque**	**1.45**	**29**	P	**Pn**	**07 29 58.8**	**0.0**
ENR				S	**Sb**	**07 30 18.0**	**-0.5**
ENR				AML	AML		
	comp=E,171μm,1.5s						
ENR				AML	AML		
	comp=N,342μm,0.4s						
ENR				AML	AML		
	comp=N,342μm,0.4s						
ENR				AML	AML		
	comp=E,171μm,1.5s						
OGAG	**Argentiere**	**1.49**	**3**	Pg	**Pb**	**07 30 05.5**	**+4.4**
SURF	**Saint Ours**	**1.54**	**10**	Pg	**Pn**	**07 30 00.1**	**+0.1**
SURF	**Saint Ours**	**1.54**	**10**	Pg	**Pn**	**07 30 00.1**	**+0.1**
SURF				Sg	**Sb**	**07 30 21.0**	**-0.2**
PZZ	**Stroppo**	**1.62**	**17**	P	**Pn**	**07 30 01.2**	**+0.1**
PZZ	**Stroppo**	**1.62**	**17**	P	**Pn**	**07 30 01.2**	**+0.1**
PZZ				AML	AML		
	comp=E,216μm,1.5s						
PZZ				AML	AML		
	comp=N,198μm,1.5s						
PZZ				AML	AML		
	comp=N,198μm,1.5s						
PZZ				AML	AML		
	comp=E,216μm,1.5s						
RORO	**Rocca Rossa**	**1.65**	**45**	P	**Pn**	**07 30 00.7**	**-0.7**
RORO	**Rocca Rossa**	**1.65**	**45**	P	**Pn**	**07 30 00.7**	**-0.7**
PGF	**Pioggiola**	**1.93**	**102**	P	**Pn**	**07 30 05.3**	**-0.1**
PGF				S	**Sn**	**07 30 28.3**	**-0.5**
PGF				AML	AML		
	comp=E,59μm,0.7s						
PGF				AML	AML		
	comp=N,35μm,0.7s						
PGF				AML	AML		
	comp=E,59μm,0.7s						
PGF				AML	AML		
	comp=N,35μm,0.7s						
BHB	**Bricherasio**	**1.97**	**17**	P	**Pn**	**07 30 06.4**	**+0.6**
BHB	**Bricherasio**	**1.97**	**17**	P	**Pn**	**07 30 06.4**	**+0.6**
BHB				AML	AML		
	comp=E,77μm,0.7s						
BHB				AML	AML		
	comp=N,62μm,1.5s						
BHB				AML	AML		
	comp=N,62μm,1.5s						
BHB				AML	AML		
	comp=E,77μm,0.7s						
RRL	**Rocca Remolon**	**1.97**	**7**	P	**Pn**	**07 30 06.7**	**+0.6**
RRL	**Rocca Remolon**	**1.97**	**7**	P	**Pn**	**07 30 06.7**	**+0.6**
RRL				AML	AML		
	comp=E,77μm,1.1s						
RRL				AML	AML		
	comp=N,46μm,1.1s						
RRL				AML	AML		
	comp=E,77μm,1.1s						
RRL				AML	AML		
	comp=N,46μm,1.1s						
ORIF	**Oris-en-Rattie**	**2.00**	**349**	Pg	**Pn**	**07 30 07.0**	**+0.8**
ORIF				Sg	**Sn**	**07 30 28.6**	**-1.9**
ORIF	**Oris-en-Rattie**	**2.00**	**349**	P	**Pn**	**07 30 07.4**	**+1.2**
TRBF	**Trabuc cave**	**2.13**	**303**	Pg	**Pn**	**07 30 07.6**	**-0.4**
TRBF	**Trabuc cave**	**2.13**	**303**	Pg	**Pn**	**07 30 07.6**	**-0.4**
SMPL	**Sampolo**	**2.28**	**111**	P	**Pn**	**07 30 10.8**	**+0.8**
SMPL	**Sampolo**	**2.28**	**111**	P	**Pn**	**07 30 10.8**	**+0.8**
SMPL				AML	AML		
	comp=E,2925μm,0.4s						
SMPL				AML	AML		
	comp=N,2530μm,0.2s						
SMPL				AML	AML		
	comp=E,2925μm,0.4s						
SMPL				AML	AML		
	comp=N,2530μm,0.2s						
MSSA	**Maissana**	**2.61**	**58**	P	**Pn**	**07 30 14.1**	**-0.6**
MSSA	**Maissana**	**2.61**	**58**	P	**Pn**	**07 30 14.1**	**-0.6**
SJAF	**Saint Jean de**	**2.66**	**261**	P	**Pn**	**07 30 14.4**	**-0.9**
	comp=N,0.6nm,0.1s,SNR=7.9						
SJAF				S	**Sn**	**07 30 46.4**	**-0.4**
	SNR=7.9						
EJON	**La Jonquera**	**2.67**	**260**	P	**Pn**	**07 30 14.4**	**-1.0**
	comp=N,3.7nm,0.1s,SNR=7.9						
EJON				S	**Sn**	**07 30 45.8**	**-1.1**
	SNR=7.9						
RSL	**Roselend**	**2.73**	**3**	Pg	**Pn**	**07 30 17.9**	**+1.5**
RSL	**Roselend**	**2.73**	**3**	Pg	**Pn**	**07 30 17.9**	**+1.5**
FNEB	**N^bias**	**3.18**	**270**	Pg	**Pn**	**07 30 22.4**	**-0.1**
FNEB	**N^bias**	**3.18**	**270**	Pg	**Pn**	**07 30 22.4**	**-0.1**
CFON	**Fontmartina**	**3.20**	**249**	P	**Pn**	**07 30 22.6**	**-0.2**
	comp=N,15nm,0.2s,SNR=7.9						
CFON				S	**Sn**	**07 31 00.1**	**-0.1**
	SNR=7.9						
CASP	**Castiglione de**	**3.26**	**92**	P	**Pn**	**07 30 23.3**	**-0.2**
CASP	**Castiglione de**	**3.26**	**92**	P	**Pn**	**07 30 23.3**	**-0.2**
CLLI	**Llivia**	**3.33**	**263**	P	**Pn**	**07 30 24.1**	**-0.5**
	comp=N,14nm,0.2s,SNR=7.9						
CLLI				S	**Sn**	**07 31 03.1**	**-0.2**
	SNR=7.9						
EMIR	**Miracle**	**3.78**	**256**	P	**Pn**	**07 30 31.3**	**+0.5**
	comp=N,5.7nm,0.3s,SNR=6.8						
MLS	**Moulis**	**3.92**	**272**	Pg	**Pn**	**07 30 33.1**	**+0.5**
MLS	**Moulis**	**3.92**	**272**	Pg	**Pn**	**07 30 33.1**	**+0.5**
CSOR	**Sort**	**3.96**	**263**	P	**Pn**	**07 30 34.1**	**+0.9**
	comp=N,3.9nm,0.1s,SNR=7.9						
CSOR				S	**Sn**	**07 31 18.1**	**-0.7**
	SNR=7.9						
MONQ	**Montcuq**	**4.05**	**292**	Pg	**Pn**	**07 30 34.2**	**-0.2**
MONQ	**Montcuq**	**4.05**	**292**	Pg	**Pn**	**07 30 34.2**	**-0.2**
VSL	**Villasalto**	**4.11**	**146**	P	**Pn**	**07 30 36.6**	**+1.3**
VSL	**Villasalto**	**4.11**	**146**	P	**Pn**	**07 30 36.6**	**+1.3**
ETOS	**Mallorca**	**4.20**	**222**	P	**Pn**	**07 30 37.3**	**+0.8**
	comp=N,1.4nm,0.2s,SNR=7.9						
ETOS				S	**Sn**	**07 31 21.8**	**-2.9**
	SNR=7.9						
EPOB	**Poblet**	**4.30**	**250**	P	**Pn**	**07 30 37.9**	**0.0**
	comp=N,1.5nm,0.2s,SNR=7.9						
ECHI	**Chisagues Biel**	**4.60**	**268**	P	**Pn**	**07 30 43.7**	**+1.6**
	comp=N,1.8nm,0.2s,SNR=7.9						

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*NIED **15** 07:31:00, 38.°20N×141.°90E, h65km, Mw4.6 Best double couple: M0:9.46000×10^15 NP1:φs185.00000°, δ26.00000°, λ89.00000°. NP2:φs6.00000°, δ64.00000°, λ90.00000°.*
*BJI **15** 07:31:46.4, 38.°01N×142.°18E, h52km, mb4.7/52, mB4.9/33, Ms4.0/22, Ms7 3.7/20*
*MOS **15** 07:31:50.9±0.8, 38.°47N×141.°74E, h58km, mb5.1/74, Error ellipse: s-maj=6.3km s-min=4.4km az=100.8*
*ISCJB **15** 07:31:51.5±0.3, 38.°22N±0.°02×141.°72E±0.°03, h73km±2km, mb4.7/274, Error ellipse: s-maj=4.2km s-min=3.1km az=138.3*
*NEIC **15** 07:31:51.7±0.3, 38.°22N×141.°74E, h61km±3km, mb4.7/201, Error ellipse: s-maj=3.0km s-min=2.3km az=134.0*
NEIC Felt at Ichinoseki and Koriyama. Recorded [3 JMA] in Miyagi.
*JMA **15** 07:31:51.4±0.1, 38.°19N×141.°85E, h63km±1km, M4.6 Broadband fault plane solution: P waves. NP1: φs8.00000°, δ62.00000°, λ78.00000°. NP2:φs212.00000°, δ30.00000°, λ111.00000°. Principal axes: T Plg71.0000°, Azm252.0000°; N Plg10.0000°, Azm14.0000°; P Plg16.0000°, Azm107.0000°;*
JMA Felt III J1.
*IDC **15** 07:31:51.6±0.4, 38.°19N×141.°74E, h63km±3km, mb4.5/34, mb1 4.5/38, mb1mx4.4/74, mbtmp4.7/38, MS3.5/33, Ms1 3.5/33, ms1mx3.4/67 Error ellipse: s-maj=10.0km s-min=8.7km az=90.0*
ISC 15 07:31:51.0±0.3, 38.°22N±0.°03×141.°92E±0.°04, h58km±2km, h58km: pP-P, n556, σ1.°25/593, mb4.8/278, MS3.6/34, 30C-27D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**0.50**	**297**	⇓P	**Pn**	**07 32 03.5**	**+0.6**
JIO				S	**Sn**	**07 32 11.9**	**+0.4**
OFUJ	**Ofunato**	**0.88**	**347**	⇓P	**Pn**	**07 32 08.2**	**+0.8**
OFUJ				*e*S	**Sn**	**07 32 20.5**	**+1.0**
JMK	**Ichinoseki**	**0.91**	**323**	⇓P	**Pn**	**07 32 08.7**	**+0.9**
JMK				*e*S	**Sn**	**07 32 21.0**	**+0.8**
JMM	**Marumori**	**0.96**	**248**	⇓P	**Pn**	**07 32 08.0**	**-0.4**
JMM				S	**Sn**	**07 32 20.5**	**-0.8**
JOU	**Okura**	**1.00**	**279**	⇓P	**Pn**	**07 32 09.1**	**+0.1**
JOU				*e*S	**Sn**	**07 32 22.4**	**+0.2**
JFK	**Kawauchi**	**1.19**	**224**	⇓P	**Pn**	**07 32 11.2**	**-0.3**
JFK				*e*S	**Sn**	**07 32 25.9**	**-0.9**
JOM	**Ohasama**	**1.34**	**339**	⇓P	**Pn**	**07 32 14.3**	**+0.8**
JOM				*e*S	**Sn**	**07 32 31.6**	**+1.2**
JYK	**Kaneyama**	**1.41**	**300**	⇓P	**Pn**	**07 32 14.8**	**+0.4**
JFT	**Otama**	**1.44**	**241**	⇓P	**Pn**	**07 32 15.0**	**+0.2**
JFT				S	**Sn**	**07 32 32.1**	**-0.6**
JYS	**Shirataka**	**1.46**	**270**	⇓P	**Pn**	**07 32 15.4**	**+0.3**
JYS				*e*S	**Sn**	**07 32 34.0**	**+0.8**
JRG	**Rokugo**	**1.54**	**320**	⇓P	**Pn**	**07 32 17.1**	**+0.9**
JRG				*e*S	**Sn**	**07 32 35.8**	**+0.6**
JYA	**Atsumi**	**1.77**	**283**	⇓P	**Pn**	**07 32 19.6**	**+0.3**
JNS	**Sasagawa**	**2.09**	**260**	⇓P	**Pn**	**07 32 24.0**	**+0.3**
JNS				*e*S	**Sn**	**07 32 49.4**	**+0.8**
MJAR	**Matsushiro Arr**	**3.40**	**242**	P	**Pn**	**07 32 42.7**	**+1.2**
	25nm,0.3s,baz=62,slow=11,SNR=185						
MJAR				LR	LR	07 34 22.6	
	comp=Z,1μm,21.5s,baz=60,slow=47						
MAJO	**Matsushiro**	**3.40**	**242**	*e*Pn	**Pn**	**07 32 42.8**	**+1.2**
MAJO	**Matsushiro**	**3.40**	**242**	*d* iP	**Pn**	**07 32 42.7**	**+1.2**
MAT	**Matsushiro**	**3.40**	**242**	P	**Pn**	**07 32 43.0**	**+1.4**
MAT				S	**Sn**	**07 33 24.7**	**+4.0**
MJB9	**Matsu-Tunnel**	**3.40**	**242**	*e*Pn	**Pn**	**07 32 42.6**	**+1.0**
ERM	**Erimo**	**3.90**	**14**	*e*Pn	**Pn**	**07 32 48.1**	**-0.4**
ERM				*e*Sn	**Sn**	**07 33 33.7**	**+0.7**
ERM	**Erimo**	**3.90**	**14**	*c* iP	**Pn**	**07 32 49.1**	**+0.7**
INU	**Inuyama**	**4.87**	**235**	*e*Pn	**Pn**	**07 33 02.5**	**+0.8**
JHJ2	**Mitsune**	**5.38**	**199**	*e*Pn	**Pn**	**07 33 06.1**	**-2.5**
JHJ2				*e*Sn	**Sn**	**07 34 04.6**	**-4.7**
JHJ	**Hachijo jima 2**	**5.38**	**199**	P	**Pn**	**07 33 07.5**	**-1.2**
	29nm,0.3s,baz=321,slow=22,SNR=13						
JHJ				S	**Sn**	**07 34 04.0**	**-5.3**
	159nm,0.3s,baz=66,slow=22,SNR=12						
ASAJ	**Asahikawa**	**5.91**	**5**	P	**Pn**	**07 33 16.4**	**+0.5**
	5.5nm,0.3s,baz=191,slow=11,SNR=16						
ASAJ	**Asahikawa**	**5.91**	**5**	*e*Pn	**Pn**	**07 33 15.2**	**-0.7**
YUK	**Yuzh-Kuril'sk**	**6.52**	**26**	*d* iP	**Pn**	**07 33 22.8**	**-1.5**
YUK				*i* S	**Sn**	**07 34 31.2**	**-6.0**
YUK				pmax	pmax		
	comp=Z,236nm,0.4s						
YUK				pmax	pmax		
	comp=N,112nm,0.2s						
YUK				pmax	pmax		
	comp=E,90nm,0.3s						
YUK				smax	smax		
	comp=E,2μm,0.6s						
YUK				smax	smax		
	comp=N,487nm,0.4s						
YUK				MLR	MLR		
	comp=Z,183nm,18.0s						
SHO	**Shikotan**	**6.75**	**32**	*e*P	**Pn**	**07 33 25.0**	**-2.4**
SHO				*e*S	**Sn**	**07 34 35.8**	**-7.0**
SHO				pmax	pmax		
	comp=Z,56nm,0.5s						
SHO				pmax	pmax		
	comp=N,23nm,0.3s						
SHO				pmax	pmax		
	comp=E,23nm,0.3s						
SHO				MLR	MLR		
	comp=Z,293nm,20.0s						
SHO				MLR	MLR		
	comp=E,259nm,19.0s						
SHO				MLR	MLR		
	comp=N,215nm,13.0s						
TEY	**Ternei**	**7.88**	**331**	*e*P	Pn	07 33 37.9	-5.0
KUR	**Kuril'sk**	**8.29**	**31**	⇓ *i* P	**Pn**	**07 33 48.1**	**-0.4**
KUR				*e*S	**Sn**	**07 35 15.7**	**-5.0**
KUR				pmax	pmax		
	comp=Z,71nm,0.4s						
KUR				pmax	pmax		
	comp=N,39nm,0.2s						
KUR				pmax	pmax		
	comp=E,28nm,0.5s						
KUR				smax	smax		
	comp=E,552nm,0.6s						
KUR				smax	smax		
	comp=N,180nm,0.3s						
YSS	**Yuzh-Sakhalins**	**8.75**	**4**	*e*Pn	**Pn**	**07 33 53.6**	**-1.1**
YSS	**Yuzh-Sakhalins**	**8.75**	**4**	⇓ *e*P	**Pn**	**07 33 54.7**	**0.0**
YSS				*e*S	Sn	07 35 21.3	-10
YSS				pmax	pmax		
	comp=Z,30nm,0.5s						
YSS				MLR	MLR		
	comp=Z,200nm,13.0s						
MSHR	**Mys Shultsa**	**9.29**	**301**	⇓ *e*P	**Pn**	**07 34 02.4**	**+0.3**
USRK	**Ussuriysk Ar.**	**9.57**	**312**	P	**Pn**	**07 34 07.3**	**+1.3**
	comp=Z,3.2nm,0.3s,baz=124,slow=14,SNR=27						
USRK				LR	LR	07 37 34.4	
	comp=Z,223nm,21.1s,baz=93,slow=36						
JNU	**Nakatsue**	**10.32**	**244**	P	**Pn**	**07 34 17.4**	**+1.1**
	comp=Z,0.7nm,0.3s,baz=84,slow=8.4,SNR=7.7						
JNU				LR	LR	07 38 44.3	
	comp=Z,494nm,20.6s,baz=116,slow=40						
JNU	**Nakatsue**	**10.32**	**244**	*e*Pn	**Pn**	**07 34 16.5**	**+0.2**
KSRS	**Korea Array**	**11.10**	**270**	P	**Pn**	**07 34 29.3**	**+2.5**
	comp=Z,2.0nm,0.3s,baz=83,slow=14,SNR=38						
KSRS				LR	LR	07 38 32.8	
	comp=Z,201nm,21.6s,baz=80,slow=36						
CBIJ	**Chichi jima**	**11.10**	**179**	*e*Pn	**Pn**	**07 34 27.3**	**+0.4**
KS01	**Wonju Array Si**	**11.12**	**270**	*e*Pn	**Pn**	**07 34 24.9**	**-2.3**
KS15	**Wonju Array Si**	**11.13**	**270**	*e*Pn	**Pn**	**07 34 24.6**	**-2.7**
KSAR	**Wonju Array Be**	**11.13**	**270**	P	**Pn**	**07 34 29.3**	**+2.0**
KSAR	**Wonju Array Be**	**11.13**	**270**	P	**Pn**	**07 34 29.3**	**+2.0**
MDJ	**Mudanjiang**	**11.24**	**309**	P	**Pn**	**07 34 25.1**	**-3.7**
MDJ				pmax	pmax		
	comp=Z,9.0nm,0.4s						
MDJ				pmax	pmax		
	comp=Z,210nm,4.5s						
MDJ	**Mudanjiang**	**11.24**	**309**	*e*Pn	**Pn**	**07 34 29.5**	**+0.8**
GRNR	**Gornyy**	**13.14**	**344**	*e*P	**P**	**07 35 02.9**	**0.0**
GRNR				pmax	pmax		
	comp=Z,34nm,1.0s						
KLR	**Kul'dur**	**13.22**	**330**	P	**Pn**	**07 34 54.9**	**-0.8**
	comp=Z,0.0nm,0.3s,baz=128,slow=14,SNR=9.7						
KLR				LR	LR	07 40 13.0	
	comp=Z,19nm,18.2s,baz=134,slow=38						
KLR	**Kul'dur**	**13.22**	**330**	⇑ *i* P	**Pn**	**07 34 54.6**	**-1.1**
CN2	**Changchun**	**13.62**	**299**	*e*P	**Pn**	**07 35 02.6**	**+1.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
JOW	**Kunigami**	**16.15**	**229**	*e*Pn	**Pn**	**07 35 33.2**	**-1.0**
	comp=Z,53nm,1.3s						
PETK	**Petropavlovsk-**	**18.46**	**31**	P	**Pn**	**07 36 02.7**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=207,slow=11,SNR=6.7						
PETK	**Petropavlovsk-**	**18.46**	**31**	*e*P	**P**	**07 36 01.5**	**-0.3**
ZEA	**Zeya**	**18.50**	**332**	*e*P	**P**	**07 36 00.5**	**-1.8**
ZEA				pmax	pmax		
	comp=Z,32nm,0.9s						
HIA	**Hailar**	**19.38**	**312**	*e*P	**P**	**07 36 11.3**	**-0.7**
	comp=Z,15nm,0.5s						
HIA	**Hailar**	**19.38**	**312**	*e*P	**P**	**07 36 11.3**	**-0.7**
HIA				pmax	pmax		
	comp=Z,15nm,0.5s						
NJ2	**Nanjing**	**19.82**	**259**	*e*P	**P**	**07 36 15.8**	**-1.0**
NJ2				pmax	pmax		
	comp=Z,26nm,0.5s						
BJI	**Beijing**	**20.04**	**283**	*e*P	**P**	**07 36 16.6**	**-2.5**
BJI				pmax	pmax		
	comp=Z,13nm,0.8s						
BJT	**Baijiatuau**	**20.04**	**283**	*e*P	**P**	**07 36 16.8**	**-2.4**
	comp=Z,24nm,1.1s						
BJT	**Baijiatuau**	**20.04**	**283**	*e*P	**P**	**07 36 16.8**	**-2.4**
BJT				pmax	pmax		
	comp=Z,24nm,1.1s						
MA2	**Magadan**	**22.11**	**12**	P	**P**	**07 36 41.8**	**+0.7**
	comp=Z,13nm,0.6s,baz=190,slow=6.6,SNR=6.7						
MA2	**Magadan**	**22.11**	**12**	*e*P	**P**	**07 36 40.5**	**-0.7**
	comp=Z,19nm,0.8s						
MA2	**Magadan**	**22.11**	**12**	⇑ *e*P	**P**	**07 36 43.0**	**+1.8**
MA2				pmax	pmax		
	comp=Z,18nm,1.3s						
HHC	**Hu-ho-hao-te**	**23.50**	**286**	*e*P	**P**	**07 36 55.5**	**-0.2**
HHC				pmax	pmax		
	comp=Z,43nm,0.7s						
HHC				pmax	pmax		
	comp=Z,120nm,4.7s						
GUMO	**Guam**	**24.68**	**173**	LR	LR	07 46 51.1	
	comp=Z,30nm,21.6s,baz=30,slow=36						
YAK	**Yakutsk**	**25.00**	**346**	*e*P	**P**	**07 37 08.5**	**-0

ULN pmax pmax
comp=Z,10.0nm,1.7s
SONA1 Songino Array 27.47 302 *eP* **P 07 37 31.8 +0.1**
SONM Songino Array 27.48 302 P **P 07 37 31.3 -0.4**
comp=Z,3.1nm,0.7s,baz=100,slow=8.9,SNR=19
SONM PcP **PcP 07 40 48.1 -0.6**
comp=Z,1.7nm,0.7s,baz=136,slow=3.6,SNR=4.9
SONM LR LR 07 48 30.1
comp=Z,85nm,18.9s,baz=122,slow=36
ENH Enshi 27.85 263 *eP* **P 07 37 34.6 -0.5**
comp=Z,34nm,0.6s
H11N2 WAKE ISLAND Hy 28.44 123 T T 08 07 58.4
baz=316,slow=75,SNR=444
H11N1 WAKE ISLAND Hy 28.45 123 T T 08 08 04.6
baz=316,slow=75,SNR=5505
H11N3 WAKE ISLAND Hy 28.46 123 T T 08 07 59.8
baz=316,slow=75,SNR=538
H11S1 WAKE ISLAND Hy 29.19 125 T T 08 08 59.7
baz=318,slow=76,SNR=173
H11S3 WAKE ISLAND Hy 29.20 125 T T 08 08 57.2
baz=318,slow=76,SNR=634
H11S2 WAKE ISLAND Hy 29.21 125 T T 08 08 55.0
baz=318,slow=76,SNR=120
ZAK Zakamensk 29.86 307 *eP* **P 07 37 51.0 -1.8**
ZAK *e* 07 40 53.4
ZAK pmax pmax
comp=Z,4.0nm,1.1s
TLY Talaya 29.87 309 LR LR 07 50 09.2
comp=Z,110nm,19.9s,baz=110,slow=37
LZH Lanzhou 30.28 278 *eP* **P 07 37 55.1 -1.7**
LZH pP pP 07 38 09.5 -1.8
LZH sP sP 07 38 14.0 -4.2
LZH *e*PP **PnPn 07 38 57.8 +1.2**
LZH pmax pmax
comp=Z,26nm,1.2s
LZH pmax pmax
comp=Z,240nm,6.5s
LZH LR LR
comp=Z,350nm,10.8s
LZH LR LR
comp=Z,340nm,11.9s
LZH LR LR
comp=Z,340nm,15.2s
GYA Guiyang 31.83 259 *eP* **P 07 38 11.0 +0.6**
GYA pmax pmax
comp=Z,10.0nm,0.8s
GTA Gaotai 32.61 285 *eP* **P 07 38 18.3 +1.1**
GTA pP pP 07 38 29.6 -2.2
GTA sP sP 07 38 35.6 -3.0
GTA pmax pmax
comp=Z,11nm,0.9s
BILL Bilibino 32.77 17 *eP* **P 07 38 17.9 -0.2**
comp=Z,7.3nm,1.1s
BILL Bilibino 32.77 17 *deP* **P 07 38 17.4 -0.7**
BILL *e* 07 39 25.7
BILL pmax pmax
comp=Z,8.0nm,1.1s
BILL MLR MLR
comp=Z,115nm,23.0s
TIXI Tiksi 34.16 353 *eP* **P 07 38 29.3 -0.7**
comp=Z,4.7nm,0.6s
TIXI Tiksi 34.16 353⇑ *iP* **P 07 38 29.0 -1.1**
TIXI pmax pmax
comp=Z,4.0nm,0.6s
DAV Davao City (W) 34.36 210 LR LR 07 50 01.2
comp=Z,55nm,20.6s,baz=341,slow=32
KMI Kunming 35.55 260 P **P 07 38 43.8 +0.9**
KMI pmax pmax
comp=Z,17nm,0.6s
KMI pmax pmax
comp=Z,140nm,4.1s
ANM Nome 40.38 32 *eP* **P 07 39 24.9 +2.1**
comp=Z,3.8nm,0.9s
ANM Nome 40.38 32 *eP* **P 07 39 24.9 +2.1**
ANM pmax pmax
comp=Z,4.0nm,0.9s
WMQ Urumqi 40.67 296 P **P 07 39 26.3 +0.7**
WMQ pP pP 07 39 42.6 +2.1
WMQ sP sP 07 39 47.6 +0.3
WMQ pmax pmax
comp=Z,53nm,0.9s
WMQ pmax pmax
comp=Z,180nm,3.7s
WMQ LR LR
comp=Z,140nm,22.5s
WMQ LR LR
comp=Z,350nm,23.7s
WMQ LR LR
comp=Z,210nm,28.9s
ZAA0 Zalesovo Array 41.42 311 *eP* **P 07 39 30.7 -0.8**
comp=Z,15nm,0.9s
ZALV Zalesovo Beam 41.42 311 P **P 07 39 31.3 -0.2**
comp=Z,5.9nm,0.4s,baz=90,slow=6.8,SNR=26
ZALV pP **pP 07 39 46.6 +0.2**
comp=Z,7.1nm,0.7s,baz=83,slow=7.2,SNR=4.8
ZALV PcP **PcP 07 41 27.8 -0.6**
comp=Z,2.8nm,0.4s,baz=95,slow=2.5,SNR=4.3
ZALV LR LR 07 57 14.1
comp=Z,72nm,19.2s,baz=70,slow=37
ZALV Zalesovo Beam 41.42 311 *eP* **P 07 39 30.8 -0.7**
ZALV pP **pP 07 39 46.6 +0.2**
ZALV PcP **PcP 07 41 27.8 -0.6**
FAKI Fak Fak 41.90 195 *eP* **P 07 39 35.9 +0.1**
comp=Z,17nm,0.7s
CMAR Chiang Mai Arr 42.19 254 P **P 07 39 37.8 -0.5**
comp=Z,2.2nm,0.6s,baz=44,slow=4.7,SNR=9.9
CMAR PcP **PcP 07 41 31.7 +0.1**
comp=Z,1.3nm,0.3s,baz=7.8,slow=2.4,SNR=6.6
CMAR LR LR 07 57 47.8
comp=Z,33nm,18.9s,baz=22,slow=37
CM01 Chiang Mai Arr 42.20 254 *eP* **P 07 39 37.9 -0.4**
RDOG Red Dog Mine 42.27 27 *eP* **P 07 39 39.8 +1.5**
comp=Z,5.5nm,0.6s
NVS Novosibirsk 42.32 313 *eP* **P 07 39 37.9 -0.9**
NVS *e* 07 39 54.2
NVS pmax pmax
comp=Z,16nm,1.0s
NVS pmax pmax
comp=E,12nm,1.3s
NRIK Noril'sk 42.36 335 P **P 07 39 38.6 -0.3**
comp=E,3.6nm,0.5s,baz=113,slow=6.7,SNR=5.5
NRIK LR LR 07 58 09.6
comp=E,77nm,20.1s,baz=94,slow=37
LSA Lhasa 42.51 274 *eP* **P 07 39 41.0 -0.3**
comp=E,5.9nm,0.8s
LSA Lhasa 42.51 274 *eP* **P 07 39 41.0 -0.3**
LSA pmax pmax
comp=Z,6.0nm,0.8s
MK01 Makanchi Array 43.84 301 *eP* **P 07 39 50.6 -0.7**
MK31 Makanchi Array 43.84 301 *eP* **P 07 39 50.6 -0.7**
MK31 Makanchi Array 43.84 301 *i P* **P 07 39 50.5 -0.7**
MK31 pmax pmax
comp=Z,15nm,0.7s
MKAR Makanchi Array 43.84 301 P **P 07 39 50.7 -0.6**
comp=Z,12nm,0.7s,baz=86,slow=8.7,SNR=88
MKAR sP **sP 07 40 12.8 -0.3**
comp=Z,12nm,0.7s,baz=83,slow=9.4,SNR=10
MKAR LR LR 07 59 43.0
comp=Z,28nm,18.3s,baz=56,slow=38
MKAR Makanchi Array 43.84 301 *eP* **P 07 39 50.8 -0.4**
comp=Z,100nm,0.8s
MKAR sP **sP 07 40 12.8 -0.3**
MKAR Makanchi Array 43.84 301 *eP* **P 07 39 50.8 -0.4**
MKAR *SP **sP 07 40 12.8 -0.3**
MKAR pmax pmax
comp=Z,100nm,0.8s
MAKZ Makanchi 44.05 301 *eP* **P 07 39 53.8 +0.9**
comp=Z,12nm,0.8s
MAKZ Makanchi 44.05 301 *eP* **P 07 39 53.8 +0.9**
MAKZ pmax pmax
comp=Z,12nm,0.8s
SVW2 Sparrevohn 44.34 38 *eP* **P 07 39 56.5 +1.5**
comp=Z,5.5nm,0.7s
KURK Kurchatov 45.52 307 *eP* **P 07 40 03.9 -0.7**
comp=Z,39nm,0.9s
KURK pP **pP 07 40 19.8 +0.2**
KURK sP **sP 07 40 26.4 +0.1**
KURK Kurchatov 45.52 307 *c iP* **P 07 40 03.7 -0.8**
KURK *i* *PP **pP 07 40 18.9 -0.7**
KURK *i* *SP **sP 07 40 25.5 -0.9**
KURK pmax pmax
comp=Z,33nm,0.7s
KURBB Kurchatov Arra 45.59 307 P **P 07 40 04.4 -0.7**
comp=Z,23nm,0.8s,baz=82,slow=8.3,SNR=36
KURBB pP **pP 07 40 19.8 -0.4**
comp=Z,15nm,0.7s,baz=81,slow=8.1,SNR=8.1
KURBB sP **sP 07 40 26.5 -0.5**
comp=Z,30nm,0.7s,baz=81,slow=7.8,SNR=12
OHAK Old Harbor 45.61 44 *eP* **P 07 40 06.3 +1.1**
comp=Z,34nm,1.4s
KDAK Kodiak Island 45.95 43 LR LR 08 01 11.9
comp=Z,59nm,19.2s,baz=211,slow=38
KDAK Kodiak Island 45.95 43 *eP* **P 07 40 08.9 +1.1**
comp=Z,36nm,1.3s
KDAK Kodiak Island 45.95 43 *ceP* **P 07 40 08.7 +0.9**
PPLA Purkeypile 45.97 36 *eP* **P 07 40 10.0 +1.9**
comp=Z,7.1nm,1.0s
BPAW Bear Paw Mtn. 46.51 34 *eP* **P 07 40 13.2 +1.0**
comp=Z,6.3nm,1.3s
KTH Kantishna Hill 46.54 35 *eP* **P 07 40 14.1 +1.6**
comp=Z,9.4nm,0.9s
MLY Manley 46.63 33 *eP* **P 07 40 14.6 +1.5**
comp=Z,4.6nm,0.8s
SUA Susitna One 46.67 38 *eP* **P 07 40 14.7 +1.2**
comp=Z,12nm,1.0s
TRF Thorofare Moun 46.83 35 *eP* **P 07 40 15.7 +0.8**
comp=Z,4.7nm,0.9s
COLD Coldfoot 46.92 30 *eP* **P 07 40 16.8 +1.5**
comp=Z,1.6nm,0.7s
TOLK Toolik Lake Re 47.23 28 *eP* **P 07 40 18.2 +0.5**
comp=Z,6.9nm,0.8s
JIRN Jiri 47.32 274 *eP* **P 07 40 19.1 -0.3**
comp=Z,55nm,0.8s
RAMN Ramite 47.33 273 *eP* **P 07 40 18.4 -0.9**
comp=Z,80nm,0.8s
GUN Gumba 47.45 275 *eP* **P 07 40 20.0 -0.3**
comp=Z,98nm,0.9s
RND Reindeer 47.47 35 *eP* **P 07 40 19.9 +0.2**
comp=Z,6.9nm,0.8s
RND Reindeer 47.47 35 *eP* **P 07 40 20.0 +0.2**
RND pmax pmax
comp=Z,7.0nm,0.8s
GHO Glory Hole Cre 47.52 37 *eP* **P 07 40 21.1 +0.9**
comp=Z,10nm,0.8s
MDM Murphy Dome 47.70 33 *eP* **P 07 40 22.4 +1.0**
comp=Z,7.4nm,0.9s
WRH Wood River Hil 47.77 33 *eP* **P 07 40 23.0 +1.1**
comp=Z,3.4nm,0.7s
SML Sawmill 47.80 37 *eP* **P 07 40 23.1 +0.9**
comp=Z,9.3nm,0.8s
SML Sawmill 47.80 37 *eP* **P 07 40 23.1 +0.9**
SML pmax pmax
comp=Z,9.0nm,0.8s
CCB Clear Creek Bu 47.89 33 *eP* **P 07 40 24.2 +1.4**
comp=Z,2.6nm,0.7s
KKN Kakani 47.97 275 *eP* **P 07 40 23.6 -0.7**
comp=Z,85nm,0.8s
DHY Denali Highway 48.16 35 *eP* **P 07 40 26.2 +1.1**
comp=Z,3.4nm,0.9s
DMN Daman 48.19 275 *eP* **P 07 40 25.4 -0.6**
TARG Taragay, Kyrgy 48.24 295 *eP* **P 07 40 26.9 +0.5**
comp=Z,16nm,0.7s
SCM Sheep Creek Mo 48.27 37 *eP* **P 07 40 27.2 +1.2**
comp=Z,12nm,0.9s
SCM Sheep Creek Mo 48.27 37 *eP* **P 07 40 27.2 +1.2**
SCM pmax pmax
comp=Z,12nm,0.9s
IL1 Eielson Array 48.28 33 *eP* **P 07 40 26.5 +0.6**
ILAR Eielson Array 48.28 33 P **P 07 40 26.1 +0.3**
comp=Z,4.6nm,0.7s,baz=270,slow=6.7,SNR=62
ILAR pP **pP 07 40 43.1 +2.1**
comp=Z,3.1nm,0.8s,baz=265,slow=6.0,SNR=7.8
ILB Eielson Array 48.28 33 *eP* **P 07 40 26.5 +0.6**
GKN Gorkha 48.38 276 *eP* **P 07 40 26.6 -0.7**
comp=Z,96nm,0.7s
DANN Dangsing 48.91 277 *eP* **P 07 40 31.4 -0.1**
comp=Z,240nm,0.6s
KLU Klutina 48.98 37 *eP* **P 07 40 32.6 +1.2**
comp=Z,6.5nm,0.6s
RIDG Independ'e Rid 49.24 34 *eP* **P 07 40 33.6 +0.3**
comp=Z,3.2nm,0.9s
KOLN Koldanda 49.30 276 *eP* **P 07 40 34.1 -0.3**
comp=Z,26nm,0.7s
TKM2 Tokmak 2 49.43 298 P **P 07 40 34.9 -0.3**
TKM2 pmax pmax
comp=Z,14nm,1.1s
SCRK Sand Creek 49.59 34 *eP* **P 07 40 36.8 +0.7**
comp=Z,4.9nm,0.8s
PYUN Piuthan 49.62 277 *eP* **P 07 40 36.5 -0.4**
comp=Z,122nm,1.0s
BMRM Bremner River 49.67 38 *eP* **P 07 40 38.0 +1.4**
comp=Z,7.4nm,0.8s
RAGM Ragged Mountai 49.72 39 *eP* **P 07 40 38.3 +1.3**
comp=Z,22nm,1.2s
OTUK Ortayu 50.06 305 P **P 07 40 39.4 -0.3**
OTUK pmax pmax
comp=Z,9.0nm,1.1s
BVA0 Borovoye Array 50.08 312 P **P 07 40 38.1 -1.6**
BVA0 pmax pmax
comp=Z,6.0nm,0.8s
BVAR Borovoye Array 50.08 312 P **P 07 40 39.2 -0.5**
comp=Z,5.2nm,0.8s,baz=71,slow=6.9,SNR=21
BVAR PcP **PcP 07 41 58.4 -0.2**
comp=Z,7.8nm,0.6s,baz=73,slow=5.0,SNR=7.3
BVAR LR LR 08 02 43.5
comp=Z,72nm,19.8s,baz=82,slow=37
BRVK Borovoye 50.13 312 *eP* **P 07 40 39.8 -0.3**
comp=Z,7.0nm,0.8s
BRVK Borovoye 50.13 312 *c iP* **P 07 40 39.9 -0.3**
BRVK *i* *SP **sP 07 41 03.2 +1.1**
BRVK *i* 07 41 58.6
BRVK pmax pmax
comp=Z,10.0nm,1.0s
FRU Bishkek 50.14 298 *eP* **P 07 40 40.0 -0.4**
FRU *e* 07 40 57.0
AAK Ala-Archa 50.28 298 P **P 07 40 41.5 -0.2**
comp=Z,3.1nm,0.4s,baz=99,slow=4.9,SNR=9.5
AAK LR LR 08 03 54.2
comp=Z,59nm,18.8s,baz=84,slow=38
AAK Ala-Archa 50.28 298 *eP* **P 07 40 41.5 -0.2**
comp=Z,4.9nm,0.8s
AAK Ala-Archa 50.28 298 P **P 07 40 41.4 -0.2**
AAK Ala-Archa 50.28 298 *c iP* **P 07 40 41.0 -0.7**
AAK *i* *SP **sP 07 41 03.4 -0.3**
AAK *i* 07 41 59.2
AAK *i* 07 42 36.9
KSH Kashi 50.30 293 P P 07 40 47.4 +5.6
KSH sP sP 07 41 02.8 -1.0
KSH PP **PP 07 42 44.1 +6.7**
KSH S **S 07 47 54.8 +4.6**
KSH sS sS 07 48 17.1 +1.1
KSH pmax pmax
comp=Z,180nm,4.3s
HNR Honiara 50.31 157 LR LR 08 00 57.2
comp=Z,38nm,19.6s,baz=20,slow=35
SOEI Soe 50.50 203 *eP* **P 07 40 42.8 -0.6**
comp=Z,62nm,1.4s
EGAK Eagle 50.72 33 *eP* **P 07 40 45.1 +0.7**
comp=Z,1.7nm,0.9s
DAWY Dawson 51.59 33 *eP* **P 07 40 52.2 +1.2**
comp=Z,1.6nm,0.9s
MNAS Manas 51.72 298 P **P 07 40 51.7 -0.7**
MNAS pmax pmax
comp=Z,18nm,1.5s
MTN Manton Dam 51.79 193 *eP* **P 07 40 52.3 -0.6**
comp=Z,27nm,1.0s
SFK Sufi-Kurgan 51.89 295 P **P 07 40 53.6 -0.3**
SFK pmax pmax
comp=Z,18nm,1.0s
COEN Coen 51.92 178 *eP* **P 07 40 54.5 +0.6**
comp=Z,21nm,0.8s
PSI Prapat 52.75 239 P **P 07 40 59.5 -0.8**
comp=Z,8.6nm,0.6s,baz=360,slow=6.4,SNR=10
PSI LR LR 08 04 27.8
comp=Z,71nm,18.2s,baz=88,slow=37
PSI Prapat 52.75 239 *eP* **P 07 40 59.5 -0.8**
comp=Z,9.8nm,0.8s
PSI Prapat 52.75 239 *eP* **P 07 40 59.5 -0.8**
PSI pmax pmax
comp=Z,10.0nm,0.8s
KK31 Karatay Array 52.88 299 *eP* **P 07 40 59.8 -1.1**
KK31 Karatay Array 52.88 299 *eP* **P 07 40 59.8 -1.1**
KKAR Karatay Array 52.88 299 *eP* **P 07 41 00.6 -0.3**
KKAR Karatay Array 52.88 299 *eP* **P 07 41 00.6 -0.3**
INK Inuvik 53.15 28 *eP* **P 07 41 03.2 +0.8**
comp=Z,9.5nm,1.0s
INK Inuvik 53.15 28 *eP* **P 07 41 03.2 +0.8**
INK pmax pmax
comp=Z,9.0nm,1.0s
SVE Sverdlovsk 54.53 318 *eP* **P 07 41 13.0 +0.4**
SVE pmax pmax
comp=Z,45nm,0.9s
NIL Nilore 54.63 288 *eP* **P 07 41 14.3 +0.5**
comp=Z,24nm,0.7s
NIL Nilore 54.63 288 *eP* **P 07 41 14.3 +0.5**
NIL pmax pmax
comp=Z,24nm,0.7s
GSI Gunungsitoli 54.76 239 *eP* **P 07 41 14.2 -0.6**
comp=Z,32nm,1.0s
ARU Arti 55.74 318 P **P 07 41 21.0 -0.3**
comp=Z,25nm,0.5s,baz=79,slow=3.6,SNR=33
ARU Arti 55.74 318 *eP* **P 07 41 20.9 -0.5**
comp=Z,35nm,0.6s
ARU Arti 55.74 318 *c iP* **P 07 41 20.9 -0.5**
ARU *PP **pP 07 41 36.5 -0.4**
ARU 07 42 17.5
ARU PPP PPP 07 44 39.6
ARU S **S 07 49 04.1 +0.6**
ARU 07 51 04.2
ARU SS **SS 07 52 45.1 -3.9**
ARU pmax pmax
comp=Z,44nm,1.0s
KBL Kabul 57.37 290 *eP* **P 07 41 33.4 -0.2**
comp=Z,19nm,0.8s
KBL Kabul 57.37 290 *eP* **P 07 41 33.4 -0.2**
KBL pmax pmax
comp=Z,19nm,0.8s
DLBC Dease Lake 57.45 39 *eP* **P 07 41 35.6 +2.0**
comp=Z,9.3nm,1.3s
AB31 Akbulak array 57.48 310 *i P* **P 07 41 32.6 -1.3**
AB31 pmax pmax
comp=Z,10.0nm,0.6s
ABKAR Akbulak array 57.48 310 *eP* **P 07 41 33.1 -0.8**
FITZ Fitzroy Crossi 58.07 198 P **P 07 41 38.1 -0.1**
comp=Z,5.7nm,0.6s,baz=9.6,slow=5.8,SNR=19
FITZ Fitzroy Crossi 58.07 198 *eP* **P 07 41 38.2 -0.1**
comp=Z,8.0nm,0.8s
DIB Dawson Inlet, 58.09 45 *eP* **P 07 41 39.1 +1.1**
comp=Z,8.4nm,1.2s
CTA Charters Tower 58.14 175 P **P 07 41 38.2 -0.5**
comp=Z,3.4nm,0.6s,baz=352,slow=10,SNR=4.2
CTAO Charters Tower 58.14 175 *eP* **P 07 41 38.6 -0.1**
comp=Z,6.8nm,1.0s
CTAO Charters Tower 58.14 175 *eP* **P 07 41 38.6 -0.1**
CTAO pmax pmax
comp=Z,7.0nm,1.0s
AKTO Aktyubinsk 58.18 312 P **P 07 41 38.1 -0.6**
comp=Z,14nm,0.8s,baz=72,slow=12,SNR=28
AKTO LR LR 08 07 41.4
comp=Z,46nm,18.8s,baz=54,slow=37
WRAB Tennant Creek 58.28 188 *eP* **P 07 41 38.7 -1.0**
comp=Z,19nm,0.8s
WRAB Tennant Creek 58.28 188 *c iP* **P 07 41 38.5 -1.2**
WRAB pmax pmax
comp=Z,58nm,2.5s
WB2 Warramunga Arr 58.29 188 *eP* **P 07 41 38.8 -1.0**
comp=Z,21nm,0.8s
WRA Warramunga Arr 58.29 188 P **P 07 41 38.7 -1.1**
comp=Z,18nm,0.6s,baz=5.6,slow=7.1,SNR=106
WRA pP **pP 07 41 55.9 +0.5**
comp=Z,5.3nm,0.5s,baz=6.9,slow=7.4,SNR=5.7
SPA0 Spitsbergen Ar 59.44 349 *eP* **P 07 41 47.6 +0.5**
SPITS Spitsbergen Ar 59.44 349 P **P 07 41 46.9 -0.2**
comp=Z,2.5nm,0.5s,baz=75,slow=9.8,SNR=7.5
SPITS LR LR 08 09 05.3
comp=Z,34nm,19.7s,baz=235,slow=38
KBS Kingsbay 59.55 350 *eP* **P 07 41 48.8 +0.9**
comp=Z,16nm,0.8s
KBS Kingsbay 59.55 350 *eP* **P 07 41 48.8 +0.9**
KBS pmax pmax
comp=Z,16nm,0.8s
PRGR Permogore 59.99 327 *eP* **P 07 41 50.1 -0.9**
PRGR pmax pmax
comp=Z,29nm,0.9s
RES Resolute Bay 61.35 15 *eP* **P 07 42 00.3 +0.2**
comp=Z,9.7nm,0.8s
RES Resolute Bay 61.35 15 *eP* **P 07 42 00.3 +0.2**
RES pmax pmax
comp=Z,10.0nm,0.8s
TMCR Tamitsa 61.90 331 *eP* **P 07 42 03.4 -0.5**
TMCR pmax pmax
comp=Z,27nm,0.9s
AS01 Alice Springs 62.01 188 *eP* **P 07 42 04.5 -0.7**
AS31 Alice Springs 62.02 188 *eP* **P 07 42 04.8 -0.4**
comp=Z,3.9nm,0.8s
ASAR Alice Springs 62.02 188 P **P 07 42 04.5 -0.7**
comp=Z,14nm,0.7s,baz=10,slow=5.4,SNR=117
KEV Kevo 62.47 339 *eP* **P 07 42 07.6 -0.1**
comp=Z,27nm,1.3s
KEV Kevo 62.47 339 *eP* **P 07 42 07.6 -0.1**
KEV pmax pmax
comp=Z,27nm,1.3s
YKW3 Yellowknife Ar 62.54 31 *eP* **P 07 42 08.9 +0.7**
comp=Z,3.6nm,0.9s
YKA Yellowknife Ar 62.58 31 P **P 07 42 08.8 +0.3**
comp=Z,2.4nm,0.7s,baz=303,slow=6.7,SNR=22
YKA pP **pP 07 42 25.7 +1.4**
comp=Z,2.6nm,0.9s,baz=299,slow=6.7,SNR=7.4
MBWA Marble Bar 62.64 203 *eP* **P 07 42 08.5 -0.8**
comp=Z,14nm,0.8s
KLMR Klimovskoe 62.97 328 *eP* **P 07 42 07.3 -3.8**
KLMR pmax pmax
comp=Z,13nm,0.7s
KLMR Klimovskoe 62.97 328 *eP* **P 07 42 07.3 -3.8**
KLMR AMP 07 42 11.1
comp=Z,13nm,0.7s
PALK Pallekele 63.02 257 P **P 07 42 12.5 +0.2**
ARCES ARCESS Array B 63.03 339 P **P 07 42 11.5 +0.1**
comp=Z,12nm,0.8s,baz=53,slow=7.2,SNR=31
ARCES ARCESS Array B 63.03 339 *eP* **P 07 42 11.4 -0.1**
ARE0 ARCESS Array S 63.03 339 *eP* **P 07 42 11.5 0.0**
comp=Z,16nm,0.9s
GEYT Alibeck 63.61 299 P **P 07 42 15.3 -0.5**
comp=Z,148nm,0.6s,baz=8.5,slow=2.9,SNR=5.6
GEYT LR LR 08 11 46.7
comp=Z,42nm,19.7s,baz=215,slow=38
EIDS Eidsvold 63.84 171 *eP* **P 07 42 17.4 +0.1**
comp=Z,7.8nm,0.6s
MSF Maaselka 64.14 335 P **P 07 42 18.7 -0.1**
MSF pmax pmax
comp=Z,27nm,1.4s
DZM Mont Dzumac 64.25 155 P **P 07 42 21.4 +1.3**
comp=Z,13nm,0.9s,baz=71,slow=14,SNR=3.6
DZM LR LR 08 07 37.2
comp=Z,55nm,20.6s,baz=353,slow=33
DZM Mont Dzumac 64.25 155 *eP* **P 07 42 21.8 +1.7**
comp=Z,32nm,1.1s
DAG Danmarks Havn 64.62 355⇑ *iP* **P 07 42 21.4 -0.4**
comp=Z,13nm,0.9s
PGC Sidney 65.23 47 *eP* **P 07 42 27.5 +1.3**
comp=Z,10nm,1.0s
NLWA Neilton Lookou 65.62 48 *eP* **P 07 42 30.9 +2.1**
comp=Z,23nm,1.0s
MOS Moscow 66.54 323 *eP* **P 07 42 33.8 -0.6**
D05A Enumclaw 66.82 48 *eP* **P 07 42 35.7 -0.7**
comp=Z,8.8nm,0.9s
OBN Obninsk 67.39 323 *ceP* **P 07 42 39.1 -0.7**
OBN *e* 07 43 05.1
OBN *e* 07 45 08.6
OBN *e*S **PnS 07 51 58.8 -1.1**
OBN pmax pmax
comp=Z,21nm,0.4s
FIA1 FINESS Array S 67.95 332 *eP* **P 07 42 42.6 -0.6**
comp=Z,26nm,0.8s
FINES FINESS Array B 67.95 332 P **P 07 42 42.9 -0.4**
comp=Z,20nm,0.7s,baz=46,slow=8.2,SNR=64
FINES LR LR 08 13 37.6
comp=Z,48nm,20.3s,baz=42,slow=37
VSR Storozhevoye 68.30 319 *eP* **P 07 42 45.0 -0.7**
VSR pmax pmax
comp=Z,30nm,0.7s
VORD Divnogorie 68.38 318 *eP* **P 07 42 45.6 -0.5**
VORD pmax pmax
comp=Z,20nm,0.9s
AKT Akhty 68.69 306 *eP* **P 07 42 47.7 -0.8**
AKT *e* 07 43 10.4
AKT pmax pmax
comp=Z,16nm,0.7s
ARMA Armidale 68.89 171 *eP* **P 07 42 51.5 +1.9**
comp=Z,8.9nm,1.2s
NEW Newport 69.00 45 *eP* **P 07 42 51.7 +1.5**
comp=Z,9.1nm,0.8s
NEW Newport 69.00 45 *eP* **P 07 42 51.7 +1.5**
NEW pmax pmax
comp=Z,9.0nm,0.8s
JMIC Jan Mayen 69.05 350 LR LR 08 16 23.4
comp=Z,18nm,19.1s,baz=24,slow=39
PINE Pine Mountain 69.27 50 *eP* **P 07 42 54.2 +2.1**

comp=Z,25nm,1.1s
SUMG Summit 69.50 0 *i* P **P 07 42 53.8 +0.5**
comp=Z,15nm,0.7s
SUMG Summit 69.50 0 *e*P **P 07 42 53.7 +0.5**
comp=Z,18nm,0.9s
SUMG Summit 69.50 0 *e*P **P 07 42 53.7 +0.5**
SUMG pmax pmax
comp=Z,18nm,0.9s
GOF Gofitskoye 69.60 312 *e*P **P 07 42 53.6 -0.3**
GOF pmax pmax
comp=Z,70nm,1.3s
VSU Vasula 69.63 330 *ce*P **P 07 42 54.1 +0.3**
VSU *i* 07 43 17.0
VSU pmax pmax
comp=Z,17nm,0.6s
STKA Stephens Creek 69.74 180 P **P 07 42 54.6 -0.1**
comp=Z,2.7nm,0.4s,baz=1.2,slow=6.5,SNR=5.9
STKA Stephens Creek 69.74 180 *e*P **P 07 42 54.6 -0.1**
comp=Z,1.6nm,1.0s
STKA Stephens Creek 69.74 180 *e*P **P 07 42 54.6 -0.1**
STKA pmax pmax
comp=Z,2.0nm,1.0s
FORT Forrest 69.86 193 *e*P **P 07 42 55.2 -0.2**
comp=Z,32nm,0.7s
K05A Summer Lake 69.88 51 *e*P **P 07 42 57.0 +1.0**
comp=Z,13nm,0.9s
WALA Waterton Lakes 70.29 43 *e*P **P 07 42 59.2 +1.0**
comp=Z,7.9nm,0.8s
KIV Kislovodsk 70.43 311 *e*P **P 07 42 59.5 +0.4**
comp=Z,39nm,0.8s
KIV Kislovodsk 70.43 311 P **P 07 43 00.0 +0.9**
KIV Kislovodsk 70.43 311 *e*P **P 07 42 59.3 +0.2**
KIV pmax pmax
comp=Z,57nm,1.1s
KIV MLR MLR
comp=Z,25nm,18.0s
KBZ Khabaz 70.43 311 P **P 07 42 59.3 +0.3**
comp=Z,15nm,0.9s,baz=71,slow=4.4,SNR=28
KBZ LR LR 08 16 08.2
comp=Z,48nm,19.6s,baz=51,slow=38
NEY Neytrino 70.81 310⇑ *i*P **P 07 43 01.2 -0.3**
NEY pmax pmax
comp=Z,2.0nm,0.8s
BMO Blue Mountains 70.83 48 *e*P **P 07 43 02.6 +1.1**
comp=Z,3.9nm,0.9s
BMO Blue Mountains 70.83 48 *e*P **P 07 43 02.7 +1.1**
BMO pmax pmax
comp=Z,4.0nm,0.9s
BBOO Buckleboo 70.88 185 *e*P **P 07 43 01.4 -0.2**
comp=Z,27nm,1.1s
SCO Scoresbysund 70.97 354⇑ *i*P **P 07 43 02.2 +0.4**
comp=Z,18nm,1.4s
SCO Scoresbysund 70.97 354 *e*P **P 07 43 01.8 0.0**
comp=Z,16nm,1.3s
SCO Scoresbysund 70.97 354 *e*P **P 07 43 01.8 0.0**
SCO pmax pmax
comp=Z,16nm,1.3s
J08A Circle Bar Ran 71.00 50 *e*P **P 07 43 03.2 +0.7**
comp=Z,7.9nm,1.1s
BANOM Banah 71.21 288 P **P 07 43 03.6 -0.4**
SHME Shamm 71.26 289 P **P 07 43 04.0 -0.3**
GNI Garni 71.32 307 LR LR 08 16 42.6
comp=Z,51nm,20.9s,baz=61,slow=38
GNI Garni 71.32 307 *ce*P **P 07 43 06.5 +1.9**
GNI *i* *PP **pP 07 43 20.8 +0.1**
GNI *i* *SP **sP 07 43 27.8 +0.6**
GNI pmax pmax
comp=Z,45nm,1.2s
WVOR Wild Horse Val 71.42 50 *e*P **P 07 43 06.2 +1.0**
comp=Z,6.7nm,1.2s
WVOR Wild Horse Val 71.42 50 *e*P **P 07 43 06.2 +1.0**
WVOR pmax pmax
comp=Z,7.0nm,1.2s
MDH Madha 71.56 288 P **P 07 43 05.7 -0.4**
IZAR Zarasai 71.62 328 *e*P **P 07 43 06.2 +0.2**
IZAR IAmb IAmb 07 43 07.1
comp=Z,13nm,0.6s
MSFE Esma-Masafi 71.63 288 P **P 07 43 06.0 -0.6**
IDID Didziasalis 71.70 327 *e*P **P 07 43 06.6 +0.2**
IDID IAmb IAmb 07 43 07.6
comp=Z,11nm,0.8s
ISAL Salakas 71.79 327 *e*P **P 07 43 07.2 +0.2**
ISAL IAmb IAmb 07 43 08.4
comp=Z,14nm,0.9s
BEKR Beckworth 71.82 53 *e*P **P 07 43 08.5 +0.8**
comp=Z,6.3nm,0.9s
UOSS Minazif 71.83 288 *e*P **P 07 43 06.4 -1.3**
comp=Z,10.0nm,0.9s
UOSS Minazif 71.83 288 P **P 07 43 07.0 -0.7**
IIGN Ignalina 71.90 327 *e*P **P 07 43 07.8 +0.2**
IIGN IAmb IAmb 07 43 08.8
comp=Z,9.3nm,0.6s
HATD Hatta, Dubai 71.95 288 P **P 07 43 08.2 -0.3**
NACGM Naroch 71.95 327 *e* **P 07 43 07.0 -0.9**
SOHO SOHO 72.04 287 P **P 07 43 08.2 -0.8**
NAZ Nazwa, Dubai 72.21 288 P **P 07 43 09.3 -0.7**
FFC Flin Flon 72.49 33 *e*P **P 07 43 11.6 +0.4**
comp=Z,8.7nm,0.8s
FFC Flin Flon 72.49 33 *e*P **P 07 43 11.6 +0.4**
FFC pmax pmax
comp=Z,9.0nm,0.8s
PAHR Pah Rah Range 72.53 53 *e*P **P 07 43 13.3 +1.4**
comp=Z,8.1nm,1.1s
MFID Camas Ranch 72.53 48 *e*P **P 07 43 13.3 +1.5**
comp=Z,5.8nm,0.8s
ASUD Al Ashush, Dub 72.66 288 P **P 07 43 12.2 -0.5**
ALNE Al Ain 72.67 287 P **P 07 43 12.5 -0.3**
PNTR Pine Nut 72.75 54 *e*P **P 07 43 15.6 +2.3**
comp=Z,7.5nm,1.0s
FCC Fort Churchill 72.76 27 *e*P **P 07 43 11.9 -0.7**
comp=Z,14nm,1.3s
FCC Fort Churchill 72.76 27 *e*P **P 07 43 11.9 -0.7**
FCC pmax pmax
comp=Z,14nm,1.3s
HRY Holter Researc 72.82 44 *e*P **P 07 43 14.9 +1.4**
LRM Limekiln Ridge 73.02 45 *e*P **P 07 43 15.9 +1.0**
NC405 NORSAR Array S 73.04 337 *e*P **P 07 43 13.2 -1.2**
NC303 NORSAR Array S 73.05 337 *e*P **P 07 43 14.3 -0.1**
EGMT Eagleton 73.12 42 *e*P **P 07 43 16.0 +0.9**
comp=Z,15nm,0.9s
HFS Hagfors 73.17 336 P **P 07 43 14.6 -0.5**
comp=Z,9.4nm,0.7s,baz=48,slow=6.4,SNR=18
HFS pP **PcP 07 43 33.4 +1.9**
comp=Z,4.3nm,0.5s,baz=57,slow=5.5,SNR=4.9
HFS LR LR 08 18 28.3
comp=Z,64nm,18.5s,baz=36,slow=38
WAKR Walker 73.19 54 *e*P **P 07 43 17.3 +1.4**
comp=Z,3.0nm,1.0s
NC204 NORSAR Array S 73.20 338 *e*P **P 07 43 14.5 -0.8**
DLMT Dillon 73.22 45 *e*P **P 07 43 16.9 +1.1**
comp=Z,6.3nm,0.9s
NB2 NORSAR Subarra 73.25 337 P **P 07 43 15.0 -0.6**
comp=Z,15nm,0.9s,baz=37,slow=6.2
NB2 NORSAR Subarra 73.25 337 P **P 07 43 12.1 -3.5**
NB2 pmax pmax
comp=Z,19nm,0.9s
NB2 NORSAR Subarra 73.25 337 P **P 07 43 15.0 -0.6**
baz=37,slow=6.2
NOA NORSAR Array B 73.25 337 LR LR 08 20 13.2
comp=Z,33nm,19.1s,baz=45,slow=40
HLID Hailey 73.27 48 *e*P **P 07 43 17.5 +1.3**
comp=Z,4.5nm,1.0s
NBO00 NORSAR Array S 73.39 338 *e*P **P 07 43 16.4 0.0**
BMN Battle Mountai 73.45 51 *e*P **P 07 43 18.8 +1.4**
comp=Z,4.9nm,0.8s
BMN Battle Mountai 73.45 51 *e*P **P 07 43 18.8 +1.4**
BMN pmax pmax
comp=Z,5.0nm,0.8s
NAO01 NORSAR Array S 73.50 337 *e*P **P 07 43 16.9 -0.1**
AKASG Malin Array Be 73.60 322 P **P 07 43 17.0 -0.8**
comp=Z,13nm,0.7s,baz=46,slow=6.0,SNR=69
AKBB Malin Array Si 73.60 322 *e*P **P 07 43 17.2 -0.6**
comp=Z,20nm,0.8s
AKBB Malin Array Si 73.60 322 *e*P **P 07 43 17.2 -0.6**
AKBB pmax pmax
comp=Z,20nm,0.8s
BOZ Bozeman (W) 73.61 45 *e*P **P 07 43 19.3 +1.1**
comp=Z,6.0nm,0.8s
BOZ Bozeman (W) 73.61 45 *e*P **P 07 43 19.3 +1.1**
BOZ pmax pmax
comp=Z,6.0nm,0.8s
KIEV Kiev 73.61 322 *e*P **P 07 43 17.1 -0.7**
comp=Z,20nm,0.8s
KIEV Kiev 73.61 322 *i* P **P 07 43 17.3 -0.6**
SNR=11
KIEV Kiev 73.61 322 *e*P **P 07 43 17.2 -0.6**
KIEV pmax pmax
comp=Z,20nm,0.8s
AK11 Malin Array Si 73.64 322 *e*P **P 07 43 17.8 -0.3**
KVN Kaiserville 73.72 53 *e*P **P 07 43 20.6 +1.7**
comp=Z,6.6nm,0.9s
KVN Kaiserville 73.72 53 *e*P **P 07 43 20.7 +1.7**
KVN pmax pmax
comp=Z,7.0nm,0.9s
NV01 Mina Array Sit 73.96 54 *e*P **P 07 43 21.5 +1.1**
NVAR Mina Array Bea 73.96 54 P **P 07 43 21.7 +1.2**
comp=Z,3.6nm,0.8s,baz=282,slow=6.1,SNR=28
NVAR pP **sP 07 43 40.0 -3.1**
comp=Z,3.6nm,0.8s,baz=275,slow=6.0,SNR=8.3
NV11 Mina Array Sit 74.05 54 *e*P **P 07 43 22.0 +1.1**
comp=Z,0.3nm,1.3s
YHB Horse Butte 74.38 45 *e*P **P 07 43 24.0 +1.2**
comp=Z,8.1nm,0.9s
NWAO Narrogin (SRO) 74.42 201 *e*P **P 07 43 22.1 -0.5**
comp=Z,14nm,0.9s
NWAO Narrogin (SRO) 74.42 201 *e*P **P 07 43 22.1 -0.5**
NWAO pmax pmax
comp=Z,14nm,0.9s
GCMT Greycliff 74.56 44 *e*P **P 07 43 24.8 +1.0**
SIM Simferopol' 74.76 316 *e*P **P 07 43 24.7 0.0**
SIM 07 43 40.7
SIM pmax pmax
comp=Z,18nm,0.8s
YPP Pitchstone Pla 74.89 45 *e*P **P 07 43 26.9 +1.0**
comp=Z,3.3nm,0.8s
H17A Grant Village 74.94 45 *e*P **P 07 43 29.1 +3.0**
comp=Z,12nm,0.8s
IMW Indian Meadow 75.05 46 *e*P **P 07 43 28.8 +2.0**
comp=Z,8.2nm,0.8s
FXWY Fox Creek 75.17 46 *e*P **P 07 43 29.0 +1.6**
comp=Z,5.5nm,0.9s
RLMT Red Lodge 75.21 44 *e*P **P 07 43 29.1 +1.6**
comp=Z,4.0nm,0.8s
MOOW Moose Ponds 75.26 46 *e*P **P 07 43 29.6 +1.8**
comp=Z,5.1nm,0.9s
TPAW Teton Pass 75.30 46 *e*P **P 07 43 30.0 +1.8**
comp=Z,5.8nm,0.8s
HVU Hansel Valley 75.32 48 *e*P **P 07 43 29.6 +1.5**
comp=Z,5.7nm,0.8s
HVU Hansel Valley 75.32 48 *e*P **P 07 43 29.6 +1.5**
HVU pmax pmax
comp=Z,6.0nm,0.8s
LOHW Long Hollow 75.42 46 *e*P **P 07 43 30.7 +1.9**
comp=Z,5.1nm,1.2s
SNOW Snow King Moun 75.43 46 *e*P **P 07 43 30.7 +1.8**
comp=Z,6.2nm,0.8s
REDW Red Top Meadow 75.44 46 *e*P **P 07 43 30.7 +1.8**
comp=Z,4.9nm,0.9s
DGMT Dagmar 75.66 39 *e*P **P 07 43 30.8 +0.9**
comp=Z,12nm,0.7s
AHID Auburn Hatcher 75.67 47 *e*P **P 07 43 31.6 +1.3**
comp=Z,5.6nm,0.7s
DAC Darwin (Calif) 75.69 55 *e*P **P 07 43 31.7 +1.3**
comp=Z,2.6nm,0.8s
DAC Darwin (Calif) 75.69 55 *e*P **P 07 43 31.7 +1.3**
DAC pmax pmax
comp=Z,3.0nm,0.8s
R11A Troy Canyon, C 75.72 52 *e*P **P 07 43 31.8 +1.2**
comp=Z,7.8nm,1.2s
LAO LASA Array 75.81 41 *e*P **P 07 43 32.3 +1.5**
comp=Z,16nm,0.9s
TPNV Topopah Spring 76.15 54 *e*P **P 07 43 34.4 +1.4**
comp=Z,6.8nm,0.8s
TPNV Topopah Spring 76.15 54 *e*P **P 07 43 34.4 +1.4**
TPNV pmax pmax
comp=Z,7.0nm,0.8s
DUG Dugway, Tooele 76.28 50 *e*P **P 07 43 35.1 +1.4**
comp=Z,5.9nm,0.9s
DUG Dugway, Tooele 76.28 50 *e*P **P 07 43 35.1 +1.4**
DUG pmax pmax
comp=Z,6.0nm,0.9s
TCUT Toone Canyon 76.53 48 *e*P **P 07 43 35.8 +0.6**
comp=Z,12nm,0.8s
BW06 Boulder Array 76.55 46 *e*P **P 07 43 35.9 +0.7**
comp=Z,5.9nm,0.8s
PD31 Pinedale Array 76.55 46 *e*P **P 07 43 35.9 +0.7**
PDAR Pinedale Array 76.55 46 P **P 07 43 35.9 +0.7**
comp=Z,4.6nm,0.6s,baz=262,slow=2.1,SNR=54
PDAR pP **pP 07 43 54.0 +2.5**
comp=Z,4.4nm,0.6s,baz=263,slow=2.5,SNR=12
BSD Bornholm Skovb 76.59 332⇓ *i*P **P 07 43 34.7 -0.2**
comp=Z,18nm,0.9s
PSUT Pine Spring 76.68 51 *e*P **P 07 43 37.5 +1.5**
comp=Z,5.5nm,1.0s
JLU Jordanelle 76.83 49 *e*P **P 07 43 38.5 +1.6**
comp=Z,6.3nm,1.2s
NLU North Lily Min 76.87 49 *e*P **P 07 43 38.5 +1.4**
comp=Z,5.5nm,0.8s
MPU Maple Canyon 77.09 49 *e*P **P 07 43 39.8 +1.5**
comp=Z,6.6nm,0.8s
SHPR Sheep Range 77.11 54 *e*P **P 07 43 40.1 +1.6**
comp=Z,4.4nm,0.8s
KWP Kalwaria Pacla 77.40 324 *e*P **P 07 43 40.0 +0.4**
comp=Z,324nm,0.6s
KWP Kalwaria Pacla 77.40 324 *e*P **P 07 43 40.0 +0.4**
ILGA Ilgaz 77.46 313 *e*P **P 07 43 41.5 +1.1**
comp=Z,20nm,0.8s
TCRU Three Creeks R 77.49 51 *e*P **P 07 43 41.9 +1.2**
comp=Z,4.4nm,0.8s
CCUT Cedar City 77.59 52 *e*P **P 07 43 42.9 +1.7**
comp=Z,4.1nm,0.8s
BUR08 Bucovina Ar. S 77.61 322 *e*P **P 07 43 41.3 +0.3**
BUR04 Bucovina Ar. S 77.63 322 *e*P **P 07 43 41.2 +0.2**
BURAR Bucovina Array 77.63 322⇑ *i*P **P 07 43 41.2 +0.2**
BURAR Bucovina Array 77.63 322⇑ P **P 07 43 41.2 +0.2**
MSU Marysvale 77.72 51 *e*P **P 07 43 42.9 +1.1**
MSU Marysvale 77.72 51 *e*P **P 07 43 42.9 +1.1**
TMUT Trail Mountain 77.80 49 *e*P **P 07 43 43.9 +1.5**
comp=Z,9.2nm,1.5s
P17A Butcher Ranch, 77.97 49 *e*P **P 07 43 44.9 +1.7**
comp=Z,8.8nm,0.7s
LCMT Little Creek M 78.00 52 *e*P **P 07 43 43.9 +0.5**
comp=Z,5.4nm,0.9s
MTPU Mount Pierson 78.01 51 *e*P **P 07 43 45.5 +1.9**
comp=Z,2.4nm,0.8s
VRI Vrincioaia 78.08 320 P **P 07 43 44.7 +1.2**
P18A Preston Nutter 78.16 49 *e*P **P 07 43 46.2 +1.8**
comp=Z,3.7nm,0.8s
KNB Kanab 78.26 52 *e*P **P 07 43 46.5 +1.6**
comp=Z,4.1nm,0.9s
KNB Kanab 78.26 52 *e*P **P 07 43 46.5 +1.6**
KNB pmax pmax
comp=Z,4.0nm,0.9s
OJC Ojcow 78.28 326 *e*P **P 07 43 44.4 -0.1**
comp=Z,22nm,1.0s
OJC Ojcow 78.28 326 *e*P **P 07 43 44.4 -0.1**
OJC pmax pmax
comp=Z,22nm,1.0s
ULM Lac du Bonnet 78.29 34 P **P 07 43 44.5 +0.1**
comp=Z,5.3nm,0.7s,baz=314,slow=5.1,SNR=7.0
ULM pP **pP 07 44 03.0 +2.2**
comp=Z,4.4nm,0.7s,baz=333,slow=7.1,SNR=4.4
ULM Lac du Bonnet 78.29 34 *e*P **P 07 43 44.6 +0.1**
comp=Z,8.2nm,0.9s
ULM pP **pP 07 44 03.0 +2.2**
ULM Lac du Bonnet 78.29 34 *e*P **P 07 43 44.6 +0.1**
ULM *PP **pP 07 44 03.0 +2.2**
ULM pmax pmax
comp=Z,8.0nm,0.9s
UZH Uzhgorod 78.30 324 *e*P P 07 43 51.7 +7.1
UZH *e* 07 44 03.5
SRU San Rafael Swe 78.33 49 *e*P **P 07 43 46.4 +1.2**
comp=Z,9.5nm,0.7s
SRU San Rafael Swe 78.33 49 *e*P **P 07 43 46.4 +1.2**
SRU pmax pmax
comp=Z,10.0nm,0.7s
BR131 Keskin Array S 78.36 312 *e*P **P 07 43 45.4 0.0**
BRTR Keskin Array B 78.36 312 P **P 07 43 45.0 -0.3**
comp=Z,1.9nm,0.5s,baz=101,slow=5.2,SNR=16
BRTR LR LR 08 21 05.5
comp=Z,18nm,19.7s,baz=60,slow=38
TRPA Tarpa 78.55 323⇓ *i*P **P 07 43 46.6 +0.7**
RWWY Rawlins 78.57 46 *e*P **P 07 43 47.2 +0.6**
comp=Z,8.2nm,0.9s
RSSD Black Hills 78.68 42 *e*P **P 07 43 47.7 +0.6**
comp=Z,7.4nm,0.9s
RSSD Black Hills 78.68 42 *e*P **P 07 43 47.7 +0.6**
RSSD pmax pmax
comp=Z,7.0nm,0.9s
MLR Muntele Rosu 78.74 320 *e*P **P 07 43 48.0 +0.8**
comp=Z,10nm,1.2s
MLR Muntele Rosu 78.74 320 *e*P **P 07 43 48.0 +0.8**
MLR pmax pmax
comp=Z,10.0nm,1.2s
U15A North Rim 78.96 52 *e*P **P 07 43 50.4 +1.5**
comp=Z,4.7nm,0.8s
LANS Liptovska Anna 79.21 326 *e*P **P 07 43 50.6 +1.0**
LANS Liptovska Anna 79.21 326 *e*P **P 07 43 50.6 +1.0**
VOIR 79.23 320⇓ *i*P **P 07 43 50.8 +0.9**
VOIR 79.23 320⇓ P **P 07 43 50.8 +0.9**
Y12C Blythe 79.23 56 *e*P **P 07 43 51.2 +1.2**
comp=Z,5.2nm,0.8s
ARR Arges 79.48 320⇓ *i*P **P 07 43 52.3 +1.0**
PV09 Paradox Valley 79.56 49 *e*P **P 07 43 53.7 +1.6**
MORC Moravsky Berou 79.58 327⇓ *i*P **P 07 43 51.8 +0.1**
MORC Moravsky Berou 79.58 327 *e*P **P 07 43 51.7 +0.1**
comp=Z,52nm,1.0s
MORC Moravsky Berou 79.58 327⇓ P **P 07 43 51.8 +0.1**
DPC Dobruska-Polom 79.66 328 *e*P **P 07 43 52.4 +0.3**
DPC Dobruska-Polom 79.66 328 *e*P **P 07 43 52.4 +0.3**
KRLC Kraliky 79.68 328 *e*P **P 07 43 52.7 +0.5**
KRLC *e*PCP **PcP 07 44 00.4 +0.6**
KRLC Kraliky 79.68 328 *e*P **P 07 43 52.7 +0.5**
KRLC *e* 07 44 00.4
PV10 Paradox Valley 79.69 49 *e*P **P 07 43 53.8 +1.0**
comp=Z,27nm,0.9s
PV04 Paradox Valley 79.76 49 *e*P **P 07 43 54.7 +1.7**
comp=Z,9.3nm,1.0s
N23A Red Feather La 79.81 46 *e*P **P 07 43 54.7 +1.3**
comp=Z,8.5nm,1.0s
PV05 Paradox Valley 79.85 49 *e*P **P 07 43 55.2 +1.7**
comp=Z,15nm,0.9s
LOT Lotru 79.86 321⇑ *i*P **P 07 43 53.8 +0.5**
PV07 Paradox Valley 79.88 49 *e*P **P 07 43 55.6 +1.8**
comp=Z,7.2nm,1.1s
PV03 Paradox Valley 79.88 49 *e*P **P 07 43 55.3 +1.6**
comp=Z,8.6nm,1.0s
PSZ Piszkesteto 79.92 325⇑ *i*P **P 07 43 53.4 -0.2**
PSZ Piszkesteto 79.92 325 *e*P **P 07 43 53.2 -0.3**
comp=Z,18nm,1.0s
PSZ Piszkesteto 79.92 325⇑ P **P 07 43 53.4 -0.2**
VYHS Vyhne 79.97 326 *e*P **P 07 43 54.0 +0.2**
VYHS pmax pmax
comp=Z,4.0nm,1.0s
VYHS Vyhne 79.97 326 *e*P **P 07 43 54.0 +0.2**
Y14A Wickenburg 80.09 55 *e*P **P 07 43 55.9 +1.1**
comp=Z,5.4nm,0.8s
WUAZ Wupatki 80.12 52 *e*P **P 07 43 56.7 +1.7**
comp=Z,7.1nm,0.8s
PV01 Paradox Valley 80.13 49 *e*P **P 07 43 56.5 +1.4**
comp=Z,4.8nm,0.9s
BRG Berggiesshubel 80.23 330 *i* P **P 07 43 55.0 -0.1**
comp=Z,11nm,1.0s
BRG Berggiesshubel 80.23 330 *i* P **P 07 43 55.0 -0.1**
BRG pmax pmax
comp=Z,11nm,1.0s
CLL Collm 80.27 330⇑ *i*P **P 07 43 54.8 -0.4**
comp=Z,16nm,1.0s
CLL *e*pP **pP 07 44 11.0 -0.6**
CLL *e*sP **sP 07 44 18.0 0.0**
CLL Collm 80.27 330 *e*P **P 07 43 54.9 -0.4**
comp=Z,12nm,0.8s
CLL Collm 80.27 330 *e*P **P 07 43 54.9 -0.3**
CLL pmax pmax
comp=Z,12nm,0.8s
RAYN Ar Rayn 80.58 292 *e*P **P 07 43 56.7 -0.8**
comp=Z,9.4nm,1.0s
RAYN Ar Rayn 80.58 292 *i* P **P 07 43 56.7 -0.8**
SNR=6.9
RAYN Ar Rayn 80.58 292 P **P 07 43 56.7 -0.8**
RAYN pmax pmax
comp=Z,9.0nm,1.0s
GOPC GO Pecny, Ondr 80.63 329 *e*P **P 07 43 57.1 -0.2**
GOPC GO Pecny, Ondr 80.63 329 *e*P **P 07 43 57.1 -0.2**
ISCO Idaho Springs 80.74 46 *e*P **P 07 43 60.0 +1.5**
comp=Z,2.3nm,0.7s
ISCO Idaho Springs 80.74 46 *e*P **P 07 44 00.0 +1.5**
ISCO pmax pmax
comp=Z,2.0nm,0.7s
MODS Modra-Piesok 80.75 326 *e*P **P 07 43 56.4 -1.6**
MODS pmax pmax
comp=Z,10.0nm,1.0s
MODS Modra-Piesok 80.75 326 *e*P **P 07 43 56.4 -1.6**
MVCO Mesa Verde 80.78 50 *e*P **P 07 44 00.0 +1.4**
comp=Z,6.3nm,1.0s
X16A Lo Mia Camp, P 80.78 53 *e*P **P 07 43 59.9 +1.3**
comp=Z,6.0nm,0.8s
BZS Buzias 80.79 322 P **P 07 43 58.1 -0.1**
D34A Park Rapids 80.93 36 *e*P **P 07 43 59.0 +0.1**
comp=Z,15nm,1.0s
G32A Webster 81.19 38 *e*P **P 07 44 00.9 +0.6**
comp=Z,35nm,1.0s
MDVR Moldovita 81.35 321⇑ *i*P **P 07 44 01.0 -0.3**
S22A 4UR Ranch, Cre 81.41 48 *e*P **P 07 44 03.8 +1.8**
comp=Z,7.0nm,1.2s
ISP Isparta 81.45 312⇑ *i*P **P 07 44 01.9 -0.1**
ISP *i* *PP **pP 07 44 17.1 -1.2**
ISP *i* *SP **sP 07 44 23.5 -1.3**
MMAI Mount Meron Ar 81.60 305 P **P 07 44 03.2 +0.3**
comp=Z,8.5nm,0.7s,baz=48,slow=6.4,SNR=11
MMAI LR LR 08 23 45.3
comp=Z,38nm,18.6s,baz=15,slow=38
CONA Conrad Observa 81.71 327 *e*P **P 07 44 03.5 +0.3**
comp=Z,9.0nm,1.0s,SNR=6.2
KHC Kasperske Hory 81.74 329 *e*P **P 07 44 03.3 +0.1**
KHC *e*sP **sP 07 44 27.0 +1.0**
KHC Kasperske Hory 81.74 329 *e*P **P 07 44 03.6 +0.4**
comp=Z,5.7nm,1.1s
KHC Kasperske Hory 81.74 329 *e*P **P 07 44 03.6 +0.4**
KHC pmax pmax
comp=Z,6.0nm,1.1s
GEC2 GERESS Array S 81.91 328 *e*P **P 07 44 04.2 0.0**
comp=Z,8.6nm,1.2s
GEC2 GERESS Array S 81.91 328 *e*P **P 07 44 04.2 0.0**
GEC2 pmax pmax
comp=Z,9.0nm,1.2s
GERES GERESS Array B 81.91 328 P **P 07 44 03.7 -0.5**
comp=Z,2.3nm,0.6s,baz=35,slow=4.9,SNR=19
GERES LR LR 08 22 54.6
comp=Z,52nm,18.4s,baz=106,slow=37
GEA0 GERESS Array S 81.92 328 *e*P **P 07 44 03.8 -0.5**
EKA Eskdalemuir Ar 82.14 341 LR LR 08 24 06.8
comp=Z,39nm,18.5s,baz=190,slow=38
VTS Vitosha 82.18 319⇑ *i*P **P 07 44 06.1 +0.3**
VTS Vitosha 82.18 319 *e*P **P 07 44 05.4 -0.4**
comp=Z,10nm,0.9s
VTS Vitosha 82.18 319⇑ P **P 07 44 06.1 +0.3**
SDCO Great Sand Dun 82.19 48 *e*P **P 07 44 07.5 +1.4**
comp=Z,2.8nm,1.0s
ARSA Arzberg 82.38 326 *e*P **P 07 44 03.4 -3.1**
comp=Z,6.1nm,1.1s
MOA Molln 82.45 327 *e*P **P 07 44 04.0 -3.0**
comp=Z,6.9nm,0.9s
DIVS Divibare 82.69 322 *e*P **P 07 44 08.6 +0.2**
comp=Z,8.1nm,1.1s
ECSD EROS Data Cent 82.74 39 *e*P **P 07 44 08.6 +0.1**
comp=Z,6.4nm,0.8s
E38A The Farm, Brul 82.93 34 *e*P **P 07 44 09.3 -0.1**
comp=Z,10nm,0.8s
SOKA Soboth 83.03 326 *e*P **P 07 44 09.7 -0.3**
comp=Z,13nm,1.0s,SNR=8.8
T25A Trinidad 83.24 47 *e*P **P 07 44 12.7 +1.2**
comp=Z,5.7nm,0.8s
OBKA Obir 83.37 326 *e*P **P 07 44 10.9 -0.9**
comp=Z,3.4nm,0.6s
KBA Koelnbreinsper 83.44 327 *e*P **P 07 44 11.8 -0.5**
comp=Z,8.5nm,0.8s
ANMO Albuquerque 83.52 50 *e*P **P 07 44 14.5 +1.5**
comp=Z,6.5nm,1.1s
ANMO Albuquerque 83.52 50⇓ *i*P **P 07 44 13.3 +0.4**
ANMO *i* *SP **sP 07 44 34.3 -1.5**
MYKA Terra Mystica 83.67 327 *e*P **P 07 44 12.4 -0.9**
comp=Z,3.2nm,0.5s
BNM Barren Site 83.95 51 *e*P **P 07 44 16.6 +1.4**
WATA Walderalm 83.98 329 *e*P **P 07 44 12.2 -2.7**
comp=Z,2.3nm,0.2s
WTTA Wattenberg 84.01 329 *e*P **P 07 44 13.1 -2.1**
comp=Z,3.9nm,0.6s
ABTA Abfaltersbach 84.06 328 *e*P **P 07 44 13.8 -1.5**
comp=Z,7.1nm,1.0s
I37A Lemond, Waseca 84.07 37 *e*P **P 07 44 16.0 +0.6**
SCHQ Schefferville 84.08 16 LR LR 08 26 12.9
comp=Z,24nm,18.2s,baz=38,slow=39
J36A Seneca 1, Swea 84.14 38 *e*P **P 07 44 16.1 +0.4**
comp=Z,8.8nm,0.9s
MOTA Moosalm 84.17 329 *e*P **P 07 44 12.9 -3.0**
comp=Z,4.5nm,0.6s
RETA Reutte 84.19 329 *e*P **P 07 44 15.9 -0.1**
comp=Z,14nm,0.9s

PDG	Podgorica	84.29	321	↑iP	P	07 44 16.4	0.0
PMOR	Pomariorio Ree	84.29	114	eT	T	09 17 40.0	
	comp=Z,43nm,0.2s						
G40A	Rib Lake	84.56	34	eP	P	07 44 17.7	-0.1
	comp=Z,9.9nm,0.8s						
FETA	Feichten	84.58	329	eP	P	07 44 17.5	-0.5
	comp=Z,6.4nm,0.7s,SNR=5.1						
F41A	Three Lakes	84.67	33	eP	P	07 44 18.9	+0.5
	comp=Z,15nm,1.1s						
DAVA	Damuels	84.71	329	eP	P	07 44 18.0	-0.6
	comp=Z,16nm,0.9s						
PPT	Papeete	84.81	117	LR	LR	08 13 35.5	
	comp=Z,60nm,21.7s,baz=302,slow=30						
PPT2	Papeete2	84.83	117	eLR	LR	08 11 20.1	
	comp=Z,95nm,24.0s						
PPT2	Papeete2	84.83	117	eT	T	09 18 19.8	
	comp=Z,3.6nm,0.2s						
PAE	Paea	84.87	117	eT	T	09 18 22.5	
	comp=Z,1.2nm,0.3s						
TIAR	Tiarei	84.97	117	eT	T	09 18 29.4	
	comp=Z,3.6nm,0.2s						
ECH	Echery	85.00	332	eP	P	07 44 19.7	-0.2
	comp=Z,11nm,0.9s						
ECH	Echery	85.00	332	eP	P	07 44 19.7	-0.2
ECH				pmax	pmax		
	comp=Z,11nm,0.9s						
I39A	Houston	85.07	36	eP	P	07 44 20.4	0.0
	comp=Z,13nm,0.8s						
FUORN	Ofenpass-Fuorn	85.09	329	eP	P	07 44 20.9	+0.2
	comp=Z,22nm,0.8s						
N37A	Lee Faris, Mou	86.14	39	eP	P	07 44 26.6	+0.9
	comp=Z,22nm,0.9s						
KSU1	Kansas State U	86.15	42	eP	P	07 44 26.1	+0.3
	comp=Z,11nm,0.8s						
I42A	Draeger Farm,	86.21	34	eP	P	07 44 26.2	+0.2
	comp=Z,11nm,0.8s						
MNTX	Cornudas Mount	86.38	52	eP	P	07 44 28.0	+0.8
	comp=Z,2.7nm,0.8s						
L40A	Anamosa	86.59	37	eP	P	07 44 28.1	+0.1
	comp=Z,8.9nm,0.9s						
ITM	Ithomi	86.77	316	eP	P	07 44 27.7	-1.2
	comp=Z,23nm,0.9s						
N39A	Derby Farms, D	86.89	38	eP	P	07 44 30.1	+0.7
	comp=Z,12nm,0.9s						
P38A	Dawn	87.34	40	eP	P	07 44 32.0	+0.4
	comp=Z,13nm,0.6s						
TIP	Timpagrande	87.99	321	↑iP	P	07 44 34.4	-0.4
TIP	Timpagrande	87.99	321	eP	P	07 44 34.4	-0.4
	comp=Z,7.2nm,1.1s						
P40A	Paris	88.15	39	eP	P	07 44 35.6	+0.1
	comp=Z,17nm,0.9s						
WMOK	Wichita Mounta	88.16	46	eP	P	07 44 36.9	+1.2
	comp=Z,3.4nm,0.9s						
WMOK	Wichita Mounta	88.16	46	eP	P	07 44 36.9	+1.2
WMOK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TBI	Tubuai	88.79	121	eT	T	09 23 15.3	
	comp=Z,55nm,0.3s						
S39A	Bolivar	88.92	41	eP	P	07 44 39.1	0.0
	comp=Z,6.3nm,0.9s						
P42A	Winchester	88.94	38	eP	P	07 44 39.8	+0.6
	comp=Z,15nm,0.8s						
R40A	Maddies Statio	88.99	40	eP	P	07 44 39.8	+0.3
	comp=Z,6.9nm,0.7s						
TX31	Lajitas Ar. Si	89.08	53	eP	P	07 44 40.9	+0.7
TXAR	Lajitas Array	89.08	53	P	P	07 44 40.8	+0.6
	comp=Z,4.0nm,0.6s,baz=299,slow=3.2,SNR=80						
TXAR				pP	pP	07 44 59.1	+2.4
	comp=Z,1.8nm,0.7s,baz=307,slow=3.2,SNR=6.3						
HHAR	Hobbs	89.67	42	eP	P	07 44 42.8	+0.1
	comp=Z,4.9nm,1.0s						
CCM	Cathedral Cave	89.69	39	eP	P	07 44 42.8	+0.1
	comp=Z,120nm,1.3s						
CCM	Cathedral Cave	89.69	39	eP	P	07 44 42.8	+0.1
CCM				pmax	pmax		
	comp=Z,120nm,1.3s						
PLVO	Plevna	89.97	26	eP	P	07 44 44.1	+0.2
	comp=Z,5.2nm,0.9s						
JCT	Junction City	90.64	49	eP	P	07 44 47.9	+0.5
	comp=Z,7.1nm,0.6s						
JCT	Junction City	90.64	49	eP	P	07 44 47.9	+0.5
JCT				pmax	pmax		
	comp=Z,7.0nm,0.6s						
MIAR	Mount Ida	91.17	43	eP	P	07 44 50.3	+0.6
	comp=Z,8.3nm,0.8s						
MIAR	Mount Ida	91.17	43	eP	P	07 44 50.3	+0.6
MIAR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
WHAR	Wooly Hollow	91.29	42	eP	P	07 44 50.8	+0.5
	comp=Z,9.4nm,0.8s						
TOA0	Torodi Ar. Sit	116.77	316	ePKPdf	PKPdf	07 50 27.8	-1.5
TORD	Torodi Ar. Bea	116.77	316	PKP	PKPdf	07 50 27.6	-1.7
	comp=Z,0.5nm,0.4s,baz=20,slow=1.9,SNR=8.5						
LBTB	Lobatse	125.17	264	ePKPdf	PKPdf	07 50 45.3	+0.1
LBTB	Lobatse	125.17	264	ePKIKP	PKPdf	07 50 45.3	+0.1
RUSC	La Rusia	125.38	44	ePKPdf	PKPdf	07 50 46.4	-0.1
BOSA	Boshof	127.18	260	PKP	PKPdf	07 50 48.6	-0.4
	comp=Z,3.4nm,0.8s,baz=96,slow=4.4,SNR=4.6						
BOSA	Boshof	127.18	260	ePKPdf	PKPdf	07 50 49.0	0.0
BOSA	Boshof	127.18	260	ePKIKP	PKPdf	07 50 49.0	0.0
QSPA	South Pole Qui	127.96	180	ePKPdf	PKPdf	07 50 48.5	-0.7
SNAA	Sanae	142.00	197	P	PKPpre	07 51 08.8	
SNAA	Sanae	142.00	197	PKhKP	PKPpre	07 51 08.7	
	comp=Z,2.9nm,0.7s,baz=122,slow=1.2,SNR=24						
VNA3	Neumayer Olymp	143.82	195	P	PKPab	07 51 15.1	-0.4
VNA1	Neumayer--Stat	143.97	196	P	PKPab	07 51 16.0	0.0
LPAZ	La Paz	145.74	59	PKPbc	PKPbc	07 51 24.4	-0.2
	comp=Z,11nm,0.5s,baz=349,slow=2.6,SNR=71						
LPAZ	La Paz	145.74	59	ePKP2	PKPbc	07 51 24.5	-0.1
MNMC	Minye Minye	146.67	64	ePKPdf	PKPbc	07 51 27.2	+0.4
PB01	IPOC Station P	147.98	67	ePKPbc	PKPbc	07 51 30.7	+0.5
PB04	IPOC Station P	148.30	69	ePKPbc	PKPbc	07 51 31.7	+0.6
GO02	Mina Guanaco	150.35	73	ePKPbc	PKPbc	07 51 36.9	+0.5
GO05	HualaæØ	152.73	94	ePKPbc	PKPbc	07 51 40.7	-0.4

IDC 15 07:35:45.6±2.4, 2°.07N×128°.63E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/61, mbtmp3.3/3, Error ellipse: s-maj=160.3km s-min=26.4km az=68.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.58	166	P	P	07 40 47.3	-0.5
	0.7nm,0.8s,baz=346,slow=11,SNR=12						
ASAR	Alice Springs	26.09	169	P	P	07 41 21.4	+0.2
	0.3nm,0.7s,baz=348,slow=13,SNR=4.0						
MKAR	Makanchi Array	60.00	325	P	P	07 45 54.1	+0.1
	0.2nm,0.3s,baz=118,slow=7.3,SNR=4.8						

ISCJB 15 07:36:36.0±1.8, 37°.17N±0°.07×42°.48E±0°.05, h0km±10km, Error ellipse: s-maj=12.4km s-min=7.3km az=4.0
ISK 15 07:36:36.5, 37°.23N×42°.56E, h10km, ML2.5/3
CSEM 15 07:36:37.4±0.2, 37°.24N×42°.51E, h8km, ML2.8, Error ellipse: s-maj=5.8km s-min=3.5km az=45.0
ISN 15 07:36:37.8±0.3, 37°.13N×42°.54E, h0km, ML2.4
DDA 15 07:36:39.8, 37°.51N×42°.60E, h7km, Ml2.8

ISC 15 07:36:34.7±2.3, 37°.11N±0°.09×42°.50E±0°.05, h2km±18km, n17, σ0°.44/27, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRN	S¨–rnak	0.40	350	iP	Pg	07 36 42.5	+0.2
SIRN				iS	Sg	07 36 46.8	-0.7
SIRN	S¨–rnak	0.40	350	P	Pg	07 36 42.5	+0.2
SIRN				S	Sg	07 36 46.8	-0.7
SIRT	Sirnak	0.40	354	PG	Pg	07 36 42.8	+0.4
SIRT				SG	Sg	07 36 47.1	-0.4
SIRT	Sirnak	0.40	354	ePg	Pg	07 36 42.8	+0.4
SIRT				eSg	Sg	07 36 47.1	-0.4
SRTM	Siirt_Merkez	0.99	333	iP	Pn	07 36 55.9	0.0
SRTM				iS	Sg	07 37 06.6	-0.1
SRTM	Siirt_Merkez	0.99	333	P	Pn	07 36 55.9	0.0
SRTM				S	Sg	07 37 06.6	-0.1
HAKT	HAKKARI	1.07	65	iP	Pn	07 36 57.1	+0.1
HAKT				iS	Sb	07 37 10.6	0.0
HAKT	HAKKARI	1.07	65	P	Pn	07 36 57.1	+0.1
HAKT				S	Sb	07 37 10.6	0.0
BTMN	Batman	1.25	309	iP	Pn	07 36 60.0	+0.6
BTMN	Batman	1.25	309	P	Pn	07 37 00.0	+0.6
MARD	Mardin	1.39	279	iP	Pn	07 37 00.4	-0.9
SVAN	Silvan-Diyarba	1.47	316	PN	Pg	07 37 03.1	+0.3
SVAN				SN	Sg	07 37 22.3	+0.5
SVAN	Silvan-Diyarba	1.47	316	ePn	Pg	07 37 03.1	+0.3
SVAN				eSn	Sg	07 37 22.3	+0.5
GURO	Guroymak-BITLI	1.49	346	PN	Pn	07 37 02.2	-0.5
GURO	Guroymak-BITLI	1.49	346	ePn	Pn	07 37 02.2	-0.5
MAZI	Mazidag	1.67	283	PN	Pg	07 37 06.8	0.0
MAZI	Mazidag	1.67	283	ePn	Pg	07 37 06.8	0.0

IDC 15 07:39:01.1±6.3, 20°.24S×176°.50W, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.3/52, mbtmp3.5/2, Error ellipse: s-maj=326.3km s-min=94.2km az=155.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	45.94	256	P	P	07 47 25.9	-0.4
	0.7nm,0.6s,baz=99,slow=7.9,SNR=8.7						
WRA	Warramunga Arr	46.03	261	P	P	07 47 27.0	+0.1
	0.2nm,0.3s,baz=96,slow=8.1,SNR=8.6						
AKASG	Malin Array Be	143.45	332	PKP	PKPdf	07 58 37.0	-0.6
	0.5nm,0.4s,baz=42,slow=4.2,SNR=7.1						

IDC 15 07:48:53.1±1.7, 26°.80N×143°.83E, h0km, mb3.7/5, mb1 3.9/6, mb1mx3.5/70, mbtmp3.7/6, ML3.8/1, Error ellipse: s-maj=40.4km s-min=19.4km az=61.0
ISCJB 15 07:48:55.6±1.3, 26°.8N±0°.2×143°.9E±0°.1, h33km, mb3.8/5, Error ellipse: s-maj=26.9km s-min=12.6km az=30.7

ISC 15 07:48:57.2±1.4, 26°.9N±0°.1×143°.9E±0°.1, h35km, n7, σ1°.34/8, mb3.8/5, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	1.54	276	Pn	Pn	07 49 21.4	-0.8
	6.2nm,0.3s,baz=108,slow=20,SNR=5.2						
JCJ				Sn	Sn	07 49 41.4	+0.5
	54nm,0.3s,baz=272,slow=22,SNR=10						
MJAR	Matsushiro Arr	10.72	335	Pn	Pn	07 51 27.1	-1.2
	0.7nm,0.3s,baz=161,slow=11,SNR=5.4						
WRA	Warramunga Arr	47.52	192	P	P	07 57 28.6	-0.6
	1.6nm,0.7s,baz=14,slow=8.5,SNR=13						
FITZ	Fitzroy Crossi	48.15	204	P	P	07 57 34.2	+0.1
	1.7nm,0.6s,baz=10,slow=8.1,SNR=7.6						
ASAR	Alice Springs	51.23	192	P	P	07 57 57.1	-0.4
	0.3nm,0.6s,baz=19,slow=8.0,SNR=4.9						
MKAR	Makanchi Array	51.75	310	P	P	07 58 03.0	+1.8
	0.5nm,0.6s,baz=92,slow=9.0,SNR=3.8						
KURBB	Kurchatov Arra	54.24	314	P	P	07 58 21.2	+1.7
	0.6nm,0.6s,baz=89,slow=7.9,SNR=6.2						

CSEM 15 07:58:42.3, 38°.85N×21°.39E, h32km, ML1.4/6

ATH 15 07:58:42.3, 38°.85N×21°.39E, h32km±3km, ML1.4/6, Error ellipse: s-maj=6.5km s-min=1.3km az=229.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVO	Paravola	0.26	155	P	Pb	07 58 49.6	+0.1
PVO				S	Sn	07 58 55.0	+0.3
PVO				AML	AML	07 58 55.6	
	comp=E,191μm,0.2s						
PVO				AML	AML	07 58 55.7	
	comp=N,198μm,0.2s						
PVO	Paravola	0.26	155	P	Pb	07 58 49.6	+0.2
PVO				S	Sn	07 58 54.9	+0.2
DSL	Palaion Diasel	0.36	321	P	Pb	07 58 50.9	0.0
DSL				S	Sn	07 58 57.9	+0.5
DSL				AML	AML	07 59 03.6	
	comp=E,83μm,0.6s						
DSL				AML	AML	07 59 04.2	
	comp=N,60μm,0.9s						
DSL	Palaion Diasel	0.36	321	P	Pb	07 58 51.0	+0.1
DSL				S	Sn	07 58 57.7	+0.2
ANX	Ano Chora	0.49	122	P	Pb	07 58 52.5	-0.2
ANX				S	Sn	07 59 01.0	+0.4
ANX				AML	AML	07 59 01.6	
	comp=N,182μm,0.4s						
ANX				AML	AML	07 59 01.7	
	comp=E,161μm,0.4s						
ANX	Ano Chora	0.49	122	P	Pb	07 58 52.7	0.0
ANX				S	Sn	07 59 00.8	+0.2
EFP	Efpalio	0.58	136	P	Pn	07 58 55.1	+0.8
EFP				S	Sb	07 59 01.9	-0.4
EFP				AML	AML	07 59 06.2	
	comp=N,45μm,0.5s						
EFP				AML	AML	07 59 08.0	
	comp=E,50μm,0.4s						
EFP	Efpalio	0.58	136	P	Pn	07 58 54.8	+0.5
EFP				S	Sn	07 59 02.7	-0.1
SERG	Sergoula	0.68	130	P	Pb	07 58 56.2	+0.4
SERG				S	Sn	07 59 07.0	+1.8
SERG				AML	AML	07 59 10.1	
	comp=E,51μm,0.2s						
SERG				AML	AML	07 59 11.1	
	comp=N,63μm,0.3s						
SERG	Sergoula	0.68	130	P	Pb	07 58 56.2	+0.4
SERG				S	Sn	07 59 06.7	+1.5
AGG	Agios Georgios	0.75	77	P	Pb	07 58 57.2	+0.2
AGG				AML	AML	07 59 09.1	
	comp=E,95μm,0.3s						
AGG				S	Sn	07 59 09.2	+2.2
AGG				AML	AML	07 59 13.7	
	comp=N,63μm,0.3s						
AGG	Agios Georgios	0.75	77	P	Pb	07 58 57.3	+0.3
AGG				S	Sn	07 59 08.8	+1.8

IDC 15 08:00:06.4±3.1, 52°.34N×35°.12E, h0km, mb1 3.6/2, mb1mx3.1/62, mbtmp3.5/2, ML3.1/3, Error ellipse: s-maj=36.0km s-min=12.1km az=118.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKASG	Malin Array Be	4.03	248	Pn	Pn	08 01 06.8	-2.5
	1.0nm,0.3s,baz=60,slow=13,SNR=5.3						
AKASG				Pg	Pb	08 01 16.9	-1.3
	1.9nm,0.3s,baz=64,slow=16,SNR=4.7						
AKASG				Sn	Sn	08 01 57.4	+0.2
	2.8nm,0.3s,baz=62,slow=22,SNR=6.7						
AKASG				Lg	Lg	08 02 12.6	
	2.0nm,0.3s,baz=68,slow=30,SNR=4.2						
FINES	FINESS Array B	10.37	335	Pn	Pn	08 02 31.4	-4.7
	0.2nm,0.3s,baz=152,slow=14,SNR=5.9						
FINES				Sn	Sn	08 04 21.4	-12
	0.2nm,0.3s,baz=150,slow=22,SNR=3.7						
I26DE	FREYUNG INFRAS	14.03	264	i		09 27 40.0	
	baz=67,slow=323,SNR=0.9						
ARCES	ARCESS Array B	17.83	349	Pn	Pn	08 04 11.4	-4.2
	0.2nm,0.3s,baz=161,slow=11,SNR=5.7						

IDC 15 08:10:06.8±1.8, 1°.38N×126°.98E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.3/54, mbtmp3.4/4, Error ellipse: s-maj=167.0km s-min=21.8km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.39	162	P	P	08 15 05.7	-1.2
	0.3nm,0.3s,baz=340,slow=11,SNR=9.0						
ASAR	Alice Springs	25.79	165	P	P	08 15 40.9	+1.1
	0.4nm,0.9s,baz=354,slow=16,SNR=4.7						
MKAR	Makanchi Array	59.62	326	P	P	08 20 12.3	-0.4
	0.3nm,0.4s,baz=122,slow=6.5,SNR=7.1						
KURBB	Kurchatov Arra	63.84	328	P	P	08 20 41.3	+0.3
	0.5nm,0.5s,baz=124,slow=6.4,SNR=4.5						

IDC 15 08:40:05.9±2.2, 1°.40N×127°.10E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.3/61, mbtmp3.5/3, Error ellipse: s-maj=178.4km s-min=25.6km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.37	162	P	P	08 45 05.0	-0.8
	1.0nm,0.8s,baz=340,slow=11,SNR=11						
ASAR	Alice Springs	25.78	166	P	P	08 45 39.3	+0.6
	0.3nm,0.4s,baz=346,slow=12,SNR=11						
MKAR	Makanchi Array	59.67	326	P	P	08 50 12.1	-0.1
	0.3nm,0.4s,baz=117,slow=7.8,SNR=5.6						

ISCJB 15 08:43:26.1±1.0, 3°.39S±0°.03×146°.44E±0°.03, h1km±6km, mb5.1/144, MS4.8/68, Error ellipse: s-maj=5.0km s-min=4.4km az=32.0
BJI 15 08:43:27.0, 3°.16S×146°.73E, h7km, mb5.1/61, mB5.2/48, Ms5.1/64, Ms7 5.0/62
IDC 15 08:43:27.2±0.5, 3°.40S×146°.38E, h0km, mb4.9/30, mb1 4.9/34, mb1mx4.8/52, mbtmp4.9/34, ML3.4/3, MS4.7/43, Ms1 4.7/43, ms1mx4.7/51, Error ellipse: s-maj=16.3km s-min=10.6km az=94.0
MOS 15 08:43:31.6±1.2, 3°.40S×146°.23E, h39km, mb5.4/39, MS4.7/9, Error ellipse: s-maj=9.9km s-min=5.6km az=103.6
GCMT 15 08:43:32.7±0.1, 3°.35S×146°.38E, h12km, MW5.4/127, Moment Tensor Solution. s95,c155; s127,c243; Duration: 1s2 Moment tensor: Scale 10^17Nm; Mrr-0.37±.02; Mθθ0.47±.02; Mφφ-0.09±.02; Mrθ-0.26±.04; Mθφ1.44±.01; Mφr0.00±.05; Best double couple: M0 1.49200×10^17 NP1:φs95.00000°, δ87.00000°, λ-11.00000°. NP2:φs186.00000°, δ79.00000°, λ-177.00000°. Principal axes: T 1.6740, Plg6.0000°, Azm141.0000°; N -0.3630, Plg78.0000°, Azm259.0000°; P -1.3100, Plg10.0000°, Azm50.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
NEIC 15 08:43:32.7±0.7, 3°.38S×146°.31E, h36km±6km, mb5.2/89 Error ellipse: s-maj=4.5km s-min=4.2km az=89.0
DJA 15 08:43:35.5±0.6, 3°.5±4°.×14°.7E±°., h44km±5km, M5.2/44, mb5.2/44, mB5.6/28, MLv5.5/4, Mw(mB)5.2/28

ISC 15 08:43:31.3±0.5, 3°.43S±0°.03×146°.47E±0°.04, h24km±2km, h24km:pP-P, n383, σ1°.76/407, mb5.1/144, MS4.8/70, 11C-8D, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANU	Manus Island	1.64	33	ePn	Pn	08 43 54.5	-4.3
MANU				eSn	Sb	08 44 20.5	-0.8
RABL	Rabaul	5.73	98	ePn	Pn	08 44 57.2	+2.1
JAY	Jayapura	5.83	279	Pn	Pn	08 44 52.8	-3.5
	0.7nm,0.3s,baz=128,slow=10,SNR=4.4						
JAY				LR	LR	08 46 58.2	
	comp=Z,11μm,18.2s,baz=91,slow=37						
JAY	Jayapura	5.83	279	P	Pn	08 44 58.7	+2.3
PMG	Port Moresby	5.98	173	Pn	Pn	08 44 57.5	-0.9
	25nm,0.3s,baz=40,slow=5.2,SNR=72						
PMG	Port Moresby	5.98	173	ePn	Pn	08 44 58.2	-0.2
PMG	Port Moresby	5.98	173	eP	Pn	08 44 58.2	-0.2
GENI	Genyem	6.35	277	P	Pn	08 45 06.2	+2.7
COEN	Coen	10.95	197	P	Pn	08 46 07.0	+0.3
	baz=11,SNR=24						
COEN	Coen	10.95	197	ePn	Pn	08 46 07.2	+0.5
FAKI	Fak Fak	14.21	272	P	Pn	08 46 51.0	-0.3
FAKI	Fak Fak	14.21	272	ePn	Pn	08 46 50.9	-0.3
HNR	Honiara	14.66	115	Pn	Pn	08 46 58.8	+1.4
	baz=288,slow=16,SNR=2.7						
HNR				LR	LR	08 52 37.4	
	comp=Z,3μm,18.3s,baz=278,slow=37						
HNR	Honiara	14.66	115	ePn	Pn	08 47 00.1	+2.8
HNR	Honiara	14.66	115	eP	Pn	08 47 00.2	+2.8
MTSU	Mount Surprise	14.77	188	P	Pn	08 47 00.9	+2.1
	baz=15,SNR=16						
SIJI	Sorong	15.40	279	Pn	Pn	08 47 05.7	-1.6
	0.7nm,0.3s,baz=93,slow=15,SNR=4.7						
SIJI				LR	LR	08 52 09.8	
	comp=Z,4μm,21.0s,baz=103,slow=34						
PATS	Pohnpei	15.62	49	ePn	Pn	08 47 11.9	+1.8
	612nm,1.7s						
SAUI	Saumlaki	15.75	253	ePn	Pn	08 47 10.3	-1.5
	284nm,0.9s						
BNDI	Bandanaira	16.56	266	P	P	08 47 24.5	-0.1
CTA	Charters Tower	16.56	181	Pn	P	08 47 25.3	+0.8
	2.2nm,0.3s,baz=351,slow=14,SNR=26						
CTA				LR	LR	08 53 43.4	
	comp=Z,1μm,21.8s,baz=4.5,slow=37						
CTAO	Charters Tower	16.56	181	ePn	P	08 47 24.9	+0.4
	192nm,1.4s						
CTAO	Charters Tower	16.56	181	eP	P	08 47 25.0	+0.4
CTAO				pmax	pmax		
	comp=Z,192nm,1.4s						
KDU	Kakadu	16.62	236	P	Pn	08 47 20.3	-2.6
	baz=16,SNR=22						
GUMO	Guam	16.98	355	LR	LR	08 53 10.1	
	comp=Z,3μm,18.5s,baz=178,slow=34						
MSAI	Masohi	17.51	270	P	P	08 47 36.8	+1.7
MTN	Manton Dam	17.82	237	P	Pn	08 47 36.0	-1.9
	baz=18,SNR=15						
MTN	Manton Dam	17.82	237	ePn	Pn	08 47 35.7	-2.2
	comp=Z,150nm,0.8s						
AAI	Ambon	18.24	269	P	P	08 47 46.3	+3.1
QIS	Mount Isa	18.29	201	P	Pn	08 47 44.4	+0.8
	baz=18,SNR=8.1						
NLAI	Namlea	19.34	270	P	Pn	08 47 58.2	+1.8
TNTI	Ternate	19.54	282	eP	P	08 47 56.5	-1.0
	comp=Z,162nm,1.3s						
WRAB	Tennant Creek	20.22	215	eP	P	08 48 03.4	-1.4
	comp=Z,1μm,1.8s						
WRAB	Tennant Creek	20.22	215	d iP	P	08 48 03.6	-1.2
WRAB				pmax	pmax		
	comp=Z,218nm,1.0s						
WB2	Warramunga Arr	20.23	215	eP	P	08 48 03.7	-1.2
	comp=Z,201nm,0.8s						
WRA	Warramunga Arr	20.23	215	P	P	08 48 03.5	-1.5
	comp=Z,34nm,0.7s,baz=37,slow=12,SNR=65						
WRA				LR	LR	08 57 08.4	
	comp=Z,4μm,18.1s,baz=45,slow=41						
SANI	Sanana	20.50	273	P	Pn	08 48 10.0	-0.2
KNRA	Kununurra	21.25	234	P	P	08 48 13.7	-2.3
	baz=21,SNR=37						
SGSI	Sangihe	22.09	288	P	P	08 48 35.9	+11
EIDS	Eidsvold	22.26	169	P	P	08 48 27.7	+1.0
	baz=22,SNR=22						
EIDS	Eidsvold	22.26	169	eP	P	08 48 26.8	0.0
	comp=Z,68nm,0.8s						
KMSI	Cibinong	22.82	280	P	P	08 48 40.7	+7.8
SOEI	Soe	22.92	253	P	P	08 48 34.2	+0.2
SOEI	Soe	22.92	253	eP	P	08 48 33.4	-0.7
	comp=Z,295nm,0.8s						
RMQ	Roma	23.03	175	P	P	08 48 35.5	+0.6
	baz=23,SNR=28						
DAV	Davao City (W)	23.31	297	LR	LR	08 57 36.5	
	comp=Z,1μm,19.0s,baz=100,slow=37						
AS01	Alice Springs	23.47	210	eP	P	08 48 38.0	-1.4
AS31	Alice Springs	23.50	210	eP	P	08 48 38.5	-1.2
	comp=Z,29nm,0.8s						
ASAR	Alice Springs	23.50	210	P	P	08 48 38.3	-1.4
	comp=Z,64nm,1.0s,baz=41,slow=8.9,SNR=78						
ASAR				LR	LR	08 59 16.9	
	comp=Z,2μm,18.6s,baz=40,slow=40						
BATI	Baumata	23.61	252	P	P	08 48 39.7	-1.1
	comp=Z,183nm,0.9s,baz=136,slow=3.5,SNR=11						
BATI	Baumata	23.61	252	P	P	08 48 43.5	+2.7
LUWI	Luwuk	23.79	275	P	P	08 48 45.0	+2.4
LUWI	Luwuk	23.79	275	eP	P	08 48 42.5	-0.1
	comp=

comp=Z,3μm,18.3s,baz=5.2,slow=39
STKA Stephens Creek 28.67 189 P P 08 49 27.1 +0.6
baz=29,SNR=7.3
STKA Stephens Creek 28.67 189 *e*P **P 08 49 27.5 +1.0**
comp=Z,8.7nm,0.9s
STKA Stephens Creek 28.67 189 *e*P **P 08 49 27.4 +1.0**
STKA pmax pmax
comp=Z,11nm,0.8s
MYLDM Lahad Datu 29.22 287 *e*P **P 08 49 30.2 -1.4**
comp=Z,85nm,1.1s
CBIJ Chichi jima 30.63 352 *e*P **P 08 49 44.1 +0.2**
comp=Z,92nm,0.9s
HTT Hallett 30.67 192 P **P 08 49 45.7 +1.5**
baz=31,SNR=6.9
TGY Tagaytay City 30.73 305 LR LR 09 00 00.8
comp=Z,1μm,21.7s,baz=100,slow=32
YNG Young 30.77 177 P **P 08 49 45.4 +0.3**
baz=31,SNR=4.8
BBOO Buckleboo 30.81 197 *e*P **P 08 49 44.5 -1.0**
comp=Z,43nm,1.0s
MBWA Marble Bar 31.41 234 *e*P **P 08 49 49.6 -1.3**
comp=Z,79nm,1.8s
CAN Canberra 31.82 176 *e*P **P 08 49 55.7 +1.4**
comp=Z,57nm,1.7s
CAN Canberra 31.82 176 *e*P **P 08 49 55.7 +1.4**
CAN pmax pmax
comp=Z,57nm,1.7s
FORT Forrest 32.28 211 P **P 08 49 57.0 -1.4**
baz=32,SNR=11
FORT Forrest 32.28 211 *e*P **P 08 49 57.0 -1.4**
comp=Z,82nm,0.6s
GMJI Gumukmas 33.19 260 P P 08 50 17.8 +11
SBUM Sibu 34.73 279 *e*P **P 08 50 18.1 -1.9**
comp=Z,123nm,1.7s
JOW Kunigami 34.84 331 LR LR 09 01 26.4
comp=Z,3μm,21.9s,baz=148,slow=31
STKI Sintang 35.14 275 P **P 08 50 27.4 +3.9**
MEEK Meekatharra 35.27 226 P **P 08 50 23.8 -0.7**
baz=35,SNR=8.0
GIRL Giralia 36.60 236 P **P 08 50 34.9 -1.0**
baz=36,SNR=3.5
JHJ Hachijo jima 2 36.90 351 LR LR 09 04 27.3
comp=Z,1μm,18.6s,baz=160,slow=34
KPJI Karang Pucung 37.56 262 P **P 08 50 46.6 +2.4**
MORW Morawa 38.53 225 P **P 08 50 52.1 -0.1**
baz=38,SNR=6.1
KLBR Kellerberrin 38.91 221 P **P 08 50 54.8 -0.6**
baz=39,SNR=6.9
QZH Quanzhou 39.09 318 ⇑P **P 08 50 59.3 +2.4**
QZH S **S 08 56 56.3 +1.0**
QZH LR LR
comp=Z,800nm,18.5s
QZH LR LR
comp=Z,2μm,19.9s
QZH LR LR
comp=Z,2μm,16.2s
JNU Nakatsue 39.23 339 LR LR 09 05 29.0
comp=Z,762nm,20.8s,baz=125,slow=34
INU Inuyama 39.58 348 *e*P **P 08 51 00.8 -0.1**
comp=Z,42nm,1.2s
NWAO Narrogin (SRO) 40.11 220 LR LR 09 09 14.1
comp=Z,3μm,20.8s,baz=282,slow=39
OUZ Omahuta 40.40 145 *e*P **P 08 51 10.1 +2.4**
comp=Z,136nm,1.8s
MJA0 Matsu Arr-Jizo 40.50 350 *e*P **P 08 51 06.9 -1.6**
MJA0 pmax pmax
comp=Z,10.0nm,1.0s
MJAR Matsushiro Arr 40.51 350 P **P 08 51 06.0 -2.5**
comp=Z,9.6nm,1.0s,baz=174,slow=7.2,SNR=15
MJAR PcP **PcP 08 53 11.1 +0.1**
comp=Z,2.6nm,0.8s,baz=176,slow=2.8,SNR=4.3
MAJO Matsushiro 40.51 350 *e*P **P 08 51 06.2 -2.3**
comp=Z,128nm,1.5s
MAJO Matsushiro 40.51 350 *d i*P **P 08 51 07.2 -1.3**
MAJO *i* *SP **pP 08 51 14.6 -1.2**
MAT Matsushiro 40.51 350 P **P 08 51 06.6 -1.9**
MAT S **S 08 57 15.0 -1.3**
MJB9 Matsu-Tunnel 40.51 350 *e*P **P 08 51 06.6 -2.0**
comp=Z,131nm,1.5s
SSE Sheshan 41.95 327 P **P 08 51 20.8 +0.4**
SSE S **S 08 57 43.0 +5.3**
SSE pmax pmax
comp=Z,12nm,0.7s
SSE pmax pmax
comp=Z,84nm,3.9s
SSE LR LR
comp=Z,890nm,21.8s
SSE LR LR
comp=Z,980nm,20.3s
MDSI Maura Dua 42.20 267 P **P 08 51 20.6 -2.2**
QIZ Qiongzhong 42.38 303 P **P 08 51 24.4 +0.2**
QIZ S **S 08 57 46.3 +1.7**
QIZ sS **pS 08 57 52.5 -0.6**
QIZ LR LR
comp=Z,970nm,22.0s
QIZ LR LR
comp=Z,950nm,19.0s
QIZ LR LR
comp=Z,1μm,23.0s
QIZ Qiongzhong 42.38 303 *e*P **P 08 51 23.3 -0.9**
comp=Z,71nm,1.1s
AFI Afiamalu 42.50 107 LR LR 09 07 13.2
comp=Z,889nm,19.0s,baz=275,slow=34
TJN Taejon 43.44 337 *ce*P **P 08 51 33.0 +0.6**
TJN *SP **sP 08 51 41.4 -1.2**
NJ2 Nanjing 43.97 325 *e*P **P 08 51 35.1 -1.7**
NJ2 S **S 08 58 13.3 +5.9**
NJ2 pmax pmax
comp=Z,14nm,0.6s
NJ2 LR LR
comp=Z,2μm,22.8s
NJ2 LR LR
comp=Z,950nm,17.9s
NJ2 LR LR
comp=Z,2μm,22.2s
MASI Maura Aman, Be 44.15 269 P **P 08 51 39.9 +1.2**
KSRS Korea Array 44.18 339 P **P 08 51 37.8 -0.6**
comp=Z,17nm,1.0s,baz=155,slow=9.5,SNR=35
KSRS LR LR 09 07 00.1
comp=Z,1μm,21.9s,baz=174,slow=32
KS15 Wonju Array Si 44.18 339 *e*P **P 08 51 37.4 -1.0**
KSAR Wonju Array Be 44.18 339 P **P 08 51 37.8 -0.6**
KSAR Wonju Array Be 44.18 339 P **P 08 51 37.8 -0.6**
KS01 Wonju Array Si 44.21 339 *e*P **P 08 51 37.7 -1.0**
BKZ Black Stump Fm 44.83 147 *e*P **P 08 51 45.6 +1.9**
comp=Z,76nm,1.4s
FOZ Fox Glacier 44.98 156 *e*P **P 08 51 45.8 +1.0**
comp=Z,100nm,1.4s
ERM Erimo 45.33 357 ⇑*i*P **P 08 51 46.4 -1.1**
ERM *i* *SP **sP 08 51 57.0 -0.6**
ERM pmax pmax
comp=Z,5.0nm,0.9s
WHN Wuhan 45.62 320 P **P 08 51 50.8 +0.8**
WHN S **S 08 58 34.8 +3.3**
WHN LR LR
comp=Z,2μm,12.2s
WHN LR LR
comp=Z,2μm,12.2s
WHN LR LR
comp=Z,4μm,22.6s
LBZ Lake Benmore 45.84 156 *e*P **P 08 51 52.2 +0.6**
comp=Z,183nm,1.8s
MLZ Mavora Lakes 45.88 159 *e*P **P 08 51 52.8 +0.9**
comp=Z,284nm,2.0s
KULM Kulim 46.58 281 *e*P **P 08 51 55.9 -2.0**
comp=Z,52nm,1.3s
SKNT Sakolnakorn 46.59 297 P **P 08 51 59.4 +1.5**
comp=Z,18nm,0.9s,comp=Z,1μm
MNSI Mandailing Nat 47.05 274 P **P 08 52 02.9 +1.3**
YUK Yuzh-Kuril'sk 47.25 359 P P 08 51 57.7 -4.9
YUK S **S 08 58 55.4 +1.0**
ASAJ Asahikawa 47.46 356 P **P 08 52 04.2 0.0**
comp=Z,38nm,1.2s,baz=240,slow=17,SNR=14
ASAJ LR LR 09 11 07.5
comp=Z,313nm,20.0s,baz=179,slow=35
ASAJ Asahikawa 47.46 356 *e*P **P 08 52 04.2 0.0**
comp=Z,66nm,1.4s
NONG Nongkai 47.73 298 P **P 08 52 09.3 +2.5**
comp=Z,48nm,0.9s
PSI Prapat 47.92 277 P **P 08 52 08.5 0.0**
comp=Z,18nm,0.8s,baz=180,slow=3.3,SNR=15
PSI Prapat 47.92 277 *e*P **P 08 52 06.0 -2.5**
comp=Z,152nm,1.7s
PSI Prapat 47.92 277 *e*P **P 08 52 06.0 -2.5**
PSI pmax pmax
comp=Z,153nm,1.7s
DL2 Dalian 47.96 334 *e*P **P 08 52 12.4 +4.2**
DL2 S **S 08 59 09.9 +5.2**
DL2 pmax pmax
comp=Z,38nm,1.4s
DL2 LR LR
comp=Z,1μm,18.8s
DL2 LR LR
comp=Z,860nm,19.2s
DL2 LR LR
comp=Z,2μm,17.3s
TRTT Trang 47.99 284 P **P 08 52 09.6 +0.8**
comp=Z,33nm,1.2s
KUR Kuril'sk 48.46 1 ⇓*i*P **P 08 52 13.0 +1.1**
KUR *i* S **S 08 59 12.3 +0.8**
KUR pmax pmax
comp=Z,118nm,1.5s
KUR pmax pmax
comp=N,43nm,1.3s
KUR pmax pmax
comp=E,40nm,0.9s
KUR MLR MLR
comp=Z,312nm,14.0s
KUR MLR MLR
comp=N,167nm,11.0s
KUR MLR MLR
comp=E,106nm,10.0s
GYA Guiyang 48.61 310 P **P 08 52 15.3 +1.7**
GYA PP **PP 08 54 08.6 +1.8**
GYA ScP **ScP 08 57 32.6 -0.1**
GYA S **S 08 59 15.0 +0.4**
GYA SS **SS 09 02 41.4 -3.7**
GYA pmax pmax
comp=E,20nm,1.0s
GYA pmax pmax
comp=E,130nm,5.4s
GYA LR LR
comp=E,760nm,16.5s
GYA LR LR
comp=E,660nm,16.0s
GYA LR LR
comp=E,600nm,16.6s
GSI Gunungsitoli 49.09 275 P **P 08 52 18.0 +0.6**
GSI Gunungsitoli 49.09 275 *e*P **P 08 52 15.6 -1.8**
comp=E,228nm,1.6s
PBKT Sadao Pong 49.14 295 P P 08 52 23.3 +5.6
comp=E,22nm,1.4s,comp=E,922nm
PBKT Sadao Pong 49.14 295 *e*P **P 08 52 18.0 +0.3**
KCSI Kotacane, Aceh 49.15 278 P **P 08 52 14.8 -3.1**
USRK Ussuriysk Ar. 49.16 346 P **P 08 52 16.4 -1.0**
comp=E,16nm,0.8s,baz=174,slow=8.2,SNR=40
USRK LR LR 09 10 10.2
comp=E,508nm,21.3s,baz=146,slow=33
PHET Kaeng Krachan 49.26 290 P **P 08 52 21.7 +3.1**
comp=E,18nm,0.8s,comp=E,178nm
PKDT Phuket 49.31 283 P **P 08 52 19.8 +0.7**
comp=E,53nm,0.9s
TPTI 49.71 277 P **P 08 52 21.7 -0.3**
SRDT SRDT 50.14 292 P **P 08 52 28.1 +2.8**
comp=E,38nm,2.1s,comp=E,2μm
NANT Nan 50.16 298 P **P 08 52 25.6 +0.2**
comp=E,18nm,1.1s,comp=E,168nm
YSS Yuzh-Sakhalins 50.28 357 *e*P **P 08 52 27.8 +2.0**
YSS *e*S **S 08 59 37.4 +0.5**
YSS *e*SSS SSS 09 04 42.0
YSS pmax pmax
comp=Z,20nm,1.6s
MLSI Meulaboh, Aceh 50.60 278 P **P 08 52 29.6 +0.7**
CN2 Changchun 50.68 340 *e*P **P 08 52 32.9 +4.0**
CN2 *es*P sP 08 52 40.0 +0.9
CN2 *e*S **S 08 59 46.9 +4.3**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=Z,1μm,17.0s
CN2 LR LR
comp=Z,700nm,17.0s
CN2 LR LR
comp=Z,2μm,18.0s
LAMP Lampang 51.01 297 P **P 08 52 32.8 +1.0**
comp=Z,17nm,0.9s,comp=Z,147nm
KMI Kunming 51.04 306 P **P 08 52 32.9 +0.7**
KMI pP pP 08 52 38.3 -1.3
KMI sP sP 08 52 40.3 -2.1
KMI PP **PP 08 54 30.3 +1.3**
KMI S **S 08 59 43.8 -4.9**
KMI sS sS 08 59 59.8 -1.0
KMI pmax pmax
comp=Z,59nm,1.1s
KMI pmax pmax
comp=Z,230nm,4.4s
KMI LR LR
comp=Z,590nm,17.5s
KMI LR LR
comp=Z,620nm,18.7s
KMI LR LR
comp=Z,1μm,25.4s
PAYA Payao 51.10 298 P **P 08 52 33.4 +0.9**
comp=Z,29nm,1.0s,comp=Z,254nm
XAN Xi'an 51.38 320 P **P 08 52 33.4 -1.1**
XAN pP pP 08 52 41.3 -0.5
XAN S **S 08 59 55.9 +3.0**
XAN ScS **ScS 09 02 25.3 +1.5**
XAN SS **SS 09 03 23.3 -5.7**
XAN pmax pmax
comp=Z,23nm,1.4s
XAN pmax pmax
comp=Z,200nm,4.1s
XAN LR LR
comp=Z,720nm,18.1s
XAN LR LR
comp=Z,550nm,18.1s
XAN LR LR
comp=Z,1μm,17.6s
BJI Beijing 51.42 330 *e*P **P 08 52 34.1 -0.4**
BJI S **S 08 59 56.0 +3.0**
BJI pmax pmax
comp=Z,26nm,0.9s
BJI LR LR
comp=Z,2μm,18.6s
BJI LR LR
comp=Z,2μm,16.5s
BJI LR LR
comp=Z,3μm,29.4s
CM01 Chiang Mai Arr 51.57 297 *e*P **P 08 52 35.9 -0.1**
CMAR Chiang Mai Arr 51.60 297 P **P 08 52 36.4 +0.1**
comp=Z,19nm,0.8s,baz=120,slow=5.8,SNR=31
CMAR LR LR 09 15 46.5
comp=Z,294nm,18.0s,baz=108,slow=38
CHTO Chiang Mai 51.72 297 P **P 08 52 39.6 +2.4**
comp=Z,146nm,1.3s,comp=Z,2μm
CHTO Chiang Mai 51.72 297 P **P 08 52 39.6 +2.4**
SNR=11
KLR Kul'dur 53.98 348 P **P 08 52 52.7 -0.7**
comp=Z,0.8nm,1.0s,baz=166,slow=4.9,SNR=20
KLR LR LR 09 13 31.7
comp=Z,43nm,21.8s,baz=162,slow=34
KLR Kul'dur 53.98 348 ⇓*i*P **P 08 52 52.5 -0.8**
KLR *i* *PP **pP 08 52 59.1 -1.6**
KLR *i* 08 53 58.2
HHC Hu-ho-hao-te 54.39 328 *e*P **P 08 52 57.4 +0.8**
HHC PP **PP 08 54 59.6 +0.7**
HHC S **S 09 00 34.0 +0.3**
HHC sS pS 09 00 40.6 -2.0
HHC SS **SS 09 04 16.1 -0.3**
HHC pmax pmax
comp=Z,15nm,0.7s
HHC pmax pmax
comp=Z,190nm,8.1s
HHC LR LR
comp=Z,980nm,18.1s
HHC LR LR
comp=Z,1μm,19.9s
HHC LR LR
comp=Z,2μm,20.7s
SKR Severo-Kuril's 54.54 8 *e*P **P 08 52 54.8 -2.5**
SKR *e*S **S 09 00 36.1 +1.0**
SKR MLR MLR
comp=Z,300nm,18.0s
SKR MLR MLR
comp=Z,400nm,15.0s
BTO Baotou 55.05 327 *e*P **P 08 53 01.1 -0.3**
RAR Rarotonga 55.11 113 LR LR 09 15 38.7
comp=Z,267nm,18.1s,baz=286,slow=35
LZH Lanzhou 55.94 319 ⇑P **P 08 53 08.3 +0.4**
LZH pP pP 08 53 15.5 +0.1
LZH sP sP 08 53 18.8 +0.6
LZH PP **PP 08 55 15.1 +2.2**
LZH S **S 09 00 55.1 +0.3**
LZH sS pS 09 01 05.0 +1.3
LZH SS **SS 09 04 43.9 +2.8**
LZH pmax pmax
comp=Z,39nm,1.5s
LZH pmax pmax
comp=Z,350nm,6.0s
LZH LR LR
comp=Z,1μm,17.2s
LZH LR LR
comp=Z,2μm,17.2s
LZH LR LR
comp=Z,2μm,18.6s
PEA0B Petropavlovsk- 57.12 8 *e*P **P 08 53 15.8 -0.1**
comp=Z,37nm,1.1s
PETK Petropavlovsk- 57.12 8 P **P 08 53 16.3 +0.4**
comp=Z,20nm,0.9s,baz=174,slow=5.4,SNR=28
PETK LR LR 09 13 30.6
comp=Z,303nm,21.6s,baz=185,slow=32
PETK Petropavlovsk- 57.12 8 *e*P **P 08 53 16.2 +0.3**
PET Petropavlovsk 57.18 9 *e*P **P 08 53 19.3 +3.1**
PET *e*S **S 09 01 11.0 +0.8**
PET *e*SS **SS 09 05 01.9 +2.3**
PET MLR MLR
comp=Z,600nm,20.0s
PET MLR MLR
comp=Z,500nm,15.0s
HIA Hailar 57.38 340 ⇑*i*P **P 08 53 17.2 -0.5**
HIA *i* 08 54 11.9
HIA pmax pmax
comp=Z,20nm,1.0s
ZEA Zeya 59.19 347 *e*P **P 08 53 31.0 +0.7**
ZEA *e*S **S 09 01 39.0 +2.5**
ZEA pmax pmax
comp=N,30nm,1.0s
ZEA pmax pmax
comp=Z,32nm,1.2s
ZEA smax smax
comp=N,200nm,6.0s
ZEA MLR MLR
comp=Z,600nm,16.0s
BRDH Bariadhala 59.45 299 LR LR 09 18 16.1
comp=Z,171nm,21.9s,baz=153,slow=35
SHL Shillong 60.20 302 *e*P **P 08 53 35.0 -3.0**
SHL Shillong 60.20 302 *e*P **P 08 53 35.8 -2.2**
comp=Z,34nm,1.1s
SHL Shillong 60.20 302 *e*P **P 08 53 35.8 -2.2**
SHL pmax pmax
comp=Z,34nm,1.1s
GTA Gaotai 60.45 320 *e*P **P 08 53 39.5 +0.1**
GTA pP pP 08 53 43.8 -3.1
GTA sP sP 08 53 47.3 -2.4
GTA S **S 09 01 52.3 -1.2**
GTA sS pS 09 02 00.1 -2.5
GTA SS **SS 09 05 53.3 +1.4**
GTA pmax pmax
comp=Z,16nm,0.9s
GTA pmax pmax
comp=Z,140nm,5.3s
GTA LR LR
comp=Z,490nm,17.5s
GTA LR LR
comp=Z,430nm,18.9s
GTA LR LR
comp=Z,940nm,23.0s
ULN Ulaanbaatar 61.62 331 *e*P **P 08 53 46.6 -0.6**
comp=Z,28nm,1.3s
ULN Ulaanbaatar 61.62 331 P **P 08 53 49.5 +2.2**
SNR=13
ULN Ulaanbaatar 61.62 331 ⇓*i*P **P 08 53 47.7 +0.5**
ULN pmax pmax
comp=Z,15nm,1.2s
SONM Songino Array 61.92 331 P **P 08 53 48.9 -0.3**
comp=Z,5.2nm,0.9s,baz=150,slow=5.8,SNR=22
SONM LR LR 09 19 55.5
comp=Z,2μm,20.0s,baz=116,slow=35
SONM Songino Array 61.92 331 *e*P **P 08 53 50.8 +1.6**
SONM pmax pmax
comp=Z,5.0nm,0.9s
SONA1 Songino Array 61.92 331 *e*P **P 08 53 49.0 -0.3**
MA2 Magadan 62.91 2 P **P 08 53 54.9 -0.5**
comp=Z,18nm,1.0s,baz=124,slow=6.9,SNR=4.6
MA2 Magadan 62.91 2 ⇓*i*P **P 08 53 54.6 -0.8**
MA2 *i* XP **pP 08 54 03.2 +0.3**
PPT Papeete 64.16 108 LR LR 09 18 38.3
comp=Z,187nm,18.5s,baz=299,slow=33
PPT2 Papeete2 64.16 108 *e*S **S 09 02 38.5 -2.4**
comp=Z,955nm,29.8s
PPT2 *e*LQ LQ 09 10 34.0
comp=Z,1μm,26.5s
PPT2 *e*LR LR 09 13 17.6
comp=Z,962nm,36.0s
ODAN Odare 64.43 302 *e*P **P 08 54 07.7 +1.2**
comp=Z,157nm,1.3s
TBI Tubuai 64.88 114 *e*S **S 09 02 46.3 -3.2**
comp=Z,898nm,29.2s
TBI *e*LQ LQ 09 10 48.2
comp=Z,2μm,33.8s
TBI *e*LR LR 09 13 38.0
comp=Z,2μm,35.2s
RAMN Ramite 65.13 302 *e*P **P 08 54 11.5 +0.5**
comp=Z,172nm,1.7s
ZAK Zakamensk 65.15 331 *e*P **P 08 54 08.5 -2.0**
ZAK pmax pmax
comp=Z,18nm,1.3s
JIRN Jiri 65.70 302 *e*P **P 08 54 15.6 +0.8**
comp=Z,58nm,0.9s
TLY Talaya 65.84 332 P **P 08 54 14.7 -0.1**
comp=Z,2.1nm,0.7s,baz=158,slow=6.3,SNR=8.3
TLY LR LR 09 23 03.2
comp=Z,878nm,20.1s,baz=129,slow=36
TLY Talaya 65.84 332 *e*P **P 08 54 15.0 +0.2**
comp=Z,24nm,1.4s
TLY Talaya 65.84 332 P **P 08 54 15.3 +0.5**
SNR=12
TLY Talaya 65.84 332 *c i*P **P 08 54 15.8 +1.0**
TLY *e*S **S 09 03 01.1 +0.8**
TLY *e*SS **SS 09 07 13.2 -2.2**
TLY pmax pmax
comp=Z,20nm,1.4s
TLY MLR MLR
comp=Z,858nm,20.0s
GUN Gumba 66.04 302 *e*P **P 08 54 17.0 0.0**
comp=Z,194nm,1.3s
SEY Seymchan 66.34 3 P **P 08 54 17.9 +0.2**
comp=Z,12nm,1.1s,baz=181,slow=5.7,SNR=23
SEY Seymchan 66.34 3 *ce*P **P 08 54 18.2 +0.5**
PALK Pallekele 66.48 279 P **P 08 54 21.7 +2.0**
comp=Z,15nm,1.0s,baz=110,slow=0.7,SNR=3.7
PALK LR LR 09 26 36.8
comp=Z,157nm,18.4s,baz=101,slow=39
KKN Kakani 66.50 302 *e*P **P 08 54 19.7 -0.1**
comp=Z,117nm,1.2s
YAK Yakutsk 66.54 351 *e*P **P 08 54 17.8 -1.2**
YAK *e**PP **pP 08 54 28.1 +1.5**
YAK *e* 08 54 44.7
YAK *e* 08 56 46.0
YAK *e*PPP PPP 08 58 20.6
YAK *e*S **S 09 03 08.1 -0.2**
YAK *e* 09 04 09.8
YAK *e*SS **SS 09 07 18.8 -7.0**
YAK pmax pmax
comp=Z,11nm,0.8s
YAK pmax pmax
comp=N,10.0nm,1.4s
YAK pmax pmax
comp=E,3.0nm,1.1s
YAK pmax pmax
comp=Z,12nm,0.5s
YAK pmax pmax
comp=N,4.0nm,0.6s
YAK pmax pmax
comp=E,4.0nm,0.6s
YAK smax smax
comp=N,1.0nm,0.3s
YAK smax smax
comp=E,7.0nm,1.0s
YAK MLR MLR
comp=N,573nm,18.0s
YAK MLR MLR
comp=E,74nm,6.0s
DMN Daman 66.60 302 *e*P **P 08 54 20.1 -0.4**
comp=E,143nm,1.1s

MOY	Mondy	67.08	331	eP	P	08 54 22.9	0.0
MOY				pmax	pmax		
comp=Z,53nm,1.8s							
GKN	Gorkha	67.11	302	eP	P	08 54 23.1	-0.5
comp=Z,135nm,1.1s							
KOLN	Koldanda	67.92	302	eP	P	08 54 28.0	-0.8
comp=Z,82nm,1.2s							
DANN	Dangsing	67.95	302	eP	P	08 54 28.2	-0.9
comp=Z,57nm,0.9s							
PYUN	Piuthan	68.53	302	eP	P	08 54 31.5	-1.2
comp=Z,72nm,1.0s							
HYB	Hyderabad	70.08	290	i P	P	08 54 44.0	+1.8
WMQ	Urumqi	70.51	319	P	P	08 54 44.8	+0.4
WMQ				pP	pP	08 54 51.5	-0.5
WMQ				PcP	PcP	08 55 07.8	+2.2
WMQ				S	S	09 04 00.8	+4.3
WMQ				SS	SS	09 08 25.3	-2.9
WMQ				pmax	pmax		
comp=Z,94nm,1.1s							
WMQ				pmax	pmax		
comp=Z,65nm,3.8s							
WMQ				LR	LR		
comp=Z,880nm,26.1s							
WMQ				LR	LR		
comp=Z,970nm,39.2s							
WMQ				LR	LR		
comp=Z,900nm,37.9s							
BILL	Bilibino	72.65	8	eP	P	08 54 57.4	+0.8
comp=Z,21nm,1.2s							
BILL	Bilibino	72.65	8	i P	P	08 54 56.9	+0.2
BILL				e		08 55 11.4	
BILL				e		08 57 39.9	
BILL				pmax	pmax		
comp=Z,20nm,1.2s							
BILL				MLR	MLR		
comp=Z,286nm,18.0s							
MIR	Mirnyy	73.00	200	eP	P	08 55 08.5	+10
MIR				pmax	pmax		
comp=Z,42nm,1.0s							
TAOE	Nuku Hiva Isla	73.07	98	eS	S	09 04 25.0	-2.1
comp=Z,120nm,26.9s							
TAOE	Nuku Hiva Isla	73.07	98	eLR	LR	09 17 30.2	
comp=Z,695nm,24.6s							
VNDA	Vanda	74.49	177	P	P	08 55 07.9	+0.5
comp=Z,2.1nm,0.7s,baz=333,slow=7.6,SNR=8.4							
VNDA				LR	LR	09 26 20.2	
comp=Z,599nm,18.2s,baz=348,slow=34							
VNDA	Vanda	74.49	177	eP	P	08 55 07.7	+0.3
comp=Z,4.4nm,0.9s							
VNDA	Vanda	74.49	177	eP	P	08 55 07.7	+0.3
VNDA				pmax	pmax		
comp=Z,4.0nm,0.9s							
MK01	Makanchi Array	75.18	320	eP	P	08 55 10.6	-1.4
MK31	Makanchi Array	75.19	320	eP	P	08 55 11.3	-0.7
MK31	Makanchi Array	75.19	320	i P	P	08 55 11.4	-0.7
MK31				pmax	pmax		
comp=Z,49nm,1.1s							
MKAR	Makanchi Array	75.19	320	P	P	08 55 10.7	-1.3
comp=Z,25nm,0.9s,baz=113,slow=5.5,SNR=58							
MKAR				LR	LR	09 26 26.3	
comp=Z,584nm,21.9s,baz=84,slow=34							
MKAR	Makanchi Array	75.19	320	eP	P	08 55 11.3	-0.7
comp=Z,186nm,1.0s							
MKAR	Makanchi Array	75.19	320	eP	P	08 55 11.6	-0.4
MKAR				pmax	pmax		
comp=Z,39nm,1.1s							
MAKZ	Makanchi	75.40	320	eP	P	08 55 12.6	-0.6
comp=Z,46nm,0.9s							
MAKZ	Makanchi	75.40	320	eP	P	08 55 12.6	-0.6
MAKZ				pmax	pmax		
comp=Z,47nm,0.9s							
TIXI	Tiksi	75.82	354	P	P	08 55 13.8	-1.3
comp=Z,0.8nm,0.4s,baz=25,slow=4.7,SNR=3.6							
TIXI	Tiksi	75.82	354	eP	P	08 55 14.2	-0.9
comp=Z,8.2nm,1.3s							
TIXI	Tiksi	75.82	354	eP	P	08 55 14.4	-0.6
TIXI				*SP	pP	08 55 24.1	+1.4
TIXI				pmax	pmax		
comp=Z,5.0nm,1.2s							
ANM	Nome	76.47	19	eP	P	08 55 20.3	+1.4
comp=Z,24nm,1.4s							
ANM	Nome	76.47	19	eP	P	08 55 20.3	+1.4
ANM				pmax	pmax		
comp=Z,24nm,1.4s							
TARG	Taragay, Kyrgy	76.56	314	eP	P	08 55 18.4	-2.0
comp=Z,30nm,1.5s							
ZAA0	Zalesovo Array	76.57	328	eP	P	08 55 18.2	-1.5
comp=Z,9.3nm,0.8s							
ZALV	Zalesovo Beam	76.57	328	P	P	08 55 18.5	-1.2
comp=Z,7.2nm,0.8s,baz=108,slow=4.8,SNR=14							
ZALV				LR	LR	09 27 42.5	
comp=Z,1μm,21.6s,baz=72,slow=35							
ZALV	Zalesovo Beam	76.57	328	eP	P	08 55 16.9	-2.8
ZALV	Zalesovo Beam	76.57	328	eP	P	08 55 16.9	-2.8
KSH	Kashi	77.28	312	P	P	08 55 27.3	+3.1
KSH				pP	pP	08 55 31.8	-0.1
KSH				PP	PP	08 58 22.3	+3.7
KSH				S	S	09 05 14.3	+1.2
KSH				sS	pS	09 05 23.1	+0.4
KSH				SS	SS	09 10 16.8	+5.2
KSH				LR	LR		
comp=Z,680nm,12.1s							
KSH				LR	LR		
comp=Z,670nm,13.7s							
KSH				LR	LR		
comp=Z,1μm,19.3s							
NRN	Naryn	77.77	314	eP	P	08 55 26.9	-0.3
comp=Z,12nm,1.0s							
NRN	Naryn	77.77	314	eP	P	08 55 26.9	-0.3
NRN				pmax	pmax		
comp=Z,12nm,1.0s							
NVS	Novosibirsk	77.79	328	eP	P	08 55 25.9	-0.6
NVS				pmax	pmax		
comp=Z,28nm,1.3s							
NVS				pmax	pmax		
comp=N,13nm,1.4s							
NVS				pmax	pmax		
comp=E,13nm,1.1s							
KDAK	Kodiak Island	77.91	29	LR	LR	09 28 19.1	
comp=E,169nm,18.4s,baz=260,slow=34							
NIL	Nilore	78.01	305	eP	P	08 55 26.8	-1.5
comp=E,46nm,0.8s							
NIL	Nilore	78.01	305	eP	P	08 55 26.8	-1.5
NIL				pmax	pmax		
comp=Z,47nm,0.8s							
RKT	Rikitea	78.14	113	eLR	LR	09 19 48.5	
comp=Z,2μm,33.2s							
SVW2	Sparrevohn	78.15	25	eP	P	08 55 28.1	-0.3
comp=Z,17nm,1.0s							
TKM2	Tokmak 2	78.47	315	P	P	08 55 30.4	-0.4
SNR=9.7							
TKM2	Tokmak 2	78.47	315	P	P	08 55 30.4	-0.4
TKM2				pmax	pmax		
comp=Z,25nm,1.7s							
KZA	Kyzart	78.49	314	P	P	08 55 34.5	+3.3
SNR=22							
KURK	Kurchatov	78.85	323	eP	P	08 55 31.5	-0.9
comp=Z,53nm,1.2s							
KURK	Kurchatov	78.85	323	P	P	08 55 31.9	-0.6
SNR=23							
KURK	Kurchatov	78.85	323	ceP	P	08 55 32.1	-0.4
KURK				pmax	pmax		
comp=Z,56nm,1.2s							
KURBB	Kurchatov Arra	78.87	323	P	P	08 55 31.5	-1.1
comp=Z,16nm,1.1s,baz=107,slow=5.0,SNR=30							
UCH	Uchtor	79.05	314	P	P	08 55 37.4	+3.0
SNR=16							
CHMS	Chumysh	79.08	315	P	P	08 55 35.8	+1.7
SNR=6.9							
FRU	Bishkek	79.14	315	eP	P	08 55 35.0	+0.7
FRU				e		08 55 44.0	
AAK	Ala-Archa	79.17	314	eP	P	08 55 34.1	-0.6
comp=Z,20nm,1.4s							
AAK	Ala-Archa	79.17	314	P	P	08 55 37.0	+2.4
SNR=9.2							
AAK	Ala-Archa	79.17	314	eP	P	08 55 33.5	-1.2
AAK				pmax	pmax		
comp=Z,9.0nm,1.1s							
HOM	Homer	79.19	27	eP	P	08 55 34.5	+0.4
comp=Z,76nm,1.0s							
SFK	Sufi-Kurgan	79.25	312	P	P	08 55 35.0	-0.2
SFK				pmax	pmax		
comp=Z,23nm,1.0s							
CNPM	China Poot	79.32	27	eP	P	08 55 35.4	+0.5
comp=Z,50nm,1.0s							
USP	Ospenovka	79.33	315	P	P	08 55 35.0	-0.3
SNR=7.3							
RDOG	Red Dog Mine	79.46	17	eP	P	08 55 36.1	+0.6
comp=Z,27nm,1.2s							
AML	Almayashu	79.62	314	P	P	08 55 41.0	+3.6
SNR=5.8							
EKS2	Erkin-Say	79.69	314	P	P	08 55 40.3	+2.8
SNR=9.2							
RC01	Rabbit Creek A	80.66	26	eP	P	08 55 41.7	-0.4
comp=Z,22nm,1.1s							
PMR	Palmer	81.14	26	eP	P	08 55 43.6	-1.0
comp=Z,19nm,1.2s							
PMR	Palmer	81.14	26	eP	P	08 55 43.6	-1.0
PMR				pmax	pmax		
comp=Z,19nm,1.2s							
GHO	Glory Hole Cre	81.30	26	eP	P	08 55 44.4	-1.2
comp=Z,13nm,0.9s							
TRF	Thorofare Moun	81.44	24	eP	P	08 55 46.2	-0.2
comp=Z,43nm,1.8s							
BPAW	Bear Paw Mtn.	81.45	23	eP	P	08 55 44.6	-1.6
comp=Z,16nm,1.4s							
SML	Sawmill	81.57	26	eP	P	08 55 46.1	-0.8
comp=Z,22nm,0.8s							
SML	Sawmill	81.57	26	eP	P	08 55 46.2	-0.8
SML				pmax	pmax		
comp=Z,22nm,0.8s							
MLY	Manley	81.96	22	eP	P	08 55 48.0	-1.0
comp=Z,15nm,1.0s							
RND	Reindeer	82.01	24	eP	P	08 55 48.3	-1.0
comp=Z,16nm,0.8s							
RND	Reindeer	82.01	24	eP	P	08 55 48.3	-1.0
RND				pmax	pmax		
comp=Z,16nm,0.8s							
SCM	Sheep Creek Mo	82.02	26	eP	P	08 55 50.5	+1.1
comp=Z,42nm,1.3s							
SCM	Sheep Creek Mo	82.02	26	eP	P	08 55 50.5	+1.1
SCM				pmax	pmax		
comp=Z,42nm,1.3s							
OTUK	Ortayu	82.05	320	P	P	08 55 49.1	-0.7
OTUK				pmax	pmax		
comp=Z,27nm,1.1s							
MCK	McKinley	82.11	24	eP	P	08 55 49.7	0.0
comp=Z,25nm,1.1s							
MCK	McKinley	82.11	24	eP	P	08 55 49.7	0.0
MCK				pmax	pmax		
comp=Z,25nm,1.1s							
KK31	Karatay Array	82.13	314	eP	P	08 55 49.3	-1.1
KK31	Karatay Array	82.13	314	i P	P	08 55 49.4	-0.9
KK31				pmax	pmax		
comp=Z,14nm,1.2s							
KKAR	Karatay Array	82.13	314	eP	P	08 55 49.5	-0.8
KKAR	Karatay Array	82.13	314	eP	P	08 55 49.5	-0.8
DIV	Divide	82.45	27	eP	P	08 55 52.0	+0.3
comp=Z,20nm,1.1s							
DHY	Denali Highway	82.49	25	eP	P	08 55 51.1	-0.8
comp=Z,14nm,1.0s							
KLU	Klutina	82.52	27	eP	P	08 55 52.1	+0.1
comp=Z,18nm,1.2s							
NRIK	Noril'sk	82.68	342	P	P	08 55 51.7	-0.9
comp=Z,6.2nm,0.8s,baz=108,slow=6.3,SNR=6.2							
NRIK				LR	LR	09 30 56.3	
comp=Z,403nm,21.9s,baz=120,slow=34							
WRH	Wood River Hil	82.75	23	eP	P	08 55 52.8	-0.2
comp=Z,37nm,1.5s							
MDM	Murphy Dome	82.89	23	eP	P	08 55 53.2	-0.6
comp=Z,33nm,1.8s							
BMRM	Bremner River	82.92	27	eP	P	08 55 53.8	-0.3
comp=Z,26nm,1.1s							
CCB	Clear Creek Bu	82.93	23	eP	P	08 55 52.5	-1.4
comp=Z,14nm,1.0s							
ILAR	Eielson Array	83.34	23	P	P	08 55 53.9	-2.2
comp=Z,8.4nm,0.7s,baz=250,slow=5.5,SNR=83							
ILAR				LR	LR	09 29 40.2	
comp=Z,339nm,20.8s,baz=266,slow=33							
ILB	Eielson Array	83.34	23	eP	P	08 55 54.4	-1.7
IL1	Eielson Array	83.34	23	eP	P	08 55 54.2	-2.0
RIDG	Independ'e Rid	83.79	25	eP	P	08 55 58.2	-0.3
comp=Z,45nm,1.8s							
TOLK	Toolik Lake Re	83.96	19	P	P	08 56 00.7	+1.5
baz=245							
TOLK	Toolik Lake Re	83.96	19	eP	P	08 55 59.0	-0.2
comp=Z,12nm,1.1s							
DOT	Dot Lake	84.09	25	eP	P	08 56 00.5	+0.5
comp=Z,39nm,1.1s							
SCRK	Sand Creek	84.23	25	eP	P	08 56 00.4	-0.4
comp=Z,24nm,1.7s							
BVA0	Borovoye Array	84.39	324	P	P	08 56 00.0	-1.7
BVA0				pmax	pmax		
comp=Z,37nm,1.2s							
BVAR	Borovoye Array	84.39	324	P	P	08 56 00.5	-1.2
comp=Z,18nm,0.9s,baz=106,slow=5.1,SNR=38							
BVAR				LR	LR	09 33 25.7	
comp=Z,363nm,20.7s,baz=84,slow=36							
MAW	Mawson	84.40	202	P	P	08 56 02.1	+0.6
comp=Z,7.3nm,1.1s,baz=55,slow=8.4,SNR=7.0							
MAW				LR	LR	09 32 37.4	
comp=Z,176nm,20.3s,baz=70,slow=35							
MAW	Mawson	84.40	202	eP	P	08 56 01.6	+0.1
comp=Z,5.1nm,1.4s							
MAW	Mawson	84.40	202	eP	P	08 56 01.6	+0.1
MAW				pmax	pmax		
comp=Z,5.0nm,1.4s							
BRVK	Borovoye	84.46	324	eP	P	08 56 01.3	-0.8
comp=Z,62nm,1.5s							
BRVK	Borovoye	84.46	324	P	P	08 56 02.7	+0.6
SNR=13							
BRVK	Borovoye	84.46	324	i P	P	08 56 01.7	-0.4
BRVK				pmax	pmax		
comp=Z,30nm,1.2s							
EGAK	Eagle	85.65	24	eP	P	08 56 06.7	-1.1
comp=Z,12nm,1.0s							
DAWY	Dawson	86.18	25	eP	P	08 56 10.3	-0.2
comp=Z,44nm,1.5s							
QSPA	South Pole Qui	86.52	180	LR	LR	09 33 14.9	
comp=Z,590nm,20.4s,baz=7.0,slow=34							
QSPA	South Pole Qui	86.52	180	eP	P	08 56 12.1	-0.2
comp=Z,7.7nm,1.0s							
SKAG	Skagway	86.95	30	eP	P	08 56 14.5	+0.2
comp=Z,19nm,1.3s							
WRAK	Wrangell Islan	87.96	33	eP	P	08 56 18.6	-0.6
comp=Z,13nm,0.6s							
INK	Inuvik	89.47	21	eP	P	08 56 25.0	-1.1
comp=Z,9.7nm,1.1s							
INK	Inuvik	89.47	21	eP	P	08 56 25.0	-1.1
INK				pmax	pmax		
comp=Z,10.0nm,1.1s							
DLBC	Dease Lake	89.49	32	eP	P	08 56 27.6	+1.1
comp=Z,16nm,1.4s							
AB31	Akbulak array	90.30	319	i P	P	08 56 27.5	-2.9
AB31				pmax	pmax		
comp=Z,6.0nm,0.8s							
ABKAR	Akbulak array	90.30	319	eP	P	08 56 27.7	-2.6
GEYT	Alibeck	90.78	308	P	P	08 56 32.1	-0.8
comp=Z,96nm,0.7s,baz=20,slow=4.6,SNR=5.6							
GEYT				LR	LR	09 39 10.8	
comp=Z,666nm,21.0s,baz=75,slow=37							
AKTO	Aktyubinsk	91.63	320	P	P	08 56 34.1	-2.4
comp=Z,3.2nm,0.9s,baz=94,slow=7.9,SNR=7.9							
AKTO				LR	LR	09 37 00.2	
comp=Z,788nm,21.5s,baz=77,slow=35							
UOSS	Minazif	91.67	295	eP	P	08 56 36.4	-1.0
comp=Z,14nm,1.1s							
ARU	Arti	91.67	326	P	P	08 56 34.7	-1.9
comp=Z,4.6nm,0.4s,baz=109,slow=3.2,SNR=4.9							
ARU				LR	LR	09 37 25.7	
comp=Z,504nm,21.4s,baz=110,slow=35							
ARU	Arti	91.67	326	d i P	P	08 56 35.4	-1.2
ARU						09 00 10.8	
ARU				S	SKSac	09 07 06.2	-1.6
ARU				SS	SS	09 13 35.7	-7.0
ARU				pmax	pmax		
comp=Z,8.0nm,1.2s							
ARU				MLR	MLR		
comp=Z,812nm,23.0s							
SYO	Syowa Base	92.81	200	eP	P	08 56 39.8	-1.8
YBH	Yreka Blue Hor	92.87	49	LR	LR	09 31 01.0	
comp=Z,764nm,20.6s,baz=304,slow=31							
J08A	Circle Bar Ran	96.02	47	eP	P	08 56 56.7	-0.4
comp=Z,8.1nm,1.4s							
NVAR	Mina Array Bea	96.21	52	P	P	08 56 58.6	+0.4
comp=Z,0.7nm,0.8s,baz=243,slow=9.0,SNR=3.6							
NVAR				LR	LR	09 31 48.9	
comp=Z,579nm,21.8s,baz=93,slow=30							
MWC	Mount Wilson	96.44	56	eP	P	08 56 59.8	+0.5
MWC	Mount Wilson	96.44	56	eP	P	08 56 59.8	+0.5
BMO	Blue Mountains	96.82	45	eP	P	08 57 00.0	-0.6
comp=Z,3.9nm,0.9s							
BMO	Blue Mountains	96.82	45	eP	P	08 57 00.0	-0.6
BMO				pmax	pmax		
comp=Z,4.0nm,0.9s							
F10A	Beach Ranch, E	96.84	44	eP	P	08 56 59.4	-1.3
comp=Z,5.5nm,0.9s							
YKW3	Yellowknife Ar	97.14	27	eP	P	08 57 00.3	-1.2
comp=Z,4.0nm,1.0s							
YKA	Yellowknife Ar	97.16	28	P	P	08 57 00.7	-0.9
comp=Z,2.5nm,0.8s,baz=277,slow=4.7,SNR=29							
YKA				PP	PP	09 00 55.7	-2.0
comp=Z,0.7nm,1.0s,baz=275,slow=7.1,SNR=4.1							
YKA				PKKPbc	PKKPbc	09 13 40.0	-3.8
comp=Z,0.6nm,0.9s,baz=85,slow=2.2,SNR=5.1							
YKA				LR	LR	09 35 51.7	
comp=Z,33nm,22.0s,baz=289,slow=32							
YKA	Yellowknife Ar	97.16	28	eP	Pdif	08 57 02.1	+0.4
YKA				pmax	pmax		
comp=Z,3.0nm,0.8s							
YKB5	Yellowknife Ar	97.16	28	eP	P	08 57 01.4	-0.2
OPO	Ambohidratompo	97.69	251	LR	LR	09 37 16.3	
comp=Z,162nm,20.7s,baz=80,slow=33							
MAK	Makhachkala	98.89	313	eP	P	08 57 07.7	-2.1
MAK				eS	SKSac	09 07 44.3	-2.5
BOZ	Bozeman (W)	100.77	44	P	Pdif	08 57 19.9	+1.6
baz=276							
KLMR	Klimovskoe	101.20	331	eP	Pdif	08 57 16.4	-3.3
KLMR				pmax	pmax		
comp=Z,21nm,1.4s							
KLMR				MLR	MLR		
comp=Z,966nm,17.0s							
KLMR	Klimovskoe	101.20	331	eP	Pdif	08 57 16.4	-3.3
KLMR				AMP		08 57 20.7	
comp=Z,21nm,1.4s							
KLMR				LQ	LQ	09 31 45.0	
KLMR				LR	LR	09 37 36.8	
KLMR				AMP		09 44 34.7	
comp=Z,966nm,16.8s							
KIV	Kislovodsk	102.29	314	eP	Pdif	08 57 22.1	-3.0
KIV				pmax	pmax		
comp=Z,6.0nm,1.0s							
KIV				MLR	MLR		
comp=Z,264nm,20.0s							
TXAR	Lajitas Array	108.97	60	PKKP		09 13 22.8	
comp=Z,0.7nm,0.7s,baz=89,slow=5.4,SNR=4.6							
V39A	Pettigrew	116.03	52	P	PKPdf	09 02 12.9	-0.1
baz=286							
Q40A	Laux Farm, Aux	116.31	48	P	PKPdf	09 02 13.3	0.0
baz=288							
OKC	Ostrava-Krasne	116.49	325	AMS	AMS	09 51 00.0	
comp=Z,500nm,19.5s							
U40A	Yellville	116.50	51	P	PKPdf	09 02 13.6	-0.2
baz=287							
Q41A	Truxton	116.94	48	P	PKPdf	09 02 14.7	+0.2
baz=289							
DPC	Dobruska-Polom	117.25	327	AMS	AMS	09 51 30.0	
comp=Z,700nm,23.4s							
UPC	Upice	117.34	327	AMS	AMS	09 51 30.0	
comp=Z,700nm,18.0s							
BEO	Beograd	117.35	320	ePKPdf	PKPdf	09 02 13.7	-1.4
BEO	Beograd	117.35	320	ePKIKP	PKPdf	09 02 13.7	-1.4
341A	Kurthwood	117.55	56	ePKPdf	PKPdf	09 02 15.9	0.0
GOPC	GO Pecny, Ondr	118.32	327	AMS	AMS	09 52 20.0	
comp=Z,700nm,22.2s							
543A	St. Martinvill	118.95	57	ePKPdf	PKPdf	09 02 19.4	+0.8
NKC	Novy Kostel	119.41	328	AMS	AMS	09 57 00.0	
comp=Z,900nm,17.6s							
KHC	Kasperske Hory	119.41	326	AMS	AMS	09 54 00.0	
comp=Z,800nm,18.7s							
GEA0	GERESS Array S	119.50	326	ePKPdf	PKPdf	09 02 18.4	-0.9
GRFO	Grafenberg	120.37	328	ePKPdf	PKPdf	09 02 20.6	-0.2
GRFO	Grafenberg	120.37	328	ePKIKP	PKPdf	09 02 20.6	-0.2
S48A	Wiedeman Farm,	121.21	47	P	PKPdf	09 02 25.5	+2.7
baz=292							
W49A	Belvidere	121.98	50	P	PKPdf	09 02 25.1	+0.7
baz=291							
X49A	Woodville	122.14	51	P	PKPdf	09 02 26.7	+2.0
baz=290							
S51A	Beattyville	123.02	47	P	PKPdf	09 02 28.0	+1.7
baz=294							
LPAZ	La Paz	140.59	121	PKP	PKPdf	09 02 59.7	-1.0
comp=Z,1.3nm,0.7s,baz=245,slow=2.6,SNR=7.0							
TOA0	Torodi Ar. Sit	143.88	288	ePKPdf	PKPbc	09 03 03.6	0.0
TORD	Torodi Ar. Bea	143.88	288	PKhKP	PKPpre	09 03 02.3	
comp=Z,9.3nm,0.9s,baz=72,slow=3.0,SNR=28							
HUMP	Col San Antoni	145.14	63	ePKPbc	PKPab	09 03 07.6	+0.1
MTP	Monte Pirata	145.42	63	ePKPdf	PKPab	09 03 09.4	+0.8
STVI	Saint Thomas	145.86	62	ePKPdf	PKPab	09 03 09.9	-0.2
SAML	Samuel	147.99	113	ePKPdf	PKPdf	09 03 14.0	+1.2
KOWA	Kowa	148.89	293	ePKPbc	PKPbc	09 03 19.1	+0.9
KIC	Kosan Boka	151.17	277	ePKP1	PKPbc	09 03 23.6	-0.2
comp=Z,124nm,1.3s							
DBIC	Dimbokro	151.26	278	PKPbc	PKPbc	09 03 23.9	-0.2
comp=Z,16nm,0.9s,baz=66,slow=3.6,SNR=7.1							
DBIC	Dimbokro	151.26	278	ePKPbc	PKPbc	09 03 25.9	+2.0
DBIC	Dimbokro	151.26	278	ePKIKP	PKPbc	09 03 26.0	+2.0
TIC	Toumodi	151.42	278	ePKP1	PKPbc	09 03 24.2	-0.2
LIC	Lamto	151.47	277	ePKP1	PKPbc	09 03 24.2	-0.3
comp=Z,106nm,1.3s							
PTGA	Pitinga	153.26	98	ePKPbc	PKPbc	09 03 29.8	+1.2

IDC 15 08:53:24.8±2.2,1°48N×127°22E,h0km,mb3.3/3, mb1 3.5/3,mb1mx3.3/58,mbtmp3.3/3,Error ellipse: s-maj=189.7km s-min=24.7km az=66.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.41	162	P	P	08 58 24.2	-0.9
0.3nm,0.6s,baz=341,slow=11,SNR=9.3							
ASAR	Alice Springs	25.83	166	P	P	08 58 58.8	+0.8
0.4nm,0.7s,baz=345,slow=12,SNR=4.5							
MKAR	Makanchi Array	59.67	326	P	P	09 03 30.9	-0.1
0.4nm,0.4s,baz=117,slow=7.4,SNR=8.4							

*THE **15** 08:55:14.8,36°97N×28°24E,h2km±2km,ML3.2/3,Error ellipse: s-maj=2.1km s-min=0.8km az=42.0*
*CSEM **15** 08:55:15.8±0.1,36°94N×28°22E,h5km,ML3.5*
*ISCJB **15** 08:55:15.5±0.3,36°95N±0°02×28°22E±0°02,h8km±3km, Error ellipse: s-maj=3.3km s-min=2.6km az=0.4*
*ATH **15** 08:55:15.6,36°97N×28°21E,h27km±1km,ML3.0/6, Error ellipse: s-maj=2.2km s-min=1.1km az=215.0*
*ISK **15** 08:55:15.5,36°94N×28°23E,h6km,ML3.5/8*
*DDA **15** 08:55:15.5,36°95N×28°24E,h7km,Ml3.5*

ISC 15 08:55:14.9±1.1,36°95N±0°02×28°22E±0°01,h2km±10km, n112,σ1°02/154,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSB	Marmaris-Mugla	0.24	185	PG	Pg	08 55 20.4	+0.9
MRSB				SG	Sg	08 55 24.1	+1.6
MRSB	Marmaris-Mugla	0.24	185	i Pg	Pg	08 55 20.4	+0.9
MRSB				eSg	Sg	08 55 24.1	+1.6
TURN	Turunc	0.31	104	PG	Pg	08 55 19.7	-1.3
TURN				SG	Sg	08 55 22.7	-2.3
TURN	Turunc	0.31	104	i P	Pg	08 55 19.7	-1.3
TURN				i S	Sg	08 55 22.5	-2.5
TURN	Turunc	0.31	104	P	Pg	08 55 19.7	-1.3
TURN				S	Sg	08 55 22.5	-2.5
DALY	Dalyan (Mu¨la	0.37	111

ARG			S	Sn	08 55 42.6	-1.6
ARG			AML	AML	08 55 46.7	
	comp=N,2783μm,0.3s					
ARG	**Arkhangelos**	**0.74 186**	P	**Pg**	**08 55 29.7**	**+0.6**
ARG			S	**Sb**	**08 55 41.6**	**+0.5**
ARG	**Arkhangelos**	**0.74 186**	P	**Pg**	**08 55 29.7**	**+0.6**
ARG			S	**Sb**	**08 55 41.6**	**+0.5**
BODT	**Bodrum**	**0.74 279**	PG	**Pb**	**08 55 30.0**	**-0.6**
BODT	**Bodrum**	**0.74 279**	P	**Pg**	**08 55 28.9**	**-0.2**
BODT			S	**Sb**	**08 55 40.7**	**-0.5**
BODT	**Bodrum**	**0.74 279**	P	**Pg**	**08 55 28.9**	**-0.2**
BODT	**Bodrum**	**0.74 279**	*e*Pg	**Pb**	**08 55 30.0**	**-0.6**
BODT			S	**Sb**	**08 55 40.7**	**-0.5**
TAVA	**DENIZLI_Tavas**	**0.75 47**	*i* P	**Pg**	**08 55 30.0**	**+0.6**
TAVA			*i* S	**Sb**	**08 55 40.9**	**-0.8**
TAVA	**DENIZLI_Tavas**	**0.75 47**	P	**Pg**	**08 55 30.0**	**+0.6**
TAVA			S	**Sb**	**08 55 40.9**	**-0.8**
FETY	**Fethiye**	**0.76 114**	PG	**Pg**	**08 55 29.2**	**-0.3**
FETY	**Fethiye**	**0.76 114**	P	**Pg**	**08 55 29.1**	**-0.4**
FETY			S	**Sb**	**08 55 41.2**	**-0.5**
FETY	**Fethiye**	**0.76 114**	*e*Pg	**Pg**	**08 55 29.2**	**-0.3**
FETY			S	**Sg**	**08 55 39.8**	**+0.5**
AYDN	**Tasoluk**	**0.76 339**	*i* P	**Pb**	**08 55 30.6**	**-0.4**
AYDN	**Tasoluk**	**0.76 339**	P	**Pb**	**08 55 30.6**	**-0.4**
YKAV	**Yalikavak-Bodr**	**0.78 283**	PG	**Pg**	**08 55 30.6**	**+0.8**
YKAV	**Yalikavak-Bodr**	**0.78 283**	*e*Pg	**Pg**	**08 55 30.6**	**+0.8**
NISR	**Nisiros**	**0.94 249**	P	**Pg**	**08 55 32.5**	**-0.5**
NISR			S	**Sn**	**08 55 49.1**	**-0.2**
NISR			AML	AML	08 55 51.5	
	comp=N,1752μm,0.3s					
NISR			AML	AML	08 55 59.7	
	comp=E,3375μm,0.8s					
NISR	**Nisiros**	**0.94 249**	P	**Pg**	**08 55 33.1**	**+0.1**
NISR			S	**Sb**	**08 55 48.0**	**+1.0**
AYDB	**Zeytinkoy-Aydi**	**1.03 345**	PG	**Pb**	**08 55 35.9**	**+0.3**
AYDB	**Zeytinkoy-Aydi**	**1.03 345**	*e*Pg	**Pb**	**08 55 35.9**	**+0.3**
DENT	**Denizli**	**1.03 39**	PG	**Pb**	**08 55 35.9**	**+0.3**
DENT	**Denizli**	**1.03 39**	*e*Pg	**Pb**	**08 55 35.9**	**+0.3**
GLHS	**Gihisar (BURDU**	**1.04 78**	PG	**Pb**	**08 55 35.7**	**-0.1**
GLHS	**Gihisar (BURDU**	**1.04 78**	*e*Pg	**Pb**	**08 55 35.7**	**-0.1**
GCAM	**G?zelcaml?**	**1.09 314**	PN	**Pb**	**08 55 36.8**	**+0.3**
GCAM	**G?zelcaml?**	**1.09 314**	*i* P	**Pg**	**08 55 36.1**	**+0.3**
GCAM	**G?zelcaml?**	**1.09 314**	P	**Pg**	**08 55 36.1**	**+0.3**
GCAM	**G?zelcaml?**	**1.09 314**	*e*Pn	**Pb**	**08 55 36.8**	**+0.3**
GOLH	**Golhisar**	**1.11 75**	*i* P	**Pb**	**08 55 36.9**	**0.0**
GOLH			*i* S	**Sn**	**08 55 54.2**	**+0.6**
GOLH	**Golhisar**	**1.11 75**	P	**Pb**	**08 55 36.9**	**0.0**
GOLH			S	**Sn**	**08 55 54.2**	**+0.6**
AKAS	**Kas**	**1.32 122**	PN	**Pb**	**08 55 40.6**	**0.0**
AKAS	**Kas**	**1.32 122**	*i* P	**Pg**	**08 55 40.1**	**-0.2**
AKAS			*i* S	**Sn**	**08 56 01.3**	**+2.4**
AKAS	**Kas**	**1.32 122**	P	**Pg**	**08 55 40.1**	**-0.2**
AKAS	**Kas**	**1.32 122**	*e*Pn	**Pb**	**08 55 40.6**	**0.0**
AKAS			S	**Sn**	**08 56 01.3**	**+2.4**
SMG	**Samos**	**1.34 305**	P	**Pn**	**08 55 39.6**	**-1.2**
SMG			S	**Sn**	**08 55 59.2**	**0.0**
SMG			AML	AML	08 56 03.7	
	comp=N,2465μm,0.4s					
SMG			AML	AML	08 56 06.5	
	comp=E,1283μm,0.3s					
SMG	**Samos**	**1.34 305**	P	**Pn**	**08 55 39.7**	**-1.0**
SMG			S	**Sg**	**08 55 57.8**	**-0.2**
SMG	**Samos**	**1.34 305**	P	**Pn**	**08 55 39.9**	**-0.8**
SMG			S	**Sg**	**08 55 57.8**	**-0.2**
KSL	**Kastellorizon**	**1.36 126**	P	**Pb**	**08 55 42.5**	**+1.4**
KSL			S	**Sn**	**08 56 00.2**	**+0.7**
KSL			AML	AML	08 56 03.1	
	comp=N,595μm,1.2s					
KSL			AML	AML	08 56 05.5	
	comp=E,608μm,0.5s					
KSL	**Kastellorizon**	**1.36 126**	P	**Pn**	**08 55 39.9**	**-1.0**
KSL			S	**Sg**	**08 55 58.0**	**-0.5**
DGB	**¯zmir**	**1.53 316**	*i* P	**Pn**	**08 55 42.7**	**-0.7**
MANT	**Manisa**	**1.56 10**	*i* P	**Pn**	**08 55 44.4**	**+0.3**
MANT	**Manisa**	**1.56 10**	P	**Pn**	**08 55 44.3**	**+0.3**
KULA	**Kula-Manisa**	**1.60 12**	PN	**Pn**	**08 55 44.8**	**+0.4**
KULA	**Kula-Manisa**	**1.60 12**	*e*Pn	**Pn**	**08 55 44.8**	**+0.4**
BRDR	**BURDUR-Merkez**	**1.64 63**	*i* P	**Pg**	**08 55 46.8**	**+0.4**
BRDR	**BURDUR-Merkez**	**1.64 63**	P	**Pg**	**08 55 46.8**	**+0.4**
KARP	**Karpathos**	**1.64 212**	PN	**Pb**	**08 55 45.7**	**-0.3**
KARP	**Karpathos**	**1.64 212**	P	**Pn**	**08 55 44.4**	**-0.6**
KARP			S	**Sn**	**08 56 05.1**	**-1.6**
KARP			AML	AML	08 56 11.3	
	comp=E,923μm,0.3s					
KARP			AML	AML	08 56 14.2	
	comp=N,1202μm,0.3s					
KARP	**Karpathos**	**1.64 212**	P	**Pn**	**08 55 44.0**	**-0.9**
KARP			S	**Sn**	**08 56 05.6**	**-1.1**
KARP	**Karpathos**	**1.64 212**	P	**Pn**	**08 55 44.6**	**-0.3**
KARP	**Karpathos**	**1.64 212**	*e*Pn	**Pb**	**08 55 45.7**	**-0.3**
KARP			S	**Sn**	**08 56 05.7**	**-1.0**
KORT	**Korkueli**	**1.70 88**	*i* P	**Pg**	**08 55 48.9**	**+1.3**
KORT	**Korkueli**	**1.70 88**	P	**Pg**	**08 55 48.9**	**+1.3**
AMGA	**Amorgos Island**	**1.87 267**	P	**Pn**	**08 55 46.8**	**-1.3**
AMGA	**Amorgos Island**	**1.87 267**	P	**Pn**	**08 55 47.3**	**-0.8**
ZEY	**¯zmir**	**1.88 314**	*i* P	**Pn**	**08 55 46.5**	**-1.6**
URLA	**Izmir**	**1.91 318**	PN	**Pn**	**08 55 49.5**	**+0.9**
URLA	**Izmir**	**1.91 318**	*i* P	**Pn**	**08 55 47.5**	**-1.1**
URLA	**Izmir**	**1.91 318**	P	**Pn**	**08 55 47.5**	**-1.1**
URLA	**Izmir**	**1.91 318**	*e*Pn	**Pn**	**08 55 49.5**	**+0.9**
AKS	**Akhisar**	**1.95 351**	PN	**Pn**	**08 55 50.1**	**+0.9**
AKS	**Akhisar**	**1.95 351**	*e*Pn	**Pn**	**08 55 50.1**	**+0.9**
APE	**Apeiranthos**	**2.16 274**	PN	**Pn**	**08 55 53.4**	**+1.4**
APE	**Apeiranthos**	**2.16 274**	P	**Pn**	**08 55 51.3**	**-0.7**
APE			S	**Sn**	**08 56 18.4**	**-1.0**
APE			AML	AML	08 56 36.4	
	comp=N,259μm,0.4s					
APE			AML	AML	08 56 36.7	
	comp=E,204μm,0.7s					
APE	**Apeiranthos**	**2.16 274**	P	**Pn**	**08 55 51.6**	**-0.4**
APE	**Apeiranthos**	**2.16 274**	*e*Pn	**Pn**	**08 55 53.4**	**+1.4**
APE			S	**Sn**	**08 56 18.5**	**-1.0**
CHOS	**Chios island**	**2.24 310**	P	**Pn**	**08 55 52.7**	**-0.4**
CHOS	**Chios island**	**2.24 310**	P	**Pn**	**08 55 52.8**	**-0.4**
ZKR	**Zakros**	**2.45 222**	P	**Pn**	**08 55 56.6**	**+0.6**
ZKR	**Zakros**	**2.45 222**	P	**Pn**	**08 55 56.4**	**+0.4**
BALB	**Balikesir**	**2.70 354**	PN	**Pn**	**08 56 01.2**	**+1.8**
BALB	**Balikesir**	**2.70 354**	*e*Pn	**Pn**	**08 56 01.2**	**+1.8**
LAST	**Lasithi**	**2.85 232**	P	**Pn**	**08 56 02.3**	**+0.6**
LAST			S	**Sn**	**08 56 35.5**	**-1.1**
LAST	**Lasithi**	**2.85 232**	P	**Pn**	**08 56 02.0**	**+0.4**
LAST			S	**Sn**	**08 56 35.5**	**-1.1**
SIGR	**SIGRI**	**2.93 321**	PN	**Pn**	**08 56 03.9**	**+1.3**
SIGR	**SIGRI**	**2.93 321**	P	**Pn**	**08 56 02.9**	**+0.3**
SIGR	**SIGRI**	**2.93 321**	P	**Pn**	**08 56 02.8**	**+0.2**
SIGR	**SIGRI**	**2.93 321**	*e*Pn	**Pn**	**08 56 03.9**	**+1.3**
IDI	**Anoyia**	**3.17 239**	PN	**Pn**	**08 56 07.2**	**+1.3**
IDI	**Anoyia**	**3.17 239**	*e*Pn	**Pn**	**08 56 07.2**	**+1.3**
KIZT	**Kizilcal**	**3.47 55**	PN	**Pn**	**08 56 11.5**	**+1.3**
KIZT	**Kizilcal**	**3.47 55**	*e*Pn	**Pn**	**08 56 11.5**	**+1.3**
CAVI	**Cavuskoy**	**3.48 21**	PN	**Pn**	**08 56 12.4**	**+2.1**
CAVI	**Cavuskoy**	**3.48 21**	*e*Pn	**Pn**	**08 56 12.4**	**+2.1**
DION	**Dionisos Attik**	**3.59 290**	P	**Pn**	**08 56 12.9**	**+1.1**
DION	**Dionisos Attik**	**3.59 290**	P	**Pn**	**08 56 12.4**	**+0.7**
VAM	**Vamos**	**3.60 246**	P	**Pn**	**08 56 14.8**	**+3.0**
VAM	**Vamos**	**3.60 246**	P	**Pn**	**08 56 13.6**	**+1.8**
GVD	**Gavdhos**	**3.96 239**	P	**Pn**	**08 56 18.8**	**+2.0**
GVD	**Gavdhos**	**3.96 239**	P	**Pn**	**08 56 18.1**	**+1.3**
SMTH	**Samothraki Isl**	**4.10 330**	P	**Pn**	**08 56 18.2**	**-0.4**
SMTH	**Samothraki Isl**	**4.10 330**	P	**Pn**	**08 56 18.7**	**0.0**
ALN	**Alexandroupoli**	**4.29 337**	P	**Pn**	**08 56 20.6**	**-0.7**
ALN	**Alexandroupoli**	**4.29 337**	P	**Pn**	**08 56 21.2**	**-0.1**

PRU ***15*** *08:59:41.2, 44˚.74N×11˚.26E, h0km*
ISCJB ***15*** *08:59:43.5±0.2, 44˚.77N±0˚.02×11˚.27E±0˚.02, h19km±1km, mb3.7/2, MS4.5/1, Error ellipse: s-maj=3.1km s-min=2.1km az=153.3*
ROM ***15*** *08:59:44.9±0.0, 44˚.849N±0˚.001×11˚.237E±0˚.003, h8km, ML3.6/76*
CSEM ***15*** *08:59:44.0±0.1, 44˚.88N×11˚.29E, h8km, ML3.6/14, Error ellipse: s-maj=3.0km s-min=2.2km az=152.0*
LDG ***15*** *08:59:44.6±0.2, 44˚.87N×11˚.28E, h2km, Ml3.9/19, Error ellipse: s-maj=6.3km s-min=4.6km az=61.0*
IDC ***15*** *08:59:45.3±2.8, 44˚.77N×11˚.46E, h26km±19km, mb3.5/2, mb1 3.7/3, mb1mx3.2/65, mbtmp3.6/3, ML3.5/1, MS3.7/2, Ms1 3.7/2, ms1mx2.5/57, Error ellipse: s-maj=41.9km s-min=15.0km az=111.0*

STR ***15*** *08:59:48.8±1.0, 45˚.N±6˚.×1˚.1E±˚., h10km, M3.9/7, MLv3.9/1, MLv4.0/7*

ISC 15 08:59:43.5±0.7, **44˚.87N**±0˚.02×**11˚.20E**±0˚.02, **h16**km±3km, **n287**,σ1$**72**/333, **15C-16D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
T0802	**SanFelice sul**	**0.02**	**300**	⇑*i*P		**Pg**	**08 59 46.2**	**-0.1**
T0802				⇑*i*S		**Sg**	**08 59 48.7**	**+0.5**
T0802	**SanFelice sul**	**0.02**	**300**	*i* P		**Pg**	**08 59 46.2**	**-0.1**
T0802				*i* S		**Sg**	**08 59 48.6**	**+0.5**
T0800	**Massa Finalese**	**0.04**	**119**	⇑*i*P		**Pg**	**08 59 45.8**	**-0.6**
T0800				⇑*i*S		**Sg**	**08 59 47.9**	**-0.4**
T0800	**Massa Finalese**	**0.04**	**119**	*i* P		**Pg**	**08 59 45.8**	**-0.6**
T0800				*i* S		**Sg**	**08 59 47.9**	**-0.4**
T0805	**Bondeno (FE)**	**0.10**	**58**	⇑*e*P		**Pb**	**08 59 46.8**	**-0.3**
T0805	**Bondeno (FE)**	**0.10**	**58**	*e*P		**Pb**	**08 59 46.8**	**-0.3**
T0822	**Casumaru (Bond**	**0.11**	**108**	⇑*e*P		**Pb**	**08 59 46.6**	**-0.6**
T0822				⇑*e*S		**Sb**	**08 59 49.5**	**-0.1**
T0822	**Casumaru (Bond**	**0.11**	**108**	*e*P		**Pb**	**08 59 46.6**	**-0.6**
T0822				*e*S		**Sb**	**08 59 49.5**	**-0.1**
T0822					AML	AML		
T0822					AML	AML		
T0822					AML	AML		
T0822					AML	AML		
RAVA	**Ravarino**	**0.12**	**208**	⇓*e*P		**Pg**	**08 59 47.6**	**+0.4**
RAVA				⇓*e*S		**Sb**	**08 59 51.7**	**+1.5**
RAVA	**Ravarino**	**0.12**	**208**	*e*P		**Pg**	**08 59 47.6**	**+0.4**
RAVA				*e*S		**Sb**	**08 59 51.7**	**+1.5**
RAVA					AML	AML		
RAVA					AML	AML		
RAVA					AML	AML		
RAVA					AML	AML		
RAVA					AML	AML		
RAVA					AML	AML		
RAVA					AML	AML		
RAVA					AML	AML		
T0803	**Dosso, Cento (**	**0.14**	**133**	⇑*e*P		**Pg**	**08 59 47.2**	**-0.3**
T0803				⇑*e*S		**Sg**	**08 59 50.6**	**+0.5**
T0803	**Dosso, Cento (**	**0.14**	**133**	*e*P		**Pg**	**08 59 47.2**	**-0.3**
T0803				*e*S		**Sg**	**08 59 50.6**	**+0.5**
SERM	**Sermide**	**0.16**	**25**	⇑*e*P		**Pg**	**08 59 48.3**	**+0.6**
SERM	**Sermide**	**0.16**	**25**	*e*P		**Pg**	**08 59 48.3**	**+0.6**
SERM					AML	AML		
	comp=E,14650μm,0.4s							
SERM					AML	AML		
	comp=N,25200μm,1.4s							
SERM					AML	AML		
	comp=E,23950μm,0.6s							
SERM					AML	AML		
	comp=N,49250μm,0.6s							
SERM					AML	AML		
	comp=E,14650μm,0.4s							
SERM					AML	AML		
	comp=N,25150μm,1.4s							
SERM					AML	AML		
	comp=E,23950μm,0.6s							
SERM					AML	AML		
	comp=N,49300μm,0.6s							
SERM					AML	AML		
	comp=E,14650μm,0.3s							
SERM					AML	AML		
	comp=N,25200μm,1.4s							
SERM					AML	AML		
	comp=E,23950μm,0.6s							
SERM					AML	AML		
	comp=N,49250μm,0.6s							
SERM					AML	AML		
	comp=E,23950μm,0.6s							
SERM					AML	AML		
	comp=N,25200μm,1.4s							
SERM					AML	AML		
	comp=N,49250μm,0.6s							
SERM					AML	AML		
	comp=E,14650μm,0.3s							
NDIM	**Novi di Modena**	**0.22**	**276**		AML	AML		
	comp=N,29550μm,1.3s							
NDIM					AML	AML		
	comp=E,34950μm,0.6s							
NDIM					AML	AML		
	comp=N,29550μm,1.3s							
NDIM					AML	AML		
	comp=E,35450μm,0.6s							
NDIM					AML	AML		
	comp=N,29950μm,1.3s							
NDIM					AML	AML		
	comp=E,35450μm,0.6s							
NDIM					AML	AML		
	comp=E,34950μm,0.6s							
NDIM					AML	AML		
	comp=N,29950μm,1.3s							
T0821	**Loc. Casaglia**	**0.24**	**81**	*e*P		**Pg**	**08 59 48.5**	**-0.4**
T0821	**Loc. Casaglia**	**0.24**	**81**	*e*P		**Pg**	**08 59 48.5**	**-0.4**
T0821					AML	AML		
	comp=E,22600μm,1.0s							
T0821					AML	AML		
	comp=N,18700μm,0.4s							
T0821					AML	AML		
	comp=E,23500μm,1.0s							
T0821					AML	AML		
	comp=N,18800μm,0.4s							
T0821					AML	AML		
	comp=E,22600μm,1.0s							
T0821					AML	AML		
	comp=N,18650μm,0.4s							
T0821					AML	AML		
	comp=E,23500μm,1.0s							
T0821					AML	AML		
	comp=N,18800μm,0.4s							
T0821					AML	AML		
	comp=E,22600μm,1.0s							
T0821					AML	AML		
	comp=E,23500μm,1.0s							
T0821					AML	AML		
	comp=N,18650μm,0.4s							
T0821					AML	AML		
	comp=N,18800μm,0.4s							
GAZZ	**Gazzo Veronese**	**0.26**	**343**	⇑*e*Pg		**Pb**	**08 59 50.6**	**+0.8**
GAZZ	**Gazzo Veronese**	**0.26**	**343**	*e*Pg		**Pb**	**08 59 50.6**	**+0.8**
SBPO	**S.Benedetto Po**	**0.27**	**313**	*e*P		**Pb**	**08 59 51.2**	**+1.1**
SBPO	**S.Benedetto Po**	**0.27**	**313**	*e*P		**Pb**	**08 59 51.2**	**+1.1**
SBPO					AML	AML		
	comp=E,25450μm,1.0s							
SBPO					AML	AML		
	comp=N,70700μm,0.7s							
SBPO					AML	AML		
	comp=E,25450μm,1.0s							
SBPO					AML	AML		
	comp=N,70700μm,0.7s							
SBPO					AML	AML		
	comp=E,25450μm,1.0s							
SBPO					AML	AML		
	comp=N,70700μm,0.7s							
T0825	**Gonzaga (MN)**	**0.27**	**293**		AML	AML		
	comp=N,31450μm,0.4s							
T0825					AML	AML		
	comp=E,55650μm,0.7s							
T0825					AML	AML		
	comp=E,55700μm,0.7s							
T0825					AML	AML		
	comp=N,31450μm,0.4s							
T0825					AML	AML		
	comp=E,55700μm,0.7s							
T0825					AML	AML		
	comp=N,31450μm,0.4s							
T0825					AML	AML		
	comp=E,55700μm,0.7s							
T0825					AML	AML		
	comp=N,31450μm,0.4s							
MODE	**Modena**	**0.30**	**217**		AML	AML		
MODE					AML	AML		
	comp=E,68000μm,0.7s							
MODE					AML	AML		
MODE					AML	AML		
	comp=E,67950μm,0.7s							
MODE					AML	AML		
MODE					AML	AML		
	comp=E,67950μm,0.7s							
MODE					AML	AML		
MODE					AML	AML		
	comp=E,67950μm,0.7s							
FIU	**Minerbio Fiu**	**0.31**	**138**		AML	AML		
	comp=E,30900μm,0.5s							
FIU					AML	AML		
	comp=N,23600μm,1.6s							
FIU					AML	AML		
	comp=E,30900μm,0.5s							
FIU					AML	AML		
	comp=N,23650μm,1.6s							
FIU					AML	AML		
	comp=E,30900μm,0.5s							
FIU					AML	AML		
	comp=N,23600μm,1.6s							
FIU					AML	AML		
	comp=E,30900μm,0.5s							
FIU					AML	AML		
	comp=N,23600μm,1.6s							
OPPE	**Oppeano**	**0.44**	**357**		AML	AML		
	comp=N,25700μm,0.5s							
OPPE					AML	AML		
	comp=E,10710μm,0.5s							
OPPE					AML	AML		
	comp=E,10710μm,0.5s							
OPPE					AML	AML		
	comp=N,25700μm,0.5s							
CMPO	**Campotto Po**	**0.52**	**123**		AML	AML		
	comp=N,10155μm,1.0s							
CMPO					AML	AML		
	comp=E,9170μm,1.1s							
CMPO					AML	AML		
	comp=N,10155μm,1.0s							
CMPO					AML	AML		
	comp=E,9170μm,1.1s							
MTRZ	**Monterenzio**	**0.53**	**159**	*e*P		**Pn**	**08 59 57.5**	**+1.1**
MTRZ					AML	AML		
	comp=E,10990μm,0.8s							
MTRZ					AML	AML		
	comp=N,7660μm,0.5s							
MTRZ					AML	AML		
	comp=E,11510μm,0.9s							
MTRZ					AML	AML		
	comp=N,7925μm,0.5s							
MTRZ					AML	AML		
	comp=E,11030μm,0.8s							
MTRZ					AML	AML		
	comp=N,7665μm,0.5s							
MTRZ					AML	AML		
	comp=E,11510μm,0.9s							
MTRZ					AML	AML		
	comp=N,7925μm,0.5s							
MTRZ					AML	AML		
	comp=N,7925μm,0.5s							
MTRZ					AML	AML		
	comp=N,7665μm,0.5s							
MTRZ					AML	AML		
	comp=E,11510μm,0.9s							
MTRZ					AML	AML		
	comp=E,11030μm,0.8s							
ZCCA	**Zocca**	**0.54**	**197**	⇑*e*P		**Pn**	**08 59 56.6**	**0.0**
ZCCA	**Zocca**	**0.54**	**197**	*e*P		**Pn**	**08 59 56.6**	**0.0**
ZCCA					AML	AML		
	comp=E,8315μm,1.2s							
ZCCA					AML	AML		
	comp=N,6395μm,1.6s							
ZCCA					AML	AML		
	comp=E,8625μm,1.2s							
ZCCA					AML	AML		
	comp=N,6700μm,1.6s							
ZCCA					AML	AML		
	comp=E,8320μm,1.2s							
ZCCA					AML	AML		
	comp=N,6395μm,1.6s							
ZCCA					AML	AML		
	comp=E,8625μm,1.2s							
ZCCA					AML	AML		
	comp=N,6700μm,1.6s							
ZCCA					AML	AML		
	comp=E,8280μm,1.1s							
ZCCA					AML	AML		
	comp=N,6395μm,1.6s							
ZCCA					AML	AML		
	comp=E,8625μm,1.2s							
ZCCA					AML	AML		
	comp=N,6700μm,1.6s							
ZCCA					AML	AML		
	comp=E,8625μm,1.2s							
ZCCA					AML	AML		
	comp=E,8280μm,1.1s							
ZCCA					AML	AML		
	comp=N,6700μm,1.6s							
ZCCA					AML	AML		
	comp=N,6395μm,1.6s							
TEOL	**Teolo**	**0.59**	**34**	⇓*e*Pg		**Pb**	**08 59 56.0**	**+0.4**
TEOL				*e*Sg		**Sb**	**09 00 05.5**	**+1.8**
TEOL	**Teolo**	**0.59**	**34**	⇓*e*P		**Pb**	**08 59 55.9**	**+0.4**
TEOL				*e*Sg		**Sb**	**09 00 05.5**	**+1.8**
TEOL	**Teolo**	**0.59**	**34**	*e*P		**Pb**	**08 59 55.9**	**+0.4**
TEOL					AML	AML		
	comp=E,19650μm,0.5s							
TEOL					AML	AML		
	comp=N,10260μm,1.2s							
TEOL					AML	AML		
	comp=E,19650μm,0.5s							
TEOL					AML	AML		
	comp=N,10260μm,1.2s							
TEOL					AML	AML		
	comp=N,10260μm,1.2s							
TEOL					AML	AML		
	comp=E,19650μm,0.5s							
ADRI	**Adria, Italy**	**0.60**	**73**	⇑*e*Pg		**Pb**	**08 59 56.7**	**+1.0**
ADRI				*e*Sg		**Sn**	**09 00 06.0**	**-0.8**
ADRI	**Adria, Italy**	**0.60**	**73**	*e*Pg		**Pb**	**08 59 56.7**	**+1.0**
ADRI				*e*Sg		**Sn**	**09 00 06.0**	**-0.8**
ZOVE	**Zovencedo**	**0.62**	**19**		AML	AML		
	comp=E,9025μm,0.4s							
ZOVE					AML	AML		
	comp=E,9025μm,0.4s							
ZOVE					AML	AML		
	comp=N,10420μm,0.4s							
ZOVE					AML	AML		
	comp=E,9025μm,0.4s							
ZOVE					AML	AML		
	comp=N,10420μm,0.4s							
ZOVE					AML	AML		
	comp=N,10420μm,0.4s							
IMOL	**Imola, Italy**	**0.64**	**143**		AML	AML		
	comp=N,678μm,0.7s							
IMOL					AML	AML		
	comp=E,4315μm,1.4s							
IMOL					AML	AML		
	comp=N,4875μm,1.0s							
IMOL					AML	AML		
	comp=E,754μm,1.0s							
IMOL					AML	AML		
	comp=N,678μm,0.7s							
IMOL					AML	AML		
	comp=E,4315μm,1.4s							
IMOL					AML	AML		
	comp=N,4875μm,1.0s							
IMOL					AML	AML		
	comp=E,754μm,1.0s							
ERBM	**Eremo**	**0.72**	**232**		AML	AML		
	comp=E,2660μm,1.5s							
ERBM					AML	AML		
	comp=E,2660μm,1.5s							
ERBM					AML	AML		
	comp=N,3025μm,1.6s							
ERBM					AML	AML		
	comp=E,2660μm,1.5s							
ERBM					AML	AML		
	comp=N,3025μm,1.6s							
ERBM					AML	AML		
	comp=N,3025μm,1.6s							
MARN	**Marana (Italy)**	**0.77**	**0**	⇓*e*Pg		**Pg**	**08 59 59.3**	**+0.7**
MARN				*e*Sg		**Sn**	**09 00 10.8**	**-0.3**
MARN	**Marana (Italy)**	**0.77**	**0**	*e*Pg		**Pg**	**08 59 59.3**	**+0.7**
MARN				*e*Sg		**Sn**	**09 00 10.8**	**-0.3**
ROVR	**Rover¯¤ Verone**	**0.79**	**353**	⇓*e*P		**Pg**	**08 59 59.6**	**+0.7**
ROVR	**Rover¯¤ Verone**	**0.79**	**353**	*e*P		**Pg**	**08 59 59.6**	**+0.7**
ROVR					AML	AML		
	comp=E,6990μm,0.4s							
ROVR					AML	AML		
	comp=N,13250μm,0.4s							
ROVR					AML	AML		
	comp=E,6990μm,0.4s							
ROVR					AML	AML		
	comp=N,13250μm,0.4s							
ROVR					AML	AML		
	comp=E,6990μm,0.4s							
ROVR					AML	AML		
	comp=N,13250μm,0.4s							
ZEN8	**San Zeno di Mo**	**0.84**	**337**		AML	AML		
	comp=N,7630μm,0.5s							

ZEN8				AML	AML	
	comp=E,5365μm,0.6s					
ZEN8				AML	AML	
	comp=N,7630μm,0.5s					
ZEN8				AML	AML	
	comp=E,5365μm,0.6s					
ZEN8				AML	AML	
	comp=N,7630μm,0.5s					
ZEN8				AML	AML	
	comp=E,5365μm,0.6s					
BALD	**Monte Baldo**	**0.86**	**342**⇑	*e*Pg	**Pn**	**09 00 01.2 0.0**
BALD				*e*Sg	**Sn**	**09 00 14.8 +1.2**
BALD	**Monte Baldo**	**0.86**	**342**	*e*Pg	**Pn**	**09 00 01.2 0.0**
BALD				*e*Sg	**Sn**	**09 00 14.8 +1.2**
SALO	**Salr**	**0.89**	**328**	AML	AML	
	comp=E,10185μm,1.3s					
SALO				AML	AML	
	comp=E,10185μm,1.3s					
SALO				AML	AML	
	comp=N,15200μm,0.7s					
SALO				AML	AML	
	comp=N,15200μm,0.7s					
SALO				AML	AML	
	comp=E,10185μm,1.3s					
SALO				AML	AML	
	comp=N,15200μm,0.7s					
BDI	**Bagni Di Lucca**	**0.91**	**209**	AML	AML	
	comp=E,4055μm,0.5s					
BDI				AML	AML	
	comp=N,4545μm,0.5s					
BDI				AML	AML	
	comp=E,3190μm,0.4s					
BDI				AML	AML	
	comp=N,5025μm,0.8s					
BDI				AML	AML	
	comp=E,3190μm,0.4s					
BDI				AML	AML	
	comp=N,4545μm,0.5s					
BDI				AML	AML	
	comp=E,4055μm,0.5s					
BDI				AML	AML	
	comp=N,5025μm,0.8s					
VLC	**Villacollemand**	**0.92**	**220**	AML	AML	
	comp=N,974μm,0.9s					
VLC				AML	AML	
	comp=E,1515μm,0.7s					
VLC				AML	AML	
	comp=N,974μm,0.9s					
VLC				AML	AML	
	comp=E,1515μm,0.7s					
VLC				AML	AML	
	comp=E,1515μm,0.7s					
VLC				AML	AML	
	comp=N,974μm,0.9s					
VOBA	**Vobarno**	**0.92**	**328**	AML	AML	
	comp=N,12800μm,1.6s					
VOBA				AML	AML	
	comp=E,9330μm,0.8s					
VOBA				AML	AML	
	comp=N,12800μm,1.6s					
VOBA				AML	AML	
	comp=E,9330μm,0.8s					
VOBA				AML	AML	
	comp=N,12800μm,1.6s					
VOBA				AML	AML	
	comp=E,9330μm,0.8s					
MAGA	**Magasa**	**0.99**	**336**	AML	AML	
	comp=N,21700μm,0.4s					
MAGA				AML	AML	
	comp=E,40600μm,0.5s					
MAGA				AML	AML	
	comp=N,21700μm,0.4s					
MAGA				AML	AML	
	comp=E,40600μm,0.5s					
MAGA				AML	AML	
	comp=E,40600μm,0.5s					
MAGA				AML	AML	
	comp=N,21700μm,0.4s					
DOSS	**Dosso del Somm**	**1.01**	**359**⇓	*e*Pg	**Pn**	**09 00 03.6 +0.3**
DOSS				*e*Sg	**Sn**	**09 00 17.4 +0.1**
DOSS	**Dosso del Somm**	**1.01**	**359**	*e*Pg	**Pn**	**09 00 03.6 +0.3**
DOSS				*e*Sg	**Sn**	**09 00 17.4 +0.1**
ASOL	**Asolo**	**1.06**	**28**	AML	AML	
	comp=E,12900μm,0.3s					
ASOL				AML	AML	
	comp=E,12900μm,0.3s					
ASOL				AML	AML	
	comp=N,16250μm,0.7s					
ASOL				AML	AML	
	comp=N,16250μm,0.7s					
SFI	**Santa Sofia**	**1.07**	**154**	AML	AML	
	comp=N,4000μm,0.7s					
SFI				AML	AML	
	comp=E,2425μm,1.0s					
SFI				AML	AML	
	comp=N,3790μm,0.7s					
SFI				AML	AML	
	comp=E,2625μm,1.0s					
SFI				AML	AML	
	comp=E,2425μm,1.0s					
SFI				AML	AML	
	comp=E,2625μm,1.0s					
SFI				AML	AML	
	comp=N,3790μm,0.7s					
SFI				AML	AML	
	comp=N,4000μm,0.7s					
CRMI	**Carmignano**	**1.09**	**189**	AML	AML	
	comp=N,1700μm,0.5s					
CRMI				AML	AML	
	comp=E,1920μm,0.8s					
CRMI				AML	AML	
	comp=E,1920μm,0.8s					
CRMI				AML	AML	
	comp=N,1700μm,0.5s					
CRMI				AML	AML	
	comp=N,1700μm,0.5s					
CRMI				AML	AML	
	comp=E,1920μm,0.8s					
CGRP	**Cima Grappa**	**1.10**	**22**⇓	*e*Pg	**Pg**	**09 00 05.1 +0.3**
CGRP				*e*Sg	**Sg**	**09 00 20.7 +1.5**
CGRP	**Cima Grappa**	**1.10**	**22**	*e*Pg	**Pg**	**09 00 05.1 +0.3**
CGRP				*e*Sg	**Sg**	**09 00 20.7 +1.5**
CGRP	**Cima Grappa**	**1.10**	**22**	*e*P	**Pn**	**09 00 04.9 +0.4**
CGRP				AML	AML	
	comp=E,4080μm,0.5s					
CGRP				AML	AML	
	comp=N,3570μm,0.8s					
CGRP				AML	AML	
	comp=E,4080μm,0.5s					
CGRP				AML	AML	
	comp=N,3570μm,0.8s					
CGRP				AML	AML	
	comp=N,3570μm,0.8s					
CGRP				AML	AML	
	comp=E,4080μm,0.5s					
MTLO	**Montello**	**1.14**	**33**⇓	*e*Pg	**Pg**	**09 00 05.9 +0.4**
MTLO	**Montello**	**1.14**	**33**	*e*Pg	**Pg**	**09 00 05.9 +0.4**
ASQU	**Asqua**	**1.15**	**158**	AML	AML	
	comp=E,2320μm,0.5s					
ASQU				AML	AML	
	comp=N,2440μm,0.6s					
ASQU				AML	AML	
	comp=N,2440μm,0.6s					
ASQU				AML	AML	
	comp=E,2320μm,0.5s					
RNI	**Roncone**	**1.19**	**340**⇑	*e*Pg	**Pn**	**09 00 06.0 +0.3**
RNI	**Roncone**	**1.19**	**340**	*e*Pg	**Pn**	**09 00 06.0 +0.3**
PANI	**Panarotta**	**1.19**	**4**	*e*Pg	**Pb**	**09 00 06.4 +0.6**
PANI	**Panarotta**	**1.19**	**4**	*e*Pg	**Pb**	**09 00 06.4 +0.6**
CTI	**Castel Tesino**	**1.22**	**15**	AML	AML	
	comp=N,5025μm,0.9s					
CTI				AML	AML	
	comp=E,4285μm,1.2s					
CTI				AML	AML	
	comp=E,4285μm,1.2s					
CTI				AML	AML	
	comp=N,5025μm,0.9s					
CTI				AML	AML	
	comp=E,4285μm,1.2s					
CTI				AML	AML	
	comp=N,5025μm,0.9s					
BOB	**Bobbio (Coli)**	**1.25**	**266**	AML	AML	
BOB				AML	AML	
BOB				AML	AML	
BOB				AML	AML	
	comp=E,2835μm,0.6s					
BOB				AML	AML	
	comp=N,3130μm,1.0s					
BOB				AML	AML	
BOB				AML	AML	
BOB				AML	AML	
	comp=E,2835μm,0.6s					
BOB				AML	AML	
	comp=N,3130μm,1.0s					
BOB				AML	AML	
	comp=N,3130μm,1.0s					
BOB				AML	AML	
	comp=E,2835μm,0.6s					
BOB				AML	AML	
PLMA	**Palmaria, Port**	**1.27**	**230**	AML	AML	
	comp=N,2615μm,1.3s					
PLMA				AML	AML	
	comp=E,2280μm,0.7s					
PLMA				AML	AML	
	comp=N,2615μm,1.3s					
PLMA				AML	AML	
	comp=E,2280μm,0.7s					
PLMA				AML	AML	
	comp=N,2615μm,1.3s					
PLMA				AML	AML	
	comp=E,2280μm,0.7s					
MABI	**Malga Bissina**	**1.28**	**338**	AML	AML	
	comp=N,2325μm,0.4s					
MABI				AML	AML	
	comp=E,2070μm,0.4s					
MABI				AML	AML	
	comp=N,2325μm,0.4s					
MABI				AML	AML	
	comp=E,2070μm,0.4s					
MABI				AML	AML	
	comp=E,2070μm,0.4s					
MABI				AML	AML	
	comp=N,2325μm,0.4s					
VARN	**Col Varnada, M**	**1.29**	**29**⇓	*e*Pg	**Pb**	**09 00 07.7 +0.2**
VARN				*e*Sg	**Sg**	**09 00 26.8 +1.4**
VARN	**Col Varnada, M**	**1.29**	**29**	*e*Pg	**Pb**	**09 00 07.7 +0.2**
VARN				*e*Sg	**Sg**	**09 00 26.8 +1.4**
MSSA	**Maissana**	**1.32**	**246**	AML	AML	
	comp=E,1750μm,0.8s					
MSSA				AML	AML	
	comp=N,3430μm,0.8s					
MSSA				AML	AML	
	comp=E,1750μm,0.8s					
MSSA				AML	AML	
	comp=N,3430μm,0.8s					
MSSA				AML	AML	
	comp=N,3430μm,0.8s					
MSSA				AML	AML	
	comp=E,1750μm,0.8s					
CRE	**Caprese Michel**	**1.36**	**156**	AML	AML	
	comp=E,2175μm,0.7s					
CRE				AML	AML	
	comp=E,2175μm,0.7s					
CRE				AML	AML	
	comp=N,2075μm,0.6s					
CRE				AML	AML	
	comp=E,2175μm,0.7s					
CRE				AML	AML	
	comp=N,2075μm,0.6s					
CRE				AML	AML	
	comp=N,2075μm,0.6s					
PARC	**Parchiule**	**1.43**	**148**	AML	AML	
	comp=N,1145μm,0.6s					
PARC				AML	AML	
	comp=E,1065μm,0.6s					
PARC				AML	AML	
	comp=N,1145μm,0.6s					
PARC				AML	AML	
	comp=E,1065μm,0.6s					
CAE	**Caneva**	**1.43**	**37**⇓	*e*Pg	**Pn**	**09 00 09.6 +0.7**
CAE	**Caneva**	**1.43**	**37**	*e*Pg	**Pn**	**09 00 09.6 +0.7**
SSP9	**Sansepolcro**	**1.45**	**152**	AML	AML	
	comp=N,1343μm,0.8s					
SSP9				AML	AML	
	comp=E,1202μm,0.9s					
SSP9				AML	AML	
	comp=N,1343μm,0.8s					
SSP9				AML	AML	
	comp=E,1202μm,0.9s					
FAU	**Forcella Aurin**	**1.47**	**22**	*e*Pg	**Pb**	**09 00 10.5 -0.1**
FAU				*e*Sg	**Sg**	**09 00 31.6 +0.6**
FAU	**Forcella Aurin**	**1.47**	**22**	*e*Pg	**Pb**	**09 00 10.5 -0.1**
FAU				*e*Sg	**Sg**	**09 00 31.6 +0.6**
POLC	**Polcenigo**	**1.48**	**38**	*e*Pg	**Pb**	**09 00 10.7 +0.1**
POLC	**Polcenigo**	**1.48**	**38**	*e*Pg	**Pb**	**09 00 10.7 +0.1**
POLC	**Polcenigo**	**1.48**	**38**	AML	AML	
	comp=N,4210μm,0.4s					
POLC				AML	AML	
	comp=E,4005μm,1.0s					
POLC				AML	AML	
	comp=E,4005μm,1.0s					
POLC				AML	AML	
	comp=N,4210μm,0.4s					
POLC				AML	AML	
	comp=E,4005μm,1.0s					
POLC				AML	AML	
	comp=N,4210μm,0.4s					
AGOR	**Agordo**	**1.54**	**22**⇓	*e*Pg	**Pb**	**09 00 11.3 -0.3**
AGOR	**Agordo**	**1.54**	**22**	AML	AML	
	comp=N,2060μm,0.4s					
AGOR				AML	AML	
	comp=E,1690μm,1.4s					
AGOR				AML	AML	
	comp=N,2060μm,0.4s					
AGOR				AML	AML	
	comp=E,1690μm,1.4s					
OZOL	**Ozolo**	**1.54**	**356**	*e*Pg	**Pb**	**09 00 11.8 0.0**
OZOL	**Ozolo**	**1.54**	**356**	*e*Pg	**Pb**	**09 00 11.8 0.0**
BADI	**Badiali**	**1.55**	**151**	AML	AML	
	comp=N,876μm,0.8s					
BADI				AML	AML	
	comp=E,1325μm,1.4s					
BADI				AML	AML	
	comp=N,876μm,0.8s					
BADI				AML	AML	
	comp=E,1325μm,1.4s					
ATMC	**Monte Cedrone**	**1.59**	**153**	AML	AML	
	comp=N,1435μm,0.6s					
ATMC				AML	AML	
	comp=E,1610μm,0.6s					
ATMC				AML	AML	
	comp=N,1435μm,0.6s					
ATMC				AML	AML	
	comp=E,1610μm,0.6s					
CARE	**Lago del Cares**	**1.60**	**347**⇓	*e*Pg	**Pn**	**09 00 12.5 +1.1**
CARE				*e*Sg	**Sg**	**09 00 34.9 -0.2**
CARE	**Lago del Cares**	**1.60**	**347**	*e*Pg	**Pn**	**09 00 12.5 +1.1**
CARE				*e*Sg	**Sg**	**09 00 34.9 -0.2**
KOSI	**Kohlern**	**1.60**	**4**	AML	AML	
	comp=N,3435μm,0.5s					
KOSI				AML	AML	
	comp=E,3870μm,0.8s					
KOSI				AML	AML	
	comp=E,3870μm,0.8s					
KOSI				AML	AML	
	comp=N,3435μm,0.5s					
APPI	**Appiano**	**1.61**	**1**	AML	AML	
	comp=E,4180μm,1.2s					
APPI				AML	AML	
	comp=E,4180μm,1.2s					
APPI				AML	AML	
	comp=N,2975μm,0.4s					
APPI				AML	AML	
	comp=N,2975μm,0.4s					
CSO	**Casso**	**1.61**	**29**⇓	*e*Pg	**Pn**	**09 00 12.0 +0.6**
CSO	**Casso**	**1.61**	**29**	*e*Pg	**Pn**	**09 00 12.0 +0.6**
MLNI	**Malnisio**	**1.62**	**37**⇓	*e*Pg	**Pn**	**09 00 12.2 +0.7**
MLNI	**Malnisio**	**1.62**	**37**	*e*Pg	**Pn**	**09 00 12.2 +0.7**
FSSB	**Fossombrone**	**1.63**	**136**	AML	AML	
	comp=N,1990μm,0.5s					
FSSB				AML	AML	
	comp=E,1365μm,0.4s					
FSSB				AML	AML	
	comp=E,1365μm,0.4s					
FSSB				AML	AML	
	comp=N,1990μm,0.5s					
CAFI	**Castiglion Fio**	**1.63**	**160**	AML	AML	
	comp=N,565μm,0.9s					
CAFI				AML	AML	
	comp=E,875μm,1.6s					
CAFI				AML	AML	
	comp=N,565μm,0.9s					
CAFI				AML	AML	
	comp=E,875μm,1.6s					
PIEI	**Pieia**	**1.64**	**144**	AML	AML	
	comp=N,578μm,0.7s					
PIEI				AML	AML	
	comp=E,912μm,0.7s					
PIEI				AML	AML	
	comp=E,912μm,0.7s					
PIEI				AML	AML	
	comp=N,578μm,0.7s					
ATPC	**Poggio Castell**	**1.65**	**146**	AML	AML	
	comp=E,1210μm,0.5s					
ATPC				AML	AML	
	comp=E,1210μm,0.5s					
ATPC				AML	AML	
	comp=N,1013μm,0.5s					
ATPC				AML	AML	
	comp=N,1013μm,0.5s					
MPAG	**Monte Paganucc**	**1.67**	**137**	AML	AML	
	comp=E,840μm,1.1s					
MPAG				AML	AML	
	comp=E,840μm,1.1s					
MPAG				AML	AML	
	comp=N,990μm,0.8s					
MPAG				AML	AML	
	comp=N,990μm,0.8s					
CIMO	**Cimolais**	**1.69**	**31**⇓	*e*Pg	**Pn**	**09 00 12.9 +0.6**
CIMO	**Cimolais**	**1.69**	**31**	*e*Pg	**Pn**	**09 00 12.9 +0.6**
TLI	**Talmassons**	**1.70**	**51**	*e*Pg	**Pb**	**09 00 14.1 -0.3**
TLI	**Talmassons**	**1.70**	**51**	*e*Pg	**Pb**	**09 00 14.1 -0.3**
BRMO	**Bormio**	**1.71**	**340**	AML	AML	
	comp=N,2110μm,0.5s					
BRMO				AML	AML	
	comp=E,2045μm,0.5s					
BRMO				AML	AML	
	comp=N,2110μm,0.5s					
BRMO				AML	AML	
	comp=E,2045μm,0.5s					
ATVO	**AVT- Monte Val**	**1.72**	**149**	AML	AML	
	comp=E,1790μm,0.7s					
ATVO				AML	AML	
	comp=E,1790μm,0.7s					
ATVO				AML	AML	
	comp=N,914μm,1.1s					
ATVO				AML	AML	
	comp=N,914μm,1.1s					
STAL	**STALIGIAL**	**1.75**	**37**	AML	AML	
	comp=N,2275μm,0.3s					
STAL				AML	AML	
	comp=E,2130μm,0.3s					
STAL				AML	AML	
	comp=N,2195μm,0.3s					
STAL				AML	AML	
	comp=E,2600μm,0.3s					
STAL				AML	AML	
	comp=N,2275μm,0.3s					
STAL				AML	AML	
	comp=N,2195μm,0.3s					
STAL				AML	AML	
	comp=E,2130μm,0.3s					
STAL				AML	AML	
	comp=E,2600μm,0.3s					
TRIF	**Trifonti**	**1.76**	**187**	AML	AML	
	comp=N,408μm,0.6s					
TRIF				AML	AML	
	comp=E,400μm,1.0s					
TRIF				AML	AML	
	comp=N,408μm,0.6s					
TRIF				AML	AML	
	comp=E,400μm,1.0s					
ATVA	**AVT- Monte Val**	**1.77**	**153**	AML	AML	
	comp=N,458μm,0.8s					
ATVA				AML	AML	
	comp=E,478μm,0.6s					
ATVA				AML	AML	
	comp=N,458μm,0.8s					
ATVA				AML	AML	
	comp=E,478μm,0.6s					
AFL	**Alpe Faloria**	**1.80**	**22**	*e*Pn	**Pb**	**09 00 16.0 -0.3**
AFL	**Alpe Faloria**	**1.80**	**22**	*e*Pn	**Pb**	**09 00 16.0 -0.3**
MOSI	**Grossmontoni**	**1.81**	**346**	AML	AML	
	comp=E,3395μm,1.0s					
MOSI				AML	AML	
	comp=E,3395μm,1.0s					
MOSI				AML	AML	
	comp=N,6985μm,1.0s					
MOSI				AML	AML	
	comp=N,6985μm,1.0s					
SSFR	**Montelago di S**	**1.83**	**141**	AML	AML	
	comp=N,1027μm,0.5s					
SSFR				AML	AML	
	comp=E,929μm,1.6s					
SSFR				AML	AML	
	comp=N,1027μm,0.5s					
SSFR				AML	AML	
	comp=E,929μm,1.6s					
MPRI	**Monte Prat**	**1.86**	**42**	*e*Pn	**Pn**	**09 00 15.9 +1.1**
MPRI	**Monte Prat**	**1.86**	**42**	*e*Pn	**Pn**	**09 00 15.9 +1.1**
ATTE	**AVT- Monte Tez**	**1.86**	**153**	AML	AML	
	comp=E,913μm,0.8s					
ATTE				AML	AML	
	comp=N,560μm,0.7s					
ATTE				AML	AML	
	comp=N,560μm,0.7s					
ATTE				AML	AML	
	comp=E,913μm,0.8s					
ABSI	**Aberstueckl**	**1.86**	**2**	AML	AML	
	comp=E,5365μm,0.4s					
ABSI				AML	AML	
	comp=N,4830μm,0.6s					
ABSI				AML	AML	
	comp=E,5365μm,0.4s					
ABSI				AML	AML	
	comp=N,4830μm,0.6s					
MURB	**Monte Urbino**	**1.86**	**149**	AML	AML	
	comp=E,1185μm,1.1s					
MURB				AML	AML	
	comp=E,1185μm,1.1s					
MURB				AML	AML	
	comp=N,1368μm,0.7s					
MURB				AML	AML	
	comp=N,1368μm,0.7s					
PCP	**Piancastagn**	**1.92**	**261**	AML	AML	
	comp=N,1230μm,0.8s					
PCP				AML	AML	
	comp=E,908μm,0.4s					
PCP				AML	AML	
	comp=N,1230μm,0.8s					
PCP				AML	AML	
	comp=E,908μm,0.4s					
CSMI	**Casera Mimoias**	**1.93**	**31**	*e*Pn	**Pn**	**09 00 17.2 +1.3**
CSMI	**Casera Mimoias**	**1.93**	**31**	*e*Pn	**Pn**	**09 00 17.2 +1.3**
VARE	**Varese**	**1.99**	**301**	AML	AML	
	comp=E,1078μm,0.5s					
VARE				AML	AML	
	comp=N,1055μm,0.4s					
VARE				AML	AML	
	comp=N,1055μm,0.4s					
VARE				AML	AML	
	comp=E,1078μm,0.5s					
MGAB	**Montegabbione**	**2.06**	**161**	AML	AML	
	comp=N,611μm,1.2s					
MGAB				AML	AML	
	comp=E,848μm,0.8s					
MGAB				AML	AML	
	comp=N,611μm,1.2s					
MGAB				AML	AML	
	comp=E,848μm,0.8s					
ROSI	**Rosskopf**	**2.07**	**4**	AML	AML	
	comp=N,2645μm,0.7s					
ROSI				AML	AML	
	comp=E,2455μm,0.5s					
ROSI				AML	AML	
	comp=N,2645μm,0.7s					
ROSI				AML	AML	
	comp=E,2455μm,0.5s					
TUE	**Stuetta**	**2.07**	**322**	AML	AML	
	comp=N,1525μm,0.5s					
TUE				AML	AML	
	comp=E,1315μm,0.5s					
TUE				AML	AML	
	comp=N,1525μm,0.5s					
TUE				AML	AML	
	comp=E,1315μm,0.5s					
SACS	**San Casciano d**	**2.08**	**166**	AML	AML	
	comp=E,328μm,0.7s					
SACS				AML	AML	
	comp=N,436μm,0.7s					
SACS				AML	AML	
	comp=E,328μm,0.7s					

SACS				AML	AML		
	comp=N,436μm,0.7s						
CASP	**Castiglione de**	**2.09**	**187**	AML	AML		
	comp=E,234μm,0.9s						
CASP				AML	AML		
	comp=N,188μm,0.9s						
CASP				AML	AML		
	comp=E,234μm,0.9s						
CASP				AML	AML		
	comp=N,188μm,0.9s						
ABTA	**Abfaltersbach**	**2.09**	**25**	*e*Pn	**Pb**	**09 00 20.0**	**-1.2**
	comp=N,4.5nm,0.1s,SNR=32						
ABTA				Sn	**Sb**	**09 00 47.7**	**+0.8**
	comp=N,46nm,0.4s						
ABTA	**Abfaltersbach**	**2.09**	**25**	Pn	**Pb**	**09 00 20.0**	**-1.2**
	comp=N,4.5nm,0.1s,SNR=32						
ABTA				Sn	**Sb**	**09 00 47.7**	**+0.8**
	comp=N,46nm,0.4s						
SKDS	**Skadanscina**	**2.10**	**70**	*i* Pn	**Pn**	**09 00 18.0**	**-0.1**
SKDS				*i* Sn	**Sn**	**09 00 43.2**	**-0.7**
	comp=Z,245nm,0.3s						
SKDS	**Skadanscina**	**2.10**	**70**	Pn	**Pn**	**09 00 18.0**	**-0.1**
SKDS				*i* Sn	**Sn**	**09 00 43.2**	**-0.7**
	comp=Z,245nm,0.3s						
QLNO	**Quiliano**	**2.11**	**256**	AML	AML		
	comp=N,660μm,0.5s						
QLNO				AML	AML		
	comp=E,384μm,0.5s						
QLNO				AML	AML		
	comp=N,660μm,0.5s						
QLNO				AML	AML		
	comp=E,384μm,0.5s						
FINB	**Finale Ligure**	**2.17**	**253**	AML	AML		
	comp=N,53μm,0.4s						
FINB				AML	AML		
	comp=E,2240μm,0.4s						
FINB				AML	AML		
	comp=E,2240μm,0.4s						
FINB				AML	AML		
	comp=N,53μm,0.4s						
RISI	**Rein**	**2.17**	**16**	AML	AML		
	comp=E,2835μm,0.4s						
RISI				AML	AML		
	comp=N,1915μm,0.5s						
RISI				AML	AML		
	comp=E,2835μm,0.4s						
RISI				AML	AML		
	comp=N,1915μm,0.5s						
FETA	**Feichten**	**2.18**	**351**	*e*Pn	**Pb**	**09 00 22.2**	**-0.5**
	SNR=55						
FETA				Sn	**Sb**	**09 00 51.1**	**+1.6**
	comp=N,31nm,0.3s						
FETA	**Feichten**	**2.18**	**351**	Pn	**Pb**	**09 00 22.2**	**-0.5**
	SNR=55						
FETA				Sn	**Sb**	**09 00 51.1**	**+1.6**
	comp=N,31nm,0.3s						
CADS	**Cadrg**	**2.24**	**52**	*i* Pn	**Pn**	**09 00 20.6**	**+0.5**
	comp=Z,319nm,0.4s						
CADS	**Cadrg**	**2.24**	**52**	*i* Pn	**Pn**	**09 00 20.5**	**+0.5**
	comp=Z,319nm,0.4s						
JAVS	**Javornik**	**2.26**	**62**	*i* Pn	**Pn**	**09 00 20.6**	**+0.2**
JAVS				*i* Sn	**Sn**	**09 00 48.6**	**+0.6**
	comp=Z,186nm,0.5s						
JAVS	**Javornik**	**2.26**	**62**	*i* Pn	**Pn**	**09 00 20.6**	**+0.2**
JAVS				*i* Sn	**Sn**	**09 00 48.6**	**+0.6**
	comp=Z,186nm,0.5s						
FDMO	**Fiordimonte**	**2.28**	**143**	AML	AML		
	comp=N,296μm,0.6s						
FDMO				AML	AML		
	comp=E,348μm,0.9s						
FDMO				AML	AML		
	comp=N,296μm,0.6s						
FDMO				AML	AML		
	comp=E,348μm,0.9s						
MOMA	**Monte Martano**	**2.29**	**154**	AML	AML		
	comp=E,388μm,0.7s						
MOMA				AML	AML		
	comp=N,2570μm,1.6s						
MOMA				AML	AML		
	comp=E,366μm,1.6s						
MOMA				AML	AML		
	comp=N,312μm,0.8s						
MOMA				AML	AML		
	comp=E,388μm,0.7s						
MOMA				AML	AML		
	comp=E,366μm,1.6s						
MOMA				AML	AML		
	comp=N,312μm,0.8s						
MOMA				AML	AML		
	comp=N,2570μm,1.6s						
ACOM	**Acomizza, Ital**	**2.33**	**43**	AML	AML		
	comp=N,1265μm,0.9s						
ACOM				AML	AML		
	comp=E,1520μm,0.7s						
ACOM				AML	AML		
	comp=E,1520μm,0.7s						
ACOM				AML	AML		
	comp=N,1265μm,0.9s						
RORO	**Rocca Rossa**	**2.37**	**253**	AML	AML		
	comp=E,261μm,0.7s						
RORO				AML	AML		
	comp=N,268μm,0.5s						
RORO				AML	AML		
	comp=N,268μm,0.5s						
RORO				AML	AML		
	comp=E,261μm,0.7s						
WTTA	**Wattenberg**	**2.42**	**7**	*e*Pn	**Pb**	**09 00 25.0**	**-1.7**
	comp=E,0.6nm,0.1s,SNR=27						
WTTA				Sn	**Sn**	**09 00 54.0**	**+2.1**
	comp=E,53nm,0.5s						
WTTA	**Wattenberg**	**2.42**	**7**	Pn	**Pb**	**09 00 25.0**	**-1.7**
	comp=E,0.6nm,0.1s,SNR=27						
WTTA				Sn	**Sn**	**09 00 54.0**	**+2.1**
	comp=E,53nm,0.5s						
CEY	**Cerknica**	**2.44**	**68**	*e*Pn	**Pn**	**09 00 23.4**	**+0.7**
MAON	**Monte Argentar**	**2.44**	**181**	AML	AML		
	comp=N,121μm,1.1s						
MAON				AML	AML		
	comp=E,100μm,0.9s						
MAON				AML	AML		
	comp=N,121μm,1.1s						
MAON				AML	AML		
	comp=E,100μm,0.9s						
MYKA	**Terra Mystica**	**2.46**	**43**	*e*Pn	**Pn**	**09 00 24.3**	**+1.3**
	comp=E,5.2nm,0.2s						
MYKA				Sn	**Sb**	**09 00 56.4**	**-0.9**
	comp=E,23nm,0.2s						
MYKA	**Terra Mystica**	**2.46**	**43**	Pn	**Pn**	**09 00 24.3**	**+1.3**
	comp=E,5.2nm,0.2s						
MYKA				Sn	**Sb**	**09 00 56.4**	**-0.9**
	comp=E,23nm,0.2s						
MOTA	**Moosalm**	**2.48**	**358**	*e*Pn	**Pn**	**09 00 25.8**	**+2.4**
	comp=E,1.7nm,0.3s,SNR=56						
MOTA				*e*Sn	**Sb**	**09 00 56.6**	**-1.6**
	comp=E,21nm,0.3s						
MOTA	**Moosalm**	**2.48**	**358**	Pn	**Pn**	**09 00 25.8**	**+2.4**
	comp=E,1.7nm,0.3s,SNR=56						
MOTA				Sn	**Sb**	**09 00 56.6**	**-1.6**
	comp=E,21nm,0.3s						
WATA	**Walderalm**	**2.48**	**6**	*e*Pn	**Pn**	**09 00 25.7**	**+2.2**
	comp=E,2.3nm,0.2s,SNR=33						
WATA				Sn	**Sb**	**09 00 56.9**	**-1.3**
	comp=E,39nm,0.5s						
WATA	**Walderalm**	**2.48**	**6**	Pn	**Pn**	**09 00 25.7**	**+2.2**
	comp=E,2.3nm,0.2s,SNR=33						
WATA				Sn	**Sb**	**09 00 56.9**	**-1.3**
	comp=E,39nm,0.5s						
DAVA	**Damuels**	**2.59**	**340**	Pn	**Pb**	**09 00 28.6**	**-1.1**
	comp=E,35nm,0.3s,SNR=29						
DAVA				Sn	**Sb**	**09 01 00.3**	**-1.0**
	comp=E,70nm,0.6s						
DAVA	**Damuels**	**2.59**	**340**	Pn	**Pb**	**09 00 28.6**	**-1.1**
	comp=E,35nm,0.3s,SNR=29						
DAVA				Sn	**Sb**	**09 01 00.3**	**-1.0**
	comp=E,70nm,0.6s						
LJU	**Ljubljana**	**2.62**	**62**	*e*Pn	**Pn**	**09 00 26.4**	**+1.2**
LNSS	**Leonessa**	**2.62**	**149**	AML	AML		
	comp=E,524μm,0.6s						
LNSS				AML	AML		
	comp=N,372μm,0.7s						
LNSS				AML	AML		
	comp=E,524μm,0.6s						
LNSS				AML	AML		
	comp=N,372μm,0.7s						
NVLJ	**Novalja**	**2.63**	**95**	*i* Pn	**Pn**	**09 00 26.1**	**+0.7**
NVLJ				Sn	**Sn**	**09 00 56.8**	**-0.1**
NVLJ	**Novalja**	**2.63**	**95**	*i* Pn	**Pn**	**09 00 26.0**	**+0.7**
NVLJ				Sn	**Sn**	**09 00 56.7**	**-0.1**
RETA	**Reutte**	**2.64**	**354**	*e*Pn	**Pb**	**09 00 28.5**	**-2.0**
	comp=N,37nm,0.3s,SNR=34						
RETA				Sn	**Sb**	**09 01 00.7**	**-1.9**
	comp=N,0.1nm,0.0s						
RETA	**Reutte**	**2.64**	**354**	Pn	**Pb**	**09 00 28.5**	**-2.0**
	comp=N,37nm,0.3s,SNR=34						
RETA				Sn	**Sb**	**09 01 00.7**	**-1.9**
	comp=N,0.1nm,0.0s						
KBA	**Koelnbreinsper**	**2.67**	**33**	*e*Pn	**Pb**	**09 00 29.0**	**-2.1**
	comp=N,6.4nm,0.2s						
KBA				Sn	**Sb**	**09 01 02.9**	**-0.7**
	comp=N,58nm,0.7s						
KBA	**Koelnbreinsper**	**2.67**	**33**	Pn	**Pb**	**09 00 29.0**	**-2.1**
	comp=N,6.4nm,0.2s						
KBA				Sn	**Sb**	**09 01 02.9**	**-0.7**
	comp=N,58nm,0.7s						
NEGI	**Seborga**	**2.71**	**249**	AML	AML		
	comp=N,460μm,0.6s						
NEGI				AML	AML		
	comp=E,452μm,0.9s						
NEGI				AML	AML		
	comp=N,460μm,0.6s						
NEGI				AML	AML		
	comp=E,452μm,0.9s						
SMA1	**SAN MARTINO**	**2.72**	**145**	AML	AML		
	comp=N,501μm,0.5s						
SMA1				AML	AML		
	comp=E,534μm,0.8s						
SMA1				AML	AML		
	comp=N,501μm,0.5s						
SMA1				AML	AML		
	comp=E,534μm,0.8s						
VISS	**Visnje**	**2.73**	**69**	*i* Pn	**Pn**	**09 00 27.5**	**+0.8**
VISS				*i* Sn	**Sn**	**09 00 59.2**	**-0.2**
	comp=Z,33nm,0.2s						
VISS	**Visnje**	**2.73**	**69**	*i* Pn	**Pn**	**09 00 27.5**	**+0.8**
VISS				*i* Sn	**Sn**	**09 00 59.2**	**-0.2**
	comp=Z,33nm,0.2s						
SAOF	**Saorge**	**2.76**	**253**	P	**Pn**	**09 00 29.8**	**+2.7**
SAOF	**Saorge**	**2.76**	**253**	P	**Pn**	**09 00 29.8**	**+2.7**
SAOF				S	**Sb**	**09 01 03.7**	**-2.3**
PGF	**Pioggiola**	**2.81**	**215**	*e*Pn	**Pn**	**09 00 29.4**	**+1.5**
	SNR=1.0						
PGF				*e*Sn	**Sn**	**09 00 59.5**	**-2.1**
	comp=Z,197nm,0.6s,SNR=1.0						
PGF	**Pioggiola**	**2.81**	**215**	*e*Pn	**Pn**	**09 00 29.4**	**+1.5**
	SNR=1.0						
PGF				*e*Sn	**Sn**	**09 00 59.5**	**-2.1**
	comp=Z,99nm,0.6s,SNR=1.0						
OBKA	**Obir**	**2.86**	**54**	*e*Pn	**Pn**	**09 00 30.0**	**+1.4**
	comp=Z,3.6nm,0.1s,SNR=9.1						
OBKA				Sn	**Sn**	**09 01 03.8**	**+1.0**
	comp=Z,83nm,0.4s						
OBKA	**Obir**	**2.86**	**54**	Pn	**Pn**	**09 00 30.0**	**+1.4**
	comp=Z,3.6nm,0.1s,SNR=9.1						
OBKA				Sn	**Sn**	**09 01 03.8**	**+1.0**
	comp=Z,83nm,0.4s						
SBF	**Sospel**	**2.88**	**251**	*e*Pn	**Pn**	**09 00 30.7**	**+1.9**
	SNR=1.0						
SBF				*e*Sn	**Sn**	**09 01 01.7**	**-1.5**
	comp=Z,324nm,0.5s						
SBF	**Sospel**	**2.88**	**251**	*e*Pn	**Pn**	**09 00 30.7**	**+1.9**
	SNR=1.0						
SBF				*e*Sn	**Sn**	**09 01 01.7**	**-1.5**
	comp=Z,162nm,0.5s						
LUCF	**Luceram**	**2.93**	**252**	P	**Pn**	**09 00 32.0**	**+2.4**
LUCF	**Luceram**	**2.93**	**252**	P	**Pn**	**09 00 31.0**	**+1.5**
LUCF				S	**Sn**	**09 01 07.6**	**+3.1**
REVF	**Revere**	**2.98**	**249**	P	**Pn**	**09 00 32.1**	**+2.0**
REVF	**Revere**	**2.98**	**249**	P	**Pn**	**09 00 32.1**	**+2.0**
OZLJ	**Ozalj**	**3.10**	**75**	*e*Pn	**Pn**	**09 00 33.1**	**+1.3**
OZLJ	**Ozalj**	**3.10**	**75**	*e*Pn	**Pn**	**09 00 33.1**	**+1.3**
CRES	**Cresnjev**	**3.15**	**71**	*e*Pn	**Pn**	**09 00 33.1**	**+0.6**
SURF	**Saint Ours**	**3.15**	**265**	P	**Pn**	**09 00 34.2**	**+1.5**
SURF	**Saint Ours**	**3.15**	**265**	P	**Pn**	**09 00 34.2**	**+1.5**
SURF				S	**Sn**	**09 01 12.6**	**+2.5**
MBDF	**Montbardon**	**3.16**	**269**	*e*Pn	**Pn**	**09 00 33.8**	**+1.1**
	SNR=1.0						
MBDF				*e*Sn	**Sn**	**09 01 07.0**	**-3.1**
	comp=Z,132nm,0.6s,SNR=1.0						
MBDF	**Montbardon**	**3.16**	**269**	*e*Pn	**Pn**	**09 00 33.8**	**+1.1**
	SNR=1.0						
LPG	**La Plagne**	**3.21**	**283**	*e*Pn	**Pn**	**09 00 36.9**	**+3.3**
	SNR=1.0						
LPG				*e*Sn	**Sn**	**09 01 08.6**	**-3.0**
	comp=Z,180nm,0.7s						
LPG	**La Plagne**	**3.21**	**283**	*e*Pn	**Pn**	**09 00 36.9**	**+3.3**
	SNR=1.0						
LPL	**La Plagne**	**3.23**	**283**	*e*Pn	**Pn**	**09 00 36.9**	**+3.2**
	SNR=1.0						
LPL				*e*Sn	**Sn**	**09 01 08.5**	**-3.4**
	comp=Z,85nm,0.5s,SNR=1.0						
LPL	**La Plagne**	**3.23**	**283**	*e*Pn	**Pn**	**09 00 36.9**	**+3.2**
	SNR=1.0						
SOKA	**Soboth**	**3.23**	**55**	*i* Pn	**Pn**	**09 00 34.9**	**+1.2**
	comp=Z,14nm,0.5s,SNR=12						
SOKA				*e*Sn	**Sn**	**09 01 14.0**	**+2.1**
	comp=Z,9.9nm,0.3s						
SOKA	**Soboth**	**3.23**	**55**	Pn	**Pn**	**09 00 34.9**	**+1.2**
	comp=Z,14nm,0.5s,SNR=12						
SOKA				Sn	**Sn**	**09 01 14.0**	**+2.1**
	comp=Z,9.9nm,0.3s						
CALF	**Calern**	**3.27**	**252**	P	**Pn**	**09 00 36.5**	**+2.3**
CALF	**Calern**	**3.27**	**252**	P	**Pn**	**09 00 36.5**	**+2.3**
CALF				S	**Sn**	**09 01 16.3**	**+3.5**
UDBI	**Udbina**	**3.27**	**94**	*e*Pn	**Pn**	**09 00 34.8**	**+0.6**
UDBI	**Udbina**	**3.27**	**94**	*e*Pn	**Pn**	**09 00 34.7**	**+0.6**
FRF	**La Foret Royal**	**3.53**	**250**	*e*Pn	**Pn**	**09 00 39.9**	**+2.3**
FRF				*e*Sn	**Sn**	**09 01 19.0**	**0.0**
	comp=Z,94nm,0.5s						
FRF	**La Foret Royal**	**3.53**	**250**	*e*Pn	**Pn**	**09 00 39.9**	**+2.3**
FRF				*e*Sn	**Sn**	**09 01 19.0**	**0.0**
	comp=Z,47nm,0.5s						
MOA	**Molln**	**3.66**	**34**	*e*Pn	**Pn**	**09 00 40.5**	**+1.0**
	comp=Z,1.1nm,0.2s,SNR=8.5						
MOA				*e*Sn	**Sn**	**09 01 24.2**	**+1.9**
	comp=Z,19nm,0.5s						
MOA	**Molln**	**3.66**	**34**	Pn	**Pn**	**09 00 40.5**	**+1.0**
	comp=Z,1.1nm,0.2s,SNR=8.5						
MOA				Sn	**Sn**	**09 01 24.2**	**+1.9**
	comp=Z,19nm,0.5s						
OG25	**Le Caire**	**3.70**	**264**	P	**Pn**	**09 00 43.3**	**+3.2**
OG25	**Le Caire**	**3.70**	**264**	P	**Pn**	**09 00 43.3**	**+3.2**
LMR	**La Mourre**	**3.71**	**247**	*e*Pn	**Pn**	**09 00 41.9**	**+1.7**
	SNR=1.0						
LMR				*e*Sn	**Sn**	**09 01 21.6**	**-1.9**
	comp=Z,72nm,0.4s,SNR=1.0						
LMR	**La Mourre**	**3.71**	**247**	*e*Pn	**Pn**	**09 00 41.9**	**+1.7**
	SNR=1.0						
LMR				*e*Sn	**Sn**	**09 01 21.6**	**-1.9**
	comp=Z,36nm,0.4s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**3.78**	**273**	*e*Pn	**Pn**	**09 00 44.4**	**+3.1**
	SNR=1.0						
ORIF	**Oris-en-Rattie**	**3.78**	**273**	*e*Pn	**Pn**	**09 00 44.4**	**+3.1**
	SNR=1.0						
ARSA	**Arzberg**	**3.84**	**50**	*i* Pn	**Pn**	**09 00 42.8**	**+0.9**
	comp=Z,11nm,0.5s						
ARSA				*e*Sn	**Sn**	**09 01 26.0**	**-0.7**
	comp=Z,5.1nm,0.3s						
ARSA	**Arzberg**	**3.84**	**50**	Pn	**Pn**	**09 00 42.8**	**+0.9**
	comp=Z,11nm,0.5s						
ARSA				Sn	**Sn**	**09 01 26.0**	**-0.7**
	comp=Z,5.1nm,0.3s						
LOMF	**Lomont**	**3.93**	**311**	P	**Pn**	**09 00 44.1**	**+0.9**
LOMF	**Lomont**	**3.93**	**311**	P	**Pn**	**09 00 44.1**	**+0.9**
CABF	**La Chapelle**	**3.98**	**298**	*e*Pn	**Pn**	**09 00 46.9**	**+2.9**
	SNR=1.0						
CABF	**La Chapelle**	**3.98**	**298**	*e*Pn	**Pn**	**09 00 46.9**	**+2.9**
	SNR=1.0						
MOF	**Molkenrain**	**4.11**	**318**	P	**Pn**	**09 00 46.9**	**+1.2**
MOF	**Molkenrain**	**4.11**	**318**	P	**Pn**	**09 00 46.9**	**+1.2**
SMRF	**Simiane la Rot**	**4.13**	**260**	*e*Pn	**Pn**	**09 00 48.6**	**+2.6**
SMRF	**Simiane la Rot**	**4.13**	**260**	*e*Pn	**Pn**	**09 00 48.6**	**+2.6**
OCF	**Saint Nazaire**	**4.21**	**268**	P	**Pn**	**09 00 50.7**	**+3.5**
OG26	**St.-Nazaire-De**	**4.21**	**268**	P	**Pn**	**09 00 50.7**	**+3.5**
HINF	**Hinteralfeld**	**4.22**	**316**	*e*Pn	**Pn**	**09 00 49.4**	**+2.2**
	SNR=1.0						
HINF				*e*Sn	**Sn**	**09 01 37.1**	**+1.0**
	comp=Z,33nm,0.3s,SNR=1.0						
HINF	**Hinteralfeld**	**4.22**	**316**	*e*Pn	**Pn**	**09 00 49.4**	**+2.2**
	SNR=1.0						
HINF				*e*Sn	**Sn**	**09 01 37.1**	**+1.0**
	comp=Z,16nm,0.3s,SNR=1.0						
BLY	**Banja Luka**	**4.26**	**89**	*e*Pn	**Pn**	**09 00 48.6**	**+0.9**
GERES	**GERESS Array B**	**4.33**	**22**	Pn	**Pn**	**09 00 49.8**	**+0.9**
	comp=Z,1.9nm,0.3s,baz=197,slow=13,SNR=20						
GERES				Pg	**Pg**	**09 01 04.7**	**-1.8**
	comp=Z,3.4nm,0.3s,baz=200,slow=17,SNR=19						
GERES				Sn	**Sn**	**09 01 39.3**	**+0.3**
	comp=Z,3.9nm,0.3s,baz=202,slow=24,SNR=5.4						
GERES				Lg	Lg	09 02 02.5	
	comp=Z,6.7nm,0.3s,baz=205,slow=30,SNR=6.9						
CONA	**Conrad Observa**	**4.45**	**45**	*e*Pn	**Pn**	**09 00 51.4**	**+1.1**
	comp=Z,1.6nm,0.3s						
CONA				*e*Sn	**Sn**	**09 01 42.6**	**+0.8**
	comp=Z,14nm,0.5s						
CONA	**Conrad Observa**	**4.45**	**45**	Pn	**Pn**	**09 00 51.4**	**+1.1**
	comp=Z,1.6nm,0.3s						
CONA				Sn	**Sn**	**09 01 42.6**	**+0.8**
	comp=Z,14nm,0.5s						
CDF	**Champ du Feu**	**4.46**	**324**	*e*Pn	**Pn**	**09 00 52.2**	**+1.7**
	SNR=1.0						
CDF				*e*Sn	**Sn**	**09 01 41.6**	**-0.5**
	comp=Z,26nm,0.5s,SNR=1.0						
CDF	**Champ du Feu**	**4.46**	**324**	*e*Pn	**Pn**	**09 00 52.2**	**+1.7**
	SNR=1.0						
CDF				*e*Sn	**Sn**	**09 01 41.6**	**-0.5**
	comp=Z,13nm,0.5s,SNR=1.0						
KHC	**Kasperske Hory**	**4.56**	**20**	*e*PN	**Pn**	**09 00 53.0**	**+1.1**
KHC				*e*PG	**Pg**	**09 01 08.7**	**-2.2**
KHC				*e*SN	**Sn**	**09 01 43.3**	**-1.3**
KHC				*e*SG	**Sg**	**09 02 08.3**	**-1.7**
KHC				AMS	AMS	09 02 50.0	
	comp=Z,400nm,7.2s						
KHC	**Kasperske Hory**	**4.56**	**20**	Pn	**Pn**	**09 00 53.0**	**+1.1**
HAU	**Haudompre**	**4.59**	**315**	*e*Pn	**Pn**	**09 00 53.9**	**+1.6**
	SNR=1.0						
HAU				*e*Sn	**Sn**	**09 01 45.1**	**-0.3**
	comp=Z,83nm,0.4s,SNR=1.0						
HAU	**Haudompre**	**4.59**	**315**	*e*Pn	**Pn**	**09 00 53.9**	**+1.6**
	SNR=1.0						
HAU				*e*Sn	**Sn**	**09 01 45.1**	**-0.3**
	comp=Z,41nm,0.4s,SNR=1.0						
VIVF	**Saint-Julien-l**	**4.64**	**272**	*e*Pn	**Pn**	**09 00 54.7**	**+1.7**
	SNR=1.0						
VIVF				*e*Sn	**Sn**	**09 01 45.8**	**-0.8**
	comp=Z,30nm,0.5s						
VIVF	**Saint-Julien-l**	**4.64**	**272**	*e*Pn	**Pn**	**09 00 54.7**	**+1.7**
	SNR=1.0						
VIVF				*e*Sn	**Sn**	**09 01 45.8**	**-0.8**
	comp=Z,15nm,0.5s						
LANF	**Langenberg**	**4.73**	**332**	P	**Pn**	**09 00 56.1**	**+1.9**
LANF	**Langenberg**	**4.73**	**332**	P	**Pn**	**09 00 56.1**	**+1.9**
THEF	**They Montfort**	**4.92**	**315**	P	**Pn**	**09 00 57.8**	**+0.9**
THEF	**They Montfort**	**4.92**	**315**	P	**Pn**	**09 00 57.8**	**+0.9**
STON	**Ston**	**5.10**	**111**	*e*Pn	**Pn**	**09 00 59.3**	**+0.1**
STON				Sn	**Sn**	**09 01 54.7**	**-3.1**
STON	**Ston**	**5.10**	**111**	*e*Pn	**Pn**	**09 00 59.3**	**+0.1**
STON				Sn	**Sn**	**09 01 54.7**	**-3.1**
ZST	**Bratislava**	**5.26**	**49**	*e*PN	**Pn**	**09 01 00.9**	**-0.5**
ZST	**Bratislava**	**5.26**	**49**	*e*Pn	**Pn**	**09 01 00.9**	**-0.5**
LASF	**Ste Croix**	**5.32**	**264**	*e*Pn	**Pn**	**09 01 04.5**	**+2.3**
	SNR=1.0						
LASF				*e*Sn	**Sn**	**09 02 02.0**	**-1.1**
	comp=Z,20nm,0.7s						
LASF	**Ste Croix**	**5.32**	**264**	*e*Pn	**Pn**	**09 01 04.5**	**+2.3**
	SNR=1.0						
LASF				*e*Sn	**Sn**	**09 02 02.0**	**-1.1**
	comp=Z,10nm,0.7s						
NKC	**Novy Kostel**	**5.44**	**8**	*e*PN	**Pn**	**09 01 04.9**	**+1.0**
NKC				*e*PG	**Pg**	**09 01 25.3**	**-2.3**
NKC	**Novy Kostel**	**5.44**	**8**	Pn	**Pn**	**09 01 04.9**	**+1.0**
SMF	**Signal de Mont**	**5.45**	**292**	*e*Pn	**Pn**	**09 01 06.1**	**+2.0**
	SNR=1.0						
SMF				*e*Sn	**Sn**	**09 02 05.7**	**-0.7**
	comp=Z,84nm,0.7s,SNR=1.0						
SMF	**Signal de Mont**	**5.45**	**292**	*e*Pn	**Pn**	**09 01 06.1**	**+2.0**
	SNR=1.0						
MODS	**Modra-Piesok**	**5.46**	**48**	*e*PN	**Pn**	**09 01 04.2**	**0.0**
MODS				*e*SN	**Sn**	**09 02 00.3**	**-6.4**
MODS	**Modra-Piesok**	**5.46**	**48**	*e*Pn	**Pn**	**09 01 04.2**	**0.0**
KRUC	**Moravsky**	**5.50**	**38**	*e*PN	**Pn**	**09 01 05.5**	**+0.8**
KRUC				*e*SN	**Sn**	**09 02 08.1**	**+0.5**
KRUC				*e*SG	**Sg**	**09 02 39.4**	**-0.5**
TREB	**Trebinje**	**5.60**	**110**	*e*Pn	**Pn**	**09 01 06.2**	**+0.1**
GOPC	**GO Pecny, Ondr**	**5.61**	**24**	*e*PN	**Pn**	**09 01 07.5**	**+1.3**
GOPC				*e*PG	**Pg**	**09 01 27.0**	**-3.8**
GOPC	**GO Pecny, Ondr**	**5.61**	**24**	Pn	**Pn**	**09 01 07.5**	**+1.3**
LOR	**Lormes**	**5.65**	**298**	*e*Pn	**Pn**	**09 01 09.5**	**+2.7**
	SNR=1.0						
LOR				*e*Sn	**Sn**	**09 02 07.2**	**-4.1**
	comp=Z,35nm,0.4s,SNR=1.0						
LOR	**Lormes**	**5.65**	**298**	*e*Pn	**Pn**	**09 01 09.5**	**+2.7**
	SNR=1.0						
PRA	**Prague**	**5.65**	**22**	*e*SG	**Sg**	**09 02 44.3**	**-0.4**
PRA	**Prague**	**5.65**	**22**	Sg	**Sg**	**09 02 44.3**	**-0.4**
BRY	**Bratogost**	**5.65**	**108**	*e*Pn	**Pn**	**09 01 08.1**	**+1.1**
VRAC	**Vranov**	**5.77**	**38**	*e*Pn	**Pn**	**09 01 09.0**	**+0.6**
VRAC				*e*Sg	**Sg**	**09 02 48.5**	**-0.1**
VRAC	**Vranov**	**5.77**	**38**	*e*PN	**Pn**	**09 01 09.0**	**+0.6**
VRAC				*e*SN	**Sn**	**09 02 13.2**	**-1.1**
VRAC				*e*SG	**Sg**	**09 02 48.5**	**-0.1**
UPM	**Unac-Piva**	**5.80**	**104**	*e*Pn	**Pn**	**09 01 11.5**	**+2.5**
SSF	**Saint Saulge**	**5.80**	**295**	*e*Pn	**Pn**	**09 01 10.5**	**+1.7**
	SNR=1.0						
SSF				*e*Sn	**Sn**	**09 02 13.8**	**-1.1**
	comp=Z,22nm,0.5s,SNR=1.0						
SSF	**Saint Saulge**	**5.80**	**295**	*e*Pn	**Pn**	**09 01 10.5**	**+1.7**
	SNR=1.0						
AVF	**Avril sur Loir**	**5.81**	**292**	*e*Pn	**Pn**	**09 01 09.0**	**0.0**
	SNR=1.0						
AVF				*e*Sn	**Sn**	**09 02 10.2**	**-5.1**
	comp=Z,33nm,0.9s,SNR=1.0						
AVF	**Avril sur Loir**	**5.81**	**292**	*e*Pn	**Pn**	**09 01 09.0**	**0.0**
	SNR=1.0						
HCY	**Herceg Novi**	**5.81**	**112**	*e*Pn	**Pn**	**09 01 07.7**	**-1.4**
BBLS	**Lazići**	**5.96**	**97**	*e*Pn	**Pn**	**09 01 12.0**	**+0.8**
JAVC	**Velka Javorina**	**5.97**	**46**	*e*SG	**Sg**	**09 03 03.2**

I45RU USSURIYSK INFR 19.00 253 *i* 11 01 30.0
baz=54,slow=329,SNR=0.9
I30JP ISUMI INFRASON 21.45 222 *i* 11 16 10.0
baz=31,slow=319,SNR=0.4

ISCJB ***15*** *09:09:06.9±1.3, 15°.4N±0°.1×146°.0E±0°.3, h100km, mb3.3/5, Error ellipse: s-maj=40.4km s-min=10.5km az=24.3*
IDC ***15*** *09:09:08.3±5.5, 15°.20N×146°.09E, h103km±76km, mb3.2/5, mb1 3.3/5, mb1mx3.0/64, mbtmp3.5/5, Error ellipse: s-maj=79.8km s-min=35.7km az=179.0*
ISC 15 09:09:08.3±1.4, 15°.3N±0°.2×146°.1E±0°.3, h100km, n6, σ0§65/7, mb3.4/5, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.05**	**215**	P	**Pn**	**09 09 42.0**	**+0.5**
	13nm,0.3s,baz=42,slow=12,SNR=11						
GUMO				S	**Sn**	**09 10 06.2**	**-0.7**
	48nm,0.3s,baz=162,slow=13,SNR=14						
SONM	**Songino Array**	**46.04**	**323**	P	**P**	**09 17 21.7**	**-0.4**
	0.3nm,0.6s,baz=123,slow=5.3,SNR=3.4						
MKAR	**Makanchi Array**	**61.09**	**315**	P	**P**	**09 19 12.6**	**+0.7**
	0.4nm,0.6s,baz=90,slow=8.8,SNR=3.0						
KURBB	**Kurchatov Arra**	**64.09**	**319**	P	**P**	**09 19 31.7**	**0.0**
	0.2nm,0.3s,baz=93,slow=7.2,SNR=4.1						
ILAR	**Eielson Array**	**66.55**	**25**	P	**P**	**09 19 46.8**	**-0.5**
	0.2nm,0.4s,baz=242,slow=6.2,SNR=6.3						
YKA	**Yellowknife Ar**	**80.83**	**28**	P	**P**	**09 21 11.2**	**+0.3**
	0.1nm,0.4s,baz=285,slow=5.3,SNR=5.2						

IDC 15 09:09:51.3±8.4, 21°.77S×170°.03E, h104km±49km, mb3.6/3, mb1 3.8/4, mb1mx3.3/48, mbtmp4.0/4, Error ellipse: s-maj=102.4km s-min=65.1km az=178.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.35**	**264**	P	Pn	09 10 41.8	-0.1
	14nm,0.3s,baz=100,slow=17,SNR=182						
DZM				S	Sn	09 11 21.3	+0.4
	114nm,0.3s,baz=101,slow=16,SNR=27						
STKA	**Stephens Creek**	**27.23**	**242**	P	P	09 15 26.4	+0.8
	2.4nm,0.8s,baz=96,slow=12,SNR=4.4						
ASAR	**Alice Springs**	**33.33**	**260**	P	P	09 16 19.5	0.0
	1.2nm,0.7s,baz=78,slow=9.3,SNR=18						
WRA	**Warramunga Arr**	**33.36**	**267**	P	P	09 16 19.1	-0.7
	0.8nm,0.7s,baz=103,slow=8.1,SNR=20						

ISCJB ***15*** *09:19:56.5±0.5, 36°.96N±0°.03×28°.25E±0°.03, h0km, Error ellipse: s-maj=4.2km s-min=3.5km az=15.2*
DDA ***15*** *09:19:56.5, 36°.95N×28°.23E, h7km, Ml2.5, Suspected Mining explosion.*
CSEM ***15*** *09:19:56.8±0.3, 36°.95N×28°.22E, h1km, ML2.1, Error ellipse: s-maj=5.9km s-min=4.5km az=12.0, Suspected Mining explosion.*
ISK ***15*** *09:19:56.4, 36°.92N×28°.18E, h15km±4km, ML2.1/7*
ISC 15 09:19:54.8±0.8, 37°.02N±0°.03×28°.30E±0°.02, h0km, n25, σ1§46/40, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TURN	**Turunc**	**0.28**	**121**	PG	**Pg**	**09 20 00.6**	**+0.5**
TURN				SG	**Sg**	**09 20 03.5**	**-0.2**
TURN	**Turunc**	**0.28**	**121**	*i* P	**Pg**	**09 20 00.5**	**+0.4**
TURN				*i* S	**Sg**	**09 20 03.0**	**-0.7**
TURN	**Turunc**	**0.28**	**121**	*e*Pg	**Pg**	**09 20 00.6**	**+0.5**
TURN				S	**Sg**	**09 20 03.0**	**-0.7**
MRSB	**Marmaris-Mugla**	**0.31**	**196**	PG	**Pg**	**09 20 01.3**	**+0.5**
MRSB				SG	**Sg**	**09 20 05.3**	**+0.5**
MRSB	**Marmaris-Mugla**	**0.31**	**196**	*e*Pg	**Pg**	**09 20 01.3**	**+0.5**
MRSB				*e*Sg	**Sg**	**09 20 05.3**	**+0.5**
DALY	**Dalyan (Mu¨la**	**0.34**	**125**	PG	**Pb**	**09 20 03.9**	**+0.1**
DALY	**Dalyan (Mu¨la**	**0.34**	**125**	*i* P	**Pb**	**09 20 03.7**	**-0.1**
DALY				*i* S	**Sb**	**09 20 09.6**	**-0.2**
DALY	**Dalyan (Mu¨la**	**0.34**	**125**	P	**Pb**	**09 20 03.7**	**-0.1**
DALY				S	**Sb**	**09 20 09.6**	**-0.2**
DAT	**Datca**	**0.65**	**244**	PG	**Pg**	**09 20 06.8**	**-0.4**
DAT	**Datca**	**0.65**	**244**	*i* P	**Pg**	**09 20 07.3**	**+0.1**
DAT				*i* S	**Sg**	**09 20 16.7**	**+1.1**
DAT	**Datca**	**0.65**	**244**	*e*Pg	**Pg**	**09 20 06.8**	**-0.4**
DAT	**Datca**	**0.65**	**244**	P	**Pg**	**09 20 07.3**	**+0.1**
DAT				S	**Sg**	**09 20 16.7**	**+1.1**
TAVA	**DENIZLI_Tavas**	**0.66**	**47**	*i* P	**Pn**	**09 20 11.0**	**-0.5**
TAVA				*i* S	**Sn**	**09 20 22.1**	**-0.5**
TAVA	**DENIZLI_Tavas**	**0.66**	**47**	P	**Pn**	**09 20 11.0**	**-0.5**
TAVA				S	**Sn**	**09 20 22.1**	**-0.5**
BDRM	**Kayabasi**	**0.69**	**274**	*i* S	**Sg**	**09 20 08.9**	**-8.0**
BDRM				*i* S	**Sb**	**09 20 19.5**	**-0.3**
BDRM	**Kayabasi**	**0.69**	**274**	S	**Sb**	**09 20 19.5**	**-0.3**
AYDN	**Tasoluk**	**0.73**	**332**	*i* P	**Pb**	**09 20 11.2**	**+0.8**
AYDN				*i* S	**Sb**	**09 20 21.7**	**+0.8**
AYDN	**Tasoluk**	**0.73**	**332**	P	**Pb**	**09 20 11.2**	**+0.8**
AYDN				S	**Sb**	**09 20 21.7**	**+0.8**
FETY	**Fethiye**	**0.73**	**121**	PG	**Pn**	**09 20 12.2**	**-0.2**
FETY	**Fethiye**	**0.73**	**121**	*e*Pg	**Pn**	**09 20 12.2**	**-0.2**
FETY	**Fethiye**	**0.73**	**121**	P	**Pn**	**09 20 12.8**	**+0.4**
FETY				S	**Sb**	**09 20 20.6**	**-0.4**
BODT	**Bodrum**	**0.80**	**274**	PG	**Pg**	**09 20 10.5**	**+0.5**
BODT	**Bodrum**	**0.80**	**274**	*e*Pg	**Pg**	**09 20 10.5**	**+0.5**
AYDB	**Zeytinkoy-Aydi**	**0.98**	**341**	PG	**Pn**	**09 20 17.6**	**+1.6**
AYDB	**Zeytinkoy-Aydi**	**0.98**	**341**	*e*Pg	**Pn**	**09 20 17.6**	**+1.6**

IDC ***15*** *09:22:00.5±0.9, 29°.00N×131°.05E, h0km, mb3.8/8, mb1 3.8/11, mb1mx3.6/67, mbtmp3.7/11, ML3.6/3, Error ellipse: s-maj=30.2km s-min=18.8km az=90.0*
ISCJB ***15*** *09:22:04.6±0.8, 28°.96N±0°.08×131°.0E±0°.1, h45km, mb3.7/9, Error ellipse: s-maj=19.0km s-min=8.5km az=29.9*
ISC 15 09:22:06.3±0.9, 29°.03N±0°.08×130°.9E±0°.1, h45km, n12, σ1§56/14, mb3.9/9, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOW	**Kunigami**	**3.22**	**228**	Pn	**Pn**	**09 22 52.6**	**-1.7**
	40nm,0.3s,baz=283,slow=25,SNR=75						
JOW				Sn	**Sn**	**09 23 29.7**	**-1.8**
	16nm,0.3s,baz=86,slow=29,SNR=6.3						
JNU	**Nakatsue**	**4.08**	**359**	Pn	**Pn**	**09 23 05.6**	**-0.6**
	1.5nm,0.3s,baz=191,slow=12,SNR=23						
JNU				Sn	**Sn**	**09 23 50.0**	**-2.8**
	1.9nm,0.3s,baz=299,slow=19,SNR=6.4						
MJAR	**Matsushiro Arr**	**9.67**	**37**	Pn	**Pn**	**09 24 21.5**	**-1.4**
	0.7nm,0.3s,baz=212,slow=16,SNR=7.6						
MKAR	**Makanchi Array**	**41.56**	**309**	P	**P**	**09 29 51.0**	**+1.5**
	0.3nm,0.4s,baz=91,slow=12,SNR=4.0						
KURBB	**Kurchatov Arra**	**44.57**	**314**	P	**P**	**09 30 14.7**	**+1.0**
	1.6nm,0.4s,baz=97,slow=8.7,SNR=15						
WRA	**Warramunga Arr**	**48.79**	**176**	P	**P**	**09 30 46.7**	**-0.3**
	0.8nm,1.0s,baz=357,slow=8.3,SNR=5.2						
ASAR	**Alice Springs**	**52.47**	**177**	P	**P**	**09 31 15.8**	**+1.1**
	0.3nm,0.6s,baz=7.0,slow=13,SNR=4.5						
FINES	**FINESS Array B**	**71.61**	**331**	P	**P**	**09 33 23.1**	**+0.4**
	0.9nm,0.4s,baz=75,slow=5.2,SNR=10						
AKASG	**Malin Array Be**	**74.96**	**320**	P	**P**	**09 33 44.5**	**+1.8**
	0.7nm,0.3s,baz=56,slow=6.3,SNR=4.3						
YKA	**Yellowknife Ar**	**74.98**	**26**	P	**P**	**09 33 42.7**	**+0.2**
	0.1nm,0.5s,baz=303,slow=5.8,SNR=3.3						
HFS	**Hagfors**	**77.45**	**333**	P	**P**	**09 33 58.1**	**+1.5**
	0.6nm,0.4s,baz=60,slow=3.8,SNR=5.0						
NB2	**NORSAR Subarra**	**77.86**	**334**	P	**P**	**09 33 58.7**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=50,slow=5.9						

NIED ***15*** *09:35:00, 44°.80N×148°.00E, h107km, Mw4.5 Best double couple: M0=6.83000×10^15 NP1:φs=146.00000°, δ54.00000°, λ-31.00000°. NP2:φs=255.00000°, δ66.00000°, λ-140.00000°.*
BJI ***15*** *09:35:17.6, 45°.35N×148°.10E, h165km, mb4.8/41, mbB4.8/24*
ISCJB ***15*** *09:35:18.8±0.2, 45°.22N±0°.02×147°.86E±0°.02, h159km±2km, mb4.7/351, Error ellipse: s-maj=4.1km s-min=2.5km az=165.6*
SKHL ***15*** *09:35:19.4±0.7, 45°.15N×147°.85E, h144km±6km, mb5.1/12, msh5.6/6*
MOS ***15*** *09:35:19.0±1.0, 45°.24N×147°.83E, h162km, mb4.8/84, Error ellipse: s-maj=5.9km s-min=4.3km az=90.2*
IDC ***15*** *09:35:20.7±0.7, 45°.32N×147°.78E, h163km±6km, mb4.4/36, mb1 4.5/43, mb1mx4.3/77, mbtmp4.8/43, MS2.9/3, Ms1 2.9/3, ms1mx2.6/73, Error ellipse: s-maj=8.7km s-min=6.7km az=153.0*
JMA ***15*** *09:35:20.3±0.4, 44°.77N×148°.04E, h163km, M4.7*
JMA Felt I J1.
NEIC ***15*** *09:35:21.5±0.1, 45°.35N×147°.73E, mb4.8/282, Error ellipse: s-maj=4.0km s-min=2.3km az=165.0*
NEIC Recorded [1 JMA] in eastern Hokkaido.
ISC 15 09:35:19.3±0.4, 45°.16N±0°.04×147°.92E±0°.04, h155km±3km, h155km↑pP-P, n1105, σ1§12/1161, mb4.8/356, 40C-18D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.08**	**332**	*i* P	**Pn**	**09 35 40.0**	**+0.1**
KUR				AMB	AMB	09 35 40.0	
	521nm,0.5s						
KUR				AMB	AMB	09 35 40.0	
	373nm,0.5s						
KUR				AMB	AMB	09 35 40.0	
	354nm,0.5s						
KUR				AMB	AMB	09 35 40.8	
	1μm,1.0s						
KUR				*i* S	**Sn**	**09 35 55.8**	**+0.1**
KUR				A	A	09 35 59.0	
	6μm,0.5s						
KUR				A	A	09 35 59.0	
	4μm,0.5s						
KUR	**Kuril'sk**	**0.08**	**332**	*d* iPN	**Pn**	**09 35 40.0**	**+0.1**
KUR				*i* S	**Sn**	**09 35 55.8**	**+0.1**
KUR				pmax	pmax		
	comp=E,369nm,0.5s						
KUR				pmax	pmax		
	comp=Z,4μm,0.5s						
KUR				pmax	pmax		
	comp=N,527nm,0.4s						
KUR				smax	smax		
	comp=N,5μm,0.5s						
KUR				smax	smax		
	comp=E,3μm,0.6s						
SHO	**Shikotan**	**1.51**	**212**	*e*P	**Pn**	**09 35 48.4**	**-0.9**
SHO				AMB	AMB	09 35 49.7	
	comp=E,600nm,0.5s						
SHO				*i* S	**Sn**	**09 36 09.2**	**-3.0**
SHO				A	A	09 36 09.8	
	comp=E,2μm,0.6s						
SHO				A	A	09 36 09.8	
	comp=E,494nm,0.6s						
SHO	**Shikotan**	**1.51**	**212**	*c* iPN	**Pn**	**09 35 48.4**	**-0.9**
SHO				pmax	pmax		
	comp=N,1μm,0.3s						
SHO				pmax	pmax		
	comp=E,3μm,0.3s						
SHO				pmax	pmax		
	comp=Z,6μm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.85**	**233**	*i* P	**Pn**	**09 35 53.0**	**0.0**
YUK				AMB	AMB	09 35 54.0	
	comp=Z,665nm,0.5s						
YUK				AMB	AMB	09 35 54.0	
	comp=Z,107nm,0.5s						
YUK				AMB	AMB	09 35 54.0	
	comp=Z,750nm,0.5s						
YUK				*i* S	**Sn**	**09 36 18.8**	**0.0**
YUK				A	A	09 36 21.0	
	comp=Z,1μm,0.6s						
YUK				A	A	09 36 21.0	
	comp=Z,974nm,0.6s						
YUK	**Yuzh-Kuril'sk**	**1.85**	**233**	*c* iPN	**Pn**	**09 35 53.6**	**+0.6**
YUK				*i* S	**Sn**	**09 36 18.8**	**0.0**
YUK				pmax	pmax		
	comp=N,665nm,0.3s						
YUK				pmax	pmax		
	comp=E,1μm,0.3s						
YUK				pmax	pmax		
	comp=Z,8μm,0.3s						
YUK				smax	smax		
	comp=N,10μm,0.5s						
YUK				smax	smax		
	comp=E,10μm,0.4s						
LAGR	**Lagunnoye**	**1.88**	**235**	*i* P	**Pn**	**09 35 54.0**	**+0.7**
LAGR				AMB	AMB	09 35 58.0	
	comp=E,108nm,0.5s						
LAGR				AMB	AMB	09 35 58.0	
	comp=E,267nm,0.5s						
LAGR				*e*S	**Sn**	**09 36 20.0**	**+0.6**
LAGR				A	A	09 36 24.0	
	comp=E,2μm,0.6s						
LAGR				A	A	09 36 24.0	
	comp=E,783nm,0.6s						
LAGR	**Lagunnoye**	**1.88**	**235**	*d* iPN	**Pn**	**09 35 54.0**	**+0.7**
LAGR				*e*S	**Sn**	**09 36 20.2**	**+0.8**
LAGR				pmax	pmax		
	comp=Z,3μm,0.5s						
LAGR				pmax	pmax		
	comp=E,2μm,0.4s						
LAGR				pmax	pmax		
	comp=N,1μm,0.3s						
LAGR				smax	smax		
	comp=N,19μm,0.6s						
LAGR				smax	smax		
	comp=E,8μm,0.7s						
GRPR	**Tuman**	**1.93**	**233**	*e*P	**Pn**	**09 35 54.0**	**+0.1**
GRPR				AMB	AMB	09 35 56.0	
	comp=E,802nm,0.4s						
GRPR				AMB	AMB	09 35 56.0	
	comp=E,344nm,0.4s						
GRPR				*e*S	**Sn**	**09 36 20.0**	**-0.4**
GRPR				A	A	09 36 21.0	
	comp=E,1μm,0.5s						
GRPR				A	A	09 36 21.0	
	comp=E,1μm,0.5s						
GRPR	**Tuman**	**1.93**	**233**	*e*PN	**Pn**	**09 35 54.5**	**+0.6**
GRPR				*e*S	**Sn**	**09 36 20.0**	**-0.4**
GRPR				pmax	pmax		
	comp=Z,3μm,0.4s						
GRPR				pmax	pmax		
	comp=E,802nm,0.2s						
GRPR				pmax	pmax		
	comp=N,1μm,0.5s						
GRPR				smax	smax		
	comp=E,12μm,0.6s						
GRPR				smax	smax		
	comp=N,11μm,0.4s						
GLVR	**Golovnino**	**2.23**	**231**	*e*P	**Pn**	**09 35 58.0**	**+0.6**
GLVR				AMB	AMB	09 35 58.0	
	comp=N,196nm,0.4s						
GLVR				AMB	AMB	09 35 58.0	
	comp=N,135nm,0.4s						
GLVR				*i* S	**Sn**	**09 36 27.0**	**+0.3**
GLVR				A	A	09 36 28.0	
	comp=N,1μm,0.6s						
GLVR				A	A	09 36 28.0	
	comp=N,1μm,0.6s						
GLVR	**Golovnino**	**2.23**	**231**	*e*PN	**Pn**	**09 35 58.0**	**+0.6**
GLVR				*i* S	**Sn**	**09 36 27.0**	**+0.3**
GLVR				pmax	pmax		
	comp=Z,1μm,0.1s						
GLVR				pmax	pmax		
	comp=E,196nm,0.2s						
GLVR				smax	smax		
	comp=E,23μm,0.4s						
GLVR				smax	smax		
	comp=N,13μm,0.2s						
JRA	**Rausu**	**2.34**	**240**	P	**Pn**	**09 35 59.3**	**+0.6**
JRA				*e*S	**Sn**	**09 36 29.3**	**+0.2**
NEM2	**Nemuro 2**	**2.38**	**222**	P	**Pn**	**09 35 58.1**	**-1.1**
NEM2				*e*S	**Sn**	**09 36 26.3**	**-3.6**
JNK	**Nakash**	**2.78**	**237**	P	**Pn**	**09 36 04.6**	**+0.5**
JTKR	**Abashiri--Toko**	**3.10**	**249**	P	**Pn**	**09 36 08.8**	**+0.7**
JTKR				*e*S	**Sn**	**09 36 47.4**	**+1.5**
JAK	**Akkeshi**	**3.17**	**228**	P	**Pn**	**09 36 08.2**	**-0.8**
JAK				*e*S	**Sn**	**09 36 44.4**	**-3.1**
JAR	**Ashorobuto**	**3.52**	**239**	P	**Pn**	**09 36 14.1**	**+0.7**
JSE	**Soyaes**	**3.79**	**269**	P	**Pn**	**09 36 18.2**	**+1.4**
JKK2	**Kamakawa 2**	**3.92**	**253**	P	**Pn**	**09 36 19.9**	**+1.3**
JKK2				*e*S	**Sn**	**09 37 08.0**	**+3.4**
ASAJ	**Asahikawa**	**3.94**	**257**	P	**Pn**	**09 36 20.6**	**+1.7**
	comp=N,25nm,0.3s,baz=85,slow=15,SNR=606						
ASAJ				S	**Sn**	**09 37 07.1**	**+2.0**
	comp=N,14nm,0.3s,baz=320,slow=16,SNR=5.3						
ASAJ				LR	LR	09 37 25.8	
	comp=N,238nm,18.8s,baz=170,slow=32						
YSS	**Yuzh-Sakhalins**	**4.02**	**298**	*e*P	**Pn**	**09 36 20.3**	**+0.5**
YSS				AMB	AMB	09 36 21.0	
	comp=N,190nm,0.6s						
YSS				*e*S	**Sn**	**09 37 08.1**	**+1.2**
YSS				A	A	09 37 10.3	
	comp=N,210nm,1.0s						
YSS				A	A	09 37 10.3	
	comp=N,270nm,1.0s						
YSS	**Yuzh-Sakhalins**	**4.02**	**298**	*e*Pn	**Pn**	**09 36 20.6**	**+0.8**
YSS	**Yuzh-Sakhalins**	**4.02**	**298**	*k i*PN	**Pn**	**09 36 20.9**	**+1.1**
YSS				*e*S	**Sn**	**09 37 08.1**	**+1.2**
YSS				pmax	pmax		
	comp=N,100nm,0.5s						
YSS				pmax	pmax		
	comp=Z,200nm,0.5s						
YSS				pmax	pmax		
	comp=E,100nm,0.6s						
YSS				pmax	pmax		
	comp=Z,190nm,0.6s						
YSS				smax	smax		
	comp=N,210nm,1.0s						
YSS				smax	smax		
	comp=E,270nm,1.2s						
YSS				smax	smax		
	comp=N,800nm,3.6s						
YSS				smax	smax		
	comp=E,2μm,2.7s						
YSS				MLR	MLR		
	comp=N,400nm,5.0s						
YSS				MLR	MLR		
	comp=E,400nm,5.0s						
YSS				MLR	MLR		
	comp=Z,500nm,5.0s						
JCH	**Churui**	**4.16**	**234**	P	**Pn**	**09 36 21.2**	**-0.6**
JCH				*e*S	**Sn**	**09 37 06.8**	**-3.5**
JWK2	**Keihoku**	**4.26**	**274**	P	**Pn**	**09 36 25.6**	**+2.7**
JFR	**Furan**	**4.32**	**244**	P	**Pn**	**09 36 25.1**	**+1.3**
ERM	**Erimo**	**4.67**	**229**	*e*P	**Pn**	**09 36 28.5**	**+0.1**
ERM	**Erimo**	**4.67**	**229**	*e*Pn	**Pn**	**09 36 27.5**	**-1.0**
ERM	**Erimo**	**4.67**	**229**	*c i*PN	**Pn**	**09 36 28.5**	**+0.1**
JYG	**Yagishiri**	**4.68**	**263**	P	**Pn**	**09 36 30.4**	**+1.9**
JNBK	**Urakawa-nobuka**	**4.72**	**234**	P	**Pn**	**09 36 27.6**	**-1.5**
JNBK				*e*S	**Sn**	**09 37 19.5**	**-4.0**
JEW	**Eniwo**	**5.21**	**246**	P	**Pn**	**09 36 36.8**	**+1.3**
JEW				*e*S	**Sn**	**09 37 36.1**	**+1.0**
UGL	**Uglegorsk**	**5.59**	**317**	*e*P	**Pn**	**09 36 41.7**	**+1.2**
UGL				AMB	AMB	09 36 43.0	
	comp=Z,100nm,1.0s						
UGL				*e*S	**Sn**	**09 37 45.3**	**+1.2**
UGL	**Uglegorsk**	**5.59**	**317**	*e*PN	**Pn**	**09 36 41.8**	**+1.2**
UGL				*e*S	**Sn**	**09 37 47.3**	**+3.2**
UGL				pmax	pmax		
	comp=Z,96nm,1.1s						
UGL				smax	smax		
	comp=N,132nm,1.4s						
JSK	**Shakotan**	**5.64**	**254**	P	**Pn**	**09 36 42.1**	**+0.9**
JKB	**Kayabe**	**5.98**	**239**	P	**Pn**	**09 36 44.4**	**-1.3**
JKB				*e*S	**Sn**	**09 37 48.1**	**-5.2**
JOT	**Ohata**	**6.28**	**235**	P	**Pn**	**09 36 47.3**	**-2.4**
JOT				*e*S	**Sn**	**09 37 54.3**	**-6.2**
TYV	**Tymovskoe**	**6.71**	**330**	*e*P	**Pn**	**09 36 55.9**	**+0.6**
TYV				AMB	AMB	09 36 57.0	
	comp=N,125nm,0.9s						
TYV	**Tymovskoe**	**6.71**	**330**	*e*PN	**Pn**	**09 36 56.2**	**+0.9**
TYV				*e*S	**Sn**	**09 38 07.9**	**-2.7**
TYV				pmax	pmax		
	comp=Z,400nm,4.7s						
TYV				pmax	pmax		
	comp=Z,125nm,0.9s						
TYV				smax	smax		
	comp=E,29nm,0.7s						
JOSM	**Okushiri--Mats**	**6.86**	**246**	P	**Pn**	**09 36 56.7**	**-0.7**
JOSM				*e*S	**Sn**	**09 38 12.5**	**-1.8**
SKR	**Severo-Kuril's**	**7.80**	**42**	*e*P	**Pn**	**09 37 09.2**	**-0.6**
SKR				AMB	AMB	09 37 16.0	
	comp=E,310nm,0.5s						
SKR	**Severo-Kuril's**	**7.80**	**42**	*e*PN	**Pn**	**09 37 08.8**	**-1.0**
SKR				*e*S	**Sn**	**09 38 33.7**	**-3.0**
SKR				pmax	pmax		
	comp=Z,311nm,0.5s						
SKR				smax	smax		
	comp=E,131nm,0.6s						
SKR				smax	smax		
	comp=N,174nm,0.6s						
SKR				MLR	MLR		
	comp=Z,200nm,17.0s						
SKR				MLR	MLR		
	comp=Z,100nm,16.0s						
JMK	**Ichinoseki**	**7.96**	**221**	P	**Pn**	**09 37 08.5**	**-3.5**
JMK				*e*S	Sn	09 38 32.5	-8.3
TEY	**Ternei**	**8.01**	**273**	*e*P	**Pn**	**09 37 13.0**	**+0.3**
OKH	**Okha**	**9.00**	**341**	*e*P	Pn	09 37 35.5	+10
OKH	**Okha**	**9.00**	**341**	*e*PN	Pn	09 37 35.5	+10
OKH				MLR	MLR		
	comp=Z,200nm,7.2s						
NKL	**Nikolayevsk**	**9.29**	**332**	*e*P	**Pn**	**09 37 30.0**	**+0.4**
NKL				AMB	AMB	09 37 32.0	
	comp=Z,140nm,1.0s						
NKL				AMB	AMB	09 37 32.0	
	comp=Z,180nm,1.0s						
NKL	**Nikolayevsk**	**9.29**	**332**	*e*PN	**Pn**	**09 37 29.0**	**-0.6**
NKL				pmax	pmax		
	comp=N,140nm,1.2s						
NKL				pmax	pmax		
	comp=E,140nm,1.2s						
NKL				pmax	pmax		
	comp=Z,180nm,1.2s						
GRNR	**Gornyy**	**9.53**	**310**	*e*P	**Pn**	**09 37 34.1**	**+1.2**
GRNR				AMB	AMB	09 37 35.3	
	comp=Z,52nm,1.0s						
GRNR	**Gornyy**	**9.53**	**310**	*e*PN	**Pn**	**09 37 34.1**	**+1.2**
GRNR				pmax	pmax		
	comp=Z,52nm,1.0s						
PEA0B	**Petropavlovsk-**	**10.21**	**35**	*e*Pn	**Pn**	**09 37 40.4**	**-1.3**
PETK	**Petropavlovsk-**	**10.21**	**35**	P	**Pn**	**09 37 40.3**	**-1.4**
	comp=Z,5.5nm,0.3s,baz=195,slow=9.7,SNR=77						
PETK	**Petropavlovsk-**	**10.21**	**35**	*e*Pn	**Pn**	**09 37 40.0**	**-1.8**
PET	**Petropavlovsk**	**10.55**	**38**	*e*P	**Pn**	**09 37 45.9**	**-0.3**
PET				AMB	AMB	09 37 48.2	
	comp=Z,17nm,0.4s						
PET	**Petropavlovsk**	**10.55**	**38**	*e*Pn	**Pn**	**09 37 46.0**	**-0.2**
PET	**Petropavlovsk**	**10.55**	**38**	*e*PN	**Pn**	**09 37 45.0**	**-1.2**
PET				pmax	pmax		
	comp=Z,17nm,0.4s						
PET				MLR	MLR		
	comp=Z,200nm,15.0s						
PET				MLR	MLR		
	comp=Z,300nm,16.0s						
MJB9	**Matsu-Tunnel**	**11.31**	**224**	*e*Pn	**Pn**	**09 37 55.0**	**-1.5**
MAJO	**Matsushiro**	**11.31**	**224**	*e*Pn	**Pn**	**09 37 54.9**	**-1.6**
MAJO	**Matsushiro**	**11.31**	**224**	*c i*PN	**Pn**	**09 37 56.1**	**-0.4**
MAT	**Matsushiro**	**11.31**	**224**	P	**Pn**	**09 37 54.8**	**-1.7**
MAT				S	**Sn**	**09 39 57.9**	**-3.8**
MJAR	**Matsushiro Arr**	**11.31**	**224**	P	**Pn**	**09 37 54.3**	**-2.2**
	comp=Z,0.8nm,0.3s,baz=25,slow=11,SNR=18						
USRK	**Ussuriysk Ar.**	**11.39**	**271**	P	**Pn**	**09 37 57.6**	**+0.3**
	comp=Z,0.7nm,0.3s,baz=84,slow=13,SNR=17						
KLR	**Kul'dur**	**11.73**	**296**	P	**Pn**	**09 38 02.9**	**+1.2**
	comp=Z,0.0nm,0.3s,baz=100,slow=15,SNR=6.2						
KLR				LR	LR	09 42 06.1	
	comp=Z,12nm,18.8s,baz=96,slow=35						
KLR	**Kul'dur**	**11.73**	**296**	*c i*PN	**Pn**	**09 38 01.2**	**-0.5**
EKMR	**Ekimchan**	**12.58**	**314**	*e*P	**Pn**	**09 38 13.0**	**+0.2**
EKMR				AMB	AMB	09 38 13.9	
	comp=Z,46nm,0.9s						
MA2	**Magadan**	**14.54**	**6**	P	**Pn**	**09 38 37.3**	**-0.1**
	comp=Z,1.9nm,0.3s,baz=190,sl

KROS AMB AMB 09 38 59.6
comp=Z,4.0nm,0.5s
KSRS Korea Array 16.86 250 P **Pn** **09 39 08.1 +2.1**
comp=Z,0.4nm,0.3s,baz=57,slow=11,SNR=12
KSRS PcP **PcP** **09 43 45.1 +1.4**
comp=Z,0.1nm,0.3s,baz=16,slow=2.4,SNR=6.2
KS01 Wonju Array Si 16.86 250 *e*P **Pn** **09 39 08.3 +2.2**
KSAR Wonju Array Be 16.89 250 P **Pn** **09 39 08.1 +1.7**
KSAR PcP **PcP** **09 43 45.1 +1.4**
KSAR Wonju Array Be 16.89 250 P **Pn** **09 39 08.1 +1.7**
JNU Nakatsue 17.82 233 P **Pn** **09 39 18.6 +0.9**
comp=Z,0.8nm,0.3s,baz=64,slow=9.1,SNR=6.3
JNU Nakatsue 17.82 233 *e*P **P** **09 39 17.0 +0.7**
comp=Z,30nm,1.1s
SNY Shenyang 17.95 268 ⇑P **Pn** **09 39 18.3 -0.8**
SNY pmax pmax
comp=Z,19nm,0.7s
SEY Seymchan 17.99 7 P **P** **09 39 17.8 0.0**
comp=Z,1.7nm,0.3s,baz=189,slow=8.4,SNR=69
SEY Seymchan 17.99 7 *e*P **P** **09 39 18.6 +0.9**
SEY Seymchan 17.99 7 ⇑*i*P **Pn** **09 39 18.7 -0.6**
CLNS Chul'man 18.51 317 *e*P **Pn** **09 39 25.1 -0.5**
CLNS pmax pmax
comp=N,9.0nm,0.8s
CLNS pmax pmax
comp=Z,25nm,0.8s
CLNS pmax pmax
comp=E,10.0nm,1.0s
CBIJ Chichi jima 18.61 196 *e*P **Pn** **09 39 28.6 +1.7**
comp=E,56nm,0.6s
SMY Shemya 18.71 57 *e*P **P** **09 39 27.9 +2.2**
comp=E,162nm,1.1s
SMY Shemya 18.71 57 *e*P **P** **09 39 27.9 +2.2**
SMY pmax pmax
comp=Z,162nm,1.1s
HIA Hailar 19.52 292 *e*P **P** **09 39 31.2 -3.4**
comp=Z,14nm,0.5s
HIA Hailar 19.52 292 *e*P **P** **09 39 31.2 -3.4**
HIA pmax pmax
comp=Z,14nm,0.5s
YAK Yakutsk 19.94 334 *e*P **P** **09 39 37.0 -1.9**
comp=Z,147nm,0.6s
YAK Yakutsk 19.94 334 *e*P **P** **09 39 35.8 -3.1**
YAK *e*S **S** **09 43 09.9 -4.5**
YAK pmax pmax
comp=Z,77nm,0.8s
YAK pmax pmax
comp=N,12nm,1.0s
YAK pmax pmax
comp=E,15nm,1.2s
YAK smax smax
comp=N,165nm,1.9s
YAK smax smax
comp=E,234nm,2.3s
BJI Beijing 23.83 269 ⇓*i*P **P** **09 40 19.3 +1.3**
BJI pmax pmax
comp=E,21nm,0.8s
BILL Bilibino 24.85 16 *e*P **P** **09 40 26.2 -0.8**
BILL Bilibino 24.85 16 *e*P **P** **09 40 25.7 -1.3**
comp=E,8.7nm,1.1s
BILL Bilibino 24.85 16 ⇓*e*P **P** **09 40 26.0 -1.0**
BILL *e**PP **pP** **09 40 57.9 -0.9**
BILL *e* 09 41 08.4
BILL *i* S **S** **09 44 41.5 +3.5**
BILL pmax pmax
comp=Z,6.0nm,1.1s
NJ2 Nanjing 26.06 250 *e*P **P** **09 40 39.3 +1.1**
NJ2 pmax pmax
comp=Z,8.0nm,0.6s
HHC Hu-ho-hao-te 26.79 274 *e*P **P** **09 40 45.4 +0.6**
HHC pmax pmax
comp=Z,27nm,1.0s
HHC pmax pmax
comp=Z,190nm,4.8s
ULN Ulaanbaatar 28.02 290 *e*P **P** **09 40 55.2 -0.6**
ULN Ulaanbaatar 28.02 290 *ce*P **P** **09 40 55.2 -0.6**
ULN pmax pmax
comp=Z,4.0nm,1.0s
TIXI Tiksi 28.10 347 *e*P **P** **09 40 52.5 -3.4**
comp=Z,7.4nm,0.7s
TIXI Tiksi 28.10 347 ⇑*i*P **P** **09 40 52.2 -3.8**
TIXI pmax pmax
comp=Z,8.0nm,0.8s
SONM Songino Array 28.46 290 P **P** **09 40 59.1 -0.6**
comp=Z,2.9nm,0.7s,baz=85,slow=8.2,SNR=14
SONM pP **pP** **09 41 33.3 +1.2**
comp=Z,9.1nm,0.9s,baz=85,slow=7.4,SNR=9.4
TLY Talaya 29.73 299 LR LR 09 55 05.9
comp=Z,79nm,18.7s,baz=266,slow=40
TLY Talaya 29.73 299 *e*P **P** **09 41 10.3 -0.4**
TLY Talaya 29.73 299 *i* P **P** **09 41 10.3 -0.4**
TLY *i* AP **pP** **09 41 43.7 +0.5**
TLY *i* XP **sP** **09 42 00.1 -0.9**
TLY pmax pmax
comp=Z,2.0nm,1.2s
H11N2 WAKE ISLAND Hy 29.84 142 T T 10 12 35.5
baz=331,slow=74,SNR=346
H11N1 WAKE ISLAND Hy 29.85 142 T T 10 12 31.5
baz=331,slow=74,SNR=408
H11N3 WAKE ISLAND Hy 29.86 142 T T 10 12 35.4
baz=331,slow=74,SNR=436
WHN Wuhan 30.01 253 ⇓P **P** **09 41 14.1 +0.8**
WHN pmax pmax
comp=Z,10.0nm,1.3s
H11S1 WAKE ISLAND Hy 30.84 143 T T 10 13 54.8
baz=333,slow=76,SNR=593
H11S3 WAKE ISLAND Hy 30.85 143 T T 10 13 59.8
baz=333,slow=76,SNR=777
H11S2 WAKE ISLAND Hy 30.86 143 T T 10 13 46.2
baz=333,slow=76,SNR=480
LZH Lanzhou 34.30 270 *e*P **P** **09 41 51.4 +0.5**
LZH pP pP 09 42 24.0 +0.1
LZH sP sP 09 42 43.8 +2.3
LZH *e*PP **PnPn** **09 43 09.3 -1.7**
LZH pmax pmax
comp=Z,38nm,1.0s
LZH pmax pmax
comp=Z,190nm,6.0s
LZH LR LR
comp=Z,180nm,14.0s
LZH LR LR
comp=Z,190nm,14.3s
LZH LR LR
comp=Z,230nm,16.8s
SVW2 Sparrevohn 36.15 43 *e*P **P** **09 42 07.5 +1.2**
comp=Z,9.7nm,1.1s
RSO Redoubt South 37.56 44 *e*P **P** **09 42 19.5 +1.0**
OHAK Old Harbor 37.59 50 *e*P **P** **09 42 18.1 -0.3**
comp=Z,23nm,1.0s
PPLA Purkeypile 37.74 40 *e*P **P** **09 42 21.4 +1.5**
comp=Z,23nm,1.2s
GYA Guiyang 37.82 255 *e*P **P** **09 42 21.3 +0.4**
GYA pmax pmax
comp=Z,10.0nm,0.8s
KDAK Kodiak Island 37.90 49 P **P** **09 42 20.8 -0.1**
comp=Z,38nm,0.8s,baz=288,slow=3.5,SNR=36
KDAK Kodiak Island 37.90 49 *e*P **P** **09 42 20.9 -0.1**
comp=Z,47nm,0.9s
KDAK Kodiak Island 37.90 49 *ce*P **P** **09 42 20.6 -0.4**
SKT Skwentna 38.07 42 *e*P **P** **09 42 24.0 +1.5**
comp=Z,7.7nm,1.2s
SKT *e*S **S** **09 47 58.5 -4.8**
BPAW Bear Paw Mtn. 38.27 38 *e*P **P** **09 42 24.8 +0.7**
comp=Z,4.9nm,0.7s
NRIK Noril'sk 38.29 330 P **P** **09 42 22.1 -2.0**
comp=Z,4.2nm,0.5s,baz=124,slow=7.8,SNR=5.1
KTH Kantishna Hill 38.30 39 *e*P **P** **09 42 25.7 +1.2**
comp=Z,17nm,0.9s
MLY Manley 38.38 37 *e*P **P** **09 42 26.0 +1.0**
comp=Z,5.0nm,0.7s
MLY *e*PcP **PcP** **09 44 36.4 +1.3**
CNPM China Poot 38.40 46 *e*P **P** **09 42 24.7 -0.5**
comp=Z,9.5nm,0.5s
SUA Susitna One 38.48 43 *e*P **P** **09 42 26.1 +0.1**
comp=Z,12nm,1.0s
BRLK Bradley Lake 38.55 45 *e*P **P** **09 42 25.9 -0.6**
comp=Z,9.8nm,0.9s
TRF Thorofare Moun 38.59 39 *e*P **P** **09 42 27.4 +0.5**
comp=Z,8.4nm,1.1s
COLD Coldfoot 38.67 33 *e*P **P** **09 42 27.6 +0.3**
comp=Z,8.6nm,0.7s
BWN Browne 38.94 38 *e*P **P** **09 42 31.5 +1.9**
comp=Z,26nm,0.7s
RC01 Rabbit Creek A 38.99 43 *e*P **P** **09 42 30.2 +0.1**
comp=Z,13nm,0.8s
TOLK Toolik Lake Re 38.99 31 P **P** **09 42 30.1 0.0**
baz=266,SNR=12
TOLK Toolik Lake Re 38.99 31 *e*P **P** **09 42 30.6 +0.5**
comp=Z,10nm,0.5s
MCK McKinley 39.19 39 *e*P **P** **09 42 32.1 +0.4**
MCK McKinley 39.19 39 *e*P **P** **09 42 32.1 +0.4**
comp=Z,8.2nm,0.9s
MCK McKinley 39.19 39 *e*P **P** **09 42 32.1 +0.4**
MCK pmax pmax
comp=Z,8.0nm,0.9s
RND Reindeer 39.24 39 *e*P **P** **09 42 32.2 0.0**
comp=Z,13nm,1.2s
RND Reindeer 39.24 39 *e*P **P** **09 42 32.2 0.0**
RND pmax pmax
comp=Z,13nm,1.2s
GHO Glory Hole Cre 39.32 42 *e*P **P** **09 42 32.5 -0.4**
comp=Z,7.7nm,0.6s
MDM Murphy Dome 39.45 37 *e*P **P** **09 42 34.4 +0.5**
comp=Z,6.0nm,0.7s
WRH Wood River Hil 39.52 38 *e*P **P** **09 42 35.1 +0.7**
comp=Z,8.2nm,0.8s
WRH *e*PcP **PcP** **09 44 38.9 +0.3**
SML Sawmill 39.59 42 *e*P **P** **09 42 35.7 +0.5**
SML Sawmill 39.59 42 *e*P **P** **09 42 35.7 +0.5**
comp=Z,23nm,0.8s
SML Sawmill 39.59 42 *e*P **P** **09 42 35.7 +0.5**
SML pmax pmax
comp=Z,23nm,0.8s
COLA College 39.61 37 *e*P **P** **09 42 36.0 +0.9**
comp=Z,16nm,0.8s
COLA College 39.61 37 *e*P **P** **09 42 36.0 +0.9**
COLA pmax pmax
comp=Z,16nm,0.8s
CCB Clear Creek Bu 39.64 37 *e*P **P** **09 42 36.4 +1.0**
comp=Z,2.7nm,0.5s
DHY Denali Highway 39.93 40 *e*P **P** **09 42 38.3 +0.2**
comp=Z,7.7nm,0.7s
HDA Harding Lake 40.02 38 *e*P **P** **09 42 38.3 -0.3**
comp=Z,9.7nm,0.4s
IL1 Eielson Array 40.03 37 *e*P **P** **09 42 37.9 -0.7**
ILAR Eielson Array 40.03 37 P **P** **09 42 38.5 -0.1**
comp=Z,3.7nm,0.5s,baz=247,slow=7.1,SNR=39
ILAR PcP **PcP** **09 44 39.5 -0.9**
comp=Z,2.1nm,0.7s,baz=284,slow=3.2,SNR=5.3
ILB Eielson Array 40.03 37 *e*P **P** **09 42 38.7 +0.1**
SCM Sheep Creek Mo 40.07 42 *e*P **P** **09 42 39.4 +0.3**
comp=Z,9.9nm,0.8s
SCM Sheep Creek Mo 40.07 42 *e*P **P** **09 42 39.4 +0.3**
SCM pmax pmax
comp=Z,10.0nm,0.8s
ZALV Zalesovo Beam 40.60 306 P **P** **09 42 41.3 -2.2**
comp=Z,2.1nm,0.4s,baz=78,slow=7.2,SNR=3.9
ZALV ScP **ScP** **09 48 16.7 -0.4**
comp=Z,1.6nm,0.6s,baz=78,slow=3.2,SNR=5.8
FYU Fort Yukon 40.62 34 *e*P **P** **09 42 44.8 +1.3**
comp=Z,11nm,0.6s
KLU Klutina 40.78 42 *e*P **P** **09 42 45.7 +0.8**
comp=Z,14nm,1.0s
DIV Divide 40.90 43 *e*P **P** **09 42 46.7 +0.8**
comp=Z,9.9nm,0.8s
RIDG Independ'e Rid 41.00 39 *e*P **P** **09 42 46.6 -0.1**
comp=Z,6.5nm,0.7s
HARP HAARP 41.01 41 *e*P **P** **09 42 47.7 +0.9**
comp=Z,20nm,0.9s
NVS Novosibirsk 41.28 308 *e*P **P** **09 42 47.4 -1.6**
NVS *e* 09 43 21.3
SCRK Sand Creek 41.35 38 *e*P **P** **09 42 49.6 0.0**
comp=Z,7.7nm,0.5s
DOT Dot Lake 41.35 39 *e*P **P** **09 42 49.4 -0.2**
comp=Z,21nm,0.6s
KMI Kunming 41.37 257 P **P** **09 42 51.1 +0.7**
KMI pmax pmax
comp=Z,12nm,0.6s
KMI pmax pmax
comp=Z,120nm,4.1s
BMRM Bremner River 41.48 43 *e*P **P** **09 42 51.6 +0.9**
comp=Z,18nm,1.1s
RAGM Ragged Mountai 41.55 44 *e*P **P** **09 42 52.3 +1.1**
comp=Z,13nm,1.0s
WMQ Urumqi 42.10 290 P **P** **09 42 56.5 +0.5**
WMQ LR LR
comp=Z,120nm,23.5s
WMQ LR LR
comp=Z,280nm,36.1s
WMQ LR LR
comp=Z,84nm,17.3s
CRQM Cirque 42.23 43 *e*P **P** **09 42 58.1 +1.2**
comp=Z,22nm,0.8s
TGL Tana Glacier 42.38 43 *e*P **P** **09 42 57.6 -0.3**
comp=Z,13nm,0.8s
EGAK Eagle 42.47 37 *e*P **P** **09 42 58.5 0.0**
DAWY Dawson 43.34 38 *e*P **P** **09 43 06.1 +0.5**
comp=Z,2.6nm,0.7s
MK31 Makanchi Array 44.43 297 *e*P **P** **09 43 14.1 -0.5**
MK31 Makanchi Array 44.43 297 *e*P **P** **09 43 14.1 -0.5**
MKAR Makanchi Array 44.43 297 P **P** **09 43 13.7 -0.8**
comp=Z,9.2nm,0.6s,baz=76,slow=8.2,SNR=37
MKAR pP **pP** **09 43 51.8 +3.0**
comp=Z,4.5nm,0.7s,baz=73,slow=10,SNR=4.3
MKAR ScP **ScP** **09 48 32.5 -0.2**
comp=Z,0.6nm,0.6s,baz=62,slow=4.6,SNR=4.6
MKAR Makanchi Array 44.43 297 *e*P **P** **09 43 14.1 -0.5**
comp=Z,89nm,0.8s
MKAR pP **pP** **09 43 51.8 +3.0**
MKAR ScP **ScP** **09 48 32.5 -0.2**
MKAR Makanchi Array 44.43 297 *e*P **P** **09 43 14.1 -0.5**
MKAR *PP **pP** **09 43 51.8 +3.0**
MKAR pmax pmax
comp=Z,89nm,0.8s
MK01 Makanchi Array 44.44 297 *e*P **P** **09 43 13.7 -0.9**
MAKZ Makanchi 44.62 297 *e*P **P** **09 43 15.6 -0.5**
comp=Z,9.3nm,0.7s
MAKZ Makanchi 44.62 297 *e*P **P** **09 43 15.6 -0.5**
MAKZ pmax pmax
comp=Z,9.0nm,0.7s
INK Inuvik 44.91 31 P **P** **09 43 18.2 +0.4**
comp=Z,6.7nm,0.5s,baz=298,slow=6.7,SNR=37
INK Inuvik 44.91 31 *e*P **P** **09 43 18.3 +0.4**
comp=Z,7.9nm,0.5s
INK Inuvik 44.91 31 *e*P **P** **09 43 18.3 +0.4**
INK pmax pmax
comp=Z,8.0nm,0.5s
KURK Kurchatov 45.21 303 *e*P **P** **09 43 19.4 -1.2**
comp=Z,11nm,0.6s
KURK pP **pP** **09 43 57.6 +2.7**
KURK ScP **ScP** **09 48 35.9 +0.1**
KURK Kurchatov 45.21 303 *c i*P **P** **09 43 19.0 -1.6**
KURK pmax pmax
comp=Z,9.0nm,0.9s
KURBB Kurchatov Arra 45.30 303 P **P** **09 43 19.8 -1.5**
comp=Z,9.9nm,0.5s,baz=72,slow=8.2,SNR=29
KURBB pP **pP** **09 43 57.6 +2.0**
comp=Z,3.7nm,0.8s,baz=70,slow=8.2,SNR=2.6
KURBB ScP **ScP** **09 48 35.9 -0.2**
comp=Z,0.5nm,0.7s,baz=86,slow=3.1,SNR=4.8
BESE Bessie Mountai 46.85 44 *e*P **P** **09 43 35.1 +1.7**
comp=Z,10.0nm,0.9s
JIS Juneau Island 47.18 45 *e*P **P** **09 43 38.0 +2.2**
comp=Z,17nm,0.8s
PDGK Podgornoye 47.70 293 P **P** **09 43 40.6 +0.4**
PDGK pmax pmax
comp=Z,15nm,0.9s
CRAG Craig 48.84 48 *e*P **P** **09 43 50.5 +1.9**
comp=Z,9.4nm,0.7s
WRAK Wrangell Islan 48.88 47 *e*P **P** **09 43 50.9 +2.0**
comp=Z,11nm,1.0s
BVAR Borovoye Array 49.04 309 P **P** **09 43 48.9 -1.3**
comp=Z,1.9nm,0.4s,baz=49,slow=4.8,SNR=12
BRVK Borovoye 49.09 309 *e*P **P** **09 43 49.7 -0.8**
BRVK Borovoye 49.09 309 *e*P **P** **09 43 49.5 -1.0**
comp=Z,9.3nm,0.7s
BRVK Borovoye 49.09 309 ⇑*i*P **P** **09 43 49.7 -0.8**
BRVK pmax pmax
comp=Z,11nm,0.8s
DLBC Dease Lake 49.27 43 P **P** **09 43 53.9 +2.0**
comp=Z,9.4nm,0.6s,baz=294,slow=7.0,SNR=27
DLBC Dease Lake 49.27 43 *e*P **P** **09 43 54.0 +2.1**
comp=Z,10.0nm,0.6s
TARG Taragay, Kyrgy 49.55 292 *e*P **P** **09 43 55.5 +0.8**
comp=Z,9.9nm,0.6s
KIP Kipapa 49.95 100 ⇑*i*P **P** **09 43 58.1 +0.7**
KIP pmax pmax
comp=Z,273nm,1.1s
OTUK Ortayu 49.95 302 P **P** **09 43 56.7 -0.5**
OTUK pmax pmax
comp=Z,19nm,0.6s
DIB Dawson Inlet, 50.11 50 *e*P **P** **09 43 59.9 +1.6**
comp=Z,18nm,0.8s
ULHL Ulahol 50.32 294 P **P** **09 44 01.3 +1.0**
SNR=7.6
TKM2 Tokmak 2 50.41 295 P **P** **09 44 01.9 +1.0**
SNR=16
USP Ospenovka 50.94 296 P **P** **09 44 05.4 +0.7**
SNR=26
KBK Karagaybulak 50.95 295 P **P** **09 44 05.6 +0.6**
SNR=13
KZA Kyzart 51.04 294 P **P** **09 44 07.3 +1.4**
SNR=29
FRU Bishkek 51.08 295 *e*P **P** **09 44 06.0 +0.3**
AAK Ala-Archa 51.25 295 P **P** **09 44 07.7 +0.4**
comp=Z,15nm,0.8s,baz=90,slow=6.3,SNR=17
AAK Ala-Archa 51.25 295 P **P** **09 44 07.9 +0.7**
SNR=12
AAK Ala-Archa 51.25 295 *e*P **P** **09 44 07.9 +0.7**
comp=Z,28nm,1.1s
AAK Ala-Archa 51.25 295 *i* P **P** **09 44 07.6 +0.4**
SNR=14
AAK Ala-Archa 51.25 295 *c i*P **P** **09 44 07.6 +0.4**
AAK pmax pmax
comp=Z,16nm,0.9s
JIRN Jiri 51.42 272 *e*P **P** **09 44 09.9 +1.0**
comp=Z,40nm,0.6s
GUN Gumba 51.49 273 *e*P **P** **09 44 10.7 +1.3**
comp=Z,40nm,0.8s
RAMN Ramite 51.56 271 *e*P **P** **09 44 10.6 +0.8**
comp=Z,40nm,0.5s
EKS2 Erkin-Say 51.70 295 P **P** **09 44 11.1 +0.7**
SNR=21
KSH Kashi 51.87 291 P **P** **09 44 16.1 +4.3**
KSH pP pP 09 44 51.5 +4.5
KSH PP **PP** **09 46 17.6 +6.7**
KSH S **S** **09 51 25.8 +3.5**
KSH sS sS 09 52 28.8 +5.3
KSH SS **SS** **09 55 00.3 -0.3**
KSH pmax pmax
comp=Z,20nm,0.6s
KSH pmax pmax
comp=Z,290nm,5.2s
KSH LR LR
comp=Z,480nm,9.9s
KSH LR LR
comp=Z,220nm,4.6s
KKN Kakani 51.99 273 *e*P **P** **09 44 14.3 +1.4**
AML Almayashu 52.02 295 P **P** **09 44 14.2 +1.1**
SNR=8.9
PKIN Phulchoki 52.03 273 *e*P **P** **09 44 14.7 +1.4**
DMN Daman 52.22 273 *e*P **P** **09 44 15.8 +1.1**
GKN Gorkha 52.31 274 *e*P **P** **09 44 16.3 +1.1**
MNAS Manas 52.60 296 P **P** **09 44 17.9 +0.7**
MNAS pmax pmax
comp=Z,30nm,0.9s
DANN Dangsing 52.73 275 *e*P **P** **09 44 19.9 +1.5**
comp=Z,41nm,0.7s
POHA Pohakuloa 52.78 99 *e*P **P** **09 44 20.7 +1.8**
comp=Z,81nm,0.7s
BBB Bella Bella 52.94 50 *e*P **P** **09 44 20.2 +0.9**
comp=Z,16nm,0.9s
KOLN Koldanda 53.19 274 *e*P **P** **09 44 22.7 +1.0**
SFK Sufi-Kurgan 53.23 293 P **P** **09 44 22.6 +0.7**
SFK pmax pmax
comp=Z,20nm,1.0s
PYUN Piuthan 53.42 275 *e*P **P** **09 44 24.5 +1.1**
RES Resolute Bay 53.46 17 P **P** **09 44 21.5 -1.2**
comp=Z,16nm,0.6s,baz=340,slow=8.1,SNR=48
RES Resolute Bay 53.46 17 *e*P **P** **09 44 21.5 -1.2**
comp=Z,14nm,0.6s
RES Resolute Bay 53.46 17 *e*P **P** **09 44 21.5 -1.2**
RES pmax pmax
comp=Z,14nm,0.6s
KK31 Karatay Array 53.55 297 *e*P **P** **09 44 24.2 +0.3**
KK31 Karatay Array 53.55 297 *e*P **P** **09 44 24.2 +0.3**
KKAR Karatay Array 53.55 297 *e*P **P** **09 44 24.2 +0.3**
KKAR Karatay Array 53.55 297 *e*P **P** **09 44 24.2 +0.3**
ARU Arti 53.70 316 P **P** **09 44 22.9 -1.9**
comp=Z,15nm,0.4s,baz=72,slow=4.5,SNR=19
ARU Arti 53.70 316 *e*P **P** **09 44 22.6 -2.1**
comp=Z,19nm,0.6s
ARU Arti 53.70 316 *i* P **P** **09 44 23.0 -1.7**
ARU pmax pmax
comp=Z,15nm,0.6s
YKW3 Yellowknife Ar 54.29 34 *e*P **P** **09 44 29.4 +0.5**
comp=Z,8.9nm,1.1s
YKA Yellowknife Ar 54.32 35 P **P** **09 44 29.4 +0.2**
comp=Z,4.1nm,0.6s,baz=302,slow=7.2,SNR=43
YKA pP **pP** **09 45 05.6 +0.9**
comp=Z,1.3nm,0.8s,baz=303,slow=7.5,SNR=1.6
YKA PcP **PcP** **09 45 31.5 +0.4**
comp=Z,2.4nm,0.8s,baz=303,slow=4.0,SNR=7.1
ABKAR Akbulak array 56.62 308 *e*P **P** **09 44 44.9 -0.9**
NIL Nilore 56.92 286 *e*P **P** **09 44 49.2 +1.0**
comp=Z,63nm,0.8s
NIL Nilore 56.92 286 *e*P **P** **09 44 49.2 +1.0**
NIL pmax pmax
comp=Z,63nm,0.8s
AKTO Aktyubinsk 57.04 310 P **P** **09 44 47.4 -1.4**
comp=Z,5.6nm,0.5s,baz=63,slow=8.0,SNR=16
LLLB Lillooet 57.10 49 *e*P **P** **09 44 50.2 +1.0**
comp=Z,14nm,0.9s
PGC Sidney 57.30 52 *e*P **P** **09 44 51.1 +0.5**
comp=Z,9.5nm,0.6s
A04D Lummi Island 57.68 52 P **P** **09 44 54.0 +0.8**
baz=304
NLWA Neilton Lookou 57.75 53 *e*P **P** **09 44 55.3 +1.5**
comp=Z,20nm,0.8s
TMCR Tamitsa 58.01 331 *e*P **P** **09 44 53.1 -2.1**
TMCR pmax pmax
comp=Z,25nm,0.8s
DAG Danmarks Havn 58.05 356 *i* P **P** **09 44 53.0 -2.3**
ARCES ARCESS Array B 58.12 340 P **P** **09 44 54.2 -1.7**
comp=Z,5.2nm,0.8s,baz=46,slow=8.3,SNR=12
ARCES ARCESS Array B 58.12 340 *e*P P 09 44 49.2 -6.8
ARCES pmax pmax
comp=Z,2.0nm,0.7s
B05A Bryant 58.27 52 P **P** **09 44 58.0 +0.7**
baz=304,SNR=6.2
E03A Lebam 58.40 54 *e*P **P** **09 44 59.8 +1.5**
comp=Z,18nm,0.8s
F03A Seaside 58.74 55 *e*P **P** **09 44 58.4 -2.3**
comp=Z,27nm,0.9s
D05A Enumclaw 58.93 53 *e*P **P** **09 45 03.5 +1.6**
F04D Rainier, OR 58.97 54 P **P** **09 45 03.1 +0.9**
baz=305
C06D Leavenworth 59.13 52 P **P** **09 45 03.8 +0.5**
baz=305
KBL Kabul 59.23 289 *e*P **P** **09 45 04.2 -0.3**
comp=Z,29nm,1.1s
KBL Kabul 59.23 289 *e*P **P** **09 45 04.2 -0.3**
KBL pmax pmax
comp=Z,29nm,1.1s
LON Longmire 59.28 53 *e*P **P** **09 45 05.3 +0.9**
comp=Z,2.8nm,0.8s
LON Longmire 59.28 53 *e*P **P** **09 45 05.3 +0.9**
LON pmax pmax
comp=Z,3.0nm,0.8s
G03D McMinnville, O 59.32 55 P **P** **09 45 06.1 +1.5**
baz=305,SNR=6.1
KLMR Klimovskoe 59.54 327 *e*P **P** **09 45 03.0 -2.9**
KLMR pmax pmax
comp=Z,15nm,0.8s
KLMR Klimovskoe 59.54 327 *e*P **P** **09 45 03.0 -2.9**
KLMR AMP 09 45 04.9
comp=Z,15nm,0.8s
LTY Liberty 59.63 52 *e*P **P** **09 45 07.6 +0.7**
comp=Z,9.8nm,0.6s
COR Corvallis 59.66 56 *e*P **P** **09 45 09.0 +2.1**
comp=Z,33nm,0.8s
COR Corvallis 59.66 56 *e*P **P** **09 45 09.0 +2.1**
COR pmax pmax
comp=Z,33nm,0.8s
MTN Manton Dam 59.70 199 *e*P **P** **09 45 08.5 +1.1**
comp=Z,15nm,0.8s
B08A Colville Reser 59.74 50 *e*P **P** **09 45 08.2 +0.7**
comp=Z,13nm,0.6s
I03D Drain, OR 60.14 57 P **P** **09 45 11.2 +0.9**
baz=306
H04A Detroit Lake 60.25 55 *e*P **P** **09 45 12.3 +1.2**
comp=Z,28nm,1.0s
G05D Wamic, OR 60.43 54 P **P** **09 45 13.7 +1.4**
baz=306,SNR=11
I04A Tendick Farm, 60.64 56 P **P** **09 45 14.9 +1.2**
baz=306,SNR=11
C09A Chrisman Ranch 60.64 51 *e*P **P** **09 45 14.3 +0.7**
comp=Z,17nm,0.6s
HAWA Hanford 60.77 52 *e*P **P** **09 45 15.9 +1.4**
comp=Z,11nm,0.8s

G06A **Carlson Farm,** 60.82 54 eP P 09 45 16.6 +1.6
comp=Z,8.8nm,1.0s
F07A **Phinny Hill Vi** 60.84 53 eP P 09 45 16.6 +1.7
comp=Z,54nm,0.6s
L02D **Cave Junction,** 60.88 58 P P 09 45 16.4 +1.0
baz=306
I05D **Terrebonne, OR** 60.94 55 P P 09 45 17.0 +1.2
baz=306,SNR=15
E08A **Dider Farm, El** 60.98 52 eP P 09 45 17.2 +1.3
comp=Z,17nm,0.8s
NEW **Newport** 60.99 50 P P 09 45 16.8 +0.8
comp=Z,14nm,0.8s,baz=330,slow=4.9,SNR=15
NEW **Newport** 60.99 50 P P 09 45 16.4 +0.4
baz=307,SNR=9.3
NEW **Newport** 60.99 50 eP P 09 45 16.9 +0.8
comp=Z,21nm,1.0s
NEW **Newport** 60.99 50 eP P 09 45 16.9 +0.8
NEW pmax pmax
comp=Z,21nm,1.0s
HUMO **Hull Mountain** 61.01 58 eP P 09 45 17.7 +1.5
comp=Z,4.1nm,0.7s
JOF **Joensuu** 61.10 332 P P 09 45 14.7 -1.7
JOF pmax pmax
comp=Z,28nm,0.8s
J04D **Umpqua Nationa** 61.14 57 P P 09 45 18.6 +1.3
baz=306,SNR=13
E09A **Wood Farm, Sta** 61.47 52 eP P 09 45 19.9 +0.7
comp=Z,19nm,0.7s
PINE **Pine Mountain** 61.50 55 eP P 09 45 21.5 +1.8
comp=Z,32nm,0.8s
J05D **Fort Rock, OR** 61.63 56 P P 09 45 22.0 +1.5
baz=307,SNR=17
YBH **Yreka Blue Hor** 61.67 58 eP P 09 45 22.8 +2.0
comp=Z,10nm,0.8s
YBH **Yreka Blue Hor** 61.67 58 eP P 09 45 22.8 +2.0
YBH pmax pmax
comp=Z,10.0nm,0.8s
K04D **Chiloquin, OR** 61.71 57 P P 09 45 22.3 +1.2
baz=307
G08A **Pilot Rock** 61.74 53 eP P 09 45 22.2 +1.0
comp=Z,6.0nm,0.8s
M02C **Callahan** 61.79 59 P P 09 45 23.1 +1.6
baz=307
N02D **Trinity Center** 62.13 59 P P 09 45 25.0 +1.2
baz=307
K05A **Summer Lake** 62.16 56 eP P 09 45 25.9 +1.8
comp=Z,29nm,0.9s
M04C **Macdoel** 62.17 58 P P 09 45 25.4 +1.3
baz=307,SNR=9.2
WALA **Waterton Lakes** 62.21 47 eP P 09 45 25.2 +0.9
comp=Z,16nm,0.8s
F10A **Beach Ranch, E** 62.30 52 eP P 09 45 26.2 +1.2
comp=Z,9.3nm,0.6s
WDC **Whiskeytown Da** 62.47 59 eP P 09 45 27.5 +1.6
comp=Z,7.4nm,0.8s
WDC **Whiskeytown Da** 62.47 59 eP P 09 45 27.5 +1.6
WDC pmax pmax
comp=Z,7.0nm,0.8s
SUMG **Summit** 62.48 2 iP P 09 45 25.0 -1.0
comp=Z,8.6nm,0.5s
SUMG **Summit** 62.48 2 eP P 09 45 25.2 -0.8
comp=Z,8.8nm,0.5s
SUMG **Summit** 62.48 2 eP P 09 45 25.2 -0.8
SUMG pmax pmax
comp=Z,9.0nm,0.5s
JTMT **Jette** 62.82 49 eP P 09 45 30.0 +1.6
comp=Z,22nm,1.0s
BMO **Blue Mountains** 62.94 53 eP P 09 45 30.3 +1.1
comp=Z,6.5nm,0.6s
BMO **Blue Mountains** 62.94 53 eP P 09 45 30.3 +1.1
BMO pmax pmax
comp=Z,6.0nm,0.6s
MOD **Modoc Plateau** 63.01 57 eP P 09 45 31.2 +1.5
comp=Z,12nm,0.8s
O03D **Paynes Creek** 63.09 59 P P 09 45 30.6 +0.4
baz=308,SNR=9.4
J08A **Circle Bar Ran** 63.19 55 eP P 09 45 32.1 +1.2
comp=Z,15nm,0.9s
MSO **Missoula** 63.58 49 P P 09 45 34.1 +0.8
baz=309,SNR=20
MSO **Missoula** 63.58 49 eP P 09 45 34.2 +0.9
comp=Z,20nm,0.8s
WVOR **Wild Horse Val** 63.66 56 eP P 09 45 35.1 +1.1
comp=Z,14nm,0.9s
WVOR **Wild Horse Val** 63.66 56 eP P 09 45 35.1 +1.1
WVOR pmax pmax
comp=Z,14nm,0.9s
FIA1 **FINESS Array S** 63.87 333 eP P 09 45 33.3 -1.5
FINES **FINESS Array B** 63.87 333 P P 09 45 33.0 -1.8
comp=Z,31nm,0.6s,baz=39,slow=7.7,SNR=117
BEKR **Beckworth** 64.22 59 eP P 09 45 38.6 +0.9
comp=Z,18nm,0.9s
FFC **Flin Flon** 64.24 37 eP P 09 45 38.0 +0.6
FFC **Flin Flon** 64.24 37 eP P 09 45 37.9 +0.6
comp=Z,15nm,0.9s
FFC **Flin Flon** 64.24 37 eP P 09 45 37.9 +0.6
FFC pmax pmax
comp=Z,15nm,0.9s
GEYT **Alibeck** 64.25 299 P P 09 45 38.3 +0.6
comp=Z,555nm,0.4s,baz=20,slow=4.7,SNR=50
AFDM **Forest Hills D** 64.42 60 eP P 09 45 39.9 +1.1
comp=Z,4.7nm,0.9s
OBN **Obninsk** 64.50 324⇑ eP P 09 45 36.9 -2.1
OBN e*PP pP 09 46 17.7 +2.0
OBN e 09 48 05.0
OBN eS S 09 54 29.1 +24
OBN pmax pmax
comp=Z,22nm,0.5s
FCC **Fort Churchill** 64.53 31 eP P 09 45 39.1 0.0
FCC **Fort Churchill** 64.53 31 eP P 09 45 39.1 0.0
comp=Z,8.6nm,0.6s
FCC **Fort Churchill** 64.53 31 eP P 09 45 39.1 0.0
FCC pmax pmax
comp=Z,9.0nm,0.6s
MFID **Camas Ranch** 64.67 53 eP P 09 45 41.5 +1.0
comp=Z,9.0nm,0.7s
HRY **Holter Researc** 64.78 48 eP P 09 45 42.3 +1.1
RUBR **Rubicon Trail** 64.85 59 eP P 09 45 43.4 +1.5
comp=Z,23nm,0.9s
PAHR **Pah Rah Range** 64.91 58 eP P 09 45 43.2 +1.0
comp=Z,18nm,1.0s
CTA **Charters Tower** 64.95 182 P P 09 45 43.1 +0.8
comp=Z,2.1nm,0.5s,baz=3.2,slow=7.5,SNR=6.7
VCNR **Virginia City** 65.01 59 eP P 09 45 44.1 +1.2
comp=Z,12nm,0.8s
LRM **Limekiln Ridge** 65.01 50 eP P 09 45 43.8 +0.9
EGMT **Eagleton** 65.01 46 P P 09 45 43.3 +0.7
baz=311,SNR=22
EGMT **Eagleton** 65.01 46 eP P 09 45 43.5 +0.9
comp=Z,26nm,0.8s
PNTR **Pine Nut** 65.17 59 eP P 09 45 45.5 +1.6
comp=Z,18nm,0.8s
DLMT **Dillon** 65.23 50 eP P 09 45 45.2 +1.1
comp=Z,11nm,0.8s
CMB **Columbia Colle** 65.35 60 eP P 09 45 46.2 +1.3
comp=Z,13nm,0.9s
CMB **Columbia Colle** 65.35 60 eP P 09 45 46.2 +1.3
CMB pmax pmax
comp=Z,13nm,0.9s
HLID **Hailey** 65.37 52 P P 09 45 46.2 +1.0
baz=310,SNR=22
HLID **Hailey** 65.37 52 eP P 09 45 46.3 +1.2
comp=Z,11nm,1.1s
MCMT **McKenzie Canyo** 65.43 51 eP P 09 45 46.3 +0.8
YERR **Yerington** 65.45 59 eP P 09 45 47.0 +1.3
comp=Z,32nm,1.1s
BOZ **Bozeman (W)** 65.60 49 P P 09 45 47.6 +1.1
baz=310,SNR=74
BOZ **Bozeman (W)** 65.60 49 eP P 09 45 47.6 +1.1
BOZ **Bozeman (W)** 65.60 49 eP P 09 45 47.6 +1.1
comp=Z,28nm,0.6s
BOZ **Bozeman (W)** 65.60 49 eP P 09 45 47.6 +1.1
BOZ pmax pmax
comp=Z,28nm,0.6s
WAKR **Walker** 65.63 59 eP P 09 45 48.6 +1.7
comp=Z,18nm,1.0s
BMN **Battle Mountai** 65.74 57 eP P 09 45 48.9 +1.4
comp=Z,16nm,0.8s
BMN **Battle Mountai** 65.74 57 eP P 09 45 48.9 +1.4
BMN pmax pmax
comp=Z,16nm,0.8s
VSU **Vasula** 65.88 330⇑ iP P 09 45 47.0 -0.8
VSU pmax pmax
comp=Z,48nm,0.9s
WRAB **Tennant Creek** 65.95 194 eP P 09 45 49.0 +0.3
comp=Z,8.0nm,0.9s
WRAB **Tennant Creek** 65.95 194 eP P 09 45 49.0 +0.3
WRAB pmax pmax
comp=Z,8.0nm,0.9s
WRA **Warramunga Arr** 65.96 194 P P 09 45 48.6 -0.2
comp=Z,4.0nm,0.5s,baz=10,slow=6.7,SNR=29
WRA PcP PcP 09 46 19.3 +1.0
comp=Z,1.6nm,0.5s,baz=8.9,slow=4.8,SNR=11
VSR **Storozhevoye** 66.02 319 eP P 09 45 47.6 -1.3
VSR pmax pmax
comp=Z,10.0nm,0.4s
KVN **Kaiserville** 66.10 58 eP P 09 45 51.1 +1.2
comp=Z,22nm,0.9s
KVN **Kaiserville** 66.10 58 eP P 09 45 51.1 +1.2
KVN pmax pmax
comp=Z,22nm,0.9s
RYN **Ryan** 66.11 59 eP P 09 45 51.1 +1.2
comp=Z,15nm,0.9s
VORD **Divnogorie** 66.13 319 eP P 09 45 48.7 -0.9
VORD pmax pmax
comp=Z,20nm,0.7s
QLMT **Earthquake Lak** 66.20 50 eP P 09 45 51.9 +1.5
NV01 **Mina Array Sit** 66.37 59 eP P 09 45 52.7 +1.0
NVAR **Mina Array Bea** 66.37 59 P P 09 45 52.8 +1.1
comp=Z,13nm,0.8s,baz=289,slow=6.7,SNR=66
YHB **Horse Butte** 66.38 50 eP P 09 45 52.9 +1.3
comp=Z,22nm,0.8s
NV11 **Mina Array Sit** 66.46 59 eP P 09 45 53.2 +1.1
comp=Z,0.8nm,0.9s
OMMB **Old Mammoth Mi** 66.46 60 eP P 09 45 53.8 +1.5
comp=Z,7.9nm,1.2s
GCMT **Greycliff** 66.51 48 eP P 09 45 52.9 +0.6
MLAC **Mammoth, Mammo** 66.55 60 P P 09 45 54.2 +1.3
baz=310
YMR **Madison River** 66.56 50 eP P 09 45 54.4 +1.7
comp=Z,16nm,0.8s
YFT **Old Faithful** 66.77 50 eP P 09 45 57.0 +2.9
comp=Z,15nm,0.8s
PAGB **Antelope Grade** 66.89 62 eP P 09 45 56.3 +1.6
comp=Z,30nm,1.1s
YPP **Pitchstone Pla** 66.91 50 eP P 09 45 57.5 +2.4
comp=Z,4.7nm,0.7s
H17A **Grant Village** 66.95 50 P P 09 45 57.8 +2.6
baz=311,SNR=19
H17A **Grant Village** 66.95 50 eP P 09 45 58.0 +2.8
comp=Z,21nm,0.9s
IMW **Indian Meadow** 67.08 50 eP P 09 45 57.9 +1.8
comp=Z,15nm,0.9s
RLMT **Red Lodge** 67.17 49 P P 09 45 57.5 +1.0
baz=312,SNR=9.0
RLMT **Red Lodge** 67.17 49 eP P 09 45 57.8 +1.2
comp=Z,7.4nm,0.7s
FXWY **Fox Creek** 67.20 51 eP P 09 45 58.5 +1.6
comp=Z,9.7nm,0.6s
MOOW **Moose Ponds** 67.28 50 eP P 09 45 58.9 +1.6
comp=Z,15nm,1.0s
TIN **Tinemaha, Big** 67.29 60 P P 09 45 58.9 +1.5
baz=310
TPAW **Teton Pass** 67.34 51 eP P 09 45 59.3 +1.6
comp=Z,25nm,0.9s
HVU **Hansel Valley** 67.45 53 eP P 09 45 59.5 +1.2
comp=Z,15nm,0.9s
HVU **Hansel Valley** 67.45 53 eP P 09 45 59.5 +1.2
HVU pmax pmax
comp=Z,15nm,0.9s
LOHW **Long Hollow** 67.45 50 eP P 09 45 60.0 +1.6
comp=Z,7.1nm,0.7s
SNOW **Snow King Moun** 67.46 51 eP P 09 46 00.3 +1.8
comp=Z,11nm,0.6s
REDW **Red Top Meadow** 67.48 51 eP P 09 46 00.1 +1.5
comp=Z,14nm,0.8s
DGMT **Dagmar** 67.49 43 P P 09 45 58.7 +0.4
baz=314,SNR=9.5
DGMT **Dagmar** 67.49 43 eP P 09 45 59.0 +0.7
comp=Z,22nm,0.6s
VES **Vestal, Richgr** 67.55 61 P P 09 45 59.0 +0.2
baz=310,SNR=5.4
LAO **LASA Array** 67.69 46 P P 09 46 00.6 +1.0
baz=313,SNR=14
LAO **LASA Array** 67.69 46 eP P 09 46 00.7 +1.0
comp=Z,20nm,0.9s
PKM **Mcpherson Peak** 67.70 63 P P 09 46 00.9 +0.8
baz=311
AHID **Auburn Hatcher** 67.73 51 eP P 09 46 01.2 +1.1
comp=Z,9.5nm,0.6s
CWC **Cottonwood Cre** 67.78 60 P P 09 46 00.9 +0.4
baz=311
GRAC **Grapevine Rang** 67.86 59 P P 09 46 02.2 +1.3
baz=311,SNR=14
BGU **Big Grassy Mou** 67.86 54 eP P 09 46 02.3 +1.4
comp=Z,4.9nm,0.7s
ISA **Isabella, Lake** 68.04 61 P P 09 46 02.0 0.0
baz=311,SNR=5.7
ISA **Isabella, Lake** 68.04 61 eP P 09 46 02.3 +0.3
comp=Z,8.1nm,0.9s
ISA **Isabella, Lake** 68.04 61 eP P 09 46 02.3 +0.3
ISA pmax pmax
comp=Z,8.0nm,0.9s
R11A **Troy Canyon, C** 68.05 57 P P 09 46 03.0 +0.9
baz=311,SNR=21
R11A **Troy Canyon, C** 68.05 57 eP P 09 46 03.1 +0.9
comp=Z,14nm,1.1s
SBC **Santa Barbara** 68.05 63 P P 09 46 02.4 +0.4
baz=311
IZAR **Zarasai** 68.11 329 eP P 09 46 01.4 -0.5
IZAR IAmb IAmb 09 46 03.0
comp=Z,10nm,0.5s
DAC **Darwin (Calif)** 68.19 60 eP P 09 46 00.0 -3.1
comp=Z,8.3nm,0.6s
DAC **Darwin (Calif)** 68.19 60 eP P 09 46 00.0 -3.1
DAC pmax pmax
comp=Z,8.0nm,0.6s
HWUT **Hardware Ranch** 68.24 53 eP P 09 46 04.5 +1.2
comp=Z,14nm,0.6s
IDID **Didziasalis** 68.25 328 eP P 09 46 02.3 -0.6
IDID IAmb IAmb 09 46 03.1
comp=Z,9.5nm,0.8s
ISAL **Salakas** 68.29 329 eP P 09 46 02.7 -0.4
ISAL IAmb IAmb 09 46 03.4
comp=Z,12nm,0.9s
GOF **Gofitskoye** 68.30 312⇑ iP P 09 46 03.8 +0.5
GOF pmax pmax
comp=Z,170nm,0.8s
MPMC **Manual Prospec** 68.39 60 P P 09 46 05.1 +0.8
baz=311,SNR=13
IIGN **Ignalina** 68.42 328 eP P 09 46 03.5 -0.5
IIGN IAmb IAmb 09 46 04.2
comp=Z,14nm,0.6s
DUG **Dugway, Tooele** 68.47 54 P P 09 46 05.9 +1.1
baz=312,SNR=36
DUG **Dugway, Tooele** 68.47 54 eP P 09 46 05.8 +1.1
comp=Z,20nm,0.8s
DUG **Dugway, Tooele** 68.47 54 eP P 09 46 05.8 +1.1
DUG pmax pmax
comp=Z,20nm,0.8s
NB2 **NORSAR Subarra** 68.48 339 P P 09 46 02.6 -1.7
comp=Z,4.4nm,0.5s,baz=30,slow=6.5
FURC **Furnace Creek,** 68.51 60 P P 09 46 06.0 +1.3
baz=311,SNR=37
OSI **Osito Audit: C** 68.56 62 P P 09 46 05.7 +0.4
baz=311
TPNV **Topopah Spring** 68.57 59 P P 09 46 06.3 +0.9
baz=311,SNR=16
TPNV **Topopah Spring** 68.57 59 eP P 09 46 06.4 +1.0
comp=Z,19nm,0.9s
TPNV **Topopah Spring** 68.57 59 eP P 09 46 06.4 +1.0
TPNV pmax pmax
comp=Z,19nm,0.9s
BW06 **Boulder Array** 68.58 51 P P 09 46 06.1 +0.6
baz=312,SNR=21
BW06 **Boulder Array** 68.58 51 eP P 09 46 06.2 +0.6
comp=Z,12nm,0.8s
PD31 **Pinedale Array** 68.58 51 eP P 09 46 06.2 +0.7
PDAR **Pinedale Array** 68.58 51 P P 09 46 05.7 +0.2
comp=Z,12nm,0.7s,baz=270,slow=1.7,SNR=116
PDAR **Pinedale Array** 68.58 51 eP P 09 46 05.5 +0.1
HFS **Hagfors** 68.60 337 P P 09 46 03.2 -1.8
comp=Z,8.7nm,0.4s,baz=39,slow=5.7,SNR=47
LRMC **Laurel Mtn Rad** 68.65 61 P P 09 46 06.1 +0.3
baz=311
TCUT **Toone Canyon** 68.66 53 eP P 09 46 07.2 +1.3
comp=Z,28nm,0.9s
BLG **Laguna Peak, P** 68.68 63 P P 09 46 06.0 +0.1
baz=311
CTU **Camp Tracy** 68.74 53 eP P 09 46 07.7 +1.3
comp=Z,12nm,0.7s
EDW2 **Edwards Air Fo** 68.84 62 P P 09 46 07.8 +0.8
baz=311,SNR=10
SNCC **San Nicolas Is** 68.95 64 P P 09 46 08.2 +0.6
baz=311
PSUT **Pine Spring** 68.96 56 eP P 09 46 08.8 +0.9
comp=Z,7.4nm,0.7s
JLU **Jordanelle** 68.97 53 eP P 09 46 09.1 +1.1
comp=Z,7.2nm,0.7s
DECC **Green Verdugo** 69.04 62 P P 09 46 08.6 +0.4
baz=311
NLU **North Lily Min** 69.05 54 eP P 09 46 09.5 +1.1
comp=Z,16nm,0.9s
KVAR **Kislovodsk Arr** 69.23 312 P P 09 46 09.8 +0.5
comp=Z,46nm,0.7s,baz=219,slow=4.2,SNR=22
KIV **Kislovodsk** 69.23 312 eP P 09 46 10.4 +1.1
comp=Z,78nm,0.7s
KIV **Kislovodsk** 69.23 312 i P P 09 46 10.1 +0.8
SNR=7.9
KIV **Kislovodsk** 69.23 312 eP P 09 46 09.9 +0.6
KIV pmax pmax
comp=Z,95nm,0.9s
MWC **Mount Wilson** 69.23 62 eP P 09 46 10.5 +0.9
comp=Z,8.3nm,0.8s
MWC **Mount Wilson** 69.23 62 eP P 09 46 10.5 +0.9
MWC pmax pmax
comp=Z,8.0nm,0.8s
SHOC **Shoshone, Teco** 69.24 60 P P 09 46 10.1 +0.7
baz=312,SNR=6.1
MPU **Maple Canyon** 69.26 54 eP P 09 46 10.8 +1.1
comp=Z,18nm,0.8s
KBZ **Khabaz** 69.28 312 P P 09 46 10.0 +0.7
comp=Z,34nm,0.8s,baz=59,slow=4.7,SNR=75
GSC **Goldstone, Bar** 69.31 61 P P 09 46 10.4 +0.5
baz=312,SNR=7.7
GSC **Goldstone, Bar** 69.31 61 eP P 09 46 10.7 +0.8
comp=Z,14nm,1.0s
GSC **Goldstone, Bar** 69.31 61 eP P 09 46 10.7 +0.8
GSC pmax pmax
comp=Z,14nm,1.0s
ZEI **Tsey** 69.38 310 eP P 09 46 09.2 -1.2
ZEI pmax pmax
comp=Z,28nm,0.9s
BFSC **Mount Baldy Ra** 69.47 62 P P 09 46 11.5 +0.5
baz=312,SNR=6.1
SHPR **Sheep Range** 69.52 59 eP P 09 46 12.5 +1.2
comp=Z,16nm,1.2s
AS01 **Alice Springs** 69.67 194 eP P 09 46 12.8 +0.9
AS31 **Alice Springs** 69.68 194 eP P 09 46 13.3 +1.3
comp=Z,1.2nm,0.6s
ASAR **Alice Springs** 69.68 194 P P 09 46 12.5 +0.5
comp=Z,4.7nm,0.8s,baz=11,slow=5.4,SNR=33
ASAR PKPPKP P'P'df 10 14 17.5 +2.6
comp=Z,0.8nm,1.0s,baz=232,slow=1.1,SNR=5.0
SCI2 **San Clemente I** 69.74 63 P P 09 46 12.6 +0.1
baz=312
TUQ **Turquoise Moun** 69.76 60 P P 09 46 13.5 +0.8
baz=312,SNR=14
CCUT **Cedar City** 69.90 57 eP P 09 46 14.9 +1.2
comp=Z,7.3nm,0.7s
HEC **Hector,Ludlow** 69.91 61 P P 09 46 14.3 +0.8
baz=312,SNR=8.8
BBRC **Big Bear Solar** 69.92 61 P P 09 46 14.3 +0.4
baz=312,SNR=5.1
MSU **Marysvale** 69.95 55 eP P 09 46 15.4 +1.4
MSU **Marysvale** 69.95 55 eP P 09 46 15.4 +1.4
TMUT **Trail Mountain** 69.99 54 eP P 09 46 15.3 +1.0
comp=Z,16nm,1.0s
SZCU **Shurtz Canyon** 70.03 57 eP P 09 46 15.7 +1.2
comp=Z,8.9nm,0.9s
ULM **Lac du Bonnet** 70.04 38 P P 09 46 13.8 -0.3
comp=Z,8.0nm,0.5s,baz=314,slow=6.3,SNR=18
ULM **Lac du Bonnet** 70.04 38 eP P 09 46 13.7 -0.3
comp=Z,8.5nm,0.5s
MDND **Maddock** 70.11 41 P P 09 46 14.8 +0.3
baz=316
MDND **Maddock** 70.11 41 eP P 09 46 15.6 +1.1
comp=Z,29nm,0.8s
MURC **Murrieta** 70.18 62 P P 09 46 15.5 +0.3
baz=312,SNR=7.9
MTPU **Mount Pierson** 70.26 56 eP P 09 46 17.6 +1.5
comp=Z,16nm,0.8s
K22A **Casper** 70.30 49 P P 09 46 16.3 +0.3
baz=314,SNR=13
K22A **Casper** 70.30 49 eP P 09 46 16.5 +0.5
comp=Z,12nm,0.6s
P18A **Preston Nutter** 70.31 53 eP P 09 46 17.4 +1.1
comp=Z,9.3nm,0.6s
LCMT **Little Creek M** 70.33 57 eP P 09 46 17.5 +1.4
comp=Z,14nm,0.8s
GMRC **Granite Mounta** 70.35 60 P P 09 46 17.1 +0.8
baz=312,SNR=8.5
LDFC **Landfair** 70.49 60 eP P 09 46 18.0 +0.8
comp=Z,32nm,0.8s
SRU **San Rafael Swe** 70.50 54 eP P 09 46 18.1 +0.9
comp=Z,41nm,1.0s
SRU **San Rafael Swe** 70.50 54 eP P 09 46 18.1 +0.9
SRU pmax pmax
comp=Z,41nm,1.0s
KNB **Kanab** 70.58 57 eP P 09 46 19.2 +1.5
comp=Z,16nm,0.9s
KNB **Kanab** 70.58 57 eP P 09 46 19.2 +1.5
KNB pmax pmax
comp=Z,16nm,0.9s
RSSD **Black Hills** 70.58 47 P P 09 46 17.7 0.0
baz=315
RSSD **Black Hills** 70.58 47 eP P 09 46 18.0 +0.3
comp=Z,14nm,0.6s
RSSD **Black Hills** 70.58 47 eP P 09 46 18.0 +0.3
RSSD pmax pmax
comp=Z,14nm,0.6s
PKCU **Pink Cliffs** 70.59 56 eP P 09 46 20.3 +2.3
comp=Z,10nm,1.1s
RWWY **Rawlins** 70.59 50 eP P 09 46 18.6 +0.8
comp=Z,21nm,1.0s
B31A **Greenbush Farm** 70.60 40 P P 09 46 17.3 -0.1
baz=317
PFO **Pinyon Flats O** 70.64 62 P P 09 46 18.5 +0.5
baz=312,SNR=5.4
PFO **Pinyon Flats O** 70.64 62 eP P 09 46 18.8 +0.7
comp=Z,11nm,0.9s
PFO **Pinyon Flats O** 70.64 62 eP P 09 46 18.8 +0.7
PFO pmax pmax
comp=Z,11nm,0.9s
BELC **Belle Mtn. Jos** 70.66 61 P P 09 46 18.6 +0.3
baz=312,SNR=6.4
109C **Camp Elliot, M** 70.71 63 P P 09 46 18.8 +0.4
baz=312
CPE **Camp Elliot** 70.71 63 eP P 09 46 19.1 +0.7
comp=Z,11nm,0.6s
GNI **Garni** 70.72 308 P P 09 46 20.2 +1.8
comp=Z,13nm,0.6s,baz=197,slow=5.8,SNR=7.5
GNI **Garni** 70.72 308c iP P 09 46 20.3 +1.8
GNI i 09 46 39.5
GNI pmax pmax
comp=Z,63nm,1.1s
AKASG **Malin Array Be** 70.77 324 P P 09 46 17.3 -1.0
comp=Z,16nm,0.7s,baz=38,slow=6.5,SNR=58
AKASG **Malin Array Be** 70.77 324ceP P 09 46 17.2 -1.2
AKASG pmax pmax
comp=Z,16nm,0.7s
AKBB **Malin Array Si** 70.77 324 eP P 09 46 17.4 -1.0
comp=Z,18nm,0.8s
AKBB **Malin Array Si** 70.77 324 eP P 09 46 17.4 -1.0
AKBB pmax pmax
comp=Z,18nm,0.8s
KIEV **Kiev** 70.78 324 eP P 09 46 17.2 -1.2
KIEV **Kiev** 70.78 324 eP P 09 46 17.3 -1.2
comp=Z,18nm,0.8s
KIEV **Kiev** 70.78 324 iP P 09 46 17.4 -1.0
SNR=10
KIEV **Kiev** 70.78 324c iP P 09 46 17.2 -1.2
KIEV pmax pmax
comp=Z,16nm,0.9s
AK11 **Malin Array Si** 70.81 324 eP P 09 46 17.6 -1.0
NEE2 **Needles Airpor** 71.00 60 P P 09 46 20.2 +0.1
baz=312
C31A **Landman Farms,** 71.02 41 P P 09 46 20.0 0.0
baz=317,SNR=7.7
IRM **Iron Mountain** 71.09 60 P P 09 46 21.4 +0.7
baz=312,SNR=9.6
O20A **White River Ci** 71.09 52 P P 09 46 21.3 +0.5
baz=314,SNR=8.9
O20A **White River Ci** 71.09 52 eP P 09 46 21.3 +0.5
comp=Z,11nm,0.6s
BAR **Barrett** 71.12 63 eP P 09 46 21.7 +0.8
comp=Z,8.1nm,0.8s
MONP2 **Monument Peak** 71.14 62 P P 09 46 21.4 +0.2
baz=312,SNR=5.1
A33A **Warroad** 71.23 38 P P 09 46 20.7 -0.5
baz=318,SNR=7.4

BC3	Big Chuckawall	71.23	61	P		P	09 46 22.1 +0.5
	baz=312						
ANN	Anapa	71.34	315	*eP*		P	09 46 18.4 -3.5
ANN				*e*			09 46 37.1
ANN				*e**PP		pP	09 46 57.4 -1.9
ANN				*e*			09 48 59.4
ANN				*e*PPP		PPP	09 50 39.7
ANN				*e*S		S	09 55 21.3 -5.6
ANN				pmax		pmax	
	comp=Z,103nm,1.4s						
SWSC	Sam W. Stewart	71.49	62	P		P	09 46 22.9 -0.1
	baz=312						
IKP	In-Ko-Pah, Jac	71.50	62	P		P	09 46 23.9 +0.7
	baz=312,SNR=5.7						
AGMN	Agassiz Nation	71.50	39	P		P	09 46 21.8 -1.0
	baz=318,SNR=5.6						
AGMN	Agassiz Nation	71.50	39	*eP*		P	09 46 22.1 -0.7
	comp=Z,10nm,1.1s						
C32A	Crookston	71.55	40	P		P	09 46 22.8 -0.3
	baz=318						
D31A	Mcclaflin, Tow	71.57	41	P		P	09 46 21.8 -1.5
	baz=318						
PDMCI	Parker Dam,Lak	71.60	60	P		P	09 46 24.5 +0.8
	baz=313,SNR=8.3						
PV09	Paradox Valley	71.72	54	*eP*		P	09 46 25.6 +0.9
Y12C	Blythe	71.74	60	P		P	09 46 25.4 +0.8
	baz=313,SNR=6.7						
Y12C	Blythe	71.74	60	*eP*		P	09 46 25.6 +1.1
	comp=Z,18nm,0.8s						
N23A	Red Feather La	71.83	50	P		P	09 46 26.3 +1.0
	baz=315,SNR=9.7						
N23A	Red Feather La	71.83	50	*eP*		P	09 46 26.5 +1.2
	comp=Z,8.8nm,0.7s						
D32A	Dogwood Acres,	71.83	41	P		P	09 46 24.5 -0.4
	baz=318						
D32A	Dogwood Acres,	71.83	41	*eP*		P	09 46 25.0 +0.2
	comp=Z,19nm,0.9s						
PV10	Paradox Valley	71.85	54	*eP*		P	09 46 26.9 +1.4
	comp=Z,52nm,0.7s						
E31A	Nome	71.85	41	P		P	09 46 25.0 -0.1
	baz=318,SNR=11						
B34A	Aery, Baudette	71.89	38	P		P	09 46 24.5 -0.6
	baz=319,SNR=5.4						
PV04	Paradox Valley	71.92	54	*eP*		P	09 46 26.7 +1.0
	comp=Z,20nm,0.7s						
C33A	Trail	71.94	40	P		P	09 46 25.1 -0.4
	baz=318						
GLA	Glamis	72.03	61	P		P	09 46 27.2 +0.9
	baz=313						
GLA	Glamis	72.03	61	*eP*		P	09 46 27.7 +1.4
	comp=Z,11nm,0.8s						
GLA	Glamis	72.03	61	*eP*		P	09 46 27.7 +1.4
GLA				pmax		pmax	
	comp=Z,11nm,0.8s						
PV07	Paradox Valley	72.03	53	*eP*		P	09 46 27.6 +1.1
	comp=Z,16nm,1.1s						
PV03	Paradox Valley	72.05	54	*eP*		P	09 46 27.7 +1.1
	comp=Z,22nm,0.6s						
PV02	Paradox Valley	72.14	54	*eP*		P	09 46 28.3 +1.1
	comp=Z,7.0nm,0.7s						
PV15	Paradox Valley	72.19	53	*eP*		P	09 46 28.5 +1.0
	comp=Z,21nm,1.1s						
PV01	Paradox Valley	72.29	54	*eP*		P	09 46 28.8 +0.8
	comp=Z,9.8nm,0.7s						
D33A	AnnSam, Waubun	72.37	40	P		P	09 46 27.6 -0.5
	baz=319						
B35A	Bob, Littlefor	72.39	38	P		P	09 46 27.8 -0.4
	baz=320,SNR=6.0						
B35A	Bob, Littlefor	72.39	38	*eP*		P	09 46 27.9 -0.3
	comp=Z,10nm,0.5s						
C34A	RKJ Ranch, Bem	72.41	39	P		P	09 46 27.8 -0.5
	baz=319						
WUAZ	Wupatki	72.45	57	P		P	09 46 29.7 +0.7
	baz=314,SNR=8.1						
WUAZ	Wupatki	72.45	57	*eP*		P	09 46 30.3 +1.3
	comp=Z,10nm,0.8s						
Y14A	Wickenburg	72.55	59	*eP*		P	09 46 30.4 +1.0
	comp=Z,15nm,0.7s						
G31A	Conde	72.68	43	P		P	09 46 29.7 -0.2
	baz=318						
D34A	Park Rapids	72.70	40	P		P	09 46 29.5 -0.5
	baz=319,SNR=9.1						
D34A	Park Rapids	72.70	40	*eP*		P	09 46 29.8 -0.3
	comp=Z,21nm,0.6s						
F32A	Veblen	72.72	42	P		P	09 46 29.7 -0.5
	baz=318						
E33A	Westby DABS, E	72.77	41	P		P	09 46 30.3 -0.1
	baz=319,SNR=11						
ISCO	Idaho Springs	72.78	51	P		P	09 46 32.0 +1.0
	baz=315,SNR=11						
ISCO	Idaho Springs	72.78	51	*eP*		P	09 46 32.2 +1.2
	comp=Z,12nm,1.0s						
ISCO	Idaho Springs	72.78	51	*eP*		P	09 46 32.2 +1.2
ISCO				pmax		pmax	
	comp=Z,12nm,1.0s						
SIM	Simferopol'	72.85	317	*eP*		P	09 46 31.4 +0.5
SIM				pmax		pmax	
	comp=Z,27nm,0.7s						
SUSD	Miller	72.89	44	P		P	09 46 31.2 0.0
	baz=317						
MVCO	Mesa Verde	72.97	54	P		P	09 46 32.8 +0.7
	baz=314,SNR=16						
MVCO	Mesa Verde	72.97	54	*eP*		P	09 46 32.8 +0.7
	comp=Z,15nm,0.7s						
G32A	Webster	73.00	42	P		P	09 46 31.7 -0.1
	baz=318,SNR=6.4						
G32A	Webster	73.00	42	*eP*		P	09 46 32.2 +0.3
	comp=Z,29nm,0.8s						
SORM	Soroca	73.09	322	⇑*iP*		P	09 46 31.8 -0.4
X16A	Lo Mia Camp, P	73.16	58	*eP*		P	09 46 34.6 +1.4
	comp=Z,18nm,0.8s						
BANOM	Banah	73.19	290	P		P	09 46 33.9 +0.7
SHME	Shamm	73.21	290	P		P	09 46 33.4 0.0
D35A	Remer	73.22	39	P		P	09 46 32.4 -0.7
	baz=320						
C36A	Pine Crest Far	73.24	38	P		P	09 46 32.5 -0.7
	baz=320,SNR=6.2						
E35A	Pequot Lakes	73.46	40	P		P	09 46 33.8 -0.7
	baz=320						
D36A	Goodland	73.54	39	P		P	09 46 34.2 -0.7
	baz=320						
D36A	Goodland	73.54	39	*eP*		P	09 46 34.4 -0.5
	comp=Z,8.4nm,0.8s						
C37A	Embarrass	73.54	38	P		P	09 46 34.5 -0.5
	baz=321						
S22A	4UR Ranch, Cre	73.54	53	P		P	09 46 36.7 +1.2
	baz=315,SNR=16						
S22A	4UR Ranch, Cre	73.54	53	*eP*		P	09 46 36.7 +1.2
	comp=Z,10nm,0.9s						
G33A	Ortonville	73.55	42	P		P	09 46 35.0 0.0
	baz=319,SNR=7.0						
LVV	L'vov	73.57	326	*eP*		P	09 46 35.7 +0.7
H32A	Carlson Farm,	73.58	43	P		P	09 46 34.7 -0.6
	baz=318						
Q24A	Divide	73.62	51	P		P	09 46 36.1 +0.2
	baz=316,SNR=8.1						
Q24A	Divide	73.62	51	*eP*		P	09 46 36.7 +0.7
	comp=Z,8.4nm,0.8s						
F34A	Alexandria	73.64	41	P		P	09 46 35.2 -0.4
	baz=319						
EYMN	Ely	73.67	37	P		P	09 46 35.3 -0.5
	baz=321						
EYMN	Ely	73.67	37	*eP*		P	09 46 35.6 -0.1
	comp=Z,8.0nm,0.8s						
W18A	Petrified Fore	73.70	57	P		P	09 46 37.3 +1.1
	baz=314						
W18A	Petrified Fore	73.70	57	*eP*		P	09 46 37.4 +1.1
	comp=Z,6.2nm,0.7s						
D37A	Cotton	73.88	38	P		P	09 46 36.1 -0.8
	baz=320						
OGNE	Ogallala	73.88	48	P		P	09 46 37.5 +0.3
	baz=317						
OGNE	Ogallala	73.88	48	*eP*		P	09 46 38.1 +1.0
	comp=Z,48nm,0.9s						
G34A	Benson	73.88	41	P		P	09 46 36.5 -0.5
	baz=319						
UOSS	Minazif	73.91	289	*eP*		P	09 46 38.1 +0.6
	comp=Z,7.0nm,0.8s						
UOSS	Minazif	73.91	289	P		P	09 46 37.5 +0.1
F35A	Swanville	73.91	40	P		P	09 46 36.7 -0.4
	baz=320						
C38A	Sawbill Land.	73.94	37	P		P	09 46 36.7 -0.6
	baz=321,SNR=5.7						
X18A	Snowflake	73.98	57	*eP*		P	09 46 39.1 +1.2
	comp=Z,10.0nm,0.8s						
E36A	McGregor	74.00	39	P		P	09 46 37.3 -0.4
	baz=320,SNR=7.1						
214A	Organ Pipe Nat	74.02	61	P		P	09 46 38.8 +0.8
	baz=314						
HATD	Hatta, Dubai	74.04	289	P		P	09 46 38.9 +0.7
SOHO	SOHO	74.23	288	P		P	09 46 39.2 -0.1
KWP	Kalwaria Pacla	74.24	326	*eP*		P	09 46 39.0 +0.1
KWP	Kalwaria Pacla	74.24	326	*eP*		P	09 46 39.0 +0.1
SDCO	Great Sand Dun	74.29	52	P		P	09 46 40.7 +0.8
	baz=316,SNR=11						
SDCO	Great Sand Dun	74.29	52	*eP*		P	09 46 40.8 +1.0
	comp=Z,8.2nm,1.1s						
F36A	Milaca	74.38	40	P		P	09 46 39.2 -0.7
	baz=320						
G35A	Watkins	74.43	41	P		P	09 46 40.2 0.0
	baz=320,SNR=6.3						
G35A	Watkins	74.43	41	*eP*		P	09 46 40.3 +0.2
	comp=Z,14nm,0.7s						
ECSD	EROS Data Cent	74.55	43	P		P	09 46 40.7 -0.2
	baz=319,SNR=12						
ECSD	EROS Data Cent	74.55	43	*eP*		P	09 46 40.8 -0.1
	comp=Z,9.0nm,0.8s						
H35A	Sunnyside Ranc	74.67	41	P		P	09 46 41.7 +0.1
	baz=320,SNR=10						
E38A	The Farm, Brul	74.68	38	P		P	09 46 41.0 -0.6
	baz=321,SNR=5.2						
E38A	The Farm, Brul	74.68	38	*eP*		P	09 46 41.1 -0.5
	comp=Z,14nm,0.8s						
G36A	St. Michael	74.76	40	P		P	09 46 41.6 -0.5
	baz=320						
BUR08	Bucovina Ar. S	74.81	324	*eP*		P	09 46 42.5 +0.1
ALNE	Al Ain	74.81	289	P		P	09 46 43.3 +0.6
BUR04	Bucovina Ar. S	74.82	324	*eP*		P	09 46 42.2 -0.3
BURAR	Bucovina Array	74.82	324	⇑*iP*		P	09 46 42.3 -0.2
OJC	Ojcow	74.87	328	*eP*		P	09 46 43.1 +0.5
OJC	Ojcow	74.87	328	*eP*		P	09 46 42.5 -0.1
	comp=Z,16nm,0.6s						
OJC	Ojcow	74.87	328	*eP*		P	09 46 42.5 -0.1
OJC				pmax		pmax	
	comp=Z,16nm,0.6s						
F37A	Hinrichs Farm,	74.89	39	P		P	09 46 42.2 -0.6
	baz=321						
KSCO	Kaye Shedlock'	74.96	50	P		P	09 46 43.3 -0.1
	baz=317						
KSCO	Kaye Shedlock'	74.96	50	*eP*		P	09 46 43.9 +0.4
	comp=Z,12nm,0.9s						
TUC	Tucson	75.01	59	P		P	09 46 44.6 +0.8
	baz=314						
TUC	Tucson	75.01	59	*eP*		P	09 46 44.6 +0.8
	comp=Z,13nm,1.1s						
TUC	Tucson	75.01	59	*eP*		P	09 46 44.7 +0.8
TUC				pmax		pmax	
	comp=Z,13nm,1.1s						
F38A	Pierce - Schro	75.04	39	P		P	09 46 43.5 -0.1
	baz=321,SNR=8.1						
TESR	Tescani	75.08	322	⇑*iP*		P	09 46 42.7 -1.2
TLCR		75.15	320	⇑*iP*		P	09 46 43.5 -0.7
H36A	Jessenland, He	75.18	41	P		P	09 46 44.8 +0.4
	baz=320						
SPMN	Marine on St.	75.20	40	P		P	09 46 44.0 -0.5
	baz=321						
UZH	Uzhgorod	75.20	326	*eP*		P	09 46 42.9 -1.6
UZH				*i*			09 46 57.3
E39A	Mellen	75.29	38	P		P	09 46 44.6 -0.5
	baz=322,SNR=6.9						
CRVS	Cervenica-Dubn	75.31	327	*eP*		P	09 46 45.2 +0.1
CRVS				pmax		pmax	
	comp=Z,7.0nm,0.8s						
CRVS	Cervenica-Dubn	75.31	327	*eP*		P	09 46 45.2 +0.1
T25A	Trinidad	75.33	52	P		P	09 46 46.1 +0.4
	baz=316,SNR=11						
T25A	Trinidad	75.33	52	*eP*		P	09 46 46.5 +0.7
	comp=Z,12nm,0.8s						
NIE	Niedzica	75.33	328	*eP*		P	09 46 46.2 +0.9
NIE	Niedzica	75.33	328	*eP*		P	09 46 46.2 +0.9
CFR	Carcaliu	75.46	321	⇓*iP*		P	09 46 46.0 0.0
F39A	Loretta	75.50	38	P		P	09 46 45.8 -0.5
	baz=322						
TRPA	Tarpa	75.51	326	⇑*iP*		P	09 46 46.8 +0.6
E40A	Wakefield	75.52	37	P		P	09 46 46.7 +0.2
	baz=322,SNR=10						
BGNE	Belgrade	75.53	45	P		P	09 46 46.3 -0.3
	baz=318						
BGNE	Belgrade	75.53	45	*eP*		P	09 46 46.8 +0.2
	comp=Z,27nm,1.0s						
VRI	Vrincioaia	75.55	322	⇓*iP*		P	09 46 46.4 -0.2
VRI	Vrincioaia	75.55	322	P		P	09 46 49.6 +3.0
I36A	Fitzsimmons Fa	75.57	41	P		P	09 46 46.5 -0.2
	baz=320						
PLOR	Plostina	75.59	322	⇑*iP*		P	09 46 46.6 -0.3
D41A	Chassel	75.60	36	P		P	09 46 46.6 -0.2
	baz=323						
KSP	Ksiaz	75.61	331	*eP*		P	09 46 47.4 +0.6
KSP	Ksiaz	75.61	331	*eP*		P	09 46 47.4 +0.6
H37A	Dierke Farm, C	75.64	40	P		P	09 46 47.1 0.0
	baz=321						
G38A	Ridgeland	75.67	39	P		P	09 46 46.4 -0.8
	baz=321						
LAZ	Ladron	75.72	56	*eP*		P	09 46 49.5 +1.5
TASM	ASL Pad, Albuq	75.73	55	P		P	09 46 49.1 +1.1
	baz=316,SNR=11						
ANMO	Albuquerque	75.73	55	P		P	09 46 49.2 +1.2
	comp=Z,7.5nm,0.7s,baz=315,slow=8.9,SNR=39						
ANMO	Albuquerque	75.73	55	P		P	09 46 49.0 +1.0
	baz=316						
ANMO	Albuquerque	75.73	55	*d iP*		P	09 46 49.3 +1.2
ANMO				pmax		pmax	
	comp=Z,6.0nm,0.8s						
TASL	Snake Pit, Alb	75.73	55	P		P	09 46 49.2 +1.1
	baz=316,SNR=12						
F40A	Park Falls	75.84	38	P		P	09 46 47.7 -0.5
	baz=322						
I37A	Lemond, Waseca	75.86	41	P		P	09 46 48.4 +0.1
	baz=320,SNR=5.5						
I37A	Lemond, Waseca	75.86	41	*eP*		P	09 46 48.8 +0.5
	comp=Z,18nm,0.8s						
H38A	Maiden Rock	75.86	40	P		P	09 46 47.7 -0.6
	baz=321						
LANS	Liptovska Anna	75.87	328	*eP*		P	09 46 49.1 +0.8
LANS	Liptovska Anna	75.87	328	*eP*		P	09 46 49.1 +0.8
TIRR	Tirgusor	75.89	320	⇑*iP*		P	09 46 48.1 -0.4
E41A	Kenton	75.91	37	P		P	09 46 48.0 -0.5
	baz=323,SNR=5.5						
HARR	Harsova	75.93	320	⇓*iP*		P	09 46 45.6 -3.1
ILGA	Ilgaz	75.94	315	*eP*		P	09 46 46.8 -2.3
	comp=Z,29nm,1.0s						
J36A	Seneca 1, Swea	75.94	42	P		P	09 46 48.3 -0.5
	baz=320						
TLB	Topalu	75.96	320	⇑*iP*		P	09 46 48.7 -0.2
DPC	Dobruska-Polom	76.01	330	*eP*		P	09 46 49.7 +0.6
DPC	Dobruska-Polom	76.01	330	*eP*		P	09 46 49.7 +0.6
DOPR	Dopca	76.05	323	⇓*iP*		P	09 46 48.3 -1.1
MORC	Moravsky Berou	76.06	329	⇑*iP*		P	09 46 49.0 -0.4
MORC	Moravsky Berou	76.06	329	*eP*		P	09 46 49.0 -0.4
	comp=Z,70nm,0.9s						
MORC	Moravsky Berou	76.06	329	*eP*		P	09 46 49.0 -0.4
MORC				pmax		pmax	
	comp=Z,70nm,0.9s						
MORC	Moravsky Berou	76.06	329	*eP*		P	09 46 49.4 0.0
KRLC	Kraliky	76.08	330	*eP*		P	09 46 49.8 +0.3
KRLC	Kraliky	76.08	330	*eP*		P	09 46 49.8 +0.3
COWI	Conover	76.12	37	*eP*		P	09 46 49.3 -0.5
	comp=Z,3.0nm,0.4s						
MLR	Muntele Rosu	76.19	322	P		P	09 46 50.7 +0.4
	comp=Z,2.9nm,0.5s,baz=189,slow=5.2,SNR=18						
MLR	Muntele Rosu	76.19	322	⇑*iP*		P	09 46 50.2 -0.1
MLR	Muntele Rosu	76.19	322	*eP*		P	09 46 50.8 +0.5
	comp=Z,13nm,0.7s						
MLR	Muntele Rosu	76.19	322	*eP*		P	09 46 50.8 +0.5
MLR				pmax		pmax	
	comp=Z,13nm,0.7s						
BNM	Barren Site	76.20	55	*eP*		P	09 46 51.9 +1.2
ISR	Istrita	76.22	322	⇓*iP*		P	09 46 51.3 +0.9
H39A	Augusta	76.30	39	P		P	09 46 50.3 -0.5
	baz=322						
CLL	Collm	76.31	333	*eP*		P	09 46 50.4 -0.3
CLL	Collm	76.31	333	*i* P		P	09 46 50.0 -0.7
	comp=Z,19nm,0.8s						
CLL	Collm	76.31	333	*eP*		P	09 46 50.4 -0.3
	comp=Z,16nm,0.7s						
CLL	Collm	76.31	333	*eP*		P	09 46 50.4 -0.3
CLL				pmax		pmax	
	comp=Z,16nm,0.7s						
G40A	Rib Lake	76.32	38	P		P	09 46 50.4 -0.5
	baz=322						
G40A	Rib Lake	76.32	38	*eP*		P	09 46 50.9 0.0
	comp=Z,10nm,0.9s						
J37A	Redenius Farm,	76.33	41	P		P	09 46 50.7 -0.3
	baz=321						
I38A	Scanlan Farm,	76.33	40	P		P	09 46 50.4 -0.6
	baz=321						
E42A	Champion	76.37	36	P		P	09 46 50.8 -0.4
	baz=323						
BRG	Berggiesshubel	76.38	332	*eP*		P	09 46 51.5 +0.4
	comp=Z,6.7nm,0.9s						
	comp=N,602nm,26.4s						
	comp=E,299nm,17.1s						
	comp=Z,656nm,16.8s						
BRG	Berggiesshubel	76.38	332	*eP*		P	09 46 51.5 +0.4
BRG				pmax		pmax	
	comp=Z,7.0nm,0.9s						
BRG				MLR		MLR	
	comp=N,602nm,26.4s						
BRG				MLR		MLR	
	comp=E,299nm,17.1s						
BRG				MLR		MLR	
	comp=Z,656nm,16.8s						
K36A	Gilmore City	76.42	42	P		P	09 46 51.2 -0.4
	baz=320						
F41A	Three Lakes	76.42	37	P		P	09 46 51.1 -0.4
	baz=323						
F41A	Three Lakes	76.42	37	*eP*		P	09 46 51.7 +0.2
	comp=Z,12nm,0.9s						
ICOR	Ion Corvin	76.43	320	⇓*iP*		P	09 46 52.7 +1.2
DRGR		76.51	325	P		P	09 46 52.9 +0.8
VOIR		76.61	323	⇓*iP*		P	09 46 53.1 +0.4
CBKS	Cedar Bluff	76.64	48	P		P	09 46 52.2 -0.7
	baz=318						
CBKS	Cedar Bluff	76.64	48	*eP*		P	09 46 52.5 -0.3
	comp=Z,9.2nm,0.6s						
CBKS	Cedar Bluff	76.64	48	*eP*		P	09 46 52.6 -0.3
CBKS				pmax		pmax	
	comp=Z,9.0nm,0.6s						
VYHS	Vyhne	76.64	328	*eP*		P	09 46 52.9 +0.2
VYHS				pmax		pmax	
	comp=Z,11nm,1.4s						
VYHS	Vyhne	76.64	328	*eP*		P	09 46 52.9 +0.2
121A	Cookes Peak, D	76.66	57	P		P	09 46 54.6 +1.3
	baz=316,SNR=11						
K37A	Belmond	76.70	42	P		P	09 46 52.5 -0.6
	baz=321,SNR=5.6						
PSZ	Piszkesteto	76.72	327	⇑*iP*		P	09 46 53.2 0.0
PSZ	Piszkesteto	76.72	327	*eP*		P	09 46 53.6 +0.4
	comp=Z,17nm,1.0s						
PSZ	Piszkesteto	76.72	327	*eP*		P	09 46 53.6 +0.4
PSZ				pmax		pmax	
	comp=Z,17nm,1.0s						
L36A	Harm Buss Farm	76.72	43	P		P	09 46 53.0 -0.3
	baz=320						
H40A	Chili	76.74	39	P		P	09 46 52.8 -0.6
	baz=322						
JAVC	Velka Javorina	76.77	329	*eP*		P	09 46 54.5 +1.0
VRAC	Vranov	76.79	330	⇑*iP*		P	09 46 53.9 +0.4
VRAC	Vranov	76.79	330	*eP*		P	09 46 53.9 +0.4
E43A	Lone Tree Farm	76.80	36	P		P	09 46 52.9 -0.7
	baz=324						
G41A	Antigo	76.81	38	P		P	09 46 53.3 -0.4
	baz=323						
J38A	Wedel Dairy, R	76.82	41	P		P	09 46 53.4 -0.4
	baz=321						
I39A	Houston	76.84	40	P		P	09 46 53.1 -0.8
	baz=322,SNR=5.5						
I39A	Houston	76.84	40	*eP*		P	09 46 53.5 -0.4
	comp=Z,12nm,0.6s						
ARR	Arges	76.85	323	⇑*iP*		P	09 46 54.6 +0.6
STKA	Stephens Creek	76.89	186	P		P	09 46 55.4 +1.4
	comp=Z,3.3nm,0.6s,baz=348,slow=7.3,SNR=7.7						
GOPC	GO Pecny, Ondr	76.91	331	*eP*		P	09 46 55.1 +0.9
GOPC	GO Pecny, Ondr	76.91	331	*eP*		P	09 46 55.1 +0.9
EKA	Eskdalemuir Ar	76.93	344	P		P	09 46 53.5 -0.7
	comp=Z,4.8nm,0.6s,baz=17,slow=5.7,SNR=15						
BR131	Keskin Array S	76.97	314	*eP*		P	09 46 55.7 +0.8
BRTR	Keskin Array B	76.97	314	P		P	09 46 55.2 +0.4
	comp=Z,5.4nm,0.7s,baz=90,slow=3.9,SNR=26						
BRTR	Keskin Array B	76.97	314	*ceP*		P	09 46 55.7 +0.8
BRTR				pmax		pmax	
	comp=Z,6.0nm,0.7s						
E44A	Grand Marais A	77.04	35	P		P	09 46 54.5 -0.4
	baz=324						
KRUC	Moravsky	77.07	330	*eP*		P	09 46 55.3 +0.3
H41A	Junction City	77.07	38	P		P	09 46 54.5 -0.6
	baz=322						
G42A	Mountain	77.11	37	P		P	09 46 54.9 -0.5
	baz=323						
L37A	Phoenix Point,	77.14	42	P		P	09 46 55.3 -0.2
	baz=321						
M36A	Felix, Anita	77.15	43	P		P	09 46 55.5 -0.2
	baz=320,SNR=6.0						
J39A	Decorah	77.16	40	P		P	09 46 54.6 -1.1
	baz=322						
K38A	Parkersburg	77.20	41	P		P	09 46 55.5 -0.4
	baz=321						
I40A	Norwalk	77.22	39	P		P	09 46 55.6 -0.4
	baz=322						
ANTO	Ankara	77.29	314	⇑*iP*		P	09 46 57.4 +0.9
ANTO	Ankara	77.29	314	*eP*		P	09 46 57.8 +1.3
	comp=Z,24nm,0.8s						
ANTO	Ankara	77.29	314	*eP*		P	09 46 57.8 +1.3
ANTO				pmax		pmax	
	comp=Z,24nm,0.8s						
MODS	Modra-Piesok	77.32	329	*eP*		P	09 46 55.7 -0.8
MODS				pmax		pmax	
	comp=Z,18nm,1.2s						
MODS	Modra-Piesok	77.32	329	*eP*		P	09 46 55.7 -0.8
F44A	Big Bay de Noc	77.36	36	P		P	09 46 56.2 -0.4
	baz=324						
SIRR	Siria	77.36	325	⇑*iP*		P	09 46 56.5 -0.3
G43A	Wallace	77.41	37	P		P	09 46 56.8 -0.2
	baz=324						
I41A	Arkdale	77.42	39	P		P	09 46 56.6 -0.5
	baz=322						
L38A	Oak Wood Farm,	77.50	42	P		P	09 46 57.2 -0.4
	baz=321						
J40A	Soldiers Grove	77.55	40	P		P	09 46 56.8 -1.0
	baz=322						
M37A	Trindle Farm,	77.55	43	P		P	09 46 57.8 -0.1
	baz=321						
E45A	Wooded Hills,	77.55	35	P		P	09 46 57.1 -0.7
	baz=325						
N36A	Muff Farm, Cla	77.56	44	P		P	09 46 57.9 0.0
	baz=320						
SCIA	State Center	77.56	42	P		P	09 46 57.9 0.0
	baz=321						
SCIA	State Center	77.56	42	*eP*		P	09 46 58.4 +0.5
	comp=Z,24nm,0.8s						
K39A	Oelwein	77.57	41	P		P	09 46 57.7 -0.2
	baz=322						
J41A	Loganville	77.90	39	P		P	09 46 59.0 -0.8
	baz=322						
BZS	Buzias	77.91	325	⇓*iP*		P	09 46 59.8 0.0
K40A	Colesburg	77.92	40	P		P	09 46 59.1 -0.8
	baz=322						
M38A	Pleasantville	77.95	42	P		P	09 46 59.9 -0.1
	baz=321

comp=Z,4.8nm,0.6s,baz=36,slow=5.4,SNR=29
F46A Macinaw City C 78.20 35 P P 09 47 00.1 -1.2
baz=325
GEA0 GERESS Array S 78.20 331 eP P 09 47 01.0 -0.4
CONA Conrad Observa 78.21 329 eP P 09 47 02.3 +0.8
comp=Z,11nm,0.6s,SNR=7.8
I43A Langenfeld Bro 78.31 38 P P 09 47 02.1 +0.1
baz=324
J42A Columbus 78.33 39 P P 09 47 01.5 -0.7
baz=323
K41A Shullsburg 78.37 40 P P 09 47 01.6 -0.8
baz=322
L40A Anamosa 78.38 41 P P 09 47 01.5 -0.9
baz=322
M39A Webster 78.39 42 P P 09 47 02.2 -0.3
baz=322,SNR=5.4
N38A Joes South For 78.42 43 P P 09 47 02.5 -0.2
baz=321,SNR=6.2
O37A Wolven Farm, M 78.46 44 P P 09 47 03.0 +0.1
baz=321
AMTX Amarillo 78.48 52 P P 09 47 03.9 +0.7
baz=318
AMTX Amarillo 78.48 52 eP P 09 47 04.2 +0.9
comp=Z,26nm,0.9s
MSTX Muleshoe 78.54 53 P P 09 47 03.8 +0.2
baz=317,SNR=6.4
MSTX Muleshoe 78.54 53 eP P 09 47 04.3 +0.7
comp=Z,13nm,1.0s
MDVR Moldovita 78.55 324⇓iP P 09 47 03.0 -0.4
J43A Natural Harves 78.59 38 P P 09 47 04.6 +1.0
baz=323
K42A Prairie Point, 78.66 39 P P 09 47 03.4 -0.6
baz=323
MNTX Cornudas Mount 78.68 56 P P 09 47 05.1 +0.8
baz=317,SNR=21
MNTX Cornudas Mount 78.68 56 eP P 09 47 05.2 +1.0
comp=Z,11nm,0.8s
L41A Preston 78.70 40 P P 09 47 03.4 -0.8
baz=322
N39A Derby Farms, D 78.70 42 P P 09 47 03.9 -0.3
baz=322,SNR=6.2
N39A Derby Farms, D 78.70 42 eP P 09 47 04.4 +0.2
comp=Z,14nm,0.8s
M40A Post Highland 78.76 41 P P 09 47 04.0 -0.5
baz=322
P37A Lathrop 78.80 44 P P 09 47 04.5 -0.3
baz=321,SNR=6.6
O38A Galt 78.82 43 P P 09 47 04.8 -0.1
baz=321
MOA Molln 78.85 330 eP P 09 47 04.8 -0.1
comp=Z,0.1nm,0.1s
ARSA Arzberg 78.91 329 iPcP P 09 47 07.3 +2.0
comp=Z,2.1nm,0.2s
N40A Mertquake, Sal 79.13 42 P P 09 47 06.4 -0.1
baz=322
L42A Oliver, Polo 79.13 40 P P 09 47 05.6 -0.9
baz=323
O39A Kirksville 79.17 43 P P 09 47 06.6 -0.1
baz=322
K43A Burlington 79.17 39 P P 09 47 05.9 -0.8
baz=324
P38A Dawn 79.18 44 P P 09 47 06.8 0.0
baz=321,SNR=6.9
P38A Dawn 79.18 44 eP P 09 47 07.2 +0.4
comp=Z,15nm,0.6s
M41A Milan 79.23 41 P P 09 47 06.5 -0.6
baz=322
Q37A Longview Farm, 79.30 45 P P 09 47 07.1 -0.4
baz=321
M42A Sheffield 79.53 40 P P 09 47 08.1 -0.6
baz=323
SOKA Soboth 79.57 329 eP P 09 47 09.2 +0.3
comp=Z,2.5nm,0.3s,SNR=9.4
O40A La Belle 79.59 42 P P 09 47 09.1 +0.1
baz=322,SNR=8.7
N41A Harden Midland 79.61 41 eP P 09 47 09.4 +0.3
comp=Z,17nm,0.8s
Q38A Cooks Store, C 79.65 44 P P 09 47 09.0 -0.3
baz=321,SNR=16
P39B Salisbury 79.66 43 P P 09 47 09.1 -0.3
baz=322
VTS Vitosha 79.69 322⇑iP P 09 47 10.3 +0.5
VTS Vitosha 79.69 322 eP P 09 47 10.2 +0.5
comp=Z,16nm,0.9s
VTS Vitosha 79.69 322 eP P 09 47 10.2 +0.5
VTS pmax pmax
comp=Z,16nm,0.9s
DIVS Divibare 79.82 325 eP P 09 47 10.1 -0.2
comp=Z,7.8nm,0.7s
KBA Koelnbreinsper 79.83 330 eP P 09 47 11.2 +0.8
comp=Z,14nm,0.5s,SNR=13
KBA Koelnbreinsper 79.83 330 P P 09 47 11.3 +0.8
OBKA Obir 79.89 329 iP P 09 47 10.7 +0.1
comp=Z,5.2nm,0.6s
N42A Yates City 79.90 41 P P 09 47 10.3 -0.3
baz=323
Q39A Willow Grove F 79.90 44 P P 09 47 10.7 0.0
baz=321,SNR=16
M43A Waltham Townsh 79.91 40 P P 09 47 10.1 -0.7
baz=323
P40A Paris 79.97 43 P P 09 47 11.0 -0.1
baz=322,SNR=7.1
P40A Paris 79.97 43 eP P 09 47 11.6 +0.5
comp=Z,20nm,1.1s
ISP Isparta 79.99 314c iP P 09 47 10.5 -0.9
O41A Passleys Farm, 80.06 42 P P 09 47 11.5 -0.1
baz=322,SNR=5.3
R38A Fenwick Farm, 80.10 45 P P 09 47 10.8 -1.0
baz=321,SNR=7.9
MYKA Terra Mystica 80.11 330 iP P 09 47 11.9 +0.1
comp=Z,4.9nm,0.4s
WMOK Wichita Mounta 80.19 50 P P 09 47 12.6 +0.2
baz=319
WMOK Wichita Mounta 80.19 50 eP P 09 47 12.8 +0.5
comp=Z,11nm,0.9s
WMOK Wichita Mounta 80.19 50 eP P 09 47 12.9 +0.5
WMOK pmax pmax
comp=Z,11nm,0.9s
WATA Walderalm 80.22 332 iP P 09 47 12.9 +0.5
comp=Z,19nm,0.5s,SNR=7.5
WTTA Wattenberg 80.26 331 iP P 09 47 13.3 +0.5
comp=Z,12nm,0.4s,SNR=6.8
P41A Barry, Barry 80.33 42 P P 09 47 12.8 -0.2
baz=322,SNR=5.6
M44A Midewin, Midew 80.36 39 P P 09 47 12.7 -0.4
baz=324
RETA Reutte 80.36 332 iP P 09 47 13.1 0.0
comp=Z,2.1nm,0.2s
MOTA Moosalm 80.37 332 iP P 09 47 12.3 -1.0
comp=Z,8.2nm,0.5s
Q40A Laux Farm, Aux 80.38 43 P P 09 47 13.1 -0.2
baz=322,SNR=6.2
O42A Bath 80.38 41 P P 09 47 12.9 -0.4
baz=323
BFO Black Forest 80.39 334ceP P 09 47 13.6 +0.3
R39A Chumby, Stover 80.44 44 P P 09 47 13.3 -0.4
baz=322,SNR=16
HDIL Hopedale 80.45 41 P P 09 47 13.3 -0.4
baz=323
HDIL Hopedale 80.45 41 eP P 09 47 14.0 +0.3
comp=Z,22nm,0.8s
S38A Stockton 80.53 45 P P 09 47 13.5 -0.7
baz=321,SNR=5.9
O43A Sugar Creek Fa 80.66 41 P P 09 47 14.5 -0.2
baz=323
FETA Feichten 80.78 332 eP P 09 47 15.8 +0.3
comp=Z,5.3nm,0.7s
S39A Bolivar 80.78 45 P P 09 47 14.6 -0.8
baz=321,SNR=9.9
S39A Bolivar 80.78 45 eP P 09 47 15.1 -0.3
comp=Z,10nm,0.8s
N44A Piper City 80.79 40 P P 09 47 15.3 -0.2
baz=324
T38A Diamond 80.80 46 P P 09 47 15.6 0.0
baz=321,SNR=13
Q41A Truxton 80.81 43 P P 09 47 15.7 +0.1
baz=322,SNR=15
DAVA Damuels 80.82 333 iP P 09 47 15.9 +0.2
comp=Z,8.8nm,0.6s
R40A Maddies Statio 80.83 44 P P 09 47 15.4 -0.3
baz=322,SNR=11
R40A Maddies Statio 80.83 44 eP P 09 47 15.7 -0.1
comp=Z,15nm,0.8s
TUL1 Leonard 80.89 47 P P 09 47 16.1 0.0
baz=320
N45A Kentland 81.03 39 P P 09 47 16.4 -0.3
baz=324
MMAI Mount Meron Ar 81.05 308 P P 09 47 19.1 +2.1
comp=Z,2.7nm,0.4s,baz=40,slow=7.9,SNR=6.7
P43A Skaggs, Pawnee 81.08 41 P P 09 47 16.7 -0.3
baz=323
O44A Mansfield 81.16 40 P P 09 47 16.5 -0.9
baz=324
Q42A Golden Eagle 81.18 42 P P 09 47 17.8 +0.2
baz=323,SNR=7.1
S40A Leban 81.26 44 P P 09 47 17.8 -0.3
baz=322,SNR=13
R41A Rosebud 81.26 43 P P 09 47 17.9 -0.1
baz=322,SNR=9.1
T39A Clever 81.27 45 P P 09 47 17.5 -0.6
baz=322
FUORN Ofenpass-Fuorn 81.28 332 eP P 09 47 18.7 +0.4
comp=Z,13nm,1.0s
ABTX Abilene, Hawle 81.30 52 P P 09 47 18.4 +0.1
baz=319
ABTX Abilene, Hawle 81.30 52 eP P 09 47 19.2 +0.8
comp=Z,8.8nm,0.8s
N46A Monticello 81.34 39 P P 09 47 17.8 -0.5
baz=325
TX31 Lajitas Ar. Si 81.41 57 eP P 09 47 20.1 +1.0
TXAR Lajitas Array 81.41 57 P P 09 47 20.0 +0.9
comp=Z,17nm,0.5s,baz=294,slow=4.1,SNR=133
TXAR Lajitas Array 81.41 57 P P 09 47 20.0 +0.9
O45A Potomac 81.42 40 P P 09 47 18.6 -0.2
baz=324
PDG Podgorica 81.50 324⇓iP P 09 47 18.6 -0.5
TTG Podgorica 81.50 324 eP P 09 47 19.2 0.0
comp=Z,14nm,0.8s
TTG Podgorica 81.50 324 eP P 09 47 19.2 0.0
TTG pmax pmax
comp=Z,14nm,0.8s
CCM Cathedral Cave 81.52 43 eP P 09 47 19.5 +0.2
comp=Z,14nm,0.8s
CCM Cathedral Cave 81.52 43 eP P 09 47 19.5 +0.2
CCM pmax pmax
comp=Z,14nm,0.8s
HHAR Hobbs 81.56 46 eP P 09 47 19.7 +0.1
comp=Z,6.6nm,0.8s
SFIN Lafayette 81.59 39 P P 09 47 19.3 -0.4
baz=324
T40A Mansfield 81.60 45 P P 09 47 19.2 -0.6
baz=322
P44A Sand Creek, Wi 81.64 41 P P 09 47 19.8 -0.2
baz=324
TUE Stuetta 81.71 332 eP P 09 47 20.6 +0.1
comp=Z,13nm,0.7s
U39A Green Forest 81.72 46 P P 09 47 20.2 -0.3
baz=322,SNR=15
Q44A Meyer Farm, Va 81.90 41 P P 09 47 21.1 -0.3
baz=324
RAYN Ar Rayn 81.90 295 P P 09 47 22.5 +0.8
HPIG 81.95 60 eP P 09 47 22.9 +0.8
comp=Z,18nm,0.9s
S42A Caledonia 81.96 43 P P 09 47 21.7 +0.1
baz=323,SNR=8.3
FVM French Village 81.97 43 eP P 09 47 22.1 +0.5
comp=Z,7.5nm,0.6s
FVM French Village 81.97 43 eP P 09 47 22.2 +0.5
FVM pmax pmax
comp=Z,8.0nm,0.6s
R43A Red Bud 81.97 42 P P 09 47 21.4 -0.3
baz=323
P45A Graceland, Par 81.99 40 P P 09 47 21.5 -0.3
baz=324
U40A Yellville 82.05 45 P P 09 47 22.0 -0.2
baz=322,SNR=20
V39A Pettigrew 82.05 46 P P 09 47 22.1 -0.2
baz=321,SNR=7.5
T41A Mountain View 82.06 44 P P 09 47 21.8 -0.4
baz=322,SNR=8.4
O47A Sheridan 82.12 39 P P 09 47 21.7 -0.7
baz=325
P46A Rosedale 82.16 40 P P 09 47 22.7 0.0
baz=324,SNR=5.6
Q45A Warren Harvey, 82.31 41 P P 09 47 23.3 -0.1
baz=324
R44A Waltonville 82.40 42 P P 09 47 23.8 -0.1
baz=324
T42A Van Buren 82.40 44 P P 09 47 23.7 -0.2
baz=323,SNR=5.8
T42A Van Buren 82.40 44 eP P 09 47 23.9 -0.1
comp=Z,7.7nm,0.6s
S43A Fulton Ridge, 82.46 43 P P 09 47 24.1 -0.2
baz=323,SNR=8.1
SENIN Lac Senin/Sane 82.47 334 eP P 09 47 24.7 +0.3
comp=Z,6.1nm,0.8s
W39A Magazine 82.48 47 P P 09 47 24.4 0.0
baz=321
V40A Witts Springs 82.50 46 P P 09 47 24.2 -0.4
baz=322
V40A Witts Springs 82.50 46 eP P 09 47 24.6 0.0
comp=Z,6.9nm,1.1s
U41A Viola 82.53 45 P P 09 47 24.3 -0.4
baz=322,SNR=5.5
NWAO Narrogin (SRO) 82.57 206 P P 09 47 25.6 +1.0
comp=Z,10nm,0.7s,baz=257,slow=6.4,SNR=6.3
P47A Martinsville 82.69 39 P P 09 47 25.2 -0.3
baz=325
R45A Skylar, Fairfi 82.74 41 P P 09 47 25.7 0.0
baz=324
T43A Greenville 82.75 43 P P 09 47 25.8 0.0
baz=323
S44A Carbondale 82.76 42 P P 09 47 26.0 +0.2
baz=324,SNR=6.9
JCT Junction City 82.81 54 P P 09 47 26.6 +0.3
baz=319,SNR=8.0
JCT Junction City 82.81 54 eP P 09 47 26.9 +0.6
comp=Z,15nm,0.6s
JCT Junction City 82.81 54 eP P 09 47 26.9 +0.6
JCT pmax pmax
comp=Z,15nm,0.6s
X39A Fountain Ranch 82.84 47 P P 09 47 26.8 +0.5
baz=321,SNR=6.4
V41A Mountainview 82.85 45 P P 09 47 26.0 -0.4
baz=322,SNR=16
W40A Ferguson Farm, 82.85 46 P P 09 47 26.5 +0.2
baz=322
W40A Ferguson Farm, 82.85 46 eP P 09 47 26.9 +0.6
comp=Z,18nm,1.1s
U42A Revenden 82.86 44 P P 09 47 26.0 -0.3
baz=323
PBMO Poplar Bluff 82.92 44 eP P 09 47 27.0 +0.4
comp=Z,9.9nm,0.6s
LONY Lake Ozonia 82.98 29 P P 09 47 26.6 -0.2
baz=332
WHTX Lake Whitney, 82.98 51 P P 09 47 27.4 +0.4
baz=320
WHTX Lake Whitney, 82.98 51 eP P 09 47 28.1 +1.0
comp=Z,21nm,0.8s
Q47A Bedord North L 83.07 40 P P 09 47 27.4 0.0
baz=325,SNR=7.0
T44A Benton 83.08 43 P P 09 47 27.6 +0.2
baz=323
S45A Carrier Mills 83.09 42 P P 09 47 27.5 0.0
baz=324
MIAR Mount Ida 83.09 47 P P 09 47 28.0 +0.4
baz=322,SNR=7.4
MIAR Mount Ida 83.09 47 eP P 09 47 28.0 +0.4
comp=Z,10nm,0.8s
MIAR Mount Ida 83.09 47 eP P 09 47 28.0 +0.4
MIAR pmax pmax
comp=Z,10.0nm,0.8s
ERPA Erie 83.14 34 P P 09 47 27.5 -0.2
baz=328
R46A Gibon Southern 83.16 41 P P 09 47 28.0 +0.1
baz=324
WHAR Wooly Hollow 83.17 46 eP P 09 47 28.4 +0.4
comp=Z,12nm,0.9s
V42A Cord 83.22 45 P P 09 47 27.7 -0.5
baz=323,SNR=5.3
U43A Rector 83.26 44 P P 09 47 28.5 +0.2
baz=323
W41B Gary Mavity, V 83.28 46 P P 09 47 28.5 -0.1
baz=322,SNR=6.4
W41B Gary Mavity, V 83.28 46 eP P 09 47 28.8 +0.3
comp=Z,12nm,1.0s
PARMO Parma 83.34 43 eP P 09 47 30.0 +1.2
comp=Z,37nm,0.8s
S46A Don Dixon Farm 83.49 41 P P 09 47 29.6 +0.1
baz=324
U44A Portageville 83.50 43 P P 09 47 30.0 +0.4
baz=323
ACSO Alum Creek Sta 83.51 37 P P 09 47 29.4 -0.2
baz=327
X40A Basin Creek Fa 83.52 46 P P 09 47 29.7 0.0
baz=322
X40A Basin Creek Fa 83.52 46 eP P 09 47 30.9 +1.1
comp=Z,11nm,1.1s
R47A Wooly Knot Far 83.54 40 P P 09 47 29.8 0.0
baz=325,SNR=5.1
T45A Paducah 83.59 42 P P 09 47 30.2 +0.2
baz=324
V43A Jonesboro 83.65 44 P P 09 47 30.7 +0.3
baz=323
Y40A Okolona 83.66 47 P P 09 47 30.7 +0.1
baz=322
X41A Kaden, Bauxite 83.68 46 P P 09 47 30.6 0.0
baz=322
WCI Wyandotte Cave 83.70 40 P P 09 47 30.7 +0.1
baz=325
WCI Wyandotte Cave 83.70 40 eP P 09 47 31.2 +0.6
comp=Z,12nm,0.8s
WCI Wyandotte Cave 83.70 40 eP P 09 47 31.2 +0.6
WCI pmax pmax
comp=Z,12nm,0.8s
R48A Northridge Ran 83.75 40 P P 09 47 31.0 +0.1
baz=325
M54A Oil Creek Stat 83.79 34 P P 09 47 30.6 -0.5
baz=329
U44B Burton Farm, H 83.79 43 P P 09 47 31.6 +0.5
baz=324
BNI Bardonecchia 83.83 333 eP P 09 47 29.3 -2.1
comp=Z,8.4nm,0.5s
BNI Bardonecchia 83.83 333 eP P 09 47 29.3 -2.1
BNI pmax pmax
comp=Z,8.0nm,0.5s
T46A Princeton 83.92 42 P P 09 47 32.3 +0.5
baz=324,SNR=7.8
Y41A Eaglette Beard 84.11 47 P P 09 47 33.2 +0.4
baz=322
PKME Peaks-Kenny Pk 84.12 25 P P 09 47 32.2 -0.4
baz=335
N54A Moraine State 84.12 34 P P 09 47 32.7 0.0
baz=328
Z40A Long Farm, Mag 84.19 48 P P 09 47 33.8 +0.6
baz=322
S48A Wiedeman Farm, 84.28 40 P P 09 47 33.7 +0.1
baz=325
T47A Sharon Grove 84.34 41 P P 09 47 34.2 +0.3
baz=325
T47A Sharon Grove 84.34 41 eP P 09 47 34.6 +0.8
comp=Z,12nm,0.8s
V45A Humboldt 84.46 43 P P 09 47 34.5 0.0
baz=324
X43A Marvell 84.49 45 P P 09 47 34.9 +0.2
baz=323
T48A Bowling Green 84.57 41 P P 09 47 35.1 0.0
baz=325
Y42A Garnett, Star 84.57 46 P P 09 47 35.8 +0.8
baz=322
140A Cam and Jess, 84.58 48 P P 09 47 35.9 +0.8
baz=322
833A Chaparral WMA, 84.66 55 P P 09 47 36.3 +0.7
baz=319
NATX Nacogdoches 84.68 49 P P 09 47 36.4 +0.7
baz=321
NATX Nacogdoches 84.68 49 eP P 09 47 37.4 +1.7
comp=Z,44nm,0.8s
WVT Waverly 84.69 42 P P 09 47 35.8 +0.1
baz=324
WVT Waverly 84.69 42 eP P 09 47 36.1 +0.4
comp=Z,7.6nm,0.7s
WVT Waverly 84.69 42 eP P 09 47 36.1 +0.4
WVT pmax pmax
comp=Z,8.0nm,0.7s
U47A Clarksville 84.69 42 P P 09 47 35.8 +0.1
baz=325
IDI Anoyia 84.78 316 P P 09 47 35.5 -0.7
comp=Z,4.4nm,0.4s,baz=24,slow=10.0,SNR=8.4
V46A Holladay 84.82 43 P P 09 47 36.2 -0.1
baz=324,SNR=5.9
W45A Hickory Valley 84.82 44 P P 09 47 36.5 +0.1
baz=324
Z42A Norrel Spur, H 84.93 47 P P 09 47 37.6 +0.7
baz=322
Y43A Makayla and Ka 84.94 46 P P 09 47 37.6 +0.7
baz=323
141A Papa Simpson, 84.96 48 P P 09 47 37.5 +0.5
baz=322
T49A Edmonton 84.97 40 P P 09 47 37.2 +0.2
baz=326
U48A Cassie Pea, Po 84.99 41 P P 09 47 37.2 +0.1
baz=325
V47A Nunnelly 85.08 42 P P 09 47 37.7 +0.1
baz=325,SNR=7.7
OXF Oxford 85.23 44 P P 09 47 38.3 0.0
baz=324
OXF Oxford 85.23 44 eP P 09 47 38.9 +0.6
comp=Z,36nm,1.0s
OXF Oxford 85.23 44 eP P 09 47 38.9 +0.6
OXF pmax pmax
comp=Z,35nm,1.0s
SSPA Standing Stone 85.23 33 P P 09 47 38.1 -0.2
baz=330
Y44A Strider, Charl 85.27 45 P P 09 47 38.9 +0.3
baz=323
O56A Blue Knob Stat 85.28 34 P P 09 47 38.1 -0.5
baz=329
X45A UM Field Stati 85.31 44 P P 09 47 38.7 0.0
baz=324
U49A Red Boiling Sp 85.34 41 P P 09 47 39.0 +0.1
baz=325,SNR=7.3
Z43A Armstrong Fami 85.34 46 P P 09 47 39.3 +0.4
baz=323
T50A Nancy 85.35 40 P P 09 47 39.1 +0.1
baz=326,SNR=8.4
S51A Beattyville 85.40 39 P P 09 47 39.0 -0.1
baz=327
241A Mo Tay, Goldon 85.41 48 P P 09 47 40.1 +0.9
baz=322
V48A Smith Brothers 85.48 42 P P 09 47 39.6 -0.1
baz=325
V48A Smith Brothers 85.48 42 eP P 09 47 40.1 +0.5
comp=Z,6.7nm,0.6s
PLAL Pickwick Lake 85.50 43 eP P 09 47 40.0 +0.2
comp=Z,7.9nm,0.8s
W47A Westpoint 85.51 43 P P 09 47 39.5 -0.3
baz=324
S52A Salyersville 85.59 38 P P 09 47 40.0 -0.2
baz=327
X46A Booneville 85.60 44 P P 09 47 39.9 -0.3
baz=324
143A Socs Landing, 85.66 47 P P 09 47 40.5 0.0
baz=323
Y45A Yeager Farm, C 85.68 45 P P 09 47 41.3 +0.7
baz=324,SNR=6.7
Z44A Pea Ridge, Bel 85.70 46 P P 09 47 40.3 -0.4
baz=323
N59A State Game Lan 85.79 32 P P 09 47 41.1 0.0
baz=331
341A Kurthwood 85.81 49 P P 09 47 41.3 0.0
baz=322
341A Kurthwood 85.81 49 eP P 09 47 42.5 +1.2
comp=Z,18nm,1.0s
V49A McMinnville 85.89 41 P P 09 47 41.6 -0.1
baz=325
W48A Pulaski 85.92 42 P P 09 47 41.9 +0.1
baz=325,SNR=5.8
Z45A Winona 86.00 45 P P 09 47 42.3 +0.2
baz=324
Y46A Houston 86.00 44 P P 09 47 42.6 +0.4
baz=324,SNR=6.7
T52A Hallie 86.11 38 P P 09 47 42.3 -0.4
baz=327
342A Flagon Creek P 86.23 48 P P 09 47 43.4 +0.1
baz=322
W49A Belvidere 86.25 42 P P 09 47 43.3 -0.1
baz=325
TZTN Tazewell 86.33 39 P P 09 47 43.6 -0.2
baz=327
TZTN Tazewell 86.33 39 eP P 09 47 44.5 +0.7
comp=Z,3.3nm,0.7s
V50A Pikeville 86.34 41 P P 09 47 43.6 -0.3
baz=326
X48A Hartselle 86.43 43 P P 09 47 43.7 -0.5
baz=325
Y47A UCPARC, Winfie 86.48 44 P P 09 47 44.2 -0.3
baz=324
145A Houston Renfro 86.49 46 P P 09 47 45.0 +0.4
baz=324
VBMS Vicksburg 86.50 46 P P 09 47 44.3 -0.3
baz=323
Z46A Louisville 86.52 45 P P 09 47 44.3 -0.5
baz=324

244A	Avery, Jackson	86.55	47	P	P	09 47 45.9	+1.0
	baz=323,SNR=5.1						
V51A	Loudon	86.58	40	P	P	09 47 44.7	-0.3
	baz=326						
W50A	Signal Mountai	86.63	41	P	P	09 47 45.0	-0.4
	baz=326						
W50A	Signal Mountai	86.63	41	eP	P	09 47 45.4	0.0
	comp=Z,13nm,1.1s						
X49A	Woodville	86.72	42	P	P	09 47 45.8	+0.1
	baz=325,SNR=5.5						
CPCT	Cooper Cave	86.79	40	eP	P	09 47 46.5	+0.5
	comp=Z,11nm,1.0s						
Y48A	Jasper	86.80	43	P	P	09 47 45.7	-0.4
	baz=325,SNR=5.4						
V52A	Sevierville	86.89	40	P	P	09 47 46.6	+0.1
	baz=327						
146A	Union	86.90	45	P	P	09 47 47.5	+0.9
	baz=324,SNR=6.5						
146A	Union	86.90	45	eP	P	09 47 48.3	+1.7
	comp=Z,43nm,0.8s						
U53A	Fall Branch	86.91	39	P	P	09 47 46.2	-0.4
	baz=327						
ZAIG	Zacatecas	86.91	61	eP	P	09 47 49.0	+1.8
	comp=Z,4.1nm,0.8s						
245A	Little AP, Sta	86.96	46	P	P	09 47 47.9	+1.0
	baz=324,SNR=8.1						
443A	Delano Plantat	86.99	48	P	P	09 47 48.3	+1.2
	baz=323						
344A	Westbrook Farm	87.00	47	P	P	09 47 48.3	+1.2
	baz=323						
Z48A	Northport	87.05	44	P	P	09 47 47.2	-0.1
	baz=325						
X50B	Fort Payne	87.08	42	P	P	09 47 47.2	-0.3
	baz=326						
Y49A	Blount Mountai	87.21	43	P	P	09 47 47.7	-0.4
	baz=325						
147A	Livingston	87.27	45	P	P	09 47 48.6	+0.2
	baz=324						
147A	Livingston	87.27	45	eP	P	09 47 49.5	+1.1
	comp=Z,39nm,1.0s						
W52A	Murphy	87.36	40	P	P	09 47 48.9	0.0
	baz=326						
X51A	Calhoun	87.37	41	P	P	09 47 48.2	-0.6
	baz=326						
V53A	Saluda	87.38	39	P	P	09 47 48.6	-0.4
	baz=327						
Y50A	Piedmont	87.51	42	P	P	09 47 49.4	-0.1
	baz=326						
247A	Quitman	87.60	45	P	P	09 47 50.3	+0.3
	baz=324						
LRAL	Lakeview Retre	87.60	43	P	P	09 47 49.8	-0.1
	baz=325						
148A	Greensboro	87.63	44	P	P	09 47 50.0	-0.1
	baz=325						
W53A	Cullowhee	87.64	40	P	P	09 47 50.4	+0.1
	baz=327						
Z49A	Columbiana	87.70	43	P	P	09 47 50.1	-0.3
	baz=325						
346A	Big Creek Wild	87.70	46	P	P	09 47 50.8	+0.4
	baz=324						
X52A	Dahlonega	87.78	40	P	P	09 47 50.8	0.0
	baz=326						
Y51A	Rockmart	87.82	42	P	P	09 47 50.9	-0.1
	baz=326,SNR=6.7						
BG3	Lake Jocassee	87.89	40	eP	P	09 47 52.3	+1.0
	comp=Z,12nm,0.8s						
Z50A	Ashland	87.94	43	P	P	09 47 51.8	+0.2
	baz=326,SNR=16						
Z50A	Ashland	87.94	43	eP	P	09 47 52.0	+0.4
	comp=Z,35nm,0.8s						
149A	Jones	88.06	44	P	P	09 47 52.2	+0.1
	baz=325,SNR=5.2						
X53A	Estanollee	88.14	40	P	P	09 47 53.2	+0.7
	baz=327,SNR=5.6						
347A	Saraland	88.16	45	P	P	09 47 53.4	+0.8
	baz=324						
446A	Poplarville	88.23	46	P	P	09 47 52.5	-0.4
	baz=324						
Z51A	Franklin	88.25	42	P	P	09 47 52.8	-0.2
	baz=326						
Y52A	Lilburn	88.31	41	P	P	09 47 53.5	+0.2
	baz=326						
249A	Camden	88.40	44	P	P	09 47 54.7	+1.0
	baz=325,SNR=6.3						
150A	Eclectic	88.42	43	P	P	09 47 53.8	0.0
	baz=325						
348A	Jackson	88.47	45	P	P	09 47 54.4	+0.3
	baz=324						
546A	Slidell	88.49	47	P	P	09 47 54.5	+0.3
	baz=324						
Y53A	Monroe	88.54	41	P	P	09 47 54.2	-0.2
	baz=327						
Z52A	Williamson	88.71	42	P	P	09 47 55.4	+0.2
	baz=326						
250A	Grady	88.82	44	P	P	09 47 56.1	+0.4
	baz=325						
151A	Opelika	88.82	43	P	P	09 47 55.3	-0.4
	baz=326,SNR=5.3						
349A	Repton	88.87	45	P	P	09 47 56.4	+0.4
	baz=325						
Y54A	Tignall	88.95	40	P	P	09 47 56.7	+0.4
	baz=327,SNR=11						
GOGA	Godfrey	88.97	41	P	P	09 47 56.1	-0.2
	baz=327						
152A	Waverly Hall	89.00	42	P	P	09 47 56.3	-0.2
	baz=326						
Z53A	Monticello	89.03	41	P	P	09 47 56.9	+0.2
	baz=327						
251A	Midway	89.14	43	P	P	09 47 57.3	+0.1
	baz=326						
350A	Dozier	89.24	44	P	P	09 47 58.3	+0.6
	baz=325						
Z54A	Sparta	89.40	40	P	P	09 47 58.4	0.0
	baz=327						
252A	Lumpkin	89.54	42	P	P	09 47 59.1	0.0
	baz=326						
Z55A	Blythe	89.74	40	P	P	09 47 60.0	0.0
	baz=328						
352A	Blakely	89.88	43	P	P	09 48 01.0	+0.3
	baz=326						
254A	Abbeville	90.27	42	P	P	09 48 02.7	+0.2
	baz=327						
353A	Camilla	90.33	42	P	P	09 48 03.4	+0.7
	baz=326						
156A	Sylvania	90.50	40	P	P	09 48 04.3	+0.8
	baz=328						
MDT	Midelt	98.48	337	LR	LR	10 38 07.2	
	comp=Z,129nm,21.2s,baz=218,slow=38						
TORD	Torodi Ar. Bea	114.40	324	PKP	PKPdf	09 53 40.1	-0.9
	comp=Z,0.4nm,0.5s,baz=9.6,slow=1.8,SNR=8.1						
TORD				PKKPbc	PKKPbc	10 04 20.7	+2.0
	comp=Z,0.3nm,0.5s,baz=192,slow=3.7,SNR=4.1						
TORD				PKKPab	PKKPab	10 04 27.6	-2.0
	comp=Z,0.3nm,0.4s,baz=206,slow=3.5,SNR=4.1						
VNDA	Vanda	122.71	176	PKP	PKPdf	09 53 55.1	+0.1
	comp=Z,1.6nm,0.6s,baz=340,slow=4.0,SNR=4.5						
MAW	Mawson	129.00	209	PKP	PKPdf	09 54 07.8	+0.6
	comp=Z,1.7nm,0.6s,baz=74,slow=4.0,SNR=3.8						
BOSA	Boshof	132.25	270	SKPbc	SKPab	09 57 27.9	-0.4
	comp=Z,3.1nm,0.9s,baz=34,slow=3.6,SNR=3.7						
QSPA	South Pole Qui	134.90	180	PKP	PKPdf	09 54 20.0	+1.5
	comp=Z,3.2nm,0.5s,baz=283,slow=1.3,SNR=16						
QSPA				SKPbc	SKPbc	09 57 34.1	-0.2
	comp=Z,2.0nm,0.7s,baz=72,slow=3.2,SNR=5.6						
LPAZ	La Paz	138.27	58	PKP	PKPdf	09 54 27.4	+0.4
	comp=Z,1.5nm,0.7s,baz=40,slow=4.1,SNR=8.8						
RCBR	Riachuelo	140.68	6	ePKPdf	PKPdf	09 54 28.8	-2.0
NVL	N'lazarevskaya	146.69	205	ePKP2	PKPbc	09 54 41.3	-0.1
NVL				pmax	pmax		
	comp=Z,18nm,0.9s						
SNAA	Sanae	149.97	198	PKPbc	PKPbc	09 54 50.3	+0.3
	comp=Z,8.6nm,0.8s,baz=194,slow=4.3,SNR=48						
PLCA	Paso Flores	151.68	95	PKP	PKPdf	09 54 48.8	+0.2
	comp=Z,3.0nm,1.1s,baz=210,slow=6.4,SNR=3.4						
PLCA				PKPbc	PKPbc	09 54 55.8	+0.8
	comp=Z,22nm,0.7s,baz=299,slow=2.5,SNR=78						
CPUP	Villa Florida	152.38	56	PKPbc	PKPbc	09 54 57.0	+0.2
	comp=Z,3.1nm,0.7s,baz=325,slow=3.5,SNR=7.9						

*ISCJB **15** 09:35:20.4±0.6, 31°.74N±0°.05×104°.27E±0°.08, h15km, mb3.8/6, Error ellipse: s-maj=10.5km s-min=5.8km az=29.6*
*IDC **15** 09:35:20.3±0.9, 31°.86N×104°.52E, h0km, mb3.8/6, mb1 4.0/7, mb1mx3.6/78, mbtmp3.9/7, ML4.0/1, Error ellipse: s-maj=50.7km s-min=18.0km az=59.0*
*BJI **15** 09:35:23.3, 31°.68N×104°.08E, h23km, ML3.9/15, Ms3.4/3, Ms7 3.1/2*

ISC 15 09:35:22.0±0.7, 31°.77N±0°.05×104°.32E±0°.06, h15km, n11, σ1§91/16, mb3.7/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.98	210	Pg	Pb	09 35 38.8	-2.0
CD2				Sg	Sb	09 35 50.6	-3.1
CD2				smax	smax		
	comp=N,2μm,0.4s						
CD2				smax	smax		
	comp=E,2μm,0.5s						
LZH	Lanzhou	4.32	355	ePg	Pg	09 36 45.3	+0.4
LZH				Sg	Sg	09 37 37.6	-3.3
LZH				smax	smax		
	comp=N,100nm,0.9s						
LZH				smax	smax		
	comp=E,170nm,1.1s						
XAN	Xi'an	4.48	58	Pn	Pn	09 36 30.9	+1.5
XAN				Pg	Pg	09 36 45.8	-2.1
XAN				Sn	Sn	09 37 22.6	+1.3
XAN				Sg	Sg	09 37 44.3	-1.6
XAN				smax	smax		
	comp=N,200nm,0.8s						
XAN				smax	smax		
	comp=E,180nm,0.8s						
XAN				LR	LR		
	comp=Z,210nm,20.6s						
CMAR	Chiang Mai Arr	14.12	201	Pn	Pn	09 38 44.6	+3.0
	0.2nm,0.3s,baz=9.2,slow=12,SNR=4.7						
WMQ	Urumqi	17.78	317	P	Pn	09 39 28.0	-1.0
MKAR	Makanchi Array	22.61	318	P	P	09 40 23.3	+1.2
	1.5nm,0.8s,baz=117,slow=12,SNR=9.5						
KURBB	Kurchatov Arra	26.82	322	P	P	09 41 02.2	+0.6
	0.6nm,0.9s,baz=126,slow=7.9,SNR=3.4						
ARU	Arti	40.02	322	P	P	09 42 56.3	+0.2
	4.0nm,0.3s,baz=129,slow=6.5,SNR=5.4						
WRA	Warramunga Arr	58.92	147	P	P	09 45 21.2	+0.4
	1.3nm,0.5s,baz=340,slow=7.8,SNR=45						
ASAR	Alice Springs	61.96	149	P	P	09 45 42.0	+0.5
	0.5nm,0.5s,baz=340,slow=6.9,SNR=9.1						
YKA	Yellowknife Ar	81.00	17	P	P	09 47 36.5	+0.7
	0.5nm,0.9s,baz=330,slow=4.3,SNR=3.7						

*IDC **15** 09:36:18.2±0.9, 30°.19N×69°.29E, h0km, mb3.9/11, mb1 4.1/14, mb1mx3.8/73, mbtmp4.0/14, ML3.8/3, MS3.6/2, Ms1 3.6/2, ms1mx2.9/69, Error ellipse: s-maj=21.1km s-min=19.3km az=145.0*
*BJI **15** 09:36:20.1, 30°.43N×69°.06E, h9km, mb4.7/13, mB4.8/9, Ms4.2/5, Ms7 4.0/4*
*NEIC **15** 09:36:20.1±0.5, 30°.14N×69°.28E, h10km, mb4.1/8, Error ellipse: s-maj=11.0km s-min=7.5km az=137.0*
*MOS **15** 09:36:21.5±1.0, 30°.26N×69°.36E, h28km, mb4.3/10, Error ellipse: s-maj=11.8km s-min=6.7km az=77.7*

ISC 15 09:36:23.2±0.6, 30°.14N±0°.07×69°.24E±0°.05, h35km, n85, σ2§44/89, mb4.1/26, MS3.7/3, 6C-3D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	4.39	358	ePn	Pn	09 37 29.4	+1.8
KBL	Kabul	4.39	358	eP	Pn	09 37 29.4	+1.8
NIL	Nilore	4.88	43	ePn	Pn	09 37 33.6	-0.6
NIL	Nilore	4.88	43	eP	Pn	09 37 33.6	-0.6
DHRM	DHARAMSHALA	6.40	69	eP	Pn	09 37 54.2	-1.0
DHRM				eS	Sn	09 39 07.1	-0.1
DHRM				IAML		09 39 10.3	
	comp=N,135nm,0.4s						
DHRM				IAML		09 39 12.6	
	comp=E,140nm,0.3s						
SMLA	Simla	6.90	80	eP	Pn	09 38 01.2	-0.6
SMLA				eS	Sn	09 39 17.9	-1.2
SMLA				IAML		09 39 20.9	
	comp=E,287nm,0.3s						
SMLA				IAML		09 39 21.4	
NDI	New Delhi	7.10	100	eP	Pn	09 38 03.0	-1.7
NDI				ex	x	09 40 02.0	
DDI	Dehra Dun	7.63	86	eP	Pn	09 38 08.8	-3.1
BHPL	Bhopal	10.03	131	eS	Sn	09 40 22.7	-14
WSAR	Wadi Sarin	11.71	237	Pn	Pn	09 39 06.7	-1.2
	comp=E,0.5nm,0.3s,baz=78,slow=13,SNR=23						
WSAR				Sn	Sn	09 41 07.8	-10
	comp=E,0.5nm,0.3s,baz=216,slow=21,SNR=5.9						
PYUN	Piuthan	12.19	96	eP	Pn	09 39 11.0	-3.6
	comp=E,17nm,0.3s						
NRN	Naryn	12.53	24	ePn	Pn	09 39 18.5	-0.7
NRN				eSn	Sn	09 41 42.4	+4.8
NRN	Naryn	12.53	24	eP	Pn	09 39 18.5	-0.7
NRN				e		09 41 42.4	
KOLN	Koldanda	12.79	97	eP	Pn	09 39 19.3	-3.5
	comp=E,14nm,0.3s						
DANN	Dangsing	12.80	94	eP	Pn	09 39 19.9	-3.1
	comp=E,39nm,0.5s						
KK31	Karatay Array	12.98	4	ePn	Pn	09 39 23.1	-2.0
KK31				eSn	Sn	09 41 44.9	-3.3
KK31	Karatay Array	12.98	4	eP	Pn	09 39 23.1	-2.0
KK31				e		09 41 44.9	
KKAR	Karatay Array	12.98	4	ePn	Pn	09 39 23.1	-2.0
KKAR				eSn	Sn	09 41 44.9	-3.3
KKAR	Karatay Array	12.98	4	eP	Pn	09 39 23.1	-2.0
KKAR				e		09 41 44.9	
AAK	Ala-Archa	13.17	17	Pn	Pn	09 39 25.1	-2.7
	comp=E,1.0nm,0.3s,baz=188,slow=3.1,SNR=13						
AAK				Sn	Sn	09 41 46.9	-6.1
	comp=E,0.3nm,0.3s,baz=289,slow=12,SNR=4.5						
AAK	Ala-Archa	13.17	17	ePn	Pn	09 39 25.2	-2.6
AAK				Sn	Sn	09 41 46.9	-6.1
AAK				eSn	S	09 41 56.3	-21
AAK	Ala-Archa	13.17	17⇑	iP	Pn	09 39 26.4	-1.4
AAK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
FRU	Bishkek	13.38	17	eP	Pn	09 39 34.0	+3.4
FRU				eS	Sn	09 42 03.0	+5.0
FRU				smax	smax		
	comp=E,40nm,2.0s						
TARG	Taragay, Kyrgy	13.47	29	ePn	Pn	09 39 34.3	+2.1
GKN	Gorkha	13.63	95	eP	Pn	09 39 30.5	-3.7
	comp=E,18nm,0.3s						
KKN	Kakani	14.23	96	eP	Pn	09 39 38.5	-4.0
	comp=E,16nm,0.4s						
GUN	Gumba	14.72	95	eP	Pn	09 39 44.4	-4.9
	comp=E,53nm,0.4s						
JIRN	Jiri	15.05	95	eP	Pn	09 39 49.1	-4.5
	comp=E,36nm,0.4s						
RAMN	Ramite	15.58	98	eP	Pn	09 39 55.5	-5.0
	comp=E,19nm,0.5s						
BOK	Bokaro	16.12	109	eP	Pn	09 40 03.3	-3.8
ODAN	Odare	16.28	97	eP	Pn	09 40 04.4	-5.1
	comp=E,9.6nm,0.4s						
BWNR	Bhubaneshwar	17.89	119	ex	x	09 40 37.8	
LSA	Lhasa	18.99	86	eP	Pn	09 40 43.0	-0.2
	comp=E,5.5nm,1.3s						
LSA	Lhasa	18.99	86	eP	Pn	09 40 43.0	-0.2
LSA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
MAKZ	Makanchi	19.36	27	eP	Pn	09 40 46.4	-0.6
	comp=Z,5.4nm,0.8s						
MAKZ	Makanchi	19.36	27	eP	Pn	09 40 46.4	-0.6
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MK31	Makanchi Array	19.47	28	eP	P	09 40 46.1	-0.8
MK31	Makanchi Array	19.47	28	eP	P	09 40 46.1	-0.8
MKAR	Makanchi Array	19.47	28	P	P	09 40 45.1	-1.9
	comp=Z,0.2nm,0.3s,baz=193,slow=10.0,SNR=10.0						
MKAR	Makanchi Array	19.47	28	eP	P	09 40 46.2	-0.7
	comp=Z,22nm,0.6s						
MKAR	Makanchi Array	19.47	28	eP	P	09 40 46.2	-0.7
MKAR				pmax	pmax		
	comp=Z,22nm,0.6s						
WMQ	Urumqi	20.03	42	P	Pn	09 40 56.3	+1.2
ABKAR	Abkulak array	20.36	342	eP	P	09 40 56.5	0.0
KURBB	Kurchatov Arra	21.61	16	P	P	09 41 08.7	-1.4
	comp=Z,1.1nm,0.6s,baz=210,slow=9.2,SNR=13						
KURK	Kurchatov	21.72	16	eP	P	09 41 07.9	-3.3
	comp=Z,3.9nm,0.8s						
KURK	Kurchatov	21.72	16⇑	eP	P	09 41 10.7	-0.5
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AKTO	Aktyubinsk	21.96	341	P	P	09 41 17.1	+3.4
	comp=Z,6.7nm,0.9s,baz=168,slow=11,SNR=14						
RAYN	Ar Rayn	22.16	258	eP	P	09 41 18.0	+1.7
	comp=Z,7.4nm,0.8s						
RAYN	Ar Rayn	22.16	258	P	P	09 41 17.9	+1.7
RAYN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GNI	Garni	22.32	303	eP	P	09 41 20.1	+2.1
	comp=Z,6.5nm,1.0s						
GNI	Garni	22.32	303	d iP	P	09 41 18.2	+0.2
GNI				i *PP	pP	09 41 24.0	-3.3
GNI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BVAR	Borovoye Array	22.88	2	P	P	09 41 23.8	+0.2
	comp=Z,2.8nm,0.7s,baz=167,slow=8.4,SNR=13						
BRVK	Borovoye	22.91	2	eP	P	09 41 25.3	+1.5
	comp=Z,11nm,1.1s						
BRVK	Borovoye	22.91	2⇑	iP	P	09 41 23.9	0.0
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.5s						
KIV	Kislovodsk	25.16	311	eP	P	09 41 47.2	+2.0
KIV				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ZAA0	Zalesovo Array	26.34	21	eP	P	09 41 57.5	+1.9
	comp=Z,14nm,0.9s						
ZALV	Zalesovo Beam	26.34	21	P	P	09 41 55.4	-0.2
	comp=Z,11nm,0.8s,baz=213,slow=11,SNR=11						
ZALV	Zalesovo Beam	26.34	21	eP	P	09 41 56.9	+1.3
GTA	Gaotai	26.66	61	P	P	09 42 03.3	+4.4
GTA				pmax	pmax		
	comp=Z,38nm,0.6s						
LZH	Lanzhou	29.48	69	eP	P	09 42 26.8	+2.7
LZH				pP	pP	09 42 32.5	-1.7
LZH				sP	sP	09 42 34.3	-4.1
LZH				ePP	PnPn	09 43 22.8	+3.8
LZH				pmax	pmax		
	comp=Z,33nm,1.2s						
LZH				pmax	pmax		
	comp=Z,290nm,5.4s						
LZH				LR	LR		
	comp=Z,170nm,13.0s						
LZH				LR	LR		
	comp=Z,190nm,13.3s						
LZH				LR	LR		
	comp=Z,220nm,14.8s						
BRTR	Keskin Array B	30.55	298	P	P	09 42 34.3	+0.8
	comp=Z,0.5nm,0.6s,baz=109,slow=9.3,SNR=3.6						
TLY	Talaya	33.28	40⇑	iP	P	09 42 56.6	-0.7
TLY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ULN	Ulaanbaatar	33.88	48	iP	P	09 43 04.1	+1.4
OBN	Obninsk	34.12	326	eP	P	09 43 05.1	+0.7
OBN				e		09 44 24.4	
OBN				eSS	SS	09 51 07.2	+11
KIS	Kishinev	35.35	310	eL	L	09 44 04.0	
KIS				LRM	MLR	09 52 32.0	
	comp=Z,800nm,18.0s						
HHC	Hu-ho-hao-te	35.77	61	eP	P	09 43 20.4	+1.4
HHC				pmax	pmax		
	comp=Z,23nm,0.8s						
HHC				pmax	pmax		
	comp=Z,120nm,7.2s						
AKASG	Malin Array Be	36.15	316	P	P	09 43 21.5	-0.5
	comp=Z,0.8nm,0.5s,baz=95,slow=7.6,SNR=6.3						
AKASG	Malin Array Be	36.15	316	eP	P	09 43 24.6	+2.6
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KIEV	Kiev	36.16	316⇑	iP	P	09 43 22.3	+0.2
KIEV				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KLMR	Klimovskoe	36.50	336	eP	P	09 43 21.9	-2.9
KLMR				pmax	pmax		
	comp=Z,14nm,1.8s						
KLMR	Klimovskoe	36.50	336	eP	P	09 43 21.9	-2.9
KLMR				AMP		09 43 30.4	
	comp=Z,14nm,1.8s						
PSI	Prapat	39.11	128	LR	LR	10 00 53.4	
	comp=Z,78nm,19.4s,baz=272,slow=38						
CN2	Changchun	46.09	57	eP	P	09 44 46.9	+3.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ARCES	ARCESS Array B	46.54	340	P	P	09 44 47.2	+0.2
	comp=Z,1.9nm,0.8s,baz=125,slow=6.4,SNR=5.0						
KSAR	Wonju Array Be	48.60	65	P	P	09 45 03.3	-0.1
KSAR	Wonju Array Be	48.60	65	P	P	09 45 03.3	-0.1
KSRS	Korea Array	48.63	65	P	P	09 45 03.3	-0.3
	comp=Z,1.7nm,0.7s,baz=264,slow=7.3,SNR=7.8						
NB2	NORSAR Subarra	48.73	327	P	P	09 45 03.0	-1.1
	comp=Z,1.8nm,0.9s,baz=106,slow=7.9						
KLR	Kul'dur	50.25	49	eP	P	09 45 16.6	+0.8
LEM	Lembang	52.02	129	LR	LR	10 08 15.5	
	comp=Z,73nm,19.6s,baz=96,slow=37						
TOA0	Torodi Ar. Sit	64.20	271	eP	P	09 46 55.5	+0.6
TORD	Torodi Ar. Bea	64.20	271	P	P	09 46 55.5	+0.6
	comp=Z,1.8nm,0.8s,baz=53,slow=5.2,SNR=7.1						
WRA	Warramunga Arr	79.99	120	P	P	09 48 29.6	+0.4
	comp=Z,1.3nm,0.9s,baz=318,slow=5.0,SNR=5.0						
ASAR	Alice Springs	81.92	123	P	P	09 48 40.2	+0.8
	comp=Z,1.0nm,0.8s,baz=303,slow=5.0,SNR=5.7						
YKA	Yellowknife Ar	87.64	2	P	P	09 49 07.6	0.0
	comp=Z,0.6nm,0.6s,baz=348,slow=5.0,SNR=9.2						

MAN 15 09:40:08.7, 13°.00N×124°.66E, h21km, mb4.5, ML3.4, MS3.2, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	Catarman	0.49	180	eP	Pn	09 40 19.6	-0.8
CNP				eS	Sn	09 40 28.9	+0.7
PVCP	Virac	0.77	320	eP	Pb	09 40 23.0	-0.4
PVCP				eS	Sn	09 40 35.5	+0.2
BESP	Borongan	1.59	151	eP	Pn	09 40 35.8	+0.3
BESP				eS	Sb	09 40 57.1	+0.2
PLP	Palo	1.85	170⇑	eP	Pn	09 40 38.5	-0.7
PLP				eS	Sn	09 41 01.7	-0.3
RCP	Roxas	2.36	233	eP	Pn	09 40 47.6	+1.5
RCP				eS	Sb	09 41 18.2	-1.0
BOAC	Boac	2.78	280	eP	Pn	09 40 50.2	-1.8
MSLP	Maasin	2.86	176	eP	Pb	09 41 01.5	+2.5
GUIM	Jordan	3.11	221	eP	Pn	09 40 58.2	+1.7

*ISCJB **15** 09:51:16.5±1.0, 67°.69N±0°.04×34°.0E±0°.1, h0km, Error ellipse: s-maj=7.6km s-min=6.0km az=15.5*
*HEL **15** 09:51:18.9±0.6, 67°.65N×34°.02E, h0km, ML2.5, Explosion*
*KOLA **15** 09:51:19.2, 67°.63N×33°.96E, h0km*
*CSEM **15** 09:51:20.6±0.9, 67°.65N×33°.59E, h2km, ML2.5, Error ellipse: s-maj=16.9km s-min=9.1km az=84.0, Mining explosion.*
*NAO **15** 09:51:23.7±1.8, 67°.64N×33°.27E, ML2.8*

ISC 15 09:51:17.9±1.5, 67°.68N±0°.04×33°.98E±0°.08, h0km, n34, σ1§30/54, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA	Apatity	0.24	245	P	Pg	09 51 23.1	+0.6
APA				S	Sg	09 51 26.0	+0.3
APA0	Apatity Array	0.39	260	P	Pg	09 51 25.8	+0.6
APA0				S	Sg	09 51 30.6	+0.4
VRF	Varrio	1.67	275	PG	Pn	09 51 48.8	+0.5
VRF				MSG		09 52 09.2	
	comp=Z,38nm,0.2s						
VRF				SG	Sn	09 52 10.6	+0.2
VRF	Varrio	1.67	275	Pg	Pn	09 51 48.8	+0.5
VRF				Sg	Sn	09 52 10.6	+0.2
	comp=Z,38nm,0.2s						
KU6	Riekki	2.31	226	PB	Pn	09 51 58.9	+1.7
KU6				MSG		09 52 27

ARA0				Sn	Sn	09 52 59.5	+0.9
	SNR=8.1						
ARA0				Lg	Lg	09 53 10.8	
	SNR=6.9						
ARA0	**ARCESS Array S**	**3.62**	**305**	Pn	**Pn**	**09 52 16.6**	**+1.4**
	baz=123,slow=16						
ARA0				Pg	**Pg**	**09 52 26.1**	**-1.1**
	baz=127,slow=16						
ARA0				Sn	**Sn**	**09 52 59.5**	**+0.9**
	baz=126,slow=22						
ARA0				Lg	Lg	09 53 10.8	
	baz=124,slow=37						
ARE0	**ARCESS Array S**	**3.62**	**305**	PN	**Pn**	**09 52 16.6**	**+1.4**
ARE0				SN	**Sn**	**09 53 00.1**	**+1.5**
ARE0	**ARCESS Array S**	**3.62**	**305**	Pn	**Pn**	**09 52 16.6**	**+1.4**
ARE0				Sn	**Sn**	**09 53 00.1**	**+1.5**
ARE0	**ARCESS Array S**	**3.62**	**305**	*e*P	**Pn**	**09 52 16.9**	**+1.7**
ARE0				IAML		09 53 17.6	
	comp=Z,13nm,0.2s						
HEF	**Hetta**	**3.95**	**286**	PN	**Pn**	**09 52 21.0**	**+1.4**
	baz=99						
HEF	**Hetta**	**3.95**	**286**	Pn	**Pn**	**09 52 21.0**	**+1.4**
HEF	**Hetta**	**3.95**	**286**	*e*P	**Pn**	**09 52 20.4**	**+0.8**
TOF	**Tornio**	**4.13**	**252**	PN	**Pn**	**09 52 23.5**	**+1.4**
TOF	**Tornio**	**4.13**	**252**	Pn	**Pn**	**09 52 23.5**	**+1.4**
OUL	**Oulu**	**4.16**	**235**	PB	**Pb**	**09 52 28.6**	**-3.3**
LANU	**Lannavaara**	**4.55**	**280**	PN	**Pn**	**09 52 28.3**	**+0.3**
LANU				SN	**Sn**	**09 53 24.2**	**+2.7**
KALU	**Kalix**	**4.58**	**252**	PB	**Pb**	**09 52 38.5**	**-0.5**
	baz=59						
ERTU	**Ertsjaerv**	**4.74**	**262**	PN	**Pn**	**09 52 30.9**	**+0.4**
ERTU				SN	**Sn**	**09 53 26.5**	**+0.5**
ERTU	**Ertsjaerv**	**4.74**	**262**	Pn	**Pn**	**09 52 30.9**	**+0.4**
ERTU				Sn	**Sn**	**09 53 26.5**	**+0.5**
STEI	**Steigen**	**7.10**	**281**	*e*P	**Pn**	**09 53 01.8**	**-1.0**
STEI				IAML		09 54 57.4	
	comp=Z,2.5nm,0.8s						
FIA0	**FINESS Array S**	**7.12**	**212**	Pn	**Pn**	**09 53 05.2**	**+2.2**
	baz=30,slow=12						
FIA0				Sn	**Sn**	**09 54 23.3**	**-1.2**
	baz=38,slow=28						
FIA0				Lg	Lg	09 54 55.6	
	baz=24,slow=28						
FIA0	**FINESS Array S**	**7.12**	**212**	Pn	**Pn**	**09 53 05.2**	**+2.2**
	baz=30,slow=12						
FIA0				Sn	**Sn**	**09 54 23.3**	**-1.2**
	baz=38,slow=28						
FIA0				Lg	Lg	09 54 55.6	
	baz=24,slow=28						
HFS	**Hagfors**	**11.64**	**239**	Pn	**Pn**	**09 54 03.8**	**-1.3**
HFS	**Hagfors**	**11.64**	**239**	Pn	**Pn**	**09 54 03.8**	**-1.3**
SPA0	**Spitsbergen Ar**	**11.66**	**342**	Pn	**Pn**	**09 54 05.7**	**+0.5**
	baz=138,slow=16						
SPA0	**Spitsbergen Ar**	**11.66**	**342**	Pn	**Pn**	**09 54 05.7**	**+0.5**
	baz=138,slow=16						
NRA0	**NORESS Array S**	**11.93**	**245**	Pn	**Pn**	**09 54 07.2**	**-1.8**
	baz=49,slow=22						
NRA0	**NORESS Array S**	**11.93**	**245**	Pn	**Pn**	**09 54 07.2**	**-1.8**
	baz=49,slow=22						

*ISCJB **15** 09:56:00.1±1.1,33.°11S±0.°05×71.°17W±0.°07,h80km±6km, Error ellipse: s-maj=10.4km s-min=7.0km az=153.1*
*SJA **15** 09:56:00.9±1.2,33.°04S×71.°07W,h73km±5km, ML2.2, MW3.1*
*GUC **15** 09:56:01.6±0.6,33.°05S×70.°95W,h77km±3km, ML3.0*
ISC 15 09:55:59.2±2.7,33.°19S±0.°09×71.°2W±0.°1,h87km±13km, n19,σ1°63/37,4C-1D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROC1	**El Roble**	**0.24**	**28**	*e*P	**Pn**	**09 56 12.6**	**+0.3**
ROC1				*i* S	**Sn**	**09 56 21.1**	**-0.9**
ROCH	**El Roble**	**0.24**	**28**	⇑*i*P	**Pn**	**09 56 12.6**	**+0.3**
ROCH				*i* S	**Sn**	**09 56 21.1**	**-0.8**
ROCH				IAML		09 56 21.8	
	comp=N,2μm,0.2s						
PEL	**Peldehue**	**0.39**	**84**	⇑*i*P	**Pn**	**09 56 13.1**	**+0.2**
PEL				*i* S	**Sn**	**09 56 21.6**	**-1.4**
PEL				IAML		09 56 21.9	
	comp=N,2μm,0.2s						
CLCH	**Cerro Calan**	**0.55**	**112**	⇑*i*P	**Pn**	**09 56 15.0**	**+0.8**
CLCH				*i* S	**Sn**	**09 56 24.9**	**-0.4**
CLCH				IAML		09 56 25.6	
	comp=E,1μm,0.5s						
ANTU	**Antumapu**	**0.57**	**132**	⇓*i*P	**Pn**	**09 56 15.7**	**+1.4**
ANTU				*i* S	**Sn**	**09 56 26.4**	**+0.9**
ANTU				IAML		09 56 26.9	
	comp=E,802nm,0.2s						
FCH	**Farellones**	**0.73**	**101**	⇑*i*P	**Pn**	**09 56 16.3**	**+0.2**
FCH				*i* S	**Sn**	**09 56 27.7**	**-0.9**
AUSP	**Uspallata**	**1.77**	**58**	*e*P	**Pn**	**09 56 29.9**	**+1.4**
AUSP				*e*S	**Sn**	**09 56 50.6**	**-0.2**
ARCO	**CERRO ARCO**	**1.89**	**80**	*i* P	**Pn**	**09 56 31.9**	**+1.9**
ARCO				*e*S	**Sn**	**09 56 54.8**	**+1.3**
ARCO				IAML		09 56 57.0	
	comp=Z,16nm,0.6s						
AAGR	**Agrelo**	**1.95**	**88**	*e*P	**Pn**	**09 56 32.4**	**+1.7**
ASAL	**Salagasta**	**2.03**	**74**	*e*P	**Pn**	**09 56 33.8**	**+2.0**
ASAL				*e*S	**Sn**	**09 56 58.4**	**+1.7**
RTLS	**Leoncito**	**2.09**	**49**	*i* P	**Pn**	**09 56 34.2**	**+1.4**
RTLS				*i* S	**Sn**	**09 56 58.7**	**+0.4**
RTLS				IAML		09 57 00.0	
	comp=Z,19nm,0.4s						
GO04	**Tololo Observa**	**3.02**	**6**	*e*P	**Pn**	**09 56 45.5**	**+0.4**
GO04				*i* S	**Sn**	**09 57 19.2**	**-1.3**
TLL	**Tololo Astrono**	**3.02**	**6**	*e*P	**Pn**	**09 56 45.3**	**+0.1**
TLL				*i* S	**Sn**	**09 57 19.4**	**-1.2**
AMOG	**MOGNA**	**3.18**	**46**	*e*P	**Pn**	**09 56 47.9**	**+0.8**
AMOG				*e*S	**Sn**	**09 57 22.0**	**-2.1**
AROD	**Rodeo**	**3.33**	**26**	*e*P	**Pn**	**09 56 51.6**	**+2.2**
AROD				*e*S	**Sn**	**09 57 29.2**	**+1.0**
ACDV	**Cuesta del Vie**	**3.47**	**30**	*e*P	**Pn**	**09 56 52.9**	**+1.7**
ACDV				*i* S	**Sn**	**09 57 32.7**	**+1.4**
AGUA	**GUANDACOL**	**4.33**	**32**	*e*P	**Pn**	**09 57 03.4**	**+0.6**
AGUA				*e*S	**Sn**	**09 57 52.6**	**+0.4**
MRA	**San Martin**	**4.64**	**82**	*e*P	**Pn**	**09 57 05.8**	**-1.1**
MRA				*e*S	**Sn**	**09 57 55.5**	**-4.1**
MRA				IAML		09 58 37.0	
	comp=Z,1.7nm,0.4s						
APLL	**PUNTA DE LOS L**	**4.82**	**56**	*e*P	**Pn**	**09 57 08.9**	**-0.5**
APLL				*e*S	**Sn**	**09 57 59.2**	**-4.7**
APLL				IAML		09 58 04.6	
	comp=Z,1.9nm,0.2s						

*ISCJB **15** 10:07:20.0±0.4,39.°98N±0.°03×33.°94E±0.°03,h0km, Error ellipse: s-maj=3.9km s-min=3.1km az=145.9*
*ISK **15** 10:07:19.9,39.°93N×33.°98E,h12km,ML2.5/3*
*CSEM **15** 10:07:20.1±0.2,39.°95N×33.°94E,h1km,ML2.8, Error ellipse: s-maj=5.4km s-min=3.9km az=150.0, Suspected Mining explosion.*
*DDA **15** 10:07:20.4,39.°97N×33.°94E,h7km,Ml2.8, Suspected Mining explosion.*
ISC 15 10:07:19.7±0.8,39.°95N±0.°03×33.°98E±0.°02,h0km,n26, σ0°75/44,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CDAG	**Cicekdag**	**0.44**	**137**	*i* P	**Pb**	**10 07 30.2**	**-0.2**
CDAG				*i* S	**Sb**	**10 07 37.2**	**-0.4**
CDAG	**Cicekdag**	**0.44**	**137**	P	**Pb**	**10 07 30.2**	**-0.2**
CDAG				S	**Sb**	**10 07 37.2**	**-0.4**
CORM	**Corum**	**0.55**	**65**	PG	**Pb**	**10 07 31.7**	**-0.6**
CORM				SG	**Sb**	**10 07 39.6**	**-1.2**
CORM	**Corum**	**0.55**	**65**	*e*Pg	**Pb**	**10 07 31.7**	**-0.6**
CORM				*e*Sg	**Sb**	**10 07 39.6**	**-1.2**
ELDT	**Eldivan**	**0.69**	**322**	*i* P	**Pg**	**10 07 32.5**	**-0.5**
ELDT				*i* S	**Sg**	**10 07 42.2**	**+0.3**
ELDT	**Eldivan**	**0.69**	**322**	P	**Pg**	**10 07 32.5**	**-0.5**
ELDT				S	**Sg**	**10 07 42.2**	**+0.3**
COAL	**Corum-Alaca**	**0.83**	**68**	*i* P	**Pb**	**10 07 37.1**	**0.0**
COAL				*i* S	**Sg**	**10 07 46.4**	**0.0**
COAL	**Corum-Alaca**	**0.83**	**68**	P	**Pb**	**10 07 37.1**	**0.0**
COAL				S	**Sg**	**10 07 46.4**	**0.0**
AFSR	**Af¨ar-Bala (A**	**0.86**	**235**	PG	**Pg**	**10 07 35.4**	**-0.8**
AFSR	**Af¨ar-Bala (A**	**0.86**	**235**	*e*Pg	**Pg**	**10 07 35.4**	**-0.8**
ANTO	**Ankara**	**0.92**	**266**	PG	**Pb**	**10 07 37.9**	**-0.7**
ANTO				SG	**Sb**	**10 07 51.1**	**-0.2**
ANTO	**Ankara**	**0.92**	**266**	*e*Pg	**Pb**	**10 07 37.9**	**-0.7**
ANTO				*e*Sg	**Sb**	**10 07 51.1**	**-0.2**
CTAK	**Corum_Osmancik**	**0.94**	**41**	*i* P	**Pb**	**10 07 38.3**	**-0.7**
CTAK				*i* S	**Sb**	**10 07 52.4**	**+0.4**
CTAK	**Corum_Osmancik**	**0.94**	**41**	P	**Pb**	**10 07 38.3**	**-0.7**
CTAK				S	**Sb**	**10 07 52.4**	**+0.4**
SERE	**Sereflikochisa**	**1.05**	**198**	PG	**Pb**	**10 07 40.1**	**-0.7**
SERE				SG	**Sb**	**10 07 55.1**	**0.0**
SERE	**Sereflikochisa**	**1.05**	**198**	*e*Pg	**Pb**	**10 07 40.1**	**-0.7**
SERE				*e*Sg	**Sb**	**10 07 55.1**	**0.0**
YOZ	**Yozgat**	**1.07**	**106**	PG	**Pb**	**10 07 40.7**	**-0.6**
YOZ	**Yozgat**	**1.07**	**106**	*e*Pg	**Pb**	**10 07 40.7**	**-0.6**
KKUL	**Konya-Kulu**	**1.13**	**227**	*i* P	**Pb**	**10 07 41.3**	**-0.9**
KKUL				*i* S	**Sb**	**10 07 56.9**	**-0.5**
KKUL	**Konya-Kulu**	**1.13**	**227**	P	**Pb**	**10 07 41.3**	**-0.9**
KKUL				S	**Sb**	**10 07 56.9**	**-0.5**
KULU	**Kulu**	**1.18**	**220**	PN	**Pb**	**10 07 42.7**	**-0.3**
KULU	**Kulu**	**1.18**	**220**	*e*Pn	**Pb**	**10 07 42.7**	**-0.3**
AKSY	**AKSARAY - Alti**	**1.30**	**188**	*i* P	**Pn**	**10 07 46.2**	**+0.9**
AKSY				*i* S	**Sn**	**10 08 05.4**	**+2.0**
AKSY	**AKSARAY - Alti**	**1.30**	**188**	P	**Pn**	**10 07 46.2**	**+0.9**
AVNS	**Nevsehir-Avano**	**1.32**	**149**	*e*P	**Pg**	**10 07 43.9**	**-1.1**
AVNS				*i* S	**Sn**	**10 08 05.5**	**+1.7**
AVNS	**Nevsehir-Avano**	**1.32**	**149**	P	**Pg**	**10 07 43.9**	**-1.1**

*ISCJB **15** 10:22:07.6±0.4,37.°24N×28.°20E±0.°03,h0km, Error ellipse: s-maj=3.7km s-min=3.2km az=7.9*
*DDA **15** 10:22:07.3,37.°23N×28.°20E,h7km,Ml2.5, Suspected Mining explosion.*
*CSEM **15** 10:22:07.8±0.1,37.°23N×28.°20E,h1km,ML2.4, Error ellipse: s-maj=3.1km s-min=2.8km az=20.0, Suspected Mining explosion.*
*ISK **15** 10:22:08.0,37.°20N×28.°14E,h15km±4km,ML2.4/7*
ISC 15 10:22:06.4±0.8,37.°26N±0.°02×28.°17E±0.°02,h0km,n32, σ0°53/52,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSB	**Milas**	**0.31**	**277**	PG	**Pb**	**10 22 14.4**	**-0.5**
MLSB				SG	**Sb**	**10 22 20.1**	**-0.4**
MLSB	**Milas**	**0.31**	**277**	*e*Pg	**Pb**	**10 22 14.4**	**-0.5**
MLSB				*e*Sg	**Sb**	**10 22 20.1**	**-0.4**
AYDN	**Tasoluk**	**0.46**	**330**	*i* P	**Pb**	**10 22 17.2**	**-0.2**
AYDN				*i* S	**Sb**	**10 22 24.5**	**-0.4**
AYDN	**Tasoluk**	**0.46**	**330**	P	**Pb**	**10 22 17.2**	**-0.2**
AYDN				S	**Sb**	**10 22 24.5**	**-0.4**
TURN	**Turunc**	**0.52**	**138**	PG	**Pg**	**10 22 16.9**	**+0.6**
TURN				SG	**Sg**	**10 22 23.5**	**+0.4**
TURN	**Turunc**	**0.52**	**138**	*i* P	**Pg**	**10 22 15.9**	**-0.4**
TURN				*i* S	**Sg**	**10 22 23.4**	**+0.4**
TURN	**Turunc**	**0.52**	**138**	P	**Pg**	**10 22 15.9**	**-0.4**
TURN	**Turunc**	**0.52**	**138**	*e*Pg	**Pg**	**10 22 16.9**	**+0.6**
TURN				S	**Sg**	**10 22 23.4**	**+0.4**
DALY	**Dalyan (Mu¨la**	**0.59**	**138**	PG	**Pb**	**10 22 19.3**	**-0.2**
DALY				SG	**Sb**	**10 22 28.3**	**-0.1**
DALY	**Dalyan (Mu¨la**	**0.59**	**138**	*i* P	**Pg**	**10 22 18.4**	**+0.8**
DALY				*i* S	**Sb**	**10 22 28.7**	**+0.3**
DALY	**Dalyan (Mu¨la**	**0.59**	**138**	P	**Pg**	**10 22 18.5**	**+0.8**
DALY	**Dalyan (Mu¨la**	**0.59**	**138**	*e*Pg	**Pb**	**10 22 19.3**	**-0.2**
DALY				S	**Sb**	**10 22 28.7**	**+0.3**
BDRM	**Kayabasi**	**0.61**	**252**	*i* P	**Pg**	**10 22 18.7**	**+0.7**
BDRM				*i* S	**Sb**	**10 22 28.8**	**-0.2**
BDRM	**Kayabasi**	**0.61**	**252**	P	**Pg**	**10 22 18.7**	**+0.7**
BDRM				S	**Sb**	**10 22 28.8**	**-0.2**
TAVA	**DENIZLI_Tavas**	**0.63**	**71**	*i* P	**Pb**	**10 22 19.5**	**-0.8**
TAVA				*i* S	**Sg**	**10 22 27.7**	**+1.1**
TAVA	**DENIZLI_Tavas**	**0.63**	**71**	P	**Pb**	**10 22 19.5**	**-0.8**
TAVA				S	**Sg**	**10 22 27.7**	**+1.1**
DAT	**Datca**	**0.71**	**222**	PG	**Pb**	**10 22 21.1**	**-0.6**
DAT	**Datca**	**0.71**	**222**	*i* P	**Pb**	**10 22 21.7**	**0.0**
DAT				*i* S	**Sn**	**10 22 35.0**	**-0.4**
DAT	**Datca**	**0.71**	**222**	*e*Pg	**Pb**	**10 22 21.1**	**-0.6**
DAT	**Datca**	**0.71**	**222**	P	**Pb**	**10 22 21.7**	**0.0**
DAT				S	**Sn**	**10 22 35.0**	**-0.4**
BODT	**Bodrum**	**0.71**	**254**	PG	**Pb**	**10 22 21.6**	**-0.1**
BODT	**Bodrum**	**0.71**	**254**	*e*Pg	**Pb**	**10 22 21.6**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	**0.72**	**342**	PG	**Pn**	**10 22 23.3**	**-0.6**
AYDB	**Zeytinkoy-Aydi**	**0.72**	**342**	*e*Pg	**Pn**	**10 22 23.3**	**-0.6**
DNZL	**Cakiroluk**	**0.82**	**58**	*i* P	**Pb**	**10 22 23.1**	**-0.5**
DNZL				*i* S	**Sb**	**10 22 34.6**	**-0.7**
DNZL	**Cakiroluk**	**0.82**	**58**	P	**Pb**	**10 22 23.1**	**-0.5**
DNZL				S	**Sb**	**10 22 34.6**	**-0.7**
FETY	**Fethiye**	**0.96**	**130**	PG	**Pn**	**10 22 26.9**	**-0.3**
FETY	**Fethiye**	**0.96**	**130**	*e*Pg	**Pn**	**10 22 26.9**	**-0.3**
ARG	**Arkhangelos**	**1.04**	**182**	PG	**Pn**	**10 22 27.8**	**-0.4**
ARG	**Arkhangelos**	**1.04**	**182**	*e*Pg	**Pn**	**10 22 27.8**	**-0.4**
MANT	**Manisa**	**1.27**	**14**	*i* P	**Pn**	**10 22 32.2**	**+0.6**
MANT				*i* S	**Sn**	**10 22 49.5**	**+0.1**
MANT	**Manisa**	**1.27**	**14**	P	**Pn**	**10 22 32.2**	**+0.6**
MANT				S	**Sn**	**10 22 49.5**	**+0.1**

*NNC **15** 10:22:40.6±2.0,53.°43N×87.°41E,h0km,mb3.6,mpv3.2, Error ellipse: s-maj=15.6km s-min=12.6km az=14.0*
IDC 15 10:22:37.5±2.7,53.°54N×87.°74E,h0km,mb1 3.5/2, mb1mx3.1/67,mbtmp3.5/2,ML3.3/2,7C-1D,Error ellipse: s-maj=25.4km s-min=15.0km az=63.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.78**	**285**	Pn	Pn	10 23 08.3	-1.2
	6.5nm,0.3s,baz=104,slow=15,SNR=22						
ZALV				Lg	Lg	10 23 34.2	
	7.6nm,0.3s,baz=105,slow=22,SNR=11						
I46RU	**ZALESOVO INFRA**	**1.78**	**285**	*i*		10 33 55.4	
	baz=106,slow=337,SNR=6.9						
KURK	**Kurchatov**	**6.29**	**247**	⇓Pn	Pn	10 24 11.4	+0.1
	1.5nm,0.7s						
KURK				⇑Sn	Sn	10 25 22.9	-0.9
	1.6nm,0.7s						
KURK				⇑Lg	Lg	10 25 55.1	
	6.8nm,0.8s						
KURBB	**Kurchatov Arra**	**6.38**	**247**	Pn	Pn	10 24 13.0	+0.3
	0.5nm,0.3s,baz=63,slow=14,SNR=16						
KURBB				Lg	Lg	10 26 00.3	
	0.1nm,0.3s,baz=63,slow=32,SNR=8.4						
KURBB	**Kurchatov Arra**	**6.38**	**247**	⇑Pn	Pn	10 24 12.8	+0.1
	2.7nm,0.3s						
KURBB				⇑Sn	Sn	10 25 24.2	-1.9
	4.3nm,0.7s						
KURBB				⇑Lg	Lg	10 25 58.5	
	8.8nm,0.8s						
MK31	**Makanchi Array**	**7.60**	**210**	Pn	Pn	10 24 30.6	+1.2
	0.2nm,0.3s,baz=27,slow=12,SNR=20						
MK31				⇑Sn	Sn	10 25 55.5	-0.7
	0.3nm,0.4s						
MK31				⇑Lg	Lg	10 26 37.4	
	2.3nm,0.8s,baz=39,slow=30,SNR=3.8						
MKAR	**Makanchi Array**	**7.60**	**210**	Pn	Pn	10 24 30.7	+1.3
	0.6nm,0.3s,baz=28,slow=13,SNR=15						
MKAR				Sn	Sn	10 25 57.4	+1.2
	0.2nm,0.3s,baz=31,slow=26,SNR=4.3						
MKAR				Lg	Lg	10 26 37.7	
	0.1nm,0.3s,baz=34,slow=37,SNR=6.2						

IDC 15 10:30:29.6±14.0,7.°10S×129.°61E,h140km±159km, mb3.7/1,mb1 3.6/4,mb1mx3.1/54,mbtmp3.9/4,ML3.8/3, Error ellipse: s-maj=105.8km s-min=58.2km az=32.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.60**	**199**	P	Pn	10 33 10.8	-0.2
	0.3nm,0.3s,baz=27,slow=12,SNR=18						
FITZ				S	Sn	10 35 10.9	-8.1
	0.7nm,0.3s,baz=114,slow=23,SNR=6.5						
WRA	**Warramunga Arr**	**13.57**	**161**	P	Pn	10 33 35.5	-1.0
	0.7nm,0.3s,baz=340,slow=12,SNR=35						
WRA				S	Sn	10 35 55.7	-11
	0.6nm,0.3s,baz=334,slow=22,SNR=7.1						
ASAR	**Alice Springs**	**16.98**	**166**	P	Pn	10 34 19.6	+0.7
	0.5nm,0.3s,baz=341,slow=8.1,SNR=39						
ASAR				S	S	10 37 18.7	-10
	0.4nm,0.3s,baz=350,slow=25,SNR=6.3						
MKAR	**Makanchi Array**	**68.09**	**327**	P	P	10 41 14.4	+0.1
	0.9nm,0.5s,baz=119,slow=7.4,SNR=13						

*BJI **15** 11:04:17.0,6.°11N×123.°50E,h644km,mb4.7/48,mB4.6/24*
*ISCJB **15** 11:04:21.7±0.2,6.°65N±0.°03×123.°32E±0.°04,h650km, mb4.4/59, Error ellipse: s-maj=5.8km s-min=3.6km az=156.6*
*NEIC **15** 11:04:22.2±0.5,6.°61N×123.°29E,h633km±9km,mb4.6/26, Error ellipse: s-maj=8.7km s-min=5.7km az=48.0*
*DJA **15** 11:04:22.6±0.3,7.°N±5.°×12.°3E±.°,h630km±6km,M4.4/23, mb4.6/23,mB4.8/12,MLv4.8/6,Mw(mB)4.1/12*
*IDC **15** 11:04:23.4±0.9,6.°65N×123.°30E,h653km±12km,mb3.6/31, mb1 3.7/33,mb1mx3.4/64,mbtmp4.7/33, Error ellipse: s-maj=11.4km s-min=6.9km az=67.0*
ISC 15 11:04:23.0±0.3,6.°58N±0.°05×123.°33E±0.°07,h650km,n126, σ1°23/137,mb4.5/59,2C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**1.12**	**55**	*e*P	**P**	**11 05 36.9**	**-2.4**
SKMP	**Bagumbayan, Su**	**1.21**	**93**	*e*P	**P**	**11 05 37.1**	**-2.4**
PAGZ	**Pagadian**	**1.27**	**3**	*e*P	**P**	**11 05 36.9**	**-2.8**
BUKP	**Musuan**	**2.15**	**53**	*e*P	**P**	**11 05 40.3**	**-2.3**
SGSI	**Sangihe**	**3.61**	**143**	P	**P**	**11 05 46.8**	**-3.1**
KMSI	**Cibinong**	**6.00**	**174**	P	**P**	**11 06 06.8**	**-0.1**
MRSI	**Marisa**	**6.21**	**193**	P	**P**	**11 06 08.5**	**-0.2**
TNTI	**Ternate**	**7.04**	**145**	*e*P	**P**	**11 06 14.6**	**-1.1**
MPSI	**Mapaga**	**7.08**	**209**	P	**P**	**11 06 14.8**	**-1.2**
KKM	**Kota Kinabalu**	**7.09**	**266**	*e*P	**P**	**11 06 13.7**	**-2.5**
APSI	**Ampana**	**7.62**	**193**	P	**P**	**11 06 21.6**	**+0.8**
LBMI	**Labuha**	**8.29**	**150**	P	**P**	**11 06 26.4**	**-0.5**
SANI	**Sanana**	**8.97**	**163**	P	**P**	**11 06 30.1**	**-3.1**
NLAI	**Namlea**	**10.45**	**159**	P	**P**	**11 06 48.3**	**+1.0**
SIJI	**Sorong**	**10.84**	**133**	P	**P**	**11 06 51.5**	**+0.4**
	6.0nm,0.3s,baz=332,slow=11,SNR=12						
SPSI	**Sidrap Palu**	**11.06**	**199**	P	**P**	**11 06 51.8**	**-1.3**
MTKI	**Muara Teweh, K**	**11.25**	**229**	P	**P**	**11 06 54.5**	**-0.4**
MSAI	**Masohi**	**11.33**	**150**	P	**P**	**11 06 56.9**	**+1.2**
KBKI	**Kotabaru**	**12.14**	**216**	P	**P**	**11 07 02.7**	**-0.3**
FAKI	**Fak Fak**	**12.97**	**136**	P	**P**	**11 07 11.9**	**+1.1**
FAKI	**Fak Fak**	**12.97**	**136**	*e*P	**P**	**11 07 11.5**	**+0.8**
KSM	**Kuching**	**13.94**	**249**	*e*P	**P**	**11 07 19.9**	**+0.3**
PBKI	**Pangkalan Bun**	**14.85**	**232**	P	**P**	**11 07 29.0**	**+1.0**
EDFI	**Ende, Flores**	**15.31**	**186**	P	**P**	**11 07 33.9**	**+1.6**
PLAI	**Plampang**	**16.27**	**200**	P	**P**	**11 07 42.4**	**+1.4**
TWG	**Pinlang**	**16.30**	**353**	*e*P	**P**	**11 07 40.3**	**-0.8**
	114nm,0.5s						
TPUB	**Ta-pu**	**16.83**	**351**	*e*P	**P**	**11 07 46.7**	**+0.7**
	44nm,0.7s						
YULB	**Yu-li**	**16.83**	**354**	*e*P	**P**	**11 07 44.5**	**-1.5**
	14nm,0.6s						
JAY	**Jayapura**	**19.56**	**117**	P	**P**	**11 08 11.9**	**+1.0**
	1.5nm,0.3s,baz=291,slow=5.2,SNR=6.5						
KPJI	**Karang Pucung**	**19.93**	**226**	P	**P**	**11 08 15.0**	**+0.9**
LEM	**Lembang**	**20.56**	**230**	P	**P**	**11 08 21.2**	**+1.2**
	22nm,0.7s,baz=331,slow=23,SNR=4.3						
IPM	**Ipoh**	**22.29**	**266**	*e*P	**P**	**11 08 34.6**	**-0.6**
	9.4nm,1.1s						
GUMO	**Guam**	**22.31**	**70**	P	**P**	**11 08 35.6**	**+0.2**
	30nm,0.3s,baz=135,slow=3.8,SNR=7.3						
GUMO	**Guam**	**22.31**	**70**	*e*P	**P**	**11 08 35.5**	**+0.2**
	141nm,1.3s						
PBKT	**Sadao Pong**	**24.02**	**296**	*e*P	**P**	**11 08 49.9**	**-0.5**
	12nm,0.8s						
PSI	**Prapat**	**24.60**	**262**	P	**P**	**11 08 56.0**	**+0.2**
	5.9nm,0.7s,baz=177,slow=0.8,SNR=3.6						
PSI	**Prapat**	**24.60**	**262**	*e*P	**P**	**11 08 55.8**	**0.0**
	7.2nm,0.7s						
GYA	**Guiyang**	**25.36**	**323**	*e*P	**P**	**11 09 02.8**	**+0.6**
GYA				sP	sP	11 11 52.0	-2.0
GYA				S	**S**	**11 12 49.4**	**+3.8**
GYA				ScP	**ScP**	**11 14 53.3**	**+2.8**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MANU	**Manus Island**	**25.48**	**109**	*e*P	**P**	**11 09 04.9**	**+1.6**
	48nm,1.3s						
KCSI	**Kotacane, Aceh**	**25.63**	**264**	P	**P**	**11 09 03.6**	**-1.1**
NJ2	**Nanjing**	**25.69**	**351**	*e*P	**P**	**11 09 06.5**	**+1.7**
NJ2				pmax	pmax		
	comp=Z,15nm,0.6s						
GSI	**Gunungsitoli**	**26.21**	**260**	*e*P	**P**	**11 09 08.6**	**-1.1**
	29nm,0.8s						
CM01	**Chiang Mai Arr**	**26.50**	**299**	*e*P	**P**	**11 09 12.2**	**0.0**
CM31	**Chiang Mai Arr**	**26.53**	**299**	*e*P	**P**	**11 09 12.7**	**+0.3**
CMAR	**Chiang Mai Arr**	**26.53**	**299**	P	**P**	**11 09 12.7**	**+0.2**
	5.7nm,0.6s,baz=113,slow=7.1,SNR=28						
CHTO	**Chiang Mai**	**26.67**	**299**	*e*P	**P**	**11 09 13.7**	**0.0**
	13nm,0.7s						
KMI	**Kunming**	**26.98**	**315**	P	**P**	**11 09 17.5**	**+0.9**
KMI				pmax	pmax		
	comp

STKA	Stephens Creek	42.03	157	P	P	11 11 21.7 +1.3
	2.1nm,0.3s,baz=340,slow=8.6,SNR=9.2					
GKN	Gorkha	42.37	305	eP	P	11 11 22.9 -0.4
	23nm,0.3s					
KOLN	Koldanda	43.13	304	eP	P	11 11 29.5 +0.2
	106nm,0.3s					
DANN	Dangsing	43.21	305	eP	P	11 11 30.0 -0.1
	128nm,0.4s					
ULN	Ulaanbaatar	43.42	344	eP	P	11 11 31.4 +0.2
	15nm,0.7s					
SONM	Songino Array	43.58	343	P	P	11 11 32.3 0.0
	12nm,0.8s,baz=162,slow=9.0,SNR=20					
SONM				PcP	PcP	11 13 04.3 -0.3
	1.2nm,0.5s,baz=159,slow=3.7,SNR=4.3					
SONA1	Songino Array	43.59	343	eP	P	11 11 32.4 0.0
PYUN	Piuthan	43.75	304	eP	P	11 11 34.4 +0.3
	64nm,0.4s					
TLY	Talaya	47.82	344	P	P	11 12 04.6 +0.6
	14nm,0.7s,baz=195,slow=4.0,SNR=7.8					
TLY	Talaya	47.82	344	eP	P	11 12 04.7 +0.6
	15nm,0.7s					
WMQ	Urumqi	48.47	326	P	P	11 12 10.8 +1.7
MKAR	Makanchi Array	53.30	326	P	P	11 12 44.0 +0.2
	36nm,0.4s,baz=122,slow=8.5,SNR=448					
MKAR				PcP	PcP	11 13 40.2 -0.1
	3.2nm,0.5s,baz=146,slow=3.2,SNR=4.7					
MKAR				ScP	ScP	11 16 37.3 +0.2
	1.5nm,0.7s,baz=126,slow=5.1,SNR=9.1					
TARG	Taragay, Kyrgy	53.38	318	eP	P	11 12 45.6 +0.8
	10nm,0.6s					
KSH	Kashi	53.65	315	P	P	11 12 45.4 -1.0
KSH				sP	sP	11 15 57.4 +2.3
KSH				ScS	ScS	11 21 28.0 -0.9
KSH				pmax	pmax	
	comp=Z,260nm,5.0s					
NRN	Naryn	54.45	317	eP	P	11 12 52.6 +0.3
ULHL	Ulahol	54.65	318	P	P	11 12 54.3 +0.8
	SNR=5.9					
KZA	Kyzart	55.24	318	P	P	11 12 58.8 +1.0
	SNR=21					
TKM2	Tokmak 2	55.38	319	P	P	11 12 59.0 +0.5
	SNR=16					
KBK	Karagaybulak	55.69	318	P	P	11 13 01.3 +0.7
	SNR=8.6					
UCH	Uchtor	55.80	317	P	P	11 13 02.6 +1.0
	SNR=22					
AAK	Ala-Archa	55.99	318	P	P	11 13 02.4 -0.2
	4.3nm,0.6s,baz=123,slow=4.5,SNR=7.1					
AAK	Ala-Archa	55.99	318	eP	P	11 13 02.6 0.0
	4.9nm,0.6s					
USP	Ospenovka	56.26	319	P	P	11 13 04.7 +0.4
	SNR=18					
EKS2	Erkin-Say	56.48	318	P	P	11 13 06.7 +0.8
	SNR=13					
ZALV	Zalesovo Beam	56.54	334	P	P	11 13 05.0 -1.0
	7.2nm,0.7s,baz=132,slow=5.7,SNR=17					
KBL	Kabul	57.11	307	eP	P	11 13 10.4 -0.1
	18nm,0.8s					
KURBB	Kurchatov Arra	57.53	328	P	P	11 13 12.6 -0.1
	32nm,0.7s,baz=128,slow=6.3,SNR=211					
KURK	Kurchatov	57.54	328	eP	P	11 13 12.8 +0.1
	59nm,0.6s					
BVAR	Borovoye Array	63.10	327	P	P	11 13 48.9 -0.3
	7.7nm,0.8s,baz=126,slow=7.5,SNR=34					
BRVK	Borovoye	63.18	327	eP	P	11 13 49.4 -0.2
	16nm,0.9s					
GEYT	Alibeck	66.48	308	P	P	11 14 11.0 +0.4
	85nm,0.5s,baz=104,slow=6.1,SNR=7.5					
ODZ	Otahua Downs	66.59	145	eP	P	11 14 11.0 0.0
	101nm,1.4s					
NRIK	Noril'sk	66.89	347	P	P	11 14 12.6 +0.2
	13nm,0.6s,baz=116,slow=5.0,SNR=5.9					
AKTO	Aktyubinsk	69.34	322	P	P	11 14 27.5 -0.1
	8.9nm,0.7s,baz=103,slow=8.1,SNR=30					
ARU	Arti	70.74	328	P	P	11 14 34.9 -0.8
	6.5nm,0.4s,baz=94,slow=2.8,SNR=12					
ARU	Arti	70.74	328	eP	P	11 14 34.9 -0.8
	8.8nm,0.6s					
RAYN	Ar Rayn	76.26	293	eP	P	11 15 07.3 -0.3
	6.8nm,0.9s					
KLMR	Klimovskoe	81.28	331	eP	P	11 15 31.3 -1.9
KLMR				AMP		11 15 33.0
	comp=Z,13nm,0.7s					
ILAR	Eielson Array	84.01	26	P	P	11 15 45.7 -1.0
	comp=Z,0.6nm,0.6s,baz=233,slow=5.0,SNR=15					
BRTR	Keskin Array B	85.61	309	P	P	11 15 53.5 -1.7
	comp=Z,1.5nm,0.4s,baz=131,slow=3.5,SNR=11					
ARCES	ARCESS Array B	86.62	340	P	P	11 15 58.0 -1.1
	comp=Z,3.4nm,0.8s,baz=78,slow=5.9,SNR=11					
VNDA	Vanda	86.67	172	P	P	11 15 57.9 -1.2
	comp=Z,1.2nm,0.7s,baz=239,slow=7.4,SNR=4.5					
SPITS	Spitsbergen Ar	87.04	349	P	P	11 16 00.6 -0.4
	comp=Z,3.3nm,0.4s,baz=95,slow=9.4,SNR=22					
FINES	FINESS Array B	87.73	332	P	P	11 16 03.2 -1.3
	comp=Z,2.8nm,0.5s,baz=61,slow=4.9,SNR=21					
MLR	Muntele Rosu	90.51	316	P	P	11 16 17.2 -0.7
	comp=Z,0.3nm,0.3s,baz=112,slow=15,SNR=3.2					
SYO	Syowa Base	93.84	201	⇓eX	P	11 16 30.0 -2.4
SYO	Syowa Base	93.84	201	⇑esP	sP	11 19 55.0 -0.2
HFS	Hagfors	93.93	332	P	P	11 16 31.6 -1.5
	comp=Z,1.3nm,0.5s,baz=99,slow=8.9,SNR=10					
YKA	Yellowknife Ar	98.29	23	P	P	11 16 52.7 +0.2
	comp=Z,0.3nm,0.7s,baz=298,slow=4.6,SNR=3.9					
TORD	Torodi Ar. Bea	118.81	289	PKP	PKPdf	11 21 59.8 -0.4
	comp=Z,1.4nm,0.7s,baz=78,slow=1.7,SNR=10					
PLCA	Paso Flores	143.79	162	PKP	PKPdf	11 22 47.5 +1.1
	comp=Z,3.8nm,0.8s,baz=257,slow=3.4,SNR=7.7					

IDC 15 11:12:51.0±1.0, 36°.83N×102°.93E, h0km, mb3.9/5, mb1 4.0/6, mb1mx3.4/73, mbtmp3.8/6, ML3.5/1, Error ellipse: s-maj=65.4km s-min=19.3km az=58.0, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	Songino Array	11.29	12	Pn	Pn	11 15 34.2	+0.5
	0.3nm,0.3s,baz=192,slow=17,SNR=3.6						
KURBB	Kurchatov Arra	22.25	316	P	P	11 17 49.4	+0.1
	0.6nm,0.3s,baz=112,slow=12,SNR=4.5						
BVAR	Borovoye Array	27.84	316	P	P	11 18 41.8	-0.2
	0.6nm,0.5s,baz=113,slow=6.6,SNR=4.3						
ARCES	ARCESS Array B	51.67	334	P	P	11 21 59.0	-0.2
	2.3nm,0.9s,baz=87,slow=7.4,SNR=6.8						
WRA	Warramunga Arr	63.78	147	P	P	11 23 24.6	-0.4
	0.4nm,0.8s,baz=339,slow=5.6,SNR=3.9						
ASAR	Alice Springs	66.89	149	P	P	11 23 45.5	+0.4
	0.6nm,0.6s,baz=338,slow=6.5,SNR=7.4						

JMA 15 11:27:24.3±0.2, 37°.54N×143°.81E, h51km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	Ouri	2.15	296	P	Pn	11 27 58.8	+1.2
JIO				eS	Sn	11 28 24.5	+1.4
OFUJ	Ofunato	2.28	313	P	Pn	11 28 00.3	+0.8
OFUJ				S	Sn	11 28 27.4	+1.0
JFK	Kawauchi	2.34	267	eS	Sn	11 28 28.1	+0.1
JMK	Ichinoseki	2.48	305	P	Pn	11 28 03.5	+1.3
JFT	Otama	2.76	271	P	Pn	11 28 08.0	+1.9
JFT				S	Sn	11 28 40.6	+2.4
JOM	Ohasama	2.76	315	P	Pn	11 28 07.5	+1.4
JOM				S	Sn	11 28 39.9	+1.7
JYK	Kaneyama	3.05	298	P	Pn	11 28 12.2	+2.2
JANG	Nango	3.35	328	P	Pn	11 28 15.9	+1.8
JRY	Ryogami san	4.22	250	P	Pn	11 28 27.3	+1.1
JRY				eS	Sn	11 29 12.5	-1.7
JOT	Ohata	4.39	332	eS	Sn	11 29 16.8	-1.4
JOD2	Odawara 2	4.43	241	eS	Sn	11 29 18.0	-1.4
JCH	Churui	5.08	356	P	Pn	11 28 37.4	-0.4
JCH				eS	Sn	11 29 31.5	-3.7
NEM2	Nemuro 2	6.00	14	eS	Sn	11 29 52.0	-5.8
JTKR	Abashiri--Toko	6.42	1	P	Pn	11 28 55.7	-0.5
JTKR				eS	Sn	11 30 03.8	-4.4

ISCJB 15 11:39:06.9±0.5, 24°.82N±0°.03×122°.53E±0°.02, h133km±3km, Error ellipse: s-maj=5.7km s-min=3.1km az=4.4
TAP 15 11:39:06.7, 24°.89N×122°.56E, h136km, ML4.1, C
JMA 15 11:39:07.1±0.2, 24°.83N×122°.51E, h133km±2km, M3.3
ISC 15 11:39:06.1±1.6, 24°.85N±0°.05×122°.53E±0°.03, h141km±9km, n80, σ0°.78/123, 30C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.47	230	⇑P	Pn	11 39 26.9	+0.6
	baz=220						
EOS1				eS	Sn	11 39 41.8	+0.3
	baz=220						
TWB1	Santiao Chiao	0.51	288	⇑P	Pn	11 39 26.9	+0.4
	baz=283						
TWB1				S	Sn	11 39 41.8	-0.2
	baz=283						
JYNG	Yonagunijimaku	0.55	136	P	Pn	11 39 27.0	+0.2
JYNG				S	Sn	11 39 41.8	-0.6
YOJ	Yonaguni jima	0.59	131	⇑P	Pn	11 39 27.2	+0.2
	baz=142						
YOJ				S	Sn	11 39 42.0	-0.8
	baz=142						
YOJ	Yonaguni jima	0.59	131	P	Pn	11 39 27.2	+0.2
YOJ				S	Sn	11 39 42.1	-0.6
NTC	Toucheng	0.63	270	eP	Pn	11 39 27.3	+0.1
	baz=261						
TIPB	Shuangxi	0.65	281	⇑iP	Pn	11 39 26.9	-0.5
	baz=275						
TIPB				eS	Sn	11 39 42.4	-1.1
	baz=275						
TWC	Suao	0.66	249	⇑iP	Pn	11 39 27.6	+0.2
	baz=242						
TWC				S	Sn	11 39 42.4	-1.2
	baz=242						
WFSB	Wu-fen Shan	0.71	288	⇑P	Pn	11 39 28.4	+0.7
	baz=276						
WFSB				S	Sn	11 39 44.4	+0.2
	baz=276						
ENAH	Nanao	0.77	239	P	Pn	11 39 28.8	+0.6
	baz=236						
TWE	Neicheng	0.79	261	⇑iP	Pn	11 39 28.9	+0.6
	baz=258						
TWE				eS	Sn	11 39 44.0	-1.1
	baz=258						
NANB	Nanao	0.82	239	⇑P	Pn	11 39 29.3	+0.7
	baz=236						
NANB				S	Sn	11 39 45.4	-0.3
	baz=236						
ENA	Nanau	0.83	240	⇑iP	Pn	11 39 29.3	+0.6
	baz=236						
ENA				S	Sn	11 39 45.8	+0.1
	baz=236						
TWA	Mucha	0.87	279	⇑P	Pn	11 39 29.2	+0.3
	baz=269						
TWA				S	Sn	11 39 45.5	-0.8
	baz=269						
YM07	YM07	0.88	292	⇑P	Pn	11 39 28.7	-0.4
	baz=282						
YM07				eS	Sn	11 39 45.4	-1.2
	baz=282						
ENTT	Nioudou	0.90	257	⇑iP	Pn	11 39 29.9	+0.7
	baz=257						
ENTT				S	Sn	11 39 47.5	+0.7
	baz=257						
YM08	YM08	0.91	292	⇑P	Pn	11 39 29.6	+0.3
	baz=282						
YM08				eS	Sn	11 39 46.3	-0.7
	baz=282						
YM11	YM11	0.92	290	⇑eP	Pn	11 39 31.1	+1.6
	baz=281						
YM11				eS	Sn	11 39 47.3	+0.1
	baz=281						
YM10	YM10	0.93	289	⇑P	Pn	11 39 30.1	+0.6
	baz=287						
YM12	YM12	0.93	291	eP	Pn	11 39 29.8	+0.3
	baz=282						
TAP1	Taipei	0.93	282	eP	Pn	11 39 29.4	-0.1
	baz=272						
NWLT	Wulai	0.93	266	eP	Pn	11 39 29.9	+0.3
	baz=268						
TWY	Chenhua	0.94	297	⇑P	Pn	11 39 30.4	+0.8
	baz=287						
TWY				eS	Sn	11 39 47.7	+0.4
	baz=287						
YM04	YM04	0.95	289	⇑P	Pn	11 39 30.0	+0.4
	baz=277						
YM04				eS	Sn	11 39 46.4	-1.1
	baz=277						
TATO	Taipei	0.95	278	P	Pn	11 39 29.9	+0.2
	baz=270						
TATO				eS	Sn	11 39 46.2	-1.3
	baz=270						
YM03	YM03	0.95	290	eP	Pn	11 39 30.2	+0.5
	baz=279						
NTST	Danshui	1.03	288	eP	Pn	11 39 31.1	+0.8
	baz=279						
YHNB	Yeheng	1.06	260	⇑P	Pn	11 39 31.4	+0.7
	baz=264						
YHNB				eS	Sn	11 39 48.9	-0.5
	baz=264						
NSK	Sanguang	1.08	261	⇑P	Pn	11 39 31.4	+0.6
	baz=264						
NSK				eS	Sn	11 39 49.0	-0.6
	baz=264						
NACB	Ninganchiao	1.08	232	P	Pn	11 39 30.9	+0.1
	baz=227						
NACB				S	Sn	11 39 49.1	-0.6
	baz=227						
NNSH	Datong	1.12	248	eP	Pn	11 39 32.0	+0.6
	baz=242						
NNSH				eS	Sn	11 39 50.3	-0.2
	baz=242						
NNS	Nan Shan	1.13	249	⇑iP	Pn	11 39 32.4	+1.0
	baz=242						
NNS				eS	Sn	11 39 50.4	-0.2
	baz=242						
TWD	Chiawan	1.14	228	⇑P	Pn	11 39 31.6	+0.2
	baz=226						
TWD				eS	Sn	11 39 50.1	-0.5
	baz=226						
IRIF	Iriomote-Funau	1.21	115	P	Pn	11 39 32.5	+0.5
IRIF				eS	Sn	11 39 51.7	0.0
NCU	National Centr	1.22	276	eP	Pn	11 39 33.0	+0.9
	baz=274						
NCU				eS	Sn	11 39 52.6	+0.7
	baz=274						
NCUH	Zhongli	1.22	276	eP	Pn	11 39 33.0	+0.8
	baz=274						
NCUH				eS	Sn	11 39 52.5	+0.5
	baz=274						
ENLB	Shoufeng	1.27	222	⇑P	Pn	11 39 34.1	+1.5
	baz=214						
LIOB	Emei	1.39	262	⇑P	Pn	11 39 34.5	+0.6
	baz=260						
LIOB				eS	Sn	11 39 54.7	-0.3
	baz=260						
SBCB	Hsinchu	1.40	268	eP	Pn	11 39 34.6	+0.6
	baz=266						
SBCB				eS	Sn	11 39 55.4	+0.2
	baz=266						
NSTT	Nanjuang	1.40	261	eP	Pn	11 39 34.4	+0.4
	baz=260						
NSTT				eS	Sn	11 39 54.6	-0.6
	baz=260						
HATJ	Hateruma jima	1.41	124	P	Pn	11 39 35.0	+0.9
HATJ				S	Sn	11 39 55.3	0.0
HSN	Hsinchu	1.42	268	eP	Pn	11 39 34.4	+0.3
	baz=268						
ESL	Shilin	1.44	224	eP	Pn	11 39 34.2	-0.2
	baz=231						
CHGB	Renai	1.46	238	⇑P	Pn	11 39 36.0	+1.1
	baz=232						
CHGB				S	Sn	11 39 56.4	-0.4
	baz=232						
JKRS	Kuro-shima	1.48	114	P	Pn	11 39 35.7	+0.9
JKRS				S	Sn	11 39 56.4	-0.3
EGFH	Guangfu	1.55	221	eP	Pn	11 39 35.5	-0.1
	baz=215						
JIJ	Ishigaki jima	1.55	108	P	Pn	11 39 36.0	+0.4
JIJ				S	Sn	11 39 56.7	-1.3
JISG	Ishigakijimahi	1.64	99	P	Pn	11 39 37.1	+0.5
JISG				S	Sn	11 39 59.0	-0.9
VWDT	VWDT	1.67	229	⇑P	Pn	11 39 37.9	+0.9
	baz=223						
TWQ1	Liyutan	1.67	253	⇑P	Pn	11 39 37.8	+0.8
	baz=251						
TWQ1				S	Sn	11 40 00.3	-0.2
	baz=251						
HGSD	Ruisui	1.69	217	⇑P	Pn	11 39 37.5	+0.4
	baz=217						
EHY	Hungye	1.73	220	eP	Pn	11 39 37.3	-0.4
	baz=226						
SMLT	Sun Moon Lake	1.77	237	⇑P	Pn	11 39 39.7	+1.5
	baz=234						
SMLT				S	Sn	11 40 03.7	+1.1
	baz=234						
SSLB	Suanglung	1.78	234	eP	Pn	11 39 39.6	+1.4
	baz=230						
SSLB				eS	Sn	11 40 02.9	+0.1
	baz=230						
TYC	Yuchr	1.79	239	⇑P	Pn	11 39 39.7	+1.4
	baz=243						
TYC				eS	Sn	11 40 03.4	+0.5
	baz=243						
YULB	Yu-li	1.84	218	eP	Pn	11 39 38.8	-0.1
	baz=224						
TWF1	Yuli	1.87	217	eP	Pn	11 39 39.3	+0.1
	baz=224						
WJS	Zhushan	1.93	238	eP	Pn	11 39 41.5	+1.6
	baz=238						
WCHH	Zhanghua	1.95	247	eP	Pn	11 39 41.4	+1.2
	baz=255						
JTJ	Tarama	1.99	96	P	Pn	11 39 41.7	+1.1
JTJ				S	Sn	11 40 06.1	-0.9
FULB	Fuli	1.99	215	eP	Pn	11 39 41.1	+0.4
	baz=223						
CHKT	Chengkung	2.04	212	eP	Pn	11 39 41.4	+0.1
	baz=206						
ALS	Alishan	2.06	230	⇑P	Pn	11 39 43.4	+1.6
	baz=222						
ELDTW	Lidau	2.15	220	eP	Pn	11 39 43.3	+0.6
	baz=220						
TPUB	Ta-pu	2.32	229	eP	Pn	11 39 45.2	+0.5
	baz=238						
TWH	Lutao	2.34	204	eP	Pn	11 39 44.4	-0.5
	baz=206						
TWH				eS	Sn	11 40 13.1	-1.5
	baz=206						
WTP	Ta-pu	2.37	228	eP	Pn	11 39 46.4	+1.1
	baz=237						
JIRB	Irabujima	2.40	90	eS	Sn	11 40 16.3	+0.3
TWGBT	Beinan	2.42	213	eP	Pn	11 39 45.8	-0.1
	baz=213						
TWG	Pinlang	2.42	214	eP	Pn	11 39 45.6	-0.3
	baz=213						
TWK	Hsinying	2.44	230	eP	Pn	11 39 46.8	+0.6
	baz=238						
CHN1	Nanshi	2.47	228	eP	Pn	11 39 47.7	+1.3
	baz=237						
SLGT	Liugui	2.53	223	eP	Pn	11 39 49.3	+2.1
	baz=230						
MATB	Ma-tsu	2.67	300	eP	Pn	11 39 48.7	-0.2
	baz=298						
SSD	Sandimen	2.72	220	eP	Pn	11 39 51.0	+1.4
	baz=220						
VWUC	VWUC	2.80	273	eP	Pn	11 39 50.3	-0.2
	baz=272						
MASBT	Mashibuluo	2.83	218	eP	Pn	11 39 51.0	0.0
	baz=218						
PNG	Penghu	3.00	245	eP	Pn	11 39 52.4	-0.8
	baz=244						
PNG				eS	Sn	11 40 27.6	-1.8
	baz=244						
PHUB	P'eng-hu	3.01	244	eP	Pn	11 39 52.4	-0.8
	baz=244						
VCHM	Qimei	3.27	241	eP	Pn	11 39 56.8	+0.2
	baz=234						

IDC 15 11:45:14.2±2.7, 3°.68S×145°.42E, h0km, mb4.0/5, mb1 4.2/7, mb1mx3.8/51, mbtmp4.1/7, ML3.7/2, MS3.5/23, Ms1 3.5/23, ms1mx3.3/46, Error ellipse: s-maj=74.9km s-min=23.8km az=93.0
ISCJB 15 11:45:16.9±1.6, 3°.7S±0°.1×145°.2E±0°.3, h23km, mb4.0/5, MS3.5/18, Error ellipse: s-maj=40.8km s-min=15.2km az=174.6
ISC 15 11:45:18.8±2.0, 3°.7S±0°.1×145°.2E±0°.4, h23km, n26, σ0°.99/7, mb4.0/5, MS3.5/18, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	Jayapura	4.61	285	LR	LR	11 48 27.2	
	comp=Z,199nm,18.0s,baz=150,slow=40						
PMG	Port Moresby	5.99	161	LR	LR	11 49 07.6	
	comp=Z,602nm,18.8s,baz=357,slow=39						
HNR	Honiara	15.74	112	LR	LR	11 53 24.9	
	comp=Z,141nm,21.5s,baz=344,slow=32						
CTA	Charters Tower	16.31	176	Pn	Pn	11 49 06.6	0.0
	0.1nm,0.3s,baz=360,slow=16,SNR=3.7						
GUMO	Guam	17.19	359	LR	LR	11 55 34.3	
	comp=Z,110nm,18.0s,baz=174,slow=36						
WRA	Warramunga Arr	19.28	212	P	Pn	11 49 43.1	-0.1
	0.3nm,0.3s,baz=39,slow=12,SNR=50						
WRA				LR	LR	11 58 18.2	
	comp=Z,212nm,18.8s,baz=45,slow=40						
DAV	Davao City (W)	22.29	299	LR	LR	11 57 12.2	
	comp=Z,48nm,21.8s,baz=316,slow=32						
ASAR	Alice Springs	22.62	208	P	P	11 50 17.7	-0.5
	2.5nm,0.8s,baz=44,slow=8.1,SNR=26						
ASAR				LR	LR	12 00 26.3	
	comp=Z,105nm,20.0s,baz=41,slow=40						
FITZ	Fitzroy Crossi	23.87	232	P	P	11 50 31.7	+0.9
	5.1nm,0.9s,baz=47,slow=11,SNR=12						
DZM	Mont Dzumac	27.55	133	LR	LR	12 00 32.9	
	comp=Z,187nm,19.0s,baz=298,slow=34						
STKA	Stephens Creek	28.22	186	LR	LR	12 03 27.4	
	comp=Z,109nm,20.0s,baz=22,slow=39						
JOW	Kunigami	34.48	333	LR	LR	12 03 42.0	
	comp=Z,198nm,21.4s,baz=72,slow=32						
LEM	Lembang	37.50	264	LR	LR	12 10 07.2	
	comp=Z,60nm,18.5s,baz=19,slow=40						
JNU	Nakatsue	39.05	341	LR	LR	12 07 38.3	
	comp=Z,31nm,22.0s,baz=118,slow=34						
NWAO	Narrogin (SRO)	39.07	219	LR	LR	12 07 29.7	
	comp=Z,149nm,21.6s,baz=266,slow=34						
KSRS	Korea Array	43.98	340	LR	LR	12 08 02.9	
	comp=Z,62nm,21.8s,baz=168,slow=31						
CMAR	Chiang Mai Arr	50.57	297	P	P	11 54 15.4	-0.7
	0.4nm,0.3s,baz=110,slow=4.7,SNR=4.9						
CMAR				LR	LR	12 13 48.5	
	comp=Z,13nm,21.6s,baz=230,slow=34						
SONM	Songino Array	61.53	331	LR	LR	12 21 53.1	
	comp=Z,58nm,19.5s,baz=94,slow=36						
MA2	Magadan	63.25	3	LR	LR	12 24 11.1	
	comp=Z,16nm,18.3s,baz=137,slow=37						
MKAR	Makanchi Array	74.58	321	P	P	11 56 57.4	+1.3
	3.1nm,1.1s,baz=121,slow=6.9,SNR=5.3						
MKAR				LR	LR	12 28 03.5	
	comp=Z,22nm,21.3s,baz=67,slow=34						
ZALV	Zalesovo Beam	76.11	328	LR	LR	12 29 08.7	
	comp=Z,38nm,21.8s,baz=70,slow=35						
KDAK	Kodiak Island	78.78	29	LR	LR	12 32 33.6	
	comp=Z,34nm,18.9s,baz=208,slow=36						
NRIK	Noril'sk	82.55	342	LR	LR	12 32 54.6	
	comp=Z,20nm,21.9s,baz=128,slow=35						
BVAR	Borovoye Array	83.85	324	P	P	11 57 45.8	-0.8
	1.5nm,0.8s,baz=81,slow=9.3,SNR=3.6						
GEYT	Alibeck	89.92	308	LR	LR	12 43 11.9	
	comp=Z,36nm,18.1s,baz=145,slow=39						
YBH	Yreka Blue Hor	94.04	49	LR	LR	12 34 36.7	
	comp=Z,54nm,18.6s,baz=316,slow=32						

MOS 15 11:46:20.0±0.9, 55°.53N×110°.46E, h13km, mb4.2/6, Error ellipse: s-maj=9.9km s-min=6.0km az=72.2
BYKL 15 11:46:21.0±0.3, 55°.49N×110°.42E
IDC 15 11:46:22.1±2.8, 55°.53N×110°.55E, h16km±18km, mb3.6/7, mb1 3.9/14, mb1mx3.6/76, mbtmp3.9/14, ML3.7/6, MS3.0/10, Ms1 3.0/10, ms1mx2.7/74, Error ellipse: s-maj=19.0km s-min=11.9km az=134.0
ISC 15 11:46:21.0±0.7, 55°.50N±0°.02×110°.49E±0°.02, h3km±5km, n89, σ2°.66/152, mb3.9/10, MS2.9/5, 16C-11D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMO	Kumora	0.56	46	⇓iPg	Pg	11 46 31.8	+0.2
KMO				Pmax		11 46 32.2	
	2μm,0.4s						
KMO				eSg	Sg	11 46 39.5	+0.6
KMO				Smax		11 46 46.1	
	11μm,1.2s						
KMO	Kumora	0.56	46	⇓iPG	Pg

	comp=N,187nm,0.7s					
NIZ			⇓*i*Pg	**Pg**	**11 46 32.3**	**-0.3**
	comp=N,187nm,0.7s					
NIZ			⇑*i*Pg	**Pg**	**11 46 32.3**	**-0.3**
	comp=N,1μm,0.7s					
NIZ			Pmax		11 46 33.1	
	comp=N,2μm,0.3s					
NIZ			*e*Sg	**Sg**	**11 46 40.9**	**+0.5**
NIZ			Smax		11 46 48.8	
	comp=N,5μm,0.4s					
NIZ	**Nizh Angarsk**	**0.61 297**	⇑*i*PG	**Pg**	**11 46 32.4**	**-0.2**
NIZ			*e*		11 46 40.8	
NIZ			pmax	pmax		
	comp=Z,2μm,0.3s					
NIZ			smax	smax		
	comp=N,5μm,0.4s					
YLYR	**Ulyunkhan**	**0.73 148**	⇑*i*Pg	**Pg**	**11 46 35.0**	**0.0**
YLYR			Pmax		11 46 36.6	
	comp=N,1μm,0.7s					
YLYR			*e*Sg	**Sg**	**11 46 44.9**	**+0.4**
YLYR			Smax		11 46 45.3	
	comp=N,6μm,0.4s					
YLYR			*e*		11 46 54.4	
YLYR	**Ulyunkhan**	**0.73 148**	⇑*i*PG	**Pg**	**11 46 35.0**	**0.0**
YLYR			*e*		11 46 44.9	
YLYR			pmax	pmax		
	comp=Z,2μm,0.2s					
YLYR			smax	smax		
	comp=N,6μm,0.4s					
YOA	**Uoyan**	**0.94 47**	*e*Pg	**Pg**	**11 46 38.9**	**-0.1**
YOA			Pmax		11 46 41.7	
	comp=N,2μm,0.5s					
YOA			*e*Sg	**Sb**	**11 46 52.5**	**-0.3**
YOA			*e*Sb	**Sn**	**11 46 55.6**	**+0.6**
YOA			max		11 47 04.5	
	comp=N,5μm,1.1s					
YOA	**Uoyan**	**0.94 47**	*e*PG	**Pg**	**11 46 38.8**	**-0.2**
YOA			*e*		11 46 52.0	
YOA			pmax	pmax		
	comp=Z,2μm,0.4s					
YOA			smax	smax		
	comp=N,2μm,0.7s					
SYVR	**Suvo**	**1.87 189**	⇓*i*Pg	**Pn**	**11 46 54.3**	**+0.5**
SYVR			Pmax		11 46 59.0	
	comp=N,901nm,0.5s					
SYVR			*e*Sg	**Sb**	**11 47 19.9**	**+0.4**
SYVR			Smax		11 47 23.1	
	comp=N,6μm,1.2s					
SYVR	**Suvo**	**1.87 189**	*e*PN	**Pn**	**11 46 54.3**	**+0.5**
SYVR			*e*		11 47 20.4	
SYVR			pmax	pmax		
	comp=Z,916nm,0.5s					
SYVR			smax	smax		
	comp=E,6μm,0.7s					
MXMB	**Maximikha**	**2.46 205**	⇓*i*Pn	**Pn**	**11 47 02.6**	**+0.6**
MXMB			*e*Pg	**Pb**	**11 47 05.3**	**-0.6**
MXMB			*e*Sg	**Sg**	**11 47 39.0**	**-1.1**
OGRR	**Ongureny**	**2.51 223**	⇓*i*Pn	**Pn**	**11 47 03.1**	**+0.4**
OGRR			*e*Pg	**Pb**	**11 47 05.7**	**-1.0**
OGRR			Pmax		11 47 08.8	
	comp=E,338nm,0.3s					
OGRR			*e*		11 47 36.0	
OGRR			*e*Sg	**Sb**	**11 47 38.8**	**+0.8**
OGRR			*e*		11 47 43.2	
OGRR			max		11 47 43.5	
	comp=E,3μm,0.3s					
OGRR	**Ongureny**	**2.51 223**	*e*PN	**Pn**	**11 47 03.1**	**+0.4**
OGRR			*e*		11 47 06.8	
OGRR			*e*		11 47 38.9	
OGRR			pmax	pmax		
	comp=Z,354nm,0.4s					
OGRR			smax	smax		
	comp=E,3μm,0.4s					
NLYR	**Nelyaty**	**3.09 69**	⇑*i*Pn	**Pn**	**11 47 11.5**	**+0.9**
NLYR			*e*Pg	**Pb**	**11 47 16.8**	**+0.3**
NLYR			Pmax		11 47 26.3	
	comp=E,206nm,0.5s					
NLYR			*e*Sn	**Sn**	**11 47 46.9**	**-1.1**
NLYR			*e*Sg	**Sg**	**11 47 58.6**	**-1.5**
NLYR			Smax		11 48 04.4	
	comp=E,2μm,1.0s					
NLYR	**Nelyaty**	**3.09 69**	*e*PN	**Pn**	**11 47 11.8**	**+1.2**
NLYR			*e*		11 47 18.6	
NLYR			*e*S	**Sn**	**11 47 49.5**	**+1.5**
NLYR			*e*		11 47 58.3	
NLYR			pmax	pmax		
	comp=Z,210nm,0.6s					
NLYR			smax	smax		
	comp=N,2μm,1.1s					
KELR	**Kotokel**	**3.09 208**	*e*Pg	**Pb**	**11 47 15.9**	**-0.7**
KELR			*e*		11 47 40.1	
KELR			*e*Sg	**Sb**	**11 47 57.5**	**+2.8**
ZRHB	**Zarechye**	**3.55 215**	*e*Pn	**Pn**	**11 47 17.1**	**+0.2**
ZRHB			*e*Pg	**Pb**	**11 47 24.1**	**-0.3**
ZRHB			Pmax		11 47 33.2	
	comp=N,671nm,0.7s					
ZRHB			*e*Sg	**Sb**	**11 48 11.2**	**+3.4**
ZRHB			Smax		11 48 32.2	
	comp=N,3μm,0.9s					
TRG	**Tyrgan**	**3.67 223**	⇑*i*Pn	**Pn**	**11 47 18.9**	**+0.3**
	comp=N,37nm,0.8s					
TRG			⇑*i*Pn	**Pn**	**11 47 18.9**	**+0.3**
	comp=N,23nm,0.8s					
TRG			⇓*i*Pn	**Pn**	**11 47 18.9**	**+0.3**
	comp=N,40nm,0.8s					
TRG			*e*Pg	**Pb**	**11 47 25.5**	**-1.0**
TRG			Pmax		11 47 32.3	
	comp=N,216nm,0.8s					
TRG			*e*		11 48 04.0	
TRG			*e*Sg	**Sb**	**11 48 13.5**	**+2.1**
TRG			Smax		11 48 21.4	
	comp=N,1μm,0.4s					
TRG	**Tyrgan**	**3.67 223**	*e*PN	**Pn**	**11 47 18.9**	**+0.3**
TRG			*e*		11 47 27.3	
TRG			*e*S	**Sn**	**11 48 01.0**	**-1.4**
TRG			*e*		11 48 13.5	
TRG			pmax	pmax		
	comp=Z,217nm,0.7s					
TRG			smax	smax		
	comp=E,1μm,0.3s					
CIT	**Chita**	**3.93 151**	*e*Pn	**Pn**	**11 47 21.5**	**-0.7**
CIT			*e*Pg	**Pb**	**11 47 31.3**	**+0.4**
CIT			Pmax		11 47 35.6	
	comp=E,163nm,0.3s					
CIT			*i* Sg	**Sb**	**11 48 23.1**	**+4.3**
CIT			Smax		11 48 27.7	
	comp=E,1μm,0.4s					
CIT	**Chita**	**3.93 151**	*e*PN	**Pn**	**11 47 22.9**	**+0.7**
CIT			*e*		11 47 32.6	
CIT			*e*		11 48 20.4	
CIT			pmax	pmax		
	comp=Z,206nm,1.1s					
CIT			smax	smax		
	comp=E,2μm,0.8s					
UUDB	**Ulan-Yde**	**4.01 206**	*e*Pn	**Pn**	**11 47 23.8**	**+0.5**
UUDB			*e*Pg	**Pb**	**11 47 32.5**	**+0.3**
UUDB			Pmax		11 47 35.4	
	comp=E,356nm,0.9s					
UUDB			*e*Sg	**Sb**	**11 48 25.7**	**+4.6**
UUDB			Smax		11 48 33.4	
	comp=E,786nm,0.7s					
FFNB	**Fofonovo**	**4.11 214**	⇑*i*Pn	**Pn**	**11 47 24.8**	**+0.2**
FFNB			*e*		11 47 28.1	
FFNB			Pg	**Pb**	**11 47 33.5**	**-0.4**
FFNB			Pmax		11 47 39.4	
	comp=E,119nm,0.7s					
FFNB			*e*Sg	**Sb**	**11 48 27.4**	**+3.5**
FFNB			*e*		11 48 31.7	
FFNB			max		11 48 35.3	
	comp=E,659nm,1.0s					
KAB	**Kabansk**	**4.14 215**	*e*Pn	**Pn**	**11 47 25.5**	**+0.5**
KAB			*e*Pg	**Pb**	**11 47 35.6**	**+1.2**
KAB			Pmax		11 47 51.7	
	comp=E,303nm,0.7s					
KAB			*e*Sg	**Sb**	**11 48 29.5**	**+4.7**
KAB			Smax		11 48 38.4	
	comp=E,3μm,1.0s					
HRMR	**Khuramsha**	**4.42 210**	*e*Pg	**Pb**	**11 47 40.0**	**+0.9**
HRMR			*e*Sg	**Sb**	**11 48 37.5**	**+4.7**
CRS	**Chara**	**4.56 69**	*e*Pn	**Pn**	**11 47 32.1**	**+1.2**
CRS			*e*Pg	**Pb**	**11 47 43.3**	**+1.7**
CRS			*e*		11 47 45.1	
CRS			max		11 47 46.7	
	comp=E,28nm,1.0s					
CRS			*e*Sg	**Sg**	**11 48 43.5**	**-3.9**
CRS			Smax		11 48 49.6	
	comp=E,1μm,0.9s					
CRS	**Chara**	**4.56 69**	*e*PN	**Pg**	**11 47 45.1**	**-3.2**
CRS			*e*		11 48 42.0	
CRS			pmax	pmax		
	comp=Z,282nm,0.8s					
CRS			smax	smax		
	comp=E,1μm,0.9s					
BGT	**Bolshoye Golou**	**4.59 223**	*e*	**Pn**	**11 47 31.3**	**+0.1**
BGT			*e*Pg	**Pb**	**11 47 42.3**	**+0.2**
BGT			Pmax		11 47 47.1	
	comp=E,89nm,0.7s					
BGT			*e*		11 48 24.7	
BGT			*e*Sg	**Sb**	**11 48 40.9**	**+3.1**
BGT			Smax		11 48 50.7	
	comp=E,940nm,1.2s					
IRK	**Irkutsk**	**4.92 231**	*e*Pg	**Pb**	**11 47 48.7**	**+1.0**
IRK			Pmax		11 47 56.6	
	comp=E,167nm,0.2s					
IRK			*e*Sn	**Sn**	**11 48 31.1**	**-2.0**
IRK			*e*Sg	**Sb**	**11 48 52.3**	**+5.1**
IRK			Smax		11 48 58.1	
	comp=E,3μm,0.6s					
IRK	**Irkutsk**	**4.92 231**	*e*PN	**Pn**	**11 47 35.9**	**+0.2**
IRK			*e*		11 47 50.3	
IRK			*e*S	**Sn**	**11 48 30.8**	**-2.3**
IRK			*e*		11 48 52.0	
IRK			pmax	pmax		
	comp=Z,174nm,0.2s					
IRK			smax	smax		
	comp=N,3μm,0.4s					
LSTR	**Listvyanka**	**4.96 225**	⇓*i*Pn	**Pn**	**11 47 35.6**	**-0.6**
LSTR			*e*Pg	**Pb**	**11 47 48.3**	**0.0**
LSTR			Pmax		11 47 54.8	
	comp=N,43nm,0.6s					
LSTR			*e*Sn	**Sn**	**11 48 32.5**	**-1.5**
LSTR			*e*Sg	**Sb**	**11 48 52.1**	**+3.8**
LSTR			Smax		11 49 01.4	
	comp=N,763nm,1.5s					
IVK	**Ivanovka**	**5.18 227**	*e*Pn	**Pn**	**11 47 39.1**	**-0.2**
IVK			*e*		11 47 43.0	
IVK			*e*Pg	**Pb**	**11 47 52.3**	**+0.2**
IVK			Pmax		11 48 03.6	
	comp=N,49nm,0.5s					
IVK			*e*Sn	**Sn**	**11 48 36.5**	**-3.0**
IVK			*e*Sg	**Sb**	**11 48 59.8**	**+5.2**
IVK			Smax		11 49 09.3	
	comp=N,864nm,1.7s					
KHNR	**Khani**	**5.48 71**	*e*Pn	**Pn**	**11 47 44.0**	**+0.5**
KHNR			*e*		11 47 48.3	
KHNR			*e*		11 48 00.7	
KHNR			*e*Sg	**Sg**	**11 49 10.5**	**-6.4**
TUP	**Tupik**	**5.56 97**	⇑*i*Pn	**Pn**	**11 47 44.7**	**+0.2**
TUP			*e*		11 47 48.8	
TUP			*e*		11 47 59.8	
TUP			max		11 48 04.9	
	comp=N,88nm,0.8s					
TUP			*e*Sn	**Sn**	**11 48 45.2**	**-3.6**
TUP			*e*Sg	**Sg**	**11 49 15.1**	**-4.2**
TUP			Smax		11 49 18.0	
	comp=N,683nm,1.1s					
TUP	**Tupik**	**5.56 97**	*e*PN	**Pn**	**11 47 44.8**	**+0.2**
TUP			*e*		11 48 01.4	
TUP			*e*S	**Sn**	**11 48 46.3**	**-2.5**
TUP			*e*		11 49 13.9	
TUP			pmax	pmax		
	comp=Z,89nm,0.8s					
TUP			smax	smax		
	comp=N,693nm,1.4s					
TLY	**Talaya**	**5.59 230**	Pn	**Pn**	**11 47 44.2**	**-0.7**
	comp=N,0.1nm,0.3s,baz=38,slow=11,SNR=27					
TLY			Pg	**Pb**	**11 48 01.1**	**+2.0**
	comp=N,0.2nm,0.3s,baz=28,slow=9.8,SNR=25					
TLY			Sn	**Sn**	**11 48 49.4**	**-0.3**
	comp=N,0.1nm,0.3s,baz=20,slow=13,SNR=3.6					
TLY			Lg	Lg	11 49 12.1	
	comp=N,0.7nm,0.3s,baz=70,slow=24,SNR=20					
TLY			LR	LR	11 50 15.1	
	comp=N,42nm,18.4s,baz=42,slow=41					
TLY	**Talaya**	**5.59 230**	*e*Pn	**Pn**	**11 47 43.9**	**-1.1**
TLY			*e*Pg	**Pb**	**11 47 59.4**	**+0.2**
TLY			Pmax		11 48 03.8	
	comp=N,83nm,0.6s					
TLY			*e*Sn	**Sn**	**11 48 47.4**	**-2.3**
TLY			*e*Sg	**Sb**	**11 49 12.1**	**+5.5**
TLY			Smax		11 49 16.4	
	comp=N,626nm,0.8s					
TLY	**Talaya**	**5.59 230**	*c i*PN	**Pn**	**11 47 44.3**	**-0.7**
TLY			*e*		11 48 01.3	
TLY			*e*S	**Sn**	**11 48 46.4**	**-3.3**
TLY			*e*		11 49 12.3	
TLY			pmax	pmax		
	comp=Z,50nm,0.4s					
TLY			smax	smax		
	comp=E,233nm,0.4s					
KPC	**Khapcheranga**	**5.92 168**	⇑*i*Pn	**Pn**	**11 47 49.0**	**-0.5**
KPC			*e*		11 47 57.4	
KPC			*e*Pg	**Pb**	**11 48 07.2**	**+2.4**
KPC			Pmax		11 48 15.5	
	comp=E,33nm,0.5s					
KPC			*e*Sn	**Sn**	**11 48 53.9**	**-4.0**
KPC			*e*		11 49 10.6	
KPC			*e*Sg	**Sb**	**11 49 24.3**	**+8.3**
KPC			Smax		11 49 34.7	
	comp=E,674nm,1.1s					
KPC	**Khapcheranga**	**5.92 168**	*e*PN	**Pn**	**11 47 49.0**	**-0.5**
KPC			*e*		11 48 08.3	
KPC			*e*S	**Sn**	**11 48 54.3**	**-3.6**
KPC			*e*		11 49 24.5	
KPC			pmax	pmax		
	comp=Z,34nm,0.5s					
KPC			smax	smax		
	comp=E,672nm,1.3s					
ARS	**Arshan**	**5.99 237**	*e*Pn	**Pn**	**11 47 49.7**	**-0.7**
ARS			*e*		11 47 56.1	
ARS			*e*		11 48 09.0	
ARS			max		11 48 12.2	
	comp=E,159nm,0.6s					
ARS			*e*		11 48 58.4	
ARS			*e*Sg	**Sb**	**11 49 24.9**	**+7.0**
ARS			Smax		11 49 30.8	
	comp=E,3μm,0.8s					
ARS	**Arshan**	**5.99 237**	*e*PN	**Pn**	**11 47 49.9**	**-0.5**
ARS			*e*		11 48 10.6	
ARS			*e*S	**Sn**	**11 48 57.1**	**-2.3**
ARS			*e*		11 49 25.7	
ARS			pmax	pmax		
	comp=Z,138nm,0.4s					
ARS			smax	smax		
	comp=E,2μm,0.4s					
YKLR	**Yuktali**	**6.35 76**	*e*Sg	**Sg**	**11 49 38.9**	**-5.8**
YKLR			*e*		11 49 46.7	
ZAK	**Zakamensk**	**6.73 223**	*e*Pn	**Pn**	**11 48 00.1**	**-0.6**
ZAK			*e*Pg	**Pb**	**11 48 20.9**	**+2.4**
ZAK			Pmax		11 48 33.9	
	comp=E,20nm,0.5s					
ZAK			*e*		11 49 35.0	
ZAK			*e*Sg	**Sg**	**11 49 48.5**	**-8.4**
ZAK			Smax		11 49 54.3	
	comp=E,466nm,1.0s					
ZAK	**Zakamensk**	**6.73 223**	*e*PN	**Pn**	**11 48 00.1**	**-0.6**
ZAK			*e*		11 48 21.4	
ZAK			*e*		11 49 47.6	
ZAK			pmax	pmax		
	comp=Z,20nm,0.4s					
ZAK			smax	smax		
	comp=E,465nm,1.1s					
MOY	**Mondy**	**6.84 240**	⇓*i*Pn	**Pn**	**11 48 02.8**	**+0.7**
MOY			⇑*i*		11 48 03.4	
MOY			max		11 48 14.0	
	comp=E,106nm,0.7s					
MOY			*e*Sn	**Sn**	**11 49 17.1**	**-3.3**
MOY			*e*Sg	**Sb**	**11 49 51.3**	**+8.9**
MOY			Smax		11 50 06.8	
	comp=E,637nm,1.4s					
MOY	**Mondy**	**6.84 240**	*e*PN	**Pn**	**11 48 02.6**	**+0.5**
MOY			*e*		11 48 24.1	
MOY			*e*S	**Sn**	**11 49 17.7**	**-2.7**
MOY			*e*		11 49 51.2	
MOY			pmax	pmax		
	comp=Z,76nm,0.9s					
MOY			smax	smax		
	comp=E,637nm,1.4s					
ORL	**Orlik**	**6.96 249**	⇓*i*Pn	**Pn**	**11 48 04.5**	**+0.6**
ORL			*e*		11 48 08.6	
ORL			max		11 48 08.8	
	comp=E,128nm,1.0s					
ORL			*e*Sn	**Sn**	**11 49 19.4**	**-4.1**
ORL			*e*Sg	**Sg**	**11 49 55.5**	**-8.7**
ORL			Smax		11 49 59.7	
	comp=E,663nm,0.8s					
ORL	**Orlik**	**6.96 249**	*e*PN	**Pn**	**11 48 04.4**	**+0.6**
ORL			*e*		11 48 26.6	
ORL			*e*S	**Sn**	**11 49 21.3**	**-2.2**
ORL			*e*		11 49 55.9	
ORL			pmax	pmax		
	comp=Z,58nm,0.8s					
ORL			smax	smax		
	comp=N,675nm,1.8s					
ULN	**Ulaanbaatar**	**7.94 197**	*e*	Pn	11 48 27.3	+10
ULN			*e*Pg	Pb	11 48 45.3	+6.1
ULN			*e*		11 50 07.1	
ULN			*e*Sg	**Sg**	**11 50 28.1**	**-7.6**
ULN	**Ulaanbaatar**	**7.94 197**	*c i*PN	**Pn**	**11 48 18.3**	**+1.0**
SONM	**Songino Array**	**8.09 200**	Pn	**Pn**	**11 48 20.4**	**+1.0**
	comp=N,2.4nm,0.3s,baz=11,slow=13,SNR=31					
SONM			Pg	Pb	11 48 48.5	+6.8
	comp=N,4.3nm,0.3s,baz=6.7,slow=16,SNR=8.9					
SONM			Lg	Lg	11 50 34.8	
	comp=N,7.2nm,0.3s,baz=13,slow=30,SNR=17					
SONM			LR	LR	11 51 40.2	
	comp=N,179nm,19.9s,baz=34,slow=39					
CLNS	**Chul'man**	**8.15 75**	*e*PG	Pg	11 48 50.7	-6.2
CLNS			pmax	pmax		
	comp=E,8.0nm,1.0s					
CLNS			pmax	pmax		
	comp=Z,8.0nm,0.9s					
CLNS			pmax	pmax		
	comp=N,9.0nm,0.8s					
CLNS			MLR	MLR		
	comp=Z,239nm,11.0s					
HIA	**Hailar**	**8.42 134**	*e*	**Pb**	**11 48 51.8**	**+4.5**
HIA			*e*		11 50 12.3	
HIA			*e*Sg	Sg	11 50 41.0	-10
HIA			*e*		11 50 49.0	
TDJR	**Todzha**	**9.04 256**	*e*Pn	**Pn**	**11 48 32.2**	**-0.1**
TDJR			*e*		11 48 39.9	
TDJR			*e*		11 48 58.8	
TDJR			*e*		11 50 25.5	
TDJR			*e*Sg	Sn	11 50 58.5	+44
ZEA	**Zeya**	**9.88 93**	*e*P	**Pn**	**11 48 44.1**	**+0.4**
ZEA			*e*		11 50 46.8	
ZEA			pmax	pmax		
	comp=Z,17nm,1.0s					
ZEA			smax	smax		
	comp=N,33nm,0.9s					
ZEA			MLR	MLR		
	comp=Z,500nm,7.0s					
ZEA			MLR	MLR		
	comp=E,500nm,6.0s					
HVS	**Khovu-Aksy**	**10.95 253**	*e*P	**Pn**	**11 48 56.3**	**-2.1**
YAK	**Yakutsk**	**11.88 49**	*e*P	**Pn**	**11 49 13.2**	**+2.2**
YAK			*e*S	**Sn**	**11 51 26.1**	**+2.1**
YAK			pmax	pmax		
	comp=Z,4.0nm,0.9s					
YAK			smax	smax		
	comp=E,9.0nm,0.9s					
YAK			smax	smax		
	comp=N,6.0nm,1.0s					
YAK			MLR	MLR		
	comp=Z,189nm,8.0s					
YAK			MLR	MLR		
	comp=E,128nm,7.0s					
YAK			MLR	MLR		
	comp=N,89nm,7.0s					
KLR	**Kul'dur**	**14.39 107**	Pn	**Pn**	**11 49 46.4**	**+1.0**
	comp=N,0.1nm,0.3s,baz=307,slow=13,SNR=16					
KLR			Lg	Lg	11 53 55.8	
	comp=N,0.0nm,0.3s,baz=219,slow=16,SNR=8.2					
KLR			LR	LR	11 55 21.4	
	comp=N,5.0nm,19.4s,baz=296,slow=38					
ZALV	**Zalesovo Beam**	**14.89 275**	Pn	**Pn**	**11 49 52.4**	**+0.2**
	comp=N,0.6nm,0.3s,baz=78,slow=11,SNR=27					
ZALV			Lg	Lg	11 54 05.0	
	baz=84,slow=27,SNR=3.5					
ZALV			LR	LR	11 55 34.2	
	comp=N,61nm,20.7s,baz=76,slow=37					
NVS	**Novosibirsk**	**15.55 279**	*e*P	**Pn**	**11 50 00.0**	**-0.9**
NVS			*e*		11 52 51.9	
NRIK	**Noril'sk**	**17.30 332**	Lg	Lg	11 55 26.0	
	comp=N,0.6nm,0.3s,baz=32,slow=17,SNR=2.9					
NRIK			LR	LR	11 57 36.2	
	comp=N,68nm,20.6s,baz=118,slow=39					
NRIK	**Noril'sk**	**17.30 332**	*e*P	**P**	**11 50 29.8**	**+5.2**
NRIK			pmax	pmax		
	comp=Z,1.0nm,0.3s					
USRK	**Ussuriysk Ar.**	**17.80 120**	Lg	Lg	11 55 48.0	
	comp=Z,0.1nm,0.3s,baz=315,slow=24,SNR=4.6					
USRK			LR	LR	11 57 59.2	
	comp=Z,41nm,21.2s,baz=180,slow=39					
TIXI	**Tiksi**	**18.00 19**	P	**Pn**	**11 50 29.6**	**-2.2**
	comp=Z,1.5nm,0.3s,baz=209,slow=6.8,SNR=12					
TIXI			Lg	Lg	11 55 43.8	
	comp=Z,0.3nm,0.3s,baz=306,slow=20,SNR=6.3					
MKAR	**Makanchi Array**	**19.61 255**	P	**P**	**11 50 50.5**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=43,slow=9.1,SNR=22					
MKAR			Lg	Lg	11 56 36.8	
	comp=Z,0.0nm,0.3s,baz=51,slow=32,SNR=3.3					
KURK	**Kurchatov**	**19.62 269**	*i* P	**P**	**11 50 49.5**	**-0.7**
KURK			pmax	pmax		
	comp=Z,4.0nm,0.9s					
KURBB	**Kurchatov Arra**	**19.71 269**	P	**P**	**11 50 50.8**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=61,slow=11,SNR=20					
KURBB			Lg	Lg	11 56 42.6	
	comp=Z,0.0nm,0.3s,baz=64,slow=32,SNR=6.1					
SEY	**Seymchan**	**22.33 54**	Lg	Lg	11 57 56.0	
	comp=Z,0.4nm,0.3s,baz=140,slow=23,SNR=2.7					
SEY	**Seymchan**	**22.33 54**	*e*P	**P**	**11 51 17.7**	**-1.7**
BVAR	**Borovoye Array**	**23.33 281**	P	**P**	**11 51 29.5**	**-0.5**
	comp=Z,1.6nm,0.5s,baz=78,slow=11,SNR=10					
BVAR			LR	LR	12 01 13.5	
	comp=Z,64nm,18.1s,baz=40,slow=38					
BRVK	**Borovoye**	**23.38 281**	⇑*i*P	**P**	**11 51 29.4**	**-1.0**
BRVK			pmax	pmax		
	comp=Z,3.0nm,0.9s					
AAK	**Ala-Archa**	**26.53 256**	LR	LR	12 01 22.7	
	comp=Z,27nm,20.0s,baz=7.0,slow=34					
AAK	**Ala-Archa**	**26.53 256**	⇓*i*P	**P**	**11 52 00.0**	**+0.2**
AAK			pmax	pmax		
	comp=Z,1.0nm,0.8s					
ARU	**Arti**	**28.52 294**	LR	LR	12 05 23.4	
	comp=Z,49nm,19.3s,baz=135,slow=40					
KBS	**Kingsbay**	**37.77 342**	⇑*e*P	**P**	**11 53 36.3**	**-1.3**
KBS			*e*AP	**sP**	**11 53 41.1**	**+2.2**
KBS			pmax	pmax		
	comp=Z,30nm,1.0s					
FINES	**FINESS Array B**	**41.60 314**	P	**P**	**11 54 08.8**	**-0.8**
	comp=Z,1.3nm,0.5s,baz=70,slow=7.4,SNR=9.5					
FINES	**FINESS Array B**	**41.60 314**	*e*P	**P**	**11 54 09.5**	**-0.1**
FINES			pmax	pmax		
	comp=Z,1.0nm,0.5s					
ILAR	**Eielson Array**	**46.39 35**	P	**P**	**11 54 47.0**	**-1.0**
	comp=Z,1.6nm,0.9s,baz=311,slow=5.8,SNR=6.8					
ILAR	**Eielson Array**	**46.39 35**	*e*P	**P**	**11 54 51.2**	**+3.2**
ILAR			pmax	pmax		
	comp=Z,2.0nm,0.9s					
AKASG	**Malin Array Be**	**46.40 300**	P	**P**	**11 54 47.2**	**-1.1**
	comp=Z,0.6nm,0.4s,baz=45,slow=9.0,SNR=5.3					
AKASG	**Malin Array Be**	**46.40 300**	*i* P	**P**	**11 54 46.9**	**-1.4**
AKASG			pmax	pmax		
	comp=Z,1.0nm,0.4s					
HFS	**Hagfors**	**47.29 317**	LR	LR	12 19 15.9	
	comp=Z,13nm,20.4s,baz=359,slow=42					
MLR	**Muntele Rosu**	**51.50 297**	LR	LR	12 19 22.2	
	comp=Z,9.1nm,19.0s,baz=32,slow=38					
YKA	**Yellowknife Ar**	**57.19 23**	P	**P**	**11 56 07.9**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=332,slow=7.2,SNR=3.1					
YKA	**Yellowknife Ar**	**57.19 23**	*e*P	**P**	**11 56 12.9**	**+4.3**
WRA	**Warramunga Arr**	**77.83 157**	P	**P**	**11 58 18.4**	**-1.0**
	comp=Z,0.4nm,0.7s,baz=349,slow=6.1,SNR=4.9					
ASAR	**Alice Springs**	**81.34 158**	P	**P**	**11 58 37.3**	**-1.2**
	comp=Z,0.4nm,0.8s,baz=352,slow=4.8,SNR=4.0					
ASAR	**Alice Springs**	**81.34 158**	*e*P	P	11 58 44.1	+5.6

HEL 15 11:57:46.8±0.6, 68°.14N×33°.36E, h0km, ML1.8,
Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRF	**Varrio**	**1.47**	**256**	PG	Pn	11 58 12.8	-1.7
	baz=74						
VRF				MSG		11 58 30.9	
	comp=Z,11nm,0.2s						
VRF				SN	Sg	11 58 33.6	-0.3
KU6	**Riekki**	**2.52**	**214**	PG	Pb	11 58 31.0	-1.8
	baz=29						
KU6				MSG		11 59 01.2	
	comp=Z,2.8nm,0.2s						
KU6				SG	Sb	11 59 04.5	+0.3
SGF	**Sodankyl**	**2.69**	**258**	PN	Pn	11 58 31.0	-0.2
	baz=73						
SGF				SB	Sb	11 59 07.2	-2.0
HEF	**Hetta**	**3.62**	**279**	PN	Pn	11 58 44.0	0.0
	baz=93						
TOF	**Tornio**	**4.09**	**244**	PG	Pb	11 59 00.8	+1.3
LANU	**Lannavaara**	**4.26**	**274**	SG	Sg	12 00 00.9	-2.7
ERTU	**Ertsjaerv**	**4.60**	**255**	PN	Pn	11 58 57.7	+0.2
	baz=72						

JMA 15 11:57:58.2±0.2, 38°22′N×144°48′E, h38km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.36**	**292**	P	Pn	11 58 36.2	+1.8
OFUJ				eS	Sn	11 59 04.3	+2.2
JIO	**Ouri**	**2.47**	**276**	P	Pn	11 58 37.6	+1.7
JIO				S	Sn	11 59 06.6	+1.8
MIYJ	**Miyakonagasawa**	**2.48**	**304**	P	Pn	11 58 37.6	+1.6
MIYJ				eS	Sn	11 59 06.8	+1.8
JMK	**Ichinoseki**	**2.66**	**287**	P	Pn	11 58 40.5	+2.1
JMK				S	Sn	11 59 11.8	+2.4
JOM	**Ohasama**	**2.79**	**298**	P	Pn	11 58 42.5	+2.3
JOM				eS	Sn	11 59 15.1	+2.5
JANG	**Nango**	**3.15**	**314**	P	Pn	11 58 47.3	+2.1
JANG				eS	Sn	11 59 22.8	+1.3
JYK	**Kaneyama**	**3.30**	**283**	P	Pn	11 58 50.1	+2.8
JYK				eS	Sn	11 59 28.4	+3.0
JFT	**Otama**	**3.35**	**259**	P	Pn	11 58 50.8	+2.8
JFT				S	Sn	11 59 29.1	+2.5
JOT	**Ohata**	**4.12**	**321**	P	Pn	11 59 01.4	+2.9
JCH	**Churui**	**4.47**	**349**	P	Pn	11 59 03.1	-0.3
JCH				S	Sn	11 59 52.9	-1.2
JKB	**Kayabe**	**4.52**	**325**	P	Pn	11 59 06.8	+2.8
BSO1	**Boso 1**	**4.54**	**219**	S	Sn	11 59 54.1	-1.0
JRY	**Ryogami san**	**4.97**	**245**	P	Pn	11 59 11.6	+1.3
JRY				S	Sn	12 00 06.3	-0.2
NEM2	**Nemuro 2**	**5.23**	**10**	P	Pn	11 59 11.0	-2.7
NEM2				S	Sn	12 00 06.1	-6.6
JTKR	**Abashiri--Toko**	**5.76**	**356**	P	Pn	11 59 20.6	-0.5
JTKR				eS	Sn	12 00 22.5	-3.3

*NEIC **15** 12:10:31.9±0.0, 16°.06N×98°.71W, h16km, MD4.0(MEX), After MEX.*

MEX 15 12:10:31.9±0.5, 16°.06N×98°.71W, h16km±16km, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**1.37**	**306**	*i* P	Pn	12 10 55.4	-1.0
ACX				eS	Sn	12 11 11.6	-2.6
ACX	**Acapulco**	**1.37**	**306**	*i* P	Pn	12 10 55.4	-1.0
ACX				eS	Sn	12 11 11.6	-2.6
TLIG	**Tlapa**	**1.50**	**5**	*e*P	Pn	12 10 55.0	-3.3
TLIG				*i* S	Sn	12 11 12.7	-5.0
TLIG	**Tlapa**	**1.50**	**5**	*e*P	Pn	12 10 55.0	-3.3
TLIG				*i* S	Sn	12 11 12.7	-5.0
CAIG	**El Cayaco**	**1.79**	**303**	*e*P	Pn	12 10 60.0	-2.2
CAIG				eS	Sn	12 11 19.7	-4.9
CAIG	**El Cayaco**	**1.79**	**303**	*e*P	Pn	12 10 60.0	-2.2
CAIG				eS	Sn	12 11 19.7	-4.9
VHO	**Vista Hermosa**	**2.14**	**62**	*e*P	Pn	12 11 03.9	-3.3
VHO				eS	Sn	12 11 28.4	-5.2
VHO	**Vista Hermosa**	**2.14**	**62**	*e*P	Pn	12 11 03.9	-3.3
VHO				eS	Sn	12 11 28.4	-5.2

*KRSC **15** 12:11:44.6±0.7, 55°.49N×162°.75E, h80km±15km, ML4.5*
*ISCJB **15** 12:11:46.5±0.3, 55°.48N±0°.02×162°.67E±0°.05, h73km±3km, mb3.9/16, Error ellipse: s-maj=5.0km s-min=3.1km az=20.9*
*MOS **15** 12:11:46.5±0.7, 55°.52N×162°.63E, h72km, mb4.2/13, Error ellipse: s-maj=7.8km s-min=4.8km az=74.2*
*IDC **15** 12:11:49.6±3.3, 55°.63N×162°.27E, h76km±35km, mb3.7/14, mb1 3.9/16, mb1mx3.6/74, mbtmp4.0/16, MS3.1/7, Ms1 3.2/7, ms1mx2.8/70, Error ellipse: s-maj=25.0km s-min=13.4km az=175.0*

ISC 15 12:11:48.0±0.7, 55°.50N±0°.03×162°.69E±0°.04, h64km±6km, n114, σ1§15/162, mb4.1/16, 2C-1D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.72**	**6**	*i* P	Pn	12 12 01.5	-1.1
KBTR	**Krutoberegovo**	**0.72**	**6**	PN	Pn	12 12 01.5	-1.1
KBG	**Krutoberegovo**	**0.76**	**1**	*i* P	Pn	12 12 01.8	-1.3
KBG				eS	Sn	12 12 13.9	-0.4
KBG	**Krutoberegovo**	**0.76**	**1**	PN	Pn	12 12 01.8	-1.3
KBG				S	Sn	12 12 13.9	-0.4
MKZ	**Mys Kozlova**	**1.09**	**211**	*e*P	Pn	12 12 06.0	-1.3
MKZ				eS	Sn	12 12 20.5	-1.2
MKZ	**Mys Kozlova**	**1.09**	**211**	PN	Pn	12 12 06.0	-1.3
MKZ				S	Sn	12 12 20.5	-1.2
ZLN	**Zelenaya**	**1.19**	**297**	*e*P	Pn	12 12 08.0	-0.7
ZLN				eS	Sn	12 12 24.2	+0.1
ZLN	**Zelenaya**	**1.19**	**297**	PN	Pn	12 12 08.0	-0.7
ZLN				S	Sn	12 12 24.2	+0.1
CIRR	**Tsirk**	**1.26**	**300**	*e*P	Pn	12 12 08.9	-0.8
CIRR	**Tsirk**	**1.26**	**300**	PN	Pn	12 12 08.9	-0.8
LGNR	**Loginova**	**1.27**	**298**	*e*P	Pn	12 12 09.5	-0.5
LGNR				eS	Sn	12 12 26.7	+0.3
LGNR	**Loginova**	**1.27**	**298**	PN	Pn	12 12 09.5	-0.5
LGNR				S	Sn	12 12 26.7	+0.3
SMKR	**Semkarok**	**1.28**	**328**	*e*P	Pn	12 12 09.1	-0.9
SMKR				eS	Sn	12 12 25.9	-0.5
SMKR	**Semkarok**	**1.28**	**328**	PN	Pn	12 12 09.1	-0.9
SMKR				S	Sn	12 12 25.9	-0.5
BZMR	**Bezymyannaya**	**1.32**	**290**	*e*P	Pn	12 12 09.9	-0.6
BZMR	**Bezymyannaya**	**1.32**	**290**	PN	Pn	12 12 09.9	-0.6
BZWR	**Bezymyannyi-We**	**1.33**	**292**	*e*P	Pn	12 12 10.0	-0.6
BZWR	**Bezymyannyi-We**	**1.33**	**292**	PN	Pn	12 12 10.0	-0.6
TUMD	**Tumrok D**	**1.34**	**258**	*e*P	Pn	12 12 10.0	-0.6
TUMD				eS	Sn	12 12 27.2	-0.4
BDR	**Baidarnaya**	**1.36**	**323**	*e*P	Pn	12 12 10.0	-0.9
BDR				eS	Sn	12 12 27.7	-0.4
BDR	**Baidarnaya**	**1.36**	**323**	PN	Pn	12 12 10.0	-0.9
BDR				S	Sn	12 12 27.7	-0.4
KRSR	**Krestovskiy**	**1.40**	**302**	*e*P	Pn	12 12 10.4	-1.1
KRSR				eS	Sn	12 12 28.4	-0.7
KRSR	**Krestovskiy**	**1.40**	**302**	PN	Pn	12 12 10.4	-1.1
KRSR				S	Sn	12 12 28.4	-0.7
KIRR	**Kirishev**	**1.40**	**290**	*i* P	Pn	12 12 11.5	-0.1
KIRR				*i* S	Sn	12 12 29.9	+0.6
KIRR	**Kirishev**	**1.40**	**290**	PN	Pn	12 12 11.5	-0.1
KIRR				S	Sn	12 12 29.9	+0.6
KLY	**Klyuchi**	**1.41**	**306**	*e*P	Pn	12 12 09.4	-2.1
KLY				eS	Sn	12 12 26.5	-2.7
KLY	**Klyuchi**	**1.41**	**306**	PN	Pn	12 12 09.4	-2.1
KLY				S	Sn	12 12 26.5	-2.7
KMNR	**Kamenistaya**	**1.42**	**282**	*e*P	Pn	12 12 11.5	-0.2
KMNR				eS	Sn	12 12 30.5	+1.0
KMNR	**Kamenistaya**	**1.42**	**282**	PN	Pn	12 12 11.5	-0.2
KMNR				S	Sn	12 12 30.5	+1.0
KZV	**Kizimen**	**1.42**	**255**	*e*P	Pn	12 12 11.1	-0.8
KZV				eS	Sn	12 12 29.4	-0.4
KZV	**Kizimen**	**1.42**	**255**	PN	Pn	12 12 11.1	-0.8
KZV				S	Sn	12 12 29.4	-0.4
SRKR	**Sorokina**	**1.44**	**324**	*e*P	Pn	12 12 11.3	-0.7
SRKR				eS	Sn	12 12 29.3	-0.7
SRKR	**Sorokina**	**1.44**	**324**	PN	Pn	12 12 11.3	-0.7
SRKR				S	Sn	12 12 29.3	-0.7
TUMR	**Tumrok**	**1.47**	**263**	*e*P	Pn	12 12 12.3	-0.1
TUMR	**Tumrok**	**1.47**	**263**	PN	Pn	12 12 10.0	-2.4
TUMR				S	Sn	12 12 27.2	-3.6
KPT	**Kopyto**	**1.47**	**290**	*e*P	Pn	12 12 12.4	-0.1
KPT				eS	Sn	12 12 31.7	+0.8
KPT	**Kopyto**	**1.47**	**290**	PN	Pn	12 12 12.4	-0.1
KPT				S	Sn	12 12 31.7	+0.8
KOZ	**Kozyrevsk**	**1.69**	**291**	*e*P	Pn	12 12 15.5	+0.2
KOZ				eS	Sn	12 12 38.0	+2.1
KOZ	**Kozyrevsk**	**1.69**	**291**	PN	Pn	12 12 15.5	+0.2
KOZ				S	Sn	12 12 38.0	+2.1
BKI	**Bering**	**1.90**	**98**	*e*P	Pn	12 12 17.9	-0.1
BKI				eS	Sn	12 12 40.0	-0.9
BKI	**Bering**	**1.90**	**98**	PN	Pn	12 12 17.9	-0.1
BKI				S	Sn	12 12 40.0	-0.9
ESO	**Esso**	**2.30**	**282**	*e*P	Pn	12 12 23.2	-0.3
ESO	**Esso**	**2.30**	**282**	PN	Pn	12 12 23.2	-0.3
KII	**Karymskiy**	**2.38**	**233**	*e*P	Pn	12 12 24.4	-0.3
KII				eS	Sn	12 12 53.7	+0.9
KII	**Karymskiy**	**2.38**	**233**	PN	Pn	12 12 24.4	-0.3
KII				S	Sn	12 12 53.7	+0.9
SPN	**Mys Shipunski**	**2.87**	**214**	*e*P	Pn	12 12 29.5	-1.8
SPN				eS	Sn	12 13 02.1	-2.5
SPN	**Mys Shipunski**	**2.87**	**214**	PN	Pn	12 12 29.5	-1.8
SPN				S	Sn	12 13 02.1	-2.5
NLC	**Nalytchevo**	**3.04**	**221**	*e*P	Pn	12 12 33.1	-0.5
NLC				eS	Sn	12 13 07.9	-0.9
NLC	**Nalytchevo**	**3.04**	**221**	PN	Pn	12 12 33.1	-0.5
NLC				S	Sn	12 13 07.9	-0.9
SDLR	**Sedlovina**	**3.15**	**227**	*e*P	Pn	12 12 35.2	0.0
SDLR				eS	Sn	12 13 11.0	-0.6
SDLR	**Sedlovina**	**3.15**	**227**	PN	Pn	12 12 35.2	0.0
SDLR				S	Sn	12 13 11.0	-0.6
KRER	**Koryakskii**	**3.18**	**228**	*e*P	Pn	12 12 36.1	+0.3
KRER	**Koryakskii**	**3.18**	**228**	PN	Pn	12 12 36.1	+0.3
KRX	**Arik**	**3.19**	**229**	*e*P	Pn	12 12 35.2	-0.6
KRX				eS	Sn	12 13 11.7	-0.9
KRX	**Arik**	**3.19**	**229**	PN	Pn	12 12 35.2	-0.6
KRX				S	Sn	12 13 11.7	-0.9
AVH	**Avacha**	**3.22**	**228**	*e*P	Pn	12 12 36.5	+0.4
AVH	**Avacha**	**3.22**	**228**	PN	Pn	12 12 36.5	+0.4
UGLR	**Uglovaya**	**3.22**	**226**	*e*P	Pn	12 12 36.5	+0.3
UGLR	**Uglovaya**	**3.22**	**226**	PN	Pn	12 12 36.5	+0.3
KOK	**Koryaka**	**3.24**	**229**	*e*P	Pn	12 12 36.3	-0.1
KOK	**Koryaka**	**3.24**	**229**	PN	Pn	12 12 36.3	-0.1
GNL	**Ganaly**	**3.30**	**239**	*e*P	Pn	12 12 37.6	+0.3
GNL	**Ganaly**	**3.30**	**239**	PN	Pn	12 12 37.6	+0.3
DALK	**Dalny**	**3.38**	**225**	*e*P	Pn	12 12 38.1	-0.2
DALK				eS	Sn	12 13 15.9	-1.2
DALK	**Dalny**	**3.38**	**225**	PN	Pn	12 12 38.1	-0.2
DALK				S	Sn	12 13 15.9	-1.2
PET	**Petropavlovsk**	**3.43**	**225**	*e*P	Pn	12 12 39.0	+0.1
PET				eS	Sn	12 13 17.9	-0.3
PET	**Petropavlovsk**	**3.43**	**225**	*e*PN	Pn	12 12 38.9	+0.1
PET				eS	Sn	12 13 17.7	-0.5
PET				pmax	pmax		
	comp=Z,101nm,0.3s						
PET				smax	smax		
	comp=N,379nm,0.5s						
PET				smax	smax		
	comp=E,349nm,0.6s						
OSSR	**Ossora**	**3.77**	**3**	*e*P	Pn	12 12 43.0	-0.5
OSSR				eS	Sn	12 13 23.1	-3.4
OSSR	**Ossora**	**3.77**	**3**	PN	Pn	12 12 43.0	-0.5
OSSR				S	Sn	12 13 23.1	-3.4
PETK	**Petropavlovsk-**	**3.78**	**233**	P	Pn	12 12 44.0	+0.3
	comp=E,4.2nm,0.3s,baz=71,slow=16,SNR=56						
KRMR	**Karymshinskiy**	**3.79**	**227**	*e*P	Pn	12 12 43.8	0.0
KRMR				eS	Sn	12 13 26.8	-0.2
KRMR	**Karymshinskiy**	**3.79**	**227**	PN	Pn	12 12 43.8	0.0
KRMR				S	Sn	12 13 26.8	-0.2
PALN	**Palana**	**3.89**	**339**	*e*P	Pn	12 12 44.8	-0.4
PALN	**Palana**	**3.89**	**339**	PN	Pn	12 12 44.8	-0.4
RUS	**Russkaya**	**3.94**	**220**	*e*P	Pn	12 12 45.2	-0.7
RUS				eS	Sn	12 13 29.9	-0.8
RUS	**Russkaya**	**3.94**	**220**	PN	Pn	12 12 45.2	-0.7
RUS				S	Sn	12 13 29.9	-0.8
MTVR	**Mutnovka**	**4.02**	**223**	*e*P	Pn	12 12 47.0	-0.2
MTVR				eS	Sn	12 13 33.4	+0.3
MTVR	**Mutnovka**	**4.02**	**223**	PN	Pn	12 12 47.0	-0.2
MTVR				S	Sn	12 13 33.4	+0.3
APC	**Apacha**	**4.14**	**234**	*e*P	Pn	12 12 49.8	+1.1
APC				eS	Sn	12 13 35.3	-0.5
APC	**Apacha**	**4.14**	**234**	PN	Pn	12 12 49.8	+1.1
APC				S	Sn	12 13 35.3	-0.5
ASAK	**Asacha**	**4.21**	**224**	*e*P	Pn	12 12 50.6	+0.9
ASAK	**Asacha**	**4.21**	**224**	PN	Pn	12 12 50.6	+0.9
KDTR	**Khodutka, Kamc**	**4.60**	**218**	*e*P	Pn	12 12 54.1	-0.8
SKR	**Severo-Kuril's**	**6.24**	**222**	*e*P	Pn	12 13 17.1	-0.2
SKR				eS	Sn	12 14 25.6	-1.5
SKR	**Severo-Kuril's**	**6.24**	**222**	*e*PN	Pn	12 13 17.3	0.0
SKR				eS	Sn	12 14 28.2	+1.1
SKR				smax	smax		
	comp=N,45nm,0.5s						
SKR				smax	smax		
	comp=E,39nm,0.6s						
ASAJ	**Asahikawa**	**17.19**	**237**	P	**P**	**12 15 43.4**	**-0.9**
	comp=E,0.5nm,0.3s,baz=73,slow=5.7,SNR=14						
ERM	**Erimo**	**18.56**	**232**	⇑*i*P	**P**	**12 15 58.8**	**-0.6**
ERM				pmax	pmax		
	comp=Z,17nm,1.3s						
TIXI	**Tiksi**	**21.61**	**331**	P	**P**	**12 16 31.8**	**-0.3**
	comp=Z,7.7nm,0.9s,baz=127,slow=13,SNR=11						
TIXI				LR	LR	12 26 50.4	
	comp=Z,41nm,19.7s,baz=172,slow=42						
MJA0	**Matsu Arr-Jizo**	**25.22**	**231**	*e*P	**P**	**12 17 08.2**	**+0.5**
MJA0				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MJAR	**Matsushiro Arr**	**25.24**	**232**	P	**P**	**12 17 06.8**	**-1.0**
	comp=Z,1.9nm,0.9s,baz=19,slow=7.4,SNR=6.0						
MJAR				LR	LR	12 27 18.0	
	comp=Z,40nm,20.8s,baz=50,slow=37						
ILAR	**Eielson Array**	**26.06**	**49**	P	**P**	**12 17 15.2**	**+0.2**
	comp=Z,1.4nm,0.8s,baz=268,slow=7.7,SNR=20						
ILAR	**Eielson Array**	**26.06**	**49**	*e*P	**P**	**12 17 15.2**	**+0.2**
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SONM	**Songino Array**	**34.87**	**281**	P	**P**	**12 18 33.0**	**0.0**
	comp=Z,0.4nm,0.5s,baz=61,slow=10,SNR=3.1						
H11N2	**WAKE ISLAND Hy**	**35.85**	**173**	T	T	12 56 10.8	
	baz=355,slow=76,SNR=20						
H11N3	**WAKE ISLAND Hy**	**35.86**	**173**	T	T	12 56 12.1	
	baz=355,slow=76,SNR=20						
H11N1	**WAKE ISLAND Hy**	**35.87**	**173**	T	T	12 56 12.7	
	baz=355,slow=76,SNR=22						
YKA	**Yellowknife Ar**	**40.37**	**45**	P	**P**	**12 19 19.7**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=298,slow=8.0,SNR=7.2						
YKA				pP	**pP**	**12 19 36.4**	**+1.5**
	comp=Z,0.6nm,0.6s,baz=298,slow=8.1,SNR=7.1						
SPITS	**Spitsbergen Ar**	**45.01**	**351**	LR	LR	12 38 14.7	
	comp=Z,31nm,19.8s,baz=155,slow=35						
KURK	**Kurchatov**	**47.77**	**301**	*c i*P	**P**	**12 20 15.8**	**-2.5**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KURBB	**Kurchatov Arra**	**47.87**	**301**	P	**P**	**12 20 16.6**	**-2.5**
	comp=Z,0.8nm,0.3s,baz=54,slow=7.8,SNR=7.8						
MKAR	**Makanchi Array**	**48.49**	**295**	P	**P**	**12 20 21.1**	**-2.9**
	comp=Z,0.9nm,0.6s,baz=60,slow=7.2,SNR=6.0						
BVAR	**Borovoye Array**	**50.09**	**308**	P	**P**	**12 20 33.6**	**-2.5**
	comp=Z,2.2nm,0.7s,baz=69,slow=7.9,SNR=10						
BRVK	**Borovoye**	**50.12**	**308**	*d i*P	**P**	**12 20 34.1**	**-2.1**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	**ARCESS Array B**	**51.47**	**342**	LR	LR	12 44 31.5	
	comp=Z,30nm,21.7s,baz=74,slow=38						
NVAR	**Mina Array Bea**	**53.54**	**73**	P	**P**	**12 21 04.7**	**+2.5**
	comp=Z,1.1nm,0.6s,baz=298,slow=7.4,SNR=7.5						
PDAR	**Pinedale Array**	**55.06**	**64**	P	**P**	**12 21 14.8**	**+1.6**
	comp=Z,0.4nm,0.6s,baz=342,slow=2.5,SNR=5.5						
PDAR				pP	**pP**	**12 21 32.3**	**+2.5**
	comp=Z,0.4nm,0.8s,baz=0.0,slow=2.2,SNR=3.0						
ULM	**Lac du Bonnet**	**56.08**	**49**	P	**P**	**12 21 21.1**	**+1.0**
	comp=Z,2.7nm,0.6s,baz=340,slow=3.0,SNR=3.4						
ULM	**Lac du Bonnet**	**56.08**	**49**	*e*P	**P**	**12 21 21.7**	**+1.6**
ULM				pmax	pmax		
	comp=Z,2.0nm,0.5s						
FINES	**FINESS Array B**	**58.50**	**337**	P	**P**	**12 21 36.0**	**-0.9**
	comp=Z,2.2nm,0.5s,baz=37,slow=7.8,SNR=16						
HFS	**Hagfors**	**62.11**	**343**	LR	LR	12 53 03.7	
	comp=Z,27nm,18.2s,baz=37,slow=40						
HNR	**Honiara**	**64.73**	**183**	LR	LR	12 47 25.9	
	comp=Z,15nm,21.0s,baz=183,slow=33						
AKASG	**Malin Array Be**	**67.31**	**330**	P	**P**	**12 22 34.3**	**-1.3**
	comp=Z,0.7nm,0.4s,baz=28,slow=7.1,SNR=4.1						
TXAR	**Lajitas Array**	**68.33**	**70**	P	**P**	**12 22 44.2**	**+1.7**
	comp=Z,1.6nm,0.6s,baz=298,slow=4.7,SNR=23						
BRTR	**Keskin Array B**	**75.70**	**322**	LR	LR	13 02 26.6	
	comp=Z,9.0nm,21.0s,baz=79,slow=40						

*ISCJB **15** 12:18:18.6±0.6, 34°.82N±0°.05×140°.09E±0°.06, h65km±6km, mb3.6/2, Error ellipse: s-maj=8.6km s-min=6.6km az=136.2*
*JMA **15** 12:18:19.0±0.2, 34°.82N×140°.10E, h62km±2km, M3.3 Broadband fault plane solution: P waves. NP1: φs=165.00000°, δ65.00000°, λ-59.00000°. NP2: φs=290.00000°, δ39.00000°, λ-138.00000°. Principal axes: T Plg15.0000°, Azm233.0000°; N Plg28.0000°, Azm331.0000°; P Plg58.0000°, Azm118.0000°;*
JMA Felt I J1.
*IDC **15** 12:18:23.4±0.8, 34°.55N×139°.18E, h72km±12km, mb3.2/2, mb1 3.5/3, mb1mx3.0/68, mbtmp3.5/3 Error ellipse: s-maj=53.9km s-min=5.5km az=70.0*

ISC 15 12:18:19.6±1.1, 34°.81N±0°.05×140°.09E±0°.05, h57km±9km, n16, σ0§52/20, 4C-2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO4	**Boso 4**	**0.27**	**49**	⇑P	**Pn**	**12 18 29.5**	**+0.5**
BSO4				X		12 18 37.3	
TATJ	**Tateyama 2**	**0.27**	**323**	P	**Pn**	**12 18 29.9**	**+0.8**
BSO3	**Boso 3**	**0.35**	**92**	⇑P	**Pn**	**12 18 29.7**	**+0.3**
BSO3				X		12 18 38.1	
KTR	**Katsuura**	**0.38**	**29**	⇑P	**Pn**	**12 18 30.0**	**-0.1**
KTR				S	**Sn**	**12 18 37.4**	**-0.2**
JIM2	**Oshima 3**	**0.55**	**260**	⇓P	**Pn**	**12 18 31.8**	**-0.1**
JIM2				S	**Sn**	**12 18 40.6**	**-0.2**
BSO1	**Boso 1**	**0.75**	**102**	⇑P	**Pn**	**12 18 33.5**	**-0.2**
BSO1				X		12 18 44.5	
JOD2	**Odawara 2**	**0.94**	**299**	⇓P	**Pn**	**12 18 36.2**	**-0.5**
JOD2				S	**Sn**	**12 18 48.4**	**-0.9**
JIZS	**Izushimoda**	**1.00**	**265**	P	**Pn**	**12 18 37.6**	**+0.1**
JIZS				S	**Sn**	**12 18 50.7**	**-0.1**
JHJ	**Hachijo jima 2**	**1.71**	**189**	P	**Pn**	**12 18 47.7**	**+0.6**
	54nm,0.3s,baz=94,slow=24,SNR=17						
JHJ				S	**Sn**	**12 19 07.9**	**+0.1**
	76nm,0.3s,baz=139,slow=22,SNR=15						
MJAR	**Matsushiro Arr**	**2.31**	**319**	P	**Pn**	**12 18 55.7**	**+0.6**
	12nm,0.3s,baz=154,slow=12,SNR=142						
MJAR				S	**Sn**	**12 19 22.8**	**+0.4**
	15nm,0.3s,baz=160,slow=25,SNR=9.5						
MAT	**Matsushiro**	**2.31**	**319**	P	**Pn**	**12 18 56.2**	**+1.0**
MAT				S	**Sn**	**12 19 22.1**	**-0.3**
H11N2	**WAKE ISLAND Hy**	**28.05**	**115**	T	T	12 53 48.6	
	baz=308,slow=75,SNR=16						
H11N1	**WAKE ISLAND Hy**	**28.06**	**115**	T	T	12 53 50.6	
	baz=308,slow=75,SNR=15						
H11N3	**WAKE ISLAND Hy**	**28.07**	**115**	T	T	12 53 49.8	
	baz=308,slow=75,SNR=12						
WRA	**Warramunga Arr**	**54.73**	**187**	P	**P**	**12 27 42.8**	**-0.5**
	0.8nm,0.7s,baz=2.5,slow=7.6,SNR=8.3						
ASAR	**Alice Springs**	**58.45**	**187**	P	**P**	**12 28 09.7**	**0.0**
	0.2nm,0.6s,baz=354,slow=5.8,SNR=2.9						

*KRSC **15** 12:21:11.3±0.7, 55°.47N×162°.72E, h65km±17km, ML4.1*
*ISCJB **15** 12:21:12.8±0.4, 55°.49N±0°.02×162°.69E±0°.05, h70km±4km, mb3.5/9, Error ellipse: s-maj=5.0km s-min=3.3km az=21.1*
*MOS **15** 12:21:12.6±0.6, 55°.51N×162°.74E, h62km, mb3.9/6, Error ellipse: s-maj=7.8km s-min=4.9km az=73.5*
*IDC **15** 12:21:15.6±3.5, 55°.67N×162°.31E, h71km±36km, mb3.3/8, mb1 3.5/10, mb1mx3.2/78, mbtmp3.6/10, ML3.2/2, Error ellipse: s-maj=30.1km s-min=18.6km az=145.0*

ISC 15 12:21:13.4±0.9, 55°.49N±0°.03×162°.72E±0°.03, h54km±10km, n100, σ1§03/148, mb3.7/9, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.73**	**5**	*e*P	**Pn**	**12 21 27.8**	**+0.1**
KBTR				eS	**Sn**	**12 21 38.5**	**+0.4**
KBTR	**Krutoberegovo**	**0.73**	**5**	PN	**Pn**	**12 21 27.8**	**+0.1**
KBTR				S	**Sn**	**12 21 38.5**	**+0.4**
KBG	**Krutoberegovo**	**0.77**	**360**	*e*P	**Pn**	**12 21 28.2**	**-0.1**
KBG	**Krutoberegovo**	**0.77**	**360**	PN	**Pn**	**12 21 28.2**	**-0.1**
MKZ	**Mys Kozlova**	**1.09**	**212**	*e*P	**Pn**	**12 21 32.2**	**-0.2**
MKZ				eS	**Sn**	**12 21 46.0**	**-0.5**
MKZ	**Mys Kozlova**	**1.09**	**212**	PN	**Pn**	**12 21 32.2**	**-0.2**
MKZ				S	**Sn**	**12 21 46.0**	**-0.5**
ZLN	**Zelenaya**	**1.21**	**297**	*e*P	**Pn**	**12 21 34.4**	**+0.3**
ZLN				eS	**Sn**	**12 21 49.1**	**-0.4**
ZLN	**Zelenaya**	**1.21**	**297**	PN	**Pn**	**12 21 34.4**	**+0.3**
ZLN				S	**Sn**	**12 21 49.1**	**-0.4**
CIRR	**Tsirk**	**1.28**	**300**	*e*P	**Pn

SDLR	**Sedlovina**	**3.15**	**227**	*eP*	**Pn**	**12 22 01.6**	**+1.0**
SDLR				*e*S	**Sn**	**12 22 36.9**	**-0.1**
SDLR	**Sedlovina**	**3.15**	**227**	PN	**Pn**	**12 22 01.6**	**+1.0**
SDLR				S	**Sn**	**12 22 36.9**	**-0.1**
KRER	**Koryakskii**	**3.19**	**228**	*eP*	**Pn**	**12 22 02.5**	**+1.3**
KRER	**Koryakskii**	**3.19**	**228**	PN	**Pn**	**12 22 02.5**	**+1.3**
KRX	**Arik**	**3.19**	**230**	*eP*	**Pn**	**12 22 02.6**	**+1.4**
KRX	**Arik**	**3.19**	**230**	PN	**Pn**	**12 22 02.6**	**+1.4**
AVH	**Avacha**	**3.22**	**228**	*eP*	**Pn**	**12 22 02.8**	**+1.3**
AVH	**Avacha**	**3.22**	**228**	PN	**Pn**	**12 22 02.8**	**+1.3**
UGLR	**Uglovaya**	**3.22**	**227**	*eP*	**Pn**	**12 22 02.8**	**+1.2**
UGLR	**Uglovaya**	**3.22**	**227**	PN	**Pn**	**12 22 02.8**	**+1.2**
KOK	**Koryaka**	**3.24**	**229**	*eP*	**Pn**	**12 22 03.7**	**+1.8**
KOK	**Koryaka**	**3.24**	**229**	PN	**Pn**	**12 22 03.7**	**+1.8**
GNL	**Ganaly**	**3.31**	**239**	*eP*	**Pn**	**12 22 04.4**	**+1.6**
GNL	**Ganaly**	**3.31**	**239**	PN	**Pn**	**12 22 04.4**	**+1.6**
DALK	**Dalny**	**3.38**	**225**	*eP*	**Pn**	**12 22 04.5**	**+0.8**
DALK				*e*S	**Sn**	**12 22 42.3**	**-0.2**
DALK	**Dalny**	**3.38**	**225**	PN	**Pn**	**12 22 04.5**	**+0.8**
DALK				S	**Sn**	**12 22 42.3**	**-0.2**
PET	**Petropavlovsk**	**3.43**	**226**	*eP*	**Pn**	**12 22 05.5**	**+1.2**
PET				*e*S	**Sn**	**12 22 44.1**	**+0.5**
PET	**Petropavlovsk**	**3.43**	**226**	*e*PN	**Pn**	**12 22 05.2**	**+0.9**
PET				*e*S	**Sn**	**12 22 43.0**	**-0.6**
PET				pmax	pmax		
	comp=Z,103nm,0.4s						
PET				smax	smax		
	comp=E,147nm,0.4s						
PET				smax	smax		
	comp=N,190nm,0.5s						
OSSR	**Ossora**	**3.78**	**3**	*eP*	**Pn**	**12 22 09.3**	**+0.2**
OSSR	**Ossora**	**3.78**	**3**	PN	**Pn**	**12 22 09.3**	**+0.2**
PETK	**Petropavlovsk-**	**3.78**	**233**	P	**Pn**	**12 22 10.8**	**+1.6**
	comp=N,2.8nm,0.3s,baz=72,slow=17,SNR=38						
KRMR	**Karymshinskiy**	**3.79**	**227**	*eP*	**Pn**	**12 22 10.9**	**+1.7**
KRMR				*e*S	**Sn**	**12 22 53.5**	**+1.1**
KRMR	**Karymshinskiy**	**3.79**	**227**	PN	**Pn**	**12 22 10.9**	**+1.7**
KRMR				S	**Sn**	**12 22 53.5**	**+1.1**
PALN	**Palana**	**3.91**	**339**	*eP*	**Pn**	**12 22 12.4**	**+1.5**
PALN	**Palana**	**3.91**	**339**	PN	**Pn**	**12 22 12.4**	**+1.5**
RUS	**Russkaya**	**3.94**	**221**	*eP*	**Pn**	**12 22 11.6**	**+0.3**
RUS				*e*S	**Sn**	**12 22 55.8**	**-0.3**
RUS	**Russkaya**	**3.94**	**221**	PN	**Pn**	**12 22 11.6**	**+0.3**
RUS				S	**Sn**	**12 22 55.8**	**-0.3**
MTVR	**Mutnovka**	**4.03**	**224**	*eP*	**Pn**	**12 22 14.0**	**+1.4**
MTVR				*e*S	**Sn**	**12 22 58.6**	**+0.1**
MTVR	**Mutnovka**	**4.03**	**224**	PN	**Pn**	**12 22 14.0**	**+1.4**
MTVR				S	**Sn**	**12 22 58.6**	**+0.1**
APC	**Apacha**	**4.15**	**234**	*eP*	**Pn**	**12 22 16.4**	**+2.2**
APC				*e*S	**Sn**	**12 23 02.6**	**+1.2**
APC	**Apacha**	**4.15**	**234**	PN	**Pn**	**12 22 16.4**	**+2.2**
APC				S	**Sn**	**12 23 02.6**	**+1.2**
ASAK	**Asacha**	**4.21**	**224**	*eP*	**Pn**	**12 22 16.9**	**+1.7**
ASAK	**Asacha**	**4.21**	**224**	PN	**Pn**	**12 22 16.9**	**+1.7**
KDTR	**Khodutka, Kamc**	**4.60**	**219**	*eP*	**Pn**	**12 22 20.3**	**-0.1**
TILK	**Tilichiki**	**5.30**	**19**	*eP*	**Pn**	**12 22 30.9**	**+1.0**
TILK	**Tilichiki**	**5.30**	**19**	PN	**Pn**	**12 22 30.9**	**+1.0**
SKR	**Severo-Kuril's**	**6.24**	**222**	*eP*	**Pn**	**12 22 43.1**	**+0.3**
SKR	**Severo-Kuril's**	**6.24**	**222**	PN	**Pn**	**12 22 43.1**	**+0.3**
ASAJ	**Asahikawa**	**17.19**	**237**	P	**P**	**12 25 11.0**	**+0.5**
	comp=N,0.2nm,0.3s,baz=317,slow=6.5,SNR=3.9						
MJAR	**Matsushiro Arr**	**25.24**	**232**	P	**P**	**12 26 33.8**	**-0.3**
	comp=N,1.6nm,0.9s,baz=21,slow=7.7,SNR=4.8						
ILAR	**Eielson Array**	**26.06**	**49**	P	**P**	**12 26 41.4**	**+0.1**
	comp=N,0.6nm,0.8s,baz=269,slow=6.8,SNR=5.7						
H11N2	**WAKE ISLAND Hy**	**35.84**	**173**	T	T	13 07 19.3	
	baz=357,slow=76,SNR=8.3						
H11N3	**WAKE ISLAND Hy**	**35.85**	**173**	T	T	13 07 23.3	
	baz=357,slow=76,SNR=5.9						
H11N1	**WAKE ISLAND Hy**	**35.85**	**173**	T	T	13 07 16.3	
	baz=357,slow=76,SNR=9.3						
YKA	**Yellowknife Ar**	**40.37**	**45**	P	**P**	**12 28 46.4**	**+1.1**
	comp=N,0.1nm,0.4s,baz=297,slow=8.2,SNR=3.1						
KURK	**Kurchatov**	**47.79**	**301**	P	**P**	**12 29 43.2**	**-1.6**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURBB	**Kurchatov Arra**	**47.89**	**301**	P	**P**	**12 29 43.2**	**-2.4**
	comp=Z,0.6nm,0.5s,baz=55,slow=8.0,SNR=3.2						
MKAR	**Makanchi Array**	**48.51**	**295**	P	**P**	**12 29 48.4**	**-2.2**
	comp=Z,0.6nm,0.8s,baz=69,slow=6.6,SNR=4.2						
BVAR	**Borovoye Array**	**50.11**	**308**	P	**P**	**12 30 00.5**	**-2.2**
	comp=Z,0.9nm,0.6s,baz=64,slow=6.7,SNR=4.5						
FINES	**FINESS Array B**	**58.52**	**337**	P	**P**	**12 31 03.1**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=46,slow=8.2,SNR=6.5						
ASAR	**Alice Springs**	**82.58**	**206**	P	**P**	**12 33 31.2**	**+0.9**
	comp=Z,0.6nm,0.9s,baz=13,slow=6.1,SNR=4.7						

UCR 15 12:33:09.9±1.4, 12°.99N×88°.61W, h69km±13km, ML3.6, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TECA	**Tecapa**	**0.51**	**12**	*e*P	Pn	12 33 23.0	-0.1
LCY	**Lacayo**	**0.53**	**36**	*e*P	Pn	12 33 23.1	0.0
LCY				*e*S	Sn	12 33 33.3	+0.5
VSM	**San Miguel**	**0.55**	**37**	*e*P	Pn	12 33 23.5	+0.1
PACA	**Pacayal**	**0.55**	**31**	*e*P	Pn	12 33 23.8	+0.5
PACA				*e*S	Sn	12 33 33.9	+0.8
SNVI	**San Vicente**	**0.66**	**341**	*e*P	Pn	12 33 24.6	+0.1
SNVI				*e*S	Sn	12 33 35.5	+0.3
LFRS	**El Faro**	**0.77**	**325**	*e*P	Pn	12 33 25.6	0.0
LFRS				*e*S	Sn	12 33 37.3	+0.1
CNCH	**Conchagua**	**0.81**	**69**	*e*P	Pn	12 33 27.4	+1.2
CNCH				*e*S	Sn	12 33 40.1	+1.9
LBRS	**Las Brisas**	**0.85**	**331**	*e*P	Pn	12 33 27.0	+0.4
LOMA	**San Marcos**	**0.85**	**320**	*e*P	Pn	12 33 26.6	0.0
LOMA				*e*S	Sn	12 33 39.7	+0.8
LFU	**La Fuente**	**0.90**	**327**	*e*P	Pn	12 33 27.6	+0.4
LFU				*e*S	Sn	12 33 40.2	+0.2
SNET	**Serv Nac Est T**	**0.92**	**319**	IAML		12 33 42.7	
	comp=Z,1μm,0.2s						
UEES	**San Salvador**	**0.95**	**320**	IAML		12 33 44.9	
	comp=Z,968nm,0.3s						
BOQS	**Boqueron**	**0.98**	**319**	*e*P	Pn	12 33 28.9	+0.5
BOQS				*e*S	Sn	12 33 43.1	+1.0
SBLS	**San Blas**	**1.29**	**311**	*e*P	Pn	12 33 33.5	+1.1
SBLS				*e*S	Sn	12 33 51.3	+2.1
MTO3	**Montecristo**	**1.58**	**333**	*e*P	Pn	12 33 36.5	+0.5
TELN	**Telica**	**1.78**	**102**	*e*P	Pn	12 33 38.4	-0.3
CNGN	**Cerro Negro**	**1.93**	**104**	*e*P	Pn	12 33 40.6	-0.1
CNGN				*e*S	Sn	12 34 05.3	+1.3
MOMN	**Momotombo**	**2.10**	**106**	*e*P	Pn	12 33 43.2	+0.2
MOMN				*e*S	Sn	12 34 08.5	+0.2
COPN	**Copaltepe**	**2.13**	**112**	*e*P	Pn	12 33 43.4	0.0
COPN				*e*S	Sn	12 34 09.6	+0.8
COPN				AML	AML	12 34 15.6	
	comp=Z,546nm,0.5s						
IXG	**Ixpaco**	**2.14**	**304**	*e*P	Pn	12 33 43.4	-0.2
ESTN	**Estel**	**2.19**	**87**	*e*P	Pn	12 33 44.7	+0.5
ESTN				*e*S	Sn	12 34 10.5	+0.1
APYN	**Apoyeque**	**2.33**	**109**	*e*P	Pn	12 33 46.5	+0.4
APYN				*e*S	Sn	12 34 15.0	+1.2
MATN	**Matagalpa**	**2.62**	**91**	*e*P	Pn	12 33 50.0	-0.1

DDA ***15*** *12:38:31.1, 37°.25N×38°.47E, h7km, Ml2.7*
ISK ***15*** *12:38:31.9, 37°.33N×38°.61E, h5km, ML2.5/4*
CSEM ***15*** *12:38:32.0±0.4, 37°.28N×38°.56E, h2km, ML2.5, Error ellipse: s-maj=8.9km s-min=6.4km az=27.0*
ISC 15 12:38:32.7±1.3, 37°.32N±0°.04×38°.57E±0°.03, h3km±11km, n29, σ0°67/39, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URFA	**Urfa**	**0.23**	**60**	PG	**Pg**	**12 38 35.9**	**-1.3**
URFA	**Urfa**	**0.23**	**60**	*e*Pg	**Pg**	**12 38 35.9**	**-1.3**
ATAB	**Bozova**	**0.26**	**304**	*i* P	**Pg**	**12 38 36.9**	**-0.8**
ATAB	**Bozova**	**0.26**	**304**	*i* P	**Pg**	**12 38 37.2**	**-0.5**
ATAB	**Bozova**	**0.26**	**304**	P	**Pg**	**12 38 36.9**	**-0.8**
SANL	**SANLIURFA_Merk**	**0.37**	**114**	*i* P	**Pg**	**12 38 39.7**	**-0.1**
SANL	**SANLIURFA_Merk**	**0.37**	**114**	P	**Pg**	**12 38 39.7**	**-0.1**
MALT	**Malatya**	**0.99**	**354**	PG	**Pb**	**12 38 52.2**	**-0.4**
MALT				SG	**Sn**	**12 39 07.2**	**-1.0**
MALT	**Malatya**	**0.99**	**354**	*e*Pg	**Pb**	**12 38 52.2**	**-0.4**
MALT				*e*Sg	**Sn**	**12 39 07.2**	**-1.0**
GAZ	**Gaziantep**	**1.09**	**262**	PN	**Pb**	**12 38 53.9**	**-0.3**
GAZ	**Gaziantep**	**1.09**	**262**	*e*Pn	**Pb**	**12 38 53.9**	**-0.3**
AKCD	**Akcadag**	**1.10**	**332**	*i* P	**Pb**	**12 38 53.9**	**-0.4**
AKCD				*i* S	**Sn**	**12 39 10.8**	**0.0**
AKCD	**Akcadag**	**1.10**	**332**	P	**Pb**	**12 38 53.9**	**-0.4**
AKCD				S	**Sn**	**12 39 10.8**	**0.0**
SVRC	**Sivrice-ELAZID**	**1.21**	**29**	PN	**Pg**	**12 38 55.6**	**-0.2**
SVRC				SN	**Sn**	**12 39 13.2**	**-0.3**
SVRC	**Sivrice-ELAZID**	**1.21**	**29**	*e*Pn	**Pg**	**12 38 55.6**	**-0.2**
SVRC				*e*Sn	**Sn**	**12 39 13.2**	**-0.3**
ELZG	**Elazig**	**1.22**	**16**	*i* P	**Pg**	**12 38 55.6**	**-0.4**
ELZG				*i* S	**Sn**	**12 39 13.6**	**-0.2**
ELZG	**Elazig**	**1.22**	**16**	P	**Pg**	**12 38 55.7**	**-0.4**
ELZG				S	**Sn**	**12 39 13.6**	**-0.2**
ELZG	**Elazig**	**1.22**	**16**	*i* S	**Sb**	**12 39 13.3**	**+0.6**
DYBB	**Diyarbakir**	**1.40**	**63**	PN	**Pg**	**12 38 59.4**	**-0.1**
DIY	**Diyarbakir**	**1.44**	**66**	*e*Pn	**Pn**	**12 38 59.4**	**-0.3**
MAZI	**Mazidag**	**1.50**	**84**	PN	**Pb**	**12 39 01.1**	**-0.2**
MAZI	**Mazidag**	**1.50**	**84**	*e*Pn	**Pb**	**12 39 01.1**	**-0.2**
HEKM	**Malatya_Hekimh**	**1.62**	**343**	*i* P	**Pb**	**12 39 02.8**	**-0.6**
HEKM				*i* S	**Sg**	**12 39 26.2**	**+1.3**
HEKM	**Malatya_Hekimh**	**1.62**	**343**	P	**Pb**	**12 39 02.8**	**-0.6**
HEKM				S	**Sg**	**12 39 26.2**	**+1.3**
HEKM	**Malatya_Hekimh**	**1.62**	**343**	*i* S	**Sg**	**12 39 25.9**	**+1.0**
PTK	**Pertek**	**1.70**	**22**	PN	**Pb**	**12 39 04.4**	**-0.2**
PTK	**Pertek**	**1.70**	**22**	*e*Pn	**Pb**	**12 39 04.4**	**-0.2**
KEMA	**Kemaliye**	**1.94**	**358**	*i* P	**Pn**	**12 39 07.3**	**+0.7**
KEMA	**Kemaliye**	**1.94**	**358**	P	**Pn**	**12 39 07.3**	**+0.7**

DDA ***15*** *12:40:07.6, 39°.99N×37°.44E, h7km, Ml3.0*
ISCJB ***15*** *12:40:08.1±0.5, 39°.97N±0°.03×37°.43E±0°.03, h2km±6km, Error ellipse: s-maj=5.8km s-min=3.9km az=178.8*
CSEM ***15*** *12:40:08.1±0.3, 39°.98N×37°.44E, h2km, ML3.0, Error ellipse: s-maj=6.4km s-min=5.7km az=156.0*
ISK ***15*** *12:40:08.4, 39°.93N×37°.32E, h5km, ML2.6/6*
ATA ***15*** *12:40:10.4±3.3, 39°.39N×39°.15E, h109km±32km, ML3.0, MW3.0*
ISC 15 12:40:08.2±0.9, 39°.95N±0°.02×37°.46E±0°.02, h13km±8km, n42, σ1°65/63, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CUZAR	**Zara_SIVAS**	**0.24**	**104**	*i* P	**Pg**	**12 40 13.6**	**+0.1**
CUZAR				*i* S	**Sb**	**12 40 19.0**	**+0.2**
CUZAR	**Zara_SIVAS**	**0.24**	**104**	P	**Pg**	**12 40 13.6**	**+0.1**
CUZAR				S	**Sb**	**12 40 19.0**	**+0.2**
SCER	**sogukcermik**	**0.27**	**251**	*i* P	**Pg**	**12 40 13.0**	**-1.0**
SCER				*i* S	**Sg**	**12 40 17.7**	**-0.2**
SCER	**sogukcermik**	**0.27**	**251**	P	**Pg**	**12 40 13.0**	**-1.0**
SCER				S	**Sg**	**12 40 17.7**	**-0.2**
RSDY	**Resadiye-TOKAT**	**0.46**	**347**	PG	**Pb**	**12 40 18.3**	**+0.1**
RSDY				SG	**Sb**	**12 40 26.6**	**+1.6**
RSDY	**Resadiye-TOKAT**	**0.46**	**347**	*e*Pg	**Pb**	**12 40 18.3**	**+0.1**
RSDY				*e*Sg	**Sb**	**12 40 26.6**	**+1.6**
SUSE	**Susehri**	**0.62**	**65**	*i* P	**Pg**	**12 40 19.5**	**-1.0**
SUSE				*i* S	**Sb**	**12 40 29.9**	**+0.1**
SUSE	**Susehri**	**0.62**	**65**	P	**Pg**	**12 40 19.5**	**-1.0**
SUSE				S	**Sb**	**12 40 29.9**	**+0.1**
CUKAN	**kangal_SIVAS**	**0.63**	**180**	*i* P	**Pg**	**12 40 20.2**	**-0.4**
CUKAN	**kangal_SIVAS**	**0.63**	**180**	P	**Pg**	**12 40 20.2**	**-0.4**
TOKT	**Tokat**	**0.80**	**298**	PG	**Pg**	**12 40 22.5**	**-1.1**
TOKT				SG	**Sg**	**12 40 34.3**	**+0.2**
TOKT	**Tokat**	**0.80**	**298**	*e*Pg	**Pg**	**12 40 22.5**	**-1.1**
TOKT				*e*Sg	**Sg**	**12 40 34.3**	**+0.2**
CUALT	**Altinyayla-SIV**	**0.87**	**219**	*i* P	**Pg**	**12 40 24.6**	**-0.4**
CUALT	**Altinyayla-SIV**	**0.87**	**219**	P	**Pg**	**12 40 24.6**	**-0.4**
KEMA	**Kemaliye**	**1.05**	**130**	*e*P	**Pb**	**12 40 27.7**	**-0.5**
KEMA				*e*S	**Sn**	**12 40 43.1**	**0.0**
KEMA				IAML		12 40 48.7	
	comp=Z,8.6nm,0.4s						
CUSAR	**Sarkisla-SIVAS**	**1.08**	**241**	*i* P	**Pb**	**12 40 28.7**	**-0.1**
CUSAR	**Sarkisla-SIVAS**	**1.08**	**241**	P	**Pb**	**12 40 28.7**	**-0.1**
ORDU	**Ordu-Boztepe**	**1.08**	**16**	*i* P	**Pb**	**12 40 28.4**	**-0.4**
ORDU	**Ordu-Boztepe**	**1.08**	**16**	P	**Pb**	**12 40 28.4**	**-0.4**
HEKM	**Malatya_Hekimh**	**1.14**	**160**	*i* P	**Pb**	**12 40 30.0**	**+0.2**
HEKM				*i* S	**Sb**	**12 40 41.2**	**-3.3**
HEKM	**Malatya_Hekimh**	**1.14**	**160**	P	**Pb**	**12 40 30.0**	**+0.2**
HEKM				S	**Sb**	**12 40 41.2**	**-3.3**
REFA	**Refahiye_ERZ¨**	**1.15**	**118**	*e*P	**Pb**	**12 40 26.8**	**-3.2**
REFA				*e*S	**Sb**	**12 40 42.6**	**-2.2**
REFA				IAML		12 40 47.5	
	comp=Z,32nm,0.4s						
REFA	**Refahiye_ERZ¨**	**1.15**	**118**	*i* P	**Pb**	**12 40 27.0**	**-3.0**
REFA				*i* S	**Sb**	**12 40 41.5**	**-3.3**
REFA	**Refahiye_ERZ¨**	**1.15**	**118**	P	**Pb**	**12 40 27.0**	**-3.0**
REFA				S	**Sb**	**12 40 41.5**	**-3.3**
GRSN	**GIRESUNGRSN**	**1.15**	**32**	*i* P	**Pb**	**12 40 28.4**	**-1.6**
GRSN	**GIRESUNGRSN**	**1.15**	**32**	P	**Pb**	**12 40 28.4**	**-1.6**
KELT	**Kelkit**	**1.39**	**81**	*e*P	**Pn**	**12 40 32.7**	**-0.8**
KELT				IAML		12 41 01.0	
	comp=Z,20nm,0.4s						
KELT	**Kelkit**	**1.39**	**81**	*i* P	**Pn**	**12 40 33.5**	**0.0**
KELT				*i* S	**Sg**	**12 40 56.3**	**+3.2**
KELT	**Kelkit**	**1.39**	**81**	P	**Pn**	**12 40 33.5**	**0.0**
KELT				S	**Sg**	**12 40 56.3**	**+3.2**
YOZ	**Yozgat**	**1.68**	**260**	PN	**Pb**	**12 40 38.6**	**-0.4**
YOZ	**Yozgat**	**1.68**	**260**	*e*Pn	**Pb**	**12 40 38.6**	**-0.4**
AKCD	**Akcadag**	**1.69**	**168**	*i* P	**Pb**	**12 40 39.8**	**+0.6**
AKCD				*i* S	**Sg**	**12 41 06.5**	**+3.9**
AKCD	**Akcadag**	**1.69**	**168**	P	**Pb**	**12 40 39.8**	**+0.6**
AKCD				S	**Sg**	**12 41 06.5**	**+3.9**
SARI	**SarD1z-Kayseri**	**1.74**	**208**	PN	**Pb**	**12 40 40.4**	**+0.3**
PTK	**Pertek**	**1.83**	**125**	PN	**Pg**	**12 40 43.3**	**0.0**
PTK	**Pertek**	**1.83**	**125**	*e*Pn	**Pg**	**12 40 43.3**	**0.0**
ELZG	**Elazig**	**1.87**	**140**	*i* P	**Pg**	**12 40 42.0**	**-0.3**
ELZG				*i* S	**Sg**	**12 41 10.3**	**+2.0**
ELZG	**Elazig**	**1.87**	**140**	S	**Sg**	**12 41 10.4**	**+2.0**
SVRC	**Sivrice-ELAZID**	**2.12**	**137**	PN	**Pb**	**12 40 47.4**	**+0.7**
SVRC	**Sivrice-ELAZID**	**2.12**	**137**	*e*Pn	**Pb**	**12 40 47.4**	**+0.7**
CORM	**Corum**	**2.19**	**277**	PN	**Pn**	**12 40 45.4**	**+1.1**
CORM	**Corum**	**2.19**	**277**	*e*Pn	**Pn**	**12 40 45.4**	**+1.1**

ISCJB ***15*** *12:40:33.8±1.5, 6°.3S±0°.1×147°.0E±0°.3, h49km, mb3.8/5, MS2.9/1, Error ellipse: s-maj=36.1km s-min=15.9km az=176.7*
IDC ***15*** *12:40:35.1±4.7, 6°.31S×147°.03E, h45km±48km, mb3.7/5, mb1 3.9/7, mb1mx3.6/47, mbtmp3.9/7, ML3.9/1, MS3.0/4, Ms1 3.0/4, ms1mx2.6/50, Error ellipse: s-maj=59.4km s-min=31.3km az=101.0*
ISC 15 12:40:35.2±1.7, 6°.3S±0°.1×147°.1E±0°.4, h49km, n11, σ0°81/8, mb3.8/5, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.06**	**178**	P	**Pn**	**12 41 21.1**	**-0.1**
	11nm,0.3s,baz=358,slow=5.1,SNR=19						
PMG				LR	LR	12 42 53.3	
	comp=Z,249nm,18.5s,baz=19,slow=45						
SIJI	**Sorong**	**16.67**	**288**	LR	LR	12 52 09.2	
	comp=Z,55nm,19.3s,baz=50,slow=42						
WRA	**Warramunga Arr**	**18.33**	**221**	P	**P**	**12 44 45.3**	**-0.4**
	0.4nm,0.3s,baz=45,slow=11,SNR=40						
GUMO	**Guam**	**19.90**	**354**	LR	LR	12 52 44.4	
	comp=Z,46nm,18.6s,baz=188,slow=37						
ASAR	**Alice Springs**	**21.39**	**215**	P	**P**	**12 45 18.9**	**0.0**
	3.0nm,0.5s,baz=54,slow=8.2,SNR=59						
FITZ	**Fitzroy Crossi**	**23.95**	**239**	P	**P**	**12 45 45.4**	**+0.3**
	7.0nm,0.8s,baz=56,slow=7.8,SNR=7.6						
STKA	**Stephens Creek**	**25.93**	**191**	P	**P**	**12 46 03.7**	**+0.7**
	1.5nm,0.6s,baz=21,slow=8.6,SNR=6.4						
KSRS	**Korea Array**	**47.08**	**339**	LR	LR	13 07 15.9	
	comp=Z,14nm,21.4s,baz=210,slow=34						
SONM	**Songino Array**	**64.72**	**331**	P	**P**	**12 51 08.7**	**+0.2**
	0.7nm,0.7s,baz=150,slow=6.2,SNR=4.0						
MKAR	**Makanchi Array**	**77.79**	**321**	P	**P**	**12 52 27.7**	**+0.4**
	0.3nm,0.7s,baz=86,slow=4.5,SNR=3.3						
TORD	**Torodi Ar. Bea**	**145.23**	**284**	PKPbc	**PKPbc**	**13 00 06.8**	**-1.5**
	0.9nm,0.7s,baz=79,slow=4.5,SNR=4.8						

NEIC ***15*** *13:04:43.3±3.4, 1°.42N×125°.76E, h58km±33km, mb4.3/1, Error ellipse: s-maj=17.6km s-min=8.4km az=85.0*
IDC ***15*** *13:04:45.9±3.8, 1°.41N×125°.75E, h82km±38km, mb4.0/20, mb1 4.1/22, mb1mx3.9/64, mbtmp4.3/22, Error ellipse: s-maj=26.1km s-min=11.6km az=84.0*
ISCJB ***15*** *13:04:46.4±0.3, 1°.46N±0°.05×125°.81E±0°.08, h100km, mb4.2/22, Error ellipse: s-maj=12.9km s-min=4.9km az=152.3*
DJA ***15*** *13:04:51.0±0.6, 1°.N±4°.×12°.6E±°., h53km±28km, M4.5/11, mb4.7/3, mB5.1/3, MLv4.5/11, Mw(mB)4.4/3*
ISC 15 13:04:47.7±0.5, 1°.38N±0°.06×125°.80E±0°.10, h100km, n43, σ1°13/42, mb4.3/22, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**1.99**	**246**	P	Pn	13 05 25.3	+5.1
SGSI	**Sangihe**	**2.31**	**353**	P	**Pn**	**13 05 26.5**	**+2.1**
LBMI	**Labuha**	**2.62**	**140**	P	**Pn**	**13 05 29.9**	**+1.4**
LBMI				S	**Sn**	**13 06 00.2**	**+0.4**
SANI	**Sanana**	**3.41**	**177**	P	**Pn**	**13 05 39.9**	**+0.9**
MRSI	**Marisa**	**3.96**	**257**	P	Pn	13 05 52.6	+6.1
APSI	**Ampana**	**4.74**	**241**	P	Pn	13 06 02.5	+5.6
NLAI	**Namlea**	**4.76**	**164**	P	**Pn**	**13 05 58.9**	**+1.6**
AAI	**Ambon**	**5.57**	**155**	P	**Pn**	**13 06 09.9**	**+1.7**
MSAI	**Masohi**	**5.64**	**146**	P	**Pn**	**13 06 11.6**	**+2.5**
SIJI	**Sorong**	**5.90**	**112**	P	**Pn**	**13 06 13.1**	**+0.4**
	1.7nm,0.3s,baz=300,slow=14,SNR=4.6						
FITZ	**Fitzroy Crossi**	**19.35**	**180**	P	**Pn**	**13 09 05.1**	**-2.5**
	0.9nm,0.3s,baz=14,slow=9.1,SNR=40						
WRAB	**Tennant Creek**	**22.78**	**159**	*e*P	**P**	**13 09 41.3**	**-0.7**
	4.7nm,0.4s						
WRA	**Warramunga Arr**	**22.78**	**159**	P	**P**	**13 09 41.2**	**-0.8**
	16nm,0.6s,baz=336,slow=11,SNR=136						
ASAR	**Alice Springs**	**26.11**	**163**	P	**P**	**13 10 12.8**	**+0.3**
	13nm,0.5s,baz=334,slow=7.7,SNR=76						
CMAR	**Chiang Mai Arr**	**31.34**	**304**	P	**P**	**13 10 57.7**	**-1.3**
	0.7nm,0.4s,baz=138,slow=8.3,SNR=5.4						
NWAO	**Narrogin (SRO)**	**35.07**	**193**	P	**P**	**13 11 31.7**	**+0.5**
	4.0nm,0.6s,baz=15,slow=11,SNR=3.2						
KSAR	**Wonju Array Be**	**35.94**	**3**	P	**P**	**13 11 39.2**	**+0.6**
KSRS	**Korea Array**	**35.95**	**3**	P	**P**	**13 11 39.2**	**+0.5**
	1.0nm,0.7s,baz=180,slow=9.4,SNR=5.1						
STKA	**Stephens Creek**	**36.30**	**157**	P	**P**	**13 11 42.1**	**+0.3**
	9.5nm,0.8s,baz=323,slow=8.7,SNR=13						
MJAR	**Matsushiro Arr**	**36.83**	**17**	P	**P**	**13 11 44.6**	**-1.7**
	1.0nm,0.7s,baz=196,slow=8.6,SNR=3.6						
ASAJ	**Asahikawa**	**45.10**	**17**	P	**P**	**13 12 54.2**	**+0.3**
	2.9nm,0.6s,baz=215,slow=9.3,SNR=7.5						
RAMN	**Ramite**	**45.39**	**308**	*e*P	**P**	**13 12 58.5**	**+1.6**
JIRN	**Jiri**	**46.04**	**308**	*e*P	**P**	**13 13 04.0**	**+1.9**
GUN	**Gumba**	**46.40**	**308**	*e*P	**P**	**13 13 05.1**	**+0.2**
	17nm,0.6s						
KLR	**Kul'dur**	**47.95**	**5**	P	**P**	**13 13 16.0**	**-0.1**
	0.1nm,0.6s,baz=168,slow=9.3,SNR=5.4						
KOLN	**Koldanda**	**48.14**	**307**	*e*P	**P**	**13 13 18.7**	**+0.4**
	19nm,0.6s						
DANN	**Dangsing**	**48.27**	**308**	*e*P	**P**	**13 13 19.3**	**0.0**
	14nm,0.5s						
PYUN	**Piuthan**	**48.77**	**307**	*e*P	**P**	**13 13 23.3**	**+0.2**
	20nm,0.6s						
SONM	**Songino Array**	**49.24**	**343**	P	**P**	**13 13 25.9**	**-0.3**
	0.7nm,0.5s,baz=150,slow=6.7,SNR=3.4						
MKAR	**Makanchi Array**	**58.97**	**326**	P	**P**	**13 14 37.0**	**+0.1**
	2.8nm,0.4

GURO	Guroymak-BITLI	1.34 346	PN	Pn	13 24 34.2	-0.2
GURO	Guroymak-BITLI	1.34 346	ePn	Pn	13 24 34.2	-0.2
MAZI	Mazidag	1.61 278	PN	Pb	13 24 38.7	-0.5
MAZI	Mazidag	1.61 278	ePn	Pb	13 24 38.7	-0.5
BNGL	BINGOL	1.99 329	i P	Pn	13 24 44.1	+0.8
SVRC	Sivrice-ELAZID	2.73 295	PN	Pn	13 24 54.3	+0.8
SVRC	Sivrice-ELAZID	2.73 295	ePn	Pn	13 24 54.3	+0.8
PTK	Pertek	2.92 305	PN	Pn	13 24 56.3	+0.2
PTK	Pertek	2.92 305	ePn	Pn	13 24 56.3	+0.2
MALT	Malatya	3.36 290	PN	Pn	13 25 03.5	+1.4
MALT	Malatya	3.36 290	ePn	Pn	13 25 03.5	+1.4
RTB	Rutbah	4.56 203	ePn	Pn	13 25 19.0	+0.5
	SNR=4.0					
RTB			eSn	Sn	13 26 11.0	-0.8
	SNR=4.0					
DGRG	David-gareji	4.77 27	P	Pb	13 25 33.7	+0.7

*ISCJB **15** 13:30:06.6±0.4, 37.°72N±0.°03×29.°49E±0.°03, h0km, Error ellipse: s-maj=3.6km s-min=3.1km az=178.0*
*ISK **15** 13:30:06.6, 37.°73N×29.°47E, h5km, ML2.5/9*
*CSEM **15** 13:30:06.6±0.2, 37.°71N×29.°49E, h1km, ML2.5, Error ellipse: s-maj=3.4km s-min=3.1km az=8.0, Suspected Mining explosion.*
*DDA **15** 13:30:06.1, 37.°72N×29.°52E, h7km, Ml2.7, Suspected Mining explosion.*

ISC 15 13:30:06.6±0.8, 37.°73N±0.°02×29.°51E±0.°02, h0km, n41, σ0°69/56, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DNZL	Cakiroluk	0.37	264	i P	Pg	13 30 13.8	+0.1
DNZL				i S	Sg	13 30 20.0	+1.6
DNZL	Cakiroluk	0.37	264	P	Pg	13 30 13.8	+0.1
DNZL				S	Sg	13 30 20.0	+1.6
DENT	Denizli	0.38	274	PG	Pg	13 30 13.6	-0.2
DENT				SG	Sg	13 30 19.1	+0.4
DENT	Denizli	0.38	274	ePg	Pg	13 30 13.6	-0.2
DENT				eSg	Sg	13 30 19.1	+0.4
BRDR	BURDUR-Merkez	0.44	94	i P	Pg	13 30 15.1	0.0
BRDR				i S	Sb	13 30 23.9	-0.7
BRDR	BURDUR-Merkez	0.44	94	P	Pg	13 30 15.1	0.0
BRDR				S	Sb	13 30 23.9	-0.7
GOLH	Golhisar	0.50	175	i P	Pg	13 30 15.1	-1.0
GOLH				i S	Sg	13 30 23.8	+1.3
GOLH	Golhisar	0.50	175	P	Pg	13 30 15.1	-1.0
GOLH				S	Sg	13 30 23.8	+1.3
TAVA	DENIZLI_Tavas	0.54	241	i P	Pg	13 30 16.5	-0.5
TAVA				i S	Sg	13 30 24.4	+0.4
TAVA	DENIZLI_Tavas	0.54	241	P	Pg	13 30 16.5	-0.5
TAVA				S	Sg	13 30 24.4	+0.4
GLHS	Glhisar (BURDU	0.57	181	PG	Pg	13 30 17.9	+0.3
GLHS	Glhisar (BURDU	0.57	181	ePg	Pg	13 30 17.9	+0.3
KHL	Karahalli	0.59	1	PG	Pb	13 30 19.1	-0.8
KHL				SG	Sg	13 30 26.9	+1.3
KHL	Karahalli	0.59	1	ePg	Pb	13 30 19.1	-0.8
KHL				eSg	Sg	13 30 26.9	+1.3
KZIL	AFYON_Kizioren	0.73	44	i P	Pg	13 30 19.5	-1.0
KZIL	AFYON_Kizioren	0.73	44	P	Pg	13 30 19.5	-1.0
ISP	Isparta	0.81	83	PG	Pg	13 30 22.9	+0.7
ISP	Isparta	0.81	83	ePg	Pg	13 30 22.9	+0.7
KORT	Korkueli	0.99	137	PG	Pg	13 30 25.8	+0.2
KORT	Korkueli	0.99	137	i P	Pb	13 30 26.5	-0.3
KORT	Korkueli	0.99	137	ePg	Pg	13 30 25.8	+0.2
KORT	Korkueli	0.99	137	P	Pb	13 30 26.5	-0.3
KULA	Kula-Manisa	1.03	320	PG	Pg	13 30 26.7	+0.4
KULA	Kula-Manisa	1.03	320	ePg	Pg	13 30 26.7	+0.4
BAGO	Egridir - ISPA	1.05	75	i P	Pg	13 30 25.8	-0.9
BAGO				i S	Sn	13 30 44.5	+0.4
MANT	Manisa	1.06	316	i P	Pg	13 30 27.2	+0.2
MANT				i S	Sb	13 30 43.0	+0.4
MANT	Manisa	1.06	316	P	Pg	13 30 27.2	+0.2
MANT				S	Sb	13 30 43.0	+0.4
DALY	Dalyan (Mu¨la	1.14	217	PN	Pg	13 30 27.8	-0.6
DALY	Dalyan (Mu¨la	1.14	217	i P	Pg	13 30 28.3	-0.1
DALY	Dalyan (Mu¨la	1.14	217	ePn	Pg	13 30 27.8	-0.6
DALY	Dalyan (Mu¨la	1.14	217	P	Pg	13 30 28.3	-0.1
FETY	Fethiye	1.15	197	PN	Pn	13 30 29.6	-0.3
FETY	Fethiye	1.15	197	ePn	Pn	13 30 29.6	-0.3
SUTC	Sutluce-Ispart	1.21	102	PN	Pn	13 30 31.2	+0.2
SUTC	Sutluce-Ispart	1.21	102	ePn	Pn	13 30 31.2	+0.2
AYDN	Tasoluk	1.29	267	i P	Pg	13 30 30.7	-0.7
AYDN	Tasoluk	1.29	267	P	Pg	13 30 30.7	-0.7
BOLV	Bolvadin	1.50	49	i P	Pn	13 30 34.5	-0.5
BOLV	Bolvadin	1.50	49	P	Pn	13 30 34.5	-0.5
TVSB	Tavsanli	1.72	359	PN	Pb	13 30 38.7	-0.4
TVSB	Tavsanli	1.72	359	ePn	Pb	13 30 38.7	-0.4

*ISK **15** 13:44:31.8, 40.°45N×40.°07E, h5km, ML2.5/4, Suspected Mining explosion.*
*ISCJB **15** 13:44:32.2±0.5, 40.°44N±0.°03×40.°02E±0.°04, h0km, Error ellipse: s-maj=5.1km s-min=4.0km az=161.7*
*CSEM **15** 13:44:32.3±0.3, 40.°43N×40.°03E, h1km, ML2.5, Error ellipse: s-maj=6.6km s-min=5.8km az=176.0, Suspected Mining explosion.*
*DDA **15** 13:44:32.6, 40.°44N×40.°01E, h7km, Ml2.5*
*ATA **15** 13:44:32.6±0.8, 40.°32N×40.°00E, h23km±7km, ML2.3, MW2.2*

ISC 15 13:44:31.6±0.8, 40.°45N±0.°04×40.°02E±0.°02, h0km, n22, σ0°55/33, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYT	Ayd¨–ntepe-Bay	0.10	121	PG	Pg	13 44 33.6	+0.1
BAYT				SG	Sg	13 44 35.1	+0.2
BAYT	Ayd¨–ntepe-Bay	0.10	121	i Pg	Pg	13 44 33.6	+0.1
BAYT				eSg	Sg	13 44 35.1	+0.2
MACK	Trabzon	0.53	339	i P	Pb	13 44 43.8	0.0
MACK	Trabzon	0.53	339	P	Pb	13 44 43.8	0.0
KOPT	Kop Dagi	0.56	140	eP	Pg	13 44 42.9	+0.5
KOPT				eS	Sb	13 44 51.8	-1.3
KOPT				IAML		13 44 54.0	
	comp=Z,10nm,0.3s						
KOPT	Kop Dagi	0.56	140	i P	Pg	13 44 42.8	+0.5
KOPT				i S	Sb	13 44 52.7	-0.4
KOPT	Kop Dagi	0.56	140	P	Pg	13 44 42.8	+0.5
KOPT				S	Sb	13 44 52.7	-0.4
KELT	Kelkit	0.66	243	eP	Pg	13 44 45.0	+0.8
KELT				eS	Sb	13 44 54.7	-1.2
KELT				IAML		13 44 56.4	
	comp=Z,20nm,0.3s						
KELT	Kelkit	0.66	243	i P	Pg	13 44 45.3	+1.1
KELT				i S	Sb	13 44 55.4	-0.4
KELT	Kelkit	0.66	243	P	Pg	13 44 45.3	+1.1
KELT				S	Sb	13 44 55.4	-0.4
CHOM	Cayeli-Rize	0.86	41	PG	Pb	13 44 49.2	-0.1
CHOM				SG	Sb	13 45 01.6	+0.2
CHOM	Cayeli-Rize	0.86	41	ePg	Pb	13 44 49.2	-0.1
CHOM				eSg	Sb	13 45 01.6	+0.2
ESPY	Espiye-Giresun	1.09	296	PN	Pn	13 44 54.2	+0.1
ESPY	Espiye-Giresun	1.09	296	ePn	Pn	13 44 54.2	+0.1
SUSE	Susehri	1.41	261	i P	Pg	13 44 58.1	-0.5
SUSE	Susehri	1.41	261	i P	Pg	13 44 58.5	-0.1
SUSE	Susehri	1.41	261	P	Pg	13 44 58.1	-0.5
BCA	Borcka	1.57	50	PN	Pn	13 45 00.7	0.0
BCA	Borcka	1.57	50	ePn	Pn	13 45 00.7	0.0
PTK	Pertek	1.63	198	PN	Pg	13 45 03.2	+0.5
PTK	Pertek	1.63	198	ePn	Pg	13 45 03.2	+0.5
KEMA	Kemaliye	1.67	226	eP	Pn	13 45 02.4	+0.3
KEMA				eS	Sn	13 45 24.0	-0.2
KEMA				IAML		13 45 29.8	
	comp=Z,1.3nm,0.6s						

*ISCJB **15** 14:12:17.9±0.6, 27.°89N±0.°05×111.°89W±0.°06, h10km, mb3.3/2, MS3.5/18, Error ellipse: s-maj=8.7km s-min=5.3km az=38.4*
*MEX **15** 14:12:18.9±0.6, 27.°96N×112.°11W, h9km±8km, MD4.2*
*NEIC **15** 14:12:18.9±0.0, 27.°96N×112.°11W, h9km, MD4.2(MEX), After MEX.*
*IDC **15** 14:12:20.4±1.2, 28.°03N×111.°83W, h0km, mb3.5/3, mb1 3.8/8, mb1mx3.7/54, mbtmp3.5/8, ML3.6/5, MS3.4/25, Ms1 3.4/25, ms1mx3.3/55, Error ellipse: s-maj=16.5km s-min=11.3km az=14.0*

ISC 15 14:12:18.6±0.8, 27.°94N±0.°05×111.°95W±0.°06, h10km, n39, σ2°40/25, MS3.6/18, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRIG	Santa Rosalia	0.67	203	eP	Pg	14 12 30.4	-1.1
SRIG				eS	Sg	14 12 38.9	-1.4
SRIG	Santa Rosalia	0.67	203	eP	Pg	14 12 30.4	-1.1
SRIG				eS	Sg	14 12 38.9	-1.4
HSIG		1.39	39	eP	Pn	14 12 41.6	-2.5
HSIG				eS	Sn	14 12 59.9	-2.7
HSIG		1.39	39	eP	Pn	14 12 41.6	-2.5
HSIG				eS	Sn	14 12 59.9	-2.7
LPIG	La Paz	4.09	158	LR	LR	14 14 51.9	
	comp=Z,269nm,20.6s,baz=252,slow=37						
		4.23	54	eP	Pn	14 13 25.4	+2.0
CGIG		4.23	54	eP	Pn	14 13 25.4	+2.0
SPX	San Pedro Mart	4.36	316	eP	Pn	14 13 25.5	+0.3
SPX				eS	Sn	14 14 14.4	-1.8
SPX	San Pedro Mart	4.36	316	eP	Pn	14 13 25.5	+0.3
SPX				eS	Sn	14 14 14.4	-1.8
TUC	Tucson	4.47	13	ePn	Pn	14 13 25.0	-1.5
TUC				eSn	Sn	14 14 14.4	-4.3
TUC	Tucson	4.47	13	eP	Pn	14 13 24.7	-1.8
MNTX	Cornudas Mount	6.83	55	ePn	Pn	14 13 53.7	-5.1
	4.8nm,0.6s						
TXAR	Lajitas Array	7.41	77	Pn	Pn	14 14 07.7	+0.7
	0.3nm,0.3s,baz=246,slow=11,SNR=20						
TXAR				Sn	Sn	14 15 33.2	+2.0
	baz=256,slow=23,SNR=2.4						
TXAR				Lg	Lg	14 16 12.4	
	0.5nm,0.3s,baz=257,slow=31,SNR=6.9						
TXAR				LR	LR	14 17 11.7	
	comp=Z,562nm,20.7s,baz=0.0,slow=40						
WUAZ	Wupatki	7.57	4	ePn	Pn	14 14 05.8	-3.4
	10nm,0.8s						
ANMO	Albuquerque	8.41	33	Pn	Pn	14 14 23.3	+2.5
	0.2nm,0.3s,baz=219,slow=14,SNR=3.6						
ANMO				Lg	Lg	14 16 43.4	
	0.3nm,0.3s,baz=330,slow=18,SNR=3.5						
ANMO				LR	LR	14 17 48.6	
	comp=Z,83nm,19.8s,baz=126,slow=40						
NVAR	Mina Array Bea	11.73	335	Pn	Pn	14 15 10.2	+3.9
	baz=160,slow=14,SNR=4.4						
NVAR				Lg	Lg	14 18 29.1	
	baz=157,slow=36,SNR=2.2						
NVAR				LR	LR	14 19 19.9	
	comp=Z,160nm,18.9s,baz=252,slow=36						
ELK	Elko	13.06	349	Pn	Pn	14 15 29.1	+4.7
	0.1nm,0.3s,baz=171,slow=16,SNR=12						
ELK				Lg	Lg	14 19 13.9	
	0.1nm,0.3s,baz=230,slow=9.9,SNR=3.1						
ELK				LR	LR	14 20 10.1	
	comp=Z,89nm,21.8s,baz=241,slow=36						
PDAR	Pinedale Array	14.92	7	Pn	P	14 15 54.7	-0.9
	0.1nm,0.3s,baz=172,slow=13,SNR=9.8						
PDAR				Lg	Lg	14 20 05.4	
	0.1nm,0.3s,baz=207,slow=23,SNR=2.6						
YBH	Yreka Blue Hor	16.33	330	LR	LR	14 22 13.1	
	comp=Z,161nm,20.7s,baz=184,slow=36						
CMIG	Matias Romero	19.08	121	LR	LR	14 23 22.8	
	comp=Z,119nm,20.3s,baz=278,slow=35						
NEW	Newport	20.69	350	P	Pn	14 17 02.9	+1.7
	3.4nm,0.8s,baz=156,slow=11,SNR=3.1						
NEW				LR	LR	14 25 18.7	
	comp=Z,122nm,20.9s,baz=174,slow=38						
APG	El Apazote	23.73	118	LR	LR	14 28 24.4	
	comp=Z,44nm,18.9s,baz=252,slow=41						
BBB	Bella Bella	27.07	338	LR	LR	14 28 56.8	
	comp=Z,56nm,21.2s,baz=188,slow=37						
JTS	JuntasAbangare	30.85	119	LR	LR	14 30 10.3	
	comp=Z,53nm,19.1s,baz=13,slow=35						
YKA	Yellowknife Ar	34.60	358	P	P	14 19 09.7	+2.3
	0.1nm,0.4s,baz=175,slow=9.6,SNR=4.4						
YKA				LR	LR	14 34 36.8	
	comp=Z,9.6nm,18.4s,baz=187,slow=39						
SCHQ	Schefferville	42.15	38	LR	LR	14 38 23.5	
	comp=Z,78nm,20.9s,baz=28,slow=37						
ILAR	Eielson Array	42.95	339	P	P	14 20 20.9	+3.4
	0.7nm,0.8s,baz=141,slow=7.0,SNR=7.8						
ILAR				LR	LR	14 39 20.8	
	comp=Z,33nm,20.1s,baz=144,slow=38						
SFJD	Kangerlussuaq	53.46	25	LR	LR	14 45 05.8	
	comp=Z,94nm,18.2s,baz=256,slow=37						
LPAZ	La Paz	61.11	131	LR	LR	14 47 58.7	
	comp=Z,20nm,20.0s,baz=310,slow=35						
RAR	Rarotonga	67.25	229	P	P	14 23 18.3	+4.8
	46nm,0.7s,baz=53,slow=5.1,SNR=6.6						
SPITS	Spitsbergen Ar	69.95	10	LR	LR	14 56 40.4	
	comp=Z,33nm,19.3s,baz=290,slow=38						
NOA	NORSAR Array B	80.12	24	LR	LR	14 59 43.6	
	comp=Z,25nm,19.5s,baz=220,slow=36						
NRIK	Noril'sk	81.97	353	LR	LR	15 02 16.9	
	comp=Z,20nm,20.1s,baz=136,slow=37						
FINES	FINESS Array B	84.69	19	LR	LR	15 04 06.3	
	comp=Z,42nm,18.2s,baz=352,slow=37						
MDT	Midelt	88.32	54	LR	LR	15 03 14.9	
	comp=Z,21nm,19.1s,baz=350,slow=35						
GERES	GERESS Array B	89.47	32	LR	LR	15 05 18.1	
	comp=Z,39nm,19.1s,baz=292,slow=36						
HNR	Honiara	92.69	261	LR	LR	15 02 04.8	
	comp=Z,36nm,18.4s,baz=146,slow=32						
GUMO	Guam	95.01	288	LR	LR	14 59 13.6	
	comp=Z,23nm,21.0s,baz=116,slow=30						
KOWA	Kowa	98.51	69	LR	LR	15 09 02.0	
	comp=Z,54nm,18.9s,baz=52,slow=35						

*NEIC **15** 14:41:24.7±0.0, 19.°63N×64.°93W, h60km, MD3.5(RSPR), After RSPR.*

RSPR 15 14:41:24.7, 19.°63N×64.°93W, h59km±22km, MD3.5/4, 11C-6D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABVI	Anegada Island	1.05	148	eP	Pn	14 41 42.9	-0.6
ABVI				eS	Sn	14 41 56.8	-0.6
ABV	Anegada	1.06	148	eP	Pn	14 41 42.9	-0.6
ABV	Anegada	1.06	148	eS	Sn	14 41 56.8	-0.6
ABV	Anegada	1.06	148	eP	Pn	14 41 42.9	-0.6
ABV				eS	Sn	14 41 56.8	-0.6
STVI	Saint Thomas	1.27	181	eP	Pn	14 41 44.9	-1.4
STVI	Saint Thomas	1.27	181	eS	Sn	14 42 01.0	-1.4
STVI	Saint Thomas	1.27	181	eP	Pn	14 41 44.9	-1.4
STVI				eS	Sn	14 42 01.0	-1.4
STVI	Saint Thomas	1.27	181	eP	Pn	14 41 44.9	-1.4
STVI				eS	Sn	14 42 01.0	-1.4
MTP	Monte Pirata	1.63	201	eP	Pn	14 41 50.5	-0.7
MTP	Monte Pirata	1.63	201	eS	Sn	14 42 11.1	-0.1
MTP	Monte Pirata	1.63	201	eP	Pn	14 41 50.5	-0.7
MTP				eS	Sn	14 42 11.1	-0.1
MTP	Monte Pirata	1.63	201	eP	Pn	14 41 50.5	-0.7
MTP				eS	Sn	14 42 11.1	-0.1
EMPR	Esperanza - Ma	1.90	233	eP	Pn	14 41 53.8	-1.0
EMPR	Esperanza - Ma	1.90	233	eP	Pn	14 41 53.8	-1.0
AOPR	Arecibo Observ	2.15	234	eP	Pn	14 41 58.0	-0.2
AOPR	Arecibo Observ	2.15	234	eP	Pn	14 41 58.0	-0.2
AOPR	Arecibo Observ	2.15	234	eP	Pn	14 41 58.0	-0.2
CELP	Cerrillos	2.20	226	eP	Pn	14 41 57.7	-1.2
CELP	Cerrillos	2.20	226	eP	Pn	14 41 57.7	-1.2
CELP	Cerrillos	2.20	226	eP	Pn	14 41 57.7	-1.2

IDC 15 14:59:24.6±1.5, 48.°75S×125.°05E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/46, mbtmp3.8/3, Error ellipse: s-maj=184.3km s-min=26.4km az=108.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W1	Cape Leeuwin H	16.02	326	T	T	15 21 17.8	
	baz=146,slow=73,SNR=13						
H01W2	Cape Leeuwin H	16.03	326	T	T	15 21 16.0	
	baz=146,slow=73,SNR=12						
H01W3	Cape Leeuwin H	16.04	326	T	T	15 21 13.8	
	baz=146,slow=73,SNR=14						
ASAR	Alice Springs	25.99	19	P	P	15 04 59.4	+0.2
	2.3nm,0.8s,baz=188,slow=9.0,SNR=29						
WRA	Warramunga Arr	29.69	18	P	P	15 05 32.0	-0.3
	0.5nm,0.9s,baz=193,slow=10,SNR=4.2						
SNAA	Sanae	54.37	198	P	P	15 08 52.5	-0.2
	1.3nm,0.9s,baz=124,slow=7.3,SNR=4.8						
YKA	Yellowknife Ar	145.00	44	PKPbc	PKPbc	15 19 00.8	-1.0
	0.1nm,0.4s,baz=268,slow=2.4,SNR=4.1						

*IDC **15** 15:03:07.0±1.7, 1.°42N×127.°06E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.3/57, mbtmp3.4/5, ML3.2/1, Error ellipse: s-maj=116.8km s-min=19.8km az=70.0*
*DJA **15** 15:03:13.1±2.1, 1.°N±7.°×12.°7E±.°, h19km±29km, M3.5/5, MLv3.5/5*

ISC 15 15:03:10.5±1.1, 1.°31N±0.°09×126.°6E±0.°1, h10km, n8, σ2°08/9, mb3.4/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	Labuha	2.15	155	P	Pn	15 03 48.6	+2.2
LBMI				S	Sn	15 04 13.8	+0.7
SGSI	Sangihe	2.58	336	P	Pn	15 03 54.2	+1.9
KMSI	Cibinong	2.70	254	P	Pn	15 03 55.4	+1.4
FITZ	Fitzroy Crossi	19.31	183	P	P	15 07 35.5	-0.4
	0.1nm,0.3s,baz=4.4,slow=13,SNR=3.2						
WRA	Warramunga Arr	22.45	161	P	P	15 08 06.5	-3.4
	0.3nm,0.4s,baz=340,slow=11,SNR=22						
ASAR	Alice Springs	25.83	164	P	P	15 08 40.7	-1.6
	0.2nm,0.3s,baz=344,slow=11,SNR=9.0						
MKAR	Makanchi Array	59.45	326	P	P	15 13 13.0	-0.6
	0.4nm,0.4s,baz=114,slow=7.2,SNR=6.9						
KURBB	Kurchatov Arra	63.69	328	P	P	15 13 41.3	-0.8
	0.2nm,0.6s,baz=126,slow=4.9,SNR=5.9						

MEX 15 15:08:34.1±0.8, 18.°22N×102.°57W, h52km±33km, MD3.9, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	Aquila	0.74	276	i P	Pn	15 08 46.9	-1.5
MMIG				eS	Sn	15 08 57.0	-1.9
ZIIG	Zihuatanejo	1.22	120	eP	Pn	15 08 54.7	-0.1
ZIIG				eS	Sn	15 09 08.4	-1.8
EZ5V		1.59	322	eP	Pn	15 08 58.4	-1.8
EZ5V				eS	Sn	15 09 17.8	-1.9
R15V		1.64	306	i P	Pn	15 08 59.2	-1.4
R15V				eS	Sn	15 09 18.1	-2.5
ARIG	Puente Sto Nin	2.12	88	eP	Pn	15 09 08.8	+1.8
ARIG				eS	Sn	15 09 32.6	+0.4

*SOME **15** 15:37:50.4, 43.°57N×82.°30E, h10km*
*NNC **15** 15:38:00.5±8.6, 43.°91N×81.°75E, h0km, mb3.0, mpv2.7, Error ellipse: s-maj=109.1km s-min=31.8km az=131.0*

ISC 15 15:37:56.8±3.1, 43.°74N±0.°08×81.°96E±0.°10, h3km±17km, n15, σ1°78/30, 1C-5D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	Jarkent	1.67	292	⇓i P	Pn	15 38 27.1	+0.1
DJR	11nm,0.2s						
				eS	Sg	15 38 53.5	+2.9
	103nm,0.3s						
PDGK	Podgornoye	1.84	258	⇓Pn	Pn	15 38 29.4	-0.1
PDGK	2.7nm,0.3s						
				⇓Sn	Sg	15 38 56.7	+0.7
	34nm,0.5s						
UZB	Uzynbulak	2.22	256	eP	Pn	15 38 35.2	+0.5
UZB	2.0nm,0.5s						
				eS	Sb	15 39 07.2	+1.6
	23nm,0.2s						
KPKS	Kokpek	2.40	265	eP	Pn	15 38 38.7	+1.7
KPKS	6.5nm,0.2s						
				eS	Sg	15 39 13.4	-0.3
	51nm,0.4s						
KAPS	Kapalarasan	2.42	311	eP	Pn	15 38 38.4	+1.1
KAPS	0.9nm,0.1s						
				eS	Sb	15 39 12.3	+1.0
	14nm,0.2s						
SATY	Saty	2.68	257	eP	Pn	15 38 42.9	+1.9
SATY	4.9nm,0.1s						
				eS	Sb	15 39 20.5	+1.8
	34nm,0.1s						
ARXS	Arharly	3.02	280	eP	Pn	15 38 47.1	+1.5
ARXS	1.2nm,0.1s						
				eS	Sb	15 39 27.6	-1.0
	22nm,0.4s						
MK31	Makanchi Array	3.06	4	Pn	Pb	15 38 51.6	-0.4
MK31	0.8nm,0.2s,baz=184,slow=17,SNR=66						
				⇑Sn	Sn	15 39 21.8	-1.5
	0.4nm,0.2s,baz=183,slow=25,SNR=3.7						
MAKZ	Makanchi	3.07	0	⇓Pn	Pb	15 38 52.2	+0.2
MAKZ	0.9nm,0.2s						
				⇓Sn	Sn	15 39 21.1	-2.4
	1.8nm,0.2s						
KOTS	Kotyrbulak	3.56	264	eP	Pb	15 38 58.8	-1.8
KOTS	2.0nm,0.5s						
				eS	Sg	15 39 48.9	-2.4
	9.0nm,0.6s						
CHKK	Chushkaly	3.60	274	eP	Pb	15 39 00.7	-0.4
CHKK	1.7nm,0.6s						
				eS	Sg	15 39 50.9	-1.5
	15nm,0.4s						
MDOK	Medeo	3.62	263	eP	Pb	15 39 01.0	-0.6
MDOK	1.7nm,0.6s						
				eS	Sg	15 39 52.2	-0.9
	5.5nm,0.6s						
TNSS	Tian-Shan	3.72	261	eP	Pn	15 38 58.3	+2.8
TNSS	1.4nm,0.3s						
				eS	Sb	15 39 47.3	-1.7
	3.7nm,0.6s						
KTBS	Karatobe	3.83	271	eP	Pb	15 39 03.1	-1.8
KTBS	0.7nm,0.5s						
				eS	Sb	15 39 55.6	+3.9
	0.8nm,0.9s						
DGS	Degeres	4.53	266	eP	Pb	15 39 17.1	+0.1
DGS	1.2nm,0.3s						
				eS	Sg	15 40 19.9	-2.3
	5.4nm,0.7s						

*MOS **15** 15:42:30.6±0.8, 55.°53N×110.°50E, h11km, mb3.9/2, Error ellipse: s-maj=12.9km s-min=7.6km az=75.3*
*IDC **15** 15:42:30.4±1.3, 55.°48N×110.°37E, h0km, mb3.4/2, mb1 3.5/9, mb1mx3.3/77, mbtmp3.4/9, ML2.8/5, MS2.8/1, Ms1 2.8/1, ms1mx2.0/76, Error ellipse: s-maj=29.0km s-min=13.0km az=129.0*
*BYKL **15** 15:42:32.2±0.3, 55.°49N×110.°42E*

ISC 15 15:42:31.6±1.1, 55.°48N±0.°02×110.°46E±0.°02, h5km±8km, n63, σ2°63/118, mb3.5/3, 9C-2D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMO	Kumora	0.59	45	⇑i Pg	Pg	15 42 42.6	-0.4
KMO				eSg	Sg	15 42 50.7	+0.1
KMO				Pmax			
	319nm,0.4s						
KMO				Smax			
	2μm,1.2s						
KMO	Kumora	0.59	45	⇑i PG	Pg	15 42 42.6	-0.

YOA	**Uoyan**	**0.97**	**47**	*e*Pg	**Pg**	**15 42 49.7**	**-0.6**
YOA				*e*Sg	**Sg**	**15 43 03.7**	**+0.8**
YOA				Pmax			
	comp=E,308nm,0.3s						
YOA				Smax			
	comp=E,3μm,0.8s						
YOA	**Uoyan**	**0.97**	**47⇑**	*i*PG	**Pg**	**15 42 49.7**	**-0.6**
YOA				*i*		15 43 03.6	
YOA				pmax	pmax		
	comp=Z,350nm,0.2s						
YOA				smax	smax		
	comp=N,3μm,0.4s						
SYVR	**Suvo**	**1.84**	**188**	*e*Pg	**Pb**	**15 43 05.2**	**-0.6**
SYVR				*e*Sg	**Sg**	**15 43 31.2**	**+0.4**
SYVR				Pmax			
	comp=N,89nm,0.5s						
SYVR				Smax			
	comp=N,634nm,0.8s						
SYVR	**Suvo**	**1.84**	**188**	*e*PN	**Pb**	**15 43 05.2**	**-0.6**
SYVR				*e*		15 43 31.2	
SYVR				pmax	pmax		
	comp=Z,89nm,0.5s						
SYVR				smax	smax		
	comp=E,653nm,0.8s						
SVKR	**Severomuysk**	**1.87**	**69**	*e*Pg	**Pb**	**15 43 05.9**	**-0.3**
SVKR				*e*Sg	**Sb**	**15 43 31.2**	**+1.3**
SVKR				*e*		15 43 35.5	
SVKR				Pmax			
	comp=E,344nm,0.3s						
SVKR				Smax			
	comp=E,2μm,0.6s						
SVKR	**Severomuysk**	**1.87**	**69**	*e*PN	**Pb**	**15 43 06.4**	**+0.2**
SVKR				*e*		15 43 30.9	
SVKR				pmax	pmax		
	comp=Z,356nm,0.7s						
SVKR				smax	smax		
	comp=N,2μm,0.8s						
MXMB	**Maximikha**	**2.43**	**205**	*e*Pn	**Pn**	**15 43 13.3**	**+1.2**
MXMB				*e*Pg	**Pb**	**15 43 16.1**	**+0.2**
MXMB				*e*Sg	**Sg**	**15 43 49.2**	**-0.6**
OGRR	**Ongureny**	**2.48**	**223**	*e*Pn	**Pn**	**15 43 13.3**	**+0.6**
OGRR				*e*Pg	**Pb**	**15 43 16.6**	**-0.1**
OGRR				*e*Sg	**Sb**	**15 43 49.2**	**+1.7**
OGRR				Pmax			
	comp=N,35nm,0.4s						
OGRR				Smax			
	comp=N,414nm,0.4s						
OGRR	**Ongureny**	**2.48**	**223**	*e*PN	**Pn**	**15 43 14.3**	**+1.6**
OGRR				*e*		15 43 17.9	
OGRR				*e*		15 43 49.2	
OGRR				pmax	pmax		
	comp=Z,35nm,0.3s						
OGRR				smax	smax		
	comp=E,422nm,1.0s						
BOD	**Bodaibo**	**3.06**	**38**	*e*	**Pn**	**15 43 23.0**	**+2.4**
BOD				*e*Pg	**Pb**	**15 43 26.7**	**+0.2**
BOD				*e*Sn	**Sn**	**15 43 57.3**	**-0.2**
BOD				*e*Sg	**Sb**	**15 44 06.0**	**+1.9**
BOD				Pmax			
	comp=E,27nm,1.0s						
BOD				Smax			
	comp=E,179nm,0.6s						
KELR	**Kotokel**	**3.06**	**208**	*e*Pn	**Pn**	**15 43 21.5**	**+0.8**
KELR				Pg	**Pb**	**15 43 28.3**	**+1.7**
KELR				*e*Sg	**Sg**	**15 44 09.3**	**-0.6**
KELR				*e*		15 44 12.2	
NLYR	**Nelyaty**	**3.12**	**69**	*e*Pn	**Pn**	**15 43 22.4**	**+0.9**
NLYR				*e*Pg	**Pb**	**15 43 27.6**	**0.0**
NLYR				*e*Sn	**Sn**	**15 43 58.6**	**-0.5**
NLYR				*e*Sg	**Sb**	**15 44 09.1**	**+3.2**
NLYR				Pmax			
	comp=E,52nm,0.3s						
NLYR				Smax			
	comp=E,354nm,1.1s						
ZRHB	**Zarechye**	**3.52**	**215**	*e*Pn	**Pn**	**15 43 29.6**	**+2.6**
ZRHB				*e*		15 44 01.0	
ZRHB				*e*Sg	**Sg**	**15 44 21.8**	**-2.7**
ZRHB				Smax			
	comp=E,552nm,0.9s						
TRG	**Tyrgan**	**3.64**	**223**	*e*Pn	**Pn**	**15 43 28.6**	**-0.1**
TRG				*e*Pg	**Pb**	**15 43 36.7**	**+0.2**
TRG				*e*		15 44 15.2	
TRG				*e*Sg	**Sb**	**15 44 24.7**	**+3.8**
TRG				Pmax			
	comp=E,300nm,1.0s						
TRG				Smax			
	comp=E,168nm,0.8s						
TRG	**Tyrgan**	**3.64**	**223**	*e*PN	**Pn**	**15 43 29.7**	**+1.0**
TRG				*e*		15 43 37.8	
TRG				*e*S	**Sn**	**15 44 11.2**	**-0.8**
TRG				*e*		15 44 24.0	
TRG				pmax	pmax		
	comp=Z,29nm,0.7s						
TRG				smax	smax		
	comp=E,159nm,0.4s						
CIT	**Chita**	**3.92**	**151**	*e*	**Pg**	**15 43 49.4**	**+2.7**
CIT				*e*Sg	**Sg**	**15 44 34.1**	**-3.4**
CIT				Smax			
	comp=E,209nm,0.4s						
UUDB	**Ulan-Yde**	**3.98**	**206**	*e*	**Pb**	**15 43 40.7**	**-1.5**
UUDB				*e*Pg	Pg	15 43 43.4	-4.4
UUDB				*e*Sg	**Sg**	**15 44 36.2**	**-3.2**
UUDB				Pmax			
	comp=E,45nm,1.1s						
UUDB				Smax			
	comp=E,160nm,1.2s						
FFNB	**Fofonovo**	**4.08**	**214**	*e*	**Pn**	**15 43 33.1**	**-1.5**
FFNB				*e*		15 44 19.3	
FFNB				*e*		15 44 23.6	
FFNB				*e*Sg	**Sb**	**15 44 37.8**	**+4.4**
FFNB				max			
	comp=E,16nm,0.9s						
FFNB				Smax			
	comp=E,84nm,1.2s						
KAB	**Kabansk**	**4.11**	**215**	*e*Sg	**Sb**	**15 44 38.9**	**+4.6**
KAB				Smax			
	comp=E,383nm,1.0s						
HRMR	**Khuramsha**	**4.38**	**210**	*e*	**Pb**	**15 43 52.1**	**+3.0**
HRMR				*e*Sg	**Sg**	**15 44 48.4**	**-4.0**
HRMR				Smax			
	comp=E,902nm,0.8s						
BGT	**Bolshoye Golou**	**4.56**	**223**	*e*Pn	**Pn**	**15 43 42.6**	**+1.3**
BGT				Pg	**Pb**	**15 43 53.7**	**+1.6**
BGT				*e*		15 44 36.1	
BGT				*e*Sg	**Sg**	**15 44 53.1**	**-4.9**
BGT				Pmax			
	comp=E,11nm,0.5s						
BGT				Smax			
	comp=E,113nm,0.9s						
CRS	**Chara**	**4.59**	**69**	*e*Pg	**Pb**	**15 43 54.5**	**+1.8**
CRS				*e*Sg	**Sg**	**15 44 55.2**	**-3.8**
CRS				Pmax			
	comp=E,90nm,0.9s						
CRS				Smax			
	comp=E,207nm,1.0s						
CRS	**Chara**	**4.59**	**69**	*e*PN	**Pb**	**15 43 55.3**	**+2.6**
CRS				*e*		15 44 53.8	
CRS				pmax	pmax		
	comp=Z,90nm,1.0s						
CRS				smax	smax		
	comp=E,207nm,1.0s						
IRK	**Irkutsk**	**4.89**	**231**	*e*Sn	**Sn**	**15 44 40.7**	**-2.0**
IRK				*e*Sg	**Sb**	**15 45 02.4**	**+5.7**
IRK				Smax			
	comp=E,302nm,0.7s						
IRK	**Irkutsk**	**4.89**	**231**	*e*PN	**Pn**	**15 43 46.2**	**+0.4**
IRK				*e*		15 44 01.4	
IRK				*e*S	**Sn**	**15 44 41.0**	**-1.7**
IRK				*e*		15 45 04.0	
IRK				pmax	pmax		
	comp=Z,79nm,0.1s						
IRK				smax	smax		
	comp=N,306nm,1.2s						
LSTR	**Listvyanka**	**4.92**	**225**	*e*Pn	**Pn**	**15 43 45.9**	**-0.4**
LSTR				*e*		15 43 50.1	
LSTR				Pg	**Pb**	**15 43 58.9**	**+0.6**
LSTR				*e*Sn	**Sn**	**15 44 43.3**	**-0.3**
LSTR				*e*Sg	**Sb**	**15 45 03.7**	**+5.9**
LSTR				Pmax			
	comp=N,4.0nm,0.4s						
LSTR				Smax			
	comp=N,122nm,1.1s						
IVK	**Ivanovka**	**5.14**	**227**	*e*Pn	**Pn**	**15 43 48.3**	**-1.0**
IVK				*e*		15 44 02.2	
IVK				*e*Sg	**Sb**	**15 45 10.2**	**+6.1**
IVK				*e*		15 45 50.3	
IVK				max			
	comp=N,8.0nm,0.5s						
IVK				Smax			
	comp=N,150nm,1.1s						
TLY	**Talaya**	**5.56**	**230**	Pn	**Pn**	**15 43 53.0**	**-2.0**
	comp=N,0.0nm,0.3s,baz=282,slow=20,SNR=2.4						
TLY				Sn	**Sn**	**15 44 56.7**	**-2.5**
	comp=N,0.0nm,0.3s,baz=219,slow=19,SNR=6.7						
TLY				Lg	Lg	15 45 20.6	
	comp=N,0.1nm,0.3s,baz=250,slow=6.5,SNR=14						
TLY	**Talaya**	**5.56**	**230**	*e*Pn	**Pn**	**15 43 54.8**	**-0.2**
TLY				*e*		15 43 59.9	
TLY				*e*Pg	**Pb**	**15 44 10.8**	**+1.7**
TLY				*e*Sn	**Sn**	**15 44 55.9**	**-3.4**
TLY				*e*Sg	**Sg**	**15 45 23.3**	**-6.8**
TLY				Pmax			
	comp=N,11nm,0.8s						
TLY				Smax			
	comp=N,89nm,1.4s						
TUP	**Tupik**	**5.58**	**97⇓**	*i*Pn	**Pn**	**15 43 56.2**	**+1.0**
TUP				*e*		15 43 59.9	
TUP				*e*Pg	**Pb**	**15 44 11.9**	**+2.5**
TUP				*e*Sn	**Sn**	**15 44 55.0**	**-4.7**
TUP				*e*Sg	**Sg**	**15 45 26.3**	**-4.2**
TUP				Pmax			
	comp=N,16nm,0.6s						
TUP				Smax			
	comp=N,103nm,1.3s						
TUP	**Tupik**	**5.58**	**97**	*e*PN	**Pn**	**15 43 55.6**	**+0.4**
TUP				*e*		15 44 12.1	
TUP				*e*S	**Sn**	**15 44 57.4**	**-2.2**
TUP				*e*		15 45 26.0	
TUP				pmax	pmax		
	comp=Z,16nm,0.5s						
TUP				smax	smax		
	comp=N,94nm,0.8s						
KPC	**Khapcheranga**	**5.90**	**168**	*e*Pn	**Pn**	**15 43 59.4**	**-0.3**
KPC				*e*Pg	**Pb**	**15 44 17.9**	**+2.9**
KPC				*e*Sn	**Sn**	**15 45 05.0**	**-2.7**
KPC				*e*		15 45 18.1	
KPC				*e*Sg	**Sg**	**15 45 34.7**	**-6.3**
KPC				Pmax			
	comp=N,5.0nm,0.6s						
KPC				Smax			
	comp=N,98nm,1.2s						
KPC	**Khapcheranga**	**5.90**	**168**	*e*PN	**Pn**	**15 44 00.3**	**+0.6**
KPC				*e*		15 44 18.3	
KPC				*e*S	**Sn**	**15 45 05.0**	**-2.7**
KPC				*e*		15 45 34.8	
KPC				pmax	pmax		
	comp=Z,5.0nm,0.4s						
KPC				smax	smax		
	comp=E,96nm,1.2s						
ARS	**Arshan**	**5.95**	**237**	*e*Pn	**Pn**	**15 44 01.0**	**+0.5**
ARS				*e*		15 44 04.4	
ARS				*e*Pg	**Pb**	**15 44 19.7**	**+3.8**
ARS				*e*Sn	**Sn**	**15 45 08.0**	**-1.0**
ARS				*e*Sg	**Sg**	**15 45 36.8**	**-5.9**
ARS				Pmax			
	comp=E,20nm,0.5s						
ARS				Smax			
	comp=E,287nm,0.9s						
ZAK	**Zakamensk**	**6.70**	**223**	*e*Pg	**Pb**	**15 44 32.8**	**+4.3**
ZAK				*e*		15 45 30.0	
ZAK				*e*Sg	**Sg**	**15 45 59.7**	**-6.8**
ZAK				Pmax			
	comp=E,5.0nm,0.9s						
ZAK				Smax			
	comp=E,87nm,1.3s						
ZAK	**Zakamensk**	**6.70**	**223**	*e*PG	**Pb**	**15 44 33.0**	**+4.5**
ZAK				*e*		15 45 59.1	
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ZAK				smax	smax		
	comp=E,47nm,1.3s						
MOY	**Mondy**	**6.80**	**240**	*e*Pn	**Pn**	**15 44 14.2**	**+2.0**
MOY				*e*		15 44 22.8	
MOY				*e*		15 44 32.8	
MOY				*e*Sn	**Sn**	**15 45 26.8**	**-3.2**
MOY				*e*Sg	Sg	15 46 01.0	-8.9
MOY				max			
	comp=E,15nm,0.9s						
MOY				Smax			
	comp=E,87nm,1.3s						
MOY	**Mondy**	**6.80**	**240**	*e*PN	**Pn**	**15 44 14.1**	**+1.9**
MOY				*e*		15 44 34.7	
MOY				*e*S	**Sn**	**15 45 29.3**	**-0.7**
MOY				*e*		15 46 01.8	
MOY				pmax	pmax		
	comp=Z,14nm,1.1s						
MOY				smax	smax		
	comp=E,87nm,1.3s						
ORL	**Orlik**	**6.93**	**249⇑**	*i*Pn	**Pn**	**15 44 15.6**	**+1.7**
ORL				*e*		15 44 25.6	
ORL				*e*		15 45 02.8	
ORL				*e*Sn	**Sn**	**15 45 28.9**	**-4.2**
ORL				*e*Sg	**Sg**	**15 46 06.4**	**-7.6**
ORL				Smax			
	comp=E,108nm,1.2s						
ORL	**Orlik**	**6.93**	**249**	*e*PN	**Pn**	**15 44 15.2**	**+1.3**
ORL				*e*		15 44 36.2	
ORL				*e*S	**Sn**	**15 45 28.8**	**-4.3**
SONM	**Songino Array**	**8.06**	**200**	Pn	**Pn**	**15 44 29.7**	**+0.3**
	baz=14,slow=12,SNR=3.4						
SONM				Lg	Lg	15 46 47.2	
	comp=E,0.8nm,0.3s,baz=12,slow=29,SNR=16						
HIA	**Hailar**	**8.42**	**134**	*e*Sg	Sg	15 46 53.1	-8.6
HIA				*e*		15 46 59.2	
TDJR	**Todzha**	**9.01**	**256**	Sg		15 47 10.9	
KNGR	**Kungurtug, Tuv**	**9.19**	**243**	*e*		15 46 42.5	
KNGR				*e*Sg	Sn	15 47 18.7	+50
ZEA	**Zeya**	**9.90**	**93**	*e*P	**Pn**	**15 44 55.2**	**+0.7**
ZEA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ZEA				MLR	MLR		
	comp=Z,200nm,8.0s						
ZEA				MLR	MLR		
	comp=E,200nm,6.0s						
KLR	**Kul'dur**	**14.40**	**107**	Pn	**Pn**	**15 45 55.6**	**-0.4**
	comp=E,0.0nm,0.3s,baz=312,slow=13,SNR=7.9						
KLR				Lg	Lg	15 50 01.6	
	comp=E,0.0nm,0.3s,baz=189,slow=19,SNR=2.5						
ZALV	**Zalesovo Beam**	**14.87**	**275**	Pn	**Pn**	**15 46 03.0**	**+0.7**
	comp=E,0.2nm,0.3s,baz=78,slow=9.9,SNR=13						
ZALV	**Zalesovo Beam**	**14.87**	**275**	P	**Pn**	**15 46 03.0**	**+0.7**
TIXI	**Tiksi**	**18.03**	**19**	P	**Pn**	**15 46 41.7**	**-0.9**
	comp=E,0.4nm,0.3s,baz=211,slow=9.3,SNR=7.2						
MKAR	**Makanchi Array**	**19.58**	**255**	P	**P**	**15 46 58.9**	**-1.4**
	comp=E,0.1nm,0.3s,baz=40,slow=9.2,SNR=7.2						
KURK	**Kurchatov**	**19.59**	**269**	P	**Pn**	**15 47 01.0**	**-0.7**
KURBB	**Kurchatov Arra**	**19.69**	**269**	P	**P**	**15 47 01.0**	**-0.4**
	comp=E,0.1nm,0.3s,baz=66,slow=11,SNR=9.7						
BVAR	**Borovoye Array**	**23.31**	**281**	P	**P**	**15 47 42.9**	**+2.6**
	comp=E,0.7nm,0.4s,baz=59,slow=12,SNR=3.6						
ARU	**Arti**	**28.51**	**294**	LR	LR	15 59 57.0	
	comp=E,16nm,19.2s,baz=360,slow=37						
GEYT	**Alibeck**	**38.89**	**266**	P	**P**	**15 49 58.2**	**+0.3**
	comp=E,97nm,0.8s,baz=34,slow=11,SNR=5.6						
FINES	**FINESS Array B**	**41.60**	**314**	P	**P**	**15 50 18.1**	**-1.9**
	comp=E,0.8nm,0.7s,baz=31,slow=8.9,SNR=4.7						
ILAR	**Eielson Array**	**46.42**	**35**	P	**P**	**15 50 58.4**	**-0.3**
	comp=E,0.2nm,0.7s,baz=310,slow=7.0,SNR=3.2						

IGQ 15 15:47:60.0±1.3, 2°S±9°×8°1W±°, h10km, MLv4.3/6, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
MILO	**Milagro-Astudi**	**1.88**	**103**	P	Pn		15 48 31.0	-1.3
MILO				S	Sn		15 48 55.7	-0.4
COHC	**Cochancay**	**2.22**	**106**	P	Pn		15 48 35.9	-1.0
MAG1	**Magdalena**	**2.39**	**43**	P	Pn		15 48 36.5	-2.8
RIOE1	**Riobamba**	**2.76**	**88**	P	Pn		15 48 45.5	+0.8
RIOE1				S	Sn		15 49 18.8	+0.5
BPAT	**Tungurahua Vol**	**2.98**	**83**	P	Pn		15 48 47.9	+0.1
BULB	**Ulba Tungurahu**	**3.01**	**82**	P	Pn		15 48 48.9	+0.9
BREF	**Cotopaxi Volca**	**3.17**	**68**	P	Pn		15 48 51.4	+0.8
BVC2	**Cotopaxi Volca**	**3.20**	**68**	P	Pn		15 48 52.4	+1.4
BTAM	**Cotopaxi Volca**	**3.21**	**69**	P	Pn		15 48 51.4	+0.4
VC1	**Cotopaxi 1**	**3.22**	**68**	P	Pn		15 48 51.4	+0.3
PITA	**Cotopaxi Volc**	**3.22**	**67**	P	Pn		15 48 51.2	+0.1
GGPC	**Guagua Pichinc**	**3.25**	**59**	P	Pn		15 48 51.5	0.0
PINO	**Pino**	**3.25**	**59**	P	Pn		15 48 50.0	-1.6
YANA	**Yana**	**3.30**	**59**	P	Pn		15 48 49.8	-2.4
ANTS	**Antisana-Sarah**	**3.49**	**67**	P	Pn		15 48 56.1	+1.2
OTAV	**Otavalo**	**3.60**	**55**	P	Pn		15 48 53.5	-2.7
CUIC	**Cuicocha-Domo**	**3.71**	**55**	P	Pn		15 48 55.3	-2.4
IMBA	**Imbabura, San**	**3.83**	**57**	P	Pn		15 48 59.4	0.0

IDC 15 15:56:24.1±1.9, 1°46N×127°09E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.3/54, mbtmp3.4/4, MS3.3/1, Ms1 3.3/1, ms1mx2.3/35, Error ellipse: s-maj=180.1km s-min=21.6km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.43**	**162**	P	P		16 01 23.0	-1.7
	0.3nm,0.4s,baz=340,slow=11,SNR=7.0							
ASAR	**Alice Springs**	**25.84**	**166**	P	P		16 01 58.9	+1.4
	0.1nm,0.4s,baz=344,slow=11,SNR=6.4							
BRDH	**Bariadhala**	**40.37**	**304**	LR	LR		16 21 30.7	
	comp=Z,36nm,18.1s,baz=156,slow=37							
MKAR	**Makanchi Array**	**59.62**	**326**	P	P		16 06 30.2	+0.2
	0.4nm,0.5s,baz=124,slow=7.4,SNR=6.7							
KURBB	**Kurchatov Arra**	**63.84**	**328**	P	P		16 06 58.0	-0.3
	0.7nm,0.5s,baz=129,slow=5.9,SNR=9.9							

*CSEM **15** 15:57:37.5, 49°54N×1°30W, h5km, ML3.4*

STR 15 15:57:37.5±0.3, 50°N±4°×°±°, h5km, M3.6/9, mB3.9/1, mb4.2/3, MLv3.4/9, Mw(mB)2.8/1, France

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
JSA	**Saint Aubin**	**0.67**	**239**	Pg	Pg		15 57 49.2	-1.2
JSA	**Saint Aubin**	**0.67**	**239**	Pg	Pg		15 57 49.2	-1.2
RENF	**Rennes**	**1.44**	**189**	Pg	Pb		15 58 04.5	-0.3
HMNX	**Herstmonceux**	**1.69**	**38**	Pn	Pn		15 58 05.7	-2.0
HMNX	**Herstmonceux**	**1.69**	**38**	Pn	Pn		15 58 05.7	-2.0
ROSF	**Rostrenen**	**1.77**	**228**	Pn	Pn		15 58 08.1	-0.8
ELSH	**Elham, Standar**	**2.24**	**43**	Pn	Pn		15 58 14.1	-1.1
ELSH	**Elham, Standar**	**2.24**	**43**	Pn	Pn		15 58 14.1	-1.1
MENF	**Mencas**	**2.45**	**64**	Pn	Pn		15 58 17.1	-1.0
MENF	**Mencas**	**2.45**	**64**	Pn	Pn		15 58 17.1	-1.0
CCA1	**Carnmenellis**	**2.62**	**286**	Pn	Pn		15 58 19.5	-1.0
CCA1	**Carnmenellis**	**2.62**	**286**	Pn	Pn		15 58 19.5	-1.0
DOU	**Dourbes**	**3.86**	**79**	Pn	Pn		15 58 36.0	-1.5
DOU	**Dourbes**	**3.86**	**79**	Pn	Pn		15 58 35.0	-2.4
LOR	**Lormes**	**4.12**	**122**	Pn	Pn		15 58 39.1	-2.0
THEF	**They Montfort**	**4.98**	**103**	Pn	Pn		15 58 50.8	-2.1
THEF	**They Montfort**	**4.98**	**103**	Pn	Pn		15 58 50.8	-2.1
LBL	**Lubilhac**	**5.30**	**143**	Pn	Pn		15 58 55.7	-1.6
LBL	**Lubilhac**	**5.30**	**143**	Pn	Pn		15 58 55.7	-1.7
ECH	**Echery**	**5.74**	**100**	Pn	Pn		15 59 01.1	-2.1
ECH	**Echery**	**5.74**	**100**	Pn	Pn		15 59 01.1	-2.2
ABH	**Alteburg**	**5.75**	**83**	Pn	Pn		15 59 01.0	-2.5
ABH	**Alteburg**	**5.75**	**83**	Pn	Pn		15 59 00.0	-3.5

*SCB **15** 16:04:07.8±0.8, 21°90S×68°64W, h99km, Ml3.9/2, Error ellipse: s-maj=21.8km s-min=6.6km az=38.0*

*ISCJB **15** 16:04:11.1±0.4, 21°90S±0°04×68°62W±0°05, h127km±4km, mb4.1/11, Error ellipse: s-maj=8.0km s-min=5.7km az=21.6*

*GUC **15** 16:04:11.7±0.6, 21°86S×68°65W, h118km±4km, ML4.2*

*IDC **15** 16:04:12.2±0.7, 21°85S×68°34W, h119km±5km, mb3.8/10, mb1 4.0/14, mb1mx3.8/39, mbtmp4.2/14, MS2.9/3, Ms1 2.9/3, ms1mx2.7/34, Error ellipse: s-maj=15.0km s-min=14.1km az=71.0*

ISC 15 16:04:11.7±0.5, 21°85S±0°05×68°50W±0°05, h118km±5km, n38, σ1°36/52, mb4.1/11, 5C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.69**	**274**	*e*P		**Pn**	**16 04 30.7**	**-0.4**
PB09				*i* S		**Sn**	**16 04 44.3**	**-1.3**
PB09				IAML			16 04 47.3	
	comp=E,5μm,0.4s							
PB01	**IPOC Station P**	**1.22**	**311**	*e*P		**Pn**	**16 04 35.3**	**-0.7**
PB01				*i* S		**Sn**	**16 04 53.6**	**-0.8**
PB01				IAML			16 04 56.4	
	comp=E,6μm,0.7s							
PB07	**IPOC Station P**	**1.29**	**275**	*e*P		**Pn**	**16 04 36.0**	**-0.9**
PB07				*i* S		**Sn**	**16 04 54.5**	**-1.4**
PB07				IAML			16 04 56.1	
	comp=E,7μm,0.4s							
PB06	**IPOC Station P**	**1.31**	**229**	*e*P		**Pn**	**16 04 36.4**	**-0.6**
PB06				*i* S		**Sn**	**16 04 54.9**	**-1.3**
PB06				IAML			16 04 55.8	
	comp=E,9μm,0.6s							
PB02	**IPOC Station P**	**1.40**	**292**	*e*P		**Pn**	**16 04 37.1**	**-1.0**
PB02				*i* S		**Sn**	**16 04 56.3**	**-1.7**
PB02				IAML			16 05 01.2	
	comp=E,7μm,1.1s							
PB04	**IPOC Station P**	**1.60**	**252**	*e*P		**Pn**	**16 04 39.4**	**-1.1**
PB04				*i* S		**Sn**	**16 05 00.5**	**-1.8**
PB04				IAML			16 05 04.8	
	comp=E,4μm,0.3s							
PB15	**IPOC Station P**	**1.62**	**213**	*e*P		**Pn**	**16 04 40.2**	**-0.5**
PB15				*i* S		**Sn**	**16 05 02.6**	**-0.2**
PB08	**IPOC Station P**	**1.81**	**340**	*e*P		**Pn**	**16 04 43.9**	**+0.8**
PB08				*i* S		**Sn**	**16 05 07.7**	**+0.7**
PB08				IAML			16 05 09.7	
	comp=E,2μm,0.2s							
MOCB	**Mochara**	**2.73**	**78**	*e*Pn		**Pn**	**16 04 56.6**	**+1.7**
MOCB				*e*Sn		**Sn**	**16 05 31.2**	**+3.2**
	comp=E,638nm,1.1s							
BBOJ	**La Paz, Jacaqu**	**4.86**	**3⇑**	*i*Pn		**Pn**	**16 05 24.7**	**+1.4**
BBOD	**La Paz, Gloria**	**5.19**	**359⇑**	*i*Pn		**Pn**	**16 05 29.0**	**+1.3**
LPAZ	**La Paz**	**5.54**	**4**	P		**Pn**	**16 05 34.3**	**+1.7**
	comp=E,2.0nm,0.3s,baz=164,slow=4.1,SNR=49							
LPAZ	**La Paz**	**5.54**	**4⇑**	*i*Pn		**Pn**	**16 05 33.6**	**+1.0**
BBOB	**La Paz, Bander**	**5.69**	**4⇑**	*i*Pn		**Pn**	**16 05 35.4**	**+0.9**
BBOB			⇑	*i*Sn		**Sn**	**16 06 40.0**	**+1.1**
	comp=E,34nm,0.7s							
SIV	**San Ignacio**	**9.13**	**52**	P		**Pn**	**16 06 17.8**	**-2.8**
	comp=E,1.7nm,0.3s,baz=248,slow=12,SNR=61							
SIV				S		**Sn**	**16 07 58.1**	**-3.5**
	comp=E,0.2nm,0.3s,baz=270,slow=20,SNR=2.8							
SIV	**San Ignacio**	**9.13**	**52**	*e*P		**Pn**	**16 06 17.7**	**-2.8**
CPUP	**Villa Florida**	**11.13**	**116**	P		**Pn**	**16 06 44.7**	**-2.8**
	comp=E,0.2nm,0.3s,baz=290,slow=12,SNR=14							
CPUP				LR		LR	16 11 08.1	
	comp=E,44nm,20.7s,baz=250,slow=38							
NNA	**Nana**	**12.64**	**320**	LR		LR	16 11 15.8	
	comp=E,44nm,20.3s,baz=138,slow=33							
PLCA	**Paso Flores**	**18.91**	**185**	P		**P**	**16 08 22.8**	**-0.4**
	comp=E,0.4nm,0.3s,baz=32,slow=10,SNR=8.4							
PTGA	**Pitinga**	**22.58**	**23**	P		**P**	**16 09 00.9**	**-1.5**
	comp=E,1.6nm,0.3s,baz=189,slow=18,SNR=5.8							
ROSC	**El Rosal**	**27.13**	**347**	LR		LR	16 22 05.3	
	comp=E,50nm,20.2s,baz=214,slow=40							
VNA3	**Neumayer Olym

ASAR pPKP **pPKPdf** **16 23 40.3 +0.4**
comp=E,0.3nm,0.8s,baz=153,slow=3.6,SNR=2.3
WRA **Warramunga Arr 132.84 210** PKP **PKPdf** **16 23 14.2 +0.5**
comp=E,0.3nm,0.6s,baz=163,slow=1.6,SNR=7.8
ZALV **Zalesovo Beam 142.10 26** PKP **PKPdf** **16 23 29.8 +0.2**
comp=E,0.4nm,0.4s,baz=222,slow=2.0,SNR=3.5
MKAR **Makanchi Array 145.69 37** PKPbc **PKPbc** **16 23 36.7 0.0**
comp=E,0.4nm,0.6s,baz=22,slow=4.2,SNR=5.3
ASAJ **Asahikawa 146.07 318** PKPbc **PKPab** **16 23 38.8 +0.1**
comp=E,2.8nm,0.8s,baz=249,slow=7.2,SNR=5.2

*IDC **15** 16:14:59.6±0.9, 28°.86N×81°.83E, h0km, mb3.6/9, mb1 3.7/12, mb1mx3.5/70, mbtmp3.6/12, ML3.4/3, MS2.8/3, Ms1 2.8/3, ms1mx2.4/66, Error ellipse: s-maj=29.9km s-min=16.0km az=57.0*
*ISCJB **15** 16:15:01.8±0.5, 28°.68N±0°.06×81°.71E±0°.05, h33km, mb3.5/9, MS2.9/1, Error ellipse: s-maj=8.8km s-min=5.3km az=29.8*
*NDI **15** 16:15:01.9±2.3, 28°.68N×81°.74E, h10km, ML3.5*
ISC 15 16:15:03.1±0.7, 28°.62N±0°.06×81°.76E±0°.06, h35km, n26, σ2°31/33, mb3.5/9, Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOSI	**Joshimath**	**2.72**	**316**	*e*P	**Pn**	**16 15 44.8**	**+0.3**
JOSI				*e*S	**Sn**	**16 16 17.7**	**+1.4**
DDI	**Dehra Dun**	**3.65**	**299**	*e*P	**Pn**	**16 15 59.0**	**+1.8**
DDI				*e*S	**Sn**	**16 16 40.3**	**+1.4**
DDI				IAML		16 16 57.6	
	comp=N,401nm,0.4s						
DDI				IAML		16 16 58.0	
	comp=E,395nm,0.2s						
NDI	**New Delhi**	**3.99**	**272**	*e*P	**Pn**	**16 16 03.0**	**+1.2**
NDI				*e*x	x	16 17 05.0	
BHGR	**Bahadurgarh**	**4.24**	**272**	*e*x	**Sn**	**16 16 59.8**	**+6.3**
KKR	**Kurukshetra**	**4.52**	**288**	*e*P	**Pn**	**16 16 11.2**	**+2.2**
SMLA	**Simla**	**4.71**	**303**	*e*P	**Pn**	**16 16 11.9**	**+0.3**
SMLA				*e*S	**Sn**	**16 17 04.1**	**-0.8**
SMLA				IAML		16 17 26.6	
	comp=E,191nm,0.5s						
SMLA				IAML		16 17 27.3	
	comp=N,200nm,0.4s						
KHET	**Khetri**	**5.28**	**265**	*e*P	**Pn**	**16 16 19.8**	**+0.3**
KHET				*e*S	**Sn**	**16 17 18.1**	**-1.0**
KHET				IAML		16 17 55.8	
	comp=N,34nm,0.3s						
KHET				IAML		16 17 56.6	
	comp=E,25nm,0.6s						
DHRM	**DHARAMSHALA**	**5.94**	**309**	*e*P	**Pn**	**16 16 27.7**	**-1.1**
DHRM				*e*S	**Sn**	**16 17 32.0**	**-3.7**
DHRM				IAML		16 18 10.4	
	comp=N,110nm,0.6s						
DHRM				IAML		16 18 10.9	
	comp=E,69nm,0.5s						
BOK	**Bokaro**	**6.07**	**141**	*e*P	**Pn**	**16 16 33.3**	**+2.9**
BOK				*e*S	**Sn**	**16 17 37.7**	**-1.0**
BOK				IAML		16 18 27.7	
	comp=N,27nm,0.8s						
BOK				IAML		16 18 28.2	
	comp=E,33nm,0.2s						
BHPL	**Bhopal**	**6.63**	**217**	*e*P	**Pn**	**16 16 38.2**	**+0.1**
BHPL				*e*S	**Sn**	**16 17 49.5**	**-3.0**
BHPL				IAML		16 18 37.9	
	comp=E,59nm,0.3s						
BHPL				IAML		16 18 39.2	
	comp=N,47nm,0.6s						
THW	**Thamme Wali**	**9.57**	**298**	P	**Pn**	**16 17 16.7**	**-1.8**
CEP	**Cherat**	**9.90**	**304**	P	**Pn**	**16 17 21.5**	**-1.5**
CEP				S	**Sn**	**16 19 12.0**	**-0.9**
HYB	**Hyderabad**	**11.54**	**195**	*e*S	**Sn**	**16 19 48.2**	**-5.0**
AAK	**Ala-Archa**	**15.17**	**339**	Pn	**Pn**	**16 18 32.9**	**-1.9**
	comp=N,0.2nm,0.3s,baz=249,slow=8.6,SNR=2.2						
AAK				LR	LR	16 24 54.4	
	comp=N,30nm,19.8s,baz=169,slow=40						
MKAR	**Makanchi Array**	**18.14**	**1**	P	**Pn**	**16 19 08.4**	**-3.8**
	comp=N,0.0nm,0.3s,baz=193,slow=12,SNR=2.6						
CMAR	**Chiang Mai Arr**	**18.70**	**119**	P	**Pn**	**16 19 20.5**	**+1.3**
	comp=N,0.2nm,0.3s,baz=303,slow=12,SNR=6.9						
CMAR				LR	LR	16 28 53.0	
	comp=N,18nm,18.7s,baz=155,slow=44						
KURBB	**Kurchatov Arra**	**22.11**	**355**	P	**P**	**16 19 54.7**	**-0.5**
	comp=N,0.5nm,0.5s,baz=179,slow=10,SNR=4.6						
ZALV	**Zalesovo Beam**	**25.40**	**4**	P	**P**	**16 20 25.9**	**-1.2**
	comp=N,0.8nm,0.6s,baz=187,slow=9.4,SNR=2.9						
BVAR	**Borovoye Array**	**25.79**	**344**	P	**P**	**16 20 30.6**	**0.0**
	comp=N,0.2nm,0.5s,baz=158,slow=14,SNR=2.3						
SONM	**Songino Array**	**27.05**	**38**	P	**P**	**16 20 41.5**	**-0.8**
	comp=N,0.1nm,0.3s,baz=258,slow=7.2,SNR=1.9						
KSRS	**Korea Array**	**39.36**	**65**	LR	LR	16 40 11.2	
	comp=N,16nm,19.2s,baz=341,slow=39						
FINES	**FINESS Array B**	**49.00**	**328**	P	**P**	**16 23 46.7**	**+0.7**
	comp=N,0.8nm,0.4s,baz=118,slow=7.9,SNR=11						
HFS	**Hagfors**	**54.76**	**325**	P	**P**	**16 24 29.6**	**+0.6**
	comp=N,1.7nm,0.7s,baz=120,slow=8.8,SNR=4.7						
WRA	**Warramunga Arr**	**70.06**	**127**	P	**P**	**16 26 14.4**	**+2.6**
	comp=N,0.4nm,0.6s,baz=322,slow=6.3,SNR=9.4						
ASAR	**Alice Springs**	**72.28**	**131**	P	**P**	**16 26 28.0**	**+2.8**
	comp=N,0.5nm,0.5s,baz=313,slow=6.2,SNR=21						
TORD	**Torodi Ar. Bea**	**75.20**	**277**	P	**P**	**16 26 44.3**	**+1.7**
	comp=N,0.5nm,0.8s,baz=86,slow=3.5,SNR=2.6						

*TIR **15** 16:21:28.4, 41°.36N×20°.97E, h3km, Md2.6/4*
*ATH **15** 16:21:28.1, 41°.39N×20°.84E, h10km±31km, ML2.0/2, Error ellipse: s-maj=31.6km s-min=1.9km az=0.0*
*SKO **15** 16:21:28.3, 41°.39N×20°.88E, h15km, M1.8, ML2.1*
*CSEM **15** 16:21:29.2±0.3, 41°.34N×20°.88E, h2km, ML2.1, Error ellipse: s-maj=9.4km s-min=5.1km az=71.0*
*BEO **15** 16:21:31.3±0.4, 41°.32N×20°.93E, h0km*
ISC 15 16:21:29.8±1.0, 41°.34N±0°.02×20°.91E±0°.02, h9km±8km, n46, σ0°95/77, 2C, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHR	**Ohrid**	**0.24**	**201**	⇑*i*Pg	**Pg**	**16 21 34.8**	**+0.1**
OHR				*e*Lg	Lg	16 21 38.9	
	comp=N,514nm,0.3s						
OHR				*i* Sg	**Sg**	**16 21 38.9**	**+0.9**
OHR				*e*Lg	Lg	16 21 39.0	
	comp=E,579nm,0.4s						
BIA	**Bitola**	**0.44**	**135**	⇑*i*Pg	**Pg**	**16 21 39.0**	**+0.5**
BIA				*i* Sg	**Sb**	**16 21 46.6**	**0.0**
PHP	**Peshkopia**	**0.50**	**315**	*i* PG	**Pg**	**16 21 38.7**	**-0.8**
PHP				*i* SG	**Sb**	**16 21 46.8**	**-1.4**
PHP	**Peshkopia**	**0.50**	**315**	*i* Pg	**Pg**	**16 21 38.7**	**-0.8**
	baz=309						
PHP				*i* Sg	**Sb**	**16 21 46.8**	**-1.4**
	baz=309						
FNA	**Florina**	**0.65**	**147**	*e*Pg	**Pg**	**16 21 42.1**	**-0.4**
FNA				*e*Sg	**Sg**	**16 21 51.1**	**+0.1**
FNA	**Florina**	**0.65**	**147**	P	**Pg**	**16 21 41.7**	**-0.7**
FNA				S	**Sg**	**16 21 51.6**	**+0.6**
FNA	**Florina**	**0.65**	**147**	*e*Pg	**Pg**	**16 21 42.1**	**-0.4**
	baz=6.0						
FNA				*e*Sg	**Sg**	**16 21 51.1**	**+0.1**
	baz=3.0						
KBN	**Korca**	**0.72**	**188**	*i* PG	**Pg**	**16 21 43.8**	**+0.1**
KBN				*i* SG	**Sb**	**16 21 55.2**	**+0.6**
KBN	**Korca**	**0.72**	**188**	*i* Pg	**Pg**	**16 21 43.8**	**+0.1**
	baz=191						
KBN				*i* Sg	**Sb**	**16 21 55.2**	**+0.6**
	baz=191						
SKO	**Skopje**	**0.75**	**32**	*e*Pg	**Pn**	**16 21 45.7**	**-1.0**
SKO				*e*Sg	**Sb**	**16 21 54.8**	**-0.6**
SKO	**Skopje**	**0.75**	**32**	*e*Pg	**Pg**	**16 21 42.9**	**-1.4**
SKO				*i* Sg	**Sb**	**16 21 54.9**	**-0.5**
SKO	**Skopje**	**0.75**	**32**	*e*Pg	**Pn**	**16 21 45.7**	**-1.0**
	baz=8.0						
SKO				*e*Sg	**Sb**	**16 21 54.8**	**-0.6**
	baz=5.0						
NEST	**Nestorio**	**0.93**	**174**	P	**Pg**	**16 21 47.2**	**-0.4**
NEST				S	**Sb**	**16 22 00.8**	**+0.3**
NEST				AML	AML	16 22 07.2	
	comp=N,200μm,0.4s						
NEST				AML	AML	16 22 07.3	
	comp=E,246μm,0.6s						
NEST	**Nestorio**	**0.93**	**174**	P	**Pg**	**16 21 47.0**	**-0.6**
NEST				S	**Sb**	**16 22 00.6**	**0.0**
STIP	**Stip**	**1.02**	**69**	*i* Pg	**Pn**	**16 21 52.3**	**+1.9**
STIP				*i* Sg	**Sn**	**16 22 08.8**	**+3.9**
PUK	**Puka**	**1.04**	**313**	*i* PG	**Pg**	**16 21 49.4**	**-0.5**
PUK				*i* SG	**Sn**	**16 22 05.2**	**-0.2**
PUK	**Puka**	**1.04**	**313**	*i* Pg	**Pg**	**16 21 49.3**	**-0.5**
	baz=311						
PUK				*i* Sg	**Sn**	**16 22 05.2**	**-0.2**
	baz=311						
PENT	**Pentalofos**	**1.15**	**171**	P	**Pg**	**16 21 50.5**	**-1.4**
PENT				S	**Sn**	**16 22 08.3**	**+0.1**
PENT				AML	AML	16 22 16.1	
	comp=E,120μm,0.6s						
PENT				AML	AML	16 22 16.6	
	comp=N,110μm,0.3s						
PENT	**Pentalofos**	**1.15**	**171**	P	**Pg**	**16 21 50.7**	**-1.3**
PENT				S	**Sn**	**16 22 08.0**	**-0.2**
GRG	**Griva**	**1.19**	**108**	P	**Pg**	**16 21 52.2**	**-0.4**
GRG				S	**Sn**	**16 22 08.9**	**-0.1**
GRG	**Griva**	**1.19**	**108**	P	**Pg**	**16 21 52.0**	**-0.6**
GRG				S	**Sn**	**16 22 08.9**	**-0.1**
BCI	**Bajram Curri**	**1.21**	**329**	*i* PN	**Pn**	**16 21 52.9**	**-0.1**
BCI				*i* SN	**Sn**	**16 22 11.6**	**+2.1**
BCI	**Bajram Curri**	**1.21**	**329**	*i* Pn	**Pn**	**16 21 52.9**	**-0.1**
	baz=327						
BCI				*i* Sn	**Sn**	**16 22 11.6**	**+2.1**
	baz=327						
KZN	**Kozani**	**1.22**	**147**	P	**Pb**	**16 21 51.8**	**-1.3**
KZN	**Kozani**	**1.22**	**147**	P	**Pb**	**16 21 52.2**	**-0.9**
VAY	**Valandovo**	**1.25**	**90**	*e*Pg	**Pn**	**16 21 53.5**	**0.0**
VAY				*e*Sg	**Sn**	**16 22 10.7**	**+0.2**
VAY	**Valandovo**	**1.25**	**90**	*i* Pg	**Pn**	**16 21 52.2**	**-1.3**
VAY				*i* Sg	**Sg**	**16 22 10.1**	**+0.1**
VAY				*e*Lg	Lg	16 22 12.9	
	comp=N,26nm,0.6s						
VAY				*e*Lg	Lg	16 22 13.3	
	comp=E,17nm,0.5s						
VAY	**Valandovo**	**1.25**	**90**	*e*Pg	**Pn**	**16 21 53.5**	**0.0**
	baz=2.0						
VAY				*e*Sg	**Sn**	**16 22 10.7**	**+0.2**
	baz=2.0						
KPRO	**Kipourio**	**1.42**	**166**	P	**Pn**	**16 21 55.8**	**-0.2**
KPRO	**Kipourio**	**1.42**	**166**	P	**Pn**	**16 21 55.9**	**0.0**
KNT	**Kendrikon**	**1.51**	**96**	P	**Pb**	**16 21 57.7**	**-0.3**
KNT	**Kendrikon**	**1.51**	**96**	P	**Pb**	**16 21 57.6**	**-0.4**
SELS	**Selova**	**1.89**	**5**	*e*Pg	**Pb**	**16 22 04.8**	**+0.3**
SELS				*e*Sg	**Sg**	**16 22 31.7**	**+1.1**
SJES	**Sjenica**	**2.05**	**340**	*e*Pg	**Pg**	**16 22 08.4**	**-0.7**
SJES				*e*Sg	**Sg**	**16 22 36.6**	**+1.0**
IVAS	**Ivanjica**	**2.31**	**346**	*e*Pg	**Pg**	**16 22 13.6**	**-0.5**
IVAS				*e*Sg	**Sg**	**16 22 45.6**	**+1.6**
IVAS	**Ivanjica**	**2.31**	**346**	*e*Pg	**Pg**	**16 22 13.6**	**-0.5**
	baz=5.0						
ZAPS	**Zavoj**	**2.32**	**33**	*e*Pg	**Pg**	**16 22 14.0**	**-0.3**
ZAPS	**Zavoj**	**2.32**	**33**	*e*Pg	**Pg**	**16 22 14.0**	**-0.3**
BOVS	**Bovan**	**2.37**	**14**	*e*Pg	**Pg**	**16 22 14.9**	**-0.4**
BOVS	**Bovan**	**2.37**	**14**	*e*Pg	**Pg**	**16 22 14.9**	**-0.4**
	baz=8.0						
ZAGS	**Zajecar**	**2.66**	**21**	*e*Pg	**Pg**	**16 22 19.6**	**-1.2**
ZAGS				*e*Sg	**Sg**	**16 22 55.4**	**+0.1**
ZAGS	**Zajecar**	**2.66**	**21**	*e*Pg	**Pg**	**16 22 19.6**	**-1.2**
	baz=4.0						
ZAGS				*e*Sg	**Sg**	**16 22 55.4**	**+0.1**
	baz=8.0						
BBLS	**Lazići**	**2.76**	**337**	*e*Pg	**Pg**	**16 22 21.5**	**-1.3**
BBLS	**Lazići**	**2.76**	**337**	*e*Pg	**Pg**	**16 22 21.5**	**-1.3**
	baz=3.0						
KUBS	**Kucevo**	**3.13**	**10**	*e*Pg	**Pb**	**16 22 26.7**	**+1.1**
KUBS	**Kucevo**	**3.13**	**10**	*e*Pg	**Pb**	**16 22 26.7**	**+1.1**

*CSEM **15** 16:21:56.2, 38°.15N×21°.72E, h26km, ML1.2/9*
ATH 15 16:21:56.1, 38°.15N×21°.72E, h26km±3km, ML1.2/9, Error ellipse: s-maj=3.3km s-min=1.1km az=196.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRO	**Drossia**	**0.20**	**182**	P	Pb	16 22 02.2	+0.2
DRO				AML	AML	16 22 06.8	
	comp=N,282μm,0.1s						
DRO				AML	AML	16 22 06.8	
	comp=E,509μm,0.2s						
DRO				S	Sb	16 22 06.9	+1.0
DRO	**Drossia**	**0.20**	**182**	P	Pb	16 22 02.1	+0.1
DRO				S	Sb	16 22 06.6	+0.7
LAKA	**Lakka**	**0.22**	**67**	P	Pb	16 22 02.0	-0.3
LAKA				S	Sb	16 22 05.2	-1.1
LAKA				AML	AML	16 22 06.4	
	comp=E,60μm,0.1s						
LAKA				AML	AML	16 22 06.7	
	comp=N,39μm,0.1s						
LAKA	**Lakka**	**0.22**	**67**	P	Pb	16 22 02.1	-0.1
LAKA				S	Sb	16 22 06.0	-0.4
RLS	**Riolos of Patr**	**0.22**	**244**	P	Pb	16 22 02.0	-0.2
RLS				S	Sb	16 22 06.6	+0.3
RLS				AML	AML	16 22 06.7	
	comp=N,224μm,0.1s						
RLS				AML	AML	16 22 06.9	
	comp=E,170μm,0.2s						
RLS	**Riolos of Patr**	**0.22**	**244**	P	Pb	16 22 02.1	-0.1
RLS				S	Sb	16 22 06.7	+0.4
EFP	**Efpalio**	**0.31**	**28**	P	Pb	16 22 03.1	-0.3
EFP				S	Sb	16 22 08.9	+0.5
EFP				AML	AML	16 22 09.2	
	comp=E,85μm,0.1s						
EFP				AML	AML	16 22 09.9	
	comp=N,74μm,0.2s						
EFP	**Efpalio**	**0.31**	**28**	P	Pb	16 22 03.3	-0.1
EFP				S	Sb	16 22 08.8	+0.4
TRIZ	**Trizonia**	**0.35**	**53**	P	Pb	16 22 03.8	-0.1
TRIZ				S	Sn	16 22 10.7	-0.9
TRIZ	**Trizonia**	**0.35**	**53**	P	Pb	16 22 04.0	0.0
TRIZ				S	Sb	16 22 10.3	+1.0
KLV	**Kalavryta, Ach**	**0.36**	**108**	P	Pb	16 22 04.6	+0.5
KLV				AML	AML	16 22 11.1	
	comp=E,45μm,0.3s						
KLV				S	Sn	16 22 11.1	-0.8
KLV				AML	AML	16 22 13.0	
	comp=N,42μm,0.2s						
KLV	**Kalavryta, Ach**	**0.36**	**108**	P	Pb	16 22 04.4	+0.2
KLV				S	Sb	16 22 10.6	+1.0
SERG	**Sergoula**	**0.37**	**45**	P	Pb	16 22 04.1	-0.2
SERG				S	Sb	16 22 10.7	+0.7
SERG				AML	AML	16 22 11.2	
	comp=E,64μm,0.2s						
SERG				AML	AML	16 22 11.6	
	comp=N,54μm,0.3s						
SERG	**Sergoula**	**0.37**	**45**	P	Pb	16 22 04.3	-0.1
SERG				S	Sb	16 22 10.6	+0.7
ANX	**Ano Chora**	**0.47**	**20**	P	Pb	16 22 06.1	+0.1
ANX				S	Sb	16 22 13.7	+1.1
ANX				AML	AML	16 22 14.3	
	comp=N,89μm,0.4s						
ANX				AML	AML	16 22 15.9	
	comp=E,62μm,0.4s						
ANX	**Ano Chora**	**0.47**	**20**	P	Pb	16 22 06.0	+0.1
ANX				S	Sb	16 22 13.4	+0.8
PVO	**Paravola**	**0.49**	**342**	P	Pb	16 22 06.2	0.0
PVO				S	Sn	16 22 15.4	+0.3
PVO				AML	AML	16 22 16.2	
	comp=N,30μm,0.2s						
PVO				AML	AML	16 22 16.4	
	comp=E,34μm,0.1s						
PVO	**Paravola**	**0.49**	**342**	P	Pb	16 22 06.3	+0.1
PVO				S	Sn	16 22 14.6	-0.5
GUR	**Goura**	**0.54**	**114**	P	Pb	16 22 07.5	+0.4
GUR				S	Sb	16 22 13.9	-0.6
GUR				AML	AML	16 22 17.2	
	comp=N,230μm,0.3s						
GUR				AML	AML	16 22 17.4	
	comp=E,205μm,0.3s						
GUR	**Goura**	**0.54**	**114**	P	Pb	16 22 07.3	+0.2
GUR				S	Sb	16 22 14.6	+0.1

*NIED **15** 16:34:00, 35°.80N×141°.00E, h8km, Mw3.6 Best double couple: M0=2.55000×10^14 NP1:φs=172.00000°, δ45.00000°, λ-118.00000°. NP2:φs=29.00000°, δ51.00000°, λ-65.00000°.*
*ISCJB **15** 16:34:20.8±1.2, 35°.81N±0°.04×141°.13E±0°.06, h8km±7km, mb3.5/7, MS3.1/1, Error ellipse: s-maj=8.6km s-min=5.9km az=172.0*
*IDC **15** 16:34:21.9±1.1, 35°.67N×140°.90E, h0km, mb3.4/7, mb1 3.5/9, mb1mx3.4/76, mbtmp3.4/9, ML3.3/2, MS2.6/2, Ms1 2.6/2, ms1mx2.2/41, Error ellipse: s-maj=27.3km s-min=19.3km az=66.0*
*JMA **15** 16:34:23.6±0.1, 35°.77N×140°.94E, h12km±1km, M3.8*
JMA Felt I J1.
ISC 15 16:34:22.7±1.3, 35°.76N±0°.04×141°.00E±0°.07, h10km±7km, n24, σ0°90/24, mb3.5/7, 2C-2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.13**	**244**	⇓P	**Pg**	**16 34 26.2**	**+0.4**
CHOJ				S	**Sg**	**16 34 28.1**	**+0.2**
JCN	**Nagara**	**0.74**	**243**	⇑P	**Pn**	**16 34 37.9**	**-1.3**
JYT	**Yasato**	**0.80**	**306**	P	**Pg**	**16 34 37.9**	**-0.4**
JYT				S	**Sg**	**16 34 47.9**	**-0.9**
JHO	**Hitachi**	**0.92**	**338**	⇓P	**Pg**	**16 34 40.0**	**-0.4**
JHO				*e*S	**Sg**	**16 34 51.8**	**-0.6**
BSO4	**Boso 4**	**0.94**	**215**	P	**Pn**	**16 34 41.8**	**-0.1**
BSO3	**Boso 3**	**1.04**	**203**	⇑P	**Pn**	**16 34 42.8**	**-0.3**
BSO3				S	**Sn**	**16 34 56.0**	**-1.6**
BSO1	**Boso 1**	**1.10**	**181**	P	**Pb**	**16 34 43.3**	**-0.3**
MJAR	**Matsushiro Arr**	**2.39**	**290**	Pn	**Pn**	**16 35 01.8**	**-0.2**
	4.0nm,0.3s,baz=92,slow=8.0,SNR=35						
MJAR				Sn	**Sn**	**16 35 32.7**	**+1.2**
	6.3nm,0.3s,baz=98,slow=22,SNR=7.9						
MJAR				LR	LR	16 35 37.6	
	comp=Z,29nm,21.4s,baz=175,slow=33						
MAT	**Matsushiro**	**2.39**	**290**	P	Pn	**16 35 01.4**	**-0.7**
MAT				S	**Sb**	**16 35 35.2**	**-0.3**
ASAJ	**Asahikawa**	**8.44**	**8**	Pn	**Pn**	**16 36 25.0**	**0.0**
	0.5nm,0.3s,baz=246,slow=13,SNR=8.9						
ASAJ				Sn	**Sn**	**16 37 59.1**	**-1.2**
	0.1nm,0.3s,baz=34,slow=12,SNR=2.2						
H11N2	**WAKE ISLAND Hy 27.81 118**			T	T	17 09 13.2	
	baz=311,slow=75,SNR=54						
H11N1	**WAKE ISLAND Hy 27.82 118**			T	T	17 09 13.7	
	baz=311,slow=75,SNR=49						
H11N3	**WAKE ISLAND Hy 27.83 118**			T	T	17 09 16.3	
	baz=311,slow=75,SNR=62						
SONM	**Songino Array**	**28.24**	**306**	LR	LR	16 51 01.3	
	comp=Z,49nm,19.6s,baz=238,slow=35						
H11S1	**WAKE ISLAND Hy 28.48 120**			T	T	17 10 00.7	
	baz=312,slow=75,SNR=70						
H11S3	**WAKE ISLAND Hy 28.48 120**			T	T	17 10 04.5	
	baz=312,slow=75,SNR=54						
H11S2	**WAKE ISLAND Hy 28.49 120**			T	T	17 10 06.2	
	baz=312,slow=75,SNR=52						
ZALV	**Zalesovo Beam**	**42.54**	**313**	P	**P**	**16 42 19.0**	**+0.7**
	0.3nm,0.3s,baz=85,slow=9.0,SNR=2.4						
MKAR	**Makanchi Array**	**44.52**	**303**	P	**P**	**16 42 35.1**	**+0.6**
	0.6nm,0.7s,baz=82,slow=8.7,SNR=4.2						
KURBB	**Kurchatov Arra**	**46.53**	**309**	P	**P**	**16 42 50.3**	**0.0**
	0.6nm,0.8s,baz=83,slow=7.7,SNR=5.2						
ILAR	**Eielson Array**	**50.75**	**32**	P	**P**	**16 43 24.9**	**+2.3**
	0.4nm,0.7s,baz=264,slow=5.3,SNR=3.2						
BVAR	**Borovoye Array**	**51.19**	**313**	P	**P**	**16 43 26.6**	**+0.6**
	0.2nm,0.5s,baz=93,slow=10,SNR=2.3						
WRA	**Warramunga Arr**	**55.76**	**188**	P	**P**	**16 43 59.6**	**-0.2**
	0.4nm,0.8s,baz=7.2,slow=7.6,SNR=5.9						
ASAR	**Alice Springs**	**59.48**	**188**	P	**P**	**16 44 26.0**	**-0.1**
	0.2nm,0.6s,baz=13,slow=13,SNR=2.9						

IDC 15 17:04:48.7±1.5, 3°.58S×127°.34E, h0km, mb2.9/2, mb1 3.2/4, mb1mx3.1/55, mbtmp3.1/4, ML3.0/2, Error ellipse: s-maj=35.0km s-min=26.3km az=79.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.76**	**56**	Pn	Pn	17 06 03.7	+1.9
	0.4nm,0.3s,baz=285,slow=20,SNR=4.6						
SIJI				Sn	Sn	17 06 57.7	0.0
	baz=253,slow=19,SNR=3.8						
WRA	**Warramunga Arr**	**17.64**	**158**	P	Pn	17 08 56.5	+0.4
	0.1nm,0.3s,baz=340,slow=11,SNR=6.1						
ASAR	**Alice Springs**	**20.95**	**163**	P	P	17 09 32.1	-1.3
	0.2nm,0.6s,baz=344,slow=10,SNR=7.0						
MKAR	**Makanchi Array**	**63.93**	**327**	P	P	17 15 23.7	+0.1
	0.3nm,0.9s,baz=139,slow=5.3,SNR=2.7						

IDC 15 17:08:17.9±30.0, 19°.48S×177°.82W, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.6/53, mbtmp3.8/4, Error ellipse: s-maj=576.9km s-min=147.6km az=87.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.39**	**243**	P	P	17 15 40.9	-0.2
	1.5nm,0.8s,baz=75,slow=15,SNR=3.6						
WRA	**Warramunga Arr**	**44.92**	**261**	P	P	17 16 35.2	+0.4
	0.4nm,0.3s,baz=97,slow=7.7,SNR=31						
ASAR	**Alice Springs**	**44.93**	**256**	P	P	17 16 34.9	0.0
	1.1nm,0.5s,baz=93,slow=7.9,SNR=51						
FITZ	**Fitzroy Crossi**	**53.34**	**262**	P	P	17 17 38.6	-0.7
	0.7nm,0.6s,baz=120,slow=8.1,SNR=4.2						

*SOME **15** 17:27:01.0, 39°.55N×73°.37E, h15km*
*KRNET **15** 17:27:01.8±0.1, 39°.63N×73°.51E, h10km, mb3.3*
*KNET **15** 17:27:04.2±0.9, 39°.80N×73°.17E, h0km, ml3.1, Error ellipse: s-maj=14.0km s-min=6.7km az=132.0*
*NNC **15** 17:27:06.7±5.3, 39°.74N×73°.55E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=37.9km s-min=31.2km az=66.0*
ISC 15 17:27:03.7±1.2, 39°.66N±0°.05×73°.45E±0°.03, h10km, n41, σ2°18/75, 41C-14D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**0.35**	**6**	⇓P	**Pg**	**17 27 09.3**	**-1.5**
	158nm,0.4s						
SFK				⇑S	**Sg**	**17 27 15.3**	**-0.2**
	107nm,0.2s						
SFK	**Sufi-Kurgan**	**0.35**	**6**	⇓*i*P	**Pg**	**17 27 09.5**	**-1.3**
	baz=59						
SFK				⇓*i*S	**Sg**	**17 27 15.0**	**-0.6**
	baz=59						
DRK	**Karamyk**	**1.29**	**262**	⇑*e*P	**Pn**	**17 27 26.9**	**-1.2**
	baz=64						
DRK				⇑*i*S	**Sg**	**17 27 45.5**	**+0.

baz=45
EKS2 Erkin-Say 3.01 5 ⇑P Pb 17 27 54.9 -2.5
0.5nm,0.2s,SNR=12
EKS2 Erkin-Say 3.01 5⇑eP Pn 17 27 53.3 +1.8
baz=4.0
EKS2 ⇑iS Sn 17 28 30.7 +3.0
baz=4.0
AAK Ala-Archa 3.07 14 ⇑Pn Pb 17 27 55.6 -3.0
17nm,0.8s
AAK ⇓Lg Lg 17 28 40.6
29nm,0.7s
AAK Ala-Archa 3.07 14 ⇑P Pb 17 27 56.2 -2.5
5.3nm,0.4s,SNR=9.7
AAK ⇑S Sb 17 28 36.8 +0.6
4.4nm,0.4s
AAK Ala-Archa 3.07 14⇓iP Pn 17 27 53.9 +1.4
baz=14
AAK ⇓iS Sn 17 28 31.8 +2.4
baz=14
MRKS Merke 3.08 357 eP Pb 17 27 57.7 -1.1
20nm,0.4s
MRKS eS Sb 17 28 38.9 +2.4
22nm,0.5s
KBK Karagaybulak 3.20 20⇑iP Pn 17 27 55.7 +1.5
baz=19
KBK ⇑iS Sn 17 28 34.8 +2.3
baz=19
ULHL Ulahol 3.33 38⇑iP Pn 17 27 57.0 +0.9
baz=37
ULHL ⇑iS Sn 17 28 37.6 +1.7
baz=37
IUG Iuzhnay 3.59 315 eP Pn 17 28 02.6 +3.0
7.6nm,0.3s
IUG eS Sb 17 28 46.9 -4.1
52nm,0.8s
TKM2 Tokmak 2 3.63 26 ⇑Pg Pg 17 28 10.9 -2.5
4.7nm,0.6s
TKM2 ⇑Lg Lg 17 29 00.4
14nm,0.7s
TKM2 Tokmak 2 3.63 26⇓iP Pn 17 28 02.0 +1.7
baz=25
TKM2 ⇓iS Sn 17 28 45.2 +1.9
baz=25
USP Ospenovka 3.69 12⇑iP Pn 17 28 02.3 +1.5
baz=11
USP ⇑iS Sn 17 28 46.7 +2.4
baz=11
KST Kastek 3.87 28 eP Pb 17 28 13.7 +1.5
4.2nm,0.6s
KST eS Sg 17 29 06.0 -2.0
42nm,0.8s
DGS Degeres 3.98 25 eP Pb 17 28 15.7 +1.7
9.9nm,0.6s
DGS eS Sg 17 29 10.0 -1.5
36nm,0.8s
KK31 Karatay Array 4.09 328 ⇓Pn Pb 17 28 12.9 -2.9
1.0nm,0.3s,baz=147,slow=15,SNR=11
KK31 ⇑Lg Lg 17 29 11.5
3.0nm,0.3s,baz=148,slow=28,SNR=3.7
MTBS Maitube 4.12 32 eP Pb 17 28 19.1 +2.7
3.8nm,0.5s
MTBS eS Sg 17 29 15.1 -1.1
16nm,0.5s
BRLS Borolday 4.33 322 eP Pb 17 28 19.3 -0.5
0.7nm,0.2s
BRLS eS Sb 17 29 15.9 +3.8
14nm,0.8s
MDOK Medeo 4.42 37 Pg Pg 17 28 25.5 -2.9
6.2nm,0.7s
MDOK ⇓Lg Lg 17 29 24.5
14nm,0.6s
MDOK Medeo 4.42 37 eP Pb 17 28 22.7 +1.1
2.1nm,0.4s
MDOK eS Sg 17 29 21.5 -4.2
21nm,0.7s
KTBS Karatobe 4.71 30 eP Pb 17 28 29.7 +3.2
2.4nm,0.4s
KTBS eS Sg 17 29 33.1 -1.9
17nm,0.8s
KUU Kurty 4.75 26 eP Pb 17 28 29.4 +2.4
2.1nm,0.8s
KUU eS Sg 17 29 32.8 -3.2
30nm,0.6s
CHKK Chushkaly 4.95 31 eP Pb 17 28 33.0 +2.5
1.6nm,0.5s
CHKK eS Sg 17 29 39.6 -3.1
25nm,0.7s
BTLS Baital 5.39 4 eP Pb 17 28 42.0 +4.0
3.3nm,0.7s
BTLS eS Sg 17 29 54.7 -2.1
6.7nm,0.6s
UZB Uzynbulak 5.45 48 eP Pb 17 28 42.0 +2.9
3.5nm,0.6s
UZB eS Sg 17 29 54.1 -4.4
5.9nm,0.8s
PDGK Podgornoye 5.83 49 ⇓Pg Pg 17 28 54.5 -0.8
3.8nm,0.7s
PDGK ⇑Lg Lg 17 30 07.2
14nm,0.9s

MAN 15 17:27:48.4,10°.13N×125°.25E,h35km,mb4.1,ML2.9, MS2.5,1C,Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**0.39**	**271**	*e*P	Pn	17 27 59.2	+1.7
MSLP				eS	Sn	17 28 06.0	+2.3
PLP	**Palo**	**1.06**	**345**	⇑eP	Pn	17 28 06.0	-0.8
PLP				eS	Sn	17 28 18.0	-2.4
OCLP	**Ormoc**	**1.11**	**325**	eP	Pn	17 28 09.3	+1.8
OCLP				eS	Sn	17 28 22.1	+0.5
BESP	**Borongan**	**1.47**	**7**	eP	Pn	17 28 12.8	+0.4
BESP				eS	Sn	17 28 31.6	+1.0

*IDC **15** 17:29:38.1±2.1,3°.72N×95°.41E,h0km,mb3.4/5,mb1 3.5/7, mb1mx3.3/65,mbtmp3.3/7,ML3.0/2,Error ellipse: s-maj=80.6km s-min=19.3km az=54.0*
*ISCJB **15** 17:29:44.4±0.9,3°.83N±0°.07×95°.64E±0°.08,h51km, mb3.4/5,Error ellipse: s-maj=12.4km s-min=8.5km az=150.3*
*DJA **15** 17:29:46.2±1.1,4°.N±5°.×9°.6E±°,h28km±10km,M3.9/7, MLv3.9/7*
ISC 15 17:29:46.1±1.2,3°.85N±0°.07×95°.72E±0°.10,h51km,n14, σ1§04/15,mb3.3/5,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSI	**Meulaboh, Aceh**	**0.80**	**59**	P	**Pn**	**17 30 01.3**	**+0.1**
MLSI				S	**Sn**	**17 30 11.7**	**-0.5**
TPTI		**1.57**	**112**	P	**Pn**	**17 30 11.7**	**+0.1**
BSI	**Banda Aceh**	**1.69**	**345**	P	**Pn**	**17 30 13.8**	**+0.5**
LHMI	**Lhok Sumawe**	**1.83**	**42**	P	**Pn**	**17 30 16.6**	**+1.4**
KCSI	**Kotacane, Aceh**	**2.07**	**99**	P	**Pn**	**17 30 19.7**	**+1.2**
GSI	**Gunungsitoli**	**3.14**	**144**	P	**Pn**	**17 30 33.5**	**+0.4**
PSI	**Prapat**	**3.36**	**108**	Pn	**Pn**	**17 30 35.0**	**-1.3**
	0.7nm,0.3s,baz=180,slow=13,SNR=2.4						
MNSI	**Mandailing Nat**	**4.91**	**128**	P	**Pn**	**17 30 58.8**	**+1.4**
CMAR	**Chiang Mai Arr**	**14.86**	**12**	Pn	**Pn**	**17 33 13.4**	**+0.2**
	0.0nm,0.3s,baz=209,slow=10,SNR=2.6						
MKAR	**Makanchi Array**	**44.34**	**347**	P	**P**	**17 37 51.0**	**-0.3**
	0.3nm,0.6s,baz=161,slow=7.9,SNR=3.1						
WRA	**Warramunga Arr**	**44.70**	**123**	P	**P**	**17 37 54.8**	**+0.3**
	0.2nm,0.5s,baz=302,slow=9.3,SNR=3.8						
ASAR	**Alice Springs**	**46.17**	**128**	P	**P**	**17 38 06.4**	**+0.2**
	0.2nm,0.6s,baz=297,slow=8.1,SNR=4.2						
KURBB	**Kurchatov Arra**	**48.81**	**346**	P	**P**	**17 38 23.9**	**-2.3**
	0.2nm,0.6s,baz=162,slow=7.0,SNR=3.4						
ZALV	**Zalesovo Beam**	**50.73**	**352**	P	**P**	**17 38 40.9**	**+0.2**
	0.9nm,0.5s,baz=178,slow=6.7,SNR=5.8						

*ISCJB **15** 17:30:50.0±0.6,50°.21N±0°.04×19°.19E±0°.03,h0km,Error ellipse: s-maj=5.5km s-min=2.7km az=16.3*
*CSEM **15** 17:30:50.6±0.4,50°.21N×19°.24E,h1km,ML2.5/4,Error ellipse: s-maj=9.2km s-min=4.3km az=10.0*
*PRU **15** 17:30:51.6,50°.19N×19°.25E,h0km*
*WAR **15** 17:30:51.9,50°.18N×19°.34E,h1km,Mw2.4*
ISC 15 17:30:50.9±0.8,50°.12N±0°.03×19°.30E±0°.02,h0km,n32, σ0§84/53,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.34**	**73**	*e*Pg	**Pg**	**17 30 57.5**	**+0.1**
OJC				eSg	**Sg**	**17 31 02.1**	**+0.3**
OJC	**Ojcow**	**0.34**	**73**	*e*Pg	**Pg**	**17 30 57.5**	**+0.1**
OJC				eSg	**Sg**	**17 31 02.1**	**+0.3**
OKC	**Ostrava-Krasne**	**0.79**	**250**	*e*PG	**Pb**	**17 31 07.6**	**0.0**
OKC				eSG	**Sb**	**17 31 18.0**	**-0.9**
	comp=Z,15nm,0.5s						
OKC	**Ostrava-Krasne**	**0.79**	**250**	Pg	**Pb**	**17 31 07.6**	**0.0**
OKC				Sg	**Sb**	**17 31 18.0**	**-0.9**
	15nm,0.5s						
NIE	**Niedzica**	**0.96**	**137**	*e*Pg	**Pn**	**17 31 11.3**	**-0.4**
NIE				eSg	**Sn**	**17 31 26.2**	**+0.2**
NIE	**Niedzica**	**0.96**	**137**	*e*Pg	**Pn**	**17 31 11.3**	**-0.4**
NIE				eSg	**Sn**	**17 31 26.2**	**+0.2**
NIE	**Niedzica**	**0.96**	**137**	*e*Pg	**Pn**	**17 31 11.3**	**-0.4**
NIE				eSg	**Sn**	**17 31 26.2**	**+0.2**
LANS	**Liptovska Anna**	**0.98**	**173**	*e*PG	**Pn**	**17 31 11.6**	**-0.3**
LANS				eSG	**Sn**	**17 31 25.4**	**-1.1**
MORC	**Moravsky Berou**	**1.18**	**254**	*e*Pg	**Pb**	**17 31 14.0**	**-0.3**
MORC				eSg	**Sb**	**17 31 30.3**	**+0.2**
MORC	**Moravsky Berou**	**1.18**	**254**	*e*PG	**Pb**	**17 31 14.0**	**-0.3**
MORC				eSG	**Sb**	**17 31 30.3**	**+0.2**
KRLC	**Kraliky**	**1.62**	**269**	*e*PG	**Pn**	**17 31 20.2**	**-0.6**
KRLC				eSG	**Sn**	**17 31 42.1**	**-0.3**
	comp=Z,3.8nm,0.4s						
KRLC	**Kraliky**	**1.62**	**269**	Pg	**Pn**	**17 31 20.2**	**-0.6**
KRLC				Sg	**Sn**	**17 31 42.1**	**-0.3**
	3.8nm,0.4s						
JAVC	**Velka Javorina**	**1.65**	**221**	*e*PN	**Pg**	**17 31 24.9**	**+2.4**
VYHS	**Vyhne**	**1.65**	**191**	*e*PN	**Pb**	**17 31 21.8**	**-0.5**
VYHS				eSN	**Sg**	**17 31 43.9**	**-0.1**
VYHS				eLG	Lg	17 31 45.5	
VYHS	**Vyhne**	**1.65**	**191**	*e*Pg	**Pb**	**17 31 21.8**	**-0.5**
VYHS				eSn	**Sg**	**17 31 43.9**	**-0.1**
DPC	**Dobruska-Polom**	**1.92**	**278**	*e*PG	**Pn**	**17 31 25.4**	**+0.4**
DPC				eSG	**Sb**	**17 31 51.4**	**0.0**
	comp=Z,11nm,0.4s						
DPC	**Dobruska-Polom**	**1.92**	**278**	Pg	**Pn**	**17 31 25.4**	**+0.4**
DPC				Sg	**Sb**	**17 31 51.4**	**0.0**
	11nm,0.4s						
VRAC	**Vranov**	**1.93**	**246**	*e*Sg	**Sg**	**17 31 52.5**	**-0.5**
VRAC	**Vranov**	**1.93**	**246**	*e*SG	**Sg**	**17 31 52.5**	**-0.5**
KSP	**Ksiaz**	**2.05**	**292**	*e*Pg	**Pg**	**17 31 31.0**	**+0.8**
KSP				eSg	**Sb**	**17 31 56.1**	**+1.0**
KSP	**Ksiaz**	**2.05**	**292**	*e*Pg	**Pg**	**17 31 31.0**	**+0.8**
KSP				eSg	**Sb**	**17 31 56.1**	**+1.0**
UPC	**Upice**	**2.14**	**282**	*e*SG	**Sg**	**17 31 59.1**	**-0.6**
UPC	**Upice**	**2.14**	**282**	Sg	**Sg**	**17 31 59.1**	**-0.6**
KRUC	**Moravsky**	**2.16**	**242**	*e*SG	**Sg**	**17 31 59.9**	**-0.5**
GOPC	**GO Pecny, Ondr**	**2.92**	**268**	*e*SG	**Sb**	**17 32 21.9**	**+1.9**
GOPC	**GO Pecny, Ondr**	**2.92**	**268**	Sg	**Sb**	**17 32 21.9**	**+1.9**
PRU	**Pruhonice**	**3.07**	**269**	*e*SG	**Sg**	**17 32 27.4**	**-2.0**
	comp=Z,2.2nm,0.4s						
PRU	**Pruhonice**	**3.07**	**269**	Sg	**Sg**	**17 32 27.4**	**-2.0**
	2.2nm,0.4s						
BRG	**Berggiesshubel**	**3.50**	**285**	SG	**Sg**	**17 32 43.0**	**-0.3**
	3.5nm,0.5s						
KHC	**Kasperske Hory**	**3.85**	**257**	*e*PN	**Pn**	**17 31 51.0**	**-0.4**
KHC				eSG	**Sg**	**17 32 53.2**	**-1.2**
KHC	**Kasperske Hory**	**3.85**	**257**	Pn	**Pn**	**17 31 51.0**	**-0.4**
KHC				Sg	**Sg**	**17 32 53.2**	**-1.2**

*IDC **15** 18:05:03.8±1.2,6°.00N×127°.28E,h0km,mb3.7/7, mb1 3.8/7,mb1mx3.5/63,mbtmp3.7/7,Error ellipse: s-maj=54.3km s-min=15.6km az=64.0*
*ISCJB **15** 18:05:13.2±1.1,5°.70N±0°.09×126°.6E±0°.1,h84km±10km, mb3.5/7,Error ellipse: s-maj=18.3km s-min=13.1km az=152.0*
ISC 15 18:05:13.8±1.8,5°.7N±0°.1×126°.6E±0°.1,h71km±18km,n14, σ1§44/16,mb3.6/7,1C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.33**	**344**	*e*P	**Pn**	**18 05 35.4**	**-1.2**
MATI				eS	**Sn**	**18 05 53.7**	**-0.1**
DAV	**Davao City (W)**	**1.75**	**323**	Pn	**Pn**	**18 05 40.8**	**-1.4**
	63nm,0.3s,baz=77,slow=14,SNR=4.6						
DAV				Sn	**Sn**	**18 06 05.6**	**+1.9**
	83nm,0.3s,baz=284,slow=19,SNR=5.9						
DMPH	**Davao City--Mi**	**1.80**	**322**	⇑*i*P	Pn	18 05 44.5	+1.5
DMPH				*i* S	**Sn**	**18 06 08.7**	**+3.7**
SKMP	**Bagumbayan, Su**	**2.25**	**292**	*e*P	**Pn**	**18 05 47.8**	**-1.1**
SKMP				eS	**Sn**	**18 06 15.2**	**-0.6**
BUKP	**Musuan**	**2.70**	**325**	*e*P	**Pn**	**18 05 55.3**	**+0.2**
BUKP				eS	**Sn**	**18 06 26.8**	**0.0**
BUTP	**Butuan**	**3.44**	**343**	*e*P	Pn	18 06 15.0	+10
BUTP				eS	Sn	18 06 56.4	+12
PAGZ	**Pagadian**	**3.90**	**304**	*e*P	Pn	18 06 11.6	+0.3
FITZ	**Fitzroy Crossi**	**23.63**	**182**	P	**P**	**18 10 19.6**	**+0.8**
	1.3nm,0.5s,baz=5.0,slow=7.7,SNR=13						
WRA	**Warramunga Arr**	**26.55**	**164**	P	**P**	**18 10 45.2**	**0.0**
	0.4nm,0.5s,baz=340,slow=10,SNR=5.7						
ASAR	**Alice Springs**	**30.00**	**167**	P	**P**	**18 11 16.8**	**+0.8**
	0.4nm,0.5s,baz=348,slow=7.4,SNR=10						
MKAR	**Makanchi Array**	**55.93**	**325**	P	**P**	**18 14 44.0**	**-0.7**
	0.6nm,0.6s,baz=117,slow=7.0,SNR=4.7						
KURBB	**Kurchatov Arra**	**60.08**	**327**	P	**P**	**18 15 13.0**	**-0.6**
	0.4nm,0.5s,baz=128,slow=7.0,SNR=9.7						
BVAR	**Borovoye Array**	**65.67**	**327**	P	**P**	**18 15 50.3**	**-0.4**
	0.5nm,0.6s,baz=120,slow=8.5,SNR=3.0						
AKTO	**Aktyubinsk**	**72.10**	**321**	P	**P**	**18 16 30.6**	**-0.1**
	0.4nm,0.4s,baz=108,slow=13,SNR=2.9						

*ISCJB **15** 18:05:46.1±0.2,55°.44N±0°.02×110°.44E±0°.03,h10km, mb3.7/10,MS3.1/3,Error ellipse: s-maj=3.5km s-min=2.0km az=135.9*
*MOS **15** 18:05:46.4±0.8,55°.52N×110°.43E,h11km,mb4.0/7,Error ellipse: s-maj=10.8km s-min=6.9km az=72.2*
*BYKL **15** 18:05:47.6±0.2,55°.49N×110°.43E*
*IDC **15** 18:05:47.7±1.1,55°.57N×110°.21E,h0km,mb3.7/10, mb1 3.8/16,mb1mx3.6/83,mbtmp3.7/16,ML3.2/6,MS3.1/3, Ms1 3.1/3,ms1mx2.4/72,Error ellipse: s-maj=21.8km s-min=11.7km az=128.0*
ISC 15 18:05:47.7±0.5,55°.45N±0°.02×110°.48E±0°.02,h10km,n66, σ2§57/130,mb3.8/10,MS3.0/3,9C,Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMO	**Kumora**	**0.60**	**43**	⇑*i*Pg	**Pg**	**18 05 58.1**	**-1.2**
KMO				Pmax		18 05 58.7	
	603nm,1.0s						
KMO				*e*Pb	**Pn**	**18 06 04.0**	**+1.7**
KMO				eSg	**Sg**	**18 06 06.0**	**-1.2**
KMO				Smax		18 06 08.5	
	3μm,1.3s						
KMO	**Kumora**	**0.60**	**43**	⇑*i*PG	**Pg**	**18 05 58.1**	**-1.2**
KMO				*e*		18 06 06.1	
KMO				pmax	pmax		
	comp=Z,597nm,0.4s						
KMO				smax	smax		
	comp=E,3μm,1.0s						
NIZ	**Nizh Angarsk**	**0.62**	**302**	⇑*i*Pg	**Pg**	**18 05 58.7**	**-1.1**
NIZ				Pmax		18 06 01.9	
	comp=E,221nm,0.2s						
NIZ				eSg	**Sb**	**18 06 07.3**	**-2.3**
NIZ				Smax		18 06 08.2	
	comp=E,3μm,0.2s						
NIZ	**Nizh Angarsk**	**0.62**	**302**	⇑*i*PG	**Pg**	**18 05 58.7**	**-1.1**
NIZ				*i*		18 06 06.8	
NIZ				pmax	pmax		
	comp=Z,459nm,0.3s						
NIZ				smax	smax		
	comp=E,2μm,0.3s						
YLYR	**Ulyunkhan**	**0.69**	**145**	⇑*i*Pg	**Pg**	**18 06 01.3**	**+0.2**
YLYR				Pmax		18 06 01.5	
	comp=E,386nm,0.5s						
YLYR				eSg	**Sg**	**18 06 11.3**	**+1.1**
YLYR				Smax		18 06 11.6	
	comp=E,2μm,0.3s						
YLYR	**Ulyunkhan**	**0.69**	**145**	⇑*i*PG	**Pg**	**18 06 01.3**	**+0.2**
YLYR				*i*		18 06 11.4	
YLYR				pmax	pmax		
	comp=Z,334nm,0.2s						
YLYR				smax	smax		
	comp=E,2μm,0.3s						
YOA	**Uoyan**	**0.98**	**45**	⇑*i*Pg	**Pg**	**18 06 05.2**	**-1.3**
YOA				Pmax		18 06 06.3	
	comp=E,583nm,0.3s						
YOA				eSg	**Sb**	**18 06 18.5**	**-1.3**
YOA				Smax		18 06 29.9	
	comp=E,5μm,0.8s						
YOA	**Uoyan**	**0.98**	**45**	*e*PG	**Pg**	**18 06 05.3**	**-1.3**
YOA				*i*		18 06 19.2	
YOA				pmax	pmax		
	comp=Z,626nm,0.2s						
YOA				smax	smax		
	comp=N,3μm,0.4s						
SYVR	**Suvo**	**1.82**	**189**	*e*Pn	**Pb**	**18 06 20.7**	**-0.3**
SYVR				*e*Pg	**Pg**	**18 06 21.5**	**-1.0**
SYVR				*e*		18 06 23.3	
SYVR				max		18 06 25.0	
	comp=N,153nm,0.6s						
SYVR				*e*Sn	**Sb**	**18 06 43.8**	**0.0**
SYVR				*e*Sg	**Sg**	**18 06 46.8**	**+0.8**
SYVR				Smax		18 06 48.9	
	comp=N,955nm,1.1s						
SYVR	**Suvo**	**1.82**	**189**	*e*PN	**Pb**	**18 06 20.7**	**-0.3**
SYVR				*e*		18 06 46.6	
SYVR				pmax	pmax		
	comp=Z,155nm,0.6s						
SYVR				smax	smax		
	comp=E,978nm,0.8s						
SVKR	**Severomuysk**	**1.86**	**68**	*e*Pn	**Pb**	**18 06 21.6**	**-0.3**
SVKR				*e*Pg	**Pg**	**18 06 22.1**	**-1.3**
SVKR				Pmax		18 06 22.5	
	comp=E,601nm,0.3s						
SVKR				*e*Sg	**Sg**	**18 06 46.9**	**-0.7**
SVKR				Smax		18 06 51.5	
	comp=E,3μm,0.8s						
SVKR	**Severomuysk**	**1.86**	**68**	*e*PN	**Pb**	**18 06 21.5**	**-0.3**
SVKR				*e*		18 06 46.0	
SVKR				pmax	pmax		
	comp=Z,767nm,0.3s						
SVKR				smax	smax		
	comp=N,3μm,0.7s						
MXMB	**Maximikha**	**2.41**	**206**	*e*Pn	**Pn**	**18 06 28.9**	**+1.7**
MXMB				*e*Pg	**Pb**	**18 06 31.8**	**+0.6**
MXMB				*e*Sg	**Sg**	**18 07 05.3**	**+0.1**
OGRR	**Ongureny**	**2.47**	**224**	*e*Pn	**Pn**	**18 06 29.4**	**+1.4**
OGRR				*e*Pg	**Pb**	**18 06 31.8**	**-0.3**
OGRR				Pmax		18 06 39.3	
	comp=N,63nm,0.4s						
OGRR				*e*		18 07 02.0	
OGRR				*e*Sg	**Sg**	**18 07 04.7**	**-2.3**
OGRR				Smax		18 07 07.4	
	comp=N,909nm,0.4s						
OGRR	**Ongureny**	**2.47**	**224**	*e*PN	**Pn**	**18 06 29.4**	**+1.4**
OGRR				*e*		18 06 32.8	
OGRR				*e*		18 07 03.6	
OGRR				pmax	pmax		
	comp=Z,63nm,0.4s						
OGRR				smax	smax		
	comp=E,907nm,0.7s						
KELR	**Kotokel**	**3.04**	**209**	*e*Pn	**Pn**	**18 06 36.5**	**+0.6**
KELR				*e*Pg	**Pb**	**18 06 42.0**	**+0.1**
KELR				*e*Sn	**Sn**	**18 07 13.1**	**+0.8**
KELR				*e*Sg	**Sg**	**18 07 23.1**	**-2.2**
BOD	**Bodaibo**	**3.07**	**38**	*e*Pn	**Pn**	**18 06 36.8**	**+0.6**
BOD				*e*Pg	**Pb**	**18 06 41.6**	**-0.8**
BOD				*e*		18 06 47.2	
BOD				max		18 06 47.9	
	comp=E,58nm,0.9s						
BOD				*e*Sn	**Sn**	**18 07 13.5**	**+0.5**
BOD				*e*Sg	**Sb**	**18 07 21.6**	**+1.7**
BOD				Smax		18 07 23.5	
	comp=E,377nm,1.1s						
NLYR	**Nelyaty**	**3.12**	**68**	*e*Pn	**Pn**	**18 06 37.7**	**+0.8**
NLYR				*e*Pg	**Pb**	**18 06 43.3**	**+0.1**
NLYR				Pmax		18 06 46.4	
	comp=E,120nm,0.7s						
NLYR				*e*Sn	**Sn**	**18 07 15.5**	**+1.3**
NLYR				*e*Sg	**Sg**	**18 07 24.8**	**-2.9**
NLYR				Smax		18 07 31.4	
	comp=E,603nm,1.1s						
TRG	**Tyrgan**	**3.63**	**224**	*e*Pn	**Pn**	**18 06 45.3**	**+1.3**
TRG				*e*Pg	**Pb**	**18 06 52.2**	**+0.3**
TRG				*e*PgPg	**Pg**	**18 06 56.6**	**-0.6**
TRG				max		18 06 58.0	
	comp=E,65nm,0.9s						
TRG				*e*Sn	**Sn**	**18 07 27.2**	**+0.4**
TRG				*e*		18 07 31.8	
TRG				*e*Sg	**Sb**	**18 07 39.2**	**+3.2**
TRG				Smax		18 07 47.6	
	comp=E,394nm,0.9s						
TRG	**Tyrgan**	**3.63**	**224**	*e*PN	**Pn**	**18 06 45.4**	**+1.4**
TRG				*e*		18 06 53.8	
TRG				*e*S	**Sn**	**18 07 27.8**	**+1.0**
TRG				*e*		18 07 39.3	
TRG				pmax	pmax		
	comp=Z,55nm,0.4s						
TRG				smax	smax		
	comp=E,372nm,0.5s						
CIT	**Chita**	**3.89**	**151**	*e*	**Pb**	**18 06 53.7**	**-2.7**
CIT				*e*Pg	**Pg**	**18 06 57.6**	**-4.6**
CIT				Pmax		18 06 59.4	
	comp=E,74nm,0.7s						
CIT				*e*Sn	**Sn**	**18 07 33.8**	**+0.6**
CIT				*e*Sg	**Sg**	**18 07 48.9**	**-3.6**
CIT				Smax		18 07 53.4	
	comp=E,480nm,1.5s						
UUDB	**Ulan-Yde**	**3.96**	**206**	*e*Pn	**Pn**	**18 06 50.3**	**+1.8**
UUDB				*e*Pg	**Pb**	**18 07 00.1**	**+2.5**
UUDB				Pmax		18 07 05.2	
	comp=E,57nm,1.0s						
UUDB				*e*Sg	**Sg**	**18 07 51.7**	**-3.1**
UUDB				Smax		18 08 01.3	
	comp=E,292nm,1.4s						
FFNB	**Fofonovo**	**4.06**	**214**	*e*	**Pn**	**18 06 50.7**	**+0.8**
FFNB				*e*		18 07 02.4	
FFNB				max		18 07 02.9	
	comp=E,19nm,0.6s						
FFNB				*e*Sn	**Sn**	**18 07 38.1**	**+0.7**
FFNB				*e*Sg	**Sg**	**18 07 53.5**	**-4.5**
FFNB				Smax		18 07 57.8	
	comp=E,159nm,0.8s						
KAB	**Kabansk**	**4.09**	**215**	*e*Sg	**Sg**	**18 07 54.9**	**-4.1**
KAB				Smax		18 08 04.7	
	comp=E,764nm,1.2s						
HRMR	**Khuramsha**	**4.37**	**210**	*e*Pg	**Pb**	**18 07 06.5**	**+2.0**
HRMR				Pmax		18 07 16.8	
	comp=E,355nm,1.0s						
HRMR				*e*Sn	**Sn**	**18 07 44.9**	**-0.1**
HRMR				*e*Sg	**Sg**	**18 08 03.2**	**-4.6**
HRMR				Smax		18 08 09.3	
	comp=E,2μm,1.1s						
BGT	**Bolshoye Golou**	**4.55**	**224**	*e*Pn	**Pn**	**18 06 58.9**	**+2.3**
BGT				*e*Pg	**Pb**	**18 07 08.4**	**+0.8**
BGT				Pmax		18 07 20.0	
	comp=E,25nm,0.6s						
BGT				*e*Sn	**Sn**	**18 07 51.0**	**+1.6**
BGT				*e*Sg	**Sg**	**18 08 08.3**	**-5.3**
BGT				Smax		18 08 12.1	
	comp=E,204nm,1.0s						
CRS	**Chara**	**4.59**	**68**	*e*Pn	**Pn**	**18 06 58.9**	**+1.8**
CRS				*e*Pg	**Pb**	**18 07 09.2**	**+0.9**
CRS				*e*		18 07 11.2	
CRS				max		18 07 13.0	
	comp=E,170nm,0.8s						
CRS				*e*Sg	**Sg**	**18 08 08.6**	**-6.4**
CRS				Smax		18 08 15.9	
	comp=E,358nm,1.5s						
CRS	**Chara**	**4.59**	**68**	*e*PN	**Pb**	**18 07 10.4**	**+2.1**
CRS				*e*		18 08 09.0	
CRS				pmax	pmax		
	comp=Z,171nm,0.9s						
CRS				smax	smax		
	comp=E,354nm,1.1s						
IRK	**Irkutsk**	**4.88**	**231**	*e*Sn	**Sn**	**18 07 57.5**	**-0.1**
IRK				*e*Sg	**Sg**	**18 08 18.6**	**-5.7**
IRK				Smax		18 08 24.2	
	comp=E,606nm,0.9s						
IRK	**Irkutsk**	**4.88**	**231**	*e*PN	**Pn**	**18 07 02.8**	**+1.7**
IRK				*e*		18 07 16.4	
IRK				*e*S	**Sn**	**18 07 56.9**	**-0.7**
IRK				*e*		18 08 19.9	
IRK				pmax	pmax		
	comp=Z,47nm,0.4s						
IRK				smax	smax		
	comp=N,619nm,0.5s						
LSTR	**Listvyanka**	**4.91**	**225**	*e*Pn	**Pn**	**18 07 04.2**	**+2.6**
LSTR				*e*Pg	**Pb**	**18 07 15.0**	**+1.2**
LSTR				Pmax		18 07 20.4	
	comp=N,10.0nm,0.5s						
LSTR				*e*Sn	**Sn**	**18 07 58.7**	**+0.3**

LSTR				*e*Sg	**Sg**	**18 08 19.6**	**-5.7**
LSTR				Smax		18 08 25.0	
	comp=N,240nm,1.2s						
IVK	**Ivanovka**	**5.14**	**227**	*e*Sn	**Sn**	**18 08 03.9**	**0.0**
IVK				*e*Sg	**Sb**	**18 08 25.3**	**+6.0**
IVK				Smax		18 08 29.9	
	comp=N,272nm,1.0s						
TLY	**Talaya**	**5.55**	**230**	Pn	**Pn**	**18 07 11.2**	**+0.8**
	comp=N,0.0nm,0.3s,baz=25,slow=11,SNR=4.1						
TLY				Sn	**Sn**	**18 08 13.2**	**-1.0**
	comp=N,0.1nm,0.3s,baz=225,slow=18,SNR=19						
TLY				Lg	Lg	18 08 36.6	
	comp=N,0.1nm,0.3s,baz=45,slow=17,SNR=3.9						
TLY	**Talaya**	**5.55**	**230**	*e*Pn	**Pn**	**18 07 11.3**	**+0.9**
TLY				*e*		18 07 29.1	
TLY				max		18 07 32.0	
	comp=N,20nm,0.8s						
TLY				*e*Sn	**Sn**	**18 08 15.6**	**+1.4**
TLY				*e*Sg	**Sg**	**18 08 38.4**	**-7.4**
TLY				Smax		18 08 47.3	
	comp=N,160nm,1.2s						
TLY	**Talaya**	**5.55**	**230**	*e*PN	**Pn**	**18 07 11.5**	**+1.1**
TLY				*e*		18 07 29.7	
TLY				*e*S	**Sn**	**18 08 12.9**	**-1.3**
TLY				*e*		18 08 38.5	
TLY				pmax	pmax		
	comp=Z,13nm,0.3s						
TUP	**Tupik**	**5.56**	**97**	*i* Pn	**Pn**	**18 07 11.1**	**+0.7**
TUP				max		18 07 12.0	
	comp=Z,45nm,0.5s						
TUP				*e*Pg	**Pb**	**18 07 26.9**	**+2.1**
TUP				*e*Sn	**Sn**	**18 08 10.5**	**-3.8**
TUP				*e*Sg	**Sg**	**18 08 40.7**	**-5.3**
TUP				Smax		18 08 51.0	
	comp=Z,234nm,1.2s						
TUP	**Tupik**	**5.56**	**97**	*e*PN	**Pn**	**18 07 11.1**	**+0.7**
TUP				*e*		18 07 27.8	
TUP				*e*S	**Sn**	**18 08 13.0**	**-1.3**
TUP				*e*		18 08 41.2	
TUP				pmax	pmax		
	comp=Z,30nm,0.7s						
TUP				smax	smax		
	comp=N,214nm,0.9s						
KPC	**Khapcheranga**	**5.87**	**168**	*e*Pn	**Pn**	**18 07 15.3**	**+0.5**
KPC				*e*Pg	**Pb**	**18 07 34.6**	**+4.5**
KPC				*e*		18 07 35.4	
KPC				max		18 07 38.0	
	comp=N,11nm,1.2s						
KPC				*e*Sn	**Sn**	**18 08 20.4**	**-1.7**
KPC				*e*		18 08 35.2	
KPC				*e*Sg	**Sg**	**18 08 51.1**	**-4.9**
KPC				Smax		18 08 57.4	
	comp=N,168nm,1.1s						
KPC	**Khapcheranga**	**5.87**	**168**	*e*PN	**Pn**	**18 07 15.4**	**+0.6**
KPC				*e*		18 07 35.4	
KPC				*e*S	**Sn**	**18 08 20.6**	**-1.5**
KPC				*e*		18 08 50.8	
KPC				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KPC				smax	smax		
	comp=E,169nm,1.2s						
ARS	**Arshan**	**5.95**	**237**	*e*Pn	**Pn**	**18 07 16.5**	**+0.7**
ARS				*e*Pg	Pb	18 07 35.7	+4.2
ARS				Pmax		18 07 38.7	
	comp=E,39nm,0.6s						
ARS				*e*Sn	**Sn**	**18 08 24.0**	**0.0**
ARS				*e*Sg	**Sg**	**18 08 52.3**	**-6.2**
ARS				Smax		18 09 16.3	
	comp=E,921nm,1.5s						
ZAK	**Zakamensk**	**6.68**	**224**	*e*PN	**Pn**	**18 07 26.5**	**+0.5**
ZAK				*e*		18 07 48.2	
ZAK				*e*		18 09 14.2	
ZAK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ZAK				smax	smax		
	comp=E,84nm,1.4s						
MOY	**Mondy**	**6.80**	**240**	⇑*i*Pn	**Pn**	**18 07 29.7**	**+2.2**
MOY				max		18 07 30.8	
	comp=E,40nm,1.2s						
MOY				*e*Sn	**Sn**	**18 08 44.7**	**-0.4**
MOY				*e*Sg	**Sg**	**18 09 17.5**	**-8.4**
MOY				Smax		18 09 29.1	
	comp=E,171nm,1.0s						
MOY	**Mondy**	**6.80**	**240**	*e*PN	**Pn**	**18 07 29.8**	**+2.2**
MOY				*e*		18 07 51.4	
MOY				*e*S	**Sn**	**18 08 44.2**	**-0.9**
MOY				*e*		18 09 17.5	
MOY				pmax	pmax		
	comp=Z,22nm,0.8s						
MOY				smax	smax		
	comp=N,1μm,1.1s						
ORL	**Orlik**	**6.93**	**250**	⇑*i*Pn	**Pn**	**18 07 31.2**	**+1.8**
ORL				max		18 07 34.8	
	comp=N,33nm,0.9s						
ORL				*e*Sn	**Sn**	**18 08 47.1**	**-1.2**
ORL				*e*Sg	**Sg**	**18 09 22.5**	**-7.5**
ORL				Smax		18 09 28.8	
	comp=N,214nm,1.3s						
ORL	**Orlik**	**6.93**	**250**	*e*PN	**Pn**	**18 07 30.8**	**+1.4**
ORL				*e*		18 07 53.0	
ORL				*e*		18 09 22.3	
ORL				pmax	pmax		
	comp=Z,15nm,0.8s						
ORL				smax	smax		
	comp=N,219nm,1.2s						
SONM	**Songino Array**	**8.04**	**200**	Pn	**Pn**	**18 07 47.1**	**+2.5**
	comp=N,0.4nm,0.3s,baz=18,slow=13,SNR=6.9						
SONM				Lg	Lg	18 10 02.6	
	comp=N,1.8nm,0.3s,baz=15,slow=28,SNR=19						
HIA	**Hailar**	**8.39**	**134**	*e*Sg	**Sg**	**18 10 08.4**	**-8.3**
ZEA	**Zeya**	**9.88**	**93**	*e*P	**Pn**	**18 08 10.7**	**+1.0**
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
ZEA				MLR	MLR		
	comp=E,300nm,7.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,7.0s						
KLR	**Kul'dur**	**14.38**	**107**	Pn	**Pn**	**18 09 12.9**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=307,slow=14,SNR=15						
KLR				Lg	Lg	18 13 20.1	
	comp=Z,0.0nm,0.3s,baz=232,slow=19,SNR=6.9						
ZALV	**Zalesovo Beam**	**14.88**	**275**	Pn	**Pn**	**18 09 18.1**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=83,slow=8.4,SNR=28						
ZALV				Lg	Lg	18 13 36.0	
	comp=Z,0.1nm,0.3s,baz=80,slow=25,SNR=3.5						
MKAR	**Makanchi Array**	**19.58**	**256**	P	**Pn**	**18 10 16.8**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=44,slow=8.9,SNR=14						
KURK	**Kurchatov**	**19.61**	**269**	P	**Pn**	**18 10 16.5**	**-0.7**
KURBB	**Kurchatov Arra**	**19.70**	**269**	P	**P**	**18 10 16.5**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=66,slow=11,SNR=24						
SEY	**Seymchan**	**22.36**	**53**	P	**P**	**18 10 48.5**	**+3.0**
	comp=Z,0.6nm,0.5s,baz=295,slow=17,SNR=4.1						
BVAR	**Borovoye Array**	**23.33**	**281**	P	**P**	**18 10 55.9**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=46,slow=9.3,SNR=8.3						
AAK	**Ala-Archa**	**26.51**	**256**	LR	LR	18 22 04.4	
	comp=Z,44nm,19.9s,baz=200,slow=37						
ARU	**Arti**	**28.53**	**294**	LR	LR	18 24 35.2	
	comp=Z,18nm,21.0s,baz=74,slow=40						
ARCES	**ARCESS Array B**	**38.10**	**325**	P	**P**	**18 13 04.9**	**-1.3**
	comp=Z,1.1nm,0.7s,baz=47,slow=11,SNR=3.7						
FINES	**FINESS Array B**	**41.63**	**314**	P	**P**	**18 13 35.2**	**-0.3**
	comp=Z,1.2nm,0.5s,baz=78,slow=8.2,SNR=14						
AKASG	**Malin Array Be**	**46.42**	**300**	P	**P**	**18 14 13.4**	**-0.7**
	comp=Z,0.9nm,0.4s,baz=45,slow=9.0,SNR=6.7						
ILAR	**Eielson Array**	**46.44**	**35**	P	**P**	**18 14 15.4**	**+1.3**
	comp=Z,0.5nm,0.8s,baz=286,slow=5.3,SNR=4.6						
HFS	**Hagfors**	**47.33**	**317**	P	**P**	**18 14 20.5**	**-0.6**
	comp=Z,1.0nm,0.5s,baz=69,slow=7.9,SNR=6.2						
WSAR	**Wadi Sarin**	**49.75**	**251**	LR	LR	18 38 56.1	
	comp=Z,53nm,18.4s,baz=200,slow=40						
MMAI	**Mount Meron Ar**	**55.32**	**279**	P	**P**	**18 15 22.9**	**+1.5**
	comp=Z,0.4nm,0.5s,baz=57,slow=10,SNR=2.8						
EKA	**Eskdalemuir Ar**	**57.05**	**321**	P	**P**	**18 15 32.8**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=50,slow=5.7,SNR=4.3						
ESDC	**Sonseca Array**	**70.08**	**312**	P	**P**	**18 17 00.9**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=37,slow=5.0,SNR=3.4						

*ISCJB **15** 18:05:55.2±0.6,23°.72N±0°.03×122°.83E±0°.02,h23km±5km, Error ellipse: s-maj=5.3km s-min=3.3km az=174.7*
*TAP **15** 18:05:55.8,23°.80N×122°.86E,h24km±1km,ML2.6,D*
*JMA **15** 18:05:56.6±0.2,23°.84N×122°.81E,h33km,M2.6*
ISC 15 18:05:55.3±1.4,23°.76N±0°.05×122°.83E±0°.02,h23km±15km, n31,σ0°65/59,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonaguni jimaku**	**0.69**	**9**	P	**Pb**	**18 06 08.8**	**0.0**
JYNG				S	**Sb**	**18 06 16.9**	**-1.0**
YOJ	**Yonaguni jima**	**0.71**	**13**	*i* P	**Pb**	**18 06 09.2**	**+0.1**
	baz=11						
YOJ				S	**Sb**	**18 06 18.1**	**-0.5**
	baz=11						
YOJ	**Yonaguni jima**	**0.71**	**13**	P	**Pb**	**18 06 09.2**	**+0.1**
YOJ				*e*S	**Sb**	**18 06 17.5**	**-1.0**
HATJ	**Hateruma jima**	**0.94**	**72**	P	**Pn**	**18 06 13.1**	**0.0**
HATJ				*e*S	**Sb**	**18 06 25.0**	**0.0**
IRIF	**Iriomote-Funau**	**1.00**	**55**	P	**Pb**	**18 06 14.3**	**+0.3**
IRIF				S	**Sn**	**18 06 26.7**	**-0.6**
EOS1	**EOS1**	**1.01**	**321**	P	**Pb**	**18 06 14.8**	**+0.6**
	baz=318						
EOS1				S	**Sb**	**18 06 28.9**	**+1.9**
	baz=318						
HWA	**Hwalien**	**1.14**	**281**	*e*P	**Pn**	**18 06 15.3**	**-0.6**
	baz=265						
JKRS	**Kuro-shima**	**1.18**	**66**	P	**Pb**	**18 06 17.4**	**+0.4**
JKRS				*e*S	**Sb**	**18 06 32.1**	**+0.2**
NANB	**Nanao**	**1.19**	**304**	*e*P	**Pn**	**18 06 16.6**	**+0.1**
	baz=301						
NANB				*e*S	**Sb**	**18 06 32.9**	**+0.8**
	baz=301						
ENA	**Nanau**	**1.19**	**304**	*e*P	**Pn**	**18 06 16.8**	**+0.2**
	baz=301						
ENA				*e*S	**Sb**	**18 06 33.0**	**+0.7**
	baz=301						
TWC	**Suao**	**1.23**	**313**	*e*P	**Pn**	**18 06 17.0**	**-0.1**
	baz=311						
TWC				*e*S	**Sb**	**18 06 34.0**	**+0.7**
	baz=311						
EGFH	**Guangfu**	**1.29**	**266**	P	**Pn**	**18 06 17.7**	**-0.2**
	baz=264						
EGFH				*e*S	**Sn**	**18 06 34.4**	**0.0**
	baz=264						
JIJ	**Ishigaki jima**	**1.34**	**63**	P	**Pb**	**18 06 20.0**	**+0.2**
JIJ				S	**Sn**	**18 06 35.8**	**0.0**
EHY	**Hungye**	**1.41**	**260**	P	**Pn**	**18 06 20.2**	**+0.7**
	baz=258						
EHY				*e*S	**Sn**	**18 06 37.6**	**+0.3**
	baz=258						
TWE	**Neicheng**	**1.43**	**312**	P	**Pb**	**18 06 20.8**	**-0.5**
	baz=310						
TWE				*e*S	**Sb**	**18 06 39.7**	**+0.7**
	baz=310						
ENTT	**Nioudou**	**1.45**	**307**	*e*P	**Pb**	**18 06 21.1**	**-0.5**
	baz=290						
ENTT				*e*S	**Sb**	**18 06 39.6**	**0.0**
	baz=290						
YULB	**Yu-li**	**1.45**	**256**	*e*P	**Pn**	**18 06 20.5**	**+0.3**
	baz=254						
YULB				S	**Sb**	**18 06 38.1**	**-0.4**
	baz=254						
TWF1	**Yuli**	**1.46**	**254**	P	**Pn**	**18 06 20.7**	**+0.4**
	baz=253						
TWF1				*e*S	**Sn**	**18 06 38.5**	**-0.3**
	baz=253						
NNS	**Nan Shan**	**1.49**	**297**	*e*P	**Pn**	**18 06 20.4**	**-0.4**
	baz=295						
NNS				*e*S	**Sn**	**18 06 40.2**	**+0.5**
	baz=295						
TIPB	**Shuangxi**	**1.51**	**323**	*e*P	**Pb**	**18 06 22.2**	**-0.6**
	baz=336						
TIPB				*e*S	**Sb**	**18 06 40.7**	**-0.8**
	baz=336						
FULB	**Fuli**	**1.52**	**249**	*e*P	**Pn**	**18 06 21.1**	**0.0**
	baz=247						
FULB				*e*S	**Sn**	**18 06 39.6**	**-0.5**
	baz=247						
CHGB	**Renai**	**1.54**	**281**	*e*P	**Pn**	**18 06 22.0**	**+0.4**
	baz=280						
CHGB				*e*S	**Sn**	**18 06 40.1**	**-0.9**
	baz=280						
VWDT	**VWDT**	**1.55**	**270**	*e*P	**Pn**	**18 06 22.3**	**+0.8**
	baz=257						
VWDT				*e*S	**Sn**	**18 06 41.2**	**+0.4**
	baz=257						
JISG	**Ishigakijimahi**	**1.58**	**59**	P	**Pn**	**18 06 23.0**	**+1.1**
JISG				S	**Sb**	**18 06 42.3**	**-1.2**
YHNB	**Yeheng**	**1.60**	**304**	*e*P	**Pb**	**18 06 23.8**	**-0.6**
	baz=303						
YHNB				*e*S	**Sb**	**18 06 43.8**	**-0.4**
	baz=303						
NWF	**Wu-fen Shan**	**1.61**	**324**	*e*P	**Pb**	**18 06 25.2**	**+0.7**
	baz=323						
WFSB	**Wu-fen Shan**	**1.61**	**324**	*e*P	**Pb**	**18 06 24.8**	**+0.3**
	baz=323						
NSK	**Sanguang**	**1.62**	**304**	*e*P	**Pb**	**18 06 24.9**	**+0.2**
	baz=303						
NSK				*e*S	**Sb**	**18 06 43.9**	**-0.8**
	baz=303						
TWH	**Lutao**	**1.63**	**230**	P	**Pn**	**18 06 22.5**	**0.0**
	baz=228						
TWH				S	**Sn**	**18 06 42.2**	**-0.5**
	baz=228						
YM07	**YM07**	**1.79**	**322**	*e*P	**Pn**	**18 06 25.6**	**+0.8**
	baz=321						
YM07				*e*S	**Sb**	**18 06 48.4**	**-1.0**
	baz=321						
YM11	**YM11**	**1.80**	**321**	*e*P	**Pn**	**18 06 25.6**	**+0.6**
	baz=320						
YM11				*e*S	**Sb**	**18 06 48.6**	**-1.4**
	baz=320						

*IDC **15** 18:09:57.6±0.7, 17°.70N×119°.70E,h0km,mb3.9/14, mb1 4.0/15,mb1mx3.7/71,mbtmp3.9/15,MS3.1/3, Ms1 3.2/3,ms1mx2.6/65,Error ellipse: s-maj=34.2km s-min=13.7km az=67.0*
*ISCJB **15** 18:09:58.0±1.8, 17°.71N±0°.04×119°.36E±0°.03, h11km±12km,mb3.9/17,MS3.2/2,Error ellipse: s-maj=6.5km s-min=5.1km az=21.2*
*NEIC **15** 18:10:01.3±2.8, 17°.69N×119°.70E,h24km±20km,mb4.2/5, Error ellipse: s-maj=12.3km s-min=6.6km az=72.0*
*MAN **15** 18:10:02.1, 17°.62N×119°.51E,h19km,mb4.7,ML3.6, MS3.5*
ISC 15 18:09:59.1±1.8,17°.69N±0°.05×119°.51E±0°.05,h10km±11km, n43,σ1°01/48,mb4.0/17,1D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABRA	**Dolores**	**1.15**	**92**	*e*P	**Pg**	**18 10 22.1**	**+1.0**
ABRA				*e*S	**Sn**	**18 10 38.8**	**+1.7**
BOLP	**Bolinao**	**1.35**	**163**	*e*P	**Pb**	**18 10 24.7**	**+0.2**
BOLP				*e*S	**Sn**	**18 10 41.7**	**-0.4**
APYP	**Conner**	**1.66**	**84**	*e*P	**Pb**	**18 10 29.5**	**-0.3**
APYP				*e*S	**Sg**	**18 10 52.9**	**+0.3**
SCZP	**Santa Cruz**	**1.94**	**168**	*e*P	**Pn**	**18 10 33.0**	**+1.0**
CVP	**Callao Caves**	**2.21**	**89**	‖*e*P	**Pb**	**18 10 38.5**	**-0.6**
CVP				*e*S	**Sb**	**18 11 06.2**	**-0.3**
CAUP	**Cauayan**	**2.33**	**108**	*e*P	**Pb**	**18 10 41.7**	**+0.4**
SGCP	**Mt. Cagua**	**2.48**	**77**	*e*P	**Pb**	**18 10 41.9**	**-1.9**
SGCP				*e*S	**Sb**	**18 11 13.0**	**-1.3**
BALP	**Baler**	**2.77**	**134**	*e*P	**Pb**	**18 10 46.6**	**-2.1**
YULB	**Yu-li**	**5.92**	**16**	*e*Pn	**Pn**	**18 11 26.1**	**-0.8**
NACB	**Ninganchiao**	**6.74**	**16**	*e*Pn	**Pn**	**18 11 38.8**	**+0.6**
YHNB	**Yeheng**	**7.16**	**14**	*e*Pn	**Pn**	**18 11 43.3**	**-0.8**
YOJ	**Yonaguni jima**	**7.49**	**25**	*e*Pn	**Pn**	**18 11 48.0**	**-0.5**
QIZ	**Qiongzhong**	**9.28**	**280**	*e*Pn	**Pn**	**18 12 11.8**	**-1.2**
QIZ				*e*Sn	Sn	18 13 47.8	-10
SBUM	**Sibu**	**16.75**	**206**	*e*Pn	**Pn**	**18 13 52.3**	**-1.6**
	11nm,1.6s						
CMAR	**Chiang Mai Arr**	**19.57**	**275**	P	**Pn**	**18 14 29.4**	**+0.8**
	baz=76,slow=8.6,SNR=3.3						
CMAR				LR	LR	18 21 17.3	
	comp=Z,24nm,21.8s,baz=105,slow=34						
KSAR	**Wonju Array Be**	**21.02**	**19**	P	**P**	**18 14 43.1**	**+0.3**
KSRS	**Korea Array**	**21.04**	**19**	P	**P**	**18 14 43.1**	**0.0**
	0.9nm,0.7s,baz=199,slow=11,SNR=3.2						
GUMO	**Guam**	**24.75**	**96**	LR	LR	18 22 57.5	
	comp=Z,23nm,21.8s,baz=180,slow=32						
FITZ	**Fitzroy Crossi**	**36.07**	**170**	P	**P**	**18 17 00.8**	**-0.3**
	1.3nm,0.8s,baz=340,slow=9.9,SNR=4.3						
FITZ	**Fitzroy Crossi**	**36.07**	**170**	*e*P	**P**	**18 17 01.4**	**+0.3**
	17nm,1.6s						
WR1	**Warramunga Arr**	**40.13**	**158**	*e*P	**P**	**18 17 34.3**	**-1.1**
	12nm,1.4s						
WRA	**Warramunga Arr**	**40.13**	**158**	P	**P**	**18 17 34.3**	**-1.1**
	0.9nm,0.7s,baz=345,slow=8.4,SNR=12						
MK32	**Makanchi Array**	**42.18**	**322**	*e*P	**P**	**18 17 53.2**	**+1.2**
MK32				*e*PcP	**PcP**	**18 19 46.6**	**+0.4**
MKAR	**Makanchi Array**	**42.18**	**322**	P	**P**	**18 17 53.2**	**+1.2**
	1.0nm,0.8s,baz=124,slow=10,SNR=5.9						
MKAR				PcP	**PcP**	**18 19 46.6**	**+0.4**
	0.4nm,0.6s,baz=104,slow=3.9,SNR=3.7						
AS31	**Alice Springs**	**43.44**	**161**	*e*P	**P**	**18 18 01.9**	**-0.5**
	1.0nm,0.8s						
ASAR	**Alice Springs**	**43.44**	**161**	P	**P**	**18 18 02.0**	**-0.4**
	1.8nm,0.6s,baz=339,slow=6.8,SNR=36						
KURK	**Kurchatov**	**46.27**	**325**	*e*P	**P**	**18 18 26.6**	**+1.9**
KURBB	**Kurchatov Arra**	**46.27**	**325**	P	**P**	**18 18 26.6**	**+1.9**
	4.1nm,0.8s,baz=121,slow=8.3,SNR=21						
BVAR	**Borovoye Array**	**51.87**	**325**	P	**P**	**18 19 09.2**	**+1.6**
	0.5nm,0.5s,baz=108,slow=9.5,SNR=4.6						
STKA	**Stephens Creek**	**53.64**	**157**	P	**P**	**18 19 21.9**	**+1.0**
	2.4nm,1.0s,baz=322,slow=9.7,SNR=4.1						
STKA	**Stephens Creek**	**53.64**	**157**	*e*P	**P**	**18 19 21.9**	**+1.0**
	8.6nm,1.6s						
ABKAR	**Akbulak array**	**57.01**	**318**	*e*P	**P**	**18 19 46.0**	**+1.0**
AKTO	**Aktyubinsk**	**58.46**	**319**	P	**P**	**18 19 56.4**	**+1.2**
	1.2nm,0.8s,baz=117,slow=6.2,SNR=3.9						
SPITS	**Spitsbergen Ar**	**75.48**	**348**	P	**P**	**18 21 42.0**	**-1.0**
	3.7nm,0.8s,baz=84,slow=5.9,SNR=3.7						
ILAR	**Eielson Array**	**75.69**	**26**	LR	LR	18 57 09.8	
	comp=Z,53nm,19.2s,baz=198,slow=38						
FIA0	**FINESS Array S**	**76.27**	**330**	*e*P	**P**	**18 21 47.9**	**+0.1**
FINES	**FINESS Array B**	**76.27**	**330**	P	**P**	**18 21 47.9**	**+0.1**
	0.8nm,0.5s,baz=50,slow=6.0,SNR=4.8						
HFS	**Hagfors**	**82.45**	**331**	P	**P**	**18 22 20.9**	**-0.7**
	0.7nm,0.4s,baz=27,slow=3.5,SNR=6.6						
NB2	**NORSAR Subarra**	**83.22**	**332**	P	**P**	**18 22 25.0**	**-0.6**
	comp=Z,1.3nm,0.8s,baz=68,slow=4.8						
CLL	**Collm**	**86.27**	**323**	*e*P	**P**	**18 22 41.0**	**-0.1**
GERES	**GERESS Array B**	**86.84**	**320**	P	**P**	**18 22 43.5**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=57,slow=4.9,SNR=4.2						
YKA	**Yellowknife Ar**	**89.54**	**22**	P	**P**	**18 22 56.7**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=312,slow=4.8,SNR=6.1						
WIFE	**Three Sisters-**	**96.92**	**40**	*e*P	**P**	**18 23 30.8**	**-0.4**

*IDC **15** 18:18:27.1±1.0,26°.23N×128°.17E,h0km,mb3.7/9, mb1 3.7/9,mb1mx3.4/66,mbtmp3.7/9,MS4.5/1,Ms1 4.5/1, ms1mx2.6/66,Error ellipse: s-maj=31.2km s-min=16.5km az=87.0*
*ISCJB **15** 18:18:28.8±0.8,26°.18N±0°.05×128°.50E±0°.05,h30km±5km, mb3.6/9,MS4.3/1,Error ellipse: s-maj=8.3km s-min=6.7km az=30.4*
*JMA **15** 18:18:31.1±0.3,26°.24N×128°.37E,h26km±4km,M3.4*
ISC 15 18:18:28.5±1.9,26°.21N±0°.06×128°.48E±0°.05,h16km±12km, n19,σ1°16/25,mb3.6/9,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNTH	**Nagotoyohara**	**0.51**	**307**	P	**Pn**	**18 18 39.7**	**-1.5**
JNTH				S	**Sb**	**18 18 46.0**	**-0.3**
JJT3	**Tamagusuku3**	**0.62**	**264**	P	**Pn**	**18 18 41.9**	**-0.9**
JJT3				*e*S	**Sb**	**18 18 50.5**	**+0.8**
JOW	**Kunigami**	**0.64**	**344**	Pn	**Pn**	**18 18 42.8**	**-0.2**
	670nm,0.3s,baz=132,slow=29,SNR=665						
JOW				Sn	**Sn**	**18 18 51.5**	**-1.4**
	772nm,0.3s,baz=325,slow=18,SNR=33						
JOW	**Kunigami**	**0.64**	**344**	P	**Pn**	**18 18 42.9**	**-0.2**
JOW				*e*S	**Sn**	**18 18 51.3**	**-1.7**
JIH	**Iheya**	**0.94**	**331**	P	**Pn**	**18 18 47.5**	**+0.4**
JIH				*e*S	**Sn**	**18 19 00.5**	**+0.3**
JOKE	**Okinoerabujima**	**1.15**	**4**	P	**Pg**	**18 18 50.7**	**-0.1**
JAGN	**Aguni-jima**	**1.17**	**289**	P	**Pb**	**18 18 50.3**	**-0.1**
JAGN				*e*S	**Sb**	**18 19 05.2**	**-0.1**
JKE	**Kume jima 2**	**1.52**	**275**	P	**Pn**	**18 18 54.4**	**-0.7**
JMZ	**Minamidaito 2**	**2.50**	**98**	P	**Pn**	**18 19 08.1**	**-0.5**
JMZ				*e*S	**Sn**	**18 19 36.2**	**-2.6**
ASAJ	**Asahikawa**	**21.21**	**29**	LR	LR	18 31 19.4	
	comp=Z,1μm,20.4s,baz=198,slow=36						
SONM	**Songino Array**	**27.69**	**327**	P	**P**	**18 24 15.6**	**-0.4**
	0.8nm,0.5s,baz=138,slow=8.4,SNR=3.9						
SEY	**Seymchan**	**39.97**	**17**	P	**P**	**18 26 04.3**	**+2.2**
	0.5nm,0.5s,baz=175,slow=7.1,SNR=6.2						
MKAR	**Makanchi Array**	**41.71**	**312**	P	**P**	**18 26 16.0**	**-0.7**
	0.9nm,0.6s,baz=101,slow=10.0,SNR=11						
ZALV	**Zalesovo Beam**	**42.40**	**323**	P	**P**	**18 26 21.2**	**-0.9**
	0.3nm,0.4s,baz=119,slow=7.0,SNR=3.6						
KURBB	**Kurchatov Arra**	**45.02**	**316**	P	**P**	**18 26 42.8**	**-0.4**
	0.3nm,0.4s,baz=105,slow=8.8,SNR=5.9						
WRA	**Warramunga Arr**	**46.23**	**172**	P	**P**	**18 26 53.4**	**+0.3**
	0.7nm,1.0s,baz=353,slow=8.3,SNR=5.4						
ASAR	**Alice Springs**	**49.86**	**173**	P	**P**	**18 27 23.4**	**+2.2**
	0.2nm,0.5s,baz=5.6,slow=13,SNR=5.1						
BVAR	**Borovoye Array**	**50.44**	**318**	P	**P**	**18 27 24.8**	**-0.5**
	0.6nm,0.5s,baz=89,slow=9.6,SNR=8.2						
FINES	**FINESS Array B**	**72.99**	**331**	P	**P**	**18 29 57.0**	**-0.1**
	1.3nm,0.8s,baz=62,slow=5.2,SNR=5.5						

*NIED **15** 18:27:00,39°.10N×143°.00E,h23km,Mw4.4 Best double couple: M0 5.21000×10^15 NP1:φ0 172.00000°,δ15.00000°, λ57.00000°. NP2:φ0 25.00000°,δ77.00000°,λ98.00000°.*
*BJI **15** 18:27:20.6,39°.03N×143°.18E,h13km,mb4.6/55,mB4.8/36, Ms4.1/31,MS7 4.0/31*
*ISCJB **15** 18:27:23.2±0.9,39°.14N±0°.03×143°.12E±0°.04,h21km±5km, mb4.5/64,MS3.9/38,Error ellipse: s-maj=6.1km s-min=3.2km az=41.2*
*MOS **15** 18:27:25.5±0.9,39°.17N×143°.05E,h35km,mb4.8/30,Error ellipse: s-maj=7.6km s-min=5.1km az=96.9*
*JMA **15** 18:27:26.1±0.2,39°.14N×142°.90E,h28km±2km,M4.3*
JMA Felt I J1.
*NEIC **15** 18:27:26.2±0.8,39°.00N×143°.23E,h38km±6km,mb4.7/28, Error ellipse: s-maj=7.9km s-min=6.0km az=120.0*
NEIC Recorded [1 JMA] in Iwate and Miyagi.
*IDC **15** 18:27:28.3±2.5,39

comp=E,2.3nm,0.3s,baz=213,slow=14,SNR=25
ASAJ Sn **Sn** **18 29 36.1 +0.5**
comp=E,3.7nm,0.3s,baz=22,slow=29,SNR=5.8
GRPR Tuman 5.25 21 P **Pn** **18 28 42.1 0.0**
GRPR *i* S **Sn** **18 29 39.1 -2.8**
GRPR pmax pmax
comp=Z,89nm,0.2s
GRPR smax smax
comp=N,448nm,0.4s
GRPR smax smax
comp=E,428nm,0.4s
LAGR Lagunnoye 5.31 21 P **Pn** **18 28 44.0 +1.1**
LAGR *i* S **Sn** **18 29 41.8 -1.6**
LAGR pmax pmax
comp=Z,104nm,0.2s
LAGR smax smax
comp=E,400nm,0.2s
LAGR smax smax
comp=N,469nm,0.3s
YUK Yuzh-Kuril'sk 5.32 22 *e*P **Pn** **18 28 42.9 -0.1**
YUK *i* S **Sn** **18 29 41.3 -2.1**
YUK pmax pmax
comp=N,44nm,0.3s
YUK pmax pmax
comp=Z,86nm,0.3s
YUK smax smax
comp=N,429nm,0.4s
YUK smax smax
comp=E,182nm,0.4s
YUK MLR MLR
comp=Z,295nm,15.0s
YUK MLR MLR
comp=N,140nm,11.0s
YUK MLR MLR
comp=E,215nm,13.0s
SHO Shikotan 5.50 29*d* *i*P **Pn** **18 28 45.3 -0.1**
SHO *i* S **Sn** **18 29 43.6 -4.3**
SHO pmax pmax
comp=E,23nm,0.3s
SHO pmax pmax
comp=Z,25nm,0.3s
SHO pmax pmax
comp=N,19nm,0.2s
SHO smax smax
comp=E,151nm,0.2s
SHO smax smax
comp=N,168nm,0.3s
SHO MLR MLR
comp=N,218nm,17.0s
SHO MLR MLR
comp=Z,191nm,17.0s
INU Inuyama 6.16 234 *e*Pn **Pn** **18 28 55.2 +0.7**
JHJ2 Mitsune 6.57 205 *e*Pn Pn 18 28 56.2 -4.0
JHJ Hachijo jima 2 6.57 205 Pn **Pn** **18 29 00.2 0.0**
comp=Z,7.9nm,0.3s,baz=90,slow=20,SNR=4.4
JHJ Sn **Sn** **18 30 12.0 -2.5**
comp=Z,11nm,0.3s,baz=52,slow=23,SNR=4.3
JHJ LR LR 18 31 56.4
comp=Z,279nm,18.4s,baz=78,slow=41
KUR Kuril'sk 7.05 28 *e*P **Pn** **18 29 08.7 +2.0**
KUR *e*S **Sn** **18 30 23.5 -2.5**
KUR pmax pmax
comp=N,17nm,0.5s
KUR pmax pmax
comp=E,14nm,0.5s
KUR pmax pmax
comp=Z,38nm,0.5s
KUR smax smax
comp=N,76nm,0.3s
KUR smax smax
comp=E,60nm,0.5s
TEY Ternei 7.63 323 *e*P **Pn** **18 29 19.0 +4.2**
TEY pmax pmax
comp=N,9.0nm,0.7s
TEY pmax pmax
comp=E,9.0nm,0.7s
TEY pmax pmax
comp=Z,27nm,0.9s
YSS Yuzh-Sakhalins 7.83 358 *e*Pn **Pn** **18 29 20.2 +2.8**
YSS Yuzh-Sakhalins 7.83 358⇑ *e*P Pb 18 29 30.7 -9.2
YSS pmax pmax
comp=Z,30nm,0.9s
USRK Ussuriysk Ar. 9.74 305 Pn **Pn** **18 29 43.5 -0.2**
comp=Z,0.2nm,0.3s,baz=328,slow=6.8,SNR=3.7
USRK LR LR 18 33 16.3
comp=Z,894nm,19.1s,baz=107,slow=36
MDJ Mudanjiang 11.47 303 P **Pn** **18 30 07.6 +0.2**
MDJ pmax pmax
comp=Z,11nm,1.4s
MDJ pmax pmax
comp=Z,140nm,4.5s
MDJ LR LR
comp=Z,360nm,16.8s
MDJ LR LR
comp=Z,800nm,16.1s
MDJ LR LR
comp=Z,1μm,17.3s
MDJ Mudanjiang 11.47 303 *e*Pn **Pn** **18 30 09.8 +2.5**
JNU Nakatsue 11.56 243 Pn **Pn** **18 30 09.0 +0.3**
comp=Z,0.2nm,0.3s,baz=202,slow=19,SNR=3.7
JNU LR LR 18 34 56.4
comp=Z,672nm,19.5s,baz=88,slow=39
JNU Nakatsue 11.56 243 *e*Pn **Pn** **18 30 08.1 -0.6**
CBIJ Chichi jima 12.03 184 *e*Pn **Pn** **18 30 11.7 -3.3**
KSRS Korea Array 12.06 267 Pn **Pn** **18 30 17.7 +2.3**
comp=Z,0.2nm,0.3s,baz=83,slow=13,SNR=9.4
KSRS LR LR 18 34 33.7
comp=Z,435nm,18.3s,baz=79,slow=36
KS01 Wonju Array Si 12.07 267 *e*Pn **Pn** **18 30 16.6 +0.9**
KS15 Wonju Array Si 12.09 267 *e*Pn **Pn** **18 30 17.1 +1.3**
KSAR Wonju Array Be 12.09 267 Pn **Pn** **18 30 17.7 +1.9**
KSAR Wonju Array Be 12.09 267 P **Pn** **18 30 17.7 +1.9**
GRNR Gornyy 12.56 340 *e*P P 18 30 29.0 -4.6
TJN Taejon 12.77 262⇑ *i*P **Pn** **18 30 26.0 +0.9**
KLR Kul'dur 12.97 325 Pn **Pn** **18 30 27.9 +0.2**
comp=Z,0.0nm,0.3s,baz=141,slow=12,SNR=10
KLR LR LR 18 35 32.4
comp=Z,45nm,18.5s,baz=138,slow=38
KLR Kul'dur 12.97 325⇑ *i*P **Pn** **18 30 28.6 +0.9**
CN2 Changchun 14.04 295 *e*P **Pn** **18 30 44.4 +1.9**
CN2 *e*sP P 18 30 52.4 +2.3
CN2 *e*S **Sn** **18 33 23.5 +6.0**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,400nm,15.0s
CN2 LR LR
comp=Z,400nm,15.0s
CN2 LR LR
comp=Z,400nm,15.0s
ZEA Zeya 18.19 329 *e*P **Pn** **18 31 34.0 -1.8**
ZEA pmax pmax
comp=E,21nm,0.8s
ZEA pmax pmax
comp=N,25nm,0.7s
ZEA pmax pmax
comp=Z,30nm,0.7s
ZEA MLR MLR
comp=N,400nm,14.0s
ZEA MLR MLR
comp=E,200nm,14.0s
ZEA MLR MLR
comp=Z,400nm,14.0s
HIA Hailar 19.51 309 *e*P **P** **18 31 48.2 -2.4**
comp=Z,13nm,0.8s
HIA Hailar 19.51 309 *e*P **P** **18 31 48.2 -2.4**
HIA pmax pmax
comp=Z,13nm,0.8s
BJI Beijing 20.76 281 P **P** **18 32 01.3 -2.8**
BJI pmax pmax
comp=Z,9.0nm,1.1s
BJI LR LR
comp=Z,200nm,5.9s
BJI LR LR
comp=Z,510nm,15.7s
BJT Baijiatuau 20.77 281 *e*P **P** **18 32 01.5 -2.8**
comp=Z,9.4nm,0.6s
BJT Baijiatuau 20.77 281 *e*P **P** **18 32 01.5 -2.8**
BJT pmax pmax
comp=Z,9.0nm,0.6s
NJ2 Nanjing 20.92 258 *e*P **P** **18 32 06.8 +0.9**
NJ2 pmax pmax
comp=Z,4.0nm,0.5s
MA2 Magadan 21.04 11 P **P** **18 32 08.5 +1.6**
comp=Z,20nm,0.8s,baz=199,slow=7.4,SNR=14
MA2 Magadan 21.04 11 *e*P **P** **18 32 08.5 +1.6**
comp=Z,18nm,0.7s
MA2 Magadan 21.04 11⇓ *e*P **P** **18 32 08.2 +1.2**
MA2 pmax pmax
comp=Z,20nm,0.9s
CLNS Chul'man 21.39 332 *e*P **P** **18 32 11.1 +0.2**
CLNS pmax pmax
comp=N,22nm,1.0s
CLNS pmax pmax
comp=Z,25nm,1.1s
CLNS pmax pmax
comp=E,14nm,0.9s
HHC Hu-ho-hao-te 24.17 284 *e*P **P** **18 32 40.3 +0.7**
HHC sP sP 18 32 49.1 -0.5
HHC S **S** **18 36 56.3 -0.1**
HHC pmax pmax
comp=E,22nm,0.8s
HHC pmax pmax
comp=E,130nm,8.9s
HHC LR LR
comp=E,2μm,9.1s
HHC LR LR
comp=E,2μm,12.1s
YAK Yakutsk 24.36 345 *e*P **P** **18 32 39.9 -1.0**
comp=E,30nm,0.9s
YAK Yakutsk 24.36 345 *e*P **P** **18 32 40.0 -1.0**
YAK *e**PP **sP** **18 32 49.7 -1.3**
YAK *e*S **S** **18 36 57.8 -1.0**
YAK *e* 18 43 49.3
YAK pmax pmax
comp=Z,38nm,1.1s
YAK pmax pmax
comp=E,4.0nm,1.3s
YAK pmax pmax
comp=N,7.0nm,1.2s
YAK smax smax
comp=N,17nm,2.0s
YAK smax smax
comp=E,17nm,1.4s
SEY Seymchan 24.49 10 P **P** **18 32 44.0 +1.9**
comp=E,7.1nm,0.7s,baz=190,slow=8.3,SNR=35
SEY Seymchan 24.49 10⇓ *i*P **P** **18 32 44.3 +2.2**
SEY *i* *PP **sP** **18 32 50.3 -1.8**
SEY *i* *SP **pP** **18 32 55.9 +6.7**
GUMO Guam 25.48 176 LR LR 18 41 30.0
comp=E,80nm,22.0s,baz=21,slow=33
ULN Ulaanbaatar 27.37 300 *e*P **P** **18 33 08.6 0.0**
comp=E,3.9nm,0.7s
ULN Ulaanbaatar 27.37 300⇑ *i*P **P** **18 33 08.9 +0.3**
ULN *i* *PP **sP** **18 33 16.3 -2.2**
ULN *i* 18 33 53.8
ULN pmax pmax
comp=Z,3.0nm,0.9s
SONA1 Songino Array 27.81 300 *e*P **P** **18 33 11.8 -0.6**
SONA0 Songino Array 27.81 300 *e*P **P** **18 33 12.4 -0.1**
SONM Songino Array 27.81 300 P **P** **18 33 12.4 -0.1**
comp=Z,3.3nm,0.7s,baz=90,slow=8.8,SNR=15
SONM LR LR 18 44 39.1
comp=Z,326nm,19.2s,baz=89,slow=37
XAN Xi'an 27.82 270 P **P** **18 33 14.6 +2.0**
XAN pP pP 18 33 19.4 -0.2
XAN pmax pmax
comp=Z,6.0nm,0.9s
XAN pmax pmax
comp=Z,110nm,4.3s
XAN LR LR
comp=Z,250nm,18.0s
XAN LR LR
comp=Z,190nm,12.8s
H11N2 WAKE ISLAND Hy 28.19 126 T T 19 02 54.7
baz=319
H11N1 WAKE ISLAND Hy 28.20 127 T T 19 02 58.0
baz=319
H11N3 WAKE ISLAND Hy 28.20 126 T T 19 02 55.3
baz=319
ENH Enshi 28.89 263 *e*P **P** **18 33 21.1 -1.0**
comp=Z,16nm,0.8s
H11S1 WAKE ISLAND Hy 28.99 128 T T 19 04 04.7
baz=320
H11S3 WAKE ISLAND Hy 28.99 128 T T 19 03 57.2
baz=320
H11S2 WAKE ISLAND Hy 29.00 128 T T 19 04 01.4
baz=320
TLY Talaya 30.04 308 P **P** **18 33 31.7 -0.4**
comp=Z,1.5nm,0.5s,baz=198,slow=1.6,SNR=6.4
TLY LR LR 18 46 12.3
comp=Z,349nm,18.3s,baz=106,slow=38
TLY Talaya 30.04 308 *e*P **P** **18 33 32.3 +0.2**
TLY pmax pmax
comp=Z,10.0nm,1.9s
TLY MLR MLR
comp=Z,326nm,18.0s
ZAK Zakamensk 30.10 305 *e*P **P** **18 33 31.9 -0.8**
ZAK pmax pmax
comp=Z,8.0nm,1.3s
LZH Lanzhou 31.10 277 *e*P **P** **18 33 41.6 -0.1**
LZH pP pP 18 33 48.9 +0.1
LZH sP sP 18 33 52.3 +0.6
LZH *e*PP **PnPn** **18 34 43.3 0.0**
LZH *e*S **S** **18 38 46.5 +0.5**
LZH sS sS 18 38 56.4 -1.2
LZH SS **SnSn** **18 40 32.3 +4.5**
LZH pmax pmax
comp=Z,17nm,0.9s
LZH pmax pmax
comp=Z,120nm,4.3s
LZH LR LR
comp=Z,350nm,13.0s
LZH LR LR
comp=Z,580nm,12.5s
LZH LR LR
comp=Z,460nm,13.6s
BILL Bilibino 31.64 16⇑ *e*P **P** **18 33 47.4 +1.4**
BILL *e* 18 34 48.3
BILL pmax pmax
comp=Z,1.0nm,1.0s
BILL MLR MLR
comp=Z,77nm,17.0s
CD2 Chengdu 33.05 268 P **P** **18 33 57.6 -1.2**
CD2 pmax pmax
comp=Z,20nm,0.4s
CD2 LR LR
comp=Z,440nm,16.8s
GTA Gaotai 33.29 285 *e*P **P** **18 34 00.8 -0.1**
GTA pP pP 18 34 07.9 -0.1
GTA sP sP 18 34 11.3 +0.4
GTA S **S** **18 39 23.3 +3.3**
GTA sS sS 18 39 30.8 -0.9
GTA pmax pmax
comp=Z,9.0nm,1.0s
GTA pmax pmax
comp=Z,59nm,6.0s
GTA LR LR
comp=Z,140nm,17.5s
GTA LR LR
comp=Z,390nm,17.9s
GTA LR LR
comp=Z,540nm,17.0s
DAV Davao City (W) 35.62 211 LR LR 18 46 12.6
comp=Z,94nm,21.9s,baz=38,slow=32
KMI Kunming 36.63 260 P **P** **18 34 30.3 +0.3**
KMI pmax pmax
comp=Z,29nm,0.9s
KMI pmax pmax
comp=Z,110nm,4.8s
KMI LR LR
comp=Z,210nm,11.8s
KMI LR LR
comp=Z,200nm,14.1s
KMI LR LR
comp=Z,230nm,17.6s
WMQ Urumqi 41.13 295 P **P** **18 35 08.8 +1.5**
WMQ sP sP 18 35 17.3 -0.1
WMQ pmax pmax
comp=Z,51nm,1.1s
WMQ pmax pmax
comp=Z,160nm,3.8s
WMQ LR LR
comp=Z,110nm,19.3s
WMQ LR LR
comp=Z,89nm,25.7s
WMQ LR LR
comp=Z,120nm,22.5s
ZAA1 Zalesovo Array 41.53 311 *e*P **P** **18 35 10.5 +0.1**
ZAA1 *e*PcP **PcP** **18 37 08.9 +1.5**
ZAA0 Zalesovo Array 41.53 311 *e*P **P** **18 35 10.3 0.0**
comp=Z,5.4nm,0.6s
ZALV Zalesovo Beam 41.53 311 P **P** **18 35 10.5 +0.1**
comp=Z,3.1nm,0.5s,baz=89,slow=7.3,SNR=18
ZALV PcP **PcP** **18 37 08.9 +1.5**
comp=Z,2.1nm,0.8s,baz=84,slow=4.9,SNR=4.8
ZALV LR LR 18 53 05.9
comp=Z,277nm,18.7s,baz=69,slow=37
ZALV Zalesovo Beam 41.53 311 *e*P **P** **18 35 09.8 -0.6**
ZALV *e*PcP **PcP** **18 37 08.3 +0.9**
NRIK Noril'sk 41.95 334 LR LR 18 53 34.5
comp=Z,250nm,19.4s,baz=93,slow=37
NVS Novosibirsk 42.40 312 *e*P **P** **18 35 17.6 +0.2**
NVS pmax pmax
comp=Z,14nm,2.2s
CHTO Chiang Mai 43.12 255 *e*P **P** **18 35 23.9 +0.2**
comp=Z,4.0nm,0.7s
CHTO Chiang Mai 43.12 255 *e*P **P** **18 35 23.9 +0.2**
CHTO pmax pmax
comp=Z,4.0nm,0.7s
CM31 Chiang Mai Arr 43.34 255 *e*P **P** **18 35 24.9 -0.5**
CMAR Chiang Mai Arr 43.34 255 P **P** **18 35 25.4 -0.1**
comp=Z,1.7nm,0.8s,baz=46,slow=7.2,SNR=12
CMAR LR LR 18 53 43.2
comp=Z,49nm,18.4s,baz=52,slow=36
CMAR Chiang Mai Arr 43.34 255 *i* P **P** **18 35 25.8 +0.3**
CMAR pmax pmax
comp=Z,2.0nm,0.8s
CM01 Chiang Mai Arr 43.35 254 *e*P **P** **18 35 25.5 -0.1**
MK01 Makanchi Array 44.18 301 *e*P **P** **18 35 31.7 -0.3**
MK31 Makanchi Array 44.18 301 *e*P **P** **18 35 31.8 -0.1**
MK31 Makanchi Array 44.18 301 *e*P **P** **18 35 31.8 -0.1**
MK32 Makanchi Array 44.18 301 *e*P **P** **18 35 32.1 +0.1**
MKAR Makanchi Array 44.18 301 P **P** **18 35 32.1 +0.1**
comp=Z,8.0nm,0.8s,baz=83,slow=9.2,SNR=51
MKAR LR LR 18 54 37.2
comp=Z,202nm,19.6s,baz=66,slow=37
MKAR Makanchi Array 44.18 301 *e*P **P** **18 35 31.7 -0.3**
comp=Z,69nm,1.0s
MAKZ Makanchi 44.38 301 *e*P **P** **18 35 33.8 +0.2**
comp=Z,11nm,1.0s
MAKZ Makanchi 44.38 301 *e*P **P** **18 35 33.8 +0.2**
MAKZ pmax pmax
comp=Z,11nm,1.0s
COLD Coldfoot 45.67 30 *e*P **P** **18 35 42.7 -0.8**
comp=Z,11nm,1.7s
KURK Kurchatov 45.73 307 *e*P **P** **18 35 43.7 -0.4**
comp=Z,21nm,0.8s
KURK Kurchatov 45.73 307*c* *e*P **P** **18 35 44.3 +0.1**
KURK *i* *SP **sP** **18 35 55.0 +0.7**
KURK pmax pmax
comp=Z,21nm,0.9s
KURBB Kurchatov Arra 45.80 307 P **P** **18 35 45.1 +0.3**
comp=Z,17nm,0.7s,baz=82,slow=8.7,SNR=146
BRDH Bariadhala 46.50 265 LR LR 18 57 55.6
comp=Z,92nm,19.7s,baz=113,slow=40
ILAR Eielson Array 47.01 33 P **P** **18 35 56.7 +2.7**
comp=Z,1.1nm,0.8s,baz=267,slow=6.0,SNR=12
ILB Eielson Array 47.01 33 *e*P **P** **18 35 55.8 +1.7**
RAMN Ramite 48.21 273 *e*P **P** **18 36 04.2 0.0**
comp=Z,46nm,1.1s
GUN Gumba 48.30 275 *e*P **P** **18 36 05.5 +0.5**
comp=Z,30nm,0.6s
TARG Taragay, Kyrgy 48.70 295 *e*P **P** **18 36 07.7 -0.3**
comp=Z,6.3nm,0.8s
KKN Kakani 48.83 275 *e*P **P** **18 36 09.4 +0.5**
comp=Z,21nm,0.6s
PKIN Phulchoki 48.84 275 *e*P **P** **18 36 08.7 -0.4**
comp=Z,14nm,0.6s
GKN Gorkha 49.22 276 *e*P **P** **18 36 11.9 +0.1**
comp=Z,13nm,0.7s
DANN Dangsing 49.73 276 *e*P **P** **18 36 16.4 +0.5**
comp=Z,78nm,0.7s
TKM2 Tokmak 2 49.84 297 P **P** **18 36 17.4 +1.0**
SNR=22
KOLN Koldanda 50.14 276 *e*P **P** **18 36 19.1 +0.2**
comp=Z,13nm,0.7s
BVAR Borovoye Array 50.18 311 P **P** **18 36 18.9 +0.3**
comp=Z,5.1nm,0.8s,baz=74,slow=8.8,SNR=40
BVAR LR LR 18 58 24.1
comp=Z,126nm,19.7s,baz=72,slow=37
BRVK Borovoye 50.23 311 *e*P **P** **18 36 19.0 0.0**
comp=Z,11nm,1.0s
BRVK Borovoye 50.23 311*c* *e*P **P** **18 36 19.6 +0.6**
BRVK *i* *SP **sP** **18 36 30.3 +1.1**
BRVK *i* 18 37 38.0
BRVK pmax pmax
comp=Z,7.0nm,0.9s
OTUK Ortayu 50.31 305 P **P** **18 36 21.6 +1.9**
OTUK pmax pmax
comp=Z,6.0nm,1.0s
KZA Kyzart 50.37 296 P **P** **18 36 22.1 +1.4**
SNR=6.5
KBK Karagaybulak 50.38 297 P **P** **18 36 21.1 +0.6**
SNR=14
PYUN Piuthan 50.45 277 *e*P **P** **18 36 21.8 +0.6**
comp=Z,79nm,0.9s
USP Ospenovka 50.48 298 P **P** **18 36 21.2 +0.1**
SNR=5.8
FRU Bishkek 50.55 298 *e*P **P** **18 36 21.0 -0.6**
FRU *e* 18 36 34.0
AAK Ala-Archa 50.70 297 *e*P **P** **18 36 22.8 -0.1**
comp=Z,5.4nm,0.9s
AAK Ala-Archa 50.70 297⇑ *i*P **P** **18 36 23.5 +0.6**
AAK *i* *SP **sP** **18 36 34.5 +1.4**
AAK pmax pmax
comp=Z,3.0nm,1.0s
HNR Honiara 50.78 158 LR LR 18 55 18.3
comp=Z,62nm,21.9s,baz=192,slow=33
HNR Honiara 50.78 158 *e*P P 18 36 19.1 -4.4
comp=Z,67nm,1.2s
HNR Honiara 50.78 158 *e*P P 18 36 19.1 -4.4
HNR pmax pmax
comp=Z,67nm,1.2s
EKS2 Erkin-Say 51.19 298 P **P** **18 36 27.3 +0.8**
SNR=8.4
AML Almayashu 51.43 297 P **P** **18 36 29.7 +1.0**
SNR=8.4
INK Inuvik 51.91 28 P **P** **18 36 33.8 +2.4**
comp=Z,1.3nm,0.9s,baz=261,slow=11,SNR=3.8
INK Inuvik 51.91 28 *e*P **P** **18 36 33.4 +2.1**
comp=Z,2.5nm,0.9s
MNAS Manas 52.12 298 P **P** **18 36 34.1 +0.6**
MNAS pmax pmax
comp=Z,20nm,1.0s
KK31 Karatay Array 53.26 299 *e*P **P** **18 36 41.6 -0.1**
KK31 Karatay Array 53.26 299 *e*P **P** **18 36 41.6 -0.1**
KKAR Karatay Array 53.26 299 *e*P **P** **18 36 41.6 -0.1**
KKAR Karatay Array 53.26 299 *e*P **P** **18 36 41.6 -0.1**
PSI Prapat 54.02 239 LR LR 19 00 51.9
comp=Z,62nm,18.5s,baz=87,slow=37
PSI Prapat 54.02 239 *e*P **P** **18 36 48.0 +0.3**
comp=Z,3.9nm,0.8s
PSI Prapat 54.02 239 *e*P **P** **18 36 48.0 +0.3**
PSI pmax pmax
comp=Z,4.0nm,0.8s
SVE Sverdlovsk 54.48 318⇑ *e*P **P** **18 36 51.8 +1.4**
SVE pmax pmax
comp=Z,32nm,0.9s
SVE MLR MLR
comp=Z,316nm,16.0s
NIL Nilore 55.25 288 *e*P **P** **18 36 57.3 +0.9**
comp=Z,9.5nm,0.8s
NIL Nilore 55.25 288 *e*P **P** **18 36 57.3 +0.9**
NIL pmax pmax
comp=Z,9.0nm,0.8s
ARU Arti 55.70 318 *e*P **P** **18 36 59.3 +0.1**
comp=Z,18nm,0.8s
ARU Arti 55.70 318*c* *i*P **P** **18 36 59.6 +0.4**
ARU *PP **sP** **18 37 09.8 +0.4**
ARU 18 37 56.6
ARU 18 39 01.0
ARU S **S** **18 44 44.5 +0.5**
ARU SS **SS** **18 48 23.5 -5.3**
ARU pmax pmax
comp=Z,16nm,1.2s
ARU MLR MLR
comp=Z,239nm,18.0s
ABKAR Akbulak array 57.63 310 *e*P **P** **18 37 13.0 0.0**
KBL Kabul 57.93 290 *e*P **P** **18 37 15.5 -0.2**
comp=Z,9.8nm,1.0s
KBL Kabul 57.93 290 *e*P **P** **18 37 15.5 -0.2**
KBL pmax pmax
comp=Z,10.0nm,1.0s
AKTO Aktyubinsk 58.29 311 P **P** **18 37 17.9 +0.2**
comp=Z,2.7nm,0.8s,baz=72,slow=14,SNR=11
AKTO LR LR 19 03 40.3

comp=Z,129nm,18.5s,baz=76,slow=37
WRAB Tennant Creek 59.32 190 ⇓*iP* **P 18 37 26.2 +1.1**
WRAB *i* *SP **sP** 18 37 38.3 +3.0
WRAB *i* 18 38 14.4
WRAB pmax pmax
comp=Z,3.0nm,1.0s
WR1 Warramunga Arr 59.33 190 *eP* **P 18 37 25.4 +0.2**
comp=Z,19nm,1.5s
WRA Warramunga Arr 59.33 190 P **P 18 37 25.4 +0.2**
comp=Z,1.3nm,0.7s,baz=7,7,slow=7.0,SNR=20
WRA Warramunga Arr 59.33 190 *i P* **P 18 37 25.0 -0.2**
WRA pmax pmax
comp=Z,1.0nm,0.7s
PRGR Permogore 59.75 327 *eP* **P 18 37 27.6 0.0**
PRGR *e*PP **sP 18 37 37.4 -0.5**
PRGR pmax pmax
comp=Z,7.0nm,0.6s
YKA Yellowknife Ar 61.32 31 P **P 18 37 40.6 +2.3**
comp=Z,0.2nm,0.6s,baz=302,slow=6.7,SNR=3.7
KLMR Klimovskoe 62.71 328 *eP* **P 18 37 45.3 -2.3**
KLMR pmax pmax
comp=Z,12nm,1.7s
KLMR Klimovskoe 62.71 328 *eP* **P 18 37 45.3 -2.3**
KLMR AMP 18 37 59.0
comp=Z,12nm,1.7s
ASAR Alice Springs 63.06 189 P **P 18 37 51.6 +1.3**
comp=Z,0.5nm,0.7s,baz=14,slow=7.0,SNR=6.4
GEYT Alibeck 64.00 299 LR LR 19 08 18.0
comp=Z,36nm,18.2s,baz=180,slow=38
DZM Mont Dzumac 64.68 156 LR LR 19 02 42.7
comp=Z,66nm,21.7s,baz=108,slow=33
AFI Afiamalu 67.48 132 LR LR 19 03 28.2
comp=Z,61nm,21.8s,baz=162,slow=32
FIA1 FINESS Array S 67.58 332 *eP* **P 18 38 18.7 -0.6**
FIA0 FINESS Array S 67.59 332 *eP* **P 18 38 20.0 +0.7**
FIA0 FINESS Array S 67.59 332 *eP* **P 18 38 20.0 +0.7**
FINES FINESS Array B 67.59 332 P **P 18 38 20.0 +0.7**
comp=Z,2.2nm,0.7s,baz=37,slow=7.4,SNR=7.8
FINES LR LR 19 10 02.3
comp=Z,111nm,20.5s,baz=52,slow=38
KIV Kislovodsk 70.55 311 *eP* **P 18 38 38.7 +0.5**
comp=Z,13nm,0.9s
KIV Kislovodsk 70.55 311 *eP* **P 18 38 39.8 +1.7**
KIV pmax pmax
comp=Z,17nm,1.1s
KIV MLR MLR
comp=Z,85nm,18.0s
KBZ Khabaz 70.56 311 P **P 18 38 37.6 -0.4**
comp=Z,4.9nm,1.0s,baz=18,slow=4.3,SNR=7.5
KBZ LR LR 19 14 32.4
comp=Z,76nm,18.6s,baz=53,slow=40
NC204 NORSAR Array S 72.71 338 *eP* **P 18 38 51.3 +0.5**
HFS Hagfors 72.73 336 P **P 18 38 50.8 0.0**
comp=Z,3.2nm,0.8s,baz=55,slow=5.5,SNR=6.7
HFS LR LR 19 13 17.1
comp=Z,81nm,18.9s,baz=36,slow=38
NB2 NORSAR Subarra 72.77 338 P **P 18 38 51.8 +0.7**
comp=Z,2.8nm,0.9s,baz=39,slow=6.2
NB200 NORSAR Array S 72.77 338 *eP* **P 18 38 51.0 -0.1**
NOA NORSAR Array B 72.77 338 P **P 18 38 51.0 -0.1**
NOA LR LR 19 15 52.6
comp=Z,42nm,19.9s,baz=45,slow=40
NOA NORSAR Array B 72.77 338 P **P 18 38 51.0 -0.1**
AKASG Malin Array Be 73.46 323 P **P 18 38 55.5 +0.2**
comp=Z,1.2nm,0.5s,baz=43,slow=6.3,SNR=7.4
AKASG LR LR 19 14 31.3
comp=Z,42nm,19.1s,baz=70,slow=38
KIEV Kiev 73.47 323 ⇓*iP* **P 18 38 56.4 +1.1**
KIEV *i* *PP **sP 18 39 04.6 -1.1**
KIEV pmax pmax
comp=Z,4.0nm,1.0s
SFJD Kangerlussuaq 73.68 6 LR LR 19 12 46.7
comp=Z,71nm,20.4s,baz=344,slow=37
RCWM Renegade Canyo 74.57 56 *eP* **P 18 39 00.3 -1.9**
BALC Balcom Canyon 74.70 58 *eP* **P 18 39 00.5 -2.4**
VTV Victorville 75.62 57 *eP* **P 18 39 04.8 -3.4**
VTV Victorville 75.62 57 *eP* **P 18 39 04.8 -3.4**
BREC Barre Substati 75.65 58 *eP* **P 18 39 06.2 -2.1**
BUR08 Bucovina Ar. S 77.48 322 *eP* **P 18 39 19.5 +0.9**
BUR04 Bucovina Ar. S 77.49 322 *eP* **P 18 39 19.2 +0.5**
WESC Westside Schoo 77.78 58 *eP* **P 18 39 20.0 -0.3**
BR101 Keskin Array S 78.46 312 *eP* **P 18 39 24.9 +0.7**
BRTR Keskin Array B 78.46 312 P **P 18 39 24.9 +0.7**
comp=Z,0.8nm,0.7s,baz=59,slow=4.8,SNR=4.2
BRTR LR LR 19 19 07.1
comp=Z,38nm,19.2s,baz=72,slow=40
BRTR Keskin Array B 78.46 312 P **P 18 39 25.0 +0.7**
MLR Muntele Rosu 78.64 320 LR LR 19 17 18.0
comp=Z,34nm,18.2s,baz=44,slow=38
CLL Collm 79.94 331 ⇓*iP* **P 18 39 33.0 +1.1**
comp=Z,7.0nm,1.0s
CLL Collm 79.94 331 ⇓*iP* **P 18 39 33.0 +1.1**
CLL pmax pmax
comp=Z,7.0nm,1.0s
GEC2 GERESS Array S 81.63 329 *eP* **P 18 39 41.4 +0.3**
comp=Z,4.1nm,1.3s
GEC2 GERESS Array S 81.63 329 *eP* **P 18 39 41.4 +0.3**
GEC2 pmax pmax
comp=Z,4.0nm,1.3s
GERES GERESS Array B 81.63 329 P **P 18 39 41.5 +0.3**
comp=Z,0.4nm,0.6s,baz=23,slow=4.4,SNR=4.6
GERES LR LR 19 19 04.4
comp=Z,73nm,18.9s,baz=74,slow=38
MMAI Mount Meron Ar 81.84 306 P **P 18 39 43.8 +1.4**
comp=Z,3.3nm,1.0s,baz=56,slow=5.4,SNR=5.9
MMAI LR LR 19 18 13.7
comp=Z,48nm,19.3s,baz=165,slow=37
PPT Papeete 84.39 118 LR LR 19 13 34.6
comp=Z,87nm,19.9s,baz=350,slow=33
WMOK Wichita Mounta 86.86 47 *eP* **P 18 40 04.6 -3.3**
comp=Z,4.3nm,0.9s
WMOK Wichita Mounta 86.86 47 *eP* **P 18 40 04.6 -3.3**
WMOK pmax pmax
comp=Z,4.0nm,0.9s
VAE Valguarnera 90.35 322 LR LR 19 23 19.5
comp=Z,27nm,18.5s,baz=138,slow=37
T47A Sharon Grove 91.26 38 *eP* **P 18 40 26.6 -1.9**
comp=Z,32nm,1.1s
PLAL Pickwick Lake 92.38 40 *eP* **P 18 40 34.1 +0.3**
comp=Z,32nm,1.1s
X48A Hartselle 93.32 39 *eP* **P 18 40 37.9 -0.2**
comp=Z,22nm,0.9s

*ISCJB **15** 18:38:40.9±0.5, 18°.0S±0°.1×177°.92W±0°.10, h590km, mb3.9/18, Error ellipse: s-maj=15.6km s-min=10.1km az=145.3*
*IDC **15** 18:38:41.7±1.3, 18°.08S×177°.80W, h589km±15km, mb3.4/19, mb1 3.6/21, mb1mx3.4/61, mbtmp4.4/21, Error ellipse: s-maj=17.1km s-min=11.0km az=146.0*
ISC 15 18:38:41.8±0.6, **18°.0S**±0°.1×**177°.9W**±0°.1, **h590**km, **n25, σ0s81/28, mb3.8**/18, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.15**	**56**	P	**P**	**18 40 33.3**	**+0.4**
	7.0nm,0.3s,baz=352,slow=23,SNR=3.7						
RAO	**Raoul Island**	**11.16**	**180**	P	**P**	**18 41 12.5**	**+0.6**
	490nm,0.3s,baz=8.2,slow=20,SNR=4.1						
DZM	**Mont Dzumac**	**15.28**	**252**	P	**P**	**18 41 54.3**	**+1.2**
	1.2nm,0.3s,baz=273,slow=22,SNR=11						
URZ	**Urewera**	**20.62**	**191**	P	**P**	**18 42 39.6**	**-1.8**
	3.1nm,0.3s,baz=282,slow=2.9,SNR=10						
CTA	**Charters Tower**	**33.94**	**261**	P	**P**	**18 44 38.2**	**+0.6**
	4.8nm,0.3s,baz=79,slow=12,SNR=9.3						
STKA	**Stephens Creek**	**39.02**	**241**	P	**P**	**18 45 20.1**	**+1.0**
	7.1nm,0.7s,baz=87,slow=9.7,SNR=17						
JAY	**Jayapura**	**43.44**	**286**	P	**P**	**18 45 54.8**	**+0.5**
	22nm,0.7s,baz=118,slow=5.3,SNR=11						
WRA	**Warramunga Arr**	**45.12**	**260**	P	**P**	**18 46 06.8**	**-0.3**
	5.6nm,0.4s,baz=95,slow=7.0,SNR=229						
WRA				ScP	**ScP**	**18 50 32.1**	**+0.3**
	1.0nm,0.8s,baz=90,slow=3.9,SNR=5.7						
ASAR	**Alice Springs**	**45.26**	**254**	P	**P**	**18 46 08.2**	**+0.1**
	16nm,0.6s,baz=92,slow=8.0,SNR=284						
ASAR				ScP	**ScP**	**18 50 32.7**	**+0.4**
	1.1nm,0.9s,baz=101,slow=4.7,SNR=6.0						
ASAR				S	**S**	**18 52 04.5**	**-2.0**
	1.1nm,0.7s,baz=92,slow=16,SNR=9.1						
FITZ	**Fitzroy Crossi**	**53.52**	**261**	P	**P**	**18 47 08.9**	**+0.2**
	1.3nm,0.3s,baz=75,slow=4.6,SNR=28						
BATI	**Baumata**	**57.05**	**269**	P	**P**	**18 47 33.7**	**+0.4**
	13nm,0.8s,baz=90,slow=20,SNR=3.4						
NWAO	**Narrogin (SRO)**	**59.61**	**242**	P	**P**	**18 47 49.8**	**-0.4**
	3.7nm,0.7s,baz=162,slow=20,SNR=3.3						
MJAR	**Matsushiro Arr**	**68.32**	**323**	P	**P**	**18 48 44.4**	**-0.8**
	1.9nm,0.7s,baz=165,slow=5.5,SNR=6.0						
LEM	**Lembang**	**73.23**	**268**	P	**P**	**18 49 14.9**	**+0.2**
	14nm,0.8s,baz=142,slow=23,SNR=4.3						
PETK	**Petropavlovsk-**	**73.94**	**345**	P	**P**	**18 49 17.3**	**-0.3**
	0.8nm,0.6s,baz=122,slow=10,SNR=4.4						
NVAR	**Mina Array Bea**	**79.16**	**44**	P	**P**	**18 49 46.9**	**+0.1**
	0.5nm,0.5s,baz=222,slow=7.3,SNR=3.1						
SEY	**Seymchan**	**84.02**	**347**	P	**P**	**18 50 10.2**	**-0.4**
	1.0nm,0.6s,baz=171,slow=6.1,SNR=8.6						
TXAR	**Lajitas Array**	**85.63**	**57**	P	**P**	**18 50 20.5**	**+1.2**
	1.0nm,0.7s,baz=224,slow=5.8,SNR=12						
ILAR	**Eielson Array**	**85.90**	**13**	P	**P**	**18 50 18.6**	**-1.1**
	0.5nm,0.7s,baz=217,slow=2.3,SNR=4.1						
PDAR	**Pinedale Array**	**87.09**	**43**	P	**P**	**18 50 25.8**	**-0.3**
	0.2nm,0.6s,baz=248,slow=4.8,SNR=2.7						
CMAR	**Chiang Mai Arr**	**89.42**	**290**	P	**P**	**18 50 37.5**	**+0.3**
	1.3nm,1.0s,baz=114,slow=3.8,SNR=6.0						
SNAA	**Sanae**	**90.45**	**178**	P	**P**	**18 50 40.3**	**-0.7**
	0.4nm,0.6s,baz=29,slow=13,SNR=3.8						
BRTR	**Keskin Array B**	**145.24**	**315**	PKPbc	**PKPdf**	**18 57 14.1**	**+0.6**
	1.2nm,0.8s,baz=102,slow=3.7,SNR=6.9						
MMAI	**Mount Meron Ar**	**146.65**	**303**	PKPbc	**PKPbc**	**18 57 18.7**	**-0.1**
	1.5nm,0.6s,baz=60,slow=5.8,SNR=7.2						
GERES	**GERESS Array B**	**147.87**	**346**	PKPbc	**PKPbc**	**18 57 21.2**	**-0.3**
	0.3nm,0.4s,baz=58,slow=3.7,SNR=3.4						

IDC 15 18:39:16.6±1.4, **2°.47N**×**128°.93E, h0**km, **mb3.4**/5, **mb1 3.5**/6, **mb1mx3.3**/62, **mbtmp3.4**/6, **ML3.3**/1, **MS3.5**/1, **Ms1 3.5**/1, **ms1mx2.4**/30, **Error ellipse: s-maj=111.8km s-min=18.2km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.05**	**145**	Pn	Pn	18 40 19.2	-0.7
	1.9nm,0.3s,baz=115,slow=15,SNR=36						
SIJI				Sn	Sn	18 41 03.3	-4.9
	2.0nm,0.3s,baz=216,slow=23,SNR=6.7						
WRA	**Warramunga Arr**	**22.89**	**167**	P	P	18 44 22.3	+0.2
	0.6nm,0.9s,baz=346,slow=10,SNR=3.8						
ASAR	**Alice Springs**	**26.42**	**170**	P	P	18 44 55.0	-0.3
	0.2nm,0.6s,baz=345,slow=6.6,SNR=3.0						
PALK	**Pallekele**	**48.27**	**277**	LR	LR	19 08 42.7	
	comp=Z,56nm,21.8s,baz=104,slow=37						
MKAR	**Makanchi Array**	**59.84**	**325**	P	P	18 49 24.2	+0.1
	0.5nm,0.6s,baz=115,slow=8.8,SNR=6.3						
KURBB	**Kurchatov Arra**	**63.99**	**327**	P	P	18 49 51.8	0.0
	0.3nm,0.5s,baz=130,slow=6.2,SNR=8.5						
BVAR	**Borovoye Array**	**69.57**	**327**	P	P	18 50 27.6	+0.1
	0.2nm,0.4s,baz=116,slow=6.6,SNR=3.1						

*ISK **15** 18:42:01.9, 37°.16N×31°.69E, h5km, ML2.5/6*
*ISCJB **15** 18:42:02.6±0.7, 37°.18N±0°.03×31°.68E±0°.06, h3km±9km, Error ellipse: s-maj=8.3km s-min=4.8km az=3.3*
*DDA **15** 18:42:02.3, 37°.17N×31°.64E, h7km, Ml2.5*
*CSEM **15** 18:42:02.6±0.3, 37°.18N×31°.66E, h8km, ML2.5, Error ellipse: s-maj=7.1km s-min=5.1km az=54.0*
ISC 15 18:42:02.4±1.1, **37°.18N**±0°.03×**31°.66E**±0°.03, **h8**km±10km, **n21, σ0s44/34, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEPZ	**Antalya-Kepez**	**0.28**	**189**	*i* P	**Pg**	**18 42 08.0**	**0.0**
KEPZ				*i* S	**Sg**	**18 42 12.1**	**+0.4**
KEPZ	**Antalya-Kepez**	**0.28**	**189**	P	**Pg**	**18 42 08.0**	**0.0**
KEPZ				S	**Sg**	**18 42 12.1**	**+0.4**
SUTC	**Sutluce-Ispart**	**0.60**	**300**	PG	**Pb**	**18 42 14.7**	**-0.6**
SUTC				SG	**Sb**	**18 42 24.2**	**+0.2**
SUTC	**Sutluce-Ispart**	**0.60**	**300**	*e*Pg	**Pb**	**18 42 14.7**	**-0.6**
SUTC				*e*Sg	**Sb**	**18 42 24.2**	**+0.2**
KONT	**Konya--Tatoy**	**0.95**	**36**	PG	**Pb**	**18 42 21.2**	**+0.1**
KONT				SG	**Sb**	**18 42 34.4**	**+0.6**
KONT	**Konya--Tatoy**	**0.95**	**36**	*i* P	**Pg**	**18 42 20.8**	**+0.1**
KONT				*i* S	**Sb**	**18 42 34.8**	**+1.0**
KONT	**Konya--Tatoy**	**0.95**	**36**	*e*Pg	**Pb**	**18 42 21.2**	**+0.1**
KONT				*e*Sg	**Sb**	**18 42 34.4**	**+0.6**
GAZI	**Gazipasa**	**1.08**	**150**	*i* P	**Pg**	**18 42 22.9**	**-0.2**
GAZI				*i* S	**Sn**	**18 42 39.1**	**+0.2**
GAZI	**Gazipasa**	**1.08**	**150**	P	**Pg**	**18 42 22.9**	**-0.2**
GAZI				S	**Sn**	**18 42 39.2**	**+0.2**
ERMK	**Ermenek**	**1.14**	**118**	*i* P	**Pg**	**18 42 23.9**	**-0.4**
ERMK				*i* S	**Sn**	**18 42 40.7**	**0.0**
ERMK	**Ermenek**	**1.14**	**118**	P	**Pg**	**18 42 23.9**	**-0.4**
ERMK				S	**Sn**	**18 42 40.7**	**0.0**
LADK	**Ladik-KONYA**	**1.16**	**29**	PN	**Pg**	**18 42 23.9**	**-0.9**
LADK	**Ladik-KONYA**	**1.16**	**29**	*e*Pn	**Pg**	**18 42 23.9**	**-0.9**
BERE	**Bereket-Mersin**	**1.51**	**123**	PN	**Pn**	**18 42 29.8**	**0.0**
BERE	**Bereket-Mersin**	**1.51**	**123**	*e*Pn	**Pn**	**18 42 29.8**	**0.0**
KEBE	**Keben-Mersin**	**1.81**	**113**	PN	**Pn**	**18 42 34.0**	**+0.2**
KEBE	**Keben-Mersin**	**1.81**	**113**	*e*Pn	**Pn**	**18 42 34.0**	**+0.2**
GULN	**MERSIN_Gulnar**	**1.81**	**123**	*i* P	**Pb**	**18 42 35.2**	**-0.6**
GULN				*i* S	**Sb**	**18 42 58.5**	**-0.1**
GULN	**MERSIN_Gulnar**	**1.81**	**123**	P	**Pb**	**18 42 35.2**	**-0.6**
GULN				S	**Sb**	**18 42 58.5**	**-0.1**
AKKU	**Akkuyu-Mersin**	**1.83**	**123**	PN	**Pn**	**18 42 34.6**	**+0.5**
AKKU	**Akkuyu-Mersin**	**1.83**	**123**	*e*Pn	**Pn**	**18 42 34.6**	**+0.5**

*NIED **15** 19:01:00, 38°.50N×142°.30E, h14km, Mw3.4 Best double couple: M0 1.33000×10^14 NP1:φs111.00000°, δ10.00000°, λ-88.00000°. NP2:φs289.00000°, δ80.00000°, λ-90.00000°.*
JMA 15 19:01:15.2±0.1, **38°.46N**×**142°.28E, h24**km±1km, **M3.5, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**0.73**	**270**	P	Pb	19 01 29.1	-0.2
JIO				S	Sb	19 01 38.6	-0.2
OFUJ	**Ofunato**	**0.78**	**323**	P	Pb	19 01 29.9	-0.2
OFUJ				S	Sb	19 01 40.5	+0.1
JMK	**Ichinoseki**	**0.96**	**301**	P	Pn	19 01 33.0	-0.2
JMK				S	Sb	19 01 45.7	+0.2
JOM	**Ohasama**	**1.27**	**323**	P	Pn	19 01 37.8	+0.3
JOM				S	Sb	19 01 54.3	-0.1
JOU	**Okura**	**1.27**	**266**	P	Pn	19 01 37.9	+0.4
JOU				S	Sb	19 01 54.5	0.0
JMM	**Marumori**	**1.31**	**244**	P	Pn	19 01 37.5	-0.5
JMM				S	Sn	19 01 53.9	-0.9
JFK	**Kawauchi**	**1.56**	**226**	P	Pn	19 01 40.0	-1.4
JFK				S	Sn	19 01 58.1	-2.8
JYK	**Kaneyama**	**1.57**	**288**	P	Pn	19 01 42.3	+0.7
JYK				*e*S	Sb	19 02 02.4	-0.6
JRG	**Rokugo**	**1.59**	**307**	P	Pb	19 01 43.2	-0.7

IDC 15 19:08:01.2±2.1, **37°.99S**×**75°.47W, h0**km, **mb3.3**/1, **mb1 3.7**/3, **mb1mx3.4**/37, **mbtmp3.4**/3, **ML3.2**/2, **MS3.0**/1, **Ms1 3.0**/1, **ms1mx2.6**/13, **Error ellipse: s-maj=83.0km s-min=28.6km az=41.0, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**4.70**	**127**	Pn	Pn	19 09 13.6	+0.1
	0.1nm,0.3s,baz=330,slow=15,SNR=2.9						
PLCA				Sn	Sn	19 10 10.3	+1.7
	0.5nm,0.3s,baz=26,slow=16,SNR=5.7						
CPUP	**Villa Florida**	**19.22**	**58**	Pn	Pn	19 12 27.9	+0.1
	0.1nm,0.3s,baz=236,slow=11,SNR=2.8						
CPUP				LR	LR	19 20 46.5	
	comp=Z,43nm,18.7s,baz=49,slow=40						
TXAR	**Lajitas Array**	**71.98**	**334**	P	P	19 19 27.0	+0.2
	0.2nm,0.6s,baz=152,slow=9.8,SNR=3.1						
BVAR	**Borovoye Array**	**152.07**	**46**	PKPbc	PKPbc	19 27 57.4	-0.5
	0.2nm,0.5s,baz=302,slow=3.2,SNR=2.6						

GUC 15 19:27:12.8±0.7, **21°.32S**×**68°.85W, h113**km±5km, **ML3.5, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.60**	**217**	*e*P	Pn	19 27 31.5	+0.6
PB09				*i* S	Sn	19 27 45.4	+0.9
PB01	**IPOC Station P**	**0.65**	**295**	*e*P	Pn	19 27 31.5	+0.3
PB01				*i* S	Sn	19 27 45.7	+0.7
PB01				IAML		19 27 47.0	
	comp=E,4μm,0.2s						
PB02	**IPOC Station P**	**0.97**	**270**	*e*P	Pn	19 27 34.9	+0.8
PB02				*i* S	Sn	19 27 51.6	+1.4
PB07	**IPOC Station P**	**1.04**	**247**	*e*P	Pn	19 27 35.7	+0.8
PB07				*i* S	Sn	19 27 52.8	+1.2
PB07				IAML		19 27 54.0	
	comp=E,1μm,0.3s						
PB08	**IPOC Station P**	**1.20**	**346**	*e*P	Pn	19 27 37.7	+0.9
PB08				*i* S	Sn	19 27 56.1	+1.1
PB08				IAML		19 27 57.7	
	comp=E,947nm,0.6s						
PB06	**IPOC Station P**	**1.53**	**206**	*e*P	Pn	19 27 41.1	+0.7
PB06				*i* S	Sn	19 28 02.3	+0.9
PB06				IAML		19 28 03.0	
	comp=E,708nm,0.2s						
PB04	**IPOC Station P**	**1.57**	**230**	*e*P	Pn	19 27 41.3	+0.5
PB04				*i* S	Sn	19 28 03.1	+1.0
PB04				IAML		19 28 06.8	
	comp=E,490nm,0.3s						

*NIED **15** 19:36:00, 37°.30N×142°.10E, h14km, Mw3.4 Best double couple: M0 1.42000×10^14 NP1:φs5.00000°, δ6.00000°, λ-87.00000°. NP2:φs182.00000°, δ84.00000°, λ-90.00000°.*
JMA 15 19:36:53.9±0.2, **37°.33N**×**142°.12E, h1**km±3km, **M3.7, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**1.08**	**258**	P	Pb	19 37 15.0	-0.4
ONAJ				*e*S	Sb	19 37 29.8	-0.2
JMM	**Marumori**	**1.18**	**297**	P	Pg	19 37 16.7	+0.1
JMM				*e*S	Sb	19 37 32.5	-0.4
JIO	**Ouri**	**1.28**	**332**	*e*S	Sg	19 37 35.3	+0.3
JOU	**Okura**	**1.55**	**312**	P	Pn	19 37 22.9	+0.3
JOU				*e*S	Sg	19 37 43.9	+0.2
JMK	**Ichinoseki**	**1.77**	**337**	*e*S	Sb	19 37 49.9	+0.1
JYS	**Shiratake**	**1.85**	**299**	P	Pn	19 37 27.6	+0.8
JYS				S	Sb	19 37 52.6	+0.3
MAT	**Matsushiro**	**3.23**	**257**	P	Pn	19 37 45.6	-0.2
MAT				S	Sn	19 38 26.9	+2.0

*SOME **15** 19:52:13.8, 46°.67N×84°.20E, h5km*
*NNC **15** 19:52:13.2±4.7, 46°.70N×84°.44E, h0km, mb4.2, mpv4.0, Error ellipse: s-maj=33.5km s-min=14.0km az=89.0*
*BJI **15** 19:52:14.5, 46°.66N×84°.44E, h10km, ML3.6/7*
ISC 15 19:52:15.1±0.9, **46°.60N**±0°.05×**84°.16E**±0°.04, **h10**km, **n14, σ2s83/20, 6C-6D, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZSN	**Zaisan**	**0.97**	**29**	*e*P	**Pg**	**19 52 31.4**	**-2.5**
	23nm,0.1s						
ZSN				*e*S	**Sg**	**19 52 43.4**	**-3.2**
	496nm,0.2s						
MK31	**Makanchi Array**	**1.30**	**279**	⇑P	**Pg**	**19 52 41.4**	**+1.3**
	16nm,0.2s,baz=98,slow=16,SNR=2893						
MK31				⇓S	**Sg**	**19 53 01.3**	**+4.3**
	112nm,0.3s,baz=89,slow=32,SNR=4.5						
MAKZ	**Makanchi**	**1.52**	**279**	⇑P	**Pg**	**19 52 44.4**	**+0.2**
	31nm,0.2s						
MAKZ				⇓S	**Sg**	**19 53 07.0**	**+3.1**
	118nm,0.3s						
KAPS	**Kapalarasan**	**3.60**	**250**	⇓*iP*	**Pg**	**19 53 21.4**	**-2.6**
	14nm,0.3s						
KAPS				⇓*iS*	**Sg**	**19 54 10.5**	**-0.2**
	51nm,0.3s						
WMQ	**Urumqi**	**3.74**	**137**	Pn	**Pn**	**19 53 15.5**	**+2.6**
WMQ				Sn	**Sn**	**19 53 59.8**	**+2.7**
WMQ				smax	smax		
	comp=N,220nm,0.9s						
WMQ				smax	smax		
	comp=E,260nm,0.9s						
DJR	**Jarkent**	**3.82**	**235**	*e*P	**Pg**	**19 53 26.0**	**-2.3**
	32nm,0.4s						
DJR				*e*S	**Sg**	**19 54 17.4**	**-0.4**
	28nm,0.4s						
TDK	**Taldyqorghan**	**4.33**	**250**	*e*P	**Pg**	**19 53 36.5**	**-1.6**
	72nm,0.4s						
TDK				*e*S	**Sg**	**19 54 36.2**	**+2.1**
	137nm,1.0s						
SEM	**Semipalatinsk**	**4.61**	**327**	*e*P	**Pb**	**19 53 37.5**	**+1.3**
	19nm,0.2s						
SEM				*e*S	**Sg**	**19 54 37.3**	**-5.7**
	150nm,0.5s						
PDGK	**Podgornoye**	**4.66**	**227**	⇑Pn	**Pn**	**19 53 27.3**	**+1.7**
	18nm,0.4s						
PDGK				⇓Sn	**Sn**	**19 54 22.6**	**+2.8**
	15nm,0.4s						
PDGK				⇓Lg	Lg	19 54 44.1	
	22nm,0.5s						
ARXS	**Arharly**	**5.06**	**244**	*e*P	Pg	19 53 47.6	-4.4
	8.1nm,0.5s						
ARXS				*e*S	**Sg**	**19 54 56.0**	**-1.5**
	25nm,0.4s						
KURBB	**Kurchatov Arra**	**5.49**	**319**	⇑Lg	Lg	19 55 10.2	
	180nm,0.6s						
KURK	**Kurchatov**	**5.51**	**320**	⇑Lg	Lg	19 55 08.4	
	47nm,0.6s						
CHKK	**Chushkaly**	**5.76**	**244**	*e*P	Pg	19 54 00.5	-4.9
	2.1nm,0.3s						
CHKK				*e*S	**Sg**	**19 55 17.0**	**-3.0**
	14nm,0.5s						
OTUK	**Ortayu**	**8.18**	**286**	⇑Lg	Lg	19 56 34.9	
	39nm,1.1s						

IDC 15 19:54:35.0±3.3, **24°.38S**×**177°.68W, h0**km, **mb3.9**/4, **mb1 4.0**/4, **mb1mx3.7**/46, **mbtmp3.9**/4, **MS3.6**/6, **Ms1 3.6**/6, **ms1mx3.0**/46, **Error ellipse: s-maj=202.0km s-min=43.1km az=161.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**33.59**	**270**	P	P	20 01 19.2	+2.0
	3.1nm,0.7s,baz=102,slow=12,SNR=3.5						
STKA	**Stephens Creek**	**36.52**	**249**	LR	LR	20 15 57.9	
	comp=Z,100nm,18.4s,baz=29,slow=35						
ASAR	**Alice Springs**	**44.05**	**261**	P	P	20 02 43.5	-1.4
	0.3nm,0.3s,baz=98,slow=8.1,SNR=14						
WRA	**Warramunga Arr**	**44.48**	**266**	P	P	20 02 47.8	-0.6
	0.3nm,0.3s,baz=102,slow=8.3,SNR=12						
FITZ	**Fitzroy Crossi**	**52.90**	**265**	P	P	20 03 53.1	0.0
	2.4nm,1.1s,baz=135,slow=5.7,SNR=4.9						
RPN	**Rapa Nui**	**60.92**	**109**	LR	LR	20 24 32.1	
	comp=Z,59nm,19.1s,baz=289,slow=30						
LEM	**Lembang**	**73.30**	**270**	LR	LR	20 38 16.1	
	comp=Z,97nm,19.5s,baz=172,slow=36						
KSRS	**Korea Array**	**79.99**	**319**	LR	LR	20 40 54.1	
	comp=Z,11nm,18.3s,baz=130,slow=35						
ANMO	**Albuquerque**	**89.60**	**51**	LR	LR	20 40 23.1	
	comp=Z,23nm,18.7s,baz=242,slow=31						
PDAR	**Pinedale Array**	**91.58**	**43**	LR	LR	20 42 58.4	
	comp=Z,28nm,18.2s,baz=246,slow=32						
HFS

KOWA Kowa 68.94 63 P P 20 12 27.4 +0.1
1.4nm,0.7s,baz=229,slow=9.3,SNR=2.9
TORD Torodi Ar. Bea 73.04 67 P P 20 12 52.0 -0.3
3.2nm,0.7s,baz=251,slow=5.7,SNR=11
PDAR Pinedale Array 78.06 327 P P 20 13 19.8 -1.0
0.4nm,0.5s,baz=129,slow=7.2,SNR=2.8
ULM Lac du Bonnet 78.40 339 P P 20 13 23.9 +1.8
1.6nm,0.5s,baz=173,slow=8.1,SNR=2.9
NVAR Mina Array Bea 79.92 319 P P 20 13 31.0 -0.1
0.2nm,0.3s,baz=138,slow=6.9,SNR=2.4

IGQ 15 20:05:14.0±0.8, 4°S±9°×7°7W±°, h20km, MLv4.5/8, Northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIOE1	**Riobamba**	**2.82**	**317**	P	Pn	20 05 59.6	+1.3
BPAT	**Tungurahua Vol**	**2.88**	**323**	P	Pn	20 05 58.5	-0.7
BPAT				S	Sn	20 06 33.8	+0.2
COHC	**Cochancay**	**2.88**	**298**	P	Pn	20 06 00.2	+1.3
ARRY	**Arrayan**	**2.89**	**323**	P	Pn	20 05 57.9	-1.4
BMAS	**Trigal station**	**2.91**	**322**	P	Pn	20 05 59.3	-0.2
BMAS				S	Sn	20 06 34.2	+0.1
BULB	**Ulba Tungurahu**	**2.92**	**324**	P	Pn	20 05 59.0	-0.7
BULB				S	Sn	20 06 35.2	+0.8
RETU	**Refugio**	**2.93**	**323**	P	Pn	20 05 59.5	-0.4
BRUN	**Tungurahua Vol**	**2.94**	**324**	P	Pn	20 05 58.9	-0.9
RUN5	**Runtun**	**2.95**	**324**	P	Pn	20 05 59.8	-0.2
BBIL	**Ulba Tungurahu**	**2.96**	**323**	P	Pn	20 05 58.2	-2.0
POND	**Pondoa**	**2.96**	**324**	P	Pn	20 05 59.4	-0.8
PIS1	**Pisayambo**	**3.22**	**328**	P	Pn	20 06 02.7	-1.2
PISA	**Pisayambo**	**3.22**	**328**	P	Pn	20 06 03.2	-0.7
BMOR	**Cotopaxi Volca**	**3.54**	**330**	P	Pn	20 06 08.5	+0.2
BTAM	**Cotopaxi Volca**	**3.56**	**332**	P	Pn	20 06 08.2	-0.4
BVC2	**Cotopaxi Volca**	**3.58**	**331**	P	Pn	20 06 08.6	-0.3
BREF	**Cotopaxi Volca**	**3.58**	**331**	P	Pn	20 06 08.1	-0.9
VC1	**Cotopaxi 1**	**3.59**	**332**	P	Pn	20 06 08.6	-0.5
ANTM	**Antisana-La Mi**	**3.60**	**335**	P	Pn	20 06 08.7	-0.5
ANTS	**Antisana-Sarah**	**3.62**	**336**	P	Pn	20 06 08.4	-1.1
ANTG	**Antisana-Guama**	**3.65**	**335**	P	Pn	20 06 09.6	-0.2
PITA	**Cotopaxi Volc**	**3.68**	**332**	P	Pn	20 06 10.3	+0.2
ILLI	**Illinizas Sur**	**3.69**	**327**	P	Pn	20 06 11.5	+1.1
QUEV	**Quevedo**	**3.79**	**317**	P	Pn	20 06 11.8	+0.5
URCU	**Urcuqui**	**4.51**	**340**	P	Pn	20 06 23.0	+1.4

*ISCJB **15** 20:12:45.8±0.3, 32°52N±0°02×115°60W±0°02, h19km±3km, Error ellipse: s-maj=3.4km s-min=2.6km az=25.9*
*NEIC **15** 20:12:46.9±0.0, 32°51N×115°63W, h4km, ML2.8(PAS), ML3.1(ECX), After ECX.*
*MEX **15** 20:12:47.0±0.6, 32°64N×115°57W, h11km±7km, MD3.5*
*ECX **15** 20:12:47.0±0.6, 32°51N×115°65W, h5km, MD2.9, ML3.1*

ISC 15 20:12:45.2±1.0, 32°52N±0°02×115°62W±0°02, h15km±8km, n83, σ1§00/119, 5C-8D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGL	**Mount Signal**	**0.15**	**326**	⇓*i P*	**Pb**	**20 12 49.8**	**0.0**
ERPC	**Ernies Place**	**0.22**	**351**	*e*Pg	**Pb**	**20 12 51.5**	**+0.6**
WESC	**Westside Schoo**	**0.25**	**339**	⇓*e P*	**Pb**	**20 12 51.9**	**+0.4**
WESC	**Westside Schoo**	**0.25**	**339**	*e*Pg	**Pb**	**20 12 52.0**	**+0.5**
YUH	**Yuha Desert**	**0.28**	**296**	⇓*i P*	**Pb**	**20 12 51.9**	**-0.1**
YUH	**Yuha Desert**	**0.28**	**296**	*e*Pg	**Pb**	**20 12 51.9**	**-0.1**
CPBX	**Cerro Prieto**	**0.29**	**111**	⇓*e P*	**Pb**	**20 12 52.2**	**+0.1**
CPBX				*e*S	**Sb**	**20 12 57.1**	**+0.4**
CPBX				*e*		20 12 58.7	
CPBX				IAML		20 12 58.7	
	comp=E,7μm,0.1s						
DREC	**Desert Rsrch C**	**0.32**	**28**	⇑*i P*	**Pb**	**20 12 53.4**	**+0.8**
COK	**Cook Ranch**	**0.34**	**345**	⇓*i P*	**Pb**	**20 12 53.5**	**+0.6**
MBIG	**Mexicali**	**0.38**	**108**	*i P*	**Pb**	**20 12 54.0**	**+0.5**
MBIG				*i* S	**Sb**	**20 13 00.5**	**+1.3**
RMX	**La Rumorosa**	**0.39**	**282**	*e P*	**Pg**	**20 12 53.1**	**-0.1**
RMX				*e P*	**Pb**	**20 12 53.4**	**-0.5**
RMX				IAML		20 12 59.7	
	comp=E,2μm,0.4s						
RMX				⇑*e*		20 12 59.7	
RMX				⇑*e*		20 12 59.7	
RMX				IAML		20 12 59.7	
	comp=N,1μm,0.2s						
IKP	**In-Ko-Pah, Jac**	**0.43**	**287**	P	**Pb**	**20 12 54.6**	**+0.1**
	baz=109,SNR=58						
IKP				S	**Sb**	**20 13 00.7**	**-0.1**
	baz=109						
IKP	**In-Ko-Pah, Jac**	**0.43**	**287**	⇓*i P*	**Pb**	**20 12 54.6**	**+0.1**
IKP				*e*S	**Sg**	**20 13 00.3**	**+0.5**
SWSC	**Sam W. Stewart**	**0.45**	**341**	P	**Pb**	**20 12 54.9**	**+0.1**
	baz=162,SNR=34						
SWSC				S	**Sb**	**20 13 01.0**	**-0.2**
	baz=162						
SWSC	**Sam W. Stewart**	**0.45**	**341**	*e*Pg	**Pb**	**20 12 55.3**	**+0.5**
CRR	**Carrizo Plain**	**0.47**	**321**	⇓*i P*	**Pb**	**20 12 55.4**	**+0.3**
CRR	**Carrizo Plain**	**0.47**	**321**	*e*Pg	**Pb**	**20 12 55.4**	**+0.3**
COA	**Coachella**	**0.54**	**51**	⇑*i P*	**Pb**	**20 12 56.8**	**+0.5**
COA	**Coachella**	**0.54**	**51**	*e*Pg	**Pb**	**20 12 56.9**	**+0.5**
ERRC	**Elmore Ranch**	**0.62**	**344**	*e*Pg	**Pn**	**20 12 59.0**	**-0.3**
ERRC				*e*Sg	**Sn**	**20 13 08.3**	**-0.6**
CLIC	**Calipatria**	**0.62**	**7**	*e*Pg	**Pb**	**20 12 58.4**	**+0.7**
CBKC	**Canebrake**	**0.65**	**306**	⇓*i P*	**Pb**	**20 12 59.0**	**+0.7**
CBKC	**Canebrake**	**0.65**	**306**	*e*Pg	**Pb**	**20 12 59.0**	**+0.7**
MONP2	**Monument Peak**	**0.77**	**299**	P	**Pb**	**20 13 00.7**	**+0.3**
	baz=120,SNR=89						
MONP2				S	**Sb**	**20 13 10.9**	**+0.2**
	baz=120						
GLA	**Glamis**	**0.85**	**52**	P	**Pb**	**20 13 01.2**	**-0.5**
	baz=232,SNR=20						
GLA				S	**Sb**	**20 13 12.3**	**-0.7**
	baz=232						
GLA	**Glamis**	**0.85**	**52**	*e*Pg	**Pb**	**20 13 01.2**	**-0.5**
GLA				*e*Sg	**Sb**	**20 13 12.2**	**-0.8**
FRK	**Frink**	**0.88**	**359**	*e*Pg	**Pb**	**20 13 01.7**	**-0.4**
TJIG	**Tijuana**	**0.89**	**265**	*e P*	**Pg**	**20 13 02.6**	**+0.1**
TJIG				*i* S	**Sb**	**20 13 13.9**	**-0.2**
BAR	**Barrett**	**0.90**	**280**	*e*Pg	**Pg**	**20 13 02.9**	**+0.2**
BAR				*e*Sg	**Sb**	**20 13 14.0**	**-0.3**
CBX	**Cerro Bola**	**0.91**	**257**	IAML		20 13 17.2	
	comp=N,636nm,0.3s						
CBX				⇑*e*		20 13 17.2	
CBX	**Cerro Bola**	**0.91**	**257**	*i* P	**Pg**	**20 13 03.0**	**+0.3**
CBX				*i* S	**Sg**	**20 13 14.9**	**+0.2**
CBX	**Cerro Bola**	**0.91**	**257**	*i* P	**Pg**	**20 13 03.0**	**+0.3**
CBX				*i* S	**Sg**	**20 13 14.9**	**+0.2**
BORC	**Borrego Spring**	**1.00**	**318**	*e*Pg	**Pn**	**20 13 04.8**	**+0.2**
EML	**El Monte Cty P**	**1.09**	**290**	*e*Sg	**Sg**	**20 13 20.3**	**-0.3**
BC3	**Big Chuckawall**	**1.14**	**7**	P	**Pb**	**20 13 05.8**	**-0.8**
	baz=188,SNR=15						
BC3				S	**Sb**	**20 13 20.2**	**-1.1**
	baz=188						
ECBX	**El Chinero**	**1.16**	**155**	*e P*	**Pb**	**20 13 06.8**	**0.0**
ECBX				*e*S	**Sn**	**20 13 21.9**	**-0.4**
DPP	**Dos Picos Cty**	**1.21**	**293**	*e*Pn	**Pg**	**20 13 08.2**	**-0.3**
DPP				*e*Sn	**Sg**	**20 13 24.1**	**-0.2**
HWB	**Hans Werner Br**	**1.23**	**294**	*e*Pn	**Pb**	**20 13 08.6**	**+0.4**
HWB				*e*Sn	**Sn**	**20 13 24.6**	**+0.3**
FRD	**Ford Ranch, An**	**1.27**	**320**	*e*Pn	**Pn**	**20 13 08.0**	**-0.5**
FRD				*e*Pg	**Pg**	**20 13 10.1**	**+0.4**
FRD				*e*Sn	**Sg**	**20 13 26.6**	**+0.3**
XPFO	**Piæon Flat**	**1.29**	**327**	*e*Pn	**Pn**	**20 13 07.9**	**-0.9**
PFO	**Pinyon Flats O**	**1.29**	**327**	P	**Pn**	**20 13 08.0**	**-0.8**
	baz=148,SNR=16						
PFO				S	**Sb**	**20 13 24.2**	**-1.6**
	baz=148						
PFO	**Pinyon Flats O**	**1.29**	**327**	*e*Pn	**Pn**	**20 13 07.8**	**-1.0**
109C	**Camp Elliot, M**	**1.30**	**287**	Pb	**Pb**	**20 13 09.5**	**+0.2**
	baz=107,SNR=13						
109C				Sb	**Sn**	**20 13 26.5**	**+0.6**
	baz=107						
CPE	**Camp Elliot**	**1.30**	**287**	*e*Pn	**Pg**	**20 13 09.9**	**-0.4**
CPE				*e*Sn	**Sb**	**20 13 25.6**	**-0.2**
CPE				*e*Sn	**Sn**	**20 13 26.5**	**+0.6**
SNDA	**J Saunders Pla**	**1.32**	**321**	*e*Pn	**Pn**	**20 13 08.9**	**-0.3**
PLM	**Palomar**	**1.33**	**309**	*e*Pn	**Pg**	**20 13 11.3**	**+0.5**
DNR	**Dunn Ranch,Anz**	**1.34**	**321**	*e*Pn	**Pn**	**20 13 09.3**	**-0.2**
CRY	**Cary Ranch**	**1.40**	**318**	*e*Pn	**Pn**	**20 13 10.0**	**-0.3**
CRY				*e*Pg	**Pg**	**20 13 12.6**	**+0.4**
CRY				*e*Sn	**Sg**	**20 13 30.9**	**+0.6**
SPIG	**San Pedro Mart**	**1.48**	**175**	*e P*	**Pn**	**20 13 11.4**	**-0.1**
SPIG				*e*Sn	**Sb**	**20 13 31.3**	**0.0**
SPIG	**San Pedro Mart**	**1.48**	**175**	*e P*	**Pn**	**20 13 11.4**	**-0.1**
SPIG				*e*S	**Sb**	**20 13 31.3**	**0.0**
SPX	**San Pedro Mart**	**1.48**	**175**	*e P*	**Pn**	**20 13 11.4**	**-0.2**
SPX				*e*S	**Sn**	**20 13 30.6**	**-0.2**
SPX	**San Pedro Mart**	**1.48**	**175**	*e P*	**Pn**	**20 13 11.4**	**-0.2**
SPX				*e*S	**Sn**	**20 13 30.6**	**-0.2**
Y12C	**Blythe**	**1.53**	**37**	P	**Pn**	**20 13 11.1**	**-0.9**
	baz=217,SNR=16						
Y12C	**Blythe**	**1.53**	**37**	*e*Pn	**Pn**	**20 13 11.4**	**-0.6**
Y12C				*e*Pg	**Pg**	**20 13 14.2**	**-0.5**
113A	**Mohawk Valley,**	**1.58**	**81**	*e*Pn	**Pn**	**20 13 12.2**	**-0.5**
BACC	**Bachelor Mtn.**	**1.61**	**313**	*e*Pn	**Pg**	**20 13 15.9**	**-0.3**
BACC				*e*Sn	**Sg**	**20 13 36.7**	**-0.4**
DGR	**Domenigoni Val**	**1.62**	**314**	*e*Pn	**Pg**	**20 13 16.1**	**-0.2**
DGR				*e*Sn	**Sg**	**20 13 37.4**	**0.0**
HMTC	**Hemet**	**1.66**	**316**	*e*Pn	**Pg**	**20 13 16.8**	**-0.3**
HMTC				*e*Sn	**Sg**	**20 13 38.2**	**-0.3**
IRM	**Iron Mountain**	**1.68**	**14**	Pb	**Pb**	**20 13 15.0**	**-0.8**
	baz=194						
CLTC	**Calectric**	**2.11**	**318**	*e*Sn	**Sn**	**20 13 46.3**	**+0.3**
PSRC	**Puddingstone R**	**2.41**	**311**	*e*Sn	**Sn**	**20 13 53.3**	**+0.1**
214A	**Organ Pipe Nat**	**2.45**	**103**	*e P*	**Pn**	**20 13 23.4**	**-1.2**
	baz=284						
214A	**Organ Pipe Nat**	**2.45**	**103**	*i* P	**Pn**	**20 13 23.4**	**-1.2**
CIS	**Catalina Islan**	**2.51**	**291**	Pb	**Pb**	**20 13 30.1**	**+0.3**
	baz=110						
LDFC	**Landfair**	**2.58**	**9**	*e*Pn	**Pn**	**20 13 26.4**	**-0.2**
Y14A	**Wickenburg**	**2.61**	**57**	*e*Pn	**Pn**	**20 13 27.7**	**+0.9**
RPV	**Rancho Palos V**	**2.63**	**298**	*e*Pn	**Pn**	**20 13 25.9**	**-1.2**
MWC	**Mount Wilson**	**2.65**	**310**	*e*Pn	**Pn**	**20 13 27.6**	**+0.1**
MWC				*e*Sn	**Sg**	**20 14 07.8**	**-2.6**
PASC	**Pasadena Art C**	**2.70**	**308**	*e*Pn	**Pn**	**20 13 30.3**	**+2.2**
PASC				*e*Sn	**Sb**	**20 14 03.5**	**-2.7**
GSC	**Goldstone, Bar**	**2.94**	**341**	*e*Pn	**Pn**	**20 13 33.0**	**+1.6**
EDW2	**Edwards Air Fo**	**3.07**	**321**	*e*Sg	**Sb**	**20 14 19.6**	**+2.7**
ALPC	**Antelope**	**3.11**	**315**	*e*Sn	**Sn**	**20 14 06.8**	**-3.7**
ALPC				*e*Sg	**Sb**	**20 14 20.2**	**+2.3**
RCWM	**Renegade Canyo**	**3.81**	**334**	*e*Sn	**Sn**	**20 14 32.3**	**+4.4**
ISA	**Isabella, Lake**	**3.92**	**324**	*e*Pn	**Pn**	**20 13 46.1**	**+1.1**
SHPR	**Sheep Range**	**3.99**	**5**	*e*Pn	**Pn**	**20 13 45.2**	**-0.8**
DAC	**Darwin (Calif)**	**4.08**	**337**	*e*Pn	**Pn**	**20 13 45.9**	**-1.3**
TPNV	**Topopah Spring**	**4.45**	**354**	*e*Pn	**Pn**	**20 13 52.1**	**-0.1**
WUAZ	**Wupatki**	**4.62**	**49**	*e*Pn	**Pn**	**20 13 56.5**	**+1.8**
LCMT	**Little Creek M**	**4.89**	**23**	*e*Pn	**Pn**	**20 13 60.0**	**+1.7**
KNB	**Kanab**	**5.04**	**26**	*e*Pn	**Pn**	**20 14 02.4**	**+2.0**
X18A	**Snowflake**	**5.14**	**66**	*e*Pn	**Pn**	**20 14 03.0**	**+1.2**
PHFM	**Heflinger Ranc**	**5.19**	**312**	*e*Sg	**Sg**	**20 15 29.6**	**-2.1**
MMSM	**Mammoth Summit**	**5.81**	**332**	*e*Pn	**Pn**	**20 14 11.3**	**+0.1**

*ISCJB **15** 20:14:10.4±0.7, 11°08S±0°09×162°89E±0°09, h34km, mb4.2/13, Error ellipse: s-maj=13.9km s-min=11.0km az=137.3*
*NEIC **15** 20:14:13.3±2.4, 11°06S×162°92E, h47km±18km, mb4.5/10, Error ellipse: s-maj=19.9km s-min=11.8km az=111.0*
*IDC **15** 20:14:19.3±6.5, 10°91S×162°59E, h85km±46km, mb3.4/6, mb1 3.7/8, mb1mx3.4/50, mbtmp3.9/8, ML4.0/2, MS2.9/2, Ms1 2.9/2, ms1mx2.5/26, Error ellipse: s-maj=50.4km s-min=23.7km az=114.0*

ISC 15 20:14:12.2±1.0, 11°0S±0°1×163°0E±0°1, h34km, n30, σ1§44/24, mb4.3/13, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.36**	**297**	*e P*	**Pn**	**20 15 04.0**	**+1.6**
HNR				*e*S	**Sn**	**20 15 40.0**	**-1.1**
HNR	**Honiara**	**3.36**	**297**	P	**Pn**	**20 15 05.0**	**+2.6**
	134nm,0.3s,baz=142,slow=5.1,SNR=54						
HNR				S	**Sn**	**20 15 39.7**	**-1.4**
	106nm,0.3s,baz=182,slow=21,SNR=9.9						
HNR				LR	LR	20 16 24.5	
	comp=Z,144nm,20.4s,baz=182,slow=42						
HNR	**Honiara**	**3.36**	**297**	*e*Pn	**Pn**	**20 15 04.0**	**+1.6**
HNR				*e*Sn	**Sn**	**20 15 39.7**	**-1.4**
PMG	**Port Moresby**	**15.65**	**274**	LR	LR	20 22 39.8	
	comp=Z,76nm,19.3s,baz=166,slow=33						
PATS	**Pohnpei**	**18.30**	**345**	*e P*	**P**	**20 18 22.4**	**-1.1**
	183nm,1.3s						
CTA	**Charters Tower**	**18.47**	**239**	P	**Pn**	**20 18 26.9**	**+1.2**
	0.1nm,0.3s,baz=59,slow=18,SNR=5.9						
CTAO	**Charters Tower**	**18.47**	**239**	*e P*	**Pn**	**20 18 28.5**	**+2.8**
	11nm,1.1s						
COEN	**Coen**	**19.56**	**259**	*e P*	**P**	**20 18 36.5**	**-0.9**
	21nm,1.4s						
WRAB	**Tennant Creek**	**28.96**	**249**	*e P*	P	20 20 00.6	-8.2
	26nm,1.8s						
WB2	**Warramunga Arr**	**28.96**	**249**	*e P*	P	20 20 01.9	-6.9
	15nm,1.5s						
WR1	**Warramunga Arr**	**28.97**	**249**	*e P*	**P**	**20 20 07.2**	**-1.7**
	24nm,1.8s						
WRA	**Warramunga Arr**	**28.97**	**249**	P	**P**	**20 20 07.2**	**-1.7**
	0.8nm,0.9s,baz=77,slow=8.6,SNR=4.8						
H11S2	**WAKE ISLAND Hy**	**29.51**	**7**	T	T	20 51 21.8	
	baz=188,slow=76,SNR=28						
H11S3	**WAKE ISLAND Hy**	**29.52**	**7**	T	T	20 51 18.3	
	baz=188,slow=76,SNR=19						
H11S1	**WAKE ISLAND Hy**	**29.53**	**7**	T	T	20 51 21.1	
	baz=188,slow=76,SNR=14						
AS31	**Alice Springs**	**30.41**	**242**	*e P*	**P**	**20 20 20.5**	**-1.2**
	2.2nm,1.4s						
ASAR	**Alice Springs**	**30.41**	**242**	P	**P**	**20 20 20.9**	**-0.7**
	0.4nm,0.5s,baz=65,slow=10,SNR=10						
H11N1	**WAKE ISLAND Hy**	**30.74**	**7**	T	T	20 52 57.7	
	baz=188,slow=76,SNR=8.0						
H11N3	**WAKE ISLAND Hy**	**30.75**	**7**	T	T	20 52 58.3	
	baz=188,slow=76,SNR=13						
H11N2	**WAKE ISLAND Hy**	**30.76**	**7**	T	T	20 52 59.1	
	baz=188,slow=76,SNR=6.9						
MTN	**Manton Dam**	**31.21**	**263**	*e P*	**P**	**20 20 28.0**	**-0.7**
	7.4nm,1.0s						
LTZ	**Lake Taylor**	**32.70**	**167**	*e P*	**P**	**20 20 40.9**	**-0.7**
	142nm,1.9s						
FITZ	**Fitzroy Crossi**	**36.78**	**254**	P	**P**	**20 21 15.8**	**-1.2**
	1.2nm,0.7s,baz=94,slow=8.4,SNR=5.1						
FITZ	**Fitzroy Crossi**	**36.78**	**254**	*e P*	**P**	**20 21 15.3**	**-1.8**
	26nm,1.8s						
SOEI	**Soe**	**38.09**	**268**	*e P*	**P**	**20 21 28.9**	**+0.6**
	18nm,1.0s						
SONA0	**Songino Array**	**77.03**	**325**	*e P*	**P**	**20 26 01.7**	**-0.2**
SONM	**Songino Array**	**77.03**	**325**	P	**P**	**20 26 01.7**	**-0.2**
	2.2nm,0.9s,baz=142,slow=5.1,SNR=5.4						
ILAR	**Eielson Array**	**84.33**	**19**	P	**P**	**20 26 41.0**	**+0.5**
	0.6nm,1.0s,baz=232,slow=6.8,SNR=4.0						
MK32	**Makanchi Array**	**91.63**	**317**	*e P*	**P**	**20 27 16.4**	**+0.4**
MKAR	**Makanchi Array**	**91.63**	**317**	P	**P**	**20 27 16.4**	**+0.4**
	0.3nm,0.8s,baz=108,slow=4.7,SNR=2.7						

*GUC **15** 21:04:18.9±0.6, 24°27S×67°73W, h215km±19km, ML4.0*
*ISCJB **15** 21:04:20.3±0.8, 24°20S±0°05×67°38W±0°07, h178km, mb3.3/1, Error ellipse: s-maj=9.1km s-min=7.3km az=167.6*
*IDC **15** 21:04:23.2±2.2, 23°90S×66°96W, h203km±21km, mb3.2/1, mb1 3.2/5, mb1mx3.0/43, mbtmp3.7/5, Error ellipse: s-maj=32.9km s-min=19.3km az=84.0*

ISC 15 21:04:19.8±0.9, 24°17S±0°06×67°30W±0°08, h178km, n14, σ1§70/20, 2C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB15	**IPOC Station P**	**2.21**	**295**	⇑*e P*	**Pn**	**21 04 59.8**	**+0.5**
PB15				*e*S	**Sn**	**21 05 30.4**	**+0.5**
PB15				IAML		21 05 34.2	
	comp=N,2μm,0.2s						
GO02	**Mina Guanaco**	**2.30**	**244**	⇑*i P*	**Pn**	**21 04 59.4**	**-1.1**
GO02				*e*S	**Sn**	**21 05 30.6**	**-1.4**
GO02				IAML		21 05 31.2	
	comp=N,279nm,0.2s						
PB06	**IPOC Station P**	**2.54**	**305**	*e P*	**Pn**	**21 05 03.4**	**+0.3**
PB06				*e*S	**Sn**	**21 05 37.1**	**+0.3**
PB06				IAML		21 05 39.8	
	comp=N,310nm,0.5s						
PB14	**IPOC Station P**	**2.86**	**260**	*e P*	**Pn**	**21 05 05.7**	**-1.3**
PB09	**IPOC Station P**	**2.96**	**323**	*e P*	**Pn**	**21 05 09.7**	**+1.5**
PB09				*e*S	**Sn**	**21 05 47.5**	**+1.7**
PB09				IAML		21 05 52.4	
	comp=E,143nm,0.4s						
PB04	**IPOC Station P**	**3.19**	**304**	*e P*	**Pn**	**21 05 11.1**	**+0.1**
PB07	**IPOC Station P**	**3.41**	**315**	*e P*	**Pn**	**21 05 13.8**	**+0.2**
PB07				*e*S	**Sn**	**21 05 54.7**	**-0.8**
PB07				IAML		21 05 59.2	
	comp=E,221nm,0.4s						
PB02	**IPOC Station P**	**3.71**	**319**	*e P*	**Pn**	**21 05 17.5**	**+0.1**

LPAZ La Paz 7.88 354 P **Pn** **21 06 12.6 +0.3**
comp=E,0.7nm,0.3s,baz=151,slow=9.8,SNR=12
LPAZ S **Sn** **21 07 40.9 -0.2**
comp=E,0.1nm,0.3s,baz=20,slow=20,SNR=3.6
CPUP Villa Florida 9.28 105 P **Pn** **21 06 32.0 +2.0**
comp=E,0.3nm,0.3s,baz=270,slow=12,SNR=4.7
SIV San Ignacio 10.02 37 P **Pn** **21 06 36.3 -3.6**
comp=E,0.2nm,0.3s,baz=233,slow=14,SNR=11
PLCA Paso Flores 16.74 189 P **Pn** **21 08 07.8 +3.7**
comp=E,0.1nm,0.3s,baz=27,slow=8.2,SNR=4.6
TORD Torodi Ar. Bea 76.89 69 P **P** **21 15 50.4 -2.4**
comp=E,0.4nm,0.5s,baz=255,slow=5.6,SNR=6.8
MKAR Makanchi Array 146.83 39 PKPbc **PKPbc** **21 23 40.5 -0.5**
comp=E,0.1nm,0.4s,baz=315,slow=3.6,SNR=2.7

IDC 15 21:04:42.4±1.6, 6°81S×128°57E, h0km, mb3.3/2, mb1 3.8/6, mb1mx3.5/56, mbtmp3.7/6, ML3.8/4, Error ellipse: s-maj=51.2km s-min=24.0km az=82.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.91**	**235**	Pn	Pn	21 06 11.6	+0.2
	2.4nm,0.3s,baz=309,slow=6.5,SNR=6.0						
BATI				Sn	Sn	21 07 08.6	-11
	6.9nm,0.3s,baz=144,slow=18,SNR=7.5						
FITZ	**Fitzroy Crossi**	**11.58**	**194**	Pn	Pn	21 07 27.1	-2.0
	0.6nm,0.3s,baz=24,slow=12,SNR=15						
FITZ				Sn	Sn	21 09 19.8	-19
	0.4nm,0.3s,baz=114,slow=20,SNR=4.6						
WRA	**Warramunga Arr**	**14.21**	**157**	Pn	Pn	21 08 06.9	+1.8
	0.5nm,0.3s,baz=342,slow=13,SNR=26						
WRA				Sn	Sn	21 10 31.8	-12
	0.8nm,0.3s,baz=327,slow=21,SNR=9.5						
ASAR	**Alice Springs**	**17.53**	**164**	P	Pn	21 08 48.6	+0.2
	0.4nm,0.3s,baz=338,slow=12,SNR=29						
ASAR				S	Sn	21 11 50.4	-14
	0.2nm,0.3s,baz=318,slow=18,SNR=4.9						
MKAR	**Makanchi Array**	**67.29**	**327**	P	P	21 15 39.0	-0.1
	0.2nm,0.6s,baz=115,slow=5.4,SNR=2.6						
KURBB	**Kurchatov Arra**	**71.61**	**329**	P	P	21 16 05.8	+0.1
	0.2nm,0.6s,baz=124,slow=4.6,SNR=2.8						

UCR 15 21:08:05.7±1.2, 13°21N×88°89W, h81km±5km, MD3.6, ML4.2, 7D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNVI	**San Vicente**	**0.40**	**7**	*e P*	Pn	21 08 19.0	0.0
SNVI				*e*S	Sn	21 08 29.7	+0.9
LFRS	**El Faro**	**0.44**	**337**	⇓*i P*	Pn	21 08 19.1	-0.2
LFRS				*e*S	Sn	21 08 29.2	-0.1
TECA	**Tecapa**	**0.47**	**53**	⇓*i P*	Pn	21 08 19.4	-0.1
LOMA	**San Marcos**	**0.52**	**327**	⇓*i P*	Pn	21 08 19.7	0.0
LOMA				AML	AML	21 08 31.9	
	comp=Z,5μm,0.3s						
LBRS	**Las Brisas**	**0.54**	**344**	*e P*	Pn	21 08 20.2	+0.1
LBRS				*e*S	Sn	21 08 31.5	+0.8
LFU	**La Fuente**	**0.58**	**338**	*e P*	Pn	21 08 20.6	+0.3
LFU				*e*S	Sn	21 08 32.0	+0.8
SNET	**Serv Nac Est T**	**0.58**	**325**	*i P*	Pn	21 08 20.4	+0.1
SNET				*e*S	Sn	21 08 31.6	+0.4
SNET				AML	AML	21 08 32.6	
	comp=Z,7μm,0.3s						
OPAM	**San Salvador**	**0.59**	**329**	*e P*	Pn	21 08 20.6	+0.2
OPAM				AML	AML	21 08 35.7	
	comp=Z,3μm,0.3s						
COLS	**Colinas**	**0.60**	**318**	⇓*e P*	Pn	21 08 20.8	+0.1
COLS				*e*S	Sn	21 08 31.8	+0.1
PACA	**Pacayal**	**0.60**	**65**	*e P*	Pn	21 08 21.1	+0.4
PACA				*e*S	Sn	21 08 32.9	+1.1
PACA				AML	AML	21 08 37.0	
	comp=Z,61μm,0.4s						
LCY	**Lacayo**	**0.61**	**70**	⇓*i P*	Pn	21 08 20.8	+0.1
LCY				*e*S	Sn	21 08 33.1	+1.2
UEES	**San Salvador**	**0.62**	**326**	⇓*i P*	Pn	21 08 20.9	+0.1
UEES				*e

	23nm,0.6s,baz=30						
KRLC	**Kraliky**	**1.18 282**	*e*PG	**Pg**	**21 14 43.3**	**0.0**	
KRLC			*e*SG	**Sg**	**21 14 58.8**	**+0.2**	
	comp=Z,8.5nm,0.3s						
KRLC	**Kraliky**	**1.18 282**	Pg	**Pg**	**21 14 43.3**	**0.0**	
KRLC			Sg	**Sg**	**21 14 58.8**	**+0.2**	
	8.5nm,0.3s						
NIE	**Niedzica**	**1.20 110**	*e*Pg	**Pn**	**21 14 44.9**	**0.0**	
NIE			*e*Sg	**Sn**	**21 15 02.4**	**+0.5**	
VYHS	**Vyhne**	**1.36 172**	*e*PG	**Pg**	**21 14 46.8**	**0.0**	
VYHS			*e*SG	**Sb**	**21 15 05.1**	**+0.1**	
VYHS			*e*LG	Lg	21 15 12.1		
VYHS	**Vyhne**	**1.36 172**	*e*Pn	**Pg**	**21 14 46.8**	**0.0**	
VYHS			*e*Sn	**Sb**	**21 15 05.1**	**+0.1**	
VRAC	**Vranov**	**1.39 248**	*e*Pg	**Pn**	**21 14 47.4**	**0.0**	
VRAC			*e*Sg	**Sg**	**21 15 05.3**	**-0.1**	
	18nm,0.3s						
VRAC	**Vranov**	**1.39 248**	*e*PG	**Pn**	**21 14 47.5**	**0.0**	
VRAC			*e*SG	**Sg**	**21 15 05.4**	**0.0**	
VRAC	**Vranov**	**1.39 248**	*e*Pg	**Pn**	**21 14 47.4**	**0.0**	
	baz=66						
VRAC			*e*Sg	**Sg**	**21 15 05.3**	**-0.1**	
	18nm,0.3s,baz=66						
SMOL	**Smolenice**	**1.52 210**	*e*SN	**Sg**	**21 15 09.7**	**+0.1**	
SMOL	**Smolenice**	**1.52 210**	*e*Sn	**Sg**	**21 15 09.7**	**+0.1**	
DPC	**Dobruska-Polom**	**1.53 290**	*e*PG	**Pb**	**21 14 50.0**	**-0.1**	
DPC			*e*SG	**Sg**	**21 15 10.1**	**+0.1**	
	comp=Z,15nm,0.3s						
DPC	**Dobruska-Polom**	**1.53 290**	Pg	**Pb**	**21 14 50.0**	**-0.1**	
DPC			Sg	**Sg**	**21 15 10.1**	**+0.1**	
	15nm,0.3s						
KRUC	**Moravsky**	**1.61 242**	*e*Pg	**Pn**	**21 14 51.0**	**+0.5**	
KRUC			*e*Sg	**Sb**	**21 15 12.5**	**+0.1**	
	13nm,0.3s						
KRUC	**Moravsky**	**1.61 242**	*e*PG	**Pn**	**21 14 51.0**	**+0.5**	
KRUC			*e*SG	**Sb**	**21 15 12.6**	**+0.1**	
KRUC	**Moravsky**	**1.61 242**	*e*Pg	**Pn**	**21 14 51.0**	**+0.5**	
	baz=60						
KRUC			*e*Sg	**Sb**	**21 15 12.5**	**+0.1**	
	13nm,0.3s,baz=60						
MODS	**Modra-Piesok**	**1.69 210**	*e*SN	**Sn**	**21 15 12.8**	**-1.2**	
MODS			*e*LG	Lg	21 15 17.6		
MODS	**Modra-Piesok**	**1.69 210**	*e*Sn	**Sn**	**21 15 12.8**	**-1.2**	
KSP	**Ksiaz**	**1.77 306**	*e*Pg	**Pg**	**21 14 54.8**	**+0.1**	
KSP			*e*Sg	**Sg**	**21 15 17.8**	**+0.2**	
KSP	**Ksiaz**	**1.77 306**	*e*Pg	**Pg**	**21 14 54.8**	**+0.1**	
KSP			*e*Sg	**Sg**	**21 15 17.8**	**+0.2**	
UPC	**Upice**	**1.77 293**	*e*PG	**Pb**	**21 14 54.2**	**0.0**	
UPC			*e*SG	**Sb**	**21 15 17.4**	**+0.4**	
	comp=Z,14nm,0.6s						
UPC	**Upice**	**1.77 293**	Pg	**Pb**	**21 14 54.2**	**0.0**	
UPC			Sg	**Sb**	**21 15 17.4**	**+0.4**	
	14nm,0.6s						
KECS	**Kecovo**	**1.85 136**	*e*PN	**Pb**	**21 14 54.8**	**-0.7**	
KECS			*e*SN	**Sn**	**21 15 17.4**	**-0.5**	
KECS			*e*LG	Lg	21 15 22.2		
KECS	**Kecovo**	**1.85 136**	*e*Pn	**Pb**	**21 14 54.8**	**-0.7**	
KECS			*e*Sn	**Sn**	**21 15 17.4**	**-0.5**	
CONA	**Conrad Observa**	**2.62 224**	*e*Pn	**Pn**	**21 15 04.6**	**+0.2**	
	0.4nm,0.2s						
CONA			*e*Sn	**Sn**	**21 15 36.2**	**-0.6**	
	0.6nm,0.1s						
CONA	**Conrad Observa**	**2.62 224**	Pn	**Pn**	**21 15 04.6**	**+0.2**	
	0.4nm,0.2s						
CONA			Sn	**Sn**	**21 15 36.2**	**-0.6**	
	0.6nm,0.1s						
PVCC	**Panska Ves**	**2.66 287**	*e*SG	**Sg**	**21 15 45.5**	**-0.7**	
	comp=Z,11nm,0.3s						
PVCC	**Panska Ves**	**2.66 287**	Sg	**Sg**	**21 15 45.5**	**-0.7**	
	11nm,0.3s						
BRG	**Berggiesshubel**	**3.14 291**	PG	**Pb**	**21 15 19.0**	**+1.6**	
KHC	**Kasperske Hory**	**3.33 260**	*e*PG	**Pb**	**21 15 22.5**	**+1.8**	
KHC			*e*SG	**Sg**	**21 16 05.2**	**-2.5**	
	comp=Z,6.3nm,0.4s						
KHC	**Kasperske Hory**	**3.33 260**	Pg	**Pb**	**21 15 22.5**	**+1.8**	
KHC			Sg	**Sg**	**21 16 05.2**	**-2.5**	
	6.3nm,0.4s						
MOA	**Molln**	**3.47 237**	*e*Pn	**Pn**	**21 15 16.3**	**+0.3**	
	0.2nm,0.1s						
MOA			*e*Sg	**Sg**	**21 16 12.1**	**0.0**	
	3.5nm,0.5s						
MOA	**Molln**	**3.47 237**	Pn	**Pn**	**21 15 16.3**	**+0.3**	
	0.2nm,0.1s						
MOA			Sg	**Sg**	**21 16 12.1**	**0.0**	
	3.5nm,0.5s						
CLL	**Collm**	**3.84 295**	*e*Sg	**Sg**	**21 16 24.0**	**-0.1**	
	comp=Z,7.0nm,0.8s						

*IDC **15** 21:14:49.2±1.8, 36°.46S×177°.71E, h198km±13km, mb3.8/5, mb1 4.0/5, mb1mx3.5/41, mbtmp4.4/5, Error ellipse: s-maj=30.2km s-min=17.7km az=24.0*
*NEIC **15** 21:14:49.0±0.0, 36°.51S×177°.58E, h196km, mb4.5/4, ML4.9(WEL), After WEL.*
*ISCJB **15** 21:14:50.3±0.5, 36°.84S±0°.04×177°.46E±0°.06, h215km±3km, mb4.2/10, Error ellipse: s-maj=8.4km s-min=5.9km az=144.4*
*WEL **15** 21:14:50.1±1.2, 36°S±9'×17°8E±°, h182km±10km*
ISC 15 21:14:50.9±0.8,**36°.71S**±0°.08×**177°.57E**±0°.07,**h203**km±5km, **n244**,σ1**s35**/210,**mb4.3**/10,**Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.03 146**		**Pn**	**Pn**	**21 15 19.9**	**-1.2**
MXZ				Sn	**Sn**	**21 15 44.0**	**-0.8**
MXZ	**Matakaoa Point**	**1.03 146**		**P**	**Pn**	**21 15 19.9**	**-1.2**
MXZ				S	**Sn**	**21 15 43.7**	**-1.0**
HAZ	**Te Kaha**	**1.06 171**		**P**	**Pn**	**21 15 20.0**	**-1.3**
WHRZ	**Whale Island**	**1.24 202**		**P**	**Pn**	**21 15 23.7**	**+1.0**
PKGZ	**Pakihiroa**	**1.24 161**		**P**	**Pn**	**21 15 22.0**	**-0.7**
PKGZ				S	**Sn**	**21 15 46.8**	**-0.9**
WMGZ	**Waiomatatini S**	**1.30 149**		Pn	**Pn**	**21 15 22.3**	**-0.7**
WMGZ				Sn	**Sn**	**21 15 47.8**	**-0.5**
WMGZ	**Waiomatatini S**	**1.30 149**		P	**Pn**	**21 15 22.3**	**-0.7**
WMGZ				S	**Sn**	**21 15 47.8**	**-0.5**
OPRZ	**Ohinepanea**	**1.39 215**		Pn	**Pn**	**21 15 23.3**	**-0.5**
OPRZ	**Ohinepanea**	**1.39 215**		P	**Pn**	**21 15 23.3**	**-0.5**
TGRZ	**Tauranga**	**1.46 225**		P	**Pn**	**21 15 24.0**	**-0.4**
MARZ	**Manawahe**	**1.46 209**		Pn	**Pn**	**21 15 25.1**	**+0.6**
MARZ	**Manawahe**	**1.46 209**		P	**Pn**	**21 15 25.2**	**+0.6**
PUZ	**Puketiti**	**1.47 158**		Pn	**Pn**	**21 15 23.9**	**-0.6**
PUZ				Sn	**Sn**	**21 15 49.8**	**-1.1**
PUZ	**Puketiti**	**1.47 158**		P	**Pn**	**21 15 23.8**	**-0.7**
PUZ				S	**Sn**	**21 15 49.8**	**-1.1**
KUZ	**Kuaotunu**	**1.49 268**		Pn	**Pn**	**21 15 22.5**	**-2.2**
KUZ	**Kuaotunu**	**1.49 268**		P	**Pn**	**21 15 22.5**	**-2.2**
TWGZ	**Tauwhareparae**	**1.50 168**		Pn	**Pn**	**21 15 24.8**	**-0.1**
TWGZ	**Tauwhareparae**	**1.50 168**		P	**Pn**	**21 15 24.9**	**0.0**
TWGZ				S	**Sn**	**21 15 51.5**	**+0.1**
EDRZ	**Edgecumbe**	**1.54 205**		P	**Pn**	**21 15 26.8**	**+1.5**
URZ	**Urewera**	**1.59 193**		P	**Pn**	**21 15 24.8**	**-0.8**
	66nm,0.3s,baz=261,slow=4.9,SNR=247						
URZ				S	**Sn**	**21 15 51.1**	**-1.7**
	142nm,0.3s,baz=224,slow=21,SNR=28						
URZ	**Urewera**	**1.59 193**		P	**Pn**	**21 15 24.9**	**-0.7**
MWZ	**Matawai**	**1.62 181**		Pn	**Pn**	**21 15 25.2**	**-0.7**
MWZ	**Matawai**	**1.62 181**		P	**Pn**	**21 15 25.3**	**-0.7**
MWZ				S	**Sn**	**21 15 52.7**	**-0.7**
KARZ	**Kaharoa**	**1.68 219**		P	**Pn**	**21 15 26.8**	**+0.4**
OMRZ	**Omania**	**1.69 214**		P	**Pn**	**21 15 27.8**	**+1.2**
KMRZ	**Kaimai**	**1.72 228**		P	**Pn**	**21 15 27.2**	**+0.3**
TKGZ	**Te Karaka**	**1.74 173**		Pn	**Pn**	**21 15 26.7**	**-0.3**
TKGZ	**Te Karaka**	**1.74 173**		P	**Pn**	**21 15 26.7**	**-0.3**
TKGZ				S	**Sn**	**21 15 54.6**	**-0.7**
TARZ	**Mount Tarawera**	**1.74 209**		Pn	**Pn**	**21 15 28.2**	**+1.1**
TARZ	**Mount Tarawera**	**1.74 209**		P	**Pn**	**21 15 28.6**	**+1.5**
GRZ	**Great Barrier**	**1.76 284**		P	**Pn**	**21 15 24.7**	**-2.6**
RAGZ	**Rawiri**	**1.79 184**		Pn	**Pn**	**21 15 27.6**	**0.0**
RAGZ	**Rawiri**	**1.79 184**		P	**Pn**	**21 15 28.0**	**+0.5**
HLRZ	**Highlands Stat**	**1.82 212**		P	**Pn**	**21 15 29.2**	**+1.4**
RRRZ	**Republican Roa**	**1.83 207**		Pn	**Pn**	**21 15 29.0**	**+1.1**
RRRZ	**Republican Roa**	**1.83 207**		P	**Pn**	**21 15 28.8**	**+0.9**
CNGZ	**Carnagh Statio**	**1.84 164**		Pn	**Pn**	**21 15 28.3**	**+0.3**
CNGZ	**Carnagh Statio**	**1.84 164**		P	**Pn**	**21 15 28.3**	**+0.3**
MUGZ	**Murupara**	**1.88 200**		P	**Pn**	**21 15 28.6**	**+0.3**
TOZ	**Tahuroa Road**	**1.94 238**		Pn	**Pn**	**21 15 28.7**	**-0.2**
TOZ	**Tahuroa Road**	**1.94 238**		P	**Pn**	**21 15 28.8**	**-0.2**
RTZ	**Ruatahuna**	**1.96 194**		P	**Pn**	**21 15 28.6**	**-0.6**
WIAZ	**Waiheke Island**	**1.96 267**		P	**Pn**	**21 15 27.6**	**-1.6**
HRRZ	**Handcock Road**	**1.96 211**		Pn	**Pn**	**21 15 30.9**	**+1.6**
HRRZ	**Handcock Road**	**1.96 211**		P	**Pn**	**21 15 31.0**	**+1.8**
RIGZ	**Rimuhau**	**2.00 176**		P	**Pn**	**21 15 29.5**	**0.0**
GRRZ	**Galatos Road**	**2.01 215**		P	**Pn**	**21 15 31.5**	**+1.8**
PRRZ	**Plateau Road**	**2.02 207**		Pn	**Pn**	**21 15 30.6**	**+0.8**
PRRZ	**Plateau Road**	**2.02 207**		P	**Pn**	**21 15 30.7**	**+1.0**
SNGZ	**Shannon Statio**	**2.08 185**		Pn	**Pn**	**21 15 29.9**	**-0.4**
SNGZ	**Shannon Statio**	**2.08 185**		P	**Pn**	**21 15 30.0**	**-0.4**
ALRZ	**Allen Road**	**2.09 207**		Pn	**Pn**	**21 15 31.2**	**+0.7**
ALRZ	**Allen Road**	**2.09 207**		P	**Pn**	**21 15 31.2**	**+0.7**
ETAZ	**East Tamaki Re**	**2.13 263**		P	**Pn**	**21 15 30.0**	**-0.9**
KBAZ	**Karaka Road Bo**	**2.18 259**		P	**Pn**	**21 15 31.0**	**-0.5**
ABAZ	**Army Bay**	**2.21 272**		P	**Pn**	**21 15 30.2**	**-1.5**
MTHZ	**Maungataniwha**	**2.21 195**		P	**Pn**	**21 15 31.5**	**-0.3**
PRGZ	**Paritu Road**	**2.22 174**		Pn	**Pn**	**21 15 31.9**	**0.0**
PRGZ	**Paritu Road**	**2.22 174**		P	**Pn**	**21 15 31.9**	**0.0**
RAHZ	**Arahi**	**2.23 190**		P	**Pn**	**21 15 31.9**	**-0.1**
KUTZ	**Kaahu Road**	**2.25 217**		P	**Pn**	**21 15 34.3**	**+2.1**
EPAZ	**Eden Park BICE**	**2.27 265**		P	**Pn**	**21 15 31.7**	**-0.7**
HBAZ	**Herne Bay Bore**	**2.28 266**		P	**Pn**	**21 15 31.5**	**-1.0**
TLZ	**Tolley Road**	**2.29 224**		Pn	**Pn**	**21 15 33.0**	**+0.4**
TLZ	**Tolley Road**	**2.29 224**		P	**Pn**	**21 15 33.6**	**+1.0**
MRHZ	**Matea Rd**	**2.31 203**		P	**Pn**	**21 15 32.9**	**+0.1**
KNZ	**Kokohu**	**2.31 178**		Pn	**Pn**	**21 15 32.4**	**-0.4**
KNZ	**Kokohu**	**2.31 178**		P	**Pn**	**21 15 32.4**	**-0.4**
AWAZ	**Awhitu Peninsu**	**2.37 261**		P	**Pn**	**21 15 32.6**	**-0.9**
WHHZ	**Waihua**	**2.38 186**		P	**Pn**	**21 15 33.6**	**+0.1**
RVAZ	**Riverhead Bore**	**2.40 268**		P	**Pn**	**21 15 32.5**	**-1.3**
WTAZ	**Waiatarua**	**2.42 264**		P	**Pn**	**21 15 33.1**	**-0.9**
MHGZ	**Mahia Peninsul**	**2.45 174**		Pn	**Pn**	**21 15 34.3**	**0.0**
MHGZ	**Mahia Peninsul**	**2.45 174**		P	**Pn**	**21 15 34.4**	**0.0**
NMHZ	**Naumai**	**2.46 194**		Pn	**Pn**	**21 15 34.9**	**+0.4**
NMHZ	**Naumai**	**2.46 194**		P	**Pn**	**21 15 35.0**	**+0.5**
WATZ	**Wairara**	**2.47 216**		P	**Pn**	**21 15 35.9**	**+1.3**
HATZ	**Hinemaiaia**	**2.47 208**		Pn	**Pn**	**21 15 35.0**	**+0.4**
HATZ	**Hinemaiaia**	**2.47 208**		P	**Pn**	**21 15 35.1**	**+0.4**
RATZ	**Rangitukua**	**2.58 213**		P	**Pn**	**21 15 37.6**	**+1.8**
ARHZ	**Aropaoanui**	**2.59 190**		Pn	**Pn**	**21 15 36.0**	**+0.2**
ARHZ	**Aropaoanui**	**2.59 190**		P	**Pn**	**21 15 35.8**	**-0.1**
BKZ	**Black Stump Fm**	**2.59 199**		Pn	**Pn**	**21 15 35.3**	**-0.7**
BKZ	**Black Stump Fm**	**2.59 199**		P	**Pn**	**21 15 35.4**	**-0.7**
RITZ	**Rihia Road**	**2.64 210**		Pn	**Pn**	**21 15 37.8**	**+1.3**
RITZ	**Rihia Road**	**2.64 210**		P	**Pn**	**21 15 38.2**	**+1.7**
WCZ	**Waipu Caves**	**2.72 286**		P	**Pn**	**21 15 34.9**	**-2.5**
HIZ	**Hauiti**	**2.81 229**		Pn	**Pn**	**21 15 39.1**	**+0.7**
HIZ	**Hauiti**	**2.81 229**		P	**Pn**	**21 15 39.2**	**+0.9**
MCHZ	**McNeill Hill**	**2.81 194**		Pn	**Pn**	**21 15 38.6**	**+0.2**
MCHZ	**McNeill Hill**	**2.81 194**		P	**Pn**	**21 15 38.8**	**+0.3**
KWHZ	**Kaweka Forest**	**2.86 198**		P	**Pn**	**21 15 38.4**	**-0.6**
OTVZ	**Oturere**	**2.88 211**		Pn	**Pn**	**21 15 39.6**	**+0.3**
TWVZ	**Taurewa**	**2.90 215**		P	**Pn**	**21 15 39.3**	**-0.2**
NGZ	**Ngauruhoe**	**2.91 212**		P	Pn	21 15 43.0	+3.2
COVZ	**Chateau Observ**	**2.96 212**		P	**Pn**	**21 15 41.4**	**+1.2**
TUVZ	**Tukino**	**2.97 210**		Pn	**Pn**	**21 15 40.4**	**0.0**
TUVZ	**Tukino**	**2.97 210**		P	**Pn**	**21 15 40.5**	**0.0**
CKHZ	**Cape Kidnapper**	**2.97 187**		Pn	**Pn**	**21 15 40.1**	**-0.1**
CKHZ	**Cape Kidnapper**	**2.97 187**		P	**Pn**	**21 15 39.9**	**-0.3**
FWVZ	**Far West T-bar**	**3.00 211**		Pn	**Pn**	**21 15 40.9**	**+0.2**
FWVZ	**Far West T-bar**	**3.00 211**		P	**Pn**	**21 15 41.0**	**+0.2**
WHVZ	**Whangaehu Hut**	**3.01 211**		Pn	**Pn**	**21 15 40.8**	**-0.1**
WHVZ	**Whangaehu Hut**	**3.01 211**		P	**Pn**	**21 15 40.8**	**-0.1**
DRZ	**Dome Shelter**	**3.01 211**		P	**Pn**	**21 15 42.5**	**+1.4**
BHHZ	**Black Hill Sta**	**3.02 203**		Pn	**Pn**	**21 15 40.0**	**-0.9**
BHHZ	**Black Hill Sta**	**3.02 203**		P	**Pn**	**21 15 40.0**	**-0.9**
TRVZ	**Turoa**	**3.04 211**		Pn	**Pn**	**21 15 41.2**	**-0.1**
TRVZ	**Turoa**	**3.04 211**		P	**Pn**	**21 15 41.2**	**-0.1**
WNVZ	**Wahianoa**	**3.04 210**		Pn	**Pn**	**21 15 40.9**	**-0.4**
MOVZ	**Moawhango**	**3.05 208**		Pn	**Pn**	**21 15 40.5**	**-0.8**
MOVZ	**Moawhango**	**3.05 208**		P	**Pn**	**21 15 40.5**	**-0.8**
KRHZ	**Kereru**	**3.08 198**		P	**Pn**	**21 15 40.5**	**-1.0**
PKVZ	**Pokaka**	**3.12 214**		Pn	**Pn**	**21 15 42.1**	**0.0**
PKVZ	**Pokaka**	**3.12 214**		P	**Pn**	**21 15 42.1**	**0.0**
KAHZ	**Kahuranaki**	**3.13 190**		Pn	**Pn**	**21 15 41.6**	**-0.6**
KAHZ	**Kahuranaki**	**3.13 190**		P	**Pn**	**21 15 41.7**	**-0.5**
MTVZ	**Mangateitei**	**3.14 211**		Pn	**Pn**	**21 15 42.7**	**+0.4**
MTVZ	**Mangateitei**	**3.14 211**		P	**Pn**	**21 15 42.9**	**+0.6**
VRZ	**Vera Road**	**3.28 222**		Pn	**Pn**	**21 15 45.1**	**+1.3**
VRZ	**Vera Road**	**3.28 222**		P	**Pn**	**21 15 45.2**	**+1.3**
PXZ	**Pawanui**	**3.36 189**		Pn	**Pn**	**21 15 43.6**	**-1.2**
PXZ	**Pawanui**	**3.36 189**		P	**Pn**	**21 15 43.8**	**-1.0**
PNHZ	**Pukenui**	**3.38 198**		Pn	**Pn**	**21 15 44.1**	**-1.0**
PNHZ	**Pukenui**	**3.38 198**		P	**Pn**	**21 15 44.0**	**-1.1**
WPHZ	**Waipukurau**	**3.46 195**		Pn	**Pn**	**21 15 45.2**	**-0.9**
WPHZ	**Waipukurau**	**3.46 195**		P	**Pn**	**21 15 45.3**	**-0.9**
OUZ	**Omahuta**	**3.55 294**		P	**Pn**	**21 15 44.6**	**-2.6**
TSZ	**Takapari Road**	**3.57 200**		Pn	**Pn**	**21 15 46.1**	**-1.3**
TSZ	**Takapari Road**	**3.57 200**		P	**Pn**	**21 15 46.1**	**-1.3**
PRHZ	**Porangahau**	**3.63 191**		Pn	**Pn**	**21 15 47.0**	**-1.1**
PRHZ	**Porangahau**	**3.63 191**		P	**Pn**	**21 15 47.1**	**-1.1**
WAZ	**Wanganui**	**3.66 213**		Pn	**Pn**	**21 15 48.4**	**-0.1**
WAZ	**Wanganui**	**3.66 213**		P	**Pn**	**21 15 48.5**	**0.0**
LREZ	**Lake Rotokare**	**3.71 221**		P	**Pn**	**21 15 50.7**	**+1.6**
DVHZ	**Dannevirke**	**3.75 197**		Pn	**Pn**	**21 15 48.0**	**-1.6**
DVHZ	**Dannevirke**	**3.75 197**		P	**Pn**	**21 15 48.0**	**-1.6**
PKE	**Pukeiti**	**3.76 228**		P	**Pn**	**21 15 52.1**	**+2.2**
KHEZ	**Kahui Hut**	**3.81 226**		P	**Pn**	**21 15 52.8**	**+2.3**
ANWZ	**Angora Road**	**3.84 193**		P	**Pn**	**21 15 49.7**	**-1.0**
OHWZ	**Ohakea**	**3.91 206**		P	**Pn**	**21 15 51.3**	**-0.2**
POWZ	**Post Office Ro**	**3.94 200**		Pn	**Pn**	**21 15 50.4**	**-1.5**
POWZ	**Post Office Ro**	**3.94 200**		P	**Pn**	**21 15 50.4**	**-1.5**
PRWZ	**Pori Road**	**4.04 198**		Pn	**Pn**	**21 15 52.0**	**-1.2**
PRWZ	**Pori Road**	**4.04 198**		P	**Pn**	**21 15 51.9**	**-1.2**
BFZ	**Birch Farm**	**4.10 194**		Pn	**Pn**	**21 15 52.2**	**-1.7**
BFZ	**Birch Farm**	**4.10 194**		P	**Pn**	**21 15 52.4**	**-1.5**
MRZ	**Mangatainoka R**	**4.24 201**		Pn	**Pn**	**21 15 53.5**	**-2.2**
MRZ	**Mangatainoka R**	**4.24 201**		P	**Pn**	**21 15 53.5**	**-2.2**
TIWZ	**Tintock**	**4.27 197**		Pn	**Pn**	**21 15 54.3**	**-1.8**
TIWZ	**Tintock**	**4.27 197**		P	**Pn**	**21 15 54.3**	**-1.8**
CPWZ	**Castlepoint**	**4.33 194**		Pn	**Pn**	**21 15 55.9**	**-0.8**
CPWZ	**Castlepoint**	**4.33 194**		P	**Pn**	**21 15 56.1**	**-0.7**
HOWZ	**Holdsworth Sta**	**4.48 200**		Pn	**Pn**	**21 15 56.2**	**-2.4**
HOWZ	**Holdsworth Sta**	**4.48 200**		P	**Pn**	**21 15 56.3**	**-2.4**
OGWZ	**Otaki Gorge**	**4.51 204**		Pn	**Pn**	**21 15 56.8**	**-2.2**
OGWZ	**Otaki Gorge**	**4.51 204**		P	**Pn**	**21 15 56.8**	**-2.2**
TMWZ	**Te Maipa**	**4.58 196**		Pn	**Pn**	**21 15 57.9**	**-2.1**
TMWZ	**Te Maipa**	**4.58 196**		P	**Pn**	**21 15 58.2**	**-1.7**
KIW	**Kapiti Island**	**4.64 206**		Pn	**Pn**	**21 15 58.2**	**-2.4**
KIW	**Kapiti Island**	**4.64 206**		P	**Pn**	**21 15 58.3**	**-2.4**
MTW	**Mount Morrison**	**4.72 199**		Pn	**Pn**	**21 15 59.1**	**-2.6**
MTW	**Mount Morrison**	**4.72 199**		P	**Pn**	**21 15 59.1**	**-2.6**
CAW	**Cannon Point**	**4.80 203**		Pn	**Pn**	**21 16 00.1**	**-2.7**
CAW	**Cannon Point**	**4.80 203**		P	**Pn**	**21 16 00.1**	**-2.7**
TRWZ	**Traveller**	**4.91 197**		Pn	**Pn**	**21 16 01.5**	**-2.5**
TRWZ	**Traveller**	**4.91 197**		P	**Pn**	**21 16 01.7**	**-2.4**
PAWZ	**Paruwai Farm**	**4.95 199**		Pn	Pn	21 16 01.8	-2.9
PAWZ	**Paruwai Farm**	**4.95 199**		P	Pn	21 16 01.8	-2.9
DUWZ	**D'Urville Isla**	**4.98 214**		Pn	**Pn**	**21 16 02.4**	**-2.7**
DUWZ	**D'Urville Isla**	**4.98 214**		P	**Pn**	**21 16 02.5**	**-2.5**
MSWZ	**Moikau Station**	**5.03 200**		Pn	Pn	21 16 02.8	-2.9
MSWZ	**Moikau Station**	**5.03 200**		P	Pn	21 16 02.8	-2.9
WEL	**Wellington**	**5.06 205**		Pn	Pn	21 16 03.1	-2.9
SNZO	**South Karori**	**5.11 205**		*e*Pn	**Pn**	**21 16 04.8**	**-1.8**
BHW	**Baring Head**	**5.14 203**		Pn	Pn	21 16 02.9	-4.1
BHW	**Baring Head**	**5.14 203**		P	Pn	21 16 04.2	-2.8
PLWZ	**Palliser**	**5.17 200**		Pn	Pn	21 16 04.8	-2.7
PLWZ	**Palliser**	**5.17 200**		P	Pn	21 16 04.7	-2.8
TCW	**Tory Channel**	**5.17 209**		Pn	**Pn**	**21 16 05.0**	**-2.5**
TCW	**Tory Channel**	**5.17 209**		P	**Pn**	**21 16 05.0**	**-2.5**
TUWZ	**Tuamarina**	**5.49 210**		Pn	Pn	21 16 08.5	-3.0
TUWZ	**Tuamarina**	**5.49 210**		P	Pn	21 16 08.2	-3.3
NNZ	**Nelson**	**5.56 215**		Pn	**Pn**	**21 16 10.0**	**-2.4**
NNZ	**Nelson**	**5.56 215**		P	Pn	21 16 09.7	-2.7
QRZ	**Quartz Range**	**5.69 222**		Pn	Pn	21 16 11.2	-3.0
QRZ	**Quartz Range**	**5.69 222**		P	Pn	21 16 11.1	-3.0
BSWZ	**Blackbirch Sta**	**5.76 209**		Pn	Pn	21 16 11.9	-3.1
BSWZ	**Blackbirch Sta**	**5.76 209**		P	Pn	21 16 12.0	-3.0
THZ	**Tophouse**	**6.21 214**		Pn	Pn	21 16 18.1	-2.7
THZ	**Tophouse**	**6.21 214**		P	**Pn**	**21 16 18.4**	**-2.4**
KHZ	**Kahutara**	**6.49 207**		Pn	Pn	21 16 21.2	-3.2
KHZ	**Kahutara**	**6.49 207**		P	Pn	21 16 21.0	-3.4
DSZ	**Denniston Nort**	**6.73 220**		Pn	**Pn**	**21 16 25.4**	**-2.1**
DSZ	**Denniston Nort**	**6.73 220**		P	**Pn**	**21 16 25.9**	**-1.7**
LTZ	**Lake Taylor**	**7.31 212**		Pn	Pn	21 16 30.0	-5.0
LTZ	**Lake Taylor**	**7.31 212**		P	Pn	21 16 31.8	-3.2
INZ	**Inchbonnie**	**7.64 216**		P	**Pn**	**21 16 36.9**	**-2.4**
EYCZ	**Eyrewell**	**7.80 209**		P	Pn	21 16 37.7	-3.7
OKCZ	**Okains Bay**	**7.81 205**		P	Pn	21 16 38.2	-3.3
OXZ	**Oxford**	**7.85 211**		Pn	Pn	21 16 37.8	-4.3
OXZ	**Oxford**	**7.85 211**		P	Pn	21 16 38.5	-3.6
MQZ	**McQueen's Vall**	**7.93 207**		Pn	Pn	21 16 38.3	-4.8
MQZ	**McQueen's Vall**	**7.93 207**		P	Pn	21 16 38.4	-4.7
AKCZ	**Akaroa Harbour**	**7.99 205**		P	**Pn**	**21 16 42.9**	**-1.0**
WVZ	**Waitaha Valley**	**8.24 217**		Pn	Pn	21 16 44.5	-2.6
WVZ	**Waitaha Valley**	**8.24 217**		P	Pn	21 16 44.5	-2.6
CTZ	**Chatham Island**	**8.30 149**		Pn	**Pn**	**21 16 50.7**	**+2.8**
RPZ	**Rata Peaks**	**8.59 213**		P	Pn	21 16 49.0	-2.6
	6.6nm,0.3s,baz=225,slow=1.5,SNR=24						
RPZ				S		21 18 21.3	
	12nm,0.3s,baz=332,slow=23,SNR=16						
RPZ	**Rata Peaks**	**8.59 213**		P	Pn	21 16 48.9	-2.7
FOZ	**Fox Glacier**	**9.04 219**		Pn	Pn	21 16 53.9	-3.5
FOZ	**Fox Glacier**	**9.04 219**		P	Pn	21 16 53.8	-3.6
LBZ	**Lake Benmore**	**9.50 214**		Pn	Pn	21 17 00.0	-3.5
LBZ	**Lake Benmore**	**9.50 214**		P	Pn	21 17 00.6	-2.9
ODZ	**Otahua Downs**	**9.84 210**		Pn	Pn	21 17 04.9	-2.9
ODZ	**Otahua Downs**	**9.84 210**		P	Pn	21 17 04.9	-2.9
JCZ	**Jackson Bay**	**9.94 220**		Pn

	baz=6.0							
ENA				*i* S		**Sn**	**21 58 47.9**	**+1.4**
	baz=6.0							
ENLB	**Shoufeng**	**0.29**	**210**	*e*P		**Pn**	**21 58 40.9**	**+0.9**
	baz=202							
ENLB				*e*S		**Sn**	**21 58 46.8**	**+0.1**
	baz=202							
ENAH	**Nanao**	**0.29**	**9**	*e*P		**Pn**	**21 58 40.1**	**+0.1**
	baz=16							
ENAH				*e*S		**Sn**	**21 58 47.8**	**+1.0**
	baz=16							
NNSH	**Datong**	**0.44**	**308**	*e*P		**Pn**	**21 58 41.1**	**-0.4**
	baz=311							
NNSH				S		**Sn**	**21 58 48.8**	**-0.6**
	baz=311							
NNSB	**Datong**	**0.44**	**308**	P		**Pn**	**21 58 41.0**	**-0.5**
	baz=311							
NNSB				S		**Sn**	**21 58 49.0**	**-0.4**
	baz=311							
NNS	**Nan Shan**	**0.45**	**309**	P		**Pn**	**21 58 41.1**	**-0.5**
	baz=311							
NNS				S		**Sn**	**21 58 49.4**	**-0.3**
	baz=311							
ESL	**Shilin**	**0.46**	**221**	*e*P		**Pn**	**21 58 40.2**	**-1.4**
	baz=216							
ESL				*e*S		**Sn**	**21 58 48.8**	**-0.7**
	baz=216							
TWC	**Suao**	**0.46**	**10**	*i* P		**Pn**	**21 58 41.8**	**+0.2**
	baz=16							
TWC				S		**Sn**	**21 58 50.8**	**+1.3**
	baz=16							
ENTT	**Nioudou**	**0.51**	**340**	*e*P		**Pn**	**21 58 42.0**	**-0.3**
	baz=344							
ENTT				*e*S		**Sn**	**21 58 50.5**	**-0.1**
	baz=344							
EOS1	**EOS1**	**0.51**	**41**	*e*P		**Pn**	**21 58 42.9**	**+0.8**
	baz=44							
EOS1				S		**Sn**	**21 58 53.1**	**+2.6**
	baz=44							
CHGB	**Renai**	**0.55**	**260**	P		**Pn**	**21 58 42.5**	**-0.3**
	baz=258							
CHGB				S		**Sn**	**21 58 51.4**	**-0.3**
	baz=258							
TWE	**Neicheng**	**0.57**	**351**	P		**Pn**	**21 58 42.6**	**-0.2**
	baz=356							
TWE				*e*S		**Sn**	**21 58 52.4**	**+0.7**
	baz=356							
EGFH	**Guangfu**	**0.57**	**212**	*e*P		**Pn**	**21 58 42.9**	**0.0**
	baz=208							
EGFH				*e*S		**Sn**	**21 58 50.5**	**-1.4**
	baz=208							
YHNB	**Yeheng**	**0.62**	**325**	P		**Pn**	**21 58 43.1**	**-0.4**
	baz=328							
YHNB				S		**Sn**	**21 58 52.6**	**-0.4**
	baz=328							
NSK	**Sanguang**	**0.63**	**325**	*i* P		**Pn**	**21 58 43.1**	**-0.6**
	baz=327							
NSK				S		**Sn**	**21 58 52.6**	**-0.7**
	baz=327							
NWLT	**Wulai**	**0.66**	**339**	*e*P		**Pn**	**21 58 43.8**	**-0.2**
	baz=342							
NWLT				S		**Sn**	**21 58 53.0**	**-0.8**
	baz=342							
VWDT	**VWDT**	**0.69**	**235**	P		**Pn**	**21 58 43.9**	**-0.4**
	baz=232							
VWDT				S		**Sn**	**21 58 54.0**	**-0.5**
	baz=232							
NTC	**Toucheng**	**0.70**	**5**	*e*P		**Pn**	**21 58 44.7**	**+0.3**
	baz=8.0							
NTC				*e*S		**Sn**	**21 58 55.0**	**+0.5**
	baz=8.0							
EGS		**0.70**	**13**	P		**Pn**	**21 58 45.0**	**+0.6**
	baz=16							
EGS				*e*S		**Sn**	**21 58 54.9**	**+0.3**
	baz=16							
HGSD	**Ruisui**	**0.73**	**205**	*e*P		**Pn**	**21 58 44.9**	**+0.1**
	baz=202							
HGSD				*e*S		**Sn**	**21 58 56.5**	**+1.3**
	baz=202							
EHY	**Hungye**	**0.76**	**212**	*e*P		**Pn**	**21 58 45.8**	**+0.5**
	baz=208							
EHY				*e*S		**Sn**	**21 58 54.2**	**-1.8**
	baz=208							
TIPB	**Shuangxi**	**0.81**	**4**	*e*P		**Pn**	**21 58 45.2**	**-0.7**
	baz=6.0							
TIPB				*e*S		**Sn**	**21 58 57.5**	**+0.3**
	baz=6.0							
SSLB	**Suanglung**	**0.82**	**244**	*e*P		**Pn**	**21 58 46.1**	**+0.1**
	baz=242							
SSLB				*e*S		**Sn**	**21 58 57.8**	**+0.4**
	baz=242							
SMLT	**Sun Moon Lake**	**0.83**	**251**	P		**Pn**	**21 58 46.4**	**+0.2**
	baz=249							
SMLT				*e*S		**Sn**	**21 58 58.0**	**+0.2**
	baz=249							
LIOB	**Emei**	**0.84**	**306**	*e*P		**Pn**	**21 58 45.9**	**-0.3**
	baz=307							
LIOB				*e*S		**Sn**	**21 58 57.9**	**+0.2**
	baz=307							
NSTT	**Nanjuang**	**0.84**	**304**	*e*P		**Pn**	**21 58 46.0**	**-0.2**
	baz=305							
NSTT				S		**Sn**	**21 58 58.2**	**+0.5**
	baz=305							
TATO	**Taipei**	**0.85**	**343**	*e*S		**Sn**	**21 58 57.9**	**-0.1**
	baz=346							
TYC	**Yuchr**	**0.86**	**253**	*e*P		**Pn**	**21 58 46.7**	**+0.2**
	baz=251							
TYC				*e*S		**Sn**	**21 58 58.6**	**+0.3**
	baz=251							
TWQ1	**Liyutan**	**0.92**	**282**	P		**Pn**	**21 58 46.8**	**-0.6**
	baz=282							
TWQ1				*e*S		**Sn**	**21 58 59.5**	**-0.2**
	baz=282							
NSY	**Sanyi**	**0.95**	**286**	*e*P		**Pn**	**21 58 47.4**	**-0.3**
	baz=286							
NSY				*e*S		**Sn**	**21 59 00.5**	**+0.1**
	baz=286							
NCU	**National Centr**	**0.96**	**327**	*e*P		**Pn**	**21 58 47.7**	**-0.1**
	baz=329							
NCU				*e*S		**Sn**	**21 59 00.3**	**-0.4**
	baz=329							
TCU	**Taichung**	**0.99**	**270**	*e*P		**Pn**	**21 58 47.8**	**-0.4**
	baz=269							
TCU				*e*S		**Sn**	**21 59 02.0**	**+0.7**
	baz=269							
WJS	**Zhushan**	**1.00**	**251**	P		**Pn**	**21 58 48.4**	**+0.1**
	baz=249							
WJS				*e*S		**Sn**	**21 59 02.0**	**+0.4**
	baz=249							
FULB	**Fuli**	**1.05**	**204**	*e*P		**Pn**	**21 58 48.3**	**-0.7**
	baz=202							
FULB				*e*S		**Sn**	**21 59 02.9**	**+0.2**
	baz=202							
ALS	**Alishan**	**1.09**	**234**	*e*P		**Pn**	**21 58 49.9**	**+0.2**
	baz=231							
ALS				*e*S		**Sn**	**21 59 06.0**	**+2.0**
	baz=231							
JYNG	**Yonagunijimaku**	**1.12**	**75**	P		**Pn**	**21 58 49.7**	**-0.2**
JYNG				S		**Sn**	**21 59 04.4**	**+0.1**
YOJ	**Yonaguni jima**	**1.18**	**75**	*e*P		**Pn**	**21 58 50.7**	**0.0**
	baz=75							
YOJ				*e*S		**Sn**	**21 59 06.5**	**+0.7**
	baz=75							
YOJ	**Yonaguni jima**	**1.18**	**75**	P		**Pn**	**21 58 50.4**	**-0.3**
YOJ				*e*S		**Sn**	**21 59 05.9**	**+0.1**
ELDTW	**Lidau**	**1.18**	**215**	*e*P		**Pn**	**21 58 50.5**	**-0.4**
	baz=213							
ELDTW				*e*S		**Sn**	**21 59 05.2**	**-0.8**
	baz=213							
RLNB	**Erlin**	**1.31**	**259**	*e*P		**Pn**	**21 58 52.4**	**-0.1**
	baz=257							
RLNB				*e*S		**Sn**	**21 59 09.6**	**+0.7**
	baz=257							
CHN2	**Minshiung**	**1.33**	**242**	*e*P		**Pn**	**21 58 53.8**	**+1.0**
	baz=241							
CHN4	**Tsaushan**	**1.34**	**233**	*e*P		**Pn**	**21 58 53.5**	**+0.6**
	baz=231							
CHN4				*e*S		**Sn**	**21 59 11.4**	**+1.8**
	baz=231							
TPUB	**Ta-pu**	**1.34**	**231**	*e*P		**Pn**	**21 58 51.6**	**-1.4**
	baz=229							
TPUB				*e*S		**Sn**	**21 59 11.4**	**+1.6**
	baz=229							
STYT	**Tauyuan**	**1.35**	**223**	*e*P		**Pn**	**21 58 53.6**	**+0.5**
	baz=221							
STYT				*e*S		**Sn**	**21 59 10.6**	**+0.6**
	baz=221							
WTP	**Ta-pu**	**1.39**	**229**	*e*P		**Pn**	**21 58 53.5**	**-0.1**
	baz=227							
WTP				*e*S		**Sn**	**21 59 11.8**	**+0.9**
	baz=227							
CHY	**Chiayi**	**1.39**	**242**	*e*P		**Pn**	**21 58 54.1**	**+0.5**
	baz=240							
CHY				*e*S		**Sn**	**21 59 10.8**	**0.0**
	baz=240							
TWK	**Hsinying**	**1.47**	**233**	*e*P		**Pn**	**21 58 54.5**	**-0.1**
	baz=231							
TWK				*e*S		**Sn**	**21 59 13.0**	**+0.2**
	baz=231							
TWG	**Pinlang**	**1.47**	**206**	*e*P		**Pn**	**21 58 54.9**	**+0.1**
	baz=203							
CHN1	**Nanshi**	**1.49**	**230**	*e*P		**Pn**	**21 58 55.0**	**+0.1**
	baz=228							
CHN1				*e*S		**Sn**	**21 59 14.1**	**+0.8**
	baz=228							
IRIF	**Iriomote-Funau**	**1.81**	**84**	P		**Pn**	**21 58 58.8**	**-0.4**
IRIF				*e*S		**Sn**	**21 59 20.3**	**-0.7**
HATJ	**Hateruma jima**	**1.87**	**93**	*e*S		**Sn**	**21 59 23.9**	**+1.3**
JKRS	**Kuro-shima**	**2.05**	**87**	P		**Pn**	**21 59 02.7**	**+0.1**
JKRS				*e*S		**Sn**	**21 59 27.3**	**+0.2**
JIJ	**Ishigaki jima**	**2.18**	**84**	P		**Pn**	**21 59 03.8**	**-0.6**
JIJ				S		**Sn**	**21 59 28.6**	**-1.6**
JISG	**Ishigakijimahi**	**2.36**	**79**	P		**Pn**	**21 59 05.9**	**-0.9**
JISG				*e*S		**Sn**	**21 59 33.0**	**-1.7**
JTJ	**Tarama**	**2.72**	**79**	P		**Pn**	**21 59 11.9**	**+0.1**
JTJ				S		**Sn**	**21 59 43.1**	**-0.4**

IDC 15 22:01:36.7±10.0, **19°.07S**×**165°.84E, h0**km, **mb4.0**/3, **mb1 4.1**/4, **mb1mx3.7**/51, **mbtmp4.0**/4, **ML3.3**/1, **Error ellipse: s-maj=188.3km s-min=30.5km az=52.0, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.04**	**169**	Pn	Pn	22 02 26.0	-0.2
	4.3nm,0.3s,baz=83,slow=10,SNR=46						
DZM				Sn	Sn	22 03 06.1	+2.7
	9.9nm,0.3s,baz=16,slow=20,SNR=9.9						
STKA	**Stephens Creek**	**25.26**	**235**	P	P	22 07 04.3	-0.4
	0.7nm,0.4s,baz=72,slow=11,SNR=5.5						
WRA	**Warramunga Arr**	**29.69**	**263**	P	P	22 07 44.4	-0.3
	0.5nm,0.4s,baz=98,slow=8.2,SNR=2.5						
ASAR	**Alice Springs**	**30.05**	**256**	P	P	22 07 48.5	+0.6
	2.7nm,0.5s,baz=85,slow=8.8,SNR=6.1						

IDC ***15*** *22:03:36.4*±*1.9, 6°.70S*×*131°.36E, h0*km*, mb3.2/1, mb1 4.0/6, mb1mx3.6/53, mbtmp3.8/6, ML3.8/5, Error ellipse: s-maj=50.7km s-min=24.5km az=91.0*
ISCJB ***15*** *22:03:37.7*±*1.0, 6°.83S*±*0°.07*×*131°.59E*±*0°.09, h42*km*, mb3.2/1, Error ellipse: s-maj=12.8km s-min=9.8km az=178.5*

ISC 15 22:03:38.3±1.0, **6°.78S**±**0°.06**×**131°.7E**±**0°.1, h42**km, **n6,** σ**3°95/11, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.88**	**356**	Pn	**Pn**	**22 05 03.9**	**+0.9**
	1.6nm,0.3s,baz=209,slow=19,SNR=8.7						
SIJI				Sn	**Sn**	**22 06 02.8**	**-6.4**
	6.1nm,0.3s,baz=188,slow=22,SNR=18						
BATI	**Baumata**	**8.63**	**246**	Pn	**Pn**	**22 05 41.2**	**+0.5**
	0.9nm,0.3s,baz=82,slow=1.5,SNR=1.6						
BATI				Sn	**Sn**	**22 07 17.2**	**+0.4**
	3.0nm,0.3s,baz=17,slow=14,SNR=3.1						
FITZ	**Fitzroy Crossi**	**12.70**	**207**	Pn	**Pn**	**22 06 38.4**	**+2.0**
	1.1nm,0.3s,baz=33,slow=13,SNR=34						
FITZ				Sn	**Sn**	**22 08 50.7**	**-5.8**
	1.0nm,0.3s,baz=26,slow=17,SNR=9.6						
WRA	**Warramunga Arr**	**13.34**	**169**	Pn	**Pn**	**22 06 47.4**	**+2.2**
	0.5nm,0.3s,baz=345,slow=14,SNR=26						
WRA				Sn	**Sn**	**22 09 08.2**	**-4.0**
	1.9nm,0.3s,baz=344,slow=24,SNR=14						
ASAR	**Alice Springs**	**16.93**	**173**	P	**P**	**22 07 36.1**	**+2.3**
	0.3nm,0.3s,baz=351,slow=10,SNR=14						
ASAR				S	**Sn**	**22 10 36.1**	**-3.5**
	0.3nm,0.3s,baz=355,slow=28,SNR=6.5						
MKAR	**Makanchi Array**	**68.96**	**326**	P	**P**	**22 14 41.7**	**+2.5**
	0.1nm,0.3s,baz=107,slow=8.1,SNR=4.2						

SJA ***15*** *22:04:27.8*±*0.9, 27°.90S*×*71°.59W, h8*km*±8*km*, ML3.3, MW3.6*
GUC ***15*** *22:04:29.3*±*0.5, 27°.89S*×*71°.62W, h40*km*, ML3.5*

ISC 15 22:04:27.2±2.8, **27°.89S**±**0°.07**×**71°.7W**±**0°.1, h2**km±12km, **n15,** σ**1°98/26, 2C, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO03	**Copiap**	**1.30**	**77**	⇑*i*P	**Pg**	**22 04 51.6**	**-0.6**
GO03				*i* S	**Sn**	**22 05 08.6**	**-2.0**
LCO	**Las Campanas**	**1.41**	**143**	*e*P	**Pg**	**22 04 54.1**	**0.0**
	baz=324,slow=18						
LCO				*e*S	**Sg**	**22 05 12.6**	**+0.2**
LCO	**Las Campanas**	**1.41**	**143**	⇑*i*P	**Pg**	**22 04 54.0**	**-0.1**
LCO				*i* S	**Sg**	**22 05 12.6**	**+0.2**
LCO				IAML		22 05 13.7	
	comp=N,1μm,0.5s						
TLL	**Tololo Astrono**	**2.39**	**162**	*e*P	**Pn**	**22 05 07.4**	**-0.3**
TLL				*i* S	**Sn**	**22 05 36.2**	**-1.6**
TLL				IAML		22 05 40.8	
	comp=E,442nm,0.5s						
GO04	**Tololo Observa**	**2.40**	**162**	*e*P	**Pn**	**22 05 07.4**	**-0.4**
GO04				*i* S	**Sn**	**22 05 36.4**	**-1.5**
AROD	**Rodeo**	**2.98**	**140**	*e*S	**Sb**	**22 05 55.6**	**-2.5**
VCA	**Vinchina**	**3.17**	**106**	*e*P	**Pb**	**22 05 23.5**	**-0.9**
VCA				*e*S	**Sg**	**22 06 10.5**	**+1.5**
VCA				IAML		22 06 13.6	
	comp=Z,64nm,0.3s						
ACDV	**Cuesta del Vie**	**3.19**	**136**	*e*P	Pn	22 05 12.1	-6.4
ACDV				*i* S	**Sb**	**22 06 02.4**	**-1.7**
AGUA	**GUANDACOL**	**3.21**	**120**	*e*P	**Pb**	**22 05 23.3**	**-1.8**
AGUA				*i* S	**Sb**	**22 06 04.0**	**-0.8**
AMOG	**MOGNA**	**4.11**	**138**	*e*P	**Pn**	**22 05 34.7**	**+3.5**
AMOG				*e*S	**Sn**	**22 06 21.9**	**+1.9**
RTLS	**Leoncito**	**4.41**	**153**	*i* P	**Pn**	**22 05 38.8**	**+3.4**
RTLS				*e*S	**Sb**	**22 06 38.1**	**-1.2**
RTLS				IAML		22 06 49.2	
	comp=Z,44nm,0.6s						
ACLC	**CERRO LA CRUZ**	**4.42**	**111**	*e*P	**Pn**	**22 05 38.1**	**+2.6**
AUSP	**Uspallata**	**4.75**	**156**	*e*P	**Pn**	**22 05 43.0**	**+2.9**
AUSP				*e*S	**Sn**	**22 06 38.4**	**+2.4**
APLL	**PUNTA DE LOS L**	**5.14**	**120**	*e*P	**Pn**	**22 05 47.2**	**+1.9**
APLL				IAML		22 07 24.8	
	comp=Z,18nm,0.8s						
ASAL	**Salagasta**	**5.29**	**153**	*i* P	**Pn**	**22 05 50.1**	**+2.7**
ASAL				*e*S	**Sn**	**22 06 48.0**	**-0.9**

NEIC ***15*** *22:08:58.3*±*0.3, 1°.35N*×*127°.10E, h35*km*, mb4.2/13, Error ellipse: s-maj=10.4km s-min=6.1km az=70.0*
IDC ***15*** *22:09:02.4*±*5.9, 1°.33N*×*127°.17E, h75*km*±59*km*, mb3.8/10, mb1 3.9/11, mb1mx3.5/62, mbtmp4.1/11, ML3.4/1, Error ellipse: s-maj=61.5km s-min=15.6km az=78.0*
ISCJB ***15*** *22:09:03.3*±*0.4, 1°.34N*±*0°.06*×*127°.23E*±*0°.09, h103*km*, mb4.2/24, Error ellipse: s-maj=12.9km s-min=7.7km az=156.4*

ISC 15 22:09:04.8±0.5, **1°.32N**±**0°.08**×**127°.24E**±**0°.10, h103**km, **n27,** σ**0°96/27, mb4.0/24, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.57**	**118**	P	**Pn**	**22 10 09.7**	**-2.1**
	1.8nm,0.3s,baz=120,slow=20,SNR=4.6						
GUMO	**Guam**	**21.28**	**54**	P	**P**	**22 13 42.8**	**-0.4**
	6.2nm,0.4s						
WRAB	**Tennant Creek**	**22.24**	**162**	*e*P	**P**	**22 13 53.0**	**-0.4**
	1.6nm,0.4s						
WRA	**Warramunga Arr**	**22.25**	**162**	P	**P**	**22 13 52.9**	**-0.6**
	2.1nm,0.3s,baz=341,slow=11,SNR=23						
PMG	**Port Moresby**	**22.52**	**119**	P	**P**	**22 13 57.3**	**+1.1**
	3.0nm,0.6s						
MBWA	**Marble Bar**	**23.52**	**198**	P	**P**	**22 14 05.3**	**-0.5**
	14nm,0.9s						
ASAR	**Alice Springs**	**25.67**	**166**	P	**P**	**22 14 26.5**	**+1.2**
	1.2nm,0.4s,baz=349,slow=14,SNR=18						
CTAO	**Charters Tower**	**28.29**	**140**	P	**P**	**22 14 49.1**	**+0.3**
	2.6nm,0.7s						
CHTO	**Chiang Mai**	**32.74**	**304**	P	**P**	**22 15 25.2**	**-2.9**
	1.0nm,0.6s						
COCO	**West Island**	**33.05**	**245**	P	**P**	**22 15 30.8**	**0.0**
	49nm,0.4s						
NWAO	**Narrogin (SRO)**	**35.35**	**195**	P	**P**	**22 15 51.0**	**+0.6**
	15nm,0.9s						
STKA	**Stephens Creek**	**35.71**	**159**	P	**P**	**22 15 54.4**	**+0.9**
	1.6nm,0.7s,baz=328,slow=10.0,SNR=4.6						
MJAR	**Matsushiro Arr**	**36.49**	**15**	P	**P**	**22 16 00.4**	**+0.3**
	0.9nm,0.6s,baz=195,slow=8.5,SNR=3.6						
BJT	**Baijiatuau**	**39.81**	**347**	P	**P**	**22 16 29.1**	**+1.1**
	2.8nm,0.4s						
LSA	**Lhasa**	**44.43**	**313**	P	**P**	**22 17 05.3**	**-0.9**
	1.9nm,0.8s						
PALK	**Pallekele**	**46.76**	**279**	P	**P**	**22 17 24.6**	**+0.2**
	9.9nm,1.1s						
ULN	**Ulaanbaatar**	**49.55**	**342**	P	**P**	**22 17 46.0**	**+0.6**
	0.5nm,0.4s						
SONM	**Songino Array**	**49.73**	**342**	P	**P**	**22 17 47.5**	**+0.8**
	1.3nm,0.7s,baz=155,slow=7.3,SNR=10.0						
MKAR	**Makanchi Array**	**59.82**	**326**	P	**P**	**22 18 59.7**	**+0.2**
	3.1nm,0.4s,baz=119,slow=7.8,SNR=80						
YAK	**Yakutsk**	**60.59**	**1**	P	**P**	**22 19 04.8**	**+0.5**
	7.7nm,0.5s						
ZALV	**Zalesovo Beam**	**62.95**	**333**	P	**P**	**22 19 20.2**	**-0.2**
	0.3nm,0.3s,baz=105,slow=9.3,SNR=3.8						
KURBB	**Kurchatov Arra**	**64.03**	**328**	P	**P**	**22 19 27.9**	**+0.3**
	4.8nm,0.7s,baz=129,slow=7.0,SNR=49						
KURK	**Kurchatov**	**64.04**	**328**	P	**P**	**22 19 27.9**	**+0.3**
CASY	**Casey**	**68.50**	**187**	P	**P**	**22 19 56.2**	**+0.5**
	3.0nm,0.9s						
BVAR	**Borovoye Array**	**69.61**	**327**	P	**P**	**22 20 03.2**	**+0.4**
	0.5nm,0.4s,baz=127,slow=11,SNR=8.2						
AKTO	**Aktyubinsk**	**75.86**	**322**	P	**P**	**22 20 40.5**	**+0.6**
	1.2nm,0.6s,baz=97,slow=14,SNR=3.8						
TORD	**Torodi Ar. Bea**	**124.13**	**287**	PKP	**PKPdf**	**22 27 51.9**	**-0.4**
	0.5nm,0.8s,baz=88,slow=1.6,SNR=3.6						

IDC ***15*** *22:13:45.9*±*0.9, 44°.90N*×*10°.94E, h0*km*, mb3.7/8, mb1 3.7/14, mb1mx3.6/70, mbtmp3.6/14, ML3.4/6, MS3.0/4, Ms1 3.0/4, ms1mx2.5/64, Error ellipse: s-maj=22.1km s-min=11.1km az=110.0*
PRU ***15*** *22:13:46.5, 44°.75N*×*11°.44E, h0*km*, M3.7*
ROM ***15*** *22:13:48.1*±*0.0, 44°.852N*±*0°.001*×*11°.278E*±*0°.003, h8*km*, ML3.7/92*
CSEM ***15*** *22:13:48.3*±*0.1, 44°.90N*×*11°.31E, h8*km*, ML4.1/13, Error ellipse: s-maj=2.3km s-min=1.7km az=161.0*
IASPEI ***15*** *22:13:48.6*±*0.8, 44°.89N*±*0°.02*×*11°.27E*±*0°.02, h11*km*±4*km*, mb3.9/8, Error ellipse: s-maj=3.5km s-min=3.2km az=115.1, GT5 selection from ISC bulletin GT5 identified by Bond¨¡r and McLaughlin (2009) selection criteria Bond¨¡r and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
ISCJB ***15*** *22:13:48.0*±*0.2, 44°.85N*±*0°.02*×*11°.32E*±*0°.02, h19*km*±2*km*, mb3.8/8, MS3.9/1, Error ellipse: s-maj=2.8km s-min=2.0km az=164.5*
LDG ***15*** *22:13:48.4*±*0.1, 44°.87N*×*11°.35E, h2*km*, Ml4.0/18, Error ellipse: s-maj=3.5km s-min=2.5km az=60.0*
BEO ***15*** *22:13:49.4*±*2.2, 44°.91N*×*11°.32E, h16*km*±3*km*
STR ***15*** *22:13:51.3*±*0.6, 45°.N*±*3°.×1°.1E*±*°, h5*km*, M4.0/7, mB4.0/2, mb3.8/3, MLv4.1/2, MLv4.0/7, Mw(mB)3.0/2*

ISC 15 22:13:48.5±0.6, **44°.89N**±**0°.02**×**11°.27E**±**0°.02, h14**km±3km, **n393,** σ**1°58/419, mb3.9**/8, **18C-28D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0800	**Massa Finalese**	**0.05**	**196**	⇑*i*P	**Pg**	**22 13 49.0**	**-2.2**
T0800				⇑*i*S	**Sg**	**22 13 52.2**	**-0.8**
T0800	**Massa Finalese**	**0.05**	**196**	*i* P	**Pg**	**22 13 50.0**	**-1.2**
T0800				*i* S	**Sg**	**22 13 52.2**	**-0.8**
T0805	**Bondeno (FE)**	**0.05**	**58**	⇓*e*P	**Pg**	**22 13 50.7**	**-0.5**
T0805	**Bondeno (FE)**	**0.05**	**58**	*e*P	**Pg**	**22 13 50.7**	**-0.5**
T0802	**SanFelice sul**	**0.06**	**253**	⇓*i*P	**Pg**	**22 13 50.6**	**-0.7**
T0802				⇓*i*S	**Sg**	**22 13 53.2**	**0.0**
T0802	**SanFelice sul**	**0.06**	**253**	*i* P	**Pg**	**22 13 50.6**	**-0.7**
T0802				*i* S	**Sg**	**22 13 53.2**	**0.0**
T0802				AML	AML		
T0802				AML	AML		
SERM	**Sermide**	**0.12**	**10**	*e*P	**Pg**	**22 13 52.3**	**+0.3**
SERM	**Sermide**	**0.12**	**10**	*e*P	**Pg**	**22 13 52.3**	**+0.3**
SERM				AML	AML		
	comp=E,15200μm,0.5s						
SERM				AML	AML		
	comp=N,28700μm,1.0s						
SERM				AML	AML		
	comp=E,21200μm,0.5s						
SERM				AML	AML		
	comp=N,44750μm,0.5s						
SERM				AML	AML		
	comp=E,15200μm,0.5s						
SERM				AML	AML		
	comp=N,28700μm,1.0s						
SERM				AML	AML		
	comp=E,21200μm,0.5s						
SERM				AML	AML		
	comp=N,44750μm,0.5s						
SERM				AML	AML		
	comp=E,15200μm,0.5s						
SERM				AML	AML		
	comp=N,28700μm,1.0s						
SERM				AML	AML		
	comp=E,21200μm,0.5s						
SERM				AML	AML		
	comp=N,44700μm,0.5s						
SERM				AML	AML		
	comp=N,44700μm,0.5s						
SERM				AML	AML		
	comp=E,21200μm,0.5s						
SERM				AML	AML		
	comp=E,15200μm,0.5s						
SERM				AML	AML		
	comp=N,28700μm,1.0s						
T0803	**Dosso, Cento (**	**0.14**	**155**	⇑*e*P	**Pg**	**22 13 51.5**	**-0.7**
T0803				⇑*e*S	**Sg**	**22 13 54.3**	**-0.4**
T0803	**Dosso, Cento (**	**0.14**	**155**	*e*P	**Pg**	**22 13 51.5**	**-0.7**
T0803				*e*S	**Sg**	**22 13 54.3**	**-0.4**
RAVA	**Ravarino**	**0.17**	**217**	⇓*i*P	**Pg**	**22 13 52.1**	**-0.6**
RAVA				⇓*i*S	**Sg**	**22 13 56.5**	**+1.1**
RAVA	**Ravarino**	**0.17**	**217**	*i* P	**Pg**	**22 13 52.1**	**-0.6**
RAVA				*i* S	**Sg**	**22 13 56.5**	**+1.1**
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
T0821	**Loc. Casaglia**	**0.20**	**87**	⇓*i*P	**Pg**	**22 13 52.2**	**-0.8**
T0821	**Loc. Casaglia**	**0.20**	**87**	*i* P	**Pg**	**22 13 52.2**	**-0.8**
T0821				AML	AML		
	comp=E,23900μm,1.0s						
T0821				AML	AML		
	comp=N,18750μm,0.7s						
T0821				AML	AML		
	comp=E,24350μm,

```
T0820                                   AML   AML
     comp=N,54300µm,0.7s
T0820                                   AML   AML
     comp=E,67200µm,0.7s
T0820                                   AML   AML
     comp=N,54650µm,0.7s
T0820                                   AML   AML
     comp=N,54650µm,0.7s
T0820                                   AML   AML
     comp=E,59600µm,0.8s
T0820                                   AML   AML
     comp=E,67200µm,0.7s
T0820                                   AML   AML
     comp=N,54300µm,0.7s
GAZZ Gazzo Veronese      0.25 331⇓ePg   Pb    22 13 54.7 -0.1
GAZZ Gazzo Veronese      0.25 331 ePg   Pb    22 13 54.7 -0.1
FIU  Minerbio Fiu        0.30 148 eP    Pg    22 13 53.0 -1.8
FIU  Minerbio Fiu        0.30 148 eP    Pg    22 13 54.0 -0.8
FIU                                     AML   AML
     comp=E,32050µm,0.8s
FIU                                     AML   AML
     comp=N,42900µm,0.6s
FIU                                     AML   AML
     comp=E,32000µm,0.8s
FIU                                     AML   AML
     comp=N,42850µm,0.6s
FIU                                     AML   AML
     comp=E,32050µm,0.8s
FIU                                     AML   AML
     comp=N,42850µm,0.6s
FIU                                     AML   AML
     comp=N,42850µm,0.6s
FIU                                     AML   AML
     comp=E,32050µm,0.8s
T0825 Gonzaga (MN)       0.31 285       AML   AML
     comp=E,62750µm,0.3s
T0825                                   AML   AML
     comp=E,62750µm,0.3s
T0825                                   AML   AML
     comp=N,51650µm,0.7s
T0825                                   AML   AML
     comp=E,62750µm,0.3s
T0825                                   AML   AML
     comp=N,51650µm,0.7s
T0825                                   AML   AML
     comp=E,62750µm,0.3s
T0825                                   AML   AML
     comp=N,51650µm,0.7s
T0825                                   AML   AML
     comp=N,51650µm,0.7s
T0826 Rio Saliceto (     0.33 261       AML   AML
     comp=E,19200µm,0.6s
T0826                                   AML   AML
     comp=N,15850µm,0.8s
T0826                                   AML   AML
     comp=E,19150µm,0.6s
T0826                                   AML   AML
     comp=N,15850µm,0.8s
T0826                                   AML   AML
     comp=E,19150µm,0.6s
T0826                                   AML   AML
     comp=N,15850µm,0.8s
T0826                                   AML   AML
     comp=N,15850µm,0.8s
T0826                                   AML   AML
     comp=E,19150µm,0.6s
MODE Modena              0.35 221 eP    Pg    22 13 55.9 +0.3
MODE Modena              0.35 221 eP    Pg    22 13 55.9 +0.3
MODE                                    AML   AML
MODE                                    AML   AML
     comp=N,83200µm,0.7s
MODE                                    AML   AML
MODE                                    AML   AML
     comp=N,83200µm,0.7s
MODE                                    AML   AML
MODE                                    AML   AML
     comp=N,83250µm,0.7s
MODE                                    AML   AML
MODE                                    AML   AML
     comp=N,83250µm,0.7s
NOVE Novellara           0.40 256 eP    Pg    22 13 56.8 +0.2
NOVE Novellara           0.40 256 eP    Pg    22 13 56.8 +0.2
NOVE                                    AML   AML
     comp=E,13000µm,0.6s
NOVE                                    AML   AML
     comp=N,26800µm,0.8s
NOVE                                    AML   AML
     comp=E,13000µm,0.6s
NOVE                                    AML   AML
     comp=N,26800µm,0.8s
NOVE                                    AML   AML
     comp=E,13000µm,0.6s
NOVE                                    AML   AML
     comp=N,26800µm,0.8s
NOVE                                    AML   AML
     comp=N,26800µm,0.8s
NOVE                                    AML   AML
     comp=E,13000µm,0.6s
OPPE Oppeano             0.42 351       AML   AML
     comp=N,32500µm,0.5s
OPPE                                    AML   AML
     comp=E,24450µm,0.4s
OPPE                                    AML   AML
     comp=N,32500µm,0.5s
OPPE                                    AML   AML
     comp=E,24500µm,0.4s
OPPE                                    AML   AML
     comp=N,32500µm,0.5s
OPPE                                    AML   AML
     comp=E,24500µm,0.4s
MNTV Mantova             0.42 307       AML   AML
     comp=E,23300µm,0.8s
MNTV                                    AML   AML
     comp=E,23300µm,0.8s
MNTV                                    AML   AML
     comp=N,25350µm,0.6s
MNTV                                    AML   AML
     comp=E,23300µm,0.8s
MNTV                                    AML   AML
     comp=N,25400µm,0.6s
MNTV                                    AML   AML
     comp=N,25400µm,0.6s
CMPO Campotto Po         0.50 129 eP    Pg    22 13 57.8 -0.6
CMPO Campotto Po         0.50 129 eP    Pg    22 13 57.8 -0.6
CMPO                                eS  Sb    22 14 07.6 +1.6
CMPO                                    AML   AML
     comp=E,16250µm,1.2s
CMPO                                    AML   AML
     comp=N,19200µm,1.0s
CMPO                                    AML   AML
     comp=E,16250µm,1.2s
CMPO                                    AML   AML
     comp=N,19200µm,1.0s
CMPO                                    AML   AML
     comp=E,16250µm,1.2s
CMPO                                    AML   AML
     comp=N,19200µm,1.0s
MTRZ Monterenzio         0.54 164       AML   AML
     comp=N,8880µm,0.7s
MTRZ                                    AML   AML
     comp=E,14400µm,0.8s
MTRZ                                    AML   AML
     comp=N,8680µm,0.7s
MTRZ                                    AML   AML
     comp=E,14900µm,0.8s
MTRZ                                    AML   AML
     comp=N,8880µm,0.7s
MTRZ                                    AML   AML
     comp=E,14400µm,0.8s
MTRZ                                    AML   AML
     comp=N,8675µm,0.7s
MTRZ                                    AML   AML
     comp=E,14900µm,0.8s
MTRZ                                    AML   AML
     comp=N,8880µm,0.7s
MTRZ                                    AML   AML
     comp=N,8675µm,0.7s
MTRZ                                    AML   AML
     comp=E,14400µm,0.8s
MTRZ                                    AML   AML
     comp=E,14900µm,0.8s
TEOL Teolo               0.55  31⇓ePg   Pb    22 13 59.7 -0.2
TEOL                                eSg Sb    22 14 09.0 +1.4
TEOL Teolo               0.55  31 ePg   Pb    22 13 59.7 -0.2
TEOL                                eSg Sb    22 14 09.0 +1.4
TEOL Teolo               0.55  31 eP    Pb    22 13 59.8 -0.2
TEOL                                    AML   AML
     comp=E,15400µm,0.7s
TEOL                                    AML   AML
     comp=N,19150µm,0.7s
TEOL                                    AML   AML
     comp=E,15400µm,0.7s
TEOL                                    AML   AML
     comp=N,19150µm,0.7s
TEOL                                    AML   AML
     comp=E,15400µm,0.7s
TEOL                                    AML   AML
     comp=N,19150µm,0.7s
ADRI Adria, Italy        0.55  75⇑ePg   Pb    22 14 00.3 +0.4
ADRI                                eSg Sn    22 14 10.7 -0.2
ADRI Adria, Italy        0.55  75 ePg   Pb    22 14 00.3 +0.4
ZCCA Zocca               0.58 201⇓eP    Pb    22 14 00.9 +0.4
ZCCA Zocca               0.58 201 eP    Pb    22 14 00.9 +0.4
ZCCA                                    AML   AML
     comp=E,6245µm,1.1s
ZCCA                                    AML   AML
     comp=N,10090µm,1.6s
ZCCA                                    AML   AML
     comp=E,6485µm,0.6s
ZCCA                                    AML   AML
     comp=N,10480µm,1.6s
ZCCA                                    AML   AML
     comp=E,6240µm,1.2s
ZCCA                                    AML   AML
     comp=N,10060µm,1.6s
ZCCA                                    AML   AML
     comp=E,6485µm,0.6s
ZCCA                                    AML   AML
     comp=N,10480µm,1.6s
ZCCA                                    AML   AML
     comp=E,6240µm,1.2s
ZCCA                                    AML   AML
     comp=E,6485µm,0.6s
ZCCA                                    AML   AML
     comp=N,10480µm,1.6s
ZCCA                                    AML   AML
     comp=N,10060µm,1.6s
IMOL Imola, Italy        0.63 147       AML   AML
     comp=E,8045µm,1.0s
IMOL                                    AML   AML
     comp=N,8740µm,0.6s
IMOL                                    AML   AML
     comp=E,1292µm,0.8s
IMOL                                    AML   AML
     comp=N,1138µm,0.9s
IMOL                                    AML   AML
     comp=E,8045µm,1.0s
IMOL                                    AML   AML
     comp=N,8740µm,0.6s
IMOL                                    AML   AML
     comp=E,1290µm,0.8s
IMOL                                    AML   AML
     comp=N,1132µm,0.9s
IMOL                                    AML   AML
     comp=E,1290µm,0.8s
IMOL                                    AML   AML
     comp=E,8045µm,1.0s
IMOL                                    AML   AML
     comp=N,8740µm,0.6s
IMOL                                    AML   AML
     comp=N,1132µm,0.9s
FNVD Fontana Vidola      0.73 188       AML   AML
     comp=E,5950µm,0.7s
FNVD                                    AML   AML
     comp=E,5950µm,0.7s
FNVD                                    AML   AML
     comp=N,5590µm,0.8s
FNVD                                    AML   AML
     comp=N,5590µm,0.8s
MARN Marana (Italy)      0.74 357⇓ePg   Pb    22 14 03.4  0.0
MARN                                eSg Sb    22 14 14.5 +1.2
MARN Marana (Italy)      0.74 357 ePg   Pb    22 14 03.3  0.0
MARN                                eSg Sb    22 14 14.5 +1.2
ROVR Rover¯¤ Verone      0.77 350       AML   AML
     comp=E,11800µm,0.4s
ROVR                                    AML   AML
     comp=E,11800µm,0.4s
ROVR                                    AML   AML
     comp=N,19000µm,0.4s
ROVR                                    AML   AML
     comp=N,19000µm,0.4s
ROVR                                    AML   AML
     comp=N,19000µm,0.4s
ROVR                                    AML   AML
     comp=E,11800µm,0.4s
ERBM Eremo               0.77 232       AML   AML
     comp=E,5160µm,0.6s
ERBM                                    AML   AML
     comp=E,5165µm,0.6s
ERBM                                    AML   AML
     comp=N,4340µm,0.9s
ERBM                                    AML   AML
     comp=N,4340µm,0.9s
ERBM                                    AML   AML
     comp=N,4340µm,0.9s
ERBM                                    AML   AML
     comp=E,5160µm,0.6s
BALD Monte Baldo         0.85 338⇑ePg   Pg    22 14 05.3 +0.2
BALD                                eSg Sb    22 14 18.4 +1.9
BALD Monte Baldo         0.85 338 ePg   Pg    22 14 05.3 +0.2
BALD                                eSg Sb    22 14 18.5 +1.9
SALO Salr                0.89 324       AML   AML
     comp=N,17800µm,1.1s
SALO                                    AML   AML
     comp=E,17100µm,0.9s
SALO                                    AML   AML
     comp=N,17800µm,1.1s
SALO                                    AML   AML
     comp=E,17100µm,0.9s
SALO                                    AML   AML
     comp=E,17100µm,0.9s
SALO                                    AML   AML
     comp=N,17800µm,1.1s
POPM Popiglio            0.92 203       AML   AML
     comp=N,6570µm,0.8s
POPM                                    AML   AML
     comp=E,4205µm,0.6s
POPM                                    AML   AML
     comp=N,6570µm,0.8s
POPM                                    AML   AML
     comp=E,4205µm,0.6s
POPM                                    AML   AML
     comp=N,6570µm,0.8s
POPM                                    AML   AML
     comp=E,4205µm,0.6s
BDI  Bagni Di Lucca      0.96 210       AML   AML
     comp=N,6450µm,0.5s
BDI                                     AML   AML
     comp=E,6650µm,1.1s
BDI                                     AML   AML
     comp=E,6885µm,1.1s
BDI                                     AML   AML
     comp=N,7865µm,0.5s
BDI                                     AML   AML
     comp=N,7865µm,0.5s
BDI                                     AML   AML
     comp=N,6450µm,0.5s
BDI                                     AML   AML
     comp=E,6650µm,1.1s
BDI                                     AML   AML
     comp=E,6885µm,1.1s
VLC  Villacollemand      0.97 221       AML   AML
     comp=N,2435µm,0.7s
VLC                                     AML   AML
     comp=E,3955µm,0.7s
VLC                                     AML   AML
     comp=N,2435µm,0.7s
VLC                                     AML   AML
     comp=E,3955µm,0.7s
VLC                                     AML   AML
     comp=E,3955µm,0.7s
VLC                                     AML   AML
     comp=N,2435µm,0.7s
DOSS Dosso del Somm      0.99 357⇓ePg   Pg    22 14 07.6 -0.1
DOSS Dosso del Somm      0.99 357 ePg   Pg    22 14 07.6 -0.1
MAGA Magasa              0.99 333       AML   AML
     comp=E,82100µm,0.5s
MAGA                                    AML   AML
     comp=E,82100µm,0.5s
MAGA                                    AML   AML
     comp=N,68250µm,0.5s
MAGA                                    AML   AML
     comp=E,82100µm,0.5s
MAGA                                    AML   AML
     comp=N,68250µm,0.5s
MAGA                                    AML   AML
     comp=N,68250µm,0.5s
CGRP Cima Grappa         1.06  21⇓ePg   Pb    22 14 08.8 +0.1
CGRP                                eSg Sn    22 14 24.8 +1.1
CGRP Cima Grappa         1.06  21⇓eP    Pb    22 14 08.8 +0.1
CGRP                                eSg Sn    22 14 24.8 +1.1
CGRP Cima Grappa         1.06  21 eP    Pb    22 14 08.8 +0.1
CGRP                                    AML   AML
     comp=E,8585µm,0.5s
CGRP                                    AML   AML
     comp=N,9190µm,0.7s
CGRP                                    AML   AML
     comp=E,8585µm,0.5s
CGRP                                    AML   AML
     comp=N,9190µm,0.7s
CGRP                                    AML   AML
     comp=N,9190µm,0.7s
CGRP                                    AML   AML
     comp=E,8585µm,0.5s
SFI  Santa Sofia         1.07 157       AML   AML
     comp=E,3630µm,0.8s
SFI                                     AML   AML
     comp=E,3430µm,0.8s
SFI                                     AML   AML
     comp=N,6255µm,1.4s
SFI                                     AML   AML
     comp=N,6500µm,1.4s
SFI                                     AML   AML
     comp=E,3430µm,0.8s
SFI                                     AML   AML
     comp=N,6250µm,1.4s
SFI                                     AML   AML
     comp=E,3630µm,0.8s
SFI                                     AML   AML
     comp=N,6500µm,1.4s
SFI                                     AML   AML
     comp=N,6500µm,1.4s
SFI                                     AML   AML
     comp=N,6250µm,1.4s
SFI                                     AML   AML
     comp=E,3430µm,0.8s
SFI                                     AML   AML
     comp=E,3630µm,0.8s
MTLO Montello            1.09  32⇑ePg   Pn    22 14 09.9 +0.6
MTLO                                eSg Sn    22 14 26.6 +2.4
MTLO Montello            1.09  32 ePg   Pn    22 14 09.9 +0.6
MTLO                                eSg Sn    22 14 26.6 +2.4
IESO Jesolo              1.10  55⇓ePg   Pn    22 14 09.8 +0.3
IESO Jesolo              1.10  55 ePg   Pn    22 14 09.8 +0.3
CRMI Carmignano          1.12 191       AML   AML
     comp=E,2205µm,1.3s
CRMI                                    AML   AML
     comp=N,2420µm,0.6s
CRMI                                    AML   AML
     comp=E,2205µm,1.3s
CRMI                                    AML   AML
     comp=N,2420µm,0.6s
MAIM Mastiano            1.13 210       AML   AML
     comp=E,3310µm,0.6s
MAIM                                    AML   AML
     comp=E,3310µm,0.6s
MAIM                                    AML   AML
     comp=N,6875µm,0.8s
MAIM                                    AML   AML
     comp=N,6875µm,0.8s
MAIM                                    AML   AML
     comp=N,6875µm,0.8s
MAIM                                    AML   AML
     comp=E,3310µm,0.6s
CTL8 Castelleone         1.13 290       AML   AML
     comp=E,5065µm,0.9s
CTL8                                    AML   AML
     comp=E,22100µm,1.0s
CTL8                                    AML   AML
     comp=N,10525µm,0.5s
CTL8                                    AML   AML
     comp=N,4855µm,0.4s
CTL8                                    AML   AML
     comp=E,22100µm,1.0s
CTL8                                    AML   AML
     comp=N,10515µm,0.5s
CTL8                                    AML   AML
     comp=E,5065µm,0.9s
CTL8                                    AML   AML
     comp=N,4855µm,0.4s
CTL8                                    AML   AML
     comp=N,10515µm,0.5s
CTL8                                    AML   AML
     comp=N,4855µm,0.4s
CTL8                                    AML   AML
     comp=E,5065µm,0.9s
CTL8                                    AML   AML
     comp=E,22100µm,1.0s
PANI Panarotta           1.16   2⇑ePg   Pg    22 14 10.3 -0.5
PANI                                eSg Sn    22 14 27.1 +0.9
PANI Panarotta           1.16   2 ePg   Pg    22 14 10.4 -0.5
PANI                                eSg Sn    22 14 27.1 +0.9
ASQU Asqua               1.16 161       AML   AML
     comp=N,2645µm,0.6s
ASQU                                    AML   AML
     comp=E,3360µm,0.6s
ASQU                                    AML   AML
     comp=N,2645µm,0.6s
ASQU                                    AML   AML
     comp=E,3360µm,0.6s
RNI  Roncone             1.18 338⇑ePg   Pg    22 14 10.0 -1.3
RNI  Roncone             1.18 338 ePg   Pg    22 14 10.0 -1.3
CTI  Castel Tesino       1.19  13       AML   AML
     comp=N,10625µm,0.4s
CTI                                     AML   AML
     comp=E,11500µm,0.8s
CTI                                     AML   AML
     comp=E,11500µm,0.8s
CTI                                     AML   AML
     comp=N,10625µm,0.4s
CTI                                     AML   AML
     comp=N,10625µm,0.4s
CTI                                     AML   AML
     comp=E,11500µm,0.8s
VARN Col Varnada, M      1.25  28⇑ePg   Pg    22 14 11.6 -1.0
VARN Col Varnada, M      1.25  28 ePg   Pg    22 14 11.6 -1.0
MABI Malga Bissina       1.28 336       AML   AML
     comp=E,3025µm,1.3s
MABI                                    AML   AML
     comp=N,3475µm,0.6s
MABI                                    AML   AML
     comp=N,3475µm,0.6s
MABI                                    AML   AML
     comp=E,3025µm,1.3s
RSM  Repubblica di       1.28 138       AML   AML
     comp=N,2300µm,0.8s
RSM                                     AML   AML
     comp=E,3000µm,1.1s
RSM                                     AML   AML
     comp=E,3000µm,1.1s
RSM                                     AML   AML
     comp=N,2300µm,0.8s
BOB  Bobbio (Coli)       1.30 265       AML   AML
BOB                                     AML   AML
BOB                                     AML   AML
BOB                                     AML   AML
     comp=E,2905µm,1.5s
BOB                                     AML   AML
     comp=N,3855µm,0.9s
BOB                                     AML   AML
     comp=N,3855µm,0.9s
BOB                                     AML   AML
     comp=E,2905µm,1.5s
BOB                                     AML   AML
PLMA Palmaria, Port      1.32 231       AML   AML
     comp=E,2400µm,0.5s
PLMA                                    AML   AML
     comp=E,2400µm,0.5s
PLMA                                    AML   AML
     comp=N,2640µm,0.3s
PLMA                                    AML   AML
     comp=N,2640µm,0.3s
CPGN Carpegna, Ital      1.33 145       AML   AML
     comp=E,2965µm,0.8s
CPGN                                    AML   AML
     comp=E,2965µm,0.8s
CPGN                                    AML   AML
     comp=N,3340µm,1.0s
CPGN                                    AML   AML
     comp=N,3340µm,1.0s
CRE  Caprese Michel      1.36 159       AML   AML
     comp=E,2785µm,0.9s
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CRE					AML	AML	
	comp=E,2785µm,0.9s						
CRE					AML	AML	
	comp=N,1600µm,1.3s						
CRE					AML	AML	
	comp=N,1600µm,1.3s						
MSSA	**Maissana**	**1.38**	**246**		AML	AML	
	comp=N,4005µm,0.9s						
MSSA					AML	AML	
	comp=E,2365µm,1.0s						
MSSA					AML	AML	
	comp=N,4005µm,0.9s						
MSSA					AML	AML	
	comp=E,2365µm,1.0s						
CAE	**Caneva**	**1.39**	**36**	*e*Pg	**Pn**	**22 14 14.0 +0.5**	
CAE	**Caneva**	**1.39**	**36**	*e*Pg	**Pn**	**22 14 14.0 +0.5**	
PARC	**Parchiule**	**1.43**	**150**	AML	AML		
	comp=E,1115µm,0.9s						
PARC					AML	AML	
	comp=E,1115µm,0.9s						
PARC					AML	AML	
	comp=N,1330µm,0.8s						
PARC					AML	AML	
	comp=N,1330µm,0.8s						
FAU	**Forcella Aurin**	**1.43**	**20⇓**	*e*Pg	**Pn**	**22 14 14.6 +0.5**	
FAU				*e*Sg	**Sn**	**22 14 36.3 +3.5**	
FAU	**Forcella Aurin**	**1.43**	**20**	*e*Pg	**Pn**	**22 14 14.6 +0.5**	
FAU				*e*Sg	**Sn**	**22 14 36.3 +3.5**	
POLC	**Polcenigo**	**1.43**	**37**	AML	AML		
	comp=E,4800µm,0.6s						
POLC					AML	AML	
	comp=N,5395µm,0.4s						
POLC					AML	AML	
	comp=E,4800µm,0.6s						
POLC					AML	AML	
	comp=N,5395µm,0.4s						
SSP9	**Sansepolcro**	**1.46**	**154**		AML	AML	
	comp=N,1955µm,1.2s						
SSP9					AML	AML	
	comp=E,2025µm,1.0s						
SSP9					AML	AML	
	comp=N,1955µm,1.2s						
SSP9					AML	AML	
	comp=E,2025µm,1.0s						
AGOR	**Agordo**	**1.49**	**21**	*e*Pg	**Pn**	**22 14 15.3 +0.4**	
AGOR	**Agordo**	**1.49**	**21**	AML	AML		
	comp=E,2295µm,0.6s						
AGOR					AML	AML	
	comp=E,2295µm,0.6s						
AGOR					AML	AML	
	comp=N,3120µm,0.8s						
AGOR					AML	AML	
	comp=N,3120µm,0.8s						
OZOL	**Ozolo**	**1.52**	**354**	*e*Pg	**Pn**	**22 14 16.0 +0.6**	
OZOL	**Ozolo**	**1.52**	**354**	*e*Pg	**Pn**	**22 14 16.0 +0.6**	
BADI	**Badiali**	**1.55**	**153**	AML	AML		
	comp=E,1855µm,1.1s						
BADI					AML	AML	
	comp=N,1635µm,0.9s						
BADI					AML	AML	
	comp=E,1855µm,1.1s						
BADI					AML	AML	
	comp=N,1635µm,0.9s						
CSO	**Casso**	**1.57**	**28**	*e*Pg	**Pb**	**22 14 17.5 +0.2**	
CSO	**Casso**	**1.57**	**28**	*e*Pg	**Pb**	**22 14 17.5 +0.2**	
KOSI	**Kohlern**	**1.57**	**3**	AML	AML		
	comp=N,7370µm,0.5s						
KOSI					AML	AML	
	comp=E,9425µm,0.5s						
KOSI					AML	AML	
	comp=N,7370µm,0.5s						
KOSI					AML	AML	
	comp=E,9425µm,0.5s						
MLNI	**Malnisio**	**1.57**	**36**	*e*Pg	**Pb**	**22 14 17.5 +0.1**	
MLNI	**Malnisio**	**1.57**	**36**	*e*Pg	**Pb**	**22 14 17.5 +0.1**	
CARE	**Lago del Cares**	**1.58**	**346**	*e*Pg	**Pn**	**22 14 16.7 +0.3**	
CARE	**Lago del Cares**	**1.58**	**346**	*e*Pg	**Pn**	**22 14 16.7 +0.3**	
APPI	**Appiano**	**1.59**	**359**	AML	AML		
	comp=E,4315µm,0.5s						
APPI					AML	AML	
	comp=N,3750µm,1.0s						
APPI					AML	AML	
	comp=E,4315µm,0.5s						
APPI					AML	AML	
	comp=N,3750µm,1.0s						
ATMC	**Monte Cedrone**	**1.59**	**155**	AML	AML		
	comp=N,2040µm,0.6s						
ATMC					AML	AML	
	comp=E,1730µm,0.8s						
ATMC					AML	AML	
	comp=E,1730µm,0.8s						
ATMC					AML	AML	
	comp=N,2040µm,0.6s						
NARO	**Abbazia di Nar**	**1.59**	**143**	AML	AML		
	comp=E,704µm,1.1s						
NARO					AML	AML	
	comp=E,704µm,1.1s						
NARO					AML	AML	
	comp=N,780µm,0.7s						
NARO					AML	AML	
	comp=N,780µm,0.7s						
BOSI	**Bolzano**	**1.60**	**1**	AML	AML		
	comp=N,12250µm,0.7s						
BOSI					AML	AML	
	comp=E,11750µm,1.0s						
BOSI					AML	AML	
	comp=N,12250µm,0.7s						
BOSI					AML	AML	
	comp=E,11750µm,1.0s						
FSSB	**Fossombrone**	**1.62**	**137**	AML	AML		
	comp=N,2210µm,0.6s						
FSSB					AML	AML	
	comp=E,2345µm,0.7s						
FSSB					AML	AML	
	comp=N,2210µm,0.6s						
FSSB					AML	AML	
	comp=E,2345µm,0.7s						
PIEI	**Pieia**	**1.64**	**146**	AML	AML		
	comp=E,838µm,0.4s						
PIEI					AML	AML	
	comp=E,838µm,0.4s						
PIEI					AML	AML	
	comp=N,806µm,0.7s						
PIEI					AML	AML	
	comp=N,806µm,0.7s						
CIMO	**Cimolais**	**1.64**	**30**	*e*Pg	**Pb**	**22 14 18.4 -0.1**	
CIMO	**Cimolais**	**1.64**	**30**	*e*Pg	**Pb**	**22 14 18.4 -0.1**	
CAFI	**Castiglion Fio**	**1.64**	**162**	AML	AML		
	comp=E,1145µm,0.8s						
CAFI					AML	AML	
	comp=N,940µm,0.6s						
CAFI					AML	AML	
	comp=E,1145µm,0.8s						
CAFI					AML	AML	
	comp=N,940µm,0.6s						
ATPI	**Pietralunga -**	**1.66**	**150**	AML	AML		
	comp=N,1435µm,0.7s						
ATPI					AML	AML	
	comp=E,1340µm,0.9s						
ATPI					AML	AML	
	comp=N,1435µm,0.7s						
ATPI					AML	AML	
	comp=E,1340µm,0.9s						
MPAG	**Monte Paganucc**	**1.66**	**139**	AML	AML		
	comp=N,1310µm,0.8s						
MPAG					AML	AML	
	comp=E,1895µm,0.6s						
MPAG					AML	AML	
	comp=E,1895µm,0.6s						
MPAG					AML	AML	
	comp=N,1310µm,0.8s						
FROS	**Frosini**	**1.69**	**183**	AML	AML		
	comp=E,1255µm,1.0s						
FROS					AML	AML	
	comp=E,1255µm,1.0s						
FROS					AML	AML	
	comp=N,1200µm,0.8s						
FROS					AML	AML	
	comp=N,1200µm,0.8s						
ATBU	**Serra di Buran**	**1.69**	**146**	AML	AML		
	comp=E,3025µm,0.6s						
ATBU					AML	AML	
	comp=N,3860µm,0.7s						
ATBU					AML	AML	
	comp=N,3860µm,0.7s						
ATBU					AML	AML	
	comp=E,3025µm,0.6s						
BRMO	**Bormio**	**1.70**	**339**	AML	AML		
	comp=N,2740µm,0.5s						
BRMO					AML	AML	
	comp=E,3015µm,0.6s						
BRMO					AML	AML	
	comp=N,2740µm,0.5s						
BRMO					AML	AML	
	comp=E,3015µm,0.6s						
STAL	**STALIGIAL**	**1.70**	**36**	AML	AML		
	comp=E,2840µm,0.5s						
STAL					AML	AML	
	comp=E,2840µm,0.5s						
STAL					AML	AML	
	comp=N,2315µm,0.4s						
STAL					AML	AML	
	comp=E,3440µm,0.5s						
STAL					AML	AML	
	comp=N,2410µm,1.0s						
STAL					AML	AML	
	comp=E,3440µm,0.5s						
STAL					AML	AML	
	comp=N,2315µm,0.4s						
STAL					AML	AML	
	comp=N,2410µm,1.0s						
ATVO	**AVT- Monte Val**	**1.72**	**151**	AML	AML		
	comp=E,1840µm,0.7s						
ATVO					AML	AML	
	comp=E,1840µm,0.7s						
ATVO					AML	AML	
	comp=N,1086µm,1.2s						
ATVO					AML	AML	
	comp=N,1086µm,1.2s						
AFL	**Alpe Faloria**	**1.76**	**21**	*e*Pn	**Pn**	**22 14 20.0 +1.3**	
AFL	**Alpe Faloria**	**1.76**	**21**	*e*Pn	**Pn**	**22 14 20.0 +1.3**	
ATVA	**AVT- Monte Val**	**1.77**	**155**	AML	AML		
	comp=N,633µm,1.4s						
ATVA					AML	AML	
	comp=E,932µm,0.9s						
ATVA					AML	AML	
	comp=N,633µm,1.4s						
ATVA					AML	AML	
	comp=E,932µm,0.9s						
MOSI	**Grossmontoni**	**1.79**	**344**	AML	AML		
	comp=E,6780µm,1.0s						
MOSI					AML	AML	
	comp=N,12400µm,0.6s						
MOSI					AML	AML	
	comp=N,12400µm,0.6s						
MOSI					AML	AML	
	comp=E,6780µm,1.0s						
TRIF	**Trifonti**	**1.80**	**189**	AML	AML		
	comp=N,779µm,0.7s						
TRIF					AML	AML	
	comp=E,599µm,0.8s						
TRIF					AML	AML	
	comp=N,779µm,0.7s						
TRIF					AML	AML	
	comp=E,599µm,0.8s						
SSFR	**Montelago di S**	**1.82**	**143**	AML	AML		
	comp=E,1190µm,1.0s						
SSFR					AML	AML	
	comp=N,1242µm,1.4s						
SSFR					AML	AML	
	comp=E,1190µm,1.0s						
SSFR					AML	AML	
	comp=N,1242µm,1.4s						
ABSI	**Aberstueckl**	**1.84**	**1**	AML	AML		
	comp=E,6980µm,0.5s						
ABSI					AML	AML	
	comp=E,6980µm,0.5s						
ABSI					AML	AML	
	comp=N,6155µm,0.9s						
ABSI					AML	AML	
	comp=N,6155µm,0.9s						
MURB	**Monte Urbino**	**1.86**	**150**	AML	AML		
	comp=N,1735µm,0.8s						
MURB					AML	AML	
	comp=E,2050µm,1.0s						
MURB					AML	AML	
	comp=N,1735µm,0.8s						
MURB					AML	AML	
	comp=E,2050µm,1.0s						
GEPF	**Gemona**	**1.91**	**43**	AML	AML		
	comp=N,2005µm,0.7s						
GEPF					AML	AML	
	comp=E,1300µm,0.8s						
GEPF					AML	AML	
	comp=N,2005µm,0.7s						
GEPF					AML	AML	
	comp=E,1300µm,0.8s						
VINO	**Villanova**	**1.96**	**45**	AML	AML		
	comp=N,1725µm,0.8s						
VINO					AML	AML	
	comp=E,1375µm,0.7s						
VINO					AML	AML	
	comp=N,1725µm,0.8s						
VINO					AML	AML	
	comp=E,1375µm,0.7s						
PCP	**Piancastagn**	**1.97**	**261**	AML	AML		
	comp=E,1230µm,1.6s						
PCP					AML	AML	
	comp=E,1230µm,1.6s						
PCP					AML	AML	
	comp=N,1410µm,0.6s						
PCP					AML	AML	
	comp=N,1410µm,0.6s						
ATCC	**AVT- Casa Cast**	**1.98**	**149**	AML	AML		
	comp=N,1490µm,0.7s						
ATCC					AML	AML	
	comp=E,1790µm,0.8s						
ATCC					AML	AML	
	comp=E,1790µm,0.8s						
ATCC					AML	AML	
	comp=N,1490µm,0.7s						
VARE	**Varese**	**2.01**	**300**	AML	AML		
	comp=N,1675µm,0.3s						
VARE					AML	AML	
	comp=E,1520µm,0.5s						
VARE					AML	AML	
	comp=E,1520µm,0.5s						
VARE					AML	AML	
	comp=N,1675µm,0.3s						
SNTG	**Esanatoglia**	**2.04**	**143**	AML	AML		
	comp=N,660µm,1.3s						
SNTG					AML	AML	
	comp=E,829µm,1.1s						
SNTG					AML	AML	
	comp=E,829µm,1.1s						
SNTG					AML	AML	
	comp=N,660µm,1.3s						
ROSI	**Rosskopf**	**2.04**	**3**	AML	AML		
	comp=N,3740µm,0.5s						
ROSI					AML	AML	
	comp=E,4060µm,0.6s						
ROSI					AML	AML	
	comp=N,3740µm,0.5s						
ROSI					AML	AML	
	comp=E,4060µm,0.6s						
ARCI	**Arcidosso**	**2.05**	**176**	AML	AML		
	comp=E,346µm,0.8s						
ARCI					AML	AML	
	comp=N,453µm,0.9s						
ARCI					AML	AML	
	comp=N,453µm,0.9s						
ARCI					AML	AML	
	comp=E,346µm,0.8s						
ABTA	**Abfaltersbach**	**2.05**	**25**	*e*Pn	**Pn**	**22 14 23.9 +1.3**	
	comp=E,3.2nm,0.1s,SNR=91						
ABTA				*i* Pg	**Pg**	**22 14 27.4 -0.5**	
	comp=E,55nm,0.3s						
ABTA				*e*Sg	**Sg**	**22 14 56.3 +1.9**	
	comp=E,316nm,0.7s						
ABTA	**Abfaltersbach**	**2.05**	**25**	Pn	**Pn**	**22 14 23.9 +1.3**	
	comp=E,3.2nm,0.1s,SNR=91						
SKDS	**Skadanscina**	**2.05**	**70**	*i* Pn	**Pn**	**22 14 21.7 -0.8**	
SKDS				*e*Sn	**Sn**	**22 14 46.7 -1.2**	
SKDS	**Skadanscina**	**2.05**	**70**	*i* Pn	**Pn**	**22 14 21.7 -0.8**	
SKDS				*e*Sn	**Sn**	**22 14 46.7 -1.2**	
CING	**Cingoli**	**2.06**	**137**	AML	AML		
	comp=E,744µm,0.8s						
CING					AML	AML	
	comp=N,675µm,0.8s						
CING					AML	AML	
	comp=N,675µm,0.8s						
CING					AML	AML	
	comp=E,744µm,0.8s						
ROTM	**Rocchetta Tana**	**2.07**	**270**	AML	AML		
	comp=E,3960µm,1.2s						
ROTM					AML	AML	
	comp=N,6015µm,0.5s						
ROTM					AML	AML	
	comp=N,6015µm,0.5s						
ROTM					AML	AML	
	comp=E,3960µm,1.2s						
MGAB	**Montegabbione**	**2.07**	**163**	AML	AML		
	comp=N,910µm,1.3s						
MGAB					AML	AML	
	comp=E,932µm,0.7s						
MGAB					AML	AML	
	comp=N,891µm,1.3s						
MGAB					AML	AML	
	comp=E,1139µm,0.9s						
MGAB					AML	AML	
	comp=N,910µm,1.3s						
MGAB					AML	AML	
	comp=E,932µm,0.7s						
MGAB					AML	AML	
	comp=E,1139µm,0.9s						
MGAB					AML	AML	
	comp=N,891µm,1.3s						
TUE	**Stuetta**	**2.07**	**320**	AML	AML		
	comp=E,1300µm,0.5s						
TUE					AML	AML	
	comp=E,1300µm,0.5s						
TUE					AML	AML	
	comp=N,1255µm,0.3s						
TUE					AML	AML	
	comp=N,1255µm,0.3s						
SACS	**San Casciano d**	**2.10**	**167**	AML	AML		
	comp=N,504µm,1.0s						
SACS					AML	AML	
	comp=E,603µm,0.7s						
SACS					AML	AML	
	comp=N,473µm,1.0s						
SACS					AML	AML	
	comp=E,584µm,1.0s						
SACS					AML	AML	
	comp=E,603µm,0.7s						
SACS					AML	AML	
	comp=E,584µm,1.0s						
SACS					AML	AML	
	comp=N,504µm,1.0s						
SACS					AML	AML	
	comp=N,473µm,1.0s						
PTCC	**Patocco-Chiusa**	**2.10**	**43**	AML	AML		
	comp=E,1060µm,0.7s						
PTCC					AML	AML	
	comp=N,907µm,0.5s						
PTCC					AML	AML	
	comp=N,907µm,0.5s						
PTCC					AML	AML	
	comp=E,1060µm,0.7s						
ASSB	**Assisi San Ben**	**2.11**	**151**	AML	AML		
	comp=N,782µm,0.9s						
ASSB					AML	AML	
	comp=E,854µm,0.8s						
ASSB					AML	AML	
	comp=E,854µm,0.8s						
ASSB					AML	AML	
	comp=N,782µm,0.9s						
CASP	**Castiglione de**	**2.12**	**188**	AML	AML		
	comp=N,357µm,1.3s						
CASP					AML	AML	
	comp=E,303µm,1.0s						
CASP					AML	AML	
	comp=N,357µm,1.3s						
CASP					AML	AML	
	comp=E,303µm,1.0s						
RISI	**Rein**	**2.13**	**15**	AML	AML		
	comp=E,4020µm,0.5s						
RISI					AML	AML	
	comp=E,4020µm,0.5s						
RISI					AML	AML	
	comp=N,4505µm,0.4s						
RISI					AML	AML	
	comp=N,4505µm,0.4s						
FETA	**Feichten**	**2.16**	**350**	*e*Pn	**Pb**	**22 14 26.6 -0.9**	
	comp=N,37nm,0.4s,SNR=86						
FETA				*e*Sg	**Sg**	**22 14 57.6 -0.4**	
	comp=N,110nm,0.3s						
FETA	**Feichten**	**2.16**	**350**	Pn	**Pb**	**22 14 26.6 -0.9**	
	comp=N,37nm,0.4s,SNR=86						
FETA				Sg	**Sg**	**22 14 57.6 -0.4**	
	comp=N,110nm,0.3s						
QLNO	**Quiliano**	**2.16**	**256**	AML	AML		
	comp=N,676µm,0.5s						
QLNO					AML	AML	
	comp=E,532µm,0.8s						
QLNO					AML	AML	
	comp=N,676µm,0.5s						
QLNO					AML	AML	
	comp=E,532µm,0.8s						
VOJS	**Vojsko**	**2.17**	**57**	*i* Pn	**Pn**	**22 14 24.0 -0.2**	
VOJS	**Vojsko**	**2.17**	**57**	*i* Pn	**Pn**	**22 14 24.0 -0.2**	
FINB	**Finale Ligure**	**2.22**	**252**	AML	AML		
	comp=N,54µm,0.4s						
FINB					AML	AML	
	comp=E,2625µm,0.3s						
FINB					AML	AML	
	comp=E,2625µm,0.3s						
FINB					AML	AML	
	comp=N,54µm,0.4s						
ACOM	**Acomizza, Ital**	**2.28**	**43**	AML	AML		
	comp=N,1710µm,0.5s						
ACOM					AML	AML	
	comp=E,2325µm,0.6s						
ACOM					AML	AML	
	comp=N,1710µm,0.5s						
ACOM					AML	AML	
	comp=E,2325µm,0.6s						
MOMA	**Monte Martano**	**2.29**	**155**	AML	AML		
	comp=E,525µm,1.1s						
MOMA					AML	AML	
	comp=N,398µm,0.6s						
MOMA					AML	AML	
	comp=E,525µm,1.1s						
MOMA					AML	AML	
	comp=N,398µm,0.6s						
RIY	**Rijeka**	**2.32**	**78**	*e*Pg	**Pb**	**22 14 30.1 0.0**	
RIY				*e*Sg	**Sg**	**22 15 01.4 -1.6**	
MONC	**Moncucco Torin**	**2.38**	**276**	AML	AML		
	comp=E,1595µm,0.4s						
MONC					AML	AML	
	comp=N,1565µm,0.4s						
MONC					AML	AML	
	comp=N,1565µm,0.4s						
MONC					AML	AML	
	comp=E,1595µm,0.4s						
CEY	**Cerknica**	**2.38**	**68**	*e*Pn	**Pn**	**22 14 26.6 -0.6**	
CEY				*e*Sg	**Sg**	**22 15 03.6 -1.6**	
CEY	**Cerknica**	**2.38**	**68**	*e*Pn	**Pn**	**22 14 26.6 -0.6**	
CEY				*e*Sg	**Sg**	**22 15 03.6 -1.6**	
WTTA	**Wattenberg**	**2.38**	**6**	*e*Pn	**Pn**	**22 14 29.6 +2.3**	
	comp=E,1.9nm,0.1s,SNR=116						
WTTA				*e*Sg	**Sg**	**22 15 05.8 +0.6**	
	comp=E,279nm,0.4s						
WTTA	**Wattenberg**	**2.38**	**6**	Pn	**Pn**	**22 14 29.6 +2.3**	
	comp=E,1.9nm,0.1s,SNR=116						
WTTA				Sg	**Sg**	**22 15 05.8 +0.6**	
	comp=E,279nm,0.4s						
MYKA	**Terra Mystica**	**2.40**	**43**	*e*Pn	**Pn**	**22 14 28.5 +1.0**	
	comp=E,2.2nm,0.1s						
MYKA				*e*Pg	**Pg**	**22 14 34.0 -0.6**	
	comp=E,44nm,0.3s						
MYKA				*e*Sg	**Sg**	**22 15 06.6 +0.8**	
	comp=E,250nm,0.6s						
MYKA	**Terra Mystica**	**2.40**	**43**	Pn	**Pn**	**22 14 28.5 +1.0**	
	comp=E,2.2nm,0.1s						
MYKA	**Terra Mystica**	**2.40**	**43**	Pg	**Pg**	**22 14 34.0 -0.6**	
	comp=E,44nm,0.3s						
MYKA				Sg	**Sg**	**22 15 06.6 +0.8**	
	comp=E,250nm,0.6s						
RORO	**Rocca Rossa**	**2.42**	**252**	AML	AML		
	comp=E,374µm,0.9s						
RORO					AML	AML	
	comp=E,374µm,0.9s						
RORO					AML	AML	
	comp=N,358µm,0.4s						
RORO					AML	AML	
	comp=N,358µm,0.4s						
WATA	**Walderalm**	**2.45**	**5**	*e*Pn	**Pn**	**22 14 30.3 +2.1**	
	SNR=114						
WATA	**Walderalm**	**2.45**	**5**	Pn	**Pn**	**22 14 30.3 +2.1**	
	SNR=114						
MOTA	**Moosalm**	**2.45**	**357**	*e*Pn	**Pn**	**22 14 29.8 +1.5**	
	comp=N,20nm,0.5s,SNR=216						

MOTA	Moosalm	2.45 357	Pn	Pn	22 14 29.8	+1.5
	comp=N,20nm,0.5s,SNR=216					
NRCA	Norcia	2.46 146	AML	AML		
	comp=E,476μm,0.9s					
NRCA			AML	AML		
	comp=E,476μm,0.9s					
NRCA			AML	AML		
	comp=N,507μm,0.7s					
NRCA			AML	AML		
	comp=N,507μm,0.7s					
MAON	Monte Argentar	2.47 182	AML	AML		
	comp=N,146μm,0.5s					
MAON			AML	AML		
	comp=E,132μm,1.1s					
MAON			AML	AML		
	comp=N,146μm,0.5s					
MAON			AML	AML		
	comp=E,132μm,1.1s					
LJU	Ljubljana	2.57 62	*e*Pn	Pn	22 14 29.8	+0.1
LJU			*e*Sg	Sg	22 15 10.2	-0.8
LJU	Ljubljana	2.57 62	*e*Pn	Pn	22 14 29.8	+0.1
LJU			*e*Sg	Sg	22 15 10.2	-0.8
DAVA	Damuels	2.58 339	*e*Pn	Pn	22 14 32.9	+2.9
	comp=E,21nm,0.3s,SNR=36					
DAVA			*e*Sn	Sb	22 15 05.2	-1.0
	comp=E,113nm,0.3s					
DAVA	Damuels	2.58 339	Pn	Pn	22 14 32.9	+2.9
	comp=E,21nm,0.3s,SNR=36					
DAVA			Sn	Sb	22 15 05.2	-1.0
	comp=E,113nm,0.3s					
NVLJ	Novalja	2.59 96	*e*Pn	Pn	22 14 30.1	+0.2
NVLJ			Sn	Sn	22 15 00.4	-0.8
NVLJ	Novalja	2.59 96	*e*Pn	Pn	22 14 30.1	+0.2
NVLJ			Sn	Sn	22 15 00.3	-0.8
IMI	Imperia	2.61 249	AML	AML		
	comp=E,624μm,0.4s					
IMI			AML	AML		
	comp=N,866μm,0.9s					
IMI			AML	AML		
	comp=N,866μm,0.9s					
IMI			AML	AML		
	comp=E,624μm,0.4s					
RETA	Reutte	2.62 352	*e*Pn	Pn	22 14 33.1	+2.7
	comp=E,53nm,0.4s,SNR=32					
RETA	Reutte	2.62 352	Pn	Pn	22 14 33.1	+2.7
	comp=E,53nm,0.4s,SNR=32					
KBA	Koelnbreinsper	2.62 33	*e*Pn	Pn	22 14 33.1	+2.5
	SNR=106					
KBA			*e*Pg	Pg	22 14 37.5	-1.3
	comp=E,104nm,0.4s					
KBA			Sg	Sg	22 15 13.4	+0.6
	comp=E,334nm,0.6s					
KBA	Koelnbreinsper	2.62 33	Pn	Pn	22 14 33.1	+2.5
	SNR=106					
LNSS	Leonessa	2.63 150	AML	AML		
	comp=N,646μm,0.6s					
LNSS			AML	AML		
	comp=E,569μm,1.6s					
LNSS			AML	AML		
	comp=N,646μm,0.6s					
LNSS			AML	AML		
	comp=E,569μm,1.6s					
VISS	Visnje	2.68 69	*i* Pn	Pn	22 14 31.3	+0.1
VISS	Visnje	2.68 69	*i* Pn	Pn	22 14 31.3	+0.1
SAOF	Saorge	2.81 252	P	Pn	22 14 34.2	+1.2
SAOF			S	Sn	22 15 09.9	+3.3
SAOF	Saorge	2.81 252	P	Pn	22 14 34.2	+1.2
OBKA	Obir	2.81 54	*e*Pn	Pn	22 14 33.7	+0.6
	comp=E,3.9nm,0.1s,SNR=11					
OBKA			Sg	Sg	22 15 19.1	+0.3
	comp=E,427nm,0.6s					
OBKA	Obir	2.81 54	Pn	Pn	22 14 33.7	+0.6
	comp=E,3.9nm,0.1s,SNR=11					
OBKA			Sg	Sg	22 15 19.1	+0.3
	comp=E,427nm,0.6s					
PGF	Pioggiola	2.86 216	*e*Pn	Pn	22 14 33.8	0.0
PGF			*e*Sn	Sn	22 15 06.5	-1.6
	comp=E,296nm,0.6s,SNR=1.0					
PGF	Pioggiola	2.86 216	*e*Pn	Pn	22 14 33.8	0.0
PGF			*e*Sn	Sn	22 15 06.5	-1.6
	comp=E,148nm,0.6s,SNR=1.0					
SBF	Sospel	2.93 251	*e*Pn	Pn	22 14 35.8	+1.1
	SNR=1.0					
SBF			*e*Sn	Sn	22 15 10.2	+0.4
	comp=E,615nm,0.6s					
SBF	Sospel	2.93 251	*e*Pn	Pn	22 14 35.8	+1.1
	SNR=1.0					
SBF			*e*Sn	Sn	22 15 10.2	+0.4
	comp=E,308nm,0.6s					
AQU	L'Aquila	2.98 148	*e*Pn	Pn	22 14 36.4	+1.1
LUCF	Luceram	2.98 252	P	Pn	22 14 36.9	+1.5
LUCF			S	Sn	22 15 14.8	+3.8
LUCF	Luceram	2.98 252	P	Pn	22 14 36.9	+1.5
ESCA	l'Escarene	2.99 251	P	Pn	22 14 37.5	+2.1
ESCA			S	Sn	22 15 14.5	+3.5
ESCA	l'Escarene	2.99 251	P	Pn	22 14 37.5	+2.1
MON	Monaco	2.99 248	P	Pn	22 14 37.6	+2.1
MON	Monaco	2.99 248	P	Pn	22 14 37.6	+2.1
REVF	Revere	3.03 249	P	Pn	22 14 36.8	+0.8
REVF	Revere	3.03 249	P	Pn	22 14 36.8	+0.8
REVF			S	Sn	22 15 15.4	+3.4
OZLJ	Ozalj	3.05 75	*i* Pn	Pn	22 14 36.9	+0.5
OZLJ	Ozalj	3.05 75	*i* Pn	Pn	22 14 36.8	+0.5
CRES	Cresnjev	3.10 71	⇑*i*Pn	Pn	22 14 36.8	-0.2
MVIF	Mont Vial	3.11 253	P	Pn	22 14 38.5	+1.2
MVIF	Mont Vial	3.11 253	P	Pn	22 14 38.5	+1.2
SMPL	Sampolo	3.15 208	P	Pn	22 14 40.0	+2.4
SMPL	Sampolo	3.15 208	P	Pn	22 14 40.0	+2.4
SMPL			S	Sn	22 15 18.9	+3.9
SOKA	Soboth	3.18 55	*i* Pn	Pn	22 14 38.7	+0.5
	comp=E,4.4nm,0.2s,SNR=12					
SOKA			*i* Sn	Sn	22 15 16.4	+0.5
	comp=E,27nm,0.5s					
SOKA	Soboth	3.18 55	Pn	Pn	22 14 38.7	+0.5
	comp=E,4.4nm,0.2s,SNR=12					
SOKA			Sn	Sn	22 15 16.4	+0.5
	comp=E,27nm,0.5s					
MBDF	Montbardon	3.20 269	*e*Pn	Pn	22 14 38.4	-0.1
	SNR=1.0					
MBDF			*e*Sn	Sn	22 15 15.5	-1.0
	comp=E,191nm,0.7s,SNR=1.0					
MBDF	Montbardon	3.20 269	*e*Pn	Pn	22 14 38.4	-0.1
	SNR=1.0					
MBDF			*e*Sn	Sn	22 15 15.5	-1.0
	comp=E,96nm,0.7s,SNR=1.0					
UDBI	Udbina	3.23 95	*e*Pn	Pn	22 14 39.6	+0.8
UDBI			Sn	Sn	22 15 16.1	-0.9
UDBI	Udbina	3.23 95	*e*Pn	Pn	22 14 39.6	+0.8
UDBI			Sn	Sn	22 15 16.1	-0.9
LPG	La Plagne	3.25 282	*e*Pn	Pn	22 14 40.3	+1.0
	SNR=1.0					
LPG	La Plagne	3.25 282	*e*Pn	Pn	22 14 40.3	+1.0
	SNR=1.0					
LPL	La Plagne	3.27 283	*e*Pn	Pn	22 14 41.3	+1.9
	SNR=1.0					
LPL	La Plagne	3.27 283	*e*Pn	Pn	22 14 41.3	+1.9
	SNR=1.0					
CALF	Calern	3.32 251	P	Pn	22 14 41.0	+0.9
CALF	Calern	3.32 251	P	Pn	22 14 41.0	+0.9
OG01	Vacheresse	3.52 296	P	Pn	22 14 44.5	+1.7
OG01	Vacheresse	3.52 296	P	Pn	22 14 44.5	+1.7
FRF	La Foret Royal	3.58 250	*e*Pn	Pn	22 14 44.2	+0.7
	SNR=1.0					
FRF			*e*Sn	Sn	22 15 23.6	-2.0
	comp=E,87nm,0.4s,SNR=1.0					
FRF	La Foret Royal	3.58 250	*e*Pn	Pn	22 14 44.2	+0.7
	SNR=1.0					
MOA	Molln	3.61 34	*i* Pn	Pn	22 14 45.5	+1.4
	comp=E,16nm,0.2s					
MOA	Molln	3.61 34	Pn	Pn	22 14 45.5	+1.4
	comp=E,16nm,0.2s					
GDM	Grand'Maison	3.66 277	P	Pn	22 14 46.4	+1.5
GDM	Grand'Maison	3.66 277	P	Pn	22 14 46.4	+1.5
LMR	La Mourre	3.76 247	*e*Pn	Pn	22 14 46.3	+0.2
	SNR=1.0					
LMR			*e*Sn	Sn	22 15 26.6	-3.5
	comp=E,99nm,0.3s,SNR=1.0					
LMR	La Mourre	3.76 247	*e*Pn	Pn	22 14 46.3	+0.2
	SNR=1.0					
ARSA	Arzberg	3.79 50	*e*Pn	Pn	22 14 46.6	+0.2
ARSA	Arzberg	3.79 50	*i* Pn	Pn	22 14 46.6	+0.2
	comp=E,6.9nm,0.2s,SNR=8.3					
ARSA			Sg	Sg	22 15 52.0	+1.9
	comp=E,40nm,0.6s					
ARSA	Arzberg	3.79 50	*e*Pn	Pn	22 14 46.6	+0.2
ARSA			Sg	Sg	22 15 52.0	+1.9
	comp=E,40nm,0.6s					
ORIF	Oris-en-Rattie	3.83 272	*e*Pn	Pn	22 14 48.5	+1.5
	SNR=1.0					
ORIF	Oris-en-Rattie	3.83 272	P	Pn	22 14 48.3	+1.3
ORIF	Oris-en-Rattie	3.83 272	*e*Pn	Pn	22 14 48.5	+1.5
	SNR=1.0					
KIZ	Kirchzarten	3.84 324	P	Pn	22 14 48.3	+1.2
KIZ	Kirchzarten	3.84 324	P	Pn	22 14 48.3	+1.2
GRN	Grenoble	3.93 277	P	Pn	22 14 49.6	+1.2
GRN	Grenoble	3.93 277	P	Pn	22 14 49.6	+1.2
LOMF	Lomont	3.94 310	P	Pn	22 14 50.4	+1.8
LOMF	Lomont	3.94 310	P	Pn	22 14 50.4	+1.8
CABF	La Chapelle	4.01 297	*e*Pn	Pn	22 14 50.5	+0.9
	SNR=1.0					
CABF			*e*Sn	Sn	22 15 33.1	-3.3
	comp=E,70nm,0.6s,SNR=1.0					
CABF	La Chapelle	4.01 297	*e*Pn	Pn	22 14 50.5	+0.9
	SNR=1.0					
CABF			*e*Sn	Sn	22 15 33.1	-3.3
	comp=E,35nm,0.6s,SNR=1.0					
MLYF	Mely	4.04 259	P	Pn	22 14 51.8	+1.9
MLYF	Mely	4.04 259	P	Pn	22 14 51.8	+1.9
MOF	Molkenrain	4.12 317	P	Pn	22 14 51.9	+0.8
MOF	Molkenrain	4.12 317	P	Pn	22 14 51.8	+0.8
BEHE	Becsehely	4.17 66	*ex*	x	22 15 05.9	
SMRF	Simiane la Rot	4.18 259	*e*Pn	Pn	22 14 56.0	+4.2
	SNR=1.0					
SMRF			*e*Sn	Sn	22 15 38.6	-1.8
	comp=E,72nm,0.7s,SNR=1.0					
SMRF	Simiane la Rot	4.18 259	*e*Pn	Pn	22 14 56.0	+4.2
	SNR=1.0					
SMRF			*e*Sn	Sn	22 15 38.6	-1.8
	comp=E,36nm,0.7s,SNR=1.0					
OPP	Oppenau	4.18 331	P	Pn	22 14 52.9	+1.0
OPP	Oppenau	4.18 331	P	Pn	22 14 52.9	+1.0
BLY	Banja Luka	4.21 90	*e*Pn	Pn	22 14 52.2	-0.1
BLY	Banja Luka	4.21 90	*e*Pn	Pn	22 14 52.2	-0.1
HINF	Hinteralfeld	4.23 315	*e*Pn	Pn	22 14 53.1	+0.6
	SNR=1.0					
HINF	Hinteralfeld	4.23 315	*e*Pn	Pn	22 14 53.1	+0.6
	SNR=1.0					
GERES	GERESS Array B	4.29 22	Pn	Pn	22 14 53.8	+0.3
	comp=E,2.5nm,0.3s,baz=195,slow=13,SNR=60					
GERES			Pg	Pb	22 15 06.2	+2.5
	comp=E,6.8nm,0.3s,baz=200,slow=17,SNR=43					
GERES			Sn	Sn	22 15 43.1	-0.1
	comp=E,5.3nm,0.3s,baz=202,slow=23,SNR=5.1					
GERES			Lg	Lg	22 16 06.7	
	comp=E,12nm,0.3s,baz=208,slow=31,SNR=11					
CONA	Conrad Observa	4.39 45	*i* Pn	Pn	22 14 55.4	+0.6
	comp=E,3.7nm,0.3s					
CONA	Conrad Observa	4.39 45	Pn	Pn	22 14 55.4	+0.6
	comp=E,3.7nm,0.3s					
CDF	Champ du Feu	4.46 323	*e*Pn	Pn	22 14 56.6	+0.8
	SNR=1.0					
CDF			*e*Sn	Sn	22 15 46.1	-1.4
	SNR=1.0					
CDF			*e*Sg	Sg	22 16 07.7	-4.1
	comp=E,114nm,0.7s,SNR=1.0					
CDF	Champ du Feu	4.46 323	*e*Pn	Pn	22 14 56.6	+0.8
	SNR=1.0					
CDF			*e*Sn	Sn	22 15 46.1	-1.4
	SNR=1.0					
CDF			*e*Sg	Sg	22 16 07.7	-4.1
	comp=E,57nm,0.7s,SNR=1.0					
KHC	Kasperske Hory	4.52 20	*e*PN	Pn	22 14 57.0	+0.4
KHC			*e*PG	Pg	22 15 13.0	-2.1
KHC			*e*SN	Sn	22 15 47.5	-1.4
KHC			*e*SG	Sg	22 16 12.4	-1.3
	comp=E,154nm,0.8s					
KHC			AMS	AMS	22 16 40.0	
	comp=E,400nm,9.4s					
KHC	Kasperske Hory	4.52 20	Pn	Pn	22 14 57.0	+0.4
HAU	Haudompre	4.61 314	*e*Pn	Pn	22 14 58.2	+0.5
	SNR=1.0					
HAU			*e*Sn	Sn	22 15 47.1	-3.9
	comp=E,66nm,0.3s,SNR=1.0					
HAU	Haudompre	4.61 314	*e*Pn	Pn	22 14 58.2	+0.5
	SNR=1.0					
SOP	Sopron	4.61 51	⇓*e*Pn	Pn	22 14 58.0	+0.3
SOP			*e*Sn	Sn	22 15 50.0	-0.9
VIVF	Saint-Julien-l	4.69 272	*e*Pn	Pn	22 14 59.3	+0.5
	SNR=1.0					
VIVF			*e*Sn	Sn	22 15 50.7	-2.3
	SNR=1.0					
VIVF	Saint-Julien-l	4.69 272	*e*Pn	Pn	22 14 59.3	+0.5
	SNR=1.0					
VIVF			*e*Sn	Sn	22 15 50.7	-2.3
	SNR=1.0					
LANF	Langenberg	4.73 331	P	Pn	22 15 00.3	+1.0
LANF	Langenberg	4.73 331	P	Pn	22 15 00.3	+1.0
THEF	They Montfort	4.94 314	P	Pn	22 15 02.7	+0.5
THEF	They Montfort	4.94 314	P	Pn	22 15 02.7	+0.5
STON	Ston	5.07 111	*e*Pn	Pn	22 15 03.7	-0.3
STON	Ston	5.07 111	*e*Pn	Pn	22 15 03.5	-0.5
STON			Sn	Sn	22 15 57.9	-4.4
STON	Ston	5.07 111	*e*Pn	Pn	22 15 03.7	-0.3
STON			Sn	Sn	22 15 57.9	-4.4
ZST	Bratislava	5.21 49	*e*PN	Pn	22 15 05.3	-0.6
ZST			*e*SN	Sn	22 16 03.3	-2.4
ZST			*e*SG	Sg	22 16 32.9	-2.7
ZST	Bratislava	5.21 49	*e*Pn	Pn	22 15 05.3	-0.6
ZST			*e*Sn	Sn	22 16 03.3	-2.4
ZST			*e*Sg	Sg	22 16 32.9	-2.7
PAGF	Fort de Pagny	5.28 316	*e*Pn	Pn	22 15 09.0	+2.0
	baz=136					
PAGF	Fort de Pagny	5.28 316	*e*Pn	Pn	22 15 09.0	+2.0
LASF	Ste Croix	5.36 264	*e*Pn	Pn	22 15 08.8	+0.7
	SNR=1.0					
LASF	Ste Croix	5.36 264	*e*Pn	Pn	22 15 08.8	+0.7
	SNR=1.0					
NKC	Novy Kostel	5.40 8	*e*PN	Pn	22 15 08.7	+0.1
NKC			*e*PG	Pg	22 15 30.3	-1.6
NKC	Novy Kostel	5.40 8	Pn	Pn	22 15 08.7	+0.1
MODS	Modra-Piesok	5.41 48	*e*PN	Pn	22 15 07.9	-0.8
MODS			*e*SN	Sn	22 16 08.7	-2.0
MODS	Modra-Piesok	5.41 48	*e*Pn	Pn	22 15 07.9	-0.8
MODS			*e*Sn	Sn	22 16 08.7	-2.0
SFTF	Sexfontaines	5.42 310	*e*Pn	Pn	22 15 09.9	+1.0
	baz=130					
SFTF	Sexfontaines	5.42 310	*e*Pn	Pn	22 15 09.9	+1.0
KRUC	Moravsky	5.45 38	*e*PN	Pn	22 15 08.7	-0.5
KRUC			*e*PG	Pg	22 15 29.9	-2.9
KRUC			*e*SG	Sg	22 16 40.1	-3.3
SMF	Signal de Mont	5.48 291	*e*Pn	Pn	22 15 10.1	+0.4
	SNR=1.0					
SMF			*e*Sn	Sn	22 16 09.2	-3.3
	comp=E,34nm,0.4s,SNR=1.0					
SMF	Signal de Mont	5.48 291	*e*Pn	Pn	22 15 10.1	+0.4
	SNR=1.0					
GOPC	GO Pecny, Ondr	5.56 24	*e*PN	Pn	22 15 11.6	+0.8
GOPC			*e*PG	Pg	22 15 31.3	-3.7
GOPC			*e*SG	Sg	22 16 46.2	-0.8
	comp=E,64nm,0.7s					
GOPC			AMS	AMS	22 17 30.0	
	comp=E,400nm,8.4s					
GOPC	GO Pecny, Ondr	5.56 24	Pn	Pn	22 15 11.6	+0.8
GOPC			Sg	Sg	22 16 46.2	-0.8
	comp=E,64nm,0.7s					
TREB	Trebinje	5.57 111	*e*Pn	Pn	22 15 10.5	-0.4
SMOL	Smolenice	5.57 47	*e*PN	Pn	22 15 11.2	+0.2
SMOL	Smolenice	5.57 47	*e*Pn	Pn	22 15 11.2	+0.2
MEZF	Maizieres J'vi	5.59 312	*e*Pn	Pn	22 15 12.5	+1.3
	SNR=1.0					
MEZF	Maizieres J'vi	5.59 312	*e*Pn	Pn	22 15 12.5	+1.3
	SNR=1.0					
BRY	Bratogost	5.62 108	*e*Pn	Pn	22 15 12.0	+0.3
LOR	Lormes	5.67 297	*e*Pn	Pn	22 15 12.9	+0.6
	baz=118,SNR=1.0					
LOR			*e*Sn	Sn	22 16 12.4	-4.8
	comp=E,62nm,0.5s,SNR=1.0					
LOR	Lormes	5.67 297	*e*Pn	Pn	22 15 12.9	+0.6
	SNR=1.0					
LBL	Lubilhac	5.69 276	P	Pn	22 15 13.0	+0.3
LBL	Lubilhac	5.69 276	P	Pn	22 15 12.0	-0.6
VRAC	Vranov	5.72 38	*e*Sg	Sg	22 16 51.5	-0.5
VRAC	Vranov	5.72 38	*e*SG	Sg	22 16 51.5	-0.5
UPM	Unac-Piva	5.76 104	*e*Pn	Pn	22 15 14.1	+0.4
SSF	Saint Saulge	5.83 295	*e*Pn	Pn	22 15 14.7	+0.3
	SNR=1.0					
SSF			*e*Sn	Sn	22 16 17.2	-3.8
	comp=E,21nm,0.5s,SNR=1.0					
SSF	Saint Saulge	5.83 295	*e*Pn	Pn	22 15 14.7	+0.3
	SNR=1.0					
MATE	Matera	5.83 135	⇑*i*P	Pn	22 15 18.1	+3.6
AGO	Saint Agoulin	5.84 284	P	Pn	22 15 14.7	+0.1
AGO	Saint Agoulin	5.84 284	P	Pn	22 15 14.7	+0.1
AVF	Avril sur Loir	5.84 292	*e*Pn	Pn	22 15 15.1	+0.4
	SNR=1.0					
AVF			*e*Sn	Sn	22 16 16.7	-4.7
	comp=E,33nm,0.7s,SNR=1.0					
AVF	Avril sur Loir	5.84 292	*e*Pn	Pn	22 15 15.1	+0.4
	SNR=1.0					
PYM	Petit Puy Mans	5.89 281	P	Pn	22 15 16.2	+0.9
PYM	Petit Puy Mans	5.89 281	P	Pn	22 15 16.2	+0.9
TEKS	Tekeris	5.90 90	*e*Pn	Pn	22 15 15.1	-0.3
TEKS	Tekeris	5.90 90	*e*Pn	Pn	22 15 15.1	-0.3
JAVC	Velka Javorina	5.92 46	*e*PN	Pn	22 15 16.5	+0.8
BBLS	Lazići	5.92 97	*e*Pn	Pn	22 15 15.8	0.0
BBLS	Lazići	5.92 97	*e*Pn	Pn	22 15 15.8	0.0
PVCC	Panska Ves	6.06 20	*e*Pn	Pn	22 15 17.8	+0.2
PVCC			*e*PG	Pg	22 15 42.0	-2.5
PVCC	Panska Ves	6.06 20	Pn	Pn	22 15 17.8	+0.2
BGF	Bois d'Agland	6.12 289	*e*Pn	Pn	22 15 19.0	+0.5
	SNR=1.0					
BGF	Bois d'Agland	6.12 289	*e*Pn	Pn	22 15 19.0	+0.5
	SNR=1.0					
BRG	Berggiesshubel	6.25 16	PN	Pn	22 15 21.1	+0.9
BRG			PG	Pg	22 15 45.2	-2.9
BRG			SG	Sg	22 17 08.8	-0.2
	comp=E,115nm,1.3s					
DIVS	Divibare	6.29 94	*e*Pn	Pn	22 15 20.2	-0.7
DIVS	Divibare	6.29 94	*e*Pn	Pn	22 15 20.2	-0.7
PDG	Podgorica	6.30 110	⇓*i*P	Pn	22 15 21.6	+0.7
PDG	Podgorica	6.30 110	*e*Pn	Pn	22 15 19.7	-1.2
PDG	Podgorica	6.30 110	⇓*i*P	Pn	22 15 21.6	+0.7
VYHS	Vyhne	6.33 53	*e*PN	Pn	22 15 20.3	-1.0
VYHS			*e*SN	Sn	22 16 29.7	-3.7
VYHS	Vyhne	6.33 53	*e*Pn	Pn	22 15 20.3	-1.0
DRME	Dracevica, Mon	6.36 112	*e*Pn	Pn	22 15 21.9	+0.2
DPC	Dobruska-Polom	6.44 30	*e*PN	Pn	22 15 22.5	-0.4
DPC			*e*PG	Pg	22 15 48.5	-3.2
DPC			AMS	AMS	22 17 50.0	
	comp=E,300nm,10.8s					
DPC	Dobruska-Polom	6.44 30	Pn	Pn	22 15 22.5	-0.4
HYF	Humbligny	6.45 295	*e*Pn	Pn	22 15 24.2	+1.2
HYF	Humbligny	6.45 295	*e*Pn	Pn	22 15 24.2	+1.2
UPC	Upice	6.46 28	*e*PN	Pn	22 15 23.2	0.0
UPC			*e*PG	Pg	22 15 48.4	-3.8
UPC			AMS	AMS	22 18 00.0	
	comp=E,400nm,8.2s					
UPC	Upice	6.46 28	Pn	Pn	22 15 23.2	0.0
SJES	Sjenica	6.48 102	*e*Pn	Pn	22 15 23.3	-0.2
MORC	Moravsky Berou	6.48 39	*e*Pn	Pn	22 15 24.2	+0.7
MORC	Moravsky Berou	6.48 39	*e*PN	Pn	22 15 24.2	+0.7
MORC			*e*SG	Sg	22 17 20.9	+4.4
TCF	Toulx Ste Croi	6.51 286	*e*Pn	Pn	22 15 24.6	+0.8
	SNR=1.0					
TCF			*e*Sn	Sn	22 16 31.8	-6.0
	comp=E,16nm,0.4s,SNR=1.0					
TCF	Toulx Ste Croi	6.51 286	*e*Pn	Pn	22 15 24.6	+0.8
	SNR=1.0					
CLL	Collm	6.52 10	*e*Pn	Pn	22 15 24.0	+0.1
CLL			*e*Pg	Pg	22 15 54.0	+0.7
CLL			*e*Sg	Sg	22 17 16.0	-1.7
	comp=Z,417nm,2.0s					
CAF	Calviac	6.54 274	*e*Pn	Pn	22 15 25.2	+1.0
	SNR=1.0					
CAF	Calviac	6.54 274	*e*Pn	Pn	22 15 25.2	+1.0
	SNR=1.0					
PSZ	Piszkesteto	6.69 60	⇓*i*P	Pn	22 15 28.0	+1.7
PSZ	Piszkesteto	6.69 60	⇓*i*P	Pn	22 15 28.0	+1.7
MTLF	Montolieu	6.70 260	*e*Pn	Pn	22 15 29.1	+2.7
	SNR=1.0					
MTLF			*e*Sn	Sn	22 16 36.8	-5.6
	comp=Z,5.3nm,0.4s,SNR=1.0					
MTLF	Montolieu	6.70 260	*e*Pn	Pn	22 15 29.1	+2.7
	SNR=1.0					
OKC	Ostrava-Krasne	6.80 41	AMS	AMS	22 18 40.0	
	comp=Z,300nm,6.9s					
LANS	Liptovska Anna	7.04 50	*e*SN	Sn	22 16 37.1	-14
BAIF	Baives	7.04 320	*e*Pn	Pn	22 15 34.6	+3.6
	SNR=1.0					
BZS	Buzias	7.34 81	⇓*i*P	Pn	22 15 36.6	+1.4
BZS	Buzias	7.34 81	⇓*i*P	Pn	22 15 36.6	+1.4
MDVR	Moldovita	7.43 87	⇓*i*P	Pn	22 15 37.8	+1.3
MDVR	Moldovita	7.43 87	⇓*i*P	Pn	22 15 37.8	+1.3
KUBS	Kucevo	7.44 90	*e*Pn	Pn	22 15 36.1	-0.5
KUBS	Kucevo	7.44 90	*e*Pn	Pn	22 15 36.1	-0.5
HERR	Herculane	7.92 86	⇓*i*P	Pn	22 15 44.5	+1.4
HERR	Herculane	7.92 86	⇓*i*P	Pn	22 15 44.5	+1.4
ZAGS	Zajecar	7.94 94	*e*Pn	Pn	22 15 42.7	-0.7
ZAGS	Zajecar	7.94 94	*e*Pn	Pn	22 15 42.7	-0.7
MFF	Saint Martin d	8.16 286	*e*Pn	Pn	22 15 46.7	+0.2
	SNR=1.0					
MFF	Saint Martin d	8.16 286	*e*Pn	Pn	22 15 46.7	+0.2
	SNR=1.0					
ZAPS	Zavoj	8.34 97	*e*Pn	Pn	22 15 47.7	-1.3
VTS	Vitosha	8.95 101	⇓*i*P	Pn	22 15 58.1	+0.7
VTS	Vitosha	8.95 101	⇓*i*P	Pn	22 15 58.1	+0.7
GRR	Gorron	9.04 297	*e*Pn	Pn	22 15 59.7	+1.2
	SNR=1.0					
KEST	Kesra	9.27 190	Pn	Pn	22 16 00.8	-0.9
	comp=Z,0.0nm,0.3s,baz=53,slow=15,SNR=2.6					
ARR	Arges	9.46 82	⇑*i*P	Pn	22 16 05.9	+1.5
ARR	Arges	9.46 82	⇑*i*P	Pn	22 16 05.9	+1.5
VOIR		9.75 82	⇑*i*P	Pn	22 16 10.1	+1.7
VOIR		9.75 82	⇑*i*P	Pn	22 16 10.1	+1.7
BURAR	Bucovina Array	10.04 69	⇑*i*P	Pn	22 16 13.9	+1.6
BURAR	Bucovina Array	10.04 69	⇑*i*P	Pn	22 16 13.9	+1.6
SGMF	Saint Gilles	10.09 294	*e*Pn	Pn	22 16 15.7	+2.8
	SNR=1.0					
SGMF	Saint Gilles	10.09 294	*e*Pn	Pn	22 16 15.7	+2.8
	SNR=1.0					
QUIF	Quistinic	10.42 292	*e*Pn	Pn	22 16 17.6	+0.3
	SNR=1.0					
QUIF	Quistinic	10.42 292	*e*Pn	Pn	22 16 17.6	+0.3

Plg4.0000°, Azm47.0000°; P -2.3180, Plg12.0000°, Azm138.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.

ISCJB ***15*** *22:18:28.0±0.3,51.72N±0.04×176.72W±0.02, h74km±2km, mb4.6/161 Error ellipse: s-maj=7.1km s-min=2.3km az=174.9*

IDC ***15*** *22:18:28.4±1.8,51.77N×176.82W, h56km±14km, mb4.1/32, mb1 4.2/35, mb1mx4.1/78, mbtmp4.3/35, MS3.6/37, Ms1 3.6/37, ms1mx3.5/61, Error ellipse: s-maj=14.2km s-min=9.6km az=166.0*

BJI ***15*** *22:18:29.2,51.83N×177.06W, h74km, mb4.9/38, mB5.0/21, Ms4.4/9, Ms7 4.1/9*

ISC 15 22:18:29.2±0.6, 51.66N±0.07×176.79W±0.03, h66km±4km, n687, σ1§21/685, mb4.7/161, 15C-2D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETKA	**Kagalaska Isla**	**0.31**	**49**	P	**Pn**	**22 18 36.5**	**-3.6**
KIKV	**Kanaga Island**	**0.33**	**313**	P	**Pn**	**22 18 38.3**	**-1.9**
ADAG	**Mount Adagdak**	**0.34**	**19**	P	**Pn**	**22 18 38.1**	**-2.2**
KINC	**Kanaga Island**	**0.35**	**322**	P	**Pn**	**22 18 38.6**	**-1.7**
KICM	**Kanaga Island**	**0.36**	**316**	P	**Pn**	**22 18 38.9**	**-1.6**
GSMY	**Great Sitkin M**	**0.59**	**49**	P	**Pn**	**22 18 40.5**	**-2.2**
TAPA	**Tanaga Point A**	**0.66**	**284**	P	**Pn**	**22 18 42.1**	**-1.3**
TAFL	**Tanaga Flats**	**0.70**	**279**	P	**Pn**	**22 18 42.9**	**-0.9**
GALAA	**Gareloi Lava P**	**1.24**	**276**	P	**Pn**	**22 18 50.4**	**-0.2**
GANE	**Gareloi Northe**	**1.25**	**278**	P	**Pn**	**22 18 50.8**	**+0.1**
GANE				S	**Sn**	**22 19 08.6**	**+1.8**
ATKA	**Atka Island**	**1.69**	**70**	*e*Pn	**Pn**	**22 18 54.4**	**-2.2**
KOWE	**Korovin West**	**1.72**	**65**	P	**Pn**	**22 18 55.6**	**-1.4**
KOKL	**Mount Kliuchef**	**1.73**	**66**	P	**Pn**	**22 18 55.9**	**-1.3**
KOFP	**Korovin Flat P**	**1.77**	**69**	P	**Pn**	**22 18 56.3**	**-1.5**
CEAP	**Semis' Anvil P**	**2.28**	**280**	P	**Pn**	**22 19 04.3**	**-0.2**
AMKA	**Amchitka**	**2.46**	**265**	P	**Pn**	**22 19 06.3**	**-0.7**
AMKA				S	**Sn**	**22 19 37.6**	**+1.7**
LSPA	**Little Sitkin**	**2.90**	**278**	P	**Pn**	**22 19 13.0**	**+0.1**
LSPA				S	**Sn**	**22 19 50.3**	**+3.7**
LSNW	**Little Sitkin**	**2.93**	**278**	P	**Pn**	**22 19 13.3**	**-0.1**
LSSA	**Little Sitkin**	**2.93**	**278**	P	**Pn**	**22 19 13.5**	**+0.1**
NIKH	**Nikolski High**	**5.04**	**72**	*e*Pn	**Pn**	**22 19 42.1**	**0.0**
OKAK	**Okmok**	**5.48**	**66**	P	**Pn**	**22 19 47.2**	**-0.9**
OKTU	**Okmok Mt. Tuli**	**5.61**	**69**	P	**Pn**	**22 19 48.6**	**-1.4**
SMY	**Shemya**	**5.71**	**284**	*e*Pn	**Pn**	**22 19 51.0**	**-0.3**
SMY	**Shemya**	**5.71**	**284**	*e*P	**Pn**	**22 19 51.0**	**-0.3**
MSOM	**Makushin Julie**	**6.35**	**66**	P	**Pn**	**22 20 00.7**	**+0.6**
MSOM	**Makushin Julie**	**6.35**	**66**	P	**Pn**	**22 20 00.7**	**+0.6**
MCIR	**Makushin Cirqu**	**6.42**	**65**	P	**Pn**	**22 20 01.9**	**+0.8**
MSW	**Makushin Switc**	**6.48**	**66**	P	**Pn**	**22 20 02.5**	**+0.7**
MTBL	**Makushin Table**	**6.55**	**65**	P	**Pn**	**22 20 04.4**	**+1.5**
UNV	**Unalaska Valle**	**6.62**	**67**	*e*Pn	**Pn**	**22 20 04.5**	**+0.9**
SPIA	**Saint Paul Isl**	**6.72**	**32**	*e*Pn	**Pn**	**22 20 06.2**	**+1.2**
ZRO	**Akutan Zero**	**6.98**	**65**	P	**Pn**	**22 20 09.4**	**+0.7**
AKUT	**Akutan**	**7.11**	**65**	*e*Pn	**Pn**	**22 20 12.2**	**+1.8**
WESP	**Westdahl Peak**	**7.80**	**64**	P	**Pn**	**22 20 20.4**	**+0.5**
FALS	**False Pass**	**8.63**	**63**	*e*Pn	**Pn**	**22 20 32.7**	**+1.5**
SDPT	**Sand Point**	**10.39**	**63**	*e*Pn	**Pn**	**22 20 54.9**	**-0.3**
ANM	**Nome**	**14.24**	**20**	*e*Pn	**P**	**22 21 49.7**	**-2.9**
ANM	**Nome**	**14.24**	**20**	*e*P	**P**	**22 21 49.7**	**-2.9**
OHAK	**Old Harbor**	**14.72**	**59**	*e*Pn	**P**	**22 21 56.5**	**-1.5**
SVW2	**Sparrevohn**	**15.01**	**43**	*e*Pn	**P**	**22 22 00.0**	**-1.1**
	41nm,0.8s						
PET	**Petropavlovsk**	**15.06**	**285**	↑*i*P	**P**	**22 22 03.0**	**+1.3**
KDAK	**Kodiak Island**	**15.22**	**57**	P	**Pn**	**22 21 55.5**	**-4.4**
	3.9nm,0.3s,baz=253,slow=7.3,SNR=21						
KDAK				S	**Sn**	**22 24 48.1**	**+0.9**
	0.8nm,0.3s,baz=88,slow=22,SNR=6.8						
KDAK	**Kodiak Island**	**15.22**	**57**	P	**Pn**	**22 21 55.5**	**-4.4**
KDAK				*e*Pn	**P**	**22 22 01.9**	**-1.6**
KDAK				S	**Sn**	**22 24 48.1**	**+0.9**
KDAK	**Kodiak Island**	**15.22**	**57**	*ce*P	**Pn**	**22 21 56.1**	**-3.8**
PEA0B	**Petropavlovsk-**	**15.62**	**285**	*e*Pn	**P**	**22 22 06.8**	**-1.2**
	51nm,1.4s						
PETK	**Petropavlovsk-**	**15.62**	**285**	P	**Pn**	**22 22 03.9**	**-1.2**
	baz=93,slow=14,SNR=3.0						
PETK				LR	LR	22 27 47.6	
	comp=Z,329nm,20.8s,baz=92,slow=36						
PETK	**Petropavlovsk-**	**15.62**	**285**	*e*Pn	**Pn**	**22 22 06.5**	**+1.4**
PETK	**Petropavlovsk-**	**15.62**	**285**	*e*P	**Pn**	**22 22 06.5**	**+1.4**
RSO	**Redoubt South**	**15.97**	**47**	*e*Pn	**P**	**22 22 10.9**	**-1.2**
BRLK	**Bradley Lake**	**16.61**	**51**	*e*Pn	**P**	**22 22 18.8**	**-0.1**
	94nm,1.7s						
SKR	**Severo-Kuril's**	**16.99**	**277**	*e*P	**Pn**	**22 22 21.6**	**-0.6**
SKR				MLR	MLR		
	comp=Z,369nm,20.2s						
SKT	**Skwentna**	**17.14**	**43**	*e*Pn	**P**	**22 22 27.0**	**+2.3**
	comp=Z,48nm,1.0s						
SUA	**Susitna One**	**17.27**	**45**	*e*Pn	**P**	**22 22 27.5**	**+1.2**
	comp=Z,65nm,1.7s						
PPLA	**Purkeypile**	**17.29**	**40**	*e*Pn	**P**	**22 22 29.7**	**+3.2**
	comp=Z,120nm,1.7s						
CAST	**Castle Rocks**	**17.59**	**38**	*e*P	**P**	**22 22 31.9**	**+2.2**
	comp=Z,19nm,0.8s						
KTH	**Kantishna Hill**	**18.11**	**39**	*e*P	**Pn**	**22 22 36.4**	**+0.5**
	comp=Z,46nm,0.9s						
TRF	**Thorofare Moun**	**18.31**	**40**	*e*P	**Pn**	**22 22 38.9**	**+0.5**
	comp=Z,180nm,1.7s						
BPAW	**Bear Paw Mtn.**	**18.36**	**37**	*e*P	**Pn**	**22 22 39.8**	**+0.9**
	comp=Z,56nm,1.4s						
BILL	**Bilibino**	**18.38**	**340**	*e*P	**Pn**	**22 22 40.6**	**+1.5**
	comp=Z,54nm,1.4s						
BILL	**Bilibino**	**18.38**	**340**	*c i*P	**Pn**	**22 22 40.0**	**+0.9**
BILL				*e*S	**S**	**22 26 02.9**	**-1.2**
BILL				pmax	pmax		
	comp=Z,31nm,1.2s						
SCM	**Sheep Creek Mo**	**18.92**	**46**	*e*P	**Pn**	**22 22 47.0**	**+1.4**
	comp=Z,18nm,0.9s						
SCM	**Sheep Creek Mo**	**18.92**	**46**	*e*P	**Pn**	**22 22 47.0**	**+1.4**
SCM				pmax	pmax		
	comp=Z,18nm,0.9s						
MLY	**Manley**	**18.94**	**35**	*e*P	**Pn**	**22 22 45.9**	**+0.1**
	comp=Z,18nm,1.0s						
BWN	**Browne**	**18.97**	**38**	*e*P	**Pn**	**22 22 47.1**	**+0.9**
	comp=Z,256nm,1.3s						
MCK	**McKinley**	**18.98**	**40**	*e*P	**Pn**	**22 22 45.9**	**-0.3**
	comp=Z,28nm,1.1s						
MCK				*e*S	**Sn**	**22 26 24.4**	**+6.5**
MCK	**McKinley**	**18.98**	**40**	*e*P	**Pn**	**22 22 45.9**	**-0.3**
MCK				pmax	pmax		
	comp=Z,28nm,1.1s						
DHY	**Denali Highway**	**19.34**	**42**	*e*P	**Pn**	**22 22 49.4**	**-1.3**
	comp=Z,30nm,0.6s						
DHY				*e*S	**Sn**	**22 26 29.7**	**+2.7**
KLU	**Klutina**	**19.46**	**48**	*e*P	**Pn**	**22 22 51.7**	**-0.3**
	comp=Z,23nm,1.2s						
WRH	**Wood River Hil**	**19.64**	**38**	*e*P	**P**	**22 22 51.8**	**-0.4**
	comp=Z,14nm,0.8s						
MA2	**Magadan**	**19.79**	**306**	P	**P**	**22 22 54.3**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=42,slow=15,SNR=2.3						
MA2				LR	LR	22 30 17.3	
	comp=Z,79nm,20.5s,baz=106,slow=36						
MDM	**Murphy Dome**	**19.82**	**37**	*e*P	**P**	**22 22 54.5**	**+0.4**
	comp=Z,171nm,1.6s						
CCB	**Clear Creek Bu**	**19.83**	**38**	*e*P	**P**	**22 22 53.7**	**-0.5**
	comp=Z,57nm,1.4s						
SEY	**Seymchan**	**19.89**	**316**	P	**P**	**22 22 55.7**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=109,slow=15,SNR=24						
SEY	**Seymchan**	**19.89**	**316**	↑*i*P	**Pn**	**22 22 55.8**	**-1.2**
HARP	**HAARP**	**20.07**	**45**	*e*P	**Pn**	**22 22 58.4**	**-0.8**
	comp=Z,30nm,0.6s						
PAX	**Paxson**	**20.12**	**44**	*e*P	Pn	22 22 59.3	-0.4
	comp=Z,15nm,0.7s						
PAX	**Paxson**	**20.12**	**44**	*e*P	Pn	22 22 59.3	-0.5
PAX				pmax	pmax		
	comp=Z,15nm,0.7s						
IL1	**Eielson Array**	**20.24**	**38**	*e*P	Pn	22 22 59.3	-1.8
ILAR	**Eielson Array**	**20.24**	**38**	P	**P**	**22 22 56.9**	**-1.7**
	comp=Z,1.9nm,0.5s,baz=239,slow=9.8,SNR=24						
ILAR				S	**S**	**22 26 43.2**	**+1.4**
	comp=Z,0.5nm,0.7s,baz=233,slow=14,SNR=4.0						
ILAR				PcP	**PcP**	**22 27 09.6**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=274,slow=3.1,SNR=10						
ILAR				ScP	**ScP**	**22 30 40.4**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=290,slow=3.1,SNR=8.2						
ILAR				LR	LR	22 31 55.1	
	comp=Z,164nm,20.4s,baz=242,slow=40						
ILB	**Eielson Array**	**20.24**	**38**	*e*P	**P**	**22 22 58.3**	**-0.3**
COLD	**Coldfoot**	**20.38**	**30**	*e*P	Pn	22 23 01.5	-1.2
	comp=Z,21nm,0.9s						
RIDG	**Independ'e Rid**	**20.65**	**42**	*e*P	Pn	22 23 04.1	-1.9
	comp=Z,42nm,1.0s						
RIDG				*e*S	Sn	22 26 59.3	+1.2
DOT	**Dot Lake**	**20.94**	**42**	*e*P	**P**	**22 23 07.0**	**+0.7**
	comp=Z,128nm,1.0s						
TOLK	**Toolik Lake Re**	**21.43**	**27**	P	**P**	**22 23 11.2**	**-0.3**
	baz=231						
TOLK	**Toolik Lake Re**	**21.43**	**27**	*e*P	**P**	**22 23 12.7**	**+1.3**
	comp=Z,39nm,1.3s						
EGAK	**Eagle**	**22.52**	**41**	*e*P	**P**	**22 23 22.6**	**-0.4**
	comp=Z,17nm,0.9s						
DAWY	**Dawson**	**23.04**	**43**	*e*P	**P**	**22 23 28.5**	**0.0**
	comp=Z,44nm,1.4s						
INK	**Inuvik**	**26.51**	**35**	P	**P**	**22 23 58.6**	**-1.3**
	comp=Z,1.3nm,0.3s,baz=244,slow=8.3,SNR=16						
INK				PcP	**PcP**	**22 27 22.9**	**+0.1**
	comp=Z,6.0nm,0.8s,baz=208,slow=1.8,SNR=14						
INK	**Inuvik**	**26.51**	**35**	*e*P	**P**	**22 24 00.0**	**+0.1**
	comp=Z,5.8nm,0.9s						
INK				*e*PcP	**PcP**	**22 27 23.5**	**+0.7**
INK	**Inuvik**	**26.51**	**35**	*e*P	**P**	**22 24 00.0**	**+0.1**
INK				*e*		22 27 23.5	
INK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
YSS	**Yuzh-Sakhalins**	**26.55**	**276**	*e*P	**P**	**22 24 01.5**	**+1.0**
	comp=Z,14nm,0.4s						
YSS	**Yuzh-Sakhalins**	**26.55**	**276**	↑*e*P	**P**	**22 24 01.5**	**+1.0**
YSS				*e*		22 24 13.7	
YSS				*e*S	**S**	**22 28 25.7**	**-4.2**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
DLBC	**Dease Lake**	**27.15**	**57**	LR	LR	22 33 41.1	
	comp=Z,101nm,21.8s,baz=216,slow=34						
ASAJ	**Asahikawa**	**27.96**	**271**	P	**P**	**22 24 12.9**	**-0.4**
	comp=Z,11nm,0.7s,baz=9.1,slow=6.7,SNR=11						
ASAJ	**Asahikawa**	**27.96**	**271**	*e*P	**P**	**22 24 13.4**	**+0.2**
	comp=Z,24nm,1.1s						
BBB	**Bella Bella**	**29.58**	**70**	LR	LR	22 33 52.4	
	comp=Z,122nm,19.7s,baz=222,slow=31						
TIXI	**Tiksi**	**31.02**	**330**	PcP	**PcP**	**22 27 33.7**	**-0.3**
	comp=Z,4.9nm,0.7s,baz=100,slow=1.6,SNR=12						
TEY	**Ternei**	**31.23**	**276**	*e*P	**P**	**22 24 43.0**	**+0.9**
TEY				pmax	pmax		
	comp=Z,26nm,0.8s						
KLR	**Kul'dur**	**32.31**	**286**	↑*i*P	**P**	**22 24 52.8**	**+1.2**
YKA	**Yellowknife Ar**	**34.12**	**47**	P	**P**	**22 25 06.9**	**-0.3**
	comp=Z,1.8nm,0.7s,baz=282,slow=8.2,SNR=13						
YKA				PcP	**PcP**	**22 27 43.4**	**+0.7**
	comp=Z,6.5nm,0.9s,baz=287,slow=2.9,SNR=27						
YKA				ScP	**ScP**	**22 31 23.5**	**+1.9**
	comp=Z,0.9nm,0.7s,baz=280,slow=3.0,SNR=7.0						
YKA				LR	LR	22 40 23.5	
	comp=Z,15nm,19.8s,baz=278,slow=39						
H11N2	**WAKE ISLAND Hy**	**34.34**	**208**	T	T	23 01 36.4	
	baz=18,slow=76,SNR=917						
H11N3	**WAKE ISLAND Hy**	**34.35**	**208**	T	T	23 01 37.1	
	baz=18,slow=76,SNR=1822						
H11N1	**WAKE ISLAND Hy**	**34.36**	**208**	T	T	23 01 30.6	
	baz=18,slow=76,SNR=1744						
USRK	**Ussuriysk Ar.**	**34.50**	**278**	P	**P**	**22 25 10.6**	**-0.1**
	comp=Z,11nm,0.9s,baz=54,slow=8.1,SNR=14						
USRK				PcP	**PcP**	**22 27 45.3**	**+1.1**
	comp=Z,1.8nm,0.6s,baz=101,slow=4.6,SNR=3.2						
B05A	**Bryant**	**34.66**	**74**	P	**P**	**22 25 10.9**	**-1.1**
	baz=296						
MAJO	**Matsushiro**	**35.07**	**262**	*e*P	**P**	**22 25 16.5**	**+0.8**
	comp=Z,18nm,0.9s						
MAJO	**Matsushiro**	**35.07**	**262**	↓*i*P	**P**	**22 25 15.9**	**+0.2**
MAJO				pmax	pmax		
	comp=Z,19nm,1.0s						
MAT	**Matsushiro**	**35.07**	**262**	P	**P**	**22 25 16.4**	**+0.7**
MJAR	**Matsushiro Arr**	**35.07**	**262**	P	**P**	**22 25 15.4**	**-0.2**
	comp=Z,5.7nm,0.8s,baz=51,slow=7.8,SNR=20						
MJB9	**Matsu-Tunnel**	**35.07**	**262**	*e*P	**P**	**22 25 16.5**	**+0.8**
	comp=Z,18nm,0.9s						
H11S1	**WAKE ISLAND Hy**	**35.56**	**208**	T	T	23 03 08.9	
	baz=18,slow=76,SNR=1977						
H11S2	**WAKE ISLAND Hy**	**35.57**	**208**	T	T	23 03 10.3	
	baz=18,slow=76,SNR=1038						
H11S3	**WAKE ISLAND Hy**	**35.57**	**208**	T	T	23 03 06.4	
	baz=18,slow=76,SNR=549						
MSHR	**Mys Shultsa**	**35.88**	**276**	↑*e*P	**P**	**22 25 23.2**	**+0.7**
LTY	**Liberty**	**35.97**	**74**	*e*P	**P**	**22 25 24.5**	**+1.1**
	comp=Z,4.0nm,0.8s						
I03D	**Drain, OR**	**36.13**	**81**	P	**P**	**22 25 24.7**	**+0.1**
	baz=302						
B08A	**Colville Reser**	**36.26**	**72**	*e*P	**P**	**22 25 27.2**	**+1.5**
	comp=Z,14nm,0.9s						
H04A	**Detroit Lake**	**36.33**	**79**	*e*P	**P**	**22 25 28.3**	**+1.9**
	comp=Z,46nm,1.7s						
JHJ	**Hachijo jima 2**	**36.38**	**257**	LR	LR	22 37 41.1	
	comp=Z,62nm,21.2s,baz=86,slow=32						
G05D	**Wamic, OR**	**36.57**	**78**	P	**P**	**22 25 27.1**	**-1.4**
	baz=300						
L02D	**Cave Junction,**	**36.81**	**83**	P	**P**	**22 25 29.3**	**-1.2**
	baz=303						
BLTW	**Bickleton**	**36.92**	**76**	*e*P	**P**	**22 25 33.9**	**+2.4**
I05D	**Terrebonne, OR**	**37.02**	**79**	P	**P**	**22 25 31.7**	**-0.6**
	baz=301						
HAWA	**Hanford**	**37.08**	**75**	*e*P	**P**	**22 25 34.3**	**+1.6**
	comp=Z,9.1nm,0.8s						
F07A	**Phinny Hill Vi**	**37.09**	**76**	*ep*P	pP	22 25 48.0	-1.1
J04D	**Umpqua Nationa**	**37.14**	**81**	P	**P**	**22 25 32.9**	**-0.6**
	baz=302						
PINE	**Pine Mountain**	**37.56**	**79**	*e*P	**P**	**22 25 38.1**	**+1.1**
	comp=Z,14nm,1.3s						
NEW	**Newport**	**37.60**	**71**	P	**P**	**22 25 35.5**	**-1.7**
	baz=298						
NEW	**Newport**	**37.60**	**71**	*e*P	**P**	**22 25 38.1**	**+0.9**
	comp=Z,13nm,0.9s						
NEW	**Newport**	**37.60**	**71**	*e*P	**P**	**22 25 38.1**	**+0.9**
NEW				pmax	pmax		
	comp=Z,13nm,0.9s						
J05D	**Fort Rock, OR**	**37.65**	**80**	P	**P**	**22 25 37.4**	**-0.4**
	baz=302						
G08A	**Pilot Rock**	**37.98**	**76**	*e*P	**P**	**22 25 41.6**	**+1.2**
	comp=Z,3.8nm,0.9s						
N02D	**Trinity Center**	**38.03**	**84**	P	**P**	**22 25 40.0**	**-0.9**
	baz=305						
K05A	**Summer Lake**	**38.16**	**81**	*e*P	**P**	**22 25 43.3**	**+1.2**
	comp=Z,10nm,1.0s						
CN2	**Changchun**	**38.73**	**282**	*e*P	**P**	**22 25 47.0**	**+0.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
O03D	**Paynes Creek**	**38.98**	**85**	P	**P**	**22 25 48.3**	**-0.6**
	baz=306						
MOD	**Modoc Plateau**	**38.99**	**82**	*e*P	**P**	**22 25 50.4**	**+1.4**
	comp=Z,11nm,1.3s						
WALA	**Waterton Lakes**	**39.10**	**68**	*e*P	**P**	**22 25 50.3**	**+0.5**
	comp=Z,9.7nm,0.9s						
WALA				*e*PcP	**PcP**	**22 28 00.4**	**+2.2**
BMO	**Blue Mountains**	**39.21**	**76**	*e*P	**P**	**22 25 52.1**	**+1.4**
	comp=Z,6.7nm,1.1s						
BMO	**Blue Mountains**	**39.21**	**76**	*e*P	**P**	**22 25 52.1**	**+1.4**
BMO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
J08A	**Circle Bar Ran**	**39.30**	**78**	*e*P	**P**	**22 25 52.9**	**+1.3**
	comp=Z,5.5nm,0.8s						
JCJ	**Chichijima**	**39.34**	**247**	LR	LR	22 39 01.2	
	comp=Z,96nm,20.1s,baz=37,slow=31						
JTMT	**Jette**	**39.52**	**70**	*e*P	**P**	**22 25 55.4**	**+2.0**
	comp=Z,12nm,1.1s						
WVOR	**Wild Horse Val**	**39.71**	**80**	*e*P	**P**	**22 25 56.3**	**+1.3**
	comp=Z,7.5nm,0.8s						
WVOR	**Wild Horse Val**	**39.71**	**80**	*e*P	**P**	**22 25 56.3**	**+1.3**
WVOR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CYBM	**Yerba Buena Is**	**40.13**	**88**	*e*P	**P**	**22 25 59.0**	**+0.7**
MSO	**Missoula**	**40.19**	**71**	P	**P**	**22 25 57.4**	**-1.4**
	baz=301						
MSO	**Missoula**	**40.19**	**71**	*e*P	**P**	**22 25 59.6**	**+0.8**
	comp=Z,21nm,1.2s						
MSO				*e*PcP	**PcP**	**22 28 02.4**	**+0.6**
PAHR	**Pah Rah Range**	**40.83**	**84**	*e*P	**P**	**22 26 04.5**	**+0.2**
	comp=Z,4.7nm,0.8s						
KSRS	**Korea Array**	**40.89**	**272**	P	**P**	**22 26 04.8**	**+0.2**
	comp=Z,6.0nm,0.9s,baz=60,slow=8.2,SNR=18						
KSRS				LR	LR	22 42 43.2	
	comp=Z,33nm,18.9s,baz=59,slow=36						
KSRS	**Korea Array**	**40.89**	**272**	P	**P**	**22 26 04.8**	**+0.2**
KSRS				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KSRS				MLR	MLR		
	comp=Z,33nm,18.9s						
KS01	**Wonju Array Si**	**40.89**	**272**	*e*P	**P**	**22 26 05.1**	**+0.5**
KSAR	**Wonju Array Be**	**40.92**	**272**	P	**P**	**22 26 04.8**	**-0.1**
KSAR	**Wonju Array Be**	**40.92**	**272**	P	**P**	**22 26 04.8**	**-0.1**
PNTR	**Pine Nut**	**41.06**	**85**	*e*P	**P**	**22 26 07.2**	**+0.9**
	comp=Z,12nm,0.8s						
YERR	**Yerington**	**41.35**	**85**	*e*P	**P**	**22 26 11.0**	**+2.4**
	comp=Z,7.1nm,0.9s						
LRM	**Limekiln Ridge**	**41.59**	**72**	*e*P	**P**	**22 26 12.3**	**+1.7**
HLID	**Hailey**	**41.65**	**76**	P	**P**	**22 26 09.5**	**-1.5**
	baz=304						
HLID	**Hailey**	**41.65**	**76**	*e*P	**P**	**22 26 12.3**	**+1.3**
	comp=Z,11nm,1.2s						
JNU	**Nakatsue**	**41.85**	**265**	P	**P**	**22 26 13.3**	**+0.7**
	comp=Z,24nm,0.8s,baz=48,slow=10,SNR=9.1						
JNU				LR	LR	22 42 07.4	
	comp=Z,88nm,21.9s,baz=118,slow=34						
JNU	**Nakatsue**	**41.85**	**265**	*e*P	**P**	**22 26 12.6**	**0.0**
	comp=Z,29nm,0.9s						
MCMT	**McKenzie Canyo**	**41.89**	**73**	*e*P	**P**	**22 26 13.4**	**+0.4**
TJN	**Taejon**	**41.91**	**271**	↑*i*P	**P**	**22 26 14.2**	**+1.2**
RYN	**Ryan**	**42.01**	**84**	*e*P	**P**	**22 26 15.5**	**+1.5**
	comp=Z,11nm,1.4s						
KVN	**Kaiserville**	**42.02**	**84**	*e*P	**P**	**22 26 15.4**	**+1.3**
	comp=Z,2.2nm,0.7s						
KVN	**Kaiserville**	**42.02**	**84**	*e*P	**P**	**22 26 15.4**	**+1.3**
KVN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BOZ	**Bozeman (W)**	**42.20**	**72**	P	**P**	**22 26 15.0**	**-0.4**
	baz=302						
BOZ	**Bozeman (W)**	**42.20**	**72**	*e*P	**P**	**22 26 16.0**	**+0.6**
	comp=Z,9.9nm,0.8s						
BOZ	**Bozeman (W)**	**42.20**	**72**	*e*P	**P**	**22 26 16.0**	**+0.6**
BOZ				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NV01	**Mina Array Sit**	**42.27**	**85**	*e*P	**P**	**22 26 17.1**	**+0.9**
NV01				*e*PcP	**PcP**	**22 28 09.7**	**+0.8**
NVAR	**Mina Array Bea**	**42.27**	**85**	P	**P**	**22 26 16.7**	**+0.6**
	comp=Z,1.8nm,0.6s,baz=288,slow=8.3,SNR=11						
NVAR				PcP	**PcP**	**22 28 08.8**	**0.0**
	comp=Z,0.9nm,0.5s,baz=266,slow=2.9,SNR=4.9						
NVAR				ScP	**ScP**	**22 31 54.2**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=301,slow=0.9,SNR=5.2						
YHB	**Horse Butte**	**42.92**	**72**	*e*P	**P**	**22 26 22.7**	**+1.3**
	comp=Z,10nm,0.8s						
GCMT	**Greycliff**	**43.25**	**70**	*e*P	**P**	**22 26 25.4**	**+1.5**
CARC	**Carrizo Plain**	**43.28**	**89**	*e*P	**P**	**22 26 22.1**	**-2.1**
H17A	**Grant Village**	**43.49**	**72**	P	**P**	**22 26 26.4**	**+0.4**
	baz=304						
IMW	**Indian Meadow**	**43.55**	**73**	*e*P	**P**	**22 26 28.1**	**+1.5**
	comp=Z,10nm,1.4s						
PKM	**Mcpherson Peak**	**43.57**	**90**	P	**P**	**22 26 27.7**	**+1.1**
	baz=311						
CWC	**Cottonwood Cre**	**43.65**	**87**	P	**P**	**22 26 28.4**	**+1.1**
	baz=309						
HVU	**Hansel Valley**	**43.66**	**77**	*e*P	**P**	**22 26 28.4**	**+1.1**
	comp=Z,6.5nm,0.8s						
HVU	**Hansel Valley**	**43.66**	**77**	*e*P	**P**	**22 26 28.4**	**+1.1**
HVU				pmax	pmax		
	comp=Z,7.0nm,0.8s						
RLMT	**Red Lodge**	**43.85**	**71**	P	**P**	**22 26 28.8**	**0.0**
	baz=304						
RLMT	**Red Lodge**	**43.85**	**71**	*e*P	**P**	**22 26 29.9**	**+1.1**
	comp=Z,22nm,1.0s						
REDW	**Red Top Meadow**	**43.91**	**74**	*e*P	**P**	**22 26 30.5**	**+1.2**
	comp=Z,11nm,1.4s						
R11A	**Troy Canyon, C**	**44.00**	**83**	P	**P**	**22 26 30.1**	**0.0**
	baz=308,SNR=5.8						
R11A	**Troy Canyon, C**	**44.00**	**83**	*e*P	**P**	**22 26 30.8**	**+0.7**
	comp=Z,2.9nm,0.9s						
DAC	**Darwin (Calif)**	**44.06**	**86**	*e*P	**P**	**22 26 31.3**	**+0.8**
	comp=Z,4.7nm,1.1s						
DAC	**Darwin (Calif)**	**44.06**	**86**	*e*P	**P**	**22 26 31.3**	**+0.8**
DAC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MPMC	**Manual Prospec**	**44.26**	**87**	P	**P**	**22 26 32.0**	**-0.2**
	baz=310						
FURC	**Furnace Creek,**	**44.39**	**86**	P

	baz=311							
TLY	Talaya	46.97	303	⇓iP		P	22 26 51.2	-1.9
TLY				pmax		pmax		
	comp=Z,5.0nm,0.9s							
MONP2	Monument Peak	47.00	89	P		P	22 26 54.6	+0.7
	baz=312							
RWWY	Rawlins	47.07	73	eP		P	22 26 55.3	+0.9
	comp=Z,17nm,1.4s							
BC3	Big Chuckawall	47.10	88	P		P	22 26 56.0	+1.5
	baz=312							
U15A	North Rim	47.25	82	eP		P	22 26 57.0	+1.2
	comp=Z,7.9nm,0.8s							
ULN	Ulaanbaatar	47.26	297	eP		P	22 26 56.3	+0.7
ULN				ePcP		PcP	22 28 26.0	+0.2
ULN	Ulaanbaatar	47.26	297	⇑iP		P	22 26 56.6	+1.0
ULN				i *PP		sP	22 27 22.0	+2.0
ULN				i			22 28 26.8	
ULN				pmax		pmax		
	comp=Z,5.0nm,0.9s							
IKP	In-Ko-Pah, Jac	47.36	89	P		P	22 26 58.7	+2.3
	baz=312							
O20A	White River Ci	47.39	76	P		P	22 26 56.6	-0.2
	baz=308							
O20A	White River Ci	47.39	76	eP		P	22 26 57.3	+0.4
	comp=Z,17nm,1.0s							
PDMCI	Parker Dam,Lak	47.48	86	P		P	22 26 57.9	+0.6
	baz=311							
RSSD	Black Hills	47.49	69	P		P	22 26 56.9	-0.6
	baz=306							
RSSD	Black Hills	47.49	69	eP		P	22 26 57.5	0.0
	comp=Z,8.2nm,1.0s							
RSSD	Black Hills	47.49	69	eP		P	22 26 57.5	0.0
RSSD				pmax		pmax		
	comp=Z,8.0nm,1.0s							
Y12C	Blythe	47.61	87	P		P	22 26 58.8	+0.4
	baz=312							
SONA1	Songino Array	47.63	297	eP		P	22 26 59.3	+0.8
SONA1				ePcP		PcP	22 28 27.1	+0.1
SONM	Songino Array	47.64	297	P		P	22 26 58.2	-0.3
	comp=Z,3.1nm,0.9s,baz=50,slow=9.0,SNR=12							
SONM				PcP		PcP	22 28 26.9	-0.2
	comp=Z,2.8nm,0.4s,baz=67,slow=1.5,SNR=20							
SONM				ScP		ScP	22 32 16.8	+1.5
	comp=Z,0.7nm,0.7s,baz=74,slow=3.1,SNR=4.8							
MDND	Maddock	47.83	62	P		P	22 26 59.4	-0.4
	baz=305							
PV09	Paradox Valley	47.87	78	eP		P	22 27 01.6	+0.9
ZAK	Zakamensk	47.88	302	eP		P	22 27 00.4	+0.1
ZAK				pmax		pmax		
	comp=Z,3.0nm,1.1s							
GLA	Glamis	47.89	88	P		P	22 27 01.0	+0.5
	baz=312							
PV04	Paradox Valley	48.08	78	eP		P	22 27 00.3	-1.8
PV04				epP		pP	22 27 20.3	+1.4
PV03	Paradox Valley	48.20	78	eP		P	22 27 03.9	+0.9
	comp=Z,7.6nm,0.7s							
PV03				eS		S	22 33 57.4	0.0
PV07	Paradox Valley	48.20	78	eP		P	22 27 03.9	+0.8
	comp=Z,6.4nm,0.6s							
PV02	Paradox Valley	48.30	78	eP		P	22 27 04.7	+0.8
	comp=Z,12nm,0.7s							
N23A	Red Feather La	48.31	74	P		P	22 27 03.6	-0.3
	baz=308							
N23A	Red Feather La	48.31	74	eP		P	22 27 04.9	+1.0
	comp=Z,11nm,1.1s							
WUAZ	Wupatki	48.40	83	P		P	22 27 03.5	-1.1
	baz=311							
WUAZ	Wupatki	48.40	83	eP		P	22 27 05.7	+1.0
	comp=Z,7.1nm,0.8s							
Y14A	Wickenburg	48.43	85	eP		P	22 27 05.5	+0.8
	comp=Z,3.6nm,0.8s							
PV01	Paradox Valley	48.44	78	eP		P	22 27 05.8	+0.9
	comp=Z,7.3nm,0.8s							
ULM	Lac du Bonnet	48.47	58	LR		LR	22 47 03.3	
	comp=Z,54nm,20.8s,baz=325,slow=35							
HHC	Hu-ho-hao-te	48.82	287	eP		P	22 27 09.0	+1.3
HHC				pmax		pmax		
	comp=Z,13nm,0.8s							
HHC				pmax		pmax		
	comp=Z,110nm,4.2s							
GUMO	Guam	48.88	233	LR		LR	22 45 27.5	
	comp=Z,16nm,21.2s,baz=122,slow=33							
C31A	Landman Farms,	48.89	61	P		P	22 27 06.7	-1.3
	baz=306							
MVCO	Mesa Verde	49.08	79	P		P	22 27 08.5	-1.3
	baz=310							
ISCO	Idaho Springs	49.18	74	P		P	22 27 10.4	-0.4
	baz=309							
ISCO	Idaho Springs	49.18	74	eP		P	22 27 12.3	+1.6
	comp=Z,12nm,1.6s							
ISCO	Idaho Springs	49.18	74	eP		P	22 27 12.3	+1.6
ISCO				pmax		pmax		
	comp=Z,12nm,1.6s							
D31A	Mcclaflin, Tow	49.34	62	P		P	22 27 09.5	-1.9
	baz=306							
A33A	Warroad	49.49	59	P		P	22 27 10.1	-2.5
	baz=306							
AGMN	Agassiz Nation	49.61	60	P		P	22 27 11.4	-2.1
	baz=306							
W18A	Petrified Fore	49.68	82	P		P	22 27 14.0	-0.3
	baz=311							
W18A	Petrified Fore	49.68	82	eP		P	22 27 15.3	+0.9
	comp=Z,8.2nm,1.0s							
S22A	4UR Ranch, Cre	49.75	77	P		P	22 27 14.2	-0.8
	baz=310							
214A	Organ Pipe Nat	49.88	87	P		P	22 27 15.5	-0.3
	baz=313							
NJ2	Nanjing	50.06	273	eP		P	22 27 16.4	-0.6
NJ2				pmax		pmax		
	comp=Z,15nm,0.6s							
B34A	Aery, Baudette	50.15	59	P		P	22 27 16.1	-1.5
	baz=306							
SPITS	Spitsbergen Ar	50.18	356	P		P	22 27 16.7	-0.7
	comp=Z,3.8nm,0.7s,baz=34,slow=6.1,SNR=16							
SPITS				LR		LR	22 48 59.8	
	comp=Z,77nm,20.0s,baz=5.0,slow=37							
SDCO	Great Sand Dun	50.56	76	P		P	22 27 21.1	0.0
	baz=310,SNR=7.4							
SDCO	Great Sand Dun	50.56	76	eP		P	22 27 22.4	+1.3
	comp=Z,5.7nm,1.0s							
OGNE	Ogallala	50.60	71	P		P	22 27 20.8	-0.4
	baz=309							
D34A	Park Rapids	50.70	61	P		P	22 27 20.6	-1.2
	baz=307							
B35A	Bob, Littlefor	50.72	59	P		P	22 27 21.0	-0.9
	baz=307							
TUC	Tucson	50.90	85	P		P	22 27 23.2	-0.4
	baz=313							
TUC	Tucson	50.90	85	eP		P	22 27 24.6	+1.1
	comp=Z,7.6nm,1.1s							
TUC	Tucson	50.90	85	eP		P	22 27 24.6	+1.1
TUC				pmax		pmax		
	comp=Z,8.0nm,1.1s							
C35A	Jirik Farms, M	50.99	60	P		P	22 27 21.0	-2.9
	baz=307							
H32A	Carlson Farm,	51.03	65	P		P	22 27 22.5	-1.8
	baz=308							
T25A	Trinidad	51.61	76	P		P	22 27 29.8	+0.8
	baz=311,SNR=9.1							
T25A	Trinidad	51.61	76	eP		P	22 27 30.3	+1.3
	comp=Z,16nm,1.0s							
LAZ	Ladron	51.75	81	eP		P	22 27 31.6	+1.6
ANMO	Albuquerque	51.81	80	LR		LR	22 46 55.2	
	comp=Z,57nm,21.3s,baz=258,slow=33							
ANMO	Albuquerque	51.81	80	P		P	22 27 29.6	-0.8
	baz=312							
TASL	Snake Pit, Alb	51.81	80	P		P	22 27 29.8	-0.6
	baz=312							
C37A	Embarrass	51.93	59	P		P	22 27 29.8	-1.1
	baz=308							
ECSD	EROS Data Cent	51.98	65	P		P	22 27 29.8	-1.6
	baz=309							
ECSD	EROS Data Cent	51.98	65	eP		P	22 27 30.4	-0.9
	comp=Z,3.5nm,0.9s							
E36A	McGregor	52.10	60	P		P	22 27 30.4	-1.8
	baz=308							
D37A	Cotton	52.15	59	P		P	22 27 30.5	-2.0
	baz=308							
EYMN	Ely	52.16	58	P		P	22 27 31.0	-1.6
	baz=308							
EYMN	Ely	52.16	58	eP		P	22 27 32.0	-0.7
	comp=Z,5.0nm,0.9s							
G35A	Watkins	52.24	62	P		P	22 27 31.0	-2.2
	baz=308							
F36A	Milaca	52.36	61	P		P	22 27 32.2	-1.9
	baz=308							
C38A	Sawbill Land.	52.42	58	P		P	22 27 32.6	-1.9
	baz=308							
BGNE	Belgrade	52.57	68	P		P	22 27 34.3	-1.5
	baz=310							
BGNE	Belgrade	52.57	68	eP		P	22 27 36.4	+0.6
	comp=Z,39nm,0.9s							
121A	Cookes Peak, D	52.61	83	P		P	22 27 36.6	+0.2
	baz=313							
E38A	The Farm, Brul	52.96	59	P		P	22 27 37.2	-1.3
	baz=309							
F38A	Pierce - Schro	53.20	60	P		P	22 27 39.1	-1.1
	baz=309							
I36A	Fitzsimmons Fa	53.26	63	P		P	22 27 39.1	-1.6
	baz=309							
CBKS	Cedar Bluff	53.32	72	P		P	22 27 40.3	-1.1
	baz=311							
I37A	Lemond, Waseca	53.60	63	P		P	22 27 42.0	-1.3
	baz=310							
E39A	Mellen	53.64	59	P		P	22 27 42.2	-1.3
	baz=309							
G38A	Ridgeland	53.71	61	P		P	22 27 42.2	-1.9
	baz=310							
H38A	Maiden Rock	53.79	62	P		P	22 27 43.6	-1.0
	baz=310							
E40A	Wakefield	53.95	59	P		P	22 27 44.2	-1.6
	baz=310							
J37A	Redenius Farm,	53.97	64	P		P	22 27 44.4	-1.5
	baz=310							
G39A	Holcombe	54.01	60	P		P	22 27 44.5	-1.7
	baz=310							
F40A	Park Falls	54.17	59	P		P	22 27 45.0	-2.4
	baz=310							
K37A	Belmond	54.27	64	P		P	22 27 46.5	-1.6
	baz=310							
E41A	Kenton	54.43	58	P		P	22 27 47.5	-1.8
	baz=310							
M36A	Felix, Anita	54.46	66	P		P	22 27 47.7	-2.0
	baz=311							
J38A	Wedel Dairy, R	54.56	63	P		P	22 27 48.6	-1.7
	baz=310							
L37A	Phoenix Point,	54.62	65	P		P	22 27 48.9	-1.9
	baz=310							
MNTX	Cornudas Mount	54.66	82	P		P	22 27 50.8	-0.4
	baz=314,SNR=8.8							
MNTX	Cornudas Mount	54.66	82	eP		P	22 27 51.9	+0.7
	comp=Z,5.3nm,0.9s							
MSTX	Muleshoe	54.71	78	P		P	22 27 51.0	-0.7
	baz=313							
MSTX	Muleshoe	54.71	78	eP		P	22 27 52.0	+0.3
	comp=Z,18nm,1.2s							
ZALV	Zalesovo Beam	54.74	314	PcP		PcP	22 28 52.2	-0.9
	comp=Z,1.8nm,0.6s,baz=10,slow=3.7,SNR=8.5							
AMTX	Amarillo	54.76	77	P		P	22 27 51.8	-0.2
	baz=312							
F41A	Three Lakes	54.83	59	P		P	22 27 50.8	-1.4
	baz=310							
XAN	Xi'an	54.84	282	⇑P		P	22 27 52.5	0.0
XAN				pP		pP	22 28 11.4	+1.8
XAN				sP		sP	22 28 20.8	+3.7
XAN				pmax		pmax		
	comp=Z,29nm,1.1s							
XAN				pmax		pmax		
	comp=Z,110nm,4.1s							
SFJD	Kangerlussuaq	54.91	23	LR		LR	22 55 03.2	
	comp=Z,80nm,19.5s,baz=326,slow=40							
KSU1	Kansas State U	54.97	69	P		P	22 27 52.0	-1.2
	baz=311							
KSU1	Kansas State U	54.97	69	eP		P	22 27 52.6	-0.7
	comp=Z,14nm,0.8s							
J39A	Decorah	54.98	63	P		P	22 27 51.3	-2.0
	baz=311							
E42A	Champion	55.01	58	P		P	22 27 51.7	-1.8
	baz=310							
L38A	Oak Wood Farm,	55.06	64	P		P	22 27 52.6	-1.3
	baz=311							
N37A	Lee Faris, Mou	55.26	66	P		P	22 27 54.4	-1.0
	baz=311							
N37A	Lee Faris, Mou	55.26	66	eP		P	22 27 55.6	+0.3
	comp=Z,44nm,0.9s							
M38A	Pleasantville	55.40	65	P		P	22 27 55.1	-1.2
	baz=311							
G42A	Mountain	55.51	59	P		P	22 27 55.5	-1.6
	baz=311							
E43A	Lone Tree Farm	55.52	57	P		P	22 27 55.9	-1.3
	baz=311							
E43A	Lone Tree Farm	55.52	57	eP		P	22 27 56.5	-0.7
	comp=Z,11nm,1.0s							
L39A	Vinton	55.61	64	P		P	22 27 56.5	-1.4
	baz=311							
O37A	Wolven Farm, M	55.68	67	P		P	22 27 57.3	-1.1
	baz=311							
J41A	Loganville	55.89	62	P		P	22 27 58.3	-1.5
	baz=311							
M39A	Webster	55.94	65	P		P	22 27 58.6	-1.6
	baz=311							
P37A	Lathrop	55.95	68	P		P	22 27 59.1	-1.3
	baz=312,SNR=5.2							
L40A	Anamosa	56.08	63	P		P	22 27 60.0	-1.2
	baz=311							
O38A	Galt	56.10	67	P		P	22 28 00.1	-1.2
	baz=312							
I42A	Dreager Farm,	56.14	60	P		P	22 28 00.0	-1.6
	baz=311							
N39A	Derby Farms, D	56.15	65	P		P	22 28 00.4	-1.3
	baz=312							
K41A	Shullsburg	56.23	62	P		P	22 28 00.6	-1.6
	baz=311							
Q37A	Longview Farm,	56.37	68	P		P	22 28 01.8	-1.5
	baz=312							
P38A	Dawn	56.40	67	P		P	22 28 02.2	-1.3
	baz=312,SNR=5.8							
P38A	Dawn	56.40	67	eP		P	22 28 02.9	-0.6
	comp=Z,21nm,0.9s							
L41A	Preston	56.48	63	P		P	22 28 02.4	-1.7
	baz=312							
LZH	Lanzhou	56.51	287	eP		P	22 28 04.9	+0.4
LZH				pP		pP	22 28 22.9	+1.1
LZH				sP		sP	22 28 32.3	+3.1
LZH				PP		PP	22 30 10.3	-0.3
LZH				pmax		pmax		
	comp=Z,36nm,1.1s							
LZH				pmax		pmax		
	comp=Z,190nm,7.1s							
LZH				LR		LR		
	comp=Z,310nm,17.2s							
LZH				LR		LR		
	comp=Z,220nm,17.2s							
LZH				LR		LR		
	comp=Z,430nm,18.6s							
I43A	Langenfeld Bro	56.56	60	P		P	22 28 02.6	-2.0
	baz=312							
WMOK	Wichita Mounta	56.61	75	P		P	22 28 05.2	0.0
	baz=313							
WMOK	Wichita Mounta	56.61	75	eP		P	22 28 05.8	+0.7
	comp=Z,8.4nm,1.4s							
WMOK	Wichita Mounta	56.61	75	eP		P	22 28 05.8	+0.7
WMOK				pmax		pmax		
	comp=Z,8.0nm,1.4s							
GTA	Gaotai	56.62	293	eP		P	22 28 05.9	+0.6
GTA				pP		pP	22 28 24.9	+2.4
GTA				sP		sP	22 28 34.3	+4.3
GTA				pmax		pmax		
	comp=Z,5.0nm,0.7s							
Q38A	Cooks Store, C	56.79	68	P		P	22 28 04.6	-1.7
	baz=312,SNR=5.5							
P39B	Salisbury	56.94	67	P		P	22 28 06.3	-1.0
	baz=312,SNR=9.6							
O40A	La Belle	57.01	66	P		P	22 28 06.4	-1.4
	baz=312,SNR=8.2							
ENH	Enshi	57.09	278	eP		P	22 28 08.6	+0.1
F46A	Macinaw City C	57.09	56	P		P	22 28 06.2	-2.1
	baz=312							
Q39A	Willow Grove F	57.10	67	P		P	22 28 07.3	-1.2
	baz=312,SNR=5.5							
R38A	Fenwick Farm,	57.15	69	P		P	22 28 06.8	-2.0
	baz=312,SNR=7.1							
P40A	Paris	57.31	66	P		P	22 28 08.9	-1.0
	baz=312,SNR=14							
P40A	Paris	57.31	66	eP		P	22 28 09.4	-0.5
	comp=Z,25nm,0.6s							
TX31	Lajitas Ar. Si	57.37	83	eP		P	22 28 10.8	+0.1
TXAR	Lajitas Array	57.37	83	P		P	22 28 10.8	+0.2
	comp=Z,2.4nm,0.6s,baz=305,slow=5.2,SNR=20							
TXAR				PcP		PcP	22 29 04.5	+0.6
	comp=Z,1.1nm,0.5s,baz=316,slow=3.5,SNR=4.5							
S38A	Stockton	57.52	69	P		P	22 28 10.0	-1.5
	baz=313,SNR=11							
ABTX	Abilene, Hawle	57.54	77	P		P	22 28 10.6	-1.2
	baz=314							
R39A	Chumby, Stover	57.56	68	P		P	22 28 09.7	-2.0
	baz=313							
N42A	Yates City	57.57	64	P		P	22 28 10.3	-1.5
	baz=312							
O41A	Passleys Farm,	57.58	65	P		P	22 28 10.8	-1.0
	baz=312							
TUL1	Leonard	57.59	72	P		P	22 28 10.7	-1.3
	baz=313							
TUL1	Leonard	57.59	72	eP		P	22 28 12.2	+0.2
	comp=Z,38nm,1.7s							
Q40A	Laux Farm, Aux	57.66	67	P		P	22 28 10.6	-1.8
	baz=313,SNR=9.8							
T38A	Diamond	57.70	70	P		P	22 28 11.4	-1.4
	baz=313							
M43A	Waltham Townsh	57.76	63	P		P	22 28 11.3	-1.8
	baz=312							
P41A	Barry, Barry	57.77	65	P		P	22 28 12.1	-1.1
	baz=313							
S39A	Bolivar	57.82	69	P		P	22 28 11.4	-2.2
	baz=313,SNR=5.0							
S39A	Bolivar	57.82	69	eP		P	22 28 12.0	-1.6
	comp=Z,6.6nm,0.7s							
S39A				eS		S	22 36 07.5	-0.4
ARCES	ARCESS Array B	58.02	351	P		P	22 28 14.5	0.0
	comp=Z,1.6nm,0.8s,baz=17,slow=7.8,SNR=8.8							
ARCES				LR		LR	22 54 39.4	
	comp=Z,112nm,19.9s,baz=73,slow=38							
R40A	Maddies Statio	58.02	67	P		P	22 28 13.2	-1.8
	baz=313,SNR=8.3							
R40A	Maddies Statio	58.02	67	eP		P	22 28 13.6	-1.4
	comp=Z,13nm,0.5s							
Q41A	Truxton	58.17	66	P		P	22 28 14.6	-1.3
	baz=313,SNR=6.1							
P42A	Winchester	58.24	65	P		P	22 28 15.1	-1.3
	baz=313							
T39A	Clever	58.25	69	P		P	22 28 15.1	-1.5
	baz=313,SNR=6.1							
M44A	Midewin, Midew	58.30	62	P		P	22 28 15.5	-1.4
	baz=313							
O43A	Sugar Creek Fa	58.34	64	P		P	22 28 15.2	-2.0
	baz=313							
S40A	Lebanon	58.36	68	P		P	22 28 15.4	-1.9
	baz=313							
R41A	Rosebud	58.53	67	P		P	22 28 17.0	-1.6
	baz=313,SNR=11							
Q42A	Golden Eagle	58.59	66	P		P	22 28 16.9	-2.0
	baz=313							
U39A	Green Forest	58.63	70	P		P	22 28 17.8	-1.4
	baz=313,SNR=9.7							
N44A	Piper City	58.65	63	P		P	22 28 17.4	-1.9
	baz=313							
T40A	Mansfield	58.66	69	P		P	22 28 17.5	-1.9
	baz=313,SNR=5.9							
P43A	Skaggs, Pawnee	58.66	65	P		P	22 28 17.7	-1.7
	baz=313							
CCM	Cathedral Cave	58.77	67	P		P	22 28 18.4	-1.8
	baz=313							
CCM	Cathedral Cave	58.77	67	eP		P	22 28 19.4	-0.8
	comp=Z,10.0nm,1.0s							
CCM	Cathedral Cave	58.77	67	eP		P	22 28 19.4	-0.8
CCM				pmax		pmax		
	comp=Z,10.0nm,1.0s							
S41A	Jillco Farms,	58.81	68	P		P	22 28 18.7	-1.8
	baz=313,SNR=23							
R42A	Luebbering	58.88	67	P		P	22 28 19.7	-1.2
	baz=313,SNR=6.4							
V39A	Pettigrew	58.91	70	P		P	22 28 20.2	-1.1
	baz=314,SNR=5.8							
JCT	Junction City	58.94	79	P		P	22 28 20.3	-1.2
	baz=315							
N45A	Kentland	58.96	62	P		P	22 28 20.0	-1.5
	baz=313							
U40A	Yellville	59.01	69	P		P	22 28 20.4	-1.5
	baz=314,SNR=13							
Q43A	New Douglas	59.05	65	P		P	22 28 21.0	-1.1
	baz=313,SNR=6.3							
T41A	Mountain View	59.17	68	P		P	22 28 20.9	-2.1
	baz=314,SNR=5.9							
S42A	Caledonia	59.23	67	P		P	22 28 21.9	-1.5
	baz=314,SNR=10.0							
O45A	Potomac	59.25	63	P		P	22 28 22.6	-0.9
	baz=313							
W39A	Magazine	59.27	71	P		P	22 28 22.5	-1.2
	baz=314							
W39A	Magazine	59.27	71	eP		P	22 28 23.8	+0.1
	comp=Z,13nm,1.1s							
FVM	French Village	59.29	67	eP		P	22 28 23.3	-0.5
	comp=Z,13nm,0.8s							
FVM	French Village	59.29	67	eP		P	22 28 23.3	-0.5
FVM				pmax		pmax		
	comp=Z,13nm,0.8s							
P44A	Sand Creek, Wi	59.29	64	P		P	22 28 22.9	-0.8
	baz=314							
WHTX	Lake Whitney,	59.31	76	P		P	22 28 23.3	-0.7
	baz=314							
N46A	Monticello	59.35	62	P		P	22 28 23.2	-0.9
	baz=314							
R43A	Red Bud	59.37	66	P		P	22 28 23.1	-1.2
	baz=314,SNR=6.1							
V40A	Witts Springs	59.41	70	P		P	22 28 23.1	-1.6
	baz=314,SNR=8.3							
V40A	Witts Springs	59.41	70	eP		P	22 28 23.9	-0.8
	comp=Z,14nm,0.9s							
Q44A	Meyer Farm, Va	59.46	65	P		P	22 28 23.7	-1.2
	baz=314							
SFIN	Lafayette	59.51	62	P		P	22 28 23.7	-1.5
	baz=314							
X39A	Fountain Ranch	59.55	72	P		P	22 28 25.3	-0.3
	baz=314,SNR=8.7							
U41A	Viola	59.56	69	P		P	22 28 24.1	-1.6
	baz=314,SNR=9.3							
T42A	Van Buren	59.57	68	P		P	22 28 23.7	-2.0
	baz=314,SNR=7.2							
T42A	Van Buren	59.57	68	eP		P	22 28 24.1	-1.5
	comp=Z,6.6nm,0.7s							
W40A	Ferguson Farm,	59.69	71	P		P	22 28 25.9	-0.7
	baz=314							
W40A	Ferguson Farm,	59.69	71	eP		P	22 28 26.8	+0.2
	comp=Z,18nm,0.9s							
KURK	Kurchatov	59.73	315	eP		P	22 28 25.7	-0.9
	comp=Z,3.8nm,0.8s							
KURK	Kurchatov	59.73	315	P		P	22 28 26.4	-0.2
KURK				pmax		pmax		
	comp=Z,4.0nm,0.6s							
P45A	Graceland, Par	59.74	64	P		P	22 28 25.9	-1.0
	baz=314							
S43A	Fulton Ridge,	59.78	67	P		P	22 28 26.2	-1.0
	baz=314,SNR=7.5							
V41A	Mountainview	59.81	69	P		P	22 28 26.1	-1.4
	baz=314,SNR=11							
KURBB	Kurchatov Arra	59.84	315	P		P	22 28 26.4	-0.9
	comp=Z,3.6nm,0.6s,baz=42,slow=6.8,SNR=36							
MIAR	Mount Ida	59.84	71	P		P	22 28 27.5	-0.2
	baz=314,SNR=8.0							
MIAR	Mount Ida	59.84	71	eP		P	22 28 27.8	+0.1
	comp=Z,11nm,0.9s							
MIAR	Mount Ida	59.84	71	eP		P	22 28 27.8	+0.1
MIAR				pmax		pmax		
	comp=Z,11nm,0.9s							
R44A	Waltonville	59.87	65	P		P	22 28 26.6	-1.1
	baz=314							
Q45A	Warren Harvey,	59.95	64	P		P	22 28 27.4	-0.8
	baz=314,SNR=5.8							
U42A	Revenden	59.95	68	P		P	22 28 26.7	-1.7
	baz=314,SNR=5.5							
P46A	Rosedale	59.98	63	P		P	22 28 27.0	-1.4
	baz=314							
T43A	Greenville	59.99	67	P		P	22 28 27.1	-1.5
	baz=314,SNR=24							
WHAR	Wooly Hollow	60.08	70	eP		P	22 28 28.9	-0.3
	comp=Z,17nm,1.2s							
O47A	Sheridan	60.12	62	P		P	22 28 27.5	-2.0
	baz=314							
PBMO	Poplar Bluff	60.

WMQ LR LR
comp=Z,140nm,21.1s
WMQ LR LR
comp=Z,130nm,21.1s
V42A Cord 60.24 69 P **P 22 28 29.0 -1.4**
baz=314
R45A Skylar, Fairfi 60.29 65 P **P 22 28 29.5 -1.1**
baz=314
X40A Basin Creek Fa 60.32 71 P **P 22 28 30.2 -0.7**
baz=314
X40A Basin Creek Fa 60.32 71 *e*P **P 22 28 31.4 +0.5**
comp=Z,13nm,1.3s
S45A Carrier Mills 60.55 66 P **P 22 28 31.1 -1.3**
baz=314
P47A Martinsville 60.59 63 P **P 22 28 31.5 -1.1**
baz=314
833A Chaparral WMA, 60.72 81 P **P 22 28 33.2 -0.5**
baz=316
R46A Gibon Southern 60.78 64 P **P 22 28 33.0 -0.9**
baz=314
MK31 Makanchi Array 60.84 309 *e*P **P 22 28 34.1 -0.1**
MK31 Makanchi Array 60.84 309 *e*P **P 22 28 34.2 -0.1**
MKAR Makanchi Array 60.84 309 P **P 22 28 32.4 -1.9**
comp=Z,0.5nm,0.3s,baz=45,slow=6.6,SNR=16
MKAR Makanchi Array 60.84 309 *e*P **P 22 28 34.1 -0.1**
comp=Z,6.3nm,0.6s
MKAR Makanchi Array 60.84 309 *e*P **P 22 28 34.2 -0.1**
MKAR pmax pmax
comp=Z,6.0nm,0.6s
MK01 Makanchi Array 60.85 309 *e*P **P 22 28 32.7 -1.6**
Y41A Eaglette Beard 60.88 71 P **P 22 28 33.8 -0.8**
baz=315
Q47A Bedord North L 60.88 63 P **P 22 28 33.8 -0.9**
baz=314
R47A Wooly Knot Far 61.28 64 P **P 22 28 35.7 -1.6**
baz=315
T46A Princeton 61.39 66 P **P 22 28 37.4 -0.7**
baz=315,SNR=5.6
X43A Marvell 61.45 70 P **P 22 28 37.4 -1.1**
baz=315
WCI Wyandotte Cave 61.45 64 P **P 22 28 37.3 -1.3**
baz=315
BVAR Borovoye Array 61.48 321 P **P 22 28 38.8 +0.3**
comp=Z,2.3nm,0.3s,baz=50,slow=7.0,SNR=29
BVAR LR LR 22 57 53.1
comp=Z,264nm,19.9s,baz=50,slow=38
BRVK Borovoye 61.50 321 *e*P **P 22 28 39.1 +0.5**
comp=Z,3.6nm,0.8s
BRVK Borovoye 61.50 321 *c e*P **P 22 28 38.6 0.0**
BRVK pmax pmax
comp=Z,4.0nm,1.0s
V45A Humboldt 61.70 67 P **P 22 28 39.4 -0.8**
baz=315
U46A Springville 61.71 66 P **P 22 28 39.5 -0.7**
baz=315
T47A Sharon Grove 61.87 65 P **P 22 28 40.5 -0.8**
baz=315,SNR=8.3
T47A Sharon Grove 61.87 65 *e*P **P 22 28 41.1 -0.2**
comp=Z,20nm,0.9s
X44A Crenshaw 61.89 69 P **P 22 28 40.1 -1.4**
baz=315
W45A Hickory Valley 61.98 68 P **P 22 28 40.8 -1.3**
baz=315
S48A Wiedeman Farm, 61.99 64 P **P 22 28 40.8 -1.4**
baz=315
WVT Waverly 62.07 66 P **P 22 28 41.4 -1.3**
baz=315
WVT Waverly 62.07 66 *e*P **P 22 28 42.3 -0.4**
comp=Z,6.9nm,1.0s
WVT Waverly 62.07 66 *e*P **P 22 28 42.3 -0.4**
WVT pmax pmax
comp=Z,7.0nm,1.0s
PRGR Permogore 62.12 339 *e*P **P 22 28 38.8 -3.8**
PRGR pmax pmax
comp=Z,3.0nm,0.8s
V46A Holladay 62.14 67 P **P 22 28 42.5 -0.7**
baz=315
U47A Clarksville 62.16 66 P **P 22 28 41.5 -1.8**
baz=315
T48A Bowling Green 62.19 65 P **P 22 28 42.3 -1.1**
baz=315
OXF Oxford 62.31 69 P **P 22 28 43.8 -0.4**
baz=315,SNR=8.9
OXF Oxford 62.31 69 *e*P **P 22 28 44.3 0.0**
comp=Z,60nm,1.0s
OXF Oxford 62.31 69 *e*P **P 22 28 44.3 0.0**
OXF pmax pmax
comp=Z,60nm,1.0s
X45A UM Field Stati 62.38 69 P **P 22 28 44.0 -0.8**
baz=315
V47A Nunnelly 62.46 66 P **P 22 28 44.9 -0.4**
baz=315
W46A Michie 62.46 68 P **P 22 28 44.6 -0.7**
baz=315
U48A Cassie Pea, Po 62.53 65 P **P 22 28 45.1 -0.6**
baz=315,SNR=9.1
T49A Edmonton 62.67 64 P **P 22 28 46.2 -0.5**
baz=315
PLAL Pickwick Lake 62.74 67 *e*P **P 22 28 46.9 -0.3**
comp=Z,9.3nm,0.7s
X46A Booneville 62.75 68 P **P 22 28 46.5 -0.8**
baz=315
342A Flagon Creek P 62.83 73 P **P 22 28 46.5 -1.3**
baz=316
W47A Westpoint 62.83 67 P **P 22 28 46.9 -0.9**
baz=316
V48A Smith Brothers 62.92 66 P **P 22 28 47.5 -0.9**
baz=316
V48A Smith Brothers 62.92 66 *e*P **P 22 28 48.3 -0.1**
comp=Z,7.1nm,0.8s
N54A Moraine State 62.93 58 P **P 22 28 47.3 -1.1**
baz=316
U49A Red Boiling Sp 62.96 65 P **P 22 28 48.2 -0.5**
baz=316
ARU Arti 63.02 329 *e*P **P 22 28 49.0 +0.3**
comp=Z,4.7nm,0.4s
ARU Arti 63.02 329 *c i*P **P 22 28 49.0 +0.3**
ARU *PP **sP 22 29 10.9 -2.7**
ARU 22 29 25.2
ARU 22 31 04.1
ARU S **S 22 37 14.4 +0.7**
ARU SS **SS 22 41 16.7 -2.5**
ARU pmax pmax
comp=Z,6.0nm,1.2s
ARU MLR MLR
comp=Z,132nm,22.0s
Y46A Houston 63.07 69 P **P 22 28 48.4 -1.0**
baz=316
T50A Nancy 63.12 64 P **P 22 28 48.7 -1.1**
baz=316
X47A Russelville 63.20 68 P **P 22 28 49.6 -0.7**
baz=316
W48A Pulaski 63.29 67 P **P 22 28 49.9 -0.9**
baz=316,SNR=6.8
244A Avery, Jackson 63.32 71 P **P 22 28 50.8 -0.2**
baz=316
S51A Beattyville 63.37 62 P **P 22 28 50.2 -1.2**
baz=316
V49A McMinnville 63.42 65 P **P 22 28 51.1 -0.6**
baz=316,SNR=5.8
Y47A UCPARC, Winfie 63.65 68 P **P 22 28 51.8 -1.4**
baz=316,SNR=6.7
W49A Belvidere 63.68 66 P **P 22 28 52.4 -1.0**
baz=316
X48A Hartselle 63.71 67 P **P 22 28 52.7 -1.0**
baz=316
X48A Hartselle 63.71 67 *e*P **P 22 28 53.0 -0.7**
comp=Z,5.8nm,0.8s
245A Little AP, Sta 63.79 71 P **P 22 28 52.5 -1.7**
baz=316
V50A Pikeville 63.95 65 P **P 22 28 53.4 -1.7**
baz=316
Z47A Carrollton 64.02 69 P **P 22 28 54.7 -0.9**
baz=316
Y48A Jasper 64.03 68 P **P 22 28 54.6 -1.1**
baz=316
HNR Honiara 64.07 206 LR LR 22 53 48.3
comp=Z,15nm,20.5s,baz=342,slow=33
X49A Woodville 64.08 67 P **P 22 28 55.1 -1.0**
baz=316
T52A Hallie 64.09 62 P **P 22 28 55.6 -0.5**
baz=316
W50A Signal Mountai 64.16 65 P **P 22 28 55.8 -0.9**
baz=316
W50A Signal Mountai 64.16 65 *e*P **P 22 28 56.8 +0.1**
comp=Z,19nm,1.0s
TZTN Tazewell 64.19 63 P **P 22 28 55.8 -1.0**
baz=316
Z48A Northport 64.19 68 P **P 22 28 56.1 -0.6**
baz=316,SNR=5.5
SSPA Standing Stone 64.27 57 P **P 22 28 55.9 -1.3**
baz=317
V51A Loudon 64.27 64 P **P 22 28 56.3 -1.0**
baz=316
147A Livingston 64.28 69 P **P 22 28 56.1 -1.3**
baz=316
OTUK Ortayu 64.31 316 P **P 22 28 57.4 0.0**
445A Amite 64.47 72 P **P 22 28 57.0 -1.6**
baz=316
X50B Fort Payne 64.50 66 P **P 22 28 58.2 -0.7**
baz=316,SNR=7.1
Y49A Blount Mountai 64.50 67 P **P 22 28 57.8 -1.1**
baz=316
247A Quitman 64.53 70 P **P 22 28 58.2 -0.8**
baz=316
V52A Sevierville 64.67 64 P **P 22 28 58.2 -1.6**
baz=316
V52A Sevierville 64.67 64 *e*P **P 22 29 00.0 +0.1**
comp=Z,14nm,0.9s
148A Greensboro 64.71 69 P **P 22 28 58.6 -1.5**
baz=316
DAV Davao City (W) 64.75 248 LR LR 22 53 40.4
comp=Z,50nm,20.1s,baz=56,slow=33
LRAL Lakeview Retre 64.76 68 P **P 22 28 59.7 -0.8**
baz=316
U53A Fall Branch 64.86 63 P **P 22 29 00.0 -1.1**
baz=317
Y50A Piedmont 64.87 67 P **P 22 29 00.4 -0.8**
baz=316
JAY Jayapura 64.87 228 LR LR 22 54 24.5
comp=Z,35nm,19.1s,baz=282,slow=33
X51A Calhoun 64.88 66 P **P 22 28 60.0 -1.3**
baz=316
Z49A Columbiana 64.92 68 P **P 22 29 00.7 -0.8**
baz=316,SNR=7.2
248A Dixon Mills 65.01 69 P **P 22 29 01.7 -0.5**
baz=316
W52A Murphy 65.02 65 P **P 22 29 01.8 -0.5**
baz=317
347A Saraland 65.04 71 P **P 22 29 01.9 -0.4**
baz=316
PKME Peaks-Kenny Pk 65.06 48 P **P 22 29 01.2 -1.1**
baz=319
N59A State Game Lan 65.15 55 P **P 22 29 02.0 -1.0**
baz=318
149A Jones 65.20 68 P **P 22 29 02.8 -0.6**
baz=317
Z50A Ashland 65.22 67 P **P 22 29 02.7 -0.8**
baz=317,SNR=12
Z50A Ashland 65.22 67 *e*P **P 22 29 02.8 -0.7**
comp=Z,19nm,0.7s
V53A Saluda 65.23 63 P **P 22 29 03.2 -0.4**
baz=317
Y51A Rockmart 65.25 66 P **P 22 29 02.7 -1.0**
baz=317,SNR=5.2
W53A Cullowhee 65.40 64 P **P 22 29 04.3 -0.4**
baz=317
X52A Dahlonega 65.40 65 P **P 22 29 04.2 -0.5**
baz=317,SNR=8.0
BLA Blacksburg 65.42 61 P **P 22 29 03.3 -1.5**
baz=317
Z51A Franklin 65.61 67 P **P 22 29 05.3 -0.7**
baz=317
150A Eclectic 65.64 68 P **P 22 29 05.0 -1.2**
baz=317
BG3 Lake Jocassee 65.66 64 *e*P **P 22 29 06.3 0.0**
comp=Z,30nm,1.2s
FINES FINESS Array B 65.78 348 P **P 22 29 06.2 -0.4**
comp=Z,0.8nm,0.6s,baz=357,slow=7.7,SNR=10
FINES LR LR 22 59 38.9
comp=Z,74nm,20.6s,baz=16,slow=38
X53A Estanollee 65.81 65 P **P 22 29 06.5 -0.7**
baz=317,SNR=5.2
Y52A Lilburn 65.84 66 P **P 22 29 07.7 +0.2**
baz=317
Y52A Lilburn 65.84 66 *e*P **P 22 29 08.0 +0.5**
comp=Z,17nm,1.0s
250A Grady 65.95 69 P **P 22 29 07.4 -0.8**
baz=317,SNR=6.0
250A Grady 65.95 69 *e*P **P 22 29 08.2 0.0**
comp=Z,28nm,0.8s
151A Opelika 66.09 67 P **P 22 29 08.2 -1.0**
baz=317
Y53A Monroe 66.12 65 P **P 22 29 08.7 -0.6**
baz=317
Z52A Williamson 66.13 66 P **P 22 29 08.5 -0.9**
baz=317
449A Pace 66.29 70 P **P 22 29 10.0 -0.4**
baz=317
152A Waverly Hall 66.34 67 P **P 22 29 09.8 -0.9**
baz=317
251A Midway 66.36 68 P **P 22 29 09.9 -1.0**
baz=317
KMSC Kings Mountain 66.44 63 P **P 22 29 10.8 -0.4**
baz=317,SNR=7.1
KMSC Kings Mountain 66.44 63 *e*P **P 22 29 11.7 +0.4**
comp=Z,28nm,0.9s
GOGA Godfrey 66.51 66 P **P 22 29 11.1 -0.7**
baz=317,SNR=5.4
GOGA Godfrey 66.51 66 *e*P **P 22 29 11.7 -0.1**
comp=Z,19nm,1.0s
GOGA Godfrey 66.51 66 *e*P **P 22 29 11.7 -0.1**
GOGA pmax pmax
comp=Z,19nm,1.0s
Z53A Monticello 66.55 66 P **P 22 29 10.9 -1.1**
baz=317,SNR=6.8
HODGE Hodges 66.59 64 *e*P **P 22 29 12.6 +0.3**
comp=Z,16nm,0.9s
Y54A Tiptail 66.62 65 P **P 22 29 12.0 -0.5**
baz=317,SNR=7.7
252A Lumpkin 66.82 67 P **P 22 29 12.7 -1.1**
baz=317
Z54A Sparta 66.99 65 P **P 22 29 14.2 -0.7**
baz=317,SNR=5.7
352A Blakely 67.09 68 P **P 22 29 14.6 -0.8**
baz=317
253A Americus 67.12 67 P **P 22 29 14.6 -1.1**
baz=317
NOA NORSAR Array B 67.47 356 LR LR 22 56 48.7
comp=Z,42nm,21.8s,baz=355,slow=34
AAK Ala-Archa 67.64 311 *e*P **P 22 29 19.2 +0.2**
comp=Z,3.2nm,1.0s
AAK Ala-Archa 67.64 311 ⇑*i*P **P 22 29 19.0 0.0**
AAK *i* 22 29 44.3
AAK pmax pmax
comp=Z,3.0nm,0.9s
155A Kite 67.66 65 P **P 22 29 18.0 -1.1**
baz=318
453A Whigham 67.90 68 P **P 22 29 19.2 -1.4**
baz=318
TAOE Nuku Hiva Isla 68.02 141 *e*LR LR 22 49 57.4
comp=Z,153nm,27.1s
TAOE Nuku Hiva Isla 68.02 141 *e*T T 23 43 18.5
comp=Z,28nm,0.2s
AKTO Aktyubinsk 68.17 326 P **P 22 29 21.4 -0.7**
comp=Z,8.3nm,0.8s,baz=31,slow=6.3,SNR=25
AKTO LR LR 23 02 49.3
comp=Z,120nm,19.2s,baz=36,slow=39
156A Sylvania 68.18 65 P **P 22 29 21.9 -0.5**
baz=318
HFS Hagfors 68.24 354 P **P 22 29 21.4 -0.8**
comp=Z,2.2nm,0.8s,baz=16,slow=7.5,SNR=9.1
PMG Port Moresby 68.29 219 LR LR 22 53 30.5
comp=Z,96nm,21.6s,baz=306,slow=31
454A Quitman 68.41 68 P **P 22 29 23.1 -0.6**
baz=318
ABKAR Akbulak array 68.47 324 *e*P **P 22 29 23.7 -0.1**
NHSC New Hope 68.59 64 P **P 22 29 24.1 -0.8**
baz=318
NHSC New Hope 68.59 64 *e*P **P 22 29 25.2 +0.4**
comp=Z,8.0nm,0.7s
MNAS Manas 68.69 312 *e*P **P 22 29 26.2 +0.7**
356A Blackshear 68.81 66 P **P 22 29 24.6 -1.6**
baz=318
KK31 Karatay Array 69.11 314 *e*P **P 22 29 27.7 -0.3**
KK31 Karatay Array 69.11 314 *e*P **P 22 29 27.7 -0.3**
KKAR Karatay Array 69.11 314 *e*P **P 22 29 27.7 -0.3**
KKAR Karatay Array 69.11 314 *e*P **P 22 29 27.7 -0.3**
555A McAlpin 69.23 68 P **P 22 29 28.0 -0.8**
baz=318
456A Hilliard 69.32 67 P **P 22 29 28.6 -0.8**
baz=318
KSH Kashi 69.33 308 P **P 22 29 33.3 +3.7**
KSH pP sP 22 29 53.4 -1.3
KSH pmax pmax
comp=Z,200nm,4.8s
655A Horseshoe Beac 69.52 68 P **P 22 29 30.1 -0.5**
baz=318
556A Lake Butler 69.64 67 P **P 22 29 30.8 -0.6**
baz=318
SFK Sufi-Kurgan 70.14 310 *e*P **P 22 29 37.3 +2.6**
PMOR Pomariorio Ree 70.99 150 *e*T T 23 47 09.0
comp=Z,11nm,0.2s
758A Lake Helen 71.11 67 P **P 22 29 40.0 -0.4**
baz=319
SHL Shillong 71.17 287 *e*P **P 22 29 41.3 +0.3**
comp=Z,22nm,1.1s
SHL Shillong 71.17 287 *e*P **P 22 29 41.3 +0.3**
SHL pmax pmax
comp=Z,22nm,1.1s
CHTO Chiang Mai 71.96 278 *e*P **P 22 29 46.3 +0.6**
comp=Z,12nm,1.1s
CHTO Chiang Mai 71.96 278 *e*P **P 22 29 46.3 +0.6**
CHTO pmax pmax
comp=Z,12nm,1.1s
CMAR Chiang Mai Arr 72.23 277 P **P 22 29 47.8 +0.5**
comp=Z,6.5nm,0.8s,baz=27,slow=7.2,SNR=29
CM01 Chiang Mai Arr 72.25 277 *e*P **P 22 29 47.7 +0.4**
PBKT Sadao Pong 72.40 275 *e*P **P 22 29 48.0 -0.3**
GUN Gumba 72.91 293 *e*P **P 22 29 52.0 +0.4**
comp=Z,29nm,0.3s
JIRN Jiri 72.92 293 *e*P **P 22 29 51.2 -0.5**
comp=Z,68nm,0.8s
PPT2 Papeete2 72.94 153 *e*LR LR 22 52 03.5
comp=Z,133nm,22.2s
TIAR Tiarei 72.97 153 *e*T T 23 49 35.0
comp=Z,4.3nm,0.4s
EKA Eskdalemuir Ar 73.25 4 P **P 22 29 52.4 -0.3**
comp=Z,2.1nm,0.9s,baz=6.8,slow=7.1,SNR=3.5
KKN Kakani 73.34 294 *e*P **P 22 29 54.1 +0.1**
PKIN Phulchoki 73.44 293 *e*P **P 22 29 54.5 -0.2**
GKN Gorkha 73.55 294 *e*P **P 22 29 55.5 +0.4**
comp=Z,6.1nm,0.3s
DANN Dangsing 73.78 295 *e*P **P 22 29 57.0 +0.3**
comp=Z,6.3nm,0.4s
RAR Rarotonga 74.08 164 LR LR 22 56 55.4
comp=Z,146nm,20.5s,baz=326,slow=31
KOLN Koldanda 74.31 295 *e*P **P 22 30 00.2 +0.5**
PYUN Piuthan 74.40 295 *e*P **P 22 30 00.4 +0.2**
NIL Nilore 75.28 306 *e*P **P 22 30 05.0 0.0**
comp=Z,18nm,0.8s
NIL Nilore 75.28 306 *e*P **P 22 30 05.0 0.0**
NIL pmax pmax
comp=Z,18nm,0.8s
AKASG Malin Array Be 75.66 343 P **P 22 30 05.3 -1.5**
comp=Z,0.4nm,0.3s,baz=19,slow=6.6,SNR=3.6
KIEV Kiev 75.67 343 ⇑*e*P **P 22 30 06.7 -0.1**
KIEV *i* 22 30 17.1
KIEV pmax pmax
comp=Z,2.0nm,0.8s
MTN Manton Dam 78.43 232 *e*P **P 22 30 23.3 +0.6**
comp=Z,16nm,1.2s
TBI Tubuai 78.44 154 *e*LR LR 22 54 42.2
comp=Z,126nm,25.5s
TBI Tubuai 78.44 154 *e*T T 23 56 18.9
comp=Z,11nm,0.4s
KVAR Kislovodsk Arr 78.82 332 P **P 22 30 24.0 -0.8**
comp=Z,3.5nm,0.9s,baz=121,slow=5.9,SNR=3.5
KIV Kislovodsk 78.83 332 *e*P **P 22 30 23.3 -1.4**
KIV pmax pmax
comp=Z,3.0nm,0.9s
KBZ Khabaz 78.97 332 P **P 22 30 24.8 -0.6**
comp=Z,0.9nm,0.6s,baz=315,slow=3.6,SNR=4.0
KBZ LR LR 23 08 35.9
comp=Z,48nm,21.8s,baz=9.5,slow=38
BUR04 Bucovina Ar. S 79.32 345 *e*P **P 22 30 26.9 -0.5**
GERES GERESS Array B 79.47 353 LR LR 23 06 37.0
comp=Z,26nm,21.1s,baz=52,slow=36
MLR Muntele Rosu 81.26 344 P **P 22 30 37.6 -0.3**
comp=Z,0.8nm,1.0s,baz=122,slow=8.4
MLR Muntele Rosu 81.26 344 *e*P **P 22 30 38.0 +0.1**
comp=Z,3.7nm,1.0s
MLR Muntele Rosu 81.26 344 *e*P **P 22 30 38.0 +0.1**
MLR pmax pmax
comp=Z,4.0nm,1.0s
GNI Garni 81.66 329 LR LR 23 12 13.6
comp=Z,107nm,19.3s,baz=36,slow=40
RKT Rikitea 82.99 142 *e*T T 00 02 02.7
comp=Z,5.5nm,0.3s
WRAB Tennant Creek 83.08 226 ⇑*i*P **P 22 30 48.0 +0.6**
WRAB pmax pmax
comp=Z,6.0nm,1.1s
WB2 Warramunga Arr 83.09 226 *e*P **P 22 30 46.5 -1.0**
WRA Warramunga Arr 83.10 226 P **P 22 30 47.1 -0.4**
comp=Z,1.4nm,0.4s,baz=33,slow=5.9,SNR=45
WRA Warramunga Arr 83.10 226 *i*P **P 22 30 47.0 -0.5**
WRA pmax pmax
comp=Z,2.0nm,0.4s
JTS JuntasAbangare 83.15 82 LR LR 23 07 24.3
comp=Z,26nm,20.8s,baz=5.0,slow=35
PSI Prapat 84.27 267 *e*P **P 22 30 54.4 +0.5**
comp=Z,16nm,0.9s
PSI Prapat 84.27 267 *e*P **P 22 30 54.4 +0.5**
PSI pmax pmax
comp=Z,16nm,0.9s
BR131 Keskin Array S 85.20 337 *e*P **P 22 30 58.5 +0.2**
BRTR Keskin Array B 85.20 337 P **P 22 30 57.6 -0.6**
comp=Z,3.7nm,0.8s,baz=49,slow=2.2,SNR=21
BRTR LR LR 23 16 42.0
comp=Z,14nm,18.1s,baz=58,slow=41
BRTR Keskin Array B 85.20 337 *i*P **P 22 30 58.5 +0.2**
BRTR pmax pmax
comp=Z,4.0nm,0.8s
FITZ Fitzroy Crossi 85.63 234 P **P 22 31 00.5 +0.1**
comp=Z,5.1nm,0.6s,baz=16,slow=6.9,SNR=24
FITZ Fitzroy Crossi 85.63 234 *e*P **P 22 31 01.1 +0.7**
comp=Z,9.8nm,0.9s
AS01 Alice Springs 86.53 224 *e*P **P 22 31 05.0 +0.3**
ASAR Alice Springs 86.55 224 P **P 22 31 05.1 +0.3**
comp=Z,4.0nm,0.9s,baz=28,slow=4.7,SNR=24
URZ Urewera 89.70 185 LR LR 23 02 17.3
comp=Z,52nm,21.2s,baz=160,slow=29
VAE Valguarnera 90.70 351 LR LR 23 14 41.0
comp=Z,26nm,20.7s,baz=324,slow=37
STKA Stephens Creek 90.86 214 P **P 22 31 26.1 +1.1**
comp=Z,2.1nm,0.7s,baz=322,slow=4.5,SNR=4.7
MMAI Mount Meron Ar 91.07 333 LR LR 23 19 09.2
comp=Z,41nm,18.4s,baz=15,slow=40
ROSC El Rosal 93.92 77 LR LR 23 15 57.2
comp=Z,16nm,19.4s,baz=80,slow=37
MDT Midelt 95.61 7 LR LR 23 15 58.5
comp=Z,18nm,19.8s,baz=1.5,slow=36
RPN Rapa Nui 98.16 124 LR LR 23 05 45.2
comp=Z,73nm,21.4s,baz=284,slow=29
TORD Torodi Ar. Bea 115.45 2 PKP **PKPdf 22 37 02.9 -0.6**
comp=Z,0.6nm,0.3s,baz=3.3,slow=2.3,SNR=34
TORD PKKPbc **PKKPbc 22 47 36.2 +1.1**
comp=Z,0.4nm,0.8s,baz=166,slow=2.7,SNR=4.5
DBIC Dimbokro 121.49 9 PKP **PKPdf 22 37 15.3 +0.1**
comp=Z,1.4nm,0.3s,baz=356,slow=2.9,SNR=9.0
PLCA Paso Flores 129.85 108 PKP **PKPdf 22 37 30.7 +0.3**
comp=Z,2.0nm,0.8s,baz=34,slow=7.9,SNR=2.9
TSUM Tsumeb 145.69 335 *e*PKPdf **PKPdf 22 37 59.5 -0.7**
MAW Mawson 147.47 218 PKPbc **PKPbc 22 38 04.9 +0.8**
comp=Z,13nm,1.0s,baz=37,slow=1.3,SNR=18
BOSA Boshof 151.69 316 PKPbc **PKPbc 22 38 15.9 +0.1**
comp=Z,15nm,0.7s,baz=20,slow=2.2,SNR=27
BOSA Boshof 151.69 316 PKIKP **PKPbc 22 38 16.0 +0.1**

IDC 15 22:34:17.2±10.0, 14°.96S×164°.60E, h0km, mb3.8/4, mb1 4.0/5, mb1mx3.6/50, mbtmp3.8/5, ML3.6/1, Error ellipse: s-maj=188.6km s-min=32.4km az=51.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.29**	**166**	Pn	Pn	22 36 04.8	-0.3
	0.9nm,0.3s,baz=61,slow=13,SNR=9.4						
DZM				Sn	Sn	22 37 30.7	+2.1
	0.2nm,0.3s,baz=86,slow=19,SNR=2.4						
STKA	**Stephens Creek**	**26.91**	**227**	P	P	22 39 59.9	-0.3
	1.3nm,0.6s,baz=40,slow=12,SNR=3.9						
WRA	**Warramunga Arr**	**29.27**	**256**	P	P	22 40 21.8	+0.4
	0.4nm,0.5s,baz=86,slow=9.4,SNR=11						
ASAR	**Alice Springs**	**30.18**	**249**	P	P	22 40 29.5	0.0
	0.4nm,0.3s,baz=79,slow=9.0,SNR=8.9						
FITZ	**Fitzroy Crossi**	**37.44**	**260**	P	P	22 41 32.2	-0.3
	1.6nm,0.8s,baz=96,slow=9.2,SNR=2.7						

IDC 15 22:40:03.0±1.3, 1°.33N×126°.94E, h73km±8km, mb3.4/4,

mb1 3.5/4, mb1mx3.1/55, mbtmp3.7/4, Error ellipse: s-maj=128.2km s-min=15.6km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.35**	**161**	P	P	22 44 53.5	-1.6
	0.4nm,0.4s,baz=340,slow=11,SNR=12						
WRA				pP	pP	22 45 12.1	+1.6
	0.6nm,0.5s,baz=339,slow=11,SNR=3.8						
ASAR	**Alice Springs**	**25.75**	**165**	P	P	22 45 27.6	+0.6
	0.4nm,0.5s,baz=347,slow=12,SNR=4.7						
MKAR	**Makanchi Array**	**59.64**	**326**	P	P	22 49 60.0	+0.4
	0.6nm,0.4s,baz=121,slow=7.9,SNR=16						
MKAR				pP	pP	22 50 18.6	+0.1
	0.9nm,0.4s,baz=122,slow=7.8,SNR=8.1						
KURBB	**Kurchatov Arra**	**63.87**	**328**	P	P	22 50 27.6	-0.2
	0.9nm,0.6s,baz=126,slow=6.4,SNR=8.7						
KURBB				pP	pP	22 50 46.3	-0.7
	1.2nm,0.6s,baz=128,slow=6.0,SNR=7.0						

IDC 15 22:49:36.3±1.2, 4°.99S×150°.80E, h0km, mb3.9/6, mb1 4.2/7, mb1mx3.8/46, mbtmp4.0/7, ML2.1/1, MS3.3/3, Ms1 3.2/3, ms1mx2.7/41, Error ellipse: s-maj=65.0km s-min=21.0km az=126.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.68**	**219**	Pn	Pn	22 51 03.0	+1.0
	3.8nm,0.3s,baz=36,slow=8.9,SNR=6.7						
PMG				Sn	Sn	22 52 04.7	-3.4
	12nm,0.3s,baz=313,slow=22,SNR=11						
WRA	**Warramunga Arr**	**21.85**	**226**	P	P	22 54 30.6	-0.1
	1.0nm,0.5s,baz=54,slow=10,SNR=18						
DZM	**Mont Dzumac**	**22.76**	**140**	LR	LR	23 01 00.1	
	comp=Z,82nm,19.7s,baz=10.0,slow=30						
ASAR	**Alice Springs**	**24.70**	**220**	P	P	22 54 58.2	-1.2
	4.3nm,0.8s,baz=56,slow=9.4,SNR=16						
ASAR				LR	LR	23 05 55.5	
	comp=Z,47nm,19.1s,baz=42,slow=40						
FITZ	**Fitzroy Crossi**	**27.82**	**240**	P	P	22 55 27.6	0.0
	1.3nm,0.5s,baz=41,slow=8.5,SNR=9.7						
STKA	**Stephens Creek**	**28.11**	**197**	P	P	22 55 30.7	+0.7
	1.2nm,0.7s,baz=355,slow=11,SNR=2.4						
STKA				LR	LR	23 06 51.9	
	comp=Z,57nm,19.5s,baz=24,slow=37						
ILAR	**Eielson Array**	**83.09**	**22**	P	P	23 02 03.6	-0.1
	0.9nm,0.7s,baz=242,slow=4.9,SNR=6.9						
NVAR	**Mina Array Bea**	**93.77**	**52**	P	P	23 02 55.3	-0.6
	0.2nm,0.5s,baz=258,slow=4.9,SNR=3.6						
TORD	**Torodi Ar. Bea**	**148.46**	**287**	PKPbc	PKPbc	23 09 26.3	+0.2
	2.3nm,0.8s,baz=84,slow=2.8,SNR=9.8						

DJA 15 22:53:05.6±1.0, 8°.S±9°×10°.7E±°, h29km±7km, M3.8/5, MLv3.8/5, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CISI	**Cisompet, Garu**	**0.65**	**61**	P	Pb	22 53 18.6	+0.1
CISI				S	Sn	22 53 27.9	-0.4
SKJI	**Sukabumi**	**1.09**	**322**	P	Pn	22 53 25.4	+0.4
SKJI				S	Sn	22 53 39.3	+0.1
LEM	**Lembang**	**1.10**	**20**	P	Pn	22 53 25.5	+0.2
CMJI	**Cimerak**	**1.20**	**86**	P	Pn	22 53 26.5	+0.1
CMJI				S	Sb	22 53 42.4	-0.5
DBJI	**Dramaga**	**1.40**	**340**	P	Pn	22 53 29.3	+0.1
KPJI	**Karang Pucung**	**1.76**	**72**	P	Pn	22 53 34.3	+0.2
CGJI	**Cibinong**	**1.98**	**309**	P	Pn	22 53 36.7	-0.5
UGM	**Wanagama**	**3.25**	**91**	P	Pn	22 53 54.5	-0.2
PCJI	**Pacitan**	**3.91**	**95**	P	Pn	22 54 04.0	+0.2
MDSI	**Maura Dua**	**4.54**	**318**	P	Pb	22 54 25.1	+0.6

*DJA **15** 22:59:26.2±0.9, 2°.N±5°.×9°.6E±°, h10km, M4.2/8, mb4.6/2, MLv4.0/8*
*ISCJB **15** 22:59:27.0±0.5, 2°.21N±0°.07×96°.07E±0°.07, h25km, mb3.9/16, MS3.3/2, Error ellipse: s-maj=12.5km s-min=6.8km az=138.0*
*IDC **15** 22:59:30.9±5.0, 2°.28N×96°.22E, h42km±44km, mb3.6/14, mb1 3.7/16, mb1mx3.6/65, mbtmp3.9/16, ML3.8/2, MS3.3/3, Ms1 3.3/3, ms1mx2.7/59, Error ellipse: s-maj=42.6km s-min=17.4km az=53.0*
*NEIC **15** 22:59:31.5±2.6, 2°.31N×96°.26E, h48km±22km, mb4.3/2, Error ellipse: s-maj=26.3km s-min=9.5km az=56.0*

ISC 15 22:59:28.7±0.7, 2°.25N±0°.07×96°.1E±0°.1, h25km, n40, σ0§89/32, mb4.0/16, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.75**	**123**	P	**Pn**	**22 59 57.3**	**-0.3**
MLSI	**Meulaboh, Aceh**	**2.02**	**9**	P	**Pn**	**23 00 01.0**	**-0.3**
KCSI	**Kotacane, Aceh**	**2.10**	**53**	P	**Pn**	**23 00 02.7**	**+0.4**
TSI	**Tuntungan**	**2.76**	**63**	P	Pb	23 00 22.4	+5.0
PSI	**Prapat**	**2.88**	**79**	P	**Pn**	**23 00 12.6**	**-0.6**
	2.9nm,0.3s,baz=350,slow=0.4,SNR=14						
LHMI	**Lhok Sumawe**	**3.08**	**16**	P	**Pn**	**23 00 16.5**	**+0.7**
BSI	**Banda Aceh**	**3.32**	**346**	P	**Pn**	**23 00 17.5**	**-1.6**
MNSI	**Mandailing Nat**	**3.77**	**113**	P	**Pn**	**23 00 25.8**	**+0.4**
SISI	**Saibi**	**4.65**	**140**	P	**Pn**	**23 00 37.6**	**+0.2**
LEM	**Lembang**	**14.62**	**128**	LR	LR	23 09 44.1	
	comp=Z,116nm,21.7s,baz=318,slow=42						
CMAR	**Chiang Mai Arr**	**16.34**	**10**	P	**Pn**	**23 03 16.5**	**-0.2**
	0.4nm,0.3s,baz=199,slow=11,SNR=8.8						
H08S2	**Diego Garcia H**	**25.52**	**247**	T	T	23 31 26.4	
	baz=67,slow=75,SNR=334						
H08S3	**Diego Garcia H**	**25.52**	**247**	T	T	23 31 18.2	
	baz=67,slow=75,SNR=488						
H08S1	**Diego Carcia H**	**25.54**	**247**	T	T	23 31 24.7	
	baz=67,slow=75,SNR=74						
ODAN	**Odare**	**25.85**	**342**	*e*P	**P**	**23 05 00.0**	**+1.3**
RAMN	**Ramite**	**26.19**	**341**	*e*P	**P**	**23 05 03.5**	**+1.7**
	12nm,0.6s						
JIRN	**Jiri**	**26.98**	**340**	*e*P	**P**	**23 05 10.6**	**+1.5**
	31nm,0.7s						
GUN	**Gumba**	**27.32**	**340**	*e*P	**P**	**23 05 13.6**	**+1.5**
	18nm,0.7s						
LSA	**Lhasa**	**27.70**	**351**	*e*P	**P**	**23 05 16.5**	**+0.9**
	5.0nm,0.8s						
KOLN	**Koldanda**	**28.05**	**336**	*e*P	**P**	**23 05 19.8**	**+1.4**
	6.9nm,0.6s						
FITZ	**Fitzroy Crossi**	**35.44**	**126**	P	**P**	**23 06 22.1**	**-1.1**
	2.2nm,1.0s,baz=293,slow=7.7,SNR=3.3						
H01W3	**Cape Leeuwin H**	**40.64**	**157**	T	T	23 50 18.9	
	baz=333,slow=76,SNR=320						
H01W2	**Cape Leeuwin H**	**40.65**	**157**	T	T	23 50 19.8	
	baz=333,slow=76,SNR=454						
H01W1	**Cape Leeuwin H**	**40.65**	**157**	T	T	23 50 22.1	
	baz=333,slow=76,SNR=461						
ASAR	**Alice Springs**	**44.91**	**127**	P	**P**	**23 07 41.5**	**-0.3**
	0.5nm,0.6s,baz=302,slow=8.3,SNR=6.1						
MKAR	**Makanchi Array**	**45.97**	**347**	P	**P**	**23 07 50.2**	**+0.4**
	2.0nm,0.4s,baz=159,slow=8.8,SNR=34						
SONM	**Songino Array**	**46.27**	**10**	P	**P**	**23 07 51.8**	**-0.5**
	1.4nm,0.5s,baz=187,slow=9.7,SNR=13						
SONM				PcP	**PcP**	**23 09 27.1**	**-0.4**
	0.4nm,0.5s,baz=184,slow=5.6,SNR=2.3						
SONM				LR	LR	23 29 30.8	
	comp=Z,52nm,18.3s,baz=179,slow=39						
KURBB	**Kurchatov Arra**	**50.44**	**346**	P	**P**	**23 08 24.3**	**+0.1**
	0.9nm,0.7s,baz=165,slow=6.5,SNR=8.5						
KURK	**Kurchatov**	**50.50**	**346**	P	**P**	**23 08 24.3**	**-0.4**
MJAR	**Matsushiro Art**	**51.68**	**44**	LR	LR	23 34 49.3	
	comp=Z,14nm,18.5s,baz=190,slow=41						
ZALV	**Zalesovo Beam**	**52.35**	**352**	P	**P**	**23 08 38.7**	**+0.2**
	3.3nm,0.6s,baz=183,slow=7.2,SNR=18						
BVAR	**Borovoye Array**	**54.90**	**341**	P	**P**	**23 08 56.6**	**-0.6**
	1.4nm,0.7s,baz=156,slow=3.9,SNR=6.5						
KBZ	**Khabaz**	**62.56**	**319**	P	**P**	**23 09 50.1**	**-0.6**
	0.6nm,0.5s,baz=172,slow=11,SNR=2.9						
MMAI	**Mount Meron Ar**	**64.40**	**306**	P	**P**	**23 10 04.5**	**+1.3**
	0.7nm,0.9s,baz=106,slow=9.1,SNR=2.9						
BRTR	**Keskin Array B**	**67.59**	**312**	P	**P**	**23 10 24.3**	**+0.7**
	0.5nm,0.7s,baz=116,slow=6.6,SNR=3.5						
TIXI	**Tiksi**	**72.35**	**10**	P	**P**	**23 10 51.4**	**-0.7**
	1.3nm,0.3s						
AKASG	**Malin Array Be**	**73.75**	**322**	P	**P**	**23 11 00.4**	**-0.4**
	0.2nm,0.3s,baz=81,slow=5.7,SNR=3.4						
FINES	**FINESS Array B**	**78.56**	**333**	P	**P**	**23 11 27.4**	**-0.5**
	1.0nm,0.7s,baz=104,slow=6.5,SNR=5.9						
ARCES	**ARCESS Array B**	**81.18**	**340**	P	**P**	**23 11 42.5**	**+0.5**
	0.5nm,0.5s,baz=96,slow=6.1,SNR=7.8						
GERES	**GERESS Array B**	**83.30**	**319**	P	**P**	**23 11 54.5**	**+0.9**
	0.1nm,0.4s,baz=62,slow=3.2,SNR=3.5						

IDC 15 23:02:36.0±1.8, 1°.24N×126°.80E, h0km, mb3.7/3, mb1 3.9/4, mb1mx3.5/53, mbtmp3.7/4, ML3.4/1, Error ellipse: s-maj=115.5km s-min=22.5km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.25**	**183**	P	P	23 07 02.0	-0.1
	0.1nm,0.3s,baz=351,slow=13,SNR=3.2						
WRA	**Warramunga Arr**	**22.31**	**161**	P	P	23 07 34.5	-0.8
	1.5nm,0.4s,baz=340,slow=11,SNR=25						
ASAR	**Alice Springs**	**25.70**	**165**	P	P	23 08 08.8	+0.7
	1.3nm,0.3s,baz=348,slow=13,SNR=15						
MKAR	**Makanchi Array**	**59.63**	**326**	P	P	23 12 41.9	-0.1
	0.3nm,0.3s,baz=118,slow=7.7,SNR=11						

*ISCJB **15** 23:20:32.4±0.6, 36°.97N±0°.03×27°.62E±0°.05, h12km±6km, Error ellipse: s-maj=7.2km s-min=4.5km az=146.2*
*CSEM **15** 23:20:32.6±0.2, 36°.98N×27°.60E, h5km, ML2.2, Error ellipse: s-maj=5.8km s-min=4.0km az=59.0*
*DDA **15** 23:20:32.6, 36°.98N×27°.63E, h7km, Ml2.2*
*ISK **15** 23:20:32.1, 36°.98N×27°.60E, h4km, ML2.5/5*

ISC 15 23:20:32.2±1.0, 36°.98N±0°.03×27°.65E±0°.03, h17km±8km, n28, σ1§65/42, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.19**	**297**	*i* P	**Pg**	**23 20 36.4**	**-0.5**
BDRM				*i* S	**Sg**	**23 20 39.4**	**-0.6**
BDRM	**Kayabasi**	**0.19**	**297**	P	**Pg**	**23 20 36.4**	**-0.5**
BDRM				S	**Sg**	**23 20 39.4**	**-0.6**
DATC	**Datca-Mugla**	**0.22**	**178**	PG	**Pg**	**23 20 36.9**	**-0.4**
DATC	**Datca-Mugla**	**0.22**	**178**	*e*Pg	**Pg**	**23 20 36.9**	**-0.4**
DAT	**Datca**	**0.26**	**194**	PG	**Pg**	**23 20 37.8**	**-0.2**
DAT	**Datca**	**0.26**	**194**	*i* P	**Pg**	**23 20 37.7**	**-0.3**
DAT				*i* S	**Sg**	**23 20 42.2**	**+0.2**
DAT	**Datca**	**0.26**	**194**	*e*Pg	**Pg**	**23 20 37.8**	**-0.2**
DAT				S	**Sg**	**23 20 42.2**	**+0.2**
BODT	**Bodrum**	**0.29**	**287**	PG	**Pg**	**23 20 37.2**	**-1.3**
BODT				SG	**Sg**	**23 20 41.7**	**-1.0**
BODT	**Bodrum**	**0.29**	**287**	*e*Pg	**Pg**	**23 20 37.2**	**-1.3**
BODT				*e*Sg	**Sg**	**23 20 41.7**	**-1.0**
MLSB	**Milas**	**0.33**	**17**	PG	**Pg**	**23 20 39.5**	**+0.3**
MLSB				SG	**Sg**	**23 20 44.8**	**+0.8**
MLSB	**Milas**	**0.33**	**17**	*e*Pg	**Pg**	**23 20 39.5**	**+0.3**
MLSB				*e*Sg	**Sg**	**23 20 44.8**	**+0.8**
YKAV	**Yalikavak-Bodr**	**0.33**	**296**	PG	**Pg**	**23 20 38.6**	**-0.6**
YKAV				SG	**Sg**	**23 20 43.6**	**-0.4**
YKAV	**Yalikavak-Bodr**	**0.33**	**296**	*e*Pg	**Pg**	**23 20 38.6**	**-0.6**
YKAV				*e*Sg	**Sg**	**23 20 43.6**	**-0.4**
MRSB	**Marmaris-Mugla**	**0.51**	**121**	PG	**Pg**	**23 20 42.9**	**+0.5**
MRSB	**Marmaris-Mugla**	**0.51**	**121**	*e*Pg	**Pg**	**23 20 42.9**	**+0.5**
AYDN	**Tasoluk**	**0.70**	**15**	*i* P	**Pg**	**23 20 46.5**	**+0.4**
AYDN				*i* S	**Sg**	**23 20 56.3**	**+0.8**
AYDN	**Tasoluk**	**0.70**	**15**	P	**Pg**	**23 20 46.5**	**+0.4**
AYDN				S	**Sg**	**23 20 56.3**	**+0.8**
TURN	**Turunc**	**0.77**	**98**	PG	**Pg**	**23 20 43.6**	**-3.6**
TURN	**Turunc**	**0.77**	**98**	*i* P	Pg	23 20 43.0	-4.2
TURN				*i* S	**Sg**	**23 20 51.0**	**-6.4**
TURN	**Turunc**	**0.77**	**98**	*e*Pg	**Pg**	**23 20 43.6**	**-3.6**
GCAM	**G?zelcaml?**	**0.79**	**335**	PG	**Pb**	**23 20 48.1**	**+0.5**
GCAM	**G?zelcaml?**	**0.79**	**335**	*i* P	**Pg**	**23 20 44.9**	**-2.8**
GCAM				*i* S	**Sb**	**23 20 59.7**	**+1.6**
GCAM	**G?zelcaml?**	**0.79**	**335**	P	**Pg**	**23 20 44.9**	**-2.8**
GCAM	**G?zelcaml?**	**0.79**	**335**	*e*Pg	**Pb**	**23 20 48.1**	**+0.5**
GCAM				S	**Sb**	**23 20 59.7**	**+1.6**
DALY	**Dalyan (Mu¨la**	**0.82**	**101**	PG	**Pg**	**23 20 49.2**	**+1.0**
DALY	**Dalyan (Mu¨la**	**0.82**	**101**	*e*Pg	**Pg**	**23 20 49.2**	**+1.0**
ARG	**Arkhangelos**	**0.85**	**153**	PG	**Pg**	**23 20 49.4**	**+0.6**
ARG	**Arkhangelos**	**0.85**	**153**	*e*Pg	**Pg**	**23 20 49.4**	**+0.6**

*ISCJB **15** 23:29:35.3±1.0, 13°.3S±0°.2×167°.1E±0°.2, h200km, mb3.8/10, Error ellipse: s-maj=30.9km s-min=19.6km az=19.7*
*IDC **15** 23:29:39.3±4.5, 13°.26S×167°.03E, h219km±41km, mb3.6/10, mb1 3.7/11, mb1mx3.5/51, mbtmp4.1/11, MS3.5/1, Ms1 3.5/1, ms1mx2.6/33, Error ellipse: s-maj=27.0km s-min=24.2km az=136.0*

ISC 15 23:29:37.0±0.8, 13°.1S±0°.1×167°.1E±0°.2, h200km, n16, σ0§92/18, mb3.8/10, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**8.92**	**184**	P	**Pn**	**23 31 43.9**	**+1.5**
	0.4nm,0.3s,baz=116,slow=18,SNR=8.9						
STKA	**Stephens Creek**	**29.91**	**227**	P	**P**	**23 35 25.5**	**-0.8**
	4.7nm,0.5s,baz=55,slow=9.6,SNR=15						
STKA				PcP	**PcP**	**23 38 24.3**	**+0.3**
	1.7nm,0.4s,baz=55,slow=2.7,SNR=4.9						
WRA	**Warramunga Arr**	**32.06**	**253**	P	**P**	**23 35 44.5**	**-0.9**
	0.7nm,0.5s,baz=85,slow=9.0,SNR=10						
RAR	**Rarotonga**	**32.63**	**109**	LR	LR	23 45 54.1	
	comp=Z,80nm,20.8s,baz=69,slow=30						
ASAR	**Alice Springs**	**33.09**	**247**	P	**P**	**23 35 53.4**	**-0.9**
	1.2nm,0.4s,baz=75,slow=9.2,SNR=24						
ASAR				PcP	**PcP**	**23 38 32.1**	**-0.8**
	0.5nm,0.6s,baz=61,slow=1.7,SNR=5.0						
VNDA	**Vanda**	**64.45**	**181**	P	**P**	**23 39 51.0**	**-0.6**
	0.9nm,0.6s,baz=0.0,slow=3.0,SNR=3.1						
CMAR	**Chiang Mai Arr**	**74.13**	**294**	P	**P**	**23 40 53.5**	**+1.5**
	1.2nm,0.6s,baz=134,slow=4.1,SNR=4.7						
SONM	**Songino Array**	**81.10**	**324**	P	**P**	**23 41 30.9**	**+0.9**
	0.3nm,0.6s,baz=149,slow=3.4,SNR=3.3						
MAW	**Mawson**	**83.29**	**202**	P	**P**	**23 41 40.0**	**-0.9**
	2.3nm,0.9s,baz=65,slow=7.2,SNR=4.1						
ILAR	**Eielson Array**	**85.07**	**18**	P	**P**	**23 41 48.8**	**-1.1**
	0.7nm,0.6s,baz=242,slow=4.9,SNR=13						
ILAR				pP	**pP**	**23 42 38.0**	**-0.8**
	1.0nm,0.8s,baz=232,slow=6.6,SNR=8.0						
MKAR	**Makanchi Array**	**95.91**	**317**	P	**P**	**23 42 41.8**	**+0.7**
	0.7nm,0.6s,baz=92,slow=6.1,SNR=11						
ZALV	**Zalesovo Beam**	**95.99**	**324**	P	**P**	**23 42 41.4**	**+0.2**
	0.5nm,0.6s,baz=164,slow=5.8,SNR=2.6						
ARCES	**ARCESS Array B**	**118.66**	**346**	PKP	**PKPdf**	**23 48 00.5**	**-0.1**
	1.5nm,0.5s,baz=78,slow=2.0,SNR=16						
FINES	**FINESS Array B**	**124.17**	**339**	PKP	**PKPdf**	**23 48 11.6**	**+0.2**
	0.6nm,0.4s,baz=106,slow=2.9,SNR=13						
KEST	**Kesra**	**149.84**	**322**	PKPbc	**PKPbc**	**23 49 04.5**	**+0.5**
	3.3nm,0.8s,baz=252,slow=6.7,SNR=5.8						
ESDC	**Sonseca Array**	**152.40**	**345**	PKPbc	**PKPbc**	**23 49 10.5**	**+0.8**
	0.4nm,0.5s,baz=10,slow=2.7,SNR=6.9						

*ISN **15** 23:33:19.9±1.8, 37°.14N×42°.50E, h0km±8km, ML2.6*
*CSEM **15** 23:33:20.0±0.2, 37°.23N×42°.51E, h2km, ML2.9, Error ellipse: s-maj=4.6km s-min=3.5km az=51.0*
*DDA **15** 23:33:21.0, 37°.29N×42°.43E, h8km, Ml2.9*
*ISK **15** 23:33:20.3, 37°.28N×42°.44E, h5km, ML2.9/6*
*ATA **15** 23:33:29.1±0.6, 37°.84N×42°.38E, h28km±16km, ML3.2, MW3.3*

ISC 15 23:33:19.5±1.3, 37°.23N±0°.04×42°.48E±0°.03, h5km±9km, n51, σ1§06/77, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRN	**S¨–rnak**	**0.27**	**349**	*i* P	**Pg**	**23 33 24.7**	**-0.2**
SIRN				*i* S	**Sg**	**23 33 27.9**	**-0.6**
SIRN	**S¨–rnak**	**0.27**	**349**	P	**Pg**	**23 33 24.7**	**-0.2**
SIRN				S	**Sg**	**23 33 28.0**	**-0.6**
SIRT	**Sirnak**	**0.28**	**354**	PG	**Pg**	**23 33 24.8**	**-0.1**
SIRT				SG	**Sg**	**23 33 28.9**	**+0.3**
SIRT	**Sirnak**	**0.28**	**354**	*e*Pg	**Pg**	**23 33 24.8**	**-0.1**
SIRT				*e*Sg	**Sg**	**23 33 28.9**	**+0.3**
SRTM	**Siirt_Merkez**	**0.88**	**330**	*i* P	**Pb**	**23 33 36.7**	**-0.7**
SRTM				*i* S	**Sb**	**23 33 48.9**	**-0.6**
SRTM	**Siirt_Merkez**	**0.88**	**330**	P	**Pb**	**23 33 36.7**	**-0.7**
SRTM				S	**Sb**	**23 33 48.9**	**-0.6**
HAKT	**HAKKARI**	**1.03**	**71**	*i* P	**Pg**	**23 33 39.2**	**-0.2**
HAKT				*i* S	**Sn**	**23 33 57.0**	**+0.9**
HAKT	**HAKKARI**	**1.03**	**71**	P	**Pg**	**23 33 39.2**	**-0.2**
BTMN	**Batman**	**1.17**	**305**	*i* P	**Pn**	**23 33 42.5**	**-0.1**
BTMN				*i* S	**Sn**	**23 33 58.7**	**-0.3**
BTMN	**Batman**	**1.17**	**305**	P	**Pn**	**23 33 42.5**	**-0.1**
BTMN				S	**Sn**	**23 33 58.7**	**-0.3**
GEVA	**Gevas**	**1.18**	**23**	*e*P	**Pn**	**23 33 43.7**	**+0.8**
GEVA				IAML		23 34 06.0	
	comp=Z,25nm,0.9s						
GEVA	**Gevas**	**1.18**	**23**	*i* P	**Pn**	**23 33 43.1**	**+0.2**
GEVA				*i* S	**Sn**	**23 33 58.6**	**-0.9**
GEVA	**Gevas**	**1.18**	**23**	P	**Pn**	**23 33 43.1**	**+0.2**
GEVA				S	**Sn**	**23 33 58.6**	**-0.9**
MARD	**Mardin**	**1.36**	**274**	*i* P	**Pn**	**23 33 44.6**	**-0.7**
MARD				*i* S	**Sn**	**23 34 03.9**	**+0.1**
GURO	**Guroymak-BITLI**	**1.37**	**345**	PN	**Pb**	**23 33 45.8**	**+0.1**
GURO				SN	**Sn**	**23 34 04.4**	**+0.3**
GURO	**Guroymak-BITLI**	**1.37**	**345**	*e*Pn	**Pb**	**23 33 45.8**	**+0.1**
GURO				*e*Sn	**Sn**	**23 34 04.4**	**+0.3**
SVAN	**Silvan-Diyarba**	**1.37**	**313**	PN	**Pg**	**23 33 46.3**	**+0.5**
SVAN				SN	**Sn**	**23 34 04.7**	**+0.7**
SVAN	**Silvan-Diyarba**	**1.37**	**313**	*i* P	**Pg**	**23 33 46.1**	**+0.3**
SVAN				*i* S	**Sn**	**23 34 05.1**	**+1.1**
SVAN	**Silvan-Diyarba**	**1.37**	**313**	P	**Pg**	**23 33 46.1**	**+0.3**
SVAN	**Silvan-Diyarba**	**1.37**	**313**	*e*Pn	**Pg**	**23 33 46.3**	**+0.5**
SVAN				*e*Sn	**Sn**	**23 34 04.7**	**+0.7**
SVAN				S	**Sn**	**23 34 05.1**	**+1.1**
VANB	**Van**	**1.54**	**28**	PN	**Pn**	**23 33 47.9**	**0.0**
ADCV	**BITLIS_Adilcev**	**1.59**	**7**	*i* P	**Pg**	**23 33 50.7**	**+0.6**
ADCV				*i* S	**Sg**	**23 34 13.1**	**+2.4**
ADCV	**BITLIS_Adilcev**	**1.59**	**7**	P	**Pg**	**23 33 50.7**	**+0.6**
MAZI	**Mazidag**	**1.63**	**279**	PN	**Pn**	**23 33 49.4**	**+0.3**
MAZI				SN	**Sg**	**23 34 11.6**	**-0.5**
MAZI	**Mazidag**	**1.63**	**279**	*e*Pn	**Pn**	**23 33 49.4**	**+0.3**
MAZI				*e*Sn	**Sg**	**23 34 11.6**	**-0.5**
DIY	**Diyarbakir**	**1.91**	**291**	*e*Pn	**Pb**	**23 33 55.2**	**+0.3**
DYBB	**Diyarbakir**	**1.99**	**292**	PN	**Pn**	**23 33 55.2**	**+1.2**
DIYA	**Diyarbakir**	**2.00**	**291**	*i* P	**Pg**	**23 33 57.5**	**-0.3**
DIYA				*i* S	**Sg**	**23 34 22.9**	**-0.8**
BNGL	**BINGOL**	**2.02**	**329**	*e*P	**Pb**	**23 33 56.5**	**-0.4**
BNGL				IAML		23 34 26.3	
	comp=Z,90nm,0.4s						
BNGL	**BINGOL**	**2.02**	**329**	*i* P	**Pb**	**23 33 56.4**	**-0.4**
BNGL				*i* S	**Sb**	**23 34 21.2**	**-1.1**
EKAR	**Karacoban**	**2.05**	**351**	*e*P	**Pb**	**23 33 56.6**	**-0.8**
EKAR				*e*S	**Sn**	**23 34 17.1**	**-3.9**
EKAR				IAML		23 34 30.2	
	comp=Z,4.9nm,0.7s						
EKAR	**Karacoban**	**2.05**	**351**	*i* P	**Pb**	**23 33 57.5**	**+0.1**
EKAR				*i* S	**Sg**	**23 34 26.4**	**+1.0**
EKAR	**Karacoban**	**2.05**	**351**	P	**Pb**	**23 33 57.5**	**+0.1**
TUTA	**Tutak**	**2.19**	**7**	*e*P	**Pb**	**23 33 58.4**	**-1.4**
CLDR	**Caldiran**	**2.23**	**30**	PN	**Pn**	**23 33 58.6**	**+1.3**
CLDR	**Caldiran**	**2.23**	**30**	*e*Pn	**Pn**	**23 33 58.6**	**+1.3**
BNGB	**Bing ¶ll**	**2.26**	**322**	PN	**Pn**	**23 33 59.1**	**+1.4**
BINT	**Bingol**	**2.27**	**317**	*e*Pn	**Pn**	**23 33 59.1**	**+1.2**
AGRB	**Hanur-Agry**	**2.38**	**10**	PN	**Pn**	**23 34 00.7**	**+1.3**
AGRB	**Hanur-Agry**	**2.38**	**10**	*e*Pn	**Pn**	**23 34 00.7**	**+1.3**
EATA	**Eleskirt**	**2.63**	**0**	*e*P	**Pb**	**23 34 05.3**	**-2.1**
SVRC	**Sivrice-ELAZID**	**2.76**	**296**	PN	**Pn**	**23 34 05.8**	**+1.1**
SVRC	**Sivrice-ELAZID**	**2.76**	**296**	*e*Pn	**Pn**	**23 34 05.8**	**+1.1**
ERZM	**Erzurum**	**2.81**	**342**	*e*P	**Pn**	**23 34 07.2**	**+1.8**
URFA	**Urfa**	**2.92**	**275**	PN	**Pn**	**23 34 08.2**	**+1.4**
URFA	**Urfa**	**2.92**	**275**	*e*Pn	**Pn**	**23 34 08.2**	**+1.4**
PTK	**Pertek**	**2.95**	**305**	PN	**Pn**	**23 34 07.6**	**+0.3**
PTK	**Pertek**	**2.95**	**305**	*e*Pn	**Pn**	**23 34 07.6**	**+0.3**
MALT	**Malatya**	**3.39**	**290**	PN	**Pn**	**23 34 14.8**	**+1.6**
MALT	**Malatya**	**3.39**	**290**	*e*Pn	**Pn**	**23 34 14.8**	**+1.6**
RTB	**Rutbah**	**4.55**	**204**	*e*Pn	**Pn**	**23 34 31.5**	**+2.4**
	SNR=3.0						
RTB				*e*Sn	**Sn**	**23 35 20.0**	**-2.4**
	SNR=3.0						

*NIED **15** 23:38:00, 41°.70N×143°.00E, h26km, Mw3.5 Best double couple: M0=2.28000×10^14 NP1:φs=337.00000°, δ13.00000°, λ

GEVA S Sg 23 48 54.8 +0.6
MARD Mardin 1.34 275 ⇑ *i* P Pn 23 48 40.2 -1.1
MARD *i* S Sg 23 49 00.2 +1.9
SVAN Silvan-Diyarba 1.37 314 PN Pb 23 48 41.4 -0.4
SVAN SN Sn 23 48 59.3 -1.3
SVAN Silvan-Diyarba 1.37 314 ⇓ *i* P Pb 23 48 41.6 -0.3
SVAN *i* S Sg 23 49 00.8 +1.3
SVAN Silvan-Diyarba 1.37 314 P Pb 23 48 41.6 -0.3
SVAN *e*Sn Sn 23 48 59.3 -1.3
SVAN S Sg 23 49 00.8 +1.3
GURO Guroymak-BITLI 1.39 346 PN Pb 23 48 41.5 -0.6
GURO Guroymak-BITLI 1.39 346 *e*Pn Pb 23 48 41.5 -0.6
YOVA Hakkari_Y¨...kse 1.52 75 ⇑ *i* P Pn 23 48 42.6 -1.2
YOVA *i* S Sg 23 49 06.0 +2.1
YOVA Hakkari_Y¨...kse 1.52 75 P Pn 23 48 42.6 -1.2
YOVA S Sg 23 49 06.0 +2.1
TVAN Van 1.53 29 ⇓ *i* P Pg 23 48 44.5 0.0
TVAN *i* S Sg 23 49 08.2 +3.8
TVAN Van 1.53 29 P Pg 23 48 44.5 0.0
TVAN S Sg 23 49 08.2 +3.8
VANB Van 1.58 28 PN Pb 23 48 44.5 -0.9
VANB Van 1.58 28 *e*Pn Pb 23 48 44.5 -0.9
MAZI Mazidag 1.62 280 PN Pb 23 48 45.2 -0.8
MAZI SN Sg 23 49 07.0 -0.3
MAZI Mazidag 1.62 280 *e*Pn Pb 23 48 45.2 -0.8
MAZI *e*Sn Sg 23 49 07.0 -0.3
ADCV BITLIS_Adilcev 1.62 8 ⇓ *i* P Pg 23 48 46.2 -0.1
ADCV *i* S Sg 23 49 08.6 +1.2
ADCV BITLIS_Adilcev 1.62 8 P Pg 23 48 46.2 -0.1
ADCV S Sg 23 49 08.6 +1.2
DIY Diyarbakir 1.90 292 *e*Pn Pb 23 48 50.2 -0.6
ERCV ERCIS-VAN 1.95 21 PN Pb 23 48 50.1 -1.6
ERCV ERCIS-VAN 1.95 21 *e*Pn Pb 23 48 50.1 -1.6
DYBB Diyarbakir 1.98 293 PN Pn 23 48 50.2 +0.1
DIYA Diyarbakir 1.99 292 *i* P Pb 23 48 50.8 -1.5
DIYA *i* S Sg 23 49 19.5 +0.4
DIYA Diyarbakir 1.99 292 P Pb 23 48 50.8 -1.5
DIYA S Sg 23 49 19.5 +0.4
VMUR Van-Muradiye 1.99 26 ⇓ *i* P Pb 23 48 51.9 -0.6
VMUR *i* S Sg 23 49 18.6 -0.7
VMUR Van-Muradiye 1.99 26 P Pb 23 48 51.9 -0.6
HANI Diyarbakir_Han 2.03 307 *i* P Pn 23 48 50.0 -0.7
HANI *i* S Sn 23 49 16.3 -0.5
HANI Diyarbakir_Han 2.03 307 P Pn 23 48 50.0 -0.7
HANI S Sn 23 49 16.3 -0.5
BNGL BINGOL 2.03 330 *e*P Pn 23 48 51.3 +0.4
BNGL *e*S Sb 23 49 18.0 -0.9
BNGL IAML 23 49 21.8
comp=Z,3μm,0.4s
BNGL BINGOL 2.03 330 ⇓ *i* P Pn 23 48 50.9 +0.1
BNGL *i* S Sb 23 49 19.3 +0.4
EKAR Karacoban 2.08 352 *e*P Pn 23 48 52.0 +0.5
EKAR *e*S Sg 23 49 22.4 +0.4
EKAR IAML 23 49 27.6
comp=Z,166nm,0.4s
EKAR Karacoban 2.08 352 ⇓ *i* P Pn 23 48 51.8 +0.3
EKAR *i* S Sg 23 49 23.7 +1.7
EKAR Karacoban 2.08 352 P Pn 23 48 51.8 +0.3
VRTB Varto-Mus 2.11 338 PN Pn 23 48 51.7 -0.2
VRTB Varto-Mus 2.11 338 ⇓ *i* P Pb 23 48 52.9 -1.5
VRTB *i* S Sb 23 49 20.8 -0.4
VRTB Varto-Mus 2.11 338 *e*Pn Pn 23 48 51.7 -0.2
VRTB Varto-Mus 2.11 338 P Pb 23 48 52.9 -1.5
VRTB S Sb 23 49 20.8 -0.4
TUTA Tutak 2.22 7 *e*P Pn 23 48 53.9 +0.5
TUTA Tutak 2.22 7 *i* P Pb 23 48 54.2 -2.1
TUTA *i* S Sg 23 49 26.5 0.0
TUTA Tutak 2.22 7 P Pb 23 48 54.2 -2.1
TUTA S Sg 23 49 26.5 0.0
CLDR Caldiran 2.26 30 PN Pn 23 48 54.5 +0.5
CLDR Caldiran 2.26 30 *i* P Pb 23 48 54.8 -2.2
CLDR *i* S Sb 23 49 25.4 -0.2
CLDR Caldiran 2.26 30 *e*Pn Pn 23 48 54.5 +0.5
CLDR Caldiran 2.26 30 P Pb 23 48 54.8 -2.2
CLDR S Sb 23 49 25.4 -0.2
BNGB Bing¨¶l 2.27 323 PN Pn 23 48 54.3 +0.2
BGOL Bingol 2.27 322 *i* P Pb 23 48 55.0 -2.2
BGOL *i* S Sb 23 49 26.4 +0.6
BGOL Bingol 2.27 322 P Pb 23 48 55.0 -2.2
BGOL S Sb 23 49 26.4 +0.6
BINT Bingol 2.28 318 *e*Pn Pn 23 48 54.3 +0.1
AGRB Hanur-Agry 2.41 10 PN Pn 23 48 56.7 +0.6
AGRB Hanur-Agry 2.41 10 *e*Pn Pn 23 48 56.7 +0.6
DYDN Diyadin 2.53 22 *e*P Pb 23 48 59.4 -2.4
DYDN *e*S Sb 23 49 35.0 +1.5
DYDN IAML 23 49 38.8
comp=Z,33nm,0.4s
EATA Eleskirt 2.66 1 *e*P Pn 23 49 00.7 +1.1
EATA *e*S Sb 23 49 38.2 +1.1
EATA IAML 23 49 49.7
comp=Z,17nm,0.6s
EATA Eleskirt 2.66 1 *i* P Pn 23 49 01.0 +1.4
EATA *i* S Sg 23 49 40.3 -0.4
EATA Eleskirt 2.66 1 P Pn 23 49 01.0 +1.4
ECAT Cat-ERZURUM 2.67 335 *e*P Pb 23 49 02.5 -1.5
ECAT Cat-ERZURUM 2.67 335 *i* P Pb 23 49 02.3 -1.7
ECAT *i* S Sb 23 49 37.1 -0.2
ECAT Cat-ERZURUM 2.67 335 P Pb 23 49 02.3 -1.7
ECAT S Sb 23 49 37.1 -0.2
SVRC Sivrice-ELAZID 2.75 296 PN Pn 23 49 01.4 +0.6
SVRC Sivrice-ELAZID 2.75 296 *e*Pn Pn 23 49 01.4 +0.6
SANL SANLIURFA_Merk 2.76 270 *i* P Pn 23 49 00.9 +0.2
ERZM Erzurum 2.83 343 *e*P Pn 23 49 03.2 +1.3
HOMI Horasan 2.87 352 *e*P Pb 23 49 06.3 -1.2
HOMI Horasan 2.87 352 *i* P Pn 23 49 03.9 +1.5
URFA Urfa 2.90 276 PN Pn 23 49 03.3 +0.6
URFA Urfa 2.90 276 *e*Pn Pn 23 49 03.3 +0.6
PTK Pertek 2.95 306 PN Pn 23 49 03.3 -0.1
PTK Pertek 2.95 306 *e*Pn Pn 23 49 03.3 -0.1
IGDI IGDIR 2.95 25 *e*P Pn 23 49 05.2 +1.7
IGDI IAML 23 49 43.1
comp=Z,13nm,0.6s
IGDI *e*S Sb 23 49 43.4 -2.0
TNCL Tunceli-Merkez 2.98 311 *e*P Pn 23 49 03.0 -0.9
TNCL *e*S Sb 23 49 46.5 +0.2
ELZG Elazig 3.03 296 *i* P Pn 23 49 04.2 -0.4
ELZG Elazig 3.03 296 P Pn 23 49 04.2 -0.4
SURC SANLIURFA_SURC 3.09 265 *i* P Pn 23 49 05.6 +0.4
SURC *i* S Sg 23 49 52.1 -2.4
SURC SANLIURFA_SURC 3.09 265 P Pn 23 49 05.6 +0.4
KOPT Kop Dagi 3.20 332 *e*P Pn 23 49 07.9 +0.9
DIGO Kars 3.29 12 *e*P Pn 23 49 09.9 +1.7
EUZM Uzumlu 3.31 320 *e*P Pb 23 49 11.3 -3.5
EUZM *e*S Sb 23 49 55.4 -0.2
EUZM IAML 23 50 23.4
comp=Z,26nm,0.6s
MALT Malatya 3.38 290 PN Pn 23 49 10.7 +1.4
MALT Malatya 3.38 290 *e*Pn Pn 23 49 10.7 +1.4
GNI Garni 3.45 31 Pn Pn 23 49 12.4 +2.1
comp=Z,0.8nm,0.3s,baz=34,slow=2.4,SNR=4.0
GNI LR LR 23 50 17.8
comp=Z,83nm,19.3s,baz=32,slow=36
GNI Garni 3.45 31 PN Pn 23 49 11.5 +1.2
GNI Garni 3.45 31 *e*Pn Pn 23 49 11.5 +1.2
KARS Kars 3.46 8 PN Pn 23 49 11.1 +0.7
KARS Kars 3.46 8 *e*Pn Pn 23 49 11.1 +0.7
EAK Akyaka 3.60 14 *e*P Pn 23 49 14.7 +2.3
REFA Refahiye_ERZ¨ 3.63 308 *e*P Pb 23 49 18.0 -2.4
REFA IAML 23 50 18.0
comp=Z,17nm,0.5s
REFA *e*S Sg 23 50 22.6 +11
BAYT Ayd¨–ntepe-Bay 3.66 331 PN Pn 23 49 14.3 +1.0
BAYT Ayd¨–ntepe-Bay 3.66 331 *e*Pn Pn 23 49 14.3 +1.0
KEMA Kemaliye 3.74 305 *e*P Pn 23 49 14.7 +0.5
KEMA *e*S Sb 23 50 02.6 -5.4
KEMA IAML 23 50 25.1
comp=Z,14nm,0.7s
KEMA Kemaliye 3.74 305 *i* P Pn 23 49 14.2 0.0
KEMA Kemaliye 3.74 305 P Pn 23 49 14.2 0.0
KELT Kelkit 3.86 321 *e*P Pn 23 49 17.9 +1.8
KELT Kelkit 3.86 321 *i* P Pb 23 49 25.7 +1.3
GAZ Gaziantep 4.18 271 PN Pn 23 49 22.3 +2.0
GAZ Gaziantep 4.18 271 *e*Pn Pn 23 49 22.3 +2.0
BHD Baghdad 4.23 157 *e*Pn Pn 23 49 20.0 -0.8
SNR=3.0
BHD *e*Sn Sn 23 50 08.0 -2.8
SNR=3.0
EPOS Posof 4.30 3 *e*P Pn 23 49 24.0 +2.0
KMRS Kahramanmaras 4.43 276 PN Pn 23 49 25.4 +1.7
KMRS Kahramanmaras 4.43 276 *e*Pn Pn 23 49 25.4 +1.7

RTB Rutbah 4.52 204 *e*Pn Pn 23 49 25.0 +0.1
SNR=3.0
RTB *e*Sn Sn 23 50 15.0 -3.1
SNR=3.0
YAYL Yayladag 5.23 259 *i* P Pn 23 49 35.9 +1.1
YAYL *i* S Sb 23 50 49.7 -1.4
YAYL Yayladag 5.23 259 P Pn 23 49 35.9 +1.1
YAHY KAYSERI_Yahyal 5.70 281 *i* P Pn 23 49 43.8 +2.7
YAHY *i* S Sg 23 51 20.8 +2.6
YAHY KAYSERI_Yahyal 5.70 281 P Pn 23 49 43.8 +2.7
FKH Fakeheh 5.73 241 *e*P Pn 23 49 43.0 +1.4
HWQ Hawqa 6.04 243 *e*P Pn 23 49 47.0 +1.1
BHL Bhannes 6.44 241 *e*P Pn 23 49 53.6 +2.2
KBZ Khabaz 6.53 3 Pn Pn 23 49 53.6 +1.2
comp=Z,0.1nm,0.3s,baz=206,slow=9.6,SNR=2.3
KBZ LR LR 23 52 52.9
comp=Z,712nm,18.1s,baz=188,slow=44
DQRL Deir Qamar 6.61 240 *e*P Pn 23 49 55.8 +2.2
SHBL Chebaa 6.70 237 *e*P Pn 23 49 56.9 +2.0
KVAR Kislovodsk Arr 6.75 2 Pn Pn 23 49 57.6 +1.9
baz=186,slow=3.5,SNR=3.0
KVAR Lg Lg 23 51 45.6
baz=165,slow=20,SNR=1.8
KVAR LR LR 23 52 59.7
comp=Z,556nm,18.6s,baz=156,slow=43
KSDI Kefar Szold 6.85 236 Pn Pn 23 49 58.4 +1.5
KSHT Keshet 6.88 234 Pn Pn 23 49 59.8 +2.5
NSR Nassriya 6.89 153 *e*Pn Pn 23 49 58.0 +0.6
SNR=3.0
MMA0B Mount Meron ar 7.12 236 Pn Pn 23 50 02.8 +2.1
MMAI Mount Meron Ar 7.12 236 Pn Pn 23 50 02.9 +2.1
comp=Z,2.2nm,0.3s,baz=57,slow=14,SNR=15
MMAI Lg Lg 23 52 05.8
comp=Z,6.6nm,0.3s,baz=85,slow=36,SNR=5.1
MMAI LR LR 23 53 20.5
comp=Z,576nm,18.7s,baz=65,slow=42
HNTI Hanita 7.24 238 Pn Pn 23 50 04.9 +2.7
BRTR Keskin Array B 7.36 293 Pn Pn 23 50 05.5 +1.4
comp=Z,0.2nm,0.3s,baz=260,slow=16,SNR=5.5
BRTR LR LR 23 52 44.5
comp=Z,136nm,19.6s,baz=104,slow=37
BLGI Bet Lehem HaGe 7.44 235 Pn Pn 23 50 07.7 +2.7
MMLI Mount Malkishu 7.48 233 Pn Pn 23 50 07.6 +2.0
HMDT Nahal Hemdat 7.54 231 Pn Pn 23 50 09.6 +3.3
OFRI ´Ofer 7.64 236 Pn Pn 23 50 10.6 +2.7
CSS Mathiatis 7.71 256 Pn Pn 23 50 10.2 +1.4
SLTI Sal´it 7.85 233 Pn Pn 23 50 13.6 +2.9
EIL Elat 9.78 222 Lg Lg 23 53 36.4
comp=Z,1.7nm,0.3s,baz=269,slow=22,SNR=9.2
EIL LR LR 23 54 10.7
comp=Z,81nm,20.5s,baz=60,slow=36
GEYT Alibeck 12.46 82 LR LR 23 57 44.1
comp=Z,133nm,18.5s,baz=120,slow=46
MLR Muntele Rosu 14.89 309 LR LR 23 58 00.2
comp=Z,44nm,20.5s,baz=138,slow=40
AKASG Malin Array Be 16.48 329 Pn Pn 23 52 06.8 -0.8
comp=Z,0.4nm,0.3s,baz=136,slow=12,SNR=4.7
AKTO Aktyubinsk 17.31 35 Pn Pn 23 52 17.4 -0.7
comp=Z,0.0nm,0.3s,baz=194,slow=4.2,SNR=3.0
AKTO LR LR 00 00 39.9
comp=Z,76nm,18.5s,baz=219,slow=43
WSAR Wadi Sarin 19.68 130 P Pn 23 52 48.2 +0.9
comp=Z,0.6nm,0.3s,baz=330,slow=8.8,SNR=9.3
WSAR LR LR 00 01 44.4
comp=Z,250nm,18.6s,baz=340,slow=41
ARU Arti 22.07 24 P P 23 53 11.1 -0.3
comp=Z,1.7nm,0.5s,baz=287,slow=20,SNR=3.5
ARU LR LR 00 03 45.5
comp=Z,123nm,19.4s,baz=219,slow=42
GERES GERESS Array B 23.88 308 LR LR 00 03 58.1
comp=Z,84nm,18.1s,baz=110,slow=40
BVAR Borovoye Array 25.06 42 LR LR 00 05 16.6
comp=Z,87nm,18.2s,baz=234,slow=41
ATD Arta Tunnel 25.56 179 LR LR 00 03 44.3
comp=Z,82nm,18.4s,baz=310,slow=36
FINES FINESS Array B 26.35 342 P P 23 53 52.5 -0.1
comp=Z,0.3nm,0.7s,baz=155,slow=24,SNR=2.8
FINES LR LR 00 05 26.2
comp=Z,89nm,19.6s,baz=152,slow=39
KURBB Kurchatov Arra 28.94 51 P P 23 54 17.7 +1.8
comp=Z,0.3nm,0.2s,baz=254,slow=9.2,SNR=2.8
HFS Hagfors 29.36 331 P P 23 54 20.4 +0.9
comp=Z,1.2nm,0.8s,baz=189,slow=7.3,SNR=3.3
HFS LR LR 00 08 21.4
comp=Z,83nm,18.5s,baz=139,slow=41
MKAR Makanchi Array 30.83 59 P P 23 54 34.7 +2.0
comp=Z,0.3nm,0.8s,baz=275,slow=6.1,SNR=3.2
MKAR LR LR 00 09 05.8
comp=Z,67nm,18.3s,baz=288,slow=41
NOA NORSAR Array B 30.89 331 LR LR 00 08 31.7
comp=Z,52nm,18.7s,baz=125,slow=40
ZALV Zalesovo Beam 33.46 46 LR LR 00 10 39.3
comp=Z,93nm,18.6s,baz=250,slow=40
NRIK Noril´sk 40.28 23 LR LR 00 16 45.2
comp=Z,66nm,19.0s,baz=168,slow=43
SPITS Spitsbergen Ar 42.53 352 LR LR 00 16 39.6
comp=Z,28nm,19.1s,baz=215,slow=40
TORD Torodi Ar. Bea 43.51 247 P P 23 56 24.7 +4.2
comp=Z,0.3nm,0.7s,baz=64,slow=6.9,SNR=2.3
KOWA Kowa 46.97 254 LR LR 00 19 40.6
comp=Z,43nm,18.9s,baz=54,slow=40
CMAR Chiang Mai Arr 52.57 95 LR LR 00 22 15.6
comp=Z,49nm,21.8s,baz=149,slow=39
KLR Kul´dur 62.55 48 LR LR 00 28 34.2
comp=Z,5.2nm,18.9s,slow=39
MJAR Matsushiro Arr 73.00 57 LR LR 00 34 54.8
comp=Z,40nm,18.6s,baz=125,slow=38
LEM Lembang 74.82 111 LR LR 00 34 34.9
comp=Z,83nm,18.9s,baz=191,slow=37

CSEM ***16*** *00:05:22.6±0.2, 48°.17N×7°.64E, h15km, ML1.8/5, Error ellipse: s-maj=4.2km s-min=3.2km az=12.0*
STR ***16*** *00:05:23.2±0.3, 48°.N±2°×.±°, h0km, MLv0.9/6*
LDG 16 00:05:22.9±0.1, 48°.17N×7°.67E, h16km, Md1.9/2, Ml1.8/5, Error ellipse: s-maj=1.0km s-min=0.8km az=17.0, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIZ	**Kirchzarten**	**0.27**	**142**	Pg	Pg	00 05 28.7	-0.2
KIZ	**Kirchzarten**	**0.27**	**142**	Pg	Pg	00 05 28.7	-0.1
KIZ				Sg	Sg	00 05 32.3	-0.6
WLS	**Welschbruch**	**0.32**	**320**	Pg	Pg	00 05 29.7	0.0
WLS				Sg	Sg	00 05 33.6	-0.7
WLS	**Welschbruch**	**0.32**	**320**	Pg	Pg	00 05 29.7	0.0
ECH	**Echery**	**0.34**	**278**	Pg	Pg	00 05 29.8	-0.2
ECH	**Echery**	**0.34**	**278**	Pg	Pg	00 05 29.8	-0.2
ECH				Sg	Sg	00 05 34.6	-0.3
CDF	**Champ du Feu**	**0.35**	**313**	*e*Pg	Pg	00 05 30.1	-0.2
CDF				*e*Sg	Sg	00 05 35.1	-0.2
4.3nm,0.4s							
CDF	**Champ du Feu**	**0.35**	**313**	*e*Pg	Pg	00 05 30.1	-0.2
CDF				*e*Sg	Sg	00 05 35.1	-0.2
2.2nm,0.4s							
OPP	**Oppenau**	**0.48**	**47**	Pg	Pg	00 05 32.4	-0.1
OPP				Sg	Sg	00 05 38.4	-0.5
OPP	**Oppenau**	**0.48**	**47**	Pg	Pg	00 05 32.4	-0.1
MOF	**Molkenrain**	**0.48**	**228**	Pg	Pg	00 05 32.5	0.0
MOF				Sg	Sb	00 05 39.4	-0.4
MOF	**Molkenrain**	**0.48**	**228**	Pg	Pg	00 05 32.5	0.0
HINF	**Hinteralfeld**	**0.65**	**237**	*e*Pg	Pg	00 05 35.3	-0.4
HINF				*e*Sg	Sg	00 05 44.4	+0.1
3.0nm,0.2s							
HINF	**Hinteralfeld**	**0.65**	**237**	*e*Pg	Pg	00 05 35.3	-0.4
HINF				*e*Sg	Sg	00 05 44.4	+0.1
1.5nm,0.2s							
HAU	**Haudompre**	**0.90**	**260**	*e*Pg	Pb	00 05 40.0	-0.1
HAU				*e*Sg	Sb	00 05 52.0	+0.1
2.8nm,0.3s							
HAU	**Haudompre**	**0.90**	**260**	*e*Pg	Pb	00 05 40.0	-0.1
HAU				*e*Sg	Sb	00 05 52.0	+0.1
1.4nm,0.3s							
PAGF	**Fort de Pagny**	**1.35**	**287**	*e*Pg	Pb	00 05 47.6	-0.2
PAGF				*e*Sg	Sb	00 06 05.5	+0.7
1.4nm,0.2s							
PAGF	**Fort de Pagny**	**1.35**	**287**	*e*Pg	Pb	00 05 47.6	-0.2
PAGF				*e*Sg	Sb	00 06 05.5	+0.7
0.7nm,0.2s							
SFTF	**Sexfontaines**	**1.76**	**272**	*e*Pn	Pn	00 05 51.2	-1.5
SFTF				*e*Sn	Sn	00 06 12.0	-2.7
SFTF				*e*Sg	Sg	00 06 18.4	-1.1
1.4nm,0.2s							
SFTF	**Sexfontaines**	**1.76**	**272**	*e*Pn	Pn	00 05 51.2	-1.5
SFTF				*e*Sn	Sn	00 06 12.0	-2.7
SFTF				*e*Sg	Sg	00 06 18.4	-1.1
0.7nm,0.2s							
MEZF	**Maizieres J'vi**	**1.77**	**282**	*e*Pg	Pb	00 05 56.0	+1.0
MEZF				*e*Sg	Sg	00 06 19.0	-1.0
2.5nm,0.4s							
MEZF	**Maizieres J'vi**	**1.77**	**282**	*e*Pg	Pb	00 05 56.0	+1.0
MEZF				*e*Sg	Sg	00 06 19.0	-1.0
1.2nm,0.4s							

NIED ***16*** *00:09:00,21°.00N×121°.30E, h11km, Mw3.9 Best double couple: M0:9.12000×10^14 NP1:φ0=331.00000°, δ25.00000°, λ103.00000°. NP2:φ0=137.00000°, δ65.00000°, λ84.00000°.*
ISCJB ***16*** *00:09:53.7±0.5,20°.73N±0°.05×121°.36E±0°.06, h10km, mb3.8/18, MS3.1/4, Error ellipse: s-maj=9.2km s-min=4.4km az=38.3*
IDC ***16*** *00:09:53.8±0.7,20°.81N×121°.55E, h0km, mb3.8/13, mb1 4.0/14, mb1mx3.7/62, mbtmp3.8/14, ML3.6/1, MS3.2/6, Ms1 3.2/6, ms1mx2.7/59, Error ellipse: s-maj=30.7km s-min=14.5km az=68.0*
JMA ***16*** *00:09:56.7±0.5,20°.95N×121°.31E, h0km, M4.3*
NEIC ***16*** *00:09:58.8±0.4,20°.82N×121°.49E, h35km, mb4.0/7, Error ellipse: s-maj=13.6km s-min=7.9km az=73.0*
ISC 16 00:09:55.3±0.7, 20°.73N±0°.07×121°.36E±0°.09, h10km, n39, σ1 55/43, mb3.8/18, MS3.1/4, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**3.98**	**21**	P	**Pn**	**00 10 58.6**	**+2.1**
JYNG				S	**Sn**	**00 11 44.5**	**+1.3**
HATJ	**Hateruma jima**	**4.01**	**34**	P	**Pn**	**00 10 59.1**	**+2.3**
HATJ				*e*S	**Sn**	**00 11 43.2**	**-0.7**
YOJ	**Yonaguni jima**	**4.01**	**22**	P	Pb	00 11 00.2	-6.0
IRIF	**Iriomote-Funau**	**4.20**	**31**	P	**Pn**	**00 11 02.7**	**+3.2**
IRIF				*e*S	**Sn**	**00 11 51.1**	**+2.4**
JKRS	**Kuro-shima**	**4.26**	**35**	P	**Pn**	**00 11 02.8**	**+2.5**
JKRS				*e*S	**Sn**	**00 11 51.2**	**+1.0**
JIJ	**Ishigaki jima**	**4.44**	**35**	P	**Pn**	**00 11 04.4**	**+1.7**
JIJ				*e*S	**Sn**	**00 11 52.9**	**-1.6**
JISG	**Ishigakijimahi**	**4.71**	**35**	P	**Pn**	**00 11 07.8**	**+1.4**
JISG				*e*S	**Sn**	**00 12 00.3**	**-0.8**
JTJ	**Tarama**	**4.97**	**38**	P	**Pn**	**00 11 13.2**	**+3.2**
JTJ				*e*S	**Sn**	**00 12 07.5**	**0.0**
JIRB	**Irabujima**	**5.39**	**40**	P	**Pn**	**00 11 19.0**	**+3.2**
JIRB				*e*S	**Sn**	**00 12 16.3**	**-1.5**
JIKM	**Ikemajima**	**5.50**	**40**	P	**Pn**	**00 11 18.8**	**+1.4**
JIKM				*e*S	**Sn**	**00 12 20.2**	**-0.5**
DAV	**Davao City (W)**	**14.18**	**163**	LR	LR	00 19 19.2
comp=Z,88nm,20.1s,baz=339,slow=40							
ENH	**Enshi**	**14.31**	**314**	Pn	**Pn**	**00 13 18.6**	**+0.4**
JNU	**Nakatsue**	**14.97**	**33**	LR	LR	00 18 29.0
comp=Z,47nm,21.7s,baz=121,slow=35							
INCN	**Inchon**	**17.31**	**14**	Pn	**Pn**	**00 13 55.3**	**-1.9**
12nm,0.6s							
KSAR	**Wonju Array Be**	**17.59**	**17**	P	**Pn**	**00 13 59.8**	**-0.8**
KSRS	**Korea Array**	**17.61**	**17**	P	**Pn**	**00 13 59.8**	**-1.0**
0.2nm,0.3s,baz=200,slow=10,SNR=4.6							
BJT	**Baijiatuau**	**19.73**	**348**	P	**Pn**	**00 14 25.0**	**-1.6**
1.6nm,0.6s							
CMAR	**Chiang Mai Arr**	**21.24**	**268**	P	**P**	**00 14 42.4**	**+0.7**
0.6nm,0.3s,baz=78,slow=8.4,SNR=4.0							
GUMO	**Guam**	**23.54**	**104**	LR	LR	00 24 09.9
comp=Z,28nm,19.3s,baz=94,slow=37							
PSI	**Prapat**	**28.21**	**234**	LR	LR	00 26 40.6
comp=Z,139nm,19.4s,baz=92,slow=35							
ULN	**Ulaanbaatar**	**29.44**	**340**	P	**P**	**00 15 57.5**	**-1.7**
1.3nm,1.3s							
SONM	**Songino Array**	**29.62**	**339**	P	**P**	**00 16 00.7**	**-0.2**
1.4nm,0.8s,baz=160,slow=11,SNR=7.1							
SONM				LR	LR	00 30 00.2
comp=Z,45nm,18.2s,baz=202,slow=41							
MKAR	**Makanchi Array**	**40.98**	**319**	P	**P**	**00 17 38.5**	**+0.2**
0.6nm,0.8s,baz=106,slow=9.1,SNR=4.9							
WRAB	**Tennant Creek**	**42.37**	**162**	*e*P	**P**	**00 17 49.5**	**-0.4**
1.1nm,0.5s							
WRA	**Warramunga Arr**	**42.37**	**162**	P	**P**	**00 17 49.4**	**-0.6**
3.6nm,0.7s,baz=343,slow=8.9,SNR=22							
PETK	**Petropavlovsk-**	**42.66**	**32**	LR	LR	00 36 04.8
comp=Z,24nm,18.4s,baz=317,slow=37							
ZALV	**Zalesovo Beam**	**43.25**	**329**	P	**P**	**00 17 57.2**	**+0.5**
0.4nm,0.4s,baz=116,slow=6.6,SNR=2.5							
KURK	**Kurchatov**	**44.87**	**322**	P	**P**	**00 18 09.7**	**-0.1**
2.1nm,0.6s							
KURBB	**Kurchatov Arra**	**44.88**	**322**	P	**P**	**00 18 09.9**	**0.0**
0.3nm,0.3s,baz=125,slow=6.1,SNR=4.6							
ASAR	**Alice Springs**	**45.79**	**164**	P	**P**	**00 18 18.1**	**+0.7**
0.8nm,0.4s,baz=343,slow=8.2,SNR=11							
BVAR	**Borovoye Array**	**50.47**	**323**	P	**P**	**00 18 53.8**	**+0.5**
0.1nm,0.3s,baz=96,slow=8.9,SNR=2.3							
BVAR				PcP	**PcP**	**00 20 10.5**	**-0.9**
0.5nm,0.8s,baz=112,slow=3.9,SNR=4.6							
BRVK	**Borovoye**	**50.54**	**323**	P	**P**	**00 18 54.7**	**+0.9**
0.8nm,0.4s							
NRIK	**Noril´sk**	**52.77**	**346**	P	**P**	**00 19 09.2**	**-1.0**
0.9nm,0.3s,baz=113,slow=7.4,SNR=3.5							
BILL	**Bilibino**	**54.87**	**19**	P	**P**	**00 19 25.0**	**-0.7**
3.2nm,1.0s							
STKA	**Stephens Creek**	**55.79**	**159**	P	**P**	**00 19 33.2**	**+0.6**
2.3nm,0.7s,baz=346,slow=12,SNR=2.5							
TAU	**Tasmania Unive**	**67.69**	**160**	P	**P**	**00 20 52.8**	**+0.1**
ILAR	**Eielson Array**	**72.20**	**27**	P	**P**	**00 21 17.8**	**-2.4**
0.3nm,0.5s,baz=280,slow=5.3,SNR=4.5							
FINES	**FINESS Array B**	**74.50**	**330**	P	**P**	**00 21 36.0**	**+2.1**
0.6nm,0.6s,baz=64,slow=6.3,SNR=5.3							
YKA	**Yellowknife Ar**	**86.08**	**23**	P	**P**	**00 22 36.1**	**-0.1**
0.4nm,0.6s,baz=307,slow=5.3,SNR=4.4							

NEIC 16 00:18:35.3±0.0, 19°.89N×155°.99W, h16km, MD3.7(HVO), **After HVO., Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKH	**Kailua Kona**	**0.23**	**186**	*e*Pn	Pb	00 18 41.5	+0.4
HUH	**Hualalai**	**0.25**	**143**	*e*Pn	Pb	00 18 42.0	+0.4
KHLU	**Kahalu'u**	**0.31**	**162**	*e*Pn	Pg	00 18 42.0	+0.1
MHA	**Mahukona**	**0.31**	**16**	*e*Pn	Pb	00 18 42.7	+0.2
HPAH	**Hawaii Prepara**	**0.31**	**63**	*e*Pn	Pb	00 18 42.4	-0.2
POHA	**Pohakuloa**	**0.45**	**106**	*e*Pn	Pg	00 18 43.9	-0.6
MLOA	**Mauna Loa Obse**	**0.53**	**131**	*e*Pn	Pg	00 18 45.1	-0.8
MWH	**Moku'aweowe**	**0.55**	**137**	*e*Pn	Pg	00 18 45.1	-1.3
HMH	**Humu'ula Sheep**	**0.56**	**120**	*e*Pn	Pg	00 18 45.6	-0.8
LPH	**Laupahoehoe**	**0.57**	**79**	*e*Pn	Pb	00 18 46.9	+0.1
MLH	**Mauna Loa**	**0.69**	**124**	*e*Pn	Pg	00 18 47.0	-1.9
AIN	**Ainahou**	**0.72**	**135**	*e*Pn	Pg	00 18 47.2	-2.2
UWE	**Uwekahuna**	**0.81**	**125**	*e*Pn	Pb	00 18 48.2	-2.9
WRMHI	**West Rim**	**0.81**	**126**	*e*Pn	Pb	00 18 48.4	-2.7
OBL	**Observatory Le**	**0.82**	**125**	*e*Pn	Pb	00 18 48.4	-2.8
UWB	**Uwekahuna B**	**0.82**	**124**	*e*Pn	Pb	00 18 48.0	-3.2
NPH	**North Pit**	**0.82**	**125**	*e*Sn	Sb	00 18 58.2	-4.0
SBLHI	**Steaming Bluff**	**0.82**	**124**	*e*Pn	Pb	00 18 48.4	-2.9
SDHHI	**Sand Hill**	**0.82**	**127**	*e*Pn	Pb	00 18 48.6

ML5.0(IGQ), Error ellipse: s-maj=5.6km s-min=3.1km az=71.0
*BJI **16** 00:19:40.0, 2".20S×76".20W, h46km, mB5.2/2, Ms4.8/2, Ms7 4.6/2*
ISC 16 00:19:37.2±0.4, 2".25S±0".04×76".28W±0".04, h35km±2km, h36km:pP-P, n746, σ1§58/424, mb4.9/101, MS3.9/27, 10C-1D, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
BPAT	**Tungurahua Vol**	**2.27**	**289**	P	**Pn**		**00 20 11.1**	**-1.7**
BPAT				S	**Sn**		**00 20 38.5**	**-1.4**
BPAT	**Tungurahua Vol**	**2.27**	**289**	P	**Pn**		**00 20 11.1**	**-1.7**
BPAT				S	**Sn**		**00 20 38.5**	**-1.4**
BULB	**Ulba Tungurahu**	**2.27**	**291**	P	**Pn**		**00 20 10.9**	**-1.8**
BULB	**Ulba Tungurahu**	**2.27**	**291**	P	**Pn**		**00 20 10.9**	**-1.8**
BRUN	**Tungurahua Vol**	**2.28**	**291**	P	**Pn**		**00 20 11.2**	**-1.6**
BRUN	**Tungurahua Vol**	**2.28**	**291**	P	**Pn**		**00 20 11.2**	**-1.6**
ARRY	**Arrayan**	**2.29**	**289**	P	**Pn**		**00 20 11.0**	**-2.0**
ARRY	**Arrayan**	**2.29**	**289**	P	**Pn**		**00 20 11.0**	**-2.0**
RUN5	**Runtun**	**2.29**	**291**	P	**Pn**		**00 20 11.1**	**-1.9**
RUN5	**Runtun**	**2.29**	**291**	P	**Pn**		**00 20 11.1**	**-1.9**
RETU	**Refugio**	**2.30**	**290**	P	**Pn**		**00 20 11.4**	**-1.8**
RETU	**Refugio**	**2.30**	**290**	P	**Pn**		**00 20 11.4**	**-1.8**
BMAS	**Trigal station**	**2.32**	**289**	P	**Pn**		**00 20 11.5**	**-1.8**
BMAS	**Trigal station**	**2.32**	**289**	P	**Pn**		**00 20 11.5**	**-1.8**
POND	**Pondoa**	**2.32**	**291**	P	**Pn**		**00 20 11.5**	**-1.8**
POND	**Pondoa**	**2.32**	**291**	P	**Pn**		**00 20 11.5**	**-1.8**
BBIL	**Ulba Tungurahu**	**2.34**	**290**	P	**Pn**		**00 20 11.6**	**-1.7**
BBIL	**Ulba Tungurahu**	**2.34**	**290**	P	**Pn**		**00 20 11.9**	**-1.7**
BIL2	**Estacion Bilba**	**2.35**	**290**	P	**Pn**		**00 20 12.0**	**-1.7**
BIL2	**Estacion Bilba**	**2.35**	**290**	P	**Pn**		**00 20 12.0**	**-1.7**
RIOE1	**Riobamba**	**2.39**	**282**	P	**Pn**		**00 20 13.0**	**-1.3**
RIOE1	**Riobamba**	**2.39**	**282**	P	**Pn**		**00 20 13.0**	**-1.3**
PIS1	**Pisayambo**	**2.41**	**299**	P	**Pn**		**00 20 13.3**	**-1.4**
PIS1	**Pisayambo**	**2.41**	**299**	P	**Pn**		**00 20 13.3**	**-1.4**
PISA	**Pisayambo**	**2.41**	**299**	P	**Pn**		**00 20 13.2**	**-1.5**
PISA	**Pisayambo**	**2.41**	**299**	P	**Pn**		**00 20 13.2**	**-1.5**
ANTS	**Antisana-Sarah**	**2.57**	**313**	P	**Pn**		**00 20 15.5**	**-1.4**
ANTS	**Antisana-Sarah**	**2.57**	**313**	P	**Pn**		**00 20 15.5**	**-1.4**
ANTM	**Antisana-La Mi**	**2.58**	**311**	P	**Pn**		**00 20 15.6**	**-1.4**
ANTM	**Antisana-La Mi**	**2.58**	**311**	P	**Pn**		**00 20 15.6**	**-1.4**
COV1	**Cotopaxi Volc**	**2.59**	**307**	P	**Pn**		**00 20 17.8**	**+0.4**
COV1	**Cotopaxi Volc**	**2.59**	**307**	P	**Pn**		**00 20 17.8**	**+0.4**
ANTG	**Antisana-Guama**	**2.62**	**311**	P	**Pn**		**00 20 16.4**	**-1.3**
ANTG	**Antisana-Guama**	**2.62**	**311**	P	**Pn**		**00 20 16.4**	**-1.3**
BTAM	**Cotopaxi Volca**	**2.63**	**306**	P	**Pn**		**00 20 16.9**	**-0.8**
BTAM	**Cotopaxi Volca**	**2.63**	**306**	P	**Pn**		**00 20 16.9**	**-0.8**
BVC2	**Cotopaxi Volca**	**2.65**	**307**	P	**Pn**		**00 20 17.4**	**-0.7**
BVC2	**Cotopaxi Volca**	**2.65**	**307**	P	**Pn**		**00 20 17.4**	**-0.7**
VC1	**Cotopaxi 1**	**2.65**	**307**	P	**Pn**		**00 20 17.4**	**-0.7**
VC1	**Cotopaxi 1**	**2.65**	**307**	P	**Pn**		**00 20 17.4**	**-0.7**
BREF	**Cotopaxi Volca**	**2.67**	**306**	P	**Pn**		**00 20 17.7**	**-0.6**
BREF	**Cotopaxi Volca**	**2.67**	**306**	P	**Pn**		**00 20 17.7**	**-0.6**
BNAS	**Cotopaxi Volca**	**2.70**	**306**	P	**Pn**		**00 20 18.1**	**-0.6**
BNAS	**Cotopaxi Volca**	**2.70**	**306**	P	**Pn**		**00 20 18.1**	**-0.6**
NAS2	**Nasa**	**2.70**	**306**	P	**Pn**		**00 20 18.2**	**-0.5**
NAS2	**Nasa**	**2.70**	**306**	P	**Pn**		**00 20 18.2**	**-0.5**
CAMI	**Rancho Maria**	**2.71**	**305**	P	**Pn**		**00 20 18.6**	**-0.2**
CAMI	**Rancho Maria**	**2.71**	**305**	P	**Pn**		**00 20 18.6**	**-0.2**
PITA	**Cotopaxi Volc**	**2.73**	**308**	P	**Pn**		**00 20 17.8**	**-1.2**
PITA	**Cotopaxi Volc**	**2.73**	**308**	P	**Pn**		**00 20 17.8**	**-1.2**
CAYA	**Cayambe**	**2.87**	**323**	P	**Pn**		**00 20 22.4**	**+1.4**
CAYA	**Cayambe**	**2.87**	**323**	P	**Pn**		**00 20 22.4**	**+1.4**
ILLI	**Illinizas Sur**	**2.88**	**302**	P	**Pn**		**00 20 20.9**	**-0.3**
ILLI	**Illinizas Sur**	**2.88**	**302**	P	**Pn**		**00 20 20.9**	**-0.3**
COHC	**Cochancay**	**2.98**	**266**	P	**Pn**		**00 20 22.9**	**+0.9**
COHC	**Cochancay**	**2.98**	**266**	P	**Pn**		**00 20 22.9**	**+0.9**
NINA	**Atacazo Ninahu**	**2.98**	**308**	P	**Pn**		**00 20 24.0**	**+1.5**
NINA	**Atacazo Ninahu**	**2.98**	**308**	P	**Pn**		**00 20 24.0**	**+1.5**
GGPC	**Guagua Pichinc**	**3.09**	**312**	P	**Pn**		**00 20 24.1**	**-0.1**
GGPC	**Guagua Pichinc**	**3.09**	**312**	P	**Pn**		**00 20 24.1**	**-0.1**
YANA	**Yana**	**3.12**	**313**	P	**Pn**		**00 20 24.2**	**-0.2**
YANA	**Yana**	**3.12**	**313**	P	**Pn**		**00 20 24.2**	**-0.2**
IMBA	**Imbabura, San**	**3.16**	**323**	P	**Pn**		**00 20 26.0**	**+1.1**
IMBA	**Imbabura, San**	**3.16**	**323**	P	**Pn**		**00 20 26.0**	**+1.1**
YAHU	**Yahuarcocha**	**3.16**	**326**	P	**Pn**		**00 20 26.4**	**+1.5**
YAHU	**Yahuarcocha**	**3.16**	**326**	P	**Pn**		**00 20 26.4**	**+1.5**
QUEV	**Quevedo**	**3.24**	**292**	P	**Pn**		**00 20 25.6**	**-0.1**
QUEV	**Quevedo**	**3.24**	**292**	P	**Pn**		**00 20 25.6**	**-0.1**
MILO	**Milagro-Astudi**	**3.27**	**269**	P	**Pn**		**00 20 26.6**	**+0.5**
MILO	**Milagro-Astudi**	**3.27**	**269**	P	**Pn**		**00 20 26.6**	**+0.5**
CUIC	**Cuicocha-Domo**	**3.28**	**321**	P	**Pn**		**00 20 27.2**	**+0.7**
CUIC	**Cuicocha-Domo**	**3.28**	**321**	P	**Pn**		**00 20 27.2**	**+0.7**
OTAV	**Otavalo**	**3.29**	**319**	*e*Pn	**Pn**		**00 20 27.0**	**+0.3**
OTAV	**Otavalo**	**3.29**	**319**	*e*P	**Pb**		**00 20 32.5**	**-2.7**
OTAV	**Otavalo**	**3.29**	**319**	P	**Pn**		**00 20 26.6**	**0.0**
OTAV	**Otavalo**	**3.29**	**319**	*e*P	**Pb**		**00 20 32.5**	**-2.7**
OTAV	**Otavalo**	**3.29**	**319**	P	**Pn**		**00 20 26.6**	**0.0**
OTAV	**Otavalo**	**3.29**	**319**	*e*P	**Pn**		**00 20 27.0**	**+0.3**
AMIL	**Milagro (Trans**	**3.31**	**272**	P	**Pn**		**00 20 26.2**	**-0.4**
AMIL	**Milagro (Trans**	**3.31**	**272**	P	**Pn**		**00 20 26.2**	**-0.4**
URCU	**Urcuqui**	**3.32**	**324**	P	**Pn**		**00 20 28.2**	**+1.0**
URCU	**Urcuqui**	**3.32**	**324**	P	**Pn**		**00 20 28.2**	**+1.0**
ATUL	**Tulc¨¡n**	**3.33**	**334**	P	**Pb**		**00 20 32.0**	**-3.8**
ATUL	**Tulc¨¡n**	**3.33**	**334**	P	**Pb**		**00 20 32.0**	**-3.8**
CMBC	**Cumbal**	**3.52**	**334**	*e*P	**Pb**		**00 20 36.2**	**-3.1**
CMBC	**Cumbal**	**3.52**	**334**	*e*P	**Pb**		**00 20 36.2**	**-3.1**
GCUF	**Volcan Galeras**	**3.61**	**343**	*e*P	**Pb**		**00 20 37.4**	**-3.4**
GCUF	**Volcan Galeras**	**3.61**	**343**	*e*P	**Pb**		**00 20 37.4**	**-3.4**
LITE1	**Lita**	**3.67**	**326**	P	**Pn**		**00 20 32.2**	**+0.5**
LITE1	**Lita**	**3.67**	**326**	P	**Pn**		**00 20 32.2**	**+0.5**
CRUC	**La Cruz**	**3.85**	**350**	*e*P	**Pb**		**00 20 40.8**	**-3.9**
CRUC	**La Cruz**	**3.85**	**350**	*e*P	**Pb**		**00 20 40.8**	**-3.9**
FLOC	**Florencia**	**3.86**	**9**	*e*P	**Pb**		**00 20 46.3**	**+1.7**
FLOC	**Florencia**	**3.86**	**9**	*e*P	**Pb**		**00 20 46.3**	**+1.7**
MAG1	**Magdalena**	**4.10**	**302**	P	**Pn**		**00 20 38.0**	**+0.4**
MAG1	**Magdalena**	**4.10**	**302**	P	**Pn**		**00 20 38.0**	**+0.4**
SOTA	**Rioblanco**	**4.37**	**356**	*e*P	**Pn**		**00 20 43.9**	**+2.2**
SOTA	**Rioblanco**	**4.37**	**356**	*e*P	**Pn**		**00 20 43.9**	**+2.2**
PCON	**Cinco Dias**	**4.55**	**359**	*e*P	**Pb**		**00 20 58.4**	**+1.6**
PCON	**Cinco Dias**	**4.55**	**359**	*e*P	**Pb**		**00 20 58.4**	**+1.6**
TUMC	**Tumaco**	**4.73**	**329**	*e*Pn	**Pn**		**00 20 50.6**	**+4.5**
TUMC	**Tumaco**	**4.73**	**329**	*e*P	**Pb**		**00 21 02.5**	**+3.0**
TUMC	**Tumaco**	**4.73**	**329**	*e*P	**Pb**		**00 21 02.5**	**+3.0**
POPC	**Popayan, Colom**	**4.77**	**355**	*e*P	Pn		00 20 40.8	-6.2
POPC	**Popayan, Colom**	**4.77**	**355**	*e*P	Pn		00 20 40.8	-6.2
BETC	**Betania**	**4.97**	**10**	*e*P	Pb		00 21 08.2	+4.6
BETC	**Betania**	**4.97**	**10**	*e*P	Pb		00 21 08.2	+4.6
MARP	**Paez Belalcaza**	**5.07**	**4**	*e*P	**Pb**		**00 21 07.9**	**+2.5**
MARP	**Paez Belalcaza**	**5.07**	**4**	*e*P	**Pb**		**00 21 07.9**	**+2.5**
ATAH	**Atahualpa**	**5.29**	**203**	Pn	**Pn**		**00 20 56.7**	**+2.5**
	72nm,0.3s,baz=24,slow=10,SNR=376							
ATAH				Sn	**Sn**		**00 21 55.7**	**+1.5**
	28nm,0.3s,baz=143,slow=20,SNR=4.8							
ATAH				LR	LR		00 23 44.9	
	comp=Z,2μm,21.8s,baz=29,slow=45							
HORQ	**Saladito**	**5.70**	**357**	*e*P	**Pn**		**00 21 04.2**	**+4.4**
HORQ	**Saladito**	**5.70**	**357**	*e*P	**Pn**		**00 21 04.2**	**+4.4**
PRAC	**Prado**	**6.09**	**13**	*e*Pn	**Pn**		**00 21 07.1**	**+2.3**
PRAC	**Prado**	**6.09**	**13**	*e*P	**Pn**		**00 21 09.2**	**+4.3**
PRAC	**Prado**	**6.09**	**13**	*e*P	**Pn**		**00 21 09.2**	**+4.3**
YOTC	**Yotoco, Valle**	**6.19**	**359**	*e*P	Pn		00 21 13.8	+7.4
YOTC	**Yotoco, Valle**	**6.19**	**359**	*e*P	Pn		00 21 13.8	+7.4
MALC	**Bahia Malaga**	**6.31**	**350**	*e*P	Pn		00 21 12.9	+5.0
MALC	**Bahia Malaga**	**6.31**	**350**	*e*P	Pn		00 21 12.9	+5.0
VILC	**Villavicencio,**	**6.83**	**22**	*e*P	**Pn**		**00 21 17.7**	**+2.6**
VILC	**Villavicencio,**	**6.83**	**22**	*e*P	**Pn**		**00 21 17.7**	**+2.6**
CHIC	**Chingaza**	**7.29**	**20**	*e*P	**Pn**		**00 21 22.8**	**+1.0**
CHIC	**Chingaza**	**7.29**	**20**	*e*P	**Pn**		**00 21 22.8**	**+1.0**
ROSC	**El Rosal**	**7.31**	**16**	Pn	**Pn**		**00 21 22.4**	**+0.4**
	0.9nm,0.3s,baz=225,slow=20,SNR=2.1							
ROSC				Lg	Lg		00 23 25.0	
	43nm,0.3s,baz=180,slow=20,SNR=3.5							
ROSC				LR	LR		00 24 39.4	
	comp=Z,2μm,18.2s,baz=204,slow=42							
ROSC	**El Rosal**	**7.31**	**16**	*e*Pn	**Pn**		**00 21 25.7**	**+3.7**
ROSC	**El Rosal**	**7.31**	**16**	*e*P	Pb		00 21 48.3	+4.7
ROSC	**El Rosal**	**7.31**	**16**	*e*P	Pb		00 21 48.3	+4.7
HELC	**Santa Helena**	**8.42**	**5**	*e*Pn	**Pn**		**00 21 40.9**	**+3.8**
HELC	**Santa Helena**	**8.42**	**5**	*e*P	Pn		00 21 44.0	+6.8
HELC	**Santa Helena**	**8.42**	**5**	*e*P	Pn		00 21 44.0	+6.8
RUSC	**La Rusia**	**8.70**	**22**	*e*Pn	**Pn**		**00 21 43.5**	**+2.4**
RUSC	**La Rusia**	**8.70**	**22**	*e*P	**Pn**		**00 21 44.3**	**+3.2**
RUSC	**La Rusia**	**8.70**	**22**	*e*P	**Pn**		**00 21 44.3**	**+3.2**
PTBC	**PUERTO BERRIO,**	**8.92**	**12**	*e*P	**Pn**		**00 21 44.3**	**+0.6**
PTBC	**PUERTO BERRIO,**	**8.92**	**12**	*e*P	**Pn**		**00 21 44.3**	**+0.6**
NNA	**Nana**	**9.69**	**183**	Pn	**Pn**		**00 21 54.7**	**+0.4**
	31nm,0.3s,baz=359,slow=12,SNR=52							
NNA				Sn	**Sn**		**00 23 36.1**	**-6.0**
	12nm,0.3s,baz=6.3,slow=18,SNR=2.7							
NNA				LR	LR		00 26 48.1	
	comp=Z,2μm,18.9s,baz=353,slow=44							
NNA	**Nana**	**9.69**	**183**	P	**Pn**		**00 21 54.5**	**+0.2**
NNA	**Nana**	**9.69**	**183**	P	**Pn**		**00 21 54.5**	**+0.2**
NNA	**Nana**	**9.69**	**183**	*i* P	**Pn**		**00 21 55.3**	**+0.9**
ZARC	**Zaragoza, Cauc**	**9.78**	**8**	*e*P	**Pn**		**00 21 58.9**	**+3.4**
ZARC	**Zaragoza, Cauc**	**9.78**	**8**	*e*P	**Pn**		**00 21 58.9**	**+3.4**
BCIP	**Isla Barro Col**	**11.88**	**343**	*e*Pn	**Pn**		**00 22 27.4**	**+3.2**
SDV	**Santo Domingo**	**12.41**	**27**	Pn	**Pn**		**00 22 31.3**	**-0.5**
	2.6nm,0.3s,baz=242,slow=5.4,SNR=4.6							
SDV				LR	LR		00 28 06.9	
	comp=Z,1μm,18.2s,baz=200,slow=42							
SDV	**Santo Domingo**	**12.41**	**27**	*e*Pn	**Pn**		**00 22 34.7**	**+3.0**
SDV	**Santo Domingo**	**12.41**	**27**	*e*P	**P**		**00 22 43.5**	**+0.2**
SDV	**Santo Domingo**	**12.41**	**27**	*e*P	**P**		**00 22 43.5**	**+0.2**
SAML	**Samuel**	**14.63**	**118**	*e*Pn	**Pn**		**00 23 01.1**	**-0.8**
SAML	**Samuel**	**14.63**	**118**	*e*P	**Pn**		**00 23 01.1**	**-0.8**
JTS	**JuntasAbangare**	**15.15**	**325**	Pn	**Pn**		**00 23 11.5**	**+2.6**
	0.4nm,0.3s,baz=152,slow=16,SNR=3.6							
JTS				LR	LR		00 28 41.8	
	comp=Z,1μm,19.5s,baz=218,slow=36							
JTS	**JuntasAbangare**	**15.15**	**325**	*e*Pn	**Pn**		**00 23 11.3**	**+2.4**
	17nm,0.8s							
JTS	**JuntasAbangare**	**15.15**	**325**	*e*P	**Pn**		**00 23 11.3**	**+2.4**
JTS				pmax	pmax			
	comp=Z,17nm,0.8s							
LPAZ	**La Paz**	**16.09**	**151**	Pn	**Pn**		**00 23 18.3**	**-3.3**
	comp=Z,1.1nm,0.3s,baz=348,slow=14,SNR=43							
LPAZ				Lg	Lg		00 28 13.6	
	comp=Z,1.6nm,0.3s,baz=82,slow=14,SNR=4.1							
LPAZ				LR	LR		00 30 51.4	
	comp=Z,2μm,19.0s,baz=329,slow=42							
LPAZ	**La Paz**	**16.09**	**151**	*e*Pn	**Pn**		**00 23 20.9**	**-0.7**
	comp=Z,26nm,0.7s							
LPAZ	**La Paz**	**16.09**	**151**	*e*P	**Pn**		**00 23 21.2**	**-0.4**
PTGA	**Pitinga**	**16.38**	**85**	Pn	**Pn**		**00 23 21.0**	**-3.7**
	comp=Z,2.6nm,0.3s,baz=263,slow=14,SNR=25							
PTGA				Sn	**Sn**		**00 26 18.4**	**-7.2**
	comp=Z,9.4nm,0.3s,baz=180,slow=20,SNR=6.9							
PTGA				Lg	Lg		00 28 09.1	
	comp=Z,19nm,0.3s,baz=343,slow=20,SNR=3.1							
PTGA				LR	LR		00 30 22.2	
	comp=Z,629nm,19.4s,baz=268,slow=40							
PTGA	**Pitinga**	**16.38**	**85**	*e*Pn	**Pn**		**00 23 22.8**	**-1.9**
	comp=Z,41nm,0.7s							
PTGA				Sn	**Sn**		**00 26 18.4**	**-7.2**
ESPN	**Las Esperanzas**	**16.41**	**331**	*e*Pn	**P**		**00 23 27.9**	**+0.4**
	comp=Z,35nm,1.1s							
PCRV	**Puerto La Cruz**	**16.94**	**43**	Pn	**Pn**		**00 23 30.2**	**-1.5**
	comp=Z,2.4nm,0.3s,baz=207,slow=8.7,SNR=9.0							
PCRV				Sn	**Sn**		**00 26 32.3**	**-6.8**
	comp=Z,0.6nm,0.3s,baz=218,slow=18,SNR=3.0							
PCRV				Lg	Lg		00 28 34.5	
	comp=Z,2.2nm,0.3s,baz=194,slow=19,SNR=3.1							
MNMC	**Minye Minye**	**18.01**	**159**	*e*P	**P**		**00 23 45.8**	**+0.3**
	comp=Z,162nm,0.8s							
TGUH	**Tegucigalpa,Un**	**19.52**	**326**	*e*P	**Pn**		**00 24 04.4**	**+1.1**
	comp=Z,34nm,0.8s							
PB01	**IPOC Station P**	**19.82**	**161**	*e*P	**Pn**		**00 24 07.0**	**+0.1**
	comp=Z,110nm,0.8s							
SIV	**San Ignacio**	**20.27**	**133**	P	**P**		**00 24 10.1**	**+0.1**
	comp=Z,9.7nm,0.5s,baz=318,slow=9.7,SNR=59							
SIV				Lg	Lg		00 30 16.8	
	comp=Z,42nm,0.7s,baz=253,slow=19,SNR=4.4							
SIV				LR	LR		00 32 46.2	
	comp=Z,1μm,18.7s,baz=323,slow=39							
MTDJ	**Mount Denham**	**20.38**	**357**	*e*P	Pn		00 24 13.5	0.0
PB04	**IPOC Station P**	**20.84**	**164**	*e*P	Pn		00 24 18.1	-0.8
	comp=Z,114nm,0.8s							
PB10	**IPOC Station P**	**21.86**	**166**	*e*P	**P**		**00 24 29.0**	**+2.0**
	comp=Z,38nm,0.8s							
CBCY	**The Bluff, Cay**	**22.11**	**351**	*e*P	**P**		**00 24 29.7**	**-0.1**
	comp=Z,98nm,1.0s							
APG	**El Apazote**	**22.16**	**321**	P	**P**		**00 24 32.0**	**+1.5**
	comp=Z,4.9nm,0.8s,baz=153,slow=14,SNR=3.4							
APG				LR	LR		00 32 01.8	
	comp=Z,499nm,21.8s,baz=126,slow=34							
OBIP	**Obispado Ponce**	**22.30**	**25**	*e*P	**P**		**00 24 33.4**	**+1.6**
	comp=Z,24nm,0.8s							
AOPR	**Arecibo Observ**	**22.52**	**24**	*e*P	**P**		**00 24 35.2**	**+1.1**
	comp=Z,89nm,1.0s							
SJG	**San Juan**	**22.56**	**26**	P	**P**		**00 24 34.2**	**-0.4**
	comp=Z,85nm,0.9s,baz=197,slow=5.7,SNR=28							
SJG				LR	LR		00 34 45.1	
	comp=Z,284nm,21.4s,baz=202,slow=40							
SJG	**San Juan**	**22.56**	**26**	*e*P	**P**		**00 24 35.8**	**+1.2**
	comp=Z,74nm,0.8s							
SJG	**San Juan**	**22.56**	**26**	*e*P	**P**		**00 24 35.8**	**+1.2**
SJG				pmax	pmax			
	comp=Z,74nm,0.8s							
HUMP	**Col San Antoni**	**22.72**	**26**	*e*P	**P**		**00 24 36.6**	**+0.3**
	comp=Z,25nm,0.8s							
MTP	**Monte Pirata**	**22.82**	**27**	*e*P	**P**		**00 24 37.4**	**+0.1**
	comp=Z,51nm,1.0s							
CBYP	**Canovanas**	**22.83**	**26**	*e*P	**P**		**00 24 38.1**	**+0.6**
	comp=Z,50nm,0.9s							
GO02	**Mina Guanaco**	**23.68**	**165**	*e*P	**P**		**00 24 48.0**	**+1.9**
	comp=Z,44nm,0.9s							
ABVI	**Anegada Island**	**23.94**	**29**	*e*P	**P**		**00 24 47.6**	**-0.7**
	comp=Z,118nm,1.1s							
CCIG	**Comitan**	**24.17**	**320**	*e*P	**P**		**00 24 52.2**	**+1.5**
	comp=Z,27nm,1.1s							
ANWB	**Willy Bob**	**24.41**	**35**	*e*P	**P**		**00 24 52.0**	**-0.7**
	comp=Z,234nm,1.6s							
GO03	**Copiap**	**25.86**	**168**	*e*P	**P**		**00 25 07.4**	**+1.6**
	comp=Z,27nm,1.0s							
CMIG	**Matias Romero**	**26.57**	**317**	LR	LR		00 34 17.1	
	comp=Z,358nm,20.8s,baz=130,slow=33							
LCO	**Las Campanas**	**27.14**	**169**	*e*P	**P**		**00 25 19.5**	**+1.9**
	comp=Z,80nm,1.8s							
LCO	**Las Campanas**	**27.14**	**169**	*e*P	**P**		**00 25 19.5**	**+1.9**
LCO				pmax	pmax			
	comp=Z,80nm,1.8s							
GO04	**Tololo Observa**	**28.25**	**170**	*e*P	**P**		**00 25 29.6**	**+2.1**
	comp=Z,41nm,1.1s							
059Z	**Ave Maria**	**28.85**	**350**	pP	pP		00 25 44.0	+1.4
	baz=169							
059A	**Moore Haven**	**29.42**	**351**	pP	pP		00 25 48.8	+1.2
	baz=170							
CPUP	**Villa Florida**	**30.08**	**144**	P	**P**		**00 25 43.5**	**0.0**
	comp=Z,3.1nm,0.5s,baz=342,slow=8.8,SNR=13							
CPUP				LR	LR		00 39 36.6	
	comp=Z,738nm,18.7s,baz=326,slow=40							
CPUP	**Villa Florida**	**30.08**	**144**	*e*P	**P**		**00 25 43.8**	**+0.3**
	comp=Z,24nm,1.8s							
CPUP	**Villa Florida**	**30.08**	**144**	*e*P	**P**		**00 25 43.8**	**+0.3**
CPUP				pmax	pmax			
	comp=Z,25nm,1.8s							
957A	**Wimauma**	**30.29**	**349**	pP	pP		00 25 56.8	+1.4
	baz=168							
859A	**Kempfer Cattle**	**30.46**	**352**	pP	pP		00 25 58.5	+1.7
	baz=171							
DWPF	**Disney Wildern**	**30.59**	**351**	pP	pP		00 25 59.1	+1.1
	baz=170							
858A	**St. Cloud**	**30.68**	**351**	pP	pP		00 26 00.2	+1.4
	baz=170							
857A	**Zephyrhills**	**30.88**	**350**	pP	pP		00 26 01.3	+0.9
	baz=168							
ROC1	**El Roble**	**30.96**	**171**	*e*P	**P**		**00 25 53.6**	**+2.1**
	comp=Z,59nm,0.7s							
758A	**Lake Helen**	**31.39**	**352**	pP	pP		00 26 06.7	+1.6
	baz=170							
757A	**Oxford**	**31.51**	**350**	pP	pP		00 26 07.4	+1.4
	baz=169							
658A	**Bunnell**	**31.85**	**352**	pP	pP		00 26 10.1	+1.0
	baz=170							
656A	**Willston**	**32.00**	**350**	pP	pP		00 26 11.7	+1.3
	baz=168							
657A	**Interlachen**	**32.10**	**351**	pP	pP		00 26 12.6	+1.3
	baz=169							
655A	**Horseshoe Beac**	**32.28**	**349**	pP	pP		00 26 13.9	+1.0
	baz=167							
557A	**Orange Park**	**32.50**	**351**	pP	pP		00 26 16.1	+1.2
	baz=170							
556A	**Lake Butler**	**32.60**	**350**	pP	pP		00 26 16.5	+0.8
	baz=168							
555A	**McAlpin**	**32.82**	**349**	pP	pP		00 26 18.7	+1.1
	baz=168							
GO05	**HualaæØ**	**32.85**	**173**	*e*P	**P**		**00 26 08.9**	**+1.2**
	comp=Z,37nm,1.0s							
554A	**Perry**	**32.92**	**348**	pP	pP		00 26 19.6	+1.1
	baz=166							
553A	**Crawfordville**	**33.18**	**347**	pP	pP		00 26 22.0	+1.3
	baz=165							
455A	**Stateville**	**33.43**	**349**	pP	pP		00 26 23.9	+0.9
	baz=168							
454A	**Quitman**	**33.52**	**348**	pP	pP		00 26 24.9	+1.2
	baz=166							
453A	**Whigham**	**33.80**	**348**	pP	pP		00 26 27.1	+1.0
	baz=165							
356A	**Blackshear**	**33.85**	**351**	pP	pP		00 26 27.4	+0.9
	baz=169							
357A	**Townsend**	**33.85**	**352**	pP	pP		00 26 27.5	+0.9
	baz=170							
355A	**Pearson**	**33.99**	**350**	pP	pP		00 26 28.8	+1.0
	baz=168							
452A	**Marianna**	**33.99**	**346**	pP	pP		00 26 28.9	+1.1
	baz=164							
TIGA	**Tifton**	**34.22**	**349**	pP	pP		00 26 30.5	+0.7
	baz=167							
353A	**Camilla**	**34.25**	**348**	pP	pP		00 26 30.7	+0.6
	baz=166							
449A	**Pace**	**34.44**	**343**	pP	pP		00 26 33.3	+1.6
	baz=160							
256A	**Glennville**	**34.45**	**352**	pP	pP		00 26 32.9	+1.1
	baz=170							
255A	**Hazlehurst**	**34.49**	**351**	pP	pP		00 26 33.0	+0.8
	baz=169							
351A	**Pinckard**	**34.50**	**346**	pP	pP		00 26 32.7	+0.5
	baz=163							
352A	**Blakely**	**34.53**	**347**	pP	pP		00 26 33.0	+0.4
	baz=165							
254A	**Abbeville**	**34.65**	**349**	pP	pP		00 26 33.9	+0.3
	baz=168							
BRAL	**Brewton**	**34.78**	**344**	pP	pP		00 26 35.7	+1.1
	baz=161							
448A	**Bay Minette**	**34.79**	**342**	pP	pP		00 26 35.4	+0.6
	baz=159							
350A	**Dozier**	**34.82**	**345**	pP	pP		00 26 35.6	+0.6
	baz=162							
253A	**Americus**	**34.93**	**348**	pP	pP		00 26 36.1

	baz=154					
X49A	Woodville	37.77 346	pP	pP	00 26 59.5	-0.7
	baz=163					
W53A	Cullowhee	37.78 351	pP	pP	00 27 00.7	+0.2
	baz=169					
Z44A	Pea Ridge, Bel	37.78 340	pP	pP	00 26 59.4	-0.9
	baz=156					
Y46A	Houston	37.84 343	pP	pP	00 27 00.2	-0.7
	baz=159					
X48A	Hartselle	37.88 345	pP	pP	00 27 00.6	-0.6
	baz=162					
X48A	Hartselle	37.88 345	eP	P	00 26 50.2	-0.9
	comp=Z,15nm,0.8s					
TRQA	Tornquist	37.98 162	eP	P	00 26 53.4	+1.6
	comp=Z,37nm,1.4s					
TRQA	Tornquist	37.98 162	eP	P	00 26 53.4	+1.6
TRQA			pmax	pmax		
	comp=Z,37nm,1.4s					
Y45A	Yeager Farm, C	38.03 342	pP	pP	00 27 01.7	-0.8
	baz=158					
NATX	Nacogdoches	38.06 334	pP	pP	00 27 02.3	-0.5
	baz=149					
141A	Papa Simpson,	38.07 337	pP	pP	00 27 02.2	-0.6
	baz=152					
X47A	Russelville	38.16 344	pP	pP	00 27 02.6	-0.9
	baz=161					
W50A	Signal Mountai	38.20 348	pP	pP	00 27 03.9	0.0
	baz=165					
W50A	Signal Mountai	38.20 348	eP	P	00 26 54.3	+0.5
	comp=Z,38nm,0.8s					
V53A	Saluda	38.21 351	pP	pP	00 27 04.5	+0.4
	baz=169					
Z42A	Norrel Spur, H	38.30 339	pP	pP	00 27 03.7	-1.1
	baz=154					
W49A	Belvidere	38.33 347	pP	pP	00 27 04.2	-0.9
	baz=164					
Y44A	Strider, Charl	38.33 341	pP	pP	00 27 03.9	-1.1
	baz=157					
X46A	Booneville	38.39 344	pP	pP	00 27 04.5	-1.0
	baz=160					
V52A	Sevierville	38.51 350	pP	pP	00 27 06.0	-0.5
	baz=168					
X45A	UM Field Stati	38.51 342	pP	pP	00 27 06.5	0.0
	baz=159					
W48A	Pulaski	38.51 346	pP	pP	00 27 06.1	-0.4
	baz=163					
OXF	Oxford	38.59 343	pP	pP	00 27 07.0	-0.2
	baz=159					
V51A	Loudon	38.60 349	pP	pP	00 27 07.1	-0.1
	baz=167					
V51A	Loudon	38.60 349	eP	P	00 26 58.0	+1.0
	comp=Z,30nm,0.8s					
435B	Jarrell	38.61 330	pP	pP	00 27 07.1	-0.4
	baz=144					
V50A	Pikevile	38.62 348	pP	pP	00 27 07.0	-0.4
	baz=166					
PLCA	Paso Flores	38.66 173	P	P	00 26 59.2	+1.6
	comp=Z,23nm,0.9s,baz=5.4,slow=9.9,SNR=21					
PLCA			PcP	PcP	00 29 09.6	+0.3
	comp=Z,1.0nm,0.5s,baz=21,slow=5.5,SNR=3.8					
PLCA	Paso Flores	38.66 173	eP	P	00 26 59.3	+1.6
	comp=Z,27nm,0.9s					
PLCA			PcP	PcP	00 29 09.6	+0.3
PLCA	Paso Flores	38.66 173	eP	P	00 26 59.3	+1.6
PLCA					00 29 09.6	
PLCA			pmax	pmax		
	comp=Z,27nm,0.9s					
Y42A	Garnett, Star	38.75 339	pP	pP	00 27 07.5	-1.0
	baz=155					
W47A	Westpoint	38.78 345	pP	pP	00 27 07.9	-0.9
	baz=162					
V49A	McMinnville	38.87 347	pP	pP	00 27 08.7	-0.8
	baz=164					
V48A	Smith Brothers	39.06 346	pP	pP	00 27 10.6	-0.5
	baz=163					
V48A	Smith Brothers	39.06 346	eP	P	00 27 00.9	0.0
	comp=Z,72nm,0.8s					
X43A	Marvell	39.06 341	pP	pP	00 27 10.0	-1.1
	baz=156					
Y41A	Eaglette Beard	39.09 338	pP	pP	00 27 10.5	-0.9
	baz=154					
W45A	Hickory Valley	39.13 343	pP	pP	00 27 10.4	-1.3
	baz=159					
TZTN	Tazewell	39.18 351	pP	pP	00 27 11.2	-1.0
	baz=168					
V47A	Nunnelly	39.31 346	pP	pP	00 27 12.1	-1.1
	baz=162					
X42A	Stuttgart	39.34 340	pP	pP	00 27 12.3	-1.2
	baz=155					
Y40A	Okolona	39.46 338	pP	pP	00 27 13.2	-1.3
	baz=153					
JCT	Junction City	39.53 327	pP	pP	00 27 15.0	-0.2
	baz=141					
WHTX	Lake Whitney,	39.54 331	pP	pP	00 27 14.4	-0.7
	baz=145					
U49A	Red Boiling Sp	39.57 348	pP	pP	00 27 14.1	-1.2
	baz=165					
X41A	Kaden, Bauxite	39.61 339	pP	pP	00 27 14.3	-1.4
	baz=154					
V45A	Humboldt	39.61 344	pP	pP	00 27 14.2	-1.5
	baz=160					
WVT	Waverly	39.67 345	pP	pP	00 27 14.7	-1.5
	baz=162					
WVT	Waverly	39.67 345	eP	P	00 27 04.9	-1.1
	comp=Z,13nm,0.8s					
WVT	Waverly	39.67 345	eP	P	00 27 04.9	-1.1
WVT			pmax	pmax		
	comp=Z,13nm,0.8s					
U48A	Cassie Pea, Po	39.73 347	pP	pP	00 27 15.7	-1.0
	baz=164					
U47A	Clarksville	39.84 346	pP	pP	00 27 16.2	-1.4
	baz=163					
T50A	Nancy	39.87 349	pP	pP	00 27 17.1	-0.7
	baz=166					
V44A	Blytheville	39.96 343	pP	pP	00 27 17.0	-1.6
	baz=158					
U46A	Springville	39.98 345	pP	pP	00 27 17.2	-1.6
	baz=161					
MIAR	Mount Ida	40.05 338	pP	pP	00 27 17.7	-1.6
	baz=152					
T49A	Edmonton	40.09 348	pP	pP	00 27 18.8	-0.9
	baz=166					
V43A	Jonesboro	40.12 342	pP	pP	00 27 18.7	-1.2
	baz=158					
W41B	Gary Mavity, V	40.12 340	pP	pP	00 27 18.6	-1.4
	baz=155					
U45A	Rockin P Farm,	40.12 344	pP	pP	00 27 18.1	-1.9
	baz=160					
X39A	Fountain Ranch	40.22 337	pP	pP	00 27 20.2	-0.7
	baz=152					
S51A	Beattyville	40.26 351	pP	pP	00 27 20.7	-0.5
	baz=169					
T48A	Bowling Green	40.27 347	pP	pP	00 27 20.5	-0.7
	baz=164					
U44B	Burton Farm, H	40.28 344	pP	pP	00 27 19.8	-1.5
	baz=160					
T47A	Sharon Grove	40.31 347	pP	pP	00 27 20.4	-1.2
	baz=163					
V42A	Cord	40.41 341	pP	pP	00 27 20.7	-1.6
	baz=156					
W40A	Ferguson Farm,	40.43 339	pP	pP	00 27 21.7	-0.8
	baz=154					
U44A	Portageville	40.53 343	pP	pP	00 27 22.1	-1.2
	baz=159					
T46A	Princeton	40.55 346	pP	pP	00 27 22.4	-1.1
	baz=162					
V41A	Mountainview	40.64 340	pP	pP	00 27 22.5	-1.9
	baz=155					
W39A	Magazine	40.70 338	pP	pP	00 27 24.0	-0.8
	baz=152					
T45A	Paducah	40.73 345	pP	pP	00 27 23.3	-1.7
	baz=161					
S48A	Wiedeman Farm,	40.73 348	pP	pP	00 27 23.8	-1.1
	baz=165					
U42A	Revenden	40.86 341	pP	pP	00 27 24.7	-1.4
	baz=157					
V40A	Witts Springs	40.89 339	pP	pP	00 27 24.9	-1.6
	baz=154					
V40A	Witts Springs	40.89 339	eP	P	00 27 15.5	-0.7
	comp=Z,26nm,0.8s					
TXAR	Lajitas Array	40.91 322	pP	pP	00 27 26.5	-0.2
	comp=Z,1.4nm,0.7s,baz=150,slow=9.9,SNR=6.8					
TXAR			PcP	PcP	00 29 17.6	+0.9
	comp=Z,1.9nm,0.7s,baz=146,slow=6.1,SNR=6.9					
TXAR			LR	LR	00 44 58.1	
	comp=Z,118nm,21.3s,baz=0.0,slow=37					
U41A	Viola	41.07 341	pP	pP	00 27 25.7	-2.1
	baz=156					
S46A	Don Dixon Farm	41.12 346	pP	pP	00 27 26.4	-1.9
	baz=162					
ABTX	Abilene, Hawle	41.13 329	epP	pP	00 27 29.0	+0.6
V39A	Pettigrew	41.22 338	pP	pP	00 27 27.5	-1.6
	baz=153					
T43A	Greenville	41.24 343	pP	pP	00 27 27.6	-1.6
	baz=158					
WCI	Wyandotte Cave	41.33 348	pP	pP	00 27 28.3	-1.6
	baz=165					
S45A	Carrier Mills	41.33 345	pP	pP	00 27 28.4	-1.5
	baz=161					
U40A	Yellville	41.40 340	pP	pP	00 27 29.1	-1.4
	baz=154					
R48A	Northridge Ran	41.41 349	pP	pP	00 27 29.4	-1.2
	baz=165					
T42A	Van Buren	41.44 342	pP	pP	00 27 28.9	-2.0
	baz=157					
T42A	Van Buren	41.44 342	eP	P	00 27 19.4	-1.2
	comp=Z,19nm,0.9s					
R47A	Wooly Knot Far	41.44 348	pP	pP	00 27 29.4	-1.4
	baz=164					
S44A	Carbondale	41.52 344	pP	pP	00 27 29.7	-1.8
	baz=160					
SIUC	Southern Illin	41.53 344	eP	P	00 27 20.6	-0.8
	comp=Z,36nm,0.9s					
R46A	Gibon Southern	41.58 347	pP	pP	00 27 30.4	-1.6
	baz=163					
S43A	Fulton Ridge,	41.63 343	pP	pP	00 27 30.8	-1.6
	baz=159					
U39A	Green Forest	41.64 339	pP	pP	00 27 31.1	-1.5
	baz=154					
T41A	Mountain View	41.66 341	pP	pP	00 27 30.9	-1.8
	baz=156					
R45A	Skylar, Fairfi	41.84 346	pP	pP	00 27 32.3	-1.8
	baz=162					
R44A	Waltonville	42.00 345	pP	pP	00 27 34.0	-1.4
	baz=161					
T40A	Mansfield	42.00 340	pP	pP	00 27 33.8	-1.8
	baz=155					
S42A	Caledonia	42.03 343	pP	pP	00 27 33.6	-2.1
	baz=158					
Q47A	Bedord North L	42.04 348	pP	pP	00 27 34.4	-1.3
	baz=165					
TUL1	Leonard	42.11 336	pP	pP	00 27 34.1	-2.2
	baz=150					
FVM	Frch Village	42.12 343	eP	P	00 27 26.2	0.0
	comp=Z,26nm,0.9s					
FVM	French Village	42.12 343	eP	P	00 27 26.2	0.0
FVM			pmax	pmax		
	comp=Z,27nm,0.9s					
S41A	Jillco Farms,	42.15 342	pP	pP	00 27 34.7	-2.0
	baz=157					
T39A	Clever	42.18 339	pP	pP	00 27 35.3	-1.7
	baz=154					
LPIG	La Paz	42.19 310	LR	LR	00 41 35.5	
	comp=Z,84nm,22.0s,baz=184,slow=31					
R43A	Red Bud	42.25 344	pP	pP	00 27 35.4	-2.0
	baz=159					
Q45A	Warren Harvey,	42.38 346	pP	pP	00 27 36.6	-1.9
	baz=162					
S40A	Lebanon	42.40 341	pP	pP	00 27 37.0	-1.8
	baz=156					
WMOK	Wichita Mounta	42.42 332	pP	pP	00 27 37.8	-1.2
	baz=146					
CCM	Cathedral Cave	42.43 342	pP	pP	00 27 37.0	-1.9
	baz=158					
CCM	Cathedral Cave	42.43 342	eP	P	00 27 27.8	-0.9
	comp=Z,11nm,0.9s					
CCM			ePcP	PcP	00 29 21.8	+0.4
CCM	Cathedral Cave	42.43 342	eP	P	00 27 27.8	-0.9
CCM			e		00 29 21.8	
CCM			pmax	pmax		
	comp=Z,11nm,0.9s					
R42A	Luebbering	42.50 343	pP	pP	00 27 37.6	-1.9
	baz=158					
T38A	Diamond	42.52 339	pP	pP	00 27 38.1	-1.6
	baz=153					
P47A	Martinsville	42.53 349	pP	pP	00 27 38.2	-1.6
	baz=165					
Q44A	Meyer Farm, Va	42.60 345	pP	pP	00 27 38.1	-2.2
	baz=161					
R41A	Rosebud	42.69 342	pP	pP	00 27 39.2	-1.9
	baz=157					
S39A	Bolivar	42.76 340	pP	pP	00 27 39.7	-2.0
	baz=154					
S39A	Bolivar	42.76 340	eP	P	00 27 30.9	-0.5
	comp=Z,22nm,1.4s					
Q43A	New Douglas	42.81 345	pP	pP	00 27 40.0	-2.1
	baz=160					
P45A	Graceland, Par	42.89 347	pP	pP	00 27 40.1	-2.5
	baz=163					
S38A	Stockton	42.91 339	pP	pP	00 27 40.7	-2.2
	baz=154					
R40A	Maddies Statio	42.96 341	pP	pP	00 27 41.1	-2.2
	baz=156					
N59A	State Game Lan	42.96 1	pP	pP	00 27 41.1	-2.2
	baz=181					
Q42A	Golden Eagle	43.01 344	pP	pP	00 27 41.9	-1.7
	baz=159					
P44A	Sand Creek, Wi	43.03 346	pP	pP	00 27 42.0	-1.8
	baz=162					
PAL	Palisades	43.10 3	eP	P	00 27 34.0	-0.1
	comp=Z,19nm,1.1s					
PAL	Palisades	43.10 3	eP	P	00 27 34.0	-0.1
PAL			pmax	pmax		
	comp=Z,19nm,1.1s					
R39A	Chumby, Stover	43.23 341	pP	pP	00 27 43.5	-2.0
	baz=155					
O47A	Sheridan	43.24 349	pP	pP	00 27 43.7	-1.8
	baz=165					
Q41A	Truxton	43.25 343	pP	pP	00 27 43.7	-1.9
	baz=158					
R38A	Fenwick Farm,	43.41 340	pP	pP	00 27 45.1	-1.9
	baz=154					
P43A	Skaggs, Pawnee	43.42 345	pP	pP	00 27 45.2	-1.8
	baz=160					
Q40A	Laux Farm, Aux	43.54 342	pP	pP	00 27 45.7	-2.3
	baz=157					
O45A	Potomac	43.57 347	pP	pP	00 27 46.3	-1.9
	baz=163					
P42A	Winchester	43.59 344	pP	pP	00 27 46.1	-2.2
	baz=159					
MNTX	Cornudas Mount	43.63 323	eP	P	00 27 39.6	+1.1
	comp=Z,3.7nm,0.8s					
O44A	Mansfield	43.65 346	pP	pP	00 27 46.7	-2.1
	baz=162					
P41A	Barry, Barry	43.87 343	pP	pP	00 27 48.8	-1.9
	baz=158					
Q39A	Willow Grove F	43.87 341	pP	pP	00 27 48.7	-2.0
	baz=156					
M65A	Busby, Falmout	43.91 6	pP	pP	00 27 48.2	-2.6
	baz=188					
AMTX	Amarillo	43.95 329	eP	P	00 27 41.9	+0.7
	comp=Z,4.7nm,0.6s					
N46A	Monticello	43.99 349	pP	pP	00 27 49.2	-2.4
	baz=165					
Q38A	Cooks Store, C	44.01 340	pP	pP	00 27 49.7	-2.0
	baz=155					
P40A	Paris	44.03 342	pP	pP	00 27 49.6	-2.2
	baz=157					
N44A	Piper City	44.19 347	pP	pP	00 27 50.7	-2.4
	baz=163					
P39B	Salisbury	44.21 342	pP	pP	00 27 50.9	-2.4
	baz=156					
HDIL	Hopedale	44.23 346	pP	pP	00 27 51.2	-2.3
	baz=161					
O41A	Passleys Farm,	44.23 344	pP	pP	00 27 51.1	-2.4
	baz=159					
BINY	Binghamton	44.24 0	eP	P	00 27 43.2	-0.1
BINY			epP	pP	00 27 54.7	+1.1
M46A	Old House Fiel	44.41 349	pP	pP	00 27 52.9	-2.0
	baz=166					
O40A	La Belle	44.52 343	pP	pP	00 27 53.6	-2.2
	baz=157					
P38A	Dawn	44.58 341	pP	pP	00 27 54.1	-2.2
	baz=155					
N42A	Yates City	44.67 345	pP	pP	00 27 54.8	-2.2
	baz=160					
P37A	Latrop	44.82 340	pP	pP	00 27 55.6	-2.6
	baz=154					
CHRN	Cochrane	44.94 176	eP	P	00 27 49.7	+1.0
	comp=Z,14nm,0.8s					
M43A	Waltham Townsh	44.98 347	pP	pP	00 27 56.9	-2.6
	baz=162					
KSU1	Kansas State U	45.20 338	pP	pP	00 27 59.6	-1.7
	baz=151					
O37A	Wolven Farm, M	45.27 341	pP	pP	00 27 59.9	-1.9
	baz=154					
M41A	Milan	45.32 345	pP	pP	00 27 59.7	-2.5
	baz=160					
N39A	Derby Farms, D	45.40 343	pP	pP	00 28 00.7	-2.1
	baz=157					
L44A	Lake County Fo	45.46 348	pP	pP	00 28 00.8	-2.5
	baz=164					
N38A	Joes South For	45.55 342	pP	pP	00 28 01.7	-2.4
	baz=156					
M40A	Post Highland	45.61 344	pP	pP	00 28 02.2	-2.3
	baz=158					
L43A	Garden Prairie	45.65 347	pP	pP	00 28 02.4	-2.3
	baz=162					
N37A	Lee Faris, Mou	45.83 341	pP	pP	00 28 03.8	-2.4
	baz=155					
319A	Douglas	45.84 320	eP	P	00 27 56.7	+0.3
	comp=Z,8.4nm,0.9s					
319A			eS	S	00 34 39.0	+0.6
M39A	Webster	45.86 343	pP	pP	00 28 04.2	-2.2
	baz=158					
L41A	Preston	45.96 345	pP	pP	00 28 05.1	-2.1
	baz=160					
NCB	Newcomb	46.05 2	eP	P	00 27 58.5	+0.9
K43A	Burlington	46.05 348	pP	pP	00 28 05.4	-2.5
	baz=163					
BNM	Barren Site	46.10 324	eP	P	00 27 59.2	+0.7
BNM			epP	pP	00 28 09.5	+0.7
M38A	Pleasantville	46.10 342	pP	pP	00 28 06.3	-2.1
	baz=156					
L40A	Anamosa	46.14 345	pP	pP	00 28 06.5	-2.2
	baz=159					
L40A	Anamosa	46.14 345	eP	P	00 27 57.5	-0.8
	comp=Z,28nm,1.1s					
K42A	Prairie Point,	46.35 347	pP	pP	00 28 08.2	-2.1
	baz=162					
L39A	Vinton	46.41 344	pP	pP	00 28 08.5	-2.2
	baz=158					
K41A	Shullsburg	46.41 346	pP	pP	00 28 08.8	-2.0
	baz=160					
SCIA	State Center	46.56 343	pP	pP	00 28 10.2	-1.8
	baz=156					
TASL	Snake Pit, Alb	46.57 325	pP	pP	00 28 10.9	-1.6
	baz=136					
ANMO	Albuquerque	46.57 325	P	P	00 28 02.6	+0.5
	comp=Z,5.0nm,0.7s,baz=144,slow=10,SNR=22					
ANMO			pP	pP	00 28 11.5	-0.9
	comp=Z,10nm,0.6s,baz=143,slow=8.1,SNR=17					
ANMO			LR	LR	00 51 50.5	
	comp=Z,86nm,18.4s,baz=106,slow=42					
ANMO	Albuquerque	46.57 325	pP	pP	00 28 11.0	-1.5
	baz=136					
ANMO	Albuquerque	46.57 325	eP	P	00 28 02.5	+0.4
	comp=Z,12nm,0.6s					
ANMO			pP	pP	00 28 11.6	-0.9
ANMO	Albuquerque	46.57 325	eP	P	00 28 02.5	+0.4
ANMO			i *PP	pP	00 28 13.5	+1.0
ANMO			pmax	pmax		
	comp=Z,5.0nm,0.9s					
TASM	ASL Pad, Albuq	46.58 325	pP	pP	00 28 10.7	-1.8
	baz=136					
LAZ	Ladron	46.58 324	eP	P	00 28 01.9	-0.3
LAZ			epP	pP	00 28 13.6	+1.1
LONY	Lake Ozonia	46.69 2	pP	pP	00 28 11.4	-1.5
	baz=182					
JFWS	Jewell Farm	46.69 346	pP	pP	00 28 10.9	-2.1
	baz=161					
JFWS	Jewell Farm	46.69 346	P	P	00 28 02.0	-0.6
	comp=Z,20nm,0.7s					
JFWS	Jewell Farm	46.69 346	P	P	00 28 02.0	-0.6
JFWS			pmax	pmax		
	comp=Z,20nm,0.7s					
L38A	Oak Wood Farm,	46.70 343	pP	pP	00 28 10.8	-2.2
	baz=157					
K40A	Colesburg	46.71 345	pP	pP	00 28 10.7	-2.4
	baz=159					
J43A	Natural Harves	46.72 348	pP	pP	00 28 11.1	-2.1
	baz=163					
J42A	Columbus	46.81 347	pP	pP	00 28 11.7	-2.2
	baz=162					
K39A	Oelwein	46.92 344	pP	pP	00 28 12.3	-2.5
	baz=158					
L37A	Phoenix Point,	46.92 342	pP	pP	00 28 12.6	-2.3
	baz=156					
FRNY	Flat Rock	46.94 3	eP	P	00 28 05.5	+1.0
FRNY			epP	pP	00 28 15.6	+0.7
J41A	Loganville	47.06 346	pP	pP	00 28 14.0	-1.9
	baz=161					
PLVO	Plevna	47.09 359	eP	P	00 28 06.2	+0.5
	comp=Z,12nm,1.0s					
T25A	Trinidad	47.10 329	pP	pP	00 28 15.1	-1.5
	baz=140					
I43A	Langenfeld Bro	47.15 348	pP	pP	00 28 14.7	-1.9
	baz=164					
J40A	Soldiers Grove	47.27 346	pP	pP	00 28 15.2	-2.3
	baz=160					
I42A	Draeger Farm,	47.31 348	pP	pP	00 28 16.3	-1.6
	baz=163					
I42A	Draeger Farm,	47.31 348	eP	P	00 28 06.6	-0.9
	comp=Z,21nm,0.8s					
TUC	Tucson	47.42 319	pP	pP	00 28 17.0	-2.0
	baz=130					
TUC	Tucson	47.42 319	eP	P	00 28 10.1	+1.4
	comp=Z,6.0nm,0.9s					
TUC	Tucson	47.42 319	eP	P	00 28 10.1	+1.4
TUC			pmax	pmax		
	comp=Z,6.0nm,0.9s					
J39A	Decorah	47.45 345	pP	pP	00 28 16.5	-2.5
	baz=159					
K37A	Belmond	47.47 343	pP	pP	00 28 17.1	-2.0
	baz=156					
K36A	Gilmore City	47.60 342	pP	pP	00 28 17.8	-2.4
	baz=155					
H43A	Windswept, Lux	47.63 349	pP	pP	00 28 18.1	-2.3
	baz=164					
J38A	Wedel Dairy, R	47.65 344	pP	pP	00 28 17.6	-2.9
	baz=158					
I41A	Arkdale	47.68 347	pP	pP	00 28 18.3	-2.5
	baz=161					
H42A	Shiocton	47.82 348	pP	pP	00 28 19.8	-2.0
	baz=163					
I39A	Houston	47.89 345	pP	pP	00 28 20.1	-2.2
	baz=159					
J37A	Redenius Farm,	47.94 343	pP	pP	00 28 20.8	-2.0
	baz=156					
SDCO	Great Sand Dun	48.12 329	eP	P	00 28 15.3	+1.0
	comp=Z,18nm,1.6s					
H41A	Junction City	48.16 347	pP	pP	00 28 22.2	-2.2
	baz=162					
I38A	Scanlan Farm,	48.28 345	pP	pP	00 28 22.6	-2.8
	baz=158					
H40A	Chili	48.34 347	pP	pP	00 28 23.4	-2.4
	baz=161					
G43A	Wallace	48.38 349	pP	pP	00 28 23.9	-2.1
	baz=165					
F45A	CMU Biological	48.42 351	pP	pP	00 28 23.8	-2.7
	baz=168					
G42A	Mountain	48.50 349	pP	pP	00 28 24.9	-2.2
	baz=164					
I37A	Lemond, Waseca	48.55 344	pP	pP	00 28 25.8	-1.7
	baz=157					
H39A	Augusta	48.60 346	pP	pP	00 28 25.6	-2.3
	baz=160					
G41A	Antigo	48.63 348	pP	pP	00 28 26.1	-2.0
	baz=163					
F43A	Flat Rock, Esc	48.84 350	pP	pP	00 28 27.1	-2.5
	baz=165					
H38A	Maiden Rock	48.85 345	pP	pP	00 28 27.7	-2.1
	baz=158					
G40A	Rib Lake	48.91 347	pP	pP	00 28 28.1	-2.1
	baz=161					
H37A	Dierke Farm, C	48.94 344	pP	pP	00 28 28.6	-1.8
	baz=158					
F41A	Three Lakes	49.12 348	pP	pP	00 28 29.9	-2.0
	baz=163					
G39A	Holcombe	49.15 346	pP	pP	00 28 30.3	-1.7
	baz=160					
X16A	Lo Mia Camp, P	49.20 321	eP	P	00 28 24.3	+1.9
	comp=Z,4.5nm,0.8s					
G38A	Ridgeland	49.20 345	pP	pP	00 28 30.1	-2.4
	baz=159					
H36A	Jessenland, He	49.21 343	pP	pP	00 28 30.9	-1.7
	baz=156					
ECSD	EROS Data Cent	49.28 341	pP	pP	00 28 30.7	-2.4
	baz=153					
ECSD	EROS Data Cent	49.28 341	eP	P	00 28 21.1	-1.6
	comp=Z,6.6nm,1.3s					
E43A	Lone Tree Farm	49.34 350	pP	pP	00 28 30.7	-2.7
	baz=166					
SPMN	Marine on St.	49.50 345	pP	pP	00 28 32.3	-2.5

baz=158
F40A Park Falls 49.50 347 pP pP 00 28 32.8 -2.0
baz=162
H35A Sunnyside Ranc 49.59 343 pP pP 00 28 33.5 -2.0
baz=155
F39A Loretta 49.68 347 pP pP 00 28 34.2 -2.0
baz=161
E41A Kenton 49.78 349 pP pP 00 28 34.9 -2.0
baz=163
WUAZ Wupatki 49.88 322 *eP* **P 00 28 29.1 +1.5**
comp=Z,14nm,1.0s
F38A Pierce - Schro 49.95 346 pP pP 00 28 36.2 -1.9
baz=159
E40A Wakefield 49.96 348 pP pP 00 28 36.6 -1.6
baz=162
E39A Mellen 50.03 347 pP pP 00 28 37.0 -1.8
baz=161
H32A Carlson Farm, 50.24 340 pP pP 00 28 37.8 -2.6
baz=152
F36A Milaca 50.28 344 pP pP 00 28 38.1 -2.5
baz=157
E38A The Farm, Brul 50.48 346 pP pP 00 28 40.1 -2.1
baz=160
G32A Webster 50.92 341 pP pP 00 28 43.3 -2.3
baz=152
E35A Pequot Lakes 51.16 344 pP pP 00 28 44.8 -2.5
baz=156
W13A Hualapai Mount 51.18 320 *eP* **P 00 28 39.0 +1.5**
comp=Z,5.4nm,0.9s
D37A Cotton 51.21 346 pP pP 00 28 45.5 -2.1
baz=159
C40A Isle Royale Na 51.21 349 pP pP 00 28 45.3 -2.4
baz=163
C39A Grand Marais 51.31 348 pP pP 00 28 46.1 -2.3
baz=162
D36A Goodland 51.41 345 pP pP 00 28 47.1 -2.1
baz=158
C38A Sawbill Land. 51.46 347 pP pP 00 28 46.7 -2.9
baz=161
D35A Remer 51.55 345 pP pP 00 28 47.8 -2.5
baz=157
EFI East Falkland 51.57 166⇑ *iP* **P 00 28 40.2 +0.3**
EFI pmax pmax
comp=Z,38nm,1.0s
C37A Embarrass 51.68 346 pP pP 00 28 48.6 -2.6
baz=160
EYMN Ely 51.73 347 pP pP 00 28 49.2 -2.3
baz=160
EYMN Ely 51.73 347 *eP* **P 00 28 40.9 -0.3**
comp=Z,6.4nm,0.8s
SRU San Rafael Swe 51.82 326 *eP* **P 00 28 42.7 +0.5**
comp=Z,5.5nm,0.8s
SRU San Rafael Swe 51.82 326 *eP* **P 00 28 42.7 +0.5**
SRU pmax pmax
comp=Z,6.0nm,0.8s
D34A Park Rapids 51.87 344 pP pP 00 28 50.0 -2.6
baz=156
C36A Pine Crest Far 51.87 346 pP pP 00 28 49.9 -2.7
baz=159
LCMT Little Creek M 51.99 322 *eP* **P 00 28 44.0 +0.5**
comp=Z,4.9nm,1.0s
C35A Jirik Farms, M 52.10 345 pP pP 00 28 51.9 -2.4
baz=157
D33A AnnSam, Waubun 52.10 343 pP pP 00 28 52.0 -2.4
baz=155
C34A RKJ Ranch, Bem 52.30 344 pP pP 00 28 53.8 -2.0
baz=156
MSU Marysvale 52.35 324 *eP* **P 00 28 47.5 +1.3**
MSU *eP*P **pP 00 28 57.3 +0.7**
MSU *eP*cP **PcP 00 29 58.3 +1.3**
CCUT Cedar City 52.41 323 *eP* **P 00 28 47.7 +1.0**
CCUT *eP*cP **PcP 00 29 58.8 +1.5**
RSSD Black Hills 52.42 335 *eP* **P 00 28 47.0 +0.4**
RSSD *eP*P **pP 00 28 57.5 +0.4**
RSSD Black Hills 52.42 335 *eP* **P 00 28 47.0 +0.4**
RSSD *e**PP **pP 00 28 57.5 +0.4**
D31A Mcclaflin, Tow 52.59 342 pP pP 00 28 55.8 -2.1
baz=153
B35A Bob, Littlefor 52.65 345 pP pP 00 28 56.0 -2.4
baz=158
B34A Aery, Baudette 53.00 345 pP pP 00 28 59.1 -1.9
baz=157
AGMN Agassiz Nation 53.16 344 pP pP 00 29 00.3 -1.9
baz=155
AGMN Agassiz Nation 53.16 344 *eP* **P 00 28 51.5 -0.1**
comp=Z,19nm,0.8s
C31A Landman Farms, 53.25 342 pP pP 00 29 00.8 -2.1
baz=153
B31A Greenbush Farm 53.79 342 pP pP 00 29 05.0 -1.8
baz=153
TPNV Topopah Spring 53.83 320 pP pP 00 29 07.1 -0.4
baz=127
TPNV Topopah Spring 53.83 320 *eP* **P 00 28 58.5 +1.4**
comp=Z,8.5nm,0.8s
TPNV Topopah Spring 53.83 320 *eP* **P 00 28 58.5 +1.4**
TPNV pmax pmax
comp=Z,9.0nm,0.8s
LRMC Laurel Mtn Rad 53.90 318 pP pP 00 29 08.2 +0.2
baz=125
PDAR Pinedale Array 53.93 330 P **P 00 28 57.3 -0.4**
comp=Z,0.3nm,0.4s,baz=147,slow=8.3,SNR=4.5
PDAR PcP **PcP 00 30 02.4 -0.5**
comp=Z,2.7nm,0.8s,baz=134,slow=4.3,SNR=6.7
PDAR pPcP 00 30 13.0
comp=Z,3.2nm,0.7s,baz=137,slow=6.0,SNR=10
PDAR LR LR 00 53 55.0
comp=Z,194nm,19.4s,baz=130,slow=38
FURC Furnace Creek, 53.94 320 pP pP 00 29 08.0 -0.1
baz=126
MPMC Manual Prospec 54.10 319 pP pP 00 29 09.3 -0.3
baz=126
R11A Troy Canyon, C 54.28 322 pP pP 00 29 10.5 -0.3
baz=129
R11A Troy Canyon, C 54.28 322 *eP* **P 00 29 01.5 +1.2**
comp=Z,13nm,1.8s
DAC Darwin (Calif) 54.30 319 *eP* **P 00 29 00.1 -0.4**
comp=Z,4.2nm,1.1s
DAC Darwin (Calif) 54.30 319 *eP* **P 00 29 00.1 -0.4**
DAC pmax pmax
comp=Z,4.0nm,1.1s
ISA Isabella, Lake 54.53 318 pP pP 00 29 11.8 -0.8
baz=124
GRAC Grapevine Rang 54.57 320 pP pP 00 29 12.6 -0.2
baz=126
CWC Cottonwood Cre 54.71 319 pP pP 00 29 13.5 -0.5
baz=125
ULM Lac du Bonnet 54.94 345 P **P 00 29 02.9 -1.7**
comp=Z,2.4nm,0.8s,baz=191,slow=7.5,SNR=4.1
ULM pP **pP 00 29 13.3 -1.8**
comp=Z,9.4nm,0.8s,baz=164,slow=6.5,SNR=13
ULM LR LR 00 53 43.0
comp=Z,56nm,22.0s,baz=194,slow=37
ULM Lac du Bonnet 54.94 345 *eP* **P 00 29 03.1 -1.5**
comp=Z,10nm,0.8s
ULM pP **pP 00 29 13.3 -1.8**
ULM Lac du Bonnet 54.94 345 *eP* **P 00 29 03.1 -1.5**
ULM *PP **pP 00 29 13.3 -1.8**
ULM pmax pmax
comp=Z,10.0nm,0.8s
SMMC Simmler 55.37 317 pP pP 00 29 18.5 -0.2
baz=123
RLMT Red Lodge 55.54 332 pP pP 00 29 18.9 -1.0
baz=139
OMMB Old Mammoth Mi 55.99 319 *eP* **P 00 29 13.8 +0.9**
comp=Z,4.4nm,0.9s
NV01 Mina Array Sit 56.02 321 *eP* **P 00 29 13.6 +0.7**
NVAR Mina Array Bea 56.02 321 P **P 00 29 14.0 +1.1**
comp=Z,1.0nm,0.6s,baz=132,slow=7.2,SNR=10
NVAR pP **pP 00 29 24.2 +0.7**
comp=Z,2.3nm,0.6s,baz=114,slow=7.1,SNR=11
NVAR PcP **PcP 00 30 11.5 +0.5**
comp=Z,1.7nm,0.7s,baz=147,slow=3.5,SNR=4.2
NVAR LR LR 00 53 13.5
comp=Z,140nm,19.6s,baz=264,slow=36
YHB Horse Butte 56.19 331 *eP* **P 00 29 14.8 +0.8**
YHB *eP*P **pP 00 29 25.9 +1.3**
GCMT Greycliff 56.23 332 *eP* **P 00 29 14.5 +0.3**
KVN Kaiserville 56.26 321 *eP* **P 00 29 15.3 +0.7**
comp=Z,3.6nm,0.9s
KVN Kaiserville 56.26 321 *eP* **P 00 29 15.3 +0.7**
KVN pmax pmax
comp=Z,4.0nm,0.9s
BMN Battle Mountai 56.56 323 *eP* **P 00 29 17.6 +0.9**
comp=Z,8.9nm,0.9s
BMN Battle Mountai 56.56 323 *eP* **P 00 29 17.6 +0.9**
BMN pmax pmax
comp=Z,9.0nm,0.9s

HLID Hailey 57.00 328 pP pP 00 29 29.9 -0.4
baz=133
HLID Hailey 57.00 328 *eP* **P 00 29 20.3 +0.6**
comp=Z,1.9nm,0.8s
BOZ Bozeman (W) 57.01 331 pP pP 00 29 29.9 -0.4
baz=136
BOZ Bozeman (W) 57.01 331 *eP* **P 00 29 20.2 +0.4**
comp=Z,2.0nm,1.3s
BOZ *eP*P **pP 00 29 30.0 -0.4**
BOZ Bozeman (W) 57.01 331 *eP* **P 00 29 20.2 +0.4**
BOZ *e**PP **pP 00 29 30.0 -0.4**
BOZ pmax pmax
comp=Z,2.0nm,1.3s
PNTR Pine Nut 57.23 321 *eP* **P 00 29 22.3 +0.7**
PNTR *eP*P **pP 00 29 33.7 +1.6**
SCHQ Schefferville 57.42 6 P **P 00 29 22.1 -0.3**
comp=Z,12nm,0.9s,baz=164,slow=7.9,SNR=4.2
SCHQ pP **pP 00 29 32.4 -0.5**
comp=Z,17nm,0.9s,baz=172,slow=7.7,SNR=3.7
SCHQ LR LR 00 56 23.0
comp=Z,28nm,18.1s,baz=185,slow=38
SCHQ Schefferville 57.42 6 *eP* **P 00 29 21.9 -0.4**
comp=Z,29nm,1.1s
SCHQ pP **pP 00 29 32.4 -0.5**
MFID Camas Ranch 57.67 327 *eP* **P 00 29 25.2 +0.8**
comp=Z,6.9nm,0.8s
MFID *eP*P **pP 00 29 35.3 +0.3**
BEKR Beckworth 58.16 321 *eP* **P 00 29 29.5 +1.5**
comp=Z,5.0nm,0.8s
WVOR Wild Horse Val 58.64 324 *eP* **P 00 29 32.2 +1.0**
comp=Z,12nm,0.9s
WVOR Wild Horse Val 58.64 324 *eP* **P 00 29 32.2 +1.0**
WVOR pmax pmax
comp=Z,12nm,0.9s
MSO Missoula 59.01 331 pP pP 00 29 43.7 -0.7
baz=135
O03D Paynes Creek 59.31 321 pP pP 00 29 45.2 -1.3
baz=124
K05A Summer Lake 60.14 323 *eP* **P 00 29 43.3 +1.6**
comp=Z,16nm,1.0s
M04C Macdoel 60.17 322 pP pP 00 29 52.0 -0.4
baz=125
J05D Fort Rock, OR 60.67 324 pP pP 00 29 55.6 -0.3
baz=126
YBH Yreka Blue Hor 60.68 322 LR LR 00 55 50.9
comp=Z,110nm,20.8s,baz=147,slow=36
PINE Pine Mountain 60.80 324 *eP* **P 00 29 47.5 +1.4**
comp=Z,18nm,0.8s
J04D Umpqua Nationa 61.17 323 pP pP 00 29 58.4 -1.0
baz=125
I05D Terrebonne, OR 61.36 325 pP pP 00 29 59.6 -0.8
baz=126
NEW Newport 61.57 330 pP pP 00 30 01.0 -0.8
baz=132
I04A Tendick Farm, 61.67 324 pP pP 00 30 01.4 -1.1
baz=125
G05D Wamic, OR 61.88 325 pP pP 00 30 02.7 -1.2
baz=127
TAOE Nuku Hiva Isla 63.84 261 *e*LR LR 00 49 24.7
comp=Z,98nm,25.7s
B05A Bryant 64.13 328 pP pP 00 30 17.8 -1.0
baz=127
A04D Lummi Island 64.73 328 pP pP 00 30 21.5 -1.1
baz=127
YKA Yellowknife Ar 70.76 342 P **P 00 30 50.1 +0.3**
comp=Z,0.4nm,0.5s,baz=140,slow=6.2,SNR=6.0
YKA LR LR 01 05 43.3
comp=Z,5.1nm,18.2s,baz=140,slow=39
SFJD Kangerlussuaq 71.45 10 LR LR 01 01 33.2
comp=Z,51nm,20.2s,baz=205,slow=35
DBIC Dimbokro 71.84 82 P **P 00 30 57.0 -0.2**
comp=Z,28nm,0.7s,baz=253,slow=4.5,SNR=49
DBIC LR LR 01 01 10.2
comp=Z,81nm,18.7s,baz=245,slow=35
DBIC Dimbokro 71.84 82 *eP* **P 00 30 57.1 -0.1**
comp=Z,38nm,0.8s
DBIC Dimbokro 71.84 82 *eP* **P 00 30 57.2 -0.1**
DBIC pmax pmax
comp=Z,38nm,0.8s
PPT2 Papeete2 73.40 252 *e*LR LR 00 53 48.7
comp=Z,155nm,23.0s
KOWA Kowa 73.44 74 P **P 00 31 05.8 -0.9**
comp=Z,4.5nm,0.5s,baz=267,slow=9.8,SNR=24
KOWA LR LR 01 02 25.3
comp=Z,187nm,19.8s,baz=222,slow=35
KOWA Kowa 73.44 74 *eP* **P 00 31 06.0 -0.7**
comp=Z,20nm,1.4s
TBI Tubuai 73.67 246 *e*LR LR 00 53 59.6
comp=Z,77nm,29.8s
MDT Midelt 75.90 56 LR LR 01 02 09.1
comp=Z,45nm,20.8s,baz=322,slow=34
ESDC Sonseca Array 77.91 49 P **P 00 31 31.4 -0.6**
comp=Z,0.4nm,0.5s,baz=259,slow=5.2,SNR=5.4
SUMG Summit 78.43 11⇑ *iP* **P 00 31 34.8 +0.3**
comp=Z,15nm,0.6s
SUMG *i* 00 31 45.3
SUMG Summit 78.43 11 *eP* **P 00 31 34.8 +0.3**
comp=Z,45nm,0.9s
SUMG Summit 78.43 11 *eP* **P 00 31 34.8 +0.3**
SUMG pmax pmax
comp=Z,45nm,0.9s
TOA0 Torodi Ar. Sit 78.82 76 *eP* **P 00 31 36.9 -0.4**
TORD Torodi Ar. Bea 78.82 76 P **P 00 31 36.0 -1.4**
comp=Z,5.1nm,0.5s,baz=278,slow=5.4,SNR=104
TORD LR LR 01 05 33.8
comp=Z,150nm,18.5s,baz=230,slow=35
VNA3 Neumayer Olymp 80.49 162 P **P 00 31 46.3 +0.9**
INK Inuvik 80.51 342 *eP* **P 00 31 46.0 +0.6**
comp=Z,5.7nm,1.0s
INK Inuvik 80.51 342 *eP* **P 00 31 46.0 +0.6**
INK pmax pmax
comp=Z,6.0nm,1.0s
VNA1 Neumayer--Stat 80.71 162 P **P 00 31 47.9 +1.4**
SCO Scoresbysund 80.85 16⇑ *iP* **P 00 31 47.3 +0.1**
comp=Z,7.1nm,0.9s
SCO *i* 00 31 57.8
EGAK Eagle 81.57 337 *eP* **P 00 31 51.8 +0.6**
comp=Z,9.8nm,0.9s
RIDG Independ'e Rid 82.67 335 *eP* **P 00 31 57.6 +0.5**
comp=Z,8.0nm,0.9s
PAX Paxson 82.67 334 *eP* **P 00 31 57.7 +0.6**
comp=Z,4.9nm,0.9s
PAX Paxson 82.67 334 *eP* **P 00 31 57.7 +0.6**
PAX pmax pmax
comp=Z,5.0nm,0.9s
SNAA Sanae 82.70 162 P **P 00 31 58.0 +0.9**
SNAA Sanae 82.70 162 P **P 00 31 58.1 +0.9**
comp=Z,3.7nm,0.5s,baz=260,slow=11,SNR=50
SNAA LR LR 01 09 02.0
comp=Z,49nm,20.4s,baz=286,slow=36
SNAA Sanae 82.70 162 *eP* **P 00 31 58.0 +0.9**
comp=Z,26nm,1.5s
SNAA Sanae 82.70 162⇓ *iP* **P 00 31 57.3 +0.2**
TAM Tamanrasset 83.32 67 *eP* **P 00 32 02.1 +0.7**
comp=Z,7.4nm,1.0s
TAM Tamanrasset 83.32 67 *eP* **P 00 32 02.1 +0.7**
TAM pmax pmax
comp=Z,7.0nm,1.0s
ILAR Eielson Array 83.86 336 P **P 00 32 03.0 -0.1**
comp=Z,2.2nm,1.0s,baz=128,slow=3.5,SNR=11
ILAR pP **pP 00 32 12.7 -1.4**
comp=Z,1.5nm,0.8s,baz=119,slow=3.8,SNR=7.1
RND Reindeer 84.27 334 *eP* **P 00 32 05.9 +0.6**
RND Reindeer 84.27 334 *eP* **P 00 32 05.9 +0.6**
MDM Murphy Dome 84.46 336 *eP* **P 00 32 06.5 +0.3**
comp=Z,10nm,1.2s
SKT Skwentna 85.08 333 *eP* **P 00 32 09.7 +0.3**
comp=Z,18nm,1.0s
DAG Danmarks Havn 85.11 11 *i* P **P 00 32 08.6 -0.5**
comp=Z,14nm,0.9s
DAG *i* 00 32 19.3
BPAW Bear Paw Mtn. 85.37 335 *eP* **P 00 32 10.9 +0.2**
comp=Z,9.4nm,0.9s
PPLA Purkeypile 85.59 334 *eP* **P 00 32 12.2 +0.2**
comp=Z,27nm,1.3s
CAST Castle Rocks 85.67 334 *eP* **P 00 32 12.1 -0.1**
comp=Z,7.2nm,0.8s
QSPA South Pole Qui 87.82 180 P **P 00 32 24.0 +1.1**
comp=Z,28nm,1.0s,baz=152,slow=4.5,SNR=19
QSPA South Pole Qui 87.82 180 *eP* **P 00 32 23.4 +0.5**
comp=Z,146nm,1.1s
NOA NORSAR Array B 90.74 29 LR LR 01 09 36.0
comp=Z,51nm,21.1s,baz=270,slow=33
GERES GERESS Array B 91.67 41 LR LR 01 12 16.3
comp=Z,21nm,19.4s,baz=276,slow=34
HFS Hagfors 91.92 30 LR LR 01 10 01.7
comp=Z,97nm,21.8s,baz=270,slow=33

SPITS Spitsbergen Ar 92.73 12 P **P 00 32 45.0 -0.4**
comp=Z,8.6nm,1.1s,baz=98,slow=6.3,SNR=4.3
SPITS LR LR 01 16 17.9
comp=Z,42nm,19.3s,baz=315,slow=37
VNDA Vanda 94.40 191 P **P 00 32 54.6 +1.6**
comp=Z,3.0nm,0.7s,baz=132,slow=2.6,SNR=14
VNDA Vanda 94.40 191 *eP* **P 00 32 55.0 +1.9**
comp=Z,4.7nm,0.8s
VNDA Vanda 94.40 191 *eP* **P 00 32 55.0 +1.9**
VNDA pmax pmax
comp=Z,5.0nm,0.8s
KLNR Kaliningrad 95.59 36⇑ *eP* **P 00 32 59.8 +0.9**
KLNR pmax pmax
comp=Z,26nm,0.8s
ARCES ARCESS Array B 96.22 20 P **P 00 33 00.4 -1.1**
comp=Z,1.4nm,0.6s,baz=269,slow=3.7,SNR=11
BOSA Boshof 99.04 119 P **Pdif 00 33 15.9 +0.6**
comp=Z,2.4nm,0.7s,baz=248,slow=3.9,SNR=4.6
BOSA LR LR 01 15 34.0
comp=Z,234nm,18.9s,baz=242,slow=34
BOSA Boshof 99.04 119 P **Pdif 00 33 16.0 +0.6**
BILL Bilibino 102.08 340 *eP* **Pdif 00 33 27.2 -0.6**
BILL pmax pmax
comp=Z,1.0nm,1.2s
GNI Garni 114.82 46⇑ *i*PKIKP PKPdf 00 38 13.9 -1.0
ARU Arti 115.08 26⇑ *i*PKIKP **PKPdf 00 38 15.1 +0.4**
YAK Yakutsk 117.25 347⇑ *i*PKIKP **PKPdf 00 38 18.9 +0.3**
ABKAR Akbulak array 120.15 32 *e*PKPdf **PKPdf 00 38 25.3 +0.7**
BRVK Borovoye 122.30 23⇑ *i*PKIKP **PKPdf 00 38 28.3 -0.4**
BVAR Borovoye Array 122.37 23 PKP **PKPdf 00 38 29.2 +0.4**
comp=Z,1.4nm,0.6s,baz=257,slow=3.9,SNR=11
BVAR pPKP **pPKPdf 00 38 40.0 -0.3**
comp=Z,2.1nm,0.7s,baz=1.9,slow=4.5,SNR=6.5
YSS Yuzh-Sakhalins 124.06 329 PKIKP **PKPdf 00 38 27.7 -4.5**
ZALV Zalesovo Beam 126.18 14 PKP **PKPdf 00 38 36.0 -0.1**
comp=Z,4.3nm,0.4s,baz=298,slow=3.2,SNR=19
ZALV pPKP **pPKPdf 00 38 46.6 -0.8**
comp=Z,4.1nm,0.7s,baz=276,slow=2.5,SNR=7.3
ERM Erimo 126.95 324 *i* PKIKP **PKPdf 00 38 37.0 -0.9**
KURK Kurchatov 127.25 20 *e*PKPdf **PKPdf 00 38 39.0 +0.8**
KURK pPKP **pPKPdf 00 38 49.7 +0.1**
KURK Kurchatov 127.25 20 *e*PKIKP **PKPdf 00 38 39.0 +0.8**
KURK 00 38 49.7
KURBB Kurchatov Arra 127.30 20 PKP **PKPdf 00 38 38.9 +0.5**
comp=Z,4.4nm,0.6s,baz=320,slow=2.4,SNR=28
KURBB pPKP **pPKPdf 00 38 49.7 0.0**
comp=Z,4.5nm,0.7s,baz=320,slow=2.4,SNR=8.1
USRK Ussuriysk Ar. 131.30 333 PKP **PKPdf 00 38 46.2 +0.1**
comp=Z,2.0nm,0.6s,baz=20,slow=2.7,SNR=4.6
USRK pPKP **pPKPdf 00 38 55.8 -1.7**
comp=Z,0.9nm,0.5s,baz=177,slow=28,SNR=1.6
WSAR Wadi Sarin 131.62 61 PKP **PKPdf 00 38 47.5 +0.1**
comp=Z,2.9nm,0.5s,baz=271,slow=7.2,SNR=5.5
MAKZ Makanchi 131.75 20 *e*PKPdf **PKPdf 00 38 47.1 +0.2**
MAKZ Makanchi 131.75 20 *e*PKIKP **PKPdf 00 38 47.1 +0.2**
MK31 Makanchi Array 131.87 20 *e*PKPdf **PKPdf 00 38 47.4 +0.2**
MK31 Makanchi Array 131.87 20 *e*PKIKP **PKPdf 00 38 47.4 +0.2**
MKAR Makanchi Array 131.87 20 PKP **PKPdf 00 38 47.1 -0.1**
comp=Z,2.0nm,0.5s,baz=293,slow=2.7,SNR=21
MKAR Makanchi Array 131.87 20 *e*PKPdf **PKPdf 00 38 47.4 +0.2**
MKAR Makanchi Array 131.87 20 *e*PKIKP **PKPdf 00 38 47.4 +0.2**
MK01 Makanchi Array 131.89 20 *e*PKPdf **PKPdf 00 38 47.1 -0.1**
AAK Ala-Archa 132.05 29 PKP **PKPdf 00 38 49.0 +1.2**
comp=Z,4.0nm,0.8s,baz=131,slow=4.0,SNR=8.1
AAK Ala-Archa 132.05 29 *e*PKPdf **PKPdf 00 38 49.5 +1.7**
AAK Ala-Archa 132.05 29⇑ *i*PKIKP **PKPdf 00 38 47.7 -0.1**
MJAR Matsushiro Arr 133.34 321 PKP **PKPdf 00 38 50.5 +0.2**
comp=Z,1.3nm,0.5s,baz=153,slow=1.5,SNR=3.8
NRN Naryn 133.70 29 *e*PKPdf **PKPdf 00 38 52.8 +1.5**
NRN Naryn 133.70 29 PKIKP **PKPdf 00 38 52.7 +1.5**
SONM Songino Array 134.53 357 PKP **PKPdf 00 38 51.8 -0.5**
comp=Z,0.5nm,0.6s,baz=153,slow=1.0,SNR=3.6
KSH Kashi 135.14 31 PKP **PKPdf 00 38 55.3 +1.6**
KSH *e*SKS **SKSdf 00 45 58.8 -3.7**
KSH *e*SKKS **SKKSac 00 48 19.3 -2.8**
WMQ Urumqi 136.23 17 PKP **PKPdf 00 38 54.9 -0.6**
WMQ LR LR
comp=Z,74nm,27.1s
WMQ LR LR
comp=Z,110nm,29.3s
WMQ LR LR
comp=Z,63nm,18.9s
KS01 Wonju Array Si 138.49 331 *e*PKPdf **PKPdf 00 38 59.6 -0.2**
KSRS Korea Array 138.49 331 PKP **PKPdf 00 39 00.2 +0.5**
comp=Z,2.8nm,0.6s,baz=17,slow=1.7,SNR=11
KSRS pPKP **pPKPdf 00 39 10.8 -0.3**
comp=Z,3.6nm,0.7s,baz=5.1,slow=1.8,SNR=6.3
KSAR Wonju Array Be 138.52 331 PKP **PKPdf 00 39 00.2 +0.4**
KSAR pPKP **pPKPdf 00 39 10.8 -0.4**
KSAR Wonju Array Be 138.52 331 PKIKP **PKPdf 00 39 00.2 +0.4**
KSAR 00 39 10.9
HHC Hu-ho-hao-te 140.93 351 *e*PKP **PKPdf 00 39 06.3 +2.0**
ASAR Alice Springs 140.93 227 PKhKP PKPpre 00 38 56.2
comp=Z,1.4nm,0.5s,baz=137,slow=3.6,SNR=11
WB2 Warramunga Arr 142.71 232 *e*PKPpre PKPpre 00 39 03.5
WRA Warramunga Arr 142.72 232 PKhKP PKPpre 00 39 03.4
comp=Z,2.8nm,0.6s,baz=122,slow=2.7,SNR=29
GTA Gaotai 142.84 5 *e*PKP **PKPdf 00 39 09.0 +1.2**
GTA pPKP pPKPdf 00 39 17.3 -1.9
LZH Lanzhou 146.33 360⇑ PKPbc **PKPbc 00 39 15.6 +0.5**
LZH pPKP pPKPab 00 39 26.9 -0.2
LZH sPKP 00 39 29.4
LZH LR LR
comp=Z,62nm,18.0s
LZH LR LR
comp=Z,95nm,18.2s
LZH LR LR
comp=Z,120nm,20.1s
NJ2 Nanjing 147.10 336 *e*PKPbc **PKPdf 00 39 14.4 -0.7**
PYUN Piuthan 147.56 36 *eP* **PKPdf 00 39 17.1 +0.8**
comp=Z,53nm,0.6s
DANN Dangsing 147.81 34 *eP* **PKPdf 00 39 17.8 +1.0**
comp=Z,108nm,0.7s
XAN Xi'an 148.00 352 PKPbc **PKPbc 00 39 19.6 -0.1**
KOLN Koldanda 148.16 35 *eP* **PKPdf 00 39 17.9 +0.6**
comp=Z,18nm,0.4s
GKN Gorkha 148.56 34 *eP* **PKPdf 00 39 18.7 +0.8**
MTN Manton Dam 148.92 240 *e*PKPbc **PKPbc 00 39 22.6 0.0**
KKN Kakani 149.08 33 *eP* **PKPdf 00 39 19.4 +0.6**
comp=Z,54nm,0.7s
DMN Daman 149.13 34 *eP* **PKPdf 00 39 19.3 +0.4**
comp=Z,33nm,0.5s
GUN Gumba 149.31 32 *eP* **PKPdf 00 39 20.2 +0.9**
comp=Z,112nm,1.0s
PKIN Phulchoki 149.31 33 *eP* **PKPdf 00 39 20.1 +0.9**
comp=Z,31nm,0.6s
JIRN Jiri 149.68 32 *eP* **PKPdf 00 39 21.4 +1.4**
comp=Z,40nm,0.6s
LSA Lhasa 150.20 22 *e*PKPdf **PKPdf 00 39 21.6 +0.7**
LSA *e*PKPbc **PKiKP 00 39 27.0 +0.2**
LSA Lhasa 150.20 22 *e*PKIKP **PKPdf 00 39 21.6 +0.7**
LSA *e* 00 39 27.0
RAMN Ramite 150.46 32 *eP* **PKPdf 00 39 21.5 +0.5**
comp=Z,38nm,0.6s
TAPN Taplejung 150.71 30 *eP* **PKPdf 00 39 23.7 +2.2**
comp=Z,51nm,0.5s
ODAN Odare 150.95 31 *eP* **PKPdf 00 39 23.0 +1.2**
comp=Z,92nm,0.7s
CD2 Chengdu 151.49 360 PKPbc **PKPdf 00 39 19.8 -2.5**
SHL Shillong 154.17 25 *eP* **PKPbc 00 39 33.0 -1.6**
GYA Guiyang 155.76 354 *e*PKP **PKPdf 00 39 26.4 -2.2**
GYA PKS **PKSdf 00 42 59.8 -3.1**
GYA PP **PP 00 43 33.0 +2.8**
GYA AMB AMB
comp=Z,120nm,7.8s
CMAR Chiang Mai Arr 163.23 16 PKP **PKPdf 00 39 37.0 -0.2**
comp=Z,1.0nm,0.3s,baz=300,slow=2.9,SNR=5.6
CMAR PKPab **PKPab 00 40 26.7 -0.6**
comp=Z,5.5nm,0.8s,baz=327,slow=5.6,SNR=13
CMAR pPKPab **pPKPab 00 40 37.2 -1.2**
comp=Z,4.3nm,0.6s,baz=331,slow=5.3,SNR=6.1

IDC ***16*** *00:21:23.6±0.8,2°.16N×128°.80E, h0km, mb3.9/10, mb1 4.0/11, mb1mx3.7/52, mbtmp3.9/11, ML3.6/1, MS2.9/2, Ms1 2.9/2, ms1mx2.4/49, Error ellipse: s-maj=44.3km s-min=16.1km az=73.0*
ISCJB ***16*** *00:21:27.1±0.4,2°.18N±0°.06×128°.8E±0°.1, h40km, mb4.0/16, MS2.8/2, Error ellipse: s-maj=15.3km s-min=7.9km az=159.9*
NEIC ***16*** *00:21:28.8±0.3,2°.17N×128°.78E, h35km, mb4.2/6, Error ellipse: s-maj=12.6km s-min=6.9km az=78.0*
ISC 16 00:21:29.1±0.6,**2°.12N**±0°.09×**128°.9E**±0°.1,**h40km**,**n22,**

σ0°97/21, mb4.0/16, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.82**	**141**	Pn	**Pn**	**00 22 24.9**	**-0.5**
	4.7nm,0.3s,baz=320,slow=17,SNR=6.4						
SIJI				Sn	**Sn**	**00 23 07.0**	**-2.1**
	4.2nm,0.3s,baz=342,slow=19,SNR=5.1						
PMG	**Port Moresby**	**21.52**	**122**	LR	LR	00 35 44.9	
	comp=Z,52nm,19.1s,baz=320,slow=40						
WRAB	**Tennant Creek**	**22.56**	**166**	P	**P**	**00 26 27.0**	**+1.0**
	1.0nm,0.6s						
WRA	**Warramunga Arr**	**22.57**	**166**	P	**P**	**00 26 27.1**	**+0.9**
	1.3nm,0.6s,baz=345,slow=10,SNR=7.5						
MBWA	**Marble Bar**	**24.80**	**201**	P	**P**	**00 26 48.2**	**+0.7**
	1.5nm,0.4s						
ASAR	**Alice Springs**	**26.09**	**169**	P	**P**	**00 26 59.2**	**0.0**
	1.5nm,0.4s,baz=338,slow=9.9,SNR=20						
CTAO	**Charters Tower**	**27.89**	**143**	P	**P**	**00 27 16.7**	**+1.2**
	1.6nm,0.4s						
JHJ	**Hachijo jima 2**	**32.50**	**17**	LR	LR	00 42 59.7	
	comp=Z,12nm,18.2s,baz=304,slow=40						
HNR	**Honiara**	**33.02**	**111**	P	**P**	**00 28 02.1**	**+1.2**
	4.8nm,0.6s						
COCO	**West Island**	**34.85**	**245**	P	**P**	**00 28 16.2**	**-0.5**
KSAR	**Wonju Array Be**	**35.17**	**359**	P	**P**	**00 28 19.1**	**0.0**
KSRS	**Korea Array**	**35.18**	**359**	P	**P**	**00 28 19.1**	**-0.1**
	1.3nm,0.5s,baz=179,slow=9.0,SNR=6.1						
MJAR	**Matsushiro Arr**	**35.33**	**13**	P	**P**	**00 28 18.8**	**-1.8**
	0.8nm,0.3s,baz=190,slow=11,SNR=3.0						
NWAO	**Narrogin (SRO)**	**36.55**	**197**	P	**P**	**00 28 31.2**	**+0.2**
	3.2nm,0.3s						
PALK	**Pallekele**	**48.25**	**278**	P	**P**	**00 30 05.8**	**-0.7**
	1.7nm,0.7s						
SONM	**Songino Array**	**49.51**	**340**	P	**P**	**00 30 15.8**	**0.0**
	0.4nm,0.6s,baz=148,slow=8.2,SNR=2.8						
PETK	**Petropavlovsk-**	**56.15**	**20**	P	**P**	**00 31 05.6**	**+1.0**
	2.4nm,0.7s,baz=182,slow=5.8,SNR=4.3						
MKAR	**Makanchi Array**	**60.09**	**325**	P	**P**	**00 31 33.0**	**+0.6**
	0.5nm,0.5s,baz=125,slow=8.1,SNR=8.0						
ZALV	**Zalesovo Beam**	**62.99**	**333**	P	**P**	**00 31 50.7**	**-1.0**
	0.2nm,0.3s,baz=120,slow=8.5,SNR=2.9						
KURBB	**Kurchatov Arra**	**64.24**	**327**	P	**P**	**00 32 00.1**	**+0.1**
	1.1nm,0.7s,baz=125,slow=6.7,SNR=11						
KURK	**Kurchatov**	**64.24**	**327**	P	**P**	**00 32 00.1**	**+0.1**
BVAR	**Borovoye Array**	**69.83**	**327**	P	**P**	**00 32 34.7**	**-0.8**
	0.3nm,0.4s,baz=81,slow=8.9,SNR=3.8						

IDC 16 00:26:55.7±11.0, 4°.88N×95°.07E, h0km, mb3.8/2, mb1 4.2/3, mb1mx3.4/63, mbtmp3.9/3, ML4.6/1, Error ellipse: s-maj=296.9km s-min=46.6km az=81.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.01**	**15**	Pn	Pn	00 30 15.5	-0.2
	0.8nm,0.3s,baz=202,slow=12,SNR=8.8						
WRA	**Warramunga Arr**	**45.81**	**124**	P	P	00 35 20.2	+0.5
	0.6nm,0.4s,baz=303,slow=8.8,SNR=14						
ASAR	**Alice Springs**	**47.32**	**129**	P	P	00 35 30.9	-0.7
	0.8nm,0.5s,baz=301,slow=8.0,SNR=8.5						

*IDC **16** 00:26:56.4±3.1, 10°.88S×113°.09E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.7/53, mbtmp3.9/6, MS3.0/1, Ms1 3.0/1, ms1mx2.4/53, Error ellipse: s-maj=161.8km s-min=25.2km az=49.0*

*DJA **16** 00:27:01.0±1.1, 11°.5S±6°.×11°.4E±°., h21km±14km, M4.5/12, mb4.9/1, MLv4.3/12*

ISC 16 00:27:00.8±1.2, 10°.7S±0°.1×113°.60E±0°.06, h23km, n23, σ1°36/18, mb3.9/7, South of Java

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAGI	**Jajag, Banyuwa**	**2.28**	**14**	P	**Pn**	**00 27 37.4**	**+0.3**
IGBI	**Denpasar**	**2.41**	**39**	P	**Sb**	**00 28 12.0**	**-0.9**
GMJI	**Gumukmas**	**2.42**	**356**	P	**Pn**	**00 27 40.2**	**+1.2**
BLJI	**Banyuglugur**	**2.94**	**360**	P	**Pn**	**00 27 47.8**	**+1.7**
SRBI	**Singaraja**	**3.05**	**32**	P	**Pn**	**00 27 49.4**	**+1.8**
PWJI	**Pagerwojo**	**3.20**	**326**	P	**Pn**	**00 27 50.2**	**+0.5**
PCJI	**Pacitan**	**3.45**	**316**	P	**Pn**	**00 27 53.7**	**+0.5**
TWSI	**Taliwang, Sumb**	**3.78**	**59**	P	**Pn**	**00 27 58.5**	**+0.8**
WOJI	**Wonogiri, Jawa**	**3.88**	**317**	P	**Pn**	**00 28 00.3**	**+1.2**
UGM	**Wanagama**	**4.11**	**312**	P	**Pn**	**00 28 03.3**	**+1.0**
PLAI	**Plampang**	**4.52**	**66**	P	**Pn**	**00 28 08.4**	**+0.5**
LWLI	**Liwa**	**11.01**	**300**	P	Pn	00 29 26.8	-10
WRA	**Warramunga Arr**	**21.99**	**117**	P	**P**	**00 31 52.2**	**-1.3**
	1.0nm,0.6s,baz=291,slow=12,SNR=3.0						
ASAR	**Alice Springs**	**23.25**	**126**	P	**P**	**00 32 08.9**	**+2.2**
	1.2nm,0.5s,baz=307,slow=9.8,SNR=10						
CMAR	**Chiang Mai Arr**	**32.38**	**333**	P	**P**	**00 33 29.2**	**+0.2**
	1.1nm,0.3s,baz=165,slow=7.7,SNR=3.7						
H08S2	**Diego Garcia H**	**40.67**	**271**	T	T	01 17 46.8	
	baz=99,slow=74						
H08S3	**Diego Garcia H**	**40.69**	**271**	T	T	01 17 46.5	
	baz=99,slow=74						
H08S1	**Diego Carcia H**	**40.69**	**271**	T	T	01 17 47.0	
	baz=99						
KSRS	**Korea Array**	**49.75**	**15**	LR	LR	00 58 55.6	
	comp=Z,15nm,18.4s,baz=55,slow=38						
SONM	**Songino Array**	**58.63**	**354**	P	**P**	**00 36 56.4**	**+0.2**
	0.4nm,0.4s,baz=175,slow=7.7,SNR=3.1						
MKAR	**Makanchi Array**	**63.71**	**337**	P	**P**	**00 37 27.6**	**-2.9**
	0.3nm,0.3s,baz=147,slow=6.7,SNR=5.4						
KURBB	**Kurchatov Arra**	**68.27**	**337**	P	**P**	**00 37 59.0**	**-0.8**
	0.4nm,0.3s,baz=138,slow=4.9,SNR=7.1						
ZALV	**Zalesovo Beam**	**68.88**	**342**	P	**P**	**00 38 03.1**	**-0.4**
	0.6nm,0.4s,baz=167,slow=5.1,SNR=5.0						

*CSEM **16** 00:37:48.2±0.3, 37°.20N×42°.51E, h8km, ML2.4, Error ellipse: s-maj=10.1km s-min=5.7km az=48.0*

*DDA **16** 00:37:48.5, 37°.23N×42°.48E, h7km, Ml2.4*

*ISCJB **16** 00:37:49.4±1.2, 37°.26N±0°.08×42°.47E±0°.05, h10km, Error ellipse: s-maj=11.0km s-min=5.9km az=10.5*

*ISN **16** 00:37:49.8±3.0, 37°.21N×43°.48E, h0km±18km, ML2.5*

ISC 16 00:37:48.8±1.5, 37°.25N±0°.08×42°.48E±0°.04, h10km, n13, σ0°82/20, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRN	**S¨–rnak**	**0.25**	**348**	*i* P	**Pg**	**00 37 53.4**	**-0.6**
SIRN				*i* S	**Sg**	**00 37 57.7**	**+0.2**
SIRN	**S¨–rnak**	**0.25**	**348**	P	**Pg**	**00 37 53.4**	**-0.6**
SIRN				S	**Sg**	**00 37 57.7**	**+0.2**
SRTM	**Siirt_Merkez**	**0.86**	**329**	*i* P	**Pn**	**00 38 06.7**	**-0.4**
SRTM				*i* S	**Sg**	**00 38 14.7**	**-1.9**
SRTM	**Siirt_Merkez**	**0.86**	**329**	P	**Pn**	**00 38 06.7**	**-0.4**
HAKT	**HAKKARI**	**1.03**	**72**	*i* P	**Pg**	**00 38 08.2**	**-0.4**
HAKT				*i* S	**Sb**	**00 38 22.7**	**+0.3**
HAKT	**HAKKARI**	**1.03**	**72**	P	**Pg**	**00 38 08.2**	**-0.4**
HAKT				S	**Sb**	**00 38 22.7**	**+0.3**
BTMN	**Batman**	**1.15**	**304**	*i* P	**Pn**	**00 38 11.5**	**+0.5**
BTMN	**Batman**	**1.15**	**304**	P	**Pn**	**00 38 11.5**	**+0.5**
GEVA	**Gevas**	**1.16**	**23**	*i* P	**Pn**	**00 38 11.6**	**+0.4**
GEVA	**Gevas**	**1.16**	**23**	P	**Pn**	**00 38 11.6**	**+0.4**
MARD	**Mardin**	**1.36**	**273**	*i* P	**Pn**	**00 38 13.1**	**-0.7**
SVAN	**Silvan-Diyarba**	**1.36**	**312**	*i* P	**Pg**	**00 38 14.6**	**-0.2**
SVAN				*i* S	**Sg**	**00 38 34.0**	**+1.6**
SVAN	**Silvan-Diyarba**	**1.36**	**312**	P	**Pg**	**00 38 14.6**	**-0.2**
SVAN				S	**Sg**	**00 38 34.0**	**+1.6**

*IDC **16** 00:38:28.7±1.2, 29°.71N×95°.33E, h0km, mb3.5/6, mb1 3.6/7, mb1mx3.4/65, mbtmp3.5/7, ML3.1/1, MS3.5/3, Ms1 3.5/3, ms1mx2.6/56, Error ellipse: s-maj=55.7km s-min=18.2km az=59.0*

ISC 16 00:38:30.4±1.4, 30°.0N±0°.4×95°.7E±0°.5, h10km, n10, σ0°49/6, mb3.7/5, MS3.7/3, Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**19.66**	**22**	P	Pn	00 43 03.7	+2.7
	1.3nm,0.8s,baz=209,slow=12,SNR=5.9						
MKAR	**Makanchi Array**	**19.77**	**332**	P	**Pn**	**00 43 01.6**	**-0.5**
	0.1nm,0.3s,baz=155,slow=10,SNR=3.5						
AAK	**Ala-Archa**	**21.18**	**312**	P	**P**	**00 43 16.4**	**+0.2**
	0.9nm,0.3s,baz=100,slow=12,SNR=3.1						
KURBB	**Kurchatov Arra**	**24.33**	**333**	P	**P**	**00 43 48.0**	**-0.2**
	0.5nm,0.4s,baz=143,slow=10,SNR=8.4						
ZALV	**Zalesovo Beam**	**25.24**	**345**	P	**P**	**00 43 57.0**	**+0.6**
	1.1nm,0.7s,baz=159,slow=9.5,SNR=5.2						
AKASG	**Malin Array Be**	**52.85**	**313**	LR	LR	01 15 44.3	
	comp=Z,22nm,20.5s,baz=15,slow=42						
WRA	**Warramunga Arr**	**62.02**	**138**	P	**P**	**00 48 51.1**	**-0.1**
	0.4nm,0.8s,baz=324,slow=8.1,SNR=7.2						
ASAR	**Alice Springs**	**64.73**	**141**	P	**P**	**00 49 09.1**	**0.0**
	0.3nm,0.4s,baz=322,slow=7.1,SNR=3.8						
HNR	**Honiara**	**73.09**	**112**	LR	LR	01 21 11.3	
	comp=Z,38nm,20.3s,baz=292,slow=35						
STKA	**Stephens Creek**	**75.37**	**141**	LR	LR	01 25 53.3	
	comp=Z,55nm,19.8s,baz=206,slow=38						

*DJA **16** 00:58:57.2±4.9, 2°.N±13°.×9°.3E±4°.0, h10km, M4.5/8, mB5.0/2, mb4.5/4, MLv4.5/8, Mw(mB)4.4/2*

*IDC **16** 00:58:57.0±2.6, 1°.88N×93°.57E, h0km, mb3.9/5, mb1 4.1/8, mb1mx3.6/65, mbtmp4.0/8, ML4.2/3, Error ellipse: s-maj=56.9km s-min=31.0km az=3.0*

*ISCJB **16** 00:59:00.2±0.9, 1°.9N±0°.1×93°.58E±0°.06, h33km, mb4.3/12, Error ellipse: s-maj=17.6km s-min=8.2km az=14.8*

*NEIC **16** 00:59:00.6±2.6, 1°.87N×93°.56E, h26km±18km, mb4.4/6, Error ellipse: s-maj=15.3km s-min=8.2km az=190.0*

ISC 16 00:59:02.7±1.0, 2°.0N±0°.1×93°.67E±0°.08, h35km, n23, σ1°29/24, mb4.1/12, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSI	**Meulaboh, Aceh**	**3.53**	**50**	P	**Pn**	**00 59 55.3**	**+0.2**
TPTI		**3.72**	**70**	P	**Pn**	**00 59 57.5**	**-0.2**
GSI	**Gunungsitoli**	**3.96**	**100**	P	**Pn**	**01 00 01.8**	**+0.8**
KCSI	**Kotacane, Aceh**	**4.36**	**70**	P	**Pn**	**01 00 08.4**	**+1.8**
LHMI	**Lhok Sumawe**	**4.58**	**45**	P	**Pn**	**01 00 09.7**	**+0.2**
PSI	**Prapat**	**5.31**	**81**	Pn	**Pn**	**01 00 20.4**	**+0.7**
	5.2nm,0.3s,baz=184,slow=0.1,SNR=22						
PSI				Sn	**Sn**	**01 01 15.3**	**-4.4**
	0.1nm,0.3s,baz=0.1,slow=17,SNR=1.9						
MNSI	**Mandailing Nat**	**6.03**	**101**	P	**Pn**	**01 00 30.7**	**+1.3**
PALK	**Pallekele**	**13.94**	**292**	Pn	**Pn**	**01 02 15.9**	**-2.1**
	0.3nm,0.3s,baz=115,slow=14,SNR=3.4						
PALK				Sn	Sn	01 04 37.4	-14
	1.7nm,0.3s,baz=117,slow=7.5,SNR=6.9						
CMAR	**Chiang Mai Arr**	**17.15**	**17**	P	**Pn**	**01 03 00.3**	**+0.6**
	1.1nm,0.3s,baz=210,slow=10,SNR=4.4						
QIZ	**Qiongzhong**	**23.17**	**42**	P	**P**	**01 04 07.1**	**+0.7**
	4.4nm,0.8s						
LSA	**Lhasa**	**27.65**	**355**	P	**P**	**01 04 48.9**	**+1.1**
	2.5nm,0.7s						
ENH	**Enshi**	**31.86**	**27**	P	**P**	**01 05 25.4**	**+0.7**
	4.7nm,0.5s						
TATO	**Taipei**	**35.23**	**47**	P	**P**	**01 05 54.7**	**+0.7**
	9.2nm,0.7s						
BJT	**Baijiatuau**	**43.00**	**26**	P	**P**	**01 06 59.3**	**+0.6**
	3.1nm,0.4s						
MKAR	**Makanchi Array**	**45.70**	**349**	P	**P**	**01 07 20.7**	**+0.4**
	1.8nm,0.6s,baz=166,slow=9.1,SNR=20						
SONM	**Songino Array**	**46.96**	**12**	P	**P**	**01 07 30.2**	**-0.1**
	0.8nm,0.6s,baz=191,slow=9.0,SNR=5.7						
GEYT	**Alibeck**	**48.38**	**322**	P	**P**	**01 07 42.0**	**+0.6**
	89nm,0.6s,baz=155,slow=7.9,SNR=3.5						
KURBB	**Kurchatov Arra**	**50.11**	**347**	P	**P**	**01 07 54.1**	**-0.3**
	0.9nm,0.7s,baz=170,slow=7.1,SNR=11						
KURK	**Kurchatov**	**50.18**	**348**	P	**P**	**01 07 55.0**	**+0.2**
ZALV	**Zalesovo Beam**	**52.28**	**353**	P	**P**	**01 08 10.9**	**+0.4**
	0.9nm,0.4s,baz=182,slow=8.9,SNR=5.4						
PMG	**Port Moresby**	**54.47**	**103**	P	**P**	**01 08 27.2**	**-0.1**
	1.7nm,0.4s						
GERES	**GERESS Array B**	**81.89**	**319**	P	**P**	**01 11 18.4**	**-0.4**
	0.6nm,0.8s,baz=90,slow=5.9,SNR=6.2						
TXAR	**Lajitas Array**	**144.69**	**27**	PKP	**PKPdf**	**01 18 35.7**	**-1.0**
	0.2nm,0.7s,baz=349,slow=1.3,SNR=4.2						

*ISCJB **16** 01:10:10.3±0.7, 29°.19N±0°.03×130°.53E±0°.08, h57km±5km, mb3.6/8, MS2.7/1, Error ellipse: s-maj=12.3km s-min=3.7km az=22.2*

*JMA **16** 01:10:10.7±0.1, 29°.22N×130°.48E, h54km±4km, M3.2*

*IDC **16** 01:10:10.5±3.1, 29°.20N×130°.50E, h39km±27km, mb3.5/8, mb1 3.6/10, mb1mx3.3/62, mbtmp3.7/10, ML3.1/2, MS2.8/1, Ms1 2.8/1, ms1mx2.2/39, Error ellipse: s-maj=38.0km s-min=17.7km az=93.0*

ISC 16 01:10:11.3±1.2, 29°.20N±0°.04×130°.50E±0°.08, h47km±11km, n23, σ0°73/35, mb3.8/8, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNN	**Nakanoshima**	**0.84**	**320**	P	**Pn**	**01 10 26.4**	**-0.5**
JNN				*e*S	**Sn**	**01 10 38.3**	**+0.1**
JZK	**Kikaishima**	**0.99**	**208**	P	**Pn**	**01 10 29.1**	**+0.2**
JZK				*e*S	**Sn**	**01 10 41.7**	**-0.1**
JYAK	**Yakushimahirau**	**1.04**	**0**	P	**Pn**	**01 10 28.7**	**-0.8**
JYAK				*e*S	**Sn**	**01 10 42.0**	**-0.9**
JAM	**Amami Oshima**	**1.11**	**225**	P	**Pn**	**01 10 30.2**	**-0.2**
JAM				*e*S	**Sn**	**01 10 45.7**	**+1.1**
JTAJ	**Takarajima**	**1.14**	**268**	P	**Pn**	**01 10 30.8**	**0.0**
JTAJ				*e*S	**Sn**	**01 10 45.6**	**+0.3**
JKC	**Kuchinoerabu**	**1.29**	**348**	P	**Pn**	**01 10 32.4**	**-0.5**
JKC				*e*S	**Sn**	**01 10 50.5**	**+1.5**
JAMN	**Amaminishikomi**	**1.50**	**231**	P	**Pn**	**01 10 35.7**	**-0.1**
JAMN				*e*S	**Sn**	**01 10 55.5**	**+1.3**
JTN	**Tanegashima 3**	**1.51**	**16**	P	**Pn**	**01 10 36.0**	**+0.1**
JTN				*e*S	**Sn**	**01 10 55.6**	**+1.2**
JTK	**Tokunoshima**	**1.96**	**225**	P	**Pn**	**01 10 41.8**	**-0.3**
JTK				*e*S	**Sn**	**01 11 06.3**	**+0.8**
JTSR	**Tashiro 2**	**2.00**	**10**	P	**Pn**	**01 10 42.6**	**0.0**
JTSR				*e*S	**Sn**	**01 11 07.0**	**+0.6**
JOKE	**Okinoerabujima**	**2.50**	**223**	P	**Pn**	**01 10 49.4**	**-0.1**
JOKE				*e*S	**Sn**	**01 11 19.4**	**+0.7**
JOW	**Kunigami**	**3.07**	**220**	Pn	**Pn**	**01 10 56.0**	**-1.3**
	2.9nm,0.3s,baz=286,slow=25,SNR=5.1						
JOW				Sn	**Sn**	**01 11 31.6**	**-1.2**
	7.8nm,0.3s,baz=130,slow=30,SNR=4.1						
JNU	**Nakatsue**	**3.93**	**5**	Pn	**Pn**	**01 11 09.3**	**+0.3**
	2.2nm,0.3s,baz=272,slow=1.6,SNR=13						
JNU				Sn	**Sn**	**01 11 54.0**	**+0.1**
	0.7nm,0.3s,baz=246,slow=19,SNR=3.4						
KLR	**Kul'dur**	**20.03**	**2**	P	**P**	**01 14 39.1**	**-0.9**
	0.1nm,0.5s,baz=210,slow=10,SNR=6.3						
SONM	**Songino Array**	**26.32**	**322**	P	**P**	**01 15 42.2**	**-0.4**
	0.4nm,0.6s,baz=128,slow=9.3,SNR=2.7						
TLY	**Talaya**	**30.07**	**326**	LR	LR	01 28 59.4	
	comp=Z,16nm,20.2s,baz=24,slow=38						
MKAR	**Makanchi Array**	**41.16**	**309**	P	**P**	**01 17 51.0**	**+0.1**
	0.3nm,0.7s,baz=104,slow=7.9,SNR=4.4						
KURBB	**Kurchatov Arra**	**44.18**	**314**	P	**P**	**01 18 15.2**	**-0.1**
	1.6nm,0.5s,baz=94,slow=8.8,SNR=21						
WRA	**Warramunga Arr**	**48.99**	**175**	P	**P**	**01 18 53.3**	**+0.1**
	0.2nm,0.7s,baz=354,slow=8.1,SNR=2.5						
BVAR	**Borovoye Array**	**49.47**	**316**	P	**P**	**01 18 56.8**	**+0.2**
	1.4nm,0.6s,baz=88,slow=9.2,SNR=15						
FINES	**FINESS Array B**	**71.28**	**331**	P	**P**	**01 21 24.5**	**-0.9**
	0.8nm,0.7s,baz=114,slow=6.2,SNR=5.9						
AKASG	**Malin Array Be**	**74.59**	**320**	P	**P**	**01 21 45.3**	**+0.1**
	0.9nm,0.5s,baz=61,slow=6.1,SNR=3.1						
BRTR	**Keskin Array B**	**76.80**	**308**	P	**P**	**01 21 59.5**	**+1.2**
	0.8nm,0.7s,baz=96,slow=5.1,SNR=5.3						

*TIF **16** 01:32:38.8, 41°.54N×43°.52E, h10km±1km*

*MOS **16** 01:32:38.3±1.1, 41°.40N×43°.40E, h3km, mb4.0/6, Error ellipse: s-maj=6.4km s-min=4.2km az=82.0*

*CSEM **16** 01:32:39.8±0.1, 41°.46N×43°.49E, h2km, mb3.7/5, Error ellipse: s-maj=3.3km s-min=3.1km az=122.0*

*IASPEI **16** 01:32:39.1±0.9, 41°.48N±0°.02×43°.47E±0°.03, h15km±5km, mb3.4/9, Error ellipse: s-maj=3.8km s-min=3.2km az=118.8, GT5 selection from ISC bulletin GT5 identified by Bond¨jr and McLaughlin (2009) selection criteria Bond¨jr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*

*NSSP **16** 01:32:39.7, 41°.43N×43°.52E, h5km, Ms3.6*

*DDA **16** 01:32:39.7, 41°.40N×43°.40E, h5km, Ml3.6*

*IDC **16** 01:32:39.5±0.7, 41°.44N×43°.45E, h0km, mb3.4/6, mb1 3.5/12, mb1mx3.4/59, mbtmp3.4/12, ML3.4/6, Error ellipse: s-maj=12.0km s-min=6.8km az=58.0*

*ATA **16** 01:32:39.3±1.7, 41°.38N×43°.35E, h6km±50km, ML3.9, MW4.1*

*ISK **16** 01:32:40.3, 41°.46N×43°.33E, h7km, ML3.4/15*

*AZER **16** 01:32:41.0±0.5, 41°.58N×43°.80E, h22km, ml3.6/21, Error ellipse: s-maj=1.4km s-min=1.0km az=333.0*

ISC 16 01:32:40.6±0.6, 41°.48N±0°.01×43°.49E±0°.01, h8km±3km, n210, σ1°46/312, mb3.4/9, 26C-47D, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKH	**Akhalkalaki**	**0.07**	**179**	P	**Pg**	**01 32 42.0**	**-0.7**
AKH				S	**Sg**	**01 32 44.0**	**-0.2**
AKH	**Akhalkalaki**	**0.07**	**179**	*e*PG	**Pg**	**01 32 42.0**	**-0.7**
AKH	**Akhalkalaki**	**0.07**	**179**	P	**Pg**	**01 32 42.0**	**-0.7**
AKH				S	**Sg**	**01 32 44.0**	**-0.2**
EPOS	**Posof**	**0.57**	**272**	*e*P	**Pg**	**01 32 49.3**	**-2.3**
EPOS				*e*S	**Sg**	**01 32 56.5**	**-2.7**
EPOS				IAML		01 33 04.4	
	comp=Z,660nm,0.5s						
EPOS	**Posof**	**0.57**	**272**	*i* P	**Pg**	**01 32 49.4**	**-2.3**
EPOS	**Posof**	**0.57**	**272**	P	**Pg**	**01 32 49.4**	**-2.3**
KZR	**Kazreti**	**0.70**	**98**	P	**Pg**	**01 32 52.5**	**-1.6**
KZR				S	**Sg**	**01 32 01.1**	**-2.2**
KZR	**Kazreti**	**0.70**	**98**	P	**Pg**	**01 32 52.5**	**-1.6**
KZR				S	**Sg**	**01 33 02.0**	**-1.3**
GMRZ	**Gyumri**	**0.72**	**159**	*e*P	**Pb**	**01 32 55.0**	**-0.4**
GMRZ				S	**Sb**	**01 33 06.0**	**+0.5**
EAK	**Akyaka**	**0.80**	**174**	*e*P	**Pg**	**01 32 53.5**	**-2.4**
EAK				*e*S	**Sg**	**01 33 03.8**	**-2.6**
EAK				IAML		01 33 10.0	
	comp=Z,625nm,0.4s						
EAK	**Akyaka**	**0.80**	**174**	*i* P	**Pg**	**01 32 53.6**	**-2.4**
EAK	**Akyaka**	**0.80**	**174**	P	**Pg**	**01 32 53.6**	**-2.4**
STE	**Stepanavan**	**0.82**	**126**	⇑P	**Pg**	**01 32 52.4**	**-3.9**
STE				S	**Sg**	**01 33 03.8**	**-3.2**
KARS	**Kars**	**0.91**	**200**	PG	**Pg**	**01 32 57.1**	**-0.9**
KARS	**Kars**	**0.91**	**200**	*i* Pg	**Pg**	**01 32 57.1**	**-0.9**
TBLG	**Delisi**	**0.97**	**75**	P	**Pg**	**01 32 57.0**	**-2.2**
TBLG				S	**Sg**	**01 33 10.4**	**-1.3**
TBLG	**Delisi**	**0.97**	**75**	⇑*e*PG	**Pg**	**01 32 57.0**	**-2.2**
TBLG				*e*S	**Sg**	**01 33 10.4**	**-1.3**
TBLG	**Delisi**	**0.97**	**75**	P	**Pg**	**01 32 57.0**	**-2.2**
TBLG				S	**Sg**	**01 33 10.4**	**-1.3**
SEAG	**Tbilisi Sea**	**1.02**	**74**	P	**Pg**	**01 32 58.1**	**-2.1**
SEAG				S	**Sg**	**01 33 12.0**	**-1.5**
SEAG	**Tbilisi Sea**	**1.02**	**74**	P	**Pg**	**01 32 58.1**	**-2.1**
SEAG				S	**Sg**	**01 33 12.0**	**-1.5**
DIGO	**Kars**	**1.07**	**185**	*e*P	**Pg**	**01 32 58.4**	**-2.7**
DIGO				*e*S	**Sg**	**01 33 11.7**	**-3.3**
DIGO				IAML		01 33 15.8	
	comp=Z,262nm,0.7s						
DIGO	**Kars**	**1.07**	**185**	*i* P	**Pg**	**01 32 58.5**	**-2.6**
DIGO	**Kars**	**1.07**	**185**	P	**Pg**	**01 32 58.5**	**-2.6**
DUS	**Dusheti**	**1.09**	**56**	P	**Pg**	**01 32 59.8**	**-1.7**
DUS				S	**Sg**	**01 33 14.0**	**-1.6**
DUS	**Dusheti**	**1.09**	**56**	⇑*i*PG	**Pg**	**01 32 59.8**	**-1.7**
DUS				*e*S	**Sg**	**01 33 14.0**	**-1.6**
DUS	**Dusheti**	**1.09**	**56**	P	**Pg**	**01 32 59.8**	**-1.7**
DUS				S	**Sg**	**01 33 14.0**	**-1.6**
ONI	**Oni**	**1.11**	**359**	P	**Pg**	**01 32 59.4**	**-2.4**
ONI				S	**Sg**	**01 33 14.4**	**-1.8**
ONI	**Oni**	**1.11**	**359**	⇓*i*PG	**Pg**	**01 32 59.4**	**-2.4**
ONI				*i* S	**Sg**	**01 33 14.4**	**-1.8**
ONI	**Oni**	**1.11**	**359**	P	**Pg**	**01 32 59.4**	**-2.4**
ONI				S	**Sg**	**01 33 14.4**	**-1.8**
GUDG	**Gudauri**	**1.23**	**37**	P	**Pb**	**01 33 02.0**	**-2.1**
GUDG				S	**Sg**	**01 33 18.6**	**-1.4**
GUDG	**Gudauri**	**1.23**	**37**	P	**Pb**	**01 33 02.0**	**-2.1**
GUDG				S	**Sg**	**01 33 18.6**	**-1.4**
ZEI	**Tsey**	**1.34**	**13**	⇑*i*PG	**Pn**	**01 33 03.8**	**-2.0**
ZEI				*e*S	**Sb**	**01 33 22.6**	**-0.9**
DBOC	**Borcka**	**1.38**	**265**	*i* P	**Pn**	**01 33 04.2**	**-1.9**
DBOC	**Borcka**	**1.38**	**265**	P	**Pn**	**01 33 04.2**	**-1.9**
BCA	**Borcka**	**1.41**	**269**	PN	**Pn**	**01 33 04.9**	**-1.6**
BCA				SN	**Sb**	**01 33 22.9**	**-2.2**
BCA	**Borcka**	**1.41**	**269**	*e*Pn	**Pn**	**01 33 04.9**	**-1.6**
BCA				*e*Sn	**Sb**	**01 33 22.9**	**-2.2**
DGRG	**David-gareji**	**1.42**	**91**	P	**Pn**	**01 33 04.4**	**-2.2**
DGRG				S	**Sn**	**01 33 24.9**	**-0.5**
DGRG	**David-gareji**	**1.42**	**91**	⇑*e*PG	**Pn**	**01 33 04.4**	**-2.2**
DGRG				*e*S	**Sn**	**01

ERZM Erzurum 2.26 226 *i* P **Pn** **01 33 18.6 +0.2**
ERZM Erzurum 2.26 226 P **Pn** **01 33 18.6 +0.2**
KBZ Khabaz 2.29 349 Pn **Pb** **01 33 20.5 -1.6**
comp=Z,7.8nm,0.3s,baz=183,slow=2.5,SNR=86
KBZ Lg Lg 01 33 51.5
comp=Z,17nm,0.3s,baz=341,slow=21,SNR=10.0
GANJ Ganja 2.30 110 ⇓P **Pn** **01 33 19.1 +0.3**
GANJ ⇑S **Sn** **01 33 47.9 +0.6**
GANJ Ganja 2.30 110 ⇓P **Pn** **01 33 19.1 +0.3**
GANJ ⇑S **Sn** **01 33 47.9 +0.6**
KBTC Kuba-Taba 2.33 359 *e*PN **Pb** **01 33 22.0 -0.9**
KBTC *e*S **Sb** **01 33 51.2 -0.7**
KBTC Kuba-Taba 2.33 359 *e*Pn **Pb** **01 33 22.0 -0.9**
KBTC *e*Sn **Sb** **01 33 51.2 -0.7**
SHA1 Shidzhatmaz 2.34 345 *e*PN **Pb** **01 33 22.2 -0.9**
SHA1 *e*S **Sb** **01 33 52.4 +0.2**
SHA1 Shidzhatmaz 2.34 345 *e*Pn **Pb** **01 33 22.2 -0.9**
SHA1 *e*Sn **Sb** **01 33 52.4 +0.2**
ZKTA Zakatala 2.35 85 ⇓Pg **Pn** **01 33 19.5 0.0**
ZKTA ⇓Sg **Sn** **01 33 50.2 +1.6**
CLDR Caldiran 2.36 172 PN **Pn** **01 33 20.4 +0.6**
CLDR Caldiran 2.36 172 *e*Pn **Pn** **01 33 20.4 +0.6**
GROC Groznyy 2.42 44 *e*PN **Pb** **01 33 22.8 -1.6**
GROC *e*S **Sb** **01 33 56.3 +1.9**
GROC pmax pmax
comp=Z,152nm,0.7s
GROC smax smax
comp=E,1μm,0.6s
GROC smax smax
comp=E,720nm,0.7s
GROC Groznyy 2.42 44 *e*Pn **Pb** **01 33 22.8 -1.6**
comp=E,152nm,0.7s
GROC *e*Sn **Sb** **01 33 56.3 +1.9**
DVE Vedeno 2.45 52⇑*i*PN **Pb** **01 33 23.4 -1.5**
DVE *e*S **Sb** **01 33 55.8 +0.6**
DVE Vedeno 2.45 52 *i* Pn **Pb** **01 33 23.4 -1.5**
DVE *e*Sn **Sb** **01 33 55.8 +0.6**
EKAR Karacoban 2.48 207 *e*P **Pn** **01 33 22.4 +0.9**
EKAR Karacoban 2.48 207 *i* P **Pn** **01 33 22.9 +1.5**
EKAR Karacoban 2.48 207 *i* P **Pn** **01 33 22.9 +1.5**
KVAR Kislovodsk Arr 2.54 347 Pn **Pn** **01 33 23.1 +0.9**
baz=172,slow=14,SNR=27
KVAR Lg Lg 01 33 59.6
baz=182,slow=10,SNR=25
KIV Kislovodsk 2.54 347 *e*PN **Pn** **01 33 22.9 +0.7**
KIV *e*S **Sn** **01 33 55.4 +2.0**
KIV pmax pmax
comp=Z,55nm,1.1s
KIV Kislovodsk 2.54 347 *e*Pn **Pn** **01 33 22.9 +0.7**
comp=Z,55nm,1.1s
KIV *e*Sn **Sn** **01 33 55.4 +2.0**
SBZ Shahbuz 2.61 142 ⇓Pg **Pb** **01 33 27.6 -0.1**
SBZ ⇓Sg **Sb** **01 34 01.1 +1.2**
SBZ Shahbuz 2.61 142 ⇓Pg **Pb** **01 33 27.6 -0.1**
SBZ ⇓Sg **Sb** **01 34 01.1 +1.2**
ECAT Cat-ERZURUM 2.68 226 *e*P **Pn** **01 33 24.6 +0.4**
ECAT IAML 01 34 22.9
comp=Z,5.7nm,0.7s
KOPT Kop Dagi 2.70 238 *e*P **Pb** **01 33 29.7 +0.3**
KOPT IAML 01 34 23.1
comp=Z,33nm,0.6s
KOPT Kop Dagi 2.70 238 *i* P **Pb** **01 33 29.8 +0.5**
ADCV BITLIS_Adilcev 2.74 193 *i* P **Pg** **01 33 31.1 -1.9**
GNBR Gunib 2.75 70 ⇓*i*PN **Pb** **01 33 27.7 -2.2**
GNBR *e*S **Sb** **01 34 03.9 +0.2**
GNBR Gunib 2.75 70 *i* Pn **Pb** **01 33 27.7 -2.2**
GNBR *e*Sn **Sb** **01 34 03.9 +0.2**
BAYT Ayd¨–ntepe-Bay 2.76 248 PN **Pn** **01 33 24.5 -0.8**
BAYT Ayd¨–ntepe-Bay 2.76 248 *e*Pn **Pn** **01 33 24.5 -0.8**
NAX Nakhchivan 2.77 146 ⇑Pg **Pb** **01 33 30.4 0.0**
NAX ⇓Sg **Sg** **01 34 08.5 -1.0**
NAX Nakhchivan 2.77 146 ⇑Pg **Pb** **01 33 30.4 0.0**
NAX ⇓Sg **Sg** **01 34 08.5 -1.0**
VRTB Varto-Mus 2.79 215 PN **Pn** **01 33 25.5 -0.2**
VRTB Varto-Mus 2.79 215 *i* P **Pn** **01 33 27.1 +1.4**
VRTB Varto-Mus 2.79 215 *e*Pn **Pn** **01 33 25.5 -0.2**
VRTB Varto-Mus 2.79 215 P **Pn** **01 33 27.1 +1.4**
SEKA Sheki 2.80 94 ⇓Pg **Pn** **01 33 26.8 +1.0**
SEKA ⇓Sg **Sb** **01 34 03.2 -2.2**
MNGR Mingechevir, A 2.81 103 ⇓Pg **Pn** **01 33 27.9 +2.2**
MNGR ⇓Sg **Sb** **01 34 06.4 +1.0**
MACK Trabzon 2.86 260 *i* P **Pn** **01 33 26.9 +0.4**
MACK Trabzon 2.86 260 P **Pn** **01 33 26.9 +0.4**
VANB Van 2.89 182 PN **Pn** **01 33 28.9 +2.0**
VANB Van 2.89 182 *e*Pn **Pn** **01 33 28.9 +2.0**
DBC Dubki 2.92 57 *e*PN **Pb** **01 33 30.9 -1.9**
DBC *e*S **Sb** **01 34 08.8 +0.1**
DBC Dubki 2.92 57 *e*Pn **Pb** **01 33 30.9 -1.9**
BRDA Brd 3.05 112 ⇑Pg **Pb** **01 33 32.5 -2.6**
BRDA ⇓Sg **Sb** **01 34 14.5 +2.0**
BNGL BINGOL 3.10 216 *e*P **Pn** **01 33 30.9 +1.0**
GURO Guroymak-BITLI 3.13 201 PN **Pn** **01 33 30.6 +0.2**
GURO Guroymak-BITLI 3.13 201 *e*Pn **Pn** **01 33 30.6 +0.2**
GEVA Gevas 3.18 186 *e*P **Pb** **01 33 38.1 +0.7**
ORD Ordubad 3.19 142 ⇓Pg **Pb** **01 33 36.8 -0.7**
ORD ⇑Sg **Sb** **01 34 18.9 +2.3**
ORD Ordubad 3.19 142 ⇓Pg **Pb** **01 33 36.8 -0.7**
ORD ⇑Sg **Sb** **01 34 18.9 +2.3**
BNGB Bing¨¶l 3.29 222 PN **Pn** **01 33 32.7 +0.2**
QBL Gabala 3.32 98 ⇓Pg **Pn** **01 33 36.0 +3.1**
QBL ⇓Sg **Sb** **01 34 19.8 -0.5**
MAK Makhachkala 3.33 62 *e*PN **Pn** **01 33 34.4 +1.5**
MAK *e*S **Sn** **01 34 13.6 +1.0**
MAK pmax pmax
comp=Z,62nm,0.9s
MAK Makhachkala 3.33 62 *e*Pn **Pn** **01 33 34.4 +1.5**
comp=Z,62nm,0.9s
MAK *e*Sn **Sn** **01 34 13.6 +1.0**
EUZM Uzumlu 3.39 240 *e*P **Pb** **01 33 40.3 -0.7**
ZRD Zardab 3.40 109 ⇑Sg **Sb** **01 34 25.0 +2.5**
ZRD Zardab 3.40 109 ⇑Sg **Sb** **01 34 25.0 +2.5**
BINT Bingol 3.47 222 PN **Pn** **01 33 32.6 -2.4**
BINT Bingol 3.47 222 Pn **Pn** **01 33 32.6 -2.4**
KELT Kelkit 3.48 249 *e*P **Pb** **01 33 40.6 -1.9**
KELT Kelkit 3.48 249 *i* P **Pb** **01 33 40.2 -2.3**
SOC Sochi 3.49 308 *e*PN **Pn** **01 33 33.1 -2.0**
SOC *e* 01 33 40.5
SOC *e*PPP PPP 01 33 45.5
SOC *e* 01 34 15.2
SOC *e*SS **Sb** **01 34 26.0 +0.9**
SOC *e*SSS SSS 01 34 34.3
SOC pmax pmax
comp=Z,29nm,0.5s
SOC Sochi 3.49 308 *e*Pn **Pn** **01 33 33.1 -2.0**
comp=Z,29nm,0.5s
SOC Sochi 3.49 308 *e*Pg **Pg** **01 33 45.5 -1.9**
SOC *e*Sn **Sn** **01 34 15.2 -1.4**
SOC *e*Sb **Sb** **01 34 26.0 +0.9**
SOC *e*Sg **Sg** **01 34 34.3 +1.7**
XNQ Khinaliq 3.52 94 ⇓Pg **Pn** **01 33 39.1 +3.4**
XNQ ⇓Sg **Sb** **01 34 24.3 -1.8**
QSAR Qusar 3.58 88 ⇑Pg **Pn** **01 33 39.3 +2.8**
GOF Gofitskoye 3.59 355 *e*PN **Pb** **01 33 44.7 +0.5**
GOF *e*S **Sg** **01 34 35.5 -0.3**
GOF pmax pmax
comp=Z,30nm,0.8s
GOF smax smax
comp=N,120nm,0.6s
GOF smax smax
comp=E,140nm,1.1s
GOF Gofitskoye 3.59 355 *e*Sb **Sg** **01 34 35.5 -0.3**
comp=E,120nm,0.6s
ESPY Espiye-Giresun 3.64 263 PN **Pn** **01 33 36.9 -0.3**
ESPY Espiye-Giresun 3.64 263 *e*Pn **Pn** **01 33 36.9 -0.3**
QUBA Quba, Azerbaij 3.76 90 ⇓Pg **Pn** **01 33 43.0 +4.0**
SVAN Silvan-Diyarba 3.77 209 PN **Pn** **01 33 39.6 +0.6**
SVAN Silvan-Diyarba 3.77 209 *e*Pn **Pn** **01 33 39.6 +0.6**
PQL Pirkuli 3.92 99 ⇓Pg **Pb** **01 33 47.2 -2.7**
SIRT Sirnak 4.06 192 PN **Pn** **01 33 44.0 +0.9**
SIRT Sirnak 4.06 192 *e*Pn **Pn** **01 33 44.0 +0.9**
PTK Pertek 4.07 232 PN **Pn** **01 33 43.3 0.0**
PTK Pertek 4.07 232 *e*Pn **Pn** **01 33 43.3 0.0**
ATGJ Altiaghaj 4.16 97 ⇓Pg **Pn** **01 33 49.0 +4.6**
REFA Refahiye_ERZ¨ 4.17 242 *e*P **Pn** **01 33 48.4 +3.9**
GLBA Ciilabad 4.36 119 ⇓Pg **Pb** **01 33 55.6 -1.9**
KEMA Kemaliye 4.41 242 *e*P **Pb** **01 33 58.2 -0.2**
LRK Lerik 4.68 126 ⇓Pg **Pb** **01 34 00.0 -2.9**
RSDY Resadiye-TOKAT 4.79 259 PN **Pn** **01 33 53.5 +0.4**
RSDY Resadiye-TOKAT 4.79 259 *e*Pn **Pn** **01 33 53.5 +0.4**
VOZR Vozrozhdenie 4.93 310 *ce*PN **Pn** **01 33 55.5 +0.6**
VOZR Vozrozhdenie 4.93 310 *e*Pn **Pn** **01 33 55.5 +0.6**

ASTR Astara 5.01 124 ⇓Pg **Pb** **01 34 07.0 -1.4**
ANN Anapa 5.53 309 *e*P **Pn** **01 34 05.0 +1.8**
ANN *e*S **Sn** **01 35 09.2 +2.3**
ANN pmax pmax
comp=Z,114nm,0.9s
ANN Anapa 5.53 309 *e*P **Pn** **01 34 05.0 +1.8**
comp=Z,114nm,0.9s
ANN *e*S **Sn** **01 35 09.2 +2.3**
FEO Feodosiya 6.89 304 *e*P **Pn** **01 34 22.9 +1.1**
FEO Feodosiya 6.89 304 *e*P **Pn** **01 34 22.9 +1.1**
SUDU Sudak 7.08 302 *e*P **Pn** **01 34 23.4 -1.0**
SUDU Sudak 7.08 302 *e*P **Pn** **01 34 23.4 -1.0**
YAL Yalta 7.47 297 *e*P **Pn** **01 34 30.1 +0.3**
YAL *e*S **Sn** **01 35 54.7 0.0**
YAL Yalta 7.47 297 *e*P **Pn** **01 34 30.1 +0.3**
YAL *e*S **Sn** **01 35 54.7 0.0**
SIM Simferopol' 7.67 300 *e*P **Pn** **01 34 32.6 0.0**
SIM Simferopol' 7.67 300 *e*P **Pn** **01 34 32.6 0.0**
BRTR Keskin Array B 7.70 260 Pn **Pn** **01 34 35.1 +2.1**
comp=Z,0.1nm,0.3s,baz=90,slow=13,SNR=3.2
SEV Sevastopol' 7.82 296 *e*P **Pn** **01 34 32.4 -2.2**
SEV *e*S **Sn** **01 36 01.8 -1.5**
TESR Tescani 13.12 298 ⇓*i*P **Pn** **01 35 45.8 -1.3**
MLR Muntele Rosu 13.35 293 Pn **Pn** **01 35 51.0 +0.6**
comp=Z,0.1nm,0.3s,baz=188,slow=5.3,SNR=8.3
MLR Muntele Rosu 13.35 293 ⇓*i*P **Pn** **01 35 51.4 +1.0**
AKTO Aktyubinsk 13.48 43 Pn **Pn** **01 35 50.6 -1.3**
comp=Z,0.1nm,0.3s,baz=214,slow=15,SNR=2.1
AKASG Malin Array Be 13.51 318 Pn **Pn** **01 35 51.4 -1.0**
comp=Z,0.4nm,0.3s,baz=125,slow=13,SNR=3.1
DOPR Dopca 13.83 295 ⇑*i*P **Pn** **01 35 55.0 -1.9**
VOIR 13.96 293 ⇓*i*P **Pn** **01 36 00.2 +1.5**
BURAR Bucovina Array 14.39 301 ⇓*i*P **Pn** **01 36 04.3 -0.2**
ARU Arti 17.87 28 P **P** **01 36 50.6 +0.6**
ARU S **Sn** **01 40 11.1 +2.6**
SVE Sverdlovsk 18.93 30 *e*P **P** **01 37 01.3 -0.3**
VSU Vasula 20.02 334 ⇑*e*P **P** **01 37 13.4 -0.2**
VSU pmax pmax
comp=Z,13nm,1.0s
BRVK Borovoye 21.41 48 ⇑*e*P **P** **01 37 29.3 +0.6**
BRVK *i* *PP **pP** **01 37 31.6 +0.6**
BRVK pmax pmax
comp=Z,3.0nm,0.8s
BVAR Borovoye Array 21.46 48 P **P** **01 37 29.3 0.0**
comp=Z,1.0nm,0.7s,baz=237,slow=10,SNR=3.1
GERES GERESS Array B 22.16 300 P **P** **01 37 38.5 +1.7**
comp=Z,0.4nm,0.6s,baz=108,slow=8.6,SNR=4.5
FINES FINESS Array B 22.60 338 P **P** **01 37 42.9 +1.6**
comp=Z,0.9nm,0.6s,baz=142,slow=19,SNR=5.8
CLL Collm 23.06 306 *e*P **P** **01 37 46.0 -0.2**
CLL *es*P **sP** **01 37 51.0 +1.5**
CLL Collm 23.06 306 *e*P **P** **01 37 46.0 -0.2**
CLL *e* 01 37 51.0
KURBB Kurchatov Arra 25.77 57 P **P** **01 38 12.4 +0.9**
comp=Z,0.7nm,0.7s,baz=267,slow=9.2,SNR=7.3
KURK Kurchatov 25.84 57 *e*P **P** **01 38 12.9 +0.7**
KURK pmax pmax
comp=Z,1.0nm,0.9s
HFS Hagfors 26.15 326 P **P** **01 38 15.9 +0.9**
comp=Z,2.3nm,0.9s,baz=139,slow=11,SNR=4.2
MKAR Makanchi Array 28.14 66 P **P** **01 38 35.6 +2.5**
comp=Z,0.1nm,0.5s,baz=258,slow=7.2,SNR=2.7
TLY Talaya 41.48 55 ⇑*i*P **P** **01 40 27.3 -0.5**
TLY pmax pmax
comp=Z,21nm,2.4s
ULN Ulaanbaatar 44.51 59 ⇓*i*P **P** **01 40 51.1 -1.5**
ULN *e**PP **pP** **01 40 53.8 -1.2**
ULN *i* 01 42 34.2

CSEM ***16*** *01:34:20.9±0.1, 41°.48N×43°.48E, h2km, ML2.7, Error ellipse: s-maj=2.7km s-min=2.0km az=155.0*
ISCJB ***16*** *01:34:21.4±0.5, 41°.48N±0°.03×43°.47E±0°.03, h10km±4km, Error ellipse: s-maj=5.4km s-min=4.4km az=177.0*
TIF ***16*** *01:34:21.1, 41°.49N×43°.52E, h17km±2km*
DDA ***16*** *01:34:23.1, 41°.32N×43°.26E, h7km, Ml2.9*
ISC 16 01:34:21.4±0.9, 41°.48N±0°.03×43°.47E±0°.02, h13km±7km, n24, σ0s72/42, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKH	**Akhalkalaki**	**0.07**	**169**	P	**Pg**	**01 34 24.4**	**+0.1**
AKH				S	**Sg**	**01 34 26.5**	**+0.1**
EPOS	**Posof**	**0.56**	**272**	*i* P	**Pg**	**01 34 31.8**	**-0.6**
EPOS				*i* S	**Sg**	**01 34 38.9**	**-1.1**
EPOS	**Posof**	**0.56**	**272**	P	**Pg**	**01 34 31.8**	**-0.6**
EPOS				S	**Sg**	**01 34 38.8**	**-1.1**
KZR	**Kazreti**	**0.71**	**98**	P	**Pg**	**01 34 34.8**	**-0.5**
KZR				S	**Sg**	**01 34 44.1**	**-0.6**
KZR	**Kazreti**	**0.71**	**98**	P	**Pg**	**01 34 34.8**	**-0.5**
KZR				S	**Sg**	**01 34 44.1**	**-0.6**
EAK	**Akyaka**	**0.80**	**173**	*i* P	**Pg**	**01 34 36.3**	**-0.7**
EAK	**Akyaka**	**0.80**	**173**	P	**Pg**	**01 34 36.3**	**-0.7**
TBLG	**Delisi**	**0.98**	**75**	P	**Pg**	**01 34 39.5**	**-0.8**
TBLG				S	**Sb**	**01 34 53.3**	**+0.2**
TBLG	**Delisi**	**0.98**	**75**	P	**Pg**	**01 34 39.5**	**-0.8**
TBLG				S	**Sb**	**01 34 53.3**	**+0.2**
SEAG	**Tbilisi Sea**	**1.04**	**74**	P	**Pg**	**01 34 40.6**	**-0.8**
SEAG				S	**Sb**	**01 34 54.8**	**+0.1**
SEAG	**Tbilisi Sea**	**1.04**	**74**	P	**Pg**	**01 34 40.6**	**-0.8**
SEAG				S	**Sb**	**01 34 54.8**	**+0.1**
DIGO	**Kars**	**1.07**	**184**	*i* P	**Pg**	**01 34 40.7**	**-1.4**
DIGO				*i* S	**Sb**	**01 34 56.5**	**+0.6**
DIGO	**Kars**	**1.07**	**184**	P	**Pg**	**01 34 40.7**	**-1.4**
DIGO				S	**Sb**	**01 34 56.5**	**+0.6**
DUS	**Dusheti**	**1.10**	**56**	P	**Pg**	**01 34 42.0**	**-0.6**
DUS				S	**Sb**	**01 34 57.6**	**+1.0**
DUS	**Dusheti**	**1.10**	**56**	P	**Pg**	**01 34 42.0**	**-0.6**
DUS				S	**Sb**	**01 34 57.6**	**+1.0**
ONI	**Oni**	**1.11**	**359**	P	**Pg**	**01 34 41.8**	**-0.9**
ONI				S	**Sg**	**01 34 56.1**	**-1.1**
GUDG	**Gudauri**	**1.23**	**37**	P	**Pg**	**01 34 44.5**	**-0.7**
GUDG				S	**Sg**	**01 35 01.0**	**-0.2**
GUDG	**Gudauri**	**1.23**	**37**	P	**Pg**	**01 34 44.5**	**-0.7**
GUDG				S	**Sg**	**01 35 01.0**	**-0.2**
DBOC	**Borcka**	**1.37**	**265**	*i* P	**Pb**	**01 34 47.0**	**+0.2**
DBOC	**Borcka**	**1.37**	**265**	P	**Pb**	**01 34 47.0**	**+0.2**
DDEM	**Demirkent**	**1.43**	**246**	*i* P	**Pg**	**01 34 48.5**	**-0.3**
DDEM	**Demirkent**	**1.43**	**246**	P	**Pg**	**01 34 48.5**	**-0.3**
CHVG	**Ch'k'valeri**	**1.61**	**320**	P	**Pn**	**01 34 50.4**	**+0.9**
CHVG				S	**Sg**	**01 35 12.8**	**-0.4**
CHVG	**Ch'k'valeri**	**1.61**	**320**	P	**Pn**	**01 34 50.4**	**+0.9**
CHVG				S	**Sg**	**01 35 12.8**	**-0.4**

IDC ***16*** *01:34:15.9±0.6, 21°.31S×174°.69W, h0km, mb4.2/15, mb1 4.5/16, mb1mx4.3/46, mbtmp4.3/16, ML3.8/1, MS3.8/16, Ms1 3.8/16, ms1mx3.5/48, Error ellipse: s-maj=24.0km s-min=17.1km az=128.0*
NEIC ***16*** *01:34:17.3±0.4, 21°.31S×174°.73W, h10km, mb4.4/1, Error ellipse: s-maj=13.8km s-min=9.1km az=130.0*
ISCJB ***16*** *01:34:19.6±0.6, 21°.4S±0°.1×174°.8W±0°.1, h35km, mb4.2/16, MS3.8/13, Error ellipse: s-maj=18.0km s-min=12.6km az=34.8*
ISC 16 01:34:21.2±0.6, 21°.3S±0°.1×174°.8W±0°.1, h35km, n48, σ0s89/38, mb4.3/16, MS3.9/13, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.92**	**22**	Pn	Pn	01 36 07.1	-6.9
AFI	5.6nm,0.3s,baz=225,slow=19,SNR=6.1			Sn	Sn	01 37 24.9	-18
AFI	baz=195,slow=20,SNR=1.8			LR	LR	01 39 11.4	
RAR	**Rarotonga**	**13.97**	**92**	Pn	Pn	01 37 20.9	-16
RAR	9.9nm,0.3s,baz=178,slow=5.8,SNR=7.5			LR	LR	01 43 30.2	
DZM	**Mont Dzumac**	**17.48**	**264**	eLR	LR	01 42 39.6	
DZM	**Mont Dzumac**	**17.48**	**264**	LR	LR	01 44 25.3	
URZ	**Urewera**	**18.26**	**201**	P	**P**	**01 38 31.1**	**-0.6**
URZ	0.3nm,0.3s,baz=15,slow=16,SNR=2.0			S	Sn	01 41 39.7	-15
TBI	**Tubuai**	**23.48**	**100**	eLR	LR	01 44 50.8	
PPT2	**Papeete2**	**24.02**	**85**	eLR	LR	01 45 02.7	
PPT	**Papeete**	**24.03**	**85**	LR	LR	01 47 25.9	

comp=Z,175nm,18.0s,baz=300,slow=33
HNR Honiara 27.06 292 LR LR 01 49 26.9
comp=Z,100nm,19.1s,baz=172,slow=34
TAOE Nuku Hiva Isla 35.55 75 *e*LR LR 01 50 31.5
125nm,22.2s
CTAO Charters Tower 36.43 265 *e*P **P** **01 41 22.3 -0.6**
PMG Port Moresby 38.48 282 P **P** **01 41 39.8 -0.5**
7.0nm,0.6s,baz=117,slow=9.0,SNR=3.7
PMG LR LR 01 56 33.9
comp=Z,280nm,18.0s,baz=132,slow=35
STKA Stephens Creek 40.18 246 P **P** **01 41 52.8 -1.5**
3.6nm,0.9s,baz=70,slow=12,SNR=2.7
STKA LR LR 01 55 31.1
comp=Z,77nm,20.9s,baz=35,slow=32
ASAR Alice Springs 47.28 257 P **P** **01 42 52.1 +0.5**
6.0nm,0.9s,baz=92,slow=8.4,SNR=39
ASAR PcP **PcP** **01 44 23.2 +0.8**
0.6nm,0.7s,baz=100,slow=5.2,SNR=3.2
ASAR LR LR 02 02 30.6
comp=Z,190nm,18.2s,baz=107,slow=36
WRAB Tennant Creek 47.48 262 *e*P **P** **01 42 52.2 -0.9**
2.3nm,0.6s
WRA Warramunga Arr 47.49 262 P **P** **01 42 53.2 0.0**
7.1nm,1.1s,baz=98,slow=8.0,SNR=24
WRA PcP **PcP** **01 44 24.3 +1.2**
1.0nm,0.9s,baz=98,slow=3.4,SNR=2.8
VNDA Vanda 57.37 186 P **P** **01 44 06.0 +0.4**
2.9nm,0.9s,baz=9.4,slow=6.3,SNR=10
MJAR Matsushiro Arr 72.71 322 P **P** **01 45 45.5 -0.3**
3.1nm,0.7s,baz=161,slow=6.5,SNR=7.7
ASAJ Asahikawa 75.94 330 LR LR 02 18 18.9
comp=Z,64nm,18.2s,baz=170,slow=35
PETK Petropavlovsk- 77.90 343 P **P** **01 46 15.1 -0.1**
3.5nm,0.9s,baz=116,slow=6.8,SNR=5.5
YBH Yreka Blue Hor 79.09 37 LR LR 02 15 56.6
comp=Z,68nm,18.3s,baz=226,slow=32
KSRS Korea Array 79.54 317 P **P** **01 46 26.6 +2.0**
3.6nm,0.9s,baz=138,slow=5.7,SNR=11
KSAR Wonju Array Be 79.56 317 P **P** **01 46 26.6 +1.9**
NVAR Mina Array Bea 79.59 42 P **P** **01 46 23.9 -1.2**
0.6nm,0.7s,baz=224,slow=7.7,SNR=3.7
USRK Ussuriysk Ar. 81.39 324 P **P** **01 46 35.0 +0.7**
0.6nm,0.6s,baz=145,slow=5.3,SNR=5.8
MAW Mawson 81.78 199 P **P** **01 46 36.9 +0.8**
2.2nm,0.6s,baz=157,slow=6.0,SNR=7.3
TXAR Lajitas Array 84.98 56 P **P** **01 46 53.3 -0.1**
0.3nm,0.8s,baz=206,slow=6.0,SNR=3.7
TXAR LR LR 02 20 38.6
comp=Z,35nm,18.1s,baz=0.0,slow=33
PLCA Paso Flores 86.48 132 LR LR 02 19 04.6
comp=Z,35nm,20.7s,baz=250,slow=31
PDAR Pinedale Array 87.53 42 P **P** **01 47 06.1 +0.3**
0.2nm,0.4s,baz=268,slow=5.4,SNR=2.0
PDAR LR LR 02 26 01.0
comp=Z,65nm,18.1s,baz=263,slow=36
ILAR Eielson Array 88.49 12 P **P** **01 47 08.0 -1.5**
2.2nm,1.2s,baz=208,slow=5.4,SNR=6.5
CMAR Chiang Mai Arr 93.25 288 P **P** **01 47 34.1 +1.3**
2.3nm,0.8s,baz=113,slow=2.6,SNR=10
CMAR LR LR 02 29 24.1
comp=Z,16nm,18.8s,baz=175,slow=36
JTS JuntasAbangare 93.50 80 LR LR 02 22 06.2
comp=Z,35nm,18.4s,baz=328,slow=31
LPAZ La Paz 98.94 111 LR LR 02 25 38.4
comp=Z,56nm,18.2s,baz=235,slow=31
BVAR Borovoye Array 121.67 320 PKP **PKPdf** **01 53 10.9 -0.2**
0.2nm,0.3s,baz=66,slow=1.7,SNR=4.7
BRVK Borovoye 121.73 320 *e*PKPdf **PKPdf** **01 53 10.9 -0.3**
ARU Arti 127.61 326 *e*PKPdf **PKPdf** **01 53 22.3 -0.1**
AKASG Malin Array Be 145.17 333 PKPbc **PKPdf** **01 53 54.1 -0.8**
4.7nm,0.9s,baz=38,slow=4.1,SNR=15
KIEV Kiev 145.19 333 *e*PKPbc **PKPdf** **01 53 54.4 -0.6**
EKA Eskdalemuir Ar 145.48 8 PKPbc **PKPbc** **01 53 54.7 -0.7**
2.3nm,1.0s,baz=335,slow=3.1,SNR=3.3
CLL Collm 149.48 350 *e*PKPbc **PKPbc** **01 54 07.0 +0.4**
CLL *i* PKPab **PKPab** **01 54 11.3 -0.2**
CLL *i* pPKPab **pPKPdf** **01 54 14.3 +0.7**
BRTR Keskin Array B 149.63 313 PKPbc **PKPbc** **01 54 08.0 +0.5**
1.7nm,0.8s,baz=110,slow=3.3,SNR=9.6
BRG Berggiesshubel 149.75 349 *e*PKP **PKPbc** **01 54 06.5 -0.7**
7.0nm,1.2s
MORC Moravsky Berou 150.00 344 *e*PKP **PKPbc** **01 54 08.7 +0.7**
MLR Muntele Rosu 150.53 330 PKPbc **PKPbc** **01 54 09.2 -0.3**
0.5nm,0.9s,baz=321,slow=6.5,SNR=3.1
JAVC Velka Javorina 150.80 343 *e*PKP **PKPbc** **01 54 11.6 +1.7**
MMAI Mount Meron Ar 150.86 300 PKPbc **PKPbc** **01 54 11.3 +0.7**
2.3nm,0.8s,baz=56,slow=5.4,SNR=6.8
KRUC Moravsky 150.94 345 *e*PKP **PKPbc** **01 54 10.6 +0.4**
GERES GERESS Array B 151.74 348 PKPbc **PKPbc** **01 54 12.2 0.0**
0.9nm,0.8s,baz=48,slow=2.0,SNR=9.8

ISCJB ***16*** *01:37:48.7±0.3, 36°.38N±0°.03×28°.94E±0°.02, h34km±12km, Error ellipse: s-maj=4.8km s-min=3.0km az=9.2*
ATH ***16*** *01:37:48.7, 36°.41N×28°.91E, h44km±1km, ML3.0/5, Error ellipse: s-maj=2.1km s-min=0.7km az=172.0*
DDA ***16*** *01:37:48.1, 36°.48N×28°.90E, h7km, Ml3.6*
ISK ***16*** *01:37:48.4, 36°.45N×28°.91E, h20km, ML3.3/15*
CSEM ***16*** *01:37:48.9±0.2, 36°.42N×28°.94E, h23km±1km, ML3.6, Error ellipse: s-maj=3.5km s-min=2.3km az=8.0*
THE ***16*** *01:37:49.2, 36°.45N×28°.88E, h15km±1km, ML2.7/2, Error ellipse: s-maj=1.4km s-min=0.6km az=102.0*
NIC ***16*** *01:37:50.8±0.4, 36°.27N×29°.07E, h51km, ML3.3*
ISC 16 01:37:48.4±1.0, 36°.41N±0°.02×28°.94E±0°.02, h21km±2km, n117, σ0s79/148, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.25**	**27**	PG	**Pb**	**01 37 54.4**	**-0.1**
FETY				SG	**Sb**	**01 37 58.9**	**+0.1**
FETY	**Fethiye**	**0.25**	**27**	P	**Pb**	**01 37 54.3**	**-0.2**
FETY				S	**Sb**	**01 37 59.5**	**+0.7**
FETY	**Fethiye**	**0.25**	**27**	*e*Pg	**Pb**	**01 37 54.4**	**-0.1**
FETY				*e*Sg	**Sb**	**01 37 58.9**	**+0.1**
FETY				S	**Sb**	**01 37 59.5**	**+0.7**
DALY	**Dalyan (Mu¨la**	**0.47**	**330**	PG	**Pb**	**01 37 57.7**	**-0.2**
DALY				SG	**Sb**	**01 38 04.5**	**+0.2**
DALY	**Dalyan (Mu¨la**	**0.47**	**330**	*i* P	**Pb**	**01 37 58.0**	**+0.1**
DALY	**Dalyan (Mu¨la**	**0.47**	**330**	*e*Pg	**Pb**	**01 37 57.7**	**-0.2**
DALY	**Dalyan (Mu¨la**	**0.47**	**330**	P	**Pb**	**01 37 58.0**	**+0.1**
DALY				*e*Sg	**Sb**	**01 38 04.5**	**+0.2**
TURN	**Turunc**	**0.54**	**329**	PG	**Pn**	**01 38 01.3**	**+0.5**
TURN				SG	**Sn**	**01 38 10.8**	**+1.6**
TURN	**Turunc**	**0.54**	**329**	*i* P	**Pn**	**01 38 01.6**	**+0.7**
TURN	**Turunc**	**0.54**	**329**	*e*Pg	**Pn**	**01 38 01.3**	**+0.5**
AKAS	**Kas**	**0.56**	**108**	PG	**Pb**	**01 38 00.3**	**+0.5**
AKAS				SG	**Sn**	**01 38 10.0**	**-0.2**
AKAS	**Kas**	**0.56**	**108**	*i* P	**Pb**	**01 38 00.3**	**+0.5**
AKAS	**Kas**	**0.56**	**108**	P	**Pb**	**01 38 00.3**	**+0.5**
AKAS				*e*Sg	**Sn**	**01 38 10.0**	**-0.2**
KSL	**Kastellorizon**	**0.58**	**117**	P	**Pn**	**01 38 01.2**	**-0.2**
KSL				S	**Sn**	**01 38 12.0**	**+1.7**
KSL				AML	AML	01 38 12.3	
KSL	comp=E,3460μm,0.5s			AML	AML	01 38 14.9	
KSL	comp=N,1663μm,0.5s **Kastellorizon**	**0.58**	**117**	P	**Pn**	**01 38 01.4**	**-0.1**
KSL				S	**Sn**	**01 38 11.3**	**+1.0**
MRSB	**Marmaris-Mugla**	**0.67**	**297**	PG	**Pb**	**01 38 01.5**	**0.0**
MRSB	**Marmaris-Mugla**	**0.67**	**297**	*e*Pg	**Pb**	**01 38 01.5**	**0.0**
ARG	**Arkhangelos**	**0.69**	**254**	PG	**Pb**	**01 38 02.3**	**+

KORT	**Korkueli**	**1.27 62**	*i* P	**Pb**	**01 38 12.6**	**+0.8**
KORT	**Korkueli**	**1.27 62**	*e*Pn	**Pb**	**01 38 12.1**	**+0.3**
KORT	**Korkueli**	**1.27 62**	P	**Pb**	**01 38 12.6**	**+0.8**
MLSB	**Milas**	**1.29 314**	PN	**Pb**	**01 38 11.7**	**-0.2**
MLSB	**Milas**	**1.29 314**	*e*Pn	**Pb**	**01 38 11.7**	**-0.2**
DENT	**Denizli**	**1.34 3**	PN	**Pn**	**01 38 11.9**	**-0.1**
DENT	**Denizli**	**1.34 3**	*e*Pn	**Pn**	**01 38 11.9**	**-0.1**
BDRM	**Kayabasi**	**1.37 299**	*i* P	**Pn**	**01 38 12.4**	**0.0**
BDRM	**Kayabasi**	**1.37 299**	P	**Pn**	**01 38 12.4**	**0.0**
ANTB	**Antalya**	**1.46 70**	PN	**Pb**	**01 38 14.5**	**-0.3**
ANTB	**Antalya**	**1.46 70**	*e*Pn	**Pb**	**01 38 14.5**	**-0.3**
BODT	**Bodrum**	**1.46 297**	PN	**Pn**	**01 38 12.9**	**-0.8**
BODT	**Bodrum**	**1.46 297**	P	**Pn**	**01 38 12.5**	**-1.2**
BODT			S	**Sn**	**01 38 30.5**	**-1.7**
BODT	**Bodrum**	**1.46 297**	P	**Pn**	**01 38 12.5**	**-1.2**
BODT	**Bodrum**	**1.46 297**	*e*Pn	**Pn**	**01 38 12.9**	**-0.8**
BODT			S	**Sn**	**01 38 30.5**	**-1.7**
AYDN	**Tasoluk**	**1.51 326**	*i* P	**Pb**	**01 38 15.4**	**-0.3**
AYDN	**Tasoluk**	**1.51 326**	P	**Pb**	**01 38 15.4**	**-0.3**
YKAV	**Yalikavak-Bodr**	**1.51 298**	PN	**Pn**	**01 38 14.5**	**+0.2**
YKAV	**Yalikavak-Bodr**	**1.51 298**	*e*Pn	**Pn**	**01 38 14.5**	**+0.2**
BRDR	**BURDUR-Merkez**	**1.56 35**	*i* P	**Pb**	**01 38 16.0**	**-0.7**
BRDR	**BURDUR-Merkez**	**1.56 35**	P	**Pb**	**01 38 16.0**	**-0.7**
KARP	**Karpathos**	**1.69 240**	PN	**Pn**	**01 38 17.4**	**+0.7**
KARP	**Karpathos**	**1.69 240**	P	**Pn**	**01 38 17.5**	**+0.8**
KARP			S	**Sn**	**01 38 36.6**	**-1.1**
KARP	**Karpathos**	**1.69 240**	P	**Pn**	**01 38 17.1**	**+0.4**
KARP	**Karpathos**	**1.69 240**	*e*Pn	**Pn**	**01 38 17.4**	**+0.7**
KARP			S	**Sn**	**01 38 36.8**	**-0.9**
AYDB	**Zeytinkoy-Aydi**	**1.75 332**	PN	**Pn**	**01 38 17.7**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**1.75 332**	*e*Pn	**Pn**	**01 38 17.7**	**0.0**
GCAM	**G?zelcaml?**	**1.88 314**	PN	**Pn**	**01 38 19.7**	**+0.4**
GCAM	**G?zelcaml?**	**1.88 314**	*i* P	**Pn**	**01 38 19.7**	**+0.4**
GCAM	**G?zelcaml?**	**1.88 314**	*e*Pn	**Pn**	**01 38 19.7**	**+0.4**
ISP	**Isparta**	**1.89 41**	PN	**Pn**	**01 38 20.4**	**+0.8**
ISP	**Isparta**	**1.89 41**	P	**Pn**	**01 38 19.8**	**+0.2**
ISP			S	**Sn**	**01 38 43.5**	**+0.6**
ISP	**Isparta**	**1.89 41**	P	**Pn**	**01 38 19.8**	**+0.2**
ISP	**Isparta**	**1.89 41**	*e*Pn	**Pn**	**01 38 20.4**	**+0.8**
ISP			S	**Sn**	**01 38 43.5**	**+0.6**
SUTC	**Sutluce-Ispart**	**1.96 57**	PN	**Pn**	**01 38 21.5**	**+0.9**
SUTC	**Sutluce-Ispart**	**1.96 57**	*e*Pn	**Pn**	**01 38 21.5**	**+0.9**
KZIL	**AFYON_Kizioren**	**2.07 27**	*i* P	Pn	01 38 03.0	-19
SMG	**Samos**	**2.12 308**	P	**Pn**	**01 38 22.6**	**-0.1**
SMG			S	**Sn**	**01 38 48.8**	**+0.2**
SMG			AML	AML	01 38 50.2	
	comp=N,908μm,0.5s					
SMG			AML	AML	01 38 50.6	
	comp=E,806μm,0.2s					
SMG	**Samos**	**2.12 308**	P	**Pn**	**01 38 22.8**	**+0.1**
SMG			S	**Sn**	**01 38 48.4**	**-0.1**
KEPZ	**Antalya-Kepez**	**2.19 76**	*i* P	Pn	01 38 16.6	-7.1
DGB	**¯zmir**	**2.32 315**	*i* P	**Pn**	**01 38 25.5**	**+0.1**
AKHS	**Akhisar**	**2.62 340**	*i* P	**Pn**	**01 38 29.6**	**+0.1**
AKHS	**Akhisar**	**2.62 340**	P	**Pn**	**01 38 29.6**	**+0.1**
DEMI	**Demirci**	**2.63 356**	*i* P	**Pn**	**01 38 29.0**	**-0.8**
DEMI	**Demirci**	**2.63 356**	P	**Pn**	**01 38 29.0**	**-0.8**
APE	**Apeiranthos**	**2.82 284**	P	**Pn**	**01 38 33.6**	**+1.3**
APE			S	**Sn**	**01 39 05.5**	**-0.2**
APE	**Apeiranthos**	**2.82 284**	P	**Pn**	**01 38 33.2**	**+0.9**
APE			S	**Sn**	**01 39 05.2**	**-0.5**
NPS	**Neapolis**	**2.94 248**	P	**Pn**	**01 38 34.2**	**+0.2**
NPS			S	**Sn**	**01 39 06.8**	**-1.8**
NPS			AML	AML	01 39 08.2	
	comp=E,174μm,0.4s					
NPS			AML	AML	01 39 09.1	
	comp=N,150μm,0.5s					
NPS	**Neapolis**	**2.94 248**	P	**Pn**	**01 38 34.3**	**+0.3**
NPS			S	**Sn**	**01 39 07.3**	**-1.4**
CHOS	**Chios island**	**3.03 311**	P	**Pn**	**01 38 35.7**	**+0.5**
CHOS			AML	AML	01 39 13.0	
	comp=N,206μm,0.4s					
CHOS			AML	AML	01 39 13.6	
	comp=E,314μm,0.3s					
CHOS	**Chios island**	**3.03 311**	P	**Pn**	**01 38 35.7**	**+0.5**
AKMC	**Akamas**	**3.08 116**	P	**Pn**	**01 38 35.4**	**-0.5**
	baz=295					
AKMC	**Akamas**	**3.08 116**	P	**Pn**	**01 38 35.4**	**-0.5**
LAST	**Lasithi**	**3.08 247**	P	**Pn**	**01 38 35.8**	**-0.2**
LAST			S	**Sn**	**01 39 10.3**	**-1.9**
LAST	**Lasithi**	**3.08 247**	P	**Pn**	**01 38 36.0**	**0.0**
LAST			S	**Sn**	**01 39 10.7**	**-1.5**
PPCY	**Paphos**	**3.16 118**	P	**Pn**	**01 38 37.0**	**0.0**
	baz=298					
PPCY	**Paphos**	**3.16 118**	P	**Pn**	**01 38 37.0**	**0.0**
ALFC	**Alefka**	**3.23 112**	P	**Pn**	**01 38 37.1**	**-0.8**
	baz=292					
ALFC			S	**Sn**	**01 39 14.2**	**-1.5**
ALFC	**Alefka**	**3.23 112**	P	**Pn**	**01 38 37.1**	**-0.8**
ALFC			S	**Sn**	**01 39 14.2**	**-1.5**
PRK	**Paraskevi**	**3.53 324**	P	**Pn**	**01 38 41.5**	**-0.6**
PRK	**Paraskevi**	**3.53 324**	P	**Pn**	**01 38 42.2**	**+0.1**
SZAC	**Souni**	**3.61 116**	P	**Pn**	**01 38 42.5**	**-0.7**
	baz=296					
SZAC			S	**Sn**	**01 39 23.5**	**-1.7**
SZAC	**Souni**	**3.61 116**	P	**Pn**	**01 38 42.5**	**-0.7**
SZAC			S	**Sn**	**01 39 23.5**	**-1.7**
SIVA	**Sivas**	**3.64 249**	P	**Pn**	**01 38 45.2**	**+1.6**
SIVA	**Sivas**	**3.64 249**	P	**Pn**	**01 38 44.7**	**+1.1**
MAMC	**Mammari**	**3.69 108**	P	**Pn**	**01 38 44.6**	**+0.4**
	baz=289					
MAMC	**Mammari**	**3.69 108**	P	**Pn**	**01 38 44.6**	**+0.4**
CSS	**Mathiatis**	**3.85 111**	P	**Pn**	**01 38 45.8**	**-0.7**
CSS	**Mathiatis**	**3.85 111**	P	**Pn**	**01 38 45.8**	**-0.7**
VAM	**Vamos**	**3.98 257**	P	**Pn**	**01 38 49.0**	**+0.7**
VAM	**Vamos**	**3.98 257**	P	**Pn**	**01 38 49.0**	**+0.7**
IMMV	**Iera Moni Meta**	**4.14 258**	P	**Pn**	**01 38 50.8**	**+0.4**
IMMV			S	**Sn**	**01 39 36.2**	**-2.0**
IMMV	**Iera Moni Meta**	**4.14 258**	P	**Pn**	**01 38 51.0**	**+0.6**
IMMV			S	**Sn**	**01 39 36.5**	**-1.7**
GVD	**Gavdhos**	**4.26 250**	P	**Pn**	**01 38 53.5**	**+1.5**
GVD	**Gavdhos**	**4.26 250**	P	**Pn**	**01 38 53.2**	**+1.2**
DION	**Dionisos Attik**	**4.33 294**	P	**Pn**	**01 38 54.5**	**+1.5**
DION	**Dionisos Attik**	**4.33 294**	P	**Pn**	**01 38 54.3**	**+1.2**
ATHU	**Athens Univers**	**4.40 292**	P	**Pn**	**01 38 54.7**	**+0.7**
ATHU	**Athens Univers**	**4.40 292**	P	**Pn**	**01 38 54.9**	**+0.9**
LIA	**Limnos Island**	**4.57 321**	P	**Pn**	**01 38 57.4**	**+1.1**
LIA	**Limnos Island**	**4.57 321**	P	**Pn**	**01 38 57.5**	**+1.2**
VLI	**Veliai**	**4.84 275**	P	**Pn**	**01 39 01.2**	**+1.0**
VLI	**Veliai**	**4.84 275**	P	**Pn**	**01 39 01.1**	**+1.0**

CSEM ***16*** *02:08:45.6±0.4, 41°.36N×22°.76E, h12km, ML1.3, Error ellipse: s-maj=9.4km s-min=5.9km az=14.0*
SKO ***16*** *02:08:45.3, 41°.37N×22°.77E, h21km, M0.8, ML0.9*
THE ***16*** *02:08:46.1, 41°.32N×22°.79E, h15km±1km, ML1.3/5, Error ellipse: s-maj=2.1km s-min=0.8km az=197.0*
ATH 16 02:08:46.7, 41°.32N×22°.80E, h13km±4km, ML1.2/6, 1D, Error ellipse: s-maj=4.7km s-min=1.2km az=167.0, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.17 270**		P	Pg	02 08 50.1	-0.6
VAY				S	Sg	02 08 52.9	-0.6
VAY	**Valandovo**	**0.17 270**	⇓	*i* Pg	Pg	02 08 50.1	-0.6
VAY				*i* Sg	Sg	02 08 52.7	-0.8
VAY				*e*Lg	Lg	02 08 52.8	
	comp=E,76nm,0.3s						
VAY				*e*Lg	Lg	02 08 52.9	
	comp=N,52nm,0.2s						
VAY	**Valandovo**	**0.17 270**		P	Pg	02 08 50.1	-0.6
VAY				S	Sg	02 08 52.9	-0.6
KNT	**Kendrikon**	**0.17 155**		P	Pg	02 08 51.0	+0.2
KNT				S	Sg	02 08 53.6	0.0
KNT				AML	AML	02 08 53.9	
	comp=E,527μm,0.1s						
KNT				AML	AML	02 08 54.0	
	comp=N,1221μm,0.1s						
KNT	**Kendrikon**	**0.17 155**		P	Pg	02 08 50.8	+0.1
KNT				S	Sg	02 08 53.6	+0.1
KNT	**Kendrikon**	**0.17 155**		P	Pg	02 08 50.8	+0.1
KNT				S	Sg	02 08 53.6	+0.1
GRG	**Griva**	**0.47 220**		P	Pg	02 08 55.5	-0.5
GRG				S	Sg	02 09 02.6	+0.3
GRG				AML	AML	02 09 02.8	
	comp=N,86μm,0.2s						
GRG				AML	AML	02 09 03.3	
	comp=E,80μm,0.1s						
GRG	**Griva**	**0.47 220**		P	Pg	02 08 55.7	-0.3
GRG				S	Sg	02 09 01.9	-0.4
GRG	**Griva**	**0.47 220**		P	Pg	02 08 55.7	-0.3
GRG				S	Sg	02 09 01.9	-0.4
STIP	**Stip**	**0.59 309**	*i*	Pg	Pg	02 08 55.1	-3.2
STIP				*i* Sg	Sg	02 09 02.1	-4.0
SRS	**Serrai**	**0.63 109**		P	Pg	02 08 59.1	+0.1
SRS				S	Sg	02 09 07.6	+0.3
SRS				AML	AML	02 09 09.5	
	comp=E,35μm,0.3s						
SRS				AML	AML	02 09 14.5	
	comp=N,43μm,0.2s						
SRS	**Serrai**	**0.63 109**		P	Pg	02 08 58.9	-0.1
SRS				S	Sg	02 09 07.4	+0.1
SRS	**Serrai**	**0.63 109**		P	Pg	02 08 58.9	-0.1
SRS				S	Sg	02 09 07.4	+0.1
SOH	**Sokhos**	**0.65 140**		P	Pg	02 08 59.5	+0.1
SOH				S	Sg	02 09 07.7	-0.2
SOH				AML	AML	02 09 10.2	
	comp=E,91μm,0.2s						
SOH				AML	AML	02 09 11.7	
	comp=N,90μm,0.2s						
SOH	**Sokhos**	**0.65 140**		P	Pg	02 08 59.4	0.0
SOH				S	Sg	02 09 08.0	+0.1
SOH	**Sokhos**	**0.65 140**		P	Pg	02 08 59.3	-0.1
SOH				S	Sg	02 09 08.0	+0.1
THE	**Thessaloniki**	**0.70 170**		P	Pg	02 08 59.8	-0.5
THE				S	Sb	02 09 10.0	-0.2
THE				AML	AML	02 09 11.9	
	comp=N,25μm,0.1s						
THE				AML	AML	02 09 12.5	
	comp=E,39μm,0.2s						
THE	**Thessaloniki**	**0.70 170**		P	Pg	02 08 59.9	-0.3
THE				S	Sb	02 09 09.9	-0.3
HORT	**Hortiatis**	**0.76 163**		P	Pb	02 09 01.6	-0.2
HORT	**Hortiatis**	**0.76 163**		P	Pg	02 09 01.3	-0.1
NVR	**Nevrokopi**	**0.80 88**		P	Pg	02 09 01.9	-0.3
NVR				S	Sg	02 09 12.3	-0.4
NVR				AML	AML	02 09 16.7	
	comp=N,16μm,0.1s						
NVR				AML	AML	02 09 16.8	
	comp=E,32μm,0.2s						
NVR	**Nevrokopi**	**0.80 88**		P	Pg	02 09 01.8	-0.4
NVR				S	Sg	02 09 12.8	+0.1
NVR	**Nevrokopi**	**0.80 88**		P	Pg	02 09 01.8	-0.4
NVR				S	Sg	02 09 12.7	0.0

TIR ***16*** *02:08:52.6, 40°.71N×19°.67E, h1km, Md3.1/7*
ATH ***16*** *02:08:53.2, 40°.76N×19°.66E, h9km±4km, ML2.3/9, Error ellipse: s-maj=4.0km s-min=1.2km az=351.0*
BEO ***16*** *02:08:53.4±2.0, 40°.68N×19°.66E, h1km±7km*
THE ***16*** *02:08:53.8, 40°.71N×19°.74E, h0km±4km, ML2.4/4, Error ellipse: s-maj=4.6km s-min=1.2km az=310.0*
CSEM ***16*** *02:08:53.4±0.3, 40°.73N×19°.64E, h2km, ML2.4, Error ellipse: s-maj=7.3km s-min=5.1km az=87.0*
ISC 16 02:08:53.5±1.0, 40.70N±0°.01×19.64E±0°.02, h9km±8km, n80, σ1°48/131, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLO	**Vlora**	**0.26 205**		P	**Pg**	**02 08 58.5**	**-0.1**
VLO				S	**Sb**	**02 09 04.7**	**-0.1**
VLO	**Vlora**	**0.26 205**		*i* PG	**Pg**	**02 08 58.6**	**0.0**
VLO				*i* SG	**Sb**	**02 09 04.3**	**-0.5**
VLO	**Vlora**	**0.26 205**		*i* Pg	**Pg**	**02 08 58.6**	**0.0**
	baz=210						
VLO				*i* Sg	**Sb**	**02 09 04.3**	**-0.5**
	baz=210						
TIR	**Tirane**	**0.67 15**		*e*Pg	**Pg**	**02 09 06.0**	**-0.5**
TIR				*e*Sg	**Sg**	**02 09 15.0**	**-0.2**
TIR	**Tirane**	**0.67 15**		P	**Pg**	**02 09 05.8**	**-0.7**
TIR	**Tirane**	**0.67 15**		P	**Pg**	**02 09 05.5**	**-1.0**
TIR	**Tirane**	**0.67 15**		*i* PG	**Pg**	**02 09 06.0**	**-0.5**
TIR				*i* SG	**Sb**	**02 09 17.9**	**+1.0**
TIR	**Tirane**	**0.67 15**		P	**Pg**	**02 09 05.5**	**-1.0**
TIR	**Tirane**	**0.67 15**		*e*Pg	**Pg**	**02 09 06.0**	**-0.5**
	baz=4.0						
TIR				*e*Sg	**Sg**	**02 09 15.0**	**-0.2**
	baz=2.0						
SRN	**Sarande**	**0.86 161**		P	**Pg**	**02 09 08.7**	**-1.4**
SRN				S	**Sb**	**02 09 22.3**	**-0.1**
SRN	**Sarande**	**0.86 161**		*i* PG	**Pb**	**02 09 11.6**	**+0.9**
SRN				*i* SG	**Sn**	**02 09 25.2**	**+0.6**
SRN	**Sarande**	**0.86 161**		P	**Pg**	**02 09 08.7**	**-1.4**
SRN	**Sarande**	**0.86 161**		*i* Pg	**Pb**	**02 09 11.6**	**+0.9**
	baz=163						
SRN				S	**Sb**	**02 09 22.3**	**-0.1**
SRN				*i* Sg	**Sn**	**02 09 25.2**	**+0.6**
	baz=163						
KBN	**Korca**	**0.88 95**		P	**Pg**	**02 09 07.8**	**-2.6**
KBN				S	**Sg**	**02 09 21.8**	**0.0**
KBN	**Korca**	**0.88 95**		*i* PG	**Pg**	**02 09 08.7**	**-1.7**
KBN				*i* SG	**Sg**	**02 09 22.2**	**+0.4**
KBN	**Korca**	**0.88 95**		*i* Pg	**Pg**	**02 09 08.7**	**-1.7**
	baz=95						
KBN				S	**Sg**	**02 09 21.8**	**0.0**
KBN				*i* Sg	**Sg**	**02 09 22.2**	**+0.4**
	baz=95						
OHR	**Ohrid**	**0.97 65**		*i* Pn	**Pg**	**02 09 09.7**	**-2.5**
KASA	**Kassiopi**	**0.98 166**		P	**Pb**	**02 09 13.1**	**+0.4**
KASA				S	**Sn**	**02 09 27.1**	**-0.4**
KASA				AML	AML	02 09 29.5	
	comp=N,319μm,0.3s						
KASA				AML	AML	02 09 30.3	
	comp=E,325μm,0.3s						
KASA	**Kassiopi**	**0.98 166**		P	**Pb**	**02 09 12.8**	**+0.1**
KASA				S	**Sb**	**02 09 26.9**	**+1.2**
KEK	**Kerkira**	**0.99 173**		P	**Pn**	**02 09 13.6**	**-0.1**
KEK				S	**Sn**	**02 09 27.9**	**+0.1**
KEK				AML	AML	02 09 30.2	
	comp=E,338μm,0.6s						
KEK				AML	AML	02 09 34.6	
	comp=N,264μm,0.6s						
KEK	**Kerkira**	**0.99 173**		P	**Pb**	**02 09 13.3**	**+0.4**
KEK				S	**Sn**	**02 09 27.6**	**-0.2**
KEK	**Kerkira**	**0.99 173**		P	**Pb**	**02 09 13.3**	**+0.4**
KEK				S	**Sn**	**02 09 27.6**	**-0.2**
SCTE	**Santa Cesarea**	**1.09 235**		P	**Pg**	**02 09 13.6**	**-0.8**
SCTE				S	**Sb**	**02 09 29.4**	**+0.4**
SCTE				AML	AML	02 09 33.3	
	comp=E,70μm,0.5s						
SCTE				AML	AML	02 09 35.7	
	comp=N,90μm,0.4s						
SCTE	**Santa Cesarea**	**1.09 235**		P	**Pg**	**02 09 14.1**	**-0.4**
SCTE				S	**Sn**	**02 09 29.8**	**-0.5**
NEST	**Nestorio**	**1.11 104**		P	**Pg**	**02 09 13.6**	**-1.3**
NEST				S	**Sg**	**02 09 28.3**	**-1.0**
NEST				AML	AML	02 09 38.2	
	comp=E,258μm,0.4s						
NEST				AML	AML	02 09 38.8	
	comp=N,179μm,0.4s						
NEST	**Nestorio**	**1.11 104**		P	**Pg**	**02 09 12.8**	**-2.1**
NEST	**Nestorio**	**1.11 104**		P	**Pg**	**02 09 13.9**	**-1.0**
NEST				S	**Sg**	**02 09 28.8**	**-0.5**
NEST	**Nestorio**	**1.11 104**		P	**Pg**	**02 09 12.8**	**-2.1**
PHP	**Peshkopia**	**1.16 31**		P	**Pn**	**02 09 16.2**	**+0.2**
PHP				S	**Sb**	**02 09 31.4**	**+0.5**
PHP	**Peshkopia**	**1.16 31**	*i*	PN	**Pg**	**02 09 14.3**	**-1.4**
PHP				*i* SN	**Sn**	**02 09 34.8**	**+2.8**
PHP	**Peshkopia**	**1.16 31**		P	**Pn**	**02 09 16.2**	**+0.2**
PHP				S	**Sb**	**02 09 31.4**	**+0.5**
PHP				*i* Sn	**Sn**	**02 09 34.8**	**+2.8**
	baz=30						
PHP	**Peshkopia**	**1.16 31**	*i*	Pn	**Pg**	**02 09 14.3**	**-1.4**
	baz=30						
SGD	**Sagiada**	**1.18 157**		P	**Pn**	**02 09 16.5**	**+0.3**
SGD	**Sagiada**	**1.18 157**		P	**Pn**	**02 09 16.5**	**+0.3**
SGD	**Sagiada**	**1.18 157**		P	**Pn**	**02 09 16.5**	**+0.3**
PENT	**Pentalofos**	**1.25 113**		P	**Pn**	**02 09 16.2**	**-1.1**
PENT				AML	AML	02 09 40.5	
	comp=N,228μm,0.8s						
PENT				AML	AML	02 09 45.3	
	comp=E,148μm,0.6s						
PENT	**Pentalofos**	**1.25 113**		P	**Pn**	**02 09 16.4**	**-0.9**
PENT				S	**Sg**	**02 09 32.3**	**-1.4**
PENT	**Pentalofos**	**1.25 113**		P	**Pn**	**02 09 16.4**	**-0.9**
PENT				S	**Sg**	**02 09 32.3**	**-1.4**
PENT	**Pentalofos**	**1.25 113**		P	**Pn**	**02 09 16.5**	**-0.8**
BIA	**Bitola**	**1.32 75**		P	**Pn**	**02 09 17.3**	**-0.9**
BIA	**Bitola**	**1.32 75**	*i*	Pn	**Pn**	**02 09 17.3**	**-0.9**
BIA	**Bitola**	**1.32 75**		P	**Pn**	**02 09 17.3**	**-0.9**
FNA	**Florina**	**1.32 86**		P	**Pn**	**02 09 16.5**	**-1.8**
FNA				AML	AML	02 09 42.7	
	comp=E,374μm,0.5s						
FNA				AML	AML	02 09 45.9	
	comp=N,374μm,0.9s						
FNA	**Florina**	**1.32 86**		P	**Pn**	**02 09 16.0**	**-2.3**
FNA				S	**Sb**	**02 09 35.9**	**+0.2**
FNA	**Florina**	**1.32 86**		P	**Pn**	**02 09 17.2**	**-1.1**
FNA				S	**Sb**	**02 09 35.9**	**+0.2**
PUK	**Puka**	**1.36 8**	*i*	PN	**Pn**	**02 09 19.0**	**+0.2**
PUK			*i*	SN	**Sn**	**02 09 40.4**	**+3.4**
PUK	**Puka**	**1.36 8**	*i*	Pn	**Pn**	**02 09 19.0**	**+0.2**
	baz=6.0						
PUK			*i*	Sn	**Sn**	**02 09 40.4**	**+3.4**
	baz=6.0						
JAN	**Janina**	**1.40 138**		P	**Pg**	**02 09 21.3**	**+1.0**
JAN				S	**Sg**	**02 09 38.7**	**+0.3**
JAN				AML	AML	02 09 47.6	
	comp=E,268μm,0.5s						
JAN				AML	AML	02 09 49.5	
	comp=N,209μm,0.5s						
JAN	**Janina**	**1.40 138**		P	**Pn**	**02 09 19.8**	**+0.5**
JAN				S	**Sg**	**02 09 39.3**	**+0.9**
JAN	**Janina**	**1.40 138**		P	**Pn**	**02 09 19.8**	**+0.5**
JAN				S	**Sg**	**02 09 39.1**	**+0.7**
JAN	**Janina**	**1.40 138**		P	**Pg**	**02 09 20.6**	**+0.3**
KPRO	**Kipourio**	**1.51 119**		P	**Pg**	**02 09 22.9**	**+0.4**
KPRO				S	**Sg**	**02 09 43.0**	**+0.8**
KPRO				AML	AML	02 09 52.8	
	comp=E,195μm,0.6s						
KPRO				AML	AML	02 09 54.9	
	comp=N,192μm,0.8s						
KPRO	**Kipourio**	**1.51 119**		P	**Pb**	**02 09 22.4**	**+0.6**
KPRO				S	**Sg**	**02 09 42.9**	**+0.8**
KZN	**Kozani**	**1.67 103**		P	**Pn**	**02 09 23.4**	**+0.3**
KZN				S	**Sg**	**02 09 48.3**	**+1.0**
KZN				AML	AML	02 09 54.2	
	comp=N,162μm,0.8s						
KZN				AML	AML	02 09 57.2	
	comp=E,171μm,0.5s						
KZN	**Kozani**	**1.67 103**		P	**Pn**	**02 09 24.0**	**+0.9**
KZN				S	**Sg**	**02 09 48.0**	**+0.7**
BCI	**Bajram Curri**	**1.70 11**	*i*	PN	**Pb**	**02 09 24.4**	**-0.6**
BCI			*i*	SN	**Sg**	**02 09 49.1**	**+1.0**
BCI	**Bajram Curri**	**1.70 11**	*i*	Pn	**Pb**	**02 09 24.4**	**-0.6**
	baz=9.0						
BCI			*i*	Sn	**Sg**	**02 09 49.1**	**+1.0**
	baz=9.0						
PDG	**Podgorica**	**1.75 351**	*e*Pn		**Pn**	**02 09 24.7**	**+0.6**
PDG			*e*Sn		**Sb**	**02 09 48.5**	**+0.5**
PDG	**Podgorica**	**1.75 351**	*e*Pn		**Pn**	**02 09 24.7**	**+0.6**
	baz=3.0						
PDG			*e*Sn		**Sb**	**02 09 48.5**	**+0.5**
	baz=1.0						
DSL	**Palaion Diasel**	**1.92 144**		P	**Pb**	**02 09 29.4**	**+0.6**
DSL				S	**Sb**	**02 09 53.9**	**+1.0**
DSL	**Palaion Diasel**	**1.92 144**		S	**Sb**	**02 09 54.4**	**+1.4**
DSL	**Palaion Diasel**	**1.92 144**		P	**Pb**	**02 09 29.1**	**+0.3**
SJES	**Sjenica**	**2.57 5**	*e*Pn		**Pn**	**02 09 36.2**	**+0.7**
SJES	**Sjenica**	**2.57 5**	*e*Pn		**Pn**	**02 09 36.2**	**+0.7**
	baz=3.0						
STON	**Ston**	**2.61 327**	*e*Pn		**Pn**	**02 09 32.9**	**-3.1**
STON			Sn		**Sn**	**02 10 04.8**	**-2.9**
STON	**Ston**	**2.61 327**	*e*Pn		**Pn**	**02 09 32.8**	**-3.1**
STON			Sn		**Sn**	**02 10 04.8**	**-2.9**
SELS	**Selova**	**2.75 23**	*e*Pn		**Pn**	**02 09 38.5**	**+0.6**
IVAS	**Ivanjica**	**2.90 7**	*e*Pn		**Pn**	**02 09 41.0**	**+1.0**
IVAS	**Ivanjica**	**2.90 7**	*e*Pn		**Pn**	**02 09 41.0**	**+1.0**
	baz=1.0						
ZAPS	**Zavoj**	**3.41 40**	*e*Pn		**Pn**	**02 09 47.3**	**+0.4**
ZAPS	**Zavoj**	**3.41 40**	*e*Pn		**Pn**	**02 09 47.3**	**+0.4**
	baz=4.0						
ZAGS	**Zajecar**	**3.66 31**	*e*Pn		**Pn**	**02 09 51.7**	**+1.4**
ZAGS	**Zajecar**	**3.66 31**	*e*Pn		**Pn**	**02 09 51.7**	**+1.4**
	baz=6.0						
TEKS	**Tekeris**	**3.85 359**	*e*Pn		**Pn**	**02 09 54.0**	**+1.0**
TEKS	**Tekeris**	**3.85 359**	*e*Pn		**Pn**	**02 09 54.0**	**+1.0**
	baz=2.0						
UDBI	**Udbina**	**4.78 325**	*e*Pn		**Pn**	**02 10 04.2**	**-1.5**
UDBI			Sn		**Sn**	**02 11 00.2**	**-1.1**
UDBI	**Udbina**	**4.78 325**	*e*Pn		**Pn**	**02 10 04.2**	**-1.5**
UDBI			Sn		**Sn**	**02 11 00.1**	**-1.1**
NVLJ	**Novalja**	**5.22 319**	*e*Pn		**Pn**	**02 10 09.4**	**-2.4**
NVLJ			Sn		**Sn**	**02 11 08.7**	**-3.5**
NVLJ	**Novalja**	**5.22 319**	*e*Pn		**Pn**	**02 10 09.4**	**-2.4**
NVLJ			Sn		**Sn**	**02 11 08.6**	**-3.5**
CEY	**Cerknica**	**6.31 325**	*i* Sg		**Sg**	**02 12 24.1**	**+8.0**
	comp=Z,1.0nm,0.1s						

NSSC ***16*** *02:09:57.7±0.4, 37°.57N×43°.31E, h4km±228km, ML3.4*
DDA ***16*** *02:10:07.0, 37°.16N×42°.41E, h10km, Ml3.9*
ISK ***16*** *02:10:06.9, 37°.25N×42°.42E, h5km, ML3.9/16*
*

DIYA	**Diyarbakir**	**1.97 290**	P		**Pn**	**02 10 42.9**	**+0.5**
DIYA			S		**Sb**	**02 11 11.0**	**+1.4**
BNGL	**BINGOL**	**1.98 329**	*e*P		**Pn**	**02 10 43.3**	**+0.6**
BNGL			*e*S		**Sn**	**02 11 05.3**	**-2.5**
BNGL			IAML			02 11 14.4	
	comp=Z,1μm,0.3s						
BNGL	**BINGOL**	**1.98 329**	*i* P		**Pn**	**02 10 43.1**	**+0.4**
BNGL			*i* S		**Sb**	**02 11 09.3**	**-0.8**
HANI	**Diyarbakir_Han**	**2.00 306**	*i* P		**Pn**	**02 10 41.9**	**-0.9**
HANI			*i* S		**Sn**	**02 11 08.2**	**+0.2**
HANI	**Diyarbakir_Han**	**2.00 306**	P		**Pn**	**02 10 41.9**	**-0.9**
HANI			S		**Sn**	**02 11 08.2**	**+0.2**
EKAR	**Karacoban**	**2.02 351**	*e*P		**Pn**	**02 10 44.5**	**+1.2**
EKAR			*e*S		**Sn**	**02 11 08.2**	**-0.7**
EKAR			IAML			02 11 18.6	
	comp=Z,103nm,0.8s						
EKAR	**Karacoban**	**2.02 351**	*i* P		**Pb**	**02 10 44.9**	**-1.0**
EKAR	**Karacoban**	**2.02 351**	P		**Pb**	**02 10 44.8**	**-1.0**
VRTB	**Varto-Mus**	**2.06 338**	PN		**Pn**	**02 10 44.1**	**+0.4**
VRTB	**Varto-Mus**	**2.06 338**	*e*Pn		**Pn**	**02 10 44.1**	**+0.4**
TUTA	**Tutak**	**2.16 7**	*e*P		**Pn**	**02 10 46.5**	**+1.2**
TUTA			*e*S		**Sn**	**02 11 10.8**	**-1.6**
TUTA			IAML			02 11 21.2	
	comp=Z,121nm,0.4s						
TUTA	**Tutak**	**2.16 7**	*i* P		**Pb**	**02 10 46.8**	**-1.4**
TUTA			*i* S		**Sg**	**02 11 19.0**	**+0.9**
TUTA	**Tutak**	**2.16 7**	P		**Pb**	**02 10 46.8**	**-1.4**
CLDR	**Caldiran**	**2.21 31**	PN		**Pn**	**02 10 46.5**	**+0.6**
CLDR	**Caldiran**	**2.21 31**	*i* P		**Pn**	**02 10 46.7**	**+0.8**
CLDR	**Caldiran**	**2.21 31**	*e*Pn		**Pn**	**02 10 46.5**	**+0.6**
BNGB	**Bing¶‖**	**2.23 322**	PN		**Pn**	**02 10 46.3**	**+0.3**
BGOL	**Bingol**	**2.23 321**	*i* P		**Pn**	**02 10 46.3**	**+0.2**
BGOL			*i* S		**Sn**	**02 11 11.7**	**-2.1**
BGOL	**Bingol**	**2.23 321**	P		**Pn**	**02 10 46.3**	**+0.2**
BGOL			S		**Sn**	**02 11 11.7**	**-2.1**
BINT	**Bingol**	**2.24 317**	*e*Pn		**Pn**	**02 10 46.3**	**+0.1**
AGRB	**Hanur-Agry**	**2.35 10**	PN		**Pn**	**02 10 48.6**	**+0.7**
AGRB	**Hanur-Agry**	**2.35 10**	*e*Pn		**Pn**	**02 10 48.6**	**+0.7**
DYDN	**Diyadin**	**2.48 23**	*e*P		**Pn**	**02 10 51.1**	**+1.4**
DYDN			IAML			02 11 28.7	
	comp=Z,29nm,0.8s						
EATA	**Eleskirt**	**2.60 1**	*e*P		**Pn**	**02 10 53.1**	**+1.8**
EATA	**Eleskirt**	**2.60 1**	*i* P		**Pn**	**02 10 53.2**	**+1.8**
EATA			*i* S		**Sg**	**02 11 31.4**	**-0.9**
EATA	**Eleskirt**	**2.60 1**	P		**Pn**	**02 10 53.2**	**+1.8**
SVRC	**Sivrice-ELAZID**	**2.73 295**	PN		**Pn**	**02 10 53.2**	**+0.2**
SVRC	**Sivrice-ELAZID**	**2.73 295**	*e*Pn		**Pn**	**02 10 53.2**	**+0.2**
SANL	**SANLIURFA_Merk**	**2.77 269**	*i* P		**Pn**	**02 10 53.2**	**-0.2**
SANL			*i* S		**Sb**	**02 11 33.9**	**+1.4**
SANL	**SANLIURFA_Merk**	**2.77 269**	P		**Pn**	**02 10 53.2**	**-0.2**
ERZM	**Erzurum**	**2.78 342**	*e*P		**Pn**	**02 10 54.8**	**+1.1**
HOMI	**Horasan**	**2.82 351**	*e*P		**Pb**	**02 10 58.8**	**-0.7**
URFA	**Urfa**	**2.90 275**	PN		**Pn**	**02 10 54.1**	**-1.2**
URFA	**Urfa**	**2.90 275**	*e*Pn		**Pn**	**02 10 54.1**	**-1.2**
IGDI	**IGDIR**	**2.90 26**	*e*P		**Pn**	**02 10 57.1**	**+1.8**
PTK	**Pertek**	**2.92 305**	PN		**Pn**	**02 10 55.5**	**-0.1**
PTK	**Pertek**	**2.92 305**	*e*Pn		**Pn**	**02 10 55.5**	**-0.1**
TNCL	**Tunceli-Merkez**	**2.95 310**	*e*P		**Pn**	**02 10 54.1**	**-1.8**
TNCL	**Tunceli-Merkez**	**2.95 310**	*i* P		**Pg**	**02 11 04.1**	**-1.1**
TNCL			*i* S		**Sg**	**02 11 41.8**	**-1.6**
ELZG	**Elazig**	**3.01 295**	*i* P		**Pn**	**02 10 56.8**	**-0.1**
ELZG			*i* S		**Sg**	**02 11 45.8**	**+0.4**
ELZG	**Elazig**	**3.01 295**	P		**Pn**	**02 10 56.8**	**-0.1**
SURC	**SANLIURFA_SURC**	**3.09 264**	*i* P		**Pn**	**02 10 57.5**	**-0.4**
SURC			*i* S		**Sb**	**02 11 41.8**	**-0.2**
SURC	**SANLIURFA_SURC**	**3.09 264**	P		**Pn**	**02 10 57.5**	**-0.4**
KOPT	**Kop Dagi**	**3.15 332**	*e*P		**Pn**	**02 10 59.7**	**+0.7**
DIGO	**Kars**	**3.23 13**	*e*P		**Pn**	**02 11 00.2**	**+0.1**
EUZM	**Uzumlu**	**3.27 319**	*e*P		**Pb**	**02 11 07.8**	**+0.8**
ATAB	**Bozova**	**3.32 275**	*i* P		**Pn**	**02 11 00.2**	**-0.8**
ATAB	**Bozova**	**3.32 275**	P		**Pn**	**02 11 00.2**	**-0.8**
MALT	**Malatya**	**3.36 290**	PN		**Pn**	**02 11 01.9**	**+0.3**
MALT	**Malatya**	**3.36 290**	*e*Pn		**Pn**	**02 11 01.9**	**+0.3**
GNI	**Garni**	**3.40 31**	PN		**Pn**	**02 11 03.5**	**+1.3**
GNI	**Garni**	**3.40 31**	*e*Pn		**Pn**	**02 11 03.5**	**+1.3**
EAK	**Akyaka**	**3.54 14**	*e*P		**Pn**	**02 11 02.8**	**-1.3**
BAYT	**Ayd¯–ntepe-Bay**	**3.62 331**	PN		**Pn**	**02 11 06.4**	**+1.2**
BAYT	**Ayd¯–ntepe-Bay**	**3.62 331**	*e*Pn		**Pn**	**02 11 06.4**	**+1.2**
KEMA	**Kemaliye**	**3.71 304**	*e*P		**Pn**	**02 11 06.5**	**+0.2**
AKCD	**Akcadag**	**3.74 287**	*i* P		**Pn**	**02 11 07.4**	**+0.6**
AKCD	**Akcadag**	**3.74 287**	P		**Pn**	**02 11 07.4**	**+0.6**
SLMH	**Al Salmeh**	**3.78 255**	*e*P		**Pn**	**02 11 07.7**	**+0.3**
SLMH			*e*S		**Sb**	**02 11 57.7**	**-4.0**
SLMH			AML	AML		02 12 24.5	
	comp=N,393nm,0.6s						
SLMH			AML	AML		02 12 27.9	
	comp=E,488nm,0.6s						
GAZ	**Gaziantep**	**4.18 270**	PN		**Pn**	**02 11 13.9**	**+1.0**
GAZ	**Gaziantep**	**4.18 270**	*e*Pn		**Pn**	**02 11 13.9**	**+1.0**
EPOS	**Posof**	**4.25 3**	*e*P		**Pn**	**02 11 15.1**	**+1.3**
RTB	**Rutbah**	**4.57 203**	*e*Pn		**Pn**	**02 11 18.0**	**-0.2**
RTB	SNR=3.0		*e*Sn		**Sn**	**02 12 08.0**	**-3.5**
	SNR=3.0						
QASN	**Qassioun**	**6.26 235‖**	*e*P		**Pn**	**02 11 42.3**	**+0.8**
QASN			*e*S		**Sn**	**02 12 57.5**	**+4.2**
QASN			AML	AML		02 13 48.8	
	comp=N,62nm,0.4s						
QASN			AML	AML		02 13 57.5	
	comp=E,85nm,0.6s						
TOTH	**TOTAH**	**6.27 233**	*e*P		**Pn**	**02 11 42.6**	**+1.0**
TOTH			*e*S		**Sn**	**02 12 57.5**	**+4.0**
TOTH			AML	AML		02 13 43.0	
	comp=E,30nm,0.9s						
TOTH			AML	AML		02 13 49.3	
	comp=N,40nm,0.8s						
BRBR	**Barbar**	**6.55 236‖**	*e*P		**Pn**	**02 11 46.0**	**+0.4**
BRBR			*e*S		**Sn**	**02 13 04.7**	**+4.1**
BRBR			AML	AML		02 13 51.1	
	comp=E,34nm,0.6s						
BRBR			AML	AML		02 14 12.7	
	comp=N,28nm,0.7s						
DQRL	**Deir Qamar**	**6.64 240**	*e*P		**Pn**	**02 11 49.1**	**+2.4**
SHBL	**Chebaa**	**6.73 237**	*e*P		**Pn**	**02 11 48.5**	**+0.5**

DDA ***16*** *02:34:41.9, 37°.23N×42°.46E, h8km, Ml2.9*
ISK ***16*** *02:34:41.7, 37°.28N×42°.42E, h5km, ML2.8/12*
CSEM ***16*** *02:34:42.3±0.2, 37°.22N×42°.50E, h2km, ML2.8, Error ellipse: s-maj=4.9km s-min=4.1km az=41.0*
ISN ***16*** *02:34:42.9±0.6, 37°.14N×42°.63E, h5km±2km, ML2.8*
ATA ***16*** *02:34:47.4±1.8, 37°.75N×42°.08E, h15km±22km, ML3.4, MW3.6*

ISC 16 02:34:42.6±1.2,**37°.26N**±0°.03×**42°.46E**±0°.02,**h7**km±9km,
n60, σ1§**19**/85,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRN	**S¯–rnak**	**0.24 351**		*i* P	**Pg**	**02 34 46.9**	**-0.5**
SIRN				*i* S	**Sg**	**02 34 51.2**	**+0.6**
SIRN	**S¯–rnak**	**0.24 351**		P	**Pg**	**02 34 46.9**	**-0.5**
SIRN				S	**Sg**	**02 34 51.2**	**+0.6**
SIRT	**Sirnak**	**0.24 357**		PG	**Pg**	**02 34 46.4**	**-1.1**
SIRT				SG	**Sg**	**02 34 51.1**	**+0.4**
SIRT	**Sirnak**	**0.24 357**		*e*Pg	**Pg**	**02 34 46.4**	**-1.1**
SIRT				*e*Sg	**Sg**	**02 34 51.1**	**+0.4**
SRTM	**Siirt_Merkez**	**0.84 330**		*i* P	**Pg**	**02 34 59.1**	**+0.2**
SRTM				*i* S	**Sb**	**02 35 12.0**	**+0.7**
SRTM	**Siirt_Merkez**	**0.84 330**		P	**Pg**	**02 34 59.1**	**+0.2**
SRTM				S	**Sb**	**02 35 12.0**	**+0.7**
HAKT	**HAKKARI**	**1.04 73**		*i* P	**Pg**	**02 35 01.5**	**-1.1**
HAKT				*i* S	**Sn**	**02 35 19.0**	**+0.2**
HAKT	**HAKKARI**	**1.04 73**		P	**Pg**	**02 35 01.5**	**-1.1**
HAKT				S	**Sn**	**02 35 19.0**	**+0.2**
BTMN	**Batman**	**1.14 304**		*i* P	**Pn**	**02 35 05.0**	**-0.1**
BTMN				*i* S	**Sn**	**02 35 21.0**	**0.0**
BTMN	**Batman**	**1.14 304**		P	**Pn**	**02 35 05.0**	**-0.1**
BTMN				S	**Sn**	**02 35 21.0**	**0.0**
GEVA	**Gevas**	**1.15 24**		*e*P	**Pn**	**02 35 05.3**	**-0.1**
GEVA				*i* Pg	**Pb**	**02 35 05.9**	**+0.8**
GEVA				*e*S	**Sn**	**02 35 21.1**	**-0.4**
GEVA				IAML		02 35 29.3	
	comp=Z,30nm,0.5s						
GEVA	**Gevas**	**1.15 24**		*i* P	**Pn**	**02 35 05.6**	**+0.2**
GEVA				*i* S	**Sb**	**02 35 20.7**	**+0.4**
GEVA	**Gevas**	**1.15 24**		P	**Pn**	**02 35 05.6**	**+0.2**
GEVA				S	**Sb**	**02 35 20.7**	**+0.4**
GURO	**Guroymak-BITLI**	**1.33 345**		PN	**Pn**	**02 35 07.8**	**0.0**
GURO	**Guroymak-BITLI**	**1.33 345**		*e*Pn	**Pn**	**02 35 07.8**	**0.0**
SVAN	**Silvan-Diyarba**	**1.34 312**		PN	**Pn**	**02 35 07.9**	**+0.1**
SVAN				SN	**Sn**	**02 35 26.7**	**+0.8**
SVAN	**Silvan-Diyarba**	**1.34 312**		*i* P	**Pb**	**02 35 08.1**	**0.0**
SVAN				*i* S	**Sn**	**02 35 27.2**	**+1.3**
SVAN	**Silvan-Diyarba**	**1.34 312**		*e*Pn	**Pn**	**02 35 07.9**	**+0.1**
SVAN	**Silvan-Diyarba**	**1.34 312**		P	**Pb**	**02 35 08.1**	**0.0**
SVAN				*e*Sn	**Sn**	**02 35 26.7**	**+0.8**
SVAN				S	**Sn**	**02 35 27.2**	**+1.3**
MARD	**Mardin**	**1.34 273**		*i* P	**Pn**	**02 35 06.8**	**-1.1**
MARD				*i* S	**Sb**	**02 35 25.6**	**0.0**
YOVA	**Hakkari_Y¯…kse**	**1.50 77**		*i* P	**Pn**	**02 35 09.9**	**-0.2**
YOVA				*i* S	**Sg**	**02 35 31.7**	**+1.0**
YOVA	**Hakkari_Y¯…kse**	**1.50 77**		P	**Pn**	**02 35 09.9**	**-0.2**
YOVA				S	**Sg**	**02 35 31.7**	**+1.0**
VANB	**Van**	**1.52 29**		PN	**Pn**	**02 35 10.2**	**-0.2**
VANB	**Van**	**1.52 29**		*e*Pn	**Pn**	**02 35 10.2**	**-0.2**
ADCV	**BITLIS_Adilcev**	**1.56 8**		*i* P	**Pb**	**02 35 12.2**	**+0.2**
ADCV				*i* S	**Sg**	**02 35 34.6**	**+1.8**
ADCV	**BITLIS_Adilcev**	**1.56 8**		P	**Pb**	**02 35 12.2**	**+0.2**
MAZI	**Mazidag**	**1.61 278**		PN	**Pn**	**02 35 11.5**	**-0.2**
MAZI	**Mazidag**	**1.61 278**		*e*Pn	**Pn**	**02 35 11.5**	**-0.2**
DIY	**Diyarbakir**	**1.88 290**		*e*Pn	**Pb**	**02 35 17.5**	**+0.1**
DYBB	**Diyarbakir**	**1.97 291**		PN	**Pn**	**02 35 17.5**	**+1.0**
DIYA	**Diyarbakir**	**1.97 290**		*i* P	**Pb**	**02 35 18.5**	**-0.4**
DIYA	**Diyarbakir**	**1.97 290**		P	**Pb**	**02 35 18.5**	**-0.4**
BNGL	**BINGOL**	**1.98 329**		*e*P	**Pn**	**02 35 14.9**	**-1.9**
BNGL				*e*S	**Sn**	**02 35 34.4**	**-7.6**
BNGL				IAML		02 35 48.5	
	comp=Z,124nm,0.4s						
BNGL	**BINGOL**	**1.98 329**		*i* P	**Pb**	**02 35 18.4**	**-0.7**
BNGL				*i* S	**Sg**	**02 35 45.6**	**-0.7**
HANI	**Diyarbakir_Han**	**2.00 306**		*i* P	**Pg**	**02 35 20.9**	**0.0**
HANI	**Diyarbakir_Han**	**2.00 306**		P	**Pg**	**02 35 20.9**	**0.0**
EKAR	**Karacoban**	**2.02 351**		*e*P	**Pn**	**02 35 17.8**	**+0.5**
EKAR	**Karacoban**	**2.02 351**		*i* P	**Pb**	**02 35 19.3**	**-0.5**
EKAR	**Karacoban**	**2.02 351**		P	**Pb**	**02 35 19.3**	**-0.5**
TUTA	**Tutak**	**2.16 7**		*e*P	**Pn**	**02 35 20.7**	**+1.4**
TUTA				IAML		02 35 56.3	
	comp=Z,6.8nm,0.5s						
TUTA	**Tutak**	**2.16 7**		*i* P	**Pb**	**02 35 21.2**	**-1.0**
TUTA	**Tutak**	**2.16 7**		P	**Pb**	**02 35 21.2**	**-1.0**
CLDR	**Caldiran**	**2.20 31**		PN	**Pn**	**02 35 21.2**	**+1.3**
CLDR	**Caldiran**	**2.20 31**		*e*Pn	**Pn**	**02 35 21.2**	**+1.3**
BNGB	**Bing¶‖**	**2.23 321**		PN	**Pn**	**02 35 20.7**	**+0.6**
BGOL	**Bingol**	**2.23 321**		*i* P	**Pb**	**02 35 22.5**	**-0.8**
BGOL	**Bingol**	**2.23 321**		P	**Pb**	**02 35 22.5**	**-0.8**
BINT	**Bingol**	**2.24 317**		*e*Pn	**Pn**	**02 35 20.7**	**+0.4**
AGRB	**Hanur-Agry**	**2.35 10**		PN	**Pn**	**02 35 22.9**	**+1.0**
AGRB	**Hanur-Agry**	**2.35 10**		*e*Pn	**Pn**	**02 35 22.9**	**+1.0**
EATA	**Eleskirt**	**2.60 1**		*e*P	**Pn**	**02 35 26.1**	**+0.7**
SVRC	**Sivrice-ELAZID**	**2.73 295**		PN	**Pn**	**02 35 28.0**	**+0.9**
SVRC	**Sivrice-ELAZID**	**2.73 295**		*e*Pn	**Pn**	**02 35 28.0**	**+0.9**
URFA	**Urfa**	**2.90 275**		PN	**Pn**	**02 35 30.5**	**+1.1**
URFA	**Urfa**	**2.90 275**		*e*Pn	**Pn**	**02 35 30.5**	**+1.1**
PTK	**Pertek**	**2.92 305**		PN	**Pn**	**02 35 29.9**	**+0.2**
PTK	**Pertek**	**2.92 305**		*e*Pn	**Pn**	**02 35 29.9**	**+0.2**
MALT	**Malatya**	**3.36 289**		PN	**Pn**	**02 35 37.0**	**+1.3**
MALT	**Malatya**	**3.36 289**		*e*Pn	**Pn**	**02 35 37.0**	**+1.3**
RTB	**Rutbah**	**4.57 203**		*e*Pn	**Pn**	**02 35 54.0**	**+1.7**
RTB	SNR=3.0			*e*Sn	**Sn**	**02 36 43.0**	**-2.7**
	SNR=3.0						

ISN ***16*** *02:44:08.5±1.4, 37°.18N×42°.58E, h0km±5km, ML3.3*
CSEM ***16*** *02:44:09.9±0.2, 37°.19N×42°.49E, h2km, ML3.3, Error ellipse: s-maj=4.2km s-min=3.1km az=60.0*
DDA ***16*** *02:44:10.6, 37°.25N×42°.45E, h7km, Ml3.3*
ISK ***16*** *02:44:10.1, 37°.23N×42°.42E, h5km, ML3.1/10*
ATA ***16*** *02:44:12.8±0.3, 37°.37N×42°.46E, h24km±16km, ML4.0, MW3.8*

ISC 16 02:44:09.9±1.3,**37°.20N**±0°.04×**42°.46E**±0°.03,**h4**km±10km,
n53, σ0§**74**/67,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRN	**S¯–rnak**	**0.30 353**		*i* P	**Pg**	**02 44 15.4**	**-0.2**
SIRN				*i* S	**Sg**	**02 44 19.1**	**-0.4**
SIRN	**S¯–rnak**	**0.30 353**		P	**Pg**	**02 44 15.4**	**-0.2**
SIRN				S	**Sg**	**02 44 19.1**	**-0.4**
SIRT	**Sirnak**	**0.30 357**		PG	**Pg**	**02 44 15.4**	**-0.3**
SIRT				SG	**Sg**	**02 44 20.5**	**+0.9**
SIRT	**Sirnak**	**0.30 357**		*e*Pg	**Pg**	**02 44 15.4**	**-0.3**
SIRT				*e*Sg	**Sg**	**02 44 20.5**	**+0.9**
SRTM	**Siirt_Merkez**	**0.90 332**		*i* P	**Pb**	**02 44 27.6**	**-0.5**
SRTM				*i* S	**Sg**	**02 44 38.4**	**-0.3**
SRTM	**Siirt_Merkez**	**0.90 332**		P	**Pb**	**02 44 27.6**	**-0.5**
SRTM				S	**Sg**	**02 44 38.4**	**-0.3**
HAKT	**HAKKARI**	**1.05 70**		*i* P	**Pg**	**02 44 30.0**	**-0.1**
HAKT	**HAKKARI**	**1.05 70**		P	**Pg**	**02 44 30.0**	**-0.1**
BTMN	**Batman**	**1.17 306**		*i* P	**Pn**	**02 44 33.6**	**+0.4**
BTMN	**Batman**	**1.17 306**		P	**Pn**	**02 44 33.6**	**+0.4**
GEVA	**Gevas**	**1.21 23**		*e*P	**Pb**	**02 44 33.2**	**-0.2**
GEVA				*e*S	**Sb**	**02 44 49.2**	**-0.2**
GEVA				IAML		02 44 57.9	
	comp=Z,59nm,0.5s						
GEVA	**Gevas**	**1.21 23**		*i* P	**Pn**	**02 44 33.4**	**-0.3**
GEVA				*i* S	**Sn**	**02 44 49.9**	**-0.7**
GEVA	**Gevas**	**1.21 23**		P	**Pn**	**02 44 33.4**	**-0.3**
GEVA				S	**Sn**	**02 44 49.9**	**-0.7**
MARD	**Mardin**	**1.35 275**		*i* P	**Pn**	**02 44 35.1**	**-0.5**
SVAN	**Silvan-Diyarba**	**1.38 314**		PN	**Pg**	**02 44 36.4**	**+0.1**
SVAN				SN	**Sn**	**02 44 54.8**	**+0.1**
SVAN	**Silvan-Diyarba**	**1.38 314**		*i* P	**Pg**	**02 44 36.6**	**+0.3**
SVAN	**Silvan-Diyarba**	**1.38 314**		*e*Pn	**Pg**	**02 44 36.4**	**+0.1**
SVAN				*e*Sn	**Sn**	**02 44 54.8**	**+0.1**
GURO	**Guroymak-BITLI**	**1.39 346**		PN	**Pg**	**02 44 36.4**	**-0.1**
GURO				SN	**Sn**	**02 44 55.5**	**+0.4**
GURO	**Guroymak-BITLI**	**1.39 346**		*e*Pn	**Pg**	**02 44 36.4**	**-0.1**
GURO				*e*Sn	**Sn**	**02 44 55.5**	**+0.4**
YOVA	**Hakkari_Y¯…kse**	**1.51 75**		*i* P	**Pb**	**02 44 38.5**	**0.0**
YOVA	**Hakkari_Y¯…kse**	**1.51 75**		P	**Pb**	**02 44 38.5**	**0.0**
TVAN	**Van**	**1.52 29**		*i* P	**Pg**	**02 44 40.8**	**+1.7**
VANB	**Van**	**1.57 28**		PN	**Pn**	**02 44 38.4**	**-0.3**
VANB	**Van**	**1.57 28**		*e*Pn	**Pn**	**02 44 38.4**	**-0.3**
ADCV	**BITLIS_Adilcev**	**1.62 7**		*i* P	**Pg**	**02 44 41.3**	**+0.4**
ADCV	**BITLIS_Adilcev**	**1.62 7**		P	**Pg**	**02 44 41.3**	**+0.4**
MAZI	**Mazidag**	**1.63 280**		PN	**Pn**	**02 44 39.6**	**+0.2**
MAZI	**Mazidag**	**1.63 280**		*e*Pn	**Pn**	**02 44 39.6**	**+0.2**
DIY	**Diyarbakir**	**1.91 292**		*e*Pn	**Pb**	**02 44 44.8**	**-0.5**
DYBB	**Diyarbakir**	**1.99 293**		PN	**Pn**	**02 44 44.8**	**+0.4**
BNGL	**BINGOL**	**2.03 330**		*e*P	**Pb**	**02 44 47.0**	**-0.4**
BNGL				IAML		02 45 21.6	
	comp=Z,272nm,0.5s						
BNGL	**BINGOL**	**2.03 330**		*i* P	**Pb**	**02 44 47.1**	**-0.4**
EKAR	**Karacoban**	**2.07 351**		*e*P	**Pb**	**02 44 47.3**	**-0.9**
EKAR				IAML		02 45 21.4	
	comp=Z,24nm,0.8s						
TUTA	**Tutak**	**2.21 7**		*e*P	**Pb**	**02 44 49.3**	**-1.3**
BNGB	**Bing¶‖**	**2.27 322**		PN	**Pn**	**02 44 48.8**	**+0.5**
BINT	**Bingol**	**2.28 318**		*e*Pn	**Pn**	**02 44 48.8**	**+0.3**
AGRB	**Hanur-Agry**	**2.41 10**		PN	**Pn**	**02 44 51.1**	**+0.9**
AGRB	**Hanur-Agry**	**2.41 10**		*e*Pn	**Pn**	**02 44 51.1**	**+0.9**
EATA	**Eleskirt**	**2.66 1**		*e*P	**Pb**	**02 44 58.2**	**0.0**
SVRC	**Sivrice-ELAZID**	**2.76 296**		PN	**Pn**	**02 44 55.6**	**+0.5**
SVRC	**Sivrice-ELAZID**	**2.76 296**		*e*Pn	**Pn**	**02 44 55.6**	**+0.5**
ERZM	**Erzurum**	**2.83 343**		*e*P	**Pb**	**02 45 00.1**	**-1.1**
HOMI	**Horasan**	**2.87 351**		*e*P	**Pb**	**02 45 01.3**	**-0.6**
URFA	**Urfa**	**2.91 276**		PN	**Pn**	**02 44 57.9**	**+0.8**
URFA	**Urfa**	**2.91 276**		*e*Pn	**Pn**	**02 44 57.9**	**+0.8**
PTK	**Pertek**	**2.95 306**		PN	**Pn**	**02 44 58.3**	**+0.6**
PTK	**Pertek**	**2.95 306**		*e*Pn	**Pn**	**02 44 58.3**	**+0.6**
TNCL	**Tunceli-Merkez**	**2.99 311**		*e*P	**Pn**	**02 44 57.0**	**-1.2**
EUZM	**Uzumlu**	**3.31 320**		*e*P	**Pn**	**02 45 04.2**	**+1.6**
MALT	**Malatya**	**3.38 290**		PN	**Pn**	**02 45 04.4**	**+0.8**
MALT	**Malatya**	**3.38 290**		*e*Pn	**Pn**	**02 45 04.4**	**+0.8**
KEMA	**Kemaliye**	**3.74 305**		*e*P	**Pn**	**02 45 11.6**	**+3.0**
RTB	**Rutbah**	**4.52 204**		*e*Pn	**Pn**	**02 45 20.0**	**+0.8**
RTB	SNR=3.0			*e*Sn	**Sn**	**02 46 11.0**	**-1.2**
	SNR=3.0						

NIED ***16*** *02:44:00, 37°.20N×141°.40E, h44km, Mw3.7 Best double couple: M=3.48000×10^14 NP1:φ=184.00000°, δ=15.00000°, λ=68.00000°. NP2:φ=27.00000°, δ=76.00000°, λ=96.00000°.*
ISCJB ***16*** *02:44:14.3±0.9, 37°.11N±0°.04×141°.49E±0°.08, h45km±7km, mb3.6/7, MS2.6/1, Error ellipse: s-maj=11.2km s-min=6.0km az=16.9*
JMA ***16*** *02:44:16.1±0.1, 37°.16N×141°.35E, h49km±1km, M3.6*
JMA Felt I J1.

IDC ***16*** *02:44:18.4±3.0, 36°.96N×141°.33E, h71km±29km, mb3.4/7, mb1 3.5/10, mb1mx3.3/66, mbtmp3.7/10, MS2.5/4, Ms1 2.5/4, ms1mx2.3/46, Error ellipse: s-maj=26.8km s-min=15.5km az=55.0*

ISC 16 02:44:15.4±1.3,**37°.13N**±0°.04×**141°.50E**±0°.08,**h36**km±2km,
n29, σ1§**25**/29,**mb3.6**/7,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.55 296**		P	**Pn**	**02 44 26.3**	**-0.6**
JFK				*e*S	**Sn**	**02 44 33.6**	**-1.2**
ONAJ	**Iwakimizuishiy**	**0.56 267**		P	**Pn**	**02 44 26.6**	**-0.4**
ONAJ				S	**Sn**	**02 44 33.9**	**-1.1**
JHO	**Hitachi**	**0.91 235**		P	**Pn**	**02 44 31.1**	**-0.5**
JHO				S	**Sn**	**02 44 41.7**	**-1.8**
JMM	**Marumori**	**0.92 323**		P	**Pn**	**02 44 31.5**	**-0.3**
JMM				S	**Sn**	**02 44 42.5**	**-1.4**
JFT	**Otama**	**1.00 293**		P	**Pn**	**02 44 33.1**	**+0.2**
JFT				*e*S	**Sn**	**02 44 45.0**	**-0.8**
JIO	**Ouri**	**1.33 355**		P	**Pn**	**02 44 37.5**	**+0.1**
JIO				S	**Sn**	**02 44 52.5**	**-1.3**
JOU	**Okura**	**1.40 332**		P	**Pn**	**02 44 38.8**	**+0.4**
JFY	**Yanaizu**	**1.46 281**		P	**Pn**	**02 44 39.2**	**0.0**
JAG	**Ashikaga**	**1.79 247**		P	**Pn**	**02 44 43.6**	**-0.1**
MJAR	**Matsushiro Arr**	**2.70 258**		P	**Pn**	**02 44 56.8**	**+0.4**
	5.3nm,0.3s,baz=147,slow=16,SNR=18						
MJAR				S	**Sn**	**02 45 27.3**	**-0.5**
	3.4nm,0.3s,baz=78,slow=19,SNR=4.9						
MJAR				LR	LR	02 46 15.5	
	comp=Z,61nm,21.2s,baz=110,slow=46						
MAT	**Matsushiro**	**2.70 258**		P	**Pn**	**02 44 57.4**	**+1.1**
MAT				S	**Sn**	**02 45 29.5**	**+1.7**
JHJ	**Hachijo jima 2**	**4.24 200**		P	**Pn**	**02 45 17.9**	**+0.5**
	11nm,0.3s,baz=128,slow=24,SNR=8.7						
JHJ				S	**Sn**	**02 46 04.6**	**-1.1**
	12nm,0.3s,baz=73,slow=19,SNR=3.2						
ASAJ	**Asahikawa**	**7.03 6**		LR	LR	02 48 52.9	
	comp=Z,22nm,20.8s,baz=16,slow=38						
USRK	**Ussuriysk Ar.**	**10.10 317**		P	**Pn**	**02 46 42.0**	**+4.3**
	0.1nm,0.3s,baz=122,slow=14,SNR=5.3						
KSRS	**Korea Array**	**10.82 276**		LR	LR	02 50 52.0	
	comp=Z,25nm,18.3s,baz=144,slow=37						
GUMO	**Guam**	**23.64 172**		LR	LR	02 58 00.1	
	comp=Z,23nm,21.5s,baz=152,slow=35

GUN	Gumba	44.46 305	*e*P	P	02 55 09.0	-0.3
PKIN	Phulchoki	44.73 304	*e*P	P	02 55 11.9	+0.5
	9.3nm,0.2s					
SONM	Songino Array	45.40 341	P	P	02 55 16.2	-0.1
	0.2nm,0.4s,baz=161,slow=9.2,SNR=2.3					
KOLN	Koldanda	46.29 303	*e*P	P	02 55 23.3	-0.3
	27nm,0.7s					
DANN	Dangsing	46.36 304	*e*P	P	02 55 23.8	-0.5
	12nm,0.5s					
PYUN	Piuthan	46.91 304	*e*P	P	02 55 28.4	-0.1
	28nm,0.8s					
MKAR	Makanchi Array	55.87 325	P	P	02 56 34.6	-0.3
	1.7nm,0.6s,baz=118,slow=7.2,SNR=11					
MKAR			PcP	PcP	02 57 32.7	-0.2
	1.2nm,0.7s,baz=108,slow=4.8,SNR=2.8					
NIL	Nilore	56.61 307	*e*P	P	02 56 39.7	-0.7
ZALV	Zalesovo Beam	58.78 333	P	P	02 56 53.9	-1.3
	0.8nm,0.5s,baz=133,slow=5.6,SNR=3.0					
ZALV			LR	LR	03 22 38.9	
	comp=Z,24nm,20.0s,baz=68,slow=36					
KURK	Kurchatov	60.01 327	P	P	02 57 03.2	-0.6
KURBB	Kurchatov Arra	60.01 327	P	P	02 57 03.2	-0.6
	2.5nm,0.7s,baz=125,slow=6.4,SNR=27					
BVAR	Borovoye Array	65.60 327	P	P	02 57 40.3	-0.6
	1.3nm,0.8s,baz=127,slow=9.4,SNR=5.6					
BRVK	Borovoye	65.67 327	*e*P	P	02 57 40.2	-1.2
GEYT	Alibeck	69.55 308	P	P	02 58 04.8	-1.4
	56nm,0.7s,baz=170,slow=10,SNR=10					
GEYT			LR	LR	03 31 23.7	
	comp=Z,20nm,18.9s,baz=75,slow=38					
AKTO	Aktyubinsk	72.03 321	P	P	02 58 19.8	-1.1
	1.9nm,0.6s,baz=61,slow=9.1,SNR=8.4					
AKTO			LR	LR	03 32 06.0	
	comp=Z,28nm,20.9s,baz=103,slow=38					
RAYN	Ar Rayn	79.56 293	*e*P	P	02 59 03.0	-1.5
	1.2nm,0.6s					
KBZ	Khabaz	81.52 313	P	P	02 59 13.2	-1.2
	2.0nm,1.0s,baz=90,slow=9.1,SNR=2.8					
KIV	Kislovodsk	81.67 313	*e*P	P	02 59 15.4	0.0
	4.5nm,0.6s					
ILAR	Eielson Array	83.43 26	P	P	02 59 24.5	+0.5
	0.5nm,0.9s,baz=246,slow=3.9,SNR=3.4					
VNDA	Vanda	85.37 173	P	P	02 59 33.8	+0.3
	1.2nm,0.8s,baz=300,slow=5.9,SNR=4.5					
SPITS	Spitsbergen Ar	88.54 349	P	P	02 59 49.1	+0.1
	5.5nm,1.1s,baz=71,slow=6.2,SNR=3.7					
ARCES	ARCESS Array B	88.57 340	P	P	02 59 48.1	-1.1
	2.6nm,0.8s,baz=74,slow=6.7,SNR=9.6					
BRTR	Keskin Array B	88.65 310	P	P	02 59 48.6	-1.8
	0.7nm,0.8s,baz=129,slow=3.5,SNR=4.7					
FINES	FINESS Array B	90.04 332	P	P	02 59 56.0	-0.2
	1.2nm,0.9s,baz=66,slow=6.5,SNR=5.2					
AKASG	Malin Array Be	90.28 321	P	P	02 59 55.6	-1.9
	0.1nm,0.3s,baz=70,slow=4.8,SNR=3.4					
MLR	Muntele Rosu	93.38 316	P	P	03 00 11.6	-0.6
	0.2nm,0.6s,baz=70,slow=12,SNR=3.0					
MLR			LR	LR	03 47 54.2	
	comp=Z,7.6nm,18.0s,baz=128,slow=39					
NOA	NORSAR Array B	96.97 334	LR	LR	03 47 17.8	
	comp=Z,20nm,21.1s,baz=65,slow=37					
TORD	Torodi Ar. Bea	122.13 289	PKP	PKPdf	03 05 51.4	-0.8
	1.1nm,0.7s,baz=61,slow=1.7,SNR=11					
KOWA	Kowa	127.04 293	PKP	PKPdf	03 06 01.7	+0.1
	0.7nm,0.6s,baz=72,slow=3.2,SNR=3.6					
JTS	JuntasAbangare	144.84 63	*e*PKPdf	PKPdf	03 06 35.0	+0.5

*ISCJB **16** 03:07:04.0±0.5,28°.94S±0°.09×178°.4W±0°.1,h231km, mb4.1/18,Error ellipse: s-maj=13.6km s-min=11.1km az=43.7*
*IDC **16** 03:07:04.3±0.5,28°.79S×178°.37W,h219km±4km,mb4.0/13, mb1 4.1/13,mb1mx3.9/42,mbtmp4.6/13,Error ellipse: s-maj=16.3km s-min=12.4km az=79.0*
*NEIC **16** 03:07:05.2±0.8,28°.85S×178°.29W,h231km±7km,mb4.4/4, Error ellipse: s-maj=13.1km s-min=11.5km az=185.0*
ISC 16 03:07:05.2±0.5,**28°.8S**±0°.1×**178°.3W**±0°.1,**h231**km,**n49,** σ1§**08**/52,**mb4.3**/18,**1D,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	0.53	142	P	Pn	03 07 35.3	-0.6
	2μm,0.3s,baz=104,slow=7.8,SNR=76						
RAO				S	S	03 07 57.3	-2.8
	1μm,0.3s,baz=228,slow=23,SNR=5.6						
URZ	Urewera	10.15	201	P	Pn	03 09 19.5	-6.3
	0.2nm,0.3s,baz=16,slow=16,SNR=2.6						
URZ				S	S	03 11 08.8	-11
	5.0nm,0.3s,baz=90,slow=18,SNR=13						
DZM	Mont Dzumac	15.34	293	P	Pn	03 10 32.7	+2.3
	0.3nm,0.3s,baz=113,slow=14,SNR=6.0						
RAR	Rarotonga	18.40	70	*e*P	P	03 11 03.4	0.0
CTA	Charters Tower	33.33	277	P	P	03 13 21.8	+0.2
	9.0nm,0.5s,baz=99,slow=10,SNR=14						
CTAO	Charters Tower	33.33	277	*e*P	P	03 13 21.6	-0.1
STKA	Stephens Creek	34.62	255	P	P	03 13 31.6	-0.9
	5.2nm,0.7s,baz=100,slow=13,SNR=9.4						
PMG	Port Moresby	37.73	294	*e*P	P	03 13 58.9	-0.2
	4.8nm,0.5s						
ASAR	Alice Springs	42.96	265	P	P	03 14 41.0	-0.9
	5.2nm,0.5s,baz=97,slow=6.6,SNR=137						
ASAR				PcP	PP	03 16 26.7	0.0
	0.6nm,0.5s,baz=107,slow=4.0,SNR=3.0						
ASAR				ScP	ScP	03 19 57.3	+0.4
	0.2nm,0.6s,baz=123,slow=3.7,SNR=3.7						
WRAB	Tennant Creek	43.80	271	*e*P	P	03 14 47.4	-1.2
	2.8nm,0.4s						
WRA	Warramunga Arr	43.81	271	P	P	03 14 47.8	-0.9
	3.2nm,0.5s,baz=110,slow=7.9,SNR=125						
WRA				PcP	PcP	03 16 30.6	-0.2
	0.9nm,0.8s,baz=89,slow=3.3,SNR=3.5						
WRA				ScP	ScP	03 20 00.7	+0.4
	0.4nm,0.8s,baz=108,slow=3.3,SNR=3.1						
SBA	Scott Base	49.58	184	*e*P	P	03 15 35.6	+3.2
	10nm,0.6s						
VNDA	Vanda	49.62	186	P	P	03 15 34.6	+1.9
	2.5nm,0.7s,baz=5.9,slow=7.1,SNR=10						
MBWA	Marble Bar	56.16	263	*e*P	P	03 16 19.9	-1.4
CASY	Casey	56.41	207	*e*P	P	03 16 21.6	-0.7
	9.0nm,0.5s						
QSPA	South Pole Qui	61.27	180	P	P	03 16 56.7	+0.8
	12nm,1.1s,baz=24,slow=0.9,SNR=4.8						
MAW	Mawson	73.68	200	P	P	03 18 14.0	+0.8
	7.2nm,0.6s,baz=138,slow=7.2,SNR=21						
MJAR	Matsushiro Arr	76.81	325	P	P	03 18 30.8	-0.6
	4.4nm,0.8s,baz=167,slow=5.7,SNR=13						
SNAA	Sanae	79.72	179	P	P	03 18 45.8	-1.2
SNAA	Sanae	79.72	179	P	P	03 18 47.1	+0.1
	2.0nm,0.8s,baz=216,slow=6.5,SNR=5.7						
VNA3	Neumayer Olymp	79.88	176	P	P	03 18 48.1	+0.3
VNA1	Neumayer--Stat	80.54	177	P	P	03 18 50.5	-0.8
ASAJ	Asahikawa	80.94	333	P	P	03 18 55.2	+1.6
	5.9nm,0.8s,baz=174,slow=10,SNR=7.1						
KSRS	Korea Array	82.99	320	P	P	03 19 05.1	+0.7
	2.2nm,0.7s,baz=138,slow=6.4,SNR=9.6						
KSAR	Wonju Array Be	83.01	320	P	P	03 19 05.1	+0.6
PETK	Petropavlovsk-	84.24	346	P	P	03 19 10.8	+0.5
	4.1nm,0.6s,baz=114,slow=6.7,SNR=8.4						
USRK	Ussuriysk Ar.	85.72	327	P	P	03 19 18.7	+0.7
	4.0nm,0.7s,baz=147,slow=2.9,SNR=6.5						
KLR	Kul'dur	89.56	330	P	P	03 19 37.5	+1.4
	0.2nm,0.8s,baz=86,slow=1.0,SNR=12						
MKAR	Makanchi Array	116.57	311	PKP	PKPdf	03 25 20.5	-1.0
	0.7nm,0.5s,baz=190,slow=1.1,SNR=8.7						
KURK	Kurchatov	119.78	314	PKP	PKPdf	03 25 26.7	-0.7
KURBB	Kurchatov Arra	119.82	314	PKP	PKPdf	03 25 26.7	-0.8
	1.5nm,0.6s,baz=121,slow=2.0,SNR=12						
BVAR	Borovoye Array	125.11	317	PKP	PKPdf	03 25 37.7	+0.1
	2.6nm,0.4s,baz=111,slow=1.1,SNR=13						
BRVK	Borovoye	125.17	317	*e*PKPdf	PKPdf	03 25 37.2	-0.5
ARU	Arti	131.72	321	*e*PKPdf	PKPdf	03 25 50.8	+0.7
AKTO	Aktyubinsk	132.85	313	PKP	PKPdf	03 25 52.0	-0.4
	1.3nm,0.6s,baz=86,slow=3.2,SNR=5.7						
ARCES	ARCESS Array B	137.01	348	PKhKP	PKPpre	03 25 54.3	
	1.9nm,0.9s,baz=29,slow=2.8,SNR=5.3						
FINES	FINESS Array B	143.59	340	PKP	PKPab	03 26 09.1	+0.3
	4.2nm,0.5s,baz=58,slow=3.2,SNR=50						
KBZ	Khabaz	144.01	306	PKP	PKPbc	03 26 11.4	-0.1
	1.3nm,0.6s,baz=72,slow=6.4,SNR=3.0						
NB2	NORSAR Subarra	147.17	351	PKP	PKPbc	03 26 19.7	-0.8
	comp=Z,1.2nm,0.4s,baz=10,slow=3.2						
HFS	Hagfors	147.66	349	PKPbc	PKPbc	03 26 20.9	-0.9
	comp=Z,6.3nm,0.7s,baz=66,slow=2.4,SNR=21						
AKASG	Malin Array Be	149.90	324	PKPbc	PKPbc	03 26 27.5	-0.1
	comp=Z,6.2nm,0.3s,baz=46,slow=3.3,SNR=36						
KIEV	Kiev	149.91	324	*e*PKPbc	PKPbc	03 26 26.9	-0.7
KIEV				*e*PKPab	PKPab	03 26 33.7	-0.4
MMAI	Mount Meron Ar	150.87	287	PKPbc	PKPbc	03 26 31.9	+1.2
	comp=Z,8.8nm,0.7s,baz=74,slow=6.2,SNR=8.3						
BRTR	Keskin Array B	151.61	301	PKPbc	PKPbc	03 26 32.0	-0.2
	comp=Z,2.2nm,0.6s,baz=141,slow=3.6,SNR=11						
ANTO	Ankara	152.21	302	*e*PKPbc	PKPbc	03 26 33.4	-0.1
ANTO				*e*PKPab	PKPab	03 26 43.0	-1.2
EKA	Eskdalemuir Ar	153.29	6	PKPab	PKPab	03 26 47.2	-0.9
	comp=Z,0.5nm,0.5s,baz=304,slow=3.3,SNR=4.3						
CLL	Collm	156.00	342	j,i/PKPab	PKPab	03 27 01.1	+1.3
	comp=Z,6.0nm,0.8s						
GERES	GERESS Array B	157.99	339	PKPab	PKPab	03 27 10.4	+1.7
	comp=Z,0.6nm,0.6s,baz=9.2,slow=4.2,SNR=6.8						
TORD	Torodi Ar. Bea	164.39	180	PKPab	PKPab	03 27 37.1	-0.1
	comp=Z,1.7nm,0.8s,baz=171,slow=4.0,SNR=7.0						

*ISN **16** 03:12:54.0±1.4,37°.17N×42°.60E,h0km±5km,ML3.7*
*CSEM **16** 03:12:55.2±0.2,37°.20N×42°.48E,h2km,ML3.6,Error ellipse: s-maj=4.1km s-min=3.7km az=39.0*
*DDA **16** 03:12:55.1,37°.25N×42°.47E,h9km,Ml3.7*
*ISK **16** 03:12:56.2,37°.29N×42°.39E,h7km,ML3.6/17*
*ATA **16** 03:12:58.0±0.3,37°.45N×42°.36E,h18km±5km,ML4.4, MW4.0*
ISC 16 03:12:54.8±1.3,**37°.19N**±0°.03×**42°.44E**±0°.02,**h0**km±10km, **n89,** σ0§**98**/128,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRN	S¯–rnak	0.30	355	*i* P	Pg	03 13 00.1	-0.5
SIRN				*i* S	Sg	03 13 03.9	-0.6
SIRN	S¯–rnak	0.30	355	P	Pg	03 13 00.1	-0.5
SIRN				S	Sg	03 13 03.9	-0.6
SIRT	Sirnak	0.31	359	PG	Pg	03 13 00.2	-0.5
SIRT				SG	Sg	03 13 04.4	-0.3
SIRT	Sirnak	0.31	359	*e*Pg	Pg	03 13 00.2	-0.5
SIRT				*e*Sg	Sg	03 13 04.4	-0.3
SRTM	Siirt_Merkez	0.90	333	*i* P	Pg	03 13 12.1	+0.1
SRTM				*i* S	Sg	03 13 24.0	+0.4
SRTM	Siirt_Merkez	0.90	333	P	Pg	03 13 12.1	+0.1
SRTM				S	Sg	03 13 24.0	+0.4
HAKT	HAKKARI	1.07	70	*i* P	Pg	03 13 14.5	-0.8
HAKT				*i* S	Sg	03 13 29.8	+0.6
HAKT	HAKKARI	1.07	70	P	Pg	03 13 14.5	-0.8
HAKT				S	Sg	03 13 29.8	+0.6
BTMN	Batman	1.16	307	*i* P	Pg	03 13 17.7	+0.6
BTMN				*i* S	Sn	03 13 34.3	-0.7
BTMN	Batman	1.16	307	P	Pg	03 13 17.7	+0.6
BTMN				S	Sn	03 13 34.3	-0.7
GEVA	Gevas	1.22	23	*e*P	Pg	03 13 18.0	-0.2
GEVA				IAML		03 13 42.7	
	comp=Z,267nm,0.5s						
GEVA	Gevas	1.22	23	*i* P	Pg	03 13 18.6	+0.5
GEVA				*i* S	Sg	03 13 34.0	+0.1
GEVA	Gevas	1.22	23	P	Pg	03 13 18.6	+0.5
GEVA				S	Sg	03 13 34.0	+0.1
MARD	Mardin	1.33	276	*i* P	Pg	03 13 19.7	-0.6
MARD				*i* S	Sn	03 13 39.9	+0.7
SVAN	Silvan-Diyarba	1.37	314	PN	Pg	03 13 21.2	+0.1
SVAN				SN	Sb	03 13 39.4	-0.1
SVAN	Silvan-Diyarba	1.37	314	*i* P	Pg	03 13 20.7	-0.4
SVAN				*i* S	Sn	03 13 40.1	-0.1
SVAN	Silvan-Diyarba	1.37	314	P	Pg	03 13 20.7	-0.4
SVAN	Silvan-Diyarba	1.37	314	*e*Pn	Pg	03 13 21.2	+0.1
SVAN				*e*Sn	Sb	03 13 39.4	-0.1
SVAN				S	Sn	03 13 40.1	-0.1
GURO	Guroymak-BITLI	1.39	347	PN	Pg	03 13 21.1	-0.4
GURO				SN	Sg	03 13 39.5	-0.1
GURO	Guroymak-BITLI	1.39	347	*e*Pn	Pg	03 13 21.1	-0.4
GURO				*e*Sn	Sg	03 13 39.5	-0.1
YOVA	Hakkari_Y¨...kse	1.52	74	*i* P	Pn	03 13 23.0	-0.4
YOVA				*i* S	Sn	03 13 44.6	+0.6
YOVA	Hakkari_Y¨...kse	1.52	74	P	Pn	03 13 23.0	-0.4
YOVA				S	Sn	03 13 44.6	+0.6
TVAN	Van	1.54	29	*i* P	Pb	03 13 25.2	+1.0
TVAN				*i* S	Sb	03 13 42.8	-1.5
TVAN	Van	1.54	29	P	Pb	03 13 25.2	+1.0
TVAN				S	Sb	03 13 42.8	-1.5
VANB	Van	1.59	28	PN	Pn	03 13 23.9	-0.3
VANB	Van	1.59	28	*e*Pn	Pn	03 13 23.9	-0.3
MAZI	Mazidag	1.61	280	PN	Pn	03 13 24.6	0.0
MAZI	Mazidag	1.61	280	*e*Pn	Pn	03 13 24.6	0.0
ADCV	BITLIS_Adilcev	1.63	8	*i* P	Pn	03 13 26.0	+1.2
ADCV				*i* S	Sg	03 13 48.4	+1.3
ADCV	BITLIS_Adilcev	1.63	8	P	Pn	03 13 26.0	+1.2
ADCV				S	Sg	03 13 48.4	+1.3
DIY	Diyarbakir	1.90	292	*e*Pn	Pb	03 13 30.3	0.0
DYBB	Diyarbakir	1.98	293	PN	Pn	03 13 30.3	+0.7
DIYA	Diyarbakir	1.98	292	*i* P	Pb	03 13 31.4	-0.4
DIYA				*i* S	Sg	03 13 58.6	0.0
DIYA	Diyarbakir	1.98	292	P	Pb	03 13 31.4	-0.4
DIYA				S	Sg	03 13 58.6	0.0
VMUR	Van-Muradiye	2.00	26	*i* S	Sn	03 13 55.4	-0.4
VMUR	Van-Muradiye	2.00	26	S	Sn	03 13 55.4	-0.4
HANI	Diyarbakir_Han	2.03	308	*i* P	Pn	03 13 29.4	-0.8
HANI				*i* S	Sn	03 13 55.8	-0.5
HANI	Diyarbakir_Han	2.03	308	P	Pn	03 13 29.4	-0.8
HANI				S	Sn	03 13 55.8	-0.5
BNGL	BINGOL	2.03	330	*e*P	Pn	03 13 31.5	+1.1
BNGL				*i* Pg	Pb	03 13 31.7	-1.0
BNGL				*e*S	Sn	03 13 57.2	+0.6
BNGL				IAML		03 14 06.4	
	comp=Z,904nm,0.5s						
BNGL	BINGOL	2.03	330	*i* P	Pn	03 13 31.5	+1.1
BNGL				*i* S	Sg	03 13 59.6	-0.5
EKAR	Karacoban	2.08	352	*e*P	Pn	03 13 31.9	+0.8
EKAR				*i* Pg	Pb	03 13 32.5	-1.0
EKAR				IAML		03 14 07.6	
	comp=Z,42nm,0.6s						
EKAR	Karacoban	2.08	352	*i* P	Pn	03 13 32.2	+1.1
EKAR				*i* S	Sg	03 14 02.9	+1.3
EKAR	Karacoban	2.08	352	P	Pn	03 13 32.2	+1.1
VRTB	Varto-Mus	2.11	339	PN	Pn	03 13 31.7	+0.2
VRTB	Varto-Mus	2.11	339	*e*Pn	Pn	03 13 31.7	+0.2
TUTA	Tutak	2.22	7	*e*P	Pn	03 13 33.8	+0.7
TUTA				IAML		03 14 08.5	
	comp=Z,67nm,0.4s						
TUTA	Tutak	2.22	7	*i* P	Pn	03 13 34.2	+1.1
TUTA				*i* S	Sb	03 14 03.7	-0.4
TUTA	Tutak	2.22	7	P	Pn	03 13 34.2	+1.1
TUTA				S	Sb	03 14 03.7	-0.4
CLDR	Caldiran	2.27	30	PN	Pn	03 13 34.5	+0.8
CLDR	Caldiran	2.27	30	*e*Pn	Pn	03 13 34.5	+0.8
BNGB	Bing¨¶l	2.27	323	PN	Pn	03 13 33.7	+0.1
BGOL	Bingol	2.27	323	*i* P	Pn	03 13 33.8	+0.2
BGOL				*i* S	Sb	03 14 04.2	-1.2
BGOL	Bingol	2.27	323	P	Pn	03 13 33.8	+0.2
BGOL				S	Sb	03 14 04.2	-1.2
BINT	Bingol	2.28	318	*e*Pn	Pn	03 13 33.7	-0.1
AGRB	Hanur-Agry	2.42	10	PN	Pn	03 13 36.5	+0.8
AGRB	Hanur-Agry	2.42	10	*e*Pn	Pn	03 13 36.5	+0.8
DYDN	Diyadin	2.54	22	*e*P	Pn	03 13 38.2	+0.7
EATA	Eleskirt	2.66	1	*e*P	Pn	03 13 40.9	+1.6
EATA	Eleskirt	2.66	1	*i* P	Pn	03 13 41.3	+2.0
EATA	Eleskirt	2.66	1	P	Pn	03 13 41.3	+2.0
YEDI	Yedisu-Bingol	2.69	327	PN	Pn	03 13 40.2	+0.7
YEDI	Yedisu-Bingol	2.69	327	*e*Pn	Pn	03 13 40.2	+0.7
SVRC	Sivrice-ELAZID	2.75	296	PN	Pn	03 13 40.5	+0.2
SVRC	Sivrice-ELAZID	2.75	296	*e*Pn	Pn	03 13 40.5	+0.2
ERZM	Erzurum	2.84	343	*e*P	Pn	03 13 42.8	+1.2
ERZM	Erzurum	2.84	343	*i* P	Pb	03 13 45.1	-1.3
ERZM	Erzurum	2.84	343	P	Pb	03 13 45.1	-1.3
HOMI	Horasan	2.88	352	*e*P	Pn	03 13 43.0	+0.9
HOMI	Horasan	2.88	352	*i* P	Pb	03 13 46.0	-1.1
URFA	Urfa	2.90	276	PN	Pn	03 13 43.5	+1.3
URFA	Urfa	2.90	276	*i* Pn	Pn	03 13 43.5	+1.3
PTK	Pertek	2.95	306	PN	Pn	03 13 42.9	-0.1
PTK	Pertek	2.95	306	*e*Pn	Pn	03 13 42.9	-0.1
IGDI	IGDIR	2.96	25	*e*P	Pn	03 13 44.8	+1.7
TNCL	Tunceli-Merkez	2.98	311	*e*P	Pn	03 13 46.6	+3.1
SURC	SANLIURFA_SURC	3.08	265	*i* P	Pn	03 13 45.2	+0.5
SURC	SANLIURFA_SURC	3.08	265	P	Pn	03 13 45.2	+0.5
KOPT	Kop Dagi	3.21	332	*e*P	Pn	03 13 48.2	+1.6
KOPT	Kop Dagi	3.21	332	*i* P	Pb	03 13 54.4	+1.7
MALT	Malatya	3.37	291	PN	Pn	03 13 49.6	+0.8
MALT	Malatya	3.37	291	*e*Pn	Pn	03 13 49.6	+0.8
REFA	Refahiye_ERZ¨	3.63	308	*e*P	Pb	03 13 58.9	-1.0
KEMA	Kemaliye	3.74	305	*e*P	Pn	03 13 56.0	+2.2
KELT	Kelkit	3.86	321	*e*P	Pn	03 13 57.7	+2.1
GAZ	Gaziantep	4.18	271	PN	Pn	03 14 01.9	+2.1
GAZ	Gaziantep	4.18	271	*e*Pn	Pn	03 14 01.9	+2.1
KMRS	Kahramanmaras	4.43	276	PN	Pn	03 14 05.3	+2.1
KMRS	Kahramanmaras	4.43	276	*e*Pn	Pn	03 14 05.3	+2.1
RTB	Rutbah	4.51	203	*e*Pn	Pn	03 14 06.0	+1.7
	SNR=3.0						
RTB				*e*Sn	Sn	03 14 56.0	-1.5
	SNR=3.0						

*JMA **16** 03:19:43.9±0.4,33°.94N×137°.45E,h362km±4km,M3.3*
*ISCJB **16** 03:19:45.3±0.6,33°.99N±0°.09×137°.52E±0°.09, h348km±6km,mb3.1/4,Error ellipse: s-maj=14.9km s-min=10.2km az=149.5*
*IDC **16** 03:19:46.3±0.9,34°.12N×137°.69E,h348km±21km,mb3.1/4, mb1 3.1/6,mb1mx2.8/62,mbtmp3.6/6,Error ellipse: s-maj=50.7km s-min=16.6km az=58.0*
ISC 16 03:19:46.2±1.0,**34°.0N**±0°.1×**137°.46E**±0°.07,**h343**km±8km, **n27,** σ0§**68**/32,**mb3.1**/4,**Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTO2	TONANKAI O.B.S	0.47	230	P	Pn	03 20 29.9	+0.6
JIE	Ise	0.71	300	P	Pn	03 20 30.4	+0.2
JHMK	Hamakita	0.82	18	P	Pn	03 20 30.8	+0.5
HMMJ	Hamamatsu 2	0.84	15	P	Pn	03 20 31.1	+0.5
JKN2	Miekihoku	1.00	282	P	Pn	03 20 31.0	-0.2
JAO	Obara	1.24	352	P	Pn	03 20 32.7	+0.5
JNY	Yasuok	1.36	14	P	Pn	03 20 33.1	+0.2
JNY				S	S	03 21 10.7	+0.3
JEG	Eigenji	1.40	322	P	Pn	03 20 33.5	+0.4
JWZ	Kozaga	1.54	251	P	Pn	03 20 33.2	-0.7
JWY	Kouya	1.56	277	P	Pn	03 20 33.8	-0.2
JWT	Wachi	2.10	307	P	Pn	03 20 37.4	-0.1
JRY	Ryogami san	2.30	31	P	Pn	03 20 40.1	+1.0
JRY				*e*S	S	03 21 23.1	+1.5
JHU	Hanno	2.35	39	P	Pn	03 20 39.7	+0.3
JAI	Aioi	2.51	265	P	Pn	03 20 40.2	-0.6
MJAR	Matsushiro Arr	2.57	14	P	Pn	03 20 41.8	+0.6
	0.8nm,0.3s,baz=186,slow=8.9,SNR=12						
MJAR				S	S	03 21 24.5	-1.0
	baz=189,slow=17,SNR=7.0						
MAT	Matsushiro	2.57	14	P	Pn	03 20 41.8	+0.6
MAT				S	S	03 21 24.5	-1.0
BSO3	Boso 3	2.64	72	P	Pn	03 20 41.2	-0.3
JAG	Ashikaga	2.89	34	P	Pn	03 20 43.5	-0.4
JAG				S	S	03 21 28.7	-1.7
BSO1	Boso 1	2.98	77	P	Pn	03 20 43.8	-0.3
JYT	Yasato	3.13	45	P	Pn	03 20 45.7	-0.4
JHO	Hitachi	3.62	44	P	Pn	03 20 50.4	-0.4
JHS	Saijyo	3.71	286	P	Pn	03 20 51.9	+0.1
KSRS	Korea Array	8.47	296	P	P	03 21 48.2	-0.5
	0.2nm,0.3s,baz=98,slow=10,SNR=4.1						
MKAR	Makanchi Array	43.05	304	P	P	03 27 13.5	+0.4
	0.7nm,0.6s,baz=87,slow=8.2,SNR=3.4						
KURBB	Kurchatov Arra	45.37	310	P	P	03 27 31.7	+0.5
	0.4nm,0.4s,baz=107,slow=5.8,SNR=3.7						
WRA	Warramunga Arr	53.76	184	P	P	03 28 34.5	+0.2
	1.0nm,0.3s,baz=0.3,slow=7.6,SNR=54						
ASAR	Alice Springs	57.48	184	P	P	03 29 00.9	+0.5
	0.3nm,0.3s,baz=354,slow=5.2,SNR=8.2						

*ISN **16** 03:22:57.0±1.3,37°.17N×42°.57E,h2km±4km,ML3.9*
*ISK **16** 03:22:57.7,37°.25N×42°.44E,h2km,ML3.9/11*
*DDA **16** 03:22:58.4,37°.24N×42°.46E,h5km,Ml3.8*
*CSEM **16** 03:22:58.2±0.2,37°.19N×42°.48E,h2km,ML3.9,Error ellipse: s-maj=4.5km s-min=4.1km az=32.0*
*GII **16** 03:23:00.3±0.0,37°.18N×42°.47E,h2km*
*ATA **16** 03:23:05.5±1.5,37°.73N×42°.48E,h17km±35km,ML4.7, MW4.3*
ISC 16 03:22:57.8±1.3,**37°.21N**±0°.03×**42°.48E**±0°.02,**h1**km±10km, **n102,** σ1§**16**

EATA	Eleskirt	2.65	0	eP		Pn	03 23 43.9	+1.9
EATA	Eleskirt	2.65	0	i P		Pb	03 23 44.1	-2.1
EATA				i S		Sg	03 24 24.4	+1.5
EATA	Eleskirt	2.65	0	P		Pb	03 23 44.1	-2.1
SVRC	Sivrice-ELAZID	2.77	296	PN		Pn	03 23 43.3	-0.2
SVRC	Sivrice-ELAZID	2.77	296	ePn		Pn	03 23 43.3	-0.2
SANL	SANLIURFA_Merk	2.78	270	i P		Pn	03 23 44.1	+0.6
SANL				i S		Sg	03 24 29.1	+1.9
SANL	SANLIURFA_Merk	2.78	270	P		Pn	03 23 44.1	+0.6
ERZM	Erzurum	2.83	342	eP		Pb	03 23 48.0	-1.2
HOMI	Horasan	2.87	351	eP		Pb	03 23 48.1	-1.8
HOMI	Horasan	2.87	351	i P		Pb	03 23 47.6	-2.2
URFA	Urfa	2.92	276	PN		Pn	03 23 44.7	-0.8
URFA	Urfa	2.92	276	ePn		Pn	03 23 44.7	-0.8
PTK	Pertek	2.96	306	PN		Pn	03 23 46.2	+0.1
PTK	Pertek	2.96	306	ePn		Pn	03 23 46.2	+0.1
TNCL	Tunceli-Merkez	2.99	310	eP		Pn	03 23 48.6	+2.1
TNCL	Tunceli-Merkez	2.99	310	i P		Pg	03 23 54.7	-0.4
ELZG	Elazig	3.05	296	i P		Pn	03 23 46.7	-0.6
ELZG	Elazig	3.05	296	P		Pn	03 23 46.7	-0.6
KOPT	Kop Dagi	3.20	332	eP		Pn	03 23 51.4	+1.9
EUZM	Uzumlu	3.31	320	eP		Pb	03 23 57.9	+0.5
MALT	Malatya	3.39	290	PN		Pn	03 23 52.4	+0.4
MALT	Malatya	3.39	290	ePn		Pn	03 23 52.4	+0.4
GNI	Garni	3.43	30	PN		Pn	03 23 53.8	+1.3
GNI	Garni	3.43	30	ePn		Pn	03 23 53.8	+1.3
EAK	Akyaka	3.58	14	eP		Pb	03 23 59.3	-2.7
BAYT	Ayd¨–ntepe-Bay	3.67	331	PN		Pn	03 23 56.9	+1.1
BAYT	Ayd¨–ntepe-Bay	3.67	331	ePn		Pn	03 23 56.9	+1.1
KEMA	Kemaliye	3.75	304	eP		Pb	03 24 00.9	-3.9
KELT	Kelkit	3.87	320	eP		Pn	03 24 02.5	+3.9
GAZ	Gaziantep	4.20	271	PN		Pn	03 24 04.3	+1.2
GAZ	Gaziantep	4.20	271	ePn		Pn	03 24 04.3	+1.2
AKH	Akhalkalaki	4.27	10	P		Pg	03 24 27.9	+8.4
AKH				S		Sn	03 24 30.0	-25
KMRS	Kahramanmaras	4.45	275	PN		Pn	03 24 07.4	+0.9
KMRS	Kahramanmaras	4.45	275	ePn		Pn	03 24 07.4	+0.9
RTB	Rutbah	4.53	204	ePn		Pn	03 24 09.0	+1.4
	SNR=3.0							
RTB				eSn		Sn	03 24 58.0	-3.0
	SNR=3.0							
YAYL	Yayladag	5.25	259	PN		Pn	03 24 17.8	+0.2
YAYL	Yayladag	5.25	259	ePn		Pn	03 24 17.8	+0.2
KOZT	Kozan	5.30	275	PN		Pn	03 24 19.9	+1.7
KOZT	Kozan	5.30	275	ePn		Pn	03 24 19.9	+1.7
SHBL	Chebaa	6.72	237	eP		Pn	03 24 39.8	+2.1
KSDI	Kefar Szold	6.87	236	Pn		Pn	03 24 41.3	+1.6
KSHT	Keshet	6.90	234	Pn		Pn	03 24 42.1	+2.0
MMA0B	Mount Meron ar	7.15	236	Pn		Pn	03 24 45.3	+1.8
MMC6	Mount Meron ar	7.16	236	Pn		Pn	03 24 45.6	+1.9
HNTI	Hanita	7.26	238	Pn		Pn	03 24 47.2	+2.2
MMLI	Mount Malkishu	7.50	233	Pn		Pn	03 24 50.0	+1.6
HMDT	Nahal Hemdat	7.56	231	Pn		Pn	03 24 49.5	+0.4

CSEM ***16*** *03:26:49.1±0.2, 37°.24N×42°.46E, h2km, ML2.6, Error ellipse: s-maj=5.7km s-min=3.6km az=43.0*
ISN ***16*** *03:26:49.7±0.3, 37°.13N×42°.51E, h0km, ML2.4*
DDA 16 03:26:48.5, 37°.23N×42°.44E, h7km, Ml2.6, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRN	S¨–rnak	0.27	355	i P		Pg	03 26 53.6	-0.2
SIRN				i S		Sg	03 26 57.5	+0.2
SIRN	S¨–rnak	0.27	355	P		Pg	03 26 53.6	-0.2
SIRN				S		Sg	03 26 57.5	+0.1
SRTM	Siirt_Merkez	0.86	332	i P		Pb	03 27 06.4	+0.5
SRTM				i S		Sb	03 27 18.4	+0.7
SRTM	Siirt_Merkez	0.86	332	P		Pb	03 27 06.4	+0.5
SRTM				S		Sb	03 27 18.4	+0.7
HAKT	HAKKARI	1.06	72	i P		Pg	03 27 09.0	+0.1
HAKT				i S		Sb	03 27 23.9	+0.4
HAKT	HAKKARI	1.06	72	P		Pg	03 27 09.0	+0.1
HAKT				S		Sb	03 27 23.9	+0.4
BTMN	Batman	1.14	306	i P		Pb	03 27 10.7	+0.1
BTMN				i S		Sn	03 27 26.8	-0.1
BTMN	Batman	1.14	306	P		Pb	03 27 10.7	+0.1
BTMN				S		Sn	03 27 26.8	-0.1
GEVA	Gevas	1.19	24	i P		Pg	03 27 11.3	0.0
GEVA				i S		Sn	03 27 27.9	-0.2
GEVA	Gevas	1.19	24	P		Pg	03 27 11.3	0.0
GEVA				S		Sn	03 27 27.9	-0.3
MARD	Mardin	1.33	274	i P		Pb	03 27 13.8	-0.1
MARD				i S		Sn	03 27 31.9	+0.3

ISCJB ***16*** *03:30:21.8±0.8, 44°.08S±0°.08×72°.8W±0°.2, h10km, mb3.1/2, Error ellipse: s-maj=25.2km s-min=6.0km az=156.5*
GUC ***16*** *03:30:21.4±0.7, 44°.13S×72°.90W, h7km±11km, ML3.2*
IDC ***16*** *03:30:24.6±5.0, 43°.67S×73°.28W, h0km, mb3.4/2, mb1 3.6/3, mb1mx3.5/33, mbtmp3.3/3, ML3.1/1, Error ellipse: s-maj=127.5km s-min=25.0km az=139.0*
ISC 16 03:30:22.1±0.9, 44°.12S±0°.04×72°.96W±0°.10, h10km, n7, σ1°29/11, 2C, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO07	Milladeo Hill,	1.13	333	⇑eP		Pb	03 30 42.1	-1.6
GO07				i S		Sb	03 30 58.4	-0.1
GO07				IAML			03 31 08.0	
	comp=E,2μm,0.5s							
COYC	Coyhaique	1.58	157	eP		Pn	03 30 49.7	-0.5
COYC				eS		Sb	03 31 10.7	-0.6
COYC				IAML			03 31 14.5	
	comp=N,461nm,0.6s							
CHRN	Cochrane	3.14	175	⇑eP		Pb	03 31 16.6	-1.3
CHRN				i S		Sb	03 31 57.9	+1.6
CHRN				IAML			03 32 05.6	
	comp=E,39nm,0.6s							
PLCA	Paso Flores	3.83	29	Pn		Pn	03 31 21.7	+0.5
	comp=E,0.3nm,0.3s,baz=212,slow=12,SNR=9.1							
PLCA				Pg		Pb	03 31 28.8	-0.9
	comp=E,3.0nm,0.3s,baz=216,slow=16,SNR=45							
PLCA				Lg	Lg		03 32 18.3	
	comp=E,3.0nm,0.3s,baz=301,slow=22,SNR=8.2							
PLCA	Paso Flores	3.83	29	eP		Pb	03 31 28.2	-1.5
LPAZ	La Paz	28.05	10	P		P	03 36 14.7	+0.5
	comp=E,0.5nm,0.7s,baz=200,slow=13,SNR=5.2							
TXAR	Lajitas Array	78.32	333	P		P	03 42 23.7	+1.4
	comp=E,0.1nm,0.7s,baz=126,slow=4.6,SNR=2.8							

NIED ***16*** *03:46:00, 46°.60N×153°.30E, h5km, Mw4.4 Best double couple: M0=4.02000×10^15 NP1:φ=253.00000°, δ=16.00000°, λ=95.00000°. NP2:φ=68.00000°, δ=74.00000°, λ=89.00000°.*
JMA ***16*** *03:46:49.6±0.7, 46°.63N×153°.34E, h30km, M4.4*
SKHL ***16*** *03:46:51.3±0.4, 46°.27N×153°.35E, h39km±9km, mb4.6/4*
ISCJB ***16*** *03:46:52.9±0.6, 46°.41N±0°.07×152°.94E±0°.09, h40km, mb4.0/25, Error ellipse: s-maj=13.1km s-min=4.0km az=138.2*
MOS ***16*** *03:46:54.2±1.0, 45°.63N×153°.12E, h43km, mb4.3/10, Error ellipse: s-maj=16.4km s-min=8.8km az=89.2*
IDC ***16*** *03:46:57.1±2.8, 46°.61N×153°.26E, h58km±24km, mb3.7/22, mb1 3.8/26, mb1mx3.7/74, mbtmp3.9/26, ML2.9/3, MS2.8/4, Ms1 2.9/4, ms1mx2.5/67, Error ellipse: s-maj=18.7km s-min=13.8km az=136.0*
ISC 16 03:46:54.1±0.8, 46°.37N±0°.09×153°.13E±0°.08, h40km, n78, σ2°13/74, mb4.1/25, 3C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.85	255	eP		Pn	03 47 51.8	+1.0
KUR				AMB	AMB	03 47 53.6	
	72nm,0.5s						
KUR				AMB	AMB	03 47 53.6	
	23nm,0.5s						
KUR				AMB	AMB	03 47 53.6	
	230nm,0.5s						
KUR				eS		Sn	03 48 37.5	+2.8
KUR				A	A	03 48 41.4	
	146nm,0.4s						
KUR				A	A	03 48 41.4	
	228nm,0.4s						
KUR	Kuril'sk	3.85	255	d iPN		Pn	03 47 53.2	+2.4
KUR				eS		Sn	03 48 38.5	+3.8
KUR				pmax	pmax			
	comp=Z,230nm,0.4s							
KUR				pmax	pmax			
	comp=E,23nm,0.2s							
KUR				pmax	pmax			
	comp=N,72nm,0.3s							
KUR				smax	smax			
	comp=E,228nm,0.6s							
KUR				smax	smax			
	comp=N,146nm,0.3s							
KUR				smax	smax			
	comp=E,463nm,2.5s							
KUR				smax	smax			
	comp=N,275nm,1.5s							
SKR	Severo-Kuril's	4.75	24	eP		Pn	03 48 01.0	-2.1
SKR				AMB	AMB	03 48 04.7	
	comp=N,37nm,0.7s							
SKR				eS		Sn	03 48 53.0	-3.8
SKR				A	A	03 49 04.8	
	comp=N,109nm,0.7s							
SKR				A	A	03 49 04.8	
	comp=N,130nm,0.7s							
SKR	Severo-Kuril's	4.75	24	ePN		Pn	03 48 02.3	-0.8
SKR				pmax	pmax			
	comp=Z,37nm,0.7s							
SHO	Shikotan	5.11	243	eP		Pn	03 48 06.8	-1.3
SHO				AMB	AMB	03 48 09.1	
	comp=Z,47nm,0.3s							
SHO				i S		Sn	03 49 03.1	-2.7
SHO				A	A	03 49 09.6	
	comp=Z,140nm,0.3s							
SHO				A	A	03 49 09.6	
	comp=Z,103nm,0.3s							
SHO	Shikotan	5.11	243	ePN		Pn	03 48 06.8	-1.3
SHO				pmax	pmax			
	comp=N,9.0nm,0.3s							
SHO				pmax	pmax			
	comp=E,19nm,0.3s							
SHO				pmax	pmax			
	comp=Z,47nm,0.3s							
YUK	Yuzh-Kuril'sk	5.64	248	eS		Sn	03 49 18.3	-0.5
NEM2	Nemuro 2	6.05	243	P		Pn	03 48 19.5	-1.4
NEM2				eS		Sn	03 49 26.3	-2.5
JRA	Rausu	6.16	250	P		Pn	03 48 24.0	+1.5
JNK	Nakash	6.58	248	P		Pn	03 48 28.7	+0.4
JNK				eS		Sn	03 49 43.2	+1.2
JAK	Akkeshi	6.89	244	P		Pn	03 48 30.8	-1.7
JAK				eS		Sn	03 49 46.1	-3.5
JTKR	Abashiri--Toko	6.94	253	P		Pn	03 48 34.8	+1.6
YSS	Yuzh-Sakhalins	7.16	278	ePN		Pn	03 48 41.5	+5.3
JMP	Maruseppu	7.29	255	P		Pn	03 48 40.2	+2.1
JAR	Ashorobuto	7.33	249	P		Pn	03 48 39.3	+0.8
JAR				eS		Sn	03 50 01.6	+1.2
PETK	Petropavlovsk-	7.36	22	P		Pn	03 48 37.7	-1.3
	comp=Z,0.7nm,0.3s,baz=179,slow=12,SNR=4.6							
PETK				S		Sn	03 50 00.1	-1.1
	comp=Z,0.2nm,0.3s,baz=232,slow=27,SNR=2.4							
JOB	Onbets	7.48	246	eS		Sn	03 50 01.3	-2.8
ASAJ	Asahikawa	7.77	257	P		Pn	03 48 44.1	-0.4
	comp=Z,0.5nm,0.3s,baz=70,slow=12,SNR=2.8							
ASAJ				LR		LR	03 51 46.4	
	comp=Z,64nm,18.1s,baz=138,slow=36							
JCH	Churui	7.93	245	P		Pn	03 48 45.4	-1.3
JCH				eS		Sn	03 50 11.7	-3.4
MYR	Moyori	8.15	243	eP		Pn	03 48 49.2	-0.6
ERM	Erimo	8.38	242	⇑ePN		Pn	03 48 44.9	-8.1
JBT2	Biratori 2	8.48	249	P		Pn	03 48 54.8	+0.5
JNBK	Urakawa-nobuka	8.49	245	P		Pn	03 48 53.0	-1.4
JNBK				eS		Sn	03 50 23.9	-4.9
JKB	Kayabe	9.78	247	eS		Sn	03 50 55.1	-5.5
JANG	Nango	10.36	239	eS		Sn	03 51 05.3	-9.5
JTM	Tenmabayashi	10.37	242	eS		Sn	03 51 07.0	-8.1
MA2	Magadan	13.30	355	P		Pn	03 49 59.3	-0.8
	comp=Z,17nm,0.3s,baz=174,slow=10,SNR=4.3							
KLR	Kul'dur	14.64	289	P		P	03 50 21.4	-2.7
	baz=109,slow=9.6,SNR=2.4							
KLR	Kul'dur	14.64	289	⇑iP		P	03 50 28.1	+4.1
EKMR	Ekimchan	14.64	305	eP		Pn	03 50 19.0	+0.6
EKMR				AMB	AMB	03 50 29.0		
	comp=Z,4.0nm,0.5s							
MJAR	Matsushiro Arr	14.86	234	LR		LR	03 57 19.1	
	comp=Z,47nm,18.6s,baz=50,slow=41							
USRK	Ussuriysk Ar.	15.03	269	P		P	03 50 27.2	-1.2
	comp=Z,0.2nm,0.3s,baz=77,slow=7.7,SNR=4.4							
SEY	Seymchan	16.60	359	P		Pn	03 50 43.1	-0.5
	comp=Z,0.1nm,0.3s,baz=174,slow=14,SNR=5.1							
BMKR	Bomnak	17.48	307	eP		Pn	03 50 51.5	-3.0
KROS	Kirovskiy	18.44	305	eP		P	03 51 04.5	-1.5
KROS				AMB	AMB	03 51 07.1		
	comp=Z,4.0nm,0.4s							
KSRS	Korea Array	20.70	254	P		Pn	03 51 35.7	+2.5
	comp=Z,1.6nm,0.8s,baz=50,slow=12,SNR=5.3							
KSRS				LR		LR	03 59 13.1	
	comp=Z,24nm,19.0s,baz=110,slow=35							
KSRS	Korea Array	20.70	254	P		Pn	03 51 35.7	+2.5
KSRS				pmax	pmax			
	comp=Z,1.0nm,0.7s							
BILL	Bilibino	22.76	13	eP		P	03 52 05.9	+13
BILL				pmax	pmax			
	comp=Z,2.0nm,1.0s							
TIXI	Tiksi	27.83	344	P		P	03 52 36.7	-2.5
	comp=Z,0.7nm,0.3s,baz=151,slow=9.1,SNR=3.1							
H11N2	WAKE ISLAND Hy	28.88	152	T		T	04 24 30.0	
	baz=340,slow=76,SNR=11							
H11N1	WAKE ISLAND Hy	28.89	152	T		T	04 24 36.6	
	baz=340,slow=76,SNR=13							
H11N3	WAKE ISLAND Hy	28.90	152	T		T	04 24 38.7	
	baz=340,slow=76,SNR=13							
H11S1	WAKE ISLAND Hy	29.96	154	T		T	04 26 02.8	
	baz=341,slow=76,SNR=7.5							
H11S3	WAKE ISLAND Hy	29.97	154	T		T	04 25 55.6	
	baz=341,slow=76,SNR=11							
H11S2	WAKE ISLAND Hy	29.98	154	T		T	04 26 08.3	
	baz=341,slow=76,SNR=7.9							
ULN	Ulaanbaatar	31.03	290	⇑iP		P	03 53 14.5	+6.5
SONM	Songino Array	31.47	290	P		P	03 53 12.6	+0.8
	comp=Z,0.5nm,0.8s,baz=60,slow=7.5,SNR=2.7							
ILAR	Eielson Array	36.84	38	P		P	03 53 56.9	-1.1
	comp=Z,0.3nm,0.8s,baz=268,slow=8.8,SNR=2.9							
INK	Inuvik	41.97	32	P		P	03 54 40.2	-0.3
	comp=Z,1.5nm,1.1s,baz=269,slow=7.0,SNR=4.0							
ZALV	Zalesovo Beam	42.84	306	P		P	03 54 47.1	-0.8
	comp=Z,0.9nm,0.4s,baz=58,slow=6.4,SNR=3.9							
MKAR	Makanchi Array	47.12	298	P		P	03 55 22.5	+0.4
	comp=Z,1.9nm,0.6s,baz=70,slow=8.0,SNR=13							
KURK	Kurchatov	47.58	304	eP		P	03 55 26.0	+0.5
KURK	Kurchatov	47.58	304	P		P	03 55 26.0	+0.5
KURK				pmax	pmax			
	comp=Z,3.0nm,0.8s							
KURBB	Kurchatov Arra	47.67	304	P		P	03 55 26.0	-0.3
	comp=Z,3.2nm,0.8s,baz=66,slow=8.6,SNR=14							
BVAR	Borovoye Array	51.11	310	P		P	03 55 52.6	+0.2
	comp=Z,0.8nm,0.4s,baz=57,slow=5.3,SNR=4.4							
BVAR				PcP		PcP	03 57 07.3	-0.4
	comp=Z,0.4nm,0.5s,baz=75,slow=1.6,SNR=2.4							
CMAR	Chiang Mai Arr	52.29	257	LR		LR	04 21 06.0	
	comp=Z,9.4nm,20.0s,baz=185,slow=39							
ARCES	ARCESS Array B	58.21	341	P		P	03 56 44.2	+0.6
	comp=Z,1.7nm,0.8s,baz=16,slow=6.9,SNR=5.9							
AKTO	Aktyubinsk	58.98	312	P		P	03 56 50.6	+1.3
	comp=Z,0.8nm,0.5s,baz=39,slow=6.5,SNR=3.5							
SUMG	Summit	61.08	4	i P		P	03 57 05.8	+2.0
	comp=Z,7.1nm,0.8s							
FINES	FINESS Array B	64.39	335	P		P	03 57 25.6	+0.1
	comp=Z,5.4nm,0.6s,baz=35,slow=7.3,SNR=49							
CTA	Charters Tower	66.44	187	LR		LR	04 22 13.7	
	comp=Z,180nm,21.8s,baz=258,slow=32							
WRA	Warramunga Arr	68.16	199	P		P	03 57 52.1	+2.0
	comp=Z,0.3nm,0.8s,baz=27,slow=6.9,SNR=3.9							
NB2	NORSAR Subarra	68.59	341	P		P	03 57 52.4	0.0
	comp=Z,1.2nm,0.6s,baz=27,slow=6.5							
HFS	Hagfors	68.81	340	P		P	03 57 54.1	+0.3
	comp=Z,3.3nm,0.5s,baz=47,slow=6.3,SNR=24							
KBZ	Khabaz	71.13	314	P		P	03 58 09.2	+1.0
	comp=Z,4.2nm,0.8s,baz=105,slow=2.8,SNR=9.3							
ASAR	Alice Springs	71.85	199	P		P	03 58 16.2	+3.5
	comp=Z,0.3nm,0.6s,baz=16,slow=5.4,SNR=4.0							
AKASG	Malin Array Be	71.86	326	P		P	03 58 12.9	+0.4
	comp=Z,2.3nm,0.4s,baz=34,slow=6.1,SNR=15							
EKA	Eskdalemuir Ar	76.71	346	P		P	03 58 41.0	+0.4
	comp=Z,0.4nm,0.3s,baz=20,slow=5.1,SNR=7.0							
EKA	Eskdalemuir Ar	76.71	346	eP		P	03 58 41.0	+0.4
EKA	Eskdalemuir Ar	76.71	346	P		P	03 58 41.0	+0.4
TXAR	Lajitas Array	77.67	60	P		P	03 58 45.1	-1.5
	comp=Z,0.6nm,0.7s,baz=297,slow=3.5,SNR=6.8							
TXAR	Lajitas Array	77.67	60	eP		P	03 58 47.7	+1.1
TXAR	Lajitas Array	77.67	60	eP		P	03 58 47.7	+1.1
TXAR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
BRTR	Keskin Array B	78.67	317	P		P	03 58 52.4	+0.4
	comp=Z,0.8nm,0.9s,baz=24,slow=7.9,SNR=2.6							
GERES	GERESS Array B	78.80	334	P		P	03 58 52.8	+0.2
	comp=Z,0.5nm,0.6s,baz=57,slow=4.9,SNR=6.0							
GERES	GERESS Array B	78.80	334	eP		P	03 58 53.7	+1.2
GERES	GERESS Array B	78.80	334	eP		P	03 58 53.7	+1.2
GERES				pmax	pmax			
	comp=Z,1.0nm,0.6s							
MMAI	Mount Meron Ar	83.07	311	P		P	03 59 16.7	+1.1
	comp=Z,1.5nm,0.7s,baz=56,slow=7.7,SNR=4.1							

DDA ***16*** *03:50:59.4, 37°.17N×42°.47E, h7km, Ml3.2*
ISK ***16*** *03:50:59.7, 37°.26N×42°.46E, h3km, ML2.9/9*
ISN ***16*** *03:50:59.5±0.6, 37°.20N×42°.62E, h1km±2km, ML2.9*
CSEM ***16*** *03:51:00.3±0.2, 37°.22N×42°.50E, h2km, ML2.9, Error ellipse: s-maj=4.8km s-min=3.6km az=40.0*
ISC 16 03:51:00.0±1.4, 37°.21N±0°.04×42°.48E±0°.03, h2km±11km, n38, σ0°71/61, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRN	S¨–rnak	0.29	350	i P		Pg	03 51 05.2	-0.3
SIRN				i S		Sg	03 51 09.3	0.0
SIRN	S¨–rnak	0.29	350	P		Pg	03 51 05.2	-0.3
SIRN				S		Sg	03 51 09.3	0.0
SIRT	Sirnak	0.29	354	PG		Pg	03 51 05.4	-0.2
SIRT				SG		Sg	03 51 09.4	0.0
SIRT	Sirnak	0.29	354	ePg		Pg	03 51 05.4	-0.2
SIRT				eSg		Sg	03 51 09.4	0.0
SRTM	Siirt_Merkez	0.89	331	i P		Pb	03 51 18.4	+0.1
SRTM				i S		Sb	03 51 30.9	+0.1
SRTM	Siirt_Merkez	0.89	331	P		Pb	03 51 18.4	+0.1
SRTM				S		Sb	03 51 30.9	+0.1
HAKT	HAKKARI	1.04	70	i P		Pb	03 51 19.9	-1.0
HAKT				i S		Sb	03 51 34.8	-0.3
HAKT	HAKKARI	1.04	70	P		Pb	03 51 19.9	-1.0
HAKT				S		Sb	03 51 34.8	-0.3
BTMN	Batman	1.18	306	i P		Pb	03 51 22.7	-0.4
BTMN				i S		Sb	03 51 39.2	+0.4
BTMN	Batman	1.18	306	P		Pb	03 51 22.7	-0.4
BTMN				S		Sb	03 51 39.2	+0.4
MARD	Mardin	1.36	275	i P		Pn	03 51 24.5	-1.7
MARD				i S		Sb	03 51 44.1	-0.1
SVAN	Silvan-Diyarba	1.38	313	PN		Pn	03 51 26.0	-0.4
SVAN				SN		Sn	03 51 45.3	0.0
SVAN	Silvan-Diyarba	1.38	313	i P		Pb	03 51 26.6	0.0
SVAN				i S		Sn	03 51 45.7	+0.4
SVAN	Silvan-Diyarba	1.38	313	ePn		Pn	03 51 26.0	-0.4
SVAN	Silvan-Diyarba	1.38	313	P		Pb	03 51 26.6	0.0
SVAN				eSn		Sn	03 51 45.3	0.0
GURO	Guroymak-BITLI	1.38	345	PN		Pn	03 51 25.9	-0.6
GURO				SN		Sn	03 51 45.1	-0.4
GURO	Guroymak-BITLI	1.38	345	ePn		Pn	03 51 25.9	-0.6
GURO				eSn		Sn	03 51 45.1	-0.4
YOVA	Hakkari_Y¨…kse	1.49	75	i P		Pg	03 51 28.1	-0.6
YOVA				i S		Sn	03 51 49.1	+0.9
YOVA	Hakkari_Y¨…kse	1.49	75	P		Pg	03 51 28.0	-0.6
YOVA				S		Sn	03 51 49.1	+0.9
ADCV	BITLIS_Adilcev	1.60	7	i P		Pg	03 51 31.1	+0.3
ADCV				i S		Sg	03 51 53.4	+1.8
ADCV	BITLIS_Adilcev	1.60	7	P		Pg	03 51 31.1	+0.3
ADCV				S		Sg	03 51 53.4	+1.8
MAZI	Mazidag	1.64	279	PN		Pn	03 51 30.1	+0.1
MAZI	Mazidag	1.64	279	ePn		Pn	03 51 30.1	+0.1
DIY	Diyarbakir	1.92	292	ePn		Pb	03 51 35.0	-0.7
DYBB	Diyarbakir	2.00	292	PN		Pn	03 51 35.0	+0.1
DIYA	Diyarbakir	2.00	291	i P		Pb	03 51 36.4	-0.8
DIYA				i S		Sb	03 52 01.9	-0.7
DIYA	Diyarbakir	2.00	291	P		Pb	03 51 36.4	-0.8
DIYA				S		Sb	03 52 01.9	-0.7
AGRB	Hanur-Agry	2.39	10	PN		Pn	03 51 40.5	0.0
AGRB	Hanur-Agry	2.39	10	ePn		Pn	03 51 40.5	0.0
SVRC	Sivrice-ELAZID	2.77	296	PN		Pn	03 51 45.1	-0.5
SVRC	Sivrice-ELAZID	2.77	296	ePn		Pn	03 51 45.1	-0.5
URFA	Urfa	2.92	276	PN		Pn	03 51 48.3	+0.7
URFA	Urfa	2.92	276	ePn		Pn	03 51 48.3	+0.7
PTK	Pertek	2.96	305	PN		Pn	03 51 48.1	-0.1
PTK	Pertek	2.96	305	ePn		Pn	03 51 48.1	-0.1
MALT	Malatya	3.39	290	PN		Pn	03 51 55.1	+1.0
MALT	Malatya	3.39	290	ePn		Pn	03 51 55.1	+1.0
RTB	Rutbah	4.54	204	ePn		Pn	03 52 12.0	+2.2
	SNR=3.0							
RTB				eSn		Sn	03 53 02.0	-1.1
	SNR=3.0							

ISCJB ***16*** *04:26:40.7±0.5, 35°.50S±0°.05×69°.91W±0°.09, h151km±6km, mb3.3/5, Error ellipse: s-maj=12.3km s-min=6.6km az=23.7*
*GUC

*IDC **16** 04:28:54.2±1.3, 22°.12N×121°.68E, h0km, mb3.5/4, mb1 3.6/5, mb1mx3.4/59, mbtmp3.6/5, ML3.6/1, Error ellipse: s-maj=45.4km s-min=24.5km az=61.0*
*ISCJB **16** 04:28:57.3±0.4, 22°.36N±0°.02×121°.58E±0°.02, h17km±4km, mb3.3/4, Error ellipse: s-maj=3.5km s-min=2.9km az=138.3*
*JMA **16** 04:28:57.2±0.1, 22°.48N×121°.60E, h1km±2km, M3.9*
*TAP **16** 04:28:58.9, 22°.43N×121°.45E, h18km, ML3.8, C*
ISC 16 04:28:57.4±1.0, 22°.36N±0°.02×121°.52E±0°.03, h17km±7km, n86, σ0s99/129, mb3.3/4, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu** baz=164	**0.32**	**175**	P	**Pn**	**04 29 06.8**	**-0.5**
LAY	baz=164			eS	**Sn**	**04 29 13.0**	**-0.6**
TWH	**Lutao** baz=19	**0.35**	**353**	P	**Pg**	**04 29 04.9**	**+0.1**
TWH	baz=19			S	**Sg**	**04 29 09.4**	**-0.4**
TTN	**Taitung** baz=321	**0.52**	**319**	eP	**Pg**	**04 29 08.3**	**+0.4**
TTN	baz=321			eS	**Sb**	**04 29 15.9**	**+0.5**
ECL	**Taimali** baz=291	**0.57**	**294**	P	**Pg**	**04 29 08.4**	**-0.4**
ECL	baz=291			eS	**Sg**	**04 29 15.9**	**-0.7**
TAW	**Tawu** baz=262	**0.58**	**270**	P	**Pg**	**04 29 08.8**	**-0.1**
TAW	baz=262			S	**Sg**	**04 29 15.6**	**-1.0**
TWGBT	**Beinan** baz=304	**0.61**	**318**	P	**Pg**	**04 29 09.4**	**-0.1**
TWGBT	baz=304			S	**Sg**	**04 29 18.0**	**+0.3**
TWG	**Pinlang** baz=304	**0.62**	**318**	P	**Pg**	**04 29 09.4**	**-0.2**
TWG	baz=304			eS	**Sg**	**04 29 17.4**	**-0.5**
TSEB	**Hengchuen, Pin** baz=226	**0.73**	**232**	P	**Pg**	**04 29 12.5**	**+0.7**
TSEB	baz=226			eS	**Sn**	**04 29 23.2**	**-0.6**
CHKT	**Chengkung** baz=3.0	**0.75**	**349**	P	**Pb**	**04 29 11.7**	**-0.3**
CHKT	baz=3.0			eS	**Sb**	**04 29 20.9**	**-1.1**
TWKBT	**Hengchun** baz=230	**0.78**	**238**	P	**Pb**	**04 29 12.2**	**-0.3**
TWKBT	baz=230			S	**Sg**	**04 29 23.4**	**+0.5**
TWK1	**Hengchun** baz=230	**0.78**	**238**	P	**Pb**	**04 29 12.5**	**0.0**
TWK1	baz=230			S	**Sb**	**04 29 23.1**	**+0.2**
HEN	**Hengchun** baz=225	**0.81**	**244**	S	**Sg**	**04 29 24.1**	**+0.3**
SCZT	**Fangliau** baz=266	**0.83**	**271**	P	**Pb**	**04 29 12.9**	**-0.5**
SCZT	baz=266			eS	**Sb**	**04 29 24.4**	**+0.1**
MASBT	**Mashibuluo** baz=276	**0.86**	**287**	P	**Pb**	**04 29 13.0**	**-0.8**
MASBT	baz=276			eS	**Sb**	**04 29 23.0**	**-2.1**
FULB	**Fuli** baz=332	**0.86**	**346**	P	**Pb**	**04 29 13.8**	**-0.2**
FULB	baz=332			S	**Sb**	**04 29 24.5**	**-0.7**
SSPT	**Xinbi** baz=274	**0.89**	**278**	S	**Sb**	**04 29 25.6**	**-0.3**
SSD	**Sandimen** baz=293	**0.91**	**295**	P	**Pb**	**04 29 14.2**	**-0.5**
ELDTW	**Lidau** baz=321	**0.95**	**331**	eP	**Pb**	**04 29 14.0**	**-1.4**
TWF1	**Yuli** baz=336	**1.01**	**348**	eS	**Sb**	**04 29 29.4**	**0.0**
SLGT	**Liugui** baz=302	**1.02**	**308**	eP	**Pb**	**04 29 15.7**	**-1.0**
YULB	**Yu-li** baz=338	**1.05**	**349**	eP	**Pb**	**04 29 15.8**	**-1.3**
YULB	baz=338			eS	**Sb**	**04 29 30.1**	**-0.5**
WLCH	**Liuqiu** baz=253	**1.06**	**270**	eP	**Pg**	**04 29 20.2**	**+2.3**
STYT	**Tauyuan** baz=330	**1.07**	**319**	P	**Pb**	**04 29 16.8**	**-0.6**
TWP	**Hsiaoliuchiu** baz=253	**1.07**	**270**	eP	**Pg**	**04 29 20.2**	**+2.0**
SGST	**Jiashian** baz=305	**1.13**	**310**	eP	**Pn**	**04 29 18.8**	**+0.3**
HGSD	**Ruisui** baz=8.0	**1.13**	**355**	eP	**Pn**	**04 29 17.4**	**-1.1**
EHY	**Hungye** baz=340	**1.16**	**351**	P	**Pn**	**04 29 18.4**	**-0.4**
EHY	baz=340			eS	**Sb**	**04 29 33.2**	**-0.4**
WTP	**Ta-pu** baz=327	**1.22**	**317**	eP	**Pn**	**04 29 19.9**	**+0.2**
WTP	baz=327			eS	**Sg**	**04 29 37.5**	**+0.6**
CHN1	**Nanshi** baz=312	**1.23**	**312**	P	**Pb**	**04 29 20.5**	**+0.2**
CHN1	baz=312			S	**Sg**	**04 29 37.6**	**+0.3**
TPUB	**Ta-pu** baz=319	**1.25**	**319**	eP	**Pn**	**04 29 20.3**	**+0.2**
TPUB	baz=319			eS	**Sn**	**04 29 37.1**	**+0.7**
CHN3	**Shinhua** baz=303	**1.28**	**304**	eP	**Pg**	**04 29 22.3**	**+0.1**
CHN3	baz=303			eS	**Sg**	**04 29 40.5**	**+1.5**
TWK	**Hsinying** baz=314	**1.31**	**314**	eP	**Pb**	**04 29 21.8**	**+0.1**
TWK	baz=314			eS	**Sg**	**04 29 40.3**	**+0.3**
ESL	**Shilin** baz=347	**1.45**	**357**	P	**Pn**	**04 29 23.3**	**+0.5**
SCLT	**Jiali** baz=303	**1.47**	**304**	S	**Sb**	**04 29 43.2**	**+0.6**
CHN2	**Minshiung** baz=321	**1.51**	**321**	P	**Pb**	**04 29 25.3**	**+0.3**
CHN2	baz=321			eS	**Sg**	**04 29 45.9**	**-0.4**
SSLB	**Suanglung** baz=354	**1.52**	**340**	eP	**Pn**	**04 29 23.7**	**-0.1**
CHY	**Chiayi** baz=319	**1.52**	**318**	S	**Sb**	**04 29 44.8**	**+0.7**
ENLB	**Shoufeng** baz=18	**1.54**	**3**	eP	**Pn**	**04 29 24.9**	**+0.8**
ENLB	baz=18			eS	**Sn**	**04 29 44.1**	**+0.4**
CHN8	**Yiju** baz=309	**1.56**	**309**	eS	**Sn**	**04 29 45.2**	**+1.1**
WLGB	**Puzi** baz=315	**1.58**	**315**	eP	**Pn**	**04 29 25.3**	**+0.7**
WLGB	baz=315			eS	**Sn**	**04 29 45.6**	**+0.8**
WGK	**Gukeng** baz=327	**1.59**	**326**	P	**Pb**	**04 29 26.4**	**0.0**
SMLT	**Sun Moon Lake** baz=342	**1.62**	**339**	eP	**Pb**	**04 29 26.8**	**-0.2**
SMLT	baz=342			eS	**Sb**	**04 29 48.1**	**+0.9**
WJS	**Zhushan** baz=335	**1.63**	**334**	eP	**Pb**	**04 29 27.4**	**+0.4**
TYC	**Yuchr** baz=340	**1.66**	**338**	eP	**Pb**	**04 29 27.4**	**0.0**
TWD	**Chiawan** baz=16	**1.71**	**2**	P	**Pn**	**04 29 26.6**	**+0.1**
TWD	baz=16			S	**Sn**	**04 29 47.6**	**-0.4**
CHGB	**Renai** baz=5.0	**1.72**	**349**	eP	**Pn**	**04 29 27.6**	**+0.8**
WSF	**Szhu** baz=317	**1.75**	**317**	eS	**Sn**	**04 29 49.4**	**+0.6**
NACB	**Ninganchiao** baz=16	**1.81**	**2**	P	**Pn**	**04 29 27.2**	**-0.6**
NACB	baz=16			eS	**Sn**	**04 29 48.8**	**-1.5**
WDGT	**Dungji** baz=296	**1.94**	**298**	eP	**Pn**	**04 29 29.6**	**+0.1**
NNSB	**Datong** baz=359	**2.06**	**357**	eP	**Pn**	**04 29 31.3**	**-0.1**
ENA	**Nanau** baz=355	**2.07**	**6**	eP	**Pn**	**04 29 30.9**	**-0.5**
ENA	baz=355			eS	**Sn**	**04 29 56.4**	**-0.4**
NANB	**Nanao** baz=355	**2.07**	**6**	eP	**Pn**	**04 29 31.1**	**-0.3**
NANB	baz=355			eS	**Sn**	**04 29 56.0**	**-0.8**
ENAH	**Nanao** baz=19	**2.10**	**7**	eS	**Sn**	**04 29 56.4**	**-1.1**
PHUB	**P'eng-hu** baz=302	**2.13**	**303**	eP	**Pn**	**04 29 31.9**	**-0.3**
PHUB	baz=302			eS	**Sn**	**04 29 55.5**	**-2.8**
NSY	**Sanyi** baz=344	**2.16**	**341**	eP	**Pb**	**04 29 34.7**	**-1.4**
NSY	baz=344			eS	**Sb**	**04 30 02.9**	**+0.2**
PNG	**Penghu** baz=303	**2.17**	**304**	eP	**Pn**	**04 29 32.7**	**-0.1**
PNG	baz=303			eS	**Sn**	**04 29 56.8**	**-2.5**
TWC	**Suao** baz=21	**2.26**	**8**	eP	**Pn**	**04 29 34.3**	**+0.3**
TWC	baz=21			eS	**Sn**	**04 30 01.7**	**+0.2**
ENTT	**Nioudou** baz=5.0	**2.27**	**1**	eP	**Pn**	**04 29 35.1**	**+1.0**
ENTT	baz=5.0			eS	**Sn**	**04 30 02.5**	**+0.7**
YHNB	**Yeheng** baz=359	**2.30**	**357**	eP	**Pn**	**04 29 35.8**	**+1.1**
YHNB	baz=359			eS	**Sn**	**04 30 02.7**	**0.0**
NSK	**Sanguang** baz=11	**2.31**	**356**	eP	**Pn**	**04 29 36.0**	**+1.2**
NSTT	**Nanjuang** baz=334	**2.31**	**348**	eP	**Pn**	**04 29 36.8**	**+2.1**
NSTT	baz=334			eS	**Sb**	**04 30 05.8**	**-1.1**
LIOB	**Emei** baz=334	**2.32**	**349**	eP	**Pn**	**04 29 36.6**	**+1.7**
LIOB	baz=334			eS	**Sb**	**04 30 05.8**	**-1.5**
JYNG	**Yonagunijimaku**	**2.46**	**32**	P	**Pn**	**04 29 38.2**	**+1.5**
JYNG				S	**Sn**	**04 30 07.5**	**+1.1**
YOJ	**Yonaguni jima** baz=48	**2.50**	**33**	eP	**Pn**	**04 29 38.0**	**+0.7**
YOJ	baz=48			eS	**Sn**	**04 30 08.4**	**+1.0**
YOJ	**Yonaguni jima**	**2.50**	**33**	P	**Pn**	**04 29 38.2**	**+0.9**
YOJ				eS	**Sn**	**04 30 08.4**	**+1.0**
TIPB	**Shuangxi** baz=358	**2.62**	**6**	eP	**Pn**	**04 29 39.6**	**+0.7**
TIPB	baz=358			eS	**Sn**	**04 30 09.9**	**-0.4**
HATJ	**Hateruma jima**	**2.70**	**51**	P	**Pn**	**04 29 41.3**	**+1.3**
HATJ				S	**Sn**	**04 30 12.1**	**-0.1**
IRIF	**Iriomote-Funau**	**2.83**	**45**	P	**Pn**	**04 29 43.2**	**+1.4**
IRIF				eS	**Sn**	**04 30 15.3**	**-0.1**
JKRS	**Kuro-shima**	**2.96**	**50**	P	**Pn**	**04 29 44.9**	**+1.4**
JKRS				eS	**Sn**	**04 30 17.5**	**-1.1**
JIJ	**Ishigaki jima**	**3.13**	**50**	P	**Pn**	**04 29 47.0**	**+1.1**
JIJ				eS	**Sn**	**04 30 21.2**	**-1.7**
JISG	**Ishigakijimahi**	**3.39**	**49**	P	**Pn**	**04 29 50.3**	**+0.8**
JISG				eS	**Sn**	**04 30 28.4**	**-0.9**
JTJ	**Tarama**	**3.70**	**52**	P	**Pn**	**04 29 55.2**	**+1.4**
JTJ				eS	**Sn**	**04 30 36.1**	**-0.9**
JIRB	**Irabujima**	**4.16**	**53**	P	**Pn**	**04 30 01.5**	**+1.5**
JIRB				eS	**Sn**	**04 30 48.8**	**+0.6**
JIKM	**Ikemajima**	**4.27**	**53**	P	**Pn**	**04 30 03.0**	**+1.4**
JIKM				eS	**Sn**	**04 30 49.9**	**-1.1**
JOGS	**Gusukube**	**4.29**	**55**	eS	**Sn**	**04 30 52.6**	**+1.0**
JOW	**Kunigami** baz=297,	**7.59**	**53**	Pn	**Pn**	**04 30 46.7**	**-0.6**
	2.3nm,0.3s,baz=297,slow=21,SNR=5.9						
MKAR	**Makanchi Array**	**39.87**	**317**	P	**P**	**04 36 32.7**	**+2.5**
	0.6nm,0.6s,baz=98,slow=8.8,SNR=5.7						
ZALV	**Zalesovo Beam**	**41.95**	**328**	P	**P**	**04 36 49.0**	**+1.9**
	0.4nm,0.3s,baz=91,slow=7.2,SNR=3.6						
H11N1	**WAKE ISLAND Hy 42.31**	**85**		T	T	05 22 26.2	
	baz=282,slow=75,SNR=7.9						
H11N2	**WAKE ISLAND Hy 42.31**	**85**		T	T	05 22 04.1	
	baz=282,slow=75,SNR=12						
H11N3	**WAKE ISLAND Hy 42.33**	**85**		T	T	05 22 09.4	
	baz=282,slow=75,SNR=12						
H11S3	**WAKE ISLAND Hy 42.38**	**87**		T	T	05 22 07.0	
	baz=283,slow=74,SNR=46						
H11S1	**WAKE ISLAND Hy 42.39**	**87**		T	T	05 22 09.3	
	baz=283,slow=74,SNR=23						
H11S2	**WAKE ISLAND Hy 42.40**	**87**		T	T	05 22 10.0	
	baz=283,slow=74,SNR=19						
KURBB	**Kurchatov Arra**	**43.71**	**321**	P	**P**	**04 37 02.1**	**+0.6**
	0.3nm,0.7s,baz=116,slow=6.3,SNR=3.7						
WRA	**Warramunga Arr**	**43.87**	**162**	P	**P**	**04 37 00.3**	**-2.8**
	0.3nm,0.9s,baz=344,slow=8.8,SNR=2.6						

*ISCJB **16** 04:31:07.9±0.5, 55°.6S±0°.1×124°.3W±0°.2, h10km, mb4.2/15, MS4.1/28, Error ellipse: s-maj=17.2km s-min=12.7km az=150.1*
*IDC **16** 04:31:08.0±0.5, 55°.70S×124°.39W, h0km, mb4.3/9, mb1 4.5/9, mb1mx4.2/35, mbtmp4.3/9, MS4.0/28, Ms1 4.0/28, ms1mx4.0/34, Error ellipse: s-maj=27.2km s-min=16.8km az=168.0*
*NEIC **16** 04:31:09.3±0.3, 55°.55S×124°.33W, h10km, mb4.4/5, Error ellipse: s-maj=14.4km s-min=9.1km az=162.0*
*GCMT **16** 04:31:09.4±0.2, 55°.72S×124°.42W, h20km±1km, MW5.0/85, Moment Tensor Solution. s33,c37; s85,c116; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.19±.14; Mθθ2.41±.14; Mφφ-2.22±.12; Mrθ-0.66±.23; Mθφ2.51±.10; Mφr0.51±.22; Best double couple: M0:3.51800×10^16 NP1:φs111.00000°, δ85.00000°, λ-13.00000°. NP2: φs202.00000°, δ77.00000°, λ-175.00000°. Principal axes: T 3.5520, Plg6.0000°, Azm157.0000°; N -0.0680, Plg76.0000°, Azm272.0000°; P -3.4840, Plg13.0000°, Azm66.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 16 04:31:09.3±0.5, 55°.5S±0°.1×124°.4W±0°.1, h10km, n74, σ1s02/36, mb4.4/15, MS4.1/28, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	**Palmer Station** comp=Z,386nm,19.5s,baz=271,slow=30	**30.25**	**132**	LR	LR	04 46 13.8	
RPN	**Rapa Nui** comp=Z,114nm,19.3s,baz=132,slow=28	**30.40**	**27**	LR	LR	04 45 27.1	
VNDA	**Vanda** 1.1nm,0.8s,baz=112,slow=5.2,SNR=5.0	**33.13**	**202**	P	**P**	**04 37 47.4**	**+2.4**
VNDA	comp=Z,48nm,19.6s,baz=84,slow=32			LR	LR	04 48 33.0	
RKT	**Rikitea** 1μm,25.5s	**33.30**	**342**	eLR	LR	04 46 43.8	
RKT	**Rikitea** 7.2nm,0.2s	**33.30**	**342**	eT	T	05 12 42.8	
QSPA	**South Pole Qui** comp=Z,190nm,18.1s,baz=86,slow=35	**34.66**	**180**	LR	LR	04 51 24.9	
TBI	**Tubuai** 717nm,26.5s,baz=166	**37.10**	**320**	eLR	LR	04 48 26.8	
TBI	**Tubuai** 127nm,0.4s	**37.10**	**320**	eT	T	05 17 35.9	
PLCA	**Paso Flores** 3.4nm,1.0s,baz=249,slow=8.6,SNR=3.4	**37.84**	**90**	P	**P**	**04 38 26.4**	**+0.4**
PLCA	comp=Z,216nm,18.6s,baz=252,slow=30			LR	LR	04 50 01.8	
RPZ	**Rata Peaks** comp=Z,298nm,18.5s,baz=102,slow=30	**41.97**	**258**	LR	LR	04 51 53.3	
PPT2	**Papeete2** 827nm,25.8s,baz=161	**42.45**	**323**	eLR	LR	04 50 55.7	
PPT	**Papeete** comp=Z,304nm,20.6s,baz=143,slow=30	**42.47**	**323**	LR	LR	04 52 10.8	
RAR	**Rarotonga** comp=Z,123nm,20.3s,baz=150,slow=29	**43.24**	**308**	LR	LR	04 52 01.9	
VAH	**Vaihoa** 64nm,0.3s	**44.01**	**327**	eT	T	05 26 11.1	
PMOR	**Pomarlorio Ree** 9.8nm,0.3s	**44.31**	**326**	eT	T	05 26 34.0	
TRQA	**Tornquist** 7.5nm,0.9s	**44.52**	**94**	eP	**P**	**04 39 20.5**	**-0.4**
VNA3	**Neumayer Olymp**	**45.46**	**156**	P	**P**	**04 39 27.8**	**-0.2**
VNA1	**Neumayer--Stat**	**46.21**	**156**	P	**P**	**04 39 33.9**	**+0.2**
SNAA	**Sanae**	**46.67**	**158**	P	**P**	**04 39 36.8**	**-0.7**
SNAA	**Sanae**	**46.67**	**158**	P	**P**	**04 39 36.5**	**-1.0**
SNAA	3.1nm,0.9s,baz=228,slow=9.0,SNR=9.5			LR	LR	04 59 16.0	
TAOE	**Nuku Hiva Isla** 90nm,25.2s	**48.19**	**339**	eS	S	04 47 00.7	+12
TAOE	644nm,26.6s,baz=178			eLR	LR	04 53 31.3	
AFI	**Afiamalu** comp=Z,60nm,18.9s,baz=208,slow=32	**55.23**	**300**	LR	LR	05 00 31.1	
CPUP	**Villa Florida** comp=Z,200nm,18.9s,baz=228,slow=33	**55.81**	**87**	LR	LR	05 01 30.7	
MAW	**Mawson** 4.9nm,0.8s,baz=170,slow=7.8,SNR=7.7	**57.07**	**183**	P	**P**	**04 40 55.0**	**+0.1**
MAW	comp=Z,307nm,21.4s,baz=199,slow=34			LR	LR	05 03 23.5	
LPAZ	**La Paz** 5.3nm,1.1s,baz=188,slow=5.4,SNR=12	**57.81**	**71**	P	**P**	**04 41 01.9**	**+0.3**
LPAZ	comp=Z,141nm,18.8s,baz=200,slow=30			LR	LR	05 00 02.0	
DZM	**Mont Dzumac** 269nm,25.5s	**60.34**	**274**	eLR	LR	04 59 21.9	
DZM	**Mont Dzumac** comp=Z,143nm,20.8s,baz=202,slow=31	**60.34**	**274**	LR	LR	05 02 14.1	
STKA	**Stephens Creek** 3.1nm,0.7s,baz=138,slow=5.0,SNR=4.7	**66.53**	**248**	P	**P**	**04 41 57.5**	**-1.7**
STKA	comp=Z,163nm,18.4s,baz=196,slow=32			LR	LR	05 06 37.8	
SAML	**Samuel** 2.2nm,0.8s	**66.55**	**71**	eP	**P**	**04 41 58.4**	**-1.1**
OTAV	**Otavalo** 1.0nm,0.4s	**66.91**	**51**	eP	**P**	**04 42 02.6**	**+0.3**
ROSC	**El Rosal** comp=Z,67nm,20.5s,baz=266,slow=31	**72.85**	**53**	LR	LR	05 08 31.5	
CTA	**Charters Tower** 4.6nm,0.9s,baz=90,slow=6.1,SNR=3.1	**73.34**	**259**	P	**P**	**04 42 41.7**	**+0.5**
JTS	**JuntasAbangare** comp=Z,165nm,21.6s,baz=241,slow=30	**73.36**	**41**	LR	LR	05 07 22.4	
APG	**El Apazote** comp=Z,75nm,21.5s,baz=260,slow=30	**75.85**	**34**	LR	LR	05 08 35.0	
H01W1	**Cape Leeuwin H** baz=150,slow=76,SNR=294	**77.04**	**226**	T	T	06 08 28.5	
H01W2	**Cape Leeuwin H** baz=150,slow=76,SNR=223	**77.04**	**226**	T	T	06 08 29.1	
H01W3	**Cape Leeuwin H** baz=150,slow=76,SNR=291	**77.05**	**226**	T	T	06 08 29.8	
ASAR	**Alice Springs** 2.4nm,0.8s,baz=146,slow=5.3,SNR=21	**77.15**	**247**	P	**P**	**04 43 03.1**	**-0.1**
WRA	**Warramunga Arr** 4.2nm,0.8s,baz=144,slow=4.9,SNR=27	**79.97**	**250**	P	**P**	**04 43 18.8**	**+0.1**
WRAB	**Tennant Creek** 2.7nm,0.7s	**79.97**	**250**	eP	**P**	**04 43 18.8**	**0.0**
LPIG	**La Paz** comp=Z,100nm,18.7s,baz=200,slow=30	**80.20**	**13**	LR	LR	05 10 40.5	
PMG	**Port Moresby** comp=Z,125nm,18.7s,baz=176,slow=32	**81.46**	**266**	LR	LR	05 15 03.0	
TXAR	**Lajitas Array** 0.3nm,0.7s,baz=192,slow=12,SNR=4.4	**86.35**	**18**	P	**P**	**04 43 53.4**	**+2.0**
TXAR	comp=Z,53nm,20.0s,baz=0.0,slow=30			LR	LR	05 14 21.8	
JAY	**Jayapura** comp=Z,39nm,18.6s,baz=94,slow=34	**90.74**	**265**	LR	LR	05 22 22.9	
ANMO	**Albuquerque** comp=Z,41nm,20.9s,baz=200,slow=30	**91.40**	**15**	LR	LR	05 17 22.0	
ANMO	**Albuquerque** 0.9nm,0.5s	**91.40**	**15**	eP	**P**	**04 44 15.0**	**-0.3**
BATI	**Baumata** comp=Z,214nm,20.1s,baz=180,slow=33	**93.70**	**246**	LR	LR	05 22 04.0	
NVAR	**Mina Array Bea** comp=Z,129nm,20.8s,baz=272,slow=29	**93.72**	**5**	LR	LR	05 16 51.2	
H11S2	**WAKE ISLAND Hy 93.74** baz=148,slow=76,SNR=44	**297**		T	T	06 28 36.1	
H11S3	**WAKE ISLAND Hy 93.75** baz=148,slow=76,SNR=34	**297**		T	T	06 28 40.0	
H11S1	**WAKE ISLAND Hy 93.75** baz=148,slow=76,SNR=19	**297**		T	T	06 28 41.7	
H11N3	**WAKE ISLAND Hy 94.67** baz=148,slow=74	**298**		T	T	06 29 52.5	
H11N1	**WAKE ISLAND Hy 94.67** baz=148,slow=74	**298**		T	T	06 29 49.3	
H11N2	**WAKE ISLAND Hy 94.69** baz=148	**298**		T	T	06 29 58.7	
YBH	**Yreka Blue Hor** comp=Z,120nm,18.8s,baz=180,slow=30	**96.89**	**1**	LR	LR	05 19 42.0	
SIJI	**Sorong** comp=Z,51nm,20.6s,slow=32	**97.39**	**258**	LR	LR	05 23 01.5	
PDAR	**Pinedale Array** comp=Z,96nm,19.7s,baz=214,slow=30	**98.72**	**11**	LR	LR	05 21 02.7	
TORD	**Torodi Ar. Bea** 0.5nm,0.9s,baz=294,slow=2.3,SNR=3.2	**120.80**	**114**	PKP	**PKPdf**	**04 50 00.5**	**-1.1**
ILAR	**Eielson Array** 0.3nm,0.7s,baz=195,slow=1.8,SNR=3.7	**121.20**	**349**	PKP	**PKPdf**	**04 50 01.7**	**+0.8**
TIXI	**Tiksi** 4.9nm,0.8s,baz=128,slow=5.6,SNR=6.0	**146.32**	**327**	PKPbc	**PKPab**	**04 50 49.3**	**-0.1**
TIXI	**Tiksi** 2.3nm,0.7s,baz=108,slow=4.7,SNR=9.1	**146.32**	**327**	ePKPbc	**PKPbc**	**04 50 48.9**	**+0.4**
RAYN	**Ar Rayn**	**147.17**	**163**	ePKPbc	**PKPbc**	**04 50 52.8**	**+0.3**
EKA	**Eskdalemuir Ar** 1.7nm,0.8s,baz=255,slow=2.7,SNR=4.6	**147.51**	**65**	PKPbc	**PKPbc**	**04 50 52.6**	**+0.3**
ULN	**Ulaanbaatar**	**147.88**	**278**	ePKPbc	**PKPbc**	**04 50 54.4**	**+0.6**
SONM	**Songino Array** 2.2nm,0.7s,baz=142,slow=4.4,SNR=3.6	**148.23**	**278**	PKPbc	**PKPbc**	**04 50 54.8**	**+0.1**
GERES	**GERESS Array B** 0.7nm,0.7s,baz=248,slow=1.4,SNR=6.6	**153.77**	**87**	PKPbc	**PKPbc**	**04 51 07.4**	**-0.3**
GERES	0.8nm,0.7s,baz=222,slow=1.8,SNR=6.1			PKPab	**PKPab**	**04 51 21.0**	**+0.2**
BRTR	**Keskin Array B** 0.6nm,0.6s,baz=163,slow=6.4,SNR=4.4	**158.48**	**128**	PKPab	**PKPab**	**04 51 41.0**	**-0.3**
MKAR	**Makanchi Array** 0.7nm,0.6s,baz=134,slow=4.7,SNR=5.4	**161.23**	**253**	PKPab	**PKPab**	**04 51 52.2**	**-0.8**
ZALV	**Zalesovo Beam** 2.3nm,0.7s,baz=108,slow=4.7,SNR=9.1	**163.12**	**277**	PKPab	**PKPab**	**04 52 01.4**	**+0.4**
KIEV	**Kiev**	**163.47**	**96**	ePKPab	**PKPab**	**04 52 01.9**	**-0.7**
AKASG	**Malin Array Be** 0.4nm,0.5s,baz=255,slow=4.0,SNR=5.3	**163.48**	**96**	PKPab	**PKPab**	**04 52 01.7**	**-0.9**
KURK	**Kurchatov**	**165.41**	**260**	ePKPab	**PKPab**	**04 52 10.7**	**-0.4**
KURBB	**Kurchatov Arra** 0.3nm,0.3s,baz=120,slow=4.3,SNR=5.8	**165.41**	**260**	PKPab	**PKPab**	**04 52 07.6**	**-3.5**
BVAR	**Borovoye Array** 0.9nm,0.7s,baz=97,slow=7.6,SNR=5.1	**171.01**	**260**	PKPab	**PKPab**	**04 52 35.2**	**-0.7**

*IDC **16** 04:43:00.4±2.6, 2°.25N×92°.47E, h0km, mb3.6/2, mb1 3.8/3, mb1mx3.3/66, mbtmp3.7/3, ML3.8/1, MS3.8/2, Ms1 3.8/2, ms1mx2.7/53, Error ellipse: s-maj=82.5km s-min=31.7km az=45.0*
*ISCJB **16** 04:43:03.8±1.6, 2°.62N±0°.10×92°.7E±0°.1, h21km, mb3.7/2, MS3.8/2, Error ellipse: s-maj=18.5km s-min=13.9km az=179.1*
*DJA **16** 04:43:11.9±2.5, 3°N±5°×9°3E±2°1, h10km, M4.2/6, mb4.1/2, MLv4.3/6*
ISC 16 04:43:05.4±1.6, 2°.5N±0°.1×92°.8E±0°.1, h21km, n12, σ2s49/11, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**3.88**	**41**	P	**Pn**	**04 44 05.8**	**+1.9**
BSI				S	**Sn**	**04 44 47.1**	**-1.8**
TPTI		**4.47**	**81**	P	**Pn**	**04 44 14.2**	**+2.2**
GSI	**Gunungsitoli**	**4.96**	**104**	P	**Pn**	**04 44 20.5**	**+1.8**
KCSI	**Kotacane, Aceh**	**5.10**	**79**	P	**Pn**	**04 44 24.7**	**+4.1**
PSI	**Prapat** 2.3nm,0.3s,baz=359,slow=2.9,SNR=10	**6.16**	**87**	Pn	**Pn**	**04 44 37.4**	**+2.0**
PSI	0.5nm,0.3s,baz=180,slow=12,SNR=2.2			Sn	**Sn**	**04 45 42.4**	**-2.9**
MNSI	**Mandailing Nat**	**7.03**	**104**	P	**Pn**	**04 44 49.2**	**+2.0**
PALK	**Pallekele** 1.8nm,0.3s,baz=117,slow=5.0,SNR=6.0	**12.91**	**292**	Sn	Sn	04 48 15.1	-16
BATI	**Baumata** comp=Z,112nm,18.3s,baz=112,slow=38	**33.27**	**113**	LR	LR	05 04 28.2	
MKAR	**Makanchi Array** 0.7nm,0.6s,baz=163,slow=8.9,SNR=5.7	**45.02**	**350**	P	**P**	**04 51 19.2**	**-0.3**
WRA	**Warramunga Arr** 0.7nm,0.7s,baz=298,slow=6.6,SNR=6.6	**46.51**	**121**	P	**P**	**04 51 30.4**	**-1.3**
TORD	**Torodi Ar. Bea** comp=Z,58nm,21.7s,baz=135,slow=32	**90.47**	**283**	LR	LR	05 31 54.8	
TXAR	**Lajitas Array** 0.2nm,0.6s,baz=298,slow=1.9,SNR=3.3	**144.62**	**25**	PKPbc	**PKPab**	**05 02 39.6**	**-0.3**

*CSEM **16** 04:49:26.4, 35°.20N×27°.31E, h26km, ML2.1/2*
ATH 16 04:49:26.4, 35°.20N×27°.31E, h26km±1km, ML2.1/2, Error ellipse: s-maj=7.1km s-min=1.7km az=314.0, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.37**	**341**	P	Pb	04 49 34.6	0.0

KARP			S	Sb	04 49 40.6	+0.5
KARP			AML	AML	04 49 41.9	
	comp=N,779μm,0.1s					
KARP			AML	AML	04 49 43.4	
	comp=E,891μm,0.1s					
KARP	**Karpathos**	**0.37 341**	P	Pb	04 49 34.6	0.0
KARP			S	Sb	04 49 40.6	+0.5
ZKR	**Zakros**	**0.90 265**	P	Pn	04 49 43.8	+0.3
ZKR			S	Sn	04 49 57.1	+1.5
ZKR			AML	AML	04 50 00.3	
	comp=N,126μm,0.3s					
ZKR			AML	AML	04 50 03.0	
	comp=E,231μm,0.3s					
ZKR	**Zakros**	**0.90 265**	P	Pn	04 49 43.8	+0.4
ZKR			S	Sn	04 49 56.9	+1.3
NPS	**Neapolis**	**1.39 273**	P	Pb	04 49 53.1	+1.3
NPS	**Neapolis**	**1.39 273**	P	Pb	04 49 52.7	+0.9
LAST	**Lasithi**	**1.50 269**	P	Pb	04 49 53.2	-0.5
LAST			S	Sb	04 50 13.1	+0.8
LAST	**Lasithi**	**1.50 269**	P	Pb	04 49 53.5	-0.2
LAST			S	Sb	04 50 13.4	+1.1

*CSEM **16** 04:51:01.5±0.1, 42°.61N×22°.98E, h2km, MD3.0, Error ellipse: s-maj=2.2km s-min=2.0km az=29.0*
*BEO **16** 04:51:01.7±0.2, 42°.62N×23°.02E, h9km±2km*
*PDG **16** 04:51:01.8±0.4, 42°.66N×22°.97E, h11km, ML2.9/7, Error ellipse: s-maj=0.6km s-min=0.6km az=0.0*
*SOF **16** 04:51:02.1, 42°.57N×23°.07E, h10km, MD3.0*
*THE **16** 04:51:02.7, 42°.55N×23°.01E, h3km±1km, ML3.2/4, Error ellipse: s-maj=2.5km s-min=0.7km az=323.0*

ISC 16 04:51:01.8±0.9, 42°.61N±0°.02×23°.00E±0°.02, h8km±7km, n144, σ0°98/219, 29C-27D, Bulgaria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VTS	**Vitosha**	**0.15**	**98**	*e*Pg	**Pg**	**04 51 05.3**	**+0.2**
VTS				*e*Sg	**Sg**	**04 51 07.9**	**+0.5**
VTS	**Vitosha**	**0.15**	**98**	⇓*i*P	**Pg**	**04 51 05.1**	**0.0**
VTS				S	**Sg**	**04 51 07.8**	**+0.4**
VTS	**Vitosha**	**0.15**	**98**	*i* P	**Pg**	**04 51 05.3**	**+0.2**
VTS	**Vitosha**	**0.15**	**98**	P	**Pg**	**04 51 05.1**	**0.0**
VTS				S	**Sg**	**04 51 07.8**	**+0.4**
VTS	**Vitosha**	**0.15**	**98**	P	**Pg**	**04 51 05.1**	**0.0**
VTS				S	**Sg**	**04 51 07.8**	**+0.4**
ZAPS	**Zavoj**	**0.71**	**338**	*e*Pg	**Pb**	**04 51 16.2**	**-0.4**
ZAPS				*e*Sg	**Sb**	**04 51 25.9**	**-0.7**
KKB	**Krupnik**	**0.75**	**175**	*i* P	**Pg**	**04 51 16.1**	**-0.1**
KKB	**Krupnik**	**0.75**	**175**	*i* P	**Pg**	**04 51 16.1**	**-0.1**
PGB	**Panagyurishte**	**0.86**	**94**	*i* P	**Pg**	**04 51 17.8**	**-0.6**
PGB	**Panagyurishte**	**0.86**	**94**	*i* P	**Pg**	**04 51 17.8**	**-0.6**
BARS	**Barje**	**0.90**	**284**	*e*Pg	**Pg**	**04 51 18.4**	**-0.7**
BARS				*e*Sg	**Sg**	**04 51 30.5**	**-0.3**
BARS	**Barje**	**0.90**	**284**	*e*Pg	**Pg**	**04 51 18.4**	**-0.7**
BARS				*e*Sg	**Sg**	**04 51 30.5**	**-0.3**
STIP	**Stip**	**1.10**	**214**	⇑*i*Pg	Pg	04 51 18.1	-4.8
MMB	**Musomiste**	**1.16**	**152**	*i* P	**Pb**	**04 51 23.9**	**-0.2**
MMB	**Musomiste**	**1.16**	**152**	*i* P	**Pb**	**04 51 23.9**	**-0.2**
SKO	**Skopje**	**1.32**	**242**	*e*Pg	**Pn**	**04 51 24.8**	**-1.9**
SKO				*e*Sg	**Sb**	**04 51 44.2**	**+0.1**
SKO	**Skopje**	**1.32**	**242**	*e*Pg	**Pn**	**04 51 24.1**	**-2.6**
SKO				*i* Sg	**Sb**	**04 51 43.7**	**-0.3**
SKO	**Skopje**	**1.32**	**242**	*e*Pg	**Pn**	**04 51 24.8**	**-1.9**
SKO				*e*Sg	**Sb**	**04 51 44.2**	**+0.1**
ZAGS	**Zajecar**	**1.32**	**335**	*e*Pg	**Pn**	**04 51 26.4**	**-0.3**
ZAGS				*e*Sg	**Sg**	**04 51 44.8**	**+0.3**
ZAGS	**Zajecar**	**1.32**	**335**	*e*Pg	**Pn**	**04 51 26.4**	**-0.3**
ZAGS				*e*Sg	**Sg**	**04 51 44.8**	**+0.3**
VAY	**Valandovo**	**1.33**	**194**	*e*Pg	**Pn**	**04 51 26.2**	**-0.5**
VAY				*e*Sg	**Sg**	**04 51 44.7**	**+0.1**
VAY	**Valandovo**	**1.33**	**194**	P	**Pn**	**04 51 26.2**	**-0.5**
VAY				S	**Sg**	**04 51 44.7**	**+0.1**
VAY	**Valandovo**	**1.33**	**194**	*i* Pg	**Pn**	**04 51 26.1**	**-0.6**
VAY				*i* Sg	**Sg**	**04 51 46.5**	**+1.9**
VAY	**Valandovo**	**1.33**	**194**	P	**Pn**	**04 51 26.2**	**-0.5**
VAY				S	**Sg**	**04 51 44.7**	**+0.1**
PLD	**Plovdiv**	**1.36**	**111**	*e*Pg	**Pn**	**04 51 25.3**	**-1.8**
PLD				*e*Sg	**Sn**	**04 51 44.8**	**-0.5**
PLD	**Plovdiv**	**1.36**	**111**	*e*Pg	**Pn**	**04 51 25.3**	**-1.8**
PLD				*e*Sg	**Sn**	**04 51 44.8**	**-0.5**
BOVS	**Bovan**	**1.40**	**318**	*e*Pg	**Pn**	**04 51 27.8**	**+0.2**
BOVS				*e*Sg	**Sn**	**04 51 46.1**	**-0.1**
BOVS	**Bovan**	**1.40**	**318**	*e*Pg	**Pn**	**04 51 27.8**	**+0.2**
BOVS				*e*Sg	**Sn**	**04 51 46.1**	**-0.1**
NVR	**Nevrokopi**	**1.42**	**153**	P	**Pn**	**04 51 28.0**	**+0.1**
NVR				S	**Sn**	**04 51 46.7**	**-0.1**
NVR	**Nevrokopi**	**1.42**	**153**	P	**Pn**	**04 51 28.0**	**+0.1**
NVR				S	**Sn**	**04 51 46.7**	**-0.1**
KNT	**Kendrikon**	**1.45**	**183**	P	**Pn**	**04 51 28.2**	**-0.2**
KNT				S	**Sg**	**04 51 48.3**	**-0.2**
KNT	**Kendrikon**	**1.45**	**183**	P	**Pn**	**04 51 28.2**	**-0.2**
KNT				S	**Sg**	**04 51 48.3**	**-0.2**
SELS	**Selova**	**1.51**	**294**	*e*Pg	**Pn**	**04 51 28.6**	**-0.7**
SELS				*e*Sg	**Sn**	**04 51 48.6**	**-0.6**
SELS	**Selova**	**1.51**	**294**	*e*Pg	**Pn**	**04 51 28.6**	**-0.7**
SELS				*e*Sg	**Sn**	**04 51 48.6**	**-0.6**
SRS	**Serrai**	**1.56**	**163**	P	**Pb**	**04 51 30.3**	**-0.6**
SRS				S	**Sb**	**04 51 51.1**	**+0.3**
SRS	**Serrai**	**1.56**	**163**	P	**Pb**	**04 51 30.3**	**-0.6**
SRS				S	**Sb**	**04 51 51.1**	**+0.3**
RZN	**Rozhen**	**1.57**	**125**	*i* P	**Pg**	**04 51 31.6**	**-0.4**
RZN	**Rozhen**	**1.57**	**125**	*i* P	**Pg**	**04 51 31.6**	**-0.4**
GRG	**Griva**	**1.71**	**195**	P	**Pn**	**04 51 32.0**	**0.0**
GRG	**Griva**	**1.71**	**195**	P	**Pn**	**04 51 32.0**	**0.0**
CRAR	**CRAIOVA**	**1.81**	**18**	⇑*i*P	**Pn**	**04 51 33.7**	**+0.4**
CRAR	**CRAIOVA**	**1.81**	**18**	⇑*i*P	**Pn**	**04 51 33.7**	**+0.4**
CRAR				S	**Sg**	**04 51 59.2**	**-0.7**
SOH	**Sokhos**	**1.81**	**172**	P	**Pn**	**04 51 33.3**	**0.0**
SOH				S	**Sn**	**04 51 56.5**	**0.0**
SOH	**Sokhos**	**1.81**	**172**	P	**Pn**	**04 51 33.3**	**0.0**
SOH				S	**Sn**	**04 51 56.5**	**0.0**
HORT	**Hortiatis**	**2.01**	**178**	P	**Pn**	**04 51 36.6**	**+0.4**
HORT	**Hortiatis**	**2.01**	**178**	P	**Pn**	**04 51 36.6**	**+0.4**
ZIMR		**2.02**	**58**	S	**Sn**	**04 52 01.8**	**+0.2**
BIA	**Bitola**	**2.03**	**219**	P	**Pn**	**04 51 36.0**	**-0.4**
BIA	**Bitola**	**2.03**	**219**	*e*Pn	**Pn**	**04 51 37.5**	**+1.2**
BIA	**Bitola**	**2.03**	**219**	P	**Pn**	**04 51 36.0**	**-0.4**
KDZ	**Kurdzhali**	**2.04**	**117**	*i* P	**Pb**	**04 51 37.8**	**-1.3**
KDZ	**Kurdzhali**	**2.04**	**117**	*i* P	**Pb**	**04 51 37.8**	**-1.3**
KUBS	**Kucevo**	**2.04**	**332**	*e*Pn	**Pn**	**04 51 35.3**	**-1.2**
KUBS				*e*Sg	**Sb**	**04 52 05.5**	**+0.7**
KUBS	**Kucevo**	**2.04**	**332**	*e*Pn	**Pn**	**04 51 35.3**	**-1.2**
KUBS				*e*Sg	**Sb**	**04 52 05.5**	**+0.7**
SRE	**Strehaia**	**2.06**	**4**	⇑*i*P	**Pn**	**04 51 37.3**	**+0.6**
SRE	**Strehaia**	**2.06**	**4**	⇑*i*P	**Pn**	**04 51 37.3**	**+0.6**
SRE				S	**Sb**	**04 52 04.8**	**-0.3**
GRUS	**Gruza**	**2.10**	**308**	*e*Pn	**Pn**	**04 51 36.9**	**-0.5**
GRUS				*e*Sg	**Sg**	**04 52 08.8**	**-0.6**
GRUS	**Gruza**	**2.10**	**308**	*e*Pn	**Pn**	**04 51 36.9**	**-0.5**
GRUS				*e*Sg	**Sg**	**04 52 08.8**	**-0.6**
SVIS	**Svilajnac**	**2.10**	**322**	*e*Pg	**Pn**	**04 51 38.4**	**+1.0**
SVIS				*e*Sg	**Sb**	**04 52 07.6**	**+1.1**
OHR	**Ohrid**	**2.23**	**228**	*i* Pn	**Pb**	**04 51 43.0**	**+0.7**
PVY	**Plav**	**2.25**	**271**	⇑*i*Pn	**Pn**	**04 51 40.1**	**+0.6**
PVY				*e*Sn	**Sb**	**04 52 09.6**	**-1.2**
IVAS	**Ivanjica**	**2.30**	**296**	*e*Pn	**Pn**	**04 51 39.8**	**-0.3**
IVAS				*e*Sg	**Sg**	**04 52 15.4**	**-0.3**
IVAS	**Ivanjica**	**2.30**	**296**	*e*Pn	**Pn**	**04 51 39.8**	**-0.3**
IVAS				*e*Sg	**Sg**	**04 52 15.4**	**-0.3**
BEY	**Berane**	**2.31**	**278**	*e*Pn	**Pn**	**04 51 40.5**	**+0.3**
BEY				*e*Sn	**Sn**	**04 52 10.3**	**+1.5**
IVA	**Berane**	**2.31**	**278**	*e*Pn	**Pn**	**04 51 40.5**	**+0.3**
IVA				*e*Sn	**Sn**	**04 52 10.3**	**+1.5**
HERR	**Herculane**	**2.31**	**350**	⇓*i*P	**Pn**	**04 51 39.6**	**-0.6**
HERR	**Herculane**	**2.31**	**350**	⇓*i*P	**Pn**	**04 51 39.6**	**-0.6**
HERR				S	**Sb**	**04 52 10.4**	**-2.0**
SJES	**Sjenica**	**2.32**	**287**	*e*Pg	**Pb**	**04 51 43.8**	**-0.1**
SJES				*e*Sg	**Sg**	**04 52 16.5**	**+0.2**
MDVR	**Moldovita**	**2.36**	**337**	⇑*i*P	**Pn**	**04 51 41.3**	**+0.3**
MDVR	**Moldovita**	**2.36**	**337**	⇑*i*P	**Pn**	**04 51 41.3**	**+0.3**
MDVR				S	**Sn**	**04 52 11.7**	**+1.5**
RDO	**Rodhopi**	**2.39**	**127**	P	**Pb**	**04 51 43.2**	**-2.0**
RDO	**Rodhopi**	**2.39**	**127**	P	**Pb**	**04 51 43.2**	**-2.0**
HUMR	**Humele**	**2.40**	**36**	⇓*i*P	**Pn**	**04 51 41.6**	**+0.2**
HUMR	**Humele**	**2.40**	**36**	⇓*i*P	**Pn**	**04 51 41.6**	**+0.2**
HUMR				S	**Sb**	**04 52 12.6**	**-2.3**
TRUS	**Trudelj**	**2.48**	**311**	*e*Pn	**Pn**	**04 51 42.2**	**-0.4**
TRUS				*e*Sg	**Sg**	**04 52 20.6**	**-1.0**
TRUS	**Trudelj**	**2.48**	**311**	*e*Pn	**Pn**	**04 51 42.2**	**-0.4**
TRUS				*e*Sg	**Sg**	**04 52 20.6**	**-1.0**
KOME	**Kolasin**	**2.58**	**276**	⇑*i*Pn	**Pn**	**04 51 44.5**	**+0.5**
KOME				*e*Sn	**Sn**	**04 52 17.0**	**+1.4**
KOME	**Kolasin**	**2.58**	**276**	⇑*i*Pn	**Pn**	**04 51 44.5**	**+0.5**
KOME				*e*Sn	**Sn**	**04 52 17.0**	**+1.4**
DIVS	**Divibare**	**2.65**	**305**	*e*Pn	**Pn**	**04 51 44.5**	**-0.5**
DIVS				*e*Sg	**Sg**	**04 52 25.7**	**-1.3**
DIVS	**Divibare**	**2.65**	**305**	*e*Pn	**Pn**	**04 51 44.5**	**-0.5**
TIR	**Tirane**	**2.66**	**243**	S	**Sn**	**04 52 17.4**	**0.0**
SGRR	**Singureni**	**2.70**	**52**	S	**Sn**	**04 52 19.7**	**+1.3**
SGRR	**Singureni**	**2.70**	**52**	S	**Sn**	**04 52 19.7**	**+1.3**
PDG	**Podgorica**	**2.78**	**268**	*e*Pg	**Pb**	**04 51 51.2**	**-0.5**
PDG	**Podgorica**	**2.78**	**268**	⇓*i*P	**Pn**	**04 51 44.9**	**-1.7**
PDG	**Podgorica**	**2.78**	**268**	⇓*i*P	**Pn**	**04 51 44.9**	**-1.7**
PDG	**Podgorica**	**2.78**	**268**	⇓*i*Pn	**Pn**	**04 51 47.2**	**+0.6**
PDG	**Podgorica**	**2.78**	**268**	*e*Pg	**Pb**	**04 51 51.2**	**-0.5**
	baz=4.0						
TTG	**Podgorica**	**2.78**	**268**	⇓*i*Pn	**Pn**	**04 51 47.2**	**+0.6**
TTG				*e*Sn	**Sn**	**04 52 22.3**	**+2.0**
ALN	**Alexandroupoli**	**2.85**	**126**	P	**Pn**	**04 51 47.8**	**+0.2**
ALN	**Alexandroupoli**	**2.85**	**126**	P	**Pn**	**04 51 47.8**	**+0.2**
DRME	**Dracevica, Mon**	**2.86**	**263**	*e*Pn	**Pn**	**04 51 49.1**	**+1.3**
DRME				*e*Sn	**Sn**	**04 52 24.1**	**+1.7**
DRME	**Dracevica, Mon**	**2.86**	**263**	*e*Pn	**Pn**	**04 51 49.1**	**+1.3**
DRME				*e*Sn	**Sn**	**04 52 24.1**	**+1.7**
LOT	**Lotru**	**2.89**	**11**	⇓*i*P	**Pn**	**04 51 48.2**	**-0.1**
LOT	**Lotru**	**2.89**	**11**	⇓*i*P	**Pn**	**04 51 48.2**	**-0.1**
BBLS	**Lazići**	**2.91**	**297**	*e*Pn	**Pn**	**04 51 49.2**	**+0.6**
BBLS				*e*Sg	**Sg**	**04 52 34.3**	**-1.1**
BBLS	**Lazići**	**2.91**	**297**	*e*Pn	**Pn**	**04 51 49.2**	**+0.6**
BBLS				*e*Sg	**Sg**	**04 52 34.3**	**-1.1**
NKME	**Niksic**	**2.99**	**274**	⇑*i*Pn	**Pn**	**04 51 50.2**	**+0.6**
NKME				*e*Sn	**Sn**	**04 52 27.1**	**+1.4**
NKME	**Niksic**	**2.99**	**274**	⇑*i*Pn	**Pn**	**04 51 50.2**	**+0.6**
NKME				*e*Sn	**Sn**	**04 52 27.1**	**+1.4**
ARR	**Arges**	**3.00**	**23**	⇑*i*P	**Pn**	**04 51 49.9**	**+0.2**
ARR	**Arges**	**3.00**	**23**	⇑*i*P	**Pn**	**04 51 49.9**	**+0.2**
ARR				S	**Sn**	**04 52 27.1**	**+1.3**
CEME	**Cevo**	**3.02**	**270**	⇓*i*Pn	**Pn**	**04 51 51.5**	**+1.5**
CEME				*e*Sn	**Sn**	**04 52 27.5**	**+1.1**
CEME	**Cevo**	**3.02**	**270**	⇓*i*Pn	**Pn**	**04 51 51.5**	**+1.5**
CEME				*e*Sn	**Sn**	**04 52 27.5**	**+1.1**
BUM	**Brajici-Budva**	**3.06**	**266**	⇑*i*Pn	**Pn**	**04 51 51.1**	**+0.6**
BUM				*e*Sn	**Sn**	**04 52 29.0**	**+1.7**
BUM	**Brajici-Budva**	**3.06**	**266**	⇑*i*Pn	**Pn**	**04 51 51.1**	**+0.6**
BUM				*e*Sn	**Sn**	**04 52 29.0**	**+1.7**
SULR		**3.14**	**48**	S	**Sn**	**04 52 31.5**	**+2.3**
SULR		**3.14**	**48**	S	**Sn**	**04 52 31.5**	**+2.3**
BZS	**Buzias**	**3.17**	**342**	*e*Pn	**Pn**	**04 51 51.7**	**-0.3**
BZS				*e*Sg	**Sg**	**04 52 42.0**	**-1.5**
BZS	**Buzias**	**3.17**	**342**	⇑*i*P	**Pn**	**04 51 51.6**	**-0.4**
BZS	**Buzias**	**3.17**	**342**	*e*Pn	**Pn**	**04 51 51.7**	**-0.3**
BZS				S	**Sn**	**04 52 31.4**	**+1.5**
BZS				*e*Sg	**Sg**	**04 52 42.0**	**-1.5**
TEKS	**Tekeris**	**3.18**	**309**	*e*Pn	**Pn**	**04 51 52.0**	**-0.2**
TEKS	**Tekeris**	**3.18**	**309**	*e*Pn	**Pn**	**04 51 52.0**	**-0.2**
VOIR		**3.19**	**27**	⇓*i*P	**Pn**	**04 51 53.1**	**+0.8**
VOIR		**3.19**	**27**	⇓*i*P	**Pn**	**04 51 53.1**	**+0.8**
VOIR				S	**Sn**	**04 52 32.5**	**+1.9**
BRY	**Bratogost**	**3.30**	**277**	⇑*i*Pn	**Pn**	**04 51 54.4**	**+0.5**
BRY				*e*Sn	**Sn**	**04 52 34.5**	**+1.1**
BRY	**Bratogost**	**3.30**	**277**	⇑*i*Pn	**Pn**	**04 51 54.4**	**+0.5**
BRY				*e*Sn	**Sn**	**04 52 34.5**	**+1.1**
HCY	**Herceg Novi**	**3.34**	**269**	*e*Pn	**Pn**	**04 51 55.8**	**+1.5**
HCY				*e*Sn	**Sn**	**04 52 35.8**	**+1.7**
HCY	**Herceg Novi**	**3.34**	**269**	*e*Pn	**Pn**	**04 51 55.8**	**+1.5**
HCY				*e*Sn	**Sn**	**04 52 35.8**	**+1.7**
MLR	**Muntele Rosu**	**3.58**	**35**	⇑*i*P	**Pn**	**04 51 58.1**	**+0.4**
MLR	**Muntele Rosu**	**3.58**	**35**	⇑*i*P	**Pn**	**04 51 58.1**	**+0.4**
MLR				S	**Sn**	**04 52 41.4**	**+1.2**
ISR	**Istrita**	**3.58**	**44**	⇑*i*P	**Pn**	**04 51 57.9**	**+0.2**
ISR	**Istrita**	**3.58**	**44**	⇑*i*P	**Pn**	**04 51 57.9**	**+0.2**
DOPR	**Dopca**	**3.77**	**26**	⇑*i*P	**Pn**	**04 52 00.1**	**-0.1**
DOPR	**Dopca**	**3.77**	**26**	⇑*i*P	**Pn**	**04 52 00.1**	**-0.1**
SIRR	**Siria**	**3.78**	**346**	⇑*i*P	**Pn**	**04 52 00.2**	**-0.2**
SIRR	**Siria**	**3.78**	**346**	⇑*i*P	**Pn**	**04 52 00.2**	**-0.2**
ICOR	**Ion Corvin**	**3.81**	**65**	⇓*i*P	**Pn**	**04 52 01.1**	**+0.3**
ICOR	**Ion Corvin**	**3.81**	**65**	⇓*i*P	**Pn**	**04 52 01.1**	**+0.3**
STON	**Ston**	**3.91**	**276**	*e*Pn	**Pn**	**04 52 02.5**	**+0.2**
STON				Sn	**Sn**	**04 52 49.1**	**+0.7**
STON	**Ston**	**3.91**	**276**	*e*Pn	**Pn**	**04 52 02.4**	**+0.2**
STON				Sn	**Sn**	**04 52 49.0**	**+0.7**
TLB	**Topalu**	**4.16**	**60**	⇓*i*P	**Pn**	**04 52 06.8**	**+1.2**
TLB	**Topalu**	**4.16**	**60**	⇓*i*P	**Pn**	**04 52 06.8**	**+1.2**
PLOR	**Plostina**	**4.17**	**38**	⇓*i*P	**Pn**	**04 52 06.5**	**+0.8**
PLOR	**Plostina**	**4.17**	**38**	⇓*i*P	**Pn**	**04 52 06.5**	**+0.8**
DRGR		**4.18**	**357**	⇓*i*P	**Pn**	**04 52 06.7**	**+0.7**
DRGR		**4.18**	**357**	⇓*i*P	**Pn**	**04 52 06.7**	**+0.7**
VRI	**Vrincioaia**	**4.21**	**38**	⇑*i*P	**Pn**	**04 52 07.6**	**+1.2**
VRI	**Vrincioaia**	**4.21**	**38**	⇑*i*P	**Pn**	**04 52 07.6**	**+1.2**
VRI				S	**Sn**	**04 52 57.7**	**+1.9**
TIRR	**Tirgusor**	**4.34**	**63**	⇓*i*P	**Pn**	**04 52 08.9**	**+0.8**
TIRR	**Tirgusor**	**4.34**	**63**	⇓*i*P	**Pn**	**04 52 08.9**	**+0.8**
CFR	**Carcaliu**	**4.51**	**54**	⇓*i*P	**Pn**	**04 52 11.6**	**+1.2**
CFR	**Carcaliu**	**4.51**	**54**	⇓*i*P	**Pn**	**04 52 11.6**	**+1.2**
CFR				S	**Sn**	**04 53 06.2**	**+3.2**
UDBI	**Udbina**	**5.60**	**292**	*e*Pn	**Pn**	**04 52 27.9**	**+2.4**
UDBI	**Udbina**	**5.60**	**292**	*e*Pn	**Pn**	**04 52 27.8**	**+2.4**

MAN 16 04:53:30.5, 11°.33N×125°.75E, h1km, mb4.3, ML3.2, MS2.9, 1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.40**	**311**	*e*P	Pg	04 53 37.9	-0.3
PLP	**Palo**	**0.77**	**258**	⇓*e*P	Pg	04 53 45.3	0.0
PLP				*e*S	Sg	04 53 56.0	+0.7
MSLP	**Maasin**	**1.48**	**216**	*e*P	Pn	04 53 58.3	0.0
MSLP				*e*S	Sn	04 54 19.8	+1.6
CNP	**Catarman**	**1.58**	**318**	*e*P	Pn	04 53 59.1	-0.5
CNP				*e*S	Sg	04 54 21.8	+0.4
PVCP	**Virac**	**2.74**	**326**	*e*P	Pn	04 54 17.2	+1.6

NNC 16 04:59:04.9±5.3, 37°.27N×70°.80E, h0km, mb3.6, mpv3.2, 2C-4D, Error ellipse: s-maj=40.6km s-min=32.5km az=176.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.46**	**37**	⇑P	Pn	05 00 00.1	-0.2
	1.9nm,0.3s						
SFK				⇑S	Sn	05 00 42.9	+0.9
	18nm,0.4s						
MNAS	**Manas**	**5.37**	**14**	⇓P	Pn	05 00 26.8	+0.3
	1.1nm,0.4s						
MNAS				⇓S	Sn	05 01 30.0	+0.9
	7.2nm,0.4s						
KK31	**Karatay Array**	**5.83**	**358**	⇓P	Pn	05 00 33.4	+0.7
	1.5nm,0.3s,baz=175,slow=12,SNR=25						
KK31				⇓S	Sn	05 01 42.2	+1.9
	4.4nm,0.5s,baz=183,slow=22						

NEIC 16 05:04:33.6±0.0, 60°.03N×153°.41W, h146km, ML3.5(AEIC), After AEIC., Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILIM	**Iliamna**	**0.23**	**77**	P	Pn	05 04 52.8	-0.7
RDWB	**Redoubt West**	**0.54**	**32**	P	Pn	05 04 54.1	-0.8
RDWB				S	Sn	05 05 10.2	-0.9
RSO	**Redoubt South**	**0.54**	**37**	*e*Pn	Pn	05 04 54.2	-0.7
RSO				*e*Sn	Sn	05 05 12.2	+1.0
NCT	**North Crescent**	**0.58**	**24**	P	Pn	05 04 54.4	-0.6
RDJH	**Redoubt Jeurge**	**0.64**	**28**	P	Pn	05 04 54.7	-0.7
RDJH				S	Sn	05 05 11.4	-0.6
AUNW	**Augustine NWes**	**0.66**	**183**	P	Pn	05 04 54.8	-0.5
AUW	**Augustine West**	**0.66**	**183**	P	Pn	05 04 55.1	-0.3
DFR	**Drift River**	**0.67**	**32**	P	Pn	05 04 54.8	-0.8
AUI	**Augustine Isla**	**0.70**	**181**	P	Pn	05 04 55.1	-0.5
AUI				S	Sn	05 05 11.6	-0.8
HOM	**Homer**	**0.97**	**112**	P	Pn	05 04 57.4	-0.2
HOM				S	Sn	05 05 15.8	-0.2
MCNL	**McNeil River**	**0.97**	**209**	P	Pn	05 04 56.8	-1.0
CDD	**Cape Douglas**	**1.11**	**186**	P	Pn	05 04 58.1	-0.8
CNPM	**China Poot**	**1.21**	**114**	P	Pn	05 04 59.2	-0.7
CNPM				S	Sn	05 05 18.7	-1.3
CKL	**Chakachamna La**	**1.28**	**24**	P	Pn	05 05 00.3	-0.4
BRLK	**Bradley Lake**	**1.30**	**101**	P	Pn	05 05 00.4	-0.4
BRLK				S	Sn	05 05 20.2	-1.3
CKT	**Bend**	**1.31**	**26**	P	Pn	05 05 00.5	-0.5
SPWE	**Spurr West**	**1.32**	**18**	P	Pn	05 05 00.7	-0.3
SPU	**Mount Spurr**	**1.33**	**29**	*e*Pn	Pn	05 05 00.5	-0.6
SPU				*e*Sn	Sn	05 05 22.2	0.0
SPCP	**Crater Peak Br**	**1.39**	**26**	P	Pn	05 05 01.4	-0.3
SPCG	**Spurr Capps Gl**	**1.44**	**28**	P	Pn	05 05 01.8	-0.5
SVW2	**Sparrevohn**	**1.52**	**316**	P	Pn	05 05 01.7	-1.2
SVW2				S	Sn	05 05 23.4	-2.1
KAPH	**Katmai Pasha**	**1.52**	**199**	P	Pn	05 05 02.3	-0.8
KAPH				S	Sn	05 05 24.4	-1.2
KAHC	**Katmai Hardscr**	**1.61**	**211**	P	Pn	05 05 03.1	-1.1
SLKM	**Skilak Lake**	**1.66**	**72**	P	Pn	05 05 03.7	-0.8
KAWH	**Katmai**	**1.80**	**204**	P	Pn	05 05 05.0	-1.2
KAKN	**Katmai Knife C**	**1.94**	**207**	P	Pn	05 05 06.8	-1.0
SUA	**Susitna One**	**1.94**	**41**	P	Pn	05 05 07.0	-0.9
SUA				S	Sn	05 05 33.6	-0.6
FIB	**Fire Island**	**1.96**	**53**	P	Pn	05 05 07.6	-0.3
KELA	**Mount Kelaz**	**2.00**	**218**	P	Pn	05 05 07.4	-1.1
KABU	**Katmai Buttres**	**2.01**	**209**	P	Pn	05 05 08.0	-0.7
RC01	**Rabbit Creek A**	**2.10**	**58**	P	Pn	05 05 08.2	-1.4
RC01				S	Sn	05 05 35.7	-1.6
ANCK	**Angle Creek**	**2.13**	**211**	P	Pn	05 05 09.3	-0.7
SKT	**Skwentna**	**2.16**	**24**	P	Pn	05 05 09.8	-0.5
SKT				S	Sn	05 05 38.0	-0.6
CAHL	**Cahill**	**2.21**	**207**	P	Pn	05 05 10.2	-0.8
KDAK	**Kodiak Island**	**2.30**	**169**	P	Pn	05 05 09.7	-2.2
KDAK				S	Sn	05 05 38.4	-3.0
PMR	**Palmer**	**2.62**	**51**	P	Pn	05 05 14.0	-1.8
PMR				*e*Sn	Sn	05 05 45.8	-2.7
PLK2	**Peulik 2**	**2.73**	**215**	P	Pn	05 05 16.7	-0.6
PLK3	**Peulik 3**	**2.78**	**214**	P	Pn	05 05 17.3	-0.6
PLK1	**Peulik 1**	**2.78**	**218**	P	Pn	05 05 17.6	-0.3
KNK	**Knik Glacier**	**2.80**	**58**	P	Pn	05 05 16.1	-2.1
GHO	**Glory Hole Cre**	**2.80**	**50**	P	Pn	05 05 16.2	-2.0
GHO				*e*Sn	Sn	05 05 49.9	-2.9
OHAK	**Old Harbor**	**2.82**	**179**	P	Pn	05 05 15.8	-2.6
PLK4	**Peulik 4**	**2.85**	**214**	P	Pn	05 05 18.2	-0.7
PPLA	**

GUWA				IAML		05 39 00.9	
	comp=E,3μm,0.1s						
GUWA				IAML		05 39 01.4	
	comp=N,2μm,0.1s						
SHL	**Shillong**	**1.13 219**	*e*P		**Pn**	**05 38 50.1**	**+1.0**
SHL			*e*S		**Sn**	**05 39 04.3**	**+0.8**
SHL				IAML		05 39 05.4	
	comp=N,3μm,0.1s						
SHL				IAML		05 39 05.7	
	comp=E,2μm,0.1s						
JORH	**JORHAT**	**1.44 78**	*e*S		**Sn**	**05 39 10.0**	**-0.9**
JORH			*e*S		**Sn**	**05 39 10.4**	**-0.5**
JORH				IAML		05 39 11.0	
	comp=E,4μm,0.3s						
MOKO	**MOKOCHONG**	**1.66 94**	*e*P		**Pn**	**05 38 56.6**	**+0.3**
MOKO			*e*S		**Sn**	**05 39 14.9**	**-1.5**
MOKO				IAML		05 39 16.4	
	comp=E,4μm,0.3s						
MOKO				IAML		05 39 17.0	
	comp=N,2μm,0.2s						
IMP	**Imphal**	**1.98 144**	*e*P		**Pn**	**05 39 01.2**	**+0.6**
IMP			*e*S		**Sn**	**05 39 20.0**	**-4.2**
IMP				IAML		05 39 24.7	
	comp=N,168nm,0.3s						
IMP				IAML		05 39 26.0	
	comp=E,127nm,0.1s						
TURI	**Tura**	**2.29 248**	*e*P		**Pn**	**05 39 07.2**	**+2.4**
TURI			*e*S		**Sn**	**05 39 34.0**	**+2.2**
GTK	**Tadong**	**3.74 284**	*e*S		**Sn**	**05 40 08.4**	**+0.6**
GTK				IAML		05 40 10.6	
	comp=N,132nm,0.2s						
BRDH	**Bariadhala**	**3.87 194**	Pn		**Pn**	**05 39 27.9**	**+1.3**
	comp=N,36nm,0.3s,baz=49,slow=23,SNR=12						
BRDH			Sn		**Sn**	**05 40 09.9**	**-0.8**
	comp=N,87nm,0.3s,baz=212,slow=21,SNR=15						
TAPN	**Taplejung**	**4.52 283**	*e*Pn		**Pn**	**05 39 37.4**	**+1.6**
TAPN			*e*Sn		**Sn**	**05 40 27.4**	**+0.1**
	comp=N,97nm,0.2s						
ODAN	**Odare**	**4.75 276**	*e*Pn		**Pn**	**05 39 41.4**	**+2.6**
ODAN			*e*Sn		**Sn**	**05 40 34.7**	**+2.0**
	comp=N,235nm,0.3s						
RAMN	**Ramite**	**5.46 277**	*e*Pn		**Pn**	**05 39 51.0**	**+2.4**
JIRN	**Jiri**	**5.91 283**	*e*Pn		**Pn**	**05 39 57.0**	**+2.2**
JIRN			*e*Sn		**Sn**	**05 41 01.1**	**-0.4**
	comp=N,212nm,0.3s						
GUN	**Gumba**	**6.22 285**	*e*Pn		**Pn**	**05 40 00.9**	**+1.7**
GUN			*e*Sn		**Sn**	**05 41 08.5**	**-0.8**
	comp=N,124nm,0.3s						
PKIN	**Phulchoki**	**6.59 281**	*e*Pn		**Pn**	**05 40 05.2**	**+1.1**
PKIN			*e*Sn		**Sn**	**05 41 17.7**	**-0.4**
	comp=N,51nm,0.3s						
BOK	**Bokaro**	**6.70 248**	*e*P		**Pn**	**05 40 06.7**	**+1.4**
BOK			*e*S		**Sn**	**05 41 17.3**	**-3.1**
BOK				IAML		05 41 20.1	
	comp=N,102nm,0.1s						
BOK				IAML		05 41 24.4	
	comp=E,37nm,0.1s						
KKN	**Kakani**	**6.72 283**	*e*Pn		**Pn**	**05 40 07.2**	**+1.3**
KKN			*e*Sn		**Sn**	**05 41 20.6**	**-0.7**
	comp=E,63nm,0.2s						
DMN	**Daman**	**6.85 281**	*e*Pn		**Pn**	**05 40 08.8**	**+1.1**
DMN			*e*Sn		**Sn**	**05 41 23.2**	**-1.3**
	comp=E,31nm,0.3s						
GKN	**Gorkha**	**7.32 284**	*e*Pn		**Pn**	**05 40 15.3**	**+1.2**
GKN			*e*Sn		**Sn**	**05 41 34.4**	**-1.6**
	comp=E,104nm,0.3s						
DANN	**Dangsing**	**8.15 285**	*e*Pn		**Pn**	**05 40 25.4**	**-0.1**
DANN			*e*Sn		**Sn**	**05 41 52.8**	**-3.6**
	comp=E,71nm,0.4s						
KOLN	**Koldanda**	**8.19 281**	*e*Pn		**Pn**	**05 40 26.3**	**+0.2**
KOLN			*e*Sn		**Sn**	**05 41 53.9**	**-3.6**
	comp=E,44nm,0.3s						
PYUN	**Piuthan**	**8.77 283**	*e*Pn		**Pn**	**05 40 33.5**	**-0.5**
PYUN			*e*Sn		**Sn**	**05 42 07.9**	**-3.8**
	comp=E,51nm,0.4s						
MKAR	**Makanchi Array**	**21.91 341**	P		P	05 43 35.0	+16
	comp=E,1.0nm,0.6s,baz=148,slow=14,SNR=6.4						
KURBB	**Kurchatov Arra**	**26.46 340**	P		P	05 44 17.4	+15
	comp=E,0.6nm,0.7s,baz=154,slow=9.6,SNR=3.9						
FINES	**FINESS Array B**	**55.97 328**	P		P	05 48 18.1	+15
	comp=E,0.4nm,0.5s,baz=90,slow=8.9,SNR=3.3						
WRA	**Warramunga Arr**	**61.32 135**	P		**P**	**05 48 40.0**	**-0.8**
	comp=E,1.4nm,0.7s,baz=324,slow=7.1,SNR=21						
GERES	**GERESS Array B**	**63.52 314**	P		P	05 49 09.2	+14
	comp=E,0.2nm,0.5s,baz=54,slow=1.7,SNR=2.7						
ASAR	**Alice Springs**	**63.81 138**	P		**P**	**05 48 57.0**	**-0.4**
	comp=E,0.8nm,0.7s,baz=324,slow=7.1,SNR=7.3						
TORD	**Torodi Ar. Bea**	**85.11 282**	P		P	05 51 15.6	+14
	comp=E,0.8nm,0.8s,baz=67,slow=4.4,SNR=8.7						

*ISK **16** 05:44:35.1,36.′99N×27.°59E,h5km,ML3.1/12*
*CSEM **16** 05:44:36.6±0.1,36.′98N×27.°60E,h5km,ML3.1,Error ellipse: s-maj=3.1km s-min=2.5km az=53.0*
*DDA **16** 05:44:36.9,36.′97N×27.°62E,h7km,Ml3.1*
ISC 16 05:44:36.7±1.0,36.′99N±0.′02×27.°64E±0.°03,h4km±11km, n35,σ1°07/48,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.17**	**297**	*i* P	**Pg**	**05 44 40.0**	**-0.1**
BDRM				*i* S	**Sg**	**05 44 43.0**	**+0.6**
BDRM	**Kayabasi**	**0.17**	**297**	P	**Pg**	**05 44 40.0**	**-0.1**
BDRM				S	**Sg**	**05 44 43.0**	**+0.6**
DAT	**Datca**	**0.26**	**191**	PG	**Pg**	**05 44 41.5**	**-0.3**
DAT				SG	**Sg**	**05 44 46.1**	**+0.8**
DAT	**Datca**	**0.26**	**191**	*i* P	**Pg**	**05 44 41.4**	**-0.4**
DAT				*i* S	**Sg**	**05 44 47.0**	**+1.7**
DAT	**Datca**	**0.26**	**191**	*e*Pg	**Pg**	**05 44 41.5**	**-0.3**
DAT				*e*Sg	**Sg**	**05 44 46.1**	**+0.8**
DAT				S		05 44 47.0	
BODT	**Bodrum**	**0.27**	**286**	PG	**Pg**	**05 44 40.8**	**-1.2**
BODT				SG	**Sg**	**05 44 45.4**	**-0.2**
BODT	**Bodrum**	**0.27**	**286**	*e*Pg	**Pg**	**05 44 40.8**	**-1.2**
BODT				*e*Sg	**Sg**	**05 44 45.4**	**-0.2**
YKAV	**Yalikavak-Bodr**	**0.32**	**296**	PG	**Pg**	**05 44 42.0**	**-0.8**
YKAV				SG	**Sg**	**05 44 46.8**	**-0.2**
YKAV	**Yalikavak-Bodr**	**0.32**	**296**	*e*Pg	**Pg**	**05 44 42.0**	**-0.8**
YKAV				*e*Sg	**Sg**	**05 44 46.8**	**-0.2**
MLSB	**Milas**	**0.33**	**20**	PG	**Pg**	**05 44 42.9**	**-0.1**
MLSB	**Milas**	**0.33**	**20**	*e*Pg	**Pg**	**05 44 42.9**	**-0.1**
MRSB	**Marmaris-Mugla**	**0.52**	**121**	PG	**Pg**	**05 44 46.8**	**0.0**
MRSB	**Marmaris-Mugla**	**0.52**	**121**	*e*Pg	**Pg**	**05 44 46.8**	**0.0**
AYDN	**Tasoluk**	**0.70**	**16**	*i* P	**Pg**	**05 44 50.0**	**-0.2**
AYDN				*i* S	**Sg**	**05 45 00.2**	**+1.0**
AYDN	**Tasoluk**	**0.70**	**16**	P	**Pg**	**05 44 50.0**	**-0.2**
AYDN				S	**Sg**	**05 45 00.2**	**+1.0**
GCAM	**G?zelcaml?**	**0.78**	**336**	PG	**Pg**	**05 44 51.7**	**0.0**
GCAM	**G?zelcaml?**	**0.78**	**336**	*i* P	**Pn**	**05 44 54.1**	**-0.4**
GCAM				*i* S	**Sb**	**05 45 03.5**	**-0.3**
GCAM	**G?zelcaml?**	**0.78**	**336**	*e*Pg	**Pg**	**05 44 51.7**	**0.0**
GCAM				S	**Sb**	**05 45 03.5**	**-0.3**
TURN	**Turunc**	**0.78**	**98**	PG	Pg	05 44 47.2	-4.5
TURN	**Turunc**	**0.78**	**98**	*i* P	Pg	05 44 46.3	-5.4
TURN				*i* S	**Sg**	**05 44 55.9**	**-6.0**
TURN	**Turunc**	**0.78**	**98**	*e*Pg	Pg	05 44 47.2	-4.5
DALY	**Dalyan (Mu¨la**	**0.83**	**101**	PG	**Pg**	**05 44 53.2**	**+0.5**
DALY	**Dalyan (Mu¨la**	**0.83**	**101**	*e*Pg	**Pg**	**05 44 53.2**	**+0.5**
ARG	**Arkhangelos**	**0.86**	**153**	PG	**Pg**	**05 44 52.9**	**-0.4**
ARG	**Arkhangelos**	**0.86**	**153**	*e*Pg	**Pg**	**05 44 52.9**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**0.98**	**12**	PG	**Pg**	**05 44 55.1**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**0.98**	**12**	*e*Pg	**Pg**	**05 44 55.1**	**-0.4**
TAVA	**DENIZLI_Tavas**	**1.12**	**65**	*i* P	**Pb**	**05 44 59.2**	**+0.4**
TAVA				*i* S	**Sn**	**05 45 15.3**	**0.0**
TAVA	**DENIZLI_Tavas**	**1.12**	**65**	P	**Pb**	**05 44 59.2**	**+0.4**
TAVA				S	**Sn**	**05 45 15.3**	**0.0**
URLA	**Izmir**	**1.60**	**329**	PN	**Pn**	**05 45 05.6**	**-0.2**
URLA	**Izmir**	**1.60**	**329**	*e*Pn	**Pn**	**05 45 05.6**	**-0.2**
KULA	**Kula-Manisa**	**1.73**	**28**	PN	**Pn**	**05 45 08.4**	**+0.8**
KULA	**Kula-Manisa**	**1.73**	**28**	*e*Pn	**Pn**	**05 45 08.4**	**+0.8**
AKAS	**Kas**	**1.75**	**115**	PN	**Pn**	**05 45 08.1**	**+0.1**
AKAS	**Kas**	**1.75**	**115**	*e*Pn	**Pn**	**05 45 08.1**	**+0.1**

*IDC **16** 06:04:24.1±0.8,31.°17S×178.°58W,h0km,mb4.6/6, mb1 4.7/7,mb1mx4.1/47,mbtmp4.6/7,ML3.9/1,MS3.2/1, Ms1 3.2/1,ms1mx2.4/45,Error ellipse: s-maj=28.9km s-min=23.1km az=49.0*
*ISCJB **16** 06:04:42.2±0.6,32.°03S±0.°03×179.°14W±0.°10,h150km, mb4.6/17,Error ellipse: s-maj=12.0km s-min=3.8km az=9.7*
*WEL **16** 06:04:44.0,32.°01S×179.°11W,h157km,ML5.3/9*

*NEIC **16** 06:04:44.6±2.5,32.°01S×179.°11W,h157km±21km, mb4.6/15,Error ellipse: s-maj=22.6km s-min=13.4km az=210.0*
ISC 16 06:04:44.2±0.6,32.°10S±0.°07×179.°05W±0.°10,h150km, n83,σ2°06/100,mb4.6/17,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.99**	**19**	P	Pn	06 05 23.1	-8.3
GLKZ				S	Sn	06 05 55.5	-12
MXZ	**Matakaoa Point**	**5.87**	**201**	*e*Pn	**Pn**	**06 06 11.0**	**+2.0**
MXZ				*e*Sn	**Sn**	**06 07 17.1**	**+1.7**
MXZ	**Matakaoa Point**	**5.87**	**201**	P	**Pn**	**06 06 12.1**	**+3.1**
MXZ				S	**Sn**	**06 07 15.4**	**0.0**
WMGZ	**Waiomatatini S**	**6.07**	**199**	P	**Pn**	**06 06 11.7**	**-0.1**
WMGZ				S	**Sn**	**06 07 21.2**	**+0.8**
HAZ	**Te Kaha**	**6.21**	**204**	P	**Pn**	**06 06 13.4**	**-0.2**
HAZ				S	**Sn**	**06 07 26.9**	**+3.2**
KUZ	**Kuaotunu**	**6.33**	**222**	P	**Pn**	**06 06 19.1**	**+3.8**
PUZ	**Puketiti**	**6.35**	**200**	P	**Pn**	**06 06 14.6**	**-0.9**
PUZ				S	**Sn**	**06 07 26.0**	**-1.1**
RUGZ	**Raukumara Rang**	**6.44**	**204**	P	**Pn**	**06 06 16.8**	**+0.1**
RUGZ				S	**Sn**	**06 07 30.0**	**+0.8**
OUZ	**Omahuta**	**6.88**	**241**	*e*Pn	**Pn**	**06 06 25.9**	**+3.4**
URZ	**Urewera**	**6.90**	**206**	Pn	**Pn**	**06 06 22.0**	**-0.8**
	1.6nm,0.3s,baz=275,slow=5.4,SNR=18						
URZ				Sn	**Sn**	**06 07 39.1**	**-1.1**
	11nm,0.3s,baz=300,slow=20,SNR=5.6						
URZ	**Urewera**	**6.90**	**206**	P	**Pn**	**06 06 22.0**	**-0.8**
URZ				S	**Sn**	**06 07 42.3**	**+2.1**
KMRZ	**Kaimai**	**7.05**	**214**	P	**Pn**	**06 06 28.6**	**+3.8**
RIGZ	**Rimuhau**	**7.09**	**201**	P	**Pn**	**06 06 28.0**	**+2.7**
RIGZ				S	**Sn**	**06 07 44.4**	**-0.3**
SNGZ	**Shannon Statio**	**7.29**	**203**	P	**Pn**	**06 06 27.4**	**-0.6**
SNGZ				S	**Sn**	**06 07 50.1**	**+0.6**
RAHZ	**Arahi**	**7.50**	**204**	P	**Pn**	**06 06 29.9**	**-0.9**
RAHZ				S	**Sn**	**06 07 54.1**	**-0.4**
MRHZ	**Matea Rd**	**7.67**	**208**	P	**Pn**	**06 06 34.4**	**+1.3**
MRHZ				S	**Sn**	**06 07 59.0**	**+0.3**
NMHZ	**Naumai**	**7.75**	**205**	P	**Pn**	**06 06 34.5**	**+0.2**
NMHZ				S	**Sn**	**06 08 01.2**	**+0.4**
ARHZ	**Aropaoanui**	**7.84**	**203**	P	**Pn**	**06 06 37.1**	**+1.8**
ARHZ				S	**Sn**	**06 08 02.8**	**+0.1**
BKZ	**Black Stump Fm**	**7.93**	**206**	*e*Pn	**Pn**	**06 06 36.8**	**+0.2**
BKZ	**Black Stump Fm**	**7.93**	**206**	P	**Pn**	**06 06 34.7**	**-1.9**
BKZ				S	**Sn**	**06 08 04.6**	**-0.3**
MCHZ	**McNeill Hill**	**8.10**	**204**	P	**Pn**	**06 06 40.3**	**+1.5**
MCHZ				S	**Sn**	**06 08 09.6**	**+0.6**
HIZ	**Hauiti**	**8.11**	**216**	*e*Pn	**Pn**	**06 06 41.1**	**+2.2**
KWHZ	**Kaweka Forest**	**8.18**	**205**	P	**Pn**	**06 06 38.1**	**-1.9**
KWHZ				S	**Sn**	**06 08 11.2**	**+0.2**
KAHZ	**Kahuranaki**	**8.36**	**202**	P	**Pn**	**06 06 41.3**	**-0.9**
KAHZ				S	**Sn**	**06 08 15.1**	**-0.1**
BHHZ	**Black Hill Sta**	**8.37**	**207**	P	**Pn**	**06 06 41.0**	**-1.5**
BHHZ				S	**Sn**	**06 08 15.3**	**-0.3**
KRHZ	**Kereru**	**8.39**	**205**	P	**Pn**	**06 06 40.9**	**-1.8**
KRHZ				S	**Sn**	**06 08 13.9**	**-2.2**
TSZ	**Takapari Road**	**8.91**	**206**	P	**Pn**	**06 06 46.9**	**-2.7**
TSZ				S	**Sn**	**06 08 26.1**	**-2.4**
BFZ	**Birch Farm**	**9.37**	**203**	*e*Pn	**Pn**	**06 06 56.8**	**+1.1**
MRZ	**Mangatainoka R**	**9.58**	**205**	P	**Pn**	**06 06 54.0**	**-4.4**
MRZ				S	**Sn**	**06 08 39.3**	**-5.2**
OGWZ	**Otaki Gorge**	**9.86**	**206**	P	**Pn**	**06 06 58.0**	**-4.3**
KIW	**Kapiti Island**	**10.00**	**207**	P	Pn	06 06 58.6	-5.5
CAW	**Cannon Point**	**10.15**	**206**	P	**Pn**	**06 07 01.8**	**-4.3**
DUWZ	**D'Urville Isla**	**10.36**	**211**	P	**Pn**	**06 07 06.0**	**-2.9**
TUWZ	**Tuamarina**	**10.87**	**209**	P	Pn	06 07 10.4	-5.2
QRZ	**Quartz Range**	**11.03**	**216**	P	**Pn**	**06 07 15.3**	**-2.3**
BSWZ	**Blackbirch Sta**	**11.14**	**209**	P	**Pn**	**06 07 16.4**	**-2.7**
THZ	**Tophouse**	**11.59**	**211**	*e*Pn	**Pn**	**06 07 21.3**	**-3.7**
THZ	**Tophouse**	**11.59**	**211**	P	**Pn**	**06 07 20.2**	**-4.8**
DSZ	**Denniston Nort**	**12.08**	**215**	P	**Pn**	**06 07 29.3**	**-2.1**
RPZ	**Rata Peaks**	**13.97**	**211**	Pn	Pn	06 07 50.2	-5.4
	0.4nm,0.3s,baz=333,slow=9.0,SNR=2.6						
RPZ				Sn	Sn	06 10 17.5	-13
	0.9nm,0.3s,baz=90,slow=19,SNR=7.0						
DZM	**Mont Dzumac**	**16.31**	**304**	LR	LR	06 12 33.2	
	comp=Z,87nm,18.9s,baz=189,slow=30						
MLZ	**Mavora Lakes**	**16.57**	**213**	*e*P	**P**	**06 08 25.4**	**-2.3**
	87nm,1.8s						
CTA	**Charters Tower**	**33.23**	**283**	P	**P**	**06 11 06.5**	**-0.6**
	5.6nm,0.7s,baz=128,slow=12,SNR=5.6						
CTAO	**Charters Tower**	**33.23**	**283**	*e*P	**P**	**06 11 07.0**	**-0.2**
	23nm,1.4s						
STKA	**Stephens Creek**	**33.25**	**260**	P	**P**	**06 11 07.5**	**+0.3**
	4.6nm,0.8s,baz=100,slow=10,SNR=2.6						
STKA	**Stephens Creek**	**33.25**	**260**	*e*P	**P**	**06 11 07.5**	**+0.3**
	6.6nm,1.8s						
COEN	**Coen**	**38.92**	**289**	*e*P	**P**	**06 11 55.2**	**-0.3**
	20nm,1.4s						
AS01	**Alice Springs**	**42.11**	**269**	*e*P	**P**	**06 12 20.7**	**-1.0**
AS31	**Alice Springs**	**42.15**	**269**	*e*P	**P**	**06 12 21.3**	**-0.8**
	2.1nm,1.0s						
ASAR	**Alice Springs**	**42.15**	**269**	P	**P**	**06 12 21.2**	**-0.8**
	3.8nm,0.5s,baz=105,slow=7.2,SNR=48						
WC3	**Warramunga Arr**	**43.26**	**275**	*e*P	**P**	**06 12 29.8**	**-1.1**
	12nm,1.0s						
WB2	**Warramunga Arr**	**43.29**	**275**	*e*P	**P**	**06 12 30.1**	**-1.0**
	9.1nm,0.6s						
WRAB	**Tennant Creek**	**43.29**	**275**	*e*P	**P**	**06 12 30.0**	**-1.2**
	6.6nm,0.8s						
WR1	**Warramunga Arr**	**43.30**	**275**	*e*P	**P**	**06 12 30.1**	**-1.2**
	10nm,0.5s						
WRA	**Warramunga Arr**	**43.30**	**275**	P	**P**	**06 12 30.1**	**-1.2**
	4.2nm,0.3s,baz=111,slow=8.0,SNR=125						
MTN	**Manton Dam**	**49.39**	**281**	*e*P	**P**	**06 13 17.5**	**-1.3**
	15nm,0.6s						
FITZ	**Fitzroy Crossi**	**51.48**	**272**	*e*P	**P**	**06 13 33.9**	**-0.6**
	7.1nm,1.1s						
MBWA	**Marble Bar**	**55.17**	**265**	*e*P	**P**	**06 14 01.3**	**-0.1**
	60nm,1.5s						
SOEI	**Soe**	**56.73**	**280**	*e*P	**P**	**06 14 12.1**	**-0.6**
	20nm,0.5s						
QSPA	**South Pole Qui**	**58.02**	**180**	P	**P**	**06 14 25.5**	**+4.5**
	9.5nm,0.5s,baz=40,slow=2.0,SNR=14						
SNAA	**Sanae**	**76.48**	**179**	P	**P**	**06 16 20.2**	**+3.2**
SNAA	**Sanae**	**76.48**	**179**	P	**P**	**06 16 20.1**	**+3.1**
	3.5nm,0.9s,baz=198,slow=2.5,SNR=16						
SNAA	**Sanae**	**76.48**	**179**	*e*P	**P**	**06 16 20.1**	**+3.1**
	21nm,1.8s						
VNA3	**Neumayer Olymp**	**76.67**	**176**	P	**P**	**06 16 21.2**	**+3.2**
VNA2	**Neumayer--Watz**	**77.09**	**177**	P	**P**	**06 16 19.4**	**-1.0**
VNA1	**Neumayer--Stat**	**77.33**	**177**	P	**P**	**06 16 22.2**	**+0.5**
CMMM	**Mount Mocho**	**87.59**	**42**	*e*PcP	**PcP**	**06 17 20.6**	**+3.5**
FON	**Fontana**	**87.72**	**47**	*e*P	**P**	**06 17 13.6**	**-2.4**
BBSC	**Beaumont Base**	**87.89**	**47**	*e*P	**P**	**06 17 15.5**	**-1.3**
LPAZ	**La Paz**	**98.26**	**115**	*e*P	**P**	**06 18 06.7**	**+1.0**
	22nm,1.9s						
MK32	**Makanchi Array**	**118.17**	**310**	*e*PKPdf	**PKPdf**	**06 23 10.6**	**-2.5**
MKAR	**Makanchi Array**	**118.17**	**310**	PKP	**PKPdf**	**06 23 10.6**	**-2.5**
	0.8nm,0.8s,baz=102,slow=4.0,SNR=3.8						
KURK	**Kurchatov**	**121.56**	**313**	*e*PKPdf	**PKPdf**	**06 23 18.1**	**-1.3**
KURBB	**Kurchatov Arra**	**121.60**	**313**	PKP	**PKPdf**	**06 23 18.1**	**-1.4**
	1.3nm,0.7s,baz=112,slow=1.9,SNR=7.4						
BVAR	**Borovoye Array**	**126.98**	**315**	PKP	**PKPdf**	**06 23 27.9**	**-1.9**
	1.2nm,0.6s,baz=74,slow=6.2,SNR=5.3						
FIA1	**FINESS Array S**	**146.41**	**338**	*e*PKPdf	**PKPdf**	**06 24 04.8**	**-0.3**
HFS	**Hagfors**	**150.71**	**347**	PKPbc	**PKPbc**	**06 24 16.3**	**-1.5**
	1.3nm,0.4s,baz=90,slow=4.3,SNR=4.8						
MMAI	**Mount Meron Ar**	**151.02**	**281**	PKPbc	**PKPbc**	**06 24 20.2**	**+0.7**
	4.6nm,0.6s,baz=84,slow=5.9,SNR=12						
AKASG	**Malin Array Be**	**152.06**	**320**	PKPbc	**PKPbc**	**06 24 20.6**	**-0.7**
	0.9nm,0.4s,baz=49,slow=2.4,SNR=9.4						
BR101	**Keskin Array B**	**152.56**	**295**	*e*PKPbc	**PKPbc**	**06 24 22.1**	**-0.8**
BRTR	**Keskin Array B**	**152.56**	**295**	PKPbc	**PKPbc**	**06 24 22.1**	**-0.8**
	1.9nm,0.5s,baz=136,slow=3.4,SNR=10						
TORD	**Torodi Ar. Bea**	**161.12**	**182**	PKPab	**PKPab**	**06 25 13.4**	**+2.4**
	1.4nm,0.9s,baz=176,slow=4.0,SNR=11						
TOA1	**Torodi Ar. Sit**	**161.13**	**182**	*e*PKPab	**PKPab**	**06 25 13.4**	**+2.4**

*NIED **16** 06:13:00,45.°80N×150.°60E,h101km,Mw4.2 Best double couple: M0:2.58000×10^15 NP1:φs158.00000°, δ21.00000°,λ6.00000°. NP2:φs63.00000°,δ88.00000°, λ111.00000°.*
*JMA **16** 06:13:02.6±0.6,45.°78N×150.°62E,h30km,M4.7*
*MOS **16** 06:13:03.7±0.9,45.°93N×150.°37E,h122km,mb4.2/36, Error ellipse: s-maj=8.7km s-min=5.6km az=70.4*
*IDC **16** 06:13:04.2±0.6,45.°93N×150.°32E,h113km±4km,mb3.8/23, mb1 4.0/27,mb1mx3.8/64,mbtmp4.2/27,MS2.8/3, Ms1 2.8/3,ms1mx2.4/69,Error ellipse: s-maj=13.2km s-min=11.5km az=133.0*

*ISCJB **16** 06:13:04.4±0.4,45.°80N±0.°05×150.°35E±0.°04, h133km±4km,mb4.1/122,Error ellipse: s-maj=8.0km s-min=4.2km az=158.2*
*SKHL **16** 06:13:05.1±0.5,45.°62N×150.°35E,h137km±7km,mb5.1/9, msh5.2/7*
*NEIC **16** 06:13:06.1±0.6,45.°97N×150.°36E,h126km±5km,mb4.3/81, Error ellipse: s-maj=6.5km s-min=3.5km az=163.0*
ISC 16 06:13:04.3±0.5,45.°89N±0.°05×150.°36E±0.°05,h115km±3km, h115km:pP-P,n315,σ1°71/334,mb4.3/123,21C-16D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.87**	**250**	*i* P	**Pn**	**06 13 37.7**	**+2.0**
KUR				AMB	AMB	06 13 38.6	
	192nm,0.4s						
KUR				AMB	AMB	06 13 38.6	
	101nm,0.4s						
KUR				AMB	AMB	06 13 38.6	
	411nm,0.4s						
KUR				*i* S	**Sn**	**06 14 02.5**	**+2.7**
KUR				A	A	06 14 04.3	
	540nm,0.4s						
KUR				A	A	06 14 04.3	
	926nm,0.4s						
KUR	**Kuril'sk**	**1.87**	**250**	*d* PN	**Pn**	**06 13 37.8**	**+2.0**
KUR				*i* S	**Sn**	**06 14 03.6**	**+3.8**
KUR				pmax	pmax		
	comp=Z,411nm,0.3s						
KUR				pmax	pmax		
	comp=N,192nm,0.2s						
KUR				pmax	pmax		
	comp=E,101nm,0.2s						
KUR				smax	smax		
	comp=E,926nm,0.4s						
KUR				smax	smax		
	comp=N,5μm,0.3s						
KUR				smax	smax		
	comp=E,12μm,1.0s						
KUR				smax	smax		
	comp=N,10μm,1.1s						
SHO	**Shikotan**	**3.22**	**232**	*e*P	**Pn**	**06 13 52.5**	**-0.7**
SHO				AMB	AMB	06 13 54.9	
	comp=N,79nm,0.4s						
SHO				*i* S	**Sn**	**06 14 27.7**	**-3.3**
SHO				A	A	06 14 30.3	
	comp=N,55nm,0.5s						
SHO				A	A	06 14 30.3	
	comp=N,82nm,0.5s						
SHO	**Shikotan**	**3.22**	**232**	*d* PN	**Pn**	**06 13 52.5**	**-0.7**
SHO				*i* S	**Sn**	**06 14 27.7**	**-3.3**
SHO				pmax	pmax		
	comp=E,38nm,0.2s						
SHO				pmax	pmax		
	comp=Z,79nm,0.2s						
SHO				pmax	pmax		
	comp=N,27nm,0.1s						
SHO				smax	smax		
	comp=N,545nm,0.3s						
SHO				smax	smax		
	comp=E,819nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**3.69**	**242**	*e*P	**Pn**	**06 14 01.0**	**+1.5**
YUK				AMB	AMB	06 14 01.8	
	comp=E,54nm,0.4s						
YUK				AMB	AMB	06 14 01.8	
	comp=E,202nm,0.4s						
YUK				*i* S	**Sn**	**06 14 42.6**	**+0.4**
YUK				A	A	06 14 48.5	
	comp=E,74nm,0.5s						
YUK				A	A	06 14 48.5	
	comp=E,83nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**3.69**	**242**	*e*PN	**Pn**	**06 14 01.0**	**+1.5**
YUK				*i* S	**Sn**	**06 14 42.2**	**0.0**
YUK				pmax	pmax		
	comp=Z,202nm,0.2s						
YUK				pmax	pmax		
	comp=E,54nm,0.1s						
YUK				smax	smax		
	comp=E,833nm,0.4s						
YUK				smax	smax		
	comp=N,742nm,0.5s						
LAGR	**Lagunnoye**	**3.72**	**242**	*e*P	**Pn**	**06 14 01.5**	**+1.6**
LAGR				AMB	AMB	06 14 07.0	
	comp=N,190nm,0.4s						
LAGR				*e*S	**Sn**	**06 14 44.3**	**+1.3**
LAGR				A	A	06 14 53.8	
	comp=N,78nm,0.5s						
LAGR				A	A	06 14 53.8	
	comp=N,136nm,0.5

ASAJ				S	Sn	06 15 37.7	+5.1
ASAJ	**Asahikawa**	**5.78**	**255**	P	**Pn**	**06 14 30.7**	**+3.1**
JWK2	**Keihoku**	**5.96**	**268**	P	Pn	06 14 35.1	+5.0
JCH	**Churui**	**5.99**	**239**	P	**Pn**	**06 14 30.3**	**-0.2**
JCH				*e*S	**Sn**	**06 15 34.8**	**-3.0**
SKR	**Severo-Kuril's**	**6.15**	**37**	*e*P	Pn	06 14 37.6	+5.1
SKR				AMB	AMB	06 14 38.1	
	comp=Z,122nm,0.4s						
SKR				*e*S	Sn	06 15 50.1	+8.7
SKR				A	A	06 15 51.4	
	comp=Z,97nm,0.8s						
SKR				A	A	06 15 51.4	
	comp=Z,74nm,0.8s						
SKR	**Severo-Kuril's**	**6.15**	**37**	*e*PN	**Pn**	**06 14 31.3**	**-1.2**
SKR				*e*S	**Sn**	**06 15 37.2**	**-4.2**
SKR				pmax	pmax		
	comp=Z,122nm,0.4s						
SKR				smax	smax		
	comp=E,75nm,0.8s						
SKR				smax	smax		
	comp=N,97nm,0.7s						
MYR	**Moyori**	**6.23**	**237**	*e*P	**Pn**	**06 14 33.6**	**-0.1**
UGL	**Uglegorsk**	**6.46**	**303**	*e*P	Pn	06 14 42.2	+5.4
UGL				AMB	AMB	06 14 47.0	
	comp=N,100nm,1.0s						
UGL	**Uglegorsk**	**6.46**	**303**	*e*PN	Pn	06 14 45.6	+8.8
UGL				*e*S	**Sn**	**06 15 46.6**	**-2.4**
UGL				pmax	pmax		
	comp=Z,97nm,1.0s						
UGL				smax	smax		
	comp=N,60nm,0.7s						
UGL				smax	smax		
	comp=E,71nm,0.9s						
ERM	**Erimo**	**6.48**	**236**	*e*Pn	**Pn**	**06 14 38.0**	**+1.0**
ERM				*e*Sn	**Sn**	**06 15 48.4**	**-1.1**
ERM	**Erimo**	**6.48**	**236**	*d i*PN	**Pn**	**06 14 37.9**	**+0.9**
JEM	**Erimo**	**6.48**	**236**	*e*S	Sn	06 15 42.5	-7.0
JBT2	**Biratori 2**	**6.52**	**244**	P	**Pn**	**06 14 39.2**	**+1.6**
JBT2				*e*S	**Sn**	**06 15 48.7**	**-1.8**
JNBK	**Urakawa-nobuka**	**6.55**	**239**	P	**Pn**	**06 14 38.1**	**0.0**
JNBK				*e*S	**Sn**	**06 15 45.5**	**-5.9**
JNB	**Noboribetsu**	**7.52**	**246**	P	**Pn**	**06 14 52.3**	**+1.2**
JNB				*e*S	**Sn**	**06 16 12.8**	**-1.9**
JKB	**Kayabe**	**7.83**	**243**	P	**Pn**	**06 14 55.0**	**-0.3**
JKB				*e*S	**Sn**	**06 16 17.0**	**-5.3**
JYM2	**Yakumo 2**	**8.12**	**246**	P	**Pn**	**06 14 59.7**	**+0.4**
JSR	**Shiriuchi**	**8.41**	**242**	*e*S	**Sn**	**06 16 30.8**	**-5.6**
JTM	**Tenmabayashi**	**8.47**	**236**	P	**Pn**	**06 15 02.3**	**-1.7**
JTM				*e*S	Sn	06 16 29.5	-8.4
JANG	**Nango**	**8.49**	**233**	P	Pn	06 15 01.2	-3.1
JANG				*e*S	Sn	06 16 28.8	-10
PEA0B	**Petropavlovsk-**	**8.66**	**31**	*e*Pn	**Pn**	**06 15 05.5**	**-1.0**
PETK	**Petropavlovsk-**	**8.66**	**31**	P	**Pn**	**06 15 06.0**	**-0.6**
	comp=E,2.7nm,0.3s,baz=208,slow=12,SNR=30						
PETK				S	Sn	06 16 51.5	+9.1
	comp=E,0.0nm,0.3s,baz=196,slow=15,SNR=1.9						
PETK	**Petropavlovsk-**	**8.66**	**31**	*e*Pn	**Pn**	**06 15 05.4**	**-1.2**
PETK				S	Sn	06 16 51.5	+9.1
PETK	**Petropavlovsk-**	**8.66**	**31**	PN	**Pn**	**06 15 06.0**	**-0.6**
PETK				pmax	pmax		
	comp=Z,3.0nm,0.3s						
PET	**Petropavlovsk**	**8.95**	**34**	*e*Pn	**Pn**	**06 15 12.3**	**+1.9**
PET	**Petropavlovsk**	**8.95**	**34**	*e*PN	**Pn**	**06 15 12.3**	**+1.9**
OFUJ	**Ofunato**	**9.35**	**226**	*e*S	Sn	06 16 50.1	-9.0
JRG	**Rokugo**	**9.66**	**231**	*e*S	Sn	06 17 00.4	-6.3
JIO	**Ouri**	**9.99**	**225**	*e*S	Sn	06 17 04.0	-11
KLR	**Kul'dur**	**13.00**	**292**	P	**Pn**	**06 16 07.5**	**+2.9**
	comp=Z,0.0nm,0.3s,baz=96,slow=10,SNR=3.6						
KLR	**Kul'dur**	**13.00**	**292**	‖*e*PN	**Pn**	**06 16 04.1**	**-0.4**
MJAR	**Matsushiro Arr**	**13.05**	**229**	LR	LR	06 21 19.6	
	comp=Z,11nm,21.4s,baz=100,slow=38						
USRK	**Ussuriysk Ar.**	**13.10**	**269**	P	**Pn**	**06 16 07.2**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=88,slow=13,SNR=4.4						
EKMR	**Ekimchan**	**13.39**	**309**	*e*P	**Pn**	**06 16 12.0**	**+2.5**
EKMR				AMB	AMB	06 16 32.6	
	comp=Z,8.0nm,0.9s						
BMKR	**Bomnak**	**16.28**	**311**	*e*P	**Pn**	**06 16 46.0**	**0.0**
SEY	**Seymchan**	**17.12**	**3**	P	**Pn**	**06 16 55.2**	**-1.0**
	comp=Z,0.5nm,0.3s,baz=180,slow=9.4,SNR=16						
SEY	**Seymchan**	**17.12**	**3**	⇑*e*P	**Pn**	**06 16 55.5**	**-0.7**
KROS	**Kirovskiy**	**17.19**	**308**	*e*rx	rx	06 16 13.1	
KSRS	**Korea Array**	**18.71**	**251**	P	**P**	**06 17 15.2**	**+1.5**
	comp=Z,0.3nm,0.3s,baz=54,slow=12,SNR=7.3						
KS01	**Wonju Array Si**	**18.72**	**251**	*e*P	**Pn**	**06 17 18.7**	**+3.2**
KSAR	**Wonju Array Be**	**18.75**	**251**	P	**P**	**06 17 15.2**	**+1.1**
KSAR	**Wonju Array Be**	**18.75**	**251**	P	**P**	**06 17 15.2**	**+1.1**
YAK	**Yakutsk**	**20.09**	**331**	*e*P	**P**	**06 17 29.3**	**+1.0**
YAK				*e*S	**S**	**06 21 09.6**	**+2.2**
YAK				*e**SS	**sS**	**06 21 35.2**	**-7.4**
YAK				*e*		06 21 41.6	
YAK				pmax	pmax		
	comp=Z,15nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.0s						
YAK				smax	smax		
	comp=N,36nm,2.8s						
BILL	**Bilibino**	**23.69**	**15**	*e*P	**P**	**06 18 04.9**	**-0.2**
BILL				pmax	pmax		
	comp=Z,2.0nm,0.5s						
TIXI	**Tiksi**	**27.80**	**346**	P	**P**	**06 18 40.4**	**-1.6**
	comp=Z,2.8nm,0.4s,baz=142,slow=8.1,SNR=6.0						
TIXI	**Tiksi**	**27.80**	**346**	*e*P	**P**	**06 18 40.3**	**-1.6**
	comp=Z,3.8nm,0.5s						
TIXI	**Tiksi**	**27.80**	**346**	*d i*P	**P**	**06 18 40.2**	**-1.7**
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.7s						
HHC	**Hu-ho-hao-te**	**28.45**	**274**	*e*P	**P**	**06 18 47.9**	**-0.3**
HHC				pP	pP	06 19 14.8	+1.5
HHC				sP	sP	06 19 29.8	+3.2
HHC				S	**S**	**06 23 22.3**	**-4.8**
HHC				sS	sS	06 24 09.3	-1.7
HHC				pmax	pmax		
	comp=Z,15nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,4.8s						
HHC				LR	LR		
	comp=N,360nm,13.8s						
HHC				LR	LR		
	comp=E,390nm,13.8s						
HHC				LR	LR		
	comp=Z,310nm,16.4s						
H11N2	**WAKE ISLAND Hy**	**29.43**	**147**	T	T	06 50 15.9	
	baz=337,slow=76,SNR=407						
H11N1	**WAKE ISLAND Hy**	**29.45**	**147**	T	T	06 50 38.7	
	baz=337,slow=76,SNR=486						
H11N3	**WAKE ISLAND Hy**	**29.45**	**147**	T	T	06 50 38.9	
	baz=337,slow=76,SNR=436						
H11S1	**WAKE ISLAND Hy**	**30.48**	**148**	T	T	06 51 20.8	
	baz=336,slow=76,SNR=642						
H11S3	**WAKE ISLAND Hy**	**30.48**	**148**	T	T	06 51 25.0	
	baz=336,slow=76,SNR=401						
H11S2	**WAKE ISLAND Hy**	**30.49**	**148**	T	T	06 51 23.0	
	baz=336,slow=76,SNR=550						
SVW2	**Sparrevohn**	**34.45**	**44**	*e*P	**P**	**06 19 41.2**	**+0.7**
	comp=Z,6.3nm,1.2s						
LZH	**Lanzhou**	**36.00**	**271**	*e*P	**P**	**06 19 55.6**	**+1.4**
LZH				pP	pP	06 20 23.8	+4.0
LZH				sP	sP	06 20 36.8	+3.8
LZH				*e*PP	**PP**	**06 21 19.3**	**+1.1**
LZH				pmax	pmax		
	comp=Z,18nm,0.9s						
LZH				pmax	pmax		
	comp=Z,180nm,6.0s						
LZH				LR	LR		
	comp=N,180nm,14.0s						
LZH				LR	LR		
	comp=E,190nm,14.3s						
LZH				LR	LR		
	comp=Z,230nm,16.8s						
PPLA	**Purkeypile**	**36.08**	**41**	*e*P	**P**	**06 19 55.9**	**+1.4**
	comp=Z,5.5nm,1.0s						
CAST	**Castle Rocks**	**36.13**	**40**	*e*P	**P**	**06 19 55.7**	**+0.8**
	comp=Z,4.8nm,0.9s						
SKT	**Skwentna**	**36.39**	**43**	*e*P	**P**	**06 19 58.0**	**+1.0**
	comp=Z,1.6nm,0.8s						
BPAW	**Bear Paw Mtn.**	**36.63**	**39**	*e*P	**P**	**06 19 59.8**	**+0.7**
	comp=Z,4.6nm,1.0s						
KTH	**Kantishna Hill**	**36.66**	**40**	*e*P	**P**	**06 20 00.4**	**+1.0**
	comp=Z,11nm,1.2s						
TRF	**Thorofare Moun**	**36.94**	**40**	*e*P	**P**	**06 20 02.6**	**+0.7**
	comp=Z,6.3nm,1.0s						
COLD	**Coldfoot**	**37.12**	**34**	*e*P	**P**	**06 20 03.5**	**+0.4**
	comp=Z,4.3nm,0.7s						
TOLK	**Toolik Lake Re**	**37.48**	**31**	*e*P	**P**	**06 20 06.8**	**+0.6**
	comp=Z,11nm,0.6s						
GHO	**Glory Hole Cre**	**37.63**	**43**	*e*P	**P**	**06 20 08.0**	**+0.4**
	comp=Z,6.3nm,1.2s						
MDM	**Murphy Dome**	**37.83**	**38**	*e*P	**P**	**06 20 09.6**	**+0.4**
	comp=Z,3.3nm,0.7s						
WRH	**Wood River Hil**	**37.90**	**38**	*e*P	**P**	**06 20 09.9**	**+0.2**
	comp=Z,3.2nm,0.7s						
SML	**Sawmill**	**37.91**	**43**	*e*P	**P**	**06 20 10.1**	**+0.2**
SML	**Sawmill**	**37.91**	**43**	*e*P	**P**	**06 20 10.1**	**+0.2**
	comp=Z,12nm,0.7s						
SML	**Sawmill**	**37.91**	**43**	*e*P	**P**	**06 20 10.1**	**+0.2**
SML				pmax	pmax		
	comp=Z,12nm,0.7s						
CCB	**Clear Creek Bu**	**38.02**	**38**	*e*P	**P**	**06 20 10.2**	**-0.5**
	comp=Z,1.4nm,1.0s						
DHY	**Denali Highway**	**38.27**	**41**	*e*P	**P**	**06 20 12.8**	**-0.2**
	comp=Z,6.4nm,1.2s						
ILAR	**Eielson Array**	**38.41**	**38**	P	**P**	**06 20 13.9**	**-0.2**
	comp=Z,2.4nm,0.8s,baz=262,slow=7.5,SNR=21						
ILB	**Eielson Array**	**38.41**	**38**	*e*P	**P**	**06 20 13.9**	**-0.2**
IL1	**Eielson Array**	**38.41**	**38**	*e*P	**P**	**06 20 13.9**	**-0.1**
CD2	**Chengdu**	**38.90**	**264**	P	**P**	**06 20 18.5**	**-0.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
FYU	**Fort Yukon**	**39.05**	**35**	*e*P	**P**	**06 20 20.5**	**+1.2**
	comp=Z,11nm,1.0s						
SCRK	**Sand Creek**	**39.72**	**39**	*e*P	**P**	**06 20 24.3**	**-0.7**
	comp=Z,1.7nm,0.8s						
BMRM	**Bremner River**	**39.78**	**44**	*e*P	**P**	**06 20 26.0**	**+0.4**
	comp=Z,6.3nm,1.0s						
EGAK	**Eagle**	**40.86**	**38**	*e*P	**P**	**06 20 34.2**	**-0.1**
	comp=Z,5.0nm,1.0s						
ZALV	**Zalesovo Beam**	**41.57**	**306**	PcP	**PcP**	**06 22 34.9**	**-0.3**
	comp=Z,0.8nm,0.3s,baz=55,slow=5.5,SNR=3.7						
DAWY	**Dawson**	**41.71**	**38**	*e*P	**P**	**06 20 41.8**	**+0.4**
	comp=Z,2.1nm,0.8s						
INK	**Inuvik**	**43.40**	**32**	*e*P	**P**	**06 20 55.6**	**+0.8**
INK	**Inuvik**	**43.40**	**32**	*e*P	**P**	**06 20 55.6**	**+0.8**
	comp=Z,5.8nm,0.9s						
INK	**Inuvik**	**43.40**	**32**	*e*P	**P**	**06 20 55.6**	**+0.8**
INK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WMQ	**Urumqi**	**43.45**	**291**	P	**P**	**06 20 57.8**	**+2.1**
MK31	**Makanchi Array**	**45.64**	**297**	*e*P	**P**	**06 21 14.4**	**+1.4**
MK31	**Makanchi Array**	**45.64**	**297**	*e*P	**P**	**06 21 14.4**	**+1.4**
MKAR	**Makanchi Array**	**45.64**	**297**	P	**P**	**06 21 13.0**	**0.0**
	comp=Z,0.7nm,0.6s,baz=71,slow=7.9,SNR=6.0						
MKAR				PcP	**PcP**	**06 22 50.2**	**+0.9**
	comp=Z,0.5nm,0.4s,baz=66,slow=4.1,SNR=5.2						
MKAR	**Makanchi Array**	**45.64**	**297**	*e*P	**P**	**06 21 14.0**	**+1.0**
MKAR	**Makanchi Array**	**45.64**	**297**	*e*P	**P**	**06 21 14.4**	**+1.5**
	comp=Z,7.2nm,0.6s						
MKAR				PcP	**PcP**	**06 22 50.2**	**+0.9**
MKAR	**Makanchi Array**	**45.64**	**297**	*c e*P	**P**	**06 21 14.0**	**+1.0**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURK	**Kurchatov**	**46.25**	**303**	P	**P**	**06 21 17.5**	**-0.1**
KURK	**Kurchatov**	**46.25**	**303**	⇑*e*P	**P**	**06 21 16.9**	**-0.7**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KURBB	**Kurchatov Arra**	**46.34**	**303**	P	**P**	**06 21 17.5**	**-0.8**
	comp=Z,1.4nm,0.7s,baz=71,slow=8.8,SNR=5.6						
WRAK	**Wrangell Islan**	**47.13**	**48**	*e*P	**P**	**06 21 24.1**	**-0.3**
	comp=Z,32nm,0.9s						
BRVK	**Borovoye**	**49.97**	**309**	‖*e*P	**P**	**06 21 45.7**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
RES	**Resolute Bay**	**52.25**	**18**	*e*P	**P**	**06 22 03.0**	**0.0**
	comp=Z,9.7nm,0.9s						
RES	**Resolute Bay**	**52.25**	**18**	*e*P	**P**	**06 22 03.0**	**0.0**
RES				pmax	pmax		
	comp=Z,10.0nm,0.9s						
AAK	**Ala-Archa**	**52.49**	**296**	LR	LR	06 45 33.3	
	comp=Z,28nm,19.5s,baz=174,slow=37						
AAK	**Ala-Archa**	**52.49**	**296**	*e*P	**P**	**06 22 07.2**	**+1.8**
AAK	**Ala-Archa**	**52.49**	**296**	‖*e*P	**P**	**06 22 07.2**	**+1.8**
AAK				*i* *PP	**pP**	**06 22 36.4**	**+3.8**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKW3	**Yellowknife Ar**	**52.71**	**35**	*e*P	**P**	**06 22 06.8**	**+0.2**
	comp=Z,3.0nm,0.8s						
YKA	**Yellowknife Ar**	**52.75**	**36**	P	**P**	**06 22 06.7**	**-0.1**
	comp=Z,2.2nm,0.7s,baz=298,slow=6.9,SNR=16						
YKA				pP	**pP**	**06 22 34.9**	**+0.9**
	comp=Z,0.4nm,0.8s,baz=300,slow=6.9,SNR=1.2						
YKA	**Yellowknife Ar**	**52.75**	**36**	*e*P	**P**	**06 22 06.9**	**+0.1**
YKA	**Yellowknife Ar**	**52.75**	**36**	*c e*P	**P**	**06 22 06.9**	**+0.1**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SPA0	**Spitsbergen Ar**	**53.12**	**349**	*e*P	**P**	**06 22 08.2**	**-1.1**
SPITS	**Spitsbergen Ar**	**53.12**	**349**	P	**P**	**06 22 08.0**	**-1.3**
	comp=Z,0.5nm,0.3s,baz=76,slow=12,SNR=18						
ARU	**Arti**	**54.35**	**317**	*e*P	**P**	**06 22 18.0**	**-0.6**
	comp=Z,4.4nm,0.9s						
ARU	**Arti**	**54.35**	**317**	*d i*P	**P**	**06 22 17.8**	**-0.8**
ARU				*PP	**pP**	**06 22 43.6**	**-2.3**
ARU				S	**S**	**06 29 46.2**	**-1.2**
ARU				SS	**SS**	**06 33 25.7**	**-4.7**
ARU				pmax	pmax		
	comp=Z,7.0nm,1.2s						
SFK	**Sufi-Kurgan**	**54.53**	**293**	P	**P**	**06 22 21.9**	**+1.5**
SFK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
KK31	**Karatay Array**	**54.73**	**298**	*e*P	**P**	**06 22 22.3**	**+0.7**
KK31	**Karatay Array**	**54.73**	**298**	*e*P	**P**	**06 22 22.3**	**+0.7**
KKAR	**Karatay Array**	**54.73**	**298**	*e*P	**P**	**06 22 22.4**	**+0.8**
KKAR	**Karatay Array**	**54.73**	**298**	*e*P	**P**	**06 22 22.4**	**+0.8**
ABKAR	**Akbulak array**	**57.50**	**309**	*e*P	**P**	**06 22 41.1**	**0.0**
COR	**Corvallis**	**57.83**	**57**	*e*P	**P**	**06 22 44.8**	**+1.4**
	comp=Z,13nm,0.8s						
COR	**Corvallis**	**57.83**	**57**	*e*P	**P**	**06 22 44.8**	**+1.4**
COR				pmax	pmax		
	comp=Z,13nm,0.8s						
ARCES	**ARCESS Array B**	**58.03**	**340**	P	**P**	**06 22 43.5**	**-1.0**
	comp=Z,1.2nm,0.9s,baz=21,slow=7.9,SNR=5.3						
H04A	**Detroit Lake**	**58.42**	**57**	*e*P	**P**	**06 22 48.2**	**+0.5**
	comp=Z,5.8nm,0.9s						
PINE	**Pine Mountain**	**59.67**	**57**	*e*P	**P**	**06 22 57.6**	**+1.1**
	comp=Z,3.1nm,0.8s						
KLMR	**Klimovskoe**	**59.84**	**328**	*e*P	**P**	**06 22 54.0**	**-3.1**
KLMR				pmax	pmax		
	comp=Z,19nm,1.9s						
KLMR	**Klimovskoe**	**59.84**	**328**	*e*P	**P**	**06 22 54.0**	**-3.1**
KLMR				AMP		06 22 57.9	
	comp=Z,19nm,1.9s						
K05A	**Summer Lake**	**60.33**	**58**	*e*P	**P**	**06 23 01.5**	**+0.5**
BMO	**Blue Mountains**	**61.14**	**54**	*e*P	**P**	**06 23 06.9**	**+0.6**
	comp=Z,0.8nm,0.6s						
BMO	**Blue Mountains**	**61.14**	**54**	*e*P	**P**	**06 23 06.9**	**+0.6**
BMO				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MOD	**Modoc Plateau**	**61.17**	**58**	*e*P	**P**	**06 23 07.1**	**+0.4**
	comp=Z,3.0nm,0.6s						
J08A	**Circle Bar Ran**	**61.37**	**56**	*e*P	**P**	**06 23 08.4**	**+0.5**
	comp=Z,1.4nm,0.8s						
SUMG	**Summit**	**61.68**	**3**	*i* P	**P**	**06 23 10.6**	**+0.6**
	comp=Z,23nm,0.9s						
SUMG	**Summit**	**61.68**	**3**	*e*P	**P**	**06 23 10.4**	**+0.6**
	comp=Z,23nm,0.9s						
SUMG	**Summit**	**61.68**	**3**	*e*P	**P**	**06 23 10.5**	**+0.6**
SUMG				pmax	pmax		
	comp=Z,23nm,0.9s						
MSO	**Missoula**	**61.80**	**51**	*e*P	**P**	**06 23 11.1**	**+0.4**
	comp=Z,3.2nm,1.0s						
FFC	**Flin Flon**	**62.62**	**38**	*e*P	**P**	**06 23 17.1**	**+1.2**
FFC	**Flin Flon**	**62.62**	**38**	*e*P	**P**	**06 23 16.4**	**+0.5**
	comp=Z,3.6nm,0.9s						
FFC	**Flin Flon**	**62.62**	**38**	*e*P	**P**	**06 23 16.4**	**+0.5**
FFC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
FCC	**Fort Churchill**	**63.02**	**32**	*e*P	**P**	**06 23 18.5**	**0.0**
	comp=Z,4.0nm,0.5s						
FCC	**Fort Churchill**	**63.02**	**32**	*e*P	**P**	**06 23 18.5**	**0.0**
FCC				pmax	pmax		
	comp=Z,4.0nm,0.5s						
PAHR	**Pah Rah Range**	**63.07**	**60**	*e*P	**P**	**06 23 19.8**	**+0.4**
	comp=Z,1.4nm,0.6s						
LRM	**Limekiln Ridge**	**63.23**	**51**	*e*P	**P**	**06 23 21.3**	**+0.8**
PNTR	**Pine Nut**	**63.32**	**61**	*e*P	**P**	**06 23 23.0**	**+1.9**
	comp=Z,6.2nm,1.0s						
HLID	**Hailey**	**63.57**	**54**	*e*P	**P**	**06 23 23.2**	**+0.6**
SCO	**Scoresbysund**	**63.81**	**357**	*e*P	**P**	**06 23 24.0**	**+0.5**
	comp=Z,6.8nm,0.8s						
SCO	**Scoresbysund**	**63.81**	**357**	*e*P	**P**	**06 23 24.0**	**+0.5**
SCO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BOZ	**Bozeman (W)**	**63.82**	**51**	*e*P	**P**	**06 23 24.6**	**+0.4**
BOZ	**Bozeman (W)**	**63.82**	**51**	*e*P	**P**	**06 23 24.4**	**+0.2**
	comp=Z,1.4nm,0.6s						
BOZ	**Bozeman (W)**	**63.82**	**51**	*e*P	**P**	**06 23 24.4**	**+0.2**
BOZ				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BMN	**Battle Mountai**	**63.91**	**58**	*e*P	**P**	**06 23 24.5**	**-0.4**
	comp=Z,1.9nm,0.6s						
BMN	**Battle Mountai**	**63.91**	**58**	*e*P	**P**	**06 23 24.5**	**-0.4**
BMN				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FIA1	**FINESS Array S**	**63.99**	**334**	*e*P	**P**	**06 23 23.8**	**-1.1**
	comp=Z,4.6nm,0.6s						
FINES	**FINESS Array B**	**63.99**	**334**	P	**P**	**06 23 23.8**	**-1.1**
	comp=Z,3.6nm,0.5s,baz=39,slow=7.7,SNR=38						
FINES				sP	**sP**	**06 24 04.7**	**-0.8**
	comp=Z,3.3nm,0.5s,baz=48,slow=4.1,SNR=7.9						
ILULI	**Ilulissat**	**64.13**	**8**	*e*P	**P**	**06 23 25.4**	**-0.2**
	comp=Z,15nm,1.0s						
ILULI	**Ilulissat**	**64.13**	**8**	*e*P	**P**	**06 23 25.4**	**-0.2**
ILULI				pmax	pmax		
	comp=Z,15nm,1.0s						
KVN	**Kaiserville**	**64.25**	**60**	*e*P	**P**	**06 23 27.9**	**+0.7**
	comp=Z,2.2nm,0.7s						
KVN	**Kaiserville**	**64.25**	**60**	*e*P	**P**	**06 23 27.9**	**+0.7**
KVN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NV01	**Mina Array Sit**	**64.52**	**60**	*e*P	**P**	**06 23 29.6**	**+0.6**
NVAR	**Mina Array Bea**	**64.52**	**60**	P	**P**	**06 23 29.3**	**+0.3**
	comp=Z,1.7nm,0.7s,baz=295,slow=7.2,SNR=11						
NVAR				sP	**sP**	**06 24 10.5**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=292,slow=7.8,SNR=1.6						
NV11	**Mina Array Sit**	**64.61**	**60**	*e*P	**P**	**06 23 30.0**	**+0.5**
	comp=Z,0.2nm,1.1s						
FXWY	**Fox Creek**	**65.41**	**52**	*e*P	**P**	**06 23 35.8**	**+1.0**
	comp=Z,1.0nm,0.9s						
TPAW	**Teton Pass**	**65.55**	**52**	*e*P	**P**	**06 23 36.8**	**+1.2**
	comp=Z,2.9nm,0.8s						
CTA	**Charters Tower**	**65.76**	**184**	P	**P**	**06 23 37.0**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=293,slow=13,SNR=2.0						
CTA	**Charters Tower**	**65.76**	**184**	P	**P**	**06 23 37.0**	**+0.2**
R11A	**Troy Canyon, C**	**66.22**	**59**	*e*P	**P**	**06 23 39.6**	**-0.3**
	comp=Z,0.3nm,0.6s						
DAC	**Darwin (Calif)**	**66.33**	**62**	*e*P	**P**	**06 23 40.8**	**+0.1**
	comp=Z,1.6nm,1.0s						
DAC	**Darwin (Calif)**	**66.33**	**62**	*e*P	**P**	**06 23 40.8**	**+0.1**
DAC				pmax	pmax		
	comp=Z,2.0nm,1.0s						
HWUT	**Hardware Ranch**	**66.44**	**54**	*e*P	**P**	**06 23 41.9**	**+0.7**
	comp=Z,1.6nm,0.6s						
DUG	**Dugway, Tooele**	**66.65**	**56**	*e*P	**P**	**06 23 43.0**	**+0.4**
	comp=Z,1.9nm,0.9s						
DUG	**Dugway, Tooele**	**66.65**	**56**	*e*P	**P**	**06 23 43.0**	**+0.4**
DUG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
TPNV	**Topopah Spring**	**66.72**	**61**	*e*P	**P**	**06 23 43.6**	**+0.5**
	comp=Z,1.9nm,0.9s						
TPNV	**Topopah Spring**	**66.72**	**61**	*e*P	**P**	**06 23 43.6**	**+0.5**
TPNV				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BW06	**Boulder Array**	**66.79**	**52**	*e*P	**P**	**06 23 43.0**	**-0.5**
	comp=Z,1.6nm,0.6s						
PD31	**Pinedale Array**	**66.79**	**52**	*e*P	**P**	**06 23 43.1**	**-0.4**
PDAR	**Pinedale Array**	**66.79**	**52**	P	**P**	**06 23 43.6**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=257,slow=2.3,SNR=18						
PDAR	**Pinedale Array**	**66.79**	**52**	*e*P	**P**	**06 23 43.2**	**-0.4**
PDAR	**Pinedale Array**	**66.79**	**52**	*e*P	**P**	**06 23 43.5**	**-0.1**
WRA	**Warramunga Arr**	**67.11**	**196**	P	**P**	**06 23 45.1**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=16,slow=6.8,SNR=14						
WRA				pP	**PcP**	**06 24 12.4**	**-0.2**
	comp=Z,1.0nm,0.9s,baz=16,slow=6.1,SNR=4.5						
MSU	**Marysvale**	**68.13**	**57**	*e*P	**P**	**06 23 52.6**	**+0.6**
MSU	**Marysvale**	**68.13**	**57**	*e*P	**P**	**06 23 52.6**	**+0.6**
NC303	**NORSAR Array S**	**68.21**	**340**	*e*P	**P**	**06 23 51.3**	**-0.6**
NC405	**NORSAR Array S**	**68.22**	**340**	*e*P	**P**	**06 23 50.4**	**-1.6**
NC204	**NORSAR Array S**	**68.31**	**340**	*e*P	**P**	**06 23 52.1**	**-0.4**
NB201	**NORSAR Array S**	**68.38**	**340**	*e*P	**P**	**06 23 51.4

TLB	Topalu	76.48	322	⇑iP	P	06 24 37.5	-3.7
TLB	Topalu	76.48	322	⇑P	P	06 24 37.5	-3.7
BRG	Berggiesshubel	76.52	333	eP	P	06 24 55.7	+14
	comp=Z,7.7nm,1.5s						
BRG	Berggiesshubel	76.52	333	eP	P	06 24 55.7	+14
BRG				pmax	pmax		
	comp=Z,8.0nm,1.5s						
MLR	Muntele Rosu	76.65	323	P	P	06 24 43.3	+1.0
	comp=Z,1.0nm,0.6s,baz=231,slow=6.5,SNR=7.4						
MLR	Muntele Rosu	76.65	323	⇑iP	P	06 24 39.7	-2.6
MLR	Muntele Rosu	76.65	323	eP	P	06 24 44.3	+2.0
	comp=Z,4.4nm,0.7s						
MLR	Muntele Rosu	76.65	323	eP	P	06 24 44.3	+2.0
MLR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
EKA	Eskdalemuir Ar	76.70	345	P	P	06 24 42.8	+0.6
	comp=Z,0.9nm,0.3s,baz=22,slow=5.3,SNR=13						
VYHS	Vyhne	76.92	329	eP	P	06 24 44.3	+0.6
VYHS				pmax	pmax		
	comp=Z,1.0nm,0.5s						
VYHS	Vyhne	76.92	329	eP	P	06 24 44.3	+0.6
VRAC	Vranov	77.01	331	⇓iP	P	06 24 40.3	-3.8
VRAC	Vranov	77.01	331	⇓P	P	06 24 40.3	-3.8
VRAC	Vranov	77.01	331	eP	P	06 24 45.4	+1.3
JAVC	Velka Javorina	77.02	330	eP	P	06 24 46.3	+2.0
VOIR		77.06	324	⇑iP	P	06 24 41.8	-2.8
VOIR		77.06	324	⇑P	P	06 24 41.8	-2.8
GOPC	GO Pecny, Ondr	77.09	332	eP	P	06 24 45.2	+0.6
GOPC	GO Pecny, Ondr	77.09	332	eP	P	06 24 45.2	+0.6
KRUC	Moravsky	77.29	331	eP	P	06 24 46.7	+1.0
ARR	Arges	77.29	324	⇑iP	P	06 24 43.3	-2.5
BRTR	Keskin Array B	77.68	315	P	P	06 24 49.2	+1.0
	comp=Z,1.9nm,0.9s,baz=45,slow=6.5,SNR=5.4						
BRTR	Keskin Array B	77.68	315	ceP	P	06 24 48.7	+0.5
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KHC	Kasperske Hory	78.16	333	eP	P	06 24 51.4	+0.9
KHC	Kasperske Hory	78.16	333	eP	P	06 24 51.5	+0.9
	comp=Z,2.6nm,0.7s						
KHC	Kasperske Hory	78.16	333	eP	P	06 24 51.5	+0.9
KHC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GEC2	GERESS Array S	78.37	332	eP	P	06 24 52.3	+0.5
	comp=Z,2.6nm,0.6s						
GEC2	GERESS Array S	78.37	332	eP	P	06 24 52.3	+0.5
GEC2				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GERES	GERESS Array B	78.37	332	P	P	06 24 52.2	+0.4
	comp=Z,1.5nm,0.5s,baz=36,slow=6.1,SNR=17						
WET	Wettzell	78.37	333	P	P	06 24 52.4	+0.7
WET				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GEA0	GERESS Array S	78.37	332	eP	P	06 24 52.0	+0.2
CONA	Conrad Observa	78.44	331	iP	P	06 24 53.2	+1.0
	comp=Z,3.6nm,0.7s						
R40A	Maddies Statio	79.11	45	eP	P	06 24 55.2	-0.7
	comp=Z,5.1nm,0.9s						
TX31	Lajitas Ar. Si	79.58	59	eP	P	06 24 58.9	+0.1
TXAR	Lajitas Array	79.58	59	P	P	06 24 58.9	+0.1
	comp=Z,0.7nm,0.6s,baz=296,slow=4.5,SNR=10.0						
TXAR				pP	pP	06 25 27.5	-0.4
	comp=Z,0.3nm,0.6s,baz=284,slow=3.6,SNR=2.4						
HHAR	Hobbs	79.81	48	eP	P	06 24 59.5	-0.4
	comp=Z,2.5nm,1.0s						
KBA	Koelnbreinsper	80.03	332	eP	P	06 25 02.0	+1.1
	comp=Z,5.1nm,0.6s						
KBA	Koelnbreinsper	80.03	332	P	P	06 25 01.2	+0.2
KBA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
VTS	Vitosha	80.15	323	P	P	06 25 02.0	+0.3
VTS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MYKA	Terra Mystica	80.32	331	iPcP	P	06 25 04.0	+1.6
	comp=Z,0.9nm,0.4s						
WATA	Walderalm	80.37	333	iP	P	06 25 03.4	+0.6
	comp=Z,4.8nm,0.7s						
WTTA	Wattenberg	80.42	333	iP	P	06 25 04.0	+1.0
	comp=Z,3.2nm,0.5s						
MOTA	Moosalm	80.52	333	iP	P	06 25 03.1	-0.5
	comp=Z,2.3nm,0.5s						
DAVA	Damuels	80.95	334	iP	P	06 25 06.3	+0.5
	comp=Z,2.3nm,0.5s						
PBMO	Poplar Bluff	81.21	45	eP	P	06 25 07.2	0.0
	comp=Z,2.6nm,0.8s						
MIAR	Mount Ida	81.34	49	eP	P	06 25 07.8	-0.1
	comp=Z,3.1nm,0.6s						
MIAR	Mount Ida	81.34	49	eP	P	06 25 07.9	-0.1
MIAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
WHAR	Wooly Hollow	81.43	47	eP	P	06 25 07.9	-0.5
	comp=Z,2.9nm,1.0s						
W41B	Gary Mavity, V	81.54	47	eP	P	06 25 09.3	+0.4
	comp=Z,2.7nm,0.8s						
PDG	Podgorica	81.89	326	⇑iP	P	06 25 05.2	-5.5
MMAI	Mount Meron Ar	81.93	310	P	P	06 25 13.0	+1.8
	comp=Z,1.8nm,0.5s,baz=53,slow=5.6,SNR=6.1						
OXF	Oxford	83.50	46	eP	P	06 25 19.0	-0.2
	comp=Z,13nm,1.1s						
OXF	Oxford	83.50	46	eP	P	06 25 19.0	-0.2
OXF				pmax	pmax		
	comp=Z,13nm,1.1s						
TZTN	Tazewell	84.67	41	eP	P	06 25 25.8	+0.7
	comp=Z,5.8nm,0.9s						
ITM	Ithomi	85.19	321	eP	P	06 25 27.6	-0.1
	comp=Z,9.8nm,0.8s						
Z50A	Ashland	86.24	44	eP	P	06 25 32.6	-0.3
	comp=Z,5.2nm,0.8s						
TORD	Torodi Ar. Bea	114.80	326	PKP	PKPdf	06 31 31.1	-0.5
	comp=Z,0.4nm,0.7s,baz=21,slow=2.5,SNR=4.1						

UCR 16 06:17:39.4±1.8, 11°.24N×85°.66W, h173km±8km, MD4.1, 13C-2D, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRZ1	La Cruz	0.17	170	eP	Pn	06 18 02.4	-0.1
CRZ1				eS	Sn	06 18 21.1	+0.8
CONN	Concepcion	0.32	7	eP	Pn	06 18 03.0	+0.2
BUAI	Buenos Aires	0.49	138	⇑iP	Pn	06 18 04.1	+0.7
GB1A	Borinquen Arri	0.49	148	eP	Pn	06 18 04.2	+0.6
GBS3	Finca Las Im¯¡	0.50	156	⇑eP	Pn	06 18 03.7	+0.2
BUEV	Buena Vista	0.51	150	eP	Pn	06 18 03.9	+0.3
LAPC	Finca la Perla	0.52	154	⇑eP	Pn	06 18 03.6	0.0
GPS1	Guardaparques	0.56	146	eP	Pn	06 18 04.3	+0.5
GPS3	Bodega del ICE	0.56	146	eP	Pn	06 18 02.4	-1.4
GPS2	Hotel Rinc¯‡n	0.57	148	eP	Pn	06 18 04.3	+0.4
NY14	Universidad de	0.60	168	eP	Pn	06 18 04.4	+0.5
LIM1	Limonal	0.67	143	⇑eP	Pn	06 18 04.7	+0.4
MESS	Mesas	0.68	137	⇑iP	Pn	06 18 04.8	+0.4
MESS				⇑eP		06 18 04.8	
MESS				eS	Sn	06 18 24.8	+1.2
GUAB	Guayabo de Bag	0.68	141	⇑eP	Pn	06 18 04.9	+0.5
HORNC	Hornillas	0.71	138	eP	Pn	06 18 05.4	+0.8
COLC	Colonia	0.73	142	⇑eP	Pn	06 18 05.1	+0.4
PTEN	Parque Tenorio	0.85	128	⇑eP	Pn	06 18 06.2	+0.7
ACAL	Aguas Claras	0.86	134	⇑eP	Pn	06 18 06.4	+0.9
AMAS	Alto Masis	0.91	133	eP	Pn	06 18 05.4	-0.5
MGAN	Managua	1.07	328	iP	Pn	06 18 07.4	+0.5
VCR	Vista de Mar	1.11	178	eP	Pn	06 18 07.9	+0.5
JTS	JuntasAbangare	1.18	143	eP	Pn	06 18 08.0	+0.1
JTS				eS	Sn	06 18 29.8	0.0
APYN	Apoyeque	1.19	326	eP	Pn	06 18 08.4	+0.4
CEDE	Laguna Cede¯–o	1.21	128	⇑eP	Pn	06 18 09.2	+1.0
CASO	Castillo	1.22	131	⇑eP	Pn	06 18 09.1	+0.8
FORC	Fortuna	1.24	128	⇑iP	Pn	06 18 09.3	+0.9
COPN	Copaltepe	1.30	316	eP	Pn	06 18 08.9	0.0
MOMN	Momotombo	1.44	324	eP	Pn	06 18 10.1	-0.2
CNGN	Cerro Negro	1.61	321	eP	Pn	06 18 11.7	-0.2
CNGN				eS	Sn	06 18 38.2	+1.0
BRAN	Las Pilas	1.62	336	eP	Pn	06 18 08.0	-3.9
SRA1	San Ram¯‡n	1.64	135	eS	Sn	06 18 39.2	+1.5
ESPN	Las Esperanzas	1.64	54	iP	Pn	06 18 11.6	-0.6
ESPN				⇓iP	Pn	06 18 11.6	-0.6
CGA2	Cerro Gallo 2	1.69	136	eP	Pn	06 18 13.7	+0.8
CGA2				eS	Sn	06 18 39.1	+0.3
MATN	Matagalpa	1.70	351	⇓iP	Pn	06 18 12.4	-0.5
LCR2	La Lucha 2	2.21	132	eP	Pn	06 18 19.7	+1.1
LCR2				eS	Sn	06 18 49.2	+0.2
RCON	San Juan de Ri	2.28	348	eP	Pn	06 18 18.9	-0.4
URSC	Urasca	2.32	127	eP	Pn	06 18 20.8	+1.0
URSC				eS	Sn	06 18 53.7	+2.5
QCR1	Quepos	2.33	141	eP	Pn	06 18 21.2	+1.5
QCR1				eS	Sn	06 18 50.9	-0.1
BUS	Buena Vista	2.51	132	eP	Pn	06 18 23.2	+0.8
EDLM	Las Mercedes	2.82	133	eP	Pn	06 18 26.9	+1.2
EDLM				eS	Sn	06 19 01.4	-0.2
EDPN	Palmar Norte	3.14	136	eS	Sn	06 19 08.8	+0.3

SJA 16 06:24:11.1±0.8, 31°.18S×68°.33W, h103km±2km, ML3.6, MW3.6, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLL	Cerro Villicun	0.20	220	eP	Pn	06 24 26.4	+0.7
RTLL				IAML		06 24 26.9	
	comp=Z,22µm,0.4s						
RTLL				eS	Sn	06 24 37.5	+0.9
AMOG	MOGNA	0.28	329	eP	Pn	06 24 27.1	+1.1
AMOG				eS	Sn	06 24 38.0	+0.9
SJA	San Juan	0.40	210	eP	Pn	06 24 27.8	+1.1
ZON	Zonda	0.48	219	eP	Pn	06 24 27.9	+0.8
ZON				eS	Sn	06 24 39.9	+0.8
RTCV	Cerro Valdivia	0.71	195	eP	Pn	06 24 29.7	+0.7
RTCV				eS	Sn	06 24 43.0	+0.7
RTLS	Leoncito	1.03	233	eP	Pn	06 24 34.0	+1.5
RTLS				eS	Sn	06 24 50.5	+1.9
RTLS				IAML		06 24 52.0	
	comp=Z,584nm,0.2s						
ACDV	Cuesta del Vie	1.21	326	eP	Pn	06 24 35.3	+1.0
ACDV				eS	Sn	06 24 53.0	+1.2
AUSP	Uspallata	1.38	221	eP	Pn	06 24 37.6	+1.2
AUSP				eS	Sn	06 24 57.6	+2.1
AROD	Rodeo	1.41	315	eP	Pn	06 24 38.1	+1.4
AROD				eS	Sn	06 24 58.0	+1.9
ACAN	Cantantal	1.46	139	eP	Pn	06 24 38.5	+1.4
ACAN				eS	Sn	06 24 58.3	+1.5
ASAL	Salagasta	1.48	197	eP	Pn	06 24 38.4	+1.0
ASAL				eS	Sn	06 24 58.7	+1.6
AGUA	GUANDACOL	1.69	355	eP	Pn	06 24 41.5	+1.6
APLL	PUNTA DE LOS L	1.73	64	eP	Pn	06 24 41.5	+1.1
APLL				eS	Sn	06 25 03.7	+0.9
APLL				IAML		06 25 07.0	
	comp=Z,162nm,0.2s						
ARCO	CERRO ARCO	1.74	197	eP	Pn	06 24 42.1	+1.4
ARCO				eS	Sn	06 25 04.4	+1.3
ARCO				IAML		06 25 07.5	
	comp=Z,418nm,0.2s						
AAGR	Agrelo	1.95	192	eP	Pn	06 24 44.6	+1.3
AAGR				eS	Sn	06 25 09.2	+1.4
ACLC	CERRO LA CRUZ	2.11	35	eP	Pn	06 24 46.6	+1.2
AVIZ	Vizcacheras	2.30	184	eP	Pn	06 24 48.9	+1.2
AVIZ				eS	Sn	06 25 16.4	+0.7
VCA	Vinchina	2.43	3	eP	Pn	06 24 50.9	+1.2
MRA	San Martin	2.54	120	eP	Pn	06 24 52.3	+1.3
TCA	Tanti	3.20	94	eP	Pn	06 25 00.6	+0.9
TCA				IAML		06 25 38.4	
	comp=Z,56nm,0.5s						

IDC 16 06:28:54.8±6.9, 4°.74S×146°.70E, h100km±84km, mb3.1/2, mb1 3.1/4, mb1mx2.9/51, mbtmp3.4/4, ML2.7/2, Error ellipse: s-maj=121.6km s-min=42.4km az=113.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	4.66	174	P	Pn	06 30 02.9	0.0
	2.4nm,0.3s,baz=122,slow=18,SNR=2.5						
PMG				S	Sn	06 30 45.4	-10
	1.4nm,0.3s,baz=197,slow=17,SNR=2.3						
WRA	Warramunga Arr	19.32	217	P	P	06 33 12.3	+0.1
	0.1nm,0.3s,baz=37,slow=11,SNR=8.8						
ASAR	Alice Springs	22.51	212	P	P	06 33 46.2	-0.1
	0.6nm,0.8s,baz=42,slow=7.5,SNR=4.2						
MKAR	Makanchi Array	76.34	320	P	P	06 40 33.1	+0.1
	0.3nm,0.4s,baz=111,slow=7.9,SNR=5.6						
TORD	Torodi Ar. Bea	144.48	286	PKP	PKPbc	06 48 19.7	+0.4
	0.4nm,1.0s,baz=61,slow=5.7,SNR=2.0						

*IDC **16** 06:33:05.8±1.6, 43°.02N×46°.08E, h0km, mb3.4/4, mb1 3.4/6, mb1mx3.2/56, mbtmp3.3/6, ML2.4/2, MS2.8/1, Ms1 2.9/1, ms1mx1.9/44, Error ellipse: s-maj=33.8km s-min=12.5km az=9.0*

*CSEM **16** 06:33:07.2±0.2, 43°.40N×46°.37E, h2km, mb3.9, Error ellipse: s-maj=5.7km s-min=3.0km az=32.0*

*MOS **16** 06:33:07.9±1.2, 43°.35N×46°.34E, h11km, mb3.9/4, Error ellipse: s-maj=5.8km s-min=4.6km az=113.9*

*TIF **16** 06:33:08.2, 43°.42N×46°.10E, h17km±2km*

ISC 16 06:33:08.9±1.0, 43°.25N±0°.03×46°.26E±0°.02, h11km±7km, n94, σ1°.20/164, mb3.5/5, 8C-6D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVE	Vedeno	0.31	199	⇓iPG	Pg	06 33 14.7	-0.5
DVE	Vedeno	0.31	199	iPg	Pg	06 33 14.7	-0.5
DLMR	Dylym	0.32	123	ePG	Pg	06 33 15.0	-0.5
DLMR				eS	Sg	06 33 20.7	+0.9
DLMR				pmax	pmax		
	comp=Z,172nm,0.1s						
DLMR	Dylym	0.32	123	ePg	Pg	06 33 15.0	-0.5
	comp=Z,172nm,0.1s						
DLMR				eSg	Sg	06 33 20.7	+0.9
GROC	Groznyy	0.34	263	ePG	Pb	06 33 17.3	+0.3
GROC				e		06 33 22.6	
GROC				pmax	pmax		
	comp=Z,74nm,0.3s						
GROC				smax	smax		
	comp=E,604nm,0.6s						
GROC				smax	smax		
	comp=E,1µm,0.9s						
GROC	Groznyy	0.34	263	ePg	Pb	06 33 17.3	+0.3
	comp=E,74nm,0.3s						
GROC				eSg	Sb	06 33 22.6	+0.1
DBC	Dubki	0.47	119	⇓iPG	Pg	06 33 17.8	-0.5
DBC				i		06 33 25.0	
DBC	Dubki	0.47	119	iPg	Pg	06 33 17.8	-0.5
DBC				iSg	Sg	06 33 25.0	+0.4
BTLR	Botlikh	0.58	183	⇑iPG	Pg	06 33 19.5	-0.8
BTLR				i		06 33 27.3	
BTLR				pmax	pmax		
	comp=Z,272nm,0.7s						
BTLR				smax	smax		
	comp=N,323nm,0.9s						
BTLR	Botlikh	0.58	183	iPg	Pg	06 33 19.5	-0.8
	comp=N,272nm,0.7s						
BTLR				iSg	Sg	06 33 27.3	-0.8
	comp=N,323nm,0.9s						
KRNR	Karanay	0.63	131	ePG	Pg	06 33 20.5	-0.8
KRNR				eS	Sg	06 33 30.0	+0.4
KRNR				pmax	pmax		
	comp=Z,66nm,0.1s						
KRNR	Karanay	0.63	131	ePg	Pg	06 33 20.5	-0.8
	comp=Z,66nm,0.1s						
KRNR				eSg	Sg	06 33 30.0	+0.4
UNCR	Uncukul	0.66	144	iPG	Pg	06 33 21.0	-0.8
UNCR				iS	Sg	06 33 30.5	0.0
UNCR				pmax	pmax		
	comp=Z,157nm,0.2s						
UNCR	Uncukul	0.66	144	iPg	Pg	06 33 21.0	-0.8
	comp=Z,157nm,0.2s						
UNCR				iSg	Sg	06 33 30.5	0.0
BUJR	Buynaksk	0.75	124	PG	Pg	06 33 24.0	+0.5
BUJR				eS	Sb	06 33 36.0	+1.8
BUJR	Buynaksk	0.75	124	Pg	Pg	06 33 24.0	+0.5
BUJR				eSg	Sb	06 33 36.0	+1.8
XNZR	Khunzakh	0.78	155	⇑iPG	Pg	06 33 23.5	-0.5
XNZR				i		06 33 33.9	
XNZR	Khunzakh	0.78	155	iPg	Pg	06 33 23.5	-0.5
XNZR				iSg	Sg	06 33 33.9	-0.3
ARKR	Arakani	0.84	140	iPG	Pg	06 33 24.5	-0.7
ARKR				eS	Sg	06 33 36.0	-0.1
ARKR				pmax	pmax		
	comp=Z,60nm,0.2s						
ARKR	Arakani	0.84	140	iPg	Pg	06 33 24.5	-0.7
	comp=Z,60nm,0.2s						
ARKR				eSg	Sg	06 33 36.0	-0.1
GNBR	Gunib	1.00	149	⇑iPG	Pg	06 33 27.8	-0.4
GNBR				i		06 33 42.3	
GNBR				pmax	pmax		
	comp=Z,126nm,0.6s						
GNBR				smax	smax		
	comp=N,304nm,0.4s						
GNBR	Gunib	1.00	149	iPg	Pg	06 33 27.8	-0.4
	comp=N,126nm,0.6s						
GNBR				iSg	Sb	06 33 42.3	+0.8
	comp=N,304nm,0.4s						
KMGR	Komgaron	1.04	260	ePG	Pn	06 33 30.5	+1.1
KMGR				eS	Sn	06 33 46.5	+2.5
KMGR	Komgaron	1.04	260	ePg	Pn	06 33 30.5	+1.1
KMGR				eSg	Sn	06 33 46.5	+2.5
VLKR	Vladikavkaz	1.18	261	ePG	Pn	06 33 32.4	+1.1
VLKR				eS	Sn	06 33 50.3	+2.9
VLKR	Vladikavkaz	1.18	261	ePg	Pn	06 33 32.4	+1.1
VLKR				eSg	Sn	06 33 50.3	+2.9
TRKR	Terskaya	1.21	294	ePG	Pg	06 33 32.7	+0.5
TRKR				eS	Sn	06 33 51.0	+2.9
TRKR	Terskaya	1.21	294	ePg	Pg	06 33 32.7	+0.5
TRKR				eSg	Sn	06 33 51.0	+2.9
BTKR	Batakoyurt	1.26	276	ePG	Pg	06 33 33.8	+0.6
BTKR				eS	Sn	06 33 53.2	+3.8
BTKR	Batakoyurt	1.26	276	ePg	Pg	06 33 33.8	+0.6
BTKR				eSg	Sn	06 33 53.2	+3.8
KMKR	Kumukh	1.28	151	⇓iPG	Pn	06 33 33.0	+0.2
KMKR				eS	Sn	06 33 51.0	+1.0
KMKR				pmax	pmax		
	comp=Z,117nm,0.2s						
KMKR	Kumukh	1.28	151	iPg	Pn	06 33 33.0	+0.2
	comp=Z,117nm,0.2s						
KMKR				eSg	Sn	06 33 51.0	+1.0
SGKR	Sergokala	1.29	127	PG	Pn	06 33 33.0	+0.1
SGKR				eS	Sb	06 33 51.0	+1.1
SGKR	Sergokala	1.29	127	Pg	Pn	06 33 33.0	+0.1
SGKR				eSg	Sb	06 33 51.0	+1.1
ARNR	Ardon	1.45	268	ePG	Pn	06 33 35.4	+0.4
ARNR				eS	Sg	06 33 57.2	+1.7
ARNR	Ardon	1.45	268	ePg	Pn	06 33 35.4	+0.4
ARNR				eSg	Sg	06 33 57.2	+1.7
URKR	Urkarakh	1.48	136	⇓ePG	Pn	06 33 36.4	+0.8
URKR				e		06 33 56.6	
URKR	Urkarakh	1.48	136	ePg	Pn	06 33 36.4	+0.8
URKR				eSg	Sb	06 33 56.6	+1.2
PRTR	Priterechnaya	1.53	290	⇑iPG	Pn	06 33 36.1	0.0
PRTR				eS	Sg	06 33 59.3	+1.3
PRTR	Priterechnaya	1.53	290	iPg	Pn	06 33 36.1	0.0
PRTR				eSg	Sg	06 33 59.3	+1.3
GUDG	Gudauri	1.53	240	P	Pn	06 33 36.8	+0.5
GUDG				S	Sb	06 33 57.0	+0.2
GUDG	Gudauri	1.53	240	P	Pn	06 33 36.8	+0.5
GUDG				S	Sb	06 33 57.0	+0.2
STDR	Stavd-Durt	1.61	275	ePN	Pg	06 33 39.2	-0.6
STDR				eS	Sg	06 34 03.5	+2.8
STDR	Stavd-Durt	1.61	275	ePn	Pg	06 33 39.2	-0.6
STDR				eSg	Sg	06 34 03.5	+2.8
KORR	Kora	1.61	265	ePN	Pn	06 33 36.9	-0.4
KORR				eS	Sg	06 34 00.7	-0.1
KORR	Kora	1.61	265	ePn	Pn	06 33 36.9	-0.4
KORR				eSg	Sg	06 34 00.7	-0.1
DUS	Dusheti	1.63	225	P	Pb	06 33 39.3	+0.2
DUS				S	Sg	06 34 02.5	+1.1
DUS	Dusheti	1.63	225	ePN	Pb	06 33 39.3	+0.2
DUS				eS	Sg	06 34 02.5	+1.1
DUS	Dusheti	1.63	225	P	Pb	06 33 39.3	+0.2
DUS				S	Sg	06 34 02.5	+1.1
LSNR	Lesken	1.78	272	ePN	Pb	06 33 41.7	+0.2
LSNR				eS	Sg	06 34 06.6	+0.5
LSNR	Lesken	1.78	272	ePn	Pb	06 33 41.7	+0.2
LSNR				eSg	Sg	06 34 06.6	+0.5
ZEI	Tsey	1.79	256	ePN	Pb	06 33 41.3	-0.5
DDFL	Dedoflistskaro	1.80	183	P	Pg	06 33 44.1	+0.6
DDFL				S	Sg	06 34 09.1	+2.1
DDFL	Dedoflistskaro	1.80	183	P	Pg	06 33 44.1	+0.6
DDFL				S	Sg	06 34 09.1	+2.1
TBLG	Delisi	1.89	217	P	Pb	06 33 43.2	-0.2
TBLG				S	Sg	06 34 09.0	-0.6
TBLG	Delisi	1.89	217	ePN	Pb	06 33 43.2	-0.2
TBLG	Delisi	1.89	217	P	Pb	06 33 43.2	-0.2
TBLG				S	Sg	06 34 09.0	-0.6
DGRG	David-gareji	1.91	200	P	Pb	06 33 44.0	+0.2
DGRG				S	Sg	06 34 11.2	+0.8
DGRG	David-gareji	1.91	200	ePN	Pb	06 33 44.1	+0.2
DGRG				eS	Sg	06 34 11.2	+0.8
DGRG	David-gareji	1.91	200	P	Pb	06 33 44.0	+0.2
DGRG				S	Sg	06 34 11.2	+0.8
DRN	Derbent	1.95	128	PN	Pb	06 33 45.9	+1.5
DRN				eS	Sb	06 34 10.2	+1.4
DRN	Derbent	1.95	128	Pn	Pb	06 33 45.9	+1.5
DRN				eSg	Sb	06 34 10.2	+1.4
DIGR	Digorskoe uzhe	2.00	261	ePN	Pn	06 33 43.8	+1.1
DIGR				eS	Sb	06 34 10.4	+0.2
DIGR	Digorskoe uzhe	2.00	261	ePn	Pn	06 33 43.8	+1.1
DIGR				eSb	Sb	06 34 10.4	+0.2
AKT	Akhty	2.08	148	⇑ePN	Pb	06 33 46.7	+0.1
AKT				e		06 34 14.4	
AKT				pmax	pmax		
	comp=Z,44nm,0.5s						
AKT				smax	smax		
	comp=Z,44nm,0.5s						
AKT				smax	smax		
	comp=N,173nm,0.5s						
AKT	Akhty	2.08	148	ePn	Pb	06 33 46.7	+0.1
	comp=N,44nm,0.5s						
AKT				eSb	Sb	06 34 14.4	+2.0
	comp=N,173nm,0.5s						
KSMR	Kasumkent	2.15	139	PN	Pb	06 33 49.0	+1.2
KSMR				eS	Sg	06 34 17.5	-0.5
KSMR	Kasumkent	2.15	139	Pn	Pb	06 33 49.0	+1.2
KSMR				eSb	Sg	06 34 17.5	-0.5
ONI	Oni	2.17	253	P	Pn	06 33 45.9	+1.0
ONI				S	Sn	06 34 12.0	+0.2
ONI	Oni	2.17	253	ePN	Pn	06 33 45.9	+1.0
ONI				eS	Sn	06 34 12.0	+0.2
ONI	Oni	2.17	253	P	Pn	06 33 45.9	+1.0
ONI				S	Sn	06 34 12.0	+0.2
KBZ	Khabaz	2.50	282	Pn	Pn	06 33 48.5	-0.

ESDC	**Sonseca Array**	**37.35 282**	LR	LR	06 56 46.2	
	comp=Z,13nm,18.7s,baz=70,slow=38					
BORG	**Borgarnes**	**42.59 324**	*i* P	**P**	**06 41 02.2**	**-2.2**
TORD	**Torodi Ar. Bea**	**48.59 246**	P	**P**	**06 41 50.2**	**-2.3**
	comp=Z,0.3nm,0.8s,baz=24,slow=9.1,SNR=3.0					

CSEM ***16*** *06:42:40.6±0.3,37.°23N×42.°55E,h8km,ML2.6, Error ellipse: s-maj=8.5km s-min=4.6km az=49.0*
ISK ***16*** *06:42:40.8,37.°32N×42.°58E,h12km,ML2.6/4*
ISCJB ***16*** *06:42:41.2±1.4,37.°24N±0.°06×42.°49E±0.°05,h5km±7km, Error ellipse: s-maj=9.7km s-min=7.0km az=1.1*
DDA ***16*** *06:42:41.2,37.°22N×42.°45E,h7km,Ml2.5*
ISN ***16*** *06:42:41.0±0.3,37.°11N×42.°61E,h0km,ML2.5*
ISC 16 06:42:41.0±1.9,**37.°25N**±0.°08×**42.°53E**±0.°04,**h6**km±10km, **n19**,σ0$90/33,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRT	**Sirnak**	**0.26**	**343**	PG	**Pg**	**06 42 45.9**	**-0.2**
SIRT				SG	**Sg**	**06 42 49.4**	**-0.2**
SIRT	**Sirnak**	**0.26**	**343**	*e*Pg	**Pg**	**06 42 45.9**	**-0.2**
SIRT				*e*Sg	**Sg**	**06 42 49.4**	**-0.2**
SIRN	**S¨–rnak**	**0.26**	**339**	*i* P	**Pg**	**06 42 46.0**	**-0.2**
SIRN				*i* S	**Sg**	**06 42 50.3**	**+0.6**
SIRN	**S¨–rnak**	**0.26**	**339**	P	**Pg**	**06 42 46.0**	**-0.2**
SIRN				S	**Sg**	**06 42 50.3**	**+0.6**
SRTM	**Siirt_Merkez**	**0.88**	**327**	*i* P	**Pb**	**06 42 59.1**	**+0.3**
SRTM				*i* S	**Sb**	**06 43 12.7**	**+1.8**
SRTM	**Siirt_Merkez**	**0.88**	**327**	P	**Pb**	**06 42 59.1**	**+0.3**
SRTM				S	**Sb**	**06 43 12.7**	**+1.8**
HAKT	**HAKKARI**	**0.98**	**72**	*i* P	**Pn**	**06 43 01.0**	**-0.6**
HAKT				*i* S	**Sn**	**06 43 17.4**	**+1.4**
HAKT	**HAKKARI**	**0.98**	**72**	P	**Pn**	**06 43 01.0**	**-0.6**
BTMN	**Batman**	**1.19**	**303**	*i* P	**Pb**	**06 43 04.0**	**0.0**
BTMN				*i* S	**Sb**	**06 43 20.9**	**+1.2**
BTMN	**Batman**	**1.19**	**303**	P	**Pb**	**06 43 04.0**	**0.0**
BTMN				S	**Sb**	**06 43 20.9**	**+1.2**
GURO	**Guroymak-BITLI**	**1.35**	**343**	PN	**Pn**	**06 43 05.6**	**-1.0**
GURO				SN	**Sb**	**06 43 23.4**	**-1.2**
GURO	**Guroymak-BITLI**	**1.35**	**343**	*e*Pn	**Pn**	**06 43 05.6**	**-1.0**
GURO				*e*Sn	**Sb**	**06 43 23.4**	**-1.2**
SVAN	**Silvan-Diyarba**	**1.39**	**311**	PN	**Pn**	**06 43 06.5**	**-0.5**
SVAN				SN	**Sn**	**06 43 25.3**	**-0.4**
SVAN	**Silvan-Diyarba**	**1.39**	**311**	*e*Pn	**Pn**	**06 43 06.5**	**-0.5**
SVAN				*e*Sn	**Sn**	**06 43 25.3**	**-0.4**
MARD	**Mardin**	**1.40**	**273**	*i* P	**Pn**	**06 43 05.4**	**-1.8**
MARD				*i* S	**Sn**	**06 43 25.1**	**-1.0**
MAZI	**Mazidag**	**1.67**	**278**	PN	**Pn**	**06 43 10.9**	**-0.1**
MAZI	**Mazidag**	**1.67**	**278**	*e*Pn	**Pn**	**06 43 10.9**	**-0.1**
SVRC	**Sivrice-ELAZID**	**2.79**	**295**	PN	**Pn**	**06 43 26.8**	**+0.4**
SVRC	**Sivrice-ELAZID**	**2.79**	**295**	*e*Pn	**Pn**	**06 43 26.8**	**+0.4**

NIED ***16*** *06:51:00,39.°10N×140.°50E,h135km,Mw3.8 Best double couple: M0=4.74000×10^14 NP1:φ0=310.00000°, δ31.00000°,λ=119.00000°. NP2:φ0=163.00000°, δ64.00000°,λ=-74.00000°.*
ISCJB ***16*** *06:51:18.3±0.3,39.°09N±0.°05×140.°52E±0.°08, h149km±3km,mb3.5/11,Error ellipse: s-maj=11.4km s-min=5.6km az=33.0*
IDC ***16*** *06:51:18.1±1.4,38.°99N×140.°47E,h136km±14km, mb3.3/11,mb1 3.5/14,mb1mx3.3/70,mbtmp3.8/14,Error ellipse: s-maj=21.2km s-min=12.4km az=107.0*
JMA ***16*** *06:51:19.6±0.1,39.°08N×140.°49E,h145km±1km,M3.6*
ISC 16 06:51:19.3±0.7,**39.°04N**±0.°05×**140.°50E**±0.°06,**h146**km±5km, **n35**,σ1$37/43,**mb3.6**/11,**Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYK	**Kaneyama**	**0.17**	**222**	P	**Pn**	**06 51 39.2**	**+0.2**
JYK				S	**Sn**	**06 51 53.8**	**-0.1**
JRG	**Rokugo**	**0.37**	**16**	P	**Pn**	**06 51 39.9**	**+0.4**
JRG				S	**Sn**	**06 51 55.4**	**+0.4**
JMK	**Ichinoseki**	**0.57**	**99**	P	**Pn**	**06 51 40.8**	**+0.4**
JMK				S	**Sn**	**06 51 56.7**	**+0.2**
JOU	**Okura**	**0.69**	**169**	P	**Pn**	**06 51 41.8**	**+0.5**
JOU				S	**Sn**	**06 51 59.0**	**+1.0**
JOM	**Ohasama**	**0.75**	**55**	P	**Pn**	**06 51 42.1**	**+0.5**
JOM				S	**Sn**	**06 51 58.8**	**+0.1**
JYA	**Atsumi**	**0.76**	**234**	P	**Pn**	**06 51 42.1**	**+0.4**
JYA				S	**Sn**	**06 51 58.7**	**-0.1**
JIO	**Ouri**	**0.89**	**131**	P	**Pn**	**06 51 42.6**	**-0.1**
JIO				*e*S	**Sn**	**06 51 59.8**	**-0.6**
JYS	**Shiratake**	**0.89**	**203**	P	**Pn**	**06 51 43.5**	**+0.8**
JAW	**Awa shima**	**1.14**	**240**	P	**Pn**	**06 51 45.2**	**+0.3**
JAW				S	**Sn**	**06 52 04.5**	**+0.1**
JFT	**Otama**	**1.53**	**185**	P	**Pn**	**06 51 49.6**	**+0.7**
JFT				S	**Sn**	**06 52 12.5**	**+1.1**
JNS	**Sasagawa**	**1.54**	**218**	P	**Pn**	**06 51 49.6**	**+0.7**
JANG	**Nango**	**1.54**	**30**	P	**Pn**	**06 51 49.1**	**+0.2**
JANG				S	**Sn**	**06 52 10.9**	**-0.8**
JSD	**Sado**	**2.02**	**241**	P	**Pn**	**06 51 54.6**	**+0.2**
MAT	**Matsushiro**	**3.09**	**217**	P	**Pn**	**06 52 08.2**	**+0.6**
MAT				S	**Sn**	**06 52 47.5**	**+2.5**
MJAR	**Matsushiro Arr**	**3.09**	**217**	P	**Pn**	**06 52 08.3**	**+0.6**
	8.6nm,0.3s,baz=22,slow=13,SNR=42						
MJAR				S	**Sn**	**06 52 41.7**	**-3.2**
	baz=45,slow=26,SNR=2.0						
ASAJ	**Asahikawa**	**5.31**	**17**	P	**Pn**	**06 52 34.9**	**-1.7**
	6.3nm,0.3s,baz=228,slow=11,SNR=26						
ASAJ				S	**Sn**	**06 53 33.3**	**-3.7**
	1.0nm,0.3s,baz=60,slow=20,SNR=3.5						
JHJ	**Hachijo jima 2**	**5.94**	**186**	P	**Pn**	**06 52 43.0**	**-2.2**
	19nm,0.3s,baz=325,slow=20,SNR=13						
JHJ				S	**Sn**	**06 53 47.3**	**-5.0**
	12nm,0.3s,baz=60,slow=20,SNR=4.7						
H11N2	**WAKE ISLAND Hy 29.81**	**123**		T	T	07 28 12.2	
	baz=317,slow=75,SNR=6.8						
H11N1	**WAKE ISLAND Hy 29.82**	**123**		T	T	07 28 11.3	
	baz=317,slow=75,SNR=10						
H11N3	**WAKE ISLAND Hy 29.83**	**123**		T	T	07 28 11.9	
	baz=317,slow=75,SNR=9.2						
H11S1	**WAKE ISLAND Hy 30.57**	**125**		T	T	07 29 02.2	
	baz=318,slow=76,SNR=4.7						
H11S3	**WAKE ISLAND Hy 30.57**	**125**		T	T	07 29 09.8	
	baz=318,slow=76,SNR=8.3						
H11S2	**WAKE ISLAND Hy 30.59**	**125**		T	T	07 29 05.6	
	baz=318,slow=76,SNR=7.3						
MKAR	**Makanchi Array**	**42.47**	**300**	P	**P**	**06 59 00.2**	**+0.4**
	0.3nm,0.7s,baz=72,slow=9.5,SNR=3.0						
KURBB	**Kurchatov Arra**	**44.22**	**306**	P	**P**	**06 59 13.3**	**-0.3**
	0.9nm,0.4s,baz=81,slow=8.0,SNR=8.5						
ILAR	**Eielson Array**	**48.20**	**33**	P	**P**	**06 59 44.9**	**+0.3**
	0.5nm,0.7s,baz=261,slow=5.2,SNR=7.6						
WRA	**Warramunga Arr**	**58.96**	**187**	P	**P**	**07 01 03.0**	**-0.3**
	0.7nm,0.6s,baz=6.3,slow=6.8,SNR=15						
RES	**Resolute Bay**	**60.84**	**15**	P	**P**	**07 01 15.2**	**-0.3**
	1.4nm,0.8s,baz=324,slow=12,SNR=5.0						
ASAR	**Alice Springs**	**62.69**	**187**	P	**P**	**07 01 27.3**	**-1.2**
	0.5nm,0.6s,baz=7.8,slow=7.5,SNR=7.1						
FINES	**FINESS Array B**	**66.70**	**332**	P	**P**	**07 01 54.2**	**+0.1**
	0.4nm,0.6s,baz=43,slow=6.3,SNR=2.8						
HFS	**Hagfors**	**71.96**	**335**	P	**P**	**07 02 26.6**	**+0.1**
	0.5nm,0.3s,baz=67,slow=11,SNR=4.7						
NVAR	**Mina Array Bea**	**74.36**	**53**	P	**P**	**07 02 42.0**	**+0.8**
	0.3nm,0.5s,baz=287,slow=6.2,SNR=2.5						
PDAR	**Pinedale Array**	**76.77**	**45**	P	**P**	**07 02 55.4**	**+0.5**
	0.3nm,0.6s,baz=252,slow=3.0,SNR=4.4						
TXAR	**Lajitas Array**	**89.46**	**52**	P	**P**	**07 04 00.8**	**+0.7**
	0.5nm,0.9s,baz=327,slow=1.5,SNR=3.2						
LPAZ	**La Paz**	**146.23**	**56**	PKPbc	**PKPbc**	**07 10 43.4**	**-0.4**
	0.4nm,0.5s,baz=326,slow=7.3,SNR=4.7						

IDC ***16*** *06:57:24.8±0.9,49.°78N×126.°81W,h0km,mb3.6/2, mb1 3.8/9,mb1mx3.5/68,mbtmp3.5/9,ML3.1/7,MS3.0/5, Ms1 3.0/5,ms1mx2.6/64,Error ellipse: s-maj=18.7km s-min=6.1km az=61.0*
PGC ***16*** *06:57:25.3±0.9,49.°62N×127.°10W,h40km,ML3.4/43, ML3.4/43*
PGC 72km west of Gold R., Bc Vancouver Island, Canada Region Felt at Tahsis.
NEIC ***16*** *06:57:25.3±0.0,49.°62N×127.°10W,h40km,mb3.8/13, ML3.4(OTT),After OTT.*
NEIC Felt at Tahsis.
ISC 16 06:57:24.8±1.1,**49.°63N**±0.°03×**127.°10W**±0.°03,**h19**km±8km, **n160**,σ1$76/233,**mb4.0**/7,**Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDB	**Eliza Dome**	**0.25**	**356**	P	**Pb**	**06 57 32.1**	**+1.6**
EDB				S	**Sb**	**06 57 35.9**	**+1.7**
EDB	**Eliza Dome**	**0.25**	**356**	*e*Pg	**Pb**	**06 57 32.1**	**+1.6**
EDB				*e*Sg	**Sb**	**06 57 35.9**	**+1.7**
ETB	**Estevan Point**	**0.44**	**125**	P	**Pn**	**06 57 35.4**	**-0.8**
ETB	**Estevan Point**	**0.44**	**125**	*e*Pg	**Pn**	**06 57 35.4**	**-0.8**
WOSB	**Wess**	**0.63**	**32**	P	**Pb**	**06 57 37.8**	**+0.6**
WOSB				S	**Sb**	**06 57 46.4**	**+0.7**
BPBC	**Brooks Peninsu**	**0.69**	**321**	P	**Pb**	**06 57 38.3**	**+0.1**
BPBC				S	**Sg**	**06 57 46.5**	**-1.0**
GDR	**Gold River**	**0.71**	**77**	P	**Pb**	**06 57 38.7**	**+0.2**
GDR				S	**Sg**	**06 57 47.6**	**-0.5**
GDR	**Gold River**	**0.71**	**77**	*e*Pg	**Pb**	**06 57 38.7**	**+0.2**
GDR				*e*Sn	**Sg**	**06 57 47.6**	**-0.5**
MAYB	**Maynard**	**0.78**	**356**	P	**Pg**	**06 57 39.8**	**-0.2**
TOFB	**Tofino**	**0.91**	**121**	P	**Pb**	**06 57 41.7**	**-0.2**
TOFB				S	**Sb**	**06 57 52.2**	**-1.4**
TLCB	**Telegraph Cove**	**0.94**	**10**	P	**Pb**	**06 57 42.3**	**-0.1**
TLCB				S	**Sb**	**06 57 53.8**	**-0.6**
SPLB	**Strathcona Par**	**0.97**	**74**	P	**Pb**	**06 57 42.9**	**-0.2**
SPLB				S	**Sb**	**06 57 55.0**	**-0.5**
NCRB	**Newcastle Ridg**	**1.03**	**40**	P	**Pb**	**06 57 43.8**	**-0.3**
NCRB				S	**Sb**	**06 57 56.9**	**-0.3**
BTB	**Buttle Lake**	**1.04**	**98**	P	**Pb**	**06 57 43.8**	**-0.5**
PHC	**Port Hardy**	**1.10**	**349**	P	**Pb**	**06 57 44.6**	**-0.7**
PHC				S	**Sb**	**06 57 57.7**	**-1.5**
PHC	**Port Hardy**	**1.10**	**349**	*e*Pn	**Pb**	**06 57 44.6**	**-0.7**
PHC				*e*Sn	**Sb**	**06 57 57.7**	**-1.5**
MWAB	**Mount Washingt**	**1.17**	**84**	P	**Pn**	**06 57 44.8**	**-1.5**
MWAB				S	**Sb**	**06 57 58.9**	**-2.4**
CBB	**Campbell River**	**1.19**	**69**	P	**Pn**	**06 57 46.1**	**-0.4**
CBB				S	**Sb**	**06 58 00.0**	**-1.8**
HOLB	**Holberg**	**1.21**	**327**	P	**Pn**	**06 57 45.4**	**-1.4**
B012	**Ucluelet**	**1.24**	**124**	P	**Pn**	**06 57 46.2**	**-0.9**
B012				Pg	**Pg**	**06 57 50.3**	**+1.6**
B012				S	**Sb**	**06 58 00.4**	**-2.7**
OZB	**Mount Ozzard**	**1.24**	**122**	P	**Pn**	**06 57 46.3**	**-0.9**
OZB				Pg	**Pg**	**06 57 50.0**	**+1.2**
OZB				S	**Sb**	**06 58 00.3**	**-3.0**
OZB	**Mount Ozzard**	**1.24**	**122**	*e*Pn	**Pn**	**06 57 46.3**	**-0.9**
OZB				*e*Pg	**Pg**	**06 57 50.0**	**+1.2**
OZB				*e*Sn	**Sb**	**06 58 00.3**	**-3.0**
B928	**Bamfield**	**1.51**	**121**	P	**Pn**	**06 57 50.0**	**-0.8**
B928				Pg	**Pg**	**06 57 54.1**	**+0.2**
B928	**Bamfield**	**1.51**	**121**	*e*Pn	**Pn**	**06 57 50.0**	**-0.8**
B928				*e*Pg	**Pg**	**06 57 54.1**	**+0.2**
ALB	**Alberni**	**1.52**	**103**	P	**Pn**	**06 57 50.5**	**-0.4**
ALB				S	**Sn**	**06 58 08.3**	**-1.9**
B927	**Port Alberni**	**1.55**	**104**	P	**Pn**	**06 57 50.8**	**-0.5**
B927				S	**Sn**	**06 58 09.2**	**-1.6**
B927	**Port Alberni**	**1.55**	**104**	*e*Pn	**Pn**	**06 57 50.8**	**-0.5**
B927				*e*Sn	**Sn**	**06 58 09.2**	**-1.6**
MGB	**Mount Grey**	**1.69**	**111**	P	**Pn**	**06 57 52.6**	**-0.9**
MGB				Pg	**Pg**	**06 57 56.4**	**-1.0**
TXB	**Texada**	**1.73**	**87**	P	**Pn**	**06 57 53.5**	**-0.4**
TXB				Pg	**Pg**	**06 57 57.1**	**-0.9**
TXB				S	**Sn**	**06 58 14.6**	**-0.8**
GHNB	**Nanoose**	**1.89**	**99**	P	**Pn**	**06 57 55.5**	**-0.5**
GHNB				Pg	**Pb**	**06 57 59.3**	**+0.6**
GHNB				S	**Sn**	**06 58 17.9**	**-1.5**
YOUB	**Youbou, Lake C**	**1.99**	**110**	P	**Pn**	**06 57 57.1**	**-0.5**
YOUB				Pg	**Pb**	**06 58 00.7**	**+0.2**
NLLB	**Nanaimo Lost L**	**2.07**	**100**	P	**Pn**	**06 57 58.0**	**-0.5**
NLLB				Pg	**Pb**	**06 58 02.0**	**+0.3**
NLLB				S	**Sn**	**06 58 22.6**	**-1.1**
SHB	**Sechelt**	**2.09**	**90**	P	**Pn**	**06 57 58.7**	**-0.3**
SHB				Pg	**Pb**	**06 58 02.6**	**+0.3**
SHB				S	**Sn**	**06 58 23.4**	**-1.2**
B926	**Mesachie Lake**	**2.10**	**111**	P	**Pn**	**06 57 59.1**	**+0.1**
B926				S	**Sn**	**06 58 22.9**	**-1.7**
BPCB	**Bare Point**	**2.33**	**106**	P	**Pn**	**06 58 03.2**	**+1.1**
BPCB				S	**Sn**	**06 58 29.1**	**-1.1**
LZB	**Mount Lazard**	**2.38**	**114**	P	**Pn**	**06 58 02.8**	**0.0**
LZB				S	**Sn**	**06 58 28.9**	**-2.6**
GOBB	**Galiano Island**	**2.44**	**105**	P	**Pn**	**06 58 04.2**	**+0.5**
GOBB				Pg	**Pg**	**06 58 11.6**	**-0.1**
OFR	**Olym-F Res Ctr**	**2.46**	**133**	P	**Pn**	**06 58 04.3**	**+0.4**
OFR				S	**Sn**	**06 58 31.7**	**-1.8**
OFR	**Olym-F Res Ctr**	**2.46**	**133**	*e*Pn	**Pn**	**06 58 04.3**	**+0.4**
OFR				*e*Sn	**Sn**	**06 58 31.7**	**-1.8**
BIB	**Bowen Island**	**2.48**	**94**	P	**Pn**	**06 58 03.5**	**-0.6**
WPB	**Watts Point**	**2.52**	**88**	P	**Pn**	**06 58 04.9**	**+0.1**
WPB				Pg	**Pb**	**06 58 10.4**	**+0.9**
B009	**North Saanich**	**2.58**	**111**	P	**Pn**	**06 58 05.8**	**+0.2**
B009				Pg	**Pg**	**06 58 13.8**	**-0.6**
B009				S	**Sn**	**06 58 34.4**	**-2.1**
B010	**North Saanich**	**2.58**	**111**	P	**Pn**	**06 58 06.2**	**+0.6**
B010				Pg	**Pg**	**06 58 12.8**	**-1.6**
B010				S	**Sn**	**06 58 34.2**	**-2.2**
PGC	**Sidney**	**2.58**	**111**	P	**Pn**	**06 58 06.2**	**+0.6**
PGC				S	**Sn**	**06 58 34.2**	**-2.3**
PGC	**Sidney**	**2.58**	**111**	*e*Pn	**Pn**	**06 58 05.7**	**+0.1**
PGC				*e*Pg	**Pb**	**06 58 07.9**	**-2.6**
PGC				*e*Sn	**Sn**	**06 58 34.2**	**-2.3**
PA01	**PA01 North**	**2.59**	**111**	P	**Pn**	**06 58 07.6**	**+2.0**
PA01				S	**Sn**	**06 58 34.5**	**-2.0**
PA02	**PA02 Ocean**	**2.59**	**111**	P	**Pn**	**06 58 06.1**	**+0.5**
PA02				S	**Sn**	**06 58 34.2**	**-2.3**
B011	**North Saanich**	**2.59**	**111**	P	**Pn**	**06 58 05.3**	**-0.3**
B011				Pg	**Pg**	**06 58 12.9**	**-1.5**
B011				S	**Sn**	**06 58 34.3**	**-2.3**
PA12	**PA12 Sannich**	**2.59**	**111**	P	**Pn**	**06 58 05.4**	**-0.3**
PA12				S	**Sn**	**06 58 34.5**	**-2.0**
PA03	**PA03 Flamable**	**2.59**	**111**	P	**Pn**	**06 58 07.4**	**+1.8**
PA03				S	**Sn**	**06 58 34.6**	**-2.0**
PA04	**PA04 Cage**	**2.59**	**111**	P	**Pn**	**06 58 06.0**	**+0.4**
PA04				S	**Sn**	**06 58 34.4**	**-2.2**
PA05	**PA05 Willingdo**	**2.59**	**111**	P	**Pn**	**06 58 08.0**	**+2.4**
PA05				S	**Sn**	**06 58 34.8**	**-1.8**
BBB	**Bella Bella**	**2.64**	**346**	Pn	**Pn**	**06 58 05.7**	**-0.7**
	0.6nm,0.3s,baz=225,slow=6.3,SNR=14						
BBB				Pg	**Pb**	**06 58 10.6**	**-0.9**
	9.6nm,0.3s,baz=185,slow=9.5,SNR=36						
BBB				Sn	**Sn**	**06 58 35.5**	**-2.4**
	19nm,0.3s,baz=59,slow=18,SNR=9.2						
BBB				Lg	Lg	06 58 46.2	
	48nm,0.3s,baz=281,slow=23,SNR=9.4						
BBB	**Bella Bella**	**2.64**	**346**	P	**Pn**	**06 58 05.7**	**-0.7**
SNB	**Saturna Island**	**2.71**	**107**	P	**Pn**	**06 58 08.6**	**+1.2**
SNB				Pg	**Pg**	**06 58 15.5**	**-1.3**
SNB				S	**Sn**	**06 58 38.8**	**-0.9**
SNB	**Saturna Island**	**2.71**	**107**	*e*Pg	**Pg**	**06 58 15.5**	**-1.3**
SNB				*e*Sn	**Sn**	**06 58 38.8**	**-0.9**
WSLR	**Whistler**	**2.75**	**78**	P	**Pn**	**06 58 08.8**	**+0.9**
VGZ	**Gonzales**	**2.76**	**115**	P	**Pn**	**06 58 08.1**	**+0.1**
VGZ				S	**Sn**	**06 58 38.5**	**-2.3**
MCW	**Mount Constitu**	**2.96**	**107**	P	**Pn**	**06 58 11.5**	**+0.7**
MCW	**Mount Constitu**	**2.96**	**107**	*e*Pn	**Pn**	**06 58 11.5**	**+0.7**
A04D	**Lummi Island**	**3.02**	**106**	P	**Pn**	**06 58 12.8**	**+1.2**
	baz=289,SNR=18						
A04D				S	**Sn**	**06 58 46.5**	**-0.7**
	baz=289						
NLWA	**Neilton Lookou**	**3.10**	**135**	*e*Pn	**Pn**	**06 58 13.7**	**+0.9**
BLN	**Blyn Mountain**	**3.17**	**119**	P	**Pn**	**06 58 14.2**	**+0.5**
BLN	**Blyn Mountain**	**3.17**	**119**	*e*Pn	**Pn**	**06 58 14.2**	**+0.5**
VDB	**Vedder Mountai**	**3.32**	**99**	P	**Pn**	**06 58 16.6**	**+0.8**
VDB				Pg	**Pb**	**06 58 25.2**	**+2.1**
HDW	**Hoodsport**	**3.33**	**125**	P	**Pn**	**06 58 16.7**	**+0.7**
HDW	**Hoodsport**	**3.33**	**125**	*e*Pn	**Pn**	**06 58 16.7**	**+0.7**
WISH	**Wishkah**	**3.35**	**137**	P	**Pn**	**06 58 16.6**	**+0.5**
WISH				S	**Sn**	**06 58 53.3**	**-2.1**
LLLB	**Lillooet**	**3.50**	**72**	P	**Pn**	**06 58 18.5**	**+0.3**
LLLB				Pg	**Pb**	**06 58 27.4**	**+1.3**
LLLB	**Lillooet**	**3.50**	**72**	*e*Pn	**Pn**	**06 58 18.5**	**+0.3**
LLLB				*e*Pg	**Pb**	**06 58 27.4**	**+1.3**
MBW	**Mount Baker**	**3.51**	**102**	P	**Pn**	**06 58 19.0**	**+0.5**
MBW	**Mount Baker**	**3.51**	**102**	*e*Pn	**Pn**	**06 58 19.0**	**+0.5**
B017	**Montesano**	**3.54**	**137**	*e*Pn	**Pn**	**06 58 20.2**	**+1.5**
B05A	**Bryant**	**3.57**	**111**	P	**Pn**	**06 58 20.3**	**+1.2**
	baz=294						
B05A				S	**Sn**	**06 58 58.7**	**-2.0**
	baz=294						
JCW	**Jim Creek**	**3.70**	**111**	P	**Pn**	**06 58 21.7**	**+0.8**
JCW	**Jim Creek**	**3.70**	**111**	*e*Pn	**Pn**	**06 58 21.7**	**+0.8**
HOPB	**Hope**	**3.71**	**92**	P	**Pn**	**06 58 22.4**	**+1.4**
UBRB	**Upper Baezaeko**	**3.78**	**29**	P	**Pn**	**06 58 23.0**	**+0.9**
UBRB				S	**Sb**	**06 59 20.0**	**+3.7**
B06A	**Marblemount**	**3.85**	**105**	P	**Pn**	**06 58 24.8**	**+1.8**
B06A	**Marblemount**	**3.85**	**105**	*e*Pn	**Pn**	**06 58 24.6**	**+1.5**
B06A				*e*Pg	**Pb**	**06 58 32.0**	**-0.1**
E03A	**Lebam**	**3.89**	**141**	P	**Pn**	**06 58 23.6**	**+0.1**
E03A				S	**Sn**	**06 59 04.9**	**-3.7**
E03A	**Lebam**	**3.89**	**141**	*e*Pn	**Pn**	**06 58 25.3**	**+1.8**
E03A				*e*Sn	**Sn**	**06 59 06.9**	**-1.7**
ELW	**Echo Lake**	**4.07**	**120**	S	**Sn**	**06 59 10.8**	**-2.4**
ELW	**Echo Lake**	**4.07**	**120**	*e*Sn	**Sn**	**06 59 10.8**	**-2.4**
BNB	**Barry Inlet**	**4.16**	**317**	P	**Pn**	**06 58 26.3**	**-1.0**
BNB				S	**Sn**	**06 59 12.1**	**-3.4**
BNB	**Barry Inlet**	**4.16**	**317**	*e*Pn	**Pn**	**06 58 26.3**	**-1.0**
BNB				*e*Sn	**Sn**	**06 59 12.1**	**-3.4**
D05A	**Enumclaw**	**4.19**	**124**	*e*Pn	**Pn**	**06 58 31.2**	**+3.5**
GPW	**Glacier Peak**	**4.21**	**109**	S	**Sn**	**06 59 15.2**	**-1.8**
GPW	**Glacier Peak**	**4.21**	**109**	*e*Sn	**Sn**	**06 59 15.2**	**-1.8**
F03A	**Seaside**	**4.40**	**146**	*e*Pn	**Pn**	**06 58 33.0**	**+2.4**
F03A				*e*Sn	**Sn**	**06 59 22.7**	**+1.4**
C06D	**Leavenworth**	**4.44**	**110**	S	**Sn**	**06 59 21.4**	**-0.9**
	baz=295						
F04D	**Rainier, OR**	**4.49**	**141**	P	**Pn**	**06 58 33.9**	**+2.1**
	baz=324						
F04D				S	**Sn**	**06 59 24.1**	**+0.6**
	baz=324						
FMW	**Mount Fremont**	**4.51**	**125**	P	**Pn**	**06 58 33.4**	**+1.1**
FMW				S	**Sn**	**06 59 22.6**	**-1.8**
FMW	**Mount Fremont**	**4.51**	**125**	*e*Pn	**Pn**	**06 58 33.4**	**+1.1**
FMW				*e*Sn	**Sn**	**06 59 22.6**	**-1.8**
LON	**Longmire**	**4.56**	**127**	P	**Pn**	**06 58 33.9**	**+1.1**
LON				S	**Sn**	**06 59 22.6**	**-2.7**
LON	**Longmire**	**4.56**	**127**	*e*Pn	**Pn**	**06 58 35.1**	**+2.3**
LON				*e*Sn	**Sn**	**06 59 24.7**	**-0.6**
PANH	**Panhandle Gap,**	**4.58**	**125**	*e*Sn	**Sn**	**06 59 25.2**	**-0.7**
TDL	**Tradedollar La**	**4.63**	**133**	*e*Pn	**Pn**	**06 58 36.8**	**+2.9**
B201	**Coldwater, Mou**	**4.65**	**134**	*e*Pn	**Pn**	**06 58 36.5**	**+2.5**
FL2	**Flat Top 2**	**4.69**	**135**	*e*Pn	**Pn**	**06 58 37.0**	**+2.4**
B202	**Windy Ridge, M**	**4.75**	**134**	*e*Pn	**Pn**	**06 58 38.5**	**+3.0**
LVP	**Lakeview Peak**	**4.76**	**137**	*e*Pn	**Pn**	**06 58 38.1**	**+2.5**
ESD	**East Dome**	**4.78**	**134**	*e*Pn	**Pn**	**06 58 39.5**	**+3.6**
PNT	**Penticton**	**4.89**	**91**	P	**Pn**	**06 58 38.4**	**+1.1**
PNT	**Penticton**	**4.89**	**91**	*e*Pn	**Pn**	**06 58 38.4**	**+1.1**
LTY	**Liberty**	**4.89**	**117**	P	**Pn**	**06 58 38.9**	**+1.6**
LTY				S	**Sn**	**06 59 31.2**	**-2.3**
LTY	**Liberty**	**4.89**	**117**	*e*Pn	**Pn**	**06 58 38.8**	**+1.4**
LTY				*e*Sn	**Sn**	**06 59 32.0**	**-1.4**
DIB	**Dawson Inlet,**	**4.91**	**319**	S	**Sn**	**06 59 28.9**	**-5.0**
DIB	**Dawson Inlet,**	**4.91**	**319**	*e*Pn	**Pn**	**06 58 37.5**	**0.0**
DIB				*e*Sn	**Sn**	**06 59 29.8**	**-4.1**
H02S1	**DAWSON INLET T**	**4.91**	**319**	Pn	**Pn**	**06 58 37.2**	**-0.4**
H02S1				Sn	**Sn**	**06 59 28.9**	**-5.0**
TBM	**Table Mountain**	**4.98**	**117**	*e*Sn	**Sn**	**06 59 33.7**	**-2.0**
RUBB	**Prince Rupert**	**5.09**	**339**	S	**Sn**	**06 59 35.9**	**-2.3**
G03D	**McMinnville, O**	**5.13**	**148**	P	**Pn**	**06 58 43.0**	**+2.4**
	baz=331,SNR=17						
G03D				S	**Sn**	**06 59 38.7**	**-0.5**
	baz=331

```
VANB                          SG      Sg      07 07 22.3 +2.6
VANB  Van          0.19 212   ePg     Pg      07 07 16.2 -0.5
TVAN  Van          0.24 201   i P     Pg      07 07 16.5 -1.2
TVAN                          i S     Sg      07 07 22.3 +1.0
TVAN  Van          0.24 201   P       Pg      07 07 16.5 -1.2
TVAN                          S       Sg      07 07 22.3 +1.0
CLDR  Caldiran     0.50  39   PG      Pg      07 07 20.9 -1.2
CLDR                          SG      Sb      07 07 29.1 -1.2
CLDR  Caldiran     0.50  39   i P     Pg      07 07 21.0 -1.2
CLDR                          i S     Sb      07 07 30.8 +0.5
CLDR  Caldiran     0.50  39   P       Pg      07 07 21.0 -1.2
CLDR                          eSg     Sb      07 07 29.1 -1.2
CLDR                          S       Sb      07 07 30.8 +0.5
GEVA  Gevas        0.57 219   eP      Pg      07 07 21.7 -1.8
GEVA                          eS      Sb      07 07 31.3 -1.0
GEVA                          IAML            07 07 33.3
      comp=Z,125nm,0.7s
GEVA  Gevas        0.57 219   i P     Pg      07 07 22.0 -1.6
GEVA                          i S     Sb      07 07 33.2 +0.9
GEVA  Gevas        0.57 219   P       Pg      07 07 22.0 -1.6
GEVA                          S       Sb      07 07 33.2 +0.9
ADCV  BITLIS_Adilcev 0.62 275 i P     Pg      07 07 23.9 -0.7
ADCV                          i S     Sb      07 07 34.9 +1.0
ADCV  BITLIS_Adilcev 0.62 275 P       Pg      07 07 23.9 -0.7
ADCV                          S       Sb      07 07 34.9 +1.0
TUTA  Tutak        0.85 320   eP      Pg      07 07 26.5 -2.3
GURO  Guroymak-BITLI 1.18 261 PN      Pg      07 07 32.3 -2.8
GURO                          SN      Sg      07 07 48.4 -2.1
GURO  Guroymak-BITLI 1.18 261 ePn     Pg      07 07 32.3 -2.8
GURO                          eSn     Sg      07 07 48.4 -2.1
IGDI  IGDIR        1.19  21   eP      Pg      07 07 33.6 -1.7
IGDI                          i Pg    Pn      07 07 35.9 +1.1
HAKT  HAKKARI      1.21 173   i P     Pg      07 07 33.8 -1.8
HAKT                          i S     Sn      07 07 54.1 +2.8
HAKT  HAKKARI      1.21 173   P       Pg      07 07 33.8 -1.8
EKAR  Karacoban    1.24 294   eP      Pg      07 07 35.1 -1.1
EKAR                          eS      Sn      07 07 52.7 +0.5
EKAR                          IAML            07 07 58.2
      comp=Z,25nm,0.4s
EATA  Eleskirt     1.36 325   eP      Pn      07 07 37.0 -0.3
EATA                          eS      Sn      07 07 57.8 +2.4
EATA                          IAML            07 07 59.9
      comp=Z,12nm,0.7s
EATA  Eleskirt     1.36 325   i P     Pg      07 07 38.2 -0.4
EATA                          i S     Sn      07 07 58.7 +3.3
EATA  Eleskirt     1.36 325   P       Pg      07 07 38.2 -0.4
EATA                          S       Sn      07 07 58.7 +3.3
SIRT  Sirnak       1.51 215   PN      Pn      07 07 39.4 +0.2
SIRT  Sirnak       1.51 215   ePn     Pn      07 07 39.4 +0.2
GNI   Garni        1.68  34   PN      Pn      07 07 41.4 -0.2
GNI   Garni        1.68  34   ePn     Pn      07 07 41.4 -0.2
HOMI  Horasan      1.79 316   eP      Pg      07 07 45.3 -1.5
BNGL  BINGOL       1.86 277   eP      Pg      07 07 47.1 -1.0
ERZM  Erzurum      2.03 305   eP      Pb      07 07 47.8 -1.4
ERZM                          eS      Sg      07 08 19.7 +2.1
```

IDC 16 07:27:09.7±1.2, 14°.18S×174°.88W, h0km, mb4.3/4, mb1 4.5/5, mb1mx3.9/52, mbtmp4.3/5, ML4.5/1, MS2.8/1, Ms1 2.8/1, ms1mx2.5/42, Error ellipse: s-maj=62.3km s-min=23.0km az=154.0, Samoa Islands region

```
Code  Station Name          Δ°   AZ°   Phase ID                Time     Res
                                       Op      ISC             h m s    ISC
AFI   Afiamalu             3.02  85   Pn      Pn              07 27 59.9 +1.0
      62nm,0.3s,baz=188,slow=1.5,SNR=94
AFI                                    Sn      Sn              07 28 26.3 -10
      32nm,0.3s,baz=16,slow=22,SNR=10
AFI                                    LR      LR              07 28 48.3
      comp=Z,150nm,18.7s,baz=200,slow=33
STKA  Stephens Creek       43.43 238    P       P               07 35 14.0 -0.6
      1.6nm,0.8s,baz=68,slow=5.4,SNR=3.5
WRA   Warramunga Arr       48.74 256    P       P               07 35 57.0 +0.3
      1.7nm,0.5s,baz=94,slow=7.3,SNR=47
ASAR  Alice Springs        49.14 251    P       P               07 36 00.1 +0.4
      20nm,0.6s,baz=87,slow=8.0,SNR=196
ILAR  Eielson Array        81.54  12    P       P               07 39 28.9 +0.1
      0.3nm,0.5s,baz=210,slow=5.6,SNR=8.5
GERES GERESS Array B 144.72 350         PKP     PKPab           07 46 45.8 -1.6
      0.2nm,0.4s,baz=352,slow=3.0,SNR=5.5
```

IDC 16 07:36:42.2±2.2, 2°.25N×128°.87E, h0km, mb3.3/4, mb1 3.4/4, mb1mx3.3/55, mbtmp3.3/4, Error ellipse: s-maj=161.5km s-min=23.5km az=69.0, Halmahera

```
Code  Station Name          Δ°   AZ°   Phase ID                Time     Res
                                       Op      ISC             h m s    ISC
WRA   Warramunga Arr       22.70 167    P       P               07 41 45.4 -0.4
      0.4nm,0.6s,baz=346,slow=11,SNR=10
ASAR  Alice Springs        26.23 170    P       P               07 42 19.2 +0.1
      0.2nm,0.3s,baz=348,slow=13,SNR=2.7
MKAR  Makanchi Array       59.98 325    P       P               07 46 51.9 +1.3
      0.2nm,0.5s,baz=124,slow=7.0,SNR=4.7
KURBB Kurchatov Arra       64.13 327    P       P               07 47 17.0 -1.4
      0.2nm,0.5s,baz=128,slow=6.0,SNR=2.5
```

NNC 16 07:49:33.5±1.6, 53°.68N×88°.24E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=12.2km s-min=8.9km az=86.0

IDC 16 07:49:35.8±2.6, 53°.61N×88°.09E, h0km, mb1 3.2/3, mb1mx2.9/66, mbtmp3.2/3, ML2.9/3, 5C-3D, Error ellipse: s-maj=22.8km s-min=15.5km az=66.0, Southwestern Siberia

```
Code  Station Name          Δ°   AZ°   Phase ID                Time     Res
                                       Op      ISC             h m s    ISC
I46RU ZALESOVO INFRA       1.97 281   i                       08 01 57.0
      baz=101,slow=339,SNR=4.5
ZAA0  Zalesovo Array       1.97 281   ⇑Pn     Pn              07 50 08.8 -1.7
      24nm,0.7s,baz=96,slow=14
ZAA0                                   ⇓Sn     Sn              07 50 36.5 +0.7
      64nm,0.8s,baz=96,slow=23
ZALV  Zalesovo Beam        1.97 281   Pn      Pn              07 50 09.0 -1.5
      3.1nm,0.3s,baz=102,slow=13,SNR=87
ZALV                                   Lg      Lg              07 50 37.2
      10.0nm,0.3s,baz=96,slow=23,SNR=27
KURK  Kurchatov            6.51 247   ⇑Pn     Pn              07 51 12.6 -0.2
      3.3nm,0.8s
KURK                                   ⇓Sn     Sn              07 52 25.3 -2.4
      1.9nm,0.6s
KURK                                   ⇑Lg     Lg              07 53 00.5
      9.4nm,0.8s
KURBB Kurchatov Arra       6.61 247   Pn      Pn              07 51 14.2 +0.1
      0.2nm,0.3s,baz=62,slow=14,SNR=14
KURBB                                  Sn      Sn              07 52 29.6 -0.5
      0.1nm,0.3s,baz=64,slow=26,SNR=4.6
KURBB                                  Lg      Lg              07 53 04.5
      0.1nm,0.3s,baz=65,slow=33,SNR=9.9
KURBB Kurchatov Arra       6.61 247   ⇓Pn     Pn              07 51 13.8 -0.3
      2.5nm,0.4s
KURBB                                  ⇑Sn     Sn              07 52 28.7 -1.4
      12nm,0.6s
KURBB                                  ⇑Lg     Lg              07 53 05.0
      16nm,0.8s
MKAR  Makanchi Array       7.77 211   Pn      Pn              07 51 31.0 +0.8
      0.1nm,0.3s,baz=33,slow=12,SNR=6.8
MKAR                                   Sn      Sn              07 53 00.0 +1.2
      0.1nm,0.3s,baz=33,slow=30,SNR=3.5
MKAR                                   Lg      Lg              07 53 44.0
      0.1nm,0.3s,baz=33,slow=30,SNR=2.8
BVAR  Borovoye Array       10.61 274  Pn      Pn              07 52 09.1 +0.1
      0.2nm,0.3s,baz=82,slow=10,SNR=2.4
BVAR                                   Sn      Sn              07 53 57.9 -11
      0.1nm,0.3s,baz=72,slow=23,SNR=2.1
```

ISCJB 16 07:50:30.7±0.5, 19°.69S±0°.08×177°.9W±0°.1, h400km, mb3.8/14, Error ellipse: s-maj=16.1km s-min=9.2km az=31.3

IDC 16 07:50:30.9±2.2, 19°.84S×177°.83W, h390km±23km, mb3.5/14, mb1 3.7/16, mb1mx3.5/49, mbtmp4.3/16, Error ellipse: s-maj=16.9km s-min=10.2km az=127.0

ISC 16 07:50:31.5±0.6, 19°.8S±0°.1×177°.9W±0°.1, h400km, n21, σ1°16/23, mb3.8/14, Fiji Islands region

```
Code  Station Name          Δ°   AZ°   Phase ID                Time     Res
                                       Op      ISC             h m s    ISC
AFI   Afiamalu             8.26  46   P       Pn              07 52 27.8 -1.8
      4.1nm,0.3s,baz=237,slow=4.4,SNR=8.5
AFI                                    S       S               07 53 56.2 -10
      4.6nm,0.3s,baz=204,slow=20,SNR=2.8
URZ   Urewera              18.91 192  P       P               07 54 24.6 -0.8
      1.0nm,0.3s,baz=242,slow=3.0,SNR=8.5
URZ                                    S       S               07 57 37.4 -0.1
      0.3nm,0.3s,baz=144,slow=19,SNR=3.1
CTA   Charters Tower       33.69 263    P       P               07 56 38.5 +1.3
      3.6nm,0.4s,baz=84,slow=10,SNR=9.8
STKA  Stephens Creek       38.21 243    P       P               07 57 16.0 +1.1
      6.2nm,0.8s,baz=86,slow=9.5,SNR=7.7
ASAR  Alice Springs        44.80 256    P       P               07 58 08.2 +0.3
      9.7nm,0.7s,baz=89,slow=8.2,SNR=100
ASAR                                   S       S               08 04 11.7 -3.1
      0.9nm,0.9s,baz=91,slow=16,SNR=6.4
WRA   Warramunga Arr       44.82 261    P       P               07 58 07.9 -0.2
      1.2nm,0.3s,baz=96,slow=7.3,SNR=46
MJAR  Matsushiro Arr       69.72 323    P       P               08 00 59.7 +0.1
      0.5nm,0.3s,baz=164,slow=6.5,SNR=4.4
QSPA  South Pole Qui       70.27 180    P       P               08 01 02.8 +0.2
      4.9nm,0.8s,baz=32,slow=4.1,SNR=4.2
PETK  Petropavlovsk-       75.63 345    P       P               08 01 32.9 -0.6
      3.4nm,0.8s,baz=122,slow=11,SNR=6.3
YBH   Yreka Blue Hor       79.67  39    P       P               08 01 57.6 +1.6
      3.0nm,0.8s,baz=274,slow=3.9,SNR=4.7
NVAR  Mina Array Bea       80.43  43    P       P               08 02 01.4 +1.2
      0.9nm,0.7s,baz=227,slow=8.6,SNR=6.6
TXAR  Lajitas Array        86.58  57    P       P               08 02 32.5 +1.4
      0.5nm,0.8s,baz=223,slow=6.5,SNR=5.7
ANMO  Albuquerque          86.87  51    P       P               08 02 33.3 +0.7
      0.3nm,0.3s,baz=179,slow=8.5,SNR=3.5
ILAR  Eielson Array        87.61  13    P       P               08 02 34.3 -0.8
      1.7nm,1.0s,baz=232,slow=5.8,SNR=10
PDAR  Pinedale Array       88.37  43    P       P               08 02 39.9 +0.4
      0.4nm,0.7s,baz=200,slow=3.0,SNR=6.4
VNA3  Neumayer Olymp       88.83 176    P       P               08 02 39.9 -1.1
VNA1  Neumayer--Stat       89.50 177    P       P               08 02 43.7 -0.3
YKA   Yellowknife Ar       95.83  25    P       P               08 03 12.6 -0.4
      0.7nm,0.9s,baz=231,slow=4.3,SNR=6.0
EKA   Eskdalemuir Ar      144.30   5    PKP     PKPdf           08 09 19.9 -0.5
      2.1nm,0.7s,baz=345,slow=2.4,SNR=4.5
BRG   Berggiesshubel      147.61 346    ePKP    PKPab           08 09 33.5 +0.7
      4.5nm,1.0s
GERES GERESS Array B 149.56 345         PKPbc   PKPbc           08 09 35.0 +0.6
      1.1nm,0.8s,baz=11,slow=2.7,SNR=7.6
```

INMG 16 07:54:24.6±1.1, 37°.16N×14°.28W, h10km, ML2.2, Error ellipse: s-maj=16.8km s-min=10.3km az=145.0

MDD 16 07:54:25.8±2.5, 37°.11N×13°.56W, h0km, mb3.6/6, Error ellipse: s-maj=25.0km s-min=21.2km az=10.0, PRXIMO

CSEM 16 07:54:28.6±0.6, 37°.33N×13°.39W, h10km, ML2.5/10, Error ellipse: s-maj=11.4km s-min=9.1km az=25.0

ISC 16 07:54:32.0±3.3, 37°.42N±0°.08×13°.1W±0°.1, h10km, n51, σ2°18/94, Azores-Cape St. Vincent Ridge

```
Code  Station Name          Δ°   AZ°   Phase ID                Time     Res
                                       Op      ISC             h m s    ISC
PMAFR Mafra                3.38  62   ePn     Pn              07 55 24.9 +0.1
PMAFR                                  eSn     Sb              07 56 10.1 -3.0
PMAFR                                  A       A               07 56 15.1
      6.3nm,0.6s
PMAFR Mafra                3.38  62   Pn      Pn              07 55 24.8  0.0
      3.6nm,0.2s,SNR=7.9
PMAFR                                  Sn      Sn              07 56 09.2 +4.3
      2.7nm,0.2s,SNR=7.9
PMAFR Mafra                3.38  62   ePn     Pn              07 55 24.9 +0.1
PMAFR                                  Sn      Sn              07 56 09.2 +4.3
      2.7nm,0.2s,SNR=7.9
PFVI  Vila Bisbo           3.42  94   eSn     Sn              07 56 07.9 +1.9
PFVI  Vila Bisbo           3.42  94   Pg      Pn              07 55 24.1 -1.3
      0.7nm,0.1s,SNR=7.9
PFVI                                   S       Sn              07 56 07.3 +1.3
      0.1nm,0.6s,SNR=7.9
PFVI  Vila Bisbo           3.42  94   Pg      Pn              07 55 24.1 -1.3
      0.7nm,0.1s,SNR=7.9
PFVI                                   S       Sn              07 56 07.3 +1.3
      0.1nm,0.6s,SNR=7.9
PFVI                                   eSn     Sn              07 56 07.9 +1.9
PTEO  Sao Teotonio         3.49  87   ePn     Pn              07 55 25.5 -0.7
PTEO                                   eSn     Sn              07 56 10.5 +2.9
PTEO                                   A       A               07 56 13.8
      3.8nm,0.9s
PTEO  Sao Teotonio         3.49  87   Pn      Pn              07 55 25.5 -0.7
PTEO                                   Sn      Sn              07 56 10.5 +2.9
      1.9nm,0.9s
PTEO  Sao Teotonio         3.49  87   Pn      Pn              07 55 25.5 -0.7
PTEO                                   Sn      Sn              07 56 10.5 +2.9
      1.9nm,0.9s
PNCL  Nicolau / Gran       3.69  78   ePn     Pn              07 55 28.8 -0.2
PNCL                                   eSn     Sn              07 56 16.0 +3.4
PNCL                                   A       A               07 56 35.2
      1.7nm,0.6s
PNCL  Nicolau / Gran       3.69  78   ePn     Pn              07 55 28.8 -0.2
PNCL                                   eSn     Sn              07 56 16.0 +3.4
MESJ  Messejana            3.90  82   ePn     Pn              07 55 32.5 +0.6
MESJ                                   eSn     Sb              07 56 23.7 -4.4
MESJ                                   A       A               07 56 37.7
      1.6nm,0.5s
MESJ  Messejana            3.90  82   Pn      Pn              07 55 32.5 +0.6
MESJ  Messejana            3.90  82   Pn      Pn              07 55 32.5 +0.6
MESJ                                   eSn     Sb              07 56 23.7 -4.4
PCVE  Castro Verde         4.03  85   ePn     Pn              07 55 33.2 -0.6
PCVE                                   eSn     Sn              07 56 24.8 +3.8
PCVE  Castro Verde         4.03  85   Pn      Pn              07 55 33.2 -0.6
PCVE                                   Sn      Sn              07 56 24.8 +3.8
PCVE  Castro Verde         4.03  85   Pn      Pn              07 55 33.2 -0.6
PCVE                                   Sn      Sn              07 56 24.8 +3.8
PBDV  Barranco-do-Ve       4.13  91   ePn     Pn              07 55 35.7 +0.6
PBDV                                   eSn     Sn              07 56 28.6 +5.2
PBDV                                   A       A               07 56 36.0
      2.8nm,0.7s
PBDV  Barranco-do-Ve       4.13  91   Pn      Pn              07 55 35.7 +0.6
PBDV  Barranco-do-Ve       4.13  91   Pn      Pn              07 55 35.7 +0.6
PBDV                                   eSn     Sn              07 56 28.6 +5.2
PMTG  Montargil            4.18  65   ePn     Pn              07 55 35.1 -0.6
PMTG                                   eSn     Sn              07 56 29.5 +4.9
PMTG                                   A       A               07 56 42.1
      1.5nm,0.3s
PMTG  Montargil            4.18  65   ePn     Pn              07 55 35.1 -0.6
PMTG                                   eSn     Sn              07 56 29.5 +4.9
PVAQ  Vaqueiros            4.29  89   ePn     Pn              07 55 37.6 +0.3
PVAQ                                   eSn     Sn              07 56 29.7 +2.3
PVAQ                                   A       A               07 56 35.0
      1.7nm,0.7s
PVAQ  Vaqueiros            4.29  89   Pn      Pn              07 55 37.6 +0.3
PVAQ                                   Sn      Sn              07 56 29.7 +2.3
      1.7nm,0.7s
PVAQ  Vaqueiros            4.29  89   Pn      Pn              07 55 37.6 +0.3
PVAQ                                   Sn      Sn              07 56 29.7 +2.3
      1.7nm,0.7s
EGRO  El Granado           4.47  87   Pn      Pn              07 55 39.4 -0.5
      1.2nm,0.3s,SNR=7.9
EGRO                                   Sn      Sn              07 56 33.5 +1.6
      0.3nm,0.2s,SNR=7.9
EGRO  El Granado           4.47  87   Pn      Pn              07 55 39.3 -0.5
      1.2nm,0.3s,SNR=7.9
EGRO                                   Sn      Sn              07 56 33.5 +1.6
      0.3nm,0.2s,SNR=7.9
PESTR Estremoz             4.58  70   ePn     Pn              07 55 41.5 +0.2
PESTR                                  eSn     Sn              07 56 38.4 +3.8
PESTR                                  A       A               07 56 43.3
      3.0nm,0.7s
PESTR Estremoz             4.58  70   ePn     Pn              07 55 41.5 +0.2
PESTR                                  eSn     Sn              07 56 38.4 +3.8
PBAR  Barrancos            4.86  79   ePn     Pn              07 55 45.4 +0.2
PBAR                                   eSn     Sn              07 56 44.7 +3.2
PBAR                                   A       A               07 57 01.7
      2.1nm,0.6s
PBAR  Barrancos            4.86  79   Pn      Pn              07 55 45.4 +0.2
PBAR                                   Sn      Sn              07 56 44.7 +3.2
      2.1nm,0.6s
PBAR  Barrancos            4.86  79   Pn      Pn              07 55 45.4 +0.2
PBAR                                   Sn      Sn              07 56 44.7 +3.2
      2.1nm,0.6s
PMRV  Marv??o              4.91  64   ePn     Pn              07 55 45.7 -0.2
PMRV                                   eSn     Sn              07 56 45.9 +3.1
PMRV                                   A       A               07 56 56.0
      0.9nm,0.3s
PMRV  Marv??o              4.91  64   Pn      Pn              07 55 45.7 -0.2
PMRV                                   Sn      Sn              07 56 45.9 +3.1
      0.9nm,0.3s
PMRV  Marv??o              4.91  64   Pn      Pn              07 55 45.7 -0.2
PMRV                                   Sn      Sn              07 56 45.9 +3.1
      0.9nm,0.3s
EBAD  Badajoz              4.99  73   Pn      Pn              07 55 46.7 -0.2
      0.5nm,0.1s,SNR=7.9
EBAD                                   Sn      Sn              07 56 46.2 +1.7
      0.7nm,0.3s,SNR=7.9
EBAD  Badajoz              4.99  73   Pn      Pn              07 55 46.7 -0.2
      0.5nm,0.1s,SNR=7.9
EBAD                                   Sn      Sn              07 56 46.2 +1.7
      0.7nm,0.3s,SNR=7.9
EMIN  Mina Concepcio       5.12  84   Pn      Pn              07 55 48.5 -0.2
      0.2nm,0.1s,SNR=7.9
EMIN                                   Sn      Sn              07 56 48.1 +0.2
      0.2nm,0.2s,SNR=7.9
EMIN  Mina Concepcio       5.12  84   Pn      Pn              07 55 48.5 -0.2
      0.2nm,0.1s,SNR=7.9
EMIN                                   Sn      Sn              07 56 48.1 +0.2
      0.2nm,0.2s,SNR=7.9
MTE   Manteigas            5.26  54   ePn     Pn              07 55 51.9 +1.3
MTE   Manteigas            5.26  54   Pn      Pn              07 55 51.9 +1.3
MTE   Manteigas            5.26  54   Pn      Pn              07 55 51.9 +1.3
PGAV  Gavieira, Arco       5.87  38   ePn     Pn              07 56 00.1 +1.0
PGAV  Gavieira, Arco       5.87  38   ePn     Pn              07 56 00.1 +1.0
ELOB  Lobios               5.90  40   Pn      Pn              07 55 58.6 -0.9
      0.3nm,0.1s,SNR=7.9
ELOB                                   Sn      Sn              07 57 08.1 +0.8
      0.7nm,0.2s,SNR=7.9
ELOB  Lobios               5.90  40   Pn      Pn              07 55 58.6 -0.9
      0.3nm,0.1s,SNR=7.9
ELOB                                   Sn      Sn              07 57 08.1 +0.8
      0.7nm,0.2s,SNR=7.9
MVO   Moncorvo             6.01  50   ePn     Pn              07 55 59.1 -1.9
MVO                                    eSn     Sn              07 57 10.7 +0.7
MVO   Moncorvo             6.01  50   Sn      Sn              07 57 09.8 -0.2
      0.1nm,0.3s,SNR=7.9
MVO   Moncorvo             6.01  50   ePn     Pn              07 55 59.1 -1.9
MVO                                    eSn     Sn              07 57 10.7 +0.7
ECAB  El Cabril            6.13  82   Pn      Pn              07 56 02.4 -0.1
      0.1nm,0.1s,SNR=7.9
ECAB                                   Sn      Sn              07 57 13.8 +1.1
      0.1nm,0.3s,SNR=7.9
ECAB  El Cabril            6.13  82   Pn      Pn              07 56 02.4 -0.1
      0.1nm,0.1s,SNR=7.9
ECAB                                   Sn      Sn              07 57 13.8 +1.1
      0.1nm,0.3s,SNR=7.9
```

NNC 16 08:02:27.6±4.1, 53°.42N×87°.41E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=31.9km s-min=27.1km az=53.0

IDC 16 08:02:24.0±2.4, 53°.55N×87°.79E, h0km, mb1 3.7/4, mb1mx3.2/67, mbtmp3.7/4, ML3.5/4, 5C-1D, Error ellipse: s-maj=21.3km s-min=12.5km az=59.0, Southwestern Siberia

```
Code  Station Name          Δ°   AZ°   Phase ID                Time     Res
                                       Op      ISC             h m s    ISC
I46RU ZALESOVO INFRA       1.81 284   i                       08 14 01.7
      baz=107,slow=346,SNR=4.7
ZALV  Zalesovo Beam        1.81 284   Pg      Pn              08 02 55.2 -1.1
      6.6nm,0.3s,baz=106,slow=9.9,SNR=56
ZALV                                   Lg      Lg              08 03 20.5
      7.9nm,0.3s,baz=100,slow=27,SNR=18
KURK  Kurchatov            6.31 247   Pn      Pn              08 03 58.3 +0.1
      1.6nm,0.6s
KURK                                   ⇑Lg     Lg              08 05 43.0
      7.3nm,0.7s
KURBB Kurchatov Arra       6.41 247   Pn      Pn              08 03 59.9 +0.3
      0.3nm,0.3s,baz=61,slow=14,SNR=35
KURBB                                  Sn      Sn              08 05 13.8 +0.4
      0.1nm,0.3s,baz=53,slow=22,SNR=4.2
KURBB                                  Lg      Lg              08 05 48.1
      0.1nm,0.3s,baz=60,slow=31,SNR=7.2
KURBB Kurchatov Arra       6.41 247   Pn      Pn              08 03 59.9 +0.3
      4.2nm,0.5s,baz=64,slow=14
KURBB                                  ⇑Sn     Sn              08 05 11.1 -2.3
      9.8nm,0.7s
KURBB                                  ⇓Lg     Lg              08 05 48.7
      11nm,0.6s
MK31  Makanchi Array       7.62 210   ⇑Pn     Pn              08 04 16.9 +0.6
      0.4nm,0.5s,baz=26,slow=13,SNR=25
MK31                                   ⇑Sn     Sn              08 05 44.0 +0.7
      0.9nm,0.5s
MK31                                   ⇑Lg     Lg              08 06 21.5
      2.8nm,0.7s
MKAR  Makanchi Array       7.62 210   Pn      Pn              08 04 17.1 +0.8
      0.5nm,0.3s,baz=27,slow=13,SNR=19
MKAR                                   Sn      Sn              08 05 43.5 +0.2
      0.3nm,0.3s,baz=34,slow=28,SNR=7.2
MKAR                                   Lg      Lg              08 06 24.6
      0.2nm,0.3s,baz=32,slow=30,SNR=5.5
BVAR  Borovoye Array       10.43 274  Pn      Pn              08 04 53.5 -1.2
      0.4nm,0.3s,baz=73,slow=15,SNR=6.0
BVAR                                   Sn      Sn              08 06 48.0 -4.2
      0.3nm,0.3s,baz=75,slow=28,SNR=7.2
AAK   Ala-Archa            14.04 224  Pn      Pn              08 05 44.7 +0.5
      0.6nm,0.3s,baz=139,slow=8.7,SNR=3.7
```

ISCJB 16 08:06:07.9±0.9, 38°.94N±0°.10×40°.19E±0°.04, h11km, Error ellipse: s-maj=14.0km s-min=4.2km az=179.3

DDA 16 08:06:07.1, 39°.01N×40°.18E, h7km, Ml2.5

ISC 16 08:06:04.8±1.8, 38°.7N±0°.1×40°.18E±0°.04, h11km, n8, σ0°95/12, Turkey

```
Code  Station Name          Δ°   AZ°   Phase ID                Time     Res
                                       Op      ISC             h m s    ISC
BGOL  Bingol               0.45  57   i P     Pg              08 06 13.7 -0.1
BGOL                                   i S     Sb              08 06 20.6 -1.1
TNCL  Tunceli-Merkez       0.63 307   i P     Pg              08 06 16.5 -0.5
TNCL                                   i S     Sg              08 06 25.1 -0.1
PTK   Pertek               0.64 284   ePG     Pn              08 06 19.9 -0.1
PTK                                    eSG     Sn              08 06 30.8 +0.6
YEDI  Yedisu-Bingol        0.75  22   ePG     Pg              08 06 18.1 -1.3
BNGL  BINGOL               0.78  74   i P     Pn              08 06 22.4 +0.3
BNGL                                   i S     Sn              08 06 35.1 +1.3
KOPT  Kop Dagi             1.30  11   i P     Pg              08 06 31.3 +1.5
ERZM  Erzurum              1.48  38   i P     Pg              08 06 32.5 -0.8
KELT  Kelkit               1.58 333   i P     Pg              08 06 35.3 +0.1
```

JMA 16 08:14:31.3±0.2, 23°.66N×121°.69E, h0km, M2.7

ISCJB 16 08:14:32.7±0.3, 23°.70N±0°.02×121°.60E±0°.02, h10km±2km, Error ellipse: s-maj=3.6km s-min=2.2km az=30.1

TAP 16 08:14:33.0, 23°.72N×121°.52E, h8km, ML2.9, B

ISC 16 08:14:33.0±0.8, 23°.70N±0°.02×121°.56E±0°.03, h15km±5km, n53, σ0°85/80, 3C-6D, Taiwan

```
Code  Station Name          Δ°   AZ°   Phase ID                Time     Res
                                       Op      ISC             h m s    ISC
EGFH  Guangfu              0.12 254   P       Pg              08 14 35.5 -0.9
      baz=252
EGFH                                   S       Sg              08 14 37.8 -1.0
      baz=252
ESL   Shilin               0.16 314   ⇓i P    Pg              08 14 35.9 -1.0
      baz=313
ESL                                    i S     Sg              08 14 38.1 -1.5
      baz=313
ENLB  Shoufeng             0.20  12   P       Pg              08 14 38.8 +1.1
      baz=19
ENLB                                   S       Sg              08 14 42.9 +2.1
      baz=19
HGSD  Ruisui               0.24 210   P       Pg              08 14 38.6 +0.4
      baz=215
HGSD                                   S       Sg              08 14 43.5 +1.7
      baz=215
HWA   Hwalien              0.28   9   eP      Pg              08 14 38.7 -0.1
      baz=6.0
HWA                                    eS      Sb              08 14 44.5 +0.3
      baz=6.0
EHY   Hungye               0.29 228   ⇑P      Pg              08 14 38.6 -0.5
      baz=231
EHY                                    eS      Sb              08 14 44.0 -0.6
      baz=231
TWD   Chiawan              0.38   5   eP      Pg              08 14 40.7  0.0
      baz=358
TWD                                    eS      Sg              08 14 46.1 +0.3
      baz=358
YULB  Yu-li                0.39 218   P       Pg              08 14 40.6 -0.2
      baz=226
YULB                                   eS      Sb              08 14 47.1 -0.4
      baz=226
TWF1  Yuli                 0.42 214   ⇑P      Pg              08 14 41.3 -0.1
      baz=225
NACB  Ninganchiao          0.47   4   P       Pg              08 14 41.9 -0.5
      baz=356
NACB                                   eS      Sg              08 14 48.7  0.0
      baz=356
CHGB  Renai                0.50 316   ⇓P      Pg              08 14 42.7 -0.2
      baz=323
CHGB                                   S       Sg              08 14 49.0 -0.7
      baz=323
FULB  Fuli                 0.56 206   eP      Pb              08 14 45.2 +0.7
      baz=224
```

SSLB	**Suanglung**	**0.56 279**	⇓P	**Pg**	**08 14 43.7**	**-0.3**
	baz=278					
SSLB			S	**Sg**	**08 14 50.6**	**-0.8**
	baz=278					
CHKT	**Chengkung**	**0.63 196**	P	**Pg**	**08 14 45.6**	**+0.4**
	baz=195					
CHKT			*e*S	**Sb**	**08 14 55.5**	**+1.3**
	baz=195					
SMLT	**Sun Moon Lake**	**0.63 287**	⇓P	**Pb**	**08 14 45.3**	**-0.5**
	baz=286					
SMLT			*e*S	**Sg**	**08 14 52.4**	**-1.3**
	baz=286					
TYC	**Yuchr**	**0.67 288**	*e*P	**Pg**	**08 14 45.5**	**-0.5**
	baz=287					
ELDTW	**Lidau**	**0.71 224**	*e*P	**Pg**	**08 14 46.2**	**-0.6**
	baz=234					
ALS	**Alishan**	**0.72 255**	P	**Pb**	**08 14 47.4**	**0.0**
	baz=254					
ALS			S	**Sb**	**08 14 56.7**	**-0.4**
	baz=254					
NNSB	**Datong**	**0.74 348**	⇓P	**Pg**	**08 14 47.2**	**-0.2**
	baz=339					
NNSB			S	**Sg**	**08 14 56.6**	**-0.7**
	baz=339					
NNSH	**Datong**	**0.74 348**	*e*P	**Pg**	**08 14 47.3**	**-0.2**
	baz=344					
ENA	**Nanau**	**0.74 13**	*e*P	**Pg**	**08 14 47.2**	**-0.2**
	baz=358					
NANB	**Nanao**	**0.74 14**	*e*P	**Pg**	**08 14 46.7**	**-0.7**
	baz=1.0					
NANB			*e*S	**Sb**	**08 14 57.8**	**+0.1**
	baz=1.0					
NNS	**Nan Shan**	**0.75 347**	P	**Pg**	**08 14 47.3**	**-0.3**
	baz=339					
NNS			*e*S	**Sg**	**08 14 57.1**	**-0.6**
	baz=339					
WJS	**Zhushan**	**0.77 279**	*e*P	**Pn**	**08 14 48.9**	**-0.4**
	baz=278					
WGK	**Gukeng**	**0.91 269**	*e*P	**Pb**	**08 14 51.1**	**+0.6**
	baz=269					
ENTT	**Nioudou**	**0.93 0**	*e*P	**Pg**	**08 14 50.2**	**-0.9**
TPUB	**Ta-pu**	**0.94 245**	*e*P	**Pn**	**08 14 52.0**	**+0.3**
	baz=254					
TPUB			*e*S	**Sn**	**08 15 05.2**	**+0.2**
	baz=254					
TWC	**Suao**	**0.94 16**	*e*P	**Pb**	**08 14 51.8**	**+0.7**
	baz=9.0					
YHNB	**Yeheng**	**0.98 350**	P	**Pg**	**08 14 51.7**	**-0.2**
	baz=339					
YHNB			S	**Sg**	**08 15 04.3**	**-0.4**
	baz=339					
WTP	**Ta-pu**	**0.98 242**	⇑P	**Pb**	**08 14 52.2**	**+0.5**
	baz=231					
TWGBT	**Beinan**	**0.98 207**	*e*P	**Pg**	**08 14 50.0**	**-2.0**
	baz=208					
TWG	**Pinlang**	**0.98 207**	*e*P	**Pg**	**08 14 50.6**	**-1.4**
	baz=208					
NSK	**Sanguang**	**0.99 349**	⇓P	**Pb**	**08 14 52.0**	**+0.1**
	baz=338					
NSK			*e*S	**Sg**	**08 15 04.3**	**-0.7**
	baz=338					
TWH	**Lutao**	**0.99 184**	*e*P	**Pg**	**08 14 50.8**	**-1.4**
	baz=169					
EOS1	**EOS1**	**0.99 32**	*e*P	**Pg**	**08 14 52.3**	**+0.2**
	baz=52					
NSTT	**Nanjuang**	**1.05 331**	*e*P	**Pb**	**08 14 53.0**	**0.0**
	baz=332					
LIOB	**Emei**	**1.06 332**	*e*P	**Pn**	**08 14 53.8**	**+0.4**
	baz=332					
NWLT	**Wulai**	**1.07 357**	*e*P	**Pn**	**08 14 55.0**	**+1.5**
	baz=357					
TWK	**Hsinying**	**1.07 246**	P	**Pb**	**08 14 53.6**	**+0.3**
	baz=248					
TWK			S	**Sn**	**08 15 09.4**	**+1.2**
	baz=248					
CHN1	**Nanshi**	**1.08 242**	P	**Pn**	**08 14 54.2**	**+0.6**
	baz=256					
CHN1			*e*S	**Sn**	**08 15 10.6**	**+2.3**
	baz=256					
SGST	**Jiashian**	**1.09 236**	*e*P	**Pn**	**08 14 54.2**	**+0.5**
	baz=237					
SGST			*e*S	**Sn**	**08 15 10.4**	**+1.8**
	baz=237					
SLGT	**Liugui**	**1.09 230**	*e*P	**Pn**	**08 14 54.4**	**+0.5**
	baz=232					
TATO	**Taipei**	**1.27 357**	*e*P	**Pg**	**08 14 57.3**	**-0.1**
	baz=356					
SSD	**Sandimen**	**1.28 222**	*e*P	**Pn**	**08 14 56.9**	**+0.6**
	baz=217					
TIPB	**Shuangxi**	**1.29 11**	*e*P	**Pn**	**08 14 56.1**	**-0.4**
	baz=356					
MASBT	**Mashibuluo**	**1.38 218**	*e*P	**Pn**	**08 14 58.2**	**+0.4**
	baz=221					
YM07	**YM07**	**1.47 2**	*e*P	**Pg**	**08 15 01.4**	**+0.2**
	baz=358					
JYNG	**Yonagunijimaku**	**1.47 59**	P	**Pn**	**08 14 58.9**	**-0.1**
JYNG			S	**Sn**	**08 15 18.4**	**+0.4**
YOJ	**Yonaguni jima**	**1.53 60**	*e*P	**Pn**	**08 15 00.1**	**+0.3**
	baz=60					
HATJ	**Hateruma jima**	**2.09 80**	P	**Pn**	**08 15 06.6**	**-0.9**
HATJ			S	**Sn**	**08 15 31.8**	**-1.4**
JIJ	**Ishigaki jima**	**2.45 74**	P	**Pn**	**08 15 11.1**	**-1.4**
JIJ			*e*S	**Sn**	**08 15 41.3**	**-1.0**
JISG	**Ishigakijimahi**	**2.67 70**	P	**Pn**	**08 15 15.2**	**-0.2**
JISG			S	**Sn**	**08 15 46.7**	**-0.8**
JTJ	**Tarama**	**3.02 71**	S	**Sn**	**08 15 56.6**	**+0.3**

*DDA **16** 08:23:45.0,39.°99N×38.°84E,h3km,Ml2.8*
*CSEM **16** 08:23:45.8±0.2,39.°98N×38.°84E,h2km,ML2.8,Error ellipse: s-maj=5.0km s-min=4.0km az=84.0*
*ATA **16** 08:23:46.1±0.9,39.°95N×38.°75E,h4km±3km,ML2.9, MW2.8*
*ISK **16** 08:23:47.2,40.°02N×38.°81E,h19km,ML2.4/6*
ISC 16 08:23:45.9±1.2,**39.°99N**±0.°02×**38.°84E**±0.°03,**h1**km±11km, **n35**,σ0°**72**/53,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KELT	**Kelkit**	**0.36**	**63**	*e*P	**Pb**	**08 23 55.5**	**+0.3**
KELT				*e*S	**Sb**	**08 24 02.7**	**+1.2**
KELT				IAML		08 24 03.9	
	comp=Z,49nm,0.5s						
KELT	**Kelkit**	**0.36**	**63**	*i* P	**Pb**	**08 23 55.6**	**+0.4**
KELT				*i* S	**Sb**	**08 24 02.5**	**+1.1**
SUSE	**Susehri**	**0.54**	**295**	*i* P	**Pg**	**08 23 56.1**	**-0.2**
SUSE				*i* S	**Sg**	**08 24 04.1**	**+0.8**
SUSE	**Susehri**	**0.54**	**295**	P	**Pg**	**08 23 56.1**	**-0.2**
SUSE				S	**Sg**	**08 24 04.1**	**+0.8**
REFA	**Refahiye_ERZ¨**	**0.59**	**186**	*e*P	Pg	08 23 47.8	-10
REFA				*e*S	Sg	08 23 49.2	-16
REFA				IAML		08 23 50.1	
	comp=Z,6μm,0.4s						
REFA	**Refahiye_ERZ¨**	**0.59**	**186**	*i* P	Pg	08 23 47.8	-9.5
REFA				*i* S	Sg	08 23 49.1	-16
KEMA	**Kemaliye**	**0.77**	**201**	*e*P	**Pg**	**08 24 00.5**	**-0.1**
KEMA				*e*S	**Sg**	**08 24 11.1**	**+0.5**
KEMA				IAML		08 24 13.1	
	comp=Z,9.1nm,0.5s						
KEMA	**Kemaliye**	**0.77**	**201**	*i* P	**Pg**	**08 24 00.5**	**-0.1**
KEMA				*i* S	**Sg**	**08 24 11.3**	**+0.8**
KEMA	**Kemaliye**	**0.77**	**201**	P	**Pg**	**08 24 00.5**	**-0.1**
KEMA				S	**Sg**	**08 24 11.3**	**+0.8**
CUZAR	**Zara_SIVAS**	**0.83**	**264**	*i* P	**Pg**	**08 24 01.0**	**-0.8**
CUZAR				*i* S	**Sg**	**08 24 12.6**	**0.0**
CUZAR	**Zara_SIVAS**	**0.83**	**264**	P	**Pg**	**08 24 01.0**	**-0.8**
CUZAR				S	**Sg**	**08 24 12.6**	**0.0**
ESPY	**Espiye-Giresun**	**0.93**	**355**	PG	**Pb**	**08 24 05.2**	**+0.2**
ESPY				SG	**Sb**	**08 24 17.9**	**0.0**
ESPY	**Espiye-Giresun**	**0.93**	**355**	*e*Pg	**Pb**	**08 24 05.2**	**+0.2**
ESPY				*e*Sg	**Sb**	**08 24 17.9**	**0.0**
TNCL	**Tunceli-Merkez**	**1.03**	**148**	*e*P	**Pg**	**08 24 05.5**	**-0.1**
TNCL				*e*S	**Sn**	**08 24 22.4**	**-0.3**
TNCL				IAML		08 24 30.8	
	comp=Z,12nm,0.4s						
TNCL	**Tunceli-Merkez**	**1.03**	**148**	*i* P	**Pg**	**08 24 03.9**	**-1.7**
TNCL	**Tunceli-Merkez**	**1.03**	**148**	P	**Pg**	**08 24 03.9**	**-1.7**
GRSN	**GIRESUNGRSN**	**1.03**	**335**	*i* P	**Pg**	**08 24 05.0**	**-0.7**
GRSN	**GIRESUNGRSN**	**1.03**	**335**	P	**Pg**	**08 24 05.1**	**-0.7**
BAYT	**Ayd¨–ntepe-Bay**	**1.07**	**67**	PN	**Pn**	**08 24 07.9**	**-0.4**
BAYT				SN	**Sn**	**08 24 22.9**	**-1.1**
BAYT	**Ayd¨–ntepe-Bay**	**1.07**	**67**	*e*Pn	**Pn**	**08 24 07.9**	**-0.4**
BAYT				*e*Sn	**Sn**	**08 24 22.9**	**-1.1**
PTK	**Pertek**	**1.17**	**159**	PN	**Pb**	**08 24 08.9**	**-0.2**
PTK				SN	**Sn**	**08 24 26.3**	**-0.1**
PTK	**Pertek**	**1.17**	**159**	*e*Pn	**Pb**	**08 24 08.9**	**-0.2**
PTK				*e*Sn	**Sn**	**08 24 26.3**	**-0.1**
CUKAN	**kangal_SIVAS**	**1.25**	**238**	*i* P	**Pg**	**08 24 08.5**	**-1.5**
CUKAN	**kangal_SIVAS**	**1.25**	**238**	P	**Pg**	**08 24 08.5**	**-1.5**
KOPT	**Kop Dagi**	**1.27**	**88**	*e*P	**Pn**	**08 24 12.8**	**+1.7**
HEKM	**Malatya_Hekimh**	**1.30**	**212**	*i* P	**Pg**	**08 24 11.1**	**+0.2**
HEKM				*i* S	**Sn**	**08 24 29.3**	**-0.3**
HEKM	**Malatya_Hekimh**	**1.30**	**212**	P	**Pg**	**08 24 11.1**	**+0.2**
HEKM				S	**Sn**	**08 24 29.3**	**-0.3**
ELZG	**Elazig**	**1.49**	**176**	*i* P	**Pb**	**08 24 14.3**	**-0.2**
ELZG				*i* S	**Sn**	**08 24 33.9**	**-0.3**
ELZG	**Elazig**	**1.49**	**176**	P	**Pb**	**08 24 14.3**	**-0.2**
ELZG				S	**Sn**	**08 24 33.9**	**-0.3**
SVRC	**Sivrice-ELAZID**	**1.65**	**167**	PN	**Pn**	**08 24 16.5**	**+0.3**
SVRC	**Sivrice-ELAZID**	**1.65**	**167**	*e*Pn	**Pn**	**08 24 16.5**	**+0.3**
MALT	**Malatya**	**1.70**	**191**	PN	**Pn**	**08 24 17.0**	**+0.1**
MALT	**Malatya**	**1.70**	**191**	*e*Pn	**Pn**	**08 24 17.0**	**+0.1**
CHOM	**Cayeli-Rize**	**1.83**	**52**	PN	**Pn**	**08 24 18.6**	**0.0**
CHOM	**Cayeli-Rize**	**1.83**	**52**	*e*Pn	**Pn**	**08 24 18.6**	**0.0**

*ISCJB **16** 08:26:28.3±0.6,45.°60N±0.°03×26.°41E±0.°04,h148km±5km, Error ellipse: s-maj=5.6km s-min=3.8km az=159.8*
*CSEM **16** 08:26:28.5±0.2,45.°59N×26.°40E,h149km±1km,MD2.9, Error ellipse: s-maj=3.6km s-min=2.5km az=166.0*
*BUC **16** 08:26:28.5±0.8,45.°58N×26.°38E,h156km±7km,MD3.6/3, Error ellipse: s-maj=6.1km s-min=5.0km az=345.0*
ISC 16 08:26:27.8±1.4,**45.°59N**±0.°03×**26.°40E**±0.°03,**h157**km±7km, **n100**,σ0°**72**/148,**66C-15D,Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLOR	**Plostina**	**0.32**	**34**	⇑*i*P	**Pn**	**08 26 49.6**	**+0.3**
PLOR	**Plostina**	**0.32**	**34**	⇑*i*P	**Pn**	**08 26 49.6**	**+0.3**
PLOR				*i* S	**Sn**	**08 27 05.4**	**-0.4**
PLOR	**Plostina**	**0.32**	**34**	P	**Pn**	**08 26 49.6**	**+0.3**
PLOR				S	**Sn**	**08 27 04.9**	**-0.9**
MLR	**Muntele Rosu**	**0.33**	**252**	⇑*i*P	**Pn**	**08 26 49.9**	**+0.4**
MLR	**Muntele Rosu**	**0.33**	**252**	⇑*i*P	**Pn**	**08 26 49.9**	**+0.4**
MLR				*i* S	**Sn**	**08 27 05.4**	**-0.6**
MLR	**Muntele Rosu**	**0.33**	**252**	P	**Pn**	**08 26 49.9**	**+0.4**
MLR				S	**Sn**	**08 27 05.2**	**-0.8**
VRI	**Vrincioaia**	**0.36**	**40**	⇑*i*P	**Pn**	**08 26 50.0**	**+0.6**
VRI	**Vrincioaia**	**0.36**	**40**	⇑*i*P	**Pn**	**08 26 50.0**	**+0.6**
VRI				*i* S	**Sn**	**08 27 06.0**	**0.0**
VRI	**Vrincioaia**	**0.36**	**40**	⇑*i*P	**Pn**	**08 26 50.0**	**+0.6**
VRI				S	**Sn**	**08 27 05.2**	**-0.8**
ISR	**Istrita**	**0.48**	**167**	⇑*i*P	**Pn**	**08 26 50.1**	**+0.1**
ISR	**Istrita**	**0.48**	**167**	⇑*i*P	**Pn**	**08 26 50.1**	**+0.1**
ISR				*i* S	**Sn**	**08 27 06.3**	**-0.6**
ISR	**Istrita**	**0.48**	**167**	⇑*i*P	**Pn**	**08 26 50.1**	**+0.1**
ISR				*i* S	**Sn**	**08 27 06.3**	**-0.6**
ODBI	**Odobesti**	**0.49**	**69**	S	**Sn**	**08 27 06.1**	**-0.8**
ODBI	**Odobesti**	**0.49**	**69**	*i* S	**Sn**	**08 27 06.1**	**-0.8**
ODBI	**Odobesti**	**0.49**	**69**	*i* S	**Sn**	**08 27 06.1**	**-0.8**
PETR	**Petresti**	**0.60**	**77**	⇑*i*P	**Pn**	**08 26 51.5**	**+1.0**
PETR	**Petresti**	**0.60**	**77**	⇑*i*P	**Pn**	**08 26 51.5**	**+1.0**
PETR				*i* S	**Sn**	**08 27 08.3**	**+0.5**
PETR	**Petresti**	**0.60**	**77**	⇑*i*P	**Pn**	**08 26 51.5**	**+1.0**
PETR				S	**Sn**	**08 27 07.1**	**-0.7**
SECR		**0.60**	**203**	⇑*i*P	**Pn**	**08 26 50.5**	**-0.1**
SECR		**0.60**	**203**	⇑*i*P	**Pn**	**08 26 50.5**	**-0.1**
SECR				*i* S	**Sn**	**08 27 08.3**	**+0.4**
SECR		**0.60**	**203**	⇑*i*P	**Pn**	**08 26 50.5**	**-0.1**
SECR				*i* S	**Sn**	**08 27 08.3**	**+0.4**
PLAR	**PLOIESTI**	**0.73**	**201**	⇑*i*P	**Pn**	**08 26 52.0**	**+0.7**
PLAR	**PLOIESTI**	**0.73**	**201**	⇑*i*P	**Pn**	**08 26 52.0**	**+0.7**
PLAR				*i* S	**Sn**	**08 27 09.2**	**+0.1**
PLAR	**PLOIESTI**	**0.73**	**201**	⇑*i*P	**Pn**	**08 26 52.0**	**+0.7**
PLAR				*i* S	**Sn**	**08 27 09.2**	**+0.1**
DOPR	**Dopca**	**0.80**	**298**	⇑*i*P	**Pn**	**08 26 52.4**	**+0.6**
DOPR	**Dopca**	**0.80**	**298**	⇑*i*P	**Pn**	**08 26 52.4**	**+0.6**
DOPR				*i* S	**Sn**	**08 27 09.6**	**-0.5**
DOPR	**Dopca**	**0.80**	**298**	⇑*i*P	**Pn**	**08 26 52.4**	**+0.6**
DOPR				*i* S	**Sn**	**08 27 09.6**	**-0.5**
SULR		**0.92**	**186**	⇑*i*P	**Pn**	**08 26 53.1**	**+0.5**
SULR		**0.92**	**186**	⇑*i*P	**Pn**	**08 26 53.1**	**+0.5**
SULR				*i* S	**Sn**	**08 27 11.5**	**-0.1**
SULR		**0.92**	**186**	⇑*i*P	**Pn**	**08 26 53.1**	**+0.5**
SULR				*i* S	**Sn**	**08 27 11.5**	**-0.1**
TESR	**Tescani**	**0.94**	**11**	⇑*i*P	**Pn**	**08 26 52.5**	**-0.3**
TESR	**Tescani**	**0.94**	**11**	⇑*i*P	**Pn**	**08 26 52.5**	**-0.3**
TESR				*i* S	**Sn**	**08 27 10.5**	**-1.5**
TESR	**Tescani**	**0.94**	**11**	P	**Pn**	**08 26 52.5**	**-0.3**
TESR				*i* S	**Sn**	**08 27 10.5**	**-1.5**
VOIR		**0.96**	**261**	⇑*i*P	**Pn**	**08 26 53.4**	**+0.4**
VOIR		**0.96**	**261**	⇑*i*P	**Pn**	**08 26 53.4**	**+0.4**
VOIR				*i* S	**Sn**	**08 27 12.1**	**-0.2**
VOIR		**0.96**	**261**	⇑*i*P	**Pn**	**08 26 53.4**	**+0.4**
VOIR				*i* S	**Sn**	**08 27 12.1**	**-0.2**
AMRR	**Amara**	**1.19**	**145**	⇑*i*P	**Pn**	**08 26 55.6**	**+0.7**
AMRR	**Amara**	**1.19**	**145**	⇑*i*P	**Pn**	**08 26 55.6**	**+0.7**
AMRR				*i* S	**Sn**	**08 27 15.1**	**-0.5**
AMRR	**Amara**	**1.19**	**145**	⇑*i*P	**Pn**	**08 26 55.6**	**+0.7**
AMRR				*i* S	**Sn**	**08 27 15.1**	**-0.5**
ARR	**Arges**	**1.26**	**260**	⇑*i*P	**Pn**	**08 26 56.5**	**+0.9**
ARR	**Arges**	**1.26**	**260**	⇑*i*P	**Pn**	**08 26 56.5**	**+0.9**
ARR				*i* S	**Sn**	**08 27 17.1**	**+0.2**
ARR	**Arges**	**1.26**	**260**	⇑*i*P	**Pn**	**08 26 56.5**	**+0.9**
ARR				*i* S	**Sn**	**08 27 17.1**	**+0.2**
GOLR		**1.26**	**234**	S	**Sn**	**08 27 17.4**	**+0.6**
GOLR		**1.26**	**234**	*i* S	**Sn**	**08 27 17.4**	**+0.6**
GOLR		**1.26**	**234**	*i* S	**Sn**	**08 27 17.4**	**+0.6**
BUC1	**Bucharest**	**1.27**	**192**	S	**Sn**	**08 27 16.2**	**-0.8**
BUC1	**Bucharest**	**1.27**	**192**	*i* S	**Sn**	**08 27 16.2**	**-0.8**
BUC1	**Bucharest**	**1.27**	**192**	*i* S	**Sn**	**08 27 16.2**	**-0.8**
GIUM	**Giurgiulesti**	**1.28**	**94**	⇓*i*P	**Pn**	**08 26 56.9**	**+1.2**
GIUM	**Giurgiulesti**	**1.28**	**94**	⇓*i*P	**Pn**	**08 26 56.9**	**+1.2**
GIUM				*i* S	**Sn**	**08 27 17.5**	**+0.4**
GIUM	**Giurgiulesti**	**1.28**	**94**	⇓*i*P	**Pn**	**08 26 56.9**	**+1.2**
GIUM				*i* S	**Sn**	**08 27 17.5**	**+0.4**
CFR	**Carcaliu**	**1.29**	**108**	⇓*i*P	**Pn**	**08 26 56.2**	**+0.3**
CFR	**Carcaliu**	**1.29**	**108**	⇓*i*P	**Pn**	**08 26 56.2**	**+0.3**
CFR				*i* S	**Sn**	**08 27 16.9**	**-0.5**
CFR	**Carcaliu**	**1.29**	**108**	⇓*i*P	**Pn**	**08 26 56.2**	**+0.3**
CFR				*i* S	**Sn**	**08 27 16.9**	**-0.5**
SGRR	**Singureni**	**1.40**	**192**	S	**Sn**	**08 27 17.8**	**-1.4**
SGRR	**Singureni**	**1.40**	**192**	*i* S	**Sn**	**08 27 17.8**	**-1.4**
SGRR	**Singureni**	**1.40**	**192**	*i* S	**Sn**	**08 27 17.8**	**-1.4**
HARR	**Harsova**	**1.41**	**129**	⇑*i*P	**Pn**	**08 26 57.4**	**+0.4**
HARR	**Harsova**	**1.41**	**129**	⇑*i*P	**Pn**	**08 26 57.4**	**+0.4**
HARR	**Harsova**	**1.41**	**129**	⇑*i*P	**Pn**	**08 26 57.4**	**+0.4**
HUMR	**Humele**	**1.46**	**224**	⇓*i*P	**Pn**	**08 26 57.8**	**+0.3**
HUMR	**Humele**	**1.46**	**224**	⇓*i*P	**Pn**	**08 26 57.8**	**+0.3**
HUMR				*i* S	**Sn**	**08 27 19.2**	**-1.1**
HUMR	**Humele**	**1.46**	**224**	⇓*i*P	**Pn**	**08 26 57.8**	**+0.3**
HUMR				*i* S	**Sn**	**08 27 19.2**	**-1.1**
TLB	**Topalu**	**1.54**	**130**	⇑*i*P	**Pn**	**08 26 58.8**	**+0.5**
TLB	**Topalu**	**1.54**	**130**	⇑*i*P	**Pn**	**08 26 58.8**	**+0.5**
TLB				*i* S	**Sn**	**08 27 20.3**	**-1.4**
TLB	**Topalu**	**1.54**	**130**	⇑*i*P	**Pn**	**08 26 58.8**	**+0.5**
TLB				*i* S	**Sn**	**08 27 20.3**	**-1.4**
LEOM	**Leova**	**1.56**	**55**	⇑*i*P	**Pn**	**08 26 59.6**	**+1.1**
LEOM	**Leova**	**1.56**	**55**	⇑*i*P	**Pn**	**08 26 59.6**	**+1.1**
LEOM				*i* S	**Sn**	**08 27 22.1**	**-0.1**
LEOM	**Leova**	**1.56**	**55**	P	**Pn**	**08 26 59.6**	**+1.1**
LEOM				*i* S	**Sn**	**08 27 22.1**	**-0.1**
TLCR		**1.75**	**103**	⇑*i*P	**Pn**	**08 27 01.2**	**+0.6**
TLCR		**1.75**	**103**	⇑*i*P	**Pn**	**08 27 01.2**	**+0.6**
TLCR				*i* S	**Sn**	**08 27 26.0**	**+0.2**
TLCR		**1.75**	**103**	⇑*i*P	**Pn**	**08 27 01.2**	**+0.6**
TLCR				*i* S	**Sn**	**08 27 26.0**	**+0.2**
TIRR	**Tirgusor**	**1.83**	**128**	⇑*i*P	**Pn**	**08 27 01.9**	**+0.5**
TIRR	**Tirgusor**	**1.83**	**128**	⇑*i*P	**Pn**	**08 27 01.9**	**+0.5**
TIRR				*i* S	**Sn**	**08 27 26.3**	**-0.9**
TIRR	**Tirgusor**	**1.83**	**128**	⇑*i*P	**Pn**	**08 27 01.9**	**+0.5**
TIRR				*i* S	**Sn**	**08 27 26.3**	**-0.9**
LOT	**Lotru**	**1.85**	**266**	⇑*i*P	**Pn**	**08 27 02.6**	**+0.8**
LOT	**Lotru**	**1.85**	**266**	⇑*i*P	**Pn**	**08 27 02.6**	**+0.8**
LOT				*i* S	**Sn**	**08 27 27.8**	**-0.1**
LOT	**Lotru**	**1.85**	**266**	⇑*i*P	**Pn**	**08 27 02.6**	**+0.8**
LOT				*i* S	**Sn**	**08 27 27.8**	**-0.1**
MILM	**Milestii Mici**	**2.14**	**51**	⇑*i*P	**Pn**	**08 27 05.9**	**+1.0**
MILM	**Milestii Mici**	**2.14**	**51**	⇑*i*P	**Pn**	**08 27 05.9**	**+1.0**
MILM				*i* S	**Sn**	**08 27 33.4**	**-0.2**
MILM	**Milestii Mici**	**2.14**	**51**	P	**Pn**	**08 27 05.5**	**+0.6**
MILM				*i* S	**Sn**	**08 27 33.4**	**-0.2**
KIS	**Kishinev**	**2.19**	**49**	S	**Sn**	**08 27 33.2**	**-1.5**
MANR	**Mangalia**	**2.37**	**138**	⇓*i*P	**Pn**	**08 27 07.8**	**+0.2**
MANR	**Mangalia**	**2.37**	**138**	⇓*i*P	**Pn**	**08 27 07.8**	**+0.2**
MANR	**Mangalia**	**2.37**	**138**	⇓*i*P	**Pn**	**08 27 07.8**	**+0.2**
SRE	**Strehaia**	**2.44**	**249**	⇑*i*P	**Pn**	**08 27 09.1**	**+0.5**
SRE	**Strehaia**	**2.44**	**249**	⇑*i*P	**Pn**	**08 27 09.1**	**+0.5**
SRE				*i* S	**Sn**	**08 27 39.0**	**-1.0**
SRE	**Strehaia**	**2.44**	**249**	⇑*i*P	**Pn**	**08 27 09.1**	**+0.5**
SRE				*i* S	**Sn**	**08 27 39.0**	**-1.0**
SORM	**Soroca**	**2.88**	**27**	⇑*i*P	**Pn**	**08 27 14.6**	**+0.8**
SORM	**Soroca**	**2.88**	**27**	⇑*i*P	**Pn**	**08 27 14.6**	**+0.8**
SORM				*i* S	**Sn**	**08 27 47.8**	**-1.8**
SORM	**Soroca**	**2.88**	**27**	P	**Pn**	**08 27 14.4**	**+0.6**
SORM				*i* S	**Sn**	**08 27 47.8**	**-1.8**
HERR	**Herculane**	**2.90**	**257**	⇓*i*P	**Pn**	**08 27 14.4**	**+0.2**
HERR	**Herculane**	**2.90**	**257**	⇓*i*P	**Pn**	**08 27 14.4**	**+0.2**
HERR	**Herculane**	**2.90**	**257**	⇓*i*P	**Pn**	**08 27 14.4**	**+0.2**
SIRR	**Siria**	**3.37**	**283**	⇑*i*P	**Pn**	**08 27 20.6**	**+0.5**
SIRR	**Siria**	**3.37**	**283**	⇑*i*P	**Pn**	**08 27 20.6**	**+0.5**
SIRR	**Siria**	**3.37**	**283**	⇑*i*P	**Pn**	**08 27 20.6**	**+0.5**
MDVR	**Moldovita**	**3.41**	**258**	⇑*i*P	**Pn**	**08 27 21.5**	**+0.8**
MDVR	**Moldovita**	**3.41**	**258**	⇑*i*P	**Pn**	**08 27 21.5**	**+0.8**
MDVR	**Moldovita**	**3.41**	**258**	⇑*i*P	**Pn**	**08 27 21.5**	**+0.8**

MEX 16 08:35:37.4±0.7,**13.°85N**×**92.°46W**,**h16**km±193km,**MD3.9, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.07**	**10**	*i* P	Pb	08 35 54.2	-3.4
THIG				*i* S	Sb	08 36 07.5	-3.8
PCIG		**1.99**	**338**	*e*P	Pn	08 36 06.6	-3.8
PCIG				*e*S	Sn	08 36 30.1	-4.9
CCIG	**Comitan**	**2.44**	**7**	*e*P	Pn	08 36 16.1	-0.7
CCIG				*e*S	Sn	08 36 44.0	-2.4
TGIG		**2.98**	**348**	*e*P	Pn	08 36 22.2	-2.0
TGIG				*e*S	Sn	08 36 56.7	-3.0

MAN 16 08:38:38.0,18.°53N×121.°16E,h3km,**mb4.0,ML2.8,MS2.4, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APYP	**Conner**	**0.67**	**173**	*e*P	Pb	08 38 51.7	-0.6
APYP				*e*S	Sn	08 39 05.1	-0.3
ABRA	**Dolores**	**0.97**	**206**	*e*P	Pg	08 38 55.4	-1.3
ABRA				*e*S	Sn	08 39 12.9	0.0
CVP	**Callao Caves**	**1.04**	**142**	*e*P	Pg	08 38 58.2	+0.2
CVP				*e*S	Sn	08 39 16.4	+2.0

IDC 16 08:43:09.9±1.4,**5.°62S**×**128.°95E,h315**km±17km,**mb3.0**/2, **mb1 3.3**/6,**mb1mx3.0**/51,**mbtmp3.9**/6,**Error ellipse: s-maj=27.6km s-min=11.5km az=81.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.26**	**26**	P	Pn	08 44 32.6	+1.5
	0.7nm,0.3s,baz=337,slow=23,SNR=1.4						
SIJI				S	S	08 45 35.2	-1.2
	9.6nm,0.3s,baz=74,slow=23,SNR=7.1						
BATI	**Baumata**	**6.94**	**229**	P	Pn	08 44 49.8	-1.1
	11nm,0.3s,baz=49,slow=3.6,SNR=5.2						
WRA	**Warramunga Arr**	**15.17**	**160**	P	Pn	08 46 29.6	-0.3
	1.1nm,0.3s,baz=333,slow=13,SNR=64						
WRA				S	S	08 49 11.3	-1.4
	0.1nm,0.3s

BANOM	**Banah**	1.66	190	P	Pb	08 57 54.6	-0.4
	SNR=43						
BANOM				S	Sg	08 58 17.5	+0.6
NGRK	**Negar Kerman**	2.08	3	*e*Pn	Pn	08 58 00.0	+0.1
MSFE	**Esma-Masafi**	2.23	191	P	Pb	08 58 03.0	-1.8
MSFE	**Esma-Masafi**	2.23	191	P	Pb	08 58 03.3	-1.4
MDH	**Madha**	2.27	187	P	Pn	08 58 01.8	-0.4
TVBK	**TV Kerman**	2.42	3	*e*Pn	Pb	08 58 08.0	-0.2
CHMN	**Cheshme madani**	2.43	19	*e*Pn	Pb	08 58 08.4	0.0
UOSS	**Minazif**	2.63	188	P	Pb	08 58 10.4	-1.1
	SNR=6.7						
UOSS	**Minazif**	2.63	188	P	Pn	08 58 08.5	+1.3
UOSS	**Minazif**	2.63	188	P	Pn	08 58 08.5	+1.3
HATD	**Hatta, Dubai**	2.76	189	P	Pn	08 58 09.8	+0.8
HATD	**Hatta, Dubai**	2.76	189	P	Pn	08 58 09.8	+0.8
KHGB	**Koh Gabri**	2.81	357	*e*Pn	Pn	08 58 10.6	+0.8
ASUD	**Al Ashush, Dub**	3.14	202	P	Pn	08 58 15.2	+1.0
	SNR=16						
ASUD	**Al Ashush, Dub**	3.14	202	*i* P	Pn	08 58 15.0	+0.8
	SNR=16						
ASUD	**Al Ashush, Dub**	3.14	202	P	Pn	08 58 15.0	+0.8
	SNR=16						
GHIR	**Ghir-Karzin**	3.29	284	*e*Pn	Pn	08 58 15.8	-0.6
GHIR				*e*Sg	Sb	08 59 03.1	-0.5
AJN	**Ajban**	3.33	207	P	Pn	08 58 17.4	+0.7
SOHO	**SOHO**	3.41	181	P	Pn	08 58 17.0	-0.9
SOHO	**SOHO**	3.41	181	P	Pn	08 58 17.0	-0.9
ALNE	**Al Ain**	3.58	193	P	Pn	08 58 20.6	+0.5
ZHSF	**Zahedan**	4.19	60	*e*Pn	Pn	08 58 31.4	+2.7
SMDO	**Samad**	4.67	164	P	Pn	08 58 37.2	+1.9
SMDO	**Samad**	4.67	164	P	Pn	08 58 37.2	+1.9
WSAR	**Wadi Sarin**	4.67	157	P	Pn	08 58 35.3	+0.1
WSAR	**Wadi Sarin**	4.67	157	P	Pn	08 58 35.3	+0.1
JLN	**Jalan Bani Buh**	5.95	154	P	Pn	08 58 53.0	+0.1
	SNR=5.8						

CSEM ***16*** *09:04:12.8±0.3, 51°.51N×16°.16E, h2km, ML3.4/8, Error ellipse: s-maj=5.2km s-min=2.5km az=19.0*
ISCJB ***16*** *09:04:12.1±0.6, 51°.46N±0°.03×16°.13E±0°.03, h0km, Error ellipse: s-maj=4.2km s-min=2.1km az=16.4*
BGR ***16*** *09:04:13.6±0.4, 51°.51N×16°.18E, h1km, ML3.0/14, Error ellipse: s-maj=4.4km s-min=2.2km az=16.0*
IDC ***16*** *09:04:13.9±1.0, 51°.54N×16°.02E, h0km, mb1 3.2/3, mb1mx2.9/61, mbtmp3.0/3, ML2.4/2, Error ellipse: s-maj=23.1km s-min=8.2km az=126.0*
PRU ***16*** *09:04:13.6, 51°.53N×16°.16E, h0km*
VIE ***16*** *09:04:15.4±0.8, 51°.37N×16°.15E, h0km, mb2.4/5, ml2.9/5, Error ellipse: s-maj=10.3km s-min=6.0km az=64.0 67 km WNW of Wroclaw Suspected Mining induced.*

ISC 16 09:04:12.3±0.8, 51°.56N±0°.03×16°.17E±0°.02, h0km, n71, σ0§81/130, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	0.72	174	*i* Pg	Pg	09 04 26.7	+0.6
KSP				*i* Sg	Sg	09 04 35.9	+0.5
KSP	**Ksiaz**	0.72	174	*e*Pg	Pg	09 04 26.4	+0.3
KSP				*e*Sg	Sg	09 04 35.9	+0.5
KSP	**Ksiaz**	0.72	174	Pg	Pg	09 04 26.4	+0.3
KSP				Sg	Sg	09 04 35.9	+0.5
UPC	**Upice**	1.06	185	*e*PG	Pg	09 04 32.9	+0.4
UPC				*e*SG	Sg	09 04 46.5	+0.3
	comp=Z,93nm,0.4s						
UPC	**Upice**	1.06	185	Pg	Pg	09 04 32.9	+0.4
UPC				Sg	Sg	09 04 46.5	+0.3
	93nm,0.4s						
DPC	**Dobruska-Polom**	1.21	175	*e*Pg	Pg	09 04 35.5	-0.1
DPC				*e*Sg	Sg	09 04 51.3	+0.1
DPC	**Dobruska-Polom**	1.21	175	*e*PG	Pg	09 04 35.5	-0.1
DPC				*e*SG	Sg	09 04 50.6	-0.7
	comp=Z,42nm,0.3s						
DPC	**Dobruska-Polom**	1.21	175	Pg	Pg	09 04 35.5	-0.1
DPC				Sg	Sg	09 04 50.6	-0.7
	42nm,0.3s						
PVCC	**Panska Ves**	1.44	225	*e*PG	Pn	09 04 40.1	+0.4
PVCC				*e*SG	Sn	09 04 59.8	+0.5
	comp=Z,97nm,0.3s						
PVCC	**Panska Ves**	1.44	225	Pg	Pn	09 04 40.1	+0.4
PVCC				Sg	Sn	09 04 59.8	+0.5
	97nm,0.3s						
KRLC	**Kraliky**	1.54	165	*e*PG	Pn	09 04 40.8	-0.2
KRLC	**Kraliky**	1.54	165	Pg	Pn	09 04 40.8	-0.2
BRG	**Berggiesshubel**	1.56	245	PN	Pn	09 04 40.8	-0.6
BRG				PG	Pb	09 04 42.4	+0.4
BRG				SG	Sg	09 05 03.1	+0.8
	66nm,0.5s						
BRG	**Berggiesshubel**	1.56	245	*e*Pn	Pn	09 04 40.7	-0.6
BRG				*e*Pg	Pb	09 04 42.5	+0.5
BRG				*e*Sg	Sg	09 05 03.3	+0.9
BRG	**Berggiesshubel**	1.56	245	Pn	Pn	09 04 40.7	-0.6
GOPC	**GO Pecny, Ondr**	1.87	209	*e*PN	Pn	09 04 45.5	0.0
GOPC				*e*PG	Pb	09 04 47.4	+0.1
GOPC				*e*SG	Sg	09 05 12.1	-0.1
	comp=Z,25nm,0.5s						
GOPC	**GO Pecny, Ondr**	1.87	209	Pn	Pn	09 04 45.5	0.0
FBE	**Freiberg**	1.88	251	*e*Pg	Pg	09 04 49.0	+0.7
FBE				*e*Sg	Sg	09 05 13.2	+0.5
FBE	**Freiberg**	1.88	251	Pg	Pg	09 04 49.0	+0.7
FBE				Sg	Sg	09 05 13.2	+0.5
PRU	**Pruhonice**	1.88	214	*e*PG	Pn	09 04 46.2	+0.5
PRU				*e*SG	Sg	09 05 12.6	-0.1
PRU	**Pruhonice**	1.88	214	Pg	Pn	09 04 46.2	+0.5
PRU				Sg	Sg	09 05 12.6	-0.1
MORC	**Moravsky Berou**	1.99	153	*e*Pn	Pn	09 04 46.9	-0.3
MORC				*e*Sg	Sb	09 05 15.1	+0.5
MORC	**Moravsky Berou**	1.99	153	Pn	Pn	09 04 46.9	-0.3
MORC				Sg	Sb	09 05 15.1	+0.5
MORC	**Moravsky Berou**	1.99	153	*e*PN	Pn	09 04 46.8	-0.4
MORC				*e*SG	Sb	09 05 14.8	+0.2
CLL	**Collm**	2.00	264	*e*Pn	Pn	09 04 46.9	-0.5
CLL				*e*Pg	Pg	09 04 50.9	+0.4
CLL				*e*Sg	Sg	09 05 17.2	+0.7
CLL	**Collm**	2.00	264	*e*Pn	Pn	09 04 47.0	-0.3
CLL				*e*Pg	Pb	09 04 50.0	+0.5
CLL				*e*		09 04 53.0	
CLL				*i*		09 04 54.1	
CLL				*e*		09 04 57.0	
CLL				*e*		09 05 13.0	
CLL				*i* Sg	Sg	09 05 16.9	+0.4
	comp=Z,35nm,0.7s						
CLL	**Collm**	2.00	264	Pn	Pn	09 04 46.8	-0.5
OKC	**Ostrava-Krasne**	2.13	143	*e*Pg	Pb	09 04 52.5	+0.7
OKC				*e*Sg	Sb	09 05 19.1	+0.3
OKC	**Ostrava-Krasne**	2.13	143	*e*SG	Sb	09 05 18.7	-0.1
OKC	**Ostrava-Krasne**	2.13	143	Pg	Pb	09 04 52.5	+0.7
OKC				Sg	Sb	09 05 19.1	+0.3
CHZP	**Chorzow**	2.19	124	*e*Pg	Pg	09 04 55.6	+1.4
CHZP				*e*Sg	Sg	09 05 24.6	+1.9
VRAC	**Vranov**	2.27	173	*e*Pn	Pn	09 04 51.4	+0.3
VRAC				*e*Sg	Sb	09 05 23.8	+1.1
VRAC	**Vranov**	2.27	173	*e*PN	Pn	09 04 51.4	+0.3
VRAC				*e*SG	Sb	09 05 23.8	+1.1
KRUC	**Moravsky**	2.50	177	*e*PN	Pn	09 04 55.3	+1.0
KRUC				*e*SG	Sg	09 05 31.3	-1.4
TANN	**Tannenbergstha**	2.61	245	*e*Pn	Pn	09 04 56.4	+0.6
TANN				*e*Pg	Pg	09 05 02.2	-0.1
TANN				*e*Sg	Sg	09 05 34.7	-1.4
TANN	**Tannenbergstha**	2.61	245	Pn	Pn	09 04 56.4	+0.6
OJC	**Ojcow**	2.66	119	*e*Pg	Pg	09 05 02.9	-0.3
OJC				*e*Sg	Sg	09 05 38.1	+0.3
OJC	**Ojcow**	2.66	119	*e*Pg	Pg	09 05 03.0	-0.3
OJC				*e*Sg	Sg	09 05 38.1	+0.3
OJC	**Ojcow**	2.66	119	Pg	Pg	09 05 03.0	-0.3
OJC				Sg	Sg	09 05 38.1	+0.3
WERD	**Werda**	2.68	247	*e*Pg	Pg	09 05 03.5	-0.2
WERD	**Werda**	2.68	247	Pg	Pg	09 05 03.5	-0.2
NKC	**Novy Kostel**	2.70	242	*e*PN	Pn	09 04 57.6	+0.5
NKC				*e*PG	Pb	09 05 02.7	+1.1
NKC				*e*SG	Sg	09 05 40.8	+1.7
	comp=Z,67nm,0.3s						
NKC	**Novy Kostel**	2.70	242	Pn	Pn	09 04 57.6	+0.5
JAVC	**Velka Javorina**	2.87	160	*e*PN	Pn	09 05 00.9	+1.5
JAVC				*e*SG	Sg	09 05 45.6	+1.2
KHC	**Kasperske Hory**	2.94	215	*e*PN	Pn	09 05 01.3	+1.0
KHC				*e*PG	Pb	09 05 06.5	+0.9
KHC				*e*SN	Sn	09 05 35.4	-1.0
KHC				*e*SG	Sg	09 05 45.4	-1.4
	comp=Z,21nm,0.5s						
KHC	**Kasperske Hory**	2.94	215	Pn	Pn	09 05 01.3	+1.0
MOX	**Moxa**	3.01	254	*e*Pg	Pg	09 05 09.5	-0.5
MOX				*e*Sg	Sg	09 05 49.3	+0.3
MOX	**Moxa**	3.01	254	Pg	Pg	09 05 09.5	-0.5
MOX				Sg	Sg	09 05 49.3	+0.3
MANZ	**Manzenberg**	3.02	240	*e*Pn	Pn	09 05 01.9	+0.5
MANZ				*e*Pg	Pg	09 05 10.8	+0.6
MANZ				*e*Sg	Sg	09 05 48.5	-0.8
MANZ	**Manzenberg**	3.02	240	Pn	Pn	09 05 01.9	+0.5
ROTZ	**Rotzenmuhle**	3.09	236	*e*Pn	Pn	09 05 02.9	+0.5
ROTZ				*e*Sg	Sg	09 05 50.7	-1.0
ROTZ	**Rotzenmuhle**	3.09	236	Pn	Pn	09 05 02.9	+0.5
ROTZ				Sg	Sg	09 05 50.7	-1.0
GEC2	**GERESS Array S**	3.15	211	*e*Pg	Pb	09 05 10.9	+1.8
GEC2				*e*Sg	Sg	09 05 51.7	-1.6
GEC2	**GERESS Array S**	3.15	211	Pg	Pb	09 05 10.9	+1.8
GEC2				Sg	Sg	09 05 51.7	-1.6
GERES	**GERESS Array B**	3.15	211	Pn	Pn	09 05 04.0	+0.8
	comp=Z,0.6nm,0.3s,baz=28,slow=13,SNR=10						
GERES				Pg	Pb	09 05 10.0	+0.9
	comp=Z,1.7nm,0.3s,baz=30,slow=16,SNR=19						
GERES				Lg	Lg	09 05 49.2	
	comp=Z,4.5nm,0.3s,baz=36,slow=29,SNR=9.6						
LANS	**Liptovska Anna**	3.21	137	*e*PG	Pg	09 05 13.5	-0.2
LANS				*e*SG	Sg	09 05 56.4	+1.2
LANS	**Liptovska Anna**	3.21	137	*e*Pg	Pg	09 05 13.5	-0.2
LANS				*e*Sg	Sg	09 05 56.4	+1.2
MODS	**Modra-Piesok**	3.27	167	*e*PG	Pg	09 05 13.7	-1.2
MODS				*e*SG	Sg	09 05 57.6	+0.4
MODS				*e*LG	Lg	09 06 00.5	
MODS	**Modra-Piesok**	3.27	167	*e*Pg	Pg	09 05 13.7	-1.2
MODS				*e*Sg	Sg	09 05 57.6	+0.4
VYHS	**Vyhne**	3.52	150	*e*SG	Sg	09 06 03.8	-1.4
VYHS	**Vyhne**	3.52	150	*e*Sg	Sg	09 06 03.8	-1.4
CONA	**Conrad Observa**	3.64	183	*i* Pn	Pn	09 05 10.4	+0.4
	comp=Z,0.7nm,0.2s						
CONA				Sg	Sg	09 06 07.5	-1.7
	comp=Z,7.5nm,0.3s						
CONA	**Conrad Observa**	3.64	183	Pn	Pn	09 05 10.4	+0.4
	comp=Z,0.7nm,0.2s						
CONA				Sg	Sg	09 06 07.5	-1.7
	comp=Z,7.5nm,0.3s						
GRA1	**Grafenberg Arr**	3.66	241	Sg	Sg	09 06 10.3	+0.4
GRF	**Grafenberg Arr**	3.66	241	*e*Sg	Sg	09 06 10.3	+0.4
ARSA	**Arzberg**	4.33	186	Sg	Sg	09 06 30.1	-1.3
	comp=Z,12nm,0.6s						
ARSA	**Arzberg**	4.33	186	Sg	Sg	09 06 30.1	-1.3
	comp=Z,12nm,0.6s						
KBA	**Koelnbreinsper**	4.85	203	*i* Pn	Pn	09 05 27.3	+0.6
	comp=Z,1.0nm,0.2s						
KBA	**Koelnbreinsper**	4.85	203	Pn	Pn	09 05 27.3	+0.6
	comp=Z,1.0nm,0.2s						
AKASG	**Malin Array Be**	8.26	91	Pn	Pn	09 06 12.3	-1.0
	comp=Z,0.8nm,0.3s,baz=280,slow=12,SNR=3.1						
FINES	**FINESS Array B**	11.30	25	Pn	Pn	09 06 52.7	-2.2
	comp=Z,0.1nm,0.3s,baz=204,slow=12,SNR=3.2						
FINES				Sn	Sn	09 08 54.0	-7.8
	comp=Z,0.1nm,0.3s,baz=220,slow=22,SNR=4.1						

DDA ***16*** *09:05:32.4, 37°.23N×42°.47E, h1km, Ml3.0*
CSEM ***16*** *09:05:33.2±0.3, 37°.24N×42°.55E, h2km, ML2.7, Error ellipse: s-maj=8.4km s-min=5.2km az=36.0*
ISN ***16*** *09:05:33.7±0.3, 37°.09N×42°.64E, h0km, ML2.7*
ISK ***16*** *09:05:34.4, 37°.36N×42°.43E, h5km, ML2.7/5*
ATA ***16*** *09:05:34.3±0.4, 37°.39N×42°.44E, h15km±23km, ML3.8, MW3.6*

ISC 16 09:05:32.6±1.3, 37°.22N±0°.04×42°.46E±0°.02, h4km±10km, n40, σ1§09/67, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRN	**S¨–rnak**	0.28	352	*i* P	Pg	09 05 37.5	-0.7
SIRN				*i* S	Sg	09 05 41.7	-0.2
SIRN	**S¨–rnak**	0.28	352	P	Pg	09 05 37.5	-0.7
SIRN				S	Sg	09 05 41.7	-0.2
SIRT	**Sirnak**	0.29	356	PG	Pg	09 05 37.7	-0.5
SIRT				SG	Sg	09 05 40.4	-1.6
SIRT	**Sirnak**	0.29	356	*e*Pg	Pg	09 05 37.7	-0.5
SIRT				*e*Sg	Sg	09 05 40.4	-1.6
SRTM	**Siirt_Merkez**	0.89	331	*i* P	Pg	09 05 50.0	+0.4
SRTM				*i* S	Sb	09 06 02.7	-0.3
SRTM	**Siirt_Merkez**	0.89	331	P	Pg	09 05 50.0	+0.4
SRTM				S	Sb	09 06 02.7	-0.3
HAKT	**HAKKARI**	1.05	71	*i* P	Pg	09 05 52.5	-0.3
HAKT				*i* S	Sn	09 06 08.9	-0.7
HAKT	**HAKKARI**	1.05	71	P	Pg	09 05 52.5	-0.3
HAKT				S	Sn	09 06 08.9	-0.7
BTMN	**Batman**	1.17	306	*i* P	Pn	09 05 55.9	0.0
BTMN				*i* S	Sg	09 06 11.1	+1.0
BTMN	**Batman**	1.17	306	P	Pn	09 05 55.9	0.0
BTMN				S	Sg	09 06 11.1	+1.0
GEVA	**Gevas**	1.19	23	*e*P	Pb	09 05 54.6	-1.3
MARD	**Mardin**	1.35	275	*i* P	Pn	09 05 57.6	-0.9
MARD				*i* S	Sg	09 06 16.9	+1.0
SVAN	**Silvan-Diyarba**	1.37	313	PN	Pg	09 05 59.5	+0.5
SVAN				SN	Sg	09 06 17.7	+1.0
SVAN	**Silvan-Diyarba**	1.37	313	*i* P	Pg	09 06 00.2	+1.3
SVAN				*i* S	Sg	09 06 18.2	+1.4
SVAN	**Silvan-Diyarba**	1.37	313	*e*Pn	Pg	09 05 59.5	+0.5
SVAN	**Silvan-Diyarba**	1.37	313	P	Pg	09 06 00.2	+1.3
SVAN				*e*Sn	Sg	09 06 17.7	+1.0
SVAN				S	Sg	09 06 18.2	+1.4
GURO	**Guroymak-BITLI**	1.38	346	PN	Pb	09 05 59.0	-0.1
GURO				SN	Sn	09 06 16.9	-0.7
GURO	**Guroymak-BITLI**	1.38	346	*e*Pn	Pb	09 05 59.0	-0.1
GURO				*e*Sn	Sn	09 06 16.9	-0.7
YOVA	**Hakkari_Y¨…kse**	1.50	75	*i* P	Pn	09 06 00.5	-0.1
YOVA				*i* S	Sg	09 06 22.9	+2.0
YOVA	**Hakkari_Y¨…kse**	1.50	75	P	Pn	09 06 00.5	-0.1
YOVA				S	Sg	09 06 22.9	+2.0
ADCV	**BITLIS_Adilcev**	1.60	7	*i* P	Pb	09 06 03.2	+0.2
ADCV				*i* S	Sg	09 06 27.0	+2.8
ADCV	**BITLIS_Adilcev**	1.60	7	P	Pb	09 06 03.2	+0.2
ADCV				S	Sg	09 06 27.0	+2.8
MAZI	**Mazidag**	1.63	279	PN	Pg	09 06 04.6	+0.8
MAZI	**Mazidag**	1.63	279	*e*Pn	Pg	09 06 04.6	+0.8
DIY	**Diyarbakir**	1.90	292	*e*Pn	Pg	09 06 09.3	+0.2
DYBB	**Diyarbakir**	1.99	292	PN	Pb	09 06 09.3	-0.2
BNGL	**BINGOL**	2.02	330	*e*P	Pb	09 06 08.9	-1.2
BNGL				*e*S	Sb	09 06 36.2	+0.4
BNGL				IAML		09 06 39.1	
	comp=Z,105nm,0.5s						
BNGL	**BINGOL**	2.02	330	*i* P	Pb	09 06 10.8	+0.7
BNGL				*i* S	Sb	09 06 36.4	+0.6
HANI	**Diyarbakir_Han**	2.03	307	*i* P	Pb	09 06 10.9	+0.7
HANI				*i* S	Sb	09 06 35.7	-0.1
HANI	**Diyarbakir_Han**	2.03	307	P	Pb	09 06 10.9	+0.7
HANI				S	Sb	09 06 35.7	-0.1
EKAR	**Karacoban**	2.06	351	*e*P	Pb	09 06 10.1	-0.8
EKAR				IAML		09 06 43.1	
	comp=Z,10.0nm,0.8s						
EKAR	**Karacoban**	2.06	351	*i* P	Pb	09 06 09.6	-1.2
EKAR				*i* S	Sg	09 06 39.6	+0.7
EKAR	**Karacoban**	2.06	351	P	Pb	09 06 09.6	-1.2
EKAR				S	Sg	09 06 39.6	+0.7
TUTA	**Tutak**	2.20	7	*e*P	Pn	09 06 10.7	+0.5
AGRB	**Hanur-Agry**	2.39	10	PN	Pn	09 06 14.2	+1.3
AGRB	**Hanur-Agry**	2.39	10	*e*Pn	Pn	09 06 14.2	+1.3
SVRC	**Sivrice-ELAZID**	2.76	296	PN	Pb	09 06 20.2	-2.5
SVRC	**Sivrice-ELAZID**	2.76	296	*e*Pn	Pb	09 06 20.2	-2.5
PTK	**Pertek**	2.95	306	PN	Pn	09 06 19.9	-0.6
PTK	**Pertek**	2.95	306	*e*Pn	Pn	09 06 19.9	-0.6

IDC 16 09:06:02.2±3.1, 53°.72N×88°.12E, h0km, mb1 3.4/2, mb1mx3.1/68, mbtmp3.4/2, ML3.0/2, Error ellipse: s-maj=29.4km s-min=17.2km az=49.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	1.97	278	*i*		09 18 28.5	
	baz=95,slow=328,SNR=2.4						
ZALV	**Zalesovo Beam**	1.97	278	Pg	Pn	09 06 37.0	+0.3
	2.7nm,0.3s,baz=93,slow=12,SNR=56						
ZALV				Lg	Lg	09 07 04.7	
	7.2nm,0.3s,baz=92,slow=25,SNR=19						
KURBB	**Kurchatov Arra**	6.66	246	Pn	Pn	09 07 42.1	+0.9
	0.2nm,0.3s,baz=62,slow=14,SNR=6.7						
KURBB				Lg	Lg	09 09 33.8	
	0.1nm,0.3s,baz=63,slow=34,SNR=5.0						
MKAR	**Makanchi Array**	7.87	211	Pn	Pn	09 07 59.1	+1.2
	0.3nm,0.3s,baz=33,slow=14,SNR=12						
MKAR				Lg	Lg	09 10 08.9	
	0.2nm,0.3s,baz=32,slow=31,SNR=3.4						

ISCJB ***16*** *09:18:10.6±0.8, 22°.4N±0°.1×142°.3E±0°.2, h300km, mb3.2/10, Error ellipse: s-maj=30.2km s-min=16.2km az=168.1*
IDC ***16*** *09:18:14.3±5.7, 22°.41N×142°.33E, h323km±57km, mb3.0/10, mb1 3.1/11, mb1mx2.8/63, mbtmp3.6/11, Error ellipse: s-maj=32.5km s-min=13.5km az=78.0*

ISC 16 09:18:11.9±1.0, 22°.4N±0°.2×142°.4E±0°.2, h300km, n11, σ0§43/11, mb3.2/10, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	19.52	323	P	P	09 22 18.4	+0.7
	0.2nm,0.3s,baz=141,slow=8.1,SNR=6.2						
WRA	**Warramunga Arr**	42.82	191	P	P	09 25 41.0	-0.1
	0.4nm,0.5s,baz=5.7,slow=7.6,SNR=11						
ASAR	**Alice Springs**	46.53	191	P	P	09 26 10.5	+0.3
	0.2nm,0.6s,baz=7.0,slow=8.4,SNR=3.2						
ZALV	**Zalesovo Beam**	53.22	321	P	P	09 26 59.1	-0.6
	0.6nm,0.4s,baz=112,slow=6.5,SNR=2.5						
MKAR	**Makanchi Array**	53.70	312	P	P	09 27 03.2	-0.2
	0.2nm,0.6s,baz=92,slow=10,SNR=3.5						
KURBB	**Kurchatov Arra**	56.52	317	P	P	09 27 23.1	-0.3
	0.7nm,0.5s,baz=95,slow=7.1,SNR=5.8						
BVAR	**Borovoye Array**	61.67	319	P	P	09 27 58.3	-0.2
	1.0nm,0.4s,baz=107,slow=7.7,SNR=6.3						
YKA	**Yellowknife Ar**	76.17	28	P	P	09 29 27.4	+0.4
	0.1nm,0.3s,baz=293,slow=5.5,SNR=3.8						
ARCES	**ARCESS Array B**	78.03	341	P	P	09 29 37.3	+0.1
	0.8nm,0.7s,baz=70,slow=7.8,SNR=5.6						
FINES	**FINESS Array B**	82.24	334	P	P	09 29 59.5	-0.2
	0.5nm,0.3s,baz=49,slow=4.2,SNR=8.1						
PDAR	**Pinedale Array**	87.40	45	P	P	09 30 25.7	-0.3
	0.1nm,0.4s,baz=292,slow=4.8,SNR=2.3						

IDC ***16*** *09:37:46.1±1.2, 37°.06N×27°.57E, h0km, mb3.5/3, mb1 3.5/6, mb1mx3.3/56, mbtmp3.4/6, ML3.0/3, Error ellipse: s-maj=39.9km s-min=17.8km az=154.0*
THE ***16*** *09:37:46.9, 36°.99N×27°.61E, h1km±1km, ML3.4/4, Error ellipse: s-maj=1.3km s-min=0.6km az=31.0*
ISK ***16*** *09:37:46.5, 36°.97N×27°.58E, h5km, ML3.5/21*
ISCJB ***16*** *09:37:47.7±0.3, 36°.98N±0°.02×27°.59E±0°.02, h9km±2km, mb3.4/3, Error ellipse: s-maj=3.0km s-min=2.4km az=137.8*
DDA ***16*** *09:37:47.2, 36°.99N×27°.61E, h14km, Ml3.1*
CSEM ***16*** *09:37:47.8±0.1, 36°.98N×27°.59E, h5km, ML3.1, Error ellipse: s-maj=2.2km s-min=1.9km az=39.0*
ATH ***16*** *09:37:48.1, 36°.98N×27°.55E, h28km±1km, ML3.2/10, Error ellipse: s-maj=1.7km s-min=1.1km az=234.0*

ISC 16 09:37:47.8±0.8, 36°.98N±0°.01×27°.61E±0°.01, h12km±5km, n141, σ1§02/183, mb3.4/3, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	0.16	302	*i* P	Pg	09 37 51.4	-0.1
BDRM				*i* S	Sg	09 37 54.1	+0.1
BDRM	**Kayabasi**	0.16	302	P	Pg	09 37 51.3	-0.1
BDRM				S	Sg	09 37 54.1	+0.1
DATC	**Datca-Mugla**	0.23	170	PG	Pg	09 37 51.6	-1.0
DATC				SG	Sg	09 37 56.1	+0.3
DATC	**Datca-Mugla**	0.23	170	*e*Pg	Pg	09 37 51.6	-1.0
DATC				*e*Sg	Sg	09 37 56.1	+0.3
BODT	**Bodrum**	0.25	288	PG	Pg	09 37 52.3	-0.7
BODT				SG	Sg	09 37 56.6	0.0
BODT	**Bodrum**	0.25	288	P	Pg	09 37 52.0	-1.0
BODT				S	Sg	09 37 56.8	+0.2
BODT	**Bodrum**	0.25	288	P	Pg	09 37 52.0	-1.0
BODT	**Bodrum**	0.25	288	*e*Pg	Pg	09 37 52.3	-0.7
BODT				*e*Sg	Sg	09 37 56.6	0.0
DAT	**Datca**	0.25	186	PG	Pg	09 37 52.4	-0.7
DAT				SG	Sg	09 37 56.9	+0.2
DAT	**Datca**	0.25	186	*i* P	Pg	09 37 52.7	-0.4
DAT				*i* S	Sg	09 37 57.4	+0.7
DAT	**Datca**	0.25	186	*e*Pg	Pg	09 37 52.4	-0.7
DAT	**Datca**	0.25	186	P	Pg	09 37 52.7	-0.4
DAT				*e*Sg	Sg	09 37 56.9	+0.2
DAT				S	Sg	09 37 57.4	+0.7
YKAV	**

AMGA	Amorgos Island	1.38 264	P	Pg	09 38 13.8	-0.5
KARP	Karpathos	1.48 194	PN	Pb	09 38 15.2	0.0
KARP	Karpathos	1.48 194	P	Pn	09 38 12.9	-1.4
KARP			S	Sn	09 38 32.3	-1.2
KARP			AML	AML	09 38 40.1	
	comp=N,1428μm,0.5s					
KARP			AML	AML	09 38 40.1	
	comp=E,1200μm,0.5s					
KARP	Karpathos	1.48 194	P	Pn	09 38 13.8	-0.4
KARP			S	Sn	09 38 33.1	-0.4
KARP	Karpathos	1.48 194	P	Pn	09 38 13.8	-0.4
KARP	Karpathos	1.48 194	ePn	Pb	09 38 15.2	0.0
KARP			S	Sn	09 38 33.1	-0.4
GLHS	Glhisar (BURDU	1.52 83	PN	Pb	09 38 16.4	+0.4
GLHS	Glhisar (BURDU	1.52 83	ePn	Pb	09 38 16.4	+0.4
ZEY	¨zmir	1.53 325	iP	Pb	09 38 15.6	-0.5
ZEY			iS	Sg	09 38 37.2	+0.1
GOLH	Golhisar	1.58 80	iP	Pb	09 38 17.2	+0.2
GOLH	Golhisar	1.58 80	P	Pb	09 38 17.2	+0.2
URLA	Izmir	1.59 330	PN	Pb	09 38 17.2	0.0
URLA	Izmir	1.59 330	iP	Pb	09 38 16.6	-0.6
URLA	Izmir	1.59 330	P	Pb	09 38 16.6	-0.6
URLA	Izmir	1.59 330	ePn	Pb	09 38 17.2	0.0
APE	Apeiranthos	1.67 274	PN	Pb	09 38 17.8	-0.6
APE	Apeiranthos	1.67 274	P	Pn	09 38 16.5	-0.3
APE			S	Sn	09 38 36.6	-1.6
APE			AML	AML	09 38 47.4	
	comp=N,423μm,0.4s					
APE			AML	AML	09 38 48.9	
	comp=E,620μm,0.6s					
APE	Apeiranthos	1.67 274	P	Pn	09 38 16.7	-0.1
APE	Apeiranthos	1.67 274	ePn	Pb	09 38 17.8	-0.6
APE			S	Sn	09 38 37.3	-0.9
MANT	Manisa	1.68 26	iP	Pn	09 38 18.2	+0.9
MANT	Manisa	1.68 26	P	Pn	09 38 18.2	+0.9
KULA	Kula-Manisa	1.74 28	PN	Pb	09 38 19.6	-0.1
KULA	Kula-Manisa	1.74 28	ePn	Pb	09 38 19.6	-0.1
AKAS	Kas	1.77 114	PN	Pb	09 38 19.9	-0.4
AKAS	Kas	1.77 114	iP	Pb	09 38 20.2	-0.1
AKAS			iS	Sg	09 38 47.0	+2.2
AKAS	Kas	1.77 114	ePn	Pb	09 38 19.9	-0.4
AKAS	Kas	1.77 114	P	Pb	09 38 20.2	-0.1
KSL	Kastellorizon	1.79 117	P	Pg	09 38 21.7	-0.4
KSL			S	Sg	09 38 44.7	-0.8
KSL			AML	AML	09 38 56.7	
	comp=E,563μm,0.6s					
KSL			AML	AML	09 38 59.9	
	comp=N,543μm,0.8s					
THR3	Thira Island,	1.86 253	P	Pb	09 38 22.0	+0.2
THR3	Thira Island,	1.86 253	P	Pb	09 38 20.8	-1.0
CHOS	Chios island	1.87 319	P	Pn	09 38 19.4	-0.2
CHOS			AML	AML	09 38 56.3	
	comp=N,551μm,0.6s					
CHOS			AML	AML	09 38 56.6	
	comp=E,786μm,0.5s					
CHOS	Chios island	1.87 319	P	Pn	09 38 19.7	+0.1
AKHS	Akhisar	1.90 5	iP	Pn	09 38 20.4	+0.4
AKHS	Akhisar	1.90 5	P	Pn	09 38 20.4	+0.4
THR5	Thira Island,	1.90 253	P	Pb	09 38 21.5	-1.0
THR5	Thira Island,	1.90 253	P	Pn	09 38 20.8	+0.7
DKL	Dikili	2.16 345	PN	Pb	09 38 25.3	-1.5
DKL	Dikili	2.16 345	ePn	Pb	09 38 25.3	-1.5
ZKR	Zakros	2.18 212	P	Pb	09 38 26.6	-0.6
ZKR			S	Sn	09 38 51.6	+0.8
ZKR			AML	AML	09 39 05.7	
	comp=N,248μm,0.6s					
ZKR			AML	AML	09 39 18.4	
	comp=E,402μm,0.7s					
ZKR	Zakros	2.18 212	P	Pn	09 38 25.4	+1.5
ZKR			S	Sn	09 38 51.1	+0.3
KORT	Korkueli	2.19 89	PN	Pn	09 38 25.9	+1.7
KORT	Korkueli	2.19 89	ePn	Pn	09 38 25.9	+1.7
DEMI	Demirci	2.23 23	iP	Pn	09 38 25.1	+0.3
DEMI	Demirci	2.23 23	P	Pn	09 38 25.0	+0.3
SIMA	Simav-Kutahya	2.36 27	PN	Pn	09 38 28.3	+1.8
SIMA	Simav-Kutahya	2.36 27	ePn	Pn	09 38 28.3	+1.8
KZIL	AFYON_Kizioren	2.38 57	iP	Pb	09 38 29.8	-0.8
KZIL	AFYON_Kizioren	2.38 57	P	Pb	09 38 29.8	-0.8
STEP	BALIKESIR_Sava	2.39 2	iP	Pg	09 38 33.9	+0.3
PRK	Paraskevi	2.49 335	P	Pn	09 38 27.2	-0.9
PRK			AML	AML	09 39 19.2	
	comp=N,1011μm,0.7s					
PRK			AML	AML	09 39 28.7	
	comp=E,760μm,0.8s					
PRK	Paraskevi	2.49 335	P	Pn	09 38 28.1	-0.1
SIGR	SIGRI	2.62 329	P	Pn	09 38 29.5	-0.4
SIGR	SIGRI	2.62 329	P	Pn	09 38 30.1	+0.2
BALB	Balikesir	2.66 5	PN	Pn	09 38 32.9	+2.4
BALB	Balikesir	2.66 5	ePn	Pn	09 38 32.9	+2.4
SUTC	Sutluce-Ispart	2.75 79	PN	Pn	09 38 33.9	+2.1
SUTC	Sutluce-Ispart	2.75 79	ePn	Pn	09 38 33.9	+2.1
BALY	Balya	2.75 0	iP	Pn	09 38 31.3	-0.5
BALY	Balya	2.75 0	P	Pn	09 38 31.3	-0.5
IDI	Anoyia	2.78 233	Pn	Pn	09 38 32.8	+0.7
	comp=E,1.0nm,0.3s,baz=50,slow=7.9,SNR=6.4					
IDI			Sn	Sn	09 39 07.5	+1.9
	comp=E,1.7nm,0.3s,baz=159,slow=15,SNR=4.4					
IDI	Anoyia	2.78 233	PN	Pn	09 38 33.4	+1.3
IDI	Anoyia	2.78 233	ePn	Pn	09 38 33.4	+1.3
TVSB	Tavsanli	2.86 30	PN	Pn	09 38 35.5	+2.1
TVSB	Tavsanli	2.86 30	ePn	Pn	09 38 35.5	+2.1
DION	Dionisos Attik	3.12 292	P	Pn	09 38 38.0	+1.1
DION	Dionisos Attik	3.12 292	P	Pn	09 38 37.7	+0.9
VLY	Voula,Athens	3.16 287	P	Pn	09 38 37.0	-0.3
VLY	Voula,Athens	3.16 287	P	Pn	09 38 37.5	+0.2
DID	Didima	3.53 280	P	Pn	09 38 42.9	+0.4
DID	Didima	3.53 280	P	Pn	09 38 43.0	+0.6
VLI	Veliai	3.76 267	P	Pn	09 38 45.5	-0.1
VLI	Veliai	3.76 267	P	Pn	09 38 45.8	+0.2
SMTH	Samothraki Isl	3.84 336	P	Pn	09 38 46.0	-0.7
SMTH	Samothraki Isl	3.84 336	P	Pn	09 38 47.0	+0.2
GAZI	Gazipasa	3.86 100	iP	Pn	09 38 46.8	-0.2
GAZI	Gazipasa	3.86 100	P	Pn	09 38 46.8	-0.2
ALN	Alexandroupoli	4.09 343	P	Pn	09 38 50.3	+0.2
ALN	Alexandroupoli	4.09 343	P	Pn	09 38 50.9	+0.7
DYR	Agios Nikonas	4.24 269	P	Pn	09 38 54.1	+1.9
DYR	Agios Nikonas	4.24 269	P	Pn	09 38 53.6	+1.4
DSF	Desfina	4.28 291	P	Pn	09 38 53.0	+0.2
DSF	Desfina	4.28 291	P	Pn	09 38 53.3	+0.6
BRTR	Keskin Array B	5.47 58	Pn	Pn	09 39 11.2	+1.9
	comp=E,0.3nm,0.3s,baz=241,slow=15,SNR=11					
MMAI	Mount Meron Ar	7.52 119	Pn	Pn	09 39 37.1	-0.3
	comp=E,1.1nm,0.3s,baz=308,slow=12,SNR=6.2					
MMAI			Sn	Sn	09 41 01.4	-1.2
	comp=E,1.1nm,0.3s,baz=297,slow=29,SNR=3.5					
EIL	Elat	9.53 138	Sn	Sn	09 41 50.4	-1.5
	comp=E,0.3nm,0.3s,baz=19,slow=18,SNR=3.1					
ESDC	Sonseca Array	24.85 286	P	P	09 43 09.3	-0.9
	comp=E,0.6nm,0.6s,baz=76,slow=9.2,SNR=4.3					
TORD	Torodi Ar. Bea	33.18 231	P	P	09 44 24.6	+0.2
	comp=E,1.0nm,0.8s,baz=42,slow=8.6,SNR=4.7					
MKAR	Makanchi Array	41.12 58	P	P	09 45 31.9	+0.3
	comp=E,0.3nm,0.5s,baz=286,slow=5.9,SNR=3.5					

*ATA **16** 09:55:01.3±0.8, 38°.52N×43°.97E, h15km±16km, ML2.9, MW3.1*
*DDA **16** 09:55:07.7, 38°.65N×43°.51E, h7km, Ml2.3*
*CSEM **16** 09:55:07.7, 38°.65N×43°.51E, h7km, ML2.3*

ISC 16 09:55:04.2±1.3, 38°.56N±0°.03×43°.92E±0°.05, h9km±13km, n23, σ1§52/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVAN	Van	0.40	265	iP	Pg	09 55 10.6	-1.6
TVAN	Van	0.40	265	P	Pg	09 55 10.6	-1.6
VMUR	Van-Muradiye	0.51	328	iP	Pg	09 55 14.5	+0.4
VMUR	Van-Muradiye	0.51	328	P	Pg	09 55 14.5	+0.4
CLDR	Caldiran	0.58	360	iP	Pg	09 55 15.1	-0.5
CLDR				iS	Sb	09 55 24.5	-0.6
CLDR	Caldiran	0.58	360	P	Pg	09 55 15.1	-0.5
CLDR				S	Sb	09 55 24.5	-0.6
GEVA	Gevas	0.72	250	eP	Pg	09 55 15.5	-2.7
GEVA				eS	Sg	09 55 27.8	+0.3
GEVA				IAML		09 55 37.0	
	comp=Z,28nm,0.4s						
GEVA	Gevas	0.72	250	eP	Pg	09 55 15.8	-2.3
GEVA				eS	Sg	09 55 27.9	+0.3
GEVA				IAML		09 55 37.0	
	comp=Z,28nm,0.4s						
GEVA	Gevas	0.72	250	iP	Pg	09 55 17.5	-0.6
GEVA				iS	Sg	09 55 27.9	+0.3
GEVA	Gevas	0.72	250	P	Pg	09 55 17.5	-0.6
GEVA				S	Sg	09 55 27.9	+0.3
HAKT	HAKKARI	1.02	190	iP	Pg	09 55 22.2	-1.6
HAKT				iS	Sg	09 55 39.2	+2.2
HAKT	HAKKARI	1.02	190	P	Pg	09 55 22.2	-1.6
HAKT				S	Sg	09 55 39.2	+2.2
TUTA	Tutak	1.20	315	eP	Pg	09 55 25.9	-1.4
TUTA	Tutak	1.20	315	eP	Pg	09 55 25.8	-1.6
TUTA				IAML		09 55 54.5	
	comp=Z,15nm,0.4s						
TUTA	Tutak	1.20	315	iP	Pg	09 55 25.9	-1.4
TUTA	Tutak	1.20	315	P	Pg	09 55 25.9	-1.4
IGDI	IGDIR	1.31	5	eP	Pg	09 55 26.8	-2.6
EKAR	Karacoban	1.60	296	eP	Pn	09 55 32.6	-0.3
EKAR	Karacoban	1.60	296	eP	Pn	09 55 33.1	+0.2
EKAR				eS	Sg	09 55 56.8	+0.9
EKAR				IAML		09 56 14.8	
	comp=Z,4.1nm,0.5s						
SRTM	Siirt_Merkez	1.67	251	iP	Pn	09 55 34.7	+1.0
SRTM				iS	Sg	09 56 00.7	+2.7
SRTM	Siirt_Merkez	1.67	251	P	Pn	09 55 34.7	+1.0
SRTM				S	Sg	09 56 00.6	+2.7
EATA	Eleskirt	1.71	320	eP	Pn	09 55 34.2	-0.2
EATA	Eleskirt	1.71	320	eP	Pn	09 55 35.5	+1.1

*SJA **16** 09:57:52.7±0.4, 28°.28S×70°.40W, h171km±5km, ML3.7, MW3.3*
*GUC **16** 09:57:54.2±0.5, 28°.39S×70°.24W, h65km±22km, ML3.1*

ISC 16 09:57:52.9±2.6, 28°.32S±0°.04×70°.41W±0°.06, h8km±18km, n13, σ0§87/23, 3C-2D, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	Las Campanas	0.73	200⇑	eP	Pn	09 58 10.3	+0.5
LCO				iS	Sn	09 58 22.3	+0.9
LCO				IAML		09 58 23.1	
	comp=E,993nm,0.7s						
GO03	Copiap	0.74	12⇓	eP	Pn	09 58 10.6	+0.8
GO03			⇓	iP		09 58 10.6	
GO03				eS	Sn	09 58 22.4	+1.2
GO03				eS		09 58 22.4	
GO03				IAML		09 58 22.8	
	comp=N,1μm,0.3s						
TLL	Tololo Astrono	1.87	190	eP	Pn	09 58 25.0	-0.5
TLL				iS	Sn	09 58 48.9	-0.6
TLL				IAML		09 58 57.0	
	comp=E,323nm,0.3s						
GO04	Tololo Observa	1.88	190⇑	eP	Pn	09 58 25.2	-0.3
GO04				iS	Sn	09 58 48.8	-0.8
VCA	Vinchina	1.99	103	eP	Pb	09 58 29.6	+0.1
AGUA	GUANDACOL	2.05	125	eP	Pb	09 58 30.5	+0.1
AGUA				eS	Sg	09 58 58.6	-0.1
AMOG	MOGNA	3.10	148	eP	Pn	09 58 43.2	+1.0
AMOG				eS	Sn	09 59 20.7	+1.2
GO02	Mina Guanaco	3.23	13⇑	iP	Pn	09 58 43.4	-0.8
GO02				iS	Sn	09 59 22.1	-0.9
ACLC	CERRO LA CRUZ	3.23	111	eP	Pn	09 58 45.0	+1.0
ACLC				eS	Sn	09 59 23.2	+0.3
RTLL	Cerro Villicun	3.44	151	eP	Pn	09 58 47.5	+0.6
RTLL				eS	Sn	09 59 28.2	+0.3
RTLL				IAML		09 59 35.1	
	comp=Z,788nm,0.3s						
APLL	PUNTA DE LOS L	3.97	122	eP	Pn	09 58 54.3	+0.1
APLL				eS	Sn	09 59 39.5	-1.5
APLL				IAML		09 59 45.2	
	comp=Z,15nm,0.4s						
CYA	Choya	4.07	93	eP	Pn	09 58 54.9	-0.5
MRA	San Martin	5.76	136	eP	Pn	09 59 17.5	-1.3

*ISN **16** 10:03:15.0±0.3, 37°.44N×41°.94E, h0km, ML2.9*
*CSEM **16** 10:03:16.6±0.3, 37°.55N×41°.72E, h5km, ML3.1, Error ellipse: s-maj=6.8km s-min=4.8km az=19.0*
*ISK **16** 10:03:16.6, 37°.64N×41°.72E, h9km, ML2.7/8*
*DDA **16** 10:03:17.4, 37°.61N×41°.71E, h7km, Ml3.1*

ISC 16 10:03:18.1±1.1, 37°.60N±0°.03×41°.72E±0°.02, h14km±10km, n34, σ1§59/49, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRTM	Siirt_Merkez	0.42	23	iP	Pg	10 03 25.2	-1.3
SRTM				iS	Sb	10 03 34.1	+0.4
SRTM	Siirt_Merkez	0.42	23	P	Pg	10 03 25.2	-1.3
SRTM				S	Sb	10 03 34.1	+0.4
BTMN	Batman	0.46	309	iP	Pb	10 03 26.4	-1.6
BTMN				iS	Sb	10 03 36.9	+2.2
BTMN	Batman	0.46	309	P	Pb	10 03 26.4	-1.6
SIRT	Sirnak	0.58	100	PG	Pg	10 03 28.2	-1.4
SIRT				SG	Sb	10 03 37.4	-0.9
SIRT	Sirnak	0.58	100	ePg	Pg	10 03 28.2	-1.4
SIRT				eSg	Sb	10 03 37.4	-0.9
SVAN	Silvan-Diyarba	0.69	323	PG	Pg	10 03 29.8	-1.7
SVAN				SG	Sb	10 03 39.5	-1.7
SVAN	Silvan-Diyarba	0.69	323	ePg	Pg	10 03 29.8	-1.7
SVAN				eSg	Sb	10 03 39.5	-1.7
MARD	Mardin	0.80	249	iP	Pb	10 03 33.0	-0.8
MARD				iS	Sn	10 03 47.4	+0.5
GURO	Guroymak-BITLI	0.98	15	PG	Pb	10 03 35.7	-1.2
GURO				SG	Sb	10 03 48.6	-1.1
GURO	Guroymak-BITLI	0.98	15	ePg	Pb	10 03 35.7	-1.2
GURO				eSg	Sb	10 03 48.6	-1.1
MAZI	Mazidag	1.02	262	PG	Pb	10 03 36.8	-0.8
MAZI	Mazidag	1.02	262	ePg	Pb	10 03 36.8	-0.8
DIY	Diyarbakir	1.22	284	ePn	Pn	10 03 41.5	+0.7
DYBB	Diyarbakir	1.30	286	PN	Pg	10 03 41.5	-1.6
DIYA	Diyarbakir	1.31	285	iP	Pg	10 03 42.2	-1.0
DIYA				iS	Sn	10 04 01.5	+2.2
DIYA	Diyarbakir	1.31	285	P	Pg	10 03 42.2	-1.0
HANI	Diyarbakir_Han	1.32	308	iP	Pg	10 03 41.8	-1.7
HANI				iS	Sn	10 04 01.7	+2.1
HANI	Diyarbakir_Han	1.32	308	P	Pg	10 03 41.8	-1.7
BNGL	BINGOL	1.42	342	iP	Pg	10 03 44.3	-1.2
BNGL				iS	Sg	10 04 06.7	+2.8
HAKT	HAKKARI	1.58	91	iP	Pg	10 03 47.4	-1.1
HAKT				iS	Sg	10 04 12.2	+3.1
HAKT	HAKKARI	1.58	91	P	Pg	10 03 47.4	-1.1
EKAR	Karacoban	1.67	9	iP	Pg	10 03 48.5	-1.8
EKAR				iS	Sg	10 04 17.1	+5.0
EKAR	Karacoban	1.67	9	P	Pg	10 03 48.5	-1.8
YEDI	Yedisu-Bingol	2.05	334	PN	Pn	10 03 51.8	-0.5
YEDI	Yedisu-Bingol	2.05	334	ePn	Pn	10 03 51.8	-0.5
SVRC	Sivrice-ELAZID	2.06	293	PN	Pn	10 03 52.1	-0.3
SVRC	Sivrice-ELAZID	2.06	293	ePn	Pn	10 03 52.1	-0.3
PTK	Pertek	2.24	306	PN	Pn	10 03 54.4	-0.5
PTK	Pertek	2.24	306	ePn	Pn	10 03 54.4	-0.5
URFA	Urfa	2.31	267	PN	Pn	10 03 55.7	-0.1
URFA	Urfa	2.31	267	ePn	Pn	10 03 55.7	-0.1
MALT	Malatya	2.70	286	PN	Pn	10 04 01.1	0.0
MALT	Malatya	2.70	286	ePn	Pn	10 04 01.1	0.0

IDC 16 10:06:07.2±1.8, 5°.98S×11°.24W, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.6/55, mbtmp3.8/7, MS3.4/14, Ms1 3.4/14, ms1mx3.1/52, Error ellipse: s-maj=120.8km s-min=23.4km az=104.0, Ascension Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	ASCENSION HYDR 3.71 240			T	T	10 10 34.5	
	baz=55,slow=74,SNR=846						
H10N1	ASCENSION HYDR 3.72 240			T	T	10 10 50.6	
	baz=55,slow=74,SNR=504						
H10N3	ASCENSION HYDR 3.73 240			T	T	10 10 35.9	
	baz=55,slow=74,SNR=1054						
H10S1	ASCENSION HYDR 4.49 229			T	T	10 11 43.9	
	baz=47,slow=74,SNR=331						
H10S2	ASCENSION HYDR 4.49 229			T	T	10 11 52.1	
	baz=47,slow=74,SNR=424						
H10S3	ASCENSION HYDR 4.50 229			T	T	10 12 00.3	
	baz=47,slow=74,SNR=297						
DBIC	Dimbokro	14.09	27	LR	LR	10 13 49.8	
	comp=Z,124nm,20.8s,baz=186,slow=33						
KOWA	Kowa	21.57	19	P	P	10 10 58.1	-0.4
	4.1nm,0.8s,baz=195,slow=10,SNR=5.8						
KOWA				LR	LR	10 18 37.5	
	comp=Z,131nm,18.1s,baz=221,slow=35						
TORD	Torodi Ar. Bea	22.93	34	P	P	10 11 12.3	-0.8
	5.4nm,1.0s,baz=225,slow=9.7,SNR=13						
TORD				LR	LR	10 19 07.5	
	comp=Z,129nm,19.5s,baz=225,slow=34						
MDT	Midelt	39.09	9	LR	LR	10 29 12.3	
	comp=Z,73nm,18.4s,baz=165,slow=35						
BOSA	Boshof	41.21	127	LR	LR	10 28 37.4	
	comp=Z,40nm,18.5s,baz=219,slow=33						
CPUP	Villa Florida	48.34	240	LR	LR	10 33 26.6	
	comp=Z,35nm,18.5s,baz=66,slow=34						
LPAZ	La Paz	56.59	255	LR	LR	10 39 55.3	
	comp=Z,31nm,18.1s,baz=84,slow=36						
GERES	GERESS Array B	58.79	19	P	P	10 16 07.3	0.0
	0.4nm,0.6s,baz=195,slow=7.1,SNR=4.0						
GERES				LR	LR	10 42 11.1	
	comp=Z,35nm,19.5s,baz=262,slow=37						
BRTR	Keskin Array B	61.46	38	P	P	10 16 26.6	+0.7
	0.4nm,0.7s,baz=224,slow=4.0,SNR=2.6						
PLCA	Paso Flores	63.06	227	LR	LR	10 41 24.1	
	comp=Z,16nm,18.9s,baz=128,slow=34						
ROSC	El Rosal	63.89	278	LR	LR	10 44 03.2	
	comp=Z,40nm,19.0s,baz=108,slow=36						
SNAA	Sanae	65.83	177	P	P	10 16 53.9	-0.2
	2.0nm,1.0s,baz=348,slow=8.2,SNR=4.2						
AKASG	Malin Array Be	66.33	27	P	P	10 16 57.7	+0.2
	0.8nm,0.5s,baz=231,slow=7.2,SNR=4.8						
HFS	Hagfors	68.78	13	LR	LR	10 49 11.8	
	comp=Z,26nm,18.1s,baz=177,slow=38						
GNI	Garni	68.89	43	LR	LR	10 49 15.0	
	comp=Z,22nm,20.0s,baz=238,slow=38						
NOA	NORSAR Array B	69.08	11	LR	LR	10 50 05.7	
	comp=Z,10.0nm,19.0s,baz=195,slow=38						
FINES	FINESS Array B	73.18	18	P	P	10 17 39.6	+0.1
	0.7nm,0.7s,baz=270,slow=2.8,SNR=2.7						
JTS	JuntasAbangare	75.16	282	LR	LR	10 49 39.9	
	comp=Z,34nm,20.8s,baz=186,slow=35						

*CSEM **16** 10:34:22.4, 14°.65N×43°.25E, h3km, ML3.5*

DHMR 16 10:34:22.4±1.2, 14°.65N×43°.25E, h4km±6km, ML3.5, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UDYN	Al 'Udayn	0.97	134	iP	Pg	10 34 40.9	-0.2
UDYN				iS	Sb	10 34 55.1	-0.1
DHBB	Dhamar BB	1.11	94	iP	Pg	10 34 43.9	+0.2
DHBB				iS	Sb	10 34 59.5	+0.1
DHBB				AML	AML	10 35 03.5	
	comp=N,633nm,0.5s						
DHBB	Dhamar BB	1.11	94	iP	Pg	10 34 43.9	+0.2
DHBB				iS	Sb	10 34 59.5	+0.1
	comp=N,317nm,0.5s						
SANA	San'a	1.18	51	iS	Sb	10 35 01.7	+0.3
SANA				AML	AML	10 35 03.4	
	comp=E,4μm,0.5s						
LBOS		2.09	111	iP	Pn	10 34 59.2	+0.7
LBOS				iS	Sg	10 35 28.7	-1.0
BDHA	Al Bayda'	2.35	106	iP	Pb	10 35 04.1	-1.4
BDHA				iS	Sg	10 35 36.8	-1.1
BDHA				AML	AML	10 35 37.7	
	comp=E,189nm,0.3s						
BDHA	Al Bayda'	2.35	106	iP	Pb	10 35 04.1	-1.4
BDHA				iS	Sg	10 35 36.8	-1.1
	comp=E,94nm,0.3s						

NEIC 16 10:36:48.0±0.0, 14°.00S×76°.14W, h56km, ML4.2(ARE), After ARE., Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	Nana	2.11	341	ePn	Pn	10 37 23.6	+2.5
NNA				eSn	Sn	10 37 49.3	+3.0
LPAZ	La Paz	8.06	107	ePn	Pn	10 38 50.0	+6.9
MNMC	Minye Minye	8.09	130	ePn	Pn	10 38 44.7	+1.6
MNMC				eSn	Sn	10 40 16.7	+3.4
PB01	IPOC Station P	9.45	139	ePn	Pn	10 39 02.6	+1.1
PB01				eSn	Sn	10 40 43.8	-2.7
FRD	Ford Ranch, An	60.98	322	eP	P	10 46 51.6	-4.3
GATR	Gnd/Air Tx Cnt	64.08	320	eP	P	10 47 12.4	-4.0
SCHQ	Schefferville	69.02	6	eP	P	10 47 46.9	-0.5

*ISCJB **16** 10:37:53.2±0.3, 51°.86N±0°.04×170°.50W±0°.03, h10km, mb4.5/88, MS3.7/27, Error ellipse: s-maj=6.6km s-min=2.6km az=163.6*
*IDC **16** 10:37:53.0±0.6, 51°.98N×170°.52W, h0km, mb4.3/36, mb1 4.4/38, mb1mx4.3/82, mbtmp4.3/38, ML3.8/2, MS3.5/23, Ms1 3.5/23, ms1mx3.2/76, Error ellipse: s-maj=18.2km s-min=10.5km az=176.0*
*MOS **16** 10:37:55.5±0.9, 51°.95N×170°.51W, h27km, mb4.8/32, Error ellipse: s-maj=9.9km s-min=6.3km az=95.1*
*NEIC **16** 10:37:56.1±0.0, 51°.77N×170°.36W, h28km, mb4.4/53, ML3.8(AEIC), After AEIC.*

ISC 16 10:37:54.9±1.3, 51°.94N±0°.08×170°.50W±0°.04, h10km±7km, n247, σ1§35/239, mb4.5/87, MS3.6/27, 10C-5D, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKH	Nikolski High	1.44	44	P	Pn	10 38 20.9	-0.1
NIKH				S	Sb	10 38 40.6	+0.5
OKTU	Okmok Mt. Tuli	2.08	45	P	Pn	10 38 30.7	+0.9
OKAK	Okmok	2.09	38	P	Pn	10 38 29.7	-0.2
OKER	Okmok East Rim	2.12	43	P	Pn	10 38 32.0	+1.5
KOFP	Korovin Flat P	2.25	280	P	Pn	10 38 33.8	+1.7
ATKA	Atka Island	2.30	278	P	Pn	10 38 33.5	+0.8
ATKA				S	Sn	10 39 02.6	+1.6
KOKL	Mount Kliuchef	2.32	281	P	Pn	10 38 35.0	+1.9
KOWE	Korovin West	2.35	282	P	Pn	10 38 35.8	+2.2
MREP	Makushin Rep't	2.94	49	P	Pn	10 38 42.8	+1.1
MCIR	Makushin Cirqu	2.97	46	P	Pn	10 38 43.6	+1.6
MSW	Makushin Switc	2.99	47	P	Pn	10 38 43.2	+0.9
MTBL	Makushin Table	3.08	47	P	Pn	10 38 44.3	+0.8
UNV	Unalaska Valle	3.08	50	P	Pn	10 38 44.0	+0.5
UNV				S	Sn	10 39 21.7	+1.4
GSTR	Great Sitkin T	3.

COLA **College** 17.43 33 *e*Pn P 10 41 59.8 +0.8
comp=Z,8.0nm,0.8s
COLA **College** 17.43 33 *e*P P 10 41 59.8 +0.8
COLA pmax pmax
comp=Z,8.0nm,0.8s
IL1 **Eielson Array** 17.70 34 *e*Pn P 10 42 05.9 +3.9
ILAR **Eielson Array** 17.70 34 P Pn 10 42 00.2 -0.9
comp=Z,0.2nm,0.3s,baz=229,slow=10.0,SNR=12
ILB **Eielson Array** 17.70 34 *e*Pn P 10 42 02.6 +0.6
RIDG **Independ'e Rid** 17.90 39 *e*Pn P 10 42 13.0 +8.8
comp=Z,43nm,1.8s
COLD **Coldfoot** 18.30 25 *e*P P 10 42 10.5 +2.0
comp=Z,3.6nm,0.8s
PET **Petropavlovsk** 18.75 286‖ *e*P Pn 10 42 14.5 +0.4
PET pmax pmax
comp=Z,16nm,1.0s
PEA0B **Petropavlovsk-** 19.31 286 *e*P Pn 10 42 20.6 -0.3
comp=Z,69nm,1.4s
PETK **Petropavlovsk-** 19.31 286 P P 10 42 20.2 +0.5
comp=Z,2.2nm,0.3s,baz=81,slow=14,SNR=30
PETK **Petropavlovsk-** 19.31 286 *e*P Pn 10 42 20.6 -0.2
PETK **Petropavlovsk-** 19.31 286 *e*P Pn 10 42 20.6 -0.2
FYU **Fort Yukon** 19.32 31 *e*P Pn 10 42 21.4 +0.6
comp=Z,23nm,1.4s
TOLK **Toolik Lake Re** 19.51 23 *e*P Pn 10 42 23.3 +0.1
comp=Z,9.2nm,0.8s
BILL **Bilibino** 19.67 334 *e*P Pn 10 42 25.5 +0.5
comp=Z,8.9nm,0.7s
BILL **Bilibino** 19.67 334 *e*P Pn 10 42 25.5 +0.5
BILL pmax pmax
comp=Z,9.0nm,0.7s
EGAK **Eagle** 19.81 38 *e*P Pn 10 42 26.5 -0.1
comp=Z,6.7nm,0.6s
DAWY **Dawson** 20.21 41 *e*P P 10 42 29.6 +0.1
comp=Z,15nm,1.4s
SKAG **Skagway** 20.99 55 *e*P P 10 42 39.1 +1.2
comp=Z,40nm,1.0s
SEY **Seymchan** 22.46 314 P P 10 42 53.9 +0.2
comp=Z,5.0nm,0.7s,baz=113,slow=9.5,SNR=21
SEY PcP PcP 10 46 47.4 -0.1
comp=Z,1.6nm,0.7s,baz=132,slow=4.0,SNR=3.7
SEY **Seymchan** 22.46 314‖ *e*P P 10 42 54.2 +0.5
MA2 **Magadan** 22.81 305 P P 10 42 57.9 +0.4
comp=Z,11nm,0.7s,baz=102,slow=9.5,SNR=9.1
MA2 LR LR 10 53 09.0
comp=Z,121nm,18.1s,baz=98,slow=40
MA2 **Magadan** 22.81 305 *e*P P 10 42 58.4 +0.9
comp=Z,15nm,1.1s
MA2 **Magadan** 22.81 305 *i* P P 10 42 58.7 +1.2
MA2 pmax pmax
comp=Z,9.0nm,1.0s
DLBC **Dease Lake** 23.70 58 P P 10 43 08.7 +2.1
comp=Z,12nm,1.1s,baz=265,slow=12,SNR=9.2
DLBC **Dease Lake** 23.70 58 *e*P P 10 43 09.5 +2.9
comp=Z,20nm,1.1s
INK **Inuvik** 24.09 33 P P 10 43 09.0 -1.0
comp=Z,6.3nm,0.6s,baz=248,slow=7.2,SNR=31
INK **Inuvik** 24.09 33 *e*P P 10 43 10.0 0.0
comp=Z,33nm,1.5s
INK **Inuvik** 24.09 33 *e*P P 10 43 10.0 0.0
INK pmax pmax
comp=Z,33nm,1.5s
YSS **Yuzh-Sakhalins** 30.38 279 *e*P P 10 44 08.5 +1.8
F03A **Seaside** 30.97 82 *e*P P 10 44 13.9 +2.0
comp=Z,44nm,1.8s
YKW3 **Yellowknife Ar** 31.03 48 *e*P P 10 44 12.2 -0.1
YKW3 *e*pP pP 10 44 13.1 -2.3
YKA **Yellowknife Ar** 31.05 48 P P 10 44 12.7 +0.3
comp=Z,1.7nm,0.5s,baz=272,slow=7.8,SNR=23
YKA LR LR 10 59 17.1
comp=Z,13nm,19.4s,baz=272,slow=41
ASAJ **Asahikawa** 31.85 275 P P 10 44 19.7 0.0
comp=Z,6.0nm,0.8s,baz=67,slow=7.7,SNR=6.5
ASAJ **Asahikawa** 31.85 275 *e*P P 10 44 19.6 -0.1
comp=Z,9.1nm,0.9s
TIXI **Tiksi** 32.75 329 P P 10 44 27.0 -0.3
comp=Z,0.8nm,0.3s,baz=122,slow=12,SNR=4.4
TIXI PcP PcP 10 47 11.3 -0.9
comp=Z,2.9nm,0.9s,baz=87,slow=3.0,SNR=5.4
TIXI **Tiksi** 32.75 329‖ *e*P P 10 44 27.3 +0.1
TIXI pmax pmax
comp=Z,1.0nm,0.9s
YAK **Yakutsk** 32.93 311 *e*P P 10 44 24.8 -4.2
YAK *e* 10 47 11.5
YAK *e* 10 54 47.4
YAK pmax pmax
comp=Z,12nm,1.0s
YAK pmax pmax
comp=E,4.0nm,1.3s
KLR **Kul'dur** 35.95 289 P P 10 44 54.0 -1.2
comp=E,0.3nm,0.9s,baz=58,slow=8.2,SNR=6.4
KLR **Kul'dur** 35.95 289 P P 10 44 54.0 -1.2
H11N2 **WAKE ISLAND Hy** 36.69 217 T T 11 24 35.4
baz=23
H11N3 **WAKE ISLAND Hy** 36.70 217 T T 11 24 29.2
baz=23
H11N1 **WAKE ISLAND Hy** 36.71 217 T T 11 24 28.6
baz=23
PAHR **Pah Rah Range** 36.91 89 *e*P P 10 45 06.3 +2.5
comp=E,6.1nm,1.3s
RES **Resolute Bay** 37.06 25 P P 10 45 03.6 -0.8
comp=E,8.9nm,1.4s,baz=270,slow=15,SNR=4.6
RES PcP PcP 10 47 24.9 +0.3
comp=E,1.8nm,0.9s,baz=284,slow=4.2,SNR=3.0
H11S1 **WAKE ISLAND Hy** 37.88 217 T T 11 26 14.0
baz=23,slow=76,SNR=3.9
H11S2 **WAKE ISLAND Hy** 37.89 217 T T 11 26 06.0
baz=23,slow=76,SNR=5.2
H11S3 **WAKE ISLAND Hy** 37.90 217 T T 11 25 52.8
baz=23,slow=76,SNR=3.5
MCMT **McKenzie Canyo** 38.05 77 *e*P P 10 45 17.0 +3.6
NVAR **Mina Array Bea** 38.35 90 P P 10 45 16.6 +0.5
comp=E,0.8nm,0.8s,baz=282,slow=7.3,SNR=3.9
MJAR **Matsushiro Arr** 38.98 267 P P 10 45 20.8 -0.3
comp=E,3.0nm,1.0s,baz=45,slow=7.6,SNR=6.1
MJAR PcP PcP 10 47 30.6 -0.7
comp=E,2.2nm,0.8s,baz=235,slow=1.1,SNR=7.0
MAJO **Matsushiro** 38.99 267⇑ *i*P P 10 45 21.7 +0.6
MAJO pmax pmax
comp=Z,8.0nm,1.1s
FFC **Flin Flon** 39.54 58 *e*P P 10 45 25.8 +0.3
comp=Z,4.5nm,1.1s
FFC **Flin Flon** 39.54 58 *e*P P 10 45 25.8 +0.3
FFC pmax pmax
comp=Z,5.0nm,1.1s
MSHR **Mys Shultsa** 39.70 280⇑ *e*P P 10 45 26.0 -1.0
R11A **Troy Canyon, C** 40.09 88 *e*P P 10 45 31.0 +0.5
comp=Z,3.0nm,1.1s
FOXC **Fox Airport** 40.75 94 *e*P P 10 45 35.2 -0.6
PSUT **Pine Spring** 41.04 86 *e*P P 10 45 43.4 +5.0
comp=Z,3.5nm,1.0s
PD31 **Pinedale Array** 41.17 78 *e*P P 10 45 39.9 +0.4
PDAR **Pinedale Array** 41.17 78 P P 10 45 39.6 +0.2
comp=Z,0.6nm,0.5s,baz=298,slow=3.2,SNR=6.0
PDAR **Pinedale Array** 41.17 78 *e*P P 10 45 39.0 -0.4
FCC **Fort Churchill** 41.75 50 *e*P P 10 45 44.2 +0.6
comp=Z,15nm,1.0s
FCC **Fort Churchill** 41.75 50 *e*P P 10 45 44.2 +0.6
FCC pmax pmax
comp=Z,15nm,1.0s
SVD **Seven Oaks Dam** 41.87 94 *e*P P 10 45 45.1 +0.1
P18A **Preston Nutter** 42.60 82 *e*P P 10 45 55.4 +4.2
comp=Z,5.0nm,1.0s
O20A **White River Ci** 43.52 80 *e*P P 10 45 58.1 -0.4
comp=Z,6.8nm,1.0s
PV03 **Paradox Valley** 44.30 83 *e*P P 10 46 05.8 +0.9
comp=Z,6.2nm,1.1s
WUAZ **Wupatki** 44.49 88 *e*P P 10 46 06.9 +0.6
comp=Z,6.4nm,1.0s
PV01 **Paradox Valley** 44.55 83 *e*P P 10 46 07.0 +0.2
comp=Z,9.4nm,1.5s
KSRS **Korea Array** 44.76 276 P P 10 46 08.6 +0.4
comp=Z,3.8nm,0.9s,baz=54,slow=7.6,SNR=14
KS01 **Wonju Array Si** 44.77 276 *e*P P 10 46 08.0 -0.3
KSAR **Wonju Array Be** 44.80 276 P P 10 46 08.6 +0.1
KSAR **Wonju Array Be** 44.80 276 P P 10 46 08.6 +0.1
ULM **Lac du Bonnet** 44.96 61 P P 10 46 09.3 -0.5
comp=Z,2.2nm,0.5s,baz=303,slow=8.5,SNR=5.6
ULM LR LR 11 06 33.9
comp=Z,84nm,18.6s,baz=300,slow=38
TJN **Taejon** 45.80 276 *de*P P 10 46 16.7 +0.2
S22A **4UR Ranch, Cre** 45.86 82 *e*P P 10 46 19.1 +1.8
comp=Z,12nm,1.6s
NRIK **Noril'sk** 46.47 331 LR LR 11 07 47.4
comp=Z,42nm,18.6s,baz=75,slow=39
TUC **Tucson** 46.99 90 *e*P P 10 46 26.4 +0.4
comp=Z,5.4nm,1.1s
TUC **Tucson** 46.99 90 *e*P P 10 46 26.4 +0.4
TUC pmax pmax
comp=Z,5.0nm,1.1s
D34A **Park Rapids** 47.10 64 *e*P P 10 46 26.6 -0.1
comp=Z,10nm,0.6s
KSCO **Kaye Shedlock'** 47.62 78 *e*P P 10 46 29.9 -1.1
comp=Z,55nm,1.5s
LAZ **Ladron** 47.84 86 *e*P P 10 46 34.0 +1.2
ANMO **Albuquerque** 47.90 85 P P 10 46 34.0 +0.8
comp=Z,2.1nm,1.1s,baz=19,slow=5.3,SNR=4.5
ANMO **Albuquerque** 47.90 85 *e*P P 10 46 33.3 +0.1
comp=Z,6.3nm,1.4s
ANMO **Albuquerque** 47.90 85⇑ *e*P P 10 46 33.0 -0.2
ANMO pmax pmax
comp=Z,4.0nm,1.2s
EYMN **Ely** 48.64 62 *e*P P 10 46 38.0 -0.5
comp=Z,5.0nm,1.0s
FRB **Frobisher Bay** 49.73 35 P P 10 46 47.6 +1.0
FRB pmax pmax
comp=Z,26nm,0.9s
TLY **Talaya** 50.03 306 *e*P P 10 46 49.6 +0.5
TLY pmax pmax
comp=Z,15nm,1.1s
SPITS **Spitsbergen Ar** 50.08 358 P P 10 46 48.7 -0.5
comp=Z,3.1nm,0.7s,baz=44,slow=4.9,SNR=7.5
SPITS LR LR 11 09 38.8
comp=Z,75nm,18.3s,baz=275,slow=38
DAG **Danmarks Havn** 50.32 8‖ *i*P P 10 46 50.1 -0.8
comp=Z,8.9nm,0.7s
DAG **Danmarks Havn** 50.32 8 P P 10 46 50.4 -0.5
DAG pmax pmax
comp=Z,13nm,1.0s
ULN **Ulaanbaatar** 50.55 300 *c i*P P 10 46 52.9 -0.4
ULN pmax pmax
comp=Z,5.0nm,1.0s
MNTX **Cornudas Mount** 50.75 87 *e*P P 10 46 55.2 +0.3
comp=Z,3.5nm,1.0s
SONA1 **Songino Array** 50.91 301 *e*P P 10 46 55.7 -0.3
SONM **Songino Array** 50.92 300 P P 10 46 55.9 -0.2
comp=Z,2.8nm,0.8s,baz=48,slow=7.5,SNR=14
SONM LR LR 11 08 20.6
comp=Z,45nm,21.6s,baz=48,slow=36
ZAK **Zakamensk** 50.99 305 *e*P P 10 46 55.4 -1.1
ZAK pmax pmax
comp=Z,7.0nm,1.2s
I39A **Houston** 51.11 66 *e*P P 10 46 59.3 +1.9
comp=Z,4.8nm,0.8s
F41A **Three Lakes** 51.28 63 *e*P P 10 46 58.7 0.0
comp=Z,7.7nm,1.2s
SUMG **Summit** 51.39 17 *i* P P 10 47 00.5 +0.9
comp=Z,14nm,1.0s
SUMG **Summit** 51.39 17 *e*P P 10 47 00.1 +0.5
comp=Z,14nm,1.0s
SUMG **Summit** 51.39 17 *e*P P 10 47 00.1 +0.5
SUMG pmax pmax
comp=Z,14nm,1.0s
HHC **Hu-ho-hao-te** 52.42 291 *e*P P 10 47 06.6 -0.8
HHC pP sP 10 47 16.5 +4.6
HHC sP pP 10 47 20.5 +10
HHC S S 10 54 28.0 -5.3
HHC sS sS 10 54 44.3 +5.7
HHC pmax pmax
comp=Z,27nm,0.9s
HHC pmax pmax
comp=Z,94nm,4.7s
HHC LR LR
comp=N,100nm,13.8s
HHC LR LR
comp=E,110nm,14.7s
HHC LR LR
comp=Z,200nm,16.4s
SFJD **Kangerlussuaq** 53.06 25 LR LR 11 11 51.8
comp=Z,58nm,20.0s,baz=332,slow=38
LPIG **La Paz** 53.12 98 LR LR 11 05 52.9
comp=Z,23nm,19.0s,baz=196,slow=32
TX31 **Lajitas Ar. Si** 53.45 88 *e*P P 10 47 14.8 -0.2
TXAR **Lajitas Array** 53.45 88 P P 10 47 14.8 -0.3
comp=Z,3.2nm,0.9s,baz=297,slow=5.5,SNR=35
HVS **Khovu-Aksy** 55.22 310‖ *e*P P 10 47 27.9 +0.3
HVS pmax pmax
comp=Z,18nm,0.9s
SCHQ **Schefferville** 56.22 43 P P 10 47 34.6 -0.1
comp=Z,5.9nm,0.8s,baz=346,slow=7.8,SNR=6.1
SCHQ LR LR 11 14 42.0
comp=Z,141nm,18.2s,baz=342,slow=39
SCHQ **Schefferville** 56.22 43 *e*P P 10 47 35.2 +0.5
comp=Z,13nm,0.9s
SADO **Sadowa** 57.26 58 LR LR 11 12 44.8
comp=Z,67nm,19.3s,baz=326,slow=36
ZALV **Zalesovo Beam** 57.27 317 P P 10 47 41.2 -0.9
comp=Z,1.1nm,0.5s,baz=46,slow=3.3,SNR=3.6
ZALV PcP PcP 10 48 36.4 +0.1
comp=Z,2.5nm,0.6s,baz=58,slow=3.0,SNR=7.1
ZALV LR LR 11 13 43.6
comp=Z,47nm,19.4s,baz=70,slow=38
ARCES **ARCESS Array B** 58.27 353 P P 10 47 48.0 -0.9
comp=Z,3.0nm,0.7s,baz=17,slow=8.6,SNR=11
ARCES LR LR 11 12 55.8
comp=Z,44nm,21.5s,baz=3.5,slow=36
XAN **Xi'an** 58.55 286 P P 10 47 50.6 -0.9
XAN pP sP 10 47 59.3 +3.3
XAN pmax pmax
comp=Z,11nm,1.3s
GTA **Gaotai** 60.05 297 P P 10 48 04.0 +2.1
GTA pP pP 10 48 09.3 +4.1
GTA sP sP 10 48 12.6 +6.2
GTA S S 10 56 17.5 +2.9
GTA pmax pmax
comp=Z,8.0nm,1.0s
GTA pmax pmax
comp=Z,76nm,5.4s
GTA LR LR
comp=N,99nm,18.4s
GTA LR LR
comp=E,130nm,19.0s
GTA LR LR
comp=Z,200nm,18.1s
LZH **Lanzhou** 60.10 291 *e*P P 10 48 02.3 0.0
LZH pP sP 10 48 12.8 +6.0
LZH sP pP 10 48 17.4 +12
LZH *e*PP PP 10 50 13.5 -1.0
LZH pmax pmax
comp=Z,17nm,1.0s
LZH pmax pmax
comp=Z,51nm,6.0s
LZH LR LR
comp=N,310nm,17.2s
LZH LR LR
comp=E,220nm,17.2s
LZH LR LR
comp=Z,430nm,18.6s
TMCR **Tamitsa** 62.12 346 *e*P P 10 48 14.5 -0.8
TMCR pmax pmax
comp=Z,13nm,0.8s
KURK **Kurchatov** 62.23 318 *e*P P 10 48 15.9 -0.4
comp=Z,6.0nm,0.8s
KURK **Kurchatov** 62.23 318 *c i*P P 10 48 15.5 -0.8
KURK pmax pmax
comp=Z,9.0nm,1.2s
KURBB **Kurchatov Arra** 62.34 318 P P 10 48 16.5 -0.5
comp=Z,5.2nm,0.9s,baz=46,slow=6.5,SNR=29
OUL **Oulu** 62.62 352 P P 10 48 18.9 +0.2
OUL pmax pmax
comp=Z,12nm,1.2s
PRGR **Permogore** 63.18 342 *e*P P 10 48 21.1 -1.3
PRGR pmax pmax
comp=Z,8.0nm,0.6s
WMQ **Urumqi** 63.24 307 P P 10 48 23.5 +0.2
WMQ pmax pmax
comp=Z,32nm,0.9s
WMQ LR LR
comp=N,290nm,26.3s
WMQ LR LR
comp=E,450nm,28.7s
MK31 **Makanchi Array** 63.59 313 *e*P P 10 48 24.9 -0.6
MK31 **Makanchi Array** 63.59 313 *e*P P 10 48 24.9 -0.6
MKAR **Makanchi Array** 63.59 313 P P 10 48 24.5 -0.9
comp=E,3.3nm,0.8s,baz=53,slow=6.7,SNR=22
MKAR **Makanchi Array** 63.59 313 *e*P P 10 48 24.9 -0.6
comp=E,22nm,0.9s
MKAR **Makanchi Array** 63.59 313 *e*P P 10 48 24.9 -0.6
MKAR pmax pmax
comp=Z,22nm,0.9s
MK01 **Makanchi Array** 63.61 313 *e*P P 10 48 24.3 -1.3
BVAR **Borovoye Array** 63.65 324 P P 10 48 25.5 -0.2
comp=Z,5.4nm,0.5s,baz=58,slow=6.1,SNR=36
BRVK **Borovoye** 63.66 324 *e*P P 10 48 25.8 +0.1
comp=Z,5.4nm,0.8s
BRVK **Borovoye** 63.66 324 *ce*P P 10 48 25.3 -0.4
BRVK pmax pmax
comp=Z,9.0nm,1.2s
MAKZ **Makanchi** 63.72 313 *e*P P 10 48 25.6 -0.7
comp=Z,3.0nm,0.8s
MAKZ **Makanchi** 63.72 313 *e*P P 10 48 25.6 -0.7
MAKZ pmax pmax
comp=Z,3.0nm,0.8s
JOF **Joensuu** 64.20 349 P P 10 48 29.1 0.0
JOF pmax pmax
comp=Z,11nm,1.1s
ARU **Arti** 64.68 332 P P 10 48 32.0 -0.4
comp=Z,5.3nm,0.5s,baz=301,slow=5.9,SNR=9.0
ARU **Arti** 64.68 332 *e*P P 10 48 32.2 -0.2
comp=Z,7.0nm,0.7s
ARU **Arti** 64.68 332 *c i*P P 10 48 31.8 -0.6
ARU 10 50 50.8
ARU S S 10 57 11.7 -0.4
ARU pmax pmax
comp=Z,8.0nm,0.8s
KLMR **Klimovskoe** 65.01 344 *e*P P 10 48 30.7 -3.7
KLMR pmax pmax
comp=Z,11nm,1.2s
KLMR **Klimovskoe** 65.01 344 *e*P P 10 48 30.8 -3.7
KLMR AMP 10 48 34.4
comp=Z,11nm,1.2s
GYA **Guiyang** 65.34 282 *e*P P 10 48 38.0 +0.7
GYA pmax pmax
comp=Z,10.0nm,1.0s
FINES **FINESS Array B** 66.19 351 P P 10 48 41.0 -1.1
comp=Z,5.7nm,0.9s,baz=28,slow=8.6,SNR=14
FINES LR LR 11 21 32.5
comp=Z,32nm,18.0s,baz=358,slow=40
FINES **FINESS Array B** 66.19 351 *i* P P 10 48 41.5 -0.6
FINES pmax pmax
comp=Z,6.0nm,0.9s
OTUK **Ortayu** 66.72 320 P P 10 48 45.7 -0.1
OTUK pmax pmax
comp=Z,6.0nm,1.0s
NB2 **NORSAR Subarra** 67.36 359 PKP P 10 48 48.6 -1.0
comp=Z,1.1nm,0.7s,baz=2.1,slow=3.1
NOA **NORSAR Array B** 67.36 359 LR LR 11 20 42.2
comp=Z,26nm,18.2s,baz=5.0,slow=38
HFS **Hagfors** 68.23 358 P P 10 48 54.3 -0.7
comp=Z,2.2nm,0.5s,baz=9.1,slow=3.6,SNR=26
DAV **Davao City (W)** 68.53 253 LR LR 11 14 50.0
comp=Z,41nm,20.0s,baz=204,slow=32
VSU **Vasula** 69.06 350 *de*P P 10 49 00.1 -0.1
VSU pmax pmax
comp=Z,64nm,2.5s
AKTO **Aktyubinsk** 70.03 329 P P 10 49 06.0 -0.4
comp=Z,11nm,0.7s,baz=44,slow=6.6,SNR=49
AKTO **Aktyubinsk** 70.03 329 P P 10 49 06.0 -0.4
FRU **Bishkek** 70.10 315 *e*P P 10 49 07.0 0.0
FRU *e* 10 49 30.0
AAK **Ala-Archa** 70.31 315 P P 10 49 08.0 -0.4
comp=Z,5.6nm,0.6s,baz=73,slow=7.6,SNR=6.8
NRN **Naryn** 70.60 313 *e*P P 10 49 11.1 +0.7
NRN **Naryn** 70.60 313 *e*P P 10 49 11.1 +0.7
MNAS **Manas** 71.30 316 P P 10 49 15.0 +0.6
MNAS pmax pmax
comp=Z,5.0nm,0.9s
PPT **Papeete** 71.58 159 LR LR 11 14 17.1
comp=Z,55nm,20.5s,baz=120,slow=30
EKA **Eskdalemuir Ar** 72.58 8 P P 10 49 21.6 -0.1
comp=Z,1.1nm,0.6s,baz=360,slow=4.5,SNR=6.7
SFK **Sufi-Kurgan** 72.87 314 P P 10 49 24.5 +0.5
SFK pmax pmax
comp=Z,6.0nm,1.2s
TAPN **Taplejung** 75.74 296 *e*P P 10 49 41.5 +0.5
CMAR **Chiang Mai Arr** 76.03 282 P P 10 49 42.6 +0.3
comp=Z,3.7nm,0.7s,baz=26,slow=6.5,SNR=16
CMAR LR LR 11 24 16.3
comp=Z,22nm,20.6s,baz=260,slow=37
GUN **Gumba** 76.31 298 *e*P P 10 49 44.3 0.0
comp=Z,19nm,0.3s
JIRN **Jiri** 76.34 297 *e*P P 10 49 44.7 +0.2
comp=Z,34nm,0.4s
AKASG **Malin Array Be** 76.38 347 P P 10 49 42.5 -1.4
comp=Z,0.9nm,0.4s,baz=14,slow=5.7,SNR=12
AKASG LR LR 11 30 06.5
comp=Z,34nm,18.1s,baz=30,slow=41
AKASG **Malin Array Be** 76.38 347 *i* P P 10 49 42.7 -1.1
AKASG pmax pmax
comp=Z,1.0nm,0.3s
KIEV **Kiev** 76.39 347 *de*P P 10 49 42.9 -1.0
KIEV pmax pmax
comp=Z,5.0nm,1.0s
RAMN **Ramite** 76.67 297 *e*P P 10 49 45.8 -0.4
KKN **Kakani** 76.73 298 *e*P P 10 49 46.3 -0.2
GKN **Gorkha** 76.92 299 *e*P P 10 49 47.3 -0.2
comp=Z,20nm,0.7s
DMN **Daman** 76.97 298 *e*P P 10 49 48.0 +0.1
CLL **Collm** 77.08 358 *e*P P 10 49 45.0 -2.8
CLL *es*P PcP 10 50 02.0 +3.3
CLL **Collm** 77.08 358 *e*P P 10 49 45.0 -2.8
DANN **Dangsing** 77.12 300 *e*P P 10 49 48.6 -0.2
comp=Z,25nm,0.6s
BRG **Berggiesshubel** 77.49 357 *e*P P 10 50 00.1 +10
comp=Z,3.6nm,0.7s
BRG **Berggiesshubel** 77.49 357 *e*P P 10 50 00.1 +10
BRG pmax pmax
comp=Z,4.0nm,0.7s
KOLN **Koldanda** 77.66 299 *e*P P 10 49 51.3 -0.4
comp=Z,7.7nm,0.7s
PYUN **Piuthan** 77.73 300 *e*P P 10 49 51.6 -0.5
KHC **Kasperske Hory** 79.25 357 *e*P P 10 50 00.0 +0.1
KHC **Kasperske Hory** 79.25 357 *e*P P 10 50 00.9 +1.0
KHC **Kasperske Hory** 79.25 357 *e*P P 10 50 00.0 +0.1
KBL **Kabul** 79.39 314 *e*P P 10 50 00.9 -0.3
KBL **Kabul** 79.39 314 *e*P P 10 50 00.9 -0.3
GERES **GERESS Array B** 79.53 357 P P 10 50 01.4 -0.1
comp=Z,0.8nm,0.7s,baz=1.7,slow=4.4,SNR=6.3
BFO **Black Forest** 80.10 1 *i* P P 10 50 07.3 +2.7
KBZ **Khabaz** 80.43 336 P P 10 50 06.3 0.0
comp=Z,2.3nm,0.7s,baz=15,slow=5.5,SNR=5.0
GEYT **Alibeck** 80.96 323 LR LR 11 29 58.0
comp=Z,72nm,18.0s,baz=35,slow=39
KBA **Koelnbreinsper** 81.31 357 P P 10 50 12.5 +1.3
KBA pmax pmax
comp=Z,11nm,1.0s
MLR **Muntele Rosu** 81.92 348 LR LR 11 30 17.0
comp=Z,11nm,19.6s,baz=1.0,slow=38
GNI **Garni** 83.29 334 LR LR 11 34 21.9
comp=Z,18nm,18.0s,baz=16,slow=41
BNI **Bardonecchia** 83.36 2 *e*P P 10 50 23.9 +2.0
BNI **Bardonecchia** 83.36 2 *e*P P 10 50 23.9 +2.0
BRTR **Keskin Array B** 86.32 342 P P 10 50 37.3 +0.4
comp=Z,0.9nm,0.6s,baz=13,slow=2.8,SNR=3.9
BRTR LR LR 11 34 30.2
comp=Z,10nm,18.4s,baz=52,slow=39
BRTR **Keskin Array B** 86.32 342 *i* P P 10 50 38.0 +1.1
BRTR pmax pmax
comp=Z,1.0nm,0.6s
ESDC **Sonseca Array** 88.01 10 P P 10 50 44.6 -0.5
comp=Z,2.3nm,0.9s,baz=343,slow=5.3,SNR=11
PSI **Prapat** 88.17 272 P P 10 50 46.0 -0.2
comp=Z,14nm,1.1s,baz=324,slow=0.0,SNR=4.0
PSI **Prapat** 88.17 272 P P 10 50 46.0 -0.2
ASAR **Alice Springs** 89.59 229 P P 10 50 50.9 -1.5
comp=Z,1.0nm,0.8s,baz=38,slow=4.7,SNR=7.1
MDT **Midelt** 94.70 12 LR LR 11 36 31.8
comp=Z,16nm,19.0s,baz=92,slow=37
TORD **Torodi Ar. Bea** 114.83 8 PKP PKPdf 10 56 34.4 -1.4
comp=Z,0.3nm,0.7s,baz=336,slow=3.2,SNR=2.5
MAW **Mawson** 150.11 218 PKPbc PKPbc 10 57 43.5 -0.7
comp=Z,5.0nm,1.1s,baz=111,slow=2.9,SNR=4.9
BOSA **Boshof** 153.90 327 PKPbc PKPbc 10 57 53.9 -0.4
comp=Z,1.2nm,0.4s,baz=360,slow=2.4,SNR=7.6

NDI ***16*** *10:42:15.5±2.6, 23°.79N±93°.58E, h20km, ML3.5*
IDC ***16*** *10:42:16.6±3.4, 23°.60N±93°.93E, h60km±35km, mb3.7/3, mb1 4.0/5, mb1mx3.2/72, mbtmp3.9/5, ML4.1/2, Error ellipse: s-maj=31.1km s-min=20.8km az=24.0*
ISCJB ***16*** *10:42:17.0±0.7, 23°.86N±0°.04×93°.51E±0°.04, h57km, mb4.0/3, Error ellipse: s-maj=6.0km s-min=4.9km az=25.3*
ISC 16 10:42:15.2±0.9,**23°.76N**±0°.05×**93°.72E**±0°.06,**h57**km,**n25,**
$_{c2}$2^{S}11/40,**mb4.5**/3,**Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
IMP	**Imphal**	1.08	11	*e*P	**Pn**	10 42 36.6	+2.2

IMP eS **Sn** **10 42 51.4 +2.9**
SAIH SAIHA 1.43 208 eP **Pn** **10 42 41.2 +2.1**
SAIH eS **Sn** **10 42 57.4 +0.4**
SAIH IAML 10 43 03.1
comp=N,441nm,0.2s
SAIH IAML 10 43 04.6
comp=E,533nm,0.2s
BRDH Bariadhala 2.19 241 P **Pn** **10 42 51.8 +2.5**
comp=E,36nm,0.3s,baz=123,slow=4.3,SNR=17
BRDH S **Sn** **10 43 20.1 +4.9**
comp=E,28nm,0.3s,baz=64,slow=24,SNR=5.6
AGT Agartala 2.26 274 eS **Sn** **10 43 16.3 -0.6**
SHL Shillong 2.45 318 eP **Pn** **10 42 53.2 +0.2**
SHL eS **Sn** **10 43 22.3 +0.5**
SHL IAML 10 43 26.7
comp=N,1μm,1.0s
SHL IAML 10 43 27.5
comp=E,290nm,0.5s
MOKO MOKOCHONG 2.65 16 eS **Sn** **10 43 28.4 +1.8**
TEZP TEZPUR 2.96 344 eS **Sn** **10 43 31.2 -2.8**
TEZP IAML 10 43 36.9
comp=E,112nm,0.1s
TEZP IAML 10 43 37.9
comp=N,86nm,0.5s
GUWA GUWAHATI 3.04 323 eS **Sn** **10 43 34.2 -1.8**
ITAN ITANAGAR 3.37 0 eS **Sn** **10 43 43.3 -0.8**
TURI Tura 3.56 301 eP **Pn** **10 43 10.7 +2.8**
TURI eS **Sn** **10 43 48.5 -0.2**
TURI IAML 10 43 53.9
comp=N,638nm,0.3s
TURI IAML 10 43 53.9
comp=E,814nm,0.3s
TAPN Taplejung 6.49 305 ePn **Pn** **10 43 50.5 +2.0**
TAPN eSn **Sn** **10 45 01.9 +0.6**
comp=E,48nm,0.3s
ODAN Odare 6.50 300 ePn **Pn** **10 43 50.4 +1.9**
ODAN eSn **Sn** **10 45 01.4 0.0**
comp=E,87nm,0.3s
RAMN Ramite 7.18 298 ePn **Pn** **10 43 59.4 +1.6**
CMAR Chiang Mai Arr 7.19 136 P **Pn** **10 43 55.7 -2.0**
comp=E,1.2nm,0.3s,baz=308,slow=14,SNR=4.7
JIRN Jiri 7.82 301 ePn **Pn** **10 44 08.3 +1.6**
JIRN eSn **Sn** **10 45 32.5 -1.4**
comp=E,94nm,0.3s
GUN Gumba 8.18 302 ePn **Pn** **10 44 13.2 +1.6**
GUN eSn **Sn** **10 45 42.5 -0.3**
comp=E,63nm,0.4s
PKIN Phulchoki 8.41 299 ePn **Pn** **10 44 15.7 +1.0**
PKIN eSn **Sn** **10 45 46.1 -2.2**
comp=E,32nm,0.5s
KKN Kakani 8.60 300 ePn **Pn** **10 44 17.5 +0.3**
KKN eSn **Sn** **10 45 50.6 -2.2**
comp=E,16nm,0.2s
GKN Gorkha 9.20 299 ePn **Pn** **10 44 26.1 +0.7**
GKN eSn **Sn** **10 46 05.5 -2.0**
comp=E,50nm,0.3s
KOLN Koldanda 9.95 296 ePn **Pn** **10 44 35.8 +0.1**
KOLN eSn **Sn** **10 46 22.0 -4.0**
comp=E,36nm,0.4s
DANN Dangsing 10.05 299 ePn **Pn** **10 44 37.9 +0.8**
DANN eSn **Sn** **10 46 25.5 -3.0**
comp=E,26nm,0.5s
PYUN Piuthan 10.57 296 ePn **Pn** **10 44 43.6 -0.6**
PYUN eSn **Sn** **10 46 37.0 -4.3**
comp=E,26nm,0.5s
MKAR Makanchi Array 24.75 341 P **P** **10 47 34.5 +3.1**
comp=E,0.3nm,0.6s,baz=156,slow=9.3,SNR=3.7
WRA Warramunga Arr 58.78 134 P **P** **10 52 07.0 -0.8**
comp=E,1.5nm,0.4s,baz=322,slow=7.4,SNR=17
ASAR Alice Springs 61.20 138 P **P** **10 52 23.8 -0.5**
comp=E,2.2nm,0.5s,baz=317,slow=6.6,SNR=13

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*IDC **16** 10:44:19.1±2.1,9.°39S×116.°84E,h0km,mb3.4/2,*
mb1 3.8/4,mb1mx3.5/54,mbtmp3.6/4,ML4.0/2,Error
ellipse: s-maj=93.1km s-min=24.5km az=44.0
*ISCJB **16** 10:44:28.2±0.6,9.°4S±0.°1×117.°24E±0.°06,h87km,mb3.3/2,*
Error ellipse: s-maj=21.0km s-min=5.5km az=16.0
*DJA **16** 10:44:31.2±1.3,9.°S±13.°×11.°7E±.°,h36km±19km,M4.5/12,*
mB5.2/2,mb5.1/3,MLv4.2/12,Mw(mB)4.6/2
ISC 16 10:44:29.0±0.9,9.°4S±0.°1×117.°24E±0.°05,h87km,n18,
σ1°79/19,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWSI	**Taliwang, Sumb**	**0.72**	**331**	P	**Pn**	**10 44 45.3**	**-0.2**
PLAI	**Plampang**	**0.76**	**45**	P	**Pn**	**10 44 46.7**	**+0.9**
DNP	**Denpasar**	**2.12**	**289**	P	**Pn**	**10 45 02.9**	**+0.3**
IGBI	**Denpasar**	**2.14**	**285**	P	**Pn**	**10 45 02.0**	**-0.9**
WBSI	**Waikabubak, Su**	**2.14**	**97**	P	**Pn**	**10 45 03.0**	**0.0**
SRBI	**Singaraja**	**2.37**	**302**	P	**Pn**	**10 45 06.7**	**+0.6**
JAGI	**Jajag, Banyuwa**	**3.18**	**286**	P	**Pn**	**10 45 15.6**	**-1.3**
ABJI	**Asem Bagus**	**3.36**	**298**	P	**Pn**	**10 45 20.3**	**+1.0**
GMJI	**Gumukmas**	**3.90**	**286**	P	**Pn**	**10 45 25.9**	**-0.8**
BLJI	**Banyuglugur**	**3.95**	**294**	P	**Pn**	**10 45 27.9**	**+0.6**
EDFI	**Ende, Flores**	**4.44**	**82**	P	**Pn**	**10 45 38.3**	**+4.2**
PWJI	**Pagerwojo**	**5.54**	**284**	P	**Pn**	**10 45 50.8**	**+1.9**
BATI	**Baumata**	**6.39**	**98**	Pn	**Pn**	**10 46 00.2**	**-0.4**
	5.0nm,0.3s,baz=288,slow=9.6,SNR=3.6						
BATI				Sn	**Sn**	**10 47 11.7**	**-0.4**
	7.3nm,0.3s,baz=37,slow=20,SNR=3.8						
AAI	**Ambon**	**12.26**	**63**	P	**P**	**10 47 25.8**	**-3.5**
KRJI	**Kerinci**	**17.27**	**294**	P	**P**	**10 48 27.5**	**+2.4**
WRA	**Warramunga Arr**	**19.58**	**124**	P	**Pn**	**10 48 51.6**	**-0.8**
	0.3nm,0.3s,baz=297,slow=13,SNR=7.2						
ASAR	**Alice Springs**	**21.35**	**134**	P	**P**	**10 49 11.6**	**+2.3**
	0.8nm,0.5s,baz=309,slow=8.7,SNR=18						
MKAR	**Makanchi Array**	**64.01**	**334**	P	**P**	**10 54 53.5**	**+0.2**
	0.3nm,0.5s,baz=132,slow=7.1,SNR=3.7						

IDC 16 10:46:47.9±1.3,2.°87S×130.°08E,h0km,mb3.7/3,
mb1 3.8/5,mb1mx3.5/51,mbtmp3.7/5,ML3.9/1,Error
ellipse: s-maj=43.4km s-min=19.8km az=90.0,Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.32**	**31**	Pn	Pn	10 47 28.1	+0.7
	baz=225,slow=19,SNR=1.1						
SIJI				Sn	Sn	10 47 56.8	+0.1
	6.0nm,0.3s,baz=217,slow=20,SNR=3.1						
WRA	**Warramunga Arr**	**17.47**	**167**	P	Pn	10 50 52.6	-0.6
	0.4nm,0.3s,baz=351,slow=11,SNR=5.6						
ASAR	**Alice Springs**	**21.00**	**170**	P	P	10 51 33.1	-0.1
	1.6nm,0.4s,baz=349,slow=9.6,SNR=18						
STKA	**Stephens Creek**	**30.82**	**161**	P	P	10 53 05.6	-0.1
	0.7nm,0.3s,baz=348,slow=11,SNR=4.3						
KURBB	**Kurchatov Arra**	**69.07**	**328**	P	P	10 57 55.7	+0.1
	0.2nm,0.5s,baz=129,slow=5.9,SNR=4.1						

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*ISCJB **16** 10:52:19.6±0.6,37.°91N±0.°05×139.°24E±0.°09,*
h165km±4km,mb3.4/3,Error ellipse: s-maj=12.2km
s-min=7.4km az=29.5
*IDC **16** 10:52:20.0±1.5,37.°88N×139.°43E,h158km±12km,mb3.1/3,*
mb1 3.1/5,mb1mx2.8/60,mbtmp3.7/5,Error ellipse:
s-maj=27.5km s-min=14.6km az=81.0
*JMA **16** 10:52:21.0±0.1,37.°92N×139.°25E,h156km±1km,M2.5*
ISC 16 10:52:20.6±0.9,37.°89N±0.°05×139.°28E±0.°07,h160km±6km,
n19,σ0°77/27,mb3.5/3,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIZZ	**Izumozaki**	**0.58**	**232**	P	**Pn**	**10 52 44.1**	**+0.6**
JIZZ				S	**Sn**	**10 53 01.2**	**+0.3**
JFY	**Yanaizu**	**0.59**	**145**	P	**Pn**	**10 52 43.8**	**+0.2**
JHK	**Hiroka**	**0.67**	**198**	P	**Pn**	**10 52 44.2**	**+0.1**
JHK				S	**Sn**	**10 53 01.8**	**-0.2**
JYS	**Shirataka**	**0.70**	**62**	P	**Pn**	**10 52 44.5**	**+0.3**
JYS				S	**Sn**	**10 53 02.6**	**+0.3**
JYA	**Atsumi**	**0.78**	**26**	P	**Pn**	**10 52 44.8**	**+0.1**
JYA				S	**Sn**	**10 53 02.8**	**-0.5**
JSD	**Sado**	**0.82**	**281**	P	**Pn**	**10 52 44.7**	**-0.3**
JSD				S	**Sn**	**10 53 02.5**	**-1.1**
JFT	**Otama**	**0.92**	**114**	P	**Pn**	**10 52 46.1**	**+0.4**
JAG	**Ashikaga**	**1.47**	**175**	P	**Pn**	**10 52 51.2**	**+0.5**
JSZ	**Suzu**	**1.58**	**254**	S	**Sn**	**10 53 15.7**	**0.0**
MAT	**Matsushiro**	**1.59**	**213**	P	**Pn**	**10 52 52.5**	**+0.5**
MAT	**Matsushiro**	**1.59**	**213**	P	**Pn**	**10 52 52.5**	**+0.5**
MAT				S	**Sn**	**10 53 16.5**	**+0.4**
MJAR	**Matsushiro Arr**	**1.59**	**213**	P	**Pn**	**10 52 52.5**	**+0.5**
	6.6nm,0.3s,baz=16,slow=11,SNR=139						
MJAR				S	**Sn**	**10 53 16.5**	**+0.4**
	0.6nm,0.3s,baz=293,slow=22,SNR=4.9						
JRY	**Ryogami san**	**1.90**	**189**	P	**Pn**	**10 52 56.1**	**+0.9**
JOM	**Ohasama**	**2.23**	**44**	P	**Pn**	**10 52 59.9**	**+0.9**
JHJ	**Hachijo jima 2**	**4.78**	**175**	P	**Pn**	**10 53 30.4**	**-0.9**
	5.2nm,0.3s,baz=46,slow=18,SNR=3.7						
JHJ				S	**Sn**	**10 54 24.1**	**-2.5**
	4.0nm,0.3s,baz=49,slow=20,SNR=3.9						
ASAJ	**Asahikawa**	**6.71**	**21**	P	**Pn**	**10 53 55.5**	**-1.2**
	0.3nm,0.3s,baz=220,slow=15,SNR=4.0						
KURBB	**Kurchatov Arra**	**44.13**	**307**	P	**P**	**11 00 12.7**	**-0.2**
	0.6nm,0.5s,baz=82,slow=7.9,SNR=5.1						
WRA	**Warramunga Arr**	**57.71**	**186**	P	**P**	**11 01 54.8**	**+0.3**
	0.7nm,1.1s,baz=6.5,slow=7.4,SNR=2.9						
FINES	**FINESS Array B**	**67.26**	**331**	P	**P**	**11 02 57.5**	**+0.1**
	0.4nm,0.7s,baz=38,slow=7.3,SNR=3.5						

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*ISCJB **16** 11:04:59.9±0.6,24.°71N±0.°04×122.°44E±0.°02,h88km±5km,*
Error ellipse: s-maj=6.8km s-min=2.7km az=175.5
*JMA **16** 11:04:59.4±0.2,24.°60N×122.°41E,h97km±2km,M1.9*
*TAP **16** 11:04:59.9,24.°79N×122.°37E,h95km,ML2.7,D*
ISC 16 11:05:00.3±1.4,24.°70N±0.°06×122.°44E±0.°02,h88km±8km,
n48,σ0°67/77,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.32**	**242**	P	**Pn**	**11 05 14.0**	**+0.5**
	baz=214						
EOS1				S	**Sn**	**11 05 24.9**	**+1.6**
	baz=214						
EGS		**0.48**	**288**	eS	**Sn**	**11 05 25.0**	**-0.4**
	baz=269						
TWB1	**Santiao Chiao**	**0.51**	**307**	eP	**Pn**	**11 05 15.0**	**+0.1**
	baz=293						
JYNG	**Yonagunijimaku**	**0.52**	**118**	P	**Pn**	**11 05 15.1**	**+0.1**
JYNG				S	**Sn**	**11 05 26.6**	**+0.7**
TWC	**Suao**	**0.55**	**261**	eP	**Pn**	**11 05 15.1**	**-0.1**
	baz=247						
TWC				S	**Sn**	**11 05 25.9**	**-0.3**
	baz=247						
YOJ	**Yonaguni jima**	**0.57**	**114**	eP	**Pn**	**11 05 15.4**	**+0.1**
	baz=119						
YOJ	**Yonaguni jima**	**0.57**	**114**	P	**Pn**	**11 05 15.5**	**+0.1**
YOJ				S	**Sn**	**11 05 27.3**	**+0.6**
NTC	**Toucheng**	**0.58**	**286**	eS	**Sn**	**11 05 26.5**	**-0.2**
	baz=275						
TIPB	**Shuangxi**	**0.62**	**296**	*i* P	**Pn**	**11 05 15.1**	**-0.8**
	baz=285						
TIPB				S	**Sn**	**11 05 26.9**	**-0.7**
	baz=285						
ENAH	**Nanao**	**0.62**	**247**	eP	**Pn**	**11 05 15.7**	**-0.2**
	baz=237						
ENAH				eS	**Sn**	**11 05 27.0**	**-0.5**
	baz=237						
NANB	**Nanao**	**0.68**	**247**	P	**Pn**	**11 05 16.4**	**0.0**
	baz=237						
NANB				eS	**Sn**	**11 05 28.8**	**+0.3**
	baz=237						
TWE	**Neicheng**	**0.70**	**272**	eP	**Pn**	**11 05 16.8**	**+0.2**
	baz=261						
TWE				eS	**Sn**	**11 05 29.1**	**+0.2**
	baz=261						
ENTT	**Nioudou**	**0.80**	**266**	P	**Pn**	**11 05 18.1**	**+0.4**
	baz=260						
ENTT				eS	**Sn**	**11 05 30.6**	**0.0**
	baz=260						
TWA	**Mucha**	**0.83**	**290**	eS	**Sn**	**11 05 30.9**	**-0.2**
	baz=283						
NWLT	**Wulai**	**0.86**	**275**	eP	**Pn**	**11 05 18.0**	**-0.3**
	baz=274						
NWLT				eS	**Sn**	**11 05 31.3**	**-0.4**
	baz=274						
TATO	**Taipei**	**0.91**	**288**	eP	**Pn**	**11 05 18.6**	**-0.2**
	baz=282						
YM10	**YM10**	**0.92**	**300**	P	**Pn**	**11 05 19.2**	**+0.2**
	baz=288						
NACB	**Ninganchiao**	**0.93**	**236**	eS	**Sn**	**11 05 31.9**	**-1.2**
	baz=221						
YM04	**YM04**	**0.94**	**299**	eS	**Sn**	**11 05 33.0**	**-0.3**
	baz=287						
YHNB	**Yeheng**	**0.97**	**269**	P	**Pn**	**11 05 19.8**	**+0.2**
	baz=266						
YHNB				S	**Sn**	**11 05 34.3**	**+0.3**
	baz=266						
NSK	**Sanguang**	**0.98**	**269**	P	**Pn**	**11 05 19.9**	**+0.1**
	baz=267						
NSK				S	**Sn**	**11 05 34.5**	**+0.2**
	baz=267						
NNSB	**Datong**	**1.00**	**255**	eP	**Pn**	**11 05 19.9**	**-0.1**
	baz=240						
NNSB				eS	**Sn**	**11 05 34.4**	**-0.4**
	baz=240						
NNSH	**Datong**	**1.00**	**255**	P	**Pn**	**11 05 19.8**	**-0.2**
	baz=240						
NNSH				eS	**Sn**	**11 05 34.1**	**-0.6**
	baz=240						
NNS	**Nan Shan**	**1.00**	**255**	eP	**Pn**	**11 05 19.9**	**-0.2**
	baz=240						
NNS				eS	**Sn**	**11 05 34.5**	**-0.3**
	baz=240						
ENLB	**Shoufeng**	**1.10**	**224**	eS	**Sn**	**11 05 37.4**	**+0.8**
	baz=212						
IRIF	**Iriomote-Funau**	**1.23**	**107**	P	**Pn**	**11 05 22.7**	**+0.1**
IRIF				S	**Sn**	**11 05 39.3**	**-0.1**
ESL	**Shilin**	**1.27**	**226**	eS	**Sn**	**11 05 38.2**	**-2.1**
	baz=228						
LIOB	**Emei**	**1.30**	**268**	eP	**Pn**	**11 05 23.4**	**0.0**
	baz=261						
LIOB				eS	**Sn**	**11 05 40.9**	**0.0**
	baz=261						
NSTT	**Nanjuang**	**1.31**	**267**	eP	**Pn**	**11 05 23.6**	**0.0**
	baz=261						
NSTT				eS	**Sn**	**11 05 41.1**	**0.0**
	baz=261						
CHGB	**Renai**	**1.32**	**241**	eP	**Pn**	**11 05 23.6**	**-0.3**
	baz=228						
CHGB				eS	**Sn**	**11 05 41.3**	**-0.4**
	baz=228						
HATJ	**Hateruma jima**	**1.40**	**117**	P	**Pn**	**11 05 24.0**	**-0.7**
HATJ				eS	**Sn**	**11 05 42.8**	**-0.3**
JKRS	**Kuro-shima**	**1.50**	**107**	P	**Pn**	**11 05 26.2**	**+0.2**
JKRS				S	**Sn**	**11 05 45.7**	**+0.3**
VWDT	**VWDT**	**1.51**	**232**	eP	**Pn**	**11 05 25.6**	**-0.5**
	baz=220						
VWDT				eS	**Sn**	**11 05 44.2**	**-1.4**
	baz=220						
TWQ1	**Liyutan**	**1.56**	**257**	eP	**Pn**	**11 05 26.6**	**-0.1**
	baz=252						
JIJ	**Ishigaki jima**	**1.59**	**102**	P	**Pn**	**11 05 26.1**	**-1.0**
JIJ				S	**Sn**	**11 05 46.5**	**-0.8**
SMLT	**Sun Moon Lake**	**1.62**	**240**	P	**Pn**	**11 05 28.4**	**+0.7**
	baz=229						
SMLT				eS	**Sn**	**11 05 49.8**	**+1.4**
	baz=229						
SSLB	**Suanglung**	**1.63**	**237**	eP	**Pn**	**11 05 28.1**	**+0.4**
	baz=226						
SSLB				eS	**Sn**	**11 05 49.1**	**+0.7**
	baz=226						
TYC	**Yuchr**	**1.65**	**242**	P	**Pn**	**11 05 28.4**	**+0.6**
	baz=235						
TYC				eS	**Sn**	**11 05 49.6**	**+0.9**
	baz=235						
YULB	**Yu-li**	**1.67**	**219**	eP	**Pn**	**11 05 26.3**	**-1.8**
	baz=221						
JISG	**Ishigakijimahi**	**1.71**	**93**	P	**Pn**	**11 05 28.8**	**+0.2**
JISG				eS	**Sn**	**11 05 49.7**	**-0.4**
WJS	**Zhushan**	**1.79**	**241**	eS	**Sn**	**11 05 53.5**	**+1.4**
	baz=245						
FULB	**Fuli**	**1.82**	**215**	eP	**Pn**	**11 05 30.1**	**-0.1**
	baz=219						
ALS	**Alishan**	**1.91**	**232**	eP	**Pn**	**11 05 31.9**	**+0.4**
	baz=219						
ALS				eS	**Sn**	**11 05 56.4**	**+1.2**
	baz=219						
JTJ	**Tarama**	**2.06**	**91**	P	**Pn**	**11 05 33.6**	**+0.4**
JTJ				eS	**Sn**	**11 05 58.8**	**+0.5**
TWK	**Hsinying**	**2.29**	**232**	eS	**Sn**	**11 06 04.1**	**+0.3**
	baz=227						
SLGT	**Liugui**	**2.36**	**224**	eS	**Sn**	**11 06 06.1**	**+0.6**
	baz=228						
JIRB	**Irabujima**	**2.49**	**86**	S	**Sn**	**11 06 07.7**	**-0.8**
JIKM	**Ikemajima**	**2.56**	**84**	S	**Sn**	**11 06 11.2**	**+0.9**

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*ISCJB **16** 11:05:27.8±0.9,39.°74N±0.°04×142.°3E±0.°1,h53km±6km,*
mb3.5/4,Error ellipse: s-maj=15.0km s-min=6.1km az=9.3

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*JMA **16** 11:05:27.6,39.°75N×142.°36E,h40km±1km,M3.4*
*IDC **16** 11:05:30.3±2.6,39.°71N×142.°40E,h74km±25km,mb3.2/4,*
mb1 3.3/6,mb1mx3.0/76,mbtmp3.5/6,Error ellipse:
s-maj=42.1km s-min=17.0km az=94.0
ISC 16 11:05:28.7±1.3,39.°73N±0.°04×142.°23E±0.°10,h43km±10km,
n17,σ1°21/25,mb3.6/4,Near east coast of eastern
Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.35**	**306**	P	**Pn**	**11 05 37.5**	**-0.3**
JTH				S	**Sn**	**11 05 44.4**	**+0.2**
MIYJ	**Miyakonagasawa**	**0.35**	**244**	P	**Pn**	**11 05 37.7**	**-0.1**
MIYJ				S	**Sn**	**11 05 44.8**	**+0.6**
JKZ	**Kuzumaki**	**0.74**	**290**	P	**Pn**	**11 05 43.0**	**+0.2**
JKZ				S	**Sn**	**11 05 53.7**	**+0.7**
JOM	**Ohasama**	**0.77**	**251**	P	**Pn**	**11 05 43.7**	**+0.5**
JOM				S	**Sn**	**11 05 55.3**	**+1.6**
OFUJ	**Ofunato**	**0.78**	**214**	P	**Pn**	**11 05 43.3**	**-0.1**
OFUJ				S	**Sn**	**11 05 54.5**	**+0.5**
JANG	**Nango**	**0.85**	**320**	P	**Pn**	**11 05 43.5**	**-0.7**
JANG				S	**Sn**	**11 05 55.5**	**0.0**
JMK	**Ichinoseki**	**1.11**	**226**	P	**Pn**	**11 05 48.2**	**+0.5**
JMK				S	**Sn**	**11 06 03.2**	**+1.4**
JRG	**Rokugo**	**1.28**	**255**	P	**Pn**	**11 05 51.3**	**+1.2**
JAH	**Hinai**	**1.31**	**291**	P	**Pn**	**11 05 51.4**	**+0.9**
JTM	**Tenmabayashi**	**1.38**	**320**	P	**Pn**	**11 05 51.8**	**+0.3**
JIO	**Ouri**	**1.45**	**209**	P	**Pn**	**11 05 52.7**	**+0.3**
ASAJ	**Asahikawa**	**4.39**	**3**	P	**Pn**	**11 06 34.8**	**+2.0**
	1.0nm,0.3s,baz=165,slow=12,SNR=9.2						
ASAJ				S	**Sn**	**11 07 25.2**	**+2.5**
	0.5nm,0.3s,baz=288,slow=20,SNR=2.1						
MJAR	**Matsushiro Arr**	**4.50**	**226**	P	**Pn**	**11 06 36.9**	**+2.6**
	0.6nm,0.3s,baz=34,slow=14,SNR=8.8						
ZALV	**Zalesovo Beam**	**40.62**	**310**	P	**P**	**11 13 03.4**	**-0.7**
	0.5nm,0.4s,baz=77,slow=9.0,SNR=3.4						
MKAR	**Makanchi Array**	**43.28**	**300**	P	**P**	**11 13 25.4**	**-0.6**
	0.3nm,0.5s,baz=87,slow=9.8,SNR=5.7						
KURBB	**Kurchatov Arra**	**44.90**	**306**	P	**P**	**11 13 38.2**	**-0.6**
	0.6nm,0.5s,baz=78,slow=8.5,SNR=4.4						
WRA	**Warramunga Arr**	**59.82**	**189**	P	**P**	**11 15 27.7**	**-1.9**
	0.4nm,0.9s,baz=5.7,slow=6.8,SNR=3.1						

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*JMA **16** 11:33:01.5±0.4,44.°07N×148.°22E,h0km,M3.5*
*SKHL **16** 11:33:03.6±0.2,44.°54N×148.°31E,h31km±6km,mb4.0/4*
ISC 16 11:32:59.4±3.3,44.°41N±0.°09×148.°3E±0.°2,h1km±16km,
n15,σ1°27/26,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.88**	**339**	*i* P	**Pb**	**11 33 16.9**	**-0.6**
KUR				AMB	AMB	11 33 18.8	
	35nm,0.4s						
KUR				AMB	AMB	11 33 18.8	
	11nm,0.4s						
KUR				AMB	AMB	11 33 18.8	
	108nm,0.4s						
KUR				eS	**Sg**	**11 33 27.0**	**-0.7**
KUR				A	A	11 33 29.4	
	574nm,0.2s						
KUR				A	A	11 33 29.4	
	347nm,0.2s						
SHO	**Shikotan**	**1.20**	**244**	eP	**Pn**	**11 33 23.3**	**0.0**
SHO				AMB	AMB	11 33 26.7	
	10.0nm,0.2s						
SHO				*i* S	**Sg**	**11 33 37.8**	**-0.1**
SHO				A	A	11 33 43.5	
	110nm,0.3s						
SHO				A	A	11 33 43.5	
	150nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.81**	**259**	*i* P	**Pb**	**11 33 32.9**	**-0.3**
YUK				AMB	AMB	11 33 33.5	
	14nm,0.2s						
YUK				AMB	AMB	11 33 33.5	
	24nm,0.2s						
YUK				AMB	AMB	11 33 33.5	
	75nm,0.2s						
YUK				*i* S	**Sn**	**11 33 54.7**	**-0.4**
YUK				A	A	11 33 57.1	
	111nm,0.3s						
YUK				A	A	11 33 57.1	
	112nm,0.3s						
LAGR	**Lagunnoye**	**1.85**	**260**	eP	**Pb**	**11 33 34.1**	**+0.1**
LAGR				AMB	AMB	11 33 37.2	
	73nm,0.3s						
LAGR				eS	**Sn**	**11 33 56.1**	**-0.2**
LAGR				A	A	11 34 00.7	
	140nm,0.4s						
LAGR				A	A	11 34 00.7	
	208nm,0.4s						
GRPR	**Tuman**	**1.88**	**258**	eP	**Pb**	**11 33 34.2**	**-0.2**
GRPR				*i* S	**Sn**	**11 33 56.6**	**-0.3**
GRPR				A	A	11 33 59.1	
	154nm,0.4s						
GRPR				A	A	11 33 59.1	
	134nm,0.4s						
GLVR	**Golovnino**	**2.12**	**252**	eS	**Sb**	**11 34 04.6**	**-0.9**
NEM2	**Nemuro 2**	**2.13**	**241**	P	**Pn**	**11 33 36.1**	**0.0**
NEM2				eS	**Sn**	**11 34 01.6**	**-1.7**
JRA	**Rausu**	**2.35**	**259**	P	**Pn**	**11 33 40.6**	**+1.6**
JRA				eS	**Sn**	**11 34 09.5**	**+1.0**
JNK	**Nakash**	**2.72**	**254**	P	**Pn**	**11 33 45.5**	**+1.2**
JNK				eS	**Sn**	**11 34 17.5**	**-0.3**
JAK	**Akkeshi**	**2.98**	**243**	P	**Pn**	**11 33 48.3**	**+0.5**
JAK				eS	**Sn**	**11 34 22.3**	**-1.9**
JAR	**Ashorobuto**	**3.47**	**253**	P	**Pn**	**11 33 56.7**	**+2.1**
JAR				eS	**Sn**	**11 34 36.9**	**+0.6**
JCH	**Churui**	**4.03**	**245**	P	**Pn**	**11 34 05.1**	**+2.9**
JNBK	**Urakawa-nobuka**	**4.58**	**244**	P	**Pn**	**11 34 11.5**	**+1.7**
JKB	**Kayabe**	**5.89**	**247**	P	**Pn**	**11 34 29.3**	**+1.5**
JKB				eS	**Sn**	**11 35 34.5**	**-1.5**
JOT	**Ohata**	**6.14**	**243**	P	**Pn**	**11 34 31.9**	**+0.8**

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*IDC **16** 11:40:10.0±1.2,34.°79S×72.°55W,h0km,mb3.9/6,*
mb1 4.0/8,mb1mx3.8/35,mbtmp3.9/8,ML3.7/2,MS3.4/7,
Ms1 3.4/7,ms1mx3.1/31,Error ellipse: s-maj=47.9km
s-min=17.3km az=84.0
*GUC **16** 11:40:15.1±0.9,34.°85S×72.°68W,h30km±5km,ML4.1*
*NEIC **16** 11:40:15.0±0.0,34.°85S×72.°68W,h30km,ML4.1(GUC),*
After GUC.
ISC 16 11:40:16.8±1.6,34.°85S±0.°06×72.°4W±0.°2,h53km±13km,
n21,σ1°78/23,mb4.1/7,MS3.5/4,5C-2D,Near coast of
central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO05	**HualaæØ**	**0.40**	**114**	⇓*i* P	**Pn**	**11 40 26.7**	**-0.5**
GO05				⇓*i* P		11 40 26.9	
GO05				*i* S	**Sn**	**11 40 35.6**	**+0.8**
GO05				*i* S		11 40 35.8	
GO05				IAML		11 40 37.4	
	comp=N,20μm,0.4s						
CCHI	**Chillan**	**1.77**	**172**	⇑*i* P	**Pn**	**11 40 45.1**	**0.0**
CCHI				*i* S	**Sn**	**11 41 07.8**	**+1.4**
CCHI				IAML		11 41 17.6	
	comp=E,3μm,0.4s						
ANTU	**Antumapu**	**1.93**	**49**	eP	**Pn**	**11 40 45.4**	**-1.8**
ANTU				*i* S	**Sn**	**11 41 10.8**	**+0.5**
CCSP	**San Pedro de C**	**2.08**	**196**	⇑*i* P	Pn	11

comp=N,0.1nm,0.3s,baz=199,slow=10,SNR=7.8
LPAZ LR LR 11 53 29.9
comp=N,121nm,18.5s,baz=141,slow=42
SIV San Ignacio 21.34 31 P **P 11 44 59.0 -0.6**
comp=N,4.6nm,0.9s,baz=212,slow=14,SNR=14
SIV LR LR 11 54 56.9
comp=N,181nm,18.1s,baz=213,slow=42
HOPE Hope Point 31.63 139 *eP* **P 11 46 31.4 -3.1**
comp=N,519nm,1.2s
PTGA Pitinga 35.86 22 P **P 11 47 11.3 -0.4**
comp=N,1.2nm,0.3s,baz=221,slow=13
PTGA LR LR 12 04 28.9
comp=N,60nm,18.0s,baz=114,slow=41
SNAA Sanae 50.91 158 P **P 11 49 13.4 +1.1**
comp=N,1.2nm,1.1s,baz=298,slow=15,SNR=2.8
TXAR Lajitas Array 70.34 331 P **P 11 51 24.8 -0.1**
comp=N,0.2nm,0.6s,baz=156,slow=9.6,SNR=3.9
MAW Mawson 72.45 164 LR LR 12 26 19.8
comp=N,34nm,18.4s,baz=250,slow=38
DBIC Dimbokro 75.71 71 LR LR 12 23 01.5
comp=N,22nm,19.7s,baz=96,slow=34
TORD Torodi Ar. Bea 84.76 70 P **P 11 52 47.0 +1.4**
comp=N,1.3nm,0.8s,baz=244,slow=4.0,SNR=5.1
ULM Lac du Bonnet 87.24 345 P **P 11 52 57.5 +0.5**
comp=N,1.4nm,0.7s,baz=166,slow=4.2,SNR=3.1
KURBB Kurchatov Arra 153.67 44 PKPbc **PKPbc 12 00 10.2 +1.1**
comp=N,0.2nm,0.4s,baz=270,slow=1.9,SNR=3.8
KURK Kurchatov 153.68 44 PKPbc **PKPbc 12 00 10.2 +1.0**

*ISCJB **16** 11:49:20.4±0.4,23°.40N±0°.02×122°.09E±0°.02,h21km±3km, Error ellipse: s-maj=3.5km s-min=2.4km az=147.5*
*JMA **16** 11:49:21.3±0.1,23°.41N×122°.04E,h44km,M2.6*
*TAP **16** 11:49:21.8,23°.40N×122°.05E,h28km,ML2.9,D*
ISC 16 11:49:18.8±1.1,23°.39N±0°.03×122°.07E±0°.02,h15km±9km, n63,σ0=63/108,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HGSD	**Ruisui**	**0.60**	**280**	*eP*	**Pn**	**11 49 32.6**	**-0.3**
	baz=279						
HGSD				*eS*	**Sb**	**11 49 40.6**	**+1.1**
	baz=279						
EGFH	**Guangfu**	**0.65**	**295**	*eP*	**Pn**	**11 49 33.5**	**-0.1**
	baz=306						
EGFH				*eS*	**Sn**	**11 49 42.6**	**-1.1**
	baz=306						
ENLB	**Shoufeng**	**0.67**	**320**	*eP*	**Pn**	**11 49 34.8**	**+1.0**
	baz=321						
ENLB				*eS*	**Sn**	**11 49 44.0**	**0.0**
	baz=321						
EHY	**Hungye**	**0.70**	**280**	*eP*	**Pn**	**11 49 34.5**	**+0.3**
	baz=279						
EHY				*eS*	**Sn**	**11 49 44.2**	**-0.6**
	baz=279						
CHKT	**Chengkung**	**0.71**	**246**	*eS*	**Sb**	**11 49 42.9**	**+0.3**
	baz=244						
YULB	**Yu-li**	**0.71**	**270**	*eP*	**Pn**	**11 49 34.7**	**+0.3**
	baz=270						
YULB				*eS*	**Sn**	**11 49 44.8**	**-0.3**
	baz=270						
TWF1	**Yuli**	**0.71**	**267**	*eP*	**Pn**	**11 49 34.5**	**+0.1**
	baz=256						
TWF1				*eS*	**Sn**	**11 49 44.9**	**-0.2**
	baz=256						
ESL	**Shilin**	**0.72**	**306**	P	**Pn**	**11 49 34.1**	**-0.4**
	baz=307						
ESL				S	**Sb**	**11 49 43.4**	**+0.5**
	baz=307						
HWA	**Hwalien**	**0.72**	**324**	*eP*	**Pn**	**11 49 34.8**	**+0.3**
	baz=325						
HWA				*eS*	**Sn**	**11 49 44.8**	**-0.6**
	baz=325						
FULB	**Fuli**	**0.74**	**255**	*eP*	**Pn**	**11 49 34.8**	**0.0**
	baz=254						
TWD	**Chiawan**	**0.81**	**328**	*eP*	**Pn**	**11 49 35.7**	**0.0**
	baz=329						
TWD				*eS*	**Sb**	**11 49 46.2**	**+0.7**
	baz=329						
NACB	**Ninganchiao**	**0.89**	**331**	*eP*	**Pn**	**11 49 36.9**	**0.0**
	baz=325						
NACB				*eS*	**Sg**	**11 49 48.2**	**+0.3**
	baz=325						
VWDT	**VWDT**	**0.93**	**293**	*eP*	**Pn**	**11 49 38.2**	**+0.8**
	baz=293						
VWDT				*eS*	**Sn**	**11 49 49.7**	**-0.7**
	baz=293						
ELDTW	**Lidau**	**0.99**	**258**	*eP*	**Pn**	**11 49 38.4**	**0.0**
	baz=258						
ELDTW				*eS*	**Sb**	**11 49 50.1**	**-0.6**
	baz=258						
CHGB	**Renai**	**1.06**	**309**	*eP*	**Pg**	**11 49 40.1**	**+0.7**
	baz=310						
CHGB				*eS*	**Sg**	**11 49 53.1**	**-0.2**
	baz=310						
NANB	**Nanao**	**1.07**	**344**	*eP*	**Pg**	**11 49 40.3**	**+0.7**
	baz=332						
NANB				*eS*	**Sg**	**11 49 53.4**	**-0.3**
	baz=332						
ENA	**Nanau**	**1.08**	**344**	*eP*	**Pg**	**11 49 40.2**	**+0.6**
	baz=332						
ENA				*eS*	**Sg**	**11 49 53.4**	**-0.4**
	baz=332						
TWGBT	**Beinan**	**1.08**	**238**	*eP*	**Pg**	**11 49 39.8**	**+0.1**
	baz=226						
ENAH	**Nanao**	**1.08**	**347**	*eS*	**Sn**	**11 49 54.3**	**+0.2**
	baz=334						
TWG	**Pinlang**	**1.08**	**239**	*eP*	**Pg**	**11 49 39.9**	**+0.2**
	baz=226						
SSLB	**Suanglung**	**1.10**	**291**	*eP*	**Pg**	**11 49 40.2**	**+0.1**
	baz=291						
SSLB				*eS*	**Sb**	**11 49 53.8**	**0.0**
	baz=291						
EOS1	**EOS1**	**1.15**	**2**	*eP*	**Pg**	**11 49 41.9**	**+0.8**
	baz=3.0						
EOS1				*eS*	**Sg**	**11 49 56.5**	**+0.3**
	baz=3.0						
ALS	**Alishan**	**1.17**	**276**	*eP*	**Pg**	**11 49 42.3**	**+0.8**
	baz=276						
ALS				*eS*	**Sn**	**11 49 56.7**	**-0.2**
	baz=276						
SMLT	**Sun Moon Lake**	**1.18**	**295**	*eP*	**Pg**	**11 49 42.0**	**+0.3**
	baz=295						
NNSB	**Datong**	**1.21**	**329**	*eP*	**Pg**	**11 49 42.4**	**+0.1**
	baz=329						
NNSB				*eS*	**Sb**	**11 49 56.5**	**-0.6**
	baz=329						
NNSH	**Datong**	**1.21**	**329**	*eP*	**Pg**	**11 49 42.4**	**+0.1**
	baz=329						
NNSH				*eS*	**Sb**	**11 49 57.0**	**-0.1**
	baz=329						
NNS	**Nan Shan**	**1.23**	**329**	*eP*	**Pg**	**11 49 42.6**	**+0.1**
	baz=329						
NNS				*eS*	**Sn**	**11 49 57.6**	**-0.3**
	baz=329						
TYC	**Yuchr**	**1.23**	**295**	*eP*	**Pg**	**11 49 42.8**	**+0.2**
	baz=295						
TWC	**Suao**	**1.23**	**350**	*eP*	**Pg**	**11 49 42.9**	**+0.3**
	baz=4.0						
TWC				*eS*	**Sn**	**11 49 57.8**	**0.0**
	baz=4.0						
ECL	**Taimali**	**1.30**	**233**	*eP*	**Pb**	**11 49 42.6**	**-0.4**
	baz=242						
WJS	**Zhushan**	**1.31**	**289**	*eP*	**Pg**	**11 49 44.8**	**+0.7**
	baz=295						
JYNG	**Yonagunijimaku**	**1.32**	**37**	P	**Pg**	**11 49 44.0**	**-0.3**
JYNG				*eS*	**Sg**	**11 50 00.9**	**-0.7**
ENTT	**Nioudou**	**1.33**	**340**	*eP*	**Pg**	**11 49 44.4**	**0.0**
	baz=340						
ENTT				*eS*	**Sn**	**11 49 59.7**	**-0.6**
	baz=340						
TPUB	**Ta-pu**	**1.33**	**266**	*eP*	**Pg**	**11 49 44.9**	**+0.4**
	baz=266						
TPUB				*eS*	**Sg**	**11 50 01.5**	**-0.4**
	baz=266						
WTP	**Ta-pu**	**1.35**	**264**	*eP*	**Pg**	**11 49 45.2**	**+0.4**
	baz=264						
WTP				*eS*	**Sg**	**11 50 02.3**	**-0.2**
	baz=264						
YOJ	**Yonaguni jima**	**1.37**	**39**	*eP*	**Pg**	**11 49 45.1**	**-0.1**
	baz=39						
YOJ				*eS*	**Sb**	**11 50 01.8**	**+0.4**
	baz=39						
YOJ	**Yonaguni jima**	**1.37**	**39**	P	**Pg**	**11 49 45.0**	**-0.2**
YOJ				S	**Sg**	**11 50 02.6**	**-0.4**
SLGT	**Liugui**	**1.37**	**253**	*eP*	**Pg**	**11 49 45.6**	**+0.3**
	baz=246						
SLGT				*eS*	**Sb**	**11 50 02.1**	**+0.5**
	baz=246						
TWE	**Neicheng**	**1.38**	**344**	*eP*	**Pg**	**11 49 45.0**	**-0.3**
	baz=345						
TWE				*eS*	**Sb**	**11 50 02.0**	**+0.3**
	baz=345						
YHNB	**Yeheng**	**1.42**	**333**	*eP*	**Pg**	**11 49 45.7**	**-0.6**
	baz=334						
YHNB				*eS*	**Sn**	**11 50 02.6**	**-0.2**
	baz=334						
LAY	**Lan-yu**	**1.43**	**200**	*eP*	**Pn**	**11 49 44.0**	**-0.3**
	baz=199						
CHN1	**Nanshi**	**1.44**	**262**	*eP*	**Pg**	**11 49 46.7**	**+0.2**
	baz=262						
CHN1				*eS*	**Sg**	**11 50 05.8**	**+0.6**
	baz=262						
NSK	**Sanguang**	**1.44**	**333**	*eP*	**Pg**	**11 49 46.0**	**-0.6**
	baz=334						
NSK				*eS*	**Sn**	**11 50 02.6**	**-0.5**
	baz=334						
WDLH	**Douliu**	**1.44**	**282**	*eS*	**Sg**	**11 50 05.4**	**+0.1**
	baz=282						
EGS		**1.45**	**355**	*eS*	**Sb**	**11 50 04.3**	**+0.4**
	baz=356						
TWK	**Hsinying**	**1.46**	**265**	*eP*	**Pg**	**11 49 47.4**	**+0.4**
	baz=265						
TWK				*eS*	**Sg**	**11 50 05.8**	**-0.2**
	baz=265						
NWLT	**Wulai**	**1.48**	**339**	*eS*	**Sn**	**11 50 03.9**	**-0.1**
	baz=340						
SSD	**Sandimen**	**1.48**	**244**	*eP*	**Pb**	**11 49 46.0**	**0.0**
	baz=244						
TWQ1	**Liyutan**	**1.52**	**309**	*eP*	**Pg**	**11 49 48.2**	**+0.1**
	baz=309						
TWQ1				*eS*	**Sb**	**11 50 06.8**	**+0.8**
	baz=309						
MASBT	**Mashibuluo**	**1.54**	**240**	*eP*	**Pb**	**11 49 47.0**	**0.0**
	baz=232						
NSTT	**Nanjuang**	**1.58**	**322**	*eP*	**Pg**	**11 49 48.8**	**-0.3**
	baz=322						
NSTT				*eS*	**Sb**	**11 50 07.6**	**+0.1**
	baz=322						
LIOB	**Emei**	**1.58**	**322**	*eP*	**Pg**	**11 49 49.4**	**+0.1**
	baz=323						
LIOB				*eS*	**Sb**	**11 50 07.9**	**+0.3**
	baz=323						
TIPB	**Shuangxi**	**1.59**	**352**	*eP*	**Pb**	**11 49 47.7**	**-0.3**
	baz=3.0						
TIPB				*eS*	**Sb**	**11 50 07.1**	**-0.8**
	baz=3.0						
TATO	**Taipei**	**1.67**	**341**	*eS*	**Sb**	**11 50 09.6**	**-0.4**
	baz=342						
HATJ	**Hateruma jima**	**1.72**	**67**	P	**Pb**	**11 49 49.1**	**-1.0**
HATJ				S	**Sn**	**11 50 10.1**	**+0.2**
IRIF	**Iriomote-Funau**	**1.78**	**58**	P	**Pb**	**11 49 51.5**	**+0.3**
IRIF				S	**Sb**	**11 50 12.6**	**-0.8**
JKRS	**Kuro-shima**	**1.96**	**64**	P	**Pb**	**11 49 54.2**	**-0.1**
JKRS				*eS*	**Sb**	**11 50 16.9**	**-1.7**
JIJ	**Ishigaki jima**	**2.13**	**63**	P	**Pb**	**11 49 55.7**	**-1.4**
JIJ				S	**Sn**	**11 50 19.7**	**-0.3**
PNG	**Penghu**	**2.32**	**275**	*eP*	**Pb**	**11 49 58.2**	**-2.1**
	baz=274						
PNG				*eS*	**Sn**	**11 50 25.4**	**+0.7**
	baz=274						
JISG	**Ishigakijimahi**	**2.37**	**59**	P	**Pn**	**11 49 58.5**	**+1.4**
JISG				*eS*	**Sn**	**11 50 25.3**	**-0.6**
JTJ	**Tarama**	**2.71**	**62**	P	**Pn**	**11 50 03.7**	**+1.9**
JTJ				*eS*	**Sn**	**11 50 34.5**	**+0.2**
VWUC	**VWUC**	**2.88**	**304**	*eP*	**Pn**	**11 50 05.7**	**+1.5**
	baz=305						
JIRB	**Irabujima**	**3.17**	**63**	*eS*	**Sn**	**11 50 47.6**	**+1.8**

*CSEM **16** 11:49:29.5±0.3,44°.20N×17°.86E,h2km,ML1.9,Error ellipse: s-maj=5.3km s-min=5.1km az=32.0,Mining explosion.*
BEO 16 11:49:31.6±0.9,44°.19N×17°.81E,h5km±5km,2C,Mining explosion.,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLY	**Banja Luka**	**0.71**	**321**	*eP*g	Pg	11 49 44.7	-0.6
BLY				*eS*g	Sb	11 49 56.3	-0.4
BLY	**Banja Luka**	**0.71**	**321**	*eP*g	Pg	11 49 43.4	-1.9
BLY				*eS*g	Sg	11 49 53.5	-1.1
HAPS	**Han Pijesak,Bl**	**0.83**	**97**	*eP*g	Pg	11 49 47.0	-0.5
HAPS				*eS*g	Sg	11 49 57.1	-1.1
HAPS	**Han Pijesak,Bl**	**0.83**	**97**	*iP*g	Pg	11 49 44.2	-3.3
HAPS				*eS*g	Sg	11 49 55.8	-2.4
BBLS	**Lazići**	**1.19**	**105**	*eP*g	Pg	11 49 52.9	-1.6
BBLS				*eS*g	Sg	11 50 09.4	-0.6
BBLS	**Lazići**	**1.19**	**105**	*eP*g	Pg	11 49 51.9	-2.6
BBLS				*eS*g	Sg	11 50 07.7	-2.3
UPM	**Unac-Piva**	**1.27**	**141**	*iP*g	Pg	11 49 52.7	-3.2
TEKS	**Tekeris**	**1.28**	**73**	*eP*g	Pg	11 49 53.3	-2.8
TEKS	**Tekeris**	**1.28**	**73**	*eP*g	Pg	11 49 53.3	-2.8
	baz=3.0						
TEKS				*eS*g	Sg	11 50 10.0	-2.7
STON	**Ston**	**1.32**	**184**	*eP*g	Pn	11 49 54.2	-2.5
STON				Sg	Sg	11 50 12.8	-1.3
STON	**Ston**	**1.32**	**184**	*eP*g	Pn	11 49 54.2	-2.5
STON				*eS*g	Sg	11 50 12.9	-1.2
TREB	**Trebinje**	**1.53**	**165**	*eP*n	Pn	11 49 58.7	-0.8
TREB				*eS*n	Sn	11 50 19.2	-0.6
DIVS	**Divibare**	**1.57**	**93**	*eP*g	Pn	11 49 59.5	-0.7
DIVS				*eS*g	Sg	11 50 22.8	+0.7
DIVS	**Divibare**	**1.57**	**93**	*eP*n	Pn	11 49 58.2	-2.0
DIVS	**Divibare**	**1.57**	**93**	*eP*g	Pn	11 49 59.5	-0.7
	baz=3.0						
DIVS				*eS*n	Sn	11 50 19.1	-1.9
IVAS	**Ivanjica**	**1.80**	**109**	*eP*g	Pn	11 50 03.8	+0.4
IVAS				*eS*g	Sg	11 50 29.5	+0.1
IVAS	**Ivanjica**	**1.80**	**109**	*eP*g	Pn	11 50 03.8	+0.4
	baz=1.0						
HCY	**Herceg Novi**	**1.81**	**164**	*eP*n	Pn	11 50 02.3	-1.2
DRME	**Dracevica, Mon**	**2.24**	**153**	*eP*n	Pn	11 50 07.9	-1.5
DRME				*eS*n	Sn	11 50 35.6	-1.8

*IDC **16** 12:00:56.5±1.0,36°.95N×27°.71E,h0km,mb3.6/6, mb1 3.6/12,mb1mx3.5/59,mbtmp3.6/12,ML3.5/6,MS2.7/6, Ms1 2.7/6,ms1mx2.4/62,Error ellipse: s-maj=19.5km s-min=14.6km az=180.0*
*ISK **16** 12:00:57.2,36°.99N×27°.58E,h4km,ML3.6/22*
*THE **16** 12:00:57.4,36°.99N×27°.61E,h0km,ML3.5/6,Error ellipse: s-maj=1.0km s-min=0.5km az=31.0*
*DDA **16** 12:00:57.3,36°.97N×27°.56E,h20km,Ml3.7*
*ISCJB **16** 12:00:58.2±0.3,36°.99N±0°.02×27°.58E±0°.02,h10km±2km, mb3.5/6,MS2.9/3,Error ellipse: s-maj=2.9km s-min=2.5km az=30.2*
*ATH **16** 12:00:58.1,36°.99N×27°.60E,h28km±1km,ML3.3/9,Error ellipse: s-maj=1.4km s-min=0.8km az=228.0*
*CSEM **16** 12:00:58.3±0.1,36°.99N×27°.58E,h5km,ML3.7,Error ellipse: s-maj=2.4km s-min=1.9km az=21.0*
ISC 16 12:00:58.3±0.8,36°.97N±0°.01×27°.61E±0°.01,h13km±5km, n153,σ1$26/202,mb3.5/6,MS2.8/3,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.16**	**305**	*i* P	**Pg**	**12 01 01.7**	**-0.4**
BDRM				*i* S	**Sg**	**12 01 04.8**	**0.0**
BDRM	**Kayabasi**	**0.16**	**305**	P	**Pg**	**12 01 01.7**	**-0.4**
BDRM				S	**Sg**	**12 01 04.8**	**0.0**
DATC	**Datca-Mugla**	**0.22**	**169**	PG	**Pg**	**12 01 02.3**	**-0.7**
DATC				SG	**Sg**	**12 01 06.5**	**+0.4**
DATC	**Datca-Mugla**	**0.22**	**169**	*e*Pg	**Pg**	**12 01 02.3**	**-0.7**
DATC				*e*Sg	**Sg**	**12 01 06.5**	**+0.4**
DAT	**Datca**	**0.24**	**186**	PG	**Pg**	**12 01 03.2**	**-0.3**
DAT	**Datca**	**0.24**	**186**	*i* P	**Pg**	**12 01 03.2**	**-0.3**
DAT				*i* S	**Sg**	**12 01 08.5**	**+1.4**
DAT	**Datca**	**0.24**	**186**	P	**Pg**	**12 01 03.2**	**-0.3**
DAT				S	**Sg**	**12 01 08.5**	**+1.4**
BODT	**Bodrum**	**0.26**	**290**	PG	**Pg**	**12 01 02.3**	**-1.4**
BODT				SG	**Sg**	**12 01 06.6**	**-0.7**
BODT	**Bodrum**	**0.26**	**290**	P	**Pg**	**12 01 02.5**	**-1.2**
BODT				S	**Sg**	**12 01 07.2**	**-0.1**
BODT	**Bodrum**	**0.26**	**290**	*e*Pg	**Pg**	**12 01 02.3**	**-1.4**
BODT				*e*Sg	**Sg**	**12 01 06.6**	**-0.7**
BODT				S	**Sg**	**12 01 07.2**	**-0.1**
YKAV	**Yalikavak-Bodr**	**0.30**	**300**	PG	**Pg**	**12 01 03.6**	**-0.9**
YKAV	**Yalikavak-Bodr**	**0.30**	**300**	*e*Pg	**Pg**	**12 01 03.6**	**-0.9**
MLSB	**Milas**	**0.35**	**22**	PG	**Pg**	**12 01 04.3**	**-1.0**
MLSB				SG	**Sg**	**12 01 10.1**	**0.0**
MLSB	**Milas**	**0.35**	**22**	*e*Pg	**Pg**	**12 01 04.3**	**-1.0**
MLSB				*e*Sg	**Sg**	**12 01 10.1**	**0.0**
DIDI	**Didim-Aydin**	**0.50**	**324**	PG	**Pg**	**12 01 07.3**	**-0.8**
DIDI	**Didim-Aydin**	**0.50**	**324**	*e*Pg	**Pg**	**12 01 07.3**	**-0.8**
NISR	**Nisiros**	**0.53**	**227**	P	**Pg**	**12 01 07.9**	**-0.7**
NISR				AML	AML	12 01 17.8	
	comp=E,17452μm,0.3s						
NISR				S	**Sb**	**12 01 17.9**	**+0.9**
NISR				AML	AML	12 01 21.3	
	comp=N,13318μm,0.5s						
NISR	**Nisiros**	**0.53**	**227**	P	**Pg**	**12 01 08.6**	**0.0**
NISR				S	**Sb**	**12 01 17.4**	**+0.4**
NISR	**Nisiros**	**0.53**	**227**	P	**Pg**	**12 01 08.6**	**0.0**
NISR				S	**Sb**	**12 01 17.4**	**+0.4**
MRSB	**Marmaris-Mugla**	**0.54**	**118**	PG	**Pg**	**12 01 08.9**	**+0.1**
MRSB	**Marmaris-Mugla**	**0.54**	**118**	*e*Pg	**Pg**	**12 01 08.9**	**+0.1**
AYDN	**Tasoluk**	**0.72**	**17**	*i* P	**Pg**	**12 01 11.8**	**-0.5**
AYDN				*i* S	**Sg**	**12 01 21.9**	**+0.2**
AYDN	**Tasoluk**	**0.72**	**17**	P	**Pg**	**12 01 11.8**	**-0.5**
AYDN				S	**Sg**	**12 01 21.9**	**+0.2**
GCAM	**G?zelcaml?**	**0.79**	**338**	PG	**Pg**	**12 01 12.7**	**-0.8**
GCAM	**G?zelcaml?**	**0.79**	**338**	*e*Pg	**Pg**	**12 01 12.7**	**-0.8**
TURN	**Turunc**	**0.80**	**97**	PG	**Pg**	**12 01 09.2**	**-4.6**
TURN	**Turunc**	**0.80**	**97**	*i* P	Pg	12 01 08.2	-5.6
TURN				*i* S	**Sg**	**12 01 17.4**	**-6.9**
TURN	**Turunc**	**0.80**	**97**	*e*Pg	**Pg**	**12 01 09.2**	**-4.6**
DALY	**Dalyan (Mu¨la**	**0.85**	**100**	PG	**Pb**	**12 01 14.9**	**0.0**
DALY	**Dalyan (Mu¨la**	**0.85**	**100**	*i* P	**Pg**	**12 01 14.4**	**-0.3**
DALY				*i* S	**Sn**	**12 01 27.5**	**-0.8**
DALY	**Dalyan (Mu¨la**	**0.85**	**100**	P	**Pg**	**12 01 14.4**	**-0.3**
DALY	**Dalyan (Mu¨la**	**0.85**	**100**	*e*Pg	**Pb**	**12 01 14.9**	**0.0**
DALY				S	**Sn**	**12 01 27.5**	**-0.8**
ARG	**Arkhangelos**	**0.86**	**151**	PG	**Pb**	**12 01 15.2**	**+0.1**
ARG	**Arkhangelos**	**0.86**	**151**	P	**Pg**	**12 01 13.8**	**-1.1**
ARG				S	**Sn**	**12 01 28.4**	**-0.2**
ARG				AML	AML	12 01 29.8	
	comp=N,13914μm,0.5s						
ARG				AML	AML	12 01 31.6	
	comp=E,15508μm,0.4s						
ARG	**Arkhangelos**	**0.86**	**151**	P	**Pg**	**12 01 14.2**	**-0.7**
ARG				S	**Sn**	**12 01 28.1**	**-0.5**
ARG	**Arkhangelos**	**0.86**	**151**	P	**Pg**	**12 01 14.6**	**-0.3**
ARG	**Arkhangelos**	**0.86**	**151**	*e*Pg	**Pb**	**12 01 15.2**	**+0.1**
ARG				S	**Sn**	**12 01 28.1**	**-0.5**
SMG	**Samos**	**0.96**	**320**	P	**Pg**	**12 01 15.5**	**-1.3**
SMG				S	**Sn**	**12 01 30.8**	**-0.3**
SMG				AML	AML	12 01 35.0	
	comp=E,4696μm,0.4s						
SMG				AML	AML	12 01 35.6	
	comp=N,3559μm,0.9s						
SMG	**Samos**	**0.96**	**320**	P	**Pg**	**12 01 15.9**	**-0.9**
SMG				S	**Sb**	**12 01 30.1**	**+0.7**
SMG	**Samos**	**0.96**	**320**	P	**Pg**	**12 01 15.9**	**-0.9**
SMG				S	**Sb**	**12 01 30.1**	**+0.7**
AYDB	**Zeytinkoy-Aydi**	**1.00**	**13**	PG	**Pg**	**12 01 16.5**	**-1.0**
AYDB	**Zeytinkoy-Aydi**	**1.00**	**13**	*e*Pg	**Pg**	**12 01 16.5**	**-1.0**
TAVA	**DENIZLI_Tavas**	**1.15**	**64**	*i* P	**Pb**	**12 01 19.4**	**-0.6**
TAVA				*i* S	**Sn**	**12 01 37.8**	**+2.0**
TAVA	**DENIZLI_Tavas**	**1.15**	**64**	P	**Pb**	**12 01 19.5**	**-0.6**
TAVA				S	**Sn**	**12 01 37.8**	**+2.0**
FETY	**Fethiye**	**1.23**	**105**	PN	**Pg**	**12 01 21.8**	**-0.1**
FETY	**Fethiye**	**1.23**	**105**	P	**Pn**	**12 01 20.0**	**-1.2**
FETY				S	**Sg**	**12 01 38.4**	**+0.5**
FETY	**Fethiye**	**1.23**	**105**	P	**Pn**	**12 01 20.2**	**-1.0**
FETY	**Fethiye**	**1.23**	**105**	*e*Pn	**Pg**	**12 01 21.8**	**-0.1**
FETY				S	**Sg**	**12 01 38.4**	**+0.5**
DENT	**Denizli**	**1.38**	**55**	PN	**Pg**	**12 01 24.7**	**0.0**
DENT	**Denizli**	**1.38**	**55**	*e*Pn	**Pg**	**12 01 24.7**	**0.0**
AMGA	**Amorgos Island**	**1.38**	**265**	P	**Pg**	**12 01 24.8**	**-0.1**
AMGA				S	**Sg**	**12 01 43.6**	**+0.8**
AMGA				AML	AML	12 01 50.1	
	comp=E,894μm,0.4s						
AMGA				AML	AML	12 01 51.1	
	comp=N,1402μm,0.4s						
AMGA	**Amorgos Island**	**1.38**	**265**	P	**Pb**	**12 01 24.1**	**+0.1**
AMGA				S	**Sg**	**12 01 42.7**	**-0.1**
KARP	**Karpathos**	**1.47**	**194**	PN	**Pb**	**12 01 25.1**	**-0.4**
KARP	**Karpathos**	**1.47**	**194**	P	**Pn**	**12 01 23.3**	**-1.2**
KARP				S	**Sn**	**12 01 42.7**	**-0.9**
KARP				AML	AML	12 01 50.3	
	comp=E,2056μm,0.7s						
KARP				AML	AML	12 01 50.8	
	comp=N,2744μm,0.6s						
KARP	**Karpathos**	**1.47**	**194**	P	**Pn**	**12 01 24.0**	**-0.5**
KARP				S	**Sb**	**12 01 44.2**	**+0.1**
KARP	**Karpathos**	**1.47**	**194**	P	**Pn**	**12 01 24.1**	**-0.5**
KARP	**Karpathos**	**1.47**	**194**	*e*Pn	**Pb**	**12 01 25.1**	**-0.4**
KARP				S	**Sb**	**12 01 44.2**	**+0.1**
GLHS	**Glhisar (BURDU**	**1.52**	**83**	PN	**Pb**	**12 01 26.6**	**+0.2**
GLHS	**Glhisar (BURDU**	**1.52**	**83**	*e*Pn	**Pb**	**12 01 26.6**	**+0.2**
GOLH	**Golhisar**	**1.58**	**80**	*i* P	**Pb**	**12 01 27.7**	**+0.3**
GOLH				*i* S	**Sg**	**12 01 50.4**	**+1.2**
GOLH	**Golhisar**	**1.58**	**80**	P	**Pb**	**12 01 27.7**	**+0.3**
GOLH				S	**Sg**	**12 01 50.4**	**+1.2**
URLA	**Izmir**	**1.60**	**330**	PN	**Pn**	**12 01 26.8**	**+0.4**
URLA	**Izmir**	**1.60**	**330**	*e*Pn	**Pn**	**12 01 26.8**	**+0.4**
APE	**Apeiranthos**	**1.67**	**274**	PN	**Pn**	**12 01 27.3**	**0.0**
APE	**Apeiranthos**	**1.67**	**274**	P	**Pn**	**12 01 26.4**	**-0.9**
APE				S	**Sn**	**12 01 47.5**	**-1.0**
APE				AML	AML	12 02 01.9	
	comp=N,668μm,0.6s						
APE				AML	AML	12 02 04.0	
	comp=E,450μm,0.5s						
APE	**Apeiranthos**	**1.67**	**274**	P	**Pn**	**12 01 26.9**	**-0.4**
APE	**Apeiranthos**	**1.67**	**274**	*e*Pn	**Pn**	**12 01 27.3**	**0.0**
APE				S	**Sn**	**12 01 48.2**	**-0.4**
KULA	**Kula-Manisa**	**1.75**	**28**	PN	**Pn**	**12 01 28.7**	**+0.3**
KULA	**Kula-Manisa**	**1.75**	**28**	*e*Pn	**Pn**	**12 01 28.7**	**+0.3**
AKAS	**Kas**	**1.77**	**114**	PN	**Pb**	**12 01 30.8**	**+0.2**
AKAS	**Kas**	**1.77**	**114**	*i* P	**Pb**	**12 01 30.8**	**+0.2**
AKAS				*i* S	**

comp=E,1107μm,0.9s
PRK AML AML 12 02 29.7
comp=N,1442μm,0.9s
PRK Paraskevi 2.50 335 P **Pn** **12 01 38.7 0.0**
PRK S **Sn** **12 02 08.4 -0.7**
PRK Paraskevi 2.50 335 P **Pn** **12 01 38.9 +0.2**
PRK S **Sn** **12 02 08.8 -0.3**
SIGR SIGRI 2.63 329 P **Pn** **12 01 40.5 0.0**
SIGR SIGRI 2.63 329 P **Pn** **12 01 40.6 +0.2**
IDI Anoyia 2.77 233 Pn **Pn** **12 01 42.9 +0.5**
comp=N,1.5nm,0.3s,baz=333,slow=3.4,SNR=8.2
IDI Sn **Sn** **12 02 14.4 -1.4**
comp=N,2.5nm,0.3s,baz=300,slow=6.4,SNR=5.2
IDI LR LR 12 03 00.1
comp=N,105nm,18.8s,baz=328,slow=44
IDI Anoyia 2.77 233 PN **Pn** **12 01 43.6 +1.2**
IDI Anoyia 2.77 233 *e*Pn **Pn** **12 01 43.6 +1.2**
SIVA Sivas 2.99 230 P **Pn** **12 01 45.5 +0.1**
SIVA Sivas 2.99 230 P **Pn** **12 01 45.8 +0.4**
DION Dionisos Attik 3.12 292 P **Pn** **12 01 48.1 +0.8**
DION Dionisos Attik 3.12 292 P **Pn** **12 01 48.0 +0.8**
VLY Voula,Athens 3.16 287 P **Pn** **12 01 47.3 -0.5**
VLY Voula,Athens 3.16 287 P **Pn** **12 01 47.9 +0.1**
KEPZ Antalya-Kepez 3.20 90 *i* P **Pn** **12 01 51.2 +2.9**
KEPZ *i* S **Sb** **12 02 34.8 +0.9**
KEPZ Antalya-Kepez 3.20 90 P **Pn** **12 01 51.2 +2.9**
ATHU Athens Univers 3.20 289 P **Pn** **12 01 47.9 -0.4**
ATHU Athens Univers 3.20 289 P **Pn** **12 01 48.4 +0.1**
VLI Veliai 3.76 268 P **Pn** **12 01 55.8 -0.1**
VLI Veliai 3.76 268 P **Pn** **12 01 56.3 +0.4**
SMTH Samothraki Isl 3.85 336 P **Pn** **12 01 57.2 -0.1**
SMTH Samothraki Isl 3.85 336 P **Pn** **12 01 57.6 +0.3**
SKIA Skiathos 3.94 305 P **Pn** **12 01 60.0 +1.5**
SKIA Skiathos 3.94 305 P **Pn** **12 01 59.6 +1.2**
ALN Alexandroupoli 4.10 343 P **Pn** **12 02 02.8 +2.1**
DYR Agios Nikonas 4.24 269 P **Pn** **12 02 05.4 +2.8**
DYR Agios Nikonas 4.24 269 P **Pn** **12 02 04.5 +1.9**
RDO Rodhopi 4.47 339 P **Pn** **12 02 07.1 +1.4**
RDO Rodhopi 4.47 339 P **Pn** **12 02 06.9 +1.2**
SRS Serrai 5.19 324 P **Pn** **12 02 17.3 +1.7**
SRS Serrai 5.19 324 P **Pn** **12 02 17.1 +1.5**
BRTR Keskin Array B 5.48 58 Pn **Pn** **12 02 21.1 +1.4**
comp=N,0.6nm,0.3s,baz=239,slow=15,SNR=16
BRTR Sn **Sn** **12 03 22.1 -0.5**
baz=240,slow=20,SNR=4.0
KNT Kendrikon 5.56 320 P **Pn** **12 02 23.9 +3.1**
KNT Kendrikon 5.56 320 P **Pn** **12 02 23.0 +2.2**
MMAI Mount Meron Ar 7.51 119 Pn **Pn** **12 02 46.8 -0.8**
comp=N,2.7nm,0.3s,baz=315,slow=12,SNR=17
MMAI Sn **Sn** **12 04 09.8 -2.9**
comp=N,2.6nm,0.3s,baz=310,slow=25,SNR=5.8
MMAI Lg Lg 12 04 51.0
baz=340,slow=37,SNR=2.2
MLR Muntele Rosu 8.60 352 LR LR 12 07 00.9
comp=N,9.6nm,18.7s,baz=203,slow=42
EIL Elat 9.52 138 Pn **Pn** **12 03 15.4 +0.3**
comp=N,0.3nm,0.3s,baz=21,slow=8.6,SNR=2.3
EIL Sn **Sn** **12 04 56.9 -5.2**
comp=N,0.5nm,0.3s,baz=13,slow=18,SNR=3.7
KVAR Kislovodsk Arr 13.43 54 Sn **Sn** **12 06 36.4 -1.3**
baz=173,slow=8.1,SNR=1.8
GNI Garni 13.78 71 LR LR 12 09 37.2
comp=N,30nm,19.3s,baz=278,slow=38
KEST Kesra 14.77 271 Pn **Pn** **12 04 29.4 +2.3**
comp=N,0.4nm,0.3s,baz=63,slow=6.8,SNR=4.0
GERES GERESS Array B 15.61 324 Pn **P** **12 04 40.5 -1.8**
comp=N,0.1nm,0.3s,baz=146,slow=12,SNR=4.3
FINES FINESS Array B 24.51 358 P **P** **12 06 17.5 +0.4**
comp=N,1.1nm,0.9s,baz=181,slow=7.0,SNR=3.4
HFS Hagfors 24.84 343 P **P** **12 06 19.5 -0.5**
comp=N,2.7nm,0.9s,baz=170,slow=11,SNR=3.1
HFS LR LR 12 16 32.7
comp=N,29nm,19.2s,baz=12,slow=38
ESDC Sonseca Array 24.85 286 P **P** **12 06 21.3 +0.8**
comp=N,0.3nm,0.4s,baz=78,slow=8.9,SNR=7.5
AKTO Aktyubinsk 25.56 49 LR LR 12 19 40.6
comp=N,28nm,19.0s,baz=109,slow=44
TORD Torodi Ar. Bea 33.17 231 P **P** **12 07 34.8 +0.1**
comp=N,0.7nm,0.5s,baz=34,slow=7.9,SNR=4.9
KURBB Kurchatov Arra 38.44 53 P **P** **12 08 19.2 -0.3**
comp=N,0.3nm,0.3s,baz=281,slow=9.1,SNR=4.1
MKAR Makanchi Array 41.13 58 P **P** **12 08 42.5 +0.5**
comp=N,0.5nm,0.6s,baz=286,slow=6.8,SNR=5.1
ZALV Zalesovo Beam 42.32 48 LR LR 12 31 23.8
comp=N,16nm,18.0s,baz=73,slow=43

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*JMA **16** 12:04:58.3±0.1,23°.31N×121°.34E,h49km±1km,M3.4*
*ISCJB **16** 12:04:59.6±0.2,23°.32N±0°.02×121°.50E±0°.01,h27km,*
Error ellipse: s-maj=2.6km s-min=1.6km az=152.7
*TAP **16** 12:04:59.9,23°.35N×121°.42E,h40km,ML3.4,C*
ISC 16 12:04:59.4±0.9,23°.34N±0°.02×121°.48E±0°.02,h27km,n71,
σ1°39/118,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWF1	**Yuli**	**0.17**	**276**	*e*P	**Pb**	**12 05 06.6**	**+1.7**
TWF1	baz=282			*e*S	**Sb**	**12 05 11.2**	**+2.6**
YULB	**Yu-li**	**0.17**	**289**	*e*P	**Pb**	**12 05 06.6**	**+1.6**
YULB	baz=293			*e*S	**Sb**	**12 05 11.4**	**+2.6**
FULB	**Fuli**	**0.21**	**231**	*e*P	**Pn**	**12 05 07.5**	**+0.6**
FULB	baz=227			*e*S	**Sb**	**12 05 13.5**	**+3.9**
EHY	**Hungye**	**0.22**	**320**	*e*P	**Pn**	**12 05 07.1**	**+0.2**
EHY	baz=326			*e*S	**Sb**	**12 05 12.1**	**+2.3**
CHKT	**Chengkung**	**0.26**	**203**	*e*P	**Pn**	**12 05 07.5**	**+0.2**
CHKT	baz=180			*e*S	**Sb**	**12 05 13.4**	**+3.0**
EGFH	**Guangfu**	**0.34**	**352**	*e*P	**Pn**	**12 05 08.6**	**+0.1**
EGFH	baz=3.0			*e*S	**Sn**	**12 05 14.4**	**0.0**
ELDTW	**Lidau**	**0.45**	**251**	*e*P	**Pn**	**12 05 09.1**	**-1.0**
ELDTW	baz=242			*e*S	**Sn**	**12 05 15.4**	**-2.0**
ESL	**Shilin**	**0.48**	**355**	*e*P	**Pn**	**12 05 09.9**	**-0.6**
ESL	baz=9.0			S	**Sn**	**12 05 16.9**	**-1.1**
TWGBT	**Beinan**	**0.63**	**215**	*e*P	**Pn**	**12 05 10.6**	**-1.9**
TWG	baz=205 **Pinlang**	**0.63**	**216**	*e*P	**Pn**	**12 05 10.7**	**-1.9**
ALS	baz=205 **Alishan**	**0.64**	**286**	*e*P	**Pn**	**12 05 12.8**	**-0.1**
HWA	baz=286 **Hwalien**	**0.65**	**10**	*e*P	**Pn**	**12 05 13.3**	**+0.5**
HWA	baz=7.0			*e*S	**Sn**	**12 05 23.0**	**+0.8**
SSLB	**Suanglung**	**0.66**	**313**	*e*P	**Pn**	**12 05 12.9**	**-0.1**
SSLB	baz=321			*e*S	**Sn**	**12 05 21.2**	**-1.3**
TWD	**Chiawan**	**0.75**	**8**	*e*P	**Pn**	**12 05 13.8**	**-0.4**
TWD	baz=5.0			*e*S	**Sn**	**12 05 23.6**	**-1.0**
SMLT	**Sun Moon Lake**	**0.76**	**316**	*e*P	**Pn**	**12 05 14.9**	**+0.5**
SMLT	baz=323			*e*S	**Sn**	**12 05 25.6**	**+0.5**
CHGB	**Renai**	**0.77**	**339**	*e*P	**Pn**	**12 05 14.9**	**+0.2**
CHGB	baz=351			*e*S	**Sn**	**12 05 25.2**	**-0.3**
TPUB	**Ta-pu**	**0.78**	**268**	*e*P	**Pn**	**12 05 14.9**	**+0.3**
TPUB	baz=266			*e*S	**Sn**	**12 05 25.3**	**-0.1**
WTP	**Ta-pu**	**0.80**	**264**	*e*P	**Pn**	**12 05 14.8**	**-0.1**
WTP	baz=262			*e*S	**Sn**	**12 05 26.1**	**+0.2**
SLGT	**Liugui**	**0.84**	**246**	*e*P	**Pn**	**12 05 15.3**	**-0.1**
SLGT	baz=236			*e*S	**Sn**	**12 05 26.7**	**-0.1**
WJS	**Zhushan**	**0.84**	**305**	*e*P	**Pn**	**12 05 16.0**	**+0.5**
WJS	baz=307			*e*S	**Sn**	**12 05 27.6**	**+0.7**
NACB	**Ninganchiao**	**0.84**	**7**	*e*P	**Pb**	**12 05 14.9**	**-0.5**
NACB	baz=12			*e*S	**Sn**	**12 05 25.4**	**-1.5**
SGST	**Jiashian**	**0.86**	**253**	*e*P	**Pn**	**12 05 16.6**	**+0.9**
SGST	baz=250			*e*S	**Sn**	**12 05 27.7**	**+0.3**
ECL	**Taimali**	**0.88**	**213**	*e*P	**Pn**	**12 05 13.9**	**-2.1**
CHN1	baz=205 **Nanshi**	**0.88**	**260**	*e*P	**Pn**	**12 05 16.3**	**+0.2**
CHN1	baz=267			*e*S	**Sn**	**12 05 28.8**	**+0.8**
WGK	**Gukeng**	**0.91**	**293**	*e*P	**Pn**	**12 05 17.1**	**+0.8**
WGK	baz=293			*e*S	**Sn**	**12 05 29.8**	**+1.2**
TWK	**Hsinying**	**0.91**	**266**	*e*P	**Pn**	**12 05 16.8**	**+0.3**
TWK	baz=264			*e*S	**Sn**	**12 05 29.4**	**+0.6**
WDLH	**Douliu**	**0.93**	**292**	*e*P	**Pn**	**12 05 17.6**	**+1.0**
WDLH	baz=293			*e*S	**Sn**	**12 05 30.7**	**+1.6**
SSD	**Sandimen**	**0.97**	**233**	*e*P	**Pb**	**12 05 17.2**	**-0.4**
SSD	baz=224			*e*S	**Sn**	**12 05 29.1**	**-1.1**
CHY	**Chiayi**	**0.98**	**280**	*e*P	**Pb**	**12 05 17.5**	**-0.2**
CHY	baz=279			*e*S	**Sn**	**12 05 30.1**	**-0.3**
CHN3	**Shinhua**	**1.05**	**256**	*e*P	**Pb**	**12 05 20.0**	**+1.1**
CHN3	baz=253			*e*S	**Sn**	**12 05 34.6**	**+2.4**
NNSB	**Datong**	**1.09**	**356**	*e*P	**Pb**	**12 05 19.2**	**-0.5**
NNSB	baz=9.0			*e*S	**Sb**	**12 05 32.4**	**-1.2**
NNSH	**Datong**	**1.09**	**356**	*e*P	**Pb**	**12 05 19.4**	**-0.3**
NNSH	baz=7.0			*e*S	**Sb**	**12 05 32.4**	**-1.2**
SGLT	**Jiouru**	**1.09**	**236**	*e*S	**Sb**	**12 05 35.4**	**+2.0**
TCU	baz=233 **Taichung**	**1.09**	**318**	*e*P	**Pb**	**12 05 20.1**	**+0.5**
NNS	baz=320 **Nan Shan**	**1.10**	**355**	*e*P	**Pb**	**12 05 19.3**	**-0.6**
NNS	baz=8.0			*e*S	**Sb**	**12 05 33.9**	**-0.1**
ENA	**Nanau**	**1.11**	**13**	*e*P	**Pb**	**12 05 18.9**	**-1.1**
NANB	baz=9.0 **Nanao**	**1.12**	**13**	*e*P	**Pb**	**12 05 18.8**	**-1.2**
ENAH	baz=9.0 **Nanao**	**1.15**	**15**	*e*P	**Pb**	**12 05 19.9**	**-0.8**
RLNB	baz=11 **Erlin**	**1.16**	**299**	*e*P	**Pb**	**12 05 20.2**	**-0.6**
RLNB	baz=299			*e*S	**Sb**	**12 05 35.2**	**-0.3**
SCLT	**Jiali**	**1.19**	**263**	*e*S	**Sb**	**12 05 36.2**	**0.0**
WSF	baz=260 **Szhu**	**1.19**	**285**	*e*S	**Sb**	**12 05 35.4**	**-0.9**
SCZT	baz=284 **Fangliau**	**1.24**	**220**	*e*P	**Pb**	**12 05 20.5**	**-1.6**
SCZT	baz=205			*e*S	**Sb**	**12 05 37.2**	**-0.6**
NSY	**Sanyi**	**1.26**	**329**	*e*P	**Pb**	**12 05 22.9**	**+0.5**
LAY	baz=331 **Lan-yu**	**1.29**	**177**	*e*P	**Pb**	**12 05 20.5**	**-2.5**
ENTT	baz=166 **Nioudou**	**1.30**	**4**	*e*P	**Pb**	**12 05 22.0**	**-1.2**
TWC	baz=20 **Suao**	**1.31**	**15**	*e*P	**Pb**	**12 05 22.9**	**-0.5**
YHNB	baz=19 **Yeheng**	**1.33**	**356**	*e*P	**Pb**	**12 05 22.9**	**-0.8**
YHNB	baz=8.0			*e*S	**Sb**	**12 05 39.2**	**-1.3**
NSK	**Sanguang**	**1.34**	**355**	*e*P	**Pb**	**12 05 23.0**	**-0.8**
NSK	baz=7.0			*e*S	**Sb**	**12 05 39.1**	**-1.6**
NMLH	**Miaoli**	**1.35**	**333**	*e*P	**Pb**	**12 05 23.7**	**-0.3**
NMLH	baz=335			*e*S	**Sb**	**12 05 41.0**	**+0.1**
NSTT	**Nanjuang**	**1.36**	**341**	*e*P	**Pb**	**12 05 24.1**	**-0.1**
NSTT	baz=345			*e*S	**Sb**	**12 05 41.5**	**+0.3**
LIOB	**Emei**	**1.37**	**342**	*e*P	**Pb**	**12 05 24.1**	**-0.2**
LIOB	baz=346			*e*S	**Sb**	**12 05 42.3**	**+0.8**
TWE	**Neicheng**	**1.39**	**7**	*e*P	**Pb**	**12 05 23.2**	**-1.4**
NWLT	baz=11 **Wulai**	**1.44**	**1**	*e*P	**Pb**	**12 05 24.3**	**-1.2**
EGS	baz=16	**1.56**	**15**	*e*P	**Pb**	**12 05 26.6**	**-0.9**
TATO	baz=20 **Taipei**	**1.63**	**0**	*e*P	**Pb**	**12 05 26.9**	**-2.0**
TWA	baz=19 **Mucha**	**1.64**	**3**	*e*P	**Pb**	**12 05 27.2**	**-1.8**
WDGT	baz=15 **Dungji**	**1.67**	**268**	*e*P	**Pb**	**12 05 26.2**	**-3.2**
TWB1	baz=266 **Santiao Chiao**	**1.73**	**16**	*e*P	**Pb**	**12 05 29.7**	**-0.7**
JYNG	baz=20 **Yonagunijimaku**	**1.75**	**50**	P	**Pb**	**12 05 29.5**	**-1.2**
JYNG				*e*S	**Sb**	**12 05 50.9**	**-1.3**
PHUB	**P'eng-hu**	**1.76**	**276**	*e*P	**Pb**	**12 05 26.8**	**-4.1**
PNG	baz=275 **Penghu**	**1.78**	**278**	*e*P	**Pb**	**12 05 27.6**	**-3.6**
YOJ	baz=276 **Yonaguni jima**	**1.80**	**51**	P	**Pb**	**12 05 30.2**	**-1.4**
YOJ				S	**Sb**	**12 05 52.7**	**-1.0**
HATJ	**Hateruma jima**	**2.25**	**71**	P	**Pn**	**12 05 36.1**	**+1.3**
HATJ				S	**Sn**	**12 06 03.0**	**+1.2**
IRIF	**Iriomote-Funau**	**2.29**	**64**	P	**Pb**	**12 05 37.4**	**-2.6**
IRIF				S	**Sn**	**12 06 05.4**	**+2.7**
JKRS	**Kuro-shima**	**2.49**	**68**	P	**Pn**	**12 05 39.9**	**+1.8**
JKRS				S	**Sn**	**12 06 09.3**	**+1.7**
JIJ	**Ishigaki jima**	**2.65**	**67**	P	**Pn**	**12 05 41.5**	**+1.2**
JIJ				S	**Sn**	**12 06 12.0**	**+0.5**
JISG	**Ishigakijimahi**	**2.88**	**64**	P	**Pn**	**12 05 44.2**	**+0.8**
JISG				S	**Sn**	**12 06 17.4**	**+0.2**
JTJ	**Tarama**	**3.22**	**66**	P	**Pn**	**12 05 49.3**	**+1.1**
JTJ				S	**Sn**	**12 06 27.0**	**+1.3**
JIRB	**Irabujima**	**3.69**	**66**	P	**Pn**	**12 05 55.5**	**+0.9**
JIRB				*e*S	**Sn**	**12 06 37.8**	**+0.5**
JIKM	**Ikemajima**	**3.79**	**65**	P	**Pn**	**12 05 57.9**	**+1.9**
JIKM				S	**Sn**	**12 06 41.6**	**+1.9**
JOGS	**Gusukube**	**3.86**	**68**	P	**Pn**	**12 05 58.6**	**+1.6**
JOGS				*e*S	**Sn**	**12 06 43.0**	**+1.5**

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*ISCJB **16** 12:18:31.9±0.4,32°.11N±0°.02×115°.75W±0°.03,h7km±3km,*
Error ellipse: s-maj=3.8km s-min=3.3km az=146.4
*ECX **16** 12:18:33.5±0.5,32°.10N×115°.74W,h6km,MD2.6,ML2.8*
*NEIC **16** 12:18:33.5±0.0,32°.10N×115°.74W,h18km,MD2.8(ECX),*
ML2.6(PAS),After ECX.
*MEX **16** 12:18:34.6±0.7,32°.13N×115°.73W,h10km,MD3.3*
ISC 16 12:18:31.5±1.0,32°.11N±0°.02×115°.74W±0°.02,h16km±9km,
n40,σ0°59/70,9C,California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPBX	**Cerro Prieto**	**0.48**	**50**	*e*P	**Pb**	**12 18 42.0**	**+0.3**
CPBX				*e*S	**Sb**	**12 18 49.2**	**+0.6**
CPBX				⇑*e*		12 18 52.7	
CPBX				IAML		12 18 52.7	
	comp=E,3μm,0.2s						
MBIG	**Mexicali**	**0.55**	**57**	*i* P	**Pb**	**12 18 43.5**	**+0.7**
MBIG				*i* S	**Sn**	**12 18 52.2**	**-1.4**
YUH	**Yuha Desert**	**0.56**	**344**	⇑*i* P	**Pb**	**12 18 43.3**	**+0.3**
YUH	**Yuha Desert**	**0.56**	**344**	*e*Pg	**Pb**	**12 18 43.3**	**+0.3**
RMX	**La Rumorosa**	**0.57**	**330**	*e*P	**Pg**	**12 18 42.5**	**-0.4**
RMX				*e*S	**Sg**	**12 18 49.6**	**-1.0**
RMX				⇑*e*		12 18 50.4	
RMX				IAML		12 18 50.4	
	comp=E,302nm,0.2s						
IKP	**In-Ko-Pah, Jac**	**0.62**	**330**	⇑*e*P	**Pb**	**12 18 44.6**	**+0.5**
ZAX	**El Zacaton**	**0.74**	**217**	⇑*e*P	**Pb**	**12 18 46.2**	**+0.1**
ZAX				*e*S	**Sb**	**12 18 56.6**	**+0.6**
ZAX				IAML		12 18 57.2	
	comp=N,371nm,0.5s						
ZAX				⇑*e*		12 18 57.2	
CRR	**Carrizo Plain**	**0.80**	**346**	*e*Pg	**Pn**	**12 18 48.0**	**-0.1**
CBX	**Cerro Bola**	**0.81**	**285**	⇑*i* P	**Pn**	**12 18 48.2**	**-0.1**
CBX				*e*S	**Sn**	**12 18 59.3**	**-0.7**
CBX	**Cerro Bola**	**0.81**	**285**	*e*Pg	**Pn**	**12 18 48.0**	**-0.4**
CBX				*e*Sg	**Sn**	**12 18 59.3**	**-0.7**
CBX	**Cerro Bola**	**0.81**	**285**	*i* P	**Pn**	**12 18 48.0**	**-0.4**
CBX				*i* S	**Sn**	**12 18 59.3**	**-0.7**
ECNX	**Esteban Cantu**	**0.85**	**239**	⇑*e*P	**Pg**	**12 18 48.5**	**+0.3**
ECNX				*e*P	**Pb**	**12 18 47.6**	**-0.4**
TJIG	**Tijuana**	**0.85**	**293**	*e*P	**Pn**	**12 18 48.5**	**-0.3**
TJIG	**Tijuana**	**0.85**	**293**	*i* P	**Pn**	**12 18 48.6**	**-0.3**
TJIG				*i* S	**Sg**	**12 18 59.6**	**+0.2**
CBKC	**Canebrake**	**0.90**	**332**	*e*Pg	**Pn**	**12 18 50.0**	**+0.5**
CBKC				*e*Sg	**Sn**	**12 19 02.7**	**+0.5**
PBX	**Punta Banda**	**0.91**	**247**	⇑*e*P	**Pg**	**12 18 49.5**	**+0.3**
COA	**Coachella**	**0.92**	**35**	*e*Pg	**Pn**	**12 18 49.9**	**+0.1**
BAR	**Barrett**	**0.97**	**306**	*e*P	**Pn**	**12 18 50.6**	**+0.1**
BAR	**Barrett**	**0.97**	**306**	*e*Pg	**Pn**	**12 18 50.8**	**+0.2**
BAR				*e*Sg	**Sg**	**12 19 03.4**	**+0.2**
BAR				*e*Sn	**Sn**	**12 19 03.9**	**-0.1**
SPIG	**San Pedro Mart**	**1.08**	**167**	*e*P	**Pg**	**12 18 52.5**	**0.0**
SPIG	**San Pedro Mart**	**1.08**	**167**	*e*Pn	**Pg**	**12 18 52.5**	**0.0**
SPIG				*e*Sn	**Sg**	**12 19 06.9**	**+0.1**
SPIG	**San Pedro Mart**	**1.08**	**167**	*e*P	**Pg**	**12 18 52.5**	**0.0**
SPIG				*i* S	**Sg**	**12 19 06.9**	**+0.1**
SPX	**San Pedro Mart**	**1.08**	**167**	*e*P	**Pg**	**12 18 52.6**	**+0.1**
SPX	**San Pedro Mart**	**1.08**	**167**	*e*Pn	**Pn**	**12 18 52.4**	**+0.1**
SPX				*e*Sn	**Sb**	**12 19 06.5**	**+0.4**
SPX	**San Pedro Mart**	**1.08**	**167**	*e*P	**Pn**	**12 18 52.4**	**+0.1**
SPX				*e*S	**Sb**	**12 19 06.5**	**+0.4**
SDRC	**San Diego Road**	**1.19**	**302**	*e*P	**Pg**	**12 18 54.6**	**+0.1**
EML	**El Monte Cty P**	**1.22**	**310**	*e*Pn	**Pg**	**12 18 55.1**	**+0.1**
EML				*e*Sn	**Sg**	**12 19 11.0**	**+0.1**
GLA	**Glamis**	**1.22**	**39**	*e*Pn	**Pn**	**12 18 53.5**	**-0.5**
GLA				*e*Sn	**Sb**	**12 19 09.2**	**-0.6**
DPP	**Dos Picos Cty**	**1.35**	**312**	*e*Pn	**Pg**	**12 18 57.1**	**-0.4**
DPP				*e*Sn	**Sg**	**12 19 14.9**	**-0.2**
HWB	**Hans Werner Br**	**1.38**	**312**	*e*Pn	**Pg**	**12 18 57.6**	**-0.4**
HWB				*e*Sn	**Sg**	**12 19 15.8**	**-0.2**
CPE	**Camp Elliot**	**1.39**	**305**	*e*Pn	**Pg**	**12 18 57.6**	**-0.7**
CPE				*e*Sn	**Sg**	**12 19 15.7**	**-0.8**
CPE				*e*Sn	**Sb**	**12 19 15.8**	**+1.2**
PLM	**Palomar**	**1.56**	**323**	*e*Pn	**Pg**	**12 19 01.5**	**-0.1**
FRD	**Ford Ranch, An**	**1.56**	**333**	*e*Pn	**Pg**	**12 19 02.1**	**+0.5**
XPFO	**Piæon Flat**	**1.62**	**338**	*e*Pn	**Pn**	**12 19 00.1**	**+0.6**
XPFO				*e*Pg	**Pb**	**12 19 00.3**	**-0.7**
XPFO				*e*Sn	**Sg**	**12 19 22.7**	**-1.0**
XPFO				*e*Sg	**Sb**	**12 19 22.9**	**+1.7**
SNDA	**J Saunders Pla**	**1.62**	**333**	*e*Pn	**Pg**	**12 19 03.2**	**+0.6**
PFO	**Pinyon Flats O**	**1.62**	**338**	*e*Pn	**Pn**	**12 19 00.0**	**+0.5**
PFO				*e*Sn	**Sg**	**12 19 22.7**	**-1.1**
DNR	**Dunn Ranch,Anz**	**1.64**	**333**	*e*Pn	**Pb**	**12 19 00.7**	**-0.7**
DNR				*e*Pg	**Pg**	**12 19 03.9**	**+0.8**
DNR				*e*Sn	**Sg**	**12 19 25.9**	**+1.6**
CRY	**Cary Ranch**	**1.68**	**330**	*e*Pn	**Pg**	**12 19 04.0**	**+0.2**
CRY				*e*Sn	**Sg**	**12 19 26.2**	**+0.5**
113A	**Mohawk Valley,**	**1.80**	**68**	*e*Pn	**Pn**	**12 19 01.9**	**+0.1**
113A				*e*Sn	**Sn**	**12 19 23.3**	**-1.0**
HMTC	**Hemet**	**1.92**	**327**	*e*Pn	**Pg**	**12 19 08.0**	**-0.4**

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*NIED **16** 12:40:00,35°.30N×140°.70E,h23km,Mw3.6 Best double couple: M0=2.74000×10^14 NP1:φ0=234.00000°,δ13.00000°, λ120.00000°. NP2:φ0=23.00000°,δ79.00000°,λ83.00000°.*
*JMA **16** 12:40:27.4±0.1,35°.38N×140°.59E,h25km±2km,M3.4*
Broadband fault plane solution: P waves. NP1: φ0=24.00000°,δ71.00000°,λ68.00000°. NP2:φ0=256.00000°, δ29.00000°,λ138.00000°. Principal axes: T Plg58.0000°, Azm264.0000°; N Plg21.0000°, Azm32.0000°; P Plg23.0000°, Azm131.0000°;
JMA Felt I J1.
*IDC **16** 12:40:28.6±4.9,35°.22N×140°.51E,h33km±38km,mb3.4/8, mb1 3.6/11,mb1mx3.4/68,mbtmp3.7/11,ML3.6/3,MS2.8/4, Ms1 2.8/4,ms1mx2.4/49 Error ellipse: s-maj=31.9km s-min=14.7km az=73.0*
ISC 16 12:40:26.9±1.1,35°.32N±0°.04×140°.65E±0°.05,h24km±8km, n22,σ0°90/24,mb3.7/8,5D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTR	**Katsuura**	**0.32**	**238**	⇓P	**Pb**	**12 40 34.4**	**+0.2**
KTR				*e*S	**Sb**	**12 40 39.3**	**+0.2**
JCN	**Nagara**	**0.38**	**285**	⇓P	**Pb**	**12 40 35.3**	**+0.2**
BSO4	**Boso 4**	**0.42**	**218**	P	**Pn**	**12 40 36.9**	**-0.4**
CHOJ	**Chosi**	**0.42**	**24**	P	**Pb**	**12 40 35.6**	**-0.2**
CHOJ				S	**Sb**	**12 40 41.6**	**-0.2**
BSO3	**Boso 3**	**0.53**	**193**	⇓P	**Pn**	**12 40 39.0**	**+0.3**
BSO1	**Boso 1**	**0.72**	**158**	⇓P	**Pb**	**12 40 41.1**	**+0.7**
JYT	**Yasato**	**0.98**	**338**	⇓P	**Pn**	**12 40 43.4**	**-1.8**
JHJ	**Hachijo jima 2**	**2.31**	**198**	Pn	**Pn**	**12 41 02.0**	**-1.5**
	26nm,0.3s,baz=60,slow=20,SNR=12						
JHJ				Sn	**Sn**	**12 41 28.9**	**-2.3**
	80nm,0.3s,baz=245,slow=21,SNR=15						
MJAR	**Matsushiro Arr**	**2.33**	**302**	Pn	**Pn**	**12 41 03.2**	**-0.6**
	4.5nm,0.3s,baz=139,slow=11,SNR=42						
MJAR				Sn	**Sn**	**12 41 31.9**	**+0.2**
	7.1nm,0.3s,baz=124,slow=14,SNR=5.4						
MJAR				LR	LR	12 42 07.8	
	comp=Z,125nm,18.7s,baz=120,slow=44						
MAT	**Matsushiro**	**2.33**	**302**	P	**Pn**	**12 41 03.9**	**+0.1**
MAT				*e*S	**Sn**	**12 41 31.6**	**-0.1**
JCJ	**Chichijima**	**8.30**	**170**	Pn	**Pn**	**12 42 26.2**	**+0.4**
	4.7nm,0.3s,baz=300,slow=20,SNR=3.8						
ASAJ	**Asahikawa**	**8.91**	**9**	LR	LR	12 47 08.4	
	comp=Z,25nm,18.2s,baz=217,slow=44						
SONM	**Songino Array**	**28.27**	**307**	LR	LR	12 57 17.2	
	comp=Z,27nm,21.0s,baz=180,slow=36						
ZALV	**Zalesovo Beam**	**42.63**	**314**	P	**P**	**12 48 22.0**	**+0.8**
	0.4nm,0.3s,baz=93,slow=7.7,SNR=4.4						
MKAR	**Makanchi Array**	**44.53**	**303**	P	**P**	**12 48 37.0**	**+0.5**
	0.5nm,0.8s,baz=93,slow=10,SNR=4.2						
KURBB	**Kurchatov Arra**	**46.59**	**309**	P	**P**	**12 48 52.6**	**-0.2**
	0.7nm,0.6s,baz=84,slow=7.7,SNR=8.0						
AAK	**Ala-Archa**	**50.77**	**299**	LR	LR	13 10 20.9	
	comp=Z,16nm,18.9s,baz=176,slow=35						
ILAR	**Eielson Array**	**51.27**	**32**	P	**P**	**12 49 30.1**	**+1.6**
	0.2nm,0.7s,baz=277,slow=7.2,SNR=3.5						
WRA	**Warramunga Arr**	**55.28**	**187**	P	**P**	**12 49 57.7**	**-0.8**
	0.6nm,0.6s,baz=3.3,slow=7.4,SNR=15						
ASAR	**Alice Springs**	**59.01**	**187**	P	**P**	**12 50 24.7**	**0.0**
	0.2nm,0.5s,baz=20,slow=10,SNR=6.5						
FINES	**FINESS Array B**	**70.04**	**332**	P	**P**	**12 51 36.5**	**+0.1**
	1.1nm,0.9s,baz=90,slow=5.6,SNR=2.7						
AKASG	**Malin Array Be**	**75.27**	**322**	P	**P**	**12 52 07.2**	**-0.5**
	0.4nm,0.4s,baz=49,slow=5.7,SNR=3.6						

IDC 16 12:56:43.0±1.9,0°.47N×126°.29E,h0km,mb3.6/4, mb1 3.8/4,mb1mx3.3/62,mbtmp3.6/4,MS3.3/3,Ms1 3.3/3, ms1mx2.6/48,Error ellipse: s-maj=166.9km s-min=26.8km az=64.0,Northern Molucca Sea

| Code | Station Name | Δ° | AZ

IDC 16 13:00:56.5±2.5, 15°24S×173°62W, h0km, mb3.6/5, mb1 3.9/6, mb1mx3.6/55, mbtmp3.6/6, ML3.1/1, MS3.1/2, Ms1 3.1/2, ms1mx2.7/42, Error ellipse: s-maj=155.7km s-min=18.8km az=149.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.22**	**54**	Pn	Pn	13 01 34.5	-0.1
	5.8nm,0.3s,baz=201,slow=4.1,SNR=18						
AFI				Sn	Sn	13 02 02.9	0.0
	27nm,0.3s,baz=300,slow=16,SNR=12						
DZM	**Mont Dzumac**	**20.06**	**247**	*e*LR	LR	13 10 59.4	
	73nm,23.5s						
DZM	**Mont Dzumac**	**20.06**	**247**	LR	LR	13 11 57.1	
	comp=Z,72nm,18.9s,baz=120,slow=33						
PPT2	**Papeete2**	**23.18**	**99**	*e*LR	LR	13 11 03.4	
	60nm,26.0s						
TBI	**Tubuai**	**24.16**	**113**	*e*LR	LR	13 11 33.1	
	64nm,26.8s						
WRA	**Warramunga Arr**	**49.67**	**257**	P	P	13 09 51.0	+0.5
	0.4nm,0.8s,baz=91,slow=6.4,SNR=3.3						
ASAR	**Alice Springs**	**49.96**	**252**	P	P	13 09 51.8	-0.9
	1.1nm,0.8s,baz=85,slow=8.8,SNR=15						
GUMO	**Guam**	**50.07**	**303**	LR	LR	13 29 49.3	
	comp=Z,14nm,18.1s,baz=70,slow=35						
NVAR	**Mina Array Bea**	**74.36**	**42**	P	P	13 12 36.8	+0.4
	0.6nm,0.8s,baz=229,slow=8.2,SNR=4.4						
PDAR	**Pinedale Array**	**82.29**	**42**	P	P	13 13 20.2	-0.1
	0.2nm,0.4s,baz=193,slow=2.6,SNR=4.0						
ILAR	**Eielson Array**	**82.33**	**11**	P	P	13 13 19.8	+0.1
	0.2nm,0.5s,baz=225,slow=6.5,SNR=5.1						

MAN 16 13:04:10.9, 8°60N×126°01E, h1km, mb4.7, ML3.5, MS3.4, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.53**	**314**	*e*P	Pg	13 04 20.7	-0.4
BUTP				*e*S	Sg	13 04 28.6	+0.6
BUKP	**Musuan**	**1.18**	**233**	*e*P	Pn	13 04 34.6	-0.1
BUKP				*e*S	Sn	13 04 54.3	+2.9
CGP	**Cagayan de Oro**	**1.31**	**264‖**	*e*P	Pn	13 04 36.6	+0.2
CGP				*e*S	Sn	13 04 54.4	-0.2
MATI	**Mati**	**1.66**	**172**	*e*P	Pn	13 04 41.3	+0.1
MATI				*e*S	Sn	13 05 03.8	-0.1
PAGZ	**Pagadian**	**2.71**	**254**	*e*P	Pn	13 04 57.8	+2.2
BESP	**Borongan**	**3.03**	**349**	*e*P	Pn	13 05 01.2	+1.1

*BJI **16** 13:05:25.2, 20°67N×145°58E, h82km, mb4.9/43, mB4.9/34, Ms4.4/12, Ms7 4.1/9*
*NEIC **16** 13:05:26.9±0.8, 20°63N×145°40E, h77km±7km, mb5.1/201, Error ellipse: s-maj=4.0km s-min=3.2km az=106.0*
*IDC **16** 13:05:27.3±1.3, 20°62N×145°42E, h84km±11km, mb4.5/43, mb1 4.5/47, mb1mx4.4/67, mbtmp4.8/47, MS3.3/28, Ms1 3.4/28, ms1mx3.2/54, Error ellipse: s-maj=11.7km s-min=7.1km az=83.0*
*MOS **16** 13:05:28.8±0.9, 20°67N×145°33E, h107km, mb5.1/67, Error ellipse: s-maj=7.7km s-min=4.4km az=89.7*
*ISCJB **16** 13:05:28.0±0.7, 20°74N±0°02×145°38E±0°03, h96km±5km, mb4.9/268, Error ellipse: s-maj=4.6km s-min=3.7km az=161.4*
*JMA **16** 13:05:29.1±0.2, 21°15N×145°71E, h47km, M5.4*
ISC 16 13:05:27.1±0.4, 20°75N±0°04×145°52E±0°06, h79km±3km, h79km:pP-P, n610, σ1°36/641, mb5.0/267, 8C-15D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**6.61**	**333**	P	**Pn**	**13 07 02.9**	**+1.3**
JHHJ				*e*S	**Sn**	**13 08 14.2**	**-1.3**
CBIJ	**Chichi jima**	**7.02**	**335**	*e*Pn	**Pn**	**13 07 07.7**	**+0.4**
CBIJ				S	**Sn**	**13 08 23.6**	**-1.9**
CBIJ	**Chichi jima**	**7.02**	**335**	P	**Pn**	**13 07 08.0**	**+0.8**
CBIJ				*e*S	**Sn**	**13 08 23.8**	**-1.7**
JCJ	**Chichijima**	**7.02**	**335**	P	**Pn**	**13 07 08.1**	**+0.9**
	35nm,0.3s,baz=283,slow=23,SNR=36						
JCJ				S	**Sn**	**13 08 23.6**	**-1.9**
	48nm,0.3s,baz=295,slow=23,SNR=3.9						
GUMO	**Guam**	**7.14**	**185**	P	Pn	13 07 12.6	+3.6
	137nm,0.3s,baz=85,slow=2.1,SNR=62						
GUMO				S	**Sn**	**13 08 33.3**	**+4.6**
	34nm,0.3s,baz=345,slow=20,SNR=2.4						
GUMO	**Guam**	**7.14**	**185**	*e*Pn	Pn	13 07 12.3	+3.2
GUMO				S	**Sn**	**13 08 33.3**	**+4.6**
JHJ	**Hachijo jima 2**	**13.34**	**339**	P	**Pn**	**13 08 33.8**	**+0.7**
	5.5nm,0.3s,baz=233,slow=20,SNR=4.0						
JHJ				S	**Sn**	**13 10 54.4**	**-5.3**
	4.4nm,0.3s,baz=90,slow=20,SNR=2.6						
BSO1	**Boso 1**	**14.42**	**345**	*e*S	**Sn**	**13 11 24.2**	**-1.0**
JOD2	**Odawara 2**	**15.53**	**340**	P	**Pn**	**13 09 02.8**	**+1.3**
JOD2				S	**Sn**	**13 11 50.2**	**-2.6**
JIE	**Ise**	**15.66**	**332**	P	**P**	**13 09 05.2**	**-0.5**
JHU	**Hanno**	**16.01**	**341**	P	**Pn**	**13 09 07.6**	**0.0**
JHU				S	**Sn**	**13 12 00.7**	**-3.8**
JYT	**Yasato**	**16.11**	**344**	P	**Pn**	**13 09 10.0**	**+1.2**
JRY	**Ryogami san**	**16.28**	**341**	P	**Pn**	**13 09 11.5**	**+0.5**
JRY				*e*S	**Sn**	**13 12 07.1**	**-3.9**
INU	**Inuyama**	**16.36**	**335**	*e*Pn	**Pn**	**13 09 11.9**	**+0.1**
	19nm,0.7s						
JGF	**Kuroka**	**16.44**	**336**	P	**P**	**13 09 14.4**	**0.0**
JAG	**Ashikaga**	**16.50**	**343**	P	**Pn**	**13 09 13.9**	**+0.3**
JNG	**Nsakai**	**16.90**	**339**	P	**Pn**	**13 09 18.8**	**+0.1**
MJAR	**Matsushiro Arr**	**16.98**	**339**	P	**Pn**	**13 09 19.8**	**+0.2**
	1.6nm,0.3s,baz=158,slow=10,SNR=32						
MJAR				S	**Sn**	**13 12 23.5**	**-4.5**
	0.1nm,0.3s,baz=158,slow=14,SNR=3.3						
MAJO	**Matsushiro**	**16.99**	**339**	*e*Pn	**P**	**13 09 20.9**	**+0.6**
	25nm,0.9s						
MAJO	**Matsushiro**	**16.99**	**339**	*ce*P	**P**	**13 09 21.5**	**+1.1**
MJB9	**Matsu-Tunnel**	**16.99**	**339**	*e*Pn	**P**	**13 09 21.5**	**+1.1**
	25nm,0.9s						
JWT	**Wachi**	**17.00**	**331**	P	**Pn**	**13 09 20.5**	**+0.7**
JJS	**Sakaide**	**17.00**	**325**	P	**P**	**13 09 21.7**	**+1.2**
JGN	**Niukaw**	**17.01**	**337**	P	**P**	**13 09 21.7**	**+1.0**
JKIT	**Kitakata**	**17.24**	**316**	P	**P**	**13 09 26.1**	**+3.0**
JAD	**Aida**	**17.32**	**327**	P	**P**	**13 09 26.1**	**+2.1**
JUS	**Usuki**	**17.34**	**318**	P	**P**	**13 09 26.9**	**+2.7**
JHK	**Hiroka**	**17.39**	**342**	P	**P**	**13 09 25.6**	**+0.8**
JKG	**Kaga**	**17.44**	**335**	P	**P**	**13 09 27.0**	**+1.7**
JMM	**Marumori**	**17.55**	**348**	P	**P**	**13 09 27.1**	**+0.6**
JHS	**Saijyo**	**17.91**	**325**	P	**Pn**	**13 09 33.3**	**+2.3**
JNU	**Nakatsue**	**17.93**	**316**	P	**Pn**	**13 09 31.2**	**0.0**
	1.2nm,0.3s,baz=113,slow=7.7,SNR=6.2						
JNU				LR	LR	13 15 44.9	
	comp=Z,45nm,21.2s,baz=138,slow=34						
JHT	**Toyohira**	**18.05**	**323**	P	**Pn**	**13 09 34.4**	**+1.8**
JHIK	**Hikimi**	**18.23**	**322**	P	**Pn**	**13 09 36.7**	**+1.8**
JGT2	**ShimaneMisato**	**18.29**	**324**	P	**Pn**	**13 09 36.0**	**+0.4**
JSD	**Sado**	**18.34**	**342**	P	**Pn**	**13 09 37.0**	**+0.9**
JFA	**Akaike**	**18.36**	**318**	P	**Pn**	**13 09 37.8**	**+1.4**
JMK	**Ichinoseki**	**18.52**	**349**	P	**Pn**	**13 09 39.5**	**+1.3**
JMK				S	**S**	**13 12 54.9**	**-8.8**
PATS	**Pohnpei**	**18.57**	**136**	*e*P	**Pn**	**13 09 38.3**	**-0.7**
	335nm,1.6s						
JTU	**Tsushima**	**19.77**	**317**	P	**Pn**	**13 09 52.2**	**-0.9**
H11S3	**WAKE ISLAND Hy**	**20.07**	**93**	T	T	13 31 18.5	
	baz=275,slow=74,SNR=10.0						
H11S1	**WAKE ISLAND Hy**	**20.08**	**93**	T	T	13 31 22.1	
	baz=275,slow=74,SNR=5.7						
H11N1	**WAKE ISLAND Hy**	**20.09**	**89**	T	T	13 31 13.9	
	baz=271						
H11S2	**WAKE ISLAND Hy**	**20.09**	**93**	T	T	13 31 19.1	
	baz=275,slow=74,SNR=7.6						
H11N2	**WAKE ISLAND Hy**	**20.09**	**89**	T	T	13 31 23.9	
	baz=271						
H11N3	**WAKE ISLAND Hy**	**20.10**	**89**	T	T	13 31 29.2	
	baz=271						
ERM	**Erimo**	**21.30**	**355⇑**	*e*P	**P**	**13 10 10.6**	**+3.4**
TJN	**Taejon**	**22.23**	**318**	*de*P	**P**	**13 10 18.5**	**+1.2**
KSRS	**Korea Array**	**22.60**	**321**	P	**P**	**13 10 21.4**	**+0.2**
	25nm,0.8s,baz=148,slow=9.7,SNR=129						
KSRS				ScP	**ScP**	**13 17 40.5**	**-1.9**
	2.5nm,0.8s,baz=126,slow=3.2,SNR=14						
KSRS				LR	LR	13 18 52.8	
	comp=Z,64nm,20.6s,baz=136,slow=36						
KS15	**Wonju Array Si**	**22.61**	**321**	*e*P	**P**	**13 10 22.3**	**+1.0**
KSAR	**Wonju Array Be**	**22.61**	**321**	P	**P**	**13 10 21.4**	**+0.1**
KSAR	**Wonju Array Be**	**22.61**	**321**	P	**P**	**13 10 21.4**	**+0.1**
KS01	**Wonju Array Si**	**22.63**	**321**	*e*P	**P**	**13 10 21.5**	**-0.1**
SHO	**Shikotan**	**23.09**	**2**	P	P	13 10 42.8	+17
SHO				pmax	pmax		
	comp=N,9.0nm,0.5s						
SHO				pmax	pmax		
	comp=Z,6.0nm,0.5s						
SHO				pmax	pmax		
	comp=E,4.0nm,0.4s						
INCN	**Inchon**	**23.39**	**320**	*e*P	**P**	**13 10 29.3**	**+0.3**
	comp=E,50nm,1.1s						
ASAJ	**Asahikawa**	**23.43**	**355**	P	**P**	**13 10 31.3**	**+2.0**
	comp=E,16nm,0.8s,baz=219,slow=9.5,SNR=26						
ASAJ				S	**S**	**13 14 40.0**	**+3.6**
	comp=E,2.1nm,0.7s,baz=159,slow=14,SNR=1.8						
ASAJ				LR	LR	13 18 43.8	
	comp=E,68nm,21.6s,baz=170,slow=34						
ASAJ	**Asahikawa**	**23.43**	**355**	*e*P	**P**	**13 10 31.4**	**+2.1**
	comp=E,20nm,0.9s						
ASAJ				S	**S**	**13 14 40.0**	**+3.6**
JAY	**Jayapura**	**23.59**	**192**	P	**P**	**13 10 30.5**	**-0.5**
	comp=E,35nm,0.8s,baz=5.8,slow=7.5,SNR=9.6						
JAY				LR	LR	13 18 00.5	
	comp=E,98nm,21.6s,baz=346,slow=32						
JAY	**Jayapura**	**23.59**	**192**	P	**P**	**13 10 31.1**	**+0.1**
JAY	**Jayapura**	**23.59**	**192**	P	**P**	**13 10 31.3**	**+0.3**
JAY				pmax	pmax		
	comp=Z,380nm,0.9s						
DAV	**Davao City (W)**	**23.61**	**238**	LR	LR	13 17 58.9	
	comp=Z,49nm,20.3s,baz=173,slow=32						
GENI	**Genyem**	**23.78**	**193**	P	**P**	**13 10 32.3**	**-0.4**
MSHR	**Mys Shultsa**	**24.89**	**334**	*de*P	**P**	**13 10 43.9**	**+1.4**
TEY	**Ternei**	**25.32**	**345**	*e*P	**P**	**13 10 50.3**	**+3.9**
WAMI	**Wamena**	**25.37**	**196**	P	**P**	**13 10 48.6**	**+1.5**
SIJI	**Sorong**	**25.61**	**215**	P	**P**	**13 10 47.3**	**-2.0**
	comp=E,8.0nm,0.5s,baz=15,slow=20,SNR=5.6						
USRK	**Ussuriysk Ar.**	**25.95**	**337**	P	**P**	**13 10 53.9**	**+1.8**
	comp=E,8.2nm,0.7s,baz=148,slow=7.2,SNR=9.8						
YSS	**Yuzh-Sakhalins**	**26.24**	**356**	*e*P	**P**	**13 10 55.4**	**+0.8**
	comp=Z,22nm,1.1s						
YSS	**Yuzh-Sakhalins**	**26.24**	**356‖**	*e*P	**P**	**13 10 56.1**	**+1.5**
YSS				*e**SP	**sP**	**13 11 23.2**	**+1.0**
YSS				*e*		13 11 45.3	
YSS				*e*S	**S**	**13 15 19.7**	**-1.5**
YSS				pmax	pmax		
	comp=Z,20nm,1.2s						
NJ2	**Nanjing**	**26.33**	**301**	*e*P	**P**	**13 10 56.0**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
MDJ	**Mudanjiang**	**27.22**	**335**	P	**P**	**13 11 02.4**	**-1.1**
MDJ				pP	pP	13 11 20.3	-1.5
MDJ				sP	sP	13 11 33.9	+2.8
MDJ				S	**S**	**13 15 39.8**	**+3.1**
MDJ				ScP	**ScP**	**13 17 48.6**	**-6.6**
MDJ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,84nm,4.4s						
DL2	**Dalian**	**27.38**	**317**	P	**P**	**13 11 07.4**	**+2.4**
DL2				pmax	pmax		
	comp=Z,37nm,0.8s						
PMG	**Port Moresby**	**30.01**	**177**	P	**P**	**13 11 25.8**	**-2.7**
	comp=Z,12nm,0.6s,baz=26,slow=9.0,SNR=8.3						
PMG	**Port Moresby**	**30.01**	**177**	*e*P	**P**	**13 11 26.1**	**-2.4**
	comp=Z,28nm,0.6s						
PMG	**Port Moresby**	**30.01**	**177**	*e*P	**P**	**13 11 26.1**	**-2.4**
PMG				pmax	pmax		
	comp=Z,28nm,0.6s						
KLR	**Kul'dur**	**30.48**	**342**	P	**P**	**13 11 33.5**	**+1.2**
	comp=Z,1.9nm,0.6s,baz=148,slow=7.4,SNR=99						
KLR	**Kul'dur**	**30.48**	**342**	*d i*P	**P**	**13 11 33.4**	**+1.1**
GRNR	**Gornyy**	**30.81**	**349**	*e*P	**P**	**13 11 37.8**	**+2.5**
GRNR				pmax	pmax		
	comp=Z,14nm,0.5s						
BJI	**Beijing**	**31.57**	**314**	*e*P	**P**	**13 11 42.8**	**+0.7**
NKL	**Nikolayevsk**	**32.56**	**355**	*e*P	**P**	**13 11 52.8**	**+2.2**
NKL				pmax	pmax		
	comp=N,15nm,0.9s						
NKL				pmax	pmax		
	comp=Z,46nm,0.9s						
HNR	**Honiara**	**33.18**	**153**	LR	LR	13 24 42.9	
	comp=Z,62nm,21.0s,baz=36,slow=35						
PEA0B	**Petropavlovsk-**	**33.64**	**13**	*e*P	**P**	**13 12 01.3**	**+1.3**
	comp=Z,12nm,0.8s						
PETK	**Petropavlovsk-**	**33.64**	**13**	P	**P**	**13 12 01.5**	**+1.5**
	comp=Z,11nm,0.7s,baz=179,slow=6.9,SNR=27						
PETK				LR	LR	13 23 47.0	
	comp=Z,52nm,20.7s,baz=193,slow=33						
PET	**Petropavlovsk**	**33.78**	**14**	*e*P	**P**	**13 12 02.4**	**+1.2**
	comp=Z,33nm,0.9s						
PET	**Petropavlovsk**	**33.78**	**14⇑**	*i*P	**P**	**13 12 03.4**	**+2.2**
PET				*e*S	**S**	**13 17 21.1**	**+2.1**
PET				pmax	pmax		
	comp=Z,44nm,0.9s						
TTSI	**Tana Toraja**	**34.55**	**230**	P	**P**	**13 12 10.0**	**+1.7**
COEN	**Coen**	**34.56**	**184**	*e*P	**P**	**13 12 06.7**	**-1.6**
	comp=Z,14nm,1.1s						
HHC	**Hu-ho-hao-te**	**35.08**	**312**	*e*P	**P**	**13 12 12.9**	**+0.1**
HHC				pP	pP	13 12 31.1	-0.3
HHC				sP	sP	13 12 39.8	-0.8
HHC				S	**S**	**13 17 38.6**	**-1.0**
HHC				sS	sS	13 18 09.6	-2.1
HHC				pmax	pmax		
	comp=Z,19nm,0.8s						
HHC				pmax	pmax		
	comp=Z,92nm,5.2s						
HHC				LR	LR		
	comp=Z,1μm,15.6s						
HHC				LR	LR		
	comp=Z,1μm,16.4s						
HHC				LR	LR		
	comp=Z,1μm,16.4s						
SPSI	**Sidrap Palu**	**35.23**	**229**	P	**P**	**13 12 14.6**	**+0.4**
ZEA	**Zeya**	**35.78**	**341**	*e*P	**P**	**13 12 19.1**	**+0.6**
ZEA				pmax	pmax		
	comp=Z,26nm,0.8s						
MTN	**Manton Dam**	**36.25**	**204**	*e*P	**P**	**13 12 21.8**	**-1.0**
	comp=Z,13nm,0.6s						
SBUM	**Sibu**	**37.20**	**245**	*e*P	**P**	**13 12 32.1**	**+1.1**
	comp=Z,14nm,0.7s						
BATI	**Baumata**	**37.52**	**217**	LR	LR	13 26 38.1	
	comp=Z,120nm,20.3s,baz=126,slow=34						
CD2	**Chengdu**	**38.73**	**294**	P	**P**	**13 12 42.3**	**-1.5**
CD2				pP	pP	13 13 01.6	-1.2
CD2				sP	sP	13 13 11.3	-0.6
CD2				PP	**PP**	**13 14 12.3**	**-1.6**
CD2				S	**S**	**13 18 33.4**	**-2.0**
CD2				sS	sS	13 19 07.3	-0.5
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,150nm,4.6s						
CD2				LR	LR		
	comp=Z,350nm,4.5s						
CD2				LR	LR		
	comp=Z,240nm,4.8s						
MA2	**Magadan**	**38.97**	**4**	P	**P**	**13 12 45.9**	**+0.5**
	comp=Z,2.4nm,0.4s,baz=180,slow=20,SNR=3.5						
MA2	**Magadan**	**38.97**	**4‖**	*e*P	**P**	**13 12 47.2**	**+1.9**
MA2				pmax	pmax		
	comp=Z,12nm,1.4s						
LZH	**Lanzhou**	**39.40**	**302**	*e*P	**P**	**13 12 49.0**	**-0.4**
LZH				pP	pP	13 13 07.8	-0.6
LZH				sP	sP	13 13 14.4	-3.1
LZH				*e*PP	**PnPn**	**13 14 23.8**	**-0.9**
LZH				pmax	pmax		
	comp=Z,16nm,0.9s						
LZH				pmax	pmax		
	comp=Z,120nm,5.4s						
LZH				LR	LR		
	comp=Z,230nm,15.0s						
LZH				LR	LR		
	comp=Z,250nm,15.3s						
LZH				LR	LR		
	comp=Z,260nm,16.8s						
KMI	**Kunming**	**39.52**	**285**	P	**P**	**13 12 50.4**	**-0.3**
KMI				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,110nm,3.9s						
CTA	**Charters Tower**	**40.59**	**179**	P	**P**	**13 12 57.0**	**-2.1**
	comp=Z,3.3nm,0.7s,baz=19,slow=10,SNR=3.9						
ULN	**Ulaanbaatar**	**41.08**	**320**	*e*P	**P**	**13 13 02.7**	**-0.4**
	comp=Z,4.5nm,0.7s						
ULN	**Ulaanbaatar**	**41.08**	**320**	*de*P	**P**	**13 13 03.4**	**+0.2**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.4s						
SONA1	**Songino Array**	**41.46**	**320**	*e*P	**P**	**13 13 06.1**	**-0.2**
SONM	**Songino Array**	**41.46**	**320**	P	**P**	**13 13 06.5**	**+0.2**
	comp=Z,3.1nm,0.3s,baz=2.4,slow=17,SNR=23						
SONM				ScP	**ScP**	**13 18 43.9**	**-1.9**
	comp=Z,0.4nm,0.5s,baz=101,slow=2.9,SNR=3.0						
SONM				LR	LR	13 30 54.5	
	comp=Z,41nm,20.2s,baz=73,slow=37						
WRAB	**Tennant Creek**	**41.88**	**196**	*e*P	**P**	**13 13 07.4**	**-2.4**
	comp=Z,17nm,0.8s						
WRAB	**Tennant Creek**	**41.88**	**196**	*d i*P	**P**	**13 13 09.0**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,29nm,1.0s						
WB2	**Warramunga Arr**	**41.89**	**196**	*e*P	**P**	**13 13 08.5**	**-1.4**
	comp=Z,27nm,0.9s						
WRA	**Warramunga Arr**	**41.89**	**196**	P	**P**	**13 13 08.7**	**-1.2**
	comp=Z,12nm,0.6s,baz=22,slow=8.7,SNR=60						
WRA				ScP	**ScP**	**13 18 45.3**	**-2.4**
	comp=Z,0.8nm,0.8s,baz=14,slow=4.0,SNR=5.0						
SEY	**Seymchan**	**42.42**	**5**	P	**P**	**13 13 15.1**	**+1.4**
	comp=Z,7.2nm,0.6s,baz=183,slow=7.4,SNR=46						
SEY	**Seymchan**	**42.42**	**5‖**	*e*P	**P**	**13 13 15.4**	**+1.7**
YAK	**Yakutsk**	**42.69**	**349**	*e*P	**P**	**13 13 16.2**	**+0.4**
	comp=Z,56nm,0.7s						
YAK	**Yakutsk**	**42.69**	**349**	*e*P	**P**	**13 13 15.5**	**-0.3**
YAK				*e**PP	**pP**	**13 13 37.0**	**+2.0**
YAK				*e*		13 14 54.3	
YAK				*e*		13 15 10.0	
YAK				*e*S	**S**	**13 19 28.7**	**-4.5**
YAK				*e*SS	SS	13 22 32.8	-13
YAK				*e*		13 23 04.1	
YAK				pmax	pmax		
	comp=Z,43nm,0.9s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.8s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.0s						
YAK				smax	smax		
	comp=E,34nm,2.9s						
YAK				smax	smax		
	comp=N,18nm,2.8s						
GTA	**Gaotai**	**43.19**	**306**	⇑P	**P**	**13 13 21.1**	**+0.6**
GTA				pP	pP	13 13 42.8	+3.1
GTA				sP	sP	13 13 50.5	+1.8
GTA				ScP	**ScP**	**13 18 52.6**	**-0.4**
GTA				pmax	pmax		
	comp=N,5.0nm,1.2s						
CM01	**Chiang Mai Arr**	**43.81**	**275**	*e*P	**P**	**13 13 24.8**	**-0.8**
CMAR	**Chiang Mai Arr**	**43.82**	**275**	P	**P**	**13 13 25.9**	**+0.3**
	comp=N,0.6nm,0.5s,baz=62,slow=6.2,SNR=3.3						
CMAR				LR	LR	13 32 39.0	
	comp=N,38nm,18.6s,baz=190,slow=37						
CMAR	**Chiang Mai Arr**	**43.82**	**275**	P	**P**	**13 13 26.0**	**+0.3**
ZAK	**Zakamensk**	**44.43**	**322**	*e*P	**P**	**13 13 29.6**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
AS01	**Alice Springs**	**45.56**	**195**	*e*P	**P**	**13 13 37.8**	**-1.5**
AS31	**Alice Springs**	**45.57**	**195**	*e*P	**P**	**13 13 38.1**	**-1.3**
	comp=Z,2.8nm,0.6s						
ASAR	**Alice Springs**	**45.57**	**195**	P	**P**	**13 13 37.9**	**-1.4**
	comp=Z,5.6nm,0.7s,baz=13,slow=6.6,SNR=59						
ASAR				PcP	**PcP**	**13 15 15.6**	**-1.2**
	comp=Z,1.0nm,0.7s,baz=33,slow=5.8,SNR=2.3						
ASAR				LR	LR	13 33 00.6	
	comp=Z,60nm,18.4s,baz=14,slow=36						
LEM	**Lembang**	**46.23**	**238**	LR	LR	13 36 57.7	
	comp=Z,58nm,18.0s,baz=205,slow=41						
DZM	**Mont Dzumac**	**47.21**	**153**	P	**P**	**13 13 51.6**	**-0.7**
	comp=Z,36nm,0.6s,baz=336,slow=3.0,SNR=36						
DZM				LR	LR	13 32 07.8	
	comp=Z,49nm,20.4s,baz=34,slow=34						
DZM	**Mont Dzumac**	**47.21**	**153**	*e*P	**P**	**13 13 51.5**	**-0.7**
	comp=Z,48nm,0.9s						
PSI	**Prapat**	**48.74**	**255**	P	**P**	**13 14 04.6**	**+0.2**
	comp=Z,4.5nm,0.5s,baz=0.2,slow=14,SNR=3.9						
PSI				LR	LR	13 36 36.4	
	comp=Z,63nm,18.0s,baz=261,slow=38						
MNSI	**Mandailing Nat**	**49.03**	**252**	P	**P**	**13 14 07.5**	**+1.1**
BILL	**Bilibino**	**49.04**	**10**	*e*P	**P**	**13 14 06.8**	**+0.9**
	comp=Z,18nm,0.7s						
BILL	**Bilibino**	**49.04**	**10**	*d i*P	**P**	**13 14 06.7**	**+0.9**
BILL				*e**PP	**sP**	**13 14 34.9**	**+0.6**
BILL				pmax	pmax		
	comp=Z,21nm,0.8s						
TIXI	**Tiksi**	**51.83**	**353**	P	**P**	**13 14 27.1**	**+0.4**
	comp=Z,8.3nm,0.8s,baz=148,slow=7.2,SNR=29						
TIXI	**Tiksi**	**51.83**	**353**	*e*P	**P**	**13 14 26.5**	**-0.1**
	comp=Z,7.8nm,0.8s						
TIXI	**Tiksi**	**51.83**	**353**	*de*P	**P**	**13 14 26.9**	**+0.2**
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
STKA	**Stephens Creek**	**52.46**	**184**	P	**P**	**13 14 29.9**	**-1.9**
	comp=Z,1.3nm,0.4s,baz=54,slow=7.4,SNR=10						
STKA				LR	LR	13 37 33.5	
	comp=Z,42nm,18.2s,baz=14,slow=37						
WMQ	**Urumqi**	**52.86**	**310**	P	**P**	**13 14 37.1**	**+2.2**
WMQ				pP	pP	13 14 57.5	+2.8
WMQ				sP	sP	13 15 07.0	+3.4
WMQ				pmax	pmax		
	comp=Z,35nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,220nm,4.7s						
WMQ				LR	LR		
	comp=Z,170nm,25.5s						
WMQ				LR	LR		
	comp=Z,340nm,34.5s						
ODAN	**Odare**	**53.15**	**289**	*e*P	**P**	**13 14 37.7**	**+0.2**
RAMN	**Ramite**	**53.84**	**289**	*e*P	**P**	**13 14 43.2**	**+0.7**
JIRN	**Jiri**	**54.12**	**290**	*e*P	**P**	**13 14 45.5**	**+0.8**
	comp=Z,19nm,0.6s						
ANM	**Nome**	**54.40**	**24**	*e*P

comp=Z,10.0nm,0.8s
KURBB **Kurchatov Arra** 59.70 317 P **P** 13 15 23.1 -0.3
comp=Z,11nm,0.6s,baz=93,slow=7.5,SNR=164
RC01 **Rabbit Creek A** 59.88 31 *e*P **P** 13 15 23.9 -0.5
comp=Z,19nm,0.6s
BPAW **Bear Paw Mtn.** 60.02 27 *e*P **P** 13 15 25.8 +0.4
comp=Z,38nm,1.0s
TRF **Thorofare Moun** 60.16 28 *e*P **P** 13 15 26.7 +0.2
comp=Z,37nm,0.9s
PMR **Palmer** 60.27 30 *e*P **P** 13 15 27.1 +0.1
comp=Z,65nm,1.7s
PMR **Palmer** 60.27 30 *e*P **P** 13 15 27.1 +0.1
PMR pmax pmax
comp=Z,65nm,1.7s
MLY **Manley** 60.36 26 *e*P **P** 13 15 28.9 +1.2
comp=Z,20nm,1.2s
GHO **Glory Hole Cre** 60.40 30 *e*P **P** 13 15 28.7 +0.7
comp=Z,17nm,0.7s
BWN **Browne** 60.68 27 *e*P **P** 13 15 31.3 +1.5
comp=Z,49nm,0.9s
SML **Sawmill** 60.69 30 *e*P **P** 13 15 30.6 +0.7
comp=Z,56nm,0.9s
SML **Sawmill** 60.69 30 *e*P **P** 13 15 30.6 +0.7
SML pmax pmax
comp=Z,56nm,0.9s
RND **Reindeer** 60.77 28 *e*P **P** 13 15 30.8 +0.2
comp=Z,9.7nm,0.9s
RND **Reindeer** 60.77 28 *e*P **P** 13 15 30.8 +0.2
RND pmax pmax
comp=Z,10.0nm,0.9s
MCK **McKinley** 60.81 28 *e*P **P** 13 15 31.2 +0.5
comp=Z,20nm,1.1s
MCK **McKinley** 60.81 28 *e*P **P** 13 15 31.2 +0.5
MCK pmax pmax
comp=Z,20nm,1.1s
SCM **Sheep Creek Mo** 61.16 30 *e*P **P** 13 15 34.2 +1.0
comp=Z,53nm,0.8s
SCM **Sheep Creek Mo** 61.16 30 *e*P **P** 13 15 34.2 +1.0
SCM pmax pmax
comp=Z,53nm,0.8s
WRH **Wood River Hil** 61.33 27 *e*P **P** 13 15 34.0 -0.2
comp=Z,14nm,1.0s
DHY **Denali Highway** 61.36 29 *e*P **P** 13 15 35.2 +0.5
comp=Z,9.2nm,0.6s
MDM **Murphy Dome** 61.38 26 *e*P **P** 13 15 34.8 +0.3
comp=Z,9.2nm,0.9s
CCB **Clear Creek Bu** 61.49 27 *e*P **P** 13 15 33.7 -1.5
comp=Z,6.3nm,0.8s
COLA **College** 61.52 26 *e*P **P** 13 15 36.1 +0.7
comp=Z,12nm,0.7s
COLA **College** 61.52 26 *e*P **P** 13 15 36.1 +0.7
COLA pmax pmax
comp=Z,12nm,0.7s
KSH **Kashi** 61.56 304 P **P** 13 15 40.4 +4.0
KSH pP pP 13 16 00.0 +3.3
KSH PP **PP** 13 17 58.3 +5.7
KSH S **S** 13 23 54.5 +2.1
KSH sS sS 13 24 28.3 +1.4
KSH ScS **ScS** 13 25 21.1 +0.1
KSH SS **SS** 13 28 04.8 +10
KSH pmax pmax
comp=Z,14nm,0.6s
KSH pmax pmax
comp=Z,320nm,4.6s
KSH LR LR
comp=Z,930nm,13.4s
KSH LR LR
comp=Z,600nm,10.7s
KSH LR LR
comp=Z,220nm,7.2s
KLU **Klutina** 61.77 30 *e*P **P** 13 15 38.4 +1.1
comp=Z,20nm,0.6s
TOLK **Toolik Lake Re** 61.77 22 P **P** 13 15 38.8 +1.7
baz=254
DIV **Divide** 61.78 31 *e*P **P** 13 15 38.5 +1.1
comp=Z,15nm,0.5s
ILAR **Eielson Array** 61.90 27 P **P** 13 15 37.2 -0.8
comp=Z,12nm,0.8s,baz=259,slow=5.5,SNR=114
ILAR LR LR 13 40 02.6
comp=Z,22nm,21.5s,baz=244,slow=33
ILB **Eielson Array** 61.90 27 *e*P **P** 13 15 37.4 -0.7
IL1 **Eielson Array** 61.90 27 *e*P **P** 13 15 37.2 -0.8
PAX **Paxson** 62.20 29 *e*P **P** 13 15 41.0 +0.8
comp=Z,30nm,1.4s
PAX **Paxson** 62.20 29 *e*P **P** 13 15 41.0 +0.8
PAX pmax pmax
comp=Z,30nm,1.4s
HARP **HAARP** 62.26 29 *e*P **P** 13 15 42.0 +1.4
comp=Z,35nm,0.8s
BMRM **Bremner River** 62.33 31 *e*P **P** 13 15 42.4 +1.3
comp=Z,42nm,1.3s
RIDG **Independ'e Rid** 62.60 28 *e*P **P** 13 15 43.3 +0.5
comp=Z,26nm,0.8s
DOT **Dot Lake** 62.93 28 *e*P **P** 13 15 45.7 +0.7
comp=Z,46nm,0.8s
SCRK **Sand Creek** 63.01 28 *e*P **P** 13 15 45.9 +0.3
comp=Z,24nm,0.9s
CRQM **Cirque** 63.01 31 *e*P **P** 13 15 47.2 +1.4
comp=Z,26nm,0.7s
TGL **Tana Glacier** 63.16 31 *e*P **P** 13 15 48.0 +1.3
comp=Z,32nm,1.2s
SFK **Sufi-Kurgan** 63.42 305 P **P** 13 15 49.4 +0.5
SFK pmax pmax
comp=Z,4.0nm,0.6s
OTUK **Ortayu** 63.71 314 P **P** 13 15 50.8 +0.4
OTUK pmax pmax
comp=Z,10.0nm,0.9s
EGAK **Eagle** 64.33 27 *e*P **P** 13 15 54.5 +0.4
comp=Z,9.8nm,0.9s
NIL **Nilore** 64.40 298 *e*P **P** 13 15 56.5 +1.3
comp=Z,20nm,1.0s
NIL **Nilore** 64.40 298 *e*P **P** 13 15 56.5 +1.3
NIL pmax pmax
comp=Z,21nm,1.0s
BVA0 **Borovoye Array** 64.80 320 *i*P **P** 13 15 57.4 0.0
BVA0 pmax pmax
comp=Z,21nm,0.7s
BVAR **Borovoye Array** 64.80 320 P **P** 13 15 57.5 +0.1
comp=Z,23nm,0.6s,baz=92,slow=7.6,SNR=136
BVAR LR LR 13 45 35.7
comp=Z,28nm,19.1s,baz=55,slow=37
BRVK **Borovoye** 64.86 320 *e*P **P** 13 15 58.1 +0.3
comp=Z,19nm,0.6s
BRVK **Borovoye** 64.86 320*d* *i*P **P** 13 15 57.9 +0.1
BRVK pmax pmax
comp=Z,19nm,0.7s
DAWY **Dawson** 65.03 28 *e*P **P** 13 15 59.8 +1.0
comp=Z,14nm,0.8s
KK31 **Karatay Array** 65.35 309 *e*P **P** 13 16 01.9 +0.8
KK31 **Karatay Array** 65.35 309 *i*P **P** 13 16 01.4 +0.2
KK31 pmax pmax
comp=Z,3.0nm,0.6s
KKAR **Karatay Array** 65.35 309 *e*P **P** 13 16 01.9 +0.8
KKAR **Karatay Array** 65.35 309 *e*P **P** 13 16 01.9 +0.8
URZ **Urewera** 65.77 153 P **P** 13 16 02.2 -1.4
comp=Z,6.7nm,0.8s,baz=353,slow=19,SNR=5.5
SKAG **Skagway** 66.88 33 *e*P **P** 13 16 12.4 +1.8
comp=Z,11nm,0.9s
INK **Inuvik** 67.57 23 P **P** 13 16 15.2 +0.4
comp=Z,17nm,0.8s,baz=277,slow=5.3,SNR=48
INK **Inuvik** 67.57 23 *e*P **P** 13 16 15.2 +0.4
comp=Z,19nm,0.8s
INK **Inuvik** 67.57 23 *e*P **P** 13 16 15.2 +0.4
INK pmax pmax
comp=Z,19nm,0.8s
KBL **Kabul** 67.70 300 *e*P **P** 13 16 17.2 +0.6
KBL **Kabul** 67.70 300 *e*P **P** 13 16 17.2 +0.6
DLBC **Dease Lake** 69.69 34 *e*P **P** 13 16 30.0 +1.7
comp=Z,26nm,0.8s
ARU **Arti** 71.31 324 *e*P **P** 13 16 38.0 -0.1
comp=Z,7.0nm,0.8s
ARU **Arti** 71.31 324*d* *i*P **P** 13 16 37.8 -0.3
ARU *PP **pP** 13 17 02.7 +3.9
ARU S **S** 13 25 48.6 -0.9
ARU SS **SS** 13 30 22.2 -2.4
ARU pmax pmax
comp=Z,15nm,1.7s
AB31 **Akbulak array** 71.74 317 *i*P **P** 13 16 39.9 -0.9
AB31 pmax pmax
comp=Z,5.0nm,0.6s
ABKAR **Akbulak array** 71.74 317 *e*P **P** 13 16 40.5 -0.3
AKTO **Aktyubinsk** 72.73 318 P **P** 13 16 46.1 -0.6
comp=Z,2.8nm,0.7s,baz=99,slow=7.3,SNR=9.8
AKTO LR LR 13 49 28.1
comp=Z,17nm,18.9s,baz=98,slow=36
PGC **Sidney** 75.38 43 *e*P **P** 13 17 03.5 +1.4
comp=Z,13nm,0.7s
NLWA **Neilton Lookou** 75.43 45 *e*P **P** 13 17 04.3 +1.8
comp=Z,24nm,1.0s
GEYT **Alibeck** 75.57 305 P **P** 13 17 04.0 +0.4
comp=Z,120nm,0.6s,baz=187,slow=24,SNR=3.9
A04D **Lummi Island** 75.84 43 P **P** 13 17 06.3 +1.5
baz=285
E03A **Lebam** 75.85 45 *e*P **P** 13 17 06.5 +1.6
comp=Z,28nm,0.8s
LLLB **Lilloet** 75.86 41 *e*P **P** 13 17 06.5 +1.5
comp=Z,28nm,1.1s
YKW3 **Yellowknife Ar** 76.25 28 *e*P **P** 13 17 06.5 -0.3
comp=Z,22nm,0.7s
YKA **Yellowknife Ar** 76.27 28 P **P** 13 17 07.3 +0.3
comp=Z,19nm,0.6s,baz=290,slow=5.7,SNR=60
B05A **Bryant** 76.35 43 P **P** 13 17 09.2 +1.5
baz=286
G03D **McMinnville, O** 76.41 47 P **P** 13 17 09.5 +1.4
baz=286
PRGR **Permogore** 76.55 331 *e*P **P** 13 17 07.6 -0.9
PRGR *e*PP **pP** 13 17 33.1 +3.6
PRGR pmax pmax
comp=Z,15nm,0.6s
D05A **Enumclaw** 76.72 44 *e*P **P** 13 17 11.7 +1.9
comp=Z,32nm,0.8s
I03D **Drain, OR** 76.76 48 P **P** 13 17 11.6 +1.4
baz=286
LON **Longmire** 76.96 45 *e*P **P** 13 17 12.1 +0.8
comp=Z,6.3nm,0.8s
LON **Longmire** 76.96 45 *e*P **P** 13 17 12.1 +0.8
LON pmax pmax
comp=Z,6.0nm,0.8s
L02D **Cave Junction,** 77.01 50 P **P** 13 17 13.0 +1.4
baz=286
SPA0 **Spitsbergen Ar** 77.13 351 *e*P **P** 13 17 12.6 +1.0
SPITS **Spitsbergen Ar** 77.13 351 P **P** 13 17 12.3 +0.7
comp=Z,6.4nm,0.7s,baz=90,slow=8.6,SNR=13
SPITS LR LR 13 51 46.3
comp=Z,10nm,21.9s,baz=145,slow=36
KBS **Kingsbay** 77.25 352 *e*P **P** 13 17 13.3 +1.1
KBS pmax pmax
comp=Z,75nm,0.8s
H04A **Detroit Lake** 77.29 47 *e*P **P** 13 17 14.1 +1.0
comp=Z,23nm,1.1s
HUMO **Hull Mountain** 77.34 49 *e*P **P** 13 17 15.0 +1.5
comp=Z,10nm,0.7s
I04A **Tendick Farm,** 77.39 48 P **P** 13 17 14.6 +0.8
baz=287,SNR=10.0
RES **Resolute Bay** 77.49 14 *e*P **P** 13 17 14.5 +0.9
comp=Z,14nm,0.8s
RES **Resolute Bay** 77.49 14 *e*P **P** 13 17 14.5 +0.9
RES pmax pmax
comp=Z,14nm,0.8s
LTY **Liberty** 77.56 44 *e*P **P** 13 17 15.6 +0.9
comp=Z,14nm,0.6s
G05D **Wamic, OR** 77.72 46 P **P** 13 17 16.7 +1.2
baz=287
J04D **Umpqua Nationa** 77.76 48 P **P** 13 17 17.1 +1.1
baz=287,SNR=8.5
M02C **Callahan** 77.77 50 P **P** 13 17 17.4 +1.5
baz=287
YBH **Yreka Blue Hor** 77.77 50 P **P** 13 17 17.4 +1.5
comp=Z,12nm,0.7s,baz=319,slow=9.3,SNR=24
YBH **Yreka Blue Hor** 77.77 50 *e*P **P** 13 17 17.3 +1.3
comp=Z,12nm,0.8s
I05D **Terrebonne, OR** 77.97 47 P **P** 13 17 17.9 +1.0
baz=287
N02D **Trinity Center** 77.99 51 P **P** 13 17 18.6 +1.4
baz=287
B08A **Colville Reser** 78.09 43 *e*P **P** 13 17 18.4 +0.9
comp=Z,19nm,0.9s
K04D **Chiloquin, OR** 78.19 49 P **P** 13 17 19.3 +1.1
baz=287
J05D **Fort Rock, OR** 78.36 48 P **P** 13 17 20.6 +1.4
baz=288,SNR=14
M04C **Macdoel** 78.38 50 P **P** 13 17 20.5 +1.2
baz=287,SNR=8.5
PINE **Pine Mountain** 78.41 48 *e*P **P** 13 17 21.0 +1.4
comp=Z,34nm,0.8s
HAWA **Hanford** 78.56 45 *e*P **P** 13 17 21.3 +1.1
comp=Z,16nm,0.6s
GDXM **Geysers** 78.57 53 *e*P **P** 13 17 22.5 +2.1
comp=Z,32nm,1.1s
D08A **Wollman Farm,** 78.76 44 *e*P **P** 13 17 22.2 +1.1
comp=Z,29nm,1.4s
K05A **Sumner Lake** 78.76 49 *e*P **P** 13 17 22.9 +1.3
comp=Z,33nm,0.9s
O03D **Paynes Creek** 78.85 51 P **P** 13 17 22.6 +0.6
baz=288
APA **Apatity** 79.05 339⇑ *i*P **P** 13 17 21.8 -0.5
APA pmax pmax
comp=Z,20nm,0.8s
APA MLR MLR
comp=Z,100nm,8.0s
G08A **Pilot Rock** 79.29 46 *e*P **P** 13 17 25.5 +1.2
comp=Z,12nm,1.1s
ORV **Oroville** 79.30 52 *e*P **P** 13 17 25.2 +0.9
comp=Z,16nm,1.0s
ORV **Oroville** 79.30 52 *e*P **P** 13 17 25.2 +0.9
ORV pmax pmax
comp=Z,16nm,1.0s
MOD **Modoc Plateau** 79.43 49 *e*P **P** 13 17 26.1 +0.9
comp=Z,12nm,0.8s
E09A **Wood Farm, Sta** 79.44 44 *e*P **P** 13 17 26.4 +1.5
comp=Z,25nm,0.8s
NEW **Newport** 79.52 42 P **P** 13 17 26.1 +0.8
baz=289
NEW **Newport** 79.52 42 *e*P **P** 13 17 26.2 +0.9
comp=Z,27nm,1.0s
NEW **Newport** 79.52 42 *e*P **P** 13 17 26.3 +0.9
NEW pmax pmax
comp=Z,27nm,1.0s
KLMR **Klimovskoe** 79.58 331 *e*P **P** 13 17 24.0 -1.4
KLMR *e*PP **sP** 13 17 51.4 -3.6
KLMR pmax pmax
comp=Z,13nm,1.3s
KLMR **Klimovskoe** 79.58 331 *e*P **P** 13 17 24.0 -1.4
KLMR AMP 13 17 25.9
comp=Z,13nm,1.3s
KLMR *e*pP **sP** 13 17 51.5 -3.6
AFDM **Forest Hills D** 79.88 52 *e*P **P** 13 17 28.6 +1.1
comp=Z,13nm,1.0s
BEKR **Beckworth** 80.04 51 *e*P **P** 13 17 29.5 +1.0
comp=Z,21nm,0.7s
F10A **Beach Ranch, E** 80.22 45 *e*P **P** 13 17 30.2 +1.0
comp=Z,25nm,1.4s
J08A **Circle Bar Ran** 80.25 47 *e*P **P** 13 17 29.8 +0.3
comp=Z,28nm,1.1s
HAMF **Hammerfest** 80.36 343 *e*P **P** 13 17 29.2 -0.2
WVOR **Wild Horse Val** 80.44 48 *e*P **P** 13 17 31.3 +0.7
comp=Z,17nm,1.0s
WVOR **Wild Horse Val** 80.44 48 *e*P **P** 13 17 31.3 +0.7
WVOR pmax pmax
comp=Z,17nm,1.0s
ARCES **ARCESS Array B** 80.50 342 P **P** 13 17 30.4 +0.2
comp=Z,11nm,0.7s,baz=72,slow=8.3,SNR=54
ARCES **ARCESS Array B** 80.50 342 *e*P **P** 13 17 30.5 +0.3
ARE0 **ARCESS Array S** 80.50 342 *e*P **P** 13 17 30.9 +0.7
comp=Z,31nm,1.1s
ARE0 **ARCESS Array S** 80.50 342 *e*P **P** 13 17 30.6 +0.4
BMO **Blue Mountains** 80.54 46 *e*P **P** 13 17 31.8 +0.8
comp=Z,35nm,1.2s
BMO **Blue Mountains** 80.54 46 *e*P **P** 13 17 31.8 +0.8
BMO pmax pmax
comp=Z,35nm,1.2s
CMB **Columbia Colle** 80.60 53 *e*P **P** 13 17 32.3 +0.9
comp=Z,24nm,0.7s
CMB **Columbia Colle** 80.60 53 *e*P **P** 13 17 32.3 +0.9
CMB pmax pmax
comp=Z,24nm,0.7s
VCNR **Virginia City** 80.74 52 *e*P **P** 13 17 33.6 +1.3
comp=Z,13nm,0.9s
PAHR **Pah Rah Range** 80.80 51 *e*P **P** 13 17 33.3 +0.7
comp=Z,12nm,1.0s
PNTR **Pine Nut** 80.84 52 *e*P **P** 13 17 34.4 +1.5
comp=Z,32nm,0.8s
YERR **Yerington** 81.14 52 *e*P **P** 13 17 35.5 +1.0
comp=Z,22nm,0.7s
WAKR **Walker** 81.16 52 *e*P **P** 13 17 35.8 +1.2
comp=Z,20nm,0.7s
WALA **Waterton Lakes** 81.24 41 *e*P **P** 13 17 36.4 +1.7
comp=Z,27nm,1.0s
SGF **Sodankyl** 81.38 340 *e*P **P** 13 17 35.1 +0.2
SGF pmax pmax
comp=Z,24nm,2.0s
PAGB **Antelope Grade** 81.46 55 *e*P **P** 13 17 37.5 +1.5
comp=Z,24nm,0.9s
JTMT **Jette** 81.49 42 *e*P **P** 13 17 37.0 +1.0
comp=Z,38nm,1.2s
HEF **Hetta** 81.70 341 *e*P **P** 13 17 36.6 +0.1
OMMB **Old Mammoth Mi** 81.78 53 *e*P **P** 13 17 39.2 +1.2
comp=Z,9.3nm,0.8s
RYN **Ryan** 81.79 52 *e*P **P** 13 17 38.8 +1.0
comp=Z,25nm,1.0s
SMMC **Simmler** 81.79 55 P **P** 13 17 38.8 +1.0
baz=290
MLAC **Mammoth, Mammo** 81.90 53 P **P** 13 17 39.6 +1.1
baz=290
KVN **Kaiserville** 81.96 51 *e*P **P** 13 17 39.6 +0.9
comp=Z,21nm,0.7s
KVN **Kaiserville** 81.96 51 *e*P **P** 13 17 39.7 +0.9
KVN pmax pmax
comp=Z,21nm,0.7s
NV01 **Mina Array Sit** 82.02 52 *e*P **P** 13 17 39.9 +0.8
NVAR **Mina Array Bea** 82.02 52 P **P** 13 17 39.9 +0.8
comp=Z,23nm,0.7s,baz=268,slow=5.9,SNR=175
MFID **Camas Ranch** 82.04 47 *e*P **P** 13 17 39.9 +0.9
comp=Z,20nm,0.9s
MSO **Missoula** 82.04 43 P **P** 13 17 39.7 +0.8
baz=292
MSO **Missoula** 82.04 43 *e*P **P** 13 17 38.8 -0.1
comp=Z,3.6nm,0.6s
PKM **Mcpherson Peak** 82.08 56 P **P** 13 17 40.5 +1.1
baz=290,SNR=8.7
JOF **Joensuu** 82.10 335 P **P** 13 17 38.2 -0.5
JOF pmax pmax
comp=Z,17nm,0.9s
BMN **Battle Mountai** 82.11 50 *e*P **P** 13 17 40.5 +1.0
comp=Z,28nm,1.5s
BMN **Battle Mountai** 82.11 50 *e*P **P** 13 17 40.5 +1.0
BMN pmax pmax
comp=Z,28nm,1.5s
NV11 **Mina Array Sit** 82.13 52 *e*P **P** 13 17 40.5 +0.9
comp=Z,1.4nm,0.8s
KIF **Kilpisjarvi** 82.16 343 *e*P **P** 13 17 38.9 -0.1
DAG **Danmarks Havn** 82.22 356 *i*P **P** 13 17 39.4 +0.3
comp=Z,6.5nm,0.9s
DAG **Danmarks Havn** 82.22 356 P **P** 13 17 39.8 +0.7
DAG pmax pmax
comp=Z,8.0nm,0.9s
TRO **Tromso** 82.27 344 *e*P **P** 13 17 39.0 -0.4
SBC **Santa Barbara** 82.30 56 P **P** 13 17 41.7 +1.3
baz=290
VES **Vestal, Richgr** 82.31 55 P **P** 13 17 40.4 0.0
baz=290,SNR=8.0
TIN **Tinemaha, Big** 82.55 53 P **P** 13 17 43.0 +1.3
baz=290
ARVC **Arvin** 82.75 55 P **P** 13 17 43.6 +0.9
baz=290
ISA **Isabella, Lake** 82.84 55 P **P** 13 17 43.3 0.0
baz=290,SNR=7.1
ISA **Isabella, Lake** 82.84 55 *e*P **P** 13 17 43.2 0.0
comp=Z,7.1nm,0.9s
ISA **Isabella, Lake** 82.84 55 *e*P **P** 13 17 43.2 0.0
ISA pmax pmax
comp=Z,7.0nm,0.9s
SNCC **San Nicolas Is** 82.86 57 P **P** 13 17 44.6 +1.3
baz=290
CWC **Cottonwood Cre** 82.87 54 P **P** 13 17 44.1 +0.6
baz=290
BLG **Laguna Peak, P** 82.92 56 P **P** 13 17 43.9 +0.2
baz=290
OUL **Oulu** 82.93 338 P **P** 13 17 43.5 +0.5
HLID **Hailey** 82.94 46 P **P** 13 17 44.5 +0.7
baz=292
HLID **Hailey** 82.94 46 *e*P **P** 13 17 44.6 +0.9
comp=Z,5.8nm,0.8s
OSI **Osito Audit: C** 83.01 56 P **P** 13 17 44.7 +0.5
baz=290
GRAC **Grapevine Rang** 83.22 53 P **P** 13 17 46.0 +0.8
baz=291,SNR=6.3
DAC **Darwin (Calif)** 83.30 54 *e*P **P** 13 17 46.3 +0.6
comp=Z,13nm,1.0s
DAC **Darwin (Calif)** 83.30 54 *e*P **P** 13 17 46.3 +0.6
DAC pmax pmax
comp=Z,13nm,1.0s
LRM **Limekiln Ridge** 83.38 44 *e*P **P** 13 17 46.6 +0.5
HRY **Holter Researc** 83.43 43 *e*P **P** 13 17 47.2 +1.1
MPMC **Manual Prospec** 83.45 54 P **P** 13 17 47.3 +0.7
baz=291,SNR=28
DLMT **Dillon** 83.47 44 *e*P **P** 13 17 46.7 +0.3
comp=Z,6.6nm,1.0s
EDW2 **Edwards Air Fo** 83.48 55 P **P** 13 17 47.3 +0.7
baz=291,SNR=9.4
MCMT **McKenzie Canyo** 83.51 45 *e*P **P** 13 17 47.3 +0.6
LRMC **Laurel Mtn Rad** 83.51 55 P **P** 13 17 47.3 +0.5
baz=291,SNR=18
MWC **Mount Wilson** 83.67 56 *e*P **P** 13 17 48.3 +0.6
comp=Z,32nm,1.5s
MWC **Mount Wilson** 83.67 56 *e*P **P** 13 17 48.3 +0.6
MWC pmax pmax
comp=Z,32nm,1.5s
CIS **Catalina Islan** 83.67 57 P **P** 13 17 47.6 0.0
baz=291
SCI2 **San Clemente I** 83.72 57 P **P** 13 17 47.9 +0.2
baz=291
FURC **Furnace Creek,** 83.78 53 P **P** 13 17 48.8 +0.9
baz=291,SNR=21
VSR **Storozhevoye** 83.80 323 *e*P **P** 13 17 46.9 -0.8
VSR pmax pmax
comp=Z,10.0nm,0.9s
BFSC **Mount Baldy Ra** 83.97 56 P **P** 13 17 49.1 0.0
baz=291
BOZ **Bozeman (W)** 84.00 43 P **P** 13 17 49.8 +0.7
baz=294
BOZ **Bozeman (W)** 84.00 43 *e*P **P** 13 17 49.8 +0.7
comp=Z,11nm,0.8s
BOZ **Bozeman (W)** 84.00 43 *e*P **P** 13 17 49.8 +0.7
BOZ pmax pmax
comp=Z,11nm,0.8s
R11A **Troy Canyon, C** 84.05 51 P **P** 13 17 50.3 +0.8
baz=292
R11A **Troy Canyon, C** 84.05 51 *e*P **P** 13 17 50.3 +0.8
comp=Z,40nm,1.8s
TPNV **Topopah Spring** 84.07 53 P **P** 13 17 50.4 +0.7
baz=291,SNR=30
TPNV **Topopah Spring** 84.07 53 *e*P **P** 13 17 50.3 +0.7
comp=Z,22nm,0.8s
TPNV **Topopah Spring** 84.07 53 *e*P **P** 13 17 50.3 +0.7
TPNV pmax pmax
comp=Z,22nm,0.8s
EGMT **Eagleton** 84.19 41 P **P** 13 17 50.2 +0.3
baz=295
EGMT **Eagleton** 84.19 41 *e*P **P** 13 17 50.7 +0.8
comp=Z,13nm,0.9s
GSC **Goldstone, Bar** 84.24 55 P **P** 13 17 51.1 +0.6
baz=291,SNR=13
GSC **Goldstone, Bar** 84.24 55 *e*P **P** 13 17 50.7 +0.2
comp=Z,12nm,0.9s
GSC **Goldstone, Bar** 84.24 55 *e*P **P** 13 17 50.7 +0.2
GSC pmax pmax
comp=Z,12nm,0.9s
STEI **Steigen** 84.41 343 *e*P **P** 13 17 50.4 -0.1
SHOC **Shoshone, Teco** 84.43 54 P **P** 13 17 51.9 +0.6
baz=292,SNR=7.1
QLMT **Earthquake Lak** 84.43 44 *e*P **P** 13 17 52.8 +1.4
BBRC **Big Bear Solar** 84.53 56 P **P** 13 17 52.1 0.0
baz=291
MURC **Murrieta** 84.56 56 P **P** 13 17 52.3 +0.3
baz=291
KBZ **Khabaz** 84.59 315 P **P** 13 17 52.4 +0.5
comp=Z,2.9nm,0.8s,baz=187,slow=3.7,SNR=5.3
KBZ LR LR 13 57 16.1
comp=Z,22nm,21.5s,baz=42,slow=37
YHB **Horse Butte** 84.62 44 *e*P **P** 13 17 53.2 +0.8
comp=Z,29nm,0.9s
HVU **Hansel Valley** 84.74 47 *e*P **P** 13 17 54.4 +1.5
comp=Z,23nm,1.2s
HVU **Hansel Valley** 84.74 47 *e*P **P** 13 17 54.4 +1.5
HVU pmax pmax
comp=Z,23nm,1.2s
HEC **Hector,Ludlow** 84.78 55 P **P** 13 17 53.6 +0.4
baz=292,SNR=5.5
TUQ **Turquoise Moun** 84.86 54 P **P** 13 17 54.2 +0.6
baz=292,SNR=13
109C **Camp Elliot, M** 84.88 57 P **P** 13 17 53.8 +0.1
baz=291
CPE **Camp Elliot** 84.88 57 *e*P **P** 13 17 54.3 +0.7
comp=Z,10.0nm,0.8s
FIA1 **FINESS Array S** 84.96 335 *e*P **P** 13 17 52.5 -0.9
FINES **FINESS Array B** 84.96 335 P **P** 13 17 52.3 -1.1
comp=Z,14nm,0.5s,baz=68,slow=4.8,SNR=134
YNR **Norris Junctio** 84.97 44 *e*P **P** 13 17 57.3 +3.2
comp=Z,50nm,1.2s
YFT **Old Faithful** 84.97 44 *e*P **P** 13 17 57.3 +3.1

	comp=Z,22nm,0.8s						
SHPR	Sheep Range	85.04	53	eP	P	13 17 55.6	+1.0
	comp=Z,9.2nm,0.9s						
YPP	Pitchstone Pla	85.07	44	eP	P	13 17 57.0	+2.3
	comp=Z,7.5nm,1.1s						
PFO	Pinyon Flats O	85.12	56	P	P	13 17 55.3	+0.2
	baz=292						
PFO	Pinyon Flats O	85.12	56	eP	P	13 17 55.2	+0.2
	comp=Z,12nm,0.9s						
PFO	Pinyon Flats O	85.12	56	eP	P	13 17 55.2	+0.2
PFO				pmax	pmax		
	comp=Z,12nm,0.9s						
XPFO	Piæon Flat	85.13	56	eP	P	13 17 55.2	+0.2
	comp=Z,10nm,0.9s						
IMW	Indian Meadow	85.13	45	eP	P	13 17 56.4	+1.4
	comp=Z,21nm,0.8s						
H17A	Grant Village	85.17	44	P	P	13 17 58.0	+2.8
	baz=294						
H17A	Grant Village	85.17	44	eP	P	13 17 58.0	+2.8
	comp=Z,16nm,1.0s						
GCMT	Greycliff	85.17	43	eP	P	13 17 56.4	+1.3
FXWY	Fox Creek	85.18	45	eP	P	13 17 56.4	+1.1
	comp=Z,11nm,0.9s						
PSUT	Pine Spring	85.23	51	eP	P	13 17 56.2	+0.7
	comp=Z,14nm,0.8s						
BORC	Borrego Spring	85.28	56	eP	P	13 17 54.8	-0.8
TPAW	Teton Pass	85.29	45	eP	P	13 17 57.0	+1.2
	comp=Z,9.3nm,0.6s						
BAR	Barrett	85.30	57	eP	P	13 17 56.3	+0.5
	comp=Z,9.2nm,1.1s						
GMRC	Granite Mounta	85.31	55	P	P	13 17 56.4	+0.5
	baz=292,SNR=9.4						
MOOW	Moose Ponds	85.32	45	eP	P	13 17 57.0	+1.1
	comp=Z,9.9nm,0.9s						
DUG	Dugway, Tooele	85.33	49	P	P	13 17 56.5	+0.6
	baz=293						
DUG	Dugway, Tooele	85.33	49	eP	P	13 17 56.7	+0.8
	comp=Z,20nm,0.8s						
DUG	Dugway, Tooele	85.33	49	eP	P	13 17 56.7	+0.8
DUG				pmax	pmax		
	comp=Z,20nm,0.8s						
BELC	Belle Mtn. Jos	85.34	56	P	P	13 17 56.2	+0.1
	baz=292,SNR=12						
REDW	Red Top Meadow	85.41	45	eP	P	13 17 57.4	+1.0
	comp=Z,38nm,1.8s						
MONP2	Monument Peak	85.42	57	P	P	13 17 57.0	+0.4
	baz=292						
SNOW	Snow King Moun	85.43	45	eP	P	13 17 58.0	+1.5
	comp=Z,6.3nm,0.8s						
FFC	Flin Flon	85.47	33	eP	P	13 17 56.8	+0.7
	comp=Z,28nm,0.8s						
FFC	Flin Flon	85.47	33	eP	P	13 17 56.8	+0.7
FFC				pmax	pmax		
	comp=Z,28nm,0.8s						
LOHW	Long Hollow	85.47	45	eP	P	13 17 57.1	+0.4
	comp=Z,20nm,1.4s						
AHID	Auburn Hatcher	85.49	46	eP	P	13 17 57.8	+1.1
	comp=Z,24nm,1.1s						
LDFC	Landfair	85.62	54	eP	P	13 17 58.1	+0.7
	comp=Z,24nm,0.8s						
HWUT	Hardware Ranch	85.64	47	eP	P	13 17 58.2	+0.7
	comp=Z,27nm,0.9s						
RLMT	Red Lodge	85.71	43	P	P	13 17 59.1	+1.3
	baz=295						
RLMT	Red Lodge	85.71	43	eP	P	13 17 59.3	+1.5
	comp=Z,27nm,0.6s						
IKP	In-Ko-Pah, Jac	85.75	57	P	P	13 17 58.3	+0.2
	baz=292						
MOR8	Moi Rana	85.88	342	eP	P	13 17 56.4	-1.5
CTU	Camp Tracy	85.88	48	eP	P	13 17 59.7	+1.0
	comp=Z,19nm,0.9s						
SWSC	Sam W. Stewart	85.88	56	P	P	13 17 58.5	0.0
	baz=292						
BC3	Big Chuckawall	85.89	56	P	P	13 17 59.1	+0.4
	baz=292						
IRM	Iron Mountain	85.94	55	P	P	13 17 59.3	+0.4
	baz=292,SNR=7.8						
TCUT	Toone Canyon	85.94	48	eP	P	13 17 59.8	+0.7
	comp=Z,37nm,0.7s						
NLU	North Lily Min	85.95	49	eP	P	13 18 00.1	+1.1
	comp=Z,18nm,1.0s						
CCUT	Cedar City	85.97	51	eP	P	13 18 00.4	+1.1
	comp=Z,11nm,1.0s						
NEE2	Needles Airpor	86.11	54	P	P	13 18 00.3	+0.6
	baz=292						
JLU	Jordanelle	86.13	48	eP	P	13 18 00.8	+0.8
	comp=Z,28nm,0.8s						
MPU	Maple Canyon	86.23	49	eP	P	13 18 01.5	+1.0
	comp=Z,15nm,1.0s						
LCMT	Little Creek M	86.27	52	eP	P	13 18 01.7	+1.1
	comp=Z,11nm,1.0s						
VSU	Vasula	86.40	333	deP	P	13 17 59.4	-1.2
VSU				pmax	pmax		
	comp=Z,25nm,0.8s						
MSU	Marysvale	86.45	50	eP	P	13 18 02.6	+1.0
MSU	Marysvale	86.45	50	eP	P	13 18 02.6	+1.0
BW06	Boulder Array	86.52	45	P	P	13 18 01.6	-0.3
	baz=295						
BW06	Boulder Array	86.52	45	eP	P	13 18 01.1	-0.8
	comp=Z,6.7nm,0.9s						
PD31	Pinedale Array	86.52	45	eP	P	13 18 02.2	+0.4
PDAR	Pinedale Array	86.52	45	P	P	13 18 01.8	-0.1
	comp=Z,2.7nm,0.6s,baz=255,slow=2.9,SNR=27						
PDAR				LR	LR	13 55 08.6	
	comp=Z,16nm,20.0s,baz=305,slow=34						
W13A	Hualapai Mount	86.54	54	eP	P	13 18 02.0	0.0
	comp=Z,7.1nm,0.8s						
KNB	Kanab	86.58	52	eP	P	13 18 03.4	+1.2
	comp=Z,32nm,0.9s						
KNB	Kanab	86.58	52	eP	P	13 18 03.4	+1.2
KNB				pmax	pmax		
	comp=Z,32nm,0.9s						
GLA	Glamis	86.60	56	P	P	13 18 02.9	+0.7
	baz=292						
GLA	Glamis	86.60	56	eP	P	13 18 03.2	+1.0
	comp=Z,13nm,0.9s						
GLA	Glamis	86.60	56	eP	P	13 18 03.2	+1.0
GLA				pmax	pmax		
	comp=Z,13nm,0.9s						
MTPU	Mount Pierson	86.64	51	eP	P	13 18 03.8	+1.1
	comp=Z,7.0nm,0.9s						
PDMCI	Parker Dam,Lak	86.65	55	P	P	13 18 03.1	+0.7
	baz=293,SNR=6.2						
TMUT	Trail Mountain	86.83	49	eP	P	13 18 04.5	+1.0
	comp=Z,13nm,0.8s						
SUMG	Summit	86.88	1	i P	P	13 18 04.7	+1.5
	comp=Z,9.4nm,1.0s						
SUMG				i		13 18 30.6	
SUMG	Summit	86.88	1	eP	P	13 18 04.7	+1.5
	comp=Z,17nm,1.3s						
SUMG	Summit	86.88	1	eP	P	13 18 04.7	+1.5
SUMG				pmax	pmax		
	comp=Z,17nm,1.3s						
FCC	Fort Churchill	86.92	27	eP	P	13 18 03.4	+0.3
	comp=Z,23nm,0.9s						
FCC	Fort Churchill	86.92	27	eP	P	13 18 03.4	+0.3
FCC				pmax	pmax		
	comp=Z,23nm,0.9s						
LAO	LASA Array	86.93	41	P	P	13 18 04.3	+0.7
	baz=297						
LAO	LASA Array	86.93	41	eP	P	13 18 04.3	+0.7
	comp=Z,34nm,1.0s						
P17A	Butcher Ranch,	87.08	49	eP	P	13 18 05.7	+1.1
	comp=Z,16nm,0.8s						
U15A	North Rim	87.20	52	eP	P	13 18 06.5	+1.1
	comp=Z,12nm,0.8s						
P18A	Preston Nutter	87.37	49	eP	P	13 18 06.8	+0.6
	comp=Z,13nm,0.7s						
SRU	San Rafael Swe	87.39	49	eP	P	13 18 06.6	+0.5
	comp=Z,30nm,0.6s						
SRU	San Rafael Swe	87.39	49	eP	P	13 18 06.6	+0.5
SRU				pmax	pmax		
	comp=Z,30nm,0.6s						
113A	Mohawk Valley,	87.53	56	eP	P	13 18 07.5	+0.9
	comp=Z,5.6nm,0.8s						
Y14A	Wickenburg	87.66	55	eP	P	13 18 08.1	+0.8
	comp=Z,28nm,0.8s						
WUAZ	Wupatki	88.25	53	P	P	13 18 11.3	+1.1
	baz=294,SNR=12						
WUAZ	Wupatki	88.25	53	eP	P	13 18 11.7	+1.5
	comp=Z,18nm,0.9s						
O20A	White River Ci	88.55	47	P	P	13 18 11.8	+0.2
	baz=296						
O20A	White River Ci	88.55	47	eP	P	13 18 12.3	+0.7
	comp=Z,13nm,0.9s						
RWWY	Rawlins	88.56	46	eP	P	13 18 12.4	+0.8
	comp=Z,18nm,1.2s						
214A	Organ Pipe Nat	88.59	56	P	P	13 18 12.6	+0.8
	baz=294						
PV09	Paradox Valley	88.63	49	eP	P	13 18 13.1	+1.0
X16A	Lo Mia Camp, P	88.65	54	eP	P	13 18 13.4	+1.2
	comp=Z,7.4nm,1.0s						
PV10	Paradox Valley	88.75	49	eP	P	13 18 13.8	+1.2
	comp=Z,32nm,0.9s						
PV05	Paradox Valley	88.84	50	eP	P	13 18 14.0	+1.0
	comp=Z,15nm,0.8s						
PV04	Paradox Valley	88.84	49	eP	P	13 18 14.0	+1.0
	comp=Z,23nm,0.9s						
PV03	Paradox Valley	88.94	49	eP	P	13 18 14.0	+0.5
	comp=Z,20nm,0.9s						
PV07	Paradox Valley	89.00	49	eP	P	13 18 14.6	+0.8
	comp=Z,17nm,1.3s						
PV02	Paradox Valley	89.04	49	eP	P	13 18 14.8	+0.8
	comp=Z,18nm,0.7s						
PV15	Paradox Valley	89.16	49	eP	P	13 18 15.3	+0.7
	comp=Z,12nm,1.0s						
PV01	Paradox Valley	89.19	49	eP	P	13 18 15.1	+0.4
	comp=Z,15nm,0.7s						
RSSD	Black Hills	89.50	42	P	P	13 18 15.9	0.0
	baz=299						
RSSD	Black Hills	89.50	42	eP	P	13 18 16.3	+0.3
	comp=Z,5.6nm,0.7s						
RSSD	Black Hills	89.50	42	eP	P	13 18 16.3	+0.3
RSSD				pmax	pmax		
	comp=Z,6.0nm,0.7s						
AKASG	Malin Array Be	89.53	325	P	P	13 18 13.9	-1.8
	comp=Z,0.1nm,0.3s,baz=189,slow=24,SNR=4.5						
KIEV	Kiev	89.55	325‖	eP	P	13 18 14.8	-0.9
KIEV				pmax	pmax		
	comp=Z,11nm,2.8s						
W18A	Petrified Fore	89.64	52	P	P	13 18 18.1	+1.3
	baz=295						
MVCO	Mesa Verde	89.64	50	P	P	13 18 17.4	+0.6
	baz=296,SNR=7.2						
MVCO	Mesa Verde	89.64	50	eP	P	13 18 17.4	+0.6
	comp=Z,11nm,1.1s						
N23A	Red Feather La	89.77	46	P	P	13 18 18.6	+1.2
	baz=298,SNR=19						
N23A	Red Feather La	89.77	46	eP	P	13 18 18.6	+1.2
	comp=Z,25nm,0.8s						
SMCO	Snowmass	89.85	48	eP	P	13 18 18.8	+0.8
	comp=Z,10nm,0.8s						
PHWY	Pilot Hill	89.91	45	eP	P	13 18 19.1	+1.1
	comp=Z,13nm,1.3s						
TUC	Tucson	90.02	55	P	P	13 18 19.7	+1.2
	baz=295						
TUC	Tucson	90.02	55	eP	P	13 18 19.8	+1.2
	comp=Z,12nm,1.3s						
TUC	Tucson	90.02	55	eP	P	13 18 19.8	+1.3
TUC				pmax	pmax		
	comp=Z,12nm,1.3s						
MDND	Maddock	90.28	38	P	P	13 18 19.5	+0.2
	baz=302						
HFS	Hagfors	90.43	338	P	P	13 18 18.3	-1.4
	comp=Z,1.9nm,0.4s,baz=90,slow=3.5,SNR=19						
ISCO	Idaho Springs	90.50	47	P	P	13 18 21.9	+1.0
	baz=298,SNR=12						
ISCO	Idaho Springs	90.50	47	eP	P	13 18 21.9	+1.0
	comp=Z,7.3nm,0.8s						
ISCO	Idaho Springs	90.50	47	eP	P	13 18 21.9	+1.0
ISCO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
S22A	4UR Ranch, Cre	90.59	49	P	P	13 18 22.2	+0.9
	baz=297,SNR=11						
S22A	4UR Ranch, Cre	90.59	49	eP	P	13 18 22.3	+0.9
	comp=Z,5.8nm,0.8s						
NB2	NORSAR Subarra	90.60	340	P	P	13 18 19.2	-1.3
	comp=Z,2.4nm,1.2s,baz=45,slow=4.6						
NB2	NORSAR Subarra	90.60	340	P	P	13 18 19.2	-1.3
	baz=45,slow=4.6						
NOA	NORSAR Array B	90.60	340	LR	LR	14 04 27.6	
	comp=Z,15nm,19.4s,baz=50,slow=39						
ULM	Lac du Bonnet	91.02	34	P	P	13 18 22.1	-0.5
	comp=Z,9.5nm,0.8s,baz=298,slow=3.1,SNR=18						
ULM				LR	LR	14 02 05.7	
	comp=Z,18nm,18.1s,baz=318,slow=37						
ULM	Lac du Bonnet	91.02	34	eP	P	13 18 22.9	+0.4
	comp=Z,12nm,0.8s						
ULM	Lac du Bonnet	91.02	34	eP	P	13 18 23.0	+0.4
ULM				pmax	pmax		
	comp=Z,12nm,0.8s						
A31A	Linda, St. Vin	91.05	36	P	P	13 18 22.9	+0.1
	baz=304						
B31A	Greenbush Farm	91.08	36	P	P	13 18 23.2	+0.3
	baz=303						
Q24A	Divide	91.21	47	P	P	13 18 24.5	+0.4
	baz=298						
C31A	Landman Farms,	91.38	37	P	P	13 18 24.7	+0.3
	baz=303,SNR=22						
SDCO	Great Sand Dun	91.53	49	P	P	13 18 26.3	+0.6
	baz=298,SNR=11						
SDCO	Great Sand Dun	91.53	49	eP	P	13 18 26.4	+0.7
	comp=Z,5.0nm,0.8s						
319A	Douglas	91.58	56	eP	P	13 18 27.4	+1.6
	comp=Z,10nm,0.8s						
KLNR	Kaliningrad	91.62	332‖	eP	P	13 18 23.6	-1.7
KLNR				pmax	pmax		
	comp=Z,39nm,0.9s						
SFJD	Kangerlussuaq	91.69	6	P	P	13 18 25.0	-0.4
	comp=Z,5.1nm,0.7s,baz=317,slow=6.0,SNR=3.0						
SFJD				LR	LR	14 02 21.9	
	comp=Z,15nm,18.8s,baz=38,slow=37						
SFJD	Kangerlussuaq	91.69	6	P	P	13 18 25.0	-0.4
D31A	Mcclaflin, Tow	91.79	38	P	P	13 18 26.6	+0.3
	baz=303						
LAZ	Ladron	91.87	52	eP	P	13 18 28.6	+1.4
E31A	Nome	91.96	38	P	P	13 18 27.0	-0.1
	baz=303,SNR=8.4						
A33A	Warroad	92.03	35	P	P	13 18 27.2	-0.1
	baz=305,SNR=7.7						
C32A	Crookston	92.03	37	P	P	13 18 27.6	+0.2
	baz=304						
TASM	ASL Pad, Albuq	92.13	51	P	P	13 18 29.2	+0.8
	baz=297						
ANMO	Albuquerque	92.13	51	P	P	13 18 28.5	+0.1
	comp=Z,5.9nm,0.9s,baz=269,slow=5.1,SNR=22						
ANMO				LR	LR	14 01 18.6	
	comp=Z,16nm,18.9s,baz=304,slow=36						
ANMO	Albuquerque	92.13	51	P	P	13 18 29.2	+0.8
	baz=297						
ANMO	Albuquerque	92.13	51	eP	P	13 18 28.5	+0.1
	comp=Z,8.3nm,1.0s						
ANMO	Albuquerque	92.13	51	deP	P	13 18 29.0	+0.6
ANMO				pmax	pmax		
	comp=Z,10.0nm,1.1s						
TASL	Snake Pit, Alb	92.13	51	P	P	13 18 29.2	+0.8
	baz=297						
AGMN	Agassiz Nation	92.14	36	P	P	13 18 27.8	-0.1
	baz=305,SNR=13						
AGMN	Agassiz Nation	92.14	36	eP	P	13 18 27.8	-0.1
	comp=Z,15nm,0.8s						
D32A	Dogwood Acres,	92.14	37	P	P	13 18 27.9	0.0
	baz=304						
121A	Cookes Peak, D	92.22	54	P	P	13 18 30.1	+1.3
	baz=296						
SUSD	Miller	92.48	40	P	P	13 18 29.4	-0.1
	baz=302						
C33A	Trail	92.49	36	P	P	13 18 29.3	-0.2
	baz=305						
G31A	Conde	92.50	39	P	P	13 18 29.5	-0.2
	baz=303						
BRTR	Keskin Array B	92.57	314	P	P	13 18 28.9	-1.4
	comp=Z,1.2nm,0.8s,baz=95,slow=3.1,SNR=5.1						
BRTR	Keskin Array B	92.57	314	i P	P	13 18 27.7	-2.5
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
T25A	Trinidad	92.58	49	P	P	13 18 31.6	+1.2
	baz=298						
T25A	Trinidad	92.58	49	eP	P	13 18 31.7	+1.2
	comp=Z,7.6nm,1.0s						
B34A	Aery, Baudette	92.69	35	P	P	13 18 30.2	-0.2
	baz=306,SNR=8.8						
D33A	AnnSam, Waubun	92.80	37	P	P	13 18 30.8	-0.1
	baz=305,SNR=5.6						
G32A	Webster	92.91	39	P	P	13 18 31.3	-0.3
	baz=304						
E33A	Westby DABS, E	93.07	37	P	P	13 18 32.2	-0.1
	baz=305						
D34A	Park Rapids	93.20	37	P	P	13 18 32.8	0.0
	baz=305,SNR=9.1						
D34A	Park Rapids	93.20	37	eP	P	13 18 33.2	+0.4
	comp=Z,19nm,0.7s						
B35A	Bob, Littlefor	93.26	35	P	P	13 18 33.1	0.0
	baz=306						
B35A	Bob, Littlefor	93.26	35	eP	P	13 18 33.5	+0.4
	comp=Z,13nm,1.2s						
H32A	Carlson Farm,	93.36	40	P	P	13 18 33.1	-0.5
	baz=304						
C35A	Jirik Farms, M	93.51	36	P	P	13 18 33.8	-0.4
	baz=306						
E34A	Wadena	93.54	37	P	P	13 18 34.3	-0.1
	baz=305						
G33A	Ortonville	93.56	39	P	P	13 18 34.3	-0.2
	baz=304						
D35A	Remer	93.84	36	P	P	13 18 35.5	-0.3
	baz=306						
G34A	Benson	94.00	38	P	P	13 18 36.6	+0.1
	baz=305						
C36A	Pine Crest Far	94.10	35	P	P	13 18 36.8	-0.1
	baz=307						
F35A	Swanville	94.26	37	P	P	13 18 37.5	-0.2
	baz=306						
D36A	Goodland	94.27	36	P	P	13 18 37.4	-0.4
	baz=307						
ECSD	EROS Data Cent	94.28	40	P	P	13 18 37.4	-0.4
	baz=304,SNR=5.9						
ECSD	EROS Data Cent	94.28	40	eP	P	13 18 37.8	0.0
	comp=Z,8.9nm,1.3s						
MLR	Muntele Rosu	94.28	322	LR	LR	14 02 16.3	
	comp=Z,8.1nm,20.7s,baz=65,slow=36						
MNTX	Cornudas Mount	94.41	54	P	P	13 18 39.4	+0.7
	baz=298						
MNTX	Cornudas Mount	94.41	54	eP	P	13 18 39.5	+0.7
	comp=Z,9.8nm,1.3s						
C37A	Embarrass	94.47	35	P	P	13 18 38.4	-0.2
	baz=308						
E36A	McGregor	94.61	36	P	P	13 18 39.1	-0.2
	baz=307						
D37A	Cotton	94.68	35	P	P	13 18 39.4	-0.2
	baz=307						
EYMN	Ely	94.70	34	P	P	13 18 39.8	+0.1
	baz=308						
F36A	Milaca	94.85	37	P	P	13 18 40.0	-0.4
	baz=306						
F36A	Milaca	94.85	37	eP	P	13 18 40.6	+0.2
	comp=Z,6.5nm,0.9s						
CBKS	Cedar Bluff	94.95	45	P	P	13 18 41.1	+0.1
	baz=302						
C38A	Sawbill Land.	94.96	35	P	P	13 18 40.7	-0.1
	baz=308						
E38A	The Farm, Brul	95.49	36	P	P	13 18 42.8	-0.5
	baz=308						
AMTX	Amarillo	95.61	50	P	P	13 18 44.5	+0.3
	baz=300						
SPMN	Marine on St.	95.64	37	P	P	13 18 44.2	+0.2
	baz=307						
SPMN	Marine on St.	95.64	37	eP	P	13 18 44.4	+0.4
	comp=Z,6.7nm,0.7s						
F38A	Pierce - Schro	95.71	36	P	P	13 18 44.9	+0.6
	baz=308						
E39A	Mellen	96.17	35	P	P	13 18 46.2	-0.2
	baz=309						
K36A	Gilmore City	96.20	40	P	P	13 18 46.4	-0.2
	baz=306						
H38A	Maiden Rock	96.26	37	P	P	13 18 47.1	+0.2
	baz=307						
F39A	Loretta	96.27	36	P	P	13 18 46.6	-0.3
	baz=308						
J37A	Redenius Farm,	96.34	39	P	P	13 18 47.1	-0.2
	baz=306						
E40A	Wakefield	96.49	35	P	P	13 18 48.0	+0.1
	baz=309						
G39A	Holcombe	96.52	36	P	P	13 18 47.7	-0.3
	baz=308						
K37A	Belmond	96.61	40	P	P	13 18 48.0	-0.5
	baz=306						
F40A	Park Falls	96.70	35	P	P	13 18 48.3	-0.6
	baz=309						
D41A	Chassel	96.80	34	P	P	13 18 49.0	-0.3
	baz=310						
TX31	Lajitas Ar. Si	96.82	55	eP	P	13 18 49.6	-0.2
TXAR	Lajitas Array	96.82	55	P	P	13 18 50.2	+0.4
	comp=Z,0.9nm,0.8s,baz=267,slow=2.8,SNR=14						
H39A	Augusta	96.83	37	P	P	13 18 49.6	+0.2
	baz=308						
J38A	Wedel Dairy, R	96.97	39	P	P	13 18 49.9	-0.2
	baz=307						
G40A	Rib Lake	97.06	36	P	P	13 18 50.6	+0.1
	baz=309						
G40A	Rib Lake	97.06	36	eP	P	13 18 50.8	+0.3
	comp=Z,5.1nm,0.7s						
I39A	Houston	97.20	38	P	P	13 18 51.1	0.0
	baz=308						
F41A	Three Lakes	97.36	35	P	P	13 18 51.8	-0.1
	baz=310						
H40A	Chili	97.36	37	P	P	13 18 52.1	+0.3
	baz=309						
J39A	Decorah	97.41	38	P	P	13 18 51.3	-0.8
	baz=308						
ATD	Arta Tunnel	97.54	285	P	Pdif	13 18 54.1	+0.8
	comp=Z,3.1nm,0.3s,baz=28,slow=15,SNR=2.5						
K39A	Oelwein	97.68	39	P	P	13 18 52.9	-0.5
	baz=307						
WMOK	Wichita Mounta	97.73	48	P	P	13 18 53.8	+0.1
	baz=302						
WMOK	Wichita Mounta	97.73	48	eP	P	13 18 54.2	+0.4
	comp=Z,3.3nm,0.9s						
WMOK	Wichita Mounta	97.73	48	eP	P	13 18 54.2	+0.4
WMOK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
N39A	Derby Farms, D	98.41	41	P	P	13 18 56.5	-0.1
	baz=307						
GERES	GERESS Array B	98.50	330	LR	LR	14 08 31.5	
	comp=Z,18nm,18.2s,baz=66,slow=38						
I42A	Draeger Farm,	98.65	37	P	P	13 18 57.5	-0.1
	baz=310						
SYO	Syowa Base	114.90	202‖	epPdiff	pPdif	13 20 33.8	+3.2
SNAA	Sanae	125.88	192	PKP	PKPdf	13 24 17.7	-1.5
	comp=Z,0.9nm,0.6s,baz=201,slow=4.0,SNR=13						
TORD	Torodi Ar. Bea	131.02	310	PKP	PKPdf	13 24 29.8	-0.8
	comp=Z,1.1nm,0.5s,baz=64,slow=0.9,SNR=10						
TORD				SKPbc	SKPbc	13 27 45.4	-2.8
	comp=Z,3.0nm,0.9s,baz=44,slow=2.6,SNR=9.3						
MNMC	Minye Minye	146.99	93	ePKPdf	PKPbc	13 25 02.5	+0.6
LPAZ	La Paz	147.82	88	PKP	PKPdf	13 25 01.3	-0.3
	comp=Z,5.2nm,0.6s,baz=293,slow=2.9,SNR=5.7						
LPAZ				PKPbc	PKPbc	13 25 05.2	+0.5
	comp=Z,5.2nm,0.6s,baz=353,slow=2.5,SNR=22						
PTGA	Pitinga	148.13	55	PKP	PKPdf	13 25 00.8	-0.8
	comp=Z,1.1nm,0.3s,baz=234,slow=7.5,SNR=1.5						
PTGA				PKPbc	PKPbc	13 25 04.6	-0.2
	comp=Z,4.9nm,0.8s,baz=338,slow=3.3,SNR=4.2						
PTGA	Pitinga	148.13	55	ePKPbc	PKPbc	13 25 04.9	+0.1
SAML	Samuel	149.94	71	ePKPbc	PKPbc	13 25 09.1	-0.2
SIV	San Ignacio	154.34	84	PKP	PKPdf	13 25 10.5	-0.4
	comp=Z,0.6nm,0.8s,baz=256,slow=19,SNR=3.2						
SIV				PKPab	pPKPdf	13 25 33.2	-0.1
	comp=Z,1.2nm,0.6s,baz=304,slow=8.7,SNR=5.1						

ISC 16 13:19:50.9±1.5, 44°.86N±0°.03×15°.97E±0°.08, h7km±11km, n8, c0°.84/14, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC	Res
UDBI	Udbina	0.36	205	ePg	Pg	13 19 57.8		-0.1
UDBI				Sg	Sg	13 20 03.8		+1.2
BOJS	Bojanci	0.82	322	i Pg	Pg	13 20 06.9		+0.2
	comp=

*HLW **16** 13:24:27.6, 34°.08N×26°.39E, h9km±10km, Md3.8, Ml3.6*
*ATH **16** 13:24:27.6, 34°.31N×26°.17E, h25km±1km, ML3.2/8, Error ellipse: s-maj=3.2km s-min=1.3km az=348.0*
*THE **16** 13:24:29.3, 34°.36N×26°.17E, h3km±2km, ML3.1/5, Error ellipse: s-maj=2.8km s-min=1.6km az=116.0*
ISC 16 13:24:26.1±1.3, **34°.24N**±0°.04×**26°.30E**±0°.03, **h15**km±8km, **n73**, σ1§**05**/93, **mb3.8**/6, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.88**	**356**	P	**Pg**	**13 24 42.4**	**-0.8**
ZKR				S	**Sg**	**13 24 54.4**	**-0.3**
ZKR				AML	AML	13 25 08.4	
	comp=E,3466μm,0.7s						
ZKR				AML	AML	13 25 08.9	
	comp=N,1684μm,0.7s						
ZKR	**Zakros**	**0.88**	**356**	P	**Pg**	**13 24 43.0**	**-0.1**
ZKR				S	**Sb**	**13 24 55.8**	**+1.2**
ZKR	**Zakros**	**0.88**	**356**	P	**Pg**	**13 24 42.8**	**-0.3**
ZKR				S	**Sg**	**13 24 54.5**	**-0.2**
LAST	**Lasithi**	**1.15**	**324**	P	**Pb**	**13 24 47.1**	**-0.5**
LAST				S	**Sg**	**13 25 02.9**	**-0.3**
LAST				AML	AML	13 25 09.4	
	comp=N,1940μm,0.6s						
LAST				AML	AML	13 25 10.1	
	comp=E,1823μm,0.7s						
LAST	**Lasithi**	**1.15**	**324**	P	**Pb**	**13 24 47.4**	**-0.2**
LAST				S	**Sb**	**13 25 01.9**	**-0.4**
LAST	**Lasithi**	**1.15**	**324**	P	**Pb**	**13 24 47.4**	**-0.2**
LAST				S	**Sb**	**13 25 02.2**	**-0.1**
NPS	**Neapolis**	**1.17**	**331**	P	**Pb**	**13 24 47.4**	**-0.6**
NPS				S	**Sb**	**13 25 03.0**	**0.0**
NPS				AML	AML	13 25 15.2	
	comp=E,2540μm,0.8s						
NPS				AML	AML	13 25 16.6	
	comp=N,1679μm,0.7s						
NPS	**Neapolis**	**1.17**	**331**	P	**Pg**	**13 24 49.1**	**+0.4**
NPS				S	**Sb**	**13 25 03.1**	**+0.1**
NPS	**Neapolis**	**1.17**	**331**	P	**Pb**	**13 24 47.6**	**-0.4**
NPS				S	**Sb**	**13 25 03.1**	**+0.1**
SIVA	**Sivas**	**1.46**	**303**	P	**Pb**	**13 24 52.8**	**-0.1**
SIVA				S	**Sn**	**13 25 09.8**	**-0.8**
SIVA				AML	AML	13 25 26.4	
	comp=N,2023μm,0.8s						
SIVA				AML	AML	13 25 36.4	
	comp=E,2056μm,0.6s						
SIVA	**Sivas**	**1.46**	**303**	P	**Pb**	**13 24 52.8**	**-0.1**
SIVA				S	**Sn**	**13 25 10.7**	**+0.1**
SIVA	**Sivas**	**1.46**	**303**	P	**Pb**	**13 24 52.6**	**-0.2**
SIVA				S	**Sn**	**13 25 10.7**	**+0.1**
KARP	**Karpathos**	**1.49**	**28**	P	**Pg**	**13 24 55.2**	**+0.5**
KARP				S	**Sg**	**13 25 15.0**	**+0.9**
KARP				AML	AML	13 25 38.2	
	comp=N,1410μm,0.8s						
KARP				AML	AML	13 25 42.0	
	comp=E,1539μm,0.7s						
KARP	**Karpathos**	**1.49**	**28**	P	**Pg**	**13 24 54.8**	**+0.1**
KARP				S	**Sg**	**13 25 13.9**	**-0.2**
KARP	**Karpathos**	**1.49**	**28**	P	**Pg**	**13 24 54.8**	**+0.1**
KARP				S	**Sg**	**13 25 13.9**	**-0.2**
IDI	**Anoyia**	**1.56**	**313**	Pn	**Pb**	**13 24 54.3**	**-0.4**
	comp=E,3.0nm,0.3s,baz=170,slow=13,SNR=21						
IDI				Sn	**Sn**	**13 25 13.6**	**+0.2**
	comp=E,8.4nm,0.3s,baz=109,slow=18,SNR=9.5						
IDI				LR	LR	13 25 52.4	
	comp=E,224nm,18.7s,baz=92,slow=55						
GVD	**Gavdhos**	**1.92**	**289**	P	**Pb**	**13 25 00.0**	**-0.8**
GVD				AML	AML	13 25 48.1	
	comp=N,486μm,1.0s						
GVD				AML	AML	13 25 51.5	
	comp=E,612μm,0.5s						
GVD	**Gavdhos**	**1.92**	**289**	P	**Pn**	**13 24 59.6**	**+1.4**
VAM	**Vamos**	**2.09**	**305**	P	**Pn**	**13 25 01.8**	**+1.3**
VAM				AML	AML	13 25 48.9	
	comp=N,821μm,1.5s						
VAM				AML	AML	13 25 54.4	
	comp=E,534μm,0.7s						
VAM	**Vamos**	**2.09**	**305**	P	**Pn**	**13 25 01.6**	**+1.1**
IMMV	**Iera Moni Meta**	**2.27**	**303**	P	**Pn**	**13 25 04.6**	**+1.7**
IMMV				AML	AML	13 25 59.6	
	comp=N,650μm,1.1s						
IMMV				AML	AML	13 26 01.8	
	comp=E,894μm,1.0s						
IMMV	**Iera Moni Meta**	**2.27**	**303**	P	**Pn**	**13 25 04.3**	**+1.4**
THR3	**Thira Island,**	**2.29**	**342**	P	**Pn**	**13 25 03.0**	**-0.2**
THR3	**Thira Island,**	**2.29**	**342**	P	**Pn**	**13 25 03.9**	**+0.6**
THR5	**Thira Island,**	**2.31**	**341**	P	**Pn**	**13 25 03.5**	**-0.1**
THR5	**Thira Island,**	**2.31**	**341**	P	**Pn**	**13 25 04.2**	**+0.6**
ARG	**Arkhangelos**	**2.48**	**37**	P	**Pb**	**13 25 08.9**	**-1.4**
ARG	**Arkhangelos**	**2.48**	**37**	P	**Pb**	**13 25 08.8**	**-1.5**
ARG	**Arkhangelos**	**2.48**	**37**	P	**Pb**	**13 25 08.8**	**-1.5**
SLUM	**Salum**	**2.88**	**199**	P	**Pn**	**13 25 12.4**	**+0.9**
SLUM	baz=202			S	**Sn**	**13 25 45.0**	**-0.9**
SLUM	baz=202						
SLUM	**Salum**	**2.88**	**199**	P	**Pn**	**13 25 12.4**	**+0.9**
SLUM				S	**Sn**	**13 25 45.0**	**-0.9**
APE	**Apeiranthos**	**2.90**	**348**	P	**Pn**	**13 25 12.1**	**+0.4**
APE	**Apeiranthos**	**2.90**	**348**	P	**Pn**	**13 25 12.7**	**+1.0**
ANKY	**Antikythira Is**	**2.95**	**304**	P	**Pn**	**13 25 15.2**	**+2.9**
ANKY	**Antikythira Is**	**2.95**	**304**	P	**Pn**	**13 25 14.4**	**+2.0**
KYTH	**Kithira**	**3.34**	**308**	P	**Pn**	**13 25 18.7**	**+0.9**
AKAS	**Kas**	**3.36**	**53**	*i* P	**Pn**	**13 25 19.9**	**+1.8**
AKAS	**Kas**	**3.36**	**53**	P	**Pn**	**13 25 19.9**	**+1.8**
SMG	**Samos**	**3.49**	**7**	P	**Pn**	**13 25 20.6**	**+0.8**
SMG	**Samos**	**3.49**	**7**	P	**Pn**	**13 25 21.4**	**+1.6**
VLI	**Veliai**	**3.70**	**313**	P	**Pn**	**13 25 21.1**	**-1.5**
VLI	**Veliai**	**3.70**	**313**	P	**Pn**	**13 25 22.6**	**0.0**
GOLH	**Golhisar**	**4.00**	**41**	*i* P	**Pn**	**13 25 29.0**	**+2.1**
GOLH	**Golhisar**	**4.00**	**41**	P	**Pn**	**13 25 29.0**	**+2.1**
DYR	**Agios Nikonas**	**4.10**	**309**	P	**Pn**	**13 25 27.4**	**-0.8**
DYR				S	**Sn**	**13 26 15.2**	**-0.8**
DYR	**Agios Nikonas**	**4.10**	**309**	P	**Pn**	**13 25 28.6**	**+0.4**
DYR				S	**Sn**	**13 26 15.2**	**-0.8**
KORT	**Korkueli**	**4.30**	**49**	*i* P	**Pn**	**13 25 30.3**	**-0.8**
KORT	**Korkueli**	**4.30**	**49**	P	**Pn**	**13 25 30.3**	**-0.8**
SWA2		**5.03**	**188**	P	**Pn**	**13 25 41.8**	**+0.8**
SWA2	baz=190			AMP		13 27 00.0	
	baz=190						
SWA2		**5.03**	**188**	P	**Pn**	**13 25 41.8**	**+0.8**
KEPZ	**Antalya-Kepez**	**5.08**	**57**	*i* P	**Pn**	**13 25 43.4**	**+1.8**
KEPZ	**Antalya-Kepez**	**5.08**	**57**	P	**Pn**	**13 25 43.4**	**+1.8**
HMYD	**Mayadein**	**5.85**	**138**	P	**Pn**	**13 25 53.4**	**+1.2**
HMYD	baz=137 **Mayadein**	**5.85**	**138**	P	**Pn**	**13 25 53.4**	**+1.2**
KOT	**Kottamia**	**6.36**	**131**	P	**Pn**	**13 26 00.2**	**+0.9**
KOT	baz=130 **Kottamia**	**6.36**	**131**	P	**Pn**	**13 26 00.2**	**+0.9**
HSAF	**As Saff**	**6.41**	**134**	P	**Pn**	**13 26 00.5**	**+0.5**
HSAF	baz=133 **As Saff**	**6.41**	**134**	P	**Pn**	**13 26 00.5**	**+0.5**
HHAG	**Hagoal**	**6.51**	**129**	P	**Pn**	**13 26 02.5**	**+1.1**
HHAG	baz=128 **Hagoal**	**6.51**	**129**	P	**Pn**	**13 26 02.5**	**+1.1**
MMAI	**Mount Meron Ar**	**7.69**	**97**	Pn	**Pn**	**13 26 17.1**	**-0.5**
	comp=E,2.0nm,0.3s,baz=270,slow=12,SNR=9.6						
MMAI				Sn	**Sn**	**13 27 43.1**	**-1.3**
	comp=E,3.4nm,0.3s,baz=266,slow=23,SNR=7.7						
BRTR	**Keskin Array B**	**8.03**	**45**	Pn	**Pn**	**13 26 23.7**	**+1.4**
	comp=E,0.1nm,0.3s,baz=236,slow=10,SNR=3.8						
EIL	**Elat**	**8.64**	**119**	Pn	**Pn**	**13 26 34.0**	**+3.4**
	comp=E,0.4nm,0.3s,baz=315,slow=20,SNR=8.0						
EIL				Sn	**Sn**	**13 28 07.0**	**-0.8**
	comp=E,1.2nm,0.3s,baz=24,slow=3.8,SNR=5.4						
MLR	**Muntele Rosu**	**11.24**	**359**	LR	LR	13 32 14.5	
	comp=E,14nm,21.6s,baz=192,slow=42						
AKASG	**Malin Array Be**	**16.59**	**7**	Pn	**P**	**13 28 19.7**	**-0.8**
	comp=E,0.8nm,0.3s,baz=192,slow=11,SNR=7.4						
GERES	**GERESS Array B**	**17.34**	**331**	P	**Pn**	**13 28 28.1**	**+0.6**
	comp=E,0.2nm,0.3s,baz=139,slow=9.1,SNR=3.2						
ESDC	**Sonseca Array**	**24.72**	**292**	P	**P**	**13 29 45.8**	**-0.9**
	comp=E,0.1nm,0.4s,baz=77,slow=8.8,SNR=7.0						
FINES	**FINESS Array B**	**27.23**	**360**	P	**P**	**13 30 09.0**	**-0.1**
	comp=E,1.5nm,0.9s,baz=179,slow=9.7,SNR=3.7						
TORD	**Torodi Ar. Bea**	**30.65**	**233**	P	**P**	**13 30 39.8**	**-0.2**
	comp=E,1.4nm,0.9s,baz=57,slow=11,SNR=4.9						
TORD				LR	LR	13 42 40.0	
	comp=E,27nm,21.4s,baz=105,slow=36						
DBIC	**Dimbokro**	**39.75**	**233**	LR	LR	13 52 25.7	
	comp=E,30nm,18.4s,baz=98,slow=42						
KURBB	**Kurchatov Arra**	**40.98**	**50**	P	**P**	**13 32 08.9**	**+0.7**
	comp=E,0.5nm,0.4s,baz=278,slow=9.0,SNR=7.3						
MKAR	**Makanchi Array**	**43.51**	**56**	P	**P**	**13 32 30.0**	**+1.1**
	comp=E,1.0nm,0.5s,baz=270,slow=6.9,SNR=10						
ZALV	**Zalesovo Beam**	**44.97**	**46**	P	**P**	**13 32 40.8**	**+0.4**
	comp=E,0.6nm,0.4s,baz=284,slow=6.7,SNR=3.3						

IDC 16 13:32:28.0±6.6, **3°.69N×128°.09E, h77**km±78km, **mb3.2**/3, **mb1 3.4**/4, **mb1mx3.1**/54, **mbtmp3.5**/4, **ML3.4**/1, **Error ellipse: s-maj=157.7km s-min=25.3km az=68.0, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.53**	**145**	P	Pn	13 33 48.7	+0.8
	1.2nm,0.3s,baz=252,slow=20,SNR=4.9						
SIJI				S	Sn	13 34 50.2	0.0
	1.1nm,0.3s,baz=18,slow=18,SNR=3.3						
WRA	**Warramunga Arr**	**24.28**	**166**	P	P	13 37 37.6	-0.6
	1.4nm,0.8s,baz=344,slow=9.8,SNR=9.9						
ASAR	**Alice Springs**	**27.78**	**169**	P	P	13 38 10.8	+0.9
	0.3nm,0.8s,baz=357,slow=8.2,SNR=4.7						
MKAR	**Makanchi Array**	**58.37**	**325**	P	P	13 42 15.2	-0.2
	0.4nm,0.7s,baz=108,slow=8.9,SNR=2.6						

*THR **16** 13:40:34.8±0.7, 33°.93N×48°.76E, h6km±5km, ML3.5*
*ISN **16** 13:40:35.9±3.1, 33°.95N×48°.54E, h15km, ML3.6*
*ISCJB **16** 13:40:36.9±0.4, 33°.98N±0°.04×48°.64E±0°.04, h11km, Error ellipse: s-maj=5.2km s-min=4.4km az=159.6*
*TEH **16** 13:40:37.6, 33°.99N×48°.67E, h4km, ML3.6*
*CSEM **16** 13:40:38.0±0.2, 33°.91N×48°.58E, h20km, ML3.5, Error ellipse: s-maj=6.3km s-min=5.0km az=170.0*
ISC 16 13:40:35.4±0.9, **34°.00N**±0°.03×**48°.78E**±0°.03, **h11**km, **n46**, σ1§**33**/47, **Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDOB	**Doab**	**0.55**	**247**	*e*Pg	**Pg**	**13 40 45.7**	**-0.4**
IKMR	**Kamar-syah**	**0.59**	**215**	*e*Pg	**Pg**	**13 40 46.1**	**-0.7**
HAGD	**Aghdareh**	**0.87**	**20**	*e*Pg	**Pb**	**13 40 53.2**	**+0.5**
HAGD				*e*Sg	**Sn**	**13 41 06.0**	**-0.7**
HAGD				*e*		13 41 08.6	
	comp=Z,99nm,0.0s						
IBZA	**Bozab**	**0.89**	**302**	*e*Pg	**Pg**	**13 40 52.2**	**-0.5**
IKFM	**Kafar-mosalman**	**0.91**	**239**	*e*Pg	**Pg**	**13 40 51.9**	**-1.1**
IKFM				*e*		13 40 56.9	
	comp=Z,99nm,0.1s						
IKFM	**Kafar-mosalman**	**0.91**	**239**	*e*Pg	**Pg**	**13 40 51.9**	**-1.1**
KHMZ	**Khomeyn**	**1.01**	**105**	*e*Pg	**Pg**	**13 40 54.7**	**-0.3**
KHMZ				*e*Sg	**Sn**	**13 41 09.1**	**-1.1**
KHMZ	**Khomeyn**	**1.01**	**105**	*e*Pg	**Pb**	**13 40 55.2**	**+0.1**
IKOM	**Komasi**	**1.07**	**280**	*e*Pg	**Pg**	**13 40 55.4**	**-0.6**
ASAO	**Ashtian**	**1.17**	**62**	*e*Pg	**Pn**	**13 40 58.1**	**+0.2**
ASAO	**Ashtian**	**1.17**	**62**	*e*Pg	**Pn**	**13 40 58.1**	**+0.2**
HKZM	**Kohzaman**	**1.38**	**4**	*e*Pg	**Pg**	**13 41 02.4**	**+0.5**
HKZM				*e*		13 41 24.5	
	comp=Z,99nm,0.1s						
HKZM	**Kohzaman**	**1.38**	**4**	*e*Pg	**Pg**	**13 41 02.3**	**+0.4**
SNGE	**Sanandaj**	**1.61**	**313**	*e*Pg	**Pg**	**13 41 06.1**	**-0.2**
SNGE	**Sanandaj**	**1.61**	**313**	*e*Pg	**Pg**	**13 41 06.1**	**-0.2**
IVIS	**Veis**	**1.68**	**289**	*e*		13 41 40.8	
	comp=Z,3μm,0.3s						
IVIS				*e*Pn	**Pb**	**13 41 06.3**	**-0.2**
IRAZ	**Razeghan**	**1.69**	**34**	*e*		13 41 37.0	
	comp=Z,6μm,0.1s						
IRAZ				*e*Pn	**Pg**	**13 41 08.0**	**+0.1**
IRAZ	**Razeghan**	**1.69**	**34**	*e*Pn	**Pg**	**13 41 07.9**	**+0.1**
ILIN	**Lien**	**1.76**	**302**	*e*		13 41 38.6	
	comp=Z,5μm,0.3s						
ILIN				*e*Pn	**Pb**	**13 41 08.1**	**+0.2**
QABG	**Abgarm-Qazvin**	**1.82**	**21**	*e*Pn	**Pg**	**13 41 10.5**	**0.0**
QABG				*e*		13 41 38.6	
	comp=Z,99nm,0.2s						
QABG	**Abgarm-Qazvin**	**1.82**	**21**	*e*Pg	**Pg**	**13 41 10.4**	**0.0**
IDHR	**Dehrash**	**2.10**	**290**	*e*Pn	**Pb**	**13 41 13.2**	**-0.4**
IDHR				*e*		13 41 48.4	
	comp=Z,4μm,0.2s						
GHVR	**GHOM**	**2.14**	**76**	*e*Pn	**Pb**	**13 41 13.4**	**-0.8**
GHVR				AML	AML	13 41 48.6	
	comp=N,242nm,0.4s						
GHVR				AML	AML	13 41 49.0	
	comp=E,383nm,0.4s						
GHVR	**GHOM**	**2.14**	**76**	*e*Pn	**Pb**	**13 41 13.4**	**-0.8**
IPIR	**Pirpir**	**2.20**	**126**	*e*Pn	**Pb**	**13 41 15.3**	**-0.1**
QAM	**Ghamsar**	**2.23**	**95**	*e*Pn	**Pb**	**13 41 16.1**	**+0.3**
QAM				*e*		13 41 51.5	
	comp=Z,7μm,0.2s						
IMHD	**Mahdasht**	**2.29**	**42**	*e*Pn	**Pg**	**13 41 18.2**	**-1.1**
IMHD				*e*		13 41 24.2	
	comp=Z,5μm,0.1s						
IMHD	**Mahdasht**	**2.29**	**42**	*e*Pn	**Pg**	**13 41 18.1**	**-1.2**
ROKH	**ROKH**	**2.51**	**131**	*e*Pn	**Pb**	**13 41 19.6**	**-1.1**
ZNGN	**Zangian**	**2.56**	**137**	*e*Pn	**Pb**	**13 41 19.6**	**-2.0**
THKV	**Tehran--Karaj**	**2.57**	**41**	*e*Pn	**Pb**	**13 41 20.1**	**-1.6**
THKV	**Tehran--Karaj**	**2.57**	**41**	*e*Pn	**Pb**	**13 41 20.1**	**-1.6**
IVRN	**Varamin**	**2.63**	**67**	*e*		13 42 10.6	
	comp=Z,3μm,0.1s						
IVRN	**Varamin**	**2.63**	**67**	*e*Pn	**Pb**	**13 41 22.9**	**+0.3**
IGZV	**Ghazvin**	**2.65**	**26**	*e*Pn	**Pb**	**13 41 22.5**	**-0.6**
IGZV				*e*		13 42 12.0	
	comp=Z,1μm,0.2s						
IGZV	**Ghazvin**	**2.65**	**26**	*e*Pn	**Pb**	**13 41 22.6**	**-0.6**
ZNJK	**Zanjan**	**2.66**	**358**	*e*Pn	**Pb**	**13 41 21.6**	**-1.7**
ZNJK	**Zanjan**	**2.66**	**358**	*e*Pn	**Pb**	**13 41 21.6**	**-1.7**
QALM	**Alamut, Qazvin**	**2.87**	**32**	*e*Pn	**Pb**	**13 41 26.2**	**-0.5**
QALM				*e*		13 42 16.1	
	comp=Z,99nm,0.4s						
QALM	**Alamut, Qazvin**	**2.87**	**32**	*e*Pn	**Pb**	**13 41 26.1**	**-0.6**
IAFJ	**Afjeh**	**3.04**	**52**	*e*Pn	**Pb**	**13 41 28.3**	**-1.4**
IDMV	**Damavand**	**3.10**	**59**	*e*Pn	**Pb**	**13 41 28.8**	**-2.0**
IDMV				*e*		13 41 29.7	
	comp=Z,1μm,0.1s						
IDMV	**Damavand**	**3.10**	**59**	*e*Pn	**Pb**	**13 41 28.8**	**-2.0**
IFIR	**Firoozkooh**	**3.65**	**62**	*e*Pn	**Pb**	**13 41 36.5**	**-3.7**
IRAM	**Ramesheh**	**3.74**	**125**	*e*Pn	**Pn**	**13 41 36.1**	**+2.9**
ANAR	**Anarak**	**4.21**	**100**	*e*Pn	**Pn**	**13 41 43.9**	**+4.2**

*ATA **16** 13:48:48.7±1.2, 40°.03N×40°.24E, h6km±999km, ML2.6, MW2.6*
ISC 16 13:48:47.3±2.8, **40°.2N**±0°.1×**40°.3E**±0°.1, **h11**km, **n5**, σ0§**36**/6, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOPT	**Kop Dagi**	**0.20**	**138**	*e*P	Pg	13 48 53.4	+1.6
KOPT				IAML		13 48 58.4	
	comp=Z,46nm,0.2s						
BAYT	**Ayd¨-ntepe-Bay**	**0.26**	**329**	PG	**Pg**	**13 48 52.9**	**0.0**
BAYT				SG	**Sg**	**13 48 56.4**	**-0.2**
KELT	**Kelkit**	**0.82**	**269**	*e*P	**Pn**	**13 49 04.8**	**-0.2**
KELT				*e*S	**Sb**	**13 49 15.3**	**+0.5**
KELT				IAML		13 49 15.9	
	comp=Z,30nm,0.2s						
CHOM	**Cayeli-Rize**	**0.99**	**20**	PG	**Pn**	**13 49 07.2**	**0.0**
ESPY	**Espiye-Giresun**	**1.43**	**302**	*e*PG	**Pb**	**13 49 13.8**	**-0.1**

*MAN **16** 13:50:48.1, 9°.75N×126°.37E, h23km, mb5.4, ML4.4, MS4.6*
*IDC **16** 13:50:51.5±1.9, 9°.69N×126°.30E, h65km±17km, mb3.8/21, mb1 3.9/23, mb1mx3.8/56, mbtmp4.1/23, MS3.3/15, Ms1 3.2/15, ms1mx3.0/58, Error ellipse: s-maj=22.6km s-min=10.4km az=82.0*
ISC 16 13:50:47.9±1.3, **9°.73N**±0°.03×**126°.39E**±0°.05, **h31**km±9km, **n57**, σ1§**67**/64, **mb4.2**/21, **MS3.1**/12, **4C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.89**	**273**	⇑*i*P	**Pb**	**13 51 03.6**	**-1.2**
SCPH				*i* S	**Sb**	**13 51 14.0**	**-2.4**
BUTP	**Butuan**	**1.07**	**225**	*e*P	**Pn**	**13 51 07.1**	**+0.3**
BUTP				*e*S	**Sb**	**13 51 22.2**	**+0.7**
MSLP	**Maasin**	**1.56**	**285**	*e*P	**Pb**	**13 51 15.0**	**-1.1**
MSLP				*e*S	**Sb**	**13 51 34.1**	**-1.4**
PLP	**Palo**	**1.99**	**316**	⇓*e*P	**Pn**	**13 51 19.9**	**+0.5**
PLP				*e*S	**Sn**	**13 51 44.8**	**+1.7**
BESP	**Borongan**	**2.08**	**333**	*e*P	**Pn**	**13 51 20.9**	**+0.3**
BESP				*e*S	**Sb**	**13 51 53.3**	**+2.9**
CGP	**Cagayan de Oro**	**2.10**	**233**	⇓*e*P	**Pn**	**13 51 22.4**	**+1.5**
CGP				*e*S	**Sn**	**13 51 47.6**	**+1.7**
OCLP	**Ormoc**	**2.19**	**307**	*e*P	**Pb**	**13 51 24.8**	**-2.0**
BUKP	**Musuan**	**2.26**	**216**	*e*P	**Pb**	**13 51 26.3**	**-1.8**
BUKP				*e*S	**Sb**	**13 51 55.1**	**-0.5**
LLP	**Lapu-Lapu**	**2.46**	**284**	⇓*e*P	**Pn**	**13 51 28.2**	**+2.4**
LLP				*i* S	**Sn**	**13 51 57.8**	**+3.1**
TBP	**Tagbilaran**	**2.49**	**269**	*e*P	**Pb**	**13 51 29.7**	**-2.2**
TBP				*i* S	**Sb**	**13 52 01.0**	**-1.2**
DAV	**Davao City (W)**	**2.76**	**197**	P	**Pb**	**13 51 34.2**	**-2.4**
	89nm,0.3s,baz=323,slow=5.1,SNR=3.7						
DAV				S	**Sn**	**13 52 05.0**	**+2.6**
	42nm,0.3s,baz=281,slow=19,SNR=3.8						
MATI	**Mati**	**2.77**	**183**	*e*P	**Pn**	**13 51 31.6**	**+1.4**
MATI				*e*S	**Sb**	**13 52 10.0**	**-0.3**
DMPH	**Davao City--Mi**	**2.77**	**198**	⇑*e*P	**Pb**	**13 51 34.3**	**-2.5**
DMPH				*e*S	**Sb**	**13 52 12.8**	**+2.5**
DCPH	**Dipolog City**	**3.21**	**249**	⇑*e*P	**Pn**	**13 51 38.0**	**+1.9**
DCPH				*e*S	**Sn**	**13 52 15.2**	**+1.9**
CNP	**Catarman**	**3.24**	**329**	*e*P	**Pn**	**13 51 38.5**	**+2.0**
CTBH	**Cotabato--PC H**	**3.27**	**221**	⇑*e*P	**Pn**	**13 51 40.1**	**+3.0**
CTBH				*i* S	**Sn**	**13 52 16.2**	**+1.3**
PAGZ	**Pagadian**	**3.51**	**238**	*e*P	**Pn**	**13 51 41.6**	**+1.3**
PAGZ				*e*S	**Sn**	**13 52 23.9**	**+3.1**
SKMP	**Bagumbayan, Su**	**3.68**	**210**	*e*P	**Pn**	**13 51 44.5**	**+1.9**
GUIM	**Jordan**	**3.84**	**284**	*e*P	**Pn**	**13 51 46.6**	**+1.7**
GUIM				*e*S	**Sn**	**13 52 31.5**	**+2.5**
PVCP	**Virac**	**4.42**	**331**	*e*P	**Pn**	**13 51 54.4**	**+1.6**
TGY	**Tagaytay City**	**6.88**	**310**	LR	LR	13 56 13.2	
	comp=Z,327nm,18.2s,baz=80,slow=47						
SIJI	**Sorong**	**11.60**	**155**	P	**Pn**	**13 53 33.5**	**+2.1**
	1.6nm,0.3s,baz=329,slow=18,SNR=5.1						
SIJI				LR	LR	13 58 03.8	
	comp=Z,66nm,20.1s,baz=298,slow=37						
GUMO	**Guam**	**18.50**	**76**	LR	LR	14 00 28.9	
	comp=Z,148nm,21.1s,baz=226,slow=31						
JCJ	**Chichijima**	**22.82**	**39**	LR	LR	14 02 53.8	
	comp=Z,59nm,21.3s,baz=270,slow=32						
JNU	**Nakatsue**	**23.64**	**9**	LR	LR	14 03 48.5	
	comp=Z,39nm,20.9s,baz=146,slow=33						
LEM	**Lembang**	**24.91**	**229**	LR	LR	14 07 01.6	
	comp=Z,121nm,18.4s,baz=98,slow=39						
KSRS	**Korea Array**	**27.64**	**3**	P	**P**	**13 56 33.4**	**+0.7**
	0.9nm,0.7s,baz=187,slow=9.6,SNR=6.0						
PMG	**Port Moresby**	**28.09**	**132**	LR	LR	14 10 02.4	
	comp=Z,27nm,18.3s,baz=116,slow=41						
MJAR	**Matsushiro Arr**	**28.76**	**20**	LR	LR	14 07 28.1	
	comp=Z,37nm,21.0s,baz=200,slow=35						
WRA	**Warramunga Arr**	**30.51**	**165**	P	**P**	**13 56 57.5**	**-0.9**
	0.8nm,0.6s,baz=344,slow=9.6,SNR=6.9						
WRA				PcP	**PcP**	**13 59 57.1**	**-0.1**
	0.4nm,0.5s,baz=341,slow=2.9,SNR=3.8						
ASAR	**Alice Springs**	**34.00**	**168**	P	**P**	**13 57 28.3**	**-0.7**
	0.7nm,0.4s,baz=349,slow=7.1,SNR=37						
ASAR				PcP	**PcP**	**14 00 06.5**	**-0.2**
	0.5nm,0.5s,baz=342,slow=2.8,SNR=5.6						
ASAR				ScP	**ScP**	**14 03 45.9**	**-3.5**
	0.6nm,0.9s,baz=345,slow=3.2,SNR=3.2						
CTA	**Charters Tower**	**35.50**	**147**	P	**P**	**13 57 41.5**	**-0.6**
	2.2nm,0.7s,baz=323,slow=23,SNR=3.4						
ASAJ	**Asahikawa**	**37.03**	**20**	P	**P**	**13 57 56.0**	**+1.3**
	2.9nm,0.8s,baz=204,slow=13,SNR=4.5						
ASAJ				LR	LR	14 14 58.7	
	comp=Z,29nm,18.0s,baz=182,slow=39						
HNR	**Honiara**	**38.45**	**119**	LR	LR	14 11 52.7	
	comp=Z,32nm,21.2s,baz=192,slow=33						
H11N1	**WAKE ISLAND Hy 40.32**	**71**	T	T	T	14 41 40.7	
	baz=264,slow=74,SNR=18						
H11N2	**WAKE ISLAND Hy 40.32**	**71**	T	T	T	14 41 43.5	
	baz=264,slow=74,SNR=16						
H11N3	**WAKE ISLAND Hy 40.33**	**71**	T	T	T	14 41 44.4	
	baz=264,slow=74,SNR=18						
SONM	**Songino Array**	**41.56**	**340**	P	**P**	**13 58 33.6**	**+0.9**
	0.4nm,0.4s,baz=153,slow=9.4,SNR=3.1						
NWAO	**Narrogin (SRO)**	**43.31**	**191**	P	**P**	**13 58 46.4**	**-0.6**
	12nm,0.7s,baz=22,slow=15,SNR=8.5

JTS S **Sn** **13 56 11.3 +2.0**
0.3nm,0.3s,baz=325,slow=9.9,SNR=2.4
JTS LR LR 13 57 41.7
comp=Z,27nm,21.8s,baz=0.5,slow=38
TXAR Lajitas Array 18.83 325 P **P** **13 57 14.9 -0.3**
0.0nm,0.3s,baz=145,slow=11,SNR=3.9
NVAR Mina Array Bea 33.86 320 P **P** **13 59 37.4 +0.6**
0.5nm,0.5s,baz=122,slow=10,SNR=4.6
NVAR PcP **PcP** **14 02 13.5 -0.5**
0.1nm,0.3s,baz=130,slow=2.8,SNR=2.5
ULM Lac du Bonnet 36.05 355 LR LR 14 16 01.6
comp=Z,25nm,19.6s,baz=306,slow=38
YKA Yellowknife Ar 50.90 346 P **P** **14 01 52.4 -1.8**
0.4nm,0.5s,baz=152,slow=7.6,SNR=2.9
ILAR Eielson Array 62.83 337 P **P** **14 03 17.4 -1.2**
0.2nm,0.7s,baz=132,slow=6.7,SNR=3.7
CMAR Chiang Mai Arr 145.92 342 PKPbc **PKPdf** **14 12 31.8 -0.2**
1.1nm,0.6s,baz=347,slow=3.3,SNR=6.1

*SJA **16** 14:03:32.9±0.9, 34°.64S×72°.75W, h55km, ML3.8, MW3.9*
*GUC **16** 14:03:35.8±0.6, 34°.67S×72°.03W, h17km±3km, ML3.9*
ISC 16 14:03:35.2±1.3, 34°.66S±0°.04×72°.07W±0°.08, h10km, n21, σ2°.26/36, 4C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GO05	**HualaæØ**	**0.37**	**162**	*eP*	**Pb**	**14 03 43.3**	**-0.6**
GO05				*eS*	**Sb**	**14 03 48.4**	**-1.4**
GO05				IAML		14 03 48.7	
	comp=N,28μm,0.3s						
ANTU	**Antumapu**	**1.61**	**48**	*eP*	**Pb**	**14 04 03.7**	**-1.4**
ANTU				*eS*	**Sb**	**14 04 24.9**	**-0.7**
ANTU				IAML		14 04 32.2	
	comp=N,3μm,0.5s						
CLCH	**Cerro Calan**	**1.79**	**46**	*eP*	**Pb**	**14 04 06.8**	**-1.4**
CLCH				*eS*	**Sb**	**14 04 29.8**	**-0.9**
CLCH				IAML		14 04 36.9	
	comp=N,2μm,0.5s						
PEL	**Peldehue**	**1.90**	**38**	*eP*	**Pb**	**14 04 08.2**	**-1.8**
PEL				*eS*	**Sb**	**14 04 33.4**	**-0.4**
PEL				IAML		14 04 39.2	
	comp=E,1μm,0.3s						
ROCH	**El Roble**	**1.90**	**28**	*eP*	**Pb**	**14 04 09.1**	**-1.1**
ROCH				*i S*	**Sb**	**14 04 33.7**	**-0.3**
ROCH				IAML		14 04 39.0	
	comp=E,2μm,0.6s						
CCHI	**Chillan**	**1.94**	**180**	*eP*	**Pb**	**14 04 08.9**	**-1.8**
CCHI				*eS*	**Sb**	**14 04 34.0**	**-0.9**
CCHI				IAML		14 04 39.0	
	comp=E,2μm,0.4s						
FCH	**Farellones**	**1.99**	**49**	*eP*	**Pb**	**14 04 10.0**	**-1.7**
FCH				*eS*	**Sb**	**14 04 36.7**	**+0.1**
FCH				IAML		14 04 40.8	
	comp=E,1μm,0.3s						
RFA	**San Rafael**	**2.97**	**93**	*eP*	**Pb**	**14 04 27.7**	**-0.6**
RFA				*eS*	**Sg**	**14 05 08.7**	**-2.0**
RFA				IAML		14 05 14.3	
	comp=Z,320nm,0.8s						
AAGR	**Agrelo**	**3.12**	**61**	*eP*	**Pb**	**14 04 28.7**	**-2.1**
AVIZ	**Vizcacheras**	**3.18**	**69**	*eP*	**Pg**	**14 04 33.6**	**-2.5**
AVIZ				*eS*	**Sg**	**14 05 17.8**	**+0.5**
ARCO	**CERRO ARCO**	**3.18**	**56**	*eP*	**Pb**	**14 04 29.8**	**-2.1**
ARCO				IAML		14 04 34.6	
	comp=Z,115nm,0.6s						
ARCO				*eS*	**Sg**	**14 05 17.4**	**0.0**
AUSP	**Uspallata**	**3.31**	**43**	*eP*	**Pb**	**14 04 31.1**	**-3.0**
AUSP				*eS*	**Sb**	**14 05 16.4**	**+1.8**
ASAL	**Salagasta**	**3.40**	**54**	*eP*	**Pb**	**14 04 33.6**	**-2.0**
ASAL				*eS*	**Sg**	**14 05 24.1**	**-0.2**
RTLS	**Leoncito**	**3.68**	**40**	*eP*	**Pb**	**14 04 36.3**	**-4.2**
RTLS				*eS*	**Sb**	**14 05 23.9**	**-1.3**
RTCV	**Cerro Valdivia**	**4.07**	**48**	*eP*	**Pn**	**14 04 41.2**	**+3.6**
RTLL	**Cerro Villicun**	**4.49**	**43**	*i P*	**Pn**	**14 04 46.1**	**+2.7**
RTLL				*eS*	**Sn**	**14 05 40.4**	**+4.7**
RTLL				IAML		14 05 50.2	
	comp=Z,54nm,0.5s						
ACAN	**Cantantal**	**4.72**	**61**	*eP*	**Pn**	**14 04 50.4**	**+3.8**
ACDV	**Cuesta del Vie**	**5.12**	**30**	*i P*	**Pn**	**14 04 54.8**	**+2.6**
MRA	**San Martin**	**5.76**	**69**	*eP*	**Pn**	**14 05 04.5**	**+3.7**
MRA				*eS*	**Sb**	**14 06 22.4**	**-2.5**
MRA				IAML		14 06 42.1	
	comp=Z,22nm,0.6s						
VCA	**Vinchina**	**6.76**	**30**	*i P*	**Pn**	**14 05 15.2**	**+0.5**
VCA				IAML		14 07 13.9	
	comp=Z,19nm,0.6s						
TCA	**Tanti**	**7.10**	**64**	*eP*	**Pn**	**14 05 22.4**	**+3.2**
TCA				IAML		14 07 27.2	
	comp=Z,12nm,0.6s						

IDC 16 14:15:40.0±3.2, 32°.90S×178°.27W, h0km, mb3.6/2, mb1 3.8/3, mb1mx3.6/45, mbtmp3.6/3, ML3.5/1, Error ellipse: s-maj=74.4km s-min=37.0km az=116.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.54**	**214**	Pn	Pn	14 17 18.0	+0.6
	1.0nm,0.3s,baz=281,slow=4.9,SNR=11						
URZ				Sn	Sn	14 18 32.0	-0.6
	1.7nm,0.3s,baz=29,slow=23,SNR=11						
ASAR	**Alice Springs**	**42.80**	**270**	P	P	14 23 39.9	+0.1
	0.4nm,0.6s,baz=106,slow=7.6,SNR=8.7						
WRA	**Warramunga Arr**	**44.02**	**275**	P	P	14 23 49.3	-0.3
	0.5nm,0.3s,baz=116,slow=7.6,SNR=9.6						
FINES	**FINESS Array B**	**147.39**	**338**	PKPbc	PKPbc	14 35 24.1	-0.9
	0.3nm,0.4s,baz=46,slow=4.0,SNR=4.3						

*IDC **16** 14:50:17.2±0.5, 14°.05N×125°.30E, h0km, mb4.2/21, mb1 4.3/22, mb1mx4.1/63, mbtmp4.2/22, ML4.9/1, MS3.2/17, Ms1 3.2/17, ms1mx3.0/64, Error ellipse: s-maj=20.9km s-min=11.8km az=72.0*
*MAN **16** 14:50:19.6, 14°.13N×125°.30E, h36km, mb5.1, ML4.0, MS4.1*
*ISCJB **16** 14:50:20.6±0.4, 14°.09N±0°.03×125°.22E±0°.04, h33km, mb4.1/22, MS3.2/13, Error ellipse: s-maj=5.8km s-min=4.6km az=1.4*
ISC 16 14:50:22.4±0.5, 14°.08N±0°.04×125°.24E±0°.07, h35km, n46, σ1°.18/47, mb4.1/22, MS3.3/13, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PVCP	**Virac**	**1.16**	**245**	*eP*	**Pn**	**14 50 40.2**	**-2.0**
PVCP				*eS*	**Sn**	**14 50 55.0**	**-1.8**
CNP	**Cataman**	**1.66**	**200**	*eP*	**Pn**	**14 50 48.6**	**-0.5**
CNP				*eS*	**Sn**	**14 51 08.9**	**-0.3**
BESP	**Borongan**	**2.48**	**175**	*eP*	**Pn**	**14 50 58.4**	**-1.9**
AUQP	**San Andres**	**2.60**	**253**	*eP*	**Pn**	**14 51 03.3**	**+1.3**
PLP	**Palo**	**2.91**	**185**	*eP*	**Pn**	**14 51 05.5**	**-0.8**
PLP				*eS*	**Sn**	**14 51 38.0**	**-2.1**
BOAC	**Boac**	**3.35**	**260**	*eP*	**Pn**	**14 51 11.8**	**-0.6**
BOAC				*eS*	**Sn**	**14 51 51.8**	**+0.8**
OTRP	**Odiongan**	**3.57**	**242**	*eP*	**Pn**	**14 51 14.8**	**-0.6**
BALP	**Baler**	**3.90**	**295**	*eP*	**Pn**	**14 51 16.7**	**-3.3**
TGY	**Tagaytay City**	**4.17**	**271**	Pn	**Pn**	**14 51 23.8**	**0.0**
	68nm,0.3s,baz=29,slow=4.5,SNR=6.6						
TGY				LR	LR	14 53 12.5	
	comp=Z,321nm,19.8s,baz=207,slow=41						
SJMP	**San Jose**	**4.32**	**249**	*eP*	**Pn**	**14 51 26.0**	**+0.3**
CAUP	**Cauayan**	**4.35**	**311**	*eP*	**Pn**	**14 51 25.1**	**-1.0**
CAUP				*eS*	**Sn**	**14 52 14.3**	**-1.3**
APYP	**Conner**	**5.37**	**315**	*eP*	**Pn**	**14 51 39.5**	**-0.6**
APYP				*eS*	**Sn**	**14 52 37.9**	**-2.9**
ABRA	**Dolores**	**5.61**	**310**	*eP*	**Pn**	**14 51 43.3**	**-0.1**
ABRA				*eS*	**Sn**	**14 52 44.2**	**-2.6**
JOW	**Kunigami**	**13.00**	**12**	LR	LR	14 58 06.9	
	comp=Z,44nm,20.4s,baz=200,slow=36						
SIJI	**Sorong**	**16.01**	**158**	LR	LR	14 59 42.2	
	comp=Z,30nm,21.2s,baz=266,slow=35						
JNU	**Nakatsue**	**19.64**	**14**	LR	LR	15 03 41.1	
	comp=Z,46nm,18.4s,baz=150,slow=41						
KSRS	**Korea Array**	**23.40**	**5**	P	**P**	**14 55 28.8**	**+0.6**
	1.8nm,0.7s,baz=187,slow=11,SNR=12						
KSRS				LR	LR	15 05 49.7	
	comp=Z,37nm,19.1s,baz=198,slow=40						
MJAR	**Matsushiro Arr**	**25.20**	**25**	LR	LR	15 04 01.4	
	comp=Z,47nm,21.0s,baz=200,slow=33						
CMAR	**Chiang Mai Arr**	**25.60**	**283**	P	**P**	**14 55 50.0**	**+1.3**
	9.7nm,0.8s,baz=96,slow=7.8,SNR=56						
CMAR				PcP	**PcP**	**14 59 20.7**	**+1.4**
	1.7nm,0.8s,baz=74,slow=0.5,SNR=10.0						
USRK	**Ussuriysk Ar.**	**30.56**	**10**	P	**P**	**14 56 33.9**	**+1.2**
	3.1nm,0.9s,baz=179,slow=11,SNR=6.2						
ASAJ	**Asahikawa**	**33.41**	**23**	LR	LR	15 10 12.5	
	comp=Z,26nm,20.1s,baz=160,slow=36						
WRA	**Warramunga Arr**	**34.98**	**165**	P	**P**	**14 57 10.0**	**-1.6**
	1.5nm,1.0s,baz=345,slow=9.7,SNR=4.5						
WRA				PcP	**PcP**	**14 59 43.4**	**-0.2**
	0.5nm,0.7s,baz=346,slow=3.0,SNR=3.1						
KLR	**Kul'dur**	**35.45**	**7**	P	**P**	**14 57 16.0**	**+0.6**
	0.2nm,0.8s,baz=219,slow=7.4,SNR=4.9						
SONM	**Songino Array**	**37.12**	**339**	P	**P**	**14 57 30.5**	**+0.7**
	3.7nm,0.8s,baz=157,slow=9.5,SNR=12						
ASAR	**Alice Springs**	**38.46**	**167**	P	**P**	**14 57 41.3**	**+0.1**
	1.7nm,0.6s,baz=347,slow=6.8,SNR=22						
ASAR				PcP	**PcP**	**14 59 53.9**	**-0.1**
	0.5nm,0.6s,baz=346,slow=3.1,SNR=3.6						
CTA	**Charters Tower**	**39.76**	**148**	P	**P**	**14 57 52.6**	**+0.5**
	3.0nm,1.0s,baz=313,slow=9.3,SNR=3.6						
HNR	**Honiara**	**41.61**	**122**	LR	LR	15 15 13.9	
	comp=Z,29nm,19.1s,baz=178,slow=36						
PETK	**Petropavlovsk-**	**46.65**	**26**	P	**P**	**14 58 48.1**	**+0.7**
	0.8nm,0.4s,baz=220,slow=5.6,SNR=5.1						
PETK				LR	LR	15 20 37.8	
	comp=Z,15nm,18.2s,baz=251,slow=39						
STKA	**Stephens Creek**	**48.32**	**161**	P	**P**	**14 59 00.2**	**-0.3**
	7.7nm,0.8s,baz=328,slow=8.7,SNR=12						
MKAR	**Makanchi Array**	**48.42**	**321**	P	**P**	**14 59 02.1**	**+0.8**
	1.3nm,0.7s,baz=108,slow=6.9,SNR=6.7						
ZALV	**Zalesovo Beam**	**50.82**	**330**	P	**P**	**14 59 19.3**	**-0.1**
	1.4nm,0.7s,baz=124,slow=7.0,SNR=6.7						
ZALV				LR	LR	15 21 02.5	
	comp=Z,34nm,19.8s,baz=69,slow=36						
KURBB	**Kurchatov Arra**	**52.39**	**324**	P	**P**	**14 59 31.8**	**+0.6**
	3.0nm,0.2s,baz=121,slow=7.9,SNR=15						
BVAR	**Borovoye Array**	**57.98**	**324**	P	**P**	**15 00 12.4**	**+0.9**
	2.0nm,0.8s,baz=116,slow=5.6,SNR=12						
NRIK	**Noril'sk**	**60.09**	**346**	LR	LR	15 28 47.0	
	comp=Z,24nm,19.2s,baz=73,slow=38						
AKTO	**Aktyubinsk**	**64.78**	**319**	P	**P**	**15 00 57.9**	**+0.4**
	1.2nm,0.6s,baz=93,slow=10,SNR=6.7						
AKTO				LR	LR	15 29 58.3	
	comp=Z,29nm,20.1s,baz=113,slow=37						
ILAR	**Eielson Array**	**76.47**	**26**	P	**P**	**15 02 08.0**	**-0.4**
	1.3nm,0.9s,baz=235,slow=5.7,SNR=14						
SPITS	**Spitsbergen Ar**	**80.10**	**349**	P	**P**	**15 02 28.4**	**+0.1**
	6.7nm,1.0s,baz=97,slow=10,SNR=5.6						
SPITS				LR	LR	15 42 03.6	
	comp=Z,24nm,19.8s,baz=270,slow=39						
ARCES	**ARCESS Array B**	**80.29**	**339**	P	**P**	**15 02 29.8**	**+0.3**
	2.6nm,0.8s,baz=58,slow=7.4,SNR=8.2						
INK	**Inuvik**	**81.13**	**22**	P	**P**	**15 02 33.5**	**-0.5**
	4.0nm,1.0s,baz=294,slow=3.3,SNR=3.5						
FINES	**FINESS Array B**	**82.08**	**331**	P	**P**	**15 02 38.6**	**-0.5**
	1.8nm,0.9s,baz=65,slow=6.6,SNR=6.8						
FINES				LR	LR	15 42 43.7	
	comp=Z,17nm,18.4s,baz=41,slow=38						
MMAI	**Mount Meron Ar**	**82.33**	**302**	P	**P**	**15 02 40.6**	**-0.5**
	1.3nm,0.6s,baz=79,slow=7.6,SNR=3.2						
MLR	**Muntele Rosu**	**86.46**	**316**	LR	LR	15 44 55.3	
	comp=Z,6.0nm,19.8s,baz=201,slow=38						
HFS	**Hagfors**	**88.22**	**332**	P	**P**	**15 03 09.7**	**-0.1**
	2.0nm,0.7s,baz=174,slow=40,SNR=3.9						
HFS				LR	LR	15 45 14.4	
	comp=Z,27nm,21.2s,baz=52,slow=37						
NOA	**NORSAR Array B**	**88.91**	**334**	LR	LR	15 45 24.0	
	comp=Z,16nm,20.2s,baz=65,slow=37						
TORD	**Torodi Ar. Bea**	**117.88**	**293**	PKP	**PKPdf**	**15 09 05.4**	**-0.9**
	0.4nm,0.7s,baz=99,slow=1.9,SNR=2.7						
PLCA	**Paso Flores**	**150.08**	**156**	PKPbc	**PKPbc**	**15 10 10.2**	**+0.4**
	4.0nm,0.9s,baz=216,slow=3.8,SNR=6.4						

*IDC **16** 15:06:27.7±6.2, 52°.84N×172°.69W, h145km±59km, mb3.7/8, mb1 4.1/10, mb1mx3.4/84, mbtmp4.3/10, Error ellipse: s-maj=34.9km s-min=15.1km az=176.0*
*ISCJB **16** 15:06:31.3±0.3, 52°.85N±0°.08×172°.64W±0°.06, h200km, mb3.8/11, Error ellipse: s-maj=12.2km s-min=2.9km az=161.0*
*NEIC **16** 15:06:32.7±0.0, 52°.51N×172°.51W, h197km, mb4.2/5, ML4.1(AEIC), After AEIC.*
ISC 16 15:06:32.5±0.7, 52°.8N±0°.1×172°.60W±0°.05, h200km, n61, σ0°.96/66, mb3.9/11, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOFP	**Korovin Flat P**	**1.06**	**241**	P	**Pn**	**15 07 01.6**	**-1.1**
KOKL	**Mount Kliuchef**	**1.09**	**245**	P	**Pn**	**15 07 01.8**	**-1.1**
KOWE	**Korovin West**	**1.10**	**247**	P	**Pn**	**15 07 01.9**	**-1.1**
ATKA	**Atka Island**	**1.15**	**239**	P	**Pn**	**15 07 02.0**	**-1.2**
ATKA				S	**Sn**	**15 07 24.7**	**-2.3**
GSTR	**Great Sitkin T**	**2.23**	**253**	P	**Pn**	**15 07 12.7**	**-0.7**
NIKH	**Nikolski High**	**2.27**	**84**	P	**Pn**	**15 07 12.8**	**-1.0**
NIKH				S	**Sn**	**15 07 43.5**	**-2.6**
GSTD	**Great Sitkin T**	**2.30**	**252**	P	**Pn**	**15 07 13.1**	**-1.1**
GSTD				S	**Sn**	**15 07 45.0**	**-1.6**
ETKA	**Kagalaska Isla**	**2.52**	**250**	P	**Pn**	**15 07 15.2**	**-1.4**
ADAG	**Mount Adagdak**	**2.59**	**253**	P	**Pn**	**15 07 16.2**	**-1.1**
ADAG				S	**Sn**	**15 07 51.8**	**-0.5**
OKAK	**Okmok**	**2.67**	**71**	P	**Pn**	**15 07 17.4**	**-0.7**
OKTU	**Okmok Mt. Tuli**	**2.81**	**76**	P	**Pn**	**15 07 19.8**	**-0.1**
OKER	**Okmok East Rim**	**2.82**	**75**	P	**Pn**	**15 07 20.4**	**+0.3**
KINC	**Kanaga Island**	**2.91**	**254**	P	**Pn**	**15 07 20.1**	**-1.0**
KIKV	**Kanaga Island**	**2.95**	**254**	P	**Pn**	**15 07 20.6**	**-1.0**
TAPA	**Tanaga Point A**	**3.35**	**255**	P	**Pn**	**15 07 25.4**	**-0.9**
MSOM	**Makushin Julie**	**3.54**	**71**	P	**Pn**	**15 07 28.4**	**0.0**
MGOD	**Makushin Gods**	**3.58**	**72**	P	**Pn**	**15 07 28.6**	**-0.4**
MCIR	**Makushin Cirqu**	**3.61**	**69**	P	**Pn**	**15 07 29.2**	**-0.1**
MSW	**Makushin Switc**	**3.66**	**70**	P	**Pn**	**15 07 29.7**	**-0.3**
MTBL	**Makushin Table**	**3.73**	**69**	P	**Pn**	**15 07 30.8**	**-0.1**
UNV	**Unalaska Valle**	**3.80**	**72**	P	**Pn**	**15 07 31.2**	**-0.5**
UNV				S	**Sn**	**15 08 16.3**	**-1.9**
GALAA	**Gareloi Lava P**	**3.93**	**257**	P	**Pn**	**15 07 32.7**	**-0.7**
AKMO	**Akutan Morgan**	**4.14**	**69**	P	**Pn**	**15 07 35.9**	**-0.1**
AKMO				S	**Sn**	**15 08 25.5**	**-0.4**
ZRO	**Akutan Zero**	**4.16**	**69**	P	**Pn**	**15 07 36.3**	**0.0**
AHB	**Akutan Harbor**	**4.26**	**69**	P	**Pn**	**15 07 37.5**	**0.0**
AKUT	**Akutan**	**4.29**	**69**	P	**Pn**	**15 07 37.8**	**0.0**
AKSA	**Akutan Strait**	**4.33**	**69**	P	**Pn**	**15 07 38.2**	**-0.2**
SPIA	**Saint Paul Isl**	**4.59**	**16**	P	**Pn**	**15 07 40.9**	**-0.6**
CEAP	**Semis' Anvil P**	**4.86**	**264**	P	**Pn**	**15 07 45.0**	**0.0**
CETU	**Semis' Tuman**	**4.92**	**263**	P	**Pn**	**15 07 45.6**	**-0.1**
WESP	**Westdahl Peak**	**4.98**	**67**	P	**Pn**	**15 07 46.7**	**+0.1**
WESE	**West Dahl East**	**5.05**	**67**	P	**Pn**	**15 07 47.5**	**-0.1**
LSPA	**Little Sitkin**	**5.47**	**265**	P	**Pn**	**15 07 52.9**	**0.0**
ISLZ	**Isanotski Laza**	**5.61**	**66**	P	**Pn**	**15 07 54.4**	**-0.3**
FALS	**False Pass**	**5.81**	**66**	P	**Pn**	**15 07 56.7**	**-0.5**
DOL	**Dolgoi Island**	**6.75**	**65**	P	**Pn**	**15 08 08.4**	**-1.0**
PS4A	**Pavlof South-4**	**6.82**	**64**	P	**Pn**	**15 08 09.8**	**-0.4**
PVV	**Pavlof Volcano**	**6.86**	**64**	P	**Pn**	**15 08 10.4**	**-0.3**
SDPT	**Sand Point**	**7.57**	**65**	P	**Pn**	**15 08 18.7**	**-1.3**
VNWF	**Veniaminof 8**	**8.30**	**61**	P	**Pn**	**15 08 29.2**	**-0.3**
CHGN	**Chignik**	**8.96**	**61**	P	**Pn**	**15 08 37.4**	**-0.5**
ANNW	**Aniakchak Nort**	**9.28**	**58**	P	**Pn**	**15 08 42.5**	**+0.2**
ANNE	**Aniakchak Nort**	**9.34**	**58**	P	**Pn**	**15 08 43.1**	**+0.1**
KDAK	**Kodiak Island**	**12.43**	**58**	P	Pn	15 09 18.9	-3.6
	5.9nm,0.3s,baz=293,slow=13,SNR=96						
KDAK				S	Sn	15 11 26.3	-15
	0.7nm,0.3s,baz=180,slow=17,SNR=4.3						
ILAR	**Eielson Array**	**17.76**	**38**	P	**P**	**15 10 23.1**	**-2.2**
	4.0nm,0.3s,baz=237,slow=9.3,SNR=144						
PETK	**Petropavlovsk-**	**17.85**	**283**	P	**P**	**15 10 26.6**	**+0.2**
	0.1nm,0.3s,baz=82,slow=14,SNR=5.2						
BILL	**Bilibino**	**18.33**	**334**	*eP*	**P**	**15 10 32.0**	**+0.5**
	8.1nm,0.9s						
EGAK	**Eagle**	**19.96**	**41**	*eP*	**P**	**15 10 48.6**	**-0.5**
DAWY	**Dawson**	**20.44**	**44**	*eP*	**P**	**15 10 53.0**	**-1.3**
INK	**Inuvik**	**24.10**	**35**	P	**P**	**15 11 28.9**	**-0.4**
	5.7nm,0.7s,baz=248,slow=10.0,SNR=14						
INK	**Inuvik**	**24.10**	**35**	*eP*	**P**	**15 11 27.9**	**-1.4**
	4.7nm,0.6s						
YKA	**Yellowknife Ar**	**31.44**	**49**	P	**P**	**15 12 34.2**	**-0.4**
	0.6nm,0.3s,baz=272,slow=8.9,SNR=7.6						
NEW	**Newport**	**34.80**	**75**	*eP*	**P**	**15 13 04.9**	**+1.0**
	5.2nm,0.8s						
EGMT	**Eagleton**	**39.20**	**71**	*eP*	**P**	**15 13 41.5**	**+0.6**
	3.7nm,0.8s						
BOZ	**Bozeman (W)**	**39.40**	**75**	*eP*	**P**	**15 13 43.0**	**+0.2**
	3.5nm,0.7s						
NVAR	**Mina Array Bea**	**39.63**	**89**	P	**P**	**15 13 47.0**	**+2.1**
	1.3nm,0.7s,baz=301,slow=7.7,SNR=10						
PDAR	**Pinedale Array**	**42.24**	**78**	P	**P**	**15 14 07.2**	**+1.1**
	2.1nm,0.5s,baz=300,slow=4.5,SNR=21						
SONM	**Songino Array**	**49.38**	**299**	P	**P**	**15 15 02.6**	**+1.0**
	0.6nm,0.5s,baz=64,slow=6.6,SNR=3.7						
TXAR	**Lajitas Array**	**54.70**	**87**	P	**P**	**15 15 42.1**	**+1.2**
	1.4nm,0.7s,baz=294,slow=4.3,SNR=16						
WRA	**Warramunga Arr**	**85.77**	**229**	P	**P**	**15 18 49.1**	**+0.1**
	1.0nm,0.5s,baz=34,slow=5.8,SNR=20						
ASAR	**Alice Springs**	**89.20**	**227**	P	**P**	**15 19 06.2**	**+0.9**
	2.3nm,0.8s,baz=28,slow=4.7,SNR=30						

*IDC **16** 15:07:51.9±1.1, 27°.40N×91°.70E, h0km, mb3.5/8, mb1 3.6/9, mb1mx3.4/70, mbtmp3.5/9, ML3.4/1, MS2.9/1, Ms1 2.9/1, ms1mx2.3/60, Error ellipse: s-maj=48.6km s-min=17.5km az=60.0*
*ISCJB **16** 15:07:52.8±1.4, 27°.35N±0°.05×91°.57E±0°.05, h18km±11km, mb3.5/7, MS2.8/1, Error ellipse: s-maj=8.3km s-min=7.2km az=177.0*
ISC 16 15:07:53.6±1.6, 27°.30N±0°.05×91°.70E±0°.04, h12km±11km, n20, σ1°.34/28, mb3.7/7, Bhutan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUWA	**GUWAHATI**	**1.10**	**181**	*eP*	**Pb**	**15 08 13.5**	**-1.1**
GUWA				*eS*	**Sb**	**15 08 28.1**	**-0.8**
GUWA				IAML		15 08 29.3	
	comp=E,674nm,0.3s						
GUWA				IAML		15 08 29.6	
	comp=N,302nm,0.3s						
TEZP	**TEZPUR**	**1.19**	**124**	*eP*	**Pn**	**15 08 14.8**	**-1.4**
TEZP				*eS*	**Sn**	**15 08 32.5**	**+0.2**
TEZP				IAML		15 08 37.4	
	comp=E,582nm,0.2s						
TEZP				IAML		15 08 37.5	
	comp=N,767nm,0.3s						
SHL	**Shillong**	**1.73**	**175**	*eP*	**Pb**	**15 08 24.8**	**-0.7**
SHL				*eS*	**Sn**	**15 08 46.2**	**+0.3**
SHL				IAML		15 08 49.6	
	comp=E,996nm,0.3s						
SHL				IAML		15 08 49.8	
	comp=N,716nm,0.2s						
ITAN	**ITANAGAR**	**1.81**	**94**	*eP*	**Pg**	**15 08 27.4**	**-0.8**
ITAN				*eS*	**Sg**	**15 08 52.6**	**+0.9**
ITAN				IAML		15 08 54.7	
	comp=E,510nm,0.3s						
ITAN				IAML		15 08 54.8	
	comp=N,701nm,0.3s						
TURI	**Tura**	**2.13**	**216**	*eP*	**Pb**	**15 08 32.2**	**0.0**
TURI				*eS*	**Sb**	**15 09 00.2**	**+1.6**
MOKO	**MOKOCHONG**	**2.70**	**111**	*eP*	**Pn**	**15 08 39.2**	**+2.2**
MOKO				*eS*	**Sn**	**15 09 11.9**	**+2.2**
MOKO				IAML		15 09 15.8	
	comp=E,131nm,0.3s						
MOKO				IAML		15 09 16.0	
	comp=N,188nm,0.6s						
GTK	**Tadong**	**2.76**	**271**	*eP*	**Pb**	**15 08 42.7**	**-0.3**
GTK				*eS*	**Sb**	**15 09 17.1**	**+0.3**
GTK				IAML		15 09 21.3	
	comp=E,222nm,0.5s						
GTK				IAML		15 09 21.4	
	comp=N,185nm,0.2s						
IMP	**Imphal**	**3.18**	**140**	*eP*	**Pn**	**15 08 44.7**	**+1.2**
SAIH	**SAIHA**	**4.93**	**166**	*eP*	**Pn**	**15 09 09.0**	**+1.3**
SAIH				*eS*	**Sn**	**15 10 02.1**	**-2.6**
SAIH				IAML		15 10 11.4	
	comp=N,26nm,0.4s						
SAIH				IAML		15 10 11.6	
	comp=E,64nm,0.6s						
BOK	**Bokaro**	**6.30**	**238**	*eP*	**Pn**	**15 09 28.0**	**+1.5**
BOK				*eS*	**Sn**	**15 10 37.3**	**-1.2**
BOK				IAML		15 11 13.2	
	comp=N,37nm,0.7s						
BOK				IAML		15 11 13.3	
	comp=E,29nm,0.5s						
CMAR	**Chiang Mai Arr**	**11.04**	**141**	Pn	**Pn**	**15 10 34.0**	**+2.6**
	comp=E,0.1nm,0.3s,baz=330,slow=12,SNR=3.2						
MKAR	**Makanchi Array**	**20.83**	**342**	P	**P**	**15 12 34.3**	**-0.8**
	comp=E,1.0nm,0.6s,baz=151,slow=9.9,SNR=5.6						
SONM	**Songino Array**	**23.50**	**25**	P	**P**	**15 13 02.7**	**-0.8**
	comp=E,0.3nm,0.4s,baz=224,slow=12,SNR=2.4						
KURBB	**Kurchatov Arra**	**25.37**	**340**	P	**P**	**15 13 20.1**	**-0.4**
	comp=E,0.3nm,0.5s,baz=148,slow=8.8,SNR=3.6						
TLY	**Talaya**	**25.97**	**17**	LR	LR	15 25 02.3	
	comp=E,26nm,

JHJ	Hachijo jima 2	3.88 184	S		Sn	15 25 54.0	-0.7
	6.5nm,0.3s,baz=53,slow=20,SNR=2.8						
ASAJ	Asahikawa	7.35 14	P		Pn	15 25 55.4	-1.5
	0.1nm,0.3s,baz=192,slow=15,SNR=3.7						
ASAJ			S		Sn	15 27 15.4	-3.2
	0.1nm,0.3s,baz=256,slow=18,SNR=2.5						
KURBB	Kurchatov Arra	45.20 308	P		P	15 32 19.2	+0.8
	0.4nm,0.7s,baz=84,slow=8.0,SNR=4.9						
WRA	Warramunga Arr	56.90 186	P		P	15 33 46.5	+0.4
	0.2nm,0.4s,baz=4.0,slow=7.3,SNR=6.0						
ASAR	Alice Springs	60.62 187	P		P	15 34 13.0	+1.2
	0.4nm,0.9s,baz=4.9,slow=7.0,SNR=3.4						

*ISK **16** 15:26:56.9, 36.°99N×27.°61E, h12km±1km, ML2.4/7*
*ISCJB **16** 15:26:57.6±0.8, 36.°97N±0.°04×27.°56E±0.°07, h17km±15km,*
Error ellipse: s-maj=10.1km s-min=5.8km az=153.4
*CSEM **16** 15:26:57.7±0.2, 36.°98N×27.°61E, h5km, ML2.6, Error*
ellipse: s-maj=4.7km s-min=3.8km az=64.0
*DDA **16** 15:26:57.4, 36.°98N×27.°64E, h7km, Ml2.6*

ISC 16 15:26:56.5±0.9, 36.°98N±0.°03×27.°63E±0.°03, h16km±7km,
n29, σ1§36/37, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	Kayabasi	0.17	299	*i* P	Pg	15 27 01.2	+0.2
BDRM				*i* S	Sg	15 27 04.5	+0.6
BDRM	Kayabasi	0.17	299	P	Pg	15 27 01.2	+0.2
BDRM				S	Sg	15 27 04.5	+0.6
DAT	Datca	0.26	190	PG	Pb	15 27 02.7	-0.1
DAT				SG	Sb	15 27 07.0	0.0
DAT	Datca	0.26	190	*i* P	Pb	15 27 02.5	-0.3
DAT	Datca	0.26	190	P	Pb	15 27 02.5	-0.3
DAT	Datca	0.26	190	*e*Pg	Pb	15 27 02.7	-0.1
DAT				*e*Sg	Sb	15 27 07.0	0.0
BODT	Bodrum	0.27	288	PG	Pg	15 27 02.5	0.0
BODT				SG	Sb	15 27 06.8	-0.6
BODT	Bodrum	0.27	288	*e*Pg	Pg	15 27 02.5	0.0
BODT				*e*Sg	Sb	15 27 06.8	-0.6
YKAV	Yalikavak-Bodr	0.32	297	PG	Pg	15 27 03.4	+0.2
YKAV				SG	Sb	15 27 08.1	-0.6
YKAV	Yalikavak-Bodr	0.32	297	*e*Pg	Pg	15 27 03.4	+0.2
YKAV				*e*Sg	Sb	15 27 08.1	-0.6
MLSB	Milas	0.34	20	PG	Pb	15 27 04.1	0.0
MLSB	Milas	0.34	20	*e*Pg	Pb	15 27 04.1	0.0
AYDN	Tasoluk	0.71	16	*i* P	Pg	15 27 10.9	+0.5
AYDN	Tasoluk	0.71	16	P	Pg	15 27 10.9	+0.5
TURN	Turunc	0.79	98	PG	Pb	15 27 08.3	-3.4
TURN	Turunc	0.79	98	*i* P	Pb	15 27 08.1	-3.6
TURN	Turunc	0.79	98	*e*Pg	Pb	15 27 08.3	-3.4
GCAM	G?zelcaml?	0.79	336	PG	Pn	15 27 12.5	-0.4
GCAM	G?zelcaml?	0.79	336	*i* P	Pn	15 27 14.3	+1.4
GCAM	G?zelcaml?	0.79	336	*e*Pg	Pn	15 27 12.5	-0.4
GCAM	G?zelcaml?	0.79	336	P	Pn	15 27 14.3	+1.4
DALY	Dalyan (Mu¨la	0.83	101	PG	Pn	15 27 13.8	+0.3
DALY	Dalyan (Mu¨la	0.83	101	*e*Pg	Pn	15 27 13.8	+0.3
ARG	Arkhangelos	0.86	152	PG	Pn	15 27 14.3	+0.4
ARG	Arkhangelos	0.86	152	*e*Pg	Pn	15 27 14.3	+0.4
AYDB	Zeytinkoy-Aydi	0.99	12	PG	Pg	15 27 16.2	+0.5
AYDB	Zeytinkoy-Aydi	0.99	12	*e*Pg	Pg	15 27 16.2	+0.5
TAVA	DENIZLI_Tavas	1.13	64	*i* P	Pg	15 27 21.2	+2.8
TAVA	DENIZLI_Tavas	1.13	64	P	Pg	15 27 21.2	+2.8

*MAN **16** 15:33:05.4, 9.°77N×126.°32E, h18km, mb4.9, ML3.8, MS3.8*
*IDC **16** 15:33:10.2±4.3, 9.°64N×126.°11E, h82km±40km, mb3.6/11,*
mb1 3.7/12, mb1mx3.4/60, mbtmp3.9/12, MS2.8/2,
Ms1 2.9/2, ms1mx2.4/50, Error ellipse: s-maj=53.5km
s-min=16.2km az=65.0

ISC 16 15:33:01.9±2.1, 9.°77N±0.°03×126.°45E±0.°06, h11km±13km,
n31, σ1§25/38, mb3.8/11, 3C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	Surigao	0.95	271	⇑*i*P	Pb	15 33 20.6	+0.1
SCPH				*i* S	Sg	15 33 31.6	-1.2
BUTP	Butuan	1.14	226	*e*P	Pn	15 33 24.0	+0.1
BUTP				*e*S	Sb	15 33 39.7	+1.1
MSLP	Maasin	1.61	283	*e*P	Pn	15 33 31.3	+1.0
MSLP				*e*S	Sn	15 33 51.0	-0.1
PLP	Palo	2.01	314	⇓*e*P	Pn	15 33 36.5	+0.7
PLP				*e*S	Sn	15 34 01.8	+0.9
BESP	Borongan	2.08	331	*e*P	Pb	15 33 39.0	-0.7
BESP				*e*S	Sg	15 34 10.8	+2.0
OCLP	Ormoc	2.22	305	*e*P	Pb	15 33 40.8	-1.3
BUKP	Musuan	2.33	216	*e*P	Pb	15 33 43.0	-1.0
BUKP				*e*S	Sb	15 34 12.5	-0.3
LLP	Lapu-Lapu	2.51	283	⇓*e*P	Pb	15 33 45.5	-1.6
LLP				*e*S	Sn	15 34 14.3	+1.0
TBP	Tagbilaran	2.56	268	*e*P	Pn	15 33 42.1	-1.3
TBP				*i* S	Sn	15 34 17.1	+2.6
DAV	Davao City (W)	2.82	198	P	Pb	15 33 52.1	-0.2
	19nm,0.3s,baz=220,slow=19,SNR=2.3						
DAV				S	Sn	15 34 21.1	+0.1
	31nm,0.3s,baz=163,slow=8.4,SNR=3.7						
CNP	Cataman	3.24	327	*e*P	Pn	15 33 54.5	+1.7
CNP				*e*S	Sn	15 34 32.0	+0.6
DCPH	Dipolog City	3.28	249	⇑*e*P	Pn	15 33 55.5	+2.2
DCPH				*e*S	Sn	15 34 32.8	+0.4
CTBH	Cotabato--PC H	3.34	221	⇑*i*P	Pn	15 33 57.2	+3.1
CTBH				*i* S	Sn	15 34 25.0	-8.9
PAGZ	Pagadian	3.58	238	*e*P	Pn	15 33 58.7	+1.2
PAGZ				*e*S	Sn	15 34 40.5	+0.6
CAUP	Cauayan	8.44	328	*e*P	Pn	15 35 04.9	+0.7
GUMO	Guam	18.43	76	LR	LR	15 43 54.7	
	comp=Z,20nm,20.8s,baz=240,slow=34						
CMAR	Chiang Mai Arr	28.01	291	LR	LR	15 50 31.2	
	comp=Z,24nm,18.2s,baz=170,slow=38						
WRA	Warramunga Arr	30.53	165	P	P	15 39 14.4	-1.1
	0.4nm,0.6s,baz=342,slow=9.6,SNR=5.2						
ASAR	Alice Springs	34.02	168	P	P	15 39 46.2	+0.1
	0.4nm,0.5s,baz=354,slow=7.0,SNR=18						
H11N1	WAKE ISLAND Hy	40.24	71	T	T	16 23 56.4	
	baz=264,slow=74,SNR=14						
H11N2	WAKE ISLAND Hy	40.25	71	T	T	16 24 01.5	
	baz=264,slow=74,SNR=11						
H11N3	WAKE ISLAND Hy	40.26	71	T	T	16 23 57.9	
	baz=264,slow=74,SNR=13						
STKA	Stephens Creek	43.87	161	P	P	15 41 09.6	+1.0
	0.7nm,0.3s,baz=354,slow=7.6,SNR=4.8						
MKAR	Makanchi Array	52.53	323	P	P	15 42 14.5	-0.8
	0.6nm,0.6s						
ZALV	Zalesovo Beam	55.15	331	P	P	15 42 33.5	-0.8
	0.5nm,0.5s,baz=114,slow=6.5,SNR=3.0						
KURBB	Kurchatov Arra	56.59	326	P	P	15 42 43.2	-1.5
	0.3nm,0.4s,baz=125,slow=6.9,SNR=4.3						
ILAR	Eielson Array	79.81	26	P	P	15 45 09.7	-0.4
	0.5nm,0.7s,baz=243,slow=4.7,SNR=5.9						
ARCES	ARCESS Array B	84.72	340	P	P	15 45 35.8	+0.1
	0.6nm,0.4s,baz=69,slow=6.6,SNR=12						
FINES	FINESS Array B	86.42	332	P	P	15 45 43.4	-0.9
	1.4nm,0.5s,baz=76,slow=5.3,SNR=24						
HFS	Hagfors	92.58	332	P	P	15 46 11.9	-1.5
	0.5nm,0.5s,baz=69,slow=4.9,SNR=7.0						
YKA	Yellowknife Ar	94.14	24	P	P	15 46 21.3	+0.7
	0.7nm,0.6s,baz=309,slow=4.9,SNR=4.1						

*DDA **16** 15:34:27.9, 36.°90N×28.°93E, h7km, Ml2.7*
*CSEM **16** 15:34:28.4±0.2, 36.°91N×28.°92E, h2km, ML2.8, Error*
ellipse: s-maj=6.7km s-min=4.4km az=4.0
*ISK **16** 15:34:28.1, 36.°87N×28.°89E, h9km, ML2.8/11*

ISC 16 15:34:28.4±1.2, 36.°92N±0.°03×28.°94E±0.°02, h1km±11km,
n44, σ1§16/55, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DALY	Dalyan (Mu¨la	0.25	245	PG	Pg	15 34 32.5	-0.6
DALY				SG	Sg	15 34 36.3	0.0
DALY	Dalyan (Mu¨la	0.25	245	*i* P	Pg	15 34 32.9	-0.2
DALY				*i* S	Sg	15 34 37.4	+1.0
DALY	Dalyan (Mu¨la	0.25	245	*e*Pg	Pg	15 34 32.5	-0.6
DALY	Dalyan (Mu¨la	0.25	245	P	Pg	15 34 32.9	-0.2
DALY				*e*Sg	Sg	15 34 36.3	0.0
DALY				S	Sg	15 34 37.4	+1.0
TURN	Turunc	0.27	260	PG	Pn	15 34 38.8	-0.7
TURN	Turunc	0.27	260	*i* P	Pn	15 34 39.3	-0.2
TURN				*i* S	Sb	15 34 46.8	+5.7
FETY	Fethiye	0.31	157	PG	Pg	15 34 33.9	-0.4
FETY				SG	Sg	15 34 38.7	+0.4
FETY	Fethiye	0.31	157	P	Pg	15 34 33.1	-1.2
FETY	Fethiye	0.31	157	*e*Pg	Pg	15 34 33.9	-0.4
				S	Sg	15 34 38.8	+0.4
TAVA	DENIZLI_Tavas	0.54	358	*i* P	Pg	15 34 38.9	0.0
TAVA	DENIZLI_Tavas	0.54	358	P	Pg	15 34 38.9	0.0
GOLH	Golhisar	0.59	58	*i* P	Pg	15 34 38.9	-0.9
GOLH	Golhisar	0.59	58	P	Pg	15 34 38.9	-0.9
MRSB	Marmaris-Mugla	0.63	251	PG	Pg	15 34 39.6	-0.8
MRSB	Marmaris-Mugla	0.63	251	*e*Pg	Pg	15 34 39.6	-0.8
ELL	Elmali	0.80	102	PG	Pg	15 34 44.6	+0.9
ELL	Elmali	0.80	102	*e*Pg	Pg	15 34 44.6	+0.9
AKAS	Kas	0.87	142	PG	Pg	15 34 45.1	0.0
AKAS	Kas	0.87	142	*i* P	Pg	15 34 45.3	+0.2
AKAS				*i* S	Sn	15 35 00.4	-0.9
AKAS	Kas	0.87	142	P	Pg	15 34 45.3	+0.2
AKAS				S	Sn	15 35 00.4	-0.9
ARG	Arkhangelos	0.96	223	PG	Pg	15 34 45.8	-0.9
ARG	Arkhangelos	0.96	223	*e*Pg	Pg	15 34 45.8	-0.9
MLSB	Milas	1.00	292	PG	Pg	15 34 47.6	+0.1
MLSB	Milas	1.00	292	*e*Pg	Pg	15 34 47.6	+0.1
DAT	Datca	1.10	260	PG	Pg	15 34 49.0	-0.6
DAT	Datca	1.10	260	*i* P	Pn	15 34 51.4	+0.3
DAT	Datca	1.10	260	*e*Pg	Pg	15 34 49.0	-0.6
DAT	Datca	1.10	260	P	Pn	15 34 51.4	+0.3
AYDN	Tasoluk	1.12	312	*i* P	Pb	15 34 49.1	-1.5
AYDN				*i* S	Sb	15 35 05.7	0.0
AYDN	Tasoluk	1.12	312	P	Pb	15 34 49.1	-1.5
AYDN				S	Sb	15 35 05.7	0.0
KORT	Korkueli	1.14	86	PN	Pn	15 34 51.2	-0.3
KORT	Korkueli	1.14	86	*i* P	Pn	15 34 51.9	+0.4
KORT	Korkueli	1.14	86	*e*Pn	Pn	15 34 51.2	-0.3
KORT	Korkueli	1.14	86	P	Pn	15 34 51.9	+0.4
BDRM	Kayabasi	1.20	277	*i* P	Pg	15 34 54.0	+2.6
BDRM	Kayabasi	1.20	277	P	Pg	15 34 54.0	+2.6
BODT	Bodrum	1.31	277	PN	Pn	15 34 52.8	-1.0
BODT	Bodrum	1.31	277	*e*Pn	Pn	15 34 52.8	-1.0
AYDB	Zeytinkoy-Aydi	1.32	321	PN	Pn	15 34 53.3	-0.7
AYDB	Zeytinkoy-Aydi	1.32	321	*e*Pn	Pn	15 34 53.3	-0.7
SUTC	Sutluce-Ispart	1.74	71	PN	Pn	15 35 00.0	+0.2
SUTC	Sutluce-Ispart	1.74	71	*e*Pn	Pn	15 35 00.0	+0.2
KEPZ	Antalya-Kepez	2.14	90	*i* P	Pb	15 35 07.5	-0.4
KEPZ	Antalya-Kepez	2.14	90	P	Pb	15 35 07.5	-0.4

ISC 16 15:42:55.7±1.3, 49.°83N±0.°07×18.°57E±0.°04, h8km±13km,
n6, σ0§44/12, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MORC	Moravsky Berou	0.67	266	*e*PG	Pg	15 43 08.9	+0.4
MORC				*e*SG	Sg	15 43 16.9	-0.3
OJC	Ojcow	0.89	64	*e*Pg	Pg	15 43 12.7	+0.1
OJC				*e*Sg	Sb	15 43 25.7	+0.4
LANS	Liptovska Anna	0.90	139	*e*PG	Pg	15 43 13.0	0.0
LANS				*e*SG	Sb	15 43 26.4	+0.6
VYHS	Vyhne	1.35	172	*e*PG	Pn	15 43 20.8	-0.1
VYHS				*e*SG	Sn	15 43 39.0	0.0
VRAC	Vranov	1.39	248	*e*PG	Pb	15 43 21.7	-0.2
VRAC				*e*SG	Sn	15 43 39.5	-0.4
KRUC	Moravsky	1.61	242	*e*PG	Pb	15 43 25.2	-0.5
KRUC				*e*SG	Sb	15 43 46.8	+0.6

WEL 16 15:47:01.0±1.4, 33.°S±19.°×17.°9W±5.°2, h33km, ML4.7/5,
South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.02	13	S	Sn	15 48 42.9	-3.3
MXZ	Matakaoa Point	4.90	207	P	Pn	15 48 15.5	+3.2
MXZ				S	Sn	15 49 04.1	-3.7
WMGZ	Waiomatatini S	5.09	204	P	Pn	15 48 18.1	+3.2
WMGZ				S	Sn	15 49 11.7	-0.8
HAZ	Te Kaha	5.28	210	P	Pn	15 48 18.8	+1.4
HAZ				S	Sn	15 49 16.1	-0.9
PUZ	Puketiti	5.37	204	P	Pn	15 48 20.5	+1.7
PUZ				S	Sn	15 49 16.9	-2.6
RUGZ	Raukumara Rang	5.50	209	P	Pn	15 48 22.9	+2.3
RUGZ				S	Sn	15 49 20.0	-2.8
TWGZ	Tauwhareparae	5.56	206	P	Pn	15 48 22.7	+1.2
TWGZ				S	Sn	15 49 22.3	-2.0
CNGZ	Carnagh Statio	5.76	203	P	Pn	15 48 25.5	+1.4
CNGZ				S	Sn	15 49 26.0	-3.0
TKGZ	Te Karaka	5.84	206	P	Pn	15 48 27.4	+2.2
TKGZ				S	Sn	15 49 28.3	-2.8
MWZ	Matawai	5.87	208	P	Pn	15 48 26.6	+0.9
MWZ				S	Sn	15 49 30.0	-2.0
OPRZ	Ohinepanea	5.92	217	P	Pn	15 48 29.1	+2.8
URZ	Urewera	5.99	211	P	Pn	15 48 28.8	+1.6
URZ				S	Sn	15 49 31.3	-3.2
MUGZ	Murupara	6.32	212	P	Pn	15 48 33.1	+1.4
MUGZ				S	Sn	15 49 39.0	-3.7
SNGZ	Shannon Statio	6.33	207	P	Pn	15 48 34.5	+2.5
SNGZ				S	Sn	15 49 40.6	-2.7
RAHZ	Arahi	6.55	208	P	Pn	15 48 36.9	+1.9
RAHZ				S	Sn	15 49 46.1	-2.5
MTHZ	Maungataniwha	6.60	210	P	Pn	15 48 37.4	+1.8
MTHZ				S	Sn	15 49 45.6	-4.1
MRHZ	Matea Rd	6.76	213	P	Pn	15 48 38.4	+0.4
MRHZ				S	Sn	15 49 47.9	-6.0
BKZ	Black Stump Fm	7.01	211	P	Pn	15 48 41.9	+0.6
BKZ				S	Sn	15 49 54.4	-5.4
HIZ	Hauiti	7.32	222	P	Pn	15 48 49.6	+4.1

MEX 16 16:04:01.0±0.5, 15.°51N×93.°38W, h89km±4km, MD3.8,
Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		0.25	38	*e*P	Pn	16 04 12.6	-1.4
PCIG				*e*S	Sn	16 04 22.3	-1.5
THIG		1.23	119	*i* P	Pn	16 04 22.1	-1.2
THIG				*e*S	Sn	16 04 37.6	-2.5
TGIG		1.29	11	*i* P	Pn	16 04 23.2	-1.0
TGIG				*e*S	Sn	16 04 39.7	-1.9
CCIG	Comitan	1.42	57	*e*P	Pn	16 04 24.9	-1.0
CCIG				*e*S	Sn	16 04 43.2	-1.4

IDC 16 16:08:11.5±2.9, 20.°27S×169.°47E, h83km±9km, mb3.8/3,
mb1 4.0/4, mb1mx3.5/43, mbtmp4.1/4, MS3.1/5, Ms1 3.1/5,
ms1mx2.8/42, Error ellipse: s-maj=94.6km
s-min=14.9km az=139.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.34	237	P	Pn	16 09 02.8	+1.2
	3.5nm,0.3s,baz=143,slow=16,SNR=134						
DZM				S	Sn	16 09 40.6	+0.3
	57nm,0.3s,baz=148,slow=17,SNR=22						
DZM				LR	LR	16 10 20.0	
	comp=Z,131nm,21.1s,baz=44,slow=38						
HNR	Honiara	14.16	318	LR	LR	16 15 37.3	
	comp=Z,76nm,22.0s,baz=337,slow=32						
URZ	Urewera	19.11	161	LR	LR	16 18 10.0	
	comp=Z,158nm,20.1s,baz=340,slow=31						
CTA	Charters Tower	21.79	266	P	P	16 12 58.1	+1.3
	3.3nm,0.7s,baz=93,slow=12,SNR=6.3						
PMG	Port Moresby	24.08	293	LR	LR	16 21 31.6	
	comp=Z,62nm,18.7s,baz=265,slow=33						
WRA	Warramunga Arr	32.95	264	P	P	16 14 37.5	-1.0
	1.3nm,0.8s,baz=93,slow=9.5,SNR=8.3						
WRA				pP	pP	16 14 58.0	+0.2
	1.1nm,1.0s,baz=98,slow=8.3,SNR=3.1						
ASAR	Alice Springs	33.10	258	P	P	16 14 39.5	-0.3
	6.2nm,0.7s,baz=86,slow=9.1,SNR=110						
ASAR				pP	pP	16 14 58.9	-0.2
	2.2nm,0.6s,baz=85,slow=9.0,SNR=5.9						
GUMO	Guam	41.44	322	LR	LR	16 30 25.2	
	comp=Z,25nm,19.8s,baz=240,slow=32						
GERES	GERESS Array B	145.50	331	PKPbc	PKPdf	16 27 39.6	-0.4
	1.0nm,0.6s,baz=44,slow=4.6,SNR=12						
GERES				pPKPbc	pPKPab	16 28 02.2	-1.1
	0.7nm,0.7s,baz=29,slow=3.0,SNR=3.0						

*IDC **16** 16:29:10.5±0.7, 41.°77N×44.°38E, h0km, mb3.5/7,*
mb1 3.7/10, mb1mx3.5/57, mbtmp3.6/10, ML3.5/3, MS2.8/4,
Ms1 2.8/4, ms1mx2.4/51, Error ellipse: s-maj=16.8km
s-min=7.0km az=69.0
*ISCJB **16** 16:29:12.4±0.3, 41.°80N±0.°01×44.°43E±0.°02, h4km±2km,*
mb3.6/8, MS3.1/2, Error ellipse: s-maj=2.1km s-min=2.0km
az=18.1
*CSEM **16** 16:29:12.7±0.1, 41.°79N×44.°45E, h2km, mb3.6/4, Error*
ellipse: s-maj=2.9km s-min=2.6km az=41.0
*MOS **16** 16:29:12.3±1.0, 41.°78N×44.°38E, h7km, mb4.0/6, Error*
ellipse: s-maj=5.7km s-min=4.6km az=95.2
*NSSP **16** 16:29:12.4, 41.°73N×44.°40E, h10km, Ms3.6*
*TIF **16** 16:29:12.5, 41.°81N×44.°45E, h22km±1km*
*AZER **16** 16:29:13.8±0.1, 41.°69N×44.°58E, h28km±1km, ml3.6/22,*
Error ellipse: s-maj=3.4km s-min=2.1km az=235.0
*ISK **16** 16:29:13.3, 41.°84N×44.°45E, h11km, ML3.5/7*
*ATA **16** 16:29:15.2±0.9, 41.°64N×44.°22E, h26km±5km, ML4.3,*
MW4.1
*DDA **16** 16:29:21.9, 41.°38N×43.°72E, h6km, Ml3.7*

ISC 16 16:29:12.7±0.9, 41.°76N±0.°01×44.°41E±0.°01, h15km±6km,
n197, σ1§51/297, mb3.7/8, 57C-46D, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBLG	Delisi	0.25	98	P	Pb	16 29 18.7	-0.2
TBLG				S	Sb	16 29 22.9	-0.2
TBLG	Delisi	0.25	98	⇑*i*PG	Pb	16 29 18.7	-0.2
TBLG				*e*S	Sb	16 29 22.9	-0.2
TBLG	Delisi	0.25	98	P	Pb	16 29 18.7	-0.2
TBLG				S	Sb	16 29 22.9	-0.2
SEAG	Tbilisi Sea	0.29	90	P	Pg	16 29 19.4	+0.5
SEAG				S	Sb	16 29 24.3	-0.1
SEAG	Tbilisi Sea	0.29	90	P	Pg	16 29 19.4	+0.5
SEAG				S	Sb	16 29 24.3	-0.1
KZR	Kazreti	0.38	180	P	Pb	16 29 22.0	+0.7
KZR				S	Sb	16 29 28.4	+1.4
KZR	Kazreti	0.38	180	P	Pb	16 29 22.0	+0.7
KZR				S	Sb	16 29 28.4	+1.4
DUS	Dusheti	0.39	33	P	Pg	16 29 20.6	-0.1
DUS				S	Sg	16 29 26.7	+0.6
DUS	Dusheti	0.39	33	*i* PG	Pg	16 29 20.6	-0.1
DUS				*e*S	Sg	16 29 26.7	+0.6
DUS	Dusheti	0.39	33	P	Pg	16 29 20.6	-0.1
DUS				S	Sg	16 29 26.7	+0.6
STE	Stepanavan	0.76	182	⇑P	Pg	16 29 25.0	-2.6
STE				S	Sg	16 29 35.6	-2.1
STEZ	Stepenevan	0.76	181	⇑*i*P	Pg	16 29 25.0	-2.6
STEZ				⇑*i*S	Sg	16 29 35.6	-2.1
AKH	Akhalkalaki	0.78	243	P	Pb	16 29 28.4	+0.4
AKH				S	Sb	16 29 39.6	+1.2
AKH	Akhalkalaki	0.78	243	⇓*i*PG	Pb	16 29 28.4	+0.4
AKH				*i* S	Sb	16 29 39.7	+1.2
AKH	Akhalkalaki	0.78	243	P	Pb	16 29 28.4	+0.4
AKH				S	Sb	16 29 39.7	+1.2
DGRG	David-gareji	0.79	113	P	Pg	16 29 27.7	-0.3
DGRG				S	Sb	16 29 40.7	+2.1
DGRG	David-gareji	0.79	113	⇓*i*PG	Pg	16 29 27.7	-0.3
DGRG				*e*S	Sb	16 29 40.7	+2.1
DGRG	David-gareji	0.79	113	P	Pg	16 29 27.7	-0.3
DGRG				S	Sb	16 29 40.7	+2.1
QZX	Qazax, Azerbai	1.01	134	⇑P	Pg	16 29 31.7	-0.5
	SNR=779						
QZX				⇑S	Sb	16 29 45.7	+0.6
QZX	Qazax, Azerbai	1.01	134	⇑P	Pg	16 29 31.7	-0.5
	SNR=779						
QZX				⇑S	Sb	16 29 45.7	+0.6
GMRZ	Gyumri	1.05	205	*e*P	Pn	16 29 35.0	+1.9
GMRZ				S	Sn	16 29 50.0	+2.5
LACR	Lac	1.07	355	⇓*i*PG	Pg	16 29 32.0	-1.3
LACR				*e*S	Sg	16 29 46.0	-1.3
LACR	Lac	1.07	355	*i* Pg	Pg	16 29 32.0	-1.3
LACR				*e*Sg	Sg	16 29 46.0	-1.3
ONI	Oni	1.09	319	P	Pg	16 29 32.7	-1.1
ONI				S	Sg	16 29 47.6	-0.5
ONI	Oni	1.09	319	*i* PG	Pg	16 29 32.7	-1.1
ONI				*e*S	Sg	16 29 47.6	-0.5
ONI	Oni	1.09	319	P	Pg	16 29 32.7	-1.1
ONI				S	Sg	16 29 47.6	-0.5
ZEI	Tsey	1.09	340	⇑*i*PG	Pg	16 29 32.4	-1.4
ZEI				*e*S	Sg	16 29 46.8	-1.3
EAK	Akyaka	1.24	210	*e*P	Pn	16 29 35.4	-0.2
EAK				*e*S	Sb	16 29 50.2	-1.5
EAK				IAML		16 29 55.1	
	comp=Z,843nm,0.4s						
EAK	Akyaka	1.24	210	*i* P	Pn	16 29 35.5	-0.2
EAK				*i* S	Sn	16 29 52.8	+0.6
EAK	Akyaka	1.24	210	P	Pn	16 29 35.5	-0.2
EAK				S	Sn	16 29 52.8	+0.6
EPOS	Posof	1.29	259	*e*P	Pn	16 29 36.3	-0.1
EPOS				*i* Pg	Pg	16 29 37.5	0.0
EPOS				*e*S	Sn	16 29 54.3	+0.9
EPOS				IAML		16 29 56.6	
	comp=Z,164nm,0.4s						
EPOS	Posof	1.29	259	*i* P	Pn	16 29 36.5	+0.2
EPOS				*i* S	Sn	16 29 54.3	+0.9
EPOS	Posof	1.29	259	P	Pn	16 29 36.5	+0.2
EPOS				S	Sn	16 29 54.3	+0.9
DIGR	Digorskoe uzhe	1.29

SNR=30
GANJ ⇓S **Sn** **16 30 07.8 +1.4**
GANJ Ganja 1.82 127 ⇓P **Pn** **16 29 44.3 +0.7**
SNR=30
GANJ ⇓S **Sn** **16 30 07.8 +1.4**
XNZR Khunzakh 1.87 65 ⇓*e*PN **Pb** **16 29 46.2 -0.6**
XNZR Khunzakh 1.87 65 *e*Pn **Pb** **16 29 46.2 -0.6**
IGDI IGDIR 1.91 188 *e*P **Pb** **16 29 47.0 -0.3**
IGDI *e*S **Sg** **16 30 13.0 -1.2**
IGDI IAML 16 30 17.1
comp=Z,99nm,0.4s
IGDI IGDIR 1.91 188 *i* P **Pb** **16 29 47.0 -0.3**
SENK Senkaya-Erzuru 1.97 233 PN **Pb** **16 29 48.4 0.0**
SENK Senkaya-Erzuru 1.97 233 *e*Pn **Pb** **16 29 48.4 0.0**
CHVG Ch'k'valeri 1.97 300 P **Pb** **16 29 47.9 -0.5**
CHVG S **Sb** **16 30 13.4 +0.6**
CHVG Ch'k'valeri 1.97 300 P **Pb** **16 29 47.9 -0.5**
CHVG S **Sb** **16 30 13.4 +0.6**
GNBR Gunib 2.00 71 ⇓*i*PN **Pn** **16 29 48.0 +1.9**
GNBR pmax pmax
comp=Z,496nm,0.8s
GNBR Gunib 2.00 71 *i* Pn **Pn** **16 29 48.0 +1.9**
comp=Z,496nm,0.8s
UNCR Uncukul 2.01 61 *i* PN **Pn** **16 29 48.0 +1.9**
UNCR pmax pmax
comp=Z,547nm,0.3s
UNCR Uncukul 2.01 61 *i* Pn **Pn** **16 29 48.0 +1.9**
comp=Z,547nm,0.3s
KMKR Kumukh 2.04 79 *i* PN **Pn** **16 29 48.5 +1.8**
KMKR pmax pmax
comp=Z,165nm,0.3s
KMKR Kumukh 2.04 79 *i* Pn **Pn** **16 29 48.5 +1.8**
comp=Z,165nm,0.3s
HYR Heyderabad 2.07 171 ⇓Pg **Pb** **16 29 50.3 +0.3**
HYR ⇓Sg **Sb** **16 30 16.2 +0.6**
HYR Heyderabad 2.07 171 ⇓Pg **Pb** **16 29 50.3 +0.3**
HYR ⇓Sg **Sb** **16 30 16.2 +0.6**
ARKR Arakani 2.09 66 *i* PN **Pb** **16 29 49.5 -1.0**
ARKR *e*S **Sb** **16 30 17.0 +0.7**
ARKR pmax pmax
comp=Z,143nm,0.3s
ARKR Arakani 2.09 66 *i* Pn **Pb** **16 29 49.5 -1.0**
comp=Z,143nm,0.3s
ARKR *e*Sb **Sb** **16 30 17.0 +0.7**
DLMR Dylym 2.10 51 *i* PN **Pb** **16 29 49.5 -1.0**
DLMR *e*S **Sb** **16 30 17.5 +1.1**
DLMR pmax pmax
comp=Z,160nm,0.2s
DLMR Dylym 2.10 51 *i* Pn **Pb** **16 29 49.5 -1.0**
comp=Z,160nm,0.2s
DLMR *e*Sb **Sb** **16 30 17.5 +1.1**
DBOC Borcka 2.10 259 *i* P **Pb** **16 29 50.9 +0.3**
DBOC Borcka 2.10 259 P **Pb** **16 29 50.9 +0.3**
BCA Borcka 2.12 262 PN **Pb** **16 29 50.3 -0.5**
BCA Borcka 2.12 262 *e*Pn **Pb** **16 29 50.3 -0.5**
KRNR Karanay 2.13 59 ⇓*i*PN **Pn** **16 29 50.0 +2.1**
KRNR *e*S **Sb** **16 30 18.0 +0.5**
KRNR pmax pmax
comp=Z,73nm,0.5s
KRNR Karanay 2.13 59 *i* Pn **Pn** **16 29 50.0 +2.1**
comp=Z,73nm,0.5s
KRNR *e*Sb **Sb** **16 30 18.0 +0.5**
SEKA Sheki 2.17 104 PN **Pn** **16 29 50.3 +2.0**
SEKA Sheki 2.17 104 ⇑P **Pn** **16 29 50.3 +2.0**
SNR=21
SEKA ⇑S **Sb** **16 30 18.1 -0.3**
SEKA Sheki 2.17 104 ⇑P **Pn** **16 29 50.3 +2.0**
SNR=21
SEKA ⇑S **Sb** **16 30 18.1 -0.3**
DDEM Demirkent 2.19 247 *i* P **Pg** **16 29 53.5 -1.1**
DDEM Demirkent 2.19 247 P **Pg** **16 29 53.5 -1.1**
MNGR Mingechevir, A 2.25 115 PN **Pn** **16 29 50.6 +1.3**
MNGR Mingechevir, A 2.25 115 ⇑P **Pn** **16 29 50.6 +1.3**
SNR=4.7
MNGR ⇑S **Sn** **16 30 18.9 +2.1**
MNGR Mingechevir, A 2.25 115 ⇑P **Pn** **16 29 50.6 +1.3**
SNR=4.7
MNGR ⇑S **Sn** **16 30 18.9 +2.1**
KBZ Khabaz 2.26 331 Pn **Pn** **16 29 51.2 +1.7**
comp=Z,34nm,0.3s,baz=178,slow=10.0,SNR=156
KBZ Pg **Pb** **16 29 53.6 +0.5**
comp=Z,34nm,0.3s,baz=164,slow=5.3,SNR=253
KBZ Lg Lg 16 30 22.8
comp=Z,23nm,0.3s,baz=321,slow=14,SNR=13
DYDN Diyadin 2.29 194 *e*P **Pn** **16 29 52.2 +2.1**
DYDN Diyadin 2.29 194 *i* P **Pg** **16 29 57.0 +0.4**
DYDN Diyadin 2.29 194 P **Pg** **16 29 57.0 +0.4**
SHA1 Shidzhatmaz 2.36 327 *e*PN **Pb** **16 29 56.0 +0.9**
SHA1 *e*S **Sg** **16 30 26.4 -2.2**
SHA1 Shidzhatmaz 2.36 327 *e*Pn **Pb** **16 29 56.0 +0.9**
SHA1 *e*Sb **Sg** **16 30 26.4 -2.2**
EATA Eleskirt 2.40 218 *e*P **Pn** **16 29 53.7 +2.0**
EATA Eleskirt 2.40 218 *i* P **Pb** **16 29 55.0 -0.8**
EATA Eleskirt 2.40 218 P **Pb** **16 29 55.0 -0.8**
URKR Urkarakh 2.44 79 ⇓*i*PN **Pb** **16 29 56.8 +0.5**
URKR *e* 16 30 28.4
URKR Urkarakh 2.44 79 *i* Pn **Pb** **16 29 56.8 +0.5**
URKR *e*Sn **Sb** **16 30 28.4 +2.2**
AGRB Hanur-Agry 2.44 207 PN **Pb** **16 29 55.2 -1.2**
AGRB Hanur-Agry 2.44 207 *e*Pn **Pb** **16 29 55.2 -1.2**
AKT Akhty 2.50 95 ⇑*e*PN **Pn** **16 29 55.0 +2.0**
AKT *e* 16 30 26.0
AKT pmax pmax
comp=Z,65nm,0.6s
AKT smax smax
comp=N,285nm,0.6s
AKT Akhty 2.50 95 *e*Pn **Pn** **16 29 55.0 +2.0**
comp=N,65nm,0.6s
AKT *e*Sn **Sn** **16 30 26.0 +2.6**
comp=N,285nm,0.6s
SBZ Shahbuz 2.52 159 ⇑Pg **Pb** **16 29 58.2 +0.5**
SBZ ⇑Sg **Sg** **16 30 32.5 -1.2**
SBZ Shahbuz 2.52 159 ⇑Pg **Pb** **16 29 58.2 +0.5**
SBZ ⇑Sg **Sg** **16 30 32.5 -1.2**
KVAR Kislovodsk Arr 2.53 331 Pn **Pn** **16 29 55.2 +1.8**
baz=155,slow=12,SNR=18
KVAR Pg **Pb** **16 29 58.5 +0.6**
baz=351,slow=2.3,SNR=36
KVAR Lg Lg 16 30 32.1
baz=158,slow=7.1,SNR=10
HOMI Horasan 2.56 229 *e*P **Pn** **16 29 56.2 +2.3**
DOMR Dombai 2.56 307 *i* PN **Pn** **16 29 55.9 +2.0**
DOMR Dombai 2.56 307 *i* Pn **Pn** **16 29 55.9 +2.0**
BRDA Brd 2.58 125 ⇑P **Pn** **16 29 53.8 -0.1**
BRDA ⇑S **Sn** **16 30 27.1 +2.2**
BRDA Brd 2.58 125 ⇑P **Pn** **16 29 53.8 -0.1**
BRDA ⇑S **Sn** **16 30 27.1 +2.2**
MAK Makhachkala 2.58 61 *e*PN **Pb** **16 29 59.2 +0.4**
MAK *e*S **Sg** **16 30 35.1 -0.7**
MAK pmax pmax
comp=Z,199nm,0.3s
MAK smax smax
comp=E,612nm,0.5s
MAK smax smax
comp=E,507nm,0.5s
MAK Makhachkala 2.58 61 *e*Pn **Pb** **16 29 59.2 +0.4**
comp=E,199nm,0.3s
MAK *e*Sb **Sg** **16 30 35.1 -0.7**
CLDR Caldiran 2.65 188 PN **Pb** **16 29 58.2 -1.8**
CLDR Caldiran 2.65 188 *e*Pn **Pb** **16 29 58.2 -1.8**
TUTA Tutak 2.66 208 *e*P **Pb** **16 29 58.4 -1.7**
TUTA Tutak 2.66 208 *i* P **Pb** **16 29 58.5 -1.6**
TUTA Tutak 2.66 208 P **Pb** **16 29 58.5 -1.6**
QBL Gabala 2.71 106 ⇑P **Pn** **16 29 57.4 +1.7**
QBL ⇑S **Sn** **16 30 30.7 +2.5**
QBL Gabala 2.71 106 ⇑P **Pn** **16 29 57.4 +1.7**
QBL ⇑S **Sn** **16 30 30.7 +2.5**
NAX Nakhchivan 2.72 162 PN **Pb** **16 30 01.4 +0.3**
NAX Nakhchivan 2.72 162 ⇓Pg **Pb** **16 30 01.4 +0.3**
SNR=9.3
NAX ⇓Sg **Sg** **16 30 37.8 -2.2**
NAX Nakhchivan 2.72 162 ⇓Pg **Pb** **16 30 01.4 +0.3**
SNR=9.3
NAX ⇓Sg **Sg** **16 30 37.8 -2.2**
CHOM Cayeli-Rize 2.83 258 PN **Pn** **16 30 00.3 +2.9**
CHOM Cayeli-Rize 2.83 258 *e*Pn **Pn** **16 30 00.3 +2.9**
XNQ Khinaliq 2.86 101 ⇑P **Pn** **16 29 59.9 +1.8**
SNR=15
XNQ ⇓S **Sn** **16 30 34.4 +2.0**
XNQ Khinaliq 2.86 101 ⇑P **Pn** **16 29 59.9 +1.8**
SNR=15
XNQ ⇓S **Sn** **16 30 34.4 +2.0**
ZRD Zardab 2.89 120 ⇑P **Pn** **16 29 58.6 +0.5**
ZRD ⇓S **Sn** **16 30 33.8 +1.2**
ZRD Zardab 2.89 120 ⇑P **Pn** **16 29 58.6 +0.5**
ZRD ⇓S **Sn** **16 30 33.8 +1.2**
QSAR Qusar 2.90 94 ⇓P **Pn** **16 30 00.4 +2.0**
SNR=24
QSAR ⇑S **Sn** **16 30 34.9 +1.9**
QSAR Qusar 2.90 94 ⇓P **Pn** **16 30 00.4 +2.0**
SNR=24
QSAR ⇑S **Sn** **16 30 34.9 +1.9**
DRN Derbent 2.94 84 ⇓*i*PN **Pb** **16 30 02.4 -2.4**
DRN *e*S **Sn** **16 30 37.1 +3.3**
DRN Derbent 2.94 84 *i* Pn **Pb** **16 30 02.4 -2.4**
DRN *e*Sn **Sn** **16 30 37.1 +3.3**
ERZM Erzurum 2.96 232 *e*P **Pn** **16 30 01.6 +2.1**
IML Ismayilli 3.00 108 P **Pn** **16 30 01.2 +1.4**
SNR=5.3
IML ⇑S **Sn** **16 30 37.6 +2.0**
IML Ismayilli 3.00 108 P **Pn** **16 30 01.2 +1.4**
SNR=5.3
IML ⇑S **Sn** **16 30 37.6 +2.0**
EKAR Karacoban 3.08 216 *e*P **Pn** **16 30 03.3 +2.3**
EKAR IAML 16 30 31.8
comp=Z,23nm,0.5s
EKAR *e*S **Sn** **16 30 39.5 +1.7**
ORD Ordubad 3.08 156 ⇑Pg **Pb** **16 30 08.1 +0.8**
ORD ⇓Sg **Sg** **16 30 49.3 -2.4**
ORD Ordubad 3.08 156 ⇑Pg **Pb** **16 30 08.1 +0.8**
ORD ⇓Sg **Sg** **16 30 49.3 -2.4**
QUBA Quba, Azerbaij 3.09 96 ⇓P **Pn** **16 30 01.5 +0.5**
QUBA Quba, Azerbaij 3.09 96 ⇓P **Pn** **16 30 01.5 +0.5**
GOF Gofitskoye 3.44 344 *e*PN **Pn** **16 30 07.4 +1.6**
GOF *e*S **Sg** **16 31 02.7 -0.5**
GOF Gofitskoye 3.44 344 *e*Pn **Pn** **16 30 07.4 +1.6**
GOF *e*Sb **Sg** **16 31 02.7 -0.5**
KOPT Kop Dagi 3.44 241 *e*P **Pn** **16 30 08.6 +2.5**
SIZA Siyzn 3.44 100 ⇑P **Pn** **16 30 05.3 -0.6**
SIZA Siyzn 3.44 100 ⇑P **Pn** **16 30 05.3 -0.6**
BAYT Ayd¨–ntepe-Bay 3.51 248 PN **Pn** **16 30 10.2 +3.3**
BAYT Ayd¨–ntepe-Bay 3.51 248 *e*Pn **Pn** **16 30 10.2 +3.3**
ATGJ Altiaghaj 3.53 103 ⇑P **Pn** **16 30 05.3 -1.8**
ATGJ Altiaghaj 3.53 103 ⇑P **Pn** **16 30 05.3 -1.8**
GEVA Gevas 3.60 197 *e*P **Pn** **16 30 10.8 +2.6**
GBS Qobustan 3.63 108 ⇑P **Pn** **16 30 08.2 -0.3**
GBS Qobustan 3.63 108 ⇑P **Pn** **16 30 08.2 -0.3**
ALIB Äli-Bayra 3.92 116 ⇑P **Pn** **16 30 11.7 -0.7**
ALIB Äli-Bayra 3.92 116 ⇑P **Pn** **16 30 11.7 -0.7**
LRK Lerik 4.33 135 ⇓P **Pn** **16 30 19.1 +0.9**
LRK Lerik 4.33 135 ⇓P **Pn** **16 30 19.1 +0.9**
MMAI Mount Meron Ar 11.29 222 LR LR 16 36 17.1
comp=Z,24nm,21.5s,baz=85,slow=38
AKTO Aktyubinsk 12.80 43 Pn **Pn** **16 32 11.7 -2.4**
comp=Z,0.2nm,0.3s,baz=238,slow=17,SNR=3.9
AKTO Sn Sn 16 34 24.1 -12
comp=Z,0.1nm,0.3s,baz=73,slow=19,SNR=2.7
AKTO LR LR 16 38 32.9
comp=Z,25nm,22.0s,baz=194,slow=44
AKTO Aktyubinsk 12.80 43 ⇓Pn **Pn** **16 32 11.8 -2.3**
comp=Z,1.8nm,0.7s
AKTO ⇑Sn Sn 16 34 23.9 -12
comp=Z,2.5nm,0.8s
AKTO Aktyubinsk 12.80 43 Pn **Pn** **16 32 11.8 -2.3**
comp=Z,1.8nm,0.7s
AKTO Sn Sn 16 34 23.9 -12
comp=Z,2.5nm,0.8s
AB31 Akbulak array 13.20 50 ⇑Pn **Pn** **16 32 16.6 -3.0**
comp=Z,0.6nm,0.4s,baz=241,slow=12
AB31 ⇑Sn Sn 16 34 34.1 -12
comp=Z,1.3nm,0.5s,baz=244,slow=22
AB31 Akbulak array 13.20 50 P **Pn** **16 32 16.6 -3.0**
AB31 pmax pmax
comp=Z,6.0nm,0.4s
AKASG Malin Array Be 13.78 316 Pn **P** **16 32 35.0 -0.8**
comp=Z,0.3nm,0.3s,baz=122,slow=11,SNR=4.6
KIEV Kiev 13.78 316 ⇓*e*P **Pn** **16 32 31.4 +4.0**
ARU Arti 17.30 27 P **Pn** **16 33 11.0 -2.6**
comp=Z,0.0nm,0.3s,baz=258,slow=14,SNR=3.5
ARU Arti 17.30 27 P **Pn** **16 33 10.4 -3.1**
ARU S **Sn** **16 36 19.7 -5.9**
KLMR Klimovskoe 19.35 353 *e*P **P** **16 33 31.1 -6.3**
KLMR pmax pmax
comp=Z,7.0nm,1.6s
KLMR Klimovskoe 19.35 353 *e*Pn **P** **16 33 31.2 -6.2**
KLMR AMP 16 33 37.5
comp=Z,7.0nm,1.6s
VSU Vasula 20.09 332 ⇑*e*P **P** **16 33 46.5 +1.0**
VSU pmax pmax
comp=Z,9.0nm,1.1s
KLNR Kaliningrad 20.50 317 ⇓*e*P **P** **16 33 51.0 +1.1**
BRVK Borovoye 20.71 48 ⇑*i*P Pn 16 33 55.0 +0.3
BRVK pmax pmax
comp=Z,3.0nm,1.0s
BVAR Borovoye Array 20.76 48 P **P** **16 33 52.5 -0.3**
comp=Z,0.3nm,0.3s,baz=242,slow=12,SNR=4.4
FINES FINESS Array B 22.61 337 P **P** **16 34 13.2 +0.7**
comp=Z,0.9nm,0.8s,baz=159,slow=12,SNR=2.7
GERES GERESS Array B 22.62 299 P **P** **16 34 13.1 +0.1**
comp=Z,0.8nm,0.8s,baz=83,slow=10.0,SNR=12
GERES GERESS Array B 22.62 299 P **P** **16 34 13.1 +0.1**
GERES pmax pmax
comp=Z,2.0nm,0.6s
CLL Collm 23.46 305 *e*P **P** **16 34 23.0 +1.6**
CLL Collm 23.46 305 *e*P **P** **16 34 23.0 +1.6**
KURBB Kurchatov Arra 25.04 58 P **P** **16 34 36.0 -0.1**
comp=Z,0.8nm,0.7s,baz=267,slow=9.2,SNR=7.1
KURK Kurchatov 25.10 57 ⇑*e*P **P** **16 34 39.7 +3.0**
KURK pmax pmax
comp=Z,1.0nm,0.5s
HFS Hagfors 26.31 325 P **P** **16 34 47.4 -0.2**
comp=Z,2.0nm,0.8s,baz=121,slow=10,SNR=3.4
ZALV Zalesovo Beam 29.31 52 LR LR 16 49 23.7
comp=Z,24nm,18.0s,baz=72,slow=41
ULN Ulaanbaatar 43.77 60 ⇑*e*P **P** **16 37 19.1 +1.4**
ULN pmax pmax
comp=Z,1.0nm,0.9s
TORD Torodi Ar. Bea 46.73 245 P **P** **16 37 41.5 +0.1**
comp=Z,0.4nm,0.5s,baz=30,slow=7.8,SNR=4.0
KOWA Kowa 49.77 252 P **P** **16 38 03.7 -1.1**
comp=Z,1.2nm,0.5s,baz=80,slow=6.1,SNR=3.4
MA2 Magadan 62.35 33 LR LR 17 11 30.0
comp=Z,23nm,18.1s,baz=90,slow=41

*IEPN **16** 16:32:20.0,86°.20N×47°.42E,h20km, station ZFI2 has station magnitude of 3.10*
ISC 16 16:32:22.6±4.6,85°.8N±0°.3×42°.5E±0°.1,h10km,n6,σ0°89/11,1C,North of Franz Josef Land

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZFI2	**Zemlya Franca-**	**5.09**	**171**	⇑*i*P	**Pn**	**16 33 38.8**	**0.0**
ZFI2				*i* S	**Sn**	**16 34 37.1**	**-0.3**
11nm,0.4s							
KBS	**Kingsbay**	**7.83**	**226**	*e*P	**Pn**	**16 34 15.5**	**-0.8**
KBS				*e*S	**Sn**	**16 35 43.5**	**-1.3**
KBS	**Kingsbay**	**7.83**	**226**	*e*P	**Pn**	**16 34 16.1**	**-0.2**
KBS				*e*S	**Sn**	**16 35 45.6**	**+0.9**
KBS				IAML		16 35 48.2	
comp=Z,3.9nm,0.7s							
SPA0	**Spitsbergen Ar**	**8.34**	**219**	*e*P	**Pn**	**16 34 22.9**	**-0.4**
SPA0				*e*S	**Sn**	**16 35 56.8**	**-0.5**
SPA0	**Spitsbergen Ar**	**8.34**	**219**	*e*P	**Pn**	**16 34 23.2**	**0.0**
SPA0				*e*S	**Sn**	**16 35 57.9**	**+0.6**
SPA0				IAML		16 35 58.5	
comp=Z,2.9nm,0.9s							
HSPB	**Hornsund (broa**	**9.54**	**218**	*e*P	**Pn**	**16 34 41.1**	**+1.6**
HSPB				*e*		16 35 42.2	

MAN 16 16:37:45.9,16°.33N×120°.45E,h67km,mb4.6,ML3.5, MS3.4,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.52**	**276**	*e*P	Pn	16 38 00.8	+2.2
BOLP				*e*S	Sn	16 38 11.9	+3.9
PCPH	**Palayan**	**0.98**	**141**	*e*P	Pn	16 38 04.9	+0.9
PCPH				*i* S	Sn	16 38 18.6	+1.1
BALP	**Baler**	**1.23**	**118**	*e*P	Pn	16 38 08.4	+1.2
BALP				*e*S	Sn	16 38 24.9	+1.8
ABRA	**Dolores**	**1.34**	**11**	*e*P	Pn	16 38 08.1	-0.6
ABRA				*e*S	Sn	16 38 24.5	-1.1
CAUP	**Cauayan**	**1.45**	**65**	*e*P	Pn	16 38 11.1	+0.9
CAUP				*e*S	Sn	16 38 30.1	+1.7
APYP	**Conner**	**1.70**	**26**	*e*P	Pn	16 38 14.1	+0.6
APYP				*e*S	Sn	16 38 35.7	+1.3

*ISCJB **16** 16:42:52.8±0.4,36°.33N±0°.03×28°.98E±0°.02,h28km±3km, Error ellipse: s-maj=4.2km s-min=3.2km az=4.9*
*ATH **16** 16:42:53.0,36°.41N×28°.96E,h42km±1km,ML2.8/3,Error ellipse: s-maj=2.5km s-min=0.9km az=166.0*
*ISK **16** 16:42:52.6,36°.42N×28°.95E,h17km,ML3.0/15*
*THE **16** 16:42:53.5,36°.44N×28°.93E,h14km±2km,ML2.6/2,Error ellipse: s-maj=2.5km s-min=0.7km az=48.0*
*DDA **16** 16:42:53.2,36°.44N×28°.93E,h33km,Ml3.6*
*CSEM **16** 16:42:53.0±0.1,36°.37N×28°.98E,h20km,ML2.6,Error ellipse: s-maj=3.8km s-min=2.7km az=6.0*
*NIC **16** 16:42:56.2±0.4,36°.24N×29°.24E,h46km,ML3.2*
ISC 16 16:42:52.5±0.9,36°.38N±0°.02×28°.99E±0°.01,h17km±7km, n106,σ0°97/157,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.27**	**16**	PG	**Pg**	**16 42 58.1**	**-0.4**
FETY				SG	**Sg**	**16 43 02.6**	**+0.1**
FETY	**Fethiye**	**0.27**	**16**	P	**Pg**	**16 42 58.2**	**-0.3**
FETY				S	**Sb**	**16 43 03.3**	**+0.1**
FETY	**Fethiye**	**0.27**	**16**	*e*Pg	**Pg**	**16 42 58.1**	**-0.4**
FETY				*e*Sg	**Sg**	**16 43 02.6**	**+0.1**
FETY				S	**Sb**	**16 43 03.3**	**+0.1**
DALY	**Dalyan (Mu¨la**	**0.52**	**328**	PG	**Pg**	**16 43 02.4**	**-0.4**
DALY				SG	**Sg**	**16 43 09.4**	**-0.4**
DALY	**Dalyan (Mu¨la**	**0.52**	**328**	*i* P	**Pg**	**16 43 02.8**	**0.0**
DALY				*i* S	**Sg**	**16 43 09.9**	**+0.1**
DALY	**Dalyan (Mu¨la**	**0.52**	**328**	*e*Pg	**Pg**	**16 43 02.4**	**-0.4**
DALY	**Dalyan (Mu¨la**	**0.52**	**328**	P	**Pg**	**16 43 02.8**	**0.0**
DALY				*e*Sg	**Sg**	**16 43 09.4**	**-0.4**
AKAS	**Kas**	**0.52**	**106**	PG	**Pb**	**16 43 03.7**	**+0.5**
AKAS				SG	**Sn**	**16 43 12.7**	**-1.0**
AKAS	**Kas**	**0.52**	**106**	*i* P	**Pb**	**16 43 03.7**	**+0.5**
AKAS				*i* S	**Sn**	**16 43 15.1**	**+1.4**
AKAS	**Kas**	**0.52**	**106**	P	**Pb**	**16 43 03.7**	**+0.5**
AKAS				*e*Sg	**Sn**	**16 43 12.7**	**-1.0**
AKAS				S	**Sn**	**16 43 15.1**	**+1.4**
KSL	**Kastellorizon**	**0.53**	**115**	P	**Pn**	**16 43 05.1**	**-0.2**
KSL				S	**Sn**	**16 43 14.9**	**+1.1**
KSL				AML	AML	16 43 16.1	
comp=E,2305μm,0.3s							
KSL				AML	AML	16 43 17.3	
comp=N,876μm,0.3s							
KSL	**Kastellorizon**	**0.53**	**115**	P	**Pn**	**16 43 05.2**	**-0.1**
KSL				S	**Sn**	**16 43 14.2**	**+0.4**
TURN	**Turunc**	**0.58**	**328**	PG	**Pn**	**16 43 06.1**	**+0.1**
TURN	**Turunc**	**0.58**	**328**	*i* P	**Pn**	**16 43 06.4**	**+0.4**
TURN				*i* S	**Sn**	**16 43 16.1**	**+1.0**
TURN	**Turunc**	**0.58**	**328**	*e*Pg	**Pn**	**16 43 06.1**	**+0.1**
TURN	**Turunc**	**0.58**	**328**	P	**Pn**	**16 43 06.4**	**+0.4**
TURN				S	**Sn**	**16 43 16.1**	**+1.0**
ARG	**Arkhangelos**	**0.72**	**257**	PG	**Pb**	**16 43 06.7**	**+0.1**
ARG	**Arkhangelos**	**0.72**	**257**	P	**Pg**	**16 43 06.8**	**+0.2**
ARG				S	**Sn**	**16 43 18.5**	**+0.1**
ARG				AML	AML	16 43 18.9	
comp=E,1170μm,0.3s							
ARG				AML	AML	16 43 22.9	
comp=N,686μm,0.2s							
ARG	**Arkhangelos**	**0.72**	**257**	P	**Pg**	**16 43 07.2**	**+0.6**
ARG				S	**Sb**	**16 43 16.7**	**+0.6**
ARG	**Arkhangelos**	**0.72**	**257**	*e*Pg	**Pb**	**16 43 06.7**	**+0.1**
ARG	**Arkhangelos**	**0.72**	**257**	P	**Pg**	**16 43 07.1**	**+0.5**
ARG				S	**Sb**	**16 43 16.7**	**+0.6**
MRSB	**Marmaris-Mugla**	**0.72**	**298**	PG	**Pb**	**16 43 06.2**	**-0.5**
MRSB	**Marmaris-Mugla**	**0.72**	**298**	*e*Pg	**Pb**	**16 43 06.2**	**-0.5**
ELL	**Elmali**	**0.82**	**63**	PG	**Pg**	**16 43 09.2**	**+0.5**
ELL	**Elmali**	**0.82**	**63**	*e*Pg	**Pg**	**16 43 09.2**	**+0.5**
GOLH	**Golhisar**	**0.97**	**28**	*i* P	**Pb**	**16 43 10.1**	**-0.8**
GOLH				*i* S	**Sn**	**16 43 25.1**	**+0.2**
GOLH	**Golhisar**	**0.97**	**28**	P	**Pb**	**16 43 10.1**	**-0.8**
GOLH				S	**Sn**	**16 43 25.1**	**+0.2**
TAVA	**DENIZLI_Tavas**	**1.09**	**357**	*i* P	**Pb**	**16 43 12.5**	**-0.4**
TAVA				*i* S	**Sn**	**16 43 27.4**	**-0.3**
TAVA	**DENIZLI_Tavas**	**1.09**	**357**	P	**Pb**	**16 43 12.5**	**-0.4**
TAVA				S	**Sn**	**16 43 27.4**	**-0.3**
DATC	**Datca-Mugla**	**1.14**	**290**	PN	**Pn**	**16 43 13.6**	**0.0**
DATC	**Datca-Mugla**	**1.14**	**290**	*e*Pn	**Pn**	**16 43 13.6**	**0.0**
DAT	**Datca**	**1.19**	**287**	PN	**Pn**	**16 43 14.6**	**+0.1**
DAT	**Datca**	**1.19**	**287**	*i* P	**Pb**	**16 43 14.9**	**+0.2**
DAT				*i* S	**Sg**	**16 43 31.9**	**+0.7**
DAT	**Datca**	**1.19**	**287**	*e*Pn	**Pn**	**16 43 14.6**	**+0.1**
DAT	**Datca**	**1.19**	**287**	P	**Pb**	**16 43 14.9**	**+0.2**
DAT				S	**Sg**	**16 43 31.9**	**+0.7**
KORT	**Korkueli**	**1.25**	**60**	PN	**Pb**	**16 43 16.1**	**+0.3**
KORT	**Korkueli**	**1.25**	**60**	*i* P	**Pg**	**16 43 17.1**	**+0.3**
KORT				*i* S	**Sg**	**16 43 36.4**	**+3.1**
KORT	**Korkueli**	**1.25**	**60**	*e*Pn	**Pb**	**16 43 16.1**	**+0.3**
KORT	**Korkueli**	**1.25**	**60**	P	**Pg**	**16 43 17.1**	**+0.3**
KORT				S	**Sg**	**16 43 36.3**	**+3.1**
DNZL	**Cakiroluk**	**1.31**	**2**	*i* S	**Sn**	**16 43 33.8**	**+0.5**
DNZL	**Cakiroluk**	**1.31**	**2**	S	**Sn**	**16 43 33.8**	**+0.5**
MLSB	**Milas**	**1.34**	**313**	PN	**Pn**	**16 43 16.5**	**+0.1**
MLSB	**Milas**	**1.34**	**313**	*e*Pn	**Pn**	**16 43 16.5**	**+0.1**
DENT	**Denizli**	**1.37**	**1**	PN	**Pn**	**16 43 16.9**	**0.0**
DENT	**Denizli**	**1.37**	**1**	*e*Pn	**Pn**	**16 43 16.9**	**0.0**
BDRM	**Kayabasi**	**1.42**	**299**	*i* P	**Pn**	**16 43 18.1**	**+0.5**
BDRM				*i* S	**Sb**	**16 43 36.9**	**+0.5**
BDRM	**Kayabasi**	**1.42**	**299**	P	**Pn**	**16 43 18.0**	**+0.5**
BDRM				S	**Sb**	**16 43 36.9**	**+0.5**
ANTB	**Antalya**	**1.43**	**68**	PN	**Pb**	**16 43 18.8**	**0.0**
ANTB	**Antalya**	**1.43**	**68**	*e*Pn	**Pb**	**16 43 18.8**	**0.0**
BODT	**Bodrum**	**1.51**	**297**	PN	**Pn**	**16 43 17.8**	**-1.0**
BODT	**Bodrum**	**1.51**	**297**	P	**Pn**	**16 43 17.8**	**-1.0**
BODT				S	**Sn**	**16 43 35.9**	**-2.3**
BODT	**Bodrum**	**1.51**	**297**	P	**Pn**	**16 43 17.8**	**-1.0**
BODT				S	**Sn**	**16 43 35.9**	**-2.3**
NISR	**Nisiros**	**1.52**	**279**	P	**Pn**	**16 43 18.3**	**-0.6**
NISR	**Nisiros**	**1.52**	**279**	P	**Pn**	**16 43 18.4**	**-0.5**
AYDN	**Tasoluk**	**1.56**	**325**	*i* P	**Pb**	**16 43 20.5**	**-0.5**
AYDN				*i* S	**Sb**	**16 43 41.5**	**+1.1**
AYDN	**Tasoluk**	**1.56**	**325**	P	**Pb**	**16 43 20.5**	**-0.5**
AYDN				S	**Sb**	**16 43 41.5**	**+1.1**
YKAV	**Yalikavak-Bodr**	**1.56**	**299**	PN	**Pn**	**16 43 19.7**	**+0.2**
YKAV	**Yalikavak-Bodr**	**1.56**	**299**	*e*Pn	**Pn**	**16 43 19.7**	**+0.2**
BRDR	**BURDUR-Merkez**	**1.57**	**33**	*i* P	**Pb**	**16 43 20.6**	**-0.5**
BRDR				*i* S	**Sg**	**16 43 42.7**	**-0.5**
BRDR	**BURDUR-Merkez**	**1.57**	**33**	P	**Pb**	**16 43 20.6**	**-0.5**
BRDR				S	**Sg**	**16 43 42.7**	**-0.5**
KARP	**Karpathos**	**1.70**	**241**	PN	**Pn**	**16 43 22.3**	**+0.9**
KARP	**Karpathos**	**1.70**	**241**	P	**Pn**	**16 43 22.0**	**+0.6**
KARP				S	**Sn**	**16 43 42.6**	**-0.3**
KARP	**Karpathos**	**1.70**	**241**	P	**Pn**	**16 43 21.6**	**+0.2**
KARP				S	**Sn**	**16 43 42.3**	**-0.5**
KARP	**Karpathos**	**1.70**	**241**	P	**Pn**	**16 43 21.6**	**+0.2**
KARP	**Karpathos**	**1.70**	**241**	*e*Pn	**Pn**	**16 43 22.3**	**+0.9**
KARP				S	**Sn**	**16 43 42.5**	**-0.3**
AYDB	**Zeytinkoy-Aydi**	**1.79**	**331**	PN	**Pn**	**16 43 22.9**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**1.79**	**331**	*e*Pn	**Pn**	**16 43 22.9**	**+0.1**
ISP	**Isparta**	**1.89**	**40**	PN	**Pn**	**16 43 24.9

APE			S	Sn	16 44 12.1	+0.5
APE	**Apeiranthos**	**2.87 285**	P	Pn	16 43 37.2	-0.3
APE			S	Sn	16 44 11.1	-0.4
NPS	**Neapolis**	**2.96 249**	P	Pn	16 43 38.9	+0.1
NPS			S	Sn	16 44 12.8	-1.1
NPS	**Neapolis**	**2.96 249**	P	Pn	16 43 39.1	+0.3
NPS			S	Sn	16 44 12.9	-1.1
AKMC	**Akamas**	**3.03 115**	P	Pn	16 43 39.2	-0.5
baz=296						
AKMC	**Akamas**	**3.03 115**	P	Pn	16 43 39.2	-0.5
LAST	**Lasithi**	**3.10 248**	P	Pn	16 43 40.9	+0.1
LAST			S	Sn	16 44 14.9	-2.6
LAST	**Lasithi**	**3.10 248**	P	Pn	16 43 41.0	+0.2
LAST			S	Sn	16 44 15.7	-1.8
PPCY	**Paphos**	**3.11 118**	P	Pn	16 43 39.9	-0.9
baz=299						
PPCY	**Paphos**	**3.11 118**	P	Pn	16 43 39.9	-0.9
ALFC	**Alefka**	**3.18 112**	P	Pn	16 43 41.4	-0.3
baz=292						
ALFC			S	Sn	16 44 15.5	-3.7
ALFC	**Alefka**	**3.18 112**	P	Pn	16 43 41.4	-0.3
ALFC			S	Sn	16 44 15.5	-3.7
SZAC	**Souni**	**3.56 116**	P	Pn	16 43 45.6	-1.4
baz=297						
SZAC			S	Sn	16 44 26.1	-2.6
SZAC	**Souni**	**3.56 116**	P	Pn	16 43 45.6	-1.4
SZAC			S	Sn	16 44 26.1	-2.6
CSS	**Mathiatis**	**3.81 111**	P	Pn	16 43 50.2	-0.1
baz=292						
CSS	**Mathiatis**	**3.81 111**	P	Pn	16 43 50.2	-0.1
IMMV	**Iera Moni Meta**	**4.17 259**	P	Pn	16 43 57.7	+2.3
IMMV	**Iera Moni Meta**	**4.17 259**	P	Pn	16 43 56.9	+1.6
GVD	**Gavdhos**	**4.28 250**	P	Pn	16 43 56.9	0.0
GVD	**Gavdhos**	**4.28 250**	P	Pn	16 43 57.3	+0.4

*IDC **16** 16:53:24.6±1.3, 28°.46N×52°.85E, h0km, mb3.9/7, mb1 3.9/9, mb1mx3.5/61, mbtmp3.9/9, ML3.5/2, Error ellipse: s-maj=29.3km s-min=22.1km az=158.0*
*CSEM **16** 16:53:26.6, 28°.28N×52°.99E, h14km, ML3.2*
*TEH **16** 16:53:27.1, 28°.43N×53°.00E, h5km, ML3.3*
ISC 16 16:53:26.2±1.1, 28°.43N±0°.05×53°.00E±0°.05, h12km±8km, n18, σ1§46/23, mb4.0/7, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GHIR	**Ghir-Karzin**	**0.15**	**184**	*e*Pg	**Pg**	**16 53 29.1**	**-0.7**
IPAR	**Pars**	**1.40**	**2**	*e*Pg	**Pn**	**16 53 51.9**	**-0.1**
IPAR				*e*Sg	**Sg**	**16 54 11.5**	**0.0**
IPAR				*e*		16 54 16.5	
comp=Z,6μm,0.4s							
AHBU	**AHRAM**	**1.56**	**286**	*e*Pg	**Pb**	**16 53 55.9**	**+0.9**
AHBU				*e*Sg	**Sg**	**16 54 17.3**	**+1.0**
IKAZ	**Kazeroun**	**1.68**	**323**	*e*Pg	**Pb**	**16 53 57.1**	**-0.2**
IKAZ				*e*		16 54 25.6	
comp=Z,12μm,0.2s							
BNDS	**Bandar-Abbas**	**2.99**	**109**	*e*Pn	**Pn**	**16 54 15.3**	**+1.6**
IMEH	**Mehriz**	**3.26**	**25**	*e*Pn	**Pn**	**16 54 18.5**	**+1.0**
IMEH				*e*		16 55 00.7	
comp=Z,556nm,0.2s							
KRBR	**Kerman**	**3.63**	**64**	*e*Pn	**Pn**	**16 54 25.7**	**+3.1**
KRBR				*e*Sg	**Sg**	**16 55 22.2**	**-0.8**
IGAR	**Gharneh**	**4.04**	**348**	*e*Pn	**Pn**	**16 54 30.6**	**+2.4**
IGAR				*e*		16 55 22.7	
comp=Z,252nm,0.3s							
IZEF	**Zefreh**	**4.48**	**353**	*e*Pn	**Pn**	**16 54 35.4**	**+1.1**
IZEF				*e*		16 54 58.3	
comp=Z,128nm,0.2s							
IZEF				*e*Sn	**Sn**	**16 55 24.9**	**-1.6**
WSAR	**Wadi Sarin**	**7.25**	**134**	Pn	**Pn**	**16 55 12.5**	**+0.5**
comp=Z,1.1nm,0.3s,baz=328,slow=13,SNR=16							
WSAR				Sn	**Sn**	**16 56 32.4**	**-1.9**
comp=Z,0.3nm,0.3s,baz=172,slow=18,SNR=3.3							
BRTR	**Keskin Array B**	**19.55**	**310**	P	**P**	**16 57 53.9**	**0.0**
comp=Z,0.1nm,0.3s,baz=125,slow=11,SNR=3.5							
KURBB	**Kurchatov Arra**	**29.38**	**34**	P	**P**	**16 59 29.9**	**+0.7**
comp=Z,0.3nm,0.5s,baz=234,slow=9.0,SNR=3.0							
ZALV	**Zalesovo Beam**	**34.47**	**33**	P	**P**	**17 00 14.0**	**+0.2**
comp=Z,1.4nm,0.5s,baz=237,slow=9.4,SNR=8.0							
FINES	**FINESS Array B**	**37.56**	**339**	P	**P**	**17 00 39.0**	**-1.1**
comp=Z,1.0nm,0.4s,baz=150,slow=7.7,SNR=19							
HFS	**Hagfors**	**41.31**	**331**	P	**P**	**17 01 09.8**	**-1.7**
comp=Z,1.2nm,0.4s,baz=137,slow=7.1,SNR=14							
TORD	**Torodi Ar. Bea**	**49.95**	**263**	P	**P**	**17 02 19.1**	**-1.4**
comp=Z,1.3nm,0.6s,baz=69,slow=8.3,SNR=9.4							
KOWA	**Kowa**	**54.39**	**268**	P	**P**	**17 02 53.2**	**-0.3**
comp=Z,1.2nm,0.4s,baz=80,slow=5.6,SNR=3.3							
ILAR	**Eielson Array**	**85.81**	**8**	P	**P**	**17 06 07.3**	**+2.0**
comp=Z,0.3nm,0.7s,baz=337,slow=4.3,SNR=3.9							

*IDC **16** 16:54:56.2±0.8, 37°.10N×143°.96E, h0km, mb3.9/13, mb1 4.1/17, mb1mx3.9/64, mbtmp3.9/17, ML3.9/3, MS3.1/12, Ms1 3.1/12, ms1mx2.8/64, Error ellipse: s-maj=21.8km s-min=15.6km az=80.0*
*ISCJB **16** 16:54:59.5±0.6, 37°.18N±0°.04×143°.62E±0°.04, h33km, mb3.9/13, MS3.2/10, Error ellipse: s-maj=6.4km s-min=4.9km az=159.5*
*NIED **16** 16:55:00, 37°.20N×143°.60E, h5km, Mw4.0 Best double couple: M0:1.15000×10^15 NP1:φs=36.00000°, δ23.00000°, λ-91.00000°. NP2:φs=217.00000°, δ67.00000°, λ-89.00000°.*
*JMA **16** 16:55:00.3±0.2, 37°.22N×143°.58E, h53km, M4.4*
ISC 16 16:55:00.9±0.7, 37°.17N±0°.05×143°.74E±0°.07, h35km, n48, σ2§65/51, mb3.9/13, MS3.3/10, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**2.29**	**305**	P	**Pn**	**16 55 34.9**	**-1.3**
JIO				S	**Sn**	**16 56 00.1**	**-3.0**
JFK	**Kawauchi**	**2.29**	**276**	P	**Pn**	**16 55 34.9**	**-1.4**
JFK				*e*S	**Sn**	**16 56 00.4**	**-2.9**
ONAJ	**Iwakimizuishiy**	**2.35**	**269**	P	**Pn**	**16 55 35.4**	**-1.7**
ONAJ				*e*S	**Sn**	**16 56 02.1**	**-2.7**
JMM	**Marumori**	**2.44**	**287**	P	**Pn**	**16 55 36.8**	**-1.5**
JMM				*e*S	**Sn**	**16 56 04.1**	**-2.9**
JMK	**Ichinoseki**	**2.67**	**313**	P	**Pn**	**16 55 40.2**	**-1.2**
JFT	**Otama**	**2.73**	**278**	P	**Pn**	**16 55 41.8**	**-0.5**
JFT				S	**Sn**	**16 56 12.9**	**-1.3**
JOM	**Ohasama**	**3.00**	**321**	P	**Pn**	**16 55 44.8**	**-1.2**
JOM				S	**Sn**	**16 56 18.1**	**-2.6**
JYK	**Kaneyama**	**3.19**	**304**	P	**Pn**	**16 55 47.8**	**-0.8**
JAG	**Ashikaga**	**3.52**	**259**	P	**Pn**	**16 55 52.3**	**-0.8**
JAG				*e*S	**Sn**	**16 56 29.9**	**-3.6**
JANG	**Nango**	**3.64**	**332**	P	**Pn**	**16 55 53.8**	**-1.0**
JANG				*e*S	**Sn**	**16 56 32.2**	**-4.3**
JRY	**Ryogami san**	**4.06**	**255**	P	**Pn**	**16 55 59.6**	**-1.0**
JRY				S	**Sn**	**16 56 42.8**	**-4.1**
JOD2	**Odawara 2**	**4.21**	**245**	P	**Pn**	**16 56 01.5**	**-1.2**
JOD2				*e*S	**Sn**	**16 56 46.2**	**-4.5**
MJAR	**Matsushiro Arr**	**4.48**	**264**	Pn	**Pn**	**16 56 06.6**	**+0.3**
9.7nm,0.3s,baz=89,slow=14,SNR=121							
MJAR				Sn	**Sn**	**16 56 55.9**	**-1.4**
6.6nm,0.3s,baz=87,slow=26,SNR=11							
MJAR				LR	LR	16 58 00.7	
comp=Z,99nm,21.4s,baz=90,slow=40							
MAT	**Matsushiro**	**4.48**	**264**	P	**Pn**	**16 56 06.9**	**+0.6**
MAT				S	**Sn**	**16 56 56.8**	**-0.5**
JOT	**Ohata**	**4.70**	**334**	P	**Pn**	**16 56 08.8**	**-0.5**
JKB	**Kayabe**	**5.16**	**337**	*e*S	**Sn**	**16 57 09.1**	**-4.7**
JHJ	**Hachijo jima 2**	**5.18**	**220**	Pn	**Pn**	**16 56 12.9**	**-3.0**
34nm,0.3s,baz=88,slow=23,SNR=8.5							
JHJ				Sn	**Sn**	**16 57 08.4**	**-6.0**
60nm,0.3s,baz=244,slow=21,SNR=6.3							
JCH	**Churui**	**5.45**	**357**	P	**Pn**	**16 56 17.4**	**-2.2**
JCH				*e*S	**Sn**	**16 57 14.3**	**-6.7**
ASAJ	**Asahikawa**	**7.00**	**353**	Pn	**Pn**	**16 56 39.6**	**-1.2**
3.0nm,0.3s,baz=203,slow=12,SNR=65							
ASAJ				Sn	**Sn**	**16 57 55.1**	**-4.0**
2.8nm,0.3s,baz=38,slow=27,SNR=7.8							
JCJ	**Chichijima**	**10.13**	**188**	Pn	**Pn**	**16 57 19.2**	**-4.6**
2.7nm,0.3s,baz=90,slow=14,SNR=2.7							
JCJ				Sn	Sn	16 59 02.8	-13
4.4nm,0.3s,baz=322,slow=19,SNR=4.3							
USRK	**Ussuriysk Ar.**	**11.35**	**312**	Pn	**Pn**	**16 57 43.1**	**+2.6**
0.4nm,0.3s,baz=118,slow=15,SNR=4.0							
KSRS	**Korea Array**	**12.60**	**276**	Pn	**Pn**	**16 58 00.1**	**+2.5**
0.2nm,0.3s,baz=86,slow=14,SNR=9.1							
KSRS				LR	LR	17 02 14.6	
comp=Z,67nm,20.9s,baz=52,slow=34							
KLR	**Kul'dur**	**14.87**	**328**	Pn	**Pn**	**16 58 26.6**	**-1.9**
0.0nm,0.3s,baz=136,slow=12,SNR=4.9							

GUMO	**Guam**	**23.50**	**177**	LR	LR	17 08 12.1
comp=Z,14nm,18.8s,baz=354,slow=34						
SEY	**Seymchan**	**26.34**	**9**	P	**P**	**17 00 34.9**	**+1.7**
1.7nm,0.8s,baz=224,slow=4.4,SNR=5.1						
H11N2	**WAKE ISLAND Hy**	**26.65**	**124**	T	T	17 28 19.5
baz=321,slow=76,SNR=2.4						
H11N1	**WAKE ISLAND Hy**	**26.66**	**124**	T	T	17 28 19.5
H11N3	**WAKE ISLAND Hy**	**26.67**	**124**	T	T	17 28 21.2
baz=313,slow=76,SNR=1.4						
H11S1	**WAKE ISLAND Hy**	**27.41**	**126**	T	T	17 29 27.6
H11S3	**WAKE ISLAND Hy**	**27.41**	**127**	T	T	17 29 29.5
SNR=2.4						
H11S2	**WAKE ISLAND Hy**	**27.42**	**126**	T	T	17 29 27.6
SONM	**Songino Array**	**29.26**	**303**	P	**P**	**17 01 03.0**	**+3.2**
1.2nm,0.6s,baz=105,slow=9.0,SNR=6.8						
SONM				LR	LR	17 12 08.5
comp=Z,22nm,20.7s,baz=103,slow=35						
ZALV	**Zalesovo Beam**	**43.20**	**312**	P	**P**	**17 02 59.6**	**+1.4**
0.4nm,0.4s,baz=72,slow=9.7,SNR=3.1						
ZALV				LR	LR	17 22 51.9
comp=Z,21nm,18.1s,baz=79,slow=39						
NRIK	**Noril'sk**	**43.93**	**335**	LR	LR	17 22 27.6
comp=Z,42nm,19.0s,baz=62,slow=38						
KURBB	**Kurchatov Arra**	**47.38**	**308**	P	**P**	**17 03 32.4**	**+1.0**
0.9nm,0.7s,baz=84,slow=7.5,SNR=11						
ILAR	**Eielson Array**	**48.38**	**32**	P	**P**	**17 03 38.0**	**-1.1**
0.8nm,0.8s,baz=268,slow=6.0,SNR=11						
HNR	**Honiara**	**48.78**	**159**	LR	LR	17 22 15.6
comp=Z,26nm,21.0s,baz=237,slow=34						
BVAR	**Borovoye Array**	**51.85**	**313**	P	**P**	**17 04 06.4**	**+0.9**
0.4nm,0.5s,baz=69,slow=9.6,SNR=3.5						
BVAR				LR	LR	17 26 39.5
comp=Z,27nm,18.2s,baz=96,slow=37						
WRA	**Warramunga Arr**	**57.49**	**190**	P	**P**	**17 04 46.4**	**-0.2**
2.9nm,0.7s,baz=9.1,slow=7.1,SNR=27						
AKTO	**Aktyubinsk**	**59.96**	**313**	P	**P**	**17 05 06.7**	**+3.1**
0.9nm,0.7s,baz=76,slow=9.9,SNR=4.9						
ASAR	**Alice Springs**	**61.21**	**190**	P	**P**	**17 05 12.4**	**+0.2**
1.4nm,0.7s,baz=13,slow=8.7,SNR=20						
STKA	**Stephens Creek**	**68.72**	**182**	P	**P**	**17 06 01.5**	**+0.7**
2.2nm,1.0s,baz=10,slow=7.3,SNR=4.3						
FINES	**FINESS Array B**	**69.55**	**333**	P	**P**	**17 06 06.8**	**+1.1**
1.3nm,0.7s,baz=46,slow=5.5,SNR=5.6						
FINES				LR	LR	17 39 37.6
comp=Z,29nm,18.2s,baz=50,slow=38						
KBZ	**Khabaz**	**72.22**	**312**	P	**P**	**17 06 23.7**	**+1.5**
1.3nm,0.9s,baz=40,slow=2.5,SNR=3.5						
GNI	**Garni**	**73.11**	**308**	LR	LR	17 43 21.5
comp=Z,19nm,18.2s,baz=212,slow=40						
HFS	**Hagfors**	**74.72**	**337**	LR	LR	17 44 10.3
comp=Z,25nm,18.4s,baz=14,slow=40						
MLR	**Muntele Rosu**	**80.47**	**321**	LR	LR	17 46 22.7
comp=Z,7.0nm,18.2s,baz=52,slow=38						
TXAR	**Lajitas Array**	**88.55**	**54**	P	**P**	**17 07 51.9**	**+1.5**
0.6nm,0.6s,baz=308,slow=3.2,SNR=8.6						

*MAN **16** 17:18:55.5, 16°.51N×120°.43E, h61km, mb5.0, ML3.9, MS3.9*
*ISCJB **16** 17:18:56.7±0.5, 16°.43N±0°.04×120°.55E±0°.06, h52km±8km, mb3.4/5, Error ellipse: s-maj=10.3km s-min=5.9km az=18.5*
*IDC **16** 17:19:00.3±2.5, 16°.51N×120°.92E, h69km±27km, mb3.2/6, mb1 3.4/6, mb1mx3.1/63, mbtmp3.5/6, MS2.7/1, Ms1 2.7/1, ms1mx2.2/31, Error ellipse: s-maj=36.5km s-min=17.1km az=76.0*
ISC 16 17:18:57.8±1.1, 16°.48N±0°.04×120°.54E±0°.06, h48km±15km, n18, σ1§81/20, mb3.4/5, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.61**	**260**	*e*P	**Pn**	**17 19 09.3**	**-1.1**
SCZP	**Santa Cruz**	**0.93**	**221**	*e*P	**Pn**	**17 19 13.5**	**-1.0**
PCPH	**Palayan**	**1.06**	**150**	*e*P	**Pn**	**17 19 13.7**	**-2.6**
ABRA	**Dolores**	**1.17**	**8**	*e*P	**Pn**	**17 19 16.4**	**-1.4**
ABRA				*e*S	**Sn**	**17 19 32.9**	**+0.3**
BALP	**Baler**	**1.24**	**127**	*e*P	**Pn**	**17 19 16.1**	**-2.6**
CAUP	**Cauayan**	**1.31**	**69**	*e*P	**Pn**	**17 19 19.0**	**-0.7**
CAUP				*e*S	**Sn**	**17 19 38.1**	**+2.0**
APYP	**Conner**	**1.52**	**26**	*e*P	**Pn**	**17 19 22.4**	**-0.2**
APYP				*e*S	**Sn**	**17 19 44.1**	**+2.8**
CVP	**Callao Caves**	**1.72**	**45**	*e*P	**Pn**	**17 19 26.0**	**+0.7**
CVP				*e*S	**Sn**	**17 19 46.0**	**-0.1**
TGY	**Tagaytay City**	**2.40**	**171**	P	**Pn**	**17 19 35.9**	**+1.2**
114nm,0.3s,baz=52,slow=2.3,SNR=7.9							
TGY				S	**Sn**	**17 20 06.9**	**+4.0**
214nm,0.3s,baz=288,slow=18,SNR=5.7							
LUBP	**Lubang**	**2.75**	**186**	*e*P	**Pn**	**17 19 38.7**	**-0.7**
BUSP	**Coron**	**4.47**	**184**	*e*P	**Pn**	**17 20 02.9**	**-0.1**
JOW	**Kunigami**	**12.55**	**34**	LR	LR	17 26 23.3	
comp=Z,36nm,21.9s,baz=208,slow=36							
CMAR	**Chiang Mai Arr**	**20.70**	**279**	P	Pn	17 23 38.6	+1.7
1.6nm,1.0s,baz=87,slow=8.6,SNR=5.7							
KSRS	**Korea Array**	**21.88**	**16**	P	**P**	**17 23 47.1**	**+0.5**
1.1nm,0.8s,baz=200,slow=12,SNR=7.6							
SONM	**Songino Array**	**33.37**	**343**	P	**P**	**17 25 31.3**	**-0.2**
0.6nm,0.7s,baz=167,slow=7.1,SNR=3.6							
WRA	**Warramunga Arr**	**38.65**	**159**	P	**P**	**17 26 15.0**	**-1.8**
0.4nm,0.7s,baz=340,slow=9.2,SNR=3.9							
ASAR	**Alice Springs**	**41.99**	**162**	P	**P**	**17 26 44.3**	**-0.1**
0.4nm,0.7s,baz=337,slow=6.8,SNR=3.8							
FINES	**FINESS Array B**	**77.80**	**331**	P	P	17 30 52.1	+2.4
0.6nm,0.8s,baz=106,slow=8.8,SNR=2.2							

DJA 16 17:24:52.0±0.3, 3°S±4°×13°1E±°, h10km, M3.7/9, MLv3.7/9, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**1.18**	**78**	P	Pb	17 25 13.2	-1.4
FAKI				S	Sn	17 25 30.9	+0.1
BNDI	**Bandanaira**	**1.79**	**221**	P	Pn	17 25 21.5	-1.5
MSAI	**Masohi**	**2.17**	**265**	P	Pn	17 25 29.5	+1.3
AAI	**Ambon**	**2.94**	**260**	P	Pn	17 25 39.6	+0.8
RKPI	**Ransiki, Papua**	**3.50**	**62**	P	Pn	17 25 46.2	-0.3
NLAI	**Namlea**	**3.98**	**269**	P	Pn	17 25 52.9	-0.3
LBMI	**Labuha**	**4.38**	**305**	P	Pn	17 25 58.5	-0.2

MEX 16 18:10:49.4±0.7, 14°.83N×93°.24W, h20km±187km, MD3.7, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.87**	**2**	*i* P	Pb	18 11 03.0	-2.9
PCIG				*e*S	Sb	18 11 13.4	-3.8
THIG		**0.95**	**85**	*e*P	Pb	18 11 04.0	-3.2
THIG				*i* S	Sb	18 11 16.4	-3.0
CCIG	**Comitan**	**1.80**	**36**	*e*P	Pn	18 11 17.4	-2.1
CCIG				*e*S	Sn	18 11 38.6	-3.2
TGIG		**1.94**	**3**	*i* P	Pn	18 11 19.1	-2.3
TGIG				*e*S	Sn	18 11 40.6	-4.7

*ISCJB **16** 18:22:34.1±0.8, 1°.34N±0°.06×99°.94E±0°.08, h150km, mb3.4/4, Error ellipse: s-maj=12.3km s-min=7.8km az=160.2*
*IDC **16** 18:22:34.2±4.7, 1°.01N×99°.30E, h165km±21km, mb3.1/4, mb1 3.2/4, mb1mx2.9/60, mbtmp3.5/4, Error ellipse: s-maj=146.2km s-min=18.2km az=56.0*
*DJA **16** 18:22:37.5±0.5, 1°N±3°×10°0E±°, h156km±6km, M3.0/10, MLv3.0/10*
ISC 16 18:22:35.4±1.0, 1°.36N±0°.06×99°.80E±0°.10, h150km, n11, σ1§95/14, mb3.4/4, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**0.60**	**201**	P	**Pn**	**18 23 01.2**	**+3.8**
PSI	**Prapat**	**1.68**	**329**	P	**Pn**	**18 23 08.2**	**+1.2**
1.8nm,0.3s,baz=180,slow=12,SNR=2.6							
PSI				S	**Sn**	**18 23 32.8**	**+1.6**
2.4nm,0.3s,baz=180,slow=14,SNR=4.9							
GSI	**Gunungsitoli**	**2.22**	**269**	P	**Pn**	**18 23 15.0**	**+1.8**
GSI				S	**Sn**	**18 23 41.7**	**-0.5**
PDSI	**Padang**	**2.35**	**164**	P	**Pn**	**18 23 17.5**	**+2.7**
SISI	**Saibi**	**2.76**	**195**	P	**Pn**	**18 23 19.8**	**0.0**
SISI				S	**Sn**	**18 23 54.2**	**0.0**
KCSI	**Kotacane, Aceh**	**2.95**	**317**	P	**Pn**	**18 23 23.6**	**+1.4**
TPTI		**3.22**	**306**	P	**Pn**	**18 23 27.5**	**+1.8**
WRA	**Warramunga Arr**	**39.94**	**124**	P	**P**	**18 29 54.5**	**-0.9**
0.7nm,0.5s,baz=302,slow=8.6,SNR=7.9							
ASAR	**Alice Springs**	**41.45**	**129**	P	**P**	**18 30 06.0**	**-1.8**
0.3nm,0.9s,baz=297,slow=7.7,SNR=6.3							

KURBB	**Kurchatov Arra**	**52.29**	**343**	P	**P**	**18 31 29.8**	**-1.6**
0.3nm,0.7s,baz=168,slow=7.1,SNR=3.2						
ZALV	**Zalesovo Beam**	**53.85**	**349**	P	**P**	**18 31 41.9**	**-0.9**
1.0nm,0.4s,baz=169,slow=7.0,SNR=7.3						

*IDC **16** 18:30:22.5±0.7, 1°.17N×126°.55E, h0km, mb4.0/10, mb1 4.0/11, mb1mx3.8/58, mbtmp4.0/11, ML3.2/1, MS2.7/1, Ms1 2.7/1, ms1mx2.2/54, Error ellipse: s-maj=49.9km s-min=14.3km az=65.0*
*ISCJB **16** 18:30:25.0±0.3, 1°.32N±0°.04×127°.03E±0°.07, h35km, mb4.6/29, Error ellipse: s-maj=10.6km s-min=5.4km az=161.2*
*NEIC **16** 18:30:31.2±0.7, 1°.20N×126°.88E, h76km±7km, mb4.4/17, Error ellipse: s-maj=9.7km s-min=5.1km az=58.0*
ISC 16 18:30:27.0±0.5, 1°.33N±0°.07×127°.15E±0°.08, h35km, n53, σ1§10/52, mb4.6/29, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.60**	**159**	*e*Pn	Pn	18 30 45.5	+6.5
SIJI	**Sorong**	**4.66**	**118**	Pn	Pn	18 31 42.2	+7.3
0.8nm,0.3s,baz=312,slow=14,SNR=4.6							
SIJI				LR	LR	18 33 55.5	
comp=Z,74nm,19.5s,baz=259,slow=42							
LUWI	**Luwuk**	**4.97**	**242**	*e*Pn	**Pn**	**18 31 37.6**	**-1.6**
LUWI				*e*Sn	**Sn**	**18 32 38.8**	**+3.2**
FAKI	**Fak Fak**	**6.62**	**130**	*e*Pn	Pn	18 32 10.5	+8.7
MYLDM	**Lahad Datu**	**9.44**	**294**	*e*Pn	**Pn**	**18 32 44.5**	**+3.8**
SOEI	**Soe**	**11.38**	**195**	*e*Pn	**Pn**	**18 33 06.2**	**-1.2**
MTN	**Manton Dam**	**14.63**	**164**	*e*Pn	**Pn**	**18 33 52.6**	**+1.1**
SBUM	**Sibu**	**14.96**	**274**	*e*Pn	**Pn**	**18 33 55.2**	**-0.8**
KSM	**Kuching**	**16.84**	**271**	*e*Pn	**Pn**	**18 34 19.4**	**-0.8**
15nm,1.3s							
FITZ	**Fitzroy Crossi**	**19.37**	**184**	*e*P	**P**	**18 34 49.8**	**0.0**
24nm,1.9s							
WR1	**Warramunga Arr**	**22.29**	**162**	*e*P	**P**	**18 35 21.9**	**+0.5**
17nm,1.4s							
WRA	**Warramunga Arr**	**22.29**	**162**	P	**P**	**18 35 21.9**	**+0.5**
2.8nm,0.5s,baz=337,slow=11,SNR=28							
WB2	**Warramunga Arr**	**22.29**	**162**	*e*P	**P**	**18 35 22.0**	**+0.5**
14nm,1.3s							
YOJ	**Yonaguni jima**	**23.34**	**350**	*e*P	**P**	**18 35 32.1**	**-0.1**
201nm,1.5s							
MBWA	**Marble Bar**	**23.50**	**198**	*e*P	**P**	**18 35 31.7**	**-2.2**
51nm,1.5s							
AS31	**Alice Springs**	**25.70**	**166**	*e*P	**P**	**18 35 54.7**	**+0.6**
1.2nm,0.6s							
ASAR	**Alice Springs**	**25.70**	**166**	P	**P**	**18 35 54.7**	**+0.6**
1.6nm,0.6s,baz=344,slow=11,SNR=40							
ASAR				PcP	**PcP**	**18 39 23.7**	**-0.3**
0.2nm,0.6s,baz=360,slow=2.2,SNR=4.2							
AS01	**Alice Springs**	**25.71**	**166**	*e*P	**P**	**18 35 54.7**	**+0.5**
FORT	**Forrest**	**31.95**	**179**	*e*P	**P**	**18 36 50.0**	**+0.4**
14nm,0.9s							
CM01	**Chiang Mai Arr**	**32.46**	**303**	*e*P	**P**	**18 36 54.4**	**+0.2**
CHTO	**Chiang Mai**	**32.66**	**304**	*e*P	**P**	**18 36 53.3**	**-2.7**
19nm,1.8s							
BBOO	**Buckleboo**	**34.99**	**167**	*e*P	**P**	**18 37 15.8**	**-0.2**
69nm,1.6s							
STKA	**Stephens Creek**	**35.76**	**159**	P	**P**	**18 37 23.9**	**+1.2**
0.6nm,0.3s,baz=344,slow=7.4,SNR=5.3							
STKA	**Stephens Creek**	**35.76**	**159**	*e*P	**P**	**18 37 23.5**	**+0.8**
2.5nm,1.4s							
KSAR	**Wonju Array Be**	**35.94**	**1**	P	**P**	**18 37 25.5**	**+1.3**
KSRS	**Korea Array**	**35.95**	**1**	P	**P**	**18 37 25.5**	**+1.3**
0.4nm,0.6s,baz=173,slow=10.0,SNR=3.4							
ULN	**Ulaanbaatar**	**49.51**	**342**	*e*P	**P**	**18 39 14.5**	**+0.2**
3.9nm,1.2s							
SONA0	**Songino Array**	**49.69**	**342**	*e*P	**P**	**18 39 15.9**	**+0.3**
SONM	**Songino Array**	**49.69**	**342**	P	**P**	**18 39 15.9**	**+0.3**
0.8nm,0.7s,baz=159,slow=8.7,SNR=4.9							
SONA1	**Songino Array**	**49.70**	**342**	*e*P	**P**	**18 39 15.8**	**+0.2**
THZ	**Tophouse**	**59.57**	**142**	*e*P	**P**	**18 40 28.0**	**+0.7**
70nm,1.6s							
RPZ	**Rata Peaks**	**59.58**	**144**	*e*P	**P**	**18 40 27.6**	**+0.3**
86nm,1.8s							
MK31	**Makanchi Array**	**59.76**	**326**	*e*P	**P**	**18 40 28.5**	**0.0**
MK32	**Makanchi Array**	**59.76**	**326**	*e*P	**P**	**18 40 28.7**	**+0.2**
MKAR	**Makanchi Array**	**59.76**	**326**	P	**P**	**18 40 28.7**	**+0.2**
2.1nm,0.4s,baz=116,slow=8.6,SNR=37		

H11N1	**WAKE ISLAND Hy 27.97 123**		T	T	19 10 14.5		
	baz=316,slow=75,SNR=52						
H11N3	**WAKE ISLAND Hy 27.98 123**		T	T	19 10 05.4		
	baz=316,slow=75,SNR=38						
H11S1	**WAKE ISLAND Hy 28.70 125**		T	T	19 11 21.6		
	baz=317,slow=76,SNR=12						
H11S3	**WAKE ISLAND Hy 28.71 125**		T	T	19 11 03.1		
	baz=317,slow=76,SNR=14						
H11S2	**WAKE ISLAND Hy 28.72 125**		T	T	19 11 14.3		
	baz=317,slow=76,SNR=13						
KURBB	**Kurchatov Arra**	**46.09 308**	P	**P**	**18 43 28.2**	**+0.8**	
	0.6nm,0.5s,baz=82,slow=7.9,SNR=6.7						
ILAR	**Eielson Array**	**48.54 33**	P	**P**	**18 43 45.3**	**-1.0**	
	0.2nm,0.6s,baz=268,slow=5.4,SNR=2.7						
WRA	**Warramunga Arr**	**57.86 189**	P	**P**	**18 44 55.8**	**+0.5**	
	0.7nm,0.6s,baz=5.7,slow=7.3,SNR=10						
ASAR	**Alice Springs**	**61.59 189**	P	**P**	**18 45 21.4**	**+0.5**	
	0.3nm,0.7s,baz=1.9,slow=6.2,SNR=4.2						
FINES	**FINESS Array B**	**68.49 332**	P	**P**	**18 46 05.7**	**+0.4**	
	1.3nm,0.9s,baz=7.0,slow=13,SNR=2.7						

*ISK **16** 19:03:48.6, 36°.92N×28°.22E, h17km, ML2.3/7*
*CSEM **16** 19:03:49.3±0.3, 36°.94N×28°.29E, h2km, ML2.3, Error ellipse: s-maj=5.7km s-min=5.6km az=59.0, Suspected Mining explosion.*
*DDA **16** 19:03:50.1, 36°.92N×28°.26E, h7km, Ml2.6, Suspected Mining explosion.*

ISC 16 19:03:48.8±1.0, 36°.94N±0°.03×28°.31E±0°.02, h5km±11km, n26, σ0s54/41, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSB	**Marmaris-Mugla**	**0.24**	**203**	PG	**Pg**	**19 03 53.6**	**+0.1**
MRSB				SG	**Sg**	**19 03 57.6**	**+0.9**
MRSB	**Marmaris-Mugla**	**0.24**	**203**	*e*Pg	**Pg**	**19 03 53.6**	**+0.1**
MRSB				*e*Sg	**Sg**	**19 03 57.6**	**+0.9**
TURN	**Turunc**	**0.24**	**106**	PG	**Pg**	**19 03 53.1**	**-0.4**
TURN				SG	**Sg**	**19 03 56.1**	**-0.6**
TURN	**Turunc**	**0.24**	**106**	*i* P	**Pg**	**19 03 53.1**	**-0.4**
TURN				*i* S	**Sg**	**19 03 56.1**	**-0.6**
TURN	**Turunc**	**0.24**	**106**	P	**Pg**	**19 03 53.1**	**-0.4**
TURN				S	**Sg**	**19 03 56.2**	**-0.5**
DALY	**Dalyan (Mu¨la**	**0.30**	**114**	PG	**Pb**	**19 03 56.4**	**-0.2**
DALY				SG	**Sb**	**19 04 02.3**	**+0.4**
DALY	**Dalyan (Mu¨la**	**0.30**	**114**	*i* P	**Pb**	**19 03 56.5**	**-0.2**
DALY				*i* S	**Sb**	**19 04 02.9**	**+1.0**
DALY	**Dalyan (Mu¨la**	**0.30**	**114**	P	**Pb**	**19 03 56.5**	**-0.2**
DALY				S	**Sb**	**19 04 02.9**	**+1.0**
MLSB	**Milas**	**0.56**	**310**	PG	**Pg**	**19 03 59.4**	**-0.1**
MLSB	**Milas**	**0.56**	**310**	*e*Pg	**Pg**	**19 03 59.4**	**-0.1**
DAT	**Datca**	**0.63**	**251**	PG	**Pg**	**19 04 00.2**	**-0.6**
DAT	**Datca**	**0.63**	**251**	*i* P	**Pb**	**19 04 02.0**	**-0.3**
DAT				*i* S	**Sb**	**19 04 10.6**	**-0.8**
DAT	**Datca**	**0.63**	**251**	*e*Pg	**Pg**	**19 04 00.2**	**-0.6**
DAT	**Datca**	**0.63**	**251**	P	**Pb**	**19 04 02.0**	**-0.3**
DAT				S	**Sb**	**19 04 10.6**	**-0.8**
BDRM	**Kayabasi**	**0.71**	**280**	*i* P	**Pb**	**19 04 04.0**	**+0.4**
BDRM				*i* S	**Sg**	**19 04 12.1**	**+0.6**
BDRM	**Kayabasi**	**0.71**	**280**	P	**Pb**	**19 04 04.0**	**+0.4**
BDRM				S	**Sg**	**19 04 12.1**	**+0.6**
TAVA	**DENIZLI_Tavas**	**0.71**	**42**	*i* P	**Pb**	**19 04 04.1**	**+0.4**
TAVA				*i* S	**Sn**	**19 04 16.5**	**-0.5**
TAVA	**DENIZLI_Tavas**	**0.71**	**42**	P	**Pb**	**19 04 04.1**	**+0.4**
ARG	**Arkhangelos**	**0.74**	**192**	PG	**Pg**	**19 04 03.1**	**+0.2**
ARG	**Arkhangelos**	**0.74**	**192**	*e*Pg	**Pg**	**19 04 03.1**	**+0.2**
AYDN	**Tasoluk**	**0.80**	**334**	*i* P	**Pg**	**19 04 04.0**	**-0.1**
AYDN				*i* S	**Sb**	**19 04 16.7**	**+0.4**
AYDN	**Tasoluk**	**0.80**	**334**	P	**Pg**	**19 04 04.0**	**-0.1**
AYDN				S	**Sb**	**19 04 16.7**	**+0.4**
BODT	**Bodrum**	**0.81**	**279**	PG	**Pg**	**19 04 03.5**	**-0.9**
BODT	**Bodrum**	**0.81**	**279**	*e*Pg	**Pg**	**19 04 03.5**	**-0.9**
AYDB	**Zeytinkoy-Aydi**	**1.06**	**342**	PG	**Pg**	**19 04 09.1**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**1.06**	**342**	*e*Pg	**Pg**	**19 04 09.1**	**0.0**

TAP 16 19:13:10.8, 23°.71N×121°.52E, h8km, ML1.8, 1D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	**Guangfu**	**0.10**	**242**	P	Pg	19 13 13.6	+0.5
	baz=242						
EGFH				S	Sg	19 13 15.9	+1.1
	baz=242						
ESL	**Shilin**	**0.13**	**322**	⇓*i* P	Pg	19 13 14.3	+0.7
	baz=324						
ESL				*i* S	Sg	19 13 16.8	+1.2
	baz=324						
HGSD	**Ruisui**	**0.24**	**202**	*e*P	Pg	19 13 16.6	+1.0
	baz=201						
EHY	**Hungye**	**0.27**	**221**	*e*P	Pg	19 13 16.9	+0.6
	baz=219						
EHY				*e*S	Sb	19 13 22.1	-0.7
	baz=219						
VWDT	**VWDT**	**0.35**	**277**	*e*P	Pb	19 13 18.9	-0.4
	baz=276						
VWDT				*e*S	Sb	19 13 24.3	-0.7
	baz=276						
TWD	**Chiawan**	**0.37**	**11**	*e*P	Pb	19 13 19.1	-0.6
	baz=12						
YULB	**Yu-li**	**0.38**	**213**	P	Pb	19 13 19.4	-0.4
	baz=212						
TWF1	**Yuli**	**0.41**	**210**	*e*P	Pb	19 13 19.8	-0.6
	baz=208						
CHGB	**Renai**	**0.47**	**318**	*e*P	Pb	19 13 21.3	-0.2
	baz=317						
SSLB	**Suanglung**	**0.52**	**278**	*e*P	Pb	19 13 22.3	0.0
	baz=278						
FULB	**Fuli**	**0.55**	**202**	*e*P	Pb	19 13 23.1	+0.3
	baz=202						
TYC	**Yuchr**	**0.64**	**288**	*e*P	Pb	19 13 24.7	+0.6
	baz=287						
NNSB	**Datong**	**0.72**	**350**	*e*P	Pb	19 13 25.4	-0.4
	baz=350						
NNSH	**Datong**	**0.72**	**350**	*e*P	Pb	19 13 25.6	-0.2
	baz=350						
NNS	**Nan Shan**	**0.74**	**350**	*e*P	Pb	19 13 25.9	-0.1
	baz=350						
CHN1	**Nanshi**	**1.05**	**240**	*e*P	Pg	19 13 31.1	+0.1
	baz=240						

TAP 16 19:13:16.6, 23°.71N×121°.53E, h6km, ML2.1, 1D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	**Guangfu**	**0.10**	**247**	P	Pg	19 13 19.6	+0.8
	baz=247						
EGFH				*i* S	Sg	19 13 21.6	+1.3
	baz=247						
ESL	**Shilin**	**0.14**	**320**	⇓*i* P	Pg	19 13 20.3	+0.8
	baz=321						
ESL				*i* S	Sg	19 13 22.8	+1.4
	baz=321						
ENLB	**Shoufeng**	**0.20**	**19**	*e*P	Pg	19 13 21.8	+1.1
	baz=18						
ENLB				*e*S	Sg	19 13 25.3	+1.9
	baz=18						
HGSD	**Ruisui**	**0.24**	**204**	*e*P	Pg	19 13 21.7	+0.4
	baz=204						
HGSD				*e*S	Sg	19 13 26.3	+2.0
	baz=204						
EHY	**Hungye**	**0.28**	**224**	P	Pb	19 13 23.1	-1.0
	baz=222						
VWDT	**VWDT**	**0.36**	**277**	*e*P	Pb	19 13 25.1	-0.4
	baz=277						
VWDT				*e*S	Sb	19 13 31.2	-0.1
	baz=277						
TWD	**Chiawan**	**0.38**	**9**	*e*P	Pb	19 13 25.2	-0.5
	baz=10.0						
TWD				*e*S	Sb	19 13 31.1	-0.7
	baz=10.0						
YULB	**Yu-li**	**0.38**	**214**	*e*P	Pb	19 13 25.3	-0.5
	baz=214						
YULB				*e*S	Sb	19 13 31.8	-0.2
	baz=214						
TWF1	**Yuli**	**0.41**	**211**	P	Pb	19 13 26.0	-0.4
	baz=210						
TWF1				*e*S	Sb	19 13 32.8	-0.2
	baz=210						
CHGB	**Renai**	**0.48**	**317**	P	Pb	19 13 27.1	-0.6
	baz=317						
CHGB				*e*S	Sb	19 13 34.6	-0.5
	baz=317						

FULB	**Fuli**	**0.55**	**203**	*e*P	Pb	19 13 28.7	0.0
	baz=203						
FULB				*e*S	Sb	19 13 37.5	+0.5
	baz=203						
SMLT	**Sun Moon Lake**	**0.60**	**287**	*e*P	Pb	19 13 29.8	+0.1
	baz=286						
SMLT				*e*S	Sb	19 13 38.5	0.0
	baz=286						
ALS	**Alishan**	**0.69**	**254**	*e*P	Pb	19 13 31.3	-0.1
	baz=253						
ALS				*e*S	Sb	19 13 41.4	+0.1
	baz=253						
NNS	**Nan Shan**	**0.74**	**349**	P	Pb	19 13 32.0	0.0
	baz=349						
NNS				*e*S	Sb	19 13 43.1	+0.5
	baz=349						

*ISCJB **16** 19:13:26.4±1.0, 15°.48N±0°.08×93°.34W±0°.09, h86km±7km, mb3.6/3, Error ellipse: s-maj=17.6km s-min=8.9km az=44.5*
*MEX **16** 19:13:27.2±0.5, 15°.46N×93°.40W, h89km±5km, MD3.8*
*IDC **16** 19:13:32.8±3.6, 16°.30N×92°.68W, h106km±55km, mb3.2/3, mb1 3.6/5, mb1mx3.3/41, mbtmp3.6/5, Error ellipse: s-maj=149.5km s-min=37.1km az=32.0*

ISC 16 19:13:27.0±1.2, 15°.49N±0°.09×93°.35W±0°.10, h82km±8km, n9, σ1s04/14, mb3.5/3, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.25**	**30**	*i* P	**Pn**	**19 13 39.1**	**-0.2**
PCIG				*i* S	**Sn**	**19 13 48.8**	**+0.4**
THIG		**1.19**	**119**	*e*P	**Pn**	**19 13 48.5**	**0.0**
THIG				*e*S	**Sn**	**19 14 04.1**	**-0.7**
TGIG		**1.30**	**10**	*i* P	**Pn**	**19 13 49.7**	**-0.3**
TGIG				*e*S	**Sn**	**19 14 06.5**	**-0.8**
CCIG	**Comitan**	**1.41**	**56**	*e*P	**Pn**	**19 13 52.2**	**+0.7**
CCIG				*e*S	**Sn**	**19 14 10.1**	**+0.2**
APG	**El Apazote**	**2.82**	**99**	P	**Pn**	**19 14 10.4**	**+0.2**
	6.7nm,0.3s,baz=319,slow=11,SNR=41						
APG				S	**Sn**	**19 14 43.4**	**-0.1**
	31nm,0.3s,baz=99,slow=19,SNR=21						
TXAR	**Lajitas Array**	**16.75**	**327**	P	**P**	**19 17 18.4**	**+0.9**
	0.0nm,0.3s,baz=141,slow=14,SNR=8.5						
NVAR	**Mina Array Bea**	**31.70**	**321**	P	**P**	**19 19 45.0**	**+1.8**
	0.7nm,0.8s,baz=124,slow=8.1,SNR=5.5						
YKA	**Yellowknife Ar**	**49.29**	**347**	P	**P**	**19 22 05.2**	**-2.2**
	0.8nm,0.6s,baz=147,slow=7.1,SNR=2.8						
ILAR	**Eielson Array**	**60.97**	**337**	P	**P**	**19 23 31.2**	**-0.1**
	0.4nm,0.9s,baz=116,slow=4.1,SNR=3.8						

*IDC **16** 19:16:11.4±0.7, 32°.66S×178°.30W, h0km, mb4.4/9, mb1 4.7/11, mb1mx4.3/45, mbtmp4.5/11, ML4.5/2, MS3.7/20, Ms1 3.8/20, ms1mx3.5/51, Error ellipse: s-maj=25.0km s-min=20.8km az=151.0*
*ISCJB **16** 19:16:13.1±0.5, 33°.15S±0°.05×178°.2W±0°.1, h32km, mb4.8/24, MS3.8/19, Error ellipse: s-maj=12.7km s-min=5.4km az=18.9*
*NEIC **16** 19:16:17.9±2.1, 33°.30S×178°.29W, h56km±19km, mb4.9/18, Error ellipse: s-maj=20.9km s-min=13.4km az=192.0*

ISC 16 19:16:15.5±0.5, 32°.87S±0°.05×178°.38W±0°.10, h32km, n115, σ2s28/103, mb5.0/24, MS3.8/19, 1C, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.63**	**6**	Pn	Pn	19 17 04.5	-4.9
	58nm,0.3s,baz=151,slow=19,SNR=2.5						
RAO				Sn	**Sn**	**19 17 45.1**	**-6.1**
	106nm,0.3s,baz=102,slow=22,SNR=4.4						
RAO	**Raoul Island**	**3.63**	**6**	*e*Pn	Pn	19 17 04.5	-5.0
RAO				*e*Sn	**Sn**	**19 17 45.1**	**-6.1**
RAO				*e*Sn	**Sn**	**19 17 46.9**	**-4.3**
MXZ	**Matakaoa Point**	**5.41**	**209**	*e*Pn	**Pn**	**19 17 31.7**	**-2.3**
MXZ				*e*Sn	**Sn**	**19 18 33.9**	**-1.2**
URZ	**Urewera**	**6.51**	**213**	Pn	**Pn**	**19 17 49.6**	**+0.5**
	8.0nm,0.3s,baz=25,slow=2.9,SNR=32						
URZ				Sn	**Sn**	**19 19 03.1**	**+0.8**
	22nm,0.3s,baz=58,slow=20,SNR=13						
URZ	**Urewera**	**6.51**	**213**	*e*Pn	**Pn**	**19 17 49.4**	**+0.4**
URZ				*e*Sn	**Sn**	**19 19 01.9**	**-0.4**
OUZ	**Omahuta**	**7.06**	**248**	*e*Pn	Pn	19 18 01.2	+4.6
BKZ	**Black Stump Fm**	**7.53**	**212**	*e*Pn	**Pn**	**19 18 01.9**	**-1.2**
BKZ				*e*Sn	**Sn**	**19 19 27.5**	**+0.1**
HIZ	**Hauiti**	**7.87**	**222**	*e*Pn	**Pn**	**19 18 07.1**	**-0.6**
BFZ	**Birch Farm**	**8.91**	**207**	*e*Pn	**Pn**	**19 18 18.0**	**-3.9**
BFZ				*e*Sn	**Sn**	**19 19 55.0**	**-6.2**
SNZO	**South Karori**	**10.07**	**211**	*e*Pn	**Pn**	**19 18 36.1**	**-1.7**
SNZO				*e*Sn	**Sn**	**19 20 21.5**	**-8.1**
THZ	**Tophouse**	**11.26**	**216**	*e*Pn	**Pn**	**19 18 52.9**	**-1.3**
THZ				*e*Sn	**Sn**	**19 20 51.4**	**-7.5**
KHZ	**Kahutara**	**11.48**	**212**	*e*Pn	**Pn**	**19 18 55.3**	**-1.7**
LTZ	**Lake Taylor**	**12.34**	**214**	*e*Pn	**Pn**	**19 19 07.8**	**-1.2**
OXZ	**Oxford**	**12.87**	**213**	*e*Pn	Pn	19 19 11.0	-5.1
OXZ				*e*Sn	Sn	19 21 25.0	-13
MQZ	**McQueen's Vall**	**12.90**	**210**	*e*Pn	**Pn**	**19 19 12.0**	**-4.5**
MQZ				*e*Sn	Sn	19 21 24.3	-15
RPZ	**Rata Peaks**	**13.63**	**214**	Pn	Pn	19 19 21.8	-4.7
	0.9nm,0.3s,baz=112,slow=3.3,SNR=4.6						
RPZ				Sn	Sn	19 21 44.2	-12
	1.5nm,0.3s,baz=79,slow=18,SNR=9.5						
FOZ	**Fox Glacier**	**14.11**	**218**	*e*Pn	**Pn**	**19 19 31.0**	**-2.0**
LBZ	**Lake Benmore**	**14.55**	**214**	*e*Pn	**Pn**	**19 19 36.1**	**-2.9**
ODZ	**Otahua Downs**	**14.84**	**212**	*e*Pn	Pn	19 19 36.8	-6.2
	94nm,1.6s						
WKZ	**Wanaka**	**15.44**	**216**	*e*Pn	Pn	19 19 42.8	-8.1
	66nm,1.4s						
MLZ	**Mavora Lakes**	**16.27**	**216**	*e*Pn	**Pn**	**19 19 56.1**	**-5.4**
	70nm,1.7s						
WHZ	**Wether Hill Ro**	**16.73**	**215**	*e*Pn	**Pn**	**19 20 03.8**	**-3.5**
	62nm,1.6s						
DCZ	**Deep Cove**	**16.82**	**217**	*e*Pn	**Pn**	**19 20 02.4**	**-6.0**
	51nm,1.4s						
DZM	**Mont Dzumac**	**17.22**	**305**	*e*P	**P**	**19 20 17.9**	**+2.9**
	75nm,1.5s						
DZM				*e*LR	LR	19 24 07.5	
	658nm,22.7s						
DZM	**Mont Dzumac**	**17.22**	**305**	P	**P**	**19 20 17.5**	**+2.5**
	0.3nm,0.3s,baz=102,slow=16,SNR=5.9						
DZM				LR	LR	19 25 48.2	
	comp=Z,892nm,18.2s,baz=163,slow=34						
DZM	**Mont Dzumac**	**17.22**	**305**	*e*Pn	**Pn**	**19 20 10.9**	**-2.8**
	30nm,1.1s						
RAR	**Rarotonga**	**20.20**	**60**	LR	LR	19 29 16.8	
	comp=Z,126nm,18.3s,baz=304,slow=39						
EIDS	**Eidsvold**	**27.64**	**278**	*e*P	**P**	**19 22 02.7**	**+2.3**
TAU	**Tasmania Unive**	**28.69**	**240**	*e*P	**P**	**19 22 13.0**	**+3.4**
	194nm,1.8s						
PPT2	**Papeete2**	**30.04**	**67**	*e*LR	LR	19 29 53.7	
	212nm,28.5s						
PPT	**Papeete**	**30.06**	**67**	LR	LR	19 34 00.2	
	comp=Z,92nm,18.1s,baz=187,slow=36						
HNR	**Honiara**	**30.73**	**315**	P	**P**	**19 22 31.5**	**+3.6**
	20nm,0.5s,baz=148,slow=19,SNR=2.6						
STKA	**Stephens Creek**	**33.68**	**261**	P	**P**	**19 22 55.5**	**+1.9**
	1.3nm,0.6s,baz=107,slow=11,SNR=2.5						
STKA				LR	LR	19 36 05.2	
	comp=Z,350nm,18.4s,baz=43,slow=35						
STKA	**Stephens Creek**	**33.68**	**261**	*e*P	**P**	**19 22 54.9**	**+1.2**
	5.0nm,1.8s						
CTA	**Charters Tower**	**33.96**	**283**	P	**P**	**19 22 58.5**	**+2.3**
	12nm,0.5s,baz=118,slow=9.6,SNR=30						
CTAO	**Charters Tower**	**33.96**	**283**	*e*P	**P**	**19 22 58.1**	**+2.0**
	13nm,0.6s						
BBOO	**Buckleboo**	**38.05**	**257**	*e*P	**P**	**19 23 30.7**	**-0.3**
	76nm,1.7s						
PMG	**Port Moresby**	**39.44**	**298**	LR	LR	19 39 31.2	
	comp=Z,139nm,18.2s,baz=170,slow=36						
COEN	**Coen**	**39.70**	**289**	*e*P	**P**	**19 23 46.2**	**+1.2**
	70nm,1.9s						
TAOE	**Nuku Hiva Isla**	**42.62**	**65**	*e*LR	LR	19 35 42.5	
	134nm,27.7s						
AS01	**Alice Springs**	**42.68**	**270**	*e*P	**P**	**19 24 09.4**	**0.0**
AS31	**Alice Springs**	**42.72**	**270**	*e*P	**P**	**19 24 10.3**	**+0.5**
	4.1nm,0.8s						
ASAR	**Alice Springs**	**42.72**	**270**	P	**P**	**19 24 10.5**	**+0.7**
	7.3nm,0.6s,baz=108,slow=7.5,SNR=202						
ASAR				LR	LR	19 41 38.1	
	comp=Z,122nm,18.1s,baz=94,slow=36						
WB2	**Warramunga Arr**	**43.92**	**275**	*e*P	**P**	**19 24 19.8**	**+0.3**
	17nm,0.6s						
WRAB	**Tennant Creek**	**43.92**	**275**	*e*P	**P**	**19 24 18.9**	**-0.6**
	25nm,1.1s						

WR1	**Warramunga Arr**	**43.93**	**275**	*e*P	**P**	**19 24 19.8**	**+0.2**
	16nm,0.6s						
WRA	**Warramunga Arr**	**43.93**	**275**	P	**P**	**19 24 19.8**	**+0.2**
	12nm,0.5s,baz=115,slow=7.7,SNR=172						
WRA				LR	LR	19 41 09.5	
	comp=Z,136nm,21.0s,baz=115,slow=34						
FORT	**Forrest**	**45.15**	**258**	*e*P	**P**	**19 24 29.2**	**0.0**
	23nm,0.6s						
VNDA	**Vanda**	**45.61**	**186**	LR	LR	19 40 50.7	
	comp=Z,64nm,20.5s,baz=23,slow=32						
MTN	**Manton Dam**	**50.10**	**281**	*e*P	**P**	**19 25 07.3**	**-0.5**
	12nm,0.8s						
CASY	**Casey**	**52.82**	**209**	*e*P	**P**	**19 25 28.6**	**+1.1**
	27nm,0.7s						
WAKE	**Wake Island**	**53.80**	**342**	*e*P	**P**	**19 25 31.8**	**-3.3**
	152nm,1.7s						
FAKI	**Fak Fak**	**54.93**	**292**	*e*P	**P**	**19 25 43.5**	**-0.1**
	77nm,1.5s						
MBWA	**Marble Bar**	**55.67**	**266**	*e*P	**P**	**19 25 48.2**	**-0.7**
	26nm,1.3s						
SIJI	**Sorong**	**56.98**	**293**	LR	LR	19 51 06.7	
	comp=Z,79nm,18.9s,slow=37						
SYO	**Syowa Base**	**74.64**	**193**	⇑*e*P	**P**	**19 27 50.7**	**-0.5**
SNAA	**Sanae**	**75.70**	**179**	P	P	19 28 07.8	+10
VNA3	**Neumayer Olymp**	**75.87**	**176**	P	P	19 28 09.4	+11
VNA1	**Neumayer--Stat**	**76.53**	**177**	P	P	19 28 13.5	+12
MJAR	**Matsushiro Arr**	**80.09**	**326**	LR	LR	20 00 06.7	
	comp=Z,23nm,20.7s,baz=285,slow=33						
PLCA	**Paso Flores**	**81.06**	**133**	P	**P**	**19 28 29.6**	**+2.0**
	4.5nm,1.1s,baz=232,slow=5.7,SNR=4.1						
PLCA				LR	LR	19 59 57.3	
	comp=Z,27nm,18.2s,baz=248,slow=32						
KSRS	**Korea Array**	**86.02**	**320**	P	**P**	**19 28 52.8**	**+0.1**
	0.8nm,0.7s,baz=140,slow=5.6,SNR=6.4						
KSRS				LR	LR	20 05 20.5	
	comp=Z,23nm,18.5s,baz=135,slow=34						
KSAR	**Wonju Array Be**	**86.03**	**320**	P	**P**	**19 28 52.8**	**+0.1**
LPIG	**La Paz**	**86.11**	**58**	LR	LR	20 02 30.7	
	comp=Z,62nm,18.0s,baz=207,slow=32						
PSRC	**Puddingstone R**	**87.61**	**46**	*e*P	**P**	**19 28 58.1**	**-2.4**
DNR	**Dunn Ranch,Anz**	**87.97**	**47**	*e*P	**P**	**19 29 02.8**	**+0.4**
SNDA	**J Saunders Pla**	**87.98**	**47**	*e*P	**P**	**19 29 02.4**	**0.0**
PETK	**Petropavlovsk-**	**88.12**	**346**	P	**P**	**19 29 02.2**	**-0.2**
	1.2nm,0.6s,baz=116,slow=5.8,SNR=5.1						
PETK				LR	LR	20 00 58.6	
	comp=Z,37nm,21.8s,baz=157,slow=31						
PEA1	**Petropavlovsk-**	**88.12**	**346**	*e*P	**P**	**19 29 02.2**	**-0.3**
USRK	**Ussuriysk Ar.**	**89.04**	**327**	P	**P**	**19 29 07.8**	**+0.8**
	1.3nm,0.5s,baz=116,slow=6.6,SNR=3.7						
YBH	**Yreka Blue Hor**	**90.17**	**38**	LR	LR	20 04 32.8	
	comp=Z,44nm,18.7s,baz=206,slow=32						
NVAR	**Mina Array Bea**	**90.27**	**43**	P	**P**	**19 29 14.7**	**+1.6**
	0.9nm,0.8s,baz=224,slow=8.1,SNR=5.2						
NVAR				LR	LR	20 05 40.7	
	comp=Z,54nm,18.1s,baz=112,slow=33						
KLR	**Kul'dur**	**93.00**	**330**	P	**P**	**19 29 25.5**	**+0.2**
	0.1nm,0.5s,baz=117,slow=2.3,SNR=2.4						
CMAR	**Chiang Mai Arr**	**93.91**	**289**	LR	LR	20 15 54.0	
	comp=Z,22nm,18.2s,baz=160,slow=38						
TXAR	**Lajitas Array**	**93.98**	**58**	LR	LR	20 06 25.0	
	comp=Z,45nm,18.1s,baz=0.0,slow=32						
APG	**El Apazote**	**96.28**	**76**	LR	LR	20 03 51.3	
	comp=Z,33nm,20.7s,baz=273,slow=30						
CPUP	**Villa Florida**	**98.70**	**129**	LR	LR	20 08 47.2	
	comp=Z,30nm,19.2s,baz=214,slow=32						
MK01	**Makanchi Array**	**119.08**	**309**	*e*PKPdf	**PKPdf**	**19 35 00.3**	**-0.5**
MK32	**Makanchi Array**	**119.09**	**309**	*e*PKPdf	**PKPdf**	**19 35 00.7**	**-0.1**
MKAR	**Makanchi Array**	**119.09**	**309**	PKP	**PKPdf**	**19 35 00.7**	**-0.1**
	0.6nm,0.6s,baz=163,slow=1.8,SNR=7.6						
MAKZ	**Makanchi**	**119.30**	**309**	*e*PKPdf	**PKPdf**	**19 35 01.1**	**-0.1**
ZALV	**Zalesovo Beam**	**119.65**	**318**	PKP	**PKPdf**	**19 35 01.7**	**+0.1**
	0.4nm,0.3s,baz=8.8,slow=1.6,SNR=3.6						
ZAA1	**Zalesovo Array**	**119.65**	**318**	*e*PKPdf	**PKPdf**	**19 35 01.7**	**+0.1**
KURK	**Kurchatov**	**122.50**	**313**	*e*PKPdf	**PKPdf**	**19 35 07.3**	**+0.2**
KURBB	**Kurchatov Arra**	**122.54**	**313**	PKP	**PKPdf**	**19 35 07.3**	**+0.1**
	1.1nm,0.5s,baz=117,slow=1.9,SNR=14						
KK31	**Karatay Array**	**126.14**	**302**	*e*PKPdf	**PKPdf**	**19 35 15.4**	**+0.9**
KKAR	**Karatay Array**	**126.14**	**302**	*e*PKPdf	**PKPdf**	**19 35 15.4**	**+0.9**
BVAR	**Borovoye Array**	**127.92**	**314**	PKP	**PKPdf**	**19 35 17.9**	**+0.5**
	1.5nm,0.5s,baz=154,slow=2.1,SNR=7.9						
ARU	**Arti**	**134.76**	**319**	PKP	**PKPdf**	**19 35 32.1**	**+1.8**
	1.8nm,0.5s,baz=324,slow=4.9,SNR=5.7						
ARU	**Arti**	**134.76**	**319**	*e*PKPdf	**PKPdf**	**19 35 31.6**	**+1.3**
AKTO	**Aktyubinsk**	**135.49**	**311**	PKP	**PKPdf**	**19 35 33.1**	**+1.2**
	1.0nm,0.5s,baz=69,slow=11,SNR=3.6						
ARA0	**ARCESS Array S**	**140.92**	**347**	*e*PKPpre	PKPpre	19 35 36.5	
ARCES	**ARCESS Array B**	**140.92**	**347**	PKhKP	PKPpre	19 35 36.5	
	1.4nm,0.8s,baz=308,slow=4.0,SNR=3.6						
KBZ	**Khabaz**	**146.16**	**301**	PKPbc	**PKPbc**	**19 35

	SNR=10						
ASUD	Al Ashush, Dub	4.96	154	P		Pn	19 24 35.3 +1.2
	SNR=9.3						
ASUD	Al Ashush, Dub	4.96	154	*i* P		Pn	19 24 35.3 +1.2
	SNR=9.3						
ASUD	Al Ashush, Dub	4.96	154	P		Pn	19 24 35.3 +1.2
	SNR=9.3						
UOSS	Minazif	5.07	144	P		Pn	19 24 35.7 0.0
UOSS	Minazif	5.07	144	*i* P		Pn	19 24 35.2 -0.4
	SNR=8.5						
UOSS	Minazif	5.07	144	P		Pn	19 24 35.2 -0.4
	SNR=8.5						
HATD	Hatta, Dubai	5.13	146	P		Pn	19 24 37.6 +1.0
HATD	Hatta, Dubai	5.13	146	P		Pn	19 24 37.6 +1.0
ALNE	Al Ain	5.63	153	*i* P		Pn	19 24 43.7 +0.3
	SNR=13						
ALNE	Al Ain	5.63	153	P		Pn	19 24 43.9 +0.5
	SNR=13						
TABS	Tabas	5.74	37	*e*Pn		Pn	19 24 46.3 +1.4
TABS	Tabas	5.74	37	*e*Pn		Pn	19 24 46.3 +1.4
SOHO	SOHO	5.91	146	*i* P		Pn	19 24 46.8 -0.4
	SNR=6.2						
SOHO	SOHO	5.91	146	P		Pn	19 24 46.8 -0.4
	SNR=6.2						
ARQ	Araqi	6.59	150	P		Pn	19 24 56.6 0.0
ARQ	Araqi	6.59	150	P		Pn	19 24 56.6 0.0
HOQ	Hoqain	6.76	144	P		Pn	19 24 58.8 -0.1
HOQ	Hoqain	6.76	144	P		Pn	19 24 58.8 -0.1
WSAR	Wadi Sarin	7.76	138	Pn		Pn	19 25 12.0 -0.7
	comp=E,0.9nm,0.3s,baz=317,slow=3.0,SNR=35						
WSAR	Wadi Sarin	7.76	138	P		Pn	19 25 12.2 -0.6
WSAR	Wadi Sarin	7.76	138	P		Pn	19 25 12.1 -0.6
RAYN	Ar Rayn	8.71	232	*i* P		Pn	19 25 26.0 +0.2
	SNR=7.8						
RAYN	Ar Rayn	8.71	232	P		Pn	19 25 26.0 +0.2
	SNR=7.8						
MHTO	MHTO	9.29	150	P		Pn	19 25 32.8 -0.8
ATD	Arta Tunnel	19.89	210	LR		LR	19 35 36.3
	comp=E,42nm,19.4s,baz=68,slow=37						
BVAR	Borovoye Array	27.11	23	P		P	19 29 03.2 +0.9
	comp=E,1.0nm,0.8s,baz=213,slow=10,SNR=5.3						
AKASG	Malin Array Be	27.99	327	P		P	19 29 09.2 -1.0
	comp=E,0.2nm,0.3s,baz=140,slow=8.6,SNR=3.4						
KURBB	Kurchatov Arra	28.83	35	P		P	19 29 18.6 +0.9
	comp=E,0.7nm,0.8s,baz=231,slow=9.4,SNR=5.0						
MKAR	Makanchi Array	28.84	44	P		P	19 29 18.6 +0.7
	comp=E,0.3nm,0.6s,baz=227,slow=8.7,SNR=3.0						
ZALV	Zalesovo Beam	33.91	34	P		P	19 30 02.2 -0.1
	comp=E,1.5nm,0.5s,baz=238,slow=9.9,SNR=9.7						
FINES	FINESS Array B	36.90	339	P		P	19 30 28.1 +0.1
	comp=E,0.6nm,0.5s,baz=141,slow=12,SNR=9.9						
HFS	Hagfors	40.69	331	P		P	19 30 59.7 0.0
	comp=E,0.8nm,0.6s,baz=132,slow=8.6,SNR=5.3						
SONM	Songino Array	44.84	50	P		P	19 31 34.2 +0.4
	comp=E,0.4nm,0.4s,baz=270,slow=7.1,SNR=2.8						
TORD	Torodi Ar. Bea	50.01	263	P		P	19 32 13.0 -1.2
	comp=E,0.4nm,0.7s,baz=58,slow=6.3,SNR=2.4						
ASAR	Alice Springs	93.84	115	P		P	19 36 35.9 -1.3
	comp=E,0.2nm,0.7s,baz=286,slow=5.3,SNR=4.4						

IDC ***16*** *19:23:56.6±0.6, 29°.08N×52°.97E, h0km, mb3.9/25, mb1 4.0/30, mb1mx3.9/68, mbtmp3.9/30, ML3.5/6, MS3.5/8, Ms1 3.5/8, ms1mx2.9/65, Error ellipse: s-maj=15.1km s-min=12.3km az=0.0*

ISCJB ***16*** *19:23:57.3±0.2, 29°.09N±0°.03×52°.97E±0°.03, h16km, mb4.1/56, MS3.5/10, Error ellipse: s-maj=4.7km s-min=3.0km az=44.1*

MOS ***16*** *19:23:57.4±0.9, 29°.04N×53°.04E, h22km, mb4.3/21, Error ellipse: s-maj=8.5km s-min=5.9km az=100.3*

NEIC ***16*** *19:23:57.8±0.3, 29°.09N×52°.98E, h10km, mb4.2/18, MN3.8(TEH), Error ellipse: s-maj=6.4km s-min=5.1km az=185.0*

DSN ***16*** *19:23:59.8±2.9, 29°.01N×52°.85E, h15km, ML4.0/7, Error ellipse: s-maj=41.8km s-min=7.3km az=5.0*

CSEM ***16*** *19:23:59.7±0.1, 29°.11N×52°.98E, h20km, mb4.3/33, Error ellipse: s-maj=5.1km s-min=3.7km az=39.0*

OMAN ***16*** *19:24:00.9±0.5, 26°.61N×54°.89E, h10km, Error ellipse: s-maj=10.5km s-min=2.1km az=324.0*

TEH ***16*** *19:24:05.4, 29°.38N×52°.98E, h10km, ML3.8*

ISC 16 19:23:58.4±0.4, 28°.99N±0°.03×53°.03E±0°.04, h16km, n252, σ1965/259, mb4.1/56, MS3.4/10, 24C-17D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPAR	Pars	0.85	1	Pn	Pb	19 24 13.0	-2.0
IPAR	Pars	0.85	1	*e*Pg	Pb	19 24 13.0	-2.0
IPAR				*e*		19 24 26.4	
	comp=Z,58μm,0.4s						
IPAR	Pars	0.85	1	Pn	Pb	19 24 13.0	-2.0
IPAR				*e*Sg	Sb	19 24 25.1	-1.2
IKAZ	Kazeroun	1.30	307	Pg	Pg	19 24 25.3	+1.7
IKAZ	Kazeroun	1.30	307	*e*Pg	Pg	19 24 25.3	+1.7
IKAZ				*e*		19 24 51.0	
	comp=Z,48μm,0.3s						
IKAZ	Kazeroun	1.30	307	*e*Pg	Pg	19 24 24.8	+1.2
IMEH	Mehriz	2.76	29	Pn	Pb	19 24 46.4	-1.0
IMEH	Mehriz	2.76	29	*e*Pn	Pb	19 24 46.4	-1.0
IMEH				*e*Sg	Sb	19 25 22.6	+1.5
IMEH				*e*		19 25 29.5	
	comp=Z,4μm,0.3s						
IMEH	Mehriz	2.76	29	*e*Pn	Pn	19 24 44.1	+1.9
ISAD	Sadrabad	2.97	11	Pn	Pn	19 24 47.6	+2.5
ISAD	Sadrabad	2.97	11	*e*Pn	Pn	19 24 47.7	+2.6
ISAD				*e*		19 25 46.7	
	comp=Z,4μm,0.5s						
ISAD	Sadrabad	2.97	11	*e*Pn	Pn	19 24 47.7	+2.6
GENO	Geno	3.19	119	*e*Pn	Pb	19 24 51.5	-3.3
NGRK	Negar Kerman	3.29	78	*e*Pn	Pb	19 24 54.0	-2.7
KHGB	Koh Gabri	3.30	64	*e*Pn	Pn	19 24 52.9	+3.3
ICHK	Chekchek	3.45	20	Pn	Pn	19 24 52.9	+1.2
ICHK	Chekchek	3.45	20	*e*Pn	Pn	19 24 52.9	+1.2
ICHK				*e*		19 25 51.4	
	comp=Z,3μm,0.3s						
ICHK	Chekchek	3.45	20	*e*Pn	Pn	19 24 53.7	+2.0
IGAR	Gharneh	3.51	346	*e*	Sg	19 25 55.0	+3.9
	comp=Z,2μm,0.4s						
ROKH	ROKH	3.76	333	*e*Pn	Pn	19 24 58.0	+2.0
SHME	Shamm	4.03	136	P	Pn	19 25 03.2	+3.8
CHMN	Cheshme madani	4.03	76	*e*Pn	Pn	19 25 02.3	+2.6
KHSK	Kohestak	4.20	121	*e*Pn	Pn	19 25 04.8	+3.1
BANOM	Banah	4.21	136	*i* P	Pn	19 25 05.7	+3.7
	SNR=9.1						
MSFE	Esma-Masafi	4.56	142	*i* P	Pn	19 25 10.1	+3.3
	SNR=28						
MSFE	Esma-Masafi	4.56	142	*e*Pn	Pn	19 25 10.1	+3.3
NAZ	Nazwa, Dubai	4.62	149	*e*Pn	Pn	19 25 11.5	+3.9
MDH	Madha	4.69	141	*i* P	Pn	19 25 11.4	+2.9
	SNR=27						
MDH	Madha	4.69	141	P	Pn	19 25 11.4	+2.9
	SNR=27						
SHGR	Shooshtar-Gavs	4.79	311	*e*Pn	Pn	19 25 02.6	-7.3
ASUD	Al Ashush, Dub	4.81	154	*i* P	Pn	19 25 14.0	+3.9
	SNR=12						
UOSS	Minazif	4.92	144	*e*Pn	Pn	19 25 14.6	+2.9
UOSS				*e*Sn	Sn	19 26 09.7	+1.3
UOSS	Minazif	4.92	144	*i* P	Pn	19 25 14.4	+2.7
	SNR=15						
UOSS	Minazif	4.92	144	P	Pn	19 25 14.4	+2.7
	SNR=15						
UOSS				*e*Sn	Sn	19 26 09.7	+1.3
HATD	Hatta, Dubai	4.99	146	P	Pn	19 25 15.9	+3.3
HATD	Hatta, Dubai	4.99	146	*e*Pn	Pn	19 25 15.7	+3.1
ALNE	Al Ain	5.48	153	*i* P	Pn	19 25 22.6	+3.2
	SNR=33						
ALNE	Al Ain	5.48	153	*e*Pn	Pn	19 25 22.6	+3.2
SOHO	SOHO	5.76	146	*i* P	Pn	19 25 25.2	+1.9
	SNR=9.2						
HSAM	Samen	6.43	325	*e*Pn	Pn	19 25 33.2	+0.5
ARQ	Araqi	6.44	150	S	Pn	19 25 35.6	+3.0
	SNR=9.6						
ARQ	Araqi	6.44	150	S	Pn	19 25 35.6	+3.0
	SNR=9.6						
HOQ	Hoqain	6.61	144	S	Pn	19 25 38.5	+3.5
	SNR=11						
HOQ	Hoqain	6.61	144	*e*Pn	Pn	19 25 38.1	+3.1
IKOM	Komasi	6.99	319	*e*Pn	Pn	19 25 41.6	+1.3
WSAR	Wadi Sarin	7.62	137	Pn	Pn	19 25 51.1	+2.3
	comp=Z,3.2nm,0.3s,baz=6.5,slow=13,SNR=17						
WSAR				Sn	Sn	19 27 13.0	-1.9
	comp=Z,0.4nm,0.3s,baz=163,slow=20,SNR=4.1						
IDHR	Dehrash	8.02	317	*e*Pn	Pn	19 25 54.9	+0.4
RAYN	Ar Rayn	8.68	233	*e*Pn	Pn	19 26 03.6	+0.2
RAYN				*e*Sn	Sn	19 27 37.5	-3.4
RAYN	Ar Rayn	8.68	233	*i* P	Pn	19 26 03.3	0.0
	SNR=5.9						
RAYN	Ar Rayn	8.68	233	P	Pn	19 26 03.5	+0.2
RAYN	Ar Rayn	8.68	233	P	Pn	19 26 03.3	0.0
	SNR=5.9						
RAYN	Ar Rayn	8.68	233	*e*Pn	Pn	19 26 03.6	+0.2
GEYT	Alibeck	9.87	24	Pn	Pn	19 26 20.3	+0.6
	comp=Z,0.1nm,0.3s,baz=194,slow=11,SNR=6.6						
GNI	Garni	13.05	331	LR	LR	19 31 46.5	
	comp=Z,8.1nm,21.5s,baz=100,slow=36						
MMAI	Mount Meron Ar	15.64	289	Pn	Pn	19 27 38.5	+0.2
	comp=Z,0.4nm,0.3s,baz=114,slow=14,SNR=4.0						
MMAI				LR	LR	19 35 04.6	
	comp=Z,70nm,18.7s,baz=95,slow=43						
EIL	Elat	15.79	277	Pn	Pn	19 27 40.0	-0.1
	comp=Z,0.2nm,0.3s,baz=82,slow=7.1,SNR=2.2						
KBZ	Khabaz	16.80	334	Pn	Pn	19 27 53.2	+0.4
	comp=Z,0.1nm,0.3s,baz=140,slow=8.9,SNR=2.8						
KIV	Kislovodsk	17.07	334	*e*P	Pn	19 27 52.2	-4.3
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,13nm,13.0s						
CSS	Mathiatis	17.73	295	*e*P	P	19 28 05.3	-0.2
	comp=Z,3.7nm,1.3s						
CSS	Mathiatis	17.73	295	*e*P	P	19 28 05.3	-0.2
	comp=Z,3.7nm,1.3s						
BR101	Keskin Array S	19.22	309	*e*P	P	19 28 22.3	+0.4
BR101	Keskin Array S	19.22	309	*e*P	P	19 28 22.3	+0.4
BR131	Keskin Array S	19.22	309	*e*P	P	19 28 22.0	+0.1
BR131	Keskin Array S	19.22	309	*e*P	P	19 28 22.0	+0.1
BRTR	Keskin Array B	19.22	309	P	P	19 28 22.3	+0.4
	comp=Z,0.1nm,0.3s,baz=129,slow=13,SNR=5.5						
BRTR	Keskin Array B	19.22	309	*i* P	P	19 28 21.6	-0.3
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ANTO	Ankara	19.87	308	*e*P	P	19 28 25.3	-3.6
	comp=Z,7.4nm,0.8s						
ANTO	Ankara	19.87	308	*e*P	P	19 28 25.3	-3.6
ANTO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BR231	Keskin MP Arra	19.87	308	*e*P	P	19 28 26.1	-2.8
KK31	Karatay Array	19.90	40	*e*P	P	19 28 28.6	-0.5
KK31	Karatay Array	19.90	40	*e*P	P	19 28 28.6	-0.5
KK31	Karatay Array	19.90	40	*e*P	P	19 28 28.6	-0.5
KKAR	Karatay Array	19.90	40	*e*P	P	19 28 28.6	-0.5
KKAR	Karatay Array	19.90	40	*e*P	P	19 28 28.6	-0.5
KKAR	Karatay Array	19.90	40	*e*P	P	19 28 28.6	-0.5
ABKAR	Abkulak array	20.92	13	*e*P	P	19 28 40.9	+0.8
ABKAR	Abkulak array	20.92	13	*e*P	P	19 28 40.9	+0.8
AKTK	Aktyubinsk	21.75	9	P	P	19 28 49.2	+0.2
	comp=Z,95nm,18.2s						
AKTO	Aktyubinsk	21.75	9	P	P	19 28 49.2	+0.2
	comp=Z,4.0nm,0.6s,baz=204,slow=11,SNR=12						
AKTO				LR	LR	19 39 13.5	
	comp=Z,95nm,18.2s,baz=173,slow=42						
AAK	Ala-Archa	22.02	46	P	P	19 28 54.2	+2.0
	comp=Z,1.4nm,0.3s,baz=232,slow=14,SNR=3.0						
AAK				LR	LR	19 39 06.3	
	comp=Z,131nm,18.3s,baz=238,slow=41						
AAK	Ala-Archa	22.02	46	*e*P	P	19 28 53.4	+1.2
	comp=Z,4.9nm,1.0s						
AAK	Ala-Archa	22.02	46	*e*P	P	19 28 53.4	+1.2
AAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
AAK	Ala-Archa	22.02	46	*e*P	P	19 28 53.4	+1.2
	comp=Z,4.9nm,1.0s						
NRN	Naryn	22.42	50	*e*P	P	19 28 56.3	-0.4
	comp=Z,8.5nm,1.0s						
NRN	Naryn	22.42	50	*e*P	P	19 28 56.3	-0.4
NRN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
NRN	Naryn	22.42	50	*e*P	P	19 28 56.3	-0.4
	comp=Z,8.5nm,1.0s						
VORD	Divnogorie	24.27	339	*e*P	P	19 29 13.0	-1.6
VORD				pmax	pmax		
	comp=Z,9.0nm,1.0s						
VORD	Divnogorie	24.27	339	*e*P	P	19 29 13.0	-1.6
	comp=Z,9.0nm,1.0s						
APE	Apeiranthos	24.36	296	⇓*i*P	P	19 29 16.8	+1.0
APE	Apeiranthos	24.36	296	⇓P	P	19 29 16.8	+1.0
APE	Apeiranthos	24.36	296	P	P	19 29 16.8	+1.0
SVR	Storozhevoye	24.52	339	*e*P	P	19 29 10.7	-6.3
VSR				*e*S	S	19 33 34.7	-2.1
VSR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
VSR				smax	smax		
	comp=N,30nm,1.6s						
TLCR		25.05	317	⇑*i*P	P	19 29 22.0	+0.2
TLCR		25.05	317	⇑P	P	19 29 22.0	+0.2
TLCR		25.05	317	P	P	19 29 22.0	+0.2
TLB	Topalu	25.22	315	⇑*i*P	P	19 29 23.5	+0.2
TLB	Topalu	25.22	315	⇑P	P	19 29 23.5	+0.2
TLB	Topalu	25.22	315	P	P	19 29 23.5	+0.2
CFR	Carcaliu	25.46	316	⇑*i*P	P	19 29 25.6	+0.1
CFR	Carcaliu	25.46	316	⇑P	P	19 29 25.6	+0.1
CFR	Carcaliu	25.46	316	P	P	19 29 25.6	+0.1
MILM	Milestii Mici	26.01	320	⇑*i*P	P	19 29 30.2	-0.3
MILM	Milestii Mici	26.01	320	⇑*i*P	P	19 29 30.2	-0.3
VRI	Vrincioaia	26.66	316	⇓*i*P	P	19 29 37.2	+0.8
VRI	Vrincioaia	26.66	316	⇓P	P	19 29 37.2	+0.8
VRI	Vrincioaia	26.66	316	P	P	19 29 37.2	+0.8
PLOR	Plostina	26.70	316	⇑*i*P	P	19 29 36.9	+0.1
PLOR	Plostina	26.70	316	⇑P	P	19 29 36.9	+0.1
PLOR	Plostina	26.70	316	P	P	19 29 36.9	+0.1
MLR	Muntele Rosu	26.95	315	P	P	19 29 40.7	+1.5
	comp=N,0.3nm,0.6s,baz=114,slow=12,SNR=3.2						
MLR	Muntele Rosu	26.95	315	⇓*i*P	P	19 29 40.0	+0.8
MLR	Muntele Rosu	26.95	315	⇓P	P	19 29 40.0	+0.8
MLR	Muntele Rosu	26.95	315	P	P	19 29 40.0	+0.8
SORM	Soroca	26.97	322	⇑*i*P	P	19 29 40.2	+1.0
SORM	Soroca	26.97	322	⇑P	P	19 29 40.2	+1.0
SORM	Soroca	26.97	322	P	P	19 29 40.2	+1.0
TESR	Tescani	27.04	318	⇑*i*P	P	19 29 39.6	-0.2
TESR	Tescani	27.04	318	⇑*i*P	P	19 29 39.6	-0.2
BRVK	Borovoye	27.20	23	*ce*P	P	19 29 40.3	-0.9
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BVAR	Borovoye Array	27.21	23	P	P	19 29 41.9	+0.6
	comp=Z,3.0nm,0.8s,baz=218,slow=9.4,SNR=11						
BVAR				LR	LR	19 42 14.7	
	comp=Z,86nm,18.1s,baz=178,slow=40						
VOIR		27.49	314	⇓*i*P	P	19 29 45.1	+1.1
VOIR		27.49	314	⇓P	P	19 29 45.1	+1.1
VOIR		27.49	314	P	P	19 29 45.1	+1.1
DOPR	Dopca	27.52	316	⇑*i*P	P	19 29 44.9	+0.7
DOPR	Dopca	27.52	316	⇑*i*P	P	19 29 44.9	+0.7
ARU	Arti	27.71	7	LR	LR	19 42 32.2	
	comp=Z,89nm,18.4s,baz=204,slow=40						
ARU	Arti	27.71	7	*e*P	P	19 29 47.1	+1.5
	comp=Z,2.3nm,0.8s						
ARU	Arti	27.71	7	*d i*P	P	19 29 44.3	-1.4
ARU						19 30 27.5	
ARU				S	S	19 34 25.6	-1.5
ARU				pmax	pmax		
	comp=Z,6.0nm,2.5s						
ARU	Arti	27.71	7	*i* P	P	19 29 44.3	-1.4
	comp=Z,6.0nm,2.5s						
ARU				S	S	19 34 25.6	-1.5
ARR	Arges	27.72	314	⇑*i*P	P	19 29 46.8	+0.8
ARR	Arges	27.72	314	⇑P	P	19 29 46.8	+0.8
AKASG	Malin Array Be	28.14	327	P	P	19 29 48.5	-1.1
	comp=Z,0.6nm,0.4s,baz=134,slow=8.4,SNR=6.8						
AKBB	Malin Array Si	28.14	327	*e*P	P	19 29 48.5	-1.1
	comp=Z,10nm,1.5s						
AKBB	Malin Array Si	28.14	327	*e*P	P	19 29 48.5	-1.1
AKBB				pmax	pmax		
	comp=Z,10.0nm,1.5s						
KIEV	Kiev	28.14	327	*e*P	P	19 29 48.4	-1.2
	comp=Z,9.2nm,1.5s						
KIEV	Kiev	28.14	327	⇑*i*P	P	19 29 48.3	-1.3
KIEV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KIEV	Kiev	28.14	327	*e*P	P	19 29 48.4	-1.2
	comp=Z,9.2nm,1.5s						
AK11	Malin Array Si	28.15	327	*e*P	P	19 29 51.2	+1.5
AK11	Malin Array Si	28.15	327	*e*P	P	19 29 51.2	+1.5
LOT	Lotru	28.30	313	⇓*i*P	P	19 29 51.6	+0.3
LOT	Lotru	28.30	313	⇓*i*P	P	19 29 51.6	+0.3
BURAR	Bucovina Array	28.44	318	⇓*i*P	P	19 29 52.5	0.0
BURAR	Bucovina Array	28.44	318	⇓P	P	19 29 52.5	0.0
BURAR	Bucovina Array	28.44	318	⇓*i*P	P	19 29 52.5	0.0
BUR04	Bucovina Ar. S	28.45	318	*e*P	P	19 29 52.4	-0.1
BUR04	Bucovina Ar. S	28.45	318	*e*P	P	19 29 52.4	-0.1
BUR08	Bucovina Ar. S	28.47	319	*e*P	P	19 29 51.0	-1.7
BUR08	Bucovina Ar. S	28.47	319	*e*P	P	19 29 51.0	-1.7
MAKZ	Makanchi	28.71	44	*e*P	P	19 29 54.5	-0.3
	comp=Z,2.2nm,0.9s						
MAKZ	Makanchi	28.71	44	*e*P	P	19 29 54.6	-0.3
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MAKZ	Makanchi	28.71	44	*e*P	P	19 29 54.6	-0.3
	comp=Z,2.0nm,0.9s						
MK01	Makanchi Array	28.89	44	*e*P	P	19 29 56.1	-0.3
MK01	Makanchi Array	28.89	44	*e*P	P	19 29 56.1	-0.3
MK31	Makanchi Array	28.90	44	*e*P	P	19 29 54.1	-2.3
MK31	Makanchi Array	28.90	44	*e*P	P	19 29 54.2	-2.3
MK31	Makanchi Array	28.90	44	*e*P	P	19 29 54.2	-2.3
MK32	Makanchi Array	28.90	44	*e*P	P	19 29 57.1	+0.6
MK32	Makanchi Array	28.90	44	*e*P	P	19 29 57.1	+0.6
MKAR	Makanchi Array	28.90	44	P	P	19 29 57.1	+0.7
	comp=Z,1.3nm,1.0s,baz=230,slow=6.9,SNR=6.1						
MKAR	Makanchi Array	28.90	44	*e*P	P	19 29 54.6	-1.9
	comp=Z,6.6nm,0.9s						
MKAR	Makanchi Array	28.90	44	*e*P	P	19 29 54.6	-1.9
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MKAR	Makanchi Array	28.90	44	*e*P	P	19 29 54.6	-1.9
	comp=Z,6.6nm,0.9s						
KURBB	Kurchatov Arra	28.91	35	P	P	19 29 57.0	+0.5
	comp=Z,2.3nm,0.8s,baz=235,slow=9.1,SNR=16						
KURK	Kurchatov	29.01	34	*e*P	P	19 29 57.5	+0.1
	comp=Z,2.5nm,0.9s						
KURK	Kurchatov	29.01	34	*ce*P	P	19 29 57.8	+0.4
KURK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KURK	Kurchatov	29.01	34	*e*P	P	19 29 57.5	+0.1
	comp=Z,2.5nm,0.9s						
MDVR	Moldovita	29.37	311	⇓*i*P	P	19 30 00.7	0.0
MDVR	Moldovita	29.37	311	⇓*i*P	P	19 30 00.7	0.0
WMQ	Urumqi	31.32	52	P	P	19 30 20.3	+2.3
WMQ				LR	LR		
	comp=N,62nm,25.3s						
WMQ				LR	LR		
	comp=E,29nm,21.5s						
WMQ				LR	LR		
	comp=Z,57nm,21.5s						
PABE	Paberze	33.68	330	*e*P	S	19 36 08.6	+8.0
ZAA0	Zalesovo Array	33.99	34	*e*P	P	19 30 40.5	-0.6
	comp=Z,4.8nm,0.8s						
ZALV	Zalesovo Beam	33.99	34	P	P	19 30 41.0	-0.1
	comp=Z,4.5nm,0.6s,baz=244,slow=9.7,SNR=19						
ZALV				LR	LR	19 46 24.8	
	comp=Z,107nm,19.9s,baz=250,slow=40						
ZALV	Zalesovo Beam	33.99	34	*e*P	P	19 30 40.7	-0.5
ZAA1	Zalesovo Array	34.00	34	*e*P	P	19 30 41.0	-0.1
ZAA1	Zalesovo Array	34.00	34	*e*P	P	19 30 41.0	-0.1
CONA	Conrad Observa	34.28	314	*e*P	P	19 30 44.8	+1.0
	comp=Z,1.8nm,0.9s						
VSU	Vasula	34.61	336	⇑*e*P	P	19 30 45.5	-0.9
VSU				pmax	pmax		
	comp=Z,17nm,1.0s						
MOA	Molln	35.27	313	*i* P	P	19 30 52.1	-0.2
	comp=Z,2.3nm,0.8s						
GEA0	GERESS Array S	35.94	314	*e*P	P	19 30 58.0	-0.1
GEC2	GERESS Array S	35.94	314	*e*P	P	19 30 57.6	-0.6
	comp=Z,6.9nm,1.6s						
GEC2	GERESS Array S	35.94	314	*e*P	P	19 30 57.6	-0.6
GEC2				pmax	pmax		
	comp=Z,7.0nm,1.6s						
GERES	GERESS Array B	35.94	314	P	P	19 30 57.8	-0.3
	comp=Z,0.4nm,0.5s,baz=98,slow=9.6,SNR=4.5						
KHC	Kasperske Hory	36.11	315	*e*P	P	19 30 59.0	-0.5
KHC	Kasperske Hory	36.11	315	*e*P	P	19 30 59.6	0.0
	comp=Z,1.0nm,0.6s						
KHC	Kasperske Hory	36.11	315	*e*P	P	19 30 59.0	-0.5
FIA0	FINESS Array S	37.05	339	*e*P	P	19 31 06.7	-0.6
FIA0	FINESS Array S	37.05	339	*e*P	P	19 31 06.7	-0.6
FIA1	FINESS Array S	37.05	339	*e*P	P	19 31 06.2	-1.1
	comp=Z,28nm,1.8s						
FINES	FINESS Array B	37.05	339	P	P	19 31 06.7	-0.6
	comp=Z,1.6nm,0.5s,baz=142,slow=9.4,SNR=20						
FINES	FINESS Array B	37.05	339	*i* P	P	19 31 06.6	-0.7
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
CLL	Collm	37.21	318	*e*P	P	19 31 07.0	-1.8
CLL	Collm	37.21	318	*e*P	P

HHC LR LR
comp=N,85nm,15.6s
HHC LR LR
comp=E,80nm,15.6s
HHC LR LR
comp=Z,250nm,14.7s
TOA0 Torodi Ar. Sit 50.05 263 *e*P **P 19 32 52.0 -0.7**
TORD Torodi Ar. Bea 50.05 263 P **P 19 32 52.7 0.0**
comp=Z,2.3nm,0.6s,baz=61,slow=8.2,SNR=14
TORD LR LR 19 54 18.7
comp=Z,36nm,18.0s,baz=190,slow=36
TOA1 Torodi Ar. Sit 50.05 263 *e*P **P 19 32 52.7 0.0**
SPA0 Spitsbergen Ar 51.92 351 *e*P **P 19 33 05.3 -0.6**
SPITS Spitsbergen Ar 51.92 351 P **P 19 33 05.1 -0.8**
comp=Z,1.3nm,0.6s,baz=135,slow=18,SNR=2.3
KOWA Kowa 54.45 267 P **P 19 33 25.7 +0.4**
comp=Z,1.9nm,0.6s,baz=79,slow=6.1,SNR=5.4
DBIC Dimbokro 58.79 260 *e*P **P 19 33 55.6 -0.6**
comp=Z,40nm,1.5s
DBIC Dimbokro 58.79 260 *e*P **P 19 33 55.6 -0.6**
DBIC pmax pmax
comp=Z,40nm,1.5s
LBTB Lobatse 59.82 209 *e*P **P 19 34 04.4 +1.2**
comp=Z,38nm,1.9s
LBTB Lobatse 59.82 209 *e*P **P 19 34 04.4 +1.2**
LBTB pmax pmax
comp=Z,38nm,1.9s
KS15 Wonju Array Si 61.70 61 *e*P **P 19 34 15.4 -0.5**
KS15 Wonju Array Si 61.70 61 *e*P **P 19 34 15.4 -0.5**
KSAR Wonju Array Be 61.70 61 P **P 19 34 15.8 -0.1**
KSAR Wonju Array Be 61.70 61 P **P 19 34 15.8 -0.1**
KSAR Wonju Array Be 61.70 61 P **P 19 34 15.8 -0.1**
KSRS Korea Array 61.73 61 P **P 19 34 15.8 -0.3**
comp=Z,1.0nm,0.8s,baz=267,slow=6.3,SNR=3.0
BOSA Boshof 63.14 207 P **P 19 34 28.0 +2.4**
comp=Z,1.8nm,0.8s,baz=23,slow=4.8,SNR=3.2
BOSA Boshof 63.14 207 *e*P **P 19 34 28.0 +2.4**
SEY Seymchan 68.68 29 P **P 19 35 01.3 +0.6**
comp=Z,0.8nm,0.5s,baz=249,slow=23,SNR=7.5
BILL Bilibino 71.53 21 *e*P **P 19 35 17.9 -0.3**
BILL *e* 19 35 39.4
BILL pmax pmax
comp=Z,1.0nm,1.0s
ILAR Eielson Array 85.26 8 P **P 19 36 33.9 -0.1**
comp=Z,0.5nm,0.9s,baz=327,slow=3.9,SNR=3.9
ILB Eielson Array 85.26 8 *e*P **P 19 36 33.4 -0.6**
YKA Yellowknife Ar 88.30 354 *i*P **P 19 36 47.5 -1.3**
WRA Warramunga Arr 92.23 111 P **P 19 37 07.2 -0.7**
comp=Z,0.1nm,0.5s,baz=310,slow=4.1,SNR=3.3
WR1 Warramunga Arr 92.23 111 *e*P **P 19 37 07.2 -0.7**
comp=Z,18nm,1.5s
AS31 Alice Springs 93.73 115 *e*P **P 19 37 13.8 -1.0**
comp=Z,1.0nm,1.1s
ASAR Alice Springs 93.73 115 P **P 19 37 14.4 -0.4**
comp=Z,0.5nm,0.8s,baz=308,slow=5.2,SNR=8.2
SADO Sadowa 94.62 328 LR LR 20 21 05.0
comp=Z,22nm,18.4s,baz=134,slow=36

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*CSEM **16** 19:27:47.4,39°.13N×29°.18E,h10km,ML1.9*
ISK 16 19:27:47.4,39°.13N±29°.18E,h10km,ML1.9/4,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHAP	**Saphane-Kutahy**	**0.11**	**161**	PG	Pg	19 27 50.6	+0.3
SHAP				SG	Sg	19 27 52.8	+0.5
SHAP	**Saphane-Kutahy**	**0.11**	**161**	*e*Pg	Pg	19 27 50.6	+0.3
SHAP				*e*Sg	Sg	19 27 52.8	+0.5
SIMA	**Simav-Kutahya**	**0.16**	**252**	PG	Pg	19 27 51.4	+0.5
SIMA				SG	Sg	19 27 54.0	+0.6
SIMA	**Simav-Kutahya**	**0.16**	**252**	*e*Pg	Pg	19 27 51.4	+0.5
SIMA				*e*Sg	Sg	19 27 54.0	+0.6
GEDZ	**Gediz**	**0.20**	**115**	PG	Pg	19 27 52.2	+0.5
GEDZ				SG	Sg	19 27 55.5	+0.9
GEDZ	**Gediz**	**0.20**	**115**	*e*Pg	Pg	19 27 52.2	+0.5
GEDZ				*e*Sg	Sg	19 27 55.5	+0.9
DEMI	**Demirci**	**0.37**	**256**	*i*P	Pn	19 27 58.9	0.0
TVSB	**Tavsanli**	**0.39**	**35**	PG	Pg	19 27 55.5	+0.4
TVSB	**Tavsanli**	**0.39**	**35**	*e*Pg	Pg	19 27 55.5	+0.4
KULA	**Kula-Manisa**	**0.73**	**213**	PG	Pb	19 28 02.0	-0.3
KULA	**Kula-Manisa**	**0.73**	**213**	*e*Pg	Pb	19 28 02.0	-0.3

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*CSEM **16** 19:28:22.8±0.1,39°.15N×29°.20E,h2km,ML1.6,Error ellipse: s-maj=3.6km s-min=2.2km az=128.0*
ISK 16 19:28:21.8,39°.16N×29°.18E,h5km,ML1.6/3,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHAP	**Saphane-Kutahy**	**0.14**	**168**	PG	Pg	19 28 25.4	+0.8
SHAP				SG	Sg	19 28 27.3	+0.8
SHAP	**Saphane-Kutahy**	**0.14**	**168**	*e*Pg	Pg	19 28 25.4	+0.8
SHAP				*e*Sg	Sg	19 28 27.3	+0.8
SIMA	**Simav-Kutahya**	**0.17**	**245**	PG	Pg	19 28 26.2	+0.9
SIMA				SG	Sg	19 28 28.5	+0.9
SIMA	**Simav-Kutahya**	**0.17**	**245**	*e*Pg	Pg	19 28 26.2	+0.9
SIMA				*e*Sg	Sg	19 28 28.5	+0.9
TVSB	**Tavsanli**	**0.36**	**36**	PG	Pb	19 28 29.9	-0.9
TVSB				SG	Sg	19 28 34.7	+1.0
TVSB	**Tavsanli**	**0.36**	**36**	*e*Pg	Pb	19 28 29.9	-0.9
TVSB				*e*Sg	Sg	19 28 34.7	+1.0
DEMI	**Demirci**	**0.38**	**253**	*i*P	Pb	19 28 30.9	-0.2
DEMI	**Demirci**	**0.38**	**253**	P	Pb	19 28 30.9	-0.2
KULA	**Kula-Manisa**	**0.76**	**213**	PG	Pb	19 28 37.3	-0.3
KULA	**Kula-Manisa**	**0.76**	**213**	*e*Pg	Pb	19 28 37.3	-0.3
MANT	**Manisa**	**0.83**	**216**	*i*P	Pn	19 28 45.1	+4.8

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*IDC **16** 19:46:30.0±1.3,11°.13S×165°.26E,h0km,mb4.1/7, mb1 4.3/9,mb1mx3.9/56,mbtmp4.2/9,ML4.3/2,MS3.2/4, Ms1 3.2/4,ms1mx2.8/44,Error ellipse: s-maj=36.6km s-min=23.3km az=119.0*
*ISCJB **16** 19:46:33.1±0.4,11°.13S±0°.06×165°.11E±0°.05,h30km, mb5.0/24,MS3.1/2,Error ellipse: s-maj=8.6km s-min=6.7km az=29.5*
*NEIC **16** 19:46:35.9±1.5,11°.12S×165°.15E,h36km±14km,mb4.7/13, Error ellipse: s-maj=8.8km s-min=7.4km az=223.0*
ISC 16 19:46:34.8±0.6,11°.19S±0°.07×165°.16E±0°.08,h30km,n39, σ1§13/40,mb4.9/24,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.42**	**288**	Pn	**Pn**	**19 47 53.9**	**+0.4**
	8.7nm,0.3s,baz=310,slow=2.9,SNR=4.4						
HNR				Sn	**Sn**	**19 48 53.7**	**-1.3**
	5.6nm,0.3s,baz=170,slow=19,SNR=2.2						
HNR				LR	LR	19 49 50.1	
	comp=Z,162nm,19.3s,baz=194,slow=36						
DZM	**Mont Dzumac**	**10.89**	**174**	Pn	**Pn**	**19 49 07.7**	**-1.1**
	2.3nm,0.3s,baz=313,slow=12,SNR=30						
DZM				Sn	**Sn**	**19 51 07.3**	**-2.5**
	0.2nm,0.3s,baz=322,slow=19,SNR=2.0						
DZM	**Mont Dzumac**	**10.89**	**174**	*e*Pn	**Pn**	**19 49 09.9**	**+1.1**
DZM				*e*Sn	Sn	19 50 55.6	-14
DZM				Sn	Sn	19 51 07.3	-2.5
PMG	**Port Moresby**	**17.80**	**274**	LR	LR	19 56 07.3	
	comp=Z,84nm,20.1s,baz=96,slow=32						
EIDS	**Eidsvold**	**19.41**	**221**	*e*P	**Pn**	**19 51 00.8**	**+0.9**
	33nm,1.7s						
MANU	**Manus Island**	**19.86**	**296**	*e*P	**Pn**	**19 51 04.6**	**-0.8**
	225nm,1.9s						
CTA	**Charters Tower**	**20.23**	**242**	P	Pn	19 51 09.8	+0.1
	7.9nm,0.9s,baz=72,slow=12,SNR=7.5						
CTAO	**Charters Tower**	**20.23**	**242**	*e*P	Pn	19 51 09.5	-0.2
	12nm,1.0s						
ARMA	**Armidale**	**22.90**	**211**	*e*P	**P**	**19 51 36.2**	**-0.1**
	40nm,1.5s						
RAO	**Raoul Island**	**23.93**	**141**	*e*P	**P**	**19 51 46.4**	**+0.1**
	582nm,0.9s						
OUZ	**Omahuta**	**25.13**	**164**	*e*P	**P**	**19 51 58.5**	**+1.4**
	49nm,1.6s						
MXZ	**Matakaoa Point**	**28.80**	**158**	*e*P	**P**	**19 52 31.7**	**+1.5**
	162nm,1.3s						
URZ	**Urewera**	**29.00**	**160**	*e*P	**P**	**19 52 33.7**	**+1.7**
	47nm,1.5s						
BKZ	**Black Stump Fm**	**29.64**	**162**	*e*P	**P**	**19 52 39.5**	**+1.8**
	197nm,2.0s						
STKA	**Stephens Creek**	**29.95**	**223**	P	**P**	**19 52 41.7**	**+1.2**
	1.7nm,0.6s,baz=62,slow=13,SNR=6.0						
STKA				LR	LR	20 03 01.7	
	comp=Z,39nm,18.4s,baz=22,slow=33						
STKA	**Stephens Creek**	**29.95**	**223**	*e*P	**P**	**19 52 41.6**	**+1.2**
	4.6nm,1.7s						
WB2	**Warramunga Arr**	**30.88**	**250**	*e*P	**P**	**19 52 48.2**	**-0.7**
WR1	**Warramunga Arr**	**30.89**	**250**	*e*P	**P**	**19 52 48.8**	**-0.2**
	13nm,1.4s						
WR1				*e*PcP	**PcP**	**19 55 45.7**	**+0.3**
WRA	**Warramunga Arr**	**30.89**	**250**	P	**P**	**19 52 48.8**	**-0.2**
	2.2nm,0.6s,baz=81,slow=9.1,SNR=24						
WRA				PcP	**PcP**	**19 55 45.7**	**+0.3**
	0.4nm,0.7s,baz=80,slow=3.8,SNR=3.4						
THZ	**Tophouse**	**31.21**	**169**	*e*P	**P**	**19 52 51.9**	**+0.3**
	93nm,1.8s						
LTZ	**Lake Taylor**	**32.08**	**170**	*e*P	**P**	**19 53 00.6**	**+1.4**
	23nm,1.2s						
AS01	**Alice Springs**	**32.17**	**243**	*e*P	**P**	**19 52 59.5**	**-0.8**
AS31	**Alice Springs**	**32.21**	**243**	*e*P	**P**	**19 53 00.1**	**-0.5**
	1.8nm,0.6s						
ASAR	**Alice Springs**	**32.22**	**243**	P	**P**	**19 53 00.1**	**-0.5**
	5.5nm,0.6s,baz=66,slow=10.0,SNR=111						
ASAR				PcP	**PcP**	**19 55 49.4**	**+0.4**
	0.7nm,0.8s,baz=40,slow=1.9,SNR=6.5						
ASAR				LR	LR	20 05 10.0	
	comp=Z,50nm,20.0s,baz=349,slow=35						
MQZ	**McQueen's Vall**	**33.05**	**170**	*e*P	**P**	**19 53 08.3**	**+0.7**
	224nm,1.9s						
MTN	**Manton Dam**	**33.31**	**264**	*e*P	**P**	**19 53 09.3**	**-0.9**
	17nm,1.2s						
FITZ	**Fitzroy Crossi**	**38.79**	**255**	*e*P	**P**	**19 53 53.9**	**-3.2**
	30nm,2.0s						
UWB	**Uwekahuna B**	**49.44**	**52**	*e*P	**P**	**19 55 21.3**	**-1.3**
	679nm,1.7s						
BYL	**Byron`s Ledge**	**49.45**	**52**	*e*P	**P**	**19 55 21.8**	**-0.9**
	430nm,1.3s						
SBLHI	**Steaming Bluff**	**49.45**	**52**	*e*P	**P**	**19 55 21.9**	**-0.8**
	1μm,1.9s						
CISI	**Cisompet, Garu**	**56.62**	**268**	*e*P	**P**	**19 56 16.6**	**+0.9**
	72nm,1.2s						
ERM	**Erimo**	**56.67**	**340**	*e*P	**P**	**19 56 16.3**	**+1.0**
	61nm,1.2s						
SONA0	**Songino Array**	**78.44**	**324**	*e*P	**P**	**19 58 33.3**	**-0.3**
SONM	**Songino Array**	**78.44**	**324**	P	**P**	**19 58 33.3**	**+0.3**
	0.4nm,0.5s,baz=147,slow=6.7,SNR=3.2						
ILAR	**Eielson Array**	**83.83**	**19**	P	**P**	**19 59 00.6**	**-0.5**
	0.5nm,0.7s,baz=232,slow=5.4,SNR=5.0						
MAGC	**SCE Magundon P**	**85.18**	**53**	*e*P	P	19 59 11.4	+2.8
DPP	**Dos Picos Cty**	**86.08**	**55**	*e*P	**P**	**19 59 12.6**	**-0.6**
MK32	**Makanchi Array**	**93.23**	**317**	*e*P	**P**	**19 59 46.4**	**-0.2**
MKAR	**Makanchi Array**	**93.23**	**317**	P	**P**	**19 59 46.3**	**-0.2**
	0.4nm,0.7s,baz=92,slow=7.2,SNR=5.1						

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*ISCJB **16** 19:58:13.7±0.5,15°.82S±0°.06×166°.00E±0°.07,h33km, mb4.8/13,Error ellipse: s-maj=9.8km s-min=8.1km az=26.1*
*IDC **16** 19:58:13.5±12.0,15°.93S×165°.76E,h0km,mb4.1/3, mb1 4.3/4,mb1mx3.6/58,mbtmp4.2/4,ML4.3/1,Error ellipse: s-maj=220.6km s-min=35.1km az=56.0*
*NEIC **16** 19:58:17.5±1.6,15°.83S×166°.05E,h57km±16km,mb4.5/7, Error ellipse: s-maj=18.3km s-min=10.1km az=153.0*
ISC 16 19:58:15.2±0.7,15°.76S±0°.08×166°.12E±0°.10,h35km,n23, σ1§36/24,mb4.7/13,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.28**	**177**	Pn	**Pn**	**19 59 46.0**	**+0.5**
	7.9nm,0.3s,baz=19,slow=4.9,SNR=126						
DZM				Sn	**Sn**	**20 00 56.5**	**+0.4**
	4.3nm,0.3s,baz=126,slow=20,SNR=4.3						
HNR	**Honiara**	**8.71**	**316**	*e*Pn	**Pn**	**20 00 19.1**	**+0.3**
FUNA	**Funafuti**	**14.66**	**62**	*e*Pn	**P**	**20 01 45.0**	**-1.0**
STKA	**Stephens Creek**	**27.48**	**230**	P	**P**	**20 03 58.0**	**-0.2**
	0.9nm,0.7s,baz=71,slow=13,SNR=2.9						
STKA	**Stephens Creek**	**27.48**	**230**	*e*P	**P**	**20 03 57.5**	**-0.8**
	5.2nm,1.7s						
WB2	**Warramunga Arr**	**30.49**	**257**	*e*P	**P**	**20 04 24.1**	**-1.1**
	6.8nm,1.1s						
WR1	**Warramunga Arr**	**30.50**	**257**	*e*P	**P**	**20 04 25.3**	**0.0**
	26nm,1.8s						
WRA	**Warramunga Arr**	**30.51**	**257**	P	**P**	**20 04 25.3**	**0.0**
	0.5nm,0.3s,baz=87,slow=9.1,SNR=17						
AS01	**Alice Springs**	**31.23**	**250**	*e*P	**P**	**20 04 31.9**	**+0.2**
AS31	**Alice Springs**	**31.27**	**250**	*e*P	**P**	**20 04 32.3**	**+0.3**
	1.6nm,0.3s						
ASAR	**Alice Springs**	**31.27**	**250**	P	**P**	**20 04 32.2**	**+0.2**
	1.9nm,0.3s,baz=79,slow=9.1,SNR=96						
MTN	**Manton Dam**	**34.00**	**270**	*e*P	**P**	**20 04 56.7**	**+0.8**
	13nm,1.3s						
FORT	**Forrest**	**37.82**	**240**	*e*P	**P**	**20 05 27.9**	**-0.7**
	111nm,2.0s						
FITZ	**Fitzroy Crossi**	**38.74**	**261**	*e*P	**P**	**20 05 36.7**	**+0.3**
	15nm,1.6s						
MBWA	**Marble Bar**	**44.21**	**256**	*e*P	**P**	**20 06 20.6**	**-0.6**
	73nm,1.8s						
KHLU	**Kahalu`u**	**51.28**	**48**	*e*P	**P**	**20 07 18.3**	**+2.1**
	292nm,1.7s						
HUH	**Hualalai**	**51.38**	**48**	*e*P	**P**	**20 07 19.8**	**+2.7**
	177nm,1.3s						
HMH	**Humu`ula Sheep**	**51.59**	**48**	*e*P	**P**	**20 07 20.2**	**+1.5**
	132nm,1.2s						
DPD	**Davis Peak**	**85.75**	**52**	*e*P	**P**	**20 10 52.1**	**+1.1**
FRD	**Ford Ranch, An**	**88.35**	**55**	*e*P	**P**	**20 11 02.1**	**-1.6**
SWSC	**Sam W. Stewart**	**88.79**	**55**	*e*P	**P**	**20 11 03.1**	**-2.7**
FURC	**Furnace Creek,**	**89.17**	**52**	*e*P	**P**	**20 11 04.7**	**-2.7**
IRM	**Iron Mountain**	**89.71**	**54**	*e*P	**P**	**20 11 08.9**	**-1.1**

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*ISK **16** 20:01:19.3,36°.95N×28°.23E,h7km,ML2.6/9*
*CSEM **16** 20:01:19.7±0.2,36°.95N×28°.25E,h1km,ML2.6,Error ellipse: s-maj=4.7km s-min=3.5km az=12.0,Suspected Mining explosion.*
*DDA **16** 20:01:20.0,36°.93N×28°.23E,h7km,Ml2.6,Suspected Mining explosion.*
ISC 16 20:01:18.8±1.2,36°.97N±0°.03×28°.26E±0°.02,h1km±11km, n37,σ1§05/56,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSB	**Marmaris-Mugla**	**0.25**	**192**	PG	**Pg**	**20 01 24.1**	**+0.5**
MRSB				SG	**Sg**	**20 01 28.1**	**+1.2**
MRSB	**Marmaris-Mugla**	**0.25**	**192**	*e*Pg	**Pg**	**20 01 24.1**	**+0.5**
MRSB				*e*Sg	**Sg**	**20 01 28.1**	**+1.2**
TURN	**Turunc**	**0.29**	**108**	PG	**Pg**	**20 01 23.4**	**-0.9**
TURN				SG	**Sg**	**20 01 26.5**	**-1.5**
TURN	**Turunc**	**0.29**	**108**	*i*P	**Pg**	**20 01 23.6**	**-0.7**
TURN				*i*S	**Sg**	**20 01 26.5**	**-1.5**
TURN	**Turunc**	**0.29**	**108**	P	**Pg**	**20 01 23.6**	**-0.7**
TURN				S	**Sg**	**20 01 26.5**	**-1.5**
DALY	**Dalyan (Mu¨la**	**0.35**	**115**	PG	**Pg**	**20 01 26.8**	**+1.4**
DALY				SG	**Sb**	**20 01 32.5**	**-1.2**
DALY	**Dalyan (Mu¨la**	**0.35**	**115**	*i*P	**Pg**	**20 01 26.8**	**+1.4**
DALY				*i*S	**Sb**	**20 01 33.0**	**-0.7**
DALY	**Dalyan (Mu¨la**	**0.35**	**115**	P	**Pg**	**20 01 26.8**	**+1.4**
DALY				*e*Sg	**Sb**	**20 01 32.5**	**-1.2**
DALY				S	**Sb**	**20 01 33.0**	**-0.7**
MLSB	**Milas**	**0.51**	**310**	PG	**Pg**	**20 01 29.6**	**+1.0**
MLSB	**Milas**	**0.51**	**310**	*e*Pg	**Pg**	**20 01 29.6**	**+1.0**
DATC	**Datca-Mugla**	**0.53**	**247**	PG	**Pg**	**20 01 29.4**	**+0.6**
DATC				SG	**Sb**	**20 01 37.2**	**-1.7**
DATC	**Datca-Mugla**	**0.53**	**247**	*e*Pg	**Pg**	**20 01 29.4**	**+0.6**
DATC				*e*Sg	**Sb**	**20 01 37.2**	**-1.7**
DAT	**Datca**	**0.60**	**247**	PG	**Pb**	**20 01 31.3**	**-0.8**
DAT	**Datca**	**0.60**	**247**	*i*P	**Pg**	**20 01 30.9**	**+0.7**
DAT				*i*S	**Sb**	**20 01 40.9**	**-0.3**
DAT	**Datca**	**0.60**	**247**	P	**Pg**	**20 01 30.9**	**+0.7**
DAT	**Datca**	**0.60**	**247**	*e*Pg	**Pb**	**20 01 31.3**	**-0.8**
DAT				S	**Sb**	**20 01 40.9**	**-0.3**
BDRM	**Kayabasi**	**0.66**	**279**	*i*P	**Pb**	**20 01 32.3**	**-0.9**
BDRM				*i*S	**Sb**	**20 01 42.4**	**-0.5**
BDRM	**Kayabasi**	**0.66**	**279**	P	**Pb**	**20 01 32.3**	**-0.9**
BDRM				S	**Sb**	**20 01 42.4**	**-0.5**
TAVA	**DENIZLI_Tavas**	**0.72**	**46**	*i*P	**Pb**	**20 01 34.4**	**+0.2**
TAVA				*i*S	**Sn**	**20 01 47.3**	**-0.7**
TAVA	**DENIZLI_Tavas**	**0.72**	**46**	P	**Pb**	**20 01 34.4**	**+0.2**
TAVA				S	**Sn**	**20 01 47.3**	**-0.7**
ARG	**Arkhangelos**	**0.76**	**188**	PG	**Pg**	**20 01 33.8**	**+0.6**
ARG	**Arkhangelos**	**0.76**	**188**	*e*Pg	**Pg**	**20 01 33.8**	**+0.6**
AYDN	**Tasoluk**	**0.76**	**336**	*i*P	**Pg**	**20 01 34.3**	**+0.9**
AYDN	**Tasoluk**	**0.76**	**336**	P	**Pg**	**20 01 34.3**	**+0.9**
BODT	**Bodrum**	**0.77**	**278**	PG	**Pg**	**20 01 33.9**	**+0.4**
BODT	**Bodrum**	**0.77**	**278**	*e*Pg	**Pg**	**20 01 33.9**	**+0.4**
AYDB	**Zeytinkoy-Aydi**	**1.02**	**343**	PG	**Pn**	**20 01 40.0**	**-0.5**
AYDB	**Zeytinkoy-Aydi**	**1.02**	**343**	*e*Pg	**Pn**	**20 01 40.0**	**-0.5**
GOLH	**Golhisar**	**1.07**	**75**	*i*P	**Pn**	**20 01 41.6**	**+0.5**
GOLH				*i*S	**Sn**	**20 01 59.4**	**+2.7**
GOLH	**Golhisar**	**1.07**	**75**	P	**Pn**	**20 01 41.6**	**+0.5**
GOLH				S	**Sn**	**20 01 59.4**	**+2.7**
GCAM	**G?zelcaml?**	**1.10**	**312**	PN	**Pg**	**20 01 40.4**	**+0.5**
GCAM	**G?zelcaml?**	**1.10**	**312**	*i*P	**Pn**	**20 01 41.6**	**+0.2**
GCAM	**G?zelcaml?**	**1.10**	**312**	*e*Pn	**Pg**	**20 01 40.4**	**+0.5**
GCAM	**G?zelcaml?**	**1.10**	**312**	P	**Pn**	**20 01 41.6**	**+0.2**
AKAS	**Kas**	**1.30**	**124**	PN	**Pg**	**20 01 44.6**	**+0.9**
AKAS	**Kas**	**1.30**	**124**	*i*P	**Pg**	**20 01 44.7**	**+0.9**
AKAS	**Kas**	**1.30**	**124**	P	**Pg**	**20 01 44.7**	**+0.9**

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*NIED **16** 20:06:00,42°.00N×142°.60E,h59km,Mw3.7 Best double couple: M0 4.24000×10^14 NP1:φs187.00000°,δ20.00000°, λ71.00000°. NP2:φs27.00000°,δ72.00000°,λ97.00000°.*
*ISCJB **16** 20:06:12.9±0.5,42°.00N±0°.05×142°.58E±0°.05,h69km±3km, mb3.6/13,Error ellipse: s-maj=8.7km s-min=5.7km az=153.8*
*JMA **16** 20:06:13.7±0.2,42°.03N×142°.61E,h63km±2km,M3.5 Broadband fault plane solution: P waves. NP1: φs23.00000°,δ61.00000°,λ89.00000°. NP2:φs206.00000°, δ29.00000°,λ92.00000°. Principal axes: T Plg74.0000°, Azm290.0000°; N Plg1.0000°, Azm24.0000°; P Plg16.0000°, Azm114.0000°;*
*IDC **16** 20:06:15.0±2.0,42°.06N×142°.61E,h72km±15km,mb3.4/13, mb1 3.5/15,mb1mx3.3/69,mbtmp3.7/15 Error ellipse: s-maj=21.6km s-min=14.3km az=109.0*
ISC 16 20:06:13.5±0.8,42°.03N±0°.05×142°.55E±0°.04,h59km±7km, n34,σ1§12/36,mb3.9/13,5C-7D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.30**	**31**	⇑P	**Pn**	**20 06 23.8**	**+0.3**
JNBK				*e*S	**Sn**	**20 06 31.5**	**+0.8**
JEM	**Erimo**	**0.45**	**91**	⇑P	**Pn**	**20 06 25.4**	**+0.5**
JEM				*e*S	**Sn**	**20 06 33.3**	**+0.1**
JBT2	**Biratori 2**	**0.76**	**350**	⇓P	**Pn**	**20 06 28.9**	**+0.4**
JBT2				*e*S	**Sn**	**20 06 40.3**	**+0.8**
JCH	**Churui**	**0.84**	**45**	⇑P	**Pn**	**20 06 29.6**	**+0.2**
JCH				*e*S	**Sn**	**20 06 41.5**	**+0.3**
JFR	**Furan**	**1.14**	**2**	⇓P	**Pn**	**20 06 33.5**	**+0.2**
JKB	**Kayabe**	**1.14**	**264**	⇓P	**Pn**	**20 06 34.0**	**+0.7**
JKB				*e*S	**Sn**	**20 06 49.0**	**+1.0**
JEW	**Eniwo**	**1.15**	**315**	⇓P	**Pn**	**20 06 34.3**	**+0.8**
JNB	**Noboribetsu**	**1.21**	**292**	⇓P	**Pn**	**20 06 34.3**	**+0.1**
JNB				*e*S	**Sn**	**20 06 50.4**	**+0.8**
JOB	**Onbets**	**1.29**	**47**	⇑P	**Pn**	**20 06 36.4**	**+1.1**
JOB				*e*S	**Sn**	**20 06 53.2**	**+1.5**
JOT	**Ohata**	**1.29**	**241**	⇓P	**Pn**	**20 06 36.1**	**+0.8**
JAB	**Ashibetsu**	**1.50**	**351**	⇓P	**Pn**	**20 06 38.9**	**+0.8**
JAR	**Ashorobuto**	**1.56**	**35**	⇑P	**Pn**	**20 06 39.0**	**+0.1**
ASAJ	**Asahikawa**	**2.09**	**1**	P	**Pn**	**20 06 47.5**	**+1.4**
	31nm,0.3s,baz=198,slow=15,SNR=316						
ASAJ				S	**Sn**	**20 07 12.9**	**+1.9**
	12nm,0.3s,baz=172,slow=31,SNR=9.8						
MJAR	**Matsushiro Arr**	**6.43**	**213**	P	**Pn**	**20 07 47.6**	**+2.1**
	0.2nm,0.3s,baz=46,slow=11,SNR=4.2						
KSRS	**Korea Array**	**12.15**	**253**	P	**P**	**20 09 10.4**	**-3.8**
	0.1nm,0.3s,baz=61,slow=14,SNR=6.2						
SEY	**Seymchan**	**21.73**	**12**	P	**P**	**20 10 58.1**	**-1.4**
	0.6nm,0.4s,baz=208,slow=15,SNR=3.5						
H11N2	**WAKE ISLAND Hy 30.31 130**			T	T	20 43 45.8	
	baz=324,slow=75,SNR=31						
H11N1	**WAKE ISLAND Hy 30.32 130**			T	T	20 43 45.8	
	baz=324,slow=75,SNR=45						
H11N3	**WAKE ISLAND Hy 30.33 130**			T	T	20 43 45.8	
	baz=324,slow=75,SNR=32						
H11S1	**WAKE ISLAND Hy 31.18 131**			T	T	20 44 49.7	
	baz=325,slow=76,SNR=50						
H11S3	**WAKE ISLAND Hy 31.18 131**			T	T	20 44 48.2	
	baz=325,slow=76,SNR=37						
H11S2	**WAKE ISLAND Hy 31.19 131**			T	T	20 44 49.8	
	baz=325,slow=76,SNR=35						
ZALV	**Zalesovo Beam**	**39.36**	**308**	P	**P**	**20 13 37.4**	**+0.6**
	1.1nm,0.6s,baz=93,slow=9.7,SNR=6.3						
MKAR	**Makanchi Array**	**42.39**	**298**	P	**P**	**20 14 02.2**	**+0.3**
	0.8nm,0.8s,baz=79,slow=9.0,SNR=5.6						
KURBB	**Kurchatov Arra**	**43.77**	**304**	P	**P**	**20 14 13.1**	**+0.2**
	1.4nm,0.5s,baz=77,slow=8.8,SNR=9.9						
ILAR	**Eielson Array**	**44.86**	**35**	P	**P**	**20 14 21.2**	**-0.2**
	0.2nm,0.5s,baz=267,slow=5.6,SNR=4.6						
BVAR	**Borovoye Array**	**47.98**	**309**	P	**P**	**20 14 46.7**	**+0.7**
	0.9nm,0.5s,baz=76,slow=8.8,SNR=9.9						
INK	**Inuvik**	**49.58**	**29**	P	**P**	**20 14 57.8**	**-0.2**
	1.5nm,0.7s,baz=256,slow=8.3,SNR=3.3						
RES	**Resolute Bay**	**57.56**	**15**	P	**P**	**20 15 55.6**	**-0.6**
	0.6nm,0.4s,baz=301,slow=4.2,SNR=5.6						
WRA	**Warramunga Arr**	**62.12**	**189**	P	**P**	**20 16 28.4**	**+0.1**
	0.2nm,0.4s,baz=4.6,slow=6.8,SNR=4.1		

comp=N,1.8nm,0.2s
MESJ Messejana 3.59 81 P **Pn 20 15 47.1 +1.1**
MESJ S **Sn 20 16 27.0 -1.5**
comp=N,3.7nm,0.7s
MESJ Messejana 3.59 81 P **Pn 20 15 47.1 +1.1**
MESJ Messejana 3.59 81 *e*Pn **Pn 20 15 48.2 +2.2**
MESJ S **Sn 20 16 27.0 -1.5**
comp=N,3.7nm,0.7s
MESJ *e*Sn **Sn 20 16 27.8 -0.7**
ALMR Almeirim 3.72 60 *e*P **Pn 20 15 49.1 +1.4**
ALMR Almeirim 3.72 60 P **Pn 20 15 49.1 +1.4**
ALMR Almeirim 3.72 60 P **Pn 20 15 49.1 +1.4**
PCVE Castro Verde 3.72 84 *e*Pn **Pn 20 15 49.7 +1.9**
PCVE *e*Sn **Sn 20 16 30.1 -1.5**
PCVE A A 20 16 39.6
comp=N,1.8nm,0.2s
PCVE Castro Verde 3.72 84 P **Pn 20 15 49.7 +1.9**
PCVE S **Sn 20 16 30.1 -1.5**
comp=N,1.8nm,0.2s
PCVE Castro Verde 3.72 84 P **Pn 20 15 49.7 +1.9**
PCVE S **Sn 20 16 30.1 -1.5**
comp=N,1.8nm,0.2s
PBDV Barranco-do-Ve 3.81 90 *e*Pn **Pn 20 15 50.9 +1.9**
PBDV *e*Sn **Sn 20 16 33.9 +0.1**
PBDV A A 20 16 39.6
comp=N,3.8nm,0.7s
PBDV Barranco-do-Ve 3.81 90 P **Pn 20 15 50.9 +1.9**
PBDV S **Sn 20 16 33.9 +0.1**
comp=N,3.8nm,0.7s
PBDV Barranco-do-Ve 3.81 90 P **Pn 20 15 50.9 +1.9**
PBDV S **Sn 20 16 33.9 +0.1**
comp=N,3.8nm,0.7s
PBEJ Beja 3.90 78 *e*Pn **Pn 20 15 52.1 +1.9**
PBEJ Beja 3.90 78 P **Pn 20 15 52.1 +1.9**
PBEJ Beja 3.90 78 P **Pn 20 15 52.1 +1.9**
PMTG Montargil 3.92 63 *e*Pn **Pn 20 15 52.3 +1.7**
PMTG *e*Sn **Sn 20 16 36.9 +0.2**
PMTG A A 20 16 41.0
comp=N,1.9nm,0.4s
PMTG Montargil 3.92 63 *e*Pn **Pn 20 15 52.3 +1.7**
PMTG *e*Sn **Sn 20 16 36.9 +0.2**
PVAQ Vaqueiros 3.97 88 *e*Pn **Pn 20 15 52.8 +1.6**
PVAQ *e*Sn **Sn 20 16 37.0 -0.8**
PVAQ A A 20 16 42.9
comp=N,3.3nm,0.1s
PVAQ Vaqueiros 3.97 88 P **Pn 20 15 52.8 +1.6**
PVAQ S **Sn 20 16 37.0 -0.8**
comp=N,3.3nm,0.1s
PVAQ Vaqueiros 3.97 88 P **Pn 20 15 52.8 +1.6**
PVAQ S **Sn 20 16 37.0 -0.8**
comp=N,3.3nm,0.1s
PTOM Tomar 4.06 55 *e*Pn **Pn 20 15 55.1 +2.6**
PTOM *e*Sn **Sn 20 16 42.2 +2.1**
PTOM A A 20 16 44.5
comp=N,4.6nm,0.3s
PTOM Tomar 4.06 55 P **Pn 20 15 55.1 +2.6**
PTOM Tomar 4.06 55 P **Pn 20 15 55.1 +2.6**
PTOM *e*Sn **Sn 20 16 42.2 +2.1**
EGRO El Granado 4.16 86 P **Pn 20 15 55.0 +1.2**
comp=N,1.2nm,0.1s,SNR=7.9
EGRO S **Sn 20 16 41.3 -1.1**
comp=N,4.6nm,0.2s,SNR=7.9
EGRO El Granado 4.16 86 P **Pn 20 15 55.0 +1.2**
comp=N,1.2nm,0.1s,SNR=7.9
EGRO S **Sn 20 16 41.3 -1.1**
comp=N,4.6nm,0.2s,SNR=7.9
PCAS Casmilo, Conde 4.26 49 *e*Pn **Pn 20 15 57.3 +2.1**
PCAS *e*Sn **Sn 20 16 44.6 -0.4**
PCAS A A 20 16 50.9
comp=N,1.9nm,0.7s
PCAS Casmilo, Conde 4.26 49 *e*Pn **Pn 20 15 57.3 +2.1**
PCAS *e*Sn **Sn 20 16 44.6 -0.4**
PESTR Estremoz 4.31 68 *e*Pn **Pn 20 15 57.7 +1.8**
PESTR *e*Sn **Sn 20 16 45.9 -0.3**
PESTR A A 20 16 51.3
comp=N,1.6nm,0.7s
PESTR Estremoz 4.31 68 *e*Pn **Pn 20 15 57.7 +1.8**
PESTR *e*Sn **Sn 20 16 45.9 -0.3**
PBAR Barrancos 4.56 78 *e*Pn **Pn 20 16 01.5 +2.1**
PBAR *e*Sn **Sn 20 16 51.6 -0.8**
PBAR A A 20 16 57.9
comp=N,4.1nm,0.5s
PBAR Barrancos 4.56 78 P **Pn 20 16 01.5 +2.1**
PBAR S **Sn 20 16 51.6 -0.8**
comp=N,4.1nm,0.5s
PBAR Barrancos 4.56 78 P **Pn 20 16 01.5 +2.1**
PBAR S **Sn 20 16 51.6 -0.8**
comp=N,4.1nm,0.5s
PMRV Marv??o 4.66 62 *e*Pn **Pn 20 16 02.5 +1.7**
PMRV *e*Sn **Sn 20 16 54.9 0.0**
PMRV A A 20 16 59.5
comp=N,2.1nm,0.3s
PMRV Marv??o 4.66 62 P **Pn 20 16 02.5 +1.7**
PMRV S **Sn 20 16 54.9 0.0**
comp=N,2.1nm,0.3s
PMRV Marv??o 4.66 62 P **Pn 20 16 02.5 +1.7**
PMRV S **Sn 20 16 54.9 0.0**
comp=N,2.1nm,0.3s
EBAD Badajoz 4.71 71 P **Pn 20 16 03.1 +1.9**
comp=N,1.8nm,0.1s,SNR=6.9
EBAD S **Sn 20 16 54.7 -1.3**
comp=N,2.6nm,0.2s,SNR=4.8
EBAD Badajoz 4.71 71 P **Pn 20 16 03.2 +1.9**
comp=N,1.8nm,0.1s,SNR=6.9
EBAD S **Sn 20 16 54.7 -1.3**
comp=N,2.6nm,0.2s,SNR=4.8
PCBR Castelo Branco 4.79 57 *e*Pn **Pn 20 16 04.9 +2.4**
PCBR Castelo Branco 4.79 57 P **Pn 20 16 04.9 +2.4**
PCBR Castelo Branco 4.79 57 P **Pn 20 16 04.9 +2.4**
EMIN Mina Concepcio 4.81 83 P **Pn 20 16 03.8 +1.0**
comp=N,0.8nm,0.1s,SNR=15
EMIN S **Sn 20 16 55.3 -3.2**
comp=N,1.8nm,0.3s,SNR=6.1
EMIN Mina Concepcio 4.81 83 P **Pn 20 16 03.8 +1.0**
comp=N,0.8nm,0.1s,SNR=15
EMIN S **Sn 20 16 55.3 -3.2**
comp=N,1.8nm,0.3s,SNR=6.1
PVIS Viseu 5.04 47 *e*Pn **Pn 20 16 07.9 +2.0**
PVIS *e*Sn **Sn 20 17 03.0 -1.2**
PVIS A A 20 17 08.1
comp=N,2.9nm,0.3s
PVIS Viseu 5.04 47 P **Pn 20 16 07.9 +2.0**
PVIS S **Sn 20 17 03.0 -1.2**
comp=N,1.4nm,0.3s
PVIS Viseu 5.04 47 P **Pn 20 16 07.9 +2.0**
PVIS S **Sn 20 17 03.0 -1.2**
comp=N,1.4nm,0.3s
MTE Manteigas 5.05 51 *e*Sn **Sn 20 17 03.9 -0.7**
MTE Manteigas 5.05 51 S **Sn 20 17 03.9 -0.7**
MTE Manteigas 5.05 51 S **Sn 20 17 03.9 -0.7**
POLO Lamas de Olo 5.54 42 *e*Pn **Pn 20 16 15.0 +2.2**
POLO *e*Sn **Sn 20 17 15.5 -1.1**
POLO Lamas de Olo 5.54 42 *e*Pn **Pn 20 16 15.0 +2.2**
POLO *e*Sn **Sn 20 17 15.5 -1.1**
PCAB Cabril 5.67 38 *e*Pn **Pn 20 16 16.4 +1.9**
PCAB Cabril 5.67 38 P **Pn 20 16 16.4 +1.9**
PCAB Cabril 5.67 38 P **Pn 20 16 16.4 +1.9**
PGAV Gavieira, Arco 5.75 35 *e*Pn **Pn 20 16 17.7 +2.0**
PGAV *e*Sn **Sn 20 17 19.6 -2.1**
PGAV A A 20 17 21.3
comp=N,3.4nm,0.7s
PGAV Gavieira, Arco 5.75 35 *e*Pn **Pn 20 16 17.7 +2.0**
PGAV *e*Sn **Sn 20 17 19.6 -2.1**
ELOB Lobios 5.77 37 P **Pn 20 16 18.3 +2.3**
comp=N,0.2nm,0.1s,SNR=4.0
ELOB S **Sn 20 17 18.4 -3.8**
comp=N,0.7nm,0.1s,SNR=7.9
ELOB Lobios 5.77 37 P **Pn 20 16 18.3 +2.3**
comp=N,0.2nm,0.1s,SNR=4.0
ECAB El Cabril 5.82 81 P **Pn 20 16 17.5 +0.8**
comp=N,0.9nm,0.1s,SNR=15
ECAB S **Sn 20 17 20.1 -3.4**
comp=N,0.4nm,0.2s,SNR=7.9
ECAB El Cabril 5.82 81 P **Pn 20 16 17.5 +0.8**
comp=N,0.9nm,0.1s,SNR=15
ECAB S **Sn 20 17 20.1 -3.4**
comp=N,0.4nm,0.2s,SNR=7.9
MVO Moncorvo 5.83 47 *e*Pn **Pn 20 16 18.7 +1.9**
MVO *e*Sn **Sn 20 17 21.3 -2.4**
MVO A A 20 17 26.4
comp=N,1.6nm,0.2s
MVO Moncorvo 5.83 47 P **Pn 20 16 17.6 +0.8**
comp=N,1.1nm,0.3s,SNR=7.9
MVO S **Sn 20 17 21.1 -2.5**
comp=N,1.0nm,0.1s,SNR=7.9
MVO Moncorvo 5.83 47 P **Pn 20 16 17.6 +0.8**
comp=N,1.1nm,0.3s,SNR=7.9
MVO Moncorvo 5.83 47 P **Pn 20 16 18.7 +1.9**
MVO *e*Sn **Sn 20 17 21.3 -2.4**
EPLA Plasencia 5.85 60 P **Pn 20 16 18.2 +1.1**
comp=N,1.0nm,0.2s,SNR=7.9
EPLA S **Sn 20 17 21.9 -2.3**
comp=N,1.7nm,0.2s,SNR=7.9
EPLA Plasencia 5.85 60 P **Pn 20 16 18.2 +1.1**
comp=N,1.0nm,0.2s,SNR=7.9
EPLA S **Sn 20 17 21.9 -2.3**
comp=N,1.7nm,0.2s,SNR=7.9
EMAZ Mazaricos 6.29 26 P **Pn 20 16 25.3 +2.3**
comp=N,0.3nm,0.1s,SNR=4.0
EMAZ S **Sn 20 17 28.9 -5.9**
comp=N,1.1nm,0.1s,SNR=7.9
EMAZ Mazaricos 6.29 26 P **Pn 20 16 25.3 +2.3**
comp=N,0.3nm,0.1s,SNR=4.0
PBRG Braganca 6.41 44 *e*Pn **Pn 20 16 26.3 +1.6**
PBRG Braganca 6.41 44 Pn **Pn 20 16 26.3 +1.6**
PBRG Braganca 6.41 44 Pn **Pn 20 16 26.3 +1.6**
EADA Adamuz 6.49 80 P **Pn 20 16 26.2 +0.4**
comp=N,0.9nm,0.1s,SNR=7.9
EADA S **Sn 20 17 33.5 -6.5**
comp=N,0.4nm,0.2s,SNR=7.9
EADA Adamuz 6.49 80 P **Pn 20 16 26.2 +0.4**
comp=N,0.9nm,0.1s,SNR=7.9
EAGO Agolada(Pontev 6.50 32 P **Pn 20 16 26.1 +0.1**
comp=N,0.3nm,0.1s,SNR=7.9
EAGO S **Sn 20 17 34.9 -5.3**
comp=N,0.6nm,0.1s,SNR=7.9
EAGO Agolada(Pontev 6.50 32 P **Pn 20 16 26.1 +0.1**
comp=N,0.3nm,0.1s,SNR=7.9
EGOR Sierra Gorda, 6.86 89 P **Pn 20 16 33.2 +2.1**
comp=N,0.3nm,0.3s,SNR=7.9
EGOR Sierra Gorda, 6.86 89 P **Pn 20 16 33.2 +2.1**
comp=N,0.3nm,0.3s,SNR=7.9
PAB San Pablo 6.92 69 P **Pn 20 16 32.7 +0.9**
comp=N,0.4nm,0.2s,SNR=7.9
PAB S **Sn 20 17 46.7 -3.8**
comp=N,0.2nm,0.2s,SNR=4.0
PAB San Pablo 6.92 69 P **Pn 20 16 32.7 +0.9**
comp=N,0.4nm,0.2s,SNR=7.9
PAB S **Sn 20 17 46.7 -3.8**
comp=N,0.2nm,0.2s,SNR=4.0
ESDC Sonseca Array 7.24 69 P **Pn 20 16 37.0 +0.9**
comp=N,1.8nm,0.2s,baz=253,slow=12,SNR=13
ESDC Sonseca Array 7.24 69 P **Pn 20 16 37.0 +0.9**
comp=N,1.8nm,0.2s,baz=253,slow=12,SNR=13
GUD Guadarrama 7.43 61 P **Pn 20 16 40.8 +2.0**
comp=N,0.7nm,0.2s,SNR=7.9
GUD Guadarrama 7.43 61 P **Pn 20 16 40.8 +2.0**
comp=N,0.7nm,0.2s,SNR=7.9

MDD ***16*** *20:16:34.8±1.9, 37.°40N×12.°63W, h0km, mb4.0/6, Error ellipse: s-maj=17.0km s-min=15.1km az=50.0, PRXIMO*
INMG ***16*** *20:16:35.3±1.1, 37.°13N×13.°09W, h10km, ML2.2, Error ellipse: s-maj=8.3km s-min=6.5km az=112.0*
IGIL ***16*** *20:16:35.3, 37.°35N×12.°62W, h0km, ML2.1*
CSEM ***16*** *20:16:36.6±0.4, 37.°43N×12.°47W, h10km, mb4.0, Error ellipse: s-maj=8.1km s-min=7.3km az=72.0*

ISC 16 20:16:33.5±2.7, 37.°50N±0.°07×12.°5W±0.°1, h10km, n83, σ2.93/146, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMAFR	**Mafra**	**2.92**	**59**	*e*Pn	**Pb**	**20 17 23.6**	**-2.1**
PMAFR				*e*Sn	**Sb**	**20 18 01.3**	**-0.2**
PMAFR				A	A	20 18 07.0	
	8.1nm,0.4s						
PMAFR	**Mafra**	**2.92**	**59**	P	**Pb**	**20 17 23.4**	**-2.3**
	4.1nm,0.1s,SNR=7.9						
PMAFR				S	**Sb**	**20 17 59.8**	**-1.8**
	5.2nm,0.2s,SNR=7.9						
PMAFR	**Mafra**	**2.92**	**59**	*e*Pn	**Pb**	**20 17 23.6**	**-2.1**
PMAFR				S	**Sb**	**20 17 59.8**	**-1.8**
	5.2nm,0.2s,SNR=7.9						
PMAFR				*e*Sn	**Sb**	**20 18 01.3**	**-0.2**
PTEO	**Sao Teotonio**	**3.01**	**88**	*e*Pn	**Pb**	**20 17 25.4**	**-1.7**
PTEO				*e*Sn	**Sb**	**20 18 02.0**	**-1.9**
PTEO				A	A	20 18 09.9	
	4.6nm,0.6s						
PTEO	**Sao Teotonio**	**3.01**	**88**	P	**Pb**	**20 17 25.4**	**-1.7**
PTEO				S	**Sb**	**20 18 02.0**	**-1.9**
	2.3nm,0.6s						
PTEO	**Sao Teotonio**	**3.01**	**88**	P	**Pb**	**20 17 25.4**	**-1.7**
PTEO				S	**Sb**	**20 18 02.0**	**-1.9**
	2.3nm,0.6s						
MORF	**Marmelete**	**3.08**	**92**	*e*P	**Pn**	**20 17 24.5**	**+2.3**
MORF	**Marmelete**	**3.08**	**92**	*e*Pn	**Pb**	**20 17 25.2**	**-3.2**
MORF	**Marmelete**	**3.08**	**92**	P	**Pn**	**20 17 24.5**	**+2.3**
MORF	**Marmelete**	**3.08**	**92**	P	**Pn**	**20 17 24.5**	**+2.3**
MORF	**Marmelete**	**3.08**	**92**	*e*Pn	**Pb**	**20 17 25.2**	**-3.2**
PNCL	**Nicolau / Gran**	**3.21**	**78**	*e*Pn	**Pb**	**20 17 27.7**	**-2.9**
PNCL				*e*Sn	**Sn**	**20 18 05.9**	**+3.7**
PNCL				A	A	20 18 12.9	
	2.0nm,0.1s						
PNCL	**Nicolau / Gran**	**3.21**	**78**	*e*Pn	**Pb**	**20 17 27.7**	**-2.9**
PNCL				*e*Sn	**Sn**	**20 18 05.9**	**+3.7**
MESJ	**Messejana**	**3.42**	**83**	*e*P	**Pn**	**20 17 29.4**	**+2.6**
MESJ				*e*S	**Sn**	**20 18 09.0**	**+1.6**
MESJ				AML	AML	20 18 12.2	
	comp=N,2.7nm,0.6s						
MESJ	**Messejana**	**3.42**	**83**	*e*Pn	**Pb**	**20 17 30.3**	**-3.8**
MESJ				*e*Sn	**Sn**	**20 18 10.0**	**+2.6**
MESJ				A	A	20 18 15.7	
	comp=N,1.9nm,0.4s						
MESJ	**Messejana**	**3.42**	**83**	P	**Pn**	**20 17 29.4**	**+2.6**
MESJ				S	**Sn**	**20 18 09.0**	**+1.6**
	comp=N,2.7nm,0.6s						
MESJ	**Messejana**	**3.42**	**83**	P	**Pn**	**20 17 29.4**	**+2.6**
MESJ	**Messejana**	**3.42**	**83**	*e*Pn	**Pb**	**20 17 30.3**	**-3.8**
MESJ				S	**Sn**	**20 18 09.0**	**+1.6**
	comp=N,2.7nm,0.6s						
MESJ				*e*Sn	**Sn**	**20 18 10.0**	**+2.6**
ALMR	**Almeirim**	**3.50**	**61**	*e*P	**Pn**	**20 17 31.1**	**+3.1**
ALMR				*e*S	**Sn**	**20 18 12.3**	**+2.8**
ALMR				AML	AML	20 18 17.1	
	comp=N,7.8nm,0.5s						
ALMR	**Almeirim**	**3.50**	**61**	*e*Pn	**Pb**	**20 17 31.9**	**-3.7**
ALMR				*e*Sn	**Sb**	**20 18 14.9**	**-3.3**
ALMR				A	A	20 18 19.2	
	comp=N,8.4nm,0.4s						
ALMR	**Almeirim**	**3.50**	**61**	P	**Pn**	**20 17 31.1**	**+3.1**
ALMR				S	**Sn**	**20 18 12.3**	**+2.8**
	comp=N,3.9nm,0.5s						
ALMR	**Almeirim**	**3.50**	**61**	P	**Pn**	**20 17 31.1**	**+3.1**
ALMR	**Almeirim**	**3.50**	**61**	*e*Pn	**Pb**	**20 17 31.9**	**-3.7**
ALMR				S	**Sn**	**20 18 12.3**	**+2.8**
	comp=N,3.9nm,0.5s						
ALMR				*e*Sn	**Sb**	**20 18 14.9**	**-3.3**
PCVE	**Castro Verde**	**3.55**	**87**	*e*Pn	**Pn**	**20 17 31.6**	**+2.9**
PCVE				*e*Sn	**Sn**	**20 18 13.0**	**+2.3**
PCVE				A	A	20 18 21.2	
	comp=N,1.9nm,0.7s						
PCVE	**Castro Verde**	**3.55**	**87**	P	**Pn**	**20 17 31.6**	**+2.9**
PCVE				S	**Sn**	**20 18 13.0**	**+2.3**
	comp=N,1.9nm,0.7s						
PCVE	**Castro Verde**	**3.55**	**87**	P	**Pn**	**20 17 31.6**	**+2.9**
PCVE				S	**Sn**	**20 18 13.0**	**+2.3**
	comp=N,1.9nm,0.7s						
PBDV	**Barranco-do-Ve**	**3.66**	**93**	*e*Pn	**Pn**	**20 17 33.0**	**+2.9**
PBDV				*e*Sn	**Sn**	**20 18 16.8**	**+3.5**
PBDV				A	A	20 18 21.9	
	comp=N,4.6nm,0.6s						
PBDV	**Barranco-do-Ve**	**3.66**	**93**	P	**Pn**	**20 17 33.0**	**+2.9**
PBDV				S	**Sn**	**20 18 16.8**	**+3.5**
	comp=N,4.6nm,0.6s						
PBDV	**Barranco-do-Ve**	**3.66**	**93**	P	**Pn**	**20 17 33.0**	**+2.9**
PBDV				S	**Sn**	**20 18 16.8**	**+3.5**
	comp=N,4.6nm,0.6s						
PMTG	**Montargil**	**3.71**	**64**	*e*Pn	**Pn**	**20 17 34.6**	**+3.7**
PMTG				*e*Sn	**Sn**	**20 18 19.4**	**+4.7**
PMTG				A	A	20 18 24.1	
	comp=N,2.1nm,0.4s						
PMTG	**Montargil**	**3.71**	**64**	*e*Pn	**Pn**	**20 17 34.6**	**+3.7**
PMTG				*e*Sn	**Sn**	**20 18 19.4**	**+4.7**
PBEJ	**Beja**	**3.71**	**81**	*e*Pn	**Pn**	**20 17 34.2**	**+3.3**
PBEJ				*e*Sn	**Sn**	**20 18 17.8**	**+3.1**
PBEJ	**Beja**	**3.71**	**81**	P	**Pn**	**20 17 34.2**	**+3.3**
PBEJ				S	**Sn**	**20 18 17.8**	**+3.1**
PBEJ	**Beja**	**3.71**	**81**	P	**Pn**	**20 17 34.2**	**+3.3**
PBEJ				S	**Sn**	**20 18 17.8**	**+3.1**
PVAQ	**Vaqueiros**	**3.81**	**90**	*e*Pn	**Pn**	**20 17 34.8**	**+2.5**
PVAQ				*e*Sn	**Sn**	**20 18 19.2**	**+2.0**
PVAQ				A	A	20 18 27.4	
	comp=N,3.2nm,0.4s						
PVAQ	**Vaqueiros**	**3.81**	**90**	P	**Pn**	**20 17 34.8**	**+2.5**
PVAQ				S	**Sn**	**20 18 19.2**	**+2.0**
	comp=N,3.2nm,0.4s						
PVAQ	**Vaqueiros**	**3.81**	**90**	P	**Pn**	**20 17 34.8**	**+2.5**
PVAQ				S	**Sn**	**20 18 19.2**	**+2.0**
	comp=N,3.2nm,0.4s						
PTOM	**Tomar**	**3.84**	**55**	*e*Pn	**Pn**	**20 17 36.8**	**+4.1**
PTOM	**Tomar**	**3.84**	**55**	P	**Pn**	**20 17 36.8**	**+4.1**
PTOM	**Tomar**	**3.84**	**55**	P	**Pn**	**20 17 36.8**	**+4.1**
EGRO	**El Granado**	**4.00**	**88**	P	**Pn**	**20 17 37.0**	**+2.2**
	comp=N,1.3nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**20 18 23.1**	**+1.5**
	comp=N,4.3nm,0.3s,SNR=7.9						
EGRO	**El Granado**	**4.00**	**88**	P	**Pn**	**20 17 37.0**	**+2.2**
	comp=N,1.3nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**20 18 23.1**	**+1.5**
	comp=N,4.3nm,0.3s,SNR=7.9						
PCAS	**Casmilo, Conde**	**4.04**	**50**	*e*Pn	**Pb**	**20 17 39.9**	**-4.8**
PCAS				*e*Sn	**Sb**	**20 18 29.1**	**-4.4**
PCAS				A	A	20 18 35.0	
	comp=N,1.1nm,0.4s						
PCAS	**Casmilo, Conde**	**4.04**	**50**	*e*Pn	**Pb**	**20 17 39.9**	**-4.8**
PCAS				*e*Sn	**Sb**	**20 18 29.1**	**-4.4**
PESTR	**Estremoz**	**4.11**	**69**	*e*Pn	**Pn**	**20 17 39.8**	**+3.5**
PESTR				*e*Sn	**Sn**	**20 18 28.3**	**+3.9**
PESTR				A	A	20 18 41.1	
	comp=N,1.2nm,0.8s						
PESTR	**Estremoz**	**4.11**	**69**	*e*Pn	**Pn**	**20 17 39.8**	**+3.5**
PESTR				*e*Sn	**Sn**	**20 18 28.3**	**+3.9**
PBAR	**Barrancos**	**4.38**	**80**	*e*Pn	**Pn**	**20 17 43.1**	**+3.0**
PBAR				*e*Sn	**Sn**	**20 18 33.7**	**+2.5**
PBAR				A	A	20 18 41.5	
	comp=N,3.9nm,0.5s						
PBAR	**Barrancos**	**4.38**	**80**	P	**Pn**	**20 17 43.1**	**+3.0**
PBAR				S	**Sn**	**20 18 33.7**	**+2.5**
	comp=N,3.9nm,0.5s						
PBAR	**Barrancos**	**4.38**	**80**	P	**Pn**	**20 17 43.1**	**+3.0**
PBAR				S	**Sn**	**20 18 33.7**	**+2.5**
	comp=N,3.9nm,0.5s						
PMRV	**Marv??o**	**4.45**	**63**	*e*Pn	**Pn**	**20 17 44.5**	**+3.4**
PMRV				*e*Sn	**Sn**	**20 18 37.0**	**+4.1**
PMRV				A	A	20 18 41.9	
	comp=N,1.5nm,0.3s						
PMRV	**Marv??o**	**4.45**	**63**	P	**Pn**	**20 17 44.5**	**+3.4**
PMRV				S	**Sn**	**20 18 37.0**	**+4.1**
	comp=N,1.5nm,0.3s						
PMRV	**Marv??o**	**4.45**	**63**	P	**Pn**	**20 17 44.5**	**+3.4**
PMRV				S	**Sn**	**20 18 37.0**	**+4.1**
	comp=N,1.5nm,0.3s						
EBAD	**Badajoz**	**4.51**	**72**	P	**Pn**	**20 17 44.6**	**+2.8**
	comp=N,1.0nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**20 18 36.0**	**+1.7**
	comp=N,1.2nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**4.51**	**72**	P	**Pn**	**20 17 44.6**	**+2.8**
	comp=N,1.0nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**20 18 36.0**	**+1.7**
	comp=N,1.2nm,0.2s,SNR=7.9						
PCBR	**Castelo Branco**	**4.58**	**58**	*e*Pn	**Pn**	**20 17 46.7**	**+4.0**
PCBR	**Castelo Branco**	**4.58**	**58**	P	**Pn**	**20 17 46.7**	**+4.0**
PCBR	**Castelo Branco**	**4.58**	**58**	P	**Pn**	**20 17 46.7**	**+4.0**
EMIN	**Mina Concepcio**	**4.64**	**85**	P	**Pn**	**20 17 45.6**	**+2.0**
	comp=N,0.8nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**20 18 37.5**	**-0.1**
	comp=N,1.1nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.64**	**85**	P	**Pn**	**20 17 45.6**	**+2.0**
	comp=N,0.8nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**20 18 37.5**	**-0.1**
	comp=N,1.1nm,0.2s,SNR=7.9						
PVIS	**Viseu**	**4.81**	**47**	*e*Pn	**Pn**	**20 17 50.1**	**+4.0**
PVIS				*e*Sn	**Sn**	**20 18 45.4**	**+3.5**
PVIS				A	A	20 18 52.9	
	comp=N,1.7nm,0.3s						
PVIS	**Viseu**	**4.81**	**47**	P	**Pn**	**20 17 50.1**	**+4.0**
PVIS				Sn	**Sn**	**20 18 45.4**	**+3.5**
	comp=N,0.9nm,0.3s						
PVIS	**Viseu**	**4.81**	**47**	P	**Pn**	**20 17 50.1**	**+4.0**
PVIS				Sn	**Sn**	**20 18 45.4**	**+3.5**
	comp=N,0.9nm,0.3s						
POLO	**Lamas de Olo**	**5.32**	**42**	*e*Sn	**Sn**	**20 18 57.6**	**+3.3**
POLO	**Lamas de Olo**	**5.32**	**42**	*e*Sn	**Sn**	**20 18 57.6**	**+3.3**
PGAV	**Gavieira, Arco**	**5.53**	**35**	*e*Sn	**Sn**	**20 19 01.8**	**+2.3**
PGAV				A	A	20 19 24.7	
	comp=N,2.3nm,0.8s						
PGAV	**Gavieira, Arco**	**5.53**	**35**	*e*Sn	**Sn**	**20 19 01.8**	**+2.3**
ELOB	**Lobios**	**5.54**	**37**	P	**Pn**	**20 17 58.4**	**+2.2**
	comp=N,0.3nm,0.2s,SNR=4.0						
ELOB				S	**Sn**	**20 19 01.6**	**+1.6**
	comp=N,0.5nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.54**	**37**	P	**Pn**	**20 17 58.4**	**+2.2**
	comp=N,0.3nm,0.2s,SNR=4.0						
ELOB				S	**Sn**	**20 19 01.6**	**+1.6**
	comp=N,0.5nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**5.60**	**48**	*e*Pn	**Pn**	**20 18 00.6**	**+3.7**
MVO				*e*Sn	**Sn**	**20 19 04.3**	**+2.9**
MVO				A	A	20 19 21.2	
	comp=N,1.7nm,0.6s						
MVO	**Moncorvo**	**5.60**	**48**	P	**Pn**	**20 18 00.2**	**+3.3**
	comp=N,0.8nm,0.2s,SNR=7.9						
MVO				S	**Sn**	**20 19 02.5**	**+1.1**
	comp=N,0.7nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**5.60**	**48**	P	**Pn**	**20 18 00.2**	**+3.3**
	comp=N,0.8nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**5.60**	**48**	*e*Pn	**Pn**	**20 18 00.6**	**+3.7**
MVO				*e*Sn	**Sn**	**20 19 04.3**	**+2.9**
EPLA	**Plasencia**	**5.63**	**61**	S	**Sn**	**20 19 01.6**	**-0.5**
	comp=N,0.9nm,0.2s,SNR=4.0						
ECAB	**El Cabril**	**5.64**	**82**	P	**Pn**	**20 17 59.8**	**+2.3**
	comp=N,0.5nm,0.1s,SNR=7.9						
ECAB				S	**Sn**	**20 19 02.5**	**+0.2**
	comp=N,0.4nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**5.64**	**82**	P	**Pn**	**20 17 59.8**	**+2.3**
	comp=N,0.5nm,0.1s,SNR=7.9						
ECAB				S	**Sn**	**20 19 02.5**	**+0.2**
	comp=N,0.4nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	**6.07**	**25**	S	**Sn**	**20 19 10.6**	**-2.3**
	comp=N,1.0nm,0.2s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.28**	**31**	S	**Sn**	**20 19 18.0**	**0.0**
	comp=N,0.7nm,0.1s,SNR=4.0						
EADA	**Adamuz**	**6.31**	**82**	P	**Pn**	**20 18 08.8**	**+2.2**
	comp=N,1.1nm,0.2s,SNR=7.9						
EADA				S	**Sn**	**20 19 18.0**	**-0.8**
	comp=N,0.2nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**6.31**	**82**	P	**Pn**	**20 18 08.8**	**+2.2**
	comp=N,1.1nm,0.2s,SNR=7.9						
EADA				S	**Sn**	**20 19 18.0**	**-0.8**
	comp=N,0.2nm,0.2s,SNR=7.9						
PAB	**San Pablo**	**6.71**	**70**	P	**Pn**	**20 18 14.6**	**+2.4**
	comp=N,0.4nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**20 19 30.9**	**+2.1**
	comp=N,0.2nm,0.2s,SNR=4.0						
PAB	**San Pablo**	**6.71**	**70**	P	**Pn**	**20 18 14.6**	**+2.4**
	comp=N,0.4nm,0.1s,

BESP	**Borongan**	**0.38 283**	*e*P	Pg	20 26 17.4	+0.3
PLP	**Palo**	**0.89 247**⇓	*e*P	Pg	20 26 26.4	-0.6
PLP			*e*S	Sg	20 26 37.2	-1.3
OCLP	**Ormoc**	**1.27 249**	*e*P	Pg	20 26 33.9	-0.3
CNP	**Cataman**	**1.50 311**	*e*P	Pn	20 26 36.8	-1.1
LLP	**Lapu-Lapu**	**2.17 237**	*e*P	Pb	20 26 48.9	-1.0
LLP			*e*S	Sb	20 27 16.3	-1.1
BUTP	**Butuan**	**2.54 184**	*e*P	Pn	20 26 53.5	+1.3
PVCP	**Virac**	**2.63 322**	*e*P	Pn	20 26 54.6	+1.2
PVCP			*e*S	Sn	20 27 27.9	+2.0

NIED ***16*** *20:33:00,39.°90N×142.°40E, h41km, Mw3.4 Best double couple: M₀1.66000×10¹⁴ NP1:φ₀253.00000°, δ37.00000°, λ160.00000°. NP2:φ₀359.00000°, δ78.00000°, λ55.00000°.*

JMA 16 20:33:59.6±0.1, 39.°94N×142.°41E, h39km±1km, M3.5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.42**	**270**	P	Pn	20 34 09.3	+0.2
JTH				S	Sn	20 34 16.2	+0.2
MIYJ	**Miyakonagasawa**	**0.58**	**232**	P	Pn	20 34 11.2	-0.3
MIYJ				S	Sn	20 34 19.5	-0.3
JANG	**Nango**	**0.81**	**303**	P	Pn	20 34 14.3	-0.2
JANG				S	Sn	20 34 24.5	-0.9
JKZ	**Kuzumaki**	**0.83**	**273**	P	Pn	20 34 15.5	+0.6
JKZ				S	Sn	20 34 25.7	-0.3
JOM	**Ohasama**	**0.98**	**242**	P	Pn	20 34 17.2	+0.4
JOM				S	Sn	20 34 30.0	+0.5
OFUJ	**Ofunato**	**1.03**	**214**	P	Pn	20 34 17.7	+0.1
OFUJ				S	Sn	20 34 30.7	-0.1
JTM	**Tenmabayashi**	**1.33**	**310**	P	Pn	20 34 22.3	+0.7

IGQ ***16*** *20:35:13.2±0.9, 4.°S±13.°×7.°8W±3.°2, h12km, M4.7/20, MLv4.7/20*
NEIC ***16*** *20:35:14.4±1.7, 3.°48S×77.°56W, h33km±12km, mb4.5/38, ML4.8(IGQ), Error ellipse: s-maj=8.6km s-min=4.7km az=66.0*
ISCJB ***16*** *20:35:15.3±0.5, 3.°54S±0.°03×77.°49W±0.°05, h62km±4km, mb4.3/46, Error ellipse: s-maj=9.6km s-min=4.8km az=158.4*
IDC ***16*** *20:35:15.8±2.6, 3.°53S×77.°55W, h42km±26km, mb3.7/15, mb1 3.9/19, mb1mx3.8/43, mbtmp4.0/19, ML4.1/4, MS3.1/2, Ms1 3.1/2, ms1mx2.6/39, Error ellipse: s-maj=22.5km s-min=14.0km az=60.0*

ISC 16 20:35:15.4±0.9, 3.°60S±0.°05×77.°50W±0.°09, h48km±10km, n139, σ1$31/139, mb4.4/46, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BPAT	**Tungurahua Vol**	**2.29**	**336**	P	**Pn**	**20 35 50.2**	**-0.9**
BPAT				S	**Sn**	**20 36 19.5**	**+1.1**
BPAT	**Tungurahua Vol**	**2.29**	**336**	P	**Pn**	**20 35 50.2**	**-0.9**
BPAT				S	**Sn**	**20 36 19.5**	**+1.1**
ARRY	**Arrayan**	**2.29**	**335**	P	**Pn**	**20 35 49.9**	**-1.2**
ARRY	**Arrayan**	**2.29**	**335**	P	**Pn**	**20 35 49.9**	**-1.2**
BMAS	**Trigal station**	**2.31**	**335**	P	**Pn**	**20 35 50.3**	**-1.0**
BMAS				S	**Sn**	**20 36 19.1**	**+0.5**
BMAS	**Trigal station**	**2.31**	**335**	P	**Pn**	**20 35 50.3**	**-1.0**
BMAS				S	**Sn**	**20 36 19.1**	**+0.5**
BULB	**Ulba Tungurahu**	**2.34**	**337**	P	**Pn**	**20 35 50.0**	**-1.7**
BULB				S	**Sn**	**20 36 20.1**	**+0.6**
BULB	**Ulba Tungurahu**	**2.34**	**337**	P	**Pn**	**20 35 50.0**	**-1.7**
BULB				S	**Sn**	**20 36 20.1**	**+0.6**
RETU	**Refugio**	**2.34**	**336**	P	**Pn**	**20 35 51.2**	**-0.6**
RETU	**Refugio**	**2.34**	**336**	P	**Pn**	**20 35 51.2**	**-0.6**
BBIL	**Ulba Tungurahu**	**2.36**	**335**	P	**Pn**	**20 35 51.2**	**-0.8**
BBIL				S	**Sn**	**20 36 20.2**	**+0.3**
BBIL	**Ulba Tungurahu**	**2.36**	**335**	P	**Pn**	**20 35 51.2**	**-0.8**
BBIL				S	**Sn**	**20 36 20.2**	**+0.3**
POND	**Pondoa**	**2.37**	**336**	P	**Pn**	**20 35 50.6**	**-1.6**
POND				S	**Sn**	**20 36 21.5**	**+1.4**
POND	**Pondoa**	**2.37**	**336**	P	**Pn**	**20 35 50.6**	**-1.6**
POND				S	**Sn**	**20 36 21.5**	**+1.4**
PIS1	**Pisayambo**	**2.68**	**341**	P	**Pn**	**20 35 55.8**	**-0.7**
PIS1	**Pisayambo**	**2.68**	**341**	P	**Pn**	**20 35 55.8**	**-0.7**
PISA	**Pisayambo**	**2.68**	**341**	P	**Pn**	**20 35 55.8**	**-0.7**
PISA	**Pisayambo**	**2.68**	**341**	P	**Pn**	**20 35 55.8**	**-0.7**
COV1	**Cotopaxi Volc**	**3.04**	**344**	P	**Pn**	**20 36 03.3**	**+1.6**
COV1	**Cotopaxi Volc**	**3.04**	**344**	P	**Pn**	**20 36 03.3**	**+1.6**
BTAM	**Cotopaxi Volca**	**3.04**	**343**	P	**Pn**	**20 36 01.0**	**-0.6**
BTAM	**Cotopaxi Volca**	**3.04**	**343**	P	**Pn**	**20 36 01.0**	**-0.6**
BVC2	**Cotopaxi Volca**	**3.06**	**343**	P	**Pn**	**20 36 02.5**	**+0.6**
BVC2	**Cotopaxi Volca**	**3.06**	**343**	P	**Pn**	**20 36 02.5**	**+0.6**
BNAS	**Cotopaxi Volca**	**3.07**	**341**	P	**Pn**	**20 36 02.4**	**+0.4**
BNAS	**Cotopaxi Volca**	**3.07**	**341**	P	**Pn**	**20 36 02.4**	**+0.4**
VC1	**Cotopaxi 1**	**3.08**	**343**	P	**Pn**	**20 36 01.4**	**-0.7**
VC1	**Cotopaxi 1**	**3.08**	**343**	P	**Pn**	**20 36 01.4**	**-0.7**
ILLI	**Illinizas Sur**	**3.12**	**337**	P	**Pn**	**20 36 03.0**	**+0.4**
ILLI	**Illinizas Sur**	**3.12**	**337**	P	**Pn**	**20 36 03.0**	**+0.4**
ANTM	**Antisana-La Mi**	**3.13**	**347**	P	**Pn**	**20 36 00.6**	**-2.2**
ANTM	**Antisana-La Mi**	**3.13**	**347**	P	**Pn**	**20 36 00.6**	**-2.2**
ANTS	**Antisana-Sarah**	**3.16**	**348**	P	**Pn**	**20 36 02.2**	**-1.0**
ANTS	**Antisana-Sarah**	**3.16**	**348**	P	**Pn**	**20 36 02.2**	**-1.0**
PITA	**Cotopaxi Volc**	**3.17**	**343**	P	**Pn**	**20 36 03.8**	**+0.6**
PITA	**Cotopaxi Volc**	**3.17**	**343**	P	**Pn**	**20 36 03.8**	**+0.6**
ANTG	**Antisana-Guama**	**3.17**	**346**	P	**Pn**	**20 36 03.5**	**+0.1**
ANTG	**Antisana-Guama**	**3.17**	**346**	P	**Pn**	**20 36 03.5**	**+0.1**
NINA	**Atacazo Ninahu**	**3.38**	**341**	P	Pn	20 36 10.7	+4.4
NINA	**Atacazo Ninahu**	**3.38**	**341**	P	Pn	20 36 10.7	+4.4
ATAH	**Atahualpa**	**3.62**	**194**	P	**Pn**	**20 36 09.8**	**+0.4**
	16nm,0.3s,baz=17,slow=5.5,SNR=57						
ATAH				S	**Sn**	**20 36 53.7**	**+2.6**
	27nm,0.3s,baz=32,slow=7.7,SNR=4.6						
ATAH				LR	LR	20 37 40.8	
	comp=Z,193nm,18.7s,baz=11,slow=40						
OTAV	**Otavalo**	**3.93**	**346**	*e*Pn	**Pn**	**20 36 13.5**	**-0.2**
OTAV	**Otavalo**	**3.93**	**346**	*e*P	Pn	20 36 17.0	+3.3
OTAV	**Otavalo**	**3.93**	**346**	*e*P	Pn	20 36 17.0	+3.3
CPAS2	**Pasto**	**4.80**	**3**	*e*P	Pn	20 36 29.4	+3.9
CPAS2	**Pasto**	**4.80**	**3**	*e*P	Pn	20 36 29.4	+3.9
CRUC	**La Cruz**	**5.17**	**6**	*e*P	**Pn**	**20 36 29.3**	**-1.2**
CRUC	**La Cruz**	**5.17**	**6**	*e*P	**Pn**	**20 36 29.3**	**-1.2**
SOTA	**Rioblanco**	**5.77**	**9**	*e*P	**Pn**	**20 36 38.0**	**-0.9**
SOTA	**Rioblanco**	**5.77**	**9**	*e*P	**Pn**	**20 36 38.0**	**-0.9**
BETC	**Betania**	**6.57**	**18**	*e*P	Pn	20 36 59.9	+10
BETC	**Betania**	**6.57**	**18**	*e*P	Pn	20 36 59.9	+10
YOTC	**Yotoco, Valle**	**7.62**	**9**	*e*P	**Pn**	**20 37 05.2**	**+1.2**
YOTC	**Yotoco, Valle**	**7.62**	**9**	*e*P	**Pn**	**20 37 05.2**	**+1.2**
PRAC	**Prado**	**7.72**	**20**	*e*Pn	**Pn**	**20 37 02.4**	**-2.9**
NNA	**Nana**	**8.36**	**176**	P	**Pn**	**20 37 13.6**	**-0.5**
	4.2nm,0.3s,baz=353,slow=6.4,SNR=6.4						
NNA				S	**Sn**	**20 38 44.2**	**-2.9**
	6.0nm,0.3s,baz=116,slow=15,SNR=3.5						
NNA				LR	LR	20 41 05.0	
	comp=Z,149nm,19.2s,baz=355,slow=41						
NNA	**Nana**	**8.36**	**176**	*e*Pn	**Pn**	**20 37 12.9**	**-1.2**
NNA				*e*Sn	**Sn**	**20 38 42.9**	**-4.2**
ROSC	**El Rosal**	**8.97**	**21**	*e*Pn	Pn	20 37 16.6	-6.1
HELC	**Santa Helena**	**9.93**	**11**	*e*Pn	Pn	20 37 31.8	-4.0
RUSC	**La Rusia**	**10.41**	**25**	*e*Pn	**Pn**	**20 37 41.9**	**-0.7**
SAML	**Samuel**	**15.18**	**111**	*e*Pn	**Pn**	**20 38 46.9**	**+0.1**
	5.2nm,0.7s						
LPAZ	**La Paz**	**15.61**	**144**	P	**Pn**	**20 38 55.2**	**+2.3**
	0.2nm,0.3s,baz=319,slow=9.3,SNR=9.1						
LPAZ	**La Paz**	**15.61**	**144**	*e*Pn	**Pn**	**20 38 55.4**	**+2.4**
	3.3nm,0.9s						
MNMC	**Minye Minye**	**17.26**	**154**	*e*P	**P**	**20 39 16.2**	**+1.8**
	17nm,0.9s						
PTGA	**Pitinga**	**17.75**	**81**	P	**P**	**20 39 21.0**	**+1.5**
	0.8nm,0.3s,baz=315,slow=19,SNR=2.9						
PTGA				S	Sn	20 42 28.1	-8.2
	1.6nm,0.3s,baz=162,slow=20,SNR=5.6						
SIV	**San Ignacio**	**20.31**	**128**	P	Pn	20 39 50.5	+0.6
	2.0nm,0.8s,baz=320,slow=14,SNR=4.0						
APG	**El Apazote**	**22.51**	**326**	P	**P**	**20 40 12.6**	**+1.1**
	4.5nm,0.8s,baz=162,slow=0.1,SNR=5.1						
PLCA	**Paso Flores**	**37.49**	**171**	P	**P**	**20 42 25.7**	**+1.1**
	0.9nm,0.8s,baz=18,slow=12,SNR=3.2						
PLCA	**Paso Flores**	**37.49**	**171**	*e*P	**P**	**20 42 26.0**	**+1.4**
	34nm,2.0s						
Z50A	**Ashland**	**37.51**	**348**	*e*P	**P**	**20 42 24.3**	**-0.5**
	9.4nm,1.0s						
LRAL	**Lakeview Retre**	**37.53**	**347**	*e*P	**P**	**20 42 24.3**	**-0.7**
	20nm,1.6s						
V48A	**Smith Brothers**	**40.10**	**348**	*e*P	**P**	**20 42 45.0**	**-1.4**
	9.8nm,0.7s						
WHAR	**Wooly Hollow**	**41.10**	**341**	*e*P	**P**	**20 42 53.2**	**-1.5**
	6.0nm,0.8s						
TXAR	**Lajitas Array**	**41.26**	**324**	P	**P**	**20 42 56.4**	**+0.2**
	0.4nm,0.6s,baz=147,slow=9.0,SNR=4.9						
TXAR				PcP	**PcP**	**20 44 55.7**	**+1.3**
	0.4nm,0.7s,baz=154,slow=6.7,SNR=5.6						
TX31	**Lajitas Ar. Si**	**41.26**	**324**	*e*P	**P**	**20 42 55.9**	**-0.4**
W39A	**Magazine**	**41.52**	**340**	*e*P	**P**	**20 42 57.3**	**-0.8**
	4.4nm,0.8s						
ABTX	**Abilene, Hawle**	**41.70**	**331**	*e*P	**P**	**20 42 59.6**	**-0.2**
	4.9nm,0.9s						
V40A	**Witts Springs**	**41.75**	**341**	*e*P	**P**	**20 42 58.1**	**-1.9**
	7.0nm,0.8s						
T42A	**Van Buren**	**42.36**	**344**	*e*P	**P**	**20 43 03.1**	**-1.8**
	5.8nm,0.7s						
HHAR	**Hobbs**	**42.55**	**340**	*e*P	**P**	**20 43 05.4**	**-1.2**
	44nm,1.6s						
WMOK	**Wichita Mounta**	**43.07**	**334**	*e*P	**P**	**20 43 09.8**	**-1.1**
	5.3nm,1.0s						
FVM	**French Village**	**43.08**	**345**	*e*P	**P**	**20 43 09.0**	**-1.8**
	5.0nm,0.7s						
CCM	**Cathedral Cave**	**43.37**	**344**	*e*P	**P**	**20 43 11.3**	**-1.8**
	5.0nm,0.7s						
319A	**Douglas**	**46.11**	**321**	*e*P	**P**	**20 43 36.1**	**+0.9**
	6.7nm,0.6s						
ANMO	**Albuquerque**	**47.02**	**327**	P	**P**	**20 43 42.7**	**+0.3**
	0.9nm,0.4s,baz=145,slow=12.7,SNR=5.3						
ANMO	**Albuquerque**	**47.02**	**327**	*e*P	**P**	**20 43 42.6**	**+0.3**
	3.3nm,1.1s						
TUC	**Tucson**	**47.68**	**321**	*e*P	**P**	**20 43 47.2**	**-0.2**
	3.1nm,1.0s						
SDCO	**Great Sand Dun**	**48.66**	**330**	*e*P	**P**	**20 43 55.8**	**+0.6**
	4.2nm,1.0s						
PV02	**Paradox Valley**	**50.67**	**328**	*e*P	**P**	**20 44 10.6**	**+0.3**
	6.3nm,0.7s						
PV13	**Radium Mtn., P**	**50.68**	**328**	*e*P	**P**	**20 44 10.8**	**+0.4**
	9.3nm,0.8s						
PV12	**Saucer Basin,**	**50.78**	**328**	*e*P	**P**	**20 44 10.6**	**-0.7**
	6.6nm,0.9s						
PV18	**Skein Mesa, Pa**	**50.79**	**328**	*e*P	**P**	**20 44 11.6**	**+0.3**
	5.0nm,0.8s						
PV11	**David Mesa, Pa**	**50.81**	**328**	*e*P	**P**	**20 44 11.2**	**-0.2**
	32nm,1.9s						
MSU	**Marysvale**	**52.76**	**326**	*e*P	**P**	**20 44 26.6**	**+0.7**
VTV	**Victorville**	**53.33**	**319**	*e*P	**P**	**20 44 33.4**	**+3.4**
JLU	**Jordanelle**	**53.85**	**328**	*e*P	**P**	**20 44 34.7**	**+0.8**
	4.7nm,1.0s						
EDW2	**Edwards Air Fo**	**53.95**	**319**	*e*P	**P**	**20 44 34.8**	**+0.2**
AGMN	**Agassiz Nation**	**54.12**	**345**	*e*P	**P**	**20 44 34.1**	**-1.4**
	13nm,1.4s						
TCUT	**Toone Canyon**	**54.20**	**329**	*e*P	**P**	**20 44 36.8**	**+0.3**
DUG	**Dugway, Tooele**	**54.29**	**327**	*e*P	**P**	**20 44 36.9**	**-0.2**
	10.0nm,1.8s						
PD31	**Pinedale Array**	**54.51**	**331**	*e*P	**P**	**20 44 36.8**	**-1.9**
PDAR	**Pinedale Array**	**54.51**	**331**	P	**P**	**20 44 38.5**	**-0.1**
	0.7nm,0.7s,baz=138,slow=7.2,SNR=7.3						
PDAR	**Pinedale Array**	**54.51**	**331**	*e*P	**P**	**20 44 37.7**	**-0.9**
TJR	**Tejon Ranch**	**54.54**	**318**	*e*P	**P**	**20 44 37.7**	**-1.1**
HWUT	**Hardware Ranch**	**54.64**	**329**	*e*P	**P**	**20 44 39.0**	**-0.6**
	8.1nm,1.3s						
SPUT	**South Promonto**	**54.88**	**328**	*e*P	**P**	**20 44 41.0**	**-0.4**
	7.7nm,1.3s						
ULM	**Lac du Bonnet**	**55.93**	**346**	P	**P**	**20 44 47.5**	**-0.9**
	1.8nm,0.5s,baz=179,slow=7.9,SNR=3.7						
NV01	**Mina Array Sit**	**56.31**	**322**	*e*P	**P**	**20 44 51.8**	**0.0**
NVAR	**Mina Array Bea**	**56.31**	**322**	P	**P**	**20 44 52.3**	**+0.5**
	1.0nm,0.6s,baz=123,slow=6.9,SNR=8.5						
KVN	**Kaiserville**	**56.57**	**323**	*e*P	**P**	**20 44 53.7**	**+0.2**
	4.9nm,1.4s						
BMN	**Battle Mountai**	**56.93**	**324**	*e*P	**P**	**20 44 55.9**	**-0.2**
	3.9nm,0.8s						
HLID	**Hailey**	**57.51**	**329**	*e*P	**P**	**20 45 00.1**	**+0.1**
	6.3nm,1.6s						
BOZ	**Bozeman (W)**	**57.62**	**332**	*e*P	**P**	**20 45 00.7**	**-0.1**
	4.1nm,1.1s						
MFID	**Camas Ranch**	**58.15**	**328**	*e*P	**P**	**20 45 05.1**	**+0.6**
	5.2nm,0.8s						
F10A	**Beach Ranch, E**	**60.62**	**329**	*e*P	**P**	**20 45 21.6**	**+0.1**
	3.9nm,0.9s						
PINE	**Pine Mountain**	**61.20**	**325**	*e*P	**P**	**20 45 24.7**	**-0.9**
	5.5nm,0.9s						
SEPW	**September Lobe**	**63.39**	**327**	*e*P	**P**	**20 45 40.6**	**+0.3**
SVOH	**Skagit Valley**	**64.93**	**328**	*e*P	**P**	**20 45 47.9**	**-2.0**
YKA	**Yellowknife Ar**	**71.68**	**343**	P	**P**	**20 46 31.3**	**-0.6**
	1.0nm,0.6s,baz=132,slow=6.1,SNR=4.1						
KOWA	**Kowa**	**74.97**	**74**	P	**P**	**20 46 53.2**	**+0.9**
	1.3nm,0.6s,baz=255,slow=4.5,SNR=3.6						
ESDC	**Sonseca Array**	**79.71**	**49**	P	**P**	**20 47 19.1**	**+0.7**
	0.5nm,0.8s,baz=279,slow=5.2,SNR=3.3						
TOA1	**Torodi Ar. Sit**	**80.31**	**76**	*e*P	**P**	**20 47 23.3**	**+1.2**
TORD	**Torodi Ar. Bea**	**80.32**	**76**	P	**P**	**20 47 23.3**	**+1.2**
	1.1nm,1.0s,baz=293,slow=6.4,SNR=4.4						
SNAA	**Sanae**	**81.79**	**162**	P	**P**	**20 47 30.1**	**+1.2**
	1.1nm,0.7s,baz=280,slow=6.1,SNR=7.5						
SNAA	**Sanae**	**81.79**	**162**	*e*P	**P**	**20 47 29.6**	**+0.6**
	24nm,2.0s						
EKA	**Eskdalemuir Ar**	**84.10**	**34**	P	**P**	**20 47 42.2**	**+1.1**
	1.2nm,0.8s,baz=248,slow=5.8,SNR=2.6						
ILAR	**Eielson Array**	**84.60**	**336**	P	**P**	**20 47 43.8**	**+0.4**
	0.8nm,0.9s,baz=119,slow=3.7,SNR=6.7						
ZAA1	**Zalesovo Array**	**127.76**	**13**	*e*PKPdf	**PKPdf**	**20 54 16.5**	**+0.9**
ZALV	**Zalesovo Beam**	**127.77**	**13**	PKP	**PKPdf**	**20 54 16.5**	**+0.9**
	0.6nm,0.5s,baz=212,slow=5.3,SNR=4.1						
KURK	**Kurchatov**	**128.93**	**19**	*e*PKPdf	**PKPdf**	**20 54 19.0**	**+1.1**
KURBB	**Kurchatov Arra**	**128.98**	**19**	PKP	**PKPdf**	**20 54 19.0**	**+1.0**
	0.5nm,0.7s,baz=316,slow=2.3,SNR=5.4						
MK32	**Makanchi Array**	**133.54**	**19**	*e*PKPdf	**PKPdf**	**20 54 27.8**	**+1.0**
MKAR	**Makanchi Array**	**133.54**	**19**	PKP	**PKPdf**	**20 54 27.8**	**+1.0**
	0.1nm,0.4s,baz=303,slow=2.6,SNR=4.0						
KSH	**Kashi**	**136.91**	**30**	PKP	PKPdf	20 54 28.0	-5.5
KSH				PP	**PP**	**20 57 14.8**	**-1.3**
KSH				AMB	AMB		
	comp=Z,320nm,5.8s						
ASAR	**Alice Springs**	**139.13**	**227**	PKhKP	PKPpre	20 54 30.5	
	comp=Z,0.6nm,1.0s,baz=136,slow=3.9,SNR=3.4						
WR1	**Warramunga Arr**	**140.94**	**232**	*e*PKPpre	PKPpre	20 54 36.5	
WRA	**Warramunga Arr**	**140.94**	**232**	PKhKP	PKPpre	20 54 36.5	
	comp=Z,0.6nm,0.9s,baz=134,slow=1.3,SNR=3.4						
LZH	**Lanzhou**	**147.65**	**358**	*e*PKPbc	**PKPdf**	**20 54 47.6**	**-5.0**
LZH				pPKP	pPKPab	20 55 14.1	+2.1
LZH				sPKP		20 55 24.3	
LZH				LR	LR		
	comp=N,52nm,18.0s						
LZH				LR	LR		
	comp=E,65nm,18.2s						
LZH				LR	LR		
	comp=Z,83nm,20.1s						
CD2	**Chengdu**	**152.81**	**358**	PKPbc	**PKPdf**	**20 54 56.8**	**-3.9**

JMA 16 20:47:47.1, 35.°09N×137.°18E, h42km, M3.2, 1C-2D Broadband fault plane solution: P waves. NP1: φ₀43.00000°, δ74.00000°, λ-41.00000°. **NP2:** φ₀147.00000°, δ50.00000°, λ-159.00000°. **Principal axes:** T Plg15.0000°, Azm100.0000°; N Plg46.0000°, Azm206.0000°; P Plg40.0000°, Azm357.0000°; **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAO	**Obara**	**0.19**	**20**	⇓P	Pn	20 47 54.4	-0.2
JAO				S	Sn	20 47 59.8	0.0
TSUJ	**Tsu 2**	**0.73**	**239**	P	Pn	20 48 01.0	0.0
TSUJ				S	Sn	20 48 11.7	+0.7
JIE	**Ise**	**0.80**	**209**	⇓P	Pn	20 48 02.0	+0.1
JIE				S	Sn	20 48 13.1	+0.5
SHZ3	**Shizuoka 3**	**0.84**	**91**	⇑P	Pn	20 48 02.3	-0.3
SHZ3				S	Sn	20 48 14.6	+0.7
TK04	**Tokai 4**	**0.91**	**141**	P	Pn	20 48 03.6	+0.3
JKN2	**Miekihoku**	**1.13**	**222**	P	Pn	20 48 06.3	-0.2
MAT	**Matsushiro**	**1.67**	**30**	P	Pn	20 48 15.0	+1.1
MAT				S	Sn	20 48 36.3	+2.1

CSEM ***16*** *21:02:50.8±0.1, 39.°11N×29.°18E, h10km, ML2.3 Error ellipse: s-maj=3.5km s-min=2.5km az=121.0*

ISK 16 21:02:50.3, 39.°13N×29.°15E, h9km, ML2.3/4, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHAP	**Saphane-Kutahy**	**0.12**	**153**	PG	Pg	21 02 53.8	+0.7
SHAP				SG	Sg	21 02 55.6	+0.6
SHAP	**Saphane-Kutahy**	**0.12**	**153**	*e*Pg	Pg	21 02 53.8	+0.7
SHAP				*e*Sg	Sg	21 02 55.6	+0.6
SIMA	**Simav-Kutahya**	**0.14**	**251**	PG	Pg	21 02 54.4	+1.0
SIMA				SG	Sg	21 02 56.2	+0.6
SIMA	**Simav-Kutahya**	**0.14**	**251**	*e*Pg	Pg	21 02 54.4	+1.0
SIMA				*e*Sg	Sg	21 02 56.2	+0.6
DEMI	**Demirci**	**0.35**	**256**	*i*P	Pb	21 02 58.3	-0.5
DEMI				*i*S	Sb	21 03 03.2	-1.2
DEMI	**Demirci**	**0.35**	**256**	P	Pb	21 02 58.3	-0.5
DEMI				S	Sb	21 03 03.2	-1.3
TVSB	**Tavsanli**	**0.40**	**37**	PG	Pg	21 02 58.6	+0.4
TVSB				SG	Sg	21 03 04.6	+1.1
TVSB	**Tavsanli**	**0.40**	**37**	*e*Pg	Pg	21 02 58.6	+0.4
TVSB				*e*Sg	Sg	21 03 04.6	+1.1
DURS	**Dursunbey**	**0.71**	**312**	*i*P	Pn	21 03 05.8	-0.9
DURS	**Dursunbey**	**0.71**	**312**	P	Pn	21 03 05.8	-0.8
KULA	**Kula-Manisa**	**0.72**	**212**	PG	Pg	21 03 04.3	0.0
KULA	**Kula-Manisa**	**0.72**	**212**	*e*Pg	Pg	21 03 04.3	0.0
YLV	**Yalova**	**1.45**	**7**	PN	Pb	21 03 17.3	-0.2
YLV	**Yalova**	**1.45**	**7**	*e*Pn	Pb	21 03 17.3	-0.2
ARMT	**Armutlu**	**1.45**	**351**	PN	Pb	21 03 17.5	-0.1
ARMT	**Armutlu**	**1.45**	**351**	*e*Pn	Pb	21 03 17.5	-0.1

ISK ***16*** *21:03:13.4, 36.°96N×28.°14E, h6km, ML2.6/8*
DDA ***16*** *21:03:14.2, 36.°96N×28.°15E, h7km, Ml2.9*
CSEM ***16*** *21:03:14.1±0.1, 36.°97N×28.°14E, h5km, ML2.6, Error ellipse: s-maj=3.6km s-min=2.8km az=28.0*

ISC 16 21:03:13.4±1.1, 36.°98N±0.°02×28.°19E±0.°02, h2km±10km, n42, σ1$46/60, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSB	**Marmaris-Mugla**	**0.27**	**178**	PG	**Pg**	**21 03 18.7**	**+0.2**
MRSB				SG	**Sg**	**21 03 22.9**	**+1.0**
MRSB	**Marmaris-Mugla**	**0.27**	**178**	*e*Pg	**Pg**	**21 03 18.7**	**+0.2**
MRSB				*e*Sg	**Sg**	**21 03 22.9**	**+1.0**
TURN	**Turunc**	**0.35**	**108**	PG	**Pg**	**21 03 18.1**	**-2.0**
TURN				SG	**Sg**	**21 03 21.5**	**-3.2**
TURN	**Turunc**	**0.35**	**108**	*i*P	**Pg**	**21 03 18.1**	**-2.0**
TURN				*i*S	**Sg**	**21 03 21.7**	**-3.0**
TURN	**Turunc**	**0.35**	**108**	P	**Pg**	**21 03 18.1**	**-2.0**
TURN				S	**Sg**	**21 03 21.7**	**-3.0**
DALY	**Dalyan (Mu¨la**	**0.41**	**113**	PG	**Pg**	**21 03 22.2**	**+1.0**
DALY				SG	**Sb**	**21 03 28.9**	**-1.1**
DALY	**Dalyan (Mu¨la**	**0.41**	**113**	*i*P	**Pg**	**21 03 22.4**	**+1.1**
DALY				*i*S	**Sb**	**21 03 29.7**	**-0.3**
DALY	**Dalyan (Mu¨la**	**0.41**	**113**	P	**Pg**	**21 03 22.4**	**+1.1**
DALY				*e*Sg	**Sb**	**21 03 28.9**	**-1.1**
DALY				S	**Sb**	**21 03 29.7**	**-0.3**
MLSB	**Milas**	**0.45**	**314**	PG	**Pg**	**21 03 22.9**	**+0.8**
MLSB	**Milas**	**0.45**	**314**	*e*Pg	**Pg**	**21 03 22.9**	**+0.8**
DATC	**Datca-Mugla**	**0.47**	**242**	PG	**Pg**	**21 03 22.3**	**-0.2**
DATC	**Datca-Mugla**	**0.47**	**242**	*e*Pg	**Pg**	**21 03 22.3**	**-0.2**
DAT	**Datca**	**0.55**	**243**	PG	**Pg**	**21 03 23.7**	**-0.2**
DAT	**Datca**	**0.55**	**243**	*i*P	**Pg**	**21 03 23.7**	**-0.2**
DAT				*i*S	**Sb**	**21 03 32.8**	**-1.3**
DAT	**Datca**	**0.55**	**243**	P	**Pg**	**21 03 23.7**	**-0.2**
DAT				S	**Sb**	**21 03 32.8**	**-1.3**
BDRM	**Kayabasi**	**0.60**	**278**	*i*P	**Pg**	**21 03 25.1**	**+0.2**
BDRM				*i*S	**Sb**	**21 03 34.9**	**-0.6**
BDRM	**Kayabasi**	**0.60**	**278**	P	**Pg**	**21 03 25.1**	**+

MESJ	**Messejana**	**3.48**	**83**	P	**Pg**	**21 28 46.1 +3.9**
MESJ				S	**Sg**	**21 29 26.9 -0.3**
2.6nm,0.6s						
MESJ	**Messejana**	**3.48**	**83**	P	**Pg**	**21 28 46.1 +3.9**
MESJ				S	**Sg**	**21 29 26.9 -0.3**
2.6nm,0.6s						
MESJ	**Messejana**	**3.48**	**83**	P	**Pn**	**21 28 30.7 +1.0**
MESJ				*e*Sn	**Sn**	**21 29 10.1 -0.8**
ALMR	**Almeirim**	**3.56**	**61**	*e*Pn	**Pn**	**21 28 32.4 +1.5**
ALMR	**Almeirim**	**3.56**	**61**	*e*Pn	**Pg**	**21 28 47.7 +3.8**
ALMR				*e*Sn	**Sg**	**21 29 30.6 +0.6**
ALMR				A	A	21 29 37.5
7.1nm,0.6s						
ALMR	**Almeirim**	**3.56**	**61**	P	**Pn**	**21 28 32.4 +1.5**
ALMR	**Almeirim**	**3.56**	**61**	P	**Pg**	**21 28 47.7 +3.8**
ALMR				S	**Sg**	**21 29 30.6 +0.6**
3.6nm,0.6s						
ALMR	**Almeirim**	**3.56**	**61**	P	**Pg**	**21 28 47.7 +3.8**
ALMR				S	**Sg**	**21 29 30.6 +0.6**
3.6nm,0.6s						
ALMR	**Almeirim**	**3.56**	**61**	P	**Pn**	**21 28 32.4 +1.5**
PCVE	**Castro Verde**	**3.61**	**86**	*e*Pn	**Pn**	**21 28 32.0 +0.5**
PCVE	**Castro Verde**	**3.61**	**86**	*e*Pn	**Pg**	**21 28 47.3 +2.6**
PCVE				*e*Sn	**Sg**	**21 29 28.8 -2.7**
PCVE				A	A	21 29 38.5
1.9nm,0.4s						
PCVE	**Castro Verde**	**3.61**	**86**	P	**Pn**	**21 28 32.0 +0.5**
PCVE	**Castro Verde**	**3.61**	**86**	P	**Pg**	**21 28 47.3 +2.6**
PCVE				S	**Sg**	**21 29 28.8 -2.7**
1.9nm,0.4s						
PCVE	**Castro Verde**	**3.61**	**86**	P	**Pg**	**21 28 47.3 +2.6**
PCVE				S	**Sg**	**21 29 28.8 -2.7**
1.9nm,0.4s						
PCVE	**Castro Verde**	**3.61**	**86**	P	**Pn**	**21 28 32.0 +0.5**
PBDV	**Barranco-do-Ve**	**3.71**	**92**	*e*Pn	**Pn**	**21 28 33.3 +0.4**
PBDV				*e*Sn	**Sn**	**21 29 17.7 +1.0**
PBDV	**Barranco-do-Ve**	**3.71**	**92**	*e*Pn	**Pg**	**21 28 49.3 +2.7**
PBDV				*e*Sn	**Sg**	**21 29 33.8 -0.8**
PBDV				A	A	21 29 39.4
2.9nm,0.8s						
PBDV	**Barranco-do-Ve**	**3.71**	**92**	P	**Pn**	**21 28 33.3 +0.4**
PBDV				S	**Sn**	**21 29 17.7 +1.0**
PBDV	**Barranco-do-Ve**	**3.71**	**92**	P	**Pg**	**21 28 49.3 +2.7**
PBDV				S	**Sg**	**21 29 33.8 -0.8**
2.9nm,0.8s						
PBDV	**Barranco-do-Ve**	**3.71**	**92**	P	**Pg**	**21 28 49.3 +2.7**
PBDV				S	**Sg**	**21 29 33.8 -0.8**
2.9nm,0.8s						
PBDV	**Barranco-do-Ve**	**3.71**	**92**	P	**Pn**	**21 28 33.3 +0.4**
PBDV				S	**Sn**	**21 29 17.7 +1.0**
PBEJ	**Beja**	**3.77**	**80**	*e*Pn	**Pg**	**21 28 49.8 +2.0**
PBEJ				*e*Sn	**Sg**	**21 29 38.0 +1.3**
PBEJ	**Beja**	**3.77**	**80**	P	**Pg**	**21 28 49.8 +2.0**
PBEJ	**Beja**	**3.77**	**80**	P	**Pg**	**21 28 49.8 +2.0**
PBEJ				*e*Sn	**Sg**	**21 29 38.0 +1.3**
PMTG	**Montargil**	**3.78**	**64**	*e*Pn	**Pn**	**21 28 35.0 +1.2**
PMTG				*e*Sn	**Sn**	**21 29 20.6 +2.3**
PMTG	**Montargil**	**3.78**	**64**	*e*Pn	**Pg**	**21 28 50.4 +2.5**
PMTG				*e*Sn	**Sg**	**21 29 35.3 -1.5**
PMTG				A	A	21 29 39.0
1.3nm,0.3s						
PMTG	**Montargil**	**3.78**	**64**	*e*Pn	**Pg**	**21 28 50.4 +2.5**
PMTG				*e*Sn	**Sg**	**21 29 35.3 -1.5**
PMTG	**Montargil**	**3.78**	**64**	*e*Pn	**Pn**	**21 28 35.0 +1.2**
PMTG				*e*Sn	**Sn**	**21 29 20.6 +2.3**
PVAQ	**Vaqueiros**	**3.87**	**90**	*e*Pn	**Pn**	**21 28 35.2 +0.1**
PVAQ				*e*Sn	**Sn**	**21 29 20.3 -0.3**
PVAQ				A	A	21 29 30.1
1.9nm,0.6s						
PVAQ	**Vaqueiros**	**3.87**	**90**	*e*Pn	**Pg**	**21 28 51.3 +1.7**
PVAQ				*e*Sn	**Sg**	**21 29 36.7 -3.1**
PVAQ				A	A	21 29 39.9
2.9nm,0.2s						
PVAQ	**Vaqueiros**	**3.87**	**90**	P	**Pn**	**21 28 35.2 +0.1**
PVAQ				S	**Sn**	**21 29 20.3 -0.3**
1.9nm,0.6s						
PVAQ	**Vaqueiros**	**3.87**	**90**	P	**Pg**	**21 28 51.3 +1.7**
PVAQ				S	**Sg**	**21 29 36.7 -3.1**
2.9nm,0.2s						
PVAQ	**Vaqueiros**	**3.87**	**90**	P	**Pg**	**21 28 51.3 +1.7**
PVAQ				S	**Sg**	**21 29 36.7 -3.1**
2.9nm,0.2s						
PVAQ	**Vaqueiros**	**3.87**	**90**	P	**Pn**	**21 28 35.2 +0.1**
PVAQ				S	**Sn**	**21 29 20.3 -0.3**
1.9nm,0.6s						
PTOM	**Tomar**	**3.90**	**55**	*e*Pn	**Pg**	**21 28 52.9 +2.6**
PTOM	**Tomar**	**3.90**	**55**	P	**Pg**	**21 28 52.9 +2.6**
PTOM	**Tomar**	**3.90**	**55**	P	**Pg**	**21 28 52.9 +2.6**
EGRO	**El Granado**	**4.05**	**88**	P	**Pn**	**21 28 37.7 +0.1**
1.8nm,0.3s,SNR=4.0						
EGRO	**El Granado**	**4.05**	**88**	P	**Pg**	**21 28 53.0 -0.1**
1.6nm,0.2s,SNR=7.9						
EGRO				S	**Sb**	**21 29 40.2 +4.2**
4.0nm,0.2s,SNR=4.0						
EGRO	**El Granado**	**4.05**	**88**	P	**Pg**	**21 28 53.0 -0.1**
1.6nm,0.2s,SNR=7.9						
EGRO				S	**Sb**	**21 29 40.2 +4.2**
4.0nm,0.2s,SNR=4.0						
EGRO	**El Granado**	**4.05**	**88**	P	**Pn**	**21 28 37.7 +0.1**
1.8nm,0.3s,SNR=4.0						
PCAS	**Casmilo, Conde**	**4.10**	**50**	*e*Pn	**Pg**	**21 28 56.4 +2.4**
PCAS				*e*Sn	**Sg**	**21 29 44.9 -2.2**
PCAS	**Casmilo, Conde**	**4.10**	**50**	*e*Pn	**Pg**	**21 28 56.4 +2.4**
PCAS				*e*Sn	**Sg**	**21 29 44.9 -2.2**
PESTR	**Estremoz**	**4.17**	**69**	*e*Pn	**Pn**	**21 28 40.5 +1.3**
PESTR				*e*Sn	**Sn**	**21 29 29.2 +1.2**
PESTR				A	A	21 29 34.0
1.2nm,0.6s						
PESTR	**Estremoz**	**4.17**	**69**	*e*Pn	**Pg**	**21 28 56.2 +0.8**
PESTR				*e*Sn	**Sg**	**21 29 45.0 -4.4**
PESTR				A	A	21 29 49.1
2.1nm,0.4s						
PESTR	**Estremoz**	**4.17**	**69**	*e*Pn	**Pg**	**21 28 56.2 +0.8**
PESTR				*e*Sn	**Sg**	**21 29 45.0 -4.4**
PESTR	**Estremoz**	**4.17**	**69**	*e*Pn	**Pn**	**21 28 40.5 +1.3**
PESTR				*e*Sn	**Sn**	**21 29 29.2 +1.2**
PBAR	**Barrancos**	**4.44**	**79**	*e*Pn	**Pn**	**21 28 43.8 +0.9**
PBAR	**Barrancos**	**4.44**	**79**	*e*Pn	**Pg**	**21 28 59.5 -1.1**
PBAR				*e*Sn	**Sb**	**21 29 50.0 +2.8**
PBAR				A	A	21 29 57.5
3.1nm,0.2s						
PBAR	**Barrancos**	**4.44**	**79**	P	**Pn**	**21 28 43.8 +0.9**
PBAR	**Barrancos**	**4.44**	**79**	P	**Pg**	**21 28 59.5 -1.1**
PBAR				S	**Sb**	**21 29 50.0 +2.8**
3.1nm,0.2s						
PBAR	**Barrancos**	**4.44**	**79**	P	**Pg**	**21 28 59.5 -1.1**
PBAR				S	**Sb**	**21 29 50.0 +2.8**
3.1nm,0.2s						
PBAR	**Barrancos**	**4.44**	**79**	P	**Pn**	**21 28 43.8 +0.9**
PMRV	**Marv??o**	**4.51**	**63**	*e*Pn	**Pn**	**21 28 44.9 +0.9**
PMRV				*e*Sn	**Sn**	**21 29 37.6 +1.1**
PMRV	**Marv??o**	**4.51**	**63**	*e*Pn	**Pg**	**21 29 00.2 -1.8**
PMRV				*e*Sn	**Sb**	**21 29 52.6 +3.3**
PMRV				A	A	21 29 59.1
2.3nm,0.5s						
PMRV	**Marv??o**	**4.51**	**63**	P	**Pn**	**21 28 44.9 +0.9**
PMRV				S	**Sn**	**21 29 37.6 +1.1**
PMRV	**Marv??o**	**4.51**	**63**	P	**Pg**	**21 29 00.2 -1.8**
PMRV				S	**Sb**	**21 29 52.6 +3.3**
2.3nm,0.5s						
PMRV	**Marv??o**	**4.51**	**63**	P	**Pg**	**21 29 00.2 -1.8**
PMRV				S	**Sb**	**21 29 52.6 +3.3**
2.3nm,0.5s						
PMRV	**Marv??o**	**4.51**	**63**	P	**Pn**	**21 28 44.9 +0.9**
PMRV				S	**Sn**	**21 29 37.6 +1.1**
EBAD	**Badajoz**	**4.57**	**72**	P	**Pn**	**21 28 45.3 +0.6**
0.3nm,0.2s,SNR=7.9						
EBAD				S	**Sn**	**21 29 37.0 -0.9**
1.3nm,0.2s,SNR=4.9						
EBAD	**Badajoz**	**4.57**	**72**	P	**Pg**	**21 29 00.7 -2.4**
0.8nm,0.2s,SNR=7.9						
EBAD				S	**Sb**	**21 29 52.5 +1.5**
2.5nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**4.57**	**72**	P	**Pg**	**21 29 00.7 -2.4**
0.8nm,0.2s,SNR=7.9						
EBAD				S	**Sb**	**21 29 52.5 +1.5**
2.5nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**4.57**	**72**	P	**Pn**	**21 28 45.3 +0.6**
0.3nm,0.2s,SNR=7.9						
EBAD				S	**Sn**	**21 29 37.0 -0.9**
1.3nm,0.2s,SNR=4.9						
PCBR	**Castelo Branco**	**4.64**	**58**	*e*Pn	**Pn**	**21 28 47.3 +1.6**
PCBR	**Castelo Branco**	**4.64**	**58**	*e*Pn	**Pg**	**21 29 02.6 -1.8**
PCBR	**Castelo Branco**	**4.64**	**58**	Pn	**Pn**	**21 28 47.3 +1.6**
PCBR	**Castelo Branco**	**4.64**	**58**	P	**Pg**	**21 29 02.6 -1.8**
PCBR	**Castelo Branco**	**4.64**	**58**	P	**Pg**	**21 29 02.6 -1.8**
PCBR	**Castelo Branco**	**4.64**	**58**	Pn	**Pn**	**21 28 47.3 +1.6**
EMIN	**Mina Concepcio**	**4.70**	**85**	P	**Pn**	**21 28 45.4 -1.1**
0.3nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**21 29 39.7 -1.3**
0.6nm,0.3s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.70**	**85**	P	**Pb**	**21 29 01.5 +3.5**
0.6nm,0.2s,SNR=7.9						
EMIN				S	**Sb**	**21 29 54.3 -0.3**
1.7nm,0.3s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.70**	**85**	P	**Pb**	**21 29 01.5 +3.5**
0.6nm,0.2s,SNR=7.9						
EMIN				S	**Sb**	**21 29 54.3 -0.3**
1.7nm,0.3s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.70**	**85**	P	**Pn**	**21 28 45.4 -1.1**
0.3nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**21 29 39.7 -1.3**
0.6nm,0.3s,SNR=7.9						
PVIS	**Viseu**	**4.87**	**47**	*e*Sn	**Sb**	**21 30 02.4 +2.7**
PVIS	**Viseu**	**4.87**	**47**	Sn	**Sb**	**21 30 02.4 +2.7**
PVIS	**Viseu**	**4.87**	**47**	Sn	**Sb**	**21 30 02.4 +2.7**
PGAV	**Gavieira, Arco**	**5.58**	**35**	*e*Sn	**Sb**	**21 30 17.4 -2.7**
PGAV	**Gavieira, Arco**	**5.58**	**35**	*e*Sn	**Sb**	**21 30 17.4 -2.7**
ELOB	**Lobios**	**5.60**	**37**	S	**Sn**	**21 30 04.4 +1.0**
0.3nm,0.2s,SNR=4.0						
ELOB	**Lobios**	**5.60**	**37**	S	**Sb**	**21 30 18.1 -2.6**
0.9nm,0.2s,SNR=4.0						
ELOB	**Lobios**	**5.60**	**37**	S	**Sb**	**21 30 18.1 -2.6**
0.9nm,0.2s,SNR=4.0						
ELOB	**Lobios**	**5.60**	**37**	S	**Sn**	**21 30 04.4 +1.0**
0.3nm,0.2s,SNR=4.0						
MVO	**Moncorvo**	**5.66**	**48**	P	**Pn**	**21 29 00.7 +0.9**
0.8nm,0.3s,SNR=7.9						
MVO				S	**Sn**	**21 30 04.5 -0.4**
0.4nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**5.66**	**48**	P	**Pb**	**21 29 16.0 +1.5**
1.0nm,0.3s,SNR=7.9						
MVO				S	**Sb**	**21 30 19.9 -2.6**
1.3nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**5.66**	**48**	P	**Pb**	**21 29 16.0 +1.5**
1.0nm,0.3s,SNR=7.9						
MVO				*e*Sn	**Sb**	**21 30 19.5 -3.0**
MVO				S	**Sb**	**21 30 19.9 -2.6**
1.3nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**5.66**	**48**	P	**Pn**	**21 29 00.7 +0.9**
0.8nm,0.3s,SNR=7.9						
MVO				*e*Sn	**Sn**	**21 30 04.0 -0.9**
MVO				S	**Sn**	**21 30 04.5 -0.4**
0.4nm,0.2s,SNR=7.9						
EPLA	**Plasencia**	**5.70**	**61**	P	**Pn**	**21 29 01.8 +1.6**
0.5nm,0.2s,SNR=7.9						
EPLA				S	**Sn**	**21 30 05.6 -0.1**
0.7nm,0.2s,SNR=7.9						
EPLA	**Plasencia**	**5.70**	**61**	P	**Pb**	**21 29 16.2 +1.2**
1.2nm,0.2s,SNR=6.3						
EPLA				S	**Sb**	**21 30 20.5 -2.9**
1.1nm,0.2s,SNR=7.9						
EPLA	**Plasencia**	**5.70**	**61**	P	**Pb**	**21 29 16.2 +1.2**
1.2nm,0.2s,SNR=6.3						
EPLA				S	**Sb**	**21 30 20.5 -2.9**
1.1nm,0.2s,SNR=7.9						
EPLA	**Plasencia**	**5.70**	**61**	P	**Pn**	**21 29 01.8 +1.6**
0.5nm,0.2s,SNR=7.9						
EPLA				S	**Sn**	**21 30 05.6 -0.1**
0.7nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**5.70**	**82**	P	**Pn**	**21 28 59.6 -0.6**
0.6nm,0.2s,SNR=6.6						
ECAB				S	**Sn**	**21 30 03.7 -2.1**
0.3nm,0.2s,SNR=4.0						
ECAB	**El Cabril**	**5.70**	**82**	P	**Pb**	**21 29 15.6 +0.4**
0.7nm,0.2s,SNR=7.9						
ECAB				S	**Sb**	**21 30 19.1 -4.5**
0.8nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**5.70**	**82**	P	**Pb**	**21 29 15.6 +0.4**
0.7nm,0.2s,SNR=7.9						
ECAB				S	**Sb**	**21 30 19.1 -4.5**
0.8nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**5.70**	**82**	P	**Pn**	**21 28 59.7 -0.6**
0.6nm,0.2s,SNR=6.6						
ECAB				S	**Sn**	**21 30 03.7 -2.1**
0.3nm,0.2s,SNR=4.0						
EMAZ	**Mazaricos**	**6.12**	**26**	S	**Sb**	**21 30 28.1 -7.5**
0.5nm,0.1s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.33**	**31**	S	**Sb**	**21 30 34.0 -7.7**
0.5nm,0.1s,SNR=4.0						
EADA	**Adamuz**	**6.37**	**81**	P	**Pn**	**21 29 09.3 -0.2**
0.5nm,0.3s,SNR=7.9						
EADA				S	**Sn**	**21 30 21.7 -0.6**
0.4nm,0.3s,SNR=4.0						
EADA	**Adamuz**	**6.37**	**81**	P	**Pb**	**21 29 24.8 -1.7**
0.8nm,0.3s,SNR=7.9						
EADA				S	**Sb**	**21 30 35.2 -7.6**
0.7nm,0.3s,SNR=7.9						
EADA	**Adamuz**	**6.37**	**81**	P	**Pb**	**21 29 24.8 -1.7**
0.8nm,0.3s,SNR=7.9						
EADA				S	**Sb**	**21 30 35.2 -7.6**
0.7nm,0.3s,SNR=7.9						
EADA	**Adamuz**	**6.37**	**81**	P	**Pn**	**21 29 09.3 -0.2**
0.5nm,0.3s,SNR=7.9						
EADA				S	**Sn**	**21 30 21.7 -0.6**
0.4nm,0.3s,SNR=4.0						
PAB	**San Pablo**	**6.78**	**70**	P	**Pn**	**21 29 15.5 +0.4**
0.2nm,0.1s,SNR=7.9						
PAB	**San Pablo**	**6.78**	**70**	P	**Pb**	**21 29 30.2 -3.3**
0.4nm,0.2s,SNR=7.9						
PAB				S	**Sb**	**21 30 47.4 -7.0**
0.3nm,0.2s,SNR=7.9						
PAB	**San Pablo**	**6.78**	**70**	P	**Pb**	**21 29 30.2 -3.3**
0.4nm,0.2s,SNR=7.9						
PAB				S	**Sb**	**21 30 47.4 -7.0**
0.3nm,0.2s,SNR=7.9						
PAB	**San Pablo**	**6.78**	**70**	P	**Pn**	**21 29 15.5 +0.4**
0.2nm,0.1s,SNR=7.9						
ESDC	**Sonseca Array**	**7.10**	**69**	P	**Pn**	**21 29 19.1 -0.4**
0.3nm,0.2s,baz=256,slow=12,SNR=7.9						
ESDC	**Sonseca Array**	**7.10**	**69**	P	**Pb**	**21 29 34.5 -4.4**
0.1nm,0.1s,baz=256,slow=12,SNR=12						
ESDC	**Sonseca Array**	**7.10**	**69**	P	**Pb**	**21 29 34.5 -4.4**
0.1nm,0.1s,baz=256,slow=12,SNR=12						
ESDC	**Sonseca Array**	**7.10**	**69**	P	**Pn**	**21 29 19.1 -0.4**
0.3nm,0.2s,SNR=7.9						

MDD ***16*** *21:30:12.7±2.0, 37°.34N×12°.67W, h0km, mb3.6/9, Error ellipse: s-maj=18.4km s-min=17.1km az=106.0, PRXIMO*
INMG ***16*** *21:30:13.7±1.1, 37°.10N×13°.08W, h10km, ML2.1, Error ellipse: s-maj=8.7km s-min=6.4km az=123.0*
IGIL ***16*** *21:30:13.9, 37°.33N×12°.64W, h0km, ML1.8*
CSEM ***16*** *21:30:14.9±0.4, 37°.40N×12°.47W, h10km, mb3.6, Error ellipse: s-maj=7.4km s-min=6.3km az=93.0*
ISC 16 21:30:14.6±3.1, 37°.47N±0°.07×12°.4W±0°.1, h10km, n78, σ1§82/136, 2C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMAFR	**Mafra**	**2.89**	**58**	*e*Pn	**Pn**	**21 31 02.0**	**+1.3**
PMAFR				*e*Sn	**Sb**	**21 31 39.4**	**-2.2**
PMAFR				A	A	21 31 43.2	
6.8nm,0.5s							
PMAFR	**Mafra**	**2.89**	**58**	P	**Pn**	**21 31 01.9**	**+1.3**
3.4nm,0.2s,SNR=7.9							
PMAFR				S	**Sb**	**21 31 38.6**	**-3.0**
3.6nm,0.1s,SNR=7.9							
PMAFR	**Mafra**	**2.89**	**58**	*e*Pn	**Pn**	**21 31 02.0**	**+1.3**
PMAFR				S	**Sb**	**21 31 38.6**	**-3.0**
3.6nm,0.1s,SNR=7.9							
PMAFR				*e*Sn	**Sb**	**21 31 39.4**	**-2.2**
PTEO	**Sao Teotonio**	**2.94**	**87**	*e*Pn	**Pn**	**21 31 02.8**	**+1.3**
PTEO	**Sao Teotonio**	**2.94**	**87**	P	**Pn**	**21 31 02.8**	**+1.3**
PTEO	**Sao Teotonio**	**2.94**	**87**	P	**Pn**	**21 31 02.8**	**+1.3**
MORF	**Marmelete**	**3.01**	**92**	*e*P	**Pn**	**21 31 03.3**	**+0.9**
MORF	**Marmelete**	**3.01**	**92**	*e*Pn	**Pn**	**21 31 04.0**	**+1.6**
MORF	**Marmelete**	**3.01**	**92**	P	**Pn**	**21 31 03.3**	**+0.9**
MORF	**Marmelete**	**3.01**	**92**	P	**Pn**	**21 31 03.3**	**+0.9**
MORF	**Marmelete**	**3.01**	**92**	*e*Pn	**Pn**	**21 31 04.0**	**+1.6**
PNCL	**Nicolau / Gran**	**3.15**	**77**	*e*Pn	**Pn**	**21 31 05.5**	**+1.2**
PNCL				*e*Sn	**Sn**	**21 31 44.1**	**+2.1**
PNCL				A	A	21 31 52.5	
1.5nm,0.2s							
PNCL	**Nicolau / Gran**	**3.15**	**77**	*e*Pn	**Pn**	**21 31 05.5**	**+1.2**
PNCL				*e*Sn	**Sn**	**21 31 44.1**	**+2.1**
MESJ	**Messejana**	**3.36**	**82**	*e*P	**Pn**	**21 31 08.3**	**+1.1**
MESJ				*e*S	**Sn**	**21 31 48.2**	**+1.1**
MESJ				AML	AML	21 31 49.5	
comp=N,1.9nm,0.3s							
MESJ	**Messejana**	**3.36**	**82⇑**	*e*Pn	**Pn**	**21 31 08.8**	**+1.6**
MESJ				*e*Sn	**Sn**	**21 31 48.3**	**+1.2**
MESJ				A	A	21 31 56.6	
comp=N,1.5nm,0.4s							
MESJ	**Messejana**	**3.36**	**82**	P	**Pn**	**21 31 08.3**	**+1.1**
MESJ				S	**Sn**	**21 31 48.2**	**+1.1**
comp=N,1.9nm,0.3s							
MESJ	**Messejana**	**3.36**	**82**	P	**Pn**	**21 31 08.3**	**+1.1**
MESJ	**Messejana**	**3.36**	**82⇑**	*e*Pn	**Pn**	**21 31 08.8**	**+1.6**
MESJ				*e*Sn	**Sn**	**21 31 48.3**	**+1.2**
ALMR	**Almeirim**	**3.46**	**60**	*e*P	**Pn**	**21 31 09.9**	**+1.3**
ALMR				*e*S	**Sn**	**21 31 51.3**	**+1.6**
ALMR				AML	AML	21 31 53.5	
comp=N,3.1nm,0.2s							
ALMR	**Almeirim**	**3.46**	**60**	*e*Pn	**Pn**	**21 31 09.9**	**+1.3**
ALMR				*e*Sn	**Sn**	**21 31 53.4**	**+3.7**
ALMR				A	A	21 32 07.0	
comp=N,5.0nm,0.7s							
ALMR	**Almeirim**	**3.46**	**60**	P	**Pn**	**21 31 09.9**	**+1.3**
ALMR				S	**Sn**	**21 31 51.3**	**+1.6**
comp=N,1.6nm,0.2s							
ALMR	**Almeirim**	**3.46**	**60**	P	**Pn**	**21 31 09.9**	**+1.3**
ALMR				S	**Sn**	**21 31 51.3**	**+1.6**
comp=N,1.6nm,0.2s							
ALMR				*e*Sn	**Sn**	**21 31 53.4**	**+3.7**
PCVE	**Castro Verde**	**3.49**	**86**	*e*Pn	**Pn**	**21 31 10.1**	**+1.1**
PCVE				*e*Sn	**Sn**	**21 31 51.8**	**+1.4**
PCVE				A	A	21 31 55.1	
comp=N,1.7nm,0.6s							
PCVE	**Castro Verde**	**3.49**	**86**	P	**Pn**	**21 31 10.1**	**+1.1**
PCVE				S	**Sn**	**21 31 51.8**	**+1.4**
comp=N,1.7nm,0.6s							
PCVE	**Castro Verde**	**3.49**	**86**	P	**Pn**	**21 31 10.1**	**+1.1**
PCVE				S	**Sn**	**21 31 51.8**	**+1.4**
comp=N,1.7nm,0.6s							
PBDV	**Barranco-do-Ve**	**3.59**	**92**	*e*Pn	**Pn**	**21 31 11.3**	**+0.9**
PBDV				*e*Sn	**Sn**	**21 31 56.0**	**+3.2**
PBDV				A	A	21 32 21.2	
comp=N,3.3nm,0.7s							
PBDV	**Barranco-do-Ve**	**3.59**	**92**	P	**Pn**	**21 31 11.3**	**+0.9**
PBDV				S	**Sn**	**21 31 56.0**	**+3.2**
comp=N,3.3nm,0.7s							
PBDV	**Barranco-do-Ve**	**3.59**	**92**	P	**Pn**	**21 31 11.3**	**+0.9**
PBDV				S	**Sn**	**21 31 56.0**	**+3.2**
comp=N,3.3nm,0.7s							
PBEJ	**Beja**	**3.66**	**80**	*e*Sn	**Sb**	**21 32 00.6**	**-3.2**
PBEJ	**Beja**	**3.66**	**80**	*e*Sn	**Sb**	**21 32 00.6**	**-3.2**
PMTG	**Montargil**	**3.67**	**63**	*e*Pn	**Pn**	**21 31 12.9**	**+1.4**
PMTG				*e*Sn	**Sn**	**21 31 57.8**	**+3.0**
PMTG				A	A	21 32 01.8	
comp=N,1.1nm,0.4s							
PMTG	**Montargil**	**3.67**	**63**	*e*Pn	**Pn**	**21 31 12.9**	**+1.4**
PMTG				*e*Sn	**Sn**	**21 31 57.8**	**+3.0**
PVAQ	**Vaqueiros**	**3.75**	**90**	*e*Pn	**Pn**	**21 31 13.3**	**+0.8**
PVAQ				*e*Sn	**Sn**	**21 31 58.2**	**+1.5**
PVAQ				A	A	21 32 05.0	
comp=N,2.0nm,0.8s							
PVAQ	**Vaqueiros**	**3.75**	**90**	P	**Pn**	**21 31 13.3**	**+0.8**
PVAQ				S	**Sn**	**21 31 58.2**	**+1.5**
comp=N,2.0nm,0.8s							
PVAQ	**Vaqueiros**	**3.75**	**90**	P	**Pn**	**21 31 13.3**	**+0.8**
PVAQ				S	**Sn**	**21 31 58.2**	**+1.5**
comp=N,2.0nm,0.8s							
PTOM	**Tomar**	**3.81**	**55**	*e*Sn	**Sn**	**21 32 01.9**	**+3.7**
PTOM				A	A	21 32 03.2	
comp=N,14nm,0.1s							
PTOM	**Tomar**	**3.81**	**55**	S	**Sn**	**21 32 01.9**	**+3.7**
comp=N,7.2nm,0.1s							
PTOM	**Tomar**	**3.81**	**55**	S	**Sn**	**21 32 01.9**	**+3.7**
comp=N,7.2nm,0.1s							
EGRO	**El Granado**	**3.93**	**88**	P	**Pn**	**21 31 15.0**	**0.0**
comp=N,0.5nm,0.2s,SNR=7.9							
EGRO				S	**Sn**	**21 32 01.8**	**+0.6**
comp=N,2.4nm,0.2s,SNR=7.9							
EGRO	**El Granado**	**3.93**	**88**	P	**Pn**	**21 31 15.0**	**0.0**
comp=N,0.5nm,0.2s,SNR=7.9							
EGRO				S	**Sn**	**21 32 01.8**	**+0.6**
comp=N,2.4nm,0.2s,SNR=7.9							
PCAS	**Casmilo, Conde**	**4.01**	**49**	*e*Pn	**Pn**	**21 31 18.2**	**+2.1**
PCAS				*e*Sn	**Sn**	**21 32 05.9**	**+2.7**
PCAS				A	A	21 32 10.5	
comp=N,1.3nm,0.9s							
PCAS	**Casmilo, Conde**	**4.01**	**49**	*e*Pn	**Pn**	**21 31 18.2**	**+2.1**
PCAS				*e*Sn	**Sn**	**21 32 05.9**	**+

comp=N,0.5nm,0.3s,SNR=7.9
EPLA Plasencia 5.59 60 P **Pn 21 31 38.9 +1.0**
comp=N,0.5nm,0.2s,SNR=7.9
EPLA S **Sn 21 32 41.3 -1.0**
comp=N,0.6nm,0.1s,SNR=7.9
EPLA Plasencia 5.59 60 P **Pn 21 31 38.9 +1.0**
comp=N,0.5nm,0.2s,SNR=7.9
EMAZ Mazaricos 6.08 25 S **Sn 21 32 49.1 -5.0**
comp=N,0.4nm,0.1s,SNR=7.9
EADA Adamuz 6.25 81 P **Pn 21 31 47.4 +0.4**
comp=N,0.4nm,0.1s,SNR=7.9
EADA S **Sn 21 32 56.8 -1.7**
comp=N,0.4nm,0.2s,SNR=4.0
EADA Adamuz 6.25 81 P **Pn 21 31 47.4 +0.4**
comp=N,0.4nm,0.1s,SNR=7.9
EADA S **Sn 21 32 56.8 -1.7**
comp=N,0.4nm,0.2s,SNR=4.0
EAGO Agolada(Pontev 6.28 31 S **Sn 21 32 55.2 -3.9**
comp=N,0.3nm,0.1s,SNR=4.0
PAB San Pablo 6.67 69 P **Pn 21 31 53.4 +0.7**
comp=N,0.2nm,0.2s,SNR=7.9
PAB S **Sn 21 33 10.0 +1.3**
comp=N,0.1nm,0.1s,SNR=4.0
PAB San Pablo 6.67 69 P **Pn 21 31 53.4 +0.7**
comp=N,0.2nm,0.2s,SNR=7.9
PAB S **Sn 21 33 10.0 +1.3**
comp=N,0.1nm,0.1s,SNR=4.0
ESDC Sonseca Array 6.99 69 P **Pn 21 31 56.9 -0.2**
comp=N,0.4nm,0.1s,baz=255,slow=12,SNR=5.9
ESDC Sonseca Array 6.99 69 P **Pn 21 31 56.9 -0.2**
comp=N,0.4nm,0.1s,baz=255,slow=12,SNR=5.9

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*ISCJB **16** 21:35:17.1±0.4, 31°.57N±0°.03×115°.85W±0°.02, h9km±4km, Error ellipse: s-maj=4.6km s-min=3.1km az=15.4*
*NEIC **16** 21:35:18.6±0.0, 31°.55N×115°.86W, h6km, ML3.8(PAS), ML3.8(ECX), After ECX.*
*ECX **16** 21:35:18.6±0.6, 31°.55N×115°.86W, h6km, MD3.5, ML3.8*
*MEX **16** 21:35:20.1±0.3, 31°.45N×115°.96W, h13km±4km, MD3.2*
ISC 16 21:35:17.0±1.1, 31°.57N±0°.02×115°.83W±0°.02, h7km±9km, n84, σ1°08/121, 9C-1D, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAX	**El Zacaton**	**0.38**	**262**	⇑*e*P	**Pb**	**21 35 25.3**	**-0.9**
ZAX				*e*S	**Sg**	**21 35 30.5**	**+1.0**
ZAX				⇑*e*		21 35 32.8	
ZAX				IAML		21 35 32.8	
	comp=E,9μm,0.4s						
SPIG	**San Pedro Mart**	**0.60**	**149**	*e*P	**Pb**	**21 35 29.9**	**-0.1**
SPIG				*e*S	**Sb**	**21 35 38.2**	**-0.7**
SPIG	**San Pedro Mart**	**0.60**	**149**	*e*Pg	**Pb**	**21 35 30.2**	**+0.1**
SPIG				*e*Sg	**Sb**	**21 35 38.0**	**-0.9**
SPIG	**San Pedro Mart**	**0.60**	**149**	*i* P	**Pb**	**21 35 30.2**	**+0.1**
SPIG				*i* S	**Sb**	**21 35 38.0**	**-0.9**
SPX	**San Pedro Mart**	**0.61**	**149**	*e*P	**Pb**	**21 35 30.1**	**+0.1**
SPX				*e*S	**Sb**	**21 35 38.3**	**-0.7**
SPX	**San Pedro Mart**	**0.61**	**149**	*e*Pg	**Pb**	**21 35 30.2**	**+0.1**
SPX				*e*Sg	**Sb**	**21 35 38.0**	**-0.9**
SPX	**San Pedro Mart**	**0.61**	**149**	*i* P	**Pb**	**21 35 30.2**	**+0.1**
SPX				*i* S	**Sb**	**21 35 38.0**	**-0.9**
ECNX	**Esteban Cantu**	**0.66**	**278**	⇑*e*P	**Pg**	**21 35 29.9**	**+0.2**
ECNX				⇑*e*P	**Pb**	**21 35 31.4**	**+0.5**
ECBX	**El Chinero**	**0.67**	**98**	⇑*e*P	**Pb**	**21 35 30.9**	**-0.1**
ECBX				*e*S	**Sb**	**21 35 40.2**	**-0.3**
PBX	**Punta Banda**	**0.78**	**283**	⇑*e*P	**Pg**	**21 35 31.9**	**-0.2**
CPBX	**Cerro Prieto**	**0.96**	**28**	*e*P	**Pb**	**21 35 35.6**	**-0.3**
CPBX				*e*S	**Sb**	**21 35 49.4**	**+0.5**
CPBX				*e*		21 35 57.7	
CPBX				IAML		21 35 57.7	
	comp=E,8μm,0.3s						
CPBX				⇑*e*		21 35 57.7	
CPBX				IAML		21 35 57.7	
	comp=N,9μm,0.4s						
MBIG	**Mexicali**	**1.00**	**32**	*i* P	**Pn**	**21 35 38.0**	**+0.7**
MBIG				*i* S	**Sn**	**21 35 52.3**	**+0.6**
CBX	**Cerro Bola**	**1.03**	**317**	⇑*e*P	**Pg**	**21 35 36.7**	**-0.1**
CBX				*e*S	**Sb**	**21 35 50.4**	**-0.5**
CBX	**Cerro Bola**	**1.03**	**317**	*e*Pg	**Pg**	**21 35 36.7**	**-0.1**
CBX				*e*Sg	**Sg**	**21 35 49.7**	**-0.4**
CBX	**Cerro Bola**	**1.03**	**317**	*i* P	**Pg**	**21 35 36.7**	**-0.1**
CBX				*i* S	**Sg**	**21 35 49.7**	**-0.4**
RMX	**La Rumorosa**	**1.05**	**349**	*e*P	**Pg**	**21 35 36.6**	**-0.6**
RMX				*e*S	**Sg**	**21 35 49.6**	**-1.3**
RMX				IAML		21 35 52.4	
	comp=N,2μm,0.2s						
RMX				⇓*e*		21 35 52.4	
YUH	**Yuha Desert**	**1.08**	**356**	*e*Pg	**Pb**	**21 35 37.8**	**-0.2**
IKP	**In-Ko-Pah, Jac**	**1.11**	**348**	P	**Pb**	**21 35 38.4**	**-0.1**
	baz=169,SNR=202						
IKP				S	**Sg**	**21 35 52.0**	**-0.7**
	baz=169						
IKP	**In-Ko-Pah, Jac**	**1.11**	**348**	*e*P	**Pb**	**21 35 38.4**	**-0.1**
TJIG	**Tijuana**	**1.12**	**321**	⇑*e*P	**Pg**	**21 35 38.1**	**-0.4**
TJIG	**Tijuana**	**1.12**	**321**	*e*P	**Pg**	**21 35 38.1**	**-0.4**
TJIG				*e*S	**Sg**	**21 35 52.1**	**-1.1**
ERPC	**Ernies Place**	**1.18**	**7**	*e*Pn	**Pn**	**21 35 40.8**	**+0.9**
WESC	**Westside Schoo**	**1.19**	**4**	*e*Pg	**Pn**	**21 35 40.5**	**+0.5**
BAR	**Barrett**	**1.32**	**328**	*e*Pg	**Pg**	**21 35 41.5**	**-0.9**
BAR				*e*Sn	**Sg**	**21 35 58.6**	**-0.9**
CRR	**Carrizo Plain**	**1.32**	**355**	*e*Pg	**Pg**	**21 35 41.6**	**-0.7**
SWSC	**Sam W. Stewart**	**1.38**	**1**	P	**Pn**	**21 35 41.8**	**-0.8**
	baz=182,SNR=99						
SWSC				S	**Sn**	**21 36 01.5**	**+0.5**
	baz=182						
SWSC	**Sam W. Stewart**	**1.38**	**1**	*e*Pn	**Pb**	**21 35 44.0**	**+0.9**
SWSC				*e*Sn	**Sn**	**21 36 01.8**	**+0.8**
CBKC	**Canebrake**	**1.38**	**345**	*e*Pg	**Pb**	**21 35 43.2**	**+0.2**
MONP2	**Monument Peak**	**1.42**	**339**	P	**Pb**	**21 35 43.7**	**-0.1**
	baz=160,SNR=350						
MONP2				S	**Sg**	**21 36 01.5**	**-1.1**
	baz=160						
SDRC	**San Diego Road**	**1.50**	**321**	*e*P	**Pn**	**21 35 44.6**	**+0.3**
EML	**El Monte Cty P**	**1.58**	**327**	*e*Pn	**Pb**	**21 35 46.5**	**0.0**
109C	**Camp Elliot, M**	**1.71**	**321**	P	**Pn**	**21 35 47.4**	**+0.3**
	baz=141,SNR=66						
109C				S	**Sn**	**21 36 09.1**	**-0.1**
	baz=141						
CPE	**Camp Elliot**	**1.71**	**321**	*e*Pn	**Pb**	**21 35 48.1**	**-0.6**
CPE				*e*Sn	**Sn**	**21 36 09.2**	**+0.1**
GLA	**Glamis**	**1.71**	**30**	P	**Pn**	**21 35 46.6**	**-0.6**
	baz=210,SNR=15						
GLA				S	**Sn**	**21 36 07.0**	**-2.3**
	baz=210						
GLA	**Glamis**	**1.71**	**30**	*e*Pn	**Pn**	**21 35 46.6**	**-0.6**
DPP	**Dos Picos Cty**	**1.71**	**327**	*e*Pn	**Pb**	**21 35 48.5**	**-0.2**
HWB	**Hans Werner Br**	**1.74**	**327**	*e*Pn	**Pn**	**21 35 48.1**	**+0.4**
HWB				*e*Sn	**Sn**	**21 36 10.8**	**+0.7**
BORC	**Borrego Spring**	**1.77**	**344**	*e*Pn	**Pg**	**21 35 50.4**	**-0.5**
BORC				*e*Sn	**Sb**	**21 36 12.4**	**+0.3**
PLM	**Palomar**	**1.98**	**334**	*e*Pn	**Pb**	**21 35 52.9**	**-0.7**
PLM				*e*Sn	**Sb**	**21 36 18.2**	**-0.3**
FRD	**Ford Ranch, An**	**2.03**	**341**	*e*Pn	**Pg**	**21 35 55.6**	**-0.3**
FRD				*e*Sn	**Sb**	**21 36 20.5**	**+0.7**
DNR	**Dunn Ranch,Anz**	**2.11**	**342**	*e*Pn	**Pn**	**21 35 52.8**	**0.0**
DNR				*e*Sn	**Sn**	**21 36 16.1**	**-3.2**
XPFO	**Piæon Flat**	**2.11**	**346**	*e*Pn	**Pn**	**21 35 52.6**	**-0.2**
BC3	**Big Chuckawall**	**2.11**	**9**	P	**Pn**	**21 35 52.6**	**-0.2**
	baz=189,SNR=14						
BC3				S	**Sn**	**21 36 16.8**	**-2.5**
	baz=189						
PFO	**Pinyon Flats O**	**2.11**	**346**	P	**Pn**	**21 35 52.5**	**-0.3**
	baz=166,SNR=19						
PFO				Sb	**Sb**	**21 36 22.2**	**+0.2**
	baz=166						
PFO	**Pinyon Flats O**	**2.11**	**346**	*e*Pn	**Pn**	**21 35 52.6**	**-0.2**
113A	**Mohawk Valley,**	**2.12**	**55**	*e*Pn	**Pn**	**21 35 53.0**	**+0.1**
DGR	**Domenigoni Val**	**2.31**	**335**	*e*Pn	**Pn**	**21 35 55.3**	**-0.1**
DGR				*e*Sn	**Sb**	**21 36 26.7**	**-0.9**
MURC	**Murrieta**	**2.33**	**331**	Sb	**Sb**	**21 36 27.7**	**-0.7**
	baz=151						
BELC	**Belle Mtn. Jos**	**2.43**	**357**	P	**Pn**	**21 35 57.7**	**+0.4**
	baz=177						
BELC				Sb	**Sb**	**21 36 31.2**	**-0.2**
	baz=177						
Y12C	**Blythe**	**2.44**	**26**	Sb	**Sb**	**21 36 30.9**	**-0.6**
	baz=208						
TPC	**Twentynine Pal**	**2.54**	**356**	*e*Pn	**Pg**	**21 36 04.3**	**-1.4**
214A	**Organ Pipe Nat**	**2.60**	**81**	P	**Pn**	**21 35 58.9**	**-0.6**
	baz=262,SNR=17						
214A				S	**Sn**	**21 36 29.1**	**-2.3**
	baz=262						
IRM	**Iron Mountain**	**2.65**	**12**	P	**Pn**	**21 36 00.1**	**0.0**
	baz=193						
SCI2	**San Clemente I**	**2.70**	**302**	P	**Pn**	**21 36 00.7**	**-0.1**
	baz=121,SNR=5.9						
SCI2				S	**Sn**	**21 36 32.9**	**-0.7**
	baz=121						
BBRC	**Big Bear Solar**	**2.84**	**341**	S	**Sn**	**21 36 36.5**	**-1.0**
	baz=162						
BBRC	**Big Bear Solar**	**2.84**	**341**	*e*Sn	**Sn**	**21 36 36.2**	**-1.3**
CIS	**Catalina Islan**	**2.85**	**311**	P	**Pn**	**21 36 02.2**	**-0.7**
	baz=130						
CIS				S	**Sn**	**21 36 36.1**	**-1.4**
	baz=130						
BREC	**Barre Substati**	**2.88**	**322**	*e*Pn	**Pn**	**21 36 03.3**	**0.0**
BREC				*e*Pg	**Pb**	**21 36 08.5**	**-0.1**
FMP	**Fort Macarthur**	**2.98**	**317**	S	**Sn**	**21 36 39.9**	**-0.8**
	baz=136						
BFSC	**Mount Baldy Ra**	**3.08**	**331**	Sb	**Sb**	**21 36 49.4**	**-0.5**
	baz=150						
VTV	**Victorville**	**3.24**	**338**	*e*Pn	**Pb**	**21 36 13.8**	**-1.1**
MWC	**Mount Wilson**	**3.25**	**325**	*e*Pn	**Pn**	**21 36 09.6**	**+1.1**
SBI	**Santa Barbara**	**3.31**	**306**	*e*Pg	**Pb**	**21 36 17.5**	**+1.5**
NEE2	**Needles Airpor**	**3.35**	**17**	P	**Pn**	**21 36 09.1**	**-0.6**
	baz=198						
Y14A	**Wickenburg**	**3.36**	**44**	*e*Pn	**Pn**	**21 36 10.7**	**+0.8**
DECC	**Green Verdugo**	**3.41**	**323**	Sb	**Sb**	**21 37 00.4**	**+1.0**
	baz=142						
SNCC	**San Nicolas Is**	**3.55**	**299**	S	**Sn**	**21 36 53.9**	**-0.7**
	baz=118						
EDW2	**Edwards Air Fo**	**3.77**	**332**	Sb	**Sb**	**21 37 10.8**	**+1.0**
	baz=151						
GSC	**Goldstone, Bar**	**3.81**	**348**	*e*Pg	**Pb**	**21 36 24.9**	**+0.3**
TUQ	**Turquoise Moun**	**3.86**	**359**	P	**Pn**	**21 36 16.8**	**-0.1**
	baz=179						
W13A	**Hualapai Mount**	**3.88**	**24**	*e*Pn	**Pn**	**21 36 19.0**	**+1.7**
OSI	**Osito Audit: C**	**3.89**	**322**	S	**Sn**	**21 37 03.0**	**-0.2**
	baz=141						
CCCA	**Chr Cany lake**	**4.15**	**342**	*e*Pn	**Pn**	**21 36 24.2**	**+3.4**
ARVC	**Arvin**	**4.35**	**326**	Sb	**Sb**	**21 37 30.2**	**+3.8**
	baz=144						
TUC	**Tucson**	**4.35**	**79**	S	**Sn**	**21 37 14.2**	**-0.4**
	baz=261						
TUC	**Tucson**	**4.35**	**79**	*e*Pg	**Pg**	**21 36 42.4**	**+2.0**
X16A	**Lo Mia Camp, P**	**4.66**	**51**	*e*Pn	**Pn**	**21 36 29.6**	**+1.7**
DAC	**Darwin (Calif)**	**4.92**	**343**	*e*Pn	**Pn**	**21 36 33.4**	**+1.8**
TPNV	**Topopah Spring**	**5.38**	**356**	*e*Pn	**Pn**	**21 36 40.7**	**+2.9**
WUAZ	**Wupatki**	**5.42**	**42**	*e*Pn	**Pn**	**21 36 41.0**	**+2.7**
U15A	**North Rim**	**5.67**	**30**	*e*Pn	**Pn**	**21 36 44.4**	**+2.5**
W18A	**Petrified Fore**	**6.21**	**54**	*e*Pn	**Pn**	**21 36 51.7**	**+2.5**
NV11	**Mina Array Sit**	**7.11**	**345**	*e*Pg	**Pg**	**21 37 33.6**	**+0.4**
NV01	**Mina Array Sit**	**7.14**	**344**	*e*Pg	**Pg**	**21 37 34.2**	**+0.5**

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*ISK **16** 21:37:43.7, 38°.40N×39°.27E, h6km, ML2.1/3*
*ISCJB **16** 21:37:44.1±0.5, 38°.36N±0°.04×39°.31E±0°.04, h4km±5km, Error ellipse: s-maj=7.0km s-min=4.9km az=17.1*
*CSEM **16** 21:37:44.1±0.2, 38°.37N×39°.30E, h5km, ML2.1, Error ellipse: s-maj=5.1km s-min=3.7km az=18.0*
*DDA **16** 21:37:44.5, 38°.38N×39°.29E, h7km, Ml2.5*
ISC 16 21:37:44.0±0.9, 38°.36N±0°.04×39°.31E±0°.03, h6km±5km, n22, σ0°39/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVRC	**Sivrice-ELAZID**	**0.02**	**356**	PG	**Pg**	**21 37 45.3**	**-0.1**
SVRC				SG	**Sg**	**21 37 46.2**	**-0.2**
SVRC	**Sivrice-ELAZID**	**0.02**	**356**	*e*Pg	**Pg**	**21 37 45.3**	**-0.1**
SVRC				*e*Sg	**Sg**	**21 37 46.2**	**-0.2**
ELZG	**Elazig**	**0.29**	**298**	*i* P	**Pg**	**21 37 49.6**	**-0.1**
ELZG				*i* S	**Sg**	**21 37 54.2**	**+0.6**
ELZG	**Elazig**	**0.29**	**298**	P	**Pg**	**21 37 49.6**	**-0.1**
ELZG				S	**Sg**	**21 37 54.2**	**+0.6**
PTK	**Pertek**	**0.53**	**7**	PG	**Pg**	**21 37 53.9**	**-0.4**
PTK				SG	**Sg**	**21 38 01.6**	**+0.3**
PTK	**Pertek**	**0.53**	**7**	*e*Pg	**Pg**	**21 37 53.9**	**-0.4**
PTK				*e*Sg	**Sg**	**21 38 01.6**	**+0.3**
MALT	**Malatya**	**0.69**	**266**	PG	**Pg**	**21 37 56.9**	**-0.4**
MALT				SG	**Sg**	**21 38 06.7**	**+0.3**
MALT	**Malatya**	**0.69**	**266**	*e*Pg	**Pg**	**21 37 56.9**	**-0.4**
MALT				*e*Sg	**Sg**	**21 38 06.7**	**+0.3**
DYBB	**Diyarbakir**	**0.77**	**122**	PG	**Pb**	**21 38 00.1**	**+0.2**
DIYA	**Diyarbakir**	**0.78**	**124**	*i* P	**Pb**	**21 38 00.1**	**+0.1**
DIYA	**Diyarbakir**	**0.78**	**124**	P	**Pb**	**21 38 00.1**	**+0.1**
HANI	**Diyarbakir_Han**	**0.86**	**86**	*i* P	**Pb**	**21 38 01.3**	**-0.1**
HANI	**Diyarbakir_Han**	**0.86**	**86**	P	**Pb**	**21 38 01.3**	**-0.1**
DIY	**Diyarbakir**	**0.86**	**122**	*e*Pg	**Pg**	**21 38 00.1**	**-0.4**
URFA	**Urfa**	**1.00**	**203**	PG	**Pb**	**21 38 03.7**	**0.0**
URFA	**Urfa**	**1.00**	**203**	*e*Pg	**Pb**	**21 38 03.7**	**0.0**
AKCD	**Akcadag**	**1.09**	**267**	*i* P	**Pg**	**21 38 04.2**	**-0.7**
AKCD				*i* S	**Sn**	**21 38 21.5**	**+0.1**
AKCD	**Akcadag**	**1.09**	**267**	P	**Pg**	**21 38 04.2**	**-0.7**
AKCD				S	**Sn**	**21 38 21.5**	**+0.1**
KEMA	**Kemaliye**	**1.11**	**325**	*i* P	**Pn**	**21 38 06.1**	**-0.1**
KEMA	**Kemaliye**	**1.11**	**325**	P	**Pn**	**21 38 06.1**	**-0.1**
MAZI	**Mazidag**	**1.27**	**135**	PN	**Pb**	**21 38 09.1**	**+0.7**
MAZI	**Mazidag**	**1.27**	**135**	*e*Pn	**Pb**	**21 38 09.1**	**+0.7**

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*CSEM **16** 21:43:52.3±1.0, 49°.70N×18°.51E, h1km, Error ellipse: s-maj=15.5km s-min=8.9km az=93.0*
PRU 16 21:43:50.2, 49°.82N×18°.67E, h0km, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.34**	**273**	*e*PG	Pg	21 43 57.4	+0.7
OKC				*e*SG	Sg	21 44 01.8	+0.7
	comp=Z,7.6nm,0.4s						
OKC	**Ostrava-Krasne**	**0.34**	**273**	Pg	Pg	21 43 57.4	+0.7
OKC				Sg	Sg	21 44 01.8	+0.7
	7.6nm,0.4s						
MORC	**Moravsky Berou**	**0.73**	**267**	*e*Pg	Pg	21 44 04.9	+0.7
MORC				*e*Sg	Sg	21 44 12.7	-1.0
MORC	**Moravsky Berou**	**0.73**	**267**	*e*PG	Pg	21 44 04.9	+0.7
MORC				*e*SG	Sg	21 44 12.7	-1.0
VRAC	**Vranov**	**1.45**	**250**	*e*Pg	Pn	21 44 17.6	0.0
VRAC				*e*Sg	Sg	21 44 35.6	-1.0
VRAC	**Vranov**	**1.45**	**250**	*e*PG	Pn	21 44 17.6	0.0
VRAC				*e*SG	Sg	21 44 35.6	-1.0
DPC	**Dobruska-Polom**	**1.60**	**290**	*e*PG	Pn	21 44 19.1	-0.7
DPC				*e*SG	Sn	21 44 41.2	0.0
KRUC	**Moravsky**	**1.67**	**244**	*e*PG	Pn	21 44 21.2	+0.5
KRUC				*e*SG	Sn	21 44 42.7	0.0

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*ISCJB **16** 21:55:16.2±1.1, 32°.44S±0°.04×70°.10W±0°.06, h11km±11km, Error ellipse: s-maj=8.6km s-min=5.5km az=31.6*
*SJA **16** 21:55:16.9±0.4, 32°.42S×69°.93W, h128km±20km, ML3.0, MW2.8*
*GUC **16** 21:55:17.5±0.6, 32°.44S×70°.25W, h106km±9km, ML2.7*
ISC 16 21:55:16.7±2.2, 32°.45S±0°.06×70°.11W±0°.06, h108km±22km, n13, σ0°74/26, 2C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PEL	**Peldehue**	**0.84**	**215**	⇑*e*P	**Pn**	**21 55 35.9**	**-0.5**
PEL				*e*S	**Sn**	**21 55 50.0**	**-1.0**
PEL				IAML		21 55 51.7	
	comp=E,324nm,0.2s						
FCH	**Farellones**	**0.89**	**190**	*e*P	**Pn**	**21 55 37.4**	**+0.4**
FCH				*e*S	**Sn**	**21 55 53.1**	**+0.7**
FCH				IAML		21 55 57.4	
	comp=E,215nm,0.2s						
ROCH	**El Roble**	**0.92**	**235**	*e*P	**Pn**	**21 55 36.8**	**-0.4**
ROCH				*e*S	**Sn**	**21 55 52.0**	**-0.6**
CLCH	**Cerro Calan**	**1.01**	**201**	*e*P	**Pn**	**21 55 38.0**	**0.0**
CLCH				*e*S	**Sn**	**21 55 54.0**	**-0.1**
LMEL	**Las Melosas**	**1.40**	**183**	⇑*e*P	**Pn**	**21 55 43.4**	**+1.0**
LMEL				*e*S	**Sn**	**21 56 02.4**	**+0.5**
LMEL				IAML		21 56 07.0	
	comp=N,127nm,0.2s						
RTCV	**Cerro Valdivia**	**1.46**	**67**	*i* P	**Pn**	**21 55 43.3**	**+0.4**
RTCV				*e*S	**Sn**	**21 56 03.2**	**+0.4**
RTLL	**Cerro Villicun**	**1.79**	**52**	*i* P	**Pn**	**21 55 47.4**	**+0.4**
RTLL				*e*S	**Sn**	**21 56 10.2**	**+0.2**
RTLL				IAML		21 56 11.6	
	comp=E,274nm,0.4s						
AMOG	**MOGNA**	**2.04**	**43**	*e*P	**Pn**	**21 55 50.8**	**+0.6**
AMOG				*e*S	**Sn**	**21 56 15.5**	**-0.4**
GO04	**Tololo Observa**	**2.34**	**345**	⇓*e*P	**Pn**	**21 55 54.9**	**+0.6**
GO04				*e*S	**Sn**	**21 56 22.8**	**-0.2**
TLL	**Tololo Astrono**	**2.35**	**345**	*e*P	**Pn**	**21 55 55.0**	**+0.6**
TLL				*e*S	**Sn**	**21 56 23.1**	**-0.1**
TLL				IAML		21 56 29.6	
	comp=N,76nm,0.6s						
AGUA	**GUANDACOL**	**3.26**	**26**	*e*P	**Pn**	**21 56 07.2**	**+0.9**
AGUA				*e*S	**Sn**	**21 56 44.9**	**+0.4**
APLL	**PUNTA DE LOS L**	**3.69**	**57**	*e*P	**Pn**	**21 56 11.5**	**-0.4**
APLL				*e*S	**Sn**	**21 56 52.2**	**-2.3**
APLL				IAML		21 56 55.8	
	comp=Z,8.7nm,0.4s						
ACLC	**CERRO LA CRUZ**	**4.05**	**43**	*e*P	**Pn**	**21 56 16.7**	**-0.3**
ACLC				*e*S	**Sn**	**21 57 03.1**	**-0.5**

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*ISCJB **16** 22:04:05.9±0.6, 17°.95N±0°.05×147°.6E±0°.1, h53km, mb3.9/17, Error ellipse: s-maj=16.3km s-min=7.2km az=12.6*
*NEIC **16** 22:04:07.7±1.8, 17°.94N×147°.72E, h54km±17km, mb4.4/6, Error ellipse: s-maj=16.4km s-min=7.8km az=86.0*
*IDC **16** 22:04:07.6±3.9, 17°.93N×147°.67E, h53km±37km, mb3.4/12, mb1 3.7/13, mb1mx3.5/65, mbtmp3.7/13, ML4.4/1, MS2.9/1, Ms1 2.9/1, ms1mx2.5/42, Error ellipse: s-maj=26.2km s-min=15.8km az=84.0*
ISC 16 22:04:07.6±0.7, 17°.95N±0°.08×147°.7E±0°.1, h53km, n23, σ0°68/24, mb3.9/17, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.10**	**212**	P	**Pn**	**22 05 22.5**	**+0.9**
	15nm,0.3s,baz=355,slow=1.1,SNR=18						
GUMO				S	**Sn**	**22 06 18.3**	**-0.9**
	35nm,0.3s,baz=20,slow=23,SNR=9.9						
GUMO				LR	LR	22 07 29.5	
	comp=Z,118nm,20.2s,baz=62,slow=40						
GUMO	**Guam**	**5.10**	**212**	*e*Pn	**Pn**	**22 05 21.7**	**+0.1**
GUMO				S	**Sn**	**22 06 18.3**	**-0.9**
MJAR	**Matsushiro Arr**	**20.32**	**338**	P	Pn	22 08 41.3	-0.4
	1.0nm,0.7s,baz=159,slow=12,SNR=4.3						
MAJO	**Matsushiro**	**20.32**	**338**	*e*P	**P**	**22 08 38.7**	**-0.6**
TATO	**Taipei**	**25.32**	**291**	P	**P**	**22 09 30.1**	**+0.6**
	25nm,1.3s						
KSRS	**Korea Array**	**26.04**	**322**	P	**P**	**22 09 35.4**	**-0.5**
	0.4nm,0.5s,baz=142,slow=10,SNR=4.3						
KSAR	**Wonju Array Be**	**26.06**	**322**	P	**P**	**22 09 35.4**	**-0.7**
CTAO	**Charters Tower**	**37.82**	**182**	P	**P**	**22 11 19.2**	**0.0**
	3.9nm,0.5s						
WRAB	**Tennant Creek**	**39.85**	**200**	*e*P	**P**	**22 11 36.2**	**+0.1**
	0.8nm,0.6s						
WRA	**Warramunga Arr**	**39.86**	**200**	P	**P**	**22 11 36.6**	**+0.3**
	2.3nm,0.7s,baz=24,slow=8.6,SNR=22						
ASAR	**Alice Springs**	**43.49**	**198**	P	**P**	**22 12 05.8**	**-0.1**
	0.7nm,0.9s,baz=12,slow=14,SNR=7.0						
YAK	**Yakutsk**	**45.82**	**348**	P	**P**	**22 12 24.1**	**+0.2**
	2.9nm,0.6s						
MBWA	**Marble Bar**	**47.54**	**216**	P	**P**	**22 12 38.4**	**+0.4**
	3.5nm,0.9s						
ZALV	**Zalesovo Beam**	**59.75**	**322**	P	**P**	**22 14 06.5**	**-0.4**
	0.2nm,0.3s,baz=99,slow=8.9,SNR=2.7						
MKAR	**Makanchi Array**	**60.33**	**314**	P	**P**	**22 14 12.4**	**+1.3**
	0.2nm,0.5s,baz=90,slow=7.8,SNR=3.1						
KURK	**Kurchatov**	**63.08**	**318**	*e*P	**P**	**22 14 29.3**	**-0.2**
	2.5nm,0.6s						
KURBB	**Kurchatov Arra**	**63.13**	**318**	P	**P**	**22 14 29.6**	**-0.1**
	1.2nm,0.9s,baz=92,slow=7.4,SNR=9.8						
ILAR	**Eielson Array**	**63.49**	**26**	P	**P**	**22 14 32.9**	**+0.9**
	0.2nm,0.7s,baz=268,slow=5.3,SNR=3.3						
BVAR	**Borovoye Array**	**68.25**	**321**	P	**P**	**22 15 02.5**	**-0.2**
	1.2nm,0.6s,baz=105,slow=9.7,SNR=7.3						
YKA	**Yellowknife Ar**	**77.77**	**28**	P	**P**	**22 15 58.4**	**-0.4**
	0.9nm,0.6s,baz=283,slow=5.6,SNR=3.2						
NVAR	**Mina Array Bea**	**82.12**	**52**	P	**P**	**22 16 22.9**	**-0.2**
	0.5nm,0.6s,baz=271,slow=5.3,SNR=5.1						
PDAR	**Pinedale Array**	**87.00**	**46**	P	**P**	**22 16 46.2**	**-1.5**
	0.2nm,0.4s,baz=318,slow=1.2,SNR=3.2						
LPAZ	**La Paz**	**145.77**	**93**	PKPbc	**PKPab**	**22 23 43.2**	**+0.3**
	1.2nm,0.6s,baz=308,slow=3.7,SNR=8.4						

IDC 16 22:06:33.4±6.8, 15°.39S×173°.72E, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.6/49, mbtmp3.7/3, MS3.6/2, Ms1 3.6/2, ms1mx3.0/55, Error ellipse: s-maj=313.8km s-min=35.9km az=143.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**9.57**	**225**	LR	LR	22 11 55.0	
	comp=Z,242nm,19.8s,baz=80,slow=34						
RAO	**Rao

comp=Z,3.0nm,0.2s
HEF eS Sn 22 11 42.0 -0.8
HEF Hetta 1.67 41 eP Pn 22 11 20.4 -0.4
HEF eS Sn 22 11 42.0 -0.8
KALU Kalix 1.71 140 ePG Pn 22 11 21.4 +0.2
KALU eSN Sg 22 11 44.9 -0.1
KALU Kalix 1.71 140 ePg Pn 22 11 21.4 +0.2
KALU eSn Sg 22 11 44.9 -0.2
TOF Tornio 1.83 126 ePG Pb 22 11 23.7 -0.8
TOF Tornio 1.83 126 ePg Pb 22 11 23.7 -0.8
TOF eSn Sb 22 11 47.8 -0.1
KIF Kilpisjarvi 1.83 1 eP Pb 22 11 23.9 -0.7
KIF eSg Sg 22 11 49.8 +0.8
comp=Z,3.9nm,0.2s
SGF Sodankyl 2.28 81 ePb Pb 22 11 30.8 -1.4
SGF eSg Sb 22 12 01.0 +0.1
MSF Maaselka 3.58 107 eSg Sg 22 12 42.2 -2.8
KU6 Riekki 3.85 103 eS Sn 22 12 37.5 +0.9
VAF Ylistaro 4.24 168 eSg Sg 22 13 02.9 -3.6

ATH ***16*** *22:11:26.4, 36°.43N×28°.89E, h40km±3km, ML2.5/2, Error ellipse: s-maj=6.7km s-min=1.3km az=182.0*
DDA ***16*** *22:11:26.5, 36°.45N×28°.86E, h7km, Ml3.2*
ISK ***16*** *22:11:26.1, 36°.45N×28°.89E, h23km, ML3.0/13*
ISCJB ***16*** *22:11:27.2±0.4, 36°.42N±0°.03×28°.89E±0°.03, h25km±4km, Error ellipse: s-maj=5.3km s-min=3.8km az=7.4*
CSEM ***16*** *22:11:27.0±0.2, 36°.43N×28°.90E, h22km±2km, ML3.0, Error ellipse: s-maj=5.1km s-min=3.4km az=7.0*

ISC 16 22:11:26.8±0.9, 36°.43N±0°.02×28°.88E±0°.02, h17km±7km, n70, σ0.75/102, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.27**	**37**	PG	**Pg**	**22 11 32.1**	**-0.6**
FETY				SG	**Sb**	**22 11 37.3**	**-0.1**
FETY	**Fethiye**	**0.27**	**37**	*e*Pg	**Pg**	**22 11 32.1**	**-0.6**
FETY				*e*Sg	**Sb**	**22 11 37.3**	**-0.1**
DALY	**Dalyan (Mu¨la**	**0.43**	**335**	PG	**Pg**	**22 11 35.5**	**-0.1**
DALY				SG	**Sg**	**22 11 41.8**	**+0.3**
DALY	**Dalyan (Mu¨la**	**0.43**	**335**	*i* P	**Pg**	**22 11 35.2**	**-0.4**
DALY				*i* S	**Sg**	**22 11 41.9**	**+0.3**
DALY	**Dalyan (Mu¨la**	**0.43**	**335**	P	**Pg**	**22 11 35.2**	**-0.4**
DALY	**Dalyan (Mu¨la**	**0.43**	**335**	*e*Pg	**Pg**	**22 11 35.5**	**-0.1**
DALY				S	**Sg**	**22 11 41.9**	**+0.3**
TURN	**Turunc**	**0.50**	**333**	PG	**Pn**	**22 11 38.8**	**-0.4**
TURN				SG	**Sn**	**22 11 48.2**	**+0.7**
TURN	**Turunc**	**0.50**	**333**	*i* P	**Pn**	**22 11 39.2**	**0.0**
TURN				*i* S	**Sn**	**22 11 48.1**	**+0.6**
TURN	**Turunc**	**0.50**	**333**	*e*Pg	**Pn**	**22 11 38.8**	**-0.4**
TURN	**Turunc**	**0.50**	**333**	P	**Pn**	**22 11 39.2**	**0.0**
TURN				S	**Sn**	**22 11 48.1**	**+0.6**
AKAS	**Kas**	**0.61**	**108**	PG	**Pb**	**22 11 38.8**	**-0.3**
AKAS				SG	**Sb**	**22 11 48.3**	**+0.8**
AKAS	**Kas**	**0.61**	**108**	*i* P	**Pg**	**22 11 38.6**	**-0.3**
AKAS				*i* S	**Sn**	**22 11 49.3**	**-1.1**
AKAS	**Kas**	**0.61**	**108**	*e*Pg	**Pb**	**22 11 38.8**	**-0.3**
AKAS				*e*Sg	**Sb**	**22 11 48.3**	**+0.8**
AKAS				S	**Sn**	**22 11 49.3**	**-1.1**
MRSB	**Marmaris-Mugla**	**0.62**	**298**	PG	**Pg**	**22 11 39.1**	**0.0**
MRSB	**Marmaris-Mugla**	**0.62**	**298**	*e*Pg	**Pg**	**22 11 39.1**	**0.0**
KSL	**Kastellorizon**	**0.63**	**116**	P	**Pn**	**22 11 39.9**	**-1.0**
KSL				S	**Sb**	**22 11 48.6**	**+0.8**
KSL				AML	AML	22 11 51.0	
	comp=E,2565μm,0.4s						
KSL				AML	AML	22 11 53.1	
	comp=N,846μm,0.2s						
KSL	**Kastellorizon**	**0.63**	**116**	P	**Pb**	**22 11 39.7**	**+0.4**
KSL				S	**Sb**	**22 11 48.8**	**+1.0**
ARG	**Arkhangelos**	**0.65**	**251**	PG	**Pb**	**22 11 39.7**	**+0.1**
ARG	**Arkhangelos**	**0.65**	**251**	P	**Pb**	**22 11 39.7**	**+0.1**
ARG				S	**Sn**	**22 11 50.3**	**-0.8**
ARG				AML	AML	22 11 50.4	
	comp=N,292μm,0.3s						
ARG				AML	AML	22 11 52.6	
	comp=E,667μm,0.4s						
ARG	**Arkhangelos**	**0.65**	**251**	*e*Pg	**Pb**	**22 11 39.7**	**+0.1**
ARG				S	**Sn**	**22 11 50.2**	**-0.8**
ELL	**Elmali**	**0.89**	**68**	PG	**Pb**	**22 11 43.3**	**-0.5**
ELL	**Elmali**	**0.89**	**68**	*e*Pg	**Pb**	**22 11 43.3**	**-0.5**
GOLH	**Golhisar**	**0.98**	**34**	*i* P	**Pb**	**22 11 44.2**	**-1.1**
GOLH				*i* S	**Sn**	**22 11 59.6**	**+0.3**
GOLH	**Golhisar**	**0.98**	**34**	P	**Pb**	**22 11 44.2**	**-1.1**
GOLH				S	**Sn**	**22 11 59.7**	**+0.3**
TAVA	**DENIZLI_Tavas**	**1.04**	**1**	*i* P	**Pb**	**22 11 46.0**	**-0.4**
TAVA				*i* S	**Sb**	**22 11 59.9**	**+0.1**
TAVA				*i* S	**Sn**	**22 12 00.9**	**0.0**
TAVA	**DENIZLI_Tavas**	**1.04**	**1**	P	**Pb**	**22 11 46.0**	**-0.4**
TAVA				S	**Sb**	**22 11 59.9**	**+0.1**
DATC	**Datca-Mugla**	**1.04**	**289**	PG	**Pb**	**22 11 45.3**	**-1.0**
DATC	**Datca-Mugla**	**1.04**	**289**	*e*Pg	**Pb**	**22 11 45.3**	**-1.0**
DAT	**Datca**	**1.09**	**287**	PN	**Pb**	**22 11 46.4**	**-0.9**
DAT	**Datca**	**1.09**	**287**	*i* P	**Pb**	**22 11 47.2**	**-0.1**
DAT				*i* S	**Sg**	**22 12 03.5**	**+1.1**
DAT	**Datca**	**1.09**	**287**	*e*Pn	**Pb**	**22 11 46.4**	**-0.9**
DAT	**Datca**	**1.09**	**287**	P	**Pb**	**22 11 47.2**	**-0.1**
DAT				S	**Sg**	**22 12 03.5**	**+1.1**
MLSB	**Milas**	**1.24**	**315**	PN	**Pn**	**22 11 48.8**	**-0.6**
MLSB	**Milas**	**1.24**	**315**	*e*Pn	**Pn**	**22 11 48.8**	**-0.6**
KORT	**Korkueli**	**1.31**	**64**	PN	**Pn**	**22 11 49.8**	**-0.7**
KORT	**Korkueli**	**1.31**	**64**	*i* P	**Pb**	**22 11 51.3**	**+0.2**
KORT				*i* S	**Sg**	**22 12 11.9**	**+2.6**
KORT	**Korkueli**	**1.31**	**64**	*e*Pn	**Pn**	**22 11 49.8**	**-0.7**
KORT	**Korkueli**	**1.31**	**64**	P	**Pb**	**22 11 51.3**	**+0.2**
BDRM	**Kayabasi**	**1.32**	**299**	*i* P	**Pn**	**22 11 50.6**	**+0.1**
BDRM				*i* S	**Sg**	**22 12 09.2**	**-0.3**
BDRM	**Kayabasi**	**1.32**	**299**	P	**Pn**	**22 11 50.6**	**+0.1**
BDRM				S	**Sg**	**22 12 09.2**	**-0.3**
DENT	**Denizli**	**1.33**	**5**	PN	**Pn**	**22 11 49.4**	**-1.3**
DENT	**Denizli**	**1.33**	**5**	*e*Pn	**Pn**	**22 11 49.4**	**-1.3**
BODT	**Bodrum**	**1.42**	**297**	PN	**Pn**	**22 11 50.5**	**-1.3**
BODT	**Bodrum**	**1.42**	**297**	*e*Pn	**Pn**	**22 11 50.5**	**-1.3**
AYDN	**Tasoluk**	**1.47**	**327**	*i* P	**Pb**	**22 11 53.4**	**-0.4**
AYDN				*i* S	**Sb**	**22 12 12.7**	**+0.5**
AYDN	**Tasoluk**	**1.47**	**327**	P	**Pb**	**22 11 53.4**	**-0.4**
AYDN				S	**Sb**	**22 12 12.7**	**+0.5**
ANTB	**Antalya**	**1.50**	**71**	PN	**Pn**	**22 11 52.5**	**-0.4**
ANTB	**Antalya**	**1.50**	**71**	*e*Pn	**Pn**	**22 11 52.5**	**-0.4**
BRDR	**BURDUR-Merkez**	**1.58**	**36**	*i* P	**Pn**	**22 11 54.2**	**+0.1**
BRDR				*i* S	**Sb**	**22 12 16.3**	**+0.9**
BRDR	**BURDUR-Merkez**	**1.58**	**36**	P	**Pn**	**22 11 54.2**	**+0.1**
BRDR				S	**Sb**	**22 12 16.3**	**+0.9**
KARP	**Karpathos**	**1.65**	**238**	PN	**Pn**	**22 11 54.9**	**-0.1**
KARP	**Karpathos**	**1.65**	**238**	P	**Pn**	**22 11 55.0**	**-0.1**
KARP	**Karpathos**	**1.65**	**238**	P	**Pn**	**22 11 54.8**	**-0.2**
AYDB	**Zeytinkoy-Aydi**	**1.71**	**333**	PN	**Pn**	**22 11 55.1**	**-0.9**
AYDB	**Zeytinkoy-Aydi**	**1.71**	**333**	*e*Pn	**Pn**	**22 11 55.1**	**-0.9**
GCAM	**G?zelcaml?**	**1.83**	**314**	PN	**Pn**	**22 11 57.1**	**-0.4**
GCAM	**G?zelcaml?**	**1.83**	**314**	*i* P	**Pn**	**22 11 57.8**	**+0.3**
GCAM				*i* S	**Sn**	**22 12 20.9**	**+0.6**
GCAM	**G?zelcaml?**	**1.83**	**314**	*e*Pn	**Pn**	**22 11 57.1**	**-0.4**
GCAM	**G?zelcaml?**	**1.83**	**314**	P	**Pn**	**22 11 57.8**	**+0.3**
GCAM				S	**Sn**	**22 12 20.9**	**+0.6**
SUTC	**Sutluce-Ispart**	**1.99**	**58**	PN	**Pn**	**22 11 59.4**	**-0.5**
SUTC	**Sutluce-Ispart**	**1.99**	**58**	*e*Pn	**Pn**	**22 11 59.4**	**-0.5**
MANT	**Manisa**	**2.08**	**353**	*i* P	**Pb**	**22 12 05.3**	**+1.1**
MANT	**Manisa**	**2.08**	**353**	P	**Pb**	**22 12 05.3**	**+1.1**
SMG	**Samos**	**2.08**	**309**	P	**Pn**	**22 12 00.6**	**-0.3**
SMG	**Samos**	**2.08**	**309**	P	**Pn**	**22 12 00.6**	**-0.3**
KULA	**Kula-Manisa**	**2.09**	**355**	PN	**Pn**	**22 11 59.1**	**-2.1**
KULA	**Kula-Manisa**	**2.09**	**355**	*e*Pn	**Pn**	**22 11 59.1**	**-2.1**
DGB	**¨zmir**	**2.28**	**316**	*i* P	**Pn**	**22 12 04.0**	**+0.4**
LAST	**Lasithi**	**3.04**	**247**	P	**Pn**	**22 12 13.4**	**-0.8**
LAST	**Lasithi**	**3.04**	**247**	P	**Pn**	**22 12 13.8**	**-0.4**

MOS ***16*** *22:18:46.8±0.9, 15°.61N×119°.71E, h37km, mb6.4/144, MS5.7/68, Error ellipse: s-maj=5.8km s-min=3.3km az=115.0*
MAN ***16*** *22:18:46.2, 15°.62N×119°.32E, h23km, mb6.3, ML5.3, MS6.0*
BJI ***16*** *22:18:46.4, 15°.62N×119°.63E, h28km, mb5.8/85, mB5.9/75, Ms6.0/97, Ms7 5.9/88*
GCMT ***16*** *22:18:47.5±0.1, 15°.66N×119°.48E, h28km, MW6.0/141, Moment Tensor Solution. s135,c293; s141,c441; Duration: 23 Moment tensor: Scale 10^18 Nm; Mrr0.89±.01; Mθθ-0.35±.01; Mφφ-0.53±.01; Mrθ0.18±.01; Mθφ0.21±.00; Mφr-0.66±.01; Best double couple: Mo1.03300×10^18 NP1:φs158.00000°, δ66.00000°, λ96.00000°. NP2:φs324.00000°, δ25.00000°, λ77.00000°. Principal axes: T 1.1510, Plg69.0000°, Azm80.0000°; N -0.2340, Plg6.0000°, Azm336.0000°; P -0.9160, Plg20.0000°, Azm244.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
NEIC ***16*** *22:18:47.5±0.1, 15°.59N×119°.56E, h28km, mb6.1/249, ME6.0, MS5.7/120, MW5.8, MW5.9, MW5.9 Error ellipse: s-maj=3.2km s-min=2.8km az=91.0, Moment Tensor Solution. s44 Moment tensor: Scale 10^17 Nm; Mrr5.78; Mθθ-1.02; Mφφ-4.76; Mrθ0.42; Mθφ1.72; Mφr-0.80; Best double couple: Mo5.70000×10^17 NP1:φs158.00000°, δ50.00000°, λ89.00000°. NP2:φs340.00000°, δ40.00000°, λ91.00000°. Principal axes: T 5.8500, Plg85.0000°, Azm57.0000°; N -0.3500, Plg1.0000°, Azm159.0000°; P -5.5000, Plg5.0000°, Azm249.0000°; Broadband fault plane solution: P waves. NP1:φs340.00000°, δ30.00000°, λ90.00000°. NP2:φs160.00000°, δ60.00000°, λ90.00000°. Principal axes: T Plg75.0000°, Azm70.0000°; N Plg0.0000°, Azm0.0000°; P Plg15.0000°, Azm250.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt [IV PIVS] at Bolinao, Bugallon, Candelaria, Dagupan City, Iba, Makati, Masinloc, Santa Cruz, Subic and Villasis; [III PIVS] in La Union and at Lubao, Pasay, Quezon City, San Fernando, San Francisco and Taguig; [II PIVS] at Bacoor and Plaridel; [I PIVS] at Tagaytay. Felt [IV] at Angeles and [III] at Manila. Felt widely in west-central Luzon.
ISCJB ***16*** *22:18:48.6±0.3, 15°.62N±0°.01×119°.61E±0°.02, h49km±2km, mb6.0/385, MS5.7/223 Error ellipse: s-maj=2.5km s-min=2.0km az=174.0*
NEIC ***16*** *22:18:48.0±0.0, 15°.57N×119°.61E, h30km, Moment Tensor Solution. s63 Moment tensor: Scale 10^17 Nm; Mrr8.27; Mθθ-3.28; Mφφ-4.99; Mrθ1.20; Mθφ1.24; Mφr-4.11; Best double couple: Mo8.50000×10^17 NP1:φs158.00000°, δ61.00000°, λ93.00000°. NP2:φs331.00000°, δ29.00000°, λ84.00000°. Principal axes: T 9.4900, Plg74.0000°, Azm76.0000°; N -2.6700, Plg2.0000°, Azm336.0000°; P -6.8200, Plg15.0000°, Azm245.0000°;*
IDC ***16*** *22:18:51.2±0.9, 15°.63N×119°.71E, h58km±8km, mb5.5/59, mb1 5.5/61, mb1mx5.5/72, mbtmp5.8/61, MS5.5/62, Ms1 5.5/62, ms1mx5.5/67 Error ellipse: s-maj=8.6km s-min=5.1km az=69.0*
NEIC ***16*** *22:19:04.2±0.0, 15°.88N×120°.09E, h25km, Moment Tensor Solution. s26 Moment tensor: Scale 10^17 Nm; Mrr9.02; Mθθ-2.73; Mφφ-6.30; Mrθ-3.21; Mθφ1.48; Mφr4.75; Best double couple: Mo9.80000×10^17 NP1:φs163.00000°, δ28.00000°, λ100.00000°. NP2:φs332.00000°, δ63.00000°, λ85.00000°. Principal axes: T 10.9000, Plg72.0000°, Azm231.0000°; N -2.3000, Plg4.0000°, Azm335.0000°; P -8.6000, Plg18.0000°, Azm66.0000°;*

ISC 16 22:18:49.3±0.3, 15°.54N±0°.02×119°.60E±0°.03, h45km±2km, h45km:pP-P, n1974, σ1.52/2154, mb6.0/402, MS5.7/229, 156C-34D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCZP	**Santa Cruz**	**0.38**	**52**	*e*P	**Pn**	**22 18 56.9**	**-1.9**
BOLP	**Bolinao**	**0.89**	**20**	*e*P	**Pn**	**22 19 03.2**	**-2.2**
PCPH	**Palayan**	**1.44**	**89⇓**	*e*P	**Pn**	**22 19 13.3**	**+0.4**
LUBP	**Lubang**	**1.90**	**161**	*e*P	**Pn**	**22 19 18.4**	**-0.9**
BALP	**Baler**	**1.91**	**84**	*e*P	**Pn**	**22 19 20.8**	**+1.4**
BALP				*e*S	**Sn**	**22 19 47.8**	**+5.5**
TGY	**Tagaytay City**	**1.93**	**138**	P	**Pn**	**22 19 22.1**	**+2.3**
	2μm,0.3s,baz=263,slow=2.6,SNR=91						
TGY				S	**Sn**	**22 19 46.4**	**+3.6**
	6μm,0.3s,baz=162,slow=10.0,SNR=8.4						
TGY				LR	LR	22 20 05.4	
	comp=Z,103μm,21.1s,baz=93,slow=38						
TGY	**Tagaytay City**	**1.93**	**138**	⇑*i* P	**Pn**	**22 19 23.5**	**+3.8**
TGY				*i* S	**Sn**	**22 19 46.9**	**+4.2**
ABRA	**Dolores**	**2.35**	**27**	*e*P	**Pn**	**22 19 25.6**	**+0.2**
ABRA				*e*S	**Sn**	**22 19 53.8**	**+0.8**
LQP	**Lukban**	**2.35**	**127**	*e*P	**Pn**	**22 19 28.2**	**+2.6**
CAUP	**Cauayan**	**2.55**	**57**	*e*P	**Pn**	**22 19 30.4**	**+2.3**
CAUP				*e*S	**Sn**	**22 20 06.3**	**+8.4**
APYP	**Conner**	**2.79**	**34**	*e*P	**Pn**	**22 19 31.6**	**+0.1**
APYP				*e*S	**Sn**	**22 20 06.9**	**+3.0**
BOAC	**Boac**	**3.00**	**133**	*e*P	**Pn**	**22 19 37.6**	**+3.2**
CVP	**Callao Caves**	**3.02**	**44**	*e*P	**Pn**	**22 19 36.8**	**+2.1**
BUSP	**Coron**	**3.56**	**171**	*e*P	**Pn**	**22 19 43.3**	**+1.1**
BUSP				*e*S	**Sn**	**22 20 19.4**	**-3.7**
AUQP	**San Andres**	**3.70**	**126**	*e*P	Pn	22 19 48.9	+4.8
OTRP	**Odiongan**	**3.94**	**143**	*e*P	**Pn**	**22 19 49.7**	**+2.4**
ENPP	**El Nido**	**4.31**	**182**	*e*P	**Pn**	**22 19 50.5**	**-2.0**
ENPP				*e*S	**Sn**	**22 20 37.8**	**-3.8**
PVCP	**Virac**	**4.81**	**113**	*e*P	**Pn**	**22 20 01.4**	**+2.1**
CUYO	**Cuyo Island**	**4.86**	**163**	*e*P	**Pn**	**22 20 00.9**	**+0.9**
CNP	**Catarman**	**5.76**	**121**	*e*P	**Pn**	**22 20 16.0**	**+3.6**
PPR	**Puerto Princes**	**5.79**	**189⇑**	*e*P	**Pn**	**22 20 12.7**	**-0.1**
PPR				*e*S	**Sn**	**22 21 11.7**	**-6.3**
LLP	**Lapu-Lapu**	**6.71**	**140⇓**	*e*P	**Pn**	**22 20 30.0**	**+4.6**
LLP				*e*S	**Sn**	**22 21 48.5**	**+7.8**
PLP	**Palo**	**6.80**	**129⇓**	*e*P	**Pn**	**22 20 30.9**	**+4.2**
BATP	**Bataraza**	**6.93**	**195**	*e*P	**Pn**	**22 20 25.9**	**-2.5**
BATP				*e*S	**Sn**	**22 21 40.0**	**-6.0**
TWG	**Pinlang**	**7.37**	**11**	*e*Pn	**Pn**	**22 20 34.1**	**-0.3**
MSLP	**Maasin**	**7.43**	**136**	*e*P	Pn	22 20 40.1	+4.9
TPUB	**Ta-pu**	**7.78**	**7**	*e*Pn	**Pn**	**22 20 39.7**	**-0.3**
YULB	**Yu-li**	**7.97**	**11**	*e*Pn	**Pn**	**22 20 41.3**	**-1.4**
SSLB	**Suanglung**	**8.30**	**9**	*e*Pn	**Pn**	**22 20 47.3**	**+0.1**
HKC	**Hong Kong Obse**	**8.46**	**323**	⇑P	**Pn**	**22 20 46.0**	**-3.4**
PAGZ	**Pagadian**	**8.49**	**154**	*e*P	**Pn**	**22 20 53.0**	**+3.2**
CGP	**Cagayan de Oro**	**8.62**	**144**	⇓*e*P	**Pn**	**22 20 53.8**	**+2.1**
MCO	**Taipa Grande**	**8.69**	**320**	P	**Pn**	**22 20 50.0**	**-2.6**
BUTP	**Butuan**	**8.79**	**137**	*e*P	**Pn**	**22 20 58.3**	**+4.4**
NACB	**Ninganchiao**	**8.79**	**12**	*e*Pn	**Pn**	**22 20 54.2**	**+0.4**
YHNB	**Yeheng**	**9.23**	**10**	*e*Pn	**Pn**	**22 21 02.1**	**+2.1**
BUKP	**Musuan**	**9.30**	**144**	*e*P	Pn	22 21 06.3	+5.3
QZH	**Quanzhou**	**9.40**	**354**	⇓*i*P	**Pn**	**22 21 02.3**	**+0.1**
QZH				S	**Sn**	**22 22 48.8**	**+2.2**
QZH				pmax	pmax		
	comp=Z,150nm,0.7s						
QZH				pmax	pmax		
	comp=Z,3μm,3.3s						
QZH				LR	LR		
	comp=N,34μm,18.0s						
QZH				LR	LR		
	comp=E,26μm,18.0s						
QZH				LR	LR		
	comp=Z,48μm,18.5s						
YOJ	**Yonaguni jima**	**9.43**	**19**	*e*Pn	**Pn**	**22 21 03.5**	**+0.8**
YOJ	**Yonaguni jima**	**9.43**	**19**	*e*P	**Pn**	**22 21 03.5**	**+0.8**
GZH	**Guangzhou**	**9.55**	**323**	P	**Pn**	**22 21 04.8**	**+0.5**
GZH				S	**Sn**	**22 22 49.8**	**-0.5**
GZH				LR	LR		
	comp=N,56μm,12.4s						
GZH				LR	LR		
	comp=E,63μm,12.2s						
TATO	**Taipei**	**9.55**	**10**	*e*Pn	**Pn**	**22 21 05.0**	**+0.7**
QIZ	**Qiongzhong**	**9.95**	**292**	P	**Pn**	**22 21 08.3**	**-1.5**
QIZ				S	**Sn**	**22 22 57.6**	**-2.5**
QIZ				pmax	pmax		
	comp=Z,120nm,1.6s						
QIZ				LR	LR		
	comp=N,26μm,16.7s						
QIZ				LR	LR		
	comp=E,31μm,18.6s						
QIZ				LR	LR		
	comp=Z,47μm,21.1s						
QIZ	**Qiongzhong**	**9.95**	**292**	*e*Pn	**Pn**	**22 21 06.8**	**-3.0**
	113nm,0.8s						
KKM	**Kota Kinabalu**	**10.01**	**200**	*e*Pn	**Pn**	**22 21 10.3**	**-0.4**
DAV	**Davao City (W)**	**10.26**	**145**	P	Pn	22 21 18.9	+4.9
	23nm,0.3s,baz=304,slow=12,SNR=3.6						
DAV				LR	LR	22 26 03.3	
	comp=Z,60μm,19.3s,baz=313,slow=42						
DAV	**Davao City (W)**	**10.26**	**145**	⇑*i*P	Pn	22 21 23.2	+9.2
MYLDM	**Lahad Datu**	**10.36**	**186**	*e*Pn	**Pn**	**22 21 18.5**	**+3.2**
MATI	**Mati**	**10.75**	**142**	*e*P	**Pn**	**22 21 24.0**	**+3.3**
SGSI	**Sangihe**	**13.15**	**153**	P	**Pn**	**22 21 55.4**	**+1.9**
JOW	**Kunigami**	**13.83**	**34**	P	**Pn**	**22 22 02.2**	**-0.6**
	2.5nm,0.3s,baz=227,slow=6.8,SNR=15						
JOW				LR	LR	22 27 05.4	
	comp=Z,30μm,21.4s,baz=223,slow=36						
JOW	**Kunigami**	**13.83**	**34**	*e*Pn	**Pn**	**22 22 02.7**	**-0.2**
SBUM	**Sibu**	**14.91**	**210**	*e*Pn	**Pn**	**22 22 17.7**	**+0.4**
MPSI	**Mapaga**	**15.11**	**179**	P	**Pn**	**22 22 21.7**	**+1.8**
MRSI	**Marisa**	**15.15**	**171**	P	**Pn**	**22 22 22.5**	**+2.1**
KMSI	**Cibinong**	**15.49**	**163**	P	**P**	**22 22 27.0**	**-1.6**
SSE	**Sheshan**	**15.55**	**5**	P	**Pn**	**22 22 26.5**	**+1.0**
SSE				S	**Sn**	**22 25 18.3**	**+1.5**
SSE				pmax	pmax		
	comp=Z,2μm,4.6s						
SSE				LR	LR		
	comp=N,4μm,19.2s						
SSE				LR	LR		
	comp=E,8μm,19.4s						
WHN	**Wuhan**	**15.69**	**343**	⇓P	**Pn**	**22 22 28.6**	**+1.3**
WHN				LR	LR		
	comp=N,86μm,18.7s						
WHN				LR	LR		
	comp=E,20μm,10.4s						
WHN				LR	LR		
	comp=Z,77μm,17.8s						
NONG	**Nongkai**	**15.96**	**281**	P	**P**	**22 22 33.0**	**-0.8**
	741nm,1.7s,14μm						
SMKI	**Samarinda**	**16.06**	**189**	P	**P**	**22 22 35.9**	**+0.9**
GYA	**Guiyang**	**16.23**	**314**	⇑*i*P	**P**	**22 22 35.8**	**-1.1**
GYA				pP	pP	22 22 42.4	-5.1
GYA				PP	**PnPn**	**22 22 48.0**	**+4.0**
GYA				S	**Sn**	**22 25 33.9**	**+0.3**
GYA				sS	S	22 25 46.6	+1.8
GYA				SS	**SnSn**	**22 25 53.0**	**+5.9**
GYA				PcP	**PcP**	**22 27 28.9**	**+1.8**
GYA				pmax	pmax		
	comp=Z,80nm,1.0s						
GYA				pmax	pmax		
	comp=Z,4μm,13.6s						
GYA				LR	LR		
	comp=N,28μm,17.9s						
GYA				LR	LR		
	comp=E,20μm,16.8s						
GYA				LR	LR		
	comp=Z,30μm,15.8s						
PCI	**Palu**	**16.34**	**179**	P	**P**	**22 22 38.1**	**0.0**
	500nm,1.0s,10μm						
PCI	**Palu**	**16.34**	**179**	P	**P**	**22 22 37.6**	**-0.5**
PCI				pmax	pmax		
	comp=Z,499nm,1.0s						
NJ2	**Nanjing**	**16.45**	**358**	*e*P	**Pn**	**22 22 37.3**	**+0.3**
NJ2				pP	**pP**	**22 22 48.3**	**-1.4**
NJ2				sP	**sP**	**22 22 52.4**	**-3.1**
NJ2				S	**Sn**	**22 25 39.8**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,370nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,7μm,3.8s						
NJ2				LR	LR		
	comp=Z,24μm,15.7s						
NJ2				LR	LR		
	comp=Z,16μm,16.3s						
NJ2				LR	LR		
	comp=Z,28μm,17.4s						
APSI	**Ampana**	**16.47**	**173**	P	**P**	**22 22 40.1**	**+0.6**
TNTI	**Ternate**	**16.56**	**152**	*e*Pn	**P**	**22 22 39.6**	**-0.9**
	comp=Z,579nm,1.5s						
KSM	**Kuching**	**16.72**	**214**	*e*Pn	**P**	**22 22 42.0**	**-0.3**
	comp=Z,955nm,0.8s						
LUWI	**Luwuk**	**16.77**	**169**	P	**P**	**22 22 43.1**	**+0.3**
LUWI	**Luwuk**	**16.77**	**169**	*e*Pn	**P**	**22 22 43.7**	**+0.8**
	comp=Z,2μm,1.0s						
BKB	**Balikpapan**	**16.91**	**189**	P	**P**	**22 22 44.5**	**+0.2**
CHBT	**CHBT**	**16.98**	**263**	P	**P**	**22 22 48.0**	**+2.9**
	comp=Z,360nm,1.4s,comp=Z,160μm						
MTKI	**Muara Teweh, K**	**17.03**	**196**	P	**P**	**22 22 46.1**	**+0.4**
STKI	**Sintang**	**17.35**	**208**	P	**P**	**22 22 50.5**	**+1.3**
ENH	**Enshi**	**17.36**	**329**	*e*Pn	**Pn**	**22 22 48.4**	**+0.1**
	comp=Z,294nm,0.9s						
LBMI	**Labuha**	**17.87**	**153**	P	**Pn**	**22 22 54.2**	**-0.6**
PBKT	**Sadao Pong**	**17.94**	**276**	*e*Pn	**Pn**	**22 22 54.6**	**-0.9**
NANT	**Nan**	**18.35**	**283**	P	**Pn**	**22 23 01.4**	**+0.8**
	comp=Z,58nm,1.0s,comp=Z,668nm						
KMI	**Kunming**	**18.45**	**304**	P	**Pn**	**22 23 05.0**	**+3.0**
KMI				pP	pP	22 23 10.8	-1.4
KMI				sP	sP	22 23 15.3	-2.6
KMI				PP	**PnPn**	**22 23 18.6**	**+4.1**
KMI				S	**Sn**	**22 26 26.3**	**-1.1**
KMI				sS	sS	22 26 38.9	-8.2
KMI				SS	**SnSn**	**22 26 49.3**	**+7.7**
KMI				pmax	pmax		
	comp=Z,58nm,1.1s						
KMI				pmax	pmax		
	comp=Z,4μm,4.7s						
KMI				LR	LR		
	comp=Z,21μm,16.5s						
KMI				LR	LR		
	comp=Z,19μm,17.1s						
KMI				LR	LR		
	comp=Z,27μm,16.5s						
TTSI	**Tana Toraja**	**18.47**	**179**	P	**Pn**	**22 23 04.4**	**+2.4**
PHIT	**Phitsanulok**	**18.48**	**278**	P	**Pn**	**22 23 04.0**	**+1.7**
	comp=Z,165nm,1.0s,comp=Z,1μm						
SANI	**Sanana**	**18.59**	**160**	P	**P**	**22 22 59.6**	**-3.2**
SPSI	**Sidrap Palu**	**19.38**	**180**	P	**Pn**	**22 23 14.1**	**+1.1**
**

XAN			LR	LR		
	comp=Z,26μm,13.3s					
XAN			LR	LR		
	comp=Z,44μm,15.7s					
TPRI	**Tanjung Pinang**	**20.80 227**	P	Pn	22 23 29.0	-0.8
AAI	**Ambon**	**20.91 155**	P	**P**	**22 23 28.4**	**+0.2**
AAI	**Ambon**	**20.91 155**	P	**P**	**22 23 27.9**	**-0.3**
AAI			pmax	pmax		
	comp=Z,341nm,1.3s					
MSAI	**Masohi**	**20.91 153**	P	**P**	**22 23 28.9**	**+0.7**
KULM	**Kulim**	**21.22 243**	*e*P	**P**	**22 23 33.7**	**+2.1**
	comp=Z,831nm,1.4s					
KULM			LR	LR		
	comp=Z,22μm,18.0s					
IPM	**Ipoh**	**21.32 241**	*e*P	**P**	**22 23 34.0**	**+1.4**
	comp=Z,1μm,1.9s					
IPM			LR	LR		
	comp=Z,24μm,19.0s					
SURT	**Suratani**	**21.35 255**	P	**P**	**22 23 35.6**	**+2.6**
	comp=Z,0.4nm,1.8s,comp=Z,7.6nm					
TJN	**Taejon**	**21.87 17***c i*P		**P**	**22 23 36.7**	**-1.6**
PPBI	**Pangkal Pinang**	**22.07 218**	P	**P**	**22 23 42.3**	**+1.7**
PKDT	**Phuket**	**22.16 252**	P	**P**	**22 23 45.9**	**+4.3**
	comp=Z,129nm,2.7s,comp=Z,3μm					
FAKI	**Fak Fak**	**22.20 145**	P	**P**	**22 23 41.2**	**-0.9**
FAKI	**Fak Fak**	**22.20 145**	*e*P	**P**	**22 23 41.7**	**-0.4**
	comp=Z,286nm,0.8s					
RKPI	**Ransiki, Papua**	**22.24 138**	P	**P**	**22 23 43.1**	**+0.6**
BNDI	**Bandanaira**	**22.39 152**	P	**P**	**22 23 45.9**	**+1.8**
INCN	**Inchon**	**22.73 15**	*e*P	**P**	**22 23 46.8**	**-0.7**
	comp=Z,2μm,1.8s					
INCN			LR	LR		
	comp=Z,15μm,20.0s					
INCN	**Inchon**	**22.73 15**	P	**P**	**22 23 47.4**	**-0.1**
	SNR=70					
TIY	**Taiyuan**	**22.98 345**	⇑P	**P**	**22 23 50.3**	**+0.1**
TIY			S	**S**	**22 27 55.3**	**-2.0**
TIY			pmax	pmax		
	comp=Z,480nm,1.1s					
TIY			pmax	pmax		
	comp=Z,7μm,5.6s					
TIY			LR	LR		
	comp=Z,15μm,12.0s					
TIY			LR	LR		
	comp=Z,7μm,9.7s					
TIY			LR	LR		
	comp=Z,18μm,17.6s					
KS15	**Wonju Array Si**	**23.02 17**	*e*P	**P**	**22 23 49.5**	**-0.9**
KSAR	**Wonju Array Be**	**23.02 17**	P	**P**	**22 23 49.1**	**-1.3**
KSAR			ScP	**ScP**	**22 31 14.1**	**+0.8**
KSAR			PKiKP	**PKiKP**	**22 35 23.1**	**-0.4**
KSAR	**Wonju Array Be**	**23.02 17**	P	**P**	**22 23 49.2**	**-1.3**
KSRS	**Korea Array**	**23.04 17**	P	**P**	**22 23 49.1**	**-1.5**
	comp=Z,102nm,0.9s,baz=199,slow=10,SNR=139					
KSRS			ScP	**ScP**	**22 31 14.1**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=191,slow=3.5,SNR=2.9					
KSRS			LR	LR	22 34 13.3	
	comp=Z,20μm,18.8s,baz=188,slow=40					
KSRS			PKiKP	**PKiKP**	**22 35 23.1**	**-0.4**
	comp=Z,2.5nm,0.9s,baz=252,slow=0.9,SNR=9.8					
KSRS			P3KPbc		22 57 22.8	
	comp=Z,3.1nm,0.8s,baz=3.8,slow=5.0,SNR=14					
KSRS	**Korea Array**	**23.04 17**	P	**P**	**22 23 49.2**	**-1.5**
KSRS			pmax	pmax		
	comp=Z,101nm,0.9s					
KSRS			MLR	MLR		
	comp=Z,20μm,18.8s					
KS01	**Wonju Array Si**	**23.05 17**	*e*P	**P**	**22 23 48.2**	**-2.6**
BAKI	**Biak**	**23.29 134**	P	**P**	**22 23 53.0**	**-0.4**
DL2	**Dalian**	**23.34 4**⇑*i*P		**P**	**22 23 52.9**	**-0.7**
DL2			PcP	**PcP**	**22 27 41.1**	**+1.5**
DL2			S	**S**	**22 28 04.9**	**+1.8**
DL2			PcS	**PcS**	**22 31 17.8**	**-1.0**
DL2			pmax	pmax		
	comp=Z,400nm,1.1s					
DL2			pmax	pmax		
	comp=Z,6μm,3.8s					
DL2			LR	LR		
	comp=Z,21μm,19.7s					
DL2			LR	LR		
	comp=Z,9μm,15.8s					
DL2			LR	LR		
	comp=Z,27μm,18.9s					
GRJI	**Gresik**	**23.40 198**	P	**P**	**22 23 56.6**	**+2.2**
PMBI	**Palembang**	**23.50 220**	P	**P**	**22 23 57.1**	**+1.7**
TBJI	**Tambak Boyo**	**23.51 200**	P	**P**	**22 23 58.3**	**+2.9**
KMPI	**Kaimana, Papua**	**23.64 143**	P	**P**	**22 23 56.4**	**-0.3**
BKNI	**Bangkinang**	**23.76 232**	P	**P**	**22 23 58.3**	**+0.4**
BKNI	**Bangkinang**	**23.76 232**	*e*P	**P**	**22 24 00.4**	**+2.5**
	comp=Z,1μm,1.4s					
BKNI			LR	LR		
	comp=Z,26μm,18.0s					
SRBI	**Singaraja**	**23.87 191**	P	**P**	**22 24 00.9**	**+2.1**
BLJI	**Banyuglugur**	**23.89 195**	P	**P**	**22 24 01.0**	**+2.0**
TSI	**Tuntungan**	**23.92 242**	P	**P**	**22 23 59.7**	**+0.4**
CBIJ	**Chichi jima**	**23.93 58**	*e*P	**P**	**22 23 56.4**	**-2.9**
	comp=Z,353nm,1.1s					
JCJ	**Chichijima**	**23.93 58**	P	**P**	**22 23 57.4**	**-2.0**
	comp=Z,127nm,0.7s,baz=180,slow=3.4					
JCJ			LR	LR	22 32 13.2	
	comp=Z,17μm,20.2s,baz=260,slow=34					
PSI	**Prapat**	**23.98 240**	P	**P**	**22 24 01.1**	**+1.1**
	comp=Z,73nm,0.8s,baz=0.4,slow=5.3,SNR=49					
PSI			PcP	**PcP**	**22 27 42.9**	**+1.4**
	comp=Z,92nm,1.1s,baz=360,slow=2.8,SNR=7.4					
PSI			ScP	**ScP**	**22 31 18.4**	**+1.9**
	comp=Z,18nm,1.0s,baz=0.5,slow=23,SNR=8.7					
PSI			LR	LR	22 33 16.0	
	comp=Z,10μm,18.4s,baz=89,slow=36					
PSI	**Prapat**	**23.98 240**	*e*P	**P**	**22 24 00.6**	**+0.5**
	comp=Z,392nm,1.1s					
PSI			PcP	**PcP**	**22 27 42.9**	**+1.4**
PSI			ScP	**ScP**	**22 31 18.4**	**+1.9**
NGJI	**Ngawi**	**24.15 200**	P	**P**	**22 24 02.9**	**+1.5**
MMRI	**Maumere**	**24.16 174**	P	**P**	**22 24 02.1**	**+0.6**
MMRI	**Maumere**	**24.16 174**	*e*P	**P**	**22 24 01.8**	**+0.3**
	comp=Z,5μm,1.8s					
SMRI	**Semarang**	**24.21 203**	P	**P**	**22 24 02.8**	**+0.8**
SMRI	**Semarang**	**24.21 203**	*e*P	**P**	**22 24 03.9**	**+1.9**
	comp=Z,1μm,1.6s					
TWSI	**Taliwang, Sumb**	**24.27 187**	P	**P**	**22 24 03.2**	**+0.7**
PLAI	**Plampang**	**24.28 184**	P	**P**	**22 24 03.9**	**+1.3**
GMJI	**Gumukmas**	**24.44 195**	P	**P**	**22 24 05.5**	**+1.5**
DNP	**Denpasar**	**24.45 191**	P	**P**	**22 24 06.6**	**+2.4**
JAGI	**Jajag, Banyuwa**	**24.46 193**	P	**P**	**22 24 04.7**	**+0.4**
JAGI	**Jajag, Banyuwa**	**24.46 193**	*e*P	**P**	**22 24 05.6**	**+1.3**
	comp=Z,724nm,1.4s					
JAGI			*e*PcP	**PcP**	**22 27 43.1**	**+0.7**
LHMI	**Lhok Sumawe**	**24.50 248**	P	**P**	**22 24 06.2**	**+1.6**
LHMI	**Lhok Sumawe**	**24.50 248**	*e*P	**P**	**22 24 04.9**	**+0.3**
	comp=Z,340nm,0.9s					
GUMO	**Guam**	**24.53 91**	P	**P**	**22 24 03.3**	**-1.6**
	comp=Z,121nm,0.9s,baz=338,slow=3.7,SNR=5.7					
GUMO			LR	LR	22 33 04.2	
	comp=Z,12μm,18.8s,baz=252,slow=35					
GUMO	**Guam**	**24.53 91**	*e*P	**P**	**22 24 04.2**	**-0.7**
	comp=Z,861nm,1.6s					
GUMO	**Guam**	**24.53 91**	*e*P	**P**	**22 24 04.2**	**-0.7**
GUMO			pmax	pmax		
	comp=Z,861nm,1.6s					
BJT	**Baijiatuau**	**24.57 354**	*e*P	**P**	**22 24 04.8**	**-0.2**
	comp=Z,674nm,1.0s					
BJT			LR	LR		
	comp=Z,15μm,20.0s					
BJT	**Baijiatuau**	**24.57 354**	*e*P	**P**	**22 24 04.8**	**-0.2**
BJT			pmax	pmax		
	comp=Z,674nm,1.0s					
BJT			MLR	MLR		
	comp=Z,15μm,20.0s					
KCSI	**Kotacane, Aceh**	**24.59 243**	P	**P**	**22 24 05.1**	**-0.4**
BJI	**Beijing**	**24.59 354**⇑*i*P		**P**	**22 24 04.9**	**-0.3**
BJI			sP	**pP**	**22 24 18.4**	**+1.3**
BJI			pmax	pmax		
	comp=Z,950nm,1.1s					
BJI			LR	LR		
	comp=Z,7μm,18.2s					
BJI			LR	LR		
	comp=Z,8μm,19.4s					
BJI			LR	LR		
	comp=Z,3μm,19.1s					
IGBI	**Denpasar**	**24.60 191**	P	**P**	**22 24 06.8**	**+1.3**
MNSI	**Mandailing Nat**	**24.60 235**	P	**P**	**22 24 05.7**	**+0.1**
WOJI	**Wonogiri, Jawa**	**24.77 201**	P	**P**	**22 24 10.0**	**+3.0**
LZH	**Lanzhou**	**24.83 328**	⇑P	**P**	**22 24 08.8**	**+1.1**
LZH			pP	pP	22 24 17.1	-2.4
LZH			sP	sP	22 24 22.0	-2.9
LZH			PP	**PnPn**	**22 24 47.5**	**+5.8**
LZH			S	**S**	**22 28 34.6**	**+7.1**
LZH			pmax	pmax		
	comp=Z,2μm,1.0s					
LZH			pmax	pmax		
	comp=Z,10μm,6.0s					
LZH			LR	LR		
	comp=Z,80μm,15.7s					
LZH			LR	LR		
	comp=Z,72μm,15.2s					
LZH			LR	LR		
	comp=Z,122μm,15.7s					
UGM	**Wanagama**	**24.98 202**	P	**P**	**22 24 11.5**	**+2.5**
UGM	**Wanagama**	**24.98 202**	*e*P	**P**	**22 24 08.6**	**-0.4**
	comp=Z,890nm,1.3s					
KLI	**Kotabumi**	**24.99 217**	P	**P**	**22 24 09.3**	**+0.3**
KLI	**Kotabumi**	**24.99 217**	P	**P**	**22 24 12.8**	**+3.8**
KLI			pmax	pmax		
	comp=Z,284nm,0.9s					
PDSI	**Padang**	**25.00 231**	P	**P**	**22 24 11.2**	**+1.9**
PCJI	**Pacitan**	**25.02 200**	P	**P**	**22 24 10.0**	**+0.7**
WBSI	**Waikabubak, Su**	**25.02 180**	P	**P**	**22 24 08.4**	**-1.0**
WSI	**Waingapu**	**25.06 178**	P	**P**	**22 24 07.4**	**-2.2**
	comp=Z,1μm,0.8s,comp=Z,17μm					
KPJI	**Karang Pucung**	**25.07 206**	P	**P**	**22 24 12.4**	**+2.7**
KRJI	**Kerinci**	**25.08 227**	P	**P**	**22 24 12.6**	**+2.6**
MDSI	**Maura Dua**	**25.09 219**	P	**P**	**22 24 10.4**	**+0.5**
TNG	**Tangerang**	**25.10 212**	P	**P**	**22 24 12.3**	**+2.2**
TNG			P	**P**	**22 24 12.4**	**+2.3**
INU	**Inuyama**	**25.15 35**	*e*P	**P**	**22 24 08.8**	**-1.5**
BLSI	**Bandar Lampung**	**25.18 215**	P	**P**	**22 24 11.7**	**+0.9**
LEM	**Lembang**	**25.20 209**	P	**P**	**22 24 13.8**	**+2.7**
	comp=Z,115nm,0.8s,baz=106,slow=21,SNR=21					
LEM			LR	LR	22 36 05.3	
	comp=Z,7μm,18.1s,baz=39,slow=41					
TPTI		**25.23 243**	P	**P**	**22 24 08.6**	**-2.6**
MASI	**Maura Aman, Be**	**25.30 224**	P	**P**	**22 24 13.2**	**+1.3**
JHJ	**Hachijo jima 2**	**25.30 43**	P	**P**	**22 24 11.1**	**-0.7**
	comp=Z,880nm,0.8s,baz=233,slow=9.0,SNR=20					
JHJ			LR	LR	22 32 24.0	
	comp=Z,13μm,21.8s,baz=258,slow=32					
JHJ2	**Mitsune**	**25.32 43**	*e*P	**P**	**22 24 11.5**	**-0.4**
	comp=Z,1μm,1.0s					
SBJI	**Serang**	**25.32 213**	P	**P**	**22 24 13.7**	**+1.6**
DBJI	**Dramaga**	**25.38 211**	P	**P**	**22 24 15.3**	**+2.7**
MLSI	**Meulaboh, Aceh**	**25.42 246**	P	**P**	**22 24 13.8**	**+0.8**
SOEI	**Soe**	**25.55 169**	P	**P**	**22 24 13.2**	**-1.1**
SOEI	**Soe**	**25.55 169**	*e*P	**P**	**22 24 13.4**	**-0.9**
	comp=Z,764nm,0.8s					
LWLI	**Liwa**	**25.58 218**	P	**P**	**22 24 16.2**	**+1.7**
BASI	**Baing, Sumba**	**25.61 178**	P	**P**	**22 24 14.5**	**-0.2**
CMJI	**Cimerak**	**25.68 206**	P	**P**	**22 24 16.2**	**+0.9**
MOKO	**MOKOCHONG**	**25.72 299**	*e*P	**P**	**22 24 15.4**	**-0.4**
MOKO			IAmb	IAmb	22 24 18.0	
	comp=Z,196nm,1.1s					
KASI	**Kota Agung**	**25.73 217**	P	**P**	**22 24 16.8**	**+1.0**
CISI	**Cisompet, Garu**	**25.75 208**	P	**P**	**22 24 17.9**	**+1.9**
CISI	**Cisompet, Garu**	**25.75 208**	*e*P	**P**	**22 24 16.7**	**+0.6**
	comp=Z,1μm,1.6s					
CISI			*e*PcP	**PcP**	**22 27 46.4**	**+1.1**
SKJI	**Sukabumi**	**25.86 211**	P	**P**	**22 24 18.8**	**+1.8**
BSI	**Banda Aceh**	**25.87 250**	P	**P**	**22 24 19.2**	**+2.1**
BATI	**Baumata**	**25.90 171**	P	**P**	**22 24 17.7**	**+0.4**
	comp=Z,934nm,0.7s,baz=309,slow=0.8,SNR=113					
BATI			PcP	**PcP**	**22 27 47.9**	**+2.3**
	comp=Z,229nm,0.7s,baz=273,slow=1.4,SNR=8.7					
BATI			LR	LR	22 34 55.7	
	comp=Z,6μm,21.4s,baz=331,slow=37					
BATI	**Baumata**	**25.90 171**	P	**P**	**22 24 17.0**	**-0.3**
GSI	**Gunungsitoli**	**25.93 239**	P	**P**	**22 24 17.4**	**-0.3**
GSI	**Gunungsitoli**	**25.93 239**	*e*P	**P**	**22 24 17.0**	**-0.7**
	comp=Z,178nm,0.8s					
GSI			*e*PcP	**PcP**	**22 27 47.7**	**+1.9**
CGJI	**Cibinong**	**25.97 213**	P	**P**	**22 24 19.8**	**+1.8**
JORH	**JORHAT**	**26.09 299**	*e*P	**P**	**22 24 17.7**	**-1.3**
SAUI	**Saumlaki**	**26.09 153**	*e*P	**P**	**22 24 19.5**	**+0.4**
	comp=Z,2μm,1.6s					
HHC	**Hu-ho-hao-te**	**26.17 346**	*e*P	**P**	**22 24 18.8**	**-0.8**
HHC			pP	pP	22 24 27.9	-3.6
HHC			sP	sP	22 24 32.1	-4.8
HHC			S	**S**	**22 28 46.3**	**-2.2**
HHC			sS	sS	22 29 02.0	-6.5
HHC			pmax	pmax		
	comp=Z,4μm,6.3s					
HHC			LR	LR		
	comp=Z,20μm,17.5s					
HHC			LR	LR		
	comp=Z,14μm,19.9s					
HHC			LR	LR		
	comp=Z,19μm,16.2s					
SISI	**Saibi**	**26.31 232**	P	**P**	**22 24 21.6**	**+0.5**
BTO	**Baotou**	**26.33 343**	*e*P	**P**	**22 24 20.8**	**-0.3**
PBA	**Port Blair**	**26.38 265**	*e*P	P	22 24 21.2	-0.5
	comp=Z,241nm,1.0s					
SNY	**Shenyang**	**26.42 7**	⇑P	**P**	**22 24 20.5**	**-1.2**
SNY			pmax	pmax		
	comp=Z,180nm,1.3s					
SNY			pmax	pmax		
	comp=Z,3μm,6.1s					
SNY			LR	LR		
	comp=Z,21μm,19.2s					
SNY			LR	LR		
	comp=Z,29μm,17.7s					
PPSI	**Pulau Pagai**	**26.58 228**	P	**P**	**22 24 28.1**	**+4.6**
ITAN	**ITANAGAR**	**26.67 300**	*e*P	**P**	**22 24 24.5**	**+0.3**
MAJO	**Matsushiro**	**26.68 35**	*e*P	**P**	**22 24 22.2**	**-2.0**
	comp=Z,487nm,1.9s					
MAJO			LR	LR		
	comp=Z,7μm,20.0s					
MAJO	**Matsushiro**	**26.68 35***ce*P		**P**	**22 24 21.6**	**-2.6**
MAT	**Matsushiro**	**26.68 35**	P	**P**	**22 24 21.9**	**-2.3**
MAT			S	**S**	**22 28 52.7**	**-3.8**
MJAR	**Matsushiro Arr**	**26.68 35**	P	**P**	**22 24 22.2**	**-2.0**
	comp=Z,27nm,1.1s,baz=221,slow=9.9,SNR=47					
MJAR			PcP	**PcP**	**22 27 48.2**	**+1.1**
	comp=Z,20nm,1.0s,baz=220,slow=3.4,SNR=7.0					
MJAR			ScP	**ScP**	**22 31 28.0**	**+4.3**
	comp=Z,5.2nm,1.1s,baz=203,slow=5.4,SNR=4.1					
MJAR			LR	LR	22 34 11.3	
	comp=Z,7μm,20.9s,baz=220,slow=35					
MJAR			P3KPbc		22 57 07.8	
	comp=Z,3.0nm,1.1s,baz=26,slow=3.6,SNR=5.1					
MJB9	**Matsu-Tunnel**	**26.68 35**	*e*P	**P**	**22 24 22.0**	**-2.2**
	comp=Z,512nm,1.9s					
GENI	**Genyem**	**27.18 130**	P	**P**	**22 24 28.3**	**-0.6**
TEZP	**TEZPUR**	**27.27 298**	*e*P	**P**	**22 24 29.2**	**-0.4**
BRDH	**Bariadhala**	**27.33 289**	P	**P**	**22 24 31.3**	**+1.1**
	comp=Z,64nm,0.3s,baz=86,slow=9.3,SNR=13					
BRDH			PcP	**PcP**	**22 27 50.3**	**+1.5**
	comp=Z,77nm,0.3s,baz=77,slow=9.5,SNR=6.0					
BRDH			LR	LR	22 36 54.2	
	comp=Z,25μm,19.0s,baz=148,slow=40					
JAY	**Jayapura**	**27.53 129**	P	**P**	**22 24 29.8**	**-2.3**
	comp=Z,39nm,1.0s,baz=168,slow=1.6,SNR=5.5					
JAY			LR	LR	22 34 29.7	
	comp=Z,13μm,20.9s,baz=326,slow=34					
JAY	**Jayapura**	**27.53 129**	P	**P**	**22 24 30.2**	**-1.9**
SHL	**Shillong**	**27.75 296**	*e*P	**P**	**22 24 33.7**	**-0.5**
SHL			⇑*i*P	**P**	**22 24 34.0**	**-0.2**
SHL			IAmb	IAmb	22 24 35.2	
	comp=Z,386nm,0.4s					
SHL			*i* x	x	22 29 10.0	
SHL	**Shillong**	**27.75 296**	*e*P	**P**	**22 24 34.0**	**-0.2**
	comp=Z,350nm,0.8s					
SHL	**Shillong**	**27.75 296**	*e*P	**P**	**22 24 34.0**	**-0.2**
SHL			pmax	pmax		
	comp=Z,351nm,0.8s					
AGT	**Agartala**	**27.91 292**	*e*P	**P**	**22 24 36.6**	**+1.2**
AGT			IAmb	IAmb	22 24 38.6	
	comp=Z,336nm,0.5s					
GUWA	**GUWAHATI**	**28.09 297**	*e*P	**P**	**22 24 36.3**	**-0.7**
GUWA			IAmb	IAmb	22 24 38.6	
	comp=Z,225nm,1.3s					
CN2	**Changchun**	**28.60 9**	*e*P	**P**	**22 24 39.1**	**-2.2**
CN2			*e*S	**S**	**22 29 27.5**	**+0.9**
CN2			pmax	pmax		
	comp=Z,10.0nm,0.4s					
CN2			pmax	pmax		
	comp=Z,200nm,5.0s					
CN2			LR	LR		
	comp=Z,18μm,19.0s					
CN2			LR	LR		
	comp=Z,12μm,19.0s					
CN2			LR	LR		
	comp=Z,21μm,18.0s					
MSHR	**Mys Shultsa**	**28.71 18***ce*P		**P**	**22 24 41.8**	**-0.5**
TURI	**Tura**	**29.10 295** *e*P		**P**	**22 24 46.3**	**+0.3**
TURI			IAmb	IAmb	22 24 48.7	
	comp=Z,255nm,1.1s					
GTA	**Gaotai**	**29.42 328** ⇑P		**P**	**22 24 49.5**	**+0.7**
GTA			pP	pP	22 24 56.1	-4.7
GTA			sP	sP	22 25 01.5	-4.7
GTA			PcP	**PcP**	**22 27 55.5**	**+1.6**
GTA			S	**S**	**22 29 43.5**	**+3.6**
GTA			sS	sS	22 29 57.8	-2.2
GTA			PcS	**PcS**	**22 31 37.4**	**+0.3**
GTA			ScS	**ScS**	**22 35 28.8**	**+1.9**
GTA			pmax	pmax		
	comp=Z,200nm,1.7s					
GTA			pmax	pmax		
	comp=Z,2μm,4.8s					
GTA			LR	LR		
	comp=Z,28μm,16.5s					
GTA			LR	LR		
	comp=Z,27μm,16.8s					
GTA			LR	LR		
	comp=Z,54μm,15.9s					
LSA	**Lhasa**	**29.70 303**	P	**P**	**22 24 53.1**	**+1.3**
LSA			sP	**pP**	**22 25 04.1**	**+0.3**
LSA			S	**S**	**22 29 47.8**	**+2.6**
LSA			sS	sS	22 29 56.5	-8.7
LSA			pmax	pmax		
	comp=Z,28nm,1.0s					
LSA			pmax	pmax		
	comp=Z,970nm,5.3s					
LSA			LR	LR		
	comp=Z,4μm,17.2s					
LSA			LR	LR		
	comp=Z,3μm,19.4s					
LSA			LR	LR		
	comp=Z,14μm,18.8s					
LSA	**Lhasa**	**29.70 303** *e*P		**P**	**22 24 52.4**	**+0.6**
	comp=Z,230nm,1.3s					
LSA			LR	LR		
	comp=Z,14μm,20.0s					
LSA	**Lhasa**	**29.70 303**	P	**P**	**22 24 52.7**	**+0.9**
LSA	**Lhasa**	**29.70 303** *e*P		**P**	**22 24 52.4**	**+0.6**
LSA			pmax	pmax		
	comp=Z,230nm,1.3s					
LSA			MLR	MLR		
	comp=Z,14μm,20.0s					
MDJ	**Mudanjiang**	**30.19 14**	P	**P**	**22 24 51.4**	**-4.0**
MDJ			pP	pP	22 25 00.8	-6.5
MDJ			sP	sP	22 25 06.4	-6.3
MDJ			S	**S**	**22 29 51.6**	**+0.1**
MDJ			sS	sS	22 30 05.9	-5.7
MDJ			pmax	pmax		
	comp=Z,190nm,1.4s					
MDJ			pmax	pmax		
	comp=Z,2μm,4.6s					
MDJ			LR	LR		
	comp=Z,21μm,17.9s					
MDJ			LR	LR		
	comp=Z,10μm,17.5s					
MDJ			LR	LR		
	comp=Z,28μm,17.5s					
MDJ	**Mudanjiang**	**30.19 14** *e*P		**P**	**22 24 55.0**	**-0.3**
	comp=Z,229nm,1.3s					
MDJ			LR	LR		
	comp=Z,15μm,19.0s					
USRK	**Ussuriysk Ar.**	**30.44 18**	P	**P**	**22 24 57.3**	**-0.3**
	comp=Z,69nm,0.8s,baz=208,slow=8.6,SNR=144					
USRK			PcP	**PcP**	**22 27 56.8**	**+0.6**
	comp=Z,10nm,1.0s,baz=259,slow=1.9,SNR=4.2					
USRK			LR	LR	22 37 10.3	
	comp=Z,10μm,20.6s,baz=180,slow=36					
GTK	**Tadong**	**31.06 297** *e*P		**P**	**22 25 03.6**	**+0.2**
GTK			IAmb	IAmb	22 25 05.7	
	comp=Z,2μm,2.5s					
TAPN	**Taplejung**	**31.83 297** *e*P		**P**	**22 25 10.9**	**+0.5**
	comp=Z,81nm,0.6s					
ODAN	**Odare**	**31.98 296** *e*P		**P**	**22 25 12.0**	**+0.3**
	comp=Z,594nm,0.9s					
RAMN	**Ramite**	**32.69 296** *e*P		**P**	**22 25 18.6**	**+0.7**
	comp=Z,656nm,1.1s					
TEY	**Ternei**	**32.72 23** *e*P		**P**	**22 25 17.1**	**-0.5**
TEY			*e*		22 28 03.3	
TEY			pmax	pmax		
	comp=N,1μm,4.0s					
TEY			pmax	pmax		
	comp=Z,2μm,6.0s					
TEY			pmax	pmax		
	comp=N,388nm,1.8s					
TEY			pmax	pmax		
	comp=Z,437nm,2.0s					
TEY			MLR	MLR		
	comp=N,4μm,16.0s					
TEY			MLR	MLR		
	comp=E,3μm,16.0s					
TEY			MLR	MLR		
	comp=Z,4μm,16.0s					
BOK	**Bokaro**	**32.73 290** *e*P		**P**	**22 25 18.7**	**+0.7**
BOK			IAmb	IAmb	22 25 21.0	
	comp=Z,111nm,1.1s					
JIRN	**Jiri**	**33.22 297** *e*P		**P**	**22 25 23.2**	**+0.6**
	comp=Z,771nm,0.9s					
ERM	**Erimo**	**33.28 33** *e*P		**P**	**22 25 22.1**	**-0.5**
	comp=Z,74nm,1.0s					
ERM			LR	LR		
	comp=Z,13μm,22.0s					
ERM	**Erimo**	**33.28 33***de*P		**P**	**22 25 22.0**	**-0.5**
GUN	**Gumba**	**33.54 297** *e*P		**P**	**22 25 25.9**	**+0.4**
	comp=Z,1μm,1.1s					
HIA	**Hailar**	**33.63 0** *e*P		**P**	**22 25 23.0**	**-2.6**
	comp=Z,19nm,0.6s					
HIA			LR	LR		
	comp=Z,16μm,21.0s					
HIA	**Hailar**	**33.63 0***ce*P		**P**	**22 25 23.4**	**-2.2**
HIA			pmax	pmax		
	comp=Z,21nm,0.9s					
ULN	**Ulaanbaatar**	**33.86 345** *e*P		**P**	**22 25 26.6**	**-1.2**
	comp=Z,136nm,1.1s					
ULN			LR	LR		
	comp=Z,14μm,20.0s					
ULN	**Ulaanbaatar**	**33.86 345** P		**P**	**22 25 27.1**	**-0.6**
	SNR=141					
ULN	**Ulaanbaatar**	**33.86 345***ce*P		**P**	**22 25 27.3**	**-0.4**
ULN			pmax	pmax		
	comp=Z,233nm,1.7s					
PKIN	**Phulchoki**	**33.88 296** *e*P		**P**	**22 25 28.6**	**+0.3**
	comp=Z,206nm,0.8s					
SONM	**Songino Array**	**34.00 344** P		**P**	**22 25 28.7**	**-0.2**
	comp=Z,75nm,0.9s,baz=158,slow=9.4,SNR=215					
SONM			PcP	**PcP**	**22 28 06.5**	**+0.4**
	comp=Z,60nm,1.2s,baz=175,slow=4.3,SNR=9.1					
SONM			P3KPbc		22 56 35.7	
	comp=Z,4.4nm,1.0s,baz=335,slow=4.6,SNR=14					
SONA1	**Songino Array**	**34.01 344** *e*P		**P**	**22 25 27.9**	**-1.1**
KKN	**Kakani**	**34.03 297** *e*P		**P**	**22 25 29.4**	**-0.1**
	comp=Z,412nm,1.0s					
CHLP	**Challavanipeta**	**34.08 280** *e*P		**P**	**22 25 30.6**	**+0.8**
CHLP			IAmb	IAmb	22 25 32.7	
	comp=Z,97nm,1.1s					
CHLP			IVMs_BB	IVMs_BB	22 42 36.3	
	comp=Z,4μm,18.3s					
DMN	**Daman**	**34.14 296** *e*P		**P**	**22 25 30.4**	**-0.1**
	comp=Z,495nm,1.1s					
ASAJ	**Asahikawa**	**34.53 30** P		**P**	**22 25 32.7**	**-0.7**
	comp=Z,42nm,0.6s,baz=222,sl

COCO	**West Island**	**35.60 221**	*e*P		**P**	**22 25 44.3 +1.5**
	comp=Z,778nm,1.4s					
COCO				LR	LR	
	comp=Z,6μm,19.0s					
COCO	**West Island**	**35.60 221**	*e*P		**P**	**22 25 44.3 +1.5**
COCO				pmax	pmax	
	comp=Z,778nm,1.4s					
COCO				MLR	MLR	
	comp=Z,6μm,19.0s					
PYUN	**Piuthan**	**36.07 297**	*e*P		**P**	**22 25 47.2 +0.1**
	comp=Z,803nm,1.0s					
YUK	**Yuzh-Kuril'sk**	**36.11 33**	*e*P		P	22 25 36.4 -11
YUK			*e*S		S	22 31 12.3 -11
YUK			*e*SS		**SnSn**	**22 33 41.8 -10**
YUK				pmax	pmax	
	comp=Z,613nm,1.0s					
YUK				pmax	pmax	
	comp=N,184nm,0.7s					
YUK				pmax	pmax	
	comp=E,151nm,0.8s					
YUK				pmax	pmax	
	comp=Z,914nm,1.4s					
YUK				MLR	MLR	
	comp=N,3μm,19.0s					
YUK				MLR	MLR	
	comp=E,7μm,19.0s					
YUK				MLR	MLR	
	comp=Z,3μm,19.0s					
PVM	**Polavaram**	**36.44 278**	*e*P		**P**	**22 25 50.9 +0.8**
PVM				IAmb	IAmb	22 25 52.8
	comp=Z,62nm,0.9s					
PVM				IVMs_BB	IVMs_BB	22 41 28.7
	comp=Z,2μm,20.4s					
MBWA	**Marble Bar**	**36.47 180**	*e*P		**P**	**22 25 50.0 -0.2**
	comp=Z,503nm,0.9s					
MBWA				LR	LR	
	comp=Z,3μm,19.0s					
MBWA	**Marble Bar**	**36.47 180**	P		**P**	**22 25 50.9 +0.7**
	SNR=30					
CIT	**Chita**	**36.71 354**	*e*P		**P**	**22 25 51.7 -0.3**
CIT			*e*			22 26 05.3
CIT				pmax	pmax	
	comp=Z,385nm,1.2s					
YSS	**Yuzh-Sakhalins**	**36.76 27**	*e*P		**P**	**22 25 52.2 -0.3**
YSS			*e*pP		**P**	**22 25 52.6 +0.2**
YSS				LR	LR	
	comp=Z,5μm,20.0s					
YSS	**Yuzh-Sakhalins**	**36.76 27***c*	*i*P		**P**	**22 25 52.4 -0.1**
YSS			*e**PP		**pP**	**22 26 04.1 -0.5**
YSS			*e**SP		**sP**	**22 26 07.9 -2.0**
YSS			*e*			22 27 17.9
YSS			*e*PPP		PPP	22 27 32.5
YSS			*e*			22 28 14.7
YSS			*i* S		**S**	**22 31 31.0 -2.2**
YSS				pmax	pmax	
	comp=Z,150nm,1.0s					
YSS				pmax	pmax	
	comp=Z,2μm,5.3s					
YSS				pmax	pmax	
	comp=N,1μm,3.8s					
YSS				pmax	pmax	
	comp=E,1μm,3.0s					
YSS				smax	smax	
	comp=N,1μm,6.0s					
YSS				MLR	MLR	
	comp=E,5μm,16.0s					
PMG	**Port Moresby**	**36.87 130**	P		**P**	**22 25 53.1 -0.6**
	comp=E,187nm,0.9s,baz=332,slow=10,SNR=41					
PMG	**Port Moresby**	**36.87 130**	*e*P		**P**	**22 25 51.7 -2.1**
	comp=E,348nm,1.0s					
PMG				LR	LR	
	comp=Z,4μm,20.0s					
ZAK	**Zakamensk**	**37.18 343**	*e*P		**P**	**22 25 55.2 -0.9**
ZAK			*e*			22 28 16.2
ZAK				pmax	pmax	
	comp=Z,93nm,1.4s					
GRNR	**Gornyy**	**37.66 17**	*e*P		**P**	**22 26 01.2 +1.1**
GRNR			*e*			22 28 19.0
GRNR				pmax	pmax	
	comp=N,220nm,1.0s					
GRNR				pmax	pmax	
	comp=E,160nm,1.0s					
GRNR				pmax	pmax	
	comp=Z,380nm,1.0s					
KUR	**Kuril'sk**	**37.97 33***ce*P			**P**	**22 26 02.3 -0.4**
KUR			*i* S		**S**	**22 31 50.0 -1.6**
KUR				pmax	pmax	
	comp=Z,4μm,5.4s					
KUR				pmax	pmax	
	comp=E,164nm,1.3s					
KUR				pmax	pmax	
	comp=Z,962nm,1.3s					
KUR				pmax	pmax	
	comp=N,452nm,1.2s					
KUR				MLR	MLR	
	comp=Z,4μm,18.0s					
KUR				MLR	MLR	
	comp=E,1μm,14.0s					
KUR				MLR	MLR	
	comp=N,968nm,19.0s					
WRAB	**Tennant Creek**	**38.12 157**	*e*P		**P**	**22 26 02.8 -1.5**
	comp=N,311nm,0.8s					
WRAB				LR	LR	
	comp=Z,5μm,21.0s					
WRAB	**Tennant Creek**	**38.12 157***c*	*i*P		**P**	**22 26 02.7 -1.5**
WRAB				pmax	pmax	
	comp=Z,297nm,0.9s					
WRA	**Warramunga Arr**	**38.12 157**	P		**P**	**22 26 03.2 -1.1**
	comp=Z,239nm,0.8s,baz=338,slow=9.3,SNR=421					
WRA				PcP	**PcP**	**22 28 19.7 +1.0**
	comp=Z,41nm,0.7s,baz=339,slow=3.3,SNR=11					
WRA				S	**S**	**22 31 53.6 -0.9**
	comp=Z,50nm,1.1s,baz=332,slow=15,SNR=13					
WRA				ScP	**ScP**	**22 32 06.2 +3.3**
	comp=Z,23nm,1.0s,baz=326,slow=4.2,SNR=11					
WRA				LR	LR	22 45 18.4
	comp=Z,3μm,20.0s,baz=25,slow=42					
WRA				PKPPKP	P'P'df	22 58 26.8 -16
	comp=Z,2.8nm,1.2s,baz=85,slow=2.2,SNR=5.0					
WRA				PKP2ab		23 00 12.1
	comp=Z,3.4nm,1.2s,baz=163,slow=3.9,SNR=4.6					
WB2	**Warramunga Arr**	**38.13 157**	*e*P		**P**	**22 26 02.7 -1.6**
	comp=Z,350nm,0.8s					
WB2			*e*PcP		**PcP**	**22 28 20.1 +1.4**
TLY	**Talaya**	**38.24 344**	P		**P**	**22 26 04.7 -0.3**
	comp=Z,35nm,0.8s,baz=170,slow=6.9,SNR=5.0					
TLY				PcP	**PcP**	**22 28 19.4 +0.8**
	comp=Z,14nm,0.7s,baz=223,slow=8.9,SNR=4.0					
TLY				LR	LR	22 44 16.9
	comp=Z,11μm,18.1s,baz=134,slow=40					
TLY	**Talaya**	**38.24 344**	*e*P		**P**	**22 26 04.5 -0.6**
	comp=Z,132nm,1.1s					
TLY				PcP	**PcP**	**22 28 19.4 +0.8**
TLY	**Talaya**	**38.24 344**	P		**P**	**22 26 05.4 +0.4**
	SNR=90					
TLY	**Talaya**	**38.24 344***c*	*i*P		**P**	**22 26 05.0 0.0**
TLY			*e*			22 27 33.8
TLY			*e*PPP		PPP	22 27 51.4
TLY			*e*			22 28 18.9
TLY			*e*S		**S**	**22 32 00.5 +4.8**
TLY			*e*SSS		SSS	22 35 07.6
TLY				pmax	pmax	
	comp=Z,233nm,1.6s					
TLY				MLR	MLR	
	comp=Z,10μm,18.0s					
RPR	**Rampur**	**38.59 281**	*e*P		**P**	**22 26 08.7 +0.4**
RPR				IAmb	IAmb	22 26 10.5
	comp=Z,98nm,1.0s					
RPR				IVMs_BB	IVMs_BB	22 44 01.8
	comp=Z,2μm,15.8s					
IRK	**Irkutsk**	**38.59 345**⇑	*i*P		**P**	**22 26 06.4 -1.5**
IRK			*e*S		**S**	**22 31 54.5 -6.4**
IRK				pmax	pmax	
	comp=Z,430nm,1.7s					
SKHT	**Srikalahasti**	**38.60 273**	*e*P		**P**	**22 26 09.9 +1.4**
SKHT				IAmb	IAmb	22 26 11.7
	comp=Z,149nm,0.9s					
SKHT				IVMs_BB	IVMs_BB	22 40 13.0
	comp=Z,2μm,24.8s					
NJS	**Nagarjunasagar**	**38.70 277**	*e*P		**P**	**22 26 10.0 +0.7**
NJS				IAmb	IAmb	22 26 11.8
	comp=Z,127nm,1.0s					
NJS				IVMs_BB	IVMs_BB	22 45 48.0
	comp=Z,3μm,18.2s					
NGP	**Nagpur**	**38.82 284**	*e*P		**P**	**22 26 09.0 -1.2**
PATS	**Pohnpei**	**38.89 98**	*e*P		**P**	**22 26 10.7 -0.1**
	comp=Z,1μm,1.4s					
PALK	**Pallekele**	**38.95 262**	LR		LR	22 41 39.9
	comp=Z,7μm,18.6s,baz=198,slow=35					
PALK	**Pallekele**	**38.95 262**	*e*P		**P**	**22 26 11.9 +0.4**
	comp=Z,97nm,1.0s					
PALK	**Pallekele**	**38.95 262**	*i* P		**P**	**22 26 13.7 +2.2**
	SNR=6.9					
PALK	**Pallekele**	**38.95 262**	*i* P		**P**	**22 26 14.5 +3.0**
MOY	**Mondy**	**38.99 342**	*e*P		**P**	**22 26 11.1 -0.3**
MOY				pmax	pmax	
	comp=Z,394nm,1.7s					
WMQ	**Urumqi**	**39.10 323**	P		**P**	**22 26 13.9 +1.5**
WMQ			sP		pP	22 26 25.8 +1.2
WMQ			PP		**PP**	**22 27 42.3 -0.3**
WMQ			PcP		**PcP**	**22 28 23.5 +2.0**
WMQ			S		**S**	**22 32 11.0 +2.0**
WMQ				pmax	pmax	
	comp=Z,250nm,1.7s					
WMQ				pmax	pmax	
	comp=Z,4μm,3.8s					
WMQ			LR		LR	
	comp=Z,80μm,17.3s					
WMQ			LR		LR	
	comp=Z,73μm,17.3s					
WMQ			LR		LR	
	comp=Z,51μm,18.3s					
SRLM	**Srisailam**	**39.13 277**	*e*P		**P**	**22 26 13.2 +0.3**
SRLM			IAmb		IAmb	22 26 15.3
	comp=Z,146nm,1.3s					
SRLM			IVMs_BB		IVMs_BB	22 41 26.6
	comp=Z,3μm,22.6s					
HYB	**Hyderabad**	**39.36 279**	*i* P		**P**	**22 26 15.0 +0.2**
HYB			*e*			22 26 25.0
HYB			*e*PcP		**PcP**	**22 28 24.5 +1.8**
HYB	**Hyderabad**	**39.36 279**	*e*P		**P**	**22 26 13.6 -1.2**
HYBB	**Hyderabad (bro**	**39.36 279**	*e*P		**P**	**22 26 15.4 +0.6**
HYBB			IAmb		IAmb	22 26 17.1
	comp=Z,272nm,1.7s					
HYBB			IVMs_BB		IVMs_BB	22 44 02.3
	comp=Z,2μm,17.4s					
SRSP	**Sriramsagar**	**39.49 281**	*e*P		**P**	**22 26 16.0 +0.1**
SRSP			IAmb		IAmb	22 26 17.9
	comp=Z,84nm,1.0s					
SRSP			IVMs_BB		IVMs_BB	22 43 38.1
	comp=Z,2μm,19.0s					
TYV	**Tymovskoe**	**39.82 23**	*e*P		**P**	**22 26 18.3 +0.2**
TYV			*e*S		**S**	**22 32 21.7 +2.4**
TYV				pmax	pmax	
	comp=Z,3μm,5.6s					
TYV				pmax	pmax	
	comp=Z,106nm,1.3s					
TYV				smax	smax	
	comp=E,3μm,11.7s					
TYV				smax	smax	
	comp=E,16nm,1.4s					
BHPL	**Bhopal**	**40.40 288**	*e*P		**P**	**22 26 22.3 -1.1**
BHPL			IAmb		IAmb	22 26 24.4
	comp=Z,130nm,1.2s					
BHPL			IAMs_20		IAMs_20	22 44 04.3
	comp=Z,9μm,12.1s					
DDI	**Dehra Dun**	**40.75 299**	*e*P		**P**	**22 26 25.8 -0.5**
DDI			IAmb		IAmb	22 26 28.0
	comp=Z,107nm,0.7s					
URV	**Uravakonda**	**40.81 275**	*e*P		**P**	**22 26 27.0 +0.1**
URV			IAmb		IAmb	22 26 29.4
	comp=Z,162nm,1.3s					
URV			IVMs_BB		IVMs_BB	22 44 11.3
	comp=Z,2μm,16.9s					
NKL	**Nikolayevsk**	**41.04 19**	*i* P		**P**	**22 26 27.0 -1.1**
NKL			*e*			22 28 29.0
NKL				pmax	pmax	
	comp=N,1μm,6.0s					
NKL				pmax	pmax	
	comp=Z,3μm,6.0s					
NKL				pmax	pmax	
	comp=N,310nm,1.6s					
NKL				pmax	pmax	
	comp=E,580nm,1.6s					
NKL				pmax	pmax	
	comp=Z,1μm,1.6s					
HVS	**Khovu-Aksy**	**41.14 335***de*P			**P**	**22 26 29.4 +0.2**
HVS				pmax	pmax	
	comp=Z,144nm,1.1s					
KLRI	**Killari**	**41.18 280**	*e*P		**P**	**22 26 29.7 -0.2**
KLRI			IAmb		IAmb	22 26 32.0
	comp=Z,661nm,1.7s					
KLRI			IVMs_BB		IVMs_BB	22 45 25.8
	comp=Z,3μm,17.7s					
AS31	**Alice Springs**	**41.40 160**	*e*P		**P**	**22 26 30.6 -1.0**
	comp=Z,84nm,0.8s					
ASAR	**Alice Springs**	**41.40 160**	P		**P**	**22 26 30.6 -0.9**
	comp=Z,307nm,0.9s,baz=337,slow=6.3,SNR=753					
ASAR			PcP		**PcP**	**22 28 30.1 +1.0**
	comp=Z,75nm,0.9s,baz=345,slow=2.7,SNR=10					
ASAR			ScP		**ScP**	**22 32 19.3 +3.7**
	comp=Z,17nm,1.0s,baz=348,slow=4.4,SNR=8.5					
ASAR			S		**S**	**22 32 41.2 -2.2**
	comp=Z,41nm,1.2s,baz=347,slow=18,SNR=15					
ASAR			PKiKP		**PKiKP**	**22 35 35.8 -1.0**
	comp=Z,2.9nm,0.9s,baz=19,slow=1.4,SNR=5.0					
ASAR			LR		LR	22 47 23.7
	comp=Z,2μm,19.3s,baz=354,slow=41					
ASAR			PKPPKP		P'P'df	22 58 24.9 -14
	comp=Z,2.2nm,1.0s,baz=141,slow=1.7,SNR=5.0					
ASAR			P4KPbc			23 04 37.7
	comp=Z,2.1nm,0.9s,baz=344,slow=4.4,SNR=14					
CLNS	**Chul'man**	**41.41 4**	*e*P		**P**	**22 26 30.8 -0.5**
CLNS			*e**PP		**sP**	**22 26 47.6 -1.2**
CLNS			*e*			22 28 09.8
CLNS			*e*			22 28 22.0
CLNS			*e*PPP		PPP	22 28 41.4
CLNS			*e*S		**S**	**22 32 47.3 +4.3**
CLNS			*e*			22 36 19.9
CLNS				pmax	pmax	
	comp=Z,108nm,0.9s					
CLNS				pmax	pmax	
	comp=N,77nm,1.0s					
CLNS				pmax	pmax	
	comp=E,44nm,1.0s					
CLNS				smax	smax	
	comp=E,457nm,12.1s					
CLNS				smax	smax	
	comp=N,1μm,13.8s					
CLNS			MLR		MLR	
	comp=E,3μm,16.0s					
CLNS			MLR		MLR	
	comp=Z,11μm,17.0s					
CLNS			MLR		MLR	
	comp=N,9μm,17.0s					
AS01	**Alice Springs**	**41.41 160**	*e*P		**P**	**22 26 29.8 -1.9**
SMLA	**Simla**	**41.67 299**	*e*P		**P**	**22 26 32.8 -0.9**
SMLA			IAmb		IAmb	22 26 35.9
	comp=Z,1μm,2.1s					
BOD	**Bodaibo**	**42.41 356**	*e*P		**P**	**22 26 37.6 -1.7**
BOD			*e*			22 28 32.1
BOD				pmax	pmax	
	comp=Z,151nm,1.8s					
DHRM	**DHARAMSHALA**	**42.63 301**	*e*P		**P**	**22 26 40.0 -1.7**
DHRM			IAmb		IAmb	22 26 42.4
	comp=Z,334nm,1.1s					
ZSN	**Zaisan**	**42.85 325**⇑	*i*P		**P**	**22 26 43.5 +0.4**
	comp=Z,15nm,1.1s					
ZSN			*i* PP		**PP**	**22 28 23.6 +0.5**
ZSN			*e*S		**S**	**22 33 05.7 +1.2**
ZSN			*i* SS		**SS**	**22 36 18.6 +1.8**
ZSN			LR		LR	22 45 07.7
	comp=Z,2μm,14.6s					
POO	**Poona**	**43.76 281**⇓	*i*P		**P**	**22 26 50.0 -0.9**
	comp=Z,386nm,1.2s					
POO			*e*P		**P**	**22 26 51.1 +0.2**
POO			IAmb		IAmb	22 26 51.8
	comp=Z,986nm,2.3s					
POO			*i* PP		**PP**	**22 28 32.0 -1.4**
POO			IAMs_20		IAMs_20	22 47 41.0
	comp=Z,8μm,13.5s					
SHLS	**Shalkode**	**43.89 317**⇑	*i*P		**P**	**22 26 50.4 -1.3**
	comp=Z,143nm,0.9s					
SHLS			*i* PP		**PP**	**22 28 32.3 -2.2**
SHLS			*i* S		**S**	**22 33 17.9 -2.1**
SHLS			*e*SS		**SS**	**22 36 34.2 -3.3**
SHLS			LR		LR	22 46 10.1
	comp=Z,3μm,14.3s					
MK31	**Makanchi Array**	**43.93 323**	*e*PP		PP	22 28 38.0 +3.3
MKAR	**Makanchi Array**	**43.93 323**	P		**P**	**22 26 52.3 +0.5**
	comp=Z,121nm,0.8s,baz=126,slow=8.4,SNR=414					
MKAR			PcP		**PcP**	**22 28 38.2 +0.9**
	comp=Z,99nm,0.8s,baz=106,slow=4.3,SNR=19					
MKAR			LR		LR	22 45 16.4
	comp=Z,4μm,18.9s,baz=116,slow=36					
MKAR	**Makanchi Array**	**43.93 323**	*e*P		**P**	**22 26 52.2 +0.5**
	comp=Z,879nm,0.8s					
MKAR			PcP		**PcP**	**22 28 38.2 +0.9**
MKAR	**Makanchi Array**	**43.93 323**	*e*P		**P**	**22 26 52.3 +0.5**
MKAR						22 28 38.2
MKAR				pmax	pmax	
	comp=Z,879nm,0.8s					
PDGK	**Podgornoye**	**43.95 317**	P		**P**	**22 26 52.4 +0.2**
PDGK				pmax	pmax	
	comp=Z,305nm,1.0s					
CTA	**Charters Tower**	**44.04 143**	P		**P**	**22 26 52.9 -0.1**
	comp=Z,182nm,0.9s,baz=323,slow=13,SNR=121					
CTA			LR		LR	22 48 09.2
	comp=Z,5μm,18.6s,baz=332,slow=40					
CTAO	**Charters Tower**	**44.04 143**	*e*P		**P**	**22 26 53.0 0.0**
	comp=Z,218nm,0.9s					
CTAO			*e*S		**S**	**22 33 22.0 -0.4**
CTAO			LR		LR	
	comp=Z,8μm,19.0s					
CTAO	**Charters Tower**	**44.04 143**	*e*P		**P**	**22 26 53.0 0.0**
CTAO			*e*S		**S**	**22 33 22.0 -0.4**
CTAO				pmax	pmax	
	comp=Z,218nm,0.9s					
CTAO			MLR		MLR	
	comp=Z,8μm,19.0s					
MAKZ	**Makanchi**	**44.12 323**	*e*P		**P**	**22 26 53.7 +0.3**
	comp=Z,298nm,1.4s					
MAKZ	**Makanchi**	**44.12 323**	*e*P		**P**	**22 26 53.7 +0.3**
MAKZ				pmax	pmax	
	comp=Z,298nm,1.4s					
UZB	**Uzynbulak**	**44.17 317**⇑	*i*P		**P**	**22 26 54.9 +0.9**
	comp=Z,98nm,0.9s					
UZB			*i* PP		**PcP**	**22 28 38.4 +0.1**
UZB			*e*S		**S**	**22 33 26.1 +1.9**
UZB			LR		LR	22 46 43.8
	comp=Z,2μm,14.3s					
PRZ	**Przheval'sk**	**44.30 316**	*e*P		**P**	**22 26 55.9 +0.8**
	comp=Z,380nm,1.1s					
PRZ	**Przheval'sk**	**44.30 316**	*e*P		**P**	**22 26 55.9 +0.8**
PRZ				pmax	pmax	
	comp=Z,381nm,1.1s					
KPKS	**Kokpek**	**44.53 317**⇑	*i*P		**P**	**22 26 57.4 +0.6**
	comp=Z,92nm,1.0s					
KPKS			*i* S		**S**	**22 33 30.7 +1.4**
KPKS			LR		LR	22 46 24.9
	comp=Z,3μm,12.4s					
SATY	**Saty**	**44.54 317**⇑	*i*P		**P**	**22 26 57.9 +1.0**
	comp=Z,114nm,0.9s					
SATY			*i* S		**S**	**22 33 31.5 +2.0**
SATY			*i* SS		**ScS**	**22 36 52.5 +1.3**
SATY			LR		LR	22 47 02.9
	comp=Z,3μm,13.9s					
ZHN	**Zhinishke**	**44.57 317**⇑	*i*P		**P**	**22 26 57.7 +0.6**
	comp=Z,46nm,1.1s					
ZHN			*e*S		**S**	**22 33 31.2 +1.3**
ZHN			LR		LR	22 46 59.6
	comp=Z,2μm,13.0s					
BOM	**Bombay**	**44.72 281**	*e*P		**P**	**22 26 56.5 -2.0**
KSH	**Kashi**	**44.89 311**⇑	*i*P		**P**	**22 27 02.3 +2.5**
KSH			pP		pP	22 27 11.3 -0.8
KSH			PcP		**PcP**	**22 28 42.1 +1.3**
KSH			PcS		**PcS**	**22 32 30.6 -4.0**
KSH			S		**S**	**22 33 38.8 +4.1**
KSH			sS		sS	22 33 53.9 -1.4
KSH			ScS		**SS**	**22 36 56.4 -0.8**
KSH				pmax	pmax	
	comp=Z,310nm,1.0s					
KSH				pmax	pmax	
	comp=Z,3μm,7.0s					
KSH			LR		LR	
	comp=Z,13μm,14.0s					
KSH			LR		LR	
	comp=Z,22μm,15.5s					
KSH			LR		LR	
	comp=Z,27μm,18.2s					
WAKE	**Wake Island**	**44.95 78**	*e*P		**P**	**22 26 59.7 -0.6**
	comp=Z,764nm,1.3s					
WAKE			LR		LR	
	comp=Z,2μm,20.0s					
H11S3	**WAKE ISLAND Hy 45.02**	**79**	P		**P**	**22 27 00.5 -0.3**
	baz=265,slow=7.0,SNR=9.3					
H11S1	**WAKE ISLAND Hy 45.03**	**79**	P		**P**	**22 27 00.6 -0.2**
	baz=265,slow=7.0,SNR=9.1					
H11S2	**WAKE ISLAND Hy 45.04**	**79**	P		**P**	**22 27 00.5 -0.4**
	baz=265,slow=7.0,SNR=8.9					
H11N1	**WAKE ISLAND Hy 45.15**	**78**	P		**P**	**22 27 02.9 +1.2**
	baz=320,slow=76,SNR=0.8					
H11N2	**WAKE ISLAND Hy 45.15**	**78**	P		**P**	**22 27 03.4 +1.7**
	baz=320,slow=76,SNR=9.5					
H11N3	**WAKE ISLAND Hy 45.17**	**78**	P		**P**	**22 27 03.3 +1.5**
	baz=320,slow=76,SNR=10.0					
NIL	**Nilore**	**45.43 302**	*e*P		**P**	**22 27 03.8 -0.2**
	comp=Z,1μm,1.1s					
NIL			LR		LR	
	comp=Z,5μm,19.0s					
NIL	**Nilore**	**45.43 302**	*e*P		**P**	**22 27 03.8 -0.2**
NIL				pmax	pmax	
	comp=Z,1μm,1.1s					
NIL			MLR		MLR	
	comp=Z,5μm,19.0s					
MDOK	**Medeo**	**45.49 316**	*i* P		**P**	**22 27 05.7 +1.2**
	comp=Z,1μm,1.8s					
MDOK			*i* S		**S**	**22 33 45.4 +2.1**
MDOK			*i* SS		**SS**	**22 37 10.5 +2.9**
MDOK			LR		LR	22 47 24.7
	comp=Z,3μm,15.1s					
NRN	**Naryn**	**45.54 313**	*e*P		**P**	**22 27 06.2 +1.0**
	comp=Z,294nm,1.0s					
NRN	**Naryn**	**45.54 313**	*e*P		**P**	**22 27 06.2 +1.0**
NRN				pmax	pmax	
	comp=Z,294nm,1.0s					
AAA	**Alma-Ata**	**45.60 316**⇑	*e*P		**P**	**22 27 06.5 +1.2**
	comp=Z,84nm,1.0s					
AAA			*e*S		**S**	**22 33 46.8 +2.1**
AAA			LR		LR	22 47 33.6
	comp=Z,3μm,15.6s					
AAA	**Alma-Ata**	**45.60 316**	*e*P		**P**	**22 27 06.3 +1.1**
AAA			*e*S		**S**	**22 33 48.2 +3.5**
AAA				pmax	pmax	
	comp=Z,1μm,5.5s					
AAA				smax	smax	
	comp=N,2μm,9.6s					
AAA			MLR		MLR	
	comp=Z,4μm,16.0s					
ULHL	**Ulahol**	**45.68 315**	P		**P**	**22 27 07.3 +1.3**
	SNR=88					
SKR	**Severo-Kuril's**	**45.71 32***c*	*i*P		**P**	**22 27 05.2 -0.7**
SKR			*i*			22 27 19.5
SKR			*e*PPP		PPP	22 28 41.2
SKR			*i* S		**S**	**22 33 45.7 -0.1**
SKR				pmax	pmax	
	comp=Z,4μm,3.2s					
SKR				pmax	pmax	
	comp=Z,336nm,1.2s					
SKR				pmax	pmax	
	comp=Z,2μm,4.9s					
SKR				smax	smax	
	comp=E,6μm,7.5s					
SKR				smax	smax	
	comp=N,2μm,7.1s					
SKR			MLR		MLR	
	comp=Z,6μm,19.0s					
KUU	**Kurty**	**46.26 317**⇑	*i*P		**P**	**22 27 11.3 +0.9**
	comp=Z,473nm,0.9s					
KUU			*i* S		**S**	**22 33 55.1 +1.1**
KUU			LR		LR	22 48 23.9
	comp=Z,2μm,11.4s					
KZA	**Kyzart**	**46.30 314**	P		**P**	**22 27 12.7 +1.5**
	SNR=156					
TKM2	**Tokmak 2**	**46.37 315**	P		**P**	**22 27 12.4 +0.9**
	SNR=86					
KBK	**Karagaybulak**	**46.72 315**	P		**P**	**22 27 15.6 +1.4**
	SNR=159					
SFK	**Sufi-Kurgan**	**46.85 311**	P		**P**	**22 27 16.1 +0.7**
SFK				pmax	pmax	
	comp=Z,136nm,1.1s					
UCH	**Uchtor**	**46.87 314**	P		**P**	**22 27 17.2 +1.6**
	SNR=331					
ZAA0	**Zalesovo Array**	**46.94 333**	*e*P		**P**	**22 27 14.8 -0.7**
	comp=Z,204nm,1.1s					
ZALV	**Zalesovo Beam**	**46.94 333**	P		**P**	**22 27 14.8 -0.7**
	comp=Z,94nm,0.9s,baz=126,slow=5.8,SNR=200					
ZALV			PcP		**PcP**	**22 28 46.8 -0.6**

comp=Z,29nm,0.7s,baz=111,slow=4.1,SNR=7.1
ZALV LR LR 22 47 50.1
comp=Z,13μm,18.5s,baz=132,slow=37
ZALV PKPPKP P'P'df 22 58 12.9 -25
comp=Z,0.2nm,0.3s,baz=298,slow=3.2,SNR=4.0
ZALV Zalesovo Beam 46.94 333 *e*P **P 22 27 13.4 -2.1**
ZALV PcP **PcP 22 28 46.8 -0.6**
ZALV P'P' 22 58 12.9
ZALV Zalesovo Beam 46.94 333 P **P 22 27 14.8 -0.7**
ZALV 22 28 46.8
ZALV pmax pmax
comp=Z,93nm,0.9s
ZALV MLR MLR
comp=Z,13μm,18.5s
CHMS Chumysh 46.98 315 P **P 22 27 16.7 +0.7**
SNR=82
YAK Yakutsk 46.98 6 *e*P **P 22 27 14.8 -0.9**
comp=Z,635nm,0.8s
YAK *e*PcP **PcP 22 28 47.7 +0.3**
YAK LR LR
comp=Z,9μm,19.0s
YAK Yakutsk 46.98 6*c i*P **P 22 27 14.6 -1.0**
YAK *e**PP **sP 22 27 33.6 +0.3**
YAK *e* 22 28 47.1
YAK *e* 22 29 04.9
YAK *e*S **S 22 33 58.1 -5.6**
YAK *e* 22 36 57.4
YAK pmax pmax
comp=Z,551nm,0.9s
YAK pmax pmax
comp=N,131nm,1.0s
YAK pmax pmax
comp=E,61nm,1.1s
YAK pmax pmax
comp=Z,2μm,5.6s
YAK pmax pmax
comp=N,1μm,4.8s
YAK pmax pmax
comp=E,302nm,2.1s
YAK smax smax
comp=E,615nm,4.8s
YAK smax smax
comp=N,493nm,4.0s
YAK MLR MLR
comp=Z,8μm,16.0s
YAK MLR MLR
comp=E,3μm,15.0s
YAK MLR MLR
comp=N,7μm,16.0s
FRU Bishkek 47.01 315⇑ *e*P **P 22 27 16.0 -0.3**
FRU *i* 22 28 43.0
FRU *e*S **S 22 34 05.0 +0.1**
FRU pmax pmax
comp=Z,450nm,2.0s
AAK Ala-Archa 47.02 314 PKPPKP 22 58 26.4
comp=Z,1.3nm,0.3s,baz=264,slow=4.5,SNR=5.6
AAK Ala-Archa 47.02 314 *e*P **P 22 27 17.5 +1.0**
comp=Z,305nm,1.5s
AAK P'P' 22 58 26.4
AAK Ala-Archa 47.02 314 *e*P **P 22 27 17.5 +1.0**
AAK pmax pmax
comp=Z,305nm,1.5s
SEM Semipalatinsk 47.04 326 *i* P **P 22 27 16.2 -0.4**
comp=Z,94nm,1.3s
SEM *i* PP **PP 22 29 07.4 -0.2**
SEM LR LR 22 49 10.8
comp=Z,2μm,13.8s
HNR Honiara 47.04 119 LR LR 22 44 32.0
comp=Z,11μm,21.8s,baz=287,slow=33
HNR Honiara 47.04 119 *e*P **P 22 27 17.1 +0.3**
comp=Z,65nm,0.7s
HNR Honiara 47.04 119 *e*P **P 22 27 17.1 +0.3**
HNR pmax pmax
comp=Z,65nm,0.7s
USP Ospenovka 47.25 315 P **P 22 27 18.8 +0.7**
SNR=160
AML Almayashu 47.40 313 P **P 22 27 21.1 +1.3**
SNR=156
EKS2 Erkin-Say 47.53 314 P **P 22 27 21.6 +1.2**
SNR=130
PEA0B Petropavlovsk- 47.95 30 *e*P **P 22 27 23.1 -0.2**
comp=Z,514nm,1.3s
PETK Petropavlovsk- 47.95 30 P **P 22 27 23.1 -0.2**
comp=Z,174nm,0.8s,baz=207,slow=3.4,SNR=117
PETK PcP **PcP 22 28 51.0 -0.1**
comp=Z,63nm,0.8s,baz=178,slow=3.4,SNR=4.0
PETK LR LR 22 48 05.5
comp=Z,6μm,19.1s,baz=218,slow=37
PETK Petropavlovsk- 47.95 30 *e*P **P 22 27 22.4 -1.0**
PETK PcP **PcP 22 28 51.0 -0.1**
KURBB Kurchatov Arra 48.08 326 P **P 22 27 24.8 +0.4**
comp=Z,233nm,1.0s,baz=120,slow=8.4,SNR=442
KURBB PcP **PcP 22 28 51.8 +0.2**
comp=Z,66nm,1.1s,baz=123,slow=3.6,SNR=7.2
KURBB S **S 22 34 21.6 +2.0**
comp=Z,1.9nm,1.0s,baz=116,slow=17,SNR=5.3
KURBB PKPPKP P'P'df 22 58 28.5 -8.2
comp=Z,3.5nm,1.2s,baz=282,slow=2.9,SNR=6.0
KURK Kurchatov 48.08 326 *e*P **P 22 27 24.5 +0.1**
comp=Z,553nm,1.0s
KURK PcP **PcP 22 28 51.8 +0.2**
KURK S **S 22 34 21.6 +2.0**
KURK P'P' 22 58 28.5
KURK LR LR
comp=Z,11μm,20.0s
KURK Kurchatov 48.08 326 P **P 22 27 24.9 +0.5**
SNR=380
KURK Kurchatov 48.08 326*c i*P **P 22 27 24.4 0.0**
KURK pmax pmax
comp=Z,457nm,1.0s
BTLS Baital 48.22 317⇑ *i*P **P 22 27 25.8 +0.2**
comp=Z,67nm,0.9s
BTLS *i* PP **PP 22 29 18.2 0.0**
BTLS *i* S **S 22 34 23.1 +1.2**
BTLS LR LR 22 50 12.5
comp=Z,2μm,13.8s
NVS Novosibirsk 48.23 333⇓ *i*P **P 22 27 25.3 -0.2**
NVS *i* 22 27 39.2
NVS *i* 22 28 50.5
NVS *i* 22 29 20.7
NVS pmax pmax
comp=Z,373nm,1.6s
NVS pmax pmax
comp=N,213nm,1.7s
NVS pmax pmax
comp=E,211nm,1.5s
NWAO Narrogin (SRO) 48.25 183 LR LR 22 50 40.3
comp=E,2μm,20.0s,baz=234,slow=40
NWAO Narrogin (SRO) 48.25 183 *e*P **P 22 27 26.0 +0.1**
comp=E,458nm,1.0s
NWAO Narrogin (SRO) 48.25 183 P **P 22 27 27.4 +1.6**
SNR=19
NWAO Narrogin (SRO) 48.25 183 *e*P **P 22 27 26.0 +0.1**
NWAO pmax pmax
comp=Z,458nm,1.0s
PET Petropavlovsk 48.36 31 *e*P **P 22 27 26.3 -0.3**
comp=Z,286nm,1.0s
PET LR LR
comp=Z,5μm,19.0s
PET Petropavlovsk 48.36 31*c e*P **P 22 27 26.2 -0.3**
PET *i* 22 28 53.5
PET *e* 22 29 18.0
PET *i* S **S 22 34 21.7 -1.9**
PET *e*SS SS 22 37 39.3 -14
PET pmax pmax
comp=Z,4μm,5.2s
PET pmax pmax
comp=Z,2μm,5.5s
PET pmax pmax
comp=Z,318nm,1.1s
PET MLR MLR
comp=Z,5μm,18.0s
KBL Kabul 49.02 302 *e*P **P 22 27 32.5 +0.3**
comp=Z,218nm,1.1s
KBL Kabul 49.02 302 *e*P **P 22 27 32.5 +0.3**
KBL pmax pmax
comp=Z,218nm,1.1s
DZA Taraz 49.30 314⇑ *i*P **P 22 27 34.8 +0.8**
comp=Z,118nm,1.0s
DZA *e*S **S 22 34 39.2 +1.9**
DZA LR LR 22 50 45.2
comp=Z,2μm,13.2s
MA2 Magadan 49.53 20 P **P 22 27 35.2 -0.3**
comp=Z,373nm,1.1s,baz=218,slow=8.4,SNR=87
MA2 PcP **PcP 22 28 56.8 +0.2**
comp=Z,116nm,0.9s,baz=166,slow=4.9,SNR=4.5
MA2 Magadan 49.53 20 *e*P **P 22 27 35.4 -0.1**
comp=Z,3μm,1.3s
MA2 PcP **PcP 22 28 56.8 +0.2**
MA2 LR LR
comp=Z,8μm,20.0s
MA2 Magadan 49.53 20 *i*P **P 22 27 35.3 -0.1**
MA2 pmax pmax
comp=Z,505nm,1.3s
KK31 Karatay Array 49.94 314 *e*P **P 22 27 39.1 +0.3**
KK31 Karatay Array 49.94 314 *e*P **P 22 27 39.1 +0.3**
KKAR Karatay Array 49.94 314 *e*P **P 22 27 39.1 +0.3**
KKAR *ep*P **P 22 27 39.8 +1.0**
KKAR Karatay Array 49.94 314 *e*P **P 22 27 39.1 +0.3**
IUG Iuzhnay 49.99 312⇑ *i*P **P 22 27 40.3 +0.9**
comp=Z,172nm,0.9s
IUG *i* S **S 22 34 49.2 +2.1**
IUG LR LR 22 52 56.0
comp=Z,2μm,14.9s
TAS Tashkent 50.30 311 P **P 22 27 43.2 +1.6**
TAS pmax pmax
comp=Z,407nm,1.1s
CHM Chimkent 50.35 312 *e*P **P 22 27 42.9 +0.9**
comp=Z,148nm,2.4s
CHM *i* S **S 22 34 53.9 +2.0**
CHM LR LR 22 51 50.6
comp=Z,2μm,11.8s
BRLS Borolday 50.39 313 *i* S **S 22 34 54.8 +2.4**
H01W3 Cape Leeuwin H 50.41 186 P **P 22 27 44.7 +2.7**
H01W1 Cape Leeuwin H 50.42 186 P **P 22 27 45.1 +3.0**
baz=195,slow=74,SNR=3.1
H01W2 Cape Leeuwin H 50.43 186 P **P 22 27 44.8 +2.7**
OTUK Ortayu 50.56 321 P **P 22 27 43.6 +0.2**
OTUK pmax pmax
comp=Z,277nm,1.1s
STKA Stephens Creek 51.65 156 P **P 22 27 50.9 -0.8**
comp=Z,60nm,0.6s,baz=333,slow=7.4,SNR=157
STKA PcP **PcP 22 29 06.2 +1.2**
comp=Z,27nm,0.8s,baz=304,slow=5.2,SNR=3.7
STKA LR LR 22 53 12.1
comp=Z,2μm,20.3s,baz=337,slow=40
STKA PKPPKP **P'P'df 22 58 27.3 +1.2**
comp=Z,1.1nm,0.7s,baz=340,slow=6.6,SNR=3.3
STKA Stephens Creek 51.65 156 *e*P **P 22 27 51.0 -0.8**
comp=Z,79nm,1.5s
STKA PcP **PcP 22 29 06.2 +1.2**
STKA P'P' 22 58 27.3
STKA Stephens Creek 51.65 156 *e*P **P 22 27 51.0 -0.8**
STKA 22 29 06.2
STKA pmax pmax
comp=Z,79nm,1.5s
DGAR Diego Garcia 51.98 247 PFAKE 22 28 10.0 +16
DGAR LR LR
comp=Z,3μm,19.0s
H08S2 Diego Garcia H 52.04 247 P **P 22 27 56.6 +2.0**
baz=28,slow=11,SNR=9.0
H08S3 Diego Garcia H 52.04 247 P **P 22 27 56.1 +1.4**
baz=28,slow=11,SNR=5.7
H08S1 Diego Carcia H 52.06 247 P **P 22 27 56.4 +1.6**
baz=28,slow=11,SNR=9.9
SEY Seymchan 52.59 18 P **P 22 27 58.8 +0.5**
comp=Z,160nm,0.8s,baz=231,slow=5.5,SNR=231
SEY PcP **PcP 22 29 08.7 +0.8**
comp=Z,107nm,1.1s,baz=228,slow=1.3,SNR=6.6
SEY Seymchan 52.59 18*c i*P **P 22 27 59.0 +0.7**
H08N1 Diego Carcia H 52.81 249 P **P 22 28 01.8 +1.5**
baz=110,slow=3.7,SNR=1.8
H08N2 Diego Garcia H 52.81 249 P **P 22 28 01.3 +1.0**
baz=110,slow=3.7,SNR=2.6
H08N3 Diego Garcia H 52.83 249 P **P 22 28 02.2 +1.8**
baz=110,slow=3.7,SNR=3.7
BVAR Borovoye Array 53.66 325 P **P 22 28 06.5 +0.2**
comp=Z,114nm,1.0s,baz=115,slow=10.0,SNR=210
BVAR PcP **PcP 22 29 12.4 +0.1**
comp=Z,69nm,0.9s,baz=112,slow=4.0,SNR=7.8
BVAR LR LR 22 52 25.7
comp=Z,12μm,18.1s,baz=112,slow=38
BVAR PKPPKP P'P'df 22 58 20.6 -8.4
comp=Z,2.2nm,1.0s,baz=339,slow=3.8,SNR=8.3
BRVK Borovoye 53.73 325 *e*P **P 22 28 07.2 +0.3**
comp=Z,534nm,1.1s
BRVK LR LR
comp=Z,2μm,19.0s
BRVK Borovoye 53.73 325 P **P 22 28 07.5 +0.6**
SNR=302
BRVK Borovoye 53.73 325*c i*P **P 22 28 06.9 0.0**
BRVK pmax pmax
comp=Z,601nm,1.2s
TIXI Tiksi 56.37 4 P **P 22 28 24.4 -1.1**
comp=Z,326nm,0.8s,baz=152,slow=3.8,SNR=418
TIXI S **S 22 36 07.8 -4.7**
comp=Z,2.3nm,0.9s,baz=352,slow=18,SNR=16
TIXI Tiksi 56.37 4 *e*P **P 22 28 24.4 -1.1**
comp=Z,556nm,1.0s
TIXI S **S 22 36 07.8 -4.7**
TIXI LR LR
comp=Z,17μm,19.0s
TIXI Tiksi 56.37 4*c i*P **P 22 28 24.1 -1.4**
TIXI pmax pmax
comp=Z,522nm,0.8s
TIXI MLR MLR
comp=Z,17μm,19.0s
SMY Shemya 56.51 36 *e*P **P 22 28 27.2 +0.4**
comp=Z,728nm,1.8s
SMY Shemya 56.51 36 *e*P **P 22 28 27.2 +0.4**
SMY pmax pmax
comp=Z,728nm,1.8s
NRIK Noril'sk 57.39 347 P **P 22 28 32.6 -0.2**
comp=Z,440nm,0.9s,baz=132,slow=6.7,SNR=225
NRIK PcP **PcP 22 29 26.4 +0.1**
comp=Z,97nm,0.8s,baz=126,slow=2.8,SNR=4.6
NRIK LR LR 22 54 47.0
comp=Z,16μm,18.6s,baz=144,slow=38
NRIK PKPPKP **P'P'df 22 58 21.0 -1.9**
comp=Z,1.4nm,0.4s,baz=288,slow=2.4,SNR=4.2
WSAR Wadi Sarin 57.68 288 LR LR 22 56 38.2
comp=Z,2μm,19.3s,baz=100,slow=39
CAN Canberra 57.76 152 *e*P **P 22 28 35.4 -0.6**
CAN Canberra 57.76 152 *e*P **P 22 28 35.4 -0.6**
ASHT Ashkhabad 58.00 305 P **P 22 28 40.2 +2.5**
ASHT pmax pmax
comp=Z,572nm,1.0s
BIDO Bidbid 58.12 288 P **P 22 28 40.0 +1.2**
SNR=28
BIDO Bidbid 58.12 288 P **P'P'bc 22 58 33.0 -1.4**
SNR=7.4
GEYT Alibeck 58.21 305 P **P 22 28 40.6 +1.4**
comp=Z,242nm,1.0s,baz=184,slow=4.5,SNR=19
GEYT LR LR 22 57 46.8
comp=Z,6μm,18.2s,baz=70,slow=40
GYA0B ALIBECK ARRAY 58.21 305 *e*P **P 22 28 39.9 +0.6**
comp=Z,390nm,1.1s
ABKAR Akbulak array 58.66 319 *e*P **P 22 28 42.5 +0.4**
HOQ Hoqain 58.86 288 P **P 22 28 46.0 +2.0**
SNR=8.1
DZM Mont Dzumac 59.20 128 *e*P **P 22 28 46.1 -0.2**
comp=Z,117nm,1.2s
DZM *e*S **S 22 36 52.8 +1.6**
comp=Z,5μm,30.6s
DZM *e*LR LR 22 46 22.8
comp=Z,4μm,22.8s
DZM Mont Dzumac 59.20 128 P **P 22 28 45.9 -0.4**
comp=Z,32nm,0.6s,baz=279,slow=7.6,SNR=48
DZM LR LR 22 54 20.4
comp=Z,2μm,18.7s,baz=286,slow=36
DZM Mont Dzumac 59.20 128 *e*P **P 22 28 45.6 -0.7**
comp=Z,142nm,1.6s
MIDW Midway 59.27 66 PFAKE 22 29 00.0 +13
MIDW LR LR
comp=Z,5μm,20.0s
SOHO SOHO 59.53 289 *i*P **P 22 28 47.9 -0.6**
SNR=23
BANOM Banah 59.62 291 P **P 22 28 51.7 +2.5**
SNR=17
BANOM Banah 59.62 291 *i*P **P 22 28 49.9 +0.6**
SNR=22
MDH Madha 59.66 290 *i*P **P 22 28 48.3 -1.1**
SNR=6.4
SHME Shamm 59.75 291 *i*P **P 22 28 50.4 +0.3**
SNR=14
UOSS Minazif 59.77 290 *e*P **P 22 28 50.4 +0.2**
comp=Z,38nm,0.9s
UOSS Minazif 59.77 290 *i*P **P 22 28 49.5 -0.8**
SNR=7.8
MSFE Esma-Masafi 59.78 291 *i*P **P 22 28 49.8 -0.5**
SNR=14
HATD Hatta, Dubai 59.84 290 P **P 22 28 52.0 +1.2**
SNR=28
HATD Hatta, Dubai 59.84 290 P **P'P'bc 22 58 30.0 -0.3**
SNR=7.6
HATD Hatta, Dubai 59.84 290 *i*P **P 22 28 50.2 -0.5**
SNR=32
AKTO Aktyubinsk 60.13 320 P **P 22 28 52.5 +0.3**
comp=Z,230nm,0.9s,baz=94,slow=6.1
AKTO LR LR 22 56 35.8
comp=Z,17μm,18.4s,baz=98,slow=38
UMQ Umm Al-Quwin 60.22 291 *i*P **P 22 28 54.1 +0.8**
SNR=6.5
ALNE Al Ain 60.25 289 *i*P **P 22 28 53.5 0.0**
SNR=28
NAZ Nazwa, Dubai 60.26 290 P **P 22 28 55.0 +1.4**
SNR=16
NAZ Nazwa, Dubai 60.26 290 P **P'P'bc 22 58 29.0 -0.3**
SNR=7.2
NAZ Nazwa, Dubai 60.26 290 *i*P **P 22 28 53.4 -0.1**
SNR=11
SVE Sverdlovsk 60.29 327*d i*P **P 22 28 53.5 +0.3**
SVE *e* 22 31 04.2
SVE *e*PPP PPP 22 32 33.0
SVE *e*S **S 22 37 04.4 +0.3**
SVE *e*SS **SS 22 41 03.1 +1.2**
SVE pmax pmax
comp=Z,827nm,1.2s
SVE pmax pmax
comp=Z,465nm,6.1s
SVE MLR MLR
comp=E,7μm,18.0s
SVE MLR MLR
comp=Z,9μm,18.0s
BILL Bilibino 60.30 18 *e*P **P 22 28 53.1 0.0**
BILL LR LR
comp=Z,6μm,19.0s
BILL Bilibino 60.30 18*c i*P **P 22 28 52.8 -0.3**
BILL *i* 22 29 09.9
BILL *e* 22 29 37.7
BILL *e* 22 31 05.9
BILL *i* S **S 22 37 07.4 +3.5**
BILL *e*SS **SS 22 41 06.4 +4.8**
BILL pmax pmax
comp=Z,791nm,1.7s
BILL MLR MLR
comp=Z,6μm,19.0s
ASUD Al Ashush, Dub 60.59 290 P **P 22 28 58.0 +2.2**
SNR=13
ASUD Al Ashush, Dub 60.59 290 *i*P **P 22 28 56.0 +0.2**
SNR=11
AJN Ajban 60.90 290 *i*P **P 22 28 57.3 -0.6**
SNR=10
ARU Arti 61.27 326 *e*P **P 22 28 59.4 -0.5**
ARU LR LR
comp=Z,10μm,19.0s
ARU Arti 61.27 326*c i*P **P 22 28 59.3 -0.6**
ARU 22 29 41.2
ARU 22 31 14.0
ARU PPP PPP 22 32 39.8
ARU *e*S **S 22 37 17.1 +0.4**
ARU 22 38 41.6
ARU SS **SS 22 41 15.6 -1.7**
ARU SSS SSS 22 44 04.7
ARU pmax pmax
comp=Z,734nm,1.7s
ARU MLR MLR
comp=Z,10μm,19.0s
MZR Muzera 62.42 288 *i*P **P 22 29 08.5 +0.3**
SNR=15
ATKA Atka Island 63.30 39 *e*P **P 22 29 11.5 -2.0**
comp=Z,442nm,1.4s
TAU Tasmania Unive 63.49 158 *e*P **P 22 29 15.9 +1.1**
comp=Z,290nm,1.4s
TAU LR LR
comp=Z,3μm,20.0s
TAU Tasmania Unive 63.49 158 *e*P **P 22 29 15.9 +1.1**
TAU pmax pmax
comp=Z,290nm,1.4s
TAU MLR MLR
comp=Z,3μm,20.0s
FUNA Funafuti 63.68 108 *e*P **P 22 29 17.4 +0.8**
comp=Z,290nm,1.4s
FUNA LR LR
comp=Z,7μm,19.0s
SPIA Saint Paul Isl 66.32 34 *e*P **P 22 29 34.8 +1.7**
comp=Z,543nm,1.6s
MAK Makhachkala 66.53 310*c i*P **P 22 29 35.0 +0.3**
MAK *e* 22 32 03.7
MAK *e*S **S 22 38 24.6 +2.3**
MAK *e*SS **SS 22 42 43.9 +4.1**
MAK pmax pmax
comp=Z,304nm,1.0s
NIKH Nikolski High 66.63 39 *e*P **P 22 29 34.3 -0.9**
comp=Z,2μm,2.0s
GROC Groznyy 67.78 311 *e*P **P 22 29 42.0 -0.6**
GROC *e* 22 30 08.5
GROC *e* 22 32 10.8
GROC *e*PPP PPP 22 33 47.8
GROC *e*S **S 22 38 37.5 +0.1**
GROC pmax pmax
comp=Z,496nm,1.2s
UNV Unalaska Valle 68.10 38 *e*P **P 22 29 44.7 +0.3**
comp=Z,105nm,0.9s
GNI Garni 68.66 307 P **P 22 29 49.6 +1.2**
comp=Z,191nm,1.2s,baz=149,slow=3.0,SNR=98
GNI LR LR 23 02 30.3
comp=Z,2μm,20.5s,baz=78,slow=38
GNI Garni 68.66 307 *e*P **P 22 29 49.7 +1.2**
comp=Z,790nm,1.5s
GNI Garni 68.66 307 P **P 22 29 50.0 +1.5**
SNR=89
GNI Garni 68.66 307 *i*P **P 22 29 49.2 +0.8**
SNR=86
PRGR Permogore 68.84 331⇑ *i*P **P 22 29 47.9 -1.0**
PRGR *e**PP **pP 22 29 57.8 -4.1**
PRGR *e* 22 30 09.0
PRGR pmax pmax
comp=Z,320nm,0.9s
YOVA Hakkari_Y"…kse 69.15 305 *i*P **P 22 29 51.8 +0.2**
IGDI IGDIR 69.18 307 *i*P **P 22 29 52.4 +0.9**
CLDR Caldiran 69.35 306 *i*P **P 22 29 52.9 +0.1**
EAK Akyaka 69.50 308 *i*P **P 22 29 54.2 +0.6**
HAKT HAKKARI 69.62 305 *i*P **P 22 29 55.2 +0.7**
VMUR Van-Muradiye 69.62 306 *i*P **P 22 29 55.6 +1.1**
RAYN Ar Rayn 69.63 290 *e*P **P 22 29 55.0 +0.3**
comp=Z,193nm,1.0s
RAYN LR LR
comp=Z,2μm,20.0s
RAYN Ar Rayn 69.63 290 *i*P **P 22 29 54.7 +0.1**
SNR=30
RAYN Ar Rayn 69.63 290 P **P 22 29 54.9 +0.3**
RAYN pmax pmax
comp=Z,190nm,1.0s
ANM Nome 69.65 26 *e*P **P 22 29 55.3 +1.4**
comp=Z,300nm,1.5s
ANM Nome 69.65 26 *e*P **P 22 29 55.3 +1.4**
ANM pmax pmax
comp=Z,300nm,1.5s
GOF Gofitskoye 69.72 313⇑ *i*P **P 22 29 55.0 +0.3**
GOF *e*S **S 22 39 03.5 +3.1**
GOF pmax pmax
comp=Z,250nm,1.2s
TVAN Van 69.78 306 *i*P **P 22 29 56.6 +1.1**
KBZ Khabaz 69.87 311 P **P 22 29 56.0 +0.4**
comp=Z,201nm,1.0s,baz=88,slow=6.5,SNR=144
KBZ PKPPKP **P'P'df 22 57 59.2 -4.2**
comp=Z,12nm,1.1s,baz=216,slow=3.9,SNR=11
KBZ LR LR 23 04 45.2
comp=Z,4μm,18.2s,baz=88,slow=39
KBZ Khabaz 69.87 311 P **P 22 29 56.0 +0.4**
KIV Kislovodsk 70.02 312 *e*P **P 22 29 57.0 +0.3**
comp=Z,524nm,0.9s
KIV LR LR
comp=Z,4μm,21.0s
KIV Kislovodsk 70.02 312 P **P 22 29 57.5 +0.8**
SNR=108
KIV Kislovodsk 70.02 312 *i*P **P 22 29 57.0 +0.3**
SNR=132
KIV Kislovodsk 70.02 312 *e*P **P 22 29 57.1 +0.4**
KIV *e* 22 32 31.9
KIV *e*S **S 22 39 05.3 +1.2**
KIV *e*SS **SS 22 43 35.6 +1.7**
KIV pmax pmax
comp=Z,640nm,1.0s
KIV pmax pmax
comp=Z,451nm,3.7s
MRIV Mauritius Mete 70.64 242 *e*P **P 22 30 01.9 +1.2**
comp=Z,233nm,1.2s

RDOG	Red Dog Mine	71.02	23	eP	P	22 30 03.0 +0.8
	comp=Z,187nm,1.2s					
SDPT	Sand Point	71.64	36	eP	P	22 30 05.1 -1.1
	comp=Z,108nm,0.8s					
KLMR	Klimovskoe	71.73	329c	iP	P	22 30 05.7 -0.9
KLMR				S	S	22 39 20.1 -3.1
KLMR				pmax	pmax	
	comp=Z,2μm,1.6s					
KLMR				pmax	pmax	
	comp=Z,2μm,1.6s					
KLMR				MLR	MLR	
	comp=Z,8μm,17.0s					
KLMR	Klimovskoe	71.73	329⇑	iP	P	22 30 05.7 -0.9
KLMR			⇓	iP	P	22 30 05.7 -0.9
KLMR			⇓	iP	P	22 30 05.7 -0.9
KLMR				AMP		22 30 08.0
	comp=Z,2μm,1.6s					
KLMR				AMP		22 30 08.0
	comp=Z,2μm,1.6s					
KLMR				S	S	22 39 20.1 -3.1
KLMR				S	S	22 39 20.1 -3.1
KLMR				LQ	LQ	22 56 55.7
KLMR				LQ	LQ	22 56 55.7
KLMR				LR	LR	23 00 34.7
KLMR				AMP		23 03 55.3
	comp=Z,8μm,17.1s					
VORD	Divnogorie	72.01	319	eP	P	22 30 07.6 -0.8
VORD				pmax	pmax	
	comp=Z,370nm,1.2s					
VORD				MLR	MLR	
	comp=Z,3μm,13.0s					
VORR	Voronezh	72.03	320	eP	P	22 30 08.0 -0.6
VSR	Storozhevoye	72.08	319	eP	P	22 30 08.2 -0.7
VSR				e*SS	S	22 39 25.8 -1.7
VSR				pmax	pmax	
	comp=Z,880nm,1.5s					
VSR				MLR	MLR	
	comp=Z,13μm,21.0s					
SOC	Sochi	72.19	311c	iP	P	22 30 09.2 -0.5
SOC				e*SP	pP	22 30 22.3 -0.5
SOC				ePPP	PPP	22 34 35.2
SOC				i S	S	22 39 25.0 -4.1
SOC				e*SS	sS	22 39 59.8 +8.9
SOC				eSSS	SSS	22 47 16.2
SOC				pmax	pmax	
	comp=Z,207nm,0.8s					
DAMY	Dhamar	72.25	281	eP	P	22 30 12.5 +1.6
	comp=Z,254nm,1.3s					
TMCR	Tamitsa	72.47	333	eP	P	22 30 10.6 -0.3
TMCR				pmax	pmax	
	comp=Z,615nm,1.0s					
CHGN	Chignik	72.78	35	eP	P	22 30 12.2 -0.7
	comp=Z,142nm,1.4s					
MOS	Moscow	72.80	324c	iP	P	22 30 12.2 -0.9
MOS				i		22 30 31.0
MOS				e		22 32 52.9
MOS				ePPP	PPP	22 34 39.0
MOS				eS	S	22 39 30.6 -5.0
MOS				ePS	PnS	22 40 21.0 +10
MOS				pmax	pmax	
	comp=Z,2μm,2.1s					
MOS				pmax	pmax	
	comp=E,600nm,1.9s					
MOS				pmax	pmax	
	comp=Z,836nm,1.3s					
MOS				pmax	pmax	
	comp=N,400nm,1.7s					
MOS				pmax	pmax	
	comp=E,243nm,1.1s					
MOS				pmax	pmax	
	comp=N,182nm,0.9s					
MOS				smax	smax	
	comp=N,1μm,3.8s					
MOS				smax	smax	
	comp=E,800nm,3.0s					
MOS				MLR	MLR	
	comp=E,8μm,18.0s					
MOS				MLR	MLR	
	comp=Z,10μm,18.0s					
ANN	Anapa	73.71	313	eP	P	22 30 16.2 -2.5
ANN				eS	S	22 39 45.5 -0.8
ANN				pmax	pmax	
	comp=Z,330nm,1.3s					
ANN				MLR	MLR	
	comp=Z,8μm,23.0s					
AFI	Afiamalu	73.88	110	LR	LR	22 59 37.8
	comp=Z,4μm,18.7s,baz=288,slow=33					
AFI	Afiamalu	73.88	110	PFAKE		22 30 30.0 +10
AFI				LR	LR	
	comp=Z,87μm,19.0s					
SVW2	Sparrevohn	74.03	30	eP	P	22 30 20.8 +0.6
	comp=Z,52nm,1.0s					
APA	Apatity	74.31	337⇓	iP	P	22 30 21.0 -0.7
APA				i		22 30 35.0
APA				i PPP	PPP	22 34 53.0
APA				i S	S	22 39 50.0 -2.3
APA				pmax	pmax	
	comp=Z,217nm,0.9s					
SLMH	Al Salmeh	74.37	304	eP	P	22 30 24.5 +1.8
ATD	Arta Tunnel	74.38	278	P	P	22 30 23.9 +0.8
	comp=Z,53nm,0.9s,baz=21,slow=3.1,SNR=25					
ATD				LR	LR	23 02 00.4
	comp=Z,1μm,20.5s,baz=68,slow=35					
ATD	Arta Tunnel	74.38	278	eP	P	22 30 23.8 +0.7
	comp=Z,106nm,1.1s					
DCZ	Deep Cove	74.42	147	eP	P	22 30 23.1 +0.5
	comp=Z,117nm,1.4s					
FOZ	Fox Glacier	74.58	145	eP	P	22 30 24.2 +0.7
	comp=Z,240nm,1.7s					
HIZ	Hauiti	74.58	138	eP	P	22 30 25.0 +1.3
	comp=Z,155nm,0.9s					
MLZ	Mavora Lakes	74.86	147	eP	P	22 30 25.3 +0.1
	comp=Z,95nm,1.5s					
RAO	Raoul Island	74.94	127	LR	LR	23 01 03.1
	comp=Z,2μm,20.8s,baz=338,slow=34					
WHZ	Wether Hill Ro	75.11	147	eP	P	22 30 26.6 -0.1
	comp=Z,70nm,1.4s					
THZ	Tophouse	75.27	142	eP	P	22 30 27.6 -0.1
	comp=Z,55nm,0.8s					
LBZ	Lake Benmore	75.33	145	eP	P	22 30 28.4 +0.4
	comp=Z,309nm,1.3s					
RPZ	Rata Peaks	75.39	144	eP	P	22 30 28.5 +0.2
	comp=Z,87nm,0.8s					
RSO	Redoubt South	75.47	31	eP	P	22 30 28.6 -0.3
CAST	Castle Rocks	75.49	28	eP	P	22 30 29.2 +0.5
	comp=Z,239nm,0.9s					
PPLA	Purkeypile	75.49	28	eP	P	22 30 29.1 +0.3
	comp=Z,665nm,1.8s					
LTZ	Lake Taylor	75.51	143	eP	P	22 30 29.7 +0.6
	comp=Z,49nm,0.9s					
OHAK	Old Harbor	75.53	34	eP	P	22 30 28.6 -0.3
	comp=Z,140nm,1.0s					
OXZ	Oxford	75.71	143	eP	P	22 30 29.9 -0.2
	comp=Z,38nm,0.8s					
KDAK	Kodiak Island	75.84	34	P	P	22 30 30.1 -0.7
	comp=Z,118nm,0.8s,baz=258,slow=3.0,SNR=41					
KDAK	Kodiak Island	75.84	34	eP	P	22 30 30.6 -0.1
	comp=Z,617nm,1.6s					
KDAK				LR	LR	
	comp=Z,894nm,20.0s					
KDAK	Kodiak Island	75.84	34	i P	P	22 30 30.4 -0.3
KEKH	Kekaha	75.88	71	eP	P	22 30 34.4 +2.8
	comp=Z,339nm,1.3s					
SKT	Skwentna	75.89	29	eP	P	22 30 30.3 -0.7
	comp=Z,150nm,1.1s					
BPAW	Bear Paw Mtn.	75.90	27	eP	P	22 30 31.3 +0.3
	comp=Z,330nm,1.2s					
MLY	Manley	75.90	26	eP	P	22 30 31.6 +0.5
	comp=Z,182nm,1.1s					
URZ	Urewera	75.91	137	LR	LR	23 06 23.4
	comp=Z,2μm,19.2s,baz=323,slow=38					
URZ	Urewera	75.91	137	eP	P	22 30 31.2 -0.1
	comp=Z,277nm,1.8s					
TOLK	Toolik Lake Re	75.95	22	P	P	22 30 31.8 +0.5
	baz=277					
TOLK	Toolik Lake Re	75.95	22	eP	P	22 30 31.7 +0.4
	comp=Z,186nm,1.1s					
BKZ	Black Stump Fm	76.00	138	eP	P	22 30 32.0 0.0
	comp=Z,196nm,1.0s					
TOTH	TOTAH	76.02	301	eP	P	22 30 33.8 +1.4
SIM	Simferopol'	76.03	313ce	P	P	22 30 31.9 -0.2
SIM				eS	S	22 40 12.1 -0.1
SIM				PPS	PPS	22 41 06.0
SIM				pmax	pmax	
	comp=Z,301nm,0.7s					
KHZ	Kahutara	76.04	142	eP	P	22 30 31.7 -0.3
	comp=Z,76nm,0.9s					
HOPEN	Hopen	76.07	346	eP	P	22 30 32.0 +0.2
SNZO	South Karori	76.09	140	PFAKE		22 30 40.0 +7.7
SNZO				LR	LR	
	comp=Z,3μm,20.0s					
QASN	Qassioun	76.12	301	eP	P	22 30 33.2 +0.3
HWQ	Hawqa	76.26	302	eP	P	22 30 35.6 +1.8
TRF	Thorofare Moun	76.29	28	eP	P	22 30 33.6 +0.2
	comp=Z,620nm,2.0s					
MQZ	McQueen's Vall	76.30	143	eP	P	22 30 34.4 +1.0
	comp=Z,135nm,1.2s					
SUA	Susitna One	76.33	30	eP	P	22 30 33.0 -0.6
	comp=Z,190nm,0.9s					
MXZ	Matakaoa Point	76.33	136	eP	P	22 30 34.5 +0.7
	comp=Z,122nm,0.8s					
PUL	Pulkovo	76.36	329c	iP	P	22 30 33.7 +0.1
PUL				pmax	pmax	
	comp=Z,888nm,1.2s					
BRBR	Barbar	76.40	301	eP	P	22 30 35.5 +0.8
KEV	Kevo	76.44	339	eP	P	22 30 33.6 -0.3
	comp=Z,184nm,1.0s					
KEV				LR	LR	
	comp=Z,5μm,19.0s					
KEV	Kevo	76.44	339	eP	P	22 30 33.6 -0.3
KEV				pmax	pmax	
	comp=Z,184nm,1.0s					
KEV				MLR	MLR	
	comp=Z,5μm,19.0s					
RCY	Rachaya	76.48	301	eP	P	22 30 36.3 +1.2
BWN	Browne	76.56	27	eP	P	22 30 36.5 +1.8
	comp=Z,269nm,0.8s					
BHL	Bhannes	76.56	302	eP	P	22 30 36.2 +0.8
SHBL	Chebaa	76.59	301	eP	P	22 30 36.9 +1.2
QRWL	Qaraoun	76.60	301	eP	P	22 30 36.5 +0.9
DQRL	Deir Qamar	76.67	302	eP	P	22 30 37.0 +0.9
BFZ	Birch Farm	76.69	139	eP	P	22 30 35.9 +0.1
	comp=Z,138nm,0.9s					
MCK	McKinley	76.85	27	eP	P	22 30 36.1 -0.3
	comp=Z,349nm,1.2s					
MCK	McKinley	76.85	27	eP	P	22 30 36.1 -0.3
MCK				pmax	pmax	
	comp=Z,349nm,1.2s					
RC01	Rabbit Creek A	76.86	30	eP	P	22 30 35.8 -0.7
	comp=Z,168nm,1.3s					
ILGA	Ilgaz	76.91	309	eP	P	22 30 39.0 +1.5
	comp=Z,270nm,1.5s					
MMAI	Mount Meron Ar	76.92	301	P	P	22 30 38.6 +1.1
	comp=Z,65nm,1.0s,baz=79,slow=7.8,SNR=111					
MMAI				LR	LR	23 09 50.6
	comp=Z,2μm,19.8s,baz=65,slow=40					
RND	Reindeer	76.93	28	eP	P	22 30 36.3 -0.6
	comp=Z,479nm,1.6s					
RND	Reindeer	76.93	28	eP	P	22 30 36.3 -0.6
RND				pmax	pmax	
	comp=Z,479nm,1.6s					
SGF	Sodankyl	76.96	337	eP	P	22 30 36.4 -0.5
SGF				pmax	pmax	
	comp=Z,259nm,1.1s					
MDM	Murphy Dome	76.97	26	eP	P	22 30 37.0 0.0
	comp=Z,282nm,1.3s					
ARCES	ARCESS Array B	77.00	339	P	P	22 30 36.8 -0.3
	comp=Z,154nm,0.9s,baz=75,slow=6.3,SNR=192					
ARCES				PKKPbc	PKKPbc	22 49 47.4 +0.1
	comp=Z,1.6nm,0.9s,baz=270,slow=2.4,SNR=5.3					
ARCES				PKPPKP	P'P'df	22 57 37.0 -13
	comp=Z,3.4nm,1.0s,baz=300,slow=9.7,SNR=4.4					
ARCES				LR	LR	23 08 18.5
	comp=Z,8μm,18.2s,baz=66,slow=39					
ARCES	ARCESS Array B	77.00	339	eP	P	22 30 36.2 -0.9
ARCES				PKKPbc	PKKPbc	22 49 47.4 +0.1
ARCES				P'P'		22 57 37.0
ARE0	ARCESS Array S	77.00	339	eP	P	22 30 36.8 -0.3
	comp=Z,201nm,0.9s					
ARE0	ARCESS Array S	77.00	339	eP	P	22 30 36.8 -0.3
PMR	Palmer	77.08	29	eP	P	22 30 37.0 -0.6
	comp=Z,130nm,1.0s					
PMR	Palmer	77.08	29	eP	P	22 30 37.0 -0.6
PMR				pmax	pmax	
	comp=Z,130nm,1.0s					
WRH	Wood River Hil	77.10	26	eP	P	22 30 37.8 0.0
	comp=Z,141nm,1.2s					
COLA	College	77.14	26	eP	P	22 30 37.3 -0.6
	comp=Z,193nm,1.4s					
COLA	College	77.14	26	eP	P	22 30 37.3 -0.6
COLA				pmax	pmax	
	comp=Z,193nm,1.4s					
GHO	Glory Hole Cre	77.14	29	eP	P	22 30 37.8 -0.4
	comp=Z,159nm,1.2s					
BR131	Keskin Array S	77.18	308	eP	P	22 30 38.5 -0.4
BRTR	Keskin Array B	77.18	308	P	P	22 30 38.5 -0.4
	comp=Z,17nm,0.8s,baz=131,slow=4.4,SNR=84					
BRTR				PP	PP	22 33 36.1 +3.1
	comp=Z,7.6nm,1.1s,baz=96,slow=6.3,SNR=4.1					
BRTR				LR	LR	23 09 24.4
	comp=Z,1μm,21.7s,baz=59,slow=39					
HAMF	Hammerfest	77.42	340	eP	P	22 30 38.6 -0.8
OPA	Opana	77.49	71	eP	P	22 30 43.2 +2.5
	comp=Z,798nm,2.0s					
OPA	Opana	77.49	71	eP	P	22 30 43.2 +2.5
OPA				pmax	pmax	
	comp=Z,798nm,2.0s					
KIP	Kipapa	77.54	71	eP	P	22 30 42.9 +1.9
	comp=Z,499nm,1.7s					
KIP				LR	LR	
	comp=Z,9μm,20.0s					
KIP	Kipapa	77.54	71ce	P	P	22 30 41.8 +0.8
KIP				pmax	pmax	
	comp=Z,2μm,1.6s					
IL1	Eielson Array	77.57	26	eP	P	22 30 38.2 -2.2
ILAR	Eielson Array	77.57	26	P	P	22 30 38.9 -1.5
	comp=Z,19nm,0.9s,baz=287,slow=3.6,SNR=50					
ILAR				PP	PP	22 33 31.8 -3.5
	comp=Z,5.6nm,1.1s,baz=285,slow=8.2,SNR=4.1					
ILAR				PKKPbc	PKKPbc	22 49 44.1 -1.7
	comp=Z,4.2nm,0.9s,baz=108,slow=1.5,SNR=17					
ILAR				PKPPKP	P'P'df	22 57 38.1 -11
	comp=Z,1.2nm,1.0s,baz=31,slow=1.4,SNR=7.0					
ILAR				LR	LR	23 08 00.4
	comp=Z,2μm,19.0s,baz=296,slow=38					
ILB	Eielson Array	77.57	26	eP	P	22 30 39.2 -1.2
SPA0	Spitsbergen Ar	77.58	348	eP	P	22 30 40.4 +0.2
SPA0	Spitsbergen Ar	77.58	348	eP	P	22 30 40.5 +0.2
SPITS	Spitsbergen Ar	77.58	348	P	P	22 30 40.1 -0.1
	comp=Z,299nm,0.7s,baz=84,slow=8.5,SNR=281					
SPITS				LR	LR	23 09 36.7
	comp=Z,8μm,19.1s,baz=65,slow=39					
OUL	Oulu	77.60	334	P	P	22 30 39.9 -0.6
OUL				pmax	pmax	
	comp=Z,318nm,1.5s					
ANTO	Ankara	77.80	308⇑	iP	P	22 30 42.3 0.0
ANTO	Ankara	77.80	308	eP	P	22 30 42.2 0.0
	comp=Z,205nm,1.4s					
ANTO				LR	LR	
	comp=Z,2μm,20.0s					
ANTO	Ankara	77.80	308	P	P	22 30 42.5 +0.2
	SNR=25					
ANTO	Ankara	77.80	308	eP	P	22 30 42.2 0.0
ANTO				pmax	pmax	
	comp=Z,205nm,1.4s					
ANTO				MLR	MLR	
	comp=Z,2μm,20.0s					
BR231	Keskin MP Arra	77.82	308	eP	P	22 30 42.5 0.0
SCM	Sheep Creek Mo	77.88	29	eP	P	22 30 42.4 +0.1
	comp=Z,464nm,1.4s					
SCM	Sheep Creek Mo	77.88	29	eP	P	22 30 42.4 +0.1
SCM				pmax	pmax	
	comp=Z,464nm,1.4s					
BJO	Bjornoya	77.90	344	eP	P	22 30 42.1 +0.1
PAF	Port-aux-Franc	77.95	211	eP	P	22 30 46.1 +3.5
	comp=Z,350nm,1.1s					
PAF	Port-aux-Franc	77.95	211	eP	P	22 30 46.1 +3.5
PAF				pmax	pmax	
	comp=Z,350nm,1.1s					
HSPB	Hornsund (broa	78.09	347	eP	P	22 30 43.2 +0.1
HSPB				e*SP	pP	22 30 57.0 +0.7
HSPB				eS	S	22 40 33.3 -0.2
HSPB				e		22 40 59.5
HSPB				MLR	MLR	
	comp=Z,4μm,22.3s					
HSPB	Hornsund (broa	78.09	347	eP	P	22 30 43.3 +0.2
FIA1	FINESS Array S	78.17	331	eP	P	22 30 43.3 -0.4
FINES	FINESS Array B	78.17	331	P	P	22 30 43.2 -0.5
	comp=Z,128nm,0.9s,baz=93,slow=6.5,SNR=198					
FINES				PKKPbc	PKKPbc	22 49 43.9 -0.5
	comp=Z,2.3nm,0.8s,baz=294,slow=1.9,SNR=6.0					
FINES				LR	LR	23 08 05.5
	comp=Z,10μm,18.8s,baz=77,slow=38					
KBS	Kingsbay	78.19	349	eP	P	22 30 44.0 +0.4
	comp=Z,175nm,0.8s					
KBS				LR	LR	
	comp=Z,10μm,20.0s					
KBS	Kingsbay	78.19	349	eP	P	22 30 44.0 +0.4
KBS				pmax	pmax	
	comp=Z,175nm,0.8s					
KBS				MLR	MLR	
	comp=Z,10μm,20.0s					
KBS	Kingsbay	78.19	349	eP	P	22 30 43.6 +0.1
CSS	Mathiatis	78.27	303	eP	P	22 30 43.7 -1.2
	comp=Z,88nm,1.0s					
CSS	Mathiatis	78.27	303	P	P	22 30 45.3 +0.4
CSS	Mathiatis	78.27	303	P	P	22 30 45.3 +0.4
MAMC	Mammari	78.32	303	P	P	22 30 45.6 +0.5
AKASG	Malin Array Be	78.38	320	P	P	22 30 44.2 -0.9
	comp=Z,106nm,0.9s,baz=65,slow=5.7,SNR=276					
AKASG				PKPPKP	P'P'df	22 57 43.2 -4.9
	comp=Z,0.1nm,0.3s,baz=280,slow=2.1,SNR=4.7					
AKASG				LR	LR	23 08 16.6
	comp=Z,3μm,19.1s,baz=75,slow=38					
AKBB	Malin Array Si	78.38	320	eP	P	22 30 44.2 -0.9
	comp=Z,246nm,1.0s					
AKBB	Malin Array Si	78.38	320	eP	P	22 30 44.2 -0.9
AKBB				pmax	pmax	
	comp=Z,246nm,1.0s					
KIEV	Kiev	78.39	320	eP	P	22 30 44.2 -1.0
	comp=Z,239nm,1.0s					
KIEV				LR	LR	
	comp=Z,3μm,20.0s					
KIEV	Kiev	78.39	320	i P	P	22 30 44.3 -0.9
	SNR=54					
KIEV	Kiev	78.39	320c	iP	P	22 30 44.0 -1.2
KIEV				pmax	pmax	
	comp=Z,197nm,1.0s					
VSU	Vasula	78.39	328c	iP	P	22 30 44.7 -0.3
VSU				pmax	pmax	
	comp=Z,2μm,1.2s					
AK11	Malin Array Si	78.42	320	eP	P	22 30 44.2 -1.1
MICGM	Minsk	78.50	323⇑	iP	P	22 30 44.0 -1.7
MICGM				PM		22 30 46.0
	comp=Z,1.4nm,1.2s					
MICGM				PM		22 30 47.0
	comp=E,1.0nm,1.1s					
MICGM				eS	S	22 40 36.0 -2.6
MICGM				eLR	LR	23 04 05.0
MICGM				LRM	MLR	23 07 12.0
	comp=Z,16nm,18.0s					
MICGM				LRM	MLR	23 07 14.0
	comp=E,8.4nm,17.0s					
MNK	Minsk	78.50	323⇑	iP	P	22 30 44.0 -1.7
MNK				eS	S	22 40 36.0 -2.6
MNK				pmax	pmax	
	comp=Z,1μm,1.2s					
MNK				pmax	pmax	
	comp=E,1μm,1.1s					
PAX	Paxson	78.52	28	eP	P	22 30 46.5 +0.7
	comp=E,199nm,1.4s					
PAX	Paxson	78.52	28	eP	P	22 30 46.5 +0.7
PAX				pmax	pmax	
	comp=Z,199nm,1.4s					
KLU	Klutina	78.61	29	eP	P	22 30 46.3 0.0
	comp=Z,177nm,1.4s					
RIDG	Independ'e Rid	78.64	27	eP	P	22 30 46.0 -0.4
	comp=Z,256nm,1.1s					
SZAC	Souni	78.67	303	P	P	22 30 47.4 +0.3
DIV	Divide	78.75	30	eP	P	22 30 47.4 +0.3
	comp=Z,127nm,1.1s					
HARP	HAARP	78.78	28	eP	P	22 30 48.3 +1.2
ALFC	Alefka	78.82	303	P	P	22 30 47.9 0.0
OPO	Ambohidratompo	78.94	247	P	P	22 30 49.3 +0.4
	comp=Z,28nm,0.8s,baz=60,slow=5.1,SNR=15					
OPO				LR	LR	23 03 38.5
	comp=Z,1μm,18.1s,baz=56,slow=34					
SCRK	Sand Creek	78.96	27	eP	P	22 30 48.0 -0.2
	comp=Z,141nm,1.3s					
IDID	Didziasalis	78.99	324	eP	P	22 30 48.4 0.0
IDID				IAmb	IAmb	22 30 50.6
	comp=Z,188nm,1.0s					
DOT	Dot Lake	79.00	27	eP	P	22 30 48.5 +0.2
	comp=Z,454nm,1.3s					
NACGM	Naroch	79.05	324	eP	P	22 30 47.0 -1.7
NACGM				PM		22 30 50.0
	comp=Z,1.6nm,1.0s					
NACGM				ePP	PP	22 33 45.0 -2.9
NACGM				eS	S	22 40 43.0 -1.4
NACGM				ePS	PnS	22 41 46.0 +14
NACGM				eSS	SS	22 45 34.0 -16
NACGM				eLQ	LQ	23 02 05.0
NACGM				eLR	LR	23 05 26.0
NACGM				LRM	MLR	23 07 40.0
	comp=Z,8.6nm,18.0s					
ABPO	Ambohimpanom	79.06	247	eP	P	22 30 51.3 +1.7
	comp=Z,62nm,1.2s					
ABPO				LR	LR	
	comp=Z,789nm,20.0s					
ABPO	Ambohimpanom	79.06	247	eP	P	22 30 51.3 +1.7
ABPO				pmax	pmax	
	comp=Z,62nm,1.2s					
ABPO				MLR	MLR	
	comp=Z,789nm,20.0s					
AKMC	Akamas	79.06	303	P	P	22 30 49.9 +0.6
PPCY	Paphos	79.08	303	P	P	22 30 49.2 -0.1
IZAR	Zarasai	79.18	325	eP	P	22 30 49.4 0.0
IZAR				IAmb	IAmb	22 30 51.5
	comp=Z,151nm,1.0s					
TRO	Tromso	79.23	340	eP	P	22 30 48.8 -0.6
IIGN	Ignalina	79.27	325	eP	P	22 30 49.9 -0.1
IIGN				IAmb	IAmb	22 30 52.1
	comp=Z,140nm,1.1s					
ISAL	Salakas	79.28	325	eP	P	22 30 50.0 0.0
ISAL				IAmb	IAmb	22 30 52.1
	comp=Z,102nm,1.0s					
KIS	Kishinev	79.33	316⇑	iP	P	22 30 49.0 -1.4
	comp=Z,700nm,2.0s					
KIS	Kishinev	79.33	316	i PcP	PcP	22 31 01.0 +2.5
KIS				epP	sP	22 31 19.0 +10
KIS	Kishinev	79.33	316	i PP	PP	22 33 50.0 -0.5
	comp=Z,1μm,6.0s					
KIS				i SKS	S	22 40 44.0 -3.8
KIS				eS	SKSac	22 41 00.0 -3.2
KIS				esS	sS	22 41 48.0 +38
KIS	Kishinev	79.33	316	ePS		22 42 10.0
KIS				eSS	SS	22 45 50.0 -5.0
KIS				eSSS	SSS	22 49 40.0
KIS				LRM	MLR	23 10 18.0
	comp=Z,7μm,20.0s					
KIS	Kishinev	79.33	316⇑	iP	P	22 30 50.0 -0.4
KIS	Kishinev	79.33	316α	iP	P	22 30 49.0 -1.4
KIS				i		22 31 01.0
KIS				i		22 33 50.0
KIS				i		22 40 44.0
KIS				eS	S	22 41 00.0 +12
KIS				e*SS	sS	22 41 48.0 +38
KIS				eSS	SS	22 45 50.0 -5.0
KIS				pmax	pmax	
	comp=Z,700nm,2.0s					
KIS				pmax	pmax	
	comp=Z,1μm,6.0s					
KIS				pmax	pmax	
	comp=E,500nm,5.0s					
KIS				pmax	pmax	
	comp=Z,1μm,6.0s					
BMRM	Bremner River	79.34	30	eP	P	22 30 50.4 +0.1
	comp=Z,97nm,1.0s					
VAF	Ylistaro	79.40	333	P	P	22 30 49.9 -0.5
VAF				pmax	pmax	
	comp=Z,273nm,1.1s					
SORM	Soroca	79.42	317⇑	iP	P	22 30 50.3 -0.6
SORM	Soroca	79.42	317	P	P	22 30 50.3 -0.6
RAGM	Ragged Mountai	79.43	30	eP	P	22 30 52.7 +1.9
	comp=Z,240nm,1.4s					
TLCR		79.69	314⇑	iP	P	22 30 52.3 -0.1
LEOM	Leova	79.82	315⇑	iP	P	22 30 53.0 -0.1
LEOM	Leova	79.82	315	P	P	22 30 52.9 -0.1
KHLU	Kahalu'u	79.87	72	eP	P	22 30 56.3 +2.3
	comp=Z,270nm,1.3s					
ISP	Isparta	79.93	306⇑	iP	P	22 30 53.4 -0.6
ISP	Isparta	79.93	306	eP	P	22 30 53.6 -0.4
	comp=Z,230nm,1.2s					
ISP	Isparta	79.93	306	P	P	22 30 53.2 -0.8
ISP	Isparta	79.93	306c	iP	P	22 30 53.1 -0.9
ISP				pmax	pmax	
	comp=Z,145nm,1.1s					

HPAH	Hawaii Prepara	79.96	72	eP	P	22 30 56.8 +2.3
	comp=Z,655nm,1.7s					
EGAK	Eagle	79.96	25	eP	P	22 30 52.7 -0.8
	comp=Z,126nm,1.3s					
EGAK				LR	LR	
	comp=Z,2μm,19.0s					
EFOR	EFORIE	80.05	313⇓	iP	P	22 30 55.2 +0.8
GIUM	Giurgiulesti	80.05	314⇓	iP	P	22 30 55.4 +1.0
CRQM	Cirque	80.08	30	eP	P	22 30 55.7 +1.2
	comp=Z,155nm,1.1s					
TIRR	Tirgusor	80.12	313⇑	iP	P	22 30 54.7 -0.1
TIRR	Tirgusor	80.12	313	eP	P	22 30 54.4 -0.4
	comp=Z,185nm,1.1s					
TIRR	Tirgusor	80.12	313	eP	P	22 30 54.4 -0.4
TIRR				pmax	pmax	
	comp=Z,185nm,1.1s					
IAS	Iasi	80.14	316⇑	iP	P	22 30 54.3 -0.5
CFR	Carcaliu	80.17	314⇑	iP	P	22 30 54.9 -0.1
CFR	Carcaliu	80.17	314	P	P	22 30 54.3 -0.7
POHA	Pohakuloa	80.17	72	eP	P	22 30 56.0 +0.3
	comp=Z,426nm,1.4s					
POHA				LR	LR	
	comp=Z,3μm,21.0s					
MLOA	Mauna Loa Obse	80.18	72	eP	P	22 30 58.4 +2.3
	comp=Z,540nm,1.6s					
TGL	Tana Glacier	80.23	30	eP	P	22 30 55.4 +0.2
	comp=Z,113nm,0.9s					
HMH	Humu'ula Sheep	80.25	72	eP	P	22 30 55.7 -0.6
	comp=Z,670nm,1.6s					
AIN	Ainahou	80.32	73	eP	P	22 30 55.8 -0.7
	comp=Z,1μm,1.5s					
TLB	Topalu	80.36	314⇓	iP	P	22 30 55.9 -0.1
MLH	Mauna Loa	80.36	72	eP	P	22 30 56.2 -0.6
	comp=Z,645nm,1.5s					
MLH	Mauna Loa	80.36	72	eP	P	22 30 56.2 -0.6
MLH				pmax	pmax	
	comp=Z,645nm,1.5s					
HARR	Harsova	80.41	314⇑	iP	P	22 30 56.4 +0.1
HARR	Harsova	80.41	314	P	P	22 30 56.3 0.0
HORU	Horodok	80.44	318	P	P	22 30 55.7 -0.7
PSN	Preselentsi	80.45	313	iP	P	22 30 55.0 -1.6
PUH	Pauahi	80.55	72	eP	P	22 31 00.2 +2.5
	comp=Z,537nm,1.4s					
ICOR	Ion Corvin	80.63	313⇑	iP	P	22 30 58.0 +0.5
PETR	Petresti	80.67	315⇓	iP	P	22 30 58.8 +1.1
HULD	Heiheiahulu Di	80.76	72	eP	P	22 30 58.3 -0.4
	comp=Z,523nm,1.5s					
TESR	Tescani	80.89	316⇑	iP	P	22 30 58.1 -0.8
DAWY	Dawson	80.89	26	eP	P	22 30 58.9 +0.2
	comp=Z,118nm,1.1s					
GRER		80.92	315⇑	iP	P	22 31 00.6 +1.5
PRAR	RASCA	80.98	317⇓	iP	P	22 30 59.1 -0.3
VRI	Vrincioaia	80.98	315⇑	iP	P	22 31 00.0 +0.6
VRI	Vrincioaia	80.98	315	P	P	22 30 59.7 +0.3
STEI	Steigen	81.02	338	eP	P	22 30 58.4 -0.7
KSL	Kastellorizon	81.02	305	P	P	22 30 58.7 -1.1
KSL	Kastellorizon	81.02	305	P	P	22 30 58.7 -1.1
PGOR	Pogoanele	81.02	314⇓	iP	P	22 31 00.7 +1.1
PLOR	Plostina	81.04	315⇓	iP	P	22 31 00.2 +0.4
PLOR	Plostina	81.04	315	P	P	22 31 00.1 +0.3
ISR	Istrita	81.28	314⇓	iP	P	22 31 02.0 +0.9
SUW	Suwalki	81.30	324	eP	P	22 31 00.1 -0.7
SUW				eS	S	22 41 04.7 -3.4
SUW				LMZ	LR	23 08 51.8
	comp=Z,11μm,18.5s					
SUW	Suwalki	81.30	324	eP	P	22 30 59.8 -1.1
	comp=Z,692nm,1.0s					
SUW	Suwalki	81.30	324	eP	P	22 31 00.1 -0.7
SUW				eS	S	22 41 04.7 -3.4
SUW				MLR	MLR	
	comp=Z,11μm,18.5s					
MANT	Manisa	81.30	307	eP	P	22 31 02.3 +0.8
	comp=Z,644nm,1.2s					
FETY	Fethiye	81.31	306	P	P	22 30 59.8 -1.5
FETY	Fethiye	81.31	306	P	P	22 30 59.8 -1.5
LOF	Lofoten	81.55	339⇑	iP	P	22 31 01.0 -0.9
SULR		81.58	314⇑	iP	P	22 31 03.2 +0.7
BURAR	Bucovina Array	81.59	317⇑	iP	P	22 31 03.0 +0.2
BURAR	Bucovina Array	81.59	317	P	P	22 31 02.9 +0.2
BUR04	Bucovina Ar. S	81.60	317	eP	P	22 31 01.9 -0.8
BUR08	Bucovina Ar. S	81.60	317	eP	P	22 31 02.9 +0.1
MLR	Muntele Rosu	81.61	315	P	P	22 31 03.2 +0.4
	comp=Z,24nm,0.8s,baz=55,slow=4.4,SNR=172					
MLR				LR	LR	23 12 25.4
	comp=Z,2μm,19.6s,baz=76,slow=39					
MLR	Muntele Rosu	81.61	315⇑	iP	P	22 31 03.0 +0.1
MLR	Muntele Rosu	81.61	315	eP	P	22 31 02.7 -0.1
	comp=Z,255nm,1.1s					
SECR		81.63	314⇑	iP	P	22 31 03.4 +0.6
INK	Inuvik	81.77	21	P	P	22 31 02.6 -0.4
	comp=Z,107nm,0.9s,baz=290,slow=5.4,SNR=146					
INK				PP	PP	22 34 05.8 -4.2
	comp=Z,13nm,1.1s,baz=276,slow=11,SNR=3.7					
INK				PKKPbc	PKKPbc	22 49 34.7 -1.8
	comp=Z,7.9nm,1.0s,baz=153,slow=2.0,SNR=11					
INK				PKPPKP	P'P'df	22 57 36.8 -4.5
	comp=Z,4.6nm,1.2s,baz=155,slow=9.2,SNR=4.2					
INK	Inuvik	81.77	21	eP	P	22 31 02.9 -0.2
	comp=Z,212nm,1.0s					
INK				PP	PP	22 34 05.8 -4.2
INK				PKKPbc	PKKPbc	22 49 34.7 -1.8
INK				P'P'		22 57 36.8
INK	Inuvik	81.77	21	eP	P	22 31 02.9 -0.2
INK						22 34 05.9
INK				pmax	pmax	
	comp=Z,212nm,1.0s					
LVV	L'vov	81.82	319	eP	P	22 31 04.1 +0.4
LVV				e		22 31 15.6
LVV				e		22 34 12.2
LVV				eS	S	22 41 08.3 -5.4
LVV				ePS	PnS	22 42 05.1 -1.4
LVV				eSS	SS	22 46 33.0 +1.0
LVV				MLR	MLR	
	comp=E,4μm,18.0s					
LVV				MLR	MLR	
	comp=N,2μm,19.0s					
LVV				MLR	MLR	
	comp=Z,3μm,19.0s					
CASY	Casey	81.86	184	eP	P	22 31 04.0 +0.7
	comp=Z,333nm,1.1s					
CASY				LR	LR	
	comp=Z,227nm,19.0s					
DOPR	Dopca	81.87	315⇓	iP	P	22 31 04.4 +0.3
SGRR	Singureni	81.88	314⇑	iP	P	22 31 04.3 +0.2
MOR8	Moi Rana	81.90	337⇑	iP	P	22 31 02.0 -1.8
SZH	Strazhica	82.14	313	iP	P	22 31 05.0 -0.5
ARG	Arkhangelos	82.15	305	P	P	22 31 05.9 +0.1
ARG	Arkhangelos	82.15	305	P	P	22 31 05.9 +0.1
ARG	Arkhangelos	82.15	305	P	P	22 31 05.9 +0.1
VOIR		82.23	315⇑	iP	P	22 31 05.8 -0.3
VOIR		82.23	315	P	P	22 31 05.7 -0.3
VOIR				pmax	pmax	
	comp=Z,41nm,1.1s					
KONS	Konsvik	82.28	337	eP	P	22 31 05.5 -0.3
ARCR	ARCALIA	82.29	317⇑	iP	P	22 31 07.0 +0.7
GOLR		82.44	314⇑	iP	P	22 31 07.0 -0.1
ZIMR		82.44	313⇑	iP	P	22 31 07.4 +0.3
HUMR	Humele	82.50	314⇑	iP	P	22 31 07.1 -0.3
MDB	Medias	82.51	316⇓	iP	P	22 31 08.4 +1.0
ARR	Arges	82.53	315⇑	iP	P	22 31 07.8 +0.2
ALN	Alexandroupoli	82.63	310	eP	P	22 31 08.0 -0.1
	comp=Z,101nm,1.2s					
ALN	Alexandroupoli	82.63	310	P	P	22 31 07.4 -0.7
ALN	Alexandroupoli	82.63	310	eP	P	22 31 08.0 -0.1
ALN				pmax	pmax	
	comp=Z,101nm,1.2s					
EZN	Ezine	82.68	309	P	P	22 31 08.1 -0.3
EZN	Ezine	82.68	309	P	P	22 31 08.1 -0.3
EZN	Ezine	82.68	309	P	P	22 31 08.1 -0.3
KWP	Kalwaria Pacla	82.70	319	eP	P	22 31 08.5 +0.2
KWP				eS	S	22 41 21.8 -1.0
KWP				LMZ	LR	23 10 37.1
	comp=Z,5μm,19.4s					
KWP	Kalwaria Pacla	82.70	319	eP	P	22 31 08.6 +0.2
	comp=Z,4μm,1.0s					
KWP	Kalwaria Pacla	82.70	319	eP	P	22 31 08.5 +0.2
KWP				eS	S	22 41 21.8 -1.0
KWP				MLR	MLR	
	comp=Z,5μm,19.4s					
BMR	Baia Mare	82.71	317⇓	iP	P	22 31 08.9 +0.5
KLNR	Kaliningrad	82.82	325c	iP	P	22 31 08.2 -0.6
KLNR				pmax	pmax	
	comp=Z,185nm,1.2s					
CJR	Cluj-Napoca	82.89	316⇑	iP	P	22 31 10.3 +0.8
CJR	Cluj-Napoca	82.89	316	P	P	22 31 10.2 +0.8
KMBO	Kilima Mbogo	82.93	267	P	P	22 31 23.9 +13
	comp=Z,29nm,0.9s,baz=65,slow=5.7,SNR=48					
KMBO				LR	LR	23 08 35.7
	comp=Z,2μm,18.3s,baz=72,slow=36					
RDO	Rodhopi	82.94	311	P	P	22 31 09.1 -0.6
RDO	Rodhopi	82.94	311	P	P	22 31 09.1 -0.6
KARP	Karpathos	83.07	305	eP	P	22 31 10.6 +0.1
	comp=Z,344nm,1.3s					
KARP	Karpathos	83.07	305	P	P	22 31 10.7 +0.1
LOT	Lotru	83.10	315⇓	iP	P	22 31 10.9 +0.2
TRPA	Tarpa	83.21	318⇑	iP	P	22 31 11.2 +0.2
TRPA	Tarpa	83.21	318⇑	eP	P	22 31 10.9 -0.1
UZH	Uzhgorod	83.23	318⇓	eP	P	22 31 11.4 +0.3
UZH				e		22 31 21.8
UZH				e		22 36 20.8
UZH				eS	S	22 41 27.4 -0.7
UZH				e		22 42 26.6
UZH				e		22 47 01.2
BEL	Belsk	83.27	322	eP	P	22 31 11.3 +0.1
BEL				LMZ	LR	23 10 06.5
	comp=Z,8μm,20.0s					
BEL	Belsk	83.27	322	eP	P	22 31 11.3 +0.1
BEL				MLR	MLR	
	comp=Z,8μm,20.0s					
PLD	Plovdiv	83.30	312	P	P	22 31 11.8 +0.2
CRAR	CRAIOVA	83.37	314⇑	iP	P	22 31 12.1 +0.2
RZN	Rozhen	83.40	311	iP	P	22 31 11.5 -0.9
DRGR		83.45	317⇑	iP	P	22 31 12.6 +0.2
DRGR		83.45	317	P	P	22 31 12.4 0.0
NSS	Namsos	83.46	335	eP	P	22 31 10.2 -1.7
DEV	Deva	83.57	316⇑	iP	P	22 31 13.6 +0.7
DEV	Deva	83.57	316	P	P	22 31 13.6 +0.7
DEV				pmax	pmax	
	comp=Z,372nm,1.2s					
PGB	Panagyurishte	83.57	312	iP	P	22 31 12.5 -0.6
CRVS	Cervenica-Dubn	83.69	319	eP	P	22 31 14.0 +0.5
CRVS				pmax	pmax	
	comp=Z,259nm,1.2s					
CRVS	Cervenica-Dubn	83.69	319	eP	P	22 31 14.0 +0.5
CRVS	Cervenica-Dubn	83.69	319	eS	S	22 41 29.9 -2.9
CRVS				eL	L	23 11 18.8
SRE	Strehaia	83.69	314⇓	iP	P	22 31 14.3 +0.7
LTVH	L~tav~rtes,	83.83	317⇑	eP	P	22 31 14.9 +0.7
NVR	Nevrokopi	84.11	311	P	P	22 31 15.0 -0.8
NVR	Nevrokopi	84.11	311	P	P	22 31 15.0 -0.8
MMB	Musomiste	84.14	311	iP	P	22 31 15.5 -0.5
HERR	Herculane	84.17	315⇑	iP	P	22 31 16.3 +0.3
THR8	Santorini-Mono	84.18	306	P	P	22 31 15.4 -0.8
SANT	Santorini	84.20	306⇑	iP	P	22 31 15.5 -0.9
SANT	Santorini	84.20	306	eP	P	22 31 15.6 -0.9
	comp=Z,1μm,1.3s					
SKAG	Skagway	84.20	30	eP	P	22 31 17.1 +1.3
MIR	Mirnyy	84.21	190⇓	iP	P	22 31 18.0 +2.5
MIR				e		22 31 31.0
MIR				e		22 34 33.0
MIR				eS	S	22 41 40.0 +3.1
MIR				ePS	PnS	22 42 42.0 +6.5
MIR				pmax	pmax	
	comp=Z,2μm,4.0s					
MIR				pmax	pmax	
	comp=Z,352nm,1.2s					
THR3	Thira Island,	84.24	306	P	P	22 31 15.2 -1.3
THR3	Thira Island,	84.24	306	P	P	22 31 15.2 -1.3
VTS	Vitosha	84.25	312⇑	iP	P	22 31 16.6 0.0
VTS	Vitosha	84.25	312	eP	P	22 31 16.6 0.0
	comp=Z,318nm,1.2s					
VTS	Vitosha	84.25	312	iP	P	22 31 16.0 -0.6
VTS	Vitosha	84.25	312	P	P	22 31 16.6 0.0
VTS	Vitosha	84.25	312	eP	P	22 31 16.6 0.0
VTS				pmax	pmax	
	comp=Z,318nm,1.2s					
NIE	Niedzica	84.27	320	eP	P	22 31 17.0 +0.5
NIE				eS	S	22 41 38.3 -0.4
NIE				LMZ	LR	23 14 34.3
	comp=Z,5μm,17.4s					
NIE	Niedzica	84.27	320	P	P	22 31 16.7 +0.3
NIE				pmax	pmax	
	comp=Z,94nm,1.1s					
SIRR	Siria	84.30	316⇑	iP	P	22 31 17.0 +0.4
OJC	Ojcow	84.34	320	eP	P	22 31 16.8 +0.1
OJC				eS	S	22 41 37.5 -1.9
OJC				LMZ	LR	23 11 21.0
	comp=Z,7μm,17.1s					
OJC	Ojcow	84.34	320	eP	P	22 31 16.8 +0.1
	comp=Z,245nm,1.0s					
OJC	Ojcow	84.34	320⇑	eP	P	22 31 16.8 +0.1
OJC				eS	S	22 41 37.4 -1.9
OJC				MLR	MLR	
	comp=Z,7μm,17.1s					
HFS	Hagfors	84.36	331	P	P	22 31 15.8 -0.8
	comp=Z,66nm,0.7s,baz=75,slow=6.1,SNR=111					
HFS				LR	LR	23 12 04.7
	comp=Z,6μm,18.5s,baz=63,slow=38					
SRS	Serrai	84.37	311	P	P	22 31 15.9 -1.2
SRS	Serrai	84.37	311	P	P	22 31 15.9 -1.2
SRS	Serrai	84.37	311	P	P	22 31 16.5 -0.6
SRS				pmax	pmax	
	comp=Z,128nm,1.2s					
NPS	Neapolis	84.37	305	P	P	22 31 17.6 +0.4
NPS	Neapolis	84.37	305	P	P	22 31 17.6 +0.4
NPS	Neapolis	84.37	305	P	P	22 31 17.6 +0.4
KECS	Kecovo	84.42	319	eP	P	22 31 18.2 +1.0
KECS				pmax	pmax	
	comp=Z,95nm,1.1s					
KECS	Kecovo	84.42	319	eP	P	22 31 18.2 +1.0
LAST	Lasithi	84.50	305	P	P	22 31 18.3 +0.3
LAST	Lasithi	84.50	305	P	P	22 31 18.3 +0.3
BZS	Buzias	84.51	316⇑	iP	P	22 31 17.3 -0.4
BZS	Buzias	84.51	316	P	P	22 31 17.1 -0.6
BZS				pmax	pmax	
	comp=Z,101nm,1.8s					
KKB	Krupnik	84.53	312	iP	P	22 31 17.0 -0.9
SOH	Sokhos	84.62	311	P	P	22 31 17.4 -1.0
SOH	Sokhos	84.62	311	P	P	22 31 17.4 -1.0
SOH	Sokhos	84.62	311	P	P	22 31 18.4 0.0
SOH				pmax	pmax	
	comp=Z,61nm,1.7s					
PAIG	Paliouri	84.62	310	P	P	22 31 17.4 -1.0
PAIG	Paliouri	84.62	310	P	P	22 31 17.4 -1.0
PAIG	Paliouri	84.62	310	P	P	22 31 17.4 -1.0
DAG	Danmarks Havn	84.64	351⇑	iP	P	22 31 16.5 -1.2
	comp=Z,207nm,0.9s					
	comp=Z,4μm,19.0s					
DAG	Danmarks Havn	84.64	351	P	P	22 31 16.3 -1.4
DAG				pmax	pmax	
	comp=Z,266nm,1.0s					
TBLU	Trondheim	84.66	335	eP	P	22 31 15.6 -2.5
PLG	Polygyros	84.67	310	P	P	22 31 17.6 -1.1
PLG	Polygyros	84.67	310	P	P	22 31 17.6 -1.1
PLG	Polygyros	84.67	310	P	P	22 31 17.6 -1.1
MDVR	Moldovita	84.68	315⇑	iP	P	22 31 18.7 0.0
TIM	Timisoara	84.74	316⇑	iP	P	22 31 19.4 +0.6
BESE	Bessie Mountai	84.75	30	eP	P	22 31 20.2 +1.5
	comp=Z,405nm,1.7s					
KNT	Kendrikon	84.86	311	P	P	22 31 18.5 -1.1
KNT	Kendrikon	84.86	311	P	P	22 31 18.5 -1.1
KNT	Kendrikon	84.86	311	P	P	22 31 18.5 -1.1
HORT	Hortiatis	84.87	311	P	P	22 31 18.3 -1.4
HORT	Hortiatis	84.87	311	P	P	22 31 18.3 -1.4
LANS	Liptovska Anna	84.87	320	eP	P	22 31 20.2 +0.7
LANS	Liptovska Anna	84.87	320	eP	P	22 31 20.2 +0.7
GKP	Gorka Klasztor	84.90	324	eP	P	22 31 19.1 -0.3
GKP				eS	S	22 41 42.8 -1.8
GKP				LMZ	LR	23 11 09.9
	comp=Z,15μm,19.3s					
GKP	Gorka Klasztor	84.90	324	eP	P	22 31 19.1 -0.3
GKP				eS	S	22 41 42.8 -1.8
GKP				MLR	MLR	
	comp=Z,15μm,19.3s					
BANR	Banloc	84.90	316⇑	iP	P	22 31 20.2 +0.6
IDI	Anoyia	84.93	305⇑	iP	P	22 31 20.0 -0.1
IDI	Anoyia	84.93	305	eP	P	22 31 19.8 -0.4
	comp=Z,183nm,1.2s					
THE	Thessaloniki	84.96	311	P	P	22 31 18.6 -1.4
THE	Thessaloniki	84.96	311	P	P	22 31 18.6 -1.4
THE	Thessaloniki	84.96	311	P	P	22 31 18.6 -1.4
PSZ	Piszkesteto	84.97	318⇑	iP	P	22 31 20.1 0.0
PSZ	Piszkesteto	84.97	318⇑	eP	P	22 31 20.0 0.0
PSZ	Piszkesteto	84.97	318	eP	P	22 31 19.8 -0.3
	comp=Z,210nm,1.1s					
PSZ	Piszkesteto	84.97	318	eP	P	22 31 19.8 -0.3
PSZ				pmax	pmax	
	comp=Z,210nm,1.1s					
VAY	Valandovo	85.05	311	P	P	22 31 19.7 -0.8
VAY	Valandovo	85.05	311	P	P	22 31 19.7 -0.8
VAY	Valandovo	85.05	311	iP	P	22 31 19.6 -0.8
VAY	Valandovo	85.05	311	P	P	22 31 19.7 -0.8
SIVA	Sivas	85.07	305	P	P	22 31 20.8 +0.1
SIVA	Sivas	85.07	305	P	P	22 31 20.8 +0.1
JIS	Juneau Island	85.09	31	eP	P	22 31 22.7 +2.4
	comp=Z,427nm,1.8s					
NC602	NORSAR Array S	85.12	332	eP	P	22 31 18.4 -2.0
NB2	NORSAR Subarra	85.15	332	P	P	22 31 18.8 -1.8
	comp=Z,224nm,1.2s,baz=65,slow=4.6					
NB2	NORSAR Subarra	85.15	332	P	P	22 31 18.8 -1.8
	baz=65,slow=4.6					
NOA	NORSAR Array B	85.15	332	P	P	22 31 19.9 -0.7
NOA				LR	LR	23 11 51.2
	comp=Z,8μm,19.2s,baz=65,slow=37					
STIP	Stip	85.22	312	iP	P	22 31 19.0 -2.4
GRG	Griva	85.28	311	P	P	22 31 20.5 -1.2
GRG	Griva	85.28	311	P	P	22 31 20.5 -1.2
GRG	Griva	85.28	311	P	P	22 31 20.5 -1.2
FYTO	Fytoko, Volos	85.31	309	P	P	22 31 19.9 -2.0
FYTO	Fytoko, Volos	85.31	309	P	P	22 31 19.9 -2.0
RAC	Raciborz	85.36	321	eP	P	22 31 22.3 +0.4
RAC				eS	S	22 41 49.8 +0.4
RAC				MLR	MLR	
	comp=Z,6μm,18.8s					
VAM	Vamos	85.44	305	P	P	22 31 22.9 +0.3
VAM	Vamos	85.44	305	P	P	22 31 22.9 +0.3
VAM	Vamos	85.44	305	P	P	22 31 22.9 +0.3
LIT	Litokhoron	85.45	310	eP	P	22 31 21.2 -1.4
	comp=Z,301nm,1.2s					
LIT	Litokhoron	85.45	310	P	P	22 31 21.1 -1.5
LIT	Litokhoron	85.45	310	eP	P	22 31 21.2 -1.4
LIT				pmax	pmax	
	comp=Z,301nm,1.2s					
VYHS	Vyhne	85.47	319	eP	P	22 31 22.6 +0.1
VYHS				pmax	pmax	
	comp=Z,155nm,1.3s					
VYHS	Vyhne	85.47	319	eP	P	22 31 22.6 +0.1
OKC	Ostrava-Krasne	85.47	320	eP	P	22 31 23.0 +0.6
OKC				ex	x	22 31 38.3
OKC				ePP	PP	22 34 42.8 +2.0
OKC				eSKS	S	22 41 45.1 -5.4
OKC				AMS	AMS	23 11 40.0
	comp=Z,6μm,15.9s					
OKC	Ostrava-Krasne	85.47	320	eP	P	22 31 23.0 +0.6
OKC				e		22 31 38.3
OKC				e		22 34 42.8
OKC				e		22 41 45.1
OKC				MLR	MLR	
	comp=Z,6μm,15.9s					
LKR	Lokris	85.48	309	P	P	22 31 20.5 -2.2
LKR	Lokris	85.48	309	P	P	22 31 20.5 -2.2
BSD	Bornholm Skovb	85.55	326⇑	iP	P	22 31 21.9 -0.8
	comp=Z,299nm,1.1s					
IMMV	Iera Moni Meta	85.60	305	P	P	22 31 23.5 +0.1
DID	Didima	85.62	308	P	P	22 31 20.8 -2.7
DID	Didima	85.62	308	P	P	22 31 20.8 -2.7
BUD	Budapest	85.66	318⇑	eP	P	22 31 23.3 -0.1
DOMB	Dombas	85.67	334	iP	P	22 31 22.5 -0.7
SKO	Skopje	85.68	312	P	P	22 31 23.0 -0.6
SKO	Skopje	85.68	312	P	P	22 31 23.0 -0.6
SKO	Skopje	85.68	312	iP	P	22 31 23.2 -0.5
SKO	Skopje	85.68	312	P	P	22 31 23.0 -0.6
GVD	Gavdhos	85.69	305	P	P	22 31 22.7 -1.1
GVD	Gavdhos	85.69	305	P	P	22 31 22.7 -1.1
OSL	Oslo	85.81	331	eP	P	22 31 23.2 -0.7
MORC	Moravsky Berou	85.86	321⇑	iP	P	22 31 24.8 +0.4
MORC	Moravsky Berou	85.86	321	eP	P	22 31 24.6 +0.2
	comp=Z,890nm,1.2s					
MORC	Moravsky Berou	85.86	321	eP	P	22 31 24.6 +0.2
MORC				pmax	pmax	
	comp=Z,890nm,1.2s					
MORC	Moravsky Berou	85.86	321⇑	iP	P	22 31 24.6 +0.2
MORC				ePP	PP	22 34 46.7 +2.6
MORC				eSKS	S	22 41 46.9 -7.6
AGG	Agios Georgios	85.88	309	eP	P	22 31 22.8 -1.9
	comp=Z,408nm,1.0s					
AGG	Agios Georgios	85.88	309	P	P	22 31 22.5 -2.2
AGG	Agios Georgios	85.88	309	eP	P	22 31 22.8 -1.9
AGG				pmax	pmax	
	comp=Z,408nm,1.0s					
DSF	Desfina	85.90	309	P	P	22 31 22.4 -2.5
DSF	Desfina	85.90	309	P	P	22 31 22.4 -2.5
KZN	Kozani	85.92	311	P	P	22 31 23.1 -1.9
KZN	Kozani	85.92	311	P	P	22 31 23.1 -1.9
KZN	Kozani	85.92	311	P	P	22 31 23.1 -1.9
THL	Klokotos Trika	85.96	310	P	P	22 31 22.6 -2.4
SRO2	Moca	85.98	318	eP	P	22 31 24.8 -0.2
SRO2	Moca	85.98	318	eP	P	22 31 24.8 -0.2
BIA	Bitola	86.04	311	iP	P	22 31 25.2 -0.3
DIVS	Divibare	86.06	315	eP	P	22 31 24.9 -0.7
	comp=Z,150nm,1.2s					
FNA	Florina	86.07	311	eP	P	22 31 24.1 -1.6
	comp=Z,157nm,1.0s					
FNA	Florina	86.07	311	P	P	22 31 23.9 -1.8
FNA	Florina	86.07	311	eP	P	22 31 24.1 -1.6
FNA				pmax	pmax	
	comp=Z,157nm,1.0s					
MOL	Molde	86.08	335⇑	iP	P	22 31 23.8 -1.3
JAVC	Velka Javorina	86.08	320⇑	iP	P	22 31 27.0 +1.4
JAVC				ePP	PP	22 34 49.8 +3.9
GUR	Goura	86.18	308	P	P	22 31 24.4 -1.9
GUR	Goura	86.18	308	P	P	22 31 24.4 -1.9
CSKK	Cs~‡kako	86.19	318⇑	eP	P	22 31 26.2 +0.1
KRLC	Kraliky	86.23	321	eP	P	22 31 26.8 +0.6
KRLC				ex	x	22 31 30.5
KRLC	Kraliky	86.23	321	eP	P	22 31 26.8 +0.6
SERG	Sergoula	86.25	309	P	P	22 31 25.4 -1.2
TRIZ	Trizonia	86.26	309	P	P	22 31 24.4 -2.1
KSP	Ksiaz	86.26	322	eP	P	22 31 26.7 +0.4
KSP				eS	S	22 42 00.0 +1.8
KSP				LMZ	LR	23 12 11.6
	comp=Z,8μm,20.2s					
KSP	Ksiaz	86.26	322	eP	P	22 31 26.7 +0.4
KSP				eS	S	22 42 00.0 +1.8
KSP				MLR	MLR	
	comp=Z,8μm,20.2s					
KLV	Kalavryta, Ach	86.29	308	P	P	22 31 25.1 -1.7
KLV	Kalavryta, Ach	86.29	308	P	P	22 31 25.1 -1.7
EVR	Evrytania	86.30	309	P	P	22 31 25.1 -1.8
EVR	Evrytania	86.30	309	P	P	22 31 25.1 -1.8
ANX	Ano Chora	86.31	309	P	P	22 31 25.5 -1.4
VLX	Vl

MODS	**Modra-Piesok**	**86.49 319**	*e*P	**P**	**22 31 26.6**	**-0.9**
MODS	**Modra-Piesok**	**86.49 319**	*e*S	**S**	**22 41 57.5**	**-3.1**
MODS			*e*L	L	23 15 47.8	
IVA	**Berane**	**86.50 313**	*e*P	**P**	**22 31 27.0**	**-0.8**
DYR	**Agios Nikonas**	**86.52 307**	P	**P**	**22 31 26.8**	**-1.1**
BCI	**Bajram Curri**	**86.53 313**	*i* P	**P**	**22 31 31.6**	**+3.7**
PVY	**Plav**	**86.54 313**	*e*P	**P**	**22 31 27.1**	**-1.0**
UPC	**Upice**	**86.54 322**	*e*P	**P**	**22 31 28.2**	**+0.5**
UPC			*e*PP	**PP**	**22 34 49.7**	**+0.2**
UPC			*e*SKS	**SKSac**	**22 41 52.5**	**+1.7**
UPC			AMS	AMS	23 12 10.0	
	comp=Z,7μm,18.2s					
UPC	**Upice**	**86.54 322**	*e*P	**P**	**22 31 28.2**	**+0.5**
UPC			*e*		22 34 49.7	
UPC			*e*		22 41 52.5	
UPC			MLR	MLR		
	comp=Z,7μm,18.2s					
KBN	**Korca**	**86.55 311**	P	**P**	**22 31 26.3**	**-1.7**
KBN	**Korca**	**86.55 311**	P	**P**	**22 31 26.3**	**-1.7**
KBN	**Korca**	**86.55 311**	*i* P	**P**	**22 31 28.0**	**-0.1**
KBN	**Korca**	**86.55 311**	P	**P**	**22 31 26.3**	**-1.7**
PVO	**Paravola**	**86.59 309**	P	**P**	**22 31 26.8**	**-1.4**
VRAC	**Vranov**	**86.60 320**	⇑*i*P	**P**	**22 31 28.7**	**+0.7**
VRAC	**Vranov**	**86.60 320**	⇑*i*P	**P**	**22 31 28.6**	**+0.6**
VRAC			*e*PP	**PP**	**22 34 53.1**	**+3.1**
VRAC			*e*SKS	**SKSac**	**22 41 52.0**	**+0.8**
RGN	**Rugen**	**86.62 326**	*e*P	**P**	**22 31 29.6**	**+1.6**
	comp=Z,109nm,1.0s					
DRO	**Drossia**	**86.65 308**	P	**P**	**22 31 27.9**	**-0.6**
COP	**Copenhagen**	**86.66 327**	⇑*i*P	**P**	**22 31 27.8**	**-0.3**
ZST	**Bratislava**	**86.66 319**	*e*P	**P**	**22 31 27.3**	**-1.0**
ZST			pmax	pmax		
	comp=Z,12nm,1.3s					
ZST	**Bratislava**	**86.66 319**	*e*P	**P**	**22 31 27.3**	**-1.0**
ITM	**Ithomi**	**86.71 308**	*e*P	**P**	**22 31 28.1**	**-0.7**
	comp=Z,756nm,1.4s					
ITM	**Ithomi**	**86.71 308**	P	**P**	**22 31 27.8**	**-1.0**
PLE	**Pljevlja**	**86.71 314**	⇑*i*P	**P**	**22 31 28.4**	**-0.5**
JMIC	**Jan Mayen**	**86.75 345**	*e*P	**P**	**22 31 28.1**	**-0.3**
PUK	**Puka**	**86.76 313**	*i* P	**P**	**22 31 29.6**	**+0.5**
DSL	**Palaion Diasel**	**86.76 310**	P	**P**	**22 31 27.6**	**-1.5**
DSL	**Palaion Diasel**	**86.76 310**	P	**P**	**22 31 27.6**	**-1.5**
AMT	**Artemida-Makis**	**86.77 308**	P	**P**	**22 31 27.9**	**-1.3**
KOME	**Kolasin**	**86.77 314**	⇑*i*P	**P**	**22 31 28.6**	**-0.5**
CRAG	**Craig**	**86.80 33**	*e*P	**P**	**22 31 30.2**	**+1.4**
	comp=Z,124nm,1.1s					
RLS	**Riolos of Patr**	**86.80 308**	P	**P**	**22 31 28.6**	**-0.6**
RLS	**Riolos of Patr**	**86.80 308**	P	**P**	**22 31 28.6**	**-0.6**
KRUC	**Moravsky**	**86.81 320**	⇑*i*P	**P**	**22 31 29.3**	**+0.3**
KRUC			*e*PP	**PP**	**22 34 56.0**	**+4.3**
KRUC			*e*SKS	**SKSac**	**22 41 52.4**	**0.0**
WRAK	**Wrangell Islan**	**86.82 32**	*e*P	**P**	**22 31 29.7**	**+0.8**
	comp=Z,258nm,1.7s					
WRAK			LR	LR		
	comp=Z,2μm,20.0s					
PDO	**Prodromos**	**86.86 309**	P	**P**	**22 31 28.2**	**-1.3**
LLD	**Lille Linde**	**86.91 327**	*i* P	**P**	**22 31 29.7**	**+0.4**
PYL	**PYLOS**	**86.93 307**	P	**P**	**22 31 28.1**	**-1.8**
PYL	**PYLOS**	**86.93 307**	P	**P**	**22 31 28.1**	**-1.8**
TIR	**Tirane**	**86.99 312**	⇑*i*P	**P**	**22 31 29.4**	**-0.7**
TIR	**Tirane**	**86.99 312**	*e*P	**P**	**22 31 29.9**	**-0.2**
	comp=Z,317nm,1.2s					
TIR	**Tirane**	**86.99 312**	*i* P	**P**	**22 31 30.9**	**+0.8**
TIR	**Tirane**	**86.99 312**	*e*P	**P**	**22 31 29.9**	**-0.2**
TIR			pmax	pmax		
	comp=Z,317nm,1.2s					
PDG	**Podgorica**	**87.09 313**	⇑*i*P	**P**	**22 31 30.1**	**-0.4**
TTG	**Podgorica**	**87.09 313**	⇑*i*P	**P**	**22 31 30.1**	**-0.4**
TTG	**Podgorica**	**87.09 313**	*e*P	**P**	**22 31 29.5**	**-1.0**
	comp=Z,189nm,1.0s					
TTG	**Podgorica**	**87.09 313**	*e*P	**P**	**22 31 29.5**	**-1.0**
TTG			pmax	pmax		
	comp=Z,189nm,1.0s					
UPM	**Unac-Piva**	**87.09 314**	⇑*i*P	**P**	**22 31 30.1**	**-0.7**
RAR	**Rarotonga**	**87.09 113**	LR	LR	23 06 14.7	
	comp=Z,2μm,20.2s,baz=296,slow=33					
DLBC	**Dease Lake**	**87.13 30**	P	**P**	**22 31 31.5**	**+1.0**
	comp=Z,82nm,1.1s,baz=299,slow=3.8,SNR=47					
DLBC	**Dease Lake**	**87.13 30**	*e*P	**P**	**22 31 31.8**	**+1.3**
	comp=Z,272nm,1.4s					
NKY	**Niksic**	**87.15 314**	⇑*i*P	**P**	**22 31 30.5**	**-0.5**
SOP	**Sopron**	**87.17 319**	⇑*e*P	**P**	**22 31 30.7**	**-0.1**
SOP	**Sopron**	**87.17 319**	P	**P**	**22 31 31.0**	**+0.1**
SOP			pmax	pmax		
	comp=Z,91nm,1.4s					
LKD2	**Lefkada island**	**87.19 309**	P	**P**	**22 31 29.8**	**-1.4**
LKD2	**Lefkada island**	**87.19 309**	P	**P**	**22 31 29.8**	**-1.4**
NKME	**Niksic**	**87.19 314**	⇑*i*P	**P**	**22 31 30.4**	**-0.7**
DRME	**Dracevica, Mon**	**87.21 313**	⇑*i*P	**P**	**22 31 30.5**	**-0.7**
ULC	**Ulcinj**	**87.24 313**	⇑*i*P	**P**	**22 31 31.2**	**-0.1**
SGD	**Sagiada**	**87.25 310**	P	**P**	**22 31 30.0**	**-1.4**
CEME	**Cevo**	**87.29 313**	⇑*i*P	**P**	**22 31 30.6**	**-1.0**
HYA	**Hoyanger**	**87.29 334**	*e*P	**P**	**22 31 30.6**	**-0.4**
KFL	**Anninata**	**87.30 309**	P	**P**	**22 31 30.6**	**-1.1**
FSK	**Fiskardo**	**87.36 309**	P	**P**	**22 31 30.2**	**-1.7**
BUM	**Brajici-Budva**	**87.38 313**	⇑*i*P	**P**	**22 31 31.7**	**-0.4**
RES	**Resolute Bay**	**87.39 9**	P	**P**	**22 31 31.2**	**0.0**
	comp=Z,138nm,0.9s,baz=318,slow=5.1,SNR=165					
RES			PKKPbc	**PKKPbc**	**22 49 22.0**	**-1.5**
	comp=Z,3.4nm,1.0s,baz=164,slow=3.3,SNR=4.7					
RES	**Resolute Bay**	**87.39 9**	*e*P	**P**	**22 31 31.3**	**0.0**
	comp=Z,246nm,1.0s					
RES			PKKPbc	**PKKPbc**	**22 49 22.0**	**-1.5**
RES	**Resolute Bay**	**87.39 9**	*e*P	**P**	**22 31 31.3**	**0.0**
RES			pmax	pmax		
	comp=Z,246nm,1.0s					
PVCC	**Panska Ves**	**87.40 322**	*e*P	**P**	**22 31 32.1**	**+0.2**
PVCC			*e*x	x	22 31 36.2	
PVCC	**Panska Ves**	**87.40 322**	*e*P	**P**	**22 31 32.1**	**+0.2**
VLS	**Valsamata**	**87.43 309**	P	**P**	**22 31 31.0**	**-1.3**
VLS	**Valsamata**	**87.43 309**	P	**P**	**22 31 31.0**	**-1.3**
VLS	**Valsamata**	**87.43 309**	P	**P**	**22 31 31.0**	**-1.3**
BRY	**Bratogost**	**87.44 314**	⇑*i*P	**P**	**22 31 31.6**	**-0.8**
BEHE	**Becsehely**	**87.45 318**	⇑*e*P	**P**	**22 31 32.3**	**+0.1**
GOPC	**GO Pecny, Ondr**	**87.49 321**	*e*P	**P**	**22 31 32.7**	**+0.3**
GOPC			*e*x	x	22 31 37.0	
GOPC			*e*PP	**PP**	**22 34 58.6**	**+1.5**
GOPC			AMS	AMS	23 12 40.0	
	comp=Z,6μm,18.3s					
GOPC	**GO Pecny, Ondr**	**87.49 321**	*e*P	**P**	**22 31 32.7**	**+0.3**
GOPC			*e*		22 34 58.6	
GOPC			MLR	MLR		
	comp=Z,6μm,18.3s					
CONA	**Conrad Observa**	**87.53 319**	*i* PcP	**P**	**22 31 32.7**	**0.0**
	comp=Z,146nm,1.4s,SNR=92					
CONA			*e*PKKPdf	**PKKPdf**	**22 49 13.6**	**-2.2**
	comp=Z,2.9nm,1.2s					
KEK	**Kerkira**	**87.54 310**	P	**P**	**22 31 31.4**	**-1.4**
KEK	**Kerkira**	**87.54 310**	P	**P**	**22 31 31.4**	**-1.4**
HCY	**Herceg Novi**	**87.62 313**	⇑*i*P	**P**	**22 31 32.6**	**-0.5**
BRG	**Berggiesshubel**	**87.64 322**	⇑*i*P	**P**	**22 31 32.9**	**-0.1**
	comp=Z,270nm,1.3s					
BRG			PP	**PP**	**22 34 55.0**	**-3.3**
BRG			S	**S**	**22 42 13.0**	**+1.5**
BRG			SS	**SS**	**22 47 48.0**	**-10**
BRG			*i* PKKP	**PKKPdf**	**22 49 15.5**	**0.0**
	comp=Z,16nm,1.8s					
BRG			*e*PKPPKP	P'P'df	22 57 22.3	-8.7
	comp=Z,13nm,1.8s					
	comp=N,4μm,19.4s					
	comp=E,5μm,18.0s					
	comp=Z,7μm,18.0s					
BRG	**Berggiesshubel**	**87.64 322**	⇑*i*P	**P**	**22 31 32.9**	**-0.1**
BRG					22 34 55.0	
BRG			S	**S**	**22 42 13.0**	**+1.5**
BRG			pmax	pmax		
	comp=Z,270nm,1.3s					
BRG			MLR	MLR		
	comp=N,4μm,19.4s					
BRG			MLR	MLR		
	comp=E,5μm,18.0s					
BRG			MLR	MLR		
	comp=Z,7μm,18.0s					
PRA	**Prague**	**87.64 322**	*e*P	**P**	**22 31 34.8**	**+1.7**
PRA			*e*PP	**PP**	**22 35 00.6**	**+2.3**
PRA			*e*SKS	**S**	**22 42 10.6**	**-1.0**
PRA			AMS	AMS	23 13 00.0	
	comp=Z,7μm,17.6s					
PRA	**Prague**	**87.64 322**	*e*P	**P**	**22 31 34.8**	**+1.7**
PRA			*e*		22 35 00.6	
PRA			*e*		22 42 10.6	
PRA			MLR	MLR		
	comp=Z,7μm,17.6s					
ODD1	**Odda**	**87.68 332**	*e*P	**P**	**22 31 32.7**	**-0.4**
BLY	**Banja Luka**	**87.76 316**	⇑*i*P	**P**	**22 31 33.8**	**+0.1**
BLY	**Banja Luka**	**87.76 316**	*e*P	**P**	**22 31 33.2**	**-0.5**
	comp=Z,122nm,1.3s					
SUE	**Sulen**	**87.96 334**	*e*P	**P**	**22 31 35.7**	**+1.4**
ARSA	**Arzberg**	**87.98 319**	*i* P	**P**	**22 31 34.6**	**-0.2**
	comp=Z,85nm,1.4s,SNR=57					
BLS5	**Blasjo**	**87.99 332**	*e*P	**P**	**22 31 34.4**	**-0.1**
MUD	**Monsted U'grnd**	**88.01 329**	⇑*i*P	**P**	**22 31 34.0**	**-0.6**
	comp=Z,103nm,1.1s					
	comp=Z,8μm,17.0s					
CLL	**Collm**	**88.03 323**	⇑*i*P	**P**	**22 31 34.2**	**-0.6**
	comp=Z,242nm,1.6s					
CLL			*i* sP	**pP**	**22 31 47.8**	**-0.5**
CLL			*e*PP	**PP**	**22 35 00.0**	**-1.4**
CLL			*e*PPP	PPP	22 37 00.0	
CLL			*e*S	**S**	**22 42 14.0**	**-1.2**
CLL			*e*SP	**SPn**	**22 43 16.0**	**+0.5**
CLL			*e*SS	SS	22 48 18.0	+15
CLL			*e*PKKPbc	**PKKPbc**	**22 49 20.0**	**-1.3**
CLL			*e*SSS	SSS	22 51 48.0	
CLL			*e*		22 52 54.0	
CLL			*e*SSSS		22 54 48.0	
CLL			*e*PKPPKPd	P'P'df	22 57 21.0	-9.3
CLL			Lm	MLR	23 13 00.0	
	comp=Z,6μm,19.7s					
CLL	**Collm**	**88.03 323**	*e*P	**P**	**22 31 34.2**	**-0.6**
	comp=Z,212nm,1.5s					
CLL	**Collm**	**88.03 323**	⇑*i*P	**P**	**22 31 34.2**	**-0.6**
CLL			*i*		22 31 47.8	
CLL			*e*S	**S**	**22 42 14.0**	**-1.2**
CLL			pmax	pmax		
	comp=Z,242nm,1.6s					
CLL			MLR	MLR		
	comp=Z,6μm,19.7s					
BER	**Bergen**	**88.03 333**	*e*P	**P**	**22 31 35.0**	**+0.4**
DIB	**Dawson Inlet,**	**88.03 35**	*e*P	**P**	**22 31 36.2**	**+1.4**
	comp=Z,210nm,1.4s					
H02S1	**DAWSON INLET T**	**88.03 35**	P	**P**	**22 31 35.7**	**+0.9**
	SNR=11					
ASK	**Askoy**	**88.05 333**	*e*P	**P**	**22 31 34.0**	**-0.7**
SNART	**Snartemo**	**88.14 331**	*e*P	**P**	**22 31 35.8**	**+0.6**
PERS	**Pernice**	**88.46 318**	*i* P	**P**	**22 31 36.5**	**-0.6**
SOKA	**Soboth**	**88.50 318**	*i* P	**P**	**22 31 37.0**	**-0.4**
	comp=Z,45nm,1.2s,SNR=50					
SOKA			*e*PKKPdf	**PKKPdf**	**22 49 12.0**	**-2.1**
	comp=Z,2.8nm,1.3s					
KHC	**Kasperske Hory**	**88.51 321**	*e*P	**P**	**22 31 37.2**	**-0.1**
KHC			*e*x	x	22 31 41.4	
KHC			*e*x	x	22 32 23.5	
KHC			*e*PP	**PP**	**22 35 04.4**	**-1.0**
KHC			*e*SKS	S	22 42 00.5	-19
KHC			AMS	AMS	23 13 30.0	
	comp=Z,6μm,16.6s					
KHC	**Kasperske Hory**	**88.51 321**	*e*P	**P**	**22 31 37.1**	**-0.2**
	comp=Z,71nm,1.5s					
KHC	**Kasperske Hory**	**88.51 321**	*e*P	**P**	**22 31 37.2**	**-0.1**
KHC			*e*		22 35 04.4	
KHC			*e*		22 42 00.5	
KHC			MLR	MLR		
	comp=Z,6μm,16.6s					
GEC2	**GERESS Array S**	**88.54 321**	*e*P	**P**	**22 31 37.4**	**-0.1**
	comp=Z,179nm,1.3s					
GEC2	**GERESS Array S**	**88.54 321**	*e*P	**P**	**22 31 37.4**	**-0.1**
GEC2			pmax	pmax		
	comp=Z,179nm,1.3s					
GERES	**GERESS Array B**	**88.54 321**	P	**P**	**22 31 37.3**	**-0.1**
	comp=Z,35nm,1.0s,baz=69,slow=4.4,SNR=146					
GERES			PKKPbc	**PKKPdf**	**22 49 17.1**	**+2.9**
	comp=Z,2.7nm,0.8s,baz=197,slow=2.8,SNR=4.5					
GERES			PKPPKP	**P'P'df**	**22 57 22.8**	**-6.8**
	comp=Z,1.1nm,1.0s,baz=329,slow=0.8,SNR=4.5					
GERES			LR	LR	23 13 47.2	
	comp=Z,5μm,18.6s,baz=58,slow=37					
GEA0	**GERESS Array S**	**88.55 321**	*e*P	**P**	**22 31 36.4**	**-1.1**
STAV	**Stavanger**	**88.56 332**	*e*P	**P**	**22 31 35.9**	**-1.3**
MOA	**Molln**	**88.56 319**	*i* PcP	**P**	**22 31 37.7**	**+0.2**
	comp=Z,176nm,1.1s,SNR=82					
KMY	**Karmoy**	**88.63 332**	*e*P	**P**	**22 31 37.6**	**+0.1**
NKC	**Novy Kostel**	**88.77 322**	*e*P	**P**	**22 31 39.2**	**+0.8**
NKC			*e*x	x	22 31 43.1	
NKC			AMS	AMS	23 13 40.0	
	comp=Z,7μm,17.8s					
NKC	**Novy Kostel**	**88.77 322**	*e*P	**P**	**22 31 39.2**	**+0.8**
NKC			MLR	MLR		
	comp=Z,7μm,17.8s					
BOJS	**Bojanci**	**88.78 317**	*e*P	**P**	**22 31 38.5**	**0.0**
BOJS			*e*SKSac	**SKSac**	**22 42 01.4**	**-3.1**
BOJS			*e*S	**S**	**22 42 21.4**	**-1.2**
OBKA	**Obir**	**88.87 318**	*i* P	**P**	**22 31 38.7**	**-0.4**
	comp=Z,47nm,1.1s,SNR=25					
WET	**Wettzell**	**88.93 321**	P	**P**	**22 31 39.3**	**+0.1**
WET			pmax	pmax		
	comp=Z,78nm,1.4s					
VISS	**Visnje**	**88.94 317**	*e*P	**P**	**22 31 39.1**	**-0.2**
VISS			*e*SKSac	**SKSac**	**22 42 02.0**	**-3.5**
VISS			*e*S	**S**	**22 42 20.6**	**-3.5**
MBAR	**Mbarara**	**89.07 269**	*e*P	**P**	**22 31 42.3**	**+1.6**
	comp=Z,90nm,1.3s					
MBAR			LR	LR		
	comp=Z,377nm,21.0s					
MBAR	**Mbarara**	**89.07 269**	*e*P	**P**	**22 31 42.3**	**+1.6**
MBAR			pmax	pmax		
	comp=Z,90nm,1.3s					
MBAR			MLR	MLR		
	comp=Z,377nm,21.0s					
MOX	**Moxa**	**89.09 323**	P	**P**	**22 31 39.8**	**-0.1**
MOX			pmax	pmax		
	comp=Z,82nm,2.0s					
MYKA	**Terra Mystica**	**89.41 319**	*i* P	**P**	**22 31 40.9**	**-0.6**
	comp=Z,31nm,1.1s,SNR=13					
MYKA			*e*PKKPbc	**PKKPbc**	**22 49 15.5**	**-2.4**
	comp=Z,3.0nm,1.0s					
JAVS	**Javornik**	**89.41 318**	*e*P	**P**	**22 31 40.9**	**-0.7**
JAVS			*e*SKSac	**SKSac**	**22 42 05.4**	**-3.1**
JAVS			*e*S	**S**	**22 42 26.4**	**-2.3**
KBA	**Koelnbreinsper**	**89.43 319**	*i* P	**P**	**22 31 41.0**	**-0.8**
	comp=Z,74nm,1.6s,SNR=23					
KBA	**Koelnbreinsper**	**89.43 319**	P	**P**	**22 31 41.2**	**-0.6**
KBA			pmax	pmax		
	comp=Z,44nm,0.9s					
MATE	**Matera**	**89.48 312**	⇑*i*P	**P**	**22 31 41.1**	**-0.8**
TRI	**Trieste**	**89.68 318**	*e*P	**P**	**22 31 41.3**	**-1.4**
	comp=Z,48nm,0.9s					
TRI	**Trieste**	**89.68 318**	*e*P	**P**	**22 31 41.3**	**-1.4**
TRI			pmax	pmax		
	comp=Z,48nm,0.9s					
GRF	**Grafenberg Arr**	**89.71 322**	P	**P**	**22 31 44.0**	**+1.2**
GRFO	**Grafenberg**	**89.71 322**	*e*P	**P**	**22 31 43.0**	**+0.2**
	comp=Z,103nm,1.1s					
GRFO	**Grafenberg**	**89.71 322**	*e*P	**P**	**22 31 43.0**	**+0.2**
GRFO			pmax	pmax		
	comp=Z,103nm,1.1s					
ORI	**Oriolo Calabro**	**89.86 312**	P	**P**	**22 31 44.1**	**+0.3**
TIP	**Timpagrande**	**89.94 311**	⇑*i*P	**P**	**22 31 44.2**	**0.0**
TIP	**Timpagrande**	**89.94 311**	*e*P	**P**	**22 31 44.1**	**-0.2**
	comp=Z,196nm,1.3s					
TIP	**Timpagrande**	**89.94 311**	P	**P**	**22 31 44.0**	**-0.2**
KULLO	**Kullorsuaq**	**90.05 359**	*i* P	**P**	**22 31 43.4**	**-0.5**
	comp=Z,187nm,1.2s					
	comp=Z,3μm,17.0s					
ABTA	**Abfaltersbach**	**90.08 319**	*i* P	**P**	**22 31 43.6**	**-1.2**
	comp=Z,100nm,1.3s,SNR=64					
ABTA			*e*PKKPbc	**PKKPbc**	**22 49 15.5**	**-0.8**
	comp=Z,6.0nm,1.4s					
SCO	**Scoresbysund**	**90.17 348**	⇑*i*P	**P**	**22 31 44.2**	**-0.3**
FUR	**Furstenfeldbru**	**90.29 321**	P	**P**	**22 31 45.8**	**+0.2**
CUC	**Castrocucco**	**90.34 312**	*e*P	**P**	**22 31 44.6**	**-1.5**
	comp=Z,52nm,1.1s					
WTTA	**Wattenberg**	**90.43 320**	*i* PcP	**P**	**22 31 46.0**	**-0.5**
	comp=Z,188nm,1.1s,SNR=64					
WTTA			*e*PKKPbc	**PKKPdf**	**22 49 12.8**	**+1.8**
	comp=Z,1.8nm,0.5s					
WATA	**Walderalm**	**90.44 320**	*i* P	**P**	**22 31 45.7**	**-0.8**
	comp=Z,76nm,0.8s,SNR=87					
WATA			*e*PKKPbc	**PKKPbc**	**22 49 14.5**	**-1.0**
	comp=Z,3.7nm,1.1s					
MOTA	**Moosalm**	**90.73 320**	*i* P	**P**	**22 31 46.2**	**-1.7**
	comp=Z,190nm,0.9s,SNR=182					
MOTA			*e*PKKPbc	**PKKPbc**	**22 49 14.4**	**-0.4**
	comp=Z,5.1nm,1.0s					
SOI	**Samo**	**90.84 310**	P	**P**	**22 31 48.3**	**-0.1**
RETA	**Reutte**	**90.89 320**	*i* PcP	**P**	**22 31 48.0**	**-0.4**
	comp=Z,69nm,1.2s,SNR=23					
SUMG	**Summit**	**90.89 354**	⇑*i*P	**P**	**22 31 48.3**	**0.0**
	comp=Z,4μm,17.0s					
SUMG	**Summit**	**90.89 354**	*e*P	**P**	**22 31 48.1**	**-0.2**
	comp=Z,104nm,1.2s					
SUMG	**Summit**	**90.89 354**	*e*P	**P**	**22 31 48.1**	**-0.2**
SUMG			pmax	pmax		
	comp=Z,104nm,1.2s					
CEL	**Celeste**	**90.90 310**	*e*P	**P**	**22 31 48.8**	**+0.1**
	comp=Z,288nm,1.0s					
WIT	**Witteveen**	**90.94 326**	P	**P**	**22 31 51.0**	**+2.6**
WIT			pmax	pmax		
	comp=Z,886nm,1.4s					
FETA	**Feichten**	**91.10 320**	*i* PcP	**P**	**22 31 49.3**	**-0.2**
	comp=Z,252nm,1.0s,SNR=129					
FETA			*e*PKKPbc	**PKKPbc**	**22 49 14.3**	**+0.5**
	comp=Z,12nm,1.2s					
AQU	**L'Aquila**	**91.18 315**	*e*P	**P**	**22 31 49.7**	**-0.2**
	comp=Z,177nm,1.0s					
AQU	**L'Aquila**	**91.18 315**	*e*P	**P**	**22 31 49.7**	**-0.2**
AQU			pmax	pmax		
	comp=Z,177nm,1.0s					
BUG	**Bochum--Univer**	**91.24 325**	P	**P**	**22 31 50.7**	**+0.9**
WTSB	**Winterswijk**	**91.26 325**	*e*P	**P**	**22 31 50.2**	**+0.3**
	comp=Z,416nm,2.0s					
STU	**Stuttgart**	**91.30 322**	*e*P	**P**	**22 31 50.3**	**+0.1**
	comp=Z,181nm,1.1s					
STU	**Stuttgart**	**91.30 322**	*e*P	**P**	**22 31 50.3**	**+0.1**
STU			pmax	pmax		
	comp=Z,181nm,1.1s					
YKW3	**Yellowknife Ar**	**91.44 22**	*e*P	**P**	**22 31 49.5**	**-1.1**
YKA	**Yellowknife Ar**	**91.48 22**	P	**P**	**22 31 51.0**	**+0.3**
	comp=Z,64nm,0.9s,baz=314,slow=4.6,SNR=138					
YKA			PKKPbc	**PKKPbc**	**22 49 11.1**	**-2.0**
	comp=Z,4.0nm,0.7s,baz=129,slow=2.6,SNR=14					
YKA			PKPPKP	**P'P'df**	**22 57 18.4**	**-4.9**
	comp=Z,1.2nm,0.8s,baz=147,slow=1.5,SNR=3.9					
YKA			LR	LR	23 15 28.1	
	comp=Z,190nm,20.6s,baz=306,slow=37					
DAVA	**Damuels**	**91.51 320**	*i* PcP	**P**	**22 31 51.2**	**-0.3**
	comp=Z,154nm,1.2s,SNR=46					
DAVA			*e*PKKPbc	**PKKPbc**	**22 49 11.2**	**-1.6**
	comp=Z,14nm,1.8s					
FUORN	**Ofenpass-Fuorn**	**91.55 319**	*e*P	**P**	**22 31 51.9**	**+0.1**
	comp=Z,291nm,1.0s					
BFO	**Black Forest**	**92.01 322**	*e*P	**P**	**22 31 53.1**	**-0.4**
BFO			LR	LR		
	comp=Z,6μm,19.0s					
BFO	**Black Forest**	**92.01 322**	*i* P	**P**	**22 31 53.5**	**-0.1**
SLE	**Schleitheim**	**92.16 321**	P	**P**	**22 31 54.5**	**+0.2**
SLE			pmax	pmax		
	comp=Z,162nm,1.1s					
TUE	**Stuetta**	**92.19 320**	*e*P	**P**	**22 31 54.4**	**-0.3**
	comp=Z,276nm,1.4s					
VAE	**Valguarnera**	**92.27 310**	LR	LR	23 19 26.1	
	comp=Z,1μm,18.4s,baz=36,slow=39					
HGN	**Heimansgroeve**	**92.30 324**	*e*P	**P**	**22 31 54.4**	**-0.4**
	comp=Z,299nm,1.9s					
MEM	**Membach**	**92.33 324**	⇑P	**P**	**22 31 54.7**	**-0.3**
	comp=Z,59nm,1.9s					
MEM	**Membach**	**92.33 324**	P	**P**	**22 31 56.0**	**+1.1**
BEBN	**Eben Emael**	**92.42 325**	⇑P	**P**	**22 31 54.9**	**-0.5**
MAW	**Mawson**	**92.48 199**	P	**P**	**22 31 56.5**	**+1.4**
	comp=Z,41nm,1.0s,baz=55,slow=6.1,SNR=30					
MAW			PKKPbc	**PKKPdf**	**22 49 09.0**	**-0.4**
	comp=Z,4.5nm,0.9s,baz=294,slow=3.1,SNR=5.5					
MAW			LR	LR	23 12 40.6	
	comp=Z,649nm,18.3s,baz=49,slow=35					
MAW	**Mawson**	**92.48 199**	*e*P	**P**	**22 31 56.1**	**+1.0**
	comp=Z,19nm,1.2s					
MAW			PKKPbc	**PKKPdf**	**22 49 09.0**	**-0.4**
VLC	**Villacollemand**	**92.49 317**	*e*P	**P**	**22 31 56.4**	**+0.5**
	comp=Z,62nm,1.0s					
CDF	**Champ du Feu**	**92.60 322**	*e*P	**P**	**22 31 56.2**	**-0.2**
WLF	**Walferdange**	**92.69 323**	⇓P	**P**	**22 31 56.7**	**+0.1**
	comp=Z,138nm,1.5s					
WLF	**Walferdange**	**92.69 323**	*e*P	**P**	**22 31 57.0**	**+0.4**
	comp=Z,236nm,1.3s					
WLF	**Walferdange**	**92.69 323**	*e*P	**P**	**22 31 57.0**	**+0.4**
WLF			pmax	pmax		
	comp=Z,236nm,1.3s					
ECH	**Echery**	**92.76 322**	*e*P	**P**	**22 31 56.6**	**-0.5**
	comp=Z,79nm,1.1s					
ECH	**Echery**	**92.76 322**	*e*P	**P**	**22 31 56.6**	**-0.5**
ECH			pmax	pmax		
	comp=Z,79nm,1.1s					
BCLA	**Clavier**	**92.81 324**	⇓P	**P**	**22 31 57.6**	**+0.4**
	comp=Z,74nm,2.0s					
CLTB	**Caltabellotta**	**93.12 310**	*e*P	**P**	**22 31 59.0**	**0.0**
	comp=Z,87nm,1.4s					
HINF	**Hinteralfeld**	**93.12 322**	*e*P	**P**	**22 31 58.3**	**-0.5**
UCC	**Uccle**	**93.16 325**	⇓P	**P**	**22 31 57.7**	**-1.0**
UCC	**Uccle**	**93.16 325**	*e*P	**P**	**22 31 58.8**	**+0.1**
	comp=Z,94nm,1.2s					
UCC	**Uccle**	**93.16 325**	*e*P	**P**	**22 31 58.8**	**+0.1**
UCC			pmax	pmax		
	comp=Z,94nm,1.2s					
GIVF	**Givet**	**93.23 324**	*e*P	**P**	**22 32 00.1**	**+1.0**
GIVF			pmax	pmax		

PPT2	Papeete2	95.34	107	ePS	PS	22 44 49.0	+3.2
	comp=Z,1µm,25.8s						
PPT2	Papeete2	95.34	107	eLQ	LQ	22 59 01.2	
	comp=Z,2µm,30.0s						
PPT2				eLR	LR	23 03 09.8	
	comp=Z,4µm,22.8s,baz=289						
SSF	Saint Saulge	95.48	322	eP	P	22 32 09.0	-0.5
A04D	Lummi Island	95.57	36	P	P	22 32 10.6	+0.8
	baz=301						
NLWA	Neilton Lookou	95.57	38	eP	P	22 32 11.8	+1.8
	comp=Z,108nm,1.3s						
NLWA				LR	LR		
	comp=Z,2µm,20.0s						
AVF	Avril sur Loir	95.71	322	eP	P	22 32 09.1	-1.4
AVF				pmax	pmax		
	comp=Z,38nm,0.9s						
SSB	Saint Sauveur	95.72	320	eP	P	22 32 10.3	-0.4
	comp=Z,46nm,0.9s						
SSB	Saint Sauveur	95.72	320	eP	P	22 32 10.3	-0.4
SSB				pmax	pmax		
	comp=Z,46nm,0.9s						
VIVF	Saint-Julien-l	95.84	320	eP	P	22 32 10.9	-0.4
VIVF				pmax	pmax		
	comp=Z,49nm,1.0s						
VNDA	Vanda	96.01	172	P	P	22 32 12.1	+1.0
	comp=Z,73nm,0.9s,baz=316,slow=5.5,SNR=101						
VNDA				PP	PP	22 36 01.1	-3.0
	comp=Z,10nm,0.9s,baz=312,slow=6.4,SNR=5.5						
VNDA				PKKPbc	PKKPbc	22 49 00.2	-2.1
	comp=Z,7.9nm,0.9s,baz=185,slow=2.4,SNR=15						
VNDA				LR	LR	23 19 11.7	
	comp=Z,738nm,18.1s,baz=337,slow=38						
VNDA	Vanda	96.01	172	eP	P	22 32 12.1	+1.0
	comp=Z,121nm,1.0s						
VNDA				PP	PP	22 36 01.1	-3.0
VNDA				PKKPbc	PKKPbc	22 49 00.2	-2.1
VNDA	Vanda	96.01	172	eP	P	22 32 12.1	+1.0
VNDA						22 36 01.2	
VNDA				pmax	pmax		
	comp=Z,121nm,1.0s						
B05A	Bryant	96.16	36	P	P	22 32 13.8	+1.3
	baz=302,SNR=14						
E03A	Lebam	96.18	38	eP	P	22 32 14.9	+2.2
	comp=Z,126nm,1.2s						
B06A	Marblemount	96.37	36	eP	P	22 32 15.2	+1.8
	comp=Z,63nm,0.9s						
F03A	Seaside	96.49	39	eP	P	22 32 16.8	+2.6
	comp=Z,219nm,1.6s						
TCF	Toulx Ste Croi	96.64	322	eP	P	22 32 14.6	-0.3
TCF				pmax	pmax		
	comp=Z,35nm,0.9s						
KEST	Kesra	96.70	310	P	P	22 32 15.3	-0.1
	comp=Z,10nm,1.0s,baz=261,slow=23,SNR=11						
KEST				PP	PP	22 36 09.1	-1.1
	comp=Z,8.4nm,1.0s,baz=31,slow=8.4,SNR=4.8						
KEST				LR	LR	23 23 29.4	
	comp=Z,2µm,18.1s,baz=348,slow=40						
KEST	Kesra	96.70	310	eP	P	22 32 16.1	+0.6
	comp=Z,59nm,1.4s						
KEST				PP	PP	22 36 09.1	-1.1
F04D	Rainier, OR	96.74	38	P	P	22 32 15.9	+0.7
	baz=301						
TBI	Tubuai	96.86	112	ePP	PP	22 36 12.3	+0.3
TBI				eSKSac	SKSac	22 42 49.6	-0.3
	comp=Z,678nm,27.0s						
TBI				eS	S	22 43 33.7	-1.6
	comp=Z,616nm,29.2s						
TBI	Tubuai	96.86	112	ePS	PS	22 45 05.8	+3.8
	comp=Z,2µm,27.5s						
TBI	Tubuai	96.86	112	eLQ	LQ	22 59 30.2	
	comp=Z,1µm,34.5s						
TBI				eLR	LR	23 03 51.7	
	comp=Z,4µm,24.5s,baz=292						
SBA	Scott Base	96.97	171	eP	P	22 32 18.7	+3.3
SBA				LR	LR		
	comp=Z,1µm,20.0s						
SBA	Scott Base	96.97	171	eP	P	22 32 18.7	+3.3
SBA				pmax	pmax		
	comp=Z,238nm,1.8s						
SBA				MLR	MLR		
	comp=Z,1µm,20.0s						
C06D	Leavenworth	97.02	36	P	Pdif	22 32 17.0	+0.4
	baz=302						
G03D	McMinnville, O	97.03	39	P	Pdif	22 32 17.4	+0.8
	baz=300,SNR=6.6						
LON	Longmire	97.11	37	eP	Pdif	22 32 18.3	+1.2
	comp=Z,16nm,1.0s						
LON	Longmire	97.11	37	eP	Pdif	22 32 18.3	+1.2
LON				pmax	pmax		
	comp=Z,16nm,1.0s						
COR	Corvallis	97.32	40	eP	Pdif	22 32 20.4	+2.5
	comp=Z,117nm,1.3s						
COR	Corvallis	97.32	40	eP	Pdif	22 32 20.4	+2.4
COR				pmax	pmax		
	comp=Z,117nm,1.3s						
SFJD	Kangerlussuaq	97.38	356	P	P	22 32 16.8	-0.8
	comp=Z,29nm,0.8s,baz=29,slow=4.8,SNR=15						
SFJD				LR	LR	23 17 18.3	
	comp=Z,1µm,20.7s,baz=5.5,slow=36						
SFJD	Kangerlussuaq	97.38	356	⇑iP	P	22 32 16.8	-0.8
	comp=Z,45nm,0.9s						
SFJD				i		22 36 10.0	
	comp=Z,2µm,17.0s						
SFJD	Kangerlussuaq	97.38	356	eP	P	22 32 17.2	-0.5
	comp=Z,49nm,0.9s						
SFJD	Kangerlussuaq	97.38	356	eP	P	22 32 17.2	-0.5
SFJD				pmax	pmax		
	comp=Z,49nm,0.9s						
CAF	Calviac	97.42	321	eP	Pdif	22 32 18.5	0.0
CAF				pmax	pmax		
	comp=Z,39nm,1.1s						
LTY	Liberty	97.50	37	eP	Pdif	22 32 20.1	+1.2
	comp=Z,32nm,1.1s						
KEBM	Edson Butte	97.52	42	eP	Pdif	22 32 21.5	+2.5
	comp=Z,72nm,1.0s						
RJF	Les Rejaudoux	97.56	321	eP	Pdif	22 32 19.2	+0.1
RJF				pmax	pmax		
	comp=Z,59nm,1.0s						
B08A	Colville Reser	97.66	35	eP	Pdif	22 32 20.2	+0.7
	comp=Z,52nm,0.9s						
I03D	Drain, OR	97.73	41	P	Pdif	22 32 20.4	+0.6
	baz=300,SNR=12						
CMAH	Djebel Manchou	97.74	311	P	P	22 32 18.7	-1.4
ABSA	Djebel Ababsia	97.85	311	P	Pdif	22 32 20.9	+0.2
H04A	Detroit Lake	97.96	39	eP	Pdif	22 32 22.2	+1.3
	comp=Z,141nm,1.8s						
CAEH	'Ain El Ouahch	98.08	312	P	P	22 32 21.5	0.0
G05D	Wamic, OR	98.19	39	P	Pdif	22 32 22.9	+1.0
	baz=302,SNR=8.6						
I04A	Tendick Farm,	98.27	40	P	Pdif	22 32 22.7	+0.4
	baz=301,SNR=17						
L02D	Cave Junction,	98.34	42	P	P	22 32 22.4	-0.2
	baz=300						
CKFL	Kef-Lekhel	98.34	311	P	P	22 32 22.8	-0.1
HUMO	Hull Mountain	98.53	41	eP	Pdif	22 32 25.3	+1.8
	comp=Z,29nm,1.0s						
C09A	Chrisman Ranch	98.56	35	eP	Pdif	22 32 24.7	+1.2
	comp=Z,118nm,1.7s						
G06A	Carlson Farm,	98.61	38	eP	Pdif	22 32 25.4	+1.6
	comp=Z,184nm,1.8s						
D08A	Wollman Farm,	98.61	36	eP	Pdif	22 32 24.9	+1.2
	comp=Z,30nm,0.8s						
HAWA	Hanford	98.63	37	eP	Pdif	22 32 24.9	+1.1
	comp=Z,19nm,1.0s						
HAWA				LR	LR		
	comp=Z,2µm,20.0s						
I05D	Terrebonne, OR	98.65	39	Pdiff	Pdif	22 32 24.4	+0.4
	baz=302						
J04D	Umpqua Nationa	98.75	41	Pdiff	Pdif	22 32 25.1	+0.5
	baz=301						
DFRA	Djebel Bou Aff	98.89	312	P	Pdif	22 32 25.6	+0.3
NEW	Newport	98.93	34	P	Pdif	22 32 25.7	+0.6
	comp=Z,32nm,1.0s,baz=307,slow=3.3,SNR=24						
NEW				PP	PP	22 36 25.6	-1.1
	comp=Z,2.1nm,0.5s,baz=306,slow=7.8,SNR=3.8						
NEW				PKKPbc	PKKPbc	22 48 51.9	-1.1
	comp=Z,0.5nm,0.3s,baz=81,slow=2.5,SNR=3.4						
NEW	Newport	98.93	34	Pdiff	Pdif	22 32 25.6	+0.5
	baz=306						
NEW	Newport	98.93	34	eP	Pdif	22 32 26.2	+1.1
	comp=Z,30nm,0.9s						
NEW				PP	PP	22 36 25.6	-1.1
NEW				PKKPbc	PKKPbc	22 48 51.9	-1.1
NEW				LR	LR		
	comp=Z,1µm,20.0s						

YBH	Yreka Blue Hor	99.13	42	P	Pdif	22 32 27.1	+0.9
	comp=Z,7.7nm,0.8s,baz=275,slow=3.9,SNR=15						
YBH				PP	PP	22 36 27.8	-0.6
	comp=Z,4.9nm,1.1s,baz=15,slow=6.3,SNR=3.5						
YBH				LR	LR	23 09 51.0	
	comp=Z,3µm,22.0s,baz=304,slow=31						
YBH	Yreka Blue Hor	99.13	42	eP	Pdif	22 32 27.9	+1.7
	comp=Z,20nm,1.0s						
YBH				PP	PP	22 36 27.9	-0.6
PINE	Pine Mountain	99.19	40	eP	Pdif	22 32 27.7	+1.1
	comp=Z,46nm,1.0s						
M02C	Callahan	99.20	43	Pdiff	Pdif	22 32 27.7	+1.1
	baz=300						
J05D	Fort Rock, OR	99.27	40	Pdiff	Pdif	22 32 27.7	+0.8
	baz=302						
K04D	Chiloquin, OR	99.28	41	Pdiff	Pdif	22 32 27.5	+0.5
	baz=301						
E09A	Wood Farm, Sta	99.36	36	eP	Pdif	22 32 28.9	+1.9
SET	Setif	99.39	312	P	Pdif	22 32 29.0	+1.5
N02D	Trinity Center	99.51	43	Pdiff	Pdif	22 32 28.8	+0.9
	baz=300						
G08A	Pilot Rock	99.57	38	eP	Pdif	22 32 29.9	+1.7
	comp=Z,45nm,1.7s						
M04C	Macdoel	99.66	42	Pdiff	Pdif	22 32 28.6	-0.1
	baz=301						
VAL	Valentia	99.97	331	eP	Pdif	22 32 33.6	+4.0
VAL	Valentia	99.97	331	eP	PP	22 36 38.8	+4.5
WALA	Waterton Lakes	100.16	33	ePdif	Pdif	22 32 31.6	+0.9
	comp=Z,33nm,1.1s						
O03D	Paynes Creek	100.45	43	Pdiff	Pdif	22 32 32.2	0.0
	baz=301						
MOD	Modoc Plateau	100.58	41	ePdif	Pdif	22 32 33.5	+0.7
	comp=Z,33nm,1.1s						
BMO	Blue Mountains	100.79	37	ePdif	Pdif	22 32 34.1	+0.6
	comp=Z,17nm,1.0s						
BMO				LR	LR		
	comp=Z,1µm,20.0s						
BMO	Blue Mountains	100.79	37	eP	Pdif	22 32 34.2	+0.6
BMO				pmax	pmax		
	comp=Z,17nm,1.0s						
BMO				MLR	MLR		
	comp=Z,1µm,20.0s						
SYO	Syowa Base	100.84	201⇑	ePdif	Pdif	22 32 33.4	+0.5
FCC	Fort Churchill	100.99	17	ePdif	Pdif	22 32 33.7	-0.3
FCC	Fort Churchill	100.99	17	eP	Pdif	22 32 33.7	-0.3
BOSA	Boshof	101.02	243	P	Pdif	22 32 35.1	+0.2
	comp=Z,5.1nm,0.9s,baz=111,slow=6.7,SNR=5.3						
BOSA				PKKPbc	PKKPbc	22 48 45.3	-1.4
	comp=Z,2.6nm,0.9s,baz=177,slow=8.9,SNR=4.2						
WVOR	Wild Horse Val	101.34	40	PFAKE		22 32 50.0	+14
WVOR				LR	LR		
	comp=Z,2µm,22.0s						
MSO	Missoula	101.52	34	Pdiff	Pdif	22 32 36.6	-0.2
	baz=308						
MSO	Missoula	101.52	34	ePdif	Pdif	22 32 37.4	+0.6
FFC	Flin Flon	101.61	23	ePdif	Pdif	22 32 37.1	+0.2
FFC				LR	LR		
	comp=Z,2µm,19.0s						
FFC	Flin Flon	101.61	23	eP	Pdif	22 32 37.1	+0.2
FFC				MLR	MLR		
	comp=Z,2µm,19.0s						
TAOE	Nuku Hiva Isla	102.13	96	ePP	PP	22 36 55.6	+3.1
	comp=Z,352nm,26.0s						
TAOE				eSP	SP	22 45 58.3	+4.7
	comp=Z,529nm,33.1s						
TAOE	Nuku Hiva Isla	102.13	96	eLQ	LQ	23 01 52.5	
	comp=Z,4µm,33.9s						
TAOE				eLR	LR	23 06 22.2	
	comp=Z,2µm,21.4s						
MFID	Camas Ranch	102.48	38	ePdif	Pdif	22 32 42.4	+1.2
	comp=Z,21nm,1.1s						
CMB	Columbia Colle	102.55	44	ePdif	Pdif	22 32 42.4	+0.9
	comp=Z,286nm,1.7s						
CMB	Columbia Colle	102.55	44	eP	Pdif	22 32 42.4	+0.9
CMB				pmax	pmax		
	comp=Z,286nm,1.7s						
EGMT	Eagleton	102.95	32	Pdiff	Pdif	22 32 43.5	+0.5
	baz=312						
EGMT	Eagleton	102.95	32	PFAKE		22 32 50.0	+6.9
EGMT				LR	LR		
	comp=Z,1µm,21.0s						
HLID	Hailey	103.23	37	Pdiff	Pdif	22 32 45.6	+1.0
	baz=307						
HLID	Hailey	103.23	37	ePdif	Pdif	22 32 45.7	+1.2
	comp=Z,9.7nm,1.0s						
HLID				LR	LR		
	comp=Z,1µm,20.0s						
BMN	Battle Mountai	103.33	41	ePdif	Pdif	22 32 46.2	+1.1
	comp=Z,30nm,1.5s						
BMN	Battle Mountai	103.33	41	eP	Pdif	22 32 46.2	+1.1
BMN				pmax	pmax		
	comp=Z,30nm,1.5s						
BOZ	Bozeman (W)	103.54	34	Pdiff	Pdif	22 32 46.1	+0.3
	baz=310						
BOZ	Bozeman (W)	103.54	34	ePdif	Pdif	22 32 46.9	+1.1
	comp=Z,11nm,1.3s						
BOZ				LR	LR		
	comp=Z,1µm,20.0s						
BOZ	Bozeman (W)	103.54	34	eP	Pdif	22 32 46.9	+1.1
BOZ				pmax	pmax		
	comp=Z,11nm,1.3s						
BOZ				MLR	MLR		
	comp=Z,1µm,20.0s						
NV01	Mina Array Sit	103.73	43	ePdif	Pdif	22 32 47.2	+0.3
NVAR	Mina Array Bea	103.73	43	Pdiff	Pdif	22 32 47.4	+0.4
	comp=Z,5.2nm,0.7s,baz=283,slow=5.6,SNR=26						
NVAR				PP	PP	22 36 56.5	-7.0
	comp=Z,2.0nm,0.8s,baz=273,slow=7.5,SNR=4.5						
NVAR				PKKPbc	PKKPbc	22 48 39.6	+0.5
	comp=Z,1.7nm,0.7s,baz=148,slow=4.0,SNR=7.5						
MLAC	Mammoth, Mammt	103.81	44	Pdiff	Pdif	22 32 48.3	+0.9
	baz=302						
ESDC	Sonseca Array	104.00	318	Pdiff	Pdif	22 32 46.9	-1.0
	comp=Z,0.1nm,0.3s,baz=47,slow=4.5,SNR=6.7						
ESDC				PP	PP	22 37 04.5	-0.7
	comp=Z,4.8nm,0.9s,baz=49,slow=7.7,SNR=5.4						
ESDC				PKKPbc	PKKPbc	22 48 36.7	-1.3
	comp=Z,2.4nm,0.8s,baz=276,slow=3.5,SNR=9.7						
SMMC	Simmler	104.22	47	Pdiff	Pdif	22 32 50.1	+1.1
	baz=301						
PAB	San Pablo	104.32	319	PFAKE		22 33 00.0	+11
PAB				LR	LR		
	comp=Z,2µm,20.0s						
PBRG	Braganca	104.49	322	ePdif	Pdif	22 32 56.0	+6.0
PBRG	Braganca	104.49	322	ePP	PP	22 37 08.9	+0.2
TIN	Tinemaha, Big	104.52	44	Pdiff	Pdif	22 32 51.5	+1.2
	baz=303						
PKM	Mcpherson Peak	104.57	47	Pdiff	Pdif	22 32 51.4	+0.8
	baz=301						
VES	Vestal, Richgr	104.58	46	Pdiff	Pdif	22 32 50.6	+0.1
	baz=302						
SBC	Santa Barbara	104.87	47	Pdiff	Pdif	22 32 52.2	+0.4
	baz=301						
LKWY	Lake	104.87	35	PFAKE		22 33 00.0	+8.1
LKWY				LR	LR		
	comp=Z,3µm,22.0s						
H17A	Grant Village	104.88	35	Pdiff	Pdif	22 32 54.8	+2.8
	baz=310						
CWC	Cottonwood Cre	104.95	45	Pdiff	Pdif	22 32 52.8	+0.4
	baz=303						
MVO	Moncorvo	105.05	321	ePdif	Pdif	22 32 57.9	+5.4
MVO	Moncorvo	105.05	321	ePP	PP	22 37 14.1	+1.2
MVO	Moncorvo	105.05	321	eLQ	LQ	23 16 56.8	
MVO				eLR	LR	23 21 00.5	
	comp=Z,2µm,18.0s						
ISA	Isabella, Lake	105.10	46	Pdiff	Pdif	22 32 52.9	0.0
	baz=302						
RLMT	Red Lodge	105.12	34	Pdiff	Pdif	22 32 52.8	-0.2
	baz=311						
RLMT	Red Lodge	105.12	34	PFAKE		22 37 20.0	
RLMT				LR	LR		
	comp=Z,2µm,20.0s						
ARVC	Arvin	105.13	46	Pdiff	Pdif	22 32 53.2	+0.3
	baz=302						
GRAC	Grapevine Rang	105.14	44	Pdiff	Pdif	22 32 53.8	+0.8
	baz=303						
SCZ2	Santa Cruz Isl	105.15	48	Pdiff	Pdif	22 32 53.1	0.0
	baz=301						
PGAV	Gavieira, Arco	105.30	322	ePdif	Pdif	22 33 00.7	+7.0
PGAV	Gavieira, Arco	105.30	322	ePP	PP	22 37 18.1	+3.4
PGAV	Gavieira, Arco	105.30	322	eLQ	LQ	23 16 49.8	
PGAV				eLR	LR	23 22 44.2	
	comp=Z,3µm,18.0s						
DGMT	Dagmar	105.32	29	Pdiff	Pdif	22 32 53.2	-0.4
	baz=316						
DGMT	Dagmar	105.32	29	PFAKE		22 37 20.0	
DGMT				LR	LR		

	comp=Z,2µm,19.0s						
DAC	Darwin (Calif)	105.37	45	ePdif	Pdif	22 32 55.3	+1.0
	comp=Z,24nm,1.6s						
DAC	Darwin (Calif)	105.37	45	eP	Pdif	22 32 55.3	+1.0
DAC				pmax	pmax		
	comp=Z,24nm,1.6s						
QSPA	South Pole Qui	105.38	180	ePdif	Pdif	22 32 54.8	+1.5
	comp=Z,50nm,0.8s						
QSPA				LR	LR		
	comp=Z,2µm,20.0s						
POLO	Lamas de Olo	105.38	322	ePdif	Pdif	22 32 59.6	+5.5
POLO	Lamas de Olo	105.38	322	ePP	PP	22 37 18.1	+2.8
PVRL	Vila Real	105.39	322	ePP	PP	22 37 18.8	+3.4
SUR	Sutherland	105.46	240	PFAKE		22 37 20.0	
SUR				LR	LR		
	comp=Z,2µm,22.0s						
OSI	Osito Audit: C	105.48	47	Pdiff	Pdif	22 32 53.9	-0.7
	baz=302						
BLG	Laguna Peak, P	105.50	47	Pdiff	Pdif	22 32 54.7	+0.1
	baz=302						
R11A	Troy Canyon, C	105.55	42	Pdiff	Pdif	22 32 55.1	+0.1
	baz=305						
MPMC	Manual Prospec	105.56	45	Pdiff	Pdif	22 32 54.8	-0.3
	baz=303						
SNCC	San Nicolas Is	105.61	48	Pdiff	Pdif	22 32 54.7	-0.5
	baz=301						
LAO	LASA Array	105.62	31	Pdiff	Pdif	22 32 54.6	-0.4
	baz=314						
LAO	LASA Array	105.62	31	PFAKE		22 37 20.0	
LAO				LR	LR		
	comp=Z,2µm,21.0s						
AHID	Auburn Hatcher	105.63	36	PFAKE		22 37 20.0	
AHID				LR	LR		
	comp=Z,1µm,20.0s						
LRMC	Laurel Mtn Rad	105.74	46	Pdiff	Pdif	22 32 56.5	+0.7
	baz=303						
FURC	Furnace Creek,	105.76	44	Pdiff	Pdif	22 32 56.3	+0.6
	baz=304						
MTE	Manteigas	105.82	321	ePdif	Pdif	22 33 01.8	+5.8
MTE	Manteigas	105.82	321	ePP	PP	22 37 22.7	+4.1
MTE	Manteigas	105.82	321	eLQ	LQ	23 17 46.9	
MTE				eLR	LR	23 22 23.1	
	comp=Z,3µm,18.0s						
PVIS	Viseu	105.84	321	ePP	PP	22 37 21.3	+2.6
EDW2	Edwards Air Fo	105.85	46	Pdiff	Pdif	22 32 56.4	+0.2
	baz=302						
TPNV	Topopah Spring	105.91	44	Pdiff	Pdif	22 32 57.1	+0.5
	baz=304						
DECC	Green Verdugo	105.94	47	Pdiff	Pdif	22 32 56.9	+0.3
	baz=302						
TSUM	Tsumeb	106.07	254	PKKPbc	PKKPbc	22 48 33.0	+1.6
	comp=Z,6.2nm,0.8s,baz=257,slow=4.3,SNR=17						
HWUT	Hardware Ranch	106.09	37	ePdif	Pdif	22 32 58.7	+1.4
	comp=Z,9.5nm,1.1s						
HWUT				LR	LR		
	comp=Z,2µm,20.0s						
PCBR	Castelo Branco	106.11	320	ePP	PP	22 37 25.5	+4.8
DUG	Dugway, Tooele	106.21	39	Pdiff	Pdif	22 32 57.3	-0.5
	baz=308						
DUG	Dugway, Tooele	106.21	39	ePdif	Pdif	22 32 59.2	+1.4
	comp=Z,17nm,1.5s						
DUG				LR	LR		
	comp=Z,2µm,22.0s						
DUG	Dugway, Tooele	106.21	39	eP	Pdif	22 32 59.2	+1.4
DUG				pmax	pmax		
	comp=Z,17nm,1.5s						
DUG				MLR	MLR		
	comp=Z,2µm,22.0s						
FMP	Fort Macarthur	106.25	47	Pdiff	Pdif	22 32 58.6	+0.6
	baz=302						
PMRV	Marv??o	106.31	320	ePP	PP	22 37 15.7	-6.4
PMRV	Marv??o	106.31	320	eLQ	LQ	23 18 00.5	
PMRV				eLR	LR	23 23 21.3	
	comp=Z,3µm,18.0s						
BFSC	Mount Baldy Ra	106.42	47	Pdiff	Pdif	22 32 58.9	0.0
	baz=302						
GSC	Goldstone, Bar	106.44	45	Pdiff	Pdif	22 32 59.7	+0.8
	baz=303						
SHOC	Shoshone, Teco	106.47	44	Pdiff	Pdif	22 32 59.2	+0.3
	baz=304						
BW06	Boulder Array	106.50	36	Pdiff	Pdif	22 32 58.9	-0.3
	baz=311						
PDAR	Pinedale Array	106.50	36	PP	PP	22 37 10.7	-13
	comp=Z,1.0nm,0.6s,baz=264,slow=1.2,SNR=4.5						
PDAR				PKKPbc	PKKPbc	22 48 29.9	-1.0
	comp=Z,2.1nm,0.9s,baz=127,slow=3.9,SNR=6.7						
RRX	Edison Barstow	106.54	46	Pdiff	Pdif	22 32 59.4	+0.1
	baz=303						
PCAS	Casmilo, Conde	106.61	321	ePdif	Pdif	22 32 59.5	+0.1
PCAS	Casmilo, Conde	106.61	321	ePP	PP	22 37 23.5	-0.8
PESTR	Estremoz	106.77	319	ePdif	Pdif	22 33 05.6	+5.4
PESTR	Estremoz	106.77	319	ePP	PP	22 37 25.8	+0.3
PBAR	Barrancos	106.83	319	ePdif	Pdif	22 33 04.6	+4.2
PBAR	Barrancos	106.83	319	ePP	PP	22 37 27.4	+1.4
BBRC	Big Bear Solar	106.92	46	Pdiff	Pdif	22 33 02.2	+1.0
	baz=303						
TUQ	Turquoise Moun	106.97	45	Pdiff	Pdif	22 33 00.3	-1.0
	baz=304						
HEC	Hector,Ludlow	107.02	45	Pdiff	Pdif	22 33 02.1	+0.7
	baz=304						
PMTG	Montargil	107.04	320	ePdif	Pdif	22 33 18.6	+17
PMTG	Montargil	107.04	320	ePP	PP	22 37 28.6	+1.1
MURC	Murrieta	107.09	47	Pdiff	Pdif	22 33 02.0	+0.3
	baz=303						
ALMR	Almeirim	107.20	320	ePP	PP	22 37 28.5	-0.2
ALMR				AMS	AMS	23 26 46.7	
	comp=Z,3µm,22.7s						
ALMR	Almeirim	107.20	320	ePP	PP	22 37 29.7	+1.0
PBEJ	Beja	107.44	319	ePP	PP	22 37 32.9	+2.4
ULM	Lac du Bonnet	107.44	23	Pdiff	Pdif	22 33 02.5	-0.4
	comp=Z,4.4nm,0.8s,baz=316,slow=3.9,SNR=7.5						
ULM				PKiKP	PKiKP	22 37 09.6	-1.5
	comp=Z,2.8nm,0.8s,baz=317,slow=3.2,SNR=4.3						
ULM				PP	PP	22 37 26.9	-3.0
	comp=Z,8.6nm,1.0s,baz=333,slow=7.6,SNR=8.3						
ULM				PKKPbc	PKKPbc	22 48 24.8	-3.1
	comp=Z,8.3nm,0.9s,baz=154,slow=3.0,SNR=7.6						
ULM	Lac du Bonnet	107.44	23	ePdif	Pdif	22 33 03.2	+0.4
ULM				PKiKP	PKiKP	22 37 09.6	-1.5
ULM				PP	PP	22 37 26.9	-3.0
ULM				PKKPbc	PKKPbc	22 48 24.8	-3.1
ULM	Lac du Bonnet	107.44	23	eP	Pdif	22 33 03.3	+0.4
ULM						22 37 26.9	
GMRC	Granite Mounta	107.51	45	Pdiff	Pdif	22 33 04.7	+1.0
	baz=304						
PFO	Pinyon Flats O	107.60	47	Pdiff	Pdif	22 33 04.3	+0.2
	baz=303						
PFO	Pinyon Flats O	107.60	47	ePd

MORF	Marmelete	108.37	319	eP	Pdif	22 33 06.4	-1.0
MORF				ePP	PP	22 37 36.8	-0.5
MORF				AMS	AMS	23 32 47.1	
	comp=Z,3µm,17.5s						
MORF	Marmelete	108.37	319	ePP	PP	22 37 40.6	+3.3
MORF	Marmelete	108.37	319	eP	Pdif	22 33 06.3	-1.0
MORF				e		22 37 36.8	
PFVI	Vila Bisbo	108.59	319	ePdif	Pdif	22 33 13.8	+5.5
PFVI	Vila Bisbo	108.59	319	ePP	PP	22 37 42.1	+3.3
C31A	Landman Farms,	108.67	26	Pdiff	Pdif	22 33 08.0	-0.4
	baz=322						
A33A	Warroad	108.69	24	Pdiff	Pdif	22 33 07.9	-0.6
	baz=324						
AGMN	Agassiz Nation	109.03	24	PFAKE		22 37 30.0	
AGMN				LR	LR		
	comp=Z,2µm,20.0s						
GLA	Glamis	109.05	46	Pdiff	Pdif	22 33 09.1	-1.4
	baz=304						
B34A	Aery, Baudette	109.34	23	Pdiff	Pdif	22 33 11.3	-0.1
	baz=325						
SCHQ	Schefferville	109.69	4	PP	PP	22 37 39.1	-6.9
	comp=Z,6.0nm,0.8s,baz=329,slow=10,SNR=3.7						
B35A	Bob, Littlefor	109.80	23	Pdiff	Pdif	22 33 12.9	-0.5
	baz=326						
RKT	Rikitea	109.87	109	ePP	PP	22 37 50.1	+0.7
	comp=Z,2µm,40.5s						
RKT	Rikitea	109.87	109	eLR	LR	23 09 40.5	
	comp=Z,3µm,23.0s						
WUAZ	Wupatki	109.94	42	Pdiff	Pdif	22 33 13.7	-0.9
	baz=307						
WUAZ	Wupatki	109.94	42	PFAKE		22 37 30.0	
WUAZ				LR	LR		
	comp=Z,2µm,22.0s						
D33A	AnnSam, Waubun	109.97	25	Pdiff	Pdif	22 33 13.4	-0.8
	baz=324						
D34A	Park Rapids	110.27	25	Pdiff	Pdif	22 33 15.3	-0.3
	baz=324						
NVL	N'lazarevskaya	110.41	200	i PKIKP	PKiKP	22 37 16.9	+0.9
NVL				e		22 44 27.4	
NVL				ePS	SP	22 47 13.8	-1.9
NVL				eSS	SS	22 53 17.7	+1.8
NVL				MLR	MLR		
	comp=Z,890nm,18.0s						
E33A	Westby DABS, E	110.41	25	Pdiff	Pdif	22 33 15.6	-0.6
	baz=323						
ISCO	Idaho Springs	110.69	36	Pdiff	Pdif	22 33 15.8	-2.2
	baz=313						
MVCO	Mesa Verde	110.70	39	Pdiff	Pdif	22 33 17.9	-0.1
	baz=310						
MVCO	Mesa Verde	110.70	39	PFAKE		22 37 30.0	
MVCO				LR	LR		
	comp=Z,2µm,22.0s						
D35A	Remer	110.73	24	Pdiff	Pdif	22 33 16.5	-1.1
	baz=325						
C37A	Embarrass	110.90	22	Pdiff	Pdif	22 33 17.6	-0.8
	baz=327						
EYMN	Ely	110.96	22	Pdiff	Pdif	22 33 17.9	-0.7
	baz=328						
EYMN	Ely	110.96	22	PFAKE		22 37 30.0	
EYMN				LR	LR		
	comp=Z,3µm,19.0s						
E35A	Pequot Lakes	111.02	24	Pdiff	Pdif	22 33 18.2	-0.7
	baz=325						
214A	Organ Pipe Nat	111.07	46	Pdiff	Pdif	22 33 19.8	+0.3
	baz=305						
C38A	Sawbill Land.	111.24	22	Pdiff	Pdif	22 33 19.7	-0.2
	baz=328						
D37A	Cotton	111.28	23	Pdiff	Pdif	22 33 19.3	-0.8
	baz=327						
E36A	McGregor	111.50	24	Pdiff	Pdif	22 33 20.4	-0.6
	baz=326						
Q24A	Divide	111.52	36	Pdiff	Pdif	22 33 21.5	-0.3
	baz=313						
C40A	Isle Royale Na	111.80	20	Pdiff	Pdif	22 33 21.9	-0.4
	baz=330						
C40A				PKiKP	PKiKP	22 37 19.1	-0.3
	baz=330						
OGNE	Ogallala	111.83	33	Pdiff	Pdif	22 33 22.6	-0.2
	baz=317						
OGNE				PKiKP	PKiKP	22 37 19.3	-0.6
	baz=317						
OGNE	Ogallala	111.83	33	PFAKE		22 37 30.0	
OGNE				LR	LR		
	comp=Z,2µm,20.0s						
F36A	Milaca	111.94	24	PKiKP	PKiKP	22 37 19.4	-0.4
	baz=326						
SDCO	Great Sand Dun	112.15	37	Pdiff	Pdif	22 33 24.9	+0.4
	baz=313						
SDCO				PKiKP	PKiKP	22 37 19.9	-0.9
	baz=313						
SDCO	Great Sand Dun	112.15	37	ePdif	Pdif	22 33 25.8	+1.3
SDCO				LR	LR		
	comp=Z,2µm,21.0s						
TUC	Tucson	112.26	45	PFAKE		22 37 30.0	
TUC				LR	LR		
	comp=Z,4µm,19.0s						
TORD	Torodi Ar. Bea	112.29	292	PKiKP	PKiKP	22 37 20.6	-0.6
	comp=Z,16nm,0.9s,baz=42,slow=1.5,SNR=39						
TORD				PP	PP	22 37 56.0	-11
	comp=Z,4.0nm,1.1s,baz=40,slow=4.8,SNR=4.0						
TORD				PKKPbc	PKKPbc	22 48 10.7	-0.6
	comp=Z,11nm,0.8s,baz=239,slow=1.9,SNR=26						
TORD				PKPPKP	P'P'df	22 56 41.1	-3.7
	comp=Z,4.2nm,1.4s,baz=242,slow=3.2,SNR=4.6						
ECSD	EROS Data Cent	112.35	28	PKiKP	PKiKP	22 37 20.4	-0.2
	baz=322						
ECSD	EROS Data Cent	112.35	28	ePKP	PKiKP	22 37 19.5	-1.1
ECSD				LR	LR		
	comp=Z,2µm,19.0s						
H35A	Sunnyside Ranc	112.35	26	PKiKP	PKiKP	22 37 20.5	-0.1
	baz=324						
G36A	St. Michael	112.36	25	Pdiff	Pdif	22 33 24.8	-0.1
	baz=325						
F37A	Hinrichs Farm,	112.41	24	PKiKP	PKiKP	22 37 20.2	-0.4
	baz=326						
F38A	Pierce - Schro	112.50	23	PKiKP	PKiKP	22 37 20.1	-0.7
	baz=327						
E39A	Mellen	112.63	22	Pdiff	Pdif	22 33 25.5	-0.6
	baz=328						
E39A				PKiKP	PKiKP	22 37 20.6	-0.5
	baz=328						
D41A	Chassel	112.74	20	PKiKP	PKiKP	22 37 20.8	-0.4
	baz=331						
H36A	Jessenland, He	112.83	25	Pdiff	Pdif	22 33 27.2	+0.2
	baz=325						
H36A				PKiKP	PKiKP	22 37 20.8	-0.7
	baz=325						
F39A	Loretta	112.89	23	PKiKP	PKiKP	22 37 20.8	-0.8
	baz=328						
KSCO	Kaye Shedlock'	112.90	35	PKiKP	PKiKP	22 37 21.4	-0.5
	baz=316						
E41A	Kenton	113.12	21	PKiKP	PKiKP	22 37 21.3	-0.7
	baz=330						
G38A	Ridgeland	113.17	24	PKiKP	PKiKP	22 37 21.3	-0.8
	baz=327						
F40A	Park Falls	113.18	22	PKiKP	PKiKP	22 37 21.5	-0.7
	baz=329						
T25A	Trinidad	113.19	37	PKiKP	PKiKP	22 37 21.5	-1.2
	baz=313						
H37A	Dierke Farm, C	113.24	25	PKiKP	PKiKP	22 37 21.4	-0.9
	baz=326						
I36A	Fitzsimmons Fa	113.25	26	PKiKP	PKiKP	22 37 21.9	-0.4
	baz=325						
G39A	Holcombe	113.33	23	PKiKP	PKiKP	22 37 22.0	-0.5
	baz=328						
H38A	Maiden Rock	113.41	24	PKiKP	PKiKP	22 37 22.1	-0.5
	baz=326						
TASM	ASL Pad, Albuq	113.43	40	PKiKP	PKiKP	22 37 22.2	-1.0
	baz=311						
ANMO	Albuquerque	113.43	40	PKiKP	PKiKP	22 37 22.1	-1.1
	baz=311						
ANMO	Albuquerque	113.43	40	ePKP	PKiKP	22 37 24.6	+1.4
ANMO				LR	LR		
	comp=Z,3µm,22.0s						
ANMO	Albuquerque	113.43	40	d i PKIKP	PKiKP	22 37 25.1	+1.9
ANMO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TASL	Snake Pit, Alb	113.43	40	PKiKP	PKiKP	22 37 22.2	-1.0
	baz=311						
E42A	Champion	113.51	20	PKiKP	PKiKP	22 37 22.3	-0.5
	baz=331						
J36A	Seneca 1, Swea	113.67	26	PKiKP	PKiKP	22 37 23.1	-0.1
	baz=324						
F41A	Three Lakes	113.70	22	PKiKP	PKiKP	22 37 23.0	-0.2
	baz=330						
Y22D	IRIS PASSCAL I	113.70	41	PKiKP	PKiKP	22 37 23.0	-0.7
	baz=310						
Y22E	IRIS PASSCAL I	113.70	41	PKiKP	PKiKP	22 37 22.9	-0.8
	baz=310						
G40A	Rib Lake	113.71	23	PKiKP	PKiKP	22 37 23.0	-0.2
	baz=329						
H39A	Augusta	113.80	24	PKiKP	PKiKP	22 37 23.1	-0.3
	baz=327						
E43A	Lone Tree Farm	113.86	20	PKiKP	PKiKP	22 37 23.1	-0.3
	baz=332						
I38A	Scanlan Farm,	113.92	25	PKiKP	PKiKP	22 37 23.2	-0.4
	baz=326						
E44A	Grand Marais A	113.99	19	PKiKP	PKiKP	22 37 23.4	-0.3
	baz=333						
J37A	Redenius Farm,	114.02	26	PKiKP	PKiKP	22 37 23.3	-0.5
	baz=325						
F42A	Maple Grove Fa	114.02	21	PKiKP	PKiKP	22 37 23.3	-0.5
	baz=331						
121A	Cookes Peak, D	114.12	43	PKiKP	PKPdf	22 37 23.4	-1.2
	baz=309						
G41A	Antigo	114.13	22	PKiKP	PKiKP	22 37 23.6	-0.4
	baz=330						
K36A	Gilmore City	114.18	27	PKiKP	PKiKP	22 37 23.7	-0.5
	baz=324						
H40A	Chili	114.19	23	PKiKP	PKiKP	22 37 23.8	-0.3
	baz=328						
F43A	Flat Rock, Esc	114.29	20	PKiKP	PKiKP	22 37 24.1	-0.1
	baz=332						
G42A	Mountain	114.37	21	PKiKP	PKPdf	22 37 24.6	+0.2
	baz=330						
I39A	Houston	114.40	24	PKiKP	PKiKP	22 37 24.0	-0.5
	baz=327						
F44A	Big Bay de Noc	114.41	20	PKiKP	PKiKP	22 37 24.0	-0.4
	baz=332						
K37A	Belmond	114.42	26	PKiKP	PKiKP	22 37 23.9	-0.7
	baz=325						
E45A	Wooded Hills,	114.46	19	PKiKP	PKPdf	22 37 24.6	0.0
	baz=334						
J38A	Wedel Dairy, R	114.46	25	PKiKP	PKiKP	22 37 23.8	-0.9
	baz=326						
H41A	Junction City	114.47	23	PKiKP	PKiKP	22 37 24.0	-0.7
	baz=329						
L36A	Harm Buss Farm	114.51	27	PKiKP	PKiKP	22 37 24.6	-0.2
	baz=324						
CBKS	Cedar Bluff	114.59	33	PKiKP	PKiKP	22 37 24.7	-0.4
	baz=318						
SNAA	Sanae	114.59	197	P	PKPdf	22 37 24.7	+0.6
SNAA	Sanae	114.59	197	P	PKKPbc	22 47 47.6	-17
SNAA	Sanae	114.59	197	PKP	PKPdf	22 37 24.2	+0.1
	comp=Z,9.3nm,0.8s,baz=136,slow=2.4,SNR=13						
SNAA				PKKPbc	PKKPbc	22 48 02.7	-2.4
	comp=Z,11nm,0.8s,baz=268,slow=2.3,SNR=30						
G43A	Wallace	114.62	21	PKiKP	PKPdf	22 37 25.0	+0.2
	baz=331						
I40A	Norwalk	114.72	24	PKiKP	PKiKP	22 37 24.5	-0.7
	baz=328						
J39A	Decorah	114.76	25	PKiKP	PKiKP	22 37 24.7	-0.6
	baz=327						
I41A	Arkdale	114.86	23	PKiKP	PKiKP	22 37 24.8	-0.6
	baz=329						
K38A	Parkersburg	114.89	26	PKiKP	PKiKP	22 37 25.0	-0.5
	baz=326						
L37A	Phoenix Point,	114.90	27	PKiKP	PKiKP	22 37 25.1	-0.5
	baz=324						
F45A	CMU Biological	114.95	19	PKiKP	PKiKP	22 37 25.0	-0.5
	baz=333						
H42A	Shiocton	114.97	22	PKiKP	PKiKP	22 37 25.1	-0.5
	baz=330						
M36A	Felix, Anita	114.97	28	PKiKP	PKiKP	22 37 25.2	-0.5
	baz=323						
J40A	Soldiers Grove	115.09	24	PKiKP	PKiKP	22 37 25.2	-0.7
	baz=328						
F46A	Macinaw City C	115.11	19	PKiKP	PKiKP	22 37 25.6	-0.2
	baz=334						
K39A	Oelwein	115.21	25	PKiKP	PKiKP	22 37 25.1	-1.0
	baz=326						
L38A	Oak Wood Farm,	115.22	26	PKiKP	PKiKP	22 37 25.4	-0.7
	baz=325						
H43A	Windswept, Lux	115.27	21	PKiKP	PKiKP	22 37 25.6	-0.6
	baz=331						
SCIA	State Center	115.31	27	PKiKP	PKiKP	22 37 25.7	-0.7
	baz=325						
SCIA	State Center	115.31	27	PFAKE		22 37 40.0	+14
SCIA				LR	LR		
	comp=Z,2µm,20.0s						
M37A	Trindle Farm,	115.35	27	PKiKP	PKiKP	22 37 26.0	-0.4
	baz=324						
I42A	Draeger Farm,	115.36	22	PKiKP	PKiKP	22 37 26.0	-0.4
	baz=330						
J41A	Loganville	115.40	24	PKiKP	PKiKP	22 37 26.0	-0.4
	baz=328						
N36A	Muff Farm, Cla	115.41	28	PKiKP	PKiKP	22 37 26.3	-0.3
	baz=323						
K40A	Colesburg	115.52	25	PKiKP	PKiKP	22 37 26.0	-0.7
	baz=327						
L39A	Vinton	115.64	26	PKiKP	PKiKP	22 37 26.4	-0.5
	baz=326						
I43A	Langenfeld Bro	115.65	22	PKiKP	PKiKP	22 37 26.5	-0.4
	baz=330						
JFWS	Jewell Farm	115.69	24	PKiKP	PKiKP	22 37 26.5	-0.5
	baz=328						
JFWS	Jewell Farm	115.69	24	PFAKE		22 37 40.0	+13
JFWS				LR	LR		
	comp=Z,2µm,20.0s						
M38A	Pleasantville	115.71	27	PKiKP	PKiKP	22 37 26.7	-0.5
	baz=325						
J42A	Columbus	115.78	23	PKiKP	PKiKP	22 37 26.7	-0.5
	baz=329						
N37A	Lee Faris, Mou	115.80	28	PKiKP	PKiKP	22 37 26.9	-0.5
	baz=324						
K41A	Shullsburg	115.93	24	PKiKP	PKiKP	22 37 26.8	-0.7
	baz=328						
KSU1	Kansas State U	115.97	31	PKiKP	PKiKP	22 37 27.2	-0.5
	baz=321						
KSU1	Kansas State U	115.97	31	ePKP	PKPdf	22 37 28.1	+0.5
KSU1				LR	LR		
	comp=Z,2µm,19.0s						
J43A	Natural Harves	115.98	22	PKiKP	PKiKP	22 37 26.9	-0.7
	baz=330						
L40A	Anamosa	116.02	25	PKiKP	PKiKP	22 37 26.9	-0.7
	baz=327						
M39A	Webster	116.11	26	PKiKP	PKiKP	22 37 27.2	-0.7
	baz=326						
K42A	Prairie Point,	116.15	23	PKiKP	PKiKP	22 37 27.5	-0.4
	baz=329						
N38A	Joes South For	116.20	27	PKiKP	PKiKP	22 37 27.3	-0.8
	baz=324						
MNTX	Cornudas Mount	116.22	42	PKiKP	PKiKP	22 37 28.7	+0.3
	baz=311						
MNTX	Cornudas Mount	116.22	42	ePKP	PKPdf	22 37 29.6	+1.2
MNTX				LR	LR		
	comp=Z,2µm,19.0s						
L41A	Preston	116.30	25	PKiKP	PKiKP	22 37 27.4	-0.8
	baz=328						
O37A	Wolven Farm, M	116.30	28	PKiKP	PKiKP	22 37 27.8	-0.5
	baz=324						
MSTX	Muleshoe	116.34	39	PKiKP	PKPdf	22 37 28.5	-0.2
	baz=314						
AMTX	Amarillo	116.35	37	PKiKP	PKiKP	22 37 28.8	+0.1
	baz=315						
AMTX	Amarillo	116.35	37	ePKPdf	PKPdf	22 37 29.9	+1.2
M40A	Post Highland	116.44	26	PKiKP	PKPdf	22 37 27.8	-0.7
	baz=326						
N39A	Derby Farms, D	116.46	27	PKiKP	PKPdf	22 37 28.0	-0.5
	baz=325						
K43A	Burlington	116.60	23	PKiKP	PKPdf	22 37 28.1	-0.7
	baz=330						
PMOZ	Porto Moniz, M	116.61	320	ePP	PP	22 38 37.6	+1.4
PMOZ	Porto Moniz, M	116.61	320	eLQ	LQ	23 23 49.0	
PMOZ				eLR	LR	23 28 50.9	
	comp=Z,2µm,16.0s						
VNA1	Neumayer--Stat	116.63	197	P	PKPdf	22 37 29.2	+1.4
VNA1	Neumayer--Stat	116.63	197	P	PKKPbc	22 47 48.2	-10
O38A	Galt	116.64	28	PKiKP	PKPdf	22 37 28.5	-0.4
	baz=324						
P37A	Lathrop	116.67	29	PKiKP	PKPdf	22 37 28.5	-0.6
	baz=323						
L42A	Oliver, Polo	116.69	24	PKiKP	PKPdf	22 37 28.4	-0.6
	baz=328						
VNA3	Neumayer Olymp	116.70	196	P	PKPdf	22 37 28.8	+0.7
VNA3	Neumayer Olymp	116.70	196	P	PKKPbc	22 47 47.8	-10
KOWA	Kowa	116.79	295	PKP	PKPdf	22 37 29.8	-0.1
	comp=Z,20nm,0.8s,baz=68,slow=3.1,SNR=29						
KOWA				PKKPbc	PKKPab	22 47 58.7	-2.4
	comp=Z,12nm,0.8s,baz=243,slow=5.8,SNR=16						
M41A	Milan	116.87	25	PKiKP	PKPdf	22 37 28.9	-0.5
	baz=327						
L43A	Garden Prairie	116.89	23	PKiKP	PKPdf	22 37 29.0	-0.4
	baz=329						
O39A	Kirksville	116.95	27	PKiKP	PKPdf	22 37 29.4	-0.2
	baz=325						
P38A	Dawn	117.02	28	PKiKP	PKPdf	22 37 29.5	-0.1
	baz=324						
M42A	Sheffield	117.12	24	PKiKP	PKPdf	22 37 29.4	-0.4
	baz=328						
Q37A	Longview Farm,	117.19	29	PKiKP	PKPdf	22 37 29.3	-0.8
	baz=323						
L44A	Lake County Fo	117.21	23	PKiKP	PKPdf	22 37 29.5	-0.5
	baz=330						
N41A	Harden Midland	117.30	26	PKiKP	PKPdf	22 37 29.4	-0.7
	baz=327						
O40A	La Belle	117.35	27	PKiKP	PKPdf	22 37 29.8	-0.5
	baz=326						
M43A	Waltham Townsh	117.45	24	PKiKP	PKPdf	22 37 29.8	-0.6
	baz=329						
P39B	Salisbury	117.48	28	PKiKP	PKPdf	22 37 30.0	-0.5
	baz=325						
Q38A	Cooks Store, C	117.51	29	PKiKP	PKPdf	22 37 30.0	-0.6
	baz=324						
N42A	Yates City	117.54	25	PKiKP	PKPdf	22 37 30.1	-0.5
	baz=328						
SADO	Sadowa	117.60	15	ePKPdf	PKPdf	22 37 31.0	+0.3
CMLA	Cha da Macela	117.67	329	PFAKE		22 37 40.0	+9.0
CMLA				LR	LR		
	comp=Z,2µm,19.0s						
Q39A	Willow Grove F	117.74	28	PKiKP	PKPdf	22 37 30.6	-0.5
	baz=324						
O41A	Passleys Farm,	117.78	26	PKiKP	PKPdf	22 37 30.6	-0.6
	baz=327						
M44A	Midewin, Midew	117.84	23	PKiKP	PKPdf	22 37 30.8	-0.4
	baz=330						
R38A	Fenwick Farm,	117.99	30	PKiKP	PKPdf	22 37 31.0	-0.6
	baz=323						
O42A	Bath	118.05	25	PKiKP	PKPdf	22 37 31.2	-0.4
	baz=327						
HDIL	Hopedale	118.07	25	PKiKP	PKPdf	22 37 31.3	-0.3
	baz=328						
HDIL	Hopedale	118.07	25	PFAKE		22 37 40.0	+8.3
HDIL				LR	LR		
	comp=Z,3µm,19.0s						
P41A	Barry, Barry	118.07	26	PKiKP	PKPdf	22 37 31.3	-0.4
	baz=326						
WMOK	Wichita Mounta	118.11	35	PKiKP	PKPdf	22 37 31.5	-0.5
	baz=318						
WMOK	Wichita Mounta	118.11	35	ePKPdf	PKPdf	22 37 32.6	+0.6
WMOK				LR	LR		
	comp=Z,2µm,19.0s						
WMOK	Wichita Mounta	118.11	35	ePKIKP	PKPdf	22 37 32.6	+0.6
WMOK				MLR	MLR		
	comp=Z,2µm,19.0s						
M45A	Boilermakers S	118.14	23	PKiKP	PKPdf	22 37 31.4	-0.4
	baz=331						
Q40A	Laux Farm, Aux	118.19	28	PKiKP	PKPdf	22 37 31.3	-0.7
	baz=325						
O43A	Sugar Creek Fa	118.29	25	PKiKP	PKPdf	22 37 31.5	-0.6
	baz=328						
R39A	Chumby, Stover	118.30	29	PKiKP	PKPdf	22 37 31.6	-0.6
	baz=324						
N44A	Piper City	118.32	24	PKiKP	PKPdf	22 37 31.7	-0.4
	baz=330						
S38A	Stockton	118.44	30	PKiKP	PKPdf	22 37 31.9	-0.6
	baz=323						
P42A	Winchester	118.45	26	PKiKP	PKPdf	22 37 32.0	-0.4
	baz=327						
M46A	Old House Fiel	118.45	22	PKiKP	PKPdf	22 37 31.9	-0.4
	baz=332						
N45A	Kentland	118.51	23	PKiKP	PKPdf	22 37 32.2	-0.3
	baz=330						
AAM	Ann Arbor	118.58	19	PKiKP	PKPdf	22 37 32.3	-0.3
	baz=334						
Q41A	Truxton	118.59	27	PKiKP	PKPdf	22 37 32.4	-0.3
	baz=326						
S39A	Bolivar	118.67	29	PKiKP	PKPdf	22 37 32.4	-0.5
	baz=324						
R40A	Maddies Statio	118.67	28	PKiKP	PKPdf	22 37 32.4	-0.5
	baz=325						
T38A	Diamond	118.72	31	PKiKP	PKPdf	22 37 32.5	-0.5
	baz=322						
O44A	Mansfield	118.74	24	PKiKP	PKPdf	22 37 32.5	-0.4
	baz=329						
LONY	Lake Ozonia	118.75	12	PKiKP	PKPdf	22 37 32.7	-0.2
	baz=344						
LONY	Lake Ozonia	118.75	12	PFAKE		22 37 40.0	+7.1
LONY				LR	LR		
	comp=Z,2µm,19.0s						
P43A	Skaggs, Pawnee	118.75	25	PKiKP	PKPdf	22 37 32.5	-0.5
	baz=328						
N46A	Monticello	118.76	23	PKiKP	PKPdf	22 37 32.5	-0.5
	baz=331						
TUL1	Leonard	118.84	32	PKiKP	PKPdf	22 37 33.0	-0.3
	baz=321						
TXAR	Lajitas Array	118.88	43	PKP	PKPdf	22 37 34.5	+0.8
	comp=Z,13nm,0.8s,baz=260,slow=0.9,SNR=70						
TXAR				PP	PP	22 38 48.9	-3.2
	comp=Z,6.5nm,1.1s,baz=308,slow=6.2,SNR=4.5						
TXAR				PKKPbc	PKKPbc	22 47 50.6	+1.6
	comp=Z,1.6nm,1.0s,baz=131,slow=5.7,SNR=6.2						
Q42A	Golden Eagle	118.93	27	PKiKP	PKPdf	22 37 33.1	-0.3
	baz=327						
PKME	Peaks-Kenny Pk	118.95	7	PKiKP	PKPdf	22 37 33.1	-0.1
	baz=350						
PKME	Peaks-Kenny Pk	118.95	7	PFAKE		22 37 50.0	+17
PKME				LR	LR		
	comp=Z,3µm,20.0s						
O45A	Potomac	118.95	24	PKiKP	PKPdf	22 37 33.0	-0.3
	baz=330						
R41A	Rosebud	119.07	28	PKiKP	PKPdf	22 37 33.3	-0.4
	baz=326						
SFIN	Lafayette	119.08	23	PKiKP	PKPdf	22 37 33.4	-0.2
	baz=330						
S40A	Lebanon	119.13	29	PKiKP	PKPdf	22 37 33.2	-0.6
	baz=324						
ABTX	Abilene, Hawle	119.15	38	PKiKP	PKPdf	22 37 33.8	-0.3
	baz=316						
T39A	Clever	119.17	30	PKiKP	PKPdf	22 37 33.4	-0.5
	baz=323						
P44A	Sand Creek, Wi	119.26	25	PKiKP	PKPdf	22 37 34.0	0.0
	baz=329						
Q43A	New Douglas	119.26	26	PKiKP	PKPdf	22 37 33.7	-0.3
	baz=327						
CCM	Cathedral Cave	119.33	28	PKiKP	PKPdf	22 37 33.7	-0.5
	baz=326						
CCM	Cathedral Cave	119.33	28	ePKPdf	PKPdf	22 37 34.0	-0.2
CCM	Cathedral Cave	119.33	28	ePKIKP	PKPdf	22 37 34.0	-0.2
R42A	Luebbering	119.34	27	PKiKP	PKPdf	22 37 33.8	-0.4
	baz=326						
T40A	Mansfield	119.48	29	PKiKP	PKPdf	22 37 33.9	-0.7
	baz=324						
S41A	Jillco Farms,	119.48	28	PKiKP	PKPdf	22 37 34.0	-0.6
	baz=325						
O47A	Sheridan	119.55	22	PKiKP	PKPdf	22 37 33.9	-0.6
	baz=331						
P45A	Graceland, Par	119.56	24	PKiKP	PKPdf	22 37 34.6	0.0
	baz=330						
Q44A	Meyer Farm, Va	119.58	25	PKiKP	PKPdf	22 37 34.5	-0.1
	baz=328						
LBNH	Lisbon	119.58	10	PKiKP	PKiKP	22 37 34.7	+0.2
	baz=347

U41A	Viola	120.41	29	PKiKP	PKPdf	22 37 35.8	-0.5	
	baz=324							
V40A	Witts Springs	120.42	30	PKiKP	PKPdf	22 37 35.8	-0.6	
	baz=323							
W39A	Magazine	120.42	32	PKiKP	PKPdf	22 37 36.0	-0.4	
	baz=322							
S44A	Carbondale	120.50	26	PKiKP	PKiKP	22 37 36.5	0.0	
	baz=328							
M54A	Oil Creek Stat	120.50	17	PKiKP	PKPdf	22 37 36.1	-0.3	
	baz=338							
T43A	Greenville	120.56	28	PKiKP	PKPdf	22 37 35.7	-0.9	
	baz=326							
JCT	Junction City	120.57	40	PKiKP	PKiKP	22 37 37.0	0.0	
	baz=315							
JCT	Junction City	120.57	40	ePKPdf	PKPdf	22 37 37.2	+0.4	
JCT				LR	LR			
	comp=Z,2μm,20.0s							
JCT	Junction City	120.57	40	ePKIKP	PKPdf	22 37 37.2	+0.4	
JCT				MLR	MLR			
	comp=Z,2μm,20.0s							
Q47A	Bedord North L	120.59	23	PKiKP	PKPdf	22 37 36.3	-0.3	
	baz=331							
ACSO	Alum Creek Sta	120.67	20	PKiKP	PKPdf	22 37 36.3	-0.4	
	baz=335							
ACSO	Alum Creek Sta	120.67	20	PFAKE		22 37 50.0	+13	
ACSO				LR	LR			
	comp=Z,3μm,21.0s							
U42A	Revenden	120.73	29	PKiKP	PKPdf	22 37 36.5	-0.3	
	baz=325							
DBIC	Dimbokro	120.73	288	PKP	PKPdf	22 37 37.5	0.0	
	comp=Z,48nm,1.0s,baz=80,slow=2.7,SNR=21							
DBIC				PKKPbc	PKKPbc	22 47 40.5	-1.0	
	comp=Z,4.8nm,0.8s,baz=328,slow=7.4,SNR=3.2							
KIC	Kosan Boka	120.74	287	ePKIKP	PKPdf	22 37 37.3	-0.2	
	comp=Z,196nm,1.1s							
V41A	Mountainview	120.75	30	PKiKP	PKPdf	22 37 36.4	-0.6	
	baz=324							
BINY	Binghamton	120.78	13	PKiKP	PKPdf	22 37 36.9	0.0	
	baz=343							
BINY	Binghamton	120.78	13	ePKPdf	PKPdf	22 37 36.6	-0.3	
BINY				LR	LR			
	comp=Z,2μm,20.0s							
W40A	Ferguson Farm,	120.78	31	PKiKP	PKPdf	22 37 36.8	-0.2	
	baz=323							
R46A	Gibon Southern	120.78	25	PKiKP	PKPdf	22 37 36.4	-0.6	
	baz=329							
X39A	Fountain Ranch	120.79	32	PKiKP	PKiKP	22 37 37.3	+0.1	
	baz=322							
S45A	Carrier Mills	120.80	26	PKiKP	PKPdf	22 37 36.9	-0.1	
	baz=328							
WHTX	Lake Whitney,	120.88	37	PKiKP	PKiKP	22 37 37.5	+0.1	
	baz=318							
TIC	Toumodi	120.89	288	ePKIKP	PKPdf	22 37 37.4	-0.4	
N54A	Moraine State	120.92	17	PKiKP	PKPdf	22 37 36.6	-0.6	
	baz=338							
MIAR	Mount Ida	121.04	32	PKiKP	PKPdf	22 37 37.5	-0.1	
	baz=322							
MIAR	Mount Ida	121.04	32	ePKPdf	PKPdf	22 37 38.2	+0.6	
MIAR				LR	LR			
	comp=Z,2μm,20.0s							
MIAR	Mount Ida	121.04	32	ePKIKP	PKPdf	22 37 38.2	+0.6	
MIAR				MLR	MLR			
	comp=Z,2μm,20.0s							
LIC	Lamto	121.06	287	ePKIKP	PKPdf	22 37 37.7	-0.4	
	comp=Z,216nm,1.0s							
U43A	Rector	121.09	28	PKiKP	PKPdf	22 37 36.8	-0.8	
	baz=326							
V42A	Cord	121.10	29	PKiKP	PKPdf	22 37 37.3	-0.4	
	baz=325							
R47A	Wooly Knot Far	121.10	24	PKiKP	PKPdf	22 37 37.2	-0.3	
	baz=330							
S46A	Don Dixon Farm	121.15	25	PKiKP	PKPdf	22 37 37.4	-0.3	
	baz=329							
W41B	Gary Mavity, V	121.20	30	PKiKP	PKPdf	22 37 37.2	-0.6	
	baz=324							
R48A	Northridge Ran	121.27	23	PKiKP	PKPdf	22 37 37.8	-0.1	
	baz=331							
U44A	Portageville	121.31	27	PKiKP	PKPdf	22 37 37.7	-0.3	
	baz=327							
T45A	Paducah	121.33	26	PKiKP	PKPdf	22 37 37.6	-0.5	
	baz=328							
HRV	Adam Dziewonsk	121.33	10	PKiKP	PKPdf	22 37 37.7	-0.1	
	baz=348							
X40A	Basin Creek Fa	121.46	31	PKiKP	PKPdf	22 37 37.6	-0.8	
	baz=323							
V43A	Jonesboro	121.51	29	PKiKP	PKPdf	22 37 37.7	-0.7	
	baz=326							
U44B	Burton Farm, H	121.59	27	PKiKP	PKPdf	22 37 38.1	-0.5	
	baz=327							
Y40A	Okolona	121.61	32	PKiKP	PKPdf	22 37 38.4	-0.3	
	baz=322							
X41A	Kaden, Bauxite	121.61	31	PKiKP	PKPdf	22 37 38.3	-0.4	
	baz=323							
T46A	Princeton	121.63	26	PKiKP	PKPdf	22 37 38.3	-0.4	
	baz=329							
435B	Jarrell	121.69	38	PKiKP	PKiKP	22 37 39.1	0.0	
	baz=317							
SSPA	Standing Stone	121.80	16	PKiKP	PKPdf	22 37 38.4	-0.4	
	baz=340							
SSPA	Standing Stone	121.80	16	ePKPdf	PKPdf	22 37 38.7	-0.1	
S48A	Wiedeman Farm,	121.84	24	PKiKP	PKPdf	22 37 38.8	-0.2	
	baz=331							
U45A	Rockin P Farm,	121.84	27	PKiKP	PKPdf	22 37 38.7	-0.4	
	baz=328							
O56A	Blue Knob Stat	121.96	16	PKiKP	PKPdf	22 37 38.8	-0.4	
	baz=339							
T47A	Sharon Grove	122.00	25	PKiKP	PKPdf	22 37 39.0	-0.4	
	baz=329							
X42A	Stuttgart	122.00	30	PKiKP	PKPdf	22 37 38.6	-0.7	
	baz=324							
W43A	Forest City	122.01	29	PKiKP	PKPdf	22 37 39.3	-0.1	
	baz=325							
N59A	State Game Lan	122.05	14	PKiKP	PKPdf	22 37 39.4	0.0	
	baz=343							
Y41A	Eaglette Beard	122.05	32	PKiKP	PKPdf	22 37 39.5	0.0	
	baz=323							
U46A	Springville	122.09	26	PKiKP	PKPdf	22 37 38.9	-0.6	
	baz=328							
Z40A	Long Farm, Mag	122.14	33	PKiKP	PKPdf	22 37 39.5	-0.2	
	baz=322							
MCWV	Mont Chateau	122.17	18	PKiKP	PKPdf	22 37 39.6	0.0	
	baz=338							
T48A	Bowling Green	122.18	24	PKiKP	PKPdf	22 37 39.2	-0.5	
	baz=330							
V45A	Humboldt	122.27	27	PKiKP	PKPdf	22 37 39.6	-0.3	
	baz=327							
833A	Chaparral WMA,	122.33	41	PKiKP	PKiKP	22 37 40.8	+0.4	
	baz=314							
PAL	Palisades	122.36	12	PKiKP	PKPdf	22 37 39.8	0.0	
	baz=345							
X43A	Marvell	122.39	30	PKiKP	PKiKP	22 37 40.6	+0.3	
	baz=325							
U47A	Clarksville	122.39	26	PKiKP	PKPdf	22 37 40.0	-0.1	
	baz=329							
WVT	Waverly	122.43	26	PKiKP	PKPdf	22 37 40.2	0.0	
	baz=328							
Y42A	Garnett, Star	122.50	31	PKiKP	PKPdf	22 37 40.5	+0.1	
	baz=324							
T49A	Edmonton	122.53	24	PKiKP	PKPdf	22 37 39.7	-0.6	
	baz=331							
140A	Cam and Jess,	122.53	33	PKiKP	PKPdf	22 37 40.3	-0.2	
	baz=322							
V46A	Holladay	122.58	27	PKiKP	PKPdf	22 37 39.9	-0.6	
	baz=328							
NATX	Nacogdoches	122.62	35	PKiKP	PKPdf	22 37 40.1	-0.6	
	baz=320							
NATX	Nacogdoches	122.62	35	ePKPdf	PKPdf	22 37 41.0	+0.3	
NATX				LR	LR			
	comp=Z,2μm,19.0s							
U48A	Cassie Pea, Po	122.64	25	PKiKP	PKPdf	22 37 40.2	-0.4	
	baz=330							
W45A	Hickory Valley	122.65	28	PKiKP	PKPdf	22 37 39.3	-1.4	
	baz=327							
X44A	Crenshaw	122.75	29	PKiKP	PKPdf	22 37 40.6	-0.3	
	baz=326							
S51A	Beattyville	122.78	22	PKiKP	PKPdf	22 37 40.7	-0.1	
	baz=333							
V47A	Nunnelly	122.82	26	PKiKP	PKPdf	22 37 40.4	-0.5	
	baz=329							
Y43A	Makayla and Ka	122.86	30	PKiKP	PKPdf	22 37 41.0	0.0	
	baz=324							
T50A	Nancy	122.87	23	PKiKP	PKPdf	22 37 40.5	-0.5	
	baz=332							
Z42A	Norrel Spur, H	122.87	31	PKiKP	PKPdf	22 37 40.9	-0.2	
	baz=323							
141A	Papa Simpson,	122.91	33	PKiKP	PKiKP	22 37 41.5	+0.1	
	baz=322							
S52A	Salyersville	122.93	21	PKiKP	PKPdf	22 37 40.6	-0.5	
	baz=334							
U49A	Red Boiling Sp	122.94	24	PKiKP	PKPdf	22 37 40.9	-0.3	
	baz=331							
W46A	Michie	123.03	27	PKiKP	PKPdf	22 37 40.7	-0.7	
	baz=328							
OXF	Oxford	123.09	29	PKiKP	PKPdf	22 37 41.3	-0.2	
	baz=326							
Y44A	Strider, Charl	123.16	30	PKiKP	PKPdf	22 37 41.7	+0.1	
	baz=325							
X45A	UM Field Stati	123.17	29	PKiKP	PKPdf	22 37 41.2	-0.4	
	baz=326							
V48A	Smith Brothers	123.19	26	PKiKP	PKPdf	22 37 41.0	-0.7	
	baz=329							
Z43A	Armstrong Fami	123.27	31	PKiKP	PKPdf	22 37 41.9	+0.1	
	baz=324							
W47A	Westpoint	123.28	27	PKiKP	PKPdf	22 37 40.7	-1.2	
	baz=328							
HKT	Hockley	123.32	37	ePKPdf	PKPdf	22 37 43.6	+1.7	
HKT	Hockley	123.32	37	ePKIKP	PKPdf	22 37 43.7	+1.7	
241A	Mo Tay, Goldon	123.36	33	PKiKP	PKiKP	22 37 42.2	-0.1	
	baz=322							
X46A	Booneville	123.42	28	PKiKP	PKPdf	22 37 41.6	-0.6	
	baz=327							
T52A	Hallie	123.47	22	PKiKP	PKPdf	22 37 42.1	-0.1	
	baz=334							
V49A	McMinnville	123.54	25	PKiKP	PKPdf	22 37 42.0	-0.3	
	baz=330							
Y45A	Yeager Farm, C	123.56	29	PKiKP	PKPdf	22 37 42.5	+0.1	
	baz=326							
143A	Socs Landing,	123.60	31	PKiKP	PKPdf	22 37 42.4	-0.1	
	baz=324							
Z44A	Pea Ridge, Bel	123.61	30	PKiKP	PKPdf	22 37 42.3	-0.2	
	baz=325							
W48A	Pulaski	123.65	26	PKiKP	PKPdf	22 37 42.0	-0.6	
	baz=329							
242A	Grayson	123.73	32	PKiKP	PKiKP	22 37 42.9	-0.1	
	baz=323							
341A	Kurthwood	123.76	34	PKiKP	PKiKP	22 37 43.1	0.0	
	baz=321							
TZTN	Tazewell	123.77	22	PKiKP	PKPdf	22 37 42.3	-0.5	
	baz=333							
TZTN	Tazewell	123.77	22	ePKPdf	PKPdf	22 37 43.3	+0.5	
X47A	Russelville	123.78	27	PKiKP	PKPdf	22 37 42.3	-0.6	
	baz=328							
KVTX	Kingsville	123.82	41	PFAKE		22 37 50.0	+6.9	
KVTX				LR	LR			
	comp=Z,2μm,19.0s							
Y46A	Houston	123.86	29	PKiKP	PKPdf	22 37 42.5	-0.4	
	baz=327							
Z45A	Winona	123.89	30	PKiKP	PKiKP	22 37 43.4	0.0	
	baz=326							
V50A	Pikevile	123.95	24	PKiKP	PKPdf	22 37 42.6	-0.6	
	baz=331							
W49A	Belvidere	123.95	26	PKiKP	PKPdf	22 37 42.8	-0.3	
	baz=330							
V51A	Loudon	124.12	23	PKiKP	PKPdf	22 37 43.1	-0.3	
	baz=332							
144A	Alexander Plac	124.14	31	PKiKP	PKiKP	22 37 44.0	+0.1	
	baz=325							
342A	Flagon Creek P	124.18	33	PKiKP	PKiKP	22 37 43.9	0.0	
	baz=322							
X48A	Hartselle	124.19	27	PKiKP	PKPdf	22 37 42.7	-0.9	
	baz=329							
CBN	Corbin Frederi	124.21	16	PKiKP	PKPdf	22 37 43.4	-0.1	
	baz=340							
CBN	Corbin Frederi	124.21	16	PFAKE		22 38 00.0	+16	
CBN				LR	LR			
	comp=Z,3μm,20.0s							
243A	Waterproof	124.22	32	PKiKP	PKiKP	22 37 44.2	+0.2	
	baz=323							
BLA	Blacksburg	124.24	19	PKiKP	PKPdf	22 37 43.0	-0.7	
	baz=337							
BLA	Blacksburg	124.24	19	ePKPdf	PKPdf	22 37 44.3	+0.6	
BLA				LR	LR			
	comp=Z,2μm,20.0s							
BLA	Blacksburg	124.24	19	ePKIKP	PKPdf	22 37 44.3	+0.6	
BLA				MLR	MLR			
	comp=Z,2μm,20.0s							
W50A	Signal Mountai	124.27	25	PKiKP	PKPdf	22 37 43.3	-0.5	
	baz=331							
U53A	Fall Branch	124.28	22	PKiKP	PKPdf	22 37 43.7	-0.1	
	baz=334							
Y47A	UCPARC, Winfie	124.30	28	PKiKP	PKPdf	22 37 43.4	-0.5	
	baz=328							
V52A	Sevville	124.38	23	PKiKP	PKiKP	22 37 44.3	+0.1	
	baz=333							
Z46A	Louisville	124.39	29	PKiKP	PKiKP	22 37 44.3	0.0	
	baz=326							
145A	Houston Renfro	124.41	30	PKiKP	PKPdf	22 37 43.7	-0.3	
	baz=325							
VBMS	Vicksburg	124.43	31	PKiKP	PKPdf	22 37 44.3	+0.2	
	baz=324							
X49A	Woodville	124.45	26	PKiKP	PKPdf	22 37 43.9	-0.2	
	baz=329							
244A	Avery, Jackson	124.49	31	PKiKP	PKPdf	22 37 44.0	-0.2	
	baz=324							
Y48A	Jasper	124.59	27	PKiKP	PKPdf	22 37 43.2	-1.2	
	baz=328							
343A	Vidalia	124.62	33	PKiKP	PKPdf	22 37 42.7	-1.8	
	baz=323							
X50B	Fort Payne	124.77	25	PKiKP	PKPdf	22 37 44.5	-0.3	
	baz=330							
Z47A	Carrollton	124.79	28	PKiKP	PKPdf	22 37 44.8	0.0	
	baz=327							
146A	Union	124.80	30	PKiKP	PKPdf	22 37 45.0	+0.1	
	baz=326							
V53A	Saluda	124.82	22	PKiKP	PKPdf	22 37 44.9	+0.1	
	baz=334							
Z48A	Northport	124.88	28	PKiKP	PKPdf	22 37 44.1	-0.8	
	baz=328							
245A	Little AP, Sta	124.89	31	PKiKP	PKPdf	22 37 45.0	0.0	
	baz=325							
W52A	Murphy	124.91	24	PKiKP	PKPdf	22 37 44.9	-0.2	
	baz=332							
344A	Westbrook Farm	124.94	32	PKiKP	PKiKP	22 37 45.9	+0.4	
	baz=324							
443A	Delano Plantat	124.94	33	PKiKP	PKiKP	22 37 45.4	-0.1	
	baz=322							
Y49A	Blount Mountai	124.97	26	PKiKP	PKPdf	22 37 44.9	-0.3	
	baz=329							
X51A	Calhoun	125.01	25	PKiKP	PKPdf	22 37 45.3	+0.1	
	baz=331							
W53A	Cullowhee	125.13	23	PKiKP	PKPdf	22 37 45.7	+0.1	
	baz=333							
147A	Livingston	125.14	29	PKiKP	PKPdf	22 37 45.2	-0.2	
	baz=327							
Y50A	Piedmont	125.23	26	PKiKP	PKPdf	22 37 45.7	+0.1	
	baz=330							
246A	Jackson Lee, B	125.28	30	PKiKP	PKiKP	22 37 46.0	-0.1	
	baz=326							
X52A	Dahonega	125.36	24	PKiKP	PKPdf	22 37 45.6	-0.3	
	baz=332							
LRAL	Lakeview Retre	125.42	27	PKiKP	PKPdf	22 37 46.0	0.0	
	baz=328							
LRAL	Lakeview Retre	125.42	27	ePKPdf	PKPdf	22 37 46.3	+0.3	
148A	Greensboro	125.48	28	PKiKP	PKPdf	22 37 46.2	+0.1	
	baz=328							
Z49A	Columbiana	125.48	27	PKiKP	PKiKP	22 37 46.4	-0.1	
	baz=329							
247A	Quitman	125.49	30	PKiKP	PKiKP	22 37 46.8	+0.2	
	baz=326							
Y51A	Rockmart	125.50	25	PKiKP	PKiKP	22 37 46.4	-0.2	
	baz=331							
444A	Pine Grove	125.52	32	PKiKP	PKPdf	22 37 46.4	+0.1	
	baz=323							
346A	Big Creek Wild	125.63	31	PKiKP	PKPdf	22 37 46.3	-0.1	
	baz=325							
X53A	Estanollee	125.67	23	PKiKP	PKiKP	22 37 46.7	-0.2	
	baz=333							
Z50A	Ashland	125.70	26	PKiKP	PKPdf	22 37 46.5	-0.1	
	baz=329							
445A	Amite	125.72	32	PKiKP	PKiKP	22 37 47.3	+0.3	
	baz=324							
KMSC	Kings Mountain	125.82	21	PKiKP	PKPdf	22 37 46.7	0.0	
	baz=335							
248A	Dixon Mills	125.87	29	PKiKP	PKiKP	22 37 47.2	-0.1	
	baz=327							
149A	Jones	125.88	28	PKiKP	PKiKP	22 37 47.4	+0.1	
	baz=328							
Y52A	Lilburn	125.94	24	PKiKP	PKiKP	22 37 47.5	0.0	
	baz=332							
Z51A	Franklin	125.96	26	PKiKP	PKPdf	22 37 47.0	0.0	
	baz=330							
347A	Saraland	126.06	30	PKiKP	PKiKP	22 37 48.3	+0.7	
	baz=326							
Y53A	Monroe	126.13	24	PKiKP	PKiKP	22 37 47.8	0.0	
	baz=332							
446A	Poplarville	126.16	31	PKiKP	PKiKP	22 37 48.2	+0.3	
	baz=325							
150A	Eclectic	126.21	27	PKiKP	PKPdf	22 37 47.7	+0.2	
	baz=329							
249A	Camden	126.25	28	PKiKP	PKiKP	22 37 48.3	+0.3	
	baz=328							
348A	Jackson	126.36	29	PKiKP	PKiKP	22 37 48.5	+0.3	
	baz=327							
Z52A	Williamson	126.38	25	PKiKP	PKPdf	22 37 47.8	0.0	
	baz=331							
Y54A	Tignall	126.47	23	PKiKP	PKiKP	22 37 48.5	0.0	
	baz=333							
447A	Lucedale	126.51	30	PKiKP	PKiKP	22 37 48.8	+0.2	
	baz=326							
GOGA	Godfrey	126.57	24	PKiKP	PKPdf	22 37 48.4	+0.2	
	baz=332							
GOGA	Godfrey	126.57	24	ePKPdf	PKPdf	22 37 48.3	+0.1	
GOGA				LR	LR			
	comp=Z,2μm,19.0s							
GOGA	Godfrey	126.57	24	ePKIKP	PKPdf	22 37 48.3	+0.1	
GOGA				MLR	MLR			
	comp=Z,2μm,19.0s							
151A	Opelika	126.58	26	PKiKP	PKPdf	22 37 48.4	+0.2	
	baz=330							
250A	Grady	126.64	28	PKiKP	PKiKP	22 37 48.7	-0.1	
	baz=329							
Z53A	Monticello	126.64	24	PKiKP	PKiKP	22 37 48.7	-0.1	
	baz=332							
152A	Waverly Hall	126.71	26	PKiKP	PKiKP	22 37 49.1	+0.1	
	baz=330							
349A	Repton	126.74	29	PKiKP	PKiKP	22 37 49.4	+0.3	
	baz=327							
448A	Bay Minette	126.78	30	PKiKP	PKiKP	22 37 49.7	+0.6	
	baz=326							
CNNC	Cliffs of the	126.84	18	PKiKP	PKiKP	22 37 49.1	0.0	
	baz=339							
CNNC	Cliffs of the	126.84	18	ePKPdf	PKPdf	22 37 49.8	+1.1	
CNNC				LR	LR			
	comp=Z,3μm,20.0s							
251A	Midway	126.91	27	PKiKP	PKiKP	22 37 49.5	+0.1	
	baz=330							
BRAL	Brewton	126.96	29	PKiKP	PKiKP	22 37 49.6	+0.1	
	baz=327							
BRAL	Brewton	126.96	29	ePKPdf	PKPdf	22 37 50.8	+1.8	
BRAL				LR	LR			
	comp=Z,2μm,20.0s							
Z54A	Sparta	126.97	24	PKiKP	PKiKP	22 37 49.4	0.0	
	baz=333							
350A	Dozier	127.08	28	PKiKP	PKiKP	22 37 49.6	-0.1	
	baz=328							
153A	Fort Valley	127.09	25	PKiKP	PKiKP	22 37 49.5	-0.2	
	baz=332							
449A	Pace	127.23	29	PKiKP	PKiKP	22 37 50.6	+0.5	
	baz=327							
Z55A	Blythe	127.25	23	PKiKP	PKPdf	22 37 49.6	+0.1	
	baz=334							
252A	Lumpkin	127.29	26	PKiKP	PKiKP	22 37 49.9	-0.2	
	baz=330							
154A	Montrose	127.42	24	PKiKP	PKPdf	22 37 50.0	+0.2	
	baz=332							
253A	Americus	127.48	26	PKiKP	PKiKP	22 37 50.3	-0.2	
	baz=331							
351A	Pinckard	127.53	27	PKiKP	PKiKP	22 37 50.7	+0.1	
	baz=329							
SHEL	Horse Pasture	127.53	262	PFAKE		22 38 00.0	+10	
SHEL				LR	LR			
	comp=Z,1μm,21.0s							
352A	Blakely	127.65	27	PKiKP	PKiKP	22 37 50.6	-0.3	
	baz=330							
155A	Kite	127.66	24	PKiKP	PKPdf	22 37 50.5	+0.2	
	baz=333							
254A	Abbeville	127.93	25	PKiKP	PKiKP	22 37 51.2	-0.2	
	baz=332							
156A	Sylvania	128.00	23	PKiKP	PKiKP	22 37 51.7	+0.2	
	baz=334							
451A	Vernon	128.03	28	PKiKP	PKiKP	22 37 51.7	+0.1	
	baz=329							
NHSC	New Hope	128.06	21	PKiKP	PKiKP	22 37 51.6	0.0	
	baz=336							
NHSC	New Hope	128.06	21	PFAKE		22 38 00.0	+9.0	
NHSC				LR	LR			
	comp=Z,2μm,20.0s							
353A	Camilla	128.07	26	PKiKP	PKPdf	22 37 51.4	+0.3	
	baz=331							
452A	Marianna	128.08	27	PKiKP	PKPdf	22 37 50.9	-0.2	
	baz=329							
TIGA	Tifton	128.25	25	PKiKP	PKiKP	22 37 52.0	-0.1	
	baz=331							
255A	Hazlehurst	128.27	24	PKiKP	PKiKP	22 37 52.1	0.0	
	baz=333							
453A	Whigham	128.45	26	PKiKP	PKPdf	22 37 51.4	-0.5	
	baz=330							
256A	Glennville	128.45	23	PKiKP	PKiKP	22 37 52.2	-0.2	
	baz=333							
355A	Pearson	128.63	25	PKiKP	PKiKP	22 37 52.8	0.0	
	baz=332							
552A	Lynn Haven	128.64	28	PKiKP	PKiKP	22 37 53.1	+0.2	
	baz=329							
257A	Skidaway Islan	128.78	23	PKiKP	PKiKP	22 37 53.3	+0.2	
	baz=334							
454A	Quitman	128.86	26	PKiKP	PKiKP	22 37 53.3	0.0	
	baz=331							
356A	Blackshear	128.94	24	PKiKP	PKiKP	22 37 53.3	-0.2	
	baz=333							
553A	Crawfordville	128.97	27	PKiKP	PKiKP	22 37 53.5	-0.1	
	baz=330							
357A	Townsend	129.10	23	PKiKP	PKiKP	22 37 54.1	+0.3	
	baz=334							
456A	Hilliard	129.51	24	PKiKP	PKiKP	22 37 54.5	-0.1	
	baz=333							
555A	McAlpin	129.66	26	PKiKP	PKPdf	22 37 54.5	+0.4	
	baz=332							
457A	Yulee	129.79	24	PKiKP	PKiKP	22 37 55.0	-0.2	
	baz=333							
556A	Lake Butler	130.00	25	PKiKP	PKiKP	22 37 55.5	-0.1	
	baz=332							
557A	Orange Park	130.26	24	PKiKP	PKPdf	22 37 55.4	+0.1	
	baz=333							
656A	Willston	130.50	26	PKiKP	PKPdf	22 37 55.4	-0.4	
	baz=332							
657A	Interlachen	130.58	25	PKiKP	PKiKP	22 37 56.5	-0.3	
	baz=332							
PMSA	Palmer Station	130.75	178	PFAKE		22 38 10.0	+15	
PMSA				LR	LR			
	comp=Z,2μm,21.0s							
658A	Bunnell	130.97	24	PKiKP	PKiKP	22 37 57.2	-0.3	
	baz=333							
757A	Oxford	131.07	25	PKiKP	PKPdf	22 37 57.1	+0.2	
	baz=332							
758A	Lake Helen	131.40	25	PKiKP	PKPdf	22 37 57.6	+0.1	
	baz=333							
857A	Zephyrhills	131.59	26	PKiKP	PKPdf	22 37 57.3	-0.6	

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GRTK Grand Turk          141.70 16 PFAKE                22 38 30.0 +13
GRTK                            LR      LR
     comp=Z,2μm,20.0s
EFI  East Falkland       143.91 182 ePKPdf              PKPdf 22 38 19.2 -0.5
EFI                             LR      LR
     comp=Z,2μm,22.0s
EFI  East Falkland       143.91 182 ePKIKP              PKPdf 22 38 19.2 -0.5
EFI                             MLR     MLR
     comp=Z,2μm,22.0s
MESS Mesas               144.15 45 eP                   PKPab 22 38 18.9 -0.1
CUI  Cuipilapa           144.23 45 i P                  PKPab 22 38 19.3 0.0
VCR  Vista de Mar        144.29 46 eP                   PKPab 22 38 18.9 -0.6
PRVC Isla de Provid      144.56 37 eP                   PKPab 22 38 20.3 0.0
JTS  JuntasAbangare      144.64 45 PKP                  PKPab 22 38 20.4 -0.4
     comp=Z,46nm,0.9s,baz=44,slow=4.6,SNR=15
JTS  JuntasAbangare      144.64 45 ePKPdf               PKPab 22 38 20.2 -0.6
JTS                             LR      LR
     comp=Z,1μm,20.0s
JTS  JuntasAbangare      144.64 45 eP                   PKPab 22 38 18.9 -1.8
CGA2 Cerro Gallo 2       145.17 45 eP                   PKPbc 22 38 22.8 0.0
HDC  Heredia             145.42 44 eP                   PKPbc 22 38 21.2 -2.4
CVTR Volcan Turrial      145.64 44 i P                  PKPdf 22 38 24.1 -0.3
LCR2 La Lucha 2          145.68 44 eP                   PKPdf 22 38 24.1 -0.1
URSC Urasca              145.76 44 eP                   PKPab 22 38 25.1 0.0
QCR1 Quepos              145.80 45 eP                   PKPab 22 38 25.4 +0.4
BUS  Buena Vista         145.98 44 eP                   PKPdf 22 38 24.4 -0.6
SJG  San Juan            146.08 10 PKPbc                PKPdf 22 38 24.6 +0.2
     comp=Z,88nm,0.9s,baz=351,slow=4.0,SNR=48
SJG  San Juan            146.08 10 ePKPdf               PKPbc 22 38 25.1 -0.2
SJG                             LR      LR
     comp=Z,1μm,19.0s
SJG  San Juan            146.08 10 ePKP2                PKPbc 22 38 25.1 -0.2
SJG                             MLR     MLR
     comp=Z,1μm,19.0s
EDDO Dominical           146.13 45 eP                   PKPab 22 38 27.0 +0.8
EDLM Las Mercedes        146.29 44 eP                   PKPdf 22 38 23.1 -1.9
SMRT St. Maarten         146.51 5 eP                    PKPdf 22 38 25.6 +0.4
SABA Saba                146.93 5 eP                    PKPbc 22 38 27.4 -0.5
ANWB Willy Bob           146.97 2 ePKPdf                PKPbc 22 38 27.3 -0.6
ANWB                            LR      LR
     comp=Z,1μm,20.0s
ANWB Willy Bob           146.97 2 eP                    PKPdf 22 38 26.4 +0.4
PAYG Puerto Ayora        147.01 66 ePKPbc               PKPab 22 38 29.8 0.0
PAYG                            LR      LR
     comp=Z,3μm,20.0s
ACR  Cerro Adams         147.03 45 eP                   PKPbc 22 38 28.3 0.0
SEUS St. Eustatius       147.07 5 eP                    PKPbc 22 38 27.6 -0.6
BRU2 Volcan              147.25 44 eP                   PKPbc 22 38 28.3 -0.8
TBS2 Saba                147.27 44 eP                   PKPdf 22 38 27.7 +0.8
NVRH Round Hill, Ne      147.41 4 eP                    PKPab 22 38 31.1 +0.1
NEV  Hard Times          147.46 4 eP                    PKPbc 22 38 29.4 0.0
NVBH Bath Hotel, Ne      147.47 4 eP                    PKPab 22 38 31.6 +0.3
BPA  Boggy Peak          147.59 3 eP                    PKPbc 22 38 29.2 -0.5
MLYT Lee's Yard          147.89 3 eP                    PKPbc 22 38 30.6 +0.1
H05N1 Guadeloupe/Mar     148.34 1 PKPbc                 PKPbc 22 38 31.8 +0.1
     SNR=113
DEG  La Desirade         148.34 1 e                     PKPbc 22 38 31.8 +0.1
MGG  Marie-Galante       148.73 2 eP                    PKPbc 22 38 33.0 +0.3
TBG  Guadaloupe-3        148.78 2 eP                    PKPbc 22 38 33.9 +1.0
BCIP Isla Barro Col      148.80 39 ePKPdf               PKPdf 22 38 29.9 +0.8
BCIP                            ePKPbc  PKiKP          22 38 34.9 +0.5
BCIP                            LR      LR
     comp=Z,1μm,20.0s
BCIP Isla Barro Col      148.80 39 i P                  PKPdf 22 38 28.6 -0.5
BCIP Isla Barro Col      148.80 39 eP                   PKPbc 22 38 31.6 -1.3
MDPV Dominica, Penn      149.01 2 eP                    PKPab 22 38 37.6 +0.1
MDVC Dominica, Viel      149.03 2 eP                    PKPbc 22 38 34.3 +0.9
MDPO Dominica; Chan      149.06 2 eP                    PKPbc 22 38 34.5 +1.0
BBL  Barber's Block      149.11 2 eP                    PKPbc 22 38 33.7 0.0
UPA  Univ. de Panam      149.13 39 eP                   PKPdf 22 38 28.9 -0.7
DLPL La Plaine           149.31 2 eP                    PKPdf 22 38 31.1 +1.3
PCM  Pelee Case Pet      149.82 2 eP                    PKPbc 22 38 36.6 +1.1
PCM  Pelee Case Pet      149.82 2 eP                    PKPbc 22 38 36.6 +1.1
BAMF Morne Balai         149.83 1 eP                    PKPbc 22 38 36.0 +0.4
CXM  Morne La Croix      149.83 1 eP                    PKPdf 22 38 31.0 +0.1
GBMF Grand Be            149.84 1 eP                    PKPbc 22 38 36.1 +0.5
PML  Morne Lenard        149.86 2 eP                    PKPbc 22 38 36.6 +1.0
FDF  Fort de France      149.91 1 eP                    PKPdf 22 38 31.6 +0.7
FDF  Fort de France      149.91 1 eP                    PKPdf 22 38 31.9 +1.0
LPMF Morne Lapointe      150.07 1 eP                    PKPbc 22 38 36.8 +0.8
ZAM  Aeronautique        150.07 1 eP                    PKPbc 22 38 37.0 +1.0
MVM  Montagne Vaucl      150.09 1 eP                    PKPbc 22 38 37.2 +1.0
TRMF Trois Ilets         150.11 1 eP                    PKPbc 22 38 37.6 +1.4
BIM  Bigot               150.12 1 eP                    PKPdf 22 38 32.2 +1.0
MCLT Moule a Chique      150.93 1 eP                    PKPbc 22 38 36.3 -1.9
MCLT Moule a Chique      150.93 1 eP                    PKPbc 22 38 37.2 -0.9
SVB  Belmont             151.36 2 eP                    PKPdf 22 38 33.1 0.0
SVB  Belmont             151.36 2 eP                    PKPbc 22 38 38.5 -0.6
SVCV St. Vincent, C      151.36 2 eP                    PKPbc 22 38 39.5 +0.3
BBGH Gun Hill            151.49 358 PFAKE               22 38 40.0 +0.6
BBGH                            LR      LR
     comp=Z,2μm,20.0s
BBGH Gun Hill            151.49 358 eP                  PKPdf 22 38 26.9 -6.4
BBGH Gun Hill            151.49 358 e                   PKPab 22 38 46.4 -1.3
MOTC Monteria, Cord      151.49 33 eP                   PKPdf 22 38 34.3 +1.0
GRSS Sisters             152.38 3 e                     PKPbc 22 38 42.7 +1.4
GRHS Sauteurs            152.38 3 eP                    PKPbc 22 38 42.2 +0.7
GRHS Sauteurs            152.38 3 e                     PKPab 22 38 53.1 +1.7
GRGR Grenville           152.47 3 eP                    PKPbc 22 38 40.0 -1.7
ZARC Zaragoza, Cauc      153.00 33 eP                   PKPdf 22 38 35.6 0.0
PLCA Paso Flores         153.39 163 PKP                 PKPdf 22 38 36.6 +1.1
     comp=Z,20nm,0.9s,baz=256,slow=1.8,SNR=26
PLCA                            PKPbc   PKiKP          22 38 44.6 +1.4
     comp=Z,159nm,0.9s,baz=230,slow=1.9,SNR=65
SDV  Santo Domingo       153.69 23 PKP                  PKPdf 22 38 37.5 +0.7
     comp=Z,33nm,0.8s,baz=300,slow=0.4,SNR=42
SDV                             PKPab   PKPab          22 38 57.3 +0.1
     comp=Z,106nm,0.7s,baz=290,slow=4.9,SNR=11
SDV  Santo Domingo       153.69 23 ePKPdf               PKPdf 22 38 37.3 +0.5
SDV                             ePKPbc  PKiKP          22 38 45.4 +0.7
SDV                             PKPab   PKPab          22 38 57.4 +0.1
SDV                             LR      LR
     comp=Z,1μm,21.0s
HELC Santa Helena        153.71 36 eP                   PKPdf 22 38 37.6 +0.5
TCE  Chacachacare        153.90 3 eP                    PKPpre 22 38 28.3
TRN  Trinidad (W)        153.96 2 eP                    PKPpre 22 38 28.1
PTBC PUERTO BÉRRIO       154.01 33 eP                   PKPdf 22 38 35.6 -1.5
RCBR Riachuelo           154.10 289 PKP                 PKPdf 22 38 39.0 +1.8
     comp=Z,118nm,0.8s,baz=236,slow=0.2,SNR=5.4
PCRV Puerto La Cruz      154.10 10 PKP                  PKPdf 22 38 37.2 0.0
     comp=Z,22nm,1.1s,baz=16,slow=5.5,SNR=7.1
GRGC Isla de Gorgon      154.53 45 eP                   PKPdf 22 38 38.3 +0.5
TUMC Tumaco              154.97 48 eP                   PKPdf 22 38 37.6 -0.8
YOTC Yotoco, Valle       154.99 40 eP                   PKPdf 22 38 38.3 -0.3
TOLC Tolima              155.13 38 eP                   PKPdf 22 38 38.9 -0.1
ANIL Santa Ana           155.16 38 eP                   PKPdf 22 38 38.3 -0.8
RUSC La Rusia            155.27 31 eP                   PKPdf 22 38 38.3 -1.1
ROSC El Rosal            155.50 35 PKP                  PKPdf 22 38 40.9 +1.3
     comp=Z,35nm,0.9s,baz=1.6,slow=2.2,SNR=39
ROSC El Rosal            155.50 35 eP                   PKPdf 22 38 36.9 -2.7
MARP Paez Belalcaza      156.11 41 eP                   PKPdf 22 38 39.6 -0.7
OTAV Otavalo             156.25 50 ePKPdf               PKPdf 22 38 41.8 +1.1
OTAV                            LR      LR
     comp=Z,1μm,22.0s
TRQA Tornquist           157.53 177 ePKPdf              PKPdf 22 38 42.1 +1.1
TRQA                            LR      LR
     comp=Z,2μm,20.0s
ATAH Atahualpa           160.49 67 PKP                  PKPdf 22 38 47.3 +1.6
     comp=Z,35nm,0.9s,baz=352,slow=2.1,SNR=50
ATAH                            PKPab   PKPab          22 39 28.8 +1.8
     comp=Z,216nm,0.9s,baz=306,slow=2.0,SNR=36
AUSP Uspallata           161.49 155 i P                 PKPdf 22 38 48.3 +2.2
RTCV Cerro Valdivia      162.14 157 i P                 PKPdf 22 38 48.1 +1.6
ACAN Cantantal           162.23 161 i P                 PKPdf 22 38 48.3 +1.8
LCO  Las Campanas        163.56 146 ePKPdf              PKPdf 22 38 49.5 +1.2
LCO                             LR      LR
     comp=Z,2μm,21.0s
NNA  Nana                163.64 80 PKP                  PKPdf 22 38 49.4 +1.0
     comp=Z,70nm,1.1s,baz=358,slow=1.4,SNR=18
NNA                             PKPab   PKPab          22 39 41.2 +0.9
     comp=Z,59nm,1.0s,baz=280,slow=5.6,SNR=8.9
NNA  Nana                163.64 80 ePKPdf               PKPdf 22 38 50.5 +2.1
NNA                             PKPab   PKPab          22 39 41.2 +0.9
NNA                             LR      LR
     comp=Z,975nm,22.0s
APLL PUNTA DE LOS L      164.18 160 i P                 PKPdf 22 38 49.8 +1.3
AGUA GUANDACOL           164.25 153 i P                 PKPdf 22 38 50.9 +2.2
ACLC CERRO LA CRUZ       164.92 157 i P                 PKPdf 22 38 51.5 +2.2
PTGA Pitinga             165.28 358 PKP                 PKPdf 22 38 50.7 +0.8
     comp=Z,24nm,1.0s,baz=352,slow=1.9,SNR=41
PTGA                            PKPab   PKPab          22 39 46.3 -0.8
     comp=Z,26nm,0.8s,baz=18,slow=7.5,SNR=16
PTGA                            PP      PP             22 43 27.5 -4.7
     comp=Z,11nm,1.2s,baz=4.4,slow=11,SNR=4.3
CPUP Villa Florida       168.89 194 PKP                 PKPdf 22 38 53.2 +1.1
     comp=Z,20nm,1.0s,baz=72,slow=1.1,SNR=22
CPUP                            PKPab   PKPab          22 40 03.7 +0.9
     comp=Z,96nm,1.0s,baz=165,slow=4.5,SNR=26
CPUP                            PP      PP             22 43 49.1 -1.8
     comp=Z,29nm,1.3s,baz=159,slow=4.6,SNR=5.3
YJA  Yavi                171.81 144 i P                 PKPdf 22 38 57.1 +2.7
LPAZ La Paz              172.52 97 PKP                  PKPdf 22 38 56.1 +1.0
     comp=Z,38nm,0.9s,baz=345,slow=0.6,SNR=121
LPAZ                            PKPab   PKPab          22 40 21.5 +1.1
     comp=Z,53nm,0.9s,baz=308,slow=3.4,SNR=14
LPAZ                            PP      PP             22 44 10.6 -1.6
     comp=Z,3.0nm,0.9s,baz=305,slow=2.9,SNR=4.0
SAML Samuel              172.90 23 ePKPdf               PKPdf 22 38 55.1 +0.5
SAML                            LR      LR
     comp=Z,2μm,20.0s
SIV  San Ignacio         179.21 125 PKP                 PKPdf 22 38 56.3 +0.3
     comp=Z,46nm,0.9s,baz=125,slow=1.1,SNR=151
SIV                             PKPab   PKPab          22 40 50.5
     comp=Z,12nm,0.7s,baz=257,slow=5.2,SNR=10
SIV                             PP      PP             22 44 40.1 -2.5
     comp=Z,3.8nm,1.0s,baz=293,slow=2.3,SNR=6.5
```

PRU 16 22:29:59.8, 49°80N×18°53E, h0km, Czech and Slovak Republics

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Code Station Name        Δ°   AZ°  Phase ID          Time      Res
                                   Op      ISC       h m s     ISC
OKC  Ostrava-Krasne      0.25 279  ePG     Pg        22 30 04.8 +0.2
OKC                                eSG     Sg        22 30 08.7 +0.9
     comp=Z,8.6nm,0.5s
MORC Moravsky Berou      0.64 268  ePG     Pg        22 30 12.2 +0.1
MORC                               eSG     Sg        22 30 19.7 -0.7
LANS Liptovska Anna      0.89 136  ePG     Pg        22 30 16.1 -0.8
LANS                               eSG     Sg        22 30 28.9 +0.5
KRLC Kraliky             1.16 284  eSG     Sg        22 30 37.3 +0.2
VYHS Vyhne               1.32 171  eSN     Sb        22 30 42.8 -0.2
VRAC Vranov              1.35 249  ePG     Pg        22 30 24.8 -0.9
VRAC                               eSG     Sg        22 30 42.4 -0.9
DPC  Dobruska-Polom      1.52 292  ePG     Pn        22 30 27.1 -1.3
DPC                                eSG     Sg        22 30 47.5 -1.3
     comp=Z,1.2nm,0.4s
KRUC Moravsky            1.58 243  ePG     Pn        22 30 28.4 -0.6
KRUC                               eSG     Sn        22 30 49.4 -0.7
```

*ISCJB **16** 22:39:47.0±0.6, 39°.93N±0°.03×27°.57E±0°.06, h9km±5km, Error ellipse: s-maj=7.3km s-min=4.6km az=175.3*
*DDA **16** 22:39:46.3, 39°.96N×27°.56E, h7km, Ml2.3*
*ISK **16** 22:39:46.9, 39°.94N×27°.59E, h10km, ML2.4/8*
*CSEM **16** 22:39:47.1±0.1, 39°.93N×27°.58E, h10km, ML2.4, Error ellipse: s-maj=3.8km s-min=2.9km az=74.0*

ISC 16 22:39:47.0±0.9, 39°93N±0°.02×27°57E±0°.04, h12km±7km, n25, σ0§33/34, Turkey

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Code Station Name        Δ°   AZ°  Phase ID          Time      Res
                                   Op      ISC       h m s     ISC
GONE Gonen-Balikesi      0.15 37   PG      Pg        22 39 50.8 +0.2
GONE                               SG      Sg        22 39 53.0 -0.1
GONE Gonen-Balikesi      0.15 37   ePg     Pg        22 39 50.8 +0.2
GONE                               eSg     Sg        22 39 53.0 -0.1
BALY Balya               0.19 168  i P     Pg        22 39 50.6 -0.7
BALY Balya               0.19 168  P       Pg        22 39 50.6 -0.7
BALB Balikesir           0.37 140  PG      Pg        22 39 54.6 +0.1
BALB                               SG      Sg        22 39 59.9 +0.4
BALB Balikesir           0.37 140  ePg     Pg        22 39 54.6 +0.1
BALB                               eSg     Sg        22 39 59.9 +0.4
EDC  Edincik             0.47 28   PG      Pg        22 39 56.4 0.0
EDC                                SG      Sg        22 40 03.1 +0.4
EDC  Edincik             0.47 28   ePg     Pg        22 39 56.4 0.0
EDC                                eSg     Sg        22 40 03.1 +0.4
STEP BALIKESIR_Sava      0.56 168  i P     Pb        22 39 58.7 -0.2
STEP                               i S     Sb        22 40 06.6 -0.3
KCTX Karacabey (Bur      0.69 61   PG      Pg        22 39 59.9 -0.6
KCTX Karacabey (Bur      0.69 61   ePg     Pg        22 39 59.9 -0.6
DURS Dursunbey           0.77 115  i P     Pg        22 40 01.7 -0.2
DURS                               i S     Sb        22 40 12.7 -0.2
DURS Dursunbey           0.77 115  P       Pg        22 40 01.7 -0.2
DURS                               S       Sb        22 40 12.7 -0.2
RKY  Sarkoy-Tekirda      0.82 339  PG      Pb        22 40 03.0 -0.2
RKY  Sarkoy-Tekirda      0.82 339  ePg     Pb        22 40 03.0 -0.2
DKL  Dikili              1.00 211  PG      Pb        22 40 06.7 +0.5
DKL  Dikili              1.00 211  ePg     Pb        22 40 06.7 +0.5
ERIK Erikli-Kesan        1.10 313  PN      Pn        22 40 08.3 +0.1
ERIK Erikli-Kesan        1.10 313  ePn     Pn        22 40 08.3 +0.1
ARMT Armutlu             1.18 57   PN      Pn        22 40 09.4 0.0
ARMT Armutlu             1.18 57   ePn     Pn        22 40 09.4 0.0
ALN  Alexandroupoli      1.51 310  PN      Pb        22 40 15.0 -0.1
ALN  Alexandroupoli      1.51 310  ePn     Pb        22 40 15.0 -0.1
TVSB Tavsanli            1.54 108  PN      Pn        22 40 14.6 +0.2
TVSB Tavsanli            1.54 108  ePn     Pn        22 40 14.6 +0.2
```

*IDC **16** 22:40:28.3±0.6, 4°.99S×134°.07E, h0km, mb4.0/8, mb1 4.3/13, mb1mx4.0/53, mbtmp4.2/13, ML4.3/5, Error ellipse: s-maj=28.2km s-min=15.3km az=70.0*
*NEIC **16** 22:40:29.9±4.3, 5°.07S×134°.04E, h12km±27km, mb4.3/3, Error ellipse: s-maj=13.3km s-min=10.2km az=80.0*
*ISCJB **16** 22:40:30.4±0.4, 5°.07S±0°.04×134°.07E±0°.04, h28km, mb4.0/10, Error ellipse: s-maj=6.2km s-min=5.3km az=146.8*
*DJA **16** 22:40:34.5±0.4, 5°S±4°×13°4E±°, h44km±41km, M4.7/13, mB5.2/1, mb4.8/9, MLv4.6/13, Mw(mB)4.6/1*

ISC 16 22:40:32.1±0.5, 5°01S±0°06×134°07E±0°06, h28km, n38, σ1§46/44, mb4.0/10, Aru Islands region

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Code Station Name        Δ°   AZ°  Phase ID          Time      Res
                                   Op      ISC       h m s     ISC
KMPI Kaimana, Papua      1.38 345  P       Pn        22 40 56.1 +0.5
KMPI                               S       Sn        22 41 12.0 -1.0
FAKI Fak Fak             2.76 319  P       Pn        22 41 16.0 +1.5
FAKI                               S       Sn        22 41 46.3 -0.6
RKPI Ransiki, Papua      3.47 2    P       Pn        22 41 24.8 +0.5
BNDI Bandanaira          4.18 276  P       Pn        22 41 35.6 +1.5
BNDI                               S       Sn        22 42 23.7 +1.7
BAKI Biak                4.30 28   P       Pn        22 41 37.5 +1.8
SIJI Sorong              4.97 326  Pn      Pn        22 41 46.1 +1.1
     2.0nm,0.3s,baz=222,slow=23,SNR=6.4
SIJI                               Sn      Sn        22 42 36.7 -4.9
     6.7nm,0.3s,baz=129,slow=23,SNR=13
MSAI Masohi              5.39 288  P       Pn        22 41 51.9 +1.2
     25nm,0.9s,0.1nm
AAI  Ambon               6.00 282  P       Pn        22 42 01.0 +1.8
GENI Genyem              6.54 69   P       Pn        22 42 08.1 +1.6
     104nm,0.8s
JAY  Jayapura            7.07 70   Pn      Pn        22 42 14.7 +0.9
     4.8nm,0.3s,baz=228,slow=14,SNR=22
JAY                                Sn      Sn        22 43 30.9 -2.3
     2.4nm,0.3s,baz=113,slow=21,SNR=2.5
JAY  Jayapura            7.07 70   P       Pn        22 42 14.7 +0.9
     229nm,1.1s
LBMI Labuha              7.87 303  P       Pn        22 42 25.4 +0.6
SANI Sanana              8.59 290  P       Pn        22 42 33.8 -0.8
SOEI Soe                 10.81 244 P       Pn        22 43 06.0 +0.8
BATI Baumata             11.54 243 Pn      Pn        22 43 15.7 +0.6
     3.5nm,0.3s,baz=15,slow=2.2,SNR=4.7
BATI                               Sn      Sn        22 45 19.8 -3.4
     5.7nm,0.3s,baz=14,slow=16,SNR=7.0
WRAB Tennant Creek       14.84 179 ePn     Pn        22 43 57.6 -2.6
     8.2nm,0.6s
WRA  Warramunga Arr      14.85 179 Pn      Pn        22 43 56.4 -4.0
     0.5nm,0.3s,baz=353,slow=13,SNR=14
WRA                                Sn      Sn        22 46 30.4 -14
     0.6nm,0.3s,baz=0.3,slow=23,SNR=6.0
ASAR Alice Springs       18.55 180 P       P         22 44 45.5 -1.4
     2.3nm,0.3s,baz=3.4,slow=9.7,SNR=122
ASAR                               S       Sn        22 47 59.6 -14
     0.4nm,0.3s,baz=356,slow=27,SNR=5.5
CTA  Charters Tower      19.11 143 P       P         22 44 54.0 +0.9
     1.1nm,0.3s,baz=321,slow=13,SNR=5.9
CTAO Charters Tower      19.11 143 eP      P         22 44 52.9 -0.2
     12nm,0.6s
STKA Stephens Creek      27.65 166 P       P         22 46 19.8 +2.2
     3.6nm,1.1s,baz=339,slow=14,SNR=4.0
TAU  Tasmania Unive      39.53 165 eP      P         22 48 00.9 +0.3
     6.4nm,0.9s
KSAR Wonju Array Be      42.62 353 P       P         22 48 26.6 +0.6
KSRS Korea Array         42.63 353 P       P         22 48 26.6 +0.6
     2.3nm,0.9s,baz=177,slow=10,SNR=11
BJT  Baijiatuau          47.74 341 P       P         22 49 06.7 +0.1
     1.0nm,0.4s
SONM Songino Array       57.97 338 P       P         22 50 22.7 +0.5
     0.4nm,0.5s,baz=134,slow=4.2,SNR=2.6
SONM                               PcP     PcP       22 51 13.5 -0.7
     0.7nm,0.7s,baz=163,slow=1.5,SNR=3.7
MKAR Makanchi Array      68.87 325 P       P         22 51 35.7 +1.4
     1.8nm,0.6s,baz=127,slow=7.3,SNR=24
ZALV Zalesovo Beam       71.67 332 P       P         22 51 51.4 +0.2
     0.4nm,0.4s,baz=122,slow=7.3,SNR=3.3
KURK Kurchatov           73.01 327 P       P         22 52 00.0 +0.8
KURBB Kurchatov Arra     73.01 327 P       P         22 52 00.0 +0.8
     1.3nm,0.9s,baz=120,slow=4.4,SNR=7.7
MAW  Mawson              78.28 202 P       P         22 52 30.0 +0.8
     5.5nm,1.0s,baz=62,slow=4.4,SNR=4.5
BVAR Borovoye Array      78.60 326 P       P         22 52 31.3 +0.1
     0.9nm,0.8s,baz=104,slow=6.1,SNR=6.4
ARCES ARCESS Array B     101.11 340 P      Pdif      22 54 18.7 -0.6
     2.6nm,1.0s,baz=65,slow=6.5,SNR=4.1
TXAR Lajitas Array       120.44 59 PKP     PKPdf     22 59 21.0 -0.8
     0.2nm,0.6s,baz=336,slow=2.0,SNR=2.3
TORD Torodi Ar. Bea      132.35 283 PKP    PKPdf     22 59 45.6 +0.8
     0.5nm,0.7s,baz=75,slow=1.7,SNR=2.7
CPUP Villa Florida       146.95 161 PKPbc  PKPbc     23 00 12.7 -0.1
     2.1nm,1.0s,baz=174,slow=7.7,SNR=4.9
LPAZ La Paz              149.50 134 PKPbc  PKPbc     23 00 21.3 +0.7
     0.7nm,0.6s,baz=32,slow=10,SNR=4.5
ROSC El Rosal            151.71 89 PKPbc   PKPbc     23 00 25.9 +0.2
     2.4nm,0.4s,baz=218,slow=23,SNR=4.4
```

IDC 16 22:49:31.6±2.8, 15°54N×120°00E, h109km±22km, mb3.7/5, mb1 3.8/5, mb1mx3.2/66, mbtmp4.0/5, Error ellipse: s-maj=61.5km s-min=16.0km az=82.0, Luzon

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Code Station Name        Δ°   AZ°  Phase ID          Time      Res
                                   Op      ISC       h m s     ISC
TGY  Tagaytay City       1.69 147  P       Pn        22 50 02.2 +1.4
     47nm,0.3s,baz=234,slow=14,SNR=1.6
TGY                                S       Sn        22 50 22.8 -0.2
     90nm,0.3s,baz=148,slow=2.7,SNR=4.2
KSRS Korea Array         22.93 16  P       P         22 54 25.9 -0.5
     0.7nm,0.7s,baz=200,slow=10,SNR=3.1
BATI Baumata             25.84 172 P       P         22 54 53.8 +0.6
     25nm,0.5s,baz=278,slow=3.1,SNR=5.3
KLR  Kul'dur             34.95 13  P       P         22 56 13.4 +0.4
     0.1nm,0.7s,baz=236,slow=6.6,SNR=4.2
WRA  Warrmunga Arr       37.98 158 P       P         22 56 38.3 -0.8
     1.2nm,0.4s,baz=334,slow=9.7,SNR=12
ASAR Alice Springs       41.27 160 P       P         22 57 06.6 +0.2
     1.0nm,0.3s,baz=337,slow=7.0,SNR=12
CTA  Charters Tower      43.81 143 P       P         22 57 27.2 +0.2
     3.0nm,0.8s,baz=324,slow=8.7,SNR=3.0
FINES FINESS Array B     78.36 331 P       P         23 01 19.4 -0.4
     3.0nm,1.2s,baz=29,slow=4.4,SNR=5.5
```

*ISCJB **16** 22:50:13.8±1.2, 16°.08S±0°.08×167°.8E±0°.3, h177km, mb3.7/6, Error ellipse: s-maj=33.9km s-min=11.8km az=1.2*
*IDC **16** 22:50:15.7±3.9, 16°.18S×167°.93E, h183km±32km, mb3.7/5, mb1 3.9/6, mb1mx3.4/49, mbtmp4.2/6, Error ellipse: s-maj=34.9km s-min=23.6km az=62.0*

ISC 16 22:50:14.9±1.2, 16°.1S±0°.1×168°.0E±0°.3, h177km, n8, σ0§54/9, mb3.8/6, Vanuatu Islands

```
Code Station Name        Δ°   AZ°  Phase ID          Time      Res
                                   Op      ISC       h m s     ISC
DZM  Mont Dzumac         6.07 193  P       Pn        22 51 43.0 +0.1
     13nm,0.3s,baz=82,slow=7.6,SNR=125
DZM                                S       Sn        22 52 52.7 +0.4
     baz=308,slow=22,SNR=2.0
WRA  Warrmunga Arr       32.16 258 P       P         22 56 25.6 -0.6
     0.2nm,0.3s,baz=83,slow=7.9,SNR=5.4
ASAR Alice Springs       32.82 251 P       P         22 56 31.9 0.0
     4.6nm,0.5s,baz=78,slow=8.9,SNR=64
KLR  Kul'dur             72.56 336 P       P         23 01 22.6 +0.2
     0.2nm,0.9s,baz=70,slow=2.5,SNR=3.7
QSPA South Pole Qui      73.90 180 P       P         23 01 30.6 +0.3
     6.3nm,0.8s,baz=332,slow=2.8,SNR=5.1
SONM Songino Array       84.02 323 P       P         23 02 26.2 +0.6
     0.6nm,0.6s,baz=128,slow=3.8,SNR=3.7
SNAA Sanae               92.19 183 P       P         23 03 03.4 -0.8
     0.9nm,0.6s,baz=212,slow=9.5,SNR=14
ARCES ARCESS Array B     121.77 345 PKP    PKPdf     23 08 46.8 -0.4
     2.4nm,1.0s,baz=79,slow=2.6,SNR=5.3
```

*ISCJB **16** 23:07:17.9±0.8, 15°.1S±0°.1×73°.3W±0°.1, h98km, mb3.7/5, Error ellipse: s-maj=19.2km s-min=9.4km az=37.5*
*IDC **16** 23:07:21.8±2.2, 15°.21S×73°.27W, h112km±20km, mb3.5/5, mb1 3.8/8, mb1mx3.5/38, mbtmp4.0/8, Error ellipse: s-maj=26.2km s-min=18.2km az=59.0*

ISC 16 23:07:20.2±0.7, 15°2S±0°.1×73°3W±0°.1, h98km, n14, σ1§48/15, mb3.7/5, Southern Peru

```
Code Station Name        Δ°   AZ°  Phase ID          Time      Res
                                   Op      ISC       h m s     ISC
NNA  Nana                4.69 312  P       Pn        23 08 31.5 +2.7
     10nm,0.3s,baz=138,slow=8.6,SNR=15
NNA                                S       Sn        23 09 19.5 -2.6
     7.5nm,0.3s,baz=214,slow=17,SNR=4.1
LPAZ La Paz              5.07 104  P       Pn        23 08 36.5 +2.1
     3.8nm,0.3s,baz=278,slow=8.2,SNR=58
LPAZ                               S       Sn        23 09 18.3 -14
     1.5nm,0.3s,baz=274,slow=8.9,SNR=4.1
SIV  San Ignacio         11.78 96  P       Pn        23 10 02.8 -2.3
     1.6nm,0.3s,baz=286,slow=10,SNR=37
PTGA Pitinga             19.44 44  P       P         23 11 39.5 +0.4
     0.5nm,0.3s,baz=211,slow=14,SNR=18
PLCA Paso Flores         25.60 175 P       P         23 12 39.5 -0.9
     2.6nm,0.9s,baz=24,slow=12,SNR=4.4
TXAR Lajitas Array       53.08 326 P       P         23 16 27.7 -0.1
     0.3nm,0.7s,baz=146,slow=7.6,SNR=3.6
SNAA Sanae               69.59 161 P       P         23 18 18.3 -0.1
     2.0nm,0.7s,baz=267,slow=6.7,SNR=14
TORD Torodi Ar. Bea      79.31 73  P       P         23 19 15.8 +0.1
     0.5nm,0.6s,baz=258,slow=4.6,SNR=4.6
YKA  Yellowknife Ar      83.88 342 P       P         23 19 37.7 -1.0
     1.6nm,1.0s,baz=135,slow=4.0,SNR=3.7
WRA  Warramunga Arr      135.81 219 PKP    PKPdf     23 26 30.2 -0.2
     0.8nm,0.7s,baz=152,slow=2.0,SNR=4.9
ZALV Zalesovo Beam       137.65 19 PKP     PKPdf     23 26 32.9 +0.2
     1.1nm,0.7s,baz=294,slow=4.3,SNR=4.9
MJAR Matsushiro Arr      144.81 313 PKP    PKPab     23 26 44.7 -0.6
     1.1nm,0.6s,baz=164,slow=1.1,SNR=3.6
SONM Songino Array       147.41 0  PKPbc   PKPbc     23 26 53.7 +0.8
     1.4nm,0.6s,baz=357,slow=2.9,SNR=6.2
KSRS Korea Array         150.91 324 PKPbc  PKPbc     23 27 01.9 +0.1
     0.8nm,0.7s,baz=343,slow=1.3,SNR=5.0
```

*DDA **16** 23:15:36.8, 41°.48N×43°.48E, h2km, Ml3.1*
*TIF **16** 23:15:37.3, 41°.52N×43°.53E, h16km±1km*
*CSEM **16** 23:15:38.0±0.2, 41°.50N×43°.50E, h2km, ML2.8, Error ellipse: s-maj=4.5km s-min=3.6km az=157.0*
*ATA **16** 23:15:38.1±1.2, 41°.39N×43°.37E, h7km±29km, ML3.3, MW3.6*
*ISK **16** 23:15:38.6, 41°.50N×43°.34E, h8km, ML2.9/4*

ISC 16 23:15:38.1±0.8, 41°50N±0°.02×43°48E±0°.02, h10km±6km, n60, σ0§91/95, Turkey-Georgia-Armenia border region

```
Code Station Name        Δ°   AZ°  Phase ID          Time      Res
                                   Op      ISC       h m s     ISC
AKH  Akhalkalaki         0.09 172  P       Pg        23 15 40.8 0.0
AKH                                S       Sg        23 15 42.7 +0.1
AKH  Akhalkalaki         0.09 172  P       Pg        23 15 40.8 0.0
AKH                                S       Sg        23 15 42.7 +0.1
BGD  Bogdanovka          0.26 159  P       Pg        23 15 42.6 -0.8
BGD                                S       Sg        23 15 46.7 -0.2
BGD  Bogdanovka          0.26 159  P       Pg        23 15 42.6 -0.8
BGD                                S       Sg        23 15 46.7 -0.2
EPOS Posof               0.56 270  eP      Pg        23 15 48.1 -1.0
EPOS                               eS      Sg        23 15 55.9 -0.6
EPOS                               IAML              23 16 04.2
     comp=Z,82nm,0.6s
EPOS Posof               0.56 270  i P     Pg        23 15 48.0 -1.0
EPOS                               i S     Sg        23 15 56.5 0.0
EPOS Posof               0.56 270  P       Pg        23 15 48.0 -1.0
EPOS                               S       Sg        23 15 56.5 0.0
KZR  Kazreti             0.72 99   P       Pg        23 15 51.3 -0.7
KZR                                S       Sg        23 16 00.9 -0.4
KZR  Kazreti             0.72 99   P       Pg        23 15 51.3 -0.7
KZR                                S       Sg        23 16 00.9 -0.4
EAK  Akyaka              0.82 173  eP      Pg        23 15 52.4 -1.6
EAK                                eS      Sg        23 16 02.2 -2.5
EAK                                IAML              23 16 08.2
```

comp=Z,117nm,0.5s
EAK Akyaka 0.82 173 *i* P **Pg 23 15 52.4 -1.6**
EAK *i* S **Sg 23 16 03.7 -1.0**
EAK Akyaka 0.82 173 P **Pg 23 15 52.4 -1.6**
EAK S **Sg 23 16 03.7 -1.0**
KARS Kars 0.92 199 PG **Pb 23 15 56.2 -0.1**
KARS SG **Sb 23 16 09.2 +0.5**
KARS Kars 0.92 199 *e*Pg **Pb 23 15 56.2 -0.1**
KARS *e*Sg **Sb 23 16 09.2 +0.5**
TBLG Delisi 0.97 76 P **Pg 23 15 55.7 -1.1**
TBLG S **Sg 23 16 09.3 -0.2**
TBLG Delisi 0.97 76 P **Pg 23 15 55.7 -1.1**
TBLG S **Sg 23 16 09.3 -0.2**
SEAG Tbilisi Sea 1.03 75 P **Pg 23 15 57.1 -0.8**
SEAG S **Sg 23 16 10.9 -0.4**
SEAG Tbilisi Sea 1.03 75 P **Pg 23 15 57.1 -0.8**
SEAG S **Sg 23 16 10.9 -0.4**
ONI Oni 1.09 359 P **Pg 23 15 58.0 -1.0**
ONI S **Sg 23 16 13.0 -0.2**
ONI Oni 1.09 359 P **Pg 23 15 58.0 -1.0**
ONI S **Sg 23 16 13.0 -0.2**
DUS Dusheti 1.09 57 P **Pg 23 15 58.9 -0.1**
DUS S **Sb 23 16 13.8 +0.4**
DUS Dusheti 1.09 57 P **Pg 23 15 58.9 -0.1**
DUS S **Sb 23 16 13.8 +0.4**
DIGO Kars 1.09 184 *e*P **Pg 23 15 57.2 -1.8**
DIGO Kars 1.09 184 *i* P **Pg 23 15 57.5 -1.6**
DIGO Kars 1.09 184 P **Pg 23 15 57.5 -1.6**
DBOC Borcka 1.37 264 *i* P **Pn 23 16 03.0 -0.3**
BCA Borcka 1.39 268 PN **Pn 23 16 03.5 -0.2**
BCA SN **Sb 23 16 21.5 -0.7**
DGRG David-gareji 1.43 91 P **Pn 23 16 03.8 -0.4**
DGRG S **Sg 23 16 24.0 0.0**
DGRG David-gareji 1.43 91 P **Pn 23 16 03.8 -0.4**
DGRG S **Sg 23 16 24.0 0.0**
DDEM Demirkent 1.44 245 *i* P **Pb 23 16 05.0 -0.1**
DDEM *i* S **Sg 23 16 24.9 +0.5**
CHVG Ch'k'valeri 1.60 320 P **Pb 23 16 07.5 -0.2**
CHVG S **Sg 23 16 29.8 +0.4**
CHVG Ch'k'valeri 1.60 320 P **Pb 23 16 07.5 -0.2**
CHVG S **Sg 23 16 29.8 +0.4**
GNI Garni 1.66 144 PN **Pg 23 16 09.5 -0.4**
GNI SN **Sg 23 16 32.2 +0.8**
GNI Garni 1.66 144 *e*Pn **Pg 23 16 09.5 -0.4**
GNI *e*Sn **Sg 23 16 32.2 +0.8**
IGDI IGDIR 1.70 164 *e*P **Pb 23 16 08.7 -0.7**
IGDI *e*S **Sb 23 16 31.4 +0.5**
IGDI IAML 23 16 38.9
comp=Z,15nm,0.6s
IGDI IGDIR 1.70 164 *i* P **Pb 23 16 08.8 -0.7**
IGDI *i* S **Sg 23 16 32.0 -0.7**
EATA Eleskirt 1.80 205 *e*P **Pn 23 16 10.1 +0.5**
EATA *e*S **Sb 23 16 34.2 0.0**
EATA Eleskirt 1.80 205 *i* P **Pb 23 16 11.3 -0.1**
EATA Eleskirt 1.80 205 P **Pb 23 16 11.3 -0.1**
HOMI Horasan 1.88 220 *e*P **Pn 23 16 11.7 +1.1**
HOMI *e*S **Sg 23 16 38.9 +0.2**
HOMI IAML 23 16 45.8
comp=Z,18nm,0.4s
AGRB Hanur-Agry 1.96 191 PN **Pn 23 16 12.9 +1.3**
AGRB Hanur-Agry 1.96 191 *e*Pn **Pn 23 16 12.9 +1.3**
DYDN Diyadin 1.96 175 *e*P **Pb 23 16 14.3 +0.2**
DDFL Dedoflistskaro 1.99 91 P **Pb 23 16 15.0 +0.6**
DDFL S **Sb 23 16 39.9 +0.6**
DDFL Dedoflistskaro 1.99 91 S **Sn 23 16 37.0 +0.1**
ERZM Erzurum 2.26 226 *e*P **Pn 23 16 17.0 +1.1**
ERZM Erzurum 2.26 226 *i* P **Pg 23 16 21.4 -0.1**
ERZM Erzurum 2.26 226 P **Pg 23 16 21.4 -0.1**
CLDR Caldiran 2.38 172 PN **Pn 23 16 19.4 +2.0**
CLDR Caldiran 2.38 172 *e*Pn **Pn 23 16 19.4 +2.0**
EKAR Karacoban 2.49 206 *e*P **Pb 23 16 21.4 -1.7**
KOPT Kop Dagi 2.71 238 *e*P **Pb 23 16 26.9 +0.1**
KOPT Kop Dagi 2.71 238 *i* P **Pg 23 16 31.4 +1.5**
BAYT Ayd¨–ntepe-Bay 2.76 247 PN **Pn 23 16 24.0 +1.4**
BAYT Ayd¨–ntepe-Bay 2.76 247 *e*Pn **Pn 23 16 24.0 +1.4**
MACK Trabzon 2.85 260 *i* P **Pb 23 16 27.4 -1.7**
MACK Trabzon 2.85 260 P **Pb 23 16 27.5 -1.7**
KELT Kelkit 3.48 248 *e*P **Pn 23 16 34.1 +1.6**
ESPY Espiye-Giresun 3.63 262 PN **Pn 23 16 35.4 +1.0**
ESPY Espiye-Giresun 3.63 262 *e*Pn **Pn 23 16 35.4 +1.0**

*ISCJB **16** 23:25:24.6±0.4, 55°.64S±0°.07×35°.3W±0°.1, h10km, mb4.6/20, MS4.7/1, Error ellipse: s-maj=13.5km s-min=7.6km az=141.4*
*IDC **16** 23:25:24.4±0.7, 55°.65S×35°.28W, h0km, mb4.4/9, mb1 4.4/9, mb1mx4.2/27, mbtmp4.4/9, Error ellipse: s-maj=28.3km s-min=17.6km az=63.0*
*NEIC **16** 23:25:25.9±0.9, 55°.63S×35°.39W, h8km±5km, mb4.6/10, Error ellipse: s-maj=13.6km s-min=8.8km az=222.0*
ISC 16 23:25:26.0±0.4, 55°.64S±0°.09×35°.4W±0°.1, h10km, n65, σ1§11/57, mb4.7/19, South Georgia Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**1.49**	**335**	*e*Pn	**Pn**	23 25 52.8	**0.0**
VNA1	**Neumayer--Stat**	**19.13**	**152**	P	**Pn**	23 29 49.7	**+0.1**
VNA3	**Neumayer Olymp**	**19.16**	**155**	P	**Pn**	23 29 50.3	**+0.3**
VNA3				S	Sn	23 33 03.9	-20
SNAA	**Sanae**	**21.16**	**152**	P	**P**	23 30 10.8	**-0.3**
SNAA	**Sanae**	**21.16**	**152**	P	**P**	23 30 10.5	**-0.5**
	13nm,0.8s,baz=306,slow=10.0,SNR=41						
SNAA	**Sanae**	**21.16**	**152**	*e*P	**P**	23 30 10.7	**-0.3**
	22nm,0.9s						
CHRN	**Cochrane**	**24.38**	**274**	*e*P	**P**	23 30 45.9	**+1.8**
	4.0nm,0.9s						
TRQA	**Tornquist**	**25.04**	**304**	*e*P	**P**	23 30 49.5	**-0.6**
	9.9nm,0.9s						
CPUP	**Villa Florida**	**33.33**	**322**	P	**P**	23 32 04.0	**+0.1**
	2.1nm,0.6s,baz=150,slow=9.2,SNR=7.6						
CPUP	**Villa Florida**	**33.33**	**322**	*e*P	**P**	23 32 04.7	**+0.8**
	11nm,1.1s						
QSPA	**South Pole Qui**	**34.61**	**180**	P	**P**	23 32 15.5	**+0.6**
	9.8nm,0.8s,baz=194,slow=4.1,SNR=9.3						
QSPA	**South Pole Qui**	**34.61**	**180**	*e*P	**P**	23 32 15.6	**+0.6**
	146nm,1.0s						
PB10	**IPOC Station P**	**41.20**	**307**	*e*P	**P**	23 33 09.0	**-1.6**
	24nm,1.2s						
PB01	**IPOC Station P**	**42.88**	**310**	*e*P	**P**	23 33 24.2	**-0.4**
	13nm,0.9s						
MAW	**Mawson**	**43.16**	**146**	P	**P**	23 33 25.2	**-0.9**
	4.2nm,0.8s,baz=278,slow=6.9,SNR=6.3						
MAW	**Mawson**	**43.16**	**146**	*e*P	**P**	23 33 26.3	**+0.2**
	1.0nm,0.9s						
MNMC	**Minye Minye**	**44.61**	**311**	*e*P	**P**	23 33 39.4	**+0.7**
	12nm,0.8s						
LPAZ	**La Paz**	**46.55**	**314**	P	**P**	23 33 55.5	**+1.1**
	2.3nm,0.7s,baz=143,slow=6.3,SNR=14						
LPAZ	**La Paz**	**46.55**	**314**	*e*P	**P**	23 33 54.7	**+0.3**
	29nm,1.9s						
H10S2	**ASCENSION HYDR**	**49.37**	**28**	T	T	00 26 54.3	
	baz=196,slow=75,SNR=129						
H10S3	**ASCENSION HYDR**	**49.37**	**27**	T	T	00 26 54.3	
	baz=196,slow=75,SNR=120						
H10S1	**ASCENSION HYDR**	**49.39**	**27**	T	T	00 26 55.5	
	baz=196,slow=75,SNR=123						
BOSA	**Boshof**	**50.47**	**84**	P	**P**	23 34 23.3	**-0.7**
	4.2nm,0.7s,baz=216,slow=7.1,SNR=9.0						
H10N3	**ASCENSION HYDR**	**50.48**	**27**	T	T	00 28 14.6	
	baz=195,slow=75,SNR=176						
H10N1	**ASCENSION HYDR**	**50.48**	**27**	T	T	00 28 14.7	
	baz=195,slow=75,SNR=131						
H10N2	**ASCENSION HYDR**	**50.50**	**27**	T	T	00 28 11.0	
	baz=195,slow=75,SNR=107						
SAML	**Samuel**	**51.46**	**324**	*e*P	**P**	23 34 31.9	**+0.5**
	12nm,1.8s						
LBTB	**Lobatse**	**53.44**	**81**	*e*P	**P**	23 34 46.0	**-0.2**
	13nm,0.8s						
TSUM	**Tsumeb**	**53.72**	**69**	*e*P	**P**	23 34 48.3	**+0.1**
	5.8nm,0.8s						
CASY	**Casey**	**55.72**	**164**	*e*P	**P**	23 35 02.7	**+0.7**
	8.4nm,0.8s						
LSZ	**Lusaka**	**62.69**	**77**	*e*P	**P**	23 35 50.7	**-0.3**
	4.6nm,0.8s						
DBIC	**Dimbokro**	**67.05**	**33**	P	**P**	23 36 19.5	**+0.3**
	8.7nm,1.1s,baz=202,slow=5.8,SNR=3.2						
TOA0	**Torodi Ar. Sit**	**75.27**	**37**	*e*P	**P**	23 37 09.2	**+0.2**
TORD	**Torodi Ar. Bea**	**75.27**	**37**	P	**P**	23 37 09.1	**+0.1**
	4.0nm,0.6s,baz=201,slow=6.1,SNR=41						
CCIG	**Comitan**	**86.02**	**306**	*e*P	**P**	23 38 07.0	**+0.3**
	14nm,0.6s						
ESDC	**Sonseca Array**	**98.66**	**24**	P	Pdif	23 39 06.3	+1.6
	0.1nm,0.4s,baz=183,slow=2.6,SNR=4.9						
ES19	**SONSECA Array**	**98.70**	**24**	*e*P	Pdif	23 39 07.0	**+2.0**
NVAR	**Mina Array Bea**	**117.04**	**299**	PKP	**PKPdf**	**23 44 10.4**	**-0.2**
	0.1nm,0.4s,baz=145,slow=3.3,SNR=3.6						
FINES	**FINESS Array B**	**126.33**	**32**	PKP	**PKPdf**	**23 44 25.9**	**-1.4**
	0.9nm,0.6s,baz=215,slow=2.3,SNR=8.7						
ABKAR	**Akbulak array**	**131.07**	**60**	*e*PKPdf	**PKPdf**	**23 44 36.3**	**-0.5**
ARCES	**ARCESS Array B**	**132.39**	**25**	PKP	**PKPdf**	**23 44 36.8**	**-1.9**
	1.3nm,0.6s,baz=299,slow=1.2,SNR=6.9						
KSH	**Kashi**	**133.00**	**80**	PKP	**PKPdf**	**23 44 43.3**	**+2.3**
KSH				PP	**PP**	**23 47 11.4**	**+3.8**
MKAR	**Makanchi Array**	**141.23**	**76**	PKhKP	PKPpre	23 44 48.6	
	2.1nm,1.1s,baz=256,slow=4.2,SNR=3.5						
CD2	**Chengdu**	**142.17**	**114**	PKP	**PKPdf**	**23 44 58.0**	**-0.1**
KLU	**Klutina**	**144.88**	**309**	*e*PKPdf	**PKPab**	**23 45 00.9**	**-0.2**
SCRK	**Sand Creek**	**144.97**	**313**	*e*PKPbc	**PKPbc**	**23 45 00.4**	**-1.0**
RIDG	**Independ'e Rid**	**145.24**	**313**	*e*PKPbc	**PKPbc**	**23 45 01.6**	**-0.5**
SCM	**Sheep Creek Mo**	**145.63**	**309**	*e*PKPdf	**PKPab**	**23 45 03.5**	**-0.3**
LZH	**Lanzhou**	**146.21**	**108**	*e*PKPbc	**PKPdf**	**23 45 00.8**	**-4.3**
LZH				pPKP	sPKPbc	23 45 10.1	-0.6
LZH				sPKP		23 45 16.8	
LZH				LR	LR		
	comp=N,62nm,18.0s						
LZH				LR	LR		
	comp=E,95nm,18.2s						
LZH				LR	LR		
	comp=Z,120nm,20.1s						
IL1	**Eielson Array**	**146.42**	**314**	*e*PKPdf	**PKPdf**	**23 45 04.0**	**-0.3**
ILAR	**Eielson Array**	**146.42**	**314**	PKPbc	**PKPdf**	**23 45 04.5**	**+0.2**
	comp=Z,6.7nm,0.8s,baz=127,slow=1.9,SNR=72						
ILB	**Eielson Array**	**146.42**	**314**	*e*PKPdf	**PKPbc**	**23 45 05.0**	**-0.8**
ZALV	**Zalesovo Beam**	**146.43**	**67**	PKPbc	**PKPdf**	**23 45 04.3**	**-0.3**
	comp=Z,2.1nm,0.7s,baz=234,slow=3.9,SNR=8.8						
CCB	**Clear Creek Bu**	**146.76**	**313**	*e*PKPdf	**PKPbc**	**23 45 05.8**	**-0.9**
MCK	**McKinley**	**146.96**	**312**	*e*PKPdf	**PKPbc**	**23 45 07.2**	**-0.1**
MDM	**Murphy Dome**	**147.03**	**314**	*e*PKPdf	**PKPbc**	**23 45 06.5**	**-1.0**
SUA	**Susitna One**	**147.03**	**307**	*e*PKPdf	**PKPbc**	**23 45 07.7**	**0.0**
TRF	**Thorofare Moun**	**147.46**	**311**	*e*PKPdf	**PKPbc**	**23 45 08.4**	**-0.5**
SKT	**Skwentna**	**147.56**	**308**	*e*PKPdf	**PKPdf**	**23 45 04.5**	**-1.8**
SKT				*e*PKPbc	**PKPbc**	**23 45 08.3**	**-0.7**
BPAW	**Bear Paw Mtn.**	**147.94**	**312**	*e*PKPdf	**PKPbc**	**23 45 09.1**	**-0.9**
PPLA	**Purkeypile**	**148.12**	**309**	*e*PKPbc	**PKPbc**	**23 45 10.2**	**-0.5**
CAST	**Castle Rocks**	**148.22**	**310**	*e*PKPdf	**PKPbc**	**23 45 09.9**	**-0.8**
TOLK	**Toolik Lake Re**	**148.37**	**320**	*e*pPKPdf	pPKPdf	23 45 10.7	-0.3
KSRS	**Korea Array**	**158.61**	**141**	PKPab	**PKPab**	**23 45 58.0**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=245,slow=2.6,SNR=4.7						
TIXI	**Tiksi**	**162.59**	**17**	*e*PKPab	**PKPab**	**23 46 15.3**	**+0.5**

NNC 16 23:37:15.8±4.7, 39°.14N×75°.62E, h0km, mb3.8, mpv3.4, 2C-3D, Error ellipse: s-maj=43.6km s-min=29.4km az=11.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**1.86**	**299**	⇑P	Pn	23 37 48.7	-0.4
	23nm,0.3s						
SFK				⇓S	Sb	23 38 14.1	-0.6
	23nm,0.3s						
MNAS	**Manas**	**4.10**	**326**	⇑P	Pn	23 38 20.6	+0.8
	5.1nm,0.5s						
MNAS				⇓S	Sn	23 39 10.1	+1.5
	8.3nm,0.5s						
KK31	**Karatay Array**	**5.53**	**317**	P	Pn	23 38 35.2	-4.2
	0.6nm,0.3s,baz=136,slow=13,SNR=25						
KK31				⇓S	Sn	23 39 34.3	-9.4
	3.8nm,0.5s,baz=130,slow=21						

*CSEM **16** 23:42:27.5, 14°.66N×43°.21E, h2km, ML3.5*
DHMR 16 23:42:27.5±0.8, 14°.66N×43°.21E, h2km±8km, ML3.5, 1C, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UDYN	**Al 'Udayn**	**1.01**	**133**	⇑*i* P	Pg	23 42 46.4	-0.5
UDYN				*i* S	Sb	23 43 01.1	-0.5
DHBB	**Dhamar BB**	**1.15**	**94**	*i* P	Pg	23 42 49.4	-0.2
DHBB				*i* S	Sb	23 43 06.2	+0.4
DHBB	**Dhamar BB**	**1.15**	**94**	*i* P	Pg	23 42 49.4	-0.2
DHBB				*i* S	Sb	23 43 06.2	+0.4
SANA	**San'a**	**1.21**	**53**	*i* P	Pg	23 42 50.0	-0.7
SANA				*i* S	Sb	23 43 07.4	0.0
SANA				AML	AML	23 43 08.7	
	comp=E,2μm,0.2s						
LBOS		**2.13**	**111**	*i* P	Pb	23 43 05.8	-1.2
LBOS				*i* S	Sg	23 43 35.5	-0.5
BDHA	**Al Bayda'**	**2.39**	**106**	*i* P	Pb	23 43 10.1	-1.3
BDHA				*i* S	Sb	23 43 42.7	+1.4
BDHA				AML	AML	23 43 44.4	
	comp=N,173nm,0.2s						
BDHA	**Al Bayda'**	**2.39**	**106**	*i* P	Pb	23 43 10.1	-1.3
BDHA				*i* S	Sb	23 43 42.7	+1.3
	comp=N,87nm,0.2s						

NEIC 16 23:43:25.3±0.0, 53°.97N×165°.04W, h67km, ML3.5(AEIC), After AEIC., Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKSA	**Akutan Strait**	**0.42**	**293**	P	Pn	23 43 37.6	+0.5
AKA	**Akutan**	**0.46**	**291**	P	Pn	23 43 38.4	+1.0
AKA				S	Sn	23 43 48.0	+1.7
AKUT	**Akutan**	**0.46**	**291**	P	Pn	23 43 37.9	+0.5
AKUT				S	Sn	23 43 47.7	+1.4
AHB	**Akutan Harbor**	**0.48**	**288**	P	Pn	23 43 38.2	+0.5
WESP	**Westdahl Peak**	**0.56**	**20**	P	Pn	23 43 39.1	+0.6
WESP				S	Sn	23 43 49.6	+1.5
HSB	**Akutan Spr's B**	**0.56**	**293**	P	Pn	23 43 38.9	+0.4
ZRO	**Akutan Zero**	**0.56**	**283**	P	Pn	23 43 39.0	+0.4
WESE	**West Dahl East**	**0.57**	**28**	P	Pn	23 43 39.1	+0.4
WECS	**Westdahl Cape**	**0.58**	**15**	P	Pn	23 43 39.5	+0.8
AKMO	**Akutan Morgan**	**0.58**	**282**	P	Pn	23 43 39.2	+0.5
AKMO				S	Sn	23 43 49.4	+0.9
LVA	**Lava Point**	**0.61**	**288**	P	Pn	23 43 39.6	+0.6
UNV	**Unalaska Valle**	**0.87**	**262**	P	Pn	23 43 42.2	+0.2
UNV				S	Sn	23 43 54.7	+0.4
SSLS	**Shishaldin Sou**	**0.96**	**39**	P	Pn	23 43 43.5	+0.3
MTBL	**Makushin Table**	**0.97**	**271**	P	Pn	23 43 43.8	+0.5
MNAT	**Makushin Natee**	**0.97**	**266**	P	Pn	23 43 43.8	+0.5
MREP	**Makushin Rep't**	**1.02**	**262**	P	Pn	23 43 44.5	+0.6
MSW	**Makushin Switc**	**1.03**	**268**	P	Pn	23 43 44.4	+0.4
ISLZ	**Isanotski Laza**	**1.09**	**45**	P	Pn	23 43 45.0	+0.2
MCIR	**Makushin Cirqu**	**1.09**	**270**	P	Pn	23 43 45.5	+0.7
MGOD	**Makushin Gods**	**1.10**	**261**	P	Pn	23 43 45.6	+0.7
FALS	**False Pass**	**1.30**	**46**	P	Pn	23 43 47.9	+0.4
FALS				S	Sn	23 44 05.6	+1.5
OKTU	**Okmok Mt. Tuli**	**1.88**	**253**	P	Pn	23 43 56.3	+1.1
DRIA	**Deer Island**	**1.90**	**57**	P	Pn	23 43 55.9	+0.3
DT1	**Dutton Round H**	**1.97**	**54**	P	Pn	23 43 56.9	+0.4
DOL	**Dolgoi Island**	**2.19**	**56**	P	Pn	23 44 00.2	+0.7
NIKH	**Nikolski High**	**2.49**	**248**	P	Pn	23 44 04.7	+1.3
SDPT	**Sand Point**	**2.99**	**61**	P	Pn	23 44 11.3	+1.0
VNWF	**Veniaminof 8**	**3.83**	**53**	P	Pn	23 44 22.9	+1.0
VNFG	**Veniaminof 2**	**3.91**	**51**	P	Pn	23 44 23.9	+1.0
SPIA	**Saint Paul Isl**	**4.36**	**320**	P	Pn	23 44 29.7	+0.7

KRSC 16 23:44:58.9±0.7, 52°.64N×159°.76E, h46km±10km, ML3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.49**	**19**	*e*P	Pn	23 45 10.9	+1.2
SPN				*e*S	Sn	23 45 18.5	+1.0
NLC	**Nalytchevo**	**0.59**	**335**	*e*P	Pn	23 45 12.1	+1.1
NLC				*e*S	Sn	23 45 21.5	+1.8
DALK	**Dalny**	**0.73**	**303**	*e*P	Pn	23 45 13.4	+0.6
DALK				*e*S	Sn	23 45 23.1	+0.2
PET	**Petropavlovsk**	**0.78**	**300**	*e*P	Pn	23 45 14.1	+0.7
PET				*e*S	Sn	23 45 24.7	+0.7
RUS	**Russkaya**	**0.79**	**255**	*i* P	Pn	23 45 14.4	+0.8
RUS				*e*S	Sn	23 45 25.3	+0.9
UGLR	**Uglovaya**	**0.81**	**316**	*i* P	Pn	23 45 15.5	+1.5
UGLR				*e*S	Sn	23 45 26.8	+1.8
SDLR	**Sedlovina**	**0.83**	**321**	*e*P	Pn	23 45 15.5	+1.2
AVH	**Avacha**	**0.88**	**316**	*e*P	Pn	23 45 16.6	+1.6
AVH				*e*S	Sn	23 45 28.3	+1.6
KRER	**Koryakskii**	**0.91**	**318**	*e*P	Pn	23 45 16.8	+1.4
KOK	**Koryaka**	**0.94**	**314**	*e*P	Pn	23 45 17.3	+1.5
MTVR	**Mutnovka**	**0.98**	**261**	*e*P	Pn	23 45 17.2	+0.9
MTVR				*e*S	Sn	23 45 30.1	+1.0
KRX	**Arik**	**0.99**	**317**	*e*P	Pn	23 45 17.7	+1.3
KRMR	**Karymshinskiy**	**1.01**	**282**	*e*P	Pn	23 45 17.4	+0.8
KRMR				*e*S	Sn	23 45 30.1	+0.4
GRL	**Gorelyy**	**1.03**	**266**	*i* P	Pn	23 45 18.7	+1.6
ASAK	**Asacha**	**1.17**	**258**	*i* P	Pn	23 45 20.5	+1.7
ASAK				*e*S	Sn	23 45 35.5	+1.9
KDTR	**Khodutka, Kamc**	**1.33**	**232**	*e*P	Pn	23 45 22.2	+1.3
KDTR				*e*S	Sn	23 45 38.6	+1.2
KII	**Karymskiy**	**1.41**	**352**	*e*P	Pn	23 45 23.9	+1.7
KII				*e*S	Sn	23 45 41.7	+2.0
GNL	**Ganaly**	**1.52**	**315**	*i* P	Pn	23 45 25.9	+2.2
GNL				*e*S	Sn	23 45 45.2	+2.8
APC	**Apacha**	**1.61**	**281**	*e*P	Pn	23 45 26.6	+1.9
APC				*e*S	Sn	23 45 46.1	+1.8
PAU	**Pauzhetka**	**2.17**	**238**	*e*P	Pn	23 45 35.8	+3.4
MKZ	**Mys Kozlova**	**2.25**	**31**	*i* P	Pn	23 45 36.1	+2.6
KZV	**Kizimen**	**2.50**	**7**	*e*P	Pn	23 45 39.8	+2.7
TUMD	**Tumrok D**	**2.60**	**8**	*e*P	Pn	23 45 41.0	+2.7
TUMD				*e*S	Sn	23 46 11.0	+2.3
TUMR	**Tumrok**	**2.66**	**5**	*e*P	Pn	23 45 42.5	+3.2
BZMR	**Bezymyannaya**	**3.33**	**7**	*e*P	Pn	23 45 52.8	+4.3
ZLN	**Zelenaya**	**3.44**	**10**	*e*P	Pn	23 45 55.0	+5.0
KBTR	**Krutoberegovo**	**4.00**	**25**	*i* P	Pn	23 46 01.3	+3.8
SRKR	**Sorokina**	**4.11**	**11**	*e*P	Pn	23 46 02.7	+3.6
BKI	**Bering**	**4.48**	**53**	*e*P	Pn	23 46 06.1	+2.0

NNC 16 23:51:22.0±5.1, 36°.95N×70°.55E, h0km, mb3.6, mpv3.2, 2C-3D, Error ellipse: s-maj=39.3km s-min=32.6km az=170.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.84**	**36**	⇓P	Pn	23 52 21.9	-0.6
	3.1nm,0.4s						
SFK				⇑S	Sn	23 53 10.0	+1.5
	3.2nm,0.2s						
MNAS	**Manas**	**5.73**	**15**	⇑P	Pn	23 52 48.8	+0.3
	1.1nm,0.6s						
MNAS				⇓S	Sn	23 53 55.4	+0.3
	1.6nm,0.3s						
KK31	**Karatay Array**	**6.15**	**360**	P	Pn	23 52 55.3	+1.2
	0.5nm,0.2s,baz=175,slow=13,SNR=28						
KK31				⇓S	Sn	23 54 06.6	+1.5
	2.3nm,0.4s,baz=183,slow=22						

*TIF **16** 23:53:46.8, 41°.50N×43°.52E, h18km±1km*
*CSEM **16** 23:53:47.3±0.2, 41°.50N×43°.46E, h2km, ML2.3, Error ellipse: s-maj=4.4km s-min=3.4km az=162.0*
*DDA **16** 23:53:48.0, 41°.41N×43°.38E, h7km, Ml3.2*
*ATA **16** 23:53:47.7±0.9, 41°.40N×43°.36E, h15km±7km, ML2.7, MW2.9*
*ISK **16** 23:53:48.3, 41°.49N×43°.34E, h9km, ML2.6/4*
ISC 16 23:53:46.9±0.8, 41°.50N±0°.02×43°.48E±0°.02, h15km±4km, n54, σ0§73/89, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKH	**Akhalkalaki**	**0.09**	**172**	P	**Pb**	**23 53 50.4**	**+0.1**
AKH				S	**Sg**	**23 53 52.5**	**0.0**
AKH	**Akhalkalaki**	**0.09**	**172**	P	**Pb**	**23 53 50.4**	**+0.1**
AKH				S	**Sg**	**23 53 52.5**	**0.0**
BGD	**Bogdanovka**	**0.25**	**158**	P	**Pg**	**23 53 52.2**	**-0.3**
BGD				S	**Sg**	**23 53 56.3**	**-0.1**
BGD	**Bogdanovka**	**0.25**	**158**	P	**Pg**	**23 53 52.2**	**-0.3**
BGD				S	**Sg**	**23 53 56.3**	**-0.1**
EPOS	**Posof**	**0.56**	**271**	*e*P	**Pg**	**23 53 57.6**	**-0.4**
EPOS				*e*S	**Sb**	**23 54 05.6**	**-0.8**
EPOS				IAML		23 54 14.1	
	comp=Z,22nm,0.6s						
EPOS	**Posof**	**0.56**	**271**	*i* P	**Pg**	**23 53 57.6**	**-0.4**
EPOS				*i* S	**Sb**	**23 54 06.0**	**-0.4**
EPOS	**Posof**	**0.56**	**271**	P	**Pg**	**23 53 57.6**	**-0.4**
EPOS				S	**Sb**	**23 54 06.0**	**-0.4**
KZR	**Kazreti**	**0.72**	**99**	P	**Pg**	**23 54 00.1**	**-0.8**
KZR				S	**Sb**	**23 54 10.5**	**-0.3**
KZR	**Kazreti**	**0.72**	**99**	P	**Pg**	**23 54 00.1**	**-0.8**
KZR				S	**Sb**	**23 54 10.5**	**-0.3**
EAK	**Akyaka**	**0.82**	**173**	*e*P	**Pg**	**23 54 01.9**	**-0.9**
EAK				*e*S	**Sg**	**23 54 12.3**	**-1.4**
EAK				IAML		23 54 18.5	
	comp=Z,35nm,0.2s						
EAK	**Akyaka**	**0.82**	**173**	*i* P	**Pg**	**23 54 01.9**	**-0.9**
EAK				*i* S	**Sg**	**23 54 13.3**	**-0.3**
EAK	**Akyaka**	**0.82**	**173**	P	**Pg**	**23 54 01.9**	**-0.9**
EAK				S	**Sg**	**23 54 13.3**	**-0.3**
KARS	**Kars**	**0.92**	**199**	PG	**Pn**	**23 54 05.8**	**+0.3**
KARS				SG	**Sn**	**23 54 18.7**	**+0.2**
KARS	**Kars**	**0.92**	**199**	*e*Pg	**Pn**	**23 54 05.8**	**+0.3**
KARS				*e*Sg	**Sn**	**23 54 18.7**	**+0.2**
TBLG	**Delisi**	**0.97**	**76**	P	**Pb**	**23 54 05.3**	**-0.2**
TBLG				S	**Sb

ellipse: s-maj=22.8km s-min=10.2km az=144.0

ISC 16 23:56:44.8±0.7, 18°.0S±0°.2×178°.0W±0°.1, h590km, n25, σ1§25/28, mb4.3/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.21**	**57**	P	**P**	**23 58 37.2**	**+0.7**
	10nm,0.3s,baz=212,slow=3.1,SNR=9.4						
AFI				S	**S**	**00 00 07.8**	**0.0**
	0.7nm,0.3s,baz=34,slow=22,SNR=2.2						
OUZ	**Omahuta**	**18.72**	**202**	P	**P**	**00 00 30.1**	**+2.9**
WCZ	**Waipu Caves**	**19.12**	**199**	P	**P**	**00 00 33.3**	**+2.5**
HAZ	**Te Kaha**	**20.03**	**190**	P	**P**	**00 00 37.5**	**-1.6**
URZ	**Urewera**	**20.64**	**191**	P	**P**	**00 00 43.3**	**-1.3**
	7.6nm,0.5s,baz=285,slow=2.8,SNR=12						
TSZ	**Takapari Road**	**22.06**	**192**	P	**P**	**00 01 01.3**	**-0.8**
BFZ	**Birch Farm**	**23.15**	**191**	P	**P**	**00 01 06.0**	**-0.9**
MRZ	**Mangatainoka R**	**23.26**	**193**	P	**P**	**00 01 07.0**	**-0.9**
DUWZ	**D'Urville Isla**	**23.77**	**195**	P	**P**	**00 01 11.2**	**-1.3**
QRZ	**Quartz Range**	**24.17**	**198**	P	**P**	**00 01 16.0**	**0.0**
NNZ	**Nelson**	**24.30**	**196**	P	**P**	**00 01 16.0**	**-1.2**
TUWZ	**Tuamarina**	**24.36**	**195**	P	**P**	**00 01 16.1**	**-1.6**
CMWZ	**Cape Campbell**	**24.60**	**194**	P	P	00 01 12.5	-7.2
THZ	**Tophouse**	**24.94**	**196**	P	**P**	**00 01 21.9**	**-1.0**
DSZ	**Denniston Nort**	**25.23**	**198**	P	**P**	**00 01 25.6**	**+0.1**
RPZ	**Rata Peaks**	**27.26**	**198**	P	**P**	**00 01 44.1**	**+1.0**
	9.1nm,0.5s,baz=25,slow=5.7,SNR=3.4						
CTA	**Charters Tower**	**33.85**	**261**	P	**P**	**00 02 40.6**	**+0.7**
	4.4nm,0.6s,baz=96,slow=13,SNR=11						
STKA	**Stephens Creek**	**38.96**	**241**	P	**P**	**00 03 22.8**	**+1.2**
	18nm,0.8s,baz=88,slow=9.3,SNR=25						
WRA	**Warramunga Arr**	**45.03**	**260**	P	**P**	**00 04 09.3**	**0.0**
	6.7nm,0.6s,baz=95,slow=7.0,SNR=63						
ASAR	**Alice Springs**	**45.17**	**254**	P	**P**	**00 04 10.8**	**+0.3**
	16nm,0.6s,baz=89,slow=7.9,SNR=135						
ASAR				PcP	**PcP**	**00 05 37.5**	**-0.5**
	0.9nm,0.5s,baz=108,slow=3.8,SNR=4.3						
ASAR				ScP	**ScP**	**00 08 35.0**	**0.0**
	1.1nm,0.9s,baz=106,slow=4.3,SNR=4.6						
ASAR				S	**S**	**00 10 06.3**	**-2.0**
	0.9nm,0.8s,baz=89,slow=16,SNR=7.9						
NVAR	**Mina Array Bea**	**79.20**	**44**	P	**P**	**00 07 50.2**	**+0.2**
	1.4nm,0.7s,baz=222,slow=8.9,SNR=12						
TXAR	**Lajitas Array**	**85.69**	**57**	P	**P**	**00 08 23.5**	**+0.8**
	2.6nm,0.8s,baz=222,slow=5.9,SNR=31						
ILAR	**Eielson Array**	**85.88**	**13**	P	**P**	**00 08 21.4**	**-1.2**
	0.4nm,0.4s,baz=225,slow=5.0,SNR=8.3						
PDAR	**Pinedale Array**	**87.13**	**43**	P	**P**	**00 08 28.8**	**-0.5**
	0.7nm,0.6s,baz=219,slow=1.9,SNR=5.5						
GERES	**GERESS Array B**	**147.81**	**345**	PKPbc	**PKPbc**	**00 15 23.2**	**-1.0**
	0.4nm,0.5s,baz=32,slow=3.5,SNR=6.9						

IDC 17 00:07:32.1±1.1, 11°.56N×145°.18E, h0km, mb3.8/11, mb1 3.9/12, mb1mx3.8/59, mbtmp3.8/12, ML3.4/1, MS3.7/3, Ms1 3.8/3, ms1mx3.1/7, Error ellipse: s-maj=37.7km s-min=17.6km az=92.0

ISCJB 17 00:07:35.3±0.9, 11°.59N±0°.07×145°.1E±0°.2, h33km, mb3.8/13, MS3.9/2, Error ellipse: s-maj=34.8km s-min=9.7km az=179.9

ISC 17 00:07:37.4±1.2, 11°.64N±0°.10×145°.2E±0°.3, h35km, n17, σ1§25/15, mb3.8/13, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.96**	**351**	Pn	**Pn**	**00 08 06.1**	**-2.2**
	14nm,0.3s,baz=79,slow=1.4,SNR=7.7						
GUMO				Sn	**Sn**	**00 08 31.2**	**-0.5**
	53nm,0.3s,baz=184,slow=20,SNR=9.3						
JCJ	**Chichijima**	**15.63**	**350**	LR	LR	00 16 34.4	
	comp=Z,126nm,19.2s,baz=278,slow=34						
MJAR	**Matsushiro Arr**	**25.58**	**347**	P	**P**	**00 13 03.0**	**-0.4**
	0.9nm,0.8s,baz=167,slow=10,SNR=2.5						
KSRS	**Korea Array**	**30.02**	**332**	P	**P**	**00 13 42.5**	**-0.4**
	0.3nm,0.4s,baz=140,slow=9.4,SNR=2.8						
WRA	**Warramunga Arr**	**33.15**	**199**	P	**P**	**00 14 08.8**	**-1.9**
	1.6nm,0.8s,baz=20,slow=9.7,SNR=6.6						
ASAR	**Alice Springs**	**36.78**	**197**	P	**P**	**00 14 41.0**	**-1.0**
	0.4nm,0.7s,baz=18,slow=11,SNR=6.4						
KLR	**Kul'dur**	**39.10**	**346**	P	**P**	**00 15 01.8**	**+0.5**
	0.1nm,0.5s,baz=138,slow=8.3,SNR=2.0						
CMAR	**Chiang Mai Arr**	**45.08**	**284**	LR	LR	00 31 34.2	
	comp=Z,67nm,21.2s,baz=66,slow=32						
SONM	**Songino Array**	**48.50**	**326**	P	**P**	**00 16 18.4**	**+1.3**
	0.4nm,0.5s,baz=133,slow=6.3,SNR=2.2						
MKAR	**Makanchi Array**	**63.11**	**317**	P	**P**	**00 18 02.7**	**+1.1**
	0.6nm,0.7s,baz=99,slow=8.4,SNR=5.2						
ZALV	**Zalesovo Beam**	**63.39**	**325**	P	**P**	**00 18 02.8**	**-0.4**
	0.5nm,0.4s,baz=103,slow=7.4,SNR=3.0						
KURBB	**Kurchatov Arra**	**66.31**	**320**	P	**P**	**00 18 22.1**	**-0.3**
	2.6nm,0.6s,baz=105,slow=6.7,SNR=12						
ILAR	**Eielson Array**	**70.19**	**25**	P	**P**	**00 18 46.6**	**+0.2**
	0.3nm,0.5s,baz=236,slow=6.9,SNR=5.2						
BVAR	**Borovoye Array**	**71.65**	**322**	P	**P**	**00 18 56.0**	**+0.5**
	1.0nm,0.4s,baz=111,slow=11,SNR=6.0						
INK	**Inuvik**	**76.04**	**22**	P	**P**	**00 19 22.4**	**+1.5**
	0.8nm,0.6s,baz=246,slow=3.9,SNR=2.1						
GEYT	**Alibeck**	**80.66**	**307**	P	**P**	**00 19 48.9**	**+1.7**
	84nm,0.6s,baz=33,slow=3.4,SNR=13						
WSAR	**Wadi Sarin**	**82.37**	**292**	LR	LR	00 59 10.4	
	comp=Z,144nm,20.6s,baz=241,slow=38						

MAN 17 00:20:35.7±5.80N×126°.85E, h14km, mb4.8, ML3.7, MS3.7

ISCJB 17 00:20:38.1±0.8, 6°.01N±0°.04×126°.98E±0°.07, h65km±7km, mb4.2/20, Error ellipse: s-maj=11.8km s-min=4.7km az=161.3

NEIC 17 00:20:39.7±1.5, 6°.09N×126°.98E, h63km±13km, mb4.3/3, Error ellipse: s-maj=24.3km s-min=6.0km az=69.0

IDC 17 00:20:40.0±1.8, 6°.05N×126°.95E, h66km±15km, mb3.9/17, mb1 4.0/18, mb1mx3.8/56, mbtmp4.2/18, Error ellipse: s-maj=36.5km s-min=10.1km az=66.0

DJA 17 00:20:41.4±0.6, 6°N±3°×12°7E±°, h45km±11km, M4.5/4, mB4.7/1, mb4.3/4, MLv4.6/1, Mw(mB)4.0/1

ISC 17 00:20:39.2±1.1, 6°.03N±0°.05×127°.03E±0°.09, h60km±9km, n38, σ1§56/51, mb4.2/20, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.19**	**320**	*e*P	**Pn**	**00 20 57.7**	**-2.1**
MATI				*e*S	**Sn**	**00 21 13.5**	**-1.7**
DAV	**Davao City (W)**	**1.77**	**306**	P	**Pn**	**00 21 06.7**	**-0.9**
	149nm,0.3s,baz=125,slow=1.8,SNR=14						
DAV				S	**Sn**	**00 21 29.4**	**+0.3**
	287nm,0.3s,baz=72,slow=20,SNR=23						
DAV				LR	LR	00 22 05.6	
	comp=Z,611nm,19.7s,baz=124,slow=50						
DMPH	**Davao City--Mi**	**1.84**	**305**	⇓*e*P	**Pn**	**00 21 10.8**	**+2.3**
DMPH				*e*S	**Sn**	**00 21 34.3**	**+3.6**
SKMP	**Bagumbayan, Su**	**2.52**	**281**	*e*P	**Pn**	**00 21 15.1**	**-2.7**
SKMP				*e*S	**Sn**	**00 21 45.6**	**-1.7**
BUKP	**Musuan**	**2.68**	**313**	*e*P	**Pn**	**00 21 19.6**	**-0.5**
BUKP				*e*S	**Sn**	**00 21 53.0**	**+1.6**
SGSI	**Sangihe**	**2.76**	**213**	P	**Pn**	**00 21 19.1**	**-2.0**
SGSI				S	**Sn**	**00 21 52.1**	**-1.2**
BUTP	**Butuan**	**3.24**	**335**	*e*P	**Pn**	**00 21 30.4**	**+2.8**
BUTP				*e*S	Sn	00 22 15.2	+10
PAGZ	**Pagadian**	**4.04**	**297**	*e*P	**Pn**	**00 21 37.8**	**-0.9**
PAGZ				*e*S	**Sn**	**00 22 25.4**	**+0.6**
LBMI	**Labuha**	**6.64**	**176**	P	**Pn**	**00 22 14.9**	**+0.7**
LBMI				S	**Sn**	**00 23 30.4**	**+1.9**
RCP	**Roxas**	**6.94**	**323**	⇑*e*P	**Pn**	**00 22 19.4**	**+1.1**
MRSI	**Marisa**	**7.49**	**223**	P	**Pn**	**00 22 24.9**	**-1.0**
MRSI				S	Sn	00 23 35.3	-14
SIJI	**Sorong**	**8.05**	**148**	P	**Pn**	**00 22 34.6**	**+1.0**
	2.4nm,0.3s,baz=338,slow=16,SNR=5.3						
SIJI				S	**Sn**	**00 23 59.3**	**-4.0**
	0.9nm,0.3s,baz=252,slow=20,SNR=2.1						
SANI	**Sanana**	**8.09**	**187**	P	**Pn**	**00 22 30.3**	**-3.8**
LUWI	**Luwuk**	**8.21**	**211**	P	**Pn**	**00 22 37.9**	**+2.2**
TTSI	**Tana Toraja**	**11.53**	**219**	P	**Pn**	**00 23 22.4**	**+1.2**
BATI	**Baumata**	**16.47**	**192**	P	**P**	**00 24 28.7**	**+0.4**
	4.7nm,0.3s,baz=340,slow=4.3,SNR=4.7						
WRAB	**Tennant Creek**	**26.78**	**165**	*e*P	**P**	**00 26 14.6**	**+0.8**
	4.8nm,0.6s						
WRA	**Warramunga Arr**	**26.79**	**165**	P	**P**	**00 26 13.5**	**-0.3**
	3.6nm,0.5s,baz=344,slow=10,SNR=15						
WRA				ScP	**ScP**	**00 33 08.8**	**-2.0**
	0.6nm,0.8s,baz=349,slow=3.1,SNR=3.9						
ASAR	**Alice Springs**	**30.27**	**167**	P	**P**	**00 26 44.6**	**-0.1**
	1.2nm,0.5s,baz=343,slow=7.3,SNR=18						
ASAR				PcP	**PcP**	**00 29 44.2**	**0.0**
	0.2nm,0.5s,baz=344,slow=2.4,SNR=2.8						
ASAR				ScP	**ScP**	**00 33 20.4**	**-1.2**
	0.3nm,0.5s,baz=340,slow=2.6,SNR=6.0						
CTA	**Charters Tower**	**32.11**	**144**	P	**P**	**00 27 02.9**	**+1.9**
	2.6nm,0.5s,baz=318,slow=14,SNR=6.6						
NWAO	**Narrogin (SRO)**	**39.84**	**193**	P	**P**	**00 28 07.6**	**+0.7**
	5.6nm,0.5s,baz=13,slow=6.5,SNR=7.0						
STKA	**Stephens Creek**	**40.17**	**161**	P	**P**	**00 28 10.0**	**+0.3**
	3.4nm,0.5s,baz=340,slow=10,SNR=8.8						
ULN	**Ulaanbaatar**	**45.05**	**341**	*e*P	**P**	**00 28 49.6**	**+0.4**
	4.5nm,1.3s						
SONM	**Songino Array**	**45.24**	**340**	P	**P**	**00 28 50.4**	**-0.3**
	1.3nm,1.0s,baz=168,slow=7.6,SNR=5.3						
MKAR	**Makanchi Array**	**55.86**	**324**	P	**P**	**00 30 10.2**	**-0.5**
	1.4nm,0.6s,baz=114,slow=8.1,SNR=14						
MKAR				PcP	**PcP**	**00 31 08.7**	**-0.3**
	1.0nm,0.6s,baz=108,slow=4.2,SNR=5.5						
ZALV	**Zalesovo Beam**	**58.70**	**332**	P	**P**	**00 30 29.8**	**-0.7**
	0.9nm,0.4s,baz=137,slow=6.8,SNR=7.2						
KURK	**Kurchatov**	**59.98**	**327**	*e*P	**P**	**00 30 39.0**	**-0.4**
KURBB	**Kurchatov Arra**	**59.99**	**327**	P	**P**	**00 30 38.9**	**-0.6**
	1.9nm,0.6s,baz=127,slow=6.5,SNR=18						
BVAR	**Borovoye Array**	**65.58**	**326**	P	**P**	**00 31 16.2**	**-0.4**
	4.7nm,1.1s,baz=121,slow=6.9,SNR=9.3						
AKTO	**Aktyubinsk**	**72.06**	**321**	P	**P**	**00 31 56.6**	**-0.4**
	1.3nm,0.4s,baz=129,slow=6.6,SNR=6.4						
ARU	**Arti**	**73.17**	**327**	*e*P	**P**	**00 32 02.5**	**-1.0**
	2.2nm,0.4s						
ILAR	**Eielson Array**	**82.92**	**26**	P	**P**	**00 32 56.9**	**-0.4**
	0.3nm,0.5s,baz=248,slow=5.2,SNR=4.5						
VNDA	**Vanda**	**85.65**	**173**	P	**P**	**00 33 11.4**	**+0.6**
	1.1nm,0.7s,baz=271,slow=5.2,SNR=4.0						
ARCES	**ARCESS Array B**	**88.41**	**340**	P	**P**	**00 33 25.1**	**+0.7**
	1.9nm,0.8s,baz=77,slow=5.9,SNR=12						
BRTR	**Keskin Array B**	**88.79**	**310**	P	**P**	**00 33 27.1**	**0.0**
	0.6nm,0.9s,baz=75,slow=7.6,SNR=3.4						
FINES	**FINESS Array B**	**89.96**	**332**	P	**P**	**00 33 32.5**	**+0.7**
	1.0nm,0.6s,baz=83,slow=4.4,SNR=9.6						
AKASG	**Malin Array Be**	**90.31**	**321**	P	**P**	**00 33 33.8**	**+0.1**
	0.6nm,0.5s,baz=69,slow=4.2,SNR=4.6						
TORD	**Torodi Ar. Bea**	**122.46**	**290**	PKP	**PKPdf**	**00 39 27.7**	**-1.1**
	0.6nm,0.6s,baz=70,slow=2.7,SNR=4.6						

WEL 17 00:29:40.0,21°.97S×178°.85W, h589km

NEIC 17 00:29:41.0±0.3,21°.97S×178°.85W, h589km±5km, mb4.6/7, Error ellipse: s-maj=8.3km s-min=5.5km az=108.0

BJI 17 00:29:40.0,22°.00S×178°.80W, h589km, mb4.6/9, mB5.0/4

ISCJB 17 00:29:42.3±0.3,22°.18S±0°.03×179°.59W±0°.07, h550km, mb4.4/37, Error ellipse: s-maj=8.1km s-min=4.6km az=179.9

IDC 17 00:29:46.1±1.4,22°.25S×179°.59W, h581km±14km, mb3.7/19, mb1 3.8/19, mb1mx3.6/43, mbtmp4.6/19, Error ellipse: s-maj=14.5km s-min=12.9km az=147.0

ISC 17 00:29:41.7±0.4,22°.13S±0°.05×179°.02W±0°.07, h576km, n116, σ2§41/128, mb4.7/38, 2D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**7.16**	**172**	P	**P**	**00 31 35.3**	**+3.2**
	112nm,0.3s,baz=6.2,slow=3.7,SNR=6.2						
RAO				S	**S**	**00 33 01.8**	**-0.8**
	47nm,0.3s,baz=90,slow=20,SNR=5.2						
RAO	**Raoul Island**	**7.16**	**172**	*e*P	**P**	**00 31 33.2**	**+1.1**
AFI	**Afiamalu**	**10.69**	**41**	P	P	00 32 12.7	+5.5
	5.4nm,0.3s,baz=194,slow=4.2,SNR=7.4						
AFI				S	**S**	**00 34 11.2**	**+4.6**
	4.2nm,0.3s,baz=134,slow=18,SNR=6.2						
AFI	**Afiamalu**	**10.69**	**41**	*e*P	**P**	**00 32 04.7**	**-2.5**
DZM	**Mont Dzumac**	**13.48**	**268**	P	**P**	**00 32 37.5**	**+1.7**
	2.1nm,0.3s,baz=86,slow=19,SNR=16						
DZM	**Mont Dzumac**	**13.48**	**268**	*e*P	**P**	**00 32 36.3**	**+0.5**
OUZ	**Omahuta**	**14.56**	**205**	*e*P	**P**	**00 32 48.2**	**+2.0**
KUZ	**Kuaotunu**	**15.26**	**196**	P	**P**	**00 32 54.5**	**+1.5**
WIAZ	**Waiheke Island**	**15.47**	**198**	P	**P**	**00 32 56.9**	**+2.0**
HAZ	**Te Kaha**	**15.82**	**189**	P	**P**	**00 32 58.7**	**+0.5**
HAZ				S	**S**	**00 35 32.3**	**-6.3**
RUGZ	**Raukumara Rang**	**16.04**	**190**	P	**P**	**00 33 00.5**	**0.0**
RUGZ				S	**S**	**00 35 37.3**	**-5.3**
PUZ	**Puketiti**	**16.06**	**188**	P	**P**	**00 33 02.5**	**+1.9**
PUZ				S	**S**	**00 35 38.9**	**-3.8**
MARZ	**Manawahe**	**16.23**	**192**	P	**P**	**00 32 59.1**	**-3.1**
KMRZ	**Kaimai**	**16.26**	**194**	P	**P**	**00 33 04.9**	**+2.5**
URZ	**Urewera**	**16.42**	**191**	P	**P**	**00 33 01.5**	**-2.3**
	4.1nm,0.3s,baz=283,slow=3.8,SNR=22						
URZ				S	**S**	**00 35 39.7**	**-8.8**
	0.7nm,0.3s,baz=355,slow=18,SNR=5.7						
URZ	**Urewera**	**16.42**	**191**	*e*P	**P**	**00 33 03.8**	**0.0**
	32nm,0.7s						
URZ				*e*S	**S**	**00 35 48.2**	**-0.3**
URZ	**Urewera**	**16.42**	**191**	P	**P**	**00 33 02.0**	**-1.8**
URZ				P	**S**	**00 35 45.2**	**-3.2**
MWZ	**Matawai**	**16.42**	**190**	P	**P**	**00 33 04.6**	**+0.7**
MWZ				P	**S**	**00 35 46.0**	**-2.7**
MKRZ	**Makatiti**	**16.42**	**193**	P	**P**	**00 33 06.9**	**+2.9**
CNGZ	**Carnagh Statio**	**16.47**	**188**	P	**P**	**00 33 05.3**	**+0.9**
TKGZ	**Te Karaka**	**16.48**	**189**	P	**P**	**00 33 05.3**	**+0.9**
TARZ	**Mount Tarawera**	**16.51**	**192**	P	**P**	**00 33 06.1**	**+1.3**
RTZ	**Ruatahuna**	**16.79**	**191**	P	**P**	**00 33 06.7**	**-0.6**
RTZ				P	**S**	**00 35 53.7**	**-0.9**
TLZ	**Tolley Road**	**16.81**	**195**	P	**P**	**00 33 09.2**	**+1.7**
MTHZ	**Maungataniwha**	**17.04**	**191**	P	**P**	**00 33 10.3**	**+0.8**
RAHZ	**Arahi**	**17.06**	**190**	P	**P**	**00 33 10.5**	**+0.8**
MRHZ	**Matea Rd**	**17.10**	**192**	P	**P**	**00 33 10.3**	**+0.2**
HIZ	**Hauiti**	**17.16**	**196**	*e*P	**P**	**00 33 11.0**	**+0.5**
	160nm,1.8s						
HIZ	**Hauiti**	**17.16**	**196**	P	**P**	**00 33 13.7**	**+3.2**
RATZ	**Rangitukua**	**17.27**	**194**	P	**P**	**00 33 11.9**	**+0.3**
BKZ	**Black Stump Fm**	**17.41**	**192**	*e*P	**P**	**00 33 12.9**	**0.0**
	140nm,1.9s						
BKZ	**Black Stump Fm**	**17.41**	**192**	P	**P**	**00 33 11.7**	**-1.2**
TWVZ	**Taurewa**	**17.54**	**194**	P	**P**	**00 33 14.7**	**+0.5**
MCHZ	**Mcneill Hill**	**17.64**	**191**	P	**P**	**00 33 15.9**	**+1.0**
FWVZ	**Far West T-bar**	**17.69**	**194**	P	**P**	**00 33 15.3**	**-0.3**
TRVZ	**Turoa**	**17.73**	**194**	P	**P**	**00 33 16.4**	**+0.4**
PKVZ	**Pokaka**	**17.77**	**194**	P	**P**	**00 33 17.6**	**+1.4**
BHHZ	**Black Hill Sta**	**17.81**	**193**	P	**P**	**00 33 15.0**	**-1.6**
BFZ	**Birch Farm**	**18.93**	**191**	*e*P	**P**	**00 33 27.6**	**+0.9**
	138nm,1.6s						
SNZO	**South Karori**	**19.84**	**194**	*e*P	**P**	**00 33 35.5**	**+0.6**
	414nm,1.8s						
KNTN	**Kanton**	**20.50**	**21**	*e*P	**P**	**00 33 37.1**	**-4.2**
	272nm,1.7s						
THZ	**Tophouse**	**20.72**	**197**	*e*P	**P**	**00 33 42.2**	**-0.7**
	96nm,1.8s						
KHZ	**Kahutara**	**21.17**	**195**	*e*P	**P**	**00 33 46.4**	**-0.4**
	34nm,1.0s						
LTZ	**Lake Taylor**	**21.84**	**197**	*e*P	**P**	**00 33 52.2**	**-0.8**
	36nm,1.3s						
OXZ	**Oxford**	**22.41**	**197**	*e*P	**P**	**00 33 57.7**	**-0.3**
	35nm,1.2s						
RPZ	**Rata Peaks**	**23.05**	**199**	P	**P**	**00 34 04.8**	**+1.1**
	4.5nm,0.4s,baz=105,slow=5.7,SNR=5.0						
WHZ	**Wether Hill Ro**	**25.98**	**201**	*e*P	**P**	**00 34 30.6**	**+1.0**
	93nm,1.7s						
CAN	**Canberra**	**30.83**	**238**	*e*P	**P**	**00 35 12.6**	**+0.7**
	27nm,1.0s						
CTA	**Charters Tower**	**32.42**	**267**	P	**P**	**00 35 25.3**	**-0.3**
	21nm,0.5s,baz=96,slow=13,SNR=50						
CTAO	**Charters Tower**	**32.42**	**267**	*e*P	**P**	**00 35 25.4**	**-0.2**
	21nm,0.4s						
PMG	**Port Moresby**	**34.83**	**286**	P	**P**	**00 35 45.9**	**+0.1**
	33nm,0.8s,baz=104,slow=6.3,SNR=12						
PMG	**Port Moresby**	**34.83**	**286**	*e*P	**P**	**00 35 46.4**	**+0.6**
	36nm,0.8s						
STKA	**Stephens Creek**	**36.25**	**246**	P	**P**	**00 35 57.1**	**-0.2**
	9.6nm,0.5s,baz=91,slow=10,SNR=22						
STKA	**Stephens Creek**	**36.25**	**246**	*e*P	**P**	**00 35 57.3**	**0.0**
	4.3nm,1.1s						
AS01	**Alice Springs**	**43.20**	**259**	*e*P	**P**	**00 36 52.4**	**-0.7**
AS31	**Alice Springs**	**43.24**	**259**	*e*P	**P**	**00 36 53.0**	**-0.4**
	7.5nm,0.6s						
ASAR	**Alice Springs**	**43.25**	**259**	P	**P**	**00 36 53.0**	**-0.5**
	27nm,0.8s,baz=99,slow=7.5,SNR=251						
ASAR				PcP	**PcP**	**00 38 29.9**	**+0.5**
	1.9nm,0.7s,baz=104,slow=3.9,SNR=4.6						
ASAR				S	**S**	**00 42 32.0**	**-7.6**
	2.7nm,0.9s,baz=93,slow=16,SNR=12						
WC3	**Warramunga Arr**	**43.43**	**264**	*e*P	**P**	**00 36 54.1**	**-0.8**
	23nm,0.8s						
WB2	**Warramunga Arr**	**43.45**	**264**	*e*P	**P**	**00 36 54.1**	**-0.9**
WRAB	**Tennant Creek**	**43.45**	**264**	*e*P	**P**	**00 36 53.9**	**-1.2**
	26nm,0.9s						
WRA	**Warramunga Arr**	**43.46**	**264**	P	**P**	**00 36 54.1**	**-1.0**
	10nm,0.3s,baz=97,slow=8.4,SNR=116						
WRA				ScP	**ScP**	**00 41 29.2**	**+2.0**
	3.2nm,1.1s,baz=97,slow=4.1,SNR=7.2						
FAKI	**Fak Fak**	**50.97**	**285**	*e*P	**P**	**00 37 50.8**	**-0.7**
	86nm,1.3s						
SOEI	**Soe**	**55.62**	**273**	*e*P	**P**	**00 38 24.8**	**+0.3**
	58nm,0.8s						
BATI	**Baumata**	**56.03**	**272**	P	**P**	**00 38 28.6**	**+1.4**
	33nm,0.5s,baz=125,slow=12,SNR=5.0						
VNDA	**Vanda**	**56.21**	**185**	P	**P**	**00 38 31.4**	**+4.0**
	1.1nm,0.5s,baz=335,slow=5.7,SNR=4.8						
MBWA	**Marble Bar**	**56.59**	**259**	*e*P	**P**	**00 38 30.3**	**-0.7**
	28nm,0.8s						
NWAO	**Narrogin (SRO)**	**56.80**	**244**	P	**P**	**00 38 31.9**	**-0.4**
	11nm,0.9s,baz=49,slow=19,SNR=6.9						
CASY	**Casey**	**62.09**	**206**	*e*P	**P**	**00 39 07.1**	**+0.3**
	4.4nm,0.9s						
MJAR	**Matsushiro Arr**	**70.97**	**325**	P	**P**	**00 40 04.5**	**+2.5**
	2.1nm,0.7s,baz=168,slow=6.1,SNR=5.8						
KSRS	**Korea Array**	**77.49**	**319**	P	**P**	**00 40 42.0**	**+3.4**
	0.8nm,0.7s,baz=128,slow=5.4,SNR=4.8						
PETK	**Petropavlovsk-**	**77.61**	**346**	P	**P**	**00 40 42.6**	**+3.8**
	2.0nm,0.7s,baz=115,slow=5.6,SNR=4.4						
MAW	**Mawson**	**79.72**	**200**	P	**P**	**00 40 52.2**	**+2.2**
	5.9nm,0.7s,baz=90,slow=20,SNR=12						
MAW	**Mawson**	**79.72**	**200**	*e*P	**P**	**00 40 50.4**	**+0.4**
	1.3nm,0.8s						
JFP	**Foothills Park**	**79.75**	**43**	*e*P	**P**	**00 40 48.0**	**-2.6**
USRK	**Ussuriysk Ar.**	**79.78**	**327**	P	**P**	**00 40 52.6**	**+2.0**
	1.3nm,0.6s,baz=76,slow=3.1,SNR=5.4						
CHGN	**Chignik**	**80.05**	**11**	*e*P	**P**	**00 40 49.0**	**-2.7**
	35nm,0.7s						
NJ2	**Nanjing**	**80.20**	**310**	*e*P	**P**	**00 40 52.9**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
YBH	**Yreka Blue Hor**	**82.15**	**39**	P	P	00 41 10.1	+7.0
	1.5nm,0.5s,baz=211,slow=5.5,SNR=4.5						
NVAR	**Mina Array Bea**	**82.85**	**44**	P	P	00 41 13.2	+6.4
	3.8nm,1.1s,baz=230,slow=8.1,SNR=8.8						
SNAA	**Sanae**	**86.41**	**179**	P	**P**	**00 41 25.2**	**+1.8**
VNA3	**Neumayer Olymp**	**86.58**	**177**	P	**P**	**00 41 26.1**	**+1.9**
RAGM	**Ragged Mountai**	**86.84**	**16**	*e*pP	pP	00 43 29.1	-0.8
SML	**Sawmill**	**87.19**	**14**	*e*P	**P**	**00 41 23.6**	**-3.4**
	9.9nm,0.6s						
VNA1	**Neumayer--Stat**	**87.24**	**177**	P	**P**	**00 41 27.1**	**-0.1**
CAST	**Castle Rocks**	**87.86**	**12**	*e*pP	pP	00 43 34.7	-0.2
TXAR	**Lajitas Array**	**88.73**	**58**	P	P	00 41 42.0	+7.0
	1.3nm,0.9s,baz=205,slow=7.1,SNR=8.2						
CMAR	**Chiang Mai Arr**	**89.77**	**290**	P	**P**	**00 41 43.1**	**+3.1**
	4.0nm,0.8s,baz=135,slow=2.8,SNR=10						
HHC	**Hu-ho-hao-te**	**89.82**	**315**	*e*P	**P**	**00 41 38.3**	**-1.5**
HHC				PP	**PP**	**00 45 25.0**	**+1.7**
HHC				S	**S**	**00 51 39.3**	**-4.3**
HHC				SS	**SS**	**00 58 01.0**	**+1.5**
HHC				pmax	pmax		
	comp=Z,36nm,1.0s						
HHC				pmax	pmax		
	comp=Z,75nm,5.1s						
PDAR	**Pinedale Array**	**90.79**	**44**	P	P

GRPR			A	A	00 30 50.0	
	344nm,0.2s					
LAGR	**Lagunnoye**	**1.17 318**	*e*P	**Pn**	**00 30 36.0**	**-0.3**
LAGR			AMB	AMB	00 30 37.0	
	18nm,0.4s					
LAGR			*e*S	**Sn**	**00 30 51.0**	**0.0**
LAGR			A	A	00 30 58.0	
	492nm,0.4s					
LAGR			A	A	00 30 58.0	
	454nm,0.4s					
JRA	**Rausu**	**1.47 301**	P	**Pn**	**00 30 41.0**	**+0.5**
JAK	**Akkeshi**	**1.60 264**	P	**Pn**	**00 30 42.1**	**-0.2**
JAK			*e*S	**Sn**	**00 31 01.4**	**-0.3**
JNK	**Nakash**	**1.62 285**	P	**Pn**	**00 30 42.3**	**-0.2**
JNK			*e*S	**Sn**	**00 31 01.4**	**-0.7**
KUR	**Kuril'sk**	**2.16 19**	*e*S	**Sn**	**00 31 15.9**	**+0.4**
JAR	**Ashorobuto**	**2.27 274**	P	**Pn**	**00 30 51.8**	**+0.4**
JAR			*e*S	**Sn**	**00 31 18.6**	**+0.5**

KRSC 17 00:48:07.1±1.7, 49°.26N×157°.37E, *h*41km±40km, ML3.5, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**2.24**	**351**	*e*P	Pn	00 48 44.2	+2.6
PAU				*e*S	Sn	00 49 10.4	+2.4
RUS	**Russkaya**	**3.26**	**12**	P	Pn	00 48 59.8	+4.2
RUS				S	Sn	00 49 38.4	+5.3
UGLR	**Uglovaya**	**4.06**	**12**	P	Pn	00 49 10.7	+4.0
AVH	**Avacha**	**4.10**	**12**	P	Pn	00 49 13.1	+5.8
SDLR	**Sedlovina**	**4.13**	**13**	P	Pn	00 49 11.5	+3.7
SPN	**Mys Shipunski**	**4.19**	**22**	P	Pn	00 49 13.0	+4.6
SPN				S	Sn	00 50 01.3	+5.2
GNL	**Ganaly**	**4.46**	**4**	P	Pn	00 49 16.0	+3.8
MKZ	**Mys Kozlova**	**5.95**	**25**	P	Pn	00 49 36.3	+3.8

KRSC 17 01:04:07.3±1.9, 52°.93N×162°.91E, *h*60km±32km, ML3.7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**1.75**	**277**	*e*P	Pn	01 04 37.7	+2.3
SPN				*e*S	Sn	01 04 57.4	+0.8
MKZ	**Mys Kozlova**	**1.77**	**337**	*e*P	Pn	01 04 37.3	+1.6
MKZ				S	Sn	01 04 57.3	+0.2
NLC	**Nalytchevo**	**2.16**	**278**	*e*P	Pn	01 04 43.5	+2.5
NLC				*e*S	Sn	01 05 08.2	+1.6
SDLR	**Sedlovina**	**2.45**	**280**	*e*P	Pn	01 04 48.1	+3.1
SDLR				*e*S	Sn	01 05 16.7	+2.9
UGLR	**Uglovaya**	**2.48**	**278**	*e*P	Pn	01 04 48.7	+3.3
UGLR				*e*S	Sn	01 05 17.1	+2.6
DALK	**Dalny**	**2.51**	**274**	*e*P	Pn	01 04 48.7	+3.0
DALK				*e*S	Sn	01 05 17.2	+2.0
KRER	**Koryakskii**	**2.53**	**280**	*e*P	Pn	01 04 49.6	+3.4
KRER				*e*S	Sn	01 05 18.6	+2.6
AVH	**Avacha**	**2.54**	**279**	*e*P	Pn	01 04 49.6	+3.5
AVH				*e*S	Sn	01 05 19.1	+3.2
PET	**Petropavlovsk**	**2.57**	**274**	*e*P	Pn	01 04 49.5	+3.0
PET				*e*S	Sn	01 05 19.5	+2.9
KOK	**Koryaka**	**2.60**	**280**	*e*P	Pn	01 04 50.3	+3.3
KOK				*e*S	Sn	01 05 19.7	+2.2
KRX	**Arik**	**2.60**	**281**	*e*P	Pn	01 04 50.3	+3.2
KRX				*e*S	Sn	01 05 19.7	+2.2
KZV	**Kizimen**	**2.67**	**326**	*e*P	Pn	01 04 51.1	+3.0
KZV				*e*S	Sn	01 05 22.3	+2.9
TUMD	**Tumrok D**	**2.71**	**328**	P	Pn	01 04 52.0	+3.5
RUS	**Russkaya**	**2.72**	**261**	*e*P	Pn	01 04 51.4	+2.8
RUS				*e*S	Sn	01 05 21.5	+1.3
TUMR	**Tumrok**	**2.86**	**327**	*e*P	Pn	01 04 54.1	+3.5
KRMR	**Karymshinskiy**	**2.90**	**270**	*e*P	Pn	01 04 53.7	+2.7
KRMR				*e*S	Sn	01 05 26.5	+2.0
BKI	**Bering**	**2.91**	**37**	*e*P	Pn	01 04 52.7	+1.6
BKI				*e*S	Sn	01 05 23.7	-1.1
MTVR	**Mutnovka**	**2.91**	**263**	*e*P	Pn	01 04 54.3	+3.0
MTVR				*e*S	Sn	01 05 27.0	+1.9
GNL	**Ganaly**	**3.08**	**286**	*e*P	Pn	01 04 57.3	+3.8
ASAK	**Asacha**	**3.10**	**262**	*e*P	Pn	01 04 57.4	+3.6
ASAK				*e*S	Sn	01 05 31.8	+2.2
KDTR	**Khodutka, Kamc**	**3.17**	**251**	*e*P	Pn	01 04 56.9	+2.3
KDTR				*e*S	Sn	01 05 31.2	0.0
KMNR	**Kamenistaya**	**3.23**	**332**	*e*P	Pn	01 04 59.7	+4.0
KMNR				*e*S	Sn	01 05 37.3	+4.3
BZGR	**Bezymyannyi-Gr**	**3.28**	**338**	*e*P	Pn	01 04 59.8	+3.5
KBTR	**Krutoberegovo**	**3.29**	**359**	*e*P	Pn	01 04 58.0	+1.7
ZLN	**Zelenaya**	**3.33**	**339**	*e*P	Pn	01 05 00.7	+3.7
ZLN				*e*S	Sn	01 05 39.0	+3.7
KBG	**Krutoberegovo**	**3.33**	**358**	P	Pn	01 04 57.4	+0.5
BZWR	**Bezymyannyi-We**	**3.35**	**336**	*e*P	Pn	01 05 01.3	+4.0
BZWR				*e*S	Sn	01 05 40.1	+4.2
KIRR	**Kirishev**	**3.38**	**335**	*e*P	Pn	01 05 01.4	+3.7
KIRR				*e*S	Sn	01 05 40.9	+4.3
LGNR	**Loginova**	**3.41**	**339**	*e*P	Pn	01 05 02.4	+4.1
LGNR				*e*S	Sn	01 05 42.0	+4.4
KPT	**Kopyto**	**3.42**	**334**	*e*P	Pn	01 05 02.6	+4.4
KPT				*e*S	Sn	01 05 42.4	+4.8
CIRR	**Tsirk**	**3.43**	**339**	*e*P	Pn	01 05 01.9	+3.5
APC	**Apacha**	**3.48**	**272**	*e*P	Pn	01 05 03.4	+4.5
APC				*e*S	Sn	01 05 42.8	+4.0
KRSR	**Krestovskiy**	**3.56**	**338**	*e*P	Pn	01 05 03.7	+3.5
KOZ	**Kozyrevsk**	**3.60**	**332**	*e*P	Pn	01 05 04.9	+4.3
KOZ				*e*S	Sn	01 05 45.5	+3.7
SMKR	**Semkarok**	**3.75**	**348**	P	Pn	01 05 06.3	+3.5
SMKR				S	Sn	01 05 48.6	+2.9
BDR	**Baidarnaya**	**3.78**	**346**	*e*P	Pn	01 05 07.7	+4.6
SRKR	**Sorokina**	**3.87**	**346**	*e*P	Pn	01 05 07.3	+3.0
SRKR				S	Sn	01 05 50.8	+2.4
ESO	**Esso**	**3.88**	**322**	*e*P	Pn	01 05 07.9	+3.5

CSEM 17 01:38:04.2, 44°.86N×11°.07E, h8km, ML1.7/6
ROM 17 01:38:04.2±0.1, 44°.861N±0°.008×11°.074E±0°.006, h8km, ML1.8/4, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0802	**SanFelice sul**	**0.08**	**79**	P	Pg	01 38 08.1	+1.9
T0802				S	Sg	01 38 11.8	+4.3
T0802	**SanFelice sul**	**0.08**	**79**	P	Pg	01 38 08.1	+2.0
T0802				S	Sg	01 38 11.8	+4.2
RAVA	**Ravarino**	**0.11**	**163**	P	Pg	01 38 09.2	+2.6
RAVA				S	Sg	01 38 12.0	+3.7
RAVA	**Ravarino**	**0.11**	**163**	P	Pg	01 38 09.2	+2.6
RAVA				S	Sg	01 38 13.0	+4.7
RAVA				AML	AML		
	comp=E,1246μm,0.3s						
RAVA				AML	AML		
	comp=N,884μm,0.3s						
RAVA				AML	AML		
	comp=E,1246μm,0.3s						
RAVA				AML	AML		
	comp=N,884μm,0.3s						
T0800	**Massa Finalese**	**0.12**	**96**	P	Pg	01 38 09.2	+2.3
T0800				S	Sg	01 38 12.9	+4.2
T0800	**Massa Finalese**	**0.12**	**96**	P	Pg	01 38 09.2	+2.3
T0800				S	Sg	01 38 12.9	+4.2
T0800				AML	AML		
	comp=E,37850μm,0.3s						
T0800				AML	AML		
	comp=N,18950μm,0.6s						
T0800				AML	AML		
	comp=E,37150μm,0.3s						
T0800				AML	AML		
	comp=N,18750μm,0.3s						
T0800				AML	AML		
	comp=E,37850μm,0.3s						
T0800				AML	AML		
	comp=E,37150μm,0.3s						
T0800				AML	AML		
	comp=N,18750μm,0.3s						
T0800				AML	AML		
	comp=N,18950μm,0.6s						
NDIM	**Novi di Modena**	**0.13**	**282**	P	Pg	01 38 08.8	+1.8
NDIM				AML	AML		
	comp=E,714μm,0.9s						
NDIM				AML	AML		
	comp=N,504μm,0.2s						
NDIM				AML	AML		
	comp=N,504μm,0.2s						
NDIM				AML	AML		
	comp=E,714μm,0.9s						
NDIM				END			
NDIM				END			
T0826	**Rio Saliceto (**	**0.19**	**264**	P	Pg	01 38 10.3	+2.3
T0826				S	Sg	01 38 15.4	+4.8
T0826	**Rio Saliceto (**	**0.19**	**264**	P	Pg	01 38 10.3	+2.4
T0826				S	Sg	01 38 15.4	+4.8
T0822	**Casumaru (Bond**	**0.20**	**98**	P	Pg	01 38 10.5	+2.4
T0822				S	Sg	01 38 15.8	+5.0
T0822	**Casumaru (Bond**	**0.20**	**98**	P	Pg	01 38 10.4	+2.3
T0822				S	Sg	01 38 15.8	+5.0
T0822				AML	AML		
	comp=E,21900μm,0.4s						
T0822				AML	AML		
	comp=N,10580μm,0.6s						
T0822				AML	AML		
	comp=N,10580μm,0.6s						
T0822				AML	AML		
	comp=E,21900μm,0.4s						
T0825	**Gonzaga (MN)**	**0.20**	**305**	P	Pg	01 38 11.6	+3.4
T0825				S	Sg	01 38 16.3	+5.5
T0825	**Gonzaga (MN)**	**0.20**	**305**	P	Pg	01 38 11.6	+3.4
T0825				S	Sg	01 38 16.3	+5.5
T0803	**Dosso, Cento (**	**0.22**	**115**	P	Pg	01 38 10.0	+1.5
T0803	**Dosso, Cento (**	**0.22**	**115**	P	Pg	01 38 10.9	+2.4
NOVE	**Novellara**	**0.26**	**256**	P	Pb	01 38 11.8	+0.6
NOVE	**Novellara**	**0.26**	**256**	P	Pb	01 38 11.8	+0.6
NOVE				AML	AML		
	comp=E,86μm,1.1s						
NOVE				AML	AML		
	comp=N,82μm,1.2s						
NOVE				AML	AML		
	comp=E,86μm,1.1s						
NOVE				AML	AML		
	comp=N,82μm,1.2s						
TEOL	**Teolo**	**0.65**	**40**	P	Pn	01 38 20.8	+1.0
TEOL	**Teolo**	**0.65**	**40**	P	Pn	01 38 20.8	+0.9
ROVR	**Rover¤ Verone**	**0.79**	**360**	P	Pn	01 38 21.7	-0.1
ROVR	**Rover¤ Verone**	**0.79**	**360**	P	Pn	01 38 21.7	0.0

CSEM 17 01:38:46.9, 44°.89N×11°.32E, h8km, ML2.3/10
ROM 17 01:38:46.9±0.1, 44°.892N±0°.004×11°.317E±0°.009, h8km, ML2.3/6, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0805	**Bondeno (FE)**	**0.03**	**8**	P	Pg	01 38 50.5	+2.1
T0805				S	Sg	01 38 52.2	+2.8
T0805	**Bondeno (FE)**	**0.03**	**8**	P	Pg	01 38 50.5	+2.1
T0805				S	Sg	01 38 52.2	+2.8
T0822	**Casumaru (Bond**	**0.06**	**161**	P	Pg	01 38 50.5	+1.8
T0822				S	Sg	01 38 52.0	+2.0
T0822	**Casumaru (Bond**	**0.06**	**161**	P	Pg	01 38 50.5	+1.8
T0822				S	Sg	01 38 53.0	+3.0
T0822				AML	AML		
	comp=E,21900μm,0.4s						
T0822				AML	AML		
	comp=N,10580μm,0.6s						
T0822				AML	AML		
	comp=N,10580μm,0.6s						
T0822				AML	AML		
	comp=E,21900μm,0.4s						
T0822				END			
T0822				END			
T0800	**Massa Finalese**	**0.07**	**228**	P	Pg	01 38 50.4	+1.7
T0800				S	Sg	01 38 53.3	+3.3
T0800	**Massa Finalese**	**0.07**	**228**	P	Pg	01 38 50.4	+1.7
T0800				S	Sg	01 38 53.3	+3.2
T0802	**SanFelice sul**	**0.10**	**260**	P	Pg	01 38 51.4	+2.2
T0802				S	Sg	01 38 53.7	+2.9
T0802	**SanFelice sul**	**0.10**	**260**	P	Pg	01 38 51.4	+2.2
T0802				S	Sg	01 38 53.7	+2.9
SERM	**Sermide**	**0.12**	**353**	P	Pg	01 38 52.2	+2.7
SERM				S	Sg	01 38 55.3	+3.9
SERM	**Sermide**	**0.12**	**353**	P	Pg	01 38 52.2	+2.6
SERM				S	Sg	01 38 55.3	+3.9
SERM				END			
SERM				END			
T0803	**Dosso, Cento (**	**0.13**	**169**	P	Pg	01 38 52.9	+3.2
T0803				S	Sg	01 38 56.3	+4.7
T0803	**Dosso, Cento (**	**0.13**	**169**	P	Pg	01 38 52.9	+3.2
T0803				S	Sg	01 38 56.3	+4.8
RAVA	**Ravarino**	**0.20**	**226**	P	Pg	01 38 53.5	+2.6
RAVA				S	Sg	01 38 58.8	+5.3
RAVA	**Ravarino**	**0.20**	**226**	P	Pg	01 38 53.5	+2.6
RAVA				S	Sg	01 38 58.8	+5.3
RAVA				AML	AML		
	comp=E,1246μm,0.3s						
RAVA				AML	AML		
	comp=N,884μm,0.3s						
RAVA				AML	AML		
	comp=E,1246μm,0.3s						
RAVA				AML	AML		
	comp=N,884μm,0.3s						
FIU	**Minerbio Fiu**	**0.28**	**154**	P	Pb	01 38 55.2	+1.0
FIU	**Minerbio Fiu**	**0.28**	**154**	P	Pb	01 38 55.2	+1.0
NDIM	**Novi di Modena**	**0.30**	**269**	P	Pb	01 38 55.4	+0.9
NDIM				AML	AML		
	comp=E,322μm,0.5s						
NDIM				AML	AML		
	comp=N,200μm,1.6s						
NDIM				AML	AML		
	comp=N,200μm,1.6s						
NDIM				AML	AML		
	comp=E,322μm,0.5s						
TEOL	**Teolo**	**0.53**	**28**	P	Pb	01 38 59.6	+1.1
TEOL	**Teolo**	**0.53**	**28**	P	Pn	01 38 59.6	-1.1
ROVR	**Rover¤ Verone**	**0.77**	**347**	P	Pn	01 39 05.2	+0.9
ROVR	**Rover¤ Verone**	**0.77**	**347**	P	Pn	01 39 05.2	+1.0
ROVR				AML	AML		
	comp=E,73μm,0.2s						
ROVR				AML	AML		
	comp=N,153μm,0.2s						
ROVR				AML	AML		
	comp=E,73μm,0.2s						
ROVR				AML	AML		
	comp=N,153μm,0.2s						
SALO	**Salr**	**0.92**	**323**	P	Pn	01 39 07.6	+1.5
SALO	**Salr**	**0.92**	**323**	P	Pn	01 39 07.6	+1.5
MAGA	**Magasa**	**1.01**	**331**	P	Pn	01 39 08.7	+1.2
MAGA	**Magasa**	**1.01**	**331**	P	Pn	01 39 08.7	+1.2
MAGA				AML	AML		
	comp=E,198μm,0.5s						
MAGA				AML	AML		
	comp=N,214μm,0.4s						
MAGA				AML	AML		
	comp=E,198μm,0.5s						
MAGA				AML	AML		
	comp=N,214μm,0.4s						
MURB	**Monte Urbino**	**1.85**	**151**	AML	AML		
	comp=E,213μm,0.7s						
MURB				AML	AML		
	comp=E,213μm,0.7s						
MURB				AML	AML		
	comp=N,172μm,1.6s						
MURB				AML	AML		
	comp=N,172μm,1.6s						

IDC 17 01:39:24.4±0.8, 30°.83S×179°.10W, h0km, mb4.1/6, mb1 4.3/6, mb1mx3.9/40, mbtmp4.1/6, MS3.7/24, Ms1 3.7/24, ms1mx3.5/46, Error ellipse: s-maj=26.9km s-min=21.5km az=131.0
NEIC 17 01:39:25.3±0.6, 30°.96S×179°.01W, h10km, mb4.3/1, Error ellipse: s-maj=20.1km s-min=11.6km az=124.0
ISCJB 17 01:39:26.5±0.7, 31°.06S±0°.08×179°.0W±0°.1, h33km, mb4.1/7, MS3.7/22, Error ellipse: s-maj=20.0km s-min=7.3km az=29.7
ISC 17 01:39:29.0±0.7, 31°.0S±0°.1×179°.0W±0°.2, h35km, n40, σ1§78/18, mb4.0/7, MS3.7/22, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.96**	**29**	Pn	**Pn**	**01 39 57.6**	**-2.1**
	90nm,0.3s,baz=198,slow=20,SNR=4.5						
RAO				Sn	**Sn**	**01 40 22.4**	**-0.8**
	326nm,0.3s,baz=132,slow=22,SNR=5.6						
URZ	**Urewera**	**7.94**	**203**	Pn	**Pn**	**01 41 19.4**	**-2.4**
	2.5nm,0.3s,baz=77,slow=4.5,SNR=17						
URZ				Sn	**Sn**	**01 42 48.4**	**-1.9**
	0.8nm,0.3s,baz=8.6,slow=19,SNR=2.2						
DZM	**Mont Dzumac**	**15.74**	**301**	*e*LR	LR	01 46 57.0	
	671nm,24.9s						
DZM	**Mont Dzumac**	**15.74**	**301**	LR	LR	01 47 49.5	
	comp=Z,607nm,19.5s,baz=75,slow=32						
RAR	**Rarotonga**	**19.80**	**65**	LR	LR	01 50 56.9	
	comp=Z,223nm,18.3s,baz=286,slow=35						
TBI	**Tubuai**	**27.31**	**81**	*e*LQ	LQ	01 50 36.4	
	293nm,27.2s						
TBI				*e*LR	LR	01 51 54.4	
	212nm,28.2s						
PPT2	**Papeete2**	**29.85**	**70**	*e*LR	LR	01 53 03.0	
	374nm,29.2s						
PPT	**Papeete**	**29.86**	**70**	LR	LR	01 57 30.4	
	comp=Z,46nm,18.5s,baz=188,slow=36						
STKA	**Stephens Creek**	**33.50**	**258**	P	**P**	**01 46 06.4**	**+1.3**
	2.5nm,0.8s,baz=94,slow=14,SNR=3.6						
STKA				LR	LR	01 57 39.7	
	comp=Z,160nm,20.3s,baz=40,slow=33						
PMG	**Port Moresby**	**38.08**	**297**	LR	LR	02 00 19.4	
	comp=Z,89nm,20.0s,baz=144,slow=33						
ASAR	**Alice Springs**	**42.21**	**268**	P	**P**	**01 47 18.6**	**-0.2**
	1.4nm,0.8s,baz=106,slow=8.1,SNR=12						
ASAR				LR	LR	02 03 10.7	
	comp=Z,95nm,21.8s,baz=106,slow=34						
TAOE	**Nuku Hiva Isla**	**42.33**	**67**	*e*LR	LR	01 58 52.1	
	208nm,26.3s						
WRAB	**Tennant Creek**	**43.25**	**273**	*e*P	**P**	**01 47 26.9**	**-0.4**
	3.2nm,0.6s						
WRA	**Warramunga Arr**	**43.25**	**273**	P	**P**	**01 47 26.9**	**-0.4**
	2.0nm,0.8s,baz=111,slow=8.3,SNR=8.3						
VNDA	**Vanda**	**47.44**	**186**	LR	LR	02 03 39.9	
	comp=Z,70nm,21.6s,baz=15,slow=31						
QSPA	**South Pole Qui**	**59.14**	**180**	P	**P**	**01 49 25.9**	**0.0**
	3.3nm,0.7s,baz=28,slow=4.0,SNR=3.2						
MAW	**Mawson**	**71.46**	**201**	LR	LR	02 19 54.0	
	comp=Z,55nm,21.7s,baz=64,slow=34						
SNAA	**Sanae**	**77.60**	**179**	P	**P**	**01 51 24.8**	**+3.7**
SNAA	**Sanae**	**77.60**	**179**	P	**P**	**01 51 24.4**	**+3.3**
	1.2nm,0.9s,baz=207,slow=11,SNR=5.9						
SNAA				LR	LR	02 21 40.1	
	comp=Z,73nm,21.9s,baz=268,slow=33						
VNA3	**Neumayer Olymp**	**77.79**	**176**	P	**P**	**01 51 22.0**	**-0.1**
MJAR	**Matsushiro Arr**	**78.22**	**326**	LR	LR	02 20 55.9	
	comp=Z,35nm,21.7s,baz=255,slow=32						
JNU	**Nakatsue**	**79.41**	**319**	LR	LR	02 21 53.1	
	comp=Z,38nm,21.7s,baz=135,slow=32						
ASAJ	**Asahikawa**	**82.55**	**333**	LR	LR	02 27 14.2	
	comp=Z,30nm,18.1s,baz=174,slow=35						
PLCA	**Paso Flores**	**82.75**	**133**	LR	LR	02 22 53.6	
	comp=Z,30nm,18.2s,baz=245,slow=32						
KSRS	**Korea Array**	**84.22**	**320**	LR	LR	02 28 28.4	
	comp=Z,32nm,18.3s,baz=216,slow=35						
LPIG	**La Paz**	**85.58**	**59**	LR	LR	02 24 05.3	
	comp=Z,48nm,19.3s,baz=207,slow=31						
PETK	**Petropavlovsk-**	**86.16**	**346**	LR	LR	02 24 33.5	
	comp=Z,64nm,19.5s,baz=165,slow=32						
YBH	**Yreka Blue Hor**	**89.02**	**39**	LR	LR	02 25 37.7	
	comp=Z,26nm,19.7s,baz=213,slow=31						
NVAR	**Mina Array Bea**	**89.25**	**43**	P	**P**	**01 52 22.8**	**+1.3**
	0.8nm,0.9s,baz=222,slow=11,SNR=3.6						
NVAR				LR	LR	02 28 59.0	
	comp=Z,87nm,18.0s,baz=104,slow=33						
CMAR	**Chiang Mai Arr**	**92.77**	**290**	LR	LR	02 38 26.8	
	comp=Z,14nm,18.2s,baz=200,slow=38						
TXAR	**Lajitas Array**	**93.43**	**58**	LR	LR	02 29 36.7	
	comp=Z,30nm,18.4s,baz=0.0,slow=32						
MA2	**Magadan**	**93.62**	**345**	LR	LR	02 31 19.3	
	comp=Z,25nm,19.9s,baz=159,slow=33						
ANMO	**Albuquerque**	**94.62**	**52**	LR	LR	02 32 28.1	
	comp=Z,32nm,18.0s,baz=240,slow=34						
PDAR	**Pinedale Array**	**97.15**	**44**	LR	LR	02 33 36.3	
	comp=Z,48nm,18.1s,baz=267,slow=34						
JTS	**JuntasAbangare**	**98.67**	**83**	LR	LR	02 26 22.7	
	comp=Z,13nm,21.4s,baz=218,slow=28						
FINES	**FINESS Array B**	**145.38**	**339**	PKPbc	**PKPdf**	**01 59 01.4**	**-0.9**
	1.8nm,0.9s,baz=52,slow=3.2,SNR=9.7						
HFS	**Hagfors**	**149.62**	**347**	PKPbc	**PKPbc**	**01 59 15.1**	**+1.0**
	0.6nm,0.6s,baz=322,slow=3.3,SNR=2.5						
MMAI	**Mount Meron Ar**	**150.81**	**283**	PKPbc	**PKPbc**	**01 59 17.9**	**-0.1**
	0.6nm,0.4s,baz=91,slow=5.8,SNR=4.0						
AKASG	**Malin Array Be**	**151.21**	**321**	PKPbc	**PKPbc**	**01 59 17.9**	**-0.3**
	0.1nm,0.3s,baz=58,slow=1.9,SNR=3.4						
TORD	**Torodi Ar. Bea**	**162.25**	**182**	PKPab	**PKPab**	**02 00 16.2**	**+1.9**
	0.7nm,0.8s,baz=187,slow=3.2,SNR=3.2						

IDC 17 01:45:27.1±1.2, 31°.12S×179°.06W, h0km, mb3.8/3, mb1 4.2/5, mb1mx3.8/42, mbtmp3.9/5, ML3.9/2, MS3.1/1, Ms1 3.1/1, ms1mx2.6/43, Error ellipse: s-maj=39.8km s-min=23.5km az=136.0
ISCJB 17 01:45:29.7±0.9, 31°.2S±0°.1×179°.0W±0°.2, h33km, mb3.7/3, Error ellipse: s-maj=30.9km s-min=7.2km az=26.2
ISC 17 01:45:31.9±0.9, 31°.1S±0°.1×179°.0W±0°.2, h35km, n7, σ0§97/9, mb3.7/3, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.09**	**27**	Pn	**Pn**	**01 46 04.5**	**+0.1**
	92nm,0.3s,baz=252,slow=20,SNR=3.5						
RAO				Sn	**Sn**	**01 46 28.3**	**-1.0**
	187nm,0.3s,baz=133,slow=20,SNR=5.9						
RAO				LR	LR	01 46 57.7	
	comp=Z,427nm,18.6s,baz=206,slow=43						
URZ	**Urewera**	**7.80**	**203**	Pn	**Pn**	**01 47 23.2**	**+0.3**
	0.9nm,0.3s,baz=56,slow=7.3,SNR=6.4						
URZ				Sn	**Sn**	**01 48 49.1**	**-0.8**
	0.5nm,0.3s,baz=198,slow=19,SNR=2.6						
ASAR	**Alice Springs**	**42.20**	**268**	P	**P**	**01 53 22.0**	**+0.4**
	0.9nm,0.8s,baz=103,slow=8.2,SNR=7.4						
WRA	**Warramunga Arr**	**43.26**	**273**	P	**P**	**01 53 30.1**	**-0.1**
	1.4nm,0.6s,baz=112,slow=7.8,SNR=10						
NVAR	**Mina Array Bea**	**89.36**	**43**	P	**P**	**01 58 26.4**	**+1.5**
	0.3nm,0.7s,baz=205,slow=8.0,SNR=2.6						
FINES	**FINESS Array B**	**145.51**	**339**	PKPbc	**PKPdf**	**02 05 04.5**	**-1.0**
	1.8nm,0.9s,baz=114,slow=4.6,SNR=4.3						
TORD	**Torodi Ar. Bea**	**162.10**	**182**	PKPab	**PKPab**	**02 06 15.8**	**-0.8**
	0.5nm,1.0s,baz=185,slow=4.0,SNR=3.0						

ISCJB 17 01:47:40.9±0.5, 40°.71N±0°.01×19°.58E±0°.02, h0km±3km, mb3.4/5, Error ellipse: s-maj=3.4km s-min=1.8km az=152.3
IDC 17 01:47:40.3±1.1, 40°.66N×19°.52E, h0km, mb3.4/6, mb1 3.5/10, mb1mx3.4/58, mbtmp3.4/10, ML2.6/4, MS2.7/1, Ms1 2.7/1, ms1mx2.0/49, Error ellipse: s-maj=18.7km s-min=16.5km az=123.0
BEO 17 01:47:40.9±0.7, 40°.62N×19°.54E, h0km
ATH 17 01:47:41.1, 40°.81N×19°.58E, h20km±1km, ML3.1/12, Error ellipse: s-maj=1.6km s-min=1.3km az=173.0
CSEM 17 01:47:42.4±0.1, 40°.72N×19°.65E, h2km, ML3.0, Error ellipse: s-maj=3.5km s-min=1.9km az=69.0
THE 17 01:47:42.8, 40°.73N×19°.75E, h1km±2km, ML3.0/5, Error ellipse: s-maj=2.9km s-min=0.9km az=317.0
PDG 17 01:47:43.3±0.8, 40°.78N×19°.63E, h11km±1km, ML3.1/9, Error ellipse: s-maj=1.0km s-min=1.2km az=0.0
**ISC 17 01:47:42.4±1.0, 40°.72

KEK			S	Sb	01 48 17.6	+2.2
KEK	**Kerkira**	**1.01 174**	P	Pg	01 48 01.4	-0.5
KEK			S	Sb	01 48 17.6	+2.2
NEST	**Nestorio**	**1.10 106**	P	Pg	01 48 01.0	-2.6
NEST			AML	AML	01 48 30.9	
	comp=E,1081μm,0.6s					
NEST			AML	AML	01 48 31.7	
	comp=N,782μm,0.5s					
NEST	**Nestorio**	**1.10 106**	P	Pg	01 48 01.9	-1.8
NEST			S	Sg	01 48 18.0	0.0
NEST	**Nestorio**	**1.10 106**	P	Pg	01 48 01.9	-1.8
NEST			S	Sg	01 48 18.0	0.0
SCTE	**Santa Cesarea**	**1.12 235**	P	Pb	01 48 04.5	+0.7
SCTE	**Santa Cesarea**	**1.12 235**	P	Pg	01 48 03.5	-0.4
PHP	**Peshkopia**	**1.13 31**	P	Pg	01 48 02.4	-1.8
PHP	**Peshkopia**	**1.13 31**	P	Pg	01 48 02.4	-1.8
SGD	**Sagiada**	**1.19 158**	P	Pg	01 48 04.6	-0.7
SGD	**Sagiada**	**1.19 158**	P	Pg	01 48 05.7	+0.3
SGD	**Sagiada**	**1.19 158**	P	Pg	01 48 05.7	+0.3
PENT	**Pentalofos**	**1.25 114**	P	Pg	01 48 04.4	-2.0
PENT			S	Sn	01 48 26.4	+3.6
PENT			AML	AML	01 48 34.4	
	comp=N,958μm,0.6s					
PENT			AML	AML	01 48 35.3	
	comp=E,708μm,0.6s					
PENT	**Pentalofos**	**1.25 114**	P	Pg	01 48 05.1	-1.3
PENT			S	Sg	01 48 21.9	-0.7
PENT	**Pentalofos**	**1.25 114**	P	Pg	01 48 05.1	-1.3
PENT			S	Sg	01 48 21.9	-0.7
ULC	**Ulcinj**	**1.28 346** ⇓	*i*Pg	Pg	01 48 06.2	-0.8
ULC			*e*Sg	Sn	01 48 24.9	+1.4
ULC	**Ulcinj**	**1.28 346** ⇓	*i*Pg	Pg	01 48 06.2	-0.8
ULC	**Ulcinj**	**1.28 346**	P	Pg	01 48 06.5	-0.5
ULC			*e*Sg	Sn	01 48 24.9	+1.4
BIA	**Bitola**	**1.30 76**	P	Pg	01 48 06.3	-1.1
BIA	**Bitola**	**1.30 76**	*i* Pn	Pg	01 48 05.5	-1.9
BIA	**Bitola**	**1.30 76**	P	Pg	01 48 06.3	-1.1
FNA	**Florina**	**1.31 87**	P	Pg	01 48 04.4	-3.1
FNA			S	Sn	01 48 27.0	+2.8
FNA			AML	AML	01 48 32.6	
	comp=E,2455μm,0.5s					
FNA			AML	AML	01 48 36.3	
	comp=N,1890μm,0.6s					
FNA	**Florina**	**1.31 87**	P	Pg	01 48 05.4	-2.1
FNA			S	Sg	01 48 24.0	-0.5
FNA	**Florina**	**1.31 87**	P	Pg	01 48 05.4	-2.1
FNA			S	Sg	01 48 24.0	-0.5
JAN	**Janina**	**1.40 139**	P	Pn	01 48 08.4	+0.4
JAN			S	Sn	01 48 31.9	+5.4
JAN			AML	AML	01 48 39.4	
	comp=N,1659μm,1.0s					
JAN			AML	AML	01 48 42.1	
	comp=E,1108μm,0.9s					
JAN	**Janina**	**1.40 139**	P	Pn	01 48 08.9	+0.9
JAN			S	Sg	01 48 26.8	-0.8
JAN	**Janina**	**1.40 139**	P	Pn	01 48 08.9	+0.9
JAN			S	Sg	01 48 26.8	-0.8
DRME	**Dracevica, Mon**	**1.51 346** ⇓	*i*Pg	Pn	01 48 10.0	+0.6
DRME			*e*Sg	Sg	01 48 31.6	+0.7
DRME	**Dracevica, Mon**	**1.51 346** ⇓	*i*Pg	Pn	01 48 10.0	+0.6
DRME			*e*Sg	Sg	01 48 31.6	+0.7
KPRO	**Kipourio**	**1.51 120**	P	Pn	01 48 09.4	-0.1
KPRO			S	Sg	01 48 33.5	+2.4
KPRO			AML	AML	01 48 41.4	
	comp=N,1083μm,0.9s					
KPRO			AML	AML	01 48 52.0	
	comp=E,925μm,0.5s					
KPRO	**Kipourio**	**1.51 120**	P	Pn	01 48 09.8	+0.3
KPRO	**Kipourio**	**1.51 120**	P	Pn	01 48 09.8	+0.3
KPRO			S	Sg	01 48 32.7	+1.6
KZN	**Kozani**	**1.66 104**	P	Pn	01 48 12.2	+0.6
KZN			S	Sn	01 48 34.7	+1.7
KZN			AML	AML	01 48 42.8	
	comp=E,917μm,0.6s					
KZN			AML	AML	01 48 44.2	
	comp=N,915μm,0.5s					
KZN	**Kozani**	**1.66 104**	P	Pn	01 48 12.3	+0.6
KZN	**Kozani**	**1.66 104**	P	Pn	01 48 12.3	+0.6
KZN			S	Sn	01 48 35.1	+2.1
BUM	**Brajici-Budva**	**1.68 340** ⇑	*i*Pn	Pn	01 48 12.4	+0.6
BUM			*e*Sn	Sg	01 48 36.5	+0.1
BUM	**Brajici-Budva**	**1.68 340** ⇑	*i*Pn	Pn	01 48 12.4	+0.6
BUM			*e*Sn	Sg	01 48 36.5	+0.1
PDG	**Podgorica**	**1.73 350**	*e*Pg	Pn	01 48 13.4	+0.9
PDG			*e*Sg	Sg	01 48 39.1	+0.9
PDG	**Podgorica**	**1.73 350** ⇑	*i*P	Pn	01 48 13.1	+0.5
PDG	**Podgorica**	**1.73 350** ⇑	*i*Pn	Pn	01 48 13.0	+0.5
PDG	**Podgorica**	**1.73 350**	*e*Pg	Pn	01 48 13.4	+0.9
PDG			*e*Sn	Sg	01 48 37.4	-0.8
PDG			*e*Sg	Sg	01 48 39.1	+0.9
TTG	**Podgorica**	**1.73 350** ⇑	*i*Pn	Pn	01 48 13.0	+0.5
TTG			*e*Sn	Sg	01 48 37.4	-0.8
SKO	**Skopje**	**1.83 46**	*e*Pn	Pb	01 48 15.9	-0.1
SKO	**Skopje**	**1.83 46**	*i* Pn	Pn	01 48 15.7	+1.8
SKO			*i* Sn	Sg	01 48 41.9	+0.6
SKO	**Skopje**	**1.83 46**	*e*Pn	Pb	01 48 15.9	-0.1
ZATK	**Zatriq**	**1.87 22**	P	Pb	01 48 16.8	+0.1
ZATK			S	Sn	01 48 24.9	-13
PVY	**Plav**	**1.88 7**	*e*Pn	Pn	01 48 16.0	+1.3
PVY			*e*Sn	Sb	01 48 41.4	+0.8
PVY	**Plav**	**1.88 7**	*e*Pn	Pn	01 48 16.0	+1.3
PVY			*e*Sn	Sb	01 48 41.4	+0.8
CEME	**Cevo**	**1.91 343** ⇓	*i*Pn	Pn	01 48 15.5	+0.5
CEME			*e*Sn	Sb	01 48 41.8	+0.7
CEME	**Cevo**	**1.91 343** ⇓	*i*Pn	Pn	01 48 15.5	+0.5
CEME			*e*Sn	Sb	01 48 41.8	+0.7
HCY	**Herceg Novi**	**1.93 333** ⇓	*i*Pn	Pn	01 48 16.2	+0.9
HCY			*e*Sn	Sb	01 48 42.2	+0.4
HCY	**Herceg Novi**	**1.93 333** ⇓	*i*Pn	Pn	01 48 16.2	+0.9
HCY			*e*Sn	Sb	01 48 42.2	+0.4
DSL	**Palaion Diasel**	**1.93 145**	P	Pb	01 48 17.7	0.0
DSL	**Palaion Diasel**	**1.93 145**	P	Pn	01 48 16.4	+1.1
DSL	**Palaion Diasel**	**1.93 145**	P	Pn	01 48 16.4	+1.1
NOCI	**Noci**	**1.97 273**	P	Pn	01 48 14.8	-1.0
NOCI	**Noci**	**1.97 273**	P	Pn	01 48 14.8	-1.0
PEJK	**Peje**	**1.97 13**	P	Pb	01 48 18.2	-0.2
PEJK			S	Sn	01 48 26.8	-14
LKD2	**Lefkada island**	**2.08 158**	P	Pn	01 48 17.1	-0.2
LKD2			S	Sb	01 48 47.5	+1.5
LKD2			AML	AML	01 48 56.1	
	comp=E,595μm,0.6s					
LKD2			AML	AML	01 48 57.7	
	comp=N,648μm,0.8s					
LKD2	**Lefkada island**	**2.08 158**	P	Pn	01 48 17.8	+0.5
LKD2	**Lefkada island**	**2.08 158**	P	Pn	01 48 17.8	+0.5
LKD2			S	Sb	01 48 46.8	+0.8
GRG	**Griva**	**2.09 83**	P	Pn	01 48 19.4	+1.8
GRG			S	Sn	01 48 44.6	+1.0
GRG			AML	AML	01 48 57.7	
	comp=E,306μm,0.9s					
GRG			AML	AML	01 49 05.4	
	comp=N,391μm,0.7s					
GRG	**Griva**	**2.09 83**	P	Pn	01 48 18.4	+0.9
GRG	**Griva**	**2.09 83**	P	Pn	01 48 18.4	+0.9
GRG			S	Sn	01 48 44.8	+1.2
NKME	**Niksic**	**2.11 346** ⇑	*i*Pn	Pn	01 48 18.5	+0.7
NKME			*e*Sn	Sb	01 48 46.6	-0.4
NKME	**Niksic**	**2.11 346** ⇑	*i*Pn	Pn	01 48 18.5	+0.7
NKME			*e*Sn	Sb	01 48 46.6	-0.4
KOME	**Kolasin**	**2.13 357** ⇑	*i*Pn	Pn	01 48 19.4	+1.3
KOME			*e*Sn	Sb	01 48 47.2	-0.4
KOME	**Kolasin**	**2.13 357** ⇑	*i*Pn	Pn	01 48 19.4	+1.3
KOME			*e*Sn	Sb	01 48 47.2	-0.4
STIP	**Stip**	**2.14 62**	*i* Pn	Pb	01 48 21.6	+0.3
THL	**Klokotos Trika**	**2.14 122**	P	Pn	01 48 18.6	+0.4
THL			S	Sb	01 48 50.3	+2.4
THL			AML	AML	01 49 02.8	
	comp=E,255μm,0.5s					
THL			AML	AML	01 49 08.1	
	comp=N,420μm,0.7s					
THL	**Klokotos Trika**	**2.14 122**	P	Pn	01 48 19.4	+1.2
THL	**Klokotos Trika**	**2.14 122**	P	Pn	01 48 19.4	+1.2
THL			S	Sb	01 48 48.9	+1.0
NKY	**Niksic**	**2.15 347**	*e*Pn	Pn	01 48 19.8	+1.5
NKY			*e*Sn	Sb	01 48 47.6	-0.5
NKY	**Niksic**	**2.15 347**	*e*Pn	Pn	01 48 19.8	+1.5
NKY			*e*Sn	Sb	01 48 47.6	-0.5
BEY	**Berane**	**2.15 5** ⇑	*i*Pn	Pn	01 48 20.1	+1.7
BEY	**Berane**	**2.15 5**	P	Pb	01 48 22.1	+0.6
BEY			*e*Sn	Sn	01 48 47.8	+2.6
IVA	**Berane**	**2.15 5** ⇑	*i*Pn	Pn	01 48 20.1	+1.7
IVA			*e*Sn	Sn	01 48 47.8	+2.6
MATE	**Matera**	**2.25 269** ⇑	*i*P	Pn	01 48 20.3	+0.7
LIT	**Litokhoron**	**2.25 105**	P	Pb	01 48 22.6	-0.5
LIT			AML	AML	01 49 05.0	
	comp=E,431μm,0.7s					
LIT			AML	AML	01 49 06.5	
	comp=N,487μm,0.8s					
LIT	**Litokhoron**	**2.25 105**	P	Pn	01 48 20.7	+1.1
LIT	**Litokhoron**	**2.25 105**	P	Pn	01 48 20.7	+1.1
VAY	**Valandovo**	**2.28 74**	*e*Pn	Pn	01 48 20.9	+0.8
VAY	**Valandovo**	**2.28 74**	P	Pn	01 48 18.9	-1.2
VAY	**Valandovo**	**2.28 74**	*i* Pn	Pn	01 48 21.3	+1.3
VAY	**Valandovo**	**2.28 74**	P	Pn	01 48 18.9	-1.2
VAY	**Valandovo**	**2.28 74**	*e*Pn	Pn	01 48 20.9	+0.8
BRY	**Bratogost**	**2.33 339** ⇓	*i*Pn	Pn	01 48 21.5	+0.6
BRY			*e*Sn	Sn	01 48 52.1	+2.5
BRY	**Bratogost**	**2.33 339** ⇓	*i*Pn	Pn	01 48 21.5	+0.6
BRY			*e*Sn	Sn	01 48 52.1	+2.5
FSK	**Fiskardo**	**2.37 163**	P	Pn	01 48 20.2	-0.9
PDO	**Prodromos**	**2.43 150**	P	Pn	01 48 21.6	-0.4
PDO	**Prodromos**	**2.43 150**	P	Pn	01 48 22.4	+0.4
PDO	**Prodromos**	**2.43 150**	P	Pn	01 48 22.4	+0.4
EVR	**Evrytania**	**2.45 137**	P	Pn	01 48 25.2	+2.7
EVR	**Evrytania**	**2.45 137**	P	Pn	01 48 24.5	+2.1
KNT	**Kendrikon**	**2.49 79**	P	Pn	01 48 24.4	+1.4
KNT	**Kendrikon**	**2.49 79**	P	Pn	01 48 24.1	+1.1
KNT	**Kendrikon**	**2.49 79**	P	Pn	01 48 24.1	+1.1
UPM	**Unac-Piva**	**2.54 347** ⇓	*i*Pn	Pn	01 48 25.5	+1.7
UPM			*e*Sn	Sn	01 48 57.8	+2.9
UPM	**Unac-Piva**	**2.54 347** ⇓	*i*Pn	Pn	01 48 25.5	+1.7
UPM	**Unac-Piva**	**2.54 347**	P	Pg	01 48 33.3	+2.1
UPM			*e*Sn	Sn	01 48 57.8	+2.9
SJES	**Sjenica**	**2.55 5**	*e*Pn	Pn	01 48 25.7	+1.9
SJES	**Sjenica**	**2.55 5**	*e*Pn	Pn	01 48 25.7	+1.9
PVO	**Paravola**	**2.55 145**	P	Pn	01 48 24.5	+0.8
PVO	**Paravola**	**2.55 145**	P	Pn	01 48 24.9	+1.2
STON	**Ston**	**2.60 326**	*e*Pn	Pn	01 48 23.7	-0.7
STON	**Ston**	**2.60 326**	*e*Pn	Pn	01 48 22.5	-1.9
STON			Sn	Sn	01 48 55.0	-1.0
STON	**Ston**	**2.60 326**	*e*Pn	Pn	01 48 23.7	-0.7
HORT	**Hortiatis**	**2.62 92**	P	Pn	01 48 27.0	+2.2
HORT	**Hortiatis**	**2.62 92**	P	Pn	01 48 26.3	+1.5
BARS	**Barje**	**2.64 37**	*e*Pn	Pn	01 48 26.4	+1.4
BARS	**Barje**	**2.64 37**	*e*Pn	Pn	01 48 26.4	+1.4
VLS	**Valsamata**	**2.64 164**	P	Pn	01 48 22.8	-2.2
VLS	**Valsamata**	**2.64 164**	P	Pn	01 48 24.7	-0.3
AGG	**Agios Georgios**	**2.67 129**	P	Pn	01 48 26.9	+1.5
AGG			S	Sn	01 49 01.9	+4.2
AGG			AML	AML	01 49 18.9	
	comp=E,816μm,0.8s					
AGG			AML	AML	01 49 28.0	
	comp=N,572μm,0.8s					
AGG	**Agios Georgios**	**2.67 129**	P	Pn	01 48 26.9	+1.5
AGG			S	Sn	01 49 01.1	+3.4
TIP	**Timpagrande**	**2.71 236** ⇓	*i*P	Pn	01 48 26.7	+0.7
TIP	**Timpagrande**	**2.71 236**	P	Pn	01 48 24.5	-1.5
TIP	**Timpagrande**	**2.71 236**	P	Pn	01 48 25.3	-0.7
SELS	**Selova**	**2.72 23**	*e*Pn	Pn	01 48 28.1	+1.9
ANX	**Ano Chora**	**2.75 140**	P	Pn	01 48 29.1	+2.5
ANX	**Ano Chora**	**2.75 140**	P	Pn	01 48 28.6	+2.0
FYTO	**Fytoko, Volos**	**2.84 116**	P	Pn	01 48 30.8	+3.1
FYTO	**Fytoko, Volos**	**2.84 116**	P	Pn	01 48 30.0	+2.3
EFP	**Efpalio**	**2.88 142**	P	Pn	01 48 29.3	+1.1
EFP	**Efpalio**	**2.88 142**	P	Pn	01 48 29.6	+1.4
IVAS	**Ivanjica**	**2.88 7**	*e*Pn	Pn	01 48 30.3	+2.0
IVAS	**Ivanjica**	**2.88 7**	*e*Pn	Pn	01 48 30.3	+2.0
PLG	**Polygyros**	**2.91 96**	P	Pn	01 48 30.5	+1.8
PLG	**Polygyros**	**2.91 96**	P	Pn	01 48 30.1	+1.4
SERG	**Sergoula**	**2.96 140**	P	Pn	01 48 31.9	+2.5
SERG	**Sergoula**	**2.96 140**	P	Pn	01 48 31.4	+2.0
TRIZ	**Trizonia**	**3.00 141**	P	Pn	01 48 31.4	+1.4
TRIZ	**Trizonia**	**3.00 141**	P	Pn	01 48 31.5	+1.5
RLS	**Riolos of Patr**	**3.01 152**	P	Pn	01 48 32.3	+2.3
RLS	**Riolos of Patr**	**3.01 152**	P	Pn	01 48 32.0	+2.0
SRS	**Serrai**	**3.01 81**	P	Pn	01 48 30.5	+0.5
SRS	**Serrai**	**3.01 81**	P	Pn	01 48 30.7	+0.7
CUC	**Castrocucco**	**3.02 257**	P	Pn	01 48 32.3	+2.0
CUC	**Castrocucco**	**3.02 257**	P	Pn	01 48 31.1	+0.8
XOR	**Xorichti**	**3.03 115**	P	Pn	01 48 30.9	+0.5
XOR	**Xorichti**	**3.03 115**	P	Pn	01 48 31.4	+1.0
LAKA	**Lakka**	**3.06 143**	P	Pn	01 48 31.8	+1.0
LAKA	**Lakka**	**3.06 143**	P	Pn	01 48 32.1	+1.3
NEO	**Neokhori**	**3.08 116**	P	Pn	01 48 33.9	+2.8
NEO	**Neokhori**	**3.08 116**	P	Pn	01 48 33.2	+2.1
BBLS	**Lazići**	**3.15 357**	*e*Pn	Pn	01 48 33.7	+1.7
BBLS	**Lazići**	**3.15 357**	*e*Pn	Pn	01 48 33.7	+1.7
PAIG	**Paliouri**	**3.17 103**	P	Pn	01 48 31.9	-0.4
PAIG	**Paliouri**	**3.17 103**	P	Pn	01 48 32.8	+0.5
DRO	**Drossia**	**3.19 149**	P	Pn	01 48 33.2	+0.6
DRO	**Drossia**	**3.19 149**	P	Pn	01 48 33.8	+1.2
DSF	**Desfina**	**3.20 135**	P	Pn	01 48 32.8	0.0
DSF	**Desfina**	**3.20 135**	P	Pn	01 48 33.6	+0.9
VTS	**Vitosha**	**3.25 54** ⇓	*i*P	Pn	01 48 36.0	+2.5
GRUS	**Gruza**	**3.26 14**	*e*Pn	Pn	01 48 34.3	+0.8
GRUS	**Gruza**	**3.26 14**	*e*Pn	Pn	01 48 34.3	+0.8
BOVS	**Bovan**	**3.28 27**	*e*Pn	Pn	01 48 34.9	+1.1
BOVS	**Bovan**	**3.28 27**	*e*Pn	Pn	01 48 34.9	+1.1
KLV	**Kalavryta, Ach**	**3.30 143**	P	Pn	01 48 34.2	+0.1
KLV	**Kalavryta, Ach**	**3.30 143**	P	Pn	01 48 35.0	+0.9
OUR	**Ouranopolis**	**3.32 95**	P	Pn	01 48 35.1	+0.8
OUR	**Ouranopolis**	**3.32 95**	P	Pn	01 48 35.4	+1.1
ZAPS	**Zavoj**	**3.38 40**	*e*Pn	Pn	01 48 37.0	+1.8
ZAPS	**Zavoj**	**3.38 40**	*e*Pn	Pn	01 48 37.0	+1.8
DIVS	**Divibare**	**3.38 4**	*e*Pn	Pn	01 48 35.0	-0.3
DIVS	**Divibare**	**3.38 4**	*e*Pn	Pn	01 48 35.0	-0.3
GUR	**Goura**	**3.47 142**	P	Pn	01 48 36.8	+0.2
GUR	**Goura**	**3.47 142**	P	Pn	01 48 37.5	+0.9
TRUS	**Trudelj**	**3.54 9**	*e*Pn	Pn	01 48 38.9	+1.5
TRUS	**Trudelj**	**3.54 9**	*e*Pn	Pn	01 48 38.9	+1.5
AMT	**Artemida-Makis**	**3.56 153**	P	Pn	01 48 39.3	+1.7
AMT	**Artemida-Makis**	**3.56 153**	P	Pn	01 48 39.4	+1.7
ZAGS	**Zajecar**	**3.63 31**	*e*Pn	Pn	01 48 40.3	+1.7
ZAGS	**Zajecar**	**3.63 31**	*e*Pn	Pn	01 48 40.3	+1.7
TRIP	**Tripoli**	**3.78 147**	P	Pn	01 48 42.5	+1.7
TRIP	**Tripoli**	**3.78 147**	P	Pn	01 48 42.5	+1.7
TEKS	**Tekeris**	**3.83 359**	*e*Pn	Pn	01 48 42.7	+1.4
TEKS	**Tekeris**	**3.83 359**	*e*Pn	Pn	01 48 42.7	+1.4
ITM	**Ithomi**	**3.96 153**	P	Pn	01 48 44.7	+1.6
ITM	**Ithomi**	**3.96 153**	P	Pn	01 48 44.9	+1.8
KUBS	**Kucevo**	**3.98 21**	*e*Pn	Pn	01 48 43.6	+0.2
KUBS	**Kucevo**	**3.98 21**	*e*Pn	Pn	01 48 43.6	+0.2
PYL	**PYLOS**	**4.15 156**	P	Pn	01 48 44.3	-1.5
PYL	**PYLOS**	**4.15 156**	P	Pn	01 48 46.1	+0.3
DION	**Dionisos Attik**	**4.24 127**	P	Pn	01 48 46.7	-0.3
DION	**Dionisos Attik**	**4.24 127**	P	Pn	01 48 47.8	+0.9
DID	**Didima**	**4.25 138**	P	Pn	01 48 47.5	+0.3
DID	**Didima**	**4.25 138**	P	Pn	01 48 48.3	+1.2
VLY	**Voula,Athens**	**4.30 130**	P	Pn	01 48 50.5	+2.7
VLY	**Voula,Athens**	**4.30 130**	P	Pn	01 48 50.2	+2.4
MDVR	**Moldovita**	**4.33 20** ⇑	*i*P	Pn	01 48 49.8	+1.5
DYR	**Agios Nikonas**	**4.47 151**	P	Pn	01 48 50.3	+0.1
DYR	**Agios Nikonas**	**4.47 151**	P	Pn	01 48 51.3	+1.1
HERR	**Herculane**	**4.62 25** ⇓	*i*P	Pn	01 48 53.6	+1.3
VLI	**Veliai**	**4.75 146**	P	Pn	01 48 55.7	+1.7
VLI	**Veliai**	**4.75 146**	P	Pn	01 48 56.0	+2.0
UDBI	**Udbina**	**4.77 324**	*i* Pn	Pn	01 48 54.5	+0.2
UDBI			Sn	Sn	01 49 49.5	-0.1
BZS	**Buzias**	**5.10 16** ⇑	*i*P	Pn	01 49 00.2	+1.5
VAE	**Valguarnera**	**5.21 233**	Pn	Pn	01 48 59.1	-1.2
	comp=N,0.6nm,0.3s,baz=5.2,slow=11,SNR=2.5					
NVLJ	**Novalja**	**5.21 319**	*i* Pn	Pn	01 48 59.4	-1.0
NVLJ			Sn	Sn	01 49 58.5	-2.0
LOT	**Lotru**	**5.60 31** ⇑	*i*P	Pn	01 49 07.4	+1.6
OZLJ	**Ozalj**	**5.77 329**	*e*Pn	Pn	01 49 07.6	-0.4
DRGR		**6.46 19** ⇓	*i*P	Pn	01 49 19.3	+1.8
MLR	**Muntele Rosu**	**6.62 42**	Pn	Pn	01 49 23.7	+3.8
	comp=N,0.0nm,0.3s,baz=241,slow=19,SNR=4.2					
MLR			Sn	Sn	01 50 37.8	+2.4
	comp=N,0.0nm,0.3s,baz=270,slow=20,SNR=1.7					
MLR	**Muntele Rosu**	**6.62 42** ⇑	*i*P	Pn	01 49 21.7	+1.9
IDI	**Anoyia**	**6.82 141**	Pn	Pn	01 49 22.0	-0.5
	comp=N,0.2nm,0.3s,baz=307,slow=18,SNR=2.7					
IDI			Sn	Sn	01 50 35.5	-4.6
	comp=N,0.1nm,0.3s,baz=315,slow=17,SNR=3.3					
SOKA	**Soboth**	**6.83 332**	*e*Pn	Pn	01 49 23.1	+0.5
	comp=N,0.4nm,0.3s					
SOKA			Sn	Sn	01 50 37.6	-2.8
	comp=N,1.5nm,0.5s					
OBKA	**Obir**	**6.87 329**	*e*Pn	Pn	01 49 23.8	+0.7
	comp=N,0.3nm,0.1s					
OBKA			*e*Sn	Sn	01 50 42.2	+0.8
	comp=N,0.2nm,0.2s					
TRPA	**Tarpa**	**7.69 15** ⇓	*i*P	Pn	01 49 35.3	+1.0
ABTA	**Abfaltersbach**	**7.94 322**	*e*Pn	Pn	01 49 38.3	+0.5
	comp=N,1.0nm,0.5s					
ABTA			*e*Sn	Sn	01 51 08.9	+1.2
	comp=N,6.0nm,0.9s					
MOA	**Molln**	**8.11 333**	*e*Pn	Pn	01 49 39.9	-0.1
MOA			*e*Sn	Sn	01 51 12.5	+0.8
	comp=N,0.6nm,0.4s					
WATA	**Walderalm**	**8.80 321**	*e*Pn	Pn	01 49 50.3	+0.5
	comp=N,0.5nm,0.2s					
FETA	**Feichten**	**9.01 317**	*e*Pn	Pn	01 49 55.9	+3.3
	comp=N,2.3nm,0.7s					
MOTA	**Moosalm**	**9.04 320**	*e*Pn	Pn	01 49 52.0	-1.0
	comp=N,1.2nm,0.4s					
GERES	**GERESS Array B**	**9.16 334**	Pn	Pn	01 49 55.0	+0.4
	comp=N,0.1nm,0.3s,baz=152,slow=13,SNR=3.0					
GERES			LR	LR	01 54 40.6	
	comp=N,47nm,19.3s,baz=160,slow=46					
RETA	**Reutte**	**9.31 320**	*e*Pn	Pn	01 49 57.6	+1.0
	comp=N,0.3nm,0.3s					
RETA			*e*Sn	Sn	01 51 39.6	-1.7
	comp=N,0.4nm,0.2s					
DAVA	**Damuels**	**9.62 316**	*i* Pn	Pn	01 50 03.3	+2.3
EKA	**Eskdalemuir Ar**	**20.99 322**	P	P	01 52 24.9	-0.7
	comp=N,3.9nm,1.1s,baz=130,slow=11,SNR=3.7					
FINES	**FINESS Array B**	**21.12 9**	P	P	01 52 26.7	-0.2
	comp=N,1.1nm,1.0s,baz=192,slow=12,SNR=2.6					
TORD	**Torodi Ar. Bea**	**31.66 215**	P	P	01 54 05.0	-0.9
	comp=N,0.2nm,0.8s,baz=22,slow=8.8,SNR=2.6					
ZALV	**Zalesovo Beam**	**44.53 50**	P	P	01 55 52.9	-1.0
	comp=N,0.5nm,0.3s,baz=282,slow=7.2,SNR=3.6					
MKAR	**Makanchi Array**	**44.58 60**	P	P	01 55 53.0	-1.4
	comp=N,0.2nm,0.4s,baz=299,slow=6.3,SNR=4.4					
SONM	**Songino Array**	**59.38 51**	P	P	01 57 44.8	+0.1
	comp=N,0.6nm,0.8s,baz=288,slow=5.9,SNR=4.2					

CSEM ***17*** *01:55:14.8±0.1, 40°.72N×19°.60E, h2km, ML3.0, Error ellipse: s-maj=3.1km s-min=1.9km az=63.0*
ATH ***17*** *01:55:14.8, 40°.76N×19°.60E, h28km±1km, ML3.1/14, Error ellipse: s-maj=1.9km s-min=1.1km az=230.0*
BEO ***17*** *01:55:14.9±0.7, 40°.69N×19°.63E, h0km*
THE ***17*** *01:55:15.1, 40°.75N×19°.65E, h0km±2km, ML3.0/8, Error ellipse: s-maj=2.9km s-min=1.0km az=291.0*
PDG ***17*** *01:55:15.5±0.5, 40°.73N×19°.58E, h11km±1km, ML3.1/11, Error ellipse: s-maj=0.7km s-min=0.9km az=0.0*
ISC 17 01:55:14.8±1.1, 40°.72N±0°.02×19°.62E±0°.02, h1km±9km, n224, σ0°96/296, 18C-22D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLO	**Vlora**	**0.27**	**200**	P	Pg	01 55 20.7	+0.8
VLO	**Vlora**	**0.27**	**200**	P	Pg	01 55 20.7	+0.8
TIR	**Tirane**	**0.66**	**17**	*e*Pg	Pg	01 55 27.5	+0.2
TIR				*e*Sg	Sg	01 55 36.1	+0.2
TIR	**Tirane**	**0.66**	**17**	*i*P	Pg	01 55 27.5	+0.2
TIR	**Tirane**	**0.66**	**17**	P	Pg	01 55 27.9	+0.5
TIR	**Tirane**	**0.66**	**17**	P	Pg	01 55 27.6	+0.2
TIR	**Tirane**	**0.66**	**17**	P	Pg	01 55 27.6	+0.2
TIR				*e*Sg	Sg	01 55 36.1	+0.2
KBN	**Korca**	**0.90**	**96**	P	Pg	01 55 30.7	-1.3

KZN	**Kozani**	**1.69**	**103**	P	**Pn**	**01 55 45.5**	**0.0**
KZN				S	**Sb**	**01 56 08.8**	**+0.2**
KZN	**Kozani**	**1.69**	**103**	P	**Pn**	**01 55 45.5**	**0.0**
KZN				S	**Sb**	**01 56 08.8**	**+0.2**
PDG	**Podgorica**	**1.73**	**351**	*e*Pn	**Pn**	**01 55 45.5**	**-0.5**
PDG				*e*Sn	**Sg**	**01 56 10.6**	**+0.2**
PDG	**Podgorica**	**1.73**	**351**	⇑*i*P	**Pn**	**01 55 45.3**	**-0.7**
PDG	**Podgorica**	**1.73**	**351**	⇑*i*P	**Pn**	**01 55 45.3**	**-0.7**
PDG	**Podgorica**	**1.73**	**351**	⇑*i*Pn	**Pn**	**01 55 46.1**	**+0.1**
PDG				*e*Sn	**Sg**	**01 56 10.6**	**+0.2**
TTG	**Podgorica**	**1.73**	**351**	⇑*i*Pn	**Pn**	**01 55 46.1**	**+0.1**
TTG				*e*Sn	**Sg**	**01 56 11.0**	**+0.6**
SKO	**Skopje**	**1.86**	**47**	*e*Pn	**Pn**	**01 55 48.0**	**+0.3**
SKO	**Skopje**	**1.86**	**47**	*i* Pn	**Pn**	**01 55 48.5**	**+0.8**
SKO	**Skopje**	**1.86**	**47**	*e*Pn	**Pn**	**01 55 48.0**	**+0.3**
PVY	**Plav**	**1.89**	**8**	⇓*i*Pn	**Pn**	**01 55 48.9**	**+0.6**
PVY				*e*Sn	**Sg**	**01 56 15.0**	**-0.6**
PVY	**Plav**	**1.89**	**8**	⇓*i*Pn	**Pn**	**01 55 48.9**	**+0.6**
PVY				*e*Sn	**Sg**	**01 56 15.0**	**-0.6**
CEME	**Cevo**	**1.90**	**344**	⇑*i*Pn	**Pn**	**01 55 47.5**	**-0.9**
CEME				*e*Sn	**Sb**	**01 56 15.0**	**+0.5**
CEME	**Cevo**	**1.90**	**344**	⇑*i*Pn	**Pn**	**01 55 47.5**	**-0.9**
CEME				*e*Sn	**Sb**	**01 56 15.0**	**+0.5**
HCY	**Herceg Novi**	**1.92**	**334**	⇓*i*Pn	**Pn**	**01 55 48.8**	**+0.2**
HCY				*e*Sn	**Sb**	**01 56 15.4**	**+0.3**
HCY	**Herceg Novi**	**1.92**	**334**	⇓*i*Pn	**Pn**	**01 55 48.8**	**+0.2**
HCY				*e*Sn	**Sb**	**01 56 15.4**	**+0.3**
NOCI	**Noci**	**1.94**	**273**	P	**Pn**	**01 55 47.2**	**-1.6**
NOCI	**Noci**	**1.94**	**273**	P	**Pn**	**01 55 47.5**	**-1.3**
DSL	**Palaion Diasel**	**1.95**	**144**	P	**Pn**	**01 55 49.0**	**+0.1**
DSL				AML	AML	01 56 30.9	
	comp=N,827µm,0.7s						
DSL				AML	AML	01 56 30.9	
	comp=E,606µm,0.6s						
DSL	**Palaion Diasel**	**1.95**	**144**	P	**Pn**	**01 55 49.5**	**+0.5**
DSL	**Palaion Diasel**	**1.95**	**144**	P	**Pn**	**01 55 49.5**	**+0.5**
LKD2	**Lefkada island**	**2.09**	**157**	P	**Pn**	**01 55 49.7**	**-1.2**
LKD2				AML	AML	01 56 26.1	
	comp=E,652µm,1.1s						
LKD2				AML	AML	01 56 33.4	
	comp=N,549µm,0.9s						
LKD2	**Lefkada island**	**2.09**	**157**	P	**Pn**	**01 55 50.2**	**-0.7**
LKD2	**Lefkada island**	**2.09**	**157**	P	**Pn**	**01 55 50.2**	**-0.7**
NKME	**Niksic**	**2.11**	**347**	*e*Pn	**Pn**	**01 55 50.8**	**-0.4**
NKME				*e*Sn	**Sb**	**01 56 19.8**	**-0.6**
NKME	**Niksic**	**2.11**	**347**	*e*Pn	**Pn**	**01 55 50.8**	**-0.4**
NKME				*e*Sn	**Sb**	**01 56 19.8**	**-0.6**
GRG	**Griva**	**2.13**	**83**	P	**Pn**	**01 55 51.9**	**+0.4**
GRG				S	**Sn**	**01 56 17.9**	**-0.6**
GRG				AML	AML	01 56 34.2	
	comp=E,386µm,1.0s						
GRG				AML	AML	01 56 42.4	
	comp=N,386µm,1.3s						
GRG	**Griva**	**2.13**	**83**	P	**Pn**	**01 55 51.4**	**0.0**
GRG				S	**Sn**	**01 56 19.2**	**+0.7**
GRG	**Griva**	**2.13**	**83**	P	**Pn**	**01 55 51.4**	**0.0**
GRG				S	**Sn**	**01 56 19.2**	**+0.7**
KOME	**Kolasin**	**2.13**	**358**	*e*Pn	**Pn**	**01 55 52.0**	**+0.4**
KOME				*e*Sn	**Sb**	**01 56 20.8**	**-0.4**
KOME	**Kolasin**	**2.13**	**358**	*e*Pn	**Pn**	**01 55 52.0**	**+0.4**
KOME				*e*Sn	**Sb**	**01 56 20.8**	**-0.4**
NKY	**Niksic**	**2.15**	**348**	⇑*i*Pn	**Pn**	**01 55 52.5**	**+0.7**
NKY				*e*Sn	**Sb**	**01 56 21.1**	**-0.5**
NKY	**Niksic**	**2.15**	**348**	⇑*i*Pn	**Pn**	**01 55 52.5**	**+0.7**
NKY				*e*Sn	**Sb**	**01 56 21.1**	**-0.5**
BEY	**Berane**	**2.16**	**5**	⇓*i*Pn	**Pn**	**01 55 53.2**	**+1.2**
BEY				*e*Sn	**Sb**	**01 56 21.1**	**-1.0**
IVA	**Berane**	**2.16**	**5**	⇓*i*Pn	**Pn**	**01 55 53.2**	**+1.2**
IVA				*e*Sn	**Sb**	**01 56 21.1**	**-1.0**
THL	**Klokotos Trika**	**2.17**	**121**	P	**Pn**	**01 55 53.0**	**+1.1**
THL				AML	AML	01 56 39.2	
	comp=E,289µm,0.9s						
THL				AML	AML	01 56 39.6	
	comp=N,303µm,0.8s						
THL	**Klokotos Trika**	**2.17**	**121**	P	**Pn**	**01 55 52.6**	**+0.6**
THL	**Klokotos Trika**	**2.17**	**121**	P	**Pn**	**01 55 52.4**	**+0.4**
STIP	**Stip**	**2.17**	**62**	*i* Pn	**Pb**	**01 55 54.4**	**-0.4**
TREB	**Trebinje**	**2.21**	**335**	*e*Pn	**Pn**	**01 55 50.1**	**-2.5**
MATE	**Matera**	**2.21**	**269**	⇑*i*P	**Pn**	**01 55 52.6**	**0.0**
MATE	**Matera**	**2.21**	**269**	⇑*i*P	**Pn**	**01 55 52.6**	**0.0**
LIT	**Litokhoron**	**2.28**	**105**	P	**Pn**	**01 55 54.8**	**+1.2**
LIT				AML	AML	01 56 37.9	
	comp=E,393µm,0.6s						
LIT				AML	AML	01 56 39.4	
	comp=N,471µm,0.9s						
LIT	**Litokhoron**	**2.28**	**105**	P	**Pn**	**01 55 53.6**	**+0.1**
LIT	**Litokhoron**	**2.28**	**105**	P	**Pn**	**01 55 54.0**	**+0.5**
VAY	**Valandovo**	**2.31**	**74**	*e*Pn	**Pn**	**01 55 54.4**	**+0.4**
VAY	**Valandovo**	**2.31**	**74**	P	**Pn**	**01 55 55.0**	**+1.0**
VAY	**Valandovo**	**2.31**	**74**	*i* Pn	**Pn**	**01 55 55.1**	**+1.1**
VAY	**Valandovo**	**2.31**	**74**	*e*Pn	**Pn**	**01 55 54.4**	**+0.4**
VAY	**Valandovo**	**2.31**	**74**	P	**Pn**	**01 55 55.0**	**+1.0**
BRY	**Bratogost**	**2.33**	**340**	*e*Pn	**Pn**	**01 55 54.6**	**+0.3**
BRY				*e*Sn	**Sn**	**01 56 25.1**	**+1.6**
BRY	**Bratogost**	**2.33**	**340**	*e*Pn	**Pn**	**01 55 54.6**	**+0.3**
BRY				*e*Sn	**Sn**	**01 56 25.1**	**+1.6**
FSK	**Fiskardo**	**2.37**	**162**	P	**Pn**	**01 55 53.1**	**-1.7**
PDO	**Prodromos**	**2.44**	**150**	P	**Pn**	**01 55 54.6**	**-1.0**
PDO				AML	AML	01 56 49.3	
	comp=N,391µm,1.1s						
PDO				AML	AML	01 56 59.2	
	comp=E,376µm,0.9s						
PDO	**Prodromos**	**2.44**	**150**	P	**Pn**	**01 55 55.2**	**-0.5**
PDO	**Prodromos**	**2.44**	**150**	P	**Pn**	**01 55 55.2**	**-0.5**
KNT	**Kendrikon**	**2.53**	**79**	P	**Pn**	**01 55 56.3**	**-0.6**
KNT	**Kendrikon**	**2.53**	**79**	P	**Pn**	**01 55 56.5**	**-0.4**
KNT	**Kendrikon**	**2.53**	**79**	P	**Pn**	**01 55 56.5**	**-0.4**
UPM	**Unac-Piva**	**2.54**	**348**	*e*Pn	**Pn**	**01 55 58.4**	**+1.1**
UPM				*e*Sn	**Sn**	**01 56 30.0**	**+1.1**
UPM	**Unac-Piva**	**2.54**	**348**	*e*Pn	**Pn**	**01 55 58.4**	**+1.1**
UPM				*e*Sn	**Sn**	**01 56 30.0**	**+1.1**
THE	**Thessaloniki**	**2.55**	**91**	P	**Pn**	**01 55 58.3**	**+1.1**
THE	**Thessaloniki**	**2.55**	**91**	P	**Pn**	**01 55 57.5**	**+0.3**
SJES	**Sjenica**	**2.56**	**6**	*e*Pn	**Pn**	**01 55 58.0**	**+0.6**
SJES	**Sjenica**	**2.56**	**6**	*e*Pn	**Pn**	**01 55 58.0**	**+0.6**
PVO	**Paravola**	**2.56**	**144**	P	**Pn**	**01 55 58.1**	**+0.7**
PVO	**Paravola**	**2.56**	**144**	P	**Pn**	**01 55 57.8**	**+0.4**
STON	**Ston**	**2.58**	**327**	*e*Pn	**Pn**	**01 55 58.7**	**+1.0**
STON	**Ston**	**2.58**	**327**	*e*Pn	**Pn**	**01 55 54.6**	**-3.0**
STON				Sn	**Sn**	**01 56 26.5**	**-3.2**
STON	**Ston**	**2.58**	**327**	*e*Pn	**Pn**	**01 55 58.7**	**+1.0**
PLE	**Pljevlja**	**2.62**	**356**	⇑*i*Pn	**Pn**	**01 55 59.0**	**+0.8**
PLE				*e*Sn	**Sn**	**01 56 32.0**	**+1.3**
PLE	**Pljevlja**	**2.62**	**356**	⇑*i*Pn	**Pn**	**01 55 59.0**	**+0.8**
PLE				*e*Sn	**Sn**	**01 56 32.0**	**+1.3**
VLS	**Valsamata**	**2.65**	**163**	P	**Pn**	**01 55 56.3**	**-2.3**
VLS	**Valsamata**	**2.65**	**163**	P	**Pn**	**01 55 57.4**	**-1.2**
BARS	**Barje**	**2.67**	**37**	*e*Pn	**Pn**	**01 55 59.6**	**+0.8**
BARS	**Barje**	**2.67**	**37**	*e*Pn	**Pn**	**01 55 59.6**	**+0.8**
TIP	**Timpagrande**	**2.68**	**236**	⇓*i*P	**Pn**	**01 55 59.3**	**+0.2**
TIP	**Timpagrande**	**2.68**	**236**	P	**Pn**	**01 55 56.5**	**-2.6**
TIP	**Timpagrande**	**2.68**	**236**	P	**Pn**	**01 55 58.8**	**-0.3**
TIP	**Timpagrande**	**2.68**	**236**	P	**Pn**	**01 55 58.8**	**-0.3**
AGG	**Agios Georgios**	**2.69**	**128**	P	**Pn**	**01 56 00.4**	**+1.2**
AGG				AML	AML	01 56 52.8	
	comp=E,700µm,1.1s						
AGG				AML	AML	01 57 00.4	
	comp=N,708µm,1.0s						
AGG	**Agios Georgios**	**2.69**	**128**	P	**Pn**	**01 55 59.8**	**+0.6**
SELS	**Selova**	**2.74**	**24**	*e*Pn	**Pn**	**01 55 59.8**	**-0.1**
ANX	**Ano Chora**	**2.77**	**139**	P	**Pn**	**01 56 02.6**	**+2.3**
ANX	**Ano Chora**	**2.77**	**139**	P	**Pn**	**01 56 01.3**	**+1.0**
ANX	**Ano Chora**	**2.77**	**139**	P	**Pn**	**01 56 01.3**	**+1.0**
SOH	**Sokhos**	**2.84**	**87**	P	**Pn**	**01 56 00.3**	**-1.0**
SOH	**Sokhos**	**2.84**	**87**	P	**Pn**	**01 56 00.6**	**-0.7**
FYTO	**Fytoko, Volos**	**2.87**	**116**	P	**Pn**	**01 56 04.2**	**+2.7**
FYTO	**Fytoko, Volos**	**2.87**	**116**	P	**Pn**	**01 56 02.9**	**+1.3**
IVAS	**Ivanjica**	**2.88**	**8**	*e*Pn	**Pn**	**01 56 01.9**	**0.0**
IVAS	**Ivanjica**	**2.88**	**8**	*e*Pn	**Pn**	**01 56 01.9**	**0.0**
EFP	**Efpalio**	**2.89**	**142**	P	**Pn**	**01 56 02.8**	**+0.9**
EFP	**Efpalio**	**2.89**	**142**	P	**Pn**	**01 56 02.4**	**+0.5**
PLG	**Polygyros**	**2.94**	**95**	P	**Pn**	**01 56 03.9**	**+1.3**
PLG	**Polygyros**	**2.94**	**95**	P	**Pn**	**01 56 03.1**	**+0.5**
CUC	**Castrocucco**	**2.99**	**257**	P	**Pn**	**01 56 04.5**	**+1.1**
CUC	**Castrocucco**	**2.99**	**257**	P	**Pn**	**01 56 03.7**	**+0.4**
SRS	**Serrai**	**3.04**	**81**	P	**Pn**	**01 56 01.4**	**-2.6**
SRS	**Serrai**	**3.04**	**81**	P	**Pn**	**01 56 02.5**	**-1.5**
XOR	**Xorichti**	**3.06**	**115**	P	**Pn**	**01 56 02.5**	**-1.7**
XOR	**Xorichti**	**3.06**	**115**	P	**Pn**	**01 56 03.4**	**-0.8**
LAKA	**Lakka**	**3.08**	**143**	P	**Pn**	**01 56 02.9**	**-1.6**
LAKA	**Lakka**	**3.08**	**143**	P	**Pn**	**01 56 03.8**	**-0.7**
NEO	**Neokhori**	**3.11**	**116**	P	**Pn**	**01 56 05.2**	**+0.2**
NEO	**Neokhori**	**3.11**	**116**	P	**Pn**	**01 56 05.0**	**+0.1**
BBLS	**Lazići**	**3.15**	**357**	*e*Pg	**Pb**	**01 56 12.4**	**+0.8**
BBLS	**Lazići**	**3.15**	**357**	*e*Pn	**Pn**	**01 56 06.7**	**+1.2**
BBLS	**Lazići**	**3.15**	**357**	*e*Pg	**Pb**	**01 56 12.4**	**+0.8**
DRO	**Drossia**	**3.20**	**149**	P	**Pn**	**01 56 05.8**	**-0.4**
DRO	**Drossia**	**3.20**	**149**	P	**Pn**	**01 56 06.1**	**-0.1**
DSF	**Desfina**	**3.22**	**135**	P	**Pn**	**01 56 06.9**	**+0.4**
DSF	**Desfina**	**3.22**	**135**	P	**Pn**	**01 56 06.8**	**+0.3**
GRUS	**Gruza**	**3.27**	**14**	*e*Pn	**Pn**	**01 56 07.1**	**0.0**
GRUS	**Gruza**	**3.27**	**14**	*e*Pn	**Pn**	**01 56 07.1**	**0.0**
NVR	**Nevrokopi**	**3.27**	**77**	P	**Pn**	**01 56 08.7**	**+1.5**
NVR	**Nevrokopi**	**3.27**	**77**	P	**Pn**	**01 56 07.8**	**+0.6**
VTS	**Vitosha**	**3.28**	**54**	⇓*i*P	**Pn**	**01 56 08.9**	**+1.5**
VTS	**Vitosha**	**3.28**	**54**	⇓*i*P	**Pn**	**01 56 08.9**	**+1.5**
BOVS	**Bovan**	**3.30**	**27**	*e*Pn	**Pn**	**01 56 07.4**	**-0.2**
BOVS	**Bovan**	**3.30**	**27**	*e*Pn	**Pn**	**01 56 07.4**	**-0.2**
KLV	**Kalavryta, Ach**	**3.31**	**143**	P	**Pn**	**01 56 08.2**	**+0.5**
KLV	**Kalavryta, Ach**	**3.31**	**143**	P	**Pn**	**01 56 08.1**	**+0.3**
DIVS	**Divibare**	**3.39**	**5**	*e*Pn	**Pn**	**01 56 08.8**	**0.0**
DIVS	**Divibare**	**3.39**	**5**	*e*Pn	**Pn**	**01 56 08.8**	**0.0**
HAPS	**Han Pijesak,BI**	**3.40**	**352**	*e*Pn	**Pn**	**01 56 07.3**	**-1.7**
ZAPS	**Zavoj**	**3.40**	**40**	*e*Pn	**Pn**	**01 56 10.0**	**+1.0**
GUR	**Goura**	**3.49**	**142**	P	**Pn**	**01 56 10.1**	**-0.2**
GUR	**Goura**	**3.49**	**142**	P	**Pn**	**01 56 10.2**	**0.0**
TRUS	**Trudelj**	**3.55**	**9**	*e*Pn	**Pn**	**01 56 11.1**	**+0.1**
TRUS	**Trudelj**	**3.55**	**9**	*e*Pn	**Pn**	**01 56 11.1**	**+0.1**
AMT	**Artemida-Makis**	**3.57**	**152**	P	**Pn**	**01 56 11.7**	**+0.3**
AMT	**Artemida-Makis**	**3.57**	**152**	P	**Pn**	**01 56 11.6**	**+0.3**
ZAGS	**Zajecar**	**3.65**	**31**	*e*Pn	**Pn**	**01 56 12.8**	**+0.5**
ZAGS	**Zajecar**	**3.65**	**31**	*e*Pn	**Pn**	**01 56 12.8**	**+0.5**
TEKS	**Tekeris**	**3.83**	**359**	*e*Pn	**Pn**	**01 56 15.5**	**+0.7**
TEKS	**Tekeris**	**3.83**	**359**	*e*Pn	**Pn**	**01 56 15.5**	**+0.7**
KUBS	**Kucevo**	**3.99**	**22**	*e*Pn	**Pn**	**01 56 17.6**	**+0.5**
KUBS	**Kucevo**	**3.99**	**22**	*e*Pn	**Pn**	**01 56 17.6**	**+0.5**
PYL	**PYLOS**	**4.16**	**156**	P	**Pn**	**01 56 17.9**	**-1.5**
PYL	**PYLOS**	**4.16**	**156**	P	**Pn**	**01 56 18.9**	**-0.5**
DID	**Didima**	**4.27**	**138**	P	**Pn**	**01 56 19.5**	**-1.3**
DID	**Didima**	**4.27**	**138**	P	**Pn**	**01 56 20.5**	**-0.4**
MDVR	**Moldovita**	**4.34**	**20**	⇓*i*P	**Pn**	**01 56 21.9**	**0.0**
MDVR	**Moldovita**	**4.34**	**20**	⇓*i*P	**Pn**	**01 56 21.9**	**0.0**
DYR	**Agios Nikonas**	**4.49**	**151**	P	**Pn**	**01 56 24.6**	**+0.7**
DYR	**Agios Nikonas**	**4.49**	**151**	P	**Pn**	**01 56 24.5**	**+0.7**
HERR	**Herculane**	**4.64**	**25**	⇓*i*P	**Pn**	**01 56 26.7**	**+0.7**
HERR	**Herculane**	**4.64**	**25**	⇓*i*P	**Pn**	**01 56 26.7**	**+0.7**
UDBI	**Udbina**	**4.75**	**325**	*e*Pn	**Pn**	**01 56 27.4**	**-0.1**
UDBI				Sn	**Sn**	**01 57 23.3**	**0.0**
UDBI	**Udbina**	**4.75**	**325**	*e*Pn	**Pn**	**01 56 27.4**	**-0.1**
UDBI				Sn	**Sn**	**01 57 23.2**	**0.0**
VLI	**Veliai**	**4.76**	**146**	P	**Pn**	**01 56 26.9**	**-0.8**
VLI	**Veliai**	**4.76**	**146**	P	**Pn**	**01 56 27.7**	**+0.1**
BZS	**Buzias**	**5.11**	**16**	⇓*i*P	**Pn**	**01 56 32.2**	**-0.2**
BZS	**Buzias**	**5.11**	**16**	⇓*i*P	**Pn**	**01 56 32.2**	**-0.2**
NVLJ	**Novalja**	**5.20**	**319**	*e*Pn	**Pn**	**01 56 31.8**	**-1.8**
NVLJ				Sn	**Sn**	**01 57 32.2**	**-1.9**
NVLJ	**Novalja**	**5.20**	**319**	*e*Pn	**Pn**	**01 56 31.8**	**-1.8**
NVLJ				Sn	**Sn**	**01 57 32.2**	**-1.9**
LOT	**Lotru**	**5.62**	**31**	⇑*i*P	**Pn**	**01 56 40.3**	**+0.8**
LOT	**Lotru**	**5.62**	**31**	⇑*i*P	**Pn**	**01 56 40.3**	**+0.8**
CRES	**Cresnjev**	**5.94**	**331**	*e*Pn	**Pn**	**01 56 42.1**	**-1.7**
VOIR		**6.17**	**38**	⇑*i*P	**Pn**	**01 56 48.3**	**+1.3**
VOIR		**6.17**	**38**	⇑*i*P	**Pn**	**01 56 48.3**	**+1.3**
SOKA	**Soboth**	**6.82**	**332**	*e*Pn	**Pn**	**01 56 55.1**	**-0.8**
	comp=N,0.3nm,0.3s						
SOKA	**Soboth**	**6.82**	**332**	Pn	**Pn**	**01 56 55.1**	**-0.8**
	comp=N,0.3nm,0.3s						
OBKA	**Obir**	**6.86**	**329**	*e*Pn	**Pn**	**01 56 56.4**	**0.0**
	comp=N,0.2nm,0.2s						
OBKA				*e*Sn	**Sn**	**01 58 14.2**	**-0.9**
	comp=N,2.7nm,0.4s						
OBKA	**Obir**	**6.86**	**329**	Pn	**Pn**	**01 56 56.4**	**0.0**
	comp=N,0.2nm,0.2s						
OBKA				Sn	**Sn**	**01 58 14.2**	**-0.9**
	comp=N,2.7nm,0.4s						
ABTA	**Abfaltersbach**	**7.92**	**322**	*e*Pn	**Pn**	**01 57 12.2**	**+1.1**
ABTA				Sn	**Sn**	**01 58 40.5**	**-0.8**
	comp=N,2.5nm,0.8s						
ABTA	**Abfaltersbach**	**7.92**	**322**	Pn	**Pn**	**01 57 12.2**	**+1.1**
ABTA				Sn	**Sn**	**01 58 40.5**	**-0.8**
	comp=N,2.5nm,0.8s						
BURAR	**Bucovina Array**	**7.98**	**28**	⇓*i*P	**Pn**	**01 57 12.8**	**+0.9**
BURAR	**Bucovina Array**	**7.98**	**28**	⇓*i*P	**Pn**	**01 57 12.8**	**+0.9**
MOA	**Molln**	**8.10**	**334**	*e*Pn	**Pn**	**01 57 14.8**	**+1.4**
	comp=N,0.5nm,0.3s						
MOA				*e*Sn	**Sn**	**01 58 44.7**	**-0.8**
	comp=N,0.9nm,0.3s						
MOA	**Molln**	**8.10**	**334**	Pn	**Pn**	**01 57 14.8**	**+1.4**
	comp=N,0.5nm,0.3s						
MOA				Sn	**Sn**	**01 58 44.7**	**-0.8**
	comp=N,0.9nm,0.3s						
WATA	**Walderalm**	**8.79**	**321**	*e*Pn	**Pn**	**01 57 22.1**	**-0.9**
	comp=N,1.0nm,0.4s						
WATA	**Walderalm**	**8.79**	**321**	Pn	**Pn**	**01 57 22.1**	**-0.9**
	comp=N,1.0nm,0.4s						
MOTA	**Moosalm**	**9.02**	**320**	*e*Pn	**Pn**	**01 57 25.1**	**-1.1**
	comp=N,0.4nm,0.2s						
MOTA	**Moosalm**	**9.02**	**320**	Pn	**Pn**	**01 57 25.1**	**-1.1**
	comp=N,0.4nm,0.2s						

*ISCJB **17** 02:31:50.4±0.4, 39°.78N±0°.02×26°.13E±0°.04, h9km±3km,*
Error ellipse: s-maj=5.0km s-min=3.9km az=167.0
*CSEM **17** 02:31:50.6±0.1, 39°.78N×26°.14E, h10km, ML2.7, Error*
ellipse: s-maj=3.3km s-min=2.2km az=83.0
*ISK **17** 02:31:50.1, 39°.78N×26°.13E, h8km, ML2.7/12*
*DDA **17** 02:31:50.6, 39°.79N×26°.19E, h7km, Ml2.7*
ISC 17 02:31:50.6±0.9, **39.78N**±0°.02×**26.14E**±0°.02, **h11**km±5km,
n47, σ0°**52**/66, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOZC	**Bozcaada**	**0.09**	**316**	*i* P	**Pg**	**02 31 53.1**	**-0.2**
BOZC				*i* S	**Sg**	**02 31 54.9**	**-0.3**
EZN	**Ezine**	**0.15**	**71**	PG	**Pg**	**02 31 54.1**	**0.0**
EZN				SG	**Sg**	**02 31 56.8**	**+0.2**
EZN	**Ezine**	**0.15**	**71**	*e*Pg	**Pg**	**02 31 54.1**	**0.0**
EZN				*e*Sg	**Sg**	**02 31 56.8**	**+0.2**
BAYC	**CANAKKALE_Bayr**	**0.32**	**96**	*i* P	**Pg**	**02 31 57.1**	**+0.1**
BAYC				*i* S	**Sg**	**02 32 02.0**	**+0.7**
BAYC	**CANAKKALE_Bayr**	**0.32**	**96**	P	**Pg**	**02 31 57.1**	**+0.1**
BAYC				S	**Sg**	**02 32 02.0**	**+0.7**
GPNR	**Gulpinar-Canak**	**0.32**	**180**	PG	**Pg**	**02 31 56.6**	**-0.4**
GPNR	**Gulpinar-Canak**	**0.32**	**180**	*e*Pg	**Pg**	**02 31 56.6**	**-0.4**
GADA	**Gvkgeada**	**0.45**	**336**	PG	**Pg**	**02 31 59.3**	**-0.3**
GADA				SG	**Sg**	**02 32 05.9**	**+0.3**
GADA	**Gvkgeada**	**0.45**	**336**	*e*Pg	**Pg**	**02 31 59.3**	**-0.3**
GADA				*e*Sg	**Sg**	**02 32 05.9**	**+0.3**
SIGR	**SIGRI**	**0.60**	**201**	PG	**Pg**	**02 32 02.4**	**+0.1**
SIGR				SG	**Sb**	**02 32 11.4**	**-0.3**
SIGR	**SIGRI**	**0.60**	**201**	*e*Pg	**Pg**	**02 32 02.4**	**+0.1**
SIGR				*e*Sg	**Sb**	**02 32 11.4**	**-0.3**
AYVA	**Ayvalik**	**0.63**	**137**	*i* P	**Pg**	**02 32 03.2**	**+0.3**
AYVA	**Ayvalik**	**0.63**	**137**	P	**Pg**	**02 32 03.2**	**+0.3**
GELI	**Tayfur-Gelibol**	**0.67**	**22**	PG	**Pg**	**02 32 03.8**	**+0.1**
GELI	**Tayfur-Gelibol**	**0.67**	**22**	*e*Pg	**Pg**	**02 32 03.8**	**+0.1**
DKL	**Dikili**	**0.92**	**139**	PG	**Pg**	**02 32 08.2**	**-0.2**
DKL	**Dikili**	**0.92**	**139**	*e*Pg	**Pg**	**02 32 08.2**	**-0.2**
ERIK	**Erikli-Kesan**	**0.94**	**18**	PG	**Pg**	**02 32 08.2**	**-0.6**
ERIK				SG	**Sb**	**02 32 21.9**	**+0.5**
ERIK	**Erikli-Kesan**	**0.94**	**18**	*e*Pg	**Pg**	**02 32 08.2**	**-0.6**
ERIK				*e*Sg	**Sb**	**02 32 21.9**	**+0.5**
ENEZ	**Enez**	**0.96**	**1**	PG	**Pb**	**02 32 09.1**	**-0.2**
ENEZ	**Enez**	**0.96**	**1**	*e*Pg	**Pb**	**02 32 09.1**	**-0.2**
KRBG	**Karabiga-Canak**	**1.08**	**55**	PN	**Pg**	**02 32 11.2**	**-0.3**
KRBG	**Karabiga-Canak**	**1.08**	**55**	*e*Pn	**Pg**	**02 32 11.2**	**-0.3**
ALN	**Alexandroupoli**	**1.12**	**356**	PN	**Pn**	**02 32 12.4**	**+0.1**
ALN	**Alexandroupoli**	**1.12**	**356**	*e*Pn	**Pn**	**02 32 12.4**	**+0.1**
KESN	**Edirne-Kesan**	**1.13**	**21**	*i* P	**Pn**	**02 32 12.8**	**0.0**
KESN				*i* S	**Sn**	**02 32 28.6**	**+0.2**
KESN	**Edirne-Kesan**	**1.13**	**21**	P	**Pn**	**02 32 12.8**	**0.0**
KESN				S	**Sn**	**02 32 28.6**	**+0.2**
BALY	**Balya**	**1.14**	**91**	*i* P	**Pg**	**02 32 11.3**	**-1.3**
BALY				*i* S	**Sg**	**02 32 26.9**	**-0.6**
BALY	**Balya**	**1.14**	**91**	P	**Pg**	**02 32 11.3**	**-1.3**
BALY				S	**Sg**	**02 32 26.9**	**-0.6**
RKY	**Sarkoy-Tekirda**	**1.21**	**41**	PN	**Pb**	**02 32 13.5**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.21**	**41**	*e*Pn	**Pb**	**02 32 13.5**	**-0.1**
GONE	**Gonen-Balikesi**	**1.22**	**77**	PN	**Pg**	**02 32 14.3**	**+0.2**
GONE	**Gonen-Balikesi**	**1.22**	**77**	*e*Pn	**Pg**	**02 32 14.3**	**+0.2**
STEP	**BALIKESIR_Sava**	**1.29**	**108**	*i* P	**Pg**	**02 32 15.2**	**-0.1**
STEP				*i* S	**Sn**	**02 32 33.1**	**+1.3**
STEP	**BALIKESIR_Sava**	**1.29**	**108**	P	**Pg**	**02 32 15.2**	**-0.1**
STEP				S	**Sn**	**02 32 33.1**	**+1.3**
BALB	**Balikesir**	**1.35**	**95**	PN	**Pn**	**02 32 15.8**	**+0.4**
BALB	**Balikesir**	**1.35**	**95**	*e*Pn	**Pn**	**02 32 15.8**	**+0.4**
CHOS	**Chios island**	**1.39**	**183**	PN	**Pn**	**02 32 16.6**	**+0.6**
CHOS	**Chios island**	**1.39**	**183**	*e*Pn	**Pn**	**02 32 16.6**	**+0.6**
RDO	**Rodhopi**	**1.44**	**342**	PN	**Pn**	**02 32 16.7**	**0.0**
RDO	**Rodhopi**	**1.44**	**342**	*e*Pn	**Pn**	**02 32 16.7**	**0.0**
URLA	**Izmir**	**1.46**	**166**	PN	**Pn**	**02 32 16.5**	**-0.4**
URLA	**Izmir**	**1.46**	**166**	*e*Pn	**Pn**	**02 32 16.5**	**-0.4**
KCTX	**Karacabey (Bur**	**1.77**	**73**	PN	**Pn**	**02 32 21.7**	**+0.4**
KCTX	**Karacabey (Bur**	**1.77**	**73**	*e*Pn	**Pn**	**02 32 21.7**	**+0.4**
DURS	**Dursunbey**	**1.81**	**95**	*i* P	**Pn**	**02 32 20.8**	**-1.1**
DURS				*i* S	**Sn**	**02 32 44.1**	**-0.8**
DURS	**Dursunbey**	**1.81**	**95**	P	**Pn**	**02 32 20.8**	**-1.1**
DURS				S	**Sn**	**02 32 44.1**	**-0.8**

*ISCJB **17** 02:32:55.6±0.4, 39°.78N±0°.02×26°.13E±0°.03, h7km±3km,*
*Error ellipse: s-maj=

SMG	Samos	2.13	165	P	Pn	02 33 31.5	+0.3
DEMI	Demirci	2.13	109	*i* P	Pn	02 33 31.7	+0.5
DEMI				*i* S	Sg	02 34 04.4	-0.1
DEMI	Demirci	2.13	109	P	Pn	02 33 31.7	+0.5
ARMT	Armutlu	2.24	68	PN	Pn	02 33 33.9	+1.2
ARMT	Armutlu	2.24	68	*e*Pn	Pn	02 33 33.9	+1.2
SBT5	Esenkoy-Cinarc	2.28	67	PN	Pn	02 33 34.6	+1.5
SBT5	Esenkoy-Cinarc	2.28	67	*e*Pn	Pn	02 33 34.6	+1.5
SIMA	Simav-Kutahya	2.32	106	PN	Pn	02 33 35.3	+1.5
SIMA	Simav-Kutahya	2.32	106	*e*Pn	Pn	02 33 35.3	+1.5
CTKS	Kestanelik-??a	2.33	50	PN	Pn	02 33 35.3	+1.4
CTKS	Kestanelik-??a	2.33	50	*e*Pn	Pn	02 33 35.3	+1.4
KULA	Kula-Manisa	2.34	122	PN	Pn	02 33 35.6	+1.6
KULA	Kula-Manisa	2.34	122	*e*Pn	Pn	02 33 35.6	+1.6
TVSB	Tavsanli	2.60	96	PN	Pn	02 33 37.9	+0.3
TVSB	Tavsanli	2.60	96	*e*Pn	Pn	02 33 37.9	+0.3
YLV	Yalova	2.61	71	PN	Pn	02 33 39.2	+1.4
YLV	Yalova	2.61	71	*e*Pn	Pn	02 33 39.2	+1.4

ISCJB ***17*** *03:06:38.0±0.5, 39°.77N±0°.03×26°.12E±0°.05, h9km±4km, Error ellipse: s-maj=6.3km s-min=4.6km az=166.7*
DDA ***17*** *03:06:37.9, 39°.76N×26°.14E, h7km, Ml2.2*
ISK ***17*** *03:06:37.4, 39°.78N×26°.12E, h12km, ML2.7/6*
CSEM ***17*** *03:06:38.1±0.1, 39°.77N×26°.15E, h12km, ML2.7, Error ellipse: s-maj=3.0km s-min=1.7km az=91.0*

ISC 17 03:06:37.9±0.9, 39°.77N±0°.03×26°.12E±0°.03, h12km±6km, n26, σ0°25/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOZC	Bozcaada	0.09	325	*i* P	Pg	03 06 40.6	-0.1
BOZC				*i* S	Sg	03 06 42.5	-0.2
EZN	Ezine	0.17	69	PG	Pg	03 06 41.7	0.0
EZN				SG	Sg	03 06 44.5	+0.1
EZN	Ezine	0.17	69	*e*Pg	Pg	03 06 41.7	0.0
EZN				*e*Sg	Sg	03 06 44.5	+0.1
GPNR	Gulpinar-Canak	0.31	178	PG	Pg	03 06 44.2	0.0
GPNR				SG	Sb	03 06 49.7	-0.6
GPNR	Gulpinar-Canak	0.31	178	*e*Pg	Pg	03 06 44.2	0.0
GPNR				*e*Sg	Sb	03 06 49.7	-0.6
BAYC	CANAKKALE_Bayr	0.33	94	*i* P	Pg	03 06 44.4	-0.1
BAYC				*i* S	Sg	03 06 49.3	+0.3
BAYC	CANAKKALE_Bayr	0.33	94	P	Pg	03 06 44.4	-0.1
BAYC				S	Sg	03 06 49.3	+0.3
GADA	Gvkgeada	0.46	338	PG	Pg	03 06 47.2	+0.3
GADA				SG	Sg	03 06 53.0	0.0
GADA	Gvkgeada	0.46	338	*e*Pg	Pg	03 06 47.2	+0.3
GADA				*e*Sg	Sg	03 06 53.0	0.0
SIGR	SIGRI	0.59	201	PG	Pb	03 06 50.1	0.0
SIGR	SIGRI	0.59	201	*e*Pg	Pb	03 06 50.1	0.0
GELI	Tayfur-Gelibol	0.69	23	PG	Pg	03 06 51.2	0.0
GELI	Tayfur-Gelibol	0.69	23	*e*Pg	Pg	03 06 51.2	0.0
DKL	Dikili	0.92	139	PG	Pb	03 06 55.8	+0.1
DKL	Dikili	0.92	139	*e*Pg	Pb	03 06 55.8	+0.1
ERIK	Erikli-Kesan	0.95	18	PG	Pg	03 06 55.7	-0.5
ERIK	Erikli-Kesan	0.95	18	*e*Pg	Pg	03 06 55.7	-0.5
ALN	Alexandroupoli	1.13	357	PN	Pg	03 06 59.6	0.0
ALN	Alexandroupoli	1.13	357	*e*Pn	Pg	03 06 59.6	0.0
KESN	Edirne-Kesan	1.14	22	*i* P	Pn	03 07 00.1	+0.1
KESN				*i* S	Sn	03 07 15.9	+0.2
KESN	Edirne-Kesan	1.14	22	P	Pn	03 07 00.1	+0.1
KESN				S	Sn	03 07 15.9	+0.2
BALY	Balya	1.15	91	*i* P	Pb	03 06 54.7	-5.0
BALB	Balikesir	1.36	95	PN	Pn	03 07 02.7	+0.1
BALB	Balikesir	1.36	95	*e*Pn	Pn	03 07 02.7	+0.1
CHOS	Chios island	1.38	182	PN	Pn	03 07 03.1	+0.2
CHOS	Chios island	1.38	182	*e*Pn	Pn	03 07 03.1	+0.2

ISCJB ***17*** *03:12:05.1±0.5, 6°.43S±0°.07×80°.81W±0°.08, h35km, mb4.3/19, MS3.5/2, Error ellipse: s-maj=13.7km s-min=6.0km az=144.5*
NEIC ***17*** *03:12:07.7±0.9, 6°.49S×80°.76W, h44km±8km, mb4.3/11, Error ellipse: s-maj=11.2km s-min=6.4km az=50.0*
IDC ***17*** *03:12:08.2±2.8, 6°.46S×80°.76W, h46km±25km, mb4.0/12, mb1 4.1/15, mb1mx3.9/41, mbtmp4.2/15, ML4.0/3, MS3.3/6, Ms1 3.3/6, ms1mx3.1/42, Error ellipse: s-maj=26.6km s-min=18.9km az=63.0*

ISC 17 03:12:07.0±0.6, 6°.44S±0°.07×80°.76W±0°.08, h35km, n50, σ1§84/43, mb4.3/19, 1D, Near coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	Atahualpa	2.45	106	P	Pn	03 12 47.0	+2.1
ATAH	45nm,0.3s,baz=336,slow=4.8,SNR=164			S	Sn	03 13 19.0	+5.2
NNA	65nm,0.3s,baz=18,slow=22,SNR=11 Nana	6.73	145	P	Pn	03 13 44.5	+1.0
NNA	1.6nm,0.3s,baz=340,slow=7.3,SNR=5.5			S	Sn	03 15 02.1	+3.1
NNA	2.5nm,0.3s,baz=185,slow=18,SNR=2.1			LR	LR	03 16 37.9	
NNA	comp=Z,126nm,19.4s,baz=294,slow=40 Nana	6.73	145	*e*Pn	Pn	03 13 42.1	-1.4
NNA				S	Sn	03 15 02.1	+3.1
NNA				*e*S		03 15 21.9	
OTAV	Otavalo	7.03	19	*e*Pn	Pn	03 13 48.7	+0.8
PAYG	Puerto Ayora	11.10	301	*e*Pn	Pn	03 14 44.9	+1.6
ROSC	El Rosal	12.92	30	LR	LR	03 20 06.7	
LPAZ	comp=Z,80nm,21.1s,baz=186,slow=37 La Paz	15.77	129	P	Pn	03 15 48.5	+1.4
LPAZ	0.3nm,0.3s,baz=320,slow=9.9,SNR=32			LR	LR	03 22 35.8	
LPAZ	comp=Z,90nm,19.5s,baz=286,slow=40 La Paz	15.77	129	*e*Pn	Pn	03 15 48.6	+1.4
MNMC	14nm,0.9s Minye Minye	16.65	140	*e*Pn	Pn	03 15 57.4	-0.7
JTS	9.3nm,1.0s JuntasAbangare	17.14	346	LR	LR	03 21 34.4	
SAML	comp=Z,89nm,18.3s,baz=176,slow=33 Samuel	17.60	99	*e*P	Pn	03 16 08.8	-0.9
SAML	8.7nm,0.9s			*e*Sn	Sn	03 19 18.9	-5.9
SIV	San Ignacio	21.50	118	P	P	03 16 52.6	-0.4
PTGA	8.6nm,0.9s,baz=303,slow=9.5,SNR=45 Pitinga	21.51	76	P	P	03 16 52.2	-0.9
PTGA	14nm,0.7s,baz=251,slow=12,SNR=29 Pitinga	21.51	76	*e*P	P	03 16 51.8	-1.3
PCRV	13nm,0.8s Puerto La Cruz	23.03	44	P	P	03 17 08.8	-0.5
SJG	13nm,0.9s,baz=221,slow=3.2,SNR=4.4 San Juan	28.34	30	P	P	03 17 58.7	+0.8
CPUP	14nm,0.8s,baz=253,slow=5.8,SNR=6.4 Villa Florida	29.84	134	LR	LR	03 31 37.8	
RPN	comp=Z,72nm,19.8s,baz=298,slow=39 Rapa Nui	34.07	230	LR	LR	03 29 28.7	
IP03	comp=Z,134nm,18.5s,baz=279,slow=31 Louisa	44.31	3	*e*P	P	03 20 14.4	+0.8
S39A	17nm,1.1s Bolivar	45.44	346	*e*P	P	03 20 23.2	+0.6
N39A	3.3nm,0.7s Derby Farms, D	48.31	348	*e*P	P	03 20 44.9	0.0
PDAR	9.9nm,0.8s Pinedale Array	55.53	335	P	P	03 21 38.9	-0.2
AGMN	0.3nm,0.4s,baz=137,slow=5.5,SNR=5.7 Agassiz Nation	56.10	348	*e*P	P	03 21 41.9	-0.9
NVAR	7.5nm,0.8s Mina Array Bea	56.64	325	P	P	03 21 47.5	+0.4
ULM	0.2nm,0.5s,baz=131,slow=6.1,SNR=3.7 Lac du Bonnet	57.96	349	P	P	03 21 55.2	-0.7
HLID	2.4nm,0.5s,baz=158,slow=9.1,SNR=6.0 Hailey	58.35	332	*e*P	P	03 22 00.1	+1.2
FFC	1.6nm,0.8s Flin Flon	63.47	346	*e*P	P	03 22 31.2	-2.1
FCC	1.0nm,0.6s Fort Churchill	65.87	352	*e*P	P	03 22 48.3	-0.5
DBIC	2.2nm,0.7s Dimbokro	76.85	82	P	P	03 23 56.5	+0.4
VNA3	6.4nm,0.9s,baz=243,slow=9.0,SNR=4.1 Neumayer Olymp	77.90	162	P	P	03 24 00.3	-0.6
KOWA	Kowa	78.88	74	P	P	03 24 07.0	-0.3
SNAA	3.1nm,0.9s,baz=284,slow=9.7,SNR=4.8 Sanae	80.12	162	P	P	03 24 09.4	-3.7
SNAA	Sanae	80.12	162	P	P	03 24 12.4	-0.8
ESDC	1.3nm,0.8s,baz=291,slow=6.9,SNR=4.3 Sonseca Array	84.02	49	P	P	03 24 35.2	+1.1
ES19	1.2nm,0.8s,baz=271,slow=4.8,SNR=14 SONSECA Array	84.07	49	*e*P	P	03 24 35.1	+0.7
TORD	Torodi Ar. Bea	84.15	76	P	P	03 24 35.2	0.0
SYO	0.9nm,0.9s,baz=256,slow=3.7,SNR=6.2 Syowa Base	94.42	162	*e*pP	pP	03 25 37.1	+3.0
H11N3	WAKE ISLAND Hy	13.14	289	T	T	05 33 26.8	
H11N2	baz=90,slow=75,SNR=29 WAKE ISLAND Hy	13.16	289	T	T	05 33 27.7	
H11N1	baz=90,slow=75,SNR=19 WAKE ISLAND Hy	13.16	289	T	T	05 33 28.2	
H11S2	baz=90,slow=75,SNR=24 WAKE ISLAND Hy	13.36	287	T	T	05 33 43.0	
H11S1	baz=90,slow=75,SNR=97 WAKE ISLAND Hy	13.37	287	T	T	05 33 46.1	
H11S3	baz=90,slow=75,SNR=38 WAKE ISLAND Hy	13.38	287	T	T	05 33 44.3	
BVAR	baz=90,slow=75,SNR=59 Borovoye Array	127.92	22	PKP	PKPdf	03 31 09.5	+0.4
ZALV	0.4nm,0.5s,baz=38,slow=2.6,SNR=3.1 Zalesovo Beam	131.21	11	PKP	PKPdf	03 31 14.9	-0.4
KURK	0.4nm,0.4s,baz=278,slow=4.2,SNR=2.7 Kurchatov	132.64	18	PKP	PKPdf	03 31 18.1	0.0
KURBB	Kurchatov Arra	132.69	18	PKP	PKPdf	03 31 18.1	-0.1
ASAR	0.3nm,0.5s,baz=318,slow=2.6,SNR=3.7 Alice Springs	134.82	227	PKP	PKPdf	03 31 22.2	-1.0
WRA	0.4nm,0.8s,baz=101,slow=3.4,SNR=4.1 Warramunga Arr	136.64	232	PKP	PKPdf	03 31 25.6	-1.0
CD2	0.7nm,0.8s,baz=135,slow=1.2,SNR=3.6 Chengdu	155.29	351	PKP	PKPdf	03 31 54.8	-2.6

IDC 17 03:36:34.1±4.0, 4°.77S×151°.01E, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.3/46, mbtmp3.5/2, Error ellipse: s-maj=169.3km s-min=48.4km az=116.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.16	226	P	P	03 41 31.2	-0.6
ASAR	0.7nm,0.5s,baz=52,slow=10,SNR=7.2 Alice Springs	25.00	220	P	P	03 42 00.3	+0.4
TORD	0.8nm,0.5s,baz=55,slow=8.5,SNR=2.3 Torodi Ar. Bea	148.60	287	PKPbc	PKPbc	03 56 23.6	-0.7
	0.3nm,0.8s,baz=86,slow=3.1,SNR=2.6						

IDC 17 03:39:01.8±3.5, 27°.58S×135°.80E, h0km, mb1 3.2/3, mb1mx3.1/48, mbtmp3.0/3, ML3.0/3, Error ellipse: s-maj=86.5km s-min=27.1km az=55.0, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	4.26	336	Pn	Pn	03 40 08.0	0.0
ASAR	0.6nm,0.3s,baz=160,slow=11,SNR=28			Pg	Pb	03 40 19.6	+2.1
ASAR	0.5nm,0.3s,baz=157,slow=16,SNR=11			Sn	Sn	03 40 54.9	-3.4
ASAR	1.1nm,0.3s,baz=159,slow=22,SNR=11			Lg	Lg	03 41 14.6	
STKA	0.6nm,0.3s,baz=161,slow=26,SNR=4.7 Stephens Creek	6.61	132	Pn	Pn	03 40 40.3	+0.1
STKA	0.2nm,0.3s,baz=316,slow=10,SNR=5.6			Sn	Sn	03 41 52.3	-4.0
STKA	0.8nm,0.3s,baz=0.0,slow=18,SNR=6.6			Lg	Lg	03 42 31.8	
WRA	0.5nm,0.3s,baz=25,slow=8.3,SNR=3.1 Warramunga Arr	7.72	350	Pn	Pn	03 40 55.2	-0.3
WRA	0.2nm,0.3s,baz=167,slow=12,SNR=18			Sn	Sn	03 42 18.5	-5.2
WRA	0.2nm,0.3s,baz=168,slow=24,SNR=4.2			Lg	Lg	03 43 05.0	
	0.1nm,0.3s,baz=178,slow=28,SNR=2.0						

ISCJB ***17*** *03:43:06.4±0.9, 8°.49S±0°.02×160°.33E±0°.02, h31km±6km, mb6.0/403, MS5.2/258, Error ellipse: s-maj=3.4km s-min=2.7km az=4.4*
IDC ***17*** *03:43:09.4±0.6, 8°.50S×160°.47E, h45km±5km, mb5.5/42, mb1 5.6/43, mb1mx5.5/49, mbtmp5.8/43, MS5.0/49, Ms1 5.0/49, ms1mx5.0/51, Error ellipse: s-maj=10.4km s-min=9.0km az=67.0*
GCMT ***17*** *03:43:10.1±0.1, 8°.46S×160°.46E, h36km, MW5.6/124, Moment Tensor Solution. s121,c224; s124,c313; Duration: 1§6 Moment tensor: Scale 10^{17}Nm; M_{rr}-2.97±.04; $M_{\theta\theta}$2.93±.03; $M_{\phi\phi}$0.03±.03; $M_{r\theta}$-1.83±.04; $M_{\theta\phi}$-0.30±.03; $M_{\phi r}$-0.18±.04; Best double couple: $M_0$3.48900×10^{17} NP1:ϕ_s90.00000°, δ61.00000°, λ-96.00000°. NP2:ϕ_s282.00000°, δ30.00000°, λ-80.00000°. Principal axes: T 3.4680, Plg16.0000°, Azm184.0000°; N 0.0400, Plg5.0000°, Azm93.0000°; P -3.5100, Plg73.0000°, Azm345.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
NEIC ***17*** *03:43:10.1±0.5, 8°.51S×160°.36E, h51km±4km, mb6.0/263, MS5.2/173, MW5.6, MW5.7 Error ellipse: s-maj=2.8km s-min=2.5km az=161.0, Moment Tensor Solution. s35 Moment tensor: Scale 10^{17}Nm; M_{rr}-3.74; $M_{\theta\theta}$2.45; $M_{\phi\phi}$1.29; $M_{r\theta}$-1.16; $M_{\theta\phi}$-1.00; $M_{\phi r}$0.04; Best double couple: $M_0$3.60000×10^{17} NP1:ϕ_s305.00000°, δ37.00000°, λ-80.00000°. NP2:ϕ_s113.00000°, δ54.00000°, λ-98.00000°. Principal axes: T 3.1800, Plg9.0000°, Azm208.0000°; N 0.7800, Plg6.0000°, Azm117.0000°; P -3.9500, Plg79.0000°, Azm352.0000°;*
NEIC Felt [III] at Honiara.
MOS ***17*** *03:43:10.1±0.9, 8°.39S×160°.36E, h62km, mb6.2/73, MS5.4/40 Error ellipse: s-maj=6.6km s-min=5.2km az=89.4*
NEIC ***17*** *03:43:11.0±0.0, 8°.24S×160°.35E, h40km, Moment Tensor Solution. s19 Moment tensor: Scale 10^{17}Nm; M_{rr}-2.79; $M_{\theta\theta}$2.84; $M_{\phi\phi}$-0.05; $M_{r\theta}$-2.30; $M_{\theta\phi}$-0.10; $M_{\phi r}$-0.96; Best double couple: $M_0$3.80000×10^{17} NP1:ϕ_s76.00000°, δ66.00000°, λ-103.00000°. NP2:ϕ_s286.00000°, δ27.00000°, λ-63.00000°. Principal axes: T 3.6700, Plg20.0000°, Azm176.0000°; N 0.1700, Plg11.0000°, Azm81.0000°; P -3.8400, Plg66.0000°, Azm322.0000°;*
BJI ***17*** *03:43:11.9, 7°.80S×160°.39E, h56km, mb6.0/83, mB5.8/58, Ms5.2/82, Ms7 5.1/78*

ISC 17 03:43:09.7±0.3, 8°.42S±0°.03×160°.50E±0°.03, h50km±2km, h50km:pP-P, n1762, σ1§28/1820, mb6.0/403, MS5.2/262, 38C-105D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	1.15	208	*i* P	Pn	03 43 30.5	+1.1
HNR				*i* S	Sn	03 43 51.0	+6.9
HNR	Honiara	1.15	208	P	Pn	03 43 31.1	+1.7
HNR	31μm,0.3s,baz=28,slow=18,SNR=5167			S	Sn	03 43 47.6	+3.5
PMG	19μm,0.3s,baz=108,slow=20,SNR=22 Port Moresby	13.22	265	P	Pn	03 46 18.6	+3.8
PMG	1.1nm,0.3s,baz=88,slow=7.3,SNR=15			LR	LR	03 51 08.2	
PMG	comp=Z,12μm,21.3s,baz=86,slow=36 Port Moresby	13.22	265	*e*Pn	Pn	03 46 10.6	-4.2
DZM	Mont Dzumac	14.73	158	*e*Pn	Pn	03 46 34.9	-0.4
DZM	26nm,0.2s			*e*Sn	Sn	03 49 11.2	-6.2
DZM	4.9nm,0.3s			*e*LR	LR	03 49 58.8	
DZM	34μm,24.6s Mont Dzumac	14.73	158	P	Pn	03 46 35.6	+0.3
DZM	6.4nm,0.3s,baz=18,slow=9.5,SNR=257			S	Sn	03 49 13.7	-3.7
DZM	0.8nm,0.3s,baz=270,slow=19,SNR=2.4			LR	LR	03 51 48.8	
PATS	comp=Z,19μm,20.4s,baz=327,slow=35 Pohnpei	15.31	352	*e*Pn	Pn	03 46 38.1	-4.5
TARA	4μm,0.7s Tarawa	15.74	52	*e*Pn	Pn	03 46 46.1	-2.1
TARA	644nm,0.6s			*e*Sn	Sn	03 49 28.6	-13
COEN	Coen	17.86	250	P	P	03 47 17.9	+2.9
CTA	baz=18 Charters Tower	18.02	228	P	Pn	03 47 18.7	+2.0
CTA	21nm,0.3s,baz=52,slow=12,SNR=147			LR	LR	03 53 32.1	
CTA	comp=Z,6μm,21.3s,baz=53,slow=35 Charters Tower	18.02	228	P	Pn	03 47 19.4	+2.7
CTAO	baz=18 Charters Tower	18.02	228	*e*Pn	Pn	03 47 19.2	+2.5
CTAO	400nm,1.1s			*e*ScP	ScP	03 55 22.7	+1.6
CTAO	Charters Tower	18.02	228	*e*P	Pn	03 47 19.2	+2.5
CTAO				pmax	pmax		
	comp=Z,400nm,1.1s						
FUNA	Funafuti	18.50	92	*e*P	P	03 47 19.7	-2.2
EIDS	comp=Z,348nm,1.1s Eidsvold	19.10	207	P	Pn	03 47 30.4	+0.7
JAY	baz=19 Jayapura	20.55	285	P	P	03 47 43.3	-1.1
JAY	comp=Z,679nm,1.0s,baz=116,slow=2.1,SNR=104			S	S	03 51 30.0	-1.7
JAY	comp=Z,16nm,0.9s,baz=75,slow=22,SNR=8.2 Jayapura	20.55	285	P	P	03 47 43.1	-1.3
GENI	comp=Z,5μm,1.1s,comp=Z,59μm Genyem	21.04	285	P	P	03 47 48.2	-1.4
RMQ	comp=Z,658nm,1.2s,comp=Z,9μm Roma	21.15	210	P	P	03 47 52.3	+1.6
NFK	baz=21 Norfolk Island	21.68	162	P	P	03 47 56.6	+0.2
LHI	baz=22 Lord Howe Isla	23.03	183	P	P	03 48 11.7	+1.1
ARMA	baz=23,SNR=8.5 Armidale	23.41	200	P	P	03 48 14.6	+0.1
QIS	baz=23 Mount Isa	23.52	237	P	P	03 48 15.5	-0.1
QLP	baz=24 Quilpie	23.76	218	P	P	03 48 18.0	+0.3
BAKI	baz=24 Biak	25.33	285	P	P	03 48 32.3	+0.2
RIV	Riverview	26.72	197	P	P	03 48 46.0	+1.6
GUMO	baz=27 Guam	26.81	324	P	P	03 48 45.5	+0.1
GUMO	comp=Z,969nm,1.0s,baz=180,slow=9.5,SNR=23			LR	LR	03 58 04.7	
GUMO	comp=Z,5μm,22.0s,baz=140,slow=33 Guam	26.81	324	*e*P	P	03 48 45.5	+0.1
GUMO	comp=Z,2μm,1.3s Guam	26.81	324	*e*P	P	03 48 45.5	+0.1
GUMO	comp=Z,2μm,1.3s			pmax	pmax		
CMSA	Cobar Meteorol	26.82	209	P	P	03 48 45.1	-0.3
RKPI	baz=27 Ransiki, Papua	27.09	283	P	P	03 48 47.7	-0.4
H11S2	comp=Z,112nm,1.6s WAKE ISLAND Hy	27.43	13	T	T	04 17 28.2	
H11S3	baz=194,slow=76,SNR=1671 WAKE ISLAND Hy	27.43	13	T	T	04 17 27.7	
H11S1	baz=194,slow=76,SNR=1151 WAKE ISLAND Hy	27.44	13	T	T	04 17 28.9	
WR7	baz=194,slow=76 Warramunga Arr	27.67	243	PFAKE		03 49 00.0	+6.8
WR7				LR	LR		
WR6	comp=Z,4μm,20.0s Warramunga Arr	27.68	243	PFAKE		03 49 00.0	+6.6
WR6				LR	LR		
WB9	comp=Z,4μm,19.0s Warramunga Arr	27.69	243	PFAKE		03 49 00.0	+6.6
WB9				LR	LR		
WB8	comp=Z,7μm,21.0s Warramunga Arr	27.70	243	PFAKE		03 49 00.0	+6.5
WB8				LR	LR		
WR5	comp=Z,3μm,21.0s Warramunga Arr	27.70	243	PFAKE		03 49 00.0	+6.5
WR5				LR	LR		
WR4	comp=Z,4μm,19.0s Warramunga Arr	27.73	243	PFAKE		03 49 00.0	+6.3
WR4				LR	LR		
WB6	comp=Z,4μm,21.0s Warramunga Arr	27.73	243	PFAKE		03 49 00.0	+6.2
WB6				LR	LR		
AFI	comp=Z,4μm,21.0s Afiamalu	27.73	104	P	P	03 48 53.2	-0.6
AFI	comp=Z,140nm,1.0s,baz=282,slow=2.6,SNR=8.9			LR	LR	03 57 52.9	
AFI	comp=Z,2μm,19.3s,baz=272,slow=32 Afiamalu	27.73	104	*e*P	P	03 48 53.3	-0.6
AFI	comp=Z,182nm,1.0s Afiamalu	27.73	104	*e*P	P	03 48 53.3	-0.6
AFI				pmax	pmax		
WB5	comp=Z,181nm,1.0s Warramunga Arr	27.74	243	PFAKE		03 49 00.0	+6.2
WB5				LR	LR		
WR3	comp=Z,3μm,20.0s Warramunga Arr	27.74	243	PFAKE		03 49 00.0	+6.1
WR3				LR	LR		
WB4	comp=Z,4μm,21.0s Warramunga Arr	27.75	243	PFAKE		03 49 00.0	+6.0
WB4				LR	LR		
WB3	comp=Z,3μm,21.0s Warramunga Arr	27.76	243	PFAKE		03 49 00.0	+5.9
WB3				LR	LR		
WR2	comp=Z,3μm,20.0s Warramunga Arr	27.76	243	PFAKE		03 49 00.0	+5.9
WR2				LR	LR		
WRAB	comp=Z,3μm,20.0s Tennant Creek	27.77	243	*e*P	P	03 48 53.6	-0.5
WRAB	comp=Z,528nm,1.4s			*e*PcP	PcP	03 52 10.0	+0.1
WRAB				*e*S	S	03 53 27.9	-5.7
WRAB				LR	LR		
WRAB	comp=Z,4μm,20.0s Tennant Creek	27.77	243	*d i*P	P	03 48 53.3	-0.8
WRAB				pmax	pmax		
WB2	comp=Z,221nm,1.7s Warramunga Arr	27.77	243	*e*P	P	03 48 53.6	-0.5
WB2	comp=Z,499nm,1.4s			*e*pP	pP	03 48 59.3	-7.6
WB2				*e*PcP	PcP	03 52 10.5	+0.7
WB2				*e*S	S	03 53 29.8	-3.9
WB2				LR	LR		
WC1	comp=Z,4μm,22.0s Warramunga Arr	27.78	243	PFAKE		03 49 00.0	+5.8
WC1				LR	LR		
WR1	comp=Z,3μm,20.0s Warramunga Arr	27.78	243	PFAKE		03 49 00.0	+5.8
WR1				LR	LR		
WRA	comp=Z,4μm,21.0s Warramunga Arr	27.78	243	P	P	03 48 53.6	-0.6
WRA	comp=Z,48nm,0.5s,baz=68,slow=8.7,SNR=80			pP	pP	03 49 05.8	-1.2
WRA	comp=Z,99nm,0.6s,baz=67,slow=9.3,SNR=12			PcP	PcP	03 52 10.5	+0.6
WRA	comp=Z,31nm,0.9s,baz=61,slow=2.5,SNR=5.6			S	S	03 53 30.1	-3.7
WRA	comp=Z,57nm,1.0s,baz=74,slow=15,SNR=14			ScP	ScP	03 55 48.5	+1.8
WRA	comp=Z,4.1nm,0.9s,baz=68,slow=3.4,SNR=5.2			LR	LR	03 59 36.1	
WRA	comp=Z,4μm,21.3s,baz=65,slow=36			ScS	ScS	03 59 39.8	+0.6
WRA	comp=Z,5.1nm,1.1s,baz=72,slow=5.1,SNR=8.0			P3KPbc		04 21 19.7	
WC4	comp=Z,2.4nm,1.0s,baz=243,slow=2.1,SNR=9.2 Warramunga Arr	27.79	243	PFAKE		03 49 10.0	+16
WC4				LR	LR		
KDU	comp=Z,4μm,21.0s Kakadu	27.87	259	P	P	03 48 54.2	-0.8
WAKE	baz=28 Wake Island	28.18	12	*e*P	P	03 48 56.8	-0.9
WAKE	comp=Z,142nm,1.0s			LR	LR		
KNTN	comp=Z,3μm,20.0s Kanton	28.20	80	*e*P	P	03 48 57.3	-0.7
H11N1	comp=Z,776nm,1.8s WAKE ISLAND Hy	28.65	13	T	T	04 18 55.2	
H11N3	baz=193,slow=76,SNR=5841 WAKE ISLAND Hy	28.66	13	T	T	04 19 00.4	
H11N2	baz=193,slow=76 WAKE ISLAND Hy	28.67	13	T	T	04 19 01.1	
CAN	baz=193,slow=76 Canberra	28.78	200	*e*P	P	03 49 03.7	+0.8
CAN	comp=Z,200nm,1.1s			LR	LR		
CAN	comp=Z,5μm,20.0s Canberra	28.78	200	*e*P	P	03 49 03.7	+0.8
CAN				pmax	pmax		
CAN	comp=Z,201nm,1.1s			MLR	MLR		
RAO	comp=Z,5μm,20.0s Raoul Island	29.00	138	LR	LR	03 58 59.5	
MTN	comp=Z,6μm,21.2s,baz=324,slow=33 Manton Dam	29.18	259	P	P	03 49 05.9	-0.8
STKA	baz=29 Stephens Creek	29.22	214	P	P	03 49 06.2	-0.7
STKA	comp=Z,26nm,0.4s,baz=11,slow=9.0,SNR=47			ScP	ScP	03 55 51.8	+0.8
STKA	comp=Z,19nm,1.0s,baz=37,slow=4.5,SNR=6.5			LR	LR	04 00 52.7	
STKA	comp=Z,7μm,19.6s,baz=35

STKA	Stephens Creek	29.22 214	P	P	03 49 06.6	-0.3	
	baz=29						
STKA	Stephens Creek	29.22 214	eP	P	03 49 06.4	-0.5	
	comp=Z,18nm,1.0s						
STKA			ScP	ScP	03 55 51.8	+0.8	
STKA			e		04 21 14.6		
STKA	Stephens Creek	29.22 214	eP	P	03 49 06.4	-0.5	
STKA					03 55 51.8		
STKA			pmax	pmax			
	comp=Z,18nm,1.0s						
OUZ	Omahuta	29.25 158	eP	P	03 49 07.2	+0.1	
	comp=Z,117nm,1.4s						
OUZ			LR	LR			
	comp=Z,12µm,20.0s						
AS01	Alice Springs	29.59 236	eP	P	03 49 08.8	-1.5	
AS31	Alice Springs	29.63 236	eP	P	03 49 09.3	-1.4	
	comp=Z,17nm,0.7s						
AS31			LR	LR			
	comp=Z,100nm,19.0s						
ASAR	Alice Springs	29.64 236	P	P	03 49 09.5	-1.2	
	comp=Z,20nm,0.3s,baz=66,slow=10,SNR=380						
ASAR			PcP	PcP	03 52 14.6	+0.1	
	comp=Z,8.8nm,0.7s,baz=58,slow=4.7,SNR=4.7						
ASAR			ScP	ScP	03 55 54.1	+1.6	
	comp=Z,18nm,1.0s,baz=72,slow=2.8,SNR=14						
ASAR			LR	LR	04 01 03.2		
	comp=Z,4µm,18.8s,baz=64,slow=36						
ASAR			P3KPbc		04 21 12.1		
	comp=Z,4.1nm,0.9s,baz=238,slow=3.9,SNR=20						
KUZ	Kuaotunu	31.42 156	P	P	03 49 25.0	-1.2	
HTT	Hallett	31.89 216	P	P	03 49 30.0	-0.4	
	baz=32						
TOO	Toolangi	32.05 203	P	P	03 49 32.5	+0.7	
	baz=32						
TOO	Toolangi	32.05 203	P	P	03 49 33.0	+1.2	
TOO			pmax	pmax			
	comp=Z,112nm,0.9s						
HIZ	Hauiti	32.64 159	eP	P	03 49 37.9	+1.0	
	comp=Z,298nm,1.1s						
HIZ			LR	LR			
	comp=Z,7µm,20.0s						
HIZ	Hauiti	32.64 159	P	P	03 49 37.6	+0.7	
OMRZ	Omania	32.85 157	P	P	03 49 41.1	+2.3	
ARPS	Mount Arapiles	32.93 208	P	P	03 49 39.9	+0.4	
	baz=33						
HRRZ	Handcock Road	33.06 157	P	P	03 49 36.7	-4.0	
HAZ	Te Kaha	33.13 154	P	P	03 49 42.6	+1.4	
BBOO	Buckleboo	33.18 220	P	P	03 49 41.2	-0.6	
	baz=33						
MXZ	Matakaoa Point	33.20 154	P	P	03 49 42.3	+0.5	
RUGZ	Raukumara Rang	33.26 155	P	P	03 49 42.2	-0.3	
URZ	Urewera	33.28 156	P	P	03 49 41.7	-0.8	
	comp=Z,21nm,0.6s,baz=307,slow=3.6,SNR=13						
URZ			LR	LR	04 02 07.6		
	comp=Z,5µm,19.3s,baz=326,slow=34						
URZ	Urewera	33.28 156	eP	P	03 49 42.2	-0.3	
	comp=Z,58nm,1.1s						
URZ	Urewera	33.28 156	P	P	03 49 36.5	-6.0	
TWVZ	Taurewa	33.34 159	P	P	03 49 44.4	+1.2	
KATZ	Kakaramea	33.35 158	P	P	03 49 44.0	+0.7	
KRVZ	Karewarewa	33.44 158	P	P	03 49 44.7	+0.7	
WTVZ	West Tongariro	33.44 158	P	P	03 49 44.9	+0.8	
WMGZ	Waiomatatini S	33.46 154	P	P	03 49 43.3	-0.8	
COVZ	Chateau Observ	33.50 159	P	P	03 49 45.0	+0.5	
NGZ	Ngauruhoe	33.50 158	P	P	03 49 45.5	+0.9	
MWZ	Matawai	33.51 155	P	P	03 49 44.7	+0.1	
RTZ	Ruatahuna	33.53 156	P	P	03 49 44.3	-0.6	
RTZ			S	S	03 55 01.7	-1.8	
FWVZ	Far West T-bar	33.55 159	P	P	03 49 45.5	+0.4	
TWGZ	Tauwhareparae	33.57 155	P	P	03 49 44.8	-0.3	
WHVZ	Whangaehu Hut	33.59 159	P	P	03 49 45.9	+0.4	
PUZ	Puketiti	33.60 154	P	P	03 49 44.9	-0.4	
PUZ			S	S	03 55 04.2	-0.3	
RAGZ	Rawiri	33.60 156	P	P	03 49 45.6	+0.1	
LBMI	Labuha	33.76 282	P	P	03 49 47.2	+0.1	
	comp=Z,354nm,1.1s,comp=Z,4µm						
BKZ	Black Stump Fm	33.82 157	eP	P	03 49 46.4	-0.9	
	comp=Z,92nm,0.6s						
BKZ			LR	LR			
	comp=Z,12µm,22.0s						
BKZ	Black Stump Fm	33.82 157	P	P	03 49 46.3	-0.9	
TNTI	Ternate	34.26 284	eP	P	03 49 51.6	+0.3	
	comp=Z,140nm,1.4s						
TNTI			LR	LR			
	comp=Z,1µm,21.0s						
WRKA	Warakurna	34.85 238	P	P	03 49 55.3	-1.1	
	baz=35						
SANI	Sanana	34.92 278	P	P	03 49 56.5	-0.6	
	comp=Z,68nm,1.6s,comp=Z,1µm						
THZ	Tophouse	34.98 164	eP	P	03 49 56.7	-0.6	
	comp=Z,287nm,0.8s						
THZ			LR	LR			
	comp=Z,5µm,22.0s						
BFZ	Birch Farm	35.06 159	eP	P	03 49 56.5	-1.4	
	comp=Z,218nm,1.3s						
BFZ			LR	LR			
	comp=Z,8µm,22.0s						
SNZO	South Karori	35.10 161	eP	P	03 49 56.6	-1.6	
	comp=Z,182nm,1.1s						
SNZO			LR	LR			
	comp=Z,6µm,22.0s						
KHZ	Kahutara	35.76 163	eP	P	03 50 02.6	-1.3	
	comp=Z,200nm,0.9s						
KHZ			LR	LR			
	comp=Z,6µm,21.0s						
LTZ	Lake Taylor	35.76 165	eP	P	03 50 03.3	-0.7	
	comp=Z,190nm,0.9s						
LTZ			LR	LR			
	comp=Z,4µm,21.0s						
SOEI	Soe	35.79 265	P	P	03 50 03.0	-1.7	
	comp=Z,137nm,0.9s,comp=Z,2µm						
SOEI	Soe	35.79 265	eP	P	03 50 04.0	-0.7	
	comp=Z,140nm,0.9s						
SOEI			LR	LR			
	comp=Z,2µm,21.0s						
FOZ	Fox Glacier	35.92 168	eP	P	03 50 04.9	-0.3	
	comp=Z,200nm,0.9s						
FOZ			LR	LR			
	comp=Z,2µm,20.0s						
OXZ	Oxford	36.22 166	eP	P	03 50 06.6	-1.2	
	comp=Z,384nm,1.0s						
OXZ			LR	LR			
	comp=Z,3µm,21.0s						
TAU	Tasmania Unive	36.26 196	eP	P	03 50 08.3	+0.3	
	comp=Z,139nm,1.1s						
TAU	Tasmania Unive	36.26 196	eP	P	03 50 08.4	+0.3	
TAU			pmax	pmax			
	comp=Z,139nm,1.1s						
RPZ	Rata Peaks	36.35 167	P	P	03 50 08.0	-1.0	
	comp=Z,154nm,0.8s,baz=24,slow=1.6,SNR=40						
RPZ	Rata Peaks	36.35 167	eP	P	03 50 08.3	-0.7	
	comp=Z,198nm,0.9s						
RPZ			LR	LR			
	comp=Z,3µm,21.0s						
BATI	Baumata	36.38 264	P	P	03 50 10.1	+0.5	
	comp=Z,81nm,0.9s,baz=121,slow=12,SNR=5.2						
BATI			LR	LR	04 06 13.6		
	comp=Z,4µm,21.9s,baz=112,slow=38						
BATI	Baumata	36.38 264	P	P	03 50 09.0	-0.6	
	comp=Z,84nm,1.4s,comp=Z,1µm						
MQZ	McQueen's Vall	36.73 165	eP	P	03 50 11.1	-1.0	
	comp=Z,245nm,0.9s						
LBZ	Lake Benmore	36.81 168	eP	P	03 50 11.7	-1.2	
	comp=Z,79nm,1.1s						
LBZ			LR	LR			
	comp=Z,3µm,22.0s						
SGSI	Sangihe	36.89 288	P	P	03 50 13.9	0.0	
	comp=Z,1µm,1.1s,comp=Z,14µm						
WKZ	Wanaka	37.02 170	eP	P	03 50 12.9	-1.8	
	comp=Z,90nm,1.1s						
WKZ			LR	LR			
	comp=Z,5µm,22.0s						
DCZ	Deep Cove	37.36 172	eP	P	03 50 16.8	-0.6	
	comp=Z,101nm,1.0s						
DCZ			LR	LR			
	comp=Z,4µm,18.0s						
MLZ	Mavora Lakes	37.40 171	eP	P	03 50 17.1	-0.8	
	comp=Z,83nm,1.2s						
MLZ			LR	LR			
	comp=Z,5µm,21.0s						
KMSI	Cibinong	37.47 282	P	P	03 50 18.9	0.0	
	comp=Z,361nm,0.9s,comp=Z,6µm						
ODZ	Otahua Downs	37.54 168	PFAKE		03 50 30.0	+11	
ODZ			LR	LR			
	comp=Z,3µm,18.0s						
FORT	Forrest	37.56 229	P	P	03 50 18.8	-0.6	
	baz=38						
MMRI	Maumere	37.83 267	P	P	03 50 20.0	-1.9	
	comp=Z,314nm,0.9s,comp=Z,4µm						
MMRI	Maumere	37.83 267	eP	P	03 50 20.5	-1.4	
	comp=Z,301nm,1.0s						
MMRI			LR	LR			
	comp=Z,800nm,22.0s						
WHZ	Wether Hill Ro	37.89 172	eP	P	03 50 21.1	-0.9	
	comp=Z,62nm,1.1s						
WHZ			LR	LR			
	comp=Z,4µm,22.0s						
PYZ	Puysegur Point	37.99 173	PFAKE		03 50 30.0	+7.2	
PYZ			LR	LR			
	comp=Z,5µm,19.0s						
DAV	Davao City (W)	38.06 293	P	P	03 50 23.6	-0.2	
	comp=Z,119nm,0.5s,baz=74,slow=5.8,SNR=5.1						
DAV			LR	LR	04 04 11.3		
	comp=Z,1µm,21.8s,baz=144,slow=33						
LUWI	Luwuk	38.28 279	P	P	03 50 24.8	-0.9	
	comp=Z,195nm,0.9s,comp=Z,4µm						
LUWI	Luwuk	38.28 279	eP	P	03 50 25.6	-0.1	
	comp=Z,240nm,1.1s						
EDFI	Ende, Flores	38.36 267	P	P	03 50 23.8	-2.7	
	comp=Z,128nm,1.3s,comp=Z,2µm						
JOHN	Johnston Islan	38.77 50	eP	P	03 50 30.4	+0.7	
	comp=Z,384nm,1.0s						
BUTP	Butuan	38.80 296	eP	P	03 50 30.2	+0.2	
BUKP	Musuan	38.85 294	eP	P	03 50 30.8	+0.2	
APSI	Ampana	39.40 279	P	P	03 50 34.3	-0.8	
	comp=Z,161nm,1.1s,comp=Z,2µm						
MRSI	Marisa	39.43 281	P	P	03 50 33.0	-2.3	
	comp=Z,38nm,1.2s,comp=Z,746nm						
JCJ	Chichijima	39.51 334	P	P	03 50 33.9	-1.9	
	comp=Z,199nm,0.8s,baz=149,slow=2.0						
JCJ			LR	LR	04 05 44.8		
	comp=Z,2µm,21.6s,baz=130,slow=34						
CBIJ	Chichi jima	39.51 334	eP	P	03 50 33.5	-2.2	
	comp=Z,298nm,0.9s						
BKSI	Bulukumba	40.19 272	P	P	03 50 40.0	-1.6	
	comp=Z,36nm,0.9s,comp=Z,548nm						
RAR	Rarotonga	40.34 113	LR	LR	04 04 17.4		
	comp=Z,814nm,21.7s,baz=301,slow=31						
PAGZ	Pagadian	40.37 293	eP	P	03 50 43.4	+0.3	
WBSI	Waikabubak, Su	40.60 265	P	P	03 50 44.0	-1.1	
	comp=Z,263nm,0.8s,comp=Z,2µm						
SPSI	Sidrap Palu	40.72 274	P	P	03 50 44.9	-1.1	
	comp=Z,42nm,1.5s						
TTSI	Tana Toraja	40.80 275	P	P	03 50 46.0	-0.7	
	comp=Z,60nm,1.0s,comp=Z,1µm						
PCI	Palu	41.17 278	P	P	03 50 49.9	+0.1	
	comp=Z,248nm,1.0s,comp=Z,3µm						
PCI	Palu	41.17 278	P	P	03 50 50.9	+1.1	
PCI			pmax	pmax			
	comp=Z,248nm,1.0s						
MBWA	Marble Bar	41.27 248	eP	P	03 50 49.2	-1.3	
	comp=Z,215nm,1.1s						
MBWA			LR	LR			
	comp=Z,2µm,20.0s						
MBWA	Marble Bar	41.27 248	P	P	03 50 50.0	-0.5	
	SNR=5.4						
MPSI	Mapaga	41.38 280	P	P	03 50 49.2	-2.3	
	comp=Z,46nm,0.9s,comp=Z,645nm						
PLAI	Plampang	42.22 266	P	P	03 50 55.8	-2.6	
	comp=Z,160nm,0.9s,comp=Z,3µm						
MIDW	Midway	42.23 30	eP	P	03 50 58.9	+0.7	
	comp=Z,567nm,1.1s						
MIDW			LR	LR			
	comp=Z,3µm,22.0s						
RCP	Roxas	42.47 297‖	eP	P	03 51 00.9	+0.6	
TWSI	Taliwang, Sumb	43.11 266	P	P	03 51 03.1	-2.5	
	comp=Z,74nm,1.2s						
MEEK	Meekatharra	43.60 240	P	P	03 51 09.3	-0.2	
	baz=44						
SMKI	Samarinda	43.84 278	P	P	03 51 13.0	+1.5	
BKB	Balikpapan	43.99 277	P	P	03 51 13.7	+1.1	
	comp=Z,354nm,1.2s						
MYLDM	Labad Datu	44.01 286	eP	P	03 51 11.9	-0.8	
	comp=Z,363nm,1.4s						
SJMP	San Jose	44.29 297	eP	P	03 51 15.2	+0.2	
IGBI	Denpasar	44.82 266	P	P	03 51 17.3	-2.0	
	comp=Z,314nm,1.0s,comp=Z,7µm						
TGY	Tagaytay City	45.18 299	P	P	03 51 22.6	+0.4	
	comp=Z,143nm,0.3s,baz=127,slow=5.1,SNR=6.1						
TGY			LR	LR	04 10 11.5		
	comp=Z,652nm,20.9s,baz=105,slow=36						
PPR	Puerto Princes	45.35 293‖	eP	P	03 51 24.7	+1.3	
JHJ	Hachijo jima 2	45.77 336	LR	LR	04 10 13.6		
	comp=Z,2µm,20.1s,baz=118,slow=35						
CAUP	Cauayan	45.80 303	eP	P	03 51 27.5	+0.6	
JAGI	Jajag, Banyuwa	45.82 266	P	P	03 51 23.9	-3.3	
	comp=Z,238nm,1.1s,comp=Z,3µm						
JAGI	Jajag, Banyuwa	45.82 266	eP	P	03 51 24.4	-2.9	
	comp=Z,191nm,0.9s						
BATP	Bataraza	45.84 291	eP	P	03 51 27.5	+0.1	
KLBR	Kellerberrin	45.91 234	P	P	03 51 26.6	-1.1	
	baz=46						
MTKI	Muara Teweh, K	46.01 277	P	P	03 51 27.8	-1.0	
	comp=Z,82nm,0.4s,comp=Z,9µm						
BLDU	Ballidu	46.42 235	P	P	03 51 30.9	-0.8	
	baz=46						
KKM	Kota Kinabalu	46.43 287	eP	P	03 51 31.9	-0.3	
	comp=Z,385nm,1.0s						
MORW	Morawa	46.49 238	P	P	03 51 31.5	-0.8	
	baz=46						
GIRL	Giralia	46.56 247	P	P	03 51 32.9	0.0	
	baz=47						
APYP	Conner	46.74 304	eP	P	03 51 35.9	+1.6	
NWAO	Narrogin (SRO)	46.80 232	P	P	03 51 33.8	-0.9	
	comp=Z,102nm,0.7s,baz=90,slow=3.0,SNR=47						
NWAO			LR	LR	04 12 22.7		
	comp=Z,2µm,18.0s,baz=310,slow=38						
NWAO	Narrogin (SRO)	46.80 232	P	P	03 51 34.1	-0.5	
	baz=47						
NWAO	Narrogin (SRO)	46.80 232	eP	P	03 51 34.1	-0.5	
	comp=Z,235nm,1.1s						
NWAO	Narrogin (SRO)	46.80 232	eP	P	03 51 34.1	-0.5	
NWAO			pmax	pmax			
	comp=Z,235nm,1.1s						
JOW	Kunigami	46.95 319	P	P	03 51 36.7	+0.8	
	comp=Z,122nm,0.9s,baz=162,slow=4.2,SNR=25						
JOW			LR	LR	04 11 38.1		
	comp=Z,855nm,18.8s,baz=104,slow=36						
JOW	Kunigami	46.95 319	eP	P	03 51 37.1	+1.3	
	comp=Z,653nm,1.6s						
MUN	Mundaring	47.27 234	P	P	03 51 38.0	-0.3	
	baz=47						
RKGY	Rocky Gully	47.63 230	P	P	03 51 41.5	+0.4	
	baz=48						
PWJI	Pagerwojo	48.17 267	P	P	03 51 44.2	-1.4	
	comp=Z,94nm,1.5s						
PCJI	Pacitan	48.78 266	P	P	03 51 49.4	-0.8	
	comp=Z,360nm,1.3s						
INU	Inuyama	48.85 334	eP	P	03 51 50.9	+0.5	
	comp=Z,149nm,0.9s						
YOJ	Yonaguni jima	49.04 313	eP	P	03 51 53.2	+1.2	
	comp=Z,555nm,1.0s						
YOJ	Yonaguni jima	49.04 313	eP	P	03 51 53.2	+1.2	
YOJ			pmax	pmax			
	comp=Z,555nm,1.0s						
WOJI	Wonogiri, Jawa	49.05 267	P	P	03 51 52.2	-0.1	
	comp=Z,52nm,1.6s						
PPT	Papeete	49.37 106	P	P	03 51 55.6	+0.9	
	comp=Z,71nm,0.8s,baz=284,slow=12,SNR=4.5						
PPT			LR	LR	04 09 01.9		
	comp=Z,499nm,19.5s,baz=276,slow=31						
PPT2	Papeete2	49.37 106	eP	P	03 51 56.0	+1.2	
	comp=Z,76nm,1.0s						
PPT2			eS	S	03 58 58.8	+0.4	
	comp=Z,878nm,27.2s						
PPT2			eLQ	LQ	04 03 56.1		
	comp=Z,2µm,32.2s						
PPT2			eLR	LR	04 06 00.9		
	comp=Z,3µm,28.0s,baz=267						
PAE	Paea	49.37 106	eP	P	03 51 55.7	+1.0	
	comp=Z,17nm,1.1s						
MJAR	Matsushiro Arr	49.38 336	P	P	03 51 53.8	-0.6	
	comp=Z,58nm,0.9s,baz=174,slow=9.2,SNR=95						
MJAR			PcP	PcP	03 53 16.8	+0.4	
	comp=Z,22nm,0.8s,baz=164,slow=5.2,SNR=7.8						
MJAR			LR	LR	04 12 45.3		
	comp=Z,996nm,19.8s,baz=150,slow=36						
MAJO	Matsushiro	49.38 336	eP	P	03 51 54.2	-0.3	
	comp=Z,97nm,0.9s						
MAJO			ePcP	PcP	03 53 16.5	+0.1	
MAJO			LR	LR			
	comp=Z,2µm,20.0s						
MAJO	Matsushiro	49.38 336	d iP	P	03 51 53.7	-0.8	
MAJO			pmax	pmax			
	comp=Z,114nm,1.0s						
MAT	Matsushiro	49.38 336	P	P	03 51 53.9	-0.6	
MAT			S	S	03 58 58.0	+0.1	
MJB9	Matsu-Tunnel	49.38 336	eP	P	03 51 54.2	-0.3	
	comp=Z,99nm,0.9s						
TWG	Pinlang	49.53 310	eP	P	03 51 55.5	-0.3	
	comp=Z,213nm,0.8s						
STKI	Sintang	49.56 277	P	P	03 51 56.4	+0.2	
	comp=Z,234nm,1.1s						
TIAR	Tiarei	49.59 106	eP	P	03 51 57.7	+1.3	
	comp=Z,50nm,1.2s						
SMRI	Semarang	49.59 268	eP	P	03 51 55.1	-1.4	
	comp=Z,175nm,1.0s						
YULB	Yu-li	49.68 310	eP	P	03 51 56.0	-1.0	
	comp=Z,134nm,0.9s						
TVO	Taravao	49.69 106	eP	P	03 51 58.6	+1.4	
	comp=Z,50nm,1.1s						
NACB	Ninganchiao	49.91 311	eP	P	03 51 59.3	+0.6	
	comp=Z,384nm,1.0s						
JNU	Nakatsue	50.01 327	P	P	03 51 59.2	-0.1	
	comp=Z,75nm,0.9s,baz=121,slow=7.0,SNR=45						
JNU			LR	LR	04 13 00.4		
	comp=Z,320nm,18.9s,baz=132,slow=36						
JNU	Nakatsue	50.01 327	eP	P	03 51 59.5	+0.2	
	comp=Z,108nm,1.0s						
TBI	Tubuai	50.11 113	eP	P	03 52 01.5	+1.2	
	comp=Z,275nm,1.3s						
TBI			eS	S	03 59 08.9	+0.4	
	comp=Z,735nm,26.5s						
TBI			eLQ	LQ	04 04 16.3		
	comp=Z,2µm,31.2s						
TBI			eLR	LR	04 06 23.5		
	comp=Z,4µm,31.5s,baz=281						
TPUB	Ta-pu	50.13 310	eP	P	03 51 59.9	-0.5	
	comp=Z,359nm,1.2s						
SSLB	Suanglung	50.16 311	eP	P	03 51 59.8	-0.9	
	comp=Z,231nm,0.9s						
YHNB	Yeheng	50.36 312	eP	P	03 52 02.9	+0.7	
	comp=Z,296nm,1.0s						
KIP	Kipapa	50.38 53	eP	P	03 52 03.0	+0.8	
	comp=Z,131nm,1.0s						
KIP			LR	LR			
	comp=Z,4µm,19.0s						
KIP	Kipapa	50.38 53	eP	P	03 52 03.0	+0.8	
KIP			pmax	pmax			
	comp=Z,131nm,1.0s						
KIP			MLR	MLR			
	comp=Z,4µm,19.0s						
TATO	Taipei	50.46 312	eP	P	03 52 03.2	+0.4	
TATO			LR	LR			
	comp=Z,3µm,20.0s						
OPA	Opana	50.52 53	eP	P	03 52 04.5	+1.2	
	comp=Z,444nm,1.0s						
OPA			LR	LR			
	comp=Z,4µm,19.0s						
OPA	Opana	50.52 53	eP	P	03 52 04.5	+1.2	
OPA			pmax	pmax			
	comp=Z,444nm,1.0s						
OPA			MLR	MLR			
	comp=Z,4µm,19.0s						
PMOR	Pomariorio Ree	50.86 102	eP	P	03 52 07.3	+1.3	
	comp=Z,442nm,1.1s						
KSM	Kuching	50.98 279	eP	P	03 52 06.0	-1.0	
	comp=Z,212nm,0.9s						
KPJI	Karang Pucung	51.06 267	P	P	03 52 07.6	0.0	
	comp=Z,73nm,0.6s						
VAH	Vaihoa	51.13 103	eP	P	03 52 09.0	+1.0	
	comp=Z,225nm,1.1s						
KHLU	Kahalu'u	51.17 57	eP	P	03 52 09.2	+0.8	
	comp=Z,373nm,1.4s						
KHLU			LR	LR			
	comp=Z,3µm,20.0s						
HUH	Hualalai	51.27 57	eP	P	03 52 10.7	+1.4	
	comp=Z,301nm,1.3s						
HUH			LR	LR			
	comp=Z,4µm,21.0s						
MWH	Moku'aweowe	51.37 57	PFAKE		03 52 20.0	+10	
MWH			LR	LR			
	comp=Z,3µm,20.0s						
KHLH	Kahului Airpor	51.38 55	eP	P	03 52 10.3	+0.6	
	comp=Z,396nm,1.3s						
AIN	Ainahou	51.43 57	eP	P	03 52 11.5	+1.1	
	comp=Z,438nm,1.1s						
HLP	Hilina Pali	51.52 57	PFAKE		03 52 20.0	+9.0	
HLP			LR	LR			
	comp=Z,3µm,19.0s						
HMH	Humu'ula Sheep	51.52 57	eP	P	03 52 12.6	+1.3	
	comp=Z,474nm,1.1s						
HMH			LR	LR			
	comp=Z,4µm,19.0s						
HPAH	Hawaii Prepara	51.55 56	eP	P	03 52 12.3	+1.2	
	comp=Z,149nm,1.0s						
HPAH			LR	LR			
	comp=Z,3µm,21.0s						
MLH	Mauna Loa	51.55 57	eP	P	03 52 12.4	+1.0	
	comp=Z,377nm,1.3s						
MLH	Mauna Loa	51.55 57	eP	P	03 52 12.4	+1.0	
MLH			pmax	pmax			
	comp=Z,377nm,1.3s						
POHA	Pohakuloa	51.55 57	eP	P	03 52 11.2	-0.3	
POHA			LR	LR			
	comp=Z,3µm,20.0s						
SDHHI	Sand Hill	51.58 57	PFAKE		03 52 30.0	+19	
SDHHI			LR	LR			
	comp=Z,3µm,22.0s						
UWE	Uwekahuna	51.59 57	PFAKE		03 52 30.0	+18	
UWE			LR	LR			
	comp=Z,3µm,21.0s						
RIM	Rim	51.59 57	PFAKE		03 52 30.0	+18	
RIM			LR	LR			
	comp=Z,3µm,22.0s						
NPH	North Pit	51.60 57	PFAKE		03 52 30.0	+18	
NPH			LR	LR			
	comp=Z,3µm,20.0s						
PUH	Pauahi	51.63 57	eP	P	03 52 12.5	+0.7	
	comp=Z,165nm,1.1s						
PUH			LR	LR			
	comp=Z,2µm,19.0s						
STCH	Steam Cracks	51.71 57	PFAKE		03 52 30.0	+18	
STCH			LR	LR			
	comp=Z,3µm,20.0s						
JCJI	Jatiwangi	51.79 268	P	P	03 52 12.3	-0.8	
	comp=Z,332nm,0.6s						
HULD	Heiheiahulu Di	51.85 57	eP	P	03 52 14.4	+1.0	
	comp=Z,344nm,1.2s						
CISI	Cisompet, Garu	52.15 267	eP	P	03 52 13.8	-2.0	
	comp=Z,105nm,0.7s						
CISI			LR	LR			
	comp=Z,1µm,22.0s						
LEM	Lembang	52.41 268	P	P	03 52 16.9	-0.9	
	comp=Z,63nm,0.9s,baz=114,slow=9.1,SNR=17						
LEM			LR	LR	04 16 12.8		
	comp=Z,968nm,21.8s,baz=86,slow=38						
QZH	Quanzhou	52.59 310‖	i P	P	03 52 19.8	+1.0	
QZH			pP	sP	03 52 35.5	-2.6	
QZH			S	S	03 59 45.8	+3.2	
QZH			sS	sS	04 00 06.1	+0.7	
QZH			pmax	pmax			
	comp=Z,420nm,1.0s						
QZH			LR	LR			
	comp=Z,1µm,20.4s						
QZH			LR	LR			
	comp=Z,1µm,20.4s						
QZH			LR	LR			
	comp=Z,1µm,21.3s						
ERM	Erimo	52.64 344	eP	P	03 52 19.4	+0.6	
	comp=Z,81nm,0.9s						
ERM			LR	LR			
	comp=Z,3µm,22.0s						
ERM	Erimo	52.64 344	deP	P	03 52 20.9	+2.1	
ERM			pmax	pmax			
	comp=Z,98nm,0.9s						
DBJI	Dramaga	53.29 268	P	P	03 52 23.0	-1.2	
	comp=Z,70nm,1.1s,comp=Z,8µm						
SKJI	Sukabumi	53.44 268	P	P	03 52 25.4	+0.2	
	comp=Z,156nm,0.7s,comp=Z,3µm						
YUK	Yuzh-Kuril'sk	53.86 347	deP	P	03 52 19.2	-8.5	
YUK			pmax	pmax			
	comp=Z,313nm,1.3s						
YUK			pmax	pmax			
	comp=Z,267nm,1.3s						
YUK			pmax	pmax			
	comp=E,110nm,0.6s						
YUK			pmax	pmax		

SSE	**Sheshan**	**54.41 318**	P	**P**	**03 52 32.4 +0.4**
SSE			S	**S**	**04 00 05.8 -1.3**
SSE			pmax	pmax	
	comp=N,150nm,1.1s				
SSE			pmax	pmax	
	comp=N,1.0nm,2.8s				
SSE			LR	LR	
	comp=N,280nm,18.0s				
SSE			LR	LR	
	comp=N,360nm,22.7s				
KUR	**Kuril'sk**	**54.60 349**	*de*P	**P**	**03 52 30.8 -2.2**
KUR			*e*S	**S**	**04 00 05.7 -3.4**
KUR			pmax	pmax	
	comp=Z,638nm,4.3s				
KUR			pmax	pmax	
	comp=E,77nm,1.2s				
KUR			pmax	pmax	
	comp=Z,226nm,1.2s				
KUR			pmax	pmax	
	comp=N,195nm,1.4s				
ASAJ	**Asahikawa**	**54.74 344**	P	**P**	**03 52 35.2 +1.0**
	comp=N,197nm,0.9s,baz=198,slow=9.2,SNR=96				
ASAJ			LR	LR	04 13 41.1
	comp=N,6μm,21.7s,baz=179,slow=33				
ASAJ	**Asahikawa**	**54.74 344**	*e*P	**P**	**03 52 35.5 +1.3**
	comp=N,264nm,1.0s				
KSRS	**Korea Array**	**54.87 328**	P	**P**	**03 52 35.8 +0.6**
	comp=N,26nm,0.8s,baz=139,slow=7.5,SNR=136				
KSRS			LR	LR	04 14 37.8
	comp=N,1μm,20.2s,baz=144,slow=34				
KS15	**Wonju Array Si**	**54.88 328**	*e*P	**P**	**03 52 35.8 +0.5**
KSAR	**Wonju Array Be**	**54.88 328**	P	**P**	**03 52 35.8 +0.5**
KSAR	**Wonju Array Be**	**54.88 328**	P	**P**	**03 52 35.8 +0.5**
KS01	**Wonju Array Si**	**54.90 328**	*e*P	**P**	**03 52 34.8 -0.6**
INCN	**Inchon**	**55.57 327**	*e*P	**P**	**03 52 41.1 +0.8**
INCN	**Inchon**	**55.57 327**	P	**P**	**03 52 41.2 +0.9**
	SNR=36				
KASI	**Kota Agung**	**55.63 269**	P	**P**	**03 52 39.6 -1.5**
	comp=N,128nm,1.1s				
GZH	**Guangzhou**	**55.74 305**	P	**P**	**03 52 43.9 +2.1**
GZH			pmax	pmax	
	comp=N,780nm,4.1s				
MDSI	**Maura Dua**	**56.06 270**	P	**P**	**03 52 42.0 -2.2**
	comp=N,89nm,1.4s				
LWLI	**Liwa**	**56.12 270**	P	**P**	**03 52 45.3 +0.5**
	comp=N,74nm,0.8s,comp=N,42μm				
NJ2	**Nanjing**	**56.56 317**	*e*P	**P**	**03 52 47.4 0.0**
NJ2			pP	**pP**	**03 53 02.4 +1.3**
NJ2			sP	**sP**	**03 53 07.9 +1.1**
NJ2			PcP	**PcP**	**03 53 44.8 +1.2**
NJ2			S	**S**	**04 00 38.4 +2.6**
NJ2			sS	**sS**	**04 01 00.4 +1.7**
NJ2			pmax	pmax	
	comp=N,190nm,1.1s				
NJ2			pmax	pmax	
	comp=N,610nm,3.9s				
NJ2			LR	LR	
	comp=N,780nm,12.5s				
NJ2			LR	LR	
	comp=N,670nm,14.1s				
NJ2			LR	LR	
	comp=N,2μm,23.9s				
QIZ	**Qiongzhong**	**56.89 299**	P	**P**	**03 52 50.5 +0.5**
QIZ			sS	**sS**	**04 01 05.5 +2.0**
QIZ			pmax	pmax	
	comp=N,440nm,5.3s				
QIZ			LR	LR	
	comp=N,580nm,23.3s				
QIZ			LR	LR	
	comp=N,930nm,22.8s				
QIZ			LR	LR	
	comp=N,1μm,26.1s				
QIZ	**Qiongzhong**	**56.89 299**	*e*P	**P**	**03 52 51.2 +1.2**
QIZ			LR	LR	
	comp=Z,1μm,20.0s				
YSS	**Yuzh-Sakhalins**	**57.34 346**	*e*P	**P**	**03 52 53.5 +0.9**
	comp=Z,194nm,1.0s				
YSS			LR	LR	
	comp=Z,2μm,20.0s				
YSS	**Yuzh-Sakhalins**	**57.34 346***k*	*i*P	**P**	**03 52 53.7 +1.0**
YSS			*e*		03 53 08.0
YSS			*e*		03 55 09.0
YSS			*e*S	**S**	**04 00 43.0 -2.5**
YSS			pmax	pmax	
	comp=E,70nm,1.0s				
YSS			pmax	pmax	
	comp=Z,160nm,1.0s				
YSS			pmax	pmax	
	comp=N,60nm,0.9s				
YSS			pmax	pmax	
	comp=N,400nm,4.0s				
YSS			pmax	pmax	
	comp=Z,800nm,4.0s				
YSS			smax	smax	
	comp=N,500nm,11.0s				
MYKOM	**Kota Tinggi**	**57.37 278**	*e*P	**P**	**03 52 53.1 -0.4**
	comp=N,165nm,1.3s				
MSHR	**Mys Shultsa**	**57.38 335***d*	*i*P	**P**	**03 52 53.4 +0.4**
TEY	**Ternei**	**57.39 340**	*i*P	**P**	**03 52 53.8 +0.8**
TEY			pmax	pmax	
	comp=Z,1μm,2.0s				
TEY			pmax	pmax	
	comp=N,25nm,0.7s				
TEY			pmax	pmax	
	comp=Z,46nm,0.6s				
MASI	**Maura Aman, Be**	**58.15 272**	P	**P**	**03 52 57.9 -1.2**
	comp=Z,124nm,1.3s				
USRK	**Ussuriysk Ar.**	**58.38 336**	P	**P**	**03 53 00.9 +0.9**
	comp=Z,194nm,0.8s,baz=147,slow=6.7,SNR=353				
USRK			pP	**pP**	**03 53 13.4 -0.3**
	comp=Z,58nm,0.7s,baz=145,slow=6.6,SNR=8.1				
USRK			LR	LR	04 16 55.7
	comp=Z,806nm,20.4s,baz=140,slow=35				
USRK			PKPPKP	**P'P'df**	**04 22 42.2 +5.0**
	comp=Z,1.0nm,0.6s,baz=306,slow=4.5,SNR=4.5				
TAOE	**Nuku Hiva Isla**	**58.63 95**	*e*P	**P**	**03 53 02.9 +0.5**
	comp=Z,354nm,1.1s				
TAOE			*e*S	**S**	**04 01 03.2 -0.5**
	comp=Z,322nm,24.5s				
TAOE			*e*LQ	LQ	04 07 50.2
	comp=Z,1μm,28.1s				
TAOE			*e*LR	LR	04 10 15.2
	comp=Z,2μm,23.9s,baz=270				
TAOE	**Nuku Hiva Isla**	**58.63 95**	*e*P	**P**	**03 53 03.0 +0.5**
	comp=Z,156nm,1.0s				
WHN	**Wuhan**	**58.81 313**⇓	*i*P	**P**	**03 53 03.8 +0.5**
WHN			sP	**sP**	**03 53 22.8 +0.1**
WHN			S	**S**	**04 01 07.3 +2.0**
WHN			pmax	pmax	
	comp=Z,310nm,0.9s				
WHN			LR	LR	
	comp=Z,3μm,19.0s				
WHN			LR	LR	
	comp=Z,4μm,24.2s				
WHN			LR	LR	
	comp=Z,6μm,22.2s				
SKR	**Severo-Kuril's**	**58.98 357**	*e*P	**P**	**03 53 04.1 +0.1**
SKR			*e**PP	**pP**	**03 53 19.4 +1.6**
SKR			*e*		03 53 49.6
SKR			*e*S	**S**	**04 01 00.8 -5.9**
SKR			pmax	pmax	
	comp=Z,134nm,2.5s				
SKR			pmax	pmax	
	comp=Z,200nm,10.2s				
SKR			pmax	pmax	
	comp=Z,400nm,7.0s				
SKR			MLR	MLR	
	comp=Z,2μm,18.0s				
KRJI	**Kerinci**	**59.07 273**	P	**P**	**03 53 04.7 -0.9**
	comp=Z,260nm,1.1s,comp=Z,8μm				
DL2	**Dalian**	**59.33 325**⇓	*i*P	**P**	**03 53 07.3 +0.6**
DL2			pP	**sP**	**03 53 24.6 -1.6**
DL2			S	**S**	**04 01 11.4 -0.3**
DL2			pmax	pmax	
	comp=Z,230nm,0.9s				
DL2			pmax	pmax	
	comp=Z,370nm,3.9s				
DL2			LR	LR	
	comp=Z,440nm,20.4s				
DL2			LR	LR	
	comp=Z,560nm,23.1s				
DL2			LR	LR	
	comp=Z,1μm,30.0s				
MDJ	**Mudanjiang**	**59.70 335**	P	**P**	**03 53 07.1 -2.1**
MDJ			PcP	**PcP**	**03 53 52.0 -3.7**
MDJ			S	**S**	**04 01 16.9 +0.6**
MDJ			SS	**SS**	**04 05 07.4 -5.7**
MDJ			pmax	pmax	
	comp=Z,270nm,1.0s				
MDJ			pmax	pmax	
	comp=Z,1μm,5.9s				
MDJ			LR	LR	
	comp=Z,1μm,18.6s				
MDJ			LR	LR	
	comp=Z,620nm,15.2s				
MDJ			LR	LR	
	comp=Z,2μm,20.1s				
MDJ	**Mudanjiang**	**59.70 335**	*e*P	**P**	**03 53 09.5 +0.4**
MDJ			LR	LR	
	comp=Z,1μm,21.0s				
BKNI	**Bangkinang**	**59.87 275**	P	**P**	**03 53 10.1 -0.9**
	comp=Z,450nm,1.2s,comp=Z,5μm				
BKNI	**Bangkinang**	**59.87 275**	*e*P	**P**	**03 53 10.5 -0.5**
	comp=Z,372nm,0.9s				
PDSI	**Padang**	**60.24 274**	P	**P**	**03 53 11.1 -2.4**
	comp=Z,122nm,0.9s				
TIA	**Tai'an**	**60.26 320**	P	**P**	**03 53 10.1 -3.1**
TIA			S	**S**	**04 01 23.3 -0.5**
TIA			pmax	pmax	
	comp=Z,67nm,1.0s				
TIA			pmax	pmax	
	comp=Z,340nm,3.6s				
TIA			LR	LR	
	comp=Z,240nm,18.6s				
TIA			LR	LR	
	comp=Z,310nm,23.0s				
TIA			LR	LR	
	comp=Z,660nm,26.5s				
SNY	**Shenyang**	**60.36 329**⇓	P	**P**	**03 53 13.5 -0.2**
SNY			S	**S**	**04 01 25.6 +0.8**
SNY			pmax	pmax	
	comp=Z,52nm,1.6s				
SNY			pmax	pmax	
	comp=Z,540nm,4.3s				
SNY			LR	LR	
	comp=Z,1μm,24.2s				
SNY			LR	LR	
	comp=Z,1μm,29.2s				
SNY			LR	LR	
	comp=Z,3μm,27.8s				
CN2	**Changchun**	**60.91 332**⇓	*i*P	**P**	**03 53 17.8 +0.4**
CN2			*e*pP	pP	03 53 33.8 +2.5
CN2			*e*sP	sP	03 53 42.1 +5.2
CN2			PcP	**PcP**	**03 54 00.3 -0.3**
CN2			*e*S	**S**	**04 01 29.0 -2.8**
CN2			pmax	pmax	
	comp=Z,250nm,1.0s				
CN2			pmax	pmax	
	comp=Z,200nm,3.0s				
CN2			LR	LR	
	comp=Z,1μm,23.0s				
CN2			LR	LR	
	comp=Z,400nm,23.0s				
CN2			LR	LR	
	comp=Z,1μm,23.0s				
TYV	**Tymovskoe**	**61.03 347**	*e*P	**P**	**03 53 18.6 +0.5**
TYV			*e*S	**S**	**04 01 32.5 -0.5**
TYV			pmax	pmax	
	comp=Z,122nm,1.4s				
TYV			pmax	pmax	
	comp=Z,900nm,4.5s				
TYV			smax	smax	
	comp=N,900nm,15.8s				
KULM	**Kulim**	**61.21 281**	*e*P	**P**	**03 53 19.4 -0.7**
	comp=N,154nm,1.0s				
PET	**Petropavlovsk**	**61.22 359**	*e*P	**P**	**03 53 18.3 -1.0**
	comp=N,222nm,1.0s				
PET			LR	LR	
	comp=Z,2μm,20.0s				
PET	**Petropavlovsk**	**61.22 359**	*de*P	**P**	**03 53 19.6 +0.3**
PET			*e*		03 55 36.9
PET			*e*S	**S**	**04 01 35.1 -0.3**
PET			*e*PS	**PnS**	**04 01 51.5 -4.0**
PET			pmax	pmax	
	comp=Z,900nm,3.6s				
PET			pmax	pmax	
	comp=Z,254nm,1.0s				
PET			pmax	pmax	
	comp=Z,300nm,11.2s				
SKNT	**Sakolnakorn**	**61.30 295**	P	**P**	**03 53 20.1 -0.5**
	comp=Z,320nm,1.1s,comp=Z,3μm				
PEA0B	**Petropavlovsk-**	**61.33 358**	*e*P	**P**	**03 53 20.6 +0.5**
	comp=Z,441nm,1.1s				
PETK	**Petropavlovsk-**	**61.33 358**	P	**P**	**03 53 20.7 +0.6**
	comp=Z,162nm,0.8s,baz=139,slow=7.0,SNR=200				
PETK			LR	LR	04 15 48.2
	comp=Z,3μm,21.9s,baz=168,slow=32				
PETK			PKP2ab		04 22 49.9
	comp=Z,0.8nm,0.5s,baz=84,slow=6.1,SNR=3.6				
PETK	**Petropavlovsk-**	**61.33 358**	*e*P	**P**	**03 53 19.4 -0.7**
PETK			P'P'ab	**P'P'ab**	**04 22 49.9 -0.2**
MNSI	**Mandailing Nat**	**61.39 276**	P	**P**	**03 53 19.4 -1.9**
	comp=Z,493nm,0.9s,comp=Z,4μm				
SISI	**Saibi**	**61.53 273**	P	**P**	**03 53 21.2 -1.0**
	comp=Z,108nm,1.1s,comp=Z,2μm				
SMY	**Shemya**	**62.00 9**	*e*P	**P**	**03 53 25.2 +0.6**
	comp=Z,496nm,1.3s				
SMY	**Shemya**	**62.00 9**	*e*P	**P**	**03 53 25.2 +0.6**
SMY			pmax	pmax	
	comp=Z,496nm,1.3s				
SRAK	**Srakaew**	**62.13 291**	P	**P**	**03 53 23.1 -3.1**
	comp=Z,240nm,1.1s,comp=Z,2μm				
ENH	**Enshi**	**62.25 311**	*e*P	**P**	**03 53 26.8 0.0**
ENH			LR	LR	
	comp=Z,915nm,22.0s				
PSI	**Prapat**	**62.40 278**	P	**P**	**03 53 25.8 -2.4**
	comp=Z,44nm,0.5s,baz=180,slow=3.2,SNR=32				
PSI			LR	LR	04 23 59.2
	comp=Z,540nm,20.2s,baz=91,slow=39				
PSI	**Prapat**	**62.40 278**	*e*P	**P**	**03 53 26.2 -2.0**
	comp=Z,76nm,0.8s				
PSI	**Prapat**	**62.40 278**	*e*P	**P**	**03 53 26.2 -2.0**
PSI			pmax	pmax	
	comp=Z,76nm,0.8s				
NONG	**Nongkai**	**62.42 295**	P	**P**	**03 53 28.6 +0.5**
	comp=Z,448nm,1.0s,comp=Z,4μm				
GRNR	**Gornyy**	**62.53 343**⇓	*i*P	**P**	**03 53 30.5 +2.3**
GRNR			pmax	pmax	
	comp=N,160nm,1.0s				
GRNR			pmax	pmax	
	comp=Z,290nm,1.0s				
COCO	**West Island**	**62.63 261**	PFAKE		03 53 40.0 +10
COCO			LR	LR	
	comp=Z,2μm,19.0s				
GYA	**Guiyang**	**62.68 305**⇓	*i*P	**P**	**03 53 31.1 +1.2**
GYA			pP	sP	03 53 48.0 -1.4
GYA			sP	pP	03 53 54.3 +11
GYA			PcP	**PcP**	**03 54 10.3 +2.0**
GYA			ScP	**ScP**	**03 58 06.0 -0.5**
GYA			S	**S**	**04 01 56.0 +0.9**
GYA			sS	sS	04 02 21.4 +3.0
GYA			ScS	**SKSac**	**04 03 15.3 -3.4**
GYA			pmax	pmax	
	comp=Z,150nm,0.9s				
GYA			pmax	pmax	
	comp=Z,190nm,5.6s				
GYA			LR	LR	
	comp=Z,580nm,21.0s				
GYA			LR	LR	
	comp=Z,610nm,21.8s				
GYA			LR	LR	
	comp=Z,630nm,21.2s				
KLR	**Kul'dur**	**62.69 339**	LR	LR	04 18 02.5
	comp=Z,88nm,21.1s,baz=144,slow=33				
KLR	**Kul'dur**	**62.69 339***d*	*i*P	**P**	**03 53 29.8 +0.5**
TRTT	**Trang**	**62.71 283**	P	**P**	**03 53 28.9 -1.3**
	comp=Z,59nm,1.1s				
TSI	**Tuntungan**	**62.88 278**	P	**P**	**03 53 30.1 -1.2**
	comp=Z,400nm,1.0s				
BJT	**Baijiatuau**	**63.23 323**	*e*P	**P**	**03 53 32.4 -0.7**
BJT			LR	LR	
	comp=Z,761nm,20.0s				
BJT	**Baijiatuau**	**63.23 323**	*e*P	**P**	**03 53 32.4 -0.7**
BJT			MLR	MLR	
	comp=Z,761nm,20.0s				
BJI	**Beijing**	**63.24 323**⇓	*e*P	**P**	**03 53 33.4 +0.3**
BJI			pP	**pP**	**03 53 43.1 -3.9**
BJI			S	**S**	**04 01 59.8 -1.6**
BJI			pmax	pmax	
	comp=Z,180nm,1.4s				
BJI			pmax	pmax	
	comp=Z,1μm,3.1s				
BJI			LR	LR	
	comp=Z,1μm,21.8s				
BJI			LR	LR	
	comp=Z,1μm,23.7s				
BJI			LR	LR	
	comp=Z,2μm,24.6s				
RKT	**Rikitea**	**63.35 112**	*e*P	**P**	**03 53 34.9 +0.6**
	comp=Z,131nm,1.2s				
RKT			*e*S	**S**	**04 02 03.7 +0.2**
	comp=Z,691nm,33.2s				
RKT			*e*LQ	LQ	04 09 32.0
	comp=Z,1μm,31.0s				
RKT			*e*LR	LR	04 12 33.0
	comp=Z,3μm,26.2s				
GSI	**Gunungsitoli**	**63.45 276**	P	**P**	**03 53 33.9 -1.2**
	comp=Z,586nm,1.0s				
GSI	**Gunungsitoli**	**63.45 276**	*e*P	**P**	**03 53 33.8 -1.3**
	comp=Z,394nm,0.8s				
NKL	**Nikolayevsk**	**63.60 347**	*i*P	**P**	**03 53 36.0 +0.8**
NKL			*e*		04 02 12.0
NKL			pmax	pmax	
	comp=N,43nm,1.1s				
NKL			pmax	pmax	
	comp=Z,160nm,1.1s				
NKL			pmax	pmax	
	comp=Z,1μm,9.0s				
KCSI	**Kotacane, Aceh**	**63.66 278**	P	**P**	**03 53 34.3 -2.2**
	comp=Z,256nm,0.8s,comp=Z,2μm				
PBKT	**Sadao Pong**	**63.90 293**	P	**P**	**03 53 37.8 -0.1**
	comp=Z,317nm,1.1s				
PBKT	**Sadao Pong**	**63.90 293**	*e*P	**P**	**03 53 38.3 +0.4**
PKDT	**Phuket**	**64.03 283**	P	**P**	**03 53 38.2 -0.7**
	comp=Z,82nm,1.0s,comp=Z,6μm				
TIY	**Taiyuan**	**64.16 319**	*e*P	**P**	**03 53 40.0 +0.6**
TIY			pmax	pmax	
	comp=Z,140nm,0.9s				
TIY			LR	LR	
	comp=Z,2μm,24.1s				
TIY			LR	LR	
	comp=Z,750nm,18.9s				
TIY			LR	LR	
	comp=Z,1μm,19.3s				
TPTI		**64.19 278**	P	**P**	**03 53 37.9 -2.1**
	comp=Z,92nm,1.0s,comp=Z,824nm				
XAN	**Xi'an**	**64.56 314**	P	**P**	**03 53 42.3 +0.3**
XAN			pP	pP	03 53 55.4 -0.6
XAN			S	**S**	**04 02 16.5 -1.6**
XAN			SS	SS	04 06 18.6 -11
XAN			pmax	pmax	
	comp=Z,250nm,1.0s				
XAN			pmax	pmax	
	comp=Z,470nm,3.9s				
XAN			LR	LR	
	comp=Z,440nm,20.1s				
XAN			LR	LR	
	comp=Z,1μm,21.6s				
XAN			LR	LR	
	comp=Z,2μm,22.6s				
PHIT	**Phitsanulok**	**64.60 293**	P	**P**	**03 53 43.5 +1.0**
	comp=Z,248nm,0.9s,comp=Z,4μm				
NANT	**Nan**	**64.86 295**	P	**P**	**03 53 44.7 +0.5**
	comp=Z,198nm,0.9s,comp=Z,1μm				
MLSI	**Meulaboh, Aceh**	**65.14 279**	P	**P**	**03 53 44.1 -2.1**
	comp=Z,538nm,0.9s,comp=Z,4μm				
KMI	**Kunming**	**65.35 302**	P	**P**	**03 53 49.4 +1.8**
KMI			pP	sP	03 54 05.0 -2.2
KMI			sP	PcP	03 54 11.3 -8.1
KMI			PcP	pP	03 54 20.8 +19
KMI			S	**S**	**04 02 29.9 +1.4**
KMI			pmax	pmax	
	comp=Z,1μm,3.5s				
KMI			LR	LR	
	comp=Z,560nm,18.4s				
KMI			LR	LR	
	comp=Z,530nm,19.6s				
KMI			LR	LR	
	comp=Z,780nm,19.6s				
PAYA	**Payao**	**65.78 296**	P	**P**	**03 53 51.1 +0.9**
	comp=Z,176nm,0.9s,comp=Z,1μm				
CM01	**Chiang Mai Arr**	**66.30 294**	*e*P	**P**	**03 53 53.6 +0.1**
CM31	**Chiang Mai Arr**	**66.32 294**	*e*P	**P**	**03 53 55.2 +1.5**
CMAR	**Chiang Mai Arr**	**66.32 294**	P	**P**	**03 53 55.0 +1.3**
	comp=Z,225nm,1.0s,baz=114,slow=4.6,SNR=320				
CMAR			LR	LR	04 19 06.7
	comp=Z,226nm,21.7s,baz=108,slow=32				
CMAR			PKP2bc		04 22 26.6
	comp=Z,3.2nm,0.9s,baz=282,slow=4.8,SNR=4.8				
CHTO	**Chiang Mai**	**66.44 295**	P	**P**	**03 53 55.0 +0.6**
	comp=Z,1μm,1.4s,comp=Z,15μm				
CHTO	**Chiang Mai**	**66.44 295**	*e*P	**P**	**03 53 55.4 +1.0**
CHTO			LR	LR	
	comp=Z,681nm,21.0s				
CHTO	**Chiang Mai**	**66.44 295**	P	**P**	**03 53 55.3 +0.9**
	SNR=57				
CHTO	**Chiang Mai**	**66.44 295**	*e*P	**P**	**03 53 55.4 +1.0**
CHTO			MLR	MLR	
	comp=Z,681nm,21.0s				
NIKH	**Nikolski High**	**66.49 20**	*e*P	**P**	**03 53 54.6 +0.6**
	comp=Z,641nm,1.0s				
HHC	**Hu-ho-hao-te**	**66.53 321**	*e*P	**P**	**03 53 56.0 +1.3**
HHC			pP	sP	03 54 12.4 -1.9
HHC			sP	PcP	03 54 19.3 -4.5
HHC			S	**S**	**04 02 41.6 -0.4**
HHC			pmax	pmax	
	comp=Z,280nm,1.2s				
HHC			pmax	pmax	
	comp=Z,470nm,5.2s				
HHC			LR	LR	
	comp=Z,3μm,22.0s				
HHC			LR	LR	
	comp=Z,3μm,19.6s				
HHC			LR	LR	
	comp=Z,1μm,21.6s				
CMAI	**Chiengmai2**	**66.70 296**	P	**P**	**03 53 57.0 +0.8**
	comp=Z,2μm,1.1s,comp=Z,20μm				
CD2	**Chengdu**	**66.92 309**	P	**P**	**03 53 57.8 +0.5**
CD2			PP	**PP**	**03 56 25.4 +0.1**
CD2			S	**S**	**04 02 46.6 -0.4**
CD2			sS	sS	04 03 08.1 -2.4
CD2			pmax	pmax	
	comp=Z,480nm,1.2s				
CD2			pmax	pmax	
	comp=Z,1μm,3.8s				
CD2			LR	LR	
	comp=Z,1μm,21.6s				
CD2			LR	LR	
	comp=Z,1μm,27.6s				
CASY	**Casey**	**67.02 200**	*e*P	**P**	**03 53 56.6 -0.6**
	comp=Z,88nm,0.9s				
CASY			LR	LR	
	comp=Z,308nm,20.0s				
BTO	**Baotou**	**67.35 320**	*e*P	**P**	**03 54 00.8 +0.9**
HIA	**Hailar**	**67.60 332**	*e*P	**P**	**03 54 02.2 +1.0**
HIA			LR	LR	
	comp=Z,2μm,21.0s				
HIA	**Hailar**	**67.60 332**	*e*P	**P**	**03 54 02.2 +1.0**
HIA			MLR	MLR	
	comp=Z,2μm,21.0s				
ZEA	**Zeya**	**68.00 339***d*	*i*P	**P**	**03 54 04.8 +1.2**
ZEA			*e*		03 54 24.0
ZEA			*e*S	**S**	**04 03 00.5 +1.5**
ZEA			*e*PS	**PnS**	**04 03 23.0 -5.2**
ZEA			pmax	pmax	
	comp=E,120nm,1.0s				
ZEA			pmax	pmax	
	comp=N,400nm,1.2s				
ZEA			pmax	pmax	
	comp=Z,670nm,1.2s				
ZEA			pmax	pmax	
	comp=N,400nm,2.0s				
ZEA			pmax	pmax	
	comp=Z,1μm,2.0s				
ZEA			smax	smax	
	comp=N,200nm,8.0s				
UNV	**Unalaska Valle**	**68.00 20**	*e*P	**P**	**03 54 03.8 +0.2**
	comp=N,142nm,0.9s				
MA2	**Magadan**	**68.21 355**	*e*P	**P**	**03 54 04.4 -0.4**
	comp=N,153nm,0.9s				
MA2			LR	LR	
	comp=Z,1μm,20.0s				
MA2	**Magadan**	**68.21 355**	*i*P	**P**	**03 54 04.2 -0.6**
MA2			pmax	pmax	
	comp=Z,319nm,1.7s				
AKUT	**Akutan**	**68.49 21**	*e*P	**P**	**03 54 06.7 +0.1**
	comp=Z,232nm,1.0s				
VNDA	**Vanda**	**69.08 180**	P	**P**	**03 54 09.9 -0.1**
	comp=Z,35nm,0.9s,baz=341,slow=6.5,SNR=85				

VNDA LR LR 04 19 23.3
comp=Z,3μm,21.1s,baz=359,slow=32
VNDA PKP2bc 04 22 18.4
comp=Z,2.7nm,1.0s,baz=192,slow=3.1,SNR=5.1
VNDA Vanda 69.08 180 *e*P **P 03 54 09.6 -0.5**
comp=Z,62nm,1.0s
VNDA ⇑*e* 04 22 18.4
LZH Lanzhou 69.19 314 ⇓P **P 03 54 13.3 +1.7**
LZH pP sP 03 54 28.8 -2.5
LZH sP PcP 03 54 35.3 +0.1
LZH PP **PP 03 56 50.8 +5.7**
LZH S **S 04 03 15.0 +0.8**
LZH sS sS 04 03 39.4 +1.6
LZH pmax pmax
comp=Z,660nm,1.3s
LZH pmax pmax
comp=Z,2μm,6.8s
LZH LR LR
comp=Z,1μm,17.9s
LZH LR LR
comp=Z,2μm,16.3s
LZH LR LR
comp=Z,3μm,18.4s
SBA Scott Base 69.49 179 *e*P **P 03 54 12.1 -0.4**
comp=Z,26nm,1.0s
SBA LR LR
comp=Z,2μm,19.0s
SBA Scott Base 69.49 179 *e*P **P 03 54 12.1 -0.4**
SBA pmax pmax
comp=Z,26nm,1.0s
SBA MLR MLR
comp=Z,2μm,19.0s
FALS False Pass 69.90 21 *e*P **P 03 54 15.7 +0.4**
comp=Z,304nm,0.8s
CLNS Chul'man 71.30 340 *e*P **P 03 54 25.0 +1.1**
CLNS *e* 03 54 41.0
CLNS *e**PP **sP 03 54 46.3 +2.7**
CLNS *e* 03 57 05.0
CLNS *e*PPP PPP 03 58 47.6
CLNS *e*S **S 04 03 40.5 +2.8**
CLNS *e* 04 04 30.6
CLNS *e*SS **SS 04 08 13.2 +0.2**
CLNS pmax pmax
comp=Z,228nm,1.1s
CLNS pmax pmax
comp=N,76nm,1.0s
CLNS pmax pmax
comp=E,35nm,1.0s
CLNS pmax pmax
comp=Z,15nm,1.2s
CLNS pmax pmax
comp=E,13nm,1.0s
CLNS pmax pmax
comp=N,17nm,1.1s
CLNS smax smax
comp=E,188nm,11.0s
CLNS smax smax
comp=N,231nm,12.4s
CLNS MLR MLR
comp=N,284nm,17.0s
CLNS MLR MLR
comp=E,404nm,19.0s
SEY Seymchan 71.41 356*d i*P **P 03 54 24.4 0.0**
CIT Chita 72.36 332 *e*P **P 03 54 30.2 -0.2**
CIT *e* 03 54 43.8
CIT *e* 03 54 48.7
CIT pmax pmax
comp=Z,400nm,1.3s
CHGN Chignik 72.84 23 *e*P **P 03 54 32.8 -0.2**
comp=Z,146nm,0.9s
ULN Ulaanbaatar 73.18 326 *e*P **P 03 54 36.4 +0.9**
ULN LR LR
comp=Z,1μm,22.0s
ULN Ulaanbaatar 73.18 326 P **P 03 54 37.1 +1.6**
SNR=352
ULN Ulaanbaatar 73.18 326*d i*P **P 03 54 36.8 +1.3**
ULN pmax pmax
comp=Z,398nm,1.2s
ULN MLR MLR
comp=Z,780nm,20.0s
MIR Mirnyy 73.45 203⇑*i*P **P 03 54 38.0 +1.5**
MIR pmax pmax
comp=Z,126nm,1.0s
SONM Songino Array 73.54 325 P **P 03 54 38.9 +1.3**
comp=Z,205nm,1.0s,baz=134,slow=5.8,SNR=511
SONM PKPPKP **P'P'df 04 22 14.8 +1.7**
comp=Z,0.7nm,0.8s,baz=259,slow=1.5,SNR=5.0
SONM LR LR 04 28 13.7
comp=Z,694nm,18.6s,baz=118,slow=37
SONA1 Songino Array 73.54 325 *e*P **P 03 54 37.1 -0.5**
GTA Gaotai 73.54 315 ⇓P **P 03 54 39.3 +1.6**
GTA pP pP 03 54 49.8 -2.1
GTA S **S 04 04 06.0 +1.7**
GTA sS pS 04 04 22.8 +1.1
GTA pmax pmax
comp=Z,240nm,1.3s
GTA pmax pmax
comp=Z,1μm,4.8s
GTA LR LR
comp=Z,370nm,19.7s
GTA LR LR
comp=Z,630nm,21.9s
GTA LR LR
comp=Z,970nm,21.9s
BRDH Bariadhala 74.10 296 P **P 03 54 42.5 +1.3**
comp=Z,487nm,0.8s,baz=85,slow=9.4,SNR=27
BRDH LR LR 04 26 34.5
comp=Z,322nm,21.2s,baz=158,slow=35
YAK Yakutsk 74.19 345 *e*P **P 03 54 41.4 +0.6**
YAK LR LR
comp=Z,2μm,21.0s
YAK Yakutsk 74.19 345*d i*P **P 03 54 41.3 +0.4**
YAK *e* 03 54 56.7
YAK *e*S **S 04 04 13.0 +2.6**
YAK *e* 04 04 58.2
YAK *e*SS **SS 04 09 03.6 +6.7**
YAK pmax pmax
comp=Z,299nm,0.8s
YAK pmax pmax
comp=N,60nm,1.0s
YAK pmax pmax
comp=E,23nm,1.1s
YAK smax smax
comp=E,92nm,3.8s
YAK smax smax
comp=N,74nm,3.5s
YAK MLR MLR
comp=Z,1μm,20.0s
YAK MLR MLR
comp=N,1μm,19.0s
YAK MLR MLR
comp=E,454nm,19.0s
SHL Shillong 74.72 299⇓*i*P **P 03 54 45.5 +0.5**
comp=Z,71nm,1.0s
SHL *i*S **S 04 04 20.0 +1.8**
SHL Shillong 74.72 299 P **P 03 54 45.5 +0.5**
SHL pmax pmax
comp=Z,476nm,1.2s
OHAK Old Harbor 75.50 24 *e*P **P 03 54 49.0 +0.5**
comp=Z,258nm,1.0s
KDAK Kodiak Island 76.16 24 *e*P **P 03 54 53.1 +0.8**
comp=Z,220nm,1.0s
KDAK LR LR
comp=Z,474nm,21.0s
KDAK Kodiak Island 76.16 24 *i*P **P 03 54 52.6 +0.4**
BILL Bilibino 76.38 2 *e*P **P 03 54 53.9 +0.6**
BILL LR LR
comp=Z,2μm,20.0s
BILL Bilibino 76.38 2*d i*P **P 03 54 53.7 +0.4**
BILL *i* 03 55 05.2
BILL *i*SS SS 04 09 27.2 -2.6
BILL pmax pmax
comp=Z,430nm,1.3s
LSA Lhasa 76.59 303 P **P 03 54 57.4 +1.4**
LSA pmax pmax
comp=Z,130nm,1.2s
LSA Lhasa 76.59 303 *e*P **P 03 54 56.5 +0.6**
comp=Z,223nm,1.2s
LSA LR LR
comp=Z,695nm,21.0s
LSA Lhasa 76.59 303 P **P 03 54 56.9 +0.9**
LSA Lhasa 76.59 303 *e*P **P 03 54 56.5 +0.6**
LSA pmax pmax
comp=Z,223nm,1.2s
LSA MLR MLR
comp=Z,695nm,21.0s

ZAK Zakamensk 76.63 326 *e*P **P 03 54 55.3 0.0**
ZAK pmax pmax
comp=Z,443nm,1.5s
IRK Irkutsk 77.08 328 *e*P **P 03 54 57.4 -0.3**
IRK *e*S **S 04 04 43.6 +0.8**
IRK pmax pmax
comp=Z,343nm,2.1s
TLY Talaya 77.11 328 *e*P **P 03 54 58.6 +0.7**
comp=Z,252nm,1.3s
TLY LR LR
comp=Z,1μm,21.0s
TLY Talaya 77.11 328 P **P 03 54 58.9 +1.1**
SNR=140
TLY Talaya 77.11 328*d i*P **P 03 54 58.4 +0.5**
TLY *e* 03 57 50.2
TLY *e*S **S 04 04 42.0 -1.1**
TLY *e* 04 05 06.8
TLY pmax pmax
comp=Z,212nm,1.2s
ANM Nome 77.14 14 *e*P **P 03 54 58.9 +1.2**
comp=Z,268nm,1.2s
ANM Nome 77.14 14 *e*P **P 03 54 58.9 +1.2**
ANM pmax pmax
comp=Z,268nm,1.2s
SVW2 Sparrevohn 77.34 20 *e*P **P 03 55 00.2 +1.2**
comp=Z,488nm,1.0s
HOM Homer 77.77 23 *e*P **P 03 55 02.3 +1.0**
comp=Z,1μm,1.0s
RSO Redoubt South 77.90 22 *e*P **P 03 55 02.0 -0.3**
TAPN Taplejung 78.82 300 *e*P **P 03 55 09.2 +1.0**
comp=Z,782nm,1.2s
ODAN Odare 78.96 299 *e*P **P 03 55 09.7 +0.8**
comp=Z,1μm,1.0s
SUA Susitna One 79.30 22 *e*P **P 03 55 09.8 -0.1**
comp=Z,232nm,1.0s
SKT Skwentna 79.36 21 *e*P **P 03 55 09.0 -1.1**
comp=Z,79nm,1.0s
RC01 Rabbit Creek A 79.43 22 *e*P **P 03 55 10.8 +0.4**
comp=Z,384nm,1.2s
RAMN Ramite 79.67 299 *e*P **P 03 55 13.4 +0.6**
comp=Z,574nm,1.4s
PPLA Purkeypile 79.75 20 *e*P **P 03 55 12.3 0.0**
comp=Z,165nm,1.3s
CHLP Challavanipeta 79.97 290 *e*P **P 03 55 15.6 +1.4**
CHLP IAmb IAmb 03 55 16.4
comp=Z,288nm,0.9s
PMR Palmer 79.97 22 *e*P **P 03 55 13.7 +0.4**
comp=Z,300nm,1.0s
PMR Palmer 79.97 22 *e*P **P 03 55 13.7 +0.4**
PMR pmax pmax
comp=Z,300nm,1.0s
CAST Castle Rocks 80.14 20 *e*P **P 03 55 13.8 -0.4**
comp=Z,200nm,0.9s
GHO Glory Hole Cre 80.17 22 *e*P **P 03 55 15.2 +0.7**
comp=Z,304nm,1.0s
JIRN Jiri 80.20 300 *e*P **P 03 55 16.6 +0.8**
SML Sawmill 80.41 22 *e*P **P 03 55 16.5 +0.7**
comp=Z,433nm,1.0s
SML Sawmill 80.41 22 *e*P **P 03 55 16.5 +0.7**
SML pmax pmax
comp=Z,433nm,1.0s
GUN Gumba 80.53 300 *e*P **P 03 55 18.4 +0.8**
comp=Z,829nm,1.0s
RDOG Red Dog Mine 80.57 13 *e*P **P 03 55 17.4 +0.9**
comp=Z,262nm,1.0s
TRF Thorofare Moun 80.76 20 *e*P **P 03 55 17.3 -0.5**
comp=Z,147nm,0.8s
PKIN Phulchoki 80.86 300 *e*P **P 03 55 20.1 +0.9**
comp=Z,243nm,0.9s
BPAW Bear Paw Mtn. 80.95 19 *e*P **P 03 55 18.2 -0.4**
comp=Z,123nm,1.3s
DIV Divide 80.97 23 *e*P **P 03 55 19.5 +0.7**
comp=Z,84nm,1.0s
KKN Kakani 81.01 300 *e*P **P 03 55 20.6 +0.6**
comp=Z,483nm,1.1s
PALK Pallekele 81.05 279 P **P 03 55 21.1 +0.9**
comp=Z,172nm,0.8s,baz=116,slow=6.8,SNR=50
PALK LR LR 04 34 49.3
comp=Z,222nm,19.7s,baz=115,slow=38
PALK Pallekele 81.05 279 *e*P **P 03 55 21.4 +1.2**
comp=Z,213nm,0.8s
PALK Pallekele 81.05 279 P **P 03 55 21.8 +1.6**
SNR=5.6
PALK Pallekele 81.05 279 *i*P **P 03 55 21.5 +1.3**
SNR=21
PALK Pallekele 81.05 279 *i*P **P 03 55 21.7 +1.5**
DMN Daman 81.12 300 *e*P **P 03 55 21.5 +0.9**
comp=Z,1μm,1.1s
KLU Klutina 81.13 23 *e*P **P 03 55 20.4 +0.8**
comp=Z,193nm,1.4s
RND Reindeer 81.23 21 *e*P **P 03 55 20.1 0.0**
comp=Z,251nm,1.0s
RND Reindeer 81.23 21 *e*P **P 03 55 20.1 0.0**
RND pmax pmax
comp=Z,251nm,1.0s
BMRM Bremner River 81.34 24 *e*P **P 03 55 21.3 +0.5**
comp=Z,245nm,1.6s
MCK McKinley 81.41 20 *e*P **P 03 55 21.0 0.0**
comp=Z,518nm,1.0s
MCK McKinley 81.41 20 *e*P **P 03 55 21.0 0.0**
MCK pmax pmax
comp=Z,519nm,1.0s
BWN Browne 81.51 20 *e*P **P 03 55 21.8 +0.3**
comp=Z,458nm,1.1s
DHY Denali Highway 81.54 21 *e*P **P 03 55 22.3 +0.4**
comp=Z,111nm,1.0s
QSPA South Pole Qui 81.57 180 P **P 03 55 21.2 -0.8**
comp=Z,32nm,0.9s,baz=4.7,slow=2.1,SNR=16
QSPA LR LR 04 29 13.3
comp=Z,2μm,18.6s,baz=16,slow=34
QSPA South Pole Qui 81.57 180 *e*P **P 03 55 21.9 -0.2**
comp=Z,98nm,1.1s
GKN Gorkha 81.62 300 *e*P **P 03 55 23.6 +0.5**
comp=Z,2μm,1.1s
MLY Manley 81.65 19 *e*P **P 03 55 22.7 +0.4**
comp=Z,176nm,1.0s
CRQM Cirque 81.81 24 *e*P **P 03 55 24.2 +0.8**
comp=Z,149nm,1.1s
TGL Tana Glacier 81.94 24 *e*P **P 03 55 24.8 +0.8**
comp=Z,139nm,1.1s
HARP HAARP 81.96 22 *e*P **P 03 55 25.1 +1.1**
comp=Z,152nm,1.0s
PVM Polavaram 81.98 289 *e*P **P 03 55 25.3 +0.3**
PVM IAmb IAmb 03 55 26.4
comp=Z,166nm,1.0s
WRH Wood River Hil 82.16 20 *e*P **P 03 55 24.6 -0.4**
comp=Z,228nm,1.0s
PAX Paxson 82.17 22 *e*P **P 03 55 25.5 +0.3**
comp=Z,53nm,1.1s
PAX Paxson 82.17 22 *e*P **P 03 55 25.5 +0.3**
PAX pmax pmax
comp=Z,53nm,1.1s
CCB Clear Creek Bu 82.37 20 *e*P **P 03 55 25.5 -0.5**
comp=Z,153nm,1.0s
HVS Khovu-Aksy 82.37 324*c i*P **P 03 55 27.6 +1.1**
HVS pmax pmax
comp=Z,114nm,1.0s
MDM Murphy Dome 82.42 20 *e*P **P 03 55 25.8 -0.5**
comp=Z,308nm,1.1s
DANN Dangsing 82.45 300 *e*P **P 03 55 27.8 +0.1**
comp=Z,1μm,1.5s
KOLN Koldanda 82.45 299 *e*P **P 03 55 27.7 +0.1**
comp=Z,456nm,1.0s
COLA College 82.49 20 *e*P **P 03 55 26.6 0.0**
COLA College 82.49 20 *e*P **P 03 55 26.6 0.0**
TIXI Tiksi 82.59 350 *e*P **P 03 55 26.7 -0.3**
comp=Z,293nm,1.6s
TIXI LR LR
comp=Z,1μm,21.0s
TIXI Tiksi 82.59 350*d i*P **P 03 55 26.8 -0.3**
TIXI pmax pmax
comp=Z,201nm,1.7s
TIXI MLR MLR
comp=Z,957nm,21.0s
IL1 Eielson Array 82.76 20 *e*P **P 03 55 26.4 -1.6**
ILAR Eielson Array 82.76 20 P **P 03 55 27.5 -0.5**
comp=Z,135nm,1.1s,baz=253,slow=3.9,SNR=290
ILAR PKKP **PKKPdf 04 13 47.2 +1.2**
comp=Z,0.5nm,0.9s,baz=310,slow=1.1,SNR=4.0
ILAR PKPPKP **P'P'df 04 21 55.8 +0.2**
comp=Z,0.7nm,1.1s,baz=355,slow=0.7,SNR=4.5
ILAR LR LR 04 26 47.8
comp=Z,731nm,21.8s,baz=240,slow=32
ILB Eielson Array 82.76 20 *e*P **P 03 55 27.5 -0.5**
PYUN Piuthan 83.05 300 *e*P **P 03 55 30.6 -0.1**
comp=Z,1μm,1.2s
SKHT Srikalahasti 83.13 285 *e*P **P 03 55 31.7 +0.7**

SKHT IAmb IAmb 03 55 32.7
comp=Z,128nm,1.0s
DIB Dawson Inlet, 83.33 34 *e*P **P 03 55 33.0 +1.8**
comp=Z,292nm,1.2s
H02S1 DAWSON INLET T 83.33 34 T T 05 27 18.7
SNR=58
WMQ Urumqi 83.60 316 P **P 03 55 33.9 +0.9**
WMQ pP pP 03 55 47.8 +0.4
WMQ PP **PP 03 58 44.8 -1.4**
WMQ S **S 04 05 51.8 +0.2**
WMQ sS sS 04 06 14.6 -1.3
WMQ pmax pmax
comp=Z,610nm,0.9s
WMQ LR LR
comp=Z,640nm,18.9s
WMQ LR LR
comp=Z,1μm,22.1s
WMQ LR LR
comp=Z,2μm,23.3s
CRAG Craig 83.90 32 *e*P **P 03 55 35.4 +1.3**
comp=Z,202nm,1.2s
NJS Nagarjunasagar 84.02 288 *e*P **P 03 55 35.8 +0.2**
NJS IAmb IAmb 03 55 36.8
comp=Z,377nm,1.1s
SRLM Srisailam 84.33 287 *e*P **P 03 55 37.4 +0.2**
SRLM IAmb IAmb 03 55 38.5
comp=Z,531nm,1.1s
BESE Bessie Mountai 84.37 28 *e*P **P 03 55 38.0 +1.4**
comp=Z,422nm,1.2s
TOLK Toolik Lake Re 84.37 16 P **P 03 55 37.3 +1.0**
baz=230
TOLK Toolik Lake Re 84.37 16 *e*P **P 03 55 36.1 -0.2**
comp=Z,101nm,0.9s
RPR Rampur 84.46 290 *e*P **P 03 55 37.9 +0.1**
RPR IAmb IAmb 03 55 38.9
comp=Z,478nm,0.9s
JIS Juneau Island 84.46 29 *e*P **P 03 55 38.4 +1.5**
comp=Z,284nm,1.2s
SKAG Skagway 84.54 28 *e*P **P 03 55 38.9 +1.6**
comp=Z,377nm,1.1s
JCC Jacoby Creek, 84.62 48 *e*P **P 03 55 40.6 +2.5**
comp=Z,273nm,1.4s
KCPM Cahto Peak 84.65 49 *e*P **P 03 55 40.8 +2.3**
comp=Z,169nm,1.0s
WRAK Wrangell Islan 84.69 31 *e*P **P 03 55 39.2 +1.2**
WRAK LR LR
comp=Z,793nm,19.0s
EGAK Eagle 84.77 21 *e*P **P 03 55 38.8 +0.4**
comp=Z,177nm,0.9s
EGAK LR LR
comp=Z,1μm,22.0s
MCCM Marconi Confer 84.77 50 *e*P **P 03 55 40.2 +1.3**
comp=Z,100nm,1.0s
HOPS Hopland Field 84.85 50 *e*P **P 03 55 40.6 +1.3**
comp=Z,115nm,1.1s
HYB Hyderabad 84.89 288⇓*i*P **P 03 55 39.0 -1.0**
comp=Z,1μm,1.0s
HYBB Hyderabad (bro 84.89 288 *e*P **P 03 55 39.8 -0.2**
HYBB IAmb IAmb 03 55 40.8
comp=Z,348nm,1.2s
GDXM Geysers 85.01 50 *e*P **P 03 55 42.6 +2.4**
comp=Z,83nm,0.9s
DAWY Dawson 85.05 22 *e*P **P 03 55 41.1 +1.3**
comp=Z,344nm,1.9s
MAW Mawson 85.18 202 P **P 03 55 39.9 -0.6**
comp=Z,18nm,1.1s,baz=101,slow=6.2,SNR=14
MAW PKKPbc **PKKPbc 04 13 46.8 -2.1**
comp=Z,4.1nm,0.8s,baz=329,slow=2.5,SNR=5.3
MAW LR LR 04 29 15.9
comp=Z,999nm,21.8s,baz=80,slow=32
MAW Mawson 85.18 202 *e*P **P 03 55 40.2 -0.2**
comp=Z,18nm,1.2s
MAW PKKPbc **PKKPbc 04 13 46.8 -2.1**
MAW Mawson 85.18 202 *e*P **P 03 55 40.2 -0.2**
MAW pmax pmax
comp=Z,18nm,1.2s
L02D Cave Junction, 85.30 46 P **P 03 55 43.5 +2.0**
baz=254,SNR=29
SRSP Sriramsagar 85.36 290 *e*P **P 03 55 42.1 -0.2**
SRSP IAmb IAmb 03 55 43.1
comp=Z,480nm,1.0s
SAO San Andreas Ge 85.54 52 *e*P **P 03 55 44.0 +1.2**
comp=Z,120nm,1.2s
SAO San Andreas Ge 85.54 52 *e*P **P 03 55 44.0 +1.2**
SAO pmax pmax
comp=Z,120nm,1.2s
M02C Callahan 85.63 47 P **P 03 55 45.4 +2.1**
baz=255,SNR=53
N02D Trinity Center 85.63 48 P **P 03 55 45.4 +2.1**
baz=255,SNR=56
WDC Whiskeytown Da 85.65 48 *e*P **P 03 55 44.9 +1.6**
comp=Z,248nm,1.4s
WDC Whiskeytown Da 85.65 48 *e*P **P 03 55 44.9 +1.6**
WDC pmax pmax
comp=Z,248nm,1.4s
URV Uravakonda 85.68 286 *e*P **P 03 55 44.2 +0.2**
URV IAmb IAmb 03 55 45.2
comp=Z,302nm,0.9s
YBH Yreka Blue Hor 85.83 47 P **P 03 55 45.8 +1.5**
comp=Z,118nm,1.1s,baz=236,slow=3.8,SNR=103
YBH LR LR 04 26 11.9
comp=Z,698nm,21.9s,baz=263,slow=30
YBH Yreka Blue Hor 85.83 47 *e*P **P 03 55 46.0 +1.8**
comp=Z,201nm,1.1s
YBH Yreka Blue Hor 85.83 47 *e*P **P 03 55 46.0 +1.8**
YBH pmax pmax
comp=Z,201nm,1.1s
HUMO Hull Mountain 85.88 46 *e*P **P 03 55 46.4 +2.0**
I03D Drain, OR 85.89 45 P **P 03 55 46.1 +1.7**
baz=254,SNR=68
PMPB Monarch Peak 85.91 53 *e*P **P 03 55 46.5 +1.7**
comp=Z,120nm,1.1s
O03D Paynes Creek 86.13 49 P **P 03 55 46.9 +1.2**
baz=256,SNR=60
O03D Paynes Creek 86.13 49 *e*P **P 03 55 47.0 +1.2**
ORV Oroville 86.17 49 *e*P **P 03 55 47.2 +1.3**
comp=Z,91nm,1.1s
ORV Oroville 86.17 49 *e*P **P 03 55 47.2 +1.3**
ORV pmax pmax
comp=Z,91nm,1.1s
MGL Magalia 86.19 49 *e*P **P 03 55 47.3 +1.2**
PAGB Antelope Grade 86.24 53 *e*P **P 03 55 48.1 +1.8**
comp=Z,152nm,1.1s
SNCC San Nicolas Is 86.28 56 P **P 03 55 48.3 +1.8**
baz=257,SNR=21
SNCC San Nicolas Is 86.28 56 *e*P **P 03 55 48.3 +1.8**
comp=Z,258nm,0.9s
SCZ2 Santa Cruz Isl 86.35 55 P **P 03 55 48.5 +1.6**
baz=257,SNR=7.2
SMMC Simmler 86.35 54 P **P 03 55 48.8 +1.9**
baz=257,SNR=26
F03A Seaside 86.35 43 *e*P **P 03 55 48.9 +2.3**
comp=Z,215nm,0.9s
G03D McMinnville, O 86.36 43 P **P 03 55 48.3 +1.6**
baz=254,SNR=48
RPN Rapa Nui 86.37 117 LR LR 04 26 05.6
comp=Z,172nm,19.2s,baz=269,slow=30
SBC Santa Barbara 86.38 55 P **P 03 55 48.7 +1.6**
baz=257
PKM Mcpherson Peak 86.40 54 P **P 03 55 49.1 +1.7**
baz=257,SNR=43
AFDM Forest Hills D 86.42 50 *e*P **P 03 55 48.5 +1.3**
comp=Z,132nm,1.2s
M04C Macdoel 86.47 47 P **P 03 55 49.2 +1.7**
baz=256,SNR=50
E03A Lebam 86.52 42 *e*P **P 03 55 49.3 +1.9**
comp=Z,208nm,0.9s
NLWA Neilton Lookou 86.55 41 *e*P **P 03 55 49.7 +2.1**
comp=Z,91nm,1.2s
NLWA LR LR
comp=Z,1μm,22.0s
ZSN Zaisan 86.57 319⇓*i*P **P 03 55 48.2 +0.5**
comp=Z,62nm,2.3s
ZSN LR LR 04 35 47.8
comp=Z,74nm,20.4s
I04A Tendick Farm, 86.57 45 P **P 03 55 48.9 +1.1**
baz=255,SNR=78
DLBC Dease Lake 86.63 30 *e*P **P 03 55 48.6 +0.8**
comp=Z,91nm,1.0s
J04D Umpqua Nationa 86.64 46 P **P 03 55 50.1 +1.7**
baz=255,SNR=71
CMB Columbia Colle 86.66 51 *e*P **P 03 55 49.3 +0.9**
comp=Z,51nm,1.1s
CMB Columbia Colle 86.66 51 *e*P **P 03 55 49.3 +0.9**
CMB pmax pmax
comp=Z,51nm,1.1s
IRO Indian Ridge 86.73 45 *e*P **P 03 55 50.1 +1.3**

K04D Chiloquin, OR 86.74 46 P **P 03 55 50.4 +1.6**
baz=256,SNR=7.0
F04D Rainier, OR 86.76 43 P **P 03 55 50.3 +1.7**
baz=254
BLG Laguna Peak, P 86.83 55 P **P 03 55 50.3 +1.0**
baz=258,SNR=7.8
KLRI Killari 86.84 289 *e*P **P 03 55 48.8 -0.9**
KLRI IAmb IAmb 03 55 49.9
comp=Z,463nm,1.9s
H04A Detroit Lake 86.96 44 *e*P **P 03 55 50.6 +0.9**
comp=Z,173nm,1.2s
SCI2 San Clemente I 87.02 56 P **P 03 55 51.5 +1.3**
baz=258,SNR=12
RUBR Rubicon Trail 87.07 50 *e*P **P 03 55 52.8 +2.2**
comp=Z,89nm,1.1s
BEKR Beckworth 87.10 49 *e*P **P 03 55 52.0 +1.3**
comp=Z,146nm,1.2s
PGC Sidney 87.17 40 *e*P **P 03 55 51.7 +1.2**
comp=Z,70nm,1.0s
VES Vestal, Richgr 87.19 53 P **P 03 55 51.8 +0.8**
baz=258,SNR=35
CIS Catalina Islan 87.22 56 P **P 03 55 52.2 +1.1**
baz=258,SNR=19
OSI Osito Audit: C 87.22 55 P **P 03 55 52.8 +1.6**
baz=258,SNR=17
ARVC Arvin 87.24 54 P **P 03 55 52.8 +1.6**
baz=258,SNR=34
J05D Fort Rock, OR 87.27 46 P **P 03 55 53.1 +1.7**
baz=256,SNR=154
PEAR Peavine Mounta 87.34 50 *e*P **P 03 55 53.5 +1.6**
FMP Fort Macarthur 87.38 56 P **P 03 55 53.2 +1.3**
baz=258
K05A Summer Lake 87.38 46 *e*P **P 03 55 53.8 +1.8**
comp=Z,313nm,1.1s
I05D Terrebonne, OR 87.46 45 P **P 03 55 53.4 +1.3**
baz=256,SNR=18
DECC Green Verdugo 87.46 55 P **P 03 55 53.5 +1.2**
baz=258,SNR=8.3
WAKR Walker 87.49 51 *e*P **P 03 55 54.2 +1.6**
comp=Z,282nm,1.9s
PNTR Pine Nut 87.50 50 *e*P **P 03 55 54.2 +1.6**
comp=Z,82nm,1.0s
VCNR Virginia City 87.50 50 *e*P **P 03 55 54.1 +1.5**
comp=Z,58nm,1.1s
PASC Pasadena Art C 87.56 55 *e*P **P 03 55 53.9 +1.1**
comp=Z,163nm,1.0s
MOD Modoc Plateau 87.61 47 *e*P **P 03 55 54.1 +1.1**
comp=Z,189nm,1.3s
OMMB Old Mammoth Mi 87.63 52 *e*P **P 03 55 54.8 +1.4**
comp=Z,72nm,1.2s
ISA Isabella, Lake 87.64 54 P **P 03 55 54.5 +1.3**
baz=258,SNR=45
ISA Isabella, Lake 87.64 54 *e*P **P 03 55 54.5 +1.3**
comp=Z,78nm,1.1s
A04D Lummi Island 87.67 40 P **P 03 55 53.9 +1.0**
baz=255,SNR=22
G05D Wamic, OR 87.69 44 P **P 03 55 54.4 +1.2**
baz=256
LON Longmire 87.74 42 *e*P **P 03 55 54.4 +1.0**
comp=Z,96nm,1.9s
LON Longmire 87.74 42 *e*P **P 03 55 54.4 +1.0**
LON pmax pmax
comp=Z,96nm,1.9s
YERR Yerington 87.75 50 *e*P **P 03 55 55.1 +1.3**
comp=Z,54nm,1.1s
MLAC Mammoth, Mammo 87.76 52 P **P 03 55 55.3 +1.3**
baz=258
PAHR Pah Rah Range 87.79 50 *e*P **P 03 55 55.4 +1.4**
comp=Z,137nm,1.1s
EDW2 Edwards Air Fo 87.86 54 P **P 03 55 55.9 +1.6**
baz=258,SNR=93
B05A Bryant 87.94 41 P **P 03 55 55.1 +0.9**
baz=255,SNR=19
BFSC Mount Baldy Ra 88.00 55 P **P 03 55 56.2 +1.2**
baz=258,SNR=68
MK01 Makanchi Array 88.08 318 *e*P **P 03 55 54.3 -0.7**
MK31 Makanchi Array 88.09 318 *e*P **P 03 55 55.4 +0.3**
MK31 Makanchi Array 88.09 318 *i*P **P 03 55 55.4 +0.3**
MK31 pmax pmax
comp=Z,149nm,0.8s
MKAR Makanchi Array 88.09 318 P **P 03 55 55.5 +0.4**
comp=Z,123nm,0.7s,baz=99,slow=6.0,SNR=866
MKAR PKiKP **PKiKP 04 00 56.7 -0.2**
comp=Z,5.0nm,1.0s,baz=90,slow=2.9,SNR=3.7
MKAR PKKPbc PKKPbc 04 13 50.5 +8.7
comp=Z,1.3nm,0.8s,baz=298,slow=2.6,SNR=6.5
MKAR PKPPKP **P'P'df 04 21 45.0 -2.2**
comp=Z,1.5nm,1.1s,baz=343,slow=3.8,SNR=5.2
MKAR LR LR 04 35 11.6
comp=Z,596nm,21.8s,baz=84,slow=35
CWC Cottonwood Cre 88.11 53 P **P 03 55 56.9 +1.3**
baz=258
TIN Tinemaha, Big 88.12 52 P **P 03 55 57.2 +1.6**
baz=258,SNR=18
G06A Carlson Farm, 88.16 44 *e*P **P 03 55 56.5 +1.0**
comp=Z,125nm,1.4s
109C Camp Elliot, M 88.19 57 P **P 03 55 57.3 +1.5**
baz=259,SNR=17
CPE Camp Elliot 88.19 57 *e*P **P 03 55 57.4 +1.6**
comp=Z,185nm,1.3s
LRMC Laurel Mtn Rad 88.23 54 P **P 03 55 57.7 +1.6**
baz=258,SNR=15
MURC Murrieta 88.25 56 P **P 03 55 57.4 +1.3**
baz=259,SNR=18
MAKZ Makanchi 88.31 318 P **P 03 55 55.8 -0.3**
MAKZ pmax pmax
comp=Z,258nm,1.1s
HWB Hans Werner Br 88.34 56 *e*P **P 03 55 56.3 -0.3**
NV01 Mina Array Sit 88.34 51 *e*P **P 03 55 57.0 +0.3**
NVAR Mina Array Bea 88.34 51 P **P 03 55 58.0 +1.3**
comp=Z,49nm,0.9s,baz=241,slow=7.4,SNR=247
NVAR PKKPbc **PKKPbc 04 13 41.4 +0.4**
comp=Z,0.5nm,0.7s,baz=89,slow=3.6,SNR=4.1
NVAR LR LR 04 28 16.5
comp=Z,980nm,20.7s,baz=88,slow=31
B06A Marblemount 88.40 41 *e*P **P 03 55 58.5 +2.2**
comp=Z,21nm,0.8s
ZAA0 Zalesovo Array 88.43 325 *e*P **P 03 55 55.8 -0.6**
comp=Z,58nm,1.0s
ZALV Zalesovo Beam 88.43 325 P **P 03 55 55.7 -0.7**
comp=Z,34nm,0.8s,baz=112,slow=5.1,SNR=112
ZALV LR LR 04 34 40.3
comp=Z,780nm,21.7s,baz=72,slow=35
ZALV Zalesovo Beam 88.43 325 *e*P **P 03 55 54.7 -1.7**
NV11 Mina Array Sit 88.46 51 *e*P **P 03 55 58.3 +1.1**
comp=Z,6.6nm,1.0s
DAC Darwin (Calif) 88.46 53 *e*P **P 03 55 58.6 +1.3**
comp=Z,68nm,1.0s
DAC Darwin (Calif) 88.46 53 *e*P **P 03 55 58.6 +1.3**
DAC pmax pmax
comp=Z,68nm,1.0s
PLM Palomar 88.48 56 *e*P **P 03 55 58.8 +1.4**
PLM Palomar 88.48 56 *e*P **P 03 55 58.8 +1.4**
MPMC Manual Prospec 88.50 53 P **P 03 55 58.9 +1.4**
baz=258,SNR=69
BAR Barrett 88.51 57 *e*P **P 03 55 58.8 +1.5**
comp=Z,108nm,1.3s
BBRC Big Bear Solar 88.61 55 P **P 03 55 59.3 +1.3**
baz=259,SNR=7.7
LTY Liberty 88.62 42 *e*P **P 03 55 58.1 +0.5**
comp=Z,29nm,1.0s
KVN Kaiserville 88.63 50 *e*P **P 03 55 59.4 +1.4**
comp=Z,64nm,1.0s
KVN Kaiserville 88.63 50 *e*P **P 03 55 59.4 +1.4**
KVN pmax pmax
comp=Z,64nm,1.0s
C06D Leavenworth 88.63 41 P **P 03 55 58.1 +0.5**
baz=256
RRX Edison Barstow 88.66 55 P **P 03 55 59.5 +1.4**
baz=259
LLLB Lillooet 88.68 38 *e*P **P 03 55 58.7 +0.9**
comp=Z,33nm,1.2s
I07A Izee 88.68 45 *e*P **P 03 55 59.6 +1.6**
comp=Z,154nm,1.4s
MONP2 Monument Peak 88.75 57 P **P 03 56 00.5 +1.7**
baz=259,SNR=64
GRAC Grapevine Rang 88.78 52 P **P 03 56 00.2 +1.6**
baz=259,SNR=11
F07A Phinny Hill Vi 88.80 43 *e*P **P 03 56 00.2 +1.8**
comp=Z,87nm,1.3s
PFO Pinyon Flats O 88.86 56 P **P 03 56 00.5 +1.3**
baz=259,SNR=54
PFO Pinyon Flats O 88.86 56 *e*P **P 03 56 00.4 +1.3**
PFO LR LR
comp=Z,3μm,20.0s
XPFO Piæon Flat 88.86 56 *e*P **P 03 56 00.4 +1.3**
comp=Z,303nm,1.9s
GSC Goldstone, Bar 88.90 54 P **P 03 56 00.6 +1.4**
baz=259,SNR=37
GSC Goldstone, Bar 88.90 54 *e*P **P 03 56 00.6 +1.4**
comp=Z,293nm,1.9s
WVOR Wild Horse Val 88.94 47 *e*P **P 03 56 00.9 +1.6**
WVOR LR LR
comp=Z,770nm,21.0s
IKP In-Ko-Pah, Jac 88.97 57 P **P 03 56 01.4 +1.8**
baz=259,SNR=40
FURC Furnace Creek, 89.07 53 P **P 03 56 01.6 +1.7**
baz=259,SNR=73
INK Inuvik 89.15 20 P **P 03 55 59.7 +0.2**
comp=Z,65nm,1.2s,baz=244,slow=4.9,SNR=9.6
INK PP **PP 03 59 31.2 +0.9**
comp=Z,37nm,1.4s,baz=261,slow=8.7,SNR=5.2
INK Inuvik 89.15 20 *e*P **P 03 55 60.0 +0.5**
comp=Z,152nm,1.4s
INK PP **PP 03 59 31.2 +0.9**
INK Inuvik 89.15 20 *e*P **P 03 56 00.0 +0.5**
INK 03 59 31.2
INK pmax pmax
comp=Z,152nm,1.4s
HAWA Hanford 89.18 43 *e*P **P 03 56 01.3 +1.2**
comp=Z,57nm,1.2s
HAWA LR LR
comp=Z,1μm,22.0s
HEC Hector,Ludlow 89.19 55 P **P 03 56 01.9 +1.3**
baz=259,SNR=42
SHLS Shalkode 89.21 314⇓*i*P **P 03 55 59.8 -0.8**
comp=Z,155nm,1.7s
SHLS LR LR 04 36 05.3
comp=Z,96nm,15.8s
PDGK Podgornoye 89.23 314 P **P 03 56 00.7 +0.1**
J08A Circle Bar Ran 89.25 46 *e*P **P 03 56 02.3 +1.6**
comp=Z,128nm,1.1s
SWSC Sam W. Stewart 89.28 57 P **P 03 56 02.6 +1.7**
baz=260,SNR=72
BELC Belle Mtn. Jos 89.31 56 P **P 03 56 02.9 +1.6**
baz=259,SNR=214
G08A Pilot Rock 89.33 44 *e*P **P 03 56 02.1 +1.1**
comp=Z,83nm,1.1s
SHOC Shoshone, Teco 89.43 54 P **P 03 56 03.0 +1.4**
baz=259,SNR=26
POO Poona 89.49 289 *e*P **P 03 55 58.0 -4.3**
E08A Dider Farm, El 89.52 43 *e*P **P 03 56 03.5 +1.7**
comp=Z,95nm,1.2s
UZB Uzynbulak 89.53 314⇓*i*P **P 03 56 02.5 +0.4**
comp=Z,128nm,1.5s
NVS Novosibirsk 89.57 326⇑*i*P **P 03 56 01.6 -0.1**
NVS pmax pmax
comp=N,28nm,1.3s
NVS pmax pmax
comp=E,65nm,1.3s
NVS pmax pmax
comp=Z,142nm,1.3s
BMN Battle Mountai 89.57 49 *e*P **P 03 56 04.1 +1.8**
comp=Z,67nm,1.0s
BMN Battle Mountai 89.57 49 *e*P **P 03 56 04.1 +1.8**
BMN pmax pmax
comp=Z,67nm,1.0s
TUQ Turquoise Moun 89.63 54 P **P 03 56 04.2 +1.5**
baz=259,SNR=7.9
TPNV Topopah Spring 89.65 53 P **P 03 56 04.3 +1.5**
baz=259,SNR=82
BC3 Big Chuckawall 89.69 56 P **P 03 56 04.8 +1.8**
baz=260,SNR=144
GMRC Granite Mounta 89.72 55 P **P 03 56 04.8 +1.6**
baz=260,SNR=110
D08A Wollman Farm, 89.74 42 *e*P **P 03 56 03.8 +1.1**
comp=Z,67nm,1.1s
B08A Colville Reser 89.75 41 *e*P **P 03 56 03.2 +0.3**
comp=Z,40nm,1.1s
KPKS Kokpek 89.83 314⇓*i*P **P 03 56 03.9 +0.5**
comp=Z,216nm,1.6s
PRZ Przheval'sk 89.84 313 P **P 03 56 05.1 +1.5**
PRZ pmax pmax
comp=Z,440nm,1.1s
SATY Saty 89.95 313⇓*i*P **P 03 56 04.7 +0.7**
comp=Z,154nm,1.2s
SATY *e*S **SKSac 04 06 30.3 -0.7**
SATY LR LR 04 38 12.8
comp=Z,75nm,14.6s
ZHN Zhinishke 89.95 314 *i*P **P 03 56 04.5 +0.5**
comp=Z,75nm,1.4s
IRM Iron Mountain 90.03 56 P **P 03 56 06.4 +1.9**
baz=260,SNR=242
GLA Glamis 90.10 57 P **P 03 56 07.1 +2.2**
baz=260,SNR=69
SEM Semipalatinsk 90.26 321 *e*P **P 03 56 04.5 -0.9**
comp=Z,103nm,1.5s
SEM LR LR 04 36 55.8
comp=Z,295nm,21.0s
C09A Chrisman Ranch 90.32 42 *e*P **P 03 56 06.2 +0.7**
comp=Z,63nm,1.1s
BMO Blue Mountains 90.38 45 *e*P **P 03 56 07.0 +1.1**
comp=Z,107nm,1.0s
BMO LR LR
comp=Z,1μm,22.0s
BMO Blue Mountains 90.38 45 *e*P **P 03 56 07.0 +1.1**
BMO pmax pmax
comp=Z,107nm,1.0s
BMO MLR MLR
comp=Z,1μm,22.0s
R11A Troy Canyon, C 90.42 51 P **P 03 56 08.0 +1.6**
baz=260,SNR=110
R11A Troy Canyon, C 90.42 51 *e*P **P 03 56 07.8 +1.4**
comp=Z,116nm,1.2s
SHPR Sheep Range 90.43 53 *e*P **P 03 56 08.4 +2.0**
comp=Z,219nm,1.3s
Y12C Blythe 90.47 56 P **P 03 56 08.4 +1.9**
baz=260,SNR=87
NEE2 Needles Airpor 90.57 55 P **P 03 56 08.8 +1.9**
baz=260,SNR=23
PDMCI Parker Dam,Lak 90.88 56 P **P 03 56 10.2 +1.8**
baz=260
113A Mohawk Valley, 90.94 57 *e*P **P 03 56 10.6 +1.9**
comp=Z,114nm,1.0s
113A *e*pP **pP 03 56 25.9 +2.7**
MDOK Medeo 90.95 313 *i*P **P 03 56 09.2 +0.5**
comp=Z,1μm,1.8s
MDOK LR LR 04 38 23.8
comp=Z,206nm,20.0s
AAA Alma-Ata 91.05 313 *e*P **P 03 56 09.8 +0.7**
comp=Z,306nm,2.0s
AAA LR LR 04 38 54.9
comp=Z,226nm,18.5s
KSH Kashi 91.09 310⇓*i*P **P 03 56 11.5 +2.1**
KSH pP sP 03 56 28.5 -1.0
KSH PP **PP 03 59 48.9 +2.2**
KSH S **S 04 06 59.9 -4.0**
KSH sS sS 04 07 30.8 +2.4
KSH pmax pmax
comp=Z,600nm,1.7s
KSH LR LR
comp=Z,340nm,11.7s
KSH LR LR
comp=Z,850nm,15.5s
KSH LR LR
comp=Z,2μm,19.7s
MFID Camas Ranch 91.15 46 *e*P **P 03 56 11.0 +1.4**
NEW Newport 91.17 41 PP PP 03 59 49.9 +2.9
comp=Z,9.3nm,1.2s,baz=296,slow=8.3,SNR=3.6
NEW Newport 91.17 41 P **P 03 56 10.1 +0.5**
baz=259,SNR=27
NEW Newport 91.17 41 *e*P **P 03 56 10.0 +0.5**
comp=Z,62nm,1.0s
NEW PP **PP 03 59 49.9 +2.9**
NEW LR LR
comp=Z,1μm,22.0s
NEW Newport 91.17 41 *e*P **P 03 56 10.0 +0.5**
NEW 03 59 49.9
NEW pmax pmax
comp=Z,62nm,1.0s
NEW MLR MLR
comp=Z,1μm,22.0s
W13A Hualapai Mount 91.22 55 *e*P **P 03 56 12.1 +1.9**
comp=Z,226nm,1.0s
H06S1 SOCORRO T 91.30 71 T T 05 37 08.2
SNR=28
H06E1 SOCORRO T-PHAS 91.33 71 T T 05 37 09.7
SNR=34
KURK Kurchatov 91.34 321 *e*P **P 03 56 09.7 -0.4**
KURK PKKPbc **PKKPbc 04 13 32.5 -1.2**
KURK P'P' 04 21 40.2
KURK LR LR
comp=Z,2μm,22.0s
KURK Kurchatov 91.34 321 P **P 03 56 10.0 -0.1**
SNR=86
KURK Kurchatov 91.34 321 *d i*P **P 03 56 09.5 -0.6**
KURK pmax pmax
comp=Z,97nm,1.3s
KURK MLR MLR
comp=Z,1μm,23.0s
ULHL Ulahol 91.37 312 P **P 03 56 11.4 +0.7**
SNR=38
KURBB Kurchatov Arra 91.38 321 P **P 03 56 09.8 -0.5**
comp=Z,23nm,0.9s,baz=106,slow=3.9,SNR=124
KURBB PKKPbc **PKKPbc 04 13 32.5 -1.1**
comp=Z,0.8nm,0.8s,baz=276,slow=3.0,SNR=6.5
KURBB PKPPKP **P'P'df 04 21 40.2 -0.6**
comp=Z,1.3nm,1.0s,baz=282,slow=2.5,SNR=5.4
SRIG Santa Rosalia 91.39 63 *e*P **P 03 56 12.3 +1.4**
comp=Z,125nm,1.2s
NRN Naryn 91.41 312 *e*P **P 03 56 11.6 +0.5**
comp=Z,128nm,1.3s
NRN Naryn 91.41 312 *e*P **P 03 56 11.6 +0.5**
NRN pmax pmax
comp=Z,129nm,1.3s
KUU Kurty 91.58 314⇓*i*P **P 03 56 11.5 +0.1**
comp=Z,257nm,1.2s
KUU LR LR 04 37 28.8
comp=Z,540nm,21.0s
214A Organ Pipe Nat 91.61 58 P **P 03 56 14.1 +2.2**
baz=261
Y14A Wickenburg 91.75 56 *e*P **P 03 56 14.0 +1.5**
comp=Z,104nm,1.4s
PSUT Pine Spring 91.79 51 *e*P **P 03 56 14.6 +1.7**
comp=Z,98nm,1.1s
NRIK Noril'sk 91.89 340 P **P 03 56 11.6 -0.7**
comp=Z,68nm,1.0s,baz=109,slow=4.7,SNR=66
NRIK PP **PP 03 59 50.6 -1.4**
comp=Z,4.1nm,0.5s,baz=124,slow=6.1,SNR=3.7
NRIK LR LR 04 36 48.9
comp=Z,2μm,21.2s,baz=100,slow=35
TKM2 Tokmak 2 91.95 313 P **P 03 56 13.5 +0.1**
SNR=61
KZA Kyzart 92.07 312 P **P 03 56 15.2 +0.9**
SNR=72
HLID Hailey 92.19 46 P **P 03 56 16.3 +1.8**
baz=261
HLID Hailey 92.19 46 *e*P **P 03 56 16.2 +1.8**
HLID LR LR
comp=Z,1μm,22.0s
NIL Nilore 92.32 304 *e*P **P 03 56 15.1 -0.1**
NIL LR LR
comp=Z,196nm,21.0s
NIL Nilore 92.32 304 *e*P **P 03 56 15.1 -0.1**
NIL MLR MLR
comp=Z,196nm,21.0s
KBK Karagaybulak 92.38 313 P **P 03 56 15.2 -0.2**
SNR=42
CHMS Chumysh 92.58 313 P **P 03 56 16.1 0.0**
SNR=64
UCH Uchtor 92.63 312 P **P 03 56 17.7 +0.8**
SNR=68
FRU Bishkek 92.65 313 *i*P **P 03 56 17.0 +0.6**
FRU *e* 03 56 40.0
FRU pmax pmax
comp=Z,240nm,1.6s
LPIG La Paz 92.66 66 LR LR 04 32 12.0
comp=Z,656nm,18.9s,baz=246,slow=32
SYO Syowa Base 92.72 198⇑*e*P **P 03 56 14.4 -1.8**
HSIG 92.77 61 *e*P **P 03 56 18.8 +1.5**
comp=Z,53nm,1.1s
USP Ospenovka 92.80 313 P **P 03 56 17.4 +0.2**
SNR=30
PKCU Pink Cliffs 92.83 53 *e*P **P 03 56 20.7 +2.9**
comp=Z,133nm,1.2s
DUG Dugway, Tooele 92.85 50 P **P 03 56 19.1 +1.6**
baz=262
DUG Dugway, Tooele 92.85 50 *e*P **P 03 56 19.2 +1.6**
DUG LR LR
comp=Z,591nm,19.0s
DUG Dugway, Tooele 92.85 50 *e*P **P 03 56 19.2 +1.6**
DUG MLR MLR
comp=Z,591nm,19.0s
SLBS Sierra La Lagu 92.93 67 *e*P **P 03 56 19.8 +1.6**
comp=Z,82nm,1.2s
JTMT Jette 92.96 42 *e*P **P 03 56 18.3 +0.4**
comp=Z,46nm,1.6s
MSO Missoula 93.05 43 P **P 03 56 18.2 0.0**
baz=261,SNR=10
MSO Missoula 93.05 43 *e*P **P 03 56 18.6 +0.4**
comp=Z,16nm,1.1s
SFK Sufi-Kurgan 93.05 310 P **P 03 56 18.9 +0.3**
SFK pmax pmax
comp=Z,60nm,1.6s
MSU Marysvale 93.09 52 *e*P **P 03 56 21.2 +2.4**
MSU Marysvale 93.09 52 *e*P **P 03 56 21.2 +2.4**
X16A Lo Mia Camp, P 93.10 56 *e*P **P 03 56 20.9 +2.0**
comp=Z,76nm,1.3s
AML Almayashu 93.22 312 P **P 03 56 20.0 +0.5**
SNR=102
EKS2 Erkin-Say 93.23 312 P **P 03 56 19.3 +0.1**
SNR=50
WUAZ Wupatki 93.31 55 P **P 03 56 21.8 +1.9**
baz=262
WUAZ Wupatki 93.31 55 *e*P **P 03 56 21.8 +1.9**
comp=Z,85nm,1.2s
WUAZ LR LR
comp=Z,2μm,20.0s
TUC Tucson 93.36 58 P **P 03 56 22.0 +1.9**
baz=262
TUC Tucson 93.36 58 *e*P **P 03 56 21.9 +1.9**
comp=Z,21nm,0.9s
TUC LR LR
comp=Z,2μm,20.0s
TUC Tucson 93.36 58 *e*P **P 03 56 21.9 +1.9**
TUC pmax pmax
comp=Z,21nm,0.9s
TUC MLR MLR
comp=Z,2μm,20.0s
BTLS Baital 93.39 315⇓*i*P **P 03 56 19.6 -0.1**
comp=Z,82nm,1.6s
BTLS *e*S **SKSac 04 06 49.0 -1.1**
WALA Waterton Lakes 93.41 41 *e*P **P 03 56 21.4 +1.5**
comp=Z,63nm,1.1s
MCMT McKenzie Canyo 93.50 45 *e*P **P 03 56 22.0 +1.4**
CTU Camp Tracy 93.72 50 *e*P **P 03 56 23.1 +1.5**
comp=Z,111nm,1.1s
LRM Limekiln Ridge 93.92 44 *e*P **P 03 56 23.3 +0.8**
HWUT Hardware Ranch 93.98 49 *e*P **P 03 56 23.5 +0.7**
comp=Z,72nm,0.9s
HWUT LR LR
comp=Z,442nm,20.0s
MNAS Manas 94.14 312 P **P 03 56 23.3 -0.2**
MNAS pmax pmax
comp=Z,78nm,1.2s
P17A Butcher Ranch, 94.33 51 *e*P **P 03 56 26.6 +2.2**
comp=Z,91nm,1.3s
X18A Snowflake 94.34 56 *e*P **P 03 56 26.9 +2.3**
comp=Z,73nm,1.5s
SRU San Rafael Swe 94.45 51 *e*P **P 03 56 26.4 +1.4**
comp=Z,44nm,1.1s
BOZ Bozeman (W) 94.46 45 P **P 03 56 26.2 +1.3**
baz=263,SNR=66
BOZ Bozeman (W) 94.46 45 *e*P **P 03 56 26.0 +1.1**
BOZ LR LR
comp=Z,1μm,22.0s
BOZ Bozeman (W) 94.46 45 *e*P **P 03 56 26.0 +1.1**
BOZ MLR MLR
comp=Z,1μm,22.0s
HRY Holter Researc 94.46 44 *e*P **P 03 56 26.1 +1.3**
AHID Auburn Hatcher 94.47 48 *e*P **P 03 56 26.4 +1.3**
comp=Z,56nm,1.0s
AHID LR LR
comp=Z,772nm,20.0s
QLMT Earthquake Lak 94.50 46 *e*P **P 03 56 27.1 +2.0**
319A Douglas 94.51 59 *e*P **P 03 56 27.4 +2.1**
comp=Z,50nm,0.9s
W18A Petrified Fore 94.58 55 P **P 03 56 27.3 +1.6**
baz=263
W18A Petrified Fore 94.58 55 *e*P **P 03 56 28.0 +2.2**
comp=Z,45nm,1.1s
FXWY Fox Creek 94.64 47 *e*P **P 03 56 27.3 +1.5**
comp=Z,59nm,1.1s
YHB Horse Butte 94.66 46 *e*P **P 03 56 28.5 +2.6**
comp=Z,211nm,1.9s
TPAW Teton Pass 94.67 47 *e*P **P 03 56 27.6 +1.5**
comp=Z,100nm,1.4s
P18A Preston Nutter 94.73 51 *e*P **P 03 56 28.1 +1.7**
comp=Z,56nm,1.2s
REDW Red Top Meadow 94.73 47 *e*P **P 03 56 27.6 +1.3**
comp=Z,127nm,1.4s
IMW Indian Meadow 94.73 46 *e*P **P 03 56 27.9 +1.6**

comp=Z,121nm,1.5s
YMR Madison River 94.81 46 *e*P **P 03 56 29.1 +2.6**
comp=Z,68nm,1.2s
SNOW Snow King Moun 94.81 47 *e*P **P 03 56 28.3 +1.6**
comp=Z,68nm,1.1s
MOOW Moose Ponds 94.85 47 *e*P **P 03 56 28.2 +1.4**
comp=Z,76nm,1.4s
YFT Old Faithful 94.87 46 *e*P **P 03 56 30.3 +3.4**
comp=Z,62nm,1.2s
YPP Pitchstone Pla 94.88 46 *e*P **P 03 56 29.4 +2.4**
comp=Z,41nm,1.3s
LOHW Long Hollow 94.94 47 *e*P **P 03 56 28.6 +1.4**
comp=Z,78nm,1.4s
OTUK Ortayu 94.98 318 P **P 03 56 26.3 -0.7**
OTUK pmax pmax
comp=Z,52nm,1.3s
YKA Yellowknife Ar 95.04 28 P **P 03 56 27.0 +0.1**
comp=Z,55nm,0.9s,baz=259,slow=4.5,SNR=115
YKA pP **pP 03 56 41.3 -0.1**
comp=Z,11nm,0.9s,baz=261,slow=4.7,SNR=3.9
YKA PP **PP 04 00 13.0 -3.7**
comp=Z,3.5nm,1.0s,baz=262,slow=7.9,SNR=4.3
YKA LR LR 04 32 16.1
comp=Z,117nm,21.9s,baz=276,slow=31
YKW3 Yellowknife Ar 95.05 28 *e*P **P 03 56 26.3 -0.6**
comp=Z,107nm,1.1s
H17A Grant Village 95.05 46 P **P 03 56 30.1 +2.4**
baz=263,SNR=34
H17A Grant Village 95.05 46 *e*P **P 03 56 30.4 +2.6**
comp=Z,49nm,1.1s
LKWY Lake 95.20 46 PFAKE 03 56 40.0 +12
LKWY LR LR
comp=Z,2μm,20.0s
PV05 Paradox Valley 95.44 52 *e*P **P 03 56 32.1 +2.5**
comp=Z,68nm,1.4s
PV09 Paradox Valley 95.46 52 *e*P **P 03 56 31.6 +1.8**
PV10 Paradox Valley 95.52 52 *e*P **P 03 56 31.9 +1.9**
comp=Z,59nm,1.0s
BW06 Boulder Array 95.60 48 P **P 03 56 31.1 +0.8**
baz=264,SNR=102
BW06 Boulder Array 95.60 48 *e*P **P 03 56 30.9 +0.7**
comp=Z,69nm,1.0s
BW06 LR LR
comp=Z,679nm,20.0s
PD31 Pinedale Array 95.60 48 *e*P **P 03 56 31.0 +0.7**
PDAR Pinedale Array 95.60 48 P **P 03 56 30.9 +0.7**
comp=Z,51nm,0.9s,baz=242,slow=3.2,SNR=237
PDAR PP **PP 04 00 21.4 -0.7**
comp=Z,2.8nm,1.1s,baz=258,slow=4.2,SNR=4.2
PDAR PKPPKP **P'P'df 04 21 34.5 +0.6**
comp=Z,1.8nm,1.0s,baz=111,slow=1.3,SNR=11
PDAR LR LR 04 35 24.2
comp=Z,552nm,19.1s,baz=309,slow=33
PDAR Pinedale Array 95.60 48 *e*P **P 03 56 29.6 -0.7**
PDAR PP **PP 04 00 21.4 -0.7**
PDAR P'P' 04 21 34.5
PV04 Paradox Valley 95.62 52 *e*P **P 03 56 32.6 +2.2**
comp=Z,109nm,1.3s
PV03 Paradox Valley 95.65 52 *e*P **P 03 56 32.0 +1.5**
comp=Z,52nm,1.4s
KK31 Karatay Array 95.67 313 *e*P **P 03 56 29.9 -0.4**
KK31 Karatay Array 95.67 313 *e*P **P 03 56 29.9 -0.4**
KKAR Karatay Array 95.67 313 *e*P **P 03 56 29.9 -0.4**
KKAR Karatay Array 95.67 313 *e*P **P 03 56 29.9 -0.4**
PV02 Paradox Valley 95.74 52 *e*P **P 03 56 32.9 +1.9**
comp=Z,53nm,1.4s
MVCO Mesa Verde 95.82 53 P **P 03 56 32.8 +1.4**
baz=264
MVCO Mesa Verde 95.82 53 *e*P **P 03 56 32.9 +1.5**
comp=Z,29nm,1.4s
MVCO LR LR
comp=Z,1μm,22.0s
PV07 Paradox Valley 95.83 52 *e*P **P 03 56 33.0 +1.6**
comp=Z,74nm,1.5s
GCMT Greycliff 95.85 45 *e*P **P 03 56 33.3 +2.1**
PV01 Paradox Valley 95.86 52 *e*P **P 03 56 32.8 +1.2**
comp=Z,56nm,1.6s
KBL Kabul 95.90 304 *e*P **P 03 56 31.4 -0.4**
comp=Z,58nm,1.1s
KBL Kabul 95.90 304 *e*P **P 03 56 31.4 -0.4**
KBL pmax pmax
comp=Z,58nm,1.1s
121A Cookes Peak, D 95.90 58 P **P 03 56 33.3 +1.5**
baz=264,SNR=20
IUG Iuzhnay 95.92 312 *e*P **P 03 56 31.6 0.0**
comp=Z,58nm,1.6s
IUG *e*S **SKSac 04 07 03.3 -0.8**
PV15 Paradox Valley 95.95 52 *e*P **P 03 56 33.8 +1.9**
comp=Z,63nm,1.4s
EGMT Eagleton 96.02 42 P **P 03 56 32.5 +0.7**
baz=264
EGMT Eagleton 96.02 42 *e*P **P 03 56 32.4 +0.5**
comp=Z,66nm,1.1s
EGMT LR LR
comp=Z,562nm,20.0s
RLMT Red Lodge 96.06 45 P **P 03 56 33.9 +1.6**
baz=264,SNR=10
RLMT Red Lodge 96.06 45 *e*P **P 03 56 33.8 +1.6**
comp=Z,53nm,1.6s
RLMT LR LR
comp=Z,936nm,22.0s
BRLS Borolday 96.16 312 *e*S **SKSac 04 07 05.6 +0.5**
CHM Chimkent 96.26 312 *e*P **P 03 56 33.3 +0.4**
comp=Z,36nm,1.3s
O20A White River Ci 96.32 50 P **P 03 56 35.0 +1.5**
baz=264,SNR=17
O20A White River Ci 96.32 50 *e*P **P 03 56 35.0 +1.5**
comp=Z,81nm,1.4s
LAZ Ladron 96.63 56 *e*P **P 03 56 37.1 +2.0**
BVA0 Borovoye Array 96.72 323 *i* P **P 03 56 34.0 -0.8**
BVA0 pmax pmax
comp=Z,137nm,1.6s
BVAR Borovoye Array 96.72 323 P **P 03 56 33.9 -0.8**
comp=Z,39nm,0.8s,baz=93,slow=5.5,SNR=183
BVAR PKKP **PKKPdf 04 13 23.6 +2.5**
comp=Z,0.4nm,0.5s,baz=293,slow=4.4,SNR=4.5
BVAR LR LR 04 41 11.8
comp=Z,847nm,20.5s,baz=82,slow=36
Y22D IRIS PASSCAL I 96.78 57 P **P 03 56 36.6 +0.9**
baz=264
Y22D IRIS PASSCAL I 96.78 57 *e*pP pP 03 56 54.0 +3.7
Y22E IRIS PASSCAL I 96.78 57 P **P 03 56 36.6 +0.9**
baz=264
BRVK Borovoye 96.79 323 *e*P **P 03 56 34.3 -0.7**
comp=Z,80nm,1.0s
BRVK LR LR
comp=Z,816nm,22.0s
BRVK Borovoye 96.79 323 P **P 03 56 34.7 -0.4**
SNR=42
BRVK Borovoye 96.79 323 *d i* P **P 03 56 34.2 -0.9**
BRVK pmax pmax
comp=Z,63nm,1.0s
BNM Barren Site 97.03 57 *e*P Pdif 03 56 38.3 +1.2
LPM Los Pinos Moun 97.04 56 *e*P Pdif 03 56 38.6 +1.6
S22A 4UR Ranch, Cre 97.19 53 P Pdif 03 56 39.5 +1.7
baz=265,SNR=14
S22A 4UR Ranch, Cre 97.19 53 *e*P Pdif 03 56 39.5 +1.8
comp=Z,48nm,1.8s
SMCO Snowmass 97.20 52 *e*P Pdif 03 56 39.5 +1.6
comp=Z,26nm,1.1s
RWWY Rawlins 97.24 49 *e*P Pdif 03 56 38.7 +0.9
comp=Z,108nm,1.2s
TASM ASL Pad, Albuq 97.24 56 P Pdif 03 56 39.0 +1.1
baz=265,SNR=24
ANMO Albuquerque 97.24 56 P Pdif 03 56 39.0 +1.1
comp=Z,12nm,0.9s,baz=216,slow=5.3,SNR=40
ANMO LR LR 04 32 56.5
comp=Z,1μm,21.2s,baz=278,slow=31
ANMO Albuquerque 97.24 56 P Pdif 03 56 39.0 +1.1
baz=265
ANMO Albuquerque 97.24 56 *e*P Pdif 03 56 39.0 +1.1
comp=Z,14nm,0.9s
ANMO Albuquerque 97.24 56 *d i* P Pdif 03 56 38.8 +0.9
ANMO pmax pmax
comp=Z,12nm,0.9s
TASL Snake Pit, Alb 97.24 56 P Pdif 03 56 39.0 +1.1
baz=265,SNR=23
K22A Casper 97.82 48 P Pdif 03 56 41.2 +1.0
baz=266,SNR=30
K22A Casper 97.82 48 *e*P Pdif 03 56 41.3 +1.0
comp=Z,64nm,1.0s
MNTX Cornudas Mount 97.85 59 P Pdif 03 56 41.0 +0.5
baz=265,SNR=20
MNTX Cornudas Mount 97.85 59 *e*P Pdif 03 56 41.2 +0.8
comp=Z,14nm,1.0s
MNTX LR LR
comp=Z,1μm,21.0s

N23A Red Feather La 98.13 50 Pdiff Pdif 03 56 43.4 +1.6
baz=266
N23A Red Feather La 98.13 50 *e*P Pdif 03 56 43.5 +1.7
comp=Z,115nm,1.6s
NVL N'lazarevskaya 98.22 190 *e*P Pdif 03 56 55.9 +15
NVL pmax pmax
comp=Z,2.0nm,0.3s
SDCO Great Sand Dun 98.24 53 Pdiff Pdif 03 56 43.5 +1.1
baz=266
SDCO Great Sand Dun 98.24 53 PFAKE 03 56 50.0 +7.6
SDCO LR LR
comp=Z,1μm,20.0s
ISCO Idaho Springs 98.30 51 Pdiff Pdif 03 56 44.2 +1.6
baz=266
ISCO Idaho Springs 98.30 51 *e*P Pdif 03 56 44.5 +1.8
comp=Z,44nm,1.9s
ISCO LR LR
comp=Z,1μm,20.0s
ISCO Idaho Springs 98.30 51 P Pdif 03 56 44.4 +1.7
ISCO pmax pmax
comp=Z,44nm,1.9s
LAO LASA Array 98.30 44 Pdiff Pdif 03 56 43.6 +1.4
baz=267
LAO LASA Array 98.30 44 *e*P Pdif 03 56 43.7 +1.5
LAO *e*PKP **PKiKP 04 01 14.9 +0.4**
LAO LR LR
comp=Z,1μm,22.0s
PHWY Pilot Hill 98.52 49 *e*P Pdif 03 56 45.2 +1.6
comp=Z,19nm,1.3s
Q24A Divide 98.60 52 Pdiff Pdif 03 56 45.5 +1.5
baz=266
GDL2 Guadalupe Moun 98.75 59 *e*P Pdif 03 56 46.1 +1.5
T25A Trinidad 99.06 54 Pdiff **Pdif 03 56 47.4 +1.4**
baz=266
T25A Trinidad 99.06 54 *e*P **Pdif 03 56 48.4 +2.4**
comp=Z,19nm,1.3s
TX31 Lajitas Ar. Si 99.13 62 *e*P **Pdif 03 56 47.5 +1.2**
TXAR Lajitas Array 99.13 62 P **Pdif 03 56 47.1 +0.8**
comp=Z,3.6nm,1.1s,baz=251,slow=3.8,SNR=24
TXAR PP **PP 04 00 48.7 -0.7**
comp=Z,1.6nm,1.0s,baz=253,slow=6.3,SNR=4.5
TXAR PKKPbc **PKKPbc 04 13 12.3 +0.2**
comp=Z,1.1nm,0.9s,baz=100,slow=3.0,SNR=5.7
TXAR PKPPKP **P'P'df 04 21 29.2 +1.0**
comp=Z,0.4nm,0.9s,baz=93,slow=5.3,SNR=3.4
TXAR LR LR 04 37 51.2
comp=Z,366nm,18.3s,baz=0.0,slow=33
CPRX Cap Rock 99.23 58 *e*P **Pdif 03 56 48.4 +1.7**
SNAA Sanae 99.32 185 PKiKP **PKiKP 04 01 15.6 0.0**
SNAA Sanae 99.32 185 Pdiff **Pdif 03 56 38.6 -7.7**
SNAA Sanae 99.32 185 P **Pdif 03 56 44.8 -1.5**
comp=Z,2.9nm,0.8s,baz=181,slow=3.2,SNR=9.4
SNAA PKKPbc **PKKPbc 04 13 09.1 -3.6**
comp=Z,2.1nm,0.8s,baz=14,slow=3.4,SNR=6.3
SNAA LR LR 04 38 25.5
comp=Z,2μm,20.7s,baz=152,slow=33
SNAA Sanae 99.32 185 *e*P **Pdif 03 56 43.1 -3.1**
comp=Z,9.9nm,1.2s
SNAA PKKPbc **PKKPbc 04 13 09.1 -3.6**
RSSD Black Hills 99.71 47 Pdiff **Pdif 03 56 49.6 +0.9**
baz=268
RSSD Black Hills 99.71 47 *e*Pdif **Pdif 03 56 49.3 +0.6**
comp=Z,58nm,1.4s
RSSD Black Hills 99.71 47 *e*P **Pdif 03 56 49.3 +0.6**
RSSD pmax pmax
comp=Z,58nm,1.4s
DGMT Dagmar 99.75 42 Pdiff **Pdif 03 56 49.2 +0.7**
baz=268
DGMT Dagmar 99.75 42 PFAKE 03 57 00.0 +11
DGMT LR LR
comp=Z,491nm,20.0s
PMSA Palmer Station 99.83 162 LR LR 04 38 25.3
comp=Z,754nm,18.6s,baz=263,slow=33
PMSA Palmer Station 99.83 162 *e*Pdif **Pdif 03 56 48.0 -0.5**
MSTX Muleshoe 100.21 57 Pdiff **Pdif 03 56 51.4 +0.3**
baz=267
VNA3 Neumayer Olymp 100.24 183 PKiKP **PKiKP 04 01 17.1 -0.1**
VNA3 Neumayer Olymp 100.24 183 Pdiff **Pdif 03 56 48.8 -1.5**
VNA3 SKS 04 07 21.1
KSCO Kaye Shedlock' 100.57 52 Pdiff **Pdif 03 56 54.2 +1.7**
baz=268
OGNE Ogallala 101.09 50 Pdiff **Pdif 03 56 55.8 +1.0**
baz=268
OGNE Ogallala 101.09 50 PFAKE 03 57 10.0 +15
OGNE LR LR
comp=Z,685nm,21.0s
AMTX Amarillo 101.15 56 Pdiff **Pdif 03 56 56.0 +0.8**
baz=268
AMTX Amarillo 101.15 56 *e*Pdif **Pdif 03 56 56.0 +0.8**
comp=Z,31nm,1.0s
FFC Flin Flon 101.16 36 *e*Pdif **Pdif 03 56 54.7 +0.1**
FFC LR LR
comp=Z,690nm,20.0s
FFC Flin Flon 101.16 36 *e*P **Pdif 03 56 54.7 +0.1**
FFC MLR MLR
comp=Z,690nm,20.0s
RES Resolute Bay 101.91 15 *e*Pdif **Pdif 03 56 58.0 +0.5**
RES Resolute Bay 101.91 15 *e*P **Pdif 03 56 58.0 +0.5**
SVE Sverdlovsk 102.39 326 *e*P **Pdif 03 56 59.3 -0.7**
SVE *e* 04 01 10.6
SVE *e*S **SKSac 04 07 36.3 +0.9**
SVE pmax pmax
comp=Z,36nm,1.5s
SVE MLR MLR
comp=Z,1μm,22.0s
JCT Junction City 102.55 61 Pdiff **Pdif 03 57 01.3 -0.1**
baz=268
JCT Junction City 102.55 61 *e*Pdif **Pdif 03 57 01.6 +0.2**
comp=Z,7.6nm,0.8s
JCT LR LR
comp=Z,639nm,19.0s
JCT Junction City 102.55 61 *e*P **Pdif 03 57 01.6 +0.2**
JCT pmax pmax
comp=Z,8.0nm,0.8s
JCT MLR MLR
comp=Z,639nm,19.0s
ABTX Abilene, Hawle 102.77 58 Pdiff **Pdif 03 57 02.5 +0.2**
baz=268
833A Chaparral WMA, 102.81 63 Pdiff **Pdif 03 57 02.6 +0.1**
baz=267
CBKS Cedar Bluff 102.82 52 Pdiff **Pdif 03 57 03.3 +0.9**
baz=270
CBKS Cedar Bluff 102.82 52 *e*Pdif **Pdif 03 57 02.8 +0.4**
comp=Z,18nm,1.1s
CBKS LR LR
comp=Z,1μm,21.0s
CBKS Cedar Bluff 102.82 52 *e*P **Pdif 03 57 02.8 +0.4**
CBKS pmax pmax
comp=Z,19nm,1.1s
CBKS MLR MLR
comp=Z,1μm,21.0s
MDND Maddock 102.83 43 Pdiff **Pdif 03 57 02.8 +0.6**
baz=272
AB31 Akbulak array 103.21 319 *i* P **Pdif 03 57 02.6 -1.2**
AB31 pmax pmax
comp=Z,21nm,1.0s
SUSD Miller 103.36 46 Pdiff **Pdif 03 57 05.0 +0.3**
baz=271
WMOK Wichita Mounta 103.53 56 Pdiff **Pdif 03 57 06.0 +0.3**
baz=269
WMOK Wichita Mounta 103.53 56 *e*Pdif **Pdif 03 57 05.8 +0.1**
comp=Z,4.0nm,1.0s
WMOK LR LR
comp=Z,885nm,20.0s
WMOK Wichita Mounta 103.53 56 *e*P **Pdif 03 57 05.8 +0.1**
WMOK pmax pmax
comp=Z,4.0nm,1.0s
WMOK MLR MLR
comp=Z,885nm,20.0s
ARU Arti 103.57 326 PKKPbc PKKPbc 04 12 59.1 -1.0
comp=Z,1.1nm,0.5s,baz=274,slow=5.6,SNR=4.2
ARU Arti 103.57 326 *e*Pdif **Pdif 03 57 03.7 -1.5**
comp=Z,45nm,1.6s
ARU PKKPbc **PKKPbc 04 12 59.1 -1.0**
ARU LR LR
comp=Z,1μm,22.0s
ARU Arti 103.57 326 *d i* P **Pdif 03 57 03.8 -1.5**
ARU 04 01 17.9
ARU S **SKSac 04 07 39.1 -1.8**
ARU SP **SP 04 10 22.5 -3.4**
ARU PS **PS 04 10 34.8 +2.1**
ARU pmax pmax
comp=Z,34nm,1.7s
ARU MLR MLR
comp=Z,2μm,24.0s
G31A Conde 103.87 46 Pdiff **Pdif 03 57 07.2 +0.3**

baz=272
BGNE Belgrade 104.02 49 Pdiff **Pdif 03 57 08.4 +0.7**
baz=271
E31A Nome 104.04 44 Pdiff **Pdif 03 57 07.7 +0.1**
baz=273
C31A Landman Farms, 104.09 43 Pdiff **Pdif 03 57 07.8 0.0**
baz=273
KVTX Kingsville 104.10 64 PFAKE 03 57 20.0 +12
KVTX LR LR
comp=Z,634nm,19.0s
B31A Greenbush Farm 104.11 42 Pdiff **Pdif 03 57 07.7 -0.1**
baz=273
D31A Mcclaflin, Tow 104.13 44 Pdiff **Pdif 03 57 07.9 -0.1**
baz=273
G32A Webster 104.37 45 Pdiff **Pdif 03 57 09.0 -0.2**
baz=273
A31A Linda, St. Vin 104.38 42 Pdiff **Pdif 03 57 08.8 -0.3**
baz=274
AKTO Aktyubinsk 104.39 320 Pdiff **Pdif 03 57 07.5 -1.5**
comp=Z,6.0nm,0.9s,baz=72,slow=7.7,SNR=22
AKTO PKiKP **PKiKP 04 01 26.0 +0.7**
comp=Z,8.6nm,1.0s,baz=54,slow=4.0,SNR=7.2
AKTO PKKPbc **PKKPbc 04 12 55.7 -1.7**
comp=Z,0.7nm,0.5s,baz=338,slow=5.4,SNR=3.0
H32A Carlson Farm, 104.45 46 Pdiff **Pdif 03 57 09.5 0.0**
baz=272
WHTX Lake Whitney, 104.60 59 Pdiff **Pdif 03 57 10.4 0.0**
baz=269
F32A Veblen 104.61 45 Pdiff **Pdif 03 57 10.4 +0.2**
baz=273
D32A Dogwood Acres, 104.61 44 Pdiff **Pdif 03 57 09.9 -0.2**
baz=273
ECSD EROS Data Cent 105.08 47 PKiKP **PKiKP 04 01 26.3 -0.5**
baz=273
ECSD EROS Data Cent 105.08 47 *e*Pdif **Pdif 03 57 13.3 +1.0**
ECSD LR LR
comp=Z,882nm,22.0s
G33A Ortonville 105.12 46 PKiKP **PKiKP 04 01 26.4 -0.4**
baz=273
ULM Lac du Bonnet 105.14 40 Pdiff **Pdif 03 57 11.9 -0.4**
comp=Z,6.5nm,0.8s,baz=277,slow=6.1,SNR=8.6
ULM PKiKP **PKiKP 04 01 26.2 -0.5**
comp=Z,6.2nm,0.9s,baz=295,slow=4.2,SNR=5.1
ULM Lac du Bonnet 105.14 40 P **Pdif 03 57 12.0 -0.4**
FCC Fort Churchill 105.14 31 *e*Pdif **Pdif 03 57 11.9 -0.3**
comp=Z,27nm,1.2s
FCC *e*PKP **PKiKP 04 01 25.8 -0.5**
FCC Fort Churchill 105.14 31 *e*P **Pdif 03 57 11.9 -0.3**
FCC pmax pmax
comp=Z,27nm,1.2s
KSU1 Kansas State U 105.25 52 PKiKP **PKiKP 04 01 27.2 0.0**
baz=272
KSU1 Kansas State U 105.25 52 PFAKE 04 01 40.0
KSU1 LR LR
comp=Z,1μm,20.0s
AGMN Agassiz Nation 105.31 42 PKiKP **PKiKP 04 01 26.8 -0.3**
baz=275
AGMN Agassiz Nation 105.31 42 PFAKE 04 01 40.0
AGMN LR LR
comp=Z,606nm,19.0s
D33A AnnSam, Waubun 105.41 43 PKiKP **PKiKP 04 01 26.7 -0.6**
baz=274
C33A Trail 105.41 43 PKiKP **PKiKP 04 01 26.8 -0.5**
baz=274
A33A Warroad 105.57 42 PKiKP **PKiKP 04 01 27.0 -0.4**
baz=275
G34A Benson 105.69 45 PKiKP **PKiKP 04 01 27.6 -0.2**
baz=274
D34A Park Rapids 105.86 44 PKiKP **PKiKP 04 01 27.6 -0.5**
baz=275
F34A Alexandria 105.91 45 PKiKP **PKiKP 04 01 27.7 -0.6**
baz=274
C34A RKJ Ranch, Bem 106.00 43 PKiKP **PKiKP 04 01 27.8 -0.6**
baz=275
B34A Aery, Baudette 106.10 42 PKiKP **PKiKP 04 01 28.1 -0.4**
baz=276
H35A Sunnyside Ranc 106.30 46 PKiKP **PKiKP 04 01 28.6 -0.4**
baz=274
F35A Swanville 106.39 45 PKiKP **PKiKP 04 01 28.7 -0.4**
baz=275
E35A Pequot Lakes 106.44 44 PKiKP **PKiKP 04 01 28.7 -0.5**
baz=275
G35A Watkins 106.50 45 PKiKP **PKiKP 04 01 29.2 -0.2**
baz=275
L36A Harm Buss Farm 106.60 49 PKiKP **PKiKP 04 01 29.2 -0.4**
baz=274
C35A Jirik Farms, M 106.62 43 PKiKP **PKiKP 04 01 28.6 -0.9**
baz=276
D35A Remer 106.63 43 PKiKP **PKiKP 04 01 28.5 -1.0**
baz=276
K36A Gilmore City 106.72 48 PKiKP **PKiKP 04 01 29.2 -0.7**
baz=274
B35A Bob, Littlefor 106.72 42 PKiKP **PKiKP 04 01 28.9 -0.8**
baz=276
J36A Seneca 1, Swea 106.75 47 PKiKP **PKiKP 04 01 29.3 -0.6**
baz=274
I36A Fitzsimmons Fa 106.93 47 PKiKP **PKiKP 04 01 29.8 -0.4**
baz=275
H36A Jessenland, He 106.95 46 PKiKP **PKiKP 04 01 30.6 +0.4**
baz=275
NATX Nacogdoches 106.98 59 PFAKE 04 01 40.0
NATX LR LR
comp=Z,692nm,21.0s
P37A Lathrop 106.98 51 PKiKP **PKiKP 04 01 29.7 -0.7**
baz=273
G36A St. Michael 107.02 45 PKiKP **PKiKP 04 01 30.2 -0.1**
baz=275
N37A Lee Faris, Mou 107.02 50 PKiKP **PKiKP 04 01 30.0 -0.5**
baz=274
M37A Trindle Farm, 107.10 49 PKiKP **PKiKP 04 01 30.5 -0.1**
baz=274
O37A Wolven Farm, M 107.11 51 PKiKP **PKiKP 04 01 30.5 -0.2**
baz=273
F36A Milaca 107.12 45 PKiKP **PKiKP 04 01 30.2 -0.3**
baz=276
T38A Diamond 107.15 54 PKiKP **PKiKP 04 01 30.3 -0.5**
baz=272
D36A Goodland 107.23 43 PKiKP **PKiKP 04 01 30.2 -0.4**
baz=276
E36A McGregor 107.23 44 PKiKP **PKiKP 04 01 30.2 -0.5**
baz=276
L37A Phoenix Point, 107.27 49 PKiKP **PKiKP 04 01 30.1 -0.8**
baz=274
K37A Belmond 107.31 48 PKiKP **PKiKP 04 01 30.3 -0.6**
baz=275
J37A Redenius Farm, 107.33 47 PKiKP **PKiKP 04 01 30.8 -0.2**
baz=275
I37A Lemond, Waseca 107.38 47 PKiKP **PKiKP 04 01 31.0 0.0**
baz=275
C36A Pine Crest Far 107.38 43 PKiKP **PKiKP 04 01 30.6 -0.3**
baz=277
R38A Fenwick Farm, 107.40 53 PKiKP **PKiKP 04 01 30.5 -0.8**
baz=273
S38A Stockton 107.43 53 PKiKP **PKiKP 04 01 30.7 -0.6**
baz=273
P38A Dawn 107.61 51 PKiKP **PKiKP 04 01 31.1 -0.4**
baz=274
O38A Galt 107.63 51 PKiKP **PKiKP 04 01 31.3 -0.3**
baz=274
H37A Dierke Farm, C 107.67 46 PKiKP **PKiKP 04 01 31.3 -0.2**
baz=276
SPMN Marine on St. 107.68 45 PKiKP **PKiKP 04 01 30.9 -0.6**
baz=276
SCIA State Center 107.69 49 PFAKE 04 01 40.0
SCIA LR LR
comp=Z,703nm,20.0s
V39A Pettigrew 107.72 55 PKiKP **PKiKP 04 01 31.3 -0.7**
baz=272
D37A Cotton 107.73 43 PKiKP **PKiKP 04 01 31.0 -0.6**
baz=277
M38A Pleasantville 107.74 49 PKiKP **PKiKP 04 01 31.7 -0.1**
baz=274
F37A Hinrichs Farm, 107.75 45 PKiKP **PKiKP 04 01 31.2 -0.4**
baz=276
N38A Joes South For 107.76 50 PKiKP **PKiKP 04 01 31.3 -0.6**
baz=274
KBS Kingsbay 107.81 354 PFAKE 04 01 40.0
KBS LR LR
comp=Z,1μm,22.0s
E37A Wrenshall 107.82 44 PKiKP **PKiKP 04 01 31.0 -0.7**
baz=277
C37A Embarrass 107.82 43 PKiKP **PKiKP 04 01 31.2 -0.6**
baz=277
MIAR Mount Ida 107.83 56 PFAKE 04 01 40.0
MIAR LR LR
comp=Z,1μm,20.0s
U39A Green Forest 107.83 55 PKiKP **PKiKP 04 01 31.5 -0.6**
baz=273

L38A	Oak Wood Farm,	107.86	49	PKiKP	PKiKP	04 01 31.4	-0.6
	baz=275						
T39A	Clever	107.88	54	PKiKP	PKiKP	04 01 31.8	-0.3
	baz=273						
S39A	Bolivar	107.89	53	PKiKP	PKiKP	04 01 32.0	-0.2
	baz=273						
K38A	Parkersburg	107.95	48	PKiKP	PKiKP	04 01 31.6	-0.5
	baz=275						
R39A	Chumby, Stover	108.08	53	PKiKP	PKiKP	04 01 32.0	-0.5
	baz=274						
Q39A	Willow Grove F	108.08	52	PKiKP	PKiKP	04 01 31.8	-0.7
	baz=274						
Y40A	Okolona	108.09	57	PKiKP	PKiKP	04 01 31.9	-0.7
	baz=272						
J38A	Wedel Dairy, R	108.11	47	PKiKP	PKiKP	04 01 31.7	-0.7
	baz=276						
I38A	Scanlan Farm,	108.14	46	PKiKP	PKiKP	04 01 31.9	-0.6
	baz=276						
P39B	Salisbury	108.22	51	PKiKP	PKiKP	04 01 32.3	-0.4
	baz=274						
F38A	Pierce - Schro	108.25	44	PKiKP	PKiKP	04 01 32.6	0.0
	baz=277						
EYMN	Ely	108.25	42	PFAKE		04 01 40.0	
EYMN				LR	LR		
	comp=Z,622nm,20.0s						
541A	Lake Charles	108.26	61	PKiKP	PKiKP	04 01 33.0	0.0
	baz=271						
N39A	Derby Farms, D	108.31	50	PKiKP	PKiKP	04 01 32.6	-0.3
	baz=275						
O39A	Kirksville	108.33	50	PKiKP	PKiKP	04 01 32.8	-0.1
	baz=274						
U40A	Yellville	108.34	55	PKiKP	PKiKP	04 01 32.5	-0.5
	baz=273						
G38A	Ridgeland	108.36	45	PKiKP	PKiKP	04 01 32.2	-0.6
	baz=277						
V40A	Witts Springs	108.39	55	PKiKP	PKiKP	04 01 32.6	-0.6
	baz=273						
C38A	Sawbill Land.	108.43	43	PKiKP	PKiKP	04 01 32.5	-0.4
	baz=278						
M39A	Webster	108.50	49	PKiKP	PKiKP	04 01 32.8	-0.4
	baz=275						
S40A	Lebanon	108.55	53	PKiKP	PKiKP	04 01 32.8	-0.6
	baz=274						
T40A	Mansfield	108.56	54	PKiKP	PKiKP	04 01 32.9	-0.6
	baz=274						
L39A	Vinton	108.57	48	PKiKP	PKiKP	04 01 32.9	-0.4
	baz=276						
K39A	Oelwein	108.60	48	PKiKP	PKiKP	04 01 32.5	-0.9
	baz=276						
J39A	Decorah	108.67	47	PKiKP	PKiKP	04 01 32.5	-0.9
	baz=276						
R40A	Maddies Statio	108.69	53	PKiKP	PKiKP	04 01 33.0	-0.7
	baz=274						
X41A	Kaden, Bauxite	108.71	57	PKiKP	PKiKP	04 01 32.8	-0.9
	baz=273						
I39A	Houston	108.74	47	PKiKP	PKiKP	04 01 32.8	-0.8
	baz=276						
P40A	Paris	108.76	51	PKiKP	PKiKP	04 01 33.7	-0.1
	baz=275						
Q40A	Laux Farm, Aux	108.78	52	PKiKP	PKiKP	04 01 32.9	-0.9
	baz=274						
H39A	Augusta	108.82	46	PKiKP	PKiKP	04 01 33.3	-0.4
	baz=277						
G39A	Holcombe	108.82	45	PKiKP	PKiKP	04 01 33.1	-0.6
	baz=277						
ABPO	Ambohimpanom	108.83	247	PFAKE		04 01 50.0	
ABPO				LR	LR		
	comp=Z,352nm,20.0s						
O40A	La Belle	108.85	51	PKiKP	PKiKP	04 01 33.6	-0.2
	baz=275						
W41B	Gary Mavity, V	108.89	56	PKiKP	PKiKP	04 01 33.7	-0.4
	baz=273						
PAYG	Puerto Ayora	108.90	94	PFAKE		04 01 50.0	
PAYG				LR	LR		
	comp=Z,463nm,21.0s						
F39A	Loretta	108.92	44	PKiKP	PKiKP	04 01 33.3	-0.6
	baz=278						
V41A	Mountainview	108.93	55	PKiKP	PKiKP	04 01 33.4	-0.8
	baz=273						
M40A	Post Highland	109.00	49	PKiKP	PKiKP	04 01 33.7	-0.4
	baz=276						
PRGR	Permogore	109.05	333	*e*P	Pdif	03 57 27.5	-2.0
PRGR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
U41A	Viola	109.09	55	PKiKP	PKiKP	04 01 33.7	-0.8
	baz=274						
E39A	Mellen	109.11	44	PKiKP	PKiKP	04 01 33.6	-0.6
	baz=278						
S41A	Jillco Farms,	109.15	53	PKiKP	PKiKP	04 01 34.1	-0.4
	baz=274						
K40A	Colesburg	109.15	48	PKiKP	PKiKP	04 01 33.8	-0.6
	baz=276						
L40A	Anamosa	109.16	48	PKiKP	PKiKP	04 01 33.7	-0.7
	baz=276						
T41A	Mountain View	109.17	54	PKiKP	PKiKP	04 01 34.1	-0.5
	baz=274						
J40A	Soldiers Grove	109.36	47	PKiKP	PKiKP	04 01 33.9	-0.8
	baz=277						
R41A	Rosebud	109.38	52	PKiKP	PKiKP	04 01 34.6	-0.3
	baz=275						
I40A	Norwalk	109.39	46	PKiKP	PKiKP	04 01 34.1	-0.7
	baz=277						
Q41A	Truxton	109.44	52	PKiKP	PKiKP	04 01 35.0	-0.1
	baz=275						
H40A	Chili	109.46	46	PKiKP	PKiKP	04 01 34.5	-0.4
	baz=278						
F40A	Park Falls	109.47	44	PKiKP	PKiKP	04 01 34.3	-0.6
	baz=278						
G40A	Rib Lake	109.50	45	PKiKP	PKiKP	04 01 34.5	-0.5
	baz=278						
V42A	Cord	109.55	55	PKiKP	PKiKP	04 01 34.6	-0.7
	baz=274						
N41A	Harden Midland	109.57	50	PKiKP	PKiKP	04 01 34.7	-0.5
	baz=276						
O41A	Passleys Farm,	109.61	50	PKiKP	PKiKP	04 01 34.6	-0.6
	baz=276						
U42A	Revenden	109.64	54	PKiKP	PKiKP	04 01 34.7	-0.8
	baz=274						
L41A	Preston	109.69	48	PKiKP	PKiKP	04 01 34.8	-0.6
	baz=277						
T42A	Van Buren	109.71	54	PKiKP	PKiKP	04 01 35.0	-0.6
	baz=274						
M41A	Milan	109.73	49	PKiKP	PKiKP	04 01 34.9	-0.6
	baz=276						
K41A	Shullsburg	109.77	48	PKiKP	PKiKP	04 01 34.8	-0.7
	baz=277						
JFWS	Jewell Farm	109.77	47	PKiKP	PKiKP	04 01 34.7	-0.9
	baz=277						
JFWS	Jewell Farm	109.77	47	*e*PKP	PKiKP	04 01 34.9	-0.7
JFWS				LR	LR		
	comp=Z,562nm,20.0s						
C40A	Isle Royale Na	109.82	42	PKiKP	PKiKP	04 01 35.1	-0.3
	baz=280						
R42A	Luebbering	109.84	52	PKiKP	PKiKP	04 01 35.4	-0.4
	baz=275						
S42A	Caledonia	109.89	53	PKiKP	PKiKP	04 01 35.3	-0.6
	baz=275						
J41A	Loganville	109.89	47	PKiKP	PKiKP	04 01 35.0	-0.7
	baz=277						
H41A	Junction City	109.98	46	PKiKP	PKiKP	04 01 35.3	-0.6
	baz=278						
Q42A	Golden Eagle	109.99	52	PKiKP	PKiKP	04 01 35.8	-0.3
	baz=275						
P42A	Winchester	110.07	51	PKiKP	PKiKP	04 01 35.8	-0.3
	baz=276						
COWI	Conover	110.12	44	PFAKE		04 01 50.0	
COWI				LR	LR		
	comp=Z,425nm,20.0s						
N42A	Yates City	110.17	50	PKiKP	PKiKP	04 01 35.9	-0.5
	baz=276						
F41A	Three Lakes	110.20	44	PKiKP	PKiKP	04 01 35.9	-0.4
	baz=279						
O42A	Bath	110.21	50	PKiKP	PKiKP	04 01 35.7	-0.7
	baz=276						
G41A	Antigo	110.22	45	PKiKP	PKiKP	04 01 35.6	-0.7
	baz=279						
M42A	Sheffield	110.31	49	PKiKP	PKiKP	04 01 36.1	-0.5
	baz=277						
L42A	Oliver, Polo	110.31	48	PKiKP	PKiKP	04 01 36.2	-0.4
	baz=277						
T43A	Greenville	110.34	54	PKiKP	PKiKP	04 01 36.0	-0.8
	baz=275						
K42A	Prairie Point,	110.45	48	PKiKP	PKiKP	04 01 35.9	-0.9
	baz=278						
S43A	Fulton Ridge,	110.47	53	PKiKP	PKiKP	04 01 36.1	-0.9
	baz=275						
J42A	Columbus	110.54	47	PKiKP	PKiKP	04 01 36.4	-0.6
	baz=278						
I42A	Draeger Farm,	110.61	46	PKiKP	PKiKP	04 01 36.4	-0.7
	baz=278						
P43A	Skaggs, Pawnee	110.70	51	PKiKP	PKiKP	04 01 37.1	-0.2
	baz=276						
G42A	Mountain	110.75	45	PKiKP	PKiKP	04 01 36.6	-0.7
	baz=279						
HDIL	Hopedale	110.77	50	PKiKP	PKiKP	04 01 37.1	-0.4
	baz=277						
HDIL	Hopedale	110.77	50	*e*PKP	PKiKP	04 01 37.6	+0.1
HDIL				LR	LR		
	comp=Z,951nm,20.0s						
T44A	Benton	110.90	54	PKiKP	PKiKP	04 01 37.4	-0.4
	baz=275						
E42A	Champion	110.90	44	PKiKP	PKiKP	04 01 37.0	-0.6
	baz=280						
M43A	Waltham Townsh	110.91	49	PKiKP	PKiKP	04 01 37.3	-0.4
	baz=277						
L43A	Garden Prairie	110.97	48	PKiKP	PKiKP	04 01 37.2	-0.6
	baz=278						
J43A	Natural Harves	111.04	47	PKiKP	PKiKP	04 01 37.0	-0.9
	baz=278						
S44A	Carbondale	111.11	53	PKiKP	PKiKP	04 01 37.5	-0.7
	baz=276						
I43A	Langenfeld Bro	111.16	46	PKiKP	PKiKP	04 01 37.4	-0.7
	baz=279						
U44B	Burton Farm, H	111.16	54	PKiKP	PKiKP	04 01 37.9	-0.4
	baz=275						
Y45A	Yeager Farm, C	111.20	57	PKiKP	PKiKP	04 01 38.1	-0.4
	baz=274						
G43A	Wallace	111.26	45	PKiKP	PKiKP	04 01 37.8	-0.5
	baz=280						
APA	Apatity	111.30	341⇑	*i*PKIKP	PKiKP	04 01 35.0	-2.7
APA				*i*		04 01 55.0	
APA				*i* PPP	PPP	04 04 49.0	
APA				*i* PS	PS	04 11 42.0	-8.2
APA				pmax	pmax		
	comp=N,14μm,1.0s						
TMCR	Tamitsa	111.31	337	*e*P	Pdif	03 57 38.2	-1.3
TMCR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
P44A	Sand Creek, Wi	111.41	51	PKiKP	PKiKP	04 01 38.4	-0.4
	baz=277						
E43A	Lone Tree Farm	111.54	43	PKiKP	PKiKP	04 01 38.3	-0.5
	baz=281						
EFI	East Falkland	111.59	155	PFAKE		04 01 50.0	
EFI				LR	LR		
	comp=Z,812nm,22.0s						
M44A	Midewin, Midew	111.60	49	PKiKP	PKiKP	04 01 38.5	-0.5
	baz=278						
N44A	Piper City	111.61	50	PKiKP	PKiKP	04 01 38.9	-0.2
	baz=278						
S45A	Carrier Mills	111.64	53	PKiKP	PKiKP	04 01 38.9	-0.3
	baz=276						
DAG	Danmarks Havn	111.67	360	*i* P	PKiKP	04 01 37.5	-0.7
	comp=Z,5.6nm,0.9s						
146A	Union	111.69	58	PKiKP	PKiKP	04 01 39.2	-0.3
	baz=274						
Z46A	Louisville	111.75	58	PKiKP	PKiKP	04 01 38.7	-0.9
	baz=274						
Y46A	Houston	111.77	57	PKiKP	PKiKP	04 01 38.9	-0.7
	baz=274						
R45A	Skylar, Fairfi	111.81	52	PKiKP	PKiKP	04 01 39.1	-0.4
	baz=277						
Q45A	Warren Harvey,	111.83	52	PKiKP	PKiKP	04 01 39.3	-0.3
	baz=277						
KEV	Kevo	111.92	344	PFAKE		04 01 50.0	
KEV				LR	LR		
	comp=Z,447nm,19.0s						
O45A	Potomac	111.99	50	PKiKP	PKiKP	04 01 39.5	-0.3
	baz=278						
F44A	Big Bay de Noc	112.00	44	PKiKP	PKiKP	04 01 39.4	-0.3
	baz=281						
N45A	Kentland	112.07	49	PKiKP	PKiKP	04 01 40.2	+0.3
	baz=278						
P45A	Graceland, Par	112.07	51	PKiKP	PKiKP	04 01 39.9	-0.1
	baz=278						
KLMR	Klimovskoe	112.09	333	*e*P	Pdif	03 57 39.9	-3.1
KLMR				*e*		04 01 37.4	
KLMR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KLMR	Klimovskoe	112.09	333	*e*Pdif	Pdif	03 57 40.0	-3.1
KLMR				AMP		03 57 41.8	
	comp=Z,10.0nm,1.0s						
KLMR				*e*PKiKP	PKiKP	04 01 37.5	-1.8
KLMR				*e*PKKPbc	PKKPbc	04 12 27.8	-5.5
KLMR				LQ	LQ	04 42 12.3	
KLMR				LQ	LQ	04 42 12.3	
U46A	Springville	112.10	54	PKiKP	PKiKP	04 01 39.7	-0.4
	baz=276						
PLCA	Paso Flores	112.22	140	PKiKP	PKiKP	04 01 40.7	+0.3
	comp=Z,1.7nm,0.9s,baz=204,slow=3.5,SNR=3.5						
PLCA				PKKPbc	PKKPbc	04 12 32.0	-0.4
	comp=Z,7.5nm,0.9s,baz=65,slow=4.8,SNR=12						
T46A	Princeton	112.25	53	PKiKP	PKiKP	04 01 40.1	-0.3
	baz=276						
WVT	Waverly	112.40	54	PKiKP	PKiKP	04 01 39.8	-0.9
	baz=276						
SFIN	Lafayette	112.45	50	PKiKP	PKiKP	04 01 40.5	-0.1
	baz=278						
ARCES	ARCESS Array B	112.46	344	PKiKP	PKiKP	04 01 40.0	+0.1
	comp=Z,13nm,0.9s,baz=14,slow=1.5,SNR=23						
ARCES				PKKPbc	PKKPbc	04 12 29.4	-2.9
	comp=Z,3.1nm,0.8s,baz=228,slow=1.1,SNR=8.9						
ARCES	ARCESS Array B	112.46	344	*i* PKIKP	PKiKP	04 01 40.0	+0.1
ARCES				pmax	pmax		
	comp=Z,13nm,0.9s						
P46A	Rosedale	112.47	51	PKiKP	PKiKP	04 01 40.5	-0.3
	baz=275						
Z47A	Carrollton	112.48	58	PKiKP	PKiKP	04 01 40.6	-0.3
	baz=275						
X47A	Russelville	112.54	56	PKiKP	PKiKP	04 01 40.1	-1.0
	baz=275						
Y47A	UCPARC, Winfie	112.60	57	PKiKP	PKiKP	04 01 40.5	-0.6
	baz=275						
N46A	Monticello	112.65	49	PKiKP	PKiKP	04 01 40.9	-0.1
	baz=279						
F45A	CMU Biological	112.68	44	PKiKP	PKiKP	04 01 40.6	-0.4
	baz=282						
W47A	Westpoint	112.68	55	PKiKP	PKiKP	04 01 40.3	-0.9
	baz=276						
V47A	Nunnelly	112.69	55	PKiKP	PKiKP	04 01 40.6	-0.7
	baz=276						
U47A	Clarksville	112.80	54	PKiKP	PKiKP	04 01 40.8	-0.6
	baz=276						
M46A	Old House Fiel	112.85	49	PKiKP	PKiKP	04 01 41.4	0.0
	baz=279						
T47A	Sharon Grove	112.89	53	PKiKP	PKiKP	04 01 41.0	-0.6
	baz=277						
Z48A	Northport	112.89	57	PKiKP	PKiKP	04 01 40.9	-0.8
	baz=275						
Y48A	Jasper	113.17	57	PKiKP	PKiKP	04 01 41.5	-0.8
	baz=276						
Q47A	Bedord North L	113.17	51	PKiKP	PKiKP	04 01 41.8	-0.3
	baz=278						
O47A	Sheridan	113.17	50	PKiKP	PKiKP	04 01 41.6	-0.4
	baz=279						
R47A	Wooly Knot Far	113.18	52	PKiKP	PKiKP	04 01 41.6	-0.5
	baz=278						
F46A	Macinaw City C	113.18	44	PKiKP	PKiKP	04 01 41.7	-0.2
	baz=282						
P47A	Martinsville	113.21	51	PKiKP	PKiKP	04 01 41.6	-0.5
	baz=278						
X48A	Hartselle	113.21	56	PKiKP	PKiKP	04 01 41.4	-0.9
	baz=276						
W48A	Pulaski	113.23	55	PKiKP	PKiKP	04 01 41.2	-1.1
	baz=276						
V48A	Smith Brothers	113.26	55	PKiKP	PKiKP	04 01 41.2	-1.2
	baz=276						
249A	Camden	113.38	59	PKiKP	PKiKP	04 01 42.0	-0.6
	baz=275						
LRAL	Lakeview Retre	113.39	58	PKiKP	PKiKP	04 01 42.5	-0.1
	baz=275						
LRAL	Lakeview Retre	113.39	58	*e*PKP	PKiKP	04 01 42.2	-0.5
U48A	Cassie Pea, Po	113.40	54	PKiKP	PKiKP	04 01 41.9	-0.7
	baz=277						
T48A	Bowling Green	113.44	53	PKiKP	PKiKP	04 01 42.2	-0.4
	baz=277						
BRAL	Brewton	113.50	60	PFAKE		04 02 00.0	
BRAL				LR	LR		
	comp=Z,976nm,20.0s						
149A	Jones	113.60	58	PKiKP	PKiKP	04 01 42.8	-0.2
	baz=275						
S48A	Wiedeman Farm,	113.63	53	PKiKP	PKiKP	04 01 42.7	-0.3
	baz=278						
GROC	Groznyy	113.67	314	*i* PKIKP	PKiKP	04 01 42.8	-0.1
GROC				*e*		04 02 35.9	
GROC				*e*		04 08 43.7	
GROC				pmax	pmax		
	comp=Z,17nm,0.6s						
R48A	Northridge Ran	113.67	52	PKiKP	PKiKP	04 01 43.0	-0.1
	baz=278						
Z49A	Columbiana	113.76	58	PKiKP	PKiKP	04 01 42.8	-0.6
	baz=276						
W49A	Belvidere	113.78	55	PKiKP	PKiKP	04 01 42.4	-0.9
	baz=277						
X49A	Woodville	113.80	56	PKiKP	PKiKP	04 01 42.7	-0.7
	baz=276						
V49A	McMinnville	114.00	55	PKiKP	PKiKP	04 01 42.9	-0.9
	baz=277						
U49A	Red Boiling Sp	114.00	54	PKiKP	PKPdf	04 01 43.2	-0.5
	baz=278						
250A	Grady	114.10	59	PKiKP	PKPdf	04 01 43.4	-0.6
	baz=275						
T49A	Edmonton	114.12	53	PKiKP	PKPdf	04 01 43.3	-0.7
	baz=278						
150A	Eclectic	114.25	58	PKiKP	PKPdf	04 01 43.4	-0.9
	baz=276						
Z50A	Ashland	114.27	57	PKiKP	PKPdf	04 01 43.9	-0.5
	baz=276						
X50B	Fort Payne	114.36	56	PKiKP	PKPdf	04 01 43.6	-0.9
	baz=277						
W50A	Signal Mountai	114.55	55	PKiKP	PKPdf	04 01 44.4	-0.5
	baz=277						
V50A	Pikeville	114.66	55	PKiKP	PKPdf	04 01 44.7	-0.4
	baz=278						
AAM	Ann Arbor	114.67	47	PFAKE		04 02 00.0	+15
AAM				LR	LR		
	comp=Z,591nm,19.0s						
T50A	Nancy	114.68	53	PKiKP	PKPdf	04 01 44.5	-0.5
	baz=278						
251A	Midway	114.81	59	PKiKP	PKPdf	04 01 45.2	-0.2
	baz=276						
151A	Opelika	114.84	58	PKiKP	PKiKP	04 01 45.5	0.0
	baz=276						
SUMG	Summit	114.87	6	*i* P	PKPdf	04 01 45.4	+0.5
	comp=Z,17nm,1.1s						
	comp=Z,880nm,24.0s						
Z51A	Franklin	114.88	57	PKiKP	PKPdf	04 01 45.2	-0.4
	baz=276						
Y51A	Rockmart	114.91	57	PKiKP	PKPdf	04 01 44.9	-0.8
	baz=277						
X51A	Calhoun	115.00	56	PKiKP	PKPdf	04 01 45.2	-0.5
	baz=277						
GNI	Garni	115.02	310	PKP	PKPdf	04 01 45.8	-0.1
	comp=Z,11nm,0.9s,baz=13,slow=10,SNR=5.3						
GNI	Garni	115.02	310	*e*PKP	PKPdf	04 01 45.5	-0.3
GNI				LR	LR		
	comp=Z,374nm,20.0s						
GNI	Garni	115.02	310	P	PKPdf	04 01 45.6	-0.1
GNI	Garni	115.02	310	*d* PKIKP	PKPdf	04 01 45.7	-0.1
GNI				pmax	pmax		
	comp=Z,95nm,1.7s						
V51A	Loudon	115.24	54	PKiKP	PKiKP	04 01 45.8	-0.4
	baz=278						
V51A	Loudon	115.24	54	*e*PKPdf	PKPdf	04 01 46.1	0.0
352A	Blakely	115.28	59	PKiKP	PKPdf	04 01 46.0	-0.3
	baz=276						
152A	Waverly Hall	115.33	58	PKiKP	PKPdf	04 01 46.2	-0.2
	baz=276						
152A	Waverly Hall	115.33	58	*e*PKPdf	PKPdf	04 01 46.8	+0.3
252A	Lumpkin	115.39	59	PKiKP	PKiKP	04 01 46.6	+0.1
	baz=276						
JTS	JuntasAbangare	115.49	83	PFAKE		04 02 00.0	+13
JTS				LR	LR		
	comp=Z,733nm,21.0s						
Z52A	Williamson	115.53	57	PKiKP	PKPdf	04 01 46.7	-0.1
	baz=277						
S51A	Beattyville	115.57	52	PKiKP	PKiKP	04 01 46.6	-0.2
	baz=280						
ACSO	Alum Creek Sta	115.58	49	PKiKP	PKiKP	04 01 46.2	-0.5
	baz=281						
ACSO	Alum Creek Sta	115.58	49	*e*PKPdf	PKiKP	04 01 46.2	-0.5
ACSO				LR	LR		
	comp=Z,1μm,22.0s						
KBZ	Khabaz	115.62	315	PKP	PKPdf	04 01 47.1	+0.5
	comp=Z,6.4nm,0.9s,baz=136,slow=1.6,SNR=7.7						
KBZ				PP	PP	04 02 50.1	+0.7
	comp=Z,5.6nm,0.9s,baz=72,slow=14,SNR=4.1						
KBZ				PKKPbc	PKKPbc	04 12 20.1	-0.6
	comp=Z,2.6nm,0.9s,baz=224,slow=4.6,SNR=3.9						
W52A	Murphy	115.69	55	PKiKP	PKPdf	04 01 46.9	-0.1
	baz=278						
W52A	Murphy	115.69	55	*e*PKPdf	PKPdf	04 01 47.0	0.0
KVAR	Kislovodsk Arr	115.71	315	PKP	PKPdf	04 01 46.5	-0.5
	comp=Z,29nm,1.2s,baz=350,slow=2.5,SNR=8.9						
KIV	Kislovodsk	115.72	315	*e*PKPdf	PKPdf	04 01 46.3	-0.7
KIV				LR	LR		
	comp=Z,772nm,22.0s						
KIV	Kislovodsk	115.72	315	P	PKPdf	04 01 47.6	+0.7
	SNR=5.8						
KIV	Kislovodsk	115.72	315	*i* P	PKPdf	04 01 47.4	+0.5
	SNR=6.4						
KIV	Kislovodsk	115.72	315	*i* PKIKP	PKPdf	04 01 47.3	+0.3
KIV				*e*		04 02 50.3	
KIV				*e*		04 08 32.0	
KIV				*e*PS	PS	04 12 32.1	+0.1
KIV				pmax	pmax		
	comp=Z,27nm,1.1s						
Y52A	Lilburn	115.74	57	PKiKP	PKPdf	04 01 47.1	0.0
	baz=277						
Y52A	Lilburn	115.74	57	*e*PKPdf	PKPdf	04 01 47.7	+0.5
TZTN	Tazewell	115.78	54	PKiKP	PKiKP	04 01 47.2	0.0
	baz=279						
X52A	Dahlonega	115.78	56	PKiKP	PKiKP	04 01 47.3	0.0
	baz=278						
V52A	Sevierville	115.85	54	PKiKP	PKiKP	04 01 47.6	+0.3
	baz=279						
V52A	Sevierville	115.85	54	*e*PKPdf	PKiKP	04 01 47.6	+0.3
453A	Whigham	115.86	60	PKiKP	PKiKP	04 01 47.9	+0.4
	baz=276						
VSR	Storozhevoye	115.89	323	*e*PKIKP	PKPdf	04 01 47.1	+0.2
VSR				*e*		04 02 46.9	
VSR				pmax	pmax		
	comp=Z,40nm,1.0s						
ILULI	Ilulissat	115.89	12	*e*PKPdf	PKPdf	04 01 46.7	+0.3
VORD	Divnogorie	115.90	323	*e*PKIKP	PKPdf	04 01 46.6	-0.3
VORD				*e*		04 02 49.4	
VORD				pmax	pmax		
	comp=Z,30nm,1.2s						
253A	Americus	115.90	59	PKiKP	PKiKP	04 01 47.5	0.0
	baz=276						
353A	Camilla	115.90	59	PKiKP	PKPdf	04 01 47.5	0.0
	baz=276						
HOPE	Hope Point	115.92	169	PFAKE		04 02 00.0	+13
HOPE				LR	LR		
	comp=Z,581nm,21.0s						
S52A	Salyersville	115.96	52	PKiKP	PKPdf	04 01 47.2	-0.3
	baz=280						
T52A	Hallie	116.13	53	PKiKP	PKiKP	04 01 48.0	+0.1
	baz=280						
Y53A	Monroe	116.14	56	PKiKP	PKPdf	04 01 47.8	-0.1
	baz=278						
RAYN	Ar Rayn	116.19	292	*e*PKPdf	PKPdf	04 01 48.8	+0.4
RAYN				*e*PP	PP	04 02 52.9	-1.4
RAYN				LR	LR		
	comp=Z,390nm,21.0s						
RAYN	Ar Rayn	116.19	292	*i* P	PKPdf	04 01 48.8	+0.4
	SNR=10						
Z53A	Monticello	116.22	57	PKiKP	PKPdf	04 01 47.9	-0.2
	baz=277						
X53A	Estanollee	116.28	56	PKiKP	PKPdf	04 01 48.1	-0.1

baz=278
355A Pearson 117.06 59 PKiKP **PKiKP 04 01 50.0 +0.2**
baz=277
555A McAlpin 117.10 61 PKiKP **PKPdf 04 01 49.3 -0.6**
baz=276
155A Kite 117.23 58 PKiKP **PKPdf 04 01 49.9 -0.2**
baz=278
SADO Sadowa 117.27 44 PKP **PKPdf 04 01 49.5 -0.3**
comp=Z,17nm,0.8s,baz=304,slow=2.8,SNR=9.1
255A Hazlehurst 117.31 58 PKiKP **PKPdf 04 01 50.0 -0.2**
baz=277
ERPA Erie 117.37 47 PKiKP **PKPdf 04 01 49.6 -0.5**
baz=284
FIA1 FINESS Array S 117.40 337 *e*PKPdf **PKPdf 04 01 49.3 -0.2**
FIA1 *e*PKPdf **PKiKP 04 01 49.4 -0.1**
FINES FINESS Array B 117.40 337 Pdiff **Pdif 03 58 06.5 -0.2**
comp=Z,1.0nm,0.8s,baz=67,slow=5.0,SNR=5.7
FINES PKP **PKPdf 04 01 49.5 -0.1**
comp=Z,30nm,1.1s,baz=108,slow=6.2,SNR=39
FINES PKKPab **PKKPab 04 12 16.6 +0.4**
comp=Z,0.6nm,0.6s,baz=150,slow=4.2,SNR=3.5
Z55A Blythe 117.42 57 PKiKP **PKPdf 04 01 50.4 0.0**
baz=278
656A Willston 117.55 61 PKiKP **PKiKP 04 01 50.8 0.0**
baz=276
N54A Moraine State 117.65 48 PKiKP **PKPdf 04 01 50.6 0.0**
baz=284
N54A Moraine State 117.65 48 *e*PKPdf **PKPdf 04 01 50.7 0.0**
356A Blackshear 117.68 59 PKiKP **PKPdf 04 01 50.7 -0.2**
baz=277
M54A Oil Creek Stat 117.75 47 PKiKP **PKPdf 04 01 50.7 -0.2**
baz=284
M54A Oil Creek Stat 117.75 47 *e*PKPdf **PKPdf 04 01 50.7 -0.2**
KMSC Kings Mountain 117.78 55 PKiKP **PKiKP 04 01 51.2 +0.1**
baz=280
KMSC Kings Mountain 117.78 55 *e*PKPdf **PKiKP 04 01 51.2 +0.1**
SFJD Kangerlussuaq 117.81 13 PKP **PKPdf 04 01 49.8 -0.3**
comp=Z,14nm,0.8s,baz=5.0,slow=1.2,SNR=7.3
SFJD Kangerlussuaq 117.81 13 *i* P **PKPdf 04 01 49.8 -0.3**
comp=Z,18nm,1.0s
comp=Z,530nm,22.0s
SFJD Kangerlussuaq 117.81 13 *e*PKPdf **PKPdf 04 01 50.6 +0.4**
SFJD LR LR
comp=Z,550nm,21.0s
SFJD Kangerlussuaq 117.81 13 *e*PKIKP **PKPdf 04 01 50.6 +0.4**
SFJD MLR MLR
comp=Z,550nm,21.0s
SOC Sochi 117.89 315 *i* PKiKP PKPdf 04 02 07.0 +16
SOC *e*PPP PPP 04 05 32.1
SOC *e*PS **PS 04 12 47.7 -3.8**
SOC *e*SS SS 04 19 16.1 +0.8
SOC *e* 04 23 35.7
SOC MLR MLR
comp=Z,530nm,24.0s
JSC Jenkinsville 117.98 56 *e*PKPdf **PKPdf 04 01 52.4 +0.9**
156A Sylvania 118.03 58 PKiKP **PKiKP 04 01 51.9 +0.3**
baz=278
MCWV Mont Chateau 118.06 49 PKiKP **PKPdf 04 01 51.4 -0.1**
baz=283
MCWV Mont Chateau 118.06 49 *e*PKPdf **PKPdf 04 01 51.6 +0.2**
BLA Blacksburg 118.13 52 PKiKP **PKPdf 04 01 51.6 -0.2**
baz=281
BLA Blacksburg 118.13 52 *e*PKPdf **PKPdf 04 01 52.0 +0.3**
BLA LR LR
comp=Z,2μm,22.0s
BLA Blacksburg 118.13 52 *e*PKIKP **PKPdf 04 01 52.1 +0.3**
BLA MLR MLR
comp=Z,2μm,22.0s
LCO Las Campanas 118.22 129 *e*PKPdf **PKPdf 04 01 51.9 -0.6**
LCO LR LR
comp=Z,989nm,21.0s
058A Arcadia 118.42 64 PKiKP **PKiKP 04 01 52.8 +0.3**
baz=275
PLVO Plevna 118.60 43 *e*PKPdf **PKPdf 04 01 52.4 +0.1**
MMNY Mt. Morris Dam 118.70 46 *e*PKPdf **PKPdf 04 01 52.5 -0.1**
O56A Blue Knob Stat 118.87 49 PKiKP **PKiKP 04 01 53.2 0.0**
baz=284
O56A Blue Knob Stat 118.87 49 *e*PKPdf **PKiKP 04 01 53.1 0.0**
VSU Vasula 118.91 334 *d i* PKIKP **PKPdf 04 01 52.3 -0.2**
VSU pmax pmax
comp=Z,136nm,1.2s
059A Moore Haven 119.01 64 PKiKP **PKPdf 04 01 53.6 0.0**
baz=275
NHSC New Hope 119.06 57 PFAKE 04 02 10.0 +16
NHSC LR LR
comp=Z,1μm,21.0s
ANN Anapa 119.10 317 *i* PKIKP **PKPdf 04 01 53.3 0.0**
ANN *e* 04 02 08.9
ANN *e* 04 03 12.4
ANN pmax pmax
comp=N,44nm,1.1s
ANN pmax pmax
comp=Z,69nm,1.1s
TRQA Tornquist 119.13 142 *e*PKPdf **PKPdf 04 01 53.4 -0.3**
TRQA LR LR
comp=Z,584nm,21.0s
GO03 Copiap 119.26 128 *e*PKPdf **PKPdf 04 01 54.0 -0.3**
SSPA Standing Stone 119.28 48 PKiKP **PKPdf 04 01 53.6 -0.2**
baz=285
SSPA Standing Stone 119.28 48 *e*PKPdf **PKPdf 04 01 53.8 0.0**
NNA Nana 119.50 109 *e*PKPdf **PKPdf 04 01 55.5 +0.5**
NNA LR LR
comp=Z,125nm,19.0s
NNA Nana 119.50 109 *i* PKIKP **PKPdf 04 01 56.0 +1.0**
IP04 Greensprings 119.74 51 *e*PKPdf **PKPdf 04 01 55.0 +0.2**
IP03 Louisa 119.82 51 *e*PKPdf **PKPdf 04 01 55.0 +0.1**
IP07 Quail 119.83 51 *e*PKPdf **PKPdf 04 01 54.8 -0.1**
IP06 Yanceyville 119.87 51 *e*PKPdf **PKPdf 04 01 55.1 +0.1**
IP01 Cuckoo 119.92 51 *e*PKPdf **PKPdf 04 01 55.1 +0.1**
SPRD Spring Road, M 119.92 51 *e*PKPdf **PKPdf 04 01 55.1 0.0**
IP05 Hopewell Churc 120.06 51 *e*PKPdf **PKPdf 04 01 55.6 +0.2**
BINY Binghamton 120.21 46 PKiKP **PKPdf 04 01 55.4 -0.2**
baz=287
BINY Binghamton 120.21 46 *e*PKPdf **PKPdf 04 01 55.6 0.0**
BINY LR LR
comp=Z,906nm,20.0s
PAGS Pennsylvania G 120.24 48 *e*PKPdf **PKPdf 04 01 55.7 0.0**
CBN Corbin Frederi 120.27 51 PKiKP **PKPdf 04 01 55.5 -0.3**
baz=284
CBN Corbin Frederi 120.27 51 *e*PKPdf **PKPdf 04 01 56.0 +0.3**
CBN LR LR
comp=Z,1μm,22.0s
URVA University of 120.30 51 *e*PKPdf **PKPdf 04 01 56.0 +0.2**
SDMD Soldier's Deli 120.37 49 *e*PKPdf **PKPdf 04 01 56.2 +0.3**
LONY Lake Ozonia 120.41 43 PKiKP **PKPdf 04 01 55.6 -0.3**
baz=290
LONY Lake Ozonia 120.41 43 *e*PKPdf **PKPdf 04 01 55.2 -0.6**
LONY LR LR
comp=Z,471nm,20.0s
BCIP Isla Barro Col 120.43 84 *e*PKPdf **PKPdf 04 01 55.8 -0.9**
BCIP LR LR
comp=Z,386nm,20.0s
SCHQ Schefferville 120.43 30 PKP **PKPdf 04 01 55.2 -0.4**
comp=Z,9.0nm,0.8s,baz=335,slow=3.9,SNR=5.7
SCHQ Schefferville 120.43 30 *e*PKPdf **PKPdf 04 01 56.0 +0.4**
CNNC Cliffs of the 120.53 54 PKiKP **PKPdf 04 01 56.4 0.0**
baz=282
CNNC Cliffs of the 120.53 54 *e*PKPdf **PKPdf 04 01 56.3 0.0**
CNNC LR LR
comp=Z,1μm,22.0s
KSPA Keystone Colle 120.56 46 *e*PKPdf **PKPdf 04 01 56.7 +0.5**
MVL Millersville 120.58 48 *e*PKPdf **PKPdf 04 01 56.6 +0.3**
MICGM Minsk 120.58 330 *e* **PKPdf 04 01 55.0 -0.8**
MICGM *e*LR LR 04 46 16.0
MNK Minsk 120.58 330 *e*PKIKP **PKPdf 04 01 55.0 -0.8**
IZAR Zarasai 120.68 332 *e*P **PKPdf 04 01 56.3 +0.3**
IZAR IAmb IAmb 04 01 58.6
comp=Z,29nm,0.9s
IDID Didziasalis 120.69 331 *e*P **PKPdf 04 01 56.7 +0.7**
IDID IAmb IAmb 04 01 58.5
comp=Z,36nm,0.9s
OTAV Otavalo 120.72 95 *e*PKPdf **PKPdf 04 01 57.8 -0.1**
OTAV LR LR
comp=Z,246nm,20.0s
OTAV Otavalo 120.72 95 *e*P **PKPdf 04 01 57.6 -0.3**
CBCY The Bluff, Cay 120.74 72 *e*PKPdf **PKPdf 04 01 57.4 +0.2**
N59A State Game Lan 120.74 47 PKiKP **PKiKP 04 01 56.8 0.0**
baz=287
N59A State Game Lan 120.74 47 *e*PKPdf **PKPdf 04 01 56.2 -0.4**
ISAL Salakas 120.84 332 *e*P **PKPdf 04 01 56.6 +0.3**
ISAL IAmb IAmb 04 01 58.9
comp=Z,29nm,1.0s
NCB Newcomb 120.87 43 *e*PKPdf **PKPdf 04 01 56.3 -0.5**
GO02 Mina Guanaco 120.92 126 *e*PKPdf **PKPdf 04 01 58.6 +0.7**
IIGN Ignalina 120.92 332 *e*P **PKPdf 04 01 57.2 +0.7**

IIGN IAmb IAmb 04 01 59.1
comp=Z,50nm,1.0s
FRNY Flat Rock 121.00 42 *e*PKPdf **PKPdf 04 01 56.6 -0.3**
LUPA Lehigh Univers 121.13 47 *e*PKPdf **PKPdf 04 01 57.6 +0.3**
PSUB Penn St. - Bra 121.26 48 *e*PKPdf **PKPdf 04 01 57.6 0.0**
SIM Simferopol' 121.27 318 *i* PKIKP **PKPdf 04 01 58.0 +0.5**
SIM *e* 04 03 30.0
SIM *e* 04 08 56.0
SIM pmax pmax
comp=Z,52nm,0.9s
SIM pmax pmax
comp=Z,40nm,9.5s
ACCN Adirondack Com 121.45 44 *e*PKPdf **PKPdf 04 01 57.8 -0.1**
ODNJ Ogdensburg 121.54 47 *e*PKPdf **PKPdf 04 01 58.5 +0.3**
TRY Troy 121.67 45 *e*PKPdf **PKPdf 04 01 59.1 +0.8**
BRNJ Basking Ridge 121.69 47 *e*PKPdf **PKPdf 04 01 59.1 +0.7**
VT1 Waterbury 121.74 43 *e*PKPdf **PKPdf 04 01 58.6 +0.2**
AKASG Malin Array Be 121.82 326 PKP **PKPdf 04 01 58.1 -0.2**
comp=Z,44nm,0.8s,baz=60,slow=2.5,SNR=29
AKASG PP **PP 04 03 32.0 +0.2**
comp=Z,11nm,1.0s,baz=55,slow=6.9,SNR=6.6
AKASG PKKPbc **PKKPbc 04 11 57.9 -0.5**
comp=Z,0.9nm,0.7s,baz=255,slow=3.3,SNR=7.5
AKBB Malin Array Si 121.82 326 *e*PKPdf **PKPdf 04 01 58.4 +0.1**
KIEV Kiev 121.83 326 *e*PKPdf **PKPdf 04 01 58.4 0.0**
KIEV LR LR
comp=Z,1μm,22.0s
KIEV Kiev 121.83 326 *i* P **PKPdf 04 01 58.4 0.0**
SNR=32
KIEV Kiev 121.83 326 *d i* PKIKP **PKPdf 04 01 57.9 -0.4**
AK11 Malin Array Si 121.86 326 *e*PKPdf **PKPdf 04 01 58.4 -0.1**
PAL Palisades 122.06 47 PKiKP **PKiKP 04 01 59.3 0.0**
baz=288
PAL Palisades 122.06 47 *e*PKPdf **PKPdf 04 01 59.7 +0.6**
LBNH Lisbon 122.33 42 PKiKP **PKiKP 04 01 59.8 +0.1**
baz=292
LBNH Lisbon 122.33 42 *e*PKPdf **PKPdf 04 02 00.3 +0.7**
NC303 NORSAR Array S 122.56 343 *e*PKPdf **PKPdf 04 01 59.5 +0.1**
KMBO Kilima Mbogo 122.65 263 pPKP pPKPdf 04 02 13.6 -2.8
comp=Z,11nm,0.9s,baz=45,slow=3.8,SNR=13
YLE Yale 122.66 46 *e*PKPdf **PKPdf 04 02 00.5 +0.3**
NC204 NORSAR Array S 122.69 343 *e*PKPdf **PKPdf 04 02 00.2 +0.4**
HFS Hagfors 122.70 341 PKP **PKPdf 04 01 59.3 -0.5**
comp=Z,27nm,0.9s,baz=120,slow=2.1,SNR=38
NB201 NORSAR Array S 122.72 343 *e*PKPdf **PKPdf 04 01 59.2 -0.7**
QUA2 Belchertown 122.74 45 *e*PKPdf **PKPdf 04 02 01.1 +0.7**
NB2 NORSAR Subarra 122.75 343 PKPdf **PKPdf 04 01 59.3 -0.6**
comp=Z,40nm,1.1s,baz=31,slow=1.9
NB2 NORSAR Subarra 122.75 343 PKPdf **PKPdf 04 01 59.3 -0.6**
baz=31,slow=1.9
FFD Franklin Falls 122.79 43 *e*PKPdf **PKPdf 04 02 01.5 +1.1**
SOTA Rioblanco 122.84 93 *e*P **PKPdf 04 02 02.9 +0.9**
PB01 IPOC Station P 122.84 122 *e*PKPdf **PKPdf 04 02 02.0 +0.6**
NBO00 NORSAR Array S 122.88 343 *e*PKPdf **PKPdf 04 02 00.4 +0.2**
MTDJ Mount Denham 122.89 74 PFAKE 04 02 10.0 +8.5
MTDJ LR LR
comp=Z,278nm,19.0s
NC602 NORSAR Array S 122.90 342 *e*PKPdf **PKPdf 04 01 59.8 -0.3**
ILGA Ilgaz 122.90 314 *e*PKPdf **PKPdf 04 02 02.3 +1.3**
NAO01 NORSAR Array S 123.00 343 *e*PKPdf **PKPdf 04 02 00.8 +0.4**
HORQ Saladito 123.02 91 *e*P **PKPdf 04 02 01.4 -0.7**
SUW Suwalki 123.14 331 *e*PKPdf **PKPdf 04 02 01.1 +0.4**
SUW *e*PP **PP 04 03 40.7 +0.2**
SUW LMZ LR 04 56 24.5
comp=Z,1μm,22.3s
SUW Suwalki 123.14 331 *e*PKPdf **PKPdf 04 02 01.1 +0.4**
SUW Suwalki 123.14 331 *e*PKIKP **PKPdf 04 02 01.1 +0.4**
SUW *e* 04 03 40.7
SUW MLR MLR
comp=Z,1μm,22.3s
IVI Ivigtut 123.19 16 *e*PKPdf **PKPdf 04 02 00.4 -0.2**
HRV Adam Dziewonsk 123.21 44 PKiKP **PKiKP 04 02 01.5 0.0**
baz=291
HRV Adam Dziewonsk 123.21 44 *e*PKPdf **PKPdf 04 02 01.4 +0.1**
BOSA Boshof 123.26 228 PKP **PKPdf 04 02 01.5 -0.5**
comp=Z,22nm,0.8s,baz=118,slow=1.8,SNR=36
BOSA PKKPab **PKKPbc 04 11 52.7 +0.1**
comp=Z,7.5nm,0.9s,baz=275,slow=4.9,SNR=7.1
BOSA Boshof 123.26 228 *e*PKPdf **PKPdf 04 02 02.3 +0.3**
BOSA PKKPab **PKKPbc 04 11 52.7 +0.1**
YOTC Yotoco, Valle 123.36 91 *e*P **PKPdf 04 02 01.6 -0.9**
BR131 Keskin Array S 123.38 312 *e*PKPdf **PKPdf 04 02 02.2 +0.3**
BRTR Keskin Array B 123.38 312 PKP **PKPdf 04 02 01.8 -0.2**
comp=Z,19nm,1.0s,baz=124,slow=1.8,SNR=56
BRTR PP **PP 04 03 43.5 +0.4**
comp=Z,12nm,0.9s,baz=97,slow=5.1,SNR=8.0
BRTR PKKPbc **PKKPbc 04 11 53.0 +0.7**
comp=Z,1.9nm,0.9s,baz=237,slow=3.8,SNR=9.2
BRTR SKKP 04 16 02.4
comp=Z,7.0nm,1.2s,baz=215,slow=5.9,SNR=6.6
WES Weston 123.42 44 *e*PKPdf **PKPdf 04 02 02.3 +0.6**
BRYW Bryant College 123.44 45 *e*PKPdf **PKPdf 04 02 02.4 +0.7**
PLMC San Jos`` del 123.53 90 *e*P **PKPdf 04 02 03.3 +0.5**
SORM Soroca 123.55 323 ⇑*i*P **PKPdf 04 02 02.0 +0.3**
SORM Soroca 123.55 323 ⇑PKIKP **PKPdf 04 02 02.0 +0.3**
MNMC Minye Minye 123.56 120 *e*PKPdf **PKPdf 04 02 03.5 +0.5**
MARP Paez Belalcaza 123.59 92 *e*P **PKPdf 04 02 03.3 +0.1**
PKME Peaks-Kenny Pk 123.64 40 PKiKP **PKiKP 04 02 02.4 +0.1**
baz=295
PKME Peaks-Kenny Pk 123.64 40 *e*PKPdf **PKPdf 04 02 02.5 +0.5**
PKME LR LR
comp=Z,1μm,20.0s
WVL Waterville 123.70 41 *e*PKPdf **PKPdf 04 02 02.2 +0.1**
FLOC Florencia 123.70 94 *e*P **PKPdf 04 02 03.1 0.0**
BORG Borgarnes 123.75 1 PFAKE 04 02 10.0 +8.4
BORG LR LR
comp=Z,165nm,20.0s
KIS Kishinev 123.80 322 *e*PKP **PKPdf 04 02 01.0 -1.3**
KIS M M 04 02 01.5
comp=Z,200nm,1.2s
KIS Kishinev 123.80 322 *e*PP PP 04 03 43.0 -2.3
KIS *e*SKP 04 05 08.0
KIS Kishinev 123.80 322 *e*PKS 04 05 12.0
KIS *e*SKS SKSdf 04 08 17.0 -53
KIS LRM MLR 04 59 52.0
comp=Z,400nm,24.0s
KIS Kishinev 123.80 322 *e*PKIKP **PKPdf 04 02 01.0 -1.3**
KIS *e* 04 02 18.0
KIS *e* 04 03 43.0
KIS *e* 04 06 30.0
KIS pmax pmax
comp=Z,200nm,1.2s
PQI Presque Isle 123.83 38 *e*PKPdf **PKPdf 04 02 01.9 -0.4**
MMAI Mount Meron Ar 123.83 304 PKP **PKPdf 04 02 03.4 +0.5**
comp=Z,22nm,0.9s,baz=65,slow=4.7,SNR=24
MMAI PKKPbc **PKKPbc 04 11 50.6 +0.4**
comp=Z,0.4nm,0.3s,baz=214,slow=4.0,SNR=3.8
ANTO Ankara 123.95 313 ⇓*i*P **PKPdf 04 02 03.2 +0.3**
ANTO Ankara 123.95 313 *e*PKPdf **PKPdf 04 02 03.2 +0.3**
ANTO *e*PP **PP 04 03 46.2 -0.6**
ANTO LR LR
comp=Z,356nm,22.0s
ANTO Ankara 123.95 313 P **PKPdf 04 02 03.8 +0.9**
SNR=20
ANTO Ankara 123.95 313 ⇓PKIKP **PKPdf 04 02 03.2 +0.3**
NRS Narsarsuaq 123.96 15 ⇓*i*P **PKPdf 04 02 01.7 -0.4**
comp=Z,74nm,0.9s
comp=Z,1μm,24.0s
BR231 Keskin MP Arra 123.97 313 *e*PKPdf **PKPdf 04 02 03.8 +0.8**
SUR Sutherland 124.11 221 *e*PKPdf **PKPdf 04 02 04.3 +0.7**
SUR LR LR
comp=Z,3μm,21.0s
KLNR Kaliningrad 124.13 333 *c i* PKIKP **PKPdf 04 02 03.8 +1.2**
KONO Kongsberg 124.35 343 *e*PKPdf **PKPdf 04 02 04.0 +1.0**
KONO Kongsberg 124.35 343 *c i* PKIKP **PKPdf 04 02 03.5 +0.6**
KONO pmax pmax
comp=Z,43nm,2.5s
LEOM Leova 124.39 322 ⇑*i*P **PKPdf 04 02 03.5 +0.1**
LEOM Leova 124.39 322 ⇑PKIKP **PKPdf 04 02 03.5 +0.1**
HELC Santa Helena 124.42 88 *e*PKPdf **PKPdf 04 02 04.6 -0.3**
HELC Santa Helena 124.42 88 *e*P **PKPdf 04 02 04.6 -0.3**
GUYC Guyana, Colomb 124.45 89 *e*P **PKPdf 04 02 05.4 +0.3**
MOTC Monteria, Cord 124.51 85 *e*P **PKPdf 04 02 04.4 -0.2**
TLCR 124.62 320 ⇑*i*P **PKPdf 04 02 04.6 +0.7**
TLCR 124.62 320 ⇑PKIKP **PKPdf 04 02 04.6 +0.7**
PRAC Prado 124.77 91 *e*PKPdf **PKPdf 04 02 05.3 +0.2**
PRAC Prado 124.77 91 *e*P **PKPdf 04 02 05.2 +0.1**
EIL Elat 124.90 300 PKP **PKPdf 04 02 12.3 +7.4**
comp=Z,28nm,1.0s,baz=83,slow=1.3,SNR=7.8
EIL PP **PP 04 03 58.7 +5.1**
comp=Z,15nm,1.1s,baz=42,slow=6.1,SNR=4.3
LBTB Lobatse 124.92 232 *e*PKPdf **PKPdf 04 02 05.5 +0.3**
NORC Norcasia 125.01 89 *e*P **PKPdf 04 02 05.2 -0.4**
CSS Mathiatis 125.02 307 *e*PKPdf **PKPdf 04 02 04.4 -0.6**

CSS Mathiatis 125.02 307 P **PKPdf 04 02 05.0 0.0**
CFR Carcaliu 125.05 320 ⇓*i*P **PKPdf 04 02 05.2 +0.5**
CFR Carcaliu 125.05 320 ⇓PKIKP **PKPdf 04 02 05.2 +0.5**
EMMW East Machias 125.06 40 *e*PKPdf **PKPdf 04 02 05.2 +0.5**
SJCC San Jacinto, C 125.06 84 *e*P **PKPdf 04 02 05.6 -0.1**
LVV L'vov 125.12 327 *e*PKIKP **PKPdf 04 02 06.0 +1.3**
PRAR RASCA 125.18 323 ⇓*i*P **PKPdf 04 02 05.4 +0.5**
TIRR Tirgusor 125.19 319 ⇑*i*P **PKPdf 04 02 05.3 +0.3**
TIRR Tirgusor 125.19 319 *e*PKPdf **PKPdf 04 02 05.8 +0.9**
TIRR Tirgusor 125.19 319 ⇑PKIKP **PKPdf 04 02 05.3 +0.3**
ZARC Zaragoza, Cauc 125.21 87 *e*P **PKPdf 04 02 04.9 -1.0**
EFOR EFORIE 125.22 319 ⇑*i*P **PKPdf 04 02 06.3 +1.3**
TESR Tescani 125.34 322 ⇓*i*P **PKPdf 04 02 05.2 -0.1**
PETR Petresti 125.36 321 ⇓*i*P **PKPdf 04 02 06.5 +1.2**
TLB Topalu 125.38 320 ⇓*i*P **PKPdf 04 02 06.5 +1.2**
TLB Topalu 125.38 320 ⇓PKIKP **PKPdf 04 02 06.5 +1.2**
ROSC El Rosal 125.47 90 PKP **PKPdf 04 02 07.3 +0.4**
comp=Z,42nm,0.8s,baz=170,slow=2.6,SNR=30
ROSC El Rosal 125.47 90 *e*PKPdf **PKPdf 04 02 07.5 +0.6**
ROSC El Rosal 125.47 90 *e*P **PKPdf 04 02 07.1 +0.1**
PTBC PUERTO BERRIO 125.52 88 *e*P **PKPdf 04 02 05.2 -1.4**
VRI Vrincioaia 125.61 322 ⇓*i*P **PKPdf 04 02 06.0 +0.2**
VRI Vrincioaia 125.61 322 ⇓PKIKP **PKPdf 04 02 06.0 +0.2**
BEL Belsk 125.61 330 *e*PKPdf **PKPdf 04 02 06.7 +1.1**
BEL *e*PP **PP 04 03 57.8 +0.7**
BEL LMZ LR 04 51 58.5
comp=Z,1μm,28.1s
BEL Belsk 125.61 330 *e*PKIKP **PKPdf 04 02 06.7 +1.1**
BEL *e* 04 03 57.8
BUR08 Bucovina Ar. S 125.64 324 *e*PKPdf **PKPdf 04 02 07.2 +1.3**
BURAR Bucovina Array 125.64 324 ⇓*i*P **PKPdf 04 02 06.8 +0.9**
BURAR Bucovina Array 125.64 324 ⇓PKIKP **PKPdf 04 02 06.8 +0.9**
BUR04 Bucovina Ar. S 125.64 324 *e*PKPdf **PKPdf 04 02 06.8 +0.9**
PLOR Plostina 125.66 322 ⇓*i*P **PKPdf 04 02 06.2 +0.3**
PLOR Plostina 125.66 322 ⇓PKIKP **PKPdf 04 02 06.2 +0.3**
PSN Preselentsi 125.68 319 P **PKPdf 04 02 06.0 0.0**
ICOR Ion Corvin 125.74 319 ⇑*i*P **PKPdf 04 02 06.7 +0.6**
KWP Kalwaria Pacla 125.94 327 *e*PKPdf **PKPdf 04 02 07.2 +0.9**
KWP LMZ LR 04 55 39.3
comp=Z,1μm,25.5s
KWP Kalwaria Pacla 125.94 327 *e*PKPdf **PKPdf 04 02 07.1 +0.7**
KWP Kalwaria Pacla 125.94 327 *e*PKIKP **PKPdf 04 02 07.2 +0.9**
KWP MLR MLR
comp=Z,1μm,25.5s
LPAZ La Paz 125.98 117 PKP **PKPdf 04 02 08.3 +0.2**
comp=Z,30nm,0.9s,baz=256,slow=1.3,SNR=83
LPAZ SKKPbc SKKPbc 04 15 29.1 +0.1
comp=Z,4.1nm,0.9s,baz=61,slow=5.1,SNR=6.6
LPAZ La Paz 125.98 117 *e*PKPdf **PKPdf 04 02 08.7 +0.6**
LPAZ SKKPbc SKKPbc 04 15 29.1 +0.1
BSD Bornholm Skovb 126.01 336 ⇓*i*P **PKPdf 04 02 06.2 0.0**
comp=Z,56nm,1.1s
CHIC Chingaza 126.02 90 *e*P **PKPdf 04 02 07.3 -0.7**
ISR Istrita 126.08 321 ⇓*i*P **PKPdf 04 02 07.3 +0.5**
ISR Istrita 126.08 321 ⇓PKIKP **PKPdf 04 02 07.3 +0.5**
MLR Muntele Rosu 126.27 322 PKP **PKPdf 04 02 07.4 +0.1**
comp=Z,13nm,1.1s,baz=5.9,slow=3.5,SNR=47
MLR PP **PP 04 04 02.2 +0.1**
comp=Z,1.6nm,0.9s,baz=130,slow=7.9,SNR=4.5
MLR Muntele Rosu 126.27 322 ⇓*i*P **PKPdf 04 02 07.2 0.0**
MLR Muntele Rosu 126.27 322 *e*PKPdf **PKPdf 04 02 07.7 +0.5**
MLR PP **PP 04 04 02.2 +0.1**
MLR Muntele Rosu 126.27 322 ⇓PKIKP **PKPdf 04 02 07.2 0.0**
ISP Isparta 126.31 311 *e*PKPdf **PKPdf 04 02 07.6 +0.1**
GKP Gorka Klasztor 126.33 334 *e*PKPdf **PKPdf 04 02 07.6 +0.7**
GKP *e*PP **PP 04 04 01.9 +0.1**
GKP LMZ LR 04 58 27.5
comp=Z,2μm,21.5s
GKP Gorka Klasztor 126.33 334 *e*PKIKP **PKPdf 04 02 07.6 +0.7**
GKP *e* 04 04 01.9
GKP MLR MLR
comp=Z,2μm,21.5s
DOPR Dopca 126.37 322 ⇓*i*P **PKPdf 04 02 07.8 +0.5**
SECR 126.41 321 ⇓*i*P **PKPdf 04 02 08.3 +0.9**
ARCR ARCALIA 126.42 324 ⇑*i*P **PKPdf 04 02 07.6 +0.3**
SULR 126.47 321 ⇓*i*P **PKPdf 04 02 07.9 +0.5**
COP Copenhagen 126.54 338 *i* P **PKPdf 04 02 08.6 +1.4**
comp=Z,890nm,27.0s
BMR Baia Mare 126.60 325 ⇓*i*P **PKPdf 04 02 08.2 +0.6**
BMR Baia Mare 126.60 325 ⇓PKIKP **PKPdf 04 02 08.2 +0.6**
UZH Uzhgorod 126.73 327 *e*PKIKP **PKPdf 04 02 07.8 0.0**
UZH *e* 04 02 23.8
UZH *e* 04 02 31.2
CODC Agust`>n Codaz 126.77 84 *e*P **PKPdf 04 02 09.0 +0.1**
BARC Barichara 126.78 88 *e*P **PKPdf 04 02 08.6 -0.6**
OCAC Ocana 126.79 86 *e*P **PKPdf 04 02 09.7 +0.5**
RUSC La Rusia 126.81 89 *e*PKPdf **PKPdf 04 02 09.3 -0.3**
RUSC La Rusia 126.81 89 *e*P **PKPdf 04 02 09.0 -0.6**
VOIR 126.84 322 ⇑*i*P **PKPdf 04 02 09.0 +0.7**
VOIR 126.84 322 ⇑PKIKP **PKPdf 04 02 09.0 +0.7**
TRPA Tarpa 126.88 326 ⇓*i*P **PKPdf 04 02 08.4 +0.3**
TRPA Tarpa 126.88 326 ⇓*e*PKPdf **PKPdf 04 02 08.4 +0.3**
CRVS Cervenica-Dubn 127.03 327 *e*PKIKP **PKPdf 04 02 09.4 +1.0**
CRVS Cervenica-Dubn 127.03 327 *e*PKP **PKPdf 04 02 09.4 +1.0**
CJR Cluj-Napoca 127.05 324 ⇓*i*P **PKPdf 04 02 09.1 +0.5**
CJR Cluj-Napoca 127.05 324 ⇓PKIKP **PKPdf 04 02 09.1 +0.5**
MUD Monsted U'grnd 127.07 340 ⇓*i*P **PKPdf 04 02 08.8 +0.6**
comp=Z,62nm,1.2s
comp=Z,960nm,18.0s
OJC Ojcow 127.10 329 *e*PKPdf **PKPdf 04 02 09.2 +0.7**
OJC *e*PP **PP 04 04 06.9 -0.2**
OJC LMZ LR 04 56 40.6
comp=Z,1μm,23.6s
OJC Ojcow 127.10 329 *e*PKPdf **PKPdf 04 02 09.2 +0.7**
OJC Ojcow 127.10 329 *e*PKIKP **PKPdf 04 02 09.2 +0.7**
OJC *e* 04 04 06.9
OJC MLR MLR
comp=Z,1μm,23.6s
ARR Arges 127.13 322 ⇑*i*P **PKPdf 04 02 09.6 +0.8**
LSZ Lusaka 127.21 244 *e*PKPdf **PKPdf 04 02 10.5 +0.6**
LSZ LR LR
comp=Z,675nm,20.0s
LSZ Lusaka 127.21 244 P **PKPdf 04 02 11.0 +1.2**
SNR=6.4
PAMC Pamplona, Colo 127.33 87 *e*P **PKPdf 04 02 10.9 +0.3**
SZH Strazhica 127.33 319 P **PKPdf 04 02 09.0 -0.2**
HUMR Humele 127.34 321 ⇑*i*P **PKPdf 04 02 08.9 -0.2**
NIE Niedzica 127.34 328 *e*PKPdf **PKPdf 04 02 10.5 +1.5**
NIE *e*PP **PP 04 04 10.2 +1.5**
NIE LMZ LR 04 55 43.3
comp=Z,600nm,25.4s
NIE Niedzica 127.34 328 *e*PKIKP **PKPdf 04 02 10.5 +1.5**
NIE *e* 04 04 10.2
NIE MLR MLR
comp=Z,600nm,25.4s
ZIMR 127.51 320 ⇑*i*P **PKPdf 04 02 10.3 +0.8**
ZIMR 127.51 320 PKIKP **PKPdf 04 02 10.3 +0.8**
MANT Manisa 127.52 313 *e*PKPdf **PKPdf 04 02 11.4 +1.5**
DRGR 127.53 324 ⇑*i*P **PKPdf 04 02 10.0 +0.5**
DRGR 127.53 324 ⇑PKIKP **PKPdf 04 02 10.0 +0.5**
LOT Lotru 127.62 322 ⇓*i*P **PKPdf 04 02 10.0 +0.2**
LTVH L``tav``rtes, 127.66 325 ⇑*e*PKPdf **PKPdf 04 02 11.4 +1.8**
KECS Kecovo 127.80 327 *e*PKIKP **PKPdf 04 02 12.0 +2.1**
KECS Kecovo 127.80 327 *e*PKP **PKPdf 04 02 12.0 +2.1**
DEV Deva 127.90 323 ⇓*i*P **PKPdf 04 02 10.8 +0.6**
DEV Deva 127.90 323 ⇓PKIKP **PKPdf 04 02 10.8 +0.6**
LANS Liptovska Anna 127.93 328 *e*PKIKP **PKPdf 04 02 11.7 +1.5**
LANS Liptovska Anna 127.93 328 *e*PKP **PKPdf 04 02 11.7 +1.5**
OKC Ostrava-Krasne 128.17 330 *e*PKPdf **PKPdf 04 02 11.6 +1.1**
OKC *ex* x 04 03 59.3
OKC AMS AMS 04 57 10.0
comp=Z,800nm,22.3s
OKC Ostrava-Krasne 128.17 330 *e*PKIKP **PKPdf 04 02 11.6 +1.1**
OKC MLR MLR
comp=Z,800nm,22.3s
CRAR CRAIOVA 128.17 321 ⇑*i*P **PKPdf 04 02 12.2 +1.5**
CRAR CRAIOVA 128.17 321 ⇑PKIKP **PKPdf 04 02 12.2 +1.5**
SRE Strehaia 128.36 322 ⇓*i*P **PKPdf 04 02 11.9 +0.8**
SRE Strehaia 128.36 322 ⇓PKIKP **PKPdf 04 02 11.9 +0.8**
KSP Ksiaz 128.40 332 *e*PKPdf **PKPdf 04 02 11.8 +0.8**
KSP *e*PP **PP 04 04 15.7 +0.2**
KSP LMZ LR 04 58 43.1
comp=Z,2μm,22.1s
KSP Ksiaz 128.40 332 *e*PKIKP **PKPdf 04 02 11.8 +0.8**
KSP *e* 04 04 15.7
KSP MLR MLR
comp=Z,2μm,22.1s
SIRR Siria 128.42 324 ⇓*i*P **PKPdf 04 02 11.6 +0.4**
PSZ Piszkesteto 128.45 327 ⇓*i*

MORC	**Moravsky Berou**	**128.51 330**	⇓	*i*P	**PKPdf**	**04 02 12.1**	**+0.8**
MORC	**Moravsky Berou**	**128.51 330**		*e*PKPdf	**PKPdf**	**04 02 11.7**	**+0.4**
MORC	**Moravsky Berou**	**128.51 330**	⇓	PKIKP	**PKPdf**	**04 02 12.1**	**+0.8**
MORC	**Moravsky Berou**	**128.51 330**		*e*PKP	**PKPdf**	**04 02 12.1**	**+0.8**
MORC				*e*		04 02 27.8	
VYHS	**Vyhne**	**128.66 328**		*e*PKIKP	**PKPdf**	**04 02 12.2**	**+0.6**
VYHS	**Vyhne**	**128.66 328**		*e*PKP	**PKPdf**	**04 02 12.2**	**+0.6**
GRTK	**Grand Turk**	**128.67 69**		PFAKE		04 02 20.0	+7.7
GRTK				LR	LR		
	comp=Z,470nm,22.0s						
KRLC	**Kraliky**	**128.69 331**		*e*PKPdf	**PKPdf**	**04 02 12.8**	**+1.2**
KRLC				*e*pPKP	**pPKPdf**	**04 02 28.6**	**+1.9**
KRLC	**Kraliky**	**128.69 331**		*e*PKIKP	**PKPdf**	**04 02 12.8**	**+1.2**
KRLC				*e*		04 02 28.6	
DPC	**Dobruska-Polom**	**128.72 331**		*e*PKPdf	**PKPdf**	**04 02 13.0**	**+1.3**
DPC				*e*pPKP	**pPKPdf**	**04 02 26.3**	**-0.4**
DPC				AMS	AMS	04 58 50.0	
	comp=Z,1μm,21.9s						
DPC	**Dobruska-Polom**	**128.72 331**		*e*PKIKP	**PKPdf**	**04 02 13.0**	**+1.3**
DPC				*e*		04 02 26.3	
DPC				MLR	MLR		
	comp=Z,1μm,21.9s						
HERR	**Herculane**	**128.73 322**	⇓	*i*P	**PKPdf**	**04 02 12.0**	**+0.2**
UPC	**Upice**	**128.76 332**		*e*PKPdf	**PKPdf**	**04 02 12.8**	**+1.1**
UPC				*e*pPKP	**pPKPdf**	**04 02 28.5**	**+1.8**
UPC				*e*SKP		04 05 33.1	
UPC				AMS	AMS	04 58 50.0	
	comp=Z,2μm,20.7s						
UPC	**Upice**	**128.76 332**		*e*PKIKP	**PKPdf**	**04 02 12.8**	**+1.1**
UPC				*e*		04 02 28.5	
UPC				MLR	MLR		
	comp=Z,2μm,20.7s						
BZS	**Buzias**	**128.81 324**	⇓	*i*P	**PKPdf**	**04 02 12.2**	**+0.3**
BZS	**Buzias**	**128.81 324**	⇓	PKIKP	**PKPdf**	**04 02 12.2**	**+0.3**
JAVC	**Velka Javorina**	**129.04 329**		*e*PKP	**PKPdf**	**04 02 14.6**	**+2.3**
MBAR	**Mbarara**	**129.14 262**		*e*PKPdf	**PKPdf**	**04 02 15.3**	**+1.6**
BUD	**Budapest**	**129.18 327**	⇓	*e*PKPdf	**PKPdf**	**04 02 13.1**	**+0.6**
MDVR	**Moldovita**	**129.20 323**	⇓	*i*P	**PKPdf**	**04 02 13.2**	**+0.4**
BANR	**Banloc**	**129.22 324**	⇑	*i*P	**PKPdf**	**04 02 13.8**	**+1.1**
VRAC	**Vranov**	**129.28 330**	⇓	*i*P	**PKPdf**	**04 02 13.6**	**+0.9**
VRAC	**Vranov**	**129.28 330**	⇓	PKIKP	**PKPdf**	**04 02 13.6**	**+0.9**
VRAC	**Vranov**	**129.28 330**		*e*PKP	**PKPdf**	**04 02 13.9**	**+1.2**
VRAC				*e*		04 05 36.7	
SRO2	**Moca**	**129.35 328**		*e*PKPdf	**PKPdf**	**04 02 12.4**	**-0.4**
SRO2	**Moca**	**129.35 328**		*e*PKP	**PKPdf**	**04 02 12.4**	**-0.4**
SMOL	**Smolenice**	**129.38 329**		*e*PKIKP	**PKPdf**	**04 02 14.2**	**+1.3**
SMOL	**Smolenice**	**129.38 329**		*e*PKP	**PKPdf**	**04 02 14.2**	**+1.3**
VTS	**Vitosha**	**129.41 320**	⇓	*i*P	**PKPdf**	**04 02 13.8**	**+0.4**
VTS	**Vitosha**	**129.41 320**		*e*PKPdf	**PKPdf**	**04 02 13.7**	**+0.4**
VTS	**Vitosha**	**129.41 320**		*i* P	**PKPdf**	**04 02 13.0**	**-0.4**
VTS	**Vitosha**	**129.41 320**		P	**PKPdf**	**04 02 13.6**	**+0.2**
VTS	**Vitosha**	**129.41 320**	⇓	PKIKP	**PKPdf**	**04 02 13.8**	**+0.4**
PVCC	**Panska Ves**	**129.42 332**		*e*PKPdf	**PKPdf**	**04 02 14.2**	**+1.3**
PVCC				*e*pPKP	**pPKPdf**	**04 02 27.9**	**-0.1**
PVCC	**Panska Ves**	**129.42 332**		*e*PKIKP	**PKPdf**	**04 02 14.2**	**+1.3**
PVCC				*e*		04 02 27.9	
BRG	**Berggiesshubel**	**129.46 333**		*i* PKP	**PKPdf**	**04 02 14.0**	**+1.0**
	comp=Z,129nm,1.2s						
BRG				*es*PKP		04 02 30.0	
	comp=Z,71nm,1.5s						
BRG				PP	**PP**	**04 04 23.0**	**+0.6**
BRG				PKS	PKSdf	04 05 37.7	-12
	comp=Z,32nm,1.5s						
	comp=N,1μm,19.2s						
	comp=E,891nm,21.6s						
	comp=Z,2μm,21.2s						
BRG	**Berggiesshubel**	**129.46 333**		*i* PKIKP	**PKPdf**	**04 02 14.0**	**+1.0**
BRG				*e*		04 02 30.0	
BRG						04 04 23.0	
BRG				pmax	pmax		
	comp=Z,129nm,1.3s						
BRG				MLR	MLR		
	comp=N,1μm,19.2s						
BRG				MLR	MLR		
	comp=E,891nm,21.6s						
BRG				MLR	MLR		
	comp=Z,2μm,21.2s						
SDV	**Santo Domingo**	**129.48 85**		PKP	**PKPdf**	**04 02 14.7**	**+0.4**
	comp=Z,134nm,0.9s,baz=285,slow=2.7,SNR=35						
SDV	**Santo Domingo**	**129.48 85**		*e*PKPdf	**PKPdf**	**04 02 15.1**	**+0.8**
SDV				LR	LR		
	comp=Z,303nm,21.0s						
KRUC	**Moravsky**	**129.54 330**		*e*PKP	**PKPdf**	**04 02 14.0**	**+0.8**
KRUC				*e*		04 05 37.4	
MODS	**Modra-Piesok**	**129.55 329**		*e*PKIKP	**PKPdf**	**04 02 13.2**	**-0.1**
MODS				*e*		04 04 20.7	
MODS	**Modra-Piesok**	**129.55 329**		*e*PKP	**PKPdf**	**04 02 13.2**	**-0.1**
MODS				*e*PP	**PP**	**04 04 20.7**	**-2.5**
MMB	**Musomiste**	**129.56 318**		*i* P	**PKPdf**	**04 02 14.0**	**+0.5**
CLL	**Collm**	**129.56 334**	⇓	*i*PKPdf	**PKPdf**	**04 02 13.7**	**+0.5**
	comp=Z,89nm,1.2s						
CLL				*e*(pPKPdf)		04 02 26.0	
CLL				*i* pPKiKP	**pPKiKP**	**04 02 30.1**	**+1.2**
CLL				*e*PP	**PP**	**04 04 22.0**	**-1.0**
CLL				*es*PP		04 04 43.0	
CLL				*e*(SKPdf)		04 05 36.0	
CLL				*e*PKSdf	**PKSdf**	**04 05 52.0**	**+2.5**
CLL				*e*PPP	PPP	04 07 24.0	
CLL				*e*SKSac	**SKSac**	**04 09 24.0**	**+6.2**
CLL				*es*SKKSac		04 11 42.0	
CLL				*e*PKKPdf	**PKKPdf**	**04 12 18.0**	**-1.0**
CLL				*e*PS	**PS**	**04 14 30.0**	**-4.0**
CLL				*e*		04 15 48.0	
CLL				*e*PPS	PPS	04 16 17.0	
CLL				*e*		04 17 00.0	
CLL				*e*SS	SS	04 22 00.0	+18
CLL				*e*		04 23 18.0	
CLL				*e*SSS	SSS	04 26 54.0	
CLL	**Collm**	**129.56 334**		*e*PKPdf	**PKPdf**	**04 02 13.7**	**+0.5**
CLL	**Collm**	**129.56 334**	⇓	*i*PKIKP	**PKPdf**	**04 02 13.7**	**+0.5**
CLL				*i*		04 02 30.1	
CLL				pmax	pmax		
	comp=Z,89nm,1.2s						
CPUP	**Villa Florida**	**129.58 134**		PKP	**PKPdf**	**04 02 14.2**	**+0.2**
	comp=Z,27nm,1.0s,baz=266,slow=1.3,SNR=27						
CPUP				pPKP	**pPKPdf**	**04 02 27.8**	**-1.2**
	comp=Z,21nm,0.9s,baz=249,slow=2.3,SNR=11						
CPUP				PKKP	**PKKPdf**	**04 12 17.7**	**-0.6**
	comp=Z,2.8nm,1.1s,baz=18,slow=4.6,SNR=3.5						
CPUP	**Villa Florida**	**129.58 134**		*e*PKPdf	**PKPdf**	**04 02 14.6**	**+0.6**
CPUP				pPKP	**pPKPdf**	**04 02 27.8**	**-1.2**
CPUP				PKKP	**PKKPdf**	**04 12 17.7**	**-0.6**
NVR	**Nevrokopi**	**129.59 318**		P	**PKPdf**	**04 02 13.9**	**+0.3**
NVR	**Nevrokopi**	**129.59 318**		P	**PKPdf**	**04 02 13.9**	**+0.3**
CSKK	**Cs´ˇtkako**	**129.67 327**	⇑	*e*PKPdf	**PKPdf**	**04 02 14.1**	**+0.6**
GOPC	**GO Pecny, Ondr**	**129.74 332**		*e*PKPdf	**PKPdf**	**04 02 14.5**	**+0.9**
GOPC				*e*pPKP	**pPKPdf**	**04 02 29.1**	**+0.5**
GOPC				*e*PP	**PP**	**04 04 23.0**	**-1.4**
GOPC				AMS	AMS	05 00 20.0	
	comp=Z,2μm,21.2s						
GOPC	**GO Pecny, Ondr**	**129.74 332**		*e*PKIKP	**PKPdf**	**04 02 14.5**	**+0.9**
GOPC				*e*		04 02 29.1	
GOPC				*e*		04 04 23.0	
GOPC				MLR	MLR		
	comp=Z,2μm,21.2s						
ZST	**Bratislava**	**129.75 329**		*e*PKIKP	**PKPdf**	**04 02 13.7**	**+0.1**
ZST				*e*		04 04 25.2	
ZST	**Bratislava**	**129.75 329**		*e*PKP	**PKPdf**	**04 02 13.7**	**+0.1**
ZST				*e*PP	**PP**	**04 04 25.2**	**+0.7**
PRA	**Prague**	**129.80 332**		*e*PKPdf	**PKPdf**	**04 02 14.7**	**+1.1**
PRA				*e*pPKP	**pPKPdf**	**04 02 28.0**	**-0.7**
PRA				AMS	AMS	05 00 40.0	
	comp=Z,2μm,21.9s						
PRA	**Prague**	**129.80 332**		*e*PKIKP	**PKPdf**	**04 02 14.7**	**+1.1**
PRA				*e*		04 02 28.0	
PRA				MLR	MLR		
	comp=Z,2μm,21.9s						
KKB	**Krupnik**	**129.85 319**		*i* P	**PKPdf**	**04 02 14.0**	**0.0**
CONA	**Conrad Observa**	**130.56 329**		*e*PKiKP	**PKiKP**	**04 02 16.0**	**-0.1**
	comp=Z,57nm,1.0s,SNR=41						
CONA				*e*SKPdf	**SKPdf**	**04 05 41.8**	**-4.8**
	comp=Z,21nm,1.5s						
NKC	**Novy Kostel**	**130.58 333**		*e*PKPdf	**PKPdf**	**04 02 16.3**	**+1.1**
NKC				*e*pPKP	**pPKPdf**	**04 02 29.7**	**-0.5**
NKC				AMS	AMS	04 58 30.0	
	comp=Z,1μm,22.7s						
NKC	**Novy Kostel**	**130.58 333**		*e*PKIKP	**PKPdf**	**04 02 16.3**	**+1.1**
NKC				*e*		04 02 29.7	
NKC				MLR	MLR		
	comp=Z,1μm,22.7s						
KHC	**Kasperske Hory**	**130.85 332**		*e*PKP	**PKPdf**	**04 02 16.7**	**+1.0**
KHC				*e*pPKP	**pPKPdf**	**04 02 29.3**	**-1.5**
KHC				*ex*	x	04 04 15.3	
KHC				*e*PKS	PKSdf	04 05 40.9	-11
KHC				*e*PS	**PS**	**04 14 48.0**	**+2.6**
KHC				AMS	AMS	05 01 10.0	
	comp=Z,2μm,22.4s						
KHC	**Kasperske Hory**	**130.85 332**		*e*PKPdf	**PKPdf**	**04 02 15.9**	**+0.1**
KHC	**Kasperske Hory**	**130.85 332**		*e*PKIKP	**PKPdf**	**04 02 16.7**	**+1.0**
KHC				*e*		04 02 29.3	
KHC				*e*		04 14 48.0	
KHC				MLR	MLR		
	comp=Z,2μm,22.4s						
GEC2	**GERESS Array S**	**131.00 331**		*e*PKPdf	**PKPdf**	**04 02 16.8**	**+0.7**
GERES	**GERESS Array B**	**131.00 331**		PKhKP	PKPpre	04 01 58.6	
	comp=Z,0.5nm,0.7s,baz=50,slow=2.1,SNR=6.2						
GERES				PKP	**PKPdf**	**04 02 16.5**	**+0.4**
	comp=Z,5.0nm,0.9s,baz=35,slow=4.9,SNR=12						
GERES				pPKP	pPKPdf	04 02 29.9	-1.3
	comp=Z,12nm,0.7s,baz=67,slow=1.4,SNR=11						
GERES				SKPbc	**SKPab**	**04 05 36.6**	**-0.1**
	comp=Z,1.6nm,0.8s,baz=52,slow=4.0,SNR=3.3						
BEHE	**Becsehely**	**131.02 327**	⇓	*e*PKPdf	**PKPdf**	**04 02 16.8**	**+0.7**
LIT	**Litokhoron**	**131.09 317**		*e*PKPdf	**PKPdf**	**04 02 16.5**	**0.0**
LIT	**Litokhoron**	**131.09 317**		P	**PKPdf**	**04 02 16.3**	**-0.2**
ARSA	**Arzberg**	**131.18 329**		*e*PKiKP	**PKPdf**	**04 02 16.7**	**+0.3**
	comp=Z,29nm,1.5s,SNR=14						
ARSA				SKPdf	**SKPdf**	**04 05 44.2**	**-3.5**
	comp=Z,26nm,1.4s						
MOA	**Molln**	**131.41 330**		*i* PKiKP	**PKiKP**	**04 02 17.3**	**-0.5**
	comp=Z,26nm,0.9s,SNR=16						
MOA				*e*SKPdf	**SKPdf**	**04 05 45.3**	**-2.8**
	comp=Z,27nm,1.4s						
EKA	**Eskdalemuir Ar**	**131.44 348**		PKP	**PKPdf**	**04 02 16.0**	**-0.6**
	comp=Z,13nm,1.0s,baz=28,slow=2.9,SNR=12						
EKA				SKP		04 05 46.2	
	comp=Z,9.7nm,1.0s,baz=25,slow=4.1,SNR=6.7						
EKA	**Eskdalemuir Ar**	**131.44 348**		PKIKP	**PKPdf**	**04 02 16.0**	**-0.6**
IDI	**Anoyia**	**131.45 310**		PKP	**PKPdf**	**04 02 17.6**	**+0.2**
	comp=Z,37nm,1.0s,baz=31,slow=8.8,SNR=6.5						
IDI				SKP		04 05 48.7	
	comp=Z,25nm,1.0s,baz=351,slow=8.0,SNR=3.5						
IDI	**Anoyia**	**131.45 310**	⇓	*i*P	**PKPdf**	**04 02 17.4**	**+0.1**
IDI	**Anoyia**	**131.45 310**		*e*PKPdf	**PKPdf**	**04 02 18.6**	**+1.3**
IDI				SKP		04 05 48.7	
ESK	**Eskdalemuir**	**131.46 348**		*e*PKPdf	**PKPdf**	**04 02 17.1**	**+0.5**
ESK				LR	LR		
	comp=Z,890nm,19.0s						
ESK	**Eskdalemuir**	**131.46 348**		*e*PKIKP	**PKPdf**	**04 02 17.1**	**+0.5**
ESK				MLR	MLR		
	comp=Z,890nm,19.0s						
FNA	**Florina**	**131.50 318**		*e*PKPdf	**PKPdf**	**04 02 17.5**	**+0.2**
FNA	**Florina**	**131.50 318**		P	**PKPdf**	**04 02 17.0**	**-0.3**
GRFO	**Grafenberg**	**131.52 334**		*e*PKPdf	**PKPdf**	**04 02 17.2**	**+0.3**
GRFO	**Grafenberg**	**131.52 334**		*e*PKIKP	**PKPdf**	**04 02 17.2**	**+0.3**
WTSB	**Winterswijk**	**131.53 339**		*e*PKPdf	**PKPdf**	**04 02 17.7**	**+0.8**
	comp=Z,335nm,1.6s						
PHP	**Peshkopia**	**131.64 320**		P	**PKPdf**	**04 02 17.5**	**0.0**
PHP	**Peshkopia**	**131.64 320**		P	**PKPdf**	**04 02 17.5**	**0.0**
PHP	**Peshkopia**	**131.64 320**		PKIKP	**PKPdf**	**04 02 17.5**	**0.0**
THL	**Klokotos Trika**	**131.67 317**		P	**PKPdf**	**04 02 17.4**	**-0.1**
AGG	**Agios Georgios**	**131.71 316**		*e*PKPdf	**PKPdf**	**04 02 17.7**	**0.0**
AGG	**Agios Georgios**	**131.71 316**		*e*PKIKP	**PKPdf**	**04 02 17.7**	**0.0**
PERS	**Pernice**	**131.79 328**		*e*PKPdf	**PKPdf**	**04 02 17.6**	**0.0**
PERS				*i* PP	**SKPab**	**04 05 43.1**	**+2.9**
PERS				*e*		04 06 05.7	
SOKA	**Soboth**	**131.81 328**		*e*PKiKP	**PKPdf**	**04 02 17.7**	**0.0**
	comp=Z,52nm,1.2s,SNR=36						
SOKA				SKPdf	**SKPab**	**04 05 43.8**	**+3.6**
	comp=Z,23nm,1.3s						
BLY	**Banja Luka**	**131.86 325**	⇓	*i*P	**PKPdf**	**04 02 18.3**	**+0.6**
BLY	**Banja Luka**	**131.86 325**		*e*PKPdf	**PKPdf**	**04 02 18.4**	**+0.6**
BBSR	**BB Station**	**131.87 54**		PFAKE		04 02 30.0	+12
BBSR				LR	LR		
	comp=Z,487nm,21.0s						
NEST	**Nestorio**	**131.90 318**		P	**PKPdf**	**04 02 18.9**	**+0.8**
KPRO	**Kipourio**	**131.92 317**		P	**PKPdf**	**04 02 18.6**	**+0.5**
PDG	**Podgorica**	**131.98 321**	⇓	*i*P	**PKPdf**	**04 02 18.1**	**+0.1**
TTG	**Podgorica**	**131.98 321**		*e*PKPdf	**PKPdf**	**04 02 18.4**	**+0.4**
TTG	**Podgorica**	**131.98 321**		*e*PKIKP	**PKPdf**	**04 02 18.4**	**+0.4**
OBKA	**Obir**	**132.17 329**		*e*PKiKP	**PKPdf**	**04 02 18.5**	**+0.1**
	comp=Z,27nm,1.6s,SNR=9.6						
TIR	**Tirane**	**132.19 320**	⇑	*i*P	**PKPdf**	**04 02 18.7**	**+0.3**
TIR	**Tirane**	**132.19 320**		*e*PKPdf	**PKPdf**	**04 02 19.3**	**+0.9**
TIR	**Tirane**	**132.19 320**		*e*PKIKP	**PKPdf**	**04 02 19.3**	**+0.9**
ANX	**Ano Chora**	**132.20 316**		P	**PKPdf**	**04 02 19.8**	**+1.1**
GUR	**Goura**	**132.21 315**		P	**PKPdf**	**04 02 19.1**	**+0.4**
GUR	**Goura**	**132.21 315**		P	**PKPdf**	**04 02 19.1**	**+0.4**
SIV	**San Ignacio**	**132.23 120**		PKP	**PKPdf**	**04 02 17.9**	**-1.4**
	comp=Z,22nm,1.1s,baz=244,slow=2.4,SNR=36						
SIV				SKPab	**SKPab**	**04 05 42.6**	**-0.3**
	comp=Z,4.9nm,1.0s,baz=199,slow=4.8,SNR=4.3						
SIV				SKKPbc	**SKKPbc**	**04 15 05.4**	**-1.0**
	comp=Z,4.9nm,1.1s,baz=37,slow=2.9,SNR=3.4						
KLV	**Kalavryta, Ach**	**132.29 315**		P	**PKPdf**	**04 02 19.4**	**+0.6**
KLV	**Kalavryta, Ach**	**132.29 315**		P	**PKPdf**	**04 02 19.4**	**+0.6**
KBA	**Koelnbereinsper**	**132.39 330**		*e*PKPdf	**PKPdf**	**04 02 17.9**	**-1.0**
	comp=Z,26nm,1.1s,SNR=9.0						
JAN	**Janina**	**132.41 317**		P	**PKPdf**	**04 02 20.2**	**+1.2**
JAN	**Janina**	**132.41 317**		P	**PKPdf**	**04 02 20.2**	**+1.2**
JAN	**Janina**	**132.41 317**		PKIKP	**PKPdf**	**04 02 20.2**	**+1.2**
BOJS	**Bojanci**	**132.46 327**		*i* PKPdf	**PKPdf**	**04 02 19.6**	**+0.8**
BOJS				*e*PP	**SKPbc**	**04 05 46.1**	**+4.4**
BOJS				*e*		04 06 09.0	
VISS	**Visnje**	**132.48 328**		*i* PKPdf	**PKPdf**	**04 02 19.4**	**+0.5**
VISS				*e*PP	**SKPbc**	**04 05 45.8**	**+4.0**
DSL	**Palaion Diasel**	**132.50 317**		P	**PKPdf**	**04 02 20.2**	**+1.0**
DSL	**Palaion Diasel**	**132.50 317**		P	**PKPdf**	**04 02 20.2**	**+1.0**
MYKA	**Terra Mystica**	**132.55 329**		*e*PKPdf	**PKPdf**	**04 02 17.5**	**-1.6**
	comp=Z,14nm,1.0s,SNR=7.8						
MYKA				*e*SKPdf	**SKPab**	**04 05 46.0**	**+2.6**
	comp=Z,22nm,1.4s						
PDO	**Prodromos**	**132.70 316**		P	**PKPdf**	**04 02 20.5**	**+1.0**
MPR	**Mayaguez**	**132.75 73**		*e*PKPdf	**PKPdf**	**04 02 20.3**	**+0.2**
CRPR	**Cabo Rojo, PR**	**132.80 73**		*e*PKPdf	**PKPdf**	**04 02 19.8**	**-0.4**
HGN	**Heimansgroeve**	**132.82 338**		*e*PKPdf	**PKPdf**	**04 02 19.7**	**+0.4**
	comp=Z,93nm,1.3s						
JAVS	**Javornik**	**132.83 328**		*i* PKPdf	**PKPdf**	**04 02 19.6**	**-0.1**
JAVS				*e*PP	**SKPbc**	**04 05 46.8**	**+3.6**
ITM	**Ithomi**	**132.84 314**		*e*PKPdf	**PKPdf**	**04 02 20.2**	**+0.4**
MEM	**Membach**	**132.92 338**	⇑	PKPbc	**PKPdf**	**04 02 20.6**	**+1.1**
LKD2	**Lefkada island**	**132.97 316**		P	**PKPdf**	**04 02 20.8**	**+0.8**
LKD2	**Lefkada island**	**132.97 316**		P	**PKPdf**	**04 02 20.8**	**+0.8**
ABTA	**Abfaltersbach**	**133.03 330**		*i* PKPdf	**PKPdf**	**04 02 19.8**	**-0.2**
	comp=Z,51nm,1.1s,SNR=17						
ABTA				*e*SKPdf	**SKPab**	**04 05 47.6**	**+2.0**
	comp=Z,18nm,0.9s,SNR=7.3						
WATA	**Walderalm**	**133.07 331**		*i* PKiKP	**PKiKP**	**04 02 20.7**	**-0.6**
	comp=Z,26nm,0.9s,SNR=12						
WATA				*e*SKPdf	**SKPdf**	**04 05 48.8**	**-2.6**
	comp=Z,20nm,1.2s						
KEK	**Kerkira**	**133.09 318**		P	**PKPdf**	**04 02 20.4**	**+0.2**
KEK	**Kerkira**	**133.09 318**		P	**PKPdf**	**04 02 20.4**	**+0.2**
STU	**Stuttgart**	**133.09 334**		*e*PKPdf	**PKPdf**	**04 02 20.3**	**+0.4**
STU	**Stuttgart**	**133.09 334**		*e*PKIKP	**PKPdf**	**04 02 20.3**	**+0.4**
WTTA	**Wattenberg**	**133.09 331**		*i* PKiKP	**PKPdf**	**04 02 20.8**	**+0.6**
	comp=Z,44nm,1.0s,SNR=22						
WTTA				*e*SKPdf	**SKPab**	**04 05 48.6**	**+2.7**
	comp=Z,45nm,1.4s,SNR=8.0						
AOPR	**Arecibo Observ**	**133.10 73**		*e*PKPdf	**PKPdf**	**04 02 21.0**	**+0.1**
TRI	**Trieste**	**133.11 328**		*e*PKPdf	**PKPdf**	**04 02 20.6**	**+0.6**
TRI	**Trieste**	**133.11 328**		*e*PKIKP	**PKPdf**	**04 02 20.6**	**+0.6**
SAML	**Samuel**	**133.19 111**		*e*PKPdf	**PKPdf**	**04 02 21.4**	**+0.3**
SAML				*e*SKPbc	**SKPab**	**04 05 47.3**	**+0.2**
SAML				LR	LR		
	comp=Z,350nm,22.0s						
MOTA	**Moosalm**	**133.29 332**		*i* PKPdf	**PKPdf**	**04 02 19.9**	**-0.7**
	comp=Z,39nm,0.9s,SNR=21						
MOTA				*e*SKPab	**SKPab**	**04 05 47.0**	**+0.3**
	comp=Z,6.5nm,0.9s						
BCLA	**Clavier**	**133.33 338**	⇑	PKPbc	**PKPdf**	**04 02 21.3**	**+1.0**
RETA	**Reutte**	**133.34 332**		*e*PKiKP	**PKPdf**	**04 02 20.8**	**+0.3**
	comp=Z,31nm,1.0s,SNR=16						
UCC	**Uccle**	**133.36 339**		*e*PKPdf	**PKPdf**	**04 02 21.5**	**+1.2**
SNF	**Seneffe**	**133.63 339**	⇑	PKPbc	**PKPdf**	**04 02 23.8**	**+3.0**
WLF	**Walferdange**	**133.63 337**	⇑	PKPbc	**PKPdf**	**04 02 22.2**	**+1.3**
WLF	**Walferdange**	**133.63 337**		*e*PKPdf	**PKPdf**	**04 02 22.4**	**+1.5**
SJG	**San Juan**	**133.70 73**		*e*PKPdf	**PKPdf**	**04 02 22.2**	**+0.3**
SJG				*e*SKPbc	**SKPab**	**04 05 49.0**	**-0.2**
SJG				LR	LR		
	comp=Z,262nm,21.0s						
FETA	**Feichten**	**133.70 332**		*e*PKiKP	**PKiKP**	**04 02 22.0**	**-0.6**
	comp=Z,33nm,1.0s,SNR=18						
BFO	**Black Forest**	**133.80 334**		*e*PKPdf	**PKPdf**	**04 02 21.1**	**-0.2**
BFO				LR	LR		
	comp=Z,698nm,21.0s						
BFO	**Black Forest**	**133.80 334**		*i* PKIKP	**PKPdf**	**04 02 22.4**	**+1.1**
DAVA	**Damuels**	**133.90 332**		*e*PKiKP	**PKPdf**	**04 02 22.1**	**+0.4**
	comp=Z,20nm,0.8s,SNR=17						
CBYP	**Canovanas**	**133.96 73**		*e*PKPdf	**PKPdf**	**04 02 23.2**	**+0.7**
HUMP	**Col San Antoni**	**133.98 73**		*e*PKPdf	**PKPdf**	**04 02 22.4**	**0.0**
FUORN	**Ofenpass-Fuorn**	**134.21 331**		*e*PKPdf	**PKPdf**	**04 02 22.6**	**+0.2**
MTP	**Monte Pirata**	**134.27 73**		*e*PKPdf	**PKPdf**	**04 02 23.8**	**+0.8**
TSUM	**Tsumeb**	**134.29 233**		SKPab	**SKPab**	**04 05 50.7**	**-1.2**
	comp=Z,15nm,1.1s,baz=90,slow=5.0,SNR=9.5						
TSUM	**Tsumeb**	**134.29 233**		*e*PKPpre	PKPpre	04 02 14.3	
TSUM				*e*PKPdf	**PKPdf**	**04 02 22.6**	**-0.6**
TSUM				*e*SKPbc	**SKPab**	**04 05 50.9**	**-1.0**
TSUM				LR	LR		
	comp=Z,1μm,21.0s						
ECH	**Echery**	**134.38 335**		*e*PKPdf	**PKPdf**	**04 02 21.8**	**-0.6**
ECH	**Echery**	**134.38 335**		*e*PKIKP	**PKPdf**	**04 02 21.8**	**-0.6**
MATE	**Matera**	**134.57 321**	⇓	*i*P	**PKPdf**	**04 02 23.1**	**+0.2**
STVI	**Saint Thomas**	**134.80 73**		*e*PKPdf	**PKPdf**	**04 02 24.3**	**+0.3**
CDVI	**St. Croix**	**135.05 73**		*e*PKPdf	**PKPdf**	**04 02 24.5**	**+0.1**
TIP	**Timpagrande**	**135.36 319**	⇓	*i*P	**PKPdf**	**04 02 24.8**	**+0.2**
TIP	**Timpagrande**	**135.36 319**		*e*PKPdf	**PKPdf**	**04 02 24.7**	**+0.2**
TIP	**Timpagrande**	**135.36 319**		P	**PKPdf**	**04 02 24.9**	**+0.3**
CUC	**Castrocucco**	**135.50 321**		*e*PKPdf	**PKPdf**	**04 02 22.8**	**-2.0**
AQU	**L'Aquila**	**135.50 325**		*e*PKPdf	**PKPdf**	**04 02 24.7**	**0.0**
AQU	**L'Aquila**	**135.50 325**		*e*PKIKP	**PKPdf**	**04 02 24.7**	**0.0**
SENIN	**Lac Senin/Sane**	**135.76 333**		*e*PKPdf	**PKPdf**	**04 02 24.6**	**-0.7**
VLC	**Villacollemand**	**135.91 329**		*e*PKPdf	**PKPdf**	**04 02 25.3**	**-0.1**
SMRT	**St. Maarten**	**136.61 73**		*e*PKPdf	**PKPdf**	**04 02 27.5**	**+0.1**
BNI	**Bardonecchia**	**137.05 333**		*e*PKPdf	**PKPdf**	**04 02 27.9**	**+0.3**
BNI	**Bardonecchia**	**137.05 333**		*e*PKIKP	**PKPdf**	**04 02 27.9**	**+0.3**
SSB	**Saint Sauveur**	**137.81 335**		*e*PKPdf	**PKPdf**	**04 02 29.0**	**+0.1**
SSB	**Saint Sauveur**	**137.81 335**		*e*PKIKP	**PKPdf**	**04 02 29.0**	**+0.1**
VAE	**Valguarnera**	**137.84 319**		PKP	**PKPdf**	**04 02 29.5**	**+0.

PVAQ	**Vaqueiros**	**149.23**	**341**	*e*PKPdf	**PKPdf**	**04 02 49.8**	**+0.8**
PVAQ	**Vaqueiros**	**149.23**	**341**	*e*PKPab	PKPab	04 03 08.7	+11
PVAQ	**Vaqueiros**	**149.23**	**341**	*e*LR	LR	04 57 00.5	
	comp=Z,696nm,20.0s						
PTEO	**Sao Teotonio**	**149.40**	**343**	*e*PKPdf	**PKPdf**	**04 02 50.8**	**+1.5**
PBDV	**Barranco-do-Ve**	**149.44**	**342**	*e*PKPdf	**PKPdf**	**04 02 50.7**	**+1.3**
PBDV	**Barranco-do-Ve**	**149.44**	**342**	*e*PKPab	PKPab	04 03 09.5	+11
MORF	**Marmelete**	**149.60**	**343**	*e*PKP	**PKPdf**	**04 02 49.1**	**-0.6**
MORF				AMS	AMS	05 13 54.6	
	comp=Z,603nm,21.1s						
MORF	**Marmelete**	**149.60**	**343**	*e*PKPdf	**PKPdf**	**04 02 51.0**	**+1.3**
MORF	**Marmelete**	**149.60**	**343**	*e*PKPab	PKPab	04 03 09.4	+10
MORF	**Marmelete**	**149.60**	**343**	*e*PKHKP	PKPpre	04 02 49.1	
PFVI	**Vila Bisbo**	**149.81**	**343**	*e*PKPdf	**PKPdf**	**04 02 51.8**	**+1.8**
PFVI	**Vila Bisbo**	**149.81**	**343**	*e*PKPdf	**PKPdf**	**04 02 51.4**	**+1.5**
PFVI				*e*PKPbc	**PKiKP**	**04 02 55.6**	**-0.1**
PSET	**Sete Cidades**	**150.19**	**10**	*e*PKP	**PKPbc**	**04 02 54.9**	**-0.8**
CMLA	**Cha da Macela**	**150.28**	**10**	*e*PKP	**PKPbc**	**04 02 54.9**	**-1.0**
CMLA	**Cha da Macela**	**150.28**	**10**	PFAKE		04 03 00.0	-2.0
CMLA				LR	LR		
	comp=Z,712nm,22.0s						
CMLA	**Cha da Macela**	**150.28**	**10**	*i* PKIKP	**PKPbc**	**04 02 58.4**	**+2.5**
BART	**Pico Bartolome**	**150.32**	**9**	*e*PKP	**PKPbc**	**04 02 54.6**	**-1.5**
PSMA	**Santa Maria**	**151.09**	**9**	*e*PKP	**PKPbc**	**04 02 58.3**	**+0.5**
PSMN	**Pico do Norte,**	**151.09**	**9**	*e*PKP	**PKPdf**	**04 02 53.5**	**+1.5**
TAM	**Tamanrasset**	**152.05**	**304**	*e*PKPdf	**PKPdf**	**04 02 53.8**	**-0.2**
TAM				*e*PKPbc	**PKiKP**	**04 03 01.4**	**+0.5**
TAM	**Tamanrasset**	**152.05**	**304**	*e*PKiKP	**PKPdf**	**04 02 53.8**	**-0.2**
MDT	**Midelt**	**152.07**	**332**	PKP	**PKPdf**	**04 02 54.2**	**+0.4**
	comp=Z,17nm,1.0s,baz=55,slow=2.1,SNR=18						
MDT				PKPbc	**PKiKP**	**04 03 01.1**	**+0.4**
	comp=Z,143nm,1.0s,baz=54,slow=2.4,SNR=68						
MDT				PKPab	**PKPab**	**04 03 10.8**	**+1.0**
	comp=Z,111nm,1.0s,baz=62,slow=4.1,SNR=13						
SHEL	**Horse Pasture**	**152.22**	**209**	PFAKE		04 03 10.0	-0.7
SHEL				LR	LR		
	comp=Z,507nm,21.0s						
PMOZ	**Porto Moniz, M**	**155.62**	**355**	*e*LR	LR	04 56 28.9	
	comp=Z,544nm,24.0s						
PMAR	**Madeira**	**155.69**	**355**	*e*PKPdf	**PKPdf**	**04 03 00.6**	**+1.7**
RCBR	**Riachuelo**	**158.38**	**130**	*e*PKPdf	**PKPdf**	**04 03 03.7**	**+1.0**
RCBR				*e*PKPab	**PKPab**	**04 03 38.0**	**+0.9**
TOA0	**Torodi Ar. Sit**	**158.66**	**285**	*e*PKPdf	**PKPdf**	**04 03 02.6**	**-0.3**
TOA0				*e*PKPdf	**PKPdf**	**04 03 02.9**	**0.0**
TOA0				*e*PKPab	**PKPab**	**04 03 37.6**	**-0.8**
TOA0				*e*PKPab	sPKPdf	04 03 38.0	+15
TORD	**Torodi Ar. Bea**	**158.66**	**285**	PKP	**PKPdf**	**04 03 02.5**	**-0.4**
	comp=Z,14nm,0.9s,baz=16,slow=2.0,SNR=53						
TORD				PKPab	**PKPab**	**04 03 38.5**	**0.0**
	comp=Z,112nm,0.9s,baz=88,slow=4.8,SNR=70						
TORD				PP	**PP**	**04 07 15.2**	**-4.0**
	comp=Z,3.9nm,0.9s,baz=68,slow=5.8,SNR=4.3						
ASCN	**Ascension**	**162.97**	**198**	PFAKE		04 03 20.0	+12
ASCN				LR	LR		
	comp=Z,1μm,20.0s						
KOWA	**Kowa**	**163.67**	**293**	PKP	**PKPdf**	**04 03 07.4**	**-0.8**
	comp=Z,15nm,1.1s,baz=316,slow=0.6,SNR=11						
KOWA				PKPab	**PKPab**	**04 03 59.6**	**-0.7**
	comp=Z,56nm,1.1s,baz=59,slow=4.7,SNR=14						
KOWA				PP	**PP**	**04 07 42.9**	**-2.9**
	comp=Z,26nm,1.2s,baz=9.8,slow=7.3,SNR=3.9						
KOWA	**Kowa**	**163.67**	**293**	*e*PKPdf	**PKPdf**	**04 03 08.4**	**+0.1**
KOWA				*e*PKPab	**PKPab**	**04 04 00.7**	**+0.4**
KOWA				PP	**PP**	**04 07 42.9**	**-2.9**
KIC	**Kosan Boka**	**165.22**	**263**	*e*PKP1	**PKPdf**	**04 03 09.9**	**+0.2**
	comp=Z,71nm,1.0s						
DBIC	**Dimbokro**	**165.38**	**264**	PKP	**PKPdf**	**04 03 09.4**	**-0.4**
	comp=Z,29nm,1.3s,baz=72,slow=5.9,SNR=4.3						
DBIC				PKPab	**PKPab**	**04 04 07.7**	**-0.3**
	comp=Z,11nm,0.8s,baz=95,slow=5.3,SNR=5.7						
DBIC	**Dimbokro**	**165.38**	**264**	*e*PKPdf	**PKPdf**	**04 03 10.1**	**+0.3**
DBIC				*e*PKPab	**PKPab**	**04 04 08.6**	**+0.6**
DBIC	**Dimbokro**	**165.38**	**264**	*e*PKIKP	**PKPdf**	**04 03 10.1**	**+0.3**
DBIC				*e*		04 04 08.6	
LIC	**Lamto**	**165.48**	**262**	*e*PKP1	**PKPdf**	**04 03 09.0**	**-0.9**
	comp=Z,120nm,1.0s						
TIC	**Toumodi**	**165.53**	**264**	*e*PKP1	**PKPdf**	**04 03 09.0**	**-1.0**
SACV	**Santiago Islan**	**172.34**	**31**	PFAKE		04 03 20.0	+5.8
SACV				LR	LR		
	comp=Z,357nm,19.0s						

*DDA **17** 03:50:16.6, 39°.81N×26°.18E, h7km, Ml3.1*
*ISCJB **17** 03:50:16.5±0.3, 39°.77N±0°.02×26°.11E±0°.02, h9km±2km, Error ellipse: s-maj=3.3km s-min=2.5km az=158.1*
*IASPEI **17** 03:50:16.6±0.8, 39°.77N±0°.02×26°.13E±0°.02, h12km±5km, Error ellipse: s-maj=2.6km s-min=2.2km az=69.8, GT5 selection from ISC bulletin GT5 identified by Bond˜¡r and McLaughlin (2009) selection criteria Bond˜¡r and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
*CSEM **17** 03:50:16.8±0.1, 39°.77N×26°.11E, h10km, ML3.0, Error ellipse: s-maj=2.4km s-min=1.8km az=73.0*
*ATH **17** 03:50:16.3, 39°.77N×26°.11E, h29km±1km, ML2.3/7, Error ellipse: s-maj=2.1km s-min=0.8km az=254.0*
*ISK **17** 03:50:16.2, 39°.77N×26°.13E, h7km, ML3.0/22*
*THE **17** 03:50:16.9, 39°.78N×26°.11E, h4km±1km, ML2.2/6, Error ellipse: s-maj=1.6km s-min=0.5km az=72.0*

ISC 17 03:50:16.8±0.8, 39°.77N±0°.01×26°.12E±0°.02, h12km±5km, n111, σ0§65/156, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOZC	**Bozcaada**	**0.09**	**326**	*i* P	**Pg**	**03 50 19.5**	**+0.1**
BOZC				*i* S	**Sg**	**03 50 21.0**	**-0.4**
BOZC				*i* S		03 50 21.1	
EZN	**Ezine**	**0.17**	**71**	PG	**Pg**	**03 50 20.4**	**-0.2**
EZN				SG	**Sg**	**03 50 23.2**	**-0.1**
EZN	**Ezine**	**0.17**	**71**	P	**Pg**	**03 50 20.5**	**-0.2**
EZN				S	**Sg**	**03 50 23.1**	**-0.2**
EZN	**Ezine**	**0.17**	**71**	*e*Pg	**Pg**	**03 50 20.4**	**-0.2**
EZN				*e*Sg	**Sg**	**03 50 23.2**	**-0.1**
GPNR	**Gulpinar-Canak**	**0.31**	**178**	PG	**Pg**	**03 50 22.9**	**-0.3**
GPNR				SG	**Sg**	**03 50 27.2**	**-0.2**
GPNR	**Gulpinar-Canak**	**0.31**	**178**	*e*Pg	**Pg**	**03 50 22.9**	**-0.3**
GPNR				*e*Sg	**Sg**	**03 50 27.2**	**-0.2**
BAYC	**CANAKKALE_Bayr**	**0.33**	**95**	*i* P	**Pg**	**03 50 23.5**	**0.0**
BAYC				*i* S	**Sg**	**03 50 28.1**	**+0.1**
BAYC	**CANAKKALE_Bayr**	**0.33**	**95**	P	**Pg**	**03 50 23.5**	**0.0**
BAYC				S	**Sg**	**03 50 28.1**	**+0.1**
GADA	**Gvkgeada**	**0.45**	**338**	PG	**Pg**	**03 50 25.9**	**+0.2**
GADA	**Gvkgeada**	**0.45**	**338**	P	**Pg**	**03 50 25.8**	**+0.1**
GADA				S	**Sg**	**03 50 32.2**	**+0.5**
GADA	**Gvkgeada**	**0.45**	**338**	P	**Pg**	**03 50 25.8**	**+0.1**
GADA				S	**Sg**	**03 50 32.2**	**+0.5**
GOKC	**Gokceada-Canak**	**0.46**	**341**	PG	**Pg**	**03 50 25.5**	**-0.3**
GOKC	**Gokceada-Canak**	**0.46**	**341**	*e*Pg	**Pg**	**03 50 25.5**	**-0.3**
PRK	**Paraskevi**	**0.54**	**167**	P	**Pg**	**03 50 27.6**	**+0.2**
PRK				S	**Sg**	**03 50 34.0**	**-0.3**
PRK				AML	AML	03 50 40.1	
	comp=N,447μm,0.2s						
PRK				AML	AML	03 50 40.1	
	comp=E,668μm,0.2s						
PRK	**Paraskevi**	**0.54**	**167**	P	**Pg**	**03 50 27.5**	**+0.2**
PRK				S	**Sg**	**03 50 35.0**	**+0.6**
PRK	**Paraskevi**	**0.54**	**167**	P	**Pg**	**03 50 27.5**	**+0.2**
PRK				S	**Sg**	**03 50 34.8**	**+0.4**
SIGR	**SIGRI**	**0.59**	**200**	PG	**Pg**	**03 50 28.2**	**-0.1**
SIGR	**SIGRI**	**0.59**	**200**	P	**Pg**	**03 50 28.4**	**+0.1**
SIGR				S	**Sb**	**03 50 37.7**	**+0.3**
SIGR				AML	AML	03 50 37.8	
	comp=E,1563μm,0.3s						
SIGR				AML	AML	03 50 38.3	
	comp=N,2964μm,0.3s						
SIGR	**SIGRI**	**0.59**	**200**	P	**Pg**	**03 50 28.4**	**+0.1**
SIGR				S	**Sb**	**03 50 37.3**	**-0.2**
SIGR	**SIGRI**	**0.59**	**200**	*e*Pg	**Pg**	**03 50 28.2**	**-0.1**
SIGR				S	**Sb**	**03 50 37.3**	**-0.2**
AYVA	**Ayvalik**	**0.64**	**136**	*i* P	**Pg**	**03 50 29.2**	**0.0**
AYVA	**Ayvalik**	**0.64**	**136**	P	**Pg**	**03 50 29.2**	**0.0**
GELI	**Tayfur-Gelibol**	**0.69**	**24**	PG	**Pg**	**03 50 30.1**	**0.0**
GELI	**Tayfur-Gelibol**	**0.69**	**24**	*e*Pg	**Pg**	**03 50 30.1**	**0.0**
LIA	**Limnos Island**	**0.73**	**280**	P	**Pb**	**03 50 31.4**	**-0.1**
LIA				S	**Sb**	**03 50 41.1**	**-0.3**
LIA				AML	AML	03 50 44.3	
	comp=E,362μm,0.3s						
LIA				AML	AML	03 50 44.4	
	comp=N,634μm,0.5s						
LIA	**Limnos Island**	**0.73**	**280**	P	**Pg**	**03 50 31.0**	**+0.1**
LIA				S	**Sg**	**03 50 40.9**	**+0.4**
LIA	**Limnos Island**	**0.73**	**280**	P	**Pg**	**03 50 31.1**	**+0.1**
LIA				S	**Sg**	**03 50 40.9**	**+0.4**
LPK	**Lapseki**	**0.78**	**39**	PG	**Pg**	**03 50 30.9**	**-1.0**
LPK	**Lapseki**	**0.78**	**39**	*e*Pg	**Pg**	**03 50 30.9**	**-1.0**
SMTH	**Samothraki Isl**	**0.83**	**328**	P	**Pb**	**03 50 33.1**	**-0.1**
SMTH				S	**Sg**	**03 50 42.6**	**-1.1**
SMTH				AML	AML	03 50 46.5	
	comp=N,456μm,0.4s						
SMTH				AML	AML	03 50 47.0	
	comp=E,448μm,0.2s						
SMTH	**Samothraki Isl**	**0.83**	**328**	P	**Pg**	**03 50 32.9**	**0.0**
SMTH				S	**Sb**	**03 50 44.2**	**-0.2**
SMTH	**Samothraki Isl**	**0.83**	**328**	P	**Pg**	**03 50 32.9**	**0.0**
SMTH				S	**Sg**	**03 50 43.6**	**-0.2**
DKL	**Dikili**	**0.93**	**139**	PG	**Pg**	**03 50 34.5**	**-0.2**
DKL	**Dikili**	**0.93**	**139**	*e*Pg	**Pg**	**03 50 34.5**	**-0.2**
ERIK	**Erikli-Kesan**	**0.95**	**19**	PG	**Pg**	**03 50 34.5**	**-0.6**
ERIK	**Erikli-Kesan**	**0.95**	**19**	*e*Pg	**Pg**	**03 50 34.5**	**-0.6**
ENEZ	**Enez**	**0.96**	**2**	PG	**Pg**	**03 50 35.2**	**-0.2**
ENEZ	**Enez**	**0.96**	**2**	*e*Pg	**Pg**	**03 50 35.2**	**-0.2**
KRBG	**Karabiga-Canak**	**1.10**	**55**	PN	**Pg**	**03 50 37.2**	**-0.8**
KRBG	**Karabiga-Canak**	**1.10**	**55**	*e*Pn	**Pg**	**03 50 37.2**	**-0.8**
ALN	**Alexandroupoli**	**1.13**	**357**	PN	**Pb**	**03 50 38.5**	**+0.3**
ALN	**Alexandroupoli**	**1.13**	**357**	P	**Pg**	**03 50 37.9**	**-0.7**
ALN				S	**Sb**	**03 50 53.4**	**+0.5**
ALN				AML	AML	03 50 54.4	
	comp=E,188μm,0.5s						
ALN				AML	AML	03 50 54.9	
	comp=N,164μm,0.4s						
ALN	**Alexandroupoli**	**1.13**	**357**	P	**Pg**	**03 50 37.7**	**-0.8**
ALN				S	**Sb**	**03 50 53.2**	**+0.3**
ALN	**Alexandroupoli**	**1.13**	**357**	P	**Pg**	**03 50 37.8**	**-0.7**
ALN	**Alexandroupoli**	**1.13**	**357**	*e*Pn	**Pb**	**03 50 38.5**	**+0.3**
ALN				S	**Sb**	**03 50 53.2**	**+0.3**
KESN	**Edirne-Kesan**	**1.14**	**22**	*i* P	**Pg**	**03 50 38.5**	**-0.3**
KESN				*i* S	**Sg**	**03 50 52.5**	**-1.1**
KESN	**Edirne-Kesan**	**1.14**	**22**	P	**Pg**	**03 50 38.5**	**-0.3**
KESN				S	**Sg**	**03 50 52.5**	**-1.1**
BALY	**Balya**	**1.16**	**91**	*i* P	**Pg**	**03 50 37.7**	**-1.4**
BALY				*i* S	**Sg**	**03 50 52.7**	**-1.5**
BALY	**Balya**	**1.16**	**91**	P	**Pg**	**03 50 37.7**	**-1.4**
BALY				S	**Sg**	**03 50 52.7**	**-1.5**
RKY	**Sarkoy-Tekirda**	**1.23**	**41**	PN	**Pb**	**03 50 39.8**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.23**	**41**	*e*Pn	**Pb**	**03 50 39.8**	**-0.1**
GONE	**Gonen-Balikesi**	**1.24**	**77**	PN	**Pn**	**03 50 40.1**	**+0.1**
GONE	**Gonen-Balikesi**	**1.24**	**77**	*e*Pn	**Pn**	**03 50 40.1**	**+0.1**
STEP	**BALIKESIR_Sava**	**1.30**	**107**	*i* P	**Pg**	**03 50 41.5**	**-0.2**
STEP				*i* S	**Sn**	**03 50 58.9**	**+0.8**
STEP	**BALIKESIR_Sava**	**1.30**	**107**	P	**Pg**	**03 50 41.5**	**-0.2**
STEP				S	**Sn**	**03 50 58.9**	**+0.8**
PSRA	**Psara**	**1.30**	**199**	P	**Pn**	**03 50 39.3**	**-1.4**
PSRA				S	**Sg**	**03 50 58.4**	**-0.2**
PSRA	**Psara**	**1.30**	**199**	P	**Pn**	**03 50 39.9**	**-0.9**
PSRA				S	**Sb**	**03 50 58.2**	**+0.4**
BALB	**Balikesir**	**1.37**	**95**	PN	**Pn**	**03 50 42.1**	**+0.4**
BALB	**Balikesir**	**1.37**	**95**	*e*Pn	**Pn**	**03 50 42.1**	**+0.4**
CHOS	**Chios island**	**1.38**	**182**	PN	**Pb**	**03 50 42.9**	**+0.3**
CHOS	**Chios island**	**1.38**	**182**	P	**Pn**	**03 50 41.3**	**-0.7**
CHOS				S	**Sb**	**03 50 59.5**	**-0.8**
CHOS				AML	AML	03 51 07.5	
	comp=N,302μm,0.4s						
CHOS				AML	AML	03 51 09.6	
	comp=E,429μm,0.2s						
CHOS	**Chios island**	**1.38**	**182**	P	**Pn**	**03 50 41.6**	**-0.4**
CHOS				S	**Sg**	**03 51 02.4**	**+1.1**
CHOS	**Chios island**	**1.38**	**182**	P	**Pn**	**03 50 41.6**	**-0.4**
CHOS	**Chios island**	**1.38**	**182**	*e*Pn	**Pb**	**03 50 42.9**	**+0.3**
CHOS				S	**Sb**	**03 50 59.8**	**-0.5**
RDO	**Rodhopi**	**1.44**	**342**	PN	**Pb**	**03 50 43.6**	**0.0**
RDO	**Rodhopi**	**1.44**	**342**	P	**Pb**	**03 50 44.0**	**+0.3**
RDO				S	**Sn**	**03 51 01.5**	**-0.2**
RDO				AML	AML	03 51 03.2	
	comp=N,74μm,0.2s						
RDO				AML	AML	03 51 09.2	
	comp=E,76μm,0.3s						
RDO	**Rodhopi**	**1.44**	**342**	P	**Pn**	**03 50 43.1**	**+0.3**
RDO				S	**Sn**	**03 51 01.9**	**+0.2**
RDO	**Rodhopi**	**1.44**	**342**	P	**Pn**	**03 50 43.1**	**+0.3**
RDO	**Rodhopi**	**1.44**	**342**	*e*Pn	**Pb**	**03 50 43.6**	**0.0**
RDO				S	**Sn**	**03 51 01.5**	**-0.2**
URLA	**Izmir**	**1.46**	**165**	PN	**Pn**	**03 50 41.8**	**-1.2**
URLA	**Izmir**	**1.46**	**165**	*i* P	**Pn**	**03 50 41.2**	**-1.8**
URLA	**Izmir**	**1.46**	**165**	P	**Pn**	**03 50 41.2**	**-1.8**
URLA	**Izmir**	**1.46**	**165**	*e*Pn	**Pn**	**03 50 41.8**	**-1.2**
EDC	**Edincik**	**1.46**	**66**	PN	**Pn**	**03 50 43.6**	**+0.6**
EDC	**Edincik**	**1.46**	**66**	*e*Pn	**Pn**	**03 50 43.6**	**+0.6**
ZEY	**¯zmir**	**1.56**	**169**	*i* P	**Pn**	**03 50 42.5**	**-1.9**
AKHS	**Akhisar**	**1.59**	**124**	*i* P	**Pb**	**03 50 46.4**	**+0.3**
AKHS				*i* S	**Sb**	**03 51 06.6**	**+0.4**
AKHS	**Akhisar**	**1.59**	**124**	P	**Pb**	**03 50 46.4**	**+0.3**
AKHS				S	**Sb**	**03 51 06.6**	**+0.4**
TKR	**Tekirdag**	**1.63**	**41**	PN	**Pn**	**03 50 46.2**	**+0.8**
TKR	**Tekirdag**	**1.63**	**41**	*e*Pn	**Pn**	**03 50 46.2**	**+0.8**
OUR	**Ouranopolis**	**1.73**	**290**	PN	**Pn**	**03 50 47.5**	**+0.8**
OUR	**Ouranopolis**	**1.73**	**290**	*e*Pn	**Pn**	**03 50 47.5**	**+0.8**
KCTX	**Karacabey (Bur**	**1.79**	**73**	PN	**Pn**	**03 50 47.7**	**+0.1**
KCTX	**Karacabey (Bur**	**1.79**	**73**	*e*Pn	**Pn**	**03 50 47.7**	**+0.1**
DURS	**Dursunbey**	**1.83**	**95**	*i* P	**Pn**	**03 50 48.3**	**+0.2**
DURS				*i* S	**Sn**	**03 51 11.2**	**-0.1**
DURS	**Dursunbey**	**1.83**	**95**	P	**Pn**	**03 50 48.3**	**+0.2**
DURS				S	**Sn**	**03 51 11.2**	**-0.1**
CRLT	**Corlu**	**1.84**	**42**	PN	**Pn**	**03 50 49.1**	**+0.9**
CRLT	**Corlu**	**1.84**	**42**	*e*Pn	**Pn**	**03 50 49.1**	**+0.9**
KDZ	**Kurdzhali**	**1.95**	**344**	PN	**Pn**	**03 50 50.5**	**+0.7**
KDZ	**Kurdzhali**	**1.95**	**344**	*e*Pn	**Pn**	**03 50 50.5**	**+0.7**
EDRB	**Edirne**	**2.13**	**13**	PN	**Pn**	**03 50 52.5**	**+0.3**
EDRB	**Edirne**	**2.13**	**13**	*e*Pn	**Pn**	**03 50 52.5**	**+0.3**
SMG	**Samos**	**2.13**	**164**	P	**Pn**	**03 50 51.9**	**-0.4**
SMG	**Samos**	**2.13**	**164**	P	**Pn**	**03 50 52.0**	**-0.3**
DEMI	**Demirci**	**2.14**	**109**	*i* P	**Pg**	**03 50 59.2**	**+1.4**
ARMT	**Armutlu**	**2.25**	**68**	PN	**Pn**	**03 50 54.8**	**+0.9**
ARMT	**Armutlu**	**2.25**	**68**	*e*Pn	**Pn**	**03 50 54.8**	**+0.9**
AYDB	**Zeytinkoy-Aydi**	**2.29**	**142**	PN	**Pn**	**03 50 55.3**	**+0.8**
AYDB	**Zeytinkoy-Aydi**	**2.29**	**142**	*e*Pn	**Pn**	**03 50 55.3**	**+0.8**
SIMA	**Simav-Kutahya**	**2.32**	**106**	PN	**Pn**	**03 50 55.9**	**+0.9**
SIMA	**Simav-Kutahya**	**2.32**	**106**	*e*Pn	**Pn**	**03 50 55.9**	**+0.9**
NVR	**Nevrokopi**	**2.33**	**313**	P	**Pn**	**03 50 55.7**	**+0.6**
NVR				S	**Sn**	**03 51 22.4**	**-1.2**
NVR	**Nevrokopi**	**2.33**	**313**	P	**Pn**	**03 50 55.3**	**+0.3**
NVR				S	**Sn**	**03 51 22.8**	**-0.9**
CTKS	**Kestanelik-??a**	**2.34**	**50**	PN	**Pn**	**03 50 56.2**	**+1.1**
CTKS	**Kestanelik-??a**	**2.34**	**50**	*e*Pn	**Pn**	**03 50 56.2**	**+1.1**
KULA	**Kula-Manisa**	**2.34**	**122**	PN	**Pn**	**03 50 56.2**	**+1.0**
KULA	**Kula-Manisa**	**2.34**	**122**	*e*Pn	**Pn**	**03 50 56.2**	**+1.0**
SRS	**Serrai**	**2.35**	**306**	P	**Pn**	**03 50 55.1**	**-0.1**
SRS	**Serrai**	**2.35**	**306**	P	**Pn**	**03 50 55.2**	**-0.1**
YLV	**Yalova**	**2.62**	**71**	PN	**Pn**	**03 51 00.1**	**+1.1**
YLV	**Yalova**	**2.62**	**71**	*e*Pn	**Pn**	**03 51 00.1**	**+1.1**

BJI 17 03:51:38.5, 30°.36N×98°.30E, h7km, ML3.6/4, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**15.86**	**331**	*e*P	Pn	03 55 21.4	-0.8
WMQ				smax	smax		
	comp=N,47nm,1.3s						
WMQ				smax	smax		
	comp=E,38nm,1.3s						
WMQ				LR	LR		
	comp=N,400nm,23.5s						
WMQ				LR	LR		
	comp=E,650nm,28.1s						
WMQ				LR	LR		
	comp=Z,560nm,29.7s						

*IDC **17** 04:00:26.6±1.1, 33°.12S×178°.96W, h0km, mb4.0/2, mb1 4.3/3, mb1mx3.7/47, mbtmp4.1/3, ML4.2/1, Error ellipse: s-maj=41.7km s-min=34.2km az=148.0*
*NEIC **17** 04:00:32.0±0.7, 33°.23S×179°.04W, h35km, mb4.0/1, Error ellipse: s-maj=19.0km s-min=15.1km az=114.0*
*WEL **17** 04:00:31.0, 33°.23S×179°.04W, h35km, ML4.8/29*

ISC 17 04:00:31.5±1.2, 33°.39S±0°.09×178°.7W±0°.2, h41km, n52, σ1§39/65, mb4.0/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.84**	**210**	P	**Pn**	**04 01 43.3**	**+1.5**
MXZ				S	**Sn**	**04 02 36.5**	**-0.1**
WMGZ	**Waiomatatini S**	**5.02**	**208**	P	**Pn**	**04 01 46.1**	**+1.9**
WMGZ				S	**Sn**	**04 02 41.6**	**+0.6**
HAZ	**Te Kaha**	**5.23**	**213**	P	**Pn**	**04 01 48.7**	**+1.5**
HAZ				S	**Sn**	**04 02 47.0**	**+0.7**
PUZ	**Puketiti**	**5.30**	**207**	P	**Pn**	**04 01 48.9**	**+0.7**
PUZ				S	**Sn**	**04 02 47.6**	**-0.4**
RUGZ	**Raukumara Rang**	**5.45**	**212**	P	**Pn**	**04 01 51.3**	**+0.9**
RUGZ				S	**Sn**	**04 02 50.2**	**-1.7**
TWGZ	**Tauwhareparae**	**5.50**	**209**	P	**Pn**	**04 01 52.6**	**+1.7**
TWGZ				S	**Sn**	**04 02 52.4**	**-0.5**
CNGZ	**Carnagh Statio**	**5.68**	**206**	P	**Pn**	**04 01 54.5**	**+1.1**
CNGZ				S	**Sn**	**04 03 00.1**	**+2.8**
WHRZ	**Whale Island**	**5.70**	**217**	P	**Pn**	**04 01 55.8**	**+2.1**
TKGZ	**Te Karaka**	**5.78**	**208**	P	**Pn**	**04 01 55.8**	**+1.1**
TKGZ				S	**Sn**	**04 02 58.2**	**-1.5**
MWZ	**Matawai**	**5.82**	**211**	P	**Pn**	**04 01 55.6**	**+0.2**
MWZ				S	**Sn**	**04 02 59.8**	**-1.0**
URZ	**Urewera**	**5.95**	**214**	Pn	**Pn**	**04 01 56.6**	**-0.5**
	5.5nm,0.3s,baz=27,slow=4.5,SNR=33						
URZ				Sn	**Sn**	**04 03 01.9**	**-2.0**
	7.9nm,0.3s,baz=108,slow=20,SNR=5.8						
URZ	**Urewera**	**5.95**	**214**	P	**Pn**	**04 01 56.5**	**-0.5**
URZ				S	**Sn**	**04 03 02.1**	**-1.8**
RAGZ	**Rawiri**	**6.01**	**211**	P	**Pn**	**04 01 57.7**	**-0.2**
RAGZ				S	**Sn**	**04 03 06.1**	**+0.7**
RIGZ	**Rimuhau**	**6.04**	**208**	P	**Pn**	**04 01 58.8**	**+0.4**
RIGZ				S	**Sn**	**04 03 06.1**	**-0.2**
PRGZ	**Paritu Road**	**6.19**	**206**	P	**Pn**	**04 02 01.6**	**+1.3**
KMRZ	**Kaimai**	**6.25**	**223**	P	**Pn**	**04 02 04.4**	**+3.2**
SNGZ	**Shannon Statio**	**6.28**	**210**	P	**Pn**	**04 02 03.2**	**+1.6**
MUGZ	**Murupara**	**6.28**	**215**	P	**Pn**	**04 02 02.4**	**+0.8**
RTZ	**Ruatahuna**	**6.30**	**213**	P	Pn	04 01 54.4	-7.5
RTZ				P	**Pn**	**04 02 01.7**	**-0.2**
MHGZ	**Mahia Peninsul**	**6.38**	**205**	P	**Pn**	**04 02 04.4**	**+1.4**
TOZ	**Tahuroa Road**	**6.43**	**226**	P	**Pn**	**04 02 07.8**	**+4.1**
RAHZ	**Arahi**	**6.50**	**211**	P	**Pn**	**04 02 04.7**	**+0.1**
MTHZ	**Maungataniwha**	**6.55**	**212**	P	**Pn**	**04 02 06.8**	**+1.4**
MRHZ	**Matea Rd**	**6.74**	**215**	P	**Pn**	**04 02 07.9**	**0.0**
NMHZ	**Naumai**	**6.77**	**211**	P	**Pn**	**04 02 09.8**	**+1.4**
ARHZ	**Aropaoanui**	**6.83**	**210**	P	**Pn**	**04 02 08.9**	**-0.2**
BKZ	**Black Stump Fm**	**6.96**	**213**	P	**Pn**	**04 02 11.3**	**+0.3**
KWHZ	**Kaweka Forest**	**7.21**	**212**	P	**Pn**	**04 02 15.0**	**+0.6**
KAHZ	**Kahuranaki**	**7.33**	**208**	P	**Pn**	**04 02 14.2**	**-1.8**
HIZ	**Hauiti**	**7.33**	**224**	P	**Pn**	**04 02 18.9**	**+2.9**
WTVZ	**West Tongariro**	**7.36**	**217**	P	**Pn**	**04 02 17.2**	**+0.6**
NGZ	**Ngauruhoe**	**7.40**	**217**	P	**Pn**	**04 02 18.2**	**+1.0**
TWVZ	**Taurewa**	**7.41**	**218**	P	**Pn**	**04 02 18.3**	**+1.2**
KRHZ	**Kereru**	**7.41**	**211**	P	**

comp=Z,4μm,0.2s
ILIN Lien 2.15 347 *e*Pn **Pb 04 04 21.4 -0.3**
ILIN *e* 04 04 57.6
comp=Z,2μm,0.2s
NSR Nassriya 2.17 214 *e*Pn **Pn 04 04 19.0 +0.5**
SNR=5.0
NSR *e*Sn **Sn 04 04 47.0 +1.9**
SNR=5.0
KHMZ Khomeyn 2.21 65 *e*Pg **Pn 04 04 20.6 +1.3**
SNGE Sanandaj 2.27 356 *e*Pn **Pb 04 04 24.5 +0.7**
SNGE *e*Sg **Sg 04 04 56.9 +0.9**
HAGD Aghdareh 2.39 33 *e*Pn **Pn 04 04 23.0 +1.2**
ASAO Ashtian 2.68 49 *e*Pn **Pn 04 04 27.5 +1.7**
HKZM Kohzaman 2.79 23 *e*Pn **Pn 04 04 29.7 +2.5**
IRAZ Razeghan 3.24 37 *e*Pn **Pn 04 04 35.3 +1.9**
IRAZ *e* 04 04 43.2
comp=Z,832nm,0.3s
QABG Abgarm-Qazvin 3.33 30 *e*Pn **Pn 04 04 36.0 +1.3**
IKLH Kolahrood 3.41 81 *e*Pn **Pn 04 04 36.9 +1.1**
IKLH *e* 04 04 39.0
comp=Z,583nm,0.1s
GHVR GHOM 3.53 61 *e*Pn **Pn 04 04 38.3 +1.0**
IZEF Zefreh 4.02 88 *e*Pn **Pn 04 04 44.3 +0.2**
IZEF *e* 04 04 58.6
comp=Z,217nm,0.2s
IVRN Varamin 4.09 57 *e*Pn **Pn 04 04 45.8 +0.8**
IVRN *e* 04 04 49.1
comp=Z,690nm,0.1s
IGZV Ghazvin 4.18 31 *e*Pn **Pn 04 04 47.0 +0.7**
IGZV *e* 04 04 48.9
comp=Z,331nm,0.1s
CHTH Charan 4.27 43 *e*Pn **Pn 04 04 49.2 +1.7**
DAMV Damavand 4.61 51 *e*Pn **Pn 04 04 53.0 +0.8**
IDMV Damavand 4.62 52 *e*Pn **Pn 04 04 52.7 +0.3**
IDMV *e* 04 04 58.4
comp=Z,204nm,0.1s
IFIR Firoozkooh 5.14 55 *e*Pn **Pn 04 05 00.2 +0.6**
RTB Rutbah 6.10 274 *e*Pn **Pn 04 05 14.0 +1.4**
SNR=5.0
RTB *e*Sn **Sn 04 06 23.0 +0.9**
SNR=5.0
KVAR Kislovodsk Arr 11.75 343 LR LR 04 11 47.3
comp=Z,52nm,19.9s,baz=308,slow=42
KURBB Kurchatov Arra 28.87 43 P **P 04 09 40.1 -0.6**
comp=Z,0.1nm,0.4s,baz=246,slow=9.2,SNR=2.7
MKAR Makanchi Array 29.84 52 P **P 04 09 50.6 +1.1**
comp=Z,0.2nm,0.5s,baz=243,slow=9.9,SNR=3.5
FINES FINESS Array B 31.83 341 P **P 04 10 06.3 -0.5**
comp=Z,0.7nm,0.6s,baz=134,slow=7.9,SNR=3.1
HFS Hagfors 35.22 331 P **P 04 10 35.1 -1.2**
comp=Z,0.9nm,0.4s,baz=115,slow=10,SNR=7.7
ARCES ARCESS Array B 38.79 348 P **P 04 11 05.8 -0.8**
comp=Z,2.5nm,1.0s,baz=148,slow=8.6,SNR=6.2
ESDC Sonseca Array 41.63 295 P **P 04 11 31.1 +0.5**
comp=Z,0.1nm,0.4s,baz=73,slow=8.0,SNR=6.0
TORD Torodi Ar. Bea 46.12 256 P **P 04 12 06.4 -0.4**
comp=Z,1.1nm,1.0s,baz=58,slow=9.7,SNR=3.2

KRSC 17 04:37:17.7±1.6, 49°.18N×157°.19E, h39km±25km, ML3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.66**	**336**	*e*P	Pn	04 37 44.6	+0.4
SKR				*e*S	Sn	04 38 04.8	+0.6
PAU	**Pauzhetka**	**2.30**	**354**	*e*P	Pn	04 37 55.8	+2.8
PAU				*e*S	Sn	04 38 23.7	+3.6
KDTR	**Khodutka, Kamc**	**2.69**	**12**	*e*P	Pn	04 38 01.7	+3.3
KDTR				*e*S	Sn	04 38 33.9	+4.2
ASAK	**Asacha**	**3.24**	**8**	*e*P	Pn	04 38 10.1	+4.1
RUS	**Russkaya**	**3.36**	**14**	*e*P	Pn	04 38 11.6	+4.0
RUS				*e*S	Sn	04 38 51.1	+4.9
MTVR	**Mutnovka**	**3.37**	**10**	*e*S	Sn	04 38 50.4	+3.9
KRMR	**Karymshinskiy**	**3.70**	**9**	*e*P	Pn	04 38 16.7	+4.4
APC	**Apacha**	**3.75**	**360**	*e*P	Pn	04 38 16.5	+3.6
DALK	**Dalny**	**3.98**	**14**	*e*P	Pn	04 38 20.1	+4.0
UGLR	**Uglovaya**	**4.16**	**14**	*e*P	Pn	04 38 23.9	+5.2
AVH	**Avacha**	**4.20**	**13**	*e*P	Pn	04 38 24.1	+4.9
KOK	**Koryaka**	**4.22**	**12**	*e*P	Pn	04 38 24.0	+4.6
SDLR	**Sedlovina**	**4.24**	**14**	*e*P	Pn	04 38 23.9	+4.1
KRER	**Koryakskii**	**4.24**	**13**	*e*P	Pn	04 38 24.6	+4.7
KRX	**Arik**	**4.28**	**12**	*e*P	Pn	04 38 24.8	+4.4
GNL	**Ganaly**	**4.55**	**6**	*e*P	Pn	04 38 28.9	+4.9
MKZ	**Mys Kozlova**	**6.07**	**26**	*e*P	Pn	04 38 48.8	+4.0
KZV	**Kizimen**	**6.24**	**17**	*e*P	Pn	04 38 51.8	+4.6

IDC 17 04:39:14.5±1.5, 34°.81S×74°.11W, h0km, mb3.5/2, mb1 3.8/4, mb1mx3.6/30, mbtmp3.5/4, ML3.7/2, Error ellipse: s-maj=80.2km s-min=22.6km az=74.0
ISCJB 17 04:39:17.4±0.8, 34°.79S±0°.04×73°.83W±0°.07, h33km, mb3.4/2, Error ellipse: s-maj=8.5km s-min=4.9km az=20.0
GUC 17 04:39:18.1±0.5, 36°.49S×71°.32W, h59km±396km, ML4.2
ISC 17 04:39:19.8±1.2, 34°.83S±0°.05×73°.78W±0°.10, h35km, n22, σ2s47/42, 6C, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO05	**HualaæØ**	**1.53**	**97⇑**	*i*P	**Pn**	**04 39 43.8**	**-0.9**
GO05			⇑	*i*P	**Pn**	**04 39 43.9**	**-0.7**
GO05				*i* S	**Sn**	**04 40 02.8**	**-0.6**
GO05				*i* S	**Sn**	**04 40 03.0**	**-0.3**
CCHI	**Chillan**	**2.25**	**142⇑**	*i*P	**Pn**	**04 39 54.6**	**+0.1**
CCHI				*i* S	**Sn**	**04 40 18.5**	**-2.5**
ROCH	**El Roble**	**2.95**	**52**	*e*P	Pn	04 39 59.5	-5.0
ROCH				*i* S	**Sn**	**04 40 34.7**	**-4.1**
ROCH				IAML		04 40 42.0	
comp=N,286nm,0.6s							
CLCH	**Cerro Calan**	**3.04**	**63⇑**	*i*P	**Pn**	**04 40 03.5**	**-2.0**
CLCH				*e*P	**Pn**	**04 40 04.2**	**-1.3**
CLCH				*i* S	**Sn**	**04 40 39.6**	**-1.2**
CLCH				IAML		04 40 51.6	
comp=N,398nm,0.7s							
PEL	**Peldehue**	**3.07**	**58⇑**	*i*P	**Pn**	**04 40 04.3**	**-1.6**
PEL				*i* S	**Sn**	**04 40 41.0**	**-0.4**
PEL				IAML		04 40 42.1	
comp=N,628nm,1.0s							
FCH	**Farellones**	**3.26**	**64⇑**	*i*P	**Pn**	**04 40 07.3**	**-1.4**
FCH				*i* S	**Sn**	**04 40 45.3**	**-1.1**
FCH				IAML		04 40 50.2	
comp=E,256nm,0.7s							
ARCO	**CERRO ARCO**	**4.49**	**65**	*e*P	**Pn**	**04 40 27.6**	**+2.0**
ARCO				*e*S	**Sn**	**04 41 22.8**	**+6.1**
ARCO				IAML		04 41 37.4	
comp=Z,22nm,0.6s							
AUSP	**Uspallata**	**4.49**	**56**	*e*P	**Pn**	**04 40 26.1**	**+0.4**
AUSP				*i* S	**Sn**	**04 41 20.5**	**+3.6**
ASAL	**Salagasta**	**4.68**	**63**	*e*P	**Pn**	**04 40 30.4**	**+2.2**
ASAL				*e*S	**Sn**	**04 41 14.3**	**-7.0**
RTLS	**Leoncito**	**4.81**	**52**	*i* P	**Pn**	**04 40 30.1**	**0.0**
RTLS				*e*S	**Sn**	**04 41 29.1**	**+4.2**
RTLS				IAML		04 41 41.3	
comp=Z,27nm,0.6s							
RTCV	**Cerro Valdivia**	**5.29**	**57**	*i* P	**Pn**	**04 40 36.5**	**+0.1**
RTCV				*e*S	**Sn**	**04 41 38.5**	**+2.4**
RTLL	**Cerro Villicun**	**5.65**	**53**	*i* P	**Pn**	**04 40 41.0**	**-0.4**
RTLL				*e*S	**Sn**	**04 41 47.7**	**+2.5**
AMOG	**MOGNA**	**5.90**	**50**	*e*P	**Pn**	**04 40 43.8**	**-1.0**
AMOG				*e*S	**Sn**	**04 41 51.6**	**+0.4**
AROD	**Rodeo**	**5.90**	**39**	*i* P	**Pn**	**04 40 44.3**	**-0.7**
AROD				*i* S	**Sn**	**04 41 54.2**	**+2.6**
PLCA	**Paso Flores**	**6.42**	**158**	Pn	**Pn**	**04 40 53.0**	**+1.0**
comp=Z,0.3nm,0.3s,baz=335,slow=15,SNR=5.9							
PLCA				Sn	**Sn**	**04 42 09.4**	**+5.3**
baz=306,slow=18,SNR=1.6							
AGUA	**GUANDACOL**	**6.96**	**42**	*e*P	**Pn**	**04 40 59.0**	**-0.4**
AGUA				*e*S	**Sn**	**04 42 19.6**	**+2.2**
VCA	**Vinchina**	**7.70**	**39**	*e*P	**Pn**	**04 41 08.5**	**-1.2**
VCA				IAML		04 41 11.5	
comp=Z,10nm,0.4s							
VCA				*e*S	**Sn**	**04 42 37.8**	**+1.9**
ACLC	**CERRO LA CRUZ**	**7.91**	**49**	*e*P	**Pn**	**04 41 09.6**	**-2.9**
ACLC				*e*S	**Sn**	**04 42 39.5**	**-1.3**
TCA	**Tanti**	**8.45**	**68**	*i* P	**Pn**	**04 41 18.1**	**-1.8**
LPAZ	**La Paz**	**19.14**	**17**	P	**P**	**04 43 40.8**	**0.0**
comp=Z,0.1nm,0.3s,baz=200,slow=8.6,SNR=8.0							
SNAA	**Sanae**	**51.37**	**157**	P	**P**	**04 48 21.0**	**+0.4**
comp=Z,0.7nm,0.8s,baz=252,slow=6.4,SNR=3.8							
TXAR	**Lajitas Array**	**69.78**	**332**	P	**P**	**04 50 25.9**	**-0.7**
comp=Z,0.2nm,0.6s,baz=153,slow=8.1,SNR=5.1							

KRSC 17 04:54:36.8±1.6, 52°.68N×160°.72E, h19km±18km, ML3.9
ISCJB 17 04:54:37.7±1.1, 52°.65N±0°.04×160°.68E±0°.06, h20km±7km, mb3.6/7, Error ellipse: s-maj=8.0km s-min=4.2km az=145.1
IDC 17 04:54:43.2±3.4, 52°.76N×160°.33E, h64km±27km, mb3.3/7, mb1 3.4/7, mb1mx3.1/70, mbtmp3.6/7, Error ellipse: s-maj=28.3km s-min=26.4km az=30.0
ISC 17 04:54:34.0±1.8, 52°.69N±0°.05×160°.81E±0°.05, h2km±10km, n47, σ1s34/59, mb3.8/7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.63**	**311**	*e*P	**Pb**	**04 54 48.9**	**+1.2**
SPN				*e*S	**Sb**	**04 54 56.7**	**-0.3**
NLC	**Nalytchevo**	**1.01**	**299**	*e*P	**Pb**	**04 54 54.5**	**+0.3**
NLC				*e*S	**Sg**	**04 55 06.9**	**+0.5**
DALK	**Dalny**	**1.29**	**286**	*e*P	**Pg**	**04 54 59.1**	**+0.3**
SDLR	**Sedlovina**	**1.30**	**298**	*e*P	**Pn**	**04 54 59.5**	**+0.1**
SDLR				*e*S	**Sg**	**04 55 15.9**	**0.0**
UGLR	**Uglovaya**	**1.31**	**294**	*e*P	**Pb**	**04 55 00.1**	**+0.7**
PET	**Petropavlovsk**	**1.35**	**285**	*e*P	**Pb**	**04 55 00.2**	**+0.2**
PET				*e*S	**Sg**	**04 55 16.7**	**-0.6**
AVH	**Avacha**	**1.38**	**295**	*e*P	**Pg**	**04 55 00.9**	**+0.5**
KRER	**Koryakskii**	**1.39**	**297**	*i* P	**Pg**	**04 55 01.1**	**+0.5**
KRER				*e*S	**Sg**	**04 55 18.2**	**-0.4**
RUS	**Russkaya**	**1.43**	**260**	*e*P	**Pb**	**04 55 01.4**	**+0.1**
RUS				*e*S	**Sb**	**04 55 18.9**	**-1.0**
KOK	**Koryaka**	**1.45**	**295**	*e*P	**Pn**	**04 55 01.4**	**+0.1**
KRX	**Arik**	**1.47**	**298**	*e*P	**Pb**	**04 55 02.2**	**+0.1**
KII	**Karymskiy**	**1.57**	**329**	*e*P	**Pb**	**04 55 04.3**	**+0.4**
MTVR	**Mutnovka**	**1.62**	**264**	*e*P	**Pb**	**04 55 04.7**	**0.0**
MTVR				*e*S	**Sn**	**04 55 24.7**	**-0.5**
KRMR	**Karymshinskiy**	**1.63**	**276**	*e*P	**Pn**	**04 55 04.2**	**+0.4**
ASAK	**Asacha**	**1.80**	**261**	*i* P	**Pb**	**04 55 08.0**	**+0.2**
ASAK				*e*S	**Sb**	**04 55 30.3**	**-0.6**
KDTR	**Khodutka, Kamc**	**1.90**	**243**	*e*P	**Pn**	**04 55 08.3**	**+0.9**
KDTR				*e*S	**Sn**	**04 55 30.6**	**-1.3**
PETK	**Petropavlovsk-**	**1.93**	**284**	P	**Pb**	**04 55 09.2**	**-0.7**
31nm,0.3s,baz=96,slow=19,SNR=126							
PETK				S	**Sn**	**04 55 29.8**	**-2.9**
15nm,0.3s,baz=84,slow=21,SNR=5.6							
MKZ	**Mys Kozlova**	**1.95**	**16**	*e*P	**Pb**	**04 55 10.0**	**-0.2**
MKZ				*e*S	**Sn**	**04 55 33.3**	**+0.2**
GNL	**Ganaly**	**2.00**	**301**	*i* P	**Pb**	**04 55 10.9**	**-0.2**
GNL				*e*S	**Sn**	**04 55 35.4**	**+0.9**
APC	**Apacha**	**2.23**	**277**	*e*P	**Pb**	**04 55 14.1**	**-0.9**
APC				*e*S	**Sn**	**04 55 40.8**	**+0.7**
KZV	**Kizimen**	**2.44**	**353**	*e*P	**Pb**	**04 55 18.9**	**+0.1**
KZV				*e*S	**Sb**	**04 55 49.2**	**-0.2**
TUMD	**Tumrok D**	**2.53**	**355**	*e*P	**Pb**	**04 55 18.5**	**-1.6**
TUMD				*e*S	**Sn**	**04 55 48.4**	**+0.9**
TUMR	**Tumrok**	**2.63**	**352**	*e*P	**Pb**	**04 55 20.8**	**-1.1**
PAU	**Pauzhetka**	**2.75**	**245**	*e*P	**Pb**	**04 55 23.1**	**-0.9**
KMNR	**Kamenistaya**	**3.09**	**354**	*e*P	**Pb**	**04 55 27.8**	**-1.9**
BZMR	**Bezymyannaya**	**3.25**	**357**	*e*P	**Pb**	**04 55 31.4**	**-1.2**
BZGR	**Bezymyannyi-Gr**	**3.26**	**359**	*e*P	**Pb**	**04 55 30.9**	**-1.7**
BZWR	**Bezymyannyi-We**	**3.28**	**357**	*e*P	**Pb**	**04 55 31.4**	**-1.7**
KPT	**Kopyto**	**3.30**	**354**	*e*P	**Pb**	**04 55 31.9**	**-1.4**
ZLN	**Zelenaya**	**3.33**	**360**	*e*P	**Pb**	**04 55 31.5**	**-2.4**
LGNR	**Loginova**	**3.40**	**359**	*e*P	**Pb**	**04 55 33.1**	**-2.0**
CIRR	**Tsirk**	**3.43**	**359**	*e*P	**Pb**	**04 55 33.0**	**-2.6**
ESO	**Esso**	**3.47**	**340**	*e*P	**Pn**	**04 55 31.9**	**+2.9**
KRSR	**Krestovskiy**	**3.54**	**358**	*e*P	**Pb**	**04 55 35.8**	**-1.5**
BDR	**Baidarnaya**	**3.89**	**5**	*e*P	**Pb**	**04 55 40.4**	**-3.0**
SMKR	**Semkarok**	**3.92**	**5**	*e*P	**Pb**	**04 55 40.5**	**-3.3**
BKI	**Bering**	**3.95**	**48**	*e*P	**Pn**	**04 55 37.4**	**+1.8**
H11N2	**WAKE ISLAND Hy**	**33.24**	**169**	T	T	05 36 31.3	
baz=353,slow=76,SNR=12							
H11N3	**WAKE ISLAND Hy**	**33.25**	**169**	T	T	05 36 30.4	
baz=353,slow=76,SNR=6.2							
H11N1	**WAKE ISLAND Hy**	**33.25**	**170**	T	T	05 36 29.8	
baz=353,slow=76,SNR=14							
SPITS	**Spitsbergen Ar**	**47.60**	**351**	P	**P**	**05 03 11.0**	**+0.3**
6.0nm,1.0s,baz=42,slow=6.7,SNR=2.7							
KURBB	**Kurchatov Arra**	**48.41**	**302**	P	**P**	**05 03 15.4**	**-1.8**
0.3nm,0.4s,baz=57,slow=7.3,SNR=4.4							
MKAR	**Makanchi Array**	**48.72**	**296**	P	**P**	**05 03 18.0**	**-1.7**
0.2nm,0.4s,baz=62,slow=8.7,SNR=4.3							
FINES	**FINESS Array B**	**60.66**	**337**	P	**P**	**05 04 46.0**	**0.0**
0.5nm,0.5s,baz=39,slow=8.5,SNR=7.1							
AKASG	**Malin Array Be**	**69.18**	**329**	P	**P**	**05 05 41.3**	**-0.3**
0.3nm,0.5s,baz=30,slow=7.1,SNR=3.6							
TXAR	**Lajitas Array**	**70.39**	**67**	P	**P**	**05 05 51.6**	**+2.0**
0.1nm,0.5s,baz=288,slow=6.4,SNR=2.8							
ASAR	**Alice Springs**	**79.57**	**205**	P	**P**	**05 06 42.9**	**+0.6**
0.2nm,0.7s,baz=19,slow=5.9,SNR=3.2							

KRSC 17 05:18:29.8±1.6, 52°.69N×160°.72E, h20km±22km, ML4.5
MOS 17 05:18:29.8±0.8, 52°.57N×160°.79E, h22km, mb4.3/17, Error ellipse: s-maj=7.2km s-min=3.9km az=98.2
NEIC 17 05:18:33.5±0.9, 52°.74N×160°.65E, h43km±10km, mb4.5/5, Error ellipse: s-maj=13.1km s-min=8.4km az=167.0
IDC 17 05:18:35.8±2.7, 52°.82N×160°.39E, h54km±24km, mb3.6/21, mb1 3.8/22, mb1mx3.6/71, mbtmp3.9/22, ML3.7/1, MS3.2/3, Ms1 3.2/3, ms1mx2.7/69, Error ellipse: s-maj=16.3km s-min=14.0km az=142.0
ISC 17 05:18:28.3±1.3, 52°.53N±0°.03×160°.68E±0°.04, h11km±8km, n160, σ1s59/200, mb4.1/29, MS3.4/3, 3C-2D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.70**	**325**	*e*P	**Pg**	**05 18 42.3**	**+0.5**
SPN				*e*S	**Sg**	**05 18 50.0**	**-1.0**
SPN	**Mys Shipunski**	**0.70**	**325**	PN	**Pg**	**05 18 42.3**	**+0.5**
SPN				S	**Sg**	**05 18 50.0**	**-1.0**
NLC	**Nalytchevo**	**1.04**	**309**	*e*P	**Pb**	**05 18 47.9**	**-0.3**
NLC				*e*S	**Sb**	**05 19 00.3**	**-1.5**
NLC	**Nalytchevo**	**1.04**	**309**	PN	**Pb**	**05 18 47.9**	**-0.3**
NLC				S	**Sb**	**05 19 00.3**	**-1.5**
DALK	**Dalny**	**1.27**	**294**	*e*P	**Pn**	**05 18 52.1**	**+0.1**
DALK				*e*S	**Sb**	**05 19 06.3**	**-2.4**
DALK	**Dalny**	**1.27**	**294**	PN	**Pn**	**05 18 52.1**	**+0.1**
DALK				S	**Sb**	**05 19 06.3**	**-2.4**
UGLR	**Uglovaya**	**1.32**	**302**	*i* P	**Pb**	**05 18 53.1**	**0.0**
UGLR	**Uglovaya**	**1.32**	**302**	PN	**Pb**	**05 18 53.1**	**0.0**
SDLR	**Sedlovina**	**1.32**	**305**	*i* P	**Pn**	**05 18 52.9**	**+0.1**
SDLR				*e*S	**Sb**	**05 19 09.2**	**-1.0**
SDLR	**Sedlovina**	**1.32**	**305**	PN	**Pn**	**05 18 52.9**	**+0.1**
SDLR				S	**Sb**	**05 19 09.2**	**-1.0**
PET	**Petropavlovsk**	**1.33**	**293**	*e*Pn	**Pb**	**05 18 53.3**	**+0.1**
PET				*e*Sn	**Sb**	**05 19 10.3**	**+0.1**
PET	**Petropavlovsk**	**1.33**	**293**	*e*P	**Pb**	**05 18 53.5**	**+0.3**
PET				*e*S	**Sb**	**05 19 10.0**	**-0.2**
PET	**Petropavlovsk**	**1.33**	**293**	*e*PN	**Pb**	**05 18 53.3**	**+0.1**
PET				*e*S	**Sb**	**05 19 09.2**	**-1.0**
PET				pmax	pmax		
comp=Z,673nm,0.6s							
PET				smax	smax		
comp=N,2μm,0.9s							
PET				smax	smax		
comp=N,3μm,0.6s							
PET				smax	smax		
comp=E,4μm,1.1s							
PET				smax	smax		
comp=E,3μm,0.6s							
RUS	**Russkaya**	**1.33**	**267**	*e*P	**Pg**	**05 18 54.6**	**+0.7**
RUS				*e*S	**Sg**	**05 19 12.2**	**+1.1**
RUS	**Russkaya**	**1.33**	**267**	PN	**Pg**	**05 18 54.6**	**+0.7**
RUS				S	**Sg**	**05 19 12.2**	**+1.1**
AVH	**Avacha**	**1.39**	**303**	*e*P	**Pb**	**05 18 54.2**	**-0.1**
AVH				*e*S	**Sn**	**05 19 10.5**	**-1.5**
AVH	**Avacha**	**1.39**	**303**	PN	**Pb**	**05 18 54.2**	**-0.1**
AVH				S	**Sn**	**05 19 10.5**	**-1.5**
KRER	**Koryakskii**	**1.41**	**304**	*i* P	**Pb**	**05 18 54.5**	**-0.2**
KRER				*e*S	**Sn**	**05 19 11.8**	**-0.8**
KRER	**Koryakskii**	**1.41**	**304**	PN	**Pb**	**05 18 54.5**	**-0.2**
KRER				S	**Sn**	**05 19 11.8**	**-0.8**
KOK	**Koryaka**	**1.46**	**303**	*e*P	**Pb**	**05 18 55.8**	**+0.3**
KOK				*e*S	**Sn**	**05 19 13.8**	**+0.1**
KOK	**Koryaka**	**1.46**	**303**	PN	**Pb**	**05 18 55.8**	**+0.3**
KOK				S	**Sn**	**05 19 13.8**	**+0.1**
KRX	**Arik**	**1.49**	**305**	*e*P	**Pn**	**05 18 55.3**	**+0.2**
KRX				*e*S	**Sn**	**05 19 13.3**	**-1.2**
KRX	**Arik**	**1.49**	**305**	PN	**Pn**	**05 18 55.3**	**+0.2**
KRX				S	**Sn**	**05 19 13.3**	**-1.2**
MTVR	**Mutnovka**	**1.53**	**269**	*e*P	**Pg**	**05 18 57.6**	**-0.1**
MTVR				*e*S	**Sg**	**05 19 17.7**	**+0.2**
MTVR	**Mutnovka**	**1.53**	**269**	PN	**Pg**	**05 18 57.6**	**-0.1**
MTVR				S	**Sg**	**05 19 17.7**	**+0.2**
KRMR	**Karymshinskiy**	**1.58**	**282**	*e*P	**Pb**	**05 18 57.6**	**+0.1**
KRMR				*e*S	**Sb**	**05 19 17.2**	**-0.3**
KRMR	**Karymshinskiy**	**1.58**	**282**	PN	**Pb**	**05 18 57.6**	**+0.1**
KRMR				S	**Sb**	**05 19 17.2**	**-0.3**
GRL	**Gorelyy**	**1.59**	**272**	*i* P	**Pg**	**05 18 59.3**	**+0.4**
GRL				*e*S	**Sg**	**05 19 20.0**	**+0.4**
GRL	**Gorelyy**	**1.59**	**272**	PN	**Pg**	**05 18 59.3**	**+0.4**
GRL				S	**Sg**	**05 19 20.0**	**+0.4**
KII	**Karymskiy**	**1.68**	**334**	*e*P	**Pn**	**05 18 57.8**	**+0.1**
KII				*e*S	**Sn**	**05 19 17.1**	**-2.2**
KII	**Karymskiy**	**1.68**	**334**	PN	**Pn**	**05 18 57.8**	**+0.1**
KII				S	**Sn**	**05 19 17.1**	**-2.2**
ASAK	**Asacha**	**1.71**	**266**	*e*P	**Pg**	**05 19 01.1**	**0.0**
ASAK				*e*S	**Sg**	**05 19 24.0**	**+0.8**
ASAK	**Asacha**	**1.71**	**266**	PN	**Pg**	**05 19 01.1**	**0.0**
ASAK				S	**Sg**	**05 19 24.0**	**+0.8**
KDTR	**Khodutka, Kamc**	**1.76**	**247**	*e*P	**Pg**	**05 19 01.5**	**-0.5**
KDTR				*e*S	**Sg**	**05 19 23.5**	**-1.3**
PEA0B	**Petropavlovsk-**	**1.90**	**289**	*e*Pn	**Pb**	**05 19 02.5**	**-0.5**
PEA0B				*e*Sn	**Sb**	**05 19 27.1**	**+0.4**
PETK	**Petropavlovsk-**	**1.90**	**289**	P	**Pb**	**05 19 02.3**	**-0.7**
comp=E,84nm,0.3s,baz=99,slow=20,SNR=185							
PETK				S	**Sn**	**05 19 25.4**	**+0.8**
comp=E,67nm,0.3s,baz=104,slow=15,SNR=19							
PETK				LR	LR	05 19 50.7	
comp=E,418nm,19.6s,baz=103,slow=45							
PETK	**Petropavlovsk-**	**1.90**	**289**	*e*Pn	**Pb**	**05 19 03.0**	**0.0**
PETK				*e*Sn	**Sb**	**05 19 26.6**	**-0.1**
PETK	**Petropavlovsk-**	**1.90**	**289**	*e*PN	**Pb**	**05 19 03.0**	**0.0**
PETK				*e*		05 19 26.6	
GNL	**Ganaly**	**2.02**	**306**	*e*P	**Pb**	**05 19 04.0**	**-1.1**
GNL				*e*S	**Sn**	**05 19 28.2**	**+0.5**
GNL	**Ganaly**	**2.02**	**306**	PN	**Pb**	**05 19 04.0**	**-1.1**
GNL				S	**Sn**	**05 19 28.2**	**+0.5**
MKZ	**Mys Kozlova**	**2.13**	**17**	*i* P	**Pn**	**05 19 03.2**	**-0.5**
MKZ				*e*S	**Sn**	**05 19 26.6**	**-3.4**
MKZ	**Mys Kozlova**	**2.13**	**17**	PN	**Pn**	**05 19 03.2**	**-0.5**
MKZ				S	**Sn**	**05 19 26.6**	**-3.4**
APC	**Apacha**	**2.18**	**282**	*e*P	**Pb**	**05 19 07.1**	**-0.6**
APC				*e*S	**Sb**	**05 19 33.4**	**-1.3**
APC	**Apacha**	**2.18**	**282**	PN	**Pb**	**05 19 07.1**	**-0.6**
APC				S	**Sb**	**05 19 33.4**	**-1.3**
KZV	**Kizimen**	**2.60**	**355**	*e*P	**Pn**	**05 19 10.9**	**+0.5**
KZV				*e*S	**Sn**	**05 19 40.2**	**-1.8**
KZV	**Kizimen**	**2.60**	**355**	PN	**Pn**	**05 19 10.9**	**+0.5**
KZV				S	**Sn**	**05 19 40.2**	**-1.8**
PAU	**Pauzhetka**	**2.62**	**248**	*e*P	**Pb**	**05 19 15.6**	**+0.4**
PAU				*e*S	**Sb**	**05 19 48.4**	**+1.1**
PAU	**Pauzhetka**	**2.62**	**248**	PN	**Pb**	**05 19 15.6**	**+0.4**
PAU				S	**Sb**	**05 19 48.4**	**+1.1**
TUMD	**Tumrok D**	**2.69**	**357**	*e*P	**Pn**	**05 19 11.9**	**+0.5**
TUMD				*e*S	**Sn**	**05 19 42.0**	**-1.9**
TUMR	**Tumrok**	**2.78**	**354**	*i* P	**Pn**	**05 19 14.0**	**+1.2**
TUMR				*e*S	**Sn**	**05 19 45.7**	**-0.6**
TUMR	**Tumrok**	**2.78**	**354**	PN	**Pn**	**05 19 14.0**	**+1.2**
TUMR				S	**Sn**	**05 19 45.7**	**-0.6**
KMNR	**Kamenistaya**	**3.25**	**356**	*e*P	**Pn**	**05 19 21.3**	**+2.1**
KMNR	**Kamenistaya**	**3.25**	**356**	PN	**Pn**	**05 19 21.3**	**+2.1**
SKR	**Severo-Kuril's**	**3.39**	**239**	*e*P	**Pb**	**05 19 24.5**	**-3.9**
SKR	**Severo-Kuril's**	**3.39**	**239**	PN	**Pb**	**05 19 24.5**	**-3.9**
BZMR	**Bezymyannaya**	**3.42**	**358**	*e*P	**Pn**	**05 19 23.7**	**+2.1**
BZMR	**Bezymyannaya**	**3.42**	**358**	PN	**Pn**	**05 19 23.7**	**+2.1**
BZGR	**Bezymyannyi-Gr**	**3.42**	**0**	*e*P	**Pn**	**05 19 24.0**	**+2.4**
BZGR	**Bezymyannyi-Gr**	**3.42**	**0**	PN	**Pn**	**05 19 24.0**	**+2.4**
KIRR	**Kirishev**	**3.44**	**357**	*e*P	**Pn**	**05 19 24.1**	**+2.2**
KIRR	**Kirishev**	**3.44**	**357**	PN	**Pn**	**05 19 24.1**	**+2.2**
BZWR	**Bezymyannyi-We**	**3.44**	**358**	*e*P	**Pn**	**05 19 24.3**	**+2.3**
BZWR	**Bezymyannyi-We**	**3.44**	**358**	PN	**Pn**	**05 19 24.3**	**+2.3**
KPT	**Kopyto**	**3.46**	**356**	*e

WMQ	**Urumqi**	**47.50**	**290**	*e*P	**P**	**05 27 05.6**	**+2.5**
WMQ				LR	LR		
	comp=N,140nm,28.7s						
WMQ				LR	LR		
	comp=Z,140nm,20.9s						
SPITS	**Spitsbergen Ar**	**47.75**	**351**	P	**P**	**05 27 04.5**	**-0.1**
	comp=Z,1.3nm,0.5s,baz=89,slow=12,SNR=10.0						
KURK	**Kurchatov**	**48.34**	**303**	*e*P	**P**	**05 27 09.5**	**0.0**
	comp=Z,2.6nm,0.6s						
KURK	**Kurchatov**	**48.34**	**303**	*i*P	**P**	**05 27 08.5**	**-0.9**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURBB	**Kurchatov Arra**	**48.44**	**303**	P	**P**	**05 27 08.6**	**-1.6**
	comp=Z,1.1nm,0.4s,baz=59,slow=7.4,SNR=12						
MK31	**Makanchi Array**	**48.72**	**296**	*e*P	**P**	**05 27 11.4**	**-1.1**
MK31	**Makanchi Array**	**48.72**	**296**	*e*P	**P**	**05 27 11.4**	**-1.1**
MKAR	**Makanchi Array**	**48.72**	**296**	P	**P**	**05 27 11.2**	**-1.3**
	comp=Z,0.7nm,0.5s,baz=57,slow=6.2,SNR=12						
MKAR	**Makanchi Array**	**48.72**	**296**	*e*P	**P**	**05 27 11.5**	**-1.0**
	comp=Z,9.2nm,0.4s						
MKAR	**Makanchi Array**	**48.72**	**296**	*e*P	**P**	**05 27 10.8**	**-1.7**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MK01	**Makanchi Array**	**48.73**	**296**	*e*P	**P**	**05 27 10.8**	**-1.7**
BVAR	**Borovoye Array**	**51.02**	**309**	P	**P**	**05 27 28.3**	**-1.6**
	comp=Z,0.9nm,0.4s,baz=72,slow=7.5,SNR=8.6						
BRVK	**Borovoye**	**51.05**	**309**	*i*P	**P**	**05 27 28.7**	**-1.4**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ARCES	**ARCESS Array B**	**53.94**	**342**	P	**P**	**05 27 50.0**	**-1.2**
	comp=Z,1.0nm,0.8s,baz=50,slow=11,SNR=6.4						
ARCES	**ARCESS Array B**	**53.94**	**342**	*e*P	**P**	**05 27 49.5**	**-1.7**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ARU	**Arti**	**54.06**	**318**	*i*P	**P**	**05 27 54.7**	**+2.4**
ARU				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NVAR	**Mina Array Bea**	**55.60**	**70**	P	**P**	**05 28 06.4**	**+2.4**
	comp=Z,0.5nm,0.5s,baz=300,slow=7.7,SNR=6.1						
PDAR	**Pinedale Array**	**57.49**	**61**	P	**P**	**05 28 19.4**	**+2.0**
	comp=Z,0.8nm,0.7s,baz=300,slow=3.8,SNR=9.6						
PDAR	**Pinedale Array**	**57.49**	**61**	*e*P	**P**	**05 28 16.7**	**-0.7**
TJR	**Tejon Ranch**	**57.69**	**73**	*e*P	**P**	**05 28 19.8**	**+1.1**
AKTO	**Aktyubinsk**	**58.47**	**313**	P	**P**	**05 28 24.9**	**+1.1**
	comp=Z,0.7nm,0.4s,baz=36,slow=8.7,SNR=2.7						
FINES	**FINESS Array B**	**60.78**	**337**	P	**P**	**05 28 39.5**	**-0.1**
	comp=Z,1.8nm,0.5s,baz=39,slow=7.7,SNR=12						
FINES	**FINESS Array B**	**60.78**	**337**	*i*P	**P**	**05 28 39.7**	**+0.1**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
HFS	**Hagfors**	**64.60**	**342**	P	**P**	**05 29 03.5**	**-1.6**
	comp=Z,1.1nm,0.6s,baz=75,slow=6.1,SNR=4.0						
AKASG	**Malin Array Be**	**69.28**	**329**	P	**P**	**05 29 34.6**	**-0.4**
	comp=Z,1.2nm,0.6s,baz=30,slow=6.3,SNR=4.8						
AKASG	**Malin Array Be**	**69.28**	**329**	*i*P	**P**	**05 29 35.5**	**+0.5**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KIEV	**Kiev**	**69.29**	**329**	*i*P	**P**	**05 29 36.3**	**+1.2**
KIEV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TX31	**Lajitas Ar. Si**	**70.53**	**67**	*e*P	**P**	**05 29 44.0**	**+0.9**
TXAR	**Lajitas Array**	**70.53**	**67**	P	**P**	**05 29 44.7**	**+1.5**
	comp=Z,1.1nm,0.8s,baz=298,slow=4.5,SNR=15						
EKA	**Eskdalemuir Ar**	**71.67**	**350**	P	**P**	**05 29 50.0**	**+0.5**
	comp=Z,1.2nm,0.7s,baz=17,slow=5.2,SNR=2.6						
EKA	**Eskdalemuir Ar**	**71.67**	**350**	P	**P**	**05 29 50.0**	**+0.5**
EKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BUR08	**Bucovina Ar. S**	**73.22**	**330**	*e*P	**P**	**05 29 59.8**	**+0.7**
BUR04	**Bucovina Ar. S**	**73.24**	**330**	*e*P	**P**	**05 29 59.7**	**+0.6**
GERES	**GERESS Array B**	**75.17**	**338**	P	**P**	**05 30 11.2**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=17,slow=7.2,SNR=3.1						
WRA	**Warramunga Arr**	**75.72**	**206**	P	**P**	**05 30 15.8**	**+2.1**
	comp=Z,1.5nm,0.7s,baz=24,slow=6.1,SNR=9.5						
ASAR	**Alice Springs**	**79.39**	**205**	P	**P**	**05 30 36.9**	**+2.8**
	comp=Z,1.4nm,0.7s,baz=16,slow=5.5,SNR=21						

MOS ***17*** *05:35:18.9±1.0, 52°.58N×160°.75E, h23km, mb4.2/3, Error ellipse: s-maj=8.5km s-min=4.5km az=102.2*
KRSC ***17*** *05:35:18.6±1.4, 52°.69N×160°.73E, h19km±18km, ML4.3*
ISCJB ***17*** *05:35:19.5±0.9, 52°.66N±0°.03×160°.70E±0°.04, h22km±5km, mb3.5/12, Error ellipse: s-maj=6.1km s-min=3.6km az=150.7*
IDC ***17*** *05:35:25.1±2.5, 52°.84N×160°.47E, h62km±22km, mb3.3/12, mb1 3.5/12, mb1mx3.2/70, mbtmp3.6/12, Error ellipse: s-maj=19.8km s-min=17.6km az=160.0*

ISC 17 05:35:16.8±1.4, 52°.81N±0°.04×160°.80E±0°.03, h3km±9km, n96, σ1§34/129, mb3.6/12, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.55**	**302**	*e*P	**Pn**	**05 35 30.7**	**-0.8**
SPN				*e*S	**Sn**	**05 35 38.7**	**-2.4**
SPN	**Mys Shipunski**	**0.55**	**302**	PN	**Pn**	**05 35 30.7**	**-0.8**
SPN				S	**Sn**	**05 35 38.7**	**-2.4**
NLC	**Nalytchevo**	**0.95**	**293**	*e*P	**Pn**	**05 35 36.5**	**-0.5**
NLC				*e*S	**Sb**	**05 35 49.0**	**+0.2**
NLC	**Nalytchevo**	**0.95**	**293**	PN	**Pn**	**05 35 36.5**	**-0.5**
NLC				S	**Sb**	**05 35 49.0**	**+0.2**
SDLR	**Sedlovina**	**1.25**	**293**	*i*P	**Pg**	**05 35 41.5**	**+0.8**
SDLR				*e*S	**Sn**	**05 35 57.8**	**-0.7**
SDLR	**Sedlovina**	**1.25**	**293**	PN	**Pg**	**05 35 41.5**	**+0.8**
SDLR				S	**Sn**	**05 35 57.8**	**-0.7**
DALK	**Dalny**	**1.26**	**281**	*e*P	**Pg**	**05 35 40.8**	**-0.1**
DALK				*e*S	**Sb**	**05 35 56.4**	**-1.2**
DALK	**Dalny**	**1.26**	**281**	PN	**Pg**	**05 35 40.8**	**-0.1**
DALK				S	**Sb**	**05 35 56.4**	**-1.2**
UGLR	**Uglovaya**	**1.26**	**289**	*e*P	**Pg**	**05 35 41.6**	**+0.7**
UGLR	**Uglovaya**	**1.26**	**289**	PN	**Pg**	**05 35 41.6**	**+0.7**
PET	**Petropavlovsk**	**1.31**	**280**	*i*P	**Pg**	**05 35 42.1**	**+0.1**
PET				*e*S	**Sb**	**05 35 58.8**	**-0.5**
PET	**Petropavlovsk**	**1.31**	**280**	PN	**Pg**	**05 35 42.1**	**+0.1**
PET				S	**Sb**	**05 35 58.8**	**-0.5**
AVH	**Avacha**	**1.32**	**291**	*e*P	**Pg**	**05 35 42.7**	**+0.5**
AVH	**Avacha**	**1.32**	**291**	PN	**Pg**	**05 35 42.7**	**+0.5**
KRER	**Koryakskii**	**1.33**	**293**	*i*P	**Pg**	**05 35 43.0**	**+0.7**
KRER				*e*S	**Sg**	**05 36 00.7**	**+1.2**
KRER	**Koryakskii**	**1.33**	**293**	PN	**Pg**	**05 35 43.0**	**+0.7**
KRER				S	**Sg**	**05 36 00.7**	**+1.2**
KOK	**Koryaka**	**1.39**	**291**	*e*P	**Pg**	**05 35 43.9**	**+0.5**
KOK				*e*S	**Sg**	**05 36 02.1**	**+0.7**
KOK	**Koryaka**	**1.39**	**291**	PN	**Pg**	**05 35 43.9**	**+0.5**
KOK				S	**Sg**	**05 36 02.1**	**+0.7**
KRX	**Arik**	**1.41**	**294**	*e*P	**Pg**	**05 35 43.7**	**-0.1**
KRX				*e*S	**Sb**	**05 36 01.8**	**-0.3**
KRX	**Arik**	**1.41**	**294**	PN	**Pg**	**05 35 43.7**	**-0.1**
KRX				S	**Sb**	**05 36 01.8**	**-0.3**
RUS	**Russkaya**	**1.44**	**256**	*e*P	**Pb**	**05 35 43.4**	**-0.8**
RUS				*e*S	**Sn**	**05 36 00.8**	**-2.3**
RUS	**Russkaya**	**1.44**	**256**	PN	**Pb**	**05 35 43.4**	**-0.8**
RUS				S	**Sn**	**05 36 00.8**	**-2.3**
KII	**Karymskiy**	**1.47**	**327**	*e*P	**Pg**	**05 35 46.4**	**+1.5**
KII				*e*S	**Sg**	**05 36 06.1**	**+2.1**
KII	**Karymskiy**	**1.47**	**327**	PN	**Pg**	**05 35 46.4**	**+1.5**
KII				S	**Sg**	**05 36 06.1**	**+2.1**
KRMR	**Karymshinskiy**	**1.62**	**272**	*e*P	**Pb**	**05 35 46.1**	**-1.1**
KRMR				*e*S	**Sn**	**05 36 05.9**	**-1.6**
KRMR	**Karymshinskiy**	**1.62**	**272**	PN	**Pb**	**05 35 46.1**	**-1.1**
KRMR				S	**Sn**	**05 36 05.9**	**-1.6**
MTVR	**Mutnovka**	**1.62**	**259**	*e*P	**Pb**	**05 35 46.3**	**-1.2**
MTVR				*e*S	**Sn**	**05 36 05.8**	**-2.1**
MTVR	**Mutnovka**	**1.62**	**259**	PN	**Pb**	**05 35 46.3**	**-1.2**
MTVR				S	**Sn**	**05 36 05.8**	**-2.1**
GRL	**Gorelyy**	**1.68**	**262**	*i*P	**Pb**	**05 35 48.0**	**-0.4**
GRL				*e*S	**Sn**	**05 36 08.6**	**-0.6**
GRL	**Gorelyy**	**1.68**	**262**	PN	**Pb**	**05 35 48.0**	**-0.4**
GRL				S	**Sn**	**05 36 08.6**	**-0.6**
ASAK	**Asacha**	**1.82**	**258**	*i*P	**Pb**	**05 35 49.9**	**-0.8**
ASAK				*e*S	**Sb**	**05 36 12.4**	**-1.5**
ASAK	**Asacha**	**1.82**	**258**	PN	**Pb**	**05 35 49.9**	**-0.8**
ASAK				S	**Sb**	**05 36 12.4**	**-1.5**
MKZ	**Mys Kozlova**	**1.83**	**17**	*i*P	**Pg**	**05 35 51.9**	**-0.1**
MKZ				*e*S	**Sg**	**05 36 15.6**	**-0.1**
MKZ	**Mys Kozlova**	**1.83**	**17**	PN	**Pg**	**05 35 51.9**	**-0.1**
MKZ				S	**Sg**	**05 36 15.6**	**-0.1**
PETK	**Petropavlovsk-**	**1.90**	**280**	P	**Pb**	**05 35 51.1**	**-0.9**
	30nm,0.3s,baz=100,slow=18,SNR=159						
PETK				S	**Sn**	**05 36 13.6**	**-0.8**
	27nm,0.3s,baz=92,slow=17,SNR=20						
GNL	**Ganaly**	**1.93**	**298**	*e*P	**Pb**	**05 35 52.6**	**-0.1**
GNL				*e*S	**Sb**	**05 36 17.2**	**+0.1**
GNL	**Ganaly**	**1.93**	**298**	PN	**Pb**	**05 35 52.6**	**-0.1**
GNL				S	**Sb**	**05 36 17.2**	**+0.1**
KDTR	**Khodutka, Kamc**	**1.95**	**240**	*e*P	**Pn**	**05 35 50.2**	**-0.5**
KDTR				*e*S	**Sn**	**05 36 12.8**	**-2.8**
APC	**Apacha**	**2.21**	**274**	*e*P	**Pb**	**05 35 55.6**	**-1.7**
APC				*e*S	**Sn**	**05 36 22.4**	**+0.4**
APC	**Apacha**	**2.21**	**274**	PN	**Pb**	**05 35 55.6**	**-1.7**
APC				S	**Sn**	**05 36 22.4**	**+0.4**
KZV	**Kizimen**	**2.33**	**353**	*i*P	**Pg**	**05 36 00.0**	**-1.4**
KZV				*e*S	**Sg**	**05 36 29.5**	**-2.0**
KZV	**Kizimen**	**2.33**	**353**	PN	**Pg**	**05 36 00.0**	**-1.4**
KZV				S	**Sg**	**05 36 29.5**	**-2.0**
TUMD	**Tumrok D**	**2.41**	**355**	*e*P	**Pb**	**05 36 00.4**	**-0.4**
TUMD				*e*S	**Sb**	**05 36 30.5**	**-0.3**
TUMR	**Tumrok**	**2.51**	**351**	*i*P	**Pb**	**05 36 02.7**	**+0.2**
TUMR	**Tumrok**	**2.51**	**351**	PN	**Pb**	**05 36 02.7**	**+0.2**
PAU	**Pauzhetka**	**2.80**	**243**	*e*P	**Pb**	**05 36 05.1**	**-2.3**
PAU	**Pauzhetka**	**2.80**	**243**	PN	**Pb**	**05 36 05.1**	**-2.3**
KMNR	**Kamenistaya**	**2.97**	**354**	*e*P	**Pb**	**05 36 10.2**	**-0.2**
KMNR	**Kamenistaya**	**2.97**	**354**	PN	**Pb**	**05 36 10.2**	**-0.2**
KIRR	**Kirishev**	**3.16**	**355**	*e*P	**Pb**	**05 36 13.1**	**-0.5**
KIRR	**Kirishev**	**3.16**	**355**	PN	**Pb**	**05 36 13.1**	**-0.5**
BZWR	**Bezymyannyi-We**	**3.17**	**357**	*e*P	**Pb**	**05 36 13.3**	**-0.4**
BZWR	**Bezymyannyi-We**	**3.17**	**357**	PN	**Pb**	**05 36 13.3**	**-0.4**
KPT	**Kopyto**	**3.18**	**354**	*e*P	**Pb**	**05 36 13.5**	**-0.4**
KPT	**Kopyto**	**3.18**	**354**	PN	**Pb**	**05 36 13.5**	**-0.4**
ZLN	**Zelenaya**	**3.21**	**0**	*e*P	**Pb**	**05 36 13.2**	**-1.3**
ZLN	**Zelenaya**	**3.21**	**0**	PN	**Pb**	**05 36 13.2**	**-1.3**
LGNR	**Loginova**	**3.28**	**359**	*e*P	**Pb**	**05 36 14.2**	**-1.6**
LGNR	**Loginova**	**3.28**	**359**	PN	**Pb**	**05 36 14.2**	**-1.6**
CIRR	**Tsirk**	**3.31**	**360**	*e*P	**Pb**	**05 36 15.0**	**-1.2**
CIRR	**Tsirk**	**3.31**	**360**	PN	**Pb**	**05 36 15.0**	**-1.2**
ESO	**Esso**	**3.35**	**339**	*e*P	**Pb**	**05 36 15.2**	**-1.6**
ESO	**Esso**	**3.35**	**339**	PN	**Pb**	**05 36 15.2**	**-1.6**
KRSR	**Krestovskiy**	**3.42**	**358**	*e*P	**Pb**	**05 36 16.9**	**-1.1**
KRSR	**Krestovskiy**	**3.42**	**358**	PN	**Pb**	**05 36 16.9**	**-1.1**
KBTR	**Krutoberegovo**	**3.60**	**18**	*i*P	**Pb**	**05 36 17.3**	**-3.8**
KBTR	**Krutoberegovo**	**3.60**	**18**	PN	**Pb**	**05 36 17.3**	**-3.8**
SKR	**Severo-Kuril's**	**3.60**	**236**	*e*PN	**Pb**	**05 36 21.2**	**+0.1**
BDR	**Baidarnaya**	**3.77**	**3**	*e*P	**Pb**	**05 36 21.4**	**-2.6**
BDR	**Baidarnaya**	**3.77**	**3**	PN	**Pb**	**05 36 21.4**	**-2.6**
SMKR	**Semkarok**	**3.80**	**6**	*e*P	**Pb**	**05 36 22.7**	**-1.8**
SMKR	**Semkarok**	**3.80**	**6**	PN	**Pb**	**05 36 22.7**	**-1.8**
SRKR	**Sorokina**	**3.86**	**3**	*e*P	**Pb**	**05 36 23.4**	**-2.1**
SRKR	**Sorokina**	**3.86**	**3**	PN	**Pb**	**05 36 23.4**	**-2.1**
BKI	**Bering**	**3.88**	**50**	*e*P	**Pn**	**05 36 19.2**	**+1.9**
BKI	**Bering**	**3.88**	**50**	PN	**Pn**	**05 36 19.2**	**+1.9**
MJAR	**Matsushiro Arr**	**22.71**	**233**	P	**P**	**05 40 21.9**	**+2.3**
	1.2nm,0.7s,baz=21,slow=11,SNR=4.0						
H11N2	**WAKE ISLAND Hy**	**33.36**	**170**	T	T	06 17 28.3	
	baz=353,slow=76,SNR=42						
H11N3	**WAKE ISLAND Hy**	**33.37**	**169**	T	T	06 17 27.4	
	baz=353,slow=76,SNR=39						
H11N1	**WAKE ISLAND Hy**	**33.37**	**170**	T	T	06 17 32.4	
	baz=353,slow=76,SNR=39						
H11S1	**WAKE ISLAND Hy**	**34.54**	**170**	T	T	06 18 60.0	
	baz=350,slow=74,SNR=9.9						
H11S3	**WAKE ISLAND Hy**	**34.55**	**170**	T	T	06 18 60.0	
	baz=350,slow=74,SNR=16						
H11S2	**WAKE ISLAND Hy**	**34.56**	**170**	T	T	06 18 55.6	
	baz=350,SNR=7.2						
SPITS	**Spitsbergen Ar**	**47.48**	**351**	P	**P**	**05 43 53.0**	**+0.8**
	7.5nm,1.1s,baz=53,slow=7.7,SNR=3.8						
KURK	**Kurchatov**	**48.24**	**302**	P	**P**	**05 43 57.9**	**-0.6**
KURBB	**Kurchatov Arra**	**48.34**	**302**	P	**P**	**05 43 57.9**	**-1.3**
	0.4nm,0.5s,baz=58,slow=7.4,SNR=5.0						
MKAR	**Makanchi Array**	**48.66**	**296**	P	**P**	**05 43 60.0**	**-1.8**
	0.1nm,0.4s,baz=71,slow=5.9,SNR=3.4						
MKAR	**Makanchi Array**	**48.66**	**296**	P	**P**	**05 44 00.0**	**-1.8**
BVAR	**Borovoye Array**	**50.90**	**309**	P	**P**	**05 44 17.7**	**-1.0**
	0.4nm,0.5s,baz=74,slow=7.7,SNR=2.5						
NVAR	**Mina Array Bea**	**55.44**	**70**	P	**P**	**05 44 54.4**	**+1.8**
	0.2nm,0.5s,baz=332,slow=5.6,SNR=3.0						
PDAR	**Pinedale Array**	**57.29**	**61**	P	**P**	**05 45 07.4**	**+1.6**
	0.2nm,0.7s,baz=320,slow=4.0,SNR=3.2						
FINES	**FINESS Array B**	**60.55**	**337**	P	**P**	**05 45 28.4**	**+0.7**
	0.4nm,0.5s,baz=31,slow=8.9,SNR=7.1						
AKASG	**Malin Array Be**	**69.07**	**329**	P	**P**	**05 46 23.4**	**-0.1**
	0.1nm,0.3s,baz=30,slow=6.4,SNR=2.6						
TXAR	**Lajitas Array**	**70.36**	**67**	P	**P**	**05 46 33.4**	**+1.5**
	0.2nm,0.6s,baz=301,slow=4.9,SNR=4.7						
WRA	**Warramunga Arr**	**76.01**	**206**	P	**P**	**05 47 04.6**	**-0.5**
	0.3nm,0.6s,baz=26,slow=6.4,SNR=3.1						
ASAR	**Alice Springs**	**79.68**	**205**	P	**P**	**05 47 25.7**	**+0.2**
	0.5nm,0.6s,baz=21,slow=5.4,SNR=3.9						

ISCJB ***17*** *05:50:50.0±1.3, 24°.7N±0°.1×94°.83E±0°.09, h100km, mb3.5/3, Error ellipse: s-maj=17.6km s-min=11.0km az=13.6*
IDC ***17*** *05:50:51.9±8.5, 24°.48N×94°.95E, h83km±91km, mb3.3/3, mb1 3.5/4, mb1mx3.0/77, mbtmp3.7/4, ML3.8/1, Error ellipse: s-maj=67.7km s-min=23.9km az=71.0*

ISC 17 05:50:52.9±1.4, 24°.6N±0°.1×94°.7E±0°.1, h100km, n5, σ1§68/7, mb3.6/3, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**2.74**	**290**	*e*PN	**Pn**	**05 51 35.0**	**-0.4**
SHL				*e*SN	**Sn**	**05 52 06.5**	**-1.5**
BRDH	**Bariadhala**	**3.44**	**236**	P	**Pn**	**05 51 44.5**	**-0.1**
	9.5nm,0.3s,baz=73,slow=19,SNR=1.8						
BRDH				S	**Sn**	**05 52 25.4**	**+0.9**
	20nm,0.3s,baz=248,slow=19,SNR=4.9						
MKAR	**Makanchi Array**	**24.24**	**339**	P	**P**	**05 56 02.9**	**+2.5**
	0.7nm,0.4s,baz=149,slow=8.7,SNR=12						
WRA	**Warramunga Arr**	**58.74**	**135**	P	**P**	**06 00 39.5**	**-1.1**
	0.2nm,0.3s,baz=324,slow=7.3,SNR=7.5						
ASAR	**Alice Springs**	**61.23**	**139**	P	**P**	**06 00 56.8**	**-0.7**
	0.3nm,0.5s,baz=319,slow=7.0,SNR=4.2						

ISCJB ***17*** *05:51:45.0±0.4, 54°.74N±0°.02×111°.90E±0°.05, h10km, Error ellipse: s-maj=4.1km s-min=2.6km az=28.6*
MOS ***17*** *05:51:49.4±1.2, 54°.80N×111°.95E, h10km, mb4.2/1, Error ellipse: s-maj=44.3km s-min=21.0km az=99.1*
BYKL ***17*** *05:51:49.0±0.2, 54°.81N×111°.98E*

ISC 17 05:51:48.3±0.7, 54°.81N±0°.02×111°.89E±0°.02, h10km, n27, σ2§49/61, 4C, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YLYR	**Ulyunkhan**	**0.43**	**279**	⇑*i*Pg	**Pb**	**05 51 58.1**	**+0.1**
YLYR				*e*Sg	**Sb**	**05 52 04.4**	**-0.1**
YLYR				Pmax			
	998nm,0.2s						
YLYR				Smax			
	2μm,0.2s						
YLYR	**Ulyunkhan**	**0.43**	**279**	⇑*i*PG	**Pb**	**05 51 58.1**	**+0.1**
YLYR				*e*		05 52 04.3	
YLYR				pmax	pmax		
	comp=Z,987nm,0.1s						
YLYR				smax	smax		
	comp=E,2μm,0.3s						
KMO	**Kumora**	**1.15**	**340**	⇑*i*Pg	**Pb**	**05 52 09.8**	**-0.5**
KMO				*e*Sg	**Sb**	**05 52 25.1**	**-0.1**
KMO				*e*Sb	**Sn**	**05 52 29.0**	**+2.7**
KMO				Pmax			
	comp=E,89nm,0.4s						
KMO				max			
	comp=E,435nm,0.4s						
KMO	**Kumora**	**1.15**	**340**	*e*PG	**Pb**	**05 52 09.6**	**-0.7**
KMO				*e*		05 52 24.7	
KMO				pmax	pmax		
	comp=Z,89nm,0.4s						
KMO				smax	smax		
	comp=N,439nm,0.7s						
YOA	**Uoyan**	**1.33**	**356**	*e*Pg	**Pb**	**05 52 13.3**	**0.0**
YOA				*e*Sg	**Sg**	**05 52 32.0**	**+1.0**
YOA				Pmax			
	comp=N,202nm,0.2s						
YOA				Smax			
	comp=N,1μm,0.5s						
YOA	**Uoyan**	**1.33**	**356**	*e*PG	**Pb**	**05 52 13.4**	**+0.1**
YOA				*e*		05 52 32.1	
YOA				pmax	pmax		
	comp=Z,202nm,0.2s						
YOA				smax	smax		
	comp=N,1μm,0.4s						
SYVR	**Suvo**	**1.60**	**225**	*e*Pg	**Pn**	**05 52 17.5**	**+0.8**
SYVR				*e*		05 52 24.3	
SYVR				*e*Sg	**Sg**	**05 52 39.9**	**+0.1**
SYVR				max			
	comp=N,24nm,0.2s						
SYVR				Smax			
	comp=N,122nm,0.4s						
SVKR	**Severomuysk**	**1.62**	**35**	*e*Pg	**Pb**	**05 52 18.4**	**+0.1**
SVKR				*e*		05 52 22.0	
SVKR				*e*		05 52 25.1	
SVKR				*e*Sg	**Sg**	**05 52 40.4**	**+0.1**
SVKR				*e*		05 52 46.6	
SVKR				max			
	comp=N,227nm,0.2s						
SVKR				Smax			
	comp=N,657nm,0.4s						
SVKR	**Severomuysk**	**1.62**	**35**	*e*PN	**Pb**	**05 52 18.1**	**-0.2**
SVKR				*e*		05 52 40.8	
SVKR				pmax	pmax		
	comp=Z,226nm,0.3s						
SVKR				smax	smax		
	comp=E,651nm,0.5s						
NIZ	**Nizh Angarsk**	**1.66**	**307**	⇑*i*Pg	**Pb**	**05 52 19.1**	**+0.2**
NIZ				*e*Sg	**Sb**	**05 52 40.9**	**+1.1**
NIZ				Pmax			
	comp=E,44nm,0.2s						
NIZ				Smax			
	comp=E,281nm,0.5s						
NIZ	**Nizh Angarsk**	**1.66**	**307**	*e*PN	**Pb**	**05 52 18.9**	**0.0**
NIZ				*e*		05 52 42.3	
NIZ				pmax	pmax		
	comp=Z,52nm,0.3s						
NIZ				smax	smax		
	comp=N,280nm,0.4s						
MXMB	**Maximikha**	**2.42**	**231**	*e*Pg	**Pg**	**05 52 34.2**	**-0.4**
MXMB				*e*Sn	**Sn**	**05 52 59.8**	**+2.3**
MXMB				*e*Sg	**Sg**	**05 53 05.9**	**0.0**
OGRR	**Ongureny**	**2.78**	**247**	*e*Pn	**Pn**	**05 52 33.9**	**+1.0**
OGRR				*e*Pg	**Pb**	**05 52 39.4**	**+1.4**
OGRR				*e*		05 52 45.4	
OGRR				*e*Sn	**Sn**	**05 53 07.9**	**+1.4**
OGRR				*e*Sg	**Sg**	**05 53 15.8**	**-1.7**
OGRR				Pmax			
	comp=N,13nm,0.3s						
OGRR				Smax			
	comp=N,46nm,0.3s						
CIT	**Chita**	**2.96**	**160**	*e*Sg	**Sg**	**05 53 20.9**	**-2.6**
CIT				Smax			
	comp=N,234nm,0.2s						
KELR	**Kotokel**	**3.06**	**229**	*e*Pn	**Pn**	**05 52 37.7**	**+1.1**
KELR				*e*Pg	**Pb**	**05 52 44.9**	**+2.2**
KELR				*e*Sn	**Sn**	**05 53 14.2**	**+1.0**
KELR				*e*Sg	**Sg**	**05 53 25.0**	**-1.3**
BOD	**Bodaibo**	**3.24**	**20**	*e*Pg	**Pb**	**05 52 45.9**	**+0.1**
BOD				*e*Sg	**Sb**	**05 53 28.4**	**+3.2**
BOD				Pmax			
	comp=N,14nm,0.3s						
BOD				Smax			
	comp=N,51nm,0.5s						
ZRHB	**Zarechye**	**3.61**	**233**	*e*Pg	**Pb**	**05 52 55.0**	**+2.8**
ZRHB				*e*Sg	**Sg**	**05 53 42.9**	**-1.3**
ZRHB				Pmax			
	comp=N,22nm,0.4s						
ZRHB				Smax			
	comp=N,89nm,0.8s						
TRG	**Tyrgan**	**3.88**	**240**	*e*Pn	**Pn**	**05 52 49.6**	**+1.6**
TRG				*e*Pg	**Pb**	**05 52 58.5**	**+1.8**
TRG				*e*		05 53 02.5	
TRG				*e*Sn	**Sn**	**05 53 34.1**	**+0.6**
TRG				*e*Sg	**Sg**	**05 53 49.5**	**-3.2**
TRG				max			
	comp=N,3.0nm,0.2s						
TRG				Smax			
	comp=N,25nm,0.4s						
UUDB	**Ulan-Yde**	**3.89**	**222**	*e*Pn	**Pn**	**05 52 48.8**	**+0.7**
UUDB				*e*		05 52 56.3	
UUDB				*e*Pg	**Pg**	**05 53 00.2**	**-2.5**
UUDB				*e*		05 53 05.8	
UUDB				*e*Sn	**Sn**	**05 53 34.2**	**+0.4**
UUDB				*e*Sg	**Sg**	**05 53 51.1**	**-2.0**
UUDB				max			
	comp=N,16nm,0.6s						
UUDB				Smax			
	comp=N,50nm,0.8s						
CRS	**Chara**	**4.16**	**57**	*e*Pn	**Pn**	**05 52 52.8**	**+1.0**
CRS	

WRA	**Warramunga Arr**	**41.94 327**	P		**P**	**06 05 26.4**	**0.0**
	2.3nm,0.7s,baz=162,slow=7.2,SNR=12						
WRA			PcP		**PcP**	**06 07 20.7**	**-1.1**
	0.7nm,0.8s,baz=174,slow=3.4,SNR=4.6						
SNAA	**Sanae**	**49.33 188**	P		**P**	**06 06 25.0**	**+0.6**
	1.0nm,1.0s,baz=174,slow=15,SNR=4.8						
SNAA			LR		LR	06 27 22.6	
	comp=Z,122nm,18.9s,baz=152,slow=36						
BOSA	**Boshof**	**84.37 221**	LR		LR	06 45 05.8	
	comp=Z,43nm,18.8s,baz=89,slow=34						
AKASG	**Malin Array Be**	**149.51 278**	PKPbc		**PKPbc**	**06 17 22.2**	**-1.7**
	0.4nm,0.5s,baz=94,slow=2.1,SNR=3.7						

SOME ***17*** *05:58:14.7, 43.°78N×82.°22E, h0km*
NNC ***17*** *05:58:15.1±3.9, 43.°73N×82.°27E, h0km, mb3.2, mpv2.8,*
Error ellipse: s-maj=42.3km s-min=14.9km az=130.0
ISC 17 05:58:14.7±1.5, 43.°78N±0.°07×82.°18E±0.°06, h10km, n18,
σ1§66/34, 6C-5D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.81**	**289**	*e*P	**Pg**	**05 58 49.5**	**+0.1**
	24nm,0.1s						
DJR				*e*S	**Sg**	**05 59 14.9**	**+2.0**
	125nm,0.3s						
SHLS	**Shalkode**	**2.07**	**254**	⇓*i*P	**Pn**	**05 58 49.6**	**-0.1**
	178nm,0.2s						
SHLS				⇓*i*S	**Sn**	**05 59 14.9**	**-0.7**
	325nm,0.3s						
UZB	**Uzynbulak**	**2.38**	**256**	*e*P	**Pb**	**05 58 57.9**	**+0.1**
	6.2nm,0.3s						
UZB				⇑*i*S	**Sb**	**05 59 29.2**	**+1.8**
	20nm,0.2s						
KAPS	**Kapalarasan**	**2.52**	**308**	⇓*i*P	**Pb**	**05 58 59.0**	**-1.1**
	1.2nm,0.1s						
KAPS				*e*S	**Sb**	**05 59 31.4**	**+0.3**
	20nm,0.3s						
KPKS	**Kokpek**	**2.56**	**264**	*e*P	**Pb**	**05 59 02.2**	**+1.4**
	12nm,0.1s						
KPKS				*e*S	**Sg**	**05 59 36.3**	**-0.6**
	47nm,0.6s						
SATY	**Saty**	**2.84**	**257**	*e*P	**Pb**	**05 59 07.2**	**+1.6**
	7.7nm,0.1s						
SATY				*e*S	**Sg**	**05 59 45.2**	**-0.8**
	52nm,0.1s						
KURS	**Kuram**	**2.93**	**266**	*e*P	**Pg**	**05 59 09.9**	**-0.8**
	0.6nm,0.9s						
KURS				*e*S	**Sg**	**05 59 49.4**	**+0.8**
	4.1nm,0.6s						
MK31	**Makanchi Array**	**3.02**	**1**	⇑Pn	**Pn**	**05 59 03.7**	**+1.1**
	0.6nm,0.4s,baz=197,slow=17,SNR=106						
MK31				⇓Pg	**Pg**	**05 59 11.8**	**-0.7**
	1.5nm,0.3s,baz=183,slow=16,SNR=74						
MK31				⇑Lg	Lg	05 59 51.1	
	7.0nm,0.5s,baz=175,slow=29,SNR=6.4						
MAKZ	**Makanchi**	**3.03**	**357**	⇑Pg	**Pg**	**05 59 13.0**	**+0.2**
	1.6nm,0.3s						
MAKZ				⇑Lg	Lg	05 59 51.5	
	4.0nm,0.6s						
ARXS	**Arharly**	**3.17**	**279**	*e*P	**Pb**	**05 59 12.7**	**+1.5**
	8.4nm,0.2s						
ARXS				*e*S	**Sg**	**05 59 54.3**	**-2.2**
	30nm,0.4s						
KOTS	**Kotyrbulak**	**3.73**	**263**	*e*P	**Pg**	**05 59 24.5**	**-1.6**
	5.8nm,0.4s						
KOTS				*e*S	**Sg**	**06 00 15.0**	**+0.7**
	7.3nm,0.3s						
CHKK	**Chushkaly**	**3.76**	**273**	*e*P	**Pb**	**05 59 23.1**	**+2.0**
	2.8nm,0.3s						
CHKK				*e*S	**Sg**	**06 00 12.2**	**-3.2**
	27nm,0.3s						
MDOK	**Medeo**	**3.79**	**262**	⇓Pg	**Pg**	**05 59 25.0**	**-2.2**
	1.6nm,0.4s						
MDOK				⇑Lg	Lg	06 00 17.4	
	7.7nm,0.6s						
MDOK	**Medeo**	**3.79**	**262**	*e*P	**Pg**	**05 59 25.6**	**-1.6**
	3.6nm,0.3s						
MDOK				*e*S	**Sg**	**06 00 16.7**	**+0.5**
	6.0nm,0.6s						
KTBS	**Karatobe**	**3.98**	**271**	*e*P	**Pg**	**05 59 28.8**	**-2.2**
	1.4nm,0.3s						
KTBS				*e*S	**Sg**	**06 00 22.3**	**-0.3**
	6.9nm,0.3s						
ZSN	**Zaisan**	**4.13**	**26**	*e*P	**Pb**	**05 59 29.4**	**+2.0**
	1.6nm,0.2s						
ZSN				*e*S	**Sg**	**06 00 23.1**	**-4.0**
	8.2nm,0.5s						
MTBS	**Maitube**	**4.24**	**263**	*e*P	**Pg**	**05 59 34.3**	**-1.5**
	3.6nm,0.3s						
MTBS				*e*S	**Sg**	**06 00 31.3**	**+0.6**
	9.0nm,0.4s						
DGS	**Degeres**	**4.69**	**266**	*e*P	**Pg**	**05 59 41.9**	**-2.7**
	2.6nm,0.6s						
DGS				*e*S	**Sg**	**06 00 44.9**	**-0.4**
	5.1nm,0.3s						

NNC 17 06:09:08.9±8.0, 36.°57N×70.°07E, h0km, mb3.9, mpv3.5,
3C-3D, Error ellipse: s-maj=61.9km s-min=52.6km
az=168.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**4.37**	**37**	⇓Pn	Pn	06 10 16.5	-0.4
	4.8nm,0.3s						
SFK				⇑Sn	Sn	06 11 09.3	+0.7
	1.4nm,0.2s						
MNAS	**Manas**	**6.20**	**17**	⇑Pn	Pn	06 10 42.2	+0.3
	2.8nm,0.8s						
MNAS				⇓Sn	Sn	06 11 54.3	+0.7
	1.7nm,0.4s						
KK31	**Karatay Array**	**6.54**	**3**	⇓Pn	Pn	06 10 47.6	+1.2
	0.7nm,0.3s,baz=180,slow=14,SNR=10						
KK31				⇑Sn	Sn	06 12 04.0	+2.4
	1.0nm,0.4s,baz=189,slow=25,SNR=7.3						

ISCJB ***17*** *06:16:16.8±0.6, 41.°49N±0.°03×43.°48E±0.°03, h4km±5km,*
Error ellipse: s-maj=4.6km s-min=3.2km az=174.1
CSEM ***17*** *06:16:16.7±0.1, 41.°47N×43.°48E, h2km, ML2.7, Error*
ellipse: s-maj=3.7km s-min=2.8km az=163.0
TIF ***17*** *06:16:16.4, 41.°50N×43.°49E, h19km±1km*
DDA ***17*** *06:16:17.0, 41.°41N×43.°41E, h7km, Ml2.9*
ATA ***17*** *06:16:18.0±1.2, 41.°34N×43.°27E, h1km±6km, ML3.1,*
MW3.1
ISC 17 06:16:17.2±0.8, 41.°48N±0.°02×43.°47E±0.°02, h14km±5km,
n38, σ0§92/70, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKH	**Akhalkalaki**	**0.07**	**163**	P	**Pg**	**06 16 20.0**	**-0.2**
AKH				S	**Sg**	**06 16 22.1**	**-0.2**
AKH	**Akhalkalaki**	**0.07**	**163**	P	**Pg**	**06 16 20.0**	**-0.2**
BGD	**Bogdanovka**	**0.24**	**155**	P	**Pg**	**06 16 21.9**	**-0.6**
BGD				S	**Sg**	**06 16 25.9**	**-0.2**
BGD	**Bogdanovka**	**0.24**	**155**	P	**Pg**	**06 16 21.9**	**-0.6**
BGD				S	**Sg**	**06 16 25.9**	**-0.2**
EPOS	**Posof**	**0.55**	**273**	*e*P	**Pg**	**06 16 27.2**	**-1.0**
EPOS				*e*S	**Sg**	**06 16 35.1**	**-0.5**
EPOS				IAML		06 16 43.7	
	comp=Z,50nm,0.4s						
EPOS	**Posof**	**0.55**	**273**	*i*P	**Pg**	**06 16 27.2**	**-1.0**
EPOS				*i*S	**Sg**	**06 16 35.0**	**-0.5**
EPOS	**Posof**	**0.55**	**273**	P	**Pg**	**06 16 27.2**	**-1.0**
EPOS				S	**Sg**	**06 16 35.0**	**-0.5**
KZR	**Kazreti**	**0.72**	**98**	P	**Pg**	**06 16 30.7**	**-0.6**
KZR				S	**Sg**	**06 16 40.1**	**-0.7**
KZR	**Kazreti**	**0.72**	**98**	P	**Pg**	**06 16 30.7**	**-0.6**
KZR				S	**Sg**	**06 16 40.1**	**-0.7**
EAK	**Akyaka**	**0.80**	**172**	*e*P	**Pg**	**06 16 31.4**	**-1.4**
EAK				*e*S	**Sg**	**06 16 42.9**	**-0.5**
EAK				IAML		06 16 47.4	
	comp=Z,89nm,0.5s						
EAK	**Akyaka**	**0.80**	**172**	*i*P	**Pg**	**06 16 31.4**	**-1.4**
EAK				*i*S	**Sg**	**06 16 41.6**	**-1.8**
EAK	**Akyaka**	**0.80**	**172**	P	**Pg**	**06 16 31.4**	**-1.4**
EAK				S	**Sg**	**06 16 41.6**	**-1.8**
TBLG	**Delisi**	**0.99**	**75**	P	**Pg**	**06 16 35.0**	**-1.3**
TBLG				S	**Sg**	**06 16 48.6**	**-0.6**
TBLG	**Delisi**	**0.99**	**75**	P	**Pg**	**06 16 35.0**	**-1.3**
TBLG				S	**Sg**	**06 16 48.6**	**-0.6**
SEAG	**Tbilisi Sea**	**1.04**	**74**	P	**Pg**	**06 16 36.2**	**-1.1**
SEAG				S	**Sb**	**06 16 51.0**	**+0.3**
SEAG	**Tbilisi Sea**	**1.04**	**74**	P	**Pg**	**06 16 36.2**	**-1.1**
SEAG				S	**Sb**	**06 16 51.0**	**+0.3**
DIGO	**Kars**	**1.07**	**184**	*e*P	**Pg**	**06 16 36.6**	**-1.2**
DIGO				*e*S	**Sg**	**06 16 50.7**	**-1.1**
DIGO				IAML		06 16 53.0	
	comp=Z,41nm,0.2s						
DIGO	**Kars**	**1.07**	**184**	*i*P	**Pg**	**06 16 36.2**	**-1.6**
DIGO				*i*S	**Sg**	**06 16 50.4**	**-1.4**
DIGO	**Kars**	**1.07**	**184**	P	**Pg**	**06 16 36.2**	**-1.6**
DIGO				S	**Sg**	**06 16 50.4**	**-1.4**
DUS	**Dusheti**	**1.11**	**56**	P	**Pg**	**06 16 37.6**	**-1.0**
DUS				S	**Sb**	**06 16 53.1**	**+0.5**
DUS	**Dusheti**	**1.11**	**56**	P	**Pg**	**06 16 37.6**	**-1.0**
DUS				S	**Sb**	**06 16 53.1**	**+0.5**
ONI	**Oni**	**1.11**	**360**	P	**Pg**	**06 16 37.3**	**-1.3**
ONI				S	**Sg**	**06 16 52.2**	**-0.9**
ONI	**Oni**	**1.11**	**360**	P	**Pg**	**06 16 37.3**	**-1.3**
ONI				S	**Sg**	**06 16 52.2**	**-0.9**
DBOC	**Borcka**	**1.36**	**265**	*i*P	**Pn**	**06 16 42.2**	**+0.3**
DBOC				*i*S	**Sb**	**06 17 00.4**	**+0.6**
DBOC	**Borcka**	**1.36**	**265**	P	**Pn**	**06 16 42.2**	**+0.3**
DBOC				S	**Sb**	**06 17 00.4**	**+0.6**
DDEM	**Demirkent**	**1.42**	**246**	*i*P	**Pb**	**06 16 44.0**	**+0.4**
DDEM				*i*S	**Sb**	**06 17 02.1**	**+0.5**
DDEM	**Demirkent**	**1.42**	**246**	P	**Pb**	**06 16 44.0**	**+0.4**
DDEM				S	**Sb**	**06 17 02.1**	**+0.5**
DGRG	**David-gareji**	**1.44**	**91**	P	**Pn**	**06 16 42.7**	**-0.2**
DGRG				S	**Sg**	**06 17 03.1**	**-0.4**
DGRG	**David-gareji**	**1.44**	**91**	P	**Pn**	**06 16 42.7**	**-0.2**
DGRG				S	**Sg**	**06 17 03.1**	**-0.4**
CHVG	**Ch'k'valeri**	**1.61**	**321**	P	**Pb**	**06 16 46.8**	**+0.1**
CHVG				S	**Sg**	**06 17 08.6**	**-0.4**
CHVG	**Ch'k'valeri**	**1.61**	**321**	P	**Pb**	**06 16 46.8**	**+0.1**
CHVG				S	**Sg**	**06 17 08.6**	**-0.4**
EATA	**Eleskirt**	**1.78**	**205**	*e*P	**Pb**	**06 16 50.3**	**+0.5**
EATA	**Eleskirt**	**1.78**	**205**	*i*P	**Pg**	**06 16 50.6**	**-0.8**
EATA	**Eleskirt**	**1.78**	**205**	P	**Pg**	**06 16 50.6**	**-0.8**
HOMI	**Horasan**	**1.86**	**220**	*e*P	**Pn**	**06 16 50.4**	**+1.4**
DDFL	**Dedoflistskaro**	**2.00**	**90**	P	**Pn**	**06 16 51.6**	**+1.0**
DDFL				S	**Sn**	**06 17 16.7**	**+1.2**
DDFL	**Dedoflistskaro**	**2.00**	**90**	P	**Pn**	**06 16 51.6**	**+1.0**
DDFL				S	**Sn**	**06 17 16.7**	**+1.2**
TUTA	**Tutak**	**2.13**	**194**	*e*P	**Pb**	**06 16 56.1**	**+0.3**

ISCJB ***17*** *06:35:00.8±1.5, 35.°42N±0.°06×29.°70E±0.°08, h5km±9km,*
Error ellipse: s-maj=11.1km s-min=10.3km az=4.1
DDA ***17*** *06:35:00.9, 35.°40N×29.°76E, h22km, Ml2.8*
ISK ***17*** *06:35:02.7, 35.°52N×29.°62E, h15km, ML3.1/8*
CSEM ***17*** *06:35:03.3±0.6, 35.°48N×29.°72E, h20km, ML3.1, Error*
ellipse: s-maj=14.3km s-min=9.7km az=163.0
ISC 17 06:35:02.7±2.0, 35.°45N±0.°08×29.°72E±0.°05, h24km±15km,
n39, σ1§14/48, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKAS	**Kas**	**0.79**	**353**	PG	**Pb**	**06 35 16.2**	**-1.7**
AKAS				SG	**Sb**	**06 35 27.8**	**-0.5**
AKAS	**Kas**	**0.79**	**353**	*i*P	**Pb**	**06 35 16.9**	**-1.1**
AKAS				*i*S	**Sn**	**06 35 29.5**	**-0.2**
AKAS	**Kas**	**0.79**	**353**	*e*Pg	**Pb**	**06 35 16.2**	**-1.7**
AKAS	**Kas**	**0.79**	**353**	P	**Pb**	**06 35 16.9**	**-1.1**
AKAS				*e*Sg	**Sb**	**06 35 27.8**	**-0.5**
AKAS				S	**Sn**	**06 35 29.5**	**-0.2**
FETY	**Fethiye**	**1.29**	**337**	PN	**Pn**	**06 35 25.7**	**+0.3**
FETY				SN	**Sn**	**06 35 41.5**	**-0.5**
FETY	**Fethiye**	**1.29**	**337**	P	**Pn**	**06 35 25.5**	**+0.1**
FETY	**Fethiye**	**1.29**	**337**	*e*Pn	**Pn**	**06 35 25.7**	**+0.3**
FETY				S	**Sn**	**06 35 41.4**	**-0.5**
ELL	**Elmali**	**1.31**	**7**	PN	**Pb**	**06 35 26.2**	**-0.5**
ELL	**Elmali**	**1.31**	**7**	*e*Pn	**Pb**	**06 35 26.2**	**-0.5**
ARG	**Arkhangelos**	**1.51**	**301**	PN	**Pn**	**06 35 28.3**	**0.0**
ARG	**Arkhangelos**	**1.51**	**301**	*e*Pn	**Pn**	**06 35 28.3**	**0.0**
DALY	**Dalyan (Mu¨la**	**1.62**	**328**	PN	**Pn**	**06 35 30.2**	**+0.4**
DALY	**Dalyan (Mu¨la**	**1.62**	**328**	*i*P	**Pb**	**06 35 32.2**	**+0.3**
DALY	**Dalyan (Mu¨la**	**1.62**	**328**	*e*Pn	**Pn**	**06 35 30.2**	**+0.4**
DALY	**Dalyan (Mu¨la**	**1.62**	**328**	P	**Pb**	**06 35 32.2**	**+0.3**
KORT	**Korkueli**	**1.63**	**18**	PN	**Pn**	**06 35 31.1**	**+1.0**
KORT	**Korkueli**	**1.63**	**18**	*i*P	**Pb**	**06 35 32.5**	**+0.2**
KORT	**Korkueli**	**1.63**	**18**	*e*Pn	**Pn**	**06 35 31.1**	**+1.0**
KORT	**Korkueli**	**1.63**	**18**	P	**Pb**	**06 35 32.5**	**+0.2**
TURN	**Turunc**	**1.69**	**328**	PN	**Pb**	**06 35 32.4**	**-0.7**
TURN	**Turunc**	**1.69**	**328**	*i*P	**Pb**	**06 35 35.2**	**+2.1**
TURN	**Turunc**	**1.69**	**328**	*e*Pn	**Pb**	**06 35 32.4**	**-0.7**
TURN	**Turunc**	**1.69**	**328**	P	**Pb**	**06 35 35.2**	**+2.1**
GOLH	**Golhisar**	**1.79**	**356**	*i*P	**Pn**	**06 35 31.7**	**-0.6**
GOLH				*i*S	**Sb**	**06 35 58.9**	**+1.9**
GOLH	**Golhisar**	**1.79**	**356**	P	**Pn**	**06 35 31.7**	**-0.6**
GOLH				S	**Sb**	**06 35 58.9**	**+1.9**
KARP	**Karpathos**	**2.09**	**274**	PN	**Pn**	**06 35 37.4**	**+1.1**
KARP	**Karpathos**	**2.09**	**274**	*e*Pn	**Pn**	**06 35 37.4**	**+1.1**
TAVA	**DENIZLI_Tavas**	**2.12**	**342**	*i*P	**Pb**	**06 35 41.0**	**+0.5**
TAVA	**DENIZLI_Tavas**	**2.12**	**342**	P	**Pb**	**06 35 41.0**	**+0.5**
DAT	**Datca**	**2.16**	**307**	PN	**Pn**	**06 35 37.9**	**+0.6**
DAT	**Datca**	**2.16**	**307**	*i*P	**Pn**	**06 35 38.4**	**+1.1**
DAT				*i*S	**Sn**	**06 35 59.5**	**-3.8**
DAT	**Datca**	**2.16**	**307**	*e*Pn	**Pn**	**06 35 37.9**	**+0.6**
DAT	**Datca**	**2.16**	**307**	P	**Pn**	**06 35 38.4**	**+1.1**
GAZI	**Gazipasa**	**2.25**	**69**	*i*P	**Pn**	**06 35 38.1**	**-0.4**
GAZI	**Gazipasa**	**2.25**	**69**	P	**Pn**	**06 35 38.1**	**-0.4**
SUTC	**Sutluce-Ispart**	**2.27**	**27**	PN	**Pn**	**06 35 40.6**	**+1.7**
SUTC	**Sutluce-Ispart**	**2.27**	**27**	*e*Pn	**Pn**	**06 35 40.6**	**+1.7**
BODT	**Bodrum**	**2.53**	**310**	PN	**Pn**	**06 35 42.2**	**-0.1**
BODT	**Bodrum**	**2.53**	**310**	*e*Pn	**Pn**	**06 35 42.2**	**-0.1**

IDC ***17*** *06:38:06.1±0.5, 18.°03S×176.°60W, h0km, mb4.5/19,*
mb1 4.6/19, mb1mx4.5/50, mbtmp4.5/19, MS4.6/37,
Ms1 4.6/37, ms1mx4.5/52, Error ellipse: s-maj=19.6km
s-min=14.3km az=121.0
BJI ***17*** *06:38:07.6, 18.°33S×176.°99W, h7km, mb4.9/27, mB5.1/9,*
Ms5.0/10, Ms7 4.7/10
NEIC ***17*** *06:38:08.4±0.3, 17.°91S×176.°67W, h10km, mb4.8/74,*
Error ellipse: s-maj=13.1km s-min=6.5km az=148.0
GCMT ***17*** *06:38:08.4±0.1, 18.°01S×176.°35W, h12km, MW5.3/111,*
Moment Tensor Solution. s74,c106; s111,c183;
Duration: 1§0 Moment tensor: Scale 1017Nm;
Mrr=0.22±.01; Mθθ=0.79±.01; Mφφ 1.01±.01; Mrθ=0.01±.04;
Mθφ 0.08±.01; Mφr 0.48±.04; Best double couple:
M0 0.98500×1017 NP1:φs 316.00000°, δ79.00000°,
λ164.00000°. NP2:φs 49.00000°, δ74.00000°, λ11.00000°.
Principal axes: T 1.1760, Plg19.0000°, Azm272.0000°; N
-0.3840, Plg71.0000°, Azm103.0000°; P -0.7940,
Plg3.0000°, Azm3.0000°; nsta1 refers to body waves,
cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
ISCJB ***17*** *06:38:10.2±0.3, 18.°00S±0.°07×176.°72W±0.°05, h33km,*
mb4.8/100, MS4.7/44 Error ellipse: s-maj=11.2km
s-min=5.9km az=152.3
MOS ***17*** *06:38:12.4±2.1, 17.°59S×176.°83W, h33km, mb4.9/20,*
MS4.8/7, Error ellipse: s-maj=12.2km s-min=11.0km
az=78.1
ISC 17 06:38:11.3±0.4, 18.°02S±0.°08×176.°40W±0.°07, h35km,
n322, σ1§68/290, mb4.8/100, MS4.7/44, 18C-12D, Fiji
Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**6.04**	**48**	Pn	**Pn**	**06 39 36.0**	**-2.2**
	4.3nm,0.3s,baz=29,slow=13,SNR=5.9						
AFI				LR	LR	06 41 29.2	
	comp=Z,2μm,19.6s,baz=224,slow=33						
AFI	**Afiamalu**	**6.04**	**48**	*e*Pn	**Pn**	**06 39 35.3**	**-2.9**
RAO	**Raoul Island**	**11.27**	**187**	LR	LR	06 44 35.1	
	comp=Z,7μm,20.7s,baz=13,slow=35						
RAR	**Rarotonga**	**15.98**	**104**	LR	LR	06 46 35.6	
	comp=Z,2μm,19.6s,baz=288,slow=32						
DZM	**Mont Dzumac**	**16.62**	**253**	*e*P	**P**	**06 42 05.3**	**+1.4**
	159nm,1.4s						
DZM				*e*LR	LR	06 46 01.7	
	12μm,24.6s						
DZM	**Mont Dzumac**	**16.62**	**253**	Pn	**P**	**06 42 03.5**	**-0.4**
	0.6nm,0.3s,baz=66,slow=21,SNR=9.8						
DZM				LR	LR	06 47 21.1	
	comp=Z,8μm,19.9s,baz=84,slow=34						
DZM	**Mont Dzumac**	**16.62**	**253**	*e*Pn	**P**	**06 42 04.1**	**+0.2**
	38nm,0.9s						
OUZ	**Omahuta**	**19.30**	**205**	*e*P	**P**	**06 42 33.5**	**+0.2**
	82nm,1.5s						
URZ	**Urewera**	**20.95**	**194**	P	**P**	**06 42 49.0**	**-2.1**
	7.0nm,0.8s,baz=225,slow=1.4,SNR=4.9						
HNR	**Honiara**	**24.49**	**287**	LR	LR	06 51 33.2	
	comp=Z,2μm,19.4s,baz=111,slow=33						
PAE	**Paea**	**25.52**	**93**	*e*T	T	07 09 41.8	
	9.1nm,0.2s						
PPT2	**Papeete2**	**25.53**	**93**	*e*LQ	LQ	06 48 44.0	
	2μm,27.5s						
PPT2				*e*LR	LR	06 49 48.7	
	7μm,27.0s,baz=258						
PPT2	**Papeete2**	**25.53**	**93**	*e*T	T	07 09 44.9	
	8.9nm,0.3s						
PPT	**Papeete**	**25.53**	**93**	LR	LR	06 50 59.1	
	comp=Z,2μm,20.5s,baz=252,slow=30						
TBI	**Tubuai**	**25.73**	**106**	*e*LQ	LQ	06 48 51.7	
	3μm,28.2s						
TBI				*e*LR	LR	06 49 57.3	
	5μm,29.0s,baz=276						
TIAR	**Tiarei**	**25.75**	**93**	*e*T	T	07 10 00.7	
	3.7nm,0.3s						
TVO	**Taravao**	**25.82**	**94**	*e*T	T	07 10 06.4	
	3.5nm,0.3s						
EIDS	**Eidsvold**	**31.03**	**251**	*e*P	**P**	**06 44 25.6**	**-0.4**
	14nm,1.1s						
CTA	**Charters Tower**	**35.32**	**261**	P	**P**	**06 45 02.2**	**-1.2**
	23nm,0.9s,baz=100,slow=10,SNR=16						
CTA				LR	LR	06 57 31.0	
	comp=Z,947nm,19.8s,baz=90,slow=33						
CTAO	**Charters Tower**	**35.32**	**261**	*e*P	**P**	**06 45 03.0**	**-0.4**
	123nm,1.6s						
CTAO	**Charters Tower**	**35.32**	**261**	*e*P	**P**	**06 45 03.0**	**-0.4**
CTAO				pmax	pmax		
	comp=Z,123nm,1.6s						
TAOE	**Nuku Hiva Isla**	**36.35**	**80**	*e*S	**S**	**06 50 46.3**	**-5.3**
	comp=Z,275nm,25.5s						
TAOE				*e*LQ	LQ	06 52 57.0	
	comp=Z,636nm,24.4s						
TAOE				*e*LR	LR	06 54 45.1	
	comp=Z,3μm,29.0s,baz=256						
TAOE	**Nuku Hiva Isla**	**36.35**	**80**	*e*T	T	07 23 02.8	
	comp=Z,33nm,0.3s						
PMG	**Port Moresby**	**36.37**	**279**	LR	LR	06 58 36.0	
	comp=Z,2μm,18.4s,baz=92,slow=34						
RKT	**Rikitea**	**39.02**	**105**	*e*LQ	LQ	06 54 20.7	
	comp=Z,552nm,27.5s						
RKT				*e*LR	LR	06 56 06.0	
	comp=Z,2μm,28.0s,baz=272						
COEN	**Coen**	**39.02**	**270**	*e*P	**P**	**06 45 34.3**	**-0.6**
	comp=Z,30nm,1.3s						
STKA	**Stephens Creek**	**40.26**	**242**	P	**P**	**06 45 45.1**	**+0.1**
	comp=Z,8.1nm,0.9s,baz=81,slow=8.5,SNR=6.2						
STKA				LR	LR	07 02 12.8	
	comp=Z,351nm,18.7s,baz=75,slow=36						
STKA	**Stephens Creek**	**40.26**	**242**	*e*P	**P**	**06 45 45.7**	**+0.7**
	comp=Z,4.9nm,1.2s						
STKA	**Stephens Creek**	**40.26**	**242**	*e*P	**P**	**06 45 45.7**	**+0.7**
STKA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
JAY	**Jayapura**	**44.78**	**285**	LR	LR	07 05 12.2	
	comp=Z,710nm,18.3s,baz=98,slow=36						
WB2	**Warramunga Arr**	**46.48**	**259**	*e*P	**P**	**06 46 31.8**	**-3.7**
	comp=Z,22nm,0.8s						
WRAB	**Tennant Creek**	**46.49**	**259**	*e*P	**P**	**06 46 32.6**	**-2.8**
	comp=Z,21nm,1.0s						
WRAB	**Tennant Creek**	**46.49**	**259**	*i*P	**P**	**06 46 32.0**	**-3.4**
WRAB				pmax	pmax		
	comp=Z,16nm,1.0s						
WRA	**Warramunga Arr**	**46.50**	**259**	P	**P**	**06 46 33.1**	**-2.4**
	comp=Z,12nm,0.9s,baz=94,slow=6.1,SNR=60						
WRA				LR	LR	07 05 43.2	
	comp=Z,2μm,18.1s,baz=85,slow=36						
AS01	**Alice Springs**	**46.56**	**254**	*e*P	**P**	**06 46 34.1**	**-1.9**
AS31	**Alice Springs**	**46.60**	**254**	*e*P	**P**	**06 46 34.5**	**-1.8**
	comp=Z,9.9nm,0.6s						
ASAR	**Alice Springs**	**46.60**	**254**	P	**P**	**06 46 34.6**	**-1.8**
	comp=Z,17nm,0.6s,baz=88,slow=8.2,SNR=171						
ASAR				LR	LR	07 04 26.2	
	comp=Z,923nm,21.2s,baz=99,slow=34						
FITZ	**Fitzroy Crossi**	**54.90**	**260**	*e*P	**P**	**06 47 37.8**	**-1.0**
	comp=Z,34nm,1.5s						
SOEI	**Soe**	**57.99**	**270**	*e*P	**P**	**06 48 00.7**	**-0.4**
	comp=Z,228nm,0.9s						
BATI	**Baumata**	**58.45**	**269**	LR	LR	07 11 47.9	
	comp=Z,910nm,21.1s,baz=112,slow=35						
VNDA	**Vanda**	**60.50**	**185**	P	**P**	**06 48 18.1**	**+0.8**
	comp=Z,2.8nm,1.0s,baz=6.3,slow=7.3,SNR=6.9						
VNDA				LR	LR	07 10 41.7	
	comp=Z,159nm,20.1s,baz=22,slow=32						
VNDA	**Vanda**	**60.50**	**185**	*e*P	**P**	**06 48 19.9**	**+2.6**
	comp=Z,14nm,1.4s						
NWAO	**Narrogin (SRO)**	**60.85**	**242**	LR	LR	07 14 21.4	
	comp=Z,502nm,19.3s,baz=324,slow=36						
RPN	**Rapa Nui**	**61.97**	**112**	LR	LR	07 08 46.0	
	comp=Z,631nm,21.7s,baz=264,slow=30						
DAV	**Davao City (W)**	**62.45**	**288**	LR	LR	07 11 10.1	
	comp=Z,342nm,22.0s,baz=153,slow=32						
JAGI	**Jajag, Banyuwa**	**67.95**	**268**	*e*P	**P**

RYN	Ryan	78.16	43	eP	P	06 50 09.2	+1.9
	comp=Z,11nm,1.4s						
NV01	Mina Array Sit	78.19	43	eP	P	06 50 07.8	+0.2
NVAR	Mina Array Bea	78.19	43	P	P	06 50 09.8	+2.2
	comp=Z,2.1nm,0.9s,baz=225,slow=8.3,SNR=12						
NVAR				LR	LR	07 18 38.6	
	comp=Z,460nm,18.9s,baz=121,slow=31						
NV11	Mina Array Sit	78.29	43	eP	P	06 50 09.1	+1.2
	comp=Z,0.5nm,1.1s						
KVN	Kaiserville	78.67	43	eP	P	06 50 12.3	+2.2
	comp=Z,6.9nm,1.1s						
KVN	Kaiserville	78.67	43	eP	P	06 50 12.3	+2.2
KVN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
K05A	Summer Lake	79.09	38	eP	P	06 50 10.4	-2.0
	comp=Z,19nm,1.4s						
Y14A	Wickenburg	79.43	49	eP	P	06 50 17.6	+3.3
	comp=Z,3.7nm,1.0s						
NJ2	Nanjing	79.50	309	eP	P	06 50 16.0	+1.5
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
PINE	Pine Mountain	79.70	37	eP	P	06 50 14.8	-0.9
	comp=Z,11nm,1.1s						
BMN	Battle Mountai	80.00	42	eP	P	06 50 16.6	-0.7
	comp=Z,7.4nm,1.3s						
BMN	Battle Mountai	80.00	42	eP	P	06 50 16.6	-0.7
BMN				pmax	pmax		
	comp=Z,7.0nm,1.3s						
TUC	Tucson	80.26	51	eP	P	06 50 19.7	+0.9
	comp=Z,8.3nm,1.5s						
TUC	Tucson	80.26	51	eP	P	06 50 19.7	+0.9
TUC				pmax	pmax		
	comp=Z,8.0nm,1.5s						
WVOR	Wild Horse Val	80.26	39	eP	P	06 50 20.1	+1.5
	comp=Z,7.4nm,1.0s						
X16A	Lo Mia Camp, P	80.79	49	eP	P	06 50 21.2	-0.5
	comp=Z,3.4nm,0.8s						
J08A	Circle Bar Ran	80.89	39	eP	P	06 50 21.3	-0.7
	comp=Z,9.3nm,1.3s						
U15A	North Rim	81.18	47	eP	P	06 50 23.2	-0.7
	comp=Z,3.7nm,1.0s						
KLR	Kul'dur	81.19	329	P	P	06 50 21.8	-1.5
	comp=Z,0.0nm,0.5s,baz=255,slow=3.7,SNR=2.6						
KLR				LR	LR	07 21 14.6	
	comp=Z,55nm,21.6s,baz=152,slow=32						
KLR	Kul'dur	81.19	329	iP	P	06 50 20.6	-2.7
CN2	Changchun	81.29	322	eP	P	06 50 29.6	+5.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
G08A	Pilot Rock	81.73	37	eP	P	06 50 26.5	+0.1
	comp=Z,11nm,1.1s						
MA2	Magadan	81.82	344	LR	LR	07 23 13.6	
	comp=Z,227nm,19.8s,baz=148,slow=33						
SUA	Susitna One	81.83	12	eP	P	06 50 25.1	-1.4
	comp=Z,6.5nm,0.8s						
MTPU	Mount Pierson	82.06	46	eP	P	06 50 33.4	+4.8
	comp=Z,6.5nm,1.4s						
BMO	Blue Mountains	82.44	38	eP	P	06 50 30.6	+0.5
	comp=Z,8.3nm,1.2s						
BMO	Blue Mountains	82.44	38	eP	P	06 50 30.6	+0.5
BMO				pmax	pmax		
	comp=Z,8.0nm,1.2s						
MFID	Camas Ranch	82.52	40	eP	P	06 50 31.8	+1.2
	comp=Z,5.3nm,1.0s						
PMSA	Palmer Station	82.95	156	LR	LR	07 24 41.6	
	comp=Z,186nm,18.3s,baz=252,slow=34						
F10A	Beach Ranch, E	83.12	37	eP	P	06 50 33.0	-0.6
	comp=Z,8.8nm,1.0s						
TMUT	Trail Mountain	83.34	45	eP	P	06 50 35.0	-0.1
	comp=Z,9.1nm,0.8s						
HLID	Hailey	83.47	40	eP	P	06 50 35.7	+0.2
	comp=Z,3.2nm,0.8s						
SPUT	South Promonto	83.53	43	eP	P	06 50 39.3	+3.4
	comp=Z,5.2nm,1.0s						
HVU	Hansel Valley	83.56	42	eP	P	06 50 39.6	+3.6
	comp=Z,10nm,1.5s						
SRU	San Rafael Swe	83.72	46	eP	P	06 50 36.5	-0.5
	comp=Z,6.3nm,1.0s						
SRU	San Rafael Swe	83.72	46	eP	P	06 50 36.5	-0.5
SRU				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TRF	Thorofare Moun	83.73	11	eP	P	06 50 35.4	-1.0
	comp=Z,14nm,1.2s						
RND	Reindeer	83.96	12	eP	P	06 50 37.1	-0.4
	comp=Z,11nm,0.9s						
RND	Reindeer	83.96	12	eP	P	06 50 37.1	-0.4
RND				pmax	pmax		
	comp=Z,11nm,0.9s						
MNTX	Cornudas Mount	84.08	54	eP	P	06 50 42.4	+3.6
	comp=Z,7.8nm,1.4s						
TCUT	Toone Canyon	84.11	43	eP	P	06 50 42.9	+3.9
	comp=Z,24nm,1.0s						
P18A	Preston Nutter	84.16	45	eP	P	06 50 40.6	+1.3
	comp=Z,9.1nm,0.3s						
BNM	Barren Site	84.20	51	eP	P	06 50 42.4	+2.8
MCK	McKinley	84.24	12	eP	P	06 50 39.3	+0.4
	comp=Z,9.3nm,0.9s						
MCK	McKinley	84.24	12	eP	P	06 50 39.3	+0.4
MCK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HWUT	Hardware Ranch	84.26	43	eP	P	06 50 41.8	+2.2
	comp=Z,4.1nm,0.9s						
SEY	Seymchan	84.33	346	P	P	06 50 39.3	+0.1
	comp=Z,4.4nm,0.6s,baz=136,slow=5.5,SNR=8.4						
SEY	Seymchan	84.33	346	iP	P	06 50 39.2	0.0
PV09	Paradox Valley	84.38	47	eP	P	06 50 43.9	+3.5
MAW	Mawson	84.39	199	LR	LR	07 26 11.1	
	comp=Z,439nm,20.6s,baz=89,slow=34						
TX31	Lajitas Ar. Si	84.44	57	eP	P	06 50 44.7	+4.0
TXAR	Lajitas Array	84.44	57	P	P	06 50 42.2	+1.4
	comp=Z,0.8nm,0.7s,baz=224,slow=5.2,SNR=10.0						
TXAR				LR	LR	07 20 50.1	
	comp=Z,381nm,20.2s,baz=0.0,slow=30						
ANMO	Albuquerque	84.67	51	LR	LR	07 20 43.5	
	comp=Z,201nm,21.7s,baz=242,slow=30						
ANMO	Albuquerque	84.67	51	eP	P	06 50 45.7	+3.8
	comp=Z,7.6nm,1.5s						
ANMO	Albuquerque	84.67	51	iP	P	06 50 43.2	+1.3
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
WRH	Wood River Hil	85.07	12	eP	P	06 50 43.0	0.0
	comp=Z,35nm,1.4s						
MLY	Manley	85.09	11	eP	P	06 50 42.9	-0.2
	comp=Z,4.4nm,1.0s						
MCMT	McKenzie Canyo	85.09	40	eP	P	06 50 46.3	+2.5
BJI	Beijing	85.22	315	↓eP	P	06 50 46.5	+2.3
BJI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CCB	Clear Creek Bu	85.28	12	eP	P	06 50 43.4	-0.6
	comp=Z,8.7nm,0.8s						
COLA	College	85.48	12	eP	P	06 50 44.9	0.0
	comp=Z,21nm,0.8s						
MDM	Murphy Dome	85.48	12	eP	P	06 50 45.1	+0.1
	comp=Z,30nm,1.5s						
DLMT	Dillon	85.52	39	eP	P	06 50 49.1	+3.3
	comp=Z,11nm,1.4s						
ILAR	Eielson Array	85.58	12	P	P	06 50 44.5	-0.9
	comp=Z,2.5nm,0.9s,baz=228,slow=6.0,SNR=24						
ILAR				LR	LR	07 22 44.4	
	comp=Z,198nm,21.0s,baz=223,slow=31						
ILB	Eielson Array	85.58	12	eP	P	06 50 44.7	-0.8
IL1	Eielson Array	85.58	12	eP	P	06 50 44.4	-1.1
REDW	Red Top Meadow	85.59	42	eP	P	06 50 50.1	+3.8
	comp=Z,5.7nm,0.9s						
TPAW	Teton Pass	85.59	42	eP	P	06 50 49.8	+3.4
	comp=Z,7.9nm,1.1s						
FXWY	Fox Creek	85.61	41	eP	P	06 50 50.3	+3.8
	comp=Z,12nm,1.6s						
S22A	4UR Ranch, Cre	85.65	48	eP	P	06 50 50.4	+3.5
	comp=Z,8.0nm,1.4s						
SNOW	Snow King Moun	85.70	42	eP	P	06 50 50.2	+3.3
	comp=Z,8.0nm,1.0s						
IMW	Indian Meadow	85.80	41	eP	P	06 50 50.9	+3.5
	comp=Z,4.9nm,1.0s						
PSI	Prapat	85.80	274	LR	LR	07 30 37.3	
	comp=Z,196nm,18.4s,baz=91,slow=37						
PDAR	Pinedale Array	86.12	43	P	P	06 50 49.5	+0.5
	comp=Z,1.6nm,1.0s,baz=194,slow=3.1,SNR=5.7						
PDAR				LR	LR	07 23 59.4	
	comp=Z,318nm,18.7s,baz=244,slow=32						
PDAR	Pinedale Array	86.12	43	eP	P	06 50 51.0	+2.0
LNIG	Linares	86.18	62	eP	P	06 50 50.0	+0.6
	comp=Z,10nm,1.0s						
BOZ	Bozeman (W)	86.22	40	eP	P	06 50 52.1	+2.7
	comp=Z,11nm,1.6s						
ZEA	Zeya	86.22	330	eP	P	06 50 51.2	+2.3
ZEA				pmax	pmax		
	comp=Z,14nm,1.2s						
DAWY	Dawson	86.68	15	eP	P	06 50 51.6	+0.6
	comp=Z,6.3nm,0.9s						
BILL	Bilibino	86.75	354	eP	P	06 50 51.3	+0.1
	comp=Z,11nm,1.0s						
BILL	Bilibino	86.75	354	iP	P	06 50 50.0	-1.2
BILL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,213nm,18.0s						
GYA	Guiyang	86.76	299	eP	P	06 50 52.6	+0.2
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
EGAK	Eagle	86.84	14	eP	P	06 50 53.1	+1.4
	comp=Z,7.7nm,1.0s						
XAN	Xi'an	87.86	307	P	P	06 50 58.5	+1.1
XAN				pP	PcP	06 51 03.0	+3.8
HHC	Hu-ho-hao-te	88.73	314	eP	P	06 51 00.8	-0.6
HHC				PP	PP	06 54 31.6	+0.7
HHC				S	S	07 01 44.6	-1.5
HHC				SS	SS	07 07 38.8	+0.1
HHC				pmax	pmax		
	comp=Z,18nm,1.2s						
HHC				LR	LR		
	comp=Z,150nm,14.5s						
HHC				LR	LR		
	comp=Z,190nm,14.5s						
HHC				LR	LR		
	comp=Z,130nm,14.3s						
KMI	Kunming	89.59	296	P	P	06 51 13.3	+7.3
KMI				pP	pP	06 51 16.3	-0.9
KMI				sP	sP	06 51 17.8	-3.4
KMI	Kunming	89.59	296	S	S	07 01 57.1	+1.9
KMI				pmax	pmax		
	comp=Z,21nm,0.6s						
KMI				pmax	pmax		
	comp=Z,110nm,3.9s						
KMI				LR	LR		
	comp=N,190nm,26.5s						
KMI				LR	LR		
	comp=E,160nm,21.5s						
KMI				LR	LR		
	comp=Z,230nm,21.0s						
PLCA	Paso Flores	89.86	133	LR	LR	07 26 05.6	
	comp=Z,90nm,18.3s,baz=274,slow=32						
LAO	LASA Array	90.05	40	eP	P	06 51 09.3	+1.8
SNAA	Sanae	90.43	178	P	P	06 51 04.7	-4.2
SNAA	Sanae	90.43	178	P	P	06 51 09.2	+0.3
	comp=Z,5.0nm,1.0s,baz=26,slow=16,SNR=9.2						
SNAA				LR	LR	07 25 59.7	
	comp=Z,272nm,21.8s,baz=144,slow=32						
SNAA	Sanae	90.43	178	iP	P	06 51 09.8	+0.9
VNA3	Neumayer Olymp	90.50	176	P	P	06 51 03.9	-5.2
CD2	Chengdu	90.75	302	P	P	06 51 10.4	-0.7
CD2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
VNA1	Neumayer--Stat	91.17	176	P	P	06 51 08.2	-4.1
NVL	N'lazarevskaya	91.26	183	eP	P	06 51 17.7	+5.0
NVL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
INK	Inuvik	91.50	15	P	P	06 51 14.1	+0.5
	comp=Z,2.1nm,0.9s,baz=207,slow=9.8,SNR=5.4						
INK	Inuvik	91.50	15	eP	P	06 51 18.2	+4.6
	comp=Z,7.4nm,1.3s						
DGMT	Dagmar	92.06	39	eP	P	06 51 20.2	+3.5
	comp=Z,14nm,1.0s						
LZH	Lanzhou	92.48	307	eP	P	06 51 18.4	-0.7
LZH				pP	PcP	06 51 21.6	+1.8
LZH				ePP	PP	06 55 02.5	+1.6
LZH				pmax	pmax		
	comp=Z,17nm,1.5s						
LZH				pmax	pmax		
	comp=Z,83nm,5.6s						
LZH				LR	LR		
	comp=Z,320nm,17.5s						
LZH				LR	LR		
	comp=Z,340nm,17.3s						
LZH				LR	LR		
	comp=Z,430nm,19.6s						
JTS	JuntasAbangare	94.48	81	LR	LR	07 24 05.3	
	comp=Z,317nm,20.4s,baz=314,slow=29						
ULN	Ulaanbaatar	94.49	319	iP	P	06 51 27.6	-0.5
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SONM	Songino Array	94.89	319	P	P	06 51 29.4	-0.5
	comp=Z,0.5nm,0.9s,baz=134,slow=4.2,SNR=2.7						
GTA	Gaotai	96.59	309	eP	P	06 51 43.0	+5.2
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TIXI	Tiksi	96.76	345	iP	P	06 51 36.8	-0.8
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ULM	Lac du Bonnet	97.77	40	LR	LR	07 31 16.4	
	comp=Z,218nm,18.5s,baz=268,slow=33						
KSH	Kashi	114.70	306	PKP	PKPdf	06 56 50.9	+2.5
KSH				PP	PP	06 57 52.3	+5.7
BVAR	Borovoye Array	118.14	321	PKP	PKPdf	06 56 53.5	-0.9
	comp=Z,3.3nm,0.8s,baz=101,slow=4.6,SNR=6.1						
SVE	Sverdlovsk	122.79	327	ePKIKP	PKPdf	06 57 03.4	+0.2
ARU	Arti	124.00	327	ePKPdf	PKPdf	06 57 06.0	+0.4
ARU	Arti	124.00	327	iPKIKP	PKPdf	06 57 04.3	-1.3
ARU						06 58 46.3	
ARU						07 04 15.9	
ARU				SP	SP	07 08 42.0	-1.0
ARU				SS	SS	07 15 29.4	-7.7
ARU				MLR	MLR		
	comp=Z,262nm,25.0s						
ABKAR	Akbulak array	125.30	318	ePKPdf	PKPdf	06 57 11.6	+3.3
KLMR	Klimovskoe	130.19	338	ePKIKP	PKPdf	06 57 15.1	-2.1
KLMR				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KLMR	Klimovskoe	130.19	338	ePKPdf	PKPdf	06 57 15.1	-2.1
KLMR				AMP		06 57 29.4	
	comp=Z,8.0nm,1.3s						
FINES	FINESS Array B	133.80	345	PKP	PKPdf	06 57 24.4	+0.4
	comp=Z,2.4nm,0.8s,baz=90,slow=1.9,SNR=6.9						
NB2	NORSAR Subarra	136.69	355	PKP	PKPdf	06 57 34.9	+5.4
	comp=Z,1.4nm,0.8s,baz=12,slow=4.0						
ANN	Anapa	141.14	321	iPKIKP	PKPdf	06 57 35.4	-2.7
AKASG	Malin Array Be	141.53	334	PKhKP	PKPpre	06 57 30.0	
	comp=Z,0.2nm,0.4s,baz=45,slow=4.1,SNR=3.3						
AKASG				PKP	PKPdf	06 57 38.2	-0.4
	comp=Z,1.7nm,0.7s,baz=39,slow=3.5,SNR=8.4						
KIEV	Kiev	141.54	334	iPKIKP	PKPdf	06 57 37.7	-0.9
AK11	Malin Array Si	141.57	334	ePKPdf	PKPdf	06 57 40.0	+1.4
LVV	L'vov	144.28	337	ePKHKP	PKPpre	06 57 36.6	
PRAR	RASCA	145.35	333	↑iP	PKPdf	06 57 53.5	+8.0
OJC	Ojcow	145.35	342	ePKP	PKPbc	06 57 45.3	0.0
OJC	Ojcow	145.35	342	ePKPbc	PKPbc	06 57 44.9	-0.3
OJC	Ojcow	145.35	342	ePKIKP	PKPbc	06 57 44.9	-0.3
ILGA	Ilgaz	145.46	318	ePKPbc	PKPab	06 57 47.1	+0.7
BUR08	Bucovina Ar. S	145.57	334	ePKPbc	PKPab	06 57 46.9	+0.4
BUR04	Bucovina Ar. S	145.59	334	ePKPbc	PKPab	06 57 46.4	-0.1
BURAR	Bucovina Array	145.59	334	↑iP	PKPdf	06 57 45.9	-0.1
BURAR	Bucovina Array	145.59	334	PKP2	PKPdf	06 57 45.9	-0.1
TLCR		145.71	328	↓iP	PKPdf	06 57 43.6	-2.5
KSP	Ksiaz	145.72	346	ePKP	PKPab	06 57 47.7	+0.9
KSP	Ksiaz	145.72	346	ePKIKP	PKPab	06 57 47.7	+0.9
TESR	Tescani	145.80	331	↑iP	PKPdf	06 57 45.5	-0.8
UZH	Uzhgorod	145.90	338	↓iPKIKP	PKPab	06 57 49.4	+1.9
UZH				e		06 58 00.4	
NIE	Niedzica	145.90	340	ePKP	PKPab	06 57 48.0	+0.5
NIE	Niedzica	145.90	340	ePKIKP	PKPab	06 57 48.0	+0.5
CLL	Collm	145.96	349	ePKPbc	PKPbc	06 57 47.0	-0.1
	comp=Z,21nm,1.1s						
CLL				iSPKPbc	PKiKP	06 57 51.3	+0.8
CLL				i (PKiKP)		06 57 52.8	
CLL				e		07 00 00.0	
CLL				e(PPPP)		07 06 31.0	
CLL				eSS	SS	07 20 18.0	+18
CLL				e		07 22 48.0	
CLL				eSSS	SSS	07 25 30.0	
CLL				LmV		08 06 00.0	
	comp=Z,200nm,19.4s						
CLL	Collm	145.96	349	ePKPdf	PKPdf	06 57 46.6	+0.3
CLL	Collm	145.96	349	ePKIKP	PKPbc	06 57 47.0	-0.1
CLL				i		06 57 51.3	
CLL				pmax	pmax		
	comp=Z,21nm,1.1s						
CLL				MLR	MLR		
	comp=Z,200nm,19.4s						
CRVS	Cervenica-Dubn	145.96	339	ePKIKP	PKPab	06 57 49.9	+2.2
CRVS	Cervenica-Dubn	145.96	339	ePKP	PKPab	06 57 49.9	+2.2
UPC	Upice	146.10	346	ePKP	PKPab	06 57 49.9	+1.7
UPC				AMS	AMS	08 00 00.0	
	comp=Z,300nm,21.0s						
UPC	Upice	146.10	346	ePKP2	PKPab	06 57 49.9	+1.7
UPC				MLR	MLR		
	comp=Z,300nm,21.0s						
OKC	Ostrava-Krasne	146.17	343	AMS	AMS	08 00 40.0	
	comp=Z,300nm,21.1s						
DPC	Dobruska-Polom	146.18	345	ePKP	PKPab	06 57 48.4	-0.1
DPC				epPKP	PKiKP	06 57 52.4	+1.3
DPC				AMS	AMS	08 00 50.0	
	comp=Z,200nm,19.5s						
DPC	Dobruska-Polom	146.18	345	ePKP2	PKPab	06 57 48.4	-0.1
DPC				MLR	MLR		
	comp=Z,200nm,19.5s						
BRG	Berggiesshubel	146.20	348	ePKP	PKPab	06 57 49.1	+0.6
	comp=Z,17nm,1.1s						
BRG	Berggiesshubel	146.20	348	ePKP2	PKPab	06 57 49.2	+0.7
BRG				pmax	pmax		
	comp=Z,17nm,1.1s						
BR131	Keskin Array S	146.21	316	ePKPdf	PKPbc	06 57 48.2	-0.2
BRTR	Keskin Array B	146.21	316	PKPbc	PKPbc	06 57 48.2	-0.2
	comp=Z,15nm,1.0s,baz=134,slow=2.1,SNR=19						
TRPA	Tarpa	146.23	337	↓iP	PKPab	06 57 48.4	-0.3
VRI	Vrincioaia	146.25	330	↓iP	PKPbc	06 57 48.4	+0.2
VRI	Vrincioaia	146.25	330	PKP2	PKPbc	06 57 48.4	+0.2
PLOR	Plostina	146.29	330	↑iP	PKPab	06 57 50.2	+1.1
PLOR	Plostina	146.29	330	PKP2	PKPab	06 57 50.2	+1.1
MORC	Moravsky Berou	146.39	344	↓iP	PKPdf	06 57 46.2	-1.0
MORC	Moravsky Berou	146.39	344	ePKPdf	PKPbc	06 57 48.7	+0.2
MORC	Moravsky Berou	146.39	344	PKIKP	PKPdf	06 57 46.2	-1.0
MORC	Moravsky Berou	146.39	344	ePKP	PKPbc	06 57 48.5	0.0
LANS	Liptovska Anna	146.40	341	ePKP2	PKPab	06 57 50.8	+1.4
LANS	Liptovska Anna	146.40	341	ePKP	PKPab	06 57 50.8	+1.4
PVCC	Panska Ves	146.40	347	ePKP	PKPab	06 57 50.2	+0.9
PVCC	Panska Ves	146.40	347	ePKP2	PKPab	06 57 50.2	+0.9
TIRR	Tirgusor	146.43	327	↓iP	PKPab	06 57 49.8	+0.2
TIRR	Tirgusor	146.43	327	PKP2	PKPab	06 57 49.8	+0.2
HARR	Harsova	146.51	328	↑iP	PKPbc	06 57 48.4	-0.5
HARR	Harsova	146.51	328	PKIKP	PKPbc	06 57 48.4	-0.5
TLB	Topalu	146.53	328	↓iP	PKPbc	06 57 48.9	-0.1
TLB	Topalu	146.53	328	PKP2	PKPbc	06 57 48.9	-0.1
ANTO	Ankara	146.69	317	↑iP	PKPpre	06 57 43.0	
ANTO	Ankara	146.69	317	PKHKP	PKPpre	06 57 43.0	
DOPR	Dopca	146.79	332	↓iP	PKPbc	06 57 49.9	+0.1
MOX	Moxa	146.83	351	PKP2	PKPab	06 57 52.4	+1.4
MLR	Muntele Rosu	146.89	331	↑iP	PKPdf	06 57 47.5	-0.8
MLR	Muntele Rosu	146.89	331	ePKPdf	PKPbc	06 57 50.8	+0.6
MLR	Muntele Rosu	146.89	331	PKIKP	PKPdf	06 57 47.5	-0.8
GOPC	GO Pecny, Ondr	146.94	347	ePKP	PKPbc	06 57 50.6	+0.5
GOPC				AMS	AMS	08 02 40.0	
	comp=Z,200nm,20.4s						
GOPC	GO Pecny, Ondr	146.94	347	ePKP2	PKPbc	06 57 50.6	+0.5
GOPC				MLR	MLR		
	comp=Z,200nm,20.4s						
CJR	Cluj-Napoca	146.97	334	↓iP	PKPbc	06 57 51.0	+0.7
CJR	Cluj-Napoca	146.97	334	PKP2	PKPbc	06 57 51.0	+0.7
VRAC	Vranov	147.07	344	↑iP	PKPab	06 57 52.9	+0.9
VRAC	Vranov	147.07	344	PKP2	PKPab	06 57 52.9	+0.9
VRAC	Vranov	147.07	344	ePKP	PKPab	06 57 52.1	+0.1
VYHS	Vyhne	147.18	341	ePKP2	PKPab	06 57 51.7	-0.7
VYHS	Vyhne	147.18	341	ePKP	PKPab	06 57 51.7	-0.7
JAVC	Velka Javorina	147.19	343	ePKP	PKPab	06 57 53.3	+0.8
DRGR		147.27	335	↑iP	PKPbc	06 57 50.7	-0.5
DRGR		147.27	335	PKP2	PKPbc	06 57 50.7	-0.5
PSZ	Piszkesteto	147.34	340	↑iP	PKPbc	06 57 52.5	-0.7
PSZ	Piszkesteto	147.34	340	PKP2	PKPab	06 57 52.5	-0.7
VOIR		147.35	332	↑iP	PKPbc	06 57 50.3	-1.1
VOIR		147.35	332	PKIKP	PKPbc	06 57 50.3	-1.1
KRUC	Moravsky	147.35	344	ePKP	PKPbc	06 57 50.8	-0.4
ARR	Arges	147.59	332	↑iP	PKPdf	06 57 50.3	+0.9
MODS	Modra-Piesok	147.74	343	ePKIKP	PKPbc	06 57 51.0	-1.3
MODS				e		06 57 54.6	
MODS	Modra-Piesok	147.74	343	ePKP	PKPbc	06 57 51.0	-1.3
MODS				e		06 57 54.6	
SGRR	Singureni	147.82	329	↑iP	PKPbc	06 57 52.3	-0.3
KHC	Kasperske Hory	147.93	348	ePKP	PKPab	06 57 54.2	-1.2
KHC				AMS	AMS	08 02 30.0	
	comp=Z,300nm,22.6s						
KHC	Kasperske Hory	147.93	348	ePKPbc	PKPbc	06 57 53.7	+0.9
KHC	Kasperske Hory	147.93	348	ePKP2	PKPab	06 57 54.2	-1.2
KHC				MLR	MLR		
	comp=Z,300nm,22.6s						
SIRR	Siria	148.11	336	↓iP	PKPbc	06 57 53.3	-0.1
GEC2	GERESS Array S	148.18	347	ePKPbc	PKPbc	06 57 54.1	+0.5
GEC2	GERESS Array S	148.18	347	ePKP2	PKPbc	06 57 54.1	+0.5
GERES	GERESS Array B	148.18	347	PKPbc	PKPbc	06 57 53.6	0.0
	comp=Z,6.9nm,1.0s,baz=34,slow=3.4,SNR=18						
GEA0	GERESS Array S	148.19	347	ePKPdf	PKPbc	06 57 53.2	-0.3
WLF	Walferdange	148.37	357	↓PKP	PKPbc	06 57 54.8	+0.9
CONA	Conrad Observa	148.53	344	ePKiKP	PKPbc	06 57 55.1	+0.6
	comp=Z,12nm,1.2s,SNR=7.4						
BZS	Buzias	148.67	335	↑iP	PKPbc	06 57 53.7	-1.1
BZS	Buzias	148.67	335	PKIKP	PKPbc	06 57 53.7	-1.1
HERR	Herculane	148.94	334	↑iP	PKPbc	06 57 54.4	-1.1
MOA	Molin	149.00	346	ePKiKP	PKiKP	06 57 57.0	0.0
	comp=Z,8.5nm,1.2s						
ARSA	Arzberg	149.25	344	ePKPbc	PKPbc	06 57 55.8	-0.5
	comp=Z,5.8nm,1.2s						
BFO	Black Forest	149.53	354	ePKPbc	PKPbc	06 57 57.5	+0

DDA 17 06:52:13.1, 36°44N×29°01E, h33km, MI3.2
ISC 17 06:52:13.5±1.0, 36°38N±0°03×29°04E±0°02, h25km±8km, n66, σ0°99/93, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.26**	**9**	PG	**Pb**	**06 52 19.5**	**-0.4**
FETY				SG	**Sb**	**06 52 24.6**	**+0.3**
FETY	**Fethiye**	**0.26**	**9**	*i* Pg	**Pb**	**06 52 19.5**	**-0.4**
FETY				*e*Sg	**Sb**	**06 52 24.6**	**+0.3**
AKAS	**Kas**	**0.48**	**108**	PG	**Pn**	**06 52 24.1**	**-0.9**
AKAS				SG	**Sn**	**06 52 32.4**	**-0.3**
AKAS	**Kas**	**0.48**	**108**	*i* P	**Pn**	**06 52 24.1**	**-0.9**
AKAS				*i* S	**Sn**	**06 52 32.9**	**+0.2**
AKAS	**Kas**	**0.48**	**108**	P	**Pn**	**06 52 24.1**	**-0.9**
AKAS				*e*Sg	**Sn**	**06 52 32.4**	**-0.3**
KSL	**Kastellorizon**	**0.50**	**118**	P	**Pn**	**06 52 25.3**	**+0.3**
KSL				S	**Sn**	**06 52 33.1**	**+0.2**
KSL				AML	AML	06 52 35.3	
	comp=E,1016μm,0.4s						
KSL				AML	AML	06 52 36.0	
	comp=N,1032μm,0.3s						
DALY	**Dalyan (Mu¨la**	**0.53**	**325**	PG	**Pb**	**06 52 23.8**	**-0.5**
DALY				SG	**Sb**	**06 52 31.4**	**-0.2**
DALY	**Dalyan (Mu¨la**	**0.53**	**325**	*i* P	**Pb**	**06 52 23.9**	**-0.3**
DALY				*i* S	**Sb**	**06 52 31.2**	**-0.4**
DALY	**Dalyan (Mu¨la**	**0.53**	**325**	P	**Pb**	**06 52 23.9**	**-0.3**
DALY				S	**Sb**	**06 52 31.2**	**-0.4**
TURN	**Turunc**	**0.60**	**325**	PG	**Pn**	**06 52 27.2**	**+0.8**
TURN	**Turunc**	**0.60**	**325**	*i* P	**Pn**	**06 52 27.8**	**+1.4**
TURN				*i* S	**Sn**	**06 52 38.1**	**+2.8**
TURN	**Turunc**	**0.60**	**325**	*e*Pg	**Pn**	**06 52 27.2**	**+0.8**
MRSB	**Marmaris-Mugla**	**0.75**	**296**	PG	**Pn**	**06 52 27.5**	**-1.1**
MRSB	**Marmaris-Mugla**	**0.75**	**296**	*e*Pg	**Pn**	**06 52 27.5**	**-1.1**
ARG	**Arkhangelos**	**0.75**	**258**	PG	**Pn**	**06 52 27.8**	**-0.7**
ARG	**Arkhangelos**	**0.75**	**258**	P	**Pn**	**06 52 28.0**	**-0.6**
ARG				S	**Sb**	**06 52 39.2**	**+1.3**
ARG				AML	AML	06 52 39.6	
	comp=N,381μm,0.5s						
ARG				AML	AML	06 52 41.1	
	comp=E,548μm,0.3s						
ARG	**Arkhangelos**	**0.75**	**258**	P	**Pn**	**06 52 28.0**	**-0.6**
ARG				S	**Sb**	**06 52 39.0**	**+1.1**
ELL	**Elmali**	**0.79**	**62**	PG	**Pb**	**06 52 29.1**	**+0.4**
ELL	**Elmali**	**0.79**	**62**	*e*Pg	**Pb**	**06 52 29.1**	**+0.4**
GOLH	**Golhisar**	**0.95**	**26**	*i* P	**Pb**	**06 52 30.9**	**-0.5**
GOLH				*i* S	**Sb**	**06 52 44.2**	**+0.6**
GOLH	**Golhisar**	**0.95**	**26**	P	**Pb**	**06 52 30.9**	**-0.5**
GOLH				S	**Sb**	**06 52 44.2**	**+0.6**
TAVA	**DENIZLI_Tavas**	**1.08**	**355**	*i* P	**Pb**	**06 52 33.3**	**-0.4**
TAVA				*i* S	**Sb**	**06 52 47.8**	**+0.3**
TAVA	**DENIZLI_Tavas**	**1.08**	**355**	P	**Pb**	**06 52 33.3**	**-0.4**
TAVA				S	**Sb**	**06 52 47.8**	**+0.3**
KORT	**Korkueli**	**1.22**	**59**	PN	**Pb**	**06 52 35.5**	**-0.5**
KORT	**Korkueli**	**1.22**	**59**	*i* P	**Pb**	**06 52 37.4**	**+1.4**
KORT				*i* S	**Sb**	**06 52 55.2**	**+3.7**
KORT	**Korkueli**	**1.22**	**59**	*e*Pn	**Pb**	**06 52 35.5**	**-0.5**
KORT	**Korkueli**	**1.22**	**59**	P	**Pb**	**06 52 37.4**	**+1.4**
DAT	**Datca**	**1.22**	**287**	PN	**Pn**	**06 52 34.2**	**-0.9**
DAT	**Datca**	**1.22**	**287**	*i* P	**Pn**	**06 52 35.0**	**-0.1**
DAT				*i* S	**Sb**	**06 52 53.0**	**+1.6**
DAT	**Datca**	**1.22**	**287**	*e*Pn	**Pn**	**06 52 34.2**	**-0.9**
DAT	**Datca**	**1.22**	**287**	P	**Pn**	**06 52 35.0**	**-0.1**
DAT				S	**Sb**	**06 52 53.0**	**+1.6**
MLSB	**Milas**	**1.36**	**312**	PN	**Pn**	**06 52 36.2**	**-0.7**
MLSB	**Milas**	**1.36**	**312**	*e*Pn	**Pn**	**06 52 36.2**	**-0.7**
DENT	**Denizli**	**1.37**	**360**	PN	**Pb**	**06 52 36.6**	**-0.5**
DENT	**Denizli**	**1.37**	**360**	*e*Pn	**Pb**	**06 52 36.6**	**-0.5**
ANTB	**Antalya**	**1.40**	**68**	PN	**Pb**	**06 52 37.7**	**-1.2**
ANTB	**Antalya**	**1.40**	**68**	*e*Pn	**Pb**	**06 52 37.7**	**-1.2**
BDRM	**Kayabasi**	**1.45**	**299**	*i* P	**Pn**	**06 52 38.1**	**0.0**
BDRM				*i* S	**Sb**	**06 52 57.9**	**0.0**
BDRM	**Kayabasi**	**1.45**	**299**	P	**Pn**	**06 52 38.1**	**0.0**
BDRM				S	**Sb**	**06 52 57.9**	**0.0**
BODT	**Bodrum**	**1.54**	**297**	PN	**Pn**	**06 52 38.3**	**-1.1**
BODT	**Bodrum**	**1.54**	**297**	*e*Pn	**Pn**	**06 52 38.3**	**-1.1**
BRDR	**BURDUR-Merkez**	**1.55**	**32**	*i* P	**Pb**	**06 52 40.0**	**-1.5**
BRDR				*i* S	**Sb**	**06 53 02.5**	**+1.8**
BRDR	**BURDUR-Merkez**	**1.55**	**32**	P	**Pb**	**06 52 40.0**	**-1.5**
AYDB	**Zeytinkoy-Aydi**	**1.81**	**330**	PN	**Pn**	**06 52 42.7**	**-0.5**
AYDB	**Zeytinkoy-Aydi**	**1.81**	**330**	*e*Pn	**Pn**	**06 52 42.7**	**-0.5**
ISP	**Isparta**	**1.86**	**39**	PN	**Pn**	**06 52 44.0**	**+0.1**
ISP	**Isparta**	**1.86**	**39**	*e*Pn	**Pn**	**06 52 44.0**	**+0.1**
SUTC	**Sutluce-Ispart**	**1.92**	**55**	PN	**Pb**	**06 52 45.1**	**-2.7**
SUTC	**Sutluce-Ispart**	**1.92**	**55**	*e*Pn	**Pb**	**06 52 45.1**	**-2.7**
GCAM	**G?zelcaml?**	**1.95**	**313**	PN	**Pn**	**06 52 44.7**	**-0.3**
GCAM	**G?zelcaml?**	**1.95**	**313**	*i* P	**Pn**	**06 52 45.3**	**+0.3**
GCAM				*i* S	**Sn**	**06 53 09.2**	**+0.5**
GCAM	**G?zelcaml?**	**1.95**	**313**	*e*Pn	**Pn**	**06 52 44.7**	**-0.3**
GCAM	**G?zelcaml?**	**1.95**	**313**	P	**Pn**	**06 52 45.3**	**+0.3**
GCAM				S	**Sn**	**06 53 09.2**	**+0.5**
KULA	**Kula-Manisa**	**2.15**	**352**	PN	**Pn**	**06 52 47.3**	**-0.5**
KULA	**Kula-Manisa**	**2.15**	**352**	*e*Pn	**Pn**	**06 52 47.3**	**-0.5**
SMG	**Samos**	**2.20**	**308**	P	**Pn**	**06 52 48.9**	**+0.4**
SMG				S	**Sn**	**06 53 14.9**	**-0.1**
SMG				AML	AML	06 53 17.5	
	comp=N,243μm,0.5s						
SMG				AML	AML	06 53 18.4	
	comp=E,242μm,0.2s						
SMG	**Samos**	**2.20**	**308**	P	**Pn**	**06 52 48.8**	**+0.4**
SMG				S	**Sn**	**06 53 14.8**	**-0.1**
DGB	**¯zmir**	**2.39**	**315**	*i* P	**Pn**	**06 52 51.1**	**0.0**
DGB				*i* S	**Sn**	**06 53 17.1**	**-2.5**
URLA	**Izmir**	**2.77**	**316**	PN	**Pn**	**06 52 56.3**	**0.0**
URLA	**Izmir**	**2.77**	**316**	*e*Pn	**Pn**	**06 52 56.3**	**0.0**
NPS	**Neapolis**	**3.00**	**249**	P	**Pn**	**06 52 59.4**	**0.0**
NPS	**Neapolis**	**3.00**	**249**	P	**Pn**	**06 52 59.6**	**+0.2**
CHOS	**Chios island**	**3.10**	**311**	P	**Pn**	**06 53 01.4**	**+0.4**
CHOS	**Chios island**	**3.10**	**311**	P	**Pn**	**06 53 01.5**	**+0.6**
LAST	**Lasithi**	**3.14**	**248**	P	**Pn**	**06 53 02.0**	**+0.6**
LAST	**Lasithi**	**3.14**	**248**	P	**Pn**	**06 53 01.9**	**+0.5**

ISCJB 17 06:54:21.6±1.2, 35°50N±0°08×27°46E±0°07, h18km, Error ellipse: s-maj=11.8km s-min=7.1km az=160.7
ISK 17 06:54:21.5, 35°59N×27°47E, h12km, ML2.7/7
CSEM 17 06:54:21.7±0.4, 35°61N×27°50E, h1km, ML2.7, Error ellipse: s-maj=12.1km s-min=6.1km az=152.0, Suspected Mining explosion.
DDA 17 06:54:43.2, 36°92N×28°13E, h7km, Ml2.2, Suspected Mining explosion.
ISC 17 06:54:22.0±1.2, 35°59N±0°06×27°44E±0°05, h18km, n21, σ0°93/26, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.23**	**259**	PG	**Pg**	**06 54 27.2**	**-0.3**
KARP				SG	**Sg**	**06 54 31.3**	**+0.1**
KARP	**Karpathos**	**0.23**	**259**	*i* Pg	**Pg**	**06 54 27.2**	**-0.3**
KARP				*e*Sg	**Sg**	**06 54 31.3**	**+0.1**
DAT	**Datca**	**1.14**	**6**	PN	**Pg**	**06 54 43.9**	**-0.2**
DAT				SN	**Sg**	**06 55 00.2**	**+1.1**
DAT	**Datca**	**1.14**	**6**	*i* P	**Pb**	**06 54 43.4**	**+0.1**
DAT				*i* S	**Sg**	**06 54 59.8**	**+0.7**
DAT	**Datca**	**1.14**	**6**	P	**Pb**	**06 54 43.4**	**+0.1**
DAT	**Datca**	**1.14**	**6**	*e*Pn	**Pg**	**06 54 43.9**	**-0.2**
DAT				*e*Sn	**Sg**	**06 55 00.2**	**+1.1**
BODT	**Bodrum**	**1.47**	**356**	PN	**Pb**	**06 54 48.6**	**-0.3**
BODT	**Bodrum**	**1.47**	**356**	*e*Pn	**Pb**	**06 54 48.6**	**-0.3**
DALY	**Dalyan (Mu¨la**	**1.57**	**38**	PN	**Pb**	**06 54 49.9**	**-0.6**
DALY	**Dalyan (Mu¨la**	**1.57**	**38**	*i* P	**Pb**	**06 54 51.2**	**+0.7**
DALY	**Dalyan (Mu¨la**	**1.57**	**38**	*e*Pn	**Pb**	**06 54 49.9**	**-0.6**
DALY	**Dalyan (Mu¨la**	**1.57**	**38**	P	**Pb**	**06 54 51.2**	**+0.7**
TURN	**Turunc**	**1.59**	**36**	PN	**Pn**	**06 54 46.8**	**-2.4**
TURN	**Turunc**	**1.59**	**36**	*i* P	**Pn**	**06 54 47.6**	**-1.6**
FETY	**Fethiye**	**1.69**	**51**	PN	**Pn**	**06 54 51.4**	**+0.7**
FETY	**Fethiye**	**1.69**	**51**	*e*Pn	**Pn**	**06 54 51.4**	**+0.7**
AKAS	**Kas**	**1.87**	**69**	PN	**Pn**	**06 54 53.8**	**+0.5**
AKAS	**Kas**	**1.87**	**69**	*e*Pn	**Pn**	**06 54 53.8**	**+0.5**
AYDN	**Tasoluk**	**2.10**	**10**	*i* P	**Pb**	**06 54 58.3**	**-1.2**
AYDN	**Tasoluk**	**2.10**	**10**	P	**Pb**	**06 54 58.3**	**-1.2**
APE	**Apeiranthos**	**2.13**	**314**	PN	**Pn**	**06 54 58.1**	**+1.3**

MOS 17 06:55:17.1±1.6, 49°08N×156°34E, h27km, mb4.1/9, Error ellipse: s-maj=13.6km s-min=4.9km az=82.0
KRSC 17 06:55:20.7±1.3, 49°24N×156°98E, h16km±20km, ML4.5
SKHL 17 06:55:20.3±0.3, 49°02N×156°70E, h32km±2km, mb4.6/4
ISCJB 17 06:55:22.5±0.9, 49°19N±0°06×156°48E±0°10, h50km±7km, mb3.8/18, MS4.3/1, Error ellipse: s-maj=13.3km s-min=6.0km az=43.8
IDC 17 06:55:25.5±3.0, 49°32N×156°31E, h52km±25km, mb3.4/14, mb1 3.7/17, mb1mx3.5/76, mbtmp3.7/17, ML3.1/2, MS3.7/2, Ms1 3.7/2, ms1mx2.9/49, Error ellipse: s-maj=28.1km s-min=15.6km az=153.0
ISC 17 06:55:24.7±1.4, 49°24N±0°09×156°49E±0°08, h51km±11km, n84, σ1°23/92, mb3.7/18, 1C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.47**	**351**	*e*P	**Pn**	**06 55 47.5**	**-1.2**
SKR				AMB	AMB	06 55 48.5	
	583nm,0.9s						
SKR				*e*S	**Sn**	**06 56 08.0**	**+1.2**
SKR				A	A	06 56 15.4	
	2μm,0.7s						
SKR				A	A	06 56 15.4	
	2μm,0.7s						
SKR	**Severo-Kuril's**	**1.47**	**351**	*e*P	**Pn**	**06 55 47.1**	**-1.6**
SKR				*e*S	**Sn**	**06 56 08.6**	**+1.8**
SKR	**Severo-Kuril's**	**1.47**	**351**	*e*PN	**Pn**	**06 55 47.5**	**-1.2**
SKR				*e*S	**Sn**	**06 56 08.2**	**+1.4**
SKR				pmax	pmax		
	comp=Z,583nm,0.9s						
SKR				smax	smax		
	comp=E,2μm,0.7s						
SKR				smax	smax		
	comp=N,2μm,0.7s						
PAU	**Pauzhetka**	**2.24**	**5**	*e*P	**Pn**	**06 55 58.9**	**-0.4**
PAU				AMB	AMB	06 56 01.5	
	comp=N,200nm,0.3s						
PAU				*e*S	**Sn**	**06 56 27.0**	**+1.2**
PAU				A	A	06 56 29.0	
	comp=N,270nm,0.3s						
PAU				A	A	06 56 29.0	
	comp=N,730nm,0.3s						
PAU	**Pauzhetka**	**2.24**	**5**	*e*P	**Pn**	**06 55 58.6**	**-0.7**
PAU				*e*S	**Sn**	**06 56 26.7**	**+0.9**
PAU	**Pauzhetka**	**2.24**	**5**	PN	**Pn**	**06 55 58.6**	**-0.7**
PAU				S	**Sn**	**06 56 26.7**	**+0.9**
KDTR	**Khodutka, Kamc**	**2.77**	**21**	*e*P	**Pn**	**06 56 04.9**	**-1.6**
ASAK	**Asacha**	**3.28**	**15**	*e*P	**Pn**	**06 56 13.5**	**0.0**
ASAK	**Asacha**	**3.28**	**15**	PN	**Pn**	**06 56 13.5**	**0.0**
MTVR	**Mutnovka**	**3.42**	**18**	*e*P	**Pn**	**06 56 15.1**	**-0.5**
MTVR				*e*S	**Sn**	**06 56 54.9**	**-0.1**
MTVR	**Mutnovka**	**3.42**	**18**	PN	**Pn**	**06 56 15.1**	**-0.5**
RUS	**Russkaya**	**3.45**	**21**	*e*P	**Pn**	**06 56 14.6**	**-1.2**
RUS	**Russkaya**	**3.45**	**21**	*e*P	**Pn**	**06 56 14.6**	**-1.2**
RUS				*e*S	**Sn**	**06 56 54.2**	**-1.1**
RUS	**Russkaya**	**3.45**	**21**	PN	**Pn**	**06 56 14.6**	**-1.2**
APC	**Apacha**	**3.72**	**6**	*e*P	**Pn**	**06 56 20.3**	**+0.8**
APC	**Apacha**	**3.72**	**6**	PN	**Pn**	**06 56 20.3**	**+0.8**
KRMR	**Karymshinskiy**	**3.75**	**15**	*e*P	**Pn**	**06 56 20.2**	**+0.4**
KRMR	**Karymshinskiy**	**3.75**	**15**	PN	**Pn**	**06 56 20.2**	**+0.4**
PETK	**Petropavlovsk-**	**3.95**	**11**	P	**Pn**	**06 56 22.9**	**+0.2**
	comp=N,1.5nm,0.3s,baz=167,slow=14,SNR=18						
PETK				LR	LR	06 58 09.9	
	comp=N,361nm,21.4s,baz=199,slow=42						
PET	**Petropavlovsk**	**4.03**	**19**	*e*P	**Pn**	**06 56 24.0**	**+0.2**
PET				AMB	AMB	06 56 26.4	
	comp=N,22nm,0.3s						
PET				*e*S	**Sn**	**06 57 10.0**	**+0.4**
PET				A	A	06 57 17.5	
	comp=N,110nm,0.6s						
PET				A	A	06 57 17.5	
	comp=N,115nm,0.6s						
PET	**Petropavlovsk**	**4.03**	**19**	*e*P	**Pn**	**06 56 24.9**	**+1.1**
PET	**Petropavlovsk**	**4.03**	**19**	*e*PN	**Pn**	**06 56 24.8**	**+1.0**
PET				pmax	pmax		
	comp=Z,46nm,0.6s						
PET				MLR	MLR		
	comp=Z,500nm,14.0s						
PET				MLR	MLR		
	comp=Z,300nm,16.0s						
UGLR	**Uglovaya**	**4.24**	**19**	*e*P	**Pn**	**06 56 27.6**	**+0.8**
UGLR	**Uglovaya**	**4.24**	**19**	PN	**Pn**	**06 56 27.6**	**+0.8**
AVH	**Avacha**	**4.28**	**18**	*e*P	**Pn**	**06 56 28.0**	**+0.8**
AVH	**Avacha**	**4.28**	**18**	*e*P	**Pn**	**06 56 28.0**	**+0.8**
AVH	**Avacha**	**4.28**	**18**	PN	**Pn**	**06 56 28.0**	**+0.8**
KOK	**Koryaka**	**4.28**	**18**	*e*P	**Pn**	**06 56 28.6**	**+1.3**
KOK	**Koryaka**	**4.28**	**18**	*e*P	**Pn**	**06 56 28.6**	**+1.3**
KOK	**Koryaka**	**4.28**	**18**	PN	**Pn**	**06 56 28.6**	**+1.3**
KRER	**Koryakskii**	**4.31**	**18**	*e*P	**Pn**	**06 56 28.8**	**+1.0**
KRER	**Koryakskii**	**4.31**	**18**	PN	**Pn**	**06 56 28.8**	**+1.0**
SDLR	**Sedlovina**	**4.32**	**19**	*e*P	**Pn**	**06 56 27.5**	**-0.3**
SDLR	**Sedlovina**	**4.32**	**19**	PN	**Pn**	**06 56 27.5**	**-0.3**
KRX	**Arik**	**4.35**	**17**	*e*P	**Pn**	**06 56 29.4**	**+1.2**
KRX	**Arik**	**4.35**	**17**	PN	**Pn**	**06 56 29.4**	**+1.2**
GNL	**Ganaly**	**4.56**	**11**	*e*P	**Pn**	**06 56 32.3**	**+1.2**
GNL	**Ganaly**	**4.56**	**11**	PN	**Pn**	**06 56 32.3**	**+1.2**
KUR	**Kuril'sk**	**7.11**	**239**	*e*P	**Pn**	**06 57 03.8**	**-2.1**
SHO	**Shikotan**	**8.55**	**235**	PN	Pn	06 57 21.0	-4.7
TYV	**Tymovskoe**	**9.05**	**286**	*e*P	**Pn**	**06 57 33.2**	**+0.6**
JKA	**Kamikawa-asahi**	**10.83**	**247**	*e*P	**Pn**	**06 57 56.3**	**-0.6**
ASAJ	**Asahikawa**	**10.83**	**247**	P	**Pn**	**06 57 56.3**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=62,slow=11,SNR=3.9						
MA2	**Magadan**	**10.88**	**344**	P	**Pn**	**06 57 58.0**	**+0.5**
	comp=Z,0.8nm,0.3s,baz=171,slow=19,SNR=2.9						
MA2	**Magadan**	**10.88**	**344**	*e*P	**Pn**	**06 57 56.1**	**-1.4**
MA2	**Magadan**	**10.88**	**344**	*i* PN	**Pn**	**06 57 56.1**	**-1.4**
EKMR	**Ekimchan**	**15.24**	**294**	*e*P	**Pn**	**06 58 58.0**	**+1.6**
EKMR				AMB	AMB	06 59 11.5	
	comp=Z,4.0nm,0.4s						
KLR	**Kul'dur**	**16.15**	**279**	P	**P**	**06 59 09.7**	**-0.8**
	comp=Z,0.0nm,0.3s,baz=57,slow=15,SNR=4.5						
KLR	**Kul'dur**	**16.15**	**279**	*e*P	**Pn**	**06 59 08.1**	**+0.1**
KLR	**Kul'dur**	**16.15**	**279**	*i* P	**Pn**	**06 59 08.1**	**+0.1**
ZEA	**Zeya**	**18.69**	**295**	*e*P	**Pn**	**06 59 41.8**	**+2.5**
BILL	**Bilibino**	**19.49**	**11**	*e*P	**P**	**06 59 45.7**	**-1.3**
BILL	**Bilibino**	**19.49**	**11**	*i* P	**P**	**06 59 45.7**	**-1.3**
BILL				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,171nm,16.0s						
KSRS	**Korea Array**	**23.73**	**251**	P	**P**	**07 00 32.1**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=53,slow=8.3,SNR=4.7						
HIA	**Hailar**	**23.84**	**284**	*e*P	**P**	**07 00 32.7**	**-0.3**
HIA	**Hailar**	**23.84**	**284**	*i* P	**P**	**07 00 32.7**	**-0.3**
HIA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
TIK	**Tiksi**	**25.79**	**340**	*e*P	**P**	**07 00 48.2**	**-2.2**
TIXI	**Tiksi**	**25.80**	**340**	P	**P**	**07 00 48.9**	**-1.6**
	comp=Z,0.7nm,0.3s,baz=133,slow=12,SNR=6.0						
TIXI	**Tiksi**	**25.80**	**340**	*i* P	**P**	**07 00 48.2**	**-2.3**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ULN	**Ulaanbaatar**	**32.29**	**287**	*e*P	**P**	**07 01 46.7**	**-1.9**
ULN	**Ulaanbaatar**	**32.29**	**287**	*i* P	**P**	**07 01 46.7**	**-1.9**
ULN				pmax	pmax		
	comp=Z,1.0nm,1.1s						
ILAR	**Eielson Array**	**33.19**	**41**	P	**P**	**07 01 56.5**	**+0.5**
	comp=Z,0.2nm,0.7s,baz=257,slow=7.0,SNR=4.1						
WHN	**Wuhan**	**36.76**	**255**	P	**P**	**07 02 29.8**	**+2.7**
RES	**Resolute Bay**	**47.74**	**20**	P	**P**	**07 03 56.7**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=350,slow=11,SNR=3.2						
MKAR	**Makanchi Array**	**47.83**	**297**	P	**P**	**07 03 55.7**	**-1.3**
	comp=Z,0.6nm,0.9s,baz=69,slow=7.9,SNR=3.8						
MKAR	**Makanchi Array**	**47.83**	**297**	*e*P	**P**	**07 03 56.2**	**-0.8**
MKAR	**Makanchi Array**	**47.83**	**297**	*i* P	**P**	**07 03 56.2**	**-0.8**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KURK	**Kurchatov**	**47.89**	**303**	*e*P	**P**	**07 03 56.3**	**-1.1**
KURK	**Kurchatov**	**47.89**	**303**	*i* P	**P**	**07 03 56.3**	**-1.1**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KURBB	**Kurchatov Arra**	**47.99**	**303**	P	**P**	**07 03 56.5**	**-1.6**
	comp=Z,1.2nm,0.8s,baz=65,slow=7.7,SNR=5.6						
BVAR	**Borovoye Array**	**51.04**	**309**	P	**P**	**07 04 21.7**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=49,slow=9.4,SNR=5.6						
BRVK	**Borovoye**	**51.08**	**309**	*e*P	**P**	**07 04 19.1**	**-2.5**
BRVK	**Borovoye**	**51.08**	**309**	*i* P	**P**	**07 04 19.1**	**-2.5**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ARU	**Arti**	**54.71**	**318**	*e*P	**P**	**07 04 45.9**	**-2.4**
ARU	**Arti**	**54.71**	**318**	*c*P	**P**	**07 04 45.9**	**-2.4**
ARU				S	**S**	**07 12 25.4**	**+0.8**
ARU				pmax	pmax		
	comp=Z,5.0nm,1.2s						
CMAR	**Chiang Mai Arr**	**55.15**	**257**	P	**P**	**07 04 52.5**	**+0.6**
	comp=Z,0.9nm,0.3s,baz=26,slow=6.4,SNR=3.2						
NVAR	**Mina Array Bea**	**59.30**	**66**	P	**P**	**07 05 22.3**	**+1.0**
	comp=Z,0.6nm,0.8s,baz=262,slow=8.3,SNR=4.0						
FINES	**FINESS Array B**	**62.73**	**336**	P	**P**	**07 05 43.4**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=45,slow=8.1,SNR=4.2						
SCHQ	**Schefferville**	**70.12**	**25**	LR	LR	07 41 19.6	
	comp=Z,171nm,19.6s,baz=272,slow=39						
TXAR	**Lajitas Array**	**74.32**	**63**	P	**P**	**07 06 57.8**	**+1.0**
	comp=Z,0.4nm,0.6s,baz=298,slow=4.7,SNR=10						
EKA	**Eskdalemuir Ar**	**74.42**	**348**	P	**P**	**07 06 57.7**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=23,slow=5.4,SNR=3.9						
GERES	**GERESS Array B**	**77.17**	**336**	P	**P**	**07 07 13.3**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=30,slow=3.2,SNR=3.6						
BRTR	**Keskin Array B**	**78.08**	**319**	P	**P**	**07 07 18.1**	**+0.1**
	comp=Z,1.4nm,1.0s,baz=357,slow=4.2,SNR=5.3						
BRTR	**Keskin Array B**	**78.08**	**319**	*i* P	**P**	**07 07 18.8**	**+0.7**
BRTR				pmax	pmax		
	comp=Z,1.0nm,1.0s						

ISCJB 17 06:56:10.5±0.9, 49°32N±0°08×156°3E±0°2, h57km, mb3.8/11, Error ellipse: s-maj=16.2km s-min=9.2km az=31.4
MOS 17 06:56:13.6±1.4, 49°51N×156°06E, h31km, mb4.0/5, Error ellipse: s-maj=21.1km s-min=12.7km az=90.3
IDC 17 06:56:14.0±2.9, 49°47N×156°17E, h70km±24km, mb3.5/10, mb1 3.7/13, mb1mx3.4/75, mbtmp3.9/13, Error ellipse: s-maj=28.8km s-min=17.7km az=165.0
ISC 17 06:56:12.5±1.1, 49°4N±0°1×156°3E±0°1, h57km, n19, σ1°25/17, mb3.8/11, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.34**	**354**	*e*PN	**Pn**	**06 56 36.3**	**+1.3**
SKR				*e*S	**Sn**	**06 56 51.7**	**-0.1**
SKR				smax	smax		
	comp=N,3μm,0.7s						
SKR				smax	smax		
	comp=E,2μm,0.6s						
PETK	**Petropavlovsk-**	**3.86**	**12**	P	**Pn**	**06 57 09.7**	**+0.4**
	comp=E,2.8nm,0.3s,baz=184,slow=13,SNR=3.4						
YSS	**Yuzh-Sakhalins**	**9.39**	**260**	*e*PN	**Pn**	**06 58 25.7**	**+0.8**
YSS				pmax	pmax		
	comp=Z,20nm,0.3s						
YSS				MLR	MLR		
	comp=Z,300nm,15.0s						
MA2	**Magadan**	**10.74**	**345**	P	**Pn**	**06 58 44.0**	**+0.7**
	comp=Z,1.5nm,0.3s,baz=161,slow=14,SNR=4.3						
ASAJ	**Asahikawa**	**10.78**	**246**	P	**Pn**	**06 58 44.3**	**+0.3**
	comp=Z,2.7nm,0.3s,baz=60,slow=12,SNR=12						
KSRS	**Korea Array**	**23.67**	**251**	P	**P**	**07 01 19.7**	**+1.1**
	comp=Z,0.7nm,0.5s,baz=48,slow=11,SNR=3.2						
TIXI	**Tiksi**	**25.66**	**340**	P	**P**	**07 01 34.7**	**-1.8**
	comp=Z,1.8nm,0.6s,baz=141,slow=12,SNR=5.3						
H11S1	**WAKE ISLAND Hy**	**31.89**	**161**	T	T	07 36 11.8	
	baz=346,SNR=38						
H11S3	**WAKE ISLAND Hy**	**31.89**	**161**	T	T	07 36 29.1	
	baz=346,slow=74,SNR=75						
H11S2	**WAKE ISLAND Hy**	**31.90**	**161**	T	T	07 36 12.8	
	baz=346,slow=74,SNR=40						
ZALV	**Zalesovo Beam**	**42.88**	**305**	P	**P**	**07 04 02.9**	**-2.0**
	comp=Z,0.3nm,0.3s,baz=62,slow=6.7,SNR=2.3						
MKAR	**Makanchi Array**	**47.68**	**297**	P	**P**	**07 04 40.3**	**-2.8**
	comp=Z,0.7nm,0.7s,baz=73,slow=5.0,SNR=4.5						
KURK	**Kurchatov**	**47.74**	**303**	P	**P**	**07 04 42.9**	**-0.5**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KURBB	**Kurchatov

baz=57
LOR Lormes 2.04 241 *e*Pg Pb 06 57 05.4 +0.3
baz=62
LOR *e*Sn Sn 06 57 25.3 -3.4
baz=65
LOR *e*Sg Sb 06 57 31.5 +0.6
0.5nm,0.2s,baz=62
SMF Signal de Mont 2.42 228 *e*Pg Pb 06 57 12.7 +1.0
SMF *e*Sg Sg 06 57 43.8 -1.4
2.2nm,0.3s
SMF Signal de Mont 2.42 228 *e*Pg Pb 06 57 12.7 +1.0
SMF *e*Sg Sg 06 57 43.8 -1.4
1.1nm,0.3s

IDC 17 07:01:16.0±2.3, 1°.41N×127°.12E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.2/59, mbtmp3.5/3, Error ellipse: s-maj=194.9km s-min=24.8km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.37**	**162**	P	P	07 06 15.4	-0.5
	0.6nm,0.3s,baz=340,slow=11,SNR=8.4						
ASAR	**Alice Springs**	**25.79**	**166**	P	P	07 06 49.2	+0.4
	0.3nm,0.3s,baz=345,slow=12,SNR=9.3						
MKAR	**Makanchi Array**	**59.67**	**326**	P	P	07 11 22.2	-0.1
	0.2nm,0.4s,baz=111,slow=9.7,SNR=3.3						

IDC 17 07:09:43.1±1.6, 0°.59N×126°.34E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.4/55, mbtmp3.7/4, Error ellipse: s-maj=165.0km s-min=21.3km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.86**	**159**	P	P	07 14 37.1	-0.5
	2.8nm,0.9s,baz=338,slow=11,SNR=14						
ASAR	**Alice Springs**	**25.21**	**164**	P	P	07 15 11.2	+0.4
	1.1nm,0.7s,baz=344,slow=12,SNR=11						
MKAR	**Makanchi Array**	**59.92**	**326**	P	P	07 19 51.6	+0.5
	0.3nm,0.3s,baz=127,slow=6.4,SNR=7.4						
KURBB	**Kurchatov Arra**	**64.17**	**328**	P	P	07 20 18.9	-0.7
	0.6nm,0.7s,baz=127,slow=6.4,SNR=5.5						

*NIED **17** 07:13:00, 36°.20N×140°.00E, h59km, Mw4.6 Best double couple: M₀9.71000×10¹⁵ NP1:φ₀261.00000°, δ28.00000°, λ115.00000°. NP2:φ₀53.00000°, δ65.00000°, λ78.00000°.*
*BJI **17** 07:13:10.9, 36°.01N×140°.41E, h56km, mb4.7/48, mB4.8/26, Ms4.2/16, Ms7 4.0/15*
*ISCJB **17** 07:13:14.9±0.3, 36°.15N±0°.03×140°.04E±0°.03, h62km±2km, mb4.6/98, Error ellipse: s-maj=4.7km s-min=4.0km az=34.2*
*NEIC **17** 07:13:16.2±0.5, 36°.15N×139°.96E, h58km±4km, mb4.6/29, Error ellipse: s-maj=5.2km s-min=4.1km az=120.0*
NEIC Felt [III] at Tokyo. Felt widely in southeastern Honshu. Recorded [3 JMA] in Gumma, Ibaraki, Saitama and Tochigi.
*IDC **17** 07:13:16.5±1.5, 36°.17N×139°.91E, h61km±13km, mb4.2/31, mb1 4.3/35, mb1mx4.2/66, mbtmp4.5/35, MS3.7/12, Ms1 3.7/12, ms1mx3.3/63, Error ellipse: s-maj=12.4km s-min=10.5km az=96.0*
*JMA **17** 07:13:16.1±0.1, 36°.18N×140°.01E, h51km±1km, M4.5 Broadband fault plane solution: P waves. NP1: φ₀53.00000°, δ73.00000°, λ87.00000°. NP2:φ₀242.00000°, δ17.00000°, λ98.00000°. Principal axes: T Plg62.0000°, Azm319.0000°; N Plg2.0000°, Azm54.0000°; P Plg28.0000°, Azm145.0000°;*
JMA Felt III J1.
*MOS **17** 07:13:17.1±0.9, 36°.47N×139°.90E, h66km, mb4.8/40 Error ellipse: s-maj=6.9km s-min=4.7km az=103.5*
ISC 17 07:13:15.5±0.5, 36°.20N±0°.04×140°.07E±0°.04, h54km±4km, n251, σ1°.73/277, mb4.6/97, MS3.8/14, 26C-9D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.10**	**72**	⇑P	**Pn**	**07 13 24.4**	**+0.6**
JYT				S	**Sn**	**07 13 30.5**	**+0.7**
JAG	**Ashikaga**	**0.55**	**295**	⇓P	**Pn**	**07 13 27.8**	**+0.2**
JAG				S	**Sn**	**07 13 36.0**	**-0.4**
JKT	**Katashina**	**0.88**	**311**	⇓P	**Pn**	**07 13 31.9**	**+0.1**
JKT				S	**Sn**	**07 13 43.9**	**+0.2**
JRY	**Ryogami san**	**0.97**	**260**	⇓P	**Pn**	**07 13 32.9**	**0.0**
JRY				S	**Sn**	**07 13 45.2**	**-0.6**
JOD2	**Odawara 2**	**1.23**	**221**	P	**Pn**	**07 13 37.0**	**+0.6**
JOD2				*e*S	**Sn**	**07 13 51.2**	**-0.8**
JFY	**Yanaizu**	**1.24**	**346**	⇓P	**Pn**	**07 13 37.6**	**+1.0**
JFY				S	**Sn**	**07 13 54.1**	**+1.7**
JHK	**Hiroka**	**1.35**	**321**	⇓P	**Pn**	**07 13 38.7**	**+0.7**
MJAR	**Matsushiro Arr**	**1.54**	**283**	P	**Pn**	**07 13 40.8**	**+0.1**
	207nm,0.3s,baz=104,slow=7.0,SNR=1247						
MJAR				S	**Sn**	**07 13 54.2**	**-5.5**
	155nm,0.3s,baz=93,slow=14,SNR=20						
MJAR				LR	LR	07 14 28.6	
	comp=Z,2μm,19.6s,baz=125,slow=52						
MAJO	**Matsushiro**	**1.55**	**283**	*e*Pn	**Pn**	**07 13 41.5**	**+0.8**
MAJO	**Matsushiro**	**1.55**	**283**	*d i* P	**Pn**	**07 13 40.9**	**+0.2**
MAT	**Matsushiro**	**1.55**	**283**	P	**Pn**	**07 13 40.3**	**-0.4**
MAT				*e*S	**Sn**	**07 13 54.5**	**-5.2**
MJB9	**Matsu-Tunnel**	**1.55**	**284**	*e*Pn	**Pn**	**07 13 41.4**	**+0.6**
INU	**Inuyama**	**2.63**	**252**	*e*Pn	**Pn**	**07 13 57.2**	**+1.8**
JHJ	**Hachijo jima 2**	**3.08**	**185**	P	**Pn**	**07 14 01.4**	**-0.3**
	331nm,0.3s,baz=313,slow=21,SNR=66						
JHJ				S	**Sn**	**07 14 36.0**	**-1.3**
	173nm,0.3s,baz=90,slow=20,SNR=4.3						
JHJ				LR	LR	07 15 34.2	
	comp=Z,978nm,21.1s,baz=76,slow=45						
JHJ2	**Mitsune**	**3.08**	**184**	*e*Pn	**Pn**	**07 14 01.5**	**-0.2**
ERM	**Erimo**	**6.29**	**21**	*e*Pn	**Pn**	**07 14 46.8**	**+1.3**
ERM				*e*Sn	**Sn**	**07 15 55.8**	**-0.2**
ERM	**Erimo**	**6.29**	**21**	*e*P	**Pn**	**07 14 46.5**	**+1.0**
ASAJ	**Asahikawa**	**8.14**	**13**	P	**Pn**	**07 15 11.1**	**+0.1**
	4.7nm,0.3s,baz=246,slow=6.9,SNR=33						
ASAJ				S	**Sn**	**07 16 38.6**	**-2.9**
	0.4nm,0.3s,baz=45,slow=20,SNR=1.8						
ASAJ	**Asahikawa**	**8.14**	**13**	*e*Pn	**Pn**	**07 15 11.6**	**+0.7**
ASAJ				S	**Sn**	**07 16 38.6**	**-2.9**
JNU	**Nakatsue**	**8.17**	**251**	P	**Pn**	**07 15 12.4**	**+1.0**
	0.8nm,0.3s,baz=57,slow=9.6,SNR=8.9						
JNU	**Nakatsue**	**8.17**	**251**	*e*Pn	**Pn**	**07 15 10.8**	**-0.7**
YUK	**Yuzh-Kuril'sk**	**8.99**	**28**	*e*P	**Pn**	**07 15 25.5**	**+2.9**
YUK				*i* S	**Sn**	**07 16 56.9**	**-5.5**
YUK				pmax	pmax		
	comp=E,22nm,0.3s						
YUK				pmax	pmax		
	comp=Z,86nm,0.3s						
YUK				pmax	pmax		
	comp=N,26nm,0.2s						
YUK				MLR	MLR		
	comp=Z,208nm,17.0s						
SHO	**Shikotan**	**9.25**	**32**	*e*P	**Pn**	**07 15 27.8**	**+1.7**
SHO				*i* S	**Sn**	**07 17 01.8**	**-6.8**
SHO				pmax	pmax		
	comp=Z,17nm,0.5s						
SHO				pmax	pmax		
	comp=N,9.0nm,0.2s						
SHO				pmax	pmax		
	comp=E,15nm,0.2s						
CBIJ	**Chichi jima**	**9.25**	**168**	*e*Pn	**Pn**	**07 15 24.2**	**-2.0**
CBIJ				S	Sn	07 16 57.4	-11
JCJ	**Chichijima**	**9.25**	**168**	P	**Pn**	**07 15 22.5**	**-3.7**
	comp=E,15nm,0.3s,baz=101,slow=22,SNR=12						
JCJ				S	Sn	07 16 57.4	-11
	baz=107,slow=19,SNR=1.8						
MSHR	**Mys Shultsa**	**9.39**	**315**	*i* P	**Pn**	**07 15 29.0**	**+0.9**
KSRS	**Korea Array**	**9.82**	**281**	P	**Pn**	**07 15 37.8**	**+3.8**
	comp=E,1.1nm,0.3s,baz=93,slow=14,SNR=46						
KSRS				LR	LR	07 19 14.6	
	comp=E,477nm,19.9s,baz=90,slow=37						
KS01	**Wonju Array Si**	**9.85**	**281**	*e*Pn	**Pn**	**07 15 37.8**	**+3.5**
KS15	**Wonju Array Si**	**9.85**	**281**	*e*Pn	**Pn**	**07 15 38.0**	**+3.6**
KSAR	**Wonju Array Be**	**9.85**	**281**	P	**Pn**	**07 15 37.8**	**+3.4**
KSAR	**Wonju Array Be**	**9.85**	**281**	P	**Pn**	**07 15 37.8**	**+3.4**
USRK	**Ussuriysk Ar.**	**10.10**	**325**	P	**Pn**	**07 15 36.5**	**-1.3**
	comp=E,0.2nm,0.3s,baz=106,slow=15,SNR=3.1						
USRK				LR	LR	07 19 16.0	
	comp=E,400nm,20.3s,baz=132,slow=36						
TJN	**Taejon**	**10.26**	**275**	*i* P	**Pn**	**07 15 43.7**	**+3.7**
KUR	**Kuril'sk**	**10.79**	**31**	P	**Pn**	**07 15 50.8**	**+3.7**
KUR				*e*S	**Sn**	**07 17 41.4**	**-4.8**
KUR				pmax	pmax		
	comp=Z,24nm,0.6s						
KUR				pmax	pmax		
	comp=N,7.0nm,0.2s						
KUR				pmax	pmax		
	comp=E,7.0nm,0.5s						
YSS	**Yuzh-Sakhalins**	**10.93**	**10**	*e*Pn	**Pn**	**07 15 48.8**	**-0.3**
YSS	**Yuzh-Sakhalins**	**10.93**	**10**	*e*P	**Pn**	**07 15 49.4**	**+0.3**
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
YSS				MLR	MLR		
	comp=Z,100nm,14.0s						
MDJ	**Mudanjiang**	**11.59**	**320**	P	**Pn**	**07 16 00.3**	**+2.2**
MDJ				S	**Sn**	**07 18 09.3**	**+3.4**
MDJ				pmax	pmax		
	comp=Z,33nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,370nm,6.3s						
MDJ				LR	LR		
	comp=Z,200nm,11.5s						
MDJ				LR	LR		
	comp=Z,310nm,11.8s						
MDJ				LR	LR		
	comp=Z,610nm,14.3s						
MDJ	**Mudanjiang**	**11.59**	**320**	*e*Pn	**Pn**	**07 16 01.9**	**+3.8**
	comp=Z,41nm,1.2s						
CN2	**Changchun**	**13.53**	**309**	*e*P	**P**	**07 16 30.9**	**-1.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KLR	**Kul'dur**	**14.38**	**338**	P	**Pn**	**07 16 35.6**	**-0.2**
	comp=Z,0.0nm,0.3s,baz=131,slow=8.4,SNR=6.5						
KLR	**Kul'dur**	**14.38**	**338**	*i* P	**Pn**	**07 16 37.0**	**+1.1**
TYV	**Tymovskoe**	**14.78**	**6**	*e*P	**Pn**	**07 16 39.9**	**-1.2**
TYV				*e*S	**Sn**	**07 19 16.4**	**-7.1**
TYV				pmax	pmax		
	comp=Z,23nm,0.7s						
TYV				smax	smax		
	comp=N,300nm,11.5s						
NJ2	**Nanjing**	**18.04**	**263**	*e*P	**P**	**07 17 22.1**	**0.0**
NJ2				pmax	pmax		
	comp=N,11nm,0.5s						
SKR	**Severo-Kuril's**	**18.52**	**34**	*e*P	**P**	**07 17 27.5**	**+0.2**
SKR				MLR	MLR		
	comp=Z,300nm,18.0s						
BJI	**Beijing**	**19.18**	**289**	⇓*e*P	**P**	**07 17 34.3**	**-0.2**
BJI				pmax	pmax		
	comp=Z,15nm,1.1s						
BJT	**Baijiatuau**	**19.18**	**289**	*e*P	**P**	**07 17 34.2**	**-0.3**
	comp=Z,16nm,0.8s						
BJT	**Baijiatuau**	**19.18**	**289**	*e*P	**P**	**07 17 34.3**	**-0.3**
BJT				pmax	pmax		
	comp=Z,15nm,0.8s						
ZEA	**Zeya**	**19.69**	**337**	*e*P	**P**	**07 17 37.8**	**-2.2**
ZEA				pmax	pmax		
	comp=Z,20nm,0.8s						
PETK	**Petropavlovsk-**	**20.95**	**31**	P	Pn	07 17 55.5	-1.4
	comp=Z,2.5nm,0.6s,baz=212,slow=7.6,SNR=6.1						
PETK	**Petropavlovsk-**	**20.95**	**31**	*e*P	**P**	**07 17 55.0**	**+1.3**
PETK				*e*pP	**P**	**07 17 55.1**	**+1.4**
HHC	**Hu-ho-hao-te**	**22.73**	**290**	*e*P	**P**	**07 18 12.4**	**-0.6**
HHC				PP	**PnPn**	**07 18 42.8**	**+4.0**
HHC				S	**S**	**07 22 11.3**	**-6.5**
HHC				SS	**SnSn**	**07 22 56.9**	**+5.0**
HHC				pmax	pmax		
	comp=Z,24nm,1.1s						
HHC				pmax	pmax		
	comp=Z,52nm,5.2s						
HHC				LR	LR		
	comp=Z,1μm,13.5s						
HHC				LR	LR		
	comp=Z,1μm,12.9s						
HHC				LR	LR		
	comp=Z,1μm,12.9s						
GUMO	**Guam**	**22.92**	**168**	LR	LR	07 26 26.4	
	comp=Z,234nm,21.4s,baz=24,slow=34						
MA2	**Magadan**	**24.41**	**13**	P	**P**	**07 18 29.2**	**+0.7**
	comp=Z,21nm,0.6s,baz=204,slow=10,SNR=11						
MA2	**Magadan**	**24.41**	**13**	*e*P	**P**	**07 18 30.3**	**+1.8**
	comp=Z,22nm,0.6s						
MA2	**Magadan**	**24.41**	**13**	*e*P	**P**	**07 18 30.3**	**+1.8**
MA2				pmax	pmax		
	comp=Z,23nm,0.6s						
ENH	**Enshi**	**26.19**	**266**	*e*P	**P**	**07 18 43.7**	**-1.4**
	comp=Z,12nm,0.6s						
YAK	**Yakutsk**	**26.67**	**349**	*e*P	**P**	**07 18 48.5**	**-0.4**
	comp=Z,24nm,0.7s						
YAK	**Yakutsk**	**26.67**	**349**	*e*P	**P**	**07 18 47.3**	**-1.6**
YAK				*e**PP	**pP**	**07 18 59.7**	**-2.9**
YAK				*e*		07 19 38.2	
YAK				*e*		07 22 14.5	
YAK				*e*S	**S**	**07 23 16.8**	**-3.3**
YAK				*e**SS	**sS**	**07 23 41.4**	**-1.9**
YAK				pmax	pmax		
	comp=Z,11nm,1.1s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,39nm,2.0s						
YAK				pmax	pmax		
	comp=N,17nm,1.8s						
YAK				pmax	pmax		
	comp=E,13nm,1.5s						
YAK				smax	smax		
	comp=N,51nm,2.3s						
YAK				smax	smax		
	comp=E,36nm,2.3s						
ULN	**Ulaanbaatar**	**26.95**	**306**	*e*P	**P**	**07 18 51.3**	**-0.7**
	comp=E,6.0nm,1.0s						
ULN	**Ulaanbaatar**	**26.95**	**306**	*ce*P	**P**	**07 18 51.9**	**0.0**
ULN				pmax	pmax		
	comp=Z,9.0nm,1.2s						
SONM	**Songino Array**	**27.38**	**306**	P	**P**	**07 18 55.0**	**-0.7**
	comp=Z,5.0nm,0.6s,baz=119,slow=9.9,SNR=14						
SONM				LR	LR	07 30 49.9	
	comp=Z,141nm,18.1s,baz=104,slow=39						
SEY	**Seymchan**	**27.83**	**12**	P	**P**	**07 19 00.3**	**+1.0**
	comp=Z,4.7nm,0.6s,baz=201,slow=12,SNR=7.7						
H11N2	**WAKE ISLAND Hy**	**28.68**	**118**	T	T	07 49 19.6	
	baz=313,slow=75,SNR=41						
H11N1	**WAKE ISLAND Hy**	**28.69**	**118**	T	T	07 49 18.7	
	baz=313,slow=75,SNR=48						
H11N3	**WAKE ISLAND Hy**	**28.70**	**118**	T	T	07 49 21.6	
	baz=313,slow=75,SNR=53						
LZH	**Lanzhou**	**29.15**	**281**	*e*P	**P**	**07 19 11.3**	**-0.4**
LZH				pP	pP	07 19 24.5	-0.9
LZH				sP	sP	07 19 31.1	-0.7
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
LZH				pmax	pmax		
	comp=Z,78nm,5.4s						
LZH				LR	LR		
	comp=Z,310nm,12.9s						
LZH				LR	LR		
	comp=Z,320nm,13.5s						
LZH				LR	LR		
	comp=Z,380nm,16.6s						
H11S1	**WAKE ISLAND Hy**	**29.34**	**120**	T	T	07 50 08.4	
	baz=314,slow=75,SNR=182						
H11S3	**WAKE ISLAND Hy**	**29.34**	**120**	T	T	07 50 10.4	
	baz=314,slow=75,SNR=145						
H11S2	**WAKE ISLAND Hy**	**29.36**	**120**	T	T	07 50 08.7	
	baz=314,slow=75,SNR=129						
ZAK	**Zakamensk**	**29.96**	**310**	*e*P	**P**	**07 19 16.6**	**-2.0**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
TLY	**Talaya**	**30.08**	**312**	LR	LR	07 32 51.4	
	comp=Z,171nm,18.4s,baz=122,slow=39						
CD2	**Chengdu**	**30.60**	**271**	P	**P**	**07 19 22.9**	**-1.5**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GTA	**Gaotai**	**31.79**	**288**	*e*P	**P**	**07 19 37.6**	**+2.7**
GTA				pP	pP	07 19 45.6	-3.0
GTA				sP	sP	07 19 49.9	-5.1
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KMI	**Kunming**	**33.77**	**261**	P	**P**	**07 19 50.6**	**-1.8**
KMI				pmax	pmax		
	comp=Z,16nm,1.1s						
BILL	**Biiibino**	**35.13**	**17**	*e*P	**P**	**07 20 04.3**	**+0.9**
	comp=Z,5.7nm,1.0s						
BILL	**Bilibino**	**35.13**	**17**	*i* P	**P**	**07 20 03.5**	**+0.1**
BILL				*i*		07 20 18.7	
BILL				*i*		07 21 23.6	
BILL				*i*		07 22 35.2	
BILL				pmax	pmax		
	comp=Z,5.0nm,1.2s						
TIXI	**Tiksi**	**36.00**	**354**	*e*P	**P**	**07 20 10.3**	**-0.5**
	comp=Z,4.1nm,0.9s						
TIXI	**Tiksi**	**36.00**	**354**	*ce*P	**P**	**07 20 10.5**	**-0.3**
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.7s						
WMQ	**Urumqi**	**40.26**	**297**	P	**P**	**07 20 48.9**	**+1.8**
WMQ				pP	pP	07 21 01.5	+0.3
WMQ				sP	sP	07 21 07.3	-0.2
WMQ				pmax	pmax		
	comp=Z,31nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,160nm,4.1s						
WMQ				LR	LR		
	comp=Z,290nm,25.9s						
WMQ				LR	LR		
	comp=Z,250nm,20.7s						
ZALV	**Zalesovo Beam**	**41.69**	**313**	P	**P**	**07 20 57.7**	**-0.9**
	comp=Z,7.9nm,0.6s,baz=93,slow=6.2,SNR=31						
ZALV				PcP	**PcP**	**07 22 53.9**	**-0.5**
	comp=Z,6.6nm,0.6s,baz=105,slow=2.4,SNR=11						
ZALV				LR	LR	07 39 47.1	
	comp=Z,147nm,19.9s,baz=70,slow=38						
SHL	**Shillong**	**42.32**	**269**	P	**P**	**07 21 03.4**	**-0.9**
NVS	**Novosibirsk**	**42.65**	**314**	*e*P	**P**	**07 21 06.5**	**+0.1**
NVS				pmax	pmax		
	comp=N,2.0nm,0.8s						
NVS				pmax	pmax		
	comp=E,8.0nm,0.8s						
NVS				pmax	pmax		
	comp=Z,15nm,0.8s						
NRIK	**Noril'sk**	**43.58**	**336**	P	**P**	**07 21 13.3**	**-0.4**
	comp=Z,7.9nm,0.8s,baz=116,slow=8.9,SNR=7.1						
NRIK				PcP	**PcP**	**07 23 01.0**	**+0.6**
	comp=Z,3.6nm,0.6s,baz=9.6,slow=2.0,SNR=4.0						
MK01	**Makanchi Array**	**43.65**	**303**	*e*P	**P**	**07 21 14.4**	**-0.3**
MK31	**Makanchi Array**	**43.66**	**303**	*e*P	**P**	**07 21 14.3**	**-0.4**
MK31	**Makanchi Array**	**43.66**	**303**	*i* P	**P**	**07 21 14.7**	**0.0**
MK31				pmax	pmax		
	comp=Z,14nm,0.9s						
MKAR	**Makanchi Array**	**43.66**	**303**	P	**P**	**07 21 14.7**	**0.0**
	comp=Z,8.3nm,0.8s,baz=91,slow=10.0,SNR=58						
MKAR				PcP	**PcP**	**07 23 00.9**	**-0.2**
	comp=Z,2.0nm,0.7s,baz=77,slow=5.4,SNR=4.7						
MKAR				LR	LR	07 40 54.1	
	comp=Z,78nm,18.1s,baz=62,slow=38						
MKAR	**Makanchi Array**	**43.66**	**303**	*e*P	**P**	**07 21 14.3**	**-0.4**
	comp=Z,72nm,0.9s						
MKAR				PcP	**PcP**	**07 23 00.9**	**-0.2**
MAKZ	**Makanchi**	**43.87**	**303**	*e*P	**P**	**07 21 16.5**	**+0.1**
	comp=Z,15nm,0.9s						
MAKZ	**Makanchi**	**43.87**	**303**	*e*P	**P**	**07 21 16.5**	**+0.1**
MAKZ				pmax	pmax		
	comp=Z,15nm,0.9s						
KURK	**Kurchatov**	**45.60**	**309**	*e*P	**P**	**07 21 29.7**	**-0.4**
	comp=Z,38nm,0.7s						
KURK				PcP	**PcP**	**07 23 07.6**	**0.0**
KURK	**Kurchatov**	**45.60**	**309**	P	**P**	**07 21 30.0**	**-0.1**
KURK				pmax	pmax		
	comp=Z,34nm,0.7s						
KURBB	**Kurchatov Arra**	**45.67**	**308**	P	**P**	**07 21 30.1**	**-0.5**
	comp=Z,27nm,0.7s,baz=86,slow=8.0,SNR=82						
KURBB				PcP	**PcP**	**07 23 07.6**	**-0.3**
	comp=Z,2.6nm,0.7s,baz=87,slow=3.8,SNR=6.4						
PMG	**Port Moresby**	**45.85**	**170**	LR	LR	07 40 21.8	
	comp=Z,85nm,19.3s,baz=360,slow=35						
RAMN	**Ramite**	**45.99**	**274**	*e*P	**P**	**07 21 33.6**	**-0.2**
JIRN	**Jiri**	**46.02**	**275**	*e*P	**P**	**07 21 34.3**	**+0.1**
GUN	**Gumba**	**46.17**	**276**	*e*P	**P**	**07 21 35.3**	**0.0**
	comp=Z,27nm,0.8s						
PDGK	**Podgornoye**	**46.22**	**298**	P	**P**	**07 21 34.6**	**-0.6**
PDGK				pmax	pmax		
	comp=Z,34nm,0.8s						
PKIN	**Phulchoki**	**46.69**	**276**	*e*P	**P**	**07 21 38.8**	**-0.5**
KKN	**Kakani**	**46.70**	**276**	*e*P	**P**	**07 21 39.2**	**-0.1**
	comp=Z,20nm,0.6s						
GKN	**Gorkha**	**47.13**	**276**	*e*P	**P**	**07 21 42.4**	**-0.2**
	comp=Z,148nm,1.0s						
PRZ	**Przheval'sk**	**47.19**	**297**	*e*P	**P**	**07 21 44.4**	**+1.5**
PRZ	**Przheval'sk**	**47.19**	**297**	*e*P	**P**	**07 21 44.4**	**+1.5**
DANN	**Dangsing**	**47.69**	**277**	*e*P	**P**	**07 21 47.4**	**+0.3**
	comp=Z,190nm,0.9s						
TARG	**Taragay, Kyrgy**	**47.81**	**297**	*e*P	**P**	**07 21 48.8**	**+0.8**
	comp=Z,24nm,1.1s						
KOLN	**Koldanda**	**48.06**	**277**	*e*P	**P**	**07 21 49.8**	**0.0**
	comp=Z,55nm,1.1s						
PYUN	**Piuthan**	**48.41**	**277**	*e*P	**P**	**07 21 52.7**	**+0.1**
	comp=Z,212nm,1.1s						
KDAK	**Kodiak Island**	**48.44**	**41**	*ce*P	**P**	**07 21 53.3**	**+1.2**
CAST	**Castle Rocks**	**48.52**	**34**	*e*P	**P**	**07 21 55.4**	**+2.7**
	comp=Z,14nm,1.4s						
BPAW	**Bear Paw Mtn.**	**49.01**	**33**	*e*P	**P**	**07 21 58.8**	**+2.4**
	comp=Z,3.4nm,0.8s						
TKM2	**Tokmak 2**	**49.08**	**299**	P	**P**	**07 21 58.0**	**+0.5**
TKM2				pmax	pmax		
	comp=Z,46nm,1.9s						
HNR	**Honiara**	**49.09**	**154**	LR	LR	07 41 12.8	
	comp=Z,40nm,22.0s,baz=334,slow=34						
MLY	**Manley**	**49.13**	**32**	*e*P	**P**	**07 21 59.6**	**+2.2**
	comp=Z,4.2nm,0.8s						
KSH	**Kashi**	**49.77**	**294**	P	**P**	**07 22 06.5**	**+3.8**
KSH				pP	sP	07 22 21.8	-1.6
KSH				PP	**PP**	**07 24 02.1**	**+4.6**
KSH				S	**S**	**07 29 09.1**	**+1.0**
KSH				sS	sS	07 29 37.5	+5.1
KSH				SS	**SS**	**07 32 42.6**	**+1.8**
KSH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,150nm,4.7s						
KSH				LR	LR		
	comp=Z,510nm,11.6s						
KSH				LR	LR		
	comp=Z,300nm,9.4s						
KSH				LR	LR		
	comp=Z,410nm,5.8s						
RND	**Reindeer**	**49.97**	**34**	*e*P	**P**	**07 22 05.3**	**+1.5**
	comp=Z,29nm,1.6s						
RND	**Reindeer**	**49.97**	**34**	*e*P	**P**	**07 22 05.3**	**+1.5**
RND				pmax	pmax		
	comp=Z,29nm,1.6s						
OTUK	**Ortayu**	**50.05**	**306**	P	**P**	**07 22 04.9**	**+0.3**
OTUK				pmax	pmax		
	comp=Z,25nm,0.9s						
MDM	**Murphy Dome**	**50.19**	**32**	*e*P	**P**	**07 22 07.8**	**+2.4**
	comp=Z,19nm,1.2s						
WRH	**Wood River Hil**	**50.27**	**32**	*e*P	**P**	**07 22 07.6**	**+1.7**
	comp=Z,8.8nm,1.2s						
BVA0	**Borovoye Array**	**50.34**	**313**	*i* P	**P**	**07 22 05.6**	**-1.1**
BVA0				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BVAR	**Borovoye Array**	**50.34**	**313**	P	**P**	**07 22 06.8**	**+0.2**
	comp=Z,3.6nm,0.5s,baz=77,slow=7.3,SNR=19						
BVAR				PcP	**PcP**	**07 23 24.1**	**-0.5**
	comp=Z,2.4nm,0.6s,baz=67,slow=5.0,SNR=4.8						
BRVK	**Borovoye**	**50.40**	**313**	*e*P	**P**	**07 22 07.5**	**+0.4**
	comp=Z,6.5nm,0.9s						
BRVK	**Borovoye**	**50.40**	**313**	*e*P	**P**	**07 22 07.5**	**+0.4**
BRVK				pmax	p

comp=Z,12nm,1.0s
WB2 Warramunga Arr 56.09 186 *e*P **P 07 22 49.3 +0.1**
WRA Warramunga Arr 56.10 187 P **P 07 22 49.0 -0.3**
comp=Z,4.7nm,0.5s,baz=2.0,slow=7.5,SNR=84
WRA PcP **PcP 07 23 47.2 +0.5**
comp=Z,1.2nm,0.8s,baz=360,slow=4.7,SNR=5.4
ARU Arti 56.27 319 P **P 07 22 50.1 0.0**
comp=Z,9.9nm,0.5s,baz=76,slow=9.0,SNR=9.7
ARU Arti 56.27 319 *e*P **P 07 22 50.0 -0.2**
ARU Arti 56.27 319 *c i*P **P 07 22 49.7 -0.4**
ARU *PP **pP 07 23 04.7 -0.1**
ARU 07 23 44.9
ARU 07 24 50.9
ARU S **S 07 30 37.2 +1.3**
ARU SS **SS 07 34 13.8 -8.8**
AB31 Akbulak array 57.65 310 *e*P **P 07 22 59.8 -0.2**
AB31 pmax pmax
comp=Z,2.0nm,0.5s
AKTO Aktyubinsk 58.43 312 P **P 07 23 04.2 -1.3**
comp=Z,3.2nm,0.7s,baz=63,slow=5.1,SNR=10
AKTO PcP **PcP 07 23 54.2 -1.4**
comp=Z,1.3nm,0.5s,baz=90,slow=2.0,SNR=3.8
AKTO Aktyubinsk 58.43 312 P **P 07 23 05.2 -0.3**
AKTO pmax pmax
comp=Z,7.0nm,1.0s
AS01 Alice Springs 59.82 186 *e*P **P 07 23 14.7 -0.6**
AS31 Alice Springs 59.82 187 *e*P **P 07 23 16.9 +1.6**
ASAR Alice Springs 59.82 187 P **P 07 23 15.4 +0.1**
comp=Z,2.9nm,0.8s,baz=7.6,slow=6.6,SNR=19
MBWA Marble Bar 60.20 202 *e*P **P 07 23 17.5 -0.4**
SPITS Spitsbergen Ar 61.13 349 P **P 07 23 24.2 +0.6**
comp=Z,3.9nm,0.8s,baz=94,slow=15,SNR=4.6
DZM Mont Dzumac 63.09 152 LR LR 07 51 44.5
comp=Z,38nm,19.5s,baz=331,slow=37
RES Resolute Bay 63.67 14 *e*P **P 07 23 40.9 +0.4**
comp=Z,9.6nm,1.4s
RES Resolute Bay 63.67 14 *e*P **P 07 23 40.9 +0.4**
RES pmax pmax
comp=Z,10.0nm,1.4s
KLMR Klimovskoe 63.88 328 *e*P **P 07 23 39.7 -2.4**
KLMR pmax pmax
comp=Z,9.0nm,0.9s
KLMR Klimovskoe 63.88 328 *e*P **P 07 23 39.8 -2.4**
KLMR AMP 07 23 42.3
comp=Z,9.0nm,0.9s
ARCES ARCESS Array B 64.40 339 P **P 07 23 44.7 -0.7**
comp=Z,2.0nm,0.6s,baz=54,slow=8.3,SNR=12
YKA Yellowknife Ar 65.07 30 P **P 07 23 50.6 +0.7**
comp=Z,2.5nm,0.8s,baz=296,slow=6.6,SNR=5.1
DAG Danmarks Havn 66.51 355⇑*i*P **P 07 23 59.1 +0.2**
comp=Z,4.1nm,0.8s
DAG Danmarks Havn 66.51 355 P **P 07 23 58.4 -0.5**
STKA Stephens Creek 67.73 179 P **P 07 24 05.8 -1.3**
comp=Z,2.5nm,0.9s,baz=342,slow=8.0,SNR=3.7
VSR Storozhevoye 68.85 319 *e*P **P 07 24 13.7 -0.3**
VSR pmax pmax
comp=Z,10.0nm,1.0s
FINES FINESS Array B 69.05 332 P **P 07 24 15.1 0.0**
comp=Z,3.8nm,0.7s,baz=79,slow=9.9,SNR=18
VSU Vasula 70.62 329 *c e*P **P 07 24 25.5 +0.7**
VSU pmax pmax
comp=Z,26nm,0.8s
KBZ Khabaz 70.62 310 P **P 07 24 25.7 +0.6**
comp=Z,5.1nm,0.8s,baz=1.4,slow=2.7,SNR=9.1
KIV Kislovodsk 70.64 311 *e*P **P 07 24 24.9 -0.4**
comp=Z,8.5nm,0.6s
KIV Kislovodsk 70.64 311 *e*P **P 07 24 26.9 +1.6**
KIV pmax pmax
comp=Z,14nm,1.1s
SUMG Summit 71.52 360 *i* P **P 07 24 31.7 +1.2**
comp=Z,9.7nm,0.8s
YBH Yreka Blue Hor 71.71 51 P **P 07 24 33.3 +1.5**
comp=Z,1.8nm0.8s,baz=7.8,slow=9.2,SNR=5.1
BMO Blue Mountains 73.29 46 *e*P **P 07 24 42.0 +0.9**
comp=Z,12nm,1.5s
BMO Blue Mountains 73.29 46 *e*P **P 07 24 42.1 +0.9**
BMO pmax pmax
comp=Z,11nm,1.5s
ANN Anapa 73.33 314 *e*P P 07 24 35.7 -5.6
ANN pmax pmax
comp=Z,58nm,0.8s
AKASG Malin Array Be 74.29 322 P **P 07 24 46.2 -0.6**
comp=Z,3.0nm,0.6s,baz=46,slow=6.2,SNR=33
KIEV Kiev 74.31 322 *e*P **P 07 24 45.4 -1.5**
comp=Z,8.2nm,0.8s
KIEV Kiev 74.31 322 *e*P **P 07 24 45.4 -1.5**
KIEV pmax pmax
comp=Z,8.0nm,0.8s
HFS Hagfors 74.40 335 P **P 07 24 47.4 +0.1**
comp=Z,1.5nm,0.4s,baz=35,slow=5.3,SNR=11
NB2 NORSAR Subarra 74.53 337 P **P 07 24 47.8 -0.3**
comp=Z,4.5nm,0.8s,baz=40,slow=6.2
FCC Fort Churchill 75.23 26 *e*P **P 07 24 52.4 +0.4**
comp=Z,10nm,1.4s
FCC Fort Churchill 75.23 26 *e*P **P 07 24 52.4 +0.4**
FCC pmax pmax
comp=Z,10.0nm,1.4s
EGMT Eagleton 75.61 41 *e*P **P 07 24 55.0 +0.4**
comp=Z,9.6nm,0.2s
BMN Battle Mountai 75.87 50 *e*P **P 07 24 58.4 +2.0**
comp=Z,2.4nm,0.6s
BMN Battle Mountai 75.87 50 *e*P **P 07 24 58.4 +2.0**
BMN pmax pmax
comp=Z,2.0nm,0.6s
BOZ Bozeman (W) 76.09 43 *e*P **P 07 24 58.5 +1.0**
comp=Z,2.1nm,0.8s
BOZ Bozeman (W) 76.09 43 *e*P **P 07 24 58.5 +1.0**
BOZ pmax pmax
comp=Z,2.0nm,0.8s
SORM Soroca 76.35 320⇑*i*P **P 07 24 58.2 -0.4**
SORM Soroca 76.35 320⇑P **P 07 24 58.2 -0.4**
NVAR Mina Array Bea 76.35 52 P **P 07 25 01.0 +1.8**
comp=Z,4.6nm,0.8s,baz=286,slow=5.5,SNR=36
TESR Tescani 78.28 320⇓*i*P **P 07 25 08.4 -1.1**
BURAR Bucovina Array 78.29 321⇑*i*P **P 07 25 10.1 +0.3**
BURAR Bucovina Array 78.29 321 P **P 07 25 10.0 +0.3**
BRTR Keskin Array B 78.59 311 P **P 07 25 12.0 +0.4**
comp=Z,2.4nm,0.9s,baz=48,slow=1.8,SNR=8.8
BRTR Keskin Array B 78.59 311 *c e*P **P 07 25 11.8 +0.2**
BRTR pmax pmax
comp=Z,2.0nm,0.9s
VRI Vrincioaia 78.66 319⇑*i*P **P 07 25 13.3 +1.6**
VRI Vrincioaia 78.66 319⇑P **P 07 25 13.3 +1.6**
DUG Dugway, Tooele 78.72 48 *e*P **P 07 25 13.8 +1.5**
comp=Z,2.7nm,0.9s
DUG Dugway, Tooele 78.72 48 *e*P **P 07 25 13.8 +1.5**
DUG pmax pmax
comp=Z,3.0nm,0.9s
PDAR Pinedale Array 79.02 45 P **P 07 25 14.8 +0.9**
comp=Z,1.1nm,0.7s,baz=255,slow=1.1,SNR=15
TRPA Tarpa 79.28 323⇑*i*P **P 07 25 15.6 +0.7**
MLR Muntele Rosu 79.32 319⇑*i*P **P 07 25 16.0 +0.6**
MLR Muntele Rosu 79.32 319⇑P **P 07 25 16.0 +0.6**
NIE Niedzica 79.46 325 P **P 07 25 16.4 +0.4**
NIE pmax pmax
comp=Z,3.0nm,1.5s
RAYN Ar Rayn 79.97 292 *e*P **P 07 25 19.1 -0.2**
comp=Z,4.8nm,0.8s
ARR Arges 80.09 320⇓*i*P **P 07 25 17.5 -2.0**
MORC Moravsky Berou 80.46 326⇑*i*P **P 07 25 21.3 -0.1**
MORC Moravsky Berou 80.46 326⇑P **P 07 25 21.3 -0.1**
MORC Moravsky Berou 80.46 326 *e*P **P 07 25 21.2 -0.1**
DPC Dobruska-Polom 80.59 327 *e*P **P 07 25 22.8 +0.7**
DPC Dobruska-Polom 80.59 327 *e*P **P 07 25 22.8 +0.7**
PSZ Piszkesteto 80.70 324⇑*i*P **P 07 25 23.4 +0.6**
PSZ Piszkesteto 80.70 324⇑P **P 07 25 23.4 +0.6**
ULM Lac du Bonnet 80.79 33 P **P 07 25 23.6 +0.5**
comp=Z,3.4nm,0.9s,baz=334,slow=7.5,SNR=3.2
VYHS Vyhne 80.79 325 *e*P **P 07 25 23.1 -0.1**
VYHS pmax pmax
comp=Z,4.0nm,1.3s
VYHS Vyhne 80.79 325 *e*P **P 07 25 23.1 -0.1**
SIRR Siria 81.00 322⇑*i*P **P 07 25 24.4 +0.1**
JAVC Velka Javorina 81.07 326 *e*P **P 07 25 25.7 +1.0**
BRG Berggiesshubel 81.22 329 *e*PKP **P 07 25 25.5 +0.2**
comp=Z,9.2nm,1.1s
comp=N,197nm,21.9s
comp=E,118nm,22.0s
comp=Z,181nm,21.5s
BRG Berggiesshubel 81.22 329 *e*P **P 07 25 25.5 +0.2**
BRG pmax pmax
comp=Z,9.0nm,1.1s
BRG MLR MLR
comp=N,197nm,21.9s
BRG MLR MLR
comp=E,118nm,22.0s
BRG MLR MLR
comp=Z,181nm,21.5s
VRAC Vranov 81.23 326⇑*i*P **P 07 25 26.3 +0.8**
VRAC Vranov 81.23 326⇑P **P 07 25 26.3 +0.8**
VRAC Vranov 81.23 326 *e*P **P 07 25 25.8 +0.3**
CLL Collm 81.28 330⇑*i*P **P 07 25 25.5 -0.1**
comp=Z,9.0nm,1.1s
CLL *e*(pP) **pP 07 25 40.0 -1.1**
CLL Collm 81.28 330⇑*i*P **P 07 25 25.5 -0.1**
CLL pmax pmax
comp=Z,9.0nm,1.1s
BZS Buzias 81.47 321 P **P 07 25 25.8 -1.0**
BZS pmax pmax
comp=Z,4.0nm,1.3s
KRUC Moravsky 81.50 326 *e*P **P 07 25 26.9 0.0**
GOPC GO Pecny, Ondr 81.58 328 *e*P **P 07 25 27.8 +0.5**
GOPC GO Pecny, Ondr 81.58 328 *e*P **P 07 25 27.8 +0.5**
CONA Conrad Observa 82.57 326 *e*P **P 07 25 33.0 +0.4**
comp=Z,2.6nm,0.9s
KHC Kasperske Hory 82.68 328 *e*P **P 07 25 33.4 +0.3**
KHC Kasperske Hory 82.68 328 *e*P **P 07 25 33.4 +0.3**
GERES GERESS Array B 82.85 328 P **P 07 25 34.1 +0.1**
comp=Z,1.2nm,0.7s,baz=30,slow=6.2,SNR=13
WET Wettzell 82.97 328 P **P 07 25 34.5 -0.1**
WET pmax pmax
comp=Z,3.0nm,1.2s
ARSA Arzberg 83.23 326 *e*P **P 07 25 35.6 -0.4**
comp=Z,3.4nm,1.2s
MOA Molln 83.35 327 *e*P **P 07 25 37.0 +0.4**
comp=Z,5.8nm,1.2s
EKA Eskdalemuir Ar 83.55 340 P **P 07 25 37.8 +0.4**
comp=Z,1.3nm,0.5s,baz=36,slow=4.1,SNR=6.0
SOKA Soboth 83.88 325 *e*P **P 07 25 39.7 +0.3**
comp=Z,7.0nm,0.9s
OBKA Obir 84.23 326 *e*P **P 07 25 41.0 -0.1**
comp=Z,1.9nm,0.8s
MYKA Terra Mystica 84.55 326 *e*P **P 07 25 42.1 -0.7**
comp=Z,3.7nm,0.8s
TUC Tucson 84.94 53 P **P 07 25 46.9 +1.9**
ABTA Abfaltersbach 84.96 327 *e*P **P 07 25 43.8 -1.0**
comp=Z,5.1nm,1.3s
RETA Reutte 85.15 328 *e*P **P 07 25 45.9 +0.1**
comp=Z,5.0nm,0.9s
BFO Black Forest 85.50 330 *e*P **P 07 25 46.9 -0.5**
comp=Z,11nm,1.4s
BFO Black Forest 85.50 330 *i* P **P 07 25 47.6 +0.2**
ANMO Albuquerque 85.95 49 *c e*P **P 07 25 52.3 +2.1**
ANMO pmax pmax
comp=Z,3.0nm,1.0s
IDI Anoyia 86.76 312 LR LR 08 10 58.8
comp=Z,42nm,21.9s,baz=78,slow=40
TXAR Lajitas Array 91.48 52 P **P 07 26 17.8 +1.4**
comp=Z,1.3nm,0.7s,baz=299,slow=3.1,SNR=21
TORD Torodi Ar. Bea 117.14 313 PKP **PKPdf 07 31 54.7 -0.4**
comp=Z,0.7nm,0.6s,baz=36,slow=1.3,SNR=8.5
KOWA Kowa 119.23 319 PKP **PKPdf 07 31 59.4 +0.3**
comp=Z,2.9nm,0.5s,baz=47,slow=2.3,SNR=6.3
BOSA Boshof 125.36 258 PKP **PKPdf 07 32 11.5 +1.0**
comp=Z,2.3nm,0.9s,baz=352,slow=3.5,SNR=3.7
DBIC Dimbokro 126.14 315 PKP **PKPdf 07 32 10.9 -1.5**
comp=Z,1.1nm,0.5s,baz=53,slow=2.0,SNR=4.8
SAML Samuel 145.60 44 *e*PKPdf **PKPbc 07 32 48.4 -0.1**
LPAZ La Paz 148.05 59 PKPbc **PKPbc 07 32 56.3 +0.1**
comp=Z,3.5nm,0.9s,baz=300,slow=3.0,SNR=13

KRSC 17 07:22:34.6±2.2, 49°.29N×157°.22E, h7km±41km, ML3.8,
East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.57**	**333**	*e*P	Pn	07 23 02.0	-0.9
SKR				*e*S	Sn	07 23 23.0	-0.5
PAU	**Pauzhetka**	**2.20**	**353**	*e*S	Sb	07 23 41.3	-0.8
KDTR	**Khodutka, Kamc**	**2.58**	**12**	*e*P	Pb	07 23 19.6	-1.6
ASAK	**Asacha**	**3.13**	**8**	*e*P	Pb	07 23 27.9	-2.7
RUS	**Russkaya**	**3.25**	**14**	*e*P	Pn	07 23 29.3	+3.2
DALK	**Dalny**	**3.87**	**14**	*e*P	Pn	07 23 38.3	+3.8
UGLR	**Uglovaya**	**4.05**	**14**	*e*P	Pb	07 23 41.8	-4.6
SDLR	**Sedlovina**	**4.13**	**14**	*e*P	Pn	07 23 41.4	+3.2
KRER	**Koryakskii**	**4.13**	**13**	*e*P	Pb	07 23 43.5	-4.3
SPN	**Mys Shipunski**	**4.20**	**24**	*e*P	Pn	07 23 42.5	+3.4

MEX 17 07:25:51.6±0.4, 16°.33N×98°.33W, h26km±46km, MD3.8,
Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.25**	**349**	*e*P	Pn	07 26 10.9	-2.6
TLIG				*i* S	Sn	07 26 25.7	-3.9
ACX	**Acapulco**	**1.56**	**290**	*i* P	Pn	07 26 18.3	+0.6
ACX				*i* S	Sn	07 26 37.0	-0.2
VHO	**Vista Hermosa**	**1.70**	**64**	*e*P	Pn	07 26 16.9	-2.9
VHO				*e*S	Sn	07 26 37.2	-3.6
CAIG	**El Cayaco**	**1.99**	**291**	*e*P	Pn	07 26 23.7	+0.1
TPIG	**Tehuac#an**	**2.27**	**24**	*e*P	Pn	07 26 27.7	0.0
TPIG				*e*S	Sn	07 26 53.8	-1.2
YAIG	**Yautepec**	**2.62**	**344**	*e*P	Pn	07 26 30.1	-2.3
YAIG				*e*S	Sn	07 27 02.4	-1.0

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*IDC **17** 07:34:16.4±1.0, 23°.54N×121°.68E, h0km, mb3.5/5, mb1 3.7/6, mb1mx3.4/62, mbtmp3.6/6, ML3.4/1, Error ellipse: s-maj=37.3km s-min=20.3km az=72.0*
*ISCJB **17** 07:34:17.6±0.3, 23°.69N±0°.01×121°.60E±0°.02, h3km±2km, mb3.4/5, Error ellipse: s-maj=2.7km s-min=1.8km az=41.1*
*JMA **17** 07:34:17.4±0.3, 23°.69N×121°.60E, h2km±4km, M3.4*
*TAP **17** 07:34:18.2, 23°.72N×121°.51E, h7km, ML3.9, C*
ISC 17 07:34:18.0±0.8, 23°.68N±0°.02×121°.59E±0°.02, h11km±5km, n110, σ1°00/149, mb3.4/5, 5C-16D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	**Guangfu**	**0.15**	**267**	*i* P	**Pg**	**07 34 20.4**	**-1.1**
EGFH	baz=249			S	**Sg**	**07 34 22.2**	**-1.6**
ESL	**Shilin**	**0.20**	**313**	⇓*i*P	**Pg**	**07 34 20.9**	**-1.3**
ESL	baz=316			*i* S	**Sg**	**07 34 23.0**	**-2.2**
ENLB	**Shoufeng**	**0.23**	**2**	⇓P	**Pg**	**07 34 24.2**	**+1.4**
ENLB	baz=15			S	**Sg**	**07 34 28.6**	**+2.7**
HGSD	**Ruisui**	**0.24**	**220**	⇓*i*P	**Pb**	**07 34 23.7**	**-0.7**
HGSD	baz=213			*e*S	**Sb**	**07 34 28.6**	**+2.2**
HWA	**Hwalien**	**0.30**	**2**	*e*P	**Pb**	**07 34 24.8**	**-0.7**
EHY	**Hungye**	**0.30**	**235**	P	**Pg**	**07 34 23.4**	**-0.7**
EHY	baz=230			*e*S	**Sg**	**07 34 28.4**	**+0.2**
YULB	**Yu-li**	**0.39**	**224**	*e*P	**Pg**	**07 34 25.4**	**-0.4**
YULB	baz=224			*e*S	**Sb**	**07 34 32.5**	**-0.7**
TWD	**Chiawan**	**0.40**	**0**	⇓*i*P	**Pg**	**07 34 25.7**	**-0.2**
TWD	baz=359			S	**Sb**	**07 34 31.9**	**-1.4**
VWDT	**VWDT**	**0.42**	**280**	⇓P	**Pg**	**07 34 25.5**	**-0.9**
VWDT	baz=277			*e*S	**Sg**	**07 34 31.1**	**-0.8**
TWF1	**Yuli**	**0.42**	**220**	⇓P	**Pg**	**07 34 26.2**	**-0.1**
TWF1	baz=224			*e*S	**Sb**	**07 34 33.4**	**-0.6**
NACB	**Ninganchiao**	**0.49**	**0**	⇓P	**Pg**	**07 34 27.1**	**-0.6**
NACB	baz=356			*e*S	**Sb**	**07 34 34.9**	**-1.2**
CHGB	**Renai**	**0.54**	**315**	⇓P	**Pg**	**07 34 27.7**	**-0.9**
CHGB	baz=315			S	**Sg**	**07 34 34.1**	**-1.7**
FULB	**Fuli**	**0.55**	**210**	*e*P	**Pb**	**07 34 29.9**	**+0.1**
SSLB	**Suanglung**	**0.59**	**281**	⇓P	**Pg**	**07 34 28.5**	**-1.1**
SSLB	baz=279			S	**Sg**	**07 34 35.4**	**-2.1**
CHKT	**Chengkung**	**0.61**	**200**	*e*P	**Pb**	**07 34 30.5**	**-0.3**
SMLT	**Sun Moon Lake**	**0.67**	**288**	⇓*i*P	**Pg**	**07 34 30.0**	**-1.0**
SMLT	baz=286			S	**Sg**	**07 34 38.4**	**-1.3**
TYC	**Yuchr**	**0.71**	**289**	⇓*i*P	**Pg**	**07 34 30.6**	**-1.1**
TYC	baz=287			*e*S	**Sg**	**07 34 40.2**	**-0.9**
ELDTW	**Lidau**	**0.72**	**227**	⇑P	**Pg**	**07 34 31.3**	**-0.7**
ELDTW	baz=223			*e*S	**Sg**	**07 34 41.9**	**+0.5**
ENA	**Nanau**	**0.76**	**10**	*e*P	**Pg**	**07 34 32.3**	**-0.4**
NANB	**Nanao**	**0.76**	**11**	⇓P	**Pg**	**07 34 32.3**	**-0.5**
NNSH	**Datong**	**0.77**	**346**	*e*P	**Pg**	**07 34 31.7**	**-1.3**
NNS	**Nan Shan**	**0.79**	**345**	⇓*i*P	**Pg**	**07 34 32.6**	**-0.7**
NNS	baz=339			*e*S	**Sg**	**07 34 42.8**	**-0.8**
ENAH	**Nanao**	**0.79**	**14**	*e*P	**Pb**	**07 34 33.4**	**-0.5**
WJS	**Zhushan**	**0.81**	**280**	*e*P	**Pb**	**07 34 34.1**	**0.0**
WJS	baz=284			*e*S	**Sb**	**07 34 45.6**	**+0.6**
WGK	**Gukeng**	**0.94**	**271**	⇑*e*P	**Pb**	**07 34 36.8**	**+0.3**
WGK	baz=271			*e*S	**Sb**	**07 34 50.4**	**+1.4**
TWC	**Suao**	**0.96**	**14**	*e*P	**Pb**	**07 34 36.1**	**-0.6**
TWC	baz=7.0			*e*S	**Sn**	**07 34 51.0**	**-0.2**
ENTT	**Nioudou**	**0.96**	**359**	*e*P	**Pb**	**07 34 36.1**	**-0.7**
ENTT	baz=351			*e*S	**Sb**	**07 34 48.8**	**-0.7**
TCU	**Taichung**	**0.96**	**299**	*e*P	**Pb**	**07 34 37.0**	**+0.2**
TPUB	**Ta-pu**	**0.96**	**247**	⇑P	**Pb**	**07 34 36.8**	**0.0**
TPUB	baz=254			S	**Sb**	**07 34 49.5**	**0.0**
WDLH	**Douliu**	**0.97**	**271**	*e*P	**Pb**	**07 34 37.2**	**+0.4**
TWH	**Lutao**	**0.97**	**186**	*e*P	**Pg**	**07 34 35.6**	**-1.1**
TWGBT	**Beinan**	**0.98**	**209**	*e*P	**Pg**	**07 34 35.2**	**-1.6**
TWG	**Pinlang**	**0.98**	**209**	*e*P	**Pg**	**07 34 35.5**	**-1.4**
EOS1	**EOS1**	**1.00**	**29**	*e*P	**Pg**	**07 34 36.5**	**-0.7**
WTP	**Ta-pu**	**1.00**	**245**	⇑*i*P	**Pb**	**07 34 37.3**	**-0.1**
WTP	baz=251			S	**Sb**	**07 34 50.7**	**+0.2**
YHNB	**Yeheng**	**1.01**	**349**	⇓P	**Pg**	**07 34 37.0**	**-0.5**
YHNB	baz=349			*e*S	**Sg**	**07 34 49.4**	**-1.2**
NSK	**Sanguang**	**1.02**	**348**	⇓*i*P	**Pg**	**07 34 37.1**	**-0.5**
NSK	baz=348			*e*S	**Sg**	**07 34 49.7**	**-1.2**
WCHH	**Zhanghua**	**1.03**	**293**	*e*P	**Pb**	**07 34 38.1**	**+0.2**
WCHH	baz=290			*e*S	**Sn**	**07 34 53.3**	**+0.4**
TWE	**Neicheng**	**1.04**	**4**	*e*P	**Pg**	**07 34 36.9**	**-1.1**
NSY	**Sanyi**	**1.06**	**314**	*e*P	**Pb**	**07 34 38.7**	**+0.3**
CHY	**Chiayi**	**1.09**	**261**	*e*P	**Pb**	**07 34 39.1**	**+0.2**
NSTT	**Nanjuang**	**1.09**	**330**	*e*P	**Pb**	**07 34 38.8**	**-0.2**
CHN1	**Nanshi**	**1.09**	**244**	⇓P	**Pb**	**07 34 39.3**	**+0.3**
CHN1	baz=244			*e*S	**Sn**	**07 34 55.3**	**+0.8**
TWK	**Hsinying**	**1.09**	**248**	⇑*i*P	**Pb**	**07 34 39.0**	**0.0**
TWK	baz=248			S	**Sb**	**07 34 54.5**	**+1.1**
LIOB	**Emei**	**1.10**	**331**	*e*P	**Pb**	**07 34 38.7**	**-0.4**
LIOB	baz=330			*e*S	**Sg**	**07 34 52.0**	**-1.5**
NWLT	**Wulai**	**1.10**	**356**	*e*P	**Pb**	**07 34 39.2**	**+0.1**
SGST	**Jiashian**	**1.10**	**238**	P	**Pb**	**07 34 39.2**	**+0.1**
SGST	baz=237			*e*S	**Sn**	**07 34 55.3**	**+0.6**
SLGT	**Liugui**	**1.10**	**232**	*e*P	**Pg**	**07 34 39.1**	**-0.2**
NMLH	**Miaoli**	**1.13**	**320**	*e*P	**Pn**	**07 34 40.1**	**+0.3**
RLNB	**Erlin**	**1.15**	**281**	*e*P	**Pb**	**07 34 40.1**	**+0.1**
RLNB	baz=280			*e*S	**Sb**	**07 34 55.8**	**+0.9**
EGS		**1.20**	**15**	*e*P	**Pn**	**07 34 41.8**	**+1.0**
WLGB	**Puzi**	**1.20**	**261**	*e*P	**Pg**	**07 34 40.8**	**-0.4**
ECL	**Taimali**	**1.23**	**209**	*e*P	**Pg**	**07 34 40.9**	**-0.7**
SBCB	**Hsinchu**	**1.24**	**334**	*e*P	**Pn**	**07 34 42.4**	**+1.0**
HSN	**Hsinchu**	**1.26**	**333**	*e*P	**Pn**	**07 34 43.0**	**+1.4**
HSN	baz=327			*e*S	**Sn**	**07 35 00.3**	**+1.7**
CHN3	**Shinhua**	**1.28**	**242**	*e*P	**Pn**	**07 34 42.8**	**+1.0**
CHN3	baz=243			*e*S	**Sn**	**07 35 02.3**	**+3.2**
SSD	**Sandimen**	**1.28**	**224**	*e*P	**Pg**	**07 34 41.7**	**-1.0**
TATO	**Taipei**	**1.29**	**356**	*e*P	**Pg**	**07 34 41.9**	**-1.1**
TWA	**Mucha**	**1.30**	**360**	*e*P	**Pn**	**07 34 42.5**	**+0.3**
TIPB	**Shuangxi**	**1.31**	**9**	*e*P	**Pg**	**07 34 41.1**	**-2.1**
TIPB	baz=4.0			*e*S	**Sn**	**07 35 01.0**	**+1.2**
CHN8	**Yiju**	**1.31**	**256**	*e*P	**Pg**	**07 34 41.9**	**-1.4**
CHN8	baz=258			*e*S	**Sb**	**07 35 00.7**	**+1.1**
NCU	**National Centr**	**1.34**	**344**	*e*P	**Pn**	**07 34 43.0**	**+0.3**
TAP1	**Taipei**	**1.36**	**357**	*e*P	**Pb**	**07 34 45.4**	**+1.9**
TWB1	**Santiao Chiao**	**1.37**	**15**	*e*P	**Pb**	**07 34 44.9**	**+1.1**
MASBT	**Mashibuluo**	**1.38**	**220**	*e*P	**Pn**	**07 34 43.7**	**+0.4**
SGLT	**Jiouru**	**1.39**	**227**	*e*P	**Pb**	**07 34 46.1**	**+2.1**
NWF	**Wu-fen Shan**	**1.40**	**7**	*e*P	**Pb**	**07 34 45.2**	**+0.9**
WFSB	**Wu-fen Shan**	**1.40**	**7**	*e*P	**Pb**	**07 34 45.1**	**+0.9**
TWS1	**Kuangyinshan**	**1.43**	**354**	*e*P	**Pg**	**07 34 45.1**	**-0.4**
JYNG	**Yonagunijimaku**	**1.46**	**58**	P	**Pb**	**07 34 44.8**	**-0.4**
JYNG				*e*S	**Sn**	**07 35 04.2**	**+0.7**
YM04	**YM04**	**1.47**	**358**	*e*P	**Pg**	**07 34 45.6**	**-0.7**
YM10	**YM10**	**1.47**	**359**	*e*P	**Pg**	**07 34 46.5**	**+0.2**
YM11	**YM11**	**1.48**	**359**	*e*P	**Pg**	**07 34 46.3**	**-0.2**
NTST	**Danshui**	**1.49**	**355**	*e*P	**Pg**	**07 34 46.9**	**+0.3**
YM07	**YM07**	**1.49**	**1**	*e*P	**Pn**	**07 34 45.1**	**+0.2**
YM03	**YM03**	**1.50**	**358**	*e*P	**Pn**	**07 34 45.3**	**+0.4**
YM12	**YM12**	**1.50**	**359**	*e*P	**Pg**	**07 34 46.7**	**-0.1**

	baz=1.0							
YM08	YM08	1.50	360	eP		Pg	07 34 46.2	-0.7
	baz=1.0							
YOJ	Yonaguni jima	1.51	59	eP		Pn	07 34 45.0	-0.1
	baz=60							
YOJ				eS		Sg	07 35 05.8	-0.9
	baz=60							
YOJ	Yonaguni jima	1.51	59	P		Pb	07 34 46.0	-0.2
YOJ				eS		Sb	07 35 05.2	-0.2
SCZT	Fangliau	1.58	215	P		Pg	07 34 48.0	-0.3
	baz=198							
LAY	Lan-yu	1.63	181	eP		Pn	07 34 44.5	-2.3
	baz=167							
WLCH	Liuqiu	1.73	220	eP		Pg	07 34 51.9	+0.7
	baz=223							
WDGT	Dungji	1.82	257	eP		Pn	07 34 49.2	-0.2
	baz=257							
PHUB	P'eng-hu	1.86	265	P		Pn	07 34 49.4	-0.5
	baz=268							
PHUB				eS		Sn	07 35 13.4	-0.1
	baz=268							
PNG	Penghu	1.87	267	eP		Pn	07 34 50.3	+0.2
	baz=269							
PNG				eS		Sn	07 35 14.3	+0.6
	baz=269							
TWK1	Hengchun	1.87	203	eP		Pb	07 34 52.5	+0.2
	baz=188							
TWKBT	Hengchun	1.87	203	eP		Pb	07 34 52.7	+0.4
	baz=188							
VCHM	Qimei	2.04	257	eP		Pn	07 34 52.1	-0.3
	baz=256							
HATJ	Hateruma jima	2.06	79	P		Pn	07 34 52.2	-0.4
HATJ				eS		Sn	07 35 18.1	-0.3
IRIF	Iriomote-Funau	2.06	71	P		Pn	07 34 53.4	+0.7
IRIF				eS		Sn	07 35 19.4	+1.0
JKRS	Kuro-shima	2.28	75	P		Pn	07 34 56.5	+0.8
JKRS				eS		Sn	07 35 25.7	+1.9
VWUC	VWUC	2.35	304	eP		Pn	07 34 56.1	-0.6
	baz=302							
JIJ	Ishigaki jima	2.43	73	P		Pn	07 34 57.6	-0.1
JIJ				eS		Sn	07 35 27.6	+0.1
JISG	Ishigakijimahi	2.64	69	P		Pn	07 35 00.4	-0.3
JISG				eS		Sn	07 35 34.0	+1.2
JTJ	Tarama	3.00	71	P		Pn	07 35 07.1	+1.6
JTJ				eS		Sn	07 35 42.8	+1.3
KNMB	Chin-men Tao	3.03	286	eP		Pn	07 35 05.9	-0.1
	baz=284							
JOW	Kunigami	6.82	61	Pn		Pn	07 35 57.5	-0.6
	1.6nm,0.3s,baz=216,slow=8.7,SNR=3.2							
KSRS	Korea Array	14.77	20	Pn		P	07 37 52.2	-0.7
	0.2nm,0.3s,baz=200,slow=11,SNR=6.9							
SONM	Songino Array	26.98	337	P		P	07 40 01.8	+1.9
	0.4nm,0.6s,baz=156,slow=7.9,SNR=2.5							
MKAR	Makanchi Array	38.96	316	P		P	07 41 45.0	+0.7
	0.5nm,0.7s,baz=126,slow=9.5,SNR=3.9							
H11N1	WAKE ISLAND Hy 42.14	86		T		T	08 27 09.5	
	baz=283,slow=75,SNR=23							
H11N2	WAKE ISLAND Hy 42.15	86		T		T	08 27 09.6	
	baz=283,slow=75,SNR=31							
H11N3	WAKE ISLAND Hy 42.16	86		T		T	08 27 10.8	
	baz=283,slow=75,SNR=47							
H11S3	WAKE ISLAND Hy 42.26	88		T		T	08 27 17.8	
	baz=284,slow=74,SNR=82							
H11S1	WAKE ISLAND Hy 42.27	88		T		T	08 27 18.4	
	baz=284,slow=74,SNR=54							
H11S2	WAKE ISLAND Hy 42.28	88		T		T	08 27 19.4	
	baz=284,slow=74,SNR=37							
WRA	Warramunga Arr	45.10	163	P		P	07 42 33.0	-1.6
	0.5nm,0.5s,baz=345,slow=8.8,SNR=12							
ASAR	Alice Springs	48.56	165	P		P	07 43 00.8	-0.8
	0.2nm,0.5s,baz=344,slow=6.9,SNR=3.7							
ILAR	Eielson Array	69.49	27	P		P	07 45 26.9	+0.5
	0.2nm,0.5s,baz=285,slow=5.8,SNR=4.7							

IDC 17 07:52:46.5±2.1, 2°.66N×127°.97E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/56, mbtmp3.4/3, Error ellipse: s-maj=143.7km s-min=24.5km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.32	165	P	P	07 57 56.5	+0.1
	0.3nm,0.3s,baz=344,slow=11,SNR=10						
ASAR	Alice Springs	26.80	168	P	P	07 58 28.3	-0.2
	0.4nm,0.4s,baz=354,slow=8.1,SNR=12						
MKAR	Makanchi Array	59.13	325	P	P	08 02 49.1	+0.1
	0.2nm,0.5s,baz=138,slow=8.9,SNR=2.8						

MEX 17 08:20:53.3±0.6, 16°.32N×98°.03W, h16km±18km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	Tlapa	1.34	338	eP		Pn	08 21 13.9	-3.6
TLIG				i S		Sn	08 21 29.6	-5.5
VHO	Vista Hermosa	1.45	59	i P		Pn	08 21 15.2	-3.9
VHO				eS		Sn	08 21 32.9	-5.0
ACX	Acapulco	1.84	288	eP		Pn	08 21 20.9	-3.3
ACX				eS		Sn	08 21 43.0	-4.2
TPIG	Tehuac#an	2.19	17	eP		Pn	08 21 27.5	-1.7
CAIG	El Cayaco	2.27	289	eP		Pn	08 21 25.7	-4.4
YAIG	Yautepec	2.72	339	eP		Pn	08 21 35.8	-0.7
YAIG				eS		Sn	08 22 08.8	-0.3

*JMA **17** 08:28:07.2±0.3, 24°.36N×121°.45E, h0km±3km, M3.3*
*TAP **17** 08:28:07.3, 24°.37N×121°.50E, h6km, ML3.6, C*
ISC 17 08:28:07.7±0.9, 24°.37N±0°.01×121°.49E±0°.01, h5km±7km, n91, σ0s83/148, 23C-6D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNSB	Datong	0.11	299	⇑iP		Pg	08 28 10.3	+0.2
	baz=299							
NNSB				i S		Sg	08 28 11.8	+0.1
	baz=299							
NNSH	Datong	0.11	299	⇑iP		Pg	08 28 10.3	+0.2
	baz=299							
NNSH				i S		Sg	08 28 11.8	+0.1
	baz=299							
NNS	Nan Shan	0.12	302	⇑iP		Pg	08 28 10.5	+0.2
	baz=304							
NNS				i S		Sg	08 28 12.4	+0.3
	baz=304							
NACB	Ninganchiao	0.22	154	⇓P		Pg	08 28 12.5	+0.4
	baz=155							
NACB				S		Sg	08 28 15.2	+0.2
	baz=155							
ENA	Nanau	0.24	77	⇑iP		Pg	08 28 12.4	+0.1
	baz=76							
ENA				S		Sg	08 28 16.6	+1.1
	baz=76							
NANB	Nanao	0.24	77	⇑P		Pg	08 28 12.4	-0.1
	baz=75							
NANB				eS		Sg	08 28 16.3	+0.6
	baz=75							
ENTT	Nioudou	0.27	15	⇑iP		Pg	08 28 13.5	+0.4
	baz=5.0							
ENTT				S		Sg	08 28 17.1	+0.4
	baz=5.0							
ENAH	Nanao	0.30	76	⇑iP		Pg	08 28 13.5	-0.1
	baz=73							
ENAH				S		Sg	08 28 17.3	-0.3
	baz=73							
TWD	Chiawan	0.31	162	P		Pg	08 28 14.1	+0.4
	baz=161							
TWD				S		Sg	08 28 18.2	+0.4
	baz=161							
YHNB	Yeheng	0.31	341	⇓P		Pb	08 28 14.5	-1.4
	baz=340							
YHNB				S		Sg	08 28 18.2	+0.2
	baz=340							
NSK	Sanguang	0.32	338	⇓iP		Pg	08 28 14.6	+0.6
	baz=326							
NSK				S		Sg	08 28 18.6	+0.2
	baz=326							
TWE	Neicheng	0.38	25	⇑iP		Pg	08 28 15.6	+0.5
	baz=36							
TWE				S		Sg	08 28 20.7	+0.6
	baz=36							
NWLT	Wulai	0.40	2	P		Pg	08 28 16.0	+0.5
	baz=353							
NWLT				S		Sg	08 28 20.7	-0.1
	baz=353							
TWC	Suao	0.40	54	⇑iP		Pg	08 28 15.4	-0.1
	baz=43							
TWC				S		Sg	08 28 21.2	+0.4
	baz=43							
HWA	Hwalien	0.41	165	eP		Pg	08 28 15.8	+0.2
	baz=165							
HWA				eS		Sb	08 28 22.3	-1.7
	baz=165							
CHGB	Renai	0.42	223	⇑P		Pg	08 28 16.0	0.0
	baz=224							
CHGB				S		Sg	08 28 21.5	-0.1
	baz=224							
ILA	Ilan	0.46	31	P		Pg	08 28 16.9	+0.4
	baz=30							
ILA				S		Sg	08 28 23.7	+1.2
	baz=30							
ENLB	Shoufeng	0.48	168	eP		Pb	08 28 18.5	-0.2
	baz=169							
ENLB				eS		Sb	08 28 25.0	-1.0
	baz=169							
LIOB	Emei	0.51	302	⇑iP		Pb	08 28 18.9	-0.3
	baz=303							
LIOB				S		Sb	08 28 25.9	-1.1
	baz=303							
NSTT	Nanjuang	0.51	300	⇑iP		Pb	08 28 18.7	-0.5
	baz=301							
NSTT				S		Sb	08 28 25.2	-1.8
	baz=301							
ESL	Shilin	0.56	185	P		Pg	08 28 18.5	0.0
	baz=175							
NTC	Toucheng	0.57	33	eP		Pg	08 28 18.5	-0.2
	baz=31							
NTC				eS		Sg	08 28 27.1	+1.0
	baz=31							
TATO	Taipei	0.60	360	P		Pb	08 28 20.1	-0.6
	baz=13							
TATO				S		Sg	08 28 27.7	+0.7
	baz=13							
EOS1	EOS1	0.61	73	P		Pg	08 28 19.9	+0.4
	baz=72							
EOS1				eS		Sb	08 28 29.0	-0.7
	baz=72							
EGS		0.62	41	⇑iP		Pg	08 28 19.9	+0.3
	baz=39							
SBCB	Hsinchu	0.62	312	eP		Pn	08 28 21.8	-1.4
	baz=313							
HSN	Hsinchu	0.64	312	eP		Pb	08 28 21.6	+0.2
	baz=317							
NCUH	Zhongli	0.65	335	eP		Pb	08 28 22.1	+0.4
	baz=334							
NCU	National Centr	0.65	335	eP		Pb	08 28 22.1	+0.4
	baz=334							
NMLH	Miaoli	0.66	284	eP		Pb	08 28 22.0	+0.3
	baz=286							
TAP1	Taipei	0.66	3	P		Pb	08 28 21.4	-0.4
	baz=1.0							
TAP1				eS		Sg	08 28 29.9	+0.8
	baz=1.0							
NSY	Sanyi	0.67	274	P		Pb	08 28 22.2	+0.3
	baz=275							
NSY				eS		Sb	08 28 31.4	0.0
	baz=275							
TIPB	Shuangxi	0.67	27	⇑eP		Pg	08 28 19.7	-0.9
	baz=12							
TIPB				eS		Sg	08 28 27.8	-1.5
	baz=12							
VWDT	VWDT	0.69	207	⇑P		Pg	08 28 20.6	-0.4
	baz=215							
VWDT				S		Sb	08 28 31.1	-1.1
	baz=215							
EGFH	Guangfu	0.70	185	⇓P		Pg	08 28 21.3	0.0
	baz=185							
EGFH				eS		Sg	08 28 30.5	+0.1
	baz=185							
TWS1	Kuangyinshan	0.73	355	⇑iP		Pb	08 28 23.4	+0.5
	baz=6.0							
TWS1				S		Sb	08 28 33.4	+0.2
	baz=6.0							
SMLT	Sun Moon Lake	0.73	228	⇑iP		Pb	08 28 22.0	-1.0
	baz=240							
NWF	Wu-fen Shan	0.74	21	⇑P		Pg	08 28 22.5	+0.4
	baz=19							
NWF				eS		Sg	08 28 32.3	+0.6
	baz=19							
WFSB	Wu-fen Shan	0.74	21	⇑P		Pb	08 28 22.5	-0.7
	baz=19							
WFSB				S		Sg	08 28 31.9	+0.3
	baz=19							
TYC	Yuchr	0.74	231	⇑iP		Pb	08 28 22.1	-1.0
	baz=223							
TYC				S		Sg	08 28 31.2	-0.5
	baz=223							
SSLB	Suanglung	0.76	220	⇑P		Pg	08 28 21.9	-0.5
	baz=221							
TCU	Taichung	0.78	253	eP		Pn	08 28 24.7	-0.6
	baz=254							
YM04	YM04	0.78	3	P		Pb	08 28 23.5	-0.3
	baz=2.0							
YM04				S		Sg	08 28 33.3	+0.5
	baz=2.0							
TWB1	Santiao Chiao	0.78	36	eP		Pg	08 28 22.0	-0.7
	baz=33							
YM10	YM10	0.78	5	eP		Pb	08 28 23.8	-0.1
	baz=3.0							
YM10				eS		Sb	08 28 34.0	-0.8
	baz=3.0							
NTST	Danshui	0.79	357	eP		Pb	08 28 24.4	+0.5
	baz=11							
YM11	YM11	0.79	6	eP		Pn	08 28 25.1	-0.6
	baz=3.0							
YM03	YM03	0.80	3	P		Pb	08 28 24.2	-0.1
	baz=17							
YM03				eS		Sg	08 28 34.0	+0.4
	baz=17							
YM07	YM07	0.81	8	⇑P		Pg	08 28 23.1	-0.1
	baz=7.0							
YM07				eS		Sg	08 28 33.2	-0.5
	baz=7.0							
YM12	YM12	0.81	5	eP		Pb	08 28 24.3	0.0
	baz=4.0							
YM12				eS		Sb	08 28 34.8	-0.7
	baz=4.0							
YM08	YM08	0.81	6	eP		Pb	08 28 23.9	-0.5
	baz=5.0							
YM08				eS		Sg	08 28 34.1	+0.1
	baz=5.0							
EHY	Hungye	0.88	190	⇓P		Pg	08 28 24.2	-0.4
	baz=181							
HGSD	Ruisui	0.88	184	⇑P		Pb	08 28 24.9	-0.6
	baz=192							
HGSD				eS		Sb	08 28 37.9	+0.3
	baz=192							
WJS	Zhushan	0.89	232	eP		Pn	08 28 25.7	-1.1
	baz=224							
WCHH	Zhanghua	0.90	251	eP		Pn	08 28 26.6	-0.4
	baz=252							
TWY	Chenhua	0.90	6	eP		Pn	08 28 26.5	-0.6
	baz=4.0							
YULB	Yu-li	0.99	190	P		Pb	08 28 26.5	-0.9
	baz=179							
YULB				eS		Sb	08 28 40.7	-0.2
	baz=179							
TWF1	Yuli	1.03	190	eP		Pg	08 28 27.1	-0.4
	baz=180							
TWF1				eS		Sb	08 28 41.8	-0.1
	baz=180							
WGK	Gukeng	1.09	231	eP		Pn	08 28 29.6	-0.1
	baz=232							
WGK				eS		Sn	08 28 47.1	+2.0
	baz=232							
WDLH	Douliu	1.10	232	eP		Pn	08 28 30.2	+0.3
	baz=233							
WDLH				eS		Sn	08 28 47.5	+2.0
	baz=233							
RLNB	Erlin	1.14	245	eP		Pn	08 28 30.2	-0.2
	baz=246							
RLNB				eS		Sn	08 28 47.7	+1.4
	baz=246							
FULB	Fuli	1.18	189	eP		Pn	08 28 30.8	-0.2
	baz=189							
CHN2	Minshiung	1.25	228	eP		Pn	08 28 32.4	+0.5
	baz=229							
CHN2				eS		Sn	08 28 50.4	+1.3
	baz=229							
ELDTW	Lidau	1.26	200	eP		Pg	08 28 31.1	-0.8
	baz=201							
ELDTW				eS		Sn	08 28 49.1	-0.3
	baz=201							
CHKT	Chengkung	1.27	185	eP		Pg	08 28 31.2	-0.9
	baz=186							
CHY	Chiayi	1.31	228	eP		Pn	08 28 33.0	+0.3
	baz=243							
TPUB	Ta-pu	1.33	217	eP		Pb	08 28 33.0	-0.1
	baz=217							
JYNG	Yonagunijimaku	1.33	86	P		Pn	08 28 32.5	-0.4
JYNG				S		Sg	08 28 50.5	0.0
WSF	Szhu	1.37	238	eP		Pb	08 28 34.3	+0.4
	baz=238							
WTP	Ta-pu	1.38	216	eP		Pb	08 28 34.2	+0.1
	baz=217							
WTP				eS		Sn	08 28 55.5	+3.2
	baz=217							
YOJ	Yonaguni jima	1.39	86	eP		Pn	08 28 33.5	-0.3
	baz=74							
YOJ				eS		Sb	08 28 52.6	+0.4
	baz=74							
YOJ	Yonaguni jima	1.39	86	P		Pn	08 28 33.3	-0.5
YOJ				S		Sb	08 28 52.6	+0.4
TWK	Hsinying	1.43	220	eP		Pg	08 28 35.4	+0.1
	baz=221							
TWK				eS		Sn	08 28 56.2	+2.5
	baz=221							
CHN1	Nanshi	1.48	217	eP		Pg	08 28 36.0	0.0
	baz=218							
CHN1				eS		Sn	08 28 57.8	+3.1
	baz=218							
SGST	Jiashian	1.53	213	⇓P		Pg	08 28 37.1	0.0
	baz=204							
SGST				eS		Sg	08 28 58.6	+1.7
	baz=204							
CHN8	Yiju	1.56	229	eP		Pg	08 28 37.1	-0.4
	baz=241							
CHN8				eS		Sg	08 28 59.8	+2.0
	baz=241							
SLGT	Liugui	1.58	210	eP		Pg	08 28 37.9	0.0
	baz=200							
TWG	Pinlang	1.59	194	eP		Pb	08 28 36.7	-1.0
	baz=177							
TWGBT	Beinan	1.59	194	eP		Pb	08 28 37.3	-0.3
	baz=177							
SSD	Sandimen	1.80	206	eP		Pg	08 28 41.5	-0.8
	baz=206							
ECL	Taimali	1.84	196	eP		Pb	08 28 40.8	-1.0
	baz=180							
MASBT	Mashibuluo	1.92	204	eP		Pg	08 28 43.7	-0.9
	baz=205							
PHUB	P'eng-hu	1.95	244	eP		Pb	08 28 42.5	-1.2
	baz=244							
WDGT	Dungji	2.01	237	eP		Pb	08 28 43.5	-1.2
	baz=236							
IRIF	Iriomote-Funau	2.04	91	P		Pn	08 28 42.7	-0.1
IRIF				eS		Sn	08 29 09.0	+0.3
SCZT	Fangliau	2.15	202	eP		Pb	08 28 47.1	0.0
	baz=220							
VCHM	Qimei	2.21	239	eP		Pb	08 28 46.2	-2.0
	baz=238							
MATB	Ma-tsu	2.25	322	eP		Pn	08 28 44.5	-1.2
	baz=319							
JKRS	Kuro-shima	2.30	93	P		Pn	08 28 47.2	+0.9
JKRS				eS		Sn	08 29 15.6	+0.5
JIJ	Ishigaki jima	2.42	90	P		Pn	08 28 47.8	-0.2
JIJ				eS		Sn	08 29 17.2	-0.8
KNMB	Chin-men Tao	2.83	272	eP		Pn	08 28 52.8	-0.8
	baz=269							

IDC 17 09:00:24.8±3.0, 32°.99S×177°.86W, h0km, mb3.5/2, mb1 3.7/3, mb1mx3.5/43, mbtmp3.5/3, ML3.6/1, Error ellipse: s-maj=74.3km s-min=36.1km az=122.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	6.67	217	Pn	Pn	09 02 04.9	+0.9
	1.1nm,0.3s,baz=144,slow=16,SNR=6.2						
URZ				Sn	Sn	09 03 19.8	-0.9
	2.1nm,0.3s,baz=143,slow=22,SNR=9.1						
ASAR	Alice Springs	43.15	270	P	P	09 08 26.8	-0.7
	0.4nm,0.8s,baz=102,slow=8.6,SNR=5.5						
WRA	Warramunga Arr	44.38	275	P	P	09 08 37.4	+0.1
	0.3nm,0.3s,baz=116,slow=6.5,SNR=11						
FINES	FINESS Array B	147.60	339	PKPbc	PKPbc	09 20 09.8	-0.5
	0.8nm,0.7s,baz=15,slow=5.8,SNR=2.4						

*NIED **17** 09:01:00, 23°.60N×121°.70E, h29km, Mw4.8 Best double couple: M0 1.91000×10^16 NP1:φs147.00000°, δ27.00000°, λ-21.00000°. NP2:φs256.00000°, δ81.00000°, λ-116.00000°.*
*JMA **17** 09:01:50.7±0.2, 23°.62N×121°.68E, h0km, M4.9*
*IDC **17** 09:01:51.1±0.5, 23°.66N×121°.67E, h0km, mb4.4/27, mb1 4.6/30, mb1mx4.4/66, mbtmp4.5/30, ML4.1/3, MS4.0/48, Ms1 4.0/48, ms1mx3.9/67, Error ellipse: s-maj=13.4km s-min=11.8km az=60.0*
*ISCJB **17** 09:01:52.0±0.3, 23°.659N±0°.009×121°.62E±0°.01, h10km±1km, mb4.8/154, MS4.2/62, Error ellipse: s-maj=1.9km s-min=1.4km az=37.4*
*NEIC **17** 09:01:52.5±0.5, 23°.65N×121°.57E, h7km±3km, mb5.0/104, ML4.7(TAP), Error ellipse: s-maj=3.6km s-min=2.9km az=120.0*
NEIC Felt at Banqiao. Recorded [6 TAP] in Hualien; [2 TAP] in Changhua and Taitung; [1 TAP] in Chiayi and Yunlin.
*BJI **17** 09:01:52.0, 23°.62N×121°.53E, h8km, mb4.6/57, mB5.0/48, ML5.0/12, Ms4.8/72, Ms7 4.6/66*
*GCMT **17** 09:01:52.5±0.3, 23°.64N×121°.51E, h12km, MW4.8/64, Moment Tensor Solution. s18,c18; s64,c90; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr1.45±.07; Mθθ-0.72±.05; Mφφ-0.73±.07; Mre1.32±.22; Mrθ-0.97±.05; Mφr0.34±.25; Best double couple: M0 2.09300×10^16 NP1:φs65.00000°, δ66.00000°, λ109.00000°. NP2: φs204.00000°, δ30.00000°, λ54.00000°. Principal axes: T 2.0790, Plg64.0000°, Azm5.0000°; N 0.0310, Plg17.0000°, Azm237.0000°; P -2.1080, Plg19.0000°, Azm141.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*TAP **17** 09:01:52.1, 23°.68N×121°.54E, h7km, ML5.0, B*
*MOS **17** 09:01:54.1±1.4, 23°.64N×121°.60E, h28km, mb5.1/46, MS4.4/10, Error ellipse: s-maj=7.4km s-min=5.2km az=108.7*
ISC 17 09:01:53.0±0.6, 23°.66N±0°.01×121°.59E±0°.02, h8km±3km, n500, σ1s56/565, mb4.9/154, MS4.2/62, 40C-45D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	Guangfu	0.15	275	⇓P		Pg	09 01 54.6	-1.6
	baz=273							
EGFH				i S		Sg	09 01 56.8	-1.6
	baz=273							
ESL	Shilin	0.21	317	⇓iP		Pg	09 01 55.7	-1.6
	baz=318							
ESL				i S		Sg	09 01 58.3	-1.9
	baz=318							
HGSD	Ruisui	0.23	223	⇓P		Pg	09 01 57.9	+0.4
	baz=209							
ENLB	Shoufeng	0.25	2	⇓eP		Pg	09 01 59.0	+1.1
	baz=12							
EHY	Hungye	0.29	239	P		Pg	09 01 57.8	-0.9
	baz=238							
EHY				S		Sg	09 02 02.1	-0.5
	baz=238							
HWA	Hwalien	0.32	2	eP		Pg	09 01 59.2	0.0
	baz=12							
YULB	Yu-li	0.38	226	⇑P		Pg	09 01 59.9	-0.5
	baz=229							
YULB				S		Sg	09 02 06.1	+0.8
	baz=229							
YULB	Yu-li	0.38	226	ePg		Pg	09 02 00.1	-0.3
YULB				eSg		Sb	09 02 07.0	-1.0
TWD	Chiawan	0.42	0	⇓iP		Pg	09 02 00.6	-0.6
	baz=356							
TWD				eS		Sg	09 02 05.8	-1.0
	baz=356							
VWDT	VWDT	0.42	283	⇓P		Pg	09 02 00.0	-1.2
	baz=282							
VWDT				eS		Sg	09 02 05.4	-1.5
	baz=282							
NACB	Ninganchiao	0.52	0	⇓P		Pg	09 02 02.0	-1.0
	baz=3.0							
NACB	Ninganchiao	0.52	0	ePg		Pg	09 02 02.0	-1.0
FULB	Fuli	0.53	211	⇓iP		Pg	09 02 03.9	+0.6
	baz=225							
CHGB	Renai	0.56	316	⇓P		Pg	09 02 02.5	-1.3

baz=318
CHGB S **Sg** **09 02 09.3 -1.7**
baz=318
CHKT Chengkung 0.59 201 P **Pg** **09 02 04.7 +0.2**
baz=196
CHKT S **Sb** **09 02 14.2 0.0**
baz=196
SSLB Suanglung 0.60 283 ⇓P **Pg** **09 02 03.1 -1.4**
baz=282
SSLB S **Sg** **09 02 10.6 -1.9**
baz=282
SSLB Suanglung 0.60 283 *e*Pg **Pg** **09 02 02.9 -1.7**
SSLB *e*Sg **Sg** **09 02 10.4 -2.0**
SMLT Sun Moon Lake 0.67 290 ⇓*i*P **Pg** **09 02 04.7 -1.3**
baz=289
SMLT *i* S **Sg** **09 02 13.7 -1.1**
baz=289
ELDTW Lidau 0.70 229 *e*P **Pg** **09 02 05.4 -1.2**
baz=224
ELDTW *e*S **Sg** **09 02 15.9 +0.1**
baz=224
TYC Yuchr 0.72 290 ⇓*i*P **Pg** **09 02 05.3 -1.5**
baz=290
TYC *e*S **Sg** **09 02 14.3 -1.8**
baz=290
ENA Nanau 0.78 10 ⇓*e*P **Pg** **09 02 07.2 -0.8**
baz=24
ENA *e*S **Sg** **09 02 19.0 +0.8**
baz=24
NANB Nanao 0.78 11 ⇓P **Pg** **09 02 07.2 -0.8**
baz=24
NANB *e*S **Sg** **09 02 18.4 +0.2**
baz=24
NNSB Datong 0.79 346 ⇓P **Pg** **09 02 07.2 -1.1**
baz=341
NNSH Datong 0.79 346 ⇓*e*P **Pg** **09 02 07.1 -1.1**
baz=339
NNSH *e*S **Sg** **09 02 17.4 -1.1**
baz=339
NNS Nan Shan 0.81 346 ⇓*i*P **Pg** **09 02 07.4 -1.1**
baz=339
NNS S **Sg** **09 02 18.4 -0.6**
baz=339
WJS Zhushan 0.81 282 ⇓*e*P **Pg** **09 02 07.9 -0.7**
baz=288
WJS *e*S **Sg** **09 02 19.1 0.0**
baz=288
ENAH Nanao 0.81 14 *e*P **Pg** **09 02 08.2 -0.4**
baz=14
WGK Gukeng 0.94 272 ⇓*e*P **Pg** **09 02 11.2 +0.1**
baz=271
WGK *e*S **Sg** **09 02 23.6 +0.1**
baz=271
TWH Lutao 0.95 186 *e*P **Pg** **09 02 09.8 -1.4**
baz=171
TWH *e*S **Sb** **09 02 24.6 +0.2**
baz=171
TPUB Ta-pu 0.95 248 ⇑P **Pg** **09 02 11.1 -0.2**
baz=255
TPUB *e*S **Sg** **09 02 23.6 -0.1**
baz=255
TPUB Ta-pu 0.95 248 *e*Pg **Pg** **09 02 10.8 -0.5**
TWGBT Beinan 0.96 210 ⇑*e*P **Pg** **09 02 09.4 -2.0**
baz=208
TWGBT *e*S **Sg** **09 02 23.7 -0.2**
baz=208
TWG Pinlang 0.96 210 ⇑*e*P **Pg** **09 02 09.3 -2.1**
baz=208
TWG *e*S **Sg** **09 02 23.8 -0.1**
baz=208
TWG Pinlang 0.96 210 *e*Pg **Pg** **09 02 09.5 -2.0**
WDLH Douliu 0.97 272 *e*P **Pg** **09 02 11.4 -0.2**
baz=271
WDLH *e*S **Sg** **09 02 24.6 +0.4**
baz=271
TCU Taichung 0.97 300 *e*P **Pg** **09 02 10.6 -1.1**
baz=303
TWC Suao 0.98 14 *e*P **Pg** **09 02 11.0 -0.7**
baz=15
TWC *e*S **Sb** **09 02 25.1 -0.2**
baz=15
ENTT Nioudou 0.98 359 ⇓P **Pg** **09 02 10.9 -0.9**
baz=351
ENTT *e*S **Sg** **09 02 23.6 -0.9**
baz=351
WTP Ta-pu 0.99 246 ⇑P **Pg** **09 02 11.7 -0.2**
baz=252
WTP *e*S **Sb** **09 02 25.4 -0.2**
baz=252
TTN Taitung 0.99 205 *e*P **Pg** **09 02 11.8 -0.2**
baz=192
EOS1 EOS1 1.01 29 *e*P **Pb** **09 02 12.8 0.0**
baz=47
YHNB Yeheng 1.03 349 ⇓P **Pg** **09 02 11.9 -0.8**
baz=338
YHNB S **Sg** **09 02 24.6 -1.5**
baz=338
YHNB Yeheng 1.03 349 *e*Pg **Pg** **09 02 11.8 -0.9**
WCHH Zhanghua 1.04 294 *e*P **Pg** **09 02 12.4 -0.5**
baz=296
NSK Sanguang 1.04 348 ⇓*i*P **Pg** **09 02 12.0 -0.9**
baz=337
NSK S **Sg** **09 02 24.8 -1.6**
baz=337
TWE Neicheng 1.06 4 *e*P **Pg** **09 02 12.4 -1.0**
baz=2.0
NSY Sanyi 1.07 315 *e*P **Pg** **09 02 12.8 -0.8**
baz=316
CHY Chiayi 1.08 262 *e*P **Pg** **09 02 13.6 -0.2**
baz=261
CHY *e*S **Sg** **09 02 27.9 0.0**
baz=261
CHN1 Nanshi 1.08 245 ⇑*i*P **Pg** **09 02 13.6 -0.3**
baz=243
CHN1 *e*S **Sn** **09 02 29.2 -0.6**
baz=243
TWK Hsinying 1.09 249 ⇑P **Pg** **09 02 13.4 -0.4**
baz=248
TWK *e*S **Sg** **09 02 28.1 +0.2**
baz=248
SGST Jiashian 1.09 239 ⇑P **Pg** **09 02 13.6 -0.3**
baz=236
SGST *e*S **Sn** **09 02 29.3 -0.6**
baz=236
SLGT Liugui 1.09 233 *e*P **Pg** **09 02 13.3 -0.7**
baz=233
NSTT Nanjuang 1.11 331 *e*P **Pg** **09 02 13.2 -1.1**
baz=324
NSTT *e*S **Sg** **09 02 26.9 -1.8**
baz=324
ILA Ilan 1.11 7 *e*P **Pg** **09 02 13.6 -0.7**
baz=360
ILA *e*S **Sg** **09 02 28.0 -0.8**
baz=360
LIOB Emei 1.12 332 ⇓P **Pg** **09 02 13.6 -0.8**
baz=325
LIOB *e*S **Sg** **09 02 28.2 -0.8**
baz=325
NWLT Wulai 1.12 356 *e*P **Pg** **09 02 13.7 -0.8**
baz=354
NMLH Miaoli 1.14 320 ⇓*e*P **Pg** **09 02 14.5 -0.4**
baz=321
RLNB Erlin 1.15 282 ⇓*e*P **Pb** **09 02 14.8 -0.4**
baz=282
RLNB *e*S **Sb** **09 02 30.3 0.0**
baz=282
WLGB Puzi 1.20 262 ⇑P **Pb** **09 02 15.3 -0.7**
baz=262
WLGB *e*S **Sg** **09 02 32.1 +0.5**
baz=262
ECL Taimali 1.21 209 *e*P **Pb** **09 02 13.5 -2.6**
baz=207
ECL *e*S **Sb** **09 02 31.4 -0.5**
baz=207
NTC Toucheng 1.21 10 *e*P **Pb** **09 02 15.2 -1.0**
baz=353
EGS 1.22 15 *e*P **Pg** **09 02 16.9 +0.4**
baz=24
WSF Szhu 1.26 269 *e*P **Pn** **09 02 16.1 -0.8**
baz=269
WSF *e*S **Sb** **09 02 30.7 -2.7**
baz=269
SBCB Hsinchu 1.26 334 ⇓P **Pb** **09 02 17.1 0.0**
baz=333
SSD Sandimen 1.27 224 *e*P **Pn** **09 02 15.6 -1.4**
baz=222
SSD *e*S **Sn** **09 02 34.3 +0.1**
baz=222

CHN3 Shinhua 1.27 243 *e*P **Pg** **09 02 17.6 +0.2**
baz=245
HSN Hsinchu 1.27 334 *e*P **Pb** **09 02 17.5 +0.2**
baz=334
HSN *e*S **Sb** **09 02 33.2 -0.7**
baz=334
CHN8 Yiju 1.31 257 ⇑*e*P **Pn** **09 02 16.9 -0.7**
baz=257
CHN8 *e*S **Sb** **09 02 34.8 0.0**
baz=257
TATO Taipei 1.32 356 P **Pn** **09 02 17.1 -0.7**
baz=353
TATO *e*S **Sg** **09 02 36.6 +1.2**
baz=353
TATO Taipei 1.32 356 *e*Pn **Pn** **09 02 16.8 -0.9**
TWA Mucha 1.32 360 *e*P **Pn** **09 02 17.3 -0.5**
baz=357
TIPB Shuangxi 1.33 9 ⇓P **Pn** **09 02 16.5 -1.4**
baz=351
TIPB *e*S **Sg** **09 02 37.1 +1.4**
baz=351
NCUH Zhongli 1.36 344 ⇓*e*P **Pn** **09 02 17.7 -0.6**
baz=354
NCU National Centr 1.36 344 *e*P **Pn** **09 02 18.3 0.0**
baz=341
NCU *e*S **Sg** **09 02 37.0 +0.3**
baz=341
MASBT Mashibuluo 1.36 221 ⇑*e*P **Pn** **09 02 16.9 -1.5**
baz=212
MASBT *e*S **Sg** **09 02 36.8 -0.1**
baz=212
SCLT Jiali 1.37 250 *e*P **Pn** **09 02 18.2 -0.3**
baz=250
SCLT *e*S **Sg** **09 02 38.5 +1.4**
baz=250
SGLT Jiouru 1.37 228 *e*P **Pg** **09 02 19.9 +0.5**
baz=228
TAP1 Taipei 1.38 357 *e*P **Pn** **09 02 18.0 -0.6**
baz=354
TAP1 *e*S **Sg** **09 02 38.1 +0.8**
baz=354
TWB1 Santiao Chiao 1.39 15 *e*P **Pn** **09 02 19.0 +0.2**
baz=360
TAI1 Yung-k'ang 1.40 244 *e*P **Pn** **09 02 19.0 +0.2**
baz=257
TAI1 *e*S **Sg** **09 02 40.0 +2.1**
baz=257
NWF Wu-fen Shan 1.42 7 *e*P **Pn** **09 02 19.0 -0.3**
baz=3.0
WFSB Wu-fen Shan 1.42 7 *e*P **Pn** **09 02 19.4 +0.3**
baz=3.0
TAW Tawu 1.44 207 *e*P **Pn** **09 02 18.5 -1.0**
baz=205
TWS1 Kuangyinshan 1.45 354 *e*P **Pn** **09 02 19.8 +0.3**
baz=350
TWS1 *e*S **Sg** **09 02 40.2 +0.6**
baz=350
JYNG Yonagunijimaku 1.47 57 P **Pn** **09 02 19.4 -0.4**
JYNG S **Sn** **09 02 37.2 -2.0**
YM04 YM04 1.49 358 ⇓*e*P **Pn** **09 02 20.1 -0.1**
baz=355
YM10 YM10 1.49 359 ⇓*e*P **Pn** **09 02 20.1 -0.2**
baz=356
SSPT Xinbi 1.50 219 *e*P **Pb** **09 02 21.1 0.0**
baz=205
YM11 YM11 1.50 359 *e*P **Pb** **09 02 21.4 +0.2**
baz=356
NTST Danshui 1.51 355 *e*P **Pb** **09 02 21.4 +0.2**
baz=351
YM07 YM07 1.51 1 *e*P **Pn** **09 02 19.2 -1.3**
baz=358
YM07 *e*S **Sb** **09 02 40.7 0.0**
baz=358
YM03 YM03 1.52 358 ⇓*e*P **Pn** **09 02 20.6 0.0**
baz=355
YM12 YM12 1.52 359 ⇓*e*P **Pn** **09 02 20.9 +0.4**
baz=356
YM08 YM08 1.52 360 *e*P **Pn** **09 02 20.6 0.0**
baz=357
YOJ Yonaguni jima 1.52 58 ⇓P **Pn** **09 02 20.0 -0.5**
baz=57
YOJ S **Sn** **09 02 40.1 -0.5**
baz=57
YOJ Yonaguni jima 1.52 58 *e*Pn **Pn** **09 02 20.1 -0.4**
YOJ Yonaguni jima 1.52 58 P **Pn** **09 02 20.2 -0.4**
YOJ *e*S **Sn** **09 02 40.0 -0.6**
YOJ Yonaguni jima 1.52 58 *e*P **Pn** **09 02 20.1 -0.4**
SCZT Fangliau 1.56 215 *e*P **Pn** **09 02 20.4 -0.7**
baz=213
SCZT *e*S **Sg** **09 02 43.7 +0.5**
baz=213
KAU Kaohsiung 1.60 228 *e*P **Pb** **09 02 23.2 +0.3**
baz=229
LAY Lan-yu 1.61 181 *e*P **Pn** **09 02 19.0 -2.8**
baz=168
TWY Chenhua 1.61 0 *e*P **Pb** **09 02 22.8 -0.2**
baz=358
WLCH Liuqiu 1.71 221 *e*P **Pg** **09 02 26.4 +0.5**
baz=221
TWP Hsiaoliuchiu 1.73 221 *e*P **Pb** **09 02 24.3 -0.7**
baz=221
WDGT Dungji 1.82 258 ⇑*e*P **Pn** **09 02 23.6 -1.1**
baz=259
WDGT *e*S **Sn** **09 02 46.6 -1.3**
baz=259
HEN Hengchun 1.82 206 *e*P **Pb** **09 02 26.0 -0.7**
baz=192
TWK1 Hengchun 1.85 203 *e*P **Pn** **09 02 24.6 -0.5**
baz=190
TWK1 *e*S **Sn** **09 02 48.5 -0.3**
baz=190
TWKBT Hengchun 1.85 203 *e*P **Pn** **09 02 25.2 +0.1**
baz=190
TWKBT *e*S **Sn** **09 02 48.9 +0.2**
baz=190
PHUB P'eng-hu 1.86 266 ⇑P **Pn** **09 02 24.2 -1.0**
baz=268
PHUB *e*S **Sn** **09 02 47.8 -1.1**
baz=268
TSEB Hengchuen, Pin 1.86 200 *e*P **Pn** **09 02 25.6 +0.3**
baz=189
TSEB *e*S **Sn** **09 02 49.4 +0.4**
baz=189
PNG Penghu 1.87 268 *e*P **Pn** **09 02 24.2 -1.2**
baz=269
PNG *e*S **Sn** **09 02 48.2 -1.0**
baz=269
VCHM Qimei 2.04 258 *e*P **Pn** **09 02 26.9 -0.8**
baz=260
VCHM *e*S **Sn** **09 02 52.2 -1.1**
baz=260
HATJ Hateruma jima 2.06 78 P **Pn** **09 02 27.3 -0.7**
HATJ *e*S **Sn** **09 02 52.9 -1.1**
IRIF Iriomote-Funau 2.07 71 P **Pn** **09 02 27.7 -0.4**
IRIF S **Sn** **09 02 53.4 -0.7**
JKRS Kuro-shima 2.29 75 P **Pn** **09 02 31.2 +0.2**
JKRS *e*S **Sn** **09 02 58.7 -0.7**
VWUC VWUC 2.36 305 *e*P **Pn** **09 02 30.9 -1.3**
baz=307
JIJ Ishigaki jima 2.44 73 P **Pn** **09 02 32.1 -1.0**
JIJ S **Sn** **09 03 02.3 -0.9**
JISG Ishigakijimahi 2.65 69 P **Pn** **09 02 35.2 -0.9**
JISG *e*S **Sn** **09 03 07.2 -1.2**
MATB Ma-tsu 2.90 329 *e*P **Pn** **09 02 39.1 -0.4**
baz=325
KNM Kinmen 2.99 285 *e*P **Pn** **09 02 41.3 +0.6**
baz=288
JTJ Tarama 3.00 70 P **Pn** **09 02 40.1 -0.8**
JTJ S **Sn** **09 03 17.2 0.0**
QZH Quanzhou 3.02 296 ⇓*i*Pn **Pn** **09 02 40.4 -0.8**
QZH Sn **Sn** **09 03 13.3 -4.3**
QZH smax smax
comp=N,3μm,1.0s
QZH smax smax
comp=E,2μm,1.1s
KNMB Chin-men Tao 3.04 286 ⇑*e*P **Pn** **09 02 40.4 -1.0**
baz=289
JIRB Irabujima 3.47 70 P **Pn** **09 02 47.1 -0.2**
JIRB S **Sn** **09 03 27.9 -0.8**
JIKM Ikemajima 3.57 69 P **Pn** **09 02 48.8 +0.1**
JIKM *e*S **Sn** **09 03 30.6 -0.4**
JOW Kunigami 6.83 61 Pn **Pn** **09 03 31.7 -1.8**
7.1nm,0.3s,baz=359,slow=5.9,SNR=14
JOW Sn **Sn** **09 04 51.9 +0.4**
2.5nm,0.3s,baz=348,slow=19,SNR=2.4
JOW Kunigami 6.83 61 *e*P **Pn** **09 03 32.0 -1.5**
baz=63

SSE Sheshan 7.42 357 P **Pn** **09 03 42.9 +1.3**
SSE S **Sn** **09 05 06.6 +0.6**
SSE smax smax
comp=N,84nm,1.6s
SSE smax smax
comp=E,190nm,1.0s
SSE LR LR
comp=N,2μm,6.5s
SSE LR LR
comp=E,2μm,2.7s
MCO Taipa Grande 7.56 260 P **Pn** **09 03 44.0 +0.4**
GZH Guangzhou 7.60 267 P **Pn** **09 03 40.3 -3.8**
GZH smax smax
comp=N,850nm,1.1s
GZH smax smax
comp=E,860nm,0.9s
NJ2 Nanjing 8.71 344 *e*P **Pn** **09 04 00.9 +1.6**
NJ2 S **Sn** **09 05 39.4 +1.7**
NJ2 pmax pmax
comp=Z,70nm,0.6s
NJ2 smax smax
comp=N,290nm,1.1s
NJ2 smax smax
comp=E,260nm,1.1s
NJ2 LR LR
comp=N,4μm,7.0s
NJ2 LR LR
comp=E,4μm,8.7s
NJ2 LR LR
comp=Z,4μm,7.0s
WHN Wuhan 9.41 318 ⇓P **Pn** **09 04 09.4 +0.4**
WHN S **Sn** **09 05 52.3 -2.8**
WHN LR LR
comp=N,5μm,7.3s
WHN LR LR
comp=E,8μm,5.8s
WHN LR LR
comp=Z,8μm,6.7s
TGY Tagaytay City 9.52 184 LR LR 09 08 25.4
comp=Z,988nm,18.8s,baz=306,slow=41
QIZ Qiongzhong 11.88 249 P **Pn** **09 04 44.0 +1.2**
QIZ S **Sn** **09 06 58.8 +3.2**
QIZ LR LR
comp=N,2μm,18.0s
QIZ LR LR
comp=E,1μm,15.5s
QIZ LR LR
comp=Z,2μm,12.4s
JNU Nakatsue 12.47 39 Pn **Pn** **09 04 52.7 +1.8**
0.5nm,0.3s,baz=205,slow=4.2,SNR=12
TIA Tai'an 13.10 344 P **P** **09 05 06.1 -3.7**
TIA S **Sn** **09 07 32.6 +7.3**
TIA LR LR
comp=N,1μm,6.9s
TIA LR LR
comp=E,550nm,8.0s
TIA LR LR
comp=Z,2μm,8.3s
GYA Guiyang 13.81 285 ⇑*i*P **Pn** **09 05 10.8 +1.4**
GYA PP **P** **09 05 22.0 +4.1**
GYA S **Sn** **09 07 44.3 +1.1**
GYA SS **S** **09 08 02.0 -3.7**
GYA pmax pmax
comp=Z,30nm,1.0s
GYA pmax pmax
comp=Z,180nm,6.5s
GYA LR LR
comp=N,4μm,12.8s
GYA LR LR
comp=E,4μm,9.9s
GYA LR LR
comp=Z,6μm,10.3s
INCN Inchon 14.44 16 *e*P **P** **09 05 24.6 -0.1**
KS15 Wonju Array Si 14.76 20 *e*Pn **Pn** **09 05 22.9 +0.8**
KS15 *e*P **P** **09 05 29.7 +1.4**
KSAR Wonju Array Be 14.76 20 Pn **Pn** **09 05 24.2 +2.1**
KSAR Wonju Array Be 14.76 20 P **Pn** **09 05 24.3 +2.1**
KSRS Korea Array 14.79 20 Pn **Pn** **09 05 24.2 +1.8**
0.1nm,0.3s,baz=201,slow=13,SNR=7.7
KSRS LR LR 09 11 49.9
comp=Z,229nm,20.2s,baz=206,slow=41
KS01 Wonju Array Si 14.80 20 *e*Pn **Pn** **09 05 21.9 -0.8**
KS01 *e*P **P** **09 05 29.4 +0.8**
XAN Xi'an 15.16 316 P **Pn** **09 05 28.9 +1.3**
XAN pP pP 09 05 34.3 -0.6
XAN S **Sn** **09 08 22.3 +6.5**
XAN pmax pmax
comp=Z,20nm,1.1s
XAN LR LR
comp=N,3μm,4.6s
XAN LR LR
comp=E,2μm,5.1s
XAN LR LR
comp=Z,3μm,11.8s
DL2 Dalian 15.20 0 P **P** **09 05 36.1 +3.0**
DL2 *e*S **S** **09 08 33.4 -0.3**
DL2 pmax pmax
comp=Z,38nm,1.1s
DL2 pmax pmax
comp=Z,95nm,5.1s
DL2 LR LR
comp=E,2μm,16.9s
DL2 LR LR
comp=Z,2μm,15.1s
TIY Taiyuan 16.06 333 *e*P **P** **09 05 44.8 +2.0**
TIY S **Sn** **09 08 37.4 -0.2**
TIY pmax pmax
comp=Z,410nm,4.7s
TIY LR LR
comp=Z,1μm,6.5s
TIY LR LR
comp=Z,1μm,8.1s
DAV Davao City (W) 16.93 166 LR LR 09 12 06.9
comp=Z,807nm,20.8s,baz=333,slow=36
DAV Davao City (W) 16.93 166 *e*Pn **Pn** **09 05 49.4 -1.0**
comp=Z,513nm,1.1s
BJT Baijiatuau 16.95 346 *e*Pn **P** **09 05 52.8 +0.3**
comp=Z,30nm,1.0s
BJT Baijiatuau 16.95 346 *e*P **P** **09 05 52.8 +0.3**
BJT pmax pmax
comp=Z,30nm,1.0s
BJI Beijing 16.96 346 ⇑*e*P **P** **09 05 55.3 +2.6**
BJI S **S** **09 09 08.1 -1.6**
BJI pmax pmax
comp=Z,25nm,0.8s
BJI LR LR
comp=Z,2μm,12.8s
BJI LR LR
comp=Z,2μm,15.2s
BJI LR LR
comp=Z,1μm,33.2s
KMI Kunming 17.24 279 P **P** **09 05 57.6 +1.5**
KMI S **Sn** **09 09 11.1 +4.5**
KMI pmax pmax
comp=Z,21nm,1.5s
KMI pmax pmax
comp=Z,310nm,4.5s
KMI LR LR
comp=Z,3μm,7.6s
KMI LR LR
comp=Z,4μm,9.3s
KMI LR LR
comp=Z,4μm,9.4s
CD2 Chengdu 17.41 298 P **Pn** **09 05 55.5 -0.9**
CD2 sP sP 09 06 01.3 +0.4
CD2 PP **PnPn** **09 06 11.6 +5.0**
CD2 S **S** **09 09 15.9 -3.2**
CD2 SS **SnSn** **09 09 30.6 +6.7**
CD2 pmax pmax
comp=Z,70nm,1.0s
CD2 pmax pmax
comp=Z,390nm,5.1s
CD2 LR LR
comp=Z,8μm,7.2s
CD2 LR LR
comp=Z,8μm,9.0s
SNY Shenyang 18.20 5 ⇓P **Pn** **09 06 04.0 -2.0**
SNY S **S** **09 09 36.6 +1.9**
SNY pmax pmax
comp=Z,100nm,2.8s
SNY LR LR
comp=Z,810nm,19.2s
SNY LR LR
comp=Z,2μm,17.7s
SNY LR LR
comp=Z,2μm,14.5s

JHJ	**Hachijo jima 2**	18.55	55	LR	LR	09 13 26.9	
	comp=Z,302nm,18.7s,baz=85,slow=38						
MYLDM	**Lahad Datu**	18.61	190	*e*P	**Pn**	**09 06 12.0**	**+0.8**
	comp=Z,30nm,0.9s						
CBIJ	**Chichi jima**	18.92	75	*e*P	**Pn**	**09 06 14.8**	**-0.1**
	comp=Z,142nm,0.9s						
JCJ	**Chichijima**	18.92	75	P	**P**	**09 06 12.7**	**-1.7**
	comp=Z,2.9nm,0.3s,baz=339,slow=5.7,SNR=6.4						
HHC	**Hu-ho-hao-te**	19.10	336	*e*P	**Pn**	**09 06 18.8**	**+1.6**
HHC				pP	sP	09 06 22.4	+2.9
HHC				sP	pP	09 06 25.8	+7.3
HHC				S	**Sn**	**09 09 48.3**	**-3.0**
HHC				sS	S	09 09 53.9	+0.6
HHC				SS	**SnSn**	**09 10 15.0**	**+9.4**
HHC				pmax	pmax		
	comp=Z,20nm,1.6s						
HHC				pmax	pmax		
	comp=Z,580nm,5.2s						
HHC				LR	LR		
	comp=Z,820nm,7.9s						
HHC				LR	LR		
	comp=Z,1μm,9.5s						
MAJO	**Matsushiro**	19.24	44	*e*P	**Pn**	**09 06 19.9**	**+1.1**
	comp=Z,15nm,1.0s						
MAJO	**Matsushiro**	19.24	44	*ce*P	**Pn**	**09 06 21.0**	**+2.2**
MAJO				pmax	pmax		
	comp=Z,13nm,0.8s						
MAT	**Matsushiro**	19.24	44	P	**Pn**	**09 06 19.1**	**+0.3**
MAT				*e*S	**Sn**	**09 09 55.2**	**+0.6**
MJAR	**Matsushiro Arr**	19.24	44	P	**P**	**09 06 17.0**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=236,slow=11,SNR=5.2						
MJAR				LR	LR	09 14 45.5	
	comp=Z,220nm,19.8s,baz=245,slow=40						
MJB9	**Matsu-Tunnel**	19.24	44	*e*P	**Pn**	**09 06 19.8**	**+1.0**
	comp=Z,8.3nm,0.9s						
LZH	**Lanzhou**	19.72	313	*e*P	**Pn**	**09 06 24.8**	**+0.1**
LZH				pP	sP	09 06 27.3	+1.0
LZH				sP	pP	09 06 29.5	+4.1
LZH				PP	**PnPn**	**09 06 44.0**	**+5.7**
LZH				*e*S	**S**	**09 10 00.8**	**-5.1**
LZH				sS	Sn	09 10 06.8	+0.4
LZH				SS	**SnSn**	**09 10 27.3**	**+6.5**
LZH				pmax	pmax		
	comp=Z,70nm,1.1s						
LZH				pmax	pmax		
	comp=Z,390nm,5.4s						
LZH				LR	LR		
	comp=Z,3μm,13.4s						
LZH				LR	LR		
	comp=Z,3μm,11.8s						
LZH				LR	LR		
	comp=Z,5μm,15.7s						
CN2	**Changchun**	20.34	8	*e*P	**P**	**09 06 30.5**	**+0.7**
CN2				*es*P	sP	09 06 37.6	+4.7
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,810nm,12.0s						
CN2				LR	LR		
	comp=Z,610nm,12.0s						
CN2				LR	LR		
	comp=Z,1μm,14.0s						
MSHR	**Mys Shultsa**	20.48	21	*e*P	**P**	**09 06 31.6**	**+0.4**
CMAI	**Chiengmai2**	21.26	264	P	**P**	**09 06 42.5**	**+2.5**
	comp=Z,174nm,0.9s						
CHTO	**Chiang Mai**	21.65	261	P	**P**	**09 06 46.2**	**+2.1**
	comp=Z,228nm,0.9s						
CHTO	**Chiang Mai**	21.65	261	*e*P	**P**	**09 06 44.4**	**+0.3**
	comp=Z,41nm,0.9s						
CHTO	**Chiang Mai**	21.65	261	*e*P	**P**	**09 06 44.4**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,41nm,0.9s						
CM01	**Chiang Mai Arr**	21.75	260	*e*P	**P**	**09 06 46.1**	**+0.9**
CM31	**Chiang Mai Arr**	21.75	261	*e*P	**P**	**09 06 46.0**	**+0.8**
CMAR	**Chiang Mai Arr**	21.75	261	P	**P**	**09 06 45.1**	**-0.1**
	comp=Z,14nm,0.9s,baz=64,slow=8.9,SNR=33						
CMAR				LR	LR	09 14 35.0	
	comp=Z,355nm,18.9s,baz=71,slow=35						
MDJ	**Mudanjiang**	21.91	15	P	**P**	**09 06 45.8**	**-0.8**
MDJ				S	**S**	**09 10 51.8**	**+3.0**
MDJ				pmax	pmax		
	comp=Z,28nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,83μm,3.1s						
MDJ				LR	LR		
	comp=Z,1μm,12.7s						
MDJ				LR	LR		
	comp=Z,3μm,15.7s						
MDJ				LR	LR		
	comp=Z,940nm,15.7s						
MDJ	**Mudanjiang**	21.91	15	*e*P	**P**	**09 06 45.5**	**-1.1**
	comp=Z,11nm,0.6s						
USRK	**Ussuriysk Ar.**	22.20	20	P	**P**	**09 06 49.5**	**-0.2**
	comp=Z,5.7nm,0.8s,baz=210,slow=9.8,SNR=7.2						
MRSI	**Marisa**	23.04	179	P	**P**	**09 07 02.2**	**+3.3**
	comp=Z,30nm,0.8s,comp=Z,1μm						
MPSI	**Mapaga**	23.24	184	P	**P**	**09 07 02.3**	**+1.4**
	comp=Z,9.8nm,1.2s						
TNTI	**Ternate**	23.43	165	*e*P	**P**	**09 07 02.5**	**-0.3**
	comp=Z,52nm,1.1s						
GUMO	**Guam**	24.19	110	LR	LR	09 15 59.3	
	comp=Z,299nm,19.6s,baz=270,slow=35						
GUMO	**Guam**	24.19	110	*e*P	**P**	**09 07 11.0**	**+0.8**
	comp=Z,241nm,1.1s						
GUMO	**Guam**	24.19	110	*e*P	**P**	**09 07 11.0**	**+0.8**
GUMO				pmax	pmax		
	comp=Z,241nm,1.1s						
GTA	**Gaotai**	24.22	316	⇓P	**P**	**09 07 10.6**	**+0.1**
GTA				pP	sP	09 07 15.1	+1.4
GTA				sP	pP	09 07 17.8	+5.0
GTA				PcP	**PcP**	**09 10 50.6**	**-0.3**
GTA				S	**S**	**09 11 31.4**	**+2.2**
GTA				sS	sS	09 11 38.0	+5.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,280nm,5.9s						
GTA				LR	LR		
	comp=Z,850nm,15.2s						
GTA				LR	LR		
	comp=Z,1μm,13.6s						
GTA				LR	LR		
	comp=Z,2μm,13.3s						
APSI	**Ampana**	24.42	180	P	**P**	**09 07 13.7**	**+1.4**
	comp=Z,69nm,1.1s,comp=Z,740nm						
LUWI	**Luwuk**	24.58	177	P	**P**	**09 07 16.9**	**+3.3**
	comp=Z,148nm,1.3s						
LUWI	**Luwuk**	24.58	177	*e*P	**P**	**09 07 17.0**	**+3.3**
	comp=Z,169nm,1.1s						
KSM	**Kuching**	24.62	208	*e*P	**P**	**09 07 13.2**	**-0.9**
	comp=Z,28nm,0.9s						
MTKI	**Muara Teweh, K**	25.30	196	P	**P**	**09 07 19.8**	**-0.5**
HIA	**Hailar**	25.60	357	*i* P	**P**	**09 07 22.6**	**-0.1**
HIA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ERM	**Erimo**	25.64	39	*i* P	**P**	**09 07 23.5**	**+0.4**
ERM				pmax	pmax		
	comp=Z,19nm,1.0s						
SIJI	**Sorong**	26.13	158	LR	LR	09 15 27.6	
	comp=Z,228nm,21.3s,baz=33,slow=31						
ASAJ	**Asahikawa**	26.70	35	P	**P**	**09 07 30.9**	**-1.8**
	comp=Z,4.4nm,0.8s,baz=127,slow=20,SNR=3.5						
ASAJ				LR	LR	09 18 54.0	
	comp=Z,238nm,20.8s,baz=230,slow=38						
KLR	**Kul'dur**	26.75	15	P	**P**	**09 07 31.6**	**-1.5**
	comp=Z,0.5nm,1.0s,baz=222,slow=7.0,SNR=11						
KLR				LR	LR	09 17 50.1	
	comp=Z,18nm,19.1s,baz=198,slow=36						
KLR	**Kul'dur**	26.75	15	*ce*P	**P**	**09 07 31.3**	**-1.8**
ULN	**Ulaanbaatar**	26.79	338	*e*P	**P**	**09 07 32.6**	**-1.1**
	comp=Z,8.1nm,0.9s						
ULN	**Ulaanbaatar**	26.79	338	*ce*P	**P**	**09 07 33.5**	**-0.2**
ULN				pmax	pmax		
	comp=Z,13nm,1.2s						
SONM	**Songino Array**	27.00	337	P	**P**	**09 07 34.2**	**-1.3**
	comp=Z,2.3nm,0.7s,baz=146,slow=9.5,SNR=21						
SONM				LR	LR	09 19 29.7	
	comp=Z,1μm,19.5s,baz=144,slow=39						
SONA1	**Songino Array**	27.00	337	*e*P	**P**	**09 07 34.5**	**-1.1**
SHL	**Shillong**	27.05	280	*e*P	**P**	**09 07 37.0**	**+0.7**
SHL	**Shillong**	27.05	280	*e*P	**P**	**09 07 36.0**	**-0.3**
	comp=Z,40nm,0.9s						
SHL	**Shillong**	27.05	280	*e*P	**P**	**09 07 36.0**	**-0.3**
SHL				pmax	pmax		
	comp=Z,40nm,0.9s						
BRDH	**Bariadhala**	27.53	274	LR	LR	09 20 03.0	
	comp=Z,63nm,21.2s,baz=156,slow=40						
LSA	**Lhasa**	27.81	289	*e*P	**P**	**09 07 43.0**	**-0.3**
	comp=Z,16nm,0.7s						
LSA	**Lhasa**	27.81	289	*e*P	**P**	**09 07 43.1**	**-0.3**
LSA				pmax	pmax		
	comp=Z,16nm,0.7s						
YSS	**Yuzh-Sakhalins**	28.78	31	*e*P	**P**	**09 07 53.0**	**+1.7**
	comp=Z,22nm,1.1s						
YSS	**Yuzh-Sakhalins**	28.78	31	*e*P	**P**	**09 07 53.8**	**+2.5**
YSS				*e*		09 08 05.8	
YSS				pmax	pmax		
	comp=Z,20nm,0.6s						
YSS				MLR	MLR		
	comp=N,300nm,13.0s						
YSS				MLR	MLR		
	comp=E,300nm,13.0s						
PSI	**Prapat**	30.18	230	P	**P**	**09 08 04.8**	**+0.7**
	comp=E,5.9nm,0.5s,baz=0.1,slow=4.9,SNR=6.8						
PSI				LR	LR	09 21 26.9	
	comp=E,304nm,18.5s,baz=91,slow=39						
PSI	**Prapat**	30.18	230	*e*P	**P**	**09 08 04.4**	**+0.3**
	comp=E,15nm,1.1s						
PSI	**Prapat**	30.18	230	*e*P	**P**	**09 08 04.4**	**+0.3**
PSI				pmax	pmax		
	comp=Z,15nm,1.1s						
ZEA	**Zeya**	30.34	7	*e*P	**P**	**09 08 02.4**	**-2.6**
ZEA				pmax	pmax		
	comp=N,23nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,23nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,1μm,13.0s						
ZEA				MLR	MLR		
	comp=E,500nm,11.0s						
ZEA				MLR	MLR		
	comp=N,800nm,14.0s						
ODAN	**Odare**	31.04	283	*e*P	**P**	**09 08 11.6**	**-0.3**
	comp=N,65nm,1.0s						
MNSI	**Mandailing Nat**	31.18	226	P	**P**	**09 08 15.4**	**+2.6**
	comp=N,18nm,0.9s,comp=N,2μm						
TLY	**Talaya**	31.20	338	LR	LR	09 22 14.4	
	comp=N,486nm,19.3s,baz=139,slow=39						
TLY	**Talaya**	31.20	338	*e*P	**P**	**09 08 12.5**	**-0.2**
	comp=N,2.7nm,0.7s						
TLY	**Talaya**	31.20	338	*e*P	**P**	**09 08 12.1**	**-0.6**
TLY				*e*S	**S**	**09 13 23.2**	**+4.2**
TLY				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TLY				MLR	MLR		
	comp=Z,688nm,15.0s						
JIRN	**Jiri**	32.09	285	*e*P	**P**	**09 08 21.4**	**+0.2**
	comp=Z,70nm,0.9s						
EDFI	**Ende, Flores**	32.21	180	P	**P**	**09 08 20.5**	**-1.4**
	comp=Z,39nm,1.0s						
GUN	**Gumba**	32.36	285	*e*P	**P**	**09 08 24.3**	**+0.7**
	comp=Z,70nm,0.9s						
MDSI	**Maura Dua**	32.73	214	P	**P**	**09 08 27.2**	**+0.8**
	comp=Z,22nm,0.9s						
KKN	**Kakani**	32.90	285	*e*P	**P**	**09 08 28.8**	**+0.7**
	comp=Z,46nm,0.9s						
PWJI	**Pagerwojo**	32.91	198	P	**P**	**09 08 29.7**	**+1.8**
	comp=Z,56nm,0.9s						
WOJI	**Wonogiri, Jawa**	32.99	200	P	**P**	**09 08 26.7**	**-2.0**
	comp=Z,72nm,1.0s						
KPJI	**Karang Pucung**	33.19	203	P	**P**	**09 08 31.0**	**+0.6**
	comp=Z,32nm,2.8s						
CGJI	**Cibinong**	33.86	209	P	**P**	**09 08 36.4**	**+0.1**
	comp=Z,254nm,0.6s,comp=Z,29μm						
DANN	**Dangsing**	34.23	286	*e*P	**P**	**09 08 40.1**	**+0.3**
	comp=Z,79nm,1.0s						
WMQ	**Urumqi**	34.29	314	P	**P**	**09 08 42.6**	**+2.7**
WMQ				pP	sP	09 08 47.0	+3.8
WMQ				sP	pP	09 08 49.6	+7.4
WMQ				PP	**PP**	**09 09 57.8**	**+0.3**
WMQ				pmax	pmax		
	comp=Z,22nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,300nm,6.5s						
WMQ				LR	LR		
	comp=Z,2μm,14.5s						
WMQ				LR	LR		
	comp=Z,2μm,12.1s						
WMQ				LR	LR		
	comp=Z,760nm,16.9s						
KOLN	**Koldanda**	34.38	285	*e*P	**P**	**09 08 41.5**	**+0.4**
	comp=Z,48nm,0.8s						
PYUN	**Piuthan**	34.91	286	*e*P	**P**	**09 08 45.9**	**+0.2**
	comp=Z,50nm,0.8s						
YAK	**Yakutsk**	38.75	6	*e*P	**P**	**09 09 14.1**	**-3.5**
YAK				*e**PP	**sP**	**09 09 21.2**	**+0.3**
YAK				*e*		09 10 47.3	
YAK				*e*S	**S**	**09 15 11.8**	**-3.0**
YAK				*e*SSS	SSS	09 18 25.8	
YAK				*e*		09 19 23.7	
YAK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,104nm,3.7s						
YAK				pmax	pmax		
	comp=N,35nm,3.8s						
YAK				pmax	pmax		
	comp=E,41nm,3.5s						
YAK				smax	smax		
	comp=E,15nm,2.0s						
YAK				smax	smax		
	comp=N,7.0nm,2.1s						
YAK				MLR	MLR		
	comp=Z,698nm,17.0s						
YAK				MLR	MLR		
	comp=N,509nm,16.0s						
YAK				MLR	MLR		
	comp=E,171nm,12.0s						
MK01	**Makanchi Array**	38.96	316	*e*P	**P**	**09 09 19.2**	**-0.4**
MK31	**Makanchi Array**	38.98	316	*e*P	**P**	**09 09 19.2**	**-0.6**
MK31	**Makanchi Array**	38.98	316	*e*P	**P**	**09 09 19.2**	**-0.6**
MKAR	**Makanchi Array**	38.98	316	P	**P**	**09 09 19.2**	**-0.6**
	comp=E,16nm,0.9s,baz=110,slow=10,SNR=28						
MKAR				LR	LR	09 26 57.5	
	comp=E,418nm,19.4s,baz=64,slow=39						
MKAR	**Makanchi Array**	38.98	316	*e*P	**P**	**09 09 19.3**	**-0.5**
	comp=E,89nm,0.9s						
MKAR	**Makanchi Array**	38.98	316	*e*P	**P**	**09 09 19.3**	**-0.5**
MKAR				pmax	pmax		
	comp=Z,89nm,0.9s						
MAKZ	**Makanchi**	39.18	316	*e*P	**P**	**09 09 21.2**	**-0.3**
	comp=Z,18nm,0.9s						
MAKZ	**Makanchi**	39.18	316	*e*P	**P**	**09 09 21.2**	**-0.3**
MAKZ				pmax	pmax		
	comp=Z,18nm,0.9s						
PDGK	**Podgornoye**	39.71	310	P	**P**	**09 09 25.8**	**-0.3**
PDGK				pmax	pmax		
	comp=Z,20nm,0.9s						
KNRA	**Kununurra**	39.72	169	P	**P**	**09 09 23.9**	**-2.2**
	baz=40,SNR=4.4						
PETK	**Petropavlovsk-**	40.10	33	LR	LR	09 26 60.0	
	comp=Z,74nm,18.4s,baz=230,slow=38						
PRZ	**Przheval'sk**	40.27	308	*e*P	**P**	**09 09 29.4**	**-1.4**
	comp=Z,9.9nm,0.4s						
PRZ	**Przheval'sk**	40.27	308	*e*P	**P**	**09 09 29.4**	**-1.4**
PRZ				pmax	pmax		
	comp=Z,10.0nm,0.4s						
TARG	**Taragay, Kyrgy**	40.53	307	*e*P	**P**	**09 09 32.8**	**-0.5**
	comp=Z,4.7nm,0.8s						
ZAA0	**Zalesovo Array**	40.89	327	*e*P	**P**	**09 09 34.1**	**-1.4**
	comp=Z,20nm,1.0s						
ZALV	**Zalesovo Beam**	40.89	327	P	**P**	**09 09 33.4**	**-2.1**
	comp=Z,9.9nm,0.8s,baz=117,slow=6.1,SNR=12						
ZALV				LR	LR	09 27 41.8	
	comp=Z,416nm,20.0s,baz=68,slow=38						
ZALV	**Zalesovo Beam**	40.89	327	*e*P	**P**	**09 09 34.0**	**-1.5**
ZALV	**Zalesovo Beam**	40.89	327	*e*P	**P**	**09 09 34.0**	**-1.5**
PMG	**Port Moresby**	41.29	140	LR	LR	09 26 16.9	
	comp=Z,222nm,19.3s,baz=202,slow=36						
MA2	**Magadan**	41.33	22	*i* P	**P**	**09 09 38.2**	**-0.9**
MA2				pmax	pmax		
	comp=Z,11nm,1.1s						
KSH	**Kashi**	41.50	303	P	**P**	**09 09 43.8**	**+2.9**
KSH				PP	**PnPn**	**09 11 20.8**	**-0.6**
KSH				S	**S**	**09 15 59.8**	**+2.9**
KSH				SS	**SS**	**09 18 57.3**	**-3.9**
KSH				pmax	pmax		
	comp=Z,460nm,5.1s						
KSH				LR	LR		
	comp=Z,1μm,11.3s						
KSH				LR	LR		
	comp=Z,540nm,10.1s						
KSH				LR	LR		
	comp=Z,920nm,13.0s						
FITZ	**Fitzroy Crossi**	41.69	174	P	**P**	**09 09 40.3**	**-2.1**
	baz=42,SNR=4.4						
NRN	**Naryn**	41.80	306	*e*P	**P**	**09 09 43.5**	**-0.1**
	comp=Z,13nm,0.9s						
NRN	**Naryn**	41.80	306	*e*P	**P**	**09 09 43.5**	**-0.1**
NRN				pmax	pmax		
	comp=Z,13nm,0.9s						
WAKE	**Wake Island**	42.03	87	*e*P	**P**	**09 09 45.9**	**+0.6**
	comp=Z,84nm,1.0s						
H11N1	**WAKE ISLAND Hy**	42.15	86	T	T	09 54 46.1	
	baz=283,slow=74,SNR=189						
H11N2	**WAKE ISLAND Hy**	42.15	86	T	T	09 54 41.8	
	baz=283,slow=74,SNR=191						
NVS	**Novosibirsk**	42.15	328	*e*P	**P**	**09 09 44.8**	**-1.0**
NVS				pmax	pmax		
	comp=N,3.0nm,1.3s						
NVS				pmax	pmax		
	comp=E,3.0nm,1.3s						
NVS				pmax	pmax		
	comp=Z,11nm,1.3s						
H11N3	**WAKE ISLAND Hy**	42.16	86	T	T	09 54 47.4	
	baz=283,slow=74,SNR=229						
H11S3	**WAKE ISLAND Hy**	42.26	88	T	T	09 54 53.7	
	baz=284,slow=75,SNR=1083						
H11S1	**WAKE ISLAND Hy**	42.27	88	T	T	09 54 54.3	
	baz=284,slow=75,SNR=194						
H11S2	**WAKE ISLAND Hy**	42.28	88	T	T	09 54 52.5	
	baz=284,slow=75,SNR=278						
KURK	**Kurchatov**	42.73	320	*e*P	**P**	**09 09 50.5**	**-0.2**
	comp=Z,8.1nm,0.8s						
KURK	**Kurchatov**	42.73	320	*ce*P	**P**	**09 09 50.4**	**-0.2**
KURK				pmax	pmax		
	comp=Z,73nm,1.0s						
KURBB	**Kurchatov Arra**	42.75	320	P	**P**	**09 09 49.6**	**-1.1**
	comp=Z,8.6nm,0.9s,baz=115,slow=8.1,SNR=11						
COEN	**Coen**	42.93	148	P	**P**	**09 09 54.6**	**+2.0**
	baz=43,SNR=6.8						
COEN	**Coen**	42.93	148	*e*P	**P**	**09 09 53.7**	**+1.1**
	comp=Z,23nm,0.9s						
NIL	**Nilore**	43.24	295	*e*P	**P**	**09 09 54.8**	**-0.3**
	comp=Z,11nm,0.8s						
NIL	**Nilore**	43.24	295	*e*P	**P**	**09 09 54.8**	**-0.3**
NIL				pmax	pmax		
	comp=Z,11nm,0.8s						
SFK	**Sufi-Kurgan**	43.45	304	P	**P**	**09 09 58.2**	**+1.2**
SFK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SEY	**Seymchan**	44.34	20	*i* P	**P**	**09 10 03.8**	**+0.3**
WRAB	**Tennant Creek**	45.08	163	*e*P	**P**	**09 10 09.2**	**-0.6**
	comp=Z,19nm,0.9s						
WRAB	**Tennant Creek**	45.08	163	*i* P	**P**	**09 10 09.9**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,23nm,1.0s						
WRA	**Warramunga Arr**	45.08	163	P	**P**	**09 10 07.8**	**-2.1**
	comp=Z,16nm,1.0s,baz=344,slow=8.6,SNR=38						
WB2	**Warramunga Arr**	45.09	163	*e*P	**P**	**09 10 07.8**	**-2.0**
	comp=Z,20nm,0.9s						
OTUK	**Ortayu**	45.83	315	P	**P**	**09 10 15.8**	**+0.3**
OTUK				pmax	pmax		
	comp=Z,16nm,0.9s						
KK31	**Karatay Array**	46.09	308	*e*P	**P**	**09 10 17.9**	**+0.3**
KK31	**Karatay Array**	46.09	308	*e*P	**P**	**09 10 18.0**	**+0.3**
KKAR	**Karatay Array**	46.09	308	*e*P	**P**	**09 10 17.9**	**+0.3**
KKAR	**Karatay Array**	46.09	308	*e*P	**P**	**09 10 18.0**	**+0.3**
GIRL	**Giralia**	46.58	189	P	**P**	**09 10 20.9**	**-0.6**
	baz=46,SNR=5.6						
KBL	**Kabul**	46.73	296	*e*P	**P**	**09 10 23.6**	**+0.6**
	comp=Z,14nm,1.1s						
KBL	**Kabul**	46.73	296	*e*P	**P**	**09 10 23.6**	**+0.6**
KBL				pmax	pmax		
	comp=Z,14nm,1.1s						
MTSU	**Mount Surprise**	47.09	150	P	**P**	**09 10 26.9**	**+1.2**
	baz=47,SNR=10						
TIXI	**Tiksi**	48.20	3	LR	LR	09 32 32.9	
	comp=Z,440nm,19.3s,baz=195,slow=38						
TIXI	**Tiksi**	48.20	3	*e*P	**P**	**09 10 31.5**	**-2.1**
	comp=Z,11nm,1.1s						
TIXI	**Tiksi**	48.20	3	*ce*P	**P**	**09 10 31.8**	**-1.8**
BVAR	**Borovoye Array**	48.32	321	P	**P**	**09 10 34.3**	**-0.6**
	comp=Z,2.8nm,0.6s,baz=119,slow=9.3,SNR=10.0						
BVAR				LR	LR	09 30 22.5	
	comp=Z,119nm,21.4s,baz=121,slow=35						
BRVK	**Borovoye**	48.39	321	*e*P	**P**	**09 10 33.9**	**-1.5**
	comp=Z,10nm,1.0s						
BRVK	**Borovoye**	48.39	321	*ce*P	**P**	**09 10 35.2**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,26nm,1.2s						
AS31	**Alice Springs**	48.54	165	*e*P	**P**	**09 10 36.9**	**0.0**
	comp=Z,2.5nm,0.8s						
ASAR	**Alice Springs**	48.54	165	P	**P**	**09 10 35.5**	**-1.4**
	comp=Z,7.8nm,1.0s,baz=345,slow=6.2,SNR=32						
ASAR				LR	LR	09 32 32.7	
	comp=Z,116nm,18.4s,baz=337,slow=38						
AS01	**Alice Springs**	48.55	165	*e*P	**P**	**09 10 36.3**	**-0.7**
WRKA	**Warakurna**	48.84	172	P	**P**	**09 10 37.9**	**-1.3**
	baz=49,SNR=12						
CTA	**Charters Tower**	49.68	149	P	**P**	**09 10 44.9**	**-0.8**
	comp=Z,3.8nm,0.8s,baz=325,slow=12,SNR=5.2						
HNR	**Honiara**	49.87	127	LR	LR	09 30 00.9	
	comp=Z,130nm,20.3s,baz=308,slow=34						
NRIK	**Noril'sk**	50.01	345	LR	LR	09 36 00.5	
	comp=Z,191nm,18.4s,baz=148,slow=41						
BILL	**Bilibino**	52.05	20	*e*P	**P**	**09 11 02.9**	**0.0**
	comp=Z,6.3nm,1.0s						
BILL	**Bilibino**	52.05	20	*i* P	**P**	**09 11 00.9**	**-2.0**
BILL				*i*		09 12 19.4	
BILL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,225nm,16.0s						
ABKAR	**Akbulak array**	54.08	315	*e*P	**P**	**09 11 17.3**	**-0.9**
FORT	**Forrest**	54.48	173	*e*P	**P**	**09 11 20.7**	**-0.5**
	comp=Z,32nm,1.1s						
QLP	**Quilpie**	54.53	155	P	**P**	**09 11 22.3**	**+0.6**
	baz=54,SNR=4.2						
SVE	**Sverdlovsk**	54.69	324	*e*P	**P**	**09 11 21.7**	**-0.8**
SVE				pmax	pmax		
	comp=Z,16nm,0.9s						
SVE				MLR	MLR		
	comp=Z,407nm,15.0s						
GEYT	**Alibeck**	55.39	301	LR	LR	09 38 54.0	
	comp=Z,188nm,18.9s,baz=180,slow=40						
GYA0B	**ALIBECK ARRAY**	55.39	301	*e*P	**P**	**09 11 28.7**	**+0.8**
	comp=Z,17nm,0.8s						
AKTO	**Aktyubinsk**	55.41	316	P	**P**	**09 11 27.9**	**+0.1**
	comp=Z,3.8nm,0.8s,baz=100,slow=3.6,SNR=3.6						
AKTO				LR	LR	09 36 51.9	
	comp=Z,322nm,19.0s,baz=94,slow=38						
ARU	**Arti**	55.75	323	P	P	09 11 25.2	-5.0
	comp=Z,1.2nm,0.3s,baz=73,slow=20,SNR=2.4						
ARU				LR	LR	09 37 40.7	
	comp=Z,156nm,18.7s,baz=88,slow=38						
ARU	**Arti**	55.75	323	*e*P	**P**	**09 11 29.0**	**-1.1**
	comp=Z,12nm,0.8s				

PRGR	Permogore	62.82	329	eP	P	09 12 16.9	-2.1
PRGR				pmax	pmax		
comp=Z,8.0nm,0.8s							
DZM	Mont Dzumac	63.00	133	eS	S	09 20 43.7	-8.1
comp=Z,98nm,27.3s							
DZM	Mont Dzumac	63.00	133	eLR	LR	09 31 11.6	
comp=Z,494nm,24.1s							
DZM	Mont Dzumac	63.00	133	LR	LR	09 35 43.2	
comp=Z,144nm,20.1s,baz=297,slow=32							
ARPS	Mount Arapiles	63.06	162	P	P	09 12 19.7	-1.1
baz=63,SNR=6.0							
GNI	Garni	65.41	305	LR	LR	09 44 45.6	
comp=Z,123nm,21.1s,baz=78,slow=39							
GNI	Garni	65.41	305	i P	P	09 12 38.1	+1.5
GNI				pmax	pmax		
comp=Z,28nm,0.9s							
KLMR	Klimovskoe	65.81	328	eP	P	09 12 36.0	-2.6
KLMR				pmax	pmax		
comp=Z,8.0nm,1.0s							
KLMR	Klimovskoe	65.81	328	eP	P	09 12 36.0	-2.6
KLMR				AMP		09 12 44.8	
comp=Z,8.0nm,1.0s							
KBZ	Khabaz	66.10	309	P	P	09 12 41.6	+0.8
comp=Z,9.6nm,0.8s,baz=121,slow=4.6,SNR=14							
KBZ				LR	LR	09 46 14.2	
comp=Z,133nm,18.3s,baz=77,slow=40							
SVW2	Sparrevohn	66.15	32	eP	P	09 12 41.2	+0.4
comp=Z,17nm,1.2s							
TMCR	Tamitsa	66.19	332	eP	P	09 12 40.1	-0.8
TMCR				pmax	pmax		
comp=Z,21nm,1.1s							
KVAR	Kislovodsk Arr	66.20	309	P	P	09 12 42.0	+0.4
comp=Z,22nm,0.8s,baz=190,slow=2.8,SNR=7.7							
KIV	Kislovodsk	66.21	309	eP	P	09 12 41.8	+0.1
comp=Z,22nm,1.0s							
KIV	Kislovodsk	66.21	309	eP	P	09 12 42.3	+0.7
KIV				pmax	pmax		
comp=Z,23nm,1.0s							
KIV				MLR	MLR		
comp=Z,124nm,17.0s							
VSR	Storozhevoye	67.28	317	eP	P	09 12 49.1	+0.9
VSR				pmax	pmax		
comp=Z,5.0nm,0.4s							
CAST	Castle Rocks	67.49	29	eP	P	09 12 49.7	+0.3
comp=Z,22nm,1.2s							
PPLA	Purkeypile	67.52	30	eP	P	09 12 48.9	-0.8
comp=Z,12nm,1.0s							
RSO	Redoubt South	67.60	32	eP	P	09 12 48.8	-1.6
APA	Apatity	67.69	336⇑	iP	P	09 12 48.0	-2.5
APA				pmax	pmax		
comp=Z,6.0nm,1.0s							
APA				MLR	MLR		
comp=Z,300nm,14.0s							
COLD	Coldfoot	67.75	25	eP	P	09 12 51.0	+0.2
comp=Z,8.1nm,1.1s							
TOLK	Toolik Lake Re	67.78	23	P	P	09 12 51.0	-0.1
baz=278							
TOLK	Toolik Lake Re	67.78	23	eP	P	09 12 51.0	-0.1
comp=Z,9.7nm,0.9s							
SPU	Mount Spurr	67.83	31	eP	P	09 12 51.0	-0.6
MLY	Manley	67.84	27	eP	P	09 12 51.3	-0.3
comp=Z,24nm,1.2s							
BPAW	Bear Paw Mtn.	67.88	28	eP	P	09 12 51.3	-0.5
comp=Z,16nm,1.2s							
SKT	Skwentna	67.96	31	eP	P	09 12 51.4	-0.9
comp=Z,14nm,1.2s							
KTH	Kantishna Hill	67.99	29	eP	P	09 12 51.5	-1.1
comp=Z,12nm,1.0s							
KDAK	Kodiak Island	68.12	35	i P	P	09 12 54.8	+1.5
TRF	Thorofare Moun	68.29	29	eP	P	09 12 54.0	-0.5
comp=Z,7.8nm,1.0s							
SUA	Susitna One	68.41	31	eP	P	09 12 55.1	-0.2
comp=Z,41nm,1.1s							
BRLK	Bradley Lake	68.64	33	eP	P	09 12 55.1	-1.5
comp=Z,22nm,1.0s							
MCK	McKinley	68.83	28	eP	P	09 12 57.4	-0.4
comp=Z,22nm,1.2s							
MCK	McKinley	68.83	28	eP	P	09 12 57.4	-0.4
MCK				pmax	pmax		
comp=Z,22nm,1.2s							
RAYN	Ar Rayn	68.86	287	eP	P	09 12 57.8	-0.9
comp=Z,8.9nm,1.0s							
MDM	Murphy Dome	68.91	27	eP	P	09 12 57.9	-0.3
comp=Z,40nm,1.1s							
RND	Reindeer	68.93	29	eP	P	09 12 57.7	-0.8
comp=Z,37nm,1.1s							
RND	Reindeer	68.93	29	eP	P	09 12 57.7	-0.8
RND				pmax	pmax		
comp=Z,37nm,1.1s							
WRH	Wood River Hil	69.06	28	eP	P	09 12 59.2	+0.1
comp=Z,18nm,1.2s							
COLA	College	69.08	27	eP	P	09 12 59.2	-0.1
comp=Z,7.8nm,0.8s							
COLA	College	69.08	27	P	P	09 13 00.6	+1.4
COLA				pmax	pmax		
comp=Z,8.0nm,0.9s							
CCB	Clear Creek Bu	69.15	27	eP	P	09 13 00.5	+0.8
comp=Z,3.7nm,1.0s							
PMR	Palmer	69.15	31	eP	P	09 12 59.1	-0.6
comp=Z,8.9nm,0.9s							
PMR	Palmer	69.15	31	eP	P	09 12 59.1	-0.6
PMR				pmax	pmax		
comp=Z,9.0nm,0.9s							
GHO	Glory Hole Cre	69.21	31	eP	P	09 12 60.0	-0.3
comp=Z,9.6nm,0.9s							
SML	Sawmill	69.48	30	eP	P	09 13 01.7	-0.2
comp=Z,17nm,1.0s							
ILAR	Eielson Array	69.51	27	P	P	09 13 00.7	-1.3
comp=Z,2.7nm,0.8s,baz=289,slow=8.3,SNR=14							
ILB	Eielson Array	69.51	27	eP	P	09 13 01.6	-0.3
IL1	Eielson Array	69.51	27	eP	P	09 13 00.3	-1.6
DHY	Denali Highway	69.65	29	eP	P	09 13 02.7	-0.3
comp=Z,5.5nm,0.9s							
FYU	Fort Yukon	69.80	25	eP	P	09 13 03.1	-0.5
comp=Z,12nm,1.0s							
SCM	Sheep Creek Mo	69.94	30	eP	P	09 13 04.3	-0.4
comp=Z,44nm,1.2s							
SCM	Sheep Creek Mo	69.94	30	eP	P	09 13 04.3	-0.4
SCM				pmax	pmax		
comp=Z,44nm,1.2s							
SPITS	Spitsbergen Ar	70.08	348	LR	LR	09 46 50.0	
comp=Z,156nm,18.5s,baz=80,slow=38							
ARCES	ARCESS Array B	70.17	338	P	P	09 13 06.0	+0.1
comp=Z,0.9nm,0.7s,baz=54,slow=6.8,SNR=3.4							
ARCES				LR	LR	09 49 02.7	
comp=Z,138nm,18.9s,baz=66,slow=40							
PAX	Paxson	70.52	29	eP	P	09 13 08.4	+0.1
comp=Z,13nm,1.2s							
PAX	Paxson	70.52	29	eP	P	09 13 08.4	+0.1
PAX				pmax	pmax		
comp=Z,13nm,1.2s							
RIDG	Independ'e Rid	70.61	28	eP	P	09 13 07.8	-1.0
comp=Z,19nm,1.0s							
KLU	Klutina	70.67	31	eP	P	09 13 09.1	-0.1
comp=Z,11nm,1.0s							
DIV	Divide	70.83	31	eP	P	09 13 09.4	-0.7
comp=Z,33nm,1.2s							
SCRK	Sand Creek	70.92	28	eP	P	09 13 09.8	-0.9
comp=Z,9.1nm,1.0s							
DOT	Dot Lake	70.97	28	eP	P	09 13 10.2	-0.7
comp=Z,37nm,1.1s							
EGAK	Eagle	71.88	27	eP	P	09 13 15.8	-0.6
comp=Z,13nm,1.1s							
FINES	FINESS Array B	72.09	330	P	P	09 13 16.8	-0.9
comp=Z,4.5nm,0.9s,baz=62,slow=5.7,SNR=8.1							
FINES				LR	LR	09 47 48.7	
comp=Z,323nm,18.1s,baz=64,slow=38							
FINES	FINESS Array B	72.09	330	ceP	P	09 13 18.8	+1.2
CRQM	Cirque	72.17	31	eP	P	09 13 18.4	+0.1
comp=Z,35nm,1.2s							
TGL	Tana Glacier	72.31	31	eP	P	09 13 19.1	0.0
comp=Z,18nm,1.0s							
DAWY	Dawson	72.83	27	eP	P	09 13 21.9	-0.3
comp=Z,14nm,1.0s							
AKASG	Malin Array Be	73.51	318	P	P	09 13 26.1	-0.2
comp=Z,0.8nm,0.5s,baz=60,slow=6.5,SNR=8.3							
AKASG				LR	LR	09 48 24.8	
comp=Z,90nm,18.7s,baz=230,slow=38							
AKASG	Malin Array Be	73.51	318	ceP	P	09 13 28.6	+2.3
KIEV	Kiev	73.52	318	ceP	P	09 13 29.2	+2.9
KIEV				pmax	pmax		
comp=Z,6.0nm,1.7s							
ASF	Jabal al Asfar	73.54	298	P	P	09 13 27.9	+1.0
comp=Z,7.1nm,0.9s,baz=45,slow=3.5,SNR=11							
AK11	Malin Array Si	73.55	318	eP	P	09 13 25.2	-1.3
INK	Inuvik	73.57	22	eP	P	09 13 25.9	-0.4
comp=Z,10nm,0.9s							
INK	Inuvik	73.57	22	eP	P	09 13 25.9	-0.4
INK				pmax	pmax		
comp=Z,10.0nm,0.9s							
BR131	Keskin Array S	73.78	307	eP	P	09 13 27.3	-1.0
BRTR	Keskin Array B	73.78	307	P	P	09 13 28.6	+0.3
comp=Z,5.1nm,0.9s,baz=116,slow=5.0,SNR=18							
BRTR				LR	LR	09 51 00.2	
comp=Z,50nm,19.4s,baz=68,slow=40							
BRTR	Keskin Array B	73.78	307	ceP	P	09 13 30.6	+2.3
MMAI	Mount Meron Ar	74.48	300	LR	LR	09 51 30.9	
comp=Z,92nm,21.2s,baz=15,slow=40							
AFI	Afiamalu	75.06	113	LR	LR	09 44 40.9	
comp=Z,76nm,19.0s,baz=164,slow=34							
ATD	Arta Tunnel	75.25	276	LR	LR	09 47 02.2	
comp=Z,50nm,18.1s,baz=338,slow=36							
TIRR	Tirgusor	75.99	313⇑	iP	P	09 13 44.1	+3.3
TIRR	Tirgusor	75.99	313⇑	iP	P	09 13 44.1	+3.3
TLB	Topalu	76.20	313⇑	iP	P	09 13 43.6	+1.6
TLB	Topalu	76.20	313⇑	iP	P	09 13 43.6	+1.6
SKAG	Skagway	76.28	31	eP	P	09 13 41.9	-0.3
comp=Z,21nm,1.2s							
TESR	Tescani	76.47	315⇑	iP	P	09 13 45.7	+2.2
VRI	Vrincioaia	76.64	314⇑	iP	P	09 13 48.1	+3.6
VRI	Vrincioaia	76.64	314⇑	iP	P	09 13 48.1	+3.6
HULD	Heiheiahulu Di	76.65	75	eP	P	09 13 45.0	0.0
comp=Z,69nm,0.9s							
PLOR	Plostina	76.69	314⇓	iP	P	09 13 54.5	+10
PLOR	Plostina	76.69	314⇓	iP	P	09 13 54.5	+10
ISP	Isparta	76.70	306⇑	iP	P	09 13 47.4	+2.3
ISP	Isparta	76.70	306	ceP	P	09 13 46.2	+1.1
ISP				pmax	pmax		
comp=Z,16nm,1.7s							
BESE	Bessie Mountai	76.86	32	eP	P	09 13 45.7	+0.1
comp=Z,20nm,1.2s							
BURAR	Bucovina Array	77.00	316⇓	iP	P	09 13 47.8	+1.2
BURAR	Bucovina Array	77.00	316⇓	iP	P	09 13 48.6	+2.0
BURAR	Bucovina Array	77.00	316⇓	iP	P	09 13 47.8	+1.2
BUR04	Bucovina Ar. S	77.00	316	eP	P	09 13 45.1	-1.6
JIS	Juneau Island	77.21	32	eP	P	09 13 47.8	+0.5
comp=Z,19nm,1.2s							
MLR	Muntele Rosu	77.28	314	P	P	09 13 46.7	-1.5
comp=Z,0.3nm,0.4s,baz=180,slow=2.0,SNR=2.5							
MLR				LR	LR	09 53 12.5	
comp=Z,36nm,18.6s,baz=48,slow=40							
MLR	Muntele Rosu	77.28	314⇑	iP	P	09 13 50.5	+2.2
KLNR	Kaliningrad	77.34	324	i P	P	09 13 48.6	+0.4
KLNR				pmax	pmax		
comp=Z,49nm,0.8s							
ARR	Arges	78.19	314⇑	iP	P	09 13 56.1	+2.8
HFS	Hagfors	78.21	331	LR	LR	09 51 29.3	
comp=Z,482nm,19.4s,baz=61,slow=38							
HUMR	Humele	78.27	313⇑	iP	P	09 13 56.6	+3.0
NOA	NORSAR Array B	78.86	332	LR	LR	09 51 59.5	
comp=Z,520nm,18.3s,baz=55,slow=38							
DLBC	Dease Lake	79.21	31	eP	P	09 13 57.9	-0.7
comp=Z,6.6nm,1.0s							
OJC	Ojcow	79.32	320	eP	P	09 13 57.9	-1.4
comp=Z,4.4nm,0.7s							
OJC	Ojcow	79.32	320	eP	P	09 13 57.9	-1.4
OJC				pmax	pmax		
comp=Z,4.0nm,0.7s							
SIRR	Siria	79.77	316⇓	iP	P	09 13 54.9	-6.9
HERR	Herculane	79.83	315⇑	iP	P	09 13 55.7	-6.4
VTS	Vitosha	80.19	312⇓	iP	P	09 14 07.6	+3.2
VTS	Vitosha	80.19	312	eP	P	09 14 02.3	-2.1
comp=Z,10nm,0.9s							
VTS	Vitosha	80.19	312	eP	P	09 14 02.3	-2.1
VTS				pmax	pmax		
comp=Z,10.0nm,0.9s							
VYHS	Vyhne	80.61	319	eP	P	09 14 07.3	+1.0
VYHS				pmax	pmax		
comp=Z,3.0nm,1.0s							
VYHS	Vyhne	80.61	319	eP	P	09 14 07.3	+1.0
JAVC	Velka Javorina	81.15	320	eP	P	09 14 11.5	+2.3
DPC	Dobruska-Polom	81.28	321	eP	P	09 14 11.9	+2.0
DPC				ex	x	09 14 20.5	
DPC				ex	x	09 14 26.1	
DPC				AMS	AMS	09 55 00.0	
comp=Z,200nm,14.0s							
DPC	Dobruska-Polom	81.28	321	eP	P	09 14 11.9	+2.0
DPC				e		09 14 20.5	
DPC				e		09 14 26.1	
DPC				MLR	MLR		
comp=Z,200nm,14.0s							
UPC	Upice	81.38	322	AMS	AMS	09 54 40.0	
comp=Z,200nm,16.5s							
DIVS	Divibare	81.73	315	eP	P	09 14 10.8	-1.7
comp=Z,3.7nm,1.1s							
GOPC	GO Pecny, Ondr	82.36	321	AMS	AMS	09 55 40.0	
comp=Z,200nm,13.7s							
BRG	Berggiesshubel	82.38	322	eP	P	09 14 17.1	+1.5
comp=Z,11nm,1.7s							
BRG	Berggiesshubel	82.38	322	eP	P	09 14 17.1	+1.5
comp=Z,11nm,1.7s							
BRG	Berggiesshubel	82.38	322	eP	P	09 14 17.1	+1.5
BRG				pmax	pmax		
comp=Z,11nm,1.7s							
CLL	Collm	82.70	323	eP	P	09 14 17.0	-0.3
CLL				i		09 14 29.0	
CLL				eS	S	09 24 36.0	+0.8
CLL	Collm	82.70	323	eP	P	09 14 17.0	-0.3
YKA	Yellowknife Ar	83.31	23	P	P	09 14 19.6	-0.6
comp=Z,4.8nm,0.7s,baz=312,slow=5.1,SNR=14							
YKA				LR	LR	09 54 23.9	
comp=Z,5.4nm,18.1s,baz=322,slow=38							
KHC	Kasperske Hory	83.42	321	eP	P	09 14 22.9	+1.8
KHC				AMS	AMS	09 54 20.0	
comp=Z,200nm,14.8s							
KHC	Kasperske Hory	83.42	321	eP	P	09 14 22.9	+1.8
KHC				MLR	MLR		
comp=Z,200nm,14.8s							
GEC2	GERESS Array S	83.48	321	eP	P	09 14 20.7	-0.8
comp=Z,3.7nm,1.1s							
GEC2	GERESS Array S	83.48	321	eP	P	09 14 20.7	-0.8
GEC2				pmax	pmax		
comp=Z,4.0nm,1.1s							
GERES	GERESS Array B	83.48	321	P	P	09 14 21.6	0.0
comp=Z,2.0nm,0.8s,baz=50,slow=4.4,SNR=13							
GERES				LR	LR	09 53 31.7	
comp=Z,122nm,19.6s,baz=74,slow=37							
GEA0	GERESS Array S	83.49	321	eP	P	09 14 20.4	-1.1
NKC	Novy Kostel	83.53	322	AMS	AMS	09 55 20.0	
comp=Z,200nm,15.0s							
BOJS	Bojanci	84.13	317	i P	P	09 14 26.4	+1.6
VISS	Visnje	84.25	318	i P	P	09 14 26.6	+1.3
JAVS	Javornik	84.68	318	i P	P	09 14 28.1	+0.4
FUORN	Ofenpass-Fuorn	86.61	320	eP	P	09 14 36.3	-1.1
comp=Z,2.5nm,0.8s							
EKA	Eskdalemuir Ar	88.35	332	LR	LR	09 58 21.9	
comp=Z,255nm,19.0s,baz=50,slow=38							
VAE	Valguarnera	88.50	311	LR	LR	10 01 40.3	
comp=Z,45nm,18.2s,baz=126,slow=40							
B05A	Bryant	88.55	37	P	P	09 14 46.9	+0.5
baz=305							
D05A	Enumclaw	89.22	38	eP	P	09 14 50.5	+0.8
comp=Z,14nm,0.9s							
LON	Longmire	89.58	38	eP	P	09 14 49.5	-1.9
comp=Z,7.3nm,0.9s							
LON	Longmire	89.58	38	eP	P	09 14 49.5	-1.9
LON				pmax	pmax		
comp=Z,7.0nm,0.9s							
LTY	Liberty	89.92	37	eP	P	09 14 51.7	-1.3
comp=Z,5.5nm,0.9s							
B08A	Colville Reser	89.99	36	eP	P	09 14 52.6	-0.6
comp=Z,10nm,1.0s							
I03D	Drain, OR	90.40	41	P	P	09 14 56.1	+0.9
baz=304							
J04D	Umpqua Nationa	91.40	41	P	P	09 15 00.0	-0.1
baz=305							
PINE	Pine Mountain	91.78	40	eP	P	09 15 02.4	+0.5
comp=Z,9.8nm,0.9s							
YBH	Yreka Blue Hor	91.89	42	P	P	09 15 02.6	+0.3
comp=Z,3.7nm,1.1s,baz=274,slow=7.4,SNR=4.0							
YBH				LR	LR	10 01 03.7	
comp=Z,20nm,18.1s,baz=324,slow=39							
J05D	Fort Rock, OR	91.90	41	P	P	09 15 02.6	+0.2
baz=305							
M04C	Macdoel	92.40	42	P	P	09 15 04.6	-0.1
baz=305							
K05A	Summer Lake	92.43	41	eP	P	09 15 04.7	-0.2
comp=Z,20nm,1.1s							
KEST	Kesra	92.89	311	LR	LR	10 02 57.5	
comp=Z,53nm,19.7s,baz=270,slow=39							
BMO	Blue Mountains	93.24	38	eP	P	09 15 08.2	-0.3
comp=Z,3.4nm,1.1s							
BMO	Blue Mountains	93.24	38	eP	P	09 15 08.2	-0.3
BMO				pmax	pmax		
comp=Z,3.0nm,1.1s							
MOD	Modoc Plateau	93.27	41	eP	P	09 15 08.4	-0.3
comp=Z,7.8nm,1.1s							
J08A	Circle Bar Ran	93.48	39	eP	P	09 15 09.3	-0.4
comp=Z,5.3nm,1.0s							
BEKR	Beckworth	94.42	43	eP	P	09 15 13.2	-0.9
comp=Z,4.0nm,1.0s							
MFID	Camas Ranch	94.97	38	eP	P	09 15 16.3	-0.2
comp=Z,2.4nm,1.0s							
PAHR	Pah Rah Range	95.12	43	eP	P	09 15 16.4	-0.9
comp=Z,6.5nm,1.2s							
VCNR	Virginia City	95.20	43	eP	P	09 15 17.5	-0.2
comp=Z,4.9nm,1.0s							
CMB	Columbia Colle	95.47	44	eP	P	09 15 18.2	-0.5
comp=Z,3.1nm,0.9s							
CMB	Columbia Colle	95.47	44	eP	P	09 15 18.3	-0.5
CMB				pmax	pmax		
comp=Z,3.0nm,0.9s							
HLID	Hailey	95.66	37	P	P	09 15 19.4	-0.3
baz=310							
HLID	Hailey	95.66	37	eP	P	09 15 19.8	+0.1
comp=Z,2.5nm,0.9s							
PPT	Papeete	95.85	107	LR	LR	09 48 59.8	
comp=Z,86nm,19.8s,baz=324,slow=30							
PPT2	Papeete2	95.85	107	eLR	LR	09 46 15.3	
comp=Z,260nm,26.0s							
RYN	Ryan	96.30	43	eP	P	09 15 22.7	0.0
comp=Z,3.3nm,1.1s							
KVN	Kaiserville	96.31	43	eP	P	09 15 22.9	+0.1
comp=Z,6.5nm,1.2s							
KVN	Kaiserville	96.31	43	eP	P	09 15 22.9	+0.1
KVN				pmax	pmax		
comp=Z,7.0nm,1.2s							
PMOR	Pomariorio Ree	96.35	104	eT	T	11 02 27.0	
comp=Z,2.8nm,0.3s							
NV01	Mina Array Sit	96.56	43	eP	P	09 15 24.2	+0.3
NVAR	Mina Array Bea	96.56	43	P	P	09 15 24.5	+0.5
comp=Z,1.0nm,0.8s,baz=288,slow=5.2,SNR=7.2							
NVAR				LR	LR	09 55 25.7	
comp=Z,33nm,19.2s,baz=84,slow=33							
TBI	Tubuai	98.15	112	eT	T	11 04 46.2	
comp=Z,5.6nm,0.3s							
ULM	Lac du Bonnet	99.28	23	LR	LR	10 03 47.2	
comp=Z,88nm,19.2s,baz=40,slow=37							
TAOE	Nuku Hiva Isla	101.02	95	eLR	LR	09 48 38.8	
comp=Z,66nm,23.5s							
TAOE	Nuku Hiva Isla	101.02	95	eT	T	11 08 03.3	
comp=Z,9.9nm,0.2s							
RUSC	La Rusia	147.32	28	ePKPbc	PKPbc	09 21 37.6	-1.2
LPAZ	La Paz	168.29	53	PKPab	PKPab	09 23 09.3	-1.1
comp=Z,1.3nm,0.9s,baz=10,slow=2.2,SNR=3.9							

TAP 17 09:02:58.8, 23°69N×121°52E, h1km, ML4.2, 1D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	Guangfu	0.09	256	P	Pg	09 03 01.6	+1.1
baz=266							
EGFH				S	Sg	09 03 03.2	+1.5
baz=266							
ESL	Shilin	0.15	326	⇓iP	Pg	09 03 02.5	+0.9
baz=319							
ESL				i S	Sg	09 03 05.0	+1.4
baz=319							
HGSD	Ruisui	0.22	205	P	Pg	09 03 04.8	+1.9
baz=191							
HGSD				eS	Sg	09 03 09.1	+3.3
baz=191							
ENLB	Shoufeng	0.22	19	eP	Pg	09 03 05.6	+2.6
baz=22							
EHY	Hungye	0.26	225	P	Pg	09 03 04.7	+0.9
baz=234							
EHY				eS	Sb	09 03 09.3	-1.9
baz=234							
HWA	Hwalien	0.29	15	eP	Pb	09 03 06.9	0.0
baz=18							
VWDT	VWDT	0.35	280	eP	Pb	09 03 06.9	-1.0
baz=281							
VWDT				eS	Sg	09 03 11.5	+1.3
baz=281							
YULB	Yu-li	0.36	215	eP	Pb	09 03 07.3	-0.7
baz=230							
YULB				eS	Sg	09 03 12.1	+1.6
baz=230							
TWD	Chiawan	0.39	10	eP	Pb	09 03 07.7	-0.9
baz=358							
NACB	Ninganchiao	0.48	8	eP	Pb	09 03 10.0	-0.1
baz=354							
CHGB	Renai	0.49	319	eP	Pb	09 03 09.5	-0.8
baz=317							
CHGB				eS	Sg	09 03 15.8	+1.3
baz=317							
SSLB	Suanglung	0.53	281	P	Pb	09 03 10.2	-0.7
baz=282							
SSLB				eS	Sg	09 03 17.0	+1.2
baz=282							
FULB	Fuli	0.53	203	eP	Pn	09 03 12.5	-1.1
baz=220							
SMLT	Sun Moon Lake	0.60	289	eP	Pb	09 03 11.6	-0.6
baz=289							
SMLT				eS	Sg	09 03 19.1	+1.0
baz=289							
CHKT	Chengkung	0.61	194	eP	Pb	09 03 12.0	-0.1
baz=177							
TYC	Yuchr	0.65	289	eP	Pb	09 03 12.4	-0.5
baz=288							
ELDTW	Lidau	0.68	223	eP	Pb	09 03 13.0	-0.5
baz=234							
WJS	Zhushan	0.74	280	eP	Pb	09 03 14.9	+0.5
baz=278							
NNSB	Datong	0.74	350	eP	Pb	09 03 13.9	-0.7
baz=341							
NNSH	Datong	0.74	350	P	Pb	09 03 14.0	-0.6
baz=338							
NNSH				eS	Sb	09 03 24.4	-0.9
baz=338							
NNS	Nan Shan	0.76	350	P	Pb	09 03 14.4	-0.4
baz=341							
ENA	Nanau	0.76	15	eP	Pb	09 03 14.8	0.0
baz=5.0							
NANB	Nanao	0.76	16	eP	Pb	09 03 14.8	0.0
baz=5.0							
ENAH	Nanao	0.80	19	eP	Pg	09 03 14.6	+0.5
baz=22							
WDLH	Douliu	0.90	270	eP	Pn	09 03 18.3	-0.3
baz=267							
TPUB	Ta-pu	0.91	245	eP	Pb	09 03 17.9	+0.6
baz=243							
WTP	Ta-pu	0.94	242	eP	Pb	09 03 18.3	+0.3
baz=240							
ENTT	Nioudou	0.95	2	eP	Pb	09 03 18.3	+0.3
baz=6.0							
TWG	Pinlang	0.96	206	eP	Pn	09 03 19.6	+0.2
baz=185							
TWGBT	Beinan	0.96	205	eP	Pn	09 03 19.6	+0.2
baz=185							
TWC	Suao	0.96	18	eP	Pn	09 03 19.1	-0.3
baz=10.0						

	baz=318						
NWLT	Wulai	1.08	359	eP	Pg	09 03 19.3	-0.2
	baz=1.0						
RLNB	Erlin	1.08	281	eP	Pb	09 03 20.0	-0.3
	baz=278						
WLGB	Puzi	1.14	260	eP	Pg	09 03 20.2	-0.5
	baz=257						
NTC	Toucheng	1.19	14	eP	Pn	09 03 22.5	0.0
	baz=358						
ECL	Taimali	1.21	206	eP	Pn	09 03 23.3	+0.5
	baz=185						
EGS		1.21	18	eP	Pn	09 03 22.7	0.0
	baz=3.0						
SSD	Sandimen	1.25	221	eP	Pn	09 03 23.4	0.0
	baz=209						
TATO	Taipei	1.28	359	eP	Pg	09 03 23.2	-0.1
TWA	Mucha	1.28	2	eP	Pn	09 03 25.7	+1.8
	baz=6.0						
TIPB	Shuangxi	1.30	12	eP	Pn	09 03 25.4	+1.2
	baz=15						
NCUH	Zhongli	1.31	346	eP	Pn	09 03 25.8	+1.6
	baz=330						
NCU	National Centr	1.31	347	eP	Pn	09 03 25.0	+0.8
	baz=2.0						
MASBT	Mashibuluo	1.35	218	eP	Pb	09 03 25.4	+0.6
	baz=214						
NWF	Wu-fen Shan	1.39	10	eP	Pb	09 03 27.2	+1.5
	baz=13						
WFSB	Wu-fen Shan	1.39	10	eP	Pb	09 03 27.2	+1.6
	baz=11						
YM04	YM04	1.46	0	eP	Pg	09 03 26.8	+0.1
	baz=2.0						
YM07	YM07	1.48	3	eP	Pg	09 03 27.6	+0.4
	baz=5.0						
YM03	YM03	1.48	1	eP	Pb	09 03 27.1	0.0
	baz=1.0						
YM12	YM12	1.48	2	eP	Pg	09 03 28.2	+1.0
	baz=2.0						
YM08	YM08	1.49	2	eP	Pg	09 03 28.0	+0.6
	baz=3.0						

*JMA **17** 09:07:51.9±0.1, 23.°64N×121.°65E, h0km, M3.8*
*BJI **17** 09:07:51.5, 23.°63N×121.°63E, h6km, ML4.1/6*
*IDC **17** 09:07:51.5±0.9, 23.°56N×121.°61E, h0km, mb3.9/16, mb1 4.1/17, mb1mx3.9/67, mbtmp3.9/17, ML3.7/1, Error ellipse: s-maj=21.0km s-min=20.2km az=20.0*
*ISCJB **17** 09:07:52.9±0.3, 23.°65N±0.°01×121.°61E±0.°02, h10km±2km, mb4.2/36, Error ellipse: s-maj=2.7km s-min=1.8km az=40.4*
*TAP **17** 09:07:52.9, 23.°68N×121.°52E, h7km, ML4.4, C*
*NEIC **17** 09:07:53.2±0.3, 23.°59N×121.°60E, h10km, mb4.6/20, Error ellipse: s-maj=5.8km s-min=4.3km az=130.0*
ISC 17 09:07:53.2±0.7, **23.°65N**±0.°02×**121.°59E**±0.°02, **h8**km±4km, **n182**, σ1¶**00**/219, **mb4.3**/36, **10C-20D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	Guangfu	0.15	278	⇓iP	Pg	09 07 55.4	-1.0
	baz=275						
EGFH				i S	Sg	09 07 57.4	-1.2
	baz=275						
ESL	Shilin	0.22	319	⇓iP	Pg	09 07 56.5	-1.1
	baz=322						
ESL				S	Sg	09 07 59.0	-1.6
	baz=322						
HGSD	Ruisui	0.22	224	⇓P	Pg	09 07 58.4	+0.8
	baz=201						
HGSD				S	Sg	09 08 02.3	+1.8
	baz=201						
ENLB	Shoufeng	0.25	3	⇑P	Pb	09 07 59.7	-0.4
	baz=15						
ENLB				eS	Sb	09 08 04.8	+0.1
	baz=15						
EHY	Hungye	0.28	240	⇓iP	Pg	09 07 58.3	-0.5
	baz=238						
EHY				S	Sg	09 08 02.6	0.0
	baz=238						
HWA	Hwalien	0.33	3	eP	Pg	09 08 00.3	+0.7
	baz=13						
YULB	Yu-li	0.37	226	⇓P	Pg	09 08 00.3	-0.1
	baz=229						
YULB				eS	Sg	09 08 06.2	+0.9
	baz=229						
YULB	Yu-li	0.37	226	ePg	Pg	09 08 00.2	-0.3
YULB				eSg	Sb	09 08 06.9	-1.1
TWF1	Yuli	0.40	222	⇓P	Pg	09 08 01.1	+0.1
	baz=223						
TWF1				eS	Sb	09 08 07.9	-1.0
	baz=223						
VWDT	VWDT	0.42	284	⇓P	Pg	09 08 00.8	-0.6
	baz=283						
VWDT				eS	Sg	09 08 06.3	-0.7
	baz=283						
TWD	Chiawan	0.43	1	⇑P	Pg	09 08 01.4	-0.1
	baz=358						
TWD				eS	Sg	09 08 07.7	+0.5
	baz=358						
NACB	Ninganchiao	0.52	1	⇑P	Pg	09 08 02.8	-0.5
	baz=4.0						
NACB	Ninganchiao	0.52	1	ePg	Pg	09 08 02.9	-0.4
FULB	Fuli	0.52	211	eP	Pb	09 08 04.7	0.0
	baz=186						
CHGB	Renai	0.56	317	⇓P	Pg	09 08 03.3	-0.7
	baz=327						
CHGB				S	Sg	09 08 09.8	-1.6
	baz=327						
CHKT	Chengkung	0.58	201	P	Pb	09 08 05.1	-0.6
	baz=194						
CHKT				S	Sb	09 08 14.8	+0.6
	baz=194						
SSLB	Suanglung	0.60	283	⇓P	Pg	09 08 03.9	-0.9
	baz=283						
SSLB				S	Sg	09 08 11.3	-1.3
	baz=283						
SSLB	Suanglung	0.60	283	ePg	Pg	09 08 03.7	-1.1
SSLB				eSg	Sg	09 08 11.8	-0.8
SMLT	Sun Moon Lake	0.67	290	⇓iP	Pg	09 08 05.4	-0.8
	baz=290						
SMLT				S	Sg	09 08 14.3	-0.7
	baz=290						
ELDTW	Lidau	0.70	229	⇓iP	Pg	09 08 06.0	-0.7
	baz=236						
ENA	Nanau	0.79	10	eP	Pg	09 08 08.0	-0.3
	baz=355						
NANB	Nanao	0.79	11	⇓eP	Pg	09 08 08.2	-0.2
	baz=355						
NNSB	Datong	0.80	346	⇓P	Pg	09 08 08.1	-0.5
	baz=341						
NNSB				eS	Sg	09 08 18.9	-0.1
	baz=341						
NNSH	Datong	0.80	346	eP	Pg	09 08 07.9	-0.7
	baz=344						
WJS	Zhushan	0.81	282	eP	Pb	09 08 09.3	-0.2
	baz=288						
WJS				eS	Sb	09 08 20.4	-0.2
	baz=288						
NNS	Nan Shan	0.81	346	⇓iP	Pg	09 08 08.3	-0.5
	baz=341						
NNS				eS	Sg	09 08 18.8	-0.6
	baz=341						
ENAH	Nanao	0.82	14	eP	Pg	09 08 08.8	-0.3
TWH	Lutao	0.94	186	eP	Pg	09 08 10.5	-0.7
	baz=169						
WGK	Gukeng	0.94	272	⇑P	Pb	09 08 11.9	+0.1
	baz=274						
TPUB	Ta-pu	0.95	249	⇓P	Pb	09 08 11.6	-0.4
	baz=256						
TPUB				eS	Sg	09 08 23.0	-0.7
	baz=256						
TPUB	Ta-pu	0.95	249	ePg	Pg	09 08 11.4	0.0
TWGBT	Beinan	0.95	210	eP	Pg	09 08 10.0	-1.5
	baz=207						
TWG	Pinlang	0.95	210	eP	Pg	09 08 10.2	-1.2
	baz=207						
TWG	Pinlang	0.95	210	ePg	Pg	09 08 09.9	-1.6
WDLH	Douliu	0.96	273	eP	Pb	09 08 12.3	+0.1
	baz=274						
TCU	Taichung	0.97	301	eP	Pb	09 08 12.3	-0.1
	baz=304						
TTN	Taitung	0.98	205	eP	Pn	09 08 13.5	+0.2
	baz=201						
WTP	Ta-pu	0.98	246	eP	Pg	09 08 12.0	0.0
	baz=246						
TWC	Suao	0.98	14	eP	Pg	09 08 11.8	-0.4
	baz=358						
ENTT	Nioudou	0.99	359	eP	Pg	09 08 11.8	-0.4
	baz=359						
EOS1	EOS1	1.02	29	eP	Pn	09 08 14.4	+0.5
	baz=47						
YHNB	Yeheng	1.03	349	⇑P	Pg	09 08 12.6	-0.5
	baz=349						
YHNB	Yeheng	1.03	349	ePg	Pg	09 08 12.9	-0.2
WCHH	Zhanghua	1.04	295	eP	Pb	09 08 13.5	+0.1
	baz=297						
NSK	Sanguang	1.04	348	⇓iP	Pg	09 08 12.8	-0.4
	baz=338						
NSK				eS	Sg	09 08 26.6	-0.2
	baz=338						
TWE	Neicheng	1.07	4	eP	Pg	09 08 13.4	-0.3
	baz=4.0						
NSY	Sanyi	1.07	315	⇑P	Pb	09 08 14.3	+0.2
	baz=317						
CHN1	Nanshi	1.08	245	⇑P	Pb	09 08 14.1	-0.1
	baz=243						
CHN1				eS	Sn	09 08 29.2	-0.7
	baz=243						
CHY	Chiayi	1.08	262	eP	Pn	09 08 14.4	-0.3
	baz=261						
CHY				eS	Sn	09 08 30.2	+0.4
	baz=261						
TWK	Hsinying	1.08	250	⇑P	Pb	09 08 14.0	-0.2
	baz=248						
TWK				eS	Sn	09 08 29.9	0.0
	baz=248						
SGST	Jiashian	1.08	239	⇑P	Pb	09 08 14.1	-0.1
	baz=239						
SLGT	Liugui	1.08	233	eP	Pb	09 08 14.2	0.0
	baz=233						
NSTT	Nanjuang	1.12	331	eP	Pg	09 08 13.8	-0.8
	baz=334						
LIOB	Emei	1.12	332	⇓P	Pg	09 08 14.6	-0.2
	baz=334						
NMLH	Miaoli	1.15	321	eP	Pn	09 08 15.8	+0.2
	baz=323						
RLNB	Erlin	1.15	282	⇓P	Pb	09 08 15.4	0.0
	baz=282						
RLNB				S	Sn	09 08 31.5	-0.2
	baz=282						
WLGB	Puzi	1.20	262	eP	Pg	09 08 15.7	-0.4
	baz=265						
ECL	Taimali	1.20	209	eP	Pg	09 08 14.8	-1.4
	baz=190						
EGS		1.23	15	eP	Pg	09 08 17.6	+0.7
	baz=358						
WSF	Szhu	1.25	270	eP	Pn	09 08 15.8	-1.3
	baz=272						
SSD	Sandimen	1.26	225	⇓P	Pn	09 08 16.8	-0.4
	baz=215						
SSD				eS	Sn	09 08 34.8	+0.5
	baz=215						
CHN3	Shinhua	1.26	243	eP	Pg	09 08 18.0	+0.6
	baz=246						
SBCB	Hsinchu	1.27	334	eP	Pn	09 08 17.3	+0.1
	baz=333						
SBCB				eS	Sn	09 08 35.6	+1.2
	baz=333						
HSN	Hsinchu	1.28	334	eP	Pn	09 08 16.9	-0.5
	baz=337						
CHN8	Yiju	1.30	257	⇑P	Pn	09 08 17.5	-0.2
	baz=257						
CHN8				S	Sn	09 08 36.7	+1.4
	baz=257						
TATO	Taipei	1.32	356	eP	Pg	09 08 18.7	+0.1
	baz=354						
TATO	Taipei	1.32	356	ePn	Pb	09 08 18.2	-0.1
TWA	Mucha	1.32	360	eP	Pg	09 08 18.9	+0.2
	baz=358						
TIPB	Shuangxi	1.33	9	eP	Pn	09 08 17.4	-0.9
	baz=354						
MASBT	Mashibuluo	1.36	221	eP	Pn	09 08 18.1	-0.3
	baz=212						
MASBT				eS	Sn	09 08 37.5	+0.8
	baz=212						
NCUH	Zhongli	1.36	344	eP	Pg	09 08 19.7	+0.3
	baz=355						
NCU	National Centr	1.36	344	eP	Pg	09 08 19.9	+0.5
	baz=355						
SCLT	Jiali	1.37	250	eP	Pn	09 08 18.6	0.0
	baz=251						
SCLT				eS	Sg	09 08 39.2	+2.0
	baz=251						
SGLT	Jiouru	1.37	228	eP	Pg	09 08 20.3	+0.9
	baz=229						
TAP1	Taipei	1.39	358	eP	Pb	09 08 19.4	0.0
	baz=355						
TAI1	Yung-k'ang	1.39	244	eP	Pn	09 08 18.8	-0.1
	baz=248						
TWB1	Santiao Chiao	1.40	15	eP	Pg	09 08 20.1	0.0
	baz=358						
NWF	Wu-fen Shan	1.43	7	eP	Pg	09 08 20.4	-0.2
	baz=4.0						
WFSB	Wu-fen Shan	1.43	7	eP	Pg	09 08 21.0	+0.5
	baz=4.0						
TAW	Tawu	1.44	207	eP	Pn	09 08 17.8	-1.7
	baz=189						
TWS1	Kuangyinshan	1.45	354	eP	Pg	09 08 21.1	0.0
	baz=352						
JYNG	Yonagunijimaku	1.48	57	P	Pn	09 08 19.9	-0.2
JYNG				eS	Sg	09 08 40.8	+0.2
YM04	YM04	1.50	358	eP	Pb	09 08 21.3	0.0
	baz=356						
YM10	YM10	1.50	359	eP	Pb	09 08 21.6	+0.2
	baz=358						
YM11	YM11	1.51	359	eP	Pg	09 08 22.3	+0.1
	baz=359						
YM07	YM07	1.52	1	eP	Pn	09 08 20.8	0.0
YM03	YM03	1.52	358	eP	Pg	09 08 22.7	+0.2
	baz=356						
YM12	YM12	1.53	359	eP	Pb	09 08 22.1	+0.3
	baz=359						
YOJ	Yonaguni jima	1.53	58	eP	Pb	09 08 21.1	-0.8
	baz=55						
YOJ	Yonaguni jima	1.53	58	ePn	Pb	09 08 21.1	-0.8
YOJ	Yonaguni jima	1.53	58	P	Pn	09 08 20.7	-0.2
YOJ				eS	Sg	09 08 42.7	+0.3
YM08	YM08	1.53	0	eP	Pn	09 08 21.3	+0.4
	baz=359						
SCZT	Fangliau	1.55	215	eP	Pb	09 08 21.8	-0.4
	baz=223						
LAY	Lan-yu	1.60	181	eP	Pn	09 08 19.4	-2.5
	baz=166						
TWY	Chenhua	1.62	0	eP	Pg	09 08 24.2	-0.1
	baz=360						
WLCH	Liuqiu	1.71	221	eP	Pg	09 08 27.3	+1.4
	baz=222						
TWP	Hsiaoliuchiu	1.72	221	eP	Pg	09 08 27.0	+0.8
	baz=222						
WDGT	Dungji	1.81	258	eP	Pn	09 08 23.8	-0.9
	baz=259						
WDGT				eS	Sn	09 08 48.7	+0.7
	baz=259						
TWK1	Hengchun	1.84	203	eP	Pb	09 08 27.1	-0.1
	baz=188						
TWKBT	Hengchun	1.84	203	eP	Pb	09 08 27.1	-0.2
	baz=188						
TSEB	Hengchuen, Pin	1.85	200	eP	Pb	09 08 26.8	-0.5
	baz=186						
PHUB	P'eng-hu	1.86	266	eP	Pn	09 08 24.7	-0.7
	baz=268						
PHUB				eS	Sb	09 08 50.1	-0.7
	baz=268						
PNG	Penghu	1.87	268	eP	Pn	09 08 25.1	-0.4
	baz=272						
VCHM	Qimei	2.03	258	eP	Pn	09 08 27.6	-0.1
	baz=263						
HATJ	Hateruma jima	2.07	78	S	Sn	09 08 54.5	+0.2
IRIF	Iriomote-Funau	2.07	70	P	Pn	09 08 28.7	+0.4
IRIF				eS	Sb	09 08 55.5	-1.6
JKRS	Kuro-shima	2.29	75	P	Pn	09 08 31.3	0.0
JKRS				S	Sn	09 09 00.9	+1.2
VWUC	VWUC	2.37	305	eP	Pn	09 08 31.1	-1.3
	baz=307						
JIJ	Ishigaki jima	2.44	73	P	Pn	09 08 32.9	-0.5
JIJ				eS	Sn	09 09 02.9	-0.6
JISG	Ishigakijimahi	2.66	69	P	Pn	09 08 35.9	-0.5
JISG				eS	Sn	09 09 08.3	-0.5
MATB	Ma-tsu	2.90	329	eP	Pn	09 08 39.4	-0.4
	baz=329						
KNM	Kinmen	2.98	285	eP	Pn	09 08 42.0	+1.1
	baz=288						
JTJ	Tarama	3.01	70	P	Pn	09 08 41.2	0.0
JTJ				eS	Sn	09 09 16.6	-0.9
QZH	Quanzhou	3.02	296	⇓iPn	Pn	09 08 41.0	-0.4
QZH				Sn	Sn	09 09 13.8	-4.0
QZH				smax	smax		
	comp=N,800nm,0.9s						
QZH				smax	smax		
	comp=E,630nm,1.0s						
KNMB	Chin-men Tao	3.04	286	eP	Pn	09 08 40.8	-0.8
	baz=289						
JIRB	Irabujima	3.48	70	P	Pn	09 08 46.3	-1.3
JIRB				eS	Sn	09 09 28.1	-0.9
JOW	Kunigami	6.83	61	Pn	Pn	09 09 32.0	-1.8
	3.0nm,0.3s,baz=297,slow=24,SNR=5.0						
JOW				Sn	Sn	09 10 50.5	-1.3
	1.1nm,0.3s,baz=108,slow=20,SNR=1.7						
KS15	Wonju Array Si	14.77	20	ePn	Pn	09 11 24.5	+2.0
KSAR	Wonju Array Be	14.77	20	Pn	P	09 11 26.7	-1.9
KSRS	Korea Array	14.79	20	Pn	P	09 11 26.7	-2.1
	0.5nm,0.3s,baz=204,slow=12,SNR=17						
LZH	Lanzhou	19.72	313	eP	P	09 12 19.5	-4.0
LZH				pP	Pn	09 12 22.0	-2.9
LZH				sP	pP	09 12 24.3	-1.3
LZH				ePP	sP	09 12 28.0	+1.4
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
LZH				pmax	pmax		
	comp=Z,76nm,4.9s						
LZH				LR	LR		
	comp=N,220nm,11.0s						
LZH				LR	LR		
	comp=E,210nm,10.5s						
LZH				LR	LR		
	comp=Z,280nm,15.2s						
CHTO	Chiang Mai	21.64	261	eP	P	09 12 45.4	+1.2
	comp=Z,5.5nm,1.0s						
CM01	Chiang Mai Arr	21.74	260	eP	P	09 12 45.3	0.0
CM31	Chiang Mai Arr	21.75	261	eP	P	09 12 46.2	+0.8
CMAR	Chiang Mai Arr	21.75	261	P	P	09 12 44.8	-0.6
	comp=Z,3.6nm,0.8s,baz=64,slow=8.2,SNR=11						
USRK	Ussuriysk Ar.	22.20	20	P	P	09 12 51.0	+1.0
	comp=Z,1.3nm,0.6s,baz=221,slow=11,SNR=4.3						
GTA	Gaotai	24.23	316	eP	P	09 13 14.8	+4.1
GTA				pP	sP	09 13 20.1	+6.1
GTA				sP	pP	09 13 23.4	+10
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KLR	Kul'dur	26.76	15	P	P	09 13 31.8	-1.6
	comp=Z,0.3nm,0.9s,baz=221,slow=6.2,SNR=7.3						
SONA0	Songino Array	27.00	337	eP	P	09 13 35.2	-0.5
SONM	Songino Array	27.00	337	P	P	09 13 35.2	-0.5
	comp=Z,1.2nm,0.6s,baz=147,slow=8.6,SNR=5.6						
SONA1	Songino Array	27.01	337	eP	P	09 13 38.2	+2.4
WMQ	Urumqi	34.29	314	P	P	09 14 42.0	+1.9
MK01	Makanchi Array	38.96	316	eP	P	09 15 20.0	+0.1
MK31	Makanchi Array	38.98	316	eP	P	09 15 20.2	+0.2
MK32	Makanchi Array	38.98	316	eP	P	09 15 20.5	+0.5
MKAR	Makanchi Array	38.98	316	P	P	09 15 20.5	+0.5
	comp=Z,1.7nm,0.7s,baz=110,slow=10,SNR=10						
MKAR	Makanchi Array	38.98	316	eP	P	09 15 20.2	+0.2
	comp=Z,15nm,0.8s						
MAKZ	Makanchi	39.18	316	eP	P	09 15 21.5	-0.2
	comp=Z,4.7nm,1.1s						
ZALV	Zalesovo Beam	40.89	327	P	P	09 15 34.7	-1.0
	comp=Z,2.0nm,0.6s,baz=118,slow=7.8,SNR=7.6						
ZALV	Zalesovo Beam	40.89	327	eP	P	09 15 34.0	-1.7
ZAA1	Zalesovo Array	40.90	327	eP	P	09 15 34.7	-1.1
NRN	Naryn	41.80	306	eP	P	09 15 44.5	+0.7
	comp=Z,3.9nm,0.6s						
H11N1	WAKE ISLAND Hy	42.15	86	T	T	10 00 43.6	
	baz=283,slow=75,SNR=24						
H11N2	WAKE ISLAND Hy	42.15	86	T	T	10 00 43.7	
	baz=283,slow=75,SNR=30						
H11N3	WAKE ISLAND Hy	42.16	86	T	T	10 00 45.0	
	baz=283,slow=75,SNR=24						
H11S3	WAKE ISLAND Hy	42.26	88	T	T	10 00 51.7	
	baz=284,slow=75,SNR=70						
H11S1	WAKE ISLAND Hy	42.27	88	T	T	10 00 53.4	
	baz=284,slow=75,SNR=38						
H11S2	WAKE ISLAND Hy	42.28	88	T	T	10 00 53.5	
	baz=284,slow=75,SNR=28						
KURK	Kurchatov	42.74	320	eP	P	09 15 51.0	+0.1
KURBB	Kurchatov Arra	42.76	320	P	P	09 15 51.0	0.0
	comp=Z,0.8nm,0.4s,baz=110,slow=7.5,SNR=5.4						
WRAB	Tennant Creek	45.07	163	eP	P	09 16 08.6	-1.4
	comp=Z,3.6nm,0.8s						
WR1	Warramunga Arr	45.08	163	eP	P	09 16 07.8	-2.1
	comp=Z,3.9nm,0.7s						
WRA	Warramunga Arr	45.08	163	P	P	09 16 07.8	-2.1
	comp=Z,2.4nm,0.7s,baz=345,slow=8.9,SNR=18						
WB2	Warramunga Arr	45.08	163	eP	P	09 16 08.7	-1.3
	comp=Z,6.5nm,1.0s						
KK31	Karatay Array	46.09	308	eP	P	09 16 17.8	-0.1
KKAR	Karatay Array	46.09	308	eP	P	09 16 18.1	+0.2
BVAR	Borovoye Array	48.32	321	P	P	09 16 34.0	-1.1
	comp=Z,0.9nm,0.5s,baz=102,slow=7.8,SNR=3.1						
BVAR				PcP	PcP	09 18 00.3	-1.5
	comp=Z,0.3nm,0.3s,baz=141,slow=5.5,SNR=3.8						
ABKAR	Akbulak array	54.08	315	eP	P	09 17 18.0	-0.3
FORT	Forrest	54.47	173	eP	P	09 17 20.6	-0.7
	comp=Z,12nm,1.0s						
KBZ	Khabaz	66.10	309	P	P	09 18 42.2	+1.3
	comp=Z,2.5nm,0.8s,baz=97,slow=1.4,SNR=4.2						
KIV	Kislovodsk	66.21	309	eP	P	09 18 41.9	+0.1
	comp=Z,5.7nm,0.8s						
CAST	Castle Rocks	67.50	29	eP	P	09 18 50.2	+0.6
	comp=Z,6.1nm,1.0s						
PPLA	Purkeypile	67.53	30	eP	P	09 18 49.6	-0.3
	comp=Z,9.0nm,1.1s						
MLY	Manley	67.85	27	eP	P	09 18 52.2	+0.4
	comp=Z,9.2nm,1.2s						
BPAW	Bear Paw Mtn.	67.89	28	eP	P	09 18 52.6	+0.6
	comp=Z,6.4nm,1.2s						
MDM	Murphy Dome	68.92	27	eP	P	09 18 58.8	+0.3
	comp=Z,13nm,1.1s						
WRH	Wood River Hil	69.07	28	eP	P	09 18 59.6	+0.2
	comp=Z,6.3nm,1.2s						
ILAR	Eielson Array	69.52	27	P	P	09 19 03.0	+0.8
	comp=Z,0.6nm,0.6s,baz=293,slow=6.2,SNR=8.9						
ILB	Eielson Array	69.52	27	eP	P	09 19 02.1	0.0
SCRK	Sand Creek	70.93	28	eP	P	09 19 11.3	+0.3
	comp=Z,2.6nm,1.0s						
EGAK	Eagle	71.89	27	eP	P	09 19 16.9	+0.3
	comp=Z,4.7nm,0.8s						
FIA0	FINESS Array S	72.09	330	eP	P	09 19 19.1	+1.3
FINES	FINESS Array B	72.09	330	P	P	09 19 19.1	+1.3
	comp=Z,1.0nm,0.8s,baz=57,slow=7.0,SNR=6.6						
DAWY	Dawson	72.84	27	eP	P	09 19 22.6	+0.3
	comp=Z,7.2nm,1.1s						
INK	Inuvik	73.58	22	eP	P	09 19 26.2	-0.3
	comp=Z,4.4nm,1.1s						
BR101	Keskin Array S	73.79	307	eP	P	09 19 29.1	+0.6
BRTR	Keskin Array B	73.79	307	P	P	09 19 29.1	+0.6
	comp=Z,0.9nm,0.7s,baz=107,slow=5.0,SNR=5.4						
TIRR	Tirgusor	75.99	313	eP	P	09 19 39.9	-1.1
	comp=Z,3.9nm,1.0s						
YKA	Yellowknife Ar	83.32	23	P	P	09 20 21.5	+1.1
	comp=Z,1.7nm,0.7s,baz=319,slow=4.6,SNR=6.5						
GERES	GERESS Array B	83.49	321	P	P	09 20 21.5	-0.3
	comp=Z,0.5nm,0.6s,baz=35,slow=4.9,SNR=5.2						
GEA0	GERESS Array S	83.49	321	eP	P	09 20 25.6	+3.9
NVAR	Mina Array Bea	96.57	43	P	P	09 21 25.1	+1.0
	comp=Z,0.6nm,0.9s,baz=316,slow=3.8,SNR=3.6						

*IDC **17** 09:09:35.5±0.6, 23.°62N×121.°62E, h0km, mb3.9/14, mb1 4.1/17, mb1mx3.9/68, mbtmp3.9/17, ML3.6/2, Error ellipse: s-maj=18.9km s-min=14.8km az=71.0*
*ISCJB **17** 09:09:36.9±0.3, 23.°64N±0.°01×121.°65E±0.°01, h9km±2km, mb4.0/29, Error ellipse: s-maj=2.3km s-min=1.7km az=42.1*
*JMA **17** 09:09:36.3±0.1, 23.°64N×121.°68E, h0km, M3.9*
*TAP **17** 09:09:36.9, 23.°70N×121.°55E, h1km, ML4.4, C*
*NEIC **17** 09:09:37.2±0.2, 23.°61N×121.°63E, h10km, mb4.4/15, ML4.5(TAP), Error ellipse: s-maj=5.0km s-min=3.7km az=111.0*
*

baz=319
ESL *i* S **Sg** 09 09 43.4 -1.7
baz=319
HGSD Ruisui 0.24 229 ⇓P **Pg** 09 09 43.0 +1.0
baz=196
HGSD S **Sg** 09 09 47.7 +2.4
baz=196
ENLB Shoufeng 0.25 355 ⇓P **Pb** 09 09 43.8 -0.2
baz=15
ENLB *e*S **Sb** 09 09 47.7 -0.9
baz=15
EHY Hungye 0.31 242 P **Pg** 09 09 43.2 -0.1
baz=233
EHY *e*S **Sg** 09 09 47.9 +0.4
baz=233
HWA Hwalien 0.32 357 P **Pg** 09 09 44.4 +0.9
baz=16
YULB Yu-li 0.40 229 ⇓P **Pg** 09 09 45.2 +0.3
baz=233
YULB *e*S **Sb** 09 09 52.3 -0.5
baz=233
YULB Yu-li 0.40 229 *e*Pg **Pb** 09 09 45.7 -0.8
YULB *e*Sg **Sb** 09 09 53.4 +0.5
TWF1 Yuli 0.42 225 ⇓P **Pb** 09 09 46.1 -0.9
baz=220
TWD Chiawan 0.43 356 ⇓P **Pg** 09 09 45.6 +0.1
baz=351
TWD *e*S **Sg** 09 09 51.7 +0.7
baz=351
VWDT VWDT 0.45 283 ⇓P **Pg** 09 09 45.4 -0.5
baz=278
VWDT S **Sg** 09 09 51.7 -0.3
baz=278
NACB Ninganchiao 0.52 357 ⇓P **Pg** 09 09 47.1 -0.1
baz=351
NACB S **Sg** 09 09 55.0 +1.0
baz=351
NACB Ninganchiao 0.52 357 *e*Pg **Pg** 09 09 46.7 -0.5
NACB *e*Sg **Sg** 09 09 54.0 0.0
FULB Fuli 0.55 214 *e*P **Pb** 09 09 49.3 +0.3
baz=186
CHGB Renai 0.58 315 ⇓P **Pg** 09 09 47.8 -0.6
baz=317
CHGB S **Sg** 09 09 54.3 -1.7
baz=317
CHKT Chengkung 0.60 203 *e*P **Pb** 09 09 49.9 0.0
baz=194
CHKT *e*S **Sb** 09 10 00.1 +1.4
baz=194
SSLB Suanglung 0.63 282 ⇓P **Pg** 09 09 48.5 -0.8
baz=279
SSLB *e*S **Sg** 09 09 55.8 -1.7
baz=279
SSLB Suanglung 0.63 282 *e*Pg **Pg** 09 09 48.2 -1.1
SSLB *e*Pn **Pn** 09 09 56.7 +4.2
SMLT Sun Moon Lake 0.70 289 ⇓*i*P **Pg** 09 09 49.9 -0.8
baz=287
SMLT *e*S **Sg** 09 09 58.1 -1.8
baz=287
ELDTW Lidau 0.72 231 ⇑P **Pg** 09 09 50.9 -0.2
baz=222
ELDTW S **Sg** 09 10 00.9 +0.4
baz=222
TYC Yuchr 0.75 290 ⇓P **Pg** 09 09 50.6 -0.9
baz=286
ALS Alishan 0.77 259 P **Pg** 09 09 51.7 -0.2
baz=267
ALS *e*S **Sg** 09 10 01.4 -0.5
baz=267
ENA Nanau 0.78 8 ⇓P **Pg** 09 09 52.2 0.0
baz=17
NANB Nanao 0.78 8 ⇓P **Pg** 09 09 52.3 +0.1
NANB *e*S **Sg** 09 10 03.0 +0.6
NNSB Datong 0.80 344 ⇓P **Pg** 09 09 52.3 -0.3
baz=338
NNSB *e*S **Sg** 09 10 01.9 -1.1
baz=338
NNSH Datong 0.80 344 P **Pg** 09 09 52.2 -0.4
baz=338
NNSH *e*S **Sg** 09 10 01.9 -1.2
baz=338
ENAH Nanao 0.81 12 *e*P **Pg** 09 09 52.9 +0.2
baz=20
NNS Nan Shan 0.82 344 ⇓P **Pg** 09 09 52.7 -0.2
baz=338
NNS *e*S **Sg** 09 10 02.5 -1.1
baz=338
WJS Zhushan 0.84 282 P **Pb** 09 09 53.9 -0.1
baz=277
TWH Lutao 0.95 188 *e*P **Pg** 09 09 55.0 -0.4
baz=166
TWGBT Beinan 0.97 211 *e*P **Pg** 09 09 54.9 -0.9
baz=203
TWG Pinlang 0.97 212 *e*P **Pg** 09 09 54.7 -1.1
baz=203
TWG Pinlang 0.97 212 *e*Pg **Pg** 09 09 54.7 -1.1
TWC Suao 0.97 12 *e*P **Pg** 09 09 56.1 +0.2
baz=7.0
TWC *e*S **Sb** 09 10 11.0 +1.5
baz=7.0
WGK Gukeng 0.97 272 ⇑P **Pb** 09 09 56.5 +0.2
baz=268
WGK S **Sb** 09 10 10.2 +0.8
baz=268
TPUB Ta-pu 0.98 249 P **Pb** 09 09 56.5 +0.1
baz=256
TPUB *e*S **Sg** 09 10 08.7 0.0
baz=256
TPUB Ta-pu 0.98 249 *e*Pg **Pb** 09 09 56.3 -0.2
TPUB *e*Sg **Sg** 09 10 09.2 +0.5
ENTT Nioudou 0.98 357 ⇓P **Pg** 09 09 55.7 -0.4
baz=352
ENTT *e*S **Sg** 09 10 08.8 -0.1
baz=352
TTN Taitung 1.00 206 *e*P **Pb** 09 09 56.7 0.0
baz=187
WDLH Douliu 1.00 272 *e*P **Pb** 09 09 56.7 0.0
baz=266
TCU Taichung 1.00 *e*P **Pb** 09 09 57.0 +0.2
baz=297
EOS1 EOS1 1.00 27 *e*P **Pn** 09 09 59.4 +1.8
baz=57
WTP Ta-pu 1.01 247 ⇑P **Pb** 09 09 57.0 -0.1
baz=251
WTP S **Sb** 09 10 11.3 +0.7
baz=251
YHNB Yeheng 1.04 347 ⇓P **Pg** 09 09 57.0 -0.1
baz=339
YHNB S **Sg** 09 10 10.1 -0.5
baz=339
YHNB Yeheng 1.04 347 *e*Pg **Pg** 09 09 56.8 -0.3
YHNB *e*Sn **Sg** 09 10 10.5 -0.1
TWQ1 Liyutan 1.04 312 *e*P **Pb** 09 09 57.8 +0.3
baz=323
TWQ1 *e*S **Sg** 09 10 10.1 -0.7
baz=323
NSK Sanguang 1.05 347 ⇓*i*P **Pg** 09 09 57.0 -0.3
baz=338
NSK *e*S **Sg** 09 10 09.4 -1.5
baz=338
TWE Neicheng 1.06 2 *e*P **Pg** 09 09 57.6 0.0
baz=8.0
TWE *e*S **Sb** 09 10 12.4 +0.4
baz=8.0
WCHH Zhanghua 1.06 294 *e*P **Pb** 09 09 58.2 +0.3
baz=292
WCHH *e*S **Sb** 09 10 13.6 +1.5
baz=292
NSY Sanyi 1.10 314 *e*P **Pb** 09 09 59.0 +0.6
baz=315
NSY *e*S **Sb** 09 10 13.9 +0.9
baz=315
CHN1 Nanshi 1.11 245 ⇓P **Pb** 09 09 59.1 +0.4
baz=239
CHN1 *e*S **Sb** 09 10 14.3 +1.0
baz=239
CHY Chiayi 1.11 262 ⇓*e*P **Pb** 09 09 59.2 +0.5
baz=258
CHY *e*S **Sb** 09 10 14.2 +0.8
baz=258
TWK Hsinying 1.11 250 *e*P **Pb** 09 09 59.1 +0.3
baz=244
TWK S **Sb** 09 10 14.5 +1.0
baz=244
SGST Jiashian 1.11 240 *e*P **Pb** 09 09 59.1 +0.3
baz=233
SGST *e*S **Sn** 09 10 15.6 +0.9
baz=233
SLGT Liugui 1.11 234 *e*P **Pb** 09 09 58.6 -0.1
baz=226
NWLT Wulai 1.12 354 *e*P **Pg** 09 09 58.8 0.0
baz=1.0
NSTT Nanjuang 1.13 330 *e*P **Pg** 09 09 57.8 -1.0
baz=323
NSTT *e*S **Sg** 09 10 12.3 -1.2
baz=323
LIOB Emei 1.13 331 *e*P **Pg** 09 09 59.1 +0.2
baz=334
NMLH Miaoli 1.16 319 *e*P **Pb** 09 10 00.2 +0.5
baz=320
NMLH *e*S **Sb** 09 10 16.0 +1.0
baz=320
RLNB Erlin 1.18 282 ⇓*e*P **Pg** 09 09 59.9 0.0
baz=279
RLNB *e*S **Sb** 09 10 16.0 +0.6
baz=279
NTC Toucheng 1.21 9 *e*P **Pn** 09 10 01.0 +0.5
baz=359
ECL Taimali 1.22 211 *e*P **Pg** 09 09 59.3 -1.3
baz=185
EGS 1.22 13 *e*P **Pn** 09 10 01.2 +0.5
baz=22
WLGB Puzi 1.23 262 *e*P **Pn** 09 10 01.1 +0.4
baz=258
WLGB *e*S **Sn** 09 10 19.1 +1.6
baz=258
SBCB Hsinchu 1.28 333 ⇓P **Pn** 09 10 02.2 +0.8
baz=326
SBCB *e*S **Sn** 09 10 20.3 +1.5
baz=326
SSD Sandimen 1.28 226 *e*P **Pg** 09 10 01.6 -0.2
baz=224
WSF Szhu 1.29 270 *e*P **Pb** 09 10 01.9 +0.2
baz=267
WSF *e*S **Sb** 09 10 19.5 +1.1
baz=267
HSN Hsinchu 1.29 333 *e*P **Pn** 09 10 02.3 +0.7
baz=338
CHN3 Shinhua 1.29 244 *e*P **Pn** 09 10 02.1 +0.5
baz=254
CHN3 *e*S **Sn** 09 10 22.6 +3.5
baz=254
TATO Taipei 1.32 355 *e*P **Pg** 09 10 01.7 -0.8
baz=1.0
TATO Taipei 1.32 355 *e*Pn **Pb** 09 10 02.8 +0.5
TWA Mucha 1.32 358 *e*P **Pb** 09 10 02.9 +0.6
baz=6.0
TIPB Shuangxi 1.33 8 *e*P **Pg** 09 10 01.2 -1.4
baz=359
CHN8 Yiju 1.33 257 *e*P **Pg** 09 10 02.1 -0.7
baz=253
CHN8 *e*S **Sn** 09 10 21.9 +1.7
baz=253
NCUH Zhongli 1.37 343 *e*P **Pn** 09 10 03.3 +0.6
baz=7.0
NCU National Centr 1.37 343 *e*P **Pb** 09 10 03.6 +0.5
baz=4.0
MASBT Mashibuluo 1.38 222 *e*P **Pn** 09 10 02.7 -0.2
baz=215
MASBT *e*S **Sn** 09 10 24.1 +2.7
baz=215
TAP1 Taipei 1.38 356 *e*P **Pb** 09 10 03.9 +0.5
baz=360
TAP1 *e*S **Sn** 09 10 23.8 +2.4
baz=360
SGLT Jiouru 1.39 229 *e*P **Pb** 09 10 05.6 +2.1
baz=221
SCLT Jiali 1.40 250 *e*P **Pg** 09 10 03.7 -0.3
baz=243
NWF Wu-fen Shan 1.42 6 *e*P **Pb** 09 10 05.4 +1.4
baz=13
WFSB Wu-fen Shan 1.42 6 *e*P **Pb** 09 10 05.1 +1.1
baz=10.0
WFSB *e*S **Sn** 09 10 24.0 +1.6
baz=10.0
TAI1 Yung-k'ang 1.42 245 *e*P **Pb** 09 10 05.0 +1.0
baz=237
JYNG Yonagunijimaku 1.45 56 P **Pn** 09 10 03.4 -0.3
JYNG *e*S **Sg** 09 10 22.6 -1.1
TWS1 Kuangyinshan 1.45 353 *e*P **Pg** 09 10 05.5 +0.4
baz=357
TWS1 *e*S **Sn** 09 10 25.9 +2.8
baz=357
YM04 YM04 1.50 357 *e*P **Pb** 09 10 05.7 +0.4
baz=2.0
YM10 YM10 1.50 358 *e*P **Pg** 09 10 06.0 +0.1
baz=2.0
YOJ Yonaguni jima 1.50 57 *e*P **Pn** 09 10 03.8 -0.7
baz=64
YOJ Yonaguni jima 1.50 57 P **Pn** 09 10 03.7 -0.8
YOJ *e*S **Sg** 09 10 25.5 0.0
YM11 YM11 1.51 358 *e*P **Pg** 09 10 06.7 +0.6
baz=2.0
NTST Danshui 1.51 354 *e*P **Pg** 09 10 06.3 +0.1
baz=359
YM07 YM07 1.52 360 *e*P **Pn** 09 10 05.3 +0.5
baz=19
YM12 YM12 1.52 358 *e*P **Pn** 09 10 05.8 +0.9
baz=1.0
YM08 YM08 1.53 359 *e*P **Pb** 09 10 06.3 +0.4
baz=3.0
SCZT Fangliau 1.57 216 *e*P **Pn** 09 10 05.7 +0.2
baz=209
SCZT *e*S **Sg** 09 10 30.9 +3.1
baz=209
LAY Lan-yu 1.61 182 *e*P **Pn** 09 10 03.7 -2.3
baz=165
TWY Chenhua 1.62 359 *e*P **Pb** 09 10 07.4 +0.1
baz=3.0
WLCH Liuqiu 1.73 222 *e*P **Pg** 09 10 11.6 +1.2
baz=217
TWP Hsiaoliuchiu 1.75 222 *e*P **Pg** 09 10 11.7 +1.1
baz=217
HEN Hengchun 1.83 207 *e*P **Pb** 09 10 11.2 +0.2
baz=188
WDGT Dungji 1.85 258 *e*P **Pn** 09 10 09.5 +0.3
baz=256
WDGT *e*S **Sn** 09 10 33.7 +0.9
baz=256
TWK1 Hengchun 1.86 204 *e*P **Pn** 09 10 09.8 +0.3
baz=185
TWKBT Hengchun 1.86 204 *e*P **Pb** 09 10 11.4 -0.1
baz=185
PHUB P'eng-hu 1.89 266 *e*P **Pn** 09 10 08.6 -1.2
baz=265
PHUB *e*S **Sn** 09 10 33.6 -0.2
baz=265
PNG Penghu 1.90 268 *e*P **Pn** 09 10 09.5 -0.5
baz=267
PNG *e*S **Sb** 09 10 36.1 0.0
baz=267
HATJ Hateruma jima 2.04 78 P **Pn** 09 10 12.1 +0.2
HATJ *e*S **Sn** 09 10 38.7 +1.2
IRIF Iriomote-Funau 2.04 70 P **Pn** 09 10 12.9 +1.0
IRIF S **Sn** 09 10 39.0 +1.3
VCHM Qimei 2.06 258 *e*P **Pn** 09 10 11.9 -0.3
baz=254
JKRS Kuro-shima 2.26 75 P **Pn** 09 10 16.4 +1.5
JKRS *e*S **Sn** 09 10 44.2 +1.2
VWUC VWUC 2.39 304 *e*P **Pn** 09 10 16.8 +0.1
baz=300
JIJ Ishigaki jima 2.41 72 P **Pn** 09 10 17.6 +0.6
JIJ *e*S **Sn** 09 10 47.5 +0.8
JISG Ishigakijimahi 2.62 69 P **Pn** 09 10 20.6 +0.7
JISG *e*S **Sn** 09 10 52.0 -0.1
JTJ Tarama 2.98 70 P **Pn** 09 10 24.6 -0.2
JTJ *e*S **Sn** 09 11 00.6 -0.2
QZH Quanzhou 3.05 296 Pn **Pn** 09 10 24.3 -1.5
QZH Sn **Sn** 09 11 00.0 -2.6
QZH smax smax
comp=N,600nm,0.9s
QZH smax smax
comp=E,460nm,1.1s
QZH LR LR
comp=N,2μm,5.7s
QZH LR LR
comp=E,2μm,5.9s
QZH LR LR
comp=Z,1μm,4.7s
KNMB Chin-men Tao 3.07 286 *e*P **Pn** 09 10 25.6 -0.4
baz=283
JIRB Irabujima 3.44 69 P **Pn** 09 10 31.0 -0.2
JIRB *e*S **Sn** 09 11 11.7 -0.6
JOW Kunigami 6.80 61 Pn **Pn** 09 11 16.7 -0.7
comp=Z,2.6nm,0.3s,baz=98,slow=6.6,SNR=4.4
JOW Sn **Sn** 09 12 36.2 +1.1
comp=Z,0.4nm,0.3s,baz=213,slow=18,SNR=2.0
KS15 Wonju Array Si 14.76 20 *e*Pn **Pn** 09 13 07.8 +1.5
KSAR Wonju Array Be 14.76 20 Pn **Pn** 09 13 07.0 +0.6
KSRS Korea Array 14.78 20 Pn **Pn** 09 13 07.0 +0.3
comp=Z,0.2nm,0.3s,baz=222,slow=13,SNR=6.2
MAJO Matsushiro 19.22 44 *e*P **P** 09 14 01.9 +0.1
MJAR Matsushiro Arr 19.22 44 P **P** 09 14 01.9 0.0
baz=238,slow=8.8,SNR=4.1
CM01 Chiang Mai Arr 21.78 260 *e*P **P** 09 14 30.5 +0.8
CM31 Chiang Mai Arr 21.78 261 *e*P **P** 09 14 28.8 -0.9
CMAR Chiang Mai Arr 21.78 261 P **P** 09 14 29.4 -0.4
comp=Z,3.2nm,0.8s,baz=68,slow=8.6,SNR=8.1
GTA Gaotai 24.25 316 *e*P **P** 09 14 59.8 +4.9
GTA pP sP 09 15 06.5 +8.5
GTA sP pP 09 15 09.6 +12
GTA pmax pmax
comp=Z,6.0nm,1.2s
KSM Kuching 24.63 208 *e*P **P** 09 14 57.1 -1.3
comp=Z,9.9nm,0.9s
KLR Kul'dur 26.75 15 P **P** 09 15 15.3 -2.0
comp=Z,0.1nm,0.8s,baz=226,slow=4.8,SNR=4.3
SONA0 Songino Array 27.01 337 *e*P **P** 09 15 19.9 0.0
SONM Songino Array 27.01 337 P **P** 09 15 19.9 0.0
comp=Z,0.7nm,0.5s,baz=156,slow=11,SNR=3.1
MK01 Makanchi Array 38.98 316 *e*P **P** 09 17 03.7 -0.4
MK31 Makanchi Array 39.00 316 *e*P **P** 09 17 04.2 0.0
MK32 Makanchi Array 39.00 316 *e*P **P** 09 17 03.8 -0.4
MK32 *e*PcP **PcP** 09 19 13.2 -1.3
MKAR Makanchi Array 39.00 316 P **P** 09 17 03.8 -0.4
comp=Z,2.2nm,0.9s,baz=111,slow=9.4,SNR=5.4
MKAR PcP **PcP** 09 19 13.2 -1.3
comp=Z,0.8nm,0.9s,baz=131,slow=4.4,SNR=3.7
MKAR Makanchi Array 39.00 316 *e*P **P** 09 17 04.0 -0.2
comp=Z,12nm,0.8s
MKAR PcP **PcP** 09 19 13.2 -1.3
MAKZ Makanchi 39.20 316 *e*P **P** 09 17 06.0 +0.1
comp=Z,3.3nm,1.0s
ZALV Zalesovo Beam 40.91 327 P **P** 09 17 19.2 -0.7
comp=Z,2.8nm,0.8s,baz=117,slow=8.1,SNR=5.7
ZALV Zalesovo Beam 40.91 327 *e*P **P** 09 17 20.6 +0.6
ZAA1 Zalesovo Array 40.91 327 *e*P **P** 09 17 19.2 -0.7
FITZ Fitzroy Crossi 41.68 174 *e*P **P** 09 17 24.8 -1.7
comp=Z,3.3nm,0.8s
H11N1 WAKE ISLAND Hy 42.12 86 T T 10 02 27.4
baz=283,slow=75,SNR=39
H11N2 WAKE ISLAND Hy 42.12 86 T T 10 02 27.4
baz=283,slow=75,SNR=52
H11N3 WAKE ISLAND Hy 42.13 86 T T 10 02 28.5
baz=283,slow=75,SNR=41
H11S3 WAKE ISLAND Hy 42.23 88 T T 10 02 35.6
baz=284,slow=75,SNR=150
H11S1 WAKE ISLAND Hy 42.24 88 T T 10 02 36.8
baz=284,slow=75,SNR=74
H11S2 WAKE ISLAND Hy 42.25 88 T T 10 02 36.6
baz=284,slow=75,SNR=102
KURK Kurchatov 42.76 320 *e*P **P** 09 17 36.7 +1.7
comp=Z,3.5nm,1.0s
KURBB Kurchatov Arra 42.77 320 P **P** 09 17 33.3 -1.9
comp=Z,0.4nm,0.5s,baz=116,slow=7.3,SNR=3.7
MBWA Marble Bar 44.58 183 *e*P **P** 09 17 49.2 -0.8
comp=Z,6.8nm,1.0s
WRAB Tennant Creek 45.06 163 *e*P **P** 09 17 52.7 -1.2
comp=Z,4.4nm,1.0s
WR1 Warramunga Arr 45.07 163 *e*P **P** 09 17 52.8 -1.2
comp=Z,6.6nm,1.1s
WRA Warramunga Arr 45.07 163 P **P** 09 17 52.8 -1.2
comp=Z,1.9nm,0.5s,baz=344,slow=8.7,SNR=13
WB2 Warramunga Arr 45.07 163 *e*P **P** 09 17 52.8 -1.2
comp=Z,2.7nm,0.7s
BVAR Borovoye Array 48.34 321 P **P** 09 18 19.4 +0.1
comp=Z,0.5nm,0.6s,baz=118,slow=8.3,SNR=2.6
BVAR PcP **PcP** 09 19 44.7 -1.2
comp=Z,0.5nm,0.5s,baz=163,slow=5.3,SNR=3.0
BRVK Borovoye 48.41 321 *e*P **P** 09 18 19.1 -0.7
comp=Z,4.1nm,1.0s
ASAR Alice Springs 48.52 165 P **P** 09 18 19.4 -1.6
comp=Z,1.7nm,0.9s,baz=344,slow=6.7,SNR=6.3
ABKAR Akbulak array 54.10 315 *e*P **P** 09 19 02.5 -0.1
BBOO Buckleboo 57.81 166 *e*P **P** 09 19 29.1 -0.2
comp=Z,7.2nm,0.8s
STKA Stephens Creek 58.43 160 P **P** 09 19 33.2 -0.4
comp=Z,2.1nm,0.6s,baz=348,slow=7.2,SNR=7.7
STKA Stephens Creek 58.43 160 *e*P **P** 09 19 33.1 -0.5
comp=Z,0.7nm,0.8s
MLY Manley 67.83 27 *e*P **P** 09 20 36.7 +0.9
comp=Z,6.5nm,1.0s
SUA Susitna One 68.40 31 *e*P **P** 09 20 40.4 +1.0
comp=Z,9.1nm,1.0s
RND Reindeer 68.92 29 *e*P **P** 09 20 42.7 +0.1
comp=Z,8.3nm,0.8s
ILAR Eielson Array 69.50 27 P **P** 09 20 46.2 +0.1
comp=Z,0.5nm,0.8s,baz=295,slow=8.5,SNR=9.1
FIA0 FINESS Array S 72.11 330 *e*P **P** 09 21 03.1 +1.1
FINES FINESS Array B 72.11 330 P **P** 09 21 03.1 +1.1
comp=Z,1.1nm,0.8s,baz=14,slow=6.3,SNR=2.8
YKA Yellowknife Ar 83.30 23 P **P** 09 22 04.5 +0.1
comp=Z,1.4nm,0.7s,baz=314,slow=4.8,SNR=4.1
GERES GERESS Array B 83.51 321 P **P** 09 22 05.2 -0.7
comp=Z,0.5nm,0.7s,baz=56,slow=5.0,SNR=4.4
NVAR Mina Array Bea 96.54 43 P **P** 09 23 08.0 -0.2
comp=Z,0.1nm,0.5s,baz=264,slow=4.1,SNR=2.3

ISCJB ***17*** *09:10:08.3±1.5, 14°.6S±0°.1×167°.4E±0°.2, h150km, mb3.9/5, Error ellipse: s-maj=27.5km s-min=13.8km az=165.3*
IDC ***17*** *09:10:11.4±5.7, 14°.67S×167°.30E, h154km±43km, mb3.6/6, mb1 3.8/7, mb1mx3.4/51, mbtmp4.1/7, MS3.6/2, Ms1 3.6/2, ms1mx2.8/38, Error ellipse: s-maj=42.6km s-min=23.4km az=31.0*

ISC 17 09:10:10.3±1.3, 14°.6S±0°.1×167°.4E±0°.2, h150km, n14, σ0=96/14, mb4.1/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.46**	**187**	P		**Pn**	**09 11 57.0**	**+0.3**
	4.3nm,0.3s,baz=48,slow=11,SNR=65							
DZM				S		**Sn**	**09 13 19.8**	**-0.4**
	2.6nm,0.3s,baz=136,slow=20,SNR=4.0							
CTA	**Charters Tower**	**20.88**	**252**	P		**P**	**09 14 41.6**	**+0.7**
	2.7nm,0.8s,baz=95,slow=15,SNR=4.6							
STKA	**Stephens Creek**	**29.15**	**229**	P		**P**	**09 15 58.8**	**+1.4**
	1.6nm,0.4s,baz=47,slow=9.1,SNR=6.4							
STKA				PcP		**PcP**	**09 19 01.9**	**+0.5**
	2.8nm,0.9s,baz=27,slow=4.5,SNR=3.7							
RPZ	**Rata Peaks**	**29.17**	**175**	LR		LR	09 27 11.2	
	comp=Z,94nm,19.8s,baz=74,slow=35							
WRA	**Warramunga Arr**	**31.96**	**256**	P		**P**	**09 16 21.0**	**-1.3**
	0.8nm,0.6s,baz=83,slow=7.7,SNR=5.1							
ASAR	**Alice Springs**	**32.82**	**249**	P		**P**	**09 16 28.6**	**-1.1**
	1.0nm,0.4s,baz=77,slow=9.3,SNR=37							
VNDA	**Vanda**	**62.97**	**181**	P		**P**	**09 20 20.9**	**+0.4**
	1.3nm,0.6s,baz=354,slow=7.9,SNR=13							
SNAA	**Sanae**	**93.66**	**183**	P		**P**	**09 23 08.4**	**-1.0**
SNAA	**Sanae**	**93.66**	**183**	P		**P**	**09 23 08.4**	**-1.0**
	1.1nm,0.8s,baz=194,slow=12,SNR=13							
VNA3	**Neumayer Olymp**	**94.33**	**181**	P		**P**	**09 23 11.6**	**-0.8**
ANMO	**Albuquerque**	**95.15**	**55**	LR		LR	09 58 18.0	
	comp=Z,36nm,21.9s,baz=330,slow=30							
ARCES	**ARCESS Array B**	**120.17**	**345**	PKP		**PKPdf**	**09 28 43.4**	**+0.5**
	1.3nm,0.6s,baz=84,slow=2.6,SNR=9.9							
FINES	**FINESS Array B**	**125.66**	**338**	PKP		**PKPdf**	**09 28 54.3**	**+0.7**
	2.0nm,1.0s,baz=57,slow=7.0,SNR=4.5							
TORD	**Torodi Ar. Bea**	**166.03**	**266**	PKPab		**PKPab**	**09 30 59.1**	**-0.4**
	0.5nm,0.8s,baz=88,slow=3.5,SNR=2.5							

TAP 17 09:10:14.7, 23°.72N×121°.50E, h9km, ML3.5, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
EGFH	**Guangfu**	**0.08**	**233**	P		Pg	09 10 17.4	+0.5
	baz=232							
EGFH				S		Sg	09 10 19.6	+1.1
	baz=232							
ESL	**Shilin**	**0.11**	**328**	*i* P		Pg	09 10 18.0	+0.6
	baz=331							
ESL				S		Sg	09 10 20.2	+0.9
	baz=331							
ENLB	**Shoufeng**	**0.21**	**27**	*e*P		Pg	09 10 20.3	+1.3
	baz=27							
HGSD	**Ruisui**	**0.23**	**197**	*e*P		Pg	09 10 20.4	+1.0
	baz=196							
EHY	**Hungye**	**0.27**	**217**	*e*P		Pg	09 10 20.3	+0.2
	baz=215							
HWA	**Hwalien**	**0.28**	**21**	*e*P		Pb	09 10 21.7	-0.2
	baz=22							

VWDT	VWDT	0.33	276	eP	Pb	09 10 22.5	-0.3
	baz=276						
TWD	Chiawan	0.37	14	eP	Pg	09 10 22.8	+0.7
	baz=15						
YULB	Yu-li	0.37	210	eP	Pg	09 10 22.6	+0.5
	baz=209						
TWF1	Yuli	0.41	207	eP	Pb	09 10 23.7	-0.5
	baz=205						
CHGB	Renai	0.45	319	eP	Pb	09 10 24.8	-0.3
	baz=318						
CHGB				eS	Sb	09 10 31.6	-0.4
	baz=318						
SSLB	Suanglung	0.50	278	eP	Pb	09 10 25.4	-0.4
	baz=277						
SMLT	Sun Moon Lake	0.57	287	eP	Pb	09 10 26.8	-0.2
	baz=286						
CHKT	Chengkung	0.63	191	eP	Pb	09 10 27.5	-0.4
	baz=190						
ALS	Alishan	0.67	252	eP	Pb	09 10 28.9	+0.1
	baz=251						
NNS	Nan Shan	0.73	351	eP	Pn	09 10 31.1	-0.3
	baz=351						

ISN 17 09:21:29.1±2.0, 34°.57N×46°.72E, h15km, ML2.5

TEH 17 09:21:28.5, 34°.65N×46°.76E, h8km, ML2.5, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IVIS	Veis	0.14	149	ePg	Pg	09 21 33.0	+1.4
IVIS				eSg	Sg	09 21 35.7	+2.0
IVIS				e		09 21 36.1	
	comp=Z,16μm,0.0s						
IDHR	Dehrash	0.31	279	ePg	Pb	09 21 36.0	-0.5
IDHR				e		09 21 41.8	
	comp=Z,67μm,0.1s						
ILIN	Lien	0.32	32	ePg	Pb	09 21 36.2	-0.4
ILIN				e		09 21 42.8	
	comp=Z,38μm,0.1s						
IKOM	Komasi	0.78	127	ePg	Pb	09 21 44.8	+0.4
IKOM				e		09 21 58.6	
	comp=Z,99nm,0.2s						
IBZA	Bozab	0.93	101	ePg	Pb	09 21 47.5	+0.5
IBZA				e		09 22 07.2	
	comp=Z,2μm,0.1s						
IKFM	Kafar-mosalman	1.44	141	ePn	Pg	09 21 59.2	+3.1
IKFM				e		09 22 02.3	
	comp=Z,99nm,0.1s						
IDOB	Doab	1.46	126	ePn	Pg	09 21 59.4	+3.0
IDOB				e		09 22 26.7	
	comp=Z,99nm,0.2s						

ATA 17 09:23:23.8±0.6, 37°.97N×42°.71E, h21km±9km, ML3.5, MW3.5
ISK 17 09:23:24.2, 38°.08N×42°.65E, h12km, ML2.7/8
ISCJB 17 09:23:25.2±0.6, 38°.07N±0°.03×42°.62E±0°.03, h3km±6km, Error ellipse: s-maj=5.0km s-min=4.2km az=139.5
CSEM 17 09:23:25.1±0.2, 38°.07N×42°.65E, h12km, ML2.9, Error ellipse: s-maj=6.2km s-min=4.3km az=146.0
DDA 17 09:23:25.7, 38°.06N×42°.62E, h7km, Ml2.9

ISC 17 09:23:25.2±1.1, 38°.05N±0°.02×42°.67E±0°.02, h11km±9km, n41, σ1§04/59, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEVA	Gevas	0.41	50	eP	Pg	09 23 33.3	0.0
GEVA				eS	Sb	09 23 40.8	0.0
GEVA				IAML		09 23 42.1	
	comp=Z,166nm,0.5s						
GEVA	Gevas	0.41	50	i P	Pb	09 23 33.8	-0.7
GEVA				i S	Sb	09 23 41.1	+0.4
GEVA	Gevas	0.41	50	P	Pb	09 23 33.8	-0.7
GEVA				S	Sb	09 23 41.1	+0.4
SIRT	Sirnak	0.58	198	PG	Pg	09 23 36.2	-0.2
SIRT				SG	Sb	09 23 45.2	-0.3
SIRT	Sirnak	0.58	198	ePg	Pg	09 23 36.2	-0.2
SIRT				eSg	Sb	09 23 45.2	-0.3
SRTM	Siirt_Merkez	0.59	265	i P	Pg	09 23 36.4	-0.3
SRTM	Siirt_Merkez	0.59	265	P	Pg	09 23 36.4	-0.3
GURO	Guroymak-BITLI	0.71	315	PG	Pg	09 23 37.8	-1.1
GURO				SG	Sg	09 23 47.8	-0.4
GURO	Guroymak-BITLI	0.71	315	ePg	Pg	09 23 37.8	-1.1
GURO				eSg	Sg	09 23 47.8	-0.4
ADCV	BITLIS_Adilcev	0.76	3	i P	Pb	09 23 40.0	-0.5
ADCV				i S	Sb	09 23 51.1	+0.2
ADCV	BITLIS_Adilcev	0.76	3	P	Pb	09 23 40.0	-0.5
ADCV				S	Sb	09 23 51.1	+0.2
VANB	Van	0.79	46	PG	Pg	09 23 38.9	-1.6
VANB	Van	0.79	46	ePg	Pg	09 23 38.9	-1.6
HAKT	HAKKARI	0.96	120	i P	Pn	09 23 44.9	+0.1
HAKT				i S	Sn	09 24 00.5	+1.9
HAKT	HAKKARI	0.96	120	P	Pn	09 23 44.9	+0.1
BTMN	Batman	1.11	262	i P	Pn	09 23 46.7	-0.1
BTMN				i S	Sn	09 24 02.6	+0.5
BTMN	Batman	1.11	262	P	Pn	09 23 46.7	-0.1
BTMN				S	Sn	09 24 02.6	+0.5
SVAN	Silvan-Diyarba	1.16	275	PN	Pb	09 23 46.5	-0.8
SVAN	Silvan-Diyarba	1.16	275	i P	Pg	09 23 47.3	-0.3
SVAN				i S	Sn	09 24 03.1	-0.2
SVAN	Silvan-Diyarba	1.16	275	ePn	Pb	09 23 46.5	-0.8
SVAN	Silvan-Diyarba	1.16	275	P	Pg	09 23 47.3	-0.3
SVAN				S	Sn	09 24 03.1	-0.2
EKAR	Karacoban	1.29	339	eP	Pg	09 23 50.5	+0.4
EKAR				eS	Sg	09 24 11.0	+4.1
EKAR				IAML		09 24 18.8	
	comp=Z,12nm,0.5s						
TUTA	Tutak	1.35	5	eP	Pg	09 23 51.0	-0.3
TUTA	Tutak	1.35	5	i P	Pg	09 23 51.4	+0.1
TUTA	Tutak	1.35	5	P	Pg	09 23 51.4	+0.1
CLDR	Caldiran	1.47	42	PN	Pn	09 23 50.9	-0.9
CLDR	Caldiran	1.47	42	ePn	Pn	09 23 50.9	-0.9
BNGL	BINGOL	1.49	308	eP	Pg	09 23 53.4	-0.4
BNGL				eS	Sg	09 24 15.7	+2.4
BNGL				IAML		09 24 21.7	
	comp=Z,92nm,0.4s						
BNGL	BINGOL	1.49	308	i P	Pg	09 23 54.0	+0.1
BNGL				i S	Sg	09 24 16.5	+3.3
AGRB	Hanur-Agry	1.54	9	PN	Pn	09 23 51.9	-0.9
AGRB	Hanur-Agry	1.54	9	ePn	Pn	09 23 51.9	-0.9
MARD	Mardin	1.67	244	i P	Pb	09 23 56.2	+0.3
MARD				i S	Sg	09 24 17.8	-1.1
EATA	Eleskirt	1.81	356	eP	Pb	09 23 58.2	-0.4
BNGB	Bing¶l	1.82	302	PN	Pn	09 23 55.6	-0.9
MAZI	Mazidag	1.85	252	PN	Pn	09 23 56.6	-0.4
MAZI	Mazidag	1.85	252	ePn	Pn	09 23 56.6	-0.4
BINT	Bingol	1.90	296	ePn	Pn	09 23 55.6	-2.0
DIY	Diyarbakir	1.93	266	ePn	Pn	09 23 58.4	+0.3
DYBB	Diyarbakir	2.00	268	PN	Pn	09 23 58.4	-0.5
SVRC	Sivrice-ELAZID	2.67	278	PN	Pn	09 24 08.0	-0.2
SVRC	Sivrice-ELAZID	2.67	278	ePn	Pn	09 24 08.0	-0.2

JMA 17 09:52:01.2±0.7, 45°.44N×150°.39E, h30km, M4.0

SKHL 17 09:52:01.0±0.6, 45°.11N×150°.54E, h30km, mb4.2/3, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.90	275	eP	Pn	09 52 31.0	-0.3
KUR				AMB	AMB	09 52 32.0	
	87nm,0.4s						
KUR				AMB	AMB	09 52 32.0	
	46nm,0.4s						
KUR				AMB	AMB	09 52 32.0	
	99nm,0.4s						
KUR				eS	Sn	09 52 54.0	-0.1
KUR				A	A	09 52 59.0	
	243nm,0.3s						
KUR				A	A	09 52 59.0	
	130nm,0.3s						
SHO	Shikotan	2.93	246	eP	Pn	09 52 45.8	+0.3
SHO				AMB	AMB	09 52 48.0	
	10.0nm,0.3s						
SHO				AMB	AMB	09 52 48.0	
	20nm,0.3s						
SHO				eS	Sn	09 53 19.0	-0.6
SHO				A	A	09 53 33.0	
	46nm,0.2s						
SHO				A	A	09 53 33.0	
	87nm,0.2s						
YUK	Yuzh-Kuril'sk	3.51	254	eP	Pn	09 52 54.6	+1.1
YUK				AMB	AMB	09 52 56.0	
	17nm,0.3s						
YUK				AMB	AMB	09 52 56.0	
	45nm,0.3s						
YUK				eS	Sn	09 53 34.7	+0.7
YUK				A	A	09 53 45.6	
	41nm,0.4s						
YUK				A	A	09 53 45.6	
	169nm,0.4s						
NEM2	Nemuro 2	3.86	245	P	Pn	09 52 58.4	+0.1
NEM2				eS	Sn	09 53 41.1	-1.5
JRA	Rausu	4.05	255	P	Pn	09 53 02.4	+1.6
JNK	Nakash	4.45	252	P	Pn	09 53 08.0	+1.7
JAK	Akkeshi	4.71	245	P	Pn	09 53 10.1	+0.1
JAK				eS	Sn	09 54 01.4	-2.2
JTKR	Abashiri--Toko	4.88	259	P	Pn	09 53 14.5	+2.3
JAR	Ashorobuto	5.19	252	P	Pn	09 53 18.6	+2.0
JAR				eS	Sn	09 54 16.2	+0.7
JMP	Maruseppu	5.25	260	P	Pn	09 53 19.7	+2.3
JOB	Onbets	5.32	248	P	Pn	09 53 19.4	+1.1
JKK2	Kamakawa 2	5.71	260	P	Pn	09 53 26.5	+2.8
JCH	Churui	5.76	247	P	Pn	09 53 24.7	+0.4
JCH				eS	Sn	09 54 26.9	-2.4
JNBK	Urakawa-nobuka	6.31	246	P	Pn	09 53 32.1	+0.1
JNBK				eS	Sn	09 54 40.3	-2.7
JBT2	Biratori 2	6.35	251	P	Pn	09 53 33.4	+1.0
JNB	Noboribetsu	7.37	252	P	Pn	09 53 47.5	+1.1
JNB				eS	Sn	09 55 07.1	-1.8
JKB	Kayabe	7.62	248	P	Pn	09 53 50.1	+0.1

MEX 17 10:02:14.3±0.7, 18°.70N×102°.20W, h70km, MD3.7, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	Aquila	1.16	250	eP	Pn	10 02 33.0	-1.9
MMIG				eS	Sn	10 02 48.9	-1.3
ZIIG	Zihuatanejo	1.29	147	eP	Pn	10 02 35.3	-1.2
ZIIG				eS	Sn	10 02 51.8	-1.4
EZ5V		1.54	301	eP	Pn	10 02 38.6	-1.4
EZ5V				eS	Sn	10 02 58.3	-1.1
R15V		1.76	286	eP	Pn	10 02 41.2	-1.5
R15V				eS	Sn	10 03 02.4	-1.9
CJM	Chamela	2.81	287	eP	Pn	10 02 55.1	-1.8

IDC 17 10:51:47.1±1.9, 36°.16N×140°.17E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.4/65, mbtmp3.8/5, ML3.6/1, Error ellipse: s-maj=45.2km s-min=20.9km az=57.0
ISCJB 17 10:51:53.1±0.7, 36°.03N±0°.05×139°.95E±0°.07, h57km±5km, mb3.6/4, Error ellipse: s-maj=9.2km s-min=7.9km az=164.1
JMA 17 10:51:54.9±0.1, 36°.06N×139°.91E, h44km±1km, M3.2
Broadband fault plane solution: P waves. NP1: ϕ_s=42.00000°, δ76.00000°, λ88.00000°. NP2:ϕ_s231.00000°, δ14.00000°, λ99.00000°. Principal axes: T Plg59.0000°, Azm309.0000°; N Plg2.0000°, Azm43.0000°; P Plg31.0000°, Azm134.0000°;
JMA Felt II J1.

ISC 17 10:51:54.1±1.0, 36°.04N±0°.05×139°.93E±0°.06, h52km±9km, n12, σ1§17/20, mb3.5/4, 1C-2D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYT	Yasato	0.28	49	↑P	Pn	10 52 03.4	+0.2
JYT				S	Sn	10 52 09.4	-0.4
JAG	Ashikaga	0.54	315	↓P	Pn	10 52 06.1	+0.1
JAG				S	Sn	10 52 14.0	-0.5
JRY	Ryogami san	0.83	269	↓P	Pn	10 52 09.8	+0.2
JRY				S	Sn	10 52 20.6	-0.4
JKT	Katashina	0.91	323	P	Pn	10 52 10.8	+0.1
JKT				S	Sn	10 52 23.2	+0.3
JOD2	Odawara 2	1.03	222	P	Pn	10 52 13.5	+1.2
JOD2				S	Sn	10 52 26.3	+0.5
MJAR	Matsushiro Arr	1.47	290	Pn	Pn	10 52 17.6	-0.7
	8.0nm,0.3s,baz=103,slow=8.1,SNR=98						
MJAR				Sn	Sn	10 52 37.7	+1.2
	8.0nm,0.3s,baz=154,slow=13,SNR=8.2						
MAT	Matsushiro	1.48	290	P	Pn	10 52 18.2	-0.1
MAT				eS	Sn	10 52 33.6	-2.9
JHJ	Hachijo jima 2	2.92	182	Pn	Pn	10 52 38.5	+0.5
	18nm,0.3s,baz=233,slow=20,SNR=18						
JHJ				Sn	Sn	10 53 09.0	-2.8
	4.0nm,0.3s,baz=72,slow=19,SNR=3.1						
ZALV	Zalesovo Beam	41.71	313	P	P	10 59 38.3	+0.7
	0.4nm,0.3s,baz=88,slow=4.6,SNR=3.6						
MKAR	Makanchi Array	43.64	303	P	P	10 59 53.3	-0.1
	0.1nm,0.5s,baz=90,slow=9.4,SNR=2.6						
KURBB	Kurchatov Arra	45.67	309	P	P	11 00 10.0	+0.5
	1.5nm,0.2s,baz=81,slow=7.8,SNR=4.5						
WRA	Warramunga Arr	55.93	186	P	P	11 01 26.9	0.0
	0.2nm,0.5s,baz=0.8,slow=7.5,SNR=7.7						

NIED 17 11:25:00, 39°.70N×143°.60E, h23km, Mw3.8 Best double couple: M_0=4.85000×10^{14} NP1:ϕ_s187.00000°, δ28.00000°, λ63.00000°. NP2:ϕ_s37.00000°, δ65.00000°, λ104.00000°.
JMA 17 11:25:36.4±0.3, 39°.74N×143°.57E, h14km±4km, M3.7
ISCJB 17 11:25:38.7±1.1, 39°.70N±0°.05×143°.54E±0°.10, h36km±10km, mb3.5/9, MS2.5/1, Error ellipse: s-maj=13.4km s-min=5.7km az=25.8
IDC 17 11:25:42.4±2.3, 39°.74N×143°.37E, h49km±22km, mb3.3/9, mb1 3.4/13, mb1mx3.3/72, mbtmp3.5/13, ML3.0/4, MS2.7/2, Ms1 2.7/2, ms1mx2.3/32, Error ellipse: s-maj=23.4km s-min=14.1km az=108.0

ISC 17 11:25:40.0±3.3, 39°.71N±0°.06×143°.45E±0°.09, h28km±23km, n26, σ1§15/32, mb3.6/9, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	Tanohata	1.24	281	P	Pn	11 26 00.1	-1.4
JTH				S	Sn	11 26 17.2	-0.1
MIYJ	Miyakonagasawa	1.27	264	P	Pn	11 26 00.9	-0.9
JANG	Nango	1.62	295	P	Pn	11 26 05.4	-1.4
JOM	Ohasama	1.68	262	P	Pn	11 26 07.5	-0.1
JOM				S	Sb	11 26 30.3	-0.8
JMK	Ichinoseki	1.89	247	P	Pn	11 26 10.0	-0.4
JMK				S	Sn	11 26 34.2	+0.9
JIO	Ouri	2.06	233	P	Pn	11 26 12.1	-0.7
JTM	Tenmabayashi	2.11	301	P	Pn	11 26 13.3	-0.2
JOT	Ohata	2.47	313	P	Pn	11 26 19.6	+1.2
JYK	Kaneyama	2.52	253	P	Pn	11 26 19.7	+0.5
JNBK	Urakawa-nobuka	2.62	349	P	Pn	11 26 20.8	+0.4
JNBK				S	Sn	11 26 52.3	+1.1
JCH	Churui	2.90	359	P	Pn	11 26 23.5	-0.8
JCH				S	Sn	11 26 56.0	-2.2
ASAJ	Asahikawa	4.45	352	P	Pn	11 26 45.2	-0.3
	1.2nm,0.3s,baz=190,slow=16,SNR=17						
ASAJ				S	Sn	11 27 38.4	+2.1
	1.4nm,0.3s,baz=108,slow=22,SNR=4.3						
MAT	Matsushiro	5.21	234	P	Pn	11 26 57.0	+1.0
MAT				eS	Sn	11 27 53.9	-1.2
MJAR	Matsushiro Arr	5.21	234	P	Pn	11 26 56.7	+0.7
	0.8nm,0.3s,baz=40,slow=12,SNR=14						
USRK	Ussuriysk Ar.	9.64	301	P	Pn	11 27 57.1	+0.3
	0.4nm,0.3s,baz=117,slow=15,SNR=4.8						
KSRS	Korea Array	12.36	264	P	Pn	11 28 37.1	+3.1
	0.1nm,0.3s,baz=72,slow=14,SNR=3.8						
KSRS				LR	LR	11 33 02.0	
	comp=Z,32nm,19.0s,baz=236,slow=36						
MA2	Magadan	20.41	11	LR	LR	11 38 44.4	
	comp=Z,19nm,18.5s,baz=172,slow=38						
SEY	Seymchan	23.86	10	P	P	11 30 50.2	-0.5
	1.4nm,0.7s,baz=227,slow=9.6,SNR=4.3						
SONM	Songino Array	27.74	299	P	P	11 31 26.2	0.0
	0.4nm,0.4s,baz=106,slow=9.1,SNR=3.6						
ZALV	Zalesovo Beam	41.35	310	P	P	11 33 22.7	-0.5
	0.9nm,0.4s,baz=91,slow=6.9,SNR=3.9						
KURBB	Kurchatov Arra	45.66	306	P	P	11 33 57.7	-0.2
	1.4nm,0.8s,baz=80,slow=8.6,SNR=9.7						
ILAR	Eielson Array	46.38	34	P	P	11 34 02.7	-0.8
	0.2nm,0.8s,baz=269,slow=7.2,SNR=2.5						
BVAR	Borovoye Array	49.99	311	P	P	11 34 29.9	-1.5
	0.7nm,0.5s,baz=75,slow=10.0,SNR=3.5						
WRA	Warramunga Arr	59.95	190	P	P	11 35 43.3	-0.5
	0.5nm,0.8s,baz=7.0,slow=6.9,SNR=4.0						
ASAR	Alice Springs	63.68	190	P	P	11 36 09.0	+0.2
	0.2nm,0.7s,baz=3.3,slow=6.5,SNR=3.9						
NVAR	Mina Array Bea	72.12	55	P	P	11 37 03.4	+1.2
	0.2nm,0.7s,baz=273,slow=5.1,SNR=2.4						

IDC 17 11:31:57.1±5.6, 18°.50S×178°.26W, h588km±60km, mb3.1/5, mb1 3.3/6, mb1mx2.9/48, mbtmp4.1/6, Error ellipse: s-maj=101.2km s-min=34.7km az=157.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.78	254	P	P	11 35 04.9	+1.2
	0.2nm,0.3s,baz=84,slow=14,SNR=2.6						
CTA	Charters Tower	33.49	261	P	P	11 37 49.0	-0.2
	2.1nm,0.4s,baz=85,slow=8.5,SNR=7.6						
STKA	Stephens Creek	38.47	242	P	P	11 38 29.7	-0.4
	1.7nm,0.7s,baz=61,slow=7.3,SNR=5.7						
WRA	Warramunga Arr	44.66	260	P	P	11 39 18.4	-0.6
	1.3nm,0.4s,baz=98,slow=6.7,SNR=54						
WRA				PcP	PcP	11 40 48.4	-0.2
	0.2nm,0.6s,baz=89,slow=3.6,SNR=2.9						
ASAR	Alice Springs	44.77	255	P	P	11 39 19.9	+0.2
	3.9nm,0.6s,baz=88,slow=9.1,SNR=85						
ASAR				PcP	PcP	11 40 49.1	+0.1
	0.2nm,0.4s,baz=103,slow=4.0,SNR=3.1						
TXAR	Lajitas Array	86.19	58	P	P	11 43 37.2	-0.2
	0.4nm,0.8s,baz=216,slow=6.2,SNR=5.0						

IDC 17 11:47:41.9±1.0, 1°.14N×126°.15E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.6/52, mbtmp3.8/7, MS2.9/1, Ms1 2.9/1, ms1mx2.3/58, Error ellipse: s-maj=125.9km s-min=16.2km az=67.0
DJA 17 11:47:45.9±1.3, 1°.N±4°.×12°.6E±°, h11km±10km, M4.1/7, mB4.7/1, mb4.7/1, MLv3.9/7, Mw(mB)3.9/1
ISCJB 17 11:47:46.3±0.6, 1°.26N±0°.06×126°.37E±0°.06, h44km, mb3.8/7, Error ellipse: s-maj=9.9km s-min=7.2km az=136.5

ISC 17 11:47:48.1±0.9, 1°.20N±0°.07×126°.35E±0°.07, h44km, n14, σ0§91/15, mb3.8/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	Labuha	2.16	148	P	Pn	11 48 21.4	-0.2
LBMI				S	Sn	11 48 49.0	+1.8
KMSI	Cibinong	2.45	255	P	Pn	11 48 25.8	+0.3
KMSI				S	Sn	11 48 55.7	+1.5
SGSI	Sangihe	2.60	342	P	Pn	11 48 28.0	+0.3
SANI	Sanana	3.25	186	P	Pn	11 48 36.7	+0.1
LUWI	Luwuk	4.21	238	P	Pn	11 48 48.4	-1.4
APSI	Ampana	5.15	246	P	Pn	11 49 03.0	+0.4
SIJI	Sorong	5.33	113	LR	LR	11 51 36.5	
	comp=Z,106nm,19.3s,baz=52,slow=43						
WRA	Warramunga Arr	22.43	160	P	P	11 52 42.7	-0.6
	1.4nm,0.3s,baz=339,slow=11,SNR=48						
ASAR	Alice Springs	25.79	164	P	P	11 53 14.5	-0.6
	0.6nm,0.3s,baz=341,slow=8.0,SNR=24						
STKA	Stephens Creek	35.93	158	P	P	11 54 44.4	0.0
	0.6nm,0.4s,baz=331,slow=11,SNR=4.6						
SONM	Songino Array	49.57	342	P	P	11 56 34.7	-0.2
	0.6nm,0.7s,baz=150,slow=6.7,SNR=2.4						
MKAR	Makanchi Array	59.42	326	P	P	11 57 45.6	-0.7
	0.4nm,0.3s,baz=121,slow=7.6,SNR=13						
KURBB	Kurchatov Arra	63.66	328	P	P	11 58 14.1	-0.7
	0.9nm,0.6s,baz=126,slow=6.2,SNR=8.0						
BVAR	Borovoye Array	69.23	328	P	P	11 58 51.0	+0.7
	0.3nm,0.5s,baz=131,slow=7.9,SNR=3.6						

KRSC 17 12:14:58.0±1.6, 53°.97N×168°.20E, h7km±32km, ML3.7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	Bering	1.79	314	eP	Pn	12 15 28.7	-0.6
BKI				eS	Sb	12 15 54.1	+0.4
MKZ	Mys Kozlova	3.84	281	eP	Pn	12 16 00.9	+3.5
MKZ				eS	Sn	12 16 46.6	+3.9
ZLN	Zelenaya	4.73	299	eP	Pn	12 16 15.0	+5.3
KZV	Kizimen	4.74	287	eP	Pn	12 16 15.1	+5.1
KZV				eS	Sn	12 17 10.4	+5.1
BDR	Baidarnaya	4.77	306	eP	Pn	12 16 14.4	+4.1
SPN	Mys Shipunski	4.96	263	P	Pn	12 16 16.6	+3.8
SPN				S	Sn	12 17 14.4	+4.1
NLC	Nalytchevo	5.34	265	eS	Sn	12 17 24.5	+4.8
SDLR	Sedlovina	5.59	267	eP	Pn	12 16 26.9	+5.3
SDLR				S	Sn	12 17 31.8	+5.7
UGLR	Uglovaya	5.64	266	eP	Pn	12 16 26.9	+4.6
UGLR				eS	Sn	12 17 32.5	+5.2
KRER	Koryakskii	5.66	267	eP	Pn	12 16 27.4	+4.7

ISCJB 17 12:20:03.0±0.5, 20°.64S±0°.08×177°.6W±0°.1, h500km, mb4.0/18, Error ellipse: s-maj=15.1km s-min=9.0km az=28.3
IDC 17 12:20:03.8±1.7, 20°.57S×177°.62W, h496km±19km, mb3.6/17, mb1 3.7/20, mb1mx3.5/55, mbtmp4.4/20, Error ellipse: s-maj=18.4km s-min=12.0km az=136.0

ISC 17 12:20:03.4±0.6, 20°.6S±0°.1×177°.5W±0°.1, h500km, n33, σ1§77/36, mb4.0/18, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	8.63	40	P	P	12 22 06.2	-0.4
	1.8nm,0.3s,baz=233,slow=10,SNR=4.1						
AFI				S	S	12 23 41.1	-6.4
	11nm,0.3s,baz=26,slow=23,SNR=11						
DZM	Mont Dzumac	15.02	262	P	P	12 23 13.3	-0.7
	baz=70,slow=18,SNR=3.2						
URZ	Urewera	18.19	194	P	P	12 23 46.1	+0.7
	2.3nm,0.3s,baz=277,slow=2.1,SNR=19						
URZ				S	S	12 26 41.6	-4.8
	0.2nm,0.3s,baz=297,slow=18,SNR=3.4						
CTA	Charters Tower	33.93	264	P	P	12 26 04.6	0.0
	24nm,0.6s,baz=90,slow=5.0,SNR=48						
STKA	Stephens Creek	38.15	244	P	P	12 26 39.6	+0.3
	3.3nm,0.6s,baz=90,slow=9.0,SNR=10						
ASAR	Alice Springs	44.94	257	P	P	12 27 33.3	-0.1
	18nm,0.8s,baz=85,slow=8.7,SNR=96						
ASAR				PcP	PcP	12 29 04.3	-0.1
	1.1nm,0.6s,baz=100,slow=4.6,SNR=5.4						
ASAR				ScP	ScP	12 32 09.4	+0.5
	0.4nm,0.8s,baz=79,slow=4.8,SNR=3.9						
ASAR				S	S	12 33 30.6	-4.2
	0.7nm,0.8s,baz=97,slow=16,SNR=5.5						
WRA	Warramunga Arr	45.04	262	P	P	12 27 33.5	-0.7
	12nm,0.7s,baz=96,slow=8.8,SNR=109						
VNDA	Vanda	57.84	185	P	P	12 29 07.2	+1.2
	0.8nm,0.8s,baz=72,slow=6.3,SNR=4.5						
TGY	Tagaytay City	69.62	294	P	P	12 30 24.1	+1.6
	88nm,0.3s,baz=139,slow=9.3,SNR=3.4						
MJAR	Matsushiro Arr	70.57	323	P	P	12 30 27.4	-0.3
	4.5nm,0.6s,baz=164,slow=6.1,SNR=22						
ASAJ	Asahikawa	74.05	331	P	P	12 30 48.3	+0.7
	12nm,0.8s,baz=236,slow=9.4,SNR=10						

1.3nm,0.7s,baz=127,slow=4.2,SNR=7.0
MMAI Mount Meron Ar 148.27 300 PKPbc **PKPbc 12 38 53.2 -0.2**
2.0nm,0.6s,baz=46,slow=4.2,SNR=3.3
CLL Collm 148.28 347 *i* PKPbc **PKPbc 12 38 53.3 +0.6**
comp=Z,7.0nm,0.8s
BRG Berggiesshubel 148.48 346 *e*PKP **PKPbc 12 38 53.8 +0.6**
comp=Z,6.2nm,1.1s
VYHS Vyhne 149.23 339 *e*PKP **PKPab 12 39 02.4 +0.8**
GERES GERESS Array B 150.43 345 PKPbc **PKPbc 12 38 58.0 0.0**
comp=Z,1.2nm,0.8s,baz=46,slow=3.9,SNR=8.6

IDC 17 12:33:41.9±4.0, 17°.23N×123°.25E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.0/68, mbtmp3.2/3, MS3.8/2, Ms1 3.8/2, ms1mx2.7/34, Error ellipse: s-maj=310.3km s-min=28.6km az=62.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**38.51**	**163**	P	P	12 41 05.6	-0.6
0.3nm,0.9s,baz=344,slow=8.5,SNR=3.5							
ASAR	**Alice Springs**	**41.96**	**165**	P	P	12 41 35.1	+0.3
0.3nm,0.8s,baz=337,slow=7.3,SNR=6.2							
PALK	**Pallekele**	**42.65**	**262**	LR	LR	12 59 19.4	
comp=Z,72nm,18.3s,baz=56,slow=36							
MKAR	**Makanchi Array**	**44.78**	**320**	P	P	12 41 57.3	-0.1
0.2nm,0.3s,baz=126,slow=6.2,SNR=3.7							
SEY	**Seymchan**	**49.93**	**17**	LR	LR	13 05 09.1	
comp=Z,173nm,21.0s,baz=331,slow=38							

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*NEIC **17** 12:36:10.5±0.0, 16°.61N×98°.51W, h11km, MD4.0(MEX), After MEX.*
MEX 17 12:36:10.5±0.3, 16°.61N×98°.51W, h11km±8km, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**0.95**	**357**	*i* P	Pg	12 36 26.1	-2.8
TLIG				*i* S	Sg	12 36 38.3	-3.1
TLIG	**Tlapa**	**0.95**	**357**	*i* P	Pg	12 36 26.1	-2.8
TLIG				*i* S	Sg	12 36 38.3	-3.1
ACX	**Acapulco**	**1.32**	**282**	*e*P	Pn	12 36 31.1	-3.8
ACX				*e*S	Sb	12 36 47.6	-4.6
ACX	**Acapulco**	**1.32**	**282**	*e*P	Pn	12 36 31.1	-3.8
ACX				*e*S	Sb	12 36 47.6	-4.6
CAIG	**El Cayaco**	**1.74**	**285**	*e*P	Pn	12 36 37.3	-3.4
CAIG	**El Cayaco**	**1.74**	**285**	*e*P	Pn	12 36 37.3	-3.4
VHO	**Vista Hermosa**	**1.77**	**74**	*e*P	Pn	12 36 37.8	-3.4
VHO	**Vista Hermosa**	**1.77**	**74**	*e*P	Pn	12 36 37.8	-3.4
PLIG	**Platanillo**	**2.01**	**332**	*e*P	Pn	12 36 42.9	-1.6
PLIG	**Platanillo**	**2.01**	**332**	*e*P	Pn	12 36 42.9	-1.6
TPIG	**Tehuac#an**	**2.11**	**31**	*e*P	Pn	12 36 43.0	-3.0
TPIG	**Tehuac#an**	**2.11**	**31**	*e*P	Pn	12 36 43.0	-3.0
YAIG	**Yautepec**	**2.31**	**347**	*e*P	Pn	12 36 47.3	-1.3
YAIG	**Yautepec**	**2.31**	**347**	*e*P	Pn	12 36 47.3	-1.3

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*IDC **17** 12:38:41.3±0.6, 15°.39S×172°.88W, h0km, mb4.3/15, mb1 4.5/15, mb1mx4.2/49, mbtmp4.3/15, MS3.5/14, Ms1 3.5/14, ms1mx3.3/50, Error ellipse: s-maj=27.4km s-min=13.4km az=133.0*
*BJI **17** 12:38:42.8, 15°.20S×172°.84W, h9km, mb4.9/15, mB5.3/6, Ms5.1/2, Ms7 4.9/1*
*ISCJB **17** 12:38:45.9±0.2, 15°.36S±0°.06×172°.96W±0°.06, h35km, mb4.5/89, MS3.7/13, Error ellipse: s-maj=10.9km s-min=5.3km az=40.3*
*NEIC **17** 12:38:45.7±2.0, 15°.35S×172°.95W, h24km±13km, mb4.6/70, Error ellipse: s-maj=8.2km s-min=3.8km az=129.0*
ISC 17 12:38:46.9±0.5, 15°.41S±0°.08×172°.7W±0°.1, h35km, n165, σ1.9 07/150, mb4.5/89, MS3.6/13, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.76**	**32**	Pn	**Pn**	**12 39 14.8**	**-0.2**
399nm,0.3s,baz=215,slow=18,SNR=493							
AFI				Sn	**Sn**	**12 39 34.1**	**-2.2**
895nm,0.3s,baz=342,slow=20,SNR=18							
AFI				LR	LR	12 39 53.4	
comp=Z,1μm,18.7s,baz=167,slow=40							
AFI	**Afiamalu**	**1.76**	**32**	*e*Pn	**Pn**	**12 39 14.9**	**-0.2**
AFI				*e*Sn	**Sn**	**12 39 33.6**	**-2.8**
KNTN	**Kanton**	**12.60**	**5**	*e*Pn	**Pn**	**12 41 42.9**	**-0.9**
RAR	**Rarotonga**	**13.59**	**117**	LR	LR	12 46 02.1	
comp=Z,147nm,18.4s,baz=289,slow=32							
RAO	**Raoul Island**	**14.58**	**198**	LR	LR	12 46 49.5	
comp=Z,185nm,20.0s,baz=55,slow=34							
DZM	**Mont Dzumac**	**20.78**	**248**	*e*P	Pn	12 43 40.1	+12
33nm,1.1s							
DZM				*e*LR	LR	12 48 47.5	
390nm,27.4s							
DZM	**Mont Dzumac**	**20.78**	**248**	P	**P**	**12 43 23.1**	**-2.2**
1.9nm,0.7s,baz=109,slow=16,SNR=2.7							
DZM				LR	LR	12 49 23.5	
comp=Z,52nm,21.1s,baz=70,slow=31							
PPT	**Papeete**	**22.31**	**99**	LR	LR	12 50 03.5	
comp=Z,63nm,19.3s,baz=315,slow=30							
PPT2	**Papeete2**	**22.31**	**99**	*e*LR	LR	12 48 46.0	
250nm,28.5s							
TVO	**Taravao**	**22.63**	**99**	*e*T	T	13 06 21.6	
1.7nm,0.3s							
TBI	**Tubuai**	**23.31**	**113**	*e*T	T	13 07 21.0	
8.7nm,0.3s							
URZ	**Urewera**	**24.46**	**200**	P	**P**	**12 44 02.9**	**+0.4**
17nm,0.6s,baz=27,slow=11,SNR=27							
URZ				S	**S**	**12 48 20.5**	**+0.2**
3.9nm,0.8s,baz=95,slow=16,SNR=2.7							
URZ	**Urewera**	**24.46**	**200**	*e*P	**P**	**12 44 03.3**	**+0.7**
24nm,0.7s							
URZ				S	**S**	**12 48 20.6**	**+0.2**
HIZ	**Hauiti**	**25.48**	**203**	*e*P	**P**	**12 44 13.6**	**+1.8**
98nm,1.3s							
BKZ	**Black Stump Fm**	**25.48**	**200**	*e*P	**P**	**12 44 12.8**	**+0.9**
21nm,1.1s							
BFZ	**Birch Farm**	**26.94**	**199**	*e*P	**P**	**12 44 26.5**	**+1.4**
71nm,1.4s							
HNR	**Honiara**	**27.31**	**279**	LR	LR	12 53 59.1	
comp=Z,103nm,18.5s,baz=263,slow=34							
SNZO	**South Karori**	**28.00**	**200**	*e*P	**P**	**12 44 35.8**	**+1.3**
55nm,1.1s							
RPZ	**Rata Peaks**	**31.41**	**203**	P	**P**	**12 45 05.6**	**+0.9**
23nm,1.2s,baz=39,slow=8.5,SNR=2.1							
TAOE	**Nuku Hiva Isla**	**32.49**	**82**	*e*LR	LR	12 53 25.8	
165nm,28.9s							
WHZ	**Wether Hill Ro**	**34.44**	**204**	*e*P	**P**	**12 45 30.0**	**-1.1**
19nm,0.9s							
RKT	**Rikitea**	**36.38**	**108**	*e*T	T	13 23 36.9	
6.1nm,0.4s							
H11S2	**WAKE ISLAND Hy**	**39.31**	**328**	T	T	13 26 38.3	
baz=146,slow=76,SNR=7.0							
H11S3	**WAKE ISLAND Hy**	**39.32**	**328**	T	T	13 26 36.4	
baz=146,slow=76,SNR=10							
H11S1	**WAKE ISLAND Hy**	**39.32**	**328**	T	T	13 26 40.8	
baz=146,slow=76,SNR=10							
H11N3	**WAKE ISLAND Hy**	**40.24**	**330**	T	T	13 27 46.1	
baz=147							
H11N1	**WAKE ISLAND Hy**	**40.25**	**330**	T	T	13 27 39.7	
baz=147							
H11N2	**WAKE ISLAND Hy**	**40.26**	**330**	T	T	13 27 44.6	
baz=147							
STKA	**Stephens Creek**	**44.58**	**240**	P	**P**	**12 46 54.2**	**-1.7**
1.3nm,0.6s,baz=80,slow=11,SNR=4.9							
STKA				LR	LR	13 02 31.7	
comp=Z,58nm,19.9s,baz=30,slow=32							
STKA	**Stephens Creek**	**44.58**	**240**	*e*P	**P**	**12 46 54.6**	**-1.2**
2.3nm,1.4s							
MCQ	**Macquarie Isla**	**44.77**	**203**	*e*P	**P**	**12 46 57.3**	**+0.3**
24nm,1.0s							
BBOO	**Buckleboo**	**49.35**	**240**	*e*P	**P**	**12 47 31.7**	**-1.5**
23nm,1.4s							
WB2	**Warramunga Arr**	**50.45**	**257**	*e*P	**P**	**12 47 40.4**	**-1.3**
WRA	**Warramunga Arr**	**50.46**	**257**	P	**P**	**12 47 39.6**	**-2.1**
0.6nm,0.8s,baz=91,slow=7.1,SNR=8.6							
AS01	**Alice Springs**	**50.67**	**252**	*e*P	**P**	**12 47 41.4**	**-1.9**
AS31	**Alice Springs**	**50.71**	**252**	*e*P	**P**	**12 47 41.9**	**-1.7**
1.9nm,0.8s							
ASAR	**Alice Springs**	**50.71**	**252**	P	**P**	**12 47 41.7**	**-1.9**
2.5nm,0.5s,baz=87,slow=8.0,SNR=94							
ASAR				LR	LR	13 07 35.9	
comp=Z,124nm,20.9s,baz=82,slow=34							
VNDA	**Vanda**	**63.43**	**186**	LR	LR	13 16 23.1	
comp=Z,17nm,18.0s,baz=332,slow=36							
ATKA	**Atka Island**	**67.34**	**359**	*e*P	**P**	**12 49 38.9**	**+0.7**
12nm,0.8s							
UNV	**Unalaska Valle**	**69.19**	**4**	*e*P	**P**	**12 49 50.0**	**+0.3**
26nm,1.4s							
ISA	**Isabella, Lake**	**72.22**	**44**	*e*P	**P**	**12 50 09.0**	**+0.2**
6.6nm,1.3s							
LPIG	**La Paz**	**72.50**	**58**	LR	LR	13 13 53.2	
comp=Z,59nm,20.1s,baz=239,slow=29							
PETK	**Petropavlovsk-**	**72.84**	**342**	P	**P**	**12 50 11.6**	**-0.3**
4.4nm,0.8s,baz=103,slow=6.4,SNR=5.9							
PETK	**Petropavlovsk-**	**72.84**	**342**	*e*P	**P**	**12 50 12.5**	**+0.6**
NV01	**Mina Array Sit**	**73.92**	**42**	*e*P	**P**	**12 50 19.7**	**+0.8**
NVAR	**Mina Array Bea**	**73.92**	**42**	P	**P**	**12 50 19.2**	**+0.3**
1.8nm,0.8s,baz=221,slow=6.8,SNR=15							
NVAR				LR	LR	13 13 58.0	
comp=Z,98nm,21.9s,baz=90,slow=29							
NV11	**Mina Array Sit**	**74.01**	**42**	*e*P	**P**	**12 50 20.6**	**+1.3**
0.5nm,1.3s							
LDFC	**Landfair**	**74.19**	**46**	*e*P	**P**	**12 50 21.6**	**+1.1**
6.0nm,0.8s							
KVN	**Kaiserville**	**74.40**	**41**	*e*P	**P**	**12 50 22.8**	**+1.1**
7.4nm,1.2s							
KDAK	**Kodiak Island**	**74.81**	**11**	P	**P**	**12 50 23.1**	**-0.2**
8.2nm,0.8s,baz=164,slow=7.4							
SHPR	**Sheep Range**	**74.92**	**45**	*e*P	**P**	**12 50 26.2**	**+1.5**
6.9nm,1.3s							
W13A	**Hualapai Mount**	**75.06**	**47**	*e*P	**P**	**12 50 26.9**	**+1.3**
1.8nm,0.9s							
Y14A	**Wickenburg**	**75.09**	**48**	*e*P	**P**	**12 50 26.1**	**+0.6**
2.9nm,0.8s							
TUC	**Tucson**	**75.91**	**50**	*e*P	**P**	**12 50 31.9**	**+1.6**
2.3nm,0.8s							
X16A	**Lo Mia Camp, P**	**76.45**	**48**	*e*P	**P**	**12 50 34.8**	**+1.3**
LCMT	**Little Creek M**	**76.49**	**45**	*e*P	**P**	**12 50 34.5**	**+0.9**
2.1nm,0.9s							
319A	**Douglas**	**76.60**	**52**	*e*P	**P**	**12 50 35.9**	**+1.5**
4.4nm,0.8s							
KSRS	**Korea Array**	**76.61**	**315**	P	**P**	**12 50 34.4**	**+0.3**
1.0nm,0.8s,baz=137,slow=6.7,SNR=5.4							
KSAR	**Wonju Array Be**	**76.64**	**315**	P	**P**	**12 50 34.4**	**+0.2**
KS01	**Wonju Array Si**	**76.65**	**315**	*e*P	**P**	**12 50 36.3**	**+2.0**
KNB	**Kanab**	**76.78**	**45**	*e*P	**P**	**12 50 35.4**	**0.0**
4.1nm,1.0s							
U15A	**North Rim**	**76.85**	**46**	*e*P	**P**	**12 50 36.9**	**+1.0**
3.6nm,0.9s							
PSUT	**Pine Spring**	**76.88**	**44**	*e*P	**P**	**12 50 36.8**	**+0.9**
3.7nm,0.7s							
HPIG		**77.50**	**57**	*e*P	**P**	**12 50 40.6**	**+1.0**
6.0nm,1.1s							
X18A	**Snowflake**	**77.58**	**49**	*e*P	**P**	**12 50 40.6**	**+0.7**
4.1nm,1.3s							
MTPU	**Mount Pierson**	**77.75**	**45**	*e*P	**P**	**12 50 42.9**	**+1.9**
3.3nm,0.8s							
MSU	**Marysvale**	**77.99**	**44**	*e*P	**P**	**12 50 44.1**	**+2.0**
BMO	**Blue Mountains**	**78.25**	**37**	*e*P	**P**	**12 50 44.2**	**+0.9**
7.4nm,1.5s							
MFID	**Camas Ranch**	**78.30**	**39**	*e*P	**P**	**12 50 44.6**	**+1.0**
3.5nm,1.1s							
DUG	**Dugway, Tooele**	**78.44**	**43**	*e*P	**P**	**12 50 45.1**	**+0.6**
4.2nm,1.1s							
TMUT	**Trail Mountain**	**79.04**	**44**	*e*P	**P**	**12 50 49.8**	**+1.8**
9.0nm,1.0s							
HLID	**Hailey**	**79.24**	**39**	*e*P	**P**	**12 50 50.0**	**+1.2**
3.2nm,0.9s							
HVU	**Hansel Valley**	**79.30**	**41**	*e*P	**P**	**12 50 50.3**	**+1.1**
2.6nm,0.7s							
SRU	**San Rafael Swe**	**79.41**	**44**	*e*P	**P**	**12 50 50.2**	**+0.3**
6.9nm,1.2s							
P17A	**Butcher Ranch,**	**79.44**	**44**	*e*P	**P**	**12 50 51.6**	**+1.6**
6.3nm,1.0s							
MNTX	**Cornudas Mount**	**79.72**	**53**	*e*P	**P**	**12 50 52.7**	**+1.1**
4.6nm,1.3s							
TCUT	**Toone Canyon**	**79.83**	**42**	*e*P	**P**	**12 50 53.2**	**+1.0**
13nm,0.9s							
P18A	**Preston Nutter**	**79.85**	**44**	*e*P	**P**	**12 50 53.8**	**+1.3**
4.9nm,1.2s							
PV09	**Paradox Valley**	**80.06**	**46**	*e*P	**P**	**12 50 54.9**	**+1.3**
TX31	**Lajitas Ar. Si**	**80.09**	**56**	*e*P	**P**	**12 50 55.0**	**+1.3**
TXAR	**Lajitas Array**	**80.09**	**56**	P	**P**	**12 50 54.6**	**+0.9**
2.1nm,0.9s,baz=217,slow=6.1,SNR=19							
PV03	**Paradox Valley**	**80.14**	**46**	*e*P	**P**	**12 50 55.0**	**+1.1**
5.4nm,1.2s							
PV04	**Paradox Valley**	**80.16**	**46**	*e*P	**P**	**12 50 54.5**	**+0.5**
5.9nm,1.0s							
PV01	**Paradox Valley**	**80.27**	**46**	*e*P	**P**	**12 50 55.5**	**+0.9**
8.3nm,1.2s							
ANMO	**Albuquerque**	**80.32**	**50**	P	**P**	**12 50 55.4**	**+0.5**
2.0nm,1.0s,baz=208,slow=5.0,SNR=5.6							
ANMO	**Albuquerque**	**80.32**	**50**	*e*P	**P**	**12 50 55.8**	**+0.8**
5.2nm,1.3s							
TRF	**Thorofare Moun**	**80.53**	**10**	*e*P	**P**	**12 50 55.5**	**+0.2**
11nm,1.1s							
NJ2	**Nanjing**	**80.68**	**307**	*e*P	**P**	**12 50 57.0**	**+0.4**
NJ2				pmax	pmax		
comp=Z,10.0nm,0.5s							
RND	**Reindeer**	**80.73**	**11**	*e*P	**P**	**12 50 56.4**	**+0.1**
7.6nm,0.9s							
MCMT	**McKenzie Canyo**	**80.87**	**39**	*e*P	**P**	**12 50 59.1**	**+1.4**
MCK	**McKinley**	**81.02**	**10**	*e*P	**P**	**12 50 58.4**	**+0.7**
12nm,0.9s							
DLMT	**Dillon**	**81.31**	**38**	*e*P	**P**	**12 51 01.2**	**+1.3**
3.0nm,1.3s							
S22A	**4UR Ranch, Cre**	**81.31**	**47**	*e*P	**P**	**12 51 01.9**	**+1.6**
4.6nm,1.0s							
MSO	**Missoula**	**81.31**	**36**	*e*P	**P**	**12 51 00.2**	**+0.3**
4.9nm,1.0s							
REDW	**Red Top Meadow**	**81.33**	**41**	*e*P	**P**	**12 51 00.8**	**+0.6**
4.9nm,1.1s							
FXWY	**Fox Creek**	**81.36**	**40**	*e*P	**P**	**12 51 01.4**	**+1.1**
1.8nm,0.9s							
SNOW	**Snow King Moun**	**81.44**	**41**	*e*P	**P**	**12 51 02.1**	**+1.3**
15nm,1.4s							
CN2	**Changchun**	**81.51**	**320**	*e*P	**P**	**12 51 02.0**	**+1.2**
CN2				pmax	pmax		
comp=Z,10.0nm,0.6s							
WRH	**Wood River Hil**	**81.85**	**11**	*e*P	**P**	**12 51 02.5**	**+0.4**
14nm,0.9s							
BW06	**Boulder Array**	**81.85**	**42**	*e*P	**P**	**12 51 03.6**	**+0.6**
9.1nm,1.5s							
PD31	**Pinedale Array**	**81.85**	**42**	*e*P	**P**	**12 51 02.8**	**-0.1**
PDAR	**Pinedale Array**	**81.85**	**42**	P	**P**	**12 51 03.5**	**+0.5**
0.7nm,0.6s,baz=196,slow=3.7,SNR=11							
PDAR				LR	LR	13 20 43.6	
comp=Z,45nm,20.0s,baz=282,slow=31							
PDAR	**Pinedale Array**	**81.85**	**42**	*e*P	**P**	**12 51 03.1**	**+0.1**
MLY	**Manley**	**81.93**	**9**	*e*P	**P**	**12 51 02.7**	**+0.1**
5.7nm,0.9s							
BOZ	**Bozeman (W)**	**82.01**	**38**	*e*P	**P**	**12 51 04.9**	**+1.3**
6.5nm,1.2s							
CCB	**Clear Creek Bu**	**82.06**	**11**	*e*P	**P**	**12 51 03.2**	**0.0**
11nm,1.0s							
SCRK	**Sand Creek**	**82.19**	**12**	*e*P	**P**	**12 51 04.6**	**+0.6**
4.9nm,1.0s							
SDCO	**Great Sand Dun**	**82.25**	**48**	*e*P	**P**	**12 51 06.3**	**+1.0**
4.3nm,1.1s							
COLA	**College**	**82.26**	**10**	*e*P	**P**	**12 51 04.8**	**+0.6**
15nm,1.0s							
MDM	**Murphy Dome**	**82.27**	**10**	*e*P	**P**	**12 51 04.2**	**-0.1**
7.0nm,1.1s							
ILAR	**Eielson Array**	**82.34**	**11**	P	**P**	**12 51 04.5**	**-0.2**
1.9nm,0.7s,baz=220,slow=6.2,SNR=20							
ILB	**Eielson Array**	**82.34**	**11**	*e*P	**P**	**12 51 04.5**	**-0.2**
IL1	**Eielson Array**	**82.34**	**11**	*e*P	**P**	**12 51 04.4**	**-0.3**
Q24A	**Divide**	**83.04**	**47**	*e*P	**P**	**12 51 10.0**	**+0.7**
8.6nm,1.1s							
ISCO	**Idaho Springs**	**83.08**	**46**	*e*P	**P**	**12 51 11.0**	**+1.4**
4.9nm,1.1s							
DAWY	**Dawson**	**83.28**	**14**	*e*P	**P**	**12 51 10.5**	**+0.8**
9.8nm,1.0s							
GCMT	**Greycliff**	**83.29**	**39**	*e*P	**P**	**12 51 11.5**	**+1.2**
N23A	**Red Feather La**	**83.35**	**45**	*e*P	**P**	**12 51 12.2**	**+1.4**
7.2nm,0.9s							
EGAK	**Eagle**	**83.49**	**13**	*e*P	**P**	**12 51 11.6**	**+1.0**
5.5nm,1.0s							
AMTX	**Amarillo**	**83.86**	**51**	*e*P	**P**	**12 51 13.7**	**+0.3**
18nm,1.4s							
PMSA	**Palmer Station**	**83.90**	**156**	P	**P**	**12 51 11.3**	**-1.6**
24nm,0.9s,baz=219,slow=6.5,SNR=2.3							
ABTX	**Abilene, Hawle**	**84.55**	**54**	*e*P	**P**	**12 51 16.8**	**0.0**
16nm,1.2s							
TOLK	**Toolik Lake Re**	**85.47**	**8**	*e*P	**P**	**12 51 21.9**	**+1.3**
3.5nm,0.9s							
LAO	**LASA Array**	**85.81**	**39**	*e*P	**P**	**12 51 24.5**	**+1.6**
11nm,1.2s							
INK	**Inuvik**	**88.13**	**14**	*e*P	**P**	**12 51 34.5**	**+1.0**
4.9nm,1.0s							
GYA	**Guiyang**	**88.61**	**298**	*e*P	**P**	**12 51 38.0**	**+1.0**
GYA				pmax	pmax		
comp=Z,10.0nm,1.0s							
HHC	**Hu-ho-hao-te**	**89.50**	**313**	*e*P	**P**	**12 51 43.3**	**+2.5**
YKA	**Yellowknife Ar**	**89.86**	**23**	P	**P**	**12 51 41.5**	**-0.3**
1.9nm,0.8s,baz=224,slow=5.1,SNR=5.4							
JTS	**JuntasAbangare**	**90.59**	**80**	LR	LR	13 25 30.8	
comp=Z,22nm,18.6s,baz=12,slow=31							
KMI	**Kunming**	**91.61**	**295**	P	**P**	**12 51 51.5**	**+0.4**
KMI				pmax	pmax		
comp=Z,15nm,1.5s							
CD2	**Chengdu**	**92.36**	**301**	P	**P**	**12 51 53.3**	**-1.0**
CD2				pmax	pmax		
comp=Z,8.0nm,0.6s							
SNAA	**Sanae**	**92.86**	**177**	LR	LR	13 31 16.7	
comp=Z,16nm,19.7s,baz=80,slow=34							
ULM	**Lac du Bonnet**	**93.54**	**39**	LR	LR	13 28 51.9	
comp=Z,44nm,20.0s,baz=214,slow=32							
LZH	**Lanzhou**	**93.75**	**306**	*e*P	**P**	**12 52 01.3**	**+0.6**
LZH				pP	pP	12 52 08.5	-3.3
LZH				sP	sP	12 52 12.9	-2.9
LZH				*e*PP	**PP**	**12 55 49.6**	**+3.2**
LZH				pmax	pmax		
comp=Z,17nm,1.4s							
LZH				pmax	pmax		
comp=Z,79nm,9.2s							
LZH				LR	LR		
comp=N,310nm,17.2s							
LZH				LR	LR		
comp=E,300nm,17.3s							
LZH				LR	LR		
comp=Z,400nm,19.7s							
KSH	**Kashi**	**115.99**	**307**	PKP	**PKPdf**	**12 57 26.3**	**-0.3**
ARCES	**ARCESS Array B**	**124.71**	**352**	PKP	**PKPdf**	**12 57 41.2**	**-1.1**
1.1nm,0.7s,baz=347,slow=2.8,SNR=4.2							
CLL	**Collm**	**143.90**	**354**	*e*PKPdf	PKPbc	12 58 17.0	+0.7
DPC	**Dobruska-Polom**	**144.39**	**350**	*e*PKP	**PKPdf**	**12 58 18.5**	**-1.0**
BUR04	**Bucovina Ar. S**	**144.61**	**339**	*e*PKPdf	**PKPdf**	**12 58 19.3**	**-0.7**
MORC	**Moravsky Berou**	**144.72**	**348**	*e*PKP	**PKPdf**	**12 58 19.5**	**-0.6**
MORC				*e*		12 58 39.1	
VRAC	**Vranov**	**145.35**	**349**	*e*PKP	**PKPab**	**12 58 21.1**	**0.0**
VRAC				*e*		12 58 41.6	
JAVC	**Velka Javorina**	**145.57**	**348**	*e*PKP	**PKPab**	**12 58 23.4**	**+1.4**
JAVC				*e*		12 58 43.4	
KRUC	**Moravsky**	**145.62**	**349**	*e*PKP	**PKPab**	**12 58 22.1**	**0.0**
KRUC				*e*		12 58 41.2	
VYHS	**Vyhne**	**145.66**	**346**	*e*PKP	**PKPab**	**12 58 22.7**	**+0.4**
VYHS				*e*		12 58 41.8	
KHC	**Kasperske Hory**	**145.98**	**353**	*e*PKP	**PKPab**	**12 58 23.3**	**-0.2**
KHC				*ex*	x	12 58 45.9	
KHC				*ex*	x	12 58 54.4	
KHC	**Kasperske Hory**	**145.98**	**353**	*e*PKPdf	**PKPab**	**12 58 23.3**	**-0.2**
MODS	**Modra-Piesok**	**146.11**	**348**	*e*PKP	**PKPbc**	**12 58 22.9**	**-0.5**
GEC2	**GERESS Array S**	**146.24**	**352**	*e*PKPdf	**PKPbc**	**12 58 23.8**	**-0.1**
GERES	**GERESS Array B**	**146.24**	**352**	PKPbc	**PKPdf**	**12 58 22.9**	**+0.1**
0.7nm,0.6s,baz=58,slow=3.3,SNR=10							
GEA0	**GERESS Array S**	**146.25**	**352**	*e*PKPdf	**PKPbc**	**12 58 23.4**	**-0.5**
BR131	**Keskin Array S**	**146.56**	**322**	*e*PKPdf	**PKPbc**	**12 58 24.7**	**-0.5**
BRTR	**Keskin Array B**	**146.57**	**322**	PKPbc	**PKPbc**	**12 58 25.4**	**+0.1**
2.0nm,0.7s,baz=99,slow=1.9,SNR=8.8							
CONA	**Conrad Observa**	**146.81**	**349**	*e*pPKPab	**PKPab**	**12 58 26.0**	**-0.8**
2.9nm,0.8s							
MOA	**Molln**	**147.14**	**351**	*e*PKPab	**PKPbc**	**12 58 26.7**	**+0.3**
3.7nm,1.0s							
ARSA	**Arzberg**	**147.52**	**349**	*e*PKPab	**PKPbc**	**12 58 27.6**	**+0.1**
4.0nm,1.2s							
RETA	**Reutte**	**147.89**	**356**	*e*PKPab	**PKPbc**	**12 58 28.9**	**+0.4**
3.4nm,1.0s							
MOTA	**Moosalm**	**148.00**	**355**	*e*pPKPbc	**PKPbc**	**12 58 28.5**	**-0.4**
2.8nm,0.6s							
SOKA	**Soboth**	**148.16**	**350**	*e*pPKPbc	**PKPbc**	**12 58 29.2**	**-0.2**
4.1nm,0.9s							
FETA	**Feichten**	**148.35**	**355**	*e*PKiKP	**PKPbc**	**12 58 30.4**	**+0.4**
2.4nm,0.8s							
ABTA	**Abfaltersbach**	**148.45**	**353**	*e*pPKPbc	**PKPbc**	**12 58 29.9**	**-0.2**
5.3nm,1.1s							
FUORN	**Ofenpass-Fuorn**	**148.79**	**356**	*e*PKPbc	**PKPbc**	**12 58 31.9**	**+0.7**
DIVS	**Divibare**	**149.43**	**342**	*e*PKPbc	**PKPbc**	**12 58 32.5**	**-0.2**
BNI	**Bardonecchia**	**150.45**	**1**	*e*PKPbc	**PKPbc**	**12 58 36.0**	**+0.9**
ES19	**SONSECA Array**	**153.91**	**20**	*e*PKPbc	**PKPbc**	**12 58 42.5**	**-0.5**
ES19				*e*PKPab	**PKPab**	**12 58 56.4**	**+0.3**
ESDC	**Sonseca Array**	**153.91**	**20**	PKPbc	**PKPbc**	**12 58 41.8**	**-1.3**
0.6nm,0.6s,baz=331,slow=3.0,SNR=7.7							
ESDC				PKPab	**PKPab**	**12 58 56.1**	**-0.1**
0.1nm,0.4s,baz=318,slow=3.5,SNR=5.2							

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*CSEM **17

CMJI				S	Sn	12 47 46.8	-1.0
LEM	**Lembang**	**1.24**	**13**	P	Pn	12 47 36.0	+1.4
	310nm,0.3s,baz=166,slow=3.8,SNR=83						
LEM				S	Sn	12 47 52.8	+2.1
	502nm,0.3s,baz=317,slow=21,SNR=16						
LEM	**Lembang**	**1.24**	**13**	P	Pn	12 47 35.5	+0.9
LEM				S	Sn	12 47 53.2	+2.5
SKJI	**Sukabumi**	**1.29**	**323**	P	Pn	12 47 34.5	-0.6
SKJI				S	Sn	12 47 51.3	-0.4
DBJI	**Dramaga**	**1.59**	**338**	P	Pn	12 47 39.8	+0.6
DBJI				S	Sn	12 48 00.2	+1.3
KPJI	**Karang Pucung**	**1.73**	**66**	P	Pn	12 47 42.0	+1.1
KPJI				S	Sn	12 48 03.3	+1.3
CGJI	**Cibinong**	**2.17**	**311**	P	Pn	12 47 46.2	-0.7
SBJI	**Serang**	**2.26**	**328**	P	Pn	12 47 49.4	+1.3
SBJI				S	Sn	12 48 15.6	+0.7
UGM	**Wanagama**	**3.15**	**88**	P	Pn	12 48 00.9	+0.5
SMRI	**Semarang**	**3.23**	**72**	P	Pn	12 48 02.4	+1.0
WOJI	**Wonogiri, Jawa**	**3.56**	**87**	P	Pn	12 48 06.5	+0.7
KASI	**Kota Agung**	**3.77**	**311**	P	Pn	12 48 08.7	-0.1
PCJI	**Pacitan**	**3.80**	**92**	P	Pn	12 48 10.0	+0.8
PCJI				S	Sn	12 48 51.3	-1.4
PWJI	**Pagerwojo**	**4.42**	**90**	P	Pn	12 48 18.8	+1.2
MDSI	**Maura Dua**	**4.73**	**318**	P	Pn	12 48 23.6	+1.7
MNAI	**Manna**	**5.69**	**310**	P	Pn	12 48 35.4	+0.3
JAGI	**Jajag, Banyuwa**	**6.75**	**94**	P	Pn	12 48 51.2	+1.6
TWSI	**Taliwang, Sumb**	**9.47**	**95**	P	Pn	12 49 27.4	+0.7
H01W3	**Cape Leeuwin H**	**27.43**	**168**	T	T	13 22 29.0	
	baz=342,slow=78,SNR=7.2						
H01W1	**Cape Leeuwin H**	**27.44**	**168**	T	T	13 22 29.6	
	baz=342,slow=78,SNR=7.5						
H01W2	**Cape Leeuwin H**	**27.44**	**168**	T	T	13 22 29.5	
	baz=342,slow=78,SNR=9.3						
WRA	**Warramunga Arr**	**28.69**	**117**	P	**P**	12 53 04.9	+0.8
	0.3nm,0.4s,baz=289,slow=10,SNR=12						
ASAR	**Alice Springs**	**29.82**	**124**	P	**P**	12 53 14.9	+0.8
	0.5nm,0.7s,baz=305,slow=9.0,SNR=6.0						
H08S2	**Diego Garcia H**	**34.52**	**268**	T	T	13 30 48.4	
	baz=94						
H08S3	**Diego Garcia H**	**34.53**	**268**	T	T	13 30 49.5	
	baz=94						
H08S1	**Diego Carcia H**	**34.54**	**268**	T	T	13 30 46.1	
	baz=94						
STKA	**Stephens Creek**	**39.70**	**131**	P	**P**	12 54 41.1	+2.0
	3.7nm,0.6s,baz=310,slow=7.8,SNR=7.8						
MKAR	**Makanchi Array**	**58.98**	**340**	P	**P**	12 57 03.1	-2.7
	0.3nm,0.5s,baz=156,slow=7.7,SNR=5.9						
KLR	**Kul'dur**	**60.91**	**18**	P	**P**	12 57 17.8	-1.2
	0.1nm,0.5s,baz=270,slow=5.1,SNR=4.9						
KURBB	**Kurchatov Arra**	**63.54**	**340**	P	**P**	12 57 36.0	-0.5
	0.4nm,0.5s,baz=152,slow=6.0,SNR=3.7						
ZALV	**Zalesovo Beam**	**64.62**	**345**	P	**P**	12 57 42.7	-0.8
	0.4nm,0.3s,baz=168,slow=7.4,SNR=2.3						
MAW	**Mawson**	**66.47**	**197**	P	**P**	12 57 56.8	+1.5
	1.3nm,0.6s,baz=21,slow=8.6,SNR=3.1						
BVAR	**Borovoye Array**	**68.46**	**337**	P	**P**	12 58 06.4	-1.7
	0.6nm,0.3s,baz=129,slow=6.3,SNR=4.4						
AKTO	**Aktyubinsk**	**72.19**	**329**	P	**P**	12 58 29.5	-1.4
	0.4nm,0.3s,baz=127,slow=7.5,SNR=3.2						
TIXI	**Tiksi**	**80.80**	**7**	P	**P**	12 59 16.3	-2.8
	0.8nm,0.5s,baz=201,slow=3.0,SNR=5.3						
BRTR	**Keskin Array B**	**82.77**	**312**	P	**P**	12 59 30.3	-0.1
	0.8nm,0.6s,baz=120,slow=4.6,SNR=2.7						
SNAA	**Sanae**	**88.63**	**197**	P	**P**	13 00 01.0	+2.3
	1.1nm,0.7s,baz=146,slow=5.7,SNR=11						
TXAR	**Lajitas Array**	**143.99**	**50**	PKP	**PKPdf**	13 06 41.5	-0.5
	0.2nm,0.5s,baz=256,slow=1.5,SNR=3.7						

BJI ***17*** *12:53:47.0, 53.°40N×165.°70W, h45km, mb4.8/22, mB4.9/10, Ms4.9/5, Ms7 4.6/3*
MOS ***17*** *12:53:48.0±1.0, 53.°82N×165.°83W, h26km, mb4.7/36, Error ellipse: s-maj=10.7km s-min=5.6km az=82.1*
NEIC ***17*** *12:53:49.2±0.0, 53.°44N×165.°68W, h26km, mb4.6/72, ML4.2(AEIC), After AEIC.*
ISCJB ***17*** *12:53:50.6±0.3, 53.°68N±0.°04×165.°73W±0.°03, h57km±2km, mb4.5/120, MS3.6/32, Error ellipse: s-maj=6.6km s-min=2.8km az=164.1*
IDC ***17*** *12:53:51.9±2.7, 53.°91N×165.°84W, h45km±25km, mb3.9/35, mb1 4.0/37, mb1mx3.9/83, mbtmp4.1/37, ML3.6/2, MS3.6/30, Ms1 3.6/30, ms1mx3.4/73, Error ellipse: s-maj=16.2km s-min=10.0km az=3.0*
ISC 17 12:53:51.5±0.9, 53.°61N±0.°06×165.°67W±0.°04, h51km±7km**, n324,** σ1$**64**/322**, mb4.5**/120**, MS3.6**/33**, 10C, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AHB	**Akutan Harbor**	**0.51**	**350**	P	**Pn**	**12 54 02.5**	**-0.5**
AKMO	**Akutan Morgan**	**0.52**	**337**	P	**Pn**	12 54 02.5	-0.6
AKMO				S	**Sn**	12 54 12.3	+0.9
AKSA	**Akutan Strait**	**0.53**	**358**	P	**Pn**	12 54 02.3	-0.8
AKUT	**Akutan**	**0.53**	**353**	P	**Pn**	12 54 02.6	-0.6
AKUT				S	**Sn**	12 54 12.7	+1.2
UNV	**Unalaska Valle**	**0.55**	**296**	P	**Pn**	12 54 01.9	-1.5
UNV				S	**Sn**	12 54 11.3	-0.6
MTBL	**Makushin Table**	**0.70**	**301**	P	**Pn**	12 54 04.7	-0.6
MSW	**Makushin Switc**	**0.73**	**295**	P	**Pn**	12 54 04.8	-0.9
MCIR	**Makushin Cirqu**	**0.80**	**296**	P	**Pn**	12 54 06.1	-0.6
WESP	**Westdahl Peak**	**1.04**	**32**	P	**Pn**	12 54 10.1	+0.1
WECS	**Westdahl Cape**	**1.06**	**29**	P	**Pn**	12 54 10.7	+0.6
OKID	**Okmok Mt. Idak**	**1.29**	**265**	P	**Pn**	12 54 11.4	-1.8
OKER	**Okmok East Rim**	**1.43**	**265**	P	**Pn**	12 54 13.5	-1.7
OKTU	**Okmok Mt. Tuli**	**1.44**	**262**	P	**Pn**	12 54 13.4	-1.8
SSLS	**Shishaldin Sou**	**1.48**	**41**	P	**Pn**	12 54 16.2	+0.4
ISLZ	**Isanotski Laza**	**1.60**	**45**	P	**Pn**	12 54 17.1	-0.3
OKAK	**Okmok**	**1.60**	**270**	P	**Pn**	12 54 15.9	-1.5
FALS	**False Pass**	**1.82**	**46**	P	**Pn**	12 54 20.1	-0.2
FALS				S	**Sn**	12 54 45.6	+3.5
NIKH	**Nikolski High**	**2.02**	**253**	P	**Pn**	12 54 20.5	-2.6
NIKH				S	**Sn**	12 54 43.8	-3.3
DT1	**Dutton Round H**	**2.48**	**52**	P	**Pn**	12 54 30.2	+0.7
DOL	**Dolgoi Island**	**2.71**	**54**	P	**Pn**	12 54 33.5	+1.0
PS4A	**Pavlof South-4**	**2.82**	**50**	P	**Pn**	12 54 35.7	+1.6
SDPT	**Sand Point**	**3.49**	**58**	P	**Pn**	12 54 43.6	+0.4
VNWF	**Veniaminof 8**	**4.35**	**52**	P	**Pn**	12 54 57.3	+2.2
SPIA	**Saint Paul Isl**	**4.43**	**326**	P	**Pn**	12 54 57.0	+1.0
VNFG	**Veniaminof 2**	**4.43**	**50**	P	**Pn**	12 54 58.2	+2.0
VNHG	**Veniaminof 1**	**4.57**	**52**	P	**Pn**	12 55 00.1	+2.0
CHGN	**Chignik**	**4.97**	**54**	*e*Pn	**Pn**	12 55 04.0	+0.5
KOFP	**Korovin Flat P**	**5.27**	**259**	P	**Pn**	12 55 08.3	+0.6
ATKA	**Atka Island**	**5.35**	**258**	P	**Pn**	12 55 08.9	+0.2
ANNW	**Aniakchak Nort**	**5.42**	**49**	P	**Pn**	12 55 12.4	+2.7
KIKV	**Kanaga Island**	**7.20**	**261**	P	**Pn**	12 55 34.7	+0.6
MGLS	**Mageik Landsli**	**7.44**	**48**	P	**Pn**	12 55 39.7	+2.3
OHAK	**Old Harbor**	**7.92**	**58**	*e*Pn	**Pn**	12 55 42.9	-0.9
KDAK	**Kodiak Island**	**8.48**	**55**	P	**Pn**	12 55 50.5	-1.0
	1.8nm,0.3s,baz=246,slow=10.0,SNR=20						
KDAK				S	**Sn**	12 57 20.6	-5.2
	1.9nm,0.3s,baz=177,slow=23,SNR=3.6						
KDAK	**Kodiak Island**	**8.48**	**55**	*e*Pn	**Pn**	12 55 50.9	-0.7
KDAK				S	**Sn**	12 57 20.6	-5.2
KDAK	**Kodiak Island**	**8.48**	**55**	*ce*P	**Pn**	12 55 51.1	-0.5
SVW2	**Sparrevohn**	**9.26**	**32**	*e*Pn	**Pn**	12 56 04.7	+2.4
AMKA	**Amchitka**	**9.44**	**262**	P	**Pn**	12 56 04.3	-0.4
HOM	**Homer**	**9.80**	**46**	*e*Pn	**Pn**	12 56 10.3	+0.6
RSO	**Redoubt South**	**9.82**	**40**	*e*Pn	**Pn**	12 56 10.3	+0.3
CNPM	**China Poot**	**9.91**	**48**	*e*Pn	**Pn**	12 56 11.2	0.0
BRLK	**Bradley Lake**	**10.19**	**47**	*e*Pn	**Pn**	12 56 14.2	-0.8
SPU	**Mount Spurr**	**10.54**	**39**	*e*Pn	**Pn**	12 56 18.8	-0.9
ANM	**Nome**	**10.99**	**1**	*e*Pn	**Pn**	12 56 27.9	+2.1
ANM	**Nome**	**10.99**	**1**	*e*P	**Pn**	12 56 27.9	+2.1
SUA	**Susitna One**	**11.21**	**39**	*e*Pn	**Pn**	12 56 29.3	+0.4
SKT	**Skwentna**	**11.25**	**36**	*e*Pn	**Pn**	12 56 31.9	+2.4
RC01	**Rabbit Creek A**	**11.38**	**43**	*e*Pn	**Pn**	12 56 30.8	-0.4
PPLA	**Purkeypile**	**11.68**	**32**	*e*Pn	**Pn**	12 56 38.6	+3.3
PMR	**Palmer**	**11.91**	**41**	*e*Pn	**Pn**	12 56 37.5	-0.8
PMR	**Palmer**	**11.91**	**41**	*e*P	**Pn**	12 56 37.5	-0.8
GHO	**Glory Hole Cre**	**12.09**	**41**	*e*Pn	**Pn**	12 56 38.9	-2.0
CAST	**Castle Rocks**	**12.10**	**30**	*e*Pn	**Pn**	12 56 42.2	+1.3
SMY	**Shemya**	**12.17**	**274**	*e*Pn	**Pn**	12 56 40.7	-1.3
SMY	**Shemya**	**12.17**	**274**	*e*P	**Pn**	12 56 40.7	-1.3
SML	**Sawmill**	**12.35**	**41**	*e*Pn	**Pn**	12 56 43.6	-0.8
SML	**Sawmill**	**12.35**	**41**	*e*P	**Pn**	12 56 43.6	-0.8
KTH	**Kantishna Hill**	**12.55**	**32**	*e*Pn	**Pn**	12 56 50.4	+3.3
TRF	**Thorofare Moun**	**12.68**	**33**	*e*Pn	**Pn**	12 56 47.5	-1.5
SCM	**Sheep Creek Mo**	**12.76**	**43**	*e*Pn	**Pn**	12 56 48.1	-1.9
SCM	**Sheep Creek Mo**	**12.76**	**43**	*e*P	**Pn**	12 56 48.1	-1.9
BPAW	**Bear Paw Mtn.**	**12.93**	**30**	*e*Pn	**Pn**	12 56 54.8	+2.5
DIV	**Divide**	**13.07**	**47**	*e*Pn	**Pn**	12 56 52.4	-1.9
RND	**Reindeer**	**13.13**	**35**	*e*Pn	**Pn**	12 56 54.9	-0.1
RND	**Reindeer**	**13.13**	**35**	*e*P	**Pn**	12 56 54.9	-0.1
KLU	**Klutina**	**13.17**	**45**	*e*Pn	**Pn**	12 56 53.6	-2.1
RAGM	**Ragged Mountai**	**13.26**	**51**	*e*Pn	**Pn**	12 56 55.8	-1.1
DHY	**Denali Highway**	**13.44**	**38**	*e*Pn	**Pn**	12 56 57.1	-2.3
BMRM	**Bremner River**	**13.52**	**49**	*e*Pn	**Pn**	12 56 58.4	-2.0
MLY	**Manley**	**13.70**	**27**	*e*Pn	**Pn**	12 57 02.1	-0.7
HARP	**HAARP**	**13.93**	**43**	*e*Pn	**Pn**	12 57 04.6	-1.3
WRH	**Wood River Hil**	**14.09**	**33**	*e*Pn	**Pn**	12 57 06.9	-1.1
PAX	**Paxson**	**14.10**	**40**	*e*Pn	**Pn**	12 57 06.5	-1.8
PAX	**Paxson**	**14.10**	**40**	*e*P	**Pn**	12 57 06.5	-1.8
CRQM	**Cirque**	**14.10**	**51**	*e*Pn	**Pn**	12 57 06.6	-1.7
TGL	**Tana Glacier**	**14.24**	**51**	*e*Pn	**Pn**	12 57 08.7	-1.5
CCB	**Clear Creek Bu**	**14.30**	**32**	*e*Pn	**Pn**	12 57 08.6	-2.1
MDM	**Murphy Dome**	**14.38**	**31**	*e*Pn	**Pn**	12 57 10.5	-1.4
HDA	**Harding Lake**	**14.42**	**34**	*e*Pn	**Pn**	12 57 12.1	-0.3
COLA	**College**	**14.44**	**32**	*e*Pn	**Pn**	12 57 12.5	-0.1
COLA	**College**	**14.44**	**32**	*e*P	**Pn**	12 57 12.5	-0.1
BALM	**Baldy**	**14.56**	**50**	*e*Pn	**Pn**	12 57 13.7	-0.7
ILAR	**Eielson Array**	**14.68**	**33**	P	**Pn**	12 57 13.1	-2.7
	0.1nm,0.3s,baz=229,slow=12,SNR=7.4						
ILAR				S	**Sn**	12 59 54.7	-2.2
	0.1nm,0.3s,baz=206,slow=22,SNR=2.9						
ILAR				LR	LR	13 03 32.4	
	comp=Z,402nm,18.2s,baz=241,slow=40						
ILB	**Eielson Array**	**14.68**	**33**	*e*Pn	**Pn**	12 57 14.3	-1.4
IL1	**Eielson Array**	**14.68**	**33**	*e*Pn	**Pn**	12 57 16.3	+0.5
RIDG	**Independ'e Rid**	**14.76**	**38**	*e*Pn	**Pn**	12 57 16.7	-0.2
DOT	**Dot Lake**	**15.00**	**39**	*e*Pn	**Pn**	12 57 20.6	+0.5
	28nm,0.7s						
SCRK	**Sand Creek**	**15.21**	**38**	*e*Pn	**Pn**	12 57 21.2	-1.6
	7.2nm,0.7s						
COLD	**Coldfoot**	**15.57**	**23**	*e*Pn	**P**	12 57 31.2	+0.5
	8.9nm,0.8s						
EGAK	**Eagle**	**16.68**	**38**	*e*Pn	**Pn**	12 57 41.2	-0.1
	9.7nm,1.1s						
TOLK	**Toolik Lake Re**	**16.86**	**20**	*e*Pn	**Pn**	12 57 41.6	-2.1
	13nm,1.0s						
DAWY	**Dawson**	**17.02**	**42**	*e*Pn	**Pn**	12 57 45.5	-0.1
	18nm,1.1s						
SKAG	**Skagway**	**17.62**	**58**	*e*Pn	**P**	12 57 53.4	0.0
	15nm,0.7s						
BESE	**Bessie Mountai**	**17.79**	**61**	*e*Pn	**P**	12 57 58.1	+2.6
	12nm,0.9s						
JIS	**Juneau Island**	**18.03**	**62**	*e*Pn	**Pn**	12 57 59.8	+1.8
	14nm,0.8s						
BILL	**Bilibino**	**19.63**	**328**	*e*P	**Pn**	12 58 16.6	-0.5
	11nm,1.0s						
BILL	**Bilibino**	**19.63**	**328**	*i* P	**P**	12 58 14.0	-1.4
BILL				pmax	pmax		
	comp=Z,13nm,1.2s						
BILL				MLR	MLR		
	comp=Z,384nm,22.0s						
DLBC	**Dease Lake**	**20.32**	**62**	P	**P**	12 58 23.2	+0.1
	comp=Z,1.5nm,0.6s,baz=279,slow=11,SNR=3.9						
DLBC				LR	LR	13 05 13.0	
	comp=Z,120nm,20.4s,baz=326,slow=34						
DLBC	**Dease Lake**	**20.32**	**62**	*e*P	Pn	12 58 26.1	+0.6
	comp=Z,13nm,1.0s						
INK	**Inuvik**	**21.08**	**33**	P	**P**	12 58 28.9	-2.1
	comp=Z,9.5nm,0.6s,baz=238,slow=13,SNR=30						
INK				S	**S**	13 02 12.6	-10
	comp=Z,0.3nm,0.5s,baz=269,slow=18,SNR=1.6						
INK				LR	LR	13 07 25.9	
	comp=Z,203nm,20.5s,baz=226,slow=39						
INK	**Inuvik**	**21.08**	**33**	*e*P	**P**	12 58 29.3	-1.7
	comp=Z,12nm,0.7s						
INK				S	**S**	13 02 12.6	-10
INK	**Inuvik**	**21.08**	**33**	*e*P	**P**	12 58 29.3	-1.7
INK				S	**S**	13 02 12.6	-10
INK				pmax	pmax		
	comp=Z,11nm,0.7s						
PETK	**Petropavlovsk-**	**21.72**	**284**	P	**P**	12 58 37.5	-0.6
	comp=Z,3.3nm,0.6s,baz=86,slow=14,SNR=8.8						
PETK				LR	LR	13 06 39.9	
	comp=Z,108nm,21.7s,baz=88,slow=36						
PETK	**Petropavlovsk-**	**21.72**	**284**	*e*P	**P**	12 58 39.1	+1.0
PETK	**Petropavlovsk-**	**21.72**	**284**	*e*P	**P**	12 58 39.1	+1.0
BBB	**Bella Bella**	**22.53**	**78**	LR	LR	13 05 13.5	
	comp=Z,69nm,20.2s,baz=64,slow=30						
SEY	**Seymchan**	**23.53**	**310**	P	**P**	12 58 55.3	-1.4
	comp=Z,3.4nm,0.9s,baz=102,slow=9.6,SNR=6.6						
SEY	**Seymchan**	**23.53**	**310**	*ce*P	**P**	12 58 56.1	-0.6
YKA	**Yellowknife Ar**	**27.73**	**51**	P	**P**	12 59 34.9	+0.2
	comp=Z,2.4nm,0.6s,baz=273,slow=9.8,SNR=11						
YKA				LR	LR	13 11 49.3	
	comp=Z,7.9nm,18.3s,baz=279,slow=39						
YKA	**Yellowknife Ar**	**27.73**	**51**	*ce*P	**P**	12 59 36.5	+1.8
YKA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
D05A	**Enumclaw**	**28.21**	**85**	*e*P	**P**	12 59 40.9	+1.8
	comp=Z,9.8nm,0.4s						
NEW	**Newport**	**30.56**	**80**	P	**P**	13 00 01.9	+1.9
	comp=Z,3.5nm,0.8s,baz=310,slow=8.7,SNR=4.3						
YBH	**Yreka Blue Hor**	**30.80**	**95**	P	**P**	13 00 04.7	+2.5
	comp=Z,1.0nm,0.4s,baz=305,slow=12,SNR=6.2						
YBH				LR	LR	13 09 32.3	
	comp=Z,130nm,21.1s,baz=288,slow=30						
TIXI	**Tiksi**	**32.85**	**328**	P	**P**	13 00 18.7	-1.1
	comp=Z,0.6nm,0.2s,baz=78,slow=9.3,SNR=2.9						
TIXI				PcP	**PcP**	13 03 02.5	-0.7
	comp=Z,2.0nm,0.8s,baz=94,slow=2.6,SNR=6.0						
TIXI	**Tiksi**	**32.85**	**328**	*ce*P	**P**	13 00 19.7	0.0
TIXI				pmax	pmax		
	comp=Z,3.0nm,2.5s						
RES	**Resolute Bay**	**34.27**	**26**	P	**P**	13 00 31.3	-0.7
	comp=Z,2.4nm,0.7s,baz=270,slow=10,SNR=14						
RES				PcP	**PcP**	13 03 06.5	-0.6
	comp=Z,1.8nm,0.8s,baz=346,slow=4.2,SNR=3.6						
RES	**Resolute Bay**	**34.27**	**26**	*e*P	**P**	13 00 31.6	-0.5
	comp=Z,3.4nm,0.8s						
RES				PcP	**PcP**	13 03 06.5	-0.6
RES	**Resolute Bay**	**34.27**	**26**	*e*P	**P**	13 00 31.6	-0.5
RES						13 03 06.6	
RES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PNTR	**Pine Nut**	**34.30**	**96**	*e*P	**P**	13 00 31.8	-1.2
	comp=Z,15nm,0.9s						
MCMT	**McKenzie Canyo**	**34.86**	**83**	*e*P	**P**	13 00 39.3	+1.4
EGMT	**Eagleton**	**34.97**	**76**	*e*P	**P**	13 00 39.8	+1.2
	comp=Z,17nm,0.8s						
NVAR	**Mina Array Bea**	**35.50**	**96**	P	**P**	13 00 45.6	+2.2
	comp=Z,1.3nm,0.7s,baz=296,slow=7.5,SNR=10						
YMR	**Madison River**	**36.06**	**82**	*e*P	**P**	13 00 50.2	+2.0
	comp=Z,6.0nm,0.9s						
GCMT	**Greycliff**	**36.20**	**79**	*e*P	**P**	13 00 50.6	+1.4
RLMT	**Red Lodge**	**36.81**	**80**	*e*P	**P**	13 00 56.3	+1.8
	comp=Z,8.1nm,0.9s						
R11A	**Troy Canyon, C**	**37.17**	**94**	*e*P	**P**	13 00 59.4	+1.9
	comp=Z,4.1nm,1.1s						
DUG	**Dugway, Tooele**	**37.64**	**89**	P	**P**	13 01 04.4	+3.0
DUG				pmax	pmax		
	comp=Z,4.0nm,1.5s						
LAO	**LASA Array**	**37.72**	**76**	*e*P	**P**	13 01 03.7	+1.7
	comp=Z,6.4nm,0.6s						
PDAR	**Pinedale Array**	**38.00**	**83**	P	**P**	13 01 05.4	+0.8
	comp=Z,0.9nm,0.6s,baz=306,slow=5.3,SNR=10.0						
PDAR	**Pinedale Array**	**38.00**	**83**	*e*P	**P**	13 01 05.7	+1.1
KLR	**Kul'dur**	**38.16**	**290**	P	**P**	13 01 03.1	-2.4
	comp=Z,0.1nm,0.6s,baz=62,slow=6.2,SNR=4.3						
KLR	**Kul'dur**	**38.16**	**290**	*i* P	**P**	13 01 02.9	-2.6
FCC	**Fort Churchill**	**38.41**	**53**	*e*P	**P**	13 01 08.5	+1.0
	comp=Z,11nm,0.8s						
FCC	**Fort Churchill**	**38.41**	**53**	*e*P	**P**	13 01 08.5	+1.0
FCC				pmax	pmax		
	comp=Z,11nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**39.85**	**223**	T	T	13 43 40.2	
	baz=25,slow=76,SNR=285						
H11N3	**WAKE ISLAND Hy**	**39.86**	**223**	T	T	13 44 01.2	
	baz=25,slow=76,SNR=295						
H11N1	**WAKE ISLAND Hy**	**39.87**	**223**	T	T	13 44 03.4	
	baz=25,slow=76,SNR=226						
O20A	**White River Ci**	**40.40**	**85**	*e*P	**P**	13 01 25.7	+1.1
	comp=Z,10nm,0.8s						
RSSD	**Black Hills**	**40.44**	**78**	*e*P	**P**	13 01 25.7	+0.8
	comp=Z,4.8nm,1.0s						
RSSD	**Black Hills**	**40.44**	**78**	*e*P	**P**	13 01 25.7	+0.8
RSSD				pmax	pmax		
	comp=Z,5.0nm,1.0s						
H11S1	**WAKE ISLAND Hy**	**41.03**	**222**	T	T	13 45 31.0	
	baz=25,slow=76,SNR=397						
H11S2	**WAKE ISLAND Hy**	**41.05**	**222**	T	T	13 45 30.1	
	baz=25,slow=76,SNR=231						
H11S3	**WAKE ISLAND Hy**	**41.05**	**222**	T	T	13 45 28.5	
	baz=25,slow=76,SNR=155						
SMCO	**Snowmass**	**41.76**	**86**	*e*P	**P**	13 01 37.5	+1.5
	comp=Z,9.1nm,1.0s						
MJAR	**Matsushiro Arr**	**41.97**	**269**	P	**P**	13 01 36.3	-0.9
	comp=Z,2.7nm,1.1s,baz=56,slow=6.5,SNR=5.2						
MAJO	**Matsushiro**	**41.97**	**269**	*i* P	**P**	13 01 36.8	-0.5
MAJO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
AGMN	**Agassiz Nation**	**42.68**	**68**	*e*P	**P**	13 01 43.5	+0.7
	comp=Z,5.3nm,1.0s						
B35A	**Bob, Littlefor**	**43.81**	**66**	*e*P	**P**	13 01 52.5	+0.4
	comp=Z,3.4nm,0.9s						
LAZ	**Ladron**	**44.85**	**91**	*e*P	**P**	13 02 02.9	+2.1
ECSD	**EROS Data Cent**	**44.95**	**73**	*e*P	**P**	13 02 01.0	-0.2
	comp=Z,3.6nm,0.6s						
F36A	**Milaca**	**45.40**	**69**	*e*P	**P**	13 02 05.2	+0.5
	comp=Z,4.4nm,1.0s						
J36A	**Seneca 1, Swea**	**46.50**	**72**	*e*P	**P**	13 02 13.7	+0.2
	comp=Z,6.6nm,0.8s						
I37A	**Lemond, Waseca**	**46.60**	**71**	*e*P	**P**	13 02 14.6	+0.4
	comp=Z,6.8nm,0.6s						
FRB	**Frobisher Bay**	**46.65**	**37**	P	**P**	13 02 14.9	+0.7
FRB				pmax	pmax		
	comp=Z,23nm,0.7s						
KSRS	**Korea Array**	**47.46**	**278**	P	**P**	13 02 20.9	0.0
	comp=Z,3.2nm,0.8s,baz=55,slow=7.5,SNR=15						
KSRS				LR	LR	13 24 10.7	
	comp=Z,34nm,18.4s,baz=104,slow=38						
KS01	**Wonju Array Si**	**47.47**	**278**	*e*P	**P**	13 02 21.1	+0.2
KSAR	**Wonju Array Be**	**47.49**	**278**	P	**P**	13 02 20.9	-0.3
KSAR	**Wonju Array Be**	**47.49**	**278**	P	**P**	13 02 20.9	-0.3
I39A	**Houston**	**47.76**	**70**	*e*P	**P**	13 02 22.7	-0.5
	comp=Z,9.1nm,0.6s						
MNTX	**Cornudas Mount**	**47.80**	**92**	*e*P	**P**	13 02 25.0	+1.3
	comp=Z,3.6nm,0.8s						
DAG	**Danmarks Havn**	**48.21**	**10⇑**	*i* P	**P**	13 02 26.0	-0.2
	comp=Z,15nm,0.7s						
DAG	**Danmarks Havn**	**48.21**	**10**	P	**P**	13 02 26.0	-0.2
DAG				pmax	pmax		
	comp=Z,22nm,1.1s						
N37A	**Lee Faris, Mou**	**48.22**	**75**	*e*P	**P**	13 02 26.6	-0.2
	comp=Z,17nm,0.6s						
SPITS	**Spitsbergen A**	**48.47**	**359**	P	**P**	13 02 27.8	-0.4
	comp=Z,8.2nm,1.0s,baz=38,slow=5.4,SNR=3.3						
SPITS				LR	LR	13 24 58.5	
	comp=Z,69nm,18.4s,baz=15,slow=39						
G42A	**Mountain**	**48.60**	**67**	*e*P	**P**	13 02 30.0	+0.3
	comp=Z,12nm,1.0s						
E43A	**Lone Tree Farm**	**48.66**	**65**	*e*P	**P**	13 02 30.4	+0.3
	comp=Z,6.9nm,0.8s						
JNU	**

LZH LR LR
comp=Z,320nm,15.0s
LZH LR LR
comp=Z,320nm,14.8s
LZH LR LR
comp=Z,380nm,18.6s
TLIG Tlapa 62.48 98 *e*P **P 13 04 09.4 -0.3**
comp=Z,7.7nm,1.1s
KURK Kurchatov 62.90 320 *e*P **P 13 04 11.3 -0.6**
comp=Z,1.8nm,0.8s
KURK PcP **PcP 13 04 49.0 -0.7**
KURK Kurchatov 62.90 320 *ce*P **P 13 04 12.3 +0.4**
KURK pmax pmax
comp=Z,4.0nm,1.2s
KURBB Kurchatov Arra 63.01 320 P **P 13 04 11.5 -1.2**
comp=Z,2.4nm,1.0s,baz=40,slow=6.7,SNR=11
KURBB PcP **PcP 13 04 49.0 -1.2**
comp=Z,0.7nm,0.7s,baz=26,slow=2.2,SNR=7.2
BVAR Borovoye Array 63.96 326 P **P 13 04 17.2 -1.7**
comp=Z,2.1nm,0.7s,baz=50,slow=9.6,SNR=8.2
BVAR PcP **PcP 13 04 53.8 -0.2**
comp=Z,2.8nm,0.6s,baz=43,slow=3.6,SNR=8.7
BRVK Borovoye 63.96 326 *ce*P **P 13 04 20.3 +1.4**
BRVK pmax pmax
comp=Z,1.0nm,0.6s
WMQ Urumqi 64.49 310 P **P 13 04 24.3 +1.7**
WMQ pP pP 13 04 37.9 +1.0
WMQ pmax pmax
comp=Z,19nm,0.7s
WMQ pmax pmax
comp=Z,140nm,5.1s
WMQ LR LR
comp=Z,110nm,20.5s
MK31 Makanchi Array 64.54 315 *e*P **P 13 04 21.9 -1.0**
MK31 Makanchi Array 64.54 315 *e*P **P 13 04 21.9 -1.0**
MKAR Makanchi Array 64.54 315 P **P 13 04 21.0 -1.9**
comp=Z,0.9nm,0.4s,baz=50,slow=6.4,SNR=20
MKAR LR LR 13 33 29.4
comp=Z,77nm,21.7s,baz=55,slow=37
MKAR Makanchi Array 64.54 315 *e*P **P 13 04 21.9 -1.0**
comp=Z,15nm,0.8s
MKAR Makanchi Array 64.54 315 *i*P **P 13 04 21.7 -1.2**
MKAR pmax pmax
comp=Z,1.0nm,0.4s
MK01 Makanchi Array 64.56 315 *e*P **P 13 04 21.9 -1.0**
MAKZ Makanchi 64.66 315 *e*P **P 13 04 22.8 -0.8**
comp=Z,5.4nm,1.1s
MAKZ Makanchi 64.66 315 *e*P **P 13 04 22.8 -0.8**
MAKZ pmax pmax
comp=Z,5.0nm,1.1s
FIA1 FINESS Array S 64.91 354 *e*P **P 13 04 24.3 -0.7**
comp=Z,5.4nm,0.8s
FINES FINESS Array B 64.91 354 P **P 13 04 23.1 -1.9**
comp=Z,1.6nm,0.4s,baz=17,slow=5.6,SNR=20
FINES LR LR 13 35 46.0
comp=Z,48nm,18.2s,baz=24,slow=39
FINES FINESS Array B 64.91 354 *i*P **P 13 04 24.1 -0.9**
FINES pmax pmax
comp=Z,2.0nm,0.4s
NC303 NORSAR Array S 65.49 2 *e*P **P 13 04 28.7 -0.1**
NB201 NORSAR Array S 65.66 2 *e*P **P 13 04 29.7 -0.2**
NB2 NORSAR Subarra 65.67 2 P **P 13 04 29.4 -0.6**
comp=Z,4.0nm,0.9s,baz=360,slow=6.2
NB2 NORSAR Subarra 65.67 2 P **P 13 04 29.9 -0.1**
NOA NORSAR Array B 65.67 2 LR LR 13 33 47.9
comp=Z,25nm,20.5s,baz=0.0,slow=37
TAOE Nuku Hiva Isla 65.88 152 *e*LR LR 13 24 19.0
comp=Z,115nm,25.7s
TAOE Nuku Hiva Isla 65.88 152 *e*T T 14 16 11.0
comp=Z,25nm,0.2s
HFS Hagfors 66.61 0 P **P 13 04 34.6 -1.3**
comp=Z,3.7nm,0.5s,baz=46,slow=6.2,SNR=22
HFS LR LR 13 34 44.7
comp=Z,32nm,20.6s,baz=356,slow=37
OTUK Ortayu 67.28 322 P **P 13 04 40.0 -0.4**
OTUK pmax pmax
comp=Z,4.0nm,1.2s
GYA Guiyang 67.81 285 *e*P **P 13 04 44.3 +0.1**
GYA pmax pmax
comp=Z,10.0nm,1.0s
PDGK Podgornoye 68.50 315 P **P 13 04 48.4 +0.1**
PDGK pmax pmax
comp=Z,9.0nm,1.1s
AKTO Aktyubinsk 70.01 332 P **P 13 04 56.7 -0.6**
comp=Z,2.4nm,0.6s,baz=41,slow=9.3,SNR=10
AKTO LR LR 13 39 53.1
comp=Z,32nm,18.4s,baz=27,slow=40
PMOR Pomariorio Ree 70.02 162 *e*T T 14 21 16.7
comp=Z,9.4nm,0.2s
EKA Eskdalemuir Ar 70.47 11 P **P 13 05 00.2 +0.2**
comp=Z,4.1nm,0.8s,baz=346,slow=4.5,SNR=8.9
ESK Eskdalemuir 70.48 11 *e*P **P 13 05 00.6 +0.5**
comp=Z,0.7nm,0.6s
ESK Eskdalemuir 70.48 11 *e*P **P 13 05 00.6 +0.5**
ESK pmax pmax
comp=Z,1.0nm,0.6s
TARG Taragay, Kyrgy 70.53 315 *e*P **P 13 05 02.1 +0.9**
comp=Z,3.6nm,0.6s
KMI Kunming 71.09 287 P **P 13 05 09.3 +4.7**
KMI pmax pmax
comp=Z,11nm,1.3s
NRN Naryn 71.53 316 *e*P **P 13 05 07.5 +0.3**
comp=Z,4.3nm,0.8s
NRN Naryn 71.53 316 *e*P **P 13 05 07.5 +0.3**
NRN pmax pmax
comp=Z,4.0nm,0.8s
PPT Papeete 72.23 164 LR LR 13 28 46.8
comp=Z,93nm,20.2s,baz=9.0,slow=29
PPT2 Papeete2 72.25 164 *e*LR LR 13 27 08.6
comp=Z,123nm,23.2s
KSH Kashi 73.14 315 P **P 13 05 20.0 +3.5**
KSH pP PcP 13 05 34.0 +1.0
KSH PP **PP 13 08 04.3 +5.0**
KSH S **S 13 14 41.4 +1.1**
KSH sS sS 13 15 04.1 -0.5
KSH ScS **ScS 13 15 19.8 -0.7**
KSH pmax pmax
comp=Z,24nm,0.6s
KSH pmax pmax
comp=Z,350nm,5.0s
KSH LR LR
comp=Z,180nm,9.6s
SIJI Sorong 75.06 247 LR LR 13 31 28.8
comp=Z,35nm,22.0s,baz=44,slow=30
AKASG Malin Array Be 75.31 350 P **P 13 05 27.7 -1.1**
comp=Z,4.4nm,0.6s,baz=13,slow=5.7,SNR=19
AKASG LR LR 13 43 30.9
comp=Z,24nm,19.9s,baz=40,slow=40
KIEV Kiev 75.32 350 *e*P **P 13 05 27.7 -1.1**
comp=Z,7.1nm,0.9s
KIEV Kiev 75.32 350 *i*P **P 13 05 26.9 -1.9**
KIEV pmax pmax
comp=Z,6.0nm,0.9s
DPC Dobruska-Polom 76.40 359 *e*P **P 13 05 35.4 +0.3**
DPC *ex* x 13 05 41.0
DPC Dobruska-Polom 76.40 359 *e*P **P 13 05 35.4 +0.3**
DPC *e* 13 05 41.0
KWP Kalwaria Pacla 76.89 354 *e*P **P 13 05 38.2 +0.4**
comp=Z,126nm,0.8s
KWP Kalwaria Pacla 76.89 354 *e*P **P 13 05 38.2 +0.4**
VRAC Vranov 77.44 358 *e*P **P 13 05 40.7 -0.2**
KHC Kasperske Hory 77.63 1 *e*P **P 13 05 42.3 +0.3**
KHC Kasperske Hory 77.63 1 *e*P **P 13 05 42.3 +0.3**
KRUC Moravsky 77.69 359 *e*P **P 13 05 42.2 -0.1**
GERES GERESS Array B 77.92 0 P **P 13 05 43.4 -0.3**
comp=Z,1.1nm,0.6s,baz=6.9,slow=4.4,SNR=9.8
GEA0 GERESS Array S 77.93 0 *e*P **P 13 05 43.7 0.0**
GUN Gumba 78.05 301 *e*P **P 13 05 44.8 -0.3**
JIRN Jiri 78.10 301 *e*P **P 13 05 45.2 -0.2**
VYHS Vyhne 78.20 357 *e*P **P 13 05 45.7 +0.6**
VYHS pmax pmax
comp=Z,3.0nm,1.0s
VYHS Vyhne 78.20 357 *e*P **P 13 05 45.7 +0.6**
MODS Modra-Piesok 78.36 358 *e*P **P 13 05 46.0 0.0**
MODS pmax pmax
comp=Z,120nm,3.6s
MODS Modra-Piesok 78.36 358 *e*P **P 13 05 46.0 0.0**
RAMN Ramite 78.46 300 *e*P **P 13 05 46.6 -0.6**
comp=Z,29nm,0.6s
CMAR Chiang Mai Arr 78.49 285 P **P 13 05 47.1 -0.1**
comp=Z,5.7nm,1.0s,baz=20,slow=5.8,SNR=15
CMAR LR LR 13 45 07.1
comp=Z,11nm,18.2s,baz=190,slow=39
CMAR Chiang Mai Arr 78.49 285 *ce*P **P 13 05 47.4 +0.2**
CMAR pmax pmax
comp=Z,6.0nm,1.0s
CM01 Chiang Mai Arr 78.51 285 *e*P **P 13 05 47.5 +0.2**
GKN Gorkha 78.61 302 *e*P **P 13 05 47.5 -0.4**
comp=Z,34nm,0.9s
BUR08 Bucovina Ar. S 78.70 353 *e*P **P 13 05 47.9 -0.1**
BUR04 Bucovina Ar. S 78.72 353 *e*P **P 13 05 47.9 -0.3**
HINF Hinteralfeld 78.75 5 *e*P **P 13 05 48.0 -0.2**
HINF pmax pmax
comp=Z,6.0nm,1.2s
DANN Dangsing 78.77 303 *e*P **P 13 05 48.7 -0.3**
comp=Z,64nm,0.9s
PBKT Sadao Pong 78.81 283 *e*P **P 13 05 48.4 -0.5**
comp=Z,9.3nm,1.1s
DZM Mont Dzumac 79.14 206 *e*LR LR 13 30 28.5
comp=Z,106nm,22.1s
DZM Mont Dzumac 79.14 206 LR LR 13 35 06.5
comp=Z,55nm,19.0s,baz=9.0,slow=31
NIL Nilore 79.26 313 *e*P **P 13 05 51.7 +0.5**
comp=Z,19nm,0.8s
NIL Nilore 79.26 313 *e*P **P 13 05 51.7 +0.5**
NIL pmax pmax
comp=Z,19nm,0.8s
SSF Saint Saulge 79.28 8 *e*P **P 13 05 51.2 +0.1**
KOLN Koldanda 79.32 303 *e*P **P 13 05 51.5 -0.4**
comp=Z,18nm,0.9s
PYUN Piuthan 79.36 303 *e*P **P 13 05 51.8 -0.3**
comp=Z,64nm,1.0s
AVF Avril sur Loir 79.54 8 *e*P **P 13 05 52.5 0.0**
AVF pmax pmax
comp=Z,7.0nm,1.1s
KBA Koelnbreinsper 79.68 1 P **P 13 05 55.2 +1.7**
KBA pmax pmax
comp=Z,9.0nm,0.9s
KVAR Kislovodsk Arr 79.82 340 LR LR 13 44 27.6
comp=Z,51nm,21.5s,baz=336,slow=38
KIV Kislovodsk 79.82 340 *e*P **P 13 05 55.2 +1.0**
KIV pmax pmax
comp=Z,6.0nm,1.1s
KIV MLR MLR
comp=Z,54nm,19.0s
TCF Toulx Ste Croi 79.94 9 *e*P **P 13 05 54.7 0.0**
TCF pmax pmax
comp=Z,4.0nm,0.9s
LPG La Plagne 81.06 5 *e*P **P 13 06 04.7 +3.7**
LPG pmax pmax
comp=Z,2.0nm,0.4s
CAF Calviac 81.28 9 *e*P **P 13 06 02.3 +0.4**
CAF pmax pmax
comp=Z,5.0nm,1.0s
GEYT Alibeck 81.29 326 LR LR 13 47 20.9
comp=Z,59nm,18.9s,baz=175,slow=40
VIVF Saint-Julien-l 81.56 7 *e*P **P 13 06 03.8 +0.4**
VIVF pmax pmax
comp=Z,23nm,1.9s
FRF La Foret Royal 82.98 6 *e*P **P 13 06 11.3 +0.5**
FRF pmax pmax
comp=Z,4.0nm,0.9s
GNI Garni 83.00 337 LR LR 13 49 31.2
comp=Z,42nm,18.7s,baz=6.5,slow=40
ETSF Etsaut 83.02 11 *e*P **P 13 06 11.8 +0.7**
ETSF pmax pmax
comp=Z,43nm,2.2s
PGF Pioggiola 84.11 4 *e*P **P 13 06 17.2 +0.5**
PGF pmax pmax
comp=Z,4.0nm,0.8s
CTA Charters Tower 84.26 225 P **P 13 06 19.8 +2.3**
comp=Z,1.0nm,0.4s,baz=259,slow=5.2,SNR=2.4
BR131 Keskin Array S 85.55 345 *e*P **P 13 06 24.7 +0.6**
BRTR Keskin Array B 85.55 345 P **P 13 06 24.0 -0.1**
comp=Z,4.2nm,0.9s,baz=33,slow=3.0,SNR=16
BRTR LR LR 13 48 17.0
comp=Z,23nm,21.6s,baz=14,slow=38
BRTR Keskin Array B 85.55 345 *ce*P **P 13 06 24.5 +0.4**
BRTR pmax pmax
comp=Z,4.0nm,0.9s
ES19 SONSECA Array 85.74 14 *e*P **P 13 06 25.2 +0.4**
ESDC Sonseca Array 85.75 14 P **P 13 06 24.7 -0.3**
comp=Z,0.2nm,0.5s,baz=346,slow=6.0,SNR=5.2
FNA Florina 85.78 355 P **P 13 06 25.2 +0.1**
FNA pmax pmax
comp=Z,9.0nm,0.6s
ROSC El Rosal 86.94 86 LR LR 13 45 58.8
comp=Z,17nm,20.7s,baz=94,slow=36
WRA Warramunga Arr 89.54 235 P **P 13 06 44.9 +1.8**
comp=Z,0.3nm,0.8s,baz=36,slow=6.3,SNR=3.6
WRA Warramunga Arr 89.54 235 P **P 13 06 45.0 +1.8**
IDI Anoyia 90.99 351 LR LR 13 51 18.9
comp=Z,24nm,19.9s,baz=92,slow=38
MMAI Mount Meron Ar 91.81 342 LR LR 13 56 15.9
comp=Z,19nm,18.3s,baz=210,slow=41
MDT Midelt 92.37 16 LR LR 13 52 59.8
comp=Z,17nm,18.1s,baz=358,slow=38
ASAR Alice Springs 92.92 233 P **P 13 07 02.2 +3.4**
comp=Z,0.3nm,0.7s,baz=26,slow=4.4,SNR=3.9
TSUM Tsumeb 145.56 355 *e*PKPdf **PKPab 13 13 24.5 0.0**
LBTB Lobatse 150.22 339 *e*PKPbc **PKPbc 13 13 37.4 +0.7**
LBTB Lobatse 150.22 339 *e*PKP2 **PKPbc 13 13 37.4 +0.7**

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*ROM **17** 13:04:02.9±0.0, 44°.860N±0°.002×11°.095E±0°.003, h8km, ML2.0/8*
*ISCJB **17** 13:04:03.9±0.4, 44°.89N±0°.02×11°.11E±0°.03, h11km±3km, Error ellipse: s-maj=4.0km s-min=3.3km az=26.8*
*CSEM **17** 13:04:03.5±0.2, 44°.89N×11°.13E, h10km, ML2.0, Error ellipse: s-maj=7.2km s-min=3.6km az=100.0*
*IASPEI **17** 13:04:04.0±0.8, 44°.88N±0°.02×11°.12E±0°.02, h12km±4km, Error ellipse: s-maj=3.6km s-min=2.8km az=113.9, GT5 selection from ISC bulletin GT5 identified by Bond˜¡r and McLaughlin (2009) selection criteria Bond˜¡r and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*

ISC 17 13:04:04.0±0.8, 44°.87N±0°.02×11°.13E±0°.02, h14km±4km, n70, σ1°.900/86, 6C-2D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
T0802	**SanFelice sul**	**0.04**	**78**	⇑*e*P		**Pg**	**13 04 05.2**	**-1.2**
T0802				*i*S		**Sg**	**13 04 08.5**	**+0.3**
T0802	**SanFelice sul**	**0.04**	**78**	*e*P		**Pg**	**13 04 05.2**	**-1.2**
T0802				*i*S		**Sg**	**13 04 08.4**	**+0.3**
T0800	**Massa Finalese**	**0.09**	**103**	⇓*e*P		**Pg**	**13 04 05.0**	**-1.9**
T0800				*i*S		**Sg**	**13 04 09.3**	**+0.5**
T0800	**Massa Finalese**	**0.09**	**103**	*e*P		**Pg**	**13 04 06.0**	**-0.9**
T0800				*i*S		**Sg**	**13 04 09.3**	**+0.5**
T0800				AML		AML		
	comp=E,4520μm,0.3s							
T0800				AML		AML		
	comp=N,8680μm,0.3s							
T0800				AML		AML		
	comp=E,4125μm,0.5s							
T0800				AML		AML		
	comp=N,8975μm,0.2s							
RAVA	**Ravarino**	**0.11**	**184**	⇓*i*P		**Pg**	**13 04 06.1**	**-1.1**
RAVA				*i*S		**Sg**	**13 04 09.7**	**+0.3**
RAVA	**Ravarino**	**0.11**	**184**	*i*P		**Pg**	**13 04 06.1**	**-1.1**
RAVA				*i*S		**Sg**	**13 04 09.7**	**+0.3**
RAVA				AML		AML		
	comp=E,16850μm,0.2s							
RAVA				AML		AML		
	comp=N,29050μm,0.2s							
T0805	**Bondeno (FE)**	**0.15**	**69**	*e*P		**Pg**	**13 04 06.9**	**-0.7**
T0805				*i*S		**Sg**	**13 04 11.5**	**+1.3**
T0805	**Bondeno (FE)**	**0.15**	**69**	*e*P		**Pg**	**13 04 06.9**	**-0.7**
T0805				*i*S		**Sg**	**13 04 11.5**	**+1.3**
T0822	**Casumaru (Bond**	**0.16**	**103**	*e*P		**Pg**	**13 04 07.2**	**-0.6**
T0822				*i*S		**Sg**	**13 04 11.6**	**+1.2**
T0822	**Casumaru (Bond**	**0.16**	**103**	*e*P		**Pg**	**13 04 07.2**	**-0.6**
T0822				*i*S		**Sg**	**13 04 11.6**	**+1.2**
NDIM	**Novi di Modena**	**0.17**	**277**	*i*P		**Pg**	**13 04 07.6**	**-0.3**
NDIM				*i*S		**Sg**	**13 04 10.0**	**-0.6**
SERM	**Sermide**	**0.18**	**40**	*e*P		**Pg**	**13 04 07.9**	**-0.4**
SERM	**Sermide**	**0.18**	**40**	*e*P		**Pg**	**13 04 07.9**	**-0.4**
SERM				AML		AML		
	comp=E,714μm,0.6s							
SERM				AML		AML		
	comp=N,472μm,0.8s							
SERM				AML		AML		
	comp=E,714μm,0.6s							
SERM				AML		AML		
	comp=N,472μm,0.8s							
T0803	**Dosso, Cento (**	**0.19**	**122**	⇑*e*P		**Pg**	**13 04 07.7**	**-0.5**
T0803				*i*S		**Sg**	**13 04 12.6**	**+1.5**
T0803	**Dosso, Cento (**	**0.19**	**122**	*e*P		**Pg**	**13 04 07.7**	**-0.5**
T0803				*i*S		**Sg**	**13 04 12.6**	**+1.5**
T0825	**Gonzaga (MN)**	**0.23**	**298**	*e*P		**Pg**	**13 04 08.6**	**-0.3**
T0825				*i*S		**Sg**	**13 04 14.7**	**+2.4**
T0825	**Gonzaga (MN)**	**0.23**	**298**	*e*P		**Pg**	**13 04 08.6**	**-0.3**
T0825				*i*S		**Sg**	**13 04 14.7**	**+2.4**
T0825				AML		AML		
	comp=E,3355μm,0.9s							
T0825				AML		AML		
	comp=N,2780μm,1.6s							
T0825				AML		AML		
	comp=E,3355μm,0.9s							
T0825				AML		AML		
	comp=N,2780μm,1.6s							
SBPO	**S.Benedetto Po**	**0.24**	**321**	*e*P		**Pg**	**13 04 08.7**	**-0.4**
SBPO	**S.Benedetto Po**	**0.24**	**321**	*e*P		**Pg**	**13 04 08.7**	**-0.4**
GAZZ	**Gazzo Veronese**	**0.25**	**354**	*e*Pg		**Pg**	**13 04 09.0**	**-0.3**
GAZZ	**Gazzo Veronese**	**0.25**	**354**	*e*Pg		**Pg**	**13 04 09.0**	**-0.3**
MODE	**Modena**	**0.27**	**208**	*e*P		**Pg**	**13 04 09.2**	**-0.4**
MODE	**Modena**	**0.27**	**208**	*e*P		**Pg**	**13 04 09.2**	**-0.4**
NOVE	**Novellara**	**0.30**	**257**	*e*P		**Pg**	**13 04 09.2**	**-1.1**
NOVE				*i*S		**Sb**	**13 04 15.2**	**-0.9**
NOVE	**Novellara**	**0.30**	**257**	*e*P		**Pg**	**13 04 09.2**	**-1.1**
NOVE				*i*S		**Sb**	**13 04 15.2**	**-0.9**
NOVE				AML		AML		
	comp=E,592μm,0.9s							
NOVE				AML		AML		
	comp=N,558μm,0.2s							
NOVE				AML		AML		
	comp=E,592μm,0.9s							
NOVE				AML		AML		
	comp=N,557μm,0.2s							
NOVE				AML		AML		
	comp=E,592μm,0.9s							
NOVE				AML		AML		
	comp=N,557μm,0.2s							
ZCCA	**Zocca**	**0.53**	**192**	*e*P		**Pb**	**13 04 15.9**	**+0.8**
ZCCA	**Zocca**	**0.53**	**192**	*e*P		**Pb**	**13 04 15.9**	**+0.8**
TEOL	**Teolo**	**0.62**	**38**	⇑*e*Pg		**Pb**	**13 04 15.8**	**-0.9**
TEOL				*e*Sg		**Sb**	**13 04 25.9**	**+0.6**
TEOL	**Teolo**	**0.62**	**38**	*e*Pg		**Pb**	**13 04 15.9**	**-0.9**
TEOL				*e*Sg		**Sb**	**13 04 26.0**	**+0.6**
TEOL	**Teolo**	**0.62**	**38**	AML		AML		
	comp=E,372μm,0.9s							
TEOL				AML		AML		
	comp=E,372μm,0.9s							
TEOL				AML		AML		
	comp=N,220μm,1.0s							
TEOL				AML		AML		
	comp=E,372μm,0.9s							
TEOL				AML		AML		
	comp=N,220μm,1.0s							
TEOL				AML		AML		
	comp=N,220μm,1.0s							
FNVD	**Fontana Vidola**	**0.70**	**180**	*e*P		**Pb**	**13 04 18.0**	**-0.1**
FNVD	**Fontana Vidola**	**0.70**	**180**	*e*P		**Pb**	**13 04 18.0**	**-0.1**
MARN	**Marana (Italy)**	**0.77**	**4**	*e*Pg		**Pb**	**13 04 18.7**	**-0.6**
MARN				*e*Sg		**Sb**	**13 04 30.3**	**+0.6**
MARN	**Marana (Italy)**	**0.77**	**4**	*e*Pg		**Pb**	**13 04 18.7**	**-0.6**
MARN				*e*Sg		**Sb**	**13 04 30.3**	**+0.6**
ROVR	**Rover˜¤ Verone**	**0.78**	**357**	*e*P		**Pg**	**13 04 18.5**	**-0.7**
ROVR	**Rover˜¤ Verone**	**0.78**	**357**	*e*P		**Pg**	**13 04 18.5**	**-0.7**
ROVR				AML		AML		
	comp=E,159μm,0.9s							
ROVR				AML		AML		
	comp=N,308μm,0.4s							
ROVR				AML		AML		
	comp=E,159μm,0.9s							
ROVR				AML		AML		
	comp=N,308μm,0.4s							
ROVR				AML		AML		
	comp=E,159μm,0.9s							
ROVR				AML		AML		
	comp=N,308μm,0.4s							
POPM	**Popiglio**	**0.86**	**198**	*e*P		**Pn**	**13 04 21.5**	**-0.3**
POPM	**Popiglio**	**0.86**	**198**	*e*P		**Pn**	**13 04 21.4**	**-0.3**
POPM				AML		AML		
	comp=E,70μm,0.3s							
POPM				AML		AML		
	comp=N,100μm,0.9s							
POPM				AML		AML		
	comp=E,70μm,0.3s							
POPM				AML		AML		
	comp=N,100μm,0.9s							
SALO	**Salr**	**0.86**	**331**	*e*P		**Pb**	**13 04 20.6**	**-0.2**
SALO	**Salr**	**0.86**	**331**	*e*P		**Pb**	**13 04 20.6**	**-0.2**
SALO				AML		AML		
	comp=E,199μm,0.7s							
SALO				AML		AML		
	comp=N,250μm,1.1s							
SALO				AML		AML		
	comp=E,199μm,0.7s							
SALO				AML		AML		
	comp=N,250μm,1.1s							
SALO				AML		AML		
	comp=E,199μm,0.7s							
SALO				AML		AML		
	comp=N,250μm,1.1s							
VLC	**Villacollemand**	**0.89**	**217**	*e*P		**Pb**	**13 04 21.2**	**0.0**
VLC	**Villacollemand**	**0.89**	**217**	*e*P		**Pb**	**13 04 21.2**	**0.0**
MAGA	**Magasa**	**0.97**	**339**	AML		AML		
	comp=N,347μm,0.2s							
MAGA				AML		AML		
	comp=E,620μm,0.7s							
MAGA				AML		AML		
	comp=N,347μm,0.2s							
MAGA				AML		AML		
	comp=E,620μm,0.7s							
DOSS	**Dosso del Somm**	**1.01**	**2**	⇑*e*Pg		**Pg**	**13 04 22.5**	**-1.1**
DOSS				*e*Sg		**Sn**	**13 04 37.3**	**-0.9**
DOSS	**Dosso del Somm**	**1.01**	**2**	*e*Pg		**Pg**	**13 04 22.5**	**-1.1**
DOSS				*e*Sg		**Sn**	**13 04 37.3**	**-0.9**
MAIM	**Mastiano**	**1.06**	**206**	AML		AML		
	comp=E,38μm,0.4s							
MAIM				AML		AML		
	comp=E,38μm,0.4s							
MAIM				AML		AML		
	comp=N,52μm,1.1s							
MAIM				AML		AML		
	comp=N,52μm,1.1s							
CRMI	**Carmignano**	**1.08**	**186**	AML		AML		
	comp=E,25μm,0.4s							
CRMI				AML		AML		
	comp=E,25μm,0.4s							
CRMI				AML		AML		
	comp=N,27μm,0.6s							
CRMI				AML		AML		
	comp=N,27μm,0.6s							
CGRP	**Cima Grappa**	**1.12**	**25**	⇑*e*Pg		**Pg**	**13 04 24.6**	**-1.0**
CGRP				*e*Sg		**Sn**	**13 04 41.5**	**+0.7**
CGRP	**Cima Grappa**	**1.12**	**25**	*e*P		**Pg**	**13 04 24.4**	**-1.2**
CGRP	**Cima Grappa**	**1.12**	**25**	*e*Pg		**Pg**	**13 04 24.6**	**-1.0**
CGRP				*e*Sg		**Sn**	**13 04 41.5**	**+0.7**
CGRP	**Cima Grappa**	**1.12**	**25**	*e*P		**Pg**	**13 04 24.4**	**-1.2**
RNI	**Roncone**	**1.17**	**342**	⇑*e*Pg		**Pg**	**13 04 24.2**	**-2.4**
RNI	**Roncone**	**1.17**	**342**	*e*Pg		**Pg**	**13 04 24.2**	**-2.4**
ASQU	**Asqua**	**1.17**	**156**	AML		AML		
	comp=N,39μm,0.6s							
ASQU				AML		AML		
	comp=E,41μm,0.7s							
ASQU				AML		AML		
	comp=N,39μm,0.6s							
ASQU				AML		AML		
	comp=E,41μm,0.7s							
MABI	**Malga Bissina**	**1.26**	**340**	AML		AML		
	comp=E,25μm,0.4s							
MABI				AML		AML		
	comp=N,28μm,0.4s							
MABI				AML		AML		
	comp=N,28μm,0.4s							
MABI				AML		AML		
	comp=E,25μm,0.4s							
MSSA	**Maissana**	**1.28**	**245**	AML		AML		
	comp=N,53μm,0.9s							
MSSA				AML		AML		
	comp=E,50μm,0.7s							
MSSA				AML		AML		
	comp=N,53μm,0.9s							
MSSA				AML		AML		
	comp=E,50μm,0.7s							
OZOL	**Ozolo**	**1.54**	**358**	*e*Pg		**Pn**	**13 04 30.6**	**-0.6**
OZOL	**Ozolo**	**1.54**	**358**	*e*Pg		**Pn**	**13 04 30.6**	**-0.6**
KOSI	**Kohlern**	**1.60**	**6**	AML		AML		
	comp=N,37μm,0.9s							
KOSI				AML		AML		
	comp=E,33μm,0.9s							
KOSI				AML		AML		

comp=N,37μm,0.9s
KOSI AML AML
comp=E,33μm,0.9s
ABSI Aberstueckl 1.87 4 AML AML
comp=N,55μm,0.4s
ABSI AML AML
comp=E,70μm,0.6s
ABSI AML AML
comp=E,70μm,0.6s
ABSI AML AML
comp=N,55μm,0.4s
ABTA Abfaltersbach 2.11 27 Pg **Pg 13 04 42.8 -1.7**
ABTA Abfaltersbach 2.11 27 Pg **Pg 13 04 42.8 -1.7**
FETA Feichten 2.17 353 Pg **Pb 13 04 43.5 +0.3**
comp=N,0.4nm,0.2s
FETA Feichten 2.17 353 Pg **Pb 13 04 43.5 +0.3**
comp=N,0.4nm,0.2s
MOTA Moosalm 2.48 360 Pn **Pn 13 04 44.8 +0.6**
comp=N,0.1nm,0.1s
MOTA Moosalm 2.48 360 Pn **Pn 13 04 44.8 +0.6**
comp=N,0.1nm,0.1s
WATA Walderalm 2.49 7 *e*Pn **Pn 13 04 45.2 +0.9**
comp=N,0.8nm,0.2s
WATA Walderalm 2.49 7 Pn **Pn 13 04 45.2 +0.9**
comp=N,0.8nm,0.2s
RETA Reutte 2.63 355 *e*Pn **Pn 13 04 47.8 +1.6**
comp=N,0.6nm,0.2s
RETA Reutte 2.63 355 Pn **Pn 13 04 47.8 +1.6**
comp=N,0.6nm,0.2s

CSEM 17 13:04:17.6, 44°.09N×19°.16E, h4km, ML1.1/5, 1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAPS	**Han Pijesak,BI**	**0.15**	**268**	⇓*i*Pg	Pg	13 04 20.2	-0.4
HAPS				*e*Sg	Sg	13 04 23.6	+0.9
BBLS	**Lazići**	**0.29**	**142**	*e*Pg	Pg	13 04 23.1	-0.1
BBLS				*e*Sg	Sg	13 04 27.9	+1.0
TEKS	**Tekeris**	**0.53**	**30**	*e*Pg	Pg	13 04 27.4	-0.4
TEKS				*e*Sg	Sg	13 04 34.8	+0.1
DIVS	**Divibare**	**0.60**	**89**	*e*Pg	Pg	13 04 28.3	-0.8
DIVS				*e*Sg	Sg	13 04 36.8	-0.1
UPM	**Unac-Piva**	**0.91**	**192**	*e*Pg	Pg	13 04 33.9	-1.1
UPM				*e*Sg	Sg	13 04 46.3	-0.4

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*SOME **17** 13:09:39.7, 40°.80N×79°.95E, h15km*
*KRNET **17** 13:09:42.1±0.1, 40°.91N×79°.89E, mb2.7*
*NNC **17** 13:10:08.1±3.5, 42°.87N×79°.76E, h0km, mb3.0, mpv2.4, Error ellipse: s-maj=31.7km s-min=26.3km az=26.0*

ISC 17 13:09:45.8±2.2, 41°.11N±0°.09×79°.84E±0°.07, h10km, n20, σ1°34/37, 8C-12D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.65**	**293**	⇑*e*P	**Pb**	**13 10 15.7**	**-0.9**
TARG	baz=98			⇑*i*S	**Sg**	**13 10 39.5**	**+0.6**
PRZ	**Przheval'sk**	**1.75**	**322**	⇑*i*P	**Pb**	**13 10 17.7**	**-0.3**
PRZ	baz=26			⇑*i*S	**Sg**	**13 10 44.0**	**+2.1**
SHLS	**Shalkode**	**2.07**	**352**	⇑*i*P	**Pb**	**13 10 22.6**	**-0.9**
SHLS	20nm,0.2s			⇓*i*S	**Sg**	**13 10 53.6**	**+1.4**
UZB	**Uzynbulak**	**2.12**	**344**	*e*P	**Pb**	**13 10 23.7**	**-0.7**
UZB	5.9nm,0.3s			*e*S	**Sg**	**13 10 55.2**	**+1.1**
SATY	**Saty**	**2.22**	**332**	*e*P	**Pb**	**13 10 24.2**	**-1.9**
SATY	10nm,0.4s			*e*S	**Sg**	**13 10 56.1**	**-1.1**
PDGK	**Podgornoye**	**2.23**	**353**	⇓Pg	**Pb**	**13 10 25.7**	**-0.6**
PDGK	2.3nm,0.4s			⇑Lg	Lg	13 10 58.6	
PDGK	**Podgornoye**	**2.23**	**353**	⇓*e*P	**Pb**	**13 10 25.0**	**-1.3**
PDGK	baz=53			⇓*i*S	**Sg**	**13 10 57.1**	**-0.5**
ZHN	**Zhinishke**	**2.31**	**334**	*e*P	**Pb**	**13 10 26.6**	**-1.0**
ZHN	7.2nm,0.1s			*e*S	**Sg**	**13 11 00.4**	**+0.4**
KPKS	**Kokpek**	**2.51**	**340**	*e*P	**Pb**	**13 10 30.9**	**0.0**
KPKS	15nm,0.8s			*e*S	**Sg**	**13 11 07.4**	**+1.1**
KURS	**Kuram**	**2.68**	**333**	*e*P	**Pb**	**13 10 33.1**	**-0.8**
KURS	2.5nm,0.5s			*e*S	**Sg**	**13 11 11.5**	**-0.4**
NRN	**Naryn**	**2.91**	**278**	⇓*e*P	**Pn**	**13 10 33.0**	**+0.5**
NRN	baz=81			⇓*i*S	**Sb**	**13 11 10.4**	**-3.4**
MDOK	**Medeo**	**2.92**	**316**	*e*P	**Pb**	**13 10 37.5**	**-0.6**
MDOK	2.8nm,0.4s			*e*S	**Sg**	**13 11 19.1**	**-0.4**
ULHL	**Ulahol**	**2.92**	**294**	⇓*i*P	**Pn**	**13 10 33.7**	**+1.1**
ULHL	baz=97			⇓*i*S	**Sb**	**13 11 11.6**	**-2.4**
KOTS	**Kotyrbulak**	**2.94**	**317**	*e*P	**Pb**	**13 10 38.0**	**-0.3**
KOTS	2.0nm,0.3s			*e*S	**Sg**	**13 11 20.1**	**0.0**
DJR	**Jarkent**	**3.22**	**359**	*e*P	**Pb**	**13 10 42.2**	**-0.9**
DJR	1.4nm,0.1s			*e*S	**Sg**	**13 11 27.3**	**-1.9**
BOOM	**Boomskoye usch**	**3.23**	**297**	⇓*i*P	**Pn**	**13 10 38.3**	**+1.6**
BOOM	baz=0.0			⇓*i*S	**Sn**	**13 11 18.4**	**+3.2**
ARXS	**Arharly**	**3.44**	**335**	*e*P	**Pb**	**13 10 47.3**	**+0.5**
ARXS	1.3nm,0.3s			*e*S	**Sg**	**13 11 36.0**	**-0.2**
CHKK	**Chushkaly**	**3.46**	**323**	*e*P	**Pb**	**13 10 47.1**	**-0.1**
CHKK	1.6nm,0.3s			*e*S	**Sg**	**13 11 35.9**	**-1.0**
MAKZ	**Makanchi**	**5.90**	**14**	⇑Pn	**Pn**	**13 11 14.1**	**+0.8**
MAKZ	3.0nm,1.3s			⇑Lg	Lg	13 12 22.9	
MK31	**Makanchi Array**	**5.95**	**16**	⇓Pn	**Pn**	**13 11 15.0**	**+1.0**
MK31	0.2nm,0.2s,baz=198,slow=12,SNR=24			⇓Lg	Lg	13 12 25.5	
	0.5nm,0.5s,baz=206,slow=33,SNR=6.4						

GUC 17 13:15:48.4±0.3, 25°.12S×70°.50W, h44km±1km, ML3.6, 2C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB14	**IPOC Station P**	**0.50**	**10**	⇑*e*P	Pn	13 15 59.8	+0.2
PB14				*e*S	Sn	13 16 08.7	+1.2
PB14				IAML		13 16 09.6	
	comp=N,6μm,0.5s						
GO02	**Mina Guanaco**	**0.83**	**93**	⇓*e*P	Pn	13 16 04.5	+0.6
GO02				*e*S	Sn	13 16 16.8	+1.6
GO02				IAML		13 16 17.7	
	comp=N,4μm,0.1s						
PB10	**IPOC Station P**	**1.60**	**358**	⇑*e*P	Pn	13 16 13.6	-0.6
PB10				*e*S	Sn	13 16 35.8	+2.1
PB15	**IPOC Station P**	**2.12**	**27**	⇓*e*P	Pn	13 16 23.3	+1.7
PB15				*e*S	Sn	13 16 49.4	+2.6

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*ISCJB **17** 13:17:35.1±1.0, 35°.29N±0°.06×141°.2E±0°.1, h35km, mb3.5/5, MS3.5/1, Error ellipse: s-maj=15.0km s-min=6.7km az=161.5*
*JMA **17** 13:17:35.4±0.1, 35°.32N×141°.15E, h31km±2km, M3.1*
*IDC **17** 13:17:42.4±5.2, 35°.06N×140°.52E, h62km±34km, mb3.2/5, mb1 3.3/7, mb1mx3.1/74, mbtmp3.4/7, ML2.6/2, MS3.1/2, Ms1 3.1/2, ms1mx2.4/32, Error ellipse: s-maj=73.9km s-min=13.4km az=78.0*

ISC 17 13:17:36.3±1.3, 35°.27N±0°.05×141°.2E±0°.1, h35km, n23, σ1°72/18, mb3.6/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.51**	**328**	P	**Pn**	**13 17 44.9**	**-2.3**
CHOJ				*e*S	**Sn**	**13 17 51.8**	**-2.9**
BSO1	**Boso 1**	**0.64**	**196**	P	**Pn**	**13 17 48.2**	**-0.2**
BSO1				X		13 17 57.7	
BSO3	**Boso 3**	**0.72**	**231**	P	**Pn**	**13 17 49.3**	**-0.5**
KTR	**Katsuura**	**0.73**	**261**	P	**Pn**	**13 17 48.6**	**-1.5**
BSO4	**Boso 4**	**0.75**	**249**	P	**Pn**	**13 17 49.6**	**-0.7**
BSO4				X		13 17 59.1	
JCN	**Nagara**	**0.82**	**281**	P	**Pn**	**13 17 50.8**	**-0.6**
JYT	**Yasato**	**1.26**	**320**	P	**Pn**	**13 17 56.2**	**-1.2**
JHJ	**Hachijo jima 2**	**2.44**	**209**	P	**Pn**	**13 18 12.7**	**-1.0**
	3.6nm,0.3s,baz=49,slow=20,SNR=5.2						
JHJ				S	**Sn**	**13 18 39.0**	**-3.2**
	18nm,0.3s,baz=84,slow=22,SNR=8.6						
MJAR	**Matsushiro Arr**	**2.73**	**299**	P	**Pn**	**13 18 19.6**	**+1.9**
	1.8nm,0.3s,baz=122,slow=9.1,SNR=19						
MAT	**Matsushiro**	**2.74**	**299**	P	**Pn**	**13 18 20.1**	**+2.3**
MAT				*e*S	**Sn**	**13 18 49.5**	**-0.1**
JOW	**Kunigami**	**13.89**	**236**	LR	LR	13 26 09.2	
	comp=Z,48nm,19.0s,baz=158,slow=38						
H11N2	**WAKE ISLAND Hy**	**27.45**	**118**	T	T	13 52 23.0	
	baz=309,slow=74,SNR=15						
H11N1	**WAKE ISLAND Hy**	**27.45**	**118**	T	T	13 52 23.6	
	baz=309,slow=74,SNR=19						
H11N3	**WAKE ISLAND Hy**	**27.46**	**118**	T	T	13 52 24.4	
	baz=309,slow=74,SNR=21						
H11S3	**WAKE ISLAND Hy**	**28.09**	**120**	T	T	13 53 08.9	
	baz=312,slow=75,SNR=63						
H11S1	**WAKE ISLAND Hy**	**28.10**	**120**	T	T	13 53 09.8	
	baz=312,slow=75,SNR=54						
H11S2	**WAKE ISLAND Hy**	**28.11**	**120**	T	T	13 53 09.0	
	baz=312,slow=75,SNR=28						
ZALV	**Zalesovo Beam**	**42.99**	**314**	P	**P**	**13 25 32.8**	**+0.8**
	0.5nm,0.4s,baz=97,slow=10,SNR=2.9						
MKAR	**Makanchi Array**	**44.92**	**304**	P	**P**	**13 25 48.4**	**+0.7**
	0.2nm,0.5s,baz=86,slow=8.2,SNR=2.8						
KURBB	**Kurchatov Arra**	**46.96**	**309**	P	**P**	**13 26 03.8**	**+0.2**
	0.2nm,0.3s,baz=82,slow=7.8,SNR=2.9						
WRA	**Warramunga Arr**	**55.29**	**188**	P	**P**	**13 27 07.0**	**+0.7**
	1.0nm,0.6s,baz=1.6,slow=7.3,SNR=17						
ASAR	**Alice Springs**	**59.02**	**188**	P	**P**	**13 27 34.6**	**+2.0**
	0.2nm,0.8s,baz=1.9,slow=6.2,SNR=4.6						
SPITS	**Spitsbergen Ar**	**62.22**	**349**	LR	LR	13 57 26.7	
	comp=Z,28nm,18.2s,baz=55,slow=38						

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*ISCJB **17** 13:19:34.6±0.9, 55°.6S±0°.1×27°.3W±0°.3, h10km, mb3.9/4, Error ellipse: s-maj=26.1km s-min=14.6km az=137.7*
*IDC **17** 13:19:34.8±1.1, 55°.66S×27°.28W, h0km, mb3.8/3, mb1 3.9/4, mb1mx3.7/32, mbtmp3.7/4, ML3.1/1, Error ellipse: s-maj=46.0km s-min=26.5km az=75.0*
*NEIC **17** 13:19:39.0±6.4, 55°.69S×27°.36W, h28km±46km, mb4.1/1, Error ellipse: s-maj=31.6km s-min=12.3km az=52.0*

ISC 17 13:19:36.6±1.0, 55°.6S±0°.2×27°.3W±0°.2, h10km, n15, σ1°06/9, mb4.0/4, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.46**	**280**	*e*Pn	**Pn**	**13 20 58.1**	**+0.2**
HOPE				*e*Sn	Sn	13 21 51.1	-1.0
VNA3	**Neumayer Olymp**	**17.44**	**161**	P	**P**	**13 23 43.1**	**+2.2**
SNAA	**Sanae**	**19.18**	**157**	P	**Pn**	**13 24 01.2**	**+0.2**
SNAA	**Sanae**	**19.18**	**157**	P	**P**	**13 23 59.4**	**-0.7**
	0.1nm,0.3s,baz=306,slow=9.2,SNR=9.3						
VNDA	**Vanda**	**47.02**	**183**	P	**P**	**13 28 06.3**	**-1.1**
	1.0nm,0.7s,baz=189,slow=8.4,SNR=5.3						
H10S2	**ASCENSION HYDR**	**47.58**	**17**	T	T	14 19 38.5	
	baz=189,slow=75,SNR=13						
H10S3	**ASCENSION HYDR**	**47.59**	**17**	T	T	14 19 37.0	
	baz=189,slow=75,SNR=10.0						
H10S1	**ASCENSION HYDR**	**47.60**	**17**	T	T	14 19 39.5	
	baz=189,slow=75,SNR=8.7						
H10N1	**ASCENSION HYDR**	**48.70**	**17**	T	T	14 20 51.0	
	baz=189,slow=29,SNR=2.4						
H10N3	**ASCENSION HYDR**	**48.70**	**17**	T	T	14 20 47.2	
	baz=189,slow=29,SNR=7.8						
H10N2	**ASCENSION HYDR**	**48.72**	**17**	T	T	14 20 50.2	
	baz=189,slow=29,SNR=6.7						
LPAZ	**La Paz**	**50.06**	**305**	P	**P**	**13 28 32.3**	**+0.1**
	1.4nm,0.7s,baz=163,slow=4.9,SNR=7.2						
SAML	**Samuel**	**54.44**	**315**	*e*P	**P**	**13 29 04.0**	**+0.1**
	1.0nm,0.5s						
TORD	**Torodi Ar. Bea**	**72.69**	**30**	P	**P**	**13 31 04.6**	**+0.1**
	0.4nm,0.7s,baz=201,slow=6.7,SNR=2.6						
ILAR	**Eielson Array**	**149.76**	**312**	PKPbc	**PKPbc**	**13 39 24.7**	**-0.5**
	0.8nm,0.8s,baz=107,slow=1.1,SNR=7.7						

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*ISCJB **17** 13:21:08.6±0.3, 63°.17N±0°.02×151°.38W±0°.05, h22km±4km, mb3.4/7, Error ellipse: s-maj=3.8km s-min=3.1km az=22.3*
*NEIC **17** 13:21:08.5±0.0, 63°.16N×151°.36W, h14km, MW3.7, ML3.8(AEIC), Moment Tensor Solution. s41 Moment tensor: Scale 10^{14}Nm; M_{rr}4.12; $M_{\theta\theta}$-2.50; $M_{\phi\phi}$-1.62; $M_{r\theta}$-0.46; $M_{\theta\phi}$-2.44; $M_{\phi r}$0.75; Best double couple: M_0=4.40000×10^{14} NP1:ϕ_s=243.00000°, δ46.00000°, λ108.00000°. NP2:ϕ_s=38.00000°, δ47.00000°, λ73.00000°. Principal axes: T 4.3200, Plg77.0000°, Azm234.0000°; N 0.2200, Plg13.0000°, Azm50.0000°; P -4.5400, Plg1.0000°, Azm140.0000°; After AEIC.*
NEIC Felt at Wasilla.
*IDC **17** 13:21:12.0±2.0, 63°.27N×151°.66W, h35km±18km, mb3.2/7, mb1 3.6/11, mb1mx3.3/82, mbtmp3.4/11, ML3.3/4, MS2.7/4, Ms1 2.7/4, ms1mx2.5/37 Error ellipse: s-maj=18.8km s-min=14.8km az=109.0*

ISC 17 13:21:08.3±1.1, 63°.16N±0°.03×151°.35W±0°.02, h10km±8km, n80, σ0°92/89, mb3.5/7, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAST	**Castle Rocks**	**0.42**	**308**	P	**Pg**	**13 21 17.2**	**+0.7**
CAST				S	**Sg**	**13 21 22.7**	**+0.6**
KTH	**Kantishna Hill**	**0.44**	**26**	P	**Pb**	**13 21 17.5**	**-0.7**
KTH				S	**Sb**	**13 21 23.3**	**-1.6**
PPLA	**Purkeypile**	**0.47**	**236**	P	**Pg**	**13 21 17.4**	**-0.1**
PPLA				S	**Sg**	**13 21 23.5**	**0.0**
TRF	**Thorofare Moun**	**0.56**	**58**	P	**Pg**	**13 21 19.3**	**+0.1**
TRF				S	**Sb**	**13 21 27.4**	**-1.1**
HUR	**Hurricane**	**0.80**	**102**	P	**Pg**	**13 21 23.4**	**-0.4**
CHUM	**Lake Minchumin**	**0.84**	**330**	P	**Pb**	**13 21 25.1**	**+0.1**
CHUM				S	**Sb**	**13 21 36.5**	**0.0**
BPAW	**Bear Paw Mtn.**	**0.96**	**10**	P	**Pb**	**13 21 26.7**	**-0.3**
BPAW				S	**Sb**	**13 21 38.9**	**-0.8**
RND	**Reindeer**	**1.16**	**77**	P	**Pb**	**13 21 29.6**	**-0.8**
RND				S	**Sg**	**13 21 44.8**	**-0.7**
SKT	**Skwentna**	**1.19**	**184**	P	**Pn**	**13 21 30.0**	**-1.0**
SKT				S	**Sb**	**13 21 44.5**	**-1.8**
MCK	**McKinley**	**1.23**	**61**	P	**Pb**	**13 21 31.1**	**-0.5**
BWN	**Browne**	**1.32**	**39**	P	**Pg**	**13 21 34.0**	**+0.4**
BWN				S	**Sn**	**13 21 52.2**	**+1.8**
SUA	**Susitna One**	**1.73**	**170**	P	**Pn**	**13 21 38.3**	**-0.2**
NEA	**Nenana**	**1.74**	**34**	P	**Pn**	**13 21 37.6**	**-1.0**
GHO	**Glory Hole Cre**	**1.79**	**140**	P	**Pn**	**13 21 39.0**	**-0.4**
GHO				S	**Sn**	**13 22 01.8**	**-0.4**
DHY	**Denali Highway**	**1.81**	**91**	P	**Pn**	**13 21 39.4**	**-0.3**
PMR	**Palmer**	**1.88**	**146**	P	**Pn**	**13 21 40.2**	**-0.3**
MLY	**Manley**	**1.90**	**8**	P	**Pn**	**13 21 40.5**	**-0.3**
SPCG	**Spurr Capps Gl**	**1.90**	**190**	P	**Pn**	**13 21 40.8**	**-0.1**
SPCP	**Crater Peak Br**	**1.94**	**192**	P	**Pn**	**13 21 41.4**	**0.0**
SML	**Sawmill**	**1.95**	**133**	P	**Pn**	**13 21 41.0**	**-0.5**
WRH	**Wood River Hil**	**1.96**	**46**	P	**Pn**	**13 21 40.6**	**-0.9**
SPWE	**Spurr West**	**1.98**	**197**	P	**Pn**	**13 21 42.5**	**+0.6**
CKT	**Bend**	**2.01**	**192**	P	**Pn**	**13 21 42.7**	**+0.4**
CKL	**Chakachamna La**	**2.03**	**194**	P	**Pn**	**13 21 42.9**	**+0.3**
FIB	**Fire Island**	**2.08**	**164**	P	**Pn**	**13 21 44.1**	**+0.9**
TT01	**Tatalina**	**2.14**	**265**	P	**Pn**	**13 21 43.2**	**-0.9**
CCB	**Clear Creek Bu**	**2.16**	**45**	P	**Pn**	**13 21 43.5**	**-0.9**
RC01	**Rabbit Creek A**	**2.21**	**159**	P	**Pn**	**13 21 44.7**	**-0.4**
KNK	**Knik Glacier**	**2.21**	**141**	P	**Pn**	**13 21 45.8**	**+0.6**
MDM	**Murphy Dome**	**2.27**	**36**	P	**Pn**	**13 21 45.0**	**-0.9**
SCM	**Sheep Creek Mo**	**2.29**	**124**	P	**Pn**	**13 21 45.8**	**-0.5**
I53US	**FAIRBANKS INFR**	**2.31**	**40**	*i*		13 36 40.0	
	baz=220,slow=329,SNR=0.4						
HDA	**Harding Lake**	**2.32**	**55**	P	**Pn**	**13 21 46.2**	**-0.3**
ILAR	**Eielson Array**	**2.55**	**49**	Pn	**Pn**	**13 21 48.8**	**-0.9**
	2.2nm,0.3s,baz=236,slow=14,SNR=45						
ILAR				Pg	**Pg**	**13 21 59.7**	**+2.6**
	14nm,0.3s,baz=241,slow=20,SNR=83						
ILAR				Lg	Lg	13 22 27.6	
	51nm,0.3s,baz=232,slow=35,SNR=17						
ILAR				LR	LR	13 23 07.3	
	comp=Z,163nm,18.6s,baz=337,slow=45						
ILB	**Eielson Array**	**2.55**	**49**	P	**Pn**	**13 21 48.9**	**-0.9**
RDJH	**Redoubt Jeurge**	**2.67**	**196**	P	**Pn**	**13 21 52.3**	**+0.9**
PAX	**Paxson**	**2.68**	**91**	P	**Pn**	**13 21 52.0**	**+0.4**
SLKM	**Skilak Lake**	**2.72**	**168**	P	**Pn**	**13 21 52.4**	**+0.4**
RDWB	**Redoubt West**	**2.77**	**195**	P	**Pn**	**13 21 53.7**	**+0.8**
SVW2	**Sparrevohn**	**2.87**	**226**	P	**Pn**	**13 21 54.0**	**-0.1**
GCSA	**Galena City Sc**	**2.91**	**306**	P	**Pn**	**13 21 55.0**	**+0.3**
HARP	**HAARP**	**2.95**	**102**	P	**Pn**	**13 21 56.4**	**+1.2**
RIDG	**Independ'e Rid**	**2.98**	**76**	P	**Pn**	**13 21 56.8**	**+1.1**
IM01	**Indian Mountai**	**3.03**	**341**	P	**Pn**	**13 21 56.5**	**+0.3**
KLU	**Klutina**	**3.04**	**121**	P	**Pn**	**13 21 57.6**	**+1.2**
VLZ	**Valdez**	**3.11**	**129**	P	**Pn**	**13 21 58.3**	**+0.9**
DOT	**Dot Lake**	**3.31**	**78**	P	**Pn**	**13 22 01.6**	**+1.3**
DIV	**Divide**	**3.32**	**125**	P	**Pn**	**13 22 00.9**	**+0.6**
SCRK	**Sand Creek**	**3.39**	**73**	P	**Pn**	**13 22 01.3**	**-0.1**
PRP	**Porcupine Dome**	**3.47**	**44**	P	**Pn**	**13 22 02.3**	**-0.1**
CNPM	**China Poot**	**3.65**	**179**	P	**Pn**	**13 22 05.8**	**+1.0**
PS05	**TAPS Pump Stn5**	**3.68**	**4**	P	**Pn**	**13 22 05.9**	**+0.7**
BMRM	**Bremner River**	**3.86**	**122**	P	**Pn**	**13 22 09.0**	**+1.3**
COLD	**Coldfoot**	**4.11**	**6**	P	**Pn**	**13 22 11.7**	**+0.6**
VRDI	**Verde Repeater**	**4.18**	**114**	P	**Pn**	**13 22 13.2**	**+1.0**
MCARA	**McCarthy VSAT**	**4.28**	**111**	P	**Pn**	**13 22 15.8**	**+2.4**
BCA3	**Beaver Creek A**	**4.35**	**87**	P	**Pn**	**13 22 15.4**	**+1.0**
BERG	**Berg Lake**	**4.57**	**124**	P	**Pn**	**13 22 17.6**	**+0.2**
KHIT	**Khitrov Hills**	**4.71**	**122**	P	**Pn**	**13 22 20.2**	**+0.8**
BALM	**Baldy**	**4.74**	**113**	P	**Pn**	**13 22 20.8**	**+1.0**
EGAK	**Eagle**	**4.78**	**66**	P	**Pn**	**13 22 20.6**	**+0.4**
KIAG	**Kiagna River**	**4.79**	**114**	P	**Pn**	**13 22 20.9**	**+0.3**
ISLE	**Juniper Island**	**4.97**	**117**	P	**Pn**	**13 22 23.4**	**+0.3**
BARN	**Barnard Glacie**	**5.01**	**111**	P	**Pn**	**13 22 25.2**	**+1.5**
BM3	**Burnt Mountain**	**5.12**	**31**	P	**Pn**	**13 22 24.9**	**-0.2**
CTGM	**Chitina Glacie**	**5.20**	**111**	P	**Pn**	**13 22 27.6**	**+1.4**
DAWY	**Dawson**	**5.41**	**75**	*e*Pn	**Pn**	**13 22 29.1**	**+0.1**
	15nm,0.6s						
KDAK	**Kodiak Island**	**5.43**	**187**	Pn	**Pn**	**13 22 29.0**	**-0.2**
	2.0nm,0.3s,baz=56,slow=6.3,SNR=26						
KDAK				Sn	Sn	13 23 23.4	-8.3
	1.6nm,0.3s,baz=195,slow=18,SNR=7.8						
KDAK				LR	LR	13 24 06.8	
	comp=Z,11nm,21.1s,baz=353,slow=32						
KDAK	**Kodiak Island**	**5.43**	**187**	*e*Pn	**Pn**	**13 22 30.2**	**+1.0**
KDAK				Sn	Sn	13 23 23.4	-8.3
INK	**Inuvik**	**8.95**	**47**	Pn	**Pn**	**13 23 17.9**	**+0.6**
	0.4nm,0.3s,baz=249,slow=10,SNR=9.8						
INK				Lg	Lg	13 25 52.7	
	0.0nm,0.3s,baz=358,slow=12,SNR=3.8						
DLBC	**Dease Lake**	**11.41**	**105**	Lg	Lg	13 27 10.2	
	0.1nm,0.3s,baz=118,slow=19,SNR=2.8						
DLBC				LR	LR	13 28 26.8	
	comp=Z,108nm,18.6s,baz=248,slow=38						
BBB	**Bella Bella**	**16.48**	**121**	LR	LR	13 31 17.3	
	comp=Z,44nm,19.8s,baz=126,slow=36						
YKA	**Yellowknife Ar**	**16.65**	**76**	Pn	**Pn**	**13 24 60.0**	**-1.5**
	0.1nm,0.3s,baz=286,slow=11,SNR=3.6						
RES	**Resolute Bay**	**22.23**	**36**	P	**P**	**13 26 04.5**	**0.0**
	0.4nm,0.5s,baz=255,slow=12,SNR=2.6						
SEY	**Seymchan**	**24.82**	**295**	P	**P**	**13 26 28.2**	**-1.9**
	0.7nm,0.5s,baz=66,slow=20,SNR=4.4						
PDAR	**Pinedale Array**	**31.56**	**110**	P	**P**	**13 27 32.6**	**+1.8**
	0.3nm,0.7s,baz=330,slow=5.2,SNR=3.1						
NVAR	**Mina Array Bea**	**31.75**	**126**	P	**P**	**13 27 33.9**	**+1.4**
	0.3nm,0.6s,baz=316,slow=8.7,SNR=3.5						
NVAR				PcP	**PcP**	**13 30 24.2**	**+0.5**
	0.4nm,0.6s,baz=286,slow=3.4,SNR=3.8						
TXAR	**Lajitas Array**	**45.48**	**115**	P	**P**	**13 29 28.5**	**+0.9**
	0.4nm,0.7s,baz=326,slow=7.6,SNR=6.9						
ZALV	**Zalesovo Beam**	**55.30**	**323**	P	**P**	**13 30 41.1**	**-0.3**
	0.5nm,0.3s,baz=37,slow=9.8,SNR=2.5						
MKAR	**Makanchi Array**	**62.45**	**321**	P	**P**	**13 31 29.6**	**-1.6**
	0.2nm,0.4s,baz=35,slow=7.9,SNR=3.6						

IDC 17 13:28:54.9±1.1, 27°.73N×104°.13E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.4/74, mbtmp3.7/5, MS2.8/1, Ms1 3.0/1, ms1mx2.3/66, Error ellipse: s-maj=237.1km s-min=20.0km az=58.0, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.39**	**208**	LR	LR	13 36 05.5	
	comp=Z,46nm,19.6s,baz=60,slow=42						
MKAR	**Makanchi Array**	**25.62**	**324**	P	P	13 34 25.6	-0.4
	0.4nm,0.7s,baz=126,slow=10.0,SNR=4.2						
ZALV	**Zalesovo Beam**	**29.79**	**337**	P	P	13 35 04.4	+1.2
	0.4nm,0.4s,baz=142,slow=5.1,SNR=1.8						
KURBB	**Kurchatov Arra**	**30.00**	**327**	P	P	13 35 04.3	-0.7
	1.1nm,0.3s,baz=126,slow=10,SNR=1.8						
WRA	**Warramunga Arr**	**55.69**	**145**	P	P	13 38 33.0	-0.2
	0.5nm,0.6s,baz=336,slow=8.3,SNR=15						
ASAR	**Alice Springs**	**58.62**	**148**	P	P	13 38 54.0	+0.1
	0.3nm,0.7s,baz=330,slow=6.5,SNR=8.3						

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*DDA **17** 13:58:57.3, 36°.32N×28°.39E, h42km, MI3.8*
*ATH **17** 13:58:57.3, 36°.34N×28°.40E, h42km±1km, ML3.0/5, Error ellipse: s-maj=2.5km s-min=1.1km az=175.0*
*ISK **17** 13:58:57.5, 36°.29N×28°.39E, h44km±1km, ML3.4/15*
*CSEM **17** 13:58:58.6±0.2, 36°.33N×28°.38E, h34km±2km, ML3.4, Error ellipse: s-maj=4.0km s-min=2.9km az=160.0*
*ISCJB **17** 13:58:58.3±0.4, 36°.31N±0°.03×28°.36E±0°.03, h45km±7km, Error ellipse: s-maj=5.1km s-min=3.6km az=161.4*
*THE **17** 13:58:59.1, 36°.38N×28°.39E, h28km±1km, ML3.2/2, Error ellipse: s-maj=2.0km s-min=0.5km az=156.0*

ISC 17 13:58:59.0±0.9, 36°.34N±0°.03×28°.39E±0°.02, h33km±7km, n92, σ0°89/125, Dodecanese Islands

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

AKAS	**Kas**	**0.99 96**	PG	**Pn**	**13 59 15.4**	**-1.2**
AKAS	**Kas**	**0.99 96**	*i* P	**Pn**	**13 59 15.5**	**-1.2**
AKAS			*i* S	**Sb**	**13 59 30.9**	**+0.4**
AKAS	**Kas**	**0.99 96**	P	**Pn**	**13 59 15.5**	**-1.2**
AKAS			S	**Sb**	**13 59 31.0**	**+0.4**
BDRM	**Kayabasi**	**1.05 314**	*i* P	**Pn**	**13 59 17.3**	**-0.1**
BDRM	**Kayabasi**	**1.05 314**	P	**Pn**	**13 59 17.3**	**-0.1**
MLSB	**Milas**	**1.08 333**	PN	**Pn**	**13 59 17.8**	**0.0**
MLSB	**Milas**	**1.08 333**	*e*Pn	**Pn**	**13 59 17.8**	**0.0**
BODT	**Bodrum**	**1.13 310**	PN	**Pn**	**13 59 17.5**	**-1.0**
BODT	**Bodrum**	**1.13 310**	P	**Pn**	**13 59 17.3**	**-1.2**
BODT			S	**Sn**	**13 59 31.8**	**-1.1**
BODT	**Bodrum**	**1.13 310**	*e*Pn	**Pn**	**13 59 17.5**	**-1.0**
BODT			S	**Sn**	**13 59 31.8**	**-1.1**
YKAV	**Yalikavak-Bodr**	**1.19 312**	PN	**Pn**	**13 59 18.2**	**-1.0**
YKAV	**Yalikavak-Bodr**	**1.19 312**	*e*Pn	**Pn**	**13 59 18.2**	**-1.0**
TAVA	**DENIZLI_Tavas**	**1.20 20**	*i* P	**Pn**	**13 59 20.4**	**+0.8**
TAVA			*i* S	**Sb**	**13 59 37.5**	**+0.9**
TAVA	**DENIZLI_Tavas**	**1.20 20**	P	**Pn**	**13 59 20.4**	**+0.8**
TAVA			S	**Sb**	**13 59 37.5**	**+0.9**
KARP	**Karpathos**	**1.27 232**	PN	**Pn**	**13 59 19.5**	**-0.9**
KARP	**Karpathos**	**1.27 232**	P	**Pn**	**13 59 20.2**	**-0.2**
KARP			S	**Sn**	**13 59 37.2**	**+0.9**
KARP			AML	AML	13 59 39.9	
	comp=N,1751μm,0.4s					
KARP			AML	AML	13 59 42.0	
	comp=E,1086μm,0.2s					
KARP	**Karpathos**	**1.27 232**	P	**Pn**	**13 59 20.0**	**-0.4**
KARP			S	**Sn**	**13 59 36.6**	**+0.3**
KARP	**Karpathos**	**1.27 232**	*e*Pn	**Pn**	**13 59 19.5**	**-0.9**
KARP	**Karpathos**	**1.27 232**	P	**Pn**	**13 59 20.0**	**-0.4**
KARP			S	**Sn**	**13 59 36.6**	**+0.3**
ELL	**Elmali**	**1.29 71**	PN	**Pn**	**13 59 19.2**	**-1.6**
ELL	**Elmali**	**1.29 71**	*e*Pn	**Pn**	**13 59 19.2**	**-1.6**
GOLH	**Golhisar**	**1.30 46**	*i* P	**Pn**	**13 59 21.4**	**+0.5**
GOLH			*i* S	**Sn**	**13 59 39.0**	**+1.7**
GOLH	**Golhisar**	**1.30 46**	P	**Pn**	**13 59 21.4**	**+0.5**
GOLH			S	**Sn**	**13 59 39.0**	**+1.7**
AYDN	**Tasoluk**	**1.38 343**	*i* P	**Pn**	**13 59 22.9**	**+0.9**
AYDN			*i* S	**Sn**	**13 59 40.4**	**+1.2**
AYDN	**Tasoluk**	**1.38 343**	P	**Pn**	**13 59 22.9**	**+0.9**
AYDN			S	**Sn**	**13 59 40.4**	**+1.2**
DENT	**Denizli**	**1.51 20**	PN	**Pn**	**13 59 23.8**	**+0.1**
DENT	**Denizli**	**1.51 20**	*e*Pn	**Pn**	**13 59 23.8**	**+0.1**
GCAM	**G?zelcaml?**	**1.65 326**	PN	**Pn**	**13 59 25.5**	**0.0**
GCAM	**G?zelcaml?**	**1.65 326**	*i* P	**Pn**	**13 59 25.1**	**-0.4**
GCAM	**G?zelcaml?**	**1.65 326**	P	**Pn**	**13 59 25.1**	**-0.4**
GCAM	**G?zelcaml?**	**1.65 326**	*e*Pn	**Pn**	**13 59 25.5**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**1.66 346**	PN	**Pn**	**13 59 25.4**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**1.66 346**	*e*Pn	**Pn**	**13 59 25.4**	**-0.4**
KORT	**Korkueli**	**1.71 67**	PN	**Pn**	**13 59 26.4**	**-0.2**
KORT	**Korkueli**	**1.71 67**	*i* P	**Pn**	**13 59 27.9**	**+1.3**
KORT	**Korkueli**	**1.71 67**	*e*Pn	**Pn**	**13 59 26.4**	**-0.2**
KORT	**Korkueli**	**1.71 67**	P	**Pn**	**13 59 27.9**	**+1.3**
SMG	**Samos**	**1.85 318**	P	**Pn**	**13 59 28.0**	**-0.3**
SMG			AML	AML	13 59 51.7	
	comp=N,524μm,0.5s					
SMG			AML	AML	13 59 52.6	
	comp=E,471μm,0.3s					
SMG	**Samos**	**1.85 318**	P	**Pn**	**13 59 28.1**	**-0.3**
DGB	**¨zmir**	**2.09 325**	*i* P	**Pn**	**13 59 31.2**	**-0.4**
ZKR	**Zakros**	**2.15 236**	P	**Pn**	**13 59 33.3**	**+0.9**
ZKR	**Zakros**	**2.15 236**	P	**Pn**	**13 59 32.8**	**+0.4**
MANT	**Manisa**	**2.16 4**	*i* P	**Pn**	**13 59 32.5**	**-0.3**
MANT	**Manisa**	**2.16 4**	P	**Pn**	**13 59 32.5**	**-0.3**
KULA	**Kula-Manisa**	**2.19 6**	PN	**Pn**	**13 59 33.2**	**+0.1**
KULA	**Kula-Manisa**	**2.19 6**	*e*Pn	**Pn**	**13 59 33.2**	**+0.1**
SUTC	**Sutluce-Ispart**	**2.38 61**	PN	**Pn**	**13 59 35.6**	**-0.2**
SUTC	**Sutluce-Ispart**	**2.38 61**	*e*Pn	**Pn**	**13 59 35.6**	**-0.2**
APE	**Apeiranthos**	**2.41 289**	P	**Pn**	**13 59 36.6**	**+0.6**
APE	**Apeiranthos**	**2.41 289**	P	**Pn**	**13 59 36.4**	**+0.3**
ZEY	**¨zmir**	**2.42 322**	*i* P	**Pn**	**13 59 35.0**	**-1.2**
URLA	**Izmir**	**2.48 325**	PN	**Pn**	**13 59 35.0**	**-2.0**
URLA	**Izmir**	**2.48 325**	*i* P	**Pn**	**13 59 35.6**	**-1.4**
URLA	**Izmir**	**2.48 325**	*e*Pn	**Pn**	**13 59 35.0**	**-2.0**
URLA	**Izmir**	**2.48 325**	P	**Pn**	**13 59 35.6**	**-1.4**
NPS	**Neapolis**	**2.50 245**	P	**Pn**	**13 59 36.4**	**-0.9**
NPS			AML	AML	14 00 10.7	
	comp=E,347μm,0.4s					
NPS			AML	AML	14 00 10.9	
	comp=N,330μm,0.3s					
NPS	**Neapolis**	**2.50 245**	P	**Pn**	**13 59 36.8**	**-0.5**
AKHS	**Akhisar**	**2.58 350**	*i* P	**Pn**	**13 59 38.3**	**-0.1**
AKHS	**Akhisar**	**2.58 350**	P	**Pn**	**13 59 38.3**	**-0.1**
LAST	**Lasithi**	**2.64 245**	P	**Pn**	**13 59 38.1**	**-1.2**
LAST			S	**Sn**	**14 00 08.9**	**-1.3**
LAST	**Lasithi**	**2.64 245**	P	**Pn**	**13 59 38.7**	**-0.6**
LAST			S	**Sn**	**14 00 09.5**	**-0.7**
KEPZ	**Antalya-Kepez**	**2.65 77**	*i* P	**Pn**	**13 59 40.6**	**+1.2**
KEPZ	**Antalya-Kepez**	**2.65 77**	P	**Pn**	**13 59 40.6**	**+1.2**
CHOS	**Chios island**	**2.77 318**	P	**Pn**	**13 59 41.1**	**+0.1**
CHOS	**Chios island**	**2.77 318**	P	**Pn**	**13 59 41.1**	**+0.1**
IMMV	**Iera Moni Meta**	**3.68 258**	P	**Pn**	**13 59 53.4**	**-0.1**
IMMV	**Iera Moni Meta**	**3.68 258**	P	**Pn**	**13 59 53.7**	**+0.1**
GVD	**Gavdhos**	**3.81 248**	P	**Pn**	**13 59 55.7**	**+0.4**
GVD	**Gavdhos**	**3.81 248**	P	**Pn**	**13 59 55.7**	**+0.4**

*IDC **17** 14:00:30.8±2.8, 31°.12S×177°.86W, h82km±21km, mb3.7/4, mb1 3.9/5, mb1mx3.4/46, mbtmp4.1/5, Error ellipse: s-maj=51.9km s-min=19.3km az=111.0*

ISC 17 14:00:30.5±1.7, 31°.05S±0°.1×178°.3W±0°.3, h35km, n13, σ2=96/7, mb3.9/4, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.77**	**10**	P	**Pn**	**14 01 01.0**	**+2.4**
	90nm,0.3s,baz=126,slow=19,SNR=2.8						
RAO				S	**Sn**	**14 01 19.7**	**-0.2**
	382nm,0.3s,baz=217,slow=23,SNR=10						
URZ	**Urewera**	**8.17**	**206**	P	**Pn**	**14 02 27.6**	**+1.0**
	1.1nm,0.3s,baz=261,slow=3.5,SNR=22						
URZ				S	**Sn**	**14 03 58.6**	**+0.9**
	3.0nm,0.3s,baz=248,slow=4.8,SNR=6.2						
CTA	**Charters Tower**	**33.66**	**280**	P	**P**	**14 07 07.5**	**-0.6**
	1.4nm,0.5s,baz=101,slow=9.1,SNR=4.3						
STKA	**Stephens Creek**	**34.11**	**258**	P	**P**	**14 07 12.1**	**+0.1**
	5.0nm,0.5s,baz=100,slow=14,SNR=18						
ASAR	**Alice Springs**	**42.84**	**268**	P	P	14 08 23.2	-2.1
	0.5nm,0.5s,baz=105,slow=6.9,SNR=16						
WRA	**Warramunga Arr**	**43.88**	**273**	P	P	14 08 30.9	-2.9
	0.7nm,0.5s,baz=110,slow=8.1,SNR=23						
H10S3	**ASCENSION HYDR**	**37.28**	**156**	T	T	16 53 54.0	
	baz=204,slow=74,SNR=2.2						
H10S2	**ASCENSION HYDR**	**37.28**	**156**	T	T	16 53 54.5	
	baz=204,slow=74,SNR=8.5						
H10S1	**ASCENSION HYDR**	**37.30**	**156**	T	T	16 53 54.5	
	baz=204,slow=74,SNR=1.9						
H10N3	**ASCENSION HYDR**	**38.37**	**155**	T	T	16 55 19.5	
	baz=203,slow=74,SNR=8.1						
H10N1	**ASCENSION HYDR**	**38.37**	**155**	T	T	16 55 10.5	
	baz=203,slow=74,SNR=7.2						
H10N2	**ASCENSION HYDR**	**38.39**	**155**	T	T	16 55 15.4	
	baz=203,slow=74,SNR=8.3						
FINES	**FINESS Array B**	**145.62**	**339**	PKPbc	**PKPdf**	**14 19 59.1**	**-5.2**
	1.2nm,0.4s,baz=58,slow=3.4,SNR=13						

IDC 17 14:21:03.3±1.7, 3°.17S×147°.32E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.6/43, mbtmp3.7/5, MS3.1/9, Ms1 3.1/9, ms1mx2.9/43, Error ellipse: s-maj=75.7km s-min=25.4km az=110.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.20**	**181**	LR	LR	14 25 06.9	
	comp=Z,230nm,19.5s,baz=338,slow=39						
GUMO	**Guam**	**16.82**	**352**	LR	LR	14 30 44.5	
	comp=Z,13nm,18.8s,baz=210,slow=34						
WRA	**Warramunga Arr**	**20.94**	**216**	P	P	14 25 47.7	-0.2
	6.9nm,1.0s,baz=40,slow=11,SNR=20						
DAV	**Davao City (W)**	**23.96**	**295**	LR	LR	14 34 52.8	
	comp=Z,39nm,19.7s,baz=151,slow=35						
ASAR	**Alice Springs**	**24.16**	**211**	P	P	14 26 21.9	+0.4
	2.0nm,1.0s,baz=43,slow=7.4,SNR=17						
H11S3	**WAKE ISLAND Hy**	**28.76**	**41**	T	T	14 57 07.7	
	baz=223,slow=76,SNR=46						
H11S2	**WAKE ISLAND Hy**	**28.77**	**41**	T	T	14 57 08.4	
	baz=223,slow=76,SNR=63						
H11S1	**WAKE ISLAND Hy**	**28.78**	**41**	T	T	14 57 09.1	
	baz=223,slow=76,SNR=42						
STKA	**Stephens Creek**	**29.06**	**190**	LR	LR	14 38 26.0	
	comp=Z,53nm,18.5s,baz=13,slow=36						
H11N1	**WAKE ISLAND Hy**	**29.78**	**39**	T	T	14 58 28.2	
	baz=221,slow=76,SNR=9.2						
H11N3	**WAKE ISLAND Hy**	**29.80**	**39**	T	T	14 58 28.4	
	baz=221,slow=76,SNR=13						
H11N2	**WAKE ISLAND Hy**	**29.80**	**39**	T	T	14 58 28.8	
	baz=221,slow=76,SNR=12						
JNU	**Nakatsue**	**39.30**	**338**	LR	LR	14 43 26.8	
	comp=Z,35nm,18.4s,baz=144,slow=34						
MJAR	**Matsushiro Arr**	**40.41**	**349**	LR	LR	14 43 33.6	
	comp=Z,18nm,20.1s,baz=240,slow=33						
PETK	**Petropavlovsk-**	**56.75**	**7**	LR	LR	14 52 32.6	
	comp=Z,19nm,20.0s,baz=195,slow=33						
MA2	**Magadan**	**62.61**	**2**	LR	LR	14 53 25.6	
	comp=Z,22nm,21.8s,baz=202,slow=31						
MKAR	**Makanchi Array**	**75.54**	**320**	P	P	14 32 49.9	0.0
	0.3nm,0.7s,baz=115,slow=6.5,SNR=2.5						
KURBB	**Kurchatov Arra**	**79.17**	**323**	P	P	14 33 10.5	+0.4
	0.4nm,0.7s,baz=104,slow=7.0,SNR=3.1						
NRIK	**Noril'sk**	**82.69**	**342**	LR	LR	15 08 11.9	
	comp=Z,28nm,21.2s,baz=129,slow=34						
ILAR	**Eielson Array**	**82.77**	**23**	P	P	14 33 28.9	-0.1
	0.6nm,0.9s,baz=245,slow=5.2,SNR=5.9						
TORD	**Torodi Ar. Bea**	**144.60**	**288**	PKP	PKPab	14 40 41.5	-0.1
	1.4nm,0.9s,baz=85,slow=3.0,SNR=4.7						

*BJI **17** 14:34:17.0, 43°.60N×28°.80W, h10km, mb5.0/13, mB5.1/5, Ms5.2/1, Ms7 4.8/1*
*ISCJB **17** 14:34:18.7±0.1, 43°.58N±0°.03×28°.75W±0°.03, h14km, mb4.5/80, MS3.6/34, Error ellipse: s-maj=5.0km s-min=2.8km az=25.7*
*IDC **17** 14:34:18.4±0.5, 43°.76N×28°.84W, h0km, mb4.1/28, mb1 4.2/29, mb1mx4.0/70, mbtmp4.1/29, ML4.5/1, MS3.6/34, Ms1 3.6/34, ms1mx3.5/57, Error ellipse: s-maj=14.3km s-min=11.3km az=177.0*
*NEIC **17** 14:34:19.9±0.1, 43°.67N×28°.80W, h10km, mb4.7/51, Error ellipse: s-maj=5.1km s-min=3.1km az=7.0*
*CSEM **17** 14:34:19.8±0.1, 43°.60N×28°.84W, h10km, mb4.7/50, Error ellipse: s-maj=4.8km s-min=2.7km az=22.0*
*PDA **17** 14:34:20.9±1.2, 43°.61N×29°.18W, h5km, MD5.1, ML4.9, Error ellipse: s-maj=18.3km s-min=6.3km az=79.0*
*IGIL **17** 14:34:24.0, 43°.61N×28°.82W, h10km, mb5.2*

ISC 17 14:34:20.2±0.3, 43°.55N±0°.05×28°.82W±0°.05, h14km, n412, σ2=97/395, mb4.6/80, MS3.7/34, 1D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSA	**Rosais**	**4.84**	**175**	*e*S	**Sn**	**14 36 24.3**	**-4.2**
ROSA				A	A	14 36 30.1	
	36nm,0.3s						
ROSA	**Rosais**	**4.84**	**175**	*e*Pn	**Pn**	**14 35 34.9**	**+2.3**
ROSA	**Rosais**	**4.84**	**175**	*e*Pn	**Pn**	**14 35 34.9**	**+2.3**
PMAN	**Manadas**	**4.94**	**173**	*e*S	**Sn**	**14 36 27.3**	**-3.6**
PMAN				A	A	14 36 28.5	
	21nm,0.1s						
PSCM	**Serra do Cume**	**5.01**	**165**	*e*P	**Pn**	**14 35 33.8**	**-1.1**
PSCM				*e*S	**Sn**	**14 36 29.2**	**-3.4**
PSCM				A	A	14 36 33.1	
	38nm,0.4s						
PSCM	**Serra do Cume**	**5.01**	**165**	*e*P	**Pn**	**14 35 33.8**	**-1.1**
PSET	**Sete Cidades**	**6.18**	**157**	*e*P	**Pn**	**14 35 51.5**	**+0.4**
PSET				*e*S	**Sn**	**14 36 58.7**	**-2.8**
PSET				A	A	14 37 01.5	
	93nm,0.3s						
PSET	**Sete Cidades**	**6.18**	**157**	*e*P	**Pn**	**14 35 51.5**	**+0.4**
PDA	**Ponta Delgada**	**6.27**	**156**	*e*P	**Pn**	**14 35 52.7**	**+0.5**
PDA	**Ponta Delgada**	**6.27**	**156**	*e*P	**Pn**	**14 35 52.7**	**+0.5**
GRON	**Grota Negra**	**6.29**	**156**	*e*P	**Pn**	**14 35 53.3**	**+0.8**
GRON				*e*S	**Sn**	**14 37 02.6**	**-1.6**
GRON				A	A	14 37 08.3	
	9.6nm,0.3s						
CMLA	**Cha da Macela**	**6.29**	**155**	*e*P	**Pn**	**14 35 52.7**	**+0.1**
CMLA				*e*S	**Sn**	**14 37 01.1**	**-3.2**
CMLA				A	A	14 37 04.4	
	52nm,0.3s						
CMLA	**Cha da Macela**	**6.29**	**155**	*e*Pn	**Pn**	**14 35 52.5**	**-0.1**
CMLA	**Cha da Macela**	**6.29**	**155**	*e*Pn	**Pn**	**14 35 52.5**	**-0.1**
CMLA	**Cha da Macela**	**6.29**	**155**	*e*P	**Pn**	**14 35 52.7**	**+0.1**
BART	**Pico Bartolome**	**6.39**	**153**	*e*P	**Pn**	**14 35 54.0**	**0.0**
BART				*e*S	**Sn**	**14 37 04.8**	**-2.1**
BART				A	A	14 37 09.6	
	70nm,0.4s						
BART	**Pico Bartolome**	**6.39**	**153**	*e*P	**Pn**	**14 35 54.0**	**0.0**
PSMA	**Santa Maria**	**7.12**	**155**	*e*P	**Pn**	**14 36 04.6**	**+0.6**
PSMA				*e*S	**Sn**	**14 37 22.1**	**-2.6**
PSMA				A	A	14 37 25.5	
	21nm,0.2s						
PSMN	**Pico do Norte,**	**7.14**	**155**	*e*P	**Pn**	**14 36 04.4**	**+0.3**
PSMN				*e*S	**Sn**	**14 37 22.0**	**-3.0**
PSMN				A	A	14 37 27.8	
	23nm,0.3s						
PSMN	**Pico do Norte,**	**7.14**	**155**	*e*P	**Pn**	**14 36 04.4**	**+0.3**
PMOZ	**Porto Moniz, M**	**14.06**	**136**	*e*P	**Pn**	**14 37 39.9**	**+0.9**
	83nm,2.2s						
PMOZ				*e*LR	LR	14 40 55.7	
	286nm,20.0s						
PMOZ	**Porto Moniz, M**	**14.06**	**136**	*e*P	**Pn**	**14 37 39.9**	**+0.9**
PMAR	**Madeira**	**14.28**	**135**	*e*P	**Pn**	**14 37 42.8**	**+0.7**
	84nm,1.5s						
PMPS	**Porto Santo**	**14.33**	**133**	*e*P	**Pn**	**14 37 42.9**	**+0.4**
	115nm,1.4s						
PGAV	**Gavieira, Arco**	**15.18**	**89**	*e*P	**P**	**14 38 00.3**	**+1.1**
	80nm,2.0s						
PGAV				*e*LR	LR	14 41 35.5	
	227nm,18.0s						
PCAS	**Casmilo, Conde**	**15.54**	**96**	*e*P	**P**	**14 38 04.1**	**+0.9**
	51nm,1.4s						
PCAS	**Casmilo, Conde**	**15.54**	**96**	*e*P	**P**	**14 38 04.1**	**+0.9**
PTOM	**Tomar**	**15.76**	**97**	*e*P	**P**	**14 38 06.5**	**+1.0**
	40nm,1.3s						
PTOM	**Tomar**	**15.76**	**97**	*e*P	**P**	**14 38 06.5**	**+1.0**
ALMR	**Almeirim**	**15.81**	**99**	*e*P	**P**	**14 38 06.8**	**+0.7**
ALMR				AMb	AMB	14 38 09.0	
	comp=Z,62nm,1.2s						
ALMR	**Almeirim**	**15.81**	**99**	*e*P	**P**	**14 38 07.0**	**+0.9**
	comp=Z,63nm,1.2s						
ALMR	**Almeirim**	**15.81**	**99**	*e*P	**P**	**14 38 07.0**	**+0.9**
PMTG	**Montargil**	**16.10**	**99**	*e*P	**P**	**14 38 09.9**	**+0.6**
	comp=Z,43nm,1.1s						
PMTG	**Montargil**	**16.10**	**99**	*e*P	**P**	**14 38 09.9**	**+0.6**
MTE	**Manteigas**	**16.12**	**94**	*e*P	**P**	**14 38 10.7**	**+1.0**
	comp=Z,38nm,2.0s						
MTE				*e*LR	LR	14 41 59.3	
	comp=Z,164nm,18.0s						
MTE	**Manteigas**	**16.12**	**94**	*e*P	**P**	**14 38 10.7**	**+1.0**
PNCL	**Nicolau / Gran**	**16.27**	**103**	*e*P	**P**	**14 38 12.4**	**+1.2**
	comp=Z,40nm,1.9s						
PNCL	**Nicolau / Gran**	**16.27**	**103**	*e*P	**P**	**14 38 12.4**	**+1.2**
PBRG	**Braganca**	**16.32**	**89**	*e*P	**P**	**14 38 13.3**	**+1.5**
	comp=Z,43nm,1.8s						
PBRG	**Braganca**	**16.32**	**89**	*e*P	**P**	**14 38 13.3**	**+1.5**
PCBR	**Castelo Branco**	**16.36**	**96**	*e*P	**P**	**14 38 13.5**	**+1.4**
	comp=Z,37nm,1.8s						
PCBR	**Castelo Branco**	**16.36**	**96**	*e*P	**P**	**14 38 13.5**	**+1.4**
PTEO	**Sao Teotonio**	**16.39**	**105**	*e*P	**P**	**14 38 14.4**	**+1.9**
	comp=Z,38nm,1.2s						
PTEO	**Sao Teotonio**	**16.39**	**105**	*e*P	**P**	**14 38 14.4**	**+1.9**
PMRV	**Marv??o**	**16.56**	**97**	*e*P	**P**	**14 38 15.3**	**+0.8**
	comp=Z,32nm,1.9s						
PMRV				*e*LR	LR	14 42 13.9	
	comp=Z,210nm,20.0s						
PMRV	**Marv??o**	**16.56**	**97**	*e*P	**P**	**14 38 15.3**	**+0.8**
MESJ	**Messejana**	**16.61**	**103**	*e*P	**P**	**14 38 16.8**	**+1.8**
	comp=Z,33nm,1.3s						
MESJ	**Messejana**	**16.61**	**103**	*e*P	**P**	**14 38 16.8**	**+1.8**
PESTR	**Estremoz**	**16.63**	**99**	*e*P	**P**	**14 38 16.0**	**+0.8**
	comp=Z,21nm,1.8s						
PESTR	**Estremoz**	**16.63**	**99**	*e*P	**P**	**14 38 16.0**	**+0.8**
PBEJ	**Beja**	**16.78**	**102**	*e*P	**P**	**14 38 18.6**	**+1.7**
	comp=Z,40nm,1.9s						
PBEJ	**Beja**	**16.78**	**102**	*e*P	**P**	**14 38 18.6**	**+1.7**
PCVE	**Castro Verde**	**16.83**	**103**	*e*P	**P**	**14 38 18.6**	**+1.1**
	comp=Z,28nm,1.4s						
PCVE	**Castro Verde**	**16.83**	**103**	*e*P	**P**	**14 38 18.6**	**+1.1**
PBDV	**Barranco-do-Ve**	**17.09**	**105**	*e*P	**P**	**14 38 21.8**	**+1.5**
	comp=Z,34nm,1.3s						
PBDV	**Barranco-do-Ve**	**17.09**	**105**	*e*P	**P**	**14 38 21.8**	**+1.5**
PBAR	**Barrancos**	**17.31**	**101**	*e*P	**P**	**14 38 22.2**	**-0.5**
	comp=Z,23nm,1.9s						
PBAR	**Barrancos**	**17.31**	**101**	*e*P	**P**	**14 38 22.2**	**-0.5**
ESDC	**Sonseca Array**	**18.96**	**93**	P	**P**	**14 38 41.2**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=291,slow=10,SNR=16						
ESDC				LR	LR	14 44 24.8	
	comp=Z,98nm,20.4s,baz=295,slow=32						
ES19	**SONSECA Array**	**19.00**	**93**	*e*P	**Pn**	**14 38 42.3**	**+0.2**
ES19	**SONSECA Array**	**19.00**	**93**	*e*P	**Pn**	**14 38 42.3**	**+0.2**
EKA	**Eskdalemuir Ar**	**20.30**	**45**	P	**P**	**14 38 54.9**	**-0.5**
	comp=Z,4.0nm,0.8s,baz=247,slow=9.2,SNR=6.6						
MDT	**Midelt**	**21.76**	**111**	P	**P**	**14 39 12.6**	**+1.1**
	comp=Z,3.6nm,0.7s,baz=291,slow=4.0,SNR=5.7						
MDT				LR	LR	14 45 50.4	
	comp=Z,112nm,19.9s,baz=341,slow=32						
SFJD	**Kangerlussuaq**	**26.29**	**341**	LR	LR	14 47 57.2	
	comp=Z,242nm,18.4s,baz=143,slow=31						
SCHQ	**Schefferville**	**26.95**	**308**	LR	LR	14 48 52.1	
	comp=Z,197nm,19.1s,baz=80,slow=33						
PKME	**Peaks-Kenny Pk**	**28.76**	**288**	P	**P**	**14 40 16.4**	**-0.8**
	baz=78						
JMIC	**Jan Mayen**	**29.30**	**13**	LR	LR	14 49 17.9	
	comp=Z,81nm,18.4s,baz=250,slow=31						
NOA	**NORSAR Array B**	**29.46**	**40**	LR	LR	14 51 09.5	
	comp=Z,51nm,18.4s,baz=255,slow=34						
GERES	**GERESS Array B**	**29.61**	**65**	P	**P**	**14 40 25.7**	**+0.8**
	comp=Z,0.8nm,1.0s,baz=284,slow=8.0,SNR=5.7						
GERES				LR	LR	14 51 22.6	
	comp=Z,54nm,19.1s,baz=286,slow=35						
GEA0	**GERESS Array S**	**29.61**	**65**	*e*P	**P**	**14 40 25.9**	**+1.1**
KEST	**Kesra**	**30.20**	**92**	P	**P**	**14 40 30.8**	**+0.6**
	comp=Z,4.8nm,0.7s,baz=350,slow=0.3,SNR=9.7						
KEST				LR	LR	14 51 58.2	
	comp=Z,71nm,19.1s,baz=322,slow=35						
KEST	**Kesra**	**30.20**	**92**	*e*P	**P**	**14 40 30.6**	**+0.4**
	comp=Z,4.6nm,0.8s						
KEST	**Kesra**	**30.20**	**92**	*e*P	**P**	**14 40 30.5**	**+0.4**
	comp=Z,4.6nm,0.8s						
HFS	**Hagfors**	**30.39**	**42**	LR	LR	14 51 04.4	
	comp=Z,76nm,20.9s,baz=226,slow=33						
VAE	**Valguarnera**	**33.13**	**86**	LR	LR	14 53 27.8	
	comp=Z,131nm,18.9s,baz=304,slow=35						
N59A	**State Game Lan**	**34.51**	**282**	P	**P**	**14 41 06.8**	**-1.1**
	baz=69						
KOWA	**Kowa**	**35.90**	**136**	LR	LR	14 54 54.1	
	comp=Z,173nm,19.0s,baz=10.0,slow=34						
SSPA	**Standing Stone**	**36.11**	**283**	P	**P**	**14 41 21.4**	**-0.2**
	baz=68						
SSPA	**Standing Stone**	**36.11**	**283**	*e*P	**P**	**14 41 22.8**	**+1.2**
	comp=Z,9.2nm,0.9s						
FINES	**FINESS Array B**	**36.58**	**41**	P	**P**	**14 41 24.0**	**-1.3**
	comp=Z,6.5nm,1.1s,baz=268,slow=7.0,SNR=3.0						
FINES				LR	LR	14 54 45.1	
	comp=Z,67nm,20.8s,baz=204,slow=34						
BUR08	**Bucovina Ar. S**	**37.38**	**64**	*e*P	**P**	**14 41 31.2**	**-1.2**
BUR04	**Bucovina Ar. S**	**37.39**	**64**	*e*P	**P**	**14 41 34.3**	**+1.7**
N54A	**Moraine State**	**37.48**	**284**	P	**P**	**14 41 33.2**	**-0.1**
	baz=68						
ARCES	**ARCESS Array B**	**37.65**	**28**	LR	LR	14 54 53.4	
	comp=Z,69nm,20.8s,baz=286,slow=33						
MLR	**Muntele Rosu**	**38.46**	**67**	LR	LR	14 57 17.7	
	comp=Z,12nm,19.4s,baz=256,slow=36						
SPITS	**Spitsbergen Ar**	**38.97**	**13**	LR	LR	14 53 37.5	
	comp=Z,44nm,21.0s,baz=320,slow=30						
AKASG	**Malin Array Be**	**39.23**	**59**	P	**P**	**14 41 46.4**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=280,slow=8.9,SNR=3.3						
BLA	**Blacksburg**	**39.29**	**279**	P	**P**	**14 41 48.3**	**-0.3**
	baz=64						
TOA0	**Torodi Ar. Sit**	**40.06**	**130**	*e*P	**P**	**14 41 55.7**	**+0.6**
TORD	**Torodi Ar. Bea**	**40.06**	**130**	P	**P**	**14 41 56.3**	**+1.3**
	comp=Z,2.6nm,0.8s,baz=323,slow=8.8,SNR=8.8						
TORD				LR	LR	14 57 19.

Y52A	Lilburn baz=60	43.48 276	P	P	14 42 24.1 +1.2
J41A	Loganville baz=68	43.52 292	P	P	14 42 24.2 +1.1
M43A	Waltham Townsh baz=66	43.55 289	P	P	14 42 23.6 +0.2
G39A	Holcombe baz=69	43.58 295	P	P	14 42 23.5 -0.1
T48A	Bowling Green baz=63	43.61 282	P	P	14 42 24.5 +0.5
X51A	Calhoun baz=60	43.70 278	P	P	14 42 25.7 +1.0
W50A	Signal Mountai baz=61	43.73 279	P	P	14 42 26.2 +1.2
W50A	Signal Mountai comp=Z,7.1nm,0.8s	43.73 279	eP	P	14 42 26.2 +1.2
D37A	Cotton baz=70	43.75 298	P	P	14 42 25.5 +0.5
F38A	Pierce - Schro baz=69	43.81 296	P	P	14 42 25.3 -0.1
C36A	Pine Crest Far baz=70	43.81 299	P	P	14 42 25.5 0.0
H39A	Augusta baz=68	43.88 294	P	P	14 42 26.1 +0.1
V49A	McMinnville baz=61	43.88 280	P	P	14 42 27.3 +1.1
U48A	Cassie Pea, Po baz=62	43.99 281	P	P	14 42 27.8 +0.8
K41A	Shullsburg baz=67	44.00 291	P	P	14 42 28.0 +0.9
Q45A	Warren Harvey, baz=64	44.06 285	P	P	14 42 28.2 +0.7
Z52A	Williamson baz=59	44.07 276	P	P	14 42 29.1 +1.4
T47A	Sharon Grove comp=Z,8.0nm,0.9s	44.17 282	eP	P	14 42 29.1 +0.7
S46A	Don Dixon Farm baz=63	44.28 283	P	P	14 42 30.3 +1.0
X50B	Fort Payne baz=60	44.33 278	P	P	14 42 30.3 +0.5
I39A	Houston baz=67	44.34 293	P	P	14 42 30.1 +0.3
R45A	Skylar, Fairfi baz=63	44.41 284	P	P	14 42 31.3 +0.9
253A	Americus baz=58	44.44 274	P	P	14 42 32.1 +1.5
W49A	Belvidere baz=61	44.45 279	P	P	14 42 31.0 +0.3
E36A	McGregor baz=69	44.51 297	P	P	14 42 31.6 +0.6
K40A	Colesburg baz=66	44.53 291	P	P	14 42 32.2 +0.9
H38A	Maiden Rock baz=68	44.54 294	P	P	14 42 32.2 +0.9
V48A	Smith Brothers baz=61	44.55 280	P	P	14 42 32.3 +0.8
U47A	Clarksville baz=62	44.55 282	P	P	14 42 32.9 +1.4
Q44A	Meyer Farm, Va baz=64	44.66 286	P	P	14 42 33.3 +1.0
J39A	Decorah baz=67	44.67 292	P	P	14 42 33.1 +0.8
Y50A	Piedmont baz=60	44.67 278	P	P	14 42 33.8 +1.3
SPMN	Marine on St. baz=68	44.68 295	P	P	14 42 33.2 +0.7
SPMN	Marine on St. comp=Z,9.7nm,0.9s	44.68 295	eP	P	14 42 33.0 +0.6
T46A	Princeton baz=62	44.70 283	P	P	14 42 34.0 +1.3
B34A	Aery, Baudette baz=70	44.72 300	P	P	14 42 32.8 +0.1
X49A	Woodville baz=60	44.79 279	P	P	14 42 34.0 +0.6
I38A	Scanlan Farm, baz=67	44.81 294	P	P	14 42 34.2 +0.8
D35A	Remer baz=69	44.82 298	P	P	14 42 33.6 +0.1
L40A	Anamosa baz=66	44.84 291	P	P	14 42 34.3 +0.5
S45A	Carrier Mills baz=63	44.90 284	P	P	14 42 34.8 +0.5
ULM	Lac du Bonnet comp=Z,181nm,20.6s,baz=70,slow=34	44.90 303	LR	LR	14 59 39.3
252A	Lumpkin baz=58	44.91 275	P	P	14 42 35.8 +1.4
F36A	Milaca baz=68	44.91 297	P	P	14 42 34.7 +0.4
F36A	Milaca comp=Z,6.4nm,1.1s	44.91 297	eP	P	14 42 34.7 +0.4
W48A	Pulaski baz=61	44.92 280	P	P	14 42 35.4 +0.9
V47A	Nunnelly baz=61,SNR=7.7	45.01 281	P	P	14 42 36.0 +0.8
K39A	Oelwein baz=66	45.04 292	P	P	14 42 35.5 +0.2
151A	Opelika baz=59	45.07 276	P	P	14 42 36.2 +0.5
WVT	Waverly baz=61	45.09 281	P	P	14 42 35.7 -0.1
Z50A	Ashland baz=59	45.12 277	P	P	14 42 37.2 +1.1
Y49A	Blount Mountai baz=60	45.17 278	P	P	14 42 37.7 +1.1
J38A	Wedel Dairy, R baz=66	45.19 293	P	P	14 42 37.4 +0.9
U46A	Springville baz=62	45.22 282	P	P	14 42 37.9 +1.1
X48A	Hartselle baz=60	45.34 279	P	P	14 42 38.5 +0.7
W47A	Westpoint baz=61	45.34 280	P	P	14 42 38.1 +0.3
251A	Midway baz=58	45.35 275	P	P	14 42 39.3 +1.4
L39A	Vinton baz=66	45.35 291	P	P	14 42 38.7 +0.9
S44A	Carbondale baz=62	45.37 284	P	P	14 42 39.0 +1.0
O41A	Passleys Farm, baz=64	45.43 288	P	P	14 42 38.7 +0.3
V46A	Holladay baz=61,SNR=6.2	45.45 281	P	P	14 42 39.4 +0.8
150A	Eclectic baz=59	45.53 276	P	P	14 42 40.2 +0.9
AGMN	Agassiz Nation baz=70	45.54 301	P	P	14 42 39.7 +0.5
R43A	Red Bud baz=63	45.58 285	P	P	14 42 40.1 +0.5
N40A	Mertquake, Sal baz=65	45.58 289	P	P	14 42 40.1 +0.4
Z49A	Columbiana baz=59	45.59 277	P	P	14 42 41.0 +1.2
K38A	Parkersburg baz=66	45.66 292	P	P	14 42 41.5 +1.3
Y48A	Jasper baz=60	45.69 278	P	P	14 42 41.9 +1.3
Q42A	Golden Eagle baz=63	45.71 286	P	P	14 42 41.9 +1.2
G35A	Watkins baz=67	45.78 296	P	P	14 42 42.2 +1.0
PLAL	Pickwick Lake comp=Z,6.6nm,0.7s	45.81 280	eP	P	14 42 42.4 +0.9
BRTR	Keskin Array B comp=Z,1.8nm,0.9s,baz=281,slow=6.3,SNR=7.8	45.87 72	P	P	14 42 43.5 +1.4
X47A	Russelville baz=60,SNR=5.3	45.88 280	P	P	14 42 43.2 +1.1
J37A	Redenius Farm, baz=66	45.91 293	P	P	14 42 43.1 +0.9
W46A	Michie baz=60	45.96 281	P	P	14 42 43.4 +0.7
L38A	Oak Wood Farm, baz=65	45.99 291	P	P	14 42 43.5 +0.7
S43A	Fulton Ridge, baz=62	46.00 284	P	P	14 42 43.6 +0.6
LRAL	Lakeview Retre baz=59	46.01 277	P	P	14 42 44.1 +1.0
250A	Grady baz=58	46.03 276	P	P	14 42 44.4 +1.1
FVM	French Village comp=Z,5.2nm,0.7s	46.06 285	eP	P	14 42 43.8 +0.4
149A	Jones baz=58	46.09 277	P	P	14 42 44.8 +1.1
O40A	La Belle baz=64	46.11 288	P	P	14 42 45.0 +1.2
R42A	Luebbering baz=63	46.18 286	P	P	14 42 45.2 +0.8
Q41A	Truxton baz=63	46.18 287	P	P	14 42 45.3 +0.9
Y47A	UCPARC, Winfie baz=60	46.19 279	P	P	14 42 45.0 +0.5
K37A	Belmond baz=66	46.19 293	P	P	14 42 45.3 +0.9
H35A	Sunnyside Ranc baz=67	46.21 295	P	P	14 42 45.2 +0.6
N39A	Derby Farms, D baz=64	46.21 290	P	P	14 42 44.9 +0.2
Z48A	Northport baz=59	46.24 278	P	P	14 42 45.9 +1.0
T43A	Greenville baz=62	46.38 284	P	P	14 42 46.5 +0.5
X46A	Booneville baz=60,SNR=7.3	46.39 280	P	P	14 42 47.1 +1.1
S42A	Caledonia baz=62	46.41 285	P	P	14 42 46.9 +0.7
J36A	Seneca 1, Swea baz=70	46.43 294	P	P	14 42 46.6 +0.3
P40A	Paris baz=63	46.49 288	P	P	14 42 47.4 +0.5
G34A	Benson baz=67	46.52 296	P	P	14 42 47.7 +0.7
L37A	Phoenix Point, baz=65	46.54 292	P	P	14 42 47.4 +0.3
R41A	Rosebud baz=62,SNR=6.1	46.58 286	P	P	14 42 48.2 +0.6
CCM	Cathedral Cave baz=62	46.60 286	P	P	14 42 48.1 +0.4
CCM	Cathedral Cave comp=Z,10nm,1.0s	46.60 286	eP	P	14 42 47.9 +0.2
B31A	Greenbush Farm baz=69	46.61 301	P	P	14 42 48.0 +0.4
PBMO	Poplar Bluff comp=Z,11nm,0.9s	46.62 284	eP	P	14 42 47.7 -0.2
249A	Camden baz=58	46.65 276	P	P	14 42 49.5 +1.3
Z47A	Carrollton baz=59,SNR=5.9	46.70 278	P	P	14 42 49.7 +1.2
Q40A	Laux Farm, Aux baz=63	46.75 287	P	P	14 42 49.6 +0.8
C31A	Landman Farms, baz=68	46.90 300	P	P	14 42 50.0 +0.1
Y46A	Houston baz=59,SNR=5.4	46.92 279	P	P	14 42 51.0 +0.7
T42A	Van Buren baz=61	46.97 284	P	P	14 42 50.5 -0.1
T42A	Van Buren comp=Z,5.2nm,0.8s	46.97 284	eP	P	14 42 50.7 +0.1
P39B	Salisbury baz=63	47.00 288	P	P	14 42 51.1 +0.3
OXF	Oxford baz=60	47.00 280	P	P	14 42 51.2 +0.4
OXF	Oxford comp=Z,20nm,0.9s	47.00 280	eP	P	14 42 51.4 +0.5
X45A	UM Field Stati baz=60	47.03 280	P	P	14 42 51.9 +0.8
L36A	Harm Buss Farm baz=65	47.16 292	P	P	14 42 52.7 +0.7
S41A	Jillco Farms, baz=62,SNR=8.2	47.17 285	P	P	14 42 52.6 +0.4
R40A	Maddies Statio baz=62,SNR=5.6	47.21 286	P	P	14 42 52.9 +0.4
R40A	Maddies Statio comp=Z,6.6nm,0.8s	47.21 286	eP	P	14 42 51.8 -0.7
Z46A	Louisville baz=59	47.33 279	P	P	14 42 54.3 +0.9
U42A	Revenden baz=61,SNR=6.3	47.40 284	P	P	14 42 54.1 +0.2
Y45A	Yeager Farm, C baz=59	47.42 280	P	P	14 42 54.5 +0.4
T41A	Mountain View baz=61,SNR=6.6	47.44 285	P	P	14 42 54.6 +0.4
E31A	Nome baz=67	47.46 299	P	P	14 42 54.6 +0.2
P38A	Dawn baz=63	47.47 289	P	P	14 42 54.7 +0.2
S40A	Lebanon baz=62,SNR=6.1	47.69 286	P	P	14 42 56.8 +0.6
R39A	Chumby, Stover baz=62,SNR=5.6	47.73 287	P	P	14 42 56.9 +0.4
V42A	Cord baz=60	47.77 283	P	P	14 42 57.2 +0.3
ECSD	EROS Data Cent baz=65,SNR=5.5	47.77 295	P	P	14 42 57.1 +0.3
ECSD	EROS Data Cent comp=Z,7.1nm,1.2s	47.77 295	eP	P	14 42 57.3 +0.5
Z45A	Winona baz=59	47.78 279	P	P	14 42 57.0 +0.1
Q38A	Cooks Store, C baz=62	47.84 288	P	P	14 42 57.6 +0.3
U41A	Viola baz=61	47.88 284	P	P	14 42 57.9 +0.2
T40A	Mansfield baz=61	47.92 285	P	P	14 42 58.1 0.0
347A	Saraland baz=57	47.98 276	P	P	14 42 59.4 +0.9
H32A	Carlson Farm, baz=66	47.99 296	P	P	14 42 59.3 +0.8
W42A	Bald Knob baz=60	48.13 282	P	P	14 43 00.3 +0.7
S39A	Bolivar baz=61,SNR=8.9	48.22 286	P	P	14 43 00.7 +0.4
S39A	Bolivar comp=Z,8.8nm,0.8s	48.22 286	eP	P	14 43 00.5 +0.1
V41A	Mountainview baz=60	48.32 283	P	P	14 43 01.3 +0.2
145A	Houston Renfro baz=58	48.35 278	P	P	14 43 02.3 +1.0
447A	Lucedale baz=57	48.39 276	P	P	14 43 02.2 +0.6
R38A	Fenwick Farm, baz=62	48.40 287	P	P	14 43 02.3 +0.6
Q37A	Longview Farm, baz=62	48.45 288	P	P	14 43 02.8 +0.7
U40A	Yellville baz=60,SNR=12	48.54 284	P	P	14 43 03.1 +0.3
T39A	Clever baz=61	48.58 285	P	P	14 43 03.8 +0.7
245A	Little AP, Sta baz=58	48.62 278	P	P	14 43 04.4 +1.0
S38A	Stockton baz=61	48.66 286	P	P	14 43 03.6 -0.1
W41B	Gary Mavity, V baz=60	48.69 283	P	P	14 43 04.4 +0.4
W41B	Gary Mavity, V comp=Z,9.2nm,1.0s	48.69 283	eP	P	14 43 03.7 -0.2
V40A	Witts Springs baz=60,SNR=12	48.79 284	P	P	14 43 05.0 +0.3
V40A	Witts Springs comp=Z,17nm,0.8s	48.79 284	eP	P	14 43 04.7 -0.1
U39A	Green Forest baz=60	48.96 285	P	P	14 43 06.6 +0.6
VBMS	Vicksburg baz=58	48.97 278	P	P	14 43 06.9 +0.8
Y42A	Garnett, Star baz=59	49.04 281	P	P	14 43 06.9 +0.3
T38A	Diamond baz=61,SNR=7.4	49.22 286	P	P	14 43 08.0 0.0
W40A	Ferguson Farm, baz=60	49.26 283	P	P	14 43 08.7 +0.3
V39A	Pettigrew baz=60	49.35 284	P	P	14 43 09.2 +0.1
143A	Socs Landing, baz=58	49.35 279	P	P	14 43 09.6 +0.5
Y41A	Eaglette Beard baz=59	49.61 281	P	P	14 43 11.4 +0.5
W39A	Magazine baz=59,SNR=5.5	49.77 284	P	P	14 43 12.6 +0.4
W39A	Magazine comp=Z,14nm,1.2s	49.77 284	eP	P	14 43 12.3 +0.1
MIAR	Mount Ida baz=59,SNR=11	49.95 283	P	P	14 43 14.1 +0.5
MIAR	Mount Ida comp=Z,14nm,0.8s	49.95 283	eP	P	14 43 13.9 +0.3
Y40A	Okolona baz=59	50.01 282	P	P	14 43 14.6 +0.6
KIV	Kislovodsk comp=Z,10nm,0.9s	50.10 63	eP	P	14 43 15.5 +0.7
X39A	Fountain Ranch baz=59	50.35 283	P	P	14 43 17.4 +0.7
YKA	Yellowknife Ar comp=Z,1.2nm,0.7s,baz=64,slow=7.9,SNR=3.4	50.74 323	P	P	14 43 18.2 -0.9
YKA			LR	LR	15 01 40.0
	comp=Z,9.1nm,20.3s,baz=44,slow=32				
TUL1	Leonard baz=59	50.82 285	P	P	14 43 20.4 +0.3
TUL1	Leonard comp=Z,7.6nm,0.8s	50.82 285	eP	P	14 43 19.4 -0.8
341A	Kurthwood baz=57	51.35 279	P	P	14 43 25.1 +0.9
H10N2	ASCENSION HYDR baz=348	52.76 162	T	T	15 40 27.3
H10N3	ASCENSION HYDR baz=348	52.77 162	T	T	15 40 34.0
H10N1	ASCENSION HYDR baz=348	52.78 162	T	T	15 40 28.4
GNI	Garni comp=Z,22nm,18.2s,baz=357,slow=40	53.23 67	LR	LR	15 09 27.1
WMOK	Wichita Mounta baz=58,SNR=5.9	53.52 286	P	P	14 43 40.3 0.0
WMOK	Wichita Mounta comp=Z,6.4nm,1.2s	53.52 286	eP	P	14 43 40.0 -0.3
H10S1	ASCENSION HYDR baz=350	53.80 163	T	T	15 41 50.4
H10S3	ASCENSION HYDR baz=350	53.81 163	T	T	15 42 01.1
H10S2	ASCENSION HYDR baz=350	53.82 163	T	T	15 41 58.6
WHTX	Lake Whitney, baz=56	54.06 282	P	P	14 43 45.1 +0.9
WHTX	Lake Whitney, comp=Z,16nm,0.8s	54.06 282	eP	P	14 43 44.7 +0.5
EGMT	Eagleton baz=62	54.15 305	P	P	14 43 45.2 +0.5
K22A	Casper baz=60	54.72 298	P	P	14 43 49.4 +0.3
N23A	Red Feather La baz=59	55.22 296	P	P	14 43 53.1 +0.2
N23A	Red Feather La comp=Z,14nm,1.3s	55.22 296	eP	P	14 43 53.0 +0.1
RLMT	Red Lodge baz=61	55.23 302	P	P	14 43 53.1 +0.2
ABTX	Abilene, Hawle baz=56	55.26 284	P	P	14 43 52.9 0.0
ABTX	Abilene, Hawle comp=Z,6.6nm,0.8s	55.26 284	eP	P	14 43 52.6 -0.3
INK	Inuvik comp=Z,2.0nm,0.9s,baz=51,slow=12,SNR=7.2	55.34 334	P	P	14 43 50.8 -2.1
AMTX	Amarillo baz=57	55.46 287	P	P	14 43 55.4 +0.9
AMTX	Amarillo comp=Z,11nm,0.9s	55.46 287	eP	P	14 43 55.1 +0.6
ISCO	Idaho Springs baz=59	55.55 295	P	P	14 43 56.2 +0.8
Q24A	Divide baz=59	55.68 293	P	P	14 43 56.6 +0.3
WALA	Waterton Lakes comp=Z,7.2nm,1.1s	56.09 308	eP	P	14 43 58.6 -0.2
T25A	Trinidad baz=58	56.13 291	P	P	14 44 00.5 +1.0
AKTO	Aktyubinsk comp=Z,2.0nm,0.8s,baz=311,slow=6.9,SNR=8.2	56.39 50	P	P	14 44 00.3 -0.5
AKTO			LR	LR	15 08 28.1
	comp=Z,56nm,18.1s,baz=273,slow=36				
BOZ	Bozeman (W) baz=60	56.45 303	P	P	14 44 01.7 +0.2
BOZ	Bozeman (W) comp=Z,3.5nm,1.1s	56.45 303	eP	P	14 44 01.4 0.0
SDCO	Great Sand Dun baz=58	56.55 292	P	P	14 44 02.5 0.0
JCT	Junction City baz=55	56.56 282	P	P	14 44 02.7 +0.3
JCT	Junction City comp=Z,5.7nm,0.7s	56.56 282	eP	P	14 44 01.9 -0.5
BW06	Boulder Array baz=59	56.59 299	P	P	14 44 02.4 -0.3
PDAR	Pinedale Array comp=Z,0.4nm,0.5s,baz=60,slow=9.4,SNR=7.2	56.59 299	P	P	14 44 01.8 -0.9
PDAR			LR	LR	15 07 27.8
	comp=Z,101nm,18.6s,baz=66,slow=35				
PDAR	Pinedale Array	56.59 299	eP	P	14 44 01.6 -1.1
MSTX	Muleshoe baz=56	56.71 287	P	P	14 44 03.8 +0.4
MSTX	Muleshoe comp=Z,20nm,0.9s	56.71 287	eP	P	14 44 03.9 +0.4
IMW	Indian Meadow comp=Z,2.6nm,0.6s	56.88 301	eP	P	14 44 05.0 +0.3
FXWY	Fox Creek comp=Z,1.4nm,0.8s	57.07 301	eP	P	14 44 06.0 0.0
REDW	Red Top Meadow comp=Z,11nm,1.4s	57.10 301	eP	P	14 44 06.2 -0.1
S22A	4UR Ranch, Cre baz=57	57.44 293	P	P	14 44 09.8 +1.0
NRIK	Noril'sk comp=Z,1.3nm,0.2s,baz=337,slow=5.2,SNR=2.6	58.18 22	P	P	14 44 11.6 -1.5
NEW	Newport comp=Z,3.8nm,0.9s,baz=45,slow=8.6,SNR=3.7	58.32 308	P	P	14 44 14.0 -0.5
HWUT	Hardware Ranch comp=Z,4.7nm,1.1s	58.47 299	eP	P	14 44 15.8 -0.1
PV09	Paradox Valley	58.56 295	eP	P	14 44 17.3 +0.6
JTS	JuntasAbangare comp=Z,49nm,21.5s,baz=114,slow=31	58.63 253	LR	LR	15 04 55.0
ANMO	Albuquerque comp=Z,1.6nm,0.9s,baz=68,slow=8.0,SNR=4.9	58.71 290	P	P	14 44 18.0 +0.4
ANMO			LR	LR	15 09 17.8
	comp=Z,144nm,18.7s,baz=57,slow=36				
ANMO	Albuquerque baz=56	58.71 290	P	P	14 44 18.4 +0.8
TASL	Snake Pit, Alb baz=56	58.71 290	P	P	14 44 18.4 +0.8
TASM	ASL Pad, Albuq baz=56	58.72 290	P	P	14 44 18.7 +1.0
HLID	Hailey baz=57	59.20 302	P	P	14 44 21.8 +0.9
HLID	Hailey comp=Z,5.1nm,1.5s	59.20 302	eP	P	14 44 21.5 +0.6
TMUT	Trail Mountain comp=Z,6.1nm,0.9s	59.49 297	eP	P	14 44 22.9 -0.1
MNTX	Cornudas Mount baz=55	59.80 286	P	P	14 44 25.7 +0.7
TX31	Lajitas Ar. Si	59.97 283	eP	P	14 44 26.6 +0.4
TXAR	Lajitas Array comp=Z,4.5nm,0.8s,baz=70,slow=6.8,SNR=52	59.97 283	P	P	14 44 26.9 +0.7
TXAR			LR	LR	15 09 40.0
	comp=Z,78nm,20.5s,baz=0.0,slow=35				
DUG	Dugway, Tooele baz=56	60.03 298	P	P	14 44 27.0 +0.4
DUG	Dugway, Tooele comp=Z,5.3nm,0.9s	60.03 298	eP	P	14 44 26.7 +0.1
121A	Cookes Peak, D baz=54	60.99 289	P	P	14 44 34.0 +0.7
BVAR	Borovoye Array comp=Z,0.9nm,0.7s,baz=296,slow=7.3,SNR=6.3	61.52 43	P	P	14 44 35.7 -0.6
SZCU	Shurtz Canyon comp=Z,3.8nm,1.1s	61.66 296	eP	P	14 44 38.8 +0.9
WUAZ	Wupatki baz=55	61.71 293	P	P	14 44 38.9 +0.8
WUAZ	Wupatki comp=Z,5.2nm,1.3s	61.71 293	eP	P	14 44 39.1 +1.0
ILAR	Eielson Array comp=Z,0.4nm,0.7s,baz=48,slow=5.6,SNR=5.8	61.73 335	P	P	14 44 36.4 -1.2
ILAR			LR	LR	15 07 32.3
	comp=Z,49nm,21.3s,baz=79,slow=32				
J08A	Circle Bar Ran comp=Z,4.4nm,0.8s	61.78 304	eP	P	14 44 39.1 +0.7
CCUT	Cedar City comp=Z,3.4nm,0.9s	61.87 296	eP	P	14 44 39.3 0.0
R11A	Troy Canyon, C baz=54	62.84 298	P	P	14 44 45.4 -0.3
TUC	Tucson baz=54	63.18 290	P	P	14 44 48.7 +0.8
GEYT	Alibeck comp=Z,47nm,18.1s,baz=180,slow=40	63.19 62	LR	LR	15 15 55.8
TIXI	Tiksi comp=Z,1.3nm,0.8s,baz=28,slow=6.1,SNR=5.5	64.02 8	P	P	14 44 52.6 -0.1
TIXI	Tiksi comp=Z,4.2nm,1.1s	64.02 8	eP	P	14 44 52.5 -0.1
KVN	Kaiserville comp=Z,4.5nm,0.9s	64.03 300	eP	P	14 44 53.9 +0.3
NVAR	Mina Array Bea comp=Z,88nm,19.7s,baz=256,slow=36	64.53 300	LR	LR	15 12 22.9
FURC	Furnace Creek, baz=53	64.77 297	P	P	14 44 58.7 +0.6
GRAC	Grapevine Rang baz=53	64.78 298	P	P	14 44 58.7 +0.3
IRM	Iron Mountain baz=53	65.02 294	P	P	14 45 01.0 +1.1
YBH	Yreka Blue Hor comp=Z,80nm,20.2s,baz=37,slow=35	65.27 305	LR	LR	15 11 51.2
MLKM	Mammoth Lakes	65.41 299	eP	P	14 45 02.0 -0.8
MPMC	Manual Prospec baz=53	65.42 297	P	P	14 45 03.8 +1.1
GSC	Goldstone, Bar baz=53	65.43 296	P	P	14 45 03.4 +0.8
BC3	Big Chuckawall baz=53	65.53 294	P	P	14 45 03.8 +0.5

MONP2	**Monument Peak**	66.63	294	P		**P**	14 45 11.2	+0.7
	baz=52							
KURK	**Kurchatov**	66.96	41	*e*P		**P**	14 45 11.2	-0.9
	comp=Z,4.1nm,0.9s							
KURBB	**Kurchatov Arra**	66.97	41	P		**P**	14 45 11.4	-0.8
	comp=Z,1.9nm,0.6s,baz=317,slow=6.8,SNR=12							
ZALV	**Zalesovo Beam**	67.58	36	P		**P**	14 45 15.5	-0.4
	comp=Z,0.3nm,0.3s,baz=316,slow=8.1,SNR=3.6							
ZALV				LR	LR		15 15 39.6	
	comp=Z,40nm,18.1s,baz=240,slow=37							
LPIG	**La Paz**	67.85	283	LR	LR		15 15 21.8	
	comp=Z,46nm,18.2s,baz=30,slow=36							
LPAZ	**La Paz**	69.58	220	P		**P**	14 45 31.1	+1.5
	comp=Z,3.2nm,0.9s,baz=23,slow=5.7,SNR=7.9							
LPAZ	**La Paz**	69.58	220	*e*P		**P**	14 45 29.8	+0.3
	comp=Z,7.0nm,1.1s							
MKAR	**Makanchi Array**	71.40	43	P		**P**	14 45 39.7	0.0
	comp=Z,0.5nm,0.4s,baz=333,slow=4.8,SNR=6.5							
MKAR				LR	LR		15 16 34.8	
	comp=Z,32nm,18.3s,baz=231,slow=36							
MK01	**Makanchi Array**	71.42	43	*e*P		**P**	14 45 39.1	-0.7
MNMC	**Minye Minye**	72.73	220	*e*P		**P**	14 45 48.0	-0.2
	comp=Z,27nm,1.7s							
KSH	**Kashi**	73.05	51	P		**P**	14 45 53.3	+3.5
KSH				sP	sP		14 45 58.4	+2.3
KSH				pmax	pmax			
	comp=Z,110nm,5.6s							
CPUP	**Villa Florida**	74.31	206	P		**P**	14 45 57.7	+0.8
	comp=Z,2.9nm,0.9s,baz=28,slow=6.9,SNR=4.6							
WMQ	**Urumqi**	76.19	42	P		**P**	14 46 09.8	+1.9
WMQ				pP	sP		14 46 14.4	+0.2
WMQ				pmax	pmax			
	comp=Z,13nm,0.7s							
WMQ				pmax	pmax			
	comp=Z,210nm,4.3s							
GO02	**Mina Guanaco**	77.95	217	*e*P		**P**	14 46 18.5	+0.4
	comp=Z,37nm,1.7s							
SONM	**Songino Array**	80.81	29	P		**P**	14 46 32.7	-0.8
	comp=Z,4.0nm,0.6s,baz=337,slow=6.9,SNR=1.9							
PETK	**Petropavlovsk-**	83.56	356	LR	LR		15 23 38.4	
	comp=Z,30nm,18.7s,baz=47,slow=36							
GTA	**Gaotai**	85.27	37	⇓P		**P**	14 46 58.3	+1.7
GTA				pP	pP		14 47 01.4	+0.1
GTA				sP	sP		14 47 04.4	+1.4
GTA				pmax	pmax			
	comp=Z,5.0nm,0.8s							
BOSA	**Boshof**	87.25	135	LR	LR		15 24 39.1	
	comp=Z,82nm,19.4s,baz=360,slow=35							
HHC	**Hu-ho-hao-te**	88.72	29	*e*P		**P**	14 47 12.3	-1.0
LZH	**Lanzhou**	89.80	37	*e*P		**P**	14 47 16.8	-1.8
LZH				pP	PcP		14 47 20.1	+0.3
LZH				sP	pP		14 47 21.6	-1.6
LZH				*e*PP		**PP**	14 50 51.0	+0.9
LZH				pmax	pmax			
	comp=Z,16nm,1.4s							
LZH				pmax	pmax			
	comp=Z,74nm,9.2s							
LZH				LR	LR			
	comp=Z,310nm,17.0s							
LZH				LR	LR			
	comp=Z,300nm,17.3s							
LZH				LR	LR			
	comp=Z,350nm,19.2s							
CD2	**Chengdu**	94.12	39	P		**P**	14 47 36.1	-2.4
CD2				pmax	pmax			
	comp=Z,10.0nm,0.7s							
GYA	**Guiyang**	99.24	40	*e*P		**Pdif**	14 48 01.4	-0.4
GYA				pmax	pmax			
	comp=Z,10.0nm,1.0s							
VNDA	**Vanda**	145.64	184	PKPbc		**PKPab**	14 53 57.8	+0.6
	comp=Z,0.7nm,0.7s,baz=201,slow=2.1,SNR=6.6							
WRA	**Warramunga Arr**	152.56	36	PKPbc		**PKPbc**	14 54 15.5	-0.9
	comp=Z,1.0nm,0.9s,baz=343,slow=2.8,SNR=5.5							
ASAR	**Alice Springs**	155.59	41	PKPab		**PKPab**	14 54 38.5	-1.0
	comp=Z,0.5nm,0.8s,baz=343,slow=4.5,SNR=6.0							

*ISN **17** 14:57:07.9±0.6, 33°.80N×45°.76E, h15km, ML2.7*
TEH 17 14:57:10.2, 33°.81N×45°.65E, h9km, ML2.7, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDHR	**Dehrash**	1.08	34	*e*Pg	Pg	14 57 29.4	-1.6
IDHR				*e*Sg	Sg	14 57 44.2	-0.8
IDHR				*e*		14 57 53.2	
	comp=Z,1μm,0.2s						
IVIS	**Veis**	1.23	54	*e*Pg	Pb	14 57 32.5	-1.1
IVIS				*e*Sg	Sb	14 57 48.3	-1.3
IVIS				*e*		14 57 54.7	
	comp=Z,1μm,0.2s						
IKOM	**Komasi**	1.59	76	*e*Pn	Pn	14 57 38.5	-0.2
IKOM				*e*		14 58 04.6	
	comp=Z,99nm,0.2s						
IKFM	**Kafar-mosalman**	1.85	98	*e*Pn	Pn	14 57 42.4	+0.3
IKFM				*e*		14 58 12.0	
	comp=Z,99nm,0.2s						

*IDC **17** 15:15:27.2±2.4, 22°.83N×12°.12W, h0km, mb3.9/6, mb1 3.9/9, mb1mx3.6/57, mbtmp3.8/9, ML3.9/3, Error ellipse: s-maj=70.4km s-min=26.7km az=81.0*
ISC 17 15:15:30.9±2.2, 22°.9N±0°.2×11°.6W±0°.3, h10km, n12, σ1§13/13, mb4.0/6, Mauritania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOWA	**Kowa**	10.97	138	Pn		**Pn**	15 18 07.9	-0.1
	0.6nm,0.3s,baz=319,slow=12,SNR=9.7							
KOWA				Sn		**Sn**	15 20 10.9	0.0
	0.3nm,0.3s,baz=168,slow=21,SNR=7.3							
TORD	**Torodi Ar. Bea**	15.87	125	Pn		**Pn**	15 19 15.3	+0.8
	0.1nm,0.3s,baz=317,slow=12,SNR=4.4							
TORD				Sn		**Sn**	15 22 09.2	-1.4
	0.1nm,0.3s,baz=308,slow=22,SNR=3.9							
ESDC	**Sonseca Array**	17.95	19	P		**Pn**	15 19 40.0	-0.6
	0.1nm,0.3s,baz=222,slow=10,SNR=2.9							
I42PT	**GRACIOSA ISLAN**	21.36	323	*i*			17 23 20.0	
	baz=137,slow=325,SNR=0.8							
GERES	**GERESS Array B**	32.73	31	P		**P**	15 22 04.3	+0.4
	0.5nm,0.5s,baz=230,slow=9.9,SNR=7.9							
HFS	**Hagfors**	41.23	19	P		**P**	15 23 13.4	-2.3
	1.9nm,0.6s,baz=201,slow=7.7,SNR=8.3							
FINES	**FINESS Array B**	46.38	24	P		**P**	15 23 56.8	-0.3
	1.5nm,0.7s,baz=199,slow=12,SNR=6.5							
AKTO	**Aktyubinsk**	59.80	44	P		**P**	15 25 38.0	+1.8
	1.2nm,0.6s,baz=300,slow=8.1,SNR=3.0							
KURBB	**Kurchatov Arra**	72.72	42	P		**P**	15 26 59.5	+0.4
	0.6nm,0.4s,baz=282,slow=6.2,SNR=4.7							
MKAR	**Makanchi Array**	76.21	45	P		**P**	15 27 20.1	+0.5
	0.6nm,0.6s,baz=281,slow=6.8,SNR=5.7							
WRA	**Warramunga Arr**	148.15	91	PKPbc		**PKPbc**	15 35 17.1	-0.6
	0.5nm,0.7s,baz=287,slow=2.8,SNR=5.7							
ASAR	**Alice Springs**	148.30	98	PKPbc		**PKPbc**	15 35 17.7	-0.4
	0.5nm,0.6s,baz=279,slow=1.8,SNR=12							

*ISCJB **17** 15:40:42.1±0.4, 51°.54N±0°.02×16°.18E±0°.03, h0km, Error ellipse: s-maj=3.7km s-min=2.4km az=15.0*
*CSEM **17** 15:40:43.8±0.2, 51°.53N×16°.18E, h2km, ML3.5/12, Error ellipse: s-maj=4.4km s-min=2.8km az=16.0*
*IDC **17** 15:40:45.1±0.8, 51°.52N×16°.05E, h0km, mb1 3.3/4, mb1mx3.0/62, mbtmp3.3/4, ML2.8/4, Error ellipse: s-maj=17.4km s-min=7.4km az=120.0*
*PRU **17** 15:40:45.3, 51°.50N×16°.15E, h0km*
*VIE **17** 15:40:46.1±0.7, 51°.35N×16°.07E, h0km, mb2.6/5, ml3.1/5, Error ellipse: s-maj=5.6km s-min=4.8km az=46.0 71 km WNW of Wroclaw Suspected Mining induced.*
*BGR **17** 15:40:46.4±0.7, 51°.42N×16°.08E, h1km, ML3.1/14, Error ellipse: s-maj=8.9km s-min=4.4km az=23.0*
ISC 17 15:40:42.5±0.7, 51°.62N±0°.03×16°.18E±0°.02, h0km, n82, σ1§04/140, 9D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	0.78	174	*i* Pg	**Pg**	15 40 58.2	+0.8
KSP				*e*Sg	**Sg**	15 41 07.4	-0.1
KSP	**Ksiaz**	0.78	174	*e*Pg	**Pg**	15 40 58.2	+0.8
KSP	**Ksiaz**	0.78	174	Pg	**Pg**	15 40 58.2	+0.8
KSP				*e*Sg	**Sg**	15 41 07.4	-0.1
UPC	**Upice**	1.12	185	⇓*e*PG	**Pg**	15 41 04.4	+0.6
UPC				*e*SG	**Sg**	15 41 18.1	-0.2
	comp=Z,152nm,0.3s						
UPC	**Upice**	1.12	185	Pg	**Pg**	15 41 04.4	+0.6
UPC				Sg	**Sg**	15 41 18.1	-0.2
	152nm,0.3s						
DPC	**Dobruska-Polom**	1.27	176	*e*Pg	**Pg**	15 41 07.0	+0.2
DPC				*e*Sg	**Sg**	15 41 21.7	-1.6
DPC	**Dobruska-Polom**	1.27	176	⇓*e*PG	**Pg**	15 41 07.1	+0.2
DPC				*e*SG	**Sg**	15 41 22.5	-0.8
	comp=Z,44nm,0.3s						
DPC	**Dobruska-Polom**	1.27	176	Pg	**Pg**	15 41 07.0	+0.2
DPC				Sg	**Sg**	15 41 22.5	-0.8
	44nm,0.3s						
PVCC	**Panska Ves**	1.49	223	⇓*e*PG	**Pn**	15 41 11.2	+0.7
PVCC				*e*SG	**Sg**	15 41 30.2	0.0
	comp=Z,153nm,0.2s						
PVCC	**Panska Ves**	1.49	223	Pg	**Pn**	15 41 11.2	+0.7
PVCC				Sg	**Sg**	15 41 30.2	0.0
	153nm,0.2s						
BRG	**Berggiesshubel**	1.59	243	PN	**Pn**	15 41 12.1	+0.3
BRG				PG	**Pg**	15 41 13.7	+0.8
BRG				SG	**Sb**	15 41 34.0	+0.7
	117nm,0.4s						
BRG	**Berggiesshubel**	1.59	243	*e*Pn	**Pn**	15 41 11.8	0.0
BRG				*e*Sg	**Sn**	15 41 33.6	+0.5
BRG	**Berggiesshubel**	1.59	243	Pn	**Pn**	15 41 11.8	0.0
BRG				Sg	**Sn**	15 41 33.6	+0.5
KRLC	**Kraliky**	1.59	166	⇓*e*PG	**Pn**	15 41 12.3	+0.4
KRLC				*e*SG	**Sn**	15 41 32.8	-0.4
	comp=Z,17nm,0.3s						
KRLC	**Kraliky**	1.59	166	Pg	**Pn**	15 41 12.3	+0.4
KRLC				Sg	**Sn**	15 41 32.8	-0.4
	17nm,0.3s						
PRA	**Prague**	1.90	216	⇓*e*PN	**Pn**	15 41 16.8	+0.7
PRA				*e*SG	**Sb**	15 41 42.3	0.0
	comp=Z,42nm,0.6s						
PRA	**Prague**	1.90	216	Pn	**Pn**	15 41 16.8	+0.7
PRA				Sg	**Sb**	15 41 42.3	0.0
	42nm,0.6s						
FBE	**Freiberg**	1.90	250	*e*Sg	**Sg**	15 41 43.9	+0.3
FBE	**Freiberg**	1.90	250	Sg	**Sg**	15 41 43.9	+0.3
GOPC	**GO Pecny, Ondr**	1.92	208	⇓*e*PN	**Pn**	15 41 16.7	+0.3
GOPC				*e*PG	**Pb**	15 41 18.7	+0.4
GOPC				*e*SG	**Sb**	15 41 43.2	+0.3
	comp=Z,29nm,0.2s						
GOPC	**GO Pecny, Ondr**	1.92	208	Pn	**Pn**	15 41 16.7	+0.3
RAC	**Raciborz**	2.00	139	*e*Pg	**Pg**	15 41 20.7	-0.1
RAC				*e*Sg	**Sg**	15 41 47.5	+0.8
CLL	**Collm**	2.01	262	*e*Pn	**Pn**	15 41 18.1	+0.5
CLL	**Collm**	2.01	262	*e*Pn	**Pn**	15 41 18.0	+0.5
CLL				*e*Pg	**Pg**	15 41 21.0	+0.1
CLL				*i*		15 41 25.3	
CLL				*i* Sg	**Sg**	15 41 48.0	+1.1
	comp=Z,40nm,0.6s						
CLL	**Collm**	2.01	262	Pn	**Pn**	15 41 18.1	+0.5
MORC	**Moravsky Berou**	2.04	154	*e*Pn	**Pn**	15 41 18.4	+0.3
MORC	**Moravsky Berou**	2.04	154	Pn	**Pn**	15 41 18.4	+0.3
MORC				*e*Sg	**Sb**	15 41 46.8	+0.5
MORC	**Moravsky Berou**	2.04	154	*e*PN	**Pn**	15 41 18.4	+0.3
MORC				*e*SG	**Sb**	15 41 46.8	+0.5
OKC	**Ostrava-Krasne**	2.18	144	⇓*e*PN	**Pn**	15 41 19.9	0.0
OKC				*e*PG	**Pg**	15 41 24.4	+0.2
OKC				*e*SG	**Sb**	15 41 51.1	+0.8
	comp=Z,42nm,0.4s						
OKC	**Ostrava-Krasne**	2.18	144	Pn	**Pn**	15 41 19.9	0.0
VRAC	**Vranov**	2.33	173	*e*Pn	**Pn**	15 41 22.6	+0.6
VRAC				*e*Sg	**Sb**	15 41 55.1	+0.5
VRAC	**Vranov**	2.33	173	*e*PN	**Pn**	15 41 22.6	+0.6
VRAC				*e*SG	**Sb**	15 41 55.1	+0.5
KRUC	**Moravsky**	2.56	177	*e*PN	**Pn**	15 41 26.2	+1.0
KRUC				*e*PG	**Pb**	15 41 30.1	+0.8
KRUC				*e*SG	**Sb**	15 42 01.9	+0.6
TANN	**Tannenbergstha**	2.64	244	*e*Pn	**Pn**	15 41 27.3	+1.0
TANN				*e*Sg	**Sg**	15 42 07.1	0.0
TANN	**Tannenbergstha**	2.64	244	Pn	**Pn**	15 41 27.3	+1.0
TANN				Sg	**Sg**	15 42 07.1	0.0
OJC	**Ojcow**	2.69	120	*e*Pn	**Pn**	15 41 26.3	-0.6
OJC				*e*Pg	**Pg**	15 41 34.5	+0.6
OJC				*e*Sg	**Sg**	15 42 10.0	+1.3
OJC	**Ojcow**	2.69	120	*e*Pn	**Pn**	15 41 26.3	-0.6
WERD	**Werda**	2.71	246	*e*Pn	**Pn**	15 41 28.1	+0.8
WERD	**Werda**	2.71	246	Pn	**Pn**	15 41 28.1	+0.8
NKC	**Novy Kostel**	2.74	241	⇓*e*PN	**Pn**	15 41 28.7	+1.1
NKC				*e*PG	**Pg**	15 41 36.2	+1.3
NKC				*e*SG	**Sg**	15 42 10.6	+0.3
	comp=Z,74nm,0.6s						
NKC	**Novy Kostel**	2.74	241	Pn	**Pn**	15 41 28.7	+1.1
JAVC	**Velka Javorina**	2.92	160	*e*PN	**Pn**	15 41 31.8	+1.6
KHC	**Kasperske Hory**	2.99	215	⇓*e*PN	**Pn**	15 41 31.9	+0.7
KHC				*e*PG	**Pb**	15 41 38.3	+1.7
KHC				*e*SN	**Sn**	15 42 06.5	-1.3
KHC				*e*SG	**Sb**	15 42 15.6	+1.8
	comp=Z,26nm,0.5s						
KHC	**Kasperske Hory**	2.99	215	Pn	**Pn**	15 41 31.9	+0.7
MOX	**Moxa**	3.03	253	*e*Pn	**Pn**	15 41 32.4	+0.7
MOX	**Moxa**	3.03	253	Pn	**Pn**	15 41 32.4	+0.7
MANZ	**Manzenberg**	3.05	239	*e*Pn	**Pn**	15 41 33.1	+1.1
MANZ	**Manzenberg**	3.05	239	Pn	**Pn**	15 41 33.1	+1.1
ROTZ	**Rotzenmuhle**	3.13	235	*e*Pn	**Pn**	15 41 34.1	+1.1
ROTZ	**Rotzenmuhle**	3.13	235	Pn	**Pn**	15 41 34.1	+1.1
GEC2	**GERESS Array S**	3.20	211	*e*Pn	**Pn**	15 41 35.5	+1.5
GEC2	**GERESS Array S**	3.20	211	Pn	**Pn**	15 41 35.5	+1.5
GERES	**GERESS Array B**	3.20	211	Pn	**Pn**	15 41 35.5	+1.5
	comp=Z,1.5nm,0.3s,baz=30,slow=12,SNR=39						
GERES				Pg	**Pg**	15 41 40.8	+0.6
	comp=Z,3.4nm,0.3s,baz=33,slow=17,SNR=25						
GERES				Sn	**Sn**	15 42 11.8	-1.1
	comp=Z,2.5nm,0.3s,baz=49,slow=27,SNR=7.4						
GERES				Lg	Lg	15 42 22.5	
	comp=Z,5.9nm,0.3s,baz=30,slow=28,SNR=8.9						
SMOL	**Smolenice**	3.21	165	*e*PN	Pn	15 41 28.9	-5.2
SMOL				*e*PG	**Pg**	15 41 45.8	+1.8
SMOL				*e*SG	**Sb**	15 42 20.2	+0.2
LANS	**Liptovska Anna**	3.25	138	*e*PG	**Pg**	15 41 44.8	+0.1
LANS				*e*SG	**Sb**	15 42 23.5	+2.4
LANS	**Liptovska Anna**	3.25	138	*e*Pg	**Pg**	15 41 44.8	+0.1
LANS				*e*Sg	**Sb**	15 42 23.5	+2.4
WET	**Wettzell**	3.25	222	*e*Pn	**Pn**	15 41 35.3	+0.5
WET	**Wettzell**	3.25	222	Pn	**Pn**	15 41 35.3	+0.5
MODS	**Modra-Piesok**	3.33	167	*e*PG	**Pg**	15 41 44.9	-1.3
MODS				*e*SG	**Sb**	15 42 25.3	+2.0
MODS				*e*LG	Lg	15 42 33.7	
MODS	**Modra-Piesok**	3.33	167	*e*Pg	**Pg**	15 41 44.9	-1.3
MODS				*e*Sg	**Sb**	15 42 25.3	+2.0
NIE	**Niedzica**	3.43	128	*e*P	**Pg**	15 41 48.3	+0.1
NIE				*e*S	**Sg**	15 42 33.4	+0.7
VYHS	**Vyhne**	3.57	150	*e*PN	**Pn**	15 41 39.4	+0.4
VYHS				*e*PG	**Pg**	15 41 50.7	-0.1
VYHS				*e*LG	Lg	15 42 51.4	
VYHS	**Vyhne**	3.57	150	*e*Pn	**Pn**	15 41 39.4	+0.4
BSD	**Bornholm Skovb**	3.58	348	*i* P	**Pn**	15 41 40.2	+1.0
BSD				*e*S	**Sn**	15 42 21.5	-0.7
BSD	**Bornholm Skovb**	3.58	348	*i* P	**Pn**	15 41 40.2	+1.0
BSD				*e*S	**Sn**	15 42 21.5	-0.7
GRA1	**Grafenberg Arr**	3.69	240	Pn	**Pn**	15 41 41.9	+1.1
GRF	**Grafenberg Arr**	3.69	240	*e*Pn	**Pn**	15 41 41.9	+1.1
CONA	**Conrad Observa**	3.70	183	*e*Pn	**Pn**	15 41 41.8	+0.9
	comp=Z,1.2nm,0.2s						
CONA				*e*Pg	**Pb**	15 41 50.8	+2.1
	comp=Z,2.5nm,0.3s						
CONA				Sg	**Sg**	15 42 39.0	-2.3
	comp=Z,16nm,0.4s						
CONA	**Conrad Observa**	3.70	183	Pn	**Pn**	15 41 41.8	+0.9
	comp=Z,1.2nm,0.2s						
CONA	**Conrad Observa**	3.70	183	Pg	**Pb**	15 41 50.8	+2.1
	comp=Z,2.5nm,0.3s						
CONA				Sg	**Sg**	15 42 39.0	-2.3
	comp=Z,16nm,0.4s						
MOA	**Molln**	3.97	199	*e*Pn	**Pn**	15 41 45.5	+0.9
	comp=Z,2.5nm,0.3s						
MOA				Pg	**Pg**	15 41 57.5	-1.0
	comp=Z,2.6nm,0.2s						
MOA				Sg	**Sg**	15 42 48.6	-1.4
	comp=Z,14nm,0.5s						
MOA	**Molln**	3.97	199	Pn	**Pn**	15 41 45.5	+0.9
	comp=Z,2.5nm,0.3s						
KECS	**Kecovo**	4.19	137	*e*PG	**Pg**	15 42 02.9	+0.2
KECS	**Kecovo**	4.19	137	*e*Pg	**Pg**	15 42 02.9	+0.2
CRVS	**Cervenica-Dubn**	4.35	127	*e*PG	**Pg**	15 42 06.8	+1.1
CRVS				*e*LG	Lg	15 43 13.6	
CRVS	**Cervenica-Dubn**	4.35	127	*e*Pg	**Pg**	15 42 06.8	+1.1
ARSA	**Arzberg**	4.39	186	*e*Pn	**Pn**	15 41 51.0	+0.6
	comp=Z,1.1nm,0.3s						
ARSA				Pg	**Pg**	15 42 05.1	-1.4
	comp=Z,2.1nm,0.5s						
ARSA				Sg	**Sg**	15 43 02.6	-0.9
	comp=Z,11nm,0.6s						
ARSA	**Arzberg**	4.39	186	Pn	**Pn**	15 41 51.0	+0.6
	comp=Z,1.1nm,0.3s						
AKASG	**Malin Array Be**	8.26	91	Pn	**Pn**	15 42 43.1	-0.2
	comp=Z,1.1nm,0.3s,baz=280,slow=12,SNR=5.0						
HFS	**Hagfors**	8.65	352	Pn	**Pn**	15 42 49.5	+0.8
	comp=Z,0.1nm,0.3s,baz=163,slow=17,SNR=1.7						
FINES	**FINESS Array B**	11.25	25	Pn	**Pn**	15 43 24.0	-0.3
	comp=Z,0.1nm,0.3s,baz=214,slow=12,SNR=8.9						
FINES				Sn	**Sn**	15 45 25.9	-4.7
	comp=Z,0.1nm,0.3s,baz=209,slow=22,SNR=1.2						
EKA	**Eskdalemuir Ar**	12.10	295	Pn	**Pn**	15 43 33.5	-2.4
	baz=100,slow=14,SNR=1.8						

*ATA **17** 15:42:44.9±3.2, 38°.65N×39°.90E, h15km±79km, ML2.8, MW2.7*
*DDA **17** 15:42:46.8, 38°.77N×40°.02E, h11km, Ml2.5*
*ISCJB **17** 15:42:47.4±0.5, 38°.73N±0°.03×39°.99E±0°.03, h2km±5km, Error ellipse: s-maj=4.9km s-min=3.4km az=23.8*
*CSEM **17** 15:42:47.5±0.2, 38°.78N×40°.01E, h10km, ML2.3, Error ellipse: s-maj=7.3km s-min=4.2km az=23.0*
*ISK **17** 15:42:47.4, 38°.79N×40°.02E, h14km, ML2.3/8*
ISC 17 15:42:47.3±1.0, 38°.78N±0°.03×40°.02E±0°.02, h10km±9km, n32, σ0§72/50, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HANI	**Diyarbakir_Han**	0.47	140	*i* P	**Pg**	15 42 56.0	-0.5
HANI	**Diyarbakir_Han**	0.47	140	P	**Pg**	15 42 56.0	-0.5
TNCL	**Tunceli-Merkez**	0.50	312	*e*P	**Pg**	15 42 56.0	-1.1
TNCL				*e*S	**Sg**	15 43 04.3	+0.5
TNCL				IAML		15 43 05.5	
	comp=Z,95nm,0.2s						
TNCL	**Tunceli-Merkez**	0.50	312	*i* P	**Pg**	15 42 56.4	-0.7
TNCL				*i* S	**Sg**	15 43 04.4	+0.7
TNCL	**Tunceli-Merkez**	0.50	312	P	**Pg**	15 42 56.4	-0.7
TNCL				S	**Sg**	15 43 04.4	+0.7
PTK	**Pertek**	0.50	283	PG	**Pg**	15 42 57.6	+0.5
PTK				SG	**Sb**	15 43 05.1	-0.7
PTK	**Pertek**	0.50	283	*e*Pg	**Pg**	15 42 57.6	+0.5
PTK				*e*Sg	**Sb**	15 43 05.1	-0.7
BGOL	**Bingol**	0.55	67	*i* P	**Pg**	15 42 57.5	-0.5
BGOL				*i* S	**Sb**	15 43 07.6	+0.5
BGOL	**Bingol**	0.55	67	P	**Pg**	15 42 57.5	-0.5
BGOL				S	**Sb**	15 43 07.6	+0.5
BNGB	**Bing¶‖**	0.56	67	PG	**Pb**	15 42 58.9	-0.3
BNGB				SG	**Sb**	15 43 06.9	-0.4
SVRC	**Sivrice-ELAZID**	0.69	235	PG	**Pb**	15 43 01.3	-0.1
SVRC	**Sivrice-ELAZID**	0.69	235	*e*Pg	**Pb**	15 43 01.3	-0.1
DYBB	**Diyarbakir**	0.83	173	PG	**Pb**	15 43 04.2	+0.4
DIY	**Diyarbakir**	0.90	169	*e*Pg	**Pg**	15 43 04.2	-0.3
BNGL	**BIŃGOL**	0.90	78	*e*P	**Pg**	15 43 03.5	-1.2
BNGL				*e*S	**Sn**	15 43 20.6	+1.2
EUZM	**Uzumlu**	0.96	345	*e*P	**Pn**	15 43 06.8	-0.1
EUZM				*e*S	**Sn**	15 43 21.9	+1.1
EUZM				IAML		15 43 27.2	
	comp=Z,4.8nm,0.3s						
SVAN	**Silvan-Diyarba**	1.12	124	PN	**Pn**	15 43 09.3	+0.3
SVAN	**Silvan-Diyarba**	1.12	124	*i* P	**Pn**	15 43 09.1	+0.1
SVAN				*i* S	**Sn**	15 43 24.6	+0.1
SVAN	**Silvan-Diyarba**	1.12	124	P	**Pn**	15 43 09.1	+0.1
SVAN				S	**Sn**	15 43 24.6	+0.1
KEMA	**Kemaliye**	1.29	293	*e*P	**Pn**	15 43 11.2	-0.2
KEMA				*e*S	**Sb**	15 43 25.5	-2.7
KEMA	**Kemaliye**	1.29	293	*i* P	**Pn**	15 43 10.9	-0.5
KEMA				*i* S	**Sg**	15 43 30.1	+1.4
KEMA	**Kemaliye**	1.29	293	P	**Pn**	15 43 10.9	-0.5
KEMA				S	**Sg**	15 43 30.1	+1.4
MALT	**Malatya**	1.33	250	PN	**Pb**	15 43 12.2	-0.2
MALT	**Malatya**	1.33	250	*e*Pn	**Pb**	15 43 12.2	-0.2
MAZI	**Mazidag**	1.36	165	PN	**Pb**	15 43 12.5	-0.4
MAZI	**Mazidag**	1.36	165	*e*Pn	**Pb**	15 43 12.5	-0.4
KELT	**Kelkit**	1.49	337	*e*P	**Pb**	15 43 15.5	+0.3
MARD	**Mardin**	1.58	157	*i* P	**Pn**	15 43 15.5	+0.1
MARD				*i*

ALS				eS	Sg	15 48 28.0	+0.1
	baz=268						
ENA	Nanau	0.79	10	⇑P	Pb	15 48 19.6	-0.7
	baz=4.0						
NANB	Nanao	0.79	10	eP	Pb	15 48 19.6	-0.7
	baz=4.0						
NANB				eS	Sb	15 48 31.7	+0.4
	baz=4.0						
NNSB	Datong	0.80	346	⇓P	Pg	15 48 19.3	-0.3
	baz=341						
NNSB				eS	Sg	15 48 30.2	+0.1
	baz=341						
NNSH	Datong	0.80	346	eP	Pg	15 48 19.6	-0.1
	baz=344						
WJS	Zhushan	0.81	283	eP	Pb	15 48 20.9	+0.2
	baz=281						
WJS				eS	Sb	15 48 32.7	+0.9
	baz=281						
NNS	Nan Shan	0.82	346	⇓P	Pg	15 48 19.7	-0.2
	baz=341						
NNS				S	Sg	15 48 30.3	-0.3
	baz=341						
ENAH	Nanao	0.82	14	eP	Pb	15 48 21.2	+0.3
	baz=18						
WGK	Gukeng	0.95	273	eP	Pb	15 48 23.3	+0.4
	baz=271						
TPUB	Ta-pu	0.95	249	P	Pb	15 48 22.8	-0.2
	baz=255						
TPUB				eS	Sb	15 48 35.7	-0.1
	baz=255						
TWGBT	Beinan	0.95	210	eP	Pg	15 48 20.9	-1.5
	baz=189						
TWG	Pinlang	0.95	210	eP	Pg	15 48 21.2	-1.2
	baz=189						
WDLH	Douliu	0.97	273	eP	Pb	15 48 23.1	-0.2
	baz=271						
TCU	Taichung	0.98	301	eP	Pb	15 48 23.9	+0.4
	baz=302						
WTP	Ta-pu	0.98	246	⇑P	Pb	15 48 23.4	-0.2
	baz=250						
WTP				S	Sb	15 48 36.7	-0.1
	baz=250						
TWC	Suao	0.99	14	eP	Pb	15 48 23.2	-0.5
	baz=19						
ENTT	Nioudou	0.99	359	eP	Pb	15 48 23.1	-0.6
	baz=354						
ENTT				eS	Sn	15 48 38.6	-0.3
	baz=354						
EOS1	EOS1	1.02	28	eP	Pn	15 48 25.7	+0.7
	baz=51						
TWQ1	Liyutan	1.02	313	eP	Pb	15 48 24.7	+0.3
	baz=325						
TWQ1				eS	Sn	15 48 39.5	-0.3
	baz=325						
YHNB	Yeheng	1.04	349	⇓P	Pb	15 48 24.2	-0.4
	baz=342						
YHNB				S	Sg	15 48 37.5	-0.1
	baz=342						
WCHH	Zhanghua	1.04	295	eP	Pb	15 48 24.8	+0.2
	baz=295						
WCHH				eS	Sn	15 48 40.0	-0.1
	baz=295						
TWE	Neicheng	1.07	4	eP	Pg	15 48 24.4	-0.4
	baz=6.0						
CHN1	Nanshi	1.08	245	eP	Pb	15 48 25.2	0.0
	baz=240						
CHN1				eS	Sn	15 48 42.5	+1.4
	baz=240						
CHY	Chiayi	1.08	262	eP	Pb	15 48 25.4	+0.1
	baz=260						
TWK	Hsinying	1.08	250	⇑P	Pg	15 48 25.2	+0.2
	baz=246						
TWK				eS	Sn	15 48 42.4	+1.2
	baz=246						
SGST	Jiashian	1.08	239	eP	Pg	15 48 25.1	+0.1
	baz=233						
SGST				eS	Sn	15 48 41.9	+0.7
	baz=233						
SLGT	Liugui	1.08	233	eP	Pg	15 48 25.2	+0.2
	baz=230						
SLBB	Yuanshan	1.10	2	eP	Pb	15 48 25.3	-0.4
	baz=3.0						
NSTT	Nanjuang	1.12	331	⇑P	Pb	15 48 25.8	-0.2
	baz=334						
NSTT				eS	Sg	15 48 39.2	-1.0
	baz=334						
ILA	Ilan	1.12	7	eP	Pn	15 48 27.2	+0.8
	baz=354						
LIOB	Emei	1.13	332	⇓P	Pg	15 48 25.5	-0.3
	baz=334						
LIOB				eS	Sb	15 48 40.4	-0.6
	baz=334						
NWLT	Wulai	1.13	356	eP	Pn	15 48 26.2	-0.3
	baz=357						
NMLH	Miaoli	1.15	321	eP	Pn	15 48 26.8	+0.1
	baz=331						
NMLH				eS	Sn	15 48 43.8	+1.0
	baz=331						
RLNB	Erlin	1.16	282	eP	Pb	15 48 26.5	0.0
	baz=282						
RLNB				eS	Sb	15 48 42.2	+0.5
	baz=282						
WLGB	Puzi	1.20	262	⇑P	Pb	15 48 27.3	+0.1
	baz=261						
WSF	Szhu	1.26	270	⇓eP	Pg	15 48 28.1	-0.2
	baz=269						
WSF				eS	Sg	15 48 44.3	-0.3
	baz=269						
SSD	Sandimen	1.26	225	eP	Pg	15 48 27.2	-1.1
	baz=223						
SSD				eS	Sn	15 48 46.5	+1.1
	baz=223						
CHN3	Shinhua	1.26	244	eP	Pn	15 48 29.2	+0.9
	baz=240						
CHN3				eS	Sn	15 48 49.3	+3.8
	baz=240						
SBCB	Hsinchu	1.27	334	eP	Pn	15 48 29.0	+0.6
	baz=336						
CHN8	Yiju	1.30	257	eP	Pg	15 48 28.5	-0.7
	baz=256						
CHN8				eS	Sg	15 48 45.9	-0.2
	baz=256						
TATO	Taipei	1.33	356	eP	Pb	15 48 29.5	0.0
	baz=357						
TWA	Mucha	1.33	360	eP	Pb	15 48 29.8	+0.3
	baz=1.0						
TIPB	Shuangxi	1.34	9	eP	Pn	15 48 29.3	-0.1
	baz=354						
MASBT	Mashibuluo	1.36	221	eP	Pn	15 48 28.9	-0.7
	baz=214						
MASBT				eS	Sn	15 48 49.3	+1.4
	baz=214						
SGLT	Jiouru	1.37	228	eP	Pg	15 48 32.1	+1.7
	baz=225						
NCUH	Zhongli	1.37	344	eP	Pb	15 48 30.3	+0.1
	baz=1.0						
NCU	National Centr	1.37	344	eP	Pn	15 48 29.8	0.0
	baz=358						
TAI1	Yung-k'ang	1.39	245	eP	Pg	15 48 30.9	0.0
	baz=243						
TWB1	Santiao Chiao	1.40	15	eP	Pg	15 48 32.5	+1.4
	baz=358						
NWF	Wu-fen Shan	1.43	7	eP	Pg	15 48 32.4	+0.8
	baz=7.0						
WFSB	Wu-fen Shan	1.43	7	eP	Pg	15 48 32.3	+0.7
	baz=7.0						
TWS1	Kuangyinshan	1.46	354	eP	Pg	15 48 33.2	+1.1
	baz=353						
JYNG	Yonagunijimaku	1.47	57	P	Pn	15 48 31.1	-0.1
JYNG				eS	Sg	15 48 51.5	-0.1
YM04	YM04	1.50	358	eP	Pb	15 48 32.0	-0.4
	baz=356						
YM10	YM10	1.50	359	eP	Pg	15 48 32.6	-0.5
	baz=355						
YM11	YM11	1.51	359	eP	Pg	15 48 32.8	-0.5
	baz=356						
YM07	YM07	1.52	1	eP	Pn	15 48 31.2	-0.7
	baz=358						
YM03	YM03	1.53	358	eP	Pg	15 48 33.9	+0.4
	baz=356						
YM12	YM12	1.53	359	eP	Pg	15 48 33.6	+0.1
	baz=356						
YOJ	Yonaguni jima	1.53	58	eP	Pn	15 48 31.6	-0.3
	baz=58						
YOJ	Yonaguni jima	1.53	58	P	Pn	15 48 32.2	+0.2
YOJ				eS	Sg	15 48 52.8	-0.6
YM08	YM08	1.54	360	eP	Pn	15 48 32.3	+0.2
	baz=357						
SCZT	Fangliau	1.55	215	eP	Pb	15 48 33.5	+0.2
	baz=219						
LAY	Lan-yu	1.60	181	eP	Pn	15 48 30.0	-2.9
	baz=167						
TWY	Chenhua	1.62	0	eP	Pb	15 48 34.0	-0.6
	baz=357						
WDGT	Dungji	1.82	258	eP	Pn	15 48 34.8	-1.1
	baz=258						
TWK1	Hengchun	1.84	203	eP	Pb	15 48 38.2	0.0
	baz=186						
TWKBT	Hengchun	1.84	203	eP	Pn	15 48 37.5	+1.2
	baz=186						
PHUB	P'eng-hu	1.86	266	eP	Pn	15 48 37.0	+0.6
	baz=266						
PNG	Penghu	1.87	268	eP	Pn	15 48 36.0	-0.6
	baz=268						
VCHM	Qimei	2.03	258	eP	Pn	15 48 39.2	+0.3
	baz=258						
HATJ	Hateruma jima	2.07	78	eS	Sn	15 49 05.3	-0.1
IRIF	Iriomote-Funau	2.07	70	P	Pn	15 48 39.9	+0.5
IRIF				eS	Sn	15 49 06.6	+1.1
JKRS	Kuro-shima	2.29	75	P	Pn	15 48 40.6	-1.8
JKRS				S	Sn	15 49 11.8	+0.9
JIJ	Ishigaki jima	2.44	72	P	Pn	15 48 44.2	-0.3
JIJ				S	Sn	15 49 14.5	-0.1
JISG	Ishigakijimahi	2.66	69	P	Pn	15 48 47.2	-0.2
JISG				S	Sn	15 49 19.4	-0.5
MATB	Ma-tsu	2.91	329	eP	Pn	15 48 50.6	-0.4
	baz=329						
JTJ	Tarama	3.01	70	eS	Sn	15 49 28.5	-0.2
QZH	Quanzhou	3.03	296	⇓i/Pn	Pn	15 48 52.3	-0.3
QZH				Sn	Sn	15 49 27.5	-1.6
QZH				smax	smax		
	comp=N,130nm,0.8s						
QZH				smax	smax		
	comp=E,150nm,0.7s						
JIRB	Irabujima	3.47	69	eS	Sn	15 49 39.8	-0.3
JIKM	Ikemajima	3.57	68	eS	Sn	15 49 42.0	-0.5
KSRS	Korea Array	14.80	20	Pn	P	15 51 39.7	-0.3
	0.1nm,0.3s,baz=196,slow=11,SNR=11						
MJAR	Matsushiro Arr	19.25	44	P	P	15 52 29.7	+0.5
	0.1nm,0.3s,baz=234,slow=14,SNR=3.6						
CMAR	Chiang Mai Arr	21.75	261	P	P	15 52 58.2	+1.7
	0.7nm,0.6s,baz=71,slow=7.7,SNR=4.6						
CMAR				LR	LR	16 01 12.6	
	comp=Z,19nm,21.9s,baz=220,slow=36						
GUMO	Guam	24.18	110	LR	LR	16 03 21.6	
	comp=Z,16nm,18.4s,baz=163,slow=38						
MKAR	Makanchi Array	38.98	316	P	P	15 55 31.6	+0.4
	0.7nm,0.7s,baz=106,slow=9.2,SNR=6.2						
ZALV	Zalesovo Beam	40.90	327	P	P	15 55 48.2	+1.3
	0.7nm,0.7s,baz=128,slow=9.3,SNR=3.1						
H11N1	WAKE ISLAND Hy	42.15	86	T	T	16 40 55.1	
	baz=283,slow=74,SNR=72						
H11N2	WAKE ISLAND Hy	42.15	86	T	T	16 40 55.1	
	baz=283,slow=74,SNR=83						
H11N3	WAKE ISLAND Hy	42.16	86	T	T	16 40 56.3	
	baz=283,slow=74,SNR=80						
H11S3	WAKE ISLAND Hy	42.26	88	T	T	16 41 05.0	
	baz=284,slow=74,SNR=100						
H11S1	WAKE ISLAND Hy	42.27	88	T	T	16 41 04.8	
	baz=284,slow=74,SNR=47						
H11S2	WAKE ISLAND Hy	42.28	88	T	T	16 41 05.6	
	baz=284,slow=74,SNR=42						
KURBB	Kurchatov Arra	42.76	320	P	P	15 56 01.3	-0.9
	0.2nm,0.5s,baz=108,slow=9.6,SNR=2.7						
WRA	Warramunga Arr	45.07	163	P	P	15 56 19.4	-1.7
	0.7nm,0.6s,baz=344,slow=9.0,SNR=9.7						
ASAR	Alice Springs	48.52	165	P	P	15 56 48.4	+0.3
	0.5nm,0.8s,baz=357,slow=14,SNR=6.9						
STKA	Stephens Creek	58.43	160	P	P	15 58 00.4	-0.3
	0.7nm,0.5s,baz=330,slow=13,SNR=4.7						
ILAR	Eielson Array	69.52	27	P	P	15 59 14.8	+1.5
	0.2nm,0.6s,baz=288,slow=6.5,SNR=3.6						
YKA	Yellowknife Ar	83.32	23	P	P	16 00 30.0	-1.6
	1.1nm,0.8s,baz=277,slow=9.7,SNR=3.9						

DJA 17 15:54:26.2±0.4, 4°S±6°×12°9E±°, h10km, M2.7/4, MLv2.7/4, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	Masohi	0.33	48	P	Pb	15 54 33.6	-0.7
MSAI				S	Sb	15 54 39.3	-0.4
AAI	Ambon	0.50	256	P	Pb	15 54 36.7	-0.4
AAI				S	Sb	15 54 44.1	-0.3
BNDI	Bandanaira	1.54	128	P	Pn	15 54 53.5	-0.3

IDC 17 15:54:43.7±7.7, 2°S2N×126°16E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.2/56, mbtmp3.5/3, Error ellipse: s-maj=172.5km s-min=120.7km az=72.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.73	161	P	P	15 59 58.2	+0.5
	0.2nm,0.3s,baz=339,slow=10,SNR=2.5						
ASAR	Alice Springs	27.18	164	P	P	16 00 29.1	+0.5
	0.2nm,0.3s,baz=340,slow=6.9,SNR=24						
STKA	Stephens Creek	37.22	158	P	P	16 01 55.8	-1.2
	0.7nm,0.7s,baz=342,slow=13,SNR=3.4						

*ISCJB **17** 16:09:45.8±0.3, 35°77N±0°03×21°98E±0°02, h11km, mb4.0/13, MS3.1/5, Error ellipse: s-maj=3.9km s-min=2.5km az=21.5*
*IDC **17** 16:09:45.4±0.7, 35°91N×22°24E, h0km, mb4.0/13, mb1 4.0/20, mb1mx3.8/66, mbtmp3.9/20, ML3.5/7, MS3.1/8, Ms1 3.1/8, ms1mx2.8/64, Error ellipse: s-maj=16.1km s-min=14.5km az=164.0*
*BEO **17** 16:09:45.0±1.0, 35°23N×21°72E, h80km*
*ATH **17** 16:09:46.9, 35°82N×22°13E, h10km±1km, ML3.8/29, Error ellipse: s-maj=2.4km s-min=0.9km az=43.0*
*THE **17** 16:09:48.9, 35°85N×22°19E, h0km±1km, ML3.9/10, Error ellipse: s-maj=2.5km s-min=1.1km az=221.0*
*CSEM **17** 16:09:48.0±0.2, 35°81N×22°06E, h10km, ML3.9, Mw4.0, Error ellipse: s-maj=6.1km s-min=3.7km az=25.0*
*NEIC **17** 16:09:51.8±0.6, 35°91N×22°09E, h54km±6km, ML4.1(THE), MW4.0(CSEM), Error ellipse: s-maj=7.2km s-min=4.6km az=185.0*

ISC 17 16:09:47.0±0.5, 35°86N±0°03×22°18E±0°03, h11km, n293, σ1§93/322, mb3.9/13, MS3.2/5, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	Kithira	0.81	60	P	Pg	16 10 02.7	+0.1
KYTH				S	Sn	16 10 15.8	-0.7
KYTH				AML	AML	16 10 17.9	
	comp=N,10018μm,0.5s						
KYTH				AML	AML	16 10 28.1	
	comp=E,11121μm,1.0s						
KYTH	Kithira	0.81	60	P	Pg	16 10 03.2	+0.5
KYTH				S	Sn	16 10 16.0	-0.4
KYTH	Kithira	0.81	60	P	Pg	16 10 03.2	+0.5
KYTH				S	Sn	16 10 16.0	-0.4
DYR	Agios Nikonas	0.91	8	P	Pn	16 10 05.8	+0.2
DYR				AML	AML	16 10 23.4	
	comp=N,5753μm,0.4s						
DYR				AML	AML	16 10 26.2	
	comp=E,9295μm,0.7s						
DYR	Agios Nikonas	0.91	8	P	Pg	16 10 04.8	+0.3
DYR	Agios Nikonas	0.91	8	P	Pb	16 10 05.5	+0.8
ANKY	Antikythira Is	0.91	90	P	Pb	16 10 05.6	+0.8
ANKY				S	Sb	16 10 18.5	+1.5
ANKY				AML	AML	16 10 24.7	
	comp=Z,5265μm,0.5s						
ANKY				AML	AML	16 10 28.9	
	comp=N,12404μm,0.8s						
ANKY	Antikythira Is	0.91	90	P	Pg	16 10 04.8	+0.2
ANKY				S	Sn	16 10 19.5	+0.6
ANKY	Antikythira Is	0.91	90	P	Pg	16 10 05.3	+0.7
ANKY				S	Sn	16 10 19.5	+0.6
VLI	Veliai	1.05	36	P	Pg	16 10 07.5	+0.3
VLI				AML	AML	16 10 31.2	
	comp=E,16946μm,0.7s						
VLI				AML	AML	16 10 33.1	
	comp=N,10523μm,0.7s						
VLI	Veliai	1.05	36	P	Pb	16 10 07.8	+0.6
VLI				S	Sn	16 10 24.9	+2.6
VLI	Veliai	1.05	36	P	Pb	16 10 07.8	+0.6
VLI				S	Sn	16 10 24.9	+2.6
MNVA	Monemvasia	1.08	40	P	Pn	16 10 09.4	+1.5
MNVA				AML	AML	16 10 33.1	
	comp=E,6771μm,0.8s						
MNVA				AML	AML	16 10 36.8	
	comp=N,4407μm,1.8s						
MNVA	Monemvasia	1.08	40	P	Pn	16 10 08.9	+0.9
PYL	PYLOS	1.09	341	P	Pb	16 10 07.7	-0.2
PYL				S	Sn	16 10 24.0	+0.8
PYL				AML	AML	16 10 25.7	
	comp=E,6950μm,0.8s						
PYL				AML	AML	16 10 32.0	
	comp=N,6946μm,0.6s						
PYL	PYLOS	1.09	341	P	Pb	16 10 07.8	0.0
PYL	PYLOS	1.09	341	P	Pb	16 10 07.9	+0.1
PYL				S	Sn	16 10 23.7	+0.5
ITM	Ithomi	1.33	351	PG	Pg	16 10 13.7	+1.2
ITM	Ithomi	1.33	351	P	Pn	16 10 12.1	+0.7
ITM				AML	AML	16 10 38.5	
	comp=N,6400μm,0.4s						
ITM				AML	AML	16 10 44.7	
	comp=E,4600μm,0.6s						
ITM	Ithomi	1.33	351	ePn	Pn	16 10 12.2	+0.7
ITM	Ithomi	1.33	351	P	Pb	16 10 12.4	+0.5
ITM				S	Sg	16 10 33.9	+4.1
ITM	Ithomi	1.33	351	P	Pb	16 10 12.4	+0.5
VLX	Vlachokerasia	1.51	6	P	Pb	16 10 15.7	+0.5
VLX				S	Sg	16 10 36.8	+1.1
VLX				AML	AML	16 10 44.9	
	comp=N,6943μm,0.6s						
VLX				AML	AML	16 10 47.0	
	comp=E,5629μm,0.7s						
VLX	Vlachokerasia	1.51	6	P	Pb	16 10 16.0	+0.9
VLX				S	Sg	16 10 37.5	+1.8
VLX	Vlachokerasia	1.51	6	P	Pb	16 10 16.0	+0.9
VLX				S	Sg	16 10 37.3	+1.6
IMMV	Iera Moni Meta	1.52	105	P	Pb	16 10 16.4	+1.1
IMMV				S	Sg	16 10 36.4	+0.4
IMMV				AML	AML	16 10 40.4	
	comp=N,10248μm,0.6s						
IMMV				AML	AML	16 10 50.4	
	comp=E,7780μm,0.9s						
IMMV	Iera Moni Meta	1.52	105	P	Pb	16 10 16.3	+1.1
IMMV				S	Sg	16 10 37.5	+1.5
IMMV	Iera Moni Meta	1.52	105	P	Pb	16 10 16.3	+1.1
IMMV				S	Sg	16 10 37.5	+1.5
KRND	KRANIDI	1.71	27	P	Pg	16 10 19.8	+0.1
KRND				AML	AML	16 10 52.6	
	comp=E,2828μm,0.5s						
KRND				AML	AML	16 10 53.1	
	comp=N,2783μm,0.5s						
KRND	KRANIDI	1.71	27	P	Pg	16 10 19.8	+0.1
KRND				S	Sg	16 10 43.8	+1.9
KRND	KRANIDI	1.71	27	P	Pg	16 10 19.8	+0.1
KRND				S	Sg	16 10 43.8	+1.9
AMT	Artemida-Makis	1.71	347	P	Pg	16 10 19.9	+0.1
AMT				S	Sg	16 10 41.6	-0.3
AMT				AML	AML	16 10 50.5	
	comp=N,9292μm,0.4s						
AMT				AML	AML	16 10 54.5	
	comp=E,5694μm,0.6s						
AMT	Artemida-Makis	1.71	347	P	Pg	16 10 19.7	0.0
AMT				S	Sg	16 10 43.4	+1.5
AMT	Artemida-Makis	1.71	347	P	Pb	16 10 19.6	+1.2
AMT				S	Sg	16 10 42.3	+0.4
VAM	Vamos	1.71	105	P	Pb	16 10 19.5	+1.0
VAM				AML	AML	16 10 59.3	
	comp=N,7211μm,1.0s						
VAM				AML	AML	16 11 04.9	
	comp=E,5836μm,0.7s						
VAM	Vamos	1.71	105	P	Pb	16 10 19.5	+1.0
VAM				S	Sg	16 10 42.9	+0.9
VAM	Vamos	1.71	105	P	Pb	16 10 19.4	+1.0
VAM				S	Sg	16 10 42.9	+0.9
DID	Didima	1.85	27	P	Pb	16 10 20.4	-0.4
DID				AML	AML	16 10 54.2	
	comp=E,3217μm,0.8s						
DID				AML	AML	16 10 55.3	
	comp=N,2504μm,0.8s						
DID	Didima	1.85	27	P	Pb	16 10 20.9	+0.1
DID	Didima	1.85	27	P	Pb	16 10 20.9	+0.1
GVD	Gavdhos	1.87	123	P	Pn	16 10 20.4	+1.6
GVD				AML	AML	16 11 03.6	
	comp=N,2411μm,0.9s						
GVD				AML	AML	16 11 06.3	
	comp=E,2324μm,0.6s						
GVD	Gavdhos	1.87	123	P	Pb	16 10 21.0	-0.1
GVD	Gavdhos	1.87	123	P	Pb	16 10 21.0	-0.1
MHLO	Agia Marina, M	1.98	65	P	Pb	16 10 22.5	-0.5
MHLO				S	Sg	16 10 51.1	+0.5
MHLO				AML	AML	16 10 52.1	
	comp=N,13964μm,0.7s						
MHLO				AML	AML	16 10 53.7	
	comp=E,15167μm,0.6s						
MHLO	Agia Marina, M	1.98	65	P	Pb	16 10 23.0	0.0
MHLO	Agia Marina, M	1.98	65	P	Pb	16 10 23.0	0.0
MHLO				S	Sg	16 10 50.6	0.0
MHLA	Plaka, Milos I	2.02	63	P	Pn	16 10 22.7	+1.7
MHLA				AML	AML	16 11 11.6	
	comp=N,8215μm,1.0s						
MHLA				AML	AML	16 11 14.0	
	comp=E,8271μm,1.0s						
MHLA	Plaka, Milos I	2.02	63	P	Pb	16 10 23.3	-0.3
GUR	Goura	2.07	4	P	Pb	16 10 25.6	+0.9
GUR				AML	AML	16 11 10.0	
	comp=N,2737μm,0.8s						
GUR				AML	AML	16 11 11.4	
	comp=E,3512μm,0.5s						
GUR	Goura	2.07	4	P	Pb	16 10 25.6	+0.9
GUR	Goura	2.07	4	P	Pb	16 10 25.2	+0.5
DRO	Drossia	2.12	350	P	Pg	16 10 27.2	-0.4
DRO				AML	AML	16 11 09.0	
	comp=N,4016μm,0.5s						
DRO				AML	AML	16 11 09.1	
	comp=E,4827μm,0.5s						
DRO	Drossia	2.12	350	P	Pb	16 10 25.6	+0.2
DRO				S	Sg	16 10 53.9	-1.2
DRO	Drossia	2.12	350	P	Pb	16 10 25.6	+0.2
KLV	Kalavryta, Ach	2.17	359	P	Pb	16 10 27.0	+0.6
KLV				AML	AML	16 11 07.8	
	comp=E,1130μm,0.7s						
KLV				AML	AML	16 11 11.8	
	comp=N,1160μm,0.8s						
KLV	Kalavryta, Ach	2.17	359	P	Pb	16 10 27.0	+0.6
KLV	Kalavryta, Ach	2.17	359	P	Pb	16 10 26.5	+0.1
LTK	Loutraki	2.25	16	P	Pb	16 10 27.6	-0.1
LTK				AML	AML	16 11 17.7	
	comp=N,1933μm,0.6s						
LTK				AML	AML	16 11 24.3	
	comp=E,1276μm,0.9s						
LTK	Loutraki	2.25	16	P	Pb	16 10 27.5	-0.1
LTK	Loutraki	2.25	16	P	Pb	16 10 27.4	-0.2
RLS	Riolos of Patr	2.26	346	P	Pb	16 10 27.9	+0.1
RLS				AML	AML	16 11 17.6	
	comp=N,1145μm,0.8s						
RLS				AML	AML	16 11 19.5	
	comp=E,1644μm,0.8s						
RLS	Riolos of Patr	2.26	346	P	Pb	16 10 27.7	-0.1
RLS	Riolos of Patr	2.26	346	P	Pb	16 10 27.5	-0.3
IDI	Anoyia	2.29	104	Pn	Pb	16 10 27.5	-0.8
	comp=E,9.8nm,0.3s,baz=289,slow=11,SNR=32						
IDI	Anoyia	2.29	104	PG	Pn	16 10 26.4	+1.7
SIVA	Sivas	2.31	111	P	Pb	16 10 28.5	-0.1
SIVA				AML	AML	16 11 14.1	
	comp=N,2512μm,0.8s						
SIVA				AML	AML	16 11 32.7	
	comp=E,3552μm,0.7s						
SIVA	Sivas	2.31	111	P	Pb	16 10 28.1	-0.6
VLY	Voula,Athens	2.37	33	P	Pb	16 10 29.0	-0.7
VLY				AML	AML	16 11 13.7	
	comp=N,2163μm,0.6s						
VLY				AML	AML	16 11 21.3	
	comp=E,1565μm,0.8s						
VLY	Voula,Athens	2.37	33	P	Pb	16 10 29.9	+0.2
VLY	Voula,Athens	2.37	33	P	Pb	16 10 29.0	-0.7
LAKA	Lakka	2.38	356	P	Pb	16 10 30.4	+0.6
VILL	Villia	2.47	21	P	Pb	16 10 31.6	+0.2
VILL	Villia	2.47	21	P	Pb	16 10 31.6	+0.2
TRIZ	Trizonia	2.50	358	P	Pb	16 10 31.4	-0.5
TRIZ	Trizonia	2.50	358	P	Pb	16 10 31.4	-0.5
KFL	Anninata	2.50	334	P	Pn	16 10 29.1	+1.5
KFL	Anninata	2.50	334	P	Pn	16 10 29.8	+2.2
SERG	Sergoula	2.55	358	P	Pn	16 10 30.5	+2.2

SERG	Sergoula	2.55	358	P	Pn	16 10 30.9	+2.6
DSF	Desfina	2.56	6	P	Pb	16 10 31.9	-1.0
DSF	Desfina	2.56	6	P	Pb	16 10 31.9	-1.0
PTL	Penteli	2.57	31	P	Pb	16 10 32.8	-0.2
PTL				AML	AML	16 11 17.2	
	comp=N,1023μm,0.8s						
PTL				AML	AML	16 11 18.2	
	comp=E,1439μm,0.7s						
PTL	Penteli	2.57	31	P	Pb	16 10 32.3	-0.7
EFP	Efpalio	2.57	355	P	Pn	16 10 30.7	+2.2
EFP				AML	AML	16 11 27.9	
	comp=N,1566μm,0.9s						
EFP				AML	AML	16 11 39.9	
	comp=E,1180μm,0.9s						
EFP	Efpalio	2.57	355	P	Pb	16 10 32.7	-0.3
EFP	Efpalio	2.57	355	P	Pn	16 10 31.1	+2.6
DION	Dionisos Attik	2.62	32	P	Pb	16 10 34.6	+0.7
DION				AML	AML	16 11 25.1	
	comp=N,1156μm,0.8s						
DION				AML	AML	16 11 34.5	
	comp=E,995μm,1.0s						
DION	Dionisos Attik	2.62	32	P	Pb	16 10 33.6	-0.4
THR5	Thira Island,	2.63	77	P	Pn	16 10 31.5	+2.2
THR5	Thira Island,	2.63	77	P	Pn	16 10 31.5	+2.2
VLS	Valsamata	2.63	332	P	Pn	16 10 31.8	+2.3
VLS	Valsamata	2.63	332	P	Pn	16 10 32.0	+2.5
THR6	Thira Island,	2.65	78	P	Pn	16 10 32.1	+2.4
THR6	Thira Island,	2.65	78	P	Pn	16 10 32.1	+2.4
THR3	Thira Island,	2.67	77	P	Pb	16 10 34.0	-0.7
THR3	Thira Island,	2.67	77	P	Pb	16 10 34.0	-0.7
SANT	Santorini	2.71	78	*e*PG	Pn	16 10 31.3	+0.8
SANT	Santorini	2.71	78	*e*Pn	Pn	16 10 33.0	+2.5
SANT	Santorini	2.71	78	*e*Pn	Pn	16 10 33.0	+2.5
LAST	Lasithi	2.78	104	P	Pb	16 10 35.2	-1.6
LAST				AML	AML	16 11 30.5	
	comp=E,758μm,0.8s						
LAST				AML	AML	16 11 30.6	
	comp=N,1264μm,0.6s						
LAST	Lasithi	2.78	104	P	Pn	16 10 34.6	+3.0
LAST	Lasithi	2.78	104	P	Pn	16 10 34.6	+3.0
PVO	Paravola	2.80	349	P	Pb	16 10 35.8	-1.1
NPS	Neapolis	2.87	101	P	Pn	16 10 35.3	+2.7
NPS				AML	AML	16 11 37.3	
	comp=E,1355μm,0.7s						
NPS				AML	AML	16 11 37.8	
	comp=N,1278μm,0.8s						
NPS	Neapolis	2.87	101	P	Pn	16 10 35.7	+3.1
NPS	Neapolis	2.87	101	P	Pn	16 10 35.4	+2.8
FSK	Fiskardo	2.89	334	P	Pn	16 10 36.1	+3.1
APE	Apeiranthos	2.96	65	*e*PG	Pn	16 10 34.5	+0.6
APE	Apeiranthos	2.96	65	P	Pn	16 10 35.4	+1.5
APE	Apeiranthos	2.96	65	P	Pn	16 10 36.3	+2.4
AGG	Agios Georgios	3.15	2	*e*PG	Pn	16 10 39.4	+2.8
AGG	Agios Georgios	3.15	2	P	Pb	16 10 41.9	-1.2
AGG				AML	AML	16 11 38.0	
	comp=E,727μm,1.0s						
AGG				AML	AML	16 11 45.2	
	comp=N,1177μm,0.9s						
AGG	Agios Georgios	3.15	2	*e*Pn	Pn	16 10 40.2	+3.6
AGG	Agios Georgios	3.15	2	*e*Pn	Pn	16 10 40.2	+3.6
AGG	Agios Georgios	3.15	2	P	Pb	16 10 40.9	-2.2
DSL	Palaion Diasel	3.38	346	P	Pn	16 10 43.6	+3.9
ZKR	Zakros	3.38	102	P	Pn	16 10 42.8	+3.1
ZKR	Zakros	3.38	102	P	Pn	16 10 42.8	+3.1
CHOS	Chios island	3.99	50	*e*PG	Pn	16 10 49.3	+1.1
KARP	Karpathos	4.07	93	*e*PG	Pn	16 10 51.3	+2.1
KARP	Karpathos	4.07	93	P	Pn	16 10 51.4	+2.2
KARP	Karpathos	4.07	93	*e*Pn	Pn	16 10 53.2	+4.0
KARP	Karpathos	4.07	93	P	Pn	16 10 52.0	+2.8
KARP	Karpathos	4.07	93	*e*Pn	Pn	16 10 53.2	+4.0
LIT	Litokhoron	4.24	3	*e*Pn	Pn	16 10 54.2	+2.7
LIT	Litokhoron	4.24	3	*e*Pn	Pn	16 10 54.2	+2.7
BODT	Bodrum	4.31	72	*e*PG	Pn	16 10 53.5	+1.0
URLA	Izmir	4.32	53	*e*PG	Pn	16 10 54.1	+1.4
SIGR	SIGRI	4.44	40	*e*PG	Pn	16 10 55.9	+1.7
DAT	Datca	4.45	77	*e*PG	Pn	16 10 56.4	+1.9
ARG	Arkhangelos	4.83	84	*e*PG	Pn	16 11 01.7	+2.0
FNA	Florina	4.95	353	*e*Pn	Pn	16 11 04.4	+3.0
FNA				*e*Sn	Sn	16 11 58.7	+0.1
FNA	Florina	4.95	353	*e*Pn	Pn	16 11 04.0	+2.7
FNA	Florina	4.95	353	P	Pn	16 11 04.3	+3.0
FNA	Florina	4.95	353	*e*Pn	Pn	16 11 04.1	+2.7
FNA				*e*Sn	Sn	16 11 58.7	+0.1
AYDB	Zeytinkoy-Aydi	5.03	64	*e*PG	Pn	16 11 04.1	+1.6
GRG	Griva	5.09	2	P	Pn	16 11 07.2	+4.0
GRG	Griva	5.09	2	P	Pn	16 11 07.2	+4.0
BIA	Bitola	5.19	353	*e*Pn	Pn	16 11 07.6	+3.0
TURN	Turunc	5.28	77	*e*PG	Pn	16 11 03.6	-2.2
DALY	Dalyan (Mu¨la	5.31	78	*e*PG	Pn	16 11 08.7	+2.4
OHR	Ohrid	5.35	349	*e*Pn	Pn	16 11 09.7	+2.9
SRS	Serrai	5.36	12	*e*Pn	Pn	16 11 09.3	+2.4
SRS	Serrai	5.36	12	*e*Pn	Pn	16 11 09.3	+2.4
TIP	Timpagrande	5.43	309	*e*Pn	Pn	16 11 08.3	+0.4
TIP	Timpagrande	5.43	309	*e*Pn	Pn	16 11 08.3	+0.4
VAY	Valandovo	5.46	3	*e*Pn	Pn	16 11 10.3	+2.1
CEL	Celeste	5.56	297	*e*Pn	Pn	16 11 09.9	+0.2
CEL	Celeste	5.56	297	*e*Pn	Pn	16 11 09.9	+0.2
FETY	Fethiye	5.63	80	*e*PG	Pn	16 11 13.5	+2.8
MANT	Manisa	5.73	61	*e*Pn	Pn	16 11 17.0	+4.8
MANT	Manisa	5.73	61	*e*Pn	Pn	16 11 17.0	+4.8
TIR	Tirane	5.77	342	*e*Pn	Pn	16 11 13.0	+0.5
TIR	Tirane	5.77	342	*e*Pn	Pn	16 11 12.7	+0.2
TIR	Tirane	5.77	342	*e*Pn	Pn	16 11 13.0	+0.5
STIP	Stip	5.82	0	*e*Pn	Pn	16 11 16.7	+3.5
MMB	Musomiste	5.84	12	P	Pn	16 11 17.2	+3.6
ALN	Alexandroupoli	5.87	30	*e*Pn	Pn	16 11 18.2	+4.3
ALN	Alexandroupoli	5.87	30	*e*Pn	Pn	16 11 18.2	+4.3
AKAS	Kas	6.03	84	*e*PG	Pn	16 11 18.1	+1.9
KKB	Krupnik	6.04	6	P	Pn	16 11 20.4	+4.2
SKO	Skopje	6.13	355	*e*Pn	Pn	16 11 08.1	-9.4
RZN	Rozhen	6.14	18	P	Pn	16 11 15.8	-2.0
MASS	Massafra	6.19	322	*e*P	Pn	16 11 18.7	+0.4
WDD	Wied Dalam	6.21	272	*e*Pn	Pn	16 11 18.0	-0.6
WDD	Wied Dalam	6.21	272	*e*Pn	Pn	16 11 18.0	-0.6
FASA	Fasano	6.23	324	*e*P	Pn	16 11 18.9	+0.1
ELL	Elmali	6.31	80	*e*PG	Pn	16 11 22.5	+2.5
VAE	Valguarnera	6.45	287	Pn	Pn	16 11 24.8	+2.9
	comp=N,1.4nm,0.3s,baz=189,slow=4.7,SNR=4.5						
VAE				Sn	Sn	16 12 36.4	+1.0
	comp=N,2.7nm,0.3s,baz=157,slow=15,SNR=2.1						
CUC	Castrocucco	6.50	311	*e*Pn	Pn	16 11 23.3	+0.7
CUC	Castrocucco	6.50	311	*e*Pn	Pn	16 11 23.3	+0.7
SG1	Sgolgore (BA)	6.58	321	*e*P	Pn	16 11 24.0	+0.3
KORT	Korkueli	6.69	78	*e*PG	Pn	16 11 27.9	+2.6
DRME	Dracevica, Mon	6.73	341	*e*Pn	Pn	16 11 26.1	+0.4
VTS	Vitosha	6.77	6	*e*Pn	Pn	16 11 29.5	+3.2
VTS	Vitosha	6.77	6	*e*Pn	Pn	16 11 29.5	+3.2
PDG	Podgorica	6.94	342	*e*Pn	Pn	16 11 29.6	+1.1
PDG				*e*Sn	Sn	16 12 43.7	-3.7
PDG	Podgorica	6.94	342	*e*Pn	Pn	16 11 29.6	+1.1
TTG	Podgorica	6.94	342	*e*Pn	Pn	16 11 29.9	+1.3
TTG	Podgorica	6.94	342	*e*Pn	Pn	16 11 29.9	+1.3
BARS	Barje	6.95	358	*e*Pn	Pn	16 11 30.4	+1.7
BARS	Barje	6.95	358	*e*Pn	Pn	16 11 30.4	+1.7
HCY	Herceg Novi	7.17	338	*e*Pn	Pn	16 11 32.6	+0.9
SUTC	Sutluce-Ispart	7.27	75	*e*PG	Pn	16 11 35.2	+1.9
SELS	Selova	7.39	354	*e*Pn	Pn	16 11 37.0	+2.2
CLTB	Caltabellotta	7.40	286	*e*Pn	Pn	16 11 35.6	+0.6
CLTB	Caltabellotta	7.40	286	*e*Pn	Pn	16 11 35.6	+0.6
ZAPS	Zavoj	7.41	3	*e*Pn	Pn	16 11 38.0	+2.9
TREB	Trebinje	7.46	338	*e*Pn	Pn	16 11 36.4	+0.7
BRY	Bratogost	7.57	339	*e*Pn	Pn	16 11 37.5	+0.1
SJES	Sjenica	7.58	348	*e*Pn	Pn	16 11 38.6	+1.1
SJES	Sjenica	7.58	348	*e*Pn	Pn	16 11 38.6	+1.1
UPM	Unac-Piva	7.75	342	*e*Pn	Pn	16 11 40.1	+0.2
BOVS	Bovan	7.77	357	*e*Pn	Pn	16 11 41.1	+1.1
BOVS	Bovan	7.77	357	*e*Pn	Pn	16 11 41.1	+1.1
STON	Ston	7.81	335	*e*Pn	Pn	16 11 39.5	-1.0
STON				*e*Sn	Sn	16 13 01.6	-7.2
STON	Ston	7.81	335	*i* Pn	Pn	16 11 40.1	-0.3
STON				Sn	Sn	16 13 03.6	-5.2
STON	Ston	7.81	335	*e*Pn	Pn	16 11 39.5	-1.0
ZAGS	Zajecar	7.94	0	*e*Pn	Pn	16 11 44.2	+1.9
ZAGS	Zajecar	7.94	0	*e*Pn	Pn	16 11 44.2	+1.9
GRUS	Gruza	8.09	352	*e*Pn	Pn	16 11 45.6	+1.2
GRUS	Gruza	8.09	352	*e*Pn	Pn	16 11 45.6	+1.2
BBLS	Lazići	8.27	346	*e*Pn	Pn	16 11 47.9	+1.0
BBLS	Lazići	8.27	346	*e*Pn	Pn	16 11 47.9	+1.0
DIVS	Divibare	8.39	349	*e*Pn	Pn	16 11 50.1	+1.5
DIVS	Divibare	8.39	349	*e*Pn	Pn	16 11 48.5	-0.1
DIVS	Divibare	8.39	349	*e*Pn	Pn	16 11 50.1	+1.5
TRUS	Trudelj	8.46	351	*e*Pn	Pn	16 11 51.2	+1.8
TRUS	Trudelj	8.46	351	*e*Pn	Pn	16 11 51.2	+1.8
HAPS	Han Pijesak,Bl	8.58	344	*e*Pn	Pn	16 11 52.4	+1.3
HAPS	Han Pijesak,Bl	8.58	344	*e*Pn	Pn	16 11 52.4	+1.3
TEKS	Tekeris	8.91	348	*e*Pn	Pn	16 11 55.3	-0.3
TEKS	Tekeris	8.91	348	*e*Pn	Pn	16 11 55.3	-0.3
BR231	Keskin MP Arra	9.27	61	*e*Pn	Pn	16 12 03.5	+2.8
BR231	Keskin MP Arra	9.27	61	*e*Pn	Pn	16 12 03.5	+2.8
ANTO	Ankara	9.30	61	*e*Pn	Pn	16 12 03.2	+2.2
ANTO	Ankara	9.30	61	*e*Pn	Pn	16 12 03.2	+2.2
FGSL	Fruska Gora	9.46	350	*e*Pn	Pn	16 12 03.3	+0.2
FRGS	Fruska Gora	9.46	350	*e*Pn	Pn	16 12 03.3	+0.2
BLY	Banja Luka	9.66	338	*e*Pn	Pn	16 12 07.3	+1.5
BLY	Banja Luka	9.66	338	*e*Pn	Pn	16 12 07.3	+1.5
BR131	Keskin Array S	9.86	64	*e*Pn	Pn	16 12 13.0	+4.3
BR131	Keskin Array S	9.86	64	*e*Pn	Pn	16 12 13.0	+4.3
BRTR	Keskin Array B	9.86	64	Pn	Pn	16 12 13.4	+4.7
	comp=N,0.1nm,0.3s,baz=234,slow=12,SNR=11						
UDBI	Udbina	9.94	332	*e*Pn	Pn	16 12 13.0	+3.1
UDBI				Sn	Sn	16 13 60.0	-1.4
UDBI	Udbina	9.94	332	*e*Pn	Pn	16 12 12.9	+3.1
MLR	Muntele Rosu	10.03	15	Pn	Pn	16 12 15.4	+4.3
	comp=N,0.1nm,0.3s,baz=207,slow=11,SNR=2.2						
MLR				LR	LR	16 16 41.5	
	comp=N,30nm,19.8s,baz=187,slow=42						
MLR	Muntele Rosu	10.03	15	*e*Pn	Pn	16 12 12.2	+1.1
MLR	Muntele Rosu	10.03	15	*e*Pn	Pn	16 12 12.2	+1.1
NVLJ	Novalja	10.32	330	*e*Pn	Pn	16 12 17.4	+2.4
NVLJ				Sn	Sn	16 14 06.1	-4.5
NVLJ	Novalja	10.32	330	*e*Pn	Pn	16 12 17.4	+2.4
KEST	Kesra	10.42	273	Pn	Pn	16 12 17.4	+1.0
	comp=N,0.2nm,0.3s,baz=4.4,slow=13,SNR=2.2						
KEST				LR	LR	16 17 01.0	
	comp=N,131nm,21.1s,baz=319,slow=42						
KEST	Kesra	10.42	273	*e*Pn	Pn	16 12 17.3	+0.8
KEST	Kesra	10.42	273	*e*Pn	Pn	16 12 17.3	+0.8
CRES	Cresnjev	11.17	335	*e*Pn	Pn	16 12 28.4	+1.8
MMAI	Mount Meron Ar	11.29	101	Pn	Pn	16 12 27.2	-1.1
	comp=N,0.4nm,0.3s,baz=265,slow=6.9,SNR=2.2						
MMAI				Sn	Sn	16 14 27.3	-7.1
	comp=N,0.8nm,0.3s,baz=284,slow=40,SNR=2.9						
CEY	Cerknica	11.47	332	*e*Pn	Pn	16 12 31.9	+1.2
OBKA	Obir	12.08	334	*e*Pn	Pn	16 12 42.6	+3.5
	comp=N,0.3nm,0.2s						
OBKA				*e*Sn	Sn	16 14 54.6	+0.8
	comp=N,4.8nm,0.7s						
OBKA	Obir	12.08	334	Pn	Pn	16 12 42.6	+3.5
	comp=N,0.3nm,0.2s						
OBKA				Sn	Sn	16 14 54.6	+0.8
	comp=N,4.8nm,0.7s						
PSZ	Piszkesteto	12.16	353	*e*Pn	Pn	16 12 42.3	+2.1
PSZ	Piszkesteto	12.16	353	*e*Pn	Pn	16 12 42.3	+2.1
EIL	Elat	12.39	116	Pn	Pn	16 12 44.9	+1.5
	comp=N,0.5nm,0.3s,baz=259,slow=1.3,SNR=7.1						
EIL				Sn	Sn	16 14 51.7	-10
	comp=N,0.4nm,0.3s,baz=258,slow=20,SNR=2.5						
ARSA	Arzberg	12.41	338	*e*Pn	Pn	16 12 45.2	+1.6
	comp=N,1.0nm,0.4s						
ARSA	Arzberg	12.41	338	Pn	Pn	16 12 45.2	+1.6
	comp=N,1.0nm,0.4s						
ABTA	Abfaltersbach	13.06	329	*e*Pn	Pn	16 12 54.4	+1.9
ABTA				*e*Sn	Sn	16 15 15.7	-2.1
	comp=N,7.5nm,0.9s						
ABTA	Abfaltersbach	13.06	329	Pn	Pn	16 12 54.4	+1.9
MOA	Molln	13.34	336	*e*Pn	Pn	16 12 57.7	+1.5
	comp=N,0.6nm,0.3s						
MOA	Molln	13.34	336	Pn	Pn	16 12 57.7	+1.5
	comp=N,0.6nm,0.3s						
GEA0	GERESS Array S	14.38	337	*e*Pn	Pn	16 13 12.1	+1.5
GEA0	GERESS Array S	14.38	337	*e*Pn	Pn	16 13 12.1	+1.5
GERES	GERESS Array B	14.39	337	Pn	Pn	16 13 10.9	+0.2
	comp=N,0.1nm,0.3s,baz=150,slow=10,SNR=5.1						
GERES				Sn	Sn	16 15 43.2	-7.0
	comp=N,0.1nm,0.3s,baz=152,slow=23,SNR=3.2						
GERES				LR	LR	16 19 43.8	
	comp=N,69nm,21.1s,baz=139,slow=42						
KHC	Kasperske Hory	14.68	337	*e*P	P	16 13 26.8	+6.0
KHC				*e*x	x	16 13 37.0	
KHC				AMS	AMS	16 20 30.0	
	comp=N,200nm,8.6s						
GOPC	GO Pecny, Ondr	15.04	341	AMS	AMS	16 20 20.0	
	comp=N,200nm,9.4s						
DPC	Dobruska-Polom	15.09	345	*e*P	P	16 13 28.9	+3.6
DPC				*e*x	x	16 13 31.8	
DPC				AMS	AMS	16 20 20.0	
	comp=N,100nm,9.6s						
DPC	Dobruska-Polom	15.09	345	P	P	16 13 28.9	+3.6
UPC	Upice	15.30	345	AMS	AMS	16 20 40.0	
	comp=N,100nm,8.9s						
AK11	Malin Array Si	15.65	17	*e*Pn	Pn	16 13 27.9	+0.6
KIEV	Kiev	15.67	17	*e*Pn	Pn	16 13 27.8	+0.2
	comp=N,3.2nm,0.8s						
KIEV	Kiev	15.67	17	*e*Pn	Pn	16 13 27.8	+0.2
	comp=N,3.2nm,0.8s						
AKASG	Malin Array Be	15.68	17	Pn	Pn	16 13 26.4	-1.3
	comp=N,0.3nm,0.3s,baz=202,slow=11,SNR=5.1						
AKBB	Malin Array Si	15.68	17	*e*Pn	Pn	16 13 27.6	-0.1
	comp=N,3.4nm,0.8s						
AKBB	Malin Array Si	15.68	17	*e*Pn	Pn	16 13 27.6	-0.1
	comp=N,3.4nm,0.8s						
NKC	Novy Kostel	16.00	337	AMS	AMS	16 21 00.0	
CLL	Collm	16.79	340	*e*pP	pP	16 13 53.0	+5.9
KVAR	Kislovodsk Arr	17.66	57	P	Pn	16 13 52.8	-0.3
	baz=302,slow=9.5,SNR=2.4						
ES19	SONSECA Array	20.94	288	*e*P	P	16 14 30.4	+0.7
ES19	SONSECA Array	20.94	288	*e*P	P	16 14 30.4	+0.7
ESDC	Sonseca Array	20.98	288	P	P	16 14 29.9	-0.4
	comp=N,3.5nm,0.9s,baz=87,slow=10,SNR=18						
MDT	Midelt	22.30	270	P	P	16 14 44.7	+0.1
	comp=N,4.1nm,0.8s,baz=93,slow=8.3,SNR=4.1						
MDT				LR	LR	16 25 34.7	
	comp=N,89nm,19.7s,baz=136,slow=42						
HFS	Hagfors	24.90	350	P	P	16 15 08.9	-0.7
	comp=N,2.3nm,0.5s,baz=159,slow=12,SNR=14						
FINES	FINESS Array B	25.72	4	P	P	16 15 17.4	+0.4
	comp=N,1.6nm,0.7s,baz=167,slow=13,SNR=7.2						
FINES				LR	LR	16 26 34.0	
	comp=N,86nm,21.1s,baz=200,slow=39						
EKA	Eskdalemuir Ar	26.08	326	P	P	16 15 20.0	-0.4
	comp=N,0.9nm,0.4s,baz=125,slow=7.7,SNR=12						
NB2	NORSAR Subarra	26.15	348	P	P	16 15 19.4	-1.6
	comp=Z,1.9nm,1.1s,baz=156,slow=9.3						
NOA	NORSAR Array B	26.15	348	LR	LR	16 28 22.7	
	comp=Z,16nm,18.9s,baz=50,slow=43						
TORD	Torodi Ar. Bea	29.18	224	P	P	16 15 49.2	+0.7
	comp=Z,1.2nm,0.9s,baz=34,slow=8.4,SNR=5.3						
AKTO	Aktyubinsk	29.60	49	LR	LR	16 32 42.1	
	comp=Z,24nm,18.4s,baz=252,slow=47						
ARCES	ARCESS Array B	33.78	2	P	P	16 16 28.4	0.0
	comp=Z,2.1nm,0.6s,baz=186,slow=8.2,SNR=16						
KK31	Karatay Array	37.57	64	*e*P	P	16 17 00.9	-0.4
KKAR	Karatay Array	37.57	64	*e*P	P	16 17 00.9	-0.4
SPITS	Spitsbergen Ar	42.49	358	P	P	16 17 41.2	-0.5
	comp=Z,4.3nm,1.0s,baz=121,slow=19,SNR=2.9						
KURBB	Kurchatov Arra	42.58	52	P	P	16 17 42.6	-0.2
	comp=Z,1.0nm,0.6s,baz=276,slow=8.5,SNR=8.9						
KURK	Kurchatov	42.64	51	P	P	16 17 42.6	-0.7
MK31	Makanchi Array	45.42	57	*e*P	P	16 18 04.8	-0.9
MKAR	Makanchi Array	45.42	57	P	P	16 18 05.2	-0.5
	comp=Z,3.8nm,0.5s,baz=274,slow=6.9,SNR=64						
MKAR	Makanchi Array	45.42	57	*e*P	P	16 18 04.7	-1.0
	comp=Z,39nm,0.6s						
MK01	Makanchi Array	45.43	57	*e*P	P	16 18 04.7	-1.1
ZALV	Zalesovo Beam	46.28	47	P	P	16 18 11.2	-1.1
	comp=Z,0.8nm,0.4s,baz=277,slow=11,SNR=5.8						
ZALV	Zalesovo Beam	46.28	47	*e*P	P	16 18 10.7	-1.7
SFJD	Kangerlussuaq	50.89	331	LR	LR	16 42 17.7	
	comp=Z,34nm,18.5s,baz=93,slow=38						
BOSA	Boshof	64.20	177	P	P	16 20 23.0	+1.1
	comp=Z,1.4nm,0.8s,baz=18,slow=3.2,SNR=3.8						
KSAR	Wonju Array Be	79.74	51	P	P	16 21 53.8	-1.3
KSRS	Korea Array	79.76	51	P	P	16 21 53.8	-1.4
	comp=Z,0.6nm,0.7s,baz=311,slow=4.5,SNR=4.4						
ASAR	Alice Springs	120.57	98	PKP	PKPdf	16 28 38.0	-1.1
	comp=Z,0.4nm,0.9s,baz=346,slow=1.1,SNR=5.6						

IDC 17 16:16:22.1±1.4, 27°.97N×139°.47E, h374km±26km, mb2.9/5, mb1 3.0/6, mb1mx2.6/66, mbtmp3.6/6, Error ellipse: s-maj=57.3km s-min=23.4km az=78.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	2.56	109	P	Pn	16 17 21.1	+1.3
	baz=272,slow=18						
JCJ				S	S	16 18 06.2	0.0
	baz=270,slow=20						
WRA	Warramunga Arr	47.89	187	P	P	16 24 24.0	-0.2
	0.3nm,0.9s,baz=3.6,slow=7.7,SNR=4.9						
MKAR	Makanchi Array	48.06	309	P	P	16 24 25.2	-0.1
	0.1nm,0.4s,baz=85,slow=7.9,SNR=2.7						
KURBB	Kurchatov Arra	50.70	314	P	P	16 24 44.6	-0.2
	0.2nm,0.3s,baz=91,slow=7.2,SNR=2.8						
ARCES	ARCESS Array B	71.92	340	P	P	16 27 05.5	+0.3
	2.1nm,0.9s,baz=66,slow=9.0,SNR=5.7						
FINES	FINESS Array B	76.09	333	P	P	16 27 29.0	-0.2
	1.1nm,0.3s,baz=60,slow=5.5,SNR=15						

GUC 17 16:17:46.1±0.7, 29°.50S×71°.26W, h47km±7km, ML3.4
SJA 17 16:17:46.7±1.3, 29°.31S×71°.47W, h31km±18km, ML3.4, MW3.5

ISC 17 16:17:40.7±2.4, 29°.43S±0°.04×71°.57W±0°.10, h1km±13km, n14, σ1§40/27, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	Las Campanas	0.86	62	*e*P	Pn	16 18 01.6	+1.4
LCO				*e*S	Sn	16 18 13.2	-0.3
LCO	Las Campanas	0.86	62	*e*P	Pn	16 18 01.5	+1.4
LCO				*i* S	Sn	16 18 12.2	-1.3
LCO				IAML		16 18 13.8	
	comp=N,2μm,0.4s						
TLL	Tololo Astrono	0.99	138	*e*P	Pn	16 18 02.4	+0.4
TLL				*i* S	Sb	16 18 14.6	+0.1
TLL				IAML		16 18 21.1	
	comp=E,2μm,0.5s						
GO04	Tololo Observa	1.00	138	*e*P	Pn	16 18 02.7	+0.6
GO04				*i* S	Sb	16 18 15.0	+0.3
GO04				IAML		16 18 19.5	
	comp=N,4μm,0.6s						
AROD	Rodeo	1.96	113	*e*P	Pg	16 18 20.1	+1.7
AROD				*e*S	Sg	16 18 45.2	+1.4
GO03	Copiap	2.17	33	*e*P	Pb	16 18 20.7	0.0
GO03				*i* S	Sb	16 18 48.0	-0.2
GO03				IAML		16 18 57.9	
	comp=E,315nm,0.3s						
ACDV	Cuesta del Vie	2.25	110	*e*P	Pg	16 18 24.6	+0.8
ACDV				*e*S	Sg	16 18 55.1	+2.0
AGUA	GUANDACOL	2.68	92	*e*P	Pg	16 18 31.8	-0.4
AGUA				*e*S	Sg	16 19 07.7	+0.8
VCA	Vinchina	3.02	78	*e*P	Pg	16 18 36.8	-1.8
VCA				IAML		16 18 41.7	
	comp=Z,114nm,0.2s						
VCA				*i* S	Sg	16 19 16.0	-1.8
AMOG	MOGNA	3.06	120	*e*P	Pb	16 18 36.6	+0.6
AMOG				*e*S	Sg	16 19 18.8	-0.2
AUSP	Uspallata	3.36	147	*e*P	Pb	16 18 39.6	-1.6
AUSP				*e*S	Sb	16 19 22.4	-0.3
RTCV	Cerro Valdivia	3.56	134	*e*P	Pb	16 18 42.3	-2.3
PEL	Peldehue	3.78	169	*e*P	Pn	16 18 42.4	+2.2
PEL				*i* S	Sn	16 19 25.6	+0.2
ARCO	CERRO ARCO	4.09	147	*e*P	Pb	16 18 50.7	-2.8
ARCO				*e*S	Sg	16 19 51.0	-1.0

*NIED 17

1.2nm,0.5s,baz=65,slow=7.8,SNR=10
BRVK Borovoye 50.17 311 *e*P **P 16 29 10.5 -0.1**
4.9nm,0.8s
INK Inuvik 51.94 28 P **P 16 29 25.1 +1.4**
0.6nm,0.7s,baz=287,slow=3.4,SNR=3.7
WRA Warramunga Arr 59.33 189 P **P 16 30 16.1 -1.2**
0.8nm,0.9s,baz=7.0,slow=7.1,SNR=7.0
ASAR Alice Springs 63.05 189 P **P 16 30 43.8 +1.3**
0.2nm,0.8s,baz=13,slow=11,SNR=3.0
HFS Hagfors 72.69 336 P **P 16 31 43.2 +0.5**
0.6nm,0.3s,baz=46,slow=8.3,SNR=8.0
AKASG Malin Array Be 73.40 323 P **P 16 31 46.6 -0.5**
0.3nm,0.3s,baz=40,slow=7.3,SNR=3.6
PDAR Pinedale Array 75.30 47 LR LR 17 05 22.2
comp=Z,7.0nm,20.7s,baz=29,slow=36

*CSEM **17** 16:33:05.6, 38.°57N×30.°23W, h10km, ML2.8*
PDA 17 16:33:05.6±0.6, 38.°57N×30.°23W, h10km, MD3.6, ML2.8, Error ellipse: s-maj=16.6km s-min=5.1km az=180.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CALA	**Caldeira**	**1.20**	**89**	*e*P	Pb	16 33 23.5	-4.9
CALA				*e*S	Sb	16 33 37.4	-6.5
CALA	**Caldeira**	**1.20**	**89**	*e*P	Pb	16 33 23.5	-4.9
CALA				*e*S	Sb	16 33 37.4	-6.5
PCED	**Cedros**	**1.20**	**87**	*e*P	Pb	16 33 24.0	-4.4
PCED				*e*S	Sb	16 33 37.3	-6.6
PCED				A	A	16 33 40.0	
	47nm,0.3s						
PCED	**Cedros**	**1.20**	**87**	*e*P	Pb	16 33 24.0	-4.4
PCED				*e*S	Sb	16 33 37.3	-6.6
HOR	**Horta**	**1.25**	**92**	*e*S	Sb	16 33 38.6	-6.9
HOR				A	A	16 33 40.7	
	130nm,0.2s						
HOR	**Horta**	**1.25**	**92**	*e*S	Sb	16 33 38.6	-6.9
PCAN	**Candelaria**	**1.37**	**94**	*e*P	Pn	16 33 26.0	-4.8
PCAN				*e*S	Sb	16 33 41.5	-7.4
PCAN				A	A	16 33 47.1	
	44nm,0.3s						
PCAN	**Candelaria**	**1.37**	**94**	*e*P	Pn	16 33 26.0	-4.8
PCAN				*e*S	Sb	16 33 41.5	-7.4
PICO	**Pico**	**1.41**	**92**	*e*P	Pg	16 33 41.8	+9.0
PICO				*e*S	Sg	16 33 57.3	+6.2
PICO				A	A	16 33 59.8	
	164nm,0.3s						
PICO	**Pico**	**1.41**	**92**	*e*P	Pg	16 33 41.8	+9.0
PICO				*e*S	Sg	16 33 57.3	+6.2
ROSA	**Rosais**	**1.56**	**84**	*e*P	Pn	16 33 28.8	-4.6
ROSA				*e*S	Sn	16 33 45.9	-7.8
ROSA				A	A	16 33 48.8	
	37nm,0.2s						
ROSA	**Rosais**	**1.56**	**84**	*e*P	Pn	16 33 28.8	-4.6
ROSA				*e*S	Sn	16 33 45.9	-7.8

IDC 17 16:40:26.7±4.0, 5.°75S×146.°03E, h98km±34km, mb3.2/2, mb1 3.3/4, mb1mx3.0/45, mbtmp3.6/4, MS3.0/1, Ms1 3.2/1, ms1mx2.4/24, Error ellipse: s-maj=37.4km s-min=23.5km az=120.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.80**	**163**	P	Pn	16 41 22.8	-0.4
	2.4nm,0.3s,baz=9.6,slow=10,SNR=12						
PMG				S	Sn	16 42 07.8	+0.9
	2.4nm,0.3s,baz=237,slow=20,SNR=10						
WRA	**Warramunga Arr**	**18.12**	**218**	P	P	16 44 31.5	+0.4
	0.2nm,0.3s,baz=44,slow=9.6,SNR=15						
WRA				S	S	16 47 53.0	-0.8
	0.0nm,0.3s,baz=41,slow=21,SNR=2.7						
ASAR	**Alice Springs**	**21.30**	**212**	P	P	16 45 04.2	-1.4
	0.5nm,0.5s,baz=44,slow=9.1,SNR=35						
ASAR				S	S	16 48 59.0	+2.1
	0.8nm,0.8s,baz=27,slow=22,SNR=5.2						
STKA	**Stephens Creek**	**26.33**	**189**	P	P	16 45 54.2	+0.8
	1.3nm,0.8s,baz=17,slow=11,SNR=1.7						
CMAR	**Chiang Mai Arr**	**52.28**	**298**	LR	LR	17 11 29.5	
	comp=Z,16nm,20.3s,baz=170,slow=36						

*ISCJB **17** 16:48:25.1±0.7, 33.°48S±0.°03×70.°52W±0.°04, h111km±5km, Error ellipse: s-maj=6.1km s-min=5.2km az=38.3*
*GUC **17** 16:48:25.9±0.6, 33.°43S×70.°50W, h106km±2km, ML4.0*
*SJA **17** 16:48:25.2±1.0, 33.°46S×70.°52W, h108km±6km, ML3.3, MW3.7*
ISC 17 16:48:26.2±1.4, 33.°47S±0.°04×70.°50W±0.°04, h102km±7km, n28, σ0⁸95/49, 3C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLCH	**Cerro Calan**	**0.08**	**338**	⇑*i*P	**Pn**	**16 48 40.5**	**+0.1**
CLCH				*e*S	**Sn**	**16 48 51.0**	**0.0**
CLCH				IAML		16 48 52.4	
	comp=N,19μm,0.7s						
ANTU	**Antumapu**	**0.15**	**228**	*e*P	**Pn**	**16 48 40.3**	**-0.2**
ANTU				*i*S	**Sn**	**16 48 50.9**	**-0.3**
ANTU				IAML		16 48 52.0	
	comp=E,4μm,0.3s						
FCH	**Farellones**	**0.23**	**51**	⇑*e*P	**Pn**	**16 48 40.5**	**-0.6**
FCH				*i*S	**Sn**	**16 48 51.8**	**-0.4**
FCH				IAML		16 48 54.4	
	comp=N,7μm,0.1s						
PEL	**Peldehue**	**0.36**	**335**	*e*P	**Pn**	**16 48 40.8**	**-0.6**
PEL				*e*S	**Sn**	**16 48 52.0**	**-0.7**
PEL				IAML		16 48 54.2	
	comp=N,7μm,0.3s						
ROC1	**El Roble**	**0.66**	**319**	*e*P	**Pn**	**16 48 43.8**	**+0.1**
ROC1				*e*S	**Sn**	**16 48 57.3**	**+0.6**
ROCH	**El Roble**	**0.66**	**319**	⇑*e*P	**Pn**	**16 48 43.7**	**+0.1**
ROCH				*i*S	**Sn**	**16 48 57.0**	**+0.3**
ROCH				IAML		16 49 00.2	
	comp=E,6μm,0.4s						
AAGR	**Agrelo**	**1.45**	**75**	*e*P	**Pn**	**16 48 52.6**	**+0.5**
AAGR				*i*S	**Sn**	**16 49 13.0**	**+1.3**
ARCO	**CERRO ARCO**	**1.46**	**65**	*e*P	**Pn**	**16 48 52.7**	**+0.5**
ARCO				*e*S	**Sn**	**16 49 12.9**	**+1.0**
ARCO				IAML		16 49 15.1	
	comp=Z,404nm,0.5s						
AUSP	**Uspallata**	**1.56**	**37**	*e*P	**Pn**	**16 48 54.3**	**+0.8**
AUSP				*i*S	**Sn**	**16 49 15.7**	**+1.4**
ASAL	**Salagasta**	**1.65**	**58**	*e*P	**Pn**	**16 48 55.0**	**+0.6**
ASAL				*i*S	**Sn**	**16 49 17.2**	**+1.2**
AVIZ	**Vizcacheras**	**1.66**	**91**	*i*P	**Pn**	**16 48 55.0**	**+0.5**
AVIZ				*e*S	**Sn**	**16 49 15.2**	**-0.9**
GO05	**HualaæØ**	**1.94**	**217**	*e*P	**Pn**	**16 48 58.4**	**+0.4**
GO05				*i*S	**Sn**	**16 49 23.4**	**+1.1**
GO05	**HualaæØ**	**1.94**	**217**	*e*P	**Pn**	**16 48 58.2**	**+0.2**
GO05				*e*S	**Sn**	**16 49 22.9**	**+0.6**
RTLS	**Leoncito**	**1.95**	**32**	*e*P	**Pn**	**16 48 59.8**	**+1.3**
RTLS				*e*S	**Sn**	**16 49 24.8**	**+1.7**
RTLS				IAML		16 49 26.6	
	comp=Z,257nm,0.7s						
RFA	**San Rafael**	**2.13**	**128**	*i*P	**Pn**	**16 49 00.8**	**+0.3**
RFA				IAML		16 49 01.3	
	comp=Z,62nm,0.5s						
RFA				*i*S	**Sn**	**16 49 27.8**	**+1.0**
RTCV	**Cerro Valdivia**	**2.30**	**46**	*e*P	**Pn**	**16 49 03.0**	**+0.1**
RTCV				*i*S	**Sn**	**16 49 31.0**	**+0.1**
ZON	**Zonda**	**2.46**	**39**	*e*P	**Pn**	**16 49 05.9**	**+1.0**
ZON				*i*S	**Sn**	**16 49 35.9**	**+1.4**
ZON				IAML		16 49 48.3	
	comp=Z,46nm,0.4s						
RTLL	**Cerro Villicun**	**2.74**	**39**	*e*P	**Pn**	**16 49 08.8**	**+0.2**
RTLL				*i*S	**Sn**	**16 49 40.7**	**-0.4**
RTLL				IAML		16 49 48.0	
	comp=N,202nm,0.5s						
ACAN	**Cantantal**	**3.03**	**68**	*i*P	**Pn**	**16 49 12.2**	**-0.2**
ACAN				*e*S	**Sn**	**16 49 46.5**	**-1.6**
AMOG	**MOGNA**	**3.04**	**35**	*e*P	**Pn**	**16 49 12.7**	**+0.1**
AMOG				*i*S	**Sn**	**16 49 48.2**	**-0.2**
GO04	**Tololo Observa**	**3.30**	**356**	*e*P	**Pn**	**16 49 15.1**	**-1.1**
GO04				*e*S	**Sn**	**16 49 52.9**	**-1.9**
TLL	**Tololo Astrono**	**3.30**	**355**	IAML		16 49 55.5	
	comp=N,286nm,0.4s						
AROD	**Rodeo**	**3.41**	**15**	*e*P	**Pn**	**16 49 18.7**	**+0.9**
AROD				*i*S	**Sn**	**16 49 59.4**	**+1.9**
MRA	**San Martin**	**4.16**	**77**	*i*P	**Pn**	**16 49 26.6**	**-1.0**
MRA				IAML		16 50 37.9	
	comp=Z,20nm,0.5s						
AGUA	**GUANDACOL**	**4.33**	**24**	*e*P	**Pn**	**16 49 29.8**	**-0.2**
SUCO	**SUCO**	**4.70**	**90**	*e*P	**Pn**	**16 49 33.4**	**-1.5**
VCA	**Vinchina**	**5.11**	**23**	*e*P	**Pn**	**16 49 39.7**	**-0.9**
VCA				IAML		16 50 44.1	
	comp=Z,40nm,0.3s						
TCA	**Tanti**	**5.43**	**69**	*i*P	**Pn**	**16 49 42.9**	**-1.9**
TCA				IAML		16 50 58.5	
	comp=Z,15nm,0.7s						

RSNC 17 17:25:52.2±1.1, 5.°78N×77.°73W, h7km±9km, ML2.8, Mw3.5, 1C, Near west coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOLC	**Bahia Solano**	**0.55**	**35**	*i*P	Pg	17 26 02.4	-0.4
SOLC				*e*S	Sg	17 26 09.7	-0.2
PLMC	**San Jos^ del**	**1.68**	**121**	*e*P	Pn	17 26 19.8	-2.3
DBBC	**Dabeiba**	**1.94**	**51**	*e*P	Pn	17 26 23.6	-2.1
DBBC				*i*		17 26 30.1	
	comp=Z,33nm,0.2s						
HELC	**Santa Helena**	**2.22**	**79**	⇑*i*P	Pn	17 26 27.8	-2.0
HELC				*i*		17 26 58.2	
	comp=Z,124nm,0.5s						
YOTC	**Yotoco, Valle**	**2.25**	**142**	*e*P	Pn	17 26 29.3	-0.7
YOTC				*i*		17 27 12.3	
	comp=Z,40nm,0.3s						
GUYC	**Guyana, Colomb**	**2.39**	**103**	*e*P	Pn	17 26 31.7	-0.5
GUYC				*i*		17 26 34.9	
	comp=Z,93nm,0.2s						
HORQ	**Saladito**	**2.53**	**154**	*e*P	Pn	17 26 33.2	-0.8
HORQ				*i*		17 27 11.3	
	comp=Z,18nm,0.4s						
ANIL	**Santa Ana**	**2.64**	**119**	*e*P	Pn	17 26 34.5	-1.1
NORC	**Norcasia**	**2.85**	**94**	*e*P	Pn	17 26 37.6	-0.6
NORC				*e*S	Sn	17 27 10.8	-2.1
ZARC	**Zaragoza, Cauc**	**3.32**	**59**	*e*P	Pn	17 26 43.9	-0.7
ZARC				*e*S	Sn	17 27 24.0	-0.3
ZARC				*i*		17 27 29.9	
	comp=Z,46nm,0.7s						
PTBC	**PUERTO BERRIO,**	**3.34**	**77**	*e*P	Pn	17 26 44.2	-0.6
PTBC				*e*S	Sn	17 27 24.2	-0.6
PTBC				*i*		17 27 35.9	
	comp=Z,25nm,0.6s						
BCIP	**Isla Barro Col**	**3.96**	**328**	*e*P	Pn	17 26 52.8	-0.7
BCIP				*e*S	Sn	17 27 38.5	-1.8
BCIP				*i*		17 27 42.0	
	comp=Z,10nm,0.4s						

*IDC **17** 17:26:24.9±0.4, 20.°78S×174.°17W, h0km, mb5.2/35, mb1 5.3/36, mb1mx5.2/44, mbtmp5.2/36, ML5.4/1, MS4.7/37, Ms1 4.7/37, ms1mx4.6/55, Error ellipse: s-maj=14.7km s-min=11.1km az=156.0*
*ISCJB **17** 17:26:25.5±0.1, 20.°61S±0.°03×174.°27W±0.°03, h10km, mb5.3/253, MS4.9/58, Error ellipse: s-maj=5.1km s-min=2.7km az=141.8*
*GCMT **17** 17:26:26.9±0.1, 20.°71S×173.°69W, h21km, MW5.3/111, Moment Tensor Solution. s94,c161; s111,c204; Duration: 1s1 Moment tensor: Scale 10^{17}Nm; M_{rr}1.02±.02; $M_{\theta\theta}$-0.09±.01; $M_{\phi\phi}$-0.92±.02; $M_{r\theta}$0.34±.03; $M_{\theta\phi}$-0.41±.01; $M_{\phi r}$0.61±.03; Best double couple: $M_0$1.27100×10^{17} NP1:ϕ_s26.00000°, δ62.00000°, λ94.00000°. NP2:ϕ_s198.00000°, δ28.00000°, λ82.00000°. Principal axes: T 1.2360, Plg73.0000°, Azm306.0000°; N 0.0710, Plg4.0000°, Azm205.0000°; P -1.3070, Plg17.0000°, Azm113.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **17** 17:26:26.9±0.1, 20.°59S×174.°31W, h10km, mb5.3/184 Error ellipse: s-maj=4.6km s-min=2.6km az=135.0*
*BJI **17** 17:26:26.1, 20.°22S×174.°05W, h7km, mb5.5/55, mB5.8/37, Ms5.3/35, Ms7 5.0/33*
*MOS **17** 17:26:29.5±1.0, 20.°51S×174.°38W, h33km, mb5.4/51, MS5.0/23, Error ellipse: s-maj=8.7km s-min=7.4km az=66.4*
ISC 17 17:26:28.1±0.5, 20.°57S±0.°04×174.°14W±0.°05, h19km±2km, h19km:pP-P, n814, σ1⁹45/840, mb5.3/252, MS4.9/58, 60C-17D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**4.24**	**70**	P	Pn	17 27 25.4	-6.2
	baz=4.0,SNR=35						
AFI	**Afiamalu**	**7.00**	**19**	Pn	**Pn**	**17 28 06.3**	**-3.4**
	42nm,0.3s,baz=225,slow=0.9,SNR=22						
AFI				Sn	Sn	17 29 18.3	-11
	22nm,0.3s,baz=49,slow=19,SNR=3.4						
AFI				LR	LR	17 30 36.3	
	comp=Z,4μm,21.7s,baz=190,slow=35						
AFI	**Afiamalu**	**7.00**	**19**	*e*Pn	**Pn**	**17 28 05.8**	**-3.9**
AFI				Sn	Sn	17 29 18.3	-11
AFI				*e*Sn	**Sn**	**17 29 31.4**	**+2.6**
RAO	**Raoul Island**	**9.30**	**201**	Pn	**Pn**	**17 28 39.4**	**-1.7**
	42nm,0.3s,baz=254,slow=20,SNR=3.0						
RAO				Sn	**Sn**	**17 30 18.3**	**-6.8**
	22nm,0.3s,baz=270,slow=20,SNR=5.4						
RAR	**Rarotonga**	**13.45**	**95**	Pn	Pn	17 29 31.0	-6.9
	14nm,0.3s,baz=261,slow=8.9,SNR=11						
RAR				Sn	Sn	17 31 43.8	-23
	4.3nm,0.3s,baz=90,slow=17,SNR=2.1						
RAR				LR	LR	17 35 23.3	
	comp=Z,2μm,18.1s,baz=230,slow=40						
KNTN	**Kanton**	**17.85**	**8**	*e*Pn	**Pn**	**17 30 31.8**	**-3.6**
	453nm,1.5s						
DZM	**Mont Dzumac**	**18.15**	**262**	*e*P	**P**	**17 30 42.2**	**+2.7**
	513nm,1.1s						
DZM				*e*LR	LR	17 34 53.5	
	5μm,22.6s						
DZM	**Mont Dzumac**	**18.15**	**262**	P	**P**	**17 30 42.0**	**+2.5**
	6.5nm,0.3s,baz=78,slow=18,SNR=60						
DZM				LR	LR	17 36 54.9	
	comp=Z,6μm,18.7s,baz=92,slow=35						
DZM	**Mont Dzumac**	**18.15**	**262**	*e*Pn	**P**	**17 30 42.2**	**+2.7**
	240nm,1.0s						
OUZ	**Omahuta**	**18.15**	**214**	*e*Pn	**Pn**	**17 30 38.9**	**-0.2**
	51nm,1.0s						
URZ	**Urewera**	**19.18**	**201**	P	**Pn**	**17 30 51.4**	**-0.2**
	6.1nm,0.3s,baz=360,slow=4.5,SNR=37						
URZ				LR	LR	17 37 36.0	
	comp=Z,2μm,21.4s,baz=14,slow=35						
URZ	**Urewera**	**19.18**	**201**	*e*P	**P**	**17 30 50.9**	**+0.3**
	47nm,0.8s						
BKZ	**Black Stump Fm**	**20.21**	**201**	*e*P	**P**	**17 31 00.6**	**-1.3**
	72nm,1.2s						
BFZ	**Birch Farm**	**21.66**	**200**	*e*P	**P**	**17 31 16.7**	**-0.7**
	79nm,0.6s						
SNZO	**South Karori**	**22.74**	**202**	*e*P	**P**	**17 31 27.2**	**-1.8**
	187nm,1.1s						
TBI	**Tubuai**	**23.05**	**101**	*e*P	**P**	**17 31 28.5**	**-3.9**
	260nm,1.1s						
TBI				*e*S	S	17 35 28.8	-14
	1μm,26.5s						
TBI				*e*LQ	LQ	17 35 54.7	
	3μm,27.8s						
TBI				*e*LR	LR	17 37 01.1	
	5μm,27.8s,baz=272						
TBI	**Tubuai**	**23.05**	**101**	*e*T	T	17 54 58.3	
	21nm,0.3s						
PAE	**Paea**	**23.38**	**87**	*e*P	**P**	**17 31 30.8**	**-5.0**
	10.0nm,0.8s						
PAE	**Paea**	**23.38**	**87**	*e*T	T	17 55 21.1	
	6.1nm,0.3s						
PPT2	**Papeete2**	**23.40**	**87**	*e*P	**P**	**17 31 31.6**	**-4.5**
	59nm,1.1s						
PPT2				*e*S	S	17 35 35.4	-13
	1μm,23.8s						
PPT2				*e*LQ	LQ	17 35 57.5	
	4μm,27.8s						
PPT2				*e*LR	LR	17 37 08.2	
	5μm,26.2s,baz=253						
PPT2	**Papeete2**	**23.40**	**87**	*e*T	T	17 55 23.2	
	8.0nm,0.4s						
PPT	**Papeete**	**23.40**	**87**	P	**P**	**17 31 34.7**	**-1.3**
	28nm,0.7s,baz=248,slow=5.4,SNR=3.3						
PPT				LR	LR	17 39 58.5	
	comp=Z,2μm,18.2s,baz=278,slow=35						
TIAR	**Tiarei**	**23.62**	**87**	*e*P	**P**	**17 31 33.5**	**-4.7**
	20nm,0.9s						
TIAR	**Tiarei**	**23.62**	**87**	*e*T	T	17 55 39.0	
	2.8nm,0.3s						
TVO	**Taravao**	**23.67**	**88**	*e*P	**P**	**17 31 33.9**	**-4.8**
	46nm,1.3s						
THZ	**Tophouse**	**23.80**	**205**	*e*P	**P**	**17 31 38.2**	**-1.6**
	77nm,0.5s						
KHZ	**Kahutara**	**24.13**	**203**	*e*P	**P**	**17 31 41.6**	**-1.1**
	71nm,0.7s						
LTZ	**Lake Taylor**	**24.91**	**204**	*e*P	**P**	**17 31 48.8**	**-1.1**
	134nm,0.7s						
LTZ	**Lake Taylor**	**24.91**	**204**	P	**P**	**17 31 53.2**	**+3.2**
INZ	**Inchbonnie**	**25.19**	**206**	P	**P**	**17 31 51.5**	**-0.9**
TARA	**Tarawa**	**25.21**	**328**	*e*P	**P**	**17 31 50.4**	**-2.3**
	18nm,1.1s						
OXZ	**Oxford**	**25.47**	**204**	*e*P	**P**	**17 31 54.1**	**-0.9**
	148nm,0.7s						
OXZ	**Oxford**	**25.47**	**204**	P	**P**	**17 31 54.0**	**-0.9**
MQZ	**McQueen's Vall**	**25.57**	**203**	*e*P	**P**	**17 31 55.9**	**+0.1**
	53nm,1.1s						
MQZ	**McQueen's Vall**	**25.57**	**203**	P	**P**	**17 31 57.8**	**+2.0**
PMOR	**Pomariorio Ree**	**25.58**	**82**	*e*T	T	17 58 05.7	
	5.3nm,0.4s						
WVZ	**Waitaha Valley**	**25.77**	**206**	P	**P**	**17 31 59.4**	**+1.8**
RPZ	**Rata Peaks**	**26.18**	**205**	P	**P**	**17 32 00.1**	**-1.2**
	38nm,0.6s,baz=243,slow=0.8,SNR=25						
RPZ	**Rata Peaks**	**26.18**	**205**	*e*P	**P**	**17 32 01.3**	**-0.1**
	150nm,1.3s						
RPZ	**Rata Peaks**	**26.18**	**205**	P	**P**	**17 32 03.2**	**+1.8**
FOZ	**Fox Glacier**	**26.53**	**207**	*e*P	**P**	**17 32 04.1**	**-0.4**
	177nm,0.6s						
FOZ	**Fox Glacier**	**26.53**	**207**	P	**P**	**17 32 06.6**	**+2.1**
LBZ	**Lake Benmore**	**27.08**	**205**	*e*P	**P**	**17 32 07.6**	**-1.9**
	48nm,0.9s						
LBZ	**Lake Benmore**	**27.08**	**205**	P	**P**	**17 32 08.6**	**-0.9**
HNR	**Honiara**	**27.32**	**290**	P	**P**	**17 32 09.0**	**-2.9**
HNR	**Honiara**	**27.32**	**290**	P	**P**	**17 32 10.7**	**-1.2**
	39nm,0.7s,baz=152,slow=1.6,SNR=5.7						
HNR				LR	LR	17 42 10.4	
	comp=Z,2μm,18.2s,baz=151,slow=34						
HNR	**Honiara**	**27.32**	**290**	*e*P	**P**	**17 32 09.0**	**-2.9**
	82nm,0.7s						
HNR	**Honiara**	**27.32**	**290**	*e*P	**P**	**17 32 09.0**	**-2.9**
HNR				pmax	pmax		
	comp=Z,82nm,0.7s						
JCZ	**Jackson Bay**	**27.41**	**207**	P	**P**	**17 32 15.6**	**+3.1**
ODZ	**Otahua Downs**	**27.46**	**204**	*e*P	**P**	**17 32 13.4**	**+0.6**
	comp=Z,34nm,0.8s						
ODZ	**Otahua Downs**	**27.46**	**204**	P	**P**	**17 32 13.5**	**+0.6**
WKZ	**Wanaka**	**27.92**	**206**	*e*P	**P**	**17 32 18.4**	**+1.3**
	comp=Z,82nm,0.8s						
WKZ	**Wanaka**	**27.92**	**206**	P	**P**	**17 32 19.0**	**+1.9**
MLZ	**Mavora Lakes**	**28.73**	**207**	*e*P	**P**	**17 32 22.9**	**-1.3**
	comp=Z,81nm,1.2s						
DCZ	**Deep Cove**	**29.22**	**208**	*e*P	**P**	**17 32 27.1**	**-1.4**
	comp=Z,39nm,0.9s						
WHZ	**Wether Hill Ro**	**29.23**	**206**	*e*P	**P**	**17 32 28.2**	**-0.4**
	comp=Z,51nm,0.8s						
ARMA	**Armidale**	**32.31**	**245**	P	**P**	**17 32 55.9**	**-0.3**
	baz=32,SNR=15						
ARMA	**Armidale**	**32.31**	**245**	*e*P	**P**	**17 32 55.2**	**-0.9**
	comp=Z,12nm,0.8s						
EIDS	**Eidsvold**	**32.31**	**255**	P	**P**	**17 32 55.2**	**-0.9**
	baz=32,SNR=6.3						
EIDS	**Eidsvold**	**32.31**	**255**	*e*P	**P**	**17 32 55.2**	**-0.9**
	comp=Z,26nm,1.1s						
MGCD	**Mangrove Creek**	**33.29**	**241**	P	**P**	**17 33 04.8**	**+0.2**
	baz=34,SNR=13						
RMQ	**Roma**	**34.44**	**253**	P	**P**	**17 33 14.8**	**+0.1**
	baz=35,SNR=38						
TAOE	**Nuku Hiva Isla**	**34.80**	**75**	*e*P	**P**	**17 33 13.3**	**-4.7**
	comp=Z,112nm,1.2s						
TAOE				*e*S	S	17 38 38.0	-10
	comp=Z,303nm,26.9s						
TAOE				*e*LR	LR	17 42 20.4	
	comp=Z,3μm,27.3s,baz=249						
TAOE	**Nuku Hiva Isla**	**34.80**	**75**	*e*T	T	18 09 35.7	
	comp=Z,30nm,0.3s						
CNB	**Canberra Magne**	**35.21**	**238**	P	**P**	**17 33 21.3**	**0.0**
	baz=35,SNR=18						
CAN	**Canberra**	**35.50**	**238**	*e*P	**P**	**17 33 23.4**	**-0.3**
	comp=Z,42nm,0.8s						
CAN	**Canberra**	**35.50**	**238**	*e*P	**P**	**17 33 23.4**	**-0.3**
CAN				pmax	pmax		
	comp=Z,42nm,0.8s						
YNG	**Young**	**35.74**	**240**	P	**P**	**17 33 25.6**	**-0.2**
	baz=36,SNR=7.1						
RKT	**Rikitea**	**36.37**	**101**	*e*LR	LR	17 43 10.1	
	comp=Z,2μm,27.0s,baz=269						
RKT	**Rikitea**	**36.37**	**101**	*e*T	T	18 11 37.3	
	comp=Z,6.1nm,0.3s						
CTA	**Charters Tower**	**37.08**	**264**	P	**P**	**17 33 36.8**	**-0.5**
	comp=Z,37nm,0.7s,baz=96,slow=11,SNR=46						
CTAO	**Charters Tower**	**37.08**	**264**	*e*P	**P**	**17 33 36.6**	**-0.8**
	comp=Z,47nm,0.9s						
CTAO	**Charters Tower**	**37.08**	**264**	*e*P	**P**	**17 33 36.6**	**-0.8**
CTAO				pmax	pmax		
	comp=Z,47nm,0.9s						
CMSA	**Cobar Meteorol**	**37.51**	**245**	P	**P**	**17 33 39.6**	**-1.4**
	baz=38,SNR=110						
QLP	**Quilpie**	**38.49**	**253**	P	**P**	**17 33 48.3**	**-0.9**
	baz=39,SNR=39						
TOO	**Toolangi**	**38.80**	**235**	P	**P**	**17 33 51.4**	**-0.4**
	baz=39,SNR=52						
TOO	**Toolangi**	**38.80**	**235**	P	**P**	**17 33 51.6**	**-0.1**
TOO				pmax	pmax		
	comp=Z,68nm,1.2s						
PMG	**Port Moresby**	**38.89**	**281**	P	**P**	**17 33 51.7**	**-1.0**
	comp=Z,42nm,0.9s,baz=84,slow=8.9,SNR=8.7						
PMG				LR	LR	17 47 02.3	
	comp=Z,1μm,21.9s,baz=180,slow=32						
PMG	**Port Moresby**	**38.89**	**281**	*e*P	**P**	**17 33 51.8**	**-1.0**
	comp=Z,54nm,0.8s						
MOO	**Moorlands**	**39.07**	**227**	P	**P**	**17 33 54.9**	**+1.1**
	baz=39,SNR=4.7						
MTSU	**Mount Surprise**	**39.20**	**266**	P	**P**	**17 33 54.8**	**-0.5**
	baz=39,SNR=41						
STKA	**Stephens Creek**	**41.02**	**245**	P	**P**	**17 34 09.1**	**-1.2**
	comp=Z,30nm,0.8s,baz=88,slow=11,SNR=104						
STKA				LR	LR	17 49 40.9	
	comp=Z,1μm,18.9s,baz=78,slow=34						
STKA	**Stephens Creek**	**41.02**	**245**	P	**P**	**17 34 09.1**	**-1.2**
	baz=41,SNR=63						
STKA	**Stephens Creek**	**41.02**	**245**	*e*P	**P**	**17 34 09.2**	**-1.1**
	comp=Z,6.3nm,0.6s						
STKA	**Stephens Creek**	**41.02**	**245**	*e*P	**P**	**17 34 09.2**	**-1.1**
STKA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
**

baz=53,SNR=22
FORT Forrest 52.58 246 *e*P **P 17 35 39.5 -1.3**
comp=Z,95nm,0.7s
GUMO Guam 52.69 307 P **P 17 35 41.2 -0.4**
comp=Z,89nm,0.7s,baz=172,slow=11,SNR=6.2
GUMO LR LR 17 56 41.2
comp=Z,456nm,19.2s,baz=134,slow=34
MTN Manton Dam 52.78 269 P **P 17 35 41.1 -1.3**
baz=53,SNR=22
MTN Manton Dam 52.78 269 *e*P **P 17 35 41.1 -1.3**
comp=Z,53nm,0.7s
WRKA Warakurna 52.92 254 P **P 17 35 41.7 -1.7**
baz=53,SNR=60
KNRA Kununurra 54.26 265 P **P 17 35 52.4 -0.8**
baz=54,SNR=19
PALU Palau 57.61 293 P **P 17 36 17.1 -0.1**
baz=58,SNR=4.9
SBA Scott Base 58.07 185 *e*P **P 17 36 19.3 -0.2**
comp=Z,29nm,0.9s
SBA Scott Base 58.07 185 *e*P **P 17 36 19.3 -0.2**
SBA pmax pmax
comp=Z,29nm,0.9s
VNDA Vanda 58.19 186 P **P 17 36 22.8 +2.4**
comp=Z,9.8nm,0.8s,baz=7.7,slow=7.0,SNR=65
VNDA LR LR 18 01 44.2
comp=Z,366nm,18.0s,baz=11,slow=37
VNDA Vanda 58.19 186 *e*P **P 17 36 21.9 +1.5**
comp=Z,14nm,0.9s
VNDA Vanda 58.19 186 *e*P **P 17 36 21.9 +1.5**
VNDA pmax pmax
comp=Z,14nm,0.9s
RPN Rapa Nui 59.08 110 LR LR 17 54 55.7
comp=Z,709nm,20.7s,baz=266,slow=29
SOEI Soe 60.12 270 *e*P **P 17 36 35.3 +0.4**
comp=Z,173nm,0.8s
BATI Baumata 60.54 270 P **P 17 36 38.8 +1.1**
comp=Z,33nm,0.6s,baz=164,slow=4.6,SNR=8.3
BATI LR LR 18 04 06.8
comp=Z,950nm,18.2s,baz=128,slow=37
TNTI Ternate 60.99 283 *e*P **P 17 36 38.9 -1.7**
comp=Z,68nm,1.0s
KLBR Kellerberrin 61.29 245 P **P 17 36 42.0 -0.5**
baz=61,SNR=38
MEEK Meekatharra 61.30 250 P **P 17 36 41.7 -1.0**
baz=62,SNR=16
MBWA Marble Bar 61.36 257 *e*P **P 17 36 41.8 -1.3**
comp=Z,23nm,0.6s
NWAO Narrogin (SRO) 61.56 243 P **P 17 36 44.6 +0.2**
comp=Z,44nm,1.0s,baz=351,slow=7.7,SNR=16
NWAO LR LR 18 02 19.4
comp=Z,814nm,19.0s,baz=331,slow=35
NWAO Narrogin (SRO) 61.56 243 P **P 17 36 41.1 -3.2**
baz=62,SNR=13
NWAO Narrogin (SRO) 61.56 243 *e*P **P 17 36 42.8 -1.5**
comp=Z,46nm,0.9s
NWAO Narrogin (SRO) 61.56 243 *e*P **P 17 36 42.8 -1.5**
NWAO pmax pmax
comp=Z,46nm,0.9s
RKGY Rocky Gully 61.58 241 P **P 17 36 43.9 -0.5**
baz=62,SNR=8.4
BLDU Ballidu 62.32 245 P **P 17 36 48.8 -0.7**
baz=62,SNR=40
MUN Mundaring 62.55 244 P **P 17 36 51.0 +0.1**
baz=63,SNR=17
MORW Morawa 63.14 247 P **P 17 36 54.6 -0.4**
baz=63,SNR=8.1
CBIJ Chichi jima 63.52 317 *e*P **P 17 36 55.3 -2.0**
comp=Z,89nm,1.0s
JCJ Chichijima 63.52 317 P **P 17 36 57.1 -0.2**
comp=Z,44nm,0.7s,baz=233,slow=5.1,SNR=6.6
H01W1 Cape Leeuwin H 63.85 240 P **P 17 37 01.2 +2.0**
baz=102,slow=8.9,SNR=3.8
H01W2 Cape Leeuwin H 63.87 240 P **P 17 37 01.5 +2.2**
baz=102,slow=8.9,SNR=2.9
H01W3 Cape Leeuwin H 63.87 240 P **P 17 37 01.7 +2.3**
baz=102,slow=8.9,SNR=2.9
LUWI Luwuk 64.51 279 P P 17 37 13.4 +9.2
DAV Davao City (W) 65.27 288 LR LR 18 05 11.9
comp=Z,304nm,18.4s,baz=102,slow=36
CASY Casey 65.45 205 *e*P **P 17 37 10.6 +1.2**
comp=Z,34nm,1.0s
GIRL Giralia 66.01 254 P **P 17 37 12.5 -1.3**
baz=66,SNR=5.5
MPSI Mapaga 67.69 279 P **P 17 37 23.7 -0.9**
JHJ2 Mitsune 69.15 320 *e*P **P 17 37 34.1 +0.9**
comp=Z,373nm,1.0s
JHJ Hachijo jima 2 69.17 320 P **P 17 37 34.4 +0.9**
comp=Z,273nm,0.8s,baz=172,slow=7.7,SNR=7.0
QSPA South Pole Qui 69.50 180 P **P 17 37 37.1 +1.8**
comp=Z,47nm,1.0s,baz=34,slow=3.3,SNR=28
JAGI Jajag, Banyuwa 70.00 268 P **P 17 37 37.5 -1.5**
MYLDM Lahad Datu 70.86 283 *e*P **P 17 37 45.6 +1.4**
comp=Z,40nm,0.9s
MTKI Muara Teweh, K 71.86 276 P **P 17 37 50.5 +0.2**
comp=Z,38nm,1.0s
PWJI Pagerwojo 72.34 268 P **P 17 37 57.5 +4.3**
INU Inuyama 72.36 320 *e*P **P 17 37 52.8 0.0**
comp=Z,75nm,1.3s
MIR Mirnyy 72.45 205⇑ *i*P **P 17 37 55.0 +2.1**
MIR *i* 17 38 14.0
MIR pmax pmax
comp=Z,81nm,1.5s
MJAR Matsushiro Arr 72.47 321 P **P 17 37 53.5 +0.1**
comp=Z,27nm,0.8s,baz=168,slow=6.3,SNR=96
MJAR LR LR 18 03 41.0
comp=Z,278nm,21.9s,baz=160,slow=31
MAJO Matsushiro 72.47 321 *e*P **P 17 37 53.3 -0.2**
comp=Z,81nm,0.8s
MAJO Matsushiro 72.47 321 *c i*P **P 17 37 53.7 +0.2**
MAJO pmax pmax
comp=Z,51nm,1.0s
MAT Matsushiro 72.47 321 P **P 17 37 53.6 +0.1**
MAT S **S 17 47 17.6 +0.9**
MJB9 Matsu-Tunnel 72.47 321 *e*P **P 17 37 53.9 +0.4**
comp=Z,87nm,0.8s
PCJI Pacitan 72.87 268 P **P 17 37 56.5 +0.2**
JOW Kunigami 73.02 308 P **P 17 37 57.7 +0.8**
comp=Z,27nm,0.7s,baz=230,slow=5.0,SNR=5.9
JOW LR LR 18 02 54.0
comp=Z,446nm,22.0s,baz=149,slow=30
H06E1 SOCORRO T-PHAS 73.25 62 T T 18 58 23.1
NIKH Nikolski High 73.38 3 *e*P **P 17 37 58.7 +0.3**
comp=Z,116nm,1.1s
SMY Shemya 73.70 353 *e*P **P 17 38 00.1 -0.2**
comp=Z,78nm,0.9s
SMY Shemya 73.70 353 *e*P **P 17 38 00.1 -0.2**
SMY pmax pmax
comp=Z,78nm,0.9s
YUK Yuzh-Kuril'sk 73.99 331 *c i*P P 17 37 57.0 -5.2
YUK *i* 17 40 41.7
YUK *e*S **SKiKP 17 47 27.0 -2.9**
YUK *e*SS **SS 17 52 12.1 -6.8**
YUK pmax pmax
comp=Z,279nm,1.0s
YUK pmax pmax
comp=N,151nm,0.7s
YUK pmax pmax
comp=E,115nm,0.7s
YUK pmax pmax
comp=Z,538nm,1.5s
KUR Kuril'sk 74.06 333 *e*P **P 17 38 00.4 -2.2**
KUR *e*S **S 17 47 39.4 +5.1**
KUR pmax pmax
comp=Z,136nm,1.6s
KUR pmax pmax
comp=Z,459nm,3.3s
PBKI Pangkalan Bun 74.25 273 P **P 17 38 06.7 +2.2**
comp=Z,110nm,1.1s
UNV Unalaska Valle 74.40 5 *e*P **P 17 38 04.6 +0.2**
comp=Z,53nm,1.1s
SNCC San Nicolas Is 74.69 45 P **P 17 38 07.6 +1.0**
baz=232
JNU Nakatsue 74.85 315 P **P 17 38 08.0 +0.4**
comp=Z,45nm,0.9s,baz=109,slow=3.3,SNR=37
JNU LR LR 18 06 07.3
comp=Z,222nm,21.6s,baz=129,slow=32
JNU Nakatsue 74.85 315 *e*P **P 17 38 08.1 +0.6**
comp=Z,97nm,1.1s
SCZ2 Santa Cruz Isl 75.07 44 P **P 17 38 09.7 +0.8**
baz=232
STKI Sintang 75.41 276 P **P 17 38 14.5 +3.3**
comp=Z,26nm,1.1s
PKM Mcpherson Peak 75.51 44 P **P 17 38 12.5 +1.0**
baz=232
BLG Laguna Peak, P 75.52 45 P **P 17 38 11.9 +0.6**
baz=232
CIS Catalina Islan 75.52 46 P **P 17 38 12.4 +1.0**
baz=233
ASAJ Asahikawa 75.57 329 P **P 17 38 13.1 +1.7**
comp=Z,22nm,0.7s,baz=202,slow=7.0,SNR=41
ASAJ LR LR 18 09 15.6
comp=Z,642nm,18.8s,baz=158,slow=34
ASAJ Asahikawa 75.57 329 *e*P **P 17 38 13.1 +1.7**
comp=Z,35nm,0.8s
109C Camp Elliot, M 76.10 47 P **P 17 38 15.3 +0.6**
baz=234
MWC Mount Wilson 76.25 45 *e*P **P 17 38 16.6 +0.8**
comp=Z,22nm,1.4s
MWC Mount Wilson 76.25 45 *e*P **P 17 38 16.6 +0.8**
MWC pmax pmax
comp=Z,23nm,1.4s
ARVC Arvin 76.29 44 P **P 17 38 16.5 +0.8**
baz=232
LPIG La Paz 76.36 58 LR LR 18 06 40.3
comp=Z,818nm,18.2s,baz=222,slow=32
MURC Murrieta 76.46 46 P **P 17 38 17.1 +0.3**
baz=234
SDPT Sand Point 76.51 8 *e*P **P 17 38 19.7 +3.3**
comp=Z,95nm,1.0s
BFSC Mount Baldy Ra 76.53 45 P **P 17 38 17.5 +0.2**
baz=233
VES Vestal, Richgr 76.56 43 P **P 17 38 17.7 +0.4**
baz=232,SNR=7.2
KMRM Mail Ridge 76.57 37 *e*P **P 17 38 19.0 +1.8**
comp=Z,42nm,0.9s
MONP2 Monument Peak 76.57 47 P **P 17 38 18.5 +0.9**
baz=234,SNR=9.5
YULB Yu-li 76.59 301 *e*P **P 17 38 17.0 -0.7**
comp=Z,25nm,0.7s
IKP In-Ko-Pah, Jac 76.65 47 P **P 17 38 18.7 +0.8**
baz=235,SNR=7.7
LEM Lembang 76.65 268 P **P 17 38 18.3 -0.2**
comp=Z,148nm,0.8s,baz=82,slow=9.6,SNR=31
LEM LR LR 18 12 14.1
comp=Z,414nm,19.1s,baz=108,slow=36
EDW2 Edwards Air Fo 76.69 45 P **P 17 38 18.7 +0.6**
baz=233,SNR=17
NACB Ninganchiao 76.74 302 *e*P **P 17 38 17.9 -0.6**
comp=Z,155nm,1.3s
ISA Isabella, Lake 76.85 44 P **P 17 38 19.7 +0.7**
baz=233,SNR=10
ISA Isabella, Lake 76.85 44 *e*P **P 17 38 20.0 +1.0**
comp=Z,19nm,1.0s
ISA Isabella, Lake 76.85 44 *e*P **P 17 38 20.0 +1.0**
ISA pmax pmax
comp=Z,19nm,1.0s
PFO Pinyon Flats O 76.96 46 P **P 17 38 20.3 +0.6**
baz=234,SNR=6.4
PFO Pinyon Flats O 76.96 46 *e*P **P 17 38 20.8 +1.0**
comp=Z,10nm,1.0s
PFO Pinyon Flats O 76.96 46 *e*P **P 17 38 20.8 +1.0**
PFO pmax pmax
comp=Z,11nm,1.0s
XPFO Piæon Flat 76.97 46 *e*P **P 17 38 20.8 +1.0**
comp=Z,8.9nm,1.0s
PET Petropavlovsk 77.00 344 *e*P **P 17 38 19.3 +0.1**
comp=Z,40nm,1.3s
PET Petropavlovsk 77.00 344 *e*P **P 17 38 18.7 -0.5**
PET *e*S **S 17 48 04.8 -1.7**
PET *e*PS **PnS 17 48 40.6 -6.1**
PET *e*PPS PPS 17 48 58.3
PET *e*SS **SS 17 53 06.0 +1.8**
PET pmax pmax
comp=Z,24nm,1.0s
PET pmax pmax
comp=Z,400nm,12.7s
PET pmax pmax
comp=Z,300nm,13.4s
PET MLR MLR
comp=Z,400nm,20.0s
KSM Kuching 77.01 277 *e*P **P 17 38 20.3 0.0**
comp=Z,28nm,0.9s
SWSC Sam W. Stewart 77.03 47 P **P 17 38 20.7 +0.7**
baz=235
SSLB Suanglung 77.06 302 *e*P **P 17 38 19.5 -0.8**
comp=Z,29nm,0.9s
TPUB Ta-pu 77.08 301 *e*P **P 17 38 19.7 -0.8**
comp=Z,87nm,0.7s
CMB Columbia Colle 77.11 41 *e*P **P 17 38 21.3 +1.0**
comp=Z,12nm,1.0s
CMB Columbia Colle 77.11 41 *e*P **P 17 38 21.3 +1.0**
CMB pmax pmax
comp=Z,12nm,1.0s
YHNB Yeheng 77.16 303 *e*P **P 17 38 21.4 +0.4**
comp=Z,87nm,1.2s
TATO Taipei 77.22 303 *e*P **P 17 38 22.2 +1.0**
comp=Z,171nm,1.4s
LRMC Laurel Mtn Rad 77.25 44 P **P 17 38 21.8 +0.5**
baz=233,SNR=12
PEA0B Petropavlovsk- 77.33 343 *e*P **P 17 38 21.6 +0.4**
comp=Z,49nm,0.9s
PETK Petropavlovsk- 77.33 343 P **P 17 38 21.5 +0.4**
comp=Z,33nm,0.8s,baz=102,slow=8.9,SNR=78
PETK LR LR 18 05 57.5
comp=Z,513nm,21.8s,baz=153,slow=31
AFDM Forest Hills D 77.33 40 *e*P **P 17 38 22.6 +1.0**
comp=Z,8.2nm,1.0s
WDC Whiskeytown Da 77.47 38 *e*P **P 17 38 23.4 +1.2**
comp=Z,12nm,1.0s
WDC Whiskeytown Da 77.47 38 *e*P **P 17 38 23.4 +1.2**
WDC pmax pmax
comp=Z,12nm,1.0s
BELC Belle Mtn. Jos 77.50 46 P **P 17 38 23.2 +0.4**
baz=235,SNR=13
DBJI Dramaga 77.55 268 P **P 17 38 23.9 +0.5**
comp=Z,146nm,0.9s
CWC Cottonwood Cre 77.57 43 P **P 17 38 23.7 +0.6**
baz=233
SKJI Sukabumi 77.58 267 P **P 17 38 23.6 +0.1**
YSS Yuzh-Sakhalins 77.63 331 *e*P **P 17 38 23.4 +0.5**
comp=Z,77nm,0.9s
YSS Yuzh-Sakhalins 77.63 331α *i*P **P 17 38 24.2 +1.2**
YSS *e* 17 38 34.5
YSS *e*S **S 17 48 14.3 +0.7**
YSS pmax pmax
comp=N,20nm,0.9s
YSS pmax pmax
comp=Z,70nm,0.9s
YSS pmax pmax
comp=E,40nm,0.7s
YSS pmax pmax
comp=Z,300nm,6.0s
YSS pmax pmax
comp=N,100nm,5.0s
YSS smax smax
comp=N,300nm,14.0s
YSS smax smax
comp=E,200nm,11.0s
N02D Trinity Center 77.64 37 P **P 17 38 24.4 +1.1**
baz=229
BC3 Big Chuckawall 77.67 47 P **P 17 38 24.4 +0.7**
baz=235,SNR=7.4
OMMB Old Mammoth Mi 77.70 42 *e*P **P 17 38 25.2 +1.2**
comp=E,19nm,1.4s
O03D Paynes Creek 77.71 38 P **P 17 38 24.3 +0.6**
baz=229
GSC Goldstone, Bar 77.72 45 P **P 17 38 24.5 +0.5**
baz=234,SNR=10
GSC Goldstone, Bar 77.72 45 *e*P **P 17 38 24.4 +0.5**
comp=E,11nm,0.9s
GSC Goldstone, Bar 77.72 45 *e*P **P 17 38 24.4 +0.5**
GSC pmax pmax
comp=Z,11nm,0.9s
MPMC Manual Prospec 77.72 44 P **P 17 38 24.9 +0.8**
baz=233,SNR=25
HEC Hector,Ludlow 77.76 45 P **P 17 38 24.6 +0.5**
baz=234,SNR=14
GLA Glamis 77.76 48 P **P 17 38 25.2 +1.0**
baz=236
DAC Darwin (Calif) 77.78 44 *e*P **P 17 38 26.7 +2.3**
comp=Z,14nm,1.2s
DAC Darwin (Calif) 77.78 44 *e*P **P 17 38 26.7 +2.3**
DAC pmax pmax
comp=Z,14nm,1.2s
MLAC Mammoth, Mammo 77.82 42 P **P 17 38 25.5 +0.9**
baz=232
M02C Callahan 77.83 37 P **P 17 38 25.6 +1.2**
baz=228
TIN Tinemaha, Big 77.85 43 P **P 17 38 25.5 +0.9**
baz=232
L02D Cave Junction, 77.92 36 P **P 17 38 26.2 +1.5**
baz=228
WAKR Walker 77.98 41 *e*P **P 17 38 26.8 +1.4**
comp=Z,34nm,1.2s
YBH Yreka Blue Hor 78.14 37 *e*P **P 17 38 27.5 +1.4**
comp=Z,10nm,0.9s,baz=172,slow=8.4,SNR=11
YBH Yreka Blue Hor 78.14 37 *e*P **P 17 38 27.5 +1.4**
comp=Z,31nm,1.4s
YBH Yreka Blue Hor 78.14 37 *e*P **P 17 38 27.5 +1.4**
YBH pmax pmax
comp=Z,31nm,1.4s
IRM Iron Mountain 78.17 47 P **P 17 38 27.2 +0.8**
baz=235,SNR=17
GMRC Granite Mounta 78.18 46 P **P 17 38 27.2 +0.7**
baz=235
PNTR Pine Nut 78.25 40 *e*P **P 17 38 28.2 +1.3**
comp=Z,30nm,1.0s
113A Mohawk Valley, 78.34 48 *e*P **P 17 38 28.6 +1.3**
VCNR Virginia City 78.35 40 *e*P **P 17 38 28.9 +1.4**
comp=Z,55nm,1.5s
GRAC Grapevine Rang 78.36 43 P **P 17 38 28.5 +1.1**
baz=233,SNR=19
Y12C Blythe 78.37 47 P **P 17 38 28.2 +0.8**
baz=236
FURC Furnace Creek, 78.37 44 P **P 17 38 28.2 +0.9**
baz=234
HSIG 78.38 53 *e*P **P 17 38 30.4 +2.8**
comp=Z,7.7nm,0.8s
TUQ Turquoise Moun 78.38 45 P **P 17 38 28.3 +0.7**
baz=234
YERR Yerington 78.40 41 *e*P **P 17 38 28.9 +1.1**
comp=Z,46nm,1.4s
SHOC Shoshone, Teco 78.42 45 P **P 17 38 28.5 +0.8**
baz=234
CGJI Cibinong 78.52 267 P **P 17 38 28.4 -0.3**
214A Organ Pipe Nat 78.57 50 P **P 17 38 29.4 +0.7**
baz=237,SNR=11
HUMO Hull Mountain 78.58 36 *e*P **P 17 38 28.7 +0.3**
comp=Z,78nm,1.2s
RYN Ryan 78.62 41 *e*P **P 17 38 30.1 +1.2**
comp=Z,21nm,1.1s
NV01 Mina Array Sit 78.64 42 *e*P **P 17 38 28.9 -0.2**
NVAR Mina Array Bea 78.64 42 P **P 17 38 29.9 +0.9**
comp=Z,19nm,1.0s,baz=224,slow=8.4,SNR=60
NVAR LR LR 18 09 26.7
comp=Z,869nm,18.0s,baz=129,slow=33
M04C Macdoel 78.66 37 P **P 17 38 29.8 +0.8**
baz=229
NV11 Mina Array Sit 78.73 42 *e*P **P 17 38 30.4 +0.8**
comp=Z,3.0nm,1.2s
PAHR Pah Rah Range 78.77 40 *e*P **P 17 38 30.8 +1.1**
comp=Z,17nm,1.1s
NEE2 Needles Airpor 78.88 46 P **P 17 38 31.0 +0.8**
baz=235
PDMCI Parker Dam,Lak 78.94 47 P **P 17 38 31.6 +1.0**
baz=236
TPNV Topopah Spring 79.05 44 P **P 17 38 32.2 +0.9**
baz=234,SNR=13
TPNV Topopah Spring 79.05 44 *e*P **P 17 38 31.9 +0.5**
comp=Z,24nm,1.1s
TPNV Topopah Spring 79.05 44 *e*P **P 17 38 31.9 +0.5**
TPNV pmax pmax
comp=Z,24nm,1.1s
TJN Taejon 79.11 316 *c e*P **P 17 38 31.9 +0.5**
KVN Kaiserville 79.14 41 *e*P **P 17 38 32.3 +0.5**
comp=Z,19nm,1.2s
KVN Kaiserville 79.14 41 *e*P **P 17 38 32.3 +0.5**
KVN pmax pmax
comp=Z,19nm,1.2s
KSRS Korea Array 79.38 317 P **P 17 38 34.5 +1.7**
comp=Z,27nm,1.1s,baz=136,slow=6.1,SNR=67
KSRS LR LR 18 08 22.1
comp=Z,401nm,21.1s,baz=122,slow=32
KS15 Wonju Array Si 79.39 317 *e*P **P 17 38 35.0 +2.1**
KSAR Wonju Array Be 79.39 317 P **P 17 38 34.5 +1.6**
KSAR Wonju Array Be 79.39 317 P **P 17 38 34.6 +1.6**
KS01 Wonju Array Si 79.41 317 *e*P **P 17 38 33.8 +0.8**
J04D Umpqua Nationa 79.47 36 P **P 17 38 34.2 +0.7**
baz=229
SHPR Sheep Range 79.51 45 *e*P **P 17 38 35.1 +1.3**
comp=Z,20nm,1.0s
W13A Hualapai Mount 79.56 46 *e*P **P 17 38 35.2 +1.0**
MOD Modoc Plateau 79.61 38 *e*P **P 17 38 34.9 +0.7**
comp=Z,10nm,0.8s
I04A Tendick Farm, 79.67 35 P **P 17 38 34.8 +0.4**
baz=228
PMSA Palmer Station 79.77 156 LR LR 18 05 18.6
comp=Z,356nm,22.0s,baz=260,slow=29
K05A Summer Lake 79.81 37 *e*P **P 17 38 36.4 +1.0**
comp=Z,37nm,1.0s
J05D Fort Rock, OR 79.98 36 P **P 17 38 37.3 +1.1**
baz=229
KDAK Kodiak Island 80.10 12 *i*P **P 17 38 37.2 +0.9**
TUC Tucson 80.21 50 P **P 17 38 38.7 +1.0**
baz=238
TUC Tucson 80.21 50 *e*P **P 17 38 39.3 +1.6**
comp=Z,14nm,1.1s
TUC Tucson 80.21 50 *e*P **P 17 38 39.3 +1.6**
TUC pmax pmax
comp=Z,14nm,1.1s
INCN Inchon 80.23 316 *e*P **P 17 38 39.6 +2.1**
comp=Z,154nm,1.3s
R11A Troy Canyon, C 80.30 43 P **P 17 38 38.9 +0.8**
baz=234
R11A Troy Canyon, C 80.30 43 *e*P **P 17 38 38.7 +0.6**
comp=Z,10.0nm,1.2s
PINE Pine Mountain 80.47 36 *e*P **P 17 38 39.8 +0.9**
comp=Z,26nm,1.0s
BMN Battle Mountai 80.52 40 *e*P **P 17 38 40.3 +1.1**
comp=Z,14nm,1.0s
BMN Battle Mountai 80.52 40 *e*P **P 17 38 40.3 +1.1**
BMN pmax pmax
comp=Z,14nm,1.0s
MSHR Mys Shultsa 80.54 322 *c e*P **P 17 38 39.8 +0.8**
LWLI Liwa 80.59 268 P **P 17 38 41.5 +1.4**
I05D Terrebonne, OR 80.61 35 P **P 17 38 40.2 +0.8**
baz=229
TYV Tymovskoe 80.64 334 *e*P **P 17 38 40.1 +0.8**
TYV *e* 17 48 52.9
TYV pmax pmax
comp=Z,32nm,1.0s
TYV pmax pmax
comp=Z,400nm,3.4s
MDSI Maura Dua 80.66 269 P **P 17 38 38.8 -1.6**
WVOR Wild Horse Val 80.91 38 *e*P **P 17 38 42.0 +0.8**
comp=Z,21nm,1.1s
WVOR Wild Horse Val 80.91 38 *e*P **P 17 38 42.0 +0.8**
WVOR pmax pmax
comp=Z,21nm,1.1s
LCMT Little Creek M 81.06 45 *e*P **P 17 38 43.4 +1.2**
comp=Z,12nm,1.0s
USRK Ussuriysk Ar. 81.10 324 P **P 17 38 43.2 +1.2**
comp=Z,12nm,0.9s,baz=128,slow=3.1,SNR=32
USRK LR LR 18 09 52.2
comp=Z,713nm,21.3s,baz=122,slow=32
CCUT Cedar City 81.28 45 *e*P **P 17 38 45.0 +1.6**
comp=Z,13nm,0.9s
KNB Kanab 81.34 45 *e*P **P 17 38 44.9 +1.2**
comp=Z,18nm,1.0s
KNB Kanab 81.34 45 *e*P **P 17 38 44.9 +1.2**
KNB pmax pmax
comp=Z,18nm,1.0s
SZCU Shurtz Canyon 81.49 45 *e*P **P 17 38 46.3 +1.7**
comp=Z,15nm,1.0s
WUAZ Wupatki 81.50 47 P **P 17 38 45.4 +0.8**
baz=237
WUAZ Wupatki 81.50 47 *e*P **P 17 38 46.3 +1.7**
comp=Z,14nm,1.1s
PSUT Pine Spring 81.52 44 *e*P **P 17 38 45.9 +1.2**
comp=Z,11nm,0.8s
J08A Circle Bar Ran 81.58 38 *e*P **P 17 38 45.7 +1.0**
comp=Z,15nm,1.1s
PKCU Pink Cliffs 81.92 45 *e*P **P 17 38 49.1 +2.2**
comp=Z,53nm,1.4s
LON Longmire 81.95 33 *e*P **P 17 38 47.2 +0.7**
comp=Z,11nm,1.1s
LON Longmire 81.95 33 *e*P **P 17 38 47.2 +0.7**
LON pmax pmax
comp=Z,11nm,1.1s
D05A Enumclaw 82.15 33 *e*P **P 17 38 49.6 +2.2**
comp=Z,70nm,1.3s
TPRI Tanjung Pinang 82.20 274 P **P 17 38 49.9 +1.4**
MTPU Mount Pierson 82.33 45 *e*P **P 17 38 51.5 +2.4**
comp=Z,22nm,0.9s
G08A Pilot Rock 82.52 36 *e*P **P 17 38 49.2 -0.4**
comp=Z,23nm,1.0s
RSO Redoubt South 82.59 10 *e*P **P 17 38 49.3 -0.4**
MSU Marysvale 82.60 44 *e*P **P 17 38 52.0 +1.8**
MSU Marysvale 82.60 44 *e*P **P 17 38 52.1 +1.8**
MAW Mawson 82.69 199 P **P 17 38 51.5 +1.4**
comp=Z,17nm,0.7s,baz=125,slow=7.0,SNR=28
MAW LR LR 18 14 35.5

comp=Z,502nm,18.8s,baz=94,slow=35
MAW Mawson 82.69 199 P **P 17 38 51.5 +1.4**
baz=83,SNR=15
MAW Mawson 82.69 199 *e*P **P 17 38 51.5 +1.4**
comp=Z,5.2nm,0.8s
MAW Mawson 82.69 199 *e*P **P 17 38 51.5 +1.4**
MAW pmax pmax
comp=Z,5.0nm,0.8s
MDJ Mudanjiang 82.70 323 P **P 17 38 48.8 -1.6**
MDJ pP PcP 17 38 52.0 -3.3
MDJ PP **PP 17 42 00.1 -0.5**
MDJ S **S 17 49 11.3 +4.2**
MDJ pmax pmax
comp=Z,48nm,0.9s
MDJ pmax pmax
comp=Z,730nm,3.8s
MDJ LR LR
comp=Z,360nm,16.7s
MDJ LR LR
comp=Z,340nm,17.2s
MDJ LR LR
comp=Z,620nm,15.7s
MDJ Mudanjiang 82.70 323 *e*P **P 17 38 50.0 -0.3**
comp=Z,87nm,1.3s
NJ2 Nanjing 82.74 308 *e*P **P 17 38 52.3 +1.4**
NJ2 pP **pP 17 38 57.6 +0.3**
NJ2 sP **sP 17 39 01.0 +1.5**
NJ2 S **S 17 49 08.6 +0.6**
NJ2 pmax pmax
comp=Z,62nm,1.0s
NJ2 pmax pmax
comp=Z,620nm,3.7s
NJ2 LR LR
comp=Z,960nm,21.7s
NJ2 LR LR
comp=Z,1μm,18.4s
NJ2 LR LR
comp=Z,1μm,21.8s
B05A Bryant 82.81 32 P **P 17 38 51.6 +0.8**
baz=228
A04D Lummi Island 82.81 31 P **P 17 38 51.7 +0.9**
baz=228
LTY Liberty 82.87 33 *e*P **P 17 38 52.0 +0.7**
comp=Z,19nm,1.1s
HAWA Hanford 82.91 35 *e*P **P 17 38 52.7 +1.3**
comp=Z,25nm,1.1s
MASI Maura Aman, Be 82.93 269 P **P 17 38 52.9 +0.5**
DUG Dugway, Tooele 83.12 43 P **P 17 38 53.5 +0.6**
baz=236
DUG Dugway, Tooele 83.12 43 *e*P **P 17 38 53.8 +0.9**
comp=Z,11nm,1.1s
MFID Camas Ranch 83.14 39 *e*P **P 17 38 53.9 +1.0**
comp=Z,20nm,1.2s
MYKOM Kota Tinggi 83.14 274 *e*P **P 17 38 54.3 +0.9**
comp=Z,37nm,0.9s
BMO Blue Mountains 83.16 37 *e*P **P 17 38 53.1 +0.2**
comp=Z,8.2nm,0.8s
BMO Blue Mountains 83.16 37 *e*P **P 17 38 53.1 +0.2**
BMO pmax pmax
comp=Z,8.0nm,0.8s
NKL Nikolayevsk 83.17 335 *e*P **P 17 38 52.8 +0.2**
NKL pmax pmax
comp=Z,90nm,1.5s
NKL pmax pmax
comp=Z,500nm,10.0s
BGU Big Grassy Mou 83.39 42 *e*P **P 17 38 55.2 +0.9**
comp=Z,6.2nm,1.0s
D08A Wollman Farm, 83.66 34 *e*P **P 17 38 56.5 +1.2**
TMUT Trail Mountain 83.66 44 *e*P **P 17 38 57.9 +2.0**
comp=Z,42nm,1.1s
RC01 Rabbit Creek A 83.72 12 *e*P **P 17 38 56.0 +0.7**
E09A Wood Farm, Sta 83.73 35 *e*P **P 17 38 56.5 +0.8**
comp=Z,21nm,1.1s
MPU Maple Canyon 83.77 43 *e*P **P 17 38 57.8 +1.4**
comp=Z,13nm,0.9s
MNTX Cornudas Mount 83.88 53 P **P 17 38 57.7 +0.8**
baz=241
MNTX Cornudas Mount 83.88 53 *e*P **P 17 38 57.5 +0.7**
comp=Z,10.0nm,1.1s
SUA Susitna One 83.88 11 *e*P **P 17 38 56.7 +0.4**
F10A Beach Ranch, E 83.89 36 *e*P **P 17 38 57.0 +0.4**
comp=Z,31nm,0.9s
LAZ Ladron 83.90 50 *e*P **P 17 38 58.6 +1.5**
SPUT South Promonto 83.97 42 *e*P **P 17 38 58.4 +1.2**
comp=Z,25nm,1.2s
SRU San Rafael Swe 84.00 44 *e*P **P 17 38 58.7 +1.2**
comp=Z,34nm,0.9s
HVU Hansel Valley 84.03 41 *e*P **P 17 38 58.4 +0.8**
comp=Z,17nm,0.9s
P17A Butcher Ranch, 84.06 44 *e*P **P 17 38 59.0 +1.3**
comp=Z,27nm,1.0s
HLID Hailey 84.06 39 P **P 17 38 58.8 +1.1**
baz=234
HLID Hailey 84.06 39 *e*P **P 17 38 58.7 +1.0**
comp=Z,22nm,0.9s
CTU Camp Tracy 84.07 43 *e*P **P 17 38 58.9 +1.1**
comp=Z,24nm,1.0s
TX31 Lajitas Ar. Si 84.08 56 *e*P **P 17 38 58.1 +0.1**
TXAR Lajitas Array 84.08 56 P **P 17 38 59.0 +1.0**
comp=Z,2.3nm,0.8s,baz=216,slow=7.2,SNR=15
TXAR LR LR 18 11 34.0
comp=Z,540nm,18.2s,baz=0.0,slow=32
BNM Barren Site 84.15 50 *e*P **P 17 38 59.5 +1.1**
JLU Jordanelle 84.21 43 *e*P **P 17 38 59.7 +1.0**
comp=Z,10nm,0.9s
LPM Los Pinos Moun 84.22 50 *e*P **P 17 39 00.3 +1.5**
SKT Skwentna 84.23 11 *e*P **P 17 38 57.5 -0.4**
B08A Colville Reser 84.27 33 *e*P **P 17 38 58.4 0.0**
comp=Z,15nm,0.8s
DL2 Dalian 84.30 315 P **P 17 39 00.0 +1.3**
DL2 *e*S **S 17 49 29.1 +5.6**
DL2 pmax pmax
comp=Z,59nm,1.3s
DL2 pmax pmax
comp=Z,190nm,4.2s
DL2 LR LR
comp=Z,420nm,17.5s
DL2 LR LR
comp=Z,330nm,21.0s
PMR Palmer 84.30 12 *e*P **P 17 38 57.8 -0.4**
comp=Z,40nm,1.1s
PMR Palmer 84.30 12 *e*P **P 17 38 57.8 -0.4**
PMR pmax pmax
comp=Z,40nm,1.1s
MVCO Mesa Verde 84.37 47 P **P 17 39 00.2 +0.7**
baz=239
MVCO Mesa Verde 84.37 47 *e*P **P 17 39 00.7 +1.2**
comp=Z,13nm,1.1s
PV05 Paradox Valley 84.41 46 *e*P **P 17 39 02.1 +2.5**
comp=Z,13nm,0.7s
P18A Preston Nutter 84.46 44 *e*P **P 17 39 01.1 +1.1**
comp=Z,30nm,0.9s
C09A Chrisman Ranch 84.47 34 *e*P **P 17 39 00.4 +1.0**
comp=Z,19nm,0.5s
KLR Kul'dur 84.47 328 P **P 17 39 00.2 +0.8**
comp=Z,0.5nm,1.0s,baz=108,slow=5.3,SNR=14
KLR LR LR 18 11 38.8
comp=Z,51nm,20.8s,baz=149,slow=32
KLR Kul'dur 84.47 328*c i*P **P 17 39 00.0 +0.6**
LLLB Lillooet 84.48 30 *e*P **P 17 39 00.4 +0.9**
TCUT Toone Canyon 84.52 42 *e*P **P 17 39 01.9 +1.8**
comp=Z,56nm,0.9s
DIV Divide 84.56 13 *e*P **P 17 39 00.3 +0.7**
comp=Z,76nm,1.1s
CN2 Changchun 84.60 321⇑ *i*P **P 17 39 01.1 +0.9**
CN2 *es*P sP 17 39 11.3 +2.5
CN2 *e*S **S 17 49 27.4 +1.1**
CN2 pmax pmax
comp=Z,30nm,1.5s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,260nm,17.0s
CN2 LR LR
comp=Z,170nm,17.0s
CN2 LR LR
comp=Z,390nm,17.0s
PV09 Paradox Valley 84.60 46 *e*P **P 17 39 02.1 +1.4**
PV10 Paradox Valley 84.60 46 *e*P **P 17 39 01.7 +1.1**
comp=Z,19nm,1.0s
SNY Shenyang 84.62 318⇓ P **P 17 39 02.4 +2.1**
SNY pmax pmax
comp=Z,29nm,1.5s
SNY pmax pmax
comp=Z,340nm,8.8s
SNY LR LR
comp=Z,270nm,18.5s
SNY LR LR
comp=Z,410nm,15.7s
SNY LR LR
comp=Z,730nm,16.7s
TASM ASL Pad, Albuq 84.66 50 P **P 17 39 02.0 +1.0**
baz=240
ANMO Albuquerque 84.66 50 P **P 17 39 02.1 +1.2**
comp=Z,11nm,0.9s,baz=213,slow=6.6,SNR=22
ANMO Albuquerque 84.66 50 P **P 17 39 02.0 +1.0**
baz=240
ANMO Albuquerque 84.66 50 *e*P **P 17 39 01.9 +1.0**
comp=Z,21nm,1.1s
ANMO Albuquerque 84.66 50*ce*P **P 17 39 01.8 +0.8**
ANMO pmax pmax
comp=Z,17nm,1.0s
TASL Snake Pit, Alb 84.66 50 P **P 17 39 02.1 +1.2**
baz=240
PV03 Paradox Valley 84.67 46 *e*P **P 17 39 02.2 +1.3**
comp=Z,41nm,1.5s
BMRM Bremner River 84.68 14 *e*P **P 17 39 01.1 +0.9**
HWUT Hardware Ranch 84.69 42 *e*P **P 17 39 01.6 +0.6**
comp=Z,14nm,0.8s
PV04 Paradox Valley 84.70 46 *e*P **P 17 39 02.5 +1.4**
comp=Z,13nm,0.9s
PV02 Paradox Valley 84.72 46 *e*P **P 17 39 02.4 +1.2**
comp=Z,19nm,1.1s
CRQM Cirque 84.83 15 *e*P **P 17 39 02.2 +1.0**
KLU Klutina 84.86 13 *e*P **P 17 39 01.9 +0.7**
MA2 Magadan 84.86 343 P **P 17 39 01.3 +0.2**
comp=Z,8.4nm,0.7s,baz=145,slow=12,SNR=7.1
MA2 LR LR 18 12 08.3
comp=Z,605nm,20.5s,baz=163,slow=32
MA2 Magadan 84.86 343 *e*P **P 17 39 01.4 +0.2**
comp=Z,37nm,1.1s
MA2 Magadan 84.86 343 *e*P **P 17 39 00.8 -0.3**
MA2 pmax pmax
comp=Z,46nm,1.7s
GDL2 Guadalupe Moun 84.88 53 *e*P **P 17 39 03.7 +1.7**
SCM Sheep Creek Mo 84.88 12 *e*P **P 17 39 02.1 +0.8**
SCM Sheep Creek Mo 84.88 12 *e*P **P 17 39 02.1 +0.8**
PV07 Paradox Valley 84.90 46 *e*P **P 17 39 03.3 +1.2**
comp=Z,9.7nm,0.9s
TGL Tana Glacier 84.91 15 *e*P **P 17 39 02.5 +1.1**
PV15 Paradox Valley 84.96 46 *e*P **P 17 39 03.6 +1.2**
comp=Z,16nm,1.1s
BESE Bessie Mountai 85.28 19 *e*P **P 17 39 04.6 +1.3**
NEW Newport 85.36 34 P **P 17 39 04.6 +0.6**
baz=232
NEW Newport 85.36 34 *e*P **P 17 39 04.4 +0.5**
comp=Z,7.4nm,0.9s
NEW Newport 85.36 34 *e*P **P 17 39 04.4 +0.5**
NEW pmax pmax
comp=Z,7.0nm,0.9s
PDSI Padang 85.37 271 P **P 17 39 04.3 -0.5**
WHN Wuhan 85.42 305 P **P 17 39 05.8 +1.2**
WHN S **S 17 49 41.8 +6.8**
WHN pmax pmax
comp=Z,110nm,1.0s
WHN LR LR
comp=Z,1μm,21.3s
CAST Castle Rocks 85.49 10 *e*P **P 17 39 03.7 -0.5**
LNIG Linares 85.49 61 *e*P **P 17 39 04.8 -0.3**
comp=Z,13nm,0.8s
AHID Auburn Hatcher 85.61 41 *e*P **P 17 39 06.5 +0.9**
comp=Z,19nm,0.9s
MCMT McKenzie Canyo 85.71 39 *e*P **P 17 39 06.8 +0.8**
S22A 4UR Ranch, Cre 85.78 47 P **P 17 39 07.5 +0.8**
baz=240
S22A 4UR Ranch, Cre 85.78 47 *e*P **P 17 39 08.2 +1.5**
comp=Z,9.7nm,0.8s
TRF Thorofare Moun 85.81 10 *e*P **P 17 39 05.8 -0.1**
SKAG Skagway 85.84 19 *e*P **P 17 39 07.5 +1.6**
comp=Z,31nm,1.4s
DHY Denali Highway 86.00 12 *e*P **P 17 39 07.2 +0.3**
RND Reindeer 86.02 11 *e*P **P 17 39 07.4 +0.5**
comp=Z,110nm,0.9s
RND Reindeer 86.02 11 *e*P **P 17 39 07.4 +0.5**
RND pmax pmax
comp=Z,110nm,0.9s
O20A White River Ci 86.04 45 P **P 17 39 08.4 +0.7**
baz=239
O20A White River Ci 86.04 45 *e*P **P 17 39 08.6 +0.8**
comp=Z,10nm,0.9s
REDW Red Top Meadow 86.09 41 *e*P **P 17 39 08.9 +1.0**
comp=Z,16nm,1.3s
TPAW Teton Pass 86.10 41 *e*P **P 17 39 09.2 +1.2**
comp=Z,7.6nm,0.9s
FXWY Fox Creek 86.14 40 *e*P **P 17 39 09.1 +0.9**
comp=Z,11nm,1.3s
DLMT Dillon 86.16 38 *e*P **P 17 39 09.3 +1.2**
comp=Z,18nm,1.1s
SNOW Snow King Moun 86.20 41 *e*P **P 17 39 09.8 +1.3**
comp=Z,13nm,0.9s
MSO Missoula 86.23 37 P **P 17 39 08.6 +0.2**
baz=235
MSO Missoula 86.23 37 *e*P **P 17 39 09.1 +0.7**
comp=Z,7.8nm,1.1s
PAX Paxson 86.28 13 *e*P **P 17 39 08.4 +0.2**
PAX Paxson 86.28 13 *e*P **P 17 39 08.4 +0.2**
BPAW Bear Paw Mtn. 86.30 10 *e*P **P 17 39 07.5 -0.8**
comp=Z,25nm,1.0s
MCK McKinley 86.31 11 *e*P **P 17 39 08.5 +0.2**
MCK McKinley 86.31 11 *e*P **P 17 39 08.5 +0.2**
IMW Indian Meadow 86.33 40 *e*P **P 17 39 10.3 +1.1**
comp=Z,13nm,1.1s
LOHW Long Hollow 86.38 41 *e*P **P 17 39 11.1 +1.8**
comp=Z,12nm,1.4s
SMCO Snowmass 86.40 46 *e*P **P 17 39 10.7 +0.9**
comp=Z,14nm,0.9s
QLMT Earthquake Lak 86.55 39 *e*P **P 17 39 11.8 +1.7**
BW06 Boulder Array 86.57 42 P **P 17 39 10.3 -0.1**
baz=238
BW06 Boulder Array 86.57 42 *e*P **P 17 39 10.6 +0.2**
comp=Z,7.1nm,0.9s
PD31 Pinedale Array 86.57 42 *e*P **P 17 39 10.5 +0.2**
PDAR Pinedale Array 86.57 42 P **P 17 39 10.3 0.0**
comp=Z,7.6nm,0.9s,baz=204,slow=3.3,SNR=28
PDAR PP **PP 17 42 32.6 0.0**
comp=Z,0.2nm,0.6s,baz=201,slow=7.4,SNR=2.5
PDAR Pinedale Array 86.57 42 *e*P **P 17 39 09.7 -0.6**
PDAR PP **PP 17 42 32.6 0.0**
PLCA Paso Flores 86.58 132 LR LR 18 12 05.5
comp=Z,325nm,18.6s,baz=280,slow=32
BWN Browne 86.62 11 *e*P **P 17 39 10.3 +0.6**
SDCO Great Sand Dun 86.70 48 P **P 17 39 11.1 0.0**
baz=241
SDCO Great Sand Dun 86.70 48 *e*P **P 17 39 11.9 +0.7**
comp=Z,7.9nm,1.4s
IPM Ipoh 86.73 276 *e*P **P 17 39 12.2 +0.7**
DLBC Dease Lake 86.75 22 *e*P **P 17 39 11.9 +1.3**
MNSI Mandailing Nat 86.79 272 P **P 17 39 11.4 -0.4**
comp=Z,37nm,0.7s
BOZ Bozeman (W) 86.85 39 P **P 17 39 12.0 +0.5**
baz=236
BOZ Bozeman (W) 86.85 39 *e*P **P 17 39 12.5 +1.0**
comp=Z,14nm,1.3s
BOZ Bozeman (W) 86.85 39 *e*P **P 17 39 12.5 +1.0**
BOZ pmax pmax
comp=Z,14nm,1.3s
MSTX Muleshoe 86.88 52 P **P 17 39 12.1 +0.2**
baz=243
MSTX Muleshoe 86.88 52 *e*P **P 17 39 12.3 +0.4**
comp=Z,16nm,0.9s
833A Chaparral WMA, 87.00 58 P **P 17 39 12.4 0.0**
baz=245
833A Chaparral WMA, 87.00 58 *e*P **P 17 39 13.4 +1.0**
comp=Z,16nm,0.8s
RIDG Independ'e Rid 87.10 13 *e*P **P 17 39 12.7 +0.5**
WRH Wood River Hil 87.14 11 *e*P **P 17 39 12.4 +0.2**
comp=Z,150nm,1.2s
DOT Dot Lake 87.18 13 *e*P **P 17 39 13.6 +1.0**
MLY Manley 87.21 10 *e*P **P 17 39 12.4 -0.3**
SEY Seymchan 87.31 345 P **P 17 39 13.5 +0.4**
comp=Z,31nm,1.0s,baz=150,slow=5.6,SNR=43
SEY Seymchan 87.31 345*ce*P **P 17 39 13.8 +0.7**
CCB Clear Creek Bu 87.35 11 *e*P **P 17 39 13.3 +0.1**
SYO Syowa Base 87.42 192⇑ *e*P **P 17 39 12.7 -1.1**
SCRK Sand Creek 87.48 13 *e*P **P 17 39 14.7 +0.6**
WALA Waterton Lakes 87.54 35 *e*P **P 17 39 15.4 +0.6**
COLA College 87.55 11 *e*P **P 17 39 14.5 +0.3**
comp=Z,75nm,1.0s
COLA College 87.55 11 *e*P **P 17 39 14.5 +0.3**
COLA pmax pmax
comp=Z,75nm,1.0s
MDM Murphy Dome 87.56 11 *e*P **P 17 39 14.3 0.0**
ISCO Idaho Springs 87.62 46 *e*P **P 17 39 15.1 -0.5**
comp=Z,7.0nm,1.2s
ISCO Idaho Springs 87.62 46 *e*P **P 17 39 15.1 -0.5**
ISCO pmax pmax
comp=Z,7.0nm,1.2s
IL1 Eielson Array 87.63 11 *e*P **P 17 39 13.4 -1.2**
ILAR Eielson Array 87.63 11 P **P 17 39 14.6 -0.1**
comp=Z,11nm,1.0s,baz=211,slow=5.9,SNR=61
ILAR LR LR 18 16 11.1
comp=Z,246nm,18.2s,baz=190,slow=34
ILB Eielson Array 87.63 11 *e*P **P 17 39 14.7 +0.1**
VNA3 Neumayer Olymp 87.80 175 P **P 17 39 15.9 +0.3**
SNAA Sanae 87.80 177 P **P 17 39 16.2 +0.4**
SNAA Sanae 87.80 177 SKS **SKSac 17 49 41.4 -1.3**
SNAA Sanae 87.80 177 P **P 17 39 16.0 +0.3**
comp=Z,13nm,0.9s,baz=200,slow=4.4,SNR=26
SNAA LR LR 18 18 07.2
comp=Z,418nm,18.0s,baz=182,slow=35
SNAA Sanae 87.80 177 *e*P **P 17 39 15.8 +0.1**
comp=Z,19nm,1.0s
N23A Red Feather La 87.94 45 P **P 17 39 17.3 +0.2**
baz=240
PSI Prapat 88.10 274 P **P 17 39 17.4 -0.9**
comp=Z,23nm,0.9s,baz=180,slow=3.7,SNR=14
PSI LR LR 18 20 06.9
comp=Z,395nm,19.7s,baz=91,slow=37
PSI Prapat 88.10 274 *e*P **P 17 39 17.6 -0.7**
PSI Prapat 88.10 274 *e*P **P 17 39 17.6 -0.7**
VNA1 Neumayer--Stat 88.48 175 P **P 17 39 19.8 +1.0**
BJT Baijiatuau 88.51 314 P **P 17 39 17.7 -1.7**
comp=Z,215nm,1.8s
BJT Baijiatuau 88.51 314 P **P 17 39 17.7 -1.7**
BJT pmax pmax
comp=Z,215nm,1.8s
BJI Beijing 88.51 314⇑ *e*P **P 17 39 20.6 +1.2**
BJI S **S 17 50 03.6 -0.9**
BJI pmax pmax
comp=Z,56nm,1.9s
BJI pmax pmax
comp=Z,650nm,5.9s
BJI LR LR
comp=Z,290nm,18.0s
BJI LR LR
comp=Z,500nm,18.0s
BJI LR LR
comp=Z,470nm,26.5s
DAWY Dawson 88.58 15 *e*P **P 17 39 20.1 +0.9**
ABTX Abilene, Hawle 88.63 54 P **P 17 39 20.4 +0.1**
baz=245
ABTX Abilene, Hawle 88.63 54 *e*P **P 17 39 21.4 +1.2**
comp=Z,10nm,0.9s
EGAK Eagle 88.79 13 *e*P **P 17 39 20.8 +0.7**
comp=Z,65nm,1.3s
GSI Gunungsitoli 88.84 272 *e*P **P 17 39 23.1 +1.5**
comp=Z,110nm,1.0s
ENH Enshi 89.09 303 *e*P **P 17 39 21.8 -0.6**
comp=Z,192nm,1.4s
TRTT Trang 89.15 279 P **P 17 39 24.1 +1.1**
comp=Z,46nm,1.3s
SRAK Srakaew 89.20 285 P **P 17 39 23.5 +0.3**
comp=Z,71nm,1.4s,comp=Z,892nm
ZEA Zeya 89.49 330 *e*P **P 17 39 24.8 +1.2**
ZEA *e* 17 39 35.6
ZEA pmax pmax
comp=E,29nm,1.2s
ZEA pmax pmax
comp=N,56nm,1.4s
ZEA pmax pmax
comp=Z,120nm,1.4s
BILL Bilibino 89.52 353 *e*P **P 17 39 23.9 +0.5**
comp=Z,17nm,0.9s
BILL Bilibino 89.52 353*c i*P **P 17 39 23.4 -0.1**
BILL *i* 17 39 33.1
BILL *i* 17 42 52.2
BILL *i* S **SKSac 17 49 55.3 +3.0**
BILL pmax pmax
comp=Z,10.0nm,0.8s
BILL MLR MLR
comp=Z,536nm,19.0s
NONG Nongkai 89.69 289 P **P 17 39 26.8 +1.4**
comp=Z,83nm,0.7s,comp=Z,5μm
GYA Guiyang 89.84 298⇑ *i*P **P 17 39 27.4 +1.2**
GYA PP **PP 17 43 01.8 +2.7**
GYA SKS **SKSac 17 49 55.0 -1.3**
GYA S **S 17 50 15.6 -2.3**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,130nm,5.4s
CHAI Chaiyaphum 89.93 287 P **P 17 39 28.1 +1.5**
comp=Z,6.8nm,0.9s
TIY Taiyuan 90.04 311 *e*P **P 17 39 29.3 +2.5**
WMOK Wichita Mounta 90.18 53 P **P 17 39 27.7 +0.3**
baz=245
RSSD Black Hills 90.73 43 P **P 17 39 29.8 -0.2**
baz=242
RSSD Black Hills 90.73 43 *e*P **P 17 39 30.2 +0.2**
comp=Z,12nm,1.0s
RSSD Black Hills 90.73 43 *e*P **P 17 39 30.2 +0.2**
RSSD pmax pmax
comp=Z,12nm,1.0s
TOLK Toolik Lake Re 90.74 9 P **P 17 39 30.1 +0.9**
baz=203
TOLK Toolik Lake Re 90.74 9 *e*P **P 17 39 30.4 +1.2**
comp=Z,17nm,1.0s
PHET Kaeng Krachan 91.00 283 P **P 17 39 34.3 +2.7**
comp=Z,30nm,0.9s,comp=Z,236nm
XAN Xi'an 91.07 306 P **P 17 39 33.0 +1.4**
XAN S **S 17 50 28.3 -0.4**
XAN SS **SS 17 56 36.5 +3.2**
XAN pmax pmax
comp=Z,77nm,1.3s
XAN LR LR
comp=Z,240nm,17.7s
XAN LR LR
comp=Z,370nm,15.7s
XAN LR LR
comp=Z,300nm,13.2s
PBKT Sadao Pong 91.08 287 *e*P **P 17 39 33.4 +1.5**
PHIT Phitsanulok 91.80 288 P **P 17 39 37.5 +2.2**
comp=Z,47nm,1.0s
SRDT SRDT 91.97 284 P **P 17 39 38.0 +1.9**
comp=Z,58nm,1.2s
HHC Hu-ho-hao-te 92.02 313 *e*P **P 17 39 36.5 +0.6**
HHC sP sP 17 39 43.6 -1.0
HHC PP **PP 17 43 18.8 +2.8**
HHC S **S 17 50 35.3 -1.8**
HHC SS **SS 17 56 47.3 +0.6**
HHC pmax pmax
comp=Z,35nm,1.0s
HHC LR LR
comp=Z,180nm,17.1s
HHC LR LR
comp=Z,340nm,17.7s
HHC LR LR
comp=Z,470nm,17.3s
NANT Nan 92.12 289 P **P 17 39 38.0 +1.3**
comp=Z,14nm,1.0s,comp=Z,132nm
KMI Kunming 92.62 296 P **P 17 39 41.0 +1.8**
KMI pP sP 17 39 50.5 +2.6
KMI PP **PP 17 43 18.1 -3.1**
KMI S **S 17 50 40.0 -3.4**
KMI pmax pmax
comp=Z,39nm,1.2s
KMI pmax pmax
comp=Z,78nm,5.3s
KMI LR LR
comp=Z,380nm,19.5s
KMI LR LR
comp=Z,450nm,23.1s
KMI LR LR
comp=Z,700nm,20.9s
DGMT Dagmar 92.69 39 P **P 17 39 39.6 +0.8**
baz=242
DGMT Dagmar 92.69 39 *e*P **P 17 39 40.1 +1.4**
comp=Z,51nm,1.0s
JTS JuntasAbangare 92.81 80 P **P 17 39 43.4 +3.4**
comp=Z,10nm,0.9s,baz=310,slow=8.8,SNR=6.4
LAMP Lampang 92.97 289 P **P 17 39 42.7 +2.0**
comp=Z,30nm,0.8s,comp=Z,234nm
INK Inuvik 93.43 14 P **P 17 39 41.7 +0.1**
comp=Z,8.8nm,0.8s,baz=222,slow=3.3,SNR=26
INK Inuvik 93.43 14 *e*P **P 17 39 41.9 +0.3**
INK Inuvik 93.43 14 *e*P **P 17 39 41.9 +0.3**
KSU1 Kansas State U 93.56 50 *e*P **P 17 39 43.7 +0.8**
comp=Z,9.4nm,0.9s
CMAR Chiang Mai Arr 93.56 288 P **P 17 39 45.1 +1.8**

comp=Z,17nm,0.8s,baz=118,slow=2.8,SNR=83
CMAR LR LR 18 21 51.5
comp=Z,151nm,18.0s,baz=134,slow=36
YAK Yakutsk 93.56 337 *e*P **P 17 39 42.1 -0.2**
YAK Yakutsk 93.56 337 *e*P **P 17 39 41.6 -0.7**
YAK pmax pmax
comp=Z,14nm,1.0s
YAK pmax pmax
comp=N,4.0nm,1.0s
CHTO Chiang Mai 93.68 289 P **P 17 39 45.6 +1.6**
comp=N,203nm,1.2s
CHTO Chiang Mai 93.68 289 *e*P **P 17 39 45.6 +1.6**
comp=N,28nm,0.8s
CHTO Chiang Mai 93.68 289 *e*P **P 17 39 45.6 +1.6**
CHTO pmax pmax
comp=Z,28nm,0.8s
CD2 Chengdu 93.89 301 P **P 17 39 44.5 -0.2**
CD2 pmax pmax
comp=Z,20nm,0.6s
CMAI Chiengmai2 93.98 290 P **P 17 39 47.2 +1.7**
comp=Z,244nm,1.5s,comp=Z,16µm
T38A Diamond 94.44 52 P **P 17 39 46.8 -0.2**
baz=248
V39A Pettigrew 94.47 53 P **P 17 39 47.2 0.0**
baz=248
U39A Green Forest 94.80 53 P **P 17 39 48.2 -0.5**
baz=248
YKA Yellowknife Ar 95.10 24 P **P 17 39 49.7 +0.3**
comp=Z,4.7nm,0.8s,baz=237,slow=4.4,SNR=13
H32A Carlson Farm, 95.16 44 P **P 17 39 50.0 -0.2**
baz=246
R38A Fenwick Farm, 95.16 51 P **P 17 39 50.1 -0.2**
baz=248
MDND Maddock 95.16 41 P **P 17 39 50.2 +0.1**
baz=245
MDND Maddock 95.16 41 *e*P **P 17 39 50.9 +0.8**
P37A Lathrop 95.36 50 P **P 17 39 50.9 -0.3**
baz=248
ECSD EROS Data Cent 95.39 45 P **P 17 39 51.0 -0.2**
baz=247
ECSD EROS Data Cent 95.39 45 *e*P **P 17 39 51.5 +0.2**
comp=Z,15nm,1.1s
Q38A Cooks Store, C 95.65 51 P **P 17 39 52.1 -0.4**
baz=248
LZH Lanzhou 95.70 306 *e*P **P 17 39 54.3 +1.2**
LZH pP pP 17 39 57.5 -2.0
LZH sP sP 17 39 59.0 -2.8
LZH PP **PP 17 43 48.9 +3.9**
LZH SKS **SKSac 17 50 27.9 -0.7**
LZH *e*S **S 17 51 08.0 -1.8**
LZH sS pS 17 51 16.8 -1.3
LZH *e*SS **SS 17 57 43.6 +3.9**
LZH pmax pmax
comp=Z,54nm,1.5s
LZH pmax pmax
comp=Z,420nm,9.0s
LZH LR LR
comp=Z,460nm,15.2s
LZH LR LR
comp=Z,720nm,16.5s
LZH LR LR
comp=Z,820nm,18.4s
T40A Mansfield 95.80 53 P **P 17 39 53.8 +0.5**
baz=249
R39A Chumby, Stover 95.84 51 P **P 17 39 53.3 -0.1**
baz=248
S40A Lebanon 95.97 52 P **P 17 39 53.8 -0.2**
baz=249
Q39A Willow Grove F 96.15 51 P **P 17 39 54.8 0.0**
baz=249
MNMC Minye Minye 96.24 113 *e*P **P 17 39 59.1 +3.0**
C31A Landman Farms, 96.29 41 P **P 17 39 54.8 -0.4**
baz=246
R40A Maddies Statio 96.39 52 P **P 17 39 55.5 -0.4**
baz=249
P39B Salisbury 96.47 50 P **P 17 39 55.7 -0.6**
baz=249
S41A Jillco Farms, 96.53 52 P **P 17 39 56.1 -0.4**
baz=249
B31A Greenbush Farm 96.59 41 P **P 17 39 56.1 -0.5**
baz=247
AGMN Agassiz Nation 97.64 41 P **P 17 40 00.5 -0.8**
baz=248
ULN Ulaanbaatar 97.80 318 *e*P Pdif 17 40 03.8 +1.5
ULN Ulaanbaatar 97.80 318 *de*P Pdif 17 40 03.2 +0.9
ULN pmax pmax
comp=Z,6.0nm,0.8s
A33A Warroad 98.17 41 P **P 17 40 03.1 -0.5**
baz=248
SONA1 Songino Array 98.20 318 *e*P Pdif 17 40 04.5 +0.4
SONM Songino Array 98.20 318 P Pdif 17 40 04.7 +0.6
comp=Z,0.6nm,0.5s,baz=118,slow=2.2,SNR=4.6
SONM PP **PP 17 44 02.2 -1.7**
comp=Z,1.7nm,0.9s,baz=103,slow=6.4,SNR=3.1
F36A Milaca 98.23 44 P **P 17 40 03.8 -0.3**
baz=249
F36A Milaca 98.23 44 *e*P Pdif 17 40 04.7 +0.6
C35A Jirik Farms, M 98.60 42 P **P 17 40 05.2 -0.5**
baz=249
E36A McGregor 98.64 44 P **P 17 40 05.7 -0.1**
baz=249
LPAZ La Paz 98.68 111 LR LR 18 16 39.8
comp=Z,289nm,20.2s,baz=307,slow=31
D36A Goodland 98.93 43 P **P 17 40 07.0 -0.1**
baz=250
D36A Goodland 98.93 43 *e*P Pdif 17 40 08.0 +0.9
B35A Bob, Littlefor 98.99 42 *e*P Pdif 17 40 09.9 +2.5
D37A Cotton 99.39 43 P **Pdif 17 40 09.2 0.0**
baz=250
TIXI Tiksi 99.77 344 P **Pdif 17 40 10.2 -0.1**
comp=Z,1.5nm,0.7s,baz=134,slow=7.4,SNR=5.3
TIXI Tiksi 99.77 344 *ce*P **Pdif 17 40 10.4 +0.1**
TIXI pmax pmax
comp=Z,3.0nm,1.1s
GTA Gaotai 99.83 308 *e*P **Pdif 17 40 11.6 +0.1**
GTA pP pP 17 40 17.9 -0.1
GTA sP sP 17 40 21.3 +1.0
GTA PP **PP 17 44 19.5 +2.9**
GTA S **S 17 51 41.0 -3.9**
GTA SS **SS 17 58 38.4 +0.7**
GTA pmax pmax
comp=Z,2.0nm,1.9s
GTA pmax pmax
comp=Z,100nm,8.9s
GTA LR LR
comp=Z,200nm,20.3s
GTA LR LR
comp=Z,180nm,17.1s
ZAK Zakamensk 101.00 320 *e*P **Pdif 17 40 15.8 -0.6**
ZAK pmax pmax
comp=Z,2.0nm,1.1s
NRIK Noril'sk 112.00 338 PP PP 17 45 50.2 +4.9
comp=Z,4.8nm,0.6s,baz=117,slow=6.4,SNR=3.9
ZALV Zalesovo Beam 112.82 321 PKiKP **PKiKP 17 45 03.0 -0.3**
comp=Z,2.5nm,0.5s,baz=166,slow=0.8,SNR=14
ZALV PP **PP 17 45 46.9 -4.8**
comp=Z,1.0nm,0.7s,baz=116,slow=5.0,SNR=2.2
ZALV Zalesovo Beam 112.82 321 PKiKP **PKiKP 17 45 03.0 -0.3**
NVS Novosibirsk 113.79 322 *e*PKiKP **PKiKP 17 45 04.4 -0.7**
MK31 Makanchi Array 113.88 313 *i* PKiKP **PKiKP 17 45 04.8 -0.8**
MK31 pmax pmax
comp=Z,4.0nm,0.8s
MKAR Makanchi Array 113.88 313 PKP **PKiKP 17 45 05.1 -0.6**
comp=Z,2.8nm,0.8s,baz=66,slow=2.1,SNR=17
MKAR PP **PP 17 46 02.6 +3.1**
comp=Z,2.3nm,1.0s,baz=77,slow=6.5,SNR=2.3
MAKZ Makanchi 114.10 313 PKiKP PKPdf 17 45 05.6 -0.4
MAKZ pmax pmax
comp=Z,8.0nm,1.1s
KURK Kurchatov 116.50 317 PKP **PKPdf 17 45 10.2 -0.3**
KURK PP **PP 17 46 14.2 -3.5**
KURK Kurchatov 116.50 317 PKiKP **PKPdf 17 45 10.2 -0.3**
KURK 17 46 14.2
KURBB Kurchatov Arra 116.55 317 PKP **PKPdf 17 45 10.2 -0.4**
comp=Z,2.7nm,0.7s,baz=96,slow=1.9,SNR=23
KURBB PP **PP 17 46 14.2 -3.9**
comp=Z,6.5nm,1.3s,baz=91,slow=6.0,SNR=8.2
KSH Kashi 117.90 305 PKP **PKPdf 17 45 16.0 +2.3**
KSH PP PP 17 46 36.3 +8.3
KSH AMB AMB
comp=Z,310nm,4.9s
TKM2 Tokmak 2 118.38 308 P **PKPdf 17 45 14.4 -0.3**
SNR=8.2
CHMS Chumysh 119.01 309 P **PKPdf 17 45 15.5 -0.1**
SNR=6.7
UCH Uchtor 119.16 308 P **PKPdf 17 45 17.4 +0.9**
SNR=7.8
USP Ospenovka 119.20 309 P **PKPdf 17 45 16.0 -0.1**
SNR=8.3
EKS2 Erkin-Say 119.71 308 P **PKPdf 17 45 17.8 +0.6**
SNR=6.5
AML Almayashu 119.76 307 P **PKPdf 17 45 18.3 +0.7**
SNR=8.9
BVA0 Borovoye Array 121.45 320 *i* PKIKP **PKPdf 17 45 19.5 -0.5**
BVA0 pmax pmax
comp=Z,8.0nm,0.8s
BVAR Borovoye Array 121.45 320 PKP **PKPdf 17 45 20.1 +0.1**
comp=Z,6.1nm,0.6s,baz=106,slow=1.8,SNR=36
BVAR PP **PP 17 46 51.0 -0.8**
comp=Z,2.1nm,0.8s,baz=64,slow=9.8,SNR=2.0
BRVK Borovoye 121.51 320 *i* PKIKP **PKPdf 17 45 19.4 -0.7**
KK31 Karatay Array 122.11 309 *i* PKIKP **PKPdf 17 45 21.1 -0.5**
KK31 pmax pmax
comp=Z,4.0nm,0.7s
SPITS Spitsbergen Ar 122.12 357 PKP **PKPdf 17 45 20.9 +0.2**
comp=Z,8.5nm,0.7s,baz=66,slow=6.5,SNR=10.0
OPO Ambohidratompo123.84 229 PKP **PKPdf 17 45 25.2 -0.7**
comp=Z,7.0nm,0.8s,baz=152,slow=3.4,SNR=4.7
SVE Sverdlovsk 126.08 326 *i* PKIKP **PKPdf 17 45 28.4 -0.3**
SVE pmax pmax
comp=Z,18nm,1.6s
SVE MLR MLR
comp=Z,511nm,23.0s
ARU Arti 127.29 326 PKP **PKPdf 17 45 29.8 -1.2**
comp=Z,4.4nm,0.6s,baz=64,slow=2.2,SNR=8.3
ARU Arti 127.29 326 *i* PKIKP **PKPdf 17 45 30.9 -0.1**
ARU 17 47 28.8
ARU 17 52 39.3
ARU MLR MLR
comp=Z,317nm,14.0s
BOSA Boshof 127.64 202 PKP **PKPdf 17 45 31.9 -0.9**
comp=Z,4.0nm,0.9s,baz=200,slow=4.2,SNR=5.3
AB31 Akbulak array 128.61 317 *i* PKIKP **PKPdf 17 45 34.0 +0.2**
AB31 pmax pmax
comp=Z,8.0nm,1.4s
AKTO Aktyubinsk 129.50 319 PKP **PKPdf 17 45 34.6 -0.9**
comp=Z,1.5nm,0.6s,baz=112,slow=3.4,SNR=4.3
AKTO PP **PP 17 47 44.6 -0.9**
comp=Z,0.7nm,0.4s,baz=45,slow=10,SNR=3.6
ARCES ARCESS Array B 129.59 351 PKP **PKPdf 17 45 35.4 +0.2**
comp=Z,8.3nm,0.6s,baz=0.2,slow=1.1,SNR=40
PRGR Permogore 130.60 336 *e*PKIKP **PKPdf 17 45 37.0 -0.2**
PRGR *e* 17 47 54.3
PRGR pmax pmax
comp=Z,5.0nm,0.6s
SOHO SOHO 133.20 284 *i* P **PKPdf 17 45 43.5 +0.3**
SNR=13
KLMR Klimovskoe 133.34 338 *e*PKIKP **PKPdf 17 45 40.3 -2.1**
KLMR pmax pmax
comp=Z,9.0nm,1.1s
KLMR Klimovskoe 133.34 338 *e*PKPdf **PKPdf 17 45 40.3 -2.1**
KLMR AMP 17 45 45.8
comp=Z,9.0nm,1.1s
KLMR *e*PP **PP 17 48 02.1 -7.5**
UOSS Minazif 133.57 285 P **PKPdf 17 45 43.8 -0.1**
HATD Hatta, Dubai 133.63 285 *i* P **PKPdf 17 45 43.3 -0.8**
SNR=5.8
MSFE Esma-Masafi 133.65 286 P **PKPdf 17 45 44.5 +0.4**
ALNE Al Ain 133.90 284 P **PKPdf 17 45 45.7 +1.1**
NAZ Nazwa, Dubai 134.07 285 P **PKPdf 17 45 45.5 +0.6**
ASUD Al Ashush, Dub 134.34 285 P **PKPdf 17 45 46.9 +1.5**
MZR Muzera 135.86 282 P **PKPdf 17 45 49.4 +1.1**
FINES FINESS Array B 136.79 346 PKhKP PKPpre 17 45 42.8
comp=Z,1.6nm,0.6s,baz=58,slow=3.4,SNR=7.9
FINES PKP **PKPdf 17 45 48.4 -0.4**
comp=Z,3.7nm,0.6s,baz=94,slow=4.2,SNR=12
NB2 NORSAR Subarra139.39 356 PKP PKPpre 17 45 43.3
comp=Z,2.1nm,0.9s,baz=10,slow=3.2
HFS Hagfors 140.09 354 PKhKP PKPpre 17 45 46.5
comp=Z,3.6nm,0.7s,baz=338,slow=3.1,SNR=7.6
KVAR Kislovodsk Arr 141.56 316 PKP **PKPdf 17 45 59.0 +0.8**
comp=Z,3.1nm,0.7s,baz=4.1,slow=6.5,SNR=3.6
KVAR PP **PP 17 48 57.1 -4.6**
comp=Z,2.8nm,0.8s,baz=108,slow=11,SNR=2.9
KIV Kislovodsk 141.56 316 *i* PKIKP **PKPdf 17 45 58.5 +0.3**
KIV pmax pmax
comp=Z,9.0nm,1.1s
GNI Garni 141.57 309 *i* PKIKP **PKPdf 17 45 57.8 -0.7**
MICGM Minsk 142.22 339 *e* **PKPdf 17 46 02.0 +3.1**
MNK Minsk 142.22 339 *e*PKIKP **PKPdf 17 46 02.0 +3.1**
RAYN Ar Rayn 143.21 282 *e*PKPdf **PKPdf 17 46 02.4 +0.7**
RAYN Ar Rayn 143.21 282 P PKPbc 17 45 59.2 +0.5
SOC Sochi 143.65 317 *i* PKHKP PKPpre 17 45 57.3
SOC *e*PPP PPP 17 52 34.8
SOC *e*SS SS 18 07 49.5 -6.0
SUW Suwalki 144.09 343 *e*PKP PKPbc 17 46 00.9 +0.7
SUW Suwalki 144.09 343 *e*PKIKP PKPbc 17 46 00.9 +0.7
ANN Anapa 144.45 320 *e*PKIKP PKPbc 17 46 01.7 +0.1
ANN *i* 17 46 06.0
ANN pmax pmax
comp=Z,70nm,1.4s
EKA Eskdalemuir Ar 144.63 9 PKP PKPbc 17 46 01.9 +0.1
comp=Z,12nm,0.7s,baz=335,slow=2.9,SNR=49
EKA Eskdalemuir Ar 144.63 9 PKIKP PKPbc 17 46 02.0 +0.1
ESK Eskdalemuir 144.64 9 *e*PKPdf PKPbc 17 46 01.9 0.0
ESK Eskdalemuir 144.64 9 *e*PKIKP PKPbc 17 46 02.0 +0.1
AKASG Malin Array Be 144.74 334 PKP **PKPab 17 46 02.0 -0.2**
comp=Z,25nm,0.6s,baz=40,slow=4.5,SNR=155
AKASG PP **PP 17 49 22.4 +2.3**
comp=Z,1.1nm,0.7s,baz=35,slow=5.0,SNR=4.7
KIEV Kiev 144.75 334 *e*PKPdf **PKPab 17 46 02.0 -0.4**
KIEV Kiev 144.75 334 *i* P **PKPab 17 46 01.9 -0.4**
SNR=7.2
KIEV Kiev 144.75 334 *c i* PKIKP **PKPab 17 46 01.7 -0.6**
KBSD Kabsdagh 145.71 306 *e*P PKPpre 17 45 56.2
MZRK Al-Mazaregh 145.98 304 *e*P PKPpre 17 45 53.7
GKP Gorka Klasztor 146.20 348 *e*PKP **PKPab 17 46 07.4 -0.2**
GKP Gorka Klasztor 146.20 348 *e*PKP2 **PKPab 17 46 07.4 -0.2**
SIM Simferopol' 146.31 323 *c i* PKP2 **PKPab 17 46 08.7 +0.4**
SIM pmax pmax
comp=Z,46nm,0.8s
BEL Belsk 146.69 343 *e*PKPc 17 46 09.6
BEL Belsk 146.69 343⇑*e*PKP2 **PKPab 17 46 09.5 0.0**
SORM Soroca 147.06 332⇓*i*P **PKPdf 17 46 07.9 +0.4**
LVV L'vov 147.44 338 *e*PKP2 **PKPab 17 46 11.6 -0.9**
LVV MLR MLR
comp=N,200nm,23.0s
LVV MLR MLR
comp=E,200nm,23.0s
LVV MLR MLR
comp=Z,400nm,23.0s
KIS Kishinev 147.69 330⇑*i*PKP **PKPbc 17 46 12.0 +0.6**
KIS M M 17 46 13.0
comp=Z,200nm,2.0s
KIS Kishinev 147.69 330 *i* PsP 17 46 22.0
KIS Kishinev 147.69 330⇑*i*PKP2 **PKPbc 17 46 12.0 +0.6**
KIS pmax pmax
comp=Z,200nm,2.0s
KIS MLR MLR
comp=Z,600nm,24.0s
SLMH Al Salmeh 147.95 306 *e*P **PKPdf 17 46 10.2 +0.8**
KWP Kalwaria Pacla 148.05 339 *e*PKP **PKPbc 17 46 12.9 +0.6**
KWP Kalwaria Pacla 148.05 339 *e*PKP2 **PKPbc 17 46 12.9 +0.6**
LEOM Leova 148.34 330⇑*i*P **PKPbc 17 46 14.3 +1.2**
OJC Ojcow 148.42 343 *e*PKPc **PKPbc 17 46 13.8 +0.6**
OJC Ojcow 148.42 343⇑*e*PKP2 **PKPbc 17 46 13.8 +0.6**
PRAR RASCA 148.58 333⇑*i*P **PKPbc 17 46 15.1 +1.4**
WTSB Winterswijk 148.66 359 *e*P **PKPdf 17 46 10.7 +0.7**
KSP Ksiaz 148.69 347 *e*PKPc **PKPbc 17 46 14.9 +1.0**
KSP Ksiaz 148.69 347⇑*e*PKP2 **PKPbc 17 46 14.9 +1.0**
BURAR Bucovina Array 148.80 334⇑*i*P **PKPbc 17 46 15.2 +0.8**
BURAR Bucovina Array 148.80 334⇓*i*P **PKPbc 17 46 16.2 +1.8**
CLL Collm 148.82 351 *e*PKPdf **PKPdf 17 46 11.0 +0.7**
CLL ⇑*i*PKPbc **PKPbc 17 46 14.8 +0.6**
comp=Z,54nm,0.8s
CLL *i* PKPab **PKPab 17 46 18.2 +0.2**
comp=Z,300nm,0.8s
CLL *i* 17 46 24.1
CLL Lm MLR 18 52 00.0
comp=Z,300nm,21.2s
CLL Collm 148.82 351⇑*e*PKIKP **PKPdf 17 46 11.0 +0.7**
CLL *i* 17 46 14.8
CLL *i* 17 46 18.2
CLL pmax pmax
comp=Z,54nm,0.8s
CLL MLR MLR
comp=Z,300nm,21.2s
NIE Niedzica 148.99 342 *e*PKP **PKPbc 17 46 16.0 +1.2**
NIE Niedzica 148.99 342 *e*PKP2 **PKPbc 17 46 16.0 +1.2**
TLCR 149.00 328⇓*i*P **PKPbc 17 46 15.7 +0.9**
UZH Uzhgorod 149.05 339⇓*e*PKIKP **PKPbc 17 46 13.3 -1.5**
UZH *i* 17 46 15.5
UZH *e* 17 46 29.8
TESR Tescani 149.05 332⇓*i*P **PKPbc 17 46 14.8 -0.2**
UPC Upice 149.07 347⇑*e*PKP **PKPbc 17 46 16.3 +1.4**
UPC *ex* x 17 46 26.5
UPC AMS AMS 18 51 50.0
comp=Z,500nm,20.7s
UPC Upice 149.07 347 *e*PKP2 **PKPbc 17 46 16.3 +1.4**
UPC MLR MLR
comp=Z,500nm,20.7s
CRVS Cervenica-Dubn 149.09 340 *e*PKP2 **PKPbc 17 46 16.1 +1.1**
CRVS Cervenica-Dubn 149.09 340 *e*PKP **PKPbc 17 46 16.1 +1.1**
BRG Berggiesshubel 149.10 350 *e*PKP **PKPdf 17 46 11.3 +0.5**
comp=Z,6.2nm,1.2s
BRG Berggiesshubel 149.10 350 *i* PKP **PKPbc 17 46 15.8 +0.9**
comp=Z,41nm,0.8s
BRG Berggiesshubel 149.10 350 *e*PKIKP **PKPdf 17 46 11.3 +0.5**
BRG *i* 17 46 15.8
BRG pmax pmax
comp=Z,6.0nm,1.2s
BRG pmax pmax
comp=Z,41nm,0.8s
DPC Dobruska-Polom 149.15 347 *e*PKPDF **PKPdf 17 46 12.5 +1.5**
DPC ⇑*e*PKP **PKiKP 17 46 16.8 +0.4**
DPC *ex* x 17 46 31.3
DPC AMS AMS 18 52 00.0
comp=Z,400nm,18.0s
DPC Dobruska-Polom 149.15 347 *e*PKIKP **PKPdf 17 46 12.5 +1.5**
DPC *e* 17 46 16.8
DPC MLR MLR
comp=Z,400nm,18.0s
OKC Ostrava-Krasne 149.20 344⇑*e*PKP **PKPbc 17 46 16.5 +1.3**
OKC AMS AMS 18 53 10.0
comp=Z,400nm,19.8s
OKC Ostrava-Krasne 149.20 344 *e*PKP2 **PKPbc 17 46 16.5 +1.3**
OKC MLR MLR
comp=Z,400nm,19.8s
KRLC Kraliky 149.31 346⇑*e*PKP **PKPbc 17 46 17.0 +1.5**
KRLC *ex* x 17 46 31.8
KRLC Kraliky 149.31 346 *e*PKP2 **PKPbc 17 46 17.0 +1.5**
PVCC Panska Ves 149.32 349⇑*e*PKP **PKPbc 17 46 16.6 +1.1**
PVCC *ex* x 17 46 27.2
PVCC Panska Ves 149.32 349 *e*PKP2 **PKPbc 17 46 16.6 +1.1**
TRPA Tarpa 149.39 338⇑*i*P **PKPbc 17 46 16.4 +0.7**
TRPA Tarpa 149.39 338⇑*e*PKPdf **PKPbc 17 46 16.3 +0.6**
MORC Moravsky Berou 149.41 345⇑*i*P **PKPbc 17 46 17.0 +1.2**
MORC Moravsky Berou 149.41 345 PKP2 **PKPbc 17 46 16.3 +0.5**
MORC Moravsky Berou 149.41 345 *e*PKP **PKPdf 17 46 11.6 +0.2**
MORC *e* 17 46 16.6
BMR Baia Mare 149.42 336⇓*i*P **PKPbc 17 46 16.8 +1.0**
LANS Liptovska Anna 149.48 342 *e*PKP2 **PKPbc 17 46 17.8 +1.8**
LANS Liptovska Anna 149.48 342 *e*PKP **PKPbc 17 46 17.8 +1.8**
VRI Vrincioaia 149.50 331⇓*i*P **PKPbc 17 46 16.7 +0.6**
BRTR Keskin Array B 149.51 315 PKP **PKPdf 17 46 11.8 -0.3**
comp=Z,9.8nm,0.7s,baz=108,slow=1.6,SNR=30
BRTR PKPbc **PKPbc 17 46 16.9 +0.4**
comp=Z,11nm,0.6s,baz=132,slow=3.8,SNR=46
BRTR PP **PP 17 49 51.1 +2.1**
comp=Z,3.9nm,1.0s,baz=94,slow=3.7,SNR=5.4
PLOR Plostina 149.55 331⇑*i*P **PKPbc 17 46 16.6 +0.3**
TIRR Tirgusor 149.71 327⇑*i*P **PKPbc 17 46 17.2 +0.6**
KECS Kecovo 149.77 341 *e*PKP2 **PKPbc 17 46 17.5 +0.8**
KECS Kecovo 149.77 341 *e*PKP **PKPbc 17 46 17.5 +0.8**
FKH Fakeheh 149.78 303 *e*P **PKPbc 17 46 18.6 +1.3**
PRA Prague 149.79 349⇑*e*PKP **PKPbc 17 46 18.1 +1.5**
PRA Prague 149.79 349 *e*PKP2 **PKPbc 17 46 18.1 +1.5**
HARR Harsova 149.79 328⇑*i*P **PKPbc 17 46 17.9 +1.1**
TLB Topalu 149.81 328⇓*i*P **PKPbc 17 46 17.3 +0.5**
BEBN Eben Emael 149.84 0⇑PKP **PKPbc 17 46 17.1 +0.3**
HGN Heimansgroeve 149.87 360 *e*P **PKPdf 17 46 11.8 -0.2**
GOPC GO Pecny, Ondr 149.87 348⇑*e*PKP **PKPbc 17 46 18.3 +1.4**
GOPC AMS AMS 18 52 00.0
comp=Z,300nm,16.2s
GOPC GO Pecny, Ondr 149.87 348 *e*PKP2 **PKPbc 17 46 18.3 +1.4**
GOPC MLR MLR
comp=Z,300nm,16.2s
NKC Novy Kostel 149.94 352⇑*e*PKP **PKPbc 17 46 17.9 +0.8**
NKC *e*PKPAB **pPKPbc 17 46 23.6 0.0**
NKC AMS AMS 18 56 50.0
comp=Z,400nm,19.2s
NKC Novy Kostel 149.94 352 *e*PKP2 **PKPbc 17 46 17.9 +0.8**
NKC MLR MLR
comp=Z,400nm,19.2s
ANTO Ankara 149.99 316⇑*i*P PKPpre 17 46 06.1
ASF Jabal al Asfar 149.99 299 PKP **PKPdf 17 46 13.3 +0.3**
comp=Z,1.6nm,0.3s,baz=37,slow=5.1,SNR=11
ASF PKPbc **PKiKP 17 46 18.8 +0.1**
comp=Z,20nm,1.0s,baz=47,slow=3.2,SNR=26
MEM Membach 150.03 360⇑PKP **PKPbc 17 46 17.6 +0.4**
DOPR Dopca 150.03 332⇓*i*P **PKPbc 17 46 16.1 -1.3**
VRAC Vranov 150.07 346⇑*i*P **PKPbc 17 46 18.2 +0.8**
VRAC Vranov 150.07 346 *e*PKP **PKPdf 17 46 14.1 +1.7**
VRAC *e* 17 46 18.2
QASN Qassioun 150.11 302 *e*P **PKPdf 17 46 13.6 +0.5**
HWQ Hawqa 150.13 304 *e*P **PKPbc 17 46 18.8 +0.7**
MLR Muntele Rosu 150.15 331 PKP **PKPdf 17 46 12.4 -0.4**
comp=Z,6.4nm,1.0s,baz=37,slow=5.1,SNR=11
MLR PKPbc **PKPbc 17 46 18.2 +0.3**
comp=Z,6.1nm,1.0s,baz=19,slow=1.7,SNR=29
MLR Muntele Rosu 150.15 331⇑*i*P **PKPbc 17 46 17.5 -0.4**
ISR Istrita 150.15 330⇑*i*P **PKPbc 17 46 18.6 +0.8**
CJR Cluj-Napoca 150.18 335⇑*i*P **PKPbc 17 46 17.2 -0.6**
BCLA Clavier 150.21 1⇑P **PKPbc 17 46 16.7 -1.0**
JAVC Velka Javorina 150.23 344 *e*PKP **PKPdf 17 46 14.1 +1.4**
JAVC *e* 17 46 19.6
VYHS Vyhne 150.25 342 *e*PKIKP **PKPbc 17 46 18.8 +0.9**
VYHS Vyhne 150.25 342 *e*PKP **PKPbc 17 46 18.8 +0.9**
KRUC Moravsky 150.35 346 *e*PKP **PKPdf 17 46 12.9 +0.1**
KRUC *e* 17 46 18.6
PSZ Piszkesteto 150.45 341⇑*i*P **PKPbc 17 46 18.9 +0.5**
PSZ Piszkesteto 150.45 341⇑*e*PKPdf **PKPbc 17 46 18.8 +0.4**
DRGR 150.45 336⇑*i*P **PKPbc 17 46 19.2 +0.7**
BHL Bhannes 150.48 303 *e*P **PKPbc 17 46 19.5 +0.5**
VOIR 150.59 332⇓*i*P **PKPbc 17 46 19.4 +0.5**
SHBL Chebaa 150.59 302 *e*P **PKPbc 17 46 20.6 +1.3**
SMOL Smolenice 150.61 344 *e*PKIKP **PKPbc 17 46 19.9 +1.2**
SMOL Smolenice 150.61 344 *e*PKP **PKPbc 17 46 19.8 +1.1**
SULR 150.61 330⇑*i*P **PKPbc 17 46 17.6 -1.2**
DQRL Deir Qamar 150.62 303 *e*P **PKPbc 17 46 20.4 +1.1**
MODS Modra-Piesok 150.78 344 *e*PKIKP **PKPbc 17 46 19.5 +0.4**
MODS Modra-Piesok 150.78 344 *e*PKP **PKPbc 17 46 19.5 +0.4**
ARR Arges 150.82 332⇑*i*P **PKPdf 17 46 16.1 +2.3**
KHC Kasperske Hory 150.84 350 *e*PKPDF **PKPdf 17 46 14.7 +1.0**
KHC ⇑*e*PKP **pPKPdf 17 46 20.1 -0.1**
KHC *ex* x 17 46 35.5
KHC AMS AMS 18 54 00.0
comp=Z,400nm,20.8s
KHC Kasperske Hory 150.84 350 *e*PKIKP **PKPdf 17 46 14.7 +1.0**
KHC *e* 17 46 20.1
KHC MLR MLR
comp=Z,400nm,20.8s
MMAI Mount Meron Ar 150.96 301 PKPbc **PKPbc 17 46 21.4 +1.2**
comp=Z,30nm,0.7s,baz=76,slow=7.0,SNR=59
WLF Walferdange 150.97 360⇓PKP **PKPbc 17 46 20.8 +1.3**
ZST Bratislava 150.99 344 *e*PKIKP **PKPbc 17 46 19.6 0.0**
ZST Bratislava 150.99 344 *e*PKP **PKPbc 17 46 19.6 0.0**
SRO2 Moca 151.04 342 *e*PKIKP **PKPbc 17 46 20.0 +0.3**
SRO2 Moca 151.04 342 *e*PKP **PKPbc 17 46 20.0 +0.3**
GERES GERESS Array B 151.10 349 PKP **PKPdf 17 46 14.6 +0.5**
comp=Z,1.4nm,0.9s,baz=98,slow=2.0,SNR=12
GERES PKPbc **PKiKP 17 46 20.5 0.0**
comp=Z,14nm,0.7s,baz=28,slow=2.5,SNR=82
DEV Deva 151.13 335⇓*i*P **PKPbc 17 46 18.6 -1.4**
SIRR Siria 151.29 337⇑*i*P **PKPbc 17 46 21.4 +1.0**
CSKK Cs̈̈̈tkako 151.44 342⇓*e*PKPdf **PKPbc 17 46 21.2 +0.5**
CONA Conrad Observa 151.53 346 *e*PKiKP **PKiKP 17 46 21.9 +0.5**
comp=Z,29nm,0.7s,SNR=15
SOP Sopron 151.60 345⇑*e*PKPdf **PKPbc 17 46 21.7 +0.7**
BZS Buzias 151.85 336⇑*i*P **PKPdf 17 46 16.5 +1.3**
MOA Molln 151.95 348 *e*PKiKP **PKiKP 17 46 22.4 +0.2**
comp=Z,14nm,0.6s,SNR=7.7
HERR Herculane 152.15 334⇓*i*P **PKPdf 17 46 16.6 +0.9**
EIL Elat 152.21 295 PKP **PKPdf 17 46 17.4 +1.1**
comp=Z,2.9nm,0.8s,baz=313,slow=2.0,SNR=4.0
EIL PKPbc **sPKPdf 17 46 24.9 -0.3**
comp=Z,22nm,0.8s,baz=352,slow=4.4,SNR=24
BFO Black Forest 152.24 356 *i* PKIKP **PKPbc 17 46 23.2 +0.7**
ARSA Arzberg 152.25 346 *i* PKiKP **PKiKP 17 46 22.8 0.0**
comp=Z,16nm,1.4s,SNR=5.2
MDVR Moldovita 152.51 335⇓*i*P **PKPdf 17 46 17.5 +1.2**
RETA Reutte 152.86 353 *i* PKiKP **PKiKP 17 46 24.4 +0.2**
comp=Z,10nm,0.9s,SNR=6.2

KBA	Koelnbreinsper	152.86	349	*i* PKiKP	PKPbc	17 46 23.9	-0.2
	comp=Z,14nm,0.7s,SNR=8.4						
WATA	Walderalm	152.90	351	*i* PKiKP	PKiKP	17 46 24.6	+0.2
	comp=Z,4.9nm,0.4s,SNR=12						
SOKA	Soboth	152.90	346	*e*PKiKP	PKiKP	17 46 24.2	-0.1
	comp=Z,18nm,1.0s						
PERS	Pernice	152.92	346	*i* PKPbc	PKPbc	17 46 24.0	-0.1
MOTA	Moosalm	152.95	352	*e*PKPbc	PKPbc	17 46 23.7	-0.6
	comp=Z,12nm,0.8s,SNR=8.9						
WTTA	Wattenberg	152.96	351	*e*PKiKP	PKiKP	17 46 24.9	+0.4
	comp=Z,25nm,0.6s,SNR=13						
DAVA	Damuels	153.15	354	*e*PKiKP	PKiKP	17 46 25.3	+0.4
	comp=Z,25nm,1.0s,SNR=7.6						
OBKA	Obir	153.17	347	*i* PKiKP	PKPbc	17 46 24.7	0.0
	comp=Z,4.1nm,0.6s						
MYKA	Terra Mystica	153.24	348	*e*PKiKP	PKPbc	17 46 24.7	-0.1
	comp=Z,9.0nm,0.7s						
FETA	Feichten	153.32	353	*e*PKiKP	PKiKP	17 46 25.8	+0.6
	comp=Z,9.5nm,0.7s,SNR=7.4						
ABTA	Abfaltersbach	153.33	350	*e*PKiKP	PKPbc	17 46 24.9	-0.1
	comp=Z,27nm,0.7s						
GCIS	Gornji Cirnik	153.52	345	*i* PKPbc	PKPbc	17 46 25.8	+0.4
LJU	Ljubljana	153.62	346	*e*PKPdf	PKPdf	17 46 15.0	-2.8
LJU				*e*PKPbc	pPKPdf	17 46 22.7	-1.7
VISS	Visnje	153.77	346	*i* PKPdf	PKPdf	17 46 18.2	+0.1
VISS				*i* PKPbc	PKiKP	17 46 26.1	+0.1
VISS				*i*		17 46 49.3	
BOJS	Bojanci	153.96	345	*i* PKPdf	PKPdf	17 46 18.8	+0.4
BOJS				*i* PKPbc	sPKPdf	17 46 26.8	-0.3
POLO	Lamas de Olo	156.25	26	*e*PKPab	PKPab	17 46 50.3	+0.7
POLO	Lamas de Olo	156.25	26	*i* P	PKPab	17 46 50.3	+0.7
PBRG	Braganca	156.30	24	*e*PKPab	PKPab	17 46 50.5	+0.8
PBRG	Braganca	156.30	24	*i* P	PKPab	17 46 50.5	+0.8
MVO	Moncorvo	156.73	25	*e*PKPdf	PKPdf	17 46 23.8	+1.5
MVO	Moncorvo	156.73	25	*e*PKPab	PKPab	17 46 52.5	+0.9
MVO	Moncorvo	156.73	25	*i* P	PKPdf	17 46 23.9	+1.6
PVIS	Viseu	156.75	27	*e*PKPab	PKPab	17 46 52.8	+1.1
PVIS	Viseu	156.75	27	*i* P	PKPab	17 46 52.8	+1.1
MTE	Manteigas	157.16	27	*e*PKPdf	PKPdf	17 46 24.3	+1.4
MTE	Manteigas	157.16	27	*i* P	PKPdf	17 46 24.4	+1.5
PTOM	Tomar	157.41	30	*e*PKPdf	PKPdf	17 46 24.4	+1.3
PTOM	Tomar	157.41	30	*e*PKPab	PKPab	17 46 55.6	+1.1
PTOM	Tomar	157.41	30	*i* P	PKPdf	17 46 26.0	+2.9
PCBR	Castelo Branco	157.65	28	*e*PKPdf	PKPdf	17 46 24.3	+0.9
PCBR	Castelo Branco	157.65	28	*e*PKPab	PKPab	17 46 55.9	+0.4
PCBR	Castelo Branco	157.65	28	*i* P	PKPdf	17 46 24.8	+1.4
ALMR	Almeirim	157.70	31	*e*PKPdf	PKPdf	17 46 25.1	+1.6
PMRV	Marv??o	158.03	28	*e*PKPdf	PKPdf	17 46 24.5	+0.6
PMRV	Marv??o	158.03	28	*e*PKPab	PKPab	17 46 57.9	+0.7
PMRV	Marv??o	158.03	28	*i* P	PKPdf	17 46 25.1	+1.2
PESTR	Estremoz	158.39	30	*e*PKPab	PKPab	17 46 59.3	+0.5
PESTR	Estremoz	158.39	30	*i* P	PKPab	17 46 59.3	+0.5
EVO	Evora	158.46	31	*e*PKPdf	PKPdf	17 46 25.9	+1.4
EVO	Evora	158.46	31	*e*PKPab	PKPab	17 46 59.7	+0.6
PNCL	Nicolau / Gran	158.54	32	*e*PKPdf	PKPdf	17 46 26.0	+1.5
PNCL	Nicolau / Gran	158.54	32	*i* P	PKPdf	17 46 26.0	+1.5
MESJ	Messejana	158.90	32	*e*PKPdf	PKPdf	17 46 26.9	+2.0
MESJ	Messejana	158.90	32	*i* P	PKPdf	17 46 27.0	+2.0
PBEJ	Beja	158.93	31	*e*PKPdf	PKPdf	17 46 27.6	+2.6
PBEJ	Beja	158.93	31	*i* P	PKPdf	17 46 28.0	+3.0
ESDC	Sonseca Array	159.18	22	PKP	PKPdf	17 46 25.1	-0.2
	comp=Z,0.8nm,0.6s,baz=324,slow=3.1,SNR=6.4						
ESDC				PKPab	PKPab	17 47 03.1	+0.9
	comp=Z,2.3nm,0.8s,baz=326,slow=4.5,SNR=6.2						
PBAR	Barrancos	159.21	30	*e*PKPdf	PKPdf	17 46 26.7	+1.4
PBAR	Barrancos	159.21	30	*i* P	PKPdf	17 46 26.7	+1.4
KEST	Kesra	164.59	349	PKP	PKPdf	17 46 31.7	+0.6
	comp=Z,3.9nm,1.1s,baz=264,slow=6.4,SNR=4.1						
MDT	Midelt	164.64	35	PKP	PKPdf	17 46 31.1	-0.1
	comp=Z,5.8nm,0.8s,baz=319,slow=3.3,SNR=2.1						
MDT				PKPab	PKPab	17 47 27.4	+1.0
	comp=Z,7.5nm,1.1s,baz=337,slow=7.2,SNR=2.3						
KOWA	Kowa	168.81	121	PKP	PKPdf	17 46 33.7	-1.0
	comp=Z,3.9nm,0.8s,baz=153,slow=2.2,SNR=5.5						
KOWA				PKPab	PKPab	17 47 43.6	-1.6
	comp=Z,4.7nm,1.0s,baz=297,slow=6.8,SNR=2.7						
TORD	Torodi Ar. Bea	171.61	151	PKP	PKPdf	17 46 35.5	-0.9
	comp=Z,4.5nm,0.9s,baz=286,slow=1.0,SNR=13						
TORD				PKPab	PKPab	17 47 56.1	-1.3
	comp=Z,1.4nm,1.1s,baz=197,slow=4.6,SNR=2.7						
TORD				PP	PP	17 51 54.5	+7.4
	comp=Z,1.1nm,1.0s,baz=197,slow=4.5,SNR=3.2						

IDC 17 17:28:12.5±5.0, 2°.49N×89°.50E, h0km, mb3.8/2, mb1 3.8/2, mb1mx3.2/73, mbtmp3.8/2, Error ellipse: s-maj=179.5km s-min=95.8km az=76.0, North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	Pallekele	9.97	299	Sn	Sn	17 32 27.9	-1.9
	0.8nm,0.3s,baz=115,slow=15,SNR=2.2						
H08S2	Diego Garcia H	19.73	239	T	T	17 53 30.3	
	baz=59,slow=75,SNR=24						
H08S3	Diego Garcia H	19.73	239	T	T	17 53 28.4	
	baz=59,slow=75,SNR=31						
H08S1	Diego Carcia H	19.74	239	T	T	17 53 31.4	
	baz=59,slow=75,SNR=29						
H01W3	Cape Leeuwin H	43.78	150	T	T	18 22 56.5	
	baz=325						
H01W2	Cape Leeuwin H	43.79	150	T	T	18 22 56.1	
	baz=325						
H01W1	Cape Leeuwin H	43.80	150	T	T	18 22 54.8	
	baz=325						
MKAR	Makanchi Array	44.57	353	P	P	17 36 26.2	-0.1
	0.3nm,0.5s,baz=176,slow=8.7,SNR=5.3						
SONM	Songino Array	47.47	15	P	P	17 36 49.1	-0.2
	1.7nm,0.4s,baz=204,slow=5.9,SNR=3.9						
TXAR	Lajitas Array	145.94	21	PKPbc	PKPdf	17 47 54.0	-0.3
	0.4nm,0.7s,baz=335,slow=4.0,SNR=3.9						

*ISCJB **17** 17:29:46.9±0.6, 41°.56N±0°.03×29°.09W±0°.09, h10km, mb3.9/12, Error ellipse: s-maj=9.7km s-min=4.6km az=6.4*
*IDC **17** 17:29:48.6±2.2, 41°.76N×28°.88W, h0km, mb3.9/12, mb1 3.9/13, mb1mx3.7/70, mbtmp3.9/13, ML4.2/1, Error ellipse: s-maj=49.8km s-min=27.6km az=40.0*
ISC 17 17:29:48.6±0.7, **41°.53N**±0°.07×**29°.11W**±0°.08, **h10km, n21,** σ0°**98**/26, **mb4.0**/12, **Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H07N1	FLORES T-PHASE	2.39	220	Pn	Pn	17 30 27.3	-0.6
H07N1				Sn	Sn	17 30 56.0	-1.2
H07N1				T	T	17 33 04.7	
ROSA	Rosais	2.89	166	*e*P	Pn	17 30 34.8	+0.1
ROSA				*e*S	Sn	17 31 09.4	0.0
ROSA				A	A	17 31 14.5	
	21nm,0.5s						
PCED	Cedros	2.92	174	*e*S	Sn	17 31 10.6	+0.4
PCED				A	A	17 31 15.0	
	45nm,0.4s						
CALA	Caldeira	2.96	174	*e*P	Pn	17 30 36.2	+0.4
CALA				*e*S	Sn	17 31 11.8	+0.4
PMAN	Manadas	3.00	164	*e*S	Sn	17 31 12.0	-0.2
PMAN				A	A	17 31 13.7	
	16nm,0.3s						
PICO	Pico	3.07	170	*e*P	Pn	17 30 37.4	+0.1
PICO				*e*S	Sn	17 31 14.1	0.0
PICO				A	A	17 31 17.3	
	5.9nm,0.2s						
PSCM	Serra do Cume	3.21	151	*e*P	Pn	17 30 38.7	-0.5
PSCM				*e*S	Sn	17 31 16.0	-1.5
PSCM				A	A	17 31 22.1	
	52nm,0.4s						
ESDC	Sonseca Array	19.17	87	P	Pn	17 34 13.4	+0.2
	0.2nm,0.3s,baz=289,slow=12,SNR=10						
KEST	Kesra	30.42	88	P	P	17 36 01.1	-0.1
	2.7nm,0.9s,baz=297,slow=9.0,SNR=3.1						
GERES	GERESS Array B	30.71	62	P	P	17 36 03.3	-0.4
	0.6nm,0.8s,baz=264,slow=18,SNR=4.1						
TORD	Torodi Ar. Bea	38.97	128	P	P	17 37 16.1	+1.0
	0.7nm,0.9s,baz=338,slow=11,SNR=3.4						
AKASG	Malin Array Be	40.50	56	P	P	17 37 27.2	-0.3
	0.8nm,0.6s,baz=276,slow=9.0,SNR=7.0						
BRTR	Keskin Array B	46.72	70	P	P	17 38 19.2	+1.3
	0.9nm,0.9s,baz=291,slow=9.1,SNR=3.7						
ARU	Arti	55.52	42	P	P	17 39 21.5	-2.1
	1.0nm,0.2s,baz=309,slow=6.1,SNR=5.2						
INK	Inuvik	57.06	335	P	P	17 39 36.6	+2.2
	2.8nm,1.0s,baz=75,slow=7.2,SNR=4.0						
AKTO	Aktyubinsk	57.87	49	P	P	17 39 39.4	-1.0
	1.2nm,0.5s,baz=298,slow=9.1,SNR=5.0						
BVAR	Borovoye Array	63.16	42	P	P	17 40 16.0	-0.4
	1.2nm,0.8s,baz=305,slow=5.1,SNR=8.3						
KURBB	Kurchatov Arra	68.64	41	P	P	17 40 50.3	-1.4
	0.8nm,0.7s,baz=312,slow=7.0,SNR=8.1						
ZALV	Zalesovo Beam	69.34	35	P	P	17 40 56.8	+0.7
	0.4nm,0.4s,baz=293,slow=7.7,SNR=4.1						
MKAR	Makanchi Array	73.04	42	P	P	17 41 18.0	-0.7
	1.7nm,1.0s,baz=354,slow=4.3,SNR=7.4						
ASAR	Alice Springs	157.22	44	PKPab	PKPab	17 50 15.0	-0.8
	0.7nm,1.1s,baz=325,slow=5.5,SNR=4.2						

*ISCJB **17** 17:31:29.5±0.4, 41°.81N±0°.06×29°.45W±0°.07, h10km, mb4.0/21, Error ellipse: s-maj=9.5km s-min=6.8km az=148.9*
*IDC **17** 17:31:30.0±0.8, 41°.83N×29°.35W, h0km, mb3.9/19, mb1 4.1/20, mb1mx3.9/68, mbtmp3.9/20, ML4.4/1, Error ellipse: s-maj=22.0km s-min=14.2km az=7.0*
ISC 17 17:31:31.1±0.5, **41°.70N**±0°.08×**29°.36W**±0°.07, **h10km, n35,** σ1°**19**/35, **mb4.0**/21, **Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H07N1	FLORES T-PHASE	2.41	214	Pn	Pn	17 32 08.6	-2.0
H07N1				Sn	Sn	17 32 42.0	+1.9
H07N1				T	T	17 34 40.4	
PMOZ	Porto Moniz, M	13.12	129	*i* P	Pn	17 34 36.5	-1.0
PMAR	Madeira	13.35	128	*i* P	Pn	17 34 39.1	-1.7
PMTG	Montargil	16.32	92	*i* P	P	17 35 23.2	0.0
PCBR	Castelo Branco	16.68	89	*i* P	P	17 35 26.6	-0.6
PMRV	Marv??o	16.85	90	*i* P	P	17 35 29.3	+0.2
PESTR	Estremoz	16.85	92	*i* P	P	17 35 29.4	+0.3
PCVE	Castro Verde	16.91	97	*i* P	Pn	17 35 27.6	-0.1
PBAR	Barrancos	17.47	94	*i* P	P	17 35 38.7	+2.7
ESDC	Sonseca Array	19.35	88	P	P	17 35 56.6	-0.2
	0.3nm,0.3s,baz=292,slow=11,SNR=16						
MDT	Midelt	21.55	106	P	P	17 36 21.7	+1.0
	5.7nm,0.9s,baz=302,slow=13,SNR=5.1						
EKA	Eskdalemuir Ar	21.91	43	P	P	17 36 25.4	+1.2
	2.2nm,0.9s,baz=236,slow=8.5,SNR=3.9						
CLL	Collm	30.32	57	*e*PPP	PPP	17 37 00.0	
CLL				*e*		17 37 43.0	
CLL				Lm	MLR	17 51 00.0	
	comp=Z,200nm,19.8s						
KEST	Kesra	30.60	88	P	P	17 37 45.3	+0.1
	comp=Z,3.9nm,0.9s,baz=281,slow=7.0,SNR=5.2						
KHC	Kasperske Hory	30.71	61	*e*P	P	17 37 46.0	0.0
GERES	GERESS Array B	30.80	62	P	P	17 37 46.7	-0.3
	comp=Z,0.6nm,0.8s,baz=278,slow=3.9,SNR=5.0						
FINES	FINESS Array B	38.25	40	P	P	17 38 53.7	+2.7
	comp=Z,4.0nm,0.8s,baz=230,slow=12,SNR=5.1						
TORD	Torodi Ar. Bea	39.22	127	P	P	17 39 00.5	+0.8
	comp=Z,2.1nm,0.8s,baz=316,slow=7.5,SNR=7.3						
MLR	Muntele Rosu	39.57	65	P	P	17 39 02.1	-0.4
	comp=Z,0.3nm,0.5s,baz=317,slow=10,SNR=3.8						
AKASG	Malin Array Be	40.57	57	P	P	17 39 10.0	-0.5
	comp=Z,1.5nm,0.7s,baz=278,slow=8.4,SNR=7.4						
RES	Resolute Bay	43.84	340	P	P	17 39 36.4	-0.5
	comp=Z,1.1nm,0.7s,baz=119,slow=7.1,SNR=5.8						
BRTR	Keskin Array B	46.84	70	P	P	17 40 01.1	-0.2
	comp=Z,1.7nm,1.0s,baz=294,slow=6.1,SNR=5.9						
YKA	Yellowknife Ar	51.99	324	P	P	17 40 39.5	-0.6
	comp=Z,1.2nm,0.7s,baz=64,slow=7.0,SNR=3.7						
ARU	Arti	55.52	42	P	P	17 41 03.3	-2.7
	comp=Z,2.7nm,0.6s,baz=283,slow=6.3,SNR=6.8						
PDAR	Pinedale Array	57.16	300	P	P	17 41 18.0	-0.3
	comp=Z,0.9nm,0.8s,baz=64,slow=8.4,SNR=3.9						
AKTO	Aktyubinsk	57.90	49	P	P	17 41 23.2	+0.2
	comp=Z,2.3nm,0.9s,baz=284,slow=7.6,SNR=5.6						
TXAR	Lajitas Array	60.01	284	P	P	17 41 38.2	+0.1
	comp=Z,2.8nm,1.0s,baz=81,slow=7.0,SNR=5.4						
BVAR	Borovoye Array	63.16	42	P	P	17 41 59.2	+0.3
	comp=Z,2.5nm,0.9s,baz=337,slow=7.1,SNR=9.7						
ILAR	Eielson Array	63.23	335	P	P	17 41 59.0	-0.2
	comp=Z,0.6nm,0.8s,baz=40,slow=7.1,SNR=3.8						
LPAZ	La Paz	67.91	220	P	P	17 42 32.5	+1.9
	comp=Z,2.5nm,1.1s,baz=335,slow=6.1,SNR=4.2						
KURBB	Kurchatov Arra	68.64	41	P	P	17 42 33.1	-1.1
	comp=Z,3.5nm,0.9s,baz=314,slow=6.4,SNR=8.1						
ZALV	Zalesovo Beam	69.32	35	P	P	17 42 38.4	0.0
	comp=Z,0.7nm,0.6s,baz=304,slow=8.2,SNR=5.5						
MKAR	Makanchi Array	73.05	42	P	P	17 42 59.9	-1.3
	comp=Z,2.6nm,1.0s,baz=328,slow=4.4,SNR=8.2						
VNDA	Vanda	143.77	184	PKP	PKPdf	17 51 05.4	+0.4
	comp=Z,0.8nm,0.8s,baz=279,slow=1.5,SNR=4.3						
ASAR	Alice Springs	157.23	43	PKPab	PKPab	17 51 58.1	-0.1
	comp=Z,1.9nm,1.2s,baz=327,slow=3.9,SNR=7.3						

*ISCJB **17** 17:34:38.6±0.5, 16°.4S±0°.1×175°.49W±0°.10, h300km, mb4.0/14, Error ellipse: s-maj=18.0km s-min=8.4km az=142.0*
*IDC **17** 17:34:41.1±1.8, 16°.44S×175°.33W, h314km±19km, mb3.6/13, mb1 3.8/15, mb1mx3.5/50, mbtmp4.3/15, Error ellipse: s-maj=20.9km s-min=11.4km az=125.0*
ISC 17 17:34:40.0±0.7, **16°.4S**±0°.1×**175°.5W**±0°.1, **h300km, n17,** σ0°**96**/18, **mb4.0**/14, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	4.30	56	P	Pn	17 35 51.4	+1.6
	36nm,0.3s,baz=218,slow=1.7,SNR=19						
AFI				S	S	17 36 44.6	-1.0
	31nm,0.3s,baz=75,slow=20,SNR=4.2						
DZM	Mont Dzumac	18.01	249	P	P	17 38 31.1	+1.1
	0.2nm,0.3s,baz=93,slow=17,SNR=4.5						
URZ	Urewera	22.77	195	P	P	17 39 15.6	-1.3
	9.2nm,0.6s,baz=243,slow=2.3,SNR=11						
HNR	Honiara	24.94	283	P	P	17 39 35.1	-1.7
	40nm,0.8s,baz=169,slow=1.5,SNR=4.3						
RPZ	Rata Peaks	29.58	200	P	P	17 40 16.9	-0.8
	5.4nm,0.5s,baz=116,slow=6.1,SNR=3.9						
STKA	Stephens Creek	41.85	240	P	P	17 42 02.4	+0.9
	3.5nm,0.6s,baz=92,slow=7.7,SNR=14						
WRA	Warramunga Arr	47.71	258	P	P	17 42 47.5	-0.1
	1.9nm,0.4s,baz=94,slow=7.8,SNR=56						
ASAR	Alice Springs	47.94	253	P	P	17 42 49.8	+0.5
	13nm,0.5s,baz=89,slow=7.8,SNR=266						
VNDA	Vanda	62.23	185	P	P	17 44 29.7	-0.2
	1.4nm,0.9s,baz=1.6,slow=5.0,SNR=5.2						
NWAO	Narrogin (SRO)	62.43	241	P	P	17 44 32.3	+0.3
	4.4nm,0.7s,baz=149,slow=5.9,SNR=2.8						
MJAR	Matsushiro Arr	68.42	321	P	P	17 45 10.3	+0.3
	1.0nm,0.6s,baz=156,slow=5.8,SNR=5.1						
PETK	Petropavlovsk-	72.96	343	P	P	17 45 37.0	+0.1
	1.3nm,0.5s,baz=108,slow=8.3,SNR=13						
NVAR	Mina Array Bea	76.36	43	P	P	17 45 56.9	0.0
	0.8nm,0.9s,baz=235,slow=7.6,SNR=3.8						
SEY	Seymchan	82.95	346	P	P	17 46 30.4	-0.8
	2.4nm,0.8s,baz=132,slow=6.4,SNR=5.6						
ILAR	Eielson Array	83.78	12	P	P	17 46 34.8	-0.6
	1.3nm,0.4s,baz=218,slow=5.1,SNR=36						
PDAR	Pinedale Array	84.30	42	P	P	17 46 38.4	-0.5
	0.2nm,0.5s,baz=220,slow=5.4,SNR=3.4						
BRTR	Keskin Array B	145.61	318	PKPbc	PKPdf	17 53 44.2	+1.1
	1.0nm,0.8s,baz=147,slow=4.2,SNR=4.5						

*ISCJB **17** 17:35:10.5±0.5, 41°.47N±0°.03×29°.29W±0°.07, h10km, mb3.9/16, MS4.3/6, Error ellipse: s-maj=7.2km s-min=4.1km az=5.8*
*IDC **17** 17:35:10.4±0.7, 41°.76N×29°.31W, h0km, mb3.9/15, mb1 4.0/16, mb1mx3.8/66, mbtmp3.9/16, ML4.5/1, Error ellipse: s-maj=22.1km s-min=14.6km az=12.0*
*GCMT **17** 17:35:12.0±0.4, 41°.60N×29°.40W, h21km±1km, MW4.9/65, Moment Tensor Solution. s19,c19; s65,c86; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-2.69±.25; Mθθ0.88±.17; Mφφ1.81±.16; Mrθ-1.97±.33; Mrφ0.30±.10; Mθφ1.09±.27; Best double couple: M0=2.94700×10^16 NP1:φs147.00000°, δ66.00000°, λ-108.00000°. NP2: φs7.00000°, δ30.00000°, λ-54.00000°. Principal axes: T 2.1080, Plg19.0000°, Azm251.0000°; N 1.6810, Plg17.0000°, Azm155.0000°; P -3.7870, Plg64.0000°, Azm27.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*PDA **17** 17:35:16.0±1.2, 41°.63N×29°.06W, h15km, ML3.6 Error ellipse: s-maj=12.6km s-min=5.2km az=96.0*
*CSEM **17** 17:35:16.6±0.3, 41°.34N×28°.95W, h20km, ML3.6, Error ellipse: s-maj=9.2km s-min=3.0km az=113.0*
ISC 17 17:35:12.3±0.7, **41°.48N**±0°.06×**29°.19W**±0°.07, **h10km, n71,** σ1°**42**/75, **mb4.0**/16, **MS4.3**/7, **Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H07N1	FLORES T-PHASE	2.31	220	Pn	Pn	17 35 48.8	-1.6
H07N1				Sn	Sn	17 36 18.1	-0.8
H07N1				T	T	17 38 33.0	
ROSA	Rosais	2.85	165	*e*P	Pn	17 35 58.3	+0.5
ROSA				*e*S	Sn	17 36 31.1	-1.1
ROSA				A	A	17 36 39.6	
	38nm,0.7s						
ROSA	Rosais	2.85	165	*e*P	Pn	17 35 58.3	+0.5
ROSA				*e*S	Sn	17 36 31.1	-1.1
PCED	Cedros	2.87	172	*e*P	Pn	17 35 59.0	+0.9
PCED				*e*S	Sn	17 36 31.3	-1.4
PCED				A	A	17 36 40.1	
	45nm,0.5s						
PCED	Cedros	2.87	172	*e*P	Pn	17 35 59.0	+0.9
PCED				*e*S	Sn	17 36 31.3	-1.4
CALA	Caldeira	2.92	172	*e*P	Pn	17 35 59.8	+1.0
CALA				*e*S	Sn	17 36 32.1	-1.9
CALA	Caldeira	2.92	172	*e*P	Pn	17 35 59.8	+1.0
CALA				*e*S	Sn	17 36 32.1	-1.9
PMAN	Manadas	2.97	163	*e*P	Pn	17 36 00.6	+1.2
PMAN	Manadas	2.97	163	*e*P	Pn	17 36 00.6	+1.2
HOR	Horta	2.98	172	*e*P	Pn	17 36 00.5	+0.9
HOR				*e*S	Sn	17 36 33.5	-1.9
HOR				A	A	17 36 40.2	
	107nm,0.2s						
HOR	Horta	2.98	172	*e*P	Pn	17 36 00.5	+0.9
HOR				*e*S	Sn	17 36 33.5	-1.9
PICO	Pico	3.03	169	*e*P	Pn	17 36 01.7	+1.3
PICO				*e*S	Sn	17 36 34.9	-1.9
PICO				A	A	17 36 47.3	
	48nm,0.6s						
PICO	Pico	3.03	169	*e*P	Pn	17 36 01.7	+1.3
PICO				*e*S	Sn	17 36 34.9	-1.9
PCAN	Candelaria	3.06	170	*e*S	Sn	17 36 35.9	-1.5
PCAN				A	A	17 36 43.2	
	56nm,0.6s						
PCAN	Candelaria	3.06	170	*e*S	Sn	17 36 35.9	-1.5
ADH	Angra Heroismo	3.19	151	*e*P	Pn	17 36 02.1	-0.4
ADH				*e*S	Sn	17 36 38.0	-2.7
ADH				A	A	17 36 43.0	
	27nm,0.3s						
ADH	Angra Heroismo	3.19	151	*e*P	Pn	17 36 02.1	-0.4
ADH				*e*S	Sn	17 36 38.0	-2.7
PSCM	Serra do Cume	3.20	150	*e*P	Pn	17 36 02.1	-0.5
PSCM				*e*S	Sn	17 36 37.9	-2.9
PSCM				A	A	17 36 53.1	
	52nm,0.7s						
PSCM	Serra do Cume	3.20	150	*e*P	Pn	17 36 02.1	-0.5
PSCM				*e*S	Sn	17 36 37.9	-2.9
PSET	Sete Cidades	4.53	143	*e*P	Pn	17 36 21.2	+0.3
PSET	Sete Cidades	4.53	143	*e*P	Pn	17 36 21.2	+0.3
PDA	Ponta Delgada	4.62	143	*e*P	Pn	17 36 22.0	-0.1
PDA	Ponta Delgada	4.62	143	*e*P	Pn	17 36 22.0	-0.1
CMLA	Cha da Macela	4.67	141	*e*P	Pn	17 36 23.1	+0.3
CMLA	Cha da Macela	4.67	141	*e*P	Pn	17 36 23.1	+0.3
BART	Pico Bartolome	4.83	139	*e*P	Pn	17 36 25.5	+0.4
BART	Pico Bartolome	4.83	139	*e*P	Pn	17 36 25.5	+0.4
PSMA	Santa Maria	5.48	144	*e*P	Pn	17 36 34.1	+0.2
PSMN	Pico do Norte,	5.50	143	*e*P	Pn	17 36 34.7	+0.5
PSMN	Pico do Norte,	5.50	143	*e*P	Pn	17 36 34.7	+0.5
COI	Coimbra	15.78	88	*e*P	P	17 38 59.6	+1.2
PMTG	Montargil	16.18	92	*e*P	P	17 39 03.8	+0.9
	24nm,1.6s						
PMTG	Montargil	16.18	92	*e*P	P	17 39 03.8	+0.9
PNCL	Nicolau / Gran	16.23	95	*e*P	P	17 39 04.0	+0.6
	28nm,1.6s						
PNCL	Nicolau / Gran	16.23	95	*e*P	P	17 39 04.0	+0.6
EVO	Evora	16.49	93	*e*P	P	17 39 07.8	+1.5
	22nm,1.6s						
EVO	Evora	16.49	93	*e*P	P	17 39 07.8	+1.5
VAL	Valentia	16.63	45	*e*P	P	17 39 08.4	+0.7
PESTR	Estremoz	16.71	92	*e*P	Pn	17 39 09.1	+2.6
	25nm,1.8s						
PESTR	Estremoz	16.71	92	*e*P	Pn	17 39 09.1	+2.6
PMRV	Marv??o	16.72	90	*e*P	P	17 39 09.5	+0.7
	29nm,1.6s

ellipse: s-maj=6.1km s-min=4.8km az=82.0

ISC 17 17:40:48.8±0.5, 41°46N±0°05×29°26W±0°05, h12km, n107, σ2§57/98, mb4.2/20, MS4.0/24, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H07N1	**FLORES T-PHASE**	**2.27**	**219**	Pn	**Pn**	**17 41 26.2**	**+0.1**
H07N1				Sn	**Sg**	**17 42 00.7**	**-1.1**
H07N1				T	T	17 44 00.3	
	SNR=30						
PGRA	**Graciosa**	**2.62**	**158**	*e*P	**Pn**	**17 41 33.0**	**+2.0**
PGRA	**Graciosa**	**2.62**	**158**	*e*P	**Pn**	**17 41 33.0**	**+2.0**
ROSA	**Rosais**	**2.85**	**164**	*e*P	**Pn**	**17 41 36.5**	**+2.4**
ROSA				*e*S	**Sn**	**17 42 04.1**	**-4.2**
ROSA				A	A	17 42 16.4	
	41nm,0.5s						
ROSA	**Rosais**	**2.85**	**164**	*e*P	**Pn**	**17 41 36.5**	**+2.4**
ROSA				*e*S	**Sn**	**17 42 04.1**	**-4.2**
ROSA	**Rosais**	**2.85**	**164**	*e*P	**Pn**	**17 41 36.5**	**+2.4**
PCED	**Cedros**	**2.86**	**171**	*e*P	**Pn**	**17 41 37.8**	**+3.5**
PCED	**Cedros**	**2.86**	**171**	*e*P	**Pn**	**17 41 37.8**	**+3.5**
CALA	**Caldeira**	**2.91**	**171**	*e*P	**Pn**	**17 41 38.9**	**+3.9**
CALA				*e*S	**Sn**	**17 42 07.0**	**-3.0**
CALA	**Caldeira**	**2.91**	**171**	*e*P	**Pn**	**17 41 38.9**	**+3.9**
PMAN	**Manadas**	**2.97**	**162**	*e*P	**Pn**	**17 41 38.5**	**+2.8**
PMAN				*e*S	**Sn**	**17 42 06.7**	**-4.5**
PMAN				A	A	17 42 22.2	
	38nm,0.4s						
PMAN	**Manadas**	**2.97**	**162**	*e*P	**Pn**	**17 41 38.5**	**+2.8**
HOR	**Horta**	**2.97**	**171**	*e*S	**Sn**	**17 42 08.1**	**-3.3**
HOR				A	A	17 42 09.9	
	44nm,0.1s						
PICO	**Pico**	**3.03**	**168**	*e*P	**Pn**	**17 41 39.7**	**+3.1**
PICO	**Pico**	**3.03**	**168**	*e*P	**Pn**	**17 41 39.7**	**+3.1**
PCAN	**Candelaria**	**3.06**	**169**	*e*P	**Pn**	**17 41 39.6**	**+2.6**
PCAN	**Candelaria**	**3.06**	**169**	*e*P	**Pn**	**17 41 39.6**	**+2.6**
ADH	**Angra Heroismo**	**3.21**	**150**	*e*P	**Pn**	**17 41 40.5**	**+1.5**
ADH	**Angra Heroismo**	**3.21**	**150**	*e*P	**Pn**	**17 41 40.5**	**+1.5**
PSCM	**Serra do Cume**	**3.21**	**149**	*e*P	**Pn**	**17 41 40.7**	**+1.6**
PSCM	**Serra do Cume**	**3.21**	**149**	*e*P	**Pn**	**17 41 40.7**	**+1.6**
PSET	**Sete Cidades**	**4.55**	**142**	*e*P	**Pn**	**17 41 58.9**	**+1.4**
PSET				*e*S	**Sn**	**17 42 43.8**	**-6.4**
PSET				A	A	17 42 54.5	
	40nm,0.4s						
PSET	**Sete Cidades**	**4.55**	**142**	*e*P	**Pn**	**17 41 58.9**	**+1.4**
PDA	**Ponta Delgada**	**4.63**	**142**	*e*P	**Pn**	**17 42 00.3**	**+1.7**
PDA	**Ponta Delgada**	**4.63**	**142**	*e*P	**Pn**	**17 42 00.3**	**+1.7**
PDA	**Ponta Delgada**	**4.63**	**142**	*e*P	**Pn**	**17 42 00.3**	**+1.7**
CMLA	**Cha da Macela**	**4.69**	**141**	*e*P	**Pn**	**17 42 00.9**	**+1.5**
CMLA				*e*S	**Sn**	**17 42 47.3**	**-6.4**
CMLA				A	A	17 43 01.9	
	62nm,0.5s						
CMLA	**Cha da Macela**	**4.69**	**141**	*e*P	**Pn**	**17 42 00.9**	**+1.5**
CMLA	**Cha da Macela**	**4.69**	**141**	*e*P	**Pn**	**17 42 00.9**	**+1.5**
BART	**Pico Bartolome**	**4.85**	**138**	*e*P	**Pn**	**17 42 03.1**	**+1.4**
BART				*e*S	**Sn**	**17 42 51.0**	**-6.8**
BART				A	A	17 42 52.5	
	28nm,0.6s						
BART	**Pico Bartolome**	**4.85**	**138**	*e*P	**Pn**	**17 42 03.1**	**+1.4**
PSMA	**Santa Maria**	**5.49**	**143**	*e*P	**Pn**	**17 42 12.9**	**+2.5**
PSMA				*e*S	**Sn**	**17 43 06.8**	**-6.7**
PSMA				A	A	17 43 13.5	
	7.6nm,0.4s						
PSMN	**Pico do Norte,**	**5.51**	**143**	*e*P	**Pn**	**17 42 12.3**	**+1.5**
PSMN				*e*S	**Sn**	**17 43 07.4**	**-6.7**
PSMN				A	A	17 43 09.3	
	12nm,0.6s						
PSMN	**Pico do Norte,**	**5.51**	**143**	*e*P	**Pn**	**17 42 12.3**	**+1.5**
PMOZ	**Porto Moniz, M**	**12.91**	**128**	*e*P	Pn	17 43 57.9	+5.7
	60nm,1.4s						
PMAR	**Madeira**	**13.15**	**128**	*e*P	**Pn**	**17 43 58.2**	**+2.7**
	95nm,1.3s						
PMAR	**Madeira**	**13.15**	**128**	*e*P	**Pn**	**17 43 58.2**	**+2.7**
PMPS	**Porto Santo**	**13.27**	**125**	*e*P	**Pn**	**17 43 59.5**	**+2.5**
	106nm,1.4s						
PMPS	**Porto Santo**	**13.27**	**125**	*e*P	**Pn**	**17 43 59.5**	**+2.5**
PCAS	**Casmilo, Conde**	**15.79**	**88**	*e*P	**P**	**17 44 36.8**	**+2.0**
	58nm,1.7s						
PCAS	**Casmilo, Conde**	**15.79**	**88**	*e*P	**P**	**17 44 36.8**	**+2.0**
COI	**Coimbra**	**15.83**	**88**	*e*P	**P**	**17 44 37.1**	**+1.9**
PTOM	**Tomar**	**15.95**	**90**	*e*P	**P**	**17 44 38.2**	**+1.6**
	32nm,2.5s						
PTOM	**Tomar**	**15.95**	**90**	*e*P	**P**	**17 44 38.2**	**+1.6**
POLO	**Lamas de Olo**	**16.10**	**83**	*e*P	**Pn**	**17 44 36.4**	**+1.4**
	38nm,1.9s						
PVIS	**Viseu**	**16.12**	**86**	*e*P	**P**	**17 44 40.6**	**+2.0**
	42nm,1.6s						
PVIS	**Viseu**	**16.12**	**86**	*e*P	**P**	**17 44 40.6**	**+2.0**
PVRL	**Vila Real**	**16.17**	**84**	*e*P	**P**	**17 44 40.6**	**+1.5**
	66nm,1.8s						
PVRL	**Vila Real**	**16.17**	**84**	*e*P	**P**	**17 44 40.6**	**+1.5**
PMTG	**Montargil**	**16.23**	**92**	*e*P	**P**	**17 44 40.9**	**+1.2**
	34nm,1.4s						
PMTG	**Montargil**	**16.23**	**92**	*e*P	**P**	**17 44 40.9**	**+1.2**
MESJ	**Messejana**	**16.59**	**96**	*e*P	**P**	**17 44 44.0**	**+0.3**
	26nm,1.5s						
MESJ	**Messejana**	**16.59**	**96**	*e*P	**P**	**17 44 44.0**	**+0.3**
PCBR	**Castelo Branco**	**16.61**	**88**	*e*P	**P**	**17 44 44.4**	**+0.6**
	42nm,1.5s						
PCBR	**Castelo Branco**	**16.61**	**88**	*e*P	**P**	**17 44 44.4**	**+0.6**
MVO	**Moncorvo**	**16.70**	**84**	*e*P	**P**	**17 44 46.0**	**+1.0**
	53nm,1.2s						
MVO	**Moncorvo**	**16.70**	**84**	*e*P	**P**	**17 44 46.0**	**+1.0**
PESTR	**Estremoz**	**16.76**	**92**	*e*P	**P**	**17 44 47.8**	**+2.2**
	21nm,1.6s						
PESTR	**Estremoz**	**16.76**	**92**	*e*P	**P**	**17 44 47.8**	**+2.2**
PMRV	**Marv??o**	**16.76**	**90**	*e*P	**P**	**17 44 47.7**	**+2.1**
	34nm,1.3s						
PMRV	**Marv??o**	**16.76**	**90**	*e*P	**P**	**17 44 47.7**	**+2.1**
PCVE	**Castro Verde**	**16.80**	**96**	*e*P	**Pn**	**17 44 45.0**	**+1.2**
	24nm,1.5s						
PCVE	**Castro Verde**	**16.80**	**96**	*e*P	**Pn**	**17 44 45.0**	**+1.2**
PBAR	**Barrancos**	**17.37**	**94**	*e*P	**P**	**17 44 56.4**	**+4.1**
	52nm,1.7s						
ESDC	**Sonseca Array**	**19.28**	**87**	P	**Pn**	**17 45 14.6**	**+0.1**
	0.5nm,0.3s,baz=288,slow=11,SNR=16						
MDT	**Midelt**	**21.40**	**106**	P	**P**	**17 45 39.1**	**+2.6**
	5.3nm,0.7s,baz=307,slow=7.2,SNR=5.2						
SCHQ	**Schefferville**	**28.04**	**311**	LR	LR	17 55 51.7	
	comp=Z,589nm,20.3s,baz=84,slow=33						
CLL	**Collm**	**30.38**	**57**	*e*P	**P**	**17 46 59.0**	**-1.5**
	comp=Z,31nm,1.6s						
KEST	**Kesra**	**30.52**	**88**	P	**P**	**17 47 04.9**	**+2.9**
	comp=Z,4.8nm,0.9s,baz=281,slow=8.1,SNR=5.3						
KEST				LR	LR	17 59 03.3	
	comp=Z,302nm,19.4s,baz=304,slow=36						
GERES	**GERESS Array B**	**30.84**	**61**	LR	LR	17 57 47.6	
	comp=Z,338nm,19.9s,baz=265,slow=33						
NOA	**NORSAR Array B**	**31.29**	**37**	LR	LR	17 57 28.5	
	comp=Z,145nm,20.9s,baz=245,slow=32						
JMIC	**Jan Mayen**	**31.40**	**13**	LR	LR	17 56 34.9	
	comp=Z,160nm,19.4s,baz=242,slow=30						
HFS	**Hagfors**	**32.18**	**40**	LR	LR	17 58 38.5	
	comp=Z,252nm,19.4s,baz=250,slow=34						
VAE	**Valguarnera**	**33.68**	**82**	LR	LR	18 00 35.7	
	comp=Z,580nm,18.0s,baz=334,slow=35						
KOWA	**Kowa**	**34.66**	**133**	LR	LR	18 00 04.3	
	comp=Z,254nm,21.8s,baz=341,slow=33						
FINES	**FINESS Array B**	**38.38**	**40**	LR	LR	18 01 48.8	
	comp=Z,232nm,20.9s,baz=256,slow=33						
TORD	**Torodi Ar. Bea**	**39.02**	**127**	P	**P**	**17 48 18.6**	**+3.2**
	comp=Z,3.7nm,0.8s,baz=305,slow=5.0,SNR=8.2						
TORD				LR	LR	18 03 02.6	
	comp=Z,281nm,21.5s,baz=335,slow=34						
MLR	**Muntele Rosu**	**39.59**	**65**	LR	LR	18 04 21.7	
	comp=Z,66nm,19.8s,baz=262,slow=36						
ARCES	**ARCESS Array B**	**39.64**	**27**	LR	LR	18 01 25.7	
	comp=Z,175nm,21.4s,baz=260,slow=32						
AKASG	**Malin Array Be**	**40.63**	**56**	P	**P**	**17 48 27.4**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=276,slow=8.6,SNR=3.9						
AKASG				LR	LR	18 04 40.4	
	comp=Z,345nm,19.1s,baz=285,slow=35						
DBIC	**Dimbokro**	**40.89**	**141**	LR	LR	18 04 08.6	
	comp=Z,296nm,18.8s,baz=306,slow=34						
SPITS	**Spitsbergen Ar**	**41.07**	**13**	P	**P**	**17 48 30.0**	**-1.7**
	comp=Z,6.2nm,1.0s,baz=267,slow=7.2,SNR=2.8						
SPITS				LR	LR	18 01 37.0	
	comp=Z,129nm,18.2s,baz=75,slow=31						
IDI	**Anoyia**	**42.31**	**80**	LR	LR	18 04 35.0	
	comp=Z,135nm,21.4s,baz=299,slow=34						
ULM	**Lac du Bonnet**	**45.79**	**305**	LR	LR	18 06 47.6	
	comp=Z,487nm,20.6s,baz=74,slow=34						
BRTR	**Keskin Array B**	**46.84**	**70**	P	**P**	**17 49 19.6**	**+0.8**
	comp=Z,1.0nm,0.8s,baz=293,slow=7.5,SNR=3.2						
BRTR				LR	LR	18 08 15.9	
	comp=Z,61nm,19.6s,baz=288,slow=35						
ECSD	**EROS Data Cent**	**48.38**	**297**	*e*P	**P**	**17 49 30.9**	**+0.4**
	comp=Z,6.7nm,1.0s						
MIAR	**Mount Ida**	**50.12**	**284**	*e*P	**P**	**17 49 44.2**	**+0.4**
	comp=Z,3.8nm,0.8s						
YKA	**Yellowknife Ar**	**52.23**	**324**	P	**P**	**17 49 57.4**	**-1.8**
	comp=Z,0.3nm,0.5s,baz=173,slow=32,SNR=2.7						
ARU	**Arti**	**55.64**	**42**	P	**P**	**17 50 22.1**	**-2.2**
	comp=Z,0.9nm,0.3s,baz=275,slow=10,SNR=4.1						
ARU	**Arti**	**55.64**	**42**	*e*P	**P**	**17 50 23.7**	**-0.6**
	comp=Z,7.5nm,1.1s						
INK	**Inuvik**	**57.08**	**335**	P	**P**	**17 50 31.6**	**-2.8**
	comp=Z,1.2nm,0.8s,baz=45,slow=5.7,SNR=3.1						
AKTO	**Aktyubinsk**	**57.99**	**49**	P	**P**	**17 50 41.9**	**+0.8**
	comp=Z,2.5nm,0.7s,baz=360,slow=2.5,SNR=4.1						
AKTO				LR	LR	18 14 42.5	
	comp=Z,145nm,20.7s,baz=335,slow=35						
NEW	**Newport**	**59.37**	**309**	LR	LR	18 15 01.8	
	comp=Z,856nm,18.1s,baz=170,slow=35						
TXAR	**Lajitas Array**	**60.14**	**284**	P	**P**	**17 50 57.1**	**+0.7**
	comp=Z,2.3nm,0.9s,baz=90,slow=6.3,SNR=15						
BVAR	**Borovoye Array**	**63.28**	**42**	P	**P**	**17 51 17.2**	**+0.1**
	comp=Z,2.4nm,1.0s,baz=305,slow=5.2,SNR=8.8						
ILAR	**Eielson Array**	**63.47**	**335**	P	**P**	**17 51 16.3**	**-1.9**
	comp=Z,0.7nm,0.9s,baz=45,slow=6.0,SNR=8.8						
LPAZ	**La Paz**	**67.79**	**221**	P	**P**	**17 51 49.6**	**+2.3**
	comp=Z,0.9nm,0.5s,baz=9.3,slow=12,SNR=4.4						
LPIG	**La Paz**	**68.00**	**283**	LR	LR	18 20 40.8	
	comp=Z,236nm,20.6s,baz=39,slow=35						
KURK	**Kurchatov**	**68.74**	**40**	P	**P**	**17 51 52.2**	**-0.1**
KURBB	**Kurchatov Arra**	**68.76**	**41**	P	**P**	**17 51 52.2**	**-0.2**
	comp=Z,1.7nm,0.9s,baz=314,slow=6.4,SNR=10						
ZALV	**Zalesovo Beam**	**69.46**	**35**	P	**P**	**17 51 57.2**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=316,slow=6.0,SNR=3.5						
CPUP	**Villa Florida**	**72.30**	**206**	LR	LR	18 23 29.5	
	comp=Z,125nm,18.2s,baz=234,slow=35						
MKAR	**Makanchi Array**	**73.16**	**42**	P	**P**	**17 52 18.4**	**-0.9**
	comp=Z,1.5nm,0.8s,baz=327,slow=6.0,SNR=8.1						
BOSA	**Boshof**	**86.02**	**134**	LR	LR	18 31 23.9	
	comp=Z,181nm,18.7s,baz=282,slow=35						
KSRS	**Korea Array**	**98.73**	**18**	LR	LR	18 39 50.1	
	comp=Z,56nm,19.7s,baz=190,slow=36						
VNDA	**Vanda**	**143.54**	**184**	PKP	**PKPdf**	**18 00 22.2**	**+0.3**
	comp=Z,1.0nm,0.9s,baz=184,slow=3.0,SNR=4.0						
ASAR	**Alice Springs**	**157.35**	**44**	PKPab	**PKPab**	**18 01 15.7**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=336,slow=3.6,SNR=4.9						

*ISCJB **17** 17:46:44.9±0.5, 41°62N±0°03×29°30W±0°08, h10km, mb3.7/16, Error ellipse: s-maj=8.2km s-min=4.4km az=1.7*
*IDC **17** 17:46:45.3±0.9, 41°73N×29°46W, h0km, mb3.7/16, mb1 3.9/17, mb1mx3.7/69, mbtmp3.7/17, ML3.8/1, Error ellipse: s-maj=26.3km s-min=16.4km az=16.0*
*GCMT **17** 17:46:48.0±0.4, 41°95N×29°14W, h20km±1km, MW4.8/76, Moment Tensor Solution. s14,c16; s76,c107; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.24±.26; $M_{\theta\theta}$0.40±.14; $M_{\phi\phi}$1.84±.15; $M_{r\theta}$0.49±.38; $M_{\theta\phi}$0.35±.07; $M_{\phi r}$-0.31±.23; Best double couple: $M_0$2.14500×10^{16} NP1:ϕ_s1.00000°, δ49.00000°, λ-105.00000°. NP2: ϕ_s204.00000°, δ43.00000°, λ-73.00000°. Principal axes: T 1.9320, Plg3.0000°, Azm102.0000°; N 0.4260, Plg11.0000°, Azm12.0000°; P -2.3590, Plg78.0000°, Azm205.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 17 17:46:46.8±0.6, 41°62N±0°06×29°29W±0°07, h10km, n33, σ1§18/38, mb3.8/16, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H07N1	**FLORES T-PHASE**	**2.38**	**216**	Pn	**Pn**	**17 47 26.4**	**+0.6**
H07N1				Sn	**Sn**	**17 47 53.4**	**-1.7**
H07N1				T	T	17 50 05.0	
PGRA	**Graciosa**	**2.77**	**158**	*e*P	**Pn**	**17 47 32.1**	**+0.8**
ROSA	**Rosais**	**3.01**	**164**	*e*P	**Pn**	**17 47 35.1**	**+0.6**
ROSA				*e*S	**Sn**	**17 48 09.4**	**-1.2**
ROSA				A	A	17 48 12.5	
	26nm,0.3s						
PCED	**Cedros**	**3.02**	**171**	*e*S	**Sn**	**17 48 10.5**	**-0.4**
PCED				A	A	17 48 28.4	
	46nm,0.6s						
CALA	**Caldeira**	**3.07**	**171**	*e*P	**Pn**	**17 47 36.7**	**+1.3**
CALA				*e*S	**Sn**	**17 48 11.6**	**-0.6**
PICO	**Pico**	**3.19**	**168**	*e*P	**Pn**	**17 47 37.7**	**+0.7**
PICO				*e*S	**Sn**	**17 48 14.0**	**-1.1**
PICO				A	A	17 48 22.4	
	29nm,0.7s						
PCAN	**Candelaria**	**3.21**	**169**	*e*P	**Pn**	**17 47 38.2**	**+0.9**
PCAN				*e*S	**Sn**	**17 48 14.6**	**-1.1**
PCAN				A	A	17 48 20.4	
	52nm,0.7s						
PSCM	**Serra do Cume**	**3.36**	**150**	*e*P	**Pn**	**17 47 38.2**	**-1.1**
PSCM				*e*S	Sn	17 48 14.4	-4.9
PSCM				A	A	17 48 19.0	
	20nm,0.3s						
PSET	**Sete Cidades**	**4.69**	**143**	*e*P	**Pn**	**17 47 55.8**	**-1.8**
PSET				*e*S	Sn	17 48 45.0	-7.0
PSET				A	A	17 48 49.9	
	33nm,0.3s						
PDA	**Ponta Delgada**	**4.77**	**143**	*e*P	**Pn**	**17 47 56.8**	**-2.0**
PDA				*e*S	Sn	17 48 47.0	-7.1
PDA				A	A	17 48 47.3	
	24nm,0.1s						
CMLA	**Cha da Macela**	**4.82**	**142**	*e*P	**Pn**	**17 47 58.5**	**-1.0**
CMLA				*e*S	Sn	17 48 48.1	-7.3
CMLA				A	A	17 48 55.1	
	42nm,0.3s						
BART	**Pico Bartolome**	**4.98**	**139**	*e*P	**Pn**	**17 48 00.1**	**-1.6**
BART				*e*S	Sn	17 48 51.5	-7.9
BART				A	A	17 48 57.6	
	38nm,0.3s						
PSMA	**Santa Maria**	**5.63**	**144**	*e*P	**Pn**	**17 48 08.5**	**-2.1**
PSMA				*e*S	Sn	17 49 07.1	-8.2
PSMA				A	A	17 49 08.3	
	4.0nm,0.1s						
PSMN	**Pico do Norte,**	**5.66**	**143**	*e*P	**Pn**	**17 48 08.5**	**-2.4**
ESDC	**Sonseca Array**	**19.30**	**87**	P	**Pn**	**17 51 12.8**	**-0.1**
	0.1nm,0.3s,baz=286,slow=9.2,SNR=10						
MDT	**Midelt**	**21.47**	**106**	P	**P**	**17 51 36.4**	**+0.8**
	2.5nm,0.9s,baz=287,slow=15,SNR=3.1						
EKA	**Eskdalemuir Ar**	**21.93**	**42**	P	**P**	**17 51 40.6**	**+0.5**
	1.4nm,0.9s,baz=243,slow=13,SNR=2.9						
KEST	**Kesra**	**30.55**	**88**	P	**P**	**17 53 01.6**	**+1.1**
	2.2nm,0.7s,baz=280,slow=6.1,SNR=3.3						
GERES	**GERESS Array B**	**30.79**	**62**	P	**P**	**17 53 03.3**	**+0.7**
	0.1nm,0.3s,baz=272,slow=9.7,SNR=3.2						
KOWA	**Kowa**	**34.79**	**134**	P	**P**	**17 53 39.4**	**+1.7**
	2.2nm,0.8s,baz=342,slow=3.2,SNR=2.2						
TORD	**Torodi Ar. Bea**	**39.13**	**127**	P	**P**	**17 54 16.0**	**+1.4**
	1.6nm,0.9s,baz=333,slow=6.8,SNR=4.3						
AKASG	**Malin Array Be**	**40.56**	**57**	P	**P**	**17 54 26.4**	**+0.2**
	0.3nm,0.3s,baz=275,slow=7.4,SNR=2.5						
BRTR	**Keskin Array B**	**46.82**	**70**	P	**P**	**17 55 17.2**	**+0.4**
	0.7nm,0.8s,baz=278,slow=10.0,SNR=3.7						
INK	**Inuvik**	**56.92**	**335**	P	**P**	**17 56 30.6**	**-0.9**
	0.9nm,0.7s,baz=22,slow=11,SNR=2.3						
PDAR	**Pinedale Array**	**57.25**	**300**	P	**P**	**17 56 32.5**	**-2.1**
	0.3nm,0.7s,baz=34,slow=14,SNR=2.6						
AKTO	**Aktyubinsk**	**57.91**	**49**	P	**P**	**17 56 39.6**	**+0.8**
	1.3nm,0.6s,baz=284,slow=12,SNR=3.4						
TXAR	**Lajitas Array**	**60.08**	**284**	P	**P**	**17 56 53.5**	**-0.8**
	0.7nm,0.8s,baz=62,slow=6.1,SNR=9.6						
BVAR	**Borovoye Array**	**63.18**	**42**	P	**P**	**17 57 14.5**	**-0.3**
	0.9nm,0.7s,baz=310,slow=5.6,SNR=6.8						
ILAR	**Eielson Array**	**63.32**	**335**	P	**P**	**17 57 14.8**	**-0.7**
	0.3nm,0.7s,baz=44,slow=7.7,SNR=4.0						
KURBB	**Kurchatov Arra**	**68.66**	**41**	P	**P**	**17 57 50.0**	**-0.1**
	1.4nm,0.9s,baz=313,slow=7.2,SNR=7.8						
MKAR	**Makanchi Array**	**73.07**	**42**	P	**P**	**17 58 17.2**	**+0.3**
	0.6nm,0.7s,baz=329,slow=5.9,SNR=6.2						
VNDA	**Vanda**	**143.69**	**184**	PKP	**PKPdf**	**18 06 20.9**	**+0.3**
	0.3nm,0.6s,baz=90,slow=3.0,SNR=3.2						
ASAR	**Alice Springs**	**157.25**	**43**	PKPab	**PKPab**	**18 07 14.0**	**-0.1**
	0.4nm,0.7s,baz=325,slow=4.5,SNR=7.6						

*ISCJB **17** 17:50:55.6±0.7, 41°7N±0°1×29°4W±0°1, h10km, mb3.6/7, MS3.9/1, Error ellipse: s-maj=20.1km s-min=13.9km az=151.9*
*IDC **17** 17:50:56.6±1.3, 41°86N×29°32W, h0km, mb3.6/7, mb1 3.8/8, mb1mx3.4/68, mbtmp3.6/8, ML4.2/1, MS3.8/1, Ms1 3.8/1, ms1mx2.8/63, Error ellipse: s-maj=38.8km s-min=22.1km az=18.0*

ISC 17 17:50:57.4±0.8, 41°6N±0°2×29°4W±0°1, h10km, n10, σ0§90/9, mb3.7/7, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H07N1	**FLORES T-PHASE**	**2.33**	**214**	Pn	**Pn**	**17 51 35.0**	**-0.9**
H07N1				T	T	17 54 11.9	
ESDC	**Sonseca Array**	**19.41**	**87**	P	**P**	**17 55 23.2**	**-0.5**
	0.2nm,0.3s,baz=283,slow=13,SNR=3.7						
KEST	**Kesra**	**30.65**	**88**	P	**P**	**17 57 12.3**	**+0.3**
	1.4nm,0.7s,baz=309,slow=14,SNR=3.6						
GERES	**GERESS Array B**	**30.88**	**62**	P	**P**	**17 57 13.5**	**-0.3**
	0.2nm,0.4s,baz=264,slow=18,SNR=2.5						
TORD	**Torodi Ar. Bea**	**39.23**	**127**	P	**P**	**17 58 27.2**	**+1.2**
	1.5nm,1.0s,baz=324,slow=7.1,SNR=3.0						
TXAR	**Lajitas Array**	**59.97**	**284**	P	**P**	**18 01 05.1**	**+0.9**
	0.5nm,0.8s,baz=110,slow=7.8,SNR=5.1						
NRIK	**Noril'sk**	**60.12**	**21**	LR	LR	18 27 33.8	
	comp=Z,85nm,20.2s,baz=84,slow=37						
ILAR	**Eielson Array**	**63.26**	**335**	P	**P**	**18 01 25.8**	**+0.1**
	0.5nm,0.8s,baz=50,slow=6.0,SNR=5.4						
KURBB	**Kurchatov Arra**	**68.71**	**41**	P	**P**	**18 01 59.8**	**-1.1**
	0.4nm,0.8s,baz=312,slow=7.0,SNR=3.4						
MKAR	**Makanchi Array**	**73.12**	**42**	P	**P**	**18 02 27.5**	**-0.4**
	0.5nm,0.8s,baz=325,slow=6.2,SNR=4.6						

MEX 17 17:55:20.0±1.0, 18°98N×104°24W, h20km±52km, MD3.7, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CJM	**Chamela**	**0.92**	**304**	*i* P	Pb	17 55 34.8	-2.5
CJM				*e*S	Sb	17 55 46.4	-2.8
MMIG	**Aquila**	**1.09**	**129**	*e*P	Pn	17 55 37.0	-3.1
MMIG				*e*S	Sb	17 55 50.7	-3.2
MOIG	**Morelia**	**2.96**	**76**	*e*P	Pn	17 56 04.4	-1.7
ZIIG	**Zihuatanejo**	**2.96**	**117**	*e*P	Pn	17 56 04.0	-2.0
ZIIG				*e*S	Sn	17 56 38.1	-2.9

*ISCJB **17** 18:00:40.5±1.1, 17°8S±0°3×178°6W±0°2, h579km, mb3.8/11, Error ellipse: s-maj=44.1km s-min=14.0km az=150.5*
*IDC **17** 18:00:41.6±2.8, 17°83S×178°58W, h580km±29km, mb3.3/11, mb1 3.5/11, mb1mx3.1/53, mbtmp4.3/11, Error ellipse: s-maj=38.9km s-min=14.7km az=147.0*

ISC 17 18:00:41.3±1.1, 17°9S±0°3×178°6W±0°2, h579km, n15, σ0§63/17, mb3.7/11, 1C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**33.29**	**260**	P	**P**	**18 06 31.9**	**-0.5**
	2.5nm,0.6s,baz=84,slow=13,SNR=3.5						
PMG	**Port Moresby**	**34.29**	**280**	P	**P**	**18 06 41.0**	**+0.3**
	12nm,0.7s,baz=67,slow=7.7,SNR=3.1						
STKA	**Stephens Creek**	**38.51**	**241**	P	**P**	**18 07 15.5**	**+0.3**
	3.1nm,0.8s,baz=99,slow=12,SNR=5.5						
WRA	**Warramunga Arr**	**44.48**	**259**	P	**P**	**18 08 02.6**	**+0.3**
	1.5nm,0.7s,baz=96,slow=7.1,SNR=34						
ASAR	**Alice Springs**	**44.65**	**254**	P	**P**	**18 08 04.2**	**+0.5**
	7.4nm,0.8s,baz=88,slow=8.7,SNR=114						
ASAR				PcP	**PcP**	**18 09 32.8**	**-0.8**
	0.2nm,0.4s,baz=103,slow=4.1,SNR=3.7						
ASAR				ScP	**ScP**	**18 12 30.8**	**-0.5**
	0.6nm,1.1s,baz=81,slow=5.7,SNR=3.7						
PETK	**Petropavlovsk-**	**73.58**	**345**	P	**P**	**18 11 16.4**	**+0.4**
	1.2nm,0.5s,baz=164,slow=7.5,SNR=2.4						
YBH	**Yreka Blue Hor**	**78.58**	**39**	P	**P**	**18 11 44.3**	**+0.4**
	2.1nm,0.8s,baz=134,slow=7.9,SNR=2.8						
NVAR	**Mina Array Bea**	**79.50**	**44**	P	**P**	**18 11 47.7**	**-1.2**
	0.6nm,0.6s,baz=230,slow=7.9,SN

GRPR A A 18 23 29.0
69nm,0.4s
GLVR Golovnino 2.43 218 *e*P Pn 18 22 56.0 -10
GLVR *e*S Sn 18 23 28.0 -6.6
GLVR A A 18 23 32.0
448nm,0.5s
GLVR A A 18 23 32.0
235nm,0.5s
YSS Yuzh-Sakhalins 3.56 293 *e*rx rx 18 23 42.3
ASAJ Asahikawa 3.86 248 Pn **Pn 18 23 27.7 +1.9**
0.2nm,0.3s,baz=74,slow=12,SNR=4.6
ASAJ Sn Sn 18 24 27.2 +17
0.0nm,0.3s,baz=125,slow=26,SNR=1.9
MAT Matsushiro 11.53 221 P **Pn 18 25 12.8 +1.7**
MJAR Matsushiro Arr 11.53 221 Pn **Pn 18 25 12.8 +1.7**
0.7nm,0.3s,baz=47,slow=18,SNR=12
MKAR Makanchi Array 43.97 296 P **P 18 30 34.9 +2.3**
1.5nm,0.7s,baz=76,slow=8.5,SNR=15
KURBB Kurchatov Arra 44.80 302 P **P 18 30 40.7 +1.6**
0.3nm,0.3s,baz=78,slow=8.6,SNR=2.7
RES Resolute Bay 53.03 17 P **P 18 31 39.5 -2.4**
1.1nm,0.9s,baz=156,slow=12,SNR=2.7
FINES FINESS Array B 63.29 333 P **P 18 32 53.6 -0.1**
2.7nm,0.8s,baz=32,slow=8.2,SNR=6.6
HFS Hagfors 68.02 337 P **P 18 33 24.0 -0.3**
1.1nm,0.5s,baz=69,slow=4.8,SNR=5.4
ASAR Alice Springs 70.13 193 P **P 18 33 39.5 +1.7**
0.3nm,0.8s,baz=1.9,slow=8.3,SNR=3.2
AKASG Malin Array Be 70.20 323 P **P 18 33 38.0 +0.1**
0.4nm,0.5s,baz=37,slow=5.8,SNR=3.4
GERES GERESS Array B 77.61 331 P **P 18 34 20.7 -0.8**
0.3nm,0.5s,baz=30,slow=4.5,SNR=3.1
TXAR Lajitas Array 81.34 57 P **P 18 34 40.8 -1.3**
0.2nm,0.6s,baz=302,slow=5.2,SNR=2.7

MAN 17 18:24:54.7, 15.77N×119.56E, h13km, mb4.7, ML3.6, MS3.5, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCZP	**Santa Cruz**	**0.34**	**88**	*e*P	Pb	18 25 02.5	-0.1
SCZP				*e*S	Sb	18 25 09.4	+1.6
BOLP	**Bolinao**	**0.70**	**29**	*e*P	Pg	18 25 08.5	+0.2
BOLP				*e*S	Sn	18 25 20.4	-0.7
BALP	**Baler**	**1.94**	**90**	*e*P	Pn	18 25 26.4	-1.0
BALP				*e*S	Sb	18 25 53.1	-0.9
ABRA	**Dolores**	**2.17**	**30**	*e*P	Pn	18 25 30.8	+0.1
ABRA				*e*S	Sb	18 25 59.3	-1.5
APYP	**Conner**	**2.63**	**37**	*e*P	Pn	18 25 39.2	+2.3
APYP				*e*S	Sb	18 26 13.2	-0.9

IDC ***17*** *18:25:40.0±1.3, 31.85N×141.49E, h0km, mb3.5/5, mb1 3.7/6, mb1mx3.4/71, mbtmp3.4/6, ML2.8/1, Error ellipse: s-maj=42.9km s-min=17.7km az=63.0*
ISCJB ***17*** *18:25:41.8±1.0, 31.9N±0.1×141.5E±0.2, h26km, mb3.5/5, Error ellipse: s-maj=29.1km s-min=9.5km az=148.8*
ISC 17 18:25:44.1±1.2, 31.8N±0.1×141.3E±0.2, h26km, n7, σ1§11/9, **mb3.7**/5, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**1.82**	**315**	Pn	**Pn**	**18 26 12.1**	**-1.7**
JHJ	16nm,0.3s,baz=260,slow=22,SNR=6.3			Sn	**Sb**	**18 26 39.1**	**-0.1**
	12nm,0.3s,baz=252,slow=20,SNR=2.6						
MJAR	**Matsushiro Arr**	**5.36**	**332**	Pn	**Pn**	**18 27 02.9**	**+0.5**
MJAR	0.3nm,0.3s,baz=155,slow=11,SNR=5.2			Sn	**Sn**	**18 28 03.2**	**0.0**
	0.0nm,0.3s,baz=161,slow=10,SNR=2.7						
MKAR	**Makanchi Array**	**46.97**	**306**	P	**P**	**18 34 14.3**	**+1.5**
	0.6nm,0.8s,baz=92,slow=9.2,SNR=4.3						
KURBB	**Kurchatov Arra**	**49.27**	**312**	P	**P**	**18 34 31.3**	**+0.9**
	0.5nm,0.6s,baz=90,slow=6.5,SNR=5.8						
WRA	**Warramunga Arr**	**51.91**	**188**	P	**P**	**18 34 51.0**	**+0.3**
	0.7nm,0.6s,baz=6.0,slow=7.6,SNR=11						
ASAR	**Alice Springs**	**55.64**	**188**	P	**P**	**18 35 17.7**	**-0.2**
	0.2nm,0.7s,baz=351,slow=5.6,SNR=6.0						
TXAR	**Lajitas Array**	**93.35**	**52**	P	**P**	**18 38 56.3**	**-1.0**
	0.1nm,0.6s,baz=325,slow=4.5,SNR=2.6						

MAN 17 18:45:02.0, 15.61N×119.33E, h23km, mb4.5, ML3.4, MS3.2, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCZP	**Santa Cruz**	**0.58**	**73**	*e*P	Pb	18 45 13.4	-0.2
SCZP				*e*S	Sb	18 45 20.6	-0.8
BOLP	**Bolinao**	**0.95**	**36**	*e*P	Pb	18 45 19.7	-0.1
BOLP				*e*S	Sn	18 45 32.4	-0.4
LUBP	**Lubang**	**2.06**	**155**	*e*P	Pn	18 45 35.4	+0.1
LUBP				*e*S	Sn	18 45 50.3	-10
BALP	**Baler**	**2.16**	**86**	*e*P	Pn	18 45 37.9	+1.2
BALP				*e*S	Sn	18 46 04.2	+1.4
ABRA	**Dolores**	**2.42**	**33**	*e*P	Pn	18 45 41.9	+1.7
ABRA				*e*S	Sn	18 46 10.0	+0.8
CAUP	**Cauayan**	**2.73**	**61**	*e*P	Pn	18 45 47.0	+2.4
CAUP				*e*S	Sb	18 46 20.6	-2.8
APYP	**Conner**	**2.89**	**39**	*e*P	Pn	18 45 48.4	+1.7
APYP				*e*S	Sn	18 46 21.8	+1.0
ENPP	**El Nido**	**4.38**	**179**	*e*P	Pn	18 46 08.1	+0.9

ISK ***17*** *18:45:52.5, 36.45N×28.99E, h29km, ML2.5/4*
CSEM ***17*** *18:45:53.6±0.3, 36.60N×29.18E, h30km, ML1.6, Error ellipse: s-maj=23.4km s-min=7.6km az=44.0*
ISCJB ***17*** *18:45:54.4±0.8, 36.58N±0.08×29.14E±0.10, h30km±8km, Error ellipse: s-maj=17.5km s-min=6.8km az=44.3*
DDA ***17*** *18:45:54.0, 36.64N×29.19E, h21km, Ml1.6*
ISC 17 18:45:54.0±1.0, 36.61N±0.07×29.18E±0.08, h31km±6km, n13, σ0§92/22, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.08**	**290**	PG	**Pb**	**18 45 58.9**	**-0.5**
FETY				SG	**Sb**	**18 46 03.9**	**+0.9**
FETY	**Fethiye**	**0.08**	**290**	P	**Pb**	**18 45 58.2**	**-1.2**
FETY	**Fethiye**	**0.08**	**290**	*e*Pg	**Pb**	**18 45 58.9**	**-0.5**
FETY				S	**Sb**	**18 46 04.0**	**+0.9**
DALY	**Dalyan (Mu¨la**	**0.47**	**297**	PG	**Pb**	**18 46 02.8**	**-1.2**
DALY				SG	**Sb**	**18 46 10.5**	**-0.2**
DALY	**Dalyan (Mu¨la**	**0.47**	**297**	*e*Pg	**Pb**	**18 46 02.8**	**-1.2**
DALY				*e*Sg	**Sb**	**18 46 10.5**	**-0.2**
AKAS	**Kas**	**0.51**	**137**	PG	**Pb**	**18 46 04.5**	**-0.2**
AKAS				SG	**Sn**	**18 46 13.1**	**0.0**
AKAS	**Kas**	**0.51**	**137**	*i* P	**Pb**	**18 46 04.2**	**-0.5**
AKAS				*i* S	**Sn**	**18 46 13.2**	**0.0**
AKAS	**Kas**	**0.51**	**137**	P	**Pb**	**18 46 04.2**	**-0.5**
AKAS	**Kas**	**0.51**	**137**	*e*Pg	**Pb**	**18 46 04.5**	**-0.2**
AKAS				S	**Sn**	**18 46 13.2**	**0.0**
TURN	**Turunc**	**0.53**	**300**	PG	**Pn**	**18 46 06.2**	**+0.7**
TURN	**Turunc**	**0.53**	**300**	*e*Pg	**Pn**	**18 46 06.2**	**+0.7**
TAVA	**DENIZLI_Tavas**	**0.88**	**346**	*i* P	**Pn**	**18 46 09.5**	**-0.9**
TAVA				*i* S	**Sn**	**18 46 23.9**	**+1.7**
TAVA	**DENIZLI_Tavas**	**0.88**	**346**	P	**Pn**	**18 46 09.5**	**-0.9**
TAVA				S	**Sn**	**18 46 23.9**	**+1.7**

DJA ***17*** *18:49:08.8±0.3, 1.1N±3.3×12.7E±.*°, *h10km, M4.6/11, mB4.9/2, mb4.7/6, MLv4.6/11, Mw(mB)4.2/2*
BJI ***17*** *18:49:08.4, 1.68N×127.17E, h62km, mb4.5/10, mB4.9/4, Ms4.6/3, Ms7 4.3/1*
IDC ***17*** *18:49:09.5±1.8, 1.23N×126.89E, h71km±16km, mb4.2/25, mb1 4.3/26, mb1mx4.1/63, mbtmp4.5/26, MS3.4/4, Ms1 3.4/4, ms1mx2.9/60, Error ellipse: s-maj=20.3km s-min=9.0km az=79.0*
ISCJB ***17*** *18:49:10.5±0.3, 1.25N±0.03×126.85E±0.04, h103km, mb4.4/31, Error ellipse: s-maj=5.6km s-min=4.1km az=167.4*
NEIC ***17*** *18:49:15.2±1.7, 1.20N×126.83E, h127km±17km, mb4.5/3, Error ellipse: s-maj=15.9km s-min=7.9km az=77.0*
ISC 17 18:49:12.6±0.4, 1.31N±0.04×126.83E±0.05, h103km, n66, σ2§41/78, **mb4.4**/31, **1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**2.04**	**161**	P	**Pn**	**18 49 43.0**	**-3.0**
LBMI				S	**Sn**	**18 50 08.0**	**-3.4**
KMSI	**Cibinong**	**2.94**	**256**	P	**Pn**	**18 49 56.0**	**-1.7**
KMSI				S	**Sn**	**18 50 32.2**	**-0.3**

SANI	**Sanana**	**3.44**	**194**	P	**Pn**	**18 50 00.4**	**-4.0**
LUWI	**Luwuk**	**4.68**	**240**	P	**Pn**	**18 50 20.3**	**-0.8**
SIJI	**Sorong**	**4.93**	**116**	P	**Pn**	**18 50 21.7**	**-2.8**
	4.6nm,0.3s,baz=323,slow=19,SNR=15						
SIJI				S	**Sn**	**18 51 16.7**	**-3.7**
	1.6nm,0.3s,baz=85,slow=16,SNR=1.9						
MRSI	**Marisa**	**4.96**	**260**	P	**Pn**	**18 50 23.8**	**-1.1**
MSAI	**Masohi**	**5.08**	**156**	P	**Pn**	**18 50 24.5**	**-2.0**
MATI	**Mati**	**5.63**	**354**	*e*P	**Pn**	**18 50 30.2**	**-3.8**
MATI				*e*S	**Sn**	**18 51 37.0**	**-0.4**
APSI	**Ampana**	**5.63**	**247**	P	**Pn**	**18 50 32.2**	**-1.8**
SKMP	**Bagumbayan, Su**	**5.66**	**336**	*e*P	**Pn**	**18 50 31.8**	**-2.6**
SKMP				*e*S	**Sn**	**18 51 32.3**	**-5.8**
DAV	**Davao City (W)**	**5.86**	**348**	LR	LR	18 53 13.6	
	comp=Z,264nm,21.1s,baz=172,slow=41						
KDI	**Kendari**	**6.71**	**219**	P	**Pn**	**18 50 46.0**	**-2.7**
BUKP	**Musuan**	**6.76**	**345**	*e*P	**Pn**	**18 50 46.6**	**-2.8**
BUKP				*e*S	**Sn**	**18 52 03.0**	**-2.0**
FAKI	**Fak Fak**	**6.85**	**128**	P	**Pn**	**18 50 51.2**	**+0.6**
PAGZ	**Pagadian**	**7.35**	**332**	*e*P	**Pn**	**18 50 52.9**	**-4.5**
PAGZ				*e*S	**Sn**	**18 52 15.1**	**-4.2**
TTSI	**Tana Toraja**	**8.24**	**238**	P	**Pn**	**18 51 05.6**	**-3.8**
SPSI	**Sidrap Palu**	**8.79**	**233**	P	**Pn**	**18 51 14.9**	**-2.0**
BAKI	**Biak**	**9.60**	**105**	P	**Pn**	**18 51 31.5**	**+3.5**
BATI	**Baumata**	**11.87**	**195**	P	**Pn**	**18 51 58.8**	**+0.2**
	0.8nm,0.3s,baz=72,slow=18,SNR=1.7						
TGY	**Tagaytay City**	**13.99**	**336**	P	**P**	**18 52 31.5**	**+0.4**
	baz=37,slow=18,SNR=3.6						
JAY	**Jayapura**	**14.38**	**105**	P	**P**	**18 52 34.8**	**-0.7**
	0.3nm,0.3s,baz=238,slow=3.3,SNR=4.2						
WRAB	**Tennant Creek**	**22.36**	**161**	*e*P	**P**	**18 54 00.4**	**-2.0**
	11nm,0.4s						
WRA	**Warramunga Arr**	**22.36**	**161**	P	**P**	**18 54 00.4**	**-2.1**
	53nm,0.9s,baz=340,slow=11,SNR=51						
WRA				S	**S**	**18 58 02.9**	**+1.5**
	1.9nm,0.7s,baz=333,slow=20,SNR=5.5						
WRA				ScP	**ScP**	**19 01 25.3**	**+2.8**
	1.3nm,0.8s,baz=339,slow=2.9,SNR=5.3						
PMG	**Port Moresby**	**22.87**	**118**	LR	LR	19 04 56.4	
	comp=Z,87nm,19.1s,baz=354,slow=42						
MBWA	**Marble Bar**	**23.39**	**197**	*e*P	**P**	**18 54 08.1**	**-4.3**
	15nm,0.7s						
ASAR	**Alice Springs**	**25.76**	**165**	P	**P**	**18 54 32.8**	**-1.2**
	16nm,0.8s,baz=345,slow=8.1,SNR=53						
ASAR				PcP	**PcP**	**18 58 00.5**	**-1.0**
	0.7nm,0.5s,baz=343,slow=2.9,SNR=4.4						
ASAR				S	**S**	**18 59 04.5**	**+8.8**
	2.8nm,1.0s,baz=343,slow=19,SNR=4.4						
ASAR				ScP	**ScP**	**19 01 35.1**	**+3.3**
	0.6nm,0.6s,baz=350,slow=2.8,SNR=4.7						
NANT	**Nan**	**30.96**	**306**	P	**P**	**18 55 21.1**	**+0.8**
	6.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**32.24**	**304**	P	**P**	**18 55 31.4**	**-0.1**
	1.4nm,0.9s,baz=116,slow=7.1,SNR=6.3						
NWAO	**Narrogin (SRO)**	**35.24**	**194**	P	**P**	**18 55 56.9**	**-0.4**
	5.6nm,0.5s,baz=256,slow=9.2,SNR=8.1						
STKA	**Stephens Creek**	**35.85**	**158**	P	**P**	**18 56 02.0**	**-0.6**
	4.5nm,0.4s,baz=332,slow=8.5,SNR=25						
KSAR	**Wonju Array Be**	**35.97**	**1**	P	**P**	**18 56 03.8**	**+0.3**
KSAR				ScP	**ScP**	**19 02 09.1**	**+3.9**
KSRS	**Korea Array**	**35.98**	**1**	P	**P**	**18 56 03.8**	**+0.2**
	3.9nm,0.9s,baz=186,slow=10,SNR=6.6						
KSRS				ScP	**ScP**	**19 02 09.1**	**+3.9**
	1.0nm,0.7s,baz=188,slow=4.7,SNR=5.7						
KSRS				LR	LR	19 15 09.4	
	comp=Z,23nm,18.1s,baz=245,slow=43						
MJAR	**Matsushiro Arr**	**36.61**	**15**	P	**P**	**18 56 08.2**	**-0.8**
	2.6nm,0.6s,baz=193,slow=9.7,SNR=16						
BJT	**Baijiatuan**	**39.73**	**347**	*e*P	**P**	**18 56 34.9**	**-0.2**
USRK	**Ussuriysk Ar.**	**42.95**	**5**	P	**P**	**18 57 02.5**	**+1.1**
	5.0nm,0.9s,baz=196,slow=8.3,SNR=9.3						
ASAJ	**Asahikawa**	**44.87**	**16**	P	**P**	**18 57 16.9**	**+0.1**
	2.9nm,0.7s,baz=199,slow=10,SNR=5.0						
GTA	**Gaotai**	**45.23**	**330**	⇓P	**P**	**18 57 21.0**	**+1.2**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,68nm,4.5s						
GTA				LR	LR		
	comp=N,160nm,15.9s						
GTA				LR	LR		
	comp=E,140nm,16.8s						
KLR	**Kul'dur**	**47.93**	**4**	P	**P**	**18 57 40.7**	**+0.2**
	0.3nm,0.8s,baz=195,slow=12,SNR=13						
ULN	**Ulaanbaatar**	**49.44**	**343**	P	**P**	**18 57 49.9**	**-2.5**
	2.0nm,0.6s						
SONM	**Songino Array**	**49.62**	**342**	P	**P**	**18 57 53.6**	**0.0**
	6.8nm,0.8s,baz=145,slow=8.5,SNR=6.5						
TLY	**Talaya**	**53.85**	**342**	P	**P**	**18 58 26.2**	**+1.3**
	2.9nm,0.5s,baz=239,slow=6.2,SNR=5.2						
PETK	**Petropavlovsk-**	**57.62**	**21**	P	**P**	**18 58 53.0**	**+1.1**
	4.0nm,0.6s,baz=187,slow=5.2,SNR=14						
MKAR	**Makanchi Array**	**59.60**	**326**	P	**P**	**18 59 07.3**	**+1.6**
	5.9nm,0.5s,baz=120,slow=8.6,SNR=75						
RPZ	**Rata Peaks**	**59.74**	**144**	P	**P**	**18 59 04.8**	**-1.9**
	12nm,0.9s,baz=90,slow=3.0,SNR=3.1						
MA2	**Magadan**	**61.02**	**14**	P	**P**	**18 59 16.1**	**+1.0**
	8.4nm,0.8s,baz=208,slow=11,SNR=3.7						
KZA	**Kyzart**	**61.47**	**318**	P	**P**	**18 59 20.7**	**+1.6**
	SNR=6.1						
TKM2	**Tokmak 2**	**61.63**	**319**	P	**P**	**18 59 21.6**	**+1.7**
	SNR=9.8						
UCH	**Uchtor**	**62.03**	**318**	P	**P**	**18 59 24.8**	**+2.0**
	SNR=9.8						
USP	**Ospenovka**	**62.50**	**319**	P	**P**	**18 59 27.3**	**+1.8**
	SNR=10						
AML	**Almayashu**	**62.53**	**318**	P	**P**	**18 59 28.4**	**+2.2**
	SNR=6.2						
EKS2	**Erkin-Say**	**62.71**	**318**	P	**P**	**18 59 30.1**	**+3.1**
	SNR=6.6						
ZALV	**Zalesovo Beam**	**62.78**	**334**	P	**P**	**18 59 27.6**	**+0.6**
	4.1nm,0.8s,baz=114,slow=5.8,SNR=15						
KURBB	**Kurchatov Arra**	**63.83**	**328**	P	**P**	**18 59 35.3**	**+1.3**
	19nm,0.7s,baz=127,slow=6.1,SNR=152						
KURK	**Kurchatov**	**63.83**	**328**	*e*P	**P**	**18 59 33.9**	**-0.2**
SEY	**Seymchan**	**64.36**	**13**	P	**P**	**18 59 38.7**	**+1.5**
	3.5nm,0.8s,baz=222,slow=7.1,SNR=9.8						
BVAR	**Borovoye Array**	**69.40**	**327**	P	**P**	**19 00 10.5**	**+1.1**
	5.0nm,0.8s,baz=126,slow=7.5,SNR=34						
BVAR				LR	LR	19 32 25.4	
	comp=Z,82nm,20.5s,baz=272,slow=37						
BRVK	**Borovoye**	**69.47**	**327**	*e*P	**P**	**19 00 08.3**	**-1.5**
TIXI	**Tiksi**	**70.25**	**1**	P	**P**	**19 00 14.3**	**+0.1**
	1.9nm,0.6s,baz=188,slow=3.0,SNR=11						
NRIK	**Noril'sk**	**72.79**	**346**	P	**P**	**19 00 30.4**	**+0.9**
	8.6nm,0.7s,baz=115,slow=4.2,SNR=5.2						
AKTO	**Aktyubinsk**	**75.61**	**322**	P	**P**	**19 00 47.6**	**+1.2**
	5.0nm,0.7s,baz=107,slow=12,SNR=21						
VNDA	**Vanda**	**81.03**	**173**	P	**P**	**19 01 16.0**	**+0.4**
	2.6nm,0.5s,baz=316,slow=6.9,SNR=20						
MAW	**Mawson**	**81.53**	**200**	P	**P**	**19 01 18.6**	**+0.2**
	2.7nm,0.6s,baz=81,slow=5.8,SNR=6.2						
ILAR	**Eielson Array**	**87.23**	**25**	P	**P**	**19 01 47.0**	**-0.3**
	0.3nm,0.7s,baz=239,slow=5.0,SNR=4.3						
TXAR	**Lajitas Array**	**122.97**	**53**	PKP	**PKPdf**	**19 07 58.8**	**+1.0**
	0.2nm,0.7s,baz=289,slow=2.8,SNR=3.7						
TORD	**Torodi Ar. Bea**	**123.74**	**287**	PKP	**PKPdf**	**19 08 00.5**	**+1.1**
	1.0nm,1.1s,baz=110,slow=2.0,SNR=4.8						
PLCA	**Paso Flores**	**137.71**	**160**	PKP	**PKPdf**	**19 08 27.4**	**+2.1**
	0.6nm,0.8s,baz=348,slow=2.1,SNR=3.2						

ISCJB ***17*** *18:49:14.7±0.4, 9.19S±0.04×75.36W±0.05, h10km, mb4.1/15, MS3.0/1, Error ellipse: s-maj=7.8km s-min=5.7km az=157.8*
IDC ***17*** *18:49:14.4±0.6, 9.23S×75.46W, h0km, mb4.1/15, mb1 4.3/21, mb1mx4.1/49, mbtmp4.2/21, ML3.7/6, MS2.9/2, Ms1 2.9/2, ms1mx2.8/47, Error ellipse: s-maj=19.4km s-min=14.6km az=64.0*
NEIC ***17*** *18:49:15.9±2.2, 9.24S×75.48W, h11km±13km, mb4.3/1, Error ellipse: s-maj=8.4km s-min=5.8km az=66.0*
ISC 17 18:49:15.9±0.5, 9.28S±0.06×75.45W±0.07, h10km, n47, σ1§57/50, **mb4.2**/15, **Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**3.02**	**207**	Pn	**Pn**	**18 50 05.6**	**+1.8**
	37nm,0.3s,baz=40,slow=6.0,SNR=146						
NNA				Sn	**Sn**	**18 50 43.9**	**+3.8**
	100nm,0.3s,baz=146,slow=22,SNR=11						
NNA				LR	LR	18 51 31.4	
	comp=Z,126nm,21.2s,baz=157,slow=45						
NNA	**Nana**	**3.02**	**207**	*e*Pn	**Pn**	**18 50 04.2**	**+0.3**
NNA				Sn	**Sn**	**18 50 32.8**	**-7.3**
OTAV	**Otavalo**	**9.91**	**342**	*e*Pn	**Pn**	**18 51 38.0**	**-1.0**
	5.5nm,0.6s						

OTAV	**Otavalo**	**9.91**	**342**	*e*P	**Pn**	**18 51 41.6**	**+2.6**
LPAZ	**La Paz**	**9.97**	**135**	Pn	**Pn**	**18 51 41.9**	**+2.0**
	0.3nm,0.3s,baz=323,slow=10,SNR=15						
LPAZ				Lg	Lg	18 54 25.0	
	1.2nm,0.3s,baz=180,slow=11,SNR=3.0						
GCUF	**Volcan Galeras**	**10.60**	**350**	*e*P	**Pn**	**18 51 49.2**	**+0.7**
CRUC	**La Cruz**	**10.88**	**352**	*e*P	**Pn**	**18 51 52.6**	**+0.5**
SOTA	**Rioblanco**	**11.40**	**354**	*e*P	**Pn**	**18 52 00.6**	**+1.2**
PCON	**Cinco Dias**	**11.57**	**355**	*e*P	**Pn**	**18 52 01.0**	**-0.8**
SAML	**Samuel**	**12.12**	**89**	*e*Pn	**Pn**	**18 52 08.5**	**-0.3**
	0.3nm,0.3s						
SAML				*e*Sn	**Sn**	**18 54 24.2**	**+0.1**
YOTC	**Yotoco, Valle**	**13.20**	**356**	*e*P	**Pn**	**18 52 26.2**	**+2.4**
VILC	**Villavicencio,**	**13.42**	**8**	*e*P	**Pn**	**18 52 25.0**	**-1.7**
CHIC	**Chingaza**	**13.92**	**7**	*e*P	**Pn**	**18 52 35.0**	**+1.2**
ROSC	**El Rosal**	**14.07**	**5**	Pn	**Pn**	**18 52 35.4**	**-0.4**
	1.1nm,0.3s,baz=274,slow=19,SNR=2.1						
ROSC				Lg	Lg	18 56 48.1	
	baz=232,slow=19,SNR=2.1						
RUSC	**La Rusia**	**15.25**	**9**	*e*P	**Pn**	**18 52 48.8**	**-3.2**
SIV	**San Ignacio**	**15.53**	**117**	Pn	**Pn**	**18 52 54.5**	**-0.7**
	2.4nm,0.3s,baz=304,slow=11,SNR=56						
SIV				Lg	Lg	18 57 09.8	
	1.4nm,0.3s,baz=8.0,slow=9.9,SNR=3.9						
ZARC	**Zaragoza, Cauc**	**16.67**	**2**	*e*P	**P**	**18 53 12.9**	**+0.7**
PTGA	**Pitinga**	**17.60**	**62**	P	**Pn**	**18 53 20.9**	**-0.5**
	0.5nm,0.3s,baz=247,slow=13,SNR=8.5						
SDV	**Santo Domingo**	**18.67**	**15**	P	**Pn**	**18 53 34.4**	**-0.4**
	1.2nm,0.3s,baz=288,slow=13,SNR=1.9						
SJCC	**San Jacinto, C**	**19.05**	**1**	*e*P	**Pn**	**18 53 38.6**	**-0.6**
JTS	**JuntasAbangare**	**21.62**	**334**	LR	LR	19 02 14.8	
	comp=Z,65nm,20.0s,baz=167,slow=36						
CPUP	**Villa Florida**	**24.14**	**137**	P	**P**	**18 54 32.8**	**+0.6**
	1.0nm,0.7s,baz=337,slow=13,SNR=3.1						
SJG	**San Juan**	**28.72**	**19**	P	**P**	**18 55 14.0**	**+0.4**
	2.8nm,0.3s,baz=347,slow=19,SNR=2.7						
SJG	**San Juan**	**28.72**	**19**	*e*P	**P**	**18 55 13.5**	**-0.1**
	3.8nm,0.6s						
TXAR	**Lajitas Array**	**47.04**	**326**	P	**P**	**18 57 48.0**	**0.0**
	0.3nm,0.5s,baz=149,slow=9.4,SNR=6.0						
TXAR				PcP	**PcP**	**18 59 20.5**	**+0.4**
	0.6nm,0.9s,baz=147,slow=5.4,SNR=4.4						
ANMO	**Albuquerque**	**52.87**	**328**	P	**P**	**18 58 32.4**	**+0.1**
	0.9nm,0.8s,baz=141,slow=7.8,SNR=4.4						
ULM	**Lac du Bonnet**	**61.90**	**345**	P	**P**	**18 59 34.5**	**-1.0**
	3.4nm,0.5s,baz=172,slow=6.3,SNR=7.8						
NVAR	**Mina Array Bea**	**62.02**	**323**	P	**P**	**18 59 36.6**	**-0.2**
	0.4nm,0.7s,baz=134,slow=2.6,SNR=2.8						
DBIC	**Dimbokro**	**72.11**	**80**	P	**P**	**19 00 41.0**	**-0.3**
	3.1nm,0.7s,baz=173,slow=8.1,SNR=3.2						
KOWA	**Kowa**	**74.66**	**72**	P	**P**	**19 00 56.6**	**+0.3**
	2.6nm,0.6s,baz=165,slow=16,SNR=4.2						
SNAA	**Sanae**	**75.80**	**162**	P	**P**	**19 01 01.5**	**-0.4**
	5.8nm,1.2s,baz=264,slow=5.5,SNR=7.9						
YKA	**Yellowknife Ar**	**77.67**	**343**	P	**P**	**19 01 11.9**	**-0.5**
	0.5nm,0.5s,baz=139,slow=5.7,SNR=4.0						
TORD	**Torodi Ar. Bea**	**79.77**	**75**	P	**P**	**19 01 25.1**	**+0.1**
	4.1nm,0.9s,baz=245,slow=3.6,SNR=12						
ESDC	**Sonseca Array**	**81.95**	**48**	P	**P**	**19 01 36.2**	**0.0**
	0.6nm,0.6s,baz=259,slow=4.2,SNR=3.3						
INK	**Inuvik**	**87.40**	**342**	P	**P**	**19 02 02.9**	**-0.1**
	3.1nm,0.7s,baz=213,slow=13,SNR=6.5						
EKA	**Eskdalemuir Ar**	**87.70**	**33**	P	**P**	**19 02 05.6**	**+0.9**
	1.1nm,0.8s,baz=224,slow=4.7,SNR=3.8						
ILAR	**Eielson Array**	**90.57**	**336**	P	**P**	**19 02 18.3**	**+0.2**
	1.1nm,1.1s,baz=155,slow=2.9,SNR=6.7						
BVAR	**Borovoye Array**	**128.39**	**26**	PKP	**PKPdf**	**19 08 23.0**	**+0.1**
	0.4nm,0.6s,baz=82,slow=2.2,SNR=3.8						
ZALV	**Zalesovo Beam**	**132.72**	**16**	PKP	**PKPdf**	**19 08 31.3**	**+0.2**
	1.1nm,0.7s,baz=318,slow=2.0,SNR=5.4						
KURK	**Kurchatov**	**133.47**	**23**	PKP	**PKPdf**	**19 08 32.9**	**+0.3**
KURBB	**Kurchatov Arra**	**133.51**	**23**	PKP	**PKPdf**	**19 08 32.9**	**+0.3**
	1.0nm,1.1s,baz=306,slow=2.5,SNR=5.5						
ASAR	**Alice Springs**	**136.46**	**221**	PKP	**PKPdf**	**19 08 38.1**	**-1.0**
	1.4nm,0.9s,baz=119,slow=2.0,SNR=9.9						
MKAR	**Makan

ELDTW eS Sb 18 52 34.8 -0.7
baz=221
TYC Yuchr 0.74 289 ⇑P Pg 18 52 23.2 -0.8
baz=288
TYC eS Sg 18 52 33.5 -0.1
baz=288
ENA Nanau 0.76 8 ⇑P Pg 18 52 24.7 +0.3
baz=16
NANB Nanao 0.76 9 P Pg 18 52 24.9 +0.4
baz=16
ALS Alishan 0.77 258 ⇑P Pg 18 52 24.4 -0.1
baz=253
NNSB Datong 0.79 344 ⇑P Pg 18 52 24.8 -0.1
baz=339
NNSB eS Sg 18 52 34.0 -1.2
baz=339
NNSH Datong 0.79 344 P Pg 18 52 24.8 -0.1
baz=349
NNSH eS Sg 18 52 34.6 -0.5
baz=349
ENAH Nanao 0.80 12 eP Pb 18 52 25.8 -0.3
baz=19
NNS Nan Shan 0.80 343 ⇑iP Pg 18 52 25.0 -0.1
baz=339
NNS S Sg 18 52 35.1 -0.4
baz=339
WJS Zhushan 0.83 281 eP Pb 18 52 26.6 -0.2
baz=287
WJS eS Sb 18 52 38.4 +0.1
baz=287
TWH Lutao 0.96 188 eP Pg 18 52 27.6 -0.6
baz=168
ENTT Nioudou 0.97 357 eP Pg 18 52 28.3 -0.1
baz=2.0
WGK Gukeng 0.97 271 ⇑iP Pb 18 52 29.0 -0.1
baz=268
WGK iS Sb 18 52 43.4 +1.0
baz=268
TPUB Ta-pu 0.98 248 ⇑P Pg 18 52 28.7 +0.1
baz=253
TPUB iS Sb 18 52 42.3 -0.3
baz=253
TWGBT Beinan 0.98 211 eP Pg 18 52 27.2 -1.4
baz=205
TWG Pinlang 0.98 211 eP Pg 18 52 27.2 -1.4
baz=205
TCU Taichung 0.99 299 eP Pb 18 52 29.2 -0.2
baz=298
EOS1 EOS1 0.99 28 eP Pn 18 52 30.5 +0.2
baz=52
EOS1 eS Sn 18 52 47.6 +2.9
baz=52
WDLH Douliu 0.99 271 ⇑P Pb 18 52 29.4 -0.1
baz=268
WDLH S Sb 18 52 43.8 +0.8
baz=268
CHN4 Tsaushan 1.00 252 ⇑iP Pb 18 52 29.3 -0.2
baz=257
CHN4 S Sb 18 52 43.9 +0.9
baz=257
TTN Taitung 1.01 206 eP Pb 18 52 29.8 0.0
baz=189
WTP Ta-pu 1.02 246 ⇑iP Pg 18 52 29.4 +0.2
baz=250
WTP S Sg 18 52 42.9 +0.4
baz=250
YHNB Yeheng 1.02 347 ⇑P Pg 18 52 29.6 +0.2
baz=341
YHNB S Sg 18 52 42.4 -0.3
baz=341
NSK Sanguang 1.03 346 ⇑P Pg 18 52 29.5 0.0
baz=341
NSK S Sg 18 52 42.2 -0.8
baz=341
TWE Neicheng 1.05 2 eP Pg 18 52 29.7 -0.1
baz=7.0
WCHH Zhanghua 1.06 293 eP Pg 18 52 30.0 0.0
baz=292
NSY Sanyi 1.08 314 ⇑P Pn 18 52 31.5 -0.2
baz=314
NWLT Wulai 1.11 354 eP Pn 18 52 31.8 -0.3
baz=358
CHY Chiayi 1.11 261 ⇓P Pb 18 52 31.7 +0.1
baz=258
CHY eS Sn 18 52 47.4 -0.4
baz=258
NSTT Nanjuang 1.11 329 P Pg 18 52 30.9 -0.2
baz=324
NSTT S Sg 18 52 44.6 -1.0
baz=324
CHN1 Nanshi 1.11 245 ⇑P Pg 18 52 31.2 0.0
baz=239
CHN1 S Sn 18 52 47.8 -0.1
baz=239
TWK Hsinying 1.12 249 ⇑P Pg 18 52 31.1 0.0
baz=253
TWK eS Sn 18 52 47.5 -0.6
baz=253
LIOB Emei 1.12 330 ⇑P Pb 18 52 31.7 0.0
baz=325
LIOB S Sg 18 52 45.0 -0.8
baz=325
SGST Jiashian 1.12 239 ⇑P Pg 18 52 31.3 0.0
baz=232
SGST S Sb 18 52 47.3 +0.7
baz=232
SLGT Liugui 1.12 233 eP Pg 18 52 31.1 -0.2
baz=220
SLGT eS Sn 18 52 47.7 -0.4
baz=220
NMLH Miaoli 1.15 319 eP Pn 18 52 32.7 +0.1
baz=321
NMLH eS Sb 18 52 47.4 -0.2
baz=321
RLNB Erlin 1.18 281 ⇑P Pg 18 52 32.2 -0.2
baz=280
RLNB S Sn 18 52 49.1 -0.4
baz=280
WLGB Puzi 1.23 261 ⇑P Pg 18 52 33.5 +0.1
baz=259
WLGB eS Sn 18 52 51.0 +0.3
baz=259
ECL Taimali 1.23 210 eP Pg 18 52 31.4 -2.0
baz=189
SBCB Hsinchu 1.26 333 P Pn 18 52 34.1 0.0
baz=328
SBCB S Sn 18 52 52.0 +0.5
baz=328
WSF Szhu 1.28 269 eP Pn 18 52 33.5 -1.0
baz=267
SSD Sandimen 1.29 225 eP Pn 18 52 33.0 -1.6
baz=223
CHN3 Shinhua 1.30 243 P Pb 18 52 35.2 +0.5
baz=253
CHN3 eS Sn 18 52 55.1 +2.7
baz=253
TWA Mucha 1.31 358 eP Pn 18 52 34.3 -0.4
baz=2.0
TATO Taipei 1.31 355 eP Pg 18 52 34.7 -0.1
baz=359
TATO eS Sb 18 52 51.9 -0.1
baz=359
TIPB Shuangxi 1.31 8 eP Pn 18 52 33.5 -1.3
baz=355
CHN8 Yiju 1.34 256 P Pn 18 52 34.5 -0.7
baz=254
CHN8 eS Sg 18 52 52.5 -0.2
baz=254
NCUH Zhongli 1.35 343 eP Pg 18 52 36.3 +0.5
baz=345
NCUH eS Sn 18 52 55.2 +1.4
baz=345
NCU National Centr 1.35 343 eP Pg 18 52 36.1 +0.3
baz=358
NCU eS Sn 18 52 54.7 +0.9
baz=358
TAP1 Taipei 1.37 356 eP Pb 18 52 35.8 -0.1
baz=357
MASBT Mashibuluo 1.39 221 eP Pn 18 52 34.5 -1.4
baz=214
MASBT eS Sg 18 52 54.8 +0.2
baz=214
SCLT Jiali 1.40 250 P Pn 18 52 36.1 +0.1
baz=247
SCLT eS Sn 18 52 56.8 +1.8
baz=247
SGLT Jiouru 1.40 228 eP Pg 18 52 37.5 +0.8
baz=224

NWF Wu-fen Shan 1.40 6 eP Pg 18 52 36.8 +0.1
baz=10.0
WFSB Wu-fen Shan 1.40 6 eP Pg 18 52 37.5 +0.8
baz=10.0
TAI1 Yung-k'ang 1.43 244 eP Pg 18 52 37.2 +0.1
baz=255
TAI1 eS Sg 18 52 59.3 +3.6
baz=255
JYNG Yonagunijimaku 1.44 57 P Pn 18 52 34.5 -2.0
JYNG eS Sb 18 52 55.5 -0.2
TWS1 Kuangyinshan 1.44 353 eP Pg 18 52 37.4 +0.1
baz=353
TAW Tawu 1.47 207 eP Pn 18 52 37.1 +0.2
baz=189
YM04 YM04 1.48 357 eP Pb 18 52 37.5 -0.3
baz=358
YM10 YM10 1.48 358 eP Pb 18 52 37.4 -0.4
baz=357
YM11 YM11 1.49 358 eP Pb 18 52 37.6 -0.4
baz=357
YOJ Yonaguni jima 1.49 58 eP Pn 18 52 37.5 +0.2
baz=61
YOJ Yonaguni jima 1.49 58 P Pn 18 52 37.2 -0.1
YM07 YM07 1.50 360 eP Pn 18 52 37.4 -0.1
baz=16
YM03 YM03 1.51 357 eP Pb 18 52 37.9 -0.4
baz=358
YM12 YM12 1.51 358 eP Pg 18 52 39.0 +0.4
baz=357
YM08 YM08 1.51 359 eP Pg 18 52 39.2 +0.4
baz=358
SCZT Fangliau 1.59 216 eP Pn 18 52 38.2 -0.3
baz=208
SCZT eS Sg 18 53 01.3 +0.5
baz=208
TWY Chenhua 1.60 359 eP Pg 18 52 40.9 +0.4
baz=358
LAY Lan-yu 1.62 182 ⇑eP Pn 18 52 36.2 -2.9
baz=167
WLCH Liuqiu 1.74 221 eP Pg 18 52 43.2 0.0
baz=222
TWP Hsiaoliuchiu 1.76 222 eP Pb 18 52 42.4 -0.1
baz=222
HEN Hengchun 1.85 206 eP Pb 18 52 43.3 -0.7
baz=190
WDGT Dungji 1.85 258 eP Pn 18 52 41.5 -0.7
baz=258
WDGT eS Sn 18 53 05.3 -0.6
baz=258
TWK1 Hengchun 1.88 204 eP Pn 18 52 42.9 +0.4
baz=187
TWKBT Hengchun 1.88 204 eP Pn 18 52 43.4 +0.8
baz=187
TSEB Hengchuen, Pin 1.88 201 eP Pn 18 52 43.5 +0.9
baz=186
PHUB P'eng-hu 1.89 266 eP Pn 18 52 42.2 -0.5
baz=266
PHUB S Sn 18 53 07.1 +0.1
baz=266
PNG Penghu 1.90 267 ⇑eP Pn 18 52 41.9 -1.0
baz=268
PNG eS Sn 18 53 06.8 -0.4
baz=268
HATJ Hateruma jima 2.03 79 S Sn 18 53 09.4 -1.2
IRIF Iriomote-Funau 2.04 71 P Pn 18 52 45.2 +0.4
IRIF eS Sn 18 53 11.4 +0.8
VCHM Qimei 2.07 258 eP Pn 18 52 45.1 -0.1
baz=260
VCHM eS Sn 18 53 12.2 +0.8
baz=260
JKRS Kuro-shima 2.25 75 P Pn 18 52 48.2 +0.4
JKRS eS Sn 18 53 16.2 +0.2
VWUC VWUC 2.38 304 eP Pn 18 52 47.9 -1.6
baz=299
JIJ Ishigaki jima 2.41 73 P Pn 18 52 49.8 -0.1
JIJ eS Sn 18 53 19.6 -0.1
JISG Ishigakijimahi 2.62 69 P Pn 18 52 52.8 0.0
JISG S Sn 18 53 24.3 -0.7
MATB Ma-tsu 2.90 329 eP Pn 18 52 57.2 +0.5
baz=322
JTJ Tarama 2.97 70 S Sn 18 53 33.5 -0.3
KNM Kinmen 3.01 285 ⇑eP Pn 18 52 58.8 +0.7
baz=285
QZH Quanzhou 3.04 295 ⇑iPn Pn 18 52 57.8 -0.8
QZH Sn Sn 18 53 31.1 -4.4
QZH smax smax
comp=N,500nm,1.0s
QZH smax smax
comp=E,420nm,0.9s
KNMB Chin-men Tao 3.06 286 eP Pn 18 52 58.1 -0.8
baz=286
JIRB Irabujima 3.44 70 eS Sn 18 53 44.5 -0.8
JIKM Ikemajima 3.54 69 S Sn 18 53 47.5 -0.1
GZH Guangzhou 7.63 267 P Pn 18 53 58.5 -3.2
GZH smax smax
comp=N,200nm,1.1s
GZH smax smax
comp=E,230nm,1.0s
JNU Nakatsue 12.45 39 Pn Pn 18 55 08.9 +1.2
0.1nm,0.3s,baz=188,slow=7.1,SNR=2.7
KSRS Korea Array 14.77 20 Pn P 18 55 42.5 -3.0
0.3nm,0.3s,baz=197,slow=12,SNR=22
XAN Xi'an 15.17 316 P Pn 18 55 44.9 0.0
XAN S Sn 18 58 38.9 +5.5
XAN pmax pmax
comp=Z,6.0nm,1.0s
XAN LR LR
comp=E,430nm,4.3s
XAN LR LR
comp=Z,340nm,9.3s
KMI Kunming 17.26 279 P P 18 56 15.6 +2.0
KMI pP sP 18 56 17.6 +2.2
KMI sP pP 18 56 18.8 +4.0
KMI S Sn 18 59 25.6 +1.0
KMI pmax pmax
comp=Z,8.0nm,1.1s
KMI pmax pmax
comp=Z,270nm,3.4s
KMI LR LR
comp=N,230nm,11.5s
LZH Lanzhou 19.73 313 eP P 18 56 39.5 -1.1
LZH pP sP 18 56 43.1 +0.7
LZH sP Pn 18 56 46.0 +4.0
LZH ePP PnPn 18 56 58.6 +3.0
LZH pmax pmax
comp=Z,19nm,1.0s
LZH pmax pmax
comp=Z,46nm,4.6s
LZH LR LR
comp=N,170nm,10.2s
LZH LR LR
comp=E,160nm,10.5s
CMAR Chiang Mai Arr 21.78 261 P P 18 57 04.1 +1.3
2.9nm,0.9s,baz=70,slow=8.8,SNR=5.7
MDJ Mudanjiang 21.89 15 P P 18 57 02.0 -1.7
MDJ pmax pmax
comp=Z,79nm,4.2s
WMQ Urumqi 34.30 314 P P 18 58 59.9 +2.7
MKAR Makanchi Array 38.99 316 P P 18 59 36.4 -0.7
1.7nm,0.4s,baz=116,slow=8.8,SNR=3.3
MKAR LR LR 19 17 14.1
comp=Z,87nm,18.9s,baz=300,slow=38
ZALV Zalesovo Beam 40.89 327 P P 18 59 53.0 +0.2
2.3nm,0.7s,baz=116,slow=6.9,SNR=4.9
MA2 Magadan 41.31 22 LR LR 19 19 21.3
comp=Z,33nm,18.7s,baz=294,slow=40
H11N1 WAKE ISLAND Hy 42.12 86 T T 19 44 58.3
baz=283,slow=75,SNR=129
H11N2 WAKE ISLAND Hy 42.12 86 T T 19 44 59.0
baz=283,slow=75,SNR=136
H11N3 WAKE ISLAND Hy 42.13 86 T T 19 45 01.0
baz=283,slow=75,SNR=170
H11S3 WAKE ISLAND Hy 42.23 88 T T 19 45 07.9
baz=284,slow=74,SNR=286
H11S1 WAKE ISLAND Hy 42.24 88 T T 19 45 08.4
baz=284,slow=74,SNR=191
H11S2 WAKE ISLAND Hy 42.25 88 T T 19 45 09.1
baz=284,slow=74,SNR=162
WRA Warramunga Arr 45.09 163 P P 19 00 25.3 -1.8
1.8nm,0.6s,baz=345,slow=8.7,SNR=6.4
ASAR Alice Springs 48.54 165 P P 19 00 52.9 -1.3
1.3nm,0.9s,baz=338,slow=6.7,SNR=7.0
STKA Stephens Creek 58.44 160 P P 19 02 06.0 -0.7
1.4nm,0.7s,baz=350,slow=6.6,SNR=5.2
KVAR Kislovodsk Arr 66.22 309 LR LR 19 33 32.7
comp=Z,97nm,20.2s,baz=250,slow=37
ILAR Eielson Array 69.48 27 P P 19 03 18.9 -0.1
0.4nm,0.6s,baz=273,slow=7.1,SNR=5.9
FINES FINESS Array B 72.09 330 P P 19 03 34.9 0.0
2.4nm,0.9s,baz=132,slow=29,SNR=2.5
INK Inuvik 73.55 22 P P 19 03 43.4 0.0
2.0nm,0.7s,baz=231,slow=6.5,SNR=2.5
BRTR Keskin Array B 73.80 307 P P 19 03 47.9 +2.2
0.9nm,0.8s,baz=90,slow=4.9,SNR=5.9
YKA Yellowknife Ar 83.29 23 P P 19 04 36.7 -0.7
0.9nm,0.7s,baz=317,slow=4.2,SNR=3.7
GERES GERESS Array B 83.49 321 P P 19 04 37.7 -1.2
0.7nm,0.8s,baz=28,slow=6.0,SNR=5.4

BJI ***17*** *19:05:12.9, 39.°61N×117.°56E, h5km, mb3.9/4, ML4.3/23, Ms4.0/3, Ms7 3.8/3*
IDC ***17*** *19:05:13.8±0.7, 40.°21N×117.°95E, h0km, mb3.7/10, mb1 3.8/13, mb1mx3.6/74, mbtmp3.7/13, ML3.8/3, Error ellipse: s-maj=23.5km s-min=13.8km az=45.0*
ISC 17 19:05:13.0±0.5, 39.°65N±0.°04×117.°57E±0.°03, h10km, n29, σ3°21/36, mb3.7/10, 1C, Northeastern China

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res	ISC
							h m s		ISC
BJI	**Beijing**	**1.14**	**291**	Pg	**Pb**		**19 05 33.3**	**-1.5**	
BJI				Sg	**Sb**		**19 05 48.6**	**-1.1**	
BJI				smax	smax				
	comp=N,5μm,0.4s								
BJI				smax	smax				
	comp=E,6μm,0.8s								
DL2	**Dalian**	**3.24**	**102**	Pn	**Pn**		**19 06 04.0**	**+0.2**	
DL2				Pg	**Pg**		**19 06 14.1**	**-0.9**	
DL2				Sn	**Sn**		**19 06 45.3**	**+2.9**	
DL2				Sg	**Sg**		**19 06 55.4**	**-1.6**	
DL2				smax	smax				
	comp=N,550nm,0.7s								
DL2				smax	smax				
	comp=E,460nm,0.6s								
TIA	**Tai'an**	**3.45**	**186**	Pn	**Pn**		**19 06 05.5**	**-1.3**	
TIA				Pg	**Pb**		**19 06 15.3**	**+1.1**	
TIA				Sn	**Sn**		**19 06 43.1**	**-4.6**	
TIA				Sg	**Sg**		**19 06 59.8**	**-4.0**	
TIA				smax	smax				
	comp=N,130nm,0.6s								
TIA				smax	smax				
	comp=E,200nm,0.7s								
TIY	**Taiyuan**	**4.46**	**246**	*e*Pg	**Pb**		**19 06 29.4**	**-2.0**	
TIY				Sg	**Sb**		**19 07 26.9**	**+1.6**	
TIY				smax	smax				
	comp=N,540nm,0.6s								
TIY				smax	smax				
	comp=E,450nm,0.6s								
HHC	**Hu-ho-hao-te**	**4.75**	**287**	*e*Pg	**Pb**		**19 06 38.8**	**+2.4**	
HHC				Sg	**Sg**		**19 07 42.0**	**-3.5**	
HHC				smax	smax				
	comp=N,360nm,0.6s								
HHC				smax	smax				
	comp=E,390nm,0.6s								
SNY	**Shenyang**	**5.06**	**63**	⇑Pg	**Pb**		**19 06 45.5**	**+3.9**	
SNY				Sg	**Sg**		**19 07 53.1**	**-2.3**	
SNY				smax	smax				
	comp=N,570nm,0.6s								
SNY				smax	smax				
	comp=E,340nm,0.9s								
BTO	**Baotou**	**5.86**	**282**	*e*Pg	**Pb**		**19 06 57.6**	**+2.2**	
BTO				Sg	**Sb**		**19 08 12.3**	**+6.6**	
BTO				smax	smax				
	comp=N,34nm,0.6s								
BTO				smax	smax				
	comp=E,18nm,0.7s								
CN2	**Changchun**	**7.21**	**52**	*e*Pg	Pg		19 07 25.4	-5.6	
CN2				*e*Sg	**Sg**		**19 08 57.9**	**-6.4**	
CN2				smax	smax				
	comp=N,290nm,0.8s								
CN2				smax	smax				
	comp=E,340nm,0.8s								
KSRS	**Korea Array**	**8.40**	**102**	Pn	**Pn**		**19 07 14.6**	**-0.3**	
	4.5nm,0.3s,baz=288,slow=14,SNR=97								
KSRS				Sn	**Sn**		**19 08 43.4**	**-6.3**	
	2.0nm,0.3s,baz=285,slow=24,SNR=4.4								
KSRS				Lg	Lg		19 09 36.1		
	1.2nm,0.3s,baz=297,slow=30,SNR=3.5								
XAN	**Xi'an**	**8.91**	**234**	P	**Pn**		**19 07 20.9**	**-0.9**	
XAN				smax	smax				
	comp=N,29nm,0.9s								
XAN				smax	smax				
	comp=E,29nm,1.2s								
XAN				LR	LR				
	comp=Z,530nm,9.4s								
WHN	**Wuhan**	**9.46**	**197**	*e*P	Pn		19 07 33.8	+4.5	
WHN				S	**Sn**		**19 09 21.5**	**+5.9**	
WHN				LR	LR				
	comp=N,750nm,3.3s								
WHN				LR	LR				
	comp=E,970nm,3.4s								
SONM	**Songino Array**	**11.49**	**319**	Pn	**Pn**		**19 07 54.4**	**-2.9**	
	0.6nm,0.3s,baz=122,slow=11,SNR=2.4								
SONM				Lg	Lg		19 11 10.2		
	1.0nm,0.3s,baz=120,slow=23,SNR=4.3								
USRK	**Ussuriysk Ar.**	**11.66**	**62**	Lg	Lg		19 11 21.4		
	0.5nm,0.3s,baz=243,slow=29,SNR=10								
JNU	**Nakatsue**	**12.54**	**117**	Pn	**Pn**		**19 08 11.6**	**+0.1**	
	0.2nm,0.3s,baz=45,slow=20,SNR=2.5								
GTA	**Gaotai**	**13.71**	**275**	*e*P	P		19 08 43.3	+6.9	
GTA				pP	Pn		19 08 47.6	+20	
GTA				sP			19 08 50.0		
GTA				S	**S**		**19 11 20.3**	**-2.5**	
GTA				pmax	pmax				
	comp=Z,2.0nm,1.3s								
GTA				pmax	pmax				
	comp=Z,140nm,5.4s								
GTA				LR	LR				
	comp=N,200nm,13.7s								
GTA				LR	LR				
	comp=E,190nm,13.6s								
GTA				LR	LR				
	comp=Z,210nm,15.2s								
KLR	**Kul'dur**	**13.92**	**42**	Pn	**Pn**		**19 08 31.5**	**+1.2**	
	comp=Z,0.0nm,0.3s,baz=240,slow=16,SNR=3.0								
KLR				Lg	Lg		19 12 33.6		
	comp=Z,0.0nm,0.3s,baz=318,slow=21,SNR=11								
TLY	**Talaya**	**15.44**	**326**	Lg	Lg		19 13 19.5		
	comp=Z,0.0nm,0.3s,baz=222,slow=19,SNR=4.5								
MJAR	**Matsushiro Arr**	**16.54**	**94**	Pn	**P**		**19 09 10.9**	**+3.2**	
	comp=Z,0.1nm,0.3s,baz=289,slow=9.2,SNR=9.5								
WMQ	**Urumqi**	**22.62**	**290**	P	**P**		**19 10 17.6**	**+3.7**	
MKAR	**Makanchi Array**	**26.51**	**297**	P	**P**		**19 10 54.5**	**+3.8**	
	comp=Z,0.2nm,0.7s,baz=97,slow=11,SNR=3.1								
CMAR	**Chiang Mai Arr**	**26.56**	**223**	P	P		19 10 58.5	+7.3	
	comp=Z,0.9nm,0.7s,baz=26,slow=9.0,SNR=4.5								
KURBB	**Kurchatov Arra**	**29.32**	**305**	P	**P**		**19 11 16.3**	**+0.7**	
	comp=Z,0.5nm,0.7s,baz=95,slow=10.0,SNR=4.6								
BVAR	**Borovoye Array**	**34.57**	**309**	P	**P**		**19 12 04.2**	**+2.5**	
	comp=Z,0.4nm,0.5s,baz=111,slow=7.3,SNR=4.8								
SPITS	**Spitsbergen Ar**	**53.78**	**345**	P	**P**		**19 14 33.9**	**-1.2**	
	comp=Z,1.1nm,0.5s,baz=106,slow=9.1,SNR=3.8								
FINES	**FINESS Array B**	**56.79**	**325**	P	**P**		**19 14 55.4**	**-1.6**	
	comp=Z,2.6nm,0.8s,baz=90,slow=7.2,SNR=2.9								
ILAR	**Eielson Array**	**57.16**	**31**	P	**P**		**19 14 58.0**	**-1.6**	
	comp=Z,0.4nm,0.7s,baz=285,slow=8.1,SNR=6.1								
WRA	**Warramunga Arr**	**61.32**	**162**	P	P		19 15 34.6	+5.9	
	comp=Z,1.0nm,0.8s,baz=346,slow=7.0,SNR=7.4								
BRTR	**Keskin Array B**	**62.13**	**300**	P	**P**		**19 15 37.2**	**+2.8**	
	comp=Z,0.6nm,0.8s,baz=88,slow=5.6,SNR=3.6								
ASAR	**Alice Springs**	**64.81**	**163**	P	P		19 15 57.0	+5.0	
	comp=Z,0.6nm,0.9s,baz=328,slow=4.6,SNR=5.0								

IDC ***17*** *19:06:05.6±1.0, 12.°35N×143.°23E, h0km, mb3.3/6, mb1 3.5/7, mb1mx3.4/70, mbtmp3.3/7, ML3.1/1, Error ellipse: s-maj=28.9km s-min=19.5km az=116.0*
ISCJB ***17*** *19:06:07.9±0.8, 12.°3N±0.°1×143.°2E±0.°1, h28km, mb3.2/6, Error ellipse: s-maj=22.9km s-min=10.2km az=140.0*
ISC 17 19:06:09.9±1.0, 12.°3N±0.°2×143.°3E±0.°2, h28km, n7, σ0°44/8, mb3.3/6, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	ID	Time	Res	ISC
								h m s		ISC
GUMO	**Guam**	**2.01**	**51**	Pn	**Pn**			**19 06 42.2**	**+0.2**	
	7.1nm,0.3s,baz=337,slow=22,SNR=12									
GUMO				Sn	**Sn**			**19 07 06.0**	**-0.2**	
	11nm,0.3s,baz=126,slow=22,SNR=3.6									
WRA	**Warramunga Arr**	**33.24**	**195**	P	**P**			**19 12 44.7**	**-0.2**	
	0.5nm,0.8s,baz=20,slow=9.5,SNR=3.9									
ASAR	**Alice Springs**	**36.92**	**194**	P	**P**			**19 13 16.6**	**+0.1**	
	0.2nm,0.6s,baz=23,slow=10,SNR=4.5									

MKAR Makanchi Array 61.32 317 P P 19 16 23.3 +0.2
0.2nm,0.8s,baz=111,slow=6.3,SNR=2.5
KURBB Kurchatov Arra 64.58 320 P P 19 16 43.8 -0.9
0.3nm,0.6s,baz=108,slow=6.5,SNR=3.4
BVAR Borovoye Array 69.95 322 P P 19 17 18.5 -0.2
0.1nm,0.4s,baz=98,slow=6.0,SNR=2.5
ILAR Eielson Array 70.38 25 P P 19 17 21.1 0.0
0.1nm,0.5s,baz=246,slow=5.9,SNR=3.0

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*ISCJB **17** 19:11:44.2±0.6, 27°.96N±0°.08×139°.5E±0°.1, h395km, mb3.3/8, Error ellipse: s-maj=17.5km s-min=10.5km az=161.4*
*IDC **17** 19:11:45.4±0.9, 28°.06N×139°.73E, h395km±13km, mb3.1/8, mb1 3.2/10, mb1mx2.8/78, mbtmp3.9/10, Error ellipse: s-maj=35.2km s-min=11.5km az=75.0*
ISC 17 19:11:45.5±0.8, **28°.1N**±0°.1×**139°.7E**±0°.2, **h395**km, **n10, σ0s61/12, mb3.3/8, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**2.44**	**113**	P			**Pn**	**19 12 44.6**	**+0.6**
	40nm,0.3s,baz=300,slow=20,SNR=36								
JCJ				S			**S**	**19 13 30.4**	**-0.8**
	27nm,0.3s,baz=287,slow=19,SNR=12								
JHJ	**Hachijo jima 2**	**5.04**	**1**	P			**Pn**	**19 13 07.3**	**-0.3**
	11nm,0.3s,baz=45,slow=22,SNR=13								
JHJ				S			**S**	**19 14 14.5**	**+0.2**
	5.4nm,0.3s,baz=274,slow=14,SNR=2.4								
WRA	**Warramunga Arr**	**48.00**	**187**	P			**P**	**19 19 46.5**	**-0.2**
	0.4nm,0.5s,baz=4.8,slow=7.6,SNR=9.1								
KURBB	**Kurchatov Arra**	**50.76**	**314**	P			**P**	**19 20 07.6**	**+0.7**
	0.5nm,0.8s,baz=88,slow=7.6,SNR=4.6								
ASAR	**Alice Springs**	**51.73**	**187**	P			**P**	**19 20 13.9**	**-0.4**
	0.2nm,0.5s,baz=356,slow=5.0,SNR=6.1								
BVAR	**Borovoye Array**	**55.81**	**317**	P			**P**	**19 20 43.9**	**+0.7**
	1.0nm,0.5s,baz=95,slow=8.0,SNR=12								
ARCES	**ARCESS Array B**	**71.89**	**340**	P			**P**	**19 22 26.3**	**-0.1**
	1.4nm,0.7s,baz=64,slow=8.7,SNR=5.2								
FINES	**FINESS Array B**	**76.08**	**333**	P			**P**	**19 22 50.3**	**-0.2**
	0.7nm,0.3s,baz=75,slow=4.9,SNR=12								
HFS	**Hagfors**	**81.64**	**336**	P			**P**	**19 23 19.5**	**-0.9**
	2.4nm,1.0s,baz=43,slow=4.7,SNR=7.6								
TXAR	**Lajitas Array**	**96.80**	**52**	P			**P**	**19 24 33.3**	**+0.5**
	0.1nm,0.6s,baz=260,slow=1.6,SNR=2.5								

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*BJI **17** 19:20:36.5, 40°.00N×21°.01E, h14km, mb4.5/23, mB5.0/12, Ms4.7/4, Ms7 4.6/1*
*IDC **17** 19:20:40.1±0.6, 40°.45N×21°.57E, h0km, mb4.2/21, mb1 4.2/28, mb1mx4.1/71, mbtmp4.1/28, ML3.7/7, MS3.7/20, Ms1 3.7/20, ms1mx3.4/67, Error ellipse: s-maj=10.2km s-min=9.6km az=78.0*
*PRU **17** 19:20:41.6, 40°.52N×21°.90E, h0km, M4.6*
*TIR **17** 19:20:42.0, 40°.49N×21°.62E, h6km, Md4.1/10*
*SKO **17** 19:20:42.9, 40°.47N×21°.55E, h14km, M4.0, ML4.4*
*ATH **17** 19:20:42.7, 40°.54N×21°.64E, h24km, ML4.2/34, Error ellipse: s-maj=0.9km s-min=0.6km az=329.0*
*MOS **17** 19:20:42.4±1.0, 40°.52N×21°.55E, h21km, mb4.5/13, Error ellipse: s-maj=4.8km s-min=3.1km az=90.0*
*NEIC **17** 19:20:42.7±0.0, 40°.54N×21°.64E, h24km, mb4.6/3, ML4.2(ATH), ML4.3(THE), After ATH.*
NEIC Felt at Ohrid, Macedonia.
*CSEM **17** 19:20:43.3±0.1, 40°.54N×21°.64E, h10km, mb4.4/17, Error ellipse: s-maj=1.8km s-min=1.4km az=59.0*
*THE **17** 19:20:43.5, 40°.55N×21°.62E, h5km±1km, ML4.2/16, Error ellipse: s-maj=1.0km s-min=0.5km az=248.0*
*PDG **17** 19:20:43.1±1.0, 40°.55N×21°.61E, h18km±1km, MD4.3/3, ML4.2/11, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*
*BEO **17** 19:20:44.1±1.4, 40°.63N×21°.57E, h4km±6km*
*DDA **17** 19:21:21.0, 40°.53N×21°.59E, h28km, Ml4.4*
ISC 17 19:20:43.1±0.8, **40°.53N**±0°.01×**21°.61E**±0°.01, **h14**km±5km, **n763, σ1s35/940, mb4.3**/42, **MS3.9**/18, **72C-60D, Greece**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KZN	**Kozani**	**0.26**	**151**	P			**Pb**	**19 20 48.8**	**-0.6**
KZN				S			**Sb**	**19 20 54.6**	**+0.8**
KZN				AML			AML	19 20 54.9	
KZN				AML			AML	19 20 55.2	
KZN	**Kozani**	**0.26**	**151**	P			**Pb**	**19 20 48.9**	**-0.6**
KZN				S			**Sb**	**19 20 54.0**	**+0.2**
KZN	**Kozani**	**0.26**	**151**	P			**Pb**	**19 20 48.9**	**-0.6**
KZN				S			**Sb**	**19 20 53.4**	**-0.4**
KZN	**Kozani**	**0.26**	**151**	P			**Pb**	**19 20 48.9**	**-0.6**
KZN				S			**Sb**	**19 20 54.0**	**+0.2**
KZN	**Kozani**	**0.26**	**151**	P			**Pb**	**19 20 49.0**	**-0.5**
KZN				S			**Sb**	**19 20 53.4**	**-0.4**
FNA	**Florina**	**0.31**	**325**	PG			**Pb**	**19 20 50.9**	**+0.5**
FNA	**Florina**	**0.31**	**325**	P			**Pg**	**19 20 49.5**	**0.0**
FNA				S			**Sg**	**19 20 54.2**	**+0.3**
FNA				AML			AML	19 20 55.6	
FNA				AML			AML	19 20 56.3	
FNA	**Florina**	**0.31**	**325**	*e*Pg			**Pb**	**19 20 49.7**	**-0.7**
FNA				S			**Sb**	**19 20 54.8**	**-0.5**
FNA	**Florina**	**0.31**	**325**	P			**Pb**	**19 20 49.6**	**-0.7**
FNA				S			**Sg**	**19 20 53.9**	**0.0**
FNA	**Florina**	**0.31**	**325**	*e*P			**Pb**	**19 20 49.7**	**-0.7**
FNA				S			**Sb**	**19 20 54.8**	**-0.5**
FNA	**Florina**	**0.31**	**325**	P			**Pb**	**19 20 49.7**	**-0.7**
FNA				S			**Sb**	**19 20 54.8**	**-0.5**
KTI	**Kastanea**	**0.41**	**109**	P			**Pb**	**19 20 51.5**	**-0.7**
KTI	**Kastanea**	**0.41**	**109**	P			**Pb**	**19 20 51.5**	**-0.7**
NEST	**Nestorio**	**0.44**	**255**	P			**Pg**	**19 20 51.6**	**-0.3**
NEST				S			**Sb**	**19 20 59.0**	**-0.1**
NEST				AML			AML	19 21 00.8	
	comp=E,81067μm,0.3s								
NEST				AML			AML	19 21 04.5	
	comp=N,68590μm,0.4s								
NEST	**Nestorio**	**0.44**	**255**	P			**Pg**	**19 20 51.8**	**-0.1**
NEST				S			**Sb**	**19 20 58.6**	**-0.6**
NEST	**Nestorio**	**0.44**	**255**	P			**Pb**	**19 20 52.0**	**-0.7**
NEST				S			**Sb**	**19 20 59.2**	**0.0**
PENT	**Pentalofos**	**0.49**	**227**	P			**Pg**	**19 20 52.2**	**-0.6**
PENT				S			**Sb**	**19 21 00.4**	**-0.1**
PENT				AML			AML	19 21 05.8	
	comp=E,58572μm,0.3s								
PENT				AML			AML	19 21 07.6	
	comp=N,63523μm,0.6s								
PENT	**Pentalofos**	**0.49**	**227**	P			**Pg**	**19 20 52.6**	**-0.2**
PENT				S			**Sb**	**19 21 00.2**	**-0.4**
PENT	**Pentalofos**	**0.49**	**227**	P			**Pg**	**19 20 52.7**	**-0.1**
PENT				S			**Sb**	**19 21 00.6**	**0.0**
BIA	**Bitola**	**0.53**	**336**	P			**Pb**	**19 20 54.1**	**-0.2**
BIA	**Bitola**	**0.53**	**336**	P			**Pb**	**19 20 53.9**	**-0.3**
BIA				S			**Sb**	**19 21 01.6**	**-0.2**
BIA	**Bitola**	**0.53**	**336**	*i* Pg			**Pb**	**19 20 54.1**	**-0.2**
BIA				*i* Sg			**Sn**	**19 21 03.3**	**-1.8**
BIA				*e*Lg			Lg	19 21 03.7	
	comp=E,10μm,0.4s								
BIA				*e*Lg			Lg	19 21 03.8	
	comp=N,8μm,0.3s								
BIA	**Bitola**	**0.53**	**336**	P			**Pb**	**19 20 54.1**	**-0.2**
BIA				S			**Sb**	**19 21 01.6**	**-0.2**
KPRO	**Kipourio**	**0.60**	**198**	P			**Pg**	**19 20 54.8**	**-0.2**
KPRO				S			**Sb**	**19 21 04.7**	**+0.8**
KPRO				AML			AML	19 21 07.9	
	comp=N,81714μm,0.6s								
KPRO				AML			AML	19 21 10.7	
	comp=E,58073μm,0.4s								
KPRO	**Kipourio**	**0.60**	**198**	P			**Pg**	**19 20 54.4**	**-0.5**
KPRO				S			**Sb**	**19 21 04.7**	**+0.8**
KPRO	**Kipourio**	**0.60**	**198**	P			**Pb**	**19 20 54.9**	**-0.5**
KPRO				S			**Sb**	**19 21 04.4**	**+0.6**
KBN	**Korca**	**0.63**	**279**	P			**Pg**	**19 20 54.9**	**-0.5**
KBN	**Korca**	**0.63**	**279**	P			**Pg**	**19 20 55.0**	**-0.5**
KBN	**Korca**	**0.63**	**279**	*i* PN			**Pg**	**19 20 53.4**	**-2.0**
KBN				*i* SN			**Sb**	**19 21 05.2**	**+0.6**
KBN	**Korca**	**0.63**	**279**	P			**Pg**	**19 20 54.9**	**-0.5**
KBN	**Korca**	**0.63**	**279**	*i* Pn			**Pg**	**19 20 53.4**	**-2.0**
KBN	**Korca**	**0.63**	**279**	P			**Pg**	**19 20 55.0**	**-0.5**
KBN				*i* Sn			**Sb**	**19 21 05.2**	**+0.6**
GRG	**Griva**	**0.74**	**55**	PG			**Pg**	**19 20 57.1**	**-0.4**
GRG	**Griva**	**0.74**	**55**	P			**Pn**	**19 20 58.3**	**-0.8**
GRG				S			**Sb**	**19 21 07.2**	**-0.5**
GRG				AML			AML	19 21 12.2	
	comp=N,50602μm,0.6s								
GRG				AML			AML	19 21 13.6	
	comp=E,40637μm,0.6s								
GRG	**Griva**	**0.74**	**55**	P			**Pb**	**19 20 57.4**	**-0.3**
GRG				S			**Sg**	**19 21 06.8**	**-0.4**
GRG	**Griva**	**0.74**	**55**	P			**Pb**	**19 20 57.4**	**-0.3**
GRG	**Griva**	**0.74**	**55**	P			**Pb**	**19 20 57.4**	**-0.3**
GRG				S			**Sg**	**19 21 06.8**	**-0.4**
LIT	**Litokhoron**	**0.80**	**122**	P			**Pb**	**19 20 58.7**	**-0.1**
LIT				S			**Sg**	**19 21 08.4**	**-0.7**
LIT				AML			AML	19 21 13.9	
	comp=E,35221μm,0.5s								
LIT				AML			AML	19 21 16.9	
	comp=N,36038μm,0.6s								
LIT	**Litokhoron**	**0.80**	**122**	*e*Pg			**Pb**	**19 20 58.4**	**-0.4**
LIT				S			**Sn**	**19 21 11.0**	**-0.7**
LIT	**Litokhoron**	**0.80**	**122**	P			**Pg**	**19 20 57.9**	**-0.7**
LIT				S			**Sn**	**19 21 11.0**	**-0.7**
LIT	**Litokhoron**	**0.80**	**122**	*e*P			**Pb**	**19 20 58.4**	**-0.4**
LIT				S			**Sn**	**19 21 11.0**	**-0.7**
LIT	**Litokhoron**	**0.80**	**122**	P			**Pb**	**19 20 58.4**	**-0.4**
LIT				S			**Sg**	**19 21 08.8**	**-0.3**
OHR	**Ohrid**	**0.84**	**314**	‖ *i*Pg			**Pg**	**19 20 58.3**	**-1.1**
OHR				*i* Sg			**Sb**	**19 21 11.3**	**+0.6**
OHR				*e*Lg			Lg	19 21 15.7	
	comp=N,14μm,0.5s								
OHR				*e*Lg			Lg	19 21 15.9	
	comp=E,22μm,0.9s								
OHR	**Ohrid**	**0.84**	**314**	P			**Pg**	**19 20 59.1**	**-0.3**
OHR	**Ohrid**	**0.84**	**314**	P			**Pg**	**19 20 59.1**	**-0.3**
THL	**Klokotos Trika**	**1.01**	**162**	P			**Pb**	**19 21 01.1**	**-1.2**
THL				S			**Sn**	**19 21 17.6**	**+0.8**
THL				AML			AML	19 21 22.2	
	comp=N,23074μm,0.6s								
THL				AML			AML	19 21 26.2	
	comp=E,34164μm,0.8s								
THL	**Klokotos Trika**	**1.01**	**162**	P			**Pb**	**19 21 01.5**	**-0.9**
THL				S			**Sn**	**19 21 17.8**	**+0.9**
THL	**Klokotos Trika**	**1.01**	**162**	P			**Pb**	**19 21 01.7**	**-0.7**
THL				S			**Sn**	**19 21 17.0**	**+0.1**
THE	**Thessaloniki**	**1.04**	**84**	P			**Pn**	**19 21 03.5**	**+0.3**
THE				S			**Sn**	**19 21 17.0**	**-0.5**
THE				AML			AML	19 21 21.0	
	comp=E,10089μm,1.1s								
THE				AML			AML	19 21 21.7	
	comp=N,12566μm,0.6s								
THE	**Thessaloniki**	**1.04**	**84**	P			**Pb**	**19 21 02.6**	**-0.2**
THE				S			**Sn**	**19 21 18.2**	**+0.7**
THE	**Thessaloniki**	**1.04**	**84**	P			**Pb**	**19 21 02.6**	**-0.2**
THE				S			**Sn**	**19 21 18.2**	**+0.7**
THE	**Thessaloniki**	**1.04**	**84**	P			**Pb**	**19 21 02.6**	**-0.2**
THE				S			**Sn**	**19 21 18.2**	**+0.7**
THE	**Thessaloniki**	**1.04**	**84**	P			**Pb**	**19 21 02.6**	**-0.2**
THE				S			**Sg**	**19 21 16.7**	**0.0**
JAN	**Janina**	**1.05**	**214**	P			**Pn**	**19 21 03.2**	**-0.1**
JAN				S			**Sn**	**19 21 17.2**	**-0.6**
JAN				AML			AML	19 21 24.4	
	comp=N,14286μm,0.4s								
JAN				AML			AML	19 21 25.1	
	comp=E,10515μm,0.8s								
JAN	**Janina**	**1.05**	**214**	P			**Pg**	**19 21 02.9**	**-0.4**
JAN				S			**Sn**	**19 21 18.6**	**+0.8**
JAN	**Janina**	**1.05**	**214**	P			**Pg**	**19 21 02.9**	**-0.4**
JAN				S			**Sn**	**19 21 18.6**	**+0.8**
JAN	**Janina**	**1.05**	**214**	P			**Pg**	**19 21 02.9**	**-0.4**
JAN				S			**Sn**	**19 21 18.6**	**+0.8**
JAN	**Janina**	**1.05**	**214**	P			**Pn**	**19 21 03.2**	**-0.1**
JAN				S			**Sn**	**19 21 17.7**	**-0.1**
LRSO	**Larissa Observ**	**1.05**	**145**	P			**Pn**	**19 21 03.0**	**-0.3**
LRSO				S			**Sn**	**19 21 17.8**	**+0.1**
LRSO	**Larissa Observ**	**1.05**	**145**	P			**Pn**	**19 21 03.0**	**-0.3**
LRSO				S			**Sn**	**19 21 18.8**	**+1.1**
LRSO	**Larissa Observ**	**1.05**	**145**	P			**Pn**	**19 21 03.0**	**-0.3**
LRSO				S			**Sn**	**19 21 17.6**	**-0.1**
VAY	**Valandovo**	**1.08**	**42**	‖ *i*Pg			**Pg**	**19 21 04.2**	**+0.4**
VAY	**Valandovo**	**1.08**	**42**	P			**Pn**	**19 21 03.4**	**-0.3**
VAY	**Valandovo**	**1.08**	**42**	P			**Pn**	**19 21 03.4**	**-0.3**
VAY	**Valandovo**	**1.08**	**42**	*i* Pg			**Pn**	**19 21 03.5**	**-0.3**
VAY				*i* Sg			**Sn**	**19 21 19.3**	**+0.9**
VAY				*e*Lg			Lg	19 21 22.6	
	comp=E,4μm,0.6s								
VAY				*e*Lg			Lg	19 21 24.7	
	comp=N,7μm,0.8s								
VAY	**Valandovo**	**1.08**	**42**	P			**Pn**	**19 21 03.5**	**-0.3**
VAY	**Valandovo**	**1.08**	**42**	P			**Pn**	**19 21 03.4**	**-0.3**
VAY	**Valandovo**	**1.08**	**42**	‖ *i*Pg			**Pg**	**19 21 04.2**	**+0.4**
HORT	**Hortiatis**	**1.14**	**86**	PG			**Pb**	**19 21 03.8**	**-0.8**
HORT	**Hortiatis**	**1.14**	**86**	P			**Pg**	**19 21 04.8**	**-0.2**
HORT				S			**Sn**	**19 21 20.7**	**+0.6**
HORT				AML			AML	19 21 22.1	
	comp=N,18602μm,1.0s								
HORT				AML			AML	19 21 23.2	
	comp=E,17085μm,0.6s								
HORT	**Hortiatis**	**1.14**	**86**	P			**Pn**	**19 21 04.4**	**-0.3**
HORT				S			**Sn**	**19 21 20.7**	**+0.6**
HORT	**Hortiatis**	**1.14**	**86**	P			**Pn**	**19 21 04.4**	**-0.3**
HORT				S			**Sn**	**19 21 20.7**	**+0.6**
HORT	**Hortiatis**	**1.14**	**86**	P			**Pn**	**19 21 04.4**	**-0.3**
HORT				S			**Sn**	**19 21 20.1**	**0.0**
KNT	**Kendrikon**	**1.17**	**57**	P			**Pg**	**19 21 05.4**	**-0.1**
KNT				S			**Sb**	**19 21 19.2**	**-0.7**
KNT				AML			AML	19 21 24.8	
	comp=N,10181μm,0.4s								
KNT				AML			AML	19 21 25.2	
	comp=E,10213μm,0.6s								
KNT	**Kendrikon**	**1.17**	**57**	P			**Pg**	**19 21 05.0**	**-0.5**
KNT	**Kendrikon**	**1.17**	**57**	P			**Pg**	**19 21 05.0**	**-0.5**
KNT	**Kendrikon**	**1.17**	**57**	P			**Pg**	**19 21 05.0**	**-0.5**
KNT	**Kendrikon**	**1.17**	**57**	P			**Pg**	**19 21 05.0**	**-0.5**
KNT				S			**Sb**	**19 21 19.8**	**-0.1**
SOH	**Sokhos**	**1.36**	**77**	P			**Pg**	**19 21 08.4**	**-0.8**
SOH				S			**Sb**	**19 21 25.5**	**-0.1**
SOH				AML			AML	19 21 30.6	
	comp=E,18870μm,0.6s								
SOH				AML			AML	19 21 32.0	
	comp=N,13615μm,0.5s								
SOH	**Sokhos**	**1.36**	**77**	P			**Pb**	**19 21 08.3**	**-0.1**
SOH				S			**Sg**	**19 21 26.7**	**-0.3**
SOH	**Sokhos**	**1.36**	**77**	P			**Pb**	**19 21 08.3**	**-0.1**
SOH				S			**Sg**	**19 21 26.7**	**-0.3**
SOH	**Sokhos**	**1.36**	**77**	P			**Pb**	**19 21 08.3**	**-0.1**
SOH				S			**Sg**	**19 21 26.7**	**-0.3**
SOH	**Sokhos**	**1.36**	**77**	P			**Pb**	**19 21 08.2**	**-0.1**
SOH				S			**Sb**	**19 21 25.9**	**+0.3**
SGD	**Sagiada**	**1.40**	**229**	P			**Pb**	**19 21 08.8**	**0.0**
SGD	**Sagiada**	**1.40**	**229**	P			**Pg**	**19 21 09.2**	**-0.7**
SGD	**Sagiada**	**1.40**	**229**	P			**Pg**	**19 21 09.2**	**-0.7**
PLG	**Polygyros**	**1.41**	**96**	P			**Pb**	**19 21 08.5**	**-0.8**
PLG				S			**Sg**	**19 21 28.6**	**0.0**
PLG				AML			AML	19 21 29.7	
	comp=N,16170μm,0.7s								
PLG				AML			AML	19 21 30.0	
	comp=E,8354μm,0.5s								
PLG	**Polygyros**	**1.41**	**96**	P			**Pb**	**19 21 08.4**	**-0.8**
PLG	**Polygyros**	**1.41**	**96**	P			**Pb**	**19 21 08.4**	**-0.8**
PLG				S			**Sg**	**19 21 28.0**	**-0.6**
PLG	**Polygyros**	**1.41**	**96**	P			**Pb**	**19 21 08.4**	**-0.8**
PLG	**Polygyros**	**1.41**	**96**	P			**Pb**	**19 21 08.6**	**-0.6**
PLG				S			**Sg**	**19 21 28.0**	**-0.6**
SKO	**Skopje**	**1.45**	**355**	*e*Pg			**Pb**	**19 21 09.5**	**-0.3**
SKO	**Skopje**	**1.45**	**355**	P			**Pb**	**19 21 09.5**	**-0.3**
SKO	**Skopje**	**1.45**	**355**	P			**Pb**	**19 21 09.5**	**-0.3**
SKO				S			**Sg**	**19 21 29.4**	**-0.3**
SKO	**Skopje**	**1.45**	**355**	*i* Pn			**Pb**	**19 21 09.6**	**-0.3**
SKO	**Skopje**	**1.45**	**355**	P			**Pb**	**19 21 09.5**	**-0.3**
SKO				S			**Sg**	**19 21 29.4**	**-0.3**
DSL	**Palaion Diasel**	**1.45**	**196**	P			**Pg**	**19 21 11.3**	**+0.4**
DSL				AML			AML	19 21 35.3	
	comp=E,14159μm,0.5s								
DSL				AML			AML	19 21 36.6	
	comp=N,15162μm,0.7s								
DSL	**Palaion Diasel**	**1.45**	**196**	P			**Pg**	**19 21 10.4**	**-0.5**
DSL	**Palaion Diasel**	**1.45**	**196**	P			**Pg**	**19 21 10.4**	**-0.5**
DSL	**Palaion Diasel**	**1.45**	**196**	P			**Pg**	**19 21 10.4**	**-0.5**
PHP	**Peshkopia**	**1.45**	**323**	P			**Pb**	**19 21 09.3**	**-0.6**
PHP	**Peshkopia**	**1.45**	**323**	P			**Pb**	**19 21 09.3**	**-0.6**
PHP	**Peshkopia**	**1.45**	**323**	*i* PN			**Pb**	**19 21 09.7**	**-0.2**
PHP				*i* SN			**Sg**	**19 21 30.4**	**+0.6**
PHP	**Peshkopia**	**1.45**	**323**	P			**Pb**	**19 21 09.3**	**-0.6**
PHP	**Peshkopia**	**1.45**	**323**	P			**Pb**	**19 21 09.3**	**-0.6**
PHP	**Peshkopia**	**1.45**	**323**	*i* Pn			**Pb**	**19 21 09.7**	**-0.2**
PHP				*i* Sn			**Sg**	**19 21 30.4**	**+0.6**
FYTO	**Fytoko, Volos**	**1.52**	**137**	P			**Pn**	**19 21 09.3**	**-0.5**
FYTO				S			**Sb**	**19 21 30.0**	**-0.1**
FYTO				AML			AML	19 21 38.8	
	comp=N,13548μm,0.9s								
FYTO				AML			AML	19 21 38.8	
	comp=E,16657μm,0.9s								
FYTO	**Fytoko, Volos**	**1.52**	**137**	P			**Pb**	**19 21 10.1**	**-0.9**
FYTO	**Fytoko, Volos**	**1.52**	**137**	P			**Pb**	**19 21 10.1**	**-0.9**
FYTO				S			**Sg**	**19 21 33.0**	**+1.0**
FYTO	**Fytoko, Volos**	**1.52**	**137**	P			**Pb**	**19 21 10.1**	**-0.9**
FYTO				S			**Sb**	**19 21 30.3**	**+0.2**
TIR	**Tirane**	**1.55**	**302**	*e*Pn			**Pg**	**19 21 12.1**	**-0.8**
TIR	**Tirane**	**1.55**	**302**	‖ *i*P			**Pg**	**19 21 12.2**	**-0.7**
TIR	**Tirane**	**1.55**	**302**	*e*Pn			**Pb**	**19 21 11.8**	**+0.3**
TIR	**Tirane**	**1.55**	**302**	P			**Pb**	**19 21 11.8**	**+0.3**
TIR	**Tirane**	**1.55**	**302**	P			**Pb**	**19 21 11.8**	**+0.3**
TIR	**Tirane**	**1.55**	**302**	*e*Pn			**Pg**	**19 21 12.1**	**-0.8**
AGG	**Agios Georgios**	**1.61**	**159**	PG			**Pn**	**19 21 11.4**	**+0.4**
AGG	**Agios Georgios**	**1.61**	**159**	P			**Pn**	**19 21 11.2**	**+0.2**
AGG				S			**Sg**	**19 21 33.8**	**-1.0**
AGG				AML			AML	19 21 42.9	
	comp=N,32616μm,1.0s								
AGG				AML			AML	19 21 50.4	
	comp=E,36602μm,1.0s								
AGG	**Agios Georgios**	**1.61**	**159**	*e*Pn			**Pb**	**19 21 11.8**	**-0.7**
AGG	**Agios Georgios**	**1.61**	**159**	P			**Pb**	**19 21 11.6**	**-0.9**
AGG	**Agios Georgios**	**1.61**	**159**	*e*P			**Pb**	**19 21 11.8**	**-0.7**
AGG	**Agios Georgios**	**1.61**	**159**	*e*Pn			**Pb**	**19 21 11.8**	**-0.7**
AGG				S			**Sg**	**19 21 33.4**	**-1.4**
KEK	**Kerkira**	**1.61**	**240**	P			**Pg**	**19 21 13.4**	**-0.6**
KEK				S			**Sg**	**19 21 34.6**	**-0.3**
KEK				AML			AML	19 21 42.2	
	comp=N,8620μm,1.0s								
KEK				AML			AML	19 21 44.7	
	comp=E,5578μm,0.5s								
KEK	**Kerkira**	**1.61**	**240**	P			**Pb**	**19 21 12.8**	**+0.3**
KEK				S			**Sg**	**19 21 34.1**	**-0.8**
SRS	**Serrai**	**1.62**	**68**	*e*Pn			**Pn**	**19 21 11.1**	**-0.1**
SRS				*e*Sn			**Sg**	**19 21 35.7**	**+0.6**
SRS	**Serrai**	**1.62**	**68**	P			**Pn**	**19 21 10.8**	**-0.4**
SRS				S			**Sb**	**19 21 33.1**	**+0.1**
SRS				AML			AML	19 21 35.9	
	comp=N,5168μm,1.0s								
SRS				AML			AML	19 21 42.8	
	comp=E,3301μm,1.0s								
SRS	**Serrai**	**1.62**	**68**	P			**Pn**	**19 21 11.1**	**-0.1**
SRS	**Serrai**	**1.62**	**68**	P			**Pn**	**19 21 11.1**	**-0.1**
SRS				S			**Sb**	**19 21 32.9**	**0.0**
SRS	**Serrai**	**1.62**	**68**	P			**Pn**	**19 21 11.1**	**-0.1**
SRS	**Serrai**	**1.62**	**68**	P			**Pn**	**19 21 11.1**	**-0.1**
SRS				S			**Sb**	**19 21 32.7**	**-0.2**
SRS				*e*Sn			**Sg**	**19 21 35.7**	**+0.6**
baz=1.0									
EVR	**Evrytania**	**1.62**	**174**	P			**Pb**	**19 21 11.8**	**-1.0**
EVR				S			**Sn**	**19 21 31.9**	**-0.1**
EVR				AML			AML	19 21 42.0	
	comp=N,13359μm,0.6s								
EVR				AML			AML	19 21 44.1	
	comp=E,7548μm,0.6s								
EVR	**Evrytania**	**1.62**	**174**	P			**Pb**	**19 21 11.9**	**-0.9**
EVR	**Evrytania**	**1.62**	**174**	P			**Pb**	**19 21 11.9**	**-0.9**
EVR	**Evrytania**	**1.62**	**174**	P			**Pb**	**19 21 11.9**	**-0.9**
EVR				S			**Sb**	**19 21 32.6**	**-0.5**
XOR	**Xorichti**	**1.69**	**133**	P			**Pn**	**19 21 11.4**	**-0.7**
XOR				AML			AML	19 21 46.8	
	comp=E,10096μm,1.5s								
XOR				AML			AML	19 21 47.9	
	comp=N,11840μm,0.9s								
XOR	**Xorichti**	**1.69**	**133**	P			**Pn**	**19 21 12.3**	**+0.2**
XOR	**Xorichti**	**1.69**	**133**	P			**Pn**	**19 21 12.3**	**+0.2**
XOR	**Xorichti**	**1.69**	**133**	P			**Pn**	**19 21 12.3**	**+0.2**
PAIG	**Paliouri**	**1.70**	**110**	P			**Pn**	**19 21 11.8**	**-0.4**
PAIG				S			**Sn**	**19 21 33.1**	**-0.6**
PAIG				AML			AML	19 21 43.4	
	comp=N,5434μm,0.7s								
PAIG				AML			A

BCI	Bajram Curri	2.17 328	*i* Pn	Pb	19 21 20.3	-1.8
TRIZ	Trizonia	2.19 170	P	Pn	19 21 19.9	+0.9
TRIZ	Trizonia	2.19 170	P	Pn	19 21 19.9	+0.9
TRIZ	Trizonia	2.19 170	P	Pn	19 21 19.9	+0.9
FSK	Fiskardo	2.22 202	P	Pb	19 21 21.2	-1.8
DSF	Desfina	2.23 161	P	Pn	19 21 19.6	0.0
DSF	Desfina	2.23 161	P	Pn	19 21 20.3	+0.6
DSF	Desfina	2.23 161	P	Pn	19 21 20.3	+0.6
DSF	Desfina	2.23 161	P	Pn	19 21 20.3	+0.6
UPR	University Cam	2.25 176	P	Pn	19 21 19.9	+0.1
UPR	University Cam	2.25 176	P	Pn	19 21 20.4	+0.6
ULC	Ulcinj	2.29 310 ⇑	*i*Pn	Pn	19 21 21.3	+0.9
ULC			*e*Sn	Sb	19 21 50.2	-2.0
ULC	Ulcinj	2.29 310 ⇑	*i*Pn	Pn	19 21 21.3	+0.9
ULC			*e*Sn	Sb	19 21 50.2	-2.0
BARS	Barje	2.29 4 ⇑	*i*Pg	Pn	19 21 21.2	+0.9
BARS	Barje	2.29 4 ⇑	*i*Pn	Pn	19 21 21.3	+0.9
BARS	Barje	2.29 4 ⇑	*i*Pn	Pn	19 21 21.3	+0.9
LAKA	Lakka	2.31 173	P	Pb	19 21 22.3	-2.1
LAKA	Lakka	2.31 173	P	Pn	19 21 21.9	+1.3
LAKA	Lakka	2.31 173	P	Pn	19 21 21.9	+1.3
LAKA	Lakka	2.31 173	P	Pn	19 21 21.9	+1.3
VTS	Vitosha	2.38 30 ⇓	*i*Pn	Pn	19 21 23.1	+1.3
VTS	Vitosha	2.38 30 ⇑	*i*P	Pb	19 21 23.6	-2.2
VTS	Vitosha	2.38 30	*e*Pn	Pn	19 21 23.2	+1.3
VTS	Vitosha	2.38 30	P	Pn	19 21 23.2	+1.3
VTS	Vitosha	2.38 30	*e*P	Pn	19 21 23.2	+1.3
VTS	Vitosha	2.38 30 ⇓	*i*Pn	Pn	19 21 23.1	+1.3
PVY	Plav	2.40 330 ⇑	*i*Pn	Pn	19 21 23.4	+1.3
PVY			*e*Sn	Sb	19 21 53.4	-2.3
PVY	Plav	2.40 330 ⇑	*i*Pn	Pn	19 21 23.4	+1.3
PVY			*e*Sn	Sb	19 21 53.4	-2.3
DRME	Dracevica, Mon	2.46 313	*e*Pn	Pn	19 21 24.0	+1.2
DRME			*e*Sn	Sb	19 21 54.8	-2.4
DRME	Dracevica, Mon	2.46 313	*e*Pn	Pn	19 21 24.0	+1.2
DRME			*e*Sn	Sb	19 21 54.8	-2.4
RLS	Riolos of Patr	2.47 183	P	Pb	19 21 27.2	0.0
RLS	Riolos of Patr	2.47 183	P	Pb	19 21 25.6	-1.6
VLS	Valsamata	2.48 199	P	Pn	19 21 24.5	+1.4
VLS	Valsamata	2.48 199	P	Pn	19 21 24.4	+1.4
PROD	Prodromos	2.48 156	P	Pn	19 21 21.5	-1.5
PROD	Prodromos	2.48 156	P	Pn	19 21 22.8	-0.2
KFL	Anninata	2.50 195	P	Pb	19 21 25.3	-2.4
KFL	Anninata	2.50 195	P	Pn	19 21 24.9	+1.6
KLV	Kalavryta, Ach	2.52 170	P	Pn	19 21 24.0	+0.4
KLV	Kalavryta, Ach	2.52 170	P	Pn	19 21 24.5	+0.9
KLV	Kalavryta, Ach	2.52 170	P	Pn	19 21 24.5	+0.9
KLV	Kalavryta, Ach	2.52 170	P	Pn	19 21 24.3	+0.7
DRO	Drossia	2.58 178	P	Pb	19 21 28.4	-0.6
DRO	Drossia	2.58 178	P	Pb	19 21 27.0	-2.0
PDG	Podgorica	2.59 318	*e*Pn	Pb	19 21 26.9	-2.4
PDG	Podgorica	2.59 318	*i*P	Pb	19 21 26.7	-2.6
PDG	Podgorica	2.59 318	*i*Pn	Pn	19 21 25.9	+1.4
PDG	Podgorica	2.59 318	*i*P	Pb	19 21 26.7	-2.6
PDG			*e*Sn	Sn	19 21 57.8	+2.0
TTG	Podgorica	2.59 318	*i*Pn	Pn	19 21 25.9	+1.4
TTG			*e*Sn	Sn	19 21 57.8	+2.0
TTG	Podgorica	2.59 318	*e*Pn	Pn	19 21 26.6	+2.1
TTG	Podgorica	2.59 318	*e*P	Pn	19 21 26.6	+2.1
TTG	Podgorica	2.59 318	*e*P	Pn	19 21 26.6	+2.1
THAL	Thalero	2.62 161	P	Pn	19 21 25.8	+0.8
THAL	Thalero	2.62 161	P	Pn	19 21 25.9	+1.0
VTN	Vitineika	2.63 187	P	Pb	19 21 28.9	-1.1
VTN	Vitineika	2.63 187	P	Pb	19 21 27.6	-2.3
VIL2	Platees	2.65 150	P	Pn	19 21 26.2	+0.8
VIL2			AML	AML	19 22 21.8	
	comp=N,3930µm,0.9s					
VIL2			AML	AML	19 22 26.4	
	comp=E,2082µm,0.7s					
GUR	Goura	2.65 167	P	Pn	19 21 25.3	-0.2
GUR	Goura	2.65 167	P	Pn	19 21 25.9	+0.4
BEY	Berane	2.67 332 ⇓	*i*Pn	Pn	19 21 26.6	+0.9
BEY			*e*Sn	Sn	19 21 59.5	+1.7
IVA	Berane	2.67 332 ⇓	*i*Pn	Pn	19 21 26.6	+0.9
IVA			*e*Sn	Sn	19 21 59.5	+1.7
BUM	Brajici-Budva	2.70 312 ⇓	*i*Pn	Pn	19 21 27.8	+1.7
BUM			*e*Sn	Sn	19 22 00.4	+1.8
BUM	Brajici-Budva	2.70 312 ⇓	*i*Pn	Pn	19 21 27.8	+1.7
BUM			*e*Sn	Sn	19 22 00.4	+1.8
VILL	Villia	2.71 150	P	Pn	19 21 26.7	+0.5
SELS	Selova	2.71 352 ⇓	*i*Pn	Pn	19 21 26.6	+0.4
LTK	Loutraki	2.72 157	P	Pn	19 21 26.3	0.0
LTK			AML	AML	19 22 14.4	
	comp=N,3103µm,1.4s					
LTK			AML	AML	19 22 18.4	
	comp=E,2688µm,1.0s					
LTK	Loutraki	2.72 157	P	Pn	19 21 26.8	+0.5
KOME	Kolasin	2.80 327 ⇑	*i*Pn	Pn	19 21 29.2	+1.7
KOME			*e*Sn	Sn	19 22 02.5	+1.5
KOME	Kolasin	2.80 327 ⇑	*i*Pn	Pn	19 21 29.2	+1.7
KOME			*e*Sn	Sn	19 22 02.5	+1.5
LIA	Limnos Island	2.81 102	P	Pn	19 21 27.5	-0.1
LIA	Limnos Island	2.81 102	P	Pn	19 21 27.9	+0.4
PLD	Plovdiv	2.81 55	*e*PG	Pn	19 21 28.5	+0.9
PLD	Plovdiv	2.81 55	P	Pn	19 21 28.7	+1.1
PLD	Plovdiv	2.81 55	P	Pn	19 21 28.7	+1.1
ZAPS	Zavoj	2.85 15 ⇓	*i*Pn	Pn	19 21 29.8	+1.7
CEME	Cevo	2.85 316 ⇑	*i*Pn	Pn	19 21 29.4	+1.2
CEME			*e*Sn	Sn	19 22 04.1	+1.8
CEME	Cevo	2.85 316 ⇑	*i*Pn	Pn	19 21 29.4	+1.2
CEME			*e*Sn	Sn	19 22 04.1	+1.8
SJES	Sjenica	2.99 336 ⇓	*i*Pn	Pn	19 21 31.4	+1.3
NKME	Niksic	2.99 319 ⇑	*i*Pn	Pn	19 21 31.1	+1.0
NKME			*e*Sn	Sn	19 22 07.4	+1.7
NKME	Niksic	2.99 319 ⇑	*i*Pn	Pn	19 21 31.1	+1.0
NKME			*e*Sn	Sn	19 22 07.4	+1.7
AMT	Artemida-Makis	3.00 178	P	Pb	19 21 34.3	-1.8
AMT	Artemida-Makis	3.00 178	P	Pb	19 21 32.9	-3.3
NKY	Niksic	3.00 320	*e*Pn	Pn	19 21 31.5	+1.2
NKY			*e*Sn	Sn	19 22 07.8	+1.6
NKY	Niksic	3.00 320	P	Pn	19 21 31.2	+0.9
NKY			S	Sn	19 22 07.0	+0.8
NKY	Niksic	3.00 320	P	Pn	19 21 31.2	+0.9
NKY	Niksic	3.00 320	*e*Pn	Pn	19 21 31.5	+1.2
NKY			S	Sn	19 22 07.0	+0.8
HCY	Herceg Novi	3.02 310 ⇑	*i*Pn	Pn	19 21 31.6	+1.1
HCY			*e*Sn	Sn	19 22 08.0	+1.6
HCY	Herceg Novi	3.02 310 ⇑	*i*Pn	Pn	19 21 31.6	+1.1
HCY			*e*Sn	Sn	19 22 08.0	+1.6
ATH	Athens Observa	3.04 147	P	Pn	19 21 32.5	+1.8
ATH			AML	AML	19 22 30.8	
	comp=E,3103µm,0.9s					
ATH			AML	AML	19 22 39.9	
	comp=N,2150µm,1.6s					
ATH	Athens Observa	3.04 147	P	Pn	19 21 32.1	+1.5
PTL	Penteli	3.04 144	P	Pn	19 21 31.3	+0.6
PTL	Penteli	3.04 144	P	Pn	19 21 31.5	+0.8
DION	Dionisos Attik	3.04 143	P	Pn	19 21 30.9	+0.1
DION			AML	AML	19 22 29.8	
	comp=E,1784µm,2.0s					
DION			AML	AML	19 22 30.6	
	comp=N,2146µm,1.4s					
DION	Dionisos Attik	3.04 143	P	Pn	19 21 31.4	+0.6
TRIP	Tripoli	3.04 170	P	Pn	19 21 31.8	+0.9
TRIP			AML	AML	19 22 34.3	
	comp=N,1455µm,0.9s					
TRIP			AML	AML	19 22 38.3	
	comp=E,1667µm,0.8s					
TRIP	Tripoli	3.04 170	P	Pn	19 21 31.9	+1.1
RDO	Rodhopi	3.04 77	*e*PG	Pn	19 21 30.9	+0.1
RDO	Rodhopi	3.04 77	P	Pn	19 21 30.1	-0.7
RDO	Rodhopi	3.04 77	P	Pn	19 21 30.8	0.0
ATHU	Athens Univers	3.07 146	P	Pn	19 21 29.2	-1.9
ATHU	Athens Univers	3.07 146	P	Pn	19 21 30.7	-0.4
KDZ	Kurdzhali	3.09 68	*e*PG	Pn	19 21 30.8	-0.6
BOVS	Bovan	3.10 1 ⇓	*i*Pn	Pn	19 21 32.1	+0.5
BOVS	Bovan	3.10 1 ⇓	*i*Pn	Pn	19 21 32.1	+0.5
CGL1	Ceglie Messapi	3.15 274	*e*Pn	Pn	19 21 33.1	+0.9
VLY	Voula,Athens	3.17 147	P	Pn	19 21 32.7	+0.2
VLY	Voula,Athens	3.17 147	P	Pn	19 21 33.2	+0.7
VLX	Vlachokerasia	3.21 169	P	Pn	19 21 34.4	+1.2
VLX	Vlachokerasia	3.21 169	P	Pn	19 21 34.4	+1.2
IVAS	Ivanjica	3.23 341 ⇓	*i*Pn	Pn	19 21 34.0	+0.6
IVAS	Ivanjica	3.23 341 ⇓	*i*Pn	Pn	19 21 34.0	+0.6
FASA	Fasano	3.25 276	*e*Pn	Pn	19 21 34.3	+0.8
PLE	Pljevlja	3.25 330 ⇑	*i*Pn	Pn	19 21 35.0	+1.2
PLE			*e*Sn	Sn	19 22 13.5	+1.3
PLE	Pljevlja	3.25 330	P	Pn	19 21 34.9	+1.2
PLE			S	Sn	19 22 13.0	+0.8
PLE	Pljevlja	3.25 330	P	Pn	19 21 34.9	+1.2
PLE			S	Sn	19 22 13.0	+0.8
DID	Didima	3.28 157	P	Pn	19 21 34.2	+0.2
DID	Didima	3.28 157	P	Pn	19 21 34.7	+0.7
TAR1	Taranto	3.29 271	*e*Pn	Pn	19 21 33.5	-0.7
GADA	Gvkgeada	3.30 95	*e*PG	Pn	19 21 33.9	-0.3
BRY	Bratogost	3.30 317 ⇑	*i*Pn	Pn	19 21 35.4	+1.0
BRY			*e*Sn	Sn	19 22 14.8	+1.3
BRY	Bratogost	3.30 317 ⇑	*i*Pn	Pn	19 21 35.4	+1.0
BRY			*e*Sn	Sn	19 22 14.8	+1.3
ZAGS	Zajecar	3.31 8 ⇑	*i*Pn	Pn	19 21 35.4	+1.0
ZAGS	Zajecar	3.31 8 ⇑	*i*Pn	Pn	19 21 35.4	+1.0
UPM	Unac-Piva	3.35 324 ⇑	*i*Pn	Pn	19 21 36.3	+1.2
UPM			*e*Sn	Sn	19 22 15.6	+0.9
UPM	Unac-Piva	3.35 324 ⇑	*i*Pn	Pn	19 21 36.3	+1.2
UPM			*e*Sn	Sn	19 22 15.6	+0.9
ITM	Ithomi	3.35 176	*e*PG	Pn	19 21 36.6	+1.5
ITM	Ithomi	3.35 176	P	Pn	19 21 37.2	+2.1
ITM	Ithomi	3.35 176	*e*Pn	Pn	19 21 37.9	+2.8
ITM	Ithomi	3.35 176	P	Pn	19 21 36.8	+1.7
ITM	Ithomi	3.35 176	*e*Pn	Pn	19 21 37.9	+2.8
KRND	KRANIDI	3.37 159	P	Pn	19 21 35.7	+0.5
KRND	KRANIDI	3.37 159	P	Pn	19 21 36.1	+0.9
ALN	Alexandroupoli	3.39 82	*e*PG	Pn	19 21 35.9	+0.4
ALN	Alexandroupoli	3.39 82	P	Pn	19 21 34.8	-0.7
ALN	Alexandroupoli	3.39 82	*e*Pn	Pn	19 21 35.9	+0.4
ALN	Alexandroupoli	3.39 82	*e*P	Pn	19 21 35.9	+0.4
ALN	Alexandroupoli	3.39 82	*e*Pn	Pn	19 21 35.9	+0.4
MASS	Massafra	3.40 273	*e*Pn	Pn	19 21 36.4	+0.8
MASS			Sn	Sn	19 22 15.1	-0.6
GRUS	Gruza	3.42 349 ⇓	*i*Pn	Pn	19 21 37.0	+1.1
GRUS	Gruza	3.42 349 ⇓	*i*Pn	Pn	19 21 37.0	+1.1
ENEZ	Enez	3.47 85	*e*PG	Pn	19 21 36.9	+0.4
BOZC	Bozcaada	3.48 100	*i*P	Pn	19 21 37.2	+0.3
BOZC			*i*S	Sn	19 22 14.2	-3.4
SIGR	SIGRI	3.52 111	*e*PG	Pn	19 21 38.1	+0.7
SIGR	SIGRI	3.52 111	P	Pn	19 21 38.2	+0.9
SIGR	SIGRI	3.52 111	P	Pn	19 21 38.4	+1.0
PYL	PYLOS	3.63 178	P	Pn	19 21 40.4	+1.6
PYL	PYLOS	3.63 178	P	Pn	19 21 40.4	+1.6
BAI	Bari	3.63 281	*e*Pn	Pn	19 21 39.4	+0.6
EZN	Ezine	3.68 99	*e*PG	Pn	19 21 40.3	+0.8
EZN	Ezine	3.68 99	P	Pn	19 21 40.3	+0.8
EZN	Ezine	3.68 99	P	Pn	19 21 40.3	+0.8
BBLS	Lazići	3.71 335 ⇑	*i*Pn	Pn	19 21 41.6	+1.6
BBLS	Lazići	3.71 335 ⇑	*i*Pn	Pn	19 21 41.6	+1.6
GELI	Tayfur-Gelibol	3.72 90	*e*PG	Pn	19 21 40.4	+0.4
MATE	Matera	3.73 273 ⇑	*i*P	Pn	19 21 41.1	+0.9
MATE	Matera	3.73 273 ⇑	*i*P	Pn	19 21 41.1	+0.9
ERIK	Erikli-Kesan	3.74 86	*e*PG	Pn	19 21 40.7	+0.4
SVIS	Svilajnac	3.74 356	*e*Pn	Pn	19 21 40.5	+0.1
STON	Ston	3.75 310	*e*Pn	Pn	19 21 39.7	-0.7
STON	Ston	3.75 310	*i*Pn	Pn	19 21 39.5	-0.8
STON			Sn	Sn	19 22 21.9	-2.3
STON	Ston	3.75 310	*e*Pn	Pn	19 21 39.7	-0.7
STON			Sn	Sn	19 22 21.9	-2.3
SG1	Sgolgore (BA)	3.76 276	*e*Pn	Pn	19 21 41.0	+0.4
DIVS	Divibare	3.76 342 ⇑	*i*Pn	Pn	19 21 41.4	+0.7
DIVS	Divibare	3.76 342	*e*Pn	Pn	19 21 41.4	+0.7
DIVS	Divibare	3.76 342 ⇑	*i*Pn	Pn	19 21 41.4	+0.7
TRUS	Trudelj	3.80 347 ⇓	*i*Pn	Pn	19 21 41.9	+0.8
TRUS	Trudelj	3.80 347 ⇓	*i*Pn	Pn	19 21 41.9	+0.8
DYR	Agios Nikonas	3.81 171	P	Pn	19 21 44.1	+2.8
DYR	Agios Nikonas	3.81 171	P	Pn	19 21 43.4	+2.1
PRK	Paraskevi	3.81 108	P	Pn	19 21 43.2	+1.9
PRK	Paraskevi	3.81 108	P	Pn	19 21 42.8	+1.5
BAYC	CANAKKALE_Bayr	3.87 100	*i*P	Pn	19 21 42.2	+0.1
BAYC			*i*S	Sn	19 22 24.6	-2.8
BAYC	CANAKKALE_Bayr	3.87 100	P	Pn	19 21 42.2	+0.1
BAYC			S	Sn	19 22 24.5	-2.8
KESN	Edirne-Kesan	3.87 84	*i*P	Pn	19 21 42.1	-0.3
KESN			*i*S	Sn	19 22 25.3	-2.6
KESN	Edirne-Kesan	3.87 84	P	Pn	19 21 42.1	-0.3
KESN			S	Sn	19 22 25.3	-2.6
KUBS	Kucevo	3.88 1 ⇑	*i*Pn	Pn	19 21 41.0	-1.3
KUBS	Kucevo	3.88 1 ⇑	*i*Pn	Pn	19 21 41.0	-1.3
LPK	Lapseki	3.94 91	*e*PG	Pn	19 21 42.6	-0.4
VLI	Veliai	3.95 164	P	Pn	19 21 42.3	-0.9
VLI	Veliai	3.95 164	P	Pn	19 21 43.5	+0.3
TIP	Timpagrande	3.97 252 ⇓	*i*P	Pn	19 21 45.5	+2.0
TIP	Timpagrande	3.97 252	*e*Pn	Pn	19 21 44.9	+1.4
TIP	Timpagrande	3.97 252	*e*Pn	Pn	19 21 44.9	+1.4
TIP	Timpagrande	3.97 252 ⇓	*i*P	Pn	19 21 45.5	+2.0
ORI	Oriolo Calabro	3.97 265	P	Pn	19 21 45.1	+1.6
ORI	Oriolo Calabro	3.97 265	P	Pn	19 21 45.1	+1.6
CHOS	Chios island	4.05 120	*e*PG	Pn	19 21 45.6	+0.9
CHOS	Chios island	4.05 120	P	Pn	19 21 46.6	+1.9
CHOS	Chios island	4.05 120	P	Pn	19 21 46.3	+1.6
HAPS	Han Pijesak,BI	4.06 332	*e*Pn	Pn	19 21 45.3	+0.4
HAPS	Han Pijesak,BI	4.06 332	*e*Pn	Pn	19 21 45.3	+0.4
EDRB	Edirne	4.09 70	*e*PG	Pn	19 21 45.1	-0.1
AYVA	Ayvalik	4.09 106	*i*P	Pn	19 21 45.8	+0.6
AYVA			*i*S	Sn	19 22 29.4	-3.5
AYVA	Ayvalik	4.09 106	P	Pn	19 21 45.8	+0.6
AYVA			S	Sn	19 22 29.4	-3.5
ZIMR		4.19 41 ⇓	*i*P	Pn	19 21 48.4	+1.9
RKY	Sarkoy-Tekirda	4.24 86	*e*PG	Pn	19 21 48.3	+1.0
MDVR	Moldovita	4.25 1 ⇑	*i*P	Pn	19 21 49.1	+1.7
MDVR	Moldovita	4.25 1 ⇑	*i*P	Pn	19 21 49.1	+1.7
SRE	Strehaia	4.29 15 ⇑	*i*P	Pn	19 21 48.3	+0.4
SRE	Strehaia	4.29 15 ⇑	*i*P	Pn	19 21 48.3	+0.4
TEKS	Tekeris	4.30 340 ⇑	*i*Pn	Pn	19 21 49.2	+1.2
TEKS	Tekeris	4.30 340 ⇑	*i*Pn	Pn	19 21 49.2	+1.2
DKL	Dikili	4.33 108	*e*PG	Pn	19 21 49.2	+0.7
KRBG	Karabiga-Canak	4.34 90	*e*PG	Pn	19 21 49.7	+0.9
HERR	Herculane	4.39 8 ⇑	*i*P	Pn	19 21 49.5	+0.3
HERR	Herculane	4.39 8 ⇑	*i*P	Pn	19 21 49.5	+0.3
URLA	Izmir	4.43 118	*e*PG	Pn	19 21 49.4	-0.4
MS1	Monte Sant'Ang	4.44 287	*e*Pn	Pn	19 21 50.2	+0.2
CUC	Castrocucco	4.46 265	*e*Pn	Pn	19 21 51.9	+1.6
CUC	Castrocucco	4.46 265	*e*Pn	Pn	19 21 51.9	+1.6
PHSR	Pinarhisar	4.61 74	*e*PG	Pn	19 21 53.3	+1.1
APE	Apeiranthos	4.62 137	*e*PG	Pn	19 21 53.7	+1.2
APE	Apeiranthos	4.62 137 ⇑	*i*P	Pn	19 21 54.2	+1.7
APE	Apeiranthos	4.62 137	*d*iP	Pn	19 21 53.3	+0.8
APE	Apeiranthos	4.62 137	*i*P	Pn	19 21 53.3	+0.8
BALY	Balya	4.68 98	*i*P	Pn	19 21 52.7	-0.6
BALY			*i*S	Sn	19 22 43.0	-4.3
BALY	Balya	4.68 98	P	Pn	19 21 52.7	-0.6
BALY			S	Sn	19 22 43.0	-4.3
HUMR	Humele	4.71 31 ⇑	*i*P	Pn	19 21 54.2	+0.6
HUMR	Humele	4.71 31 ⇑	*i*P	Pn	19 21 54.2	+0.6
EDC	Edincik	4.78 90	*e*PG	Pn	19 21 55.5	+0.9
FGSL	Fruska Gora	4.81 345 ⇓	*i*Pn	Pn	19 21 55.6	+0.6
FRGS	Fruska Gora	4.81 345 ⇓	*i*Pn	Pn	19 21 55.6	+0.6
STEP	BALIKESIR_Sava	4.84 102	*i*P	Pn	19 21 56.5	+1.0
STEP			*i*S	Sn	19 22 45.5	-5.7
STEP	BALIKESIR_Sava	4.84 102	P	Pn	19 21 56.5	+1.0
SBT3	Marmara-Eregli	4.85 84	*e*PG	Pn	19 21 56.7	+1.2
BALB	Balikesir	4.89 98	*e*PG	Pn	19 21 57.2	+1.0
SOI	Samo	4.96 242	P	Pn	19 21 58.6	+1.5
SOI	Samo	4.96 242	P	Pn	19 21 58.6	+1.5
CEL	Celeste	4.97 245	*e*Pn	Pn	19 21 58.8	+1.5
CEL	Celeste	4.97 245	*e*Pn	Pn	19 21 58.8	+1.5
SLVT	Silivri	5.05 80	*e*PG	Pn	19 21 59.1	+0.7
BZS	Buzias	5.08 0	*e*Pn	Pn	19 21 58.1	-0.7
BZS	Buzias	5.08 0 ⇓	*i*P	Pn	19 21 58.7	-0.1
BZS	Buzias	5.08 0	P	Pn	19 21 58.2	-0.6
BZS			pmax	pmax		
	comp=Z,50nm,0.8s					
BZS	Buzias	5.08 0	P	Pn	19 21 58.2	-0.6
	comp=Z,50nm,0.8s					
CTYL	Yalikoy Yolu	5.14 77	*e*PG	Pn	19 22 00.7	+1.1
KCTX	Karacabey (Bur	5.16 91	*e*PG	Pn	19 22 00.2	+0.3
LOT	Lotru	5.16 17	*e*PG	Pn	19 22 01.8	+1.8
LOT	Lotru	5.16 17	*i*P	Pn	19 22 00.0	0.0
LOT	Lotru	5.16 17	*i*P	Pn	19 22 00.0	0.0
CTKS	Kestanelik-??a	5.28 80	*e*PG	Pn	19 22 01.9	+0.5
ARR	Arges	5.32 24 ⇓	*i*P	Pn	19 22 03.0	+0.9
ARR	Arges	5.32 24 ⇓	*i*P	Pn	19 22 03.0	+0.9
BLY	Banja Luka	5.33 324	*e*Pn	Pn	19 22 03.5	+1.3
BLY	Banja Luka	5.33 324 ⇓	*i*P	Pn	19 22 04.1	+1.9
BLY	Banja Luka	5.33 324	*e*Pn	Pn	19 22 03.5	+1.3
BLY	Banja Luka	5.33 324	*e*Pn	Pn	19 22 03.5	+1.3
BLY	Banja Luka	5.33 324 ⇓	*i*P	Pn	19 22 04.1	+1.9
DURS	Dursunbey	5.35 98	*i*P	Pn	19 22 02.5	0.0
DURS			*i*S	Sn	19 22 60.0	-4.0
DURS	Dursunbey	5.35 98	P	Pn	19 22 02.5	0.0
DURS			S	Sn	19 23 00.0	-4.0
SULR		5.38 38 ⇑	*i*P	Pn	19 22 04.7	+1.9
SULR		5.38 38 ⇑	*i*P	Pn	19 22 04.7	+1.9
DEV	Deva	5.43 10 ⇑	*i*P	Pn	19 22 05.5	+1.9
DEV	Deva	5.43 10 ⇑	*i*P	Pn	19 22 05.5	+1.9
VOIR		5.51 26 ⇑	*i*P	Pn	19 22 05.7	+0.9
VOIR		5.51 26	P	Pn	19 22 06.3	+1.5
VOIR		5.51 26	P	Pn	19 22 06.3	+1.5
AYDB	Zeytinkoy-Aydi	5.52 116	*e*PG	Pn	19 22 05.9	+1.0
SECR		5.57 35 ⇓	*i*P	Pn	19 22 06.1	+0.6
SECR		5.57 35 ⇓	*i*P	Pn	19 22 06.1	+0.6
BODT	Bodrum	5.64 126	*e*PG	Pn	19 22 07.8	+1.3
KLYT	Kilyos	5.68 80	*e*PG	Pn	19 22 08.2	+1.2
ISK	Istanbul-Kandi	5.68 82	*e*PG	Pn	19 22 07.6	+0.6
KAVV	Kandilli-Istan	5.68 82	*e*PG	Pn	19 22 07.5	+0.5
MLSB	Milas	5.79 122	*e*PG	Pn	19 22 10.6	+2.0
KULA	Kula-Manisa	5.81 108	*e*PG	Pn	19 22 10.7	+1.8
IDI	Anoyia	5.84 153	Pn	Pn	19 22 09.1	-0.2
	comp=Z,0.8nm,0.3s,baz=270,slow=6.1,SNR=5.7					
IDI			Sn	Sn	19 23 17.0	+0.9
	comp=Z,3.2nm,0.3s,baz=127,slow=20,SNR=2.9					
IDI			LR	LR	19 24 22.0	
	comp=Z,276nm,18.7s,baz=320,slow=38					
IDI	Anoyia	5.84 153	*e*PG	Pn	19 22 11.4	+2.1
IDI	Anoyia	5.84 153 ⇓	*i*P	Pn	19 22 09.8	+0.5
IDI	Anoyia	5.84 153 ⇓	*i*P	Pn	19 22 09.8	+0.5
IDI			Sn	Sn	19 23 17.0	+0.9
ISR	Istrita	5.85 37 ⇓	*i*P	Pn	19 22 11.3	+2.0
ISR	Istrita	5.85 37	P	Pn	19 22 11.4	+2.1
ISR			pmax	pmax		
	comp=Z,148nm,0.9s					
ISR	Istrita	5.85 37	P	Pn	19 22 11.4	+2.1
	comp=Z,148nm,0.9s					
SIMA	Simav-Kutahya	5.86 102	*e*PG	Pn	19 22 10.9	+1.3
UDBI	Udbina	5.88 315	*i*Pn	Pn	19 22 11.2	+1.3
UDBI			Sn	Sn	19 23 16.6	-0.4
UDBI	Udbina	5.88 315	*i*Pn	Pn	19 22 11.1	+1.3
UDBI			Sn	Sn	19 23 16.5	-0.4
MLR	Muntele Rosu	5.89 31	Pn	Pn	19 22 11.7	+1.8
	comp=Z,0.7nm,0.3s,baz=108,slow=1.2,SNR=38					
MLR			Sn	Sn	19 23 19.3	+2.0
	comp=Z,0.5nm,0.3s,baz=72,slow=19,SNR=2.2					
MLR	Muntele Rosu	5.89 31 ⇓	*i*P	Pn	19 22 11.9	+1.9
MLR	Muntele Rosu	5.89 31	*e*Pn	Pn	19 22 11.3	+1.3
MLR			Sn	Sn	19 23 19.3	+2.0
MLR	Muntele Rosu	5.89 31	*e*P	Pn	19 22 11.3	+1.3
MLR					19 23 19.3	
MLR	Muntele Rosu	5.89 31	*e*P	Pn	19 22 11.3	+1.3
MLR			S	Sn	19 23 19.3	+2.0
PGOR	Pogoanele	5.90 40 ⇑	*i*P	Pn	19 22 11.7	+1.7
PGOR	Pogoanele	5.90 40 ⇑	*i*P	Pn	19 22 11.7	+1.7
YLV	Yalova	5.92 87	*e*PG	Pn	19 22 12.1	+1.8

comp=Z,9.6nm,0.4s,SNR=23
UZH Uzhgorod 8.11 3 *e*P **Pn 19 22 40.8 +0.5**
UZH Uzhgorod 8.11 3 *e*P **Pn 19 22 40.8 +0.5**
VYHS Vyhne 8.20 347 *e*P **Pn 19 22 43.3 +1.7**
VYHS *e* 19 24 09.7
VYHS Vyhne 8.20 347 *e*PN **Pn 19 22 43.3 +1.7**
VYHS *e*SN **Sn 19 24 09.7 -4.4**
VYHS Vyhne 8.20 347 *e*P **Pn 19 22 43.3 +1.7**
KIS Kishinev 8.30 37 *e*P **Pn 19 22 41.0 -2.0**
KIS LRM MLR 19 26 50.0
comp=Z,900nm,12.0s
KIS Kishinev 8.30 37 *e*P **Pn 19 22 41.0 -2.0**
KIS MLR MLR
comp=E,500nm,10.0s
KIS MLR MLR
comp=Z,1µm,10.0s
KIS MLR MLR
comp=Z,900nm,12.0s
KIS Kishinev 8.30 37 *e*P **Pn 19 22 41.0 -2.0**
comp=Z,900nm,12.0s
CRVS Cervenica-Dubn 8.37 359 *e*P **Pn 19 22 46.0 +2.1**
CRVS Cervenica-Dubn 8.37 359 *e*PN **Pn 19 22 46.0 +2.1**
CRVS Cervenica-Dubn 8.37 359 *e*P **Pn 19 22 46.0 +2.1**
MYKA Terra Mystica 8.40 319 *e*Pn **Pn 19 22 46.7 +2.4**
comp=Z,3.5nm,0.4s
MYKA Sn **Sn 19 24 16.7 -2.2**
comp=Z,9.1nm,0.8s
MYKA Terra Mystica 8.40 319 Pn **Pn 19 22 46.7 +2.4**
comp=Z,3.5nm,0.4s
MODS Modra-Piesok 8.43 340 *e*P **Pn 19 22 45.0 +0.3**
MODS *e* 19 24 13.6
MODS Modra-Piesok 8.43 340 *e*PN **Pn 19 22 45.0 +0.3**
MODS *e*SN **Sn 19 24 13.6 -6.0**
MODS Modra-Piesok 8.43 340 *e*P **Pn 19 22 45.0 +0.3**
CONA Conrad Observa 8.46 333 *e*Pn **Pn 19 22 47.5 +2.2**
comp=Z,3.2nm,0.7s
CONA Conrad Observa 8.46 333 Pn **Pn 19 22 47.5 +2.2**
comp=Z,3.2nm,0.7s
SMOL Smolenice 8.52 341 *e*P **Pn 19 22 48.3 +2.4**
SMOL Smolenice 8.52 341 *e*PN **Pn 19 22 48.3 +2.4**
SMOL Smolenice 8.52 341 *e*P **Pn 19 22 48.3 +2.4**
LANS Liptovska Anna 8.75 351 *e*P **Pn 19 22 52.0 +2.9**
LANS Liptovska Anna 8.75 351 *e*PN **Pn 19 22 52.0 +2.9**
LANS Liptovska Anna 8.75 351 *e*P **Pn 19 22 52.0 +2.9**
JAVC Velka Javorina 8.79 343 *e*PN **Pn 19 22 52.0 +2.4**
KBA Koelnbreinsper 8.86 320 *e*Pn **Pn 19 22 51.3 +0.6**
comp=Z,7.9nm,0.6s
KBA *e*Sn **Sn 19 24 29.5 -0.9**
comp=Z,8.6nm,0.6s
KBA Koelnbreinsper 8.86 320 P **Pn 19 22 53.2 +2.5**
KBA pmax pmax
comp=Z,25nm,1.0s
KBA Koelnbreinsper 8.86 320 Pn **Pn 19 22 51.3 +0.6**
comp=Z,7.9nm,0.6s
KBA Koelnbreinsper 8.86 320 P **Pn 19 22 53.2 +2.5**
comp=Z,25nm,1.0s
KBA Sn **Sn 19 24 29.5 -0.9**
comp=Z,8.6nm,0.6s
NIE Niedzica 8.94 354 *e*P Pn 19 22 56.8 +5.1
NIE Niedzica 8.94 354 *e*P Pn 19 22 56.8 +5.1
SORM Soroca 9.01 30⇑ *i*P **Pn 19 22 52.7 +0.1**
SORM Soroca 9.01 30 P **Pn 19 22 53.7 +1.1**
SORM Soroca 9.01 30 P **Pn 19 22 53.7 +1.1**
MOA Molln 9.02 327 *e*Pn **Pn 19 22 54.1 +1.3**
comp=Z,20nm,0.8s
MOA *e*Sn **Sn 19 24 34.4 +0.4**
comp=Z,12nm,0.7s
MOA Molln 9.02 327 Pn **Pn 19 22 54.1 +1.3**
comp=Z,20nm,0.8s
MOA Sn **Sn 19 24 34.4 +0.4**
comp=Z,12nm,0.7s
ABTA Abfaltersbach 9.06 316 *e*Pn **Pn 19 22 53.1 -0.3**
comp=Z,8.5nm,0.5s,SNR=11
ABTA *e*Sn **Sn 19 24 32.4 -2.7**
comp=Z,15nm,0.6s
ABTA Abfaltersbach 9.06 316 Pn **Pn 19 22 53.1 -0.3**
comp=Z,8.5nm,0.5s,SNR=11
BR131 Keskin Array S 9.25 91 *e*Pn **Pn 19 22 57.2 +1.0**
BR131 Keskin Array S 9.25 91 *e*Pn **Pn 19 22 57.2 +1.0**
BRTR Keskin Array B 9.25 91 Pn **Pn 19 22 57.5 +1.4**
comp=Z,0.5nm,0.3s,baz=263,slow=11,SNR=19
BRTR LR LR 19 26 59.9
comp=Z,663nm,18.7s,baz=270,slow=41
BRTR Keskin Array B 9.25 91 *ce*P **Pn 19 22 57.5 +1.4**
BRTR pmax pmax
comp=Z,2.0nm,0.6s
BRTR Keskin Array B 9.25 91 *e*P **Pn 19 22 57.5 +1.4**
comp=Z,2.0nm,0.6s
KRUC Moravsky 9.30 338 *e*PN **Pn 19 22 58.0 +1.4**
LVV L'vov 9.44 10 *e*P **Pn 19 23 02.9 +4.3**
LVV MLR MLR
comp=N,250nm,9.0s
LVV MLR MLR
comp=E,450nm,9.0s
LVV MLR MLR
comp=Z,290nm,9.0s
VRAC Vranov 9.47 340⇓ *i*P **Pn 19 22 59.9 +1.0**
VRAC Vranov 9.47 340 P **Pn 19 22 59.9 +1.0**
VRAC Vranov 9.47 340 *e*Pn **Pn 19 22 59.8 +0.9**
VRAC Vranov 9.47 340 *e*PN **Pn 19 22 59.8 +0.9**
OKC Ostrava-Krasne 9.62 346 *e*P **Pn 19 23 03.7 +2.7**
OKC *e*S **Sn 19 24 45.4 -3.4**
OKC AMS AMS 19 27 30.0
comp=Z,500nm,12.7s
OKC Ostrava-Krasne 9.62 346 *e*P **Pn 19 23 03.7 +2.7**
OKC *e*S **Sn 19 24 45.4 -3.4**
OKC MLR MLR
comp=Z,500nm,12.7s
OKC Ostrava-Krasne 9.62 346 *e*P **Pn 19 23 03.7 +2.7**
comp=Z,500nm,12.7s
MORC Moravsky Berou 9.68 344⇓ *i*P **Pn 19 23 02.9 +1.0**
MORC Moravsky Berou 9.68 344 *e*Pn **Pn 19 23 02.4 +0.5**
MORC Moravsky Berou 9.68 344 *e*P **Pn 19 23 02.4 +0.5**
MORC Moravsky Berou 9.68 344 *e*P **Pn 19 23 02.4 +0.5**
MORC *e*Sn **Sn 19 24 51.9 +1.6**
MORC Moravsky Berou 9.68 344 *e*PN **Pn 19 23 03.1 +1.2**
MORC *e*SN **Sn 19 24 51.9 +1.6**
OJC Ojcow 9.77 353 *e*P **Pn 19 23 06.7 +3.6**
OJC Ojcow 9.77 353 *e*P **Pn 19 23 06.7 +3.6**
WTTA Wattenberg 9.85 316 *e*Pn **Pn 19 23 05.9 +1.6**
comp=Z,3.8nm,0.5s
WTTA *e*Sn **Sn 19 24 51.8 -2.9**
comp=Z,48nm,0.6s
WTTA Wattenberg 9.85 316 Pn **Pn 19 23 05.9 +1.6**
comp=Z,3.8nm,0.5s
WATA Walderalm 9.93 317 *e*Pn **Pn 19 23 06.6 +1.3**
comp=Z,9.0nm,0.5s,SNR=19
WATA Walderalm 9.93 317 Pn **Pn 19 23 06.6 +1.3**
comp=Z,9.0nm,0.5s,SNR=19
GEA0 GERESS Array S 10.03 329 *e*Pn **Pn 19 23 07.5 +0.9**
GEA0 GERESS Array S 10.03 329 *e*Pn **Pn 19 23 07.5 +0.9**
GERES GERESS Array B 10.03 329 Pn **Pn 19 23 08.4 +1.7**
comp=Z,0.4nm,0.3s,baz=150,slow=14,SNR=26
GERES Sn **Sn 19 24 59.3 +0.2**
comp=Z,0.2nm,0.3s,baz=153,slow=22,SNR=2.7
GERES LR LR 19 28 03.1
comp=Z,208nm,18.9s,baz=138,slow=44
KRLC Kraliky 10.13 342 *e*P Pn 19 23 13.0 +5.0
KRLC *e*S **Sn 19 25 02.3 +0.9**
KRLC Kraliky 10.13 342 *e*P Pn 19 23 13.0 +5.0
KRLC *e*S **Sn 19 25 02.3 +0.9**
MOTA Moosalm 10.18 315 *e*Pn **Pn 19 23 09.2 +0.4**
comp=Z,14nm,0.9s,SNR=23
MOTA Moosalm 10.18 315 Pn **Pn 19 23 09.2 +0.4**
comp=Z,14nm,0.9s,SNR=23
FETA Feichten 10.19 313 Pn **Pn 19 23 10.5 +1.5**
comp=Z,1.9nm,0.5s
FETA *e*Sn **Sn 19 25 01.4 -1.7**
comp=Z,18nm,1.2s
FETA Feichten 10.19 313 Pn **Pn 19 23 10.5 +1.5**
comp=Z,1.9nm,0.5s
FUORN Ofenpass-Fuorn 10.23 310 *e*Pn **Pn 19 23 10.0 +0.4**
FUORN Ofenpass-Fuorn 10.23 310 *e*Pn **Pn 19 23 10.0 +0.4**
KHC Kasperske Hory 10.31 329 *e*P **Pn 19 23 11.2 +0.7**
KHC *ex* x 19 23 16.0
KHC *e*S **Sn 19 25 04.6 -1.2**
KHC AMS AMS 19 27 20.0
comp=Z,1µm,12.5s
KHC Kasperske Hory 10.31 329 *e*Pn **Pn 19 23 12.2 +1.7**
KHC Kasperske Hory 10.31 329 *e*P **Pn 19 23 11.2 +0.7**
KHC *e*S **Sn 19 25 04.6 -1.2**
KHC MLR MLR
comp=Z,1µm,12.5s
KHC Kasperske Hory 10.31 329 *e*P **Pn 19 23 11.2 +0.7**
KHC Kasperske Hory 10.31 329 *e*Pn **Pn 19 23 12.2 +1.7**

RETA Reutte 10.45 315 *e*Pn **Pn 19 23 12.6 +0.1**
comp=Z,0.2nm,0.1s
RETA Sn **Sn 19 25 05.6 -3.7**
comp=Z,22nm,0.7s
RETA Reutte 10.45 315 Pn **Pn 19 23 12.6 +0.1**
comp=Z,0.2nm,0.1s
DPC Dobruska-Polom 10.49 341 *e*P **Pn 19 23 14.9 +1.9**
DPC *e*S **Sn 19 25 05.7 -4.6**
DPC AMS AMS 19 27 40.0
comp=Z,600nm,16.7s
DPC Dobruska-Polom 10.49 341 *e*P **Pn 19 23 14.9 +1.9**
DPC *e*S **Sn 19 25 05.7 -4.6**
DPC MLR MLR
comp=Z,600nm,16.7s
DPC Dobruska-Polom 10.49 341 *e*P **Pn 19 23 14.9 +1.9**
comp=Z,600nm,16.7s
GOPC GO Pecny, Ondr 10.54 335 AMS AMS 19 27 40.0
comp=Z,900nm,9.4s
UPC Upice 10.72 340 AMS AMS 19 27 50.0
comp=Z,800nm,12.6s
KEST Kesra 10.78 248 Pn **Pn 19 23 20.3 +3.3**
comp=Z,0.1nm,0.3s,baz=347,slow=8.5,SNR=4.7
KEST LR LR 19 28 13.7
comp=Z,316nm,19.4s,baz=345,slow=42
PRA Prague 10.79 335 AMS AMS 19 27 50.0
comp=Z,1µm,8.9s
DAVA Damuels 10.82 313 *e*Pn **Pn 19 23 18.9 +1.3**
comp=Z,3.6nm,0.4s
DAVA Sn **Sn 19 25 16.5 -2.0**
comp=Z,21nm,1.0s
DAVA Damuels 10.82 313 Pn **Pn 19 23 18.9 +1.3**
comp=Z,3.6nm,0.4s
KSP Ksiaz 10.96 342 *e*P Pn 19 23 23.9 +4.6
KSP Ksiaz 10.96 342 *e*P Pn 19 23 23.9 +4.6
KIEV Kiev 11.47 25 *i*P Pn 19 23 31.6 +5.4
AKASG Malin Array Be 11.48 25 Pn **Pn 19 23 26.5 +0.1**
comp=Z,0.3nm,0.3s,baz=207,slow=11,SNR=5.8
AKASG Malin Array Be 11.48 25 *i*P **Pn 19 23 30.8 +4.4**
AKASG pmax pmax
comp=Z,2.0nm,0.7s
NKC Novy Kostel 11.63 330 AMS AMS 19 28 20.0
comp=Z,2µm,10.8s
BRG Berggiesshubel 11.64 335 *e*P **Pn 19 23 29.2 +0.6**
comp=Z,6.5nm,1.3s
BRG Berggiesshubel 11.64 335 *e*P **Pn 19 23 29.2 +0.6**
BRG pmax pmax
comp=Z,7.0nm,1.3s
BFO Black Forest 12.27 314 *ce*P **Pn 19 23 39.5 +2.2**
BFO Black Forest 12.27 314 *e*P **Pn 19 23 39.5 +2.2**
CLL Collm 12.32 334 *e*(P) **Pn 19 23 39.0 +1.1**
comp=Z,8.0nm,1.5s
CLL *es*P **P 19 23 46.0 -4.1**
CLL *es*PP 19 23 52.0
CLL Lmax 19 28 00.0
CLL Collm 12.32 334 *e*P **Pn 19 23 39.0 +1.1**
CLL pmax pmax
comp=Z,8.0nm,1.5s
CLL Collm 12.32 334 *e*P **Pn 19 23 39.0 +1.1**
comp=Z,8.0nm,1.5s
MMAI Mount Meron Ar 13.35 120 Pn **Pn 19 23 51.2 -1.0**
comp=Z,0.6nm,0.3s,baz=302,slow=13,SNR=12
MMAI LR LR 19 29 58.1
comp=Z,311nm,19.8s,baz=195,slow=42
KLNR Kaliningrad 14.11 357 *i*P **Pn 19 24 03.9 +1.6**
KLNR pmax pmax
comp=Z,33nm,1.1s
ASF Jabal al Asfar 14.86 119 Pn **P 19 24 16.8 -1.8**
comp=Z,0.2nm,0.3s,baz=315,slow=5.7,SNR=2.3
IIGN Ignalina 15.14 10 *e*P **P 19 24 21.3 -0.1**
IIGN IAmb IAmb 19 24 23.4
comp=Z,24nm,1.1s
IIGN Ignalina 15.14 10 *e*P **P 19 24 21.3 -0.1**
SNR=35
IDID Didziasalis 15.18 11 *e*P **P 19 24 21.8 -0.1**
IDID IAmb IAmb 19 24 22.7
comp=Z,7.9nm,0.9s
IDID Didziasalis 15.18 11 *e*P **P 19 24 21.8 -0.1**
SNR=35
ISAL Salakas 15.35 10 *e*P **P 19 24 23.5 -0.2**
ISAL IAmb IAmb 19 24 25.6
comp=Z,16nm,1.0s
EIL Elat 15.37 131 Pn **P 19 24 23.0 -1.1**
comp=Z,0.1nm,0.3s,baz=11,slow=10,SNR=2.5
IZAR Zarasai 15.54 10 *e*P **P 19 24 25.6 -0.2**
IZAR IAmb IAmb 19 24 26.8
comp=Z,12nm,0.8s
KIV Kislovodsk 15.98 71 *e*P **P 19 24 29.7 -1.2**
KIV pmax pmax
comp=Z,9.0nm,1.1s
KIV MLR MLR
comp=Z,57nm,13.0s
KIV Kislovodsk 15.98 71 *e*P **P 19 24 29.7 -1.2**
comp=Z,57nm,13.0s
VORD Divnogorie 16.12 44 *e*P **Pn 19 24 30.4 +1.3**
VORD pmax pmax
comp=Z,10.0nm,1.3s
VSR Storozhevoye 16.20 43 *e*P **P 19 24 31.5 -1.6**
VSR pmax pmax
comp=Z,10.0nm,1.0s
GOF Gofitskoye 16.36 67 *e*P **P 19 24 37.0 +2.0**
GOF pmax pmax
comp=Z,40nm,1.3s
GNI Garni 17.64 84 P **P 19 24 53.3 +3.9**
comp=Z,0.3nm,0.3s,baz=328,slow=19,SNR=3.5
GROC Groznyy 18.20 74 *e*P **P 19 24 57.7 +2.3**
GROC *e*S **S 19 28 24.5 +1.2**
GROC pmax pmax
comp=Z,7.0nm,0.6s
GROC Groznyy 18.20 74 *e*P **P 19 24 57.7 +2.3**
comp=Z,7.0nm,0.6s
GROC *e*S **S 19 28 24.5 +1.2**
VSU Vasula 18.25 9 *i*P **P 19 24 57.2 +1.5**
VSU pmax pmax
comp=Z,76nm,0.9s
MOS Moscow 18.52 29 *e*P **P 19 24 57.3 -1.5**
ESDC Sonseca Array 19.56 276 P **P 19 25 10.2 -0.3**
comp=Z,0.2nm,0.3s,baz=69,slow=11,SNR=5.3
ESDC LR LR 19 32 54.6
comp=Z,91nm,18.9s,baz=170,slow=38
HFS Hagfors 20.24 349 P **P 19 25 16.5 -1.1**
comp=Z,6.9nm,0.7s,baz=163,slow=11,SNR=12
HFS LR LR 19 33 41.1
comp=Z,168nm,20.7s,baz=168,slow=38
FINES FINESS Array B 21.12 6 P **P 19 25 25.8 -1.2**
comp=Z,7.0nm,0.9s,baz=174,slow=12,SNR=9.2
FINES LR LR 19 35 44.9
comp=Z,65nm,18.1s,baz=226,slow=43
FINES FINESS Array B 21.12 6 *ce*P **P 19 25 27.3 +0.3**
FINES pmax pmax
comp=Z,8.0nm,1.0s
NAO01 NORSAR Array S 21.39 346 *e*P **P 19 25 27.2 -2.7**
NB201 NORSAR Array S 21.50 346 *e*P **P 19 25 29.1 -2.1**
NB2 NORSAR Subarra 21.51 346 P **P 19 25 29.6 -1.7**
comp=Z,2.8nm,0.5s,baz=156,slow=11
NOA NORSAR Array B 21.51 346 P **P 19 25 30.2 -1.1**
NOA LR LR 19 34 39.0
comp=Z,74nm,20.9s,baz=150,slow=39
NBO00 NORSAR Array S 21.58 346 *e*P **P 19 25 30.7 -1.4**
NC303 NORSAR Array S 21.65 347 *e*P **P 19 25 29.1 -3.7**
NC204 NORSAR Array S 21.81 346 *e*P **P 19 25 33.2 -1.4**
EKA Eskdalemuir Ar 22.07 320 P **P 19 25 36.0 -1.4**
comp=Z,9.8nm,0.7s,baz=117,slow=9.8,SNR=24
EKA Eskdalemuir Ar 22.07 320 P **P 19 25 36.0 -1.4**
ESK Eskdalemuir 22.09 320 *e*P **P 19 25 36.7 -0.8**
comp=Z,31nm,1.2s
ESK Eskdalemuir 22.09 320 *e*P **P 19 25 36.7 -0.8**
ESK pmax pmax
comp=Z,31nm,1.2s
TAM Tamanrasset 22.30 222 P **P 19 25 43.1 +2.9**
TAM pmax pmax
comp=Z,6.0nm,1.6s
TAM Tamanrasset 22.30 222 P **P 19 25 43.1 +2.9**
comp=Z,6.0nm,1.6s
MDT Midelt 22.34 258 LR LR 19 33 35.3
comp=Z,157nm,18.8s,baz=2.5,slow=35
KLMR Klimovskoe 23.15 23 *e*P **P 19 25 46.3 -2.3**
KLMR Klimovskoe 23.15 23 *e*P **P 19 25 46.4 -2.2**
KLMR LQ LQ 19 33 04.0
KLMR LQ LQ 19 33 04.0
TMCR Tamitsa 25.55 17 *e*P **P 19 26 11.4 +0.4**
TMCR pmax pmax
comp=Z,51nm,1.4s
PRGR Permogore 25.68 27⇑ *i*P **P 19 26 12.2 0.0**
PRGR pmax pmax
comp=Z,67nm,0.9s
AKTO Aktyubinsk 27.13 56 P **P 19 26 25.6 +0.1**

comp=Z,2.6nm,0.9s,baz=258,slow=9.9,SNR=9.6
AKTO LR LR 19 37 35.6
comp=Z,87nm,21.7s,baz=274,slow=37
GEYT Alibeck 28.27 83 LR LR 19 39 23.7
comp=Z,98nm,18.0s,baz=215,slow=40
ARU Arti 28.76 44 P **P 19 26 39.0 -1.0**
comp=Z,1.8nm,0.5s,baz=239,slow=3.9,SNR=7.9
ARU LR LR 19 38 53.3
comp=Z,129nm,18.0s,baz=242,slow=38
ARU Arti 28.76 44 *c i*P **P 19 26 40.3 +0.3**
ARU 19 27 28.9
ARU S **S 19 31 31.3 +2.5**
ARU SS **SnSn 19 32 52.1 +2.3**
ARU pmax pmax
comp=Z,11nm,1.2s
ARCES ARCESS Array B 29.14 3 P **P 19 26 41.7 -1.6**
comp=Z,1.8nm,0.8s,baz=183,slow=2.4,SNR=4.6
SVE Sverdlovsk 29.98 44⇓ *i*P **P 19 26 51.8 +1.1**
SVE pmax pmax
comp=Z,19nm,1.1s
TORD Torodi Ar. Bea 32.39 218 P **P 19 27 12.2 -0.2**
comp=Z,5.0nm,0.6s,baz=32,slow=9.3,SNR=31
TORD LR LR 19 41 05.2
comp=Z,90nm,19.0s,baz=310,slow=38
BRVK Borovoye 34.93 52 *e*P **P 19 27 34.0 -0.1**
comp=Z,11nm,0.9s
BRVK Borovoye 34.93 52 *ce*P **P 19 27 35.5 +1.4**
BRVK pmax pmax
comp=Z,8.0nm,1.0s
BVAR Borovoye Array 34.99 52 P **P 19 27 35.2 +0.6**
comp=Z,2.6nm,0.8s,baz=253,slow=4.5,SNR=20
KURBB Kurchatov Arra 40.18 56 P **P 19 28 18.3 -0.3**
comp=Z,0.9nm,1.0s,baz=283,slow=9.4,SNR=4.8
KURK Kurchatov 40.23 56 *e*P **P 19 28 18.3 -0.7**
KURK Kurchatov 40.23 56 *i*P **P 19 28 19.5 +0.5**
KURK pmax pmax
comp=Z,1.0nm,1.1s
KSH Kashi 41.08 73 P **P 19 28 26.9 +0.5**
KSH pmax pmax
comp=Z,270nm,4.6s
DBIC Dimbokro 41.19 222 P **P 19 28 25.8 -1.5**
comp=Z,9.0nm,1.1s,baz=53,slow=5.1,SNR=2.3
NIL Nilore 41.27 83 *e*P **P 19 28 29.3 +1.4**
comp=Z,9.5nm,0.8s
NIL Nilore 41.27 83 *e*P **P 19 28 29.3 +1.4**
NIL pmax pmax
comp=Z,9.0nm,0.8s
NIL Nilore 41.27 83 *e*P **P 19 28 29.3 +1.4**
comp=Z,9.0nm,0.8s
NVS Novosibirsk 42.48 49 *e*P **P 19 28 40.0 +2.6**
NVS pmax pmax
comp=N,4.0nm,1.3s
NVS pmax pmax
comp=E,5.0nm,1.3s
NVS pmax pmax
comp=Z,9.0nm,1.3s
MKAR Makanchi Array 43.38 61 P **P 19 28 44.8 -0.2**
comp=Z,1.9nm,0.6s,baz=282,slow=6.5,SNR=25
MK01 Makanchi Array 43.40 61 *e*P **P 19 28 44.8 -0.2**
ZALV Zalesovo Beam 43.52 50 P **P 19 28 45.6 -0.2**
comp=Z,2.0nm,0.6s,baz=275,slow=8.5,SNR=9.6
ZALV Zalesovo Beam 43.52 50 *e*P **P 19 28 45.8 0.0**
ZALV Zalesovo Beam 43.52 50 *e*P **P 19 28 45.8 0.0**
NRIK Noril'sk 44.32 28 LR LR 19 49 50.3
comp=Z,210nm,19.3s,baz=190,slow=39
SFJD Kangerlussuaq 46.63 329 LR LR 19 49 33.8
comp=Z,173nm,18.2s,baz=73,slow=37
WMQ Urumqi 47.91 63 P **P 19 29 23.8 +3.0**
WMQ sP sP 19 29 31.3 +4.3
WMQ pmax pmax
comp=Z,14nm,0.7s
WMQ pmax pmax
comp=Z,150nm,5.5s
WMQ LR LR
comp=Z,160nm,21.3s
DANN Dangsing 51.71 83 *e*P **P 19 29 50.2 0.0**
comp=Z,46nm,0.8s
KOLN Koldanda 51.89 84 *e*P **P 19 29 51.1 -0.3**
comp=Z,18nm,0.8s
GKN Gorkha 52.55 83 *e*P **P 19 29 55.7 -0.6**
comp=Z,42nm,1.0s
DMN Daman 53.11 83 *e*P **P 19 30 00.3 -0.3**
comp=Z,57nm,1.1s
KKN Kakani 53.15 83 *e*P **P 19 30 00.0 -0.8**
comp=Z,16nm,0.8s
GUN Gumba 53.54 82 *e*P **P 19 30 03.3 -0.5**
comp=Z,68nm,1.1s
JIRN Jiri 53.91 82 *e*P **P 19 30 05.8 -0.7**
comp=Z,43nm,0.8s
RAMN Ramite 54.59 83 *e*P **P 19 30 10.6 -0.8**
comp=Z,32nm,0.6s
ODAN Odare 55.23 83 *e*P **P 19 30 15.2 -0.8**
comp=Z,48nm,1.1s
TIXI Tiksi 57.16 21 *i*P **P 19 30 29.2 +0.5**
TIXI pmax pmax
comp=Z,2.0nm,1.8s
SCHQ Schefferville 57.32 317 LR LR 19 53 28.5
comp=Z,93nm,21.1s,baz=74,slow=34
GTA Gaotai 57.99 63 *e*P **P 19 30 35.8 +0.4**
GTA pP sP 19 30 44.5 +2.9
GTA sP pP 19 30 48.4 +8.5
GTA pmax pmax
comp=Z,1.0nm,0.8s
ULN Ulaanbaatar 58.71 52 *i*P **P 19 30 40.4 +0.1**
ULN pmax pmax
comp=Z,7.0nm,2.4s
LZH Lanzhou 62.42 65 *e*P **P 19 31 05.9 +0.1**
LZH pP pP 19 31 09.5 -0.8
LZH sP sP 19 31 13.0 +0.9
LZH *e*PP **PP 19 33 25.0 +2.2**
LZH pmax pmax
comp=Z,20nm,1.3s
LZH pmax pmax
comp=Z,75nm,7.5s
LZH LR LR
comp=Z,280nm,15.3s
LZH LR LR
comp=Z,290nm,15.4s
LZH LR LR
comp=Z,360nm,19.2s
YAK Yakutsk 62.65 30 *i*P **P 19 31 07.9 +1.3**
YAK pmax pmax
comp=Z,2.0nm,0.8s
HHC Hu-ho-hao-te 65.03 57 *e*P **P 19 31 24.4 +1.6**
HHC PP **PP 19 33 48.9 +3.4**
HHC S **S 19 40 03.3 -1.3**
HHC pmax pmax
comp=Z,20nm,1.1s
HHC pmax pmax
comp=Z,80nm,5.5s
HHC LR LR
comp=Z,180nm,17.7s
HHC LR LR
comp=Z,99nm,17.5s
CD2 Chengdu 65.14 70 P **P 19 31 22.1 -1.6**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
XAN Xi'an 67.03 64 P **P 19 31 35.4 -0.3**
XAN pmax pmax
comp=Z,6.0nm,1.2s
KMI Kunming 67.68 76 P **P 19 31 39.1 -1.1**
KMI pmax pmax
comp=Z,9.0nm,0.9s
BILL Bilibino 68.54 14 *i*P **P 19 31 46.5 +1.9**
BILL pmax pmax
comp=Z,2.0nm,0.9s
BILL MLR MLR
comp=Z,101nm,18.0s
CMAR Chiang Mai Arr 68.76 84 P **P 19 31 44.8 -1.9**
comp=Z,3.8nm,0.9s,baz=302,slow=7.6,SNR=14
CMAR Chiang Mai Arr 68.76 84 *i*P **P 19 31 45.7 -1.1**
CMAR pmax pmax
comp=Z,4.0nm,0.9s
CMAR Chiang Mai Arr 68.76 84 *i*P **P 19 31 45.7 -1.1**
comp=Z,4.0nm,0.9s
BOSA Boshof 68.88 177 P **P 19 31 46.7 -0.5**
comp=Z,1.6nm,0.8s,baz=9.6,slow=8.4,SNR=4.3
YKA Yellowknife Ar 71.47 340 P **P 19 32 01.8 -0.8**
comp=Z,1.9nm,0.6s,baz=33,slow=5.3,SNR=8.5
ULM Lac du Bonnet 74.31 324 P **P 19 32 18.7 -1.0**
comp=Z,5.1nm,0.8s,baz=15,slow=6.6,SNR=7.8
ULM LR LR 20 06 08.3
comp=Z,111nm,18.2s,baz=26,slow=37
ILAR Eielson Array 74.65 355 P **P 19 32 21.7 +0.2**
comp=Z,1.3nm,0.8s,baz=3.9,slow=5.6,SNR=20
NJ2 Nanjing 74.92 61 *e*P **P 19 32 24.1 +0.5**

NJ2 pmax pmax
comp=Z,10.0nm,0.5s
KSAR Wonju Array Be 77.18 52 P **P 19 32 34.8 -1.6**
KSAR Wonju Array Be 77.18 52 P **P 19 32 34.8 -1.6**
KSRS Korea Array 77.20 52 P **P 19 32 34.8 -1.6**
comp=Z,1.7nm,0.7s,baz=312,slow=5.3,SNR=11
YSS Yuzh-Sakhalins 78.38 37 *e*P **P 19 32 39.2 -3.6**
YSS *e* 19 32 42.6
DLBC Dease Lake 78.59 345 P **P 19 32 44.4 +0.4**
comp=Z,1.4nm,0.6s,baz=115,slow=3.8,SNR=4.2
PETK Petropavlovsk- 79.32 25 LR LR 20 12 37.9
comp=Z,58nm,18.1s,baz=307,slow=39
MJAR Matsushiro Arr 83.75 46 P **P 19 33 10.5 -1.2**
comp=Z,2.4nm,0.9s,baz=304,slow=3.8,SNR=7.3
PDAR Pinedale Array 86.07 326 P **P 19 33 22.7 -0.9**
comp=Z,0.6nm,0.8s,baz=54,slow=7.5,SNR=4.5
PDAR LR LR 20 12 48.0
comp=Z,105nm,18.3s,baz=55,slow=36
ANMO Albuquerque 90.97 320*e*P **P 19 33 44.5 -2.5**
ANMO pmax pmax
comp=Z,1.0nm,0.8s
ASAR Alice Springs 121.57 95 PKP **PKPdf 19 39 34.9 -1.5**
comp=Z,1.0nm,1.0s,baz=225,slow=1.6,SNR=4.4

MEX 17 19:30:49.4±0.8, 27°.89N×112°.06W, h9km±11km, MD3.8, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRIG	**Santa Rosalia**	**0.59**	**196**	*i* P	Pg	19 30 59.6	-1.3
SRIG				*i* S	Sg	19 31 08.5	-0.2
HSIG		**1.49**	**41**	*e*P	Pn	19 31 12.8	-3.6
HSIG				*e*S	Sn	19 31 30.7	-5.3

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*IDC **17** 20:05:59.9±0.7, 32°.89S×178°.28W, h0km, mb4.3/8, mb1 4.5/11, mb1mx4.2/44, mbtmp4.4/11, ML4.5/3, MS3.9/5, Ms1 3.9/5, ms1mx3.5/47, Error ellipse: s-maj=24.7km s-min=18.5km az=115.0*
*WEL **17** 20:06:01.0, 32°.92S×178°.32W, h10km, ML5.2/13*
*NEIC **17** 20:06:01.5±0.4, 32°.92S×178°.32W, h10km, mb4.5/1, Error ellipse: s-maj=14.9km s-min=8.8km az=111.0*
*ISCJB **17** 20:06:02.9±0.7, 32°.94S±0°.05×178°.3W±0°.1, h32km, mb4.2/10, MS3.7/4, Error ellipse: s-maj=17.6km s-min=4.1km az=20.2*

ISC 17 20:06:04.6±0.7, 32°.91S±0°.07×178°.2W±0°.1, h32km, n59, σ1§49/69, mb4.3/10, MS3.6/4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.65**	**3**	Pn	**Pn**	**20 06 59.2**	**+0.4**
	50nm,0.3s,baz=108,slow=20,SNR=2.9						
RAO				Sn	**Sn**	**20 07 36.1**	**-4.7**
	204nm,0.3s,baz=224,slow=20,SNR=5.6						
MXZ	**Matakaoa Point**	**5.47**	**211**	P	**Pn**	**20 07 22.5**	**-1.4**
MXZ				S	**Sn**	**20 08 25.2**	**-0.5**
WMGZ	**Waiomatatini S**	**5.65**	**209**	P	**Pn**	**20 07 26.0**	**-0.3**
WMGZ				S	**Sn**	**20 08 30.2**	**+0.2**
HAZ	**Te Kaha**	**5.87**	**213**	P	**Pn**	**20 07 28.5**	**-0.8**
HAZ				S	**Sn**	**20 08 36.8**	**+1.4**
PUZ	**Puketiti**	**5.93**	**209**	P	**Pn**	**20 07 28.1**	**-2.0**
PUZ				S	**Sn**	**20 08 37.5**	**+0.6**
RUGZ	**Raukumara Rang**	**6.09**	**213**	P	**Pn**	**20 07 31.4**	**-1.1**
RUGZ				S	**Sn**	**20 08 42.0**	**+1.0**
TWGZ	**Tauwhareparae**	**6.13**	**210**	P	**Pn**	**20 07 31.5**	**-1.4**
TWGZ				S	**Sn**	**20 08 43.1**	**+1.1**
CNGZ	**Carnagh Statio**	**6.30**	**207**	P	**Pn**	**20 07 33.9**	**-1.4**
CNGZ				S	**Sn**	**20 08 47.2**	**+1.1**
WHRZ	**Whale Island**	**6.34**	**218**	P	**Pn**	**20 07 37.8**	**+2.0**
WHRZ				S	**Sn**	**20 08 49.2**	**+2.1**
TKGZ	**Te Karaka**	**6.41**	**209**	P	**Pn**	**20 07 36.3**	**-0.4**
TKGZ				S	**Sn**	**20 08 49.0**	**+0.3**
MWZ	**Matawai**	**6.46**	**212**	P	**Pn**	**20 07 35.5**	**-1.9**
MWZ				S	**Sn**	**20 08 48.8**	**-1.2**
OPRZ	**Ohinepanea**	**6.55**	**220**	P	**Pn**	**20 07 39.9**	**+1.2**
URZ	**Urewera**	**6.59**	**215**	Pn	**Pn**	**20 07 38.1**	**-1.1**
	11nm,0.3s,baz=12,slow=2.0,SNR=36						
URZ				Sn	**Sn**	**20 08 52.6**	**-0.5**
	14nm,0.3s,baz=259,slow=24,SNR=7.2						
URZ	**Urewera**	**6.59**	**215**	P	**Pn**	**20 07 37.7**	**-1.4**
URZ				S	**Sn**	**20 08 52.3**	**-0.8**
RIGZ	**Rimuhau**	**6.67**	**209**	P	**Pn**	**20 07 39.4**	**-1.0**
RIGZ				S	**Sn**	**20 08 54.2**	**-1.1**
PRGZ	**Paritu Road**	**6.81**	**207**	P	**Pn**	**20 07 42.9**	**+0.7**
PRGZ				S	**Sn**	**20 08 57.4**	**-1.3**
SNGZ	**Shannon Statio**	**6.91**	**211**	P	**Pn**	**20 07 43.9**	**+0.3**
SNGZ				S	**Sn**	**20 09 00.9**	**-0.3**
MUGZ	**Murupara**	**6.92**	**215**	P	**Pn**	**20 07 44.4**	**+0.6**
MUGZ				S	**Sn**	**20 08 59.6**	**-1.9**
KNZ	**Kokohu**	**6.98**	**208**	P	**Pn**	**20 07 42.4**	**-2.1**
KNZ				S	**Sn**	**20 08 58.4**	**-4.3**
RPZ	**Rata Peaks**	**13.71**	**215**	Pn	**Pn**	**20 09 12.8**	**-3.8**
	1.7nm,0.3s,baz=45,slow=2.1,SNR=6.5						
RPZ				Sn	Sn	20 11 33.2	-15
	1.1nm,0.3s,baz=111,slow=23,SNR=10						
DZM	**Mont Dzumac**	**17.39**	**304**	*e*P	**P**	**20 10 10.2**	**+4.2**
	64nm,1.2s						
DZM				*e*LR	LR	20 14 06.6	
	902nm,22.6s						
DZM	**Mont Dzumac**	**17.39**	**304**	P	**P**	**20 10 07.6**	**+1.5**
	0.1nm,0.3s,baz=104,slow=18,SNR=1.9						
DZM				LR	LR	20 15 37.6	
	comp=Z,1μm,18.5s,baz=142,slow=33						
RAR	**Rarotonga**	**20.05**	**59**	LR	LR	20 19 04.7	
	comp=Z,130nm,18.3s,baz=238,slow=39						
PPT2	**Papeete2**	**29.88**	**66**	*e*LR	LR	20 19 59.9	
	229nm,22.8s						
PPT	**Papeete**	**29.90**	**66**	LR	LR	20 21 12.5	
	comp=Z,120nm,21.1s,baz=138,slow=30						
HNR	**Honiara**	**30.89**	**314**	LR	LR	20 23 24.0	
	comp=Z,156nm,18.2s,baz=180,slow=34						
STKA	**Stephens Creek**	**33.86**	**261**	P	**P**	**20 12 44.0**	**-0.3**
	2.1nm,0.9s,baz=111,slow=13,SNR=3.1						
STKA				LR	LR	20 25 54.8	
	comp=Z,451nm,18.4s,baz=48,slow=35						
CTA	**Charters Tower**	**34.15**	**283**	P	**P**	**20 12 47.3**	**+0.4**
	9.9nm,0.5s,baz=118,slow=10,SNR=27						
CTAO	**Charters Tower**	**34.15**	**283**	*e*P	**P**	**20 12 45.9**	**-1.0**
TAOE	**Nuku Hiva Isla**	**42.46**	**64**	*e*LR	LR	20 25 31.7	
	90nm,24.3s						
ASAR	**Alice Springs**	**42.91**	**270**	P	**P**	**20 13 59.5**	**-0.9**
	4.8nm,0.7s,baz=107,slow=7.6,SNR=92						
WRAB	**Tennant Creek**	**44.11**	**275**	*e*P	**P**	**20 14 08.9**	**-1.2**
	3.5nm,0.5s						
WRA	**Warramunga Arr**	**44.12**	**275**	P	**P**	**20 14 08.7**	**-1.5**
	7.4nm,0.4s,baz=115,slow=7.8,SNR=157						
VNDA	**Vanda**	**45.59**	**186**	P	**P**	**20 14 22.6**	**+1.5**
	0.2nm,0.7s,baz=180,slow=1.2,SNR=2.5						
CASY	**Casey**	**52.88**	**209**	*e*P	**P**	**20 15 17.0**	**+0.1**
QSPA	**South Pole Qui**	**57.21**	**180**	*e*P	P	20 15 55.9	+7.4
MAW	**Mawson**	**69.92**	**201**	P	**P**	**20 17 11.7**	**-0.4**
	0.9nm,0.4s,baz=11,slow=5.2,SNR=3.6						
SNAA	**Sanae**	**75.66**	**178**	P	P	20 17 57.1	+11
VNA3	**Neumayer Olymp**	**75.82**	**176**	P	P	20 17 57.9	+11
KSRS	**Korea Array**	**86.17**	**320**	P	**P**	**20 18 42.4**	**0.0**
	0.5nm,0.8s,baz=157,slow=6.6,SNR=3.1						
KSAR	**Wonju Array Be**	**86.18**	**320**	P	**P**	**20 18 42.4**	**-0.1**
PETK	**Petropavlovsk-**	**88.20**	**346**	P	**P**	**20 18 52.5**	**+0.5**
	1.2nm,0.6s,baz=108,slow=4.7,SNR=3.2						
NVAR	**Mina Array Bea**	**90.16**	**43**	P	**P**	**20 19 03.7**	**+1.9**
	0.5nm,0.8s,baz=217,slow=4.3,SNR=3.2						
MKAR	**Makanchi Array**	**119.26**	**309**	PKP	**PKPdf**	**20 24 49.6**	**-0.6**
	0.2nm,0.3s,baz=196,slow=1.7,SNR=5.0						
ZALV	**Zalesovo Beam**	**119.80**	**317**	PKP	**PKPdf**	**20 24 49.5**	**-1.4**
	0.5nm,0.5s,baz=93,slow=5.8,SNR=2.8						
KURK	**Kurchatov**	**122.67**	**313**	PKP	**PKPdf**	**20 24 56.1**	**-0.4**
KURBB	**Kurchatov Arra**	**122.70**	**313**	PKP	**PKPdf**	**20 24 56.1**	**-0.5**
	1.0nm,0.7s,baz=110,slow=1.9,SNR=10						
BVAR	**Borovoye Array**	**128.08**	**314**	PKP	**PKPdf**	**20 25 07.5**	**+0.7**
	0.7nm,0.4s,baz=143,slow=2.5,SNR=11						
AKTO	**Aktyubinsk**	**135.66**	**311**	PKP	**PKPdf**	**20 25 22.6**	**+1.4**
	0.8nm,0.6s,baz=90,slow=9.1,SNR=3.4						
ARCES	**ARCESS Array B**	**141.00**	**347**	PKhKP	PKPpre	20 25 25.2	
	1.4nm,0.8s,baz=90,slow=1.5,SNR=3.6						
FINES	**FINESS Array B**	**147.44**	**339**	PKPbc	**PKPbc**	**20 25 43.9**	**-0.6**
	11nm,0.7s,baz=48,slow=3.8,SNR=19						
NB2	**NORSAR Subarra**	**151.20**	**351**	PKP	**PKPbc**	**20 25 53.5**	**-0.4**
	comp=Z,1.5nm,0.9s,baz=17,slow=2.6						
HFS	**Hagfors**	**151.66**	**347**	PKPbc	**PKPbc**	**20 25 54.7**	**-0.2**
	comp=Z,1.9nm,0.6s,baz=151,slow=3.3,SNR=7.3						
MMAI	**Mount Meron Ar**	**151.91**	**279**	PKPbc	**PKPbc**	**20 25 57.6**	**+1.1**
	comp=Z,2.8nm,0.6s,baz=76,slow=6.1,SNR=12						
DBIC	**Dimbokro**	**153.16**	**165**	PKPbc	**PKPbc**	**20 25 59.2**	**-0.5**
	comp=Z,3.7nm,1.1s,baz=97,slow=2.5,SNR=5.7						
AKASG	**Malin Array Be**	**153.17**	**320**	PKPbc	**PKPbc**	**20 25 58.5**	**-0.1**
	comp=Z,1.4nm,0.6s,baz=56,slow=2.4,SNR=15						
BRTR	**Keskin Array B**	**153.59**	**294**	PKPbc	**PKPbc**	**20 25 59.9**	**-0.3**
	comp=Z,1.0nm,0.5s,baz=143,slow=3.7,SNR=14						
BRTR				PKPab	**pPKPbc**	**20 26 11.1**	**+0.5**
	comp=Z,1.4nm,0.6s,baz=149,slow=3.7,SNR=5.9						
TORD	**Torodi Ar. Bea**	**160.33**	**180**	PKPab	**PKPab**	**20 26 43.5**	**+1.6**
	comp=Z,1.0nm,1.0s,baz=163,slow=2.9,SNR=5.8						
GERES	**GERESS Array B**	**161.76**	**334**	PKPab	**PKPab**	**20 26 46.9**	**-0.7**
	comp=Z,0.1nm,0.4s,baz=53,slow=5.0,SNR=3.5						

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*CSEM **17** 20:20:00.6±0.2, 37°.21N×42°.53E, h5km, ML2.9, Error ellipse: s-maj=4.2km s-min=3.0km az=40.0*
*DDA **17** 20:20:00.1, 37°.16N×42°.47E, h7km, Ml3.0*
*ISK **17** 20:20:00.4, 37°.24N×42°.46E, h4km, ML2.9/9*
*ISN **17** 20:20:04.2±3.2, 36°.92N×42°.54E, h1km±16km, ML2.8*

ISC 17 20:20:00.7±1.4, 37°.21N±0°.05×42°.50E±0°.03, h4km±10km, n40, σ0§75/57, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRN	**S¯–rnak**	**0.30**	**346**	*i* P	**Pg**	**20 20 06.0**	**-0.5**
SIRN				*i* S	**Sg**	**20 20 10.1**	**-0.4**
SIRN	**S¯–rnak**	**0.30**	**346**	P	**Pg**	**20 20 06.0**	**-0.5**
SIRN				S	**Sg**	**20 20 10.1**	**-0.4**
SIRT	**Sirnak**	**0.30**	**351**	PG	**Pg**	**20 20 06.2**	**-0.3**
SIRT				SG	**Sg**	**20 20 10.6**	**+0.1**
SIRT	**Sirnak**	**0.30**	**351**	*e*Pg	**Pg**	**20 20 06.2**	**-0.3**
SIRT				*e*Sg	**Sg**	**20 20 10.6**	**+0.1**
SRTM	**Siirt_Merkez**	**0.91**	**330**	*i* P	**Pg**	**20 20 18.7**	**+0.6**
SRTM				*i* S	**Sb**	**20 20 31.6**	**0.0**
SRTM	**Siirt_Merkez**	**0.91**	**330**	P	**Pg**	**20 20 18.7**	**+0.6**
SRTM				S	**Sb**	**20 20 31.6**	**0.0**
HAKT	**HAKKARI**	**1.02**	**70**	*i* P	**Pb**	**20 20 20.2**	**-0.9**
HAKT				*i* S	Sn	20 20 35.5	-1.4
HAKT	**HAKKARI**	**1.02**	**70**	P	**Pb**	**20 20 20.2**	**-0.9**
GEVA	**Gevas**	**1.19**	**22**	*i* P	**Pb**	**20 20 23.5**	**-0.4**
GEVA	**Gevas**	**1.19**	**22**	P	**Pb**	**20 20 23.5**	**-0.4**
BTMN	**Batman**	**1.19**	**305**	*i* P	**Pg**	**20 20 23.6**	**0.0**
BTMN				*i* S	**Sb**	**20 20 40.5**	**+0.7**
BTMN	**Batman**	**1.19**	**305**	P	**Pg**	**20 20 23.6**	**0.0**
BTMN				S	**Sb**	**20 20 40.5**	**+0.7**
MARD	**Mardin**	**1.38**	**275**	*i* P	**Pn**	**20 20 25.2**	**-1.6**
MARD				*i* S	**Sb**	**20 20 45.0**	**-0.1**
GURO	**Guroymak-BITLI**	**1.39**	**345**	PN	**Pb**	**20 20 27.2**	**-0.2**
GURO				SN	**Sn**	**20 20 46.1**	**+0.1**
GURO	**Guroymak-BITLI**	**1.39**	**345**	*e*Pn	**Pb**	**20 20 27.2**	**-0.2**
GURO				*e*Sn	**Sn**	**20 20 46.1**	**+0.1**
SVAN	**Silvan-Diyarba**	**1.40**	**313**	PN	**Pn**	**20 20 27.3**	**+0.3**
SVAN				SN	**Sb**	**20 20 45.9**	**+0.3**
SVAN	**Silvan-Diyarba**	**1.40**	**313**	*i* P	**Pn**	**20 20 27.1**	**+0.1**
SVAN				*i* S	**Sg**	**20 20 46.1**	**+0.4**
SVAN	**Silvan-Diyarba**	**1.40**	**313**	*e*Pn	**Pn**	**20 20 27.3**	**+0.3**
SVAN				*e*Sn	**Sb**	**20 20 45.9**	**+0.3**
YOVA	**Hakkari_Y¯…kse**	**1.48**	**74**	*i* P	**Pg**	**20 20 28.6**	**-0.4**
YOVA				*i* S	**Sg**	**20 20 50.7**	**+2.6**
YOVA	**Hakkari_Y¯…kse**	**1.48**	**74**	P	**Pg**	**20 20 28.6**	**-0.4**
YOVA				S	**Sg**	**20 20 50.7**	**+2.6**
VANB	**Van**	**1.56**	**27**	PN	**Pn**	**20 20 28.1**	**-1.1**
VANB	**Van**	**1.56**	**27**	*e*Pn	**Pn**	**20 20 28.1**	**-1.1**
MAZI	**Mazidag**	**1.66**	**279**	PN	**Pn**	**20 20 30.6**	**0.0**
MAZI	**Mazidag**	**1.66**	**279**	*e*Pn	**Pn**	**20 20 30.6**	**0.0**
DIY	**Diyarbakir**	**1.94**	**292**	*e*Pn	**Pb**	**20 20 35.9**	**-0.6**
DYBB	**Diyarbakir**	**2.02**	**292**	PN	**Pn**	**20 20 35.9**	**+0.3**
CLDR	**Caldiran**	**2.23**	**30**	PN	**Pn**	**20 20 39.1**	**+0.4**
CLDR	**Caldiran**	**2.23**	**30**	*e*Pn	**Pn**	**20 20 39.1**	**+0.4**
BNGB	**Bing¯¶‖**	**2.29**	**322**	PN	**Pn**	**20 20 39.7**	**+0.4**
BINT	**Bingol**	**2.30**	**317**	*e*Pn	**Pn**	**20 20 39.7**	**+0.2**
AGRB	**Hanur-Agry**	**2.40**	**9**	PN	**Pn**	**20 20 41.4**	**+0.5**
AGRB	**Hanur-Agry**	**2.40**	**9**	*e*Pn	**Pn**	**20 20 41.4**	**+0.5**
SVRC	**Sivrice-ELAZID**	**2.79**	**296**	PN	**Pn**	**20 20 45.8**	**-0.4**
SVRC	**Sivrice-ELAZID**	**2.79**	**296**	*e*Pn	**Pn**	**20 20 45.8**	**-0.4**
URFA	**Urfa**	**2.94**	**276**	PN	**Pn**	**20 20 49.0**	**+0.7**
URFA	**Urfa**	**2.94**	**276**	*e*Pn	**Pn**	**20 20 49.0**	**+0.7**
PTK	**Pertek**	**2.98**	**305**	PN	**Pn**	**20 20 48.8**	**0.0**
PTK	**Pertek**	**2.98**	**305**	*e*Pn	**Pn**	**20 20 48.8**	**0.0**
MALT	**Malatya**	**3.41**	**290**	PN	**Pn**	**20 20 55.1**	**+0.3**
MALT	**Malatya**	**3.41**	**290**	*e*Pn	**Pn**	**20 20 55.1**	**+0.3**

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*SJA **17** 20:22:37.9±0.8, 31°.74S×69°.68W, h4km±5km, ML3.5, MW4.2*
*IDC **17** 20:22:37.0±2.0, 31°.60S×69°.34W, h0km, mb4.1/2, mb1 3.9/6, mb1mx3.7/34, mbtmp3.8/6, ML3.9/4, MS2.7/3, Ms1 2.8/3, ms1mx2.7/30, Error ellipse: s-maj=53.7km s-min=23.0km az=112.0*
*NEIC **17** 20:22:38.0±0.0, 31°.74S×69°.68W, h4km, MD4.2(SJA), After SJA.*
NEIC Felt [III] at Mendoza and San Juan.
*ISCJB **17** 20:22:39.2±0.9, 31°.68S±0°.02×69°.58W±0°.04, h9km±6km, mb3.9/2, Error ellipse: s-maj=5.4km s-min=3.5km az=14.1*
*GUC **17** 20:22:40.4±0.6, 31°.70S×69°.72W, h100km, ML4.0*

ISC 17 20:22:38.5±1.1, 31°.65S±0°.02×69°.60W±0°.03, h16km±9km, n40, σ1§70/58, 3C-7D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLS	**Leoncito**	**0.30**	**119**	*e*P	**Pb**	**20 22 45.7**	**0.0**
RTLS				*e*S	**Sb**	**20 22 50.8**	**+0.3**
RTLS				IAML		20 22 51.4	
	comp=Z,6μm,0.3s						
RTLS				*i* S	**Sn**	**20 22 52.1**	**-2.7**
AUSP	**Uspallata**	**0.60**	**162**	*i* P	**Pg**	**20 22 49.9**	**-0.5**
ZON	**Zonda**	**0.79**	**82**	*e*P	**Pb**	**20 22 53.8**	**-0.2**
ZON				*e*S	**Sb**	**20 23 04.3**	**-0.3**
SJA	**San Juan**	**0.90**	**82**	‖*e*P	Pb	20 22 49.8	-5.9
RTCV	**Cerro Valdivia**	**0.93**	**103**	‖*e*P	**Pb**	**20 22 55.6**	**-0.7**
ASAL	**Salagasta**	**1.14**	**145**	*i* P	**Pg**	**20 22 60.0**	**-0.6**
AMOG	**MOGNA**	**1.19**	**53**	*e*P	**Pg**	**20 23 03.0**	**+1.6**
AMOG				*e*S	**Sg**	**20 23 17.0**	**+0.1**
ARCO	**CERRO ARCO**	**1.31**	**155**	*i* P	**Pb**	**20 23 02.8**	**-0.2**
ARCO				*e*S	**Sg**	**20 23 26.1**	**+5.0**
AROD	**Rodeo**	**1.49**	**4**	*i* P	**Pb**	**20 23 05.8**	**-0.2**
ACDV	**Cuesta del Vie**	**1.53**	**16**	*i* P	**Pb**	**20 23 06.5**	**-0.2**
AAGR	**Agrelo**	**1.57**	**156**	*i* P	**Pb**	**20 23 07.6**	**+0.3**
PEL	**Peldehue**	**1.75**	**211**	*e*P	**Pb**	**20 23 09.8**	**-0.5**
PEL				*e*S	**Sb**	**20 23 31.7**	**-0.3**
PEL				IAML		20 23 35.2	
	comp=E,2μm,0.3s						
FCH	**Farellones**	**1.77**	**199**	‖*e*P	**Pb**	**20 23 10.6**	**-0.2**
FCH				*e*S	**Sb**	**20 23 33.8**	**+0.8**
FCH				IAML		20 23 34.8	
	comp=E,928nm,0.2s						
ROCH	**El Roble**	**1.78**	**222**	*e*P	**Pb**	**20 23 10.4**	**-0.5**
ROCH				*i* S	**Sb**	**20 23 33.8**	**+0.7**
ROCH				IAML		20 23 35.7	
	comp=N,2μm,0.4s						
ROC1	**El Roble**	**1.78**	**222**	*e*Pn	**Pb**	**20 23 10.5**	**-0.5**
ROC1				*e*Sn	**Sb**	**20 23 34.0**	**+0.8**
ROC1	**El Roble**	**1.78**	**222**	*e*P	**Pb**	**20 23 10.4**	**-0.5**
ROC1				*e*S	**Sb**	**20 23 33.7**	**+0.5**
GO04	**Tololo Observa**	**1.80**	**325**	*e*Pn	**Pb**	**20 23 11.5**	**+0.2**
GO04				*e*Sn	**Sg**	**20 23 35.4**	**-1.2**
GO04	**Tololo Observa**	**1.80**	**325**	‖*e*P	**Pb**	**20 23 11.7**	**+0.4**
GO04				*e*S	**Sg**	**20 23 35.6**	**-1.0**
TLL	**Tololo Astrono**	**1.81**	**325**	*e*P	**Pb**	**20 23 11.3**	**-0.1**
TLL				*e*S	**Sg**	**20 23 35.6**	**-1.2**
TLL				IAML		20 23 38.2	
	comp=N,3μm,0.7s						
CLCH	**Cerro Calan**	**1.91**	**204**	‖*e*P	**Pb**	**20 23 12.3**	**-0.7**
CLCH				*e*S	**Sb**	**20 23 35.6**	**-1.1**
AVIZ	**Vizcacheras**	**2.03**	**154**	*e*P	**Pb**	**20 23 14.9**	**-0.3**
AVIZ				*e*S	**Sg**	**20 23 42.3**	**-1.6**
ACAN	**Cantantal**	**2.14**	**107**	‖*e*P	**Pb**	**20 23 16.3**	**-0.7**
LCO	**Las Campanas**	**2.80**	**340**	*e*Pn	**Pb**	**20 23 26.4**	**-2.0**
LCO				*e*Sn	**Sb**	**20 24 02.1**	**-0.5**
LCO	**Las Campanas**	**2.80**	**340**	‖*e*P	**Pb**	**20 23 26.3**	**-2.0**
LCO	**Las Campanas**	**2.80**	**340**	‖*e*P	**Pb**	**20 23 25.7**	**-2.7**
LCO				*e*S	**Sb**	**20 23 60.0**	**-2.6**
LCO				IAML		20 24 08.4	
	comp=N,541nm,0.4s						
VCA	**Vinchina**	**3.15**	**23**	‖*e*P	**Pb**	**20 23 32.4**	**-1.9**
VCA				*e*S	**Sb**	**20 24 14.5**	**+2.0**
MRA	**San Martin**	**3.39**	**104**	*e*P	**Pn**	**20 23 32.7**	**+1.8**
GO05	**HualaæØ**	**3.87**	**210**	*e*Pn	**Pn**	**20 23 39.0**	**+1.5**
GO03	**Copiap**	**4.08**	**352**	*e*Pn	**Pn**	**20 23 43.6**	**+3.1**
GO03				*e*Sn	**Sn**	**20 24 32.8**	**+4.8**
CYA	**Choya**	**4.59**	**47**	‖*e*P	**Pn**	**20 23 48.8**	**+1.4**
GO02	**Mina Guanaco**	**6.47**	**0**	*e*Pn	**Pn**	**20 24 16.4**	**+3.0**
TRQA	**Tornquist**	**8.94**	**138**	*e*Pn	**Pn**	**20 24 43.3**	**-3.8**
PLCA	**Paso Flores**	**9.09**	**185**	Pn	**Pn**	**20 24 51.5**	**+2.3**
	comp=N,0.3nm,0.3s,baz=19,slow=15,SNR=12						
PLCA				Lg	Lg	20 27 29.9	
	comp=N,0.3nm,0.3s,baz=334,slow=18,SNR=4.1						
PLCA				LR	LR	20 28 41.4	
	comp=N,112nm,21.4s,baz=49,slow=40						
PLCA	**Paso Flores**	**9.09**	**185**	*e*Pn	**Pn**	**20 24 47.5**	**-1.7**
CPUP	**Villa Florida**	**11.98**	**67**	Pn	**Pn**	**20 25 27.4**	**-1.2**
	comp=N,0.8nm,0.3s,baz=237,slow=14,SNR=11						
CPUP				Lg	Lg	20 28 50.7	
	comp=N,0.3nm,0.3s,baz=132,slow=15,SNR=3.0						
CPUP				LR	LR	20 29 36.9	
	comp=N,32nm,21.6s,baz=239,slow=36						
CPUP	**Villa Florida**	**11.98**	**67**	*e*Pn	**Pn**	**20 25 27.8**	**-0.9**
LPAZ	**La Paz**	**15.36**	**5**	Pn	**Pn**	**20 26 16.8**	**+1.6**
	comp=N,0.1nm,0.3s,baz=185,slow=9.4,SNR=3.7						
LPAZ				LR	LR	20 32 05.3	
	comp=N,20nm,19.8s,baz=182,slow=37						
SIV	**San Ignacio**	**17.42**	**28**	P	**Pn**	**20 26 41.0**	**0.0**
	comp=N,0.1nm,0.3s,baz=207,slow=14,SNR=5.8						
KOWA	**Kowa**	**77.79**	**64**	P	**P**	**20 34 34.9**	**-0.5**
	comp=N,0.9nm,0.5s,baz=256,slow=4.2,SNR=4.7						
TORD	**Torodi Ar. Bea**	**81.47**	**69**	P	**P**	**20 34 54.7**	**-0.7**
	comp=N,0.8nm,0.6s,baz=258,slow=6.8,SNR=14						

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*NIED **17** 20:32:00, 38°.90N×142°.10E, h47km, Mw6.3 Best double couple: M0 2.83000×10^18 NP1:φs186.00000°, δ21.00000°, λ73.00000°. NP2:φs24.00000°, δ70.00000°, λ96.00000°.*
*BJI **17** 20:32:16.6, 38°.76N×142°.12E, h35km, mb6.0/79, mB6.0/66, Ms6.3/99, Ms7 6.3/90*
*MOS **17** 20:32:19.8±0.9, 38°.98N×141°.96E, h43km, mb6.2/83, MS6.2/60, Error ellipse: s-maj=5.8km s-min=3.5km az=92.1*
*NEIC **17** 20:32:20.0±0.0, 38°.69N×141°.95E, h50km, Moment Tensor Solution. s60 Moment tensor: Scale 10^18Nm; Mrr1.87; Mθθ-0.25; Mφφ-1.62; Mrθ1.24; Mrφ-0.49; Mθφ3.15; Best double couple: M0 3.80000×10^18 NP1:φs21.00000°, δ76.00000°, λ91.00000°. NP2:φs195.00000°, δ14.00000°, λ84.00000°. Principal axes: T 3.8900, Plg59.0000°, Azm292.0000°; N -0.1000, Plg1.0000°, Azm200.0000°; P -3.7900, Plg30.0000°, Azm109.0000°;*
*NEIC **17** 20:32:20.6±0.1, 38°.92N×141°.83E, h36km, mb6.0/36, ME6.0, MS5.9/131, MW6.3, MW6.4, MW6.3 Error ellipse: s-maj=3.1km s-min=2.1km az=147.0, Moment Tensor Solution. s82 Moment tensor: Scale 10^18Nm; Mrr3.54; Mθθ-0.02; Mφφ-3.52; Mrθ1.80; Mθφ-0.71; Mφr2.91; Best double couple: M0 5.00000×10^18 NP1:φs178.00000°, δ25.00000°, λ65.00000°. NP2:φs25.00000°, δ67.00000°, λ101.00000°. Principal axes: T 5.0200, Plg66.0000°, Azm315.0000°; N -0.1100, Plg10.0000°, Azm201.0000°; P -4.9100, Plg21.0000°, Azm106.0000°; Broadband fault plane solution: P waves. NP1:φs205.00000°, δ15.00000°, λ90.00000°. NP2:φs25.00000°, δ75.00000°, λ90.00000°. Principal axes: T Plg60.0000°, Azm295.0000°; N Plg0.0000°, Azm0.0000°; P Plg30.0000°, Azm115.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt [III] at Misawa, Sendai and Tokyo. Also felt at Akita, Aomori, Fukushima, Hitachi, Ichinoseki, Ishinomaki, Kesennuma, Kitakami, Matsudo, Mito, Morioka, Nasu, Niigata, Tsuchiura, Utsunomiya and Wakuya. Recorded [4 JMA] in Iwate and Miyagi.
*JMA **17** 20:32:20.8, 38°.87N×142°.09E, h47km±1km, M6.2 Broadband fault plane solution: P waves. NP1: φs18.00000°, δ68.00000

baz=45,slow=21,SNR=8.8
I30JP *i* 20 50 10.0
baz=12,slow=320,SNR=0.3
MAJO Matsushiro 3.86 233 ⇓*i*Pn **Pn 20 33 19.5 +1.6**
MAJO *e*Sn **Sn 20 33 59.2 -2.7**
MAJO Matsushiro 3.86 233 ⇓*i*P **Pn 20 33 19.5 +1.6**
MAJO *e* 20 33 59.2
MAT Matsushiro 3.86 233 P **Pn 20 33 19.5 +1.6**
MAT Matsushiro 3.86 233 P **Pn 20 33 19.5 +1.6**
MAT *e*S **Sn 20 34 08.0 +6.1**
MJB9 Matsu-Tunnel 3.86 233 *e*Pn **Pn 20 33 19.6 +1.8**
MJB9 *e*Sn **Sn 20 33 59.2 -2.7**
JSZ Suzu 3.97 250 ⇓P **Pn 20 33 19.9 +0.5**
JNG Nsakai 4.01 233 ⇓P **Pn 20 33 21.9 +1.9**
JHG Hegura jima 4.17 257 ⇓P **Pn 20 33 22.9 +0.8**
BSO3 Boso 3 4.29 197 P **Pn 20 33 23.4 -0.1**
JOD2 Odawara 2 4.35 214 P **Pn 20 33 25.0 +0.4**
JYN Shimob 4.41 220 P **Pn 20 33 27.4 +1.9**
JAR Ashorobuto 4.57 16 P **Pn 20 33 27.0 -0.5**
JJH Hakui 4.62 246 P **Pn 20 33 29.2 +1.0**
JIM2 Oshima 3 4.69 207 P **Pn 20 33 29.3 +0.1**
JNY Yasuok 4.88 225 P **Pn 20 33 34.2 +2.3**
JIZS Izushimoda 4.90 212 P **Pn 20 33 32.5 +0.3**
SHZ3 Shizuoka 3 4.92 220 P **Pn 20 33 34.2 +1.7**
JKK2 Kamakawa 2 4.98 6 ⇑P **Pn 20 33 33.7 +0.5**
JGF Kuroka 5.00 230 P **Pn 20 33 36.1 +2.6**
ASAJ Asahikawa 5.21 4 P **Pn 20 33 37.9 +1.5**
comp=Z,52nm,0.3s,baz=223,slow=10,SNR=198
ASAJ S **Sn 20 34 34.8 -0.4**
comp=Z,130nm,0.3s,baz=136,slow=30,SNR=4.5
ASAJ Asahikawa 5.21 4 *e*Pn **Pn 20 33 38.0 +1.5**
ASAJ S **Sn 20 34 34.8 -0.4**
ASAJ *e*Sn Sn 20 34 43.3 +8.2
JYZW Yoshizawa 5.22 223 P **Pn 20 33 37.8 +1.3**
JKG Kaga 5.25 242 P **Pn 20 33 38.9 +2.0**
JAO Obara 5.29 228 P **Pn 20 33 39.6 +2.1**
HMMJ Hamamatsu 2 5.33 222 P **Pn 20 33 39.2 +1.1**
INU Inuyama 5.37 230 *e*Pn **Pn 20 33 40.9 +2.3**
GLVR Golovnino 5.48 27*d i*P **Pn 20 33 40.1 +0.1**
GLVR *i* S **Sn 20 34 38.8 -2.9**
GLVR pmax pmax
comp=Z,6μm,0.5s
GLVR pmax pmax
comp=E,3μm,0.3s
GLVR pmax pmax
comp=N,4μm,0.7s
GLVR smax smax
comp=N,63μm,1.7s
GLVR smax smax
comp=E,24μm,1.4s
GLVR smax smax
comp=E,17μm,1.0s
GLVR smax smax
comp=N,24μm,0.4s
GLVR MLR MLR
comp=Z,50μm,15.0s
GLVR MLR MLR
comp=E,78μm,16.0s
GLVR MLR MLR
comp=N,34μm,9.0s
GRPR Tuman 5.79 28*d i*P **Pn 20 33 44.2 -0.1**
GRPR *i* S **Sn 20 34 45.3 -4.1**
GRPR pmax pmax
comp=N,2μm,0.4s
GRPR pmax pmax
comp=Z,3μm,0.4s
GRPR pmax pmax
comp=E,727nm,0.3s
GRPR smax smax
comp=N,8μm,0.5s
GRPR smax smax
comp=E,25μm,0.4s
GRPR MLR MLR
comp=N,57μm,15.0s
GRPR MLR MLR
comp=Z,51μm,15.0s
GRPR MLR MLR
comp=E,32μm,13.0s
LAGR Lagunnoye 5.85 27*d i*P **Pn 20 33 45.3 +0.2**
LAGR *i* S **Sn 20 34 48.0 -2.9**
LAGR pmax pmax
comp=Z,7μm,0.5s
LAGR pmax pmax
comp=N,4μm,0.6s
LAGR pmax pmax
comp=E,4μm,0.3s
LAGR smax smax
comp=N,22μm,0.5s
LAGR smax smax
comp=E,56μm,0.6s
LAGR MLR MLR
comp=Z,59μm,15.0s
LAGR MLR MLR
comp=N,53μm,16.0s
LAGR MLR MLR
comp=E,37μm,14.0s
YUK Yuzh-Kuril'sk 5.86 28*d i*P **Pn 20 33 44.9 -0.4**
YUK *i* S **Sn 20 34 47.0 -4.1**
YUK pmax pmax
comp=N,3μm,0.6s
YUK pmax pmax
comp=Z,4μm,0.6s
YUK pmax pmax
comp=E,1μm,0.2s
YUK smax smax
comp=N,20μm,0.6s
YUK smax smax
comp=E,28μm,0.6s
YUK smax smax
comp=N,48μm,1.5s
YUK smax smax
comp=E,53μm,1.6s
YUK MLR MLR
comp=Z,47μm,15.0s
YUK MLR MLR
comp=N,40μm,14.0s
YUK MLR MLR
comp=E,48μm,17.0s
JFM Mihama 5.90 237 P **Pn 20 33 49.3 +3.4**
JHJ2 Mitsune 6.07 198 *e*Pn **Pn 20 33 48.1 0.0**
JHJ2 *e*Sn **Sn 20 34 52.6 -3.7**
JHJ Hachijo jima 2 6.07 198 P **Pn 20 33 48.5 +0.3**
comp=E,168nm,0.3s,baz=228,slow=2.2,SNR=57
JHJ S **Sn 20 34 53.8 -2.5**
comp=E,735nm,0.3s,baz=216,slow=22,SNR=8.5
SHO Shikotan 6.12 34*d i*P **Pn 20 33 46.9 -1.9**
SHO *i* S **Sn 20 34 50.6 -6.8**
SHO pmax pmax
comp=Z,2μm,2.2s
SHO pmax pmax
comp=N,489nm,0.4s
SHO pmax pmax
comp=E,797nm,0.4s
SHO pmax pmax
comp=Z,910nm,0.4s
SHO smax smax
comp=N,2μm,0.2s
SHO smax smax
comp=E,10μm,0.4s
SHO MLR MLR
comp=Z,34μm,14.0s
SHO MLR MLR
comp=N,60μm,15.0s
JKY Yasaka 6.44 241 ⇓P **Pn 20 33 55.7 +2.5**
JKN2 Miekihoku 6.58 227 P **Pn 20 33 55.9 +0.7**
JKSM Kasumi 6.76 243 ⇓P **Pn 20 34 00.2 +2.5**
JMIK Miki 6.95 236 ⇓P **Pn 20 34 02.9 +2.7**
JKS Kasai 6.98 238 P **Pn 20 34 03.5 +2.9**
JWY Kouya 7.00 230 P **Pn 20 34 01.8 +0.8**
TEY Ternei 7.34 328⇑*e*P **Pn 20 34 08.2 +2.7**
TEY *e*S **Sn 20 35 31.0 +3.6**
TEY pmax pmax
comp=Z,2μm,1.1s
TEY pmax pmax
comp=Z,7μm,7.5s
TEY smax smax
comp=N,590nm,1.4s
TEY smax smax
comp=N,930nm,1.3s
TEY MLR MLR
comp=N,45μm,13.0s
TEY MLR MLR
comp=Z,72μm,15.0s
KUR Kuril'sk 7.65 33*d i*P **Pn 20 34 09.9 +0.1**
KUR *i* S **Sn 20 35 31.7 -3.4**
KUR pmax pmax
comp=N,652nm,0.6s
KUR pmax pmax
comp=Z,1μm,0.6s
KUR pmax pmax
comp=E,490nm,0.4s
KUR pmax pmax
comp=Z,10μm,1.3s
KUR smax smax
comp=E,41μm,4.0s
KUR smax smax
comp=N,28μm,2.2s
KUR smax smax
comp=N,6μm,0.8s
KUR smax smax
comp=E,4μm,0.4s
YSS Yuzh-Sakhalins 8.05 3 *e*Pn **Pn 20 34 16.7 +1.4**
YSS *e*Sn Sn 20 35 33.0 -12
YSS Yuzh-Sakhalins 8.05 3α *i*P **Pn 20 34 15.8 +0.5**
YSS pmax pmax
comp=N,5μm,5.9s
YSS pmax pmax
comp=Z,6μm,5.9s
YSS pmax pmax
comp=Z,1μm,1.0s
YSS pmax pmax
comp=N,890nm,0.9s
YSS MLR MLR
comp=E,55μm,14.0s
JMN Monobe 8.38 234 ⇓P **Pn 20 34 21.1 +1.2**
MSHR Mys Shultsa 9.04 297*de*P **Pn 20 34 29.4 +0.6**
USRK Ussuriysk Ar. 9.20 308 P **Pn 20 34 32.6 +1.5**
comp=E,43nm,0.3s,baz=114,slow=19,SNR=390
USRK LR LR 20 38 01.6
comp=E,165μm,19.9s,baz=113,slow=37
I45RU USSURIYSK INFR 9.21 308 P Pn 20 34 36.6 +5.4
baz=130,slow=24,SNR=2.0
I45RU *i* 21 27 10.0
baz=126,slow=317,SNR=0.8
JHIK Hikimi 9.23 245 P **Pn 20 34 34.4 +2.9**
JTY Toyota 9.98 246 P **Pn 20 34 44.8 +3.1**
UGL Uglegorsk 10.16 0 *e*P **Pn 20 34 44.3 +0.2**
UGL *e*S **Sn 20 36 29.7 -6.9**
UGL pmax pmax
comp=Z,200nm,1.0s
UGL smax smax
comp=N,537nm,1.3s
UGL MLR MLR
comp=Z,37μm,16.0s
UGL MLR MLR
comp=E,33μm,13.0s
JUS Usuki 10.18 238 P **Pn 20 34 46.4 +1.9**
JNU Nakatsue 10.73 241 P **Pn 20 34 53.5 +1.4**
comp=E,6.7nm,0.3s,baz=51,slow=4.2,SNR=54
JNU LR LR 20 39 23.1
comp=E,162μm,21.3s,baz=44,slow=40
JNU Nakatsue 10.73 241 *e*Pn **Pn 20 34 54.3 +2.2**
JNU *e*Sn Sn 20 36 32.2 -19
MDJ Mudanjiang 10.90 305 P **Pn 20 34 53.3 -1.1**
MDJ S **Sn 20 36 56.8 +1.9**
MDJ PcP **PcP 20 40 45.6 -5.6**
MDJ ScP **ScP 20 44 17.3 -2.6**
MDJ ScS **ScS 20 47 53.4 -1.6**
MDJ pmax pmax
comp=E,150nm,1.1s
MDJ LR LR
comp=E,65μm,16.2s
MDJ LR LR
comp=E,107μm,16.7s
MDJ LR LR
comp=E,208μm,19.0s
KSRS Korea Array 11.22 267 P **Pn 20 35 01.6 +3.0**
comp=E,5.4nm,0.3s,baz=80,slow=14,SNR=107
KSRS LR LR 20 39 01.4
comp=E,127μm,20.5s,baz=78,slow=36
KS01 Wonju Array Si 11.23 267 *e*Pn **Pn 20 35 00.8 +1.9**
CBIJ Chichi jima 11.79 179 *e*Pn **Pn 20 35 03.8 -2.7**
CBIJ *e*Sn **Sn 20 37 08.3 -8.4**
JCJ Chichijima 11.79 179 P **Pn 20 35 04.2 -2.3**
comp=E,52nm,0.3s,baz=88,slow=21,SNR=22
JCJ S **Sn 20 37 08.8 -7.9**
comp=E,111nm,0.3s,baz=20,slow=22,SNR=5.7
JCJ LR LR 20 40 26.9
comp=E,14μm,21.5s,baz=358,slow=41
TJN Taejon 11.91 262*c i*P **Pn 20 35 11.2 +3.0**
TYV Tymovskoe 11.95 2 *e*P **Pn 20 35 08.9 +0.3**
TYV *e*S **Sn 20 37 18.7 -1.8**
TYV pmax pmax
comp=Z,4μm,6.9s
TYV pmax pmax
comp=Z,267nm,1.0s
TYV smax smax
comp=N,213nm,1.5s
TYV smax smax
comp=E,12μm,10.4s
INCN Inchon 12.21 268 P Pn 20 35 17.2 +4.9
SNR=67
GRNR Gornyy 12.50 343 *e*P **Pn 20 35 16.8 +0.7**
GRNR pmax pmax
comp=N,84nm,1.0s
GRNR pmax pmax
comp=E,84nm,1.0s
GRNR pmax pmax
comp=Z,160nm,1.0s
KLR Kul'dur 12.68 328 P **Pn 20 35 19.4 +0.8**
comp=Z,0.2nm,0.3s,baz=131,slow=13,SNR=201
KLR LR LR 20 40 14.2
comp=Z,15μm,19.7s,baz=142,slow=37
KLR Kul'dur 12.68 328*c i*P **Pn 20 35 18.6 0.0**
CN2 Changchun 13.39 297 *e*P **Pn 20 35 29.3 +1.0**
CN2 *ep*P P 20 35 36.5 -0.2
CN2 *es*P 20 35 41.9
CN2 *e*S **Sn 20 37 57.3 +1.8**
CN2 pmax pmax
comp=Z,260nm,1.5s
CN2 LR LR
comp=Z,40μm,16.0s
CN2 LR LR
comp=Z,56μm,19.0s
CN2 LR LR
comp=Z,64μm,19.0s
NKL Nikolayevsk 14.27 357 *i*P **Pn 20 35 38.0 -2.1**
NKL *e*S **Sn 20 38 14.0 -2.8**
NKL pmax pmax
comp=N,170nm,1.0s
NKL pmax pmax
comp=E,340nm,1.0s
NKL pmax pmax
comp=Z,300nm,1.0s
NKL pmax pmax
comp=E,800nm,8.0s
NKL pmax pmax
comp=Z,4μm,10.0s
NKL smax smax
comp=E,8μm,11.0s
NKL MLR MLR
comp=Z,44μm,16.0s
SNY Shenyang 14.38 288 ⇑P **Pn 20 35 42.9 +1.2**
SNY pmax pmax
comp=Z,6μm,10.2s
SNY LR LR
comp=Z,49μm,19.9s
SNY LR LR
comp=Z,56μm,27.1s
SNY LR LR
comp=Z,137μm,28.4s
OKH Okha 14.65 2⇑*i*P **Pn 20 35 44.7 -0.5**
OKH *i* S **Sn 20 38 18.7 -7.4**
OKH pmax pmax
comp=Z,6μm,8.0s
OKH smax smax
comp=E,8μm,11.0s
OKH MLR MLR
comp=Z,50μm,22.0s
SKR Severo-Kuril's 15.40 36 *e*P **Pn 20 35 51.5 -3.5**
SKR *e*S **Sn 20 38 39.6 -4.7**
SKR pmax pmax
comp=Z,303nm,1.7s
SKR pmax pmax
comp=Z,1μm,6.0s
SKR pmax pmax
comp=Z,600nm,7.0s
SKR MLR MLR
comp=Z,21μm,17.0s
DL2 Dalian 15.90 276⇑*i*P **Pn 20 36 02.3 +0.8**
DL2 sP **pP 20 36 16.3 +1.1**
DL2 S **Sn 20 38 59.1 +2.4**
DL2 pmax pmax
comp=Z,780nm,1.1s
DL2 pmax pmax
comp=Z,7μm,9.1s
DL2 LR LR
comp=Z,66μm,17.5s
DL2 LR LR
comp=Z,85μm,17.9s
JOW Kunigami 16.68 228 P **Pn 20 36 10.0 -1.6**
comp=Z,2.3nm,0.3s,baz=266,slow=19,SNR=5.8
JOW Kunigami 16.68 228 *e*Pn **Pn 20 36 07.8 -3.8**
PEA0B Petropavlovsk- 17.82 32 *e*Pn **Pn 20 36 23.7 -1.7**
PETK Petropavlovsk- 17.82 32 P **Pn 20 36 23.2 -2.2**
comp=Z,1.1nm,0.3s,baz=202,slow=7.4,SNR=27
PETK LR LR 20 44 21.2
comp=Z,23μm,19.6s,baz=216,slow=40
PETK Petropavlovsk- 17.82 32 *e*Pn **Pn 20 36 22.6 -2.9**
ZEA Zeya 17.95 331*ce*P **Pn 20 36 24.8 -2.2**
ZEA *e*S **Sn 20 39 39.0 -7.1**
ZEA pmax pmax
comp=N,420nm,0.8s
ZEA pmax pmax
comp=E,440nm,1.0s
ZEA pmax pmax
comp=Z,1μm,1.0s
ZEA pmax pmax
comp=N,5μm,9.0s
ZEA pmax pmax
comp=E,4μm,9.0s
ZEA pmax pmax
comp=Z,7μm,9.0s
ZEA smax smax
comp=N,3μm,9.0s
ZEA MLR MLR
comp=N,87μm,16.0s
ZEA MLR MLR
comp=E,57μm,16.0s
ZEA MLR MLR
comp=Z,100μm,16.0s
PET Petropavlovsk 18.16 34 *e*P **Pn 20 36 32.1 +2.5**
PET Petropavlovsk 18.16 34*ce*P **Pn 20 36 31.7 +2.1**
PET *e*S **Sn 20 39 50.6 -0.6**
PET pmax pmax
comp=Z,2μm,6.4s
PET pmax pmax
comp=Z,4μm,6.3s
PET pmax pmax
comp=Z,503nm,1.2s
PET MLR MLR
comp=Z,26μm,16.0s
PET MLR MLR
comp=Z,23μm,15.0s
SSE Sheshan 18.76 252 P **P 20 36 36.3 +0.1**
SSE S Sn 20 39 51.9 -14
SSE sS **S 20 40 15.9 +8.5**
SSE pmax pmax
comp=Z,250nm,1.2s
SSE pmax pmax
comp=Z,3μm,11.8s
SSE LR LR
comp=Z,9μm,16.5s
HIA Hailar 19.00 310 *e*P **P 20 36 36.6 -2.2**
HIA Hailar 19.00 310 *e*P **P 20 36 36.6 -2.2**
TIA Tai'an 19.93 270 P **P 20 36 47.0 -2.0**
TIA pmax pmax
comp=Z,170nm,0.9s
TIA pmax pmax
comp=Z,9μm,14.2s
TIA LR LR
comp=Z,15μm,23.2s
TIA LR LR
comp=Z,17μm,20.8s
TIA LR LR
comp=Z,37μm,24.5s
BJI Beijing 19.99 281⇑*e*P **P 20 36 48.4 -1.2**
BJI sP **sP 20 37 08.3 +2.3**
BJI S **S 20 40 27.3 -4.5**
BJI pmax pmax
comp=Z,190nm,1.5s
BJT Baijiatuau 19.99 281 *e*P **P 20 36 47.6 -2.0**
BJT Baijiatuau 19.99 281 *e*P **P 20 36 47.6 -2.0**
NJ2 Nanjing 20.06 257 *e*P **P 20 36 49.3 -1.1**
NJ2 pP **pP 20 36 57.3 -3.9**
NJ2 sP **sP 20 37 01.6 -5.3**
NJ2 S **S 20 40 35.1 +1.7**
NJ2 sS Sn 20 40 41.9 +4.5
NJ2 pmax pmax
comp=Z,5μm,7.3s
NJ2 LR LR
comp=Z,42μm,15.7s
NJ2 LR LR
comp=Z,38μm,21.1s
NJ2 LR LR
comp=Z,68μm,20.1s
CLNS Chul'man 21.20 333 *e*P **P 20 37 01.8 -0.8**
CLNS *e**PP **pP 20 37 13.1 -0.3**
CLNS *e* 20 37 20.1
CLNS *e*S **S 20 40 55.8 +0.2**
CLNS *e* 20 41 04.4
CLNS *e*SS **SnSn 20 41 29.9 +10**
CLNS *e* 20 48 17.2
CLNS pmax pmax
comp=Z,448nm,1.0s
CLNS pmax pmax
comp=N,471nm,1.3s
CLNS pmax pmax
comp=E,234nm,1.0s
CLNS pmax pmax
comp=E,330nm,1.1s
CLNS pmax pmax
comp=Z,374nm,0.9s
CLNS pmax pmax
comp=N,444nm,1.2s
CLNS smax smax
comp=N,8μm,11.9s
CLNS smax smax
comp=E,12μm,10.8s
CLNS MLR MLR
comp=Z,67μm,19.0s
CLNS MLR MLR
comp=N,51μm,17.0s
CLNS MLR MLR
comp=E,12μm,17.0s
MA2 Magadan 21.41 12 P **P 20 37 05.5 +0.8**
comp=E,488nm,0.9s,baz=196,slow=8.8,SNR=102
MA2 LR LR 20 45 08.3
comp=E,23μm,21.8s,baz=198,slow=36
MA2 Magadan 21.41 12 *e*P **P 20 37 05.2 +0.4**
MA2 LR LR
comp=Z,25μm,22.0s
MA2 Magadan 21.41 12⇑*e*P **P 20 37 05.5 +0.8**
MA2 pmax pmax
comp=Z,1μm,1.3s
MA2 MLR MLR
comp=Z,29μm,22.0s
YOJ Yonaguni jima 21.62 234 *e*P **P 20 37 02.8 -4.5**
YOJ Yonaguni jima 21.62 234 *e*P **P 20 37 02.8 -4.5**
TATO Taipei 22.24 237 *e*P **P 20 37 13.5 -0.4**
TATO *e*PcP **PcP 20 41 05.5 -3.4**
TATO LR LR
comp=Z,55μm,19.0s
YHNB Yeheng 22.52 237 *e*P **P 20 37 14.9 -2.2**
NACB Ninganchiao 22.73 236 *e*P **P 20 37 16.1 -3.0**
TIY Taiyuan 23.23 276 *e*P **P 20 37 21.1 -3.1**
TIY S **S 20 41 23.3 -10**
TIY pmax pmax
comp=Z,310nm,0.7s
TIY pmax pmax
comp=Z,3μm,6.6s
TIY LR LR
comp=Z,28μm,16.9s
TIY LR LR
comp=Z,50μm,15.7s
TIY LR LR
comp=Z,76μm,16.6s
SSLB Suanglung 23.41 236 *e*P **P 20 37 22.8 -3.3**
HHC Hu-ho-hao-te 23.42 284 *e*P **P 20 37 25.1 -1.0**
HHC pP pP 20 37 34.3 -3.1
HHC sP sP 20 37 38.4 -4.6
HHC PP **PnPn 20 37 56.6 +2.9**
HHC S **S 20 41 31.5 -4.6**
HHC sS sS 20 41 46.6 -9.3
HHC SS **SnSn 20 42 18.6 +4.3**
HHC pmax pmax
comp=Z,270nm,1.2s

HHC pmax pmax
comp=Z,2μm,5.6s
HHC LR LR
comp=Z,17μm,13.7s
HHC LR LR
comp=Z,90μm,15.8s
HHC LR LR
comp=Z,99μm,16.1s
YULB Yu-li 23.47 235 *e*P **P 20 37 22.9 -3.7**
CIT Chita 23.72 313 *e*P **P 20 37 28.6 -0.1**
CIT *e* 20 37 46.3
CIT *e* 20 38 03.1
CIT *e* 20 38 13.8
CIT *e* 20 41 40.8
CIT *e* 20 42 03.1
CIT pmax pmax
comp=Z,1μm,1.2s
TPUB Ta-pu 23.97 236 *e*P **P 20 37 27.4 -3.8**
TWG Pinlang 24.03 234 *e*P **P 20 37 30.3 -1.5**
WHN Wuhan 24.18 258 P **P 20 37 31.3 -1.8**
WHN S **S 20 41 44.3 -3.9**
WHN LR LR
comp=Z,54μm,16.1s
WHN LR LR
comp=Z,125μm,18.1s
WHN LR LR
comp=Z,161μm,19.3s
QZH Quanzhou 24.21 242⇑*i*P **P 20 37 29.8 -3.6**
QZH S **S 20 41 44.0 -4.7**
QZH pmax pmax
comp=Z,140nm,1.5s
QZH pmax pmax
comp=Z,5μm,10.1s
QZH LR LR
comp=Z,16μm,21.0s
QZH LR LR
comp=Z,28μm,24.3s
QZH LR LR
comp=Z,34μm,24.4s
YAK Yakutsk 24.36 346 *e*P **P 20 37 33.2 -1.2**
comp=Z,1μm,0.8s
YAK LR LR
comp=Z,41μm,20.0s
YAK Yakutsk 24.36 346*c i*P **P 20 37 33.9 -0.5**
YAK *e**PP **pP 20 37 45.2 -1.1**
YAK *e*PPP PPP 20 38 16.1
YAK *e*S **S 20 41 50.5 0.0**
YAK *e**SS **sS 20 42 08.6 -1.7**
YAK *e*SSS SSS 20 42 49.1
YAK pmax pmax
comp=Z,2μm,1.0s
YAK pmax pmax
comp=N,483nm,0.9s
YAK pmax pmax
comp=E,153nm,1.1s
YAK smax smax
comp=N,10μm,3.3s
YAK smax smax
comp=E,3μm,2.1s
YAK MLR MLR
comp=Z,33μm,16.0s
YAK MLR MLR
comp=E,19μm,18.0s
YAK MLR MLR
comp=N,53μm,21.0s
BTO Baotou 24.61 284 *e*P **P 20 37 33.9 -3.2**
BTO S **S 20 41 50.3 -4.9**
SEY Seymchan 24.85 11 P **P 20 37 40.5 +1.7**
comp=N,367nm,0.9s,baz=205,slow=7.2,SNR=303
SEY LR LR 20 47 30.1
comp=N,27μm,21.9s,baz=198,slow=36
SEY Seymchan 24.85 11*ce*P **P 20 37 40.4 +1.5**
GUMO Guam 25.35 174 P P 20 37 57.8 +14
comp=N,142nm,0.8s,baz=357,slow=6.9,SNR=6.0
GUMO LR LR 20 47 40.2
comp=N,17μm,21.8s,baz=14,slow=36
GUMO Guam 25.35 174 PFAKE 20 38 00.0 +16
GUMO LR LR
comp=Z,31μm,22.0s
SMY Shemya 26.00 47 *e*P **P 20 37 51.7 +2.3**
SMY Shemya 26.00 47 *e*P **P 20 37 51.7 +2.3**
BOD Bodaibo 26.24 325 *e*P **P 20 37 51.3 -0.2**
BOD pmax pmax
comp=Z,539nm,1.5s
ULN Ulaanbaatar 26.77 301 *e*P **P 20 37 56.8 +0.1**
comp=Z,325nm,1.2s
ULN LR LR
comp=Z,45μm,20.0s
ULN Ulaanbaatar 26.77 301 P **P 20 37 57.1 +0.5**
SNR=142
ULN Ulaanbaatar 26.77 301*ce*P **P 20 37 56.7 +0.1**
ULN pmax pmax
comp=Z,185nm,1.2s
ULN MLR MLR
comp=Z,45μm,20.0s
XAN Xi'an 26.99 270 P **P 20 37 56.5 -2.1**
XAN pP pP 20 38 08.3 -2.2
XAN S **S 20 42 29.6 -3.3**
XAN pmax pmax
comp=Z,330nm,0.6s
XAN pmax pmax
comp=Z,7μm,8.3s
XAN LR LR
comp=Z,36μm,21.6s
XAN LR LR
comp=Z,37μm,20.6s
XAN LR LR
comp=Z,39μm,24.5s
SONA1 Songino Array 27.20 301 *e*P **P 20 38 00.5 +0.1**
SONM Songino Array 27.20 301 P **P 20 38 00.8 +0.3**
comp=Z,301nm,1.2s,baz=99,slow=8.6,SNR=104
SONM LR LR 20 49 21.2
comp=Z,47μm,19.4s,baz=104,slow=38
SONM P3KPbc 21 10 48.7
comp=Z,1.1nm,0.7s,baz=321,slow=2.0,SNR=3.8
APYP Conner 27.72 227 *e*P **P 20 38 03.0 -2.1**
ENH Enshi 28.04 262 *e*P **P 20 38 07.2 -0.8**
comp=Z,539nm,0.6s
ENH LR LR
comp=Z,34μm,22.0s
ABRA Dolores 28.19 227 *e*P **P 20 38 09.9 +0.5**
H11N2 WAKE ISLAND Hy 28.74 125 T T 21 08 38.7
baz=317,slow=75
H11N1 WAKE ISLAND Hy 28.75 125 T T 21 08 38.4
baz=317,slow=75,SNR=3217
H11N3 WAKE ISLAND Hy 28.76 125 T T 21 08 39.0
baz=317,slow=75
WAKE Wake Island 28.91 126 *e*P **P 20 38 17.0 +1.3**
comp=Z,366nm,1.1s
WAKE LR LR
comp=Z,39μm,20.0s
GZH Guangzhou 29.07 246 P **P 20 38 13.3 -3.9**
GZH S **S 20 42 57.9 -7.8**
GZH pmax pmax
comp=Z,6μm,9.8s
GZH LR LR
comp=Z,28μm,16.7s
GZH LR LR
comp=Z,32μm,16.5s
IRK Irkutsk 29.25 310 *e*P **P 20 38 18.3 -0.2**
IRK *e* 20 38 37.0
IRK *e* 20 39 19.7
IRK pmax pmax
comp=Z,568nm,2.5s
H11S1 WAKE ISLAND Hy 29.52 127 T T 21 09 37.3
baz=319,slow=76,SNR=736
H11S3 WAKE ISLAND Hy 29.52 127 T T 21 09 37.9
baz=319,slow=76,SNR=1062
TLY Talaya 29.52 308 P **P 20 38 21.4 +0.4**
comp=Z,81nm,0.7s,baz=105,slow=6.0,SNR=83
TLY LR LR 20 50 56.8
comp=Z,68μm,18.6s,baz=108,slow=38
TLY Talaya 29.52 308 *e*P **P 20 38 21.4 +0.4**
comp=Z,291nm,1.1s
TLY LR LR
comp=Z,66μm,19.0s
TLY Talaya 29.52 308 P **P 20 38 21.7 +0.7**
SNR=102
TLY Talaya 29.52 308*c i*P **P 20 38 20.9 0.0**
TLY *e* 20 39 31.6
TLY *e*S **S 20 43 05.6 -6.8**
TLY pmax pmax
comp=Z,364nm,1.3s
TLY MLR MLR
comp=Z,64μm,20.0s
H11S2 WAKE ISLAND Hy 29.53 127 T T 21 09 38.3
baz=319,slow=76,SNR=2727
ZAK Zakamensk 29.54 306 *e*P **P 20 38 21.5 +0.3**
ZAK pmax pmax
comp=Z,333nm,1.2s
LZH Lanzhou 30.30 277⇑P **P 20 38 27.8 -0.3**
LZH pP pP 20 38 36.4 -3.7
LZH sP sP 20 38 40.9 -4.6
LZH PP **PnPn 20 39 26.1 -1.2**
LZH S **S 20 43 23.0 -2.1**
LZH sS sS 20 43 39.3 -5.9
LZH SS **SnSn 20 45 02.6 +0.3**
LZH pmax pmax
comp=Z,700nm,1.0s
LZH pmax pmax
comp=Z,9μm,8.5s
LZH LR LR
comp=Z,59μm,14.5s
LZH LR LR
comp=Z,82μm,14.6s
LZH LR LR
comp=Z,120μm,16.8s
TGY Tagaytay City 30.95 223 P **P 20 38 33.7 -0.3**
comp=Z,146nm,0.5s,baz=229,slow=18,SNR=2.3
MOY Mondy 31.15 308 *e*P **P 20 38 35.6 +0.2**
MOY pmax pmax
comp=Z,506nm,2.5s
GYA Guiyang 32.07 258⇑*i*P **P 20 38 42.6 -1.2**
GYA pP pP 20 38 54.3 -1.5
GYA PP **PnPn 20 39 51.0 +0.6**
GYA PcP **PcP 20 41 34.8 +2.3**
GYA S **S 20 43 54.0 +1.1**
GYA sS sS 20 44 08.4 -4.7
GYA ScP **ScP 20 45 14.3 +2.1**
GYA SS **SnSn 20 45 45.5 -0.1**
GYA ScS **ScS 20 49 11.4 +0.2**
GYA pmax pmax
comp=Z,480nm,1.1s
GYA pmax pmax
comp=Z,3μm,12.4s
GYA LR LR
comp=Z,26μm,22.4s
GYA LR LR
comp=Z,26μm,20.9s
GYA LR LR
comp=Z,41μm,22.7s
BILL Bilibino 32.08 17 *e*P **P 20 38 43.4 +0.1**
comp=Z,189nm,1.2s
BILL LR LR
comp=Z,16μm,21.0s
BILL Bilibino 32.08 17*c i*P **P 20 38 43.2 -0.1**
BILL *i* 20 38 57.3
BILL *i* 20 39 50.7
BILL *i*S **S 20 43 43.9 -8.2**
BILL pmax pmax
comp=Z,194nm,1.0s
BILL MLR MLR
comp=Z,16μm,20.0s
RCP Roxas 32.21 217⇑*e*P **P 20 38 44.4 -0.5**
CD2 Chengdu 32.22 267 ⇓P **P 20 38 43.9 -1.1**
CD2 pP pP 20 38 53.1 -3.9
CD2 PP **PP 20 39 56.8 -1.4**
CD2 S **S 20 43 49.3 -5.7**
CD2 sS sS 20 44 10.5 -4.6
CD2 pmax pmax
comp=Z,580nm,0.8s
CD2 pmax pmax
comp=Z,5μm,11.4s
CD2 LR LR
comp=Z,42μm,14.5s
CD2 LR LR
comp=Z,42μm,24.0s
GTA Gaotai 32.53 284 *e*P **P 20 38 47.1 -0.7**
GTA pP pP 20 38 56.8 -3.0
GTA sP sP 20 39 00.8 -4.4
GTA PcP **PcP 20 41 32.6 -1.0**
GTA S **S 20 44 01.3 +1.3**
GTA sS sS 20 44 17.8 -2.3
GTA ScP **ScP 20 45 14.9 +1.2**
GTA PcS **PcS 20 45 19.5 +0.7**
GTA SS **SnSn 20 46 00.5 +3.9**
GTA ScS **ScS 20 49 13.3 0.0**
GTA pmax pmax
comp=Z,120nm,1.5s
GTA pmax pmax
comp=Z,3μm,7.3s
GTA LR LR
comp=Z,23μm,18.1s
GTA LR LR
comp=Z,68μm,17.8s
GTA LR LR
comp=Z,100μm,18.7s
BUSP Coron 33.10 222 *e*P **P 20 38 51.6 -1.1**
TIXI Tiksi 33.49 352 P **P 20 38 55.1 -0.5**
comp=Z,54nm,0.9s,baz=145,slow=6.5,SNR=125
TIXI Tiksi 33.49 352 *e*P **P 20 38 55.0 -0.6**
comp=Z,77nm,1.0s
TIXI LR LR
comp=Z,27μm,19.0s
TIXI Tiksi 33.49 352*ce*P **P 20 38 54.9 -0.6**
TIXI pmax pmax
comp=Z,146nm,1.7s
TIXI MLR MLR
comp=Z,24μm,18.0s
CGP Cagayan de Oro 34.10 212⇓*e*P **P 20 39 03.7 +2.2**
QIZ Qiongzhong 34.19 244 P **P 20 39 03.0 +0.8**
QIZ sP **pP 20 39 15.0 +0.8**
QIZ S **S 20 44 21.4 -4.2**
QIZ pmax pmax
comp=Z,3μm,6.3s
QIZ LR LR
comp=Z,22μm,18.6s
QIZ LR LR
comp=Z,9μm,20.2s
QIZ LR LR
comp=Z,27μm,16.9s
QIZ Qiongzhong 34.19 244 PFAKE 20 39 10.0 +7.8
QIZ LR LR
comp=Z,20μm,20.0s
BUKP Musuan 34.48 211 *e*P **P 20 39 03.2 -1.6**
DAV Davao City (W) 35.02 209 P **P 20 39 09.1 -0.2**
comp=Z,144nm,0.4s,baz=291,slow=8.0,SNR=3.0
DAV LR LR 20 53 33.8
comp=Z,12μm,20.6s,baz=40,slow=36
DAV Davao City (W) 35.02 209 P **P 20 39 09.1 -0.2**
DAV LR LR
comp=Z,8μm,19.0s
MIDW Midway 35.20 95 PFAKE 20 39 20.0 +9.2
MIDW LR LR
comp=Z,38μm,22.0s
PAGZ Pagadian 35.20 213 *e*P **P 20 39 08.1 -2.8**
CTBH Cotabato--PC H 35.41 212 *e*P **P 20 39 13.2 +0.5**
HVS Khovu-Aksy 35.66 306*d i*P **P 20 39 15.3 +0.6**
HVS pmax pmax
comp=Z,420nm,1.2s
HVS MLR MLR
comp=Z,57μm,16.0s
PPR Puerto Princes 35.74 222⇑*e*P **P 20 39 13.2 -2.4**
KMI Kunming 35.77 259 P **P 20 39 15.6 -0.5**
KMI pP pP 20 39 26.8 -1.4
KMI sP sP 20 39 33.8 +0.3
KMI PP **PP 20 40 40.3 +2.4**
KMI S **S 20 44 44.9 -5.5**
KMI sS sS 20 45 05.4 -5.3
KMI SS **SnSn 20 47 07.4 -8.2**
KMI pmax pmax
comp=Z,540nm,1.3s
KMI pmax pmax
comp=Z,4μm,7.2s
KMI LR LR
comp=Z,28μm,20.1s
KMI LR LR
comp=Z,32μm,20.4s
KMI LR LR
comp=Z,48μm,20.4s
SKMP Bagumbayan, Su 35.92 211 *e*P **P 20 39 17.5 +0.4**
BATP Bataraza 37.05 222 *e*P **P 20 39 26.4 -0.4**
SKNT Sakolnakorn 39.71 247 P **P 20 39 48.6 -0.5**
comp=Z,131nm,1.2s,comp=Z,2μm
ANM Nome 39.74 32 *e*P **P 20 39 51.2 +2.4**
ANM *e*PcP **PcP 20 41 50.7 -3.7**
ANM Nome 39.74 32 *e*P **P 20 39 51.2 +2.4**
ANM *e* 20 41 50.7
MYLDM Lahad Datu 39.79 218 *e*P **P 20 39 51.5 +1.8**
LKP Lekhapani 40.00 267 *e*P **P 20 39 50.4 -1.0**
BAKI Biak 40.28 189 P **P 20 39 58.2 +4.4**
comp=Z,150nm,1.5s,comp=Z,4μm
WMQ Urumqi 40.47 295 P **P 20 39 56.3 +1.1**
WMQ sP sP 20 40 10.9 -1.9
WMQ PP **PnPn 20 41 37.1 +4.1**
WMQ PcP **PcP 20 41 57.3 +0.1**
WMQ PcS **PcS 20 45 49.4 +1.6**
WMQ S **S 20 46 02.5 +1.7**
WMQ sS sS 20 46 24.8 +3.5
WMQ SS **SS 20 48 56.0 -5.1**
WMQ pmax pmax
comp=Z,2μm,1.5s
WMQ LR LR
comp=Z,24μm,16.5s
WMQ LR LR
comp=Z,29μm,29.7s
WMQ LR LR
comp=Z,57μm,29.1s
SIJI Sorong 40.81 197 P **P 20 39 58.3 +0.1**
comp=Z,22nm,0.6s,baz=2.4,slow=9.8,SNR=12
SIJI LR LR 20 54 27.7
comp=Z,11μm,20.6s,baz=358,slow=32
RKPI Ransiki, Papua 40.88 192 P **P 20 40 02.0 +3.3**
ZAA0 Zalesovo Array 41.04 311 *e*P **P 20 39 59.5 -0.2**
ZALV Zalesovo Beam 41.04 311 P **P 20 40 00.1 +0.4**
comp=Z,777nm,1.1s,baz=89,slow=6.1,SNR=445
ZALV PcP **PcP 20 41 59.5 +0.7**
comp=Z,74nm,0.9s,baz=82,slow=3.8,SNR=4.7
ZALV LR LR 20 58 00.6
comp=Z,52μm,18.1s,baz=89,slow=38
ZALV Zalesovo Beam 41.04 311 *e*P **P 20 39 59.8 0.0**
ZALV *e*PcP **PcP 20 41 58.9 +0.1**
JAY Jayapura 41.24 182 P **P 20 40 02.3 +0.5**
comp=Z,53nm,1.1s,baz=314,slow=4.8,SNR=16
JAY LR LR 20 57 53.8
comp=Z,3μm,19.5s,baz=360,slow=37
JAY Jayapura 41.24 182 P **P 20 40 05.1 +3.3**
GENI Genyem 41.34 183 P **P 20 40 05.0 +2.5**
ZIRO ZIRO 41.46 269 *e*P **P 20 40 04.3 +0.6**
CMAI Chiengmai2 41.52 255 P **P 20 40 04.5 +0.3**
comp=Z,2μm,0.9s
JORH JORHAT 41.53 268 *e*P **P 20 40 03.1 -0.9**
MOKO MOKOCHONG 41.53 267 *e*P **P 20 40 04.9 +0.7**
LBMI Labuha 41.57 202 P **P 20 40 08.3 +3.9**
KMSI Cibinong 41.60 208 P **P 20 40 06.1 +1.5**
RDOG Red Dog Mine 41.60 28 *e*P **P 20 40 05.7 +1.5**
ZSN Zaisan 41.72 301⇑*i*P **P 20 40 06.5 +1.1**
comp=Z,287nm,1.3s
ZSN *i*S **S 20 46 21.1 +1.9**
ITAN ITANAGAR 41.74 269 *e*P **P 20 40 06.7 +0.9**
NRIK Noril'sk 41.78 334 P **P 20 40 05.3 -0.3**
comp=Z,139nm,0.9s,baz=110,slow=9.0,SNR=119
NRIK LR LR 20 58 28.4
comp=Z,73μm,19.8s,baz=107,slow=38
LAMP Lampang 41.92 253 P **P 20 40 07.8 +0.4**
comp=Z,44nm,0.8s
NVS Novosibirsk 41.93 312⇑*i*P **P 20 40 07.4 +0.5**
NVS *e* 20 42 04.5
NVS *e*S **S 20 46 14.6 -7.3**
NVS pmax pmax
comp=N,66nm,1.3s
NVS pmax pmax
comp=Z,549nm,1.3s
NVS smax smax
comp=N,158nm,2.2s
NVS smax smax
comp=E,296nm,2.2s
PBKT Sadao Pong 42.16 250 P **P 20 40 08.3 -1.0**
comp=E,116nm,1.4s,comp=E,3μm
PBKT Sadao Pong 42.16 250 *e*P **P 20 40 08.2 -1.0**
PHIT Phitsanulok 42.17 251 P **P 20 40 11.0 +1.6**
comp=E,59nm,1.2s,comp=E,692nm
CHTO Chiang Mai 42.26 254 P **P 20 40 10.1 0.0**
comp=E,737nm,0.7s,comp=E,20μm
CHTO Chiang Mai 42.26 254 *e*P **P 20 40 10.2 0.0**
comp=E,101nm,0.7s
CHTO LR LR
comp=Z,14μm,20.0s
CHTO Chiang Mai 42.26 254 P **P 20 40 10.5 +0.4**
SNR=22
CHTO Chiang Mai 42.26 254 *e*P **P 20 40 10.2 +0.1**
CHTO pmax pmax
comp=Z,101nm,0.7s
CHTO MLR MLR
comp=Z,14μm,20.0s
MRSI Marisa 42.46 211 P **P 20 40 12.2 +0.5**
CM31 Chiang Mai Arr 42.48 254 *e*P **P 20 40 12.2 +0.3**
CM31 *e*PcP **PcP 20 42 05.0 +0.8**
CMAR Chiang Mai Arr 42.48 254 P **P 20 40 12.0 +0.1**
comp=Z,14nm,0.7s,baz=43,slow=8.1,SNR=46
CMAR PcP **PcP 20 42 05.0 +0.9**
comp=Z,8.7nm,0.5s,baz=27,slow=1.6,SNR=5.2
CM01 Chiang Mai Arr 42.49 254 *e*P **P 20 40 11.9 0.0**
CM01 *e*PcP **PcP 20 42 04.8 +0.7**
LSA Lhasa 42.57 273 P **P 20 40 14.0 +0.9**
LSA S **S 20 46 30.8 -2.1**
LSA pmax pmax
comp=Z,4μm,11.1s
LSA LR LR
comp=Z,7μm,21.4s
LSA LR LR
comp=Z,10μm,24.6s
LSA LR LR
comp=Z,44μm,25.9s
LSA Lhasa 42.57 273 *e*P **P 20 40 14.0 +0.9**
comp=Z,158nm,0.9s
LSA LR LR
comp=Z,36μm,21.0s
LSA Lhasa 42.57 273 P **P 20 40 14.2 +1.2**
LSA Lhasa 42.57 273 *e*P **P 20 40 14.0 +0.9**
LSA pmax pmax
comp=Z,158nm,0.9s
LSA MLR MLR
comp=Z,36μm,21.0s
FAKI Fak Fak 42.60 195 P **P 20 40 14.9 +2.1**
TEZP TEZPUR 42.72 268 *e*P **P 20 40 13.7 0.0**
SRAK Srakaew 43.07 246 P **P 20 40 14.2 -2.5**
comp=Z,353nm,1.2s,comp=Z,3μm
SANI Sanana 43.37 204 P **P 20 40 20.5 +1.5**
MPSI Mapaga 43.43 213 P **P 20 40 20.5 +1.0**
LUWI Luwuk 43.53 209 P **P 20 40 21.1 +0.8**
LUWI Luwuk 43.53 209 *e*P **P 20 40 19.4 -1.0**
MK01 Makanchi Array 43.57 301 *e*P **P 20 40 20.9 +0.4**
MK31 Makanchi Array 43.57 301 *e*P **P 20 40 20.8 +0.3**
MK31 Makanchi Array 43.57 301 *e*P **P 20 40 20.8 +0.3**
MKAR Makanchi Array 43.57 301 P **P 20 40 20.7 +0.3**
comp=Z,294nm,0.8s,baz=84,slow=8.7,SNR=1063
MKAR LR LR 20 59 09.5
comp=Z,30μm,21.5s,baz=65,slow=37
MKAR P4KPbc 21 18 15.8
comp=Z,0.6nm,0.8s,baz=69,slow=8.2,SNR=4.3
SVW2 Sparrevohn 43.73 39 *e*P **P 20 40 23.6 +2.1**
MSAI Masohi 43.76 199 P P 20 40 29.0 +6.8
MAKZ Makanchi 43.78 301 *e*P **P 20 40 22.5 +0.4**
MAKZ Makanchi 43.78 301 *e*P **P 20 40 22.5 +0.4**
GUWA GUWAHATI 43.79 269 *e*P **P 20 40 22.0 -0.4**
APSI Ampana 43.84 210 P **P 20 40 23.8 +1.0**
SHL Shillong 43.96 268 *e*P **P 20 40 23.2 -0.7**
SHL ⇑*i*P **P 20 40 23.5 -0.5**
SHL IAmb IAmb 20 40 26.8
comp=Z,280nm,1.2s
SHL *e*S **S 20 46 54.0 +1.3**
SHL Shillong 43.96 268 *e*P **P 20 40 23.0 -1.0**
SHL Shillong 43.96 268 *e*P **P 20 40 23.0 -1.0**
SEM Semipalatinsk 44.22 306⇑*i*P **P 20 40 24.7 -1.1**
comp=Z,450nm,1.2s
SEM *e*S **S 20 46 56.4 +0.2**
SEM *i*LR LR 20 58 59.6
comp=Z,19μm,16.2s
AAI Ambon 44.28 200 P **P 20 40 30.5 +4.2**
comp=Z,296nm,1.1s,comp=Z,6μm
AAI Ambon 44.28 200 P **P 20 40 27.4 +1.1**
AAI pmax pmax
comp=Z,299nm,1.1s
PCI Palu 44.58 213 P **P 20 40 29.0 +0.2**
comp=Z,409nm,1.2s,comp=Z,4μm
PCI Palu 44.58 213 P **P 20 40 28.9 +0.2**
PCI pmax pmax
comp=Z,409nm,1.2s
BNDI Bandanaira 44.66 197 P **P 20 40 32.7 +3.4**
SAIH SAIHA 44.71 263 *e*P **P 20 40 29.4 -0.5**
SAIH IAMs_20 IAMs_20 20 58 58.6
comp=Z,49μm,32.4s
SRDT SRDT 44.95 249 P **P 20 40 31.7 0.0**
comp=Z,217nm,1.3s,comp=Z,4μm
OHAK Old Harbor 45.04 44 *e*P **P 20 40 33.3 +1.4**

RSO Redoubt South 45.12 39 *e*P **P 20 40 34.7 +1.8**
KURK Kurchatov 45.19 307 *e*P **P 20 40 33.3 0.0**
comp=Z,6μm,0.8s
KURK P'P' 21 12 06.5
KURK LR LR
comp=Z,49μm,19.0s
KURK Kurchatov 45.19 307 P **P 20 40 33.6 +0.3**
SNR=715
KURK Kurchatov 45.19 307 *ce*P **P 20 40 33.1 -0.1**
KURK pmax pmax
comp=Z,2μm,1.3s
KURK MLR MLR
comp=Z,32μm,17.0s
KURBB Kurchatov Arra 45.26 307 P **P 20 40 34.3 +0.5**
comp=Z,781nm,0.8s,baz=80,slow=8.3,SNR=1642
KURBB PKPPKP **P'P'df 21 12 06.5 -7.3**
comp=Z,0.4nm,0.8s,baz=294,slow=2.6,SNR=4.7
AGT Agartala 45.31 266 *e*P **P 20 40 33.7 -0.9**
SMKI Samarinda 45.33 216 P P 20 40 40.3 +5.6
comp=Z,162nm,1.1s,comp=Z,4μm
PPLA Purkeypile 45.35 36 *e*P **P 20 40 36.4 +1.8**
SBUM Sibu 45.35 224 *e*P **P 20 40 35.0 +0.1**
KDAK Kodiak Island 45.38 43 P **P 20 40 35.3 +0.7**
comp=Z,120nm,0.9s,baz=352,slow=4.4,SNR=24
KDAK Kodiak Island 45.38 43 *e*P **P 20 40 36.1 +1.5**
comp=Z,1μm,1.5s
KDAK LR LR
comp=Z,10μm,22.0s
KDAK Kodiak Island 45.38 43 *ce*P **P 20 40 35.8 +1.2**
CAST Castle Rocks 45.40 35 *e*P **P 20 40 31.3 -3.4**
BELO BELONIA 45.50 265 *e*P **P 20 40 35.7 -0.3**
PHET Kaeng Krachan 45.54 247 P **P 20 40 37.3 +0.9**
comp=Z,69nm,0.7s,comp=Z,566nm
BRDH Bariadhala 45.65 264 P **P 20 40 37.2 0.0**
comp=Z,465nm,0.9s,baz=307,slow=20,SNR=32
BRDH LR LR 21 03 40.6
comp=Z,13μm,18.2s,baz=80,slow=41
GTK Tadong 45.66 272 *e*P **P 20 40 37.6 +0.2**
GTK IAMs_20 IAMs_20 21 00 33.1
comp=Z,12μm,19.0s
SKT Skwentna 45.67 37 *e*P **P 20 40 37.5 +0.6**
BPAW Bear Paw Mtn. 45.88 34 *e*P **P 20 40 40.4 +1.8**
MLY Manley 45.99 33 *e*P **P 20 40 41.6 +2.1**
MLY *e*PcP **PcP 20 42 15.3 -0.1**
SUA Susitna One 46.06 38 *e*P **P 20 40 41.3 +1.2**
BKB Balikpapan 46.19 216 P **P 20 40 44.2 +2.7**
comp=Z,368nm,1.1s,comp=Z,6μm
TRF Thorofare Moun 46.20 35 *e*P **P 20 40 42.6 +1.3**
KDI Kendari 46.28 207 P **P 20 40 47.0 +4.8**
comp=Z,172nm,1.6s
TAPN Taplejung 46.34 273 *e*P **P 20 40 43.6 +0.6**
comp=Z,1μm,1.3s
PDGK Podgornoye 46.36 297 P **P 20 40 42.3 -0.5**
PDGK pmax pmax
comp=Z,327nm,1.1s
SHLS Shalkode 46.43 296⇑ *i*P **P 20 40 41.1 -2.3**
comp=Z,498nm,2.1s
SHLS *i* S **S 20 47 25.1 -3.0**
SHLS *i* LR LR 21 00 49.1
comp=Z,7μm,15.0s
TTSI Tana Toraja 46.52 211 P **P 20 40 47.1 +3.1**
BWN Browne 46.55 34 *e*P **P 20 40 46.7 +3.0**
RC01 Rabbit Creek A 46.57 38 *e*P **P 20 40 44.9 +0.9**
TOLK Toolik Lake Re 46.57 28 P **P 20 40 45.4 +1.4**
baz=267
TOLK S **S 20 47 31.8 +2.5**
baz=267
TOLK Toolik Lake Re 46.57 28 *e*P **P 20 40 45.6 +1.6**
UZB Uzynbulak 46.74 296⇑ *i*P **P 20 40 45.8 0.0**
comp=Z,331nm,1.9s
UZB *i* S **S 20 47 33.6 +1.1**
UZB *i* LR LR 21 01 03.7
comp=Z,2μm,14.6s
MCK McKinley 46.80 35 *e*P **P 20 40 46.8 +1.0**
ODAN Odare 46.82 272 *e*P **P 20 40 47.1 +0.4**
comp=Z,1μm,1.2s
PMR Palmer 46.82 38 *e*P **P 20 40 46.8 +0.8**
PMR Palmer 46.82 38 *e*P **P 20 40 46.8 +0.8**
TARA Tarawa 46.84 135 PFAKE 20 41 00.0 +13
TARA LR LR
comp=Z,3μm,20.0s
RND Reindeer 46.85 35 *e*P **P 20 40 47.2 +1.0**
RND Reindeer 46.85 35 *e*P **P 20 40 47.2 +1.0**
MTKI Muara Teweh, K 46.86 219 P **P 20 40 47.2 +0.5**
comp=Z,341nm,1.1s,comp=Z,6μm
KPKS Kokpek 46.88 297⇑ *i*P **P 20 40 47.0 +0.2**
comp=Z,559nm,1.9s
KPKS *i* S **S 20 47 35.8 +1.4**
KPKS *i* LR LR 21 01 08.8
comp=Z,5μm,13.0s
GHO Glory Hole Cre 46.91 37 *e*P **P 20 40 48.0 +1.3**
MDM Murphy Dome 47.06 33 *e*P **P 20 40 48.4 +0.6**
WRH Wood River Hil 47.14 34 *e*P **P 20 40 49.5 +1.2**
ZHN Zhinishke 47.15 297⇑ *i*P **P 20 40 49.1 +0.2**
comp=Z,329nm,2.4s
ZHN *e*S **S 20 47 39.7 +1.4**
ZHN *i* LR LR 21 01 18.3
comp=Z,1μm,13.5s
SML Sawmill 47.19 37 *e*P **P 20 40 50.1 +1.2**
SML Sawmill 47.19 37 *e*P **P 20 40 50.1 +1.2**
SATY Saty 47.20 296⇑ *i*P **P 20 40 49.7 +0.3**
comp=Z,663nm,2.4s
SATY *i* S **S 20 47 40.6 +1.6**
SATY *i* LR LR 21 03 01.7
comp=Z,2μm,12.3s
CCB Clear Creek Bu 47.26 33 *e*P **P 20 40 50.4 +1.1**
JIRN Jiri 47.37 274 *e*P **P 20 40 51.6 +0.5**
comp=Z,2μm,1.3s
SPSI Sidrap Palu 47.37 211 P **P 20 40 52.0 +1.3**
PRZ Przheval'sk 47.38 296 *e*P **P 20 40 51.9 +1.0**
RAMN Ramite 47.39 273 *e*P **P 20 40 51.4 +0.2**
comp=Z,1μm,1.1s
GUN Gumba 47.49 274 *e*P **P 20 40 52.4 +0.3**
comp=Z,1μm,0.9s
DHY Denali Highway 47.54 36 *e*P **P 20 40 52.7 +1.0**
JOHN Johnston Islan 47.54 104 PFAKE 20 41 10.0 +18
JOHN LR LR
comp=Z,2μm,19.0s
HDA Harding Lake 47.64 34 *e*P **P 20 40 52.1 -0.2**
IL1 Eielson Array 47.64 33 *e*P **P 20 40 53.2 +0.9**
ILAR Eielson Array 47.64 33 P **P 20 40 53.1 +0.8**
comp=Z,40nm,0.8s,baz=267,slow=5.8,SNR=248
ILAR LR LR 21 02 19.6
comp=Z,7μm,21.8s,baz=286,slow=38
ILB Eielson Array 47.64 33 *e*P **P 20 40 53.0 +0.8**
SCM Sheep Creek Mo 47.66 37 *e*P **P 20 40 54.0 +1.4**
SCM Sheep Creek Mo 47.66 37 *e*P **P 20 40 54.0 +1.4**
STKI Sintang 47.75 223 P **P 20 40 54.8 +1.1**
comp=Z,133nm,1.1s,comp=Z,7μm
KKN Kakani 48.02 274 *e*P **P 20 40 56.3 +0.3**
comp=Z,576nm,0.7s
PKIN Phulchoki 48.03 274 *e*P **P 20 40 56.6 +0.5**
TARG Taragay, Kyrgy 48.04 295 *e*P **P 20 40 56.6 +0.4**
MDOK Medeo 48.11 297 *i*P **P 20 40 57.1 +0.7**
comp=Z,4μm,2.5s
MDOK *i* S **S 20 47 54.0 +2.0**
MDOK *i* LR LR 21 01 39.7
comp=Z,10μm,16.2s
AAA Alma-Ata 48.19 297⇑ *i*P **P 20 40 57.9 +0.9**
comp=Z,1μm,2.6s
AAA *i* LR LR 21 01 46.4
comp=Z,11μm,17.7s
DMN Daman 48.24 274 *e*P **P 20 40 57.9 +0.2**
comp=Z,954nm,1.3s
PMG Port Moresby 48.31 173 P **P 20 40 58.7 +0.8**
comp=Z,24nm,1.1s,baz=344,slow=18,SNR=2.7
PMG LR LR 21 00 39.8
comp=Z,4μm,21.8s,baz=344,slow=35
PMG Port Moresby 48.31 173 P **P 20 40 58.7 +0.8**
PMG LR LR
comp=Z,10μm,22.0s
PMG Port Moresby 48.31 173 P **P 20 40 58.7 +0.8**
PMG MLR MLR
comp=Z,10μm,22.0s
KBKI Kotabaru 48.32 216 P **P 20 40 59.6 +1.5**
comp=Z,58nm,1.1s,comp=Z,489nm
KLU Klutina 48.37 38 *e*P **P 20 40 59.6 +1.6**
KUU Kurty 48.38 298⇑ *i*P **P 20 40 58.1 -0.2**
comp=Z,1μm,2.5s
KUU *i* S **S 20 47 56.7 +1.3**
KUU *i* LR LR 21 04 11.4
comp=Z,5μm,13.1s
PAX Paxson 48.41 36 *e*P **P 20 40 00.6 +2.2**
PAX Paxson 48.41 36 *e*P **P 20 40 00.6 +2.2**
GKN Gorkha 48.41 275 *e*P **P 20 40 59.1 +0.1**
comp=Z,790nm,0.9s
BKSI Bulukumba 48.47 210 P **P 20 41 00.7 +1.5**
DIV Divide 48.48 38 *e*P **P 20 41 00.7 +1.8**
RIDG Independ'e Rid 48.61 35 *e*P **P 20 41 00.5 +0.6**
RIDG *e*PcP **PcP 20 42 19.0 -5.7**
HARP HAARP 48.62 36 *e*P **P 20 41 01.9 +2.0**
HARP *e*PcP **PcP 20 42 20.7 -4.0**
DANN Dangsing 48.93 276 *e*P **P 20 41 03.7 +0.6**
SCRK Sand Creek 48.97 34 *e*P **P 20 41 03.5 +0.8**
DOT Dot Lake 48.97 35 *e*P **P 20 41 02.7 +0.1**
DOT *e*PcP **PcP 20 42 21.5 -4.5**
ULHL Ulahol 48.97 296 P **P 20 41 03.5 +0.3**
SNR=29
TRTT Trang 49.01 242 P **P 20 41 03.7 +0.3**
comp=Z,84nm,1.4s,comp=Z,2μm
BMRM Bremner River 49.07 38 *e*P **P 20 41 05.0 +1.6**
KRAB Krabi 49.08 243 P P 20 41 08.9 +4.9
comp=Z,982nm,0.7s,comp=Z,25μm
RAGM Ragged Mountai 49.12 39 *e*P **P 20 41 06.1 +2.3**
TKM2 Tokmak 2 49.20 297 P **P 20 41 05.8 +0.9**
SNR=372
KOLN Koldanda 49.33 275 *e*P **P 20 41 06.4 +0.3**
comp=Z,762nm,1.2s
NRN Naryn 49.41 295 *e*P **P 20 41 06.7 0.0**
NRN *e*PcP PcP 20 42 20.3 -8.1
NRN Naryn 49.41 295 *e*P **P 20 41 06.7 0.0**
BOK Bokaro 49.54 270 *e*P **P 20 41 06.0 -1.4**
BTLS Baital 49.58 300⇑ *i*P **P 20 41 07.4 -0.1**
comp=Z,276nm,2.0s
BTLS *e*S **S 20 48 13.6 +1.3**
BTLS *i* LR LR 21 02 31.9
comp=Z,2μm,14.2s
PYUN Piuthan 49.65 276 *e*P **P 20 41 08.8 +0.3**
comp=Z,1μm,0.8s
BVAR Borovoye Array 49.70 311 P **P 20 41 08.7 +0.5**
comp=Z,148nm,0.6s,baz=78,slow=9.0,SNR=717
BVAR LR LR 21 03 19.4
comp=Z,33μm,18.8s,baz=77,slow=37
BVAR PKPPKP P'P'df 21 12 17.0 +8.9
comp=Z,2.2nm,1.1s,baz=212,slow=5.1,SNR=4.3
BVAR P4KPbc 21 18 43.7
comp=Z,4.9nm,1.1s,baz=103,slow=4.6,SNR=12
KZA Kyzart 49.72 296 P **P 20 41 10.0 +0.9**
SNR=122
KBK Karagaybulak 49.74 297 P **P 20 41 09.6 +0.7**
SNR=230
BRVK Borovoye 49.75 311 *e*P **P 20 41 08.9 +0.3**
comp=Z,484nm,0.8s
BRVK LR LR
comp=Z,21μm,20.0s
BRVK Borovoye 49.75 311 P **P 20 41 09.2 +0.6**
SNR=176
BRVK Borovoye 49.75 311 *ce*P **P 20 41 08.7 +0.1**
BRVK pmax pmax
comp=Z,311nm,1.0s
BRVK MLR MLR
comp=Z,35μm,19.0s
OTUK Ortayu 49.75 305 P **P 20 41 08.5 -0.2**
OTUK pmax pmax
comp=Z,422nm,1.2s
CHMS Chumysh 49.76 298 P **P 20 41 09.1 +0.2**
SNR=66
CRQM Cirque 49.81 38 *e*P **P 20 41 11.4 +2.2**
USP Ospenovka 49.84 298 P **P 20 41 09.9 +0.4**
SNR=145
FRU Bishkek 49.91 297⇑ *i*P **P 20 41 09.0 -1.0**
FRU *e*S **S 20 48 20.0 +3.0**
FRU *i* 20 48 40.0
FRU *i* 20 51 51.0
FRU pmax pmax
comp=Z,750nm,2.0s
FRU smax smax
comp=E,5μm,6.0s
PKDT Phuket 49.91 243 P **P 20 41 11.0 +0.7**
comp=E,187nm,1.0s,comp=E,2μm
TGL Tana Glacier 49.96 38 *e*P **P 20 41 11.6 +1.4**
PBKI Pangkalan Bun 49.99 221 P **P 20 41 12.5 +1.7**
EGAK Eagle 50.09 33 *e*P **P 20 41 11.2 +0.2**
comp=E,216nm,1.4s
EGAK LR LR
comp=Z,7μm,19.0s
KSH Kashi 50.12 293⇑ *i*P **P 20 41 15.8 +4.0**
KSH pP pP 20 41 25.9 +1.5
KSH PP **PP 20 43 12.4 +5.4**
KSH PcS **PcS 20 46 32.1 +4.1**
KSH S **S 20 48 25.0 +4.8**
KSH sS sS 20 48 40.8 -0.3
KSH ScS **ScS 20 51 03.6 +4.3**
KSH pmax pmax
comp=Z,300nm,1.1s
KSH pmax pmax
comp=Z,7μm,7.9s
KSH LR LR
comp=Z,27μm,14.7s
KSH LR LR
comp=Z,20μm,14.9s
KSH LR LR
comp=Z,37μm,16.3s
UCH Uchtor 50.19 297 P **P 20 41 13.3 +0.6**
SNR=48
KULM Kulim 50.21 239 *e*P **P 20 41 13.0 +0.4**
EKS2 Erkin-Say 50.55 297 P **P 20 41 15.3 +0.3**
SNR=88
IPM Ipoh 50.56 238 *e*P **P 20 41 13.2 -2.0**
MMRI Maumere 50.77 206 P **P 20 41 19.3 +2.6**
MMRI Maumere 50.77 206 *e*P **P 20 41 15.8 -0.9**
MYKOM Kota Tinggi 50.79 233 *e*P **P 20 41 16.1 -0.8**
AML Almayashu 50.79 297 P **P 20 41 17.9 +0.8**
SNR=134
HNR Honiara 50.90 157 *e*P P 20 41 32.0 +14
HNR Honiara 50.90 157 P P 20 41 23.2 +5.5
comp=Z,28nm,0.4s,baz=212,slow=9.5,SNR=3.9
HNR LR LR 21 01 11.0
comp=Z,29μm,21.5s,baz=324,slow=34
HNR Honiara 50.90 157 P P 20 41 23.2 +5.5
HNR LR LR
comp=Z,29μm,21.0s
HNR Honiara 50.90 157 P P 20 41 23.2 +5.5
HNR MLR MLR
comp=Z,29μm,21.0s
DAWY Dawson 50.95 34 *e*P **P 20 41 18.5 +0.8**
comp=Z,40nm,1.1s
TPRI Tanjung Pinang 51.05 232 P **P 20 41 21.2 +2.3**
SOEI Soe 51.17 203 P **P 20 41 22.0 +2.1**
SOEI Soe 51.17 203 *e*P **P 20 41 19.6 -0.3**
MNAS Manas 51.49 298 P **P 20 41 22.3 +0.2**
MNAS pmax pmax
comp=Z,256nm,0.8s
BWNR Bhubaneshwar 51.49 266 *e*P **P 20 41 21.7 -0.5**
SFK Sufi-Kurgan 51.70 294 P **P 20 41 23.7 -0.1**
SFK pmax pmax
comp=Z,178nm,1.2s
BATI Baumata 51.79 203 P **P 20 41 25.3 +1.0**
comp=Z,167nm,0.8s,baz=332,slow=2.3,SNR=14
BATI Baumata 51.79 203 P **P 20 41 25.6 +1.3**
comp=Z,173nm,1.3s,comp=Z,3μm
DDI Dehra Dun 52.41 281 *e*P **P 20 41 28.8 -0.2**
DDI IAMs_20 IAMs_20 21 04 51.4
comp=Z,22μm,23.5s
INK Inuvik 52.49 28 P **P 20 41 30.4 +1.5**
comp=Z,92nm,0.9s,baz=280,slow=7.7,SNR=62
INK Inuvik 52.49 28 *e*P **P 20 41 30.3 +1.5**
comp=Z,151nm,1.1s
MTN Manton Dam 52.49 193 *e*P **P 20 41 29.3 -0.2**
PPBI Pangkal Pinang 52.56 228 P P 20 41 37.0 +6.9
PLAI Plampang 52.59 211 P **P 20 41 31.4 +1.1**
COEN Coen 52.61 179 *e*P **P 20 41 31.2 +0.9**
KK31 Karatay Array 52.63 299 *e*P **P 20 41 30.4 0.0**
KKAR Karatay Array 52.63 299 *e*P **P 20 41 30.4 0.0**
SMLA Simla 52.71 283 *e*P **P 20 41 30.9 -0.2**
SMLA IAMs_20 IAMs_20 21 04 08.2
comp=Z,14μm,29.6s
WBSI Waikabubak, Su 52.72 209 P P 20 41 36.5 +5.3
LHMI Lhok Sumawe 52.77 242 P **P 20 41 32.6 +0.9**
LHMI Lhok Sumawe 52.77 242 *e*P **P 20 41 29.9 -1.8**
DHRM DHARAMSHALA 52.86 284 *e*P **P 20 41 31.0 -1.5**
TWSI Taliwang, Sumb 52.88 212 P **P 20 41 34.2 +1.8**
TSI Tuntungan 52.92 239 P P 20 41 37.9 +5.1
comp=Z,103nm,1.4s
BRLS Borolday 53.12 299 *i* S **S 20 49 05.1 +3.9**
PSI Prapat 53.20 239 P **P 20 41 34.8 -0.2**
comp=Z,95nm,1.0s,baz=0.0,slow=9.3,SNR=31
PSI LR LR 21 03 55.1
comp=Z,18μm,22.0s,baz=89,slow=36
PSI Prapat 53.20 239 *e*P **P 20 41 33.5 -1.5**
IUG Iuzhnay 53.32 298⇑ *i*P **P 20 41 36.1 +0.5**
comp=Z,482nm,1.6s
IUG *e*S **S 20 49 05.8 +1.8**
IUG *i* LR LR 21 04 51.3
comp=Z,2μm,14.6s
KCSI Kotacane, Aceh 53.44 240 P **P 20 41 36.9 +0.2**
CHM Chimkent 53.55 298⇑ *i*P **P 20 41 37.7 +0.5**
comp=Z,648nm,2.5s
CHM *e*S **S 20 49 08.8 +1.8**
CHM *i* LR LR 21 04 53.5
comp=Z,4μm,18.3s
BKNI Bangkinang 53.69 235 P **P 20 41 40.3 +1.9**
BKNI Bangkinang 53.69 235 *e*P **P 20 41 38.0 -0.4**
KIP Kipapa 53.75 91 PFAKE 20 41 50.0 +11
KIP LR LR
comp=Z,11μm,19.0s
JAGI Jajag, Banyuwa 53.81 215 P **P 20 41 42.8 +3.5**
comp=Z,71nm,1.3s
JAGI Jajag, Banyuwa 53.81 215 *e*P **P 20 41 41.1 +1.8**
NDI New Delhi 53.83 280 *e*P **P 20 41 40.0 +0.6**
MLSI Meulaboh, Aceh 53.83 242 P **P 20 41 39.4 -0.1**
comp=Z,286nm,0.7s,comp=Z,4μm
CHLP Challavanipeta 53.86 265 *e*P **P 20 41 40.3 +0.6**
CHLP IAmb IAmb 20 41 41.9
comp=Z,153nm,1.2s
CHLP IVMs_BB IVMs_BB 21 04 46.8
comp=Z,5μm,27.1s
SKAG Skagway 53.91 39 *e*P **P 20 41 42.1 +2.6**
GMJI Gumukmas 53.95 216 P **P 20 41 42.0 +1.7**
comp=Z,92nm,1.2s,comp=Z,2μm
PMBI Palembang 53.97 228 P **P 20 41 44.2 +3.7**
comp=Z,488nm,1.2s,comp=Z,6μm
TPTI 54.03 240 P **P 20 41 40.0 -1.0**
comp=Z,30nm,1.2s,comp=Z,1μm
SVE Sverdlovsk 54.08 318 *d*P **P 20 41 41.6 +0.8**
SVE *e* 20 43 40.0
SVE *e*PPP PPP 20 45 00.9
SVE *e*S **S 20 49 13.5 -0.2**
SVE *e* 20 51 23.5
SVE *e*SS **SS 20 52 56.4 +1.3**
SVE pmax pmax
comp=Z,1μm,1.1s
SVE MLR MLR
comp=E,40μm,20.0s
SVE MLR MLR
comp=N,10μm,16.0s
SVE MLR MLR
comp=Z,44μm,16.0s
NGJI Ngawi 54.10 219 P **P 20 41 44.2 +2.8**
comp=Z,195nm,1.4s,comp=Z,6μm
TAS Tashkent 54.15 297 P **P 20 41 42.3 +0.7**
TAS pmax pmax
comp=Z,245nm,1.2s
MNSI Mandailing Nat 54.27 236 P **P 20 41 42.0 -0.7**
comp=Z,61nm,0.6s,comp=Z,2μm
SMRI Semarang 54.33 220 P **P 20 41 47.0 +3.9**
SMRI Semarang 54.33 220 *e*P **P 20 41 43.4 +0.3**
BESE Bessie Mountai 54.41 40 *e*P **P 20 41 45.4 +2.1**
PWJI Pagerwojo 54.50 218 P **P 20 41 42.3 -2.0**
NIL Nilore 54.52 287 *e*P **P 20 41 45.3 +0.9**
comp=Z,1μm,0.8s
NIL LR LR
comp=Z,5μm,19.0s
NIL Nilore 54.52 287 *e*P **P 20 41 45.3 +0.9**
NIL pmax pmax
comp=Z,1μm,0.8s
NIL MLR MLR
comp=Z,5μm,19.0s
JIS Juneau Island 54.74 40 *e*P **P 20 41 48.1 +2.6**
WOJI Wonogiri, Jawa 54.77 219 P **P 20 41 50.7 +4.5**
comp=Z,84nm,1.3s,comp=Z,2μm
VIS Vishakhapatnam 54.88 265 *i*P **P 20 41 46.7 -0.4**
VIS *i* x **S 20 49 22.2 -3.2**
PCJI Pacitan 54.95 218 P P 20 41 54.6 +7.0
comp=Z,112nm,0.8s
PDSI Padang 55.00 234 P **P 20 41 47.9 -0.1**
comp=Z,39nm,1.0s
UGM Wanagama 55.03 219 P **P 20 41 49.1 +0.9**
comp=Z,613nm,1.2s,comp=Z,8μm
UGM Wanagama 55.03 219 *e*P **P 20 41 47.3 -0.9**
GSI Gunungsitoli 55.20 239 P **P 20 41 49.7 +0.2**
comp=Z,521nm,1.1s,comp=Z,8μm
GSI Gunungsitoli 55.20 239 *e*P **P 20 41 49.2 -0.3**
KRJI Kerinci 55.29 232 P **P 20 41 52.4 +2.2**
ARU Arti 55.30 318 *e*P **P 20 41 49.6 0.0**
comp=Z,570nm,0.9s
ARU LR LR
comp=Z,57μm,19.0s
ARU Arti 55.30 318 *c*P **P 20 41 49.6 0.0**
ARU 20 42 45.3
ARU 20 43 51.8
ARU *e*S **S 20 49 31.9 +1.9**
ARU 20 51 33.8
ARU SSS SSS 20 55 21.0
ARU pmax pmax
comp=Z,940nm,1.0s
ARU pmax pmax
comp=Z,3μm,11.8s
ARU MLR MLR
comp=Z,57μm,19.0s
KPJI Karang Pucung 55.33 221 P **P 20 41 48.3 -2.0**
KLI Kotabumi 55.49 227 P **P 20 41 52.7 +1.2**
KLI Kotabumi 55.49 227 P **P 20 41 51.7 +0.2**
KLI pmax pmax
comp=Z,403nm,1.4s
MDSI Maura Dua 55.57 228 P **P 20 41 52.6 +0.5**
LEM Lembang 55.59 223 P **P 20 41 52.4 0.0**
comp=Z,205nm,1.1s,baz=93,slow=18,SNR=22
LEM LR LR 21 06 28.1
comp=Z,3μm,20.9s,baz=13,slow=37
MASI Maura Aman, Be 55.64 231 P **P 20 41 53.8 +1.1**
BLSI Bandar Lampung 55.68 226 P **P 20 41 54.0 +1.1**
comp=Z,311nm,1.1s,comp=Z,8μm
SBJI Serang 55.81 225 P **P 20 41 57.2 +3.5**
comp=Z,144nm,1.8s,comp=Z,4μm
DBJI Dramaga 55.83 224 P **P 20 41 55.0 +1.1**
comp=Z,94nm,1.5s,comp=Z,5μm
LWLI Liwa 56.07 228 P **P 20 41 56.8 +1.0**
CISI Cisompet, Garu 56.10 222 *e*P **P 20 41 55.8 -0.1**
SISI Saibi 56.19 235 P **P 20 41 57.3 +0.8**
comp=Z,156nm,0.9s,comp=Z,3μm
KASI Kota Agung 56.23 227 P **P 20 41 56.1 -0.7**
comp=Z,120nm,0.9s,comp=Z,2μm
NGP Nagpur 56.29 271 *e*P **P 20 41 56.4 -0.8**
NGP IAmb IAmb 20 41 59.2
comp=Z,147nm,0.8s
NGP *e*S **S 20 49 44.7 +0.5**
NGP *e*x x 21 08 26.8
comp=Z,11μm,19.6s
WRAK Wrangell Islan 56.40 42 *e*P **P 20 42 00.5 +3.0**
comp=Z,65nm,1.1s
WRAK LR LR
comp=Z,5μm,20.0s
BHPL Bhopal 56.43 274 *e*P **P 20 41 56.1 -2.1**
BHPL IAmb IAmb 20 41 58.0
comp=Z,92nm,0.8s
CGJI Cibinong 56.46 225 P **P 20 41 59.2 +0.8**
comp=Z,67nm,1.3s,comp=Z,1μm
PVM Polavaram 56.47 266 *e*P **P 20 41 58.1 -0.5**
PVM IAmb IAmb 20 42 04.2
comp=Z,70nm,0.8s
PVM IVMs_BB IVMs_BB 21 06 16.6
comp=Z,4μm,25.0s
POHA Pohakuloa 56.60 91 PFAKE 20 42 10.0 +10
POHA LR LR
comp=Z,6μm,19.0s
PPSI Pulau Pagai 56.72 233 P **P 20 42 04.2 +3.9**
comp=Z,322nm,0.9s,comp=Z,6μm
DLBC Dease Lake 56.84 39 P **P 20 42 03.0 +2.3**
comp=Z,38nm,0.9s,baz=289,slow=8.0,SNR=33
DLBC Dease Lake 56.84 39 *e*P **P 20 42 03.1 +2.3**
comp=Z,140nm,1.1s
ABKAR Akbulak array 57.12 309 *e*P **P 20 42 02.7 -0.1**
KBL Kabul 57.23 290 *e*P **P 20 42 03.5 -0.5**
KBL Kabul 57.23 290 *e*P **P 20 42 03.5 -0.5**
RPR Rampur 57.37 269 *e*P **P 20 42 04.3 -0.6**
RPR IAmb IAmb 20 42 11.6
comp=Z,163nm,1.2s
RPR IVMs_BB IVMs_BB 21 10 18.8
comp=Z,3μm,21.6s
AKTO Aktyubinsk 57.80 311 P **P 20 42 07.6 0.0**
comp=Z,206nm,0.8s,baz=63,slow=10,SNR=135
AKTO LR LR 21 08 27.1
comp=Z,24μm,19.1s,baz=64,slow=38
SRSP Sriramsagar 58.07 269 *e*P **P 20 42 08.7 -1.2**

SRSP IAmb IAmb 20 42 11.7
comp=Z,311nm,1.1s
SRSP IVMs_BB IVMs_BB 21 10 03.2
comp=Z,5μm,16.3s
HOPEN Hopen 58.34 346 *e*P **P** **20 42 11.1 +0.3**
FUNA Funafuti 58.47 136 PFAKE 20 42 30.0 +17
FUNA LR LR
comp=Z,36μm,22.0s
NJS Nagarjunasagar 58.68 266 *e*P **P** **20 42 13.8 -0.3**
NJS IAmb IAmb 20 42 15.4
comp=Z,187nm,1.4s
NJS IVMs_BB IVMs_BB 21 08 00.2
comp=Z,4μm,27.5s
HYBB Hyderabad (bro 58.77 268 *e*P **P** **20 42 14.1 -0.7**
HYBB IAmb IAmb 20 42 15.9
comp=Z,195nm,1.2s
HYBB IVMs_BB IVMs_BB 21 07 35.1
comp=Z,3μm,26.3s
HYB Hyderabad 58.77 268 *i* P **P** **20 42 14.5 -0.3**
comp=Z,140nm,1.0s
HYB *e*PcP **PcP** **20 43 07.5 +3.4**
HYB *e*S **S** **20 50 16.0 -0.9**
HYB Hyderabad 58.77 268 *e*P P 20 42 09.8 -4.9
HYB IAMs_20 IAMs_20 21 07 30.3
comp=Z,11μm,21.2s
SPA0 Spitsbergen Ar 58.78 349 *e*P **P** **20 42 14.0 +0.1**
SPA0 *e*PcP **PcP** **20 43 00.9 -2.2**
SPA0 Spitsbergen Ar 58.78 349 *e*P **P** **20 42 14.1 +0.1**
SPITS Spitsbergen Ar 58.78 349 P **P** **20 42 14.5 +0.5**
comp=Z,75nm,1.0s,baz=64,slow=9.9,SNR=27
SPITS LR LR 21 08 25.8
comp=Z,7μm,20.8s,baz=50,slow=37
CTA Charters Tower 58.83 175 P **P** **20 42 15.1 +0.2**
comp=Z,7.1nm,0.5s,baz=348,slow=7.9,SNR=14
CTA LR LR 21 06 23.4
comp=Z,4μm,21.9s,baz=351,slow=35
CTAO Charters Tower 58.83 175 *e*P **P** **20 42 15.8 +1.0**
comp=Z,274nm,1.1s
CTAO LR LR
comp=Z,9μm,22.0s
KBS Kingsbay 58.89 350 *e*P **P** **20 42 14.7 0.0**
comp=Z,248nm,1.0s
KBS LR LR
comp=Z,7μm,21.0s
KBS Kingsbay 58.89 350 *e*P **P** **20 42 14.7 0.0**
KBS pmax pmax
comp=Z,248nm,1.0s
KBS MLR MLR
comp=Z,7μm,21.0s
KBS Kingsbay 58.89 350 *e*P **P** **20 42 15.4 +0.7**
WRAB Tennant Creek 58.98 188 *e*P **P** **20 42 15.0 -1.0**
comp=Z,163nm,0.9s
WRAB LR LR
comp=Z,6μm,22.0s
WRAB Tennant Creek 58.98 188 *ce*P **P** **20 42 15.2 -0.8**
WRAB pmax pmax
comp=Z,164nm,1.0s
WB2 Warramunga Arr 58.99 188 *e*P **P** **20 42 15.2 -0.8**
WRA Warramunga Arr 58.99 188 P **P** **20 42 15.2 -0.9**
comp=Z,72nm,0.7s,baz=6.5,slow=7.0,SNR=114
WRA LR LR 21 07 20.8
comp=Z,6μm,21.8s,baz=10.0,slow=36
WRA PKPPKP **P'P'df** **21 11 51.2 +7.3**
comp=Z,2.8nm,1.0s,baz=194,slow=1.5,SNR=5.8
WRA Warramunga Arr 58.99 188 *i* P **P** **20 42 15.1 -1.0**
WRA pmax pmax
comp=Z,72nm,0.7s
SRLM Srisailam 59.27 266 *e*P **P** **20 42 16.9 -1.3**
SRLM IAmb IAmb 20 42 19.2
comp=Z,187nm,1.4s
SRLM IVMs_BB IVMs_BB 21 08 18.1
comp=Z,4μm,24.5s
PRGR Permogore 59.47 327⇑ *i*P **P** **20 42 19.1 +0.2**
PRGR *e* 20 44 25.7
PRGR *e*S **S** **20 50 26.2 +1.6**
PRGR pmax pmax
comp=Z,593nm,1.1s
HSPB Hornsund (broa 59.72 348 *e*P **P** **20 42 21.3 +0.9**
HSPB *e*S **S** **20 50 28.1 +0.7**
HSPB Hornsund (broa 59.72 348 *e*P **P** **20 42 21.1 +0.8**
KLRI Killari 59.92 270 *e*P **P** **20 42 21.3 -1.5**
KLRI IAmb IAmb 20 42 23.6
comp=Z,235nm,1.1s
KLRI IVMs_BB IVMs_BB 21 09 24.1
comp=Z,6μm,20.3s
SKHT Srikalahasti 60.03 263 *e*P **P** **20 42 23.6 +0.2**
SKHT IAmb IAmb 20 42 25.5
comp=Z,202nm,1.2s
SKHT IVMs_BB IVMs_BB 21 09 26.9
comp=Z,4μm,25.2s
RES Resolute Bay 60.66 15 *e*P **P** **20 42 27.0 +0.1**
comp=Z,162nm,1.1s
RES Resolute Bay 60.66 15 *e*P **P** **20 42 27.0 +0.1**
RES pmax pmax
comp=Z,162nm,1.1s
BJO Bjornoya 60.74 345 *e*P **P** **20 42 27.8 +0.4**
APA Apatity 61.18 335⇑ *i*P **P** **20 42 29.6 -0.9**
APA *i* 20 42 47.0
APA *i* 20 44 44.0
APA *i* S **S** **20 50 43.0 -3.4**
APA pmax pmax
comp=Z,131nm,0.9s
URV Uravakonda 61.21 266 *e*P **P** **20 42 30.6 -1.0**
URV IAmb IAmb 20 42 32.7
comp=Z,237nm,1.5s
URV IVMs_BB IVMs_BB 21 11 17.3
comp=Z,3μm,16.3s
TMCR Tamitsa 61.34 331 *e*P **P** **20 42 32.0 +0.4**
TMCR pmax pmax
comp=Z,597nm,1.1s
POO Poona 61.80 272 *e*P **P** **20 42 33.5 -2.0**
YKW3 Yellowknife Ar 61.90 31 *e*P **P** **20 42 36.0 +0.6**
YKA Yellowknife Ar 61.93 31 P **P** **20 42 36.2 +0.6**
comp=Z,45nm,1.0s,baz=296,slow=6.7,SNR=63
YKA LR LR 21 09 57.5
comp=Z,510nm,21.5s,baz=305,slow=36
YKA PKPPKP **P'P'df** **21 11 44.3 -5.7**
comp=Z,1.3nm,0.9s,baz=117,slow=2.3,SNR=4.7
HAMF Hammerfest 62.21 341 *e*P **P** **20 42 37.6 +0.2**
BOM Bombay 62.40 273 *e*P **P** **20 42 39.2 -0.3**
BOM IAmb IAmb 20 42 41.0
BOM AMS AMS 20 43 05.2
comp=N,115nm,9.6s
ARCES ARCESS Array B 62.42 339 P **P** **20 42 39.0 +0.2**
comp=N,49nm,0.9s,baz=55,slow=7.1,SNR=54
ARCES LR LR 21 12 55.7
comp=N,8μm,21.3s,baz=48,slow=39
ARCES ARCESS Array B 62.42 339 *e*P **P** **20 42 39.0 +0.2**
ARE0 ARCESS Array S 62.42 339 *e*P **P** **20 42 39.5 +0.6**
ARE0 ARCESS Array S 62.42 339 *e*P **P** **20 42 39.1 +0.3**
KLMR Klimovskoe 62.44 327 *e*P **P** **20 42 37.8 -1.3**
KLMR *e* 20 44 55.0
KLMR *e*S **S** **20 51 02.5 0.0**
KLMR *e*SS **SS** **20 55 07.8 +1.8**
KLMR pmax pmax
comp=Z,457nm,1.4s
KLMR MLR MLR
comp=Z,30μm,17.0s
KLMR Klimovskoe 62.44 327 *e*P **P** **20 42 37.9 -1.2**
KLMR AMP 20 42 41.1
comp=Z,457nm,1.4s
KLMR *e*PP **PP** **20 44 55.0 -1.3**
KLMR *e*S **S** **20 51 02.5 0.0**
KLMR *e*S **S** **20 51 02.5 0.0**
KLMR *e*SS **SS** **20 55 07.8 +1.8**
KLMR *e*SS **SS** **20 55 07.8 +1.8**
KLMR LQ LQ 21 04 45.0
KLMR LQ LQ 21 04 45.0
KLMR LR LR 21 08 03.4
KLMR AMP 21 12 05.1
comp=Z,30μm,16.9s
BHJ Bhuj 62.44 279 *e*P **P** **20 42 38.7 -1.0**
BHJ IAMs_20 IAMs_20 21 11 32.8
comp=Z,31μm,20.4s
AS01 Alice Springs 62.71 188 *e*P **P** **20 42 40.9 -0.4**
AS31 Alice Springs 62.72 188 *e*P **P** **20 42 41.0 -0.4**
ASAR Alice Springs 62.72 188 P **P** **20 42 40.9 -0.4**
comp=Z,30nm,0.7s,baz=12,slow=6.7,SNR=220
ASAR LR LR 21 09 46.8
comp=Z,8μm,21.6s,baz=5.0,slow=36
ASAR PKP2bc 21 11 50.9
comp=Z,7.1nm,1.0s,baz=181,slow=3.6,SNR=6.5
TULEG Thule 63.17 8 *e*P **P** **20 42 43.6 -0.1**
PALK Pallekele 63.27 257 P **P** **20 42 45.3 -0.1**
comp=Z,41nm,0.9s,baz=114,slow=1.8,SNR=9.2

PALK LR LR 21 12 34.4
comp=Z,9μm,21.2s,baz=27,slow=38
PALK Pallekele 63.27 257 P **P** **20 42 47.4 +2.1**
SNR=5.0
PALK Pallekele 63.27 257 *i* P **P** **20 42 46.1 +0.8**
SNR=5.3
PALK Pallekele 63.27 257 *i* P **P** **20 42 47.5 +2.1**
MBWA Marble Bar 63.31 203 *e*P **P** **20 42 43.7 -1.6**
comp=Z,511nm,1.2s
MBWA LR LR
comp=Z,2μm,20.0s
MBWA Marble Bar 63.31 203 P **P** **20 42 48.8 +3.5**
SNR=6.6
GEYT Alibeck 63.37 298 P **P** **20 42 45.9 +0.1**
comp=Z,124nm,1.0s,baz=29,slow=3.3,SNR=19
GEYT LR LR 21 12 18.0
comp=Z,18μm,18.4s,baz=45,slow=38
SGF Sodankyl 63.42 337 *e*P **P** **20 42 45.5 0.0**
SGF pmax pmax
comp=Z,314nm,1.2s
MSF Maaselka 63.55 335 *e*P **P** **20 42 46.6 +0.2**
MSF pmax pmax
comp=Z,290nm,1.2s
DAG Danmarks Havn 63.95 355⇑ *i*P **P** **20 42 48.9 +0.1**
comp=Z,189nm,1.0s
TRO Tromso 64.10 341 *e*P **P** **20 42 49.6 -0.3**
EIDS Eidsvold 64.50 171 *e*P **P** **20 42 55.3 +2.3**
JOF Joensuu 64.54 332 P **P** **20 42 53.1 +0.2**
JOF pmax pmax
comp=Z,253nm,1.1s
LLLB Lillooet 64.56 45 *e*P **P** **20 42 55.5 +2.2**
PGC Sidney 64.68 47 *e*P **P** **20 42 56.4 +2.4**
comp=Z,103nm,1.1s
DZM Mont Dzumac 64.83 155 *e*P **P** **20 42 56.0 +0.7**
comp=Z,496nm,1.2s
DZM *e*S **S** **20 51 32.2 -0.9**
comp=Z,9μm,28.9s
DZM Mont Dzumac 64.83 155 *e*LR LR 21 02 22.0
comp=Z,42μm,22.2s
DZM Mont Dzumac 64.83 155 P **P** **20 42 57.1 +1.8**
comp=Z,25nm,1.0s,baz=20,slow=9.4,SNR=8.3
DZM LR LR 21 07 51.2
comp=Z,23μm,21.8s,baz=328,slow=33
A04D Lummi Island 65.07 47 P **P** **20 42 57.6 +1.0**
baz=301
NLWA Neilton Lookou 65.08 48 *e*P **P** **20 42 59.7 +2.9**
comp=Z,315nm,1.1s
NLWA LR LR
comp=Z,7μm,22.0s
OUL Oulu 65.10 335 P **P** **20 42 56.4 -0.1**
OUL pmax pmax
comp=Z,352nm,1.1s
B05A Bryant 65.65 47 P **P** **20 43 02.6 +2.2**
baz=302
E03A Lebam 65.70 49 *e*P **P** **20 43 04.0 +3.3**
B06A Marblemount 65.86 46 *e*P **P** **20 43 03.9 +2.1**
COCO West Island 66.04 229 *e*P **P** **20 43 06.1 +2.9**
COCO LR LR
comp=Z,4μm,20.0s
COCO West Island 66.04 229 *i* P **P** **20 43 06.0 +2.8**
MOS Moscow 66.04 323α *i*P **P** **20 43 02.2 -0.5**
MOS *e* 20 43 23.9
MOS *e* 20 43 34.7
MOS *e* 20 45 25.3
MOS *e*PPP PPP 20 47 06.7
MOS *e*S **S** **20 51 45.6 -1.6**
MOS *e* 20 52 02.5
MOS *e* 20 52 55.1
MOS pmax pmax
comp=Z,2μm,2.2s
MOS pmax pmax
comp=N,700nm,1.9s
MOS pmax pmax
comp=E,600nm,1.9s
MOS pmax pmax
comp=Z,862nm,1.6s
MOS pmax pmax
comp=N,329nm,1.3s
MOS pmax pmax
comp=E,239nm,1.4s
MOS MLR MLR
comp=N,16μm,16.0s
MOS MLR MLR
comp=E,17μm,16.0s
MOS MLR MLR
comp=Z,28μm,16.0s
XMAS Kiritimati 66.05 108 PFAKE 20 43 20.0 +17
XMAS LR LR
comp=Z,7.0nm,22.0s
KULLO Kullorsuaq 66.06 6⇑ *i*P **P** **20 43 02.6 0.0**
comp=Z,171nm,1.1s
comp=Z,5μm,19.0s
STEI Steigen 66.26 341 *e*P **P** **20 43 03.6 -0.3**
F04D Rainier, OR 66.27 49 P **P** **20 43 06.6 +2.2**
baz=302
D05A Enumclaw 66.28 48 *e*P **P** **20 43 06.3 +1.9**
D05A *e*PcP **PcP** **20 43 33.4 -0.8**
C06D Leavenworth 66.52 47 P **P** **20 43 07.4 +1.4**
baz=303
LOF Lofoten 66.54 341 *e*P **P** **20 43 05.3 -0.4**
G03D McMinnville, O 66.58 50 P **P** **20 43 08.4 +2.0**
baz=302
LON Longmire 66.62 48 *e*P **P** **20 43 08.8 +2.1**
LON Longmire 66.62 48 *e*P **P** **20 43 08.8 +2.1**
PUL Pulkovo 66.83 329 *ce*P **P** **20 43 08.9 +1.2**
PUL pmax pmax
comp=Z,712nm,1.4s
PUL MLR MLR
comp=Z,31μm,20.0s
COR Corvallis 66.89 51 *e*P **P** **20 43 12.5 +4.1**
LTY Liberty 67.00 47 *e*P **P** **20 43 09.4 +0.3**
B08A Colville Reser 67.16 46 *e*P **P** **20 43 11.0 +1.0**
I03D Drain, OR 67.34 52 P **P** **20 43 12.5 +1.3**
baz=303,SNR=7.5
FIA1 FINESS Array S 67.39 332 *e*P **P** **20 43 10.5 -0.7**
FINES FINESS Array B 67.39 332 P **P** **20 43 11.2 -0.1**
comp=Z,134nm,0.7s,baz=47,slow=6.5,SNR=201
FINES LR LR 21 14 33.7
comp=Z,26μm,21.9s,baz=48,slow=38
H04A Detroit Lake 67.51 50 *e*P **P** **20 43 13.9 +1.5**
H04A *e*PcP **sP** **20 43 34.9 +4.3**
VAF Ylistaro 67.51 335 P **P** **20 43 12.2 +0.2**
VAF pmax pmax
comp=Z,224nm,1.2s
VORR Voronezh 67.57 319 *e*P **P** **20 43 11.0 -1.5**
MAK Makhachkala 67.70 308 *e*P **P** **20 43 14.2 +0.7**
MAK *e*S **S** **20 52 11.1 +3.5**
MAK *e*SS **SS** **20 56 35.0 +6.5**
MAK pmax pmax
comp=Z,177nm,1.0s
G05D Wamic, OR 67.72 49 P **P** **20 43 15.1 +1.4**
baz=303
G05D S **S** **20 52 10.2 +2.3**
baz=303
MOR8 Moi Rana 67.78 340 *e*P **P** **20 43 12.4 -1.2**
VSR Storozhevoye 67.85 319 *e*P **P** **20 43 14.1 -0.2**
VSR *e* 20 45 40.6
VSR *e*S **S** **20 52 08.3 -0.8**
VSR pmax pmax
comp=Z,340nm,1.4s
VSR smax smax
comp=E,70nm,1.7s
VSR MLR MLR
comp=Z,92μm,22.0s
I04A Tendick Farm, 67.86 51 P **P** **20 43 16.0 +1.4**
baz=303,SNR=9.0
KONS Konsvik 67.88 340 *e*P **P** **20 43 14.2 0.0**
VORD Divnogorie 67.93 318 *e*P **P** **20 43 14.5 -0.3**
VORD *e* 20 45 40.7
VORD *e*S **S** **20 52 10.1 0.0**
VORD pmax pmax
comp=Z,240nm,1.3s
VORD smax smax
comp=E,40nm,1.1s
VORD MLR MLR
comp=Z,75μm,22.0s
AFI Afiamalu 67.97 131 P **P** **20 43 16.3 +0.8**
comp=Z,34nm,0.8s,baz=96,slow=19,SNR=2.9
AFI LR LR 21 07 01.6
comp=Z,12μm,21.8s,baz=322,slow=31
AFI Afiamalu 67.97 131 P **P** **20 43 16.3 +0.8**
AFI LR LR
comp=Z,13μm,22.0s
AFI Afiamalu 67.97 131 P **P** **20 43 16.3 +0.8**
AFI MLR MLR
comp=Z,13μm,22.0s

L02D Cave Junction, 68.01 53 P **P** **20 43 17.5 +2.0**
baz=303
C09A Chrisman Ranch 68.06 46 *e*P **P** **20 43 16.8 +1.0**
D08A Wollman Farm, 68.11 47 *e*P **P** **20 43 17.1 +1.1**
G06A Carlson Farm, 68.13 49 *e*P **P** **20 43 17.8 +1.6**
HAWA Hanford 68.13 48 *e*P **P** **20 43 18.5 +2.3**
HAWA LR LR
comp=Z,4μm,21.0s
HUMO Hull Mountain 68.17 52 *e*P **P** **20 43 20.4 +3.8**
F07A Phinny Hill Vi 68.18 48 *e*P **P** **20 43 18.5 +2.0**
I05D Terrebonne, OR 68.20 50 P **P** **20 43 17.2 +0.4**
baz=304
J04D Umpqua Nationa 68.34 51 P **P** **20 43 18.8 +1.0**
baz=304
E08A Dider Farm, El 68.35 47 *e*P **P** **20 43 20.3 +2.8**
JMIC Jan Mayen 68.38 350 *e*P **P** **20 43 18.5 +1.2**
NEW Newport 68.44 45 P **P** **20 43 19.0 +0.9**
baz=305
NEW Newport 68.44 45 *e*P **P** **20 43 19.0 +0.9**
comp=Z,150nm,1.2s
NEW LR LR
comp=Z,6μm,22.0s
NEW Newport 68.44 45 *e*P **P** **20 43 19.0 +0.9**
NEW pmax pmax
comp=Z,151nm,1.2s
NEW MLR MLR
comp=Z,6μm,22.0s
GROC Groznyy 68.61 309 *e*P **P** **20 43 18.5 -0.8**
GROC *e* 20 43 44.9
GROC *e* 20 45 50.4
GROC *e*S **S** **20 52 16.4 -2.1**
GROC pmax pmax
comp=Z,338nm,1.3s
KHMM Horse Mountain 68.64 54 *e*P **P** **20 43 23.1 +3.4**
PINE Pine Mountain 68.75 50 *e*P **P** **20 43 22.8 +2.4**
YBH Yreka Blue Hor 68.80 53 P **P** **20 43 21.6 +1.0**
comp=Z,22nm,1.0s,baz=7.5,slow=0.9,SNR=11
YBH LR LR 21 06 30.0
comp=Z,4μm,21.6s,baz=298,slow=30
YBH Yreka Blue Hor 68.80 53 *e*P **P** **20 43 23.3 +2.7**
YBH Yreka Blue Hor 68.80 53 *e*P **P** **20 43 23.3 +2.7**
SUMG Summit 68.81 0⇑ *i*P **P** **20 43 21.5 +1.0**
comp=Z,231nm,1.0s
SUMG Summit 68.81 0 *e*P **P** **20 43 21.4 +1.0**
SUMG Summit 68.81 0 *e*P **P** **20 43 21.4 +1.0**
J05D Fort Rock, OR 68.85 51 P **P** **20 43 22.5 +1.5**
baz=304,SNR=13
E09A Wood Farm, Sta 68.86 47 *e*P **P** **20 43 22.5 +1.8**
K04D Chiloquin, OR 68.90 52 P **P** **20 43 22.8 +1.6**
baz=304
M02C Callahan 68.90 53 P **P** **20 43 22.8 +1.6**
baz=304,SNR=16
G08A Pilot Rock 69.08 48 *e*P **P** **20 43 24.4 +2.1**
VSU Vasula 69.09 329 *ce*P **P** **20 43 21.9 0.0**
VSU pmax pmax
comp=Z,1μm,1.2s
VSU MLR MLR
comp=Z,57μm,23.0s
GOF Gofitskoye 69.22 312⇑ *i*P **P** **20 43 23.4 +0.4**
GOF *e*S **S** **20 52 26.9 +1.3**
GOF pmax pmax
comp=Z,910nm,1.3s
GOF smax smax
comp=N,30nm,1.3s
GOF smax smax
comp=E,90nm,1.3s
N02D Trinity Center 69.23 54 P **P** **20 43 25.4 +2.1**
baz=304
M04C Macdoel 69.32 53 P **P** **20 43 25.1 +1.3**
baz=304,SNR=28
K05A Summer Lake 69.37 51 *e*P **P** **20 43 26.6 +2.4**
I07A Izee 69.44 50 *e*P **P** **20 43 27.5 +3.0**
WDC Whiskeytown Da 69.55 54 *e*P **P** **20 43 27.5 +2.4**
WDC Whiskeytown Da 69.55 54 *e*P **P** **20 43 27.5 +2.4**
ARMA Armidale 69.55 171 *e*P **P** **20 43 29.4 +4.3**
F10A Beach Ranch, E 69.69 47 *e*P **P** **20 43 28.1 +2.1**
NSS Namsos 69.70 339 *e*P **P** **20 43 25.2 -0.3**
WALA Waterton Lakes 69.71 43 *e*P **P** **20 43 27.0 +0.9**
KIV Kislovodsk 70.06 311 *e*P **P** **20 43 28.9 +0.6**
KIV LR LR
comp=Z,10μm,19.0s
KIV Kislovodsk 70.06 311 P **P** **20 43 29.2 +0.9**
SNR=225
KIV Kislovodsk 70.06 311 *i* P **P** **20 43 28.8 +0.6**
SNR=252
KIV Kislovodsk 70.06 311 *e*P **P** **20 43 28.9 +0.6**
KIV *e*S **S** **20 52 37.5 +1.8**
KIV *e*SS **SS** **20 57 08.7 +3.6**
KIV pmax pmax
comp=Z,929nm,1.0s
KIV pmax pmax
comp=Z,2μm,5.7s
KIV MLR MLR
comp=Z,12μm,17.0s
O03D Paynes Creek 70.18 54 P **P** **20 43 30.3 +1.2**
baz=305,SNR=22
MOD Modoc Plateau 70.20 52 *e*P **P** **20 43 30.8 +1.5**
JTMT Jette 70.29 44 *e*P **P** **20 43 32.0 +2.3**
BMO Blue Mountains 70.29 48 *e*P **P** **20 43 31.3 +1.6**
BMO LR LR
comp=Z,5μm,22.0s
SCO Scoresbysund 70.29 354⇑ *i*P **P** **20 43 29.9 +0.8**
comp=Z,135nm,1.2s
SCO Scoresbysund 70.29 354 *e*P **P** **20 43 29.7 +0.6**
SCO Scoresbysund 70.29 354 *e*P **P** **20 43 29.7 +0.6**
STKA Stephens Creek 70.43 180 P **P** **20 43 30.6 +0.2**
comp=Z,13nm,0.9s,baz=358,slow=5.7,SNR=16
STKA PKPPKP **P'P'df** **21 11 31.1 +6.0**
comp=Z,4.3nm,1.1s,baz=280,slow=9.3,SNR=3.1
STKA LR LR 21 11 56.3
comp=Z,6μm,21.6s,baz=20,slow=34
J08A Circle Bar Ran 70.47 50 *e*P **P** **20 43 32.9 +2.0**
FORT Forrest 70.55 193 *e*P **P** **20 43 30.8 -0.3**
ORV Oroville 70.79 54 *e*P **P** **20 43 34.8 +2.1**
ORV Oroville 70.79 54 *e*P **P** **20 43 34.8 +2.1**
WSAR Wadi Sarin 70.87 285 P **P** **20 43 33.7 +0.2**
comp=Z,86nm,1.0s,baz=94,slow=7.2,SNR=21
WSAR LR LR 21 20 20.2
comp=Z,5μm,18.0s,baz=102,slow=41
WVOR Wild Horse Val 70.91 51 *e*P **P** **20 43 35.6 +2.0**
WVOR LR LR
comp=Z,4μm,22.0s
WVOR Wild Horse Val 70.91 51 *e*P **P** **20 43 35.6 +2.0**
WVOR MLR MLR
comp=Z,4μm,22.0s
WBK Wadi Bani Khal 70.97 284 P **P** **20 43 37.0 +2.9**
SNR=11
GNI Garni 70.99 306 P **P** **20 43 34.5 +0.3**
comp=Z,157nm,1.2s,baz=242,slow=2.9,SNR=52
GNI LR LR 21 18 03.4
comp=Z,19μm,19.4s,baz=52,slow=39
GNI Garni 70.99 306 *e*P **P** **20 43 35.0 +0.8**
GNI LR LR
comp=Z,25μm,20.0s
GNI Garni 70.99 306 P **P** **20 43 35.4 +1.2**
SNR=52
GNI Garni 70.99 306 *i* P **P** **20 43 34.8 +0.7**
SNR=33
GNI Garni 70.99 306 *ce*P **P** **20 43 34.7 +0.6**
GNI pmax pmax
comp=Z,906nm,1.2s
GNI MLR MLR
comp=Z,17μm,22.0s
MSO Missoula 71.03 45 P **P** **20 43 34.9 +0.7**
baz=307,SNR=24
MSO Missoula 71.03 45 *e*P **P** **20 43 35.4 +1.2**
BANOM Banah 71.09 288 P **P** **20 43 35.8 +1.0**
SNR=24
BANOM Banah 71.09 288 *i* P **P** **20 43 35.0 +0.2**
SNR=45
BIDO Bidbid 71.09 285 P **P** **20 43 37.0 +2.2**
SNR=21
IZAR Zarasai 71.09 327 *e*P **P** **20 43 34.8 +0.6**
IZAR IAmb IAmb 20 43 36.3
comp=Z,57nm,0.9s
SHME Shamm 71.14 289 *i* P **P** **20 43 34.8 -0.3**
SNR=32
TBLU Trondheim 71.17 339 *e*P **P** **20 43 32.8 -1.8**
IDID Didziasalis 71.18 327 *e*P **P** **20 43 35.4 +0.7**
IDID IAmb IAmb 20 43 37.9
comp=Z,133nm,1.2s
MICGM Minsk 71.22 326⇑ *i*P **P** **20 43 35.0 0.0**
MICGM *e*PPP PPP 20 43 00.0
MICGM ⇑ *i*P **P** **20 43 35.0 0.0**
MICGM PM 20 43 36.0

comp=Z,1.5nm,1.0s
MICGM PM 20 43 36.0
comp=Z,5.1nm,8.0s
MICGM PM 20 43 37.0
comp=N,0.6nm,1.0s
MICGM PM 20 43 37.0
comp=E,0.7nm,1.0s
MICGM ePcP sP 20 43 54.0 +0.7
MICGM ePP **PP** **20 46 12.0 -0.8**
MICGM eS **S** **20 52 48.0 -0.7**
MICGM ePS **PnS** **20 53 22.0 +0.4**
MICGM eSS **SS** **20 57 16.0 -6.1**
MICGM eSSS SSS 21 00 34.0
MICGM eLQ LQ 21 07 44.0
MICGM LQM 21 13 12.0
comp=N,11nm,20.0s
MICGM LQM 21 13 40.0
comp=E,6.9nm,20.0s
MICGM eLR LR 21 14 32.0
MICGM LRM MLR 21 17 24.0
comp=Z,78nm,16.0s
MICGM LRM MLR 21 17 30.0
comp=E,25nm,16.0s
MICGM LRM MLR 21 17 30.0
comp=E,28nm,16.0s
MICGM LRM MLR 21 17 32.0
comp=Z,66nm,16.0s
MICGM LRM MLR 21 17 34.0
comp=N,18nm,16.0s
MNK Minsk 71.22 326⇑ *i*P **P** **20 43 35.0 0.0**
MNK *e* 20 43 54.0
MNK *e* 20 46 12.0
MNK *e* 20 48 00.0
MNK eS **S** **20 52 48.0 -0.7**
MNK *e* 20 53 22.0
MNK *e* 21 00 34.0
MNK pmax pmax
comp=Z,2μm,1.0s
MNK pmax pmax
comp=Z,5μm,8.0s
MNK pmax pmax
comp=N,600nm,1.0s
MNK pmax pmax
comp=E,700nm,1.0s
MNK MLR MLR
comp=Z,78μm,16.0s
MNK MLR MLR
comp=E,25μm,16.0s
MNK MLR MLR
comp=E,28μm,16.0s
MNK MLR MLR
comp=Z,66μm,16.0s
MNK MLR MLR
comp=N,18μm,16.0s
ISAL Salakas 71.26 327 eP **P** **20 43 36.0 +0.7**
ISAL IAmb IAmb 20 43 38.5
comp=Z,202nm,1.1s
BEKR Beckworth 71.33 54 eP **P** **20 43 39.3 +3.1**
IIGN Ignalina 71.37 327 eP **P** **20 43 36.7 +0.8**
IIGN IAmb IAmb 20 43 39.1
comp=Z,154nm,1.1s
NACGM Naroch 71.43 327 eP **P** **20 43 35.0 -1.3**
NACGM eP **P** **20 43 36.0 -0.3**
NACGM PM 20 43 38.0
comp=Z,0.9nm,1.0s
NACGM ePcP **pP** **20 43 48.0 -1.4**
NACGM ePP PP 20 45 52.0 -23
NACGM ePPP PPP 20 48 00.0
NACGM eS **S** **20 52 48.0 -3.1**
NACGM ePS **PnS** **20 53 32.0 +7.7**
NACGM eSS SS 20 57 44.0 +19
NACGM eSSS SSS 21 01 06.0
NACGM eLQ LQ 21 07 46.0
NACGM eLR LR 21 12 08.0
NACGM LRM MLR 21 17 33.0
comp=E,18nm,16.0s
NACGM LRM MLR 21 17 36.0
comp=Z,37nm,16.0s
NACGM LRM MLR 21 17 40.0
comp=N,20nm,16.0s
MDH Madha 71.44 288 *i* P **P** **20 43 36.3 -0.6**
SNR=22
AFDM Forest Hills D 71.47 55 eP **P** **20 43 38.9 +2.0**
MSFE Esma-Masafi 71.51 288 *i* P **P** **20 43 37.5 +0.1**
SNR=27
BBOO Buckleboo 71.58 185 eP **P** **20 43 37.2 -0.1**
HOQ Hoqain 71.67 286 P **P** **20 43 40.0 +1.7**
SNR=11
UOSS Minazif 71.72 288 eP **P** **20 43 38.4 -0.1**
UOSS Minazif 71.72 288 *i* P **P** **20 43 38.1 -0.5**
SNR=81
ILULI Ilulissat 71.75 5⇑ *i*P **P** **20 43 38.2 +0.3**
comp=N,134nm,1.0s
comp=Z,8μm,23.0s
UMQ Umm Al-Quwin 71.79 288 *i* P **P** **20 43 40.6 +1.6**
SNR=8.2
HATD Hatta, Dubai 71.84 287 P **P** **20 43 40.0 +0.7**
SNR=80
HATD Hatta, Dubai 71.84 287 *i* P **P** **20 43 39.4 +0.1**
SNR=115
FFC Flin Flon 71.86 33 eP **P** **20 43 39.5 +0.6**
FFC LR LR
comp=Z,3μm,19.0s
FFC Flin Flon 71.86 33 eP **P** **20 43 39.5 +0.6**
FFC MLR MLR
comp=Z,3μm,19.0s
SOHO SOHO 71.94 287 *i* P **P** **20 43 39.4 -0.4**
SNR=67
MFID Camas Ranch 72.00 49 eP **P** **20 43 41.8 +1.7**
SOC Sochi 72.02 312*c i*P **P** **20 43 39.9 -0.1**
SOC *e**SP **pP** **20 43 53.9 +0.7**
SOC *e* 20 46 21.2
SOC ePPP PPP 20 48 05.2
SOC eS **S** **20 52 56.7 -1.5**
SOC eSS **SS** **20 57 33.8 -1.1**
SOC pmax pmax
comp=Z,222nm,0.9s
SOC MLR MLR
comp=Z,11μm,17.0s
PAHR Pah Rah Range 72.03 53 eP **P** **20 43 42.0 +1.6**
NAZ Nazwa, Dubai 72.09 288 P **P** **20 43 42.1 +1.2**
SNR=25
NAZ Nazwa, Dubai 72.09 288 *i* P **P** **20 43 40.7 -0.1**
SNR=17
FCC Fort Churchill 72.10 27 eP **P** **20 43 40.4 +0.2**
FCC Fort Churchill 72.10 27 eP **P** **20 43 40.4 +0.2**
VCNR Virginia City 72.11 54 eP **P** **20 43 43.8 +2.9**
HRY Holter Researc 72.25 44 eP **P** **20 43 44.1 +2.5**
PNTR Pine Nut 72.26 54 eP **P** **20 43 43.8 +2.0**
CMB Columbia Colle 72.38 55 eP **P** **20 43 44.0 +1.6**
CMB Columbia Colle 72.38 55 eP **P** **20 43 44.0 +1.6**
ARQ Araqi 72.40 286 P **P** **20 43 46.0 +3.3**
SNR=8.6
NC303 NORSAR Array S 72.45 337 eP **P** **20 43 42.5 +0.2**
LRM Limekiln Ridge 72.46 45 eP **P** **20 43 44.0 +1.0**
MOL Molde 72.47 340 eP **P** **20 43 42.5 +0.1**
DOMB Dombas 72.47 339 eP **P** **20 43 42.8 +0.3**
EGMT Eagleton 72.53 42 P **P** **20 43 43.7 +0.6**
baz=309,SNR=21
EGMT Eagleton 72.53 42 eP **P** **20 43 44.4 +1.2**
EGMT LR LR
comp=Z,7μm,22.0s
YERR Yerington 72.55 54 eP **P** **20 43 44.6 +1.0**
ASUD Al Ashush, Dub 72.55 288 P **P** **20 43 45.0 +1.5**
SNR=18
ASUD Al Ashush, Dub 72.55 288 *i* P **P** **20 43 43.5 0.0**
SNR=36
ALNE Al Ain 72.56 287 *i* P **P** **20 43 43.4 -0.2**
SNR=47
HFS Hagfors 72.58 336 P **P** **20 43 43.7 +0.6**
comp=Z,232nm,1.1s,baz=43,slow=6.5,SNR=99
HFS LR LR 21 18 37.8
comp=Z,34μm,18.8s,baz=38,slow=38
ANN Anapa 72.59 314*c i*P **P** **20 43 43.0 -0.4**
ANN *e* 20 43 59.9
ANN *e* 20 46 25.1
ANN ePPP PPP 20 48 11.8
ANN eS **S** **20 53 07.1 +2.4**
ANN *e* 20 53 56.9
ANN eSS **SS** **20 57 44.7 +1.2**
ANN pmax pmax
comp=E,41nm,0.9s
ANN pmax pmax
comp=N,63nm,1.1s
ANN pmax pmax
comp=Z,312nm,1.1s
ANN pmax pmax
comp=E,183nm,6.7s
ANN pmax pmax
comp=Z,2μm,6.7s
ANN pmax pmax
comp=N,597nm,6.7s
ANN MLR MLR
comp=N,19μm,20.0s
ANN MLR MLR
comp=E,2μm,20.0s
ANN MLR MLR
comp=Z,18μm,20.0s
NC204 NORSAR Array S 72.59 338 eP **P** **20 43 43.5 +0.3**
NB201 NORSAR Array S 72.61 337 eP **P** **20 43 42.3 -1.1**
NOA NORSAR Array B 72.65 337 P **P** **20 43 44.1 +0.6**
NOA LR LR 21 18 20.5
comp=Z,29μm,21.5s,baz=40,slow=38
DLMT Dillon 72.66 45 eP **P** **20 43 45.8 +1.8**
WAKR Walker 72.71 54 eP **P** **20 43 47.0 +2.5**
HLID Hailey 72.73 48 P **P** **20 43 46.3 +1.8**
baz=308,SNR=18
HLID Hailey 72.73 48 eP **P** **20 43 46.4 +1.8**
HLID LR LR
comp=Z,4μm,21.0s
NBO00 NORSAR Array S 72.78 337 eP **P** **20 43 44.5 +0.2**
NC602 NORSAR Array S 72.79 337 eP **P** **20 43 44.0 -0.3**
NC602 NORSAR Array S 72.79 337 eP **P** **20 43 43.9 -0.4**
AJN Ajban 72.84 288 *i* P **P** **20 43 44.9 -0.3**
SNR=16
MCMT McKenzie Canyo 72.85 46 eP **P** **20 43 47.4 +2.1**
NAO01 NORSAR Array S 72.90 337 eP **P** **20 43 44.8 -0.2**
AKN Aaknes 72.94 340 eP **P** **20 43 44.2 -1.0**
BMN Battle Mountai 72.94 52 eP **P** **20 43 47.9 +2.0**
BOZ Bozeman (W) 73.05 45 P **P** **20 43 47.2 +0.8**
baz=309,SNR=71
BOZ Bozeman (W) 73.05 45 eP **P** **20 43 47.5 +1.1**
BOZ LR LR
comp=Z,3μm,21.0s
BOZ Bozeman (W) 73.05 45 eP **P** **20 43 47.5 +1.1**
BOZ MLR MLR
comp=Z,3μm,21.0s
AKASG Malin Array Be 73.12 322 P **P** **20 43 46.2 -0.3**
comp=Z,149nm,0.9s,baz=45,slow=6.7,SNR=310
AKASG LR LR 21 18 55.0
comp=Z,23μm,18.9s,baz=40,slow=38
AKBB Malin Array Si 73.12 322 eP **P** **20 43 46.2 -0.2**
KIEV Kiev 73.13 322 eP **P** **20 43 45.7 -0.8**
KIEV LR LR
comp=Z,25μm,19.0s
KIEV Kiev 73.13 322 *i* P **P** **20 43 46.3 -0.2**
SNR=239
KIEV Kiev 73.13 322*c i*P **P** **20 43 46.1 -0.4**
KIEV pmax pmax
comp=Z,39nm,0.8s
AK11 Malin Array Si 73.16 322 eP **P** **20 43 46.2 -0.5**
RYN Ryan 73.21 54 eP **P** **20 43 49.7 +2.3**
KVN Kaiserville 73.22 53 eP **P** **20 43 49.1 +1.5**
KVN Kaiserville 73.22 53 eP **P** **20 43 49.1 +1.5**
NV01 Mina Array Sit 73.47 54 eP **P** **20 43 50.5 +1.4**
NVAR Mina Array Bea 73.47 54 P **P** **20 43 50.5 +1.4**
comp=Z,27nm,0.9s,baz=287,slow=5.9,SNR=56
NVAR LR LR 21 13 55.1
comp=Z,5μm,19.4s,baz=70,slow=34
OMMB Old Mammoth Mi 73.51 55 eP **P** **20 43 51.5 +2.1**
NV11 Mina Array Sit 73.56 54 eP **P** **20 43 51.2 +1.7**
SUW Suwalki 73.58 327 eP **P** **20 43 48.7 -0.3**
SUW ePP **PP** **20 46 30.9 -2.0**
SUW eS **S** **20 53 15.6 +0.1**
SUW LMZ LR 21 18 07.5
comp=Z,18μm,20.8s
SUW Suwalki 73.58 327 eP **P** **20 43 48.7 -0.3**
SUW *e* 20 46 30.9
SUW eS **S** **20 53 15.6 +0.1**
SUW MLR MLR
comp=Z,18μm,20.8s
MLAC Mammoth, Mammo 73.61 55 P **P** **20 43 51.6 +1.7**
baz=307
QLMT Earthquake Lak 73.64 45 eP **P** **20 43 50.7 +0.8**
OSL Oslo 73.67 337 eP **P** **20 43 49.6 +0.1**
YHB Horse Butte 73.82 45 eP **P** **20 43 52.0 +1.0**
PAGB Antelope Grade 73.82 57 eP **P** **20 43 53.0 +2.1**
SFJD Kangerlussuaq 73.97 5 P **P** **20 43 51.2 +0.1**
comp=Z,117nm,1.0s,baz=346,slow=7.4,SNR=35
SFJD Kangerlussuaq 73.97 5⇑ *i*P **P** **20 43 51.6 +0.5**
comp=Z,115nm,0.9s
SFJD Kangerlussuaq 73.97 5 eP **P** **20 43 51.6 +0.5**
SFJD LR LR
comp=Z,9μm,21.0s
SFJD Kangerlussuaq 73.97 5 eP **P** **20 43 51.6 +0.5**
SFJD MLR MLR
comp=Z,9μm,21.0s
HYA Hoyanger 73.99 339 eP **P** **20 43 51.5 +0.2**
GCMT Greycliff 73.99 44 eP **P** **20 43 53.8 +1.9**
YNR Norris Junctio 74.12 45 eP **P** **20 43 57.0 +4.2**
CAN Canberra 74.15 174 eP **P** **20 43 55.9 +3.3**
YFT Old Faithful 74.20 45 eP **P** **20 43 57.5 +4.2**
SMMC Simmler 74.23 57 P **P** **20 43 54.4 +1.0**
baz=307
KONO Kongsberg 74.24 337 eP **P** **20 43 53.2 +0.3**
KONO Kongsberg 74.24 337*c*eP **P** **20 43 53.5 +0.6**
KONO pmax pmax
comp=Z,174nm,1.7s
KONO Kongsberg 74.24 337 eP **P** **20 43 53.5 +0.6**
TIN Tinemaha, Big 74.34 55 P **P** **20 43 54.9 +0.9**
baz=307
YPP Pitchstone Pla 74.34 45 eP **P** **20 43 58.1 +4.0**
SIM Simferopol' 74.34 315*c i*P **P** **20 43 53.9 +0.2**
SIM PPP PPP 20 48 33.0
SIM eS **S** **20 53 25.0 +0.5**
SIM ePS PnS 20 54 20.0 +17
SIM pmax pmax
comp=Z,134nm,1.1s
SIM MLR MLR
comp=Z,13μm,16.0s
KLNR Kaliningrad 74.37 329*c i*P **P** **20 43 53.4 -0.3**
KLNR pmax pmax
comp=Z,435nm,1.1s
KLNR MLR MLR
comp=Z,30μm,20.0s
LKWY Lake 74.37 45 PFAKE 20 44 10.0 +16
LKWY LR LR
comp=Z,3μm,19.0s
H17A Grant Village 74.39 45 P **P** **20 43 57.2 +2.8**
baz=310,SNR=15
H17A Grant Village 74.39 45 eP **P** **20 43 58.3 +3.9**
SUE Sulen 74.47 340 eP **P** **20 43 55.5 +1.4**
IMW Indian Meadow 74.50 46 eP **P** **20 43 57.6 +2.5**
VES Vestal, Richgr 74.51 56 P **P** **20 43 55.5 +0.6**
baz=307
PKM Mcpherson Peak 74.61 58 P **P** **20 43 57.5 +1.8**
baz=307
FXWY Fox Creek 74.61 46 eP **P** **20 43 57.9 +2.2**
RLMT Red Lodge 74.64 44 P **P** **20 43 56.9 +1.1**
baz=310,SNR=25
RLMT Red Lodge 74.64 44 eP **P** **20 43 57.6 +1.8**
RLMT LR LR
comp=Z,4μm,22.0s
MOOW Moose Ponds 74.70 46 eP **P** **20 43 58.5 +2.4**
TPAW Teton Pass 74.75 46 eP **P** **20 43 58.3 +1.8**
HVU Hansel Valley 74.78 48 eP **P** **20 43 59.0 +2.4**
HVU Hansel Valley 74.78 48 eP **P** **20 43 59.0 +2.4**
CWC Cottonwood Cre 74.80 55 P **P** **20 43 58.1 +1.3**
baz=307
ASK Askoy 74.83 339 eP **P** **20 43 56.5 +0.3**
LOHW Long Hollow 74.87 46 eP **P** **20 43 59.6 +2.5**
MZR Muzera 74.87 287 *i* P **P** **20 43 56.5 -0.6**
SNR=31
BER Bergen 74.88 339 eP **P** **20 43 57.6 +1.1**
SNOW Snow King Moun 74.88 46 eP **P** **20 43 59.5 +2.3**
REDW Red Top Meadow 74.89 46 eP **P** **20 43 59.0 +1.8**
ODD1 Odda 74.90 339 eP **P** **20 43 57.6 +0.8**
GRAC Grapevine Rang 74.92 55 P **P** **20 43 59.0 +1.7**
baz=308
SBC Santa Barbara 74.94 58 P **P** **20 43 58.7 +1.4**
baz=307
ISA Isabella, Lake 75.02 56 P **P** **20 43 58.2 +0.3**
baz=307,SNR=7.0
ISA Isabella, Lake 75.02 56 eP **P** **20 43 59.1 +1.2**
ISA Isabella, Lake 75.02 56 eP **P** **20 43 59.1 +1.2**
DGMT Dagmar 75.06 39 P **P** **20 43 58.4 +0.5**
baz=313,SNR=7.0
DGMT Dagmar 75.06 39 eP **P** **20 43 58.9 +1.0**
DGMT LR LR
comp=Z,7μm,22.0s
NWAO Narrogin (SRO) 75.10 201 P **P** **20 43 58.1 0.0**
comp=Z,111nm,1.1s,baz=260,slow=6.9,SNR=15
NWAO Narrogin (SRO) 75.10 201 PFAKE 20 44 10.0 +12
NWAO LR LR
comp=Z,3μm,20.0s
NWAO Narrogin (SRO) 75.10 201 P **P** **20 43 59.3 +1.2**
SNR=5.2
ARVC Arvin 75.11 57 P **P** **20 43 59.7 +1.3**
baz=307
AHID Auburn Hatcher 75.12 47 eP **P** **20 44 00.6 +2.0**
AHID LR LR
comp=Z,5μm,22.0s
BGU Big Grassy Mou 75.16 49 eP **P** **20 44 00.7 +1.9**
DAC Darwin (Calif) 75.21 55 eP **P** **20 43 59.9 +0.7**
DAC Darwin (Calif) 75.21 55 eP **P** **20 43 59.9 +0.7**
R11A Troy Canyon, C 75.21 53 P **P** **20 43 60.0 +0.8**
baz=308,SNR=22
R11A Troy Canyon, C 75.21 53 eP **P** **20 44 00.6 +1.4**
LAO LASA Array 75.23 41 P **P** **20 43 59.7 +0.8**
baz=312
LAO LASA Array 75.23 41 PFAKE 20 44 10.0 +11
LAO LR LR
comp=Z,5μm,20.0s
SORM Soroca 75.26 321⇑ *i*P **P** **20 43 58.5 -0.4**
SCZ2 Santa Cruz Isl 75.26 58 P **P** **20 44 00.1 +0.8**
baz=307
SPUT South Promonto 75.27 49 eP **P** **20 44 01.4 +2.0**
BLS5 Blasjo 75.36 338 eP **P** **20 44 00.9 +1.5**
RCWM Renegade Canyo 75.38 56 eP **P** **20 44 03.6 +3.6**
MPMC Manual Prospec 75.41 55 P **P** **20 44 01.3 +0.9**
baz=308,SNR=45
OSI Osito Audit: C 75.49 57 P **P** **20 44 00.9 +0.3**
baz=308
OSI Osito Audit: C 75.49 57 eP **P** **20 44 03.2 +2.6**
FURC Furnace Creek, 75.56 55 P **P** **20 44 02.0 +1.1**
baz=308,SNR=41
BLG Laguna Peak, P 75.57 58 P **P** **20 44 01.9 +0.8**
baz=308
HWUT Hardware Ranch 75.59 48 eP **P** **20 44 02.6 +1.4**
HWUT LR LR
comp=Z,3μm,20.0s
LRMC Laurel Mtn Rad 75.64 56 P **P** **20 44 01.7 +0.2**
baz=308
TPNV Topopah Spring 75.66 54 P **P** **20 44 02.9 +1.2**
baz=308,SNR=26
TPNV Topopah Spring 75.66 54 eP **P** **20 44 03.3 +1.6**
TPNV Topopah Spring 75.66 54 eP **P** **20 44 03.3 +1.6**
HOMB Homborsund 75.69 337 eP **P** **20 44 02.3 +1.1**
DUG Dugway, Tooele 75.75 50 P **P** **20 44 03.5 +1.4**
baz=309,SNR=57
DUG Dugway, Tooele 75.75 50 eP **P** **20 44 03.6 +1.5**
DUG LR LR
comp=Z,4μm,22.0s
DUG Dugway, Tooele 75.75 50 eP **P** **20 44 03.7 +1.5**
DUG MLR MLR
comp=Z,4μm,22.0s
SNCC San Nicolas Is 75.78 59 P **P** **20 44 03.4 +1.1**
baz=308
SNCC San Nicolas Is 75.78 59 eP **P** **20 44 04.5 +2.2**
KIS Kishinev 75.79 320⇑ *i*P **P** **20 44 01.0 -1.0**
comp=Z,600nm,2.0s
KIS Kishinev 75.79 320 *i* PcP **PcP** **20 44 14.0 -0.5**
KIS Kishinev 75.79 320 *i* PP PP 20 46 54.0 +2.2
KIS Kishinev 75.79 320⇓ *i*P **P** **20 44 02.6 +0.6**
KIS Kishinev 75.79 320κ *i*P **P** **20 44 01.0 -1.0**
KIS *i* 20 44 14.0
KIS *i* 20 46 54.0
KIS *i* PPP PPP 20 48 40.0
KIS *i* S **S** **20 53 36.0 -4.5**
KIS *i* PS **PnS** **20 54 30.0 +8.6**
KIS pmax pmax
comp=E,300nm,2.0s
KIS pmax pmax
comp=Z,600nm,2.0s
KIS pmax pmax
comp=N,1μm,13.0s
KIS pmax pmax
comp=E,900nm,13.0s
KIS pmax pmax
comp=Z,3μm,13.0s
KIS MLR MLR
comp=N,19μm,16.0s
KIS MLR MLR
comp=Z,30μm,16.0s
KIS MLR MLR
comp=Z,30μm,16.0s
ANGG Ammassalik, Gr 75.80 360 eP **P** **20 44 00.9 -0.8**
EDW2 Edwards Air Fo 75.80 57 P **P** **20 44 03.4 +1.0**
baz=308,SNR=17
BORG Borgarnes 75.85 353 PFAKE 20 44 10.0 +8.0
BORG LR LR
comp=Z,2μm,22.0s
KMY Karmoy 75.88 339 eP **P** **20 44 03.4 +1.1**
DECC Green Verdugo 75.96 57 P **P** **20 44 03.4 +0.1**
baz=308
STAV Stavanger 75.98 338 eP **P** **20 44 03.0 +0.1**
BW06 Boulder Array 76.00 46 P **P** **20 44 04.1 +0.5**
baz=310,SNR=31
BW06 Boulder Array 76.00 46 eP **P** **20 44 04.3 +0.7**
BW06 LR LR
comp=Z,5μm,21.0s
PD31 Pinedale Array 76.00 46 eP **P** **20 44 03.6 0.0**
PDAR Pinedale Array 76.00 46 P **P** **20 44 04.3 +0.7**
comp=Z,13nm,0.9s,baz=273,slow=2.7,SNR=50
PDAR LR LR 21 13 34.1
comp=Z,2μm,21.6s,baz=327,slow=32
PDAR Pinedale Array 76.00 46 eP **P** **20 44 03.8 +0.2**
BSD Bornholm Skovb 76.03 332⇑ *i*P **P** **20 44 03.2 0.0**
comp=Z,375nm,1.1s
comp=Z,21μm,20.0s
SNART Snartemo 76.03 337 eP **P** **20 44 03.5 +0.3**
CTU Camp Tracy 76.06 49 eP **P** **20 44 05.7 +1.7**
PASC Pasadena Art C 76.11 57 eP **P** **20 44 08.0 +3.9**
BEL Belsk 76.15 327 eP **P** **20 44 04.8 +0.9**
BEL eS **S** **20 53 45.8 +1.5**
BEL LMZ LR 21 19 17.0
comp=Z,16μm,22.8s
BEL Belsk 76.15 327 eP **P** **20 44 04.8 +0.9**
BEL eS **S** **20 53 45.8 +1.5**
BEL MLR MLR
comp=Z,16μm,22.8s
LVV L'vov 76.16 324 eP **P** **20 44 05.7 +1.6**
LVV *e* 20 46 56.0
LVV ePPP PPP 20 48 45.4
LVV eS **S** **20 53 44.1 -0.4**
LVV pmax pmax
comp=Z,900nm,1.3s
LVV MLR MLR
comp=N,14μm,15.0s
LVV MLR MLR
comp=E,16μm,15.0s
LVV MLR MLR
comp=Z,22μm,15.0s
MWC Mount Wilson 76.16 57 eP **P** **20 44 06.7 +2.1**
PSUT Pine Spring 76.17 52 eP **P** **20 44 06.3 +1.7**
IAS Iasi 76.29 320⇓ *i*P **P** **20 44 05.1 +0.2**
SHOC Shoshone, Teco 76.29 55 P **P** **20 44 06.4 +1.3**
baz=308
JLU Jordanelle 76.30 49 eP **P** **20 44 07.7 +2.3**
GSC Goldstone, Bar 76.31 56 P **P** **20 44 05.4 0.0**
baz=308,SNR=12
GSC Goldstone, Bar 76.31 56 eP **P** **20 44 06.3 +0.9**
GSC Goldstone, Bar 76.31 56 eP **P** **20 44 06.3 +0.9**
FMP Fort Macarthur 76.32 58 P **P** **20 44 06.4 +1.1**
baz=308
BFSC Mount Baldy Ra 76.41 57 P **P** **20 44 06.5 +0.5**
baz=308,SNR=7.3
CIS Catalina Islan 76.43 58 P **P** **20 44 06.8 +0.8**
baz=308
LEOM Leova 76.43 319⇓ *i*P **P** **20 44 05.9 +0.2**
RRX Edison Barstow 76.45 56 P **P** **20 44 07.4 +1.3**
baz=308
COP Copenhagen 76.47 333 *i* P **P** **20 44 06.2 +0.5**
comp=Z,229nm,0.9s
comp=Z,18μm,19.0s
GKP Gorka Klasztor 76.54 330 eP **P** **20 44 06.4 +0.2**
GKP eS **S** **20 53 48.8 +0.2**
GKP LMZ LR 21 20 30.8
comp=Z,41μm,19.2s
GKP Gorka Klasztor 76.54 330 eP **P** **20 44 06.4 +0.2**
GKP eS **S** **20 53 48.8 +0.2**
GKP MLR MLR
comp=Z,41μm,19.2s
MPU Maple Canyon 76.56 49 eP **P** **20 44 08.7 +1.8**

SCI2	San Clemente I	76.60	58	P		P	20 44 08.2 +1.4
	baz=308						
SHPR	Sheep Range	76.62	54	eP		P	20 44 09.1 +1.9
TUQ	Turquoise Moun	76.80	55	P		P	20 44 09.8 +1.6
	baz=309						
LLD	Lille Linde	76.83	333	i P		P	20 44 08.0 +0.3
	comp=Z,295nm,1.3s						
PRAR	RASCA	76.83	321⇓	iP		P	20 44 08.4 +0.4
BBRC	Big Bear Solar	76.88	57	P		P	20 44 08.6 -0.2
	baz=308						
KWP	Kalwaria Pacla	76.89	324	eP		P	20 44 09.1 +0.8
KWP				eS		S	20 53 52.5 -0.1
KWP	Kalwaria Pacla	76.89	324	eP		P	20 44 09.0 +0.8
KWP	Kalwaria Pacla	76.89	324	eP		P	20 44 09.1 +0.8
KWP				eS		S	20 53 52.5 -0.1
HEC	Hector,Ludlow	76.91	56	P		P	20 44 09.2 +0.4
	baz=308,SNR=14						
MUD	Monsted U'grnd	76.96	335	i P		P	20 44 09.1 +0.7
	comp=Z,231nm,1.2s						
	comp=Z,27μm,19.0s						
TLCR		77.02	318⇓	iP		P	20 44 09.1 +0.1
RGN	Rugen	77.05	332	eP		P	20 44 09.9 +0.9
ILGA	Ilgaz	77.07	313	eP		P	20 44 11.2 +1.4
CCUT	Cedar City	77.08	52	eP		P	20 44 11.2 +1.4
MURC	Murrieta	77.11	57	P		P	20 44 10.4 +0.6
	baz=308						
GIUM	Giurgiulesti	77.13	319⇑	iP		P	20 44 09.7 +0.1
BUR08	Bucovina Ar. S	77.14	322	eP		P	20 44 10.4 +0.6
BUR04	Bucovina Ar. S	77.15	322	eP		P	20 44 10.3 +0.4
BURAR	Bucovina Array	77.15	322⇑	iP		P	20 44 10.2 +0.3
MSU	Marysvale	77.20	51	eP		P	20 44 12.4 +1.9
TESR	Tescani	77.21	320⇑	iP		P	20 44 09.5 -0.6
SZCU	Shurtz Canyon	77.22	52	eP		P	20 44 11.8 +1.1
TMUT	Trail Mountain	77.28	50	eP		P	20 44 12.2 +1.2
GMRC	Granite Mounta	77.37	56	P		P	20 44 12.3 +0.9
	baz=309,SNR=17						
RAO	Raoul Island	77.42	145	LR		LR	21 12 00.1
	comp=Z,7μm,21.7s,baz=354,slow=31						
RAO	Raoul Island	77.42	145	PFAKE			20 44 20.0 +8.7
RAO				LR		LR	
	comp=Z,9μm,20.0s						
P17A	Butcher Ranch,	77.44	49	eP		P	20 44 13.3 +1.5
PETR	Petresti	77.46	319⇑	iP		P	20 44 13.0 +1.5
MTPU	Mount Pierson	77.49	51	eP		P	20 44 14.3 +2.0
LCMT	Little Creek M	77.50	52	eP		P	20 44 13.8 +1.7
ODBI	Odobesti	77.52	319⇓	iP		P	20 44 09.0 -2.8
PFO	Pinyon Flats O	77.58	57	P		P	20 44 13.1 +0.5
	baz=309,SNR=11						
PFO	Pinyon Flats O	77.58	57	eP		P	20 44 14.3 +1.7
PFO				LR		LR	
	comp=Z,8μm,20.0s						
XPFO	Piæon Flat	77.59	57	eP		P	20 44 14.2 +1.6
109C	Camp Elliot, M	77.61	58	P		P	20 44 14.1 +1.6
	baz=309						
CPE	Camp Elliot	77.61	58	eP		P	20 44 17.0 +4.4
VRI	Vrincioaia	77.62	320⇑	iP		P	20 44 13.5 +1.1
P18A	Preston Nutter	77.63	49	eP		P	20 44 14.8 +1.8
SLMH	Al Salmeh	77.64	307	eP		P	20 44 12.3 -0.5
BELC	Belle Mtn. Jos	77.64	56	P		P	20 44 13.1 +0.2
	baz=309,SNR=7.8						
BELC	Belle Mtn. Jos	77.64	56	eP		P	20 44 14.6 +1.6
ULM	Lac du Bonnet	77.66	34	P		P	20 44 12.4 -0.1
	comp=Z,46nm,1.1s,baz=315,slow=6.9,SNR=32						
ULM				LR		LR	21 19 04.6
	comp=Z,4μm,21.9s,baz=326,slow=36						
ULM	Lac du Bonnet	77.66	34	eP		P	20 44 11.8 -0.7
PLOR	Plostina	77.67	320⇑	iP		P	20 44 13.2 +0.5
MDND	Maddock	77.71	37	P		P	20 44 13.7 +0.8
	baz=316						
TIRR	Tirgusor	77.72	318⇑	iP		P	20 44 13.2 +0.3
TIRR	Tirgusor	77.72	318	eP		P	20 44 13.1 +0.1
K22A	Casper	77.76	45	P		P	20 44 14.4 +0.9
	baz=312						
K22A	Casper	77.76	45	eP		P	20 44 15.1 +1.7
KNB	Kanab	77.76	52	eP		P	20 44 15.8 +2.2
OJC	Ojcow	77.76	326	eP		P	20 44 13.7 +0.6
OJC				eS		S	20 54 01.4 -0.6
OJC				LMZ		LR	21 21 38.9
	comp=Z,38μm,18.0s						
OJC	Ojcow	77.76	326	eP		P	20 44 13.7 +0.6
OJC	Ojcow	77.76	326	eP		P	20 44 13.7 +0.6
OJC				eS		S	20 54 01.4 -0.6
OJC				MLR		MLR	
	comp=Z,38μm,18.0s						
PKCU	Pink Cliffs	77.80	52	eP		P	20 44 17.3 +3.4
SRU	San Rafael Swe	77.80	49	eP		P	20 44 15.2 +1.4
SRU	San Rafael Swe	77.80	49	eP		P	20 44 15.2 +1.4
UZH	Uzhgorod	77.80	324⇓	iP		P	20 44 14.1 +0.8
UZH				e			20 47 08.6
UZH				e			20 48 59.8
UZH				eS		S	20 53 59.6 -2.8
UZH				MLR		MLR	
	comp=N,2μm,15.0s						
UZH				MLR		MLR	
	comp=Z,2μm,15.0s						
HARR	Harsova	77.81	318⇓	iP		P	20 44 13.8 +0.3
GRER		77.83	319⇑	iP		P	20 44 15.0 +1.4
EFOR	EFORIE	77.86	317⇓	iP		P	20 44 14.9 +1.2
BMR	Baia Mare	77.93	323⇑	iP		P	20 44 14.9 +0.8
ARCR	ARCALIA	77.94	322⇑	iP		P	20 44 15.6 +1.5
BR131	Keskin Array S	77.98	312	eP		P	20 44 14.9 +0.1
BRTR	Keskin Array B	77.98	312	P		P	20 44 14.8 +0.1
	comp=Z,97nm,1.1s,baz=81,slow=3.9,SNR=146						
BRTR				PP		PP	20 47 08.7 -1.9
	comp=Z,63nm,1.1s,baz=72,slow=5.3,SNR=8.1						
BRTR				PKKPbc		PKKPbc	21 03 15.0 +1.6
	comp=Z,0.5nm,0.8s,baz=284,slow=1.2,SNR=3.2						
BRTR				PKPPKP		P'P'df	21 11 15.8 -6.2
	comp=Z,0.4nm,0.7s,baz=185,slow=7.2,SNR=4.0						
BRTR				LR		LR	21 22 14.4
	comp=Z,5μm,19.6s,baz=48,slow=38						
BRTR	Keskin Array B	77.98	312	i P		P	20 44 14.8 +0.1
BRTR				pmax		pmax	
	comp=Z,60nm,0.9s						
CRVS	Cervenica-Dubn	77.99	324	eP		P	20 44 15.2 +0.8
CRVS				pmax		pmax	
	comp=Z,143nm,1.3s						
CRVS	Cervenica-Dubn	77.99	324	eP		P	20 44 15.2 +0.8
CRVS				ePP		PP	20 47 09.9 -0.3
CRVS				eS		S	20 54 04.8 +0.3
CRVS				eL		L	21 21 56.6
RWWY	Rawlins	78.02	46	eP		P	20 44 15.7 +0.7
BAR	Barrett	78.02	58	eP		P	20 44 17.0 +2.1
A31A	Linda, St. Vin	78.04	35	P		P	20 44 14.6 -0.1
	baz=317						
TRPA	Tarpa	78.05	323⇑	iP		P	20 44 15.6 +0.9
TRPA	Tarpa	78.05	323⇑	eP		P	20 44 15.6 +0.9
NEE2	Needles Airpor	78.05	55	P		P	20 44 16.3 +1.3
	baz=309						
MONP2	Monument Peak	78.06	57	P		P	20 44 16.4 +1.1
	baz=309						
IRM	Iron Mountain	78.10	56	P		P	20 44 16.2 +0.9
	baz=309,SNR=16						
RSSD	Black Hills	78.10	42	P		P	20 44 16.0 +0.6
	baz=313						
RSSD	Black Hills	78.10	42	eP		P	20 44 15.7 +0.3
RSSD	Black Hills	78.10	42	eP		P	20 44 15.7 +0.3
NIE	Niedzica	78.13	325	eP		P	20 44 16.1 +1.0
NIE				eS		S	20 54 07.6 +1.6
NIE				LMZ		LR	21 21 54.1
	comp=Z,21μm,17.8s						
NIE	Niedzica	78.13	325	eP		P	20 44 16.2 +1.0
NIE				eS		S	20 54 07.6 +1.6
NIE				MLR		MLR	
	comp=Z,21μm,17.8s						
PGOR	Pogoanele	78.15	319⇓	iP		P	20 44 16.9 +1.6
AMRR	Amara	78.18	318⇓	iP		P	20 44 16.9 +1.4
B31A	Greenbush Farm	78.20	36	P		P	20 44 15.8 +0.2
	baz=317,SNR=13						
BC3	Big Chuckawall	78.21	56	P		P	20 44 16.6 +0.6
	baz=309,SNR=15						
DOPR	Dopca	78.22	320⇓	iP		P	20 44 17.0 +1.2
ISR	Istrita	78.23	319⇓	iP		P	20 44 17.0 +1.1
ICOR	Ion Corvin	78.27	318⇓	iP		P	20 44 17.1 +1.1
MLR	Muntele Rosu	78.27	320	LR		LR	21 22 04.8
	comp=Z,7μm,18.5s,baz=46,slow=38						
MLR	Muntele Rosu	78.27	320⇓	iP		P	20 44 16.2 0.0
MLR	Muntele Rosu	78.27	320	eP		P	20 44 16.1 0.0
W13A	Hualapai Mount	78.31	54	eP		P	20 44 18.2 +1.5
ANTO	Ankara	78.38	312	iP		P	20 44 17.2 +0.4
ANTO	Ankara	78.38	312	eP		P	20 44 17.4 +0.6
ANTO				LR		LR	
	comp=Z,5μm,22.0s						
ANTO	Ankara	78.38	312	P		P	20 44 17.8 +1.0
	SNR=46						
ANTO	Ankara	78.38	312	eP		P	20 44 17.4 +0.6
ANTO				MLR		MLR	
	comp=Z,5μm,22.0s						
BR231	Keskin MP Arra	78.41	312	eP		P	20 44 17.8 +0.8
IKP	In-Ko-Pah, Jac	78.41	57	P		P	20 44 17.7 +0.5
	baz=309,SNR=10						
SWSC	Sam W. Stewart	78.43	57	P		P	20 44 18.0 +0.9
	baz=309,SNR=6.3						
U15A	North Rim	78.46	52	eP		P	20 44 19.6 +2.1
O20A	White River Ci	78.46	47	P		P	20 44 18.0 +0.5
	baz=312,SNR=19						
SECR		78.53	319⇑	iP		P	20 44 18.6 +1.1
RAC	Raciborz	78.55	327	eP		P	20 44 18.6 +1.2
RAC				eS		S	20 54 13.0 +2.6
RAC				MLR		MLR	
	comp=Z,24μm,19.2s						
CJR	Cluj-Napoca	78.57	322⇓	iP		P	20 44 18.8 +1.1
MDB	Medias	78.59	321⇑	iP		P	20 44 19.3 +1.5
C31A	Landman Farms,	78.62	36	P		P	20 44 17.9 0.0
	baz=317,SNR=28						
PLAR	PLOIESTI	78.64	319⇑	iP		P	20 44 18.8 +0.8
PDMCI	Parker Dam,Lak	78.65	55	P		P	20 44 19.1 +0.8
	baz=310						
SULR		78.68	319⇓	iP		P	20 44 18.9 +0.6
LANS	Liptovska Anna	78.69	326	eP		P	20 44 19.8 +1.5
LANS	Liptovska Anna	78.69	326	eP		P	20 44 19.8 +1.5
KECS	Kecovo	78.73	325	eP		P	20 44 20.8 +2.3
KECS	Kecovo	78.73	325	eP		P	20 44 20.8 +2.3
Y12C	Blythe	78.75	56	P		P	20 44 19.6 +0.8
	baz=310,SNR=11						
Y12C	Blythe	78.75	56	eP		P	20 44 20.5 +1.6
OKC	Ostrava-Krasne	78.75	327	eP		P	20 44 19.2 +0.6
OKC				eS		S	20 54 13.5 +0.9
OKC				AMS		AMS	21 21 50.0
	comp=Z,19μm,17.8s						
OKC	Ostrava-Krasne	78.75	327	eP		P	20 44 19.2 +0.6
OKC				eS		S	20 54 13.5 +0.9
OKC				MLR		MLR	
	comp=Z,19μm,17.8s						
VOIR		78.76	320⇑	iP		P	20 44 19.2 +0.4
KSP	Ksiaz	78.77	328	eP		P	20 44 19.3 +0.6
KSP				eS		S	20 54 13.0 +0.3
KSP				LMZ		LR	21 21 32.1
	comp=Z,25μm,21.5s						
KSP	Ksiaz	78.77	328	eP		P	20 44 19.3 +0.6
KSP				eS		S	20 54 13.0 +0.3
KSP				MLR		MLR	
	comp=Z,25μm,21.5s						
A33A	Warroad	78.84	35	P		P	20 44 19.1 0.0
	baz=318,SNR=26						
BIGH	Upper Bighouse	78.88	343⇑	eP		P	20 44 19.7 +0.7
BIGH				IAmb		IAmb	20 44 21.2
	comp=Z,385nm,1.2s						
BIGH				IAMs_20		IAMs_20	21 13 08.3
	comp=Z,19μm,36.7s						
LTVH	L"tav"rtes,	78.89	323⇑	eP		P	20 44 20.7 +1.4
MTUR	Mau	78.90	320⇑	iP		P	20 44 20.8 +1.2
MLA1	Latheron	78.92	342⇑	eP		P	20 44 19.7 +0.4
DRGR		78.94	322⇑	iP		P	20 44 20.2 +0.5
GLA	Glamis	79.00	56	P		P	20 44 20.9 +0.6
	baz=310,SNR=7.3						
GLA	Glamis	79.00	56	eP		P	20 44 21.9 +1.6
GLA	Glamis	79.00	56	eP		P	20 44 21.9 +1.6
ARR	Arges	79.02	320⇑	iP		P	20 44 21.5 +1.3
PV09	Paradox Valley	79.02	49	eP		P	20 44 22.5 +1.8
MORC	Moravsky Berou	79.06	327⇑	iP		P	20 44 21.1 +0.7
MORC	Moravsky Berou	79.06	327	eP		P	20 44 21.0 +0.7
MORC	Moravsky Berou	79.06	327	eP		P	20 44 21.0 +0.7
MORC	Moravsky Berou	79.06	327⇑	iP		P	20 44 20.9 +0.7
MORC				eS		S	20 54 16.6 +0.6
DGAR	Diego Garcia	79.07	251	eP		P	20 44 21.3 +0.5
DGAR				LR		LR	
	comp=Z,3μm,22.0s						
DGAR	Diego Garcia	79.07	251	i P		P	20 44 21.9 +1.1
AGMN	Agassiz Nation	79.11	35	P		P	20 44 20.2 -0.3
	baz=318,SNR=24						
AGMN	Agassiz Nation	79.11	35	PFAKE			20 44 30.0 +9.4
AGMN				LR		LR	
	comp=Z,5μm,21.0s						
DPC	Dobruska-Polom	79.13	328	eP		P	20 44 21.5 +0.8
DPC				ex		x	20 44 35.8
DPC				eS		S	20 54 17.2 +0.5
DPC				eXS		SKKSac	20 54 34.9 +0.6
DPC				AMS		AMS	21 21 40.0
	comp=Z,23μm,17.7s						
DPC	Dobruska-Polom	79.13	328	eP		P	20 44 21.5 +0.8
DPC				e			20 44 35.8
DPC				eS		S	20 54 17.2 +0.5
DPC				e			20 54 34.9
DPC				MLR		MLR	
	comp=Z,23μm,17.7s						
UPC	Upice	79.14	328	eP		P	20 44 21.7 +1.0
UPC				eS		S	20 54 17.6 +0.9
UPC				AMS		AMS	21 21 50.0
	comp=Z,27μm,17.5s						
UPC	Upice	79.14	328	eP		P	20 44 21.7 +1.0
UPC				eS		S	20 54 17.6 +0.9
UPC				MLR		MLR	
	comp=Z,27μm,17.5s						
SGRR	Singureni	79.15	319⇑	iP		P	20 44 20.6 -0.2
KRLC	Kraliky	79.15	328	eP		P	20 44 21.8 +1.0
KRLC	Kraliky	79.15	328	eP		P	20 44 21.8 +1.0
C32A	Crookston	79.15	36	P		P	20 44 20.7 -0.1
	baz=318						
PV10	Paradox Valley	79.16	49	eP		P	20 44 23.2 +1.8
D31A	Mcclaflin, Tow	79.17	37	P		P	20 44 20.8 -0.1
	baz=317						
GOLR		79.23	320⇓	iP		P	20 44 21.9 +0.6
PV04	Paradox Valley	79.23	49	eP		P	20 44 23.1 +1.4
PHWY	Pilot Hill	79.25	45	eP		P	20 44 24.4 +2.5
N23A	Red Feather La	79.26	46	P		P	20 44 22.8 +0.9
	baz=313,SNR=15						
N23A	Red Feather La	79.26	46	eP		P	20 44 23.4 +1.5
PV05	Paradox Valley	79.32	49	eP		P	20 44 23.6 +1.4
PV07	Paradox Valley	79.35	49	eP		P	20 44 23.1 +0.8
PV03	Paradox Valley	79.35	49	eP		P	20 44 23.7 +1.3
LOT	Lotru	79.39	321⇓	iP		P	20 44 22.6 +0.3
PSZ	Piszkesteto	79.42	325⇑	iP		P	20 44 23.5 +1.2
PSZ	Piszkesteto	79.42	325⇑	eP		P	20 44 23.6 +1.2
PSZ	Piszkesteto	79.42	325	eP		P	20 44 22.8 +0.4
PSZ	Piszkesteto	79.42	325	eP		P	20 44 22.8 +0.4
H08N2	Diego Garcia H	79.43	253	P		P	20 44 23.9 +1.5
	baz=9.3,slow=2.1,SNR=5.8						
H08N1	Diego Garcia H	79.44	253	P		P	20 44 23.2 +0.8
	baz=9.3,slow=2.1,SNR=3.7						
D32A	Dogwood Acres,	79.44	37	P		P	20 44 22.0 -0.4
	baz=317						
D32A	Dogwood Acres,	79.44	37	eP		P	20 44 22.8 +0.4
HUMR	Humele	79.44	320⇓	iP		P	20 44 22.2 -0.2
E31A	Nome	79.45	37	P		P	20 44 22.7 +0.2
	baz=317,SNR=15						
PV02	Paradox Valley	79.45	49	eP		P	20 44 24.6 +1.7
H08N3	Diego Garcia H	79.45	253	P		P	20 44 19.7 -2.8
	baz=9.3,slow=2.1,SNR=3.0						
VYHS	Vyhne	79.46	326	eP		P	20 44 23.1 +0.6
VYHS				pmax		pmax	
	comp=Z,114nm,1.4s						
VYHS	Vyhne	79.46	326	eP		P	20 44 23.1 +0.6
VYHS				ePP		PP	20 47 23.5 +1.0
VYHS				epS		pS	20 54 35.4 -1.4
DEV	Deva	79.50	322⇑	iP		P	20 44 24.3 +1.6
B34A	Aery, Baudette	79.51	34	P		P	20 44 22.4 -0.3
	baz=319,SNR=18						
PV15	Paradox Valley	79.51	49	eP		P	20 44 24.9 +1.6
MCD	Coleburn Disti	79.54	342⇑	eP		P	20 44 23.2 +0.5
C33A	Trail	79.55	36	P		P	20 44 22.9 -0.1
	baz=318,SNR=10						
PV01	Paradox Valley	79.60	49	eP		P	20 44 25.1 +1.3
Y14A	Wickenburg	79.61	55	eP		P	20 44 24.7 +1.1
WUAZ	Wupatki	79.61	53	P		P	20 44 25.1 +1.4
	baz=311,SNR=31						
WUAZ	Wupatki	79.61	53	eP		P	20 44 25.4 +1.6
WUAZ				LR		LR	
	comp=Z,6μm,21.0s						
BRG	Berggiesshubel	79.69	330	⇑TP			20 44 24.2
	comp=Z,181nm,1.1s						
BRG				i			20 44 30.3
	comp=Z,145nm,1.3s						
BRG				i pP		sP	20 44 41.0 -1.1
	comp=Z,155nm,1.6s						
BRG				sP		sP	20 44 48.0 +5.9
BRG				i PP		PP	20 47 25.3 +1.1
	comp=Z,38nm,1.1s						
BRG				S		S	20 54 25.0 +2.5
BRG				SS		SS	20 59 27.0 -3.4
	comp=N,12μm,18.7s						
	comp=E,26μm,17.3s						
	comp=Z,33μm,17.7s						
BRG	Berggiesshubel	79.69	330	P		P	20 44 24.2 +0.5
BRG				i			20 44 30.3
BRG				i *PP		sP	20 44 41.0 -1.1
BRG				i			20 47 25.3
BRG				S		S	20 54 25.0 +2.5
BRG				SS		SS	20 59 27.0 -3.4
BRG				pmax		pmax	
	comp=Z,181nm,1.1s						
BRG				pmax		pmax	
	comp=Z,38nm,1.1s						
BRG				MLR		MLR	
	comp=N,12μm,18.7s						
BRG				MLR		MLR	
	comp=E,26μm,17.3s						
BRG				MLR		MLR	
	comp=Z,33μm,17.7s						
JAVC	Velka Javorina	79.70	326⇑	iP		P	20 44 25.5 +1.7
JAVC				eS		S	20 54 25.6 +2.8
MME1	Meikle Cairn	79.70	342⇑	eP		P	20 44 23.7 0.0
PVCC	Panska Ves	79.71	329	eP		P	20 44 24.7 +0.9
PVCC				AMS		AMS	21 22 00.0
	comp=Z,31μm,21.0s						
PVCC	Panska Ves	79.71	329	eP		P	20 44 24.7 +0.9
PVCC				MLR		MLR	
	comp=Z,31μm,21.0s						
CLL	Collm	79.72	330⇑	iP		P	20 44 23.9 +0.1
	comp=Z,273nm,1.1s						
CLL				ePmax			20 44 25.0
CLL				e			20 47 09.0
CLL				ePP		PP	20 47 31.0 +6.5
CLL				ePPP		PPP	20 49 30.0
CLL				eS		S	20 54 21.0 -1.7
CLL				esS		ScS	20 54 42.0 -2.1
CLL				esSKSac		sSKSac	20 54 56.0 -4.0
CLL				eSP		SPn	20 55 01.0 -3.7
CLL				eSS		SS	20 59 28.0 -2.7
CLL				e			21 00 18.0
CLL				eSSS		SSS	21 03 00.0
CLL				eSSSS			21 05 54.0
CLL				LV			21 22 00.0
	comp=Z,16μm,18.0s						
CLL				Lmax			21 22 00.0
CLL	Collm	79.72	330	eP		P	20 44 23.6 -0.2
CLL	Collm	79.72	330⇑	iP		P	20 44 23.9 +0.1
CLL				eS		S	20 54 21.0 -1.7
CLL				pmax		pmax	
	comp=Z,273nm,1.1s						
CLL				MLR		MLR	
	comp=Z,20μm,17.8s						
SIRR	Siria	79.81	323⇓	iP		P	20 44 25.4 +0.9
VRAC	Vranov	79.81	327⇑	iP		P	20 44 25.2 +0.8
VRAC	Vranov	79.81	327⇑	iP		P	20 44 25.2 +0.8
VRAC				eS		S	20 54 23.7 -0.2
SZH	Strazhica	79.84	318	i P		P	20 44 24.8 +0.2
FKH	Fakeheh	79.85	306	eP		P	20 44 25.5 +0.5
ZIMR		79.86	319⇑	iP		P	20 44 25.2 +0.5
113A	Mohawk Valley,	79.87	56	eP		P	20 44 25.9 +1.0
IVI	Ivigtut	79.88	5	eP		P	20 44 24.7 +0.3
MDO	Dochfour	79.93	342⇑	eP		P	20 44 24.9 +0.1
D33A	AnnSam, Waubun	79.97	36	P		P	20 44 25.1 -0.2
	baz=318						
B35A	Bob, Littlefor	80.01	34	P		P	20 44 25.4 -0.1
	baz=319,SNR=30						
B35A	Bob, Littlefor	80.01	34	eP		P	20 44 25.5 0.0
C34A	RKJ Ranch, Bem	80.02	35	P		P	20 44 25.1 -0.4
	baz=319						
JMB	Yambol	80.06	317	i P		P	20 44 26.4 +0.6
SMOL	Smolenice	80.06	326	eP		P	20 44 27.0 +1.2
SMOL	Smolenice	80.06	326	eP		P	20 44 27.0 +1.2
KRUC	Moravsky	80.09	327⇑	iP		P	20 44 26.4 +0.5
KRUC	Moravsky	80.09	327	eS		S	20 54 28.0 +1.2
NRS	Narsarsuaq	80.09	4	i P		P	20 44 26.3 +0.7
	comp=Z,680nm,2.7s						
GOPC	GO Pecny, Ondr	80.10	329	eP		P	20 44 26.9 +1.0
GOPC				epP		pP	20 44 40.4 +1.2
GOPC				ePP		PP	20 47 24.5 -3.2
GOPC				eS		S	20 54 29.2 +2.3
GOPC				eXS		ScS	20 54 48.1 +0.8
GOPC				AMS		AMS	21 22 20.0
	comp=Z,26μm,18.4s						
GOPC	GO Pecny, Ondr	80.10	329	eP		P	20 44 26.9 +1.0
GOPC				e			20 44 40.4
GOPC				e			20 47 24.5
GOPC				eS		S	20 54 29.2 +2.3
GOPC				MLR		MLR	
	comp=Z,26μm,18.4s						
PRA	Prague	80.12	329	eP		P	20 44 27.1 +1.1
PRA				eS		S	20 54 28.0 +1.0
PRA				AMS		AMS	21 22 20.0
	comp=Z,30μm,19.8s						
PRA	Prague	80.12	329	eP		P	20 44 27.1 +1.1
PRA				eS		S	20 54 28.0 +1.0
PRA				MLR		MLR	
	comp=Z,30μm,19.8s						
HWQ	Hawqa	80.12	306	eP		P	20 44 26.4 -0.1
BUD	Budapest	80.13	325⇑	eP		P	20 44 26.8 +0.7
CRAR	CRAIOVA	80.18	320⇑	iP		P	20 44 27.6 +1.2
ISCO	Idaho Springs	80.19	46	P		P	20 44 28.0 +1.0
	baz=313,SNR=33						
ISCO	Idaho Springs	80.19	46	eP		P	20 44 28.4 +1.4
ISCO				LR		LR	
	comp=Z,4μm,21.0s						
ISCO	Idaho Springs	80.19	46	eP		P	20 44 28.4 +1.4
ISCO				MLR		MLR	
	comp=Z,4μm,21.0s						
SRO2	Moca	80.21	325	eP		P	20 44 26.5 0.0
SRO2	Moca	80.21	325	eP		P	20 44 26.5 0.0
SRE	Strehaia	80.23	321⇑	iP		P	20 44 28.1 +1.4
MODS	Modra-Piesok	80.23	326	eP		P	20 44 26.7 0.0
MODS				pmax		pmax	
	comp=Z,270nm,1.3s						
MODS	Modra-Piesok	80.23	326	eP		P	20 44 26.7 0.0
MODS				ePP		PP	20 47 28.8 -0.1
MODS				eS		S	20 54 27.7 -0.7
MODS				eL		L	21 23 37.5
MVCO	Mesa Verde	80.25	50	P		P	20 44 28.1 +0.8
	baz=312,SNR=13						
MVCO	Mesa Verde	80.25	50	PFAKE			20 44 40.0 +13
MVCO				LR		LR	
	comp=Z,5μm,22.0s						
G31A

CSKK Cs˙‡kako 80.57 325⇑eP P 20 44 29.0 +0.5
G32A Webster 80.58 38 P P 20 44 28.9 +0.3
baz=317,SNR=12
G32A Webster 80.58 38 eP P 20 44 29.4 +0.7
BRBR Barbar 80.68 305 eP P 20 44 31.4 +1.8
RCY Rachaya 80.70 306 eP P 20 44 29.9 +0.2
BANR Banloc 80.71 322⇑iP P 20 44 30.1 +0.8
DQRL Deir Qamar 80.73 306 eP P 20 44 30.0 +0.2
E34A Wadena 80.75 36 P P 20 44 29.3 -0.2
baz=319
INVG Invergeldie, C 80.77 342⇑eP P 20 44 29.6 +0.2
INVG IAmb IAmb 20 44 31.2
comp=Z,105nm,1.1s
INVG IAMs_20 IAMs_20 21 24 28.5
comp=Z,11μm,18.3s
NKC Novy Kostel 80.78 330 eP P 20 44 30.3 +0.7
NKC ePP PP 20 47 35.0 +1.6
NKC eS S 20 54 34.8 +0.7
NKC AMS AMS 21 23 10.0
comp=Z,20μm,17.1s
NKC Novy Kostel 80.78 330 eP P 20 44 30.3 +0.7
NKC e 20 47 35.0
NKC eS S 20 54 34.8 +0.7
NKC MLR MLR
comp=Z,20μm,17.1s
D35A Remer 80.83 35 P P 20 44 29.3 -0.6
baz=319,SNR=8.9
C36A Pine Crest Far 80.85 34 P P 20 44 30.0 0.0
baz=320,SNR=19
SHBL Chebaa 80.85 306 eP P 20 44 30.8 +0.3
ESY Stoneypath 80.86 341⇑eP P 20 44 29.6 -0.3
RAR Rarotonga 80.86 127 LR LR 21 13 26.5
comp=Z,6μm,21.1s,baz=318,slow=30
RAR Rarotonga 80.86 127 PFAKE 20 44 40.0 +10
RAR LR LR
comp=Z,8μm,21.0s
ASF Jabal al Asfar 80.88 304 P P 20 44 31.2 +0.7
comp=Z,49nm,1.0s,baz=348,slow=14,SNR=64
ASF LR LR 21 24 01.6
comp=Z,8μm,21.0s,baz=12,slow=38
MDVR Moldovita 80.88 321||iP P 20 44 30.3 +0.1
S22A 4UR Ranch, Cre 80.88 48 P P 20 44 32.2 +1.5
baz=313,SNR=39
S22A 4UR Ranch, Cre 80.88 48 eP P 20 44 32.4 +1.7
W18A Petrified Fore 80.89 52 P P 20 44 32.1 +1.5
baz=312
214A Organ Pipe Nat 81.01 56 P P 20 44 31.5 +0.3
baz=311,SNR=22
Q24A Divide 81.02 47 P P 20 44 32.0 +0.5
baz=314
Q24A Divide 81.02 47 eP P 20 44 31.8 +0.4
EAB Aberfoyle 81.05 342⇑eP P 20 44 31.3 +0.4
ISP Isparta 81.06 312⇑iP P 20 44 31.3 -0.1
ISP Isparta 81.06 312 eP P 20 44 29.8 -1.7
ISP Isparta 81.06 312 P P 20 44 31.0 -0.4
ISP Isparta 81.06 312 iP P 20 44 30.7 -0.7
ISP pmax pmax
comp=Z,69nm,1.0s
E35A Pequot Lakes 81.07 36 P P 20 44 30.5 -0.7
baz=319
SOP Sopron 81.07 326||eP P 20 44 33.3 +2.1
G33A Ortonville 81.14 38 P P 20 44 31.8 +0.2
baz=318,SNR=20
X18A Snowflake 81.14 53 eP P 20 44 32.6 +0.5
D36A Goodland 81.15 35 P P 20 44 31.0 -0.6
baz=320,SNR=9.2
D36A Goodland 81.15 35 eP P 20 44 31.6 -0.1
C37A Embarrass 81.16 34 P P 20 44 31.3 -0.3
baz=320,SNR=26
H32A Carlson Farm, 81.17 39 P P 20 44 31.4 -0.4
baz=317
CONA Conrad Observa 81.19 327 iP P 20 44 32.9 +1.0
comp=Z,214nm,1.4s,SNR=127
KHC Kasperske Hory 81.20 329 eP P 20 44 32.5 +0.6
KHC epP pP 20 44 45.2 0.0
KHC ePP PP 20 47 38.5 +1.6
KHC eS S 20 54 40.0 +1.5
KHC ex x 20 55 37.8
KHC AMS AMS 21 23 00.0
comp=Z,34μm,18.6s
KHC Kasperske Hory 81.20 329 eP P 20 44 32.3 +0.4
KHC Kasperske Hory 81.20 329 eP P 20 44 32.5 +0.6
KHC e 20 44 45.2
KHC e 20 47 38.5
KHC eS S 20 54 40.0 +1.5
KHC e 20 55 37.8
KHC MLR MLR
comp=Z,34μm,18.6s
MAMC Mammari 81.23 308 P P 20 44 32.9 +0.7
F34A Alexandria 81.25 37 P P 20 44 31.8 -0.4
baz=319,SNR=9.8
KDZ Kurdzhali 81.25 317 iP P 20 44 33.3 +1.1
PGB Panagyurishte 81.26 319 iP P 20 44 33.1 +0.7
MMAI Mount Meron Ar 81.29 305 P P 20 44 33.4 +0.7
comp=Z,126nm,1.0s,baz=6.6,slow=4.9,SNR=98
MMAI LR LR 21 24 18.3
comp=Z,7μm,20.9s,baz=45,slow=38
EYMN Ely 81.29 33 P P 20 44 32.2 -0.1
baz=321,SNR=23
EYMN Ely 81.29 33 eP P 20 44 32.0 -0.3
EYMN LR LR
comp=Z,4μm,22.0s
CSS Mathiatis 81.30 308 eP P 20 44 32.6 0.0
CSS Mathiatis 81.30 308 P P 20 44 32.6 0.0
CSS Mathiatis 81.30 308 P P 20 44 32.2 -0.4
OGNE Ogallala 81.37 44 P P 20 44 33.2 +0.2
baz=315,SNR=15
OGNE Ogallala 81.37 44 eP P 20 44 34.3 +1.3
OGNE LR LR
comp=Z,3μm,19.0s
GEC2 GERESS Array S 81.38 328 eP P 20 44 33.1 +0.2
GEC2 GERESS Array S 81.38 328 eP P 20 44 33.1 +0.2
GERES GERESS Array B 81.38 328 P P 20 44 33.0 +0.2
comp=Z,53nm,1.0s,baz=46,slow=5.8,SNR=145
GERES PKKPbc PKKPbc 21 03 05.2 -0.9
comp=Z,1.1nm,0.9s,baz=255,slow=3.8,SNR=5.9
GERES PKPPKP P'P'df 21 11 16.5 +0.4
comp=Z,0.2nm,0.4s,baz=306,slow=3.3,SNR=3.5
GERES LR LR 21 23 36.6
comp=Z,28μm,20.1s,baz=30,slow=38
GEA0 GERESS Array S 81.38 328 eP P 20 44 32.5 -0.4
PGBU Glenifferbraes 81.43 342 eP P 20 44 33.7 +0.8
PGBU IAmb IAmb 20 44 35.8
comp=Z,490nm,1.2s
PGBU IAMs_20 IAMs_20 21 24 48.0
comp=Z,9μm,18.9s
ALN Alexandroupoli 81.45 316 eP P 20 44 33.2 -0.1
ALN Alexandroupoli 81.45 316 P P 20 44 33.4 +0.1
ALN Alexandroupoli 81.45 316 eP P 20 44 33.2 -0.1
WTSB Winterswijk 81.45 334 iP P 20 44 33.0 0.0
comp=Z,430nm,1.4s
G34A Benson 81.48 37 P P 20 44 33.6 +0.2
baz=318,SNR=12
D37A Cotton 81.49 34 P P 20 44 33.0 -0.4
baz=320,SNR=9.4
F35A Swanville 81.52 36 P P 20 44 33.3 -0.3
baz=319,SNR=9.2
EKA Eskdalemuir Ar 81.53 341 P P 20 44 33.9 +0.5
comp=Z,101nm,1.1s,baz=23,slow=4.9,SNR=49
EKA PP PP 20 47 32.8 -6.5
comp=Z,9.2nm,1.0s,baz=34,slow=7.8,SNR=3.3
EKA LR LR 21 25 05.6
comp=Z,10μm,19.1s,baz=20,slow=39
RDO Rodhopi 81.54 317 P P 20 44 34.2 +0.4
RDO Rodhopi 81.54 317 P P 20 44 34.2 +0.4
ESK Eskdalemuir 81.55 341 eP P 20 44 34.4 +0.9
ESK LR LR
comp=Z,11μm,19.0s
ESK Eskdalemuir 81.55 341 eP P 20 44 34.4 +0.9
ESK MLR MLR
comp=Z,11μm,19.0s
C38A Sawbill Land. 81.56 33 P P 20 44 33.5 -0.3
baz=321,SNR=28
TAU Tasmania Unive 81.59 176 PFAKE 20 44 50.0 +16
TAU LR LR
comp=Z,8μm,22.0s
RZN Rozhen 81.59 318 iP P 20 44 35.1 +0.8
E36A McGregor 81.61 35 P P 20 44 33.6 -0.5
baz=320,SNR=26
ALFC Alefka 81.62 309 P P 20 44 34.2 -0.1
SDCO Great Sand Dun 81.65 48 P P 20 44 35.7 +0.9
baz=313,SNR=39
SDCO Great Sand Dun 81.65 48 eP P 20 44 36.0 +1.2
SDCO LR LR
comp=Z,5μm,21.0s

ECK Cauldkaine Hil 81.65 341⇑eP P 20 44 34.3 +0.2
GRFO Grafenberg 81.69 330 eP P 20 44 35.4 +1.0
GRFO Grafenberg 81.69 330 eP P 20 44 35.4 +1.0
SZAC Souni 81.71 308 P P 20 44 34.2 -0.6
VTS Vitosha 81.72 319⇑iP P 20 44 35.5 +0.6
VTS Vitosha 81.72 319 eP P 20 44 35.5 +0.6
VTS Vitosha 81.72 319 iP P 20 44 35.6 +0.6
VTS Vitosha 81.72 319 P P 20 44 35.5 +0.6
VTS Vitosha 81.72 319 eP P 20 44 35.5 +0.6
MANT Manisa 81.73 313 eP P 20 44 34.6 -0.6
BHH Howats Hill 81.76 341⇑eP P 20 44 35.3 +0.7
ARSA Arzberg 81.86 326 iP P 20 44 36.0 +0.6
comp=Z,130nm,1.3s,SNR=140
AKMC Akamas 81.87 309 P P 20 44 35.0 -0.6
BEHE Becsehely 81.91 325⇑eP P 20 44 35.8 +0.2
MOA Molln 81.92 327 iP P 20 44 36.2 +0.5
comp=Z,177nm,1.4s,SNR=76
PPCY Paphos 81.95 309 P P 20 44 35.0 -1.0
E37A Wrenshall 81.96 35 P P 20 44 35.7 -0.2
baz=320
C39A Grand Marais 81.97 33 P P 20 44 35.7 -0.2
baz=322
F36A Milaca 81.99 36 P P 20 44 35.4 -0.7
baz=320,SNR=12
F36A Milaca 81.99 36 eP P 20 44 35.3 -0.7
G35A Watkins 82.04 37 P P 20 44 36.9 +0.6
baz=319
G35A Watkins 82.04 37 eP P 20 44 36.4 +0.1
TUC Tucson 82.08 55 P P 20 44 37.6 +0.7
baz=311
TUC Tucson 82.08 55 eP P 20 44 37.8 +0.9
TUC LR LR
comp=Z,8μm,22.0s
TUC Tucson 82.08 55 eP P 20 44 37.8 +0.9
TUC MLR MLR
comp=Z,8μm,22.0s
GMK Mull of Kintyr 82.12 342⇑eP P 20 44 37.0 +0.5
ECSD EROS Data Cent 82.13 39 P P 20 44 37.1 +0.2
baz=318,SNR=83
ECSD EROS Data Cent 82.13 39 eP P 20 44 37.1 +0.2
ECSD LR LR
comp=Z,5μm,22.0s
KOGS Kog 82.16 326 eP P 20 44 36.5 -0.4
KESW Keswick, Cumbr 82.18 340 eP P 20 44 37.2 +0.4
KESW IAmb IAmb 20 44 39.7
comp=Z,387nm,1.2s
KESW IAMs_20 IAMs_20 21 25 07.2
comp=Z,15μm,19.6s
MMB Musomiste 82.18 318 iP P 20 44 37.7 +0.5
DIVS Divibare 82.21 322 eP P 20 44 37.4 +0.1
H35A Sunnyside Ranc 82.27 37 P P 20 44 37.8 +0.3
baz=319,SNR=29
NVR Nevrokopi 82.28 318 P P 20 44 38.0 +0.3
NVR Nevrokopi 82.28 318 P P 20 44 38.0 +0.3
C40A Isle Royale Na 82.30 32 P P 20 44 37.2 -0.4
baz=322
C40A Isle Royale Na 82.30 32 eP P 20 44 40.9 +3.3
E38A The Farm, Brul 82.30 34 P P 20 44 37.2 -0.4
baz=321,SNR=23
E38A The Farm, Brul 82.30 34 eP P 20 44 37.6 -0.1
KKB Krupnik 82.31 319 iP P 20 44 38.6 +0.8
GAL1 Galloway 82.34 341⇑eP P 20 44 37.8 +0.2
GAL1 IAmb IAmb 20 44 40.1
comp=Z,107nm,1.1s
GAL1 IAMs_20 IAMs_20 21 25 24.0
comp=Z,5μm,19.0s
HPK Haverah Park 82.34 339⇑eP P 20 44 38.4 +0.7
HPK IAmb IAmb 20 44 39.8
comp=Z,334nm,1.4s
HPK IAMs_20 IAMs_20 21 24 24.9
comp=Z,22μm,21.7s
G36A St. Michael 82.36 36 P P 20 44 37.4 -0.6
baz=320
KSCO Kaye Shedlock' 82.40 45 P P 20 44 39.0 +0.5
baz=315,SNR=8.9
KSCO Kaye Shedlock' 82.40 45 eP P 20 44 40.1 +1.6
F37A Hinrichs Farm, 82.50 35 P P 20 44 38.3 -0.4
baz=320
PERS Pernice 82.51 326 iP P 20 44 39.1 +0.3
PERS eSKSac SKSac 20 54 54.6 -1.7
PERS eS ScS 20 55 11.3 +4.1
SOKA Soboth 82.51 326 iP P 20 44 39.4 +0.5
comp=Z,327nm,1.1s,SNR=298
SRS Serrai 82.59 318 P P 20 44 39.1 -0.2
SRS Serrai 82.59 318 P P 20 44 39.1 -0.2
SRS Serrai 82.59 318 P P 20 44 39.1 -0.2
F38A Pierce - Schro 82.66 35 P P 20 44 39.7 +0.2
baz=321,SNR=64
T25A Trinidad 82.70 48 P P 20 44 41.0 +0.8
baz=314,SNR=48
T25A Trinidad 82.70 48 eP P 20 44 41.3 +1.1
FETY Fethiye 82.71 312 P P 20 44 38.6 -1.4
FETY Fethiye 82.71 312 P P 20 44 38.6 -1.4
HGN Heimansgroeve 82.75 334 iP P 20 44 39.8 -0.1
comp=Z,392nm,1.4s
HGN eS SKiKP 20 54 08.6 +39
KSL Kastellorizon 82.75 311 P P 20 44 39.3 -0.9
KSL Kastellorizon 82.75 311 P P 20 44 39.3 -0.9
H36A Jessenland, He 82.78 37 P P 20 44 40.9 +0.7
baz=320,SNR=20
WACR West Acre 82.78 338⇑eP P 20 44 41.1 +1.1
WACR IAmb IAmb 20 44 42.3
comp=Z,370nm,1.1s
WACR IAMs_20 IAMs_20 21 24 25.4
comp=Z,26μm,21.4s
SPMN Marine on St. 82.81 36 P P 20 44 40.0 -0.3
baz=320,SNR=11
SPMN Marine on St. 82.81 36 eP P 20 44 40.5 +0.2
BEBN Eben Emael 82.81 334⇑eP P 20 44 40.4 +0.2
IDGL Inch Island, C 82.82 343⇑eP P 20 44 40.9 +0.7
IDGL IAmb IAmb 20 44 42.9
comp=Z,455nm,1.3s
OBKA Obir 82.85 326 eP P 20 44 40.6 -0.1
comp=Z,60nm,1.3s,SNR=33
MEM Membach 82.86 334 ⇑P P 20 44 40.4 -0.1
comp=Z,92nm,1.2s
STIP Stip 82.90 319 iP P 20 44 39.8 -1.1
E39A Mellen 82.91 34 P P 20 44 40.6 -0.3
baz=322,SNR=32
KBA Koelnbreinsper 82.92 327 ePcP P 20 44 41.3 +0.2
comp=Z,198nm,1.1s,SNR=200
KNT Kendrikon 82.92 318 P P 20 44 41.2 +0.2
KNT Kendrikon 82.92 318 P P 20 44 41.2 +0.2
KNT Kendrikon 82.92 318 P P 20 44 41.2 +0.2
OUR Ouranopolis 82.95 317 P P 20 44 41.2 +0.1
OUR Ouranopolis 82.95 317 P P 20 44 41.2 +0.1
OUR Ouranopolis 82.95 317 P P 20 44 41.2 +0.1
LAZ Ladron 82.95 51 eP P 20 44 43.5 +2.0
VAY Valandovo 82.97 319 P P 20 44 41.6 +0.4
VAY Valandovo 82.97 319 P P 20 44 41.6 +0.4
VAY Valandovo 82.97 319 iP P 20 44 41.6 +0.4
VAY Valandovo 82.97 319 P P 20 44 41.6 +0.4
WIM Isle of Man 82.98 341⇑eP P 20 44 41.3 +0.3
TASM ASL Pad, Albuq 83.00 50 P P 20 44 43.0 +1.2
baz=313,SNR=46
ANMO Albuquerque 83.00 50 P P 20 44 43.2 +1.4
comp=Z,25nm,1.0s,baz=305,slow=7.7,SNR=53
ANMO LR LR 21 16 37.4
comp=Z,4μm,21.8s,baz=322,slow=32
ANMO Albuquerque 83.00 50 P P 20 44 42.7 +0.9
baz=313
ANMO Albuquerque 83.00 50 eP P 20 44 43.2 +1.4
ANMO LR LR
comp=Z,5μm,21.0s
ANMO Albuquerque 83.00 50cePP 20 44 42.9 +1.1
ANMO pmax pmax
comp=Z,57nm,1.7s
TASL Snake Pit, Alb 83.00 50 P P 20 44 42.8 +1.0
baz=313,SNR=55
BLY Banja Luka 83.04 324⇑iP P 20 44 41.5 0.0
BLY Banja Luka 83.04 324 eP P 20 44 41.1 -0.4
SKO Skopje 83.07 320 P P 20 44 42.7 +0.9
SKO Skopje 83.07 320 P P 20 44 42.7 +0.9
SKO Skopje 83.07 320 iP P 20 44 42.6 +0.9
BGNE Belgrade 83.07 41 P P 20 44 42.2 +0.3
baz=317
BGNE Belgrade 83.07 41 eP P 20 44 42.5 +0.6
PLE Pljevlja 83.08 322 eP P 20 44 42.1 +0.2
F39A Loretta 83.11 34 P P 20 44 41.7 -0.3
baz=321,SNR=22
MYKA Terra Mystica 83.15 327 iP P 20 44 41.8 -0.3
comp=Z,120nm,1.0s,SNR=76
OZLJ Ozalj 83.15 325 P P 20 44 41.6 -0.5
I36A Fitzsimmons Fa 83.16 37 P P 20 44 42.3 +0.1

baz=320,SNR=9.6
IVA Berane 83.17 321||iP P 20 44 42.7 +0.3
PLG Polygyros 83.20 318 P P 20 44 42.5 0.0
PLG Polygyros 83.20 318 P P 20 44 42.5 0.0
GMM Mts of Mourne 83.21 342⇑eP P 20 44 42.4 +0.2
D41A Chassel 83.22 32 P P 20 44 42.4 0.0
baz=323
D41A Chassel 83.22 32 eP P 20 44 42.6 +0.2
STU Stuttgart 83.22 331 eP P 20 44 42.6 +0.3
HORT Hortiatis 83.22 318 P P 20 44 42.3 -0.4
HORT Hortiatis 83.22 318 P P 20 44 42.3 -0.4
H37A Dierke Farm, C 83.25 36 P P 20 44 42.9 +0.3
baz=320,SNR=18
BCLA Clavier 83.26 334 ⇑P P 20 44 42.3 -0.3
comp=Z,85nm,1.5s
UCC Uccle 83.26 335 ⇑P P 20 44 42.3 -0.2
UCC Uccle 83.26 335 eP P 20 44 42.1 -0.4
UCC Uccle 83.26 335 eP P 20 44 42.1 -0.4
THE Thessaloniki 83.27 318 P P 20 44 42.2 -0.6
THE Thessaloniki 83.27 318 P P 20 44 42.2 -0.6
STNC Stoke 83.27 339⇑eP P 20 44 43.9 +1.3
STNC IAmb IAmb 20 44 44.7
comp=Z,170nm,1.2s
STNC IAMs_20 IAMs_20 21 24 20.6
comp=Z,18μm,21.4s
G38A Ridgeland 83.28 35 P P 20 44 42.2 -0.5
baz=321,SNR=19
VISS Visnje 83.28 326 eP P 20 44 42.4 -0.4
VISS eSKSac S 20 54 58.3 -1.5
VISS eS ScS 20 55 17.1 +3.6
URZ Urewera 83.29 153 LR LR 21 16 44.4
comp=Z,5μm,21.2s,baz=333,slow=32
Y22E IRIS PASSCAL I 83.31 51 P P 20 44 44.8 +1.5
baz=313
Y22D IRIS PASSCAL I 83.31 51 P P 20 44 44.8 +1.5
baz=313
LPM Los Pinos Moun 83.32 51 eP P 20 44 44.9 +1.5
GRG Griva 83.33 318 P P 20 44 43.1 0.0
GRG Griva 83.33 318 P P 20 44 43.1 0.0
GRG Griva 83.33 318 P P 20 44 43.1 0.0
BOJS Bojanci 83.33 325 eP P 20 44 42.8 -0.2
BOJS eS S 20 55 19.3 +19
PVY Plav 83.35 321||iP P 20 44 43.4 +0.1
KOME Kolasin 83.37 321||iP P 20 44 43.5 +0.1
SCHQ Schefferville 83.39 16 P P 20 44 44.4 +1.2
comp=Z,52nm,1.0s,baz=348,slow=5.4,SNR=18
SCHQ LR LR 21 24 17.8
comp=Z,3μm,20.6s,baz=342,slow=37
SCHQ Schefferville 83.39 16 eP P 20 44 43.0 -0.2
PAIG Paliouri 83.40 317 P P 20 44 43.3 -0.2
PAIG Paliouri 83.40 317 P P 20 44 43.3 -0.2
PAIG Paliouri 83.40 317 P P 20 44 43.3 -0.2
UPM Unac-Piva 83.40 322||iP P 20 44 43.1 -0.6
BNM Barren Site 83.44 51 eP P 20 44 45.5 +1.4
BODT Bodrum 83.44 313 P P 20 44 42.8 -1.0
BODT Bodrum 83.44 313 P P 20 44 42.8 -1.0
WATA Walderalm 83.44 329 iP P 20 44 43.8 +0.1
comp=Z,87nm,1.1s,SNR=57
I37A Lemond, Waseca 83.45 37 P P 20 44 44.2 +0.4
baz=320,SNR=60
I37A Lemond, Waseca 83.45 37 eP P 20 44 44.1 +0.4
F40A Park Falls 83.46 34 P P 20 44 43.3 -0.4
baz=322,SNR=14
H38A Maiden Rock 83.46 36 P P 20 44 43.8 +0.1
baz=321,SNR=13
WTTA Wattenberg 83.47 329 iPcP P 20 44 44.3 +0.3
comp=Z,106nm,1.2s,SNR=38
G39A Holcombe 83.49 35 P P 20 44 43.4 -0.5
baz=321,SNR=17
E41A Kenton 83.52 33 P P 20 44 43.9 -0.1
baz=323,SNR=30
ABTA Abfaltersbach 83.53 328 eP P 20 44 43.5 -0.7
comp=Z,108nm,1.1s,SNR=86
SNF Seneffe 83.53 334 ⇑P P 20 44 43.8 -0.1
comp=Z,101nm,1.3s
J36A Seneca 1, Swea 83.53 38 P P 20 44 44.3 +0.1
baz=319,SNR=12
J36A Seneca 1, Swea 83.53 38 eP P 20 44 44.2 +0.1
JAVS Javornik 83.54 326 iP P 20 44 43.4 -0.8
JAVS eSKSac S 20 54 58.8 -3.9
JAVS eS ScS 20 55 19.5 +3.7
ARG Arkhangelos 83.56 312 P P 20 44 44.7 +0.3
ARG Arkhangelos 83.56 312 P P 20 44 44.7 +0.3
WME Myndd Eilian 83.56 340⇑eP P 20 44 44.2 +0.2
WPM1 Penmaenmawr 83.58 340⇑eP P 20 44 44.6 +0.4
WLF Walferdange 83.60 333 ⇑P P 20 44 45.0 +0.7
comp=Z,145nm,2.1s
WLF Walferdange 83.60 333 eP P 20 44 44.2 -0.1
WLF Walferdange 83.60 333 eP P 20 44 44.2 -0.1
WPS Cemaes, Angles 83.61 341⇑eP P 20 44 44.3 +0.1
WPS IAmb IAmb 20 44 46.9
comp=Z,438nm,1.9s
WPS IAMs_20 IAMs_20 21 25 41.8
comp=Z,13μm,19.6s
MOTA Moosalm 83.63 329 iP P 20 44 43.8 -0.9
comp=Z,236nm,1.1s,SNR=201
RETA Reutte 83.65 329 iPcP P 20 44 45.2 +0.5
comp=Z,352nm,1.1s,SNR=268
319A Douglas 83.65 55 eP P 20 44 46.4 +1.2
NKY Niksic 83.66 322 eP P 20 44 44.2 -0.7
WLF1 Llynfaes 83.68 340⇑eP P 20 44 45.2 +0.5
WLF1 IAmb IAmb 20 44 47.3
comp=Z,623nm,1.5s
WLF1 IAMs_20 IAMs_20 21 25 43.2
comp=Z,32μm,19.7s
NKME Niksic 83.71 322||iP P 20 44 44.7 -0.4
FOEL Foel Wylfa 83.72 340⇑eP P 20 44 44.6 -0.3
FOEL IAmb IAmb 20 44 46.0
comp=Z,262nm,1.2s
FOEL IAMs_20 IAMs_20 21 25 48.5
comp=Z,18μm,21.1s
COWI Conover 83.74 33 PFAKE 20 45 00.0 +15
COWI LR LR
comp=Z,4μm,21.0s
YLL Llanberis 83.76 340⇑eP P 20 44 45.5 +0.5
YRC Rhoscolyn 83.76 341⇑eP P 20 44 45.6 +0.5
PHP Peshkopia 83.79 320 P P 20 44 45.4 -0.1
PHP Peshkopia 83.79 320 P P 20 44 45.4 -0.1
PHP Peshkopia 83.79 320 iPN P 20 44 45.6 +0.1
PUK Puka 83.79 321 iPN P 20 44 45.5 -0.1
BRY Bratogost 83.81 322||iP P 20 44 45.1 -0.6
PDG Podgorica 83.81 321⇑iP P 20 44 45.6 0.0
TTG Podgorica 83.81 321||iP P 20 44 45.5 0.0
TTG Podgorica 83.81 321 eP P 20 44 45.7 +0.1
121A Cookes Peak, D 83.82 53 P P 20 44 47.3 +1.3
baz=313,SNR=35
TRI Trieste 83.82 326 eP P 20 44 44.6 -0.9
TRI Trieste 83.82 326 eP P 20 44 44.6 -0.9
BIA Bitola 83.83 319 iP P 20 44 45.8 +0.1
UDBI Udbina 83.86 325 P P 20 44 45.2 -0.6
BKZ Black Stump Fm 83.88 154 eP P 20 44 49.1 +3.4
LLW Llanuwychllyn 83.89 340 eP P 20 44 46.3 +0.6
CEME Cevo 83.89 322||iP P 20 44 45.7 -0.3
LIT Litokhoron 83.90 318 eP P 20 44 45.8 -0.3
LIT Litokhoron 83.90 318 P P 20 44 45.7 -0.3
LIT Litokhoron 83.90 318 eP P 20 44 45.8 -0.3
BFO Black Forest 83.91 331 eP P 20 44 46.0 0.0
BFO LR LR
comp=Z,15μm,19.0s
BFO Black Forest 83.91 331ceP P 20 44 46.0 0.0
H39A Augusta 83.91 35 P P 20 44 45.9 -0.1
baz=321,SNR=26
J37A Redenius Farm, 83.92 37 P P 20 44 46.0 -0.2
baz=320,SNR=16
I38A Scanlan Farm, 83.93 36 P P 20 44 46.1 -0.1
baz=321,SNR=18
G40A Rib Lake 83.93 34 P P 20 44 46.0 -0.2
baz=322,SNR=39
G40A Rib Lake 83.93 34 eP P 20 44 46.2 +0.1
HLM1 Long Mynd 83.97 339⇑eP P 20 44 46.2 0.0
HLM1 IAmb IAmb 20 44 48.1
comp=Z,156nm,1.7s
HLM1 IAMs_20 IAMs_20 21 24 52.7
comp=Z,14μm,22.0s
FNA Florina 83.98 319 eP P 20 44 46.0 -0.5
FNA Florina 83.98 319 P P 20 44 46.1 -0.4
FNA Florina 83.98 319 eP P 20 44 46.0 -0.5
E42A Champion 83.99 32 P P 20 44 46.3 -0.1
baz=323,SNR=17
K36A Gilmore City 84.00 38 P P 20 44 46.6 +0.1
baz=319
OHR Ohrid 84.03 319 iP P 20 44 46.7 -0.1
DRME Dracevica, Mon 84.03 321||iP P 20 44 46.9 +0.2
F41A Three Lakes 84.04 33 P P 20 44 46.7 0.0

baz=323,SNR=46
F41A Three Lakes 84.04 33 *e*P **P 20 44 47.1 +0.4**
FETA Feichten 84.04 329 *e*PcP **P 20 44 47.0 +0.2**
comp=Z,201nm,1.2s,SNR=97
XOR Xorichti 84.07 317 P **P 20 44 46.3 -0.7**
XOR Xorichti 84.07 317 P **P 20 44 46.3 -0.7**
BUM Brajici-Budva 84.09 321 ‖ *i*P **P 20 44 46.8 -0.3**
NEO Neokhori 84.09 317 P **P 20 44 46.3 -0.8**
NEO Neokhori 84.09 317 P **P 20 44 46.3 -0.8**
CBKS Cedar Bluff 84.12 44 P **P 20 44 46.9 -0.4**
baz=316
CBKS Cedar Bluff 84.12 44 *e*P **P 20 44 48.5 +1.2**
CBKS LR LR
comp=Z,4μm,22.0s
CBKS Cedar Bluff 84.12 44 *e*P **P 20 44 48.5 +1.2**
CBKS MLR MLR
comp=Z,4μm,22.0s
KZN Kozani 84.13 318 P **P 20 44 46.7 -0.6**
KZN Kozani 84.13 318 P **P 20 44 46.7 -0.6**
KZN Kozani 84.13 318 P **P 20 44 46.7 -0.6**
HSIG 84.14 57 *e*P **P 20 44 49.2 +1.8**
DAVA Damuels 84.16 330 *i* PcP **P 20 44 47.9 +0.4**
comp=Z,320nm,1.1s,SNR=150
FYTO Fytoko, Volos 84.17 317 P **P 20 44 47.0 -0.4**
FYTO Fytoko, Volos 84.17 317 P **P 20 44 47.0 -0.4**
ULC Ulcinj 84.17 321 ‖ *i*P **P 20 44 47.1 -0.3**
HCY Herceg Novi 84.17 322 ‖ *i*P **P 20 44 46.7 -0.7**
DSB Dublin 84.22 342 *e*P **P 20 44 47.9 +0.5**
NVLJ Novalja 84.23 325 P **P 20 44 46.4 -1.3**
STON Ston 84.23 322 P **P 20 44 45.7 -1.9**
K37A Belmond 84.29 38 P **P 20 44 48.1 +0.1**
baz=320,SNR=41
L36A Harm Buss Farm 84.30 39 P **P 20 44 47.9 -0.1**
baz=319,SNR=12
TIR Tirane 84.33 320 ⇑ *i*P **P 20 44 48.3 +0.1**
TIR Tirane 84.33 320 *e*P **P 20 44 48.5 +0.3**
TIR Tirane 84.33 320 *i* PN **P 20 44 48.6 +0.4**
TIR Tirane 84.33 320 *e*P **P 20 44 48.5 +0.3**
H40A Chili 84.36 35 P **P 20 44 48.2 -0.1**
baz=322,SNR=42
KBN Korca 84.40 319 P **P 20 44 48.6 -0.1**
KBN Korca 84.40 319 P **P 20 44 48.6 -0.1**
KBN Korca 84.40 319 *i* PN **P 20 44 49.3 +0.6**
KBN Korca 84.40 319 P **P 20 44 48.6 -0.1**
E43A Lone Tree Farm 84.41 32 P **P 20 44 48.3 -0.2**
baz=324,SNR=15
E43A Lone Tree Farm 84.41 32 *e*P **P 20 44 48.9 +0.3**
SMIA Simia 84.41 317 P **P 20 44 45.5 -3.2**
J38A Wedel Dairy, R 84.42 37 P **P 20 44 48.5 -0.1**
baz=321,SNR=18
NEST Nestorio 84.42 319 P **P 20 44 48.7 -0.1**
G41A Antigo 84.42 34 P **P 20 44 48.2 -0.5**
baz=323
STRD Stroud 84.43 339 ⇑ *e*P **P 20 44 49.8 +1.3**
STRD IAmb IAmb 20 44 51.1
comp=Z,598nm,1.3s
STRD IAMs_20 IAMs_20 21 25 17.4
comp=Z,18μm,21.8s
F42A Maple Grove Fa 84.43 33 P **P 20 44 48.7 0.0**
baz=323
APE Apeiranthos 84.44 314 ⇑ *i*P **P 20 44 47.7 -1.2**
APE Apeiranthos 84.44 314 *c i*P **P 20 44 48.2 -0.7**
APE pmax pmax
comp=Z,21nm,0.8s
ECH Echery 84.44 332 *e*P **P 20 44 48.6 -0.1**
ECH Echery 84.44 332 *e*P **P 20 44 48.6 -0.1**
I39A Houston 84.44 36 P **P 20 44 48.4 -0.3**
baz=321,SNR=11
I39A Houston 84.44 36 *e*P **P 20 44 49.0 +0.2**
MCH1 Michaelchurch 84.47 339 ⇑ *e*P **P 20 44 49.1 +0.4**
MCH1 IAmb IAmb 20 44 51.3
comp=Z,277nm,1.3s
MCH1 IAMs_20 IAMs_20 21 25 07.7
comp=Z,21μm,22.7s
PMOR Pomariorio Ree 84.48 114 *e*P **P 20 44 48.1 -1.1**
comp=Z,452nm,1.4s
PMOR Pomariorio Ree 84.48 114 *e*T T 22 17 28.2
comp=Z,268nm,0.2s
BUW Bucklebury Wes 84.48 338 *e*P **P 20 44 48.6 -0.2**
PENT Pentalofos 84.54 319 P **P 20 44 49.0 -0.4**
THL Klokotos Trika 84.55 318 P **P 20 44 47.8 -1.5**
FUORN Ofenpass-Fuorn 84.55 329 *e*P **P 20 44 50.0 +0.4**
MONM Monmouth 84.56 339 ⇑ *e*P **P 20 44 50.5 +1.4**
MONM IAmb IAmb 20 44 51.1
comp=Z,368nm,1.3s
MONM IAMs_20 IAMs_20 21 25 10.1
comp=Z,19μm,22.0s
KARP Karpathos 84.58 312 P **P 20 44 49.4 -0.3**
KARP Karpathos 84.58 312 P **P 20 44 49.4 -0.3**
KPRO Kipourio 84.60 318 P **P 20 44 48.8 -0.9**
OLDB Oldbury-Upon-S 84.64 339 ⇑ *e*P **P 20 44 49.9 +0.4**
OLDB IAMs_20 IAMs_20 21 25 35.2
comp=Z,21μm,22.6s
E44A Grand Marais A 84.65 31 P **P 20 44 49.8 +0.1**
baz=325,SNR=12
E44A Grand Marais A 84.65 31 *e*P **P 20 44 50.0 +0.3**
H41A Junction City 84.69 34 P **P 20 44 49.8 -0.1**
baz=322,SNR=19
H41A Junction City 84.69 34 *e*P **P 20 44 49.4 -0.6**
LKR Lokris 84.69 317 P **P 20 44 49.1 -1.0**
LKR Lokris 84.69 317 P **P 20 44 49.1 -1.0**
G42A Mountain 84.72 33 P **P 20 44 50.2 +0.1**
baz=323,SNR=18
G42A Mountain 84.72 33 *e*P **P 20 44 50.0 -0.1**
M36A Felix, Anita 84.72 39 P **P 20 44 50.5 +0.3**
baz=319,SNR=12
L37A Phoenix Point, 84.73 38 P **P 20 44 50.3 +0.1**
baz=320,SNR=21
HGH Gray Hill 84.74 339 ⇑ *e*P **P 20 44 50.1 +0.1**
J39A Decorah 84.76 36 P **P 20 44 49.8 -0.5**
baz=321,SNR=40
IGLA Glengowla, Co 84.77 343 ⇑ *e*P **P 20 44 50.4 +0.2**
IGLA IAmb IAmb 20 44 52.2
comp=Z,234nm,1.3s
BATH Bath 84.78 339 ⇑ *e*P **P 20 44 51.3 +1.1**
BATH IAmb IAmb 20 44 52.7
comp=Z,252nm,1.2s
BATH IAMs_20 IAMs_20 21 26 11.7
comp=Z,18μm,20.0s
AGG Agios Georgios 84.78 317 P **P 20 44 49.1 -1.5**
AGG Agios Georgios 84.78 317 P **P 20 44 49.1 -1.5**
AGG Agios Georgios 84.78 317 P **P 20 44 49.1 -1.5**
F43A Flat Rock, Esc 84.78 32 P **P 20 44 50.3 0.0**
baz=324,SNR=27
K38A Parkersburg 84.80 37 P **P 20 44 50.5 -0.1**
baz=320,SNR=8.1
K38A Parkersburg 84.80 37 *e*P **P 20 44 50.8 +0.3**
I40A Norwalk 84.83 35 P **P 20 44 50.6 -0.1**
baz=322,SNR=13
VAH Vaihoa 84.83 114 *e*P **P 20 44 49.7 -1.2**
comp=Z,188nm,1.3s
VLY Voula,Athens 84.84 316 P **P 20 44 49.8 -1.0**
VLY Voula,Athens 84.84 316 P **P 20 44 49.8 -1.0**
F44A Big Bay de Noc 84.97 32 P **P 20 44 51.4 0.0**
baz=324,SNR=19
SANT Santorini 84.98 314 *i* P **P 20 44 49.5 -2.1**
SANT Santorini 84.98 314 *e*P **P 20 44 49.4 -2.2**
G43A Wallace 85.02 33 P **P 20 44 51.6 0.0**
baz=324,SNR=14
G43A Wallace 85.02 33 *e*P **P 20 44 51.8 +0.2**
I41A Arkdale 85.03 35 P **P 20 44 51.6 -0.1**
baz=322,SNR=8.9
I41A Arkdale 85.03 35 *e*P **P 20 44 52.3 +0.6**
PPT Papeete 85.03 117 LR LR 21 15 25.2
comp=Z,13μm,21.9s,baz=285,slow=30
TUE Stuetta 85.04 329 *e*P **P 20 44 52.0 +0.1**
PPT2 Papeete2 85.05 117 *e*P **P 20 44 51.1 -1.0**
comp=Z,124nm,1.2s
PPT2 Papeete2 85.05 117 *e*S **S 20 55 14.9 -3.3**
PPT2 *e*SS **SS 21 00 51.0 -1.8**
comp=Z,5μm,25.8s
comp=Z,3μm,24.8s
PPT2 Papeete2 85.05 117 *e*LR LR 21 11 28.5
comp=Z,38μm,24.2s,baz=317
PPT2 Papeete2 85.05 117 *e*T T 22 18 13.4
comp=Z,113nm,0.3s
JAN Janina 85.08 318 P **P 20 44 52.3 +0.2**
JAN Janina 85.08 318 P **P 20 44 52.3 +0.2**
JAN Janina 85.08 318 P **P 20 44 52.3 +0.2**
L38A Oak Wood Farm, 85.09 38 P **P 20 44 52.1 +0.1**
baz=320,SNR=13
PAE Paea 85.09 117 *e*P **P 20 44 51.0 -1.2**
comp=Z,27nm,1.3s
PAE Paea 85.09 117 *e*T T 22 18 15.9
comp=Z,20nm,0.3s

DSF Desfina 85.12 317 P **P 20 44 50.5 -1.8**
DSF Desfina 85.12 317 P **P 20 44 50.5 -1.8**
N36A Muff Farm, Cla 85.13 40 P **P 20 44 52.5 +0.2**
baz=319,SNR=9.4
M37A Trindle Farm, 85.13 39 P **P 20 44 52.8 +0.6**
baz=320,SNR=12
EVR Evrytania 85.13 317 P **P 20 44 51.5 -0.9**
EVR Evrytania 85.13 317 P **P 20 44 51.5 -0.9**
SCIA State Center 85.15 38 P **P 20 44 52.8 +0.5**
baz=320,SNR=12
SCIA State Center 85.15 38 *e*P **P 20 44 53.0 +0.6**
SCIA LR LR
comp=Z,6μm,21.0s
J40A Soldiers Grove 85.16 36 P **P 20 44 52.0 -0.4**
baz=322,SNR=16
E45A Wooded Hills, 85.16 31 P **P 20 44 52.0 -0.3**
baz=325,SNR=7.1
K39A Oelwein 85.17 37 P **P 20 44 52.0 -0.4**
baz=321,SNR=62
TIAR Tiarei 85.19 117 *e*P **P 20 44 51.4 -1.3**
comp=Z,41nm,1.1s
TIAR Tiarei 85.19 117 *e*T T 22 18 22.7
comp=Z,27nm,0.3s
SNZO South Karori 85.22 156 PFAKE
SNZO LR LR 20 45 00.0 +7.7
comp=Z,17μm,21.0s
H42A Shiocton 85.26 34 P **P 20 44 52.9 +0.1**
baz=323,SNR=14
H42A Shiocton 85.26 34 *e*P **P 20 44 52.9 +0.1**
ANX Ano Chora 85.31 317 P **P 20 44 52.5 -0.8**
DSL Palaion Diasel 85.34 318 P **P 20 44 53.1 -0.3**
DSL Palaion Diasel 85.34 318 P **P 20 44 53.1 -0.3**
SERG Sergoula 85.37 317 P **P 20 44 52.5 -1.0**
TRIZ Trizonia 85.39 317 P **P 20 44 52.4 -1.2**
TVO Taravao 85.41 117 *e*P **P 20 44 52.4 -1.5**
comp=Z,53nm,1.0s
TVO Taravao 85.41 117 *e*T T 22 18 38.4
comp=Z,7.2nm,0.3s
SGD Sagiada 85.43 319 P **P 20 44 53.5 -0.3**
ZKR Zakros 85.44 312 P **P 20 44 53.8 -0.1**
ZKR Zakros 85.44 312 P **P 20 44 53.8 -0.1**
EFP Efpalio 85.44 317 P **P 20 44 53.9 +0.1**
J41A Loganville 85.51 35 P **P 20 44 53.9 -0.3**
baz=322,SNR=40
K40A Colesburg 85.52 36 P **P 20 44 54.1 0.0**
baz=321,SNR=44
M38A Pleasantville 85.54 38 P **P 20 44 54.6 +0.3**
baz=320,SNR=33
LAKA Lakka 85.54 317 P **P 20 44 53.6 -0.8**
LAKA Lakka 85.54 317 P **P 20 44 53.6 -0.8**
N37A Lee Faris, Mou 85.54 39 P **P 20 44 54.9 +0.6**
baz=320,SNR=9.3
N37A Lee Faris, Mou 85.54 39 *e*P **P 20 44 55.5 +1.1**
L39A Vinton 85.56 37 P **P 20 44 54.3 -0.1**
baz=321,SNR=83
GUR Goura 85.56 316 P **P 20 44 53.9 -0.7**
GUR Goura 85.56 316 P **P 20 44 53.9 -0.7**
KSU1 Kansas State U 85.57 42 P **P 20 44 54.1 -0.4**
baz=318,SNR=16
KSU1 Kansas State U 85.57 42 *e*P **P 20 44 54.3 -0.2**
KSU1 LR LR
comp=Z,6μm,22.0s
F45A CMU Biological 85.58 31 P **P 20 44 54.4 0.0**
baz=325
KEK Kerkira 85.58 319 P **P 20 44 54.2 -0.3**
KEK Kerkira 85.58 319 P **P 20 44 54.2 -0.3**
I42A Draeger Farm, 85.58 34 P **P 20 44 54.6 +0.1**
baz=323,SNR=26
I42A Draeger Farm, 85.58 34 *e*P **P 20 44 54.7 +0.3**
KLV Kalavryta, Ach 85.59 317 P **P 20 44 53.5 -1.2**
KLV Kalavryta, Ach 85.59 317 P **P 20 44 53.5 -1.2**
H43A Windswept, Lux 85.62 33 P **P 20 44 54.9 +0.3**
baz=324,SNR=23
H43A Windswept, Lux 85.62 33 *e*P **P 20 44 55.1 +0.5**
NPS Neapolis 85.68 313 P **P 20 44 55.0 -0.1**
NPS Neapolis 85.68 313 P **P 20 44 55.0 -0.1**
PDO Prodromos 85.69 318 P **P 20 44 54.6 -0.5**
JFWS Jewell Farm 85.76 36 P **P 20 44 55.0 -0.4**
baz=322,SNR=15
JFWS Jewell Farm 85.76 36 *e*P **P 20 44 54.4 -1.0**
JFWS LR LR
comp=Z,7μm,21.0s
JFWS Jewell Farm 85.76 36 *e*P **P 20 44 54.4 -1.0**
JFWS MLR MLR
comp=Z,7μm,21.0s
HTL Hartland 85.78 340 *e*P **P 20 44 55.3 0.0**
HTL IAmb IAmb 20 44 57.4
comp=Z,118nm,1.2s
HTL IAMs_20 IAMs_20 21 26 42.7
comp=Z,8μm,21.1s
F46A Macinaw City C 85.81 31 P **P 20 44 55.6 +0.1**
baz=326,SNR=12
LAST Lasithi 85.83 313 P **P 20 44 55.8 -0.1**
LAST Lasithi 85.83 313 P **P 20 44 55.8 -0.1**
LKD2 Lefkada island 85.83 318 P **P 20 44 55.0 -0.8**
LKD2 Lefkada island 85.83 318 P **P 20 44 55.0 -0.8**
AMTX Amarillo 85.85 48 P **P 20 44 57.1 +1.0**
baz=316
AMTX Amarillo 85.85 48 *e*P **P 20 44 57.3 +1.2**
MSTX Muleshoe 85.86 49 P **P 20 44 57.0 +0.8**
baz=315
MSTX Muleshoe 85.86 49 *e*P **P 20 44 57.0 +0.8**
MNTX Cornudas Mount 85.88 52 P **P 20 44 56.7 +0.6**
baz=314,SNR=24
MNTX Cornudas Mount 85.88 52 *e*P **P 20 44 57.0 +0.8**
MNTX LR LR
comp=Z,3μm,19.0s
DRO Drossia 85.89 317 P **P 20 44 55.7 -0.4**
I43A Langenfeld Bro 85.92 34 P **P 20 44 56.2 +0.1**
baz=323,SNR=9.7
SENIN Lac Senin/Sane 85.93 330 *e*P **P 20 44 56.2 -0.2**
RLS Riolos of Patr 85.94 317 P **P 20 44 56.2 -0.1**
RLS Riolos of Patr 85.94 317 P **P 20 44 56.2 -0.1**
J42A Columbus 85.95 35 P **P 20 44 55.9 -0.3**
baz=323,SNR=21
K41A Shullsburg 85.97 36 P **P 20 44 56.2 -0.2**
baz=322,SNR=18
L40A Anamosa 85.98 37 P **P 20 44 56.2 -0.2**
baz=321,SNR=42
L40A Anamosa 85.98 37 *e*P **P 20 44 56.2 -0.2**
M39A Webster 85.98 38 P **P 20 44 56.7 +0.2**
baz=321,SNR=26
N38A Joes South For 86.00 39 P **P 20 44 56.9 +0.4**
baz=320,SNR=15
O37A Wolven Farm, M 86.02 40 P **P 20 44 57.1 +0.4**
baz=320,SNR=16
IDI Anoyia 86.07 313 P **P 20 44 56.3 -0.8**
comp=Z,90nm,0.9s,baz=44,slow=7.5,SNR=23
IDI LR LR 21 28 08.7
comp=Z,3μm,18.3s,baz=23,slow=39
IDI Anoyia 86.07 313 ⇑ *i*P **P 20 44 55.9 -1.2**
FSK Fiskardo 86.12 318 P **P 20 44 56.4 -0.8**
TAOE Nuku Hiva Isla 86.15 105 *e*P **P 20 44 55.8 -1.9**
comp=Z,159nm,1.1s
TAOE Nuku Hiva Isla 86.15 105 *e*S **S 20 55 25.0 -4.3**
comp=Z,12μm,26.2s
TAOE *e*SS **SS 21 01 04.0 -5.0**
comp=Z,3μm,28.6s
TAOE Nuku Hiva Isla 86.15 105 *e*LR LR 21 12 06.0
comp=Z,30μm,22.2s,baz=319
TAOE Nuku Hiva Isla 86.15 105 *e*T T 22 19 29.3
comp=Z,76nm,0.2s
GDL2 Guadalupe Moun 86.15 51 *e*P **P 20 44 58.9 +1.2**
AMT Artemida-Makis 86.20 317 P **P 20 44 57.2 -0.5**
J43A Natural Harves 86.21 34 P **P 20 44 57.4 -0.1**
baz=323,SNR=25
OXZ Oxford 86.25 159 *e*P **P 20 45 00.5 +3.1**
K42A Prairie Point, 86.27 35 P **P 20 44 57.4 -0.5**
baz=323,SNR=21
N39A Derby Farms, D 86.29 38 P **P 20 44 58.2 +0.2**
baz=321,SNR=30
N39A Derby Farms, D 86.29 38 *e*P **P 20 44 57.1 -0.8**
L41A Preston 86.30 36 P **P 20 44 57.8 -0.2**
baz=322,SNR=30
SIVA Sivas 86.31 313 P **P 20 44 58.5 +0.3**
SIVA Sivas 86.31 313 P **P 20 44 58.5 +0.3**
VLS Valsamata 86.32 318 P **P 20 44 57.6 -0.6**
VLS Valsamata 86.32 318 P **P 20 44 57.6 -0.6**
VLS Valsamata 86.32 318 P **P 20 44 57.6 -0.6**
ITM Ithomi 86.34 316 *e*P **P 20 44 57.4 -0.9**
ITM Ithomi 86.34 316 P **P 20 44 57.3 -1.1**
VAL Valentia 86.34 343 ‖ *i*P **P 20 44 58.3 +0.3**
VAL Valentia 86.34 343 *i* S **S 20 55 32.1 +2.2**
M40A Post Highland 86.35 37 P **P 20 44 58.4 +0.1**
baz=321,SNR=32

P37A Lathrop 86.36 40 P **P 20 44 58.4 0.0**
baz=320,SNR=20
VAM Vamos 86.38 314 P **P 20 44 57.7 -0.8**
VAM Vamos 86.38 314 P **P 20 44 57.7 -0.8**
VAM Vamos 86.38 314 P **P 20 44 57.7 -0.8**
O38A Galt 86.39 39 P **P 20 44 58.9 +0.4**
baz=320,SNR=20
MATE Matera 86.41 322 ⇑ *i*P **P 20 44 58.1 -0.5**
DYR Agios Nikonas 86.43 316 P **P 20 44 57.9 -0.9**
VLC Villacollemand 86.50 327 *e*P **P 20 44 58.7 -0.3**
AQU L'Aquila 86.63 325 *e*P **P 20 44 59.8 +0.1**
AQU L'Aquila 86.63 325 *e*P **P 20 44 59.8 +0.1**
PYL PYLOS 86.65 316 P **P 20 44 58.2 -1.7**
PYL PYLOS 86.65 316 P **P 20 44 58.2 -1.7**
N40A Mertquake, Sal 86.72 38 P **P 20 45 00.4 +0.3**
baz=321,SNR=24
L42A Oliver, Polo 86.74 36 P **P 20 44 59.9 -0.2**
baz=322,SNR=9.2
L42A Oliver, Polo 86.74 36 *e*P **P 20 45 00.4 +0.2**
P38A Dawn 86.74 40 P **P 20 45 00.5 +0.3**
baz=320,SNR=44
P38A Dawn 86.74 40 *e*P **P 20 45 00.7 +0.5**
O39A Kirksville 86.75 39 P **P 20 45 00.5 +0.2**
baz=321,SNR=12
K43A Burlington 86.79 35 P **P 20 44 59.9 -0.5**
baz=323
K43A Burlington 86.79 35 *e*P **P 20 45 00.6 +0.2**
DAMY Dhamar 86.80 286 *e*P **P 20 45 00.1 -1.2**
M41A Milan 86.83 37 P **P 20 45 00.6 -0.1**
baz=322,SNR=30
Q37A Longview Farm, 86.85 41 P **P 20 45 00.4 -0.4**
baz=320
LPL La Plagne 86.85 330 *e*P **P 20 45 01.7 +0.7**
LPL pmax pmax
comp=Z,89nm,0.9s
LPG La Plagne 86.86 330 *e*P **P 20 45 01.9 +0.8**
LPG pmax pmax
comp=Z,144nm,1.1s
L43A Garden Prairie 87.02 35 P **P 20 45 01.3 -0.2**
baz=323
AVF Avril sur Loir 87.03 333 *e*P **P 20 45 01.3 -0.2**
AVF pmax pmax
comp=Z,369nm,1.2s
M42A Sheffield 87.13 36 P **P 20 45 01.9 -0.2**
baz=322,SNR=9.9
O40A La Belle 87.17 38 P **P 20 45 02.7 +0.4**
baz=321,SNR=62
N41A Harden Midland 87.20 37 P **P 20 45 02.6 +0.1**
baz=322,SNR=28
N41A Harden Midland 87.20 37 *e*P **P 20 45 02.4 -0.1**
Q38A Cooks Store, C 87.20 40 P **P 20 45 02.4 -0.1**
baz=320,SNR=48
P39B Salisbury 87.23 39 P **P 20 45 02.9 +0.3**
baz=321,SNR=39
BNI Bardonecchia 87.26 330 *e*P **P 20 45 02.3 -0.5**
BNI Bardonecchia 87.26 330 *e*P **P 20 45 02.3 -0.5**
CUC Castrocucco 87.35 322 *e*P **P 20 45 01.7 -1.6**
L44A Lake County Fo 87.39 35 P **P 20 45 02.4 -0.9**
baz=324
Q39A Willow Grove F 87.46 40 P **P 20 45 04.0 +0.2**
baz=320,SNR=50
N42A Yates City 87.50 37 P **P 20 45 04.0 +0.1**
baz=322,SNR=22
M43A Waltham Townsh 87.51 36 P **P 20 45 04.3 +0.3**
baz=323,SNR=52
TIP Timpagrande 87.52 321 ⇑ *i*P **P 20 45 03.9 -0.2**
TIP Timpagrande 87.52 321 *e*P **P 20 45 04.0 -0.1**
TIP Timpagrande 87.52 321 P **P 20 45 03.9 -0.2**
P40A Paris 87.55 39 P **P 20 45 04.6 +0.5**
baz=321,SNR=80
P40A Paris 87.55 39 *e*P **P 20 45 04.6 +0.5**
WMOK Wichita Mounta 87.61 46 P **P 20 45 04.9 +0.3**
baz=317,SNR=49
WMOK Wichita Mounta 87.61 46 *e*P **P 20 45 05.0 +0.4**
WMOK LR LR
comp=Z,4μm,21.0s
WMOK Wichita Mounta 87.61 46 *e*P **P 20 45 05.0 +0.4**
WMOK MLR MLR
comp=Z,4μm,21.0s
R38A Fenwick Farm, 87.65 41 P **P 20 45 03.9 -0.8**
baz=320,SNR=32
O41A Passleys Farm, 87.66 38 P **P 20 45 04.9 +0.3**
baz=322,SNR=37
ORIF Oris-en-Rattie 87.68 330 *e*P **P 20 45 04.5 -0.3**
ORIF pmax pmax
comp=Z,317nm,1.9s
N43A Stutzman Famil 87.81 36 P **P 20 45 05.4 +0.1**
baz=323
LPIG La Paz 87.82 61 LR LR 21 18 29.4
comp=Z,5μm,20.2s,baz=310,slow=32
TCF Toulx Ste Croi 87.86 333 *e*P **P 20 45 05.6 0.0**
TCF pmax pmax
comp=Z,200nm,1.4s
SSB Saint Sauveur 87.89 331 *e*P **P 20 45 05.6 -0.1**
SSB Saint Sauveur 87.89 331 *e*P **P 20 45 05.6 -0.1**
P41A Barry, Barry 87.91 38 P **P 20 45 06.3 +0.4**
baz=322,SNR=50
Q40A Laux Farm, Aux 87.95 39 P **P 20 45 06.2 +0.1**
baz=321,SNR=41
M44A Midewin, Midew 87.97 35 P **P 20 45 06.3 +0.2**
baz=324,SNR=23
M44A Midewin, Midew 87.97 35 *e*P **P 20 45 06.2 +0.1**
O42A Bath 87.97 37 P **P 20 45 06.1 0.0**
baz=322,SNR=6.6
R39A Chumby, Stover 87.99 40 P **P 20 45 06.2 -0.1**
baz=320,SNR=40
HDIL Hopedale 88.06 37 P **P 20 45 06.7 +0.1**
baz=323,SNR=26
HDIL Hopedale 88.06 37 *e*P **P 20 45 06.8 +0.3**
HDIL LR LR
comp=Z,5μm,20.0s
S38A Stockton 88.07 41 P **P 20 45 06.2 -0.5**
baz=320,SNR=23
QUIF Quistinic 88.17 337 *e*P **P 20 45 06.8 -0.1**
QUIF pmax pmax
comp=Z,191nm,1.7s
O43A Sugar Creek Fa 88.26 37 P **P 20 45 07.7 +0.2**
baz=323,SNR=14
M45A Boilermakers S 88.32 35 P **P 20 45 07.1 -0.7**
baz=324
S39A Bolivar 88.33 41 P **P 20 45 07.3 -0.6**
baz=320,SNR=45
S39A Bolivar 88.33 41 *e*P **P 20 45 07.6 -0.3**
T38A Diamond 88.33 42 P **P 20 45 07.9 0.0**
baz=320,SNR=81
P42A Winchester 88.33 38 P **P 20 45 08.0 +0.2**
baz=322,SNR=55
P42A Winchester 88.33 38 *e*P **P 20 45 08.3 +0.5**
SLBS Sierra La Lagu 88.35 61 *e*P **P 20 45 10.5 +2.2**
TUL1 Leonard 88.38 43 P **P 20 45 08.7 +0.5**
baz=319,SNR=10
TUL1 Leonard 88.38 43 *e*P **P 20 45 09.1 +0.9**
Q41A Truxton 88.39 39 P **P 20 45 08.6 +0.4**
baz=322,SNR=64
R40A Maddies Statio 88.40 40 P **P 20 45 08.3 +0.1**
baz=321,SNR=51
R40A Maddies Statio 88.40 40 *e*P **P 20 45 08.4 +0.3**
PGF Pioggiola 88.40 327 *e*P **P 20 45 07.2 -1.1**
PGF pmax pmax
comp=Z,83nm,1.4s
N44A Piper City 88.40 36 P **P 20 45 08.3 +0.2**
baz=323,SNR=29
FRF La Foret Royal 88.52 329 *e*P **P 20 45 07.5 -1.2**
FRF pmax pmax
comp=Z,119nm,1.8s
TX31 Lajitas Ar. Si 88.58 53 *e*P **P 20 45 10.0 +0.6**
TXAR Lajitas Array 88.58 53 P **P 20 45 10.1 +0.7**
comp=Z,6.8nm,0.8s,baz=292,slow=3.2,SNR=63
TXAR PKKPbc **PKKPbc 21 02 50.2 +1.3**
comp=Z,0.4nm,0.7s,baz=140,slow=4.7,SNR=2.8
TXAR LR LR 21 23 01.2
comp=Z,4μm,19.7s,baz=0.0,slow=34
N45A Kentland 88.64 35 P **P 20 45 09.8 +0.5**
baz=324,SNR=40
ABTX Abilene, Hawle 88.65 48 P **P 20 45 10.0 +0.5**
baz=317,SNR=18
ABTX Abilene, Hawle 88.65 48 *e*P **P 20 45 10.7 +1.1**
CEL Celeste 88.66 321 *e*P **P 20 45 09.1 -0.4**
P43A Skaggs, Pawnee 88.67 37 P **P 20 45 09.9 +0.4**
baz=323,SNR=23
M46A Old House Fiel 88.70 34 P **P 20 45 09.6 0.0**
baz=324
M46A Old House Fiel 88.70 34 *e*P **P 20 45 11.1 +1.5**
O44A Mansfield 88.76 36 P **P 20 45 10.0 +0.1**
baz=323,SNR=12
Q42A Golden Eagle 88.77 38 P **P 20 45 10.4 +0.5**

baz=322,SNR=21
SADO Sadowa 88.80 28 eP P 20 45 10.6 +0.6
T39A Clever 88.81 41 P P 20 45 10.1 -0.1
baz=320,SNR=30
S40A Lebanon 88.81 40 P P 20 45 10.2 0.0
baz=321,SNR=29
R41A Rosebud 88.83 39 P P 20 45 10.5 +0.3
baz=321,SNR=72
N46A Monticello 88.95 35 P P 20 45 10.8 +0.1
baz=324,SNR=14
RJF Les Rejaudoux 88.96 333 eP P 20 45 09.8 -0.9
RJF pmax pmax
comp=Z,178nm,1.5s
HPIG 88.98 56 eP P 20 45 13.0 +1.5
O45A Potomac 89.02 36 P P 20 45 11.6 +0.5
baz=324,SNR=29
TBI Tubuai 89.06 121 eS S 20 55 54.0 -2.6
comp=Z,5µm,25.2s
TBI eSS SS 21 01 50.1 -1.2
comp=Z,2µm,31.5s
TBI Tubuai 89.06 121 eLR LR 21 13 07.8
comp=Z,20µm,22.2s,baz=318
TBI Tubuai 89.06 121 eT T 22 23 15.6
comp=Z,480nm,0.3s
HHAR Hobbs 89.08 42 eP P 20 45 12.1 +0.6
CCM Cathedral Cave 89.09 39 P P 20 45 11.5 +0.1
baz=322
CCM Cathedral Cave 89.09 39 eP P 20 45 11.7 +0.2
CCM Cathedral Cave 89.09 39 eP P 20 45 11.7 +0.2
CAF Calviac 89.09 333 eP P 20 45 10.7 -0.7
CAF pmax pmax
comp=Z,104nm,1.1s
TRQ Mont Tremblant 89.11 24 eP P 20 45 11.6 0.0
AAM Ann Arbor 89.12 32 P P 20 45 11.7 +0.1
baz=326,SNR=7.1
AAM Ann Arbor 89.12 32 eP P 20 45 12.4 +0.9
AAM LR LR
comp=Z,4µm,20.0s
AAM Ann Arbor 89.12 32 eP P 20 45 12.4 +0.9
AAM MLR MLR
comp=Z,4µm,20.0s
SLM Saint Louis 89.12 38 eP P 20 45 12.4 +0.9
SLM Saint Louis 89.12 38 eP P 20 45 12.5 +0.9
R42A Luebbering 89.13 39 P P 20 45 12.0 +0.3
baz=322,SNR=30
Q43A New Douglas 89.14 38 P P 20 45 12.0 +0.3
baz=322,SNR=12
T40A Mansfield 89.15 41 P P 20 45 11.6 -0.2
baz=321
S41A Jillco Farms, 89.20 40 P P 20 45 11.9 -0.1
baz=321,SNR=33
SFIN Lafayette 89.20 35 P P 20 45 12.3 +0.3
baz=324,SNR=12
SFIN Lafayette 89.20 35 eP P 20 45 11.3 -0.7
P44A Sand Creek, Wi 89.23 37 P P 20 45 12.4 +0.3
baz=323,SNR=20
U39A Green Forest 89.25 42 P P 20 45 12.3 +0.1
baz=320,SNR=95
PLVO Plevna 89.31 27 eP P 20 45 11.8 -0.6
Q44A Meyer Farm, Va 89.50 37 P P 20 45 13.8 +0.4
baz=323,SNR=19
S42A Caledonia 89.53 39 P P 20 45 13.9 +0.3
baz=322,SNR=76
FVM French Village 89.55 39 eP P 20 45 14.0 +0.4
FVM French Village 89.55 39 eP P 20 45 14.0 +0.4
R43A Red Bud 89.56 38 P P 20 45 14.0 +0.3
baz=322,SNR=27
V39A Pettigrew 89.57 42 P P 20 45 13.8 -0.1
baz=320,SNR=65
U40A Yellville 89.59 41 P P 20 45 14.0 +0.1
baz=321,SNR=134
P45A Graceland, Par 89.59 36 P P 20 45 14.2 +0.4
baz=324,SNR=10
P45A Graceland, Par 89.59 36 eP P 20 45 13.9 +0.1
T41A Mountain View 89.61 40 P P 20 45 14.0 0.0
baz=321,SNR=78
O47A Sheridan 89.73 35 P P 20 45 14.4 -0.1
baz=325,SNR=18
P46A Rosedale 89.77 36 P P 20 45 15.1 +0.5
baz=324,SNR=10
ATD Arta Tunnel 89.89 285 P P 20 45 15.5 -0.1
comp=Z,92nm,1.0s,baz=90,slow=20,SNR=26
ATD LR LR 21 29 35.5
comp=Z,3µm,19.4s,baz=46,slow=38
ATD Arta Tunnel 89.89 285 eP P 20 45 15.8 +0.2
Q45A Warren Harvey, 89.91 37 P P 20 45 15.7 +0.5
baz=323,SNR=31
T42A Van Buren 89.96 40 P P 20 45 15.8 +0.2
baz=322,SNR=65
T42A Van Buren 89.96 40 eP P 20 45 15.8 +0.2
R44A Waltonville 89.99 38 P P 20 45 16.1 +0.4
baz=323,SNR=16
W39A Magazine 89.99 43 P P 20 45 15.8 +0.1
baz=320,SNR=17
W39A Magazine 89.99 43 eP P 20 45 16.0 +0.3
VAE Valguarnera 90.00 321 P P 20 45 16.3 +0.5
comp=Z,9.7nm,0.6s,baz=132,slow=2.5,SNR=2.9
VAE PP PP 20 48 51.0 +2.6
comp=Z,35nm,1.1s,baz=54,slow=10.0,SNR=4.5
VAE LR LR 21 30 57.1
comp=Z,17µm,18.3s,baz=78,slow=39
V40A Witts Springs 90.03 42 P P 20 45 15.8 -0.2
baz=321,SNR=15
V40A Witts Springs 90.03 42 eP P 20 45 15.9 -0.1
S43A Fulton Ridge, 90.04 39 P P 20 45 16.0 +0.1
baz=322,SNR=15
OLIL Olney 90.06 37 eP P 20 45 16.1 +0.1
U41A Viola 90.08 41 P P 20 45 16.0 -0.1
baz=321,SNR=39
JCT Junction City 90.11 50 P P 20 45 16.6 +0.1
baz=317,SNR=8.5
JCT Junction City 90.11 50 eP P 20 45 17.1 +0.6
comp=Z,55nm,0.8s
JCT LR LR
comp=Z,6µm,22.0s
JCT Junction City 90.11 50 eP P 20 45 17.1 +0.6
JCT pmax pmax
comp=Z,55nm,0.8s
JCT MLR MLR
comp=Z,6µm,22.0s
Q46A CEJHS Indians, 90.18 36 P P 20 45 16.8 +0.3
baz=324
P47A Martinsville 90.30 35 P P 20 45 17.3 +0.2
baz=325,SNR=19
T43A Greenville 90.32 39 P P 20 45 17.4 +0.1
baz=322,SNR=11
R45A Skylar, Fairfi 90.33 37 P P 20 45 17.7 +0.5
baz=323,SNR=8.6
X39A Fountain Ranch 90.34 43 P P 20 45 18.0 +0.6
baz=320,SNR=43
S44A Carbondale 90.34 38 P P 20 45 17.7 +0.3
baz=323,SNR=30
SIUC Southern Illin 90.34 38 eP P 20 45 18.3 +1.0
W40A Ferguson Farm, 90.37 42 P P 20 45 17.8 +0.3
baz=320,SNR=26
W40A Ferguson Farm, 90.37 42 eP P 20 45 18.0 +0.5
WHTX Lake Whitney, 90.38 47 P P 20 45 18.2 +0.6
baz=318,SNR=8.9
WHTX Lake Whitney, 90.38 47 eP P 20 45 18.1 +0.6
V41A Mountainview 90.39 41 P P 20 45 17.4 -0.2
baz=321,SNR=45
U42A Revenden 90.42 40 P P 20 45 17.9 +0.2
baz=322,SNR=21
BLO Bloomington 90.44 36 eP P 20 45 18.2 +0.4
BLO Bloomington 90.44 36 eP P 20 45 18.2 +0.4
PBMO Poplar Bluff 90.49 40 eP P 20 45 18.5 +0.5
LONY Lake Ozonia 90.52 25 P P 20 45 18.0 -0.1
baz=332,SNR=14
LONY Lake Ozonia 90.52 25 eP P 20 45 17.8 -0.3
comp=Z,48nm,1.2s
LONY LR LR
comp=Z,5µm,21.0s
MIAR Mount Ida 90.60 43 P P 20 45 19.1 +0.5
baz=320,SNR=57
MIAR Mount Ida 90.60 43 eP P 20 45 19.2 +0.7
comp=Z,100nm,1.1s
MIAR LR LR
comp=Z,4µm,22.0s
MIAR Mount Ida 90.60 43 eP P 20 45 19.3 +0.7
MIAR pmax pmax
comp=Z,100nm,1.1s
MIAR MLR MLR
comp=Z,4µm,22.0s
PQI Presque Isle 90.65 20 eP P 20 45 18.8 +0.2
FRNY Flat Rock 90.66 24 eP P 20 45 18.7 0.0
T44A Benton 90.66 39 P P 20 45 18.4 -0.4
baz=322

Q47A Bedord North L 90.67 36 P P 20 45 19.3 +0.4
baz=324,SNR=30
S45A Carrier Mills 90.68 38 P P 20 45 19.2 +0.3
baz=323,SNR=23
WHAR Wooly Hollow 90.70 42 eP P 20 45 19.4 +0.4
ERPA Erie 90.75 30 P P 20 45 19.7 +0.6
baz=329,SNR=15
ERPA Erie 90.75 30 eP P 20 45 20.4 +1.3
R46A Gibon Southern 90.76 37 P P 20 45 19.8 +0.5
baz=324,SNR=10
V42A Cord 90.76 41 P P 20 45 19.2 -0.1
baz=321,SNR=12
W41B Gary Mavity, V 90.81 42 P P 20 45 19.7 +0.2
baz=321,SNR=32
W41B Gary Mavity, V 90.81 42 eP P 20 45 19.8 +0.2
U43A Rector 90.82 40 P P 20 45 19.6 +0.1
baz=322
H06N1 SOCORRO T-PHAS 90.83 65 T T 22 26 20.6
SNR=37
USIN University of 90.88 37 eP P 20 45 21.3 +1.5
PARMO Parma 90.91 39 eP P 20 45 22.0 +2.0
H06E1 SOCORRO T-PHAS 90.93 65 T T 22 26 34.8
SNR=37
H06S1 SOCORRO T 90.94 65 T T 22 26 32.5
SNR=15
MMNY Mt. Morris Dam 91.01 28 eP P 20 45 21.1 +0.8
X40A Basin Creek Fa 91.03 43 P P 20 45 21.0 +0.4
baz=321,SNR=27
X40A Basin Creek Fa 91.03 43 eP P 20 45 20.7 +0.1
UALR University of 91.07 42 eP P 20 45 20.9 +0.2
U44A Portageville 91.07 39 P P 20 45 21.3 +0.5
baz=322
S46A Don Dixon Farm 91.08 37 P P 20 45 21.0 +0.2
baz=324,SNR=7.2
ALLY Alegheny Colle 91.09 30 eP P 20 45 21.8 +1.1
W42A Bald Knob 91.11 41 P P 20 45 20.3 -0.6
baz=321
ACSO Alum Creek Sta 91.12 33 P P 20 45 21.0 +0.1
baz=327,SNR=20
ACSO Alum Creek Sta 91.12 33 eP P 20 45 21.8 +0.8
comp=Z,60nm,0.8s
ACSO LR LR
comp=Z,4µm,21.0s
R47A Wooly Knot Far 91.15 36 P P 20 45 21.5 +0.4
baz=324,SNR=20
Y40A Okolona 91.16 43 P P 20 45 21.5 +0.3
baz=320
T45A Paducah 91.17 38 P P 20 45 21.2 0.0
baz=323
435B Jarrell 91.19 48 P P 20 45 21.6 +0.1
baz=318
435B Jarrell 91.19 48 eP P 20 45 22.4 +1.0
X41A Kaden, Bauxite 91.20 42 P P 20 45 21.6 +0.2
baz=321,SNR=8.5
V43A Jonesboro 91.21 40 P P 20 45 22.2 +0.8
baz=322
NCB Newcomb 91.22 25 eP P 20 45 21.4 +0.1
GNAR Gosnell 91.33 40 eP P 20 45 21.7 -0.3
R48A Northridge Ran 91.36 36 P P 20 45 22.6 +0.6
baz=325,SNR=12
U44B Burton Farm, H 91.37 39 P P 20 45 22.6 +0.5
baz=323
VT1 Waterbury 91.38 24 eP P 20 45 22.6 +0.6
M54A Oil Creek Stat 91.39 30 P P 20 45 22.6 +0.5
baz=329,SNR=25
M54A Oil Creek Stat 91.39 30 eP P 20 45 23.1 +0.9
V44A Blytheville 91.50 40 P P 20 45 22.3 -0.4
baz=322
T46A Princeton 91.52 38 P P 20 45 23.1 +0.3
baz=324,SNR=31
PKME Peaks-Kenny Pk 91.58 22 P P 20 45 23.6 +0.7
baz=336,SNR=11
PKME Peaks-Kenny Pk 91.58 22 eP P 20 45 24.0 +1.1
comp=Z,84nm,1.3s
PKME LR LR
comp=Z,3µm,20.0s
X42A Stuttgart 91.62 42 P P 20 45 23.4 +0.1
baz=321
Y41A Eaglette Beard 91.62 43 P P 20 45 23.8 +0.5
baz=321,SNR=11
U45A Rockin P Farm, 91.65 39 P P 20 45 23.8 +0.4
baz=323,SNR=9.0
W43A Forest City 91.67 41 P P 20 45 23.6 +0.1
baz=322
Z40A Long Farm, Mag 91.67 44 P P 20 45 24.2 +0.6
baz=320
LBNH Lisbon 91.72 24 P P 20 45 24.2 +0.6
baz=334
LBNH Lisbon 91.72 24 eP P 20 45 24.8 +1.2
LBNH Lisbon 91.72 24 eP P 20 45 24.8 +1.2
N54A Moraine State 91.73 30 P P 20 45 24.4 +0.7
baz=329,SNR=9.1
N54A Moraine State 91.73 30 eP P 20 45 24.7 +1.0
ETSF Etsaut 91.78 333 eP P 20 45 24.5 +0.5
ETSF pmax pmax
comp=Z,54nm,1.0s
SJPF Ste Jean 91.82 334 eP P 20 45 26.6 +2.5
SJPF pmax pmax
comp=Z,40nm,1.2s
S48A Wiedeman Farm, 91.88 36 P P 20 45 24.7 +0.3
baz=325,SNR=24
833A Chaparral WMA, 91.92 51 P P 20 45 26.2 +1.4
baz=317
833A Chaparral WMA, 91.92 51 eP P 20 45 26.1 +1.4
ACCN Adirondack Com 91.92 25 eP P 20 45 25.1 +0.5
U46A Springville 91.92 38 P P 20 45 25.0 +0.3
baz=323
T47A Sharon Grove 91.93 37 P P 20 45 25.0 +0.3
baz=324,SNR=17
T47A Sharon Grove 91.93 37 eP P 20 45 25.4 +0.6
X43A Marvell 92.03 41 P P 20 45 25.0 -0.2
baz=322
X43A Marvell 92.03 41 eP P 20 45 26.3 +1.1
CCAR Cane Creek 92.03 42 eP P 20 45 26.8 +1.5
V45A Humboldt 92.03 39 P P 20 45 25.5 +0.3
baz=323
140A Cam and Jess, 92.05 44 P P 20 45 26.4 +1.1
baz=320
140A Cam and Jess, 92.05 44 eP P 20 45 27.2 +1.9
W44A Shelby Farms P 92.08 40 P P 20 45 25.5 +0.1
baz=322
Y42A Garnett, Star 92.09 42 P P 20 45 26.1 +0.6
baz=321,SNR=13
WVL Waterville 92.11 22 eP P 20 45 25.8 +0.4
NATX Nacogdoches 92.12 45 P P 20 45 26.3 +0.6
baz=320
NATX Nacogdoches 92.12 45 PFAKE 20 45 40.0 +14
NATX LR LR
comp=Z,7µm,21.0s
T48A Bowling Green 92.17 37 P P 20 45 26.2 +0.3
baz=324,SNR=7.0
BINY Binghamton 92.17 27 P P 20 45 26.0 +0.3
baz=332,SNR=12
BINY Binghamton 92.17 27 eP P 20 45 25.9 +0.1
comp=Z,72nm,1.2s
BINY LR LR
comp=Z,5µm,20.0s
U47A Clarksville 92.29 38 P P 20 45 26.4 0.0
baz=324,SNR=16
W45A Hickory Valley 92.39 40 P P 20 45 26.9 +0.1
baz=323,SNR=11
V46A Holladay 92.40 39 P P 20 45 26.8 -0.1
baz=323,SNR=19
240A Hunter Patters 92.41 45 P P 20 45 27.3 +0.3
baz=320
X44A Crenshaw 92.42 41 P P 20 45 26.8 -0.2
baz=322
Z42A Norrel Spur, H 92.44 43 P P 20 45 27.5 +0.4
baz=321,SNR=13
141A Papa Simpson, 92.44 44 P P 20 45 27.2 +0.1
baz=320
Y43A Makayla and Ka 92.48 42 P P 20 45 28.1 +0.8
baz=322
FFD Franklin Falls 92.50 24 eP P 20 45 28.7 +1.5
TRY Troy 92.51 26 eP P 20 45 27.7 +0.5
T49A Edmonton 92.57 36 P P 20 45 28.1 +0.4
baz=325,SNR=18
U48A Cassie Pea, Po 92.59 37 P P 20 45 27.9 +0.2
baz=324,SNR=11
EMMW East Machias 92.61 21 eP P 20 45 28.6 +1.0
V47A Nunnelly 92.67 38 P P 20 45 28.3 +0.1
baz=324,SNR=28
OXF Oxford 92.78 40 P P 20 45 28.9 +0.2
baz=323,SNR=30
OXF Oxford 92.78 40 eP P 20 45 29.2 +0.6
comp=Z,137nm,1.0s
OXF Oxford 92.78 40 eP P 20 45 29.3 +0.6

OXF pmax pmax
comp=Z,137nm,1.0s
W46A Michie 92.80 39 P P 20 45 28.8 0.0
baz=323
Y44A Strider, Charl 92.81 41 P P 20 45 29.5 +0.7
baz=322,SNR=13
KSPA Keystone Colle 92.81 27 eP P 20 45 29.9 +1.2
HKT Hockley 92.82 47 eP P 20 45 30.4 +1.6
comp=Z,257nm,1.6s
HKT Hockley 92.82 47 eP P 20 45 30.4 +1.6
HKT pmax pmax
comp=Z,257nm,1.6s
SSPA Standing Stone 92.83 29 P P 20 45 28.9 +0.1
baz=330
SSPA Standing Stone 92.83 29 eP P 20 45 30.1 +1.3
comp=Z,103nm,1.1s
Z43A Armstrong Fami 92.86 42 P P 20 45 29.6 +0.6
baz=322
X45A UM Field Stati 92.86 40 P P 20 45 29.1 0.0
baz=323,SNR=8.7
241A Mo Tay, Goldon 92.88 44 P P 20 45 29.5 +0.3
baz=320
O56A Blue Knob Stat 92.88 30 P P 20 45 29.4 +0.3
baz=330
O56A Blue Knob Stat 92.88 30 eP P 20 45 29.9 +0.7
MCWV Mont Chateau 92.90 31 P P 20 45 29.8 +0.6
baz=329
MCWV Mont Chateau 92.90 31 eP P 20 45 31.3 +2.2
U49A Red Boiling Sp 92.94 37 P P 20 45 29.6 +0.2
baz=325,SNR=21
T50A Nancy 92.96 36 P P 20 45 29.6 +0.2
baz=326,SNR=20
142A Monroe 93.00 43 P P 20 45 30.3 +0.6
baz=321
S51A Beattyville 93.01 35 P P 20 45 29.6 -0.1
baz=326,SNR=8.9
PLAL Pickwick Lake 93.07 39 eP P 20 45 30.1 +0.1
V48A Smith Brothers 93.07 38 P P 20 45 30.1 0.0
baz=324,SNR=20
V48A Smith Brothers 93.07 38 eP P 20 45 30.3 +0.2
W47A Westpoint 93.09 39 P P 20 45 30.3 +0.2
baz=324,SNR=17
X46A Booneville 93.16 40 P P 20 45 30.0 -0.5
baz=323
143A Socs Landing, 93.17 43 P P 20 45 30.8 +0.3
baz=321
S52A Salyersville 93.20 34 P P 20 45 30.8 +0.2
baz=327,SNR=14
Y45A Yeager Farm, C 93.22 41 P P 20 45 31.4 +0.7
baz=322,SNR=11
Z44A Pea Ridge, Bel 93.23 42 P P 20 45 31.4 +0.6
baz=322,SNR=12
242A Grayson 93.27 44 P P 20 45 31.5 +0.6
baz=321
341A Kurthwood 93.27 45 P P 20 45 31.7 +0.7
baz=320,SNR=7.4
341A Kurthwood 93.27 45 eP P 20 45 33.1 +2.2
N59A State Game Lan 93.37 28 P P 20 45 31.4 0.0
baz=332,SNR=5.8
N59A State Game Lan 93.37 28 eP P 20 45 32.6 +1.3
KVTX Kingsville 93.39 50 PFAKE 20 45 40.0 +8.4
KVTX LR LR
comp=Z,3µm,19.0s
HRV Adam Dziewonsk 93.40 24 P P 20 45 31.7 +0.3
baz=335
HRV Adam Dziewonsk 93.40 24 eP P 20 45 32.8 +1.4
comp=Z,42nm,1.1s
HRV Adam Dziewonsk 93.40 24 eP P 20 45 32.8 +1.4
HRV pmax pmax
comp=Z,42nm,1.1s
V49A McMinnville 93.49 37 P P 20 45 32.0 0.0
baz=325,SNR=9.8
W48A Pulaski 93.51 38 P P 20 45 32.0 0.0
baz=324,SNR=26
Z45A Winona 93.54 41 P P 20 45 32.7 +0.5
baz=322
Z45A Winona 93.54 41 eP P 20 45 33.9 +1.7
X47A Russelville 93.55 39 P P 20 45 31.9 -0.4
baz=324,SNR=13
Y46A Houston 93.56 40 P P 20 45 32.4 +0.1
baz=323,SNR=22
WES Weston 93.58 24 eP P 20 45 33.6 +1.4
WES Weston 93.58 24 eP P 20 45 33.6 +1.4
PAGS Pennsylvania G 93.62 29 eP P 20 45 33.8 +1.4
342A Flagon Creek P 93.70 44 P P 20 45 34.5 +1.5
baz=321
441A DeRidder 93.71 45 P P 20 45 34.1 +1.1
baz=320
T52A Hallie 93.72 35 P P 20 45 33.4 +0.4
baz=327
144A Alexander Plac 93.74 42 P P 20 45 33.7 +0.5
baz=322
243A Waterproof 93.77 43 P P 20 45 34.0 +0.8
baz=321
LUPA Lehigh Univers 93.80 28 eP P 20 45 34.8 +1.5
KEST Kesra 93.83 323 P P 20 45 33.3 -0.3
comp=Z,18nm,1.0s,baz=293,slow=0.9,SNR=17
KEST PP PP 20 49 21.0 +2.4
comp=Z,19nm,1.0s,baz=72,slow=9.3,SNR=3.6
KEST LR LR 21 32 51.4
comp=Z,26µm,18.2s,baz=342,slow=39
W49A Belvidere 93.84 38 P P 20 45 33.5 -0.1
baz=324,SNR=24
ZAIG Zacatecas 93.89 57 eP P 20 45 36.3 +2.0
TZTN Tazewell 93.94 35 P P 20 45 34.3 +0.2
baz=326,SNR=8.2
TZTN Tazewell 93.94 35 eP P 20 45 34.2 +0.2
V50A Pikevile 93.94 37 P P 20 45 33.9 -0.1
baz=325,SNR=7.4
PAL Palisades 93.96 26 P P 20 45 34.8 +0.8
baz=333
CMAH Djebel Manchou 93.97 325 P P 20 45 33.8 -0.4
X48A Hartselle 94.00 39 P P 20 45 33.9 -0.5
baz=324,SNR=13
X48A Hartselle 94.00 39 eP P 20 45 33.9 -0.5
BRNJ Basking Ridge 94.01 27 eP P 20 45 37.0 +2.8
VBMS Vicksburg 94.01 42 P P 20 45 34.9 +0.5
baz=322
145A Houston Renfro 94.02 42 P P 20 45 34.7 +0.3
baz=322
Y47A UCPARC, Winfie 94.05 40 P P 20 45 34.2 -0.4
baz=324,SNR=9.8
244A Avery, Jackson 94.06 43 P P 20 45 35.1 +0.5
baz=322
Z46A Louisville 94.06 41 P P 20 45 35.3 +0.7
baz=323
CAEH 'Ain El Ouahch 94.10 325 P P 20 45 35.9 +1.2
442A Mamou 94.15 45 P P 20 45 36.3 +1.3
baz=321
343A Vidalia 94.15 44 P P 20 45 33.4 -1.6
baz=321
V51A Loudon 94.18 36 P P 20 45 35.1 0.0
baz=326,SNR=16
V51A Loudon 94.18 36 eP P 20 45 34.9 -0.3
W50A Signal Mountai 94.23 37 P P 20 45 35.2 -0.2
baz=325,SNR=11
W50A Signal Mountai 94.23 37 eP P 20 45 34.0 -1.4
541A Lake Charles 94.23 46 P P 20 45 38.2 +2.8
baz=320
ABSA Djebel Ababsia 94.24 325 P P 20 45 35.7 +0.2
X49A Woodville 94.31 38 P P 20 45 35.7 0.0
baz=324,SNR=17
LNIG Linares 94.36 53 eP P 20 45 36.3 +0.2
PSUB Penn St. - Bra 94.36 28 eP P 20 45 37.5 +1.7
Y48A Jasper 94.38 39 P P 20 45 35.4 -0.6
baz=324,SNR=9.4
CPCT Cooper Cave 94.39 36 eP P 20 45 35.7 -0.4
146A Union 94.44 41 P P 20 45 36.8 +0.5
baz=323
443A Delano Plantat 94.47 44 P P 20 45 37.8 +1.3
baz=321
CKFL Kef-Lekhel 94.47 325 P P 20 45 36.1 -0.5
245A Little AP, Sta 94.49 42 P P 20 45 37.1 +0.5
baz=322
V52A Sevierville 94.50 36 P P 20 45 36.4 -0.2
baz=326,SNR=11
V52A Sevierville 94.50 36 eP P 20 45 36.8 +0.2
344A Westbrook Farm 94.50 43 P P 20 45 38.1 +1.5
baz=322
Z47A Carrollton 94.50 40 P P 20 45 36.8 +0.2
baz=323
U53A Fall Branch 94.52 35 P P 20 45 36.7 0.0
baz=327,SNR=16
542A Morse 94.54 45 P P 20 45 38.8 +2.0
baz=321
M65A Busby, Falmout 94.54 24 P P 20 45 37.6 +1.0
baz=335

Z48A Northport 94.62 40 P **P** 20 45 37.1 0.0
baz=324
X50B Fort Payne 94.67 38 P **P** 20 45 37.3 -0.1
baz=325
CASM Ain Smara 94.69 325 P **P** 20 45 37.9 +0.4
DFRA Djebel Bou Aff 94.72 326 P **P** 20 45 37.7 0.0
BLA Blacksburg 94.74 33 P **P** 20 45 37.7 0.0
baz=328,SNR=8.8
BLA Blacksburg 94.74 33 *e*P **P** 20 45 39.1 +1.4
BLA LR LR
comp=Z,5μm,22.0s
BLA Blacksburg 94.74 33 *e*P **P** 20 45 39.1 +1.4
BLA MLR MLR
comp=Z,5μm,22.0s
PBRG Braganca 94.78 337 *e*P **P** 20 45 38.6 +0.8
comp=Z,60nm,1.5s
PBRG Braganca 94.78 337 *e*PP PP 20 49 27.4 +1.7
Y49A Blount Mountai 94.79 39 P **P** 20 45 37.7 -0.3
baz=324,SNR=9.9
Y49A Blount Mountai 94.79 39 *e*P **P** 20 45 37.2 -0.8
147A Livingston 94.82 41 P **P** 20 45 38.1 0.0
baz=323
147A Livingston 94.82 41 *e*P **P** 20 45 39.8 +1.8
CTEI Djebel Teioual 94.89 325 P **P** 20 45 39.2 +0.7
246A Jackson Lee, B 94.90 42 P **P** 20 45 38.7 +0.2
baz=323
IP04 Greensprings 94.94 31 *e*P **P** 20 45 40.3 +1.7
543A St. Martinvill 94.95 45 P **P** 20 45 40.2 +1.5
baz=321
W52A Murphy 94.96 36 P **P** 20 45 38.4 -0.4
baz=326
W52A Murphy 94.96 36 *e*P **P** 20 45 41.6 +2.8
X51A Calhoun 94.96 37 P **P** 20 45 39.1 +0.4
baz=325
X51A Calhoun 94.96 37 *e*P **P** 20 45 40.1 +1.4
345A Thompson Farm, 94.98 43 P **P** 20 45 38.9 0.0
baz=322
V53A Saluda 94.99 35 P **P** 20 45 39.2 +0.2
baz=327,SNR=12
IP03 Louisa 95.04 31 *e*P **P** 20 45 40.6 +1.6
444A Pine Grove 95.06 44 P **P** 20 45 40.0 +0.8
baz=322
CVRD Centerville Ro 95.08 31 *e*P **P** 20 45 39.8 +0.7
PGAV Gavieira, Arco 95.09 338 *e*P **P** 20 45 40.3 +1.0
comp=Z,98nm,2.2s
PGAV Gavieira, Arco 95.09 338 *e*PP PP 20 49 31.3 +3.2
PGAV *e*SKS **S** 20 56 43.4 -7.3
PGAV Gavieira, Arco 95.09 338 *e*LQ LQ 21 14 48.4
PGAV *e*LR LR 21 17 45.0
comp=Z,10μm,22.0s
SPRD Spring Road, M 95.09 31 *e*P **P** 20 45 41.2 +2.0
Y50A Piedmont 95.09 38 P **P** 20 45 39.2 -0.1
baz=325,SNR=16
CBN Corbin Frederi 95.13 30 P **P** 20 45 39.0 -0.4
baz=330
CBN Corbin Frederi 95.13 30 PFAKE 20 45 50.0 +11
CBN LR LR
comp=Z,4μm,21.0s
247A Quitman 95.14 41 P **P** 20 45 40.3 +0.7
baz=323
LRAL Lakeview Retre 95.17 40 P **P** 20 45 39.9 +0.2
baz=324
LRAL Lakeview Retre 95.17 40 *e*P **P** 20 45 40.8 +1.1
148A Greensboro 95.19 40 P **P** 20 45 39.3 -0.5
baz=324
346A Big Creek Wild 95.22 42 P **P** 20 45 37.5 -2.4
baz=322
SET Setif 95.22 326 P **P** 20 45 41.0 +1.0
W53A Cullowhee 95.25 36 P **P** 20 45 40.2 0.0
baz=326,SNR=11
Z49A Columbiana 95.27 39 P **P** 20 45 40.1 0.0
baz=324
445A Amite 95.27 43 P **P** 20 45 40.0 -0.2
baz=322
544A White Castle 95.31 44 P **P** 20 45 41.6 +1.3
baz=321
CKHR Kef el Ahmar 95.32 326 P **P** 20 45 40.5 0.0
JSRW J. Sargeant Re 95.37 31 *e*P **P** 20 45 42.0 +1.5
X52A Dahlonega 95.38 37 P **P** 20 45 40.3 -0.4
baz=326
Y51A Rockmart 95.41 38 P **P** 20 45 40.6 -0.2
baz=325,SNR=18
MVO Moncorvo 95.45 337 *e*P **P** 20 45 40.7 -0.2
comp=Z,79nm,1.6s
MVO Moncorvo 95.45 337 *e*SKS **SKSac** 20 56 22.4 +9.1
MVO Moncorvo 95.45 337 *e*LQ LQ 21 14 18.3
MVO *e*LR LR 21 18 00.5
comp=Z,17μm,22.0s
POLO Lamas de Olo 95.49 338 *e*P **P** 20 45 41.1 0.0
comp=Z,54nm,1.5s
BG3 Lake Jocassee 95.50 36 *e*P **P** 20 45 42.0 +0.9
Z50A Ashland 95.52 39 P **P** 20 45 41.1 -0.2
baz=325,SNR=27
Z50A Ashland 95.52 39 *e*P **P** 20 45 41.1 -0.2
248A Dixon Mills 95.55 41 P **P** 20 45 42.6 +1.2
baz=324
PVRL Vila Real 95.56 338 *e*P **P** 20 45 42.7 +1.3
comp=Z,98nm,1.4s
149A Jones 95.62 40 P **P** 20 45 41.5 -0.2
baz=324,SNR=12
347A Saraland 95.69 42 P **P** 20 45 42.8 +0.7
baz=323
X53A Estanollee 95.74 36 P **P** 20 45 42.7 +0.5
baz=326,SNR=26
446A Poplarville 95.74 43 P **P** 20 45 42.5 +0.2
baz=322
ES19 SONSECA Array 95.78 334 *e*P **P** 20 45 41.9 -0.5
ESDC Sonseca Array 95.82 334 P **P** 20 45 42.3 -0.3
comp=Z,8.9nm,0.9s,baz=21,slow=3.6,SNR=31
ESDC PP PP 20 49 02.8 -31
comp=Z,16nm,1.1s,baz=24,slow=6.6,SNR=7.1
ESDC PKKPbc **PKKPdf** 21 02 29.7 -0.1
comp=Z,1.0nm,1.0s,baz=268,slow=6.4,SNR=3.6
ESDC LR LR 21 34 06.4
comp=Z,14μm,19.2s,baz=30,slow=39
ESLA Sonseca Array 95.82 334 *e*P **P** 20 45 41.5 -1.1
Z51A Franklin 95.83 38 P **P** 20 45 42.9 +0.1
baz=325
Y52A Lilburn 95.91 37 P **P** 20 45 43.4 +0.4
baz=326
Y52A Lilburn 95.91 37 *e*P **P** 20 45 43.8 +0.7
249A Camden 95.96 40 P **P** 20 45 42.9 -0.4
baz=324,SNR=6.3
150A Eclectic 96.00 39 P **P** 20 45 43.6 +0.2
baz=325
348A Jackson 96.01 41 P **P** 20 45 44.0 +0.5
baz=323
PAB San Pablo 96.07 335 *e*P **P** 20 45 43.0 -0.8
PAB LR LR
comp=Z,21μm,20.0s
PAB San Pablo 96.07 335 *e*P **P** 20 45 43.0 -0.8
PAB MLR MLR
comp=Z,21μm,20.0s
KMSC Kings Mountain 96.09 34 P **P** 20 45 43.6 -0.2
baz=328,SNR=10.0
KMSC Kings Mountain 96.09 34 *e*P **P** 20 45 44.1 +0.3
Y53A Monroe 96.14 37 P **P** 20 45 44.2 +0.1
baz=326
PAULI Pauline 96.15 35 *e*P **P** 20 45 45.8 +1.7
Z52A Williamson 96.30 38 P **P** 20 45 45.4 +0.6
baz=326
MTE Manteigas 96.31 337 *e*P **P** 20 45 45.3 +0.5
comp=Z,78nm,1.6s
MTE Manteigas 96.31 337 *e*PP PP 20 49 36.1 -1.5
MTE *e*SKS **SKKSac** 20 56 42.6 -0.5
MTE Manteigas 96.31 337 *e*LQ LQ 21 14 42.5
MTE *e*LR LR 21 18 18.1
comp=Z,15μm,22.0s
250A Grady 96.38 40 P **P** 20 45 46.1 +0.9
baz=324
151A Opelika 96.40 39 P **P** 20 45 45.7 +0.4
baz=325
448A Bay Minette 96.42 41 P **P** 20 45 46.5 +1.2
baz=323
349A Repton 96.42 41 P **P** 20 45 46.1 +0.7
baz=324
HODGE Hodges 96.44 36 *e*P **P** 20 45 46.9 +1.5
646A Port Sulphur 96.44 44 P **P** 20 45 47.2 +1.7
baz=322
Y54A Tignall 96.55 36 P **P** 20 45 46.1 +0.1
baz=327,SNR=24
GOGA Godfrey 96.57 37 P **P** 20 45 46.6 +0.7
baz=326
GOGA Godfrey 96.57 37 *e*P **P** 20 45 46.7 +0.7
GOGA LR LR
comp=Z,6μm,22.0s
GOGA Godfrey 96.57 37 *e*P **P** 20 45 46.7 +0.7
GOGA MLR MLR
comp=Z,6μm,22.0s
152A Waverly Hall 96.58 38 P **P** 20 45 46.5 +0.4
baz=325
152A Waverly Hall 96.58 38 *e*P **P** 20 45 47.0 +0.9
Z53A Monticello 96.62 37 P **P** 20 45 46.2 -0.1
baz=326,SNR=8.5
BRAL Brewton 96.64 41 P **P** 20 45 47.1 +0.7
baz=324
BRAL Brewton 96.64 41 PFAKE 20 46 00.0 +14
BRAL LR LR
comp=Z,4μm,21.0s
251A Midway 96.71 39 P **P** 20 45 46.9 +0.1
baz=325
350A Dozier 96.80 40 P **P** 20 45 46.8 -0.3
baz=324
PCBR Castelo Branco 96.80 337 *e*P **P** 20 45 47.9 +0.9
comp=Z,35nm,1.5s
PCBR Castelo Branco 96.80 337 *e*PP PP 20 49 44.9 +3.6
JSC Jenkinsville 96.85 35 *e*P **P** 20 45 51.2 +3.9
JSC Jenkinsville 96.85 35 *e*P **P** 20 45 51.2 +3.9
PCAS Casmilo, Conde 96.92 338 *e*P **P** 20 45 48.2 +0.7
comp=Z,65nm,1.7s
PCAS Casmilo, Conde 96.92 338 *e*PP PP 20 49 44.9 +2.7
Z54A Sparta 97.00 37 P **P** 20 45 47.9 -0.1
baz=327
153A Fort Valley 97.02 38 P Pdif 20 45 48.7 +0.5
baz=326
252A Lumpkin 97.12 39 P Pdif 20 45 48.9 +0.3
baz=325
PMRV Marv??o 97.15 337 *e*P Pdif 20 45 49.0 +0.3
comp=Z,46nm,1.6s
PMRV Marv??o 97.15 337 *e*PP PP 20 49 45.9 +1.9
PMRV *e*SKS **SKSac** 20 56 29.8 +7.6
PMRV Marv??o 97.15 337 *e*LQ LQ 21 15 43.7
PMRV *e*LR LR 21 18 39.0
comp=Z,15μm,22.0s
450A Crestview 97.17 41 P Pdif 20 45 49.2 +0.3
baz=324
351A Pinckard 97.28 40 P **P** 20 45 49.2 -0.1
baz=325
Z55A Blythe 97.34 36 P Pdif 20 45 50.3 +0.7
baz=327
253A Americus 97.36 38 P Pdif 20 45 50.7 +1.0
baz=326
253A Americus 97.36 38 *e*P Pdif 20 45 51.3 +1.6
154A Montrose 97.39 37 P Pdif 20 45 50.8 +1.0
baz=326
352A Blakely 97.45 39 P Pdif 20 45 50.9 +0.8
baz=325
CNNC Cliffs of the 97.48 32 P Pdif 20 45 50.9 +0.7
baz=330
CNNC Cliffs of the 97.48 32 PFAKE 20 46 00.0 +10
CNNC LR LR
comp=Z,5μm,20.0s
155A Kite 97.69 37 P Pdif 20 45 51.4 +0.3
baz=327
PESTR Estremoz 97.73 337 *e*P Pdif 20 45 51.3 0.0
comp=Z,32nm,1.5s
PESTR Estremoz 97.73 337 *e*PP PP 20 49 49.7 +1.2
PMTG Montargil 97.74 337 *e*P **P** 20 45 50.2 -1.0
comp=Z,32nm,1.4s
PMTG Montargil 97.74 337 *e*PP PP 20 49 50.6 +2.1
451A Vernon 97.75 40 P Pdif 20 45 52.2 +0.8
baz=325
ALMR Almeirim 97.77 337 *e*P Pdif 20 45 51.6 +0.2
ALMR AMS AMS 21 34 32.9
comp=Z,14μm,18.6s
ALMR Almeirim 97.77 337 *e*P P 20 45 40.9 -10
comp=Z,65nm,1.7s
ALMR Almeirim 97.77 337 *e*PP PP 20 49 51.7 +3.0
ALMR Almeirim 97.77 337 *e*P Pdif 20 45 51.5 +0.1
254A Abbeville 97.86 38 P Pdif 20 45 52.7 +0.8
baz=326
156A Sylvania 98.11 36 P Pdif 20 45 53.8 +0.8
baz=327
TIGA Tifton 98.13 38 P Pdif 20 45 53.2 +0.1
baz=326
TIGA Tifton 98.13 38 *e*P Pdif 20 45 55.7 +2.5
PMAFR Mafra 98.16 338 *e*PP PP 20 49 50.9 -0.8
EVO Evora 98.17 337 *e*P Pdif 20 45 53.3 +0.1
comp=Z,42nm,1.8s
EVO Evora 98.17 337 *e*PP PP 20 49 53.0 +1.2
PBAR Barrancos 98.19 336 *e*P Pdif 20 45 54.1 +0.8
comp=Z,73nm,1.7s
PBAR Barrancos 98.19 336 *e*PP PP 20 49 54.4 +2.4
453A Whigham 98.26 39 P Pdif 20 45 54.3 +0.6
baz=326
255A Hazlehurst 98.26 37 P Pdif 20 45 53.8 0.0
baz=327
NHSC New Hope 98.32 35 PFAKE 20 46 10.0 +16
NHSC LR LR
comp=Z,8μm,22.0s
LIS Lisbon 98.34 338 *e*P Pdif 20 45 54.2 +0.3
LIS AMS AMS 21 34 51.0
comp=Z,16μm,20.7s
LIS Lisbon 98.34 338 *e*P Pdif 20 45 54.2 +0.3
552A Lynn Haven 98.36 40 P Pdif 20 45 55.0 +0.8
baz=325
256A Glennville 98.49 37 P **P** 20 45 54.0 -0.7
baz=327
355A Pearson 98.57 38 Pdiff Pdif 20 45 55.4 +0.3
baz=326
PBEJ Beja 98.59 336 *e*PP PP 20 49 54.0 -1.0
PNCL Nicolau / Gran 98.71 337 *e*P Pdif 20 45 55.8 +0.2
comp=Z,24nm,1.9s
PNCL Nicolau / Gran 98.71 337 *e*PP PP 20 49 58.1 +2.2
553A Crawfordville 98.75 39 Pdiff Pdif 20 45 57.2 +1.3
baz=325
MESJ Messejana 98.87 337 *e*P Pdif 20 45 56.6 +0.3
MESJ *e*SKS **SKSac** 20 56 32.2 +1.3
MESJ AMS AMS 21 33 42.0
comp=Z,14μm,20.2s
MESJ Messejana 98.87 337 *e*P Pdif 20 45 56.5 +0.2
comp=Z,31nm,1.8s
MESJ Messejana 98.87 337 *e*PP PP 20 49 58.5 +1.4
MESJ Messejana 98.87 337 *e*P Pdif 20 45 56.5 +0.2
MESJ *e* 20 56 32.1
257A Skidaway Islan 98.89 36 Pdiff Pdif 20 45 57.5 +1.0
baz=328
RKT Rikitea 99.00 112 *e*SKSac **SKSac** 20 56 29.6 -1.9
comp=Z,4μm,29.5s
RKT Rikitea 99.00 112 *e*PS PS 20 58 48.1 -8.0
comp=Z,5μm,34.2s
RKT *e*SS SS 21 04 11.7 -1.5
comp=Z,5μm,29.5s
RKT Rikitea 99.00 112 *e*LR LR 21 18 19.3
comp=Z,23μm,27.2s,baz=309
PCVE Castro Verde 99.00 336 *e*P **Pdif** 20 45 57.5 +0.6
comp=Z,29nm,1.6s
PCVE Castro Verde 99.00 336 *e*PP PP 20 50 00.9 +2.7
PVAQ Vaqueiros 99.11 336 *e*P **Pdif** 20 45 57.9 +0.5
PVAQ Vaqueiros 99.11 336 *e*PP PP 20 49 56.8 -2.2
PVAQ *e*SKS **SKSac** 20 56 35.5 +3.4
PVAQ Vaqueiros 99.11 336 *e*LQ LQ 21 15 54.9
PVAQ *e*LR LR 21 19 36.6
comp=Z,29μm,22.0s
357A Townsend 99.14 37 Pdiff **Pdif** 20 45 58.4 +0.8
baz=327
PTEO Sao Teotonio 99.29 337 *e*P **Pdif** 20 45 46.4 -12
PTEO Sao Teotonio 99.29 337 *e*PP PP 20 50 03.2 +2.8
PBDV Barranco-do-Ve 99.33 336 *e*P **Pdif** 20 45 59.1 +0.7
PBDV Barranco-do-Ve 99.33 336 *e*PP PP 20 50 03.9 +3.2
456A Hilliard 99.47 37 Pdiff **Pdif** 20 45 59.4 +0.3
baz=327
MORF Marmelete 99.49 337 *e*P **Pdif** 20 45 59.4 +0.2
MORF AMS AMS 21 37 12.2
comp=Z,11μm,22.4s
MORF Marmelete 99.49 337 *e*P **Pdif** 20 45 59.6 +0.4
comp=Z,37nm,1.5s
MORF Marmelete 99.49 337 *e*PP PP 20 50 05.1 +3.1
MORF Marmelete 99.49 337 *e*P **Pdif** 20 45 59.3 +0.2
555A McAlpin 99.52 38 Pdiff **Pdif** 20 46 00.4 +1.0
baz=326
PFVI Vila Bisbo 99.71 337 *e*PP PP 20 50 06.4 +2.9
457A Yulee 99.78 37 Pdiff **Pdif** 20 46 01.2 +0.8
baz=327
556A Lake Butler 99.89 38 Pdiff **Pdif** 20 46 02.0 +1.0
baz=327
557A Orange Park 100.20 38 Pdiff **Pdif** 20 46 04.1 +1.7
baz=327
656A Willston 100.35 39 Pdiff **Pdif** 20 46 03.7 +0.6
baz=326
657A Interlachen 100.50 38 Pdiff **Pdif** 20 46 04.9 +1.2
baz=327
LODK Lodwar 100.75 283 *i* P **Pdif** 20 46 06.0 +0.9
658A Bunnell 100.92 38 Pdiff **Pdif** 20 46 05.6 0.0
baz=327
757A Oxford 100.94 38 Pdiff **Pdif** 20 46 06.5 +0.9
baz=327
857A Zephyrhills 101.42 39 Pdiff **Pdif** 20 46 08.4 +0.6
baz=326
PGRA Graciosa 101.89 352 *e*LR LR 21 20 05.0
comp=Z,487nm,21.8s
DWPF Disney Wildern 101.93 38 Pdiff **Pdif** 20 46 10.1 0.0
baz=327
KMBO Kilima Mbogo 102.21 279 Pdiff **Pdif** 20 46 23.3 +11
comp=Z,10nm,1.0s,baz=30,slow=8.2,SNR=11
KMBO PKiKP **PKiKP** 20 50 32.3 -1.6
comp=Z,1.0nm,0.4s,baz=26,slow=6.8,SNR=4.0
KMBO Kilima Mbogo 102.21 279 PFAKE 20 46 20.0 +8.2
KMBO LR LR
comp=Z,5μm,20.0s
958A Wauchula 102.21 39 Pdiff **Pdif** 20 46 11.1 -0.2
baz=327
ROSA Rosais 102.23 352 *e*LR LR 21 20 13.8
comp=Z,436nm,23.0s
859A Kempfer Cattle 102.23 38 Pdiff **Pdif** 20 46 11.2 -0.2
baz=327
058A Arcadia 102.63 39 Pdiff **Pdif** 20 46 12.7 -0.5
baz=327
959A Okeechobee 102.69 38 Pdiff **Pdif** 20 46 12.8 -0.7
baz=327
PSET Sete Cidades 102.81 350 *e*LR LR 21 20 08.7
comp=Z,308nm,20.5s
CMLA Cha da Macela 102.84 350 *e*LR LR 21 20 05.2
comp=Z,300nm,17.5s
CMLA Cha da Macela 102.84 350 PFAKE 20 46 30.0 +16
CMLA LR LR
comp=Z,4μm,21.0s
059A Moore Haven 103.03 39 Pdiff **Pdif** 20 46 14.8 -0.2
baz=327
060A Indiantown 103.35 38 Pdiff **Pdif** 20 46 15.9 -0.5
baz=328
PSMN Pico do Norte, 103.53 349 *e*LR LR 21 20 45.7
comp=Z,73nm,17.5s
060Z West Palm Beac 103.78 39 Pdiff **Pdif** 20 46 19.3 +1.0
baz=327
BBSR BB Station 104.84 23 PFAKE 20 46 40.0 +17
BBSR LR LR
comp=Z,3μm,22.0s
OPO Ambohidratompo 105.11 258 PKiKP **PKiKP** 20 50 39.8 +0.9
comp=Z,6.3nm,1.0s,baz=216,slow=14,SNR=3.2
ABPO Ambohimpanom 105.35 258 PFAKE 20 50 50.0
ABPO LR LR
comp=Z,1μm,19.0s
PMOZ Porto Moniz, M 106.06 342 *e*LQ LQ 21 18 37.5
PMOZ *e*LR LR 21 23 18.3
comp=Z,5μm,20.0s
MBAR Mbarara 106.86 283 PFAKE 20 50 50.0
MBAR LR LR
comp=Z,974nm,19.0s
CASY Casey 107.64 193 PFAKE 20 50 50.0
CASY LR LR
comp=Z,598nm,21.0s
MTDJ Mount Denham 112.14 41 PFAKE 20 51 00.0
MTDJ LR LR
comp=Z,3μm,22.0s
GRTK Grand Turk 112.33 33 PFAKE 20 51 00.0
GRTK LR LR
comp=Z,5μm,22.0s
JTS JuntasAbangare 114.36 52 PFAKE 20 51 10.0 +14
JTS LR LR
comp=Z,2μm,21.0s
TORD Torodi Ar. Bea 116.34 316 PKP **PKPdf** 20 50 59.3 -0.8
comp=Z,8.9nm,1.0s,baz=356,slow=1.1,SNR=23
TORD PP PP 20 51 56.9 -8.8
comp=Z,15nm,1.2s,baz=29,slow=5.7,SNR=5.0
TORD PKKPbc **PKKPbc** 21 01 28.9 +1.3
comp=Z,1.4nm,0.9s,baz=225,slow=3.5,SNR=4.5
VNDA Vanda 116.81 175 PKP **PKPdf** 20 50 58.5 -0.6
comp=Z,2.8nm,0.9s,baz=302,slow=3.3,SNR=9.9
VNDA PKKPbc **PKKPab** 21 01 26.9 +0.1
comp=Z,5.0nm,1.1s,baz=255,slow=3.0,SNR=5.5
SJG San Juan 117.42 30 PFAKE 20 51 10.0 +7.9
SJG LR LR
comp=Z,6μm,22.0s
SBA Scott Base 117.47 174 PFAKE 20 51 10.0 +10
SBA LR LR
comp=Z,2μm,20.0s
LSZ Lusaka 117.93 273 PFAKE 20 51 20.0 +17
LSZ LR LR
comp=Z,4μm,19.0s
KOWA Kowa 118.12 322 PKP **PKPdf** 20 51 03.1 -0.4
comp=Z,8.3nm,0.5s,baz=42,slow=1.6,SNR=23
KOWA PP **PP** 20 52 13.7 -4.2
comp=Z,38nm,1.0s,baz=35,slow=4.4,SNR=13
KOWA PKKPab PKKPab 21 01 36.8 +8.9
comp=Z,1.8nm,0.5s,baz=56,slow=3.6,SNR=3.2
BCIP Isla Barro Col 118.32 48 PFAKE 20 51 20.0 +16
BCIP LR LR
comp=Z,2μm,22.0s
PAYG Puerto Ayora 118.94 65 PFAKE 20 51 20.0 +15
PAYG LR LR
comp=Z,7μm,22.0s
ANWB Willy Bob 119.45 26 PFAKE 20 51 20.0 +14
ANWB LR LR
comp=Z,2μm,22.0s
BLWY Bulawayo 120.38 268 *i* P PKPpre 20 50 50.0
BLWY Bulawayo 120.38 268 *i* P PKPpre 20 50 50.0
MAW Mawson 121.45 206 PKP **PKPdf** 20 51 08.0 -0.2
comp=Z,5.2nm,0.9s,baz=138,slow=2.1,SNR=5.6
MAW PKKPab PKKPab 21 01 29.3 +22
comp=Z,3.2nm,0.8s,baz=250,slow=9.4,SNR=4.5
MAW Mawson 121.45 206 PKIKP **PKPdf** 20 51 08.0 -0.2
CXM Morne La Croix 122.31 27 *e*P PKPpre 20 51 02.2
FDF Fort de France 122.39 27 *e*P PKPpre 20 51 02.0
ZARC Zaragoza, Cauc 122.51 45 *e*P **PKPdf** 20 51 11.8 -0.2
OCAC Ocana 122.72 43 *e*P **PKPdf** 20 51 11.8 -0.8
PTBC PUERTO BERRIO 123.52 45 *e*P **PKPdf** 20 51 13.8 -0.2
SDV Santo Domingo 123.56 40 PKP **PKPdf** 20 51 14.5 +0.2
comp=Z,47nm,0.8s,baz=359,slow=2.9,SNR=11
SDV Santo Domingo 123.56 40 PKP **PKPdf** 20 51 14.5 +0.2
SDV LR LR
comp=Z,3μm,20.0s
BBGH Gun Hill 124.42 26 PFAKE 20 51 30.0 +14
BBGH LR LR
comp=Z,4μm,21.0s
YOTC Yotoco, Valle 124.53 49 *e*P **PKPdf** 20 51 16.4 +0.4
GRGR Grenville 124.61 29 PFAKE 20 51 30.0 +14
GRGR LR LR
comp=Z,2μm,21.0s
RUSC La Rusia 124.81 44 *e*PKPdf **PKPdf** 20 51 17.1 +0.1
RUSC La Rusia 124.81 44 *e*P **PKPdf** 20 51 16.4 -0.6
ROSC El Rosal 125.00 46 PKP **PKPdf** 20 51 17.8 +0.5
comp=Z,19nm,1.0s,baz=120,slow=4.8,SNR=11
ROSC El Rosal 125.00 46 *e*PKPdf **PKPdf** 20 51 18.3 +1.0
ROSC El Rosal 125.00 46 *e*P **PKPdf** 20 51 17.8 +0.5
PCRV Puerto La Cruz 125.20 33 PKP **PKPdf** 20 51 16.0 -1.2
comp=Z,14nm,0.8s,baz=301,slow=4.7,SNR=4.4
DBIC Dimbokro 125.24 318 PKP **PKPdf** 20 51 16.9 -0.2
comp=Z,25nm,1.0s,baz=7.5,slow=3.0,SNR=9.5
DBIC Dimbokro 125.24 318 PKIKP **PKPdf** 20 51 17.0 -0.2
LBTB Lobatse 125.34 265 *e*PKPdf **PKPdf** 20 51 17.6 +0.4
LBTB Lobatse 125.34 265 *e*PKIKP **PKPdf** 20 51 17.6 +0.4
TIC Toumodi 125.35 319 *e*PKIKP **PKPdf** 20 51 17.4 -0.1
KIC Kosan Boka 125.44 318 *e*PKIKP **PKPdf** 20 51 16.8 -0.8
comp=Z,153nm,1.3s
LIC Lamto 125.71 318 *e*PKIKP **PKPdf** 20 51 17.1 -1.0
comp=Z,98nm,1.3s
PCON Cinco Dias 125.82 50 *e*P **PKPdf** 20 51 19.8 +0.7
SOTA Rioblanco 125.85 50 *e*P **PKPdf** 20 51 21.1 +2.1
VILC Villavicencio, 125.95 46 *e*P **PKPdf** 20 51 16.4 -2.3
OTAV Otavalo 126.20 54 PFAKE 20 51 30.0 +10
OTAV LR LR
comp=Z,3μm,20.0s
BOSA Boshof 127.39 261 PKP **PKPdf** 20 51 20.8 -0.2
comp=Z,15nm,0.9s,baz=49,slow=0.6,SNR=13
BOSA Boshof 127.39 261 *e*PKPdf **PKPdf** 20 51 21.7 +0.7
BOSA Boshof 127.39 261 *e*PKIKP **PKPdf** 20 51 21.7 +0.7
TSUM Tsumeb 128.44 276 *e*PKPdf **PKPdf** 20 51 24.2 +1.0
TSUM LR LR
comp=Z,4μm,21.0s
QSPA South Pole Qui 128.66 180 PKP **PKPdf** 20 51 21.5 -0.6
comp=Z,34nm,1.0s,baz=320,slow=1.4
QSPA South Pole Qui 128.66 180 *e*PKPdf **PKPdf** 20 51 21.1 -1.1
QSPA LR LR
comp=Z,4μm,22.0s
SUR Sutherland 132.51 259 PFAKE 20 51 40.0 +9.3
SUR LR LR
comp=Z,6μm,21.0s

NNA	**Nana**	**136.32**	**63**	PFAKE		20 51 50.0	+12
NNA				LR	LR		
comp=Z,3μm,21.0s							
PTGA	**Pitinga**	**136.98**	**33**	PKP	**PKPdf**	**20 51 39.9**	**+0.5**
comp=Z,16nm,0.8s,baz=2.1,slow=2.1,SNR=14							
PTGA	**Pitinga**	**136.98**	**33**	PKP	**PKPdf**	**20 51 39.9**	**+0.5**
PTGA				LR	LR		
comp=Z,12μm,21.0s							
NVL	**N'lazarevskaya**	**139.22**	**203**	*e*PKIKP	PKPdf	20 51 49.7	+8.0
NVL				*e*		20 54 34.8	
NVL				*e*PS		21 04 58.2	
NVL				*e*SP		21 05 10.2	
NVL				*e*SSS	SSS	21 18 03.7	
NVL				MLR	MLR		
comp=Z,7μm,23.0s							
SAML	**Samuel**	**142.55**	**44**	PFAKE		20 52 00.0	+11
SAML				LR	LR		
comp=Z,4μm,21.0s							
ASCN	**Ascension**	**142.56**	**319**	PFAKE		20 52 00.0	+10
ASCN				LR	LR		
comp=Z,4μm,22.0s							
SNAA	**Sanae**	**142.69**	**197**	P	PKPpre	20 51 43.2	
SNAA	**Sanae**	**142.69**	**197**	PKhKP	PKPpre	20 51 43.2	
comp=Z,28nm,0.8s,baz=189,slow=3.5,SNR=41							
SHEL	**Horse Pasture**	**143.70**	**300**	PFAKE		20 52 00.0	+8.5
SHEL				LR	LR		
comp=Z,2μm,20.0s							
VNA3	**Neumayer Olymp**	**144.51**	**195**	P	**PKPab**	**20 51 49.1**	**-0.7**
VNA1	**Neumayer--Stat**	**144.66**	**197**	P	**PKPab**	**20 51 50.1**	**-0.1**
LPAZ	**La Paz**	**145.29**	**58**	PKPbc	**PKPab**	**20 51 54.8**	**-0.1**
comp=Z,37nm,1.1s,baz=339,slow=3.9,SNR=61							
LPAZ	**La Paz**	**145.29**	**58**	*e*PKPbc	**PKPbc**	**20 51 54.6**	**-0.1**
PB12	**IPOC Station P**	**145.42**	**63** ⇑	*i*P	**PKPab**	**20 51 54.7**	**0.0**
PB16	**IPOC Station P**	**145.80**	**62** ⇑	*i*P	**PKPab**	**20 51 58.0**	**+1.3**
PSGC	**Pisagua**	**146.22**	**65** ⇑	*i*P	**PKPbc**	**20 51 57.1**	**+0.2**
MNMC	**Minye Minye**	**146.28**	**63** ⇑	*i*P	**PKPab**	**20 51 58.2**	**+0.1**
RCBR	**Riachuelo**	**147.01**	**356**	PKPbc	**PKPab**	**20 52 00.7**	**-0.1**
comp=Z,189nm,1.2s,baz=344,slow=3.2,SNR=9.1							
RCBR	**Riachuelo**	**147.01**	**356**	*e*PKPdf	**PKPbc**	**20 51 59.1**	**-0.2**
RCBR				LR	LR		
comp=Z,22μm,21.0s							
PB08	**IPOC Station P**	**147.26**	**64** ⇑	*i*P	**PKPbc**	**20 51 59.1**	**-1.1**
PB14	**IPOC Station P**	**149.13**	**72** ⇑	*i*P	**PKPbc**	**20 52 06.1**	**+1.1**
SIV	**San Ignacio**	**149.47**	**48**	PKPbc	**PKPbc**	**20 52 06.0**	**+0.4**
comp=Z,35nm,0.9s,baz=278,slow=4.4,SNR=57							
PMSA	**Palmer Station**	**149.94**	**158**	PFAKE		20 52 10.0	-1.1
PMSA				LR	LR		
comp=Z,4μm,20.0s							
GO02	**Mina Guanaco**	**150.04**	**72**	*e*PKPdf	**PKPdf**	**20 52 04.7**	**+2.5**
GO03	**Copiap**	**150.88**	**77** ⇑	*i*P	**PKPbc**	**20 52 09.2**	**+0.3**
LCO	**Las Campanas**	**151.23**	**80**	*e*PKPbc	**PKPbc**	**20 52 10.6**	**+0.8**
LCO				LR	LR		
comp=Z,7μm,22.0s							
TLL	**Tololo Astrono**	**151.69**	**82** ⇑	*i*P	**PKPbc**	**20 52 08.4**	**-2.5**
GO04	**Tololo Observa**	**151.69**	**82**	*e*PKPbc	**PKPbc**	**20 52 11.7**	**+0.8**
GO05	**HualaæØ**	**152.66**	**92**	*e*PKPbc	**PKPbc**	**20 52 13.2**	**+0.6**
ROCH	**El Roble**	**152.68**	**88** ⇓	*i*P	**PKPbc**	**20 52 12.9**	**-0.1**
PEL	**Peldehue**	**153.00**	**88** ⇓	*i*P	**PKPdf**	**20 52 09.7**	**+3.6**
CLCH	**Cerro Calan**	**153.21**	**88** ⇑	*i*P	**PKPbc**	**20 52 14.9**	**+1.0**
FCH	**Farellones**	**153.38**	**88** ⇑	*i*P	**PKPbc**	**20 52 14.2**	**-0.4**
PLCA	**Paso Flores**	**154.97**	**105**	PKPbc	**PKPbc**	**20 52 18.5**	**+1.0**
comp=Z,6.9nm,1.0s,baz=256,slow=3.9,SNR=3.1							
PLCA				PKPab	**PKPab**	**20 52 33.4**	**+0.2**
comp=Z,40nm,1.0s,baz=270,slow=2.7,SNR=20							
CPUP	**Villa Florida**	**159.46**	**58**	PKP	**PKPdf**	**20 52 14.6**	**-0.1**
comp=Z,6.2nm,1.1s,baz=259,slow=2.6,SNR=4.6							
CPUP				PKPab	**PKPab**	**20 52 53.8**	**+1.0**
comp=Z,16nm,1.1s,baz=317,slow=3.8,SNR=6.3							
EFI	**East Falkland**	**161.03**	**139**	PFAKE		20 52 30.0	+14
EFI				LR	LR		
comp=Z,8μm,20.0s							
TRQA	**Tornquist**	**161.18**	**95**	PFAKE		20 52 30.0	+14
TRQA				LR	LR		
comp=Z,5μm,20.0s							
HOPE	**Hope Point**	**164.59**	**183**	PFAKE		20 52 30.0	+11
HOPE				LR	LR		
comp=Z,4μm,22.0s							

MEX 17 20:32:56.4±0.7, 16°.40N×98°.54W, h26km±149km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.16**	**359**	*e*P	Pn	20 33 14.0	-3.1
TLIG				*e*S	Sn	20 33 28.5	-3.7
ACX	**Acapulco**	**1.35**	**291**	*i* P	Pn	20 33 17.3	-2.4
ACX				*e*S	Sn	20 33 34.2	-2.6
CAIG	**El Cayaco**	**1.78**	**292**	*e*P	Pn	20 33 23.4	-2.1
CAIG				*e*S	Sn	20 33 44.6	-2.7
VHO	**Vista Hermosa**	**1.85**	**68**	*e*P	Pn	20 33 24.1	-2.6
VHO				*e*S	Sn	20 33 47.0	-2.3

IDC 17 20:47:27.3±4.7, 3°.74N×128°.33E, h100km±55km, mb3.3/5, mb1 3.4/6, mb1mx3.2/54, mbtmp3.6/6, Error ellipse: s-maj=136.8km s-min=20.8km az=68.0, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**4.29**	**320**	S	Sn	20 49 20.4	+0.9
113nm,0.3s,baz=67,slow=10,SNR=4.6							
SIJI	**Sorong**	**5.44**	**147**	P	Pn	20 48 46.5	+0.5
1.3nm,0.3s,baz=270,slow=21,SNR=12							
SIJI				S	Sn	20 49 47.5	+0.2
1.3nm,0.3s,baz=220,slow=22,SNR=5.1							
WRA	**Warramunga Arr**	**24.27**	**166**	P	P	20 52 35.2	0.0
2.0nm,0.8s,baz=345,slow=11,SNR=11							
ASAR	**Alice Springs**	**27.78**	**169**	P	P	20 53 07.3	+0.3
0.7nm,0.9s,baz=360,slow=10,SNR=3.5							
STKA	**Stephens Creek**	**37.60**	**161**	P	P	20 54 32.0	-0.3
2.2nm,0.9s,baz=345,slow=10,SNR=3.4							
MKAR	**Makanchi Array**	**58.46**	**325**	P	P	20 57 13.1	+0.3
0.3nm,0.6s,baz=121,slow=7.6,SNR=7.5							
KURBB	**Kurchatov Arra**	**62.60**	**327**	P	P	20 57 40.2	-0.6
0.1nm,0.4s,baz=130,slow=5.3,SNR=3.3							

WEL 17 20:53:08.2, 39°.S±1°×17°.6E±°, h38km±2km, ML3.6/13, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKZ	**Black Stump Fm**	**0.21**	**17**	P	Pn	20 53 15.0	-2.2
BKZ				S	Sn	20 53 20.7	-5.1
MCHZ	**McNeill Hill**	**0.23**	**111**	P	Pn	20 53 15.9	-0.9
KRHZ	**Kereru**	**0.28**	**187**	P	Pn	20 53 15.7	-0.7
KRHZ				S	Sn	20 53 22.5	-1.2
BHHZ	**Black Hill Sta**	**0.30**	**245**	P	Pn	20 53 16.1	-0.4
BHHZ				S	Sn	20 53 22.6	-0.9
NMHZ	**Naumai**	**0.40**	**49**	P	Pn	20 53 18.1	+0.8
ARHZ	**Aropaoanui**	**0.46**	**78**	P	Pn	20 53 18.6	+0.5
ARHZ				S	Sn	20 53 27.7	+2.5
MOVZ	**Moawhango**	**0.52**	**265**	P	Pn	20 53 19.2	0.0
MOVZ				S	Sn	20 53 27.4	+0.7
MRHZ	**Matea Rd**	**0.53**	**0**	P	Pn	20 53 19.1	-0.2
MRHZ				S	Sn	20 53 28.0	+1.0
HATZ	**Hinemaiaia**	**0.54**	**332**	P	Pn	20 53 19.0	-0.3
HATZ				S	Sn	20 53 27.4	+0.3
KAHZ	**Kahuranaki**	**0.56**	**141**	P	Pn	20 53 19.7	-0.1
KAHZ				S	Sn	20 53 29.7	+1.9
PNHZ	**Pukenui**	**0.57**	**197**	P	Pn	20 53 19.6	-0.4
PNHZ				S	Sn	20 53 29.4	+1.2
RITZ	**Rihia Road**	**0.58**	**311**	P	Pn	20 53 20.0	0.0
CKHZ	**Cape Kidnapper**	**0.59**	**120**	P	Pn	20 53 20.0	-0.2
TUVZ	**Tukino**	**0.60**	**279**	P	Pn	20 53 20.5	+0.1
TUVZ				S	Sn	20 53 30.2	+1.2
MTHZ	**Maungataniwha**	**0.61**	**33**	P	Pn	20 53 20.6	+0.1
MTHZ				S	Sn	20 53 31.2	+2.2
WHVZ	**Whangaehu Hut**	**0.65**	**277**	P	Pn	20 53 21.0	-0.2
WHVZ				S	Sn	20 53 30.9	+0.7
KRVZ	**Karewarewa**	**0.66**	**294**	P	Pn	20 53 21.0	-0.2
NGZ	**Ngauruhoe**	**0.66**	**286**	P	Pn	20 53 21.1	-0.1
DRZ	**Dome Shelter**	**0.67**	**277**	P	Pn	20 53 21.3	-0.1
TRVZ	**Turoa**	**0.68**	**275**	P	Pn	20 53 21.3	-0.2
TRVZ				P	Pn	20 53 21.3	-0.2
FWVZ	**Far West T-bar**	**0.68**	**279**	P	Pn	20 53 21.3	-0.2
KATZ	**Kakaramea**	**0.68**	**304**	P	Pn	20 53 21.3	-0.1
RAHZ	**Arahi**	**0.69**	**50**	P	Pn	20 53 21.6	+0.2
WTVZ	**West Tongariro**	**0.69**	**291**	P	Pn	20 53 21.7	+0.1
WHHZ	**Waihua**	**0.70**	**66**	P	Pn	20 53 21.8	+0.3
COVZ	**Chateau Observ**	**0.70**	**283**	P	Pn	20 53 21.5	-0.1
WPHZ	**Waipukurau**	**0.70**	**178**	P	Pn	20 53 21.2	-0.4
RATZ	**Rangitukua**	**0.70**	**314**	P	Pn	20 53 21.4	-0.2
PXZ	**Pawanui**	**0.75**	**153**	P	Pn	20 53 21.6	-0.6
TSZ	**Takapari Road**	**0.78**	**207**	P	Pn	20 53 22.4	-0.3
WHTZ	**Whakaora**	**0.78**	**333**	P	Pn	20 53 22.6	-0.1
ALRZ	**Allen Road**	**0.80**	**356**	P	Pn	20 53 22.3	-0.6
WATZ	**Wairara**	**0.84**	**321**	P	Pn	20 53 22.9	-0.6
PRRZ	**Plateau Road**	**0.86**	**359**	P	Pn	20 53 23.2	-0.6
WPRZ	**Whakapapatarin**	**0.86**	**347**	P	Pn	20 53 23.2	-0.7
RTZ	**Ruatahuna**	**0.87**	**31**	P	Pn	20 53 24.1	+0.3
PRHZ	**Porangahau**	**0.92**	**169**	P	Pn	20 53 23.9	-0.7
SNGZ	**Shannon Statio**	**0.92**	**51**	P	Pn	20 53 24.7	+0.1
MUGZ	**Murupara**	**0.93**	**17**	P		20 53 24.0	
MUGZ				P	Pn	20 53 23.9	-0.7
DVHZ	**Dannevirke**	**0.95**	**192**	P	Pn	20 53 24.1	-0.9
HRRZ	**Handcock Road**	**0.98**	**354**	P	Pn	20 53 25.2	-0.2
KUTZ	**Kaahu Road**	**0.99**	**332**	P	Pn	20 53 25.0	-0.5
RRRZ	**Republican Roa**	**1.02**	**4**	P	Pn	20 53 25.4	-0.6
KNZ	**Kokohu**	**1.03**	**71**	P	Pn	20 53 25.3	-0.7
GRRZ	**Galatos Road**	**1.04**	**347**	P	Pn	20 53 25.9	-0.3
HSRZ	**Hossack Road**	**1.06**	**353**	P	Pn	20 53 26.0	-0.4
ANWZ	**Angora Road**	**1.10**	**178**	P	Pn	20 53 26.1	-0.9
ANWZ				P	Pn	20 53 26.1	-0.8
TARZ	**Mount Tarawera**	**1.13**	**4**	P	Pn	20 53 27.2	-0.3
POWZ	**Post Office Ro**	**1.14**	**206**	P	Pn	20 53 26.9	-0.7
RAGZ	**Rawiri**	**1.17**	**42**	P	Pn	20 53 27.8	-0.2
WAZ	**Wanganui**	**1.17**	**250**	P	Pn	20 53 29.3	+1.3
MHGZ	**Mahia Peninsul**	**1.18**	**80**	P	Pn	20 53 27.6	-0.4
OHWZ	**Ohakea**	**1.20**	**225**	P	Pn	20 53 29.1	+0.8
PRGZ	**Paritu Road**	**1.22**	**69**	P	Pn	20 53 28.0	-0.7
URZ	**Urewera**	**1.23**	**26**	P	Pn	20 53 27.7	-1.0
RIGZ	**Rimuhau**	**1.24**	**58**	P	Pn	20 53 28.3	-0.6
PRWZ	**Pori Road**	**1.24**	**196**	P	Pn	20 53 28.5	-0.4
TLZ	**Tolley Road**	**1.24**	**326**	P	Pn	20 53 28.1	-0.9
OMRZ	**Omania**	**1.25**	**358**	P	Pn	20 53 28.6	-0.5
VRZ	**Vera Road**	**1.31**	**280**	P	Pn	20 53 29.8	-0.1
BFZ	**Birch Farm**	**1.32**	**186**	P	Pn	20 53 28.6	-1.5
MWZ	**Matawai**	**1.34**	**41**	P	Pn	20 53 29.9	-0.5
MRZ	**Mangatainoka R**	**1.45**	**206**	P	Pn	20 53 30.6	-1.1
TKGZ	**Te Karaka**	**1.45**	**51**	P	Pn	20 53 30.8	-1.0
TIWZ	**Tintock**	**1.47**	**196**	P	Pn	20 53 30.8	-1.3
HIZ	**Hauiti**	**1.48**	**304**	P	Pn	20 53 31.8	-0.5
CPWZ	**Castlepoint**	**1.55**	**186**	P	Pn	20 53 30.5	-2.8
KMRZ	**Kaimai**	**1.56**	**346**	P	Pn	20 53 32.7	-0.7
WHRZ	**Whale Island**	**1.57**	**16**	P	Pn	20 53 33.1	-0.3
HOWZ	**Holdsworth Sta**	**1.68**	**204**	P	Pn	20 53 33.1	-1.9
TWGZ	**Tauwhareparae**	**1.70**	**46**	P	Pn	20 53 34.8	-0.5
RUGZ	**Raukumara Rang**	**1.71**	**36**	P	Pn	20 53 35.1	-0.4
OGWZ	**Otaki Gorge**	**1.74**	**213**	P	Pn	20 53 34.3	-1.4
TOZ	**Tahuroa Road**	**1.78**	**336**	P	Pn	20 53 35.7	-0.6
TMWZ	**Te Maipa**	**1.79**	**193**	P	Pn	20 53 34.5	-1.9
KIW	**Kapiti Island**	**1.89**	**217**	P	Pn	20 53 36.4	-1.5
MTW	**Mount Morrison**	**1.93**	**201**	P	Pn	20 53 35.9	-2.5
HAZ	**Te Kaha**	**1.93**	**34**	P	Pn	20 53 37.0	-1.4
CAW	**Cannon Point**	**2.03**	**210**	P	Pn	20 53 38.0	-1.8
TRWZ	**Traveller**	**2.11**	**195**	P	Pn	20 53 38.5	-2.4
WMGZ	**Waiomatatini S**	**2.20**	**46**	P	Pn	20 53 41.0	-1.1
PLWZ	**Palliser**	**2.38**	**202**	P	Pn	20 53 41.5	-3.0

CSEM 17 21:27:28.9±0.2, 43°.16N×17°.95E, h2km, ML2.3, Error ellipse: s-maj=4.4km s-min=3.0km az=48.0
PDG 17 21:27:28.8±0.1, 43°.14N×17°.90E, h10km, ML2.5/11, Error ellipse: s-maj=0.2km s-min=0.3km az=0.0
BEO 17 21:27:29.6±0.5, 43°.17N×17°.88E, h2km±7km
VIE 17 21:27:31.2±1.1, 43°.04N×17°.84E, h18km, mb2.4/3, ml1.9/4, Error ellipse: s-maj=15.0km s-min=9.1km az=48.0 100 km SSW of Sarajevo

ISC 17 21:27:29.0±1.1, 43°.16N±0°.02×17°.93E±0°.02, h1km±10km, n67, σ0°.93/124, 16C-11D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STON	**Ston**	**0.33**	**211**	*e*Pg	**Pg**	**21 27 34.8**	**-0.6**
STON				*e*Sg	**Sg**	**21 27 40.2**	**+0.6**
STON	**Ston**	**0.33**	**211**	*i* P*g*	**Pg**	**21 27 34.9**	**-0.4**
STON				Sg	**Sg**	**21 27 40.2**	**+0.6**
STON	**Ston**	**0.33**	**211**	⇓ *i*P*g*	**Pg**	**21 27 34.7**	**-0.6**
STON				*e*Sg	**Sg**	**21 27 39.8**	**+0.2**
BRY	**Bratogost**	**0.51**	**120**	⇑ *i*P*g*	**Pg**	**21 27 38.6**	**-0.2**
BRY				*e*Sg	**Sb**	**21 27 47.2**	**-1.7**
BRY	**Bratogost**	**0.51**	**120**	⇑ *i*P*g*	**Pg**	**21 27 38.6**	**-0.2**
BRY				*e*Sg	**Sg**	**21 27 46.9**	**+1.4**
TREB	**Trebinje**	**0.54**	**145**	⇑ *i*P*g*	**Pg**	**21 27 38.8**	**-0.4**
TREB				*e*Sg	**Sg**	**21 27 47.2**	**+1.0**
UPM	**Unac-Piva**	**0.71**	**86**	⇑ *i*P*g*	**Pg**	**21 27 42.6**	**-0.1**
UPM				*e*Sg	**Sb**	**21 27 54.1**	**-0.7**
UPM	**Unac-Piva**	**0.71**	**86**	⇑ *i*P*g*	**Pg**	**21 27 42.6**	**-0.1**
UPM	**Unac-Piva**	**0.71**	**86**	P	**Pg**	**21 27 42.9**	**+0.2**
UPM				*e*Sg	**Sg**	**21 27 52.4**	**+0.5**
HCY	**Herceg Novi**	**0.82**	**149**	⇑ *i*P*g*	**Pg**	**21 27 44.2**	**-0.5**
HCY				*e*Sg	**Sb**	**21 27 57.1**	**-0.5**
HCY	**Herceg Novi**	**0.82**	**149**	⇑ *i*P*g*	**Pg**	**21 27 44.2**	**-0.5**
HCY				*e*Sg	**Sg**	**21 27 56.0**	**+0.7**
NKME	**Niksic**	**0.85**	**117**	⇓ *i*P*g*	**Pg**	**21 27 44.5**	**-0.7**
NKME				*e*Sg	**Sb**	**21 27 58.0**	**-0.4**
NKME	**Niksic**	**0.85**	**117**	⇓ *i*P*g*	**Pg**	**21 27 44.5**	**-0.7**
NKME				*e*Sg	**Sb**	**21 27 58.0**	**-0.4**
NKY	**Niksic**	**0.85**	**113**	⇓ *i*P*g*	**Pg**	**21 27 44.7**	**-0.6**
NKY				*e*Sg	**Sb**	**21 27 58.6**	**0.0**
NKY	**Niksic**	**0.85**	**113**	⇓ *i*P*g*	**Pg**	**21 27 44.7**	**-0.6**
NKY				*e*Sg	**Sb**	**21 27 58.6**	**0.0**
CEME	**Cevo**	**0.95**	**130**	⇑ *i*P*g*	**Pg**	**21 27 46.3**	**-0.8**
CEME				*e*Sg	**Sb**	**21 28 01.5**	**+0.2**
CEME	**Cevo**	**0.95**	**130**	⇑ *i*P*g*	**Pg**	**21 27 46.3**	**-0.8**
CEME				*e*Sg	**Sb**	**21 28 01.5**	**+0.2**
PLE	**Pljevlja**	**1.08**	**80**	⇑ *i*P*g*	**Pg**	**21 27 49.2**	**-0.5**
PLE				*e*Sg	**Sn**	**21 28 06.3**	**-0.8**
PLE	**Pljevlja**	**1.08**	**80**	⇑ *i*P*g*	**Pg**	**21 27 49.2**	**-0.5**
PLE				*e*Sg	**Sn**	**21 28 06.3**	**-0.8**
BUM	**Brajici-Budva**	**1.11**	**140**	⇑ *i*P*g*	**Pg**	**21 27 49.7**	**-0.6**
BUM				*e*Sg	**Sn**	**21 28 06.8**	**-1.0**
BUM	**Brajici-Budva**	**1.11**	**140**	⇑ *i*P*g*	**Pg**	**21 27 49.7**	**-0.6**
BUM				*e*Sg	**Sn**	**21 28 06.8**	**-1.0**
HAPS	**Han Pijesak,Bl**	**1.19**	**38**	*e*P*g*	**Pg**	**21 27 50.9**	**-0.9**
HAPS				*e*Sg	**Sb**	**21 28 08.3**	**0.0**
HAPS	**Han Pijesak,Bl**	**1.19**	**38**	*e*P*g*	**Pg**	**21 27 50.9**	**-0.9**
HAPS				*e*Sg	**Sg**	**21 28 06.6**	**-0.6**
KOME	**Kolasin**	**1.20**	**104**	⇓ *i*P*g*	**Pg**	**21 27 51.5**	**-0.5**
KOME				*e*Sg	**Sn**	**21 28 10.4**	**+0.4**
KOME	**Kolasin**	**1.20**	**104**	⇓ *i*P*g*	**Pg**	**21 27 51.5**	**-0.5**
KOME				*e*Sg	**Sn**	**21 28 10.4**	**+0.4**
PDG	**Podgorica**	**1.22**	**126**	*e*P*g*	**Pg**	**21 27 52.1**	**-0.2**
PDG				*e*Sg	**Sn**	**21 28 10.3**	**+0.1**
PDG	**Podgorica**	**1.22**	**126**	*e*P*g*	**Pg**	**21 27 52.1**	**-0.2**
PDG				*e*Sg	**Sb**	**21 28 08.8**	**-0.2**
TTG	**Podgorica**	**1.22**	**126**	⇑ *i*P*g*	**Pg**	**21 27 51.4**	**-0.9**
TTG				*e*Sg	**Sn**	**21 28 10.7**	**+0.5**
BBLS	**Lazići**	**1.29**	**56**	*e*P*g*	**Pg**	**21 27 53.6**	**0.0**
BBLS				*e*Sg	**Sn**	**21 28 11.9**	**-0.2**
BBLS	**Lazići**	**1.29**	**56**	*e*P*g*	**Pg**	**21 27 53.6**	**0.0**
BBLS				*e*Sg	**Sg**	**21 28 10.8**	**+0.5**
DRME	**Dracevica, Mon**	**1.34**	**136**	⇓ *i*P*g*	**Pn**	**21 27 53.8**	**-1.0**
DRME				*e*Sg	**Sn**	**21 28 14.7**	**+1.4**
DRME	**Dracevica, Mon**	**1.34**	**136**	⇓ *i*P*g*	**Pn**	**21 27 53.8**	**-1.0**
DRME				*e*Sg	**Sb**	**21 28 12.3**	**-0.2**
BEY	**Berane**	**1.47**	**101**	*e*P*g*	**Pn**	**21 27 55.9**	**-0.8**
BEY				*e*Sg	**Sn**	**21 28 18.9**	**+2.3**
IVA	**Berane**	**1.47**	**101**	*e*P*g*	**Pn**	**21 27 55.9**	**-0.8**
IVA				*e*Sg	**Sn**	**21 28 18.9**	**+2.3**
SJES	**Sjenica**	**1.50**	**85**	*e*P*g*	**Pb**	**21 27 57.7**	**0.0**
SJES				*e*Sg	**Sg**	**21 28 18.1**	**+1.0**
ULC	**Ulcinj**	**1.54**	**140**	⇑ *i*P*g*	**Pn**	**21 27 56.8**	**-0.8**
ULC				*e*Sg	**Sg**	**21 28 20.1**	**+1.7**
ULC	**Ulcinj**	**1.54**	**140**	⇑ *i*P*g*	**Pn**	**21 27 56.8**	**-0.8**
ULC				*e*Sg	**Sg**	**21 28 20.1**	**+1.7**
PVY	**Plav**	**1.59**	**110**	⇓ *i*P*n*	**Pn**	**21 27 58.4**	**0.0**
PVY				*e*Sn	**Sg**	**21 28 21.7**	**+1.6**
PVY	**Plav**	**1.59**	**110**	⇓ *i*P*n*	**Pn**	**21 27 58.4**	**0.0**
PVY				*e*Sn	**Sg**	**21 28 21.7**	**+1.6**
IVAS	**Ivanjica**	**1.67**	**75**	*e*P*g*	**Pb**	**21 28 00.5**	**-0.1**
IVAS				*e*Sg	**Sg**	**21 28 23.0**	**+0.3**
IVAS	**Ivanjica**	**1.67**	**75**	*e*P*g*	**Pb**	**21 28 00.5**	**-0.1**
IVAS				*e*Sg	**Sg**	**21 28 23.0**	**+0.3**
BLY	**Banja Luka**	**1.68**	**342**	*e*P*g*	**Pb**	**21 28 00.4**	**-0.3**
BLY				*e*Sg	**Sg**	**21 28 23.8**	**+0.8**
BLY	**Banja Luka**	**1.68**	**342**	*e*P*n*	**Pn**	**21 27 58.4**	**-1.1**
BLY	**Banja Luka**	**1.68**	**342**	*e*P*g*	**Pb**	**21 28 00.4**	**-0.3**
BLY				*e*Sn	**Sn**	**21 28 20.7**	**-1.0**
BLY				*e*Sg	**Sg**	**21 28 23.8**	**+0.8**
DIVS	**Divibare**	**1.77**	**57**	*e*P*g*	**Pn**	**21 28 01.1**	**+0.3**
DIVS				*e*Sg	**Sg**	**21 28 27.1**	**+1.3**
DIVS	**Divibare**	**1.77**	**57**	*e*P*n*	**Pn**	**21 28 00.0**	**-0.8**
DIVS	**Divibare**	**1.77**	**57**	*e*P*g*	**Pn**	**21 28 01.1**	**+0.3**
DIVS				*e*Sn	**Sn**	**21 28 23.4**	**-0.6**
DIVS				*e*Sg	**Sg**	**21 28 27.1**	**+1.3**
PEJK	**Peje**	**1.80**	**106**	P	**Pb**	**21 28 03.1**	**+0.3**
TEKS	**Tekeris**	**1.81**	**39**	*e*P*n*	**Pn**	**21 28 00.9**	**-0.4**
TEKS				*e*Sn	**Sn**	**21 28 24.8**	**-0.1**
UDBI	**Udbina**	**2.08**	**312**	*e*P*n*	**Pb**	**21 28 06.9**	**-0.7**
UDBI				Sn	**Sg**	**21 28 36.3**	**+0.4**
UDBI	**Udbina**	**2.08**	**312**	*e*P*n*	**Pb**	**21 28 06.9**	**-0.7**
TRUS	**Trudelj**	**2.09**	**58**	*e*P*g*	**Pb**	**21 28 06.6**	**-1.1**
TRUS				*e*Sg	**Sg**	**21 28 36.2**	**+0.1**
TRUS	**Trudelj**	**2.09**	**58**	*e*P*g*	**Pb**	**21 28 06.6**	**-1.1**
TRUS				*e*Sg	**Sg**	**21 28 36.2**	**+0.1**
GRUS	**Gruza**	**2.15**	**69**	*e*P*g*	**Pb**	**21 28 08.1**	**-0.7**
GRUS				*e*Sg	**Sg**	**21 28 38.1**	**-0.1**
GRUS	**Gruza**	**2.15**	**69**	*e*P*g*	**Pb**	**21 28 08.1**	**-0.7**
GRUS				*e*Sg	**Sg**	**21 28 38.1**	**-0.1**
NVLJ	**Novalja**	**2.62**	**303**	*e*P*n*	**Pn**	**21 28 12.6**	**+0.2**
OZLJ	**Ozalj**	**3.03**	**325**	*e*P*n*	**Pn**	**21 28 19.5**	**+1.5**
CRES	**Cresnjev**	**3.20**	**327**	*e*Sn	**Sn**	**21 28 57.6**	**-1.7**
CEY	**Cerknica**	**3.60**	**317**	*e*P*n*	**Pn**	**21 28 24.8**	**-1.1**
CEY				*e*Sn	**Sn**	**21 29 07.3**	**-1.8**
SOKA	**Soboth**	**4.08**	**331**	*e*P*n*	**Pn**	**21 28 33.6**	**+1.1**
1.9nm,0.3s,SNR=6.4							
SOKA				*e*Sn	**Sn**	**21 29 21.2**	**+0.2**
0.3nm,0.3s							
SOKA	**Soboth**	**4.08**	**331**	Pn	**Pn**	**21 28 33.6**	**+1.1**
1.9nm,0.3s,SNR=6.4							
SOKA				Sn	**Sn**	**21 29 21.2**	**+0.2**
0.3nm,0.3s							
OBKA	**Obir**	**4.12**	**326**	*e*P*n*	**Pn**	**21 28 35.1**	**+1.9**
0.2nm,0.2s							
OBKA	**Obir**	**4.12**	**326**	Pn	**Pn**	**21 28 35.1**	**+1.9**
0.2nm,0.2s							
ARSA	**Arzberg**	**4.43**	**338**	*e*P*n*	**Pn**	**21 28 38.5**	**+1.1**
1.5nm,0.2s,SNR=5.0							
ARSA	**Arzberg**	**4.43**

IDI	**Anoyia**	**1.89**	**273**	Pn	**Pb**	**21 28 06.6**	**-0.3**
	comp=E,16nm,0.3s,baz=102,slow=17,SNR=76						
IDI				Sn	**Sg**	**21 28 33.9**	**+0.3**
	comp=E,18nm,0.3s,baz=348,slow=18,SNR=4.9						
IDI	**Anoyia**	**1.89**	**273**	PN	**Pn**	**21 28 05.2**	**+0.7**
IDI	**Anoyia**	**1.89**	**273**	*e*Pn	**Pn**	**21 28 05.2**	**+0.7**
THR5	**Thira Island,**	**1.92**	**309**	P	**Pn**	**21 28 05.3**	**+0.5**
THR5	**Thira Island,**	**1.92**	**309**	P	**Pn**	**21 28 05.3**	**+0.5**
AMGA	**Amorgos Island**	**1.92**	**327**	P	**Pn**	**21 28 04.7**	**-0.2**
AMGA	**Amorgos Island**	**1.92**	**327**	P	**Pn**	**21 28 05.0**	**+0.2**
DALY	**Dalyan (Mu¨la**	**1.98**	**36**	PN	**Pn**	**21 28 06.9**	**+1.4**
DALY	**Dalyan (Mu¨la**	**1.98**	**36**	*i* P	**Pb**	**21 28 08.5**	**+0.2**
DALY				*i* S	**Sg**	**21 28 39.1**	**+2.9**
DALY	**Dalyan (Mu¨la**	**1.98**	**36**	*e*Pn	**Pn**	**21 28 06.9**	**+1.4**
DALY	**Dalyan (Mu¨la**	**1.98**	**36**	P	**Pb**	**21 28 08.5**	**+0.2**
TURN	**Turunc**	**2.00**	**34**	PN	**Pn**	**21 28 04.1**	**-1.7**
TURN	**Turunc**	**2.00**	**34**	*i* P	**Pn**	**21 28 04.5**	**-1.4**
TURN				*i* S	**Sn**	**21 28 28.6**	**-2.1**
TURN	**Turunc**	**2.00**	**34**	*e*Pn	**Pn**	**21 28 04.1**	**-1.7**
TURN	**Turunc**	**2.00**	**34**	P	**Pn**	**21 28 04.5**	**-1.3**
TURN				S	**Sn**	**21 28 28.5**	**-2.1**
FETY	**Fethiye**	**2.08**	**47**	PN	**Pn**	**21 28 08.4**	**+1.4**
FETY	**Fethiye**	**2.08**	**47**	P	**Pn**	**21 28 07.6**	**+0.6**
FETY				S	**Sb**	**21 28 34.7**	**-1.0**
FETY	**Fethiye**	**2.08**	**47**	P	**Pn**	**21 28 07.6**	**+0.6**
FETY	**Fethiye**	**2.08**	**47**	*e*Pn	**Pn**	**21 28 08.4**	**+1.4**
FETY				S	**Sb**	**21 28 34.7**	**-1.0**
MLSB	**Milas**	**2.12**	**12**	PN	**Pn**	**21 28 08.6**	**+1.1**
MLSB	**Milas**	**2.12**	**12**	*e*Pn	**Pn**	**21 28 08.6**	**+1.1**
APE	**Apeiranthos**	**2.29**	**324**	PN	**Pn**	**21 28 10.7**	**+0.9**
APE	**Apeiranthos**	**2.29**	**324**	P	**Pn**	**21 28 10.4**	**+0.6**
APE	**Apeiranthos**	**2.29**	**324**	*e*Pn	**Pn**	**21 28 10.7**	**+0.9**
GCAM	**G?zelcaml?**	**2.47**	**1**	PN	**Pn**	**21 28 13.8**	**+1.5**
GCAM	**G?zelcaml?**	**2.47**	**1**	*e*Pn	**Pn**	**21 28 13.8**	**+1.5**
AYDN	**Tasoluk**	**2.49**	**12**	*i* P	**Pn**	**21 28 15.1**	**+2.4**
AYDN	**Tasoluk**	**2.49**	**12**	P	**Pn**	**21 28 15.1**	**+2.4**
SMG	**Samos**	**2.50**	**353**	P	**Pn**	**21 28 12.6**	**-0.1**
SMG	**Samos**	**2.50**	**353**	P	**Pn**	**21 28 12.8**	**+0.1**
GVD	**Gavdhos**	**2.58**	**262**	P	**Pb**	**21 28 17.3**	**-1.3**
GVD	**Gavdhos**	**2.58**	**262**	P	**Pn**	**21 28 16.4**	**+2.5**
TAVA	**DENIZLI_Tavas**	**2.63**	**31**	*i* P	**Pb**	**21 28 17.5**	**-2.0**
TAVA	**DENIZLI_Tavas**	**2.63**	**31**	P	**Pb**	**21 28 17.5**	**-2.0**
IMMV	**Iera Moni Meta**	**2.64**	**276**	P	**Pn**	**21 28 15.4**	**+0.6**
IMMV	**Iera Moni Meta**	**2.64**	**276**	P	**Pn**	**21 28 15.8**	**+1.1**
ELL	**Elmali**	**2.67**	**54**	PN	**Pn**	**21 28 16.9**	**+1.7**
ELL	**Elmali**	**2.67**	**54**	*e*Pn	**Pn**	**21 28 16.9**	**+1.7**
AYDB	**Zeytinkoy-Aydi**	**2.77**	**11**	PN	**Pn**	**21 28 18.2**	**+1.6**
AYDB	**Zeytinkoy-Aydi**	**2.77**	**11**	*e*Pn	**Pn**	**21 28 18.2**	**+1.6**
DGB	**¨zmir**	**2.83**	**355**	*i* P	**Pn**	**21 28 13.5**	**-3.8**
KORT	**Korkueli**	**3.10**	**54**	PN	**Pn**	**21 28 23.0**	**+1.8**
KORT	**Korkueli**	**3.10**	**54**	*e*Pn	**Pn**	**21 28 23.0**	**+1.8**
ANTB	**Antalya**	**3.26**	**58**	PN	**Pn**	**21 28 25.5**	**+2.3**
ANTB	**Antalya**	**3.26**	**58**	*e*Pn	**Pn**	**21 28 25.5**	**+2.3**
CHOS	**Chios island**	**3.29**	**344**	P	**Pn**	**21 28 24.5**	**+0.8**
CHOS	**Chios island**	**3.29**	**344**	P	**Pn**	**21 28 24.4**	**+0.8**
KULA	**Kula-Manisa**	**3.49**	**19**	PN	**Pn**	**21 28 28.2**	**+1.8**
KULA	**Kula-Manisa**	**3.49**	**19**	*e*Pn	**Pn**	**21 28 28.2**	**+1.8**
VLI	**Veliai**	**3.77**	**295**	P	**Pn**	**21 28 31.1**	**+0.9**
VLI	**Veliai**	**3.77**	**295**	P	**Pn**	**21 28 31.4**	**+1.2**
VLY	**Voula,Athens**	**3.80**	**315**	P	**Pn**	**21 28 32.0**	**+1.4**
VLY	**Voula,Athens**	**3.80**	**315**	P	**Pn**	**21 28 31.9**	**+1.4**
BRTR	**Keskin Array B**	**6.81**	**47**	Pn	**Pn**	**21 29 12.5**	**+0.4**
	comp=E,0.1nm,0.3s,baz=213,slow=15,SNR=3.8						
BRTR				Sn	**Sn**	**21 30 31.9**	**+2.5**
	comp=E,0.1nm,0.3s,baz=213,slow=26,SNR=2.7						
MMAI	**Mount Meron Ar**	**7.15**	**106**	Pn	**Pn**	**21 29 15.2**	**-1.5**
	comp=E,0.5nm,0.3s,baz=294,slow=13,SNR=6.0						
MMAI				Sn	**Sn**	**21 30 34.7**	**-3.0**
	comp=E,1.3nm,0.3s,baz=308,slow=26,SNR=5.2						
ESDC	**Sonseca Array**	**25.07**	**289**	P	**P**	**21 32 57.9**	**+1.4**
	comp=E,0.4nm,0.6s,baz=80,slow=9.2,SNR=2.6						
TORD	**Torodi Ar. Bea**	**31.83**	**233**	P	**P**	**21 33 55.4**	**-1.6**
	comp=E,0.2nm,0.4s,baz=35,slow=8.8,SNR=5.2						
KURBB	**Kurchatov Arra**	**39.78**	**51**	P	**P**	**21 35 05.5**	**+0.8**
	comp=E,0.1nm,0.3s,baz=271,slow=9.4,SNR=2.7						
MKAR	**Makanchi Array**	**42.34**	**57**	P	**P**	**21 35 26.6**	**+0.7**
	comp=E,0.3nm,0.5s,baz=262,slow=9.7,SNR=5.1						

*ISCJB **17** 21:30:33.9±1.6, 35°.19N±0°.07×27°.25E±0°.07, h4km±8km,*
Error ellipse: s-maj=14.1km s-min=5.0km az=145.1
*CSEM **17** 21:30:34.0±0.3, 35°.19N×27°.24E, h2km, ML2.9, Error*
ellipse: s-maj=8.1km s-min=3.2km az=148.0
*ATH **17** 21:30:34.1, 35°.21N×27°.22E, h22km±2km, ML2.3/3, Error*
ellipse: s-maj=5.3km s-min=1.2km az=329.0
*ISK **17** 21:30:34.9, 35°.26N×27°.23E, h9km, ML2.9/4*

ISC 17 21:30:33.6±1.7, 35°.18N±0°.07×27°.24E±0°.05, h6km±11km, n25, σ0.8 67/37, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.37**	**350**	PG	**Pg**	**21 30 40.6**	**-0.3**
KARP				SG	**Sg**	**21 30 46.2**	**+0.3**
KARP	**Karpathos**	**0.37**	**350**	P	**Pg**	**21 30 40.7**	**-0.2**
KARP				S	**Sg**	**21 30 46.5**	**+0.6**
KARP				AML	AML	21 30 47.3	
	comp=N,1565μm,0.2s						
KARP				AML	AML	21 30 48.2	
	comp=E,1505μm,0.3s						
KARP	**Karpathos**	**0.37**	**350**	*e*Pg	**Pg**	**21 30 40.6**	**-0.3**
KARP	**Karpathos**	**0.37**	**350**	P	**Pg**	**21 30 41.1**	**+0.2**
KARP				*e*Sg	**Sg**	**21 30 46.2**	**+0.3**
ZKR	**Zakros**	**0.84**	**266**	P	**Pg**	**21 30 49.2**	**-0.6**
ZKR				S	**Sb**	**21 31 03.2**	**+1.0**
ZKR				AML	AML	21 31 06.9	
	comp=N,228μm,0.3s						
ZKR				AML	AML	21 31 07.9	
	comp=E,454μm,0.3s						
ZKR	**Zakros**	**0.84**	**266**	P	**Pg**	**21 30 49.6**	**-0.2**
ZKR				S	**Sb**	**21 31 02.4**	**+0.2**
ARG	**Arkhangelos**	**1.26**	**35**	PN	**Pg**	**21 30 58.4**	**+0.6**
ARG				SN	**Sn**	**21 31 15.5**	**+0.4**
ARG	**Arkhangelos**	**1.26**	**35**	P	**Pg**	**21 30 58.2**	**+0.3**
ARG				S	**Sn**	**21 31 15.6**	**+0.4**
ARG				AML	AML	21 31 20.7	
	comp=N,158μm,0.6s						
ARG				AML	AML	21 31 21.2	
	comp=E,199μm,0.3s						
ARG	**Arkhangelos**	**1.26**	**35**	P	**Pg**	**21 30 57.9**	**+0.1**
ARG	**Arkhangelos**	**1.26**	**35**	*e*Pn	**Pg**	**21 30 58.4**	**+0.6**
ARG				S	**Sn**	**21 31 15.2**	**+0.1**
NPS	**Neapolis**	**1.33**	**274**	P	**Pn**	**21 30 58.5**	**-0.3**
NPS	**Neapolis**	**1.33**	**274**	P	**Pn**	**21 30 58.8**	**-0.1**
LAST	**Lasithi**	**1.44**	**270**	P	**Pn**	**21 31 00.1**	**-0.3**
LAST				S	**Sg**	**21 31 20.5**	**+0.4**
LAST	**Lasithi**	**1.44**	**270**	P	**Pn**	**21 31 00.5**	**+0.1**
LAST				S	**Sg**	**21 31 20.4**	**+0.4**
DAT	**Datca**	**1.57**	**10**	PN	**Pn**	**21 31 02.1**	**-0.1**
DAT				SN	**Sn**	**21 31 22.6**	**-0.3**
DAT	**Datca**	**1.57**	**10**	*e*Pn	**Pn**	**21 31 02.1**	**-0.1**
DAT				*e*Sn	**Sn**	**21 31 22.6**	**-0.3**
IDI	**Anoyia**	**1.93**	**274**	PN	**Pb**	**21 31 09.1**	**-0.1**
IDI	**Anoyia**	**1.93**	**274**	*e*Pn	**Pb**	**21 31 09.1**	**-0.1**
DALY	**Dalyan (Mu¨la**	**2.00**	**35**	PN	**Pb**	**21 31 09.2**	**-1.2**
DALY	**Dalyan (Mu¨la**	**2.00**	**35**	*e*Pn	**Pb**	**21 31 09.2**	**-1.2**
TURN	**Turunc**	**2.02**	**33**	PN	**Pn**	**21 31 05.9**	**-2.3**
FETY	**Fethiye**	**2.09**	**45**	PN	**Pn**	**21 31 10.1**	**+0.9**
FETY	**Fethiye**	**2.09**	**45**	*e*Pn	**Pn**	**21 31 10.1**	**+0.9**
MLSB	**Milas**	**2.16**	**11**	PN	**Pn**	**21 31 10.9**	**+0.7**
MLSB	**Milas**	**2.16**	**11**	*e*Pn	**Pn**	**21 31 10.9**	**+0.7**

*DDA **17** 21:32:20.7, 40°.68N×43°.74E, h8km, Ml1.9*
*TIF **17** 21:32:21.2, 40°.03N×45°.20E, h15km±6km*
*CSEM **17** 21:32:22.7±0.6, 40°.09N×45°.09E, h2km, ML1.9, Error*
ellipse: s-maj=15.5km s-min=9.2km az=129.0

ISC 17 21:32:23.1±1.4, 40°.16N±0°.04×45°.02E±0°.05, h6km±12km, n15, σ2.9 01/28, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGDI	**IGDIR**	**0.78**	**249**	*i* P	**Pb**	**21 32 37.5**	**-1.5**
IGDI				*i* S	**Sn**	**21 32 50.0**	**-2.7**
EAK	**Akyaka**	**1.20**	**297**	*i* P	**Pg**	**21 32 46.6**	**+0.4**
EAK				*i* S	**Sn**	**21 33 05.5**	**+2.1**
EAK	**Akyaka**	**1.20**	**297**	P	**Pg**	**21 32 46.6**	**+0.4**
EAK				S	**Sn**	**21 33 05.5**	**+2.1**
CLDR	**Caldiran**	**1.32**	**220**	*i* P	**Pg**	**21 32 48.1**	**-0.3**
CLDR				*i* S	**Sn**	**21 33 10.1**	**+3.7**
CLDR	**Caldiran**	**1.32**	**220**	P	**Pg**	**21 32 48.1**	**-0.3**
CLDR				S	**Sn**	**21 33 10.1**	**+3.7**
DGRG	**David-gareji**	**1.32**	**12**	P	**Pn**	**21 32 46.7**	**-1.5**
DGRG				S	**Sg**	**21 33 09.7**	**+4.1**
DGRG	**David-gareji**	**1.32**	**12**	P	**Pn**	**21 32 46.7**	**-1.5**
DGRG				S	**Sg**	**21 33 09.7**	**+4.1**
DDFL	**Dedoflistskaro**	**1.54**	**33**	P	**Pg**	**21 32 52.4**	**-0.2**
DDFL				S	**Sg**	**21 33 13.0**	**+0.5**
DDFL	**Dedoflistskaro**	**1.54**	**33**	P	**Pg**	**21 32 52.4**	**-0.2**
DDFL				S	**Sg**	**21 33 13.0**	**+0.5**
BGD	**Bogdanovka**	**1.55**	**316**	P	**Pg**	**21 32 52.1**	**-0.7**
BGD	**Bogdanovka**	**1.55**	**316**	P	**Pg**	**21 32 52.1**	**-0.7**
TBLG	**Delisi**	**1.59**	**352**	P	**Pg**	**21 32 53.0**	**-0.6**
TBLG				S	**Sg**	**21 33 16.1**	**+1.9**
TBLG	**Delisi**	**1.59**	**352**	P	**Pg**	**21 32 53.0**	**-0.6**
TBLG				S	**Sg**	**21 33 16.1**	**+1.9**
DUS	**Dusheti**	**1.95**	**353**	P	**Pb**	**21 32 58.0**	**-1.1**
DUS				S	**Sg**	**21 33 25.1**	**-0.6**
DUS	**Dusheti**	**1.95**	**353**	P	**Pb**	**21 32 58.0**	**-1.1**
DUS				S	**Sg**	**21 33 25.1**	**-0.6**

*MOS **17** 22:06:39.2±1.2, 52°.51N×160°.89E, h17km, mb4.0/5, Error*
ellipse: s-maj=7.5km s-min=3.8km az=100.6
*KRSC **17** 22:06:40.0±2.3, 52°.66N×160°.84E, h16km±20km, ML4.2*
*IDC **17** 22:06:39.3±0.8, 52°.77N×160°.37E, h0km, mb3.8/17,*
mb1 3.9/18, mb1mx3.7/73, mbtmp3.8/18, ML3.9/1, Error
ellipse: s-maj=22.2km s-min=19.6km az=77.0
*NEIC **17** 22:06:43.4±0.5, 52°.83N×160°.89E, h35km, mb4.6/5, Error*
ellipse: s-maj=11.8km s-min=9.6km az=163.0

ISC 17 22:06:38.1±1.4, 52°.78N±0°.04×160°.88E±0°.03, h3km±9km, n149, σ1.9 40/206, mb3.9/25, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.61**	**302**	*e*P	**Pn**	**22 06 53.4**	**-0.3**
SPN				*e*S	**Sb**	**22 07 01.1**	**+0.7**
SPN	**Mys Shipunski**	**0.61**	**302**	PN	**Pn**	**22 06 53.4**	**-0.3**
SPN				S	**Sb**	**22 07 01.1**	**+0.7**
NLC	**Nalytchevo**	**1.01**	**294**	*e*P	**Pn**	**22 06 59.1**	**0.0**
NLC				*e*S	**Sb**	**22 07 11.0**	**-0.8**
NLC	**Nalytchevo**	**1.01**	**294**	PN	**Pn**	**22 06 59.1**	**0.0**
NLC				S	**Sb**	**22 07 11.0**	**-0.8**
SDLR	**Sedlovina**	**1.31**	**293**	*e*P	**Pg**	**22 07 04.0**	**+0.8**
SDLR	**Sedlovina**	**1.31**	**293**	PN	**Pg**	**22 07 04.0**	**+0.8**
DALK	**Dalny**	**1.31**	**282**	*e*P	**Pg**	**22 07 03.7**	**+0.4**
DALK				*e*S	**Sb**	**22 07 19.2**	**-1.4**
DALK	**Dalny**	**1.31**	**282**	PN	**Pg**	**22 07 03.7**	**+0.4**
DALK				S	**Sb**	**22 07 19.2**	**-1.4**
UGLR	**Uglovaya**	**1.32**	**290**	*e*P	**Pg**	**22 07 04.1**	**+0.7**
UGLR				*e*S	**Sg**	**22 07 20.2**	**-0.2**
UGLR	**Uglovaya**	**1.32**	**290**	PN	**Pg**	**22 07 04.1**	**+0.7**
UGLR				S	**Sg**	**22 07 20.2**	**-0.2**
PET	**Petropavlovsk**	**1.37**	**281**	*e*Pn	**Pg**	**22 07 04.5**	**+0.1**
PET				*e*Sn	**Sb**	**22 07 20.0**	**-2.3**
PET	**Petropavlovsk**	**1.37**	**281**	*e*P	**Pg**	**22 07 04.5**	**+0.1**
PET				*e*S	**Sb**	**22 07 21.1**	**-1.2**
PET	**Petropavlovsk**	**1.37**	**281**	PN	**Pg**	**22 07 04.5**	**+0.1**
PET				S	**Sb**	**22 07 21.1**	**-1.2**
AVH	**Avacha**	**1.38**	**292**	*e*P	**Pg**	**22 07 05.5**	**+0.9**
AVH	**Avacha**	**1.38**	**292**	PN	**Pg**	**22 07 05.5**	**+0.9**
KRER	**Koryakskii**	**1.39**	**293**	*e*P	**Pg**	**22 07 05.6**	**+0.8**
KRER				*e*S	**Sb**	**22 07 22.5**	**-0.6**
KRER	**Koryakskii**	**1.39**	**293**	PN	**Pg**	**22 07 05.6**	**+0.8**
KRER				S	**Sb**	**22 07 22.5**	**-0.6**
KOK	**Koryaka**	**1.45**	**292**	*e*P	**Pg**	**22 07 06.7**	**+0.8**
KOK	**Koryaka**	**1.45**	**292**	PN	**Pg**	**22 07 06.7**	**+0.8**
KRX	**Arik**	**1.47**	**294**	*e*P	**Pg**	**22 07 06.5**	**+0.3**
KRX				*e*S	**Sb**	**22 07 24.0**	**-1.2**
KRX	**Arik**	**1.47**	**294**	PN	**Pg**	**22 07 06.5**	**+0.3**
KRX				S	**Sb**	**22 07 24.0**	**-1.2**
RUS	**Russkaya**	**1.48**	**258**	*e*P	**Pn**	**22 07 05.9**	**+0.3**
RUS				*e*S	**Sn**	**22 07 23.1**	**-2.4**
RUS	**Russkaya**	**1.48**	**258**	PN	**Pn**	**22 07 05.9**	**+0.3**
RUS				S	**Sn**	**22 07 23.1**	**-2.4**
KII	**Karymskiy**	**1.52**	**326**	*e*P	**Pg**	**22 07 09.0**	**+1.6**
KII				*e*S	**Sg**	**22 07 28.0**	**+0.9**
KII	**Karymskiy**	**1.52**	**326**	PN	**Pg**	**22 07 09.0**	**+1.6**
KII				S	**Sg**	**22 07 28.0**	**+0.9**
MTVR	**Mutnovka**	**1.67**	**261**	*e*P	**Pb**	**22 07 09.2**	**-0.4**
MTVR				*e*S	**Sn**	**22 07 28.4**	**-1.9**
MTVR	**Mutnovka**	**1.67**	**261**	PN	**Pb**	**22 07 09.2**	**-0.4**
MTVR				S	**Sn**	**22 07 28.4**	**-1.9**
KRMR	**Karymshinskiy**	**1.67**	**273**	*e*P	**Pb**	**22 07 08.9**	**-0.6**
KRMR				*e*S	**Sn**	**22 07 28.5**	**-1.6**
KRMR	**Karymshinskiy**	**1.67**	**273**	PN	**Pb**	**22 07 08.9**	**-0.6**
KRMR				S	**Sn**	**22 07 28.5**	**-1.6**
GRL	**Gorelyy**	**1.72**	**264**	*e*P	**Pb**	**22 07 10.2**	**-0.3**
GRL				*e*S	**Sn**	**22 07 30.7**	**-0.9**
GRL	**Gorelyy**	**1.72**	**264**	PN	**Pb**	**22 07 10.2**	**-0.3**
GRL				S	**Sn**	**22 07 30.7**	**-0.9**
MKZ	**Mys Kozlova**	**1.85**	**15**	*e*P	**Pg**	**22 07 14.1**	**+0.5**
MKZ				*e*S	**Sg**	**22 07 37.5**	**-0.1**
MKZ	**Mys Kozlova**	**1.85**	**15**	PN	**Pg**	**22 07 14.1**	**+0.5**
MKZ				S	**Sg**	**22 07 37.5**	**-0.1**
ASAK	**Asacha**	**1.86**	**259**	*e*P	**Pb**	**22 07 12.3**	**-0.5**
ASAK				*e*S	**Sn**	**22 07 33.9**	**-1.0**
ASAK	**Asacha**	**1.86**	**259**	PN	**Pb**	**22 07 12.3**	**-0.5**
ASAK				S	**Sn**	**22 07 33.9**	**-1.0**
PEA0B	**Petropavlovsk-**	**1.95**	**281**	*e*Pn	**Pb**	**22 07 13.6**	**-0.7**
PEA0B				*e*Sn	**Sn**	**22 07 33.9**	**-3.2**
PETK	**Petropavlovsk-**	**1.95**	**281**	Pn	**Pb**	**22 07 13.6**	**-0.7**
	56nm,0.3s,baz=97,slow=21,SNR=148						
PETK				Sn	**Sn**	**22 07 37.6**	**+0.5**
	39nm,0.3s,baz=98,slow=20,SNR=20						
PETK	**Petropavlovsk-**	**1.95**	**281**	*e*Pn	**Pb**	**22 07 13.2**	**-1.1**
PETK				*e*Sn	**Sn**	**22 07 35.5**	**-1.6**
PEA1	**Petropavlovsk-**	**1.96**	**281**	*e*Pn	**Pb**	**22 07 13.6**	**-0.7**
PEA1				*e*Sn	**Sn**	**22 07 37.6**	**+0.5**
KDTR	**Khodutka, Kamc**	**1.98**	**242**	*e*P	**Pn**	**22 07 13.0**	**+0.6**
KDTR				*e*S	**Sn**	**22 07 36.4**	**-1.2**
GNL	**Ganaly**	**1.99**	**299**	*e*P	**Pb**	**22 07 15.2**	**+0.2**
GNL				*e*S	**Sb**	**22 07 39.8**	**-0.4**
GNL	**Ganaly**	**1.99**	**299**	PN	**Pb**	**22 07 15.2**	**+0.2**
GNL				S	**Sb**	**22 07 39.8**	**-0.4**
APC	**Apacha**	**2.26**	**275**	*e*P	**Pb**	**22 07 18.9**	**-0.6**
APC				*e*S	**Sb**	**22 07 46.6**	**-1.3**
APC	**Apacha**	**2.26**	**275**	PN	**Pb**	**22 07 18.9**	**-0.6**
APC				S	**Sb**	**22 07 46.6**	**-1.3**
KZV	**Kizimen**	**2.37**	**352**	*e*P	**Pg**	**22 07 22.2**	**-1.3**
KZV	**Kizimen**	**2.37**	**352**	PN	**Pg**	**22 07 22.2**	**-1.3**
TUMD	**Tumrok D**	**2.45**	**354**	*e*P	**Pb**	**22 07 23.0**	**+0.3**
TUMD				*e*S	**Sb**	**22 07 53.0**	**-0.3**
TUMR	**Tumrok**	**2.55**	**351**	*e*P	**Pb**	**22 07 25.0**	**+0.5**
TUMR				*e*S	**Sb**	**22 07 57.0**	**+0.7**
TUMR	**Tumrok**	**2.55**	**351**	PN	**Pb**	**22 07 25.0**	**+0.5**
TUMR				S	**Sb**	**22 07 57.0**	**+0.7**
MIPR	**Malaya Ipel'ka**	**2.57**	**260**	*e*P	**Pb**	**22 07 24.5**	**-0.3**
MIPR				*e*S	**Sb**	**22 07 55.8**	**-0.9**
MIPR	**Malaya Ipel'ka**	**2.57**	**260**	PN	**Pb**	**22 07 24.5**	**-0.3**
MIPR				S	**Sb**	**22 07 55.8**	**-0.9**
PAU	**Pauzhetka**	**2.83**	**244**	*e*P	**Pn**	**22 07 26.4**	**+2.2**
PAU	**Pauzhetka**	**2.83**	**244**	PN	**Pn**	**22 07 26.4**	**+2.2**
KMNR	**Kamenistaya**	**3.01**	**353**	*e*P	**Pb**	**22 07 32.5**	**+0.1**
KMNR				*e*S	**Sb**	**22 08 09.3**	**-0.2**
KMNR	**Kamenistaya**	**3.01**	**353**	PN	**Pb**	**22 07 32.5**	**+0.1**
KMNR				S	**Sb**	**22 08 09.3**	**-0.2**
BZGR	**Bezymyannyi-Gr**	**3.17**	**358**	*e*P	**Pb**	**22 07 34.8**	**-0.3**
BZGR				*e*S	**Sb**	**22 08 13.3**	**-0.9**
BZGR	**Bezymyannyi-Gr**	**3.17**	**358**	PN	**Pb**	**22 07 34.8**	**-0.3**
BZGR				S	**Sb**	**22 08 13.3**	**-0.9**
BZMR	**Bezymyannaya**	**3.17**	**356**	*e*P	**Pb**	**22 07 35.1**	**-0.1**
BZMR				*e*S	**Sb**	**22 08 14.4**	**+0.1**
BZMR	**Bezymyannaya**	**3.17**	**356**	PN	**Pb**	**22 07 35.1**	**-0.1**
BZMR				S	**Sb**	**22 08 14.4**	**+0.1**
KIRR	**Kirishev**	**3.20**	**355**	*e*P	**Pb**	**22 07 35.6**	**0.0**
KIRR				*e*S	**Sb**	**22 08 13.3**	**-1.7**
KIRR	**Kirishev**	**3.20**	**355**	PN	**Pb**	**22 07 35.6**	**0.0**
BZWR	**Bezymyannyi-We**	**3.20**	**356**	*e*P	**Pb**	**22 07 35.3**	**-0.4**
BZWR				*e*S	**Sb**	**22 08 13.7**	**-1.4**
BZWR	**Bezymyannyi-We**	**3.20**	**356**	PN	**Pb**	**22 07 35.3**	**-0.4**
KPT	**Kopyto**	**3.22**	**353**	*e*P	**Pb**	**22 07 33.8**	**-2.1**
KPT	**Kopyto**	**3.22**	**353**	PN	**Pb**	**22 07 33.8**	**-2.1**
ZLN	**Zelenaya**	**3.25**	**359**	*e*P	**Pb**	**22 07 36.1**	**-0.3**
ZLN				*e*S	**Sb**	**22 08 15.5**	**-0.8**
ZLN	**Zelenaya**	**3.25**	**359**	PN	**Pb**	**22 07 36.1**	**-0.3**
ZLN				S	**Sb**	**22 08 15.5**	**-0.8**
LGNR	**Loginova**	**3.31**	**358**	*e*P	**Pb**	**22 07 37.5**	**-0.2**
LGNR				*e*S	**Sb**	**22 08 17.3**	**-1.2**
LGNR	**Loginova**	**3.31**	**358**	PN	**Pb**	**22 07 37.5**	**-0.2**
LGNR				S	**Sb**	**22 08 17.3**	**-1.2**
KOZ	**Kozyrevsk**	**3.34**	**350**	*e*P	**Pb**	**22 07 36.8**	**-1.1**
KOZ				*e*S	**Sb**	**22 08 16.1**	**-2.8**
KOZ	**Kozyrevsk**	**3.34**	**350**	PN	**Pb**	**22 07 36.8**	**-1.1**
CIRR	**Tsirk**	**3.35**	**359**	*e*P	**Pb**	**22 07 37.6**	**-0.5**
CIRR				*e*S	**Sb**	**22 08 19.2**	**0.0**
CIRR	**Tsirk**	**3.35**	**359**	PN	**Pb**	**22 07 37.6**	**-0.5**
CIRR				S	**Sb**	**22 08 19.2**	**0.0**
ESO	**Esso**	**3.40**	**339**	*e*P	**Pb**	**22 07 37.4**	**-1.6**
ESO	**Esso**	**3.40**	**339**	PN	**Pb**	**22 07 37.4**	**-1.6**
KRSR	**Krestovskiy**	**3.45**	**357**	*e*P	**Pb**	**22 07 39.0**	**-0.9**
KRSR	**Krestovskiy**	**3.45**	**357**	PN	**Pb**	**22 07 39.0**	**-0.9**
KLY	**Klyuchi**	**3.55**	**358**	*e*P	**Pb**	**22 07 40.7**	**-0.7**
KLY				*e*S	**Sb**	**22 08 22.9**	**-1.9**
KLY	**Klyuchi**	**3.55**	**358**	PN	**Pb**	**22 07 40.7**	**-0.7**
KBTR	**Krutoberegovo**	**3.62**	**17**	*e*P	**Pb**	**22 07 39.0**	**-3.7**
KBTR	**Krutoberegovo**	**3.62**	**17**	PN	**Pb**	**22 07 39.0**	**-3.7**
SKR	**Severo-Kuril's**	**3.63**	**237**	*e*PN	**Pn**	**22 07 35.7**	**+0.6**
SKR				pmax	pmax		
	comp=Z,34nm,0.4s						
BDR	**Baidarnaya**	**3.80**	**3**	*e*P	**Pb**	**22 07 44.7**	**-1.2**
BDR	**Baidarnaya**	**3.80**	**3**	PN	**Pb**	**22 07 44.7**	**-1.2**
SMKR	**Semkarok**	**3.83**	**5**	*e*P	**Pb**	**22 07 43.9**	**-2.4**
SMKR				*e*S	**Sb**	**22 08 31.6**	**-1.4**
SMKR	**Semkarok**	**3.83**	**5**	PN	**Pb**	**22 07 43.9**	**-2.4**
SMKR				S	**Sb**	**22 08 31.6**	**-1.4**
BKI	**Bering**	**3.87**	**49**	*e*P	**Pn**	**22 07 40.7**	**+2.3**
BKI				*e*S	**Sn**	**22 08 23.4**	**-0.8**
BKI	**Bering**	**3.87**	**49**	PN	**Pn**	**22 07 40.7**	**+2.3**
SRKR	**Sorokina**	**3.89**	**2**	*e*P	**Pb**	**22 07 46.1**	**-1.2**
SRKR				*e*S	**Sb**	**22 08 33.0**	**-1.8**
SRKR	**Sorokina**	**3.89**	**2**	PN	**Pb**	**22 07 46.1**	**-1.2**
SRKR				S	**Sb**	**22 08 33.0**	**-1.8**
MA2	**Magadan**	**8.84**	**324**	*i* PN	**Pn**	**22 08 49.5**	**+2.9**
ASAJ	**Asahikawa**	**14.87**	**242**	Pn	**Pn**	**22 10 08

ISN 17 22:19:06.2±1.1, 37.′15N×42.′58E, h0km±5km, ML2.6
CSEM 17 22:19:06.3±0.2, 37.′19N×42.′50E, h2km, ML2.7, Error ellipse: s-maj=6.1km s-min=3.8km az=42.0
DDA 17 22:19:06.4, 37.′14N×42.′40E, h7km, Ml2.8
ISK 17 22:19:06.2, 37.′27N×42.′41E, h5km, ML2.7/4
ISC 17 22:19:06.9±1.4, 37.′22N±0.′05×42.′46E±0.′03, h2km±11km, n37, σ0.′86/51, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRN	**S¨–rnak**	**0.28**	**352**	*i* P	**Pg**	**22 19 11.8**	**-0.4**
SIRN	**S¨–rnak**	**0.28**	**352**	P	**Pg**	**22 19 11.8**	**-0.4**
SIRT	**Sirnak**	**0.28**	**356**	PG	**Pg**	**22 19 11.6**	**-0.7**
SIRT				SG	**Sg**	**22 19 16.1**	**+0.2**
SIRT	**Sirnak**	**0.28**	**356**	*e*Pg	**Pg**	**22 19 11.6**	**-0.7**
SIRT				*e*Sg	**Sg**	**22 19 16.1**	**+0.2**
SRTM	**Siirt_Merkez**	**0.88**	**331**	*i* P	**Pg**	**22 19 24.1**	**+0.3**
SRTM				*i* S	**Sb**	**22 19 38.1**	**+0.9**
SRTM	**Siirt_Merkez**	**0.88**	**331**	P	**Pg**	**22 19 24.1**	**+0.3**
SRTM				S	**Sb**	**22 19 38.1**	**+0.9**
HAKT	**HAKKARI**	**1.05**	**71**	*i* P	**Pg**	**22 19 26.3**	**-0.7**
HAKT				*i* S	**Sn**	**22 19 44.4**	**+0.2**
HAKT	**HAKKARI**	**1.05**	**71**	P	**Pg**	**22 19 26.3**	**-0.7**
HAKT				S	**Sn**	**22 19 44.4**	**+0.2**
BTMN	**Batman**	**1.16**	**305**	*i* P	**Pg**	**22 19 29.5**	**+0.4**
BTMN				*i* S	**Sb**	**22 19 45.6**	**+0.4**
BTMN	**Batman**	**1.16**	**305**	P	**Pg**	**22 19 29.5**	**+0.4**
BTMN				S	**Sb**	**22 19 45.7**	**+0.4**
GEVA	**Gevas**	**1.19**	**23**	*i* P	**Pn**	**22 19 30.9**	**+0.2**
GEVA	**Gevas**	**1.19**	**23**	P	**Pn**	**22 19 30.9**	**+0.2**
MARD	**Mardin**	**1.34**	**274**	*i* P	**Pn**	**22 19 31.3**	**-1.5**
MARD				*i* S	**Sb**	**22 19 50.4**	**-0.3**
SVAN	**Silvan-Diyarba**	**1.36**	**313**	PN	**Pn**	**22 19 32.1**	**-1.0**
SVAN	**Silvan-Diyarba**	**1.36**	**313**	*i* P	**Pn**	**22 19 31.8**	**-1.3**
SVAN				*i* S	**Sn**	**22 19 51.9**	**+0.1**
SVAN	**Silvan-Diyarba**	**1.36**	**313**	P	**Pn**	**22 19 31.8**	**-1.3**
SVAN	**Silvan-Diyarba**	**1.36**	**313**	*e*Pn	**Pn**	**22 19 32.1**	**-1.0**
SVAN				S	**Sn**	**22 19 51.9**	**+0.1**
GURO	**Guroymak-BITLI**	**1.37**	**346**	PN	**Pn**	**22 19 32.8**	**-0.4**
GURO				SN	**Sg**	**22 19 51.7**	**+0.8**
GURO	**Guroymak-BITLI**	**1.37**	**346**	*e*Pn	**Pn**	**22 19 32.8**	**-0.4**
GURO				*e*Sn	**Sg**	**22 19 51.7**	**+0.8**
YOVA	**Hakkari_Y¨...kse**	**1.50**	**75**	*i* P	**Pg**	**22 19 35.0**	**-0.7**
YOVA				*i* S	**Sg**	**22 19 58.5**	**+3.4**
YOVA	**Hakkari_Y¨...kse**	**1.50**	**75**	P	**Pg**	**22 19 35.0**	**-0.7**
MAZI	**Mazidag**	**1.62**	**279**	PN	**Pb**	**22 19 37.2**	**-0.5**
MAZI	**Mazidag**	**1.62**	**279**	*e*Pn	**Pb**	**22 19 37.2**	**-0.5**
DIY	**Diyarbakir**	**1.90**	**291**	*e*Pn	**Pb**	**22 19 41.4**	**-1.0**
DYBB	**Diyarbakir**	**1.98**	**292**	PN	**Pn**	**22 19 41.4**	**-0.2**
DIYA	**Diyarbakir**	**1.99**	**291**	*i* S	**Sb**	**22 20 09.8**	**+0.7**
DIYA	**Diyarbakir**	**1.99**	**291**	S	**Sb**	**22 20 09.8**	**+0.7**
EKAR	**Karacoban**	**2.05**	**351**	*i* P	**Pb**	**22 19 43.7**	**-1.4**
EKAR	**Karacoban**	**2.05**	**351**	P	**Pb**	**22 19 43.7**	**-1.4**
BNGB	**Bing¨¶l**	**2.26**	**322**	PN	**Pn**	**22 19 45.3**	**-0.1**
BINT	**Bingol**	**2.27**	**317**	*e*Pn	**Pn**	**22 19 45.3**	**-0.3**
AGRB	**Hanur-Agry**	**2.38**	**10**	PN	**Pn**	**22 19 47.3**	**+0.1**
AGRB	**Hanur-Agry**	**2.38**	**10**	*e*Pn	**Pn**	**22 19 47.3**	**+0.1**
SVRC	**Sivrice-ELAZID**	**2.75**	**296**	PN	**Pn**	**22 19 52.1**	**-0.2**
SVRC	**Sivrice-ELAZID**	**2.75**	**296**	*e*Pn	**Pn**	**22 19 52.1**	**-0.2**
MALT	**Malatya**	**3.38**	**290**	PN	**Pn**	**22 20 01.7**	**+0.9**
MALT	**Malatya**	**3.38**	**290**	*e*Pn	**Pn**	**22 20 01.7**	**+0.9**

IDC 17 22:31:34.7±1.0, 21.′41S×174.′21W, h0km, mb3.9/5, mb1 4.2/5, mb1mx3.8/46, mbtmp3.9/5, Error ellipse: s-maj=45.3km s-min=27.3km az=149.0
ISC 17 22:31:38.3±1.1, 21.′5S±0.′3×174.′1W±0.′2, h25km, n12, σ1.9±17/12, mb3.9/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**18.10**	**265**	P	**P**	**22 35 50.2**	**+1.8**
	0.2nm,0.3s,baz=95,slow=18,SNR=3.4						
STKA	**Stephens Creek**	**40.69**	**246**	P	**P**	**22 39 17.2**	**+0.3**
	1.7nm,0.6s,baz=124,slow=7.3,SNR=4.7						
WRA	**Warramunga Arr**	**48.09**	**262**	P	**P**	**22 40 14.0**	**-2.3**
	1.2nm,0.6s,baz=97,slow=7.1,SNR=3.9						
NVAR	**Mina Array Bea**	**79.28**	**41**	P	**P**	**22 43 41.9**	**0.0**
	0.7nm,0.7s,baz=220,slow=8.0,SNR=6.1						
KSRS	**Korea Array**	**80.08**	**317**	P	**P**	**22 43 47.0**	**+1.1**
	0.5nm,0.4s,baz=133,slow=7.1,SNR=4.0						
ILAR	**Eielson Array**	**88.50**	**11**	P	**P**	**22 44 27.8**	**-0.3**
	0.5nm,0.9s,baz=217,slow=6.0,SNR=4.5						
EKA	**Eskdalemuir Ar**	**145.52**	**9**	PKPbc	**PKPab**	**22 51 14.7**	**+0.4**
	0.3nm,0.6s,baz=201,slow=25,SNR=2.6						
AKASG	**Malin Array Be**	**145.58**	**334**	PKPbc	**PKPdf**	**22 51 13.6**	**-0.6**
	0.5nm,0.4s,baz=39,slow=4.6,SNR=8.2						
BRTR	**Keskin Array B**	**150.18**	**314**	PKPbc	**PKPbc**	**22 51 26.7**	**-0.8**
	0.7nm,0.8s,baz=101,slow=3.3,SNR=4.4						
MMAI	**Mount Meron Ar**	**151.48**	**300**	PKPbc	**PKPbc**	**22 51 30.9**	**+0.3**
	0.5nm,0.6s,baz=104,slow=6.1,SNR=2.4						
GERES	**GERESS Array B**	**152.00**	**349**	PKPbc	**PKPbc**	**22 51 31.0**	**-0.3**
	0.1nm,0.3s,baz=338,slow=2.1,SNR=3.9						
TORD	**Torodi Ar. Bea**	**170.78**	**153**	PKPab	**PKPab**	**22 53 04.0**	**+1.0**
	0.5nm,0.9s,baz=192,slow=4.9,SNR=2.2						

ISCJB 17 22:36:01.3±0.3, 7.′54S±0.′03×128.′83E±0.′04, h131km, mb4.4/6, Error ellipse: s-maj=5.5km s-min=4.1km az=3.2
NEIC 17 22:36:03.8±0.7, 7.′56S×128.′87E, h140km±9km, mb4.7/3, Error ellipse: s-maj=9.4km s-min=7.6km az=221.0
IDC 17 22:36:04.7±1.9, 7.′37S×128.′63E, h135km±16km, mb3.9/5, mb1 3.8/7, mb1mx3.4/50, mbtmp4.2/7, Error ellipse: s-maj=27.4km s-min=13.6km az=126.0
ISC 17 22:36:02.3±0.6, 7.′66S±0.′05×128.′88E±0.′06, h131km, n39, σ2.9±53/43, mb4.3/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**5.02**	**245**	*e*Pn	**Pn**	**22 37 18.0**	**+2.2**
SOEI				*e*Sn	**Sn**	**22 38 12.5**	**-0.4**
MTN	**Manton Dam**	**5.61**	**157**	*e*Pn	Pn	22 37 28.7	+5.1
MTN				*e*Sn	**Sn**	**22 38 31.4**	**+4.4**
BATI	**Baumata**	**5.75**	**243**	P	**Pn**	**22 37 28.4**	**+2.9**
	127nm,0.3s,baz=91,slow=4.2,SNR=74						
BATI				S	**Sn**	**22 38 30.2**	**-0.2**
	63nm,0.3s,baz=161,slow=17,SNR=14						
FAKI	**Fak Fak**	**5.78**	**36**	*e*Pn	**Pn**	**22 37 26.5**	**+0.6**
FAKI				*e*Sn	**Sn**	**22 38 29.8**	**-1.4**
MMRI	**Maumere**	**6.65**	**261**	*e*Pn	**Pn**	**22 37 38.6**	**+1.0**
SIJI	**Sorong**	**7.15**	**20**	P	**Pn**	**22 37 46.0**	**+1.6**
	2.8nm,0.3s,baz=239,slow=23,SNR=14						
SIJI				S	**Sn**	**22 39 01.4**	**-2.8**
	3.5nm,0.3s,baz=204,slow=19,SNR=5.6						
WRAB	**Tennant Creek**	**13.30**	**157**	*e*Pn	**Pn**	**22 39 07.7**	**+1.6**
WRAB				*e*Sn	**Sn**	**22 41 32.8**	**-0.3**
WR1	**Warramunga Arr**	**13.31**	**157**	*e*Pn	**Pn**	**22 39 07.7**	**+1.5**
WR1				*e*Sn	**Sn**	**22 41 29.6**	**-3.5**
WRA	**Warramunga Arr**	**13.31**	**157**	P	**Pn**	**22 39 07.7**	**+1.5**
	1.0nm,0.3s,baz=330,slow=14,SNR=49						
WRA				S	**Sn**	**22 41 29.6**	**-3.5**
	3.0nm,0.3s,baz=338,slow=22,SNR=7.5						
WB2	**Warramunga Arr**	**13.31**	**157**	*e*Pn	**Pn**	**22 39 08.1**	**+1.9**
WB2				*e*Sn	**Sn**	**22 41 30.1**	**-3.2**
JAGI	**Jajag, Banyuwa**	**14.61**	**266**	*e*Pn	**Pn**	**22 39 20.8**	**-2.0**
COEN	**Coen**	**15.37**	**115**	*e*Pn	**P**	**22 39 33.8**	**-0.2**
	55nm,1.5s						
MBWA	**Marble Bar**	**16.07**	**212**	*e*Pn	**P**	**22 39 42.5**	**+0.7**
	52nm,1.6s						
AS31	**Alice Springs**	**16.63**	**164**	*e*P	**P**	**22 39 52.6**	**+4.6**
AS31				*e*pP	**pP**	**22 40 03.8**	**-7.3**
AS31				*e*S	**Sn**	**22 42 48.9**	**-4.3**
ASAR	**Alice Springs**	**16.63**	**164**	P	**P**	**22 39 52.6**	**+4.6**
	0.3nm,0.3s,baz=340,slow=10.0,SNR=7.0						
ASAR				S	**Sn**	**22 42 48.9**	**-4.3**
	0.5nm,0.3s,baz=345,slow=25,SNR=4.4						
LHI	**Lord Howe Isla**	**36.81**	**134**	*e*P	**P**	**22 42 55.1**	**-2.6**
	611nm,1.6s						
PETK	**Petropavlovsk-**	**65.29**	**19**	P	**P**	**22 46 30.6**	**+0.6**
	2.9nm,0.6s,baz=183,slow=3.6,SNR=4.4						
PEA1	**Petropavlovsk-**	**65.30**	**19**	*e*P	**P**	**22 46 30.6**	**+0.6**
MK01	**Makanchi Array**	**68.15**	**327**	*e*P	**P**	**22 46 48.1**	**-0.2**
MK31	**Makanchi Array**	**68.17**	**327**	*e*P	**P**	**22 46 48.6**	**+0.2**
MK32	**Makanchi Array**	**68.17**	**327**	*e*P	**P**	**22 46 48.2**	**-0.2**
MKAR	**Makanchi Array**	**68.17**	**327**	P	**P**	**22 46 48.2**	**-0.2**
	1.3nm,0.4s,baz=120,slow=8.0,SNR=18						
MKAR	**Makanchi Array**	**68.17**	**327**	*e*P	**P**	**22 46 48.6**	**+0.2**
	9.0nm,0.4s						
ZALV	**Zalesovo Beam**	**71.69**	**334**	P	**P**	**22 47 09.1**	**-0.6**
	1.8nm,0.5s,baz=145,slow=5.2,SNR=9.0						
ZALV	**Zalesovo Beam**	**71.69**	**334**	*e*P	**P**	**22 47 08.8**	**-0.9**
ZAA1	**Zalesovo Array**	**71.69**	**334**	*e*P	**P**	**22 47 09.1**	**-0.6**
KURBB	**Kurchatov Arra**	**72.49**	**329**	P	**P**	**22 47 14.3**	**-0.2**
	1.8nm,0.4s,baz=134,slow=5.0,SNR=24						
KURK	**Kurchatov**	**72.50**	**329**	*e*P	**P**	**22 47 14.3**	**-0.3**
BVAR	**Borovoye Array**	**78.03**	**328**	P	**P**	**22 47 46.7**	**+0.5**
	0.4nm,0.4s,baz=121,slow=6.9,SNR=6.0						
OKC	**Ostrava-Krasne**	**109.15**	**320**	AMS	AMS	22 55 30.0	
	600nm,21.3s						
DPC	**Dobruska-Polom**	**110.20**	**321**	AMS	AMS	22 55 50.0	
	700nm,20.8s						
UPC	**Upice**	**110.36**	**321**	AMS	AMS	22 57 20.0	
	800nm,20.4s						
GOPC	**GO Pecny, Ondr**	**111.26**	**321**	AMS	AMS	22 56 40.0	
	800nm,22.3s						
PRA	**Prague**	**111.44**	**321**	AMS	AMS	22 57 20.0	
	700nm,17.7s						
KHC	**Kasperske Hory**	**112.22**	**320**	AMS	AMS	22 54 20.0	
	700nm,21.2s						
NKC	**Nove Kostel**	**112.63**	**321**	AMS	AMS	23 00 40.0	
	600nm,16.4s						
PV12	**Saucer Basin,**	**119.90**	**50**	*e*Pdif	**Pdif**	**22 51 01.8**	**+0.1**
LPAZ	**La Paz**	**150.85**	**145**	PKPbc	**PKPbc**	**22 55 43.9**	**+2.7**
	0.8nm,0.4s,baz=160,slow=3.1,SNR=6.6						
LPAZ	**La Paz**	**150.85**	**145**	*e*PKPbc	**PKPbc**	**22 55 44.2**	**+3.1**

IDC 17 22:48:28.2±2.0, 23.′99N×143.′21E, h379km±19km, mb3.1/7, mb1 3.2/8, mb1mx2.8/62, mbtmp3.8/8, Error ellipse: s-maj=27.6km s-min=21.1km az=85.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**3.23**	**343**	P	Pn	22 49 31.6	-0.1
	11nm,0.3s,baz=253,slow=21,SNR=5.9						
JCJ				S	S	22 50 36.3	+13
	baz=308,slow=19						
KSRS	**Korea Array**	**18.75**	**319**	P	P	22 52 25.6	+4.0
	0.1nm,0.3s,baz=148,slow=8.8,SNR=7.0						
ASAR	**Alice Springs**	**48.23**	**191**	P	P	22 56 32.6	+0.2
	0.2nm,0.4s,baz=341,slow=9.6,SNR=6.8						
MKAR	**Makanchi Array**	**53.19**	**311**	P	P	22 57 08.2	-0.7
	0.2nm,0.3s,baz=97,slow=8.2,SNR=5.7						
BVAR	**Borovoye Array**	**60.96**	**319**	P	P	22 58 02.8	+0.2
	1.5nm,0.4s,baz=79,slow=7.8,SNR=18						
YKA	**Yellowknife Ar**	**74.43**	**28**	P	P	22 59 26.9	+1.4
	0.4nm,0.6s,baz=292,slow=6.0,SNR=3.0						
ARCES	**ARCESS Array B**	**76.77**	**341**	P	P	22 59 39.7	+1.2
	1.9nm,0.7s,baz=44,slow=6.6,SNR=6.6						
FINES	**FINESS Array B**	**81.13**	**344**	P	P	23 00 01.0	-1.1
	0.7nm,0.5s,baz=92,slow=5.7,SNR=9.9						
NVAR	**Mina Array Bea**	**81.70**	**52**	P	P	23 00 04.3	-1.6
	0.3nm,0.7s,baz=316,slow=5.0,SNR=3.0						

IDC 17 22:52:29.9±1.6, 26.′87N×143.′61E, h0km, mb3.6/5, mb1 3.9/8, mb1mx3.6/60, mbtmp3.8/8, ML3.7/3, Error ellipse: s-maj=31.1km s-min=23.3km az=70.0
ISCJB 17 22:52:32.4±1.2, 26.′9N±0.′1×143.′7E±0.′1, h33km, mb3.6/5, Error ellipse: s-maj=18.4km s-min=13.9km az=177.3
ISC 17 22:52:34.7±1.5, 27.′0N±0.′1×143.′6E±0.′1, h35km, n10, σ1.9±05/11, mb3.8/5, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**1.29**	**275**	Pn	**Pn**	**22 52 55.9**	**-0.3**
	22nm,0.3s,baz=287,slow=20,SNR=9.9						
JCJ				Sn	**Sn**	**22 53 12.5**	**+0.3**
	92nm,0.3s,baz=270,slow=20,SNR=25						
MJAR	**Matsushiro Arr**	**10.58**	**336**	Pn	**Pn**	**22 55 02.3**	**-1.5**
	4.1nm,0.3s,baz=158,slow=10,SNR=35						
MAT	**Matsushiro**	**10.58**	**336**	P	**Pn**	**22 55 02.6**	**-1.2**
KSRS	**Korea Array**	**16.87**	**312**	Pn	**P**	**22 56 29.4**	**-0.4**
	0.2nm,0.3s,baz=120,slow=12,SNR=16						
USRK	**Ussuriysk Ar.**	**19.58**	**334**	P	**Pn**	**22 57 01.1**	**+0.1**
	0.5nm,0.3s,baz=145,slow=12,SNR=4.6						
KLR	**Kul'dur**	**24.04**	**341**	P	**P**	**22 57 47.5**	**+1.2**
	0.2nm,0.6s,baz=140,slow=7.5,SNR=12						
WRA	**Warramunga Arr**	**47.51**	**192**	P	**P**	**23 01 05.8**	**-0.7**
	0.8nm,0.7s,baz=12,slow=8.4,SNR=4.0						
MKAR	**Makanchi Array**	**51.53**	**310**	P	**P**	**23 01 38.2**	**+1.1**
	0.4nm,0.5s,baz=90,slow=7.1,SNR=4.3						
KURBB	**Kurchatov Arra**	**54.03**	**314**	P	**P**	**23 01 56.4**	**+1.0**
	1.5nm,1.0s,baz=89,slow=7.1,SNR=5.1						
BVAR	**Borovoye Array**	**58.99**	**318**	P	**P**	**23 02 31.4**	**+0.8**
	0.5nm,0.5s,baz=99,slow=6.2,SNR=6.6						

IDC 17 23:18:50.2±1.9, 10.′91N×125.′34E, h0km, mb4.0/8, mb1 4.0/8, mb1mx3.6/58, mbtmp4.0/8, MS3.7/1, Ms1 3.7/1, ms1mx3.0/56, Error ellipse: s-maj=187.2km s-min=18.4km az=66.0
MAN 17 23:18:51.2, 11.′17N×126.′08E, h1km, mb4.8, ML3.7, MS3.6
NEIC 17 23:18:55.4±0.5, 10.′92N×125.′35E, h35km, mb4.5/8, Error ellipse: s-maj=25.7km s-min=8.2km az=75.0
ISC 17 23:18:53.9±1.6, 11.′17N±0.′04×126.′04E±0.′08, h29km±11km, n29, σ2.9±42/36, mb4.4/16, 2C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.73**	**306**	*e*P	**Pb**	**23 19 05.5**	**-2.5**
BESP				*e*S	**Sn**	**23 19 21.5**	**+3.2**
PLP	**Palo**	**1.04**	**270**	*e*P	**Pb**	**23 19 11.3**	**-1.9**
PLP				*i* S	**Sn**	**23 19 29.1**	**+3.1**
SCPH	**Surigao**	**1.48**	**201**	*e*P	**Pn**	**23 19 18.3**	**-0.3**
SCPH				*e*S	**Sb**	**23 19 37.7**	**-1.5**
MSLP	**Maasin**	**1.55**	**228**	*e*P	**Pb**	**23 19 20.4**	**-1.5**
MSLP				*e*S	**Sb**	**23 19 44.0**	**+2.8**
CNP	**Catarman**	**1.89**	**315**	*e*P	**Pb**	**23 19 25.3**	**-2.5**
CNP				*e*S	**Sb**	**23 19 55.1**	**+4.1**
LLP	**Lapu-Lapu**	**2.21**	**248**	*e*P	**Pb**	**23 19 31.1**	**-2.0**
LLP				*e*S	**Sb**	**23 20 01.9**	**+1.9**
BUTP	**Butuan**	**2.23**	**191**	*e*P	**Pb**	**23 19 36.1**	**+2.7**
BUTP				*e*S	**Sb**	**23 20 06.1**	**+5.5**
CGP	**Cagayan de Oro**	**3.01**	**206**	*e*P	**Pn**	**23 19 42.0**	**+2.4**
CGP				*e*S	**Sb**	**23 20 19.2**	**-3.8**
RCP	**Roxas**	**3.25**	**277**	*e*P	**Pn**	**23 19 45.9**	**+2.9**
BUKP	**Musuan**	**3.41**	**196**	*e*P	**Pn**	**23 19 47.1**	**+1.9**
BUKP				*e*S	**Sb**	**23 20 33.2**	**-1.5**
TATO	**Taipei**	**14.39**	**343**	Pn	**Pn**	**23 22 16.5**	**+0.8**
WRAB	**Tennant Creek**	**31.97**	**165**	P	**P**	**23 25 17.7**	**+0.1**
	1.2nm,0.9s						
WRA	**Warramunga Arr**	**31.98**	**165**	P	**P**	**23 25 15.9**	**-1.7**
	0.4nm,0.8s,baz=338,slow=9.9,SNR=3.2						
MBWA	**Marble Bar**	**32.72**	**191**	P	**P**	**23 25 21.2**	**-2.9**
	6.1nm,0.7s						
USRK	**Ussuriysk Ar.**	**33.31**	**8**	LR	LR	23 39 41.0	
	comp=Z,138nm,20.4s,baz=291,slow=37						
ASAR	**Alice Springs**	**35.47**	**168**	P	**P**	**23 25 49.6**	**+1.6**
	0.4nm,0.4s,baz=346,slow=7.2,SNR=6.9						
LSA	**Lhasa**	**37.32**	**305**	P	**P**	**23 26 01.5**	**-2.9**
	2.6nm,0.4s						
NWAO	**Narrogin (SRO)**	**44.65**	**191**	P	**P**	**23 27 02.3**	**-1.7**
	20nm,0.8s						
MKAR	**Makanchi Array**	**51.18**	**322**	P	**P**	**23 27 54.8**	**+0.2**
	1.5nm,0.6s,baz=122,slow=8.0,SNR=20						
MA2	**Magadan**	**51.73**	**16**	P	P	23 28 02.8	+4.4
	7.3nm,0.3s						
ZALV	**Zalesovo Beam**	**53.73**	**331**	P	**P**	**23 28 12.6**	**-0.7**
	1.6nm,0.6s,baz=126,slow=7.4,SNR=7.5						
KURK	**Kurchatov**	**55.20**	**325**	P	**P**	**23 28 23.6**	**-0.4**
KURBB	**Kurchatov Arra**	**55.21**	**325**	P	**P**	**23 28 23.6**	**-0.4**
	2.3nm,0.6s,baz=123,slow=7.0,SNR=26						
BVAR	**Borovoye Array**	**60.80**	**325**	P	**P**	**23 29 03.5**	**+0.3**
	0.7nm,0.6s,baz=109,slow=7.8,SNR=8.7						
BRVK	**Borovoye**	**60.87**	**325**	P	**P**	**23 29 03.4**	**-0.3**
	3.4nm,1.0s						
AKTO	**Aktyubinsk**	**67.49**	**320**	P	**P**	**23 29 46.3**	**-0.9**
	0.8nm,0.6s,baz=102,slow=9.3,SNR=3.3						
ARU	**Arti**	**68.35**	**326**	*e*P	**P**	**23 29 51.5**	**-1.0**
	4.8nm,1.2s						
INK	**Inuvik**	**83.54**	**22**	P	**P**	**23 31 22.3**	**+3.5**
	1.8nm,0.7s						
FINES	**FINESS Array B**	**85.00**	**332**	P	**P**	**23 31 25.6**	**-0.8**
	3.3nm,1.0s,baz=67,slow=4.7,SNR=8.0						

IDC 17 23:28:33.9±2.0, 0.′69S×133.′25E, h0km, mb3.5/2, mb1 3.7/3, mb1mx3.4/48, mbtmp3.5/3, ML3.4/1, Error ellipse: s-maj=37.7km s-min=25.6km az=52.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.00**	**265**	Pn	Pn	23 29 09.4	+0.5
	23nm,0.3s,baz=243,slow=23,SNR=133						
SIJI				Sn	Sn	23 29 35.2	+0.6
	10nm,0.3s,baz=248,slow=24,SNR=5.6						
WRA	**Warramunga Arr**	**19.16**	**177**	P	P	23 32 58.1	-1.1
	0.1nm,0.3s,baz=355,slow=11,SNR=4.9						
ASAR	**Alice Springs**	**22.85**	**178**	P	P	23 33 39.6	+0.7
	1.6nm,0.7s,baz=8.1,slow=11,SNR=13						
MKAR	**Makanchi Array**	**64.91**	**324**	P	P	23 39 15.1	-0.2
	0.3nm,0.6s,baz=118,slow=7.4,SNR=4.4						

IDC 17 23:30:31.7±4.3, 52.′97N×158.′88E, h0km, Error ellipse: s-maj=31.1km s-min=7.8km az=63.0, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**0.73**	**282**	Pg	Pg	23 30 45.5	-0.1
	3.9nm,0.3s,baz=101,slow=21,SNR=20						
PETK				Lg	Lg	23 30 56.1	
	1.4nm,0.3s,baz=84,slow=6.2,SNR=5.8						
H11N2	**WAKE ISLAND Hy**	**33.75**	**166**	H	H	00 12 50.6	
	baz=352,slow=76,SNR=624						
H11N3	**WAKE ISLAND Hy**	**33.77**	**166**	H	H	00 12 51.8	
	baz=352,slow=76,SNR=589						
H11N1	**WAKE ISLAND Hy**	**33.77**	**166**	H	H	00 12 51.2	
	baz=352,slow=76,SNR=516						
H11S1	**WAKE ISLAND Hy**	**34.92**	**167**	H	H	00 14 20.5	
	baz=352,slow=76,SNR=257						
H11S3	**WAKE ISLAND Hy**	**34.94**	**167**	H	H	00 14 21.4	
	baz=352,slow=76,SNR=962						
H11S2	**WAKE ISLAND Hy**	**34.94**	**167**	H	H	00 14 20.2	
	baz=352,slow=76,SNR=132						

IDC 17 23:32:03.0±0.8, 41.′95N×29.′27W, h0km, mb4.0/20, mb1 4.1/21, mb1mx3.9/57, mbtmp4.0/21, ML4.5/1, MS3.8/24, Ms1 3.8/24, ms1mx3.6/62, Error ellipse: s-maj=22.0km s-min=14.7km az=176.0
ISCJB 17 23:32:02.8±0.2, 41.′77N±0.′02×29.′13W±0.′03, h10km, mb4.5/132, MS3.9/33, Error ellipse: s-maj=3.8km s-min=3.2km az=140.9
CSEM 17 23:32:04.1±0.1, 41.′76N×29.′19W, h10km, mb4.7/76, Error ellipse: s-maj=5.5km s-min=4.3km az=60.0
BJI 17 23:32:05.0, 42.′60N×29.′10W, h10km, mb4.9/17, mB5.1/6, Ms4.8/3, Ms7 4.5/1
PDA 17 23:32:06.0±1.2, 41.′98N×29.′11W, h10km, ML3.8, Error ellipse: s-maj=12.2km s-min=6.2km az=69.0
MOS 17 23:32:07.6±1.0, 42.′54N×29.′09W, h29km, mb4.8/54, Error ellipse: s-maj=10.5km s-min=5.4km az=142.3
NEIC 17 23:32:07.4±0.3, 42.′44N×29.′11W, h10km, mb4.6/54, Error ellipse: s-maj=9.6km s-min=3.8km az=184.0
ISC 17 23:32:04.7±0.4, 41.′82N±0.′05×29.′14W±0.′05, h10km, n304, σ1.9±73/295, mb4.6/139, MS3.9/33, 10C-7D, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H07N1	**FLORES T-PHASE**	**2.60**	**216**	T	T	23 34 56.5	
	SNR=83						
PGRA	**Graciosa**	**2.92**	**162**	*e*P	**Pn**	**23 32 49.5**	**-1.7**
PGRA	**Graciosa**	**2.92**	**162**	*e*P	**Pn**	**23 32 49.5**	**-1.7**
ROSA	**Rosais**	**3.17**	**167**	*e*P	**Pn**	**23 32 53.9**	**-0.7**
ROSA				*e*S	**Sn**	**23 33 29.5**	**-3.0**
ROSA				A	A	23 33 33.3	
	17nm,0.6s						
ROSA	**Rosais**	**3.17**	**167**	*e*P	**Pn**	**23 32 53.9**	**-0.7**
ROSA				*e*S	**Sn**	**23 33 29.5**	**-3.0**
PCED	**Cedros**	**3.20**	**174**	*e*P	**Sg**	**23 33 49.3**	**+1.7**
CALA	**Caldeira**	**3.25**	**174**	*e*P	**Pn**	**23 32 56.8**	**+1.0**
PMAN	**Manadas**	**3.28**	**165**	*e*P	**Pn**	**23 32 55.6**	**-0.6**
PMAN				*e*S	**Sn**	**23

EKA Eskdalemuir Ar 21.70 43 P P 23 36 55.2 -0.4
comp=Z,0.6nm,0.6s,baz=248,slow=9.1,SNR=3.6
NRS Narsarsuaq 21.74 338 *eP* **P 23 36 52.3 -3.6**
comp=Z,40nm,1.4s
NRS Narsarsuaq 21.74 338 *eP* **P 23 36 52.3 -3.6**
NRS pmax pmax
comp=Z,40nm,1.4s
IVI Ivigtut 22.58 336 *eP* **P 23 37 01.9 -3.0**
comp=Z,14nm,1.0s
CAF Calviac 22.82 72 *eP* **P 23 37 07.9 +0.2**
CAF pmax pmax
comp=Z,47nm,1.7s
BGF Bois d'Agland 23.32 67 *eP* **P 23 37 13.2 +0.4**
BGF pmax pmax
comp=Z,51nm,1.4s
SSF Saint Saulge 23.78 66 *eP* **P 23 37 16.6 -0.7**
SSF pmax pmax
comp=Z,79nm,1.8s
SSF Saint Saulge 23.78 66 *eP* **P 23 37 16.6 -0.7**
comp=Z,79nm,1.8s
SMF Signal de Mont 24.01 67 *eP* **P 23 37 18.9 -0.6**
SMF pmax pmax
comp=Z,28nm,1.4s
SSB Saint Sauveur 24.55 70 *eP* **P 23 37 25.7 +1.1**
comp=Z,49nm,2.0s
SSB Saint Sauveur 24.55 70 *eP* **P 23 37 25.7 +1.1**
SSB pmax pmax
comp=Z,49nm,2.0s
UCC Uccle 24.64 57 *eP* **P 23 37 24.8 -0.4**
comp=Z,33nm,1.4s
UCC Uccle 24.64 57 *eP* **P 23 37 24.8 -0.4**
UCC pmax pmax
comp=Z,33nm,1.4s
VIVF Saint-Julien-I 24.68 71 *eP* **P 23 37 25.8 +0.1**
VIVF pmax pmax
comp=Z,42nm,1.9s
VIVF Saint-Julien-I 24.68 71 *eP* **P 23 37 25.8 +0.1**
comp=Z,42nm,1.9s
GIVF Givet 24.84 59 *eP* **P 23 37 27.8 +0.7**
GIVF pmax pmax
comp=Z,50nm,1.6s
BCLA Clavier 25.19 58 ⇑*P* **P 23 37 29.7 -0.5**
comp=Z,24nm,1.7s
CABF La Chapelle 25.56 67 *eP* **P 23 37 33.4 -0.3**
CABF pmax pmax
comp=Z,82nm,1.8s
MEM Membach 25.66 58 ⇑*P* **P 23 37 34.0 -0.4**
WLF Walferdange 25.66 60 ⇓*P* **P 23 37 34.2 -0.3**
comp=Z,24nm,1.8s
WLF Walferdange 25.66 60 *eP* **P 23 37 34.4 -0.1**
comp=Z,56nm,1.5s
WLF Walferdange 25.66 60 *eP* **P 23 37 34.4 -0.1**
WLF pmax pmax
comp=Z,56nm,1.5s
LPL La Plagne 26.07 70 *eP* **P 23 37 40.9 +2.4**
LPL pmax pmax
comp=Z,8.0nm,1.1s
BNI Bardonecchia 26.08 71 *eP* **P 23 37 39.8 +1.3**
comp=Z,30nm,1.6s
BNI Bardonecchia 26.08 71 *eP* **P 23 37 39.8 +1.3**
BNI pmax pmax
comp=Z,30nm,1.6s
LPG La Plagne 26.09 70 *eP* **P 23 37 39.0 +0.3**
LPG pmax pmax
comp=Z,14nm,1.4s
FRF La Foret Royal 26.24 74 *eP* **P 23 37 39.5 -0.3**
FRF pmax pmax
comp=Z,17nm,1.6s
ECH Echery 26.26 63 *eP* **P 23 37 40.1 +0.1**
comp=Z,28nm,1.3s
ECH Echery 26.26 63 *eP* **P 23 37 40.1 +0.1**
ECH pmax pmax
comp=Z,28nm,1.3s
CDF Champ du Feu 26.34 63 *eP* **P 23 37 42.5 +1.7**
CDF pmax pmax
comp=Z,38nm,1.5s
SENIN Lac Senin/Sane 26.41 68 *eP* **P 23 37 42.9 +1.4**
comp=Z,49nm,1.8s
BFO Black Forest 27.05 63 *eP* **P 23 37 47.0 -0.1**
comp=Z,10nm,1.2s
BFO Black Forest 27.05 63 *ceP* **P 23 37 47.6 +0.5**
SACV Santiago Islan 27.18 168 *eP* P 23 37 57.6 +9.2
comp=Z,64nm,1.4s
TUE Stuetta 27.81 67 *eP* **P 23 37 54.8 +0.6**
comp=Z,15nm,1.4s
SFJD Kangerlussuaq 27.85 342 LR LR 23 46 36.1
comp=Z,186nm,18.8s,baz=114,slow=32
SCHQ Schefferville 27.87 311 LR LR 23 47 04.0
comp=Z,214nm,20.2s,baz=56,slow=32
SCHQ Schefferville 27.87 311 *eP* **P 23 37 52.7 -1.6**
comp=Z,6.3nm,0.9s
EMMW East Machias 27.88 289 *eP* **P 23 37 57.5 +2.9**
comp=Z,17nm,1.0s
PQI Presque Isle 28.07 293 *eP* **P 23 37 59.2 +3.0**
comp=Z,20nm,1.1s
DAVA Damuels 28.12 65 *epP* **P 23 37 57.6 +0.7**
comp=Z,4.5nm,1.4s
RETA Reutte 28.71 65 *epP* **P 23 38 02.4 +0.4**
comp=Z,1.6nm,0.7s
FETA Feichten 28.72 66 *epP* **P 23 38 02.6 +0.5**
comp=Z,7.9nm,1.2s
VLC Villacollemand 28.82 72 *eP* **P 23 38 04.0 +1.1**
comp=Z,9.4nm,1.2s
GRFO Grafenberg 28.95 60 *eP* **P 23 38 04.6 +0.6**
comp=Z,28nm,1.6s
GRFO Grafenberg 28.95 60 *eP* **P 23 38 04.6 +0.6**
GRFO pmax pmax
comp=Z,28nm,1.6s
MOTA Moosalm 28.95 65 *eP* **P 23 38 03.5 -0.8**
comp=Z,5.4nm,1.1s
PKME Peaks-Kenny Pk 29.10 291 *eP* **P 23 38 06.0 +0.7**
comp=Z,30nm,1.4s
WATA Walderalm 29.27 65 *eP* **P 23 38 05.9 -1.2**
comp=Z,2.0nm,0.9s
WTTA Wattenberg 29.32 65 *eP* **P 23 38 05.2 -2.3**
comp=Z,4.9nm,1.0s
KONO Kongsberg 29.73 40 *i P* **P 23 38 11.0 +0.2**
KONO pmax pmax
comp=Z,10.0nm,1.1s
NKC Novy Kostel 29.75 59 AMS AMS 23 48 20.0
comp=Z,400nm,16.7s
ABTA Abfaltersbach 29.96 66 *epP* **P 23 38 13.5 +0.4**
comp=Z,9.1nm,1.3s
WET Wettzell 30.04 61 P **P 23 38 13.9 +0.2**
CLL Collm 30.12 57 ⇓*iP* **P 23 38 13.7 -0.6**
comp=Z,11nm,1.4s
CLL *i* sP **sP 23 38 19.0 +0.4**
CLL LmV 23 48 00.0
comp=Z,100nm,21.0s
CLL Collm 30.12 57 *eP* **P 23 38 13.2 -1.1**
comp=Z,15nm,1.7s
CLL Collm 30.12 57 *eP* **P 23 38 13.2 -1.1**
CLL pmax pmax
comp=Z,15nm,1.7s
KEST Kesra 30.43 89 P **P 23 38 17.6 +0.3**
comp=Z,2.2nm,0.8s,baz=175,slow=1.8,SNR=5.8
KEST LR LR 23 49 58.3
comp=Z,169nm,20.6s,baz=220,slow=35
KBA Koelnbreinsper 30.50 65 *epP* **P 23 38 18.1 +0.2**
comp=Z,14nm,1.1s
KHC Kasperske Hory 30.50 61 *eP* **P 23 38 16.9 -0.9**
KHC *ex* x 23 38 36.5
KHC AMS AMS 23 49 40.0
comp=Z,200nm,11.1s
KHC Kasperske Hory 30.50 61 *eP* **P 23 38 17.3 -0.5**
comp=Z,5.7nm,1.4s
KHC Kasperske Hory 30.50 61 *eP* **P 23 38 16.9 -0.9**
KHC MLR MLR
comp=Z,200nm,11.1s
GERES GERESS Array B 30.60 62 P **P 23 38 18.6 -0.1**
comp=Z,0.6nm,0.7s,baz=278,slow=9.0,SNR=8.0
GERES LR LR 23 48 59.9
comp=Z,210nm,20.6s,baz=272,slow=33
BRG Berggiesshubel 30.70 58 *eP* **P 23 38 19.0 -0.5**
comp=Z,13nm,1.8s
BRG Berggiesshubel 30.70 58 *eP* **P 23 38 19.0 -0.5**
BRG pmax pmax
comp=Z,13nm,1.8s
NOA NORSAR Array B 30.96 38 LR LR 23 48 49.8
comp=Z,92nm,21.3s,baz=200,slow=33
PRA Prague 31.02 60 AMS AMS 23 49 40.0
comp=Z,300nm,18.1s
MOA Molln 31.04 64 *epP* **P 23 38 22.8 +0.2**
comp=Z,11nm,1.6s
GOPC GO Pecny, Ondr 31.26 60 AMS AMS 23 49 40.0
comp=Z,300nm,15.7s
OBKA Obir 31.38 66 *eP* **P 23 38 24.5 -1.2**
comp=Z,7.7nm,0.9s
SOKA Soboth 31.69 66 *eP* **P 23 38 26.3 -2.1**
comp=Z,4.2nm,1.6s
HFS Hagfors 31.85 40 LR LR 23 49 48.8
comp=Z,151nm,19.7s,baz=260,slow=34
ARSA Arzberg 31.95 65 *eP* **P 23 38 28.8 -1.8**
comp=Z,7.4nm,1.4s
UPC Upice 32.02 59 AMS AMS 23 49 40.0
comp=Z,300nm,15.1s
CONA Conrad Observa 32.10 63 *epP* **P 23 38 32.3 +0.3**
comp=Z,5.8nm,1.4s
KSP Ksiaz 32.19 58 *eP* **P 23 38 32.4 -0.2**
KSP Ksiaz 32.19 58 *eP* **P 23 38 32.4 -0.2**
DPC Dobruska-Polom 32.23 59 AMS AMS 23 50 00.0
comp=Z,300nm,16.2s
KRUC Moravsky 32.35 61 *eP* **P 23 38 33.8 -0.3**
VRAC Vranov 32.47 61 ⇓*iP* **P 23 38 34.8 -0.3**
VRAC Vranov 32.47 61 *eP* **P 23 38 34.7 -0.3**
GKP Gorka Klasztor 32.77 53 *eP* **P 23 38 37.9 +0.3**
GKP Gorka Klasztor 32.77 53 *eP* **P 23 38 37.9 +0.3**
ZST Bratislava 32.90 63 *eP* **P 23 38 38.6 -0.3**
ZST Bratislava 32.90 63 *eP* **P 23 38 38.6 -0.3**
MODS Modra-Piesok 33.00 62 *eP* **P 23 38 38.4 -1.4**
MODS pmax pmax
comp=Z,13nm,1.3s
MODS Modra-Piesok 33.00 62 *eP* **P 23 38 38.4 -1.4**
MORC Moravsky Berou 33.05 60 *eP* **P 23 38 39.9 -0.2**
comp=Z,51nm,1.4s
MORC Moravsky Berou 33.05 60 *eP* **P 23 38 39.9 -0.2**
MORC pmax pmax
comp=Z,51nm,1.4s
MORC Moravsky Berou 33.05 60 *eP* **P 23 38 40.0 -0.2**
PAL Palisades 33.30 284 *eP* **P 23 38 42.6 +0.2**
comp=Z,16nm,1.0s
PAL Palisades 33.30 284 *eP* **P 23 38 42.6 +0.2**
PAL pmax pmax
comp=Z,16nm,1.0s
OKC Ostrava-Krasne 33.43 60 AMS AMS 23 50 30.0
comp=Z,200nm,21.5s
BLY Banja Luka 33.50 69 *eP* **P 23 38 43.4 -0.7**
comp=Z,23nm,2.0s
VAE Valguarnera 33.54 83 LR LR 23 51 30.5
comp=Z,406nm,18.0s,baz=324,slow=35
CUC Castrocucco 33.73 78 *eP* **P 23 38 46.0 -0.2**
comp=Z,11nm,1.4s
VYHS Vyhne 34.02 62 *eP* **P 23 38 48.2 -0.4**
VYHS pmax pmax
comp=Z,14nm,2.5s
VYHS Vyhne 34.02 62 *eP* **P 23 38 48.2 -0.4**
OJC Ojcow 34.46 59 *eP* **P 23 38 52.4 0.0**
OJC Ojcow 34.46 59 *eP* **P 23 38 52.8 +0.3**
comp=Z,20nm,1.3s
OJC Ojcow 34.46 59 *eP* **P 23 38 52.4 0.0**
TIP Tinagrande 34.69 79 *eP* **P 23 38 55.7 +1.1**
comp=Z,16nm,1.4s
PSZ Piszkesteto 34.80 63 *eP* **P 23 38 55.5 0.0**
comp=Z,7.7nm,1.1s
PSZ Piszkesteto 34.80 63 *eP* **P 23 38 55.5 0.0**
PSZ pmax pmax
comp=Z,8.0nm,1.1s
NIE Niedzica 34.87 60 *eP* **P 23 38 57.2 +1.2**
NIE Niedzica 34.87 60 *eP* **P 23 38 57.2 +1.2**
CRVS Cervenica-Dubn 35.69 61 *eP* **P 23 39 02.0 -1.0**
CRVS pmax pmax
comp=Z,20nm,1.8s
CRVS Cervenica-Dubn 35.69 61 *eP* **P 23 39 02.0 -1.0**
UZH Uzhgorod 36.27 61 *eP* **P 23 39 03.6 -4.4**
UZH *i* 23 39 07.0
UZH *e* 23 39 12.2
SIRR Siria 36.27 65 ⇓*iP* **P 23 39 07.3 -0.8**
BZS Buzias 36.38 66 ⇑*iP* **P 23 39 09.3 +0.3**
KWP Kalwaria Pacla 36.40 60 *eP* **P 23 39 09.4 +0.3**
KWP Kalwaria Pacla 36.40 60 *eP* **P 23 39 08.9 -0.2**
comp=Z,91nm,1.0s
KWP Kalwaria Pacla 36.40 60 *eP* **P 23 39 08.9 -0.2**
KWP pmax pmax
comp=Z,91nm,1.0s
TRPA Tarpa 36.52 62 ⇑*iP* **P 23 39 09.5 -0.6**
LVV L'vov 37.22 59 *eP* **P 23 39 16.8 +0.7**
LOT Lotru 37.89 66 ⇓*iP* **P 23 39 22.0 0.0**
FINES FINESS Array B 38.05 40 P **P 23 39 22.1 -0.8**
comp=Z,3.5nm,0.9s,baz=263,slow=7.7,SNR=4.2
BUR08 Bucovina Ar. S 38.37 62 *eP* **P 23 39 26.6 +0.6**
BUR04 Bucovina Ar. S 38.38 62 *eP* **P 23 39 26.2 +0.2**
BURAR Bucovina Array 38.38 62 ⇓*iP* **P 23 39 26.3 +0.2**
TORD Torodi Ar. Bea 39.16 128 P **P 23 39 33.4 +0.7**
comp=Z,7.0nm,1.1s,baz=323,slow=7.1,SNR=22
TORD LR LR 23 53 46.1
comp=Z,248nm,21.4s,baz=355,slow=33
ARCES ARCESS Array B 39.29 27 P **P 23 39 31.8 -1.4**
comp=Z,1.0nm,0.7s,baz=259,slow=7.2,SNR=3.8
MLR Muntele Rosu 39.37 65 LR LR 23 57 13.6
comp=Z,26nm,18.9s,baz=320,slow=38
MLR Muntele Rosu 39.37 65 ⇓*iP* **P 23 39 34.0 -0.4**
MLR Muntele Rosu 39.37 65 *eP* **P 23 39 34.4 0.0**
comp=Z,15nm,1.4s
MLR Muntele Rosu 39.37 65 *eP* **P 23 39 34.4 0.0**
MLR pmax pmax
comp=Z,15nm,1.4s
KIEV Kiev 40.35 57 *eP* **P 23 39 41.6 -0.7**
comp=Z,13nm,1.4s
KIEV Kiev 40.35 57 *i P* **P 23 39 43.0 +0.7**
KIEV pmax pmax
comp=Z,2.0nm,1.0s
AKASG Malin Array Be 40.36 57 P **P 23 39 41.4 -0.9**
comp=Z,1.3nm,0.7s,baz=280,slow=8.0,SNR=15
AKASG LR LR 23 55 42.7
comp=Z,210nm,19.2s,baz=265,slow=35
DBIC Dimbokro 41.11 142 LR LR 23 54 35.1
comp=Z,121nm,20.7s,baz=314,slow=33
IDI Anoyia 42.17 81 LR LR 23 58 01.3
comp=Z,38nm,18.0s,baz=314,slow=37
L40A Anamosa 45.25 292 *eP* **P 23 40 22.4 +0.2**
comp=Z,11nm,1.0s
ULM Lac du Bonnet 45.66 304 LR LR 23 57 59.2
comp=Z,234nm,19.8s,baz=30,slow=34
VSR Storozhevoye 46.35 54 *eP* **P 23 40 29.6 -1.1**
VSR pmax pmax
comp=Z,10.0nm,1.6s
VORD Divnogorie 46.50 54 *eP* **P 23 40 30.3 -1.6**
VORD pmax pmax
comp=Z,5.0nm,0.6s
BRTR Keskin Array B 46.64 71 P **P 23 40 32.9 -0.5**
comp=Z,0.9nm,1.0s,baz=291,slow=4.8,SNR=5.2
BRTR LR LR 23 59 08.2
comp=Z,87nm,20.2s,baz=333,slow=35
CCM Cathedral Cave 46.86 287 *eP* **P 23 40 37.3 +2.4**
comp=Z,8.1nm,1.3s
CCM Cathedral Cave 46.86 287 *eP* **P 23 40 37.3 +2.4**
CCM pmax pmax
comp=Z,8.0nm,1.3s
OXF Oxford 47.10 282 *eP* **P 23 40 40.8 +4.0**
comp=Z,24nm,1.0s
OXF Oxford 47.10 282 *eP* **P 23 40 40.8 +4.0**
OXF pmax pmax
comp=Z,25nm,1.0s
T42A Van Buren 47.19 286 *eP* **P 23 40 41.5 +4.0**
comp=Z,10nm,1.3s
R40A Maddies Statio 47.49 288 *eP* **P 23 40 43.4 +3.6**
comp=Z,8.8nm,1.1s
ECSD EROS Data Cent 48.30 296 *eP* **P 23 40 46.0 -0.1**
comp=Z,10nm,1.1s
CSS Mathiatis 48.49 77 *eP* **P 23 40 49.5 +1.9**
comp=Z,2.9nm,1.2s
S39A Bolivar 48.50 288 *eP* **P 23 40 49.2 +1.6**
comp=Z,8.1nm,1.1s
V40A Witts Springs 48.98 285 *eP* **P 23 40 50.5 -1.0**
comp=Z,20nm,1.3s
W39A Magazine 49.96 285 *eP* **P 23 41 01.3 +2.4**
comp=Z,15nm,1.2s
MIAR Mount Ida 50.12 284 *eP* **P 23 41 03.5 +3.5**
comp=Z,10.0nm,1.2s
MIAR Mount Ida 50.12 284 *eP* **P 23 41 03.5 +3.5**
MIAR pmax pmax
comp=Z,10.0nm,1.2s
PTGA Pitinga 50.70 221 LR LR 23 58 55.0
comp=Z,78nm,19.5s,baz=44,slow=32
MMAI Mount Meron Ar 50.94 78 P **P 23 41 07.1 +0.8**
comp=Z,3.4nm,1.0s,baz=317,slow=8.1,SNR=4.9
KIV Kislovodsk 51.11 62 *eP* **P 23 41 08.8 +1.3**
KIV pmax pmax
comp=Z,8.0nm,1.1s
KIV MLR MLR
comp=Z,101nm,16.0s
RUSC La Rusia 52.91 240 *eP* P 23 41 29.5 +7.8
comp=Z,6.2nm,1.6s
WMOK Wichita Mounta 53.77 287 *eP* **P 23 41 30.4 +3.0**
comp=Z,7.4nm,1.4s
WMOK Wichita Mounta 53.77 287 *eP* **P 23 41 30.4 +3.0**
WMOK pmax pmax
comp=Z,7.0nm,1.4s
ROSC El Rosal 54.50 240 LR LR 00 02 32.5
comp=Z,51nm,21.8s,baz=62,slow=34
ARU Arti 55.32 42 *eP* **P 23 41 37.7 -0.5**
comp=Z,18nm,1.2s
ARU Arti 55.32 42 *c i P* **P 23 41 38.0 -0.2**
ARU 23 43 37.5
ARU PPP PPP 23 44 52.0
ARU S **S 23 49 20.7 -1.2**
ARU pmax pmax
comp=Z,26nm,1.7s
RLMT Red Lodge 55.95 303 *eP* **P 23 41 42.8 -0.4**
comp=Z,10nm,1.4s
ISCO Idaho Springs 56.07 295 *eP* **P 23 41 48.4 +4.2**
comp=Z,6.6nm,1.4s
SVE Sverdlovsk 56.19 41 *eP* **P 23 41 43.4 -1.0**
SVE pmax pmax
comp=Z,21nm,1.6s
INK Inuvik 56.80 335 *eP* **P 23 41 46.2 -2.3**
comp=Z,5.5nm,1.0s
INK Inuvik 56.80 335 *eP* **P 23 41 46.2 -2.3**
INK pmax pmax
comp=Z,6.0nm,1.0s
MSTX Muleshoe 57.01 288 *eP* **P 23 41 50.5 -0.2**
comp=Z,10nm,1.0s
PDAR Pinedale Array 57.25 300 P **P 23 41 50.8 -1.7**
comp=Z,0.9nm,0.8s,baz=59,slow=8.8,SNR=6.0
PDAR LR LR 00 05 53.7
comp=Z,153nm,18.5s,baz=352,slow=36
PDAR Pinedale Array 57.25 300 *eP* **P 23 41 50.5 -1.9**
LRM Limekiln Ridge 57.61 305 *eP* **P 23 41 57.8 +2.9**
AKTO Aktyubinsk 57.70 49 LR LR 00 06 20.6
comp=Z,104nm,21.6s,baz=32,slow=36
ANMO Albuquerque 59.10 291 LR LR 00 07 03.7
comp=Z,109nm,18.2s,baz=1.5,slow=36
ANMO Albuquerque 59.10 291 *i P* **P 23 42 09.0 +3.5**
ANMO pmax pmax
comp=Z,1.0nm,1.1s
HWUT Hardware Ranch 59.12 300 *eP* **P 23 42 04.8 -0.7**
comp=Z,4.5nm,0.9s
ABKAR Akbulak array 59.36 50 *eP* **P 23 42 07.1 +0.3**
NRIK Noril'sk 59.88 22 P **P 23 42 10.3 +0.2**
comp=Z,1.3nm,0.4s,baz=314,slow=5.2,SNR=6.0
TX31 Lajitas Ar. Si 60.14 284 *eP* **P 23 42 12.6 -0.1**
TXAR Lajitas Array 60.14 284 P **P 23 42 11.6 -1.0**
comp=Z,0.7nm,0.8s,baz=66,slow=5.6,SNR=8.7
TXAR LR LR 00 07 33.5
comp=Z,68nm,20.3s,baz=0.0,slow=36
NLU North Lily Min 60.29 299 *eP* **P 23 42 14.0 +0.3**
comp=Z,36nm,1.7s
BGU Big Grassy Mou 60.41 300 *eP* **P 23 42 14.7 +0.3**
comp=Z,6.8nm,1.2s
DUG Dugway, Tooele 60.65 299 *eP* **P 23 42 15.8 -0.2**
comp=Z,8.2nm,1.3s
DUG Dugway, Tooele 60.65 299 *eP* **P 23 42 15.8 -0.2**
DUG pmax pmax
comp=Z,8.0nm,1.3s
OTAV Otavalo 60.66 240 *eP* P 23 42 24.8 +8.1
comp=Z,7.1nm,1.3s
OTAV Otavalo 60.66 240 *eP* P 23 42 24.8 +8.1
OTAV pmax pmax
comp=Z,7.0nm,1.3s
CMIG Matias Romero 60.81 267 LR LR 00 07 47.8
comp=Z,86nm,18.7s,baz=46,slow=35
MSU Marysvale 61.12 297 *eP* **P 23 42 20.6 +1.2**
MSU Marysvale 61.12 297 *eP* **P 23 42 20.6 +1.2**
DAWY Dawson 61.13 332 *eP* **P 23 42 17.6 -1.2**
comp=Z,12nm,1.4s
TOLK Toolik Lake Re 61.35 339 *eP* **P 23 42 19.8 -0.4**
comp=Z,18nm,1.6s
PSUT Pine Spring 62.22 298 *eP* **P 23 42 27.8 +1.0**
comp=Z,3.5nm,0.7s
COLD Coldfoot 62.50 338 *eP* **P 23 42 26.9 -1.0**
comp=Z,6.0nm,1.1s
BRVK Borovoye 62.89 42 *eP* **P 23 42 30.1 -0.6**
comp=Z,9.7nm,1.0s
BRVK Borovoye 62.89 42 *ceP* **P 23 42 31.1 +0.4**
BRVK pmax pmax
comp=Z,16nm,1.7s
BVAR Borovoye Array 62.96 42 P **P 23 42 31.2 0.0**
comp=Z,4.3nm,0.9s,baz=299,slow=6.5,SNR=17
IL1 Eielson Array 63.19 335 *eP* **P 23 42 31.4 -1.1**
ILAR Eielson Array 63.19 335 P **P 23 42 31.1 -1.4**
comp=Z,0.4nm,0.6s,baz=47,slow=6.0,SNR=7.4
MDM Murphy Dome 63.48 335 *eP* **P 23 42 34.5 0.0**
comp=Z,21nm,1.8s
TUC Tucson 63.56 291 *eP* **P 23 42 37.1 +1.5**
comp=Z,3.0nm,1.0s
TUC Tucson 63.56 291 *eP* **P 23 42 37.1 +1.5**
TUC pmax pmax
comp=Z,3.0nm,1.0s
CCB Clear Creek Bu 63.57 335 *eP* **P 23 42 34.1 -0.9**
comp=Z,14nm,1.7s
WRH Wood River Hil 63.78 335 *eP* **P 23 42 35.8 -0.6**
comp=Z,18nm,1.6s
MLY Manley 64.20 336 *eP* **P 23 42 37.7 -1.5**
comp=Z,3.6nm,1.0s
MLY *e*S **S 23 51 10.3 -5.9**
KVN Kaiserville 64.70 301 *eP* **P 23 42 42.4 -0.7**
comp=Z,6.8nm,1.1s
KVN Kaiserville 64.70 301 *eP* **P 23 42 42.4 -0.7**
KVN pmax pmax
comp=Z,7.0nm,1.1s
BMRM Bremner River 64.97 331 *eP* **P 23 42 44.3 -0.1**
comp=Z,21nm,1.3s
NV01 Mina Array Sit 65.18 300 *eP* **P 23 42 45.0 -1.3**
NVAR Mina Array Bea 65.18 300 P **P 23 42 44.8 -1.5**
comp=Z,0.4nm,0.7s,baz=39,slow=7.2,SNR=2.6
TRF Thorofare Moun 65.19 335 *eP* **P 23 42 45.4 -0.5**
comp=Z,25nm,1.6s
TIXI Tiksi 65.76 7 *eP* **P 23 42 49.6 +0.5**
comp=Z,12nm,1.2s
TIXI Tiksi 65.76 7 *ceP* **P 23 42 50.3 +1.1**
TIXI pmax pmax
comp=Z,13nm,1.2s
DAC Darwin (Calif) 65.94 298 *eP* **P 23 42 52.8 +1.6**
comp=Z,3.8nm,0.9s
DAC Darwin (Calif) 65.94 298 *eP* **P 23 42 52.8 +1.6**
DAC pmax pmax
comp=Z,4.0nm,0.9s
PMR Palmer 66.13 333 *eP* **P 23 42 51.6 -0.1**
comp=Z,15nm,1.3s
PMR Palmer 66.13 333 *eP* **P 23 42 51.6 -0.1**
PMR pmax pmax
comp=Z,15nm,1.3s
SKT Skwentna 66.64 334 *eP* **P 23 42 54.3 -0.8**
comp=Z,51nm,1.8s
SNDA J Saunders Pla 66.86 295 *eP* **P 23 42 58.6 +1.5**
HMTC Hemet 67.04 295 *eP* **P 23 43 00.9 +2.8**
DGR Domenigoni Val 67.07 295 *eP* **P 23 43 00.5 +2.2**
NVS Novosibirsk 67.83 35 *eP* **P 23 42 58.7 -4.0**
NVS pmax pmax
comp=N,4.0nm,1.7s
NVS pmax pmax
comp=E,8.0nm,1.7s
NVS pmax pmax
comp=Z,13nm,1.7s
LPIG La Paz 68.00 283 LR LR 00 11 57.7
comp=Z,134nm,20.5s,baz=43,slow=35
LPAZ La Paz 68.11 221 P **P 23 43 06.2 +0.6**
comp=Z,0.5nm,0.5s,baz=9.3,slow=9.7,SNR=4.3
LPAZ La Paz 68.11 221 *eP* P 23 43 12.9 +7.4
LPAZ La Paz 68.11 221 *eP* P 23 43 13.0 +7.4
CYBM Yerba Buena Is 68.14 302 *eP* **P 23 43 04.9 -0.1**
KURK Kurchatov 68.42 41 *eP* **P 23 43 06.1 -0.4**
comp=Z,10nm,1.1s
KURK Kurchatov 68.42 41 *ceP* **P 23 43 06.3 -0.1**
KURK pmax pmax
comp=Z,15nm,1.7s
KURBB Kurchatov Arra 68.44 41 P **P 23 43 06.0 -0.5**
comp=Z,3.8nm,0.9s,baz=312,slow=7.0,SNR=24
ZAA0 Zalesovo Array 69.12 35 *eP* **P 23 43 11.1 +0.4**
comp=Z,3.7nm,1.0s
ZALV Zalesovo Beam 69.12 35 P **P 23 43 10.7 -0.1**
comp=Z,1.7nm,0.9s,baz=302,slow=6.6,SNR=7.5
ZALV Zalesovo Beam 69.12 35 *eP* **P 23 43 10.1 -0.6**
ZALV Zalesovo Beam 69.12 35 *eP* **P 23 43 10.1 -0.6**
BILL Bilibino 69.85 354 *i P* **P 23 43 17.7 +2.7**
BILL *i* 23 43 36.9
BILL pmax pmax
comp=Z,1.0nm,1.1s
MAKZ Makanchi 72.67 42 *eP* **P 23 43 32.4 -0.1**

comp=Z,8.6nm,1.4s
MAKZ Makanchi 72.67 42 *e*P **P 23 43 32.4 -0.1**
MAKZ pmax pmax
comp=Z,9.0nm,1.4s
MK31 Makanchi Array 72.84 42 *e*P **P 23 43 33.1 -0.4**
MK31 Makanchi Array 72.84 42 *e*P **P 23 43 33.1 -0.4**
MKAR Makanchi Array 72.84 42 P **P 23 43 33.0 -0.5**
comp=Z,3.1nm,0.9s,baz=322,slow=5.8,SNR=26
MKAR Makanchi Array 72.84 42 *e*P **P 23 43 33.1 -0.5**
comp=Z,20nm,0.9s
MKAR Makanchi Array 72.84 42 *e*P **P 23 43 33.1 -0.5**
MKAR pmax pmax
comp=Z,20nm,0.9s
MK01 Makanchi Array 72.86 42 *e*P **P 23 43 33.0 -0.7**
NRN Naryn 73.07 49 *e*P **P 23 43 35.9 +0.5**
comp=Z,22nm,1.7s
NRN Naryn 73.07 49 *e*P **P 23 43 35.9 +0.5**
NRN pmax pmax
comp=Z,22nm,1.7s
KSH Kashi 74.32 51 P **P 23 43 43.4 +0.9**
KSH pP sP 23 43 48.1 +1.1
KSH PP **PP 23 46 29.4 +1.4**
KSH S **SKiKP 23 53 12.1 +2.7**
KSH pmax pmax
comp=Z,27nm,1.2s
KSH pmax pmax
comp=Z,320nm,6.7s
WMQ Urumqi 77.64 41 P **P 23 44 01.9 +0.7**
WMQ pP sP 23 44 05.9 +0.2
WMQ pmax pmax
comp=Z,19nm,1.3s
WMQ pmax pmax
comp=Z,520nm,11.7s
WMQ LR LR
comp=Z,130nm,21.3s
WMQ LR LR
comp=Z,120nm,24.3s
TLY Talaya 78.25 28 *e*P **P 23 44 04.7 +0.3**
TLY pmax pmax
comp=Z,8.0nm,1.6s
SONA1 Songino Array 82.44 28 *e*P **P 23 44 27.0 -0.2**
SONM Songino Array 82.45 28 P **P 23 44 27.9 +0.7**
comp=Z,0.9nm,0.5s,baz=326,slow=7.5,SNR=4.0
ULN Ulaanbaatar 82.65 28 *e*P **P 23 44 28.3 0.0**
comp=Z,9.0nm,1.2s
ULN Ulaanbaatar 82.65 28 *c*e**P 23 44 28.7 +0.4**
ULN pmax pmax
comp=Z,11nm,1.7s
GTA Gaotai 86.79 37 *e*P **P 23 44 49.4 0.0**
GTA pP sP 23 44 54.3 +0.4
GTA sP pP 23 44 56.6 +3.9
GTA pmax pmax
comp=Z,6.0nm,1.8s
HHC Hu-ho-hao-te 90.34 29 *e*P **P 23 45 05.0 -1.1**
LZH Lanzhou 91.33 36 *e*P **P 23 45 09.6 -1.3**
LZH pP PcP 23 45 13.0 +1.2
LZH sP pP 23 45 14.5 +0.3
LZH *e*PP **PP 23 48 46.5 -0.9**
LZH pmax pmax
comp=Z,15nm,1.5s
LZH pmax pmax
comp=Z,67nm,9.2s
LZH LR LR
comp=Z,140nm,17.3s
LZH LR LR
comp=Z,150nm,17.4s
LZH LR LR
comp=Z,170nm,19.6s
CD2 Chengdu 95.61 39 P **P 23 45 29.4 -1.1**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
GYA Guiyang 100.72 39 *e*P **Pdif 23 45 54.0 +0.4**
GYA pmax pmax
comp=Z,10.0nm,1.0s
NJ2 Nanjing 100.80 27 *e*P **Pdif 23 45 51.8 -1.9**
YOJ Yonaguni jima 109.19 27 *e*Pdif **Pdif 23 46 31.1 -0.1**
YOJ Yonaguni jima 109.19 27 *e*P **Pdif 23 46 31.1 -0.1**
ASAR Alice Springs 157.03 43 PKPab **PKPab 23 52 30.4 -0.5**
comp=Z,1.5nm,0.9s,baz=353,slow=4.7,SNR=5.0

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*ISCJB **17** 23:43:46.6±0.3,57.°09S±0.°05×26.°6W±0.°1,h86km, mb5.0/37,Error ellipse: s-maj=9.7km s-min=5.2km az=140.9*
*IDC **17** 23:43:53.4±1.3,57.°06S×26.°58W,h130km±11km,mb4.6/18, mb1 4.7/20,mb1mx4.4/34,mbtmp5.0/20,Error ellipse: s-maj=12.5km s-min=9.5km az=29.0*
*NEIC **17** 23:43:53.2±1.2,57.°12S×26.°60W,h130km±10km,mb5.1/26, Error ellipse: s-maj=9.5km s-min=6.0km az=214.0*
ISC 17 23:43:48.1±0.3,57.°20S±0.°06×26.°72W±0.°07,h86km,n130, σ2.°40/144,mb5.0/37,2C,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.24**	**294**	*e*Pn	Pn	23 45 25.4	+7.9
VNA1	**Neumayer--Stat**	**15.64**	**157**	P	**P**	**23 47 28.4**	**+2.9**
VNA1	**Neumayer--Stat**	**15.64**	**157**	S	**Sn**	**23 50 12.8**	**-2.6**
VNA3	**Neumayer Olymp**	**15.82**	**160**	P	**P**	**23 47 28.6**	**+1.0**
VNA3	**Neumayer Olymp**	**15.82**	**160**	S	**Sn**	**23 50 12.3**	**-7.7**
SNAA	**Sanae**	**17.59**	**155**	P	**Pn**	**23 47 49.4**	**+2.0**
SNAA	**Sanae**	**17.59**	**155**	S	**Sn**	**23 50 58.1**	**-4.5**
SNAA	**Sanae**	**17.59**	**155**	P	**Pn**	**23 47 49.3**	**+2.0**
	4.7nm,0.3s,baz=303,slow=9.7,SNR=280						
SNAA				S	**Sn**	**23 50 57.4**	**-5.2**
	1.8nm,0.3s,baz=1.4,slow=19,SNR=6.0						
SNAA				ScP	**ScP**	**23 55 43.5**	**-5.0**
	0.2nm,0.3s,baz=267,slow=2.4,SNR=11						
SNAA	**Sanae**	**17.59**	**155**	*e*Pn	**Pn**	**23 47 48.6**	**+1.2**
	29nm,0.7s						
SNAA				*e*Sn	**Sn**	**23 50 58.2**	**-4.4**
SNAA				ScP	**ScP**	**23 55 43.5**	**-5.0**
EFI	**East Falkland**	**18.94**	**274**	*e*P	**Pn**	**23 48 05.8**	**+2.3**
	150nm,0.5s						
PMSA	**Palmer Station**	**19.36**	**232**	P	**Pn**	**23 48 11.7**	**+3.3**
	6.6nm,0.3s,baz=76,slow=7.4,SNR=17						
PMSA	**Palmer Station**	**19.36**	**232**	*e*P	**Pn**	**23 48 08.5**	**+0.1**
	84nm,0.8s						
GO09	**Cerro Castillo**	**26.89**	**263**	*e*P	**P**	**23 49 21.9**	**+1.3**
	44nm,0.8s						
TRQA	**Tornquist**	**30.02**	**294**	*e*P	**P**	**23 49 48.2**	**-0.4**
	3.5nm,0.6s						
SYO	**Syowa Base**	**30.54**	**140**	*e*P	**P**	**23 49 51.3**	**-1.4**
SYO	**Syowa Base**	**30.54**	**140**	*e*pP	**P**	**23 49 55.2**	**+2.5**
PLCA	**Paso Flores**	**32.47**	**281**	P	**P**	**23 50 10.2**	**0.0**
	10nm,0.8s,baz=164,slow=8.5,SNR=21						
PLCA				ScP	**ScP**	**23 56 25.8**	**-5.1**
	2.0nm,0.7s,baz=54,slow=1.7,SNR=4.2						
PLCA	**Paso Flores**	**32.47**	**281**	*e*P	**P**	**23 50 10.6**	**+0.4**
	24nm,1.1s						
PLCA				ScP	**ScP**	**23 56 25.8**	**-5.1**
QSPA	**South Pole Qui**	**33.05**	**180**	P	**P**	**23 50 17.5**	**+2.4**
	14nm,0.6s,baz=210,slow=2.0,SNR=18						
QSPA				ScP	**ScP**	**23 56 27.6**	**-4.9**
	15nm,0.9s,baz=191,slow=3.1,SNR=8.9						
QSPA	**South Pole Qui**	**33.05**	**180**	*e*P	**P**	**23 50 17.2**	**+2.1**
	5.6nm,0.5s						
QSPA				ScP	**ScP**	**23 56 27.6**	**-4.9**
SPB	**Sao Paulo**	**36.78**	**327**	*e*P	**P**	**23 50 48.8**	**+1.5**
	35nm,0.7s						
CPUP	**Villa Florida**	**37.77**	**312**	P	**P**	**23 50 56.1**	**+0.5**
	20nm,0.7s,baz=154,slow=7.8,SNR=44						
CPUP				PcP	**PcP**	**23 53 10.2**	**-0.5**
	5.3nm,0.7s,baz=218,slow=2.2,SNR=5.7						
CPUP	**Villa Florida**	**37.77**	**312**	*e*P	**P**	**23 50 56.1**	**+0.5**
	30nm,0.9s						
CPUP				PcP	**PcP**	**23 53 10.2**	**-0.5**
MAW	**Mawson**	**39.08**	**143**	P	**P**	**23 51 07.0**	**+0.9**
	5.3nm,0.4s,baz=214,slow=6.5,SNR=14						
SUR	**Sutherland**	**40.71**	**73**	P	**P**	**23 51 20.3**	**0.0**
	1.3nm,0.8s,baz=206,slow=8.6,SNR=10						
GO03	**Copiap**	**42.53**	**295**	*e*P	**P**	**23 51 34.7**	**-0.4**
	9.9nm,0.8s						
GO02	**Mina Guanaco**	**44.25**	**298**	*e*P	**P**	**23 51 49.3**	**+0.1**
	24nm,0.6s						
VNDA	**Vanda**	**45.44**	**183**	P	**P**	**23 51 59.9**	**+2.2**
	5.3nm,0.6s,baz=188,slow=6.9,SNR=66						
VNDA				ScP	**ScP**	**23 57 15.5**	**-4.3**
	2.7nm,0.9s,baz=248,slow=2.7,SNR=9.4						
VNDA	**Vanda**	**45.44**	**183**	*e*P	**P**	**23 51 59.9**	**+2.2**
	6.1nm,0.6s						
VNDA				ScP	**ScP**	**23 57 15.5**	**-4.3**
BOSA	**Boshof**	**46.02**	**74**	P	**P**	**23 52 02.4**	**-0.6**
	22nm,0.9s,baz=206,slow=7.6,SNR=33						
BOSA	**Boshof**	**46.02**	**74**	*e*P	**P**	**23 52 02.4**	**-0.6**
	32nm,1.0s						
PB10	**IPOC Station P**	**46.11**	**298**	*e*P	**P**	**23 52 03.7**	**+0.1**
	93nm,1.8s						
PB04	**IPOC Station P**	**46.92**	**299**	*e*P	**P**	**23 52 10.2**	**+0.1**
	34nm,0.8s						
PB01	**IPOC Station P**	**47.72**	**301**	*e*P	**P**	**23 52 16.6**	**+0.3**
	29nm,0.7s						
SIV	**San Ignacio**	**48.55**	**314**	P	**P**	**23 52 22.9**	**+0.3**
	baz=174,slow=9.3						
SIV				PcP	**PcP**	**23 53 47.4**	**+0.3**
	8.0nm,0.9s,baz=250,slow=5.4,SNR=4.8						
H10S2	**ASCENSION HYDR**	**49.03**	**16**	T	T	00 45 15.9	
	baz=189,slow=75,SNR=252						
H10S3	**ASCENSION HYDR**	**49.03**	**16**	T	T	00 45 16.2	
	baz=189,slow=75,SNR=242						
H10S1	**ASCENSION HYDR**	**49.05**	**16**	T	T	00 45 17.2	
	baz=189,slow=75,SNR=194						
LBTB	**Lobatse**	**49.11**	**72**	P	**P**	**23 52 26.3**	**-0.6**
	29nm,0.8s,baz=213,slow=8.3,SNR=35						
LBTB	**Lobatse**	**49.11**	**72**	*e*P	**P**	**23 52 25.6**	**-1.2**
	32nm,0.8s						
MNMC	**Minye Minye**	**49.42**	**302**	*e*P	**P**	**23 52 30.1**	**+0.6**
	42nm,0.8s						
TSUM	**Tsumeb**	**50.03**	**59**	P	**P**	**23 52 33.6**	**-0.3**
	5.9nm,0.7s,baz=197,slow=7.4,SNR=15						
H10N1	**ASCENSION HYDR**	**50.15**	**16**	T	T	00 46 40.7	
	baz=197						
H10N3	**ASCENSION HYDR**	**50.15**	**16**	T	T	00 46 40.2	
	baz=197						
H10N2	**ASCENSION HYDR**	**50.16**	**16**	T	T	00 46 41.7	
	baz=197						
LPAZ	**La Paz**	**51.25**	**305**	P	**P**	**23 52 44.4**	**+0.7**
	22nm,0.5s,baz=149,slow=5.7,SNR=77						
LPAZ	**La Paz**	**51.25**	**305**	*e*P	**P**	**23 52 44.3**	**+0.7**
	25nm,0.6s						
CASY	**Casey**	**52.74**	**160**	*e*P	**P**	**23 52 54.9**	**+1.5**
	5.5nm,0.7s						
SAML	**Samuel**	**55.79**	**315**	*e*P	**P**	**23 53 16.4**	**+0.2**
	56nm,0.6s						
LSZ	**Lusaka**	**58.56**	**68**	*e*P	**P**	**23 53 34.8**	**-1.0**
	23nm,1.0s						
PTGA	**Pitinga**	**62.23**	**322**	P	**P**	**23 54 00.2**	**-0.5**
	10nm,0.6s,baz=155,slow=7.1,SNR=20						
OPO	**Ambohidratompo**	**65.88**	**87**	P	**P**	**23 54 25.3**	**+0.5**
	8.4nm,0.8s,baz=214,slow=4.1,SNR=6.9						
OTAV	**Otavalo**	**70.51**	**304**	*e*P	**P**	**23 54 54.8**	**+0.8**
	5.6nm,0.7s						
SOTA	**Rioblanco**	**71.37**	**306**	*e*P	**P**	**23 54 57.0**	**-2.2**
PCON	**Cinco Dias**	**71.45**	**307**	*e*P	**P**	**23 55 01.0**	**+1.2**
PRAC	**Prado**	**72.04**	**309**	*e*P	**P**	**23 55 02.7**	**-0.1**
	35nm,0.8s						
CHIC	**Chingaza**	**72.38**	**310**	*e*P	**P**	**23 55 04.3**	**-0.9**
ROSC	**El Rosal**	**72.81**	**310**	P	**P**	**23 55 08.4**	**+0.7**
	6.5nm,0.3s,baz=200,slow=5.9,SNR=8.9						
ROSC	**El Rosal**	**72.81**	**310**	*e*P	P	23 55 02.4	-5.4
YOTC	**Yotoco, Valle**	**72.91**	**307**	*e*P	**P**	**23 55 05.7**	**-2.3**
RUSC	**La Rusia**	**73.25**	**311**	*e*P	**P**	**23 55 09.4**	**-1.1**
RUSC	**La Rusia**	**73.25**	**311**	*e*P	**P**	**23 55 07.7**	**-2.8**
BARC	**Barichara**	**73.93**	**311**	*e*P	**P**	**23 55 11.7**	**-2.4**
TORD	**Torodi Ar. Bea**	**73.93**	**29**	P	**P**	**23 55 13.6**	**-0.2**
	9.8nm,0.7s,baz=196,slow=6.4,SNR=41						
PCRV	**Puerto La Cruz**	**74.00**	**321**	P	**P**	**23 55 15.2**	**+0.9**
	107nm,0.8s,baz=166,slow=2.9,SNR=43						
PTBC	**PUERTO BERRIO,**	**74.40**	**310**	*e*P	**P**	**23 55 13.7**	**-2.9**
HELC	**Santa Helena**	**74.54**	**309**	*e*P	**P**	**23 55 16.5**	**-1.3**
	17nm,0.7s						
GRGR	**Grenville**	**74.86**	**325**	P	**P**	**23 55 18.8**	**-0.4**
	26nm,0.6s						
SDV	**Santo Domingo**	**75.00**	**315**	P	**P**	**23 55 20.1**	**-0.1**
	18nm,0.4s,baz=149,slow=5.9,SNR=4.7						
GDHS	**Morne Mazeau,**	**78.79**	**326**	*e*P	**P**	**23 55 41.7**	**+0.4**
	100nm,0.9s						
SJG	**San Juan**	**81.91**	**322**	P	**P**	**23 55 57.2**	**-0.7**
	22nm,1.0s,baz=183,slow=1.1,SNR=4.4						
CBYP	**Canovanas**	**81.96**	**323**	*e*P	**P**	**23 55 57.9**	**-0.3**
	46nm,1.0s						
JTS	**JuntasAbangare**	**82.35**	**302**	P	**P**	**23 56 00.4**	**+0.1**
	13nm,1.2s,baz=281,slow=11,SNR=3.1						
ASAR	**Alice Springs**	**97.82**	**162**	P	**P**	**23 57 12.2**	**-1.6**
	1.3nm,0.6s,baz=182,slow=4.0,SNR=16						
WRA	**Warramunga Arr**	**101.53**	**162**	P	**Pdif**	**23 57 30.7**	**+0.3**
	0.5nm,0.8s,baz=193,slow=4.3,SNR=3.4						
TXAR	**Lajitas Array**	**107.55**	**297**	PKiKP	**PKiKP**	**00 02 03.4**	**-1.1**
	0.3nm,0.8s,baz=134,slow=6.4,SNR=3.6						
MSU	**Marysvale**	**119.10**	**296**	*e*PKPdf	**PKPdf**	**00 02 26.8**	**+0.4**
PSUT	**Pine Spring**	**119.94**	**295**	*e*PKPdf	**PKPdf**	**00 02 28.4**	**+0.4**
DUG	**Dugway, Tooele**	**120.72**	**297**	*e*PKPdf	**PKPdf**	**00 02 29.1**	**-0.2**
PDAR	**Pinedale Array**	**121.17**	**301**	PKP	**PKPdf**	**00 02 28.1**	**-2.1**
	0.6nm,0.5s,baz=142,slow=4.6,SNR=6.4						
HWUT	**Hardware Ranch**	**121.21**	**299**	*e*PKPdf	**PKPdf**	**00 02 29.6**	**-0.7**
ULM	**Lac du Bonnet**	**121.25**	**315**	PKP	**PKPdf**	**00 02 28.1**	**-1.7**
	2.3nm,0.5s,baz=27,slow=2.3,SNR=7.7						
NV01	**Mina Array Sit**	**122.08**	**292**	*e*PKPdf	**PKPdf**	**00 02 32.1**	**0.0**
NVAR	**Mina Array Bea**	**122.08**	**292**	PKP	**PKPdf**	**00 02 32.3**	**+0.2**
	1.3nm,0.6s,baz=138,slow=3.3,SNR=16						
FXWY	**Fox Creek**	**122.52**	**301**	*e*PKPdf	**PKPdf**	**00 02 32.6**	**-0.3**
FINES	**FINESS Array B**	**125.28**	**28**	PKP	**PKPdf**	**00 02 35.8**	**-1.4**
	2.2nm,0.8s,baz=35,slow=4.7,SNR=6.5						
MSO	**Missoula**	**126.28**	**302**	*e*PKPdf	**PKPdf**	**00 02 40.1**	**+0.3**
BMO	**Blue Mountains**	**126.41**	**298**	*e*PKPdf	**PKPdf**	**00 02 39.9**	**-0.2**
G08A	**Pilot Rock**	**127.53**	**297**	*e*PKPdf	**PKPdf**	**00 02 43.1**	**+0.9**
ABKAR	**Akbulak array**	**127.81**	**56**	*e*PKPdf	**PKPdf**	**00 02 43.0**	**+0.6**
KSH	**Kashi**	**128.62**	**75**	PKP	**PKPdf**	**00 02 48.3**	**+3.8**
KSH				PP	**PP**	**00 04 55.1**	**+3.1**
KSH				AMB	AMB		
	comp=Z,270nm,4.7s						
MBW	**Mount Baker**	**131.43**	**299**	*e*PKPdf	**PKPdf**	**00 02 50.4**	**+0.9**
MCW	**Mount Constitu**	**131.80**	**298**	*e*PKPdf	**PKPdf**	**00 02 50.6**	**+0.5**
ARCES	**ARCESS Array B**	**131.91**	**22**	PKP	**PKPdf**	**00 02 51.4**	**+1.7**
	1.8nm,0.7s,baz=219,slow=1.2,SNR=5.9						
GYA	**Guiyang**	**134.99**	**113**	*e*Pdif	**Pdif**	**00 00 00.4**	**+1.4**
GYA				PKP	PKPdf	00 02 46.4	-11
GYA				PP	**PP**	**00 05 37.3**	**+4.6**
GYA				AMB	AMB		
	comp=Z,120nm,7.8s						
MKAR	**Makanchi Array**	**137.00**	**72**	PKP	**PKPdf**	**00 02 58.2**	**-1.7**
	comp=Z,0.2nm,0.5s,baz=241,slow=1.4,SNR=3.6						
MKAR				SKPbc	**SKPbc**	**00 06 16.4**	**-8.4**
	comp=Z,0.7nm,0.7s,baz=246,slow=3.3,SNR=6.1						
CD2	**Chengdu**	**137.10**	**106**	PKP	**PKPdf**	**00 03 01.9**	**+1.3**
YKA	**Yellowknife Ar**	**137.19**	**317**	PKP	**PKPdf**	**00 02 59.4**	**-0.2**
	comp=Z,5.5nm,0.7s,baz=127,slow=2.4,SNR=26						
YKA				PP	**PP**	**00 05 42.5**	**-3.7**
	comp=Z,1.1nm,0.7s,baz=122,slow=6.2,SNR=6.4						
YKA				SKPbc	**SKPbc**	**00 06 18.1**	**-6.7**
	comp=Z,3.2nm,1.0s,baz=133,slow=1.8,SNR=12						
YKW3	**Yellowknife Ar**	**137.24**	**317**	*e*PKPdf	**PKPdf**	**00 02 58.7**	**-1.1**
KURBB	**Kurchatov Arra**	**137.55**	**66**	PKP	**PKPdf**	**00 03 03.3**	**+2.5**
	comp=Z,0.3nm,0.4s,baz=239,slow=3.4,SNR=3.6						
KURK	**Kurchatov**	**137.65**	**66**	PKP	**PKPdf**	**00 03 03.3**	**+2.4**
WMQ	**Urumqi**	**137.87**	**79**	*e*PKP	**PKPdf**	**00 03 03.3**	**+1.6**
WMQ				AMB	AMB		
	comp=Z,100nm,8.5s						
WMQ				LR	LR		
	comp=Z,940nm,15.1s						
WMQ				LR	LR		
	comp=Z,700nm,15.5s						
WMQ				LR	LR		
	comp=Z,480nm,26.5s						
LZH	**Lanzhou**	**141.14**	**101**	*e*PKP	**PKPdf**	**00 03 10.3**	**+2.3**
LZH				sPKP		00 03 14.8	
LZH				LR	LR		
	comp=Z,150nm,18.3s						
LZH				LR	LR		
	comp=Z,140nm,18.0s						
LZH				LR	LR		
	comp=Z,190nm,20.1s						
ZALV	**Zalesovo Beam**	**142.63**	**65**	PKP	**PKPdf**	**00 03 11.2**	**+1.4**
	comp=Z,1.8nm,0.5s,baz=228,slow=3.8,SNR=10						
ZALV				SKP		00 06 31.9	
	comp=Z,0.7nm,0.5s,baz=292,slow=4.5,SNR=4.2						
ZALV	**Zalesovo Beam**	**142.63**	**65**	*e*PKPdf	**PKPdf**	**00 03 11.7**	**+1.9**
ZALV				SKP		00 06 31.9	
NJ2	**Nanjing**	**145.52**	**122**	*e*PKPbc	**PKPab**	**00 03 17.1**	**+0.9**
INK	**Inuvik**	**146.85**	**319**	*e*PKPdf	**PKPbc**	**00 03 18.4**	**-0.3**
DAWY	**Dawson**	**147.74**	**311**	*e*PKPdf	**PKPbc**	**00 03 20.5**	**-0.9**
TGL	**Tana Glacier**	**148.04**	**304**	*e*PKPdf	**PKPbc**	**00 03 22.0**	**-0.3**
CRQM	**Cirque**	**148.18**	**303**	*e*PKPdf	**PKPbc**	**00 03 22.5**	**-0.3**
EGAK	**Eagle**	**148.70**	**311**	*e*PKPbc	**PKPbc**	**00 03 22.3**	**-1.4**
EGAK				*e*PKPab	**PKPab**	**00 03 27.3**	**-0.5**
RAGM	**Ragged Mountai**	**148.74**	**302**	*e*PKPdf	**PKPbc**	**00 03 23.8**	**-0.3**
HHC	**Hu-ho-hao-te**	**148.74**	**103**	*e*PKPbc	**PKPbc**	**00 03 24.5**	**-0.3**
HHC				PP	**PP**	**00 07 02.0**	**+5.8**
HHC				SKS	**SKSdf**	**00 10 31.3**	**+10**
HHC				SKKS	SKKSac	00 13 50.8	+12
HHC				SS	SS	00 26 10.8	+12
HHC				AMB	AMB		
	comp=Z,130nm,5.2s						
HHC				LR	LR		
	comp=Z,220nm,19.8s						
HHC				LR	LR		
	comp=Z,190nm,20.2s						
HHC				LR	LR		
	comp=Z,1μm,21.8s						
BMRM	**Bremner River**	**148.92**	**303**	*e*PKPdf	**PKPbc**	**00 03 24.8**	**+0.2**
RIDG	**Independ'e Rid**	**149.93**	**308**	*e*PKPdf	**PKPbc**	**00 03 26.5**	**-0.4**
RIDG				*e*PKPbc	**PKiKP**	**00 03 26.6**	**-1.1**
SONM	**Songino Array**	**150.52**	**88**	PKPbc	**PKPbc**	**00 03 27.9**	**-1.0**
	comp=Z,0.7nm,0.3s,baz=230,slow=3.4,SNR=8.1						
BJI	**Beijing**	**150.56**	**110**	PKPbc	**PKPbc**	**00 03 28.3**	**-0.8**
DHY	**Denali Highway**	**150.84**	**307**	*e*PKPbc	**PKPbc**	**00 03 29.3**	**+0.1**
ILAR	**Eielson Array**	**151.06**	**310**	PKPbc	**PKPbc**	**00 03 28.9**	**-0.6**
	comp=Z,22nm,0.8s,baz=142,slow=2.1,SNR=163						
RC01	**Rabbit Creek A**	**151.32**	**302**	*e*PKPbc	**PKPbc**	**00 03 30.4**	**+0.2**
COLA	**College**	**151.49**	**310**	*e*PKPab	**PKPab**	**00 03 39.3**	**+0.1**
RND	**Reindeer**	**151.57**	**307**	*e*PKPbc	**PKPbc**	**00 03 30.7**	**-0.1**
MCK	**McKinley**	**151.69**	**307**	*e*PKPbc	**PKPbc**	**00 03 30.8**	**-0.2**
SUA	**Susitna One**	**151.89**	**302**	*e*PKPbc	**PKPbc**	**00 03 31.8**	**+0.1**
BWN	**Browne**	**152.01**	**308**	*e*PKPbc	**PKPbc**	**00 03 31.7**	**0.0**
TRF	**Thorofare Moun**	**152.21**	**307**	*e*PKPbc	**PKPbc**	**00 03 31.9**	**-0.4**
SKT	**Skwentna**	**152.40**	**303**	*e*PKPbc	**PKPbc**	**00 03 32.2**	**-0.4**
TOLK	**Toolik Lake Re**	**152.71**	**318**	*e*PKPbc	**PKPbc**	**00 03 33.0**	**-0.1**
PPLA	**Purkeypile**	**152.92**	**305**	*e*PKPbc	**PKPbc**	**00 03 33.6**	**-0.3**
CAST	**Castle Rocks**	**152.99**	**306**	*e*PKPbc	**PKPbc**	**00 03 33.2**	**-0.7**

JMA 17 23:46:53.2±0.2,25.°85N×123.°94E,h203km,M3.7, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JISG	**Ishigakijimahi**	**1.30**	**165**	P	Pn	23 47 25.9	+0.4
JISG				S	S	23 47 50.5	+0.2
JTJ	**Tarama**	**1.39**	**150**	S	S	23 47 51.7	+0.2
JIJ	**Ishigaki jima**	**1.49**	**173**	P	Pn	23 47 27.1	0.0
JIJ				S	S	23 47 52.1	-1.0
JIKM	**Ikemajima**	**1.50**	**128**	P	Pn	23 47 27.9	+0.7
JIKM				*e*S	S	23 47 53.8	+0.7
JIRB	**Irabujima**	**1.51**	**132**	P	Pn	23 47 27.6	+0.3
JIRB				*e*S	S	23 47 53.3	0.0
IRIF	**Iriomote-Funau**	**1.52**	**187**	P	Pn	23 47 27.2	-0.2
IRIF				S	S	23 47 53.9	+0.3
JMJ	**Miyako jima 2**	**1.60**	**130**	*e*S	S	23 47 55.1	+0.4
JKRS	**Kuro-shima**	**1.61**	**178**	S	S	23 47 54.8	-0.1
YOJ	**Yonaguni jima**	**1.62**	**212**	P	Pn	23 47 28.6	+0.3
JOGS	**Gusukube**	**1.71**	**129**	*e*S	S	23 47 57.2	+0.6
HATJ	**Hateruma jima**	**1.79**	**184**	*e*S	S	23 47 58.5	+0.6
JKE	**Kume jima 2**	**2.60**	**79**	P	Pn	23 47 37.9	-0.5
JOW	**Kunigami**	**4.01**	**75**	P	Pn	23 47 53.5	-1.7
JOW				S	S	23 48 38.5	-4.9
JTK	**Tokunoshima**	**4.88**	**66**	*e*S	S	23 48 56.9	-6.2

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*DDA **17** 23:52:52.0,36.°88N×29.°47E,h7km,Ml2.0*
*ISK **17** 23:52:51.5,36.°87N×29.°51E,h5km,ML2.5/6*
*ISCJB **17** 23:52:52.5±0.5,36.°90N±0.°03×29.°52E±0.°03,h1km±10km, Error ellipse: s-maj=5.3km s-min=4.5km az=157.0*
*CSEM **17** 23:52:52.3±0.2,36.°91N×29.°51E,h2km,ML2.5,Error ellipse: s-maj=5.4km s-min=4.0km az=158.0*
ISC 17 23:52:52.3±1.1,36.°92N±0.°02×29.°52E±0.°02,h6km±10km, n27,σ1.°00/43,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.32**	**5**	*i* P	**Pg**	**23 52 57.5**	**-1.1**
GOLH				*i* S	**Sg**	**23 53 03.3**	**+0.4**
GOLH	**Golhisar**	**0.32**	**5**	P	**Pg**	**23 52 57.5**	**-1.1**
GOLH				S	**Sg**	**23 53 03.3**	**+0.4**
ELL	**Elmali**	**0.35**	**118**	PG	**Pg**	**23 52 58.9**	**-0.2**
ELL				SG	**Sb**	**23 53 05.4**	**-1.4**
ELL	**Elmali**	**0.35**	**118**	*e*Pg	**Pg**	**23 52 58.9**	**-0.2**
ELL				*e*Sg	**Sb**	**23 53 05.4**	**-1.4**
FETY	**Fethiye**	**0.45**	**232**	PG	**Pg**	**23 53 00.9**	**-0.1**
FETY				SG	**Sb**	**23 53 07.7**	**-1.9**
FETY	**Fethiye**	**0.45**	**232**	P	**Pg**	**23 52 59.7**	**-1.3**
FETY	**Fethiye**	**0.45**	**232**	*e*Pg	**Pg**	**23 53 00.9**	**-0.1**
FETY				*e*Sg	**Sb**	**23 53 07.7**	**-1.9**
FETY				S	**Sg**	**23 53 09.0**	**+2.2**
KORT	**Korkueli**	**0.67**	**82**	PG	**Pb**	**23 53 05.9**	**-0.5**
KORT	**Korkueli**	**0.67**	**82**	*i* P	**Pg**	**23 53 05.6**	**+0.5**
KORT				*i* S	**Sn**	**23 53 18.4**	**-0.8**
KORT	**Korkueli**	**0.67**	**82**	P	**Pg**	**23 53 05.6**	**+0.5**
KORT	**Korkueli**	**0.67**	**82**	*e*Pg	**Pb**	**23 53 05.9**	**-0.5**
KORT				S	**Sn**	**23 53 18.4**	**-0.8**
AKAS	**Kas**	**0.69**	**174**	*i* P	**Pg**	**23 53 05.0**	**-0.4**
AKAS				*i* S	**Sn**	**23 53 22.3**	**+2.7

ARG				*e*Sn	**Sg**	**23 58 46.1**	**+0.9**
NPS	**Neapolis**	**1.30**	**273**	P	**Pb**	**23 58 29.2**	**+0.4**
NPS				S	**Sg**	**23 58 46.6**	**-0.2**
NPS				AML	AML	23 58 56.0	
	comp=E,1535μm,0.6s						
NPS				AML	AML	23 58 56.2	
	comp=N,1534μm,0.6s						
NPS	**Neapolis**	**1.30**	**273**	P	**Pb**	**23 58 29.2**	**+0.4**
NPS				S	**Sg**	**23 58 47.8**	**+1.0**
NPS	**Neapolis**	**1.30**	**273**	P	**Pb**	**23 58 29.2**	**+0.4**
NPS				S	**Sg**	**23 58 46.5**	**-0.2**
LAST	**Lasithi**	**1.41**	**268**	P	**Pn**	**23 58 30.3**	**+0.4**
LAST				S	**Sg**	**23 58 50.1**	**-0.2**
LAST				AML	AML	23 58 59.8	
	comp=N,649μm,1.0s						
LAST				AML	AML	23 59 03.7	
	comp=E,492μm,0.7s						
LAST	**Lasithi**	**1.41**	**268**	P	**Pb**	**23 58 30.9**	**+0.1**
LAST				S	**Sg**	**23 58 49.6**	**-0.7**
LAST	**Lasithi**	**1.41**	**268**	P	**Pb**	**23 58 30.9**	**+0.1**
LAST				S	**Sg**	**23 58 49.6**	**-0.7**
DAT	**Datca**	**1.54**	**11**	PN	**Pn**	**23 58 32.2**	**+0.5**
DAT				SN	**Sb**	**23 58 52.6**	**+0.2**
DAT	**Datca**	**1.54**	**11**	*i* P	**Pn**	**23 58 32.2**	**+0.5**
DAT				*i* S	**Sb**	**23 58 52.9**	**+0.5**
DAT	**Datca**	**1.54**	**11**	*e*Pn	**Pn**	**23 58 32.2**	**+0.5**
DAT				*e*Sn	**Sb**	**23 58 52.6**	**+0.2**
SANT	**Santorini**	**1.83**	**310**	PN	**Pn**	**23 58 36.1**	**+0.5**
SANT	**Santorini**	**1.83**	**310**	*e*Pn	**Pn**	**23 58 36.1**	**+0.5**
BODT	**Bodrum**	**1.85**	**3**	PN	**Pn**	**23 58 36.2**	**+0.4**
BODT	**Bodrum**	**1.85**	**3**	*e*Pn	**Pn**	**23 58 36.2**	**+0.4**
THR6	**Thira Island,**	**1.86**	**308**	P	**Pn**	**23 58 36.9**	**+1.0**
THR6	**Thira Island,**	**1.86**	**308**	P	**Pn**	**23 58 36.9**	**+1.0**
BDRM	**Kayabasi**	**1.86**	**6**	*i* P	**Pn**	**23 58 36.5**	**+0.5**
BDRM				*i* S	**Sb**	**23 59 01.8**	**+0.4**
BDRM	**Kayabasi**	**1.86**	**6**	P	**Pn**	**23 58 36.5**	**+0.5**
BDRM				S	**Sb**	**23 59 01.8**	**+0.4**
IDI	**Anoyia**	**1.89**	**273**	PN	**Pn**	**23 58 37.4**	**+0.9**
IDI	**Anoyia**	**1.89**	**273**	*e*Pn	**Pn**	**23 58 37.4**	**+0.9**
SIVA	**Sivas**	**1.97**	**265**	P	**Pb**	**23 58 40.4**	**+0.2**
SIVA	**Sivas**	**1.97**	**265**	P	**Pb**	**23 58 40.1**	**-0.2**
SIVA				S	**Sb**	**23 59 04.3**	**-0.3**
SIVA	**Sivas**	**1.97**	**265**	P	**Pb**	**23 58 40.0**	**-0.2**
SIVA				S	**Sb**	**23 59 04.3**	**-0.3**
DALY	**Dalyan (Mu¨la**	**1.99**	**36**	PN	**Pn**	**23 58 38.7**	**+1.0**
DALY	**Dalyan (Mu¨la**	**1.99**	**36**	*i* P	**Pb**	**23 58 40.1**	**-0.4**
DALY				*i* S	**Sg**	**23 59 09.6**	**+1.0**
DALY	**Dalyan (Mu¨la**	**1.99**	**36**	*e*Pn	**Pn**	**23 58 38.7**	**+1.0**
DALY	**Dalyan (Mu¨la**	**1.99**	**36**	P	**Pb**	**23 58 40.1**	**-0.4**
TURN	**Turunc**	**2.01**	**34**	PN	**Pn**	**23 58 35.5**	**-2.5**
TURN	**Turunc**	**2.01**	**34**	*i* P	**Pn**	**23 58 35.4**	**-2.5**
TURN				*i* S	**Sn**	**23 59 00.4**	**-2.4**
TURN	**Turunc**	**2.01**	**34**	*e*Pn	**Pn**	**23 58 35.5**	**-2.5**
TURN				S	**Sn**	**23 59 00.4**	**-2.4**
FETY	**Fethiye**	**2.08**	**47**	PN	**Pn**	**23 58 39.6**	**+0.5**
FETY	**Fethiye**	**2.08**	**47**	*e*Pn	**Pn**	**23 58 39.6**	**+0.5**
MLSB	**Milas**	**2.13**	**12**	PN	**Pn**	**23 58 40.4**	**+0.7**
MLSB	**Milas**	**2.13**	**12**	*e*Pn	**Pn**	**23 58 40.4**	**+0.7**
AKAS	**Kas**	**2.20**	**62**	PN	**Pn**	**23 58 40.7**	**-0.1**
AKAS	**Kas**	**2.20**	**62**	*i* P	**Pn**	**23 58 40.1**	**-0.7**
AKAS				*i* S	**Sn**	**23 59 08.0**	**+0.1**
AKAS	**Kas**	**2.20**	**62**	P	**Pn**	**23 58 40.1**	**-0.7**
AKAS	**Kas**	**2.20**	**62**	*e*Pn	**Pn**	**23 58 40.7**	**-0.1**
AKAS				S	**Sn**	**23 59 07.9**	**+0.1**
APE	**Apeiranthos**	**2.29**	**324**	PN	**Pn**	**23 58 42.1**	**+0.1**
APE	**Apeiranthos**	**2.29**	**324**	*e*Pn	**Pn**	**23 58 42.1**	**+0.1**
VAM	**Vamos**	**2.46**	**275**	P	**Pn**	**23 58 45.5**	**+1.2**
VAM	**Vamos**	**2.46**	**275**	P	**Pn**	**23 58 46.0**	**+1.8**
AYDN	**Tasoluk**	**2.50**	**12**	*i* P	**Pn**	**23 58 46.4**	**+1.5**
AYDN				*i* S	**Sg**	**23 59 23.7**	**-1.5**
AYDN	**Tasoluk**	**2.50**	**12**	P	**Pn**	**23 58 46.4**	**+1.5**
TAVA	**DENIZLI_Tavas**	**2.64**	**31**	*i* P	**Pn**	**23 58 48.0**	**+1.3**
TAVA				*i* S	**Sb**	**23 59 23.6**	**-0.3**
TAVA	**DENIZLI_Tavas**	**2.64**	**31**	P	**Pn**	**23 58 48.0**	**+1.2**
TAVA				S	**Sb**	**23 59 23.6**	**-0.3**
IMMV	**Iera Moni Meta**	**2.65**	**276**	P	**Pn**	**23 58 48.8**	**+2.0**
IMMV	**Iera Moni Meta**	**2.65**	**276**	P	**Pn**	**23 58 48.9**	**+2.2**
ELL	**Elmali**	**2.68**	**54**	PN	**Pn**	**23 58 48.5**	**+1.2**
ELL	**Elmali**	**2.68**	**54**	*e*Pn	**Pn**	**23 58 48.5**	**+1.2**
GOLH	**Golhisar**	**2.78**	**43**	*i* P	**Pn**	**23 58 49.4**	**+0.7**
GOLH	**Golhisar**	**2.78**	**43**	P	**Pn**	**23 58 49.3**	**+0.6**
AYDB	**Zeytinkoy-Aydi**	**2.79**	**11**	PN	**Pn**	**23 58 49.9**	**+1.1**
AYDB	**Zeytinkoy-Aydi**	**2.79**	**11**	*e*Pn	**Pn**	**23 58 49.9**	**+1.1**
DNZL	**Cakiroluk**	**2.88**	**30**	*i* S	**Sb**	**23 59 31.5**	**+0.4**
KORT	**Korkueli**	**3.11**	**54**	PN	**Pn**	**23 58 54.6**	**+1.3**
KORT	**Korkueli**	**3.11**	**54**	*i* P	Pn	23 58 48.3	-5.0
KORT	**Korkueli**	**3.11**	**54**	*e*Pn	**Pn**	**23 58 54.6**	**+1.3**
KULA	**Kula-Manisa**	**3.50**	**19**	PN	**Pn**	**23 58 59.7**	**+1.2**
KULA	**Kula-Manisa**	**3.50**	**19**	*e*Pn	**Pn**	**23 58 59.7**	**+1.2**

ISCJB ***18*** *00:02:37.9±0.1, 41°.76N±0°.02×29°.23W±0°.01, h10km, mb4.9/353, MS4.4/63, Error ellipse: s-maj=2.2km s-min=1.3km az=1.4*
IDC ***18*** *00:02:38.8±0.4, 41°.87N×29°.22W, h0km, mb4.5/45, mb1 4.6/46, mb1mx4.5/66, mbtmp4.5/46, ML5.2/1, MS4.3/44, Ms1 4.3/44, ms1mx4.2/60, Error ellipse: s-maj=12.1km s-min=8.2km az=178.0*
IGIL ***18*** *00:02:38.5, 41°.86N×29°.16W, h10km, mb5.0*
BJI ***18*** *00:02:38.8, 41°.90N×29°.10W, h10km, mb5.1/23, mB5.4/13, Ms5.2/11, Ms7 4.9/9*
NEIC ***18*** *00:02:40.6±0.1, 41°.84N×29°.15W, h10km, mb5.0/232, Error ellipse: s-maj=4.0km s-min=1.8km az=179.0*
CSEM ***18*** *00:02:40.4±0.1, 41°.75N×29°.11W, h10km, mb5.1/99, Mw4.7, Error ellipse: s-maj=2.8km s-min=2.6km az=44.0*
GCMT ***18*** *00:02:40.7±0.2, 41°.96N×29°.13W, h14km, MW5.1/105, Moment Tensor Solution. s39,c46; s105,c179; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-6.06±.30; $M_{\theta\theta}$0.39±.18; $M_{\phi\phi}$5.67±.20; $M_{r\theta}$-0.04±.49; $M_{r\phi}$1.08±.11; $M_{\theta\phi}$-1.56±.35; Best double couple: $M_0$6.17100×10^{16} NP1:ϕ_s9.00000°, δ52.00000°, λ-93.00000°. NP2: ϕ_s193.00000°, δ38.00000°, λ-86.00000°. Principal axes: T 6.0770, Plg7.0000°, Azm101.0000°; N 0.1850, Plg2.0000°, Azm11.0000°; P -6.2650, Plg82.0000°, Azm263.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
MOS ***18*** *00:02:41.5±0.9, 41°.78N×29°.13W, h31km, mb5.1/92, MS4.5/15 Error ellipse: s-maj=6.4km s-min=3.6km az=144.0*
PDA ***18*** *00:02:42.1±1.6, 41°.94N×29°.08W, h10km, ML4.0, Error ellipse: s-maj=9.7km s-min=6.1km az=82.0*
CNRM ***18*** *00:02:50.8, 42°.16N×28°.71W, h35km, ML5.3*

ISC 18 00:02:40.2±0.3, 41°.76N±0°.04×29°.14W±0°.03, h10km, n1173, σ1°38/1213, mb5.0/357, MS4.4/78, 43C-16D, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H07N1	**FLORES T-PHASE**	**2.56**	**217**	Pn	**Pn**	**00 03 20.8**	**-1.0**
	SNR=28						
H07N1				T	T	00 06 08.2	
	SNR=12						
PGRA	**Graciosa**	**2.87**	**162**	*e*P	**Pn**	**00 03 25.1**	**-0.9**
PGRA				*e*S	**Sn**	**00 03 58.2**	**-2.3**
PGRA				A	A	00 04 02.9	
	71nm,0.5s						
PGRA	**Graciosa**	**2.87**	**162**	*e*P	**Pn**	**00 03 25.1**	**-0.9**
PGRA				*e*S	**Sn**	**00 03 58.2**	**-2.3**
ROSA	**Rosais**	**3.11**	**167**	*e*P	**Pn**	**00 03 29.4**	**0.0**
ROSA				*e*S	**Sn**	**00 04 04.7**	**-1.9**
ROSA				A	A	00 04 08.6	
	27nm,0.2s						
ROSA	**Rosais**	**3.11**	**167**	*e*Pn	**Pn**	**00 03 31.0**	**+1.6**
ROSA	**Rosais**	**3.11**	**167**	*e*P	**Pn**	**00 03 29.4**	**0.0**
ROSA	**Rosais**	**3.11**	**167**	*e*Pn	**Pn**	**00 03 31.0**	**+1.6**
ROSA				*e*S	**Sn**	**00 04 04.7**	**-1.9**
PCED	**Cedros**	**3.15**	**174**	*e*P	**Pn**	**00 03 29.7**	**-0.1**
PCED				*e*S	**Sn**	**00 04 05.4**	**-2.0**
PCED				A	A	00 04 11.6	
	45nm,0.3s						
PCED	**Cedros**	**3.15**	**174**	*e*P	**Pn**	**00 03 29.7**	**-0.1**
PCED				*e*S	**Sn**	**00 04 05.4**	**-2.0**
CALA	**Caldeira**	**3.19**	**174**	*e*P	**Pn**	**00 03 30.5**	**0.0**
CALA				*e*S	**Sn**	**00 04 06.9**	**-1.8**
CALA	**Caldeira**	**3.19**	**174**	*e*P	**Pn**	**00 03 30.5**	**0.0**
CALA				*e*S	**Sn**	**00 04 06.9**	**-1.8**
PMAN	**Manadas**	**3.22**	**165**	*e*P	**Pn**	**00 03 30.3**	**-0.6**
PMAN	**Manadas**	**3.22**	**165**	*e*P	**Pn**	**00 03 30.3**	**-0.6**
HOR	**Horta**	**3.25**	**173**	*e*P	**Pn**	**00 03 31.6**	**+0.3**
HOR				*e*S	**Sn**	**00 04 07.4**	**-2.6**
HOR				A	A	00 04 11.0	
	123nm,0.1s						
HOR	**Horta**	**3.25**	**173**	*e*P	**Pn**	**00 03 31.6**	**+0.3**
HOR				*e*S	**Sn**	**00 04 07.4**	**-2.6**
PICO	**Pico**	**3.30**	**170**	*e*P	**Pn**	**00 03 32.4**	**+0.4**
PICO				*e*S	**Sn**	**00 04 09.9**	**-1.4**
PICO				A	A	00 04 11.6	
	28nm,0.2s						
PICO	**Pico**	**3.30**	**170**	*e*P	**Pn**	**00 03 32.4**	**+0.4**
PICO				*e*S	**Sn**	**00 04 09.9**	**-1.4**
PCAN	**Candelaria**	**3.33**	**171**	*e*P	**Pn**	**00 03 32.8**	**+0.4**
PCAN				*e*S	**Sn**	**00 04 10.2**	**-1.8**
PCAN				A	A	00 04 12.6	
	28nm,0.2s						
PCAN	**Candelaria**	**3.33**	**171**	*e*P	**Pn**	**00 03 32.8**	**+0.4**
PCAN				*e*S	**Sn**	**00 04 10.2**	**-1.8**
PSCM	**Serra do Cume**	**3.42**	**153**	*e*P	**Pn**	**00 03 32.4**	**-1.3**
PSCM				*e*S	**Sn**	**00 04 11.1**	**-3.2**
PSCM				A	A	00 04 11.9	
	52nm,0.1s						
PSCM	**Serra do Cume**	**3.42**	**153**	*e*P	**Pn**	**00 03 32.4**	**-1.3**
PSCM				*e*S	**Sn**	**00 04 11.1**	**-3.2**
ADH	**Angra Heroismo**	**3.42**	**154**	*e*P	**Pn**	**00 03 32.5**	**-1.2**
ADH				*e*S	**Sn**	**00 04 10.6**	**-3.7**
ADH				A	A	00 04 14.9	
	42nm,0.3s						
ADH	**Angra Heroismo**	**3.42**	**154**	*e*P	**Pn**	**00 03 32.5**	**-1.2**
ADH				*e*S	**Sn**	**00 04 10.6**	**-3.7**
PSET	**Sete Cidades**	**4.73**	**145**	*e*P	**Pn**	**00 03 51.2**	**-0.4**
PSET				*e*S	**Sn**	**00 04 43.5**	**-3.0**
PSET				A	A	00 04 51.2	
	87nm,0.4s						
PSET	**Sete Cidades**	**4.73**	**145**	*e*P	**Pn**	**00 03 51.2**	**-0.4**
PSET				*e*S	**Sn**	**00 04 43.5**	**-3.0**
PDA	**Ponta Delgada**	**4.82**	**145**	*e*P	**Pn**	**00 03 52.8**	**0.0**
PDA				*e*S	**Sn**	**00 04 45.5**	**-3.2**
PDA				A	A	00 04 48.2	
	44nm,0.4s						
PDA	**Ponta Delgada**	**4.82**	**145**	*e*P	**Pn**	**00 03 52.8**	**0.0**
PDA				*e*S	**Sn**	**00 04 45.5**	**-3.2**
GRON	**Grota Negra**	**4.86**	**144**	*e*P	**Pn**	**00 03 53.7**	**+0.3**
GRON				*e*S	**Sn**	**00 04 47.3**	**-2.4**
GRON				A	A	00 04 51.6	
	8.5nm,0.1s						
CMLA	**Cha da Macela**	**4.86**	**144**	*e*P	**Pn**	**00 03 53.5**	**0.0**
CMLA				*e*S	**Sn**	**00 04 46.1**	**-3.7**
CMLA				A	A	00 04 52.5	
	48nm,0.2s						
CMLA	**Cha da Macela**	**4.86**	**144**	*e*Pn	**Pn**	**00 03 53.2**	**-0.3**
CMLA	**Cha da Macela**	**4.86**	**144**	*i* P	**Pn**	**00 03 54.1**	**+0.6**
CMLA	**Cha da Macela**	**4.86**	**144**	*e*Pn	**Pn**	**00 03 53.2**	**-0.3**
CMLA	**Cha da Macela**	**4.86**	**144**	*e*P	**Pn**	**00 03 53.5**	**0.0**
CMLA				*e*S	**Sn**	**00 04 46.1**	**-3.7**
BART	**Pico Bartolome**	**5.01**	**141**	*e*P	**Pn**	**00 03 54.9**	**-0.7**
BART				*e*S	**Sn**	**00 04 49.5**	**-4.2**
BART				A	A	00 04 51.4	
	25nm,0.3s						
BART	**Pico Bartolome**	**5.01**	**141**	*e*P	**Pn**	**00 03 54.9**	**-0.7**
PSMA	**Santa Maria**	**5.68**	**146**	*e*P	**Pn**	**00 04 04.2**	**-0.5**
PSMA				*e*S	**Sn**	**00 05 06.2**	**-3.7**
PSMA				A	A	00 05 10.9	
	32nm,0.2s						
PSMN	**Pico do Norte,**	**5.70**	**145**	*e*P	**Pn**	**00 04 04.6**	**-0.4**
PSMN				A	A	00 05 10.9	
	21nm,0.4s						
PSMN	**Pico do Norte,**	**5.70**	**145**	*e*P	**Pn**	**00 04 04.6**	**-0.4**
PMOZ	**Porto Moniz, M**	**13.02**	**129**	*e*P	**Pn**	**00 05 47.7**	**+2.3**
	75nm,2.3s						
PMOZ				*e*LR	LR	00 08 36.5	
	1μm,20.0s						
PMOZ	**Porto Moniz, M**	**13.02**	**129**	*e*P	**Pn**	**00 05 47.7**	**+2.3**
PMAR	**Madeira**	**13.26**	**129**	*e*P	**Pn**	**00 05 50.3**	**+1.6**
	110nm,1.9s						
PMAR	**Madeira**	**13.26**	**129**	*e*P	**Pn**	**00 05 50.3**	**+1.6**
FUL	**Funchal**	**13.33**	**129**	*e*P	**Pn**	**00 05 48.1**	**-1.3**
	60nm,1.3s						
FUL	**Funchal**	**13.33**	**129**	*e*P	**Pn**	**00 05 48.1**	**-1.3**
PMPS	**Porto Santo**	**13.37**	**126**	*e*P	**Pn**	**00 05 51.5**	**+1.5**
	146nm,1.5s						
PMPS	**Porto Santo**	**13.37**	**126**	*e*P	**Pn**	**00 05 51.5**	**+1.5**
PMAFR	**Mafra**	**15.39**	**94**	*e*P	**Pn**	**00 06 14.2**	**-3.2**
	105nm,1.5s						
PTO	**Porto**	**15.41**	**85**	*e*P	**Pn**	**00 06 16.6**	**-1.1**
PMST	**Lisbon--Monsan**	**15.53**	**95**	*e*P	**Pn**	**00 06 18.9**	**-0.3**
	225nm,1.8s						
PGAV	**Gavieira, Arco**	**15.55**	**82**	*e*P	**P**	**00 06 25.2**	**+1.3**
	128nm,1.3s						
PGAV				*e*LR	LR	00 09 38.3	
	2μm,18.0s						
PGAV	**Gavieira, Arco**	**15.55**	**82**	*e*P	**P**	**00 06 25.2**	**+1.3**
LIS	**Lisbon**	**15.56**	**95**	*e*P	**Pn**	**00 06 18.2**	**-1.5**
LIS				AMb	AMB	00 06 21.8	
	comp=Z,127nm,2.6s						
LIS	**Lisbon**	**15.56**	**95**	*e*P	**Pn**	**00 06 18.1**	**-1.5**
PCAS	**Casmilo, Conde**	**15.70**	**89**	*e*P	**Pn**	**00 06 20.4**	**-1.0**
	comp=Z,153nm,1.4s						
PCAB	**Cabril**	**15.76**	**83**	*e*P	**Pn**	**00 06 18.9**	**-3.3**
	comp=Z,113nm,1.7s						
ALMR	**Almeirim**	**15.86**	**93**	*e*P	**Pn**	**00 06 22.1**	**-1.4**
ALMR				AMb	AMB	00 06 28.6	
	comp=Z,141nm,2.6s						
ALMR	**Almeirim**	**15.86**	**93**	*e*P	**Pn**	**00 06 22.4**	**-1.1**
	comp=Z,208nm,1.4s						
ALMR	**Almeirim**	**15.86**	**93**	*e*P	**Pn**	**00 06 22.1**	**-1.4**
PTOM	**Tomar**	**15.87**	**91**	*e*P	**Pn**	**00 06 22.1**	**-1.5**
	comp=Z,156nm,1.3s						
POLO	**Lamas de Olo**	**15.98**	**84**	*e*P	**P**	**00 06 29.3**	**+0.6**
	comp=Z,52nm,1.4s						
POLO	**Lamas de Olo**	**15.98**	**84**	*e*P	**P**	**00 06 29.3**	**+0.6**
PVIS	**Viseu**	**16.01**	**87**	*e*P	**P**	**00 06 30.8**	**+1.8**
	comp=Z,116nm,2.1s						
PVIS	**Viseu**	**16.01**	**87**	*e*P	**P**	**00 06 30.8**	**+1.8**
PVRL	**Vila Real**	**16.05**	**85**	*e*P	**Pn**	**00 06 26.9**	**+0.9**
	comp=Z,98nm,1.4s						
PMTG	**Montargil**	**16.15**	**93**	*e*P	**Pn**	**00 06 26.1**	**-1.1**
	comp=Z,130nm,1.5s						
PNCL	**Nicolau / Gran**	**16.22**	**96**	*e*P	**Pn**	**00 06 26.5**	**-1.6**
	comp=Z,62nm,1.6s						
PTEO	**Sao Teotonio**	**16.27**	**98**	*e*P	**Pn**	**00 06 28.0**	**-0.7**
	comp=Z,60nm,1.6s						
MTE	**Manteigas**	**16.34**	**88**	*e*P	**P**	**00 06 31.3**	**-1.3**
	comp=Z,212nm,1.4s						
MTE				*e*LR	LR	00 10 06.0	
	comp=Z,2μm,20.0s						
MTE	**Manteigas**	**16.34**	**88**	*e*Pn	**Pn**	**00 06 29.1**	**-0.6**
	comp=Z,139nm,1.2s						
MTE	**Manteigas**	**16.34**	**88**	*e*Pn	**Pn**	**00 06 29.1**	**-0.6**
	comp=Z,139nm,1.2s						
MTE	**Manteigas**	**16.34**	**88**	*e*P	**P**	**00 06 31.3**	**-1.3**
PFVI	**Vila Bisbo**	**16.35**	**100**	*e*P	**Pn**	**00 06 30.5**	**+0.7**
	comp=Z,84nm,2.3s						
PFVI	**Vila Bisbo**	**16.35**	**100**	*e*Pn	**Pn**	**00 06 30.8**	**+1.0**
	comp=Z,21nm,0.8s						
PFVI	**Vila Bisbo**	**16.35**	**100**	*e*P	**Pn**	**00 06 30.5**	**+0.7**
PFVI	**Vila Bisbo**	**16.35**	**100**	*e*Pn	**Pn**	**00 06 30.8**	**+1.0**
	comp=Z,21nm,0.8s						
VAL	**Valentia**	**16.40**	**45**	*e*P	**Pn**	**00 06 30.8**	**+0.4**
VAL				*i* S	**S**	**00 09 47.3**	**+2.6**
MORF	**Marmelete**	**16.41**	**99**	*e*P	**Pn**	**00 06 29.3**	**-1.4**
MORF				AMb	AMB	00 06 35.2	
	comp=Z,31nm,1.5s						
MORF				*e*S	**Sn**	**00 09 33.0**	**+0.2**
MORF	**Marmelete**	**16.41**	**99**	*e*P	**Pn**	**00 06 30.8**	**+0.2**
	comp=Z,40nm,1.7s						
MORF	**Marmelete**	**16.41**	**99**	*e*P	**Pn**	**00 06 29.2**	**-1.4**
MORF				*e*S	**Sn**	**00 09 33.0**	**+0.2**
EVO	**Evora**	**16.47**	**94**	*e*P	**Pn**	**00 06 29.6**	**-1.7**
	comp=Z,102nm,1.5s						
PCBR	**Castelo Branco**	**16.51**	**89**	*e*P	**Pn**	**00 06 30.2**	**-1.6**
	comp=Z,125nm,1.5s						
MESJ	**Messejana**	**16.54**	**97**	*e*P	**Pn**	**00 06 30.7**	**-1.5**
MESJ				AMb	AMB	00 06 40.0	
	comp=Z,74nm,1.4s						
MESJ	**Messejana**	**16.54**	**97**	*e*P	**Pn**	**00 06 32.5**	**+0.3**
	comp=Z,74nm,1.5s						
MESJ	**Messejana**	**16.54**	**97**	*e*P	**Pn**	**00 06 30.7**	**-1.5**
MESJ	**Messejana**	**16.54**	**97**	*e*P	**Pn**	**00 06 32.5**	**+0.3**
MVO	**Moncorvo**	**16.58**	**85**	*e*P	**P**	**00 06 35.4**	**+0.1**
	comp=Z,108nm,1.9s						
MVO				*e*LR	LR	00 10 13.9	
	comp=Z,1μm,20.0s						
MVO	**Moncorvo**	**16.58**	**85**	*e*P	**P**	**00 06 35.4**	**+0.1**
PMRV	**Marv??o**	**16.68**	**91**	*e*P	**Pn**	**00 06 35.0**	**+1.0**
	comp=Z,95nm,1.3s						
PMRV				*e*LR	LR	00 10 20.5	
	comp=Z,3μm,18.0s						
PMRV	**Marv??o**	**16.68**	**91**	*e*P	**Pn**	**00 06 35.0**	**+1.0**
PESTR	**Estremoz**	**16.68**	**93**	*e*P	**Pn**	**00 06 31.6**	**-2.4**
	comp=Z,84nm,1.5s						
PESTR	**Estremoz**	**16.68**	**93**	*e*Pn	**Pn**	**00 06 32.1**	**-2.0**
	comp=Z,24nm,1.1s						
PESTR	**Estremoz**	**16.68**	**93**	P	**P**	**00 06 37.2**	**+0.8**
PBRG	**Braganca**	**16.70**	**82**	*e*P	**Pn**	**00 06 31.7**	**-2.6**
	comp=Z,94nm,1.5s						
PBEJ	**Beja**	**16.74**	**96**	*e*P	**Pn**	**00 06 34.5**	**-0.2**
	comp=Z,46nm,1.3s						
PCVE	**Castro Verde**	**16.75**	**97**	*e*P	**P**	**00 06 36.1**	**-1.0**
	comp=Z,80nm,1.5s						
PBDV	**Barranco-do-Ve**	**16.97**	**98**	*e*P	**P**	**00 06 39.3**	**-0.3**
	comp=Z,105nm,1.8s						
PVAQ	**Vaqueiros**	**17.07**	**98**	*e*P	**P**	**00 06 39.8**	**-0.8**
	comp=Z,50nm,1.5s						
PVAQ				*e*LR	LR	00 10 37.7	
	comp=Z,2μm,20.0s						
PVAQ	**Vaqueiros**	**17.07**	**98**	*e*P	**P**	**00 06 39.8**	**-0.8**
PBAR	**Barrancos**	**17.30**	**95**	*e*P	**P**	**00 06 43.4**	**+0.1**
	comp=Z,133nm,1.7s						
PBAR	**Barrancos**	**17.30**	**95**	*e*P	**P**	**00 06 43.4**	**+0.1**
CCA1	**Carnmenellis**	**18.57**	**55**	*e*P	**Pn**	**00 06 57.9**	**+0.6**
CCA1				IAMs_20	IAMs_20	00 11 55.1	
	comp=Z,2μm,12.3s						
PAB	**San Pablo**	**18.92**	**88**	*e*P	**Pn**	**00 07 02.0**	**+0.2**
	comp=Z,210nm,1.9s						
PAB	**San Pablo**	**18.92**	**88**	*e*P	**Pn**	**00 07 02.0**	**+0.2**
PAB				pmax	pmax		
	comp=Z,210nm,1.9s						
PAB	**San Pablo**	**18.92**	**88**	*e*P	**Pn**	**00 07 02.0**	**+0.2**
	comp=Z,210nm,1.9s						
DSB	**Dublin**	**19.10**	**45**	*e*P	**Pn**	**00 07 03.6**	**-0.2**
	comp=Z,41nm,1.3s						
ESDC	**Sonseca Array**	**19.18**	**88**	P	**P**	**00 07 04.4**	**+0.4**
	comp=Z,1.4nm,0.3s,baz=289,slow=12,SNR=52						
ESDC				LR	LR	00 12 54.8	
	comp=Z,1μm,21.2s,baz=285,slow=32						
ESLA	**Sonseca Array**	**19.18**	**88**	*e*P	**Pn**	**00 07 05.8**	**+0.9**
	comp=Z,148nm,1.9s						
ESLA	**Sonseca Array**	**19.18**	**88**	*e*P	**Pn**	**00 07 05.8**	**+0.9**
	comp=Z,148nm,1.9s						
ES19	**SONSECA Array**	**19.22**	**88**	*e*P	**P**	**00 07 04.6**	**+0.2**
ES19	**SONSECA Array**	**19.22**	**88**	*e*P	**P**	**00 07 04.6**	**+0.2**
HTL	**Hartland**	**19.28**	**53**	*e*P	**Pn**	**00 07 05.9**	**0.0**
HTL				IAmb	IAmb	00 07 09.3	
	comp=Z,71nm,1.4s						
HTL				IAMs_20	IAMs_20	00 13 39.5	
	comp=Z,681nm,15.3s						
ROSF	**Rostrenen**	**19.37**	**61**	*e*P	**Pn**	**00 07 07.0**	**0.0**
ROSF				pmax	pmax		
	comp=Z,102nm,1.2s						
QUIF	**Quistinic**	**19.37**	**63**	*e*P	**Pn**	**00 07 06.5**	**-0.5**
QUIF				pmax	pmax		
	comp=Z,323nm,0.7s						
DYA	**Yadsworthy**	**19.44**	**55**	*e*P	**Pn**	**00 07 07.3**	**-0.6**
DYA				IAMs_20	IAMs_20	00 12 20.8	
	comp=Z,1μm,14.7s						
DYA	**Yadsworthy**	**19.44**	**55**	*e*P	**Pn**	**00 07 07.3**	**-0.6**
IDGL	**Inch Island, C**	**19.47**	**39**	*e*P	**P**	**00 07 07.2**	**+0.2**
HEX	**Exmoor**	**19.71**	**53**	*e*P	**Pn**	**00 07 10.6**	**-0.5**
CLGH	**Cloghs, Cushen**	**20.15**	**41**	IAMs_20	IAMs_20	00 13 13.5	
	comp=Z,1μm,17.6s						
WLF1	**Llynfaes**	**20.19**	**47**	*e*P	**P**	**00 07 14.9**	**+0.1**
WLF1				IAmb	IAmb	00 07 18.6	
	comp=Z,160nm

comp=Z,114nm,1.7s
CART Cartagena 22.01 92 *e*P **P 00 07 34.5 0.0**
comp=Z,114nm,1.7s
HMNX Herstmonceux 22.18 56 *e*P **P 00 07 35.2 -1.1**
HMNX IAMs_20 IAMs_20 00 14 38.2
comp=Z,2μm,15.5s
MDO Dochfour 22.26 37 *e*P **P 00 07 36.2 -0.9**
RJF Les Rejaudoux 22.43 71 *e*P **P 00 07 40.1 +1.0**
RJF pmax pmax
comp=Z,149nm,1.6s
RJF Les Rejaudoux 22.43 71 *e*P **P 00 07 40.1 +1.0**
comp=Z,149nm,1.6s
ELSH Elham, Standar 22.73 55 IAMs_20 IAMs_20 00 15 27.4
comp=Z,1μm,13.0s
CAF Calviac 22.84 71 *e*P **P 00 07 43.0 -0.4**
CAF pmax pmax
comp=Z,106nm,1.4s
TCF Toulx Ste Croi 22.91 68 *e*P **P 00 07 43.8 -0.3**
TCF pmax pmax
comp=Z,171nm,1.4s
TCF Toulx Ste Croi 22.91 68 *e*P **P 00 07 43.8 -0.3**
comp=Z,171nm,1.4s
BGF Bois d'Agland 23.35 67 *e*P **P 00 07 48.4 -0.2**
BGF pmax pmax
comp=Z,97nm,1.0s
BORG Borgarnes 23.46 8 *e*P **P 00 07 50.1 +0.6**
comp=Z,65nm,1.6s
BORG Borgarnes 23.46 8 *e*P **P 00 07 50.1 +0.6**
BORG pmax pmax
comp=Z,65nm,1.6s
AVF Avril sur Loir 23.70 67 *e*P **P 00 07 51.6 -0.4**
AVF pmax pmax
comp=Z,42nm,1.0s
EANR 'Ain N'Sour 24.18 94 P **P 00 07 53.3 -3.5**
EBNR Beni Rached 24.37 93 P **P 00 07 59.9 +1.4**
EBNR Beni Rached 24.37 93 P **P 00 07 59.9 +1.4**
ANGG Ammassalik, Gr 24.38 351 *e*P **P 00 08 00.2 +2.0**
comp=Z,23nm,1.2s
BAIF Baives 24.48 59 *e*P **P 00 07 58.7 -0.6**
BAIF pmax pmax
comp=Z,45nm,1.0s
ETRT Tiaret 24.55 95 P **P 00 08 02.0 +1.8**
ETRT Tiaret 24.55 95 P **P 00 08 02.0 +1.8**
SSB Saint Sauveur 24.57 70 *e*P **P 00 08 01.4 +1.1**
comp=Z,48nm,1.2s
SNF Seneffe 24.58 58 ⇓P **P 00 08 00.3 0.0**
comp=Z,36nm,1.0s
UCC Uccle 24.67 57 ⇑P **P 00 08 00.0 -1.0**
comp=Z,34nm,1.2s
UCC Uccle 24.67 57 *e*P **P 00 08 01.0 0.0**
comp=Z,124nm,1.3s
UCC Uccle 24.67 57 *e*P **P 00 08 01.0 0.0**
UCC pmax pmax
comp=Z,124nm,1.3s
VIVF Saint-Julien-l 24.69 71 *e*P **P 00 08 01.9 +0.5**
VIVF pmax pmax
comp=Z,56nm,1.4s
VIVF Saint-Julien-l 24.69 71 *e*P **P 00 08 01.9 +0.5**
comp=Z,56nm,1.4s
BCLA Clavier 25.22 58 ⇓P **P 00 08 05.9 -0.1**
comp=Z,117nm,1.3s
ABA Alger-Bouzarea 25.30 91 P P 00 08 16.0 +9.1
EMHD Djebel Mahouad 25.46 92 P **P 00 08 12.0 +3.5**
BEBN Eben Emael 25.50 57 ⇑P **P 00 08 08.3 -0.2**
ORIF Oris-en-Rattie 25.54 71 *e*P **P 00 08 10.3 +1.2**
ORIF pmax pmax
comp=Z,133nm,2.0s
CABF La Chapelle 25.58 67 *e*P **P 00 08 09.6 +0.2**
CABF pmax pmax
comp=Z,252nm,1.7s
HGN Heimansgroeve 25.66 57 *e*P **P 00 08 08.7 -1.2**
comp=Z,118nm,1.3s
HGN *e*L L 00 16 21.2
comp=Z,1μm,21.4s
MEM Membach 25.68 58 ⇓P **P 00 08 10.2 0.0**
comp=Z,40nm,1.3s
MEM Membach 25.68 58 *e*P **P 00 08 10.4 +0.2**
WLF Walferdange 25.69 60 ⇓P **P 00 08 10.2 -0.1**
comp=Z,68nm,1.6s
WLF Walferdange 25.69 60 *e*P **P 00 08 10.6 +0.3**
comp=Z,74nm,1.0s
WLF Walferdange 25.69 60 *e*P **P 00 08 10.6 +0.3**
WLF pmax pmax
comp=Z,74nm,1.0s
HAU Haudompre 25.74 64 *e*P **P 00 08 10.4 -0.4**
HAU pmax pmax
comp=Z,97nm,1.2s
HINF Hinteralfeld 26.08 64 *e*P **P 00 08 13.4 -0.5**
HINF pmax pmax
comp=Z,47nm,1.0s
LPL La Plagne 26.09 70 *e*P **P 00 08 14.9 +0.7**
LPL pmax pmax
comp=Z,26nm,1.1s
BNI Bardonecchia 26.09 71 *e*P **P 00 08 15.0 +0.8**
comp=Z,110nm,1.8s
BNI Bardonecchia 26.09 71 *e*P **P 00 08 15.0 +0.8**
BNI pmax pmax
comp=Z,110nm,1.8s
BNI Bardonecchia 26.09 71 *e*P **P 00 08 15.0 +0.8**
comp=Z,110nm,1.8s
LPG La Plagne 26.11 70 *e*P **P 00 08 15.1 +0.7**
LPG pmax pmax
comp=Z,41nm,1.2s
FRF La Foret Royal 26.25 74 *e*P **P 00 08 15.7 +0.2**
FRF pmax pmax
comp=Z,30nm,1.4s
FRF La Foret Royal 26.25 74 *e*P **P 00 08 15.7 +0.2**
comp=Z,30nm,1.4s
ECH Echery 26.29 63 *e*P **P 00 08 16.3 +0.5**
comp=Z,69nm,1.0s
ECH Echery 26.29 63 *e*P **P 00 08 16.3 +0.5**
ECH pmax pmax
comp=Z,69nm,1.0s
WTSB Winterswijk 26.36 55 *e*P **P 00 08 14.1 -2.1**
comp=Z,68nm,1.5s
CDF Champ du Feu 26.37 63 *e*P **P 00 08 16.2 -0.4**
CDF pmax pmax
comp=Z,87nm,1.2s
SENIN Lac Senin/Sane 26.43 68 *e*P **P 00 08 18.2 +1.0**
comp=Z,74nm,1.2s
BFO Black Forest 27.07 63 *e*P **P 00 08 23.2 +0.4**
comp=Z,37nm,1.1s
BFO Black Forest 27.07 63 *e*P **P 00 08 23.2 +0.4**
BFO pmax pmax
comp=Z,37nm,1.1s
SLE Schleitheim 27.19 64 P **P 00 08 24.4 +0.5**
DFRA Djebel Bou Aff 27.52 89 P **P 00 08 32.6 +5.5**
STU Stuttgart 27.65 62 *e*P **P 00 08 27.6 -0.3**
comp=Z,29nm,0.9s
STU Stuttgart 27.65 62 *e*P **P 00 08 27.6 -0.3**
STU pmax pmax
comp=Z,29nm,0.9s
TUE Stuetta 27.83 67 *e*P **P 00 08 31.0 +1.1**
comp=Z,31nm,0.9s
EMMW East Machias 27.90 289 *e*P **P 00 08 29.9 -0.4**
comp=Z,54nm,1.3s
SFJD Kangerlussuaq 27.91 342 LR LR 00 17 20.6
comp=Z,633nm,18.2s,baz=155,slow=32
SCHQ Schefferville 27.91 311 LR LR 00 17 48.9
comp=Z,1μm,19.3s,baz=91,slow=33
SCHQ Schefferville 27.91 311 *e*P **P 00 08 31.0 +0.8**
comp=Z,59nm,1.6s
PQI Presque Isle 28.09 293 *e*P **P 00 08 30.6 -1.4**
comp=Z,25nm,1.0s
CTEI Djebel Teioual 28.10 90 P **P 00 08 33.8 +1.5**
CTEI Djebel Teioual 28.10 90 P **P 00 08 33.8 +1.5**
DAVA Damuels 28.15 65 *e*P **P 00 08 33.5 +0.9**
comp=Z,19nm,1.2s,SNR=7.7
CAEH 'Ain El Ouahch 28.16 88 P **P 00 08 33.2 +0.5**
CAEH 'Ain El Ouahch 28.16 88 P **P 00 08 33.2 +0.5**
CKFL Kef-Lekhel 28.21 89 P P 00 08 38.6 +5.4
FUORN Ofenpass-Fuorn 28.45 67 *e*P **P 00 08 36.8 +1.3**
comp=Z,23nm,1.3s
CMAH Djebel Manchou 28.65 88 P **P 00 08 36.9 -0.2**
CMAH Djebel Manchou 28.65 88 P **P 00 08 36.9 -0.2**
RETA Reutte 28.73 65 *e*P **P 00 08 38.2 +0.4**
comp=Z,9.4nm,1.1s,SNR=6.7
FETA Feichten 28.74 66 *e*P **P 00 08 39.1 +1.1**
comp=Z,21nm,1.2s,SNR=13
ABSA Djebel Ababsia 28.82 89 P **P 00 08 38.8 +0.1**
VLC Villacollemand 28.84 72 *e*P **P 00 08 39.1 +0.5**
comp=Z,27nm,1.3s
VLC Villacollemand 28.84 72 *e*P **P 00 08 39.1 +0.5**
comp=Z,27nm,1.3s
MOTA Moosalm 28.97 65 *e*P **P 00 08 39.6 -0.4**
comp=Z,12nm,0.9s,SNR=14

GRFO Grafenberg 28.98 60 *e*P **P 00 08 40.6 +0.9**
comp=Z,36nm,1.4s
GRFO Grafenberg 28.98 60 *e*P **P 00 08 40.7 +0.9**
GRFO pmax pmax
comp=Z,37nm,1.4s
GRF Grafenberg Arr 28.98 60 P **P 00 08 41.0 +1.2**
PKME Peaks-Kenny Pk 29.12 291 P **P 00 08 39.1 -1.9**
baz=82,SNR=6.2
PKME Peaks-Kenny Pk 29.12 291 *e*P **P 00 08 40.0 -1.1**
comp=Z,50nm,1.4s
WATA Walderalm 29.30 65 *i*P **P 00 08 43.6 +0.8**
comp=Z,17nm,1.1s,SNR=10
WTTA Wattenberg 29.34 65 *i*P **P 00 08 44.2 +1.0**
comp=Z,20nm,1.5s,SNR=6.3
NKC Novy Kostel 29.77 59 *e*P **P 00 08 47.5 +0.6**
NKC *e*P sP 00 09 02.8 +12
NKC AMS AMS 00 19 20.0
comp=Z,1μm,17.5s
NKC Novy Kostel 29.77 59 *e*P **P 00 08 47.5 +0.6**
NKC *e* 00 09 02.8
NKC MLR MLR
comp=Z,1μm,17.5s
KONO Kongsberg 29.78 40 *i*P **P 00 08 46.2 -0.6**
KONO pmax pmax
comp=Z,11nm,1.1s
ABTA Abfaltersbach 29.98 66 *i*P **P 00 08 49.8 +0.9**
comp=Z,35nm,1.2s,SNR=24
CLL Collm 30.15 57⇑*i*P **P 00 08 49.9 -0.2**
comp=Z,22nm,1.1s
CLL *e*sP **sP 00 08 55.0 +0.6**
CLL *i* 00 09 03.6
CLL *e*S **S 00 13 42.0 -6.8**
CLL *e*SS **SnSn 00 15 12.0 -10**
CLL *e*SSS SSS 00 15 48.0
CLL Lm MLR 00 19 00.0
comp=N,300nm,18.7s
CLL Lm MLR 00 19 00.0
comp=E,500nm,19.7s
CLL Lm MLR 00 19 00.0
comp=Z,800nm,19.0s
CLL Lmax 00 20 00.0
CLL Collm 30.15 57 *e*P **P 00 08 50.5 +0.3**
comp=Z,17nm,1.0s
CLL Collm 30.15 57⇑*i*P **P 00 08 49.9 -0.2**
CLL *e*S **S 00 13 42.0 -6.8**
CLL pmax pmax
comp=Z,22nm,1.1s
CLL MLR MLR
comp=Z,800nm,19.0s
KEST Kesra 30.43 89 P **P 00 08 52.6 -0.3**
comp=Z,6.9nm,0.8s,baz=189,slow=1.3,SNR=13
KBA Koelnbreinsper 30.52 65 *e*P **P 00 08 54.7 +1.0**
comp=Z,111nm,1.3s,SNR=38
KBA Koelnbreinsper 30.52 65 P **P 00 08 54.4 +0.7**
KHC Kasperske Hory 30.53 61 *e*P **P 00 08 54.1 +0.5**
KHC *e*pP **pP 00 08 56.8 +0.2**
KHC *e*S **S 00 13 55.4 +0.4**
KHC AMS AMS 00 20 00.0
comp=Z,900nm,13.1s
KHC Kasperske Hory 30.53 61 *e*P **P 00 08 53.9 +0.3**
comp=Z,16nm,1.2s
KHC Kasperske Hory 30.53 61 *e*P **P 00 08 54.1 +0.5**
KHC *e*S **S 00 13 55.4 +0.4**
KHC MLR MLR
comp=Z,900nm,13.1s
GERES GERESS Array B 30.62 62 P **P 00 08 53.5 -1.0**
comp=Z,3.4nm,0.8s,baz=270,slow=8.0,SNR=37
GERES LR LR 00 19 38.0
comp=Z,825nm,20.7s,baz=268,slow=33
BRG Berggiesshubel 30.73 58 *e*P **P 00 08 55.3 0.0**
comp=Z,28nm,1.4s
BRG *e* 00 10 07.2
comp=Z,23nm,1.8s
BRG *e*PCP PcP 00 12 01.8 +9.1
comp=Z,6.9nm,1.4s
BRG S **S 00 13 57.0 -1.0**
comp=N,729nm,12.2s
comp=E,597nm,16.3s
comp=Z,868nm,15.9s
BRG Berggiesshubel 30.73 58 *e*P **P 00 08 55.3 0.0**
BRG *e* 00 10 07.2
BRG S **S 00 13 57.0 -1.0**
BRG pmax pmax
comp=Z,28nm,1.5s
BRG MLR MLR
comp=N,729nm,12.2s
BRG MLR MLR
comp=E,597nm,16.3s
BRG MLR MLR
comp=Z,868nm,15.9s
MYKA Terra Mystica 30.77 66 *e*P **P 00 08 56.4 +0.6**
comp=Z,32nm,1.5s,SNR=12
NAO01 NORSAR Array S 30.79 38 *e*P **P 00 08 54.9 -0.8**
NBO00 NORSAR Array S 30.80 38 *e*P **P 00 08 55.0 -0.8**
NB2 NORSAR Subarra 31.00 38 P **P 00 08 57.3 -0.4**
comp=Z,9.6nm,1.1s,baz=251,slow=10
NOA NORSAR Array B 31.00 38 P **P 00 08 56.6 -1.0**
NOA LR LR 00 19 28.6
comp=Z,299nm,22.0s,baz=250,slow=33
NB201 NORSAR Array S 31.05 38 *e*P **P 00 08 57.8 -0.2**
PRA Prague 31.05 59 *e*P **P 00 08 59.3 +1.2**
PRA *e*S **S 00 14 07.8 +4.7**
PRA AMS AMS 00 20 10.0
comp=Z,2μm,17.0s
PRA Prague 31.05 59 *e*P **P 00 08 59.3 +1.2**
PRA *e*S **S 00 14 07.8 +4.7**
PRA MLR MLR
comp=Z,2μm,17.0s
NC602 NORSAR Array S 31.05 38 *e*P **P 00 08 58.5 +0.5**
MOA Molln 31.07 64 *e*P **P 00 08 58.5 +0.2**
comp=Z,29nm,1.3s,SNR=18
PVCC Panska Ves 31.13 59 *e*P **P 00 08 59.5 +0.7**
PVCC Panska Ves 31.13 59 *e*P **P 00 08 59.5 +0.7**
LBNH Lisbon 31.14 289 P **P 00 08 58.0 -1.0**
baz=79
LBNH Lisbon 31.14 289 *e*P **P 00 08 59.5 +0.5**
comp=Z,83nm,2.0s
NC303 NORSAR Array S 31.14 37 *e*P **P 00 08 59.6 +0.8**
JAVS Javornik 31.16 68 *e*P **P 00 08 58.8 -0.4**
SUMG Summit 31.23 355 *e*P **P 00 08 59.1 -0.7**
comp=Z,14nm,1.2s
SUMG Summit 31.23 355 *e*P **P 00 08 59.2 -0.7**
SUMG pmax pmax
comp=Z,14nm,1.2s
HRV Adam Dziewonsk 31.23 286 P **P 00 08 58.1 -1.7**
baz=77
GOPC GO Pecny, Ondr 31.29 60 *e*P **P 00 09 01.4 +1.2**
GOPC AMS AMS 00 20 20.0
comp=Z,1μm,16.6s
GOPC GO Pecny, Ondr 31.29 60 *e*P **P 00 09 01.4 +1.2**
GOPC MLR MLR
comp=Z,1μm,16.6s
AQU L'Aquila 31.35 74 *e*P **P 00 09 01.4 +0.5**
comp=Z,29nm,1.0s
AQU L'Aquila 31.35 74 *e*P **P 00 09 01.4 +0.5**
AQU pmax pmax
comp=Z,29nm,1.0s
OBKA Obir 31.41 66 *e*P **P 00 09 01.4 0.0**
comp=Z,37nm,0.9s,SNR=13
FRB Frobisher Bay 31.64 327 P **P 00 09 02.2 -0.9**
comp=Z,4.4nm,0.9s,baz=114,slow=4.8,SNR=3.7
VISS Visnje 31.70 68 *e*P **P 00 09 03.6 -0.4**
SOKA Soboth 31.71 66 *e*P **P 00 09 03.4 -0.7**
comp=Z,20nm,1.4s,SNR=14
PERS Pernice 31.78 66 *e*P **P 00 09 03.2 -1.4**
HFS Hagfors 31.89 40 P **P 00 09 05.3 -0.1**
comp=Z,5.8nm,0.9s,baz=251,slow=9.0,SNR=7.9
HFS LR LR 00 20 28.1
comp=Z,683nm,20.6s,baz=264,slow=34
ARSA Arzberg 31.98 65 *e*P **P 00 09 05.9 -0.4**
comp=Z,27nm,1.2s,SNR=19
BOJS Bojanci 32.04 68 *e*P **P 00 09 07.1 +0.3**
UPC Upice 32.05 59 *e*P **P 00 09 07.3 +0.4**
UPC AMS AMS 00 21 20.0
comp=Z,1μm,15.5s
UPC Upice 32.05 59 *e*P **P 00 09 07.3 +0.4**
UPC MLR MLR
comp=Z,1μm,15.5s
CONA Conrad Observa 32.13 63 *e*P **P 00 09 08.0 +0.2**
comp=Z,19nm,1.4s,SNR=13
KSP Ksiaz 32.22 58 *e*P **P 00 09 08.3 -0.1**
KSP Ksiaz 32.22 58 *e*P **P 00 09 08.3 -0.1**
DPC Dobruska-Polom 32.26 59 *e*P **P 00 09 08.9 +0.1**
DPC *e*pP **sP 00 09 12.6 -0.5**
DPC *e*S **S 00 14 25.1 +3.1**
DPC AMS AMS 00 21 30.0

comp=Z,1μm,15.9s
DPC Dobruska-Polom 32.26 59 *e*P **P 00 09 08.9 +0.1**
DPC *e*S **S 00 14 25.1 +3.1**
DPC MLR MLR
comp=Z,1μm,15.9s
KRUC Moravsky 32.38 61 *e*P **P 00 09 09.8 0.0**
VRAC Vranov 32.49 61⇑*i*P **P 00 09 10.9 +0.1**
VRAC Vranov 32.49 61 ⇑P **P 00 09 10.9 +0.1**
VRAC Vranov 32.49 61 *e*P **P 00 09 10.8 0.0**
SOP Sopron 32.62 64⇑*e*SKSac **P 00 09 11.5 -0.5**
SOP Sopron 32.62 64 P **P 00 09 11.8 -0.2**
CLTB Caltabellotta 32.62 83 *e*P **P 00 09 13.4 +1.2**
comp=Z,23nm,1.0s
TRQ Mont Tremblant 32.63 294 *e*P **P 00 09 11.6 -0.6**
GKP Gorka Klasztor 32.80 53 *e*P **P 00 09 13.8 +0.4**
GKP Gorka Klasztor 32.80 53 *e*P **P 00 09 13.8 +0.4**
NCB Newcomb 32.81 289 *e*P **P 00 09 14.6 +0.9**
comp=Z,9.3nm,1.1s
ZST Bratislava 32.93 63 *e*P **P 00 09 13.0 -1.6**
ZST pmax pmax
comp=Z,2.0nm,1.6s
ZST Bratislava 32.93 63 *e*P **P 00 09 13.0 -1.6**
LONY Lake Ozonia 32.93 291 P **P 00 09 13.0 -1.7**
baz=78
LONY Lake Ozonia 32.93 291 *e*P **P 00 09 15.2 +0.5**
comp=Z,36nm,1.6s
ALFO Alfred 32.96 292 P **P 00 09 14.3 -0.6**
baz=80,SNR=5.6
MODS Modra-Piesok 33.03 62 *e*P **P 00 09 14.6 -0.9**
MODS pmax pmax
comp=Z,59nm,1.4s
MODS Modra-Piesok 33.03 62 *e*P **P 00 09 14.6 -0.9**
MORC Moravsky Berou 33.07 60⇓*i*P **P 00 09 16.2 +0.2**
MORC Moravsky Berou 33.07 60 *e*P **P 00 09 16.1 +0.2**
comp=Z,95nm,1.2s
MORC Moravsky Berou 33.07 60 *e*P **P 00 09 16.1 +0.1**
MORC pmax pmax
comp=Z,95nm,1.2s
MORC Moravsky Berou 33.07 60 *e*P **P 00 09 16.0 +0.1**
SMOL Smolenice 33.11 62 *e*P **P 00 09 15.6 -0.6**
SMOL Smolenice 33.11 62 *e*P **P 00 09 15.6 -0.6**
JAVC Velka Javorina 33.24 61 *e*P **P 00 09 17.8 +0.4**
PAL Palisades 33.31 284 P **P 00 09 17.3 -0.7**
baz=73
OKC Ostrava-Krasne 33.46 60 *e*S **S 00 14 43.5 +2.9**
OKC AMS AMS 00 22 20.0
comp=Z,900nm,13.9s
BLY Banja Luka 33.52 69 *e*P **P 00 09 19.1 -0.7**
comp=Z,17nm,1.5s
VAE Valguarnera 33.55 83 P **P 00 09 20.4 +0.2**
comp=Z,11nm,0.8s,baz=184,slow=19,SNR=4.8
CUC Castrocucco 33.74 78 *e*P **P 00 09 22.0 +0.1**
comp=Z,31nm,1.2s
ODNJ Ogdensburg 33.80 284 *e*P **P 00 09 20.9 -1.4**
comp=Z,21nm,1.3s
VYHS Vyhne 34.04 62 *e*P **P 00 09 23.6 -0.8**
VYHS pmax pmax
comp=Z,6.0nm,1.2s
VYHS Vyhne 34.04 62 *e*P **P 00 09 23.5 -0.8**
LANS Liptovska Anna 34.38 61 *e*P **P 00 09 28.3 +1.0**
LANS *e* 00 10 46.8
LANS Liptovska Anna 34.38 61 *e*P **P 00 09 28.3 +1.0**
LANS *e*PP **PP 00 10 46.8 +1.7**
BINY Binghamton 34.49 287 P **P 00 09 26.9 -1.4**
baz=74
BINY Binghamton 34.49 287 *e*P **P 00 09 28.1 -0.2**
comp=Z,25nm,1.4s
OJC Ojcow 34.49 59 *e*P **P 00 09 28.4 +0.3**
OJC Ojcow 34.49 59 *e*P **P 00 09 28.5 +0.3**
comp=Z,40nm,1.2s
OJC Ojcow 34.49 59⇑*e*P **P 00 09 28.4 +0.3**
TAM Tamanrasset 34.56 112 *e*P **P 00 09 31.9 +2.7**
comp=Z,5.8nm,1.2s
PEMO Pembroke 34.58 293 P **P 00 09 28.6 -0.4**
baz=79,SNR=5.2
PLVO Plevna 34.59 292 P **P 00 09 28.8 -0.3**
baz=78,SNR=6.2
PLVO Plevna 34.59 292 *e*P **P 00 09 29.1 0.0**
comp=Z,31nm,1.2s
KLNR Kaliningrad 34.59 51 *i*P **P 00 09 26.7 -2.3**
KLNR pmax pmax
comp=Z,39nm,1.1s
N59A State Game Lan 34.69 285 P **P 00 09 29.4 -0.7**
baz=73
N59A State Game Lan 34.69 285 *e*P **P 00 09 29.4 -0.7**
comp=Z,18nm,1.3s
TIP Timpagrande 34.70 79⇑*i*P **P 00 09 30.0 -0.2**
TIP Timpagrande 34.70 79 *e*P **P 00 09 29.7 -0.5**
comp=Z,27nm,1.2s
KOWA Kowa 34.80 134 P **P 00 09 32.6 +1.4**
comp=Z,3.8nm,0.7s,baz=324,slow=10.0,SNR=7.0
KOWA LR LR 00 23 21.0
comp=Z,372nm,18.2s,baz=328,slow=36
PSZ Piszkesteto 34.82 63⇑*i*P **P 00 09 31.2 0.0**
PSZ Piszkesteto 34.82 63 *e*P **P 00 09 31.6 +0.4**
comp=Z,26nm,1.2s
PSZ Piszkesteto 34.82 63 ⇑P **P 00 09 31.2 0.0**
NIE Niedzica 34.89 60 *e*P **P 00 09 32.1 +0.4**
NIE Niedzica 34.89 60 *e*P **P 00 09 32.1 +0.4**
BEL Belsk 34.99 56 *e*P **P 00 09 33.1 +0.6**
BEL Belsk 34.99 56 *e*P **P 00 09 33.1 +0.6**
KECS Kecovo 35.13 62 *e*P **P 00 09 34.6 +0.8**
KECS Kecovo 35.13 62 *e*P **P 00 09 34.6 +0.8**
BANO Bancroft 35.18 292 P **P 00 09 34.6 +0.4**
baz=78,SNR=5.2
DIVS Divibare 35.62 69 *e*P **P 00 09 38.2 +0.1**
comp=Z,16nm,1.1s
CRVS Cervenica-Dubn 35.72 61 *e*P **P 00 09 39.9 +1.1**
CRVS pmax pmax
comp=Z,25nm,1.4s
CRVS Cervenica-Dubn 35.72 61 *e*P **P 00 09 39.9 +1.1**
MMNY Mt. Morris Dam 35.72 288 *e*P **P 00 09 40.1 +1.3**
comp=Z,29nm,1.2s
SADO Sadowa 36.08 292 *e*P **P 00 09 43.1 +1.2**
comp=Z,47nm,1.8s
LTVH L"tav"rtes, 36.25 63⇑*e*SKSdf **P 00 09 43.7 +0.4**
SIRR Siria 36.30 65⇑*i*P **P 00 09 43.9 +0.1**
UZH Uzhgorod 36.30 61 *e*P **P 00 09 43.1 -0.7**
UZH *e* 00 09 50.5
UZH *e* 00 09 54.9
SSPA Standing Stone 36.31 285 P **P 00 09 41.2 -2.7**
baz=72
SSPA Standing Stone 36.31 285 *e*P **P 00 09 44.1 +0.2**
comp=Z,16nm,1.0s
SUW Suwalki 36.34 52 *e*P **P 00 09 42.3 -1.7**
SUW Suwalki 36.34 52 *e*P **P 00 09 42.3 -1.7**
BZS Buzias 36.41 66⇓*i*P **P 00 09 45.1 +0.4**
BZS Buzias 36.41 66 ⇓P **P 00 09 45.1 +0.4**
KWP Kalwaria Pacla 36.42 59 *e*P **P 00 09 45.5 +0.6**
KWP Kalwaria Pacla 36.42 59 *e*P **P 00 09 44.4 -0.4**
comp=Z,294nm,1.1s
KWP Kalwaria Pacla 36.42 59 *e*P **P 00 09 44.4 -0.4**
KWP pmax pmax
comp=Z,294nm,1.1s
TRPA Tarpa 36.54 62⇑*i*P **P 00 09 46.3 +0.5**
TRPA Tarpa 36.54 62⇑*e*SKSdf **P 00 09 45.7 -0.1**
MDVR Moldovita 36.66 68⇑*i*P **P 00 09 46.9 -0.1**
O56A Blue Knob Stat 36.92 285 P **P 00 09 48.2 -1.0**
baz=71
HERR Herculane 37.12 67⇓*i*P **P 00 09 49.9 -0.9**
LVV L'vov 37.25 59 *e*P **P 00 09 53.0 +1.2**
LVV *e*S **S 00 15 39.0 +0.2**
LVV MLR MLR
comp=N,370nm,17.0s
LVV MLR MLR
comp=E,450nm,17.0s
LVV MLR MLR
comp=Z,520nm,17.0s
M54A Oil Creek Stat 37.32 287 P **P 00 09 51.1 -1.5**
baz=72
ERPA Erie 37.37 288 P **P 00 09 51.2 -1.8**
baz=73
FNA Florina 37.53 74 *e*P **P 00 09 55.2 +0.8**
comp=Z,19nm,1.1s
FNA Florina 37.53 74 *e*P **P 00 09 55.2 +0.8**
FNA pmax pmax
comp=Z,19nm,1.1s
N54A Moraine State 37.72 286 P **P 00 09 53.8 -2.2**
baz=71,SNR=5.9
N54A Moraine State 37.72 286 *e*P **P 00 09 55.8 -0.2**
comp=Z,19nm,1.0s
LOT Lotru 37.92 66⇑*i*P **P 00 09 58.0 +0.3**
ISAL Salakas 37.98 49 *e*P **P 00 09 57.5 -0.5**
IZAR Zarasai 38.04 49 *e*P **P 00 09 57.9 -0.6**
IZAR IAmb IAmb 00 09 59.7

comp=Z,4.1nm,1.0s
IIGN Ignalina 38.04 50 eP P 00 09 57.8 -0.7
IIGN IAmb IAmb 00 09 59.5
comp=Z,14nm,1.2s
MCWV Mont Chateau 38.05 284 P P 00 09 56.8 -1.9
baz=70
MCWV Mont Chateau 38.05 284 eP P 00 09 59.8 +1.1
comp=Z,17nm,0.8s
FINES FINESS Array B 38.09 40 P P 00 09 58.7 -0.1
comp=Z,8.4nm,0.8s,baz=263,slow=3.1,SNR=15
FINES LR LR 00 23 60.0
comp=Z,543nm,21.6s,baz=257,slow=34
FIA1 FINESS Array S 38.10 40 eP P 00 09 58.4 -0.4
comp=Z,18nm,0.9s
VSU Vasula 38.27 45ceP P 00 09 58.5 -1.8
VSU pmax pmax
comp=Z,97nm,1.7s
CNNC Cliffs of the 38.29 277 P P 00 09 58.7 -2.0
baz=65
IDID Didziasalis 38.34 50 eP P 00 10 00.4 -0.6
IDID IAmb IAmb 00 10 01.9
comp=Z,7.8nm,1.1s
BUR08 Bucovina Ar. S 38.39 62 eP P 00 10 02.7 +1.0
BUR04 Bucovina Ar. S 38.41 62 eP P 00 10 01.7 -0.1
BURAR Bucovina Array 38.41 62⇑iP P 00 10 01.8 0.0
BURAR Bucovina Array 38.41 62⇑P P 00 10 01.8 0.0
ARR Arges 38.53 66⇑iP P 00 10 03.2 +0.4
VOIR 38.79 66⇓iP P 00 10 05.4 +0.4
VOIR 38.79 66 ⇓P P 00 10 05.4 +0.4
AGG Agios Georgios 38.82 76 eP P 00 10 04.6 -0.7
comp=Z,56nm,1.0s
AGG Agios Georgios 38.82 76 eP P 00 10 04.6 -0.7
AGG pmax pmax
comp=Z,57nm,1.0s
DOPR Dopca 38.89 65⇓iP P 00 10 06.0 +0.2
MTP Monte Pirata 38.97 244 eP P 00 10 05.5 -1.1
comp=Z,56nm,1.1s
HUMR Humele 38.98 67⇑iP P 00 10 06.9 +0.4
MICGM Minsk 39.06 51 e P 00 10 06.0 -1.0
MICGM eLR LR 00 22 26.0
MNK Minsk 39.06 51 eP P 00 10 06.0 -1.0
TORD Torodi Ar. Bea 39.12 128 P P 00 10 09.7 +1.7
comp=Z,26nm,1.1s,baz=331,slow=5.2,SNR=73
PRAR RASCA 39.13 62⇑iP P 00 10 07.9 +0.1
ARCES ARCESS Array B 39.34 27 P P 00 10 08.6 -0.7
comp=Z,7.8nm,0.9s,baz=278,slow=9.3,SNR=8.7
ARCES LR LR 00 23 13.9
comp=Z,437nm,21.6s,baz=278,slow=31
ARCES ARCESS Array B 39.34 27 eP P 00 10 08.3 -1.0
ARE0 ARCESS Array S 39.34 27 eP P 00 10 06.7 -2.5
comp=Z,66nm,1.8s
SJG San Juan 39.36 245 P P 00 10 08.6 -1.2
comp=Z,4.1nm,0.4s,baz=21,slow=17,SNR=2.5
BLA Blacksburg 39.36 281 P P 00 10 09.4 -0.4
baz=67
BLA Blacksburg 39.36 281 eP P 00 10 09.2 -0.6
comp=Z,15nm,1.0s
MLR Muntele Rosu 39.39 65 P P 00 10 09.1 -1.0
comp=Z,2.4nm,1.1s,baz=319,slow=9.3,SNR=10
MLR LR LR 00 26 11.7
comp=Z,165nm,20.1s,baz=272,slow=36
MLR Muntele Rosu 39.39 65⇑iP P 00 10 10.3 +0.2
MLR Muntele Rosu 39.39 65 eP P 00 10 10.5 +0.4
comp=Z,37nm,1.4s
F46A Macinaw City C 39.68 295 P P 00 10 10.7 -1.6
baz=75
PLOR Plostina 39.77 65⇓iP P 00 10 13.4 +0.2
PLOR Plostina 39.77 65 ⇓P P 00 10 13.4 +0.2
E45A Wooded Hills, 39.82 296 P P 00 10 11.7 -1.8
baz=76
VRI Vrincioaia 39.82 65⇑iP P 00 10 13.1 -0.5
VRI Vrincioaia 39.82 65 ⇑P P 00 10 13.1 -0.5
AAM Ann Arbor 39.91 290 P P 00 10 12.1 -2.2
baz=72
ACSO Alum Creek Sta 40.11 286 P P 00 10 14.7 -1.3
baz=70
ACSO Alum Creek Sta 40.11 286 eP P 00 10 17.1 +1.1
comp=Z,57nm,1.6s
F45A CMU Biological 40.22 295 P P 00 10 15.0 -1.8
baz=75
E44A Grand Marais A 40.25 297 P P 00 10 14.8 -2.3
baz=76
PGOR Pogoanele 40.25 66⇑iP P 00 10 16.0 -1.1
SORM Soroca 40.36 61⇑iP P 00 10 16.5 -1.4
SORM Soroca 40.36 61 ⇑P P 00 10 16.5 -1.4
KIEV Kiev 40.38 57 eP P 00 10 17.7 -0.3
comp=Z,30nm,1.2s
KIEV Kiev 40.38 57 iP P 00 10 16.7 -1.4
KIEV pmax pmax
comp=Z,16nm,1.1s
AKASG Malin Array Be 40.39 57 P P 00 10 17.3 -0.8
comp=Z,12nm,1.0s,baz=279,slow=8.1,SNR=52
AKASG LR LR 00 26 57.6
comp=Z,673nm,18.3s,baz=280,slow=36
LEOM Leova 40.69 63⇑iP P 00 10 20.2 -0.5
LEOM Leova 40.69 63 ⇑P P 00 10 20.2 -0.5
F44A Big Bay de Noc 40.76 296 P P 00 10 19.6 -1.6
baz=74
SPITS Spitsbergen Ar 40.77 13 P P 00 10 20.5 -0.5
comp=Z,6.6nm,0.9s,baz=337,slow=4.0,SNR=3.9
SPITS LR LR 00 23 34.0
comp=Z,309nm,18.5s,baz=225,slow=31
ALN Alexandroupoli 40.84 72 eP P 00 10 23.3 +1.3
comp=Z,24nm,1.2s
ALN Alexandroupoli 40.84 72 eP P 00 10 23.3 +1.3
ALN pmax pmax
comp=Z,24nm,1.2s
KMSC Kings Mountain 40.88 278 P P 00 10 20.8 -1.6
baz=64
NHSC New Hope 40.93 275 P P 00 10 21.3 -1.5
baz=62
HARR Harsova 40.96 66⇓iP P 00 10 21.6 -1.3
HARR Harsova 40.96 66 ⇓P P 00 10 21.6 -1.3
E43A Lone Tree Farm 41.03 297 P P 00 10 21.4 -2.2
baz=75
E43A Lone Tree Farm 41.03 297 eP P 00 10 23.3 -0.2
comp=Z,12nm,0.9s
ICOR Ion Corvin 41.04 67⇑iP P 00 10 22.9 -0.7
DBIC Dimbokro 41.06 142 P P 00 10 25.7 +1.7
comp=Z,5.1nm,0.8s,baz=312,slow=11,SNR=3.5
DBIC LR LR 00 25 53.7
comp=Z,580nm,19.7s,baz=314,slow=34
TLB Topalu 41.07 66⇑iP P 00 10 22.5 -1.2
TLB Topalu 41.07 66 ⇑P P 00 10 22.6 -1.2
S52A Salyersville 41.13 283 P P 00 10 23.3 -1.1
baz=67
T52A Hallie 41.28 282 P P 00 10 24.6 -1.1
baz=66
U53A Fall Branch 41.29 281 P P 00 10 24.4 -1.4
baz=65
F43A Flat Rock, Esc 41.30 296 P P 00 10 24.4 -1.3
baz=74
TIRR Tirgusor 41.36 66⇑iP P 00 10 25.2 -1.0
TIRR Tirgusor 41.36 66 eP P 00 10 25.1 -1.1
comp=Z,21nm,1.0s
TIRR Tirgusor 41.36 66 ⇑P P 00 10 25.2 -1.0
S51A Beattyville 41.52 283 P P 00 10 27.5 -0.1
baz=66
E42A Champion 41.63 297 P P 00 10 26.4 -2.0
baz=74
V53A Saluda 41.75 280 P P 00 10 28.4 -1.3
baz=65
G43A Wallace 41.80 295 P P 00 10 28.7 -1.2
baz=73
D41A Chassel 41.90 298 P P 00 10 29.4 -1.2
baz=75
D41A Chassel 41.90 298 eP P 00 10 29.4 -1.2
comp=Z,69nm,1.5s
TZTN Tazewell 41.93 281 P P 00 10 29.3 -1.8
baz=65
F42A Maple Grove Fa 41.96 296 P P 00 10 29.2 -2.0
baz=73
H43A Windswept, Lux 42.09 294 P P 00 10 30.6 -1.7
baz=72
SANT Santorini 42.13 79 eP P 00 10 31.9 -0.8
comp=Z,160nm,1.3s
IDI Anoyia 42.17 80 P P 00 10 33.9 +0.8
comp=Z,12nm,0.8s,baz=276,slow=7.5,SNR=5.0
IDI LR LR 00 28 47.1
comp=Z,102nm,19.2s,baz=298,slow=37
IDI Anoyia 42.17 80 eP P 00 10 32.3 -0.8
comp=Z,43nm,1.2s
W53A Cullowhee 42.23 279 P P 00 10 32.1 -1.5
baz=64,SNR=5.1
V52A Sevierville 42.26 281 P P 00 10 32.1 -1.6
baz=65
G42A Mountain 42.31 296 P P 00 10 32.2 -1.8
baz=73,SNR=5.6
G42A Mountain 42.31 296 eP P 00 10 34.1 +0.1
comp=Z,17nm,1.1s
E41A Kenton 42.32 297 P P 00 10 32.2 -1.8
baz=74,SNR=6.7
Z55A Blythe 42.33 276 P P 00 10 33.1 -1.3
baz=62
O47A Sheridan 42.39 288 P P 00 10 33.4 -1.3
baz=68,SNR=6.4
Y54A Tignall 42.45 277 P P 00 10 32.8 -2.5
baz=63
I43A Langenfeld Bro 42.53 294 P P 00 10 33.7 -2.2
baz=71
COWI Conover 42.54 297 eP P 00 10 35.7 -0.2
comp=Z,3.5nm,0.4s
N46A Monticello 42.55 289 P P 00 10 34.9 -1.1
baz=69,SNR=6.1
H42A Shiocton 42.60 295 P P 00 10 34.1 -2.3
baz=72
X53A Estanollee 42.62 279 P P 00 10 35.1 -1.5
baz=63
F41A Three Lakes 42.62 296 P P 00 10 35.0 -1.6
baz=73
T50A Nancy 42.67 283 P P 00 10 34.8 -2.3
baz=66,SNR=5.0
C39A Grand Marais 42.72 300 P P 00 10 35.6 -1.7
baz=74
P47A Martinsville 42.74 287 P P 00 10 36.4 -1.2
baz=68
M45A Boilermakers S 42.74 290 P P 00 10 36.2 -1.4
baz=69
V51A Loudon 42.83 281 P P 00 10 36.4 -1.9
baz=64
V51A Loudon 42.83 281 eP P 00 10 38.7 +0.3
comp=Z,22nm,1.2s
Z54A Sparta 42.85 277 P P 00 10 36.9 -1.6
baz=62
R48A Northridge Ran 42.87 285 P P 00 10 38.0 -0.7
baz=67
J43A Natural Harves 42.88 293 P P 00 10 37.0 -1.7
baz=71
L44A Lake County Fo 42.93 291 P P 00 10 36.8 -2.3
baz=70
E40A Wakefield 42.95 298 P P 00 10 37.1 -2.1
baz=73
SFIN Lafayette 43.00 288 P P 00 10 37.9 -1.7
baz=68
FCC Fort Churchill 43.00 316 eP P 00 10 40.1 +0.7
FCC Fort Churchill 43.00 316 eP P 00 10 40.1 +0.7
X52A Dahlonega 43.01 279 P P 00 10 39.8 -0.1
baz=63
BLO Bloomington 43.04 286 eP P 00 10 40.2 +0.2
comp=Z,16nm,0.8s
BLO Bloomington 43.04 286 eP P 00 10 40.2 +0.2
BLO pmax pmax
comp=Z,16nm,0.8s
K43A Burlington 43.05 292 P P 00 10 39.4 -0.6
baz=70
I42A Draeger Farm, 43.06 294 P P 00 10 38.3 -1.8
baz=71,SNR=5.8
I42A Draeger Farm, 43.06 294 eP P 00 10 40.6 +0.6
comp=Z,36nm,1.4s
Q47A Bedord North L 43.06 286 P P 00 10 39.8 -0.4
baz=67
CPCT Cooper Cave 43.10 280 eP P 00 10 41.9 +1.3
comp=Z,10nm,1.1s
Y53A Monroe 43.12 278 P P 00 10 40.7 0.0
baz=63
N45A Kentland 43.12 289 P P 00 10 40.1 -0.6
baz=69
457A Yulee 43.15 273 P P 00 10 40.0 -1.0
baz=60
255A Hazlehurst 43.20 275 P P 00 10 40.3 -1.0
baz=61
GOGA Godfrey 43.23 277 P P 00 10 41.2 -0.5
baz=62
GOGA Godfrey 43.23 277 eP P 00 10 42.3 +0.7
comp=Z,18nm,1.4s
GOGA Godfrey 43.23 277 eP P 00 10 42.3 +0.7
GOGA pmax pmax
comp=Z,18nm,1.4s
F40A Park Falls 43.25 297 P P 00 10 39.7 -1.9
baz=73,SNR=11
M44A Midewin, Midew 43.30 290 P P 00 10 40.2 -1.9
baz=69
M44A Midewin, Midew 43.30 290 eP P 00 10 43.2 +1.1
comp=Z,27nm,1.2s
S48A Wiedeman Farm, 43.30 284 P P 00 10 40.7 -1.5
baz=66
H41A Junction City 43.33 295 P P 00 10 41.1 -1.2
baz=72
H41A Juction City 43.33 295 eP P 00 10 42.9 +0.6
comp=Z,18nm,1.1s
154A Montrose 43.34 276 P P 00 10 40.9 -1.6
baz=62
P46A Rosedale 43.36 287 P P 00 10 41.4 -1.2
baz=68
Z53A Monticello 43.37 277 P P 00 10 41.1 -1.6
baz=62
R47A Wooly Knot Far 43.39 285 P P 00 10 41.4 -1.5
baz=66,SNR=6.1
J42A Columbus 43.39 293 P P 00 10 40.3 -2.5
baz=70
E39A Mellen 43.40 298 P P 00 10 41.1 -1.7
baz=73,SNR=6.6
V50A Pikevile 43.43 281 P P 00 10 42.3 -0.9
baz=64
Y52A Lilburn 43.47 278 P P 00 10 43.0 -0.5
baz=63
Y52A Lilburn 43.47 278 eP P 00 10 44.1 +0.5
comp=Z,17nm,1.3s
C38A Sawbill Land. 43.49 300 P P 00 10 41.4 -2.1
baz=74
O45A Potomac 43.49 288 P P 00 10 42.4 -1.2
baz=68
G40A Rib Lake 43.50 296 P P 00 10 41.4 -2.2
baz=72
L43A Garden Prairie 43.51 291 P P 00 10 42.6 -1.1
baz=69
EYMN Ely 43.57 300 P P 00 10 41.9 -2.3
baz=74
EYMN Ely 43.57 300 eP P 00 10 43.9 -0.3
comp=Z,16nm,1.2s
U49A Red Boiling Sp 43.57 283 P P 00 10 42.1 -2.3
baz=65
N44A Piper City 43.58 289 P P 00 10 42.6 -1.8
baz=68
TMCR Tamitsa 43.65 36 eP P 00 10 44.6 +0.1
TMCR pmax pmax
comp=Z,29nm,0.8s
I41A Arkdale 43.66 294 P P 00 10 44.4 -0.5
baz=71
758A Lake Helen 43.72 270 P P 00 10 44.9 -0.7
baz=58
K42A Prairie Point, 43.72 292 P P 00 10 44.1 -1.3
baz=70,SNR=9.5
X51A Calhoun 43.74 280 P P 00 10 44.0 -1.7
baz=63
355A Pearson 43.76 274 P P 00 10 44.5 -1.4
baz=60
T48A Bowling Green 43.77 284 P P 00 10 44.8 -1.1
baz=65
F39A Loretta 43.78 297 P P 00 10 43.5 -2.4
baz=72,SNR=8.5
P45A Graceland, Par 43.78 287 P P 00 10 44.7 -1.2
baz=67
W50A Signal Mountai 43.80 281 P P 00 10 45.1 -1.1
baz=64,SNR=5.2
W50A Signal Mountai 43.80 281 eP P 00 10 47.0 +0.7
comp=Z,17nm,1.0s
H40A Chili 43.83 295 P P 00 10 44.4 -1.9
baz=71,SNR=7.4
RES Resolute Bay 43.84 340 P P 00 10 45.9 -0.1
comp=Z,3.6nm,1.0s,baz=122,slow=8.0,SNR=5.6
RES LR LR 00 26 38.9
comp=Z,138nm,18.8s,baz=110,slow=33
RES Resolute Bay 43.84 340 eP P 00 10 46.3 +0.3
comp=Z,11nm,1.0s
153A Fort Valley 43.86 276 P P 00 10 45.4 -1.3
baz=62
657A Interlachen 43.90 271 P P 00 10 45.4 -1.6
baz=59
M43A Waltham Townsh 43.93 290 P P 00 10 45.0 -2.1
baz=69
OBN Obninsk 43.95 49ceP P 00 10 45.7 -1.4
OBN i 00 12 26.7
OBN i SS SS 00 20 38.5 +3.8
OBN pmax pmax
comp=Z,52nm,1.6s
OBN MLR MLR
comp=Z,523nm,17.0s
859A Kempfer Cattle 43.97 269 P P 00 10 45.7 -1.8
baz=58
V49A McMinnville 43.98 282 P P 00 10 45.4 -2.3
baz=64
J41A Loganville 43.98 293 P P 00 10 46.9 -0.7
baz=70,SNR=7.5
E38A The Farm, Brul 43.99 298 P P 00 10 45.2 -2.4
baz=72
Z52A Williamson 44.04 278 P P 00 10 46.5 -1.7
baz=62
O44A Mansfield 44.05 289 P P 00 10 45.8 -2.4
baz=68
C37A Embarrass 44.08 300 P P 00 10 45.8 -2.4
baz=73
556A Lake Butler 44.09 272 P P 00 10 46.4 -2.1
baz=59
060A Indiantown 44.12 267 P P 00 10 46.8 -2.0
baz=57
U48A Cassie Pea, Po 44.13 283 P P 00 10 46.2 -2.6
baz=65
R46A Gibon Southern 44.13 286 P P 00 10 46.6 -2.2
baz=66
G39A Holcombe 44.14 296 P P 00 10 47.2 -1.6
baz=71
L42A Oliver, Polo 44.22 291 P P 00 10 47.7 -1.8
baz=69
L42A Oliver, Polo 44.22 291 eP P 00 10 50.3 +0.9
comp=Z,22nm,0.9s
I40A Norwalk 44.22 294 P P 00 10 47.4 -2.0
baz=70
N43A Stutzman Famil 44.26 290 P P 00 10 48.7 -1.1
baz=68
PCRV Puerto La Cruz 44.27 235 LR LR 00 26 55.6
comp=Z,328nm,20.7s,baz=36,slow=33
JFWS Jewell Farm 44.30 293 P P 00 10 48.9 -1.2
baz=70
JFWS Jewell Farm 44.30 293 eP P 00 10 50.5 +0.5
comp=Z,22nm,1.4s
JFWS Jewell Farm 44.30 293 eP P 00 10 50.6 +0.5
JFWS pmax pmax
comp=Z,23nm,1.4s
Q45A Warren Harvey, 44.32 287 P P 00 10 48.6 -1.7
baz=66,SNR=6.1
X50B Fort Payne 44.37 280 P P 00 10 50.4 -0.4
baz=63
757A Oxford 44.38 271 P P 00 10 50.1 -0.8
baz=58
D37A Cotton 44.40 299 P P 00 10 50.0 -0.8
baz=73,SNR=5.8
F38A Pierce - Schro 44.40 298 P P 00 10 50.1 -0.8
baz=72,SNR=6.2
H39A Augusta 44.41 296 P P 00 10 50.2 -0.8
baz=71,SNR=5.5
P44A Sand Creek, Wi 44.43 288 P P 00 10 49.6 -1.6
baz=67
K41A Shullsburg 44.45 293 P P 00 10 50.1 -1.2
baz=69,SNR=5.3
J40A Soldiers Grove 44.47 294 P P 00 10 50.0 -1.5
baz=70,SNR=5.0
M42A Sheffield 44.48 291 P P 00 10 48.9 -2.6
baz=68
HDIL Hopedale 44.49 289 P P 00 10 50.5 -1.1
baz=68
HDIL Hopedale 44.49 289 eP P 00 10 52.8 +1.2
comp=Z,38nm,1.4s
C36A Pine Crest Far 44.49 300 P P 00 10 50.3 -1.3
baz=73,SNR=7.6
S46A Don Dixon Farm 44.49 285 P P 00 10 50.8 -0.9
baz=66,SNR=5.6
656A Willston 44.51 272 P P 00 10 51.6 -0.3
baz=59
152A Waverly Hall 44.51 277 P P 00 10 51.6 -0.3
baz=62
W49A Belvidere 44.53 281 P P 00 10 50.6 -1.4
baz=63
Z51A Franklin 44.55 278 P P 00 10 50.5 -1.7
baz=62
O43A Sugar Creek Fa 44.60 289 P P 00 10 51.6 -0.9
baz=67
G38A Ridgeland 44.64 297 P P 00 10 51.7 -1.1
baz=71,SNR=5.8
R45A Skylar, Fairfi 44.65 286 P P 00 10 52.3 -0.7
baz=66
V48A Smith Brothers 44.67 282 P P 00 10 52.7 -0.5
baz=64
Y50A Piedmont 44.69 279 P P 00 10 52.5 -0.9
baz=62
U47A Clarksville 44.70 283 P P 00 10 52.9 -0.5
baz=64,SNR=7.8
L41A Preston 44.77 292 P P 00 10 53.1 -0.8
baz=69,SNR=5.9
353A Camilla 44.77 275 P P 00 10 53.3 -0.7
baz=60
252A Lumpkin 44.84 276 P P 00 10 52.8 -1.8
baz=61
X49A Woodville 44.85 280 P P 00 10 53.2 -1.4
baz=63
I39A Houston 44.85 295 P P 00 10 53.7 -0.8
baz=70,SNR=7.3
I39A Houston 44.85 295 eP P 00 10 54.2 -0.3
comp=Z,23nm,1.0s
958A Wauchula 44.86 269 P P 00 10 53.6 -1.2
baz=57
D36A Goodland 44.88 300 P P 00 10 53.4 -1.3
baz=72
B35A Bob, Littlefor 44.89 301 P P 00 10 52.4 -2.3
baz=73
T46A Princeton 44.89 284 P P 00 10 54.8 -0.1
baz=65,SNR=10.0
N42A Yates City 44.91 290 P P 00 10 53.0 -1.9
baz=68
Q44A Meyer Farm, Va 44.93 287 P P 00 10 52.7 -2.5
baz=66
F37A Hinrichs Farm, 44.97 298 P P 00 10 53.2 -2.2
baz=71
655A Horseshoe Beac 44.98 272 P P 00 10 55.8 +0.2
baz=59
K40A Colesburg 44.99 293 P P 00 10 54.6 -1.0
baz=69,SNR=8.1
P43A Skaggs, Pawnee 45.00 288 P P 00 10 54.8 -0.9
baz=67
W48A Pulaski 45.01 281 P P 00 10 54.1 -1.8
baz=63
151A Opelika 45.03 277 P P 00 10 55.4 -0.7
baz=61
M41A Milan 45.06 291 P P 00 10 54.5 -1.6
baz=68
SIM Simferopol' 45.07 64deP P 00 10 57.1 +0.9
SIM S S 00 17 35.5 +0.5
SIM pmax pmax
comp=Z,7.0nm,1.0s
SIM MLR MLR
comp=Z,360nm,15.0s
H38A Maiden Rock 45.09 296 P P 00 10 55.8 -0.6
baz=70
453A Whigham 45.09 275 P P 00 10 56.5 -0.1
baz=60
S45A Carrier Mills 45.12 285 P P 00 10 55.0 -1.7
baz=65
Z50A Ashland 45.13 278 P P 00 10 55.8 -1.0
baz=62
E36A McGregor 45.14 299 P P 00 10 55.9 -0.8
baz=72,SNR=6.4
V47A Nunnelly 45.14 282 P P 00 10 56.4 -0.5
baz=64,SNR=8.4
J39A Decorah 45.15 294 P P 00 10 55.8 -1.2
baz=69,SNR=7.7
Y49A Blount Mountai 45.21 279 P P 00 10 57.6 +0.1
baz=62
WVT Waverly 45.23 283 P P 00 10 56.8 -0.8
baz=64
WVT Waverly 45.23 283 eP P 00 10 57.5 -0.1
comp=Z,8.8nm,1.0s
WVT Waverly 45.23 283 eP P 00 10 57.5 -0.1
WVT pmax pmax
comp=Z,9.0nm,1.0s
352A Blakely 45.24 276 P P 00 10 56.5 -1.2
baz=60
C35A Jirik Farms, M 45.24 301 P P 00 10 56.0 -1.5
baz=72,SNR=5.4
R44A Waltonville 45.24 286 P P 00 10 55.7 -2.0
baz=66
SPMN Marine on St. 45.25 297 P P 00 10 56.6 -1.1
baz=71,SNR=5.8

SPMN	Marine on St.	45.25 297	eP	P	00 10 57.4	-0.3
	comp=Z,18nm,1.0s					
L40A	Anamosa	45.28 292	P	P	00 10 57.0	-0.9
	baz=68,SNR=10					
L40A	Anamosa	45.28 292	eP	P	00 10 58.2	+0.3
	comp=Z,47nm,1.1s					
I38A	Scanlan Farm,	45.33 295	P	P	00 10 56.8	-1.6
	baz=70					
U46A	Springville	45.39 283	P	P	00 10 58.0	-0.8
	baz=64					
X48A	Hartselle	45.40 281	P	P	00 10 56.8	-2.2
	baz=63					
Q43A	New Douglas	45.41 287	P	P	00 10 57.7	-1.2
	baz=66					
B34A	Aery, Baudette	45.44 302	P	P	00 10 57.6	-1.5
	baz=73,SNR=9.8					
D35A	Remer	45.48 300	P	P	00 10 57.0	-2.5
	baz=72					
K39A	Oelwein	45.50 293	P	P	00 10 57.7	-2.0
	baz=69,SNR=14					
150A	Eclectic	45.51 278	P	P	00 11 00.0	+0.2
	baz=61					
F36A	Milaca	45.52 298	P	P	00 10 58.0	-1.8
	baz=71,SNR=6.8					
F36A	Milaca	45.52 298	eP	P	00 10 59.8	-0.1
	comp=Z,14nm,1.1s					
N41A	Harden Midland	45.53 290	P	P	00 10 58.6	-1.3
	baz=67,SNR=9.3					
N41A	Harden Midland	45.53 290	eP	P	00 11 00.4	+0.5
	comp=Z,56nm,1.2s					
H37A	Dierke Farm, C	45.55 296	P	P	00 10 59.3	-0.7
	baz=70					
SIUC	Southern Illin	45.56 286	eP	P	00 11 01.2	+1.0
	comp=Z,21nm,1.1s					
V46A	Holladay	45.59 283	P	P	00 10 59.5	-0.9
	baz=64,SNR=6.0					
S44A	Carbondale	45.60 286	P	P	00 10 59.6	-0.9
	baz=65					
Z49A	Columbiana	45.61 279	P	P	00 11 00.8	+0.1
	baz=62					
P42A	Winchester	45.61 289	P	P	00 10 59.6	-0.9
	baz=66					
P42A	Winchester	45.61 289	eP	P	00 11 00.8	+0.2
	comp=Z,31nm,1.4s					
J38A	Wedel Dairy, R	45.69 294	P	P	00 11 00.1	-1.1
	baz=69					
ULM	Lac du Bonnet	45.70 305	P	P	00 11 00.1	-1.0
	comp=Z,2.3nm,0.9s,baz=79,slow=8.1,SNR=3.8					
ULM			LR	LR	00 28 24.7	
	comp=Z,972nm,20.9s,baz=77,slow=34					
ULM	Lac du Bonnet	45.70 305	eP	P	00 11 00.6	-0.5
	comp=Z,11nm,1.4s					
M40A	Post Highland	45.72 291	P	P	00 11 00.8	-0.7
	baz=68					
Y48A	Jasper	45.74 280	P	P	00 11 01.0	-0.7
	baz=62					
A33A	Warroad	45.77 303	P	P	00 11 00.5	-1.3
	baz=73,SNR=8.1					
O41A	Passleys Farm,	45.78 290	P	P	00 11 00.9	-1.0
	baz=67,SNR=7.8					
L39A	Vinton	45.79 293	P	P	00 11 01.2	-0.8
	baz=68,SNR=16					
U45A	Rockin P Farm,	45.82 284	P	P	00 11 01.1	-1.1
	baz=64					
R43A	Red Bud	45.84 287	P	P	00 11 00.9	-1.6
	baz=65					
PLAL	Pickwick Lake	45.92 282	eP	P	00 11 03.5	+0.4
	comp=Z,7.7nm,0.9s					
X47A	Russelville	45.97 281	P	P	00 11 02.4	-1.1
	baz=63					
N40A	Mertquake, Sal	45.97 291	P	P	00 11 02.4	-1.0
	baz=67,SNR=5.9					
250A	Grady	45.99 277	P	P	00 11 02.9	-0.8
	baz=61					
ANTO	Ankara	46.01 71	eP	P	00 11 04.9	+1.1
	comp=Z,20nm,1.3s					
ANTO	Ankara	46.01 71	eP	P	00 11 04.9	+1.1
ANTO			pmax	pmax		
	comp=Z,20nm,1.3s					
Q42A	Golden Eagle	46.01 288	P	P	00 11 02.9	-0.9
	baz=66,SNR=5.3					
LRAL	Lakeview Retre	46.03 279	P	P	00 11 03.6	-0.4
	baz=62					
I37A	Lemond, Waseca	46.07 296	P	P	00 11 03.4	-0.7
	baz=69					
W46A	Michie	46.07 282	P	P	00 11 03.5	-0.8
	baz=63					
149A	Jones	46.08 278	P	P	00 11 03.0	-1.3
	baz=61					
T44A	Benton	46.10 285	P	P	00 11 04.3	-0.2
	baz=64					
K38A	Parkersburg	46.13 294	P	P	00 11 03.3	-1.4
	baz=68					
K38A	Parkersburg	46.13 294	eP	P	00 11 04.7	0.0
	comp=Z,44nm,1.1s					
M39A	Webster	46.16 292	P	P	00 11 03.5	-1.3
	baz=67,SNR=7.3					
F35A	Swanville	46.22 298	P	P	00 11 03.8	-1.4
	baz=70					
D34A	Park Rapids	46.22 300	P	P	00 11 03.7	-1.7
	baz=71					
H36A	Jessenland, He	46.23 296	P	P	00 11 04.1	-1.2
	baz=70					
V45A	Humboldt	46.23 283	P	P	00 11 04.0	-1.5
	baz=63					
S43A	Fulton Ridge,	46.24 286	P	P	00 11 03.9	-1.7
	baz=65,SNR=7.6					
Y47A	UCPARC, Winfie	46.25 280	P	P	00 11 05.4	-0.2
	baz=62					
AGMN	Agassiz Nation	46.27 302	P	P	00 11 05.3	-0.3
	baz=72					
AGMN	Agassiz Nation	46.27 302	eP	P	00 11 05.0	-0.7
	comp=Z,9.0nm,1.0s					
Z48A	Northport	46.28 279	P	P	00 11 05.5	-0.4
	baz=62					
VORR	Voronezh	46.28 53	eP	P	00 11 05.0	-0.7
VORR			pmax	pmax		
	comp=Z,250nm,1.4s					
350A	Dozier	46.31 276	P	P	00 11 05.3	-0.9
	baz=60					
FVM	French Village	46.32 287	eP	P	00 11 06.0	-0.2
	comp=Z,16nm,1.2s					
FVM	French Village	46.32 287	eP	P	00 11 06.0	-0.2
FVM			pmax	pmax		
	comp=Z,16nm,1.2s					
G35A	Watkins	46.37 297	P	P	00 11 05.8	-0.8
	baz=70					
G35A	Watkins	46.37 297	eP	P	00 11 06.3	-0.2
	comp=Z,23nm,1.0s					
C33A	Trail	46.38 301	P	P	00 11 04.7	-1.8
	baz=71					
VSR	Storozhevoye	46.38 54	eP	P	00 11 05.2	-1.3
VSR			eS	S	00 17 48.0	-5.8
VSR			pmax	pmax		
	comp=Z,10.0nm,1.1s					
VSR			smax	smax		
	comp=E,10.0nm,1.3s					
E34A	Wadena	46.39 299	P	P	00 11 05.0	-1.6
	baz=71					
U44A	Portageville	46.42 284	P	P	00 11 04.7	-2.3
	baz=64					
J37A	Redenius Farm,	46.42 295	P	P	00 11 04.4	-2.6
	baz=68					
HALT	Halls	46.43 284	eP	P	00 11 06.2	-0.9
	comp=E,202nm,1.8s					
L38A	Oak Wood Farm,	46.45 293	P	P	00 11 05.9	-1.3
	baz=68,SNR=7.1					
R42A	Luebbering	46.46 287	P	P	00 11 06.2	-1.1
	baz=65					
O40A	La Belle	46.47 290	P	P	00 11 06.4	-1.0
	baz=66,SNR=7.1					
I36A	Fitzsimmons Fa	46.48 296	P	P	00 11 05.8	-1.6
	baz=69					
X46A	Booneville	46.49 281	P	P	00 11 05.5	-2.1
	baz=62					
Q41A	Truxton	46.49 288	P	P	00 11 06.6	-0.9
	baz=66,SNR=9.8					
VORD	Divnogorie	46.53 54	eP	P	00 11 05.8	-1.8
VORD			pmax	pmax		
	comp=Z,40nm,0.9s					
T43A	Greenville	46.60 285	P	P	00 11 06.4	-2.0
	baz=64					
N39A	Derby Farms, D	46.62 291	P	P	00 11 07.8	-0.7
	baz=67,SNR=8.6					
N39A	Derby Farms, D	46.62 291	eP	P	00 11 08.6	+0.1
	comp=Z,32nm,1.1s					
D33A	AnnSam, Waubun	46.62 300	P	P	00 11 06.3	-2.2
	baz=71					
249A	Camden	46.63 278	P	P	00 11 07.0	-1.6
	baz=60					
148A	Greensboro	46.63 279	P	P	00 11 07.4	-1.3
	baz=61					
W45A	Hickory Valley	46.65 283	P	P	00 11 07.6	-1.3
	baz=63					
BR131	Keskin Array S	46.66 71	eP	P	00 11 09.9	+0.8
BRTR	Keskin Array B	46.66 71	P	P	00 11 09.5	+0.5
	comp=Z,3.0nm,0.9s,baz=282,slow=6.1,SNR=16					
BRTR			PcP	PcP	00 12 41.1	-1.5
	comp=Z,2.0nm,1.0s,baz=277,slow=3.2,SNR=4.3					
BRTR			PP	PP	00 13 03.5	+5.0
	comp=Z,5.4nm,1.1s,baz=289,slow=7.7,SNR=7.6					
BRTR			LR	LR	00 32 12.4	
	comp=Z,110nm,18.0s,baz=284,slow=38					
S42A	Caledonia	46.67 287	P	P	00 11 07.7	-1.2
	baz=65,SNR=9.9					
K37A	Belmond	46.68 294	P	P	00 11 06.9	-2.1
	baz=68					
F34A	Alexandria	46.69 298	P	P	00 11 06.9	-2.1
	baz=70					
SCIA	State Center	46.71 293	P	P	00 11 07.5	-1.7
	baz=67					
SCIA	State Center	46.71 293	eP	P	00 11 09.7	+0.5
	comp=Z,52nm,1.4s					
Z47A	Carrollton	46.74 280	P	P	00 11 07.0	-2.5
	baz=61					
H35A	Sunyside Ranc	46.79 297	P	P	00 11 06.9	-2.9
	baz=69					
P40A	Paris	46.84 289	P	P	00 11 09.1	-1.1
	baz=66,SNR=5.8					
P40A	Paris	46.84 289	eP	P	00 11 09.9	-0.3
	comp=Z,20nm,1.1s					
PBMO	Poplar Bluff	46.84 285	eP	P	00 11 09.7	-0.6
	comp=Z,15nm,0.9s					
C32A	Crookston	46.84 301	P	P	00 11 08.0	-2.1
	baz=71					
V44A	Blytheville	46.87 284	P	P	00 11 07.7	-2.8
	baz=63					
R41A	Rosebud	46.87 287	P	P	00 11 09.4	-1.1
	baz=65,SNR=9.1					
CCM	Cathedral Cave	46.88 287	P	P	00 11 08.8	-1.7
	baz=65					
CCM	Cathedral Cave	46.88 287	eP	P	00 11 09.6	-0.9
	comp=Z,14nm,1.0s					
CCM	Cathedral Cave	46.88 287	eP	P	00 11 09.6	-0.9
CCM			pmax	pmax		
	comp=Z,13nm,1.0s					
M38A	Pleasantville	46.89 292	P	P	00 11 09.8	-0.8
	baz=67,SNR=8.5					
O39A	Kirksville	46.89 290	P	P	00 11 08.7	-2.0
	baz=66					
E33A	Westby DABS, E	46.94 300	P	P	00 11 08.1	-2.8
	baz=70					
J36A	Seneca 1, Swea	46.95 295	P	P	00 11 08.2	-2.9
	baz=68					
BRAL	Brewton	46.97 277	P	P	00 11 09.3	-2.1
	baz=60					
U43A	Rector	47.00 285	P	P	00 11 09.9	-1.7
	baz=64					
Y46A	Houston	47.00 281	P	P	00 11 09.5	-2.1
	baz=62					
L37A	Phoenix Point,	47.00 293	P	P	00 11 10.1	-1.4
	baz=67,SNR=11					
Q40A	Laux Farm, Aux	47.07 289	P	P	00 11 10.9	-1.2
	baz=65,SNR=7.1					
OXF	Oxford	47.11 282	P	P	00 11 09.8	-2.6
	baz=62					
OXF	Oxford	47.11 282	eP	P	00 11 12.5	+0.1
	comp=Z,50nm,1.1s					
OXF	Oxford	47.11 282	eP	P	00 11 12.5	+0.1
OXF			pmax	pmax		
	comp=Z,50nm,1.1s					
147A	Livingston	47.14 279	P	P	00 11 11.6	-1.0
	baz=61					
X45A	UM Field Stati	47.14 282	P	P	00 11 11.6	-1.1
	baz=62					
N38A	Joes South For	47.16 291	P	P	00 11 09.8	-3.0
	baz=66					
T42A	Van Buren	47.21 286	P	P	00 11 11.7	-1.4
	baz=64,SNR=10					
T42A	Van Buren	47.21 286	eP	P	00 11 12.5	-0.7
	comp=Z,20nm,1.2s					
K36A	Gilmore City	47.28 294	P	P	00 11 11.0	-2.7
	baz=68					
ANN	Anapa	47.33 63	eP	P	00 11 12.9	-1.1
ANN			eS	S	00 18 05.6	-1.9
ANN			pmax	pmax		
	comp=Z,67nm,1.9s					
ANN			MLR	MLR		
	comp=Z,498nm,15.0s					
P39B	Salisbury	47.35 290	P	P	00 11 11.8	-2.5
	baz=66					
V43A	Jonesboro	47.36 284	P	P	00 11 12.4	-2.0
	baz=63					
D32A	Dogwood Acres,	47.38 301	P	P	00 11 12.2	-2.1
	baz=70					
Z46A	Louisville	47.39 280	P	P	00 11 12.9	-1.7
	baz=61					
PRGR	Permogore	47.40 39	eP	P	00 11 13.7	-0.6
PRGR			pmax	pmax		
	comp=Z,7.0nm,0.9s					
S41A	Jillco Farms,	47.43 287	P	P	00 11 13.7	-1.2
	baz=64,SNR=13					
348A	Jackson	47.48 277	P	P	00 11 13.4	-2.0
	baz=60					
M37A	Trindle Farm,	47.49 292	P	P	00 11 13.5	-1.9
	baz=67					
R40A	Maddies Statio	47.51 288	P	P	00 11 14.1	-1.3
	baz=65,SNR=12					
R40A	Maddies Statio	47.51 288	eP	P	00 11 14.7	-0.8
	comp=Z,18nm,1.0s					
Y45A	Yeager Farm, C	47.51 281	P	P	00 11 13.5	-2.1
	baz=62					
O38A	Galt	47.60 291	P	P	00 11 14.8	-1.3
	baz=66					
U42A	Revenden	47.61 285	P	P	00 11 14.4	-1.9
	baz=63,SNR=11					
C31A	Landman Farms,	47.62 302	P	P	00 11 14.4	-1.8
	baz=70					
L36A	Harm Buss Farm	47.64 294	P	P	00 11 14.7	-1.7
	baz=67					
X44A	Crenshaw	47.66 282	P	P	00 11 14.2	-2.4
	baz=62					
T41A	Mountain View	47.68 286	P	P	00 11 15.5	-1.4
	baz=64,SNR=11					
Q39A	Willow Grove F	47.69 289	P	P	00 11 14.8	-2.1
	baz=65,SNR=9.6					
247A	Quitman	47.69 278	P	P	00 11 16.0	-1.0
	baz=60					
P38A	Dawn	47.84 290	P	P	00 11 16.9	-1.1
	baz=65,SNR=7.5					
P38A	Dawn	47.84 290	eP	P	00 11 17.4	-0.7
	comp=Z,22nm,1.0s					
N37A	Lee Faris, Mou	47.85 292	P	P	00 11 16.4	-1.7
	baz=66					
Z45A	Winona	47.85 281	P	P	00 11 15.5	-2.7
	baz=61					
Y44A	Strider, Charl	47.95 282	P	P	00 11 16.2	-2.7
	baz=62					
347A	Saraland	47.96 278	P	P	00 11 17.6	-1.5
	baz=60					
V42A	Cord	47.96 284	P	P	00 11 18.2	-0.8
	baz=63,SNR=5.4					
S40A	Lebanon	47.97 287	P	P	00 11 17.8	-1.3
	baz=64,SNR=8.7					
R39A	Chumby, Stover	48.04 288	P	P	00 11 19.0	-0.6
	baz=64,SNR=11					
FFC	Flin Flon	48.05 312	eP	P	00 11 19.4	-0.1
	comp=Z,9.9nm,1.1s					
FFC	Flin Flon	48.05 312	eP	P	00 11 19.4	-0.1
FFC			pmax	pmax		
	comp=Z,10.0nm,1.1s					
O37A	Wolven Farm, M	48.05 291	P	P	00 11 17.8	-1.8
	baz=66					
246A	Jackson Lee, B	48.09 279	P	P	00 11 17.9	-2.2
	baz=60					
U41A	Viola	48.11 285	P	P	00 11 18.6	-1.5
	baz=63					
E31A	Nome	48.14 300	P	P	00 11 18.5	-1.8
	baz=69					
T40A	Mansfield	48.18 287	P	P	00 11 18.3	-2.4
	baz=64,SNR=11					
Q38A	Cooks Store, C	48.18 289	P	P	00 11 18.4	-2.3
	baz=65					
X43A	Marvell	48.19 283	P	P	00 11 19.1	-1.6
	baz=62					
ECSD	EROS Data Cent	48.33 296	P	P	00 11 20.6	-1.2
	baz=68,SNR=22					
ECSD	EROS Data Cent	48.33 296	eP	P	00 11 21.1	-0.7
	comp=Z,30nm,1.3s					
N36A	Muff Farm, Cla	48.35 292	P	P	00 11 20.0	-2.0
	baz=66					
145A	Houston Renfro	48.40 280	P	P	00 11 19.9	-2.5
	baz=61					
P37A	Lathrop	48.43 290	P	P	00 11 20.8	-1.8
	baz=65					
Z44A	Pea Ridge, Bel	48.44 281	P	P	00 11 21.0	-1.7
	baz=61					
Y43A	Makayla and Ka	48.50 282	P	P	00 11 22.1	-1.1
	baz=62					
CSS	Mathiatis	48.51 76	eP	P	00 11 23.9	+0.6
	comp=Z,5.2nm,1.1s					
S39A	Bolivar	48.52 288	P	P	00 11 22.0	-1.3
	baz=64,SNR=11					
S39A	Bolivar	48.52 288	eP	P	00 11 22.4	-1.0
	comp=Z,27nm,1.4s					
V41A	Mountainview	48.53 285	P	P	00 11 21.9	-1.6
	baz=63					
H32A	Carlson Farm,	48.59 298	P	P	00 11 21.8	-2.0
	baz=68					
245A	Little AP, Sta	48.65 279	P	P	00 11 23.9	-0.5
	baz=60					
X42A	Stuttgart	48.71 283	P	P	00 11 23.4	-1.5
	baz=62					
R38A	Fenwick Farm,	48.72 288	P	P	00 11 23.7	-1.1
	baz=64,SNR=8.7					
144A	Alexander Plac	48.75 280	P	P	00 11 24.1	-1.0
	baz=61					
U40A	Yellville	48.77 286	P	P	00 11 23.7	-1.6
	baz=63,SNR=16					
Q37A	Longview Farm,	48.80 290	P	P	00 11 24.0	-1.5
	baz=64					
T39A	Clever	48.85 287	P	P	00 11 24.7	-1.2
	baz=63,SNR=7.2					
WHAR	Wooly Hollow	48.85 284	eP	P	00 11 25.3	-0.6
	comp=Z,20nm,1.3s					
W41B	Gary Mavity, V	48.88 284	P	P	00 11 24.7	-1.3
	baz=62					
W41B	Gary Mavity, V	48.88 284	eP	P	00 11 25.4	-0.7
	comp=Z,12nm,1.2s					
S38A	Stockton	48.96 288	P	P	00 11 24.3	-2.4
	baz=64					
V40A	Witts Springs	49.00 285	P	P	00 11 25.2	-1.9
	baz=62,SNR=16					
V40A	Witts Springs	49.00 285	eP	P	00 11 26.0	-1.1
	comp=Z,25nm,1.0s					
SDV	Santo Domingo	49.04 240	P	P	00 11 28.8	+1.1
	comp=Z,27nm,0.5s,baz=43,slow=6.3,SNR=4.5					
345A	Thompson Farm,	49.11 278	P	P	00 11 26.1	-1.8
	baz=60					
Y42A	Garnett, Star	49.17 282	P	P	00 11 26.1	-2.3
	baz=61					
U39A	Green Forest	49.21 286	P	P	00 11 25.9	-2.8
	baz=63,SNR=11					
X41A	Kaden, Bauxite	49.39 283	P	P	00 11 28.0	-2.0
	baz=62					
W40A	Ferguson Farm,	49.46 285	P	P	00 11 28.3	-2.3
	baz=62,SNR=8.1					
W40A	Ferguson Farm,	49.46 285	eP	P	00 11 30.5	-0.1
	comp=Z,36nm,1.3s					
T38A	Diamond	49.50 287	P	P	00 11 28.6	-2.3
	baz=63,SNR=8.9					
Z42A	Norrel Spur, H	49.56 282	P	P	00 11 29.2	-2.1
	baz=61					
344A	Westbrook Farm	49.56 279	P	P	00 11 28.7	-2.7
	baz=60					
V39A	Pettigrew	49.58 286	P	P	00 11 29.3	-2.3
	baz=62					
SUSD	Miller	49.62 298	P	P	00 11 29.5	-2.2
	baz=67					
X40A	Basin Creek Fa	49.62 284	P	P	00 11 30.5	-1.3
	baz=62					
X40A	Basin Creek Fa	49.62 284	eP	P	00 11 31.2	-0.6
	comp=Z,29nm,1.8s					
243A	Waterproof	49.90 280	P	P	00 11 31.9	-2.0
	baz=60					
W39A	Magazine	49.98 285	P	P	00 11 32.5	-2.0
	baz=62,SNR=18					
W39A	Magazine	49.98 285	eP	P	00 11 34.0	-0.4
	comp=Z,29nm,1.1s					
MIAR	Mount Ida	50.13 284	P	P	00 11 34.4	-1.3
	baz=61,SNR=9.5					
MIAR	Mount Ida	50.13 284	eP	P	00 11 34.9	-0.8
	comp=Z,48nm,1.6s					
MIAR	Mount Ida	50.13 284	eP	P	00 11 34.9	-0.8
MIAR			pmax	pmax		
	comp=Z,48nm,1.6s					
Y40A	Okolona	50.17 283	P	P	00 11 33.9	-2.1
	baz=61					
KSU1	Kansas State U	50.22 291	P	P	00 11 34.0	-2.3
	baz=64					
KSU1	Kansas State U	50.22 291	eP	P	00 11 35.2	-1.1
	comp=Z,18nm,0.9s					
X39A	Fountain Ranch	50.54 284	P	P	00 11 37.7	-1.1
	baz=61,SNR=7.7					
342A	Flagon Creek P	50.77 280	P	P	00 11 38.9	-1.7
	baz=59					
MMAI	Mount Meron Ar	50.95 78	P	P	00 11 43.1	+1.1
	comp=Z,9.8nm,0.9s,baz=318,slow=6.2,SNR=14					
TUL1	Leonard	51.09 287	P	P	00 11 40.5	-2.4
	baz=62					
TUL1	Leonard	51.09 287	eP	P	00 11 43.2	+0.3
	comp=Z,9.6nm,0.8s					
KIV	Kislovodsk	51.13 62	eP	P	00 11 41.0	-2.2
KIV			pmax	pmax		
	comp=Z,8.0nm,1.1s					
KIV			MLR	MLR		
	comp=Z,233nm,16.0s					
KBZ	Khabaz	51.37 62	P	P	00 11 44.7	-0.1
	comp=Z,8.0nm,1.1s,baz=295,slow=9.6,SNR=7.2					
KBZ			LR	LR	00 33 39.6	
	comp=Z,305nm,20.7s,baz=352,slow=36					
341A	Kurthwood	51.41 280	P	P	00 11 43.3	-2.0
	baz=59					
341A	Kurthwood	51.41 280	eP	P	00 11 44.5	-0.9
	comp=Z,24nm,1.2s					
YKA	Yellowknife Ar	52.04 324	P	P	00 11 48.5	-1.1
	comp=Z,2.4nm,0.9s,baz=70,slow=7.1,SNR=12					
YKA			PcP	PcP	00 13 00.0	-1.6
	comp=Z,1.0nm,1.0s,baz=67,slow=3.6,SNR=4.4					
YKA			LR	LR	00 30 33.7	
	comp=Z,16nm,21.5s,baz=70,slow=32					
YKA	Yellowknife Ar	52.04 324	i P	P	00 11 49.5	-0.1
YKA			pmax	pmax		
	comp=Z,2.0nm,0.8s					
NATX	Nacogdoches	52.30 282	P	P	00 11 50.0	-1.9
	baz=59					
NATX	Nacogdoches	52.30 282	eP	P	00 11 52.5	+0.6
	comp=Z,53nm,1.5s					
ASF	Jabal al Asfar	52.46 78	P	P	00 11 54.4	+1.2
	comp=Z,14nm,1.2s,baz=256,slow=4.5,SNR=17					
CBKS	Cedar Bluff	52.53 292	P	P	00 11 50.8	-2.9
	baz=63					
RUSC	La Rusia	52.88 240	eP	P	00 11 57.6	+0.6
	comp=Z,7.1nm,1.2s					
RSSD	Black Hills	53.08 300	P	P	00 11 55.9	-1.9
	baz=64					
RSSD	Black Hills	53.08 300	eP	P	00 11 57.4	-0.5
	comp=Z,13nm,1.5s					
RSSD	Black Hills	53.08 300	eP	P	00 11 57.4	-0.5
RSSD			pmax	pmax		
	comp=Z,13nm,1.5s					
OGNE	Ogallala	53.14 295	P	P	00 11 55.4	-2.9
	baz=63					
OGNE	Ogallala	53.14 295	eP	P	00 11 56.9	-1.4
	comp=Z,23nm,1.0s					
PTBC	PUERTO BERRIO,	53.29 242	eP	P	00 11 59.6	+0.1
LAO	LASA Array	53.39 303	P	P	00 11 59.2	-0.7
	baz=65,SNR=7.5					
LAO	LASA Array	53.39 303	eP	P	00 12 00.7	+0.7
	comp=Z,57nm,1.5s					
WMOK	Wichita Mounta	53.79 287	P	P	00 12 00.4	-2.6
	baz=60					
WMOK	Wichita Mounta	53.79 287	eP	P	00 12 01.3	-1.7
	comp=Z,16nm,1.3s					
WMOK	Wichita Mounta	53.79 287	eP	P	00 12 01.3	-1.7
WMOK			pmax	pmax		
	comp=Z,16nm,1.3s					
HKT	Hockley	54.09 280	eP	P	00 12 04.8	-0.3
	comp=Z,6.3nm,1.3s					
HKT	Hockley	54.09 280	eP	P	00 12 04.8	-0.3
HKT			pmax	pmax		
	comp=Z,6.0nm,1.3s					
GNI	Garni	54.17 65	LR	LR	00 38 23.4	
	comp=Z,111nm,19.1s,baz=270,slow=40					

WHTX	Lake Whitney,	54.22	283	P	P	00 12 03.0 -3.1
	baz=59					
WHTX	Lake Whitney,	54.22	283	eP	P	00 12 04.7 -1.5
	comp=Z,30nm,1.2s					
CHIC	Chingaza	54.25	240	eP	P	00 12 05.6 -1.4
HELC	Santa Helena	54.26	242	eP	P	00 12 07.9 +0.9
	comp=Z,61nm,1.1s					
HELC	Santa Helena	54.26	242	eP	P	00 12 07.6 +0.6
ROSC	El Rosal	54.47	240	P	P	00 12 08.8 +0.3
	comp=Z,2.8nm,0.3s,baz=229,slow=20,SNR=7.2					
435B	Jarrell	54.94	282	P	P	00 12 10.1 -1.3
	baz=58					
EGMT	Eagleton	54.99	306	P	P	00 12 10.4 -1.3
	baz=64,SNR=10					
K22A	Casper	55.36	299	P	P	00 12 12.6 -1.8
	baz=62,SNR=5.4					
ARU	Arti	55.36	42	LR	LR	00 36 26.9
	comp=Z,403nm,18.3s,baz=280,slow=37					
ARU	Arti	55.36	42	eP	P	00 12 13.8 -0.3
	comp=Z,37nm,1.2s					
ARU	Arti	55.36	42	c iP	P	00 12 13.7 -0.3
ARU						00 13 11.7
ARU						00 14 13.8
ARU				PPP	PPP	00 15 28.3
ARU				S	S	00 19 56.9 -1.1
ARU				SS	SS	00 23 42.5 +0.6
ARU				pmax	pmax	
	comp=Z,51nm,1.7s					
ARU				MLR	MLR	
	comp=Z,432nm,18.0s					
ABTX	Abilene, Hawle	55.48	285	P	P	00 12 13.7 -1.6
	baz=59					
ABTX	Abilene, Hawle	55.48	285	eP	P	00 12 14.3 -1.0
	comp=Z,12nm,1.0s					
AMTX	Amarillo	55.79	288	P	P	00 12 15.7 -1.9
	baz=60					
AMTX	Amarillo	55.79	288	eP	P	00 12 18.1 +0.5
	comp=Z,32nm,1.2s					
N23A	Red Feather La	55.80	297	P	P	00 12 15.5 -2.3
	baz=62,SNR=6.3					
N23A	Red Feather La	55.80	297	eP	P	00 12 18.0 +0.3
	comp=Z,31nm,1.1s					
GCMT	Greycliff	55.93	304	eP	P	00 12 18.6 +0.1
RLMT	Red Lodge	55.99	303	P	P	00 12 18.1 -0.9
	baz=63,SNR=8.8					
RLMT	Red Lodge	55.99	303	eP	P	00 12 18.7 -0.3
	comp=Z,61nm,1.9s					
ISCO	Idaho Springs	56.10	296	P	P	00 12 19.1 -0.9
	baz=61,SNR=8.4					
ISCO	Idaho Springs	56.10	296	eP	P	00 12 20.6 +0.6
	comp=Z,7.8nm,1.1s					
ISCO	Idaho Springs	56.10	296	eP	P	00 12 20.6 +0.6
ISCO				pmax	pmax	
	comp=Z,8.0nm,1.1s					
ESPN	Las Esperanzas	56.14	255	eP	P	00 12 20.9 +0.8
	comp=Z,60nm,1.1s					
SVE	Sverdlovsk	56.23	41	eP	P	00 12 20.4 +0.2
SVE				pmax	pmax	
	comp=Z,36nm,1.6s					
YOTC	Yotoco, Valle	56.44	241	eP	P	00 12 22.9 +0.5
T25A	Trinidad	56.57	292	P	P	00 12 22.2 -1.1
	baz=60,SNR=8.8					
T25A	Trinidad	56.57	292	eP	P	00 12 24.6 +1.3
	comp=Z,20nm,1.4s					
JCT	Junction City	56.72	283	P	P	00 12 23.4 -0.8
	baz=57					
JCT	Junction City	56.72	283	eP	P	00 12 24.4 +0.2
	comp=Z,14nm,1.4s					
INK	Inuvik	56.85	335	P	P	00 12 23.7 -0.7
	comp=Z,4.2nm,0.8s,baz=194,slow=4.2,SNR=3.4					
INK	Inuvik	56.85	335	eP	P	00 12 23.4 -1.1
	comp=Z,8.6nm,0.9s					
INK	Inuvik	56.85	335	eP	P	00 12 23.4 -1.1
INK				pmax	pmax	
	comp=Z,9.0nm,0.9s					
HORQ	Saladito	57.00	241	eP	P	00 12 26.2 -0.4
WALA	Waterton Lakes	57.01	309	eP	P	00 12 25.6 -0.4
	comp=Z,30nm,1.1s					
SDCO	Great Sand Dun	57.02	293	P	P	00 12 24.5 -2.1
	baz=60					
SDCO	Great Sand Dun	57.02	293	eP	P	00 12 26.2 -0.4
	comp=Z,2.5nm,0.9s					
MSTX	Muleshoe	57.03	288	P	P	00 12 24.6 -1.9
	baz=59,SNR=11					
MSTX	Muleshoe	57.03	288	eP	P	00 12 25.7 -0.7
	comp=Z,39nm,1.3s					
TGUH	Tegucigalpa,Un	57.08	259	eP	P	00 12 29.6 +2.8
	comp=Z,26nm,0.9s					
BOZ	Bozeman (W)	57.24	304	P	P	00 12 25.9 -2.0
	baz=62,SNR=12					
BOZ	Bozeman (W)	57.24	304	eP	P	00 12 27.4 -0.4
	comp=Z,10nm,0.9s					
BOZ	Bozeman (W)	57.24	304	eP	P	00 12 27.4 -0.4
BOZ				pmax	pmax	
	comp=Z,10.0nm,0.9s					
PD31	Pinedale Array	57.28	300	eP	P	00 12 26.9 -1.3
PDAR	Pinedale Array	57.28	300	P	P	00 12 26.6 -1.6
	comp=Z,6.1nm,1.0s,baz=60,slow=7.0,SNR=27					
PDAR				LR	LR	00 36 38.1
	comp=Z,700nm,18.2s,baz=57,slow=36					
PDAR	Pinedale Array	57.28	300	eP	P	00 12 25.9 -2.3
PDAR				P	P	00 12 26.6 -1.6
BW06	Boulder Array	57.28	300	P	P	00 12 24.8 -3.4
	baz=61,SNR=7.1					
BW06	Boulder Array	57.28	300	eP	P	00 12 27.0 -1.2
	comp=Z,20nm,1.4s					
MOOW	Moose Ponds	57.57	302	eP	P	00 12 30.7 +0.5
	comp=Z,22nm,1.4s					
833A	Chaparral WMA,	57.59	281	P	P	00 12 28.8 -1.5
	baz=56					
833A	Chaparral WMA,	57.59	281	eP	P	00 12 31.0 +0.6
	comp=Z,51nm,1.8s					
LRM	Limekiln Ridge	57.64	305	eP	P	00 12 30.8 0.0
O20A	White River Ci	57.70	297	P	P	00 12 29.3 -1.9
	baz=60					
O20A	White River Ci	57.70	297	eP	P	00 12 30.2 -1.0
	comp=Z,9.9nm,1.0s					
SNOW	Snow King Moun	57.71	302	eP	P	00 12 31.5 +0.2
	comp=Z,18nm,1.1s					
PCON	Cinco Dias	57.72	240	eP	P	00 12 31.5 -0.5
AKTO	Aktyubinsk	57.73	49	P	P	00 12 31.6 +0.5
	comp=Z,8.9nm,0.8s,baz=294,slow=7.3,SNR=28					
AKTO				LR	LR	00 36 31.4
	comp=Z,310nm,20.8s,baz=304,slow=35					
FXWY	Fox Creek	57.80	302	eP	P	00 12 31.4 -0.5
	comp=Z,7.2nm,1.0s					
REDW	Red Top Meadow	57.82	301	eP	P	00 12 31.6 -0.5
	comp=Z,25nm,1.1s					
TPAW	Teton Pass	57.82	302	eP	P	00 12 32.2 +0.1
	comp=Z,14nm,1.1s					
S22A	4UR Ranch, Cre	57.94	294	P	P	00 12 30.7 -2.3
	baz=59					
S22A	4UR Ranch, Cre	57.94	294	eP	P	00 12 33.6 +0.6
	comp=Z,4.7nm,1.1s					
DLMT	Dillon	57.95	304	eP	P	00 12 32.9 0.0
	comp=Z,25nm,1.3s					
SOTA	Rioblanco	58.00	240	eP	P	00 12 34.2 +0.3
MSO	Missoula	58.07	306	P	P	00 12 31.7 -1.9
	baz=61					
MSO	Missoula	58.07	306	eP	P	00 12 32.8 -0.8
	comp=Z,32nm,1.6s					
AHID	Auburn Hatcher	58.27	301	eP	P	00 12 35.6 +0.4
	comp=Z,8.8nm,0.8s					
PV04	Paradox Valley	59.02	296	eP	P	00 12 41.5 +1.0
	comp=Z,11nm,1.2s					
GDL2	Guadalupe Moun	59.10	287	eP	P	00 12 41.8 +0.8
PV10	Paradox Valley	59.12	296	eP	P	00 12 40.7 -0.5
	comp=Z,8.8nm,0.9s					
PV09	Paradox Valley	59.12	296	eP	P	00 12 41.5 +0.3
ANMO	Albuquerque	59.12	291	P	P	00 12 41.3 +0.1
	comp=Z,2.5nm,0.9s,baz=78,slow=12,SNR=8.7					
ANMO	Albuquerque	59.12	291	P	P	00 12 40.0 -1.2
	baz=58					
ANMO	Albuquerque	59.12	291	eP	P	00 12 42.4 +1.1
	comp=Z,7.0nm,1.2s					
ANMO	Albuquerque	59.12	291	c eP	P	00 12 42.3 +1.1
ANMO				pmax	pmax	
	comp=Z,9.0nm,1.7s					
TASL	Snake Pit, Alb	59.12	291	P	P	00 12 39.7 -1.5
	baz=58,SNR=5.5					
TASM	ASL Pad, Albuq	59.12	291	P	P	00 12 39.6 -1.6
	baz=58,SNR=5.9					
HWUT	Hardware Ranch	59.15	300	eP	P	00 12 40.9 -0.4
	comp=Z,20nm,1.0s					
NEW	Newport	59.26	309	P	P	00 12 40.5 -1.3
	comp=Z,15nm,1.0s,baz=67,slow=5.8,SNR=9.7					
NEW	Newport	59.26	309	P	P	00 12 40.0 -1.7
	baz=60,SNR=6.6					
NEW	Newport	59.26	309	eP	P	00 12 40.4 -1.4
	comp=Z,27nm,1.1s					
CCIG	Comitan	59.26	265	eP	P	00 12 42.3 0.0
	comp=Z,37nm,0.9s					
SAML	Samuel	59.34	220	eP	P	00 12 43.6 +1.0
	comp=Z,24nm,1.8s					
MVCO	Mesa Verde	59.35	294	P	P	00 12 42.3 -0.5
	baz=58					
MVCO	Mesa Verde	59.35	294	eP	P	00 12 44.1 +1.4
	comp=Z,32nm,1.6s					
ABKAR	Akbulak array	59.39	50	eP	P	00 12 43.2 +0.6
LNIG	Linares	59.57	277	eP	P	00 12 43.7 -0.5
	comp=Z,9.4nm,1.1s					
LPM	Los Pinos Moun	59.58	290	eP	P	00 12 44.3 0.0
JLU	Jordanelle	59.58	299	eP	P	00 12 43.5 -0.8
	comp=Z,21nm,1.7s					
BNM	Barren Site	59.66	290	eP	P	00 12 45.7 +0.7
P17A	Butcher Ranch,	59.69	298	eP	P	00 12 44.5 -0.5
	comp=Z,24nm,1.7s					
SRU	San Rafael Swe	59.73	297	eP	P	00 12 45.7 +0.3
	comp=Z,3.9nm,0.9s					
HVU	Hansel Valley	59.84	301	eP	P	00 12 45.3 -0.7
	comp=Z,19nm,1.1s					
HVU	Hansel Valley	59.84	301	eP	P	00 12 45.3 -0.7
HVU				pmax	pmax	
	comp=Z,19nm,1.1s					
SPUT	South Promonto	59.87	300	eP	P	00 12 45.9 -0.4
	comp=Z,15nm,1.2s					
LAZ	Ladron	59.88	291	eP	P	00 12 47.7 +1.2
Y22E	IRIS PASSCAL I	59.91	290	P	P	00 12 44.8 -1.8
	baz=58					
Y22D	IRIS PASSCAL I	59.91	290	P	P	00 12 45.1 -1.5
	baz=58					
NRIK	Noril'sk	59.93	21	P	P	00 12 46.2 +0.2
	comp=Z,4.0nm,0.8s,baz=302,slow=4.2,SNR=7.1					
NRIK				LR	LR	00 37 46.6
	comp=Z,123nm,21.6s,baz=343,slow=35					
HLID	Hailey	59.97	303	P	P	00 12 45.8 -1.1
	baz=59,SNR=9.0					
HLID	Hailey	59.97	303	eP	P	00 12 46.9 -0.1
	comp=Z,6.2nm,0.9s					
MPU	Maple Canyon	60.00	298	eP	P	00 12 46.9 -0.3
	comp=Z,7.2nm,1.0s					
TMUT	Trail Mountain	60.09	298	eP	P	00 12 47.9 0.0
	comp=Z,19nm,0.9s					
MNTX	Cornudas Mount	60.09	287	P	P	00 12 46.5 -1.2
	baz=57					
MNTX	Cornudas Mount	60.09	287	eP	P	00 12 48.0 +0.3
	comp=Z,8.2nm,1.4s					
TXAR	Lajitas Array	60.16	284	P	P	00 12 47.7 -0.6
	comp=Z,3.5nm,0.9s,baz=78,slow=5.5,SNR=34					
TXAR				LR	LR	00 39 13.0
	comp=Z,377nm,18.7s,baz=0.0,slow=36					
TX31	Lajitas Ar. Si	60.16	284	eP	P	00 12 48.1 -0.2
BGU	Big Grassy Mou	60.44	300	eP	P	00 12 50.0 -0.2
	comp=Z,16nm,1.2s					
OTAV	Otavalo	60.63	240	eP	P	00 12 53.5 +1.4
	comp=Z,23nm,1.4s					
DLBC	Dease Lake	60.66	324	P	P	00 12 51.6 +0.4
	comp=Z,3.4nm,0.8s,baz=31,slow=7.8,SNR=6.6					
DLBC	Dease Lake	60.66	324	eP	P	00 12 51.8 +0.5
	comp=Z,25nm,1.5s					
DUG	Dugway, Tooele	60.68	299	P	P	00 12 50.0 -1.8
	baz=58,SNR=17					
DUG	Dugway, Tooele	60.68	299	eP	P	00 12 51.3 -0.5
	comp=Z,38nm,1.5s					
DUG	Dugway, Tooele	60.68	299	eP	P	00 12 51.3 -0.5
DUG				pmax	pmax	
	comp=Z,38nm,1.5s					
MFID	Camas Ranch	60.93	304	eP	P	00 12 54.1 +0.8
	comp=Z,5.8nm,1.0s					
MSU	Marysvale	61.15	297	eP	P	00 12 55.5 +0.4
MSU	Marysvale	61.15	297	eP	P	00 12 55.5 +0.4
DAWY	Dawson	61.18	332	eP	P	00 12 55.3 +0.6
	comp=Z,21nm,1.3s					
W18A	Petrified Fore	61.30	293	P	P	00 12 53.4 -2.7
	baz=57					
121A	Cookes Peak, D	61.35	289	P	P	00 12 55.1 -1.4
	baz=56,SNR=10					
EGAK	Eagle	61.36	333	eP	P	00 12 56.5 +0.7
	comp=Z,17nm,1.5s					
TOLK	Toolik Lake Re	61.41	339	P	P	00 12 53.2 -3.0
	baz=47					
TOLK	Toolik Lake Re	61.41	339	eP	P	00 12 55.9 -0.3
	comp=Z,16nm,1.1s					
X18A	Snowflake	61.77	292	eP	P	00 13 00.4 +1.1
	comp=Z,13nm,1.4s					
LTY	Liberty	61.83	309	eP	P	00 12 58.3 -1.0
	comp=Z,16nm,1.3s					
ELK	Elko	61.96	301	P	P	00 13 01.8 +1.2
	comp=Z,7.7nm,0.8s,baz=58,slow=5.0,SNR=7.7					
WUAZ	Wupatki	62.21	294	P	P	00 12 59.4 -2.8
	baz=57,SNR=5.9					
WUAZ	Wupatki	62.21	294	eP	P	00 13 03.1 +0.9
	comp=Z,47nm,1.9s					
SZCU	Shurtz Canyon	62.24	297	eP	P	00 13 01.5 -1.0
	comp=Z,25nm,1.5s					
PSUT	Pine Spring	62.25	298	eP	P	00 13 02.8 +0.3
	comp=Z,11nm,1.1s					
U15A	North Rim	62.34	295	eP	P	00 13 02.6 -0.6
	comp=Z,4.6nm,0.8s					
KNB	Kanab	62.38	296	eP	P	00 13 03.4 +0.1
	comp=Z,7.8nm,1.1s					
KNB	Kanab	62.38	296	eP	P	00 13 03.4 +0.1
KNB				pmax	pmax	
	comp=Z,8.0nm,1.1s					
CCUT	Cedar City	62.45	297	eP	P	00 13 04.3 +0.4
	comp=Z,13nm,1.0s					
COLD	Coldfoot	62.56	338	eP	P	00 13 03.0 -0.8
	comp=Z,12nm,1.0s					
J08A	Circle Bar Ran	62.60	305	eP	P	00 13 05.0 +0.4
	comp=Z,51nm,1.2s					
JRQG	Juriquilla Cam	62.77	274	eP	P	00 13 07.7 +1.5
	comp=Z,202nm,1.7s					
SCRK	Sand Creek	62.82	333	eP	P	00 13 06.2 +0.4
	comp=Z,13nm,1.2s					
X16A	Lo Mia Camp, P	62.86	293	eP	P	00 13 08.3 +1.7
	comp=Z,19nm,1.7s					
BRVK	Borovoye	62.93	42	eP	P	00 13 06.7 +0.2
	comp=Z,19nm,1.0s					
BRVK	Borovoye	62.93	42	c eP	P	00 13 07.0 +0.5
BRVK				pmax	pmax	
	comp=Z,36nm,1.7s					
HPIG		62.96	283	eP	P	00 13 07.6 +0.2
	comp=Z,9.1nm,1.2s					
BVAR	Borovoye Array	63.00	42	P	P	00 13 07.7 +0.7
	comp=Z,7.2nm,0.9s,baz=276,slow=4.2,SNR=45					
BVAR				LR	LR	00 39 38.3
	comp=Z,361nm,19.7s,baz=312,slow=35					
319A	Douglas	63.05	289	eP	P	00 13 10.1 +2.3
	comp=Z,31nm,1.3s					
DOT	Dot Lake	63.06	333	eP	P	00 13 07.4 +0.1
	comp=Z,55nm,1.3s					
ZAIG	Zacatecas	63.11	277	eP	P	00 13 10.3 +1.8
	comp=Z,13nm,1.3s					
ZAIG	Zacatecas	63.11	277	eP	P	00 13 10.3 +1.8
	comp=Z,13nm,1.3s					
WVOR	Wild Horse Val	63.20	304	eP	P	00 13 09.7 +1.0
	comp=Z,25nm,1.2s					
IL1	Eielson Array	63.24	335	eP	P	00 13 08.1 -0.3
ILAR	Eielson Array	63.24	335	P	P	00 13 07.5 -0.9
	comp=Z,1.0nm,0.7s,baz=43,slow=6.4,SNR=15					
ILAR				LR	LR	00 37 47.4
	comp=Z,208nm,18.8s,baz=86,slow=33					
ILB	Eielson Array	63.24	335	eP	P	00 13 07.9 -0.5
RIDG	Independ'e Rid	63.26	333	eP	P	00 13 09.4 +0.8
	comp=Z,14nm,1.1s					
TLIG	Tlapa	63.27	270	eP	P	00 13 10.0 +0.6
	comp=Z,30nm,1.1s					
TLIG	Tlapa	63.27	270	eP	P	00 13 10.0 +0.6
	comp=Z,30nm,1.1s					
BMN	Battle Mountai	63.40	301	eP	P	00 13 10.2 +0.1
	comp=Z,10nm,1.1s					
BMN	Battle Mountai	63.40	301	eP	P	00 13 10.2 +0.1
BMN				pmax	pmax	
	comp=Z,10.0nm,1.1s					
R11A	Troy Canyon, C	63.49	299	P	P	00 13 09.7 -1.0
	baz=56					
R11A	Troy Canyon, C	63.49	299	eP	P	00 13 10.7 0.0
	comp=Z,15nm,1.7s					
MDM	Murphy Dome	63.54	335	eP	P	00 13 10.9 +0.5
	comp=Z,12nm,1.2s					
RAYN	Ar Rayn	63.56	81	eP	P	00 13 12.1 +0.9
	comp=Z,6.0nm,1.1s					
RAYN	Ar Rayn	63.56	81	eP	P	00 13 12.1 +0.9
	comp=Z,6.0nm,1.1s					
TUC	Tucson	63.58	291	P	P	00 13 10.2 -1.0
	baz=56					
TUC	Tucson	63.58	291	eP	P	00 13 12.7 +1.4
	comp=Z,12nm,1.1s					
TUC	Tucson	63.58	291	eP	P	00 13 12.7 +1.4
TUC				pmax	pmax	
	comp=Z,12nm,1.1s					
CCB	Clear Creek Bu	63.62	335	eP	P	00 13 10.7 -0.2
	comp=Z,13nm,1.3s					
WRH	Wood River Hil	63.83	335	eP	P	00 13 11.6 -0.7
	comp=Z,21nm,1.3s					
PINE	Pine Mountain	63.86	306	eP	P	00 13 14.4 +1.3
	comp=Z,10nm,1.0s					
W13A	Hualapai Mount	64.16	295	eP	P	00 13 15.9 +0.7
	comp=Z,9.9nm,1.1s					
Y14A	Wickenburg	64.20	293	eP	P	00 13 16.4 +1.0
	comp=Z,7.7nm,1.1s					
SHPR	Sheep Range	64.23	297	eP	P	00 13 16.2 +0.6
	comp=Z,9.2nm,1.2s					
MLY	Manley	64.26	336	eP	P	00 13 15.5 +0.3
	comp=Z,8.3nm,1.2s					
J05D	Fort Rock, OR	64.32	306	P	P	00 13 15.7 -0.4
	baz=56					
K05A	Summer Lake	64.43	305	eP	P	00 13 17.7 +0.9
	comp=Z,28nm,1.3s					
G03D	McMinnville, O	64.45	309	P	P	00 13 15.4 -1.2
	baz=56					
TGL	Tana Glacier	64.51	330	eP	P	00 13 18.1 +1.1
	comp=Z,33nm,1.2s					
MOD	Modoc Plateau	64.53	304	eP	P	00 13 17.9 +0.5
	comp=Z,14nm,0.9s					
CRQM	Cirque	64.62	330	eP	P	00 13 18.4 +0.6
	comp=Z,28nm,1.1s					
TPNV	Topopah Spring	64.70	298	P	P	00 13 18.4 -0.3
	baz=56					
TPNV	Topopah Spring	64.70	298	eP	P	00 13 19.1 +0.4
	comp=Z,7.7nm,1.1s					
KVN	Kaiserville	64.73	301	eP	P	00 13 18.1 -0.8
	comp=Z,20nm,1.1s					
KVN	Kaiserville	64.73	301	eP	P	00 13 18.1 -0.8
KVN				pmax	pmax	
	comp=Z,20nm,1.1s					
PDMCI	Parker Dam,Lak	64.78	294	P	P	00 13 17.8 -1.1
	baz=55					
BPAW	Bear Paw Mtn.	64.99	336	eP	P	00 13 19.3 -0.6
	comp=Z,46nm,1.9s					
BMRM	Bremner River	65.02	331	eP	P	00 13 21.2 +1.0
	comp=Z,38nm,1.4s					
NV11	Mina Array Sit	65.12	300	eP	P	00 13 21.1 -0.3
	comp=Z,0.7nm,1.2s					
214A	Organ Pipe Nat	65.19	291	P	P	00 13 19.8 -2.0
	baz=55,SNR=8.4					
NV01	Mina Array Sit	65.21	300	eP	P	00 13 21.3 -0.7
NVAR	Mina Array Bea	65.21	300	P	P	00 13 21.6 -0.4
	comp=Z,2.0nm,0.9s,baz=59,slow=4.9,SNR=9.9					
TRF	Thorofare Moun	65.24	335	eP	P	00 13 21.9 +0.1
	comp=Z,53nm,1.9s					
RYN	Ryan	65.24	300	eP	P	00 13 21.8 -0.4
	comp=Z,6.9nm,1.1s					
TUQ	Turquoise Moun	65.34	296	P	P	00 13 20.6 -2.2
	baz=55					
Y12C	Blythe	65.35	294	P	P	00 13 21.8 -1.0
	baz=55					
Y12C	Blythe	65.35	294	eP	P	00 13 23.2 +0.5
	comp=Z,18nm,1.4s					
FURC	Furnace Creek,	65.38	298	P	P	00 13 22.0 -0.8
	baz=55					
113A	Mohawk Valley,	65.39	293	eP	P	00 13 23.5 +0.5
	comp=Z,16nm,1.4s					
GRAC	Grapevine Rang	65.41	298	P	P	00 13 22.0 -1.1
	baz=55					
GMRC	Granite Mounta	65.53	295	P	P	00 13 23.2 -0.9
	baz=55					
M04C	Macdoel	65.54	305	P	P	00 13 21.8 -2.2
	baz=55					
IRM	Iron Mountain	65.54	295	P	P	00 13 23.0 -1.1
	baz=55,SNR=7.4					
BEKR	Beckworth	65.71	302	eP	P	00 13 26.0 +0.8
	comp=Z,12nm,1.0s					
TIXI	Tiksi	65.82	7	LR	LR	00 38 15.6
	comp=Z,63nm,21.2s,baz=360,slow=32					
TIXI	Tiksi	65.82	7	eP	P	00 13 26.1 +1.0
	comp=Z,23nm,1.3s					
TIXI	Tiksi	65.82	7	eP	P	00 13 26.1 +1.0
TIXI				pmax	pmax	
	comp=Z,23nm,1.3s					
TIN	Tinemaha, Big	65.95	299	P	P	00 13 25.5 -1.2
	baz=55					
GLA	Glamis	65.96	294	P	P	00 13 26.0 -0.7
	baz=55					
GLA	Glamis	65.96	294	eP	P	00 13 28.4 +1.7
	comp=Z,41nm,1.6s					
HEC	Hector,Ludlow	65.96	296	P	P	00 13 26.5 -0.3
	baz=55					
DAC	Darwin (Calif)	65.97	298	eP	P	00 13 28.0 +1.1
	comp=Z,15nm,1.3s					
GSC	Goldstone, Bar	66.01	297	P	P	00 13 26.6 -0.5
	baz=55,SNR=7.9					
GSC	Goldstone, Bar	66.01	297	eP	P	00 13 27.8 +0.7
	comp=Z,26nm,1.4s					
MPMC	Manual Prospec	66.03	298	P	P	00 13 25.9 -1.4
	baz=55,SNR=16					
BC3	Big Chuckawall	66.04	294	P	P	00 13 25.5 -1.8
	baz=55					
YBH	Yreka Blue Hor	66.10	305	P	P	00 13 26.3 -1.3
	comp=Z,3.1nm,1.0s,baz=105,slow=12,SNR=3.6					
YBH				LR	LR	00 41 17.0
	comp=Z,318nm,18.4s,baz=42,slow=35					
OMMB	Old Mammoth Mi	66.13	300	eP	P	00 13 29.3 +1.2
	comp=Z,12nm,1.3s					
PMR	Palmer	66.18	333	eP	P	00 13 27.3 -0.3
	comp=Z,25nm,1.2s					
PMR	Palmer	66.18	333	eP	P	00 13 27.3 -0.3
PMR				pmax	pmax	
	comp=Z,25nm,1.2s					
CWC	Cottonwood Cre	66.20	298	P	P	00 13 27.3 -1.1
	baz=55					
BELC	Belle Mtn. Jos	66.21	295	P	P	00 13 26.2 -2.3
	baz=54,SNR=8.1					
O03D	Paynes Creek	66.37	303	P	P	00 13 27.4 -1.9
	baz=54					
M02C	Callahan	66.39	305	P	P	00 13 26.9 -2.5
	baz=54					
L02D	Cave Junction,	66.40	306	P	P	00 13 27.3 -2.1
	baz=54					
AFDM	Forest Hills D	66.63	302	eP	P	00 13 31.4 +0.5
	comp=Z,10nm,1.3s					
SWSC	Sam W. Stewart	66.69	294	P	P	00 13 31.2 -0.1
	baz=54					
SKT	Skwentna	66.70	334	eP	P	00 13 30.9 0.0
	comp=Z,24nm,1.4s					
XPFO	Pinon Flat	66.75	295	eP	P	00 13 32.7 +0.8
	comp=Z,16nm,1.4s					
PFO	Pinyon Flats O	66.75	295	P	P	00 13 29.8 -2.1
	baz=54,SNR=5.8					
PFO	Pinyon Flats O	66.75	295	eP	P	00 13 32.7 +0.8
	comp=Z,19nm,1.4s					
CMB	Columbia Colle	66.78	301	eP	P	00 13 32.0 +0.1
	comp=Z,14nm,1.3s					
CMB	Columbia Colle	66.78	301	eP	P	00 13 32.0 +0.1
CMB				pmax	pmax	
	comp=Z,14nm,1.3s					
ISA	Isabella, Lake	66.91	298	P	P	00 13 31.3 -1.5
	baz=54					
ISA	Isabella, Lake	66.91	298	eP	P	00 13 34.5 +1.7
	comp=Z,6.5nm,1.0s					
ISA	Isabella, Lake	66.91

comp=Z,7.3nm,1.1s,baz=20,slow=9.7,SNR=11
LPAZ LR LR 00 39 56.7
comp=Z,367nm,21.6s,baz=13,slow=33
LPAZ La Paz 68.07 221 *e*P **P 00 13 41.9 +1.0**
comp=Z,16nm,1.3s
PMPB Monarch Peak 68.12 299 *e*P **P 00 13 42.3 +1.8**
comp=Z,97nm,1.7s
PKM Mcpherson Peak 68.25 298 P **P 00 13 40.8 -0.6**
baz=54
KURK Kurchatov 68.46 41 *e*P **P 00 13 42.2 -0.1**
comp=Z,17nm,1.0s
KURK Kurchatov 68.46 41 *ce*P **P 00 13 42.3 +0.1**
KURK pmax pmax
comp=Z,29nm,1.7s
KURBB Kurchatov Arra 68.48 41 P **P 00 13 41.9 -0.5**
comp=Z,10.0nm,1.0s,baz=311,slow=6.4,SNR=44
ATD Arta Tunnel 68.99 93 LR LR 00 45 22.0
comp=Z,166nm,18.5s,baz=334,slow=37
ZAA0 Zalesovo Array 69.17 35 *e*P **P 00 13 46.8 +0.2**
comp=Z,8.2nm,1.1s
ZALV Zalesovo Beam 69.17 35 P **P 00 13 46.7 +0.1**
comp=Z,4.5nm,0.9s,baz=296,slow=8.1,SNR=22
ZALV LR LR 00 43 36.3
comp=Z,127nm,22.0s,baz=250,slow=36
ZALV Zalesovo Beam 69.17 35 *e*P **P 00 13 46.1 -0.5**
BILL Bilibino 69.91 354⇑ *e*P **P 00 13 51.5 +0.6**
BILL *e* 00 14 15.6
BILL *e* 00 16 25.0
BILL pmax pmax
comp=Z,1.0nm,1.0s
UOSS Minazif 70.52 74 *e*P **P 00 13 55.1 -0.3**
comp=Z,29nm,1.0s
EKS2 Erkin-Say 71.06 49 P **P 00 13 59.8 +1.3**
SNR=15
MNMC Minye Minye 71.21 220 *e*P **P 00 14 01.1 +1.4**
comp=Z,6.9nm,0.9s
AML Almayashu 71.34 50 P **P 00 14 01.7 +1.0**
SNR=14
UCH Uchtor 71.75 49 P **P 00 14 04.7 +1.6**
SNR=13
TKM2 Tokmak 2 71.91 48 P **P 00 14 05.2 +1.4**
SNR=11
KZA Kyzart 72.27 49 P **P 00 14 08.0 +1.8**
SNR=7.4
CPUP Villa Florida 72.60 206 P **P 00 14 07.6 0.0**
comp=Z,1.7nm,0.9s,baz=24,slow=9.2,SNR=3.2
CPUP LR LR 00 44 14.9
comp=Z,60nm,18.1s,baz=14,slow=34
MAKZ Makanchi 72.72 42 *e*P **P 00 14 08.3 0.0**
comp=Z,11nm,1.2s
MAKZ Makanchi 72.72 42 *e*P **P 00 14 08.3 0.0**
MAKZ pmax pmax
comp=Z,11nm,1.2s
MK31 Makanchi Array 72.88 42 *e*P **P 00 14 09.0 -0.3**
MK31 Makanchi Array 72.88 42 *e*P **P 00 14 09.0 -0.3**
MKAR Makanchi Array 72.88 42 P **P 00 14 09.5 +0.2**
comp=Z,8.8nm,1.0s,baz=318,slow=5.2,SNR=39
MKAR LR LR 00 45 23.0
comp=Z,343nm,21.9s,baz=278,slow=35
MKAR Makanchi Array 72.88 42 *e*P **P 00 14 09.0 -0.3**
comp=Z,49nm,1.1s
MK01 Makanchi Array 72.91 42 *e*P **P 00 14 08.8 -0.6**
NRN Naryn 73.11 49 *e*P **P 00 14 12.9 +1.8**
comp=Z,23nm,1.4s
NRN Naryn 73.11 49 *e*P **P 00 14 12.9 +1.8**
NRN pmax pmax
comp=Z,23nm,1.4s
WSAR Wadi Sarin 73.31 74 LR LR 00 49 05.6
comp=Z,134nm,20.5s,baz=344,slow=38
KMBO Kilima Mbogo 73.34 107 LR LR 00 46 22.7
comp=Z,509nm,20.5s,baz=282,slow=36
KSH Kashi 74.36 51 P **P 00 14 19.9 +1.7**
KSH sP sP 00 14 25.3 +2.6
KSH PP **PP 00 17 06.3 +2.5**
KSH S **SKiKP 00 23 47.9 +2.9**
KSH sS sS 00 23 57.4 -0.6
KSH ScS **SKSac 00 24 24.5 -1.8**
KSH pmax pmax
comp=Z,38nm,1.1s
KSH pmax pmax
comp=Z,380nm,4.3s
KSH LR LR
comp=Z,300nm,7.4s
KSH LR LR
comp=Z,420nm,8.9s
KSH LR LR
comp=Z,940nm,19.8s
YAK Yakutsk 75.15 10 *i*P **P 00 14 23.2 +1.0**
YAK pmax pmax
comp=Z,9.0nm,1.0s
SEY Seymchan 75.65 359 *i*P **P 00 14 27.9 +2.8**
NIL Nilore 76.58 57 *e*P **P 00 14 31.2 +0.2**
comp=Z,22nm,1.1s
NIL Nilore 76.58 57 *e*P **P 00 14 31.2 +0.2**
NIL pmax pmax
comp=Z,22nm,1.1s
MOY Mondy 77.36 29 *e*P **P 00 14 36.4 +1.2**
WMQ Urumqi 77.68 41 P **P 00 14 39.1 +2.1**
WMQ pP sP 00 14 43.6 +2.1
WMQ pmax pmax
comp=Z,22nm,0.7s
WMQ pmax pmax
comp=Z,330nm,4.7s
WMQ LR LR
comp=Z,950nm,15.3s
WMQ LR LR
comp=Z,720nm,17.3s
TLY Talaya 78.30 28 *e*P **P 00 14 41.6 +1.4**
TLY pmax pmax
comp=Z,12nm,1.5s
TLY MLR MLR
comp=Z,99nm,14.0s
MA2 Magadan 79.03 0 LR LR 00 48 01.6
comp=Z,28nm,18.4s,baz=13,slow=34
ZAK Zakamensk 79.24 29 *e*P **P 00 14 44.7 -0.9**
ZAK pmax pmax
comp=Z,6.0nm,1.7s
SONA1 Songino Array 82.49 28 *e*P **P 00 15 03.2 +0.2**
SONM Songino Array 82.50 28 P **P 00 15 03.3 +0.2**
comp=Z,1.6nm,0.6s,baz=316,slow=4.1,SNR=4.9
ULN Ulaanbaatar 82.70 28 *e*P **P 00 15 04.4 +0.3**
comp=Z,2.1nm,1.0s
ULN Ulaanbaatar 82.70 28 *ce*P **P 00 15 04.9 +0.8**
ULN pmax pmax
comp=Z,12nm,1.7s
ZEA Zeya 82.73 14 *e*P **P 00 15 06.0 +2.0**
ZEA pmax pmax
comp=Z,64nm,1.8s
PETK Petropavlovsk- 85.33 356 LR LR 00 54 32.6
comp=Z,112nm,18.9s,baz=3.6,slow=36
BOSA Boshof 86.17 134 LR LR 00 50 22.7
comp=Z,446nm,22.0s,baz=312,slow=33
GTA Gaotai 86.84 37 *e*P **P 00 15 25.0 -0.1**
GTA pP sP 00 15 29.8 +0.2
GTA sP pP 00 15 32.0 +3.6
GTA S **S 00 26 02.0 -1.2**
GTA pmax pmax
comp=Z,5.0nm,1.3s
GTA pmax pmax
comp=Z,120nm,4.9s
GTA LR LR
comp=Z,120nm,17.5s
GTA LR LR
comp=Z,1μm,18.1s
GTA LR LR
comp=Z,350nm,19.7s
HHC Hu-ho-hao-te 90.39 29 *e*P **P 00 15 40.3 -1.6**
HHC pmax pmax
comp=Z,13nm,0.7s
HHC pmax pmax
comp=Z,170nm,6.9s
LZH Lanzhou 91.38 36 *e*P **P 00 15 45.8 -0.8**
LZH pP pP 00 15 49.1 -0.9
LZH sP sP 00 15 50.6 -0.6
LZH *e*PP **PP 00 19 25.0 +1.7**
LZH pmax pmax
comp=Z,17nm,1.5s
LZH pmax pmax
comp=Z,78nm,9.3s
LZH LR LR
comp=Z,230nm,17.5s
LZH LR LR
comp=Z,240nm,17.4s
LZH LR LR
comp=Z,300nm,19.7s
USRK Ussuriysk Ar. 92.76 13 LR LR 00 57 42.2
comp=Z,58nm,18.6s,baz=357,slow=36
CD2 Chengdu 95.66 39 P **P 00 16 04.0 -2.3**
CD2 pmax pmax
comp=Z,10.0nm,0.6s
BRDH Bariadhala 95.70 53 LR LR 01 03 19.1
comp=Z,251nm,18.2s,baz=340,slow=38
NJ2 Nanjing 100.85 27 *e*P **Pdif 00 16 28.4 -1.1**
NJ2 pmax pmax
comp=Z,7.0nm,0.6s
VNDA Vanda 143.84 184 PKP **PKPdf 00 22 13.7 -0.6**
comp=Z,1.9nm,1.0s,baz=266,slow=2.5,SNR=6.7
VNDA Vanda 143.84 184 *e*PKPdf **PKPdf 00 22 14.9 +0.6**
CASY Casey 146.88 151 *e*PKPbc **PKPbc 00 22 22.2 +0.6**
WRA Warramunga Arr 154.12 38 PKPbc **PKPbc 00 22 38.5 -2.1**
comp=Z,2.2nm,1.2s,baz=358,slow=2.0,SNR=3.6
ASAR Alice Springs 157.07 43 PKPab **PKPab 00 23 06.7 -0.1**
comp=Z,1.3nm,0.8s,baz=338,slow=4.4,SNR=7.2
AS01 Alice Springs 157.09 43 *e*PKPab **PKPab 00 23 05.9 -0.9**

NEIC ***18*** *00:39:36.4±0.0, 58°.39N×133°.55W, h5km, ML2.5(OTT), After OTT.*

PGC 18 00:39:36.4±0.1, 58°.39N×133°.55W, h5km, ML2.5/4, 51km east of Juneau, Ak Southeastern Alaska, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
BESE	**Bessie Mountai**	**0.71**	**286**	P		Pg	00 39 49.7	-0.4
BESE	**Bessie Mountai**	**0.71**	**286**	P		Pg	00 39 49.7	-0.4
PLBC	**Pleasant Camp**	**1.81**	**307**	Pn		Pn	00 40 07.6	-0.7
PLBC				Sn		Sn	00 40 31.1	-0.5
PLBC	**Pleasant Camp**	**1.81**	**307**	Pn		Pn	00 40 07.6	-0.7
PLBC				Sn		Sn	00 40 31.1	-0.5
DLBC	**Dease Lake**	**1.85**	**87**	Pn		Pn	00 40 08.0	-0.9
DLBC				Sn		Sn	00 40 33.0	+0.3
DLBC	**Dease Lake**	**1.85**	**87**	*e*Pn		Pn	00 40 08.9	0.0
DLBC				*e*Sn		Sn	00 40 33.1	+0.4
WRAK	**Wrangell Islan**	**2.08**	**161**	*e*Pn		Pb	00 40 13.5	-1.1
WRAK				*e*Sn		Sb	00 40 39.8	-0.9
HYT	**Haines Junctio**	**3.17**	**322**	Pn		Pn	00 40 26.4	-0.6
HYT				Sn		Sn	00 41 04.3	-0.9
HYT				Sg		Sb	00 41 14.7	+2.6
HYT	**Haines Junctio**	**3.17**	**322**	Pn		Pn	00 40 26.4	-0.6
HYT				Sn		Sn	00 41 04.3	-0.9
YUK7	**Dusty Glacier**	**3.18**	**314**	Pg		Pb	00 40 33.1	-0.3
YUK7	**Dusty Glacier**	**3.18**	**314**	Pg		Pb	00 40 33.1	-0.3
PNL	**Peninsula**	**3.29**	**295**	Pn		Pn	00 40 27.9	-0.7
PNL	**Peninsula**	**3.29**	**295**	Pn		Pn	00 40 27.9	-0.7
YUK5	**Granite Creek**	**3.51**	**323**	Pn		Pn	00 40 31.7	-0.1
YUK5				Pg		Pb	00 40 39.0	0.0
YUK5				Sn		Sn	00 41 12.2	-1.5
YUK5				Sg		Sb	00 41 25.1	+3.1
YUK5	**Granite Creek**	**3.51**	**323**	Pn		Pb	00 40 39.0	0.0
YUK5				Sn		Sn	00 41 12.2	-1.5
YUK5				Sg		Sb	00 41 25.1	+3.1

TIF ***18*** *00:49:20.9, 40°.01N×45°.30E, h6km±1km*
CSEM ***18*** *00:49:23.3±0.5, 40°.00N×45°.17E, h2km, ML2.4, Error ellipse: s-maj=12.0km s-min=7.2km az=123.0*
ATA ***18*** *00:49:27.4±0.8, 39°.70N×43°.61E, h58km±20km, ML2.8, MW2.9*

ISC 18 00:49:24.0±1.4, 40°.04N±0°.05×45°.08E±0°.05, h13km±13km, n20, σ1§08/37, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
IGDI	**IGDIR**	**0.79**	**258**	*e*P		**Pg**	**00 49 38.6**	**-0.7**
IGDI				*e*S		**Sg**	**00 49 48.5**	**-1.1**
IGDI				IAML			00 49 54.4	
comp=Z,23nm,0.6s								
IGDI	**IGDIR**	**0.79**	**258**	*i*P		**Pg**	**00 49 38.8**	**-0.5**
IGDI				*i*S		**Sb**	**00 49 50.8**	**+0.5**
CLDR	**Caldiran**	**1.27**	**225**	*i*P		**Pg**	**00 49 48.8**	**+0.4**
CLDR	**Caldiran**	**1.27**	**225**	P		**Pg**	**00 49 48.8**	**+0.4**
EAK	**Akyaka**	**1.29**	**300**	*e*P		**Pn**	**00 49 47.9**	**-0.2**
EAK				*e*S		**Sb**	**00 50 02.8**	**-2.3**
EAK				IAML			00 50 10.6	
comp=Z,17nm,0.6s								
EAK	**Akyaka**	**1.29**	**300**	*i*P		**Pn**	**00 49 47.8**	**-0.2**
EAK				*i*S		**Sg**	**00 50 07.9**	**+2.1**
EAK	**Akyaka**	**1.29**	**300**	P		**Pn**	**00 49 47.8**	**-0.2**
EAK				S		**Sg**	**00 50 07.9**	**+2.1**
DGRG	**David-gareji**	**1.43**	**9**	P		**Pn**	**00 49 49.2**	**-0.6**
DGRG				S		**Sg**	**00 50 10.6**	**+0.6**
DGRG	**David-gareji**	**1.43**	**9**	P		**Pn**	**00 49 49.2**	**-0.5**
DGRG				S		**Sg**	**00 50 09.8**	**-0.2**
DDFL	**Dedoflistskaro**	**1.61**	**29**	P		**Pb**	**00 49 53.4**	**-0.3**
DDFL				S		**Sb**	**00 50 14.1**	**+0.1**
DDFL	**Dedoflistskaro**	**1.61**	**29**	P		**Pb**	**00 49 53.4**	**-0.3**
DDFL				S		**Sb**	**00 50 14.1**	**+0.1**
BGD	**Bogdanovka**	**1.66**	**318**	P		**Pb**	**00 49 54.4**	**-0.2**
BGD				S		**Sg**	**00 50 18.3**	**+0.8**
BGD	**Bogdanovka**	**1.66**	**318**	P		**Pb**	**00 49 54.4**	**-0.2**
BGD				S		**Sg**	**00 50 18.3**	**+0.8**
TBLG	**Delisi**	**1.71**	**351**	P		**Pb**	**00 49 54.4**	**-0.9**
TBLG				S		**Sb**	**00 50 17.1**	**+0.3**
TBLG	**Delisi**	**1.71**	**351**	P		**Pb**	**00 49 54.4**	**-0.9**
TBLG				S		**Sb**	**00 50 17.7**	**+1.0**
DUS	**Dusheti**	**2.07**	**352**	P		**Pb**	**00 50 00.1**	**-1.4**
DUS				S		**Sg**	**00 50 29.1**	**-1.4**
DUS	**Dusheti**	**2.07**	**352**	S		**Sb**	**00 50 27.3**	**+0.2**
GUDG	**Gudauri**	**2.46**	**350**	P		**Pn**	**00 50 06.0**	**+1.9**
GUDG				S		**Sb**	**00 50 38.1**	**-0.6**
GUDG	**Gudauri**	**2.46**	**350**	P		**Pn**	**00 50 06.0**	**+1.9**
GUDG				S		**Sb**	**00 50 38.1**	**-0.6**
ONI	**Oni**	**2.83**	**335**	P		**Pn**	**00 50 11.0**	**+2.0**
ONI				S		**Sb**	**00 50 48.0**	**-0.9**

KRNET ***18*** *01:45:43.5±0.1, 39°.65N×74°.11E, h11km, mb3.5*
NNC ***18*** *01:45:44.2±0.8, 39°.62N×74°.05E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=9.1km s-min=3.4km az=21.0*
ISCJB ***18*** *01:45:45.7±0.8, 39°.60N±0°.04×74°.12E±0°.04, h10km, Error ellipse: s-maj=6.6km s-min=3.9km az=161.3*

ISC 18 01:45:45.2±1.2, 39°.65N±0°.06×74°.07E±0°.03, h10km, n34, σ1§90/58, 44C-9D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
SFK	**Sufi-Kurgan**	**0.57**	**310**	⇑P		**Pg**	**01 45 55.3**	**-1.0**
95nm,0.2s								
SFK				⇑S		**Sg**	**01 46 03.7**	**-0.1**
249nm,0.3s								
SFK	**Sufi-Kurgan**	**0.57**	**310**	⇑*i*P		**Pg**	**01 45 55.3**	**-1.0**
baz=9.0								
SFK				⇑*i*S		**Sg**	**01 46 03.8**	**0.0**
baz=9.0								
DRK	**Karamyk**	**1.76**	**265**	⇑*i*P		**Pb**	**01 46 16.7**	**-1.0**
baz=66								
DRK				⇑*i*S		**Sg**	**01 46 41.9**	**+0.1**
baz=66								
ARSB	**Arslanbob**	**1.87**	**334**	⇑*i*P		**Pb**	**01 46 18.6**	**-0.9**
baz=33								
ARSB				⇑*i*S		**Sg**	**01 46 44.8**	**-0.5**
baz=33								
NRN	**Naryn**	**2.32**	**39**	⇑*i*P		**Pn**	**01 46 24.5**	**+0.8**
baz=38								
NRN				⇑*i*S		**Sb**	**01 46 54.4**	**-1.6**
baz=38								
TOKL	**Toktogul**	**2.47**	**339**	⇑*i*P		**Pn**	**01 46 27.2**	**+1.7**
baz=38								
TOKL				⇑*i*S		**Sb**	**01 46 59.1**	**-1.0**
baz=38								
AML	**Almayashu**	**2.50**	**354**	P		**Pb**	**01 46 28.7**	**-1.7**
SNR=43								
AML	**Almayashu**	**2.50**	**354**	⇑*i*P		**Pn**	**01 46 28.0**	**+1.7**
baz=53								
AML				⇑*i*S		**Sb**	**01 47 00.3**	**-1.1**
baz=53								
BTK	**Batken**	**2.53**	**280**	⇑*i*P		**Pb**	**01 46 28.6**	**-2.2**
baz=80								
BTK				⇑*i*S		**Sb**	**01 47 01.6**	**-0.4**
baz=80								
KZA	**Kyzart**	**2.59**	**20**	P		**Pb**	**01 46 29.5**	**-2.4**
SNR=23								
KZA	**Kyzart**	**2.59**	**20**	⇑*i*P		**Pn**	**01 46 29.1**	**+1.6**
baz=19								
KZA				⇑*i*S		**Sb**	**01 47 01.7**	**-2.3**
baz=19								
UCH	**Uchtor**	**2.60**	**7**	P		**Pb**	**01 46 29.8**	**-2.4**
SNR=60								
UCH	**Uchtor**	**2.60**	**7**	⇑*i*P		**Pn**	**01 46 29.0**	**+1.3**
baz=7.0								
UCH				⇑*i*S		**Sb**	**01 47 02.5**	**-1.9**
baz=7.0								
ARK	**Arkit**	**2.68**	**324**	⇑*i*P		**Pn**	**01 46 29.9**	**+1.4**
baz=23								
ARK				⇑*i*S		**Sb**	**01 47 04.1**	**-2.2**
baz=23								
EKS2	**Erkin-Say**	**3.02**	**356**	P		**Pb**	**01 46 37.9**	**-1.2**
SNR=8.1								
EKS2	**Erkin-Say**	**3.02**	**356**	⇑*i*P		**Pn**	**01 46 34.6**	**+1.4**
baz=55								
EKS2				⇑*i*S		**Sn**	**01 47 12.3**	**+2.8**
baz=55								
MNAS	**Manas**	**3.08**	**338**	⇓Pn		**Pn**	**01 46 34.9**	**+1.0**
6.1nm,0.4s								
MNAS				⇑Lg		Lg	01 47 21.7	
68nm,0.9s								
MNAS	**Manas**	**3.08**	**338**	⇑*i*P		**Pn**	**01 46 35.6**	**+1.7**
baz=37								
MNAS				⇑*i*S		**Sn**	**01 47 14.2**	**+3.4**
baz=37								
ULHL	**Ulahol**	**3.08**	**32**	P		**Pb**	**01 46 36.9**	**-3.3**
SNR=8.9								
ULHL	**Ulahol**	**3.08**	**32**	⇓*i*P		**Pn**	**01 46 35.6**	**+1.6**
baz=31								
ULHL				⇓*i*S		**Sn**	**01 47 13.4**	**+2.4**
baz=31								
KBK	**Karagaybulak**	**3.08**	**12**	P		**Pb**	**01 46 37.0**	**-3.2**
SNR=8.8								
KBK	**Karagaybulak**	**3.08**	**12**	⇑*i*P		**Pn**	**01 46 36.0**	**+1.9**
baz=12								
KBK				⇑*i*S		**Sn**	**01 47 13.5**	**+2.4**
baz=12								
BOOM	**Boomskoye usch**	**3.18**	**26**	⇑*i*P		**Pn**	**01 46 36.5**	**+1.1**
baz=25								
BOOM				⇑*i*S		**Sn**	**01 47 15.8**	**+2.4**
baz=25								
CHMS	**Chumysh**	**3.39**	**9**	⇑*i*P		**Pn**	**01 46 39.9**	**+1.7**
baz=8.0								
CHMS				⇑*i*S		**Sn**	**01 47 20.7**	**+2.2**
baz=8.0								
TKM2	**Tokmak 2**	**3.47**	**19**	⇓Pn		**Pn**	**01 46 40.2**	**+0.8**
4.3nm,0.6s								
TKM2				⇑Lg		Lg	01 47 34.0	
17nm,0.5s								
TKM2	**Tokmak 2**	**3.47**	**19**	P		**Pn**	**01 46 42.1**	**+2.7**
SNR=5.8								
TKM2	**Tokmak 2**	**3.47**	**19**	⇑*i*P		**Pn**	**01 46 40.8**	**+1.4**
baz=18								
TKM2				⇑*i*S		**Sn**	**01 47 22.9**	**+2.2**
baz=18								
TARG	**Taragay, Kyrgy**	**3.52**	**53**	⇑*i*P		**Pn**	**01 46 41.5**	**+1.1**
baz=52								
TARG				⇑*i*S		**Sn**	**01 47 23.9**	**+1.6**
baz=52								
USP	**Ospenovka**	**3.63**	**5**	P		**Pb**	**01 46 48.8**	**-0.7**
SNR=6.2								
USP	**Ospenovka**	**3.63**	**5**	⇑*i*P		**Pn**	**01 46 43.6**	**+2.1**
baz=4.0								
USP				⇑*i*S		**Sn**	**01 47 27.0**	**+2.5**
baz=4.0								
MDOK	**Medeo**	**4.17**	**32**	⇓Pn		**Pn**	**01 46 50.6**	**+1.6**
2.2nm,0.7s								
MDOK				⇓Pg		**Pb**	**01 47 00.1**	**+1.4**
8.1nm,0.6s								
MDOK				⇓Lg		Lg	01 47 57.0	
28nm,0.9s								
KK31	**Karatay Array**	**4.37**	**323**	Pn		**Pn**	**01 46 53.0**	**+1.4**
2.1nm,0.4s,baz=129,slow=12,SNR=66								
KK31				⇑Pg		**Pb**	**01 47 04.6**	**+2.6**
1.1nm,0.3s,baz=146,slow=16,SNR=5.2								
KK31				⇑Sn		**Sn**	**01 47 45.8**	**+3.3**
3.4nm,0.4s,baz=145,slow=22,SNR=5.7								
KK31				⇓Lg		Lg	01 48 02.3	
12nm,0.7s,baz=139,slow=30,SNR=4.7								
PDGK	**Podgornoye**	**5.49**	**46**	⇑Pn		**Pn**	**01 47 09.1**	**+2.0**
2.7nm,1.0s								
PDGK				⇓Pg		**Pb**	**01 47 22.7**	**+1.5**
5.2nm,0.8s								
PDGK				⇑Lg		Lg	01 48 36.9	
13nm,0.9s								
AB31	**Akbulak array**	**13.91**	**318**	P		**Pn**	**01 49 00.3**	**-1.9**
1.1nm,0.4s,baz=125,slow=14,SNR=9.0								

MOS ***18*** *02:22:57.6±0.8, 52°.54N×160°.78E, h13km, mb4.1/9, Error ellipse: s-maj=7.8km s-min=4.1km az=99.7*
KRSC ***18*** *02:22:58.3±1.5, 52°.68N×160°.78E, h16km±20km, ML4.4*
IDC ***18*** *02:23:03.8±2.8, 52°.95N×160°.53E, h53km±25km, mb3.6/18, mb1 3.8/19, mb1mx3.6/76, mbtmp3.9/19, ML3.1/2, MS3.6/11, Ms1 3.6/11, ms1mx3.2/69, Error ellipse: s-maj=18.1km s-min=13.6km az=146.0*

ISC 18 02:22:57.9±1.4, 52°.65N±0°.04×160°.68E±0°.04, h12km±8km, n115, σ1§85/142, mb3.9/21, MS3.6/10, 1C-1D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
NLC	**Nalytchevo**	**0.96**	**304**	*e*P		**Pb**	**02 23 16.3**	**-0.3**
NLC				*e*S		**Sb**	**02 23 28.7**	**-0.6**
NLC	**Nalytchevo**	**0.96**	**304**	PN		**Pb**	**02 23 16.3**	**-0.3**
NLC				S		**Sb**	**02 23 28.7**	**-0.6**
DALK	**Dalny**	**1.23**	**289**	*e*P		**Pn**	**02 23 20.9**	**0.0**
DALK				*e*S		**Sg**	**02 23 36.9**	**-0.6**
DALK	**Dalny**	**1.23**	**289**	PN		**Pn**	**02 23 20.9**	**0.0**
DALK				S		**Sg**	**02 23 36.9**	**-0.6**
SDLR	**Sedlovina**	**1.26**	**301**	*e*P		**Pn**	**02 23 21.4**	**-0.1**
SDLR				*e*S		**Sn**	**02 23 38.3**	**-0.1**
SDLR	**Sedlovina**	**1.26**	**301**	PN		**Pn**	**02 23 21.4**	**-0.1**
SDLR				S		**Sn**	**02 23 38.3**	**-0.1**
UGLR	**Uglovaya**	**1.26**	**297**	*e*P		**Pn**	**02 23 21.9**	**+0.5**
UGLR	**Uglovaya**	**1.26**	**297**	PN		**Pn**	**02 23 21.9**	**+0.5**
PET	**Petropavlovsk**	**1.29**	**288**	*e*P		**Pb**	**02 23 22.2**	**+0.1**
PET				*e*S		**Sg**	**02 23 39.1**	**-0.3**
PET	**Petropavlovsk**	**1.29**	**288**	⇑*i*PN		**Pb**	**02 23 22.1**	**0.0**
PET				*e*S		**Sg**	**02 23 39.0**	**-0.3**
PET				pmax		pmax		
comp=Z,128nm,0.3s								
PET				smax		smax		
comp=N,2μm,0.8s								
PET				smax		smax		
comp=E,1μm,0.6s								
INSR	**Institute**	**1.33**	**289**	*e*P		**Pn**	**02 23 22.3**	**0.0**
INSR				*e*S		**Sg**	**02 23 40.0**	**-0.6**
INSR	**Institute**	**1.33**	**289**	PN		**Pn**	**02 23 22.3**	**0.0**
INSR				S		**Sg**	**02 23 40.0**	**-0.6**
AVH	**Avacha**	**1.33**	**299**	*e*P		**Pb**	**02 23 23.1**	**+0.3**
AVH				*e*S		**Sn**	**02 23 39.6**	**-0.5**
AVH	**Avacha**	**1.33**	**299**	PN		**Pb**	**02 23 23.1**	**+0.3**
AVH				S		**Sn**	**02 23 39.6**	**-0.5**
RUS	**Russkaya**	**1.34**	**262**	*e*P		**Pg**	**02 23 23.2**	**-0.4**
RUS				*e*S		**Sg**	**02 23 41.1**	**+0.1**
RUS	**Russkaya**	**1.34**	**262**	PN		**Pg**	**02 23 23.2**	**-0.4**
RUS				S		**Sg**	**02 23 41.1**	**+0.1**
KRER	**Koryakskii**	**1.34**	**300**	*e*P		**Pn**	**02 23 23.0**	**+0.3**
KRER				*e*S		**Sn**	**02 23 40.5**	**0.0**
KRER	**Koryakskii**	**1.34**	**300**	PN		**Pn**	**02 23 23.0**	**+0.3**
KRER				S		**Sn**	**02 23 40.5**	**0.0**
KOK	**Koryaka**	**1.40**	**298**	*e*P		**Pb**	**02 23 24.6**	**+0.6**
KOK				*e*S		**Sg**	**02 23 44.4**	**+1.6**
KOK	**Koryaka**	**1.40**	**298**	PN		**Pb**	**02 23 24.6**	**+0.6**
KOK				S		**Sg**	**02 23 44.4**	**+1.6**
KRX	**Arik**	**1.42**	**301**	*e*P		**Pn**	**02 23 24.2**	**+0.5**
KRX				*e*S		**Sb**	**02 23 42.3**	**-0.3**
KRX	**Arik**	**1.42**	**301**	PN		**Pn**	**02 23 24.2**	**+0.5**
KRX				S		**Sb**	**02 23 42.3**	**-0.3**
MTVR	**Mutnovka**	**1.53**	**265**	*e*P		**Pg**	**02 23 26.5**	**-0.8**
MTVR				*e*S		**Sg**	**02 23 46.3**	**-0.9**
MTVR	**Mutnovka**	**1.53**	**265**	PN		**Pg**	**02 23 26.5**	**-0.8**
MTVR				S		**Sg**	**02 23 46.3**	**-0.9**
KII	**Karymskiy**	**1.58**	**333**	*e*P		**Pn**	**02 23 26.2**	**+0.4**
KII				*e*S		**Sn**	**02 23 46.2**	**0.0**
KII	**Karymskiy**	**1.58**	**333**	PN		**Pn**	**02 23 26.2**	**+0.4**
KII				S		**Sn**	**02 23 46.2**	**0.0**
GRL	**Gorelyy**	**1.59**	**268**	*e*P		**Pg**	**02 23 28.1**	**-0.4**
GRL				*e*S		**Sg**	**02 23 50.4**	**+1.3**
GRL	**Gorelyy**	**1.59**	**268**	PN		**Pg**	**02 23 28.1**	**-0.4**
GRL				S		**Sg**	**02 23 50.4**	**+1.3**
ASAK	**Asacha**	**1.72**	**262**	*e*P		**Pg**	**02 23 29.9**	**-1.0**
ASAK				*e*S		**Sg**	**02 23 52.4**	**-0.8**
ASAK	**Asacha**	**1.72**	**262**	PN		**Pg**	**02 23 29.9**	**-1.0**
ASAK				S		**Sg**	**02 23 52.4**	**-0.8**
PETK	**Petropavlovsk-**	**1.86**	**286**	P		**Pb**	**02 23 30.8**	**-1.2**

comp=E,49nm,0.3s,baz=102,slow=19,SNR=161
PETK S **Sg** **02 23 55.2 -2.7**
comp=E,79nm,0.3s,baz=21,slow=25,SNR=22
PETK LR LR 02 24 19.4
comp=E,706nm,20.4s,baz=97,slow=44
GNL Ganaly 1.96 304 *eP* **Pn** **02 23 32.6 +1.6**
GNL *eS* **Sb** **02 23 57.8 -0.1**
GNL Ganaly 1.96 304 PN **Pn** **02 23 32.6 +1.6**
GNL S **Sb** **02 23 57.8 -0.1**
MKZ Mys Kozlova 2.02 18 *eP* **Pn** **02 23 31.4 -0.3**
MKZ *eS* **Sn** **02 23 55.2 -1.6**
MKZ Mys Kozlova 2.02 18 PN **Pn** **02 23 31.4 -0.3**
APC Apacha 2.16 279 *eP* **Pb** **02 23 37.2 +0.3**
APC *eS* **Sg** **02 24 04.9 -2.3**
APC Apacha 2.16 279 PN **Pb** **02 23 37.2 +0.3**
APC S **Sg** **02 24 04.9 -2.3**
KZV Kizimen 2.48 355 *eP* **Pn** **02 23 39.6 +1.3**
KZV *eS* **Sn** **02 24 09.3 +0.6**
KZV Kizimen 2.48 355 PN **Pn** **02 23 39.6 +1.3**
KZV S **Sn** **02 24 09.3 +0.6**
TUMR Tumrok 2.66 353 *eP* **Pn** **02 23 42.5 +1.7**
TUMR Tumrok 2.66 353 PN **Pn** **02 23 42.5 +1.7**
KMNR Kamenistaya 3.13 355 *eP* **Pn** **02 23 50.2 +3.1**
KMNR Kamenistaya 3.13 355 PN **Pn** **02 23 50.2 +3.1**
BZMR Bezymyannaya 3.30 358 *eP* **Pn** **02 23 52.5 +3.0**
BZMR Bezymyannaya 3.30 358 PN **Pn** **02 23 52.5 +3.0**
BZGR Bezymyannyi-Gr 3.30 0 *eP* **Pn** **02 23 52.1 +2.6**
BZGR Bezymyannyi-Gr 3.30 0 PN **Pn** **02 23 52.1 +2.6**
KIRR Kirishev 3.32 357 *eP* **Pn** **02 23 52.7 +2.9**
KIRR Kirishev 3.32 357 PN **Pn** **02 23 52.7 +2.9**
BZWR Bezymyannyi-We 3.33 358 *eP* **Pn** **02 23 53.5 +3.6**
BZWR Bezymyannyi-We 3.33 358 PN **Pn** **02 23 53.5 +3.6**
KPT Kopyto 3.34 356 *eP* **Pn** **02 23 53.9 +3.9**
KPT Kopyto 3.34 356 PN **Pn** **02 23 53.9 +3.9**
ZLN Zelenaya 3.38 1 *eP* **Pn** **02 23 53.7 +3.1**
ZLN Zelenaya 3.38 1 PN **Pn** **02 23 53.7 +3.1**
LGNR Loginova 3.44 0 *eP* **Pn** **02 23 54.2 +2.5**
LGNR Loginova 3.44 0 PN **Pn** **02 23 54.2 +2.5**
SKR Severo-Kuril's 3.45 237 *ePN* **Pn** **02 23 53.3 +1.8**
SKR pmax pmax
comp=Z,13nm,0.2s
SKR MLR MLR
comp=Z,500nm,11.0s
SKR MLR MLR
comp=Z,200nm,12.0s
CIRR Tsirk 3.48 1 *eP* **Pn** **02 23 55.4 +3.4**
CIRR Tsirk 3.48 1 PN **Pn** **02 23 55.4 +3.4**
ESO Esso 3.48 341 *eP* **Pn** **02 23 54.3 +2.3**
ESO Esso 3.48 341 PN **Pn** **02 23 54.3 +2.3**
KRSR Krestovskiy 3.58 359 *eP* **Pn** **02 23 57.1 +3.7**
KRSR Krestovskiy 3.58 359 PN **Pn** **02 23 57.1 +3.7**
KLY Klyuchi 3.68 360 P **Pn** **02 23 58.9 +4.4**
KLY Klyuchi 3.68 360 PN **Pn** **02 23 58.9 +4.4**
KBTR Krutoberegovo 3.78 18 *eP* **Pn** **02 23 56.9 +0.9**
KBTR Krutoberegovo 3.78 18 PN **Pn** **02 23 56.9 +0.9**
BDR Baidarnaya 3.94 4 *eP* **Pn** **02 24 01.6 +3.3**
BDR Baidarnaya 3.94 4 PN **Pn** **02 24 01.6 +3.3**
SMKR Semkarok 3.97 6 *eP* **Pn** **02 24 02.1 +3.4**
SMKR Semkarok 3.97 6 PN **Pn** **02 24 02.1 +3.4**
SRKR Sorokina 4.03 4 *eP* **Pn** **02 24 03.0 +3.5**
SRKR Sorokina 4.03 4 PN **Pn** **02 24 03.0 +3.5**
BKI Bering 4.04 49 *eP* **Pn** **02 23 59.3 -0.3**
BKI Bering 4.04 49 PN **Pn** **02 23 59.3 -0.3**
MA2 Magadan 8.87 325 LR LR 02 29 01.3
comp=Z,255nm,18.5s,baz=150,slow=42
ASAJ Asahikawa 14.70 242 P **Pn** **02 26 27.5 +1.9**
comp=Z,0.3nm,0.3s,baz=144,slow=17,SNR=2.9
BILL Bilibino 15.68 8‖ *eP* **P** **02 26 43.1 +0.6**
BILL pmax pmax
comp=Z,6.0nm,1.0s
BILL MLR MLR
comp=Z,117nm,21.0s
KLR Kul'dur 18.49 271 P **Pn** **02 27 14.9 +1.2**
comp=Z,0.0nm,0.3s,baz=103,slow=15,SNR=3.3
KLR LR LR 02 34 37.5
comp=Z,10nm,19.6s,baz=74,slow=38
KLR Kul'dur 18.49 271 *i P* **Pn** **02 27 16.0 +2.2**
MJAR Matsushiro Arr 22.55 233 P **P** **02 28 02.3 +4.5**
comp=Z,1.1nm,0.3s,baz=22,slow=11,SNR=3.1
TIXI Tiksi 23.64 335 P **P** **02 28 06.3 -2.3**
comp=Z,4.5nm,0.2s,baz=130,slow=5.8,SNR=8.7
TIXI LR LR 02 38 14.1
comp=Z,121nm,19.0s,baz=112,slow=39
TIXI Tiksi 23.64 335 *i P* **P** **02 28 07.0 -1.5**
TIXI pmax pmax
comp=Z,3.0nm,0.9s
KSRS Korea Array 27.38 249 P **P** **02 28 46.3 +3.3**
comp=Z,0.6nm,0.3s,baz=42,slow=9.7,SNR=3.3
KSRS LR LR 02 40 11.6
comp=Z,44nm,20.2s,baz=220,slow=38
ILAR Eielson Array 28.88 45 P **P** **02 28 55.0 -1.1**
comp=Z,0.2nm,0.6s,baz=272,slow=5.7,SNR=5.2
ILAR Eielson Array 28.88 45 *eP* **P** **02 28 57.9 +1.8**
H11N2 WAKE ISLAND Hy 33.20 169 T T 03 05 57.1
SNR=29
H11N3 WAKE ISLAND Hy 33.22 169 T T 03 05 17.3
baz=160,slow=74,SNR=28
H11N1 WAKE ISLAND Hy 33.22 169 T T 03 05 15.0
baz=353,slow=74,SNR=33
ULN Ulaanbaatar 33.95 284 *i P* **P** **02 29 40.7 -0.3**
ULN pmax pmax
comp=Z,1.0nm,0.8s
SONM Songino Array 34.35 284 LR LR 02 44 12.4
comp=Z,113nm,18.8s,baz=272,slow=37
NRIK Noril'sk 36.48 325 LR LR 02 46 28.1
comp=Z,253nm,18.9s,baz=46,slow=39
YKA Yellowknife Ar 43.25 42 P **P** **02 30 56.7 -2.0**
comp=Z,0.4nm,0.8s,baz=293,slow=7.8,SNR=3.6
ZALV Zalesovo Beam 43.32 303 LR LR 02 50 20.1
comp=Z,70nm,18.2s,baz=70,slow=38
SPITS Spitsbergen Ar 47.64 351 P **P** **02 31 32.0 -1.3**
comp=Z,0.8nm,0.4s,baz=54,slow=13,SNR=5.5
KURK Kurchatov 48.27 302 P **P** **02 31 37.3 -1.2**
KURK pmax pmax
comp=Z,1.0nm,0.3s
KURBB Kurchatov Arra 48.37 302 P **P** **02 31 37.3 -2.0**
comp=Z,0.3nm,0.3s,baz=56,slow=8.3,SNR=4.5
MKAR Makanchi Array 48.67 296 P **P** **02 31 39.5 -2.2**
comp=Z,0.3nm,0.4s,baz=58,slow=8.0,SNR=4.4
BVAR Borovoye Array 50.95 309 P **P** **02 31 56.6 -2.2**
comp=Z,0.3nm,0.4s,baz=70,slow=9.3,SNR=2.9
BVAR LR LR 02 55 36.8
comp=Z,71nm,19.9s,baz=96,slow=38
NVAR Mina Array Bea 55.56 70 P **P** **02 32 33.5 +0.3**
comp=Z,0.7nm,0.6s,baz=301,slow=7.2,SNR=4.7
PDAR Pinedale Array 57.43 61 P **P** **02 32 47.4 +0.8**
comp=Z,0.9nm,0.6s,baz=306,slow=3.3,SNR=9.6
AKTO Aktyubinsk 58.39 313 LR LR 03 00 42.0
comp=Z,68nm,19.1s,baz=57,slow=39
FINES FINESS Array B 60.67 337 P **P** **02 33 08.0 -0.4**
comp=Z,1.9nm,0.7s,baz=32,slow=7.6,SNR=7.9
FINES LR LR 03 03 04.4
comp=Z,43nm,18.9s,baz=18,slow=40
AKASG Malin Array Be 69.18 329 P **P** **02 34 03.0 -0.9**
comp=Z,0.4nm,0.4s,baz=29,slow=6.6,SNR=4.9
AKASG LR LR 03 07 38.0
comp=Z,62nm,19.5s,baz=130,slow=39
AKASG Malin Array Be 69.18 329 P **P** **02 34 03.0 -0.9**
AKASG MLR MLR
comp=Z,62nm,19.5s
TXAR Lajitas Array 70.48 67 P **P** **02 34 13.3 +0.8**
comp=Z,1.1nm,0.7s,baz=298,slow=4.3,SNR=18
CLL Collm 72.90 339 *eP* **P** **02 34 27.0 +0.5**
CLL Collm 72.90 339 *eP* **P** **02 34 27.0 +0.5**
CLL pmax pmax
comp=Z,2.0nm,0.9s
GERES GERESS Array B 75.06 338 P **P** **02 34 37.4 -1.9**
comp=Z,0.2nm,0.3s,baz=343,slow=4.2,SNR=4.5
GERES LR LR 03 11 15.5
comp=Z,26nm,21.1s,baz=66,slow=39
GERES GERESS Array B 75.06 338 *eP* **P** **02 34 40.7 +1.4**
WRA Warramunga Arr 75.83 206 P **P** **02 34 43.7 -0.1**
comp=Z,1.8nm,0.7s,baz=20,slow=6.0,SNR=6.5
BRTR Keskin Array B 77.19 321 P **P** **02 34 50.1 -1.5**
comp=Z,0.4nm,0.7s,baz=79,slow=7.6,SNR=2.6
BRTR Keskin Array B 77.19 321 *eP* P 02 34 58.5 +6.8
BRTR pmax pmax
comp=Z,1.0nm,0.7s
ASAR Alice Springs 79.50 205 P **P** **02 35 05.7 +1.4**
comp=Z,1.3nm,0.7s,baz=16,slow=5.9,SNR=12

KRSC ***18*** *02:27:07.4±2.1, 52°.64N×160°.86E, h16km±25km, ML4.5*
MOS ***18*** *02:27:08.5±0.8, 52°.59N×160°.75E, h18km, mb4.1/7, Error*
ellipse: s-maj=7.5km s-min=4.1km az=99.3
IDC ***18*** *02:27:12.1±5.3, 52°.86N×160°.43E, h33km±40km, mb3.7/24, mb1 3.9/25, mb1mx3.7/75, mbtmp3.9/25, ML4.1/1, Error*
ellipse: s-maj=17.4km s-min=16.0km az=114.0
NEIC ***18*** *02:27:14.4±1.0, 52°.85N×160°.33E, h54km±8km, mb4.4/8,*
Error ellipse: s-maj=9.1km s-min=8.0km az=138.0
ISC 18 02:27:07.1±1.4, 52°.83N±0°.04×160°.78E±0°.03, h6km±8km, n160, σ1§47/188, mb4.0/31, 3D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.53**	**301**	*eP*	**Pn**	**02 27 21.0**	**-0.2**
SPN				*eS*	**Sn**	**02 27 28.7**	**-1.8**
SPN	**Mys Shipunski**	**0.53**	**301**	PN	**Pn**	**02 27 21.0**	**-0.2**
SPN				S	**Sn**	**02 27 28.7**	**-1.8**
NLC	**Nalytchevo**	**0.93**	**292**	*eP*	**Pn**	**02 27 26.7**	**0.0**
NLC				*eS*	**Sn**	**02 27 39.2**	**-1.2**
NLC	**Nalytchevo**	**0.93**	**292**	PN	**Pn**	**02 27 26.7**	**0.0**
NLC				S	**Sn**	**02 27 39.2**	**-1.2**
SDLR	**Sedlovina**	**1.23**	**292**	*eP*	**Pg**	**02 27 31.7**	**+1.0**
SDLR	**Sedlovina**	**1.23**	**292**	PN	**Pg**	**02 27 31.7**	**+1.0**
UGLR	**Uglovaya**	**1.24**	**289**	*eP*	**Pg**	**02 27 31.8**	**+0.9**
UGLR	**Uglovaya**	**1.24**	**289**	PN	**Pg**	**02 27 31.8**	**+0.9**
DALK	**Dalny**	**1.25**	**280**	*eP*	**Pg**	**02 27 31.4**	**+0.4**
DALK	**Dalny**	**1.25**	**280**	PN	**Pg**	**02 27 31.4**	**+0.4**
PET	**Petropavlovsk**	**1.30**	**279**	*ePn*	**Pg**	**02 27 31.8**	**-0.3**
PET				*eSn*	**Sb**	**02 27 44.6**	**-4.4**
PET	**Petropavlovsk**	**1.30**	**279**	*eP*	**Pg**	**02 27 32.2**	**+0.1**
PET				*eS*	**Sg**	**02 27 49.9**	**+0.9**
PET	**Petropavlovsk**	**1.30**	**279**K	*iPN*	**Pg**	**02 27 32.2**	**+0.1**
PET				*eS*	**Sg**	**02 27 50.1**	**+1.1**
PET				pmax	pmax		
comp=Z,350nm,0.6s							
PET				pmax	pmax		
comp=Z,400nm,0.3s							
PET				smax	smax		
comp=N,2μm,0.8s							
PET				smax	smax		
comp=E,2μm,0.6s							
PET				smax	smax		
comp=N,2μm,0.8s							
AVH	**Avacha**	**1.31**	**290**	*eP*	**Pg**	**02 27 33.1**	**+0.9**
AVH	**Avacha**	**1.31**	**290**	PN	**Pg**	**02 27 33.1**	**+0.9**
KRER	**Koryakskii**	**1.32**	**292**	*eP*	**Pg**	**02 27 33.2**	**+0.9**
KRER				*eS*	**Sg**	**02 27 51.3**	**+1.9**
KRER	**Koryakskii**	**1.32**	**292**	PN	**Pg**	**02 27 33.2**	**+0.9**
KRER				S	**Sg**	**02 27 51.3**	**+1.9**
KOK	**Koryaka**	**1.38**	**290**	*eP*	**Pg**	**02 27 34.5**	**+1.0**
KOK				*eS*	**Sg**	**02 27 54.3**	**+3.0**
KOK	**Koryaka**	**1.38**	**290**	PN	**Pg**	**02 27 34.5**	**+1.0**
KOK				S	**Sg**	**02 27 54.3**	**+3.0**
KRX	**Arik**	**1.39**	**293**	*eP*	**Pg**	**02 27 34.0**	**+0.2**
KRX				*eS*	**Sg**	**02 27 51.7**	**-0.1**
KRX	**Arik**	**1.39**	**293**	PN	**Pg**	**02 27 34.0**	**+0.2**
KRX				S	**Sg**	**02 27 51.7**	**-0.1**
RUS	**Russkaya**	**1.44**	**255**	*eP*	**Pb**	**02 27 33.5**	**-0.8**
RUS				*eS*	**Sn**	**02 27 51.1**	**-1.8**
RUS	**Russkaya**	**1.44**	**255**	PN	**Pb**	**02 27 33.5**	**-0.8**
RUS				S	**Sn**	**02 27 51.1**	**-1.8**
KII	**Karymskiy**	**1.45**	**327**	*eP*	**Pg**	**02 27 36.6**	**+1.7**
KII				*eS*	**Sg**	**02 27 57.0**	**+3.4**
KII	**Karymskiy**	**1.45**	**327**	PN	**Pg**	**02 27 36.6**	**+1.7**
KII				S	**Sg**	**02 27 57.0**	**+3.4**
KRMR	**Karymshinskiy**	**1.61**	**271**	*eP*	**Pg**	**02 27 36.9**	**-1.0**
KRMR				*eS*	**Sg**	**02 27 58.1**	**-0.7**
KRMR	**Karymshinskiy**	**1.61**	**271**	PN	**Pg**	**02 27 36.9**	**-1.0**
KRMR				S	**Sg**	**02 27 58.1**	**-0.7**
MTVR	**Mutnovka**	**1.62**	**259**	*eP*	**Pb**	**02 27 36.9**	**-0.6**
MTVR				*eS*	**Sb**	**02 27 56.9**	**-1.3**
MTVR	**Mutnovka**	**1.62**	**259**	PN	**Pb**	**02 27 36.9**	**-0.6**
MTVR				S	**Sb**	**02 27 56.9**	**-1.3**
GRL	**Gorelyy**	**1.67**	**261**	*eP*	**Pg**	**02 27 38.1**	**-1.1**
GRL				*eS*	**Sg**	**02 28 00.6**	**-0.2**
GRL	**Gorelyy**	**1.67**	**261**	PN	**Pg**	**02 27 38.1**	**-1.1**
GRL				S	**Sg**	**02 28 00.6**	**-0.2**
ASAK	**Asacha**	**1.81**	**257**	*eP*	**Pb**	**02 27 39.9**	**-0.8**
ASAK				*eS*	**Sb**	**02 28 03.3**	**-0.4**
ASAK	**Asacha**	**1.81**	**257**	PN	**Pb**	**02 27 39.9**	**-0.8**
ASAK				S	**Sb**	**02 28 03.3**	**-0.4**
MKZ	**Mys Kozlova**	**1.82**	**18**	*eP*	**Pg**	**02 27 41.8**	**-0.1**
MKZ				*eS*	**Sg**	**02 28 05.4**	**-0.1**
MKZ	**Mys Kozlova**	**1.82**	**18**	PN	**Pg**	**02 27 41.8**	**-0.1**
MKZ				S	**Sg**	**02 28 05.4**	**-0.1**
PEA0B	**Petropavlovsk-**	**1.89**	**280**	*ePn*	**Pb**	**02 27 41.5**	**-0.5**
PEA0B				*eSn*	**Sn**	**02 27 58.9**	**-5.0**
PETK	**Petropavlovsk-**	**1.89**	**280**	Pn	**Pb**	**02 27 41.1**	**-0.8**
comp=N,142nm,0.3s,baz=98,slow=19,SNR=113							
PETK				Sn	**Sn**	**02 28 03.5**	**-0.4**
comp=N,71nm,0.3s,baz=98,slow=18,SNR=13							
PETK	**Petropavlovsk-**	**1.89**	**280**	*ePn*	**Pb**	**02 27 40.8**	**-1.1**
PETK				*eSn*	**Sn**	**02 27 59.8**	**-4.2**
PEA1	**Petropavlovsk-**	**1.89**	**280**	*ePn*	**Pb**	**02 27 41.1**	**-0.9**
PEA1				*eSn*	**Sn**	**02 28 03.5**	**-0.5**
GNL	**Ganaly**	**1.91**	**298**	*eP*	**Pg**	**02 27 42.8**	**-1.0**
GNL	**Ganaly**	**1.91**	**298**	PN	**Pg**	**02 27 42.8**	**-1.0**
KDTR	**Khodutka, Kamc**	**1.95**	**239**	*eP*	**Pb**	**02 27 40.9**	**-2.1**
KDTR				*eS*	**Sn**	**02 28 04.9**	**-0.6**
APC	**Apacha**	**2.20**	**274**	*eP*	**Pb**	**02 27 46.2**	**-1.0**
APC				*eS*	**Sb**	**02 28 14.7**	**0.0**
APC	**Apacha**	**2.20**	**274**	PN	**Pb**	**02 27 46.2**	**-1.0**
APC				S	**Sb**	**02 28 14.7**	**0.0**
KZV	**Kizimen**	**2.31**	**353**	*eP*	**Pg**	**02 27 49.8**	**-1.5**
KZV				*eS*	**Sg**	**02 28 21.2**	**+0.1**
KZV	**Kizimen**	**2.31**	**353**	PN	**Pg**	**02 27 49.8**	**-1.5**
KZV				S	**Sg**	**02 28 21.2**	**+0.1**
TUMD	**Tumrok D**	**2.39**	**355**	*eP*	**Pb**	**02 27 50.6**	**+0.1**
TUMD				*eS*	**Sg**	**02 28 22.0**	**-1.8**
TUMR	**Tumrok**	**2.49**	**352**	*eP*	**Pb**	**02 27 52.6**	**+0.4**
TUMR	**Tumrok**	**2.49**	**352**	PN	**Pb**	**02 27 52.6**	**+0.4**
KMNR	**Kamenistaya**	**2.95**	**354**	*eP*	**Pb**	**02 27 59.7**	**-0.4**
KMNR	**Kamenistaya**	**2.95**	**354**	PN	**Pb**	**02 27 59.7**	**-0.4**
BZMR	**Bezymyannaya**	**3.12**	**357**	*eP*	**Pb**	**02 28 02.4**	**-0.5**
BZMR	**Bezymyannaya**	**3.12**	**357**	PN	**Pb**	**02 28 02.4**	**-0.5**
BZGR	**Bezymyannyi-Gr**	**3.12**	**359**	*eP*	**Pb**	**02 28 02.2**	**-0.7**
BZGR	**Bezymyannyi-Gr**	**3.12**	**359**	PN	**Pb**	**02 28 02.2**	**-0.7**
KIRR	**Kirishev**	**3.14**	**355**	*eP*	**Pb**	**02 28 02.4**	**-1.0**
KIRR	**Kirishev**	**3.14**	**355**	PN	**Pb**	**02 28 02.4**	**-1.0**
BZWR	**Bezymyannyi-We**	**3.15**	**357**	*eP*	**Pb**	**02 28 02.5**	**-1.0**
BZWR	**Bezymyannyi-We**	**3.15**	**357**	PN	**Pb**	**02 28 02.5**	**-1.0**
KPT	**Kopyto**	**3.16**	**354**	P	**Pb**	**02 28 03.7**	**0.0**
KPT	**Kopyto**	**3.16**	**354**	PN	**Pb**	**02 28 03.7**	**0.0**
ZLN	**Zelenaya**	**3.19**	**0**	*eP*	**Pb**	**02 28 03.4**	**-0.8**
ZLN	**Zelenaya**	**3.19**	**0**	PN	**Pb**	**02 28 03.4**	**-0.8**
LGNR	**Loginova**	**3.26**	**359**	*eP*	**Pb**	**02 28 04.8**	**-0.7**
LGNR	**Loginova**	**3.26**	**359**	PN	**Pb**	**02 28 04.8**	**-0.7**
CIRR	**Tsirk**	**3.29**	**360**	*eP*	**Pb**	**02 28 04.9**	**-1.0**
CIRR	**Tsirk**	**3.29**	**360**	PN	**Pb**	**02 28 04.9**	**-1.0**
ESO	**Esso**	**3.33**	**339**	*eP*	**Pb**	**02 28 03.8**	**-2.8**
ESO	**Esso**	**3.33**	**339**	PN	**Pb**	**02 28 03.8**	**-2.8**
KRSR	**Krestovskiy**	**3.40**	**358**	*eP*	**Pb**	**02 28 07.2**	**-0.5**
KRSR	**Krestovskiy**	**3.40**	**358**	PN	**Pb**	**02 28 07.2**	**-0.5**
KBTR	**Krutoberegovo**	**3.59**	**18**	*eP*	**Pb**	**02 28 08.2**	**-2.7**
KBTR	**Krutoberegovo**	**3.59**	**18**	PN	**Pb**	**02 28 08.2**	**-2.7**
SKR	**Severo-Kuril's**	**3.61**	**235**	*ePN*	**Pn**	**02 28 03.8**	**+0.3**
SKR				pmax	pmax		
comp=Z,23nm,0.4s							
SKR				pmax	pmax		
comp=Z,100nm,1.7s							
SKR				MLR	MLR		
comp=Z,300nm,13.0s							
SKR				MLR	MLR		
comp=Z,200nm,18.0s							
BDR	**Baidarnaya**	**3.75**	**4**	*eP*	**Pb**	**02 28 12.2**	**-1.6**
BDR	**Baidarnaya**	**3.75**	**4**	PN	**Pb**	**02 28 12.2**	**-1.6**
SMKR	**Semkarok**	**3.78**	**6**	*eP*	**Pb**	**02 28 11.5**	**-2.7**
SMKR	**Semkarok**	**3.78**	**6**	PN	**Pb**	**02 28 11.5**	**-2.7**
SRKR	**Sorokina**	**3.84**	**3**	*eP*	**Pb**	**02 28 12.2**	**-3.0**
SRKR	**Sorokina**	**3.84**	**3**	PN	**Pb**	**02 28 12.2**	**-3.0**
BKI	**Bering**	**3.88**	**50**	*eS*	**Sn**	**02 28 51.3**	**-1.6**
SEY	**Seymchan**	**11.06**	**340**	*i PN*	**Pn**	**02 29 44.4**	**-1.2**
ASAJ	**Asahikawa**	**14.85**	**241**	Pn	**Pn**	**02 30 38.3**	**+0.9**
comp=Z,1.4nm,0.3s,baz=139,slow=19,SNR=4.0							
BILL	**Bilibino**	**15.49**	**8**‖	*eP*	**P**	**02 30 50.4**	**+0.1**
BILL				pmax	pmax		
comp=Z,3.0nm,0.9s							
BILL				MLR	MLR		
comp=Z,70nm,17.0s							
ERM	**Erimo**	**16.06**	**235**	*ePn*	**Pn**	**02 30 52.7**	**-0.6**
comp=Z,86nm,1.5s							
ERM	**Erimo**	**16.06**	**235**	*eP*	**Pn**	**02 30 52.7**	**-0.6**
ERM				pmax	pmax		
comp=Z,86nm,1.5s							
KLR	**Kul'dur**	**18.55**	**270**	P	**Pn**	**02 31 25.1**	**+0.7**
comp=Z,0.0nm,0.3s,baz=72,slow=9.2,SNR=5.0							
KLR	**Kul'dur**	**18.55**	**270**	*i P*	**Pn**	**02 31 27.5**	**+3.0**
YAK	**Yakutsk**	**18.93**	**311**	*i P*	**Pn**	**02 31 29.5**	**+0.6**
MJA0	**Matsu Arr-Jizo**	**22.70**	**233**	*eP*	**P**	**02 32 14.1**	**+4.8**
MJA0				pmax	pmax		
comp=Z,2.0nm,0.4s							
MJAR	**Matsushiro Arr**	**22.72**	**233**	P	**P**	**02 32 09.2**	**-0.3**
comp=Z,1.6nm,0.3s,baz=20,slow=10,SNR=2.8							
MAJO	**Matsushiro**	**22.72**	**233**	*eP*	**P**	**02 32 09.2**	**-0.3**
MAJO	**Matsushiro**	**22.72**	**233**	*eP*	**P**	**02 32 09.2**	**-0.3**
TIXI	**Tiksi**	**23.50**	**335**	P	**P**	**02 32 15.4**	**-1.7**
comp=Z,1.2nm,0.3s,baz=125,slow=8.0,SNR=5.3							
TIXI	**Tiksi**	**23.50**	**335**	*i P*	**P**	**02 32 16.9**	**-0.3**
TIXI				pmax	pmax		
comp=Z,3.0nm,1.0s							
KSRS	**Korea Array**	**27.51**	**249**	P	**P**	**02 32 54.2**	**+0.1**
comp=Z,0.4nm,0.3s,baz=31,slow=10,SNR=3.8							
KSAR	**Wonju Array Be**	**27.54**	**249**	P	**P**	**02 32 54.2**	**-0.2**
KSAR	**Wonju Array Be**	**27.54**	**249**	P	**P**	**02 32 54.2**	**-0.2**
ULN	**Ulaanbaatar**	**33.97**	**284**	*i P*	**P**	**02 33 49.4**	**-1.8**
ULN				pmax	pmax		
comp=Z,5.0nm,2.5s							
ZAA1	**Zalesovo Array**	**43.27**	**303**	*eP*	**P**	**02 35 06.9**	**-2.1**
ZALV	**Zalesovo Beam**	**43.27**	**303**	P	**P**	**02 35 06.9**	**-2.1**
comp=Z,0.5nm,0.4s,baz=65,slow=8.3,SNR=2.9							
SPA0	**Spitsbergen Ar**	**47.46**	**351**	*eP*	**P**	**02 35 42.5**	**+0.5**
SPITS	**Spitsbergen Ar**	**47.46**	**351**	P	**P**	**02 35 42.5**	**+0.5**
comp=Z,0.7nm,0.3s,baz=40,slow=11,SNR=12							
KURK	**Kurchatov**	**48.23**	**302**	*eP*	**P**	**02 35 47.1**	**-1.1**
KURK	**Kurchatov**	**48.23**	**302**	*eP*	**P**	**02 35 47.1**	**-1.1**
KURBB	**Kurchatov Arra**	**48.33**	**302**	P	**P**	**02 35 47.1**	**-1.9**
comp=Z,1.7nm,0.4s,baz=60,slow=7.5,SNR=5.0							
MK31	**Makanchi Array**	**48.65**	**296**	*eP*	**P**	**02 35 49.9**	**-1.6**
MK31	**Makanchi Array**	**48.65**	**296**	*eP*	**P**	**02 35 49.9**	**-1.6**
MK32	**Makanchi Array**	**48.65**	**296**	*eP*	**P**	**02 35 49.8**	**-1.7**
MKAR	**Makanchi Array**	**48.65**	**296**	P	**P**	**02 35 49.8**	**-1.7**
comp=Z,1.0nm,0.4s,baz=57,slow=7.7,SNR=17							
MKAR	**Makanchi Array**	**48.65**	**296**	*eP*	**P**	**02 35 49.9**	**-1.6**
comp=Z,13nm,0.4s							
MKAR	**Makanchi Array**	**48.65**	**296**	*eP*	**P**	**02 35 49.9**	**-1.6**
MKAR				pmax	pmax		
comp=Z,13nm,0.4s							
MK01	**Makanchi Array**	**48.65**	**296**	*eP*	**P**	**02 35 48.8**	**-2.8**
BLTW	**Bickleton**	**49.48**	**64**	*eP*	P	02 36 06.5	+8.5
BVAR	**Borovoye Array**	**50.88**	**309**	P	**P**	**02 36 06.9**	**-1.5**
comp=Z,1.0nm,0.4s,baz=62,slow=8.2,SNR=6.6							
ARA0	**ARCESS Array S**	**53.67**	**342**	*eP*	**P**	**02 36 28.1**	**-0.7**
ARCES	**ARCESS Array B**	**53.67**	**342**	P	**P**	**02 36 28.1**	**-0.7**
comp=Z,2.6nm,0.9s,baz=46,slow=8.7,SNR=5.8							
ARCES	**ARCESS Array B**	**53.67**	**342**	*eP*	**P**	**02 36 29.0**	**+0.1**
ARCES				pmax	pmax		
comp=Z,3.0nm,0.9s							
BGC	**Bolinger Road**	**53.69**	**73**	*eP*	P	02 36 36.0	+6.4
NV01	**Mina Array Sit**	**55.44**	**70**	*eP*	**P**	**02 36 44.3**	**+1.9**
NVAR	**Mina Array Bea**	**55.44**	**70**	P	**P**	**02 36 44.3**	**+1.9**
comp=Z,0.1nm,0.3s,baz=326,slow=4.5,SNR=2.4							
SNOW	**Snow King Moun**	**56.17**	**61**	*eP*	P	02 36 52.0	+4.3
comp=Z,11nm,0.7s							
SNOW				*ep*P	sP	02 37 07.6	+17
PD31	**Pinedale Array**	**57.29**	**61**	*eP*	**P**	**02 36 58.0**	**+2.5**
PDAR	**Pinedale Array**	**57.29**	**61**	P	**P**	**02 36 58.0**	**+2.5**
comp=Z,0.4nm,0.6s,baz=294,slow=1.5,SNR=4.2							
DAC	**Darwin (Calif)**	**57.34**	**72**	*eP*	P	02 36 59.9	+3.9
comp=Z,2.2nm,0.8s							
DAC	**Darwin (Calif)**	**57.34**	**72**	*eP*	P	02 36 59.9	+3.9
DAC				pmax	pmax		
comp=Z,2.0nm,0.8s							
AKTO	**Aktyubinsk**	**58.31**	**313**	P	**P**	**02 37 00.6**	**-1.8**
comp=Z,0.4nm,0.4s,baz=41,slow=8.8,SNR=4.3							
BBRC	**Big Bear Solar**	**59.15**	**73**	*eP*	P	02 37 15.9	+7.1
GMRC	**Granite Mounta**	**59.50**	**72**	*eP*	P	02 37 17.3	+6.3
HWB	**Hans Werner Br**	**60.01**	**74**	*eP*	P	02 37 22.2	+7.8
DPP	**Dos Picos Cty**	**60.04**	**74**	*eP*	**P**	**02 37 16.1**	**+1.5**
FIA0	**FINESS Array S**	**60.53**	**337**	*eP*	**P**	**02 37 18.4**	**+0.9**
FIA0	**FINESS Array S**	**60.53**	**337**	*eP*	**P**	**02 37 18.4**	**+0.9**
FINES	**FINESS Array B**	**60.53**	**337**	P	**P**	**02 37 18.4**	**+0.9**
comp=Z,2.6nm,0.6s,baz=36,slow=8.2,SNR=20							
NB2	**NORSAR Subarra**	**63.91**	**344**	P	**P**	**02 37 40.5**	**+0.3**
comp=Z,0.6nm,0.7s,baz=22,slow=6.5						

FDF				*e*S	Sn	02 49 52.1	+2.2
PML	**Morne Lenard**	**0.81**	**241**	*e*P	Pn	02 49 39.0	+1.1
PCM	**Pelee Case Pet**	**0.82**	**244**	*e*P	Pn	02 49 38.5	+0.5
PCM	**Pelee Case Pet**	**0.82**	**244**	*e*P	Pn	02 49 39.1	+1.1
ZAM	**Aeronautique**	**0.82**	**223**	*e*P	Pn	02 49 38.7	+0.7
TRMF	**Trois Ilets**	**0.86**	**222**	*e*P	Pn	02 49 39.3	+0.8
MDN	**Morne-Daniel**	**0.92**	**279**	*e*P	Pn	02 49 41.3	+1.9
MDN				*e*S	Sn	02 49 56.8	+4.2
MDVC	**Dominica, Viel**	**1.02**	**295**	*e*S	Sn	02 49 57.9	+2.9
BBL	**Barber's Block**	**1.04**	**290**	*e*P	Pn	02 49 43.6	+2.6
BBL				*e*S	Sn	02 49 59.4	+3.7
MDPO	**Dominica; Chan**	**1.04**	**292**	*e*P	Pn	02 49 42.7	+1.7
MDPO				*e*S	Sn	02 49 59.0	+3.3
MGG	**Marie-Galante**	**1.11**	**312**	*e*P	Pn	02 49 43.7	+1.7
MGG				*e*S	Sn	02 50 01.0	+3.6
TBG	**Guadaloupe-3**	**1.33**	**300**	*e*P	Pg	02 49 47.3	+1.3
TBG				*e*S	Sg	02 50 06.1	+2.8
DOG	**Dongo Capester**	**1.41**	**307**	*e*P	Pg	02 49 47.8	+0.3
SVCV	**St. Vincent, C**	**2.01**	**200**	*e*P	Pn	02 49 55.7	+1.3
SVCV				*e*S	Sb	02 50 23.6	+1.4
SVB	**Belmont**	**2.05**	**202**	*e*P	Pn	02 49 56.1	+1.2
SVB				*e*S	Sb	02 50 23.6	+0.4
GRGR	**Grenville**	**3.25**	**201**	*e*P	Pn	02 50 13.1	+1.7
GRGR				*e*S	Sb	02 50 54.2	-3.5

NEIC ***18*** *02:53:14.5±0.0, 14°.32N×93°.14W, h21km, mb4.8/255, MD4.8(MEX), After MEX.*
NEIC Felt at Tapachula.
MEX ***18*** *02:53:14.5±0.5, 14°.32N×93°.14W, h21km±148km, MD4.8*
GCMT ***18*** *02:53:14.5±0.4, 14°.09N×93°.25W, h19km±1km, MW5.0/71, Moment Tensor Solution. s46,c61; s71,c103; Duration: 0 Moment tensor: Scale 1016Nm; M*$_{rr}$*3.54±.19; M*$_{\theta\theta}$*-3.10±.14; M*$_{\phi\phi}$*-0.43±.13; M*$_{r\theta}$*2.71±.27; M*$_{\theta\phi}$*0.59±.09; M*$_{\phi r}$*-1.68±.30; Best double couple: M*$_0$*4.63900×10*^{16} *NP1:*ϕ_s*115.00000°,*δ*67.00000°,*λ*99.00000°. NP2: *ϕ_s*273.00000°,*δ*25.00000°,*λ*70.00000°. Principal axes: T 4.8760, Plg67.0000°, Azm41.0000°; N -0.4700, Plg8.0000°, Azm291.0000°; P -4.4020, Plg21.0000°, Azm198.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISCJB ***18*** *02:53:15.3±0.4, 14°.59N±0°.02×92°.59W±0°.02, h48km±3km, mb4.8/221, MS4.3/34 Error ellipse: s-maj=4.3km s-min=2.4km az=41.0*
IDC ***18*** *02:53:17.1±2.9, 14°.35N×92°.64W, h62km±25km, mb4.2/24, mb1 4.4/26, mb1mx4.2/48, mbtmp4.5/26, ML4.2/2, MS4.2/34, Ms1 4.2/34, ms1mx4.2/47, Error ellipse: s-maj=22.9km s-min=9.9km az=50.0*

ISC 18 02:53:16.2±0.8, 14°.40N±0°.05×92°.81W±0°.05, h53km±6km, n811, σ1$60/802, mb4.7/221, MS4.4/34, 1C, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.73**	**46**	*e*Pn	**Pn**	**02 53 30.5**	**0.0**
THIG				*e*Sn	**Sn**	**02 53 43.0**	**+2.2**
THIG		**0.73**	**46**	*i* P	**Pn**	**02 53 30.5**	**0.0**
THIG				*e*S	**Sn**	**02 53 43.0**	**+2.2**
PCIG		**1.36**	**343**	*e*P	**Pn**	**02 53 35.8**	**-3.1**
PCIG		**1.36**	**343**	*e*P	**Pn**	**02 53 35.8**	**-3.1**
PCIG				*i* S	**Sn**	**02 53 51.3**	**-4.4**
CCIG	**Comitan**	**1.98**	**19**	*e*Pn	**Pn**	**02 53 50.1**	**+2.5**
CCIG				*e*Sn	**Sn**	**02 54 12.9**	**+1.7**
CCIG	**Comitan**	**1.98**	**19**	*e*P	**Pn**	**02 53 49.8**	**+2.3**
CCIG				*i* S	**Sn**	**02 54 12.9**	**+1.7**
TGIG		**2.38**	**353**	*e*Pn	**Pn**	**02 53 53.0**	**0.0**
TGIG				*e*Sn	**Sn**	**02 54 19.4**	**-1.6**
TGIG		**2.38**	**353**	*e*P	**Pn**	**02 53 53.0**	**0.0**
TGIG				*e*S	**Sn**	**02 54 19.4**	**-1.6**
SBLS	**San Blas**	**3.14**	**100**	*e*P	**Pn**	**02 54 02.6**	**-0.9**
SBLS				*e*S	**Sn**	**02 54 41.1**	**+1.2**
SNJE	**San Jose**	**3.15**	**99**	*e*P	**Pn**	**02 54 02.2**	**-1.4**
SNJE				*e*S	**Sn**	**02 54 39.8**	**-0.3**
CMIG	**Matias Romero**	**3.34**	**324**	P	**Pn**	**02 54 03.2**	**-2.8**
	24nm,0.3s,baz=147,slow=12,SNR=242						
CMIG				S	**Sn**	**02 54 43.2**	**-1.2**
	70nm,0.3s,baz=51,slow=19,SNR=7.1						
CMIG				LR	LR	02 54 59.1	
	comp=Z,751nm,21.7s,baz=243,slow=29						
HUIG	**Huatulco**	**3.47**	**294**	*e*P	Pn	02 54 01.1	-6.6
HUIG	**Huatulco**	**3.47**	**294**	*e*P	Pn	02 54 01.1	-6.6
COLS	**Colinas**	**3.48**	**102**	*e*P	**Pn**	**02 54 06.7**	**-1.4**
COLS				*e*S	**Sn**	**02 54 47.9**	**-0.2**
BOQS	**Boqueron**	**3.49**	**100**	*e*P	**Pn**	**02 54 06.9**	**-1.3**
UEES	**San Salvador**	**3.52**	**101**	IAML		02 55 00.7	
	comp=Z,636nm,0.4s						
SNET	**Serv Nac Est T**	**3.54**	**101**	IAML		02 55 04.7	
	comp=Z,737nm,0.4s						
LOMA	**San Marcos**	**3.60**	**101**	*e*P	**Pn**	**02 54 08.8**	**-0.8**
LFU	**La Fuente**	**3.64**	**100**	*e*P	**Pn**	**02 54 08.0**	**-2.2**
LBRS	**Las Brisas**	**3.71**	**100**	*e*P	**Pn**	**02 54 08.9**	**-2.3**
LFRS	**El Faro**	**3.72**	**102**	*e*P	**Pn**	**02 54 09.8**	**-1.4**
LFRS				*e*S	**Sn**	**02 54 53.6**	**-0.2**
TECA	**Tecapa**	**4.28**	**102**	*e*P	**Pn**	**02 54 16.9**	**-2.1**
CNGN	**Cerro Negro**	**6.24**	**107**	*e*P	**Pn**	**02 54 44.0**	**-1.7**
LVIG	**Laguna Verde**	**6.32**	**327**	*e*Pn	**Pn**	**02 54 46.7**	**-0.1**
LVIG				*e*Sn	**Sn**	**02 55 56.3**	**-1.4**
TLIG	**Tlapa**	**6.37**	**300**	*e*Pn	**Pn**	**02 54 45.6**	**-2.0**
TLIG				*e*Sn	**Sn**	**02 56 01.6**	**+2.5**
ESTN	**Estel**	**6.39**	**101**	*e*Pn	**Pn**	**02 54 45.6**	**-2.3**
ESTN				*e*Sn	Sn	02 56 09.6	+10
ESTN	**Estel**	**6.39**	**101**	*e*P	**Pn**	**02 54 46.4**	**-1.5**
ESTN				IAML		02 56 21.8	
	comp=N,108nm,1.2s						
MOMN	**Momotombo**	**6.41**	**107**	*e*P	**Pn**	**02 54 46.8**	**-1.4**
COPN	**Copaltepe**	**6.44**	**109**	*e*P	**Pn**	**02 54 46.8**	**-1.8**
RCON	**San Juan de Ri**	**6.52**	**97**	*e*P	**Pn**	**02 54 46.3**	**-3.5**
APYN	**Apoyeque**	**6.64**	**108**	*e*P	**Pn**	**02 54 49.6**	**-1.7**
MATN	**Matagalpa**	**6.85**	**101**	*e*P	**Pn**	**02 54 52.6**	**-1.5**
MYIG	**MØrida**	**7.15**	**24**	*e*Pn	**Pn**	**02 54 58.6**	**+0.4**
MYIG				*e*Sn	Sn	02 56 36.7	+19
JTS	**JuntasAbangare**	**8.69**	**117**	P	**Pn**	**02 55 16.7**	**-2.7**
	comp=N,2.3nm,0.3s,baz=14,slow=21,SNR=14						
HDC	**Heredia**	**9.56**	**116**	*e*Pn	Pn	02 55 35.8	+4.5
MOIG	**Morelia**	**9.58**	**304**	*e*Pn	**Pn**	**02 55 32.0**	**+0.3**
FSCY	**Frank Sound, G**	**12.15**	**65**	*e*Pn	Pn	02 56 12.9	+6.2
LNIG	**Linares**	**12.18**	**330**	*e*Pn	**Pn**	**02 56 08.6**	**+1.6**
ZAIG	**Zacatecas**	**12.44**	**313**	*e*Pn	**Pn**	**02 56 12.2**	**+1.3**
LCCY	**Blossom Villag**	**13.25**	**65**	*e*Pn	**Pn**	**02 56 23.5**	**+1.9**
833A	**Chaparral WMA,**	**15.15**	**337**	P	**Pn**	**02 56 45.8**	**-1.1**
	baz=156						
833A	**Chaparral WMA,**	**15.15**	**337**	*e*Pn	**P**	**02 56 48.6**	**-2.4**
	comp=N,42nm,0.9s						
542A	**Morse**	**15.65**	**1**	P	**Pn**	**02 56 51.5**	**-1.9**
	baz=182						
544A	**White Castle**	**15.71**	**5**	P	**Pn**	**02 56 52.6**	**-1.4**
	baz=187						
HKT	**Hockley**	**15.73**	**350**	*e*Pn	**Pn**	**02 56 55.1**	**+0.8**
	comp=N,34nm,1.3s						
059Z	**Ave Maria**	**15.94**	**40**	P	**Pn**	**02 56 53.6**	**-3.5**
	baz=225						
061Z	**Ochoppi**	**15.96**	**43**	P	**Pn**	**02 56 56.1**	**-1.2**
	baz=227,SNR=5.5						
442A	**Mamou**	**16.24**	**1**	P	**Pn**	**02 56 58.5**	**-2.3**
	baz=182						
058A	**Arcadia**	**16.25**	**37**	P	**Pn**	**02 56 57.5**	**-3.5**
	baz=222						
441A	**DeRidder**	**16.28**	**359**	P	**Pn**	**02 57 00.2**	**-1.1**
	baz=180						
443A	**Delano Plantat**	**16.32**	**3**	P	**Pn**	**02 56 59.6**	**-2.2**
	baz=185						
444A	**Pine Grove**	**16.35**	**6**	P	**Pn**	**02 57 00.7**	**-1.6**
	baz=188						
445A	**Amite**	**16.41**	**8**	P	**Pn**	**02 56 59.8**	**-3.2**
	baz=190						
957A	**Wimauma**	**16.47**	**35**	P	**Pn**	**02 57 00.7**	**-3.0**
	baz=219						
059A	**Moore Haven**	**16.58**	**39**	P	**Pn**	**02 57 00.4**	**-4.8**
	baz=224						
447A	**Lucedale**	**16.76**	**12**	P	**Pn**	**02 57 05.3**	**-2.0**
	baz=195						
343A	**Vidalia**	**16.84**	**4**	P	**Pn**	**02 57 06.1**	**-2.3**
	baz=185						
341A	**Kurthwood**	**16.86**	**359**	P	**Pn**	**02 57 07.1**	**-1.5**
	baz=180						
341A	**Kurthwood**	**16.86**	**359**	*e*Pn	**Pn**	**02 57 02.3**	**-6.3**
	comp=N,43nm,0.9s						
435B	**Jarrell**	**16.89**	**346**	P	**Pn**	**02 57 07.3**	**-1.6**
	baz=165						
435B	**Jarrell**	**16.89**	**346**	*e*Pn	**P**	**02 57 09.6**	**-0.7**
	comp=N,36nm,1.0s						
342A	**Flagon Creek P**	**16.90**	**1**	P	**Pn**	**02 57 07.7**	**-1.4**
	baz=183						
342A	**Flagon Creek P**	**16.90**	**1**	*e*Pn	**P**	**02 57 11.9**	**+1.5**
	comp=N,78nm,1.4s						
345A	**Thompson Farm,**	**17.02**	**8**	P	**Pn**	**02 57 06.7**	**-3.9**
	baz=190						
449A	**Pace**	**17.08**	**17**	P	**Pn**	**02 57 08.1**	**-3.2**
	baz=200						
344A	**Westbrook Farm**	**17.08**	**6**	P	**Pn**	**02 57 09.3**	**-2.0**
	baz=188,SNR=7.1						
344A	**Westbrook Farm**	**17.08**	**6**	*e*Pn	**P**	**02 57 14.4**	**+1.9**
	comp=N,90nm,1.1s						
346A	**Big Creek Wild**	**17.18**	**10**	P	**Pn**	**02 57 09.1**	**-3.5**
	baz=192						
346A	**Big Creek Wild**	**17.18**	**10**	*e*Pn	P	02 57 20.2	+6.6
	comp=N,55nm,0.9s						
JCT	**Junction City**	**17.25**	**339**	P	**Pn**	**02 57 13.4**	**-0.1**
	baz=158						
JCT	**Junction City**	**17.25**	**339**	*e*Pn	**P**	**02 57 14.5**	**+0.2**
	comp=N,34nm,1.1s						
HPIG		**17.31**	**318**	*e*Pn	**P**	**02 57 15.2**	**-0.1**
NATX	**Nacogdoches**	**17.36**	**355**	P	**Pn**	**02 57 14.3**	**-0.6**
	baz=175						
NATX	**Nacogdoches**	**17.36**	**355**	*e*Pn	**P**	**02 57 17.1**	**+1.6**
	comp=N,103nm,1.4s						
347A	**Saraland**	**17.37**	**12**	P	**Pn**	**02 57 13.2**	**-1.7**
	baz=195						
858A	**St. Cloud**	**17.38**	**36**	P	**Pn**	**02 57 13.3**	**-1.7**
	baz=221						
451A	**Vernon**	**17.40**	**21**	P	**Pn**	**02 57 14.7**	**-0.6**
	baz=204						
243A	**Waterproof**	**17.44**	**4**	P	**Pn**	**02 57 14.1**	**-1.7**
	baz=185,SNR=8.0						
BRAL	**Brewton**	**17.51**	**17**	P	**Pn**	**02 57 14.8**	**-1.8**
	baz=200,SNR=7.2						
BRAL	**Brewton**	**17.51**	**17**	*e*Pn	**P**	**02 57 20.5**	**+3.4**
348A	**Jackson**	**17.52**	**14**	P	**Pn**	**02 57 15.6**	**-1.2**
	baz=197						
348A	**Jackson**	**17.52**	**14**	*e*Pn	**P**	**02 57 21.1**	**+3.8**
	comp=N,98nm,1.1s						
859A	**Kempfer Cattle**	**17.53**	**37**	P	**Pn**	**02 57 15.3**	**-1.6**
	baz=222						
241A	**Mo Tay, Goldon**	**17.54**	**360**	P	**Pn**	**02 57 15.9**	**-1.2**
	baz=181						
241A	**Mo Tay, Goldon**	**17.54**	**360**	*e*Pn	**P**	**02 57 19.4**	**+1.9**
	comp=N,60nm,1.1s						
757A	**Oxford**	**17.56**	**33**	P	**Pn**	**02 57 15.4**	**-1.9**
	baz=217						
240A	**Hunter Patters**	**17.58**	**357**	*e*P	**P**	**02 57 22.9**	**+4.9**
	comp=N,109nm,1.3s						
242A	**Grayson**	**17.59**	**2**	P	**Pn**	**02 57 15.8**	**-1.9**
	baz=183						
349A	**Repton**	**17.64**	**16**	P	**Pn**	**02 57 15.3**	**-2.9**
	baz=199,SNR=22						
244A	**Avery, Jackson**	**17.67**	**6**	P	**Pn**	**02 57 15.3**	**-3.3**
	baz=188,SNR=8.3						
656A	**Willston**	**17.67**	**31**	*e*P	**P**	**02 57 25.2**	**+6.2**
	comp=N,111nm,1.1s						
MOTC	**Monteria, Cord**	**17.69**	**107**	*e*P	**Pn**	**02 57 15.9**	**-3.1**
245A	**Little AP, Sta**	**17.75**	**8**	P	**Pn**	**02 57 17.3**	**-2.3**
	baz=190						
SJCC	**San Jacinto, C**	**17.80**	**103**	*e*P	**Pn**	**02 57 17.3**	**-3.2**
452A	**Marianna**	**17.81**	**22**	P	**Pn**	**02 57 18.8**	**-1.5**
	baz=206,SNR=6.2						
246A	**Jackson Lee, B**	**17.85**	**10**	P	**Pn**	**02 57 19.4**	**-1.5**
	baz=193						
VBMS	**Vicksburg**	**17.86**	**6**	P	**Pn**	**02 57 19.6**	**-1.3**
	baz=188						
TXAR	**Lajitas Array**	**17.94**	**328**	P	**P**	**02 57 22.8**	**+0.7**
	comp=N,0.2nm,0.3s,baz=150,slow=10,SNR=60						
TXAR				PcP	**PcP**	**03 01 55.7**	**0.0**
	comp=N,0.0nm,0.3s,baz=127,slow=5.7,SNR=2.7						
TXAR				LR	LR	03 04 29.9	
	comp=N,280nm,20.7s,baz=0.0,slow=37						
TX31	**Lajitas Ar. Si**	**17.94**	**328**	*e*P	**P**	**02 57 24.0**	**+2.0**
350A	**Dozier**	**17.95**	**18**	P	**Pn**	**02 57 21.8**	**-0.3**
	baz=202						
247A	**Quitman**	**17.99**	**12**	P	**Pn**	**02 57 21.2**	**-1.3**
	baz=194						
WHTX	**Lake Whitney,**	**18.02**	**347**	P	**Pn**	**02 57 22.2**	**-0.7**
	baz=166						
WHTX	**Lake Whitney,**	**18.02**	**347**	*e*P	**P**	**02 57 23.6**	**+0.8**
	comp=N,59nm,1.3s						
758A	**Lake Helen**	**18.05**	**35**	P	**P**	**02 57 21.1**	**-2.0**
	baz=220						
351A	**Pinckard**	**18.05**	**20**	P	**P**	**02 57 21.6**	**-1.6**
	baz=204,SNR=9.8						
142A	**Monroe**	**18.08**	**2**	P	**P**	**02 57 22.8**	**-0.7**
	baz=184						
555A	**McAlpin**	**18.09**	**28**	P	**P**	**02 57 22.3**	**-1.2**
	baz=213						
555A	**McAlpin**	**18.09**	**28**	*e*P	**P**	**02 57 23.3**	**-0.2**
	comp=N,50nm,0.9s						
141A	**Papa Simpson,**	**18.12**	**360**	P	**P**	**02 57 22.3**	**-1.6**
	baz=181						
453A	**Whigham**	**18.14**	**24**	P	**P**	**02 57 21.5**	**-2.6**
	baz=208,SNR=6.9						
453A	**Whigham**	**18.14**	**24**	*e*P	**Pn**	**02 57 26.4**	**+2.1**
	comp=N,148nm,1.1s						
140A	**Cam and Jess,**	**18.17**	**358**	P	**P**	**02 57 22.9**	**-1.5**
	baz=179						
140A	**Cam and Jess,**	**18.17**	**358**	*e*P	**Pn**	**02 57 27.1**	**+2.3**
	comp=N,128nm,1.3s						
657A	**Interlachen**	**18.18**	**32**	P	**P**	**02 57 21.9**	**-2.7**
	baz=217						
248A	**Dixon Mills**	**18.21**	**14**	P	**P**	**02 57 22.6**	**-2.3**
	baz=197						
249A	**Camden**	**18.25**	**16**	P	**P**	**02 57 23.8**	**-1.6**
	baz=199						
556A	**Lake Butler**	**18.25**	**30**	P	**P**	**02 57 22.9**	**-2.5**
	baz=215						
143A	**Socs Landing,**	**18.27**	**4**	P	**P**	**02 57 24.3**	**-1.1**
	baz=185						
143A	**Socs Landing,**	**18.27**	**4**	*e*Pn	**Pn**	**02 57 28.3**	**+2.4**
	comp=N,61nm,1.1s						
144A	**Alexander Plac**	**18.28**	**6**	P	**P**	**02 57 25.4**	**-0.2**
	baz=188						
454A	**Quitman**	**18.30**	**26**	P	**P**	**02 57 24.0**	**-1.9**
	baz=210						
145A	**Houston Renfro**	**18.31**	**8**	P	**P**	**02 57 26.5**	**+0.5**
	baz=190						
352A	**Blakely**	**18.47**	**22**	P	**P**	**02 57 26.8**	**-1.0**
	baz=206,SNR=31						
352A	**Blakely**	**18.47**	**22**	*e*P	**Pn**	**02 57 29.4**	**+1.0**
	comp=N,164nm,0.9s						
146A	**Union**	**18.47**	**10**	P	**P**	**02 57 28.0**	**+0.2**
	baz=192						
146A	**Union**	**18.47**	**10**	*e*P	**Pn**	**02 57 32.6**	**+4.2**
	comp=N,43nm,1.0s						
250A	**Grady**	**18.49**	**18**	P	**P**	**02 57 28.3**	**+0.4**
	baz=201,SNR=12						
250A	**Grady**	**18.49**	**18**	*e*P	**Pn**	**02 57 31.5**	**+2.9**
	comp=N,96nm,1.1s						
353A	**Camilla**	**18.62**	**24**	P	**P**	**02 57 29.1**	**-0.3**
	baz=208						
147A	**Livingston**	**18.66**	**12**	P	**P**	**02 57 29.7**	**0.0**
	baz=195						
147A	**Livingston**	**18.66**	**12**	*e*P	**Pn**	**02 57 33.7**	**+3.1**
	comp=N,123nm,1.4s						
Z43A	**Armstrong Fami**	**18.78**	**4**	P	**P**	**02 57 31.4**	**+0.2**
	baz=186						
148A	**Greensboro**	**18.78**	**14**	P	**P**	**02 57 30.8**	**-0.3**
	baz=197						
Z40A	**Long Farm, Mag**	**18.78**	**358**	P	**P**	**02 57 31.4**	**+0.2**
	baz=179						
Z42A	**Norrel Spur, H**	**18.81**	**2**	P	**P**	**02 57 31.9**	**+0.5**
	baz=184,SNR=6.4						
PLMC	**San Jos¨ del**	**18.81**	**118**	*e*P	**P**	**02 57 32.6**	**+0.8**
HELC	**Santa Helena**	**18.84**	**114**	*e*P	**P**	**02 57 32.3**	**-0.1**
	baz=62nm,0.9s						
HELC	**Santa Helena**	**18.84**	**114**	*e*P	**P**	**02 57 33.2**	**+0.8**
251A	**Midway**	**18.87**	**20**	P	**P**	**02 57 31.3**	**-0.8**
	baz=203,SNR=29						
ZARC	**Zaragoza, Cauc**	**18.90**	**109**	*e*P	**P**	**02 57 31.9**	**-0.8**
Z44A	**Pea Ridge, Bel**	**18.92**	**6**	P	**P**	**02 57 32.3**	**-0.3**
	baz=188,SNR=10						
149A	**Jones**	**18.93**	**16**	P	**P**	**02 57 32.0**	**-0.8**
	baz=199						
TIGA	**Tifton**	**18.95**	**25**	P	**P**	**02 57 31.3**	**-1.7**
	baz=209,SNR=7.5						
TIGA	**Tifton**	**18.95**	**25**	*e*P	**P**	**02 57 33.5**	**+0.5**
	comp=N,81nm,1.0s						
252A	**Lumpkin**	**19.01**	**21**	P	**P**	**02 57 30.4**	**-3.2**
	baz=205,SNR=16						
Z46A	**Louisville**	**19.04**	**10**	P	**P**	**02 57 33.4**	**-0.6**
	baz=192						
Z45A	**Winona**	**19.10**	**8**	P	**P**	**02 57 34.7**	**+0.1**
	baz=190						
Z45A	**Winona**	**19.10**	**8**	*e*P	**Pn**	**02 57 39.1**	**+3.2**
	comp=N,90nm,0.9s						
LPIG	**La Paz**	**19.11**	**303**	LR	LR	03 04 55.4	
	comp=N,417nm,18.5s,baz=112,slow=36						
150A	**Eclectic**	**19.15**	**18**	P	**P**	**02 57 34.7**	**-0.6**
	baz=201,SNR=12						
355A	**Pearson**	**19.18**	**27**	P	**P**	**02 57 35.5**	**0.0**
	baz=211						
ABTX	**Abilene, Hawle**	**19.18**	**342**	P	**P**	**02 57 35.9**	**+0.3**
	baz=160						
ABTX	**Abilene, Hawle**	**19.18**	**342**	*e*P	**Pn**	**02 57 37.8**	**+0.9**
	comp=N,37nm,0.9s						
Z47A	**Carrollton**	**19.20**	**12**	P	**P**	**02 57 35.4**	**-0.3**
	baz=195,SNR=8.1						
YOTC	**Yotoco, Valle**	**19.25**	**121**	*e*P	**Pn**	**02 57 37.9**	**-0.1**
253A	**Americus**	**19.29**	**23**	P	**P**	**02 57 35.7**	**-1.0**
	baz=207						
253A	**Americus**	**19.29**	**23**	*e*P	**Pn**	**02 57 39.2**	**+1.0**
	comp=N,82nm,1.1s						
LRAL	**Lakeview Retre**	**19.29**	**15**	P	**P**	**02 57 36.4**	**-0.4**
	baz=198						
LRAL	**Lakeview Retre**	**19.29**	**15**	*e*P	**Pn**	**02 57 38.5**	**+0.4**
	comp=N,52nm,1.3s						
151A	**Opelika**	**19.29**	**19**	P	**P**	**02 57 37.1**	**+0.3**
	baz=203,SNR=24						
HORQ	**Saladito**	**19.30**	**123**	*e*P	**Pn**	**02 57 39.9**	**+1.1**
Y42A	**Garnett, Star**	**19.37**	**3**	P	**P**	**02 57 37.9**	**+0.3**
	baz=184						
Y41A	**Eaglette Beard**	**19.40**	**0**	P	**P**	**02 57 37.8**	**0.0**
	baz=182						
CCAR	**Cane Creek**	**19.45**	**3**	*e*P	**Pn**	**02 57 42.0**	**+1.9**
	comp=N,43nm,0.9s						
Z48A	**Northport**	**19.49**	**13**	P	**P**	**02 57 38.6**	**-0.3**
	baz=196						
356A	**Blackshear**	**19.49**	**28**	P	**P**	**02 57 38.7**	**-0.2**
	baz=213						
Y43A	**Makayla and Ka**	**19.50**	**5**	P	**P**	**02 57 39.0**	**0.0**
	baz=186						
254A	**Abbeville**	**19.52**	**25**	P	**P**	**02 57 39.3**	**+0.1**
	baz=209						
Y40A	**Okolona**	**19.53**	**359**	P	**P**	**02 57 38.3**	**-1.0**
	baz=180,SNR=6.1						
Z49A	**Columbiana**	**19.56**	**16**	P	**P**	**02 57 39.9**	**+0.2**
	baz=199,SNR=17						
Y45A	**Yeager Farm, C**	**19.61**	**8**	P	**P**	**02 57 38.6**	**-1.6**
	baz=190,SNR=16						
Y44A	**Strider, Charl**	**19.62**	**6**	P	**P**	**02 57 38.8**	**-1.5**
	baz=188,SNR=6.2						
152A	**Waverly Hall**	**19.62**	**21**	P	**P**	**02 57 39.5**	**-0.9**
	baz=205,SNR=17						
152A	**Waverly Hall**	**19.62**	**21**	*e*P	**P**	**02 57 41.0**	**+0.7**
	comp=N,56nm,1.0s						
PTBC	**PUERTO BERRIO,**	**19.65**	**112**	*e*P	**P**	**02 57 40.5**	**-0.3**
NORC	**Norcasia**	**19.71**	**115**	*e*P	**P**	**02 57 41.9**	**+0.3**
Y46A	**Houston**	**19.73**	**10**	P	**P**	**02 57 40.0**	**-1.4**
	baz=192,SNR=36						
ANIL	**Santa Ana**	**19.77**	**118**	*e*P	**Pn**	**02 57 44.5**	**+0.2**
Z50A	**Ashland**	**19.79**	**17**	P	**P**	**02 57 41.4**	**-0.8**
	baz=201,SNR=8.3						
Z50A	**Ashland**	**19.79**	**17**	*e*P	**P**	**02 57 43.6**	**+1.4**
	comp=N,42nm,1.1s						
TOLC	**Tolima**	**19.80**	**118**	*e*P	**Pn**	**02 57 44.5**	**-0.2**
255A	**Hazlehurst**	**19.84**	**27**	P	**P**	**02 57 41.4**	**-1.4**
	baz=211						
255A	**Hazlehurst**	**19.84**	**27**	*e*P	**Pn**	**02 57 48.1**	**+3.4**
357A	**Townsend**	**19.87**	**30**	P	**P**	**02 57 41.6**	**-1.4**
	baz=215						
Y47A	**UCPARC, Winfie**	**19.93**	**12**	P	**P**	**02 57 42.7**	**-1.0**
	baz=195						
OTAV	**Otavalo**	**19.99**	**134**	*e*P	**P**	**02 57 46.2**	**+1.1**
	comp=N,25nm,1.3s						
OTAV	**Otavalo**	**19.99**	**134**	*e*P	**P**	**02 57 44.5**	**-0.5**
X40A	**Basin Creek Fa**	**20.00**	**360**	P	**P**	**02 57 44.6**	**+0.2**
	baz=181						
X40A	**Basin Creek Fa**	**20.00**	**360**	*e*P	Pn	02 57 45.9	-0.7
	comp=N,13nm,0.9s						
X41A	**Kaden, Bauxite**	**20.01**	**1**	P	**P**	**02 57 44.4**	**-0.2**
	baz=182,SNR=14						
X39A	**Fountain Ranch**	**20.06**	**357**	P	**P**	**02 57 45.3**	**+0.2**
	baz=177,SNR=6.6						
MIAR	**Mount Ida**	**20.07**	**358**	P	**P**	**02 57 44.7**	**-0.6**
	baz=179,SNR=95						
MIAR	**Mount Ida**	**20.07**	**358**	*e*P	**P**	**02 57 45.4**	**+0.2**
	comp=N,94nm,0.9s						
Z51A	**Franklin**	**20.07**	**19**	P	**P**	**02 57 44.9**	**-0.3**
	baz=203						
Y48A	**Jasper**	**20.09**	**14**	P	**P**	**02 57 44.3**	**-1.1**
	baz=197,SNR=8.3						
X42A	**Stuttgart**	**20.09**	**3**	P	**P**	**02 57 45.4**	**-0.1**
	baz=

GOGA	Godfrey	20.74	23	eP	P	02 57 53.1	+0.7
	comp=N,56nm,1.0s						
BARC	Barichara	20.79	110	eP	P	02 57 55.1	+1.7
WHAR	Wooly Hollow	20.81	1	eP	P	02 57 54.1	+1.0
	comp=N,30nm,1.0s						
WHAR				eS	S	03 01 39.8	-2.6
W42A	Bald Knob	20.82	3	P	P	02 57 53.0	-0.3
	baz=184						
Z54A	Sparta	20.83	24	P	P	02 57 51.9	-1.5
	baz=209						
X49A	Woodville	20.86	15	P	P	02 57 53.1	-0.7
	baz=199,SNR=29						
156A	Sylvania	20.89	28	P	P	02 57 53.1	-1.0
	baz=213						
W45A	Hickory Valley	20.92	8	P	P	02 57 53.8	-0.7
	baz=191,SNR=11						
PLAL	Pickwick Lake	20.93	11	eP	P	02 58 00.8	+6.2
	comp=N,39nm,1.2s						
Y52A	Lilburn	20.94	21	P	P	02 57 52.6	-2.1
	baz=205,SNR=15						
Y52A	Lilburn	20.94	21	eP	P	02 57 55.6	+1.0
	comp=N,87nm,1.2s						
PAMC	Pamplona, Colo	20.95	107	eP	P	02 57 53.8	-1.5
WMOK	Wichita Mounta	20.96	346	P	P	02 57 53.9	-0.9
	baz=165,SNR=8.6						
WMOK	Wichita Mounta	20.96	346	eP	P	02 57 55.7	+0.9
	comp=N,9.9nm,0.8s						
X50B	Fort Payne	21.00	17	P	P	02 57 54.7	-0.6
	baz=200,SNR=13						
W46A	Michie	21.03	10	P	P	02 57 54.4	-1.2
	baz=193,SNR=13						
Y53A	Monroe	21.10	22	P	P	02 57 54.7	-1.6
	baz=206,SNR=12						
Z55A	Blythe	21.10	26	P	P	02 57 55.0	-1.3
	baz=210						
CHIC	Chingaza	21.15	115	eP	P	02 57 58.5	+1.0
RUSC	La Rusia	21.16	112	eP	P	02 57 56.6	-1.1
	comp=N,38nm,1.0s						
RUSC	La Rusia	21.16	112	eP	P	02 57 57.8	+0.1
FLOC	Florencia	21.20	125	eP	P	02 58 01.1	+3.5
W47A	Westpoint	21.29	12	P	P	02 57 56.7	-1.6
	baz=195						
V41A	Mountainview	21.30	1	P	P	02 57 56.9	-1.6
	baz=183,SNR=24						
V40A	Witts Springs	21.32	360	P	P	02 57 56.9	-1.8
	baz=181,SNR=15						
V40A	Witts Springs	21.32	360	eP	P	02 57 59.5	+0.8
	comp=N,26nm,1.0s						
W48A	Pulaski	21.32	13	P	P	02 57 57.6	-1.1
	baz=197						
X51A	Calhoun	21.32	18	P	P	02 57 57.9	-0.9
	baz=202						
X51A	Calhoun	21.32	18	eP	P	02 58 04.1	+5.3
	comp=N,42nm,1.1s						
V42A	Cord	21.35	3	P	P	02 57 57.9	-1.1
	baz=185						
V39A	Pettigrew	21.36	358	P	P	02 57 57.9	-1.3
	baz=179,SNR=20						
VILC	Villavicencio,	21.43	117	eP	P	02 58 02.5	+2.2
Y54A	Tignall	21.44	24	P	P	02 57 58.5	-1.4
	baz=208						
W49A	Belvidere	21.46	15	P	P	02 57 59.0	-1.1
	baz=198						
MSTX	Muleshoe	21.47	337	P	P	02 57 59.8	-0.7
	baz=154,SNR=17						
MSTX	Muleshoe	21.47	337	eP	P	02 58 00.8	+0.4
	comp=N,31nm,0.8s						
V45A	Humboldt	21.53	9	P	P	02 58 00.4	-0.5
	baz=191						
TUL1	Leonard	21.59	353	P	P	02 57 59.1	-2.4
	baz=173,SNR=7.3						
TUL1	Leonard	21.59	353	eP	P	02 58 03.1	+1.6
	comp=N,25nm,0.9s						
X52A	Dahlonega	21.67	20	P	P	02 58 01.1	-1.4
	baz=205						
V46A	Holladay	21.72	10	P	P	02 58 02.0	-0.9
	baz=193						
X53A	Estanollee	21.78	22	P	P	02 58 02.7	-1.0
	baz=206						
W50A	Signal Mountai	21.78	17	P	P	02 58 03.6	-0.1
	baz=201,SNR=7.3						
W50A	Signal Mountai	21.78	17	eP	P	02 58 06.7	+3.0
	comp=N,34nm,1.0s						
HHAR	Hobbs	21.81	358	eP	P	02 58 04.6	+0.6
	comp=N,31nm,0.9s						
HHAR				eSn	Sn	03 02 18.6	+4.3
CSU	Charleston Sou	21.83	30	eP	P	02 58 07.8	+3.7
V47A	Nunnelly	21.86	12	P	P	02 58 04.8	+0.4
	baz=195,SNR=11						
U40A	Yellville	21.86	360	P	P	02 58 03.5	-1.1
	baz=181,SNR=26						
U41A	Viola	21.87	2	P	P	02 58 03.4	-1.1
	baz=183,SNR=21						
NHSC	New Hope	21.88	30	P	P	02 58 01.5	-3.2
	baz=215,SNR=6.0						
NHSC	New Hope	21.88	30	eP	P	02 58 07.7	+3.0
	comp=N,184nm,1.0s						
U39A	Green Forest	21.90	359	P	P	02 58 03.6	-1.3
	baz=179,SNR=20						
U42A	Revenden	21.91	3	P	P	02 58 03.3	-1.6
	baz=185,SNR=11						
AMTX	Amarillo	21.91	340	P	P	02 58 04.4	-0.7
	baz=157						
AMTX	Amarillo	21.91	340	eP	P	02 58 05.3	+0.2
	comp=N,56nm,0.6s						
V48A	Smith Brothers	21.92	13	P	P	02 58 03.6	-1.5
	baz=196,SNR=6.0						
V48A	Smith Brothers	21.92	13	eP	P	02 58 06.2	+1.1
	comp=N,19nm,1.1s						
U43A	Rector	21.98	5	P	P	02 58 04.4	-1.4
	baz=187						
U44B	Burton Farm, H	22.07	7	P	P	02 58 06.2	-0.5
	baz=190						
WVT	Waverly	22.09	11	P	P	02 58 06.4	-0.6
	baz=194						
WVT	Waverly	22.09	11	eP	P	02 58 07.6	+0.6
	comp=N,18nm,0.9s						
W52A	Murphy	22.10	20	P	P	02 58 05.0	-2.2
	baz=204						
W52A	Murphy	22.10	20	eP	P	02 58 09.1	+2.0
	comp=N,24nm,1.0s						
U45A	Rockin P Farm,	22.16	9	P	P	02 58 07.1	-0.5
	baz=191						
V49A	McMinnville	22.16	15	P	P	02 58 06.9	-0.8
	baz=199						
U44A	Portageville	22.19	7	P	P	02 58 06.5	-1.5
	baz=189						
HSIG		22.22	314	eP	P	02 58 09.2	+0.8
	comp=N,43nm,1.4s						
CPCT	Cooper Cave	22.25	18	eP	P	02 58 11.6	+2.9
	comp=N,22nm,1.0s						
U46A	Springville	22.26	10	P	P	02 58 08.9	+0.2
	baz=193						
V50A	Pikevile	22.29	17	P	P	02 58 08.4	-0.7
	baz=201						
PARMO	Parma	22.34	6	eP	P	02 58 12.0	+2.4
	comp=N,36nm,0.8s						
BG3	Lake Jocassee	22.35	22	eP	P	02 58 11.1	+1.3
	comp=N,42nm,1.2s						
JSC	Jenkinsville	22.38	26	eP	P	02 58 11.0	+0.9
	comp=N,23nm,1.0s						
PBMO	Poplar Bluff	22.39	5	eP	P	02 58 10.9	+0.8
	comp=N,21nm,0.8s						
SDV	Santo Domingo	22.39	102	P	P	02 58 09.7	-0.9
	comp=N,25nm,0.5s,baz=270,slow=3.8,SNR=5.0						
W53A	Cullowhee	22.43	21	P	P	02 58 09.6	-1.2
	baz=206						
U47A	Clarksville	22.50	12	P	P	02 58 10.0	-1.3
	baz=195						
T39A	Clever	22.54	359	P	P	02 58 10.4	-1.4
	baz=179,SNR=37						
T41A	Mountain View	22.57	2	P	P	02 58 11.3	-0.8
	baz=183,SNR=29						
T38A	Diamond	22.58	357	P	P	02 58 11.2	-1.1
	baz=177,SNR=14						
T42A	Van Buren	22.59	4	P	P	02 58 10.5	-1.7
	baz=185,SNR=6.1						
T42A	Van Buren	22.59	4	eP	P	02 58 12.2	-0.1
	comp=N,9.0nm,0.8s						
V51A	Loudon	22.62	18	P	P	02 58 11.3	-1.3
	baz=202						
V51A	Loudon	22.62	18	eP	P	02 58 15.7	+3.0
	comp=N,26nm,1.0s						
121A	Cookes Peak, D	22.64	325	P	P	02 58 13.6	+0.5
	baz=140,SNR=40						
T40A	Mansfield	22.66	1	P	P	02 58 12.3	-0.7
	baz=182						
319A	Douglas	22.66	321	eP	P	02 58 14.9	+1.7
	comp=N,48nm,1.1s						
T43A	Greenville	22.70	5	P	P	02 58 12.4	-1.1
	baz=187,SNR=6.7						
U48A	Cassie Pea, Po	22.72	13	P	P	02 58 12.3	-1.4
	baz=197						
T44A	Benton	22.77	7	P	P	02 58 12.7	-1.5
	baz=189						
T45A	Paducah	22.83	9	P	P	02 58 13.8	-1.0
	baz=191						
V52A	Sevierville	22.90	20	P	P	02 58 14.1	-1.4
	baz=204,SNR=6.5						
V52A	Sevierville	22.90	20	eP	P	02 58 15.3	-0.2
	comp=N,39nm,1.3s						
U49A	Red Boiling Sp	22.90	15	P	P	02 58 14.2	-1.4
	baz=198						
T46A	Princeton	22.97	10	P	P	02 58 14.1	-2.2
	baz=193						
V53A	Saluda	23.00	21	P	P	02 58 16.1	-0.5
	baz=206,SNR=8.5						
T47A	Sharon Grove	23.06	12	P	P	02 58 15.3	-1.9
	baz=195,SNR=9.2						
T47A	Sharon Grove	23.06	12	eP	P	02 58 16.8	-0.4
	comp=N,20nm,0.8s						
KMSC	Kings Mountain	23.09	25	P	P	02 58 17.0	-0.5
	baz=210,SNR=10						
KMSC	Kings Mountain	23.09	25	eP	P	02 58 17.6	+0.1
	comp=N,76nm,1.5s						
S40A	Lebanon	23.11	1	P	P	02 58 16.2	-1.4
	baz=182,SNR=28						
S41A	Jillco Farms,	23.11	2	P	P	02 58 15.8	-1.9
	baz=183,SNR=20						
S38A	Stockton	23.16	358	P	P	02 58 16.8	-1.3
	baz=178,SNR=32						
S39A	Bolivar	23.20	359	P	P	02 58 17.1	-1.4
	baz=180,SNR=55						
S39A	Bolivar	23.20	359	eP	P	02 58 18.1	-0.4
	comp=N,60nm,0.9s						
S43A	Fulton Ridge,	23.21	6	P	P	02 58 16.1	-2.5
	baz=188,SNR=6.2						
BNM	Barren Site	23.30	330	eP	P	02 58 21.0	+1.2
T48A	Bowling Green	23.33	13	P	P	02 58 18.0	-1.8
	baz=196						
S42A	Caledonia	23.34	4	P	P	02 58 17.1	-2.8
	baz=186,SNR=7.5						
Y22D	IRIS PASSCAL I	23.39	329	P	P	02 58 21.5	+0.9
	baz=144						
S44A	Carbondale	23.41	7	P	P	02 58 19.1	-1.4
	baz=189						
LPM	Los Pinos Moun	23.44	330	eP	P	02 58 22.1	+1.1
SIUC	Southern Illin	23.44	7	eP	P	02 58 21.0	+0.2
S45A	Carrier Mills	23.49	8	P	P	02 58 19.7	-1.5
	baz=191						
T49A	Edmonton	23.52	15	P	P	02 58 20.3	-1.3
	baz=199						
TZTN	Tazewell	23.56	19	P	P	02 58 20.7	-1.3
	baz=204						
TZTN	Tazewell	23.56	19	eP	P	02 58 21.7	-0.3
	comp=N,9.3nm,0.8s						
CCM	Cathedral Cave	23.60	3	P	P	02 58 21.0	-1.3
	baz=185						
CCM	Cathedral Cave	23.60	3	eP	P	02 58 21.3	-1.1
	comp=N,26nm,1.1s						
T50A	Nancy	23.62	16	P	P	02 58 20.4	-2.2
	baz=200						
S46A	Don Dixon Farm	23.63	10	P	P	02 58 21.0	-1.6
	baz=193						
R38A	Fenwick Farm,	23.71	358	P	P	02 58 21.4	-2.0
	baz=178,SNR=38						
U53A	Fall Branch	23.71	21	P	P	02 58 21.1	-2.3
	baz=206,SNR=12						
LAZ	Ladron	23.76	329	eP	P	02 58 25.8	+1.7
R40A	Maddies Statio	23.80	1	P	P	02 58 21.4	-2.7
	baz=182,SNR=14						
R40A	Maddies Statio	23.80	1	eP	P	02 58 24.1	0.0
	comp=N,19nm,0.8s						
R39A	Chumby, Stover	23.82	360	P	P	02 58 22.1	-2.3
	baz=180,SNR=21						
R41A	Rosebud	23.84	3	P	P	02 58 22.6	-1.9
	baz=184,SNR=13						
R42A	Luebbering	23.85	4	P	P	02 58 21.8	-2.8
	baz=186,SNR=5.7						
ANMO	Albuquerque	23.87	331	P	P	02 58 26.6	+1.5
	comp=N,6.3nm,0.9s,baz=146,slow=10,SNR=24						
ANMO				LR	LR	03 10 12.6	
	comp=N,284nm,18.7s,baz=141,slow=42						
ANMO	Albuquerque	23.87	331	P	P	02 58 25.7	+0.6
	baz=146						
ANMO	Albuquerque	23.87	331	eP	P	02 58 26.0	+0.9
	comp=N,6.3nm,0.8s						
TASL	Snake Pit, Alb	23.87	331	P	P	02 58 25.6	+0.5
	baz=146,SNR=14						
TASM	ASL Pad, Albuq	23.87	331	P	P	02 58 25.6	+0.5
	baz=146,SNR=15						
R43A	Red Bud	23.92	6	P	P	02 58 23.2	-2.0
	baz=188						
R44A	Waltonville	23.98	7	P	P	02 58 24.1	-1.7
	baz=190						
R45A	Skylar, Fairfi	24.13	9	P	P	02 58 25.5	-1.7
	baz=192						
TUC	Tucson	24.23	320	P	P	02 58 28.2	-0.1
	baz=134						
TUC	Tucson	24.23	320	eP	P	02 58 29.5	+1.3
	comp=N,31nm,1.2s						
T52A	Hallie	24.25	19	P	P	02 58 27.0	-1.3
	baz=204						
Q37A	Longview Farm,	24.42	357	P	P	02 58 28.1	-1.7
	baz=177,SNR=5.3						
R47A	Wooly Knot Far	24.44	12	P	P	02 58 28.6	-1.4
	baz=196						
Q38A	Cooks Store, C	24.48	358	P	P	02 58 29.2	-1.1
	baz=179,SNR=28						
Q41A	Truxton	24.50	3	P	P	02 58 29.1	-1.4
	baz=184,SNR=14						
Q42A	Golden Eagle	24.50	4	P	P	02 58 28.9	-1.6
	baz=186						
Q40A	Laux Farm, Aux	24.51	1	P	P	02 58 29.9	-0.7
	baz=182,SNR=7.8						
Q39A	Willow Grove F	24.55	360	P	P	02 58 29.7	-1.3
	baz=180,SNR=18						
S51A	Beattyville	24.55	18	P	P	02 58 30.2	-0.8
	baz=202						
OLIL	Olney	24.59	9	eP	P	02 58 32.7	+1.4
	comp=N,25nm,1.0s						
Q43A	New Douglas	24.60	6	P	P	02 58 30.4	-1.0
	baz=188						
Q44A	Meyer Farm, Va	24.64	7	P	P	02 58 30.9	-0.9
	baz=190						
R48A	Northridge Ran	24.68	13	P	P	02 58 31.3	-0.9
	baz=197						
CNNC	Cliffs of the	24.71	30	P	P	02 58 31.1	-1.4
	baz=217						
CNNC	Cliffs of the	24.71	30	eP	P	02 58 32.5	-0.1
	comp=N,24nm,0.8s						
Q45A	Warren Harvey,	24.74	9	P	P	02 58 31.2	-1.5
	baz=192						
S52A	Salyersville	24.75	19	P	P	02 58 31.7	-1.1
	baz=204						
KSU1	Kansas State U	24.83	353	P	P	02 58 32.0	-1.6
	baz=172,SNR=25						
KSU1	Kansas State U	24.83	353	eP	P	02 58 33.3	-0.3
	comp=N,75nm,0.9s						
T25A	Trinidad	24.90	338	P	P	02 58 35.9	+1.5
	baz=153,SNR=32						
T25A	Trinidad	24.90	338	eP	P	02 58 36.5	+2.0
	comp=N,52nm,1.1s						
P39B	Salisbury	24.99	0	P	P	02 58 33.7	-1.3
	baz=181,SNR=9.5						
P40A	Paris	25.04	1	P	P	02 58 33.6	-1.8
	baz=182,SNR=18						
P40A	Paris	25.04	1	eP	P	02 58 34.8	-0.7
	comp=N,27nm,0.8s						
CBKS	Cedar Bluff	25.08	347	P	P	02 58 35.0	-0.8
	baz=165,SNR=5.7						
CBKS	Cedar Bluff	25.08	347	eP	P	02 58 36.8	+0.9
	comp=N,49nm,0.9s						
Q47A	Bedord North L	25.08	12	P	P	02 58 34.0	-1.8
	baz=195						
P37A	Lathrop	25.13	357	P	P	02 58 35.3	-1.0
	baz=177						
P38A	Dawn	25.14	359	P	P	02 58 35.1	-1.2
	baz=179						
P38A	Dawn	25.14	359	eP	P	02 58 36.1	-0.2
	comp=N,28nm,1.5s						
P42A	Winchester	25.18	4	P	P	02 58 35.9	-0.8
	baz=186						
P42A	Winchester	25.18	4	eP	P	02 58 36.5	-0.2
	comp=N,22nm,1.3s						
P41A	Barry, Barry	25.23	3	P	P	02 58 35.5	-1.6
	baz=185,SNR=7.6						
BLA	Blacksburg	25.26	24	P	P	02 58 36.2	-1.3
	baz=210						
BLA	Blacksburg	25.26	24	eP	P	02 58 39.0	+1.5
	comp=N,18nm,1.0s						
214A	Organ Pipe Nat	25.29	317	P	P	02 58 38.7	+0.8
	baz=130						
X18A	Snowflake	25.32	325	eP	P	02 58 40.3	+2.0
	comp=N,24nm,1.3s						
P45A	Graceland, Par	25.43	9	P	P	02 58 37.8	-1.1
	baz=192						
P45A	Graceland, Par	25.43	9	eP	P	02 58 44.0	+5.1
	comp=N,19nm,0.9s						
VWCC	Virginia Weste	25.46	24	eP	P	02 58 39.4	+0.1
P46A	Rosedale	25.60	10	P	P	02 58 39.5	-1.0
	baz=193						
O38A	Galt	25.63	359	P	P	02 58 39.8	-1.0
	baz=179						
O40A	La Belle	25.64	2	P	P	02 58 38.6	-2.3
	baz=183,SNR=5.7						
P47A	Martinsville	25.64	12	P	P	02 58 38.9	-2.0
	baz=195						
W18A	Petrified Fore	25.65	327	P	P	02 58 41.9	+0.7
	baz=140						
O41A	Passleys Farm,	25.67	3	P	P	02 58 40.0	-1.2
	baz=185,SNR=5.4						
O37A	Wolven Farm, M	25.70	358	P	P	02 58 40.6	-0.8
	baz=178						
O39A	Kirksville	25.76	0	P	P	02 58 41.7	-0.3
	baz=181						
SDCO	Great Sand Dun	25.84	336	P	P	02 58 44.3	+1.2
	baz=152,SNR=45						
SDCO	Great Sand Dun	25.84	336	eP	P	02 58 44.7	+1.6
	comp=N,35nm,1.1s						
O44A	Mansfield	25.94	8	P	P	02 58 43.3	-0.3
	baz=190						
O43A	Sugar Creek Fa	25.97	6	P	P	02 58 43.2	-0.6
	baz=188						
KSCO	Kaye Shedlock'	26.00	342	P	P	02 58 45.1	+0.8
	baz=159						
X16A	Lo Mia Camp, P	26.09	323	eP	P	02 58 47.0	+1.7
	comp=N,7.4nm,0.9s						
O45A	Potomac	26.13	9	P	P	02 58 45.2	-0.1
	baz=192						
HDIL	Hopedale	26.24	6	P	P	02 58 45.6	-0.6
	baz=188						
HDIL	Hopedale	26.24	6	eP	P	02 58 46.6	+0.3
	comp=N,18nm,1.0s						
N41A	Harden Midland	26.27	3	P	P	02 58 46.4	-0.2
	baz=185						
N37A	Lee Faris, Mou	26.29	358	P	P	02 58 45.9	-0.8
	baz=178						
N38A	Joes South For	26.30	359	P	P	02 58 44.8	-2.0
	baz=180,SNR=11						
SFIN	Lafayette	26.36	10	P	P	02 58 47.0	-0.3
	baz=193						
SFIN	Lafayette	26.36	10	eP	P	02 58 47.5	+0.1
	comp=N,4.8nm,0.8s						
S22A	4UR Ranch, Cre	26.38	334	P	P	02 58 48.7	+0.8
	baz=149,SNR=37						
S22A	4UR Ranch, Cre	26.38	334	eP	P	02 58 49.6	+1.7
	comp=N,28nm,1.1s						
N39A	Derby Farms, D	26.38	1	P	P	02 58 46.9	-0.6
	baz=181						
N39A	Derby Farms, D	26.38	1	eP	P	02 58 47.0	-0.6
	comp=N,16nm,1.0s						
O47A	Sheridan	26.39	11	P	P	02 58 46.6	-1.0
	baz=195						
N40A	Mertquake, Sal	26.41	2	P	P	02 58 47.3	-0.5
	baz=183						
N44A	Piper City	26.61	8	P	P	02 58 48.4	-1.3
	baz=191						
N43A	Stutzman Famil	26.63	6	P	P	02 58 49.8	0.0
	baz=188						
MVCO	Mesa Verde	26.67	331	P	P	02 58 51.7	+1.1
	baz=145,SNR=27						
MVCO	Mesa Verde	26.67	331	eP	P	02 58 52.5	+1.9
	comp=N,70nm,1.4s						
Y14A	Wickenburg	26.70	320	eP	P	02 58 51.9	+1.3
	comp=N,18nm,1.3s						
N45A	Kentland	26.75	9	P	P	02 58 50.0	-0.9
	baz=192						
URVA	University of	26.77	28	eP	P	02 58 50.0	-1.1
Q24A	Divide	26.78	338	P	P	02 58 51.1	-0.5
	baz=153						
WUAZ	Wupatki	26.84	325	P	P	02 58 52.6	+0.6
	baz=138,SNR=7.0						
WUAZ	Wupatki	26.84	325	eP	P	02 58 53.4	+1.4
	comp=N,18nm,1.0s						
IP07	Quail	26.84	27	eP	P	02 58 51.8	0.0
	comp=N,15nm,1.0s						
IP06	Yanceyville	26.88	27	eP	P	02 58 52.2	+0.1
	comp=N,9.4nm,1.0s						
IP05	Hopewell Churc	26.89	27	eP	P	02 58 51.9	-0.3
	comp=N,16nm,1.0s						
M38A	Pleasantville	26.92	359	P	P	02 58 51.1	-1.3
	baz=180,SNR=6.5						
N46A	Monticello	26.92	10	P	P	02 58 50.3	-2.1
	baz=194						
M37A	Trindle Farm,	26.93	358	P	P	02 58 52.5	0.0
	baz=178						
IP01	Cuckoo	26.93	27	eP	P	02 58 52.2	-0.3
	comp=N,11nm,0.9s						
M40A	Post Highland	26.93	2	P	P	02 58 50.0	-2.5
	baz=184,SNR=6.7						
M41A	Milan	26.95	4	P	P	02 58 51.7	-1.0
	baz=186						
IP04	Greensprings	26.96	26	eP	P	02 58 52.6	-0.2
	comp=N,7.2nm,0.8s						
M39A	Webster	26.99	1	P	P	02 58 51.4	-1.6
	baz=182,SNR=5.6						
SPRD	Spring Road, M	27.00	27	eP	P	02 58 52.8	-0.3
	comp=N,9.5nm,1.1s						
ACSO	Alum Creek Sta	27.14	17	P	P	02 58 53.4	-1.0
	baz=202						
ACSO	Alum Creek Sta	27.14	17	eP	P	02 58 55.2	+0.8
	comp=N,12nm,1.0s						
M43A	Waltham Townsh	27.14	6	P	P	02 58 53.4	-1.0
	baz=189,SNR=5.7						
M44A	Midewin, Midew	27.21	8	P	P	02 58 53.3	-1.7
	baz=191						
GLA	Glamis	27.30	317	P	P	02 58 55.8	-0.2
	baz=128						
CBN	Corbin Frederi	27.37	27	P	P	02 58 55.2	-1.3
	baz=215						
CBN	Corbin Frederi	27.37	27	eP	P	02 58 56.7	+0.2
	comp=N,26nm,0.9s						
Y12C	Blythe	27.54	318	P	P	02 58 58.7	+0.6
	baz=130						
PV15	Paradox Valley	27.59	333	eP	P	02 59 01.4	+2.7
	comp=N,40nm,1.3s						
PV13	Radium Mtn., P	27.59	332	eP	P	02 59 00.9	+2.1
	comp=N,32nm,1.1s						
PV02	Paradox Valley	27.59	332	eP	P	02 59 01.0	+2.2
	comp=N,44nm,1.4s						
L40A	Anamosa	27.60	3	P	P	02 58 56.2	-2.3
	baz=184,SNR=8.2						
L40A	Anamosa	27.60	3	eP	P	02 58 57.6	-0.9
	comp=N,24nm,1.0s						
L39A	Vinton	27.63	1	P	P	02 58 58.5	-0.3
	baz=182						
L37A	Phoenix Point,	27.64	358	P	P	02 58 58.4	-0.4
	baz=179						
L42A	Oliver, Polo	27.64	5	P	P	02 58 58.5	-0.4
	baz=187						
L42A	Oliver, Polo	27.64	5	eP	P	02 58 59.1	+0.2
	comp=N,21nm,1.3s						
L38A	Oak Wood Farm,	27.64	360	P	P	02 58 58.8	-0.1
	baz=180						
OGNE	Ogallala	27.64	345	P	P	02 58 59.4	+0.4
	baz=161						
PDMCI	Parker Dam,Lak	27.65	320	P	P	02 58 58.8	-0.2
	baz=131,SNR=7.1						
L36A	Harm Buss Farm	27.65	357	P	P	02 58 58.8	-0.2
	baz=177						
L41A	Preston	27.65	4	P	P	02 58 58.2	-0.8
	baz=186						
PV05	Paradox Valley	27.65	332	eP	P	02 59 01.8	+2.5
	comp=N,25nm,1.1s						
SMCO	Snowmass	27.66	336	eP	P	02 59 01.5	+2.0
	comp=N,34nm,1.3s						
PV03	Paradox Valley	27.68	332	eP	P	02 59 01.5	+2.0
	comp=N,

PV18	Skein Mesa, Pa	27.70	332	eP		P	02 59 01.8 +2.0
	comp=N,42nm,1.3s						
PV12	Saucer Basin,	27.71	332	eP		P	02 59 02.1 +2.3
	comp=N,44nm,1.0s						
PV11	David Mesa, Pa	27.73	332	eP		P	02 59 02.1 +2.2
	comp=N,36nm,1.1s						
PV07	Paradox Valley	27.74	333	eP		P	02 59 02.4 +2.3
	comp=N,44nm,1.3s						
PV17	East Wray Mesa	27.75	332	eP		P	02 59 02.3 +2.1
	comp=N,30nm,1.0s						
PV16	Nyswonger Mesa	27.76	332	eP		P	02 59 02.2 +2.0
	comp=N,43nm,1.2s						
PV19	Morning Glory	27.79	332	eP		P	02 59 02.7 +2.2
	comp=N,31nm,1.1s						
PV04	Paradox Valley	27.82	332	eP		P	02 59 02.9 +2.1
	comp=N,51nm,1.1s						
PV14	Lion Creek, Pa	27.86	332	eP		P	02 59 03.8 +2.6
	comp=N,48nm,1.3s						
PV10	Paradox Valley	27.87	332	eP		P	02 59 05.2 +3.9
	comp=N,25nm,1.0s						
PV22	Blue Mesa, Par	27.88	333	eP		P	02 59 03.5 +2.1
	comp=N,38nm,1.2s						
SWSC	Sam W. Stewart	27.89	315	P		P	02 59 02.3 +1.1
	baz=127						
PV23	Carpenter Ridg	27.92	332	eP		P	02 59 03.8 +2.0
	comp=N,27nm,0.9s						
IKP	In-Ko-Pah, Jac	27.94	315	P		P	02 59 02.7 +0.9
	baz=126						
PV21	Cone Mtn., Par	27.99	332	eP		P	02 59 04.4 +2.1
	comp=N,13nm,1.0s						
PV09	Paradox Valley	28.01	332	eP		P	02 59 02.6 0.0
U15A	North Rim	28.01	325	eP		P	02 59 04.7 +2.1
	comp=N,7.7nm,1.0s						
W13A	Hualapai Mount	28.01	321	eP		P	02 59 04.4 +1.8
	comp=N,14nm,1.3s						
W13A				ePcP		PcP	03 02 17.4 +0.8
BC3	Big Chuckawall	28.09	317	P		P	02 59 02.5 -0.6
	baz=128,SNR=13						
K38A	Parkersburg	28.15	0	P		P	02 59 02.1 -1.2
	baz=181						
K41A	Shullsburg	28.19	4	P		P	02 59 03.8 0.0
	baz=186						
IRM	Iron Mountain	28.20	318	P		P	02 59 04.3 +0.3
	baz=130						
K39A	Oelwein	28.22	1	P		P	02 59 02.5 -1.5
	baz=183						
K40A	Colesburg	28.24	3	P		P	02 59 02.1 -2.1
	baz=184,SNR=5.0						
MONP2	Monument Peak	28.29	315	P		P	02 59 05.2 +0.2
	baz=126						
K42A	Prairie Point,	28.44	5	P		P	02 59 05.5 -0.4
	baz=188						
JFWS	Jewell Farm	28.50	4	P		P	02 59 06.0 -0.6
	baz=186						
JFWS	Jewell Farm	28.50	4	eP		P	02 59 06.6 +0.1
	comp=N,11nm,0.9s						
O56A	Blue Knob Stat	28.63	23	P		P	02 59 06.9 -0.8
	baz=210						
BELC	Belle Mtn. Jos	28.66	317	P		P	02 59 08.2 0.0
	baz=128						
N54A	Moraine State	28.73	20	P		P	02 59 07.5 -1.1
	baz=207						
KNB	Kanab	28.73	325	eP		P	02 59 11.0 +2.1
	comp=N,20nm,1.3s						
KNB				ePcP		PcP	03 02 17.3 -0.9
PFO	Pinyon Flats O	28.73	316	P		P	02 59 11.3 +2.4
	comp=N,2.9nm,0.3s,baz=128,slow=2.5,SNR=6.2						
PFO	Pinyon Flats O	28.73	316	P		P	02 59 09.7 +0.9
	baz=127						
PFO	Pinyon Flats O	28.73	316	eP		P	02 59 11.3 +2.4
	comp=N,4.7nm,0.9s						
HWB	Hans Werner Br	28.74	314	eP		P	02 59 14.0 +5.2
LDFC	Landfair	28.76	320	eP		P	02 59 11.5 +2.4
	comp=N,23nm,1.1s						
FRD	Ford Ranch, An	28.76	316	eP		P	02 59 15.1 +6.0
109C	Camp Elliot, M	28.76	314	P		P	02 59 09.0 +0.1
	baz=125						
N23A	Red Feather La	28.77	339	P		P	02 59 10.2 +0.9
	baz=154						
J39A	Decorah	28.85	2	P		P	02 59 08.9 -0.7
	baz=183						
GMRC	Granite Mounta	28.92	319	P		P	02 59 11.1 +0.6
	baz=130						
J40A	Soldiers Grove	28.95	3	P		P	02 59 09.8 -0.7
	baz=185						
LCMT	Little Creek M	28.96	325	eP		P	02 59 12.8 +1.9
	comp=N,7.1nm,1.2s						
J41A	Loganville	28.97	4	P		P	02 59 09.9 -0.8
	baz=186						
PHWY	Pilot Hill	28.97	340	eP		P	02 59 10.9 -0.2
	comp=N,18nm,0.7s						
O20A	White River Ci	28.98	335	P		P	02 59 11.7 +0.6
	baz=149,SNR=7.2						
O20A	White River Ci	28.98	335	eP		P	02 59 13.9 +2.8
	comp=N,20nm,1.1s						
DGR	Domenigoni Val	29.13	315	eP		P	02 59 09.2 -3.1
MTPU	Mount Pierson	29.14	327	eP		P	02 59 15.1 +2.4
	comp=N,14nm,1.4s						
SRU	San Rafael Swe	29.15	331	eP		P	02 59 15.0 +2.4
	comp=N,14nm,1.4s						
SSPA	Standing Stone	29.21	24	P		P	02 59 11.4 -1.4
	baz=211						
SZCU	Shurtz Canyon	29.30	326	eP		P	02 59 16.3 +2.4
	comp=N,20nm,1.2s						
I39A	Houston	29.38	2	P		P	02 59 13.2 -1.1
	baz=183						
I39A	Houston	29.38	2	eP		P	02 59 14.7 +0.4
	comp=N,14nm,1.1s						
CCUT	Cedar City	29.41	325	eP		P	02 59 17.4 +2.4
	comp=N,11nm,1.1s						
ECSD	EROS Data Cent	29.41	354	P		P	02 59 13.5 -1.2
	baz=173,SNR=16						
ECSD	EROS Data Cent	29.41	354	eP		P	02 59 14.4 -0.3
	comp=N,8.7nm,0.9s						
MSU	Marysvale	29.50	328	eP		P	02 59 17.4 +1.7
MSU				ePcP		PcP	03 02 22.0 +1.9
P17A	Butcher Ranch,	29.54	331	eP		P	02 59 17.9 +2.0
	comp=N,26nm,1.5s						
I38A	Scanlan Farm,	29.54	1	P		P	02 59 14.7 -1.1
	baz=182						
TMUT	Trail Mountain	29.62	330	eP		P	02 59 19.0 +2.1
	comp=N,2.9nm,0.7s						
TMUT				ePcP		PcP	03 02 21.8 +1.2
SHPR	Sheep Range	29.72	322	eP		P	02 59 19.6 +1.9
	comp=N,11nm,1.3s						
RPV	Rancho Palos V	30.14	314	epP		pP	02 59 44.3 +10
H38A	Maiden Rock	30.18	1	P		P	02 59 20.3 -1.1
	baz=182						
H40A	Chili	30.19	3	P		P	02 59 20.6 -0.9
	baz=185						
H39A	Augusta	30.21	2	P		P	02 59 21.1 -0.5
	baz=184						
H42A	Shiocton	30.23	6	P		P	02 59 21.0 -0.8
	baz=189						
H35A	Sunnyside Ranc	30.25	357	P		P	02 59 21.6 -0.4
	baz=177						
H32A	Carlson Farm,	30.26	353	P		P	02 59 20.3 -1.9
	baz=172,SNR=6.3						
N59A	State Game Lan	30.31	26	P		P	02 59 21.1 -1.5
	baz=215						
PSUT	Pine Spring	30.39	326	eP		P	02 59 26.0 +2.4
	comp=N,7.1nm,0.9s						
EDW2	Edwards Air Fo	30.50	316	eP		P	02 59 27.7 +3.2
K22A	Casper	30.54	340	P		P	02 59 25.0 +0.2
	baz=154						
K22A	Casper	30.54	340	eP		P	02 59 26.4 +1.6
	comp=N,17nm,1.0s						
TPNV	Topopah Spring	30.67	321	P		P	02 59 27.0 +0.9
	baz=132						
TPNV	Topopah Spring	30.67	321	eP		P	02 59 28.4 +2.4
	comp=N,7.6nm,1.1s						
G38A	Ridgeland	30.68	1	P		P	02 59 24.7 -1.1
	baz=182,SNR=6.3						
SPMN	Marine on St.	30.73	0	P		P	02 59 25.5 -0.6
	baz=181						
SPMN	Marine on St.	30.73	0	eP		P	02 59 21.9 -4.3
	comp=N,12nm,0.9s						
FURC	Furnace Creek,	30.74	320	P		P	02 59 27.0 +0.6
	baz=130						
JLU	Jordanelle	30.76	332	eP		P	02 59 32.1 +5.2
	comp=N,11nm,1.2s						
G39A	Holcombe	30.82	2	P		P	02 59 26.6 -0.5
	baz=184,SNR=5.2						
G33A	Ortonville	30.85	355	P		P	02 59 26.8 -0.5
	baz=174						
MPMC	Manual Prospec	30.88	319	P		P	02 59 28.1 +0.2
	baz=129,SNR=5.9						
CTU	Camp Tracy	30.97	331	eP		P	02 59 31.3 +2.6
	comp=N,13nm,1.3s						
G32A	Webster	31.01	354	P		P	02 59 28.2 -0.5
	baz=172						
G32A	Webster	31.01	354	eP		P	02 59 28.1 -0.7
	comp=N,32nm,1.0s						
DAC	Darwin (Calif)	31.08	319	eP		P	02 59 32.1 +2.4
	comp=N,9.5nm,1.4s						
RSSD	Black Hills	31.14	344	P		P	02 59 30.9 +0.8
	baz=159						
RSSD	Black Hills	31.14	344	eP		P	02 59 31.1 +1.0
	comp=N,7.1nm,1.0s						
TCUT	Toone Canyon	31.16	332	eP		P	02 59 32.8 +2.4
	comp=N,64nm,1.3s						
PAL	Palisades	31.20	28	P		P	02 59 29.1 -1.3
	baz=218						
R11A	Troy Canyon, C	31.22	324	P		P	02 59 31.2 +0.3
	baz=134,SNR=7.2						
R11A	Troy Canyon, C	31.22	324	eP		P	02 59 33.0 +2.1
	comp=N,8.2nm,1.3s						
ISA	Isabella, Lake	31.28	317	P		P	02 59 31.8 +0.5
	baz=127						
ISA	Isabella, Lake	31.28	317	eP		P	02 59 34.6 +3.3
	comp=N,9.8nm,1.4s						
BINY	Binghamton	31.29	24	P		P	02 59 30.0 -1.2
	baz=213,SNR=5.8						
BINY	Binghamton	31.29	24	eP		P	02 59 30.6 -0.6
	comp=N,16nm,0.9s						
F36A	Milaca	31.37	359	P		P	02 59 31.6 -0.2
	baz=179						
GRAC	Grapevine Rang	31.39	320	P		P	02 59 33.2 +1.0
	baz=130						
F39A	Loretta	31.46	3	P		P	02 59 31.7 -0.9
	baz=184						
F38A	Pierce - Schro	31.47	1	P		P	02 59 31.9 -0.9
	baz=182						
CWC	Cottonwood Cre	31.49	319	P		P	02 59 32.6 -0.7
	baz=128						
F40A	Park Falls	31.50	4	P		P	02 59 32.1 -1.0
	baz=186						
HWUT	Hardware Ranch	31.62	333	eP		P	02 59 36.1 +1.7
	comp=N,11nm,1.0s						
HWUT				ePcP		PcP	03 02 26.2 +0.6
BW06	Boulder Array	31.74	336	P		P	02 59 34.8 -0.6
	baz=149						
PD31	Pinedale Array	31.74	336	eP		P	02 59 36.4 +1.0
PDAR	Pinedale Array	31.74	336	P		P	02 59 36.4 +1.0
	comp=N,5.4nm,1.0s,baz=133,slow=8.7,SNR=18						
PDAR				LR		LR	03 13 47.8
	comp=N,270nm,18.1s,baz=154,slow=39						
PDAR	Pinedale Array	31.74	336	eP		P	02 59 35.1 -0.3
PKM	Mcpherson Peak	31.74	315	P		P	02 59 35.7 +0.1
	baz=124						
E39A	Mellen	31.93	3	P		P	02 59 35.9 -1.0
	baz=185						
E36A	McGregor	32.02	359	P		P	02 59 35.8 -1.8
	baz=180,SNR=7.2						
E40A	Wakefield	32.04	4	P		P	02 59 36.4 -1.4
	baz=186						
E34A	Wadena	32.08	357	P		P	02 59 37.7 -0.4
	baz=176						
E35A	Pequot Lakes	32.09	358	P		P	02 59 37.7 -0.4
	baz=178						
E42A	Champion	32.19	6	P		P	02 59 38.5 -0.7
	baz=190						
AHID	Auburn Hatcher	32.36	334	eP		P	02 59 42.3 +1.5
	comp=N,37nm,1.3s						
SADO	Sadowa	32.42	18	P		P	02 59 42.2 +1.1
	comp=N,3.0nm,0.7s,baz=197,slow=6.7,SNR=3.4						
SADO	Sadowa	32.42	18	eP		P	02 59 42.2 +1.1
	comp=N,16nm,1.4s						
PSNM	Stone Corral	32.57	316	eP		P	02 59 49.0 +6.5
D35A	Remer	32.60	358	P		P	02 59 41.6 -1.0
	baz=178						
D37A	Cotton	32.66	0	P		P	02 59 41.8 -1.4
	baz=181,SNR=14						
D36A	Goodland	32.68	360	eP		P	02 59 43.1 -0.2
	comp=N,9.2nm,1.0s						
D36A				ePcP		PcP	03 02 29.0 +0.9
TRY	Troy	32.69	27	eP		P	02 59 43.5 0.0
	comp=N,20nm,1.1s						
REDW	Red Top Meadow	32.75	335	eP		P	02 59 45.9 +1.6
	comp=N,90nm,1.3s						
NV11	Mina Array Sit	32.78	322	eP		P	02 59 46.5 +1.9
	comp=N,1.1nm,0.9s						
OMMB	Old Mammoth Mi	32.79	320	eP		P	02 59 47.3 +2.5
	comp=N,10nm,1.1s						
SNOW	Snow King Moun	32.80	336	eP		P	02 59 46.5 +1.7
	comp=N,58nm,0.8s						
D31A	Mcclaflin, Tow	32.81	354	P		P	02 59 43.4 -1.1
	baz=172						
LOHW	Long Hollow	32.86	336	eP		P	02 59 46.7 +1.4
	comp=N,22nm,1.0s						
NV01	Mina Array Sit	32.87	321	eP		P	02 59 46.8 +1.4
NV01				ePcP		PcP	03 02 29.6 +0.4
NVAR	Mina Array Bea	32.87	321	P		P	02 59 47.3 +1.9
	comp=N,12nm,0.9s,baz=140,slow=8.6,SNR=34						
NVAR				PcP		PcP	03 02 29.6 +0.4
	comp=N,1.7nm,0.8s,baz=155,slow=4.5,SNR=3.8						
NVAR				LR		LR	03 14 49.0
	comp=N,723nm,20.5s,baz=226,slow=39						
TPAW	Teton Pass	32.90	335	eP		P	02 59 47.5 +1.9
	comp=N,75nm,1.3s						
MOOW	Moose Ponds	33.03	336	eP		P	02 59 48.4 +1.7
	comp=N,21nm,1.1s						
FXWY	Fox Creek	33.05	335	eP		P	02 59 48.6 +1.6
	comp=N,14nm,1.0s						
KVN	Kaiserville	33.15	323	eP		P	02 59 49.8 +1.9
	comp=N,8.4nm,1.0s						
C35A	Jirik Farms, M	33.22	359	P		P	02 59 45.8 -2.2
	baz=178,SNR=8.2						
IMW	Indian Meadow	33.23	336	eP		P	02 59 51.2 +2.6
	comp=N,30nm,1.3s						
C38A	Sawbill Land.	33.24	2	P		P	02 59 46.3 -2.0
	baz=183						
EYMN	Ely	33.47	2	P		P	02 59 46.9 -3.3
	baz=183						
NCB	Newcomb	33.48	25	eP		P	02 59 49.2 -1.1
	comp=N,6.5nm,0.9s						
H17A	Grant Village	33.51	337	P		P	02 59 50.0 -0.9
	baz=148						
H17A	Grant Village	33.51	337	eP		P	02 59 53.8 +2.8
	comp=N,22nm,1.1s						
C31A	Landman Farms,	33.55	354	P		P	02 59 48.8 -2.1
	baz=172,SNR=12						
BMN	Battle Mountai	33.58	325	eP		P	02 59 53.5 +2.0
	comp=N,11nm,1.0s						
RLMT	Red Lodge	33.65	339	P		P	02 59 52.1 0.0
	baz=151,SNR=8.6						
RLMT	Red Lodge	33.65	339	eP		P	02 59 53.5 +1.4
	comp=N,33nm,1.5s						
YFT	Old Faithful	33.66	336	eP		P	02 59 55.9 +3.7
	comp=N,18nm,1.0s						
YERR	Yerington	33.79	321	eP		P	02 59 56.2 +2.8
	comp=N,13nm,0.6s						
MDND	Maddock	33.82	352	P		P	02 59 51.9 -1.4
	baz=169,SNR=10						
MDND	Maddock	33.82	352	eP		P	02 59 53.5 +0.2
	comp=N,76nm,0.9s						
B35A	Bob, Littlefor	33.87	359	P		P	02 59 52.4 -1.3
	baz=179,SNR=9.8						
B35A	Bob, Littlefor	33.87	359	eP		P	02 59 53.1 -0.6
	comp=N,15nm,1.0s						
LONY	Lake Ozonia	33.87	24	P		P	02 59 51.9 -1.9
	baz=213,SNR=6.0						
LONY	Lake Ozonia	33.87	24	eP		P	02 59 52.9 -0.9
	comp=N,11nm,1.0s						
AGMN	Agassiz Nation	33.89	356	P		P	02 59 52.6 -1.3
	baz=175,SNR=6.6						
AGMN	Agassiz Nation	33.89	356	eP		P	02 59 53.8 -0.1
	comp=N,8.0nm,0.9s						
B34A	Aery, Baudette	34.02	358	P		P	02 59 53.7 -1.3
	baz=177,SNR=6.1						
LAO	LASA Array	34.10	343	P		P	02 59 54.9 -0.8
	baz=157,SNR=5.9						
LAO	LASA Array	34.10	343	eP		P	02 59 56.6 +0.9
	comp=N,20nm,1.3s						
QLMT	Earthquake Lak	34.20	336	eP		P	02 59 59.7 +2.8
GCMT	Greycliff	34.37	339	eP		P	02 59 59.5 +1.2
FRNY	Flat Rock	34.45	24	eP		P	02 59 57.8 -1.0
	comp=N,5.9nm,0.9s						
HLID	Hailey	34.45	332	P		P	02 59 59.2 +0.1
	baz=142,SNR=10						
HLID	Hailey	34.45	332	eP		P	03 00 00.8 +1.8
	comp=N,11nm,1.1s						
A33A	Warroad	34.51	357	P		P	02 59 58.4 -0.8
	baz=176						
MCMT	McKenzie Canyo	34.77	335	eP		P	03 00 04.3 +2.4
BOZ	Bozeman (W)	34.92	337	P		P	03 00 03.9 +0.9
	baz=148,SNR=18						
BOZ	Bozeman (W)	34.92	337	eP		P	03 00 04.5 +1.4
	comp=N,26nm,1.5s						
MFID	Camas Ranch	35.00	330	eP		P	03 00 05.9 +2.2
	comp=N,7.2nm,1.0s						
BEKR	Beckworth	35.02	322	eP		P	03 00 06.0 +2.1
	comp=N,19nm,1.5s						
DLMT	Dillon	35.11	335	eP		P	03 00 06.5 +1.8
	comp=N,28nm,1.1s						
TRQ	Mont Tremblant	35.24	22	eP		P	03 00 05.4 -0.3
DGMT	Dagmar	35.25	347	P		P	03 00 05.6 -0.1
	baz=161						
DGMT	Dagmar	35.25	347	eP		P	03 00 06.6 +0.9
	comp=N,14nm,0.9s						
LRM	Limekiln Ridge	35.43	336	eP		P	03 00 09.4 +1.9
WVOR	Wild Horse Val	35.73	326	eP		P	03 00 12.2 +2.3
	comp=N,17nm,1.1s						
PTGA	Pitinga	35.81	112	P		P	03 00 10.5 -0.4
	comp=N,28nm,0.7s,baz=302,slow=8.8,SNR=52						
PTGA	Pitinga	35.81	112	eP		P	03 00 10.1 -0.8
	comp=N,34nm,0.8s						
ULM	Lac du Bonnet	35.84	357	P		P	03 00 09.3 -1.3
	comp=N,3.7nm,0.6s,baz=170,slow=10.0,SNR=4.8						
ULM				PcP		PcP	03 02 37.2 +0.1
	comp=N,2.8nm,0.7s,baz=245,slow=5.1,SNR=3.0						
ULM				LR		LR	03 19 01.1
	comp=N,316nm,18.3s,baz=190,slow=43						
ULM	Lac du Bonnet	35.84	357	eP		P	03 00 09.9 -0.7
	comp=N,11nm,1.2s						
O03D	Paynes Creek	36.15	321	P		P	03 00 13.8 +0.2
	baz=128						
J08A	Circle Bar Ran	36.28	328	eP		P	03 00 16.1 +1.4
	comp=N,22nm,0.9s						
MOD	Modoc Plateau	36.28	324	eP		P	03 00 15.9 +1.1
	comp=N,9.0nm,1.0s						
EGMT	Eagleton	36.35	341	P		P	03 00 15.0 -0.2
	baz=152,SNR=11						
EGMT	Eagleton	36.35	341	eP		P	03 00 16.3 +1.1
	comp=N,47nm,1.3s						
EGMT				epP		sP	03 00 36.0 +0.9
PKME	Peaks-Kenny Pk	36.64	28	P		P	03 00 16.1 -1.4
	baz=221						
BMO	Blue Mountains	36.78	330	eP		P	03 00 19.9 +0.9
	comp=N,12nm,1.3s						
MSO	Missoula	36.85	336	P		P	03 00 19.5 +0.1
	baz=145,SNR=13						
MSO	Missoula	36.85	336	eP		P	03 00 20.8 +1.3
	comp=N,22nm,1.2s						
SAML	Samuel	37.44	127	eP		P	03 00 22.4 -2.3
	comp=N,7.7nm,0.9s						
YBH	Yreka Blue Hor	37.57	322	LR		LR	03 15 34.4
	comp=N,531nm,18.9s,baz=150,slow=36						
F10A	Beach Ranch, E	37.59	332	eP		P	03 00 26.7 +1.0
	comp=N,16nm,0.8s						
J04D	Umpqua Nationa	38.17	325	P		P	03 00 32.0 +1.2
	baz=130						
WALA	Waterton Lakes	38.67	338	eP		P	03 00 37.2 +2.4
	comp=N,18nm,1.1s						
I04A	Tendick Farm,	38.69	325	P		P	03 00 35.1 +0.1
	baz=131						
LPAZ	La Paz	39.04	140	P		P	03 00 36.7 -2.1
	comp=N,1.4nm,0.7s,baz=318,slow=9.6,SNR=5.5						
LPAZ				LR		LR	03 15 24.1
	comp=N,337nm,21.8s,baz=319,slow=34						
LPAZ	La Paz	39.04	140	eP		P	03 00 37.5 -1.3
	comp=N,4.9nm,1.2s						
G05D	Wamic, OR	39.06	328	P		P	03 00 39.4 +1.3
	baz=133						
H04A	Detroit Lake	39.15	326	eP		P	03 00 39.9 +1.1
	comp=N,40nm,1.3s						
I03D	Drain, OR	39.16	324	P		P	03 00 39.2 +0.4
	baz=129						
NEW	Newport	39.30	334	P		P	03 00 40.4 +0.4
	baz=142						
LTY	Liberty	40.14	330	eP		P	03 00 48.5 +1.4
	comp=N,22nm,1.4s						
MNMC	Minye Minye	40.41	145	eP		P	03 00 53.3 +3.6
	comp=N,34nm,1.2s						
FFC	Flin Flon	40.87	352	eP		P	03 00 53.3 +0.4
	comp=N,9.5nm,0.9s						
LLLB	Lillooet	43.11	333	eP		P	03 01 12.8 +1.6
	comp=N,28nm,1.4s						
SIV	San Ignacio	43.53	133	P		P	03 01 13.1 -1.9
	comp=N,6.2nm,0.8s,baz=313,slow=9.1,SNR=31						
RPN	Rapa Nui	44.29	201	LR		LR	03 15 15.9
	comp=N,252nm,19.1s,baz=56,slow=30						
FCC	Fort Churchill	44.29	359	eP		P	03 01 20.8 +0.3
	comp=N,9.3nm,0.9s						
SCHQ	Schefferville	45.13	21	LR		LR	03 22 21.8
	comp=N,1µm,18.6s,baz=216,slow=39						
BBB	Bella Bella	47.03	331	LR		LR	03 22 15.4
	comp=N,224nm,18.9s,baz=174,slow=37						
YKA	Yellowknife Ar	50.46	347	P		P	03 02 08.8 +0.4
	comp=N,22nm,0.9s,baz=147,slow=7.7,SNR=129						
YKA				PcP		PcP	03 03 25.8 -0.1
	comp=N,1.4nm,0.8s,baz=157,slow=3.7,SNR=4.0						
YKA				LR		LR	03 26 57.6
	comp=N,13nm,18.7s,baz=216,slow=40						
YKW3	Yellowknife Ar	50.52	347	eP		P	03 02 09.3 +0.5
	comp=N,39nm,1.0s						
DLBC	Dease Lake	51.97	336	LR		LR	03 27 22.9
	comp=N,362nm,18.6s,baz=124,slow=39						
DLBC	Dease Lake	51.97	336	eP		P	03 02 22.6 +2.7
	comp=N,31nm,1.2s						
CPUP	Villa Florida	53.19	139	P		P	03 02 26.8 -2.5
	comp=N,2.2nm,0.9s,baz=328,slow=12,SNR=3.8						
CPUP				LR		LR	03 25 02.0
	comp=N,119nm,19.7s,baz=338,slow=36						
CPUP	Villa Florida	53.19	139	eP		P	03 02 26.8 -2.5
	comp=N,9.3nm,1.1s						
TGL	Tana Glacier	58.60	334	eP		P	03 03 09.5 +1.9
	comp=N,36nm,1.4s						
PLCA	Paso Flores	58.61	160	P		P	03 03 06.9 -0.9
	comp=N,4.3nm,1.0s,baz=9.4,slow=11,SNR=3.6						
PLCA				LR		LR	03 24 12.2
	comp=N,192nm,18.0s,baz=24,slow=32						
PLCA	Paso Flores	58.61	160	eP		P	03 03 10.7 +2.8
	comp=N,22nm,1.2s						
DAWY	Dawson	59.02	338	eP		P	03 03 10.8 +0.4
	comp=N,7.8nm,1.4s						
RAGM	Ragged Mountai	59.23	333	eP		P	03 03 14.1 +2.2
	comp=N,18nm,1.0s						
SFJD	Kangerlussuaq	59.38	18	LR		LR	03 30 43.0
	comp=N,838nm,18.0s,baz=230,slow=38						
BMRM	Bremner River	59.47	334	eP		P	03 03 15.6 +2.1
	comp=N,14nm,1.1s						
INK	Inuvik	59.84	344	LR		LR	03 34 60.0
	comp=N,266nm,18.6s,baz=121,slow=42						
INK	Inuvik	59.84	344	eP		P	03 03 16.9 +1.1
	comp=N,51nm,1.4s						
RCBR	Riachuelo	59.90	106	eP		P	03 03 17.7 +0.4
	comp=N,22nm,0.9s						
EGAK	Eagle	60.05	338	eP		P	03 03 17.9 +0.5
	comp=N,7.6nm,1.0s						
KLU	Klutina	60.27	334	eP		P	03 03 20.8 +1.7
	comp=N,16nm,1.0s						
RES	Resolute Bay

BWN	Browne	62.91	336	eP		P		03 03 37.5	+0.8
	comp=N,64nm,1.0s								
RSO	Redoubt South	62.93	331	eP		P		03 03 40.5	+3.4
TRF	Thorofare Moun	62.94	335	eP		P		03 03 38.0	+0.9
	comp=N,27nm,1.1s								
BPAW	Bear Paw Mtn.	63.49	335	eP		P		03 03 40.7	+0.1
	comp=N,11nm,1.0s								
PPLA	Purkeypile	63.53	334	eP		P		03 03 41.8	+0.8
	comp=N,27nm,1.4s								
MLY	Manley	63.76	336	eP		P		03 03 42.7	+0.3
	comp=N,13nm,1.0s								
TOLK	Toolik Lake Re	64.88	340	P		P		03 03 48.7	-1.0
	baz=117,SNR=10.0								
TOLK	Toolik Lake Re	64.88	340	eP		P		03 03 50.8	+1.1
	comp=N,13nm,1.1s								
EKA	Eskdalemuir Ar	78.10	36	P		P		03 05 07.6	-1.9
	comp=N,7.2nm,0.8s,baz=279,slow=5.6,SNR=35								
EKA				LR		LR		03 40 33.4	
	comp=N,194nm,18.0s,baz=275,slow=36								
SPITS	Spitsbergen Ar	79.85	11	LR		LR		03 43 49.3	
	comp=N,414nm,19.1s,baz=265,slow=38								
ESDC	Sonseca Array	80.08	52	P		P		03 05 19.5	-1.2
	comp=N,2.5nm,0.8s,baz=290,slow=5.5,SNR=18								
ES19	SONSECA Array	80.13	52	eP		P		03 05 19.5	-1.5
BILL	Bilibino	80.80	338	eP		P		03 05 24.9	+1.0
	comp=N,21nm,1.0s								
MDT	Midelt	80.85	58	LR		LR		03 37 33.7	
	comp=N,118nm,19.9s,baz=306,slow=33								
PMSA	Palmer Station	81.91	168	LR		LR		03 34 52.3	
	comp=N,92nm,18.1s,baz=311,slow=30								
NB2	NORSAR Subarra	84.17	28	P		P		03 05 41.9	+0.3
	comp=Z,5.8nm,0.9s,baz=288,slow=5.1								
NOA	NORSAR Array B	84.17	28	LR		LR		03 41 16.4	
	comp=Z,250nm,22.0s,baz=280,slow=34								
WLF	Walferdange	84.85	40	⇑P		P		03 05 45.0	-0.3
KOWA	Kowa	85.34	76	P		P		03 05 47.8	-0.6
	comp=Z,8.3nm,0.8s,baz=286,slow=10,SNR=15								
KOWA				LR		LR		03 42 15.7	
	comp=Z,120nm,19.8s,baz=272,slow=34								
HFS	Hagfors	85.63	29	LR		LR		03 41 58.9	
	comp=Z,245nm,22.0s,baz=287,slow=34								
ARCES	ARCESS Array B	86.00	18	P		P		03 05 51.2	+0.6
	comp=Z,1.6nm,0.7s,baz=259,slow=2.5,SNR=4.1								
ARCES				LR		LR		03 45 23.8	
	comp=Z,298nm,18.1s,baz=288,slow=36								
ARA0	ARCESS Array S	86.00	18	eP		P		03 05 51.2	+0.6
TIC	Toumodi	86.24	84	eP		P		03 05 52.0	-0.9
LIC	Lamto	86.33	85	eP		P		03 05 52.7	-0.6
	comp=Z,53nm,1.3s								
DBIC	Dimbokro	86.39	84	P		P		03 05 53.0	-0.6
	comp=Z,4.4nm,0.8s,baz=322,slow=8.1,SNR=4.1								
DBIC				LR		LR		03 42 05.2	
	comp=Z,70nm,20.4s,baz=265,slow=34								
DBIC	Dimbokro	86.39	84	eP		P		03 05 53.0	-0.6
	comp=Z,28nm,1.4s								
BNI	Bardonecchia	86.50	44	eP		P		03 05 54.0	+0.2
	comp=Z,7.3nm,1.3s								
SENIN	Lac Senin/Sane	86.53	43	eP		P		03 05 54.3	+0.3
	comp=Z,13nm,1.4s								
KIC	Kosan Boka	86.58	84	eP		P		03 05 54.1	-0.4
	comp=Z,348nm,2.4s								
TUE	Stuetta	87.85	43	eP		P		03 06 00.2	-0.1
	comp=Z,4.3nm,1.0s								
FUORN	Ofenpass-Fuorn	88.40	42	eP		P		03 06 03.1	+0.1
	comp=Z,5.4nm,1.0s								
CLL	Collm	88.47	37	eP		P		03 06 03.0	+0.1
CLL				ePS		PS		03 18 00.0	+5.6
CLL				LmV				03 46 00.0	
	comp=Z,200nm,20.7s								
BRG	Berggiesshubel	89.18	37	eP		P		03 06 07.1	+0.9
	comp=Z,2.3nm,1.0s								
TIXI	Tiksi	89.70	348	eP		P		03 06 08.2	0.0
	comp=Z,8.1nm,0.9s								
GEC2	GERESS Array S	89.79	39	eP		P		03 06 08.7	-0.6
	comp=Z,2.1nm,1.0s								
GERES	GERESS Array B	89.79	39	P		P		03 06 08.7	-0.6
	comp=Z,1.3nm,0.9s,baz=316,slow=3.7,SNR=8.9								
GERES				LR		LR		03 45 41.7	
	comp=Z,137nm,19.0s,baz=286,slow=35								
GEA0	GERESS Array S	89.80	39	eP		P		03 06 08.8	-0.5
FIA0	FINESS Array S	90.47	25	eP		P		03 06 11.7	-0.3
FINES	FINESS Array B	90.47	25	P		P		03 06 11.7	-0.3
	comp=Z,6.7nm,1.1s,baz=279,slow=3.7,SNR=6.2								
FINES				LR		LR		03 48 27.3	
	comp=Z,190nm,18.5s,baz=292,slow=37								
THTN	Thala	90.82	53	eP		P		03 06 14.6	+0.2
	comp=Z,5.0nm,0.9s								
TOA1	Torodi Ar. Sit	91.04	76	eP		P		03 06 14.0	-1.6
TORD	Torodi Ar. Bea	91.05	76	P		P		03 06 14.0	-1.7
	comp=Z,0.9nm,0.7s,baz=294,slow=4.2,SNR=12								
TORD				LR		LR		03 44 59.0	
	comp=Z,128nm,20.1s,baz=255,slow=34								
KEST	Kesra	91.28	53	P		P		03 06 15.9	-0.6
	comp=Z,1.9nm,0.9s,baz=295,slow=5.3,SNR=3.4								
KEST	Kesra	91.28	53	eP		P		03 06 15.9	-0.6
	comp=Z,6.9nm,1.1s								
MORC	Moravsky Berou	91.74	37	eP		P		03 06 18.4	+0.2
	comp=Z,3.4nm,1.0s								
TAM	Tamanrasset	91.97	66	eP		P		03 06 20.7	+0.7
	comp=Z,4.1nm,1.2s								
VAE	Valguarnera	94.50	50	LR		LR		03 46 19.0	
	comp=Z,237nm,19.5s,baz=342,slow=34								
AKASG	Malin Array Be	97.82	33	LR		LR		03 54 19.5	
	comp=Z,113nm,18.2s,baz=270,slow=38								
MLR	Muntele Rosu	98.76	39	LR		LR		03 52 02.8	
	comp=Z,21nm,20.0s,baz=309,slow=36								
ZAA1	Zalesovo Array	111.89	2	ePP		PP		03 12 29.7	+1.9
ZALV	Zalesovo Beam	111.90	2	PP		PP		03 12 29.7	+1.9
	comp=Z,0.5nm,0.4s,baz=324,slow=7.3,SNR=3.7								
KURK	Kurchatov	114.73	6	ePKiKP		PKiKP		03 11 49.6	-1.2
KURBB	Kurchatov Arra	114.81	6	PKP		PKPdf		03 11 49.6	-1.3
	comp=Z,0.7nm,0.6s,baz=354,slow=2.3,SNR=5.3								
MK32	Makanchi Array	118.93	4	ePKPdf		PKPdf		03 11 58.3	-0.8
MKAR	Makanchi Array	118.93	4	PKP		PKPdf		03 11 58.3	-0.8
	comp=Z,1.0nm,0.8s,baz=322,slow=3.4,SNR=6.9								
HHC	Hu-ho-hao-te	120.57	339	ePKP		PKPdf		03 12 00.8	-1.7
HHC				AMB		AMB			
	comp=Z,89nm,6.9s								
BOSA	Boshof	121.23	115	PKP		PKPdf		03 12 05.7	+1.6
	comp=Z,5.1nm,0.8s,baz=145,slow=1.0,SNR=8.6								
WMQ	Urumqi	122.06	360	ePKP		PKPdf		03 12 05.8	+0.5
WMQ				AMB		AMB			
	comp=Z,190nm,6.1s								
WMQ				LR		LR			
	comp=Z,480nm,21.7s								
NJ2	Nanjing	124.74	327	ePKP		PKPdf		03 12 11.1	+0.5
GTA	Gaotai	125.19	348	ePKP		PKPdf		03 12 15.3	+3.8
KSH	Kashi	125.35	11	PKP		PKPdf		03 12 10.8	-1.0
KSH				PP		PP		03 14 04.8	+3.7
KSH				AMB		AMB			
	comp=Z,240nm,4.9s								
LZH	Lanzhou	127.38	343	ePKP		PKPdf		03 12 14.0	-1.8
LZH				LR		LR			
	comp=Z,230nm,18.2s								
LZH				LR		LR			
	comp=Z,240nm,18.1s								
LZH				LR		LR			
	comp=Z,270nm,20.2s								
STKA	Stephens Creek	127.57	241	PKP		PKPdf		03 12 15.1	-0.9
	comp=Z,3.8nm,0.9s,baz=306,slow=5.6,SNR=5.0								
CD2	Chengdu	132.22	341	PKP		PKPdf		03 12 24.3	-0.7
WR1	Warramunga Arr	134.73	256	ePKPdf		PKPdf		03 12 28.8	-1.0
WRA	Warramunga Arr	134.73	256	PKP		PKPdf		03 12 28.8	-1.0
	comp=Z,1.2nm,0.7s,baz=85,slow=1.9,SNR=7.2								
AS31	Alice Springs	135.06	251	ePKPdf		PKPdf		03 12 28.4	-2.1
ASAR	Alice Springs	135.06	251	PKP		PKPdf		03 12 28.4	-2.1
	comp=Z,0.4nm,0.5s,baz=89,slow=3.0,SNR=4.6								
GYA	Guiyang	135.19	335	ePdif		Pdif		03 09 31.3	-1.6
GYA				PKP		PKPdf		03 12 30.6	-0.2
GYA				PP		PP		03 15 09.4	+4.1
GYA				AMB		AMB			
	comp=Z,120nm,7.9s								
CM31	Chiang Mai Arr	145.36	340	ePKPbc		PKPbc		03 12 49.0	0.0
CMAR	Chiang Mai Arr	145.36	340	PKPbc		PKPbc		03 12 49.0	0.0
	comp=Z,13nm,0.9s,baz=343,slow=4.2,SNR=32								
PSI	Prapat	159.33	325	PKPab		PKPab		03 13 46.8	-0.5
	comp=Z,5.6nm,0.7s,baz=1.6,slow=0.6,SNR=5.1								

IDC 18 03:04:48.0±1.6, 1°.08N×126°.26E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.7/57, mbtmp3.9/5, MS4.0/3, Ms1 3.9/3, ms1mx3.0/53, Error ellipse: s-maj=183.7km s-min=19.5km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	5.37	111	LR	LR	03 08 50.7	
	comp=Z,38nm,19.2s,baz=186,slow=45						
WRA	Warramunga Arr	22.35	160	P	P	03 09 47.1	-0.6
	0.8nm,0.4s,baz=338,slow=10,SNR=11						
ASAR	Alice Springs	25.70	164	P	P	03 10 20.4	+0.4
	0.9nm,0.5s,baz=348,slow=13,SNR=8.8						
MKAR	Makanchi Array	59.47	326	P	P	03 14 53.1	+0.3
	1.1nm,0.5s,baz=119,slow=8.1,SNR=14						
KURBB	Kurchatov Arra	63.72	328	P	P	03 15 21.3	0.0
	2.2nm,0.7s,baz=128,slow=6.0,SNR=23						
BVAR	Borovoye Array	69.28	328	P	P	03 15 56.7	-0.3
	0.3nm,0.4s,baz=106,slow=5.2,SNR=3.5						
NRIK	Noril'sk	72.88	347	LR	LR	03 51 57.6	
	comp=Z,126nm,20.0s,baz=16,slow=39						
GNI	Garni	82.81	310	LR	LR	03 59 10.7	
	comp=Z,74nm,21.5s,baz=337,slow=39						
KBZ	Khabaz	84.45	314	LR	LR	04 00 14.3	
	comp=Z,60nm,19.6s,baz=318,slow=39						

*IDC **18** 03:17:30.8±4.0, 51°.79N×173°.70W, h18km±24km, mb4.3/37, mb1 4.4/39, mb1mx4.3/78, mbtmp4.4/39, ML4.0/2, MS3.5/17, Ms1 3.5/17, ms1mx3.3/75, Error ellipse: s-maj=15.6km s-min=9.6km az=164.0*

*ISCJB **18** 03:17:32.6±0.4, 51°.65N±0°.04×173°.59W±0°.02, h52km±3km, mb4.7/182, MS3.6/19, Error ellipse: s-maj=6.3km s-min=2.4km az=173.8*

*BJI **18** 03:17:33.5, 51°.80N×173°.70W, h53km, mb4.9/28, mB5.1/8, Ms4.4/3, Ms7 4.3/1*

*NEIC **18** 03:17:33.0±0.0, 51°.63N×173°.74W, h38km, mb4.7/149, ML4.0(AEIC), After AEIC.*

*MOS **18** 03:17:33.0±0.9, 51°.78N×173°.72W, h45km, mb4.8/45, Error ellipse: s-maj=8.4km s-min=5.9km az=86.0*

ISC 18 03:17:33.9±0.8, 51°.71N±0°.07×173°.71W±0°.03, h41km±6km, n739, σ1$05/740, mb4.7/186, MS3.6/19, 23C-6D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	Atka Island	0.58	329	P	Pn	03 17 45.5	-0.3
ATKA				S	Sn	03 17 55.0	+0.9
KOFP	Korovin Flat P	0.62	337	P	Pn	03 17 46.6	+0.3
KOKL	Mount Kliuchef	0.69	334	P	Pn	03 17 47.6	+0.3
KOWE	Korovin West	0.74	333	P	Pn	03 17 48.5	+0.6
GSTR	Great Sitkin T	1.51	286	P	Pn	03 17 58.7	+0.3
ETKA	Kagalaska Isla	1.68	276	P	Pn	03 17 59.5	-1.4
ADAG	Mount Adagdak	1.82	280	P	Pn	03 18 02.5	-0.1
KINC	Kanaga Island	2.13	277	P	Pn	03 18 07.5	+0.5
KIKV	Kanaga Island	2.16	276	P	Pn	03 18 07.1	-0.2
KICM	Kanaga Island	2.18	277	P	Pn	03 18 07.6	+0.1
TAPA	Tanaga Point A	2.55	274	P	Pn	03 18 12.8	0.0
GALAA	Gareloi Lava P	3.15	273	P	Pn	03 18 22.0	+1.0
NIKH	Nikolski High	3.24	65	P	Pn	03 18 22.2	0.0
NIKH				S	Sn	03 19 00.4	+1.0
OKAK	Okmok	3.76	58	P	Pn	03 18 29.9	+0.6
OKTU	Okmok Mt. Tuli	3.84	62	P	Pn	03 18 32.2	+1.6
OKER	Okmok East Rim	3.87	61	P	Pn	03 18 34.0	+3.1
CERAA	Semis' Rag'd T	4.11	275	P	Pn	03 18 34.6	+0.5
CERB	Semis' Cerberu	4.14	276	P	Pn	03 18 35.7	+1.1
CEAP	Semis' Anvil P	4.17	277	P	Pn	03 18 36.2	+1.2
CESW	Semis' Southwe	4.18	275	P	Pn	03 18 35.7	+0.5
CETU	Semis' Tuman	4.22	276	P	Pn	03 18 36.5	+0.8
AMKA	Amchitka	4.38	268	P	Pn	03 18 37.5	-0.3
AMKA				S	Sn	03 19 30.2	+2.7
LSPA	Little Sitkin	4.79	276	P	Pn	03 18 44.4	+0.9
LSNW	Little Sitkin	4.83	276	P	Pn	03 18 44.8	+0.8
LSSA	Little Sitkin	4.83	276	P	Pn	03 18 45.0	+1.0
UNV	Unalaska Valle	4.87	61	P	Pn	03 18 45.5	+1.0
UNV				S	Sn	03 19 41.2	+1.7
AKMO	Akutan Morgan	5.23	60	P	Pn	03 18 51.9	+2.3
AKMO				S	Sn	03 19 51.9	+3.3
AKUT	Akutan	5.38	60	ePn	Pn	03 18 54.4	+2.9
SPIA	Saint Paul Isl	5.84	19	P	Pn	03 19 00.9	+3.1
FALS	False Pass	6.93	59	ePn	Pn	03 19 14.3	+1.6
SMY	Shemya	7.56	283	ePn	Pn	03 19 26.8	+5.4
SMY	Shemya	7.56	283	eP	Pn	03 19 26.8	+5.4
SDPT	Sand Point	8.68	60	ePn	Pn	03 19 35.6	-1.2
KDAK	Kodiak Island	13.60	55	Pn	Pn	03 20 40.8	-3.1
	0.9nm,0.3s,baz=229,slow=8.0,SNR=8.5						
KDAK	Kodiak Island	13.60	55	ePn	Pn	03 20 45.2	+1.2
KDAK	Kodiak Island	13.60	55	ceP	Pn	03 20 43.5	-0.4
ANM	Nome	13.61	15	ePn	Pn	03 20 46.4	+2.4
ANM	Nome	13.61	15	eP	Pn	03 20 46.4	+2.4
SVW2	Sparrevohn	13.70	40	ePn	Pn	03 20 48.5	+3.1
SKT	Skwentna	15.81	41	ePn	Pn	03 21 13.2	-0.2
	12nm,1.1s						
PPLA	Purkeypile	16.05	37	ePn	Pn	03 21 16.0	-0.5
	43nm,1.6s						
GHO	Glory Hole Cre	16.81	44	ePn	Pn	03 21 26.4	+0.4
	9.1nm,0.6s						
TRF	Thorofare Moun	17.08	37	ePn	P	03 21 30.6	-0.1
	14nm,1.1s						
BPAW	Bear Paw Mtn.	17.18	35	ePn	P	03 21 31.8	0.0
	28nm,1.3s						
PETK	Petropavlovsk-	17.46	286	P	Pn	03 21 33.6	-0.4
	0.8nm,0.3s,baz=87,slow=14,SNR=13						
PETK				LR	LR	03 28 13.3	
	comp=Z,48nm,18.5s,baz=96,slow=37						
PETK	Petropavlovsk-	17.46	286	ePn	P	03 21 36.7	+1.8
SCM	Sheep Creek Mo	17.52	44	ePn	Pn	03 21 34.7	-0.1
	14nm,0.8s						
SCM	Sheep Creek Mo	17.52	44	eP	Pn	03 21 34.7	-0.1
SCM				pmax	pmax		
	comp=Z,14nm,0.8s						
RND	Reindeer	17.60	39	ePn	Pn	03 21 35.4	-0.5
	comp=Z,8.8nm,0.7s						
RND	Reindeer	17.60	39	eP	Pn	03 21 35.4	-0.5
RND				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MCK	McKinley	17.74	38	ePn	Pn	03 21 37.0	-0.5
	comp=Z,12nm,0.8s						
MCK	McKinley	17.74	38	eP	Pn	03 21 37.0	-0.5
MCK				pmax	pmax		
	comp=Z,12nm,0.8s						
BWN	Browne	17.77	36	ePn	P	03 21 39.5	+1.2
	comp=Z,50nm,1.2s						
MLY	Manley	17.83	33	ePn	P	03 21 40.1	+1.2
	comp=Z,16nm,0.8s						
DIV	Divide	17.96	47	ePn	P	03 21 40.4	0.0
	comp=Z,21nm,1.5s						
KLU	Klutina	18.02	46	eP	P	03 21 41.2	+0.1
	comp=Z,27nm,1.5s						
DHY	Denali Highway	18.03	41	eP	P	03 21 41.6	+0.3
	comp=Z,21nm,1.5s						
WRH	Wood River Hil	18.44	36	eP	P	03 21 44.0	-1.6
	comp=Z,8.3nm,0.8s						
BMRM	Bremner River	18.45	49	eP	P	03 21 45.4	-0.5
	comp=Z,8.2nm,0.8s						
CCB	Clear Creek Bu	18.64	36	eP	P	03 21 46.3	-1.4
	comp=Z,10nm,0.8s						
MDM	Murphy Dome	18.65	35	eP	Pn	03 21 48.9	+0.3
	comp=Z,11nm,1.2s						
PAX	Paxson	18.77	42	eP	Pn	03 21 50.5	+0.3
	comp=Z,7.1nm,1.0s						
PAX	Paxson	18.77	42	P	Pn	03 21 50.4	+0.3
PAX				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SKR	Severo-Kuril's	18.88	279	eP	Pn	03 21 56.3	+4.9
SKR				pmax	pmax		
	comp=Z,45nm,0.9s						
SKR				pmax	pmax		
	comp=Z,200nm,3.8s						
SKR				pmax	pmax		
	comp=Z,100nm,4.7s						
SKR				MLR	MLR		
	comp=Z,200nm,15.0s						
IL1	Eielson Array	19.04	36	eP	P	03 21 50.3	-1.9
ILAR	Eielson Array	19.04	36	P	P	03 21 50.1	-2.1
	comp=Z,1.4nm,0.3s,baz=234,slow=11,SNR=88						
ILB	Eielson Array	19.04	36	eP	P	03 21 50.4	-1.8
BILL	Bilibino	19.05	337	eP	P	03 21 52.6	+0.4
	comp=Z,15nm,1.0s						
BILL	Bilibino	19.05	337	i P	Pn	03 21 53.0	-0.3
BILL				pmax	pmax		
	comp=Z,4.0nm,0.4s						
BILL				MLR	MLR		
	comp=Z,193nm,21.0s						
CRQM	Cirque	19.09	50	eP	Pn	03 21 54.2	+0.3
	comp=Z,37nm,1.4s						
RIDG	Independ'e Rid	19.35	40	eP	P	03 21 55.7	+0.1
	comp=Z,15nm,0.6s						
DOT	Dot Lake	19.63	41	eP	P	03 21 58.6	0.0
	comp=Z,24nm,0.7s						
SCRK	Sand Creek	19.79	40	eP	P	03 21 59.3	-1.2
	comp=Z,21nm,0.5s						
TOLK	Toolik Lake Re	20.54	25	P	P	03 22 09.0	+0.5
	baz=226,SNR=13						
TOLK	Toolik Lake Re	20.54	25	eP	P	03 22 09.2	+0.7
	comp=Z,14nm,0.8s						
SEY	Seymchan	21.20	315	P	P	03 22 15.9	+0.4
	comp=Z,5.8nm,0.8s,baz=108,slow=10,SNR=10						
SEY	Seymchan	21.20	315	i P	P	03 22 15.5	0.0
EGAK	Eagle	21.24	40	eP	P	03 22 15.7	-0.4
	comp=Z,48nm,0.7s						
MA2	Magadan	21.32	306	LR	LR	03 30 14.9	
	comp=Z,137nm,19.5s,baz=96,slow=36						
DAWY	Dawson	21.71	42	eP	P	03 22 19.7	-1.4
	comp=Z,7.2nm,0.6s						
INK	Inuvik	25.39	34	P	P	03 22 56.3	-0.5
	comp=Z,8.3nm,0.8s,baz=230,slow=9.6,SNR=4.0						
DLBC	Dease Lake	25.51	58	P	P	03 22 59.2	+1.0
	comp=Z,15nm,1.0s,baz=273,slow=11,SNR=20						
DLBC	Dease Lake	25.51	58	eP	P	03 23 00.2	+2.0
	comp=Z,12nm,0.8s						
BBB	Bella Bella	27.76	71	LR	LR	03 33 55.9	
	comp=Z,127nm,18.2s,baz=205,slow=36						
YSS	Yuzh-Sakhalins	28.44	278⇑	eP	P	03 23 25.1	+0.6
YSS				e		03 23 39.6	
YSS				e		03 23 45.9	
YSS				pmax	pmax		
	comp=N,10.0nm,0.7s						
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
YSS				pmax	pmax		
	comp=E,10.0nm,0.8s						
ASAJ	Asahikawa	29.88	273	P	P	03 23 38.1	+0.8
	comp=E,19nm,0.8s,baz=39,slow=4.6,SNR=23						
ASAJ				LR	LR	03 35 06.3	
	comp=E,79nm,20.6s,baz=347,slow=35						
ASAJ	Asahikawa	29.88	273	eP	P	03 23 38.1	+0.8
	comp=E,22nm,0.8s						
ERM	Erimo	30.64	269	i P	P	03 23 45.3	+1.3
ERM				pmax	pmax		
	comp=Z,4.0nm,0.4s						
TIXI	Tiksi	31.94	330	P	P	03 23 54.4	-0.8
	comp=Z,0.6nm,0.3s,baz=97,slow=11,SNR=2.9						
TIXI				PcP	PcP	03 26 44.6	+0.3
	comp=Z,1.0nm,0.4s,baz=32,slow=1.6,SNR=5.9						
TIXI	Tiksi	31.94	330	ceP	P	03 23 55.6	+0.5
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.0s						
YKA	Yellowknife Ar	32.68	48	P	P	03 24 00.9	-0.8
	comp=Z,1.3nm,0.7s,baz=270,slow=8.3,SNR=14						
YKA				PcP	PcP	03 26 47.1	+0.6
	comp=Z,2.6nm,0.7s,baz=286,slow=3.3,SNR=21						
YKA				ScP	ScP	03 30 30.1	+3.3
	comp=Z,0.2nm,0.6s,baz=280,slow=2.8,SNR=3.4						
YKA				LR	LR	03 37 29.0	
	comp=Z,20nm,18.5s,baz=236,slow=37						
B05A	Bryant	32.80	75	P	P	03 24 03.3	+0.4
	baz=296						
KLR	Kul'dur	34.13	288	P	P	03 24 12.9	-1.6
	comp=Z,0.3nm,0.5s,baz=62,slow=8.0,SNR=15						
KLR	Kul'dur	34.13	288	i P	P	03 24 14.9	+0.4
B08A	Colville Reser	34.41	74	eP	P	03 24 18.1	+1.0
	comp=Z,10nm,0.8s						
I04A	Tendick Farm,	34.75	82	P	P	03 24 20.8	+0.8
	baz=302						
L02D	Cave Junction,	34.89	86	P	P	03 24 22.6	+1.4
	baz=303						
H11N2	WAKE ISLAND Hy	35.35	213	T	T	04 02 30.4	
	baz=21,slow=76,SNR=31						
H11N3	WAKE ISLAND Hy	35.36	213	T	T	04 02 25.8	
	baz=21,slow=76,SNR=50						
H11N1	WAKE ISLAND Hy	35.37	213	T	T	04 02 29.5	
	baz=21,slow=76,SNR=44						
YBH	Yreka Blue Hor	35.68	86	LR	LR	03 35 31.6	
	comp=Z,73nm,21.5s,baz=308,slow=30						
J05D	Fort Rock, OR	35.75	82	P	P	03 24 29.0	+0.3
	baz=302						
NEW	Newport	35.77	73	P	P	03 24 29.0	+0.3
	baz=297,SNR=7.0						
NEW	Newport	35.77	73	eP	P	03 24 29.4	+0.7
	comp=Z,9.9nm,0.8s						
NEW	Newport	35.77	73	eP	P	03 24 29.4	+0.7
NEW				pmax	pmax		
	comp=Z,10.0nm,0.8s						
USRK	Ussuriysk Ar.	36.39	280	P	P	03 24 34.2	+0.2
	comp=Z,6.2nm,0.7s,baz=64,slow=7.8,SNR=8.7						
H11S1	WAKE ISLAND Hy	36.56	212	T	T	04 03 45.8	
	baz=20,slow=76,SNR=96						
H11S2	WAKE ISLAND Hy	36.57	212	T	T	04 03 47.1	
	baz=20,slow=76,SNR=107						
H11S3	WAKE ISLAND Hy	36.57	212	T	T	04 03 47.7	
	baz=20,slow=76,SNR=52						
MAJO	Matsushiro	36.98	265	eP	P	03 24 40.2	+1.0
	comp=Z,7.7nm,0.7s						
MAJO	Matsushiro	36.98	265	eP	P	03 24 40.2	+1.0
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MAT	Matsushiro	36.98	265	P	P	03 24 39.9	+0.8

DUG pmax pmax
comp=Z,14nm,1.4s
KSRS Korea Array 42.80 274 P **P** **03 25 28.4 +1.0**
comp=Z,8.4nm,0.7s,baz=55,slow=7.6,SNR=41
KSRS PcP **PcP** **03 27 18.6 +0.7**
comp=Z,1.3nm,0.8s,baz=60,slow=2.6,SNR=4.4
KSRS LR LR 03 41 00.7
comp=Z,54nm,20.9s,baz=72,slow=33
KS01 Wonju Array Si 42.80 274 *e*P **P** **03 25 27.8 +0.4**
KS15 Wonju Array Si 42.83 274 *e*P **P** **03 25 28.7 +1.1**
KSAR Wonju Array Be 42.83 274 P **P** **03 25 28.4 +0.8**
KSAR PcP **PcP** **03 27 18.6 +0.5**
KSAR Wonju Array Be 42.83 274 P **P** **03 25 28.4 +0.8**
KSAR 03 27 18.7
LAO LASA Array 42.96 69 P **P** **03 25 29.0 +0.3**
baz=302
BW06 Boulder Array 43.16 76 P **P** **03 25 30.7 +0.1**
baz=305,SNR=13
BW06 Boulder Array 43.16 76 *e*P **P** **03 25 30.9 +0.3**
comp=Z,14nm,1.1s
PD31 Pinedale Array 43.16 76 *e*P **P** **03 25 31.1 +0.6**
PDAR Pinedale Array 43.16 76 P **P** **03 25 30.9 +0.3**
comp=Z,4.5nm,0.5s,baz=306,slow=5.0,SNR=44
PDAR LR LR 03 41 14.8
comp=Z,84nm,20.0s,baz=4.0,slow=33
PDAR Pinedale Array 43.16 76 *e*P **P** **03 25 30.5 0.0**
DGMT Dagmar 43.18 66 P **P** **03 25 30.4 +0.1**
baz=302
GSC Goldstone, Bar 43.26 89 P **P** **03 25 31.2 0.0**
baz=310
GSC Goldstone, Bar 43.26 89 *e*P **P** **03 25 32.0 +0.7**
comp=Z,9.4nm,0.8s
GSC Goldstone, Bar 43.26 89 *e*P **P** **03 25 32.0 +0.7**
GSC pmax pmax
comp=Z,9.0nm,0.8s
JLU Jordanelle 43.28 79 *e*P **P** **03 25 32.4 +0.9**
comp=Z,4.0nm,1.0s
TUQ Turquoise Moun 43.72 88 *e*P **P** **03 25 36.7 +1.7**
JNU Nakatsue 43.77 267 P **P** **03 25 35.5 +0.1**
comp=Z,12nm,0.8s,baz=37,slow=3.9,SNR=11
JNU LR LR 03 41 55.1
comp=Z,78nm,20.6s,baz=125,slow=34
JNU Nakatsue 43.77 267 *e*P **P** **03 25 36.3 +1.0**
comp=Z,20nm,1.1s
TJN Taejon 43.83 273 *ce*P **P** **03 25 36.9 +1.2**
TMUT Trail Mountain 44.21 81 *e*P **P** **03 25 40.6 +1.5**
comp=Z,8.1nm,1.0s
GMRC Granite Mounta 44.31 89 P **P** **03 25 39.5 -0.2**
baz=311
LCMT Little Creek M 44.38 85 *e*P **P** **03 25 41.2 +0.9**
comp=Z,3.0nm,0.8s
PFO Pinyon Flats O 44.58 91 P **P** **03 25 41.6 -0.3**
baz=312
P18A Preston Nutter 44.60 80 *e*P **P** **03 25 43.7 +1.5**
comp=Z,5.5nm,0.8s
BELC Belle Mtn. Jos 44.61 90 P **P** **03 25 42.2 +0.1**
baz=312
SRU San Rafael Swe 44.75 81 *e*P **P** **03 25 45.4 +2.1**
comp=Z,7.5nm,0.9s
SRU San Rafael Swe 44.75 81 *e*P **P** **03 25 45.4 +2.1**
SRU pmax pmax
comp=Z,8.0nm,0.9s
K22A Casper 45.05 74 P **P** **03 25 45.0 -0.6**
baz=306
U15A North Rim 45.34 85 *e*P **P** **03 25 49.0 +0.9**
comp=Z,5.1nm,0.6s
O20A White River Ci 45.52 78 P **P** **03 25 49.2 -0.2**
baz=308,SNR=7.3
O20A White River Ci 45.52 78 *e*P **P** **03 25 49.7 +0.3**
comp=Z,37nm,1.5s
RSSD Black Hills 45.67 71 P **P** **03 25 49.9 -0.6**
baz=305
RSSD Black Hills 45.67 71 *e*P **P** **03 25 50.5 0.0**
comp=Z,4.4nm,0.8s
RSSD Black Hills 45.67 71 *e*P **P** **03 25 50.5 0.0**
RSSD pmax pmax
comp=Z,4.0nm,0.8s
Y12C Blythe 45.69 89 P **P** **03 25 50.8 +0.2**
baz=312
NRIK Noril'sk 45.71 331 P **P** **03 25 50.0 -0.2**
comp=Z,3.4nm,0.4s,baz=67,slow=8.0,SNR=4.9
NRIK Noril'sk 45.71 331 P **P** **03 25 50.0 -0.2**
NRIK pmax pmax
comp=Z,3.0nm,0.4s
PV09 Paradox Valley 45.98 80 *e*P **P** **03 25 54.1 +0.9**
PV09 *ep*P sP 03 26 08.2 -1.4
MDND Maddock 46.10 64 P **P** **03 25 53.3 -0.3**
baz=304
PV04 Paradox Valley 46.18 80 *e*P **P** **03 25 55.3 +0.7**
comp=Z,7.1nm,0.7s
PV03 Paradox Valley 46.31 80 *e*P **P** **03 25 55.8 +0.1**
comp=Z,5.5nm,0.8s
PV02 Paradox Valley 46.40 80 *e*P **P** **03 25 56.7 +0.3**
comp=Z,10nm,0.7s
N23A Red Feather La 46.45 76 P **P** **03 25 56.7 0.0**
baz=307,SNR=5.9
N23A Red Feather La 46.45 76 *e*P **P** **03 25 57.9 +1.1**
comp=Z,7.9nm,0.9s
WUAZ Wupatki 46.49 85 P **P** **03 25 57.3 +0.2**
baz=311
WUAZ Wupatki 46.49 85 *e*P **P** **03 25 55.8 -1.3**
comp=Z,6.3nm,0.7s
ULM Lac du Bonnet 46.81 59 P **P** **03 25 57.8 -1.4**
comp=Z,3.0nm,0.4s,baz=308,slow=7.0,SNR=12
ULM Lac du Bonnet 46.81 59 *e*P **P** **03 25 59.0 -0.1**
comp=Z,13nm,1.1s
ULM Lac du Bonnet 46.81 59 *e*P **P** **03 25 59.1 -0.1**
ULM pmax pmax
comp=Z,13nm,1.1s
B31A Greenbush Farm 46.86 62 P **P** **03 25 59.2 -0.3**
baz=304,SNR=6.8
C31A Landman Farms, 47.17 63 P **P** **03 26 01.2 -0.8**
baz=305,SNR=5.9
MVCO Mesa Verde 47.18 81 P **P** **03 26 01.8 -0.7**
baz=310
ISCO Idaho Springs 47.32 76 P **P** **03 26 02.7 -1.0**
baz=308,SNR=5.0
ISCO Idaho Springs 47.32 76 *e*P **P** **03 26 04.9 +1.3**
comp=Z,3.0nm,1.0s
ISCO Idaho Springs 47.32 76 *e*P **P** **03 26 04.9 +1.3**
ISCO pmax pmax
comp=Z,3.0nm,1.0s
D31A Mcclaflin, Tow 47.60 64 P **P** **03 26 04.6 -0.8**
baz=305
E31A Nome 47.80 65 P **P** **03 26 05.7 -1.2**
baz=306
A33A Warroad 47.81 61 P **P** **03 26 06.2 -0.7**
baz=305
C32A Crookston 47.82 62 P **P** **03 26 06.2 -0.8**
baz=305
S22A 4UR Ranch, Cre 47.86 79 P **P** **03 26 07.9 0.0**
baz=310
S22A 4UR Ranch, Cre 47.86 79 *e*P **P** **03 26 09.4 +1.5**
comp=Z,5.5nm,1.3s
AGMN Agassiz Nation 47.92 62 P **P** **03 26 07.0 -0.8**
baz=305,SNR=6.1
AGMN Agassiz Nation 47.92 62 *e*P **P** **03 26 07.5 -0.3**
comp=Z,12nm,1.1s
SUSD Miller 48.43 67 P **P** **03 26 11.1 -0.7**
baz=307
B34A Aery, Baudette 48.47 61 P **P** **03 26 10.8 -1.2**
baz=305,SNR=15
SDCO Great Sand Dun 48.67 79 P **P** **03 26 14.1 0.0**
baz=310,SNR=8.0
SDCO Great Sand Dun 48.67 79 *e*P **P** **03 26 14.8 +0.7**
comp=Z,3.2nm,0.8s
G32A Webster 48.78 66 P **P** **03 26 13.4 -1.1**
baz=307
G32A Webster 48.78 66 *e*P **P** **03 26 14.1 -0.4**
comp=Z,17nm,0.8s
E33A Westby DABS, E 48.88 64 P **P** **03 26 14.0 -1.2**
baz=306
ULN Ulaanbaatar 48.93 299 *e*P **P** **03 26 16.0 +0.2**
comp=Z,6.1nm,1.1s
ULN Ulaanbaatar 48.93 299 *ce*P **P** **03 26 16.8 +1.0**
ULN pmax pmax
comp=Z,5.0nm,0.8s
TUC Tucson 48.98 88 P **P** **03 26 16.0 -0.3**
baz=313
D34A Park Rapids 48.99 63 P **P** **03 26 15.1 -0.9**
baz=306
D34A Park Rapids 48.99 63 *e*P **P** **03 26 15.7 -0.3**
comp=Z,24nm,0.7s
B35A Bob, Littlefor 49.04 60 P **P** **03 26 15.4 -1.0**
baz=306,SNR=6.9
B35A Bob, Littlefor 49.04 60 *e*P **P** **03 26 16.0 -0.4**
comp=Z,8.2nm,0.8s

H32A Carlson Farm, 49.27 67 P **P** **03 26 17.5 -0.8**
baz=307
C35A Jirik Farms, M 49.29 61 P **P** **03 26 17.7 -0.7**
baz=306
SONA1 Songino Array 49.30 299 *e*P **P** **03 26 18.6 0.0**
SONM Songino Array 49.31 299 P **P** **03 26 17.7 -0.9**
comp=Z,3.5nm,0.7s,baz=33,slow=9.8,SNR=8.4
G33A Ortonville 49.42 65 P **P** **03 26 18.6 -0.8**
baz=307
ZAK Zakamensk 49.47 303 *e*P **P** **03 26 19.2 -0.6**
ZAK pmax pmax
comp=Z,3.0nm,1.2s
KSCO Kaye Shedlock' 49.61 75 P **P** **03 26 21.1 0.0**
baz=309
D35A Remer 49.62 62 P **P** **03 26 19.8 -1.0**
baz=306
F34A Alexandria 49.72 64 P **P** **03 26 21.0 -0.7**
baz=307
T25A Trinidad 49.73 78 P **P** **03 26 22.0 -0.1**
baz=310,SNR=9.6
T25A Trinidad 49.73 78 *e*P **P** **03 26 23.5 +1.4**
comp=Z,10nm,0.9s
G34A Benson 49.84 65 P **P** **03 26 21.9 -0.6**
baz=307
TASM ASL Pad, Albuq 49.90 82 P **P** **03 26 23.9 +0.5**
baz=311
ANMO Albuquerque 49.91 82 LR LR 03 44 17.6
comp=Z,42nm,21.3s,baz=332,slow=32
ANMO Albuquerque 49.91 82 P **P** **03 26 23.2 -0.2**
baz=311
ANMO Albuquerque 49.91 82 *e*P **P** **03 26 24.5 +1.1**
comp=Z,4.4nm,1.3s
ANMO Albuquerque 49.91 82 *e*P **P** **03 26 24.5 +1.1**
ANMO pmax pmax
comp=Z,4.0nm,1.3s
TASL Snake Pit, Alb 49.91 82 P **P** **03 26 23.0 -0.4**
baz=311
D36A Goodland 50.05 61 P **P** **03 26 23.2 -0.9**
baz=307
F35A Swanville 50.06 64 P **P** **03 26 23.4 -0.9**
baz=307
ECSD EROS Data Cent 50.21 67 P **P** **03 26 24.3 -1.1**
baz=308,SNR=7.7
ECSD EROS Data Cent 50.21 67 *e*P **P** **03 26 24.6 -0.7**
comp=Z,4.9nm,0.9s
SPITS Spitsbergen Ar 50.23 357 P **P** **03 26 24.7 -0.5**
comp=Z,2.9nm,0.8s,baz=7.8,slow=12,SNR=5.6
C37A Embarrass 50.25 60 P **P** **03 26 24.7 -0.9**
baz=307
E36A McGregor 50.40 62 P **P** **03 26 25.7 -1.0**
baz=307
D37A Cotton 50.46 61 P **P** **03 26 26.1 -1.2**
baz=307
EYMN Ely 50.49 60 P **P** **03 26 26.4 -1.1**
baz=307
EYMN Ely 50.49 60 *e*P **P** **03 26 27.1 -0.4**
comp=Z,11nm,1.1s
F36A Milaca 50.65 63 P **P** **03 26 27.8 -0.9**
baz=308
C38A Sawbill Land. 50.75 60 P **P** **03 26 28.3 -1.1**
baz=307
H36A Jessenland, He 51.21 64 P **P** **03 26 32.7 -0.2**
baz=308
E38A The Farm, Brul 51.27 61 P **P** **03 26 32.3 -1.0**
baz=308,SNR=5.8
E38A The Farm, Brul 51.27 61 *e*P **P** **03 26 32.8 -0.5**
comp=Z,9.3nm,0.8s
CBKS Cedar Bluff 51.47 74 P **P** **03 26 34.8 -0.2**
baz=310
F38A Pierce - Schro 51.49 62 P **P** **03 26 34.5 -0.5**
baz=308,SNR=8.2
H37A Dierke Farm, C 51.77 64 P **P** **03 26 36.4 -0.8**
baz=309
I37A Lemond, Waseca 51.86 65 P **P** **03 26 37.0 -0.8**
baz=309
E39A Mellen 51.96 61 P **P** **03 26 37.3 -1.2**
baz=308
NJ2 Nanjing 51.96 275 *e*P **P** **03 26 39.4 +0.7**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
G38A Ridgeland 52.00 63 P **P** **03 26 37.7 -1.1**
baz=309,SNR=5.8
F39A Loretta 52.05 61 P **P** **03 26 38.3 -0.8**
baz=308
H38A Maiden Rock 52.07 63 P **P** **03 26 38.7 -0.6**
baz=309
K36A Gilmore City 52.13 67 P **P** **03 26 38.8 -1.0**
baz=309
J37A Redenius Farm, 52.21 66 P **P** **03 26 39.4 -1.0**
baz=309
E40A Wakefield 52.27 60 P **P** **03 26 40.1 -0.8**
baz=309
G39A Holcombe 52.30 62 P **P** **03 26 40.5 -0.6**
baz=309
I38A Scanlan Farm, 52.44 64 P **P** **03 26 41.2 -0.9**
baz=309
F40A Park Falls 52.48 61 P **P** **03 26 41.4 -1.0**
baz=309,SNR=7.4
K37A Belmond 52.51 66 P **P** **03 26 41.7 -0.9**
baz=309
H39A Augusta 52.62 63 P **P** **03 26 42.5 -0.9**
baz=309
MNTX Cornudas Mount 52.75 84 P **P** **03 26 44.5 -0.1**
baz=314
MNTX Cornudas Mount 52.75 84 *e*P **P** **03 26 45.0 +0.4**
comp=Z,4.3nm,1.0s
E41A Kenton 52.76 60 P **P** **03 26 43.3 -1.2**
baz=309
J38A Wedel Dairy, R 52.81 65 P **P** **03 26 44.0 -0.9**
baz=310
MSTX Muleshoe 52.82 80 P **P** **03 26 44.8 -0.4**
baz=312
MSTX Muleshoe 52.82 80 *e*P **P** **03 26 45.5 +0.3**
comp=Z,18nm,1.4s
G40A Rib Lake 52.84 62 P **P** **03 26 44.5 -0.6**
baz=309
G40A Rib Lake 52.84 62 *e*P **P** **03 26 44.6 -0.4**
comp=Z,4.7nm,0.7s
L37A Phoenix Point, 52.85 67 P **P** **03 26 44.2 -1.0**
baz=310,SNR=5.8
COWI Conover 52.90 60 *e*P **P** **03 26 44.9 -0.6**
comp=Z,15nm,1.4s
N36A Muff Farm, Cla 53.00 69 P **P** **03 26 44.8 -1.5**
baz=310
I39A Houston 53.01 64 P **P** **03 26 45.4 -0.9**
baz=310
K38A Parkersburg 53.08 66 P **P** **03 26 45.8 -1.0**
baz=310
M37A Trindle Farm, 53.14 68 P **P** **03 26 46.7 -0.6**
baz=310
KSU1 Kansas State U 53.14 71 P **P** **03 26 46.3 -1.0**
baz=311
KSU1 Kansas State U 53.14 71 *e*P **P** **03 26 47.0 -0.4**
comp=Z,11nm,0.9s
F41A Three Lakes 53.15 61 P **P** **03 26 46.5 -0.8**
baz=309,SNR=6.3
F41A Three Lakes 53.15 61 *e*P **P** **03 26 46.8 -0.5**
comp=Z,8.6nm,0.6s
H40A Chili 53.15 62 P **P** **03 26 46.5 -0.9**
baz=310
J39A Decorah 53.24 64 P **P** **03 26 47.0 -0.9**
baz=310,SNR=5.9
L38A Oak Wood Farm, 53.29 66 P **P** **03 26 47.4 -1.0**
baz=310
SCIA State Center 53.30 67 P **P** **03 26 47.5 -0.9**
baz=310
SCIA State Center 53.30 67 *e*P **P** **03 26 48.9 +0.5**
comp=Z,30nm,1.3s
E42A Champion 53.35 59 P **P** **03 26 47.8 -1.0**
baz=309
G41A Antigo 53.44 61 P **P** **03 26 48.5 -1.0**
baz=310
N37A Lee Faris, Mou 53.47 68 P **P** **03 26 48.7 -1.0**
baz=310
N37A Lee Faris, Mou 53.47 68 *e*P **P** **03 26 49.9 +0.2**
comp=Z,46nm,1.3s
N37A *ep*P sP 03 27 05.6 -0.7
I40A Norwalk 53.49 63 P **P** **03 26 48.6 -1.2**
baz=310
K39A Oelwein 53.54 65 P **P** **03 26 49.3 -0.9**
baz=310
H41A Junction City 53.56 62 P **P** **03 26 49.2 -1.1**
baz=310
M38A Pleasantville 53.62 67 P **P** **03 26 49.8 -1.1**
baz=310
F42A Maple Grove Fa 53.66 60 P **P** **03 26 49.9 -1.2**
baz=310
J40A Soldiers Grove 53.74 64 P **P** **03 26 50.6 -1.0**
baz=310

I41A Arkdale 53.80 63 P **P** **03 26 51.1 -1.0**
baz=310
I41A Arkdale 53.80 63 *e*P **P** **03 26 51.9 -0.2**
comp=Z,10nm,0.8s
G42A Mountain 53.83 61 P **P** **03 26 51.4 -0.8**
baz=310
G42A Mountain 53.83 61 *e*P **P** **03 26 52.0 -0.3**
comp=Z,6.6nm,0.6s
L39A Vinton 53.85 66 P **P** **03 26 51.2 -1.3**
baz=310,SNR=5.4
E43A Lone Tree Farm 53.87 59 P **P** **03 26 51.8 -0.7**
baz=310,SNR=5.3
E43A Lone Tree Farm 53.87 59 *e*P **P** **03 26 52.4 -0.2**
comp=Z,27nm,1.3s
O37A Wolven Farm, M 53.89 69 P **P** **03 26 51.8 -0.9**
baz=311
K40A Colesburg 53.97 65 P **P** **03 26 51.9 -1.4**
baz=310
N38A Joes South For 54.01 68 P **P** **03 26 52.6 -1.0**
baz=311
F43A Flat Rock, Esc 54.13 59 P **P** **03 26 53.4 -1.0**
baz=310
P37A Lathrop 54.15 70 P **P** **03 26 53.4 -1.3**
baz=311,SNR=8.2
J41A Loganville 54.16 63 P **P** **03 26 53.6 -1.1**
baz=310,SNR=6.2
M39A Webster 54.17 66 P **P** **03 26 53.8 -1.0**
baz=311,SNR=5.2
H42A Shiocton 54.24 61 P **P** **03 26 54.1 -1.2**
baz=310
O38A Galt 54.31 69 P **P** **03 26 54.8 -1.0**
baz=311
JFWS Jewell Farm 54.33 64 P **P** **03 26 54.7 -1.2**
baz=310
JFWS Jewell Farm 54.33 64 *e*P **P** **03 26 54.9 -1.1**
comp=Z,12nm,1.0s
JFWS Jewell Farm 54.33 64 *e*P **P** **03 26 54.9 -1.1**
JFWS pmax pmax
comp=Z,12nm,1.0s
L40A Anamosa 54.33 65 P **P** **03 26 54.8 -1.2**
baz=311
L40A Anamosa 54.33 65 *e*P **P** **03 26 56.4 +0.4**
comp=Z,10nm,1.1s
N39A Derby Farms, D 54.37 67 P **P** **03 26 55.3 -1.0**
baz=311,SNR=7.0
N39A Derby Farms, D 54.37 67 *e*P **P** **03 26 55.4 -0.9**
comp=Z,25nm,1.0s
I42A Draeger Farm, 54.43 62 P **P** **03 26 55.7 -1.0**
baz=310
I42A Draeger Farm, 54.43 62 *e*P **P** **03 26 56.3 -0.4**
comp=Z,6.9nm,0.8s
K41A Shullsburg 54.49 64 P **P** **03 26 55.9 -1.2**
baz=311
M40A Post Highland 54.59 66 P **P** **03 26 56.6 -1.3**
baz=311
P38A Dawn 54.60 69 P **P** **03 26 56.9 -1.1**
baz=311,SNR=6.5
P38A Dawn 54.60 69 *e*P **P** **03 26 57.2 -0.7**
comp=Z,12nm,0.7s
P38A *ep*P sP 03 27 11.2 -3.4
H43A Windswept, Lux 54.68 61 P **P** **03 26 57.4 -1.1**
baz=310
J42A Columbus 54.69 63 P **P** **03 26 57.7 -0.9**
baz=311
L41A Preston 54.73 65 P **P** **03 26 58.2 -0.6**
baz=311
WMOK Wichita Mounta 54.74 77 P **P** **03 26 58.5 -0.6**
baz=313,SNR=6.3
WMOK Wichita Mounta 54.74 77 *e*P **P** **03 26 58.8 -0.3**
WMOK *ep*P sP 03 27 13.8 -1.9
WMOK Wichita Mounta 54.74 77 *e*P **P** **03 26 58.8 -0.3**
WMOK *e**PP sP 03 27 13.8 -1.9
O39A Kirksville 54.76 68 P **P** **03 26 58.2 -0.9**
baz=311
E45A Wooded Hills, 54.85 58 P **P** **03 26 59.1 -0.5**
baz=310
I43A Langenfeld Bro 54.86 62 P **P** **03 26 58.8 -1.0**
baz=311
K42A Prairie Point, 54.92 64 P **P** **03 26 58.8 -1.4**
baz=311
Q38A Cooks Store, C 54.99 70 P **P** **03 26 59.0 -1.8**
baz=312,SNR=5.6
J43A Natural Harves 55.04 62 P **P** **03 26 59.7 -1.4**
baz=311
LPIG La Paz 55.08 95 LR LR 03 48 12.2
comp=Z,67nm,18.3s,baz=194,slow=33
P39B Salisbury 55.14 69 P **P** **03 27 00.7 -1.2**
baz=312,SNR=7.9
M41A Milan 55.16 66 P **P** **03 27 00.7 -1.3**
baz=311
O40A La Belle 55.23 68 P **P** **03 27 01.4 -1.2**
baz=312,SNR=6.6
L42A Oliver, Polo 55.24 64 P **P** **03 27 00.9 -1.7**
baz=311
L42A Oliver, Polo 55.24 64 *e*P **P** **03 27 02.0 -0.6**
comp=Z,10nm,0.8s
Q39A Willow Grove F 55.31 69 P **P** **03 27 01.7 -1.3**
baz=312
R38A Fenwick Farm, 55.34 71 P **P** **03 27 01.2 -2.1**
baz=312,SNR=5.5
N41A Harden Midland 55.43 66 P **P** **03 27 02.3 -1.6**
baz=312
TX31 Lajitas Ar. Si 55.46 85 *e*P **P** **03 27 04.2 -0.2**
TXAR Lajitas Array 55.46 85 P **P** **03 27 04.0 -0.4**
comp=Z,2.8nm,1.0s,baz=295,slow=5.2,SNR=20
TXAR LR LR 03 49 05.5
comp=Z,38nm,19.9s,baz=0.0,slow=34
P40A Paris 55.52 68 P **P** **03 27 03.5 -1.1**
baz=312,SNR=12
P40A Paris 55.52 68 *e*P **P** **03 27 03.7 -0.9**
comp=Z,15nm,0.6s
K43A Burlington 55.53 63 P **P** **03 27 03.2 -1.4**
baz=311
S38A Stockton 55.71 71 P **P** **03 27 04.2 -1.8**
baz=312,SNR=11
TUL1 Leonard 55.74 74 P **P** **03 27 05.2 -1.1**
baz=313
TUL1 Leonard 55.74 74 *e*P **P** **03 27 06.2 -0.1**
comp=Z,8.8nm,0.9s
R39A Chumby, Stover 55.76 70 P **P** **03 27 04.6 -1.8**
baz=312
O41A Passleys Farm, 55.80 67 P **P** **03 27 05.3 -1.3**
baz=312,SNR=5.1
N42A Yates City 55.81 66 P **P** **03 27 05.1 -1.6**
baz=312
Q40A Laux Farm, Aux 55.86 69 P **P** **03 27 05.7 -1.4**
baz=312,SNR=6.6
T38A Diamond 55.88 72 P **P** **03 27 05.8 -1.4**
baz=312
P41A Barry, Barry 55.99 67 P **P** **03 27 07.0 -1.0**
baz=312
S39A Bolivar 56.01 71 P **P** **03 27 06.0 -2.2**
baz=312,SNR=5.7
S39A Bolivar 56.01 71 *e*P **P** **03 27 06.2 -1.9**
comp=Z,4.7nm,0.8s
M43A Waltham Townsh 56.02 65 P **P** **03 27 06.7 -1.4**
baz=312
ZALV Zalesovo Beam 56.06 316 PcP **PcP** **03 28 06.3 +0.3**
comp=Z,4.5nm,0.7s,baz=36,slow=3.5,SNR=15
L44A Lake County Fo 56.11 63 P **P** **03 27 07.3 -1.5**
baz=312
O42A Bath 56.21 66 P **P** **03 27 08.0 -1.5**
baz=312
R40A Maddies Statio 56.22 69 P **P** **03 27 07.6 -2.1**
baz=312,SNR=8.4
R40A Maddies Statio 56.22 69 *e*P **P** **03 27 08.0 -1.6**
comp=Z,8.4nm,0.6s
N43A Stutzman Famil 56.23 65 P **P** **03 27 08.0 -1.6**
baz=312
Q41A Truxton 56.38 68 P **P** **03 27 09.5 -1.2**
baz=312
HDIL Hopedale 56.41 66 P **P** **03 27 09.7 -1.3**
baz=312
HDIL Hopedale 56.41 66 *e*P **P** **03 27 11.0 0.0**
comp=Z,9.3nm,0.6s
T39A Clever 56.43 71 P **P** **03 27 09.5 -1.7**
baz=313,SNR=7.3
P42A Winchester 56.47 67 P **P** **03 27 09.9 -1.5**
baz=312
S40A Lebanon 56.55 70 P **P** **03 27 10.5 -1.5**
baz=313
M44A Midewin, Midew 56.56 64 P **P** **03 27 10.4 -1.6**
baz=312
M44A Midewin, Midew 56.56 64 *e*P **P** **03 27 12.1 +0.1**
comp=Z,13nm,1.0s
HHAR Hobbs 56.60 72 *e*P **P** **03 27 11.3 -1.1**
comp=Z,4.4nm,0.7s

R41A	Rosebud	56.73	69	P	P	03 27 11.6	-1.7
	baz=312,SNR=6.9						
U39A	Green Forest	56.80	72	P	P	03 27 12.3	-1.6
	baz=313,SNR=6.7						
Q42A	Golden Eagle	56.81	68	P	P	03 27 12.7	-1.1
	baz=312						
T40A	Mansfield	56.84	71	P	P	03 27 12.2	-1.9
	baz=313,SNR=6.1						
P43A	Skaggs, Pawnee	56.90	66	P	P	03 27 13.2	-1.3
	baz=312						
N44A	Piper City	56.91	65	P	P	03 27 13.3	-1.2
	baz=312						
CCM	Cathedral Cave	56.98	69	P	P	03 27 13.2	-1.8
	baz=313						
CCM	Cathedral Cave	56.98	69	eP	P	03 27 13.5	-1.5
	comp=Z,6.0nm,0.9s						
CCM	Cathedral Cave	56.98	69	eP	P	03 27 13.5	-1.5
CCM				pmax	pmax		
	comp=Z,6.0nm,0.9s						
S41A	Jillco Farms,	57.00	70	P	P	03 27 13.3	-2.0
	baz=313,SNR=10						
V39A	Pettigrew	57.07	72	P	P	03 27 14.6	-1.2
	baz=313,SNR=6.1						
R42A	Luebbering	57.09	68	P	P	03 27 14.2	-1.6
	baz=313						
O44A	Mansfield	57.15	65	P	P	03 27 14.7	-1.5
	baz=312						
U40A	Yellville	57.19	71	P	P	03 27 14.9	-1.6
	baz=313,SNR=7.4						
N45A	Kentland	57.22	64	P	P	03 27 15.4	-1.3
	baz=312						
Q43A	New Douglas	57.27	67	P	P	03 27 15.6	-1.4
	baz=313						
T41A	Mountain View	57.36	70	P	P	03 27 16.1	-1.7
	baz=313						
W39A	Magazine	57.43	73	P	P	03 27 17.1	-1.1
	baz=313,SNR=5.0						
W39A	Magazine	57.43	73	eP	P	03 27 17.9	-0.3
	comp=Z,12nm,1.1s						
S42A	Caledonia	57.43	69	P	P	03 27 16.7	-1.6
	baz=313						
M46A	Old House Fiel	57.49	63	P	P	03 27 17.2	-1.4
	baz=313						
O45A	Potomac	57.51	65	P	P	03 27 17.9	-0.8
	baz=313						
P44A	Sand Creek, Wi	57.53	66	P	P	03 27 18.2	-0.7
	baz=313						
V40A	Witts Springs	57.58	72	P	P	03 27 18.0	-1.4
	baz=313,SNR=7.9						
V40A	Witts Springs	57.58	72	eP	P	03 27 18.0	-1.4
	comp=Z,8.8nm,0.8s						
R43A	Red Bud	57.59	68	P	P	03 27 17.8	-1.5
	baz=313						
N46A	Monticello	57.63	64	P	P	03 27 18.6	-1.0
	baz=313						
Q44A	Meyer Farm, Va	57.69	67	P	P	03 27 18.8	-1.1
	baz=313						
X39A	Fountain Ranch	57.70	74	P	P	03 27 19.8	-0.4
	baz=314,SNR=9.6						
U41A	Viola	57.75	71	P	P	03 27 18.6	-1.9
	baz=313						
T42A	Van Buren	57.76	70	P	P	03 27 18.4	-2.2
	baz=313,SNR=5.6						
T42A	Van Buren	57.76	70	eP	P	03 27 18.4	-2.2
	comp=Z,3.8nm,0.6s						
SFIN	Lafayette	57.77	64	P	P	03 27 19.4	-1.1
	baz=313						
SFIN	Lafayette	57.77	64	eP	P	03 27 20.5	-0.1
	comp=Z,11nm,0.8s						
W40A	Ferguson Farm,	57.86	73	P	P	03 27 19.7	-1.6
	baz=314,SNR=7.2						
W40A	Ferguson Farm,	57.86	73	eP	P	03 27 20.6	-0.6
	comp=Z,22nm,0.9s						
S43A	Fulton Ridge,	57.98	69	P	P	03 27 20.8	-1.3
	baz=313,SNR=11						
P45A	Graceland, Par	57.99	65	P	P	03 27 20.8	-1.2
	baz=313						
V41A	Mountainview	57.99	72	P	P	03 27 20.5	-1.7
	baz=314,SNR=6.6						
MIAR	Mount Ida	58.00	74	P	P	03 27 21.4	-0.9
	baz=314,SNR=12						
MIAR	Mount Ida	58.00	74	P	P	03 27 22.2	-0.1
R44A	Waltonville	58.10	67	P	P	03 27 21.5	-1.4
	baz=313						
U42A	Revenden	58.14	70	P	P	03 27 21.4	-1.8
	baz=314						
Q45A	Warren Harvey,	58.18	66	P	P	03 27 22.5	-0.9
	baz=313,SNR=5.3						
T43A	Greenville	58.20	69	P	P	03 27 22.1	-1.4
	baz=313,SNR=13						
WHAR	Wooly Hollow	58.25	72	eP	P	03 27 23.5	-0.5
	comp=Z,6.0nm,0.8s						
ARCES	ARCESS Array B	58.25	352	P	P	03 27 22.5	-1.0
	comp=Z,2.8nm,0.6s,baz=21,slow=7.7,SNR=14						
ARCES				PcP	PcP	03 28 13.8	-0.6
	comp=Z,5.2nm,0.8s,baz=4.3,slow=4.9,SNR=7.4						
LZH	Lanzhou	58.31	289	eP	P	03 27 25.8	+1.2
LZH				pP	sP	03 27 40.5	-0.8
LZH				sP	pP	03 27 46.8	+10
LZH				ePP	PP	03 29 36.0	+2.3
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
LZH				pmax	pmax		
	comp=Z,72nm,7.8s						
LZH				LR	LR		
	comp=Z,150nm,15.5s						
LZH				LR	LR		
	comp=Z,160nm,16.0s						
LZH				LR	LR		
	comp=Z,230nm,18.5s						
OLIL	Olney	58.33	66	eP	P	03 27 23.0	-1.4
	comp=Z,18nm,0.9s						
W41B	Gary Mavity, V	58.36	72	P	P	03 27 23.6	-1.1
	baz=314,SNR=7.4						
W41B	Gary Mavity, V	58.36	72	eP	P	03 27 23.8	-0.9
	comp=Z,7.7nm,0.8s						
O47A	Sheridan	58.39	64	P	P	03 27 23.4	-1.5
	baz=313						
X40A	Basin Creek Fa	58.48	73	P	P	03 27 24.5	-1.1
	baz=314						
R45A	Skylar, Fairfi	58.52	67	P	P	03 27 24.9	-0.9
	baz=313						
Y40A	Okolona	58.55	74	P	P	03 27 25.2	-0.9
	baz=314						
T44A	Benton	58.60	69	P	P	03 27 25.3	-1.1
	baz=314						
U43A	Rector	58.62	70	P	P	03 27 24.9	-1.6
	baz=314						
W42A	Bald Knob	58.72	72	P	P	03 27 25.8	-1.4
	baz=314						
S45A	Carrier Mills	58.77	68	P	P	03 27 25.4	-2.2
	baz=314						
P47A	Martinsville	58.85	65	P	P	03 27 26.8	-1.3
	baz=314						
BLO	Bloomington	58.92	65	eP	P	03 27 28.2	-0.4
	comp=Z,13nm,1.1s						
BLO	Bloomington	58.92	65	eP	P	03 27 28.2	-0.4
BLO				pmax	pmax		
	comp=Z,13nm,1.1s						
U44A	Portageville	58.94	69	P	P	03 27 27.3	-1.5
	baz=314						
ENH	Enshi	58.97	281	eP	P	03 27 27.9	-1.2
	comp=Z,11nm,0.6s						
Z40A	Long Farm, Mag	59.00	74	P	P	03 27 28.5	-0.7
	baz=314						
R46A	Gibon Southern	59.02	66	P	P	03 27 27.3	-2.0
	baz=314						
Y41A	Eaglette Beard	59.04	73	P	P	03 27 28.4	-1.0
	baz=314						
Q47A	Bedord North L	59.14	65	P	P	03 27 28.9	-1.2
	baz=314						
R47A	Wooly Knot Far	59.52	66	P	P	03 27 31.4	-1.4
	baz=314						
T46A	Princeton	59.61	68	P	P	03 27 32.3	-1.1
	baz=314						
X43A	Marvell	59.62	72	P	P	03 27 32.2	-1.3
	baz=314						
U46A	Springville	59.92	68	P	P	03 27 34.6	-1.0
	baz=314						
PLVO	Plevna	59.93	54	eP	P	03 27 35.7	+0.2
	comp=Z,11nm,0.8s						
T47A	Sharon Grove	60.10	67	P	P	03 27 36.1	-0.7
	baz=314,SNR=5.2						
T47A	Sharon Grove	60.10	67	eP	P	03 27 36.6	-0.1
	comp=Z,13nm,1.1s						
241A	Mo Tay, Goldon	60.15	75	P	P	03 27 36.7	-0.5
	baz=315						
W45A	Hickory Valley	60.17	70	P	P	03 27 36.4	-0.9
	baz=314						
S48A	Wiedeman Farm,	60.23	66	P	P	03 27 36.6	-1.1
	baz=314						
WVT	Waverly	60.28	68	P	P	03 27 37.3	-0.7
	baz=314						
WVT	Waverly	60.28	68	eP	P	03 27 37.8	-0.2
	comp=Z,4.9nm,0.9s						
WVT	Waverly	60.28	68	eP	P	03 27 37.8	-0.2
WVT				pmax	pmax		
	comp=Z,5.0nm,0.9s						
V46A	Holladay	60.34	69	P	P	03 27 37.6	-0.8
	baz=314						
TRQ	Mont Tremblant	60.35	52	eP	P	03 27 37.6	-0.8
Y44A	Strider, Charl	60.40	72	P	P	03 27 38.0	-0.9
	baz=315						
T48A	Bowling Green	60.42	67	P	P	03 27 38.0	-0.9
	baz=314						
341A	Kurthwood	60.49	76	P	P	03 27 38.4	-1.0
	baz=315						
OXF	Oxford	60.49	71	P	P	03 27 38.7	-0.8
	baz=315,SNR=5.6						
OXF	Oxford	60.49	71	eP	P	03 27 39.2	-0.3
	comp=Z,27nm,0.8s						
OXF	Oxford	60.49	71	eP	P	03 27 39.2	-0.3
OXF				pmax	pmax		
	comp=Z,27nm,0.8s						
W46A	Michie	60.66	70	P	P	03 27 39.5	-1.1
	baz=315						
V47A	Nunnelly	60.67	68	P	P	03 27 39.7	-1.0
	baz=315						
Z44A	Pea Ridge, Bel	60.75	72	P	P	03 27 40.4	-0.8
	baz=315						
U48A	Cassie Pea, Po	60.76	67	P	P	03 27 40.6	-0.7
	baz=315						
Y45A	Yeager Farm, C	60.87	71	P	P	03 27 41.2	-0.8
	baz=315						
T49A	Edmonton	60.91	66	P	P	03 27 41.4	-0.9
	baz=315						
PLAL	Pickwick Lake	60.94	69	eP	P	03 27 41.7	-0.9
	comp=Z,9.8nm,0.7s						
X46A	Booneville	60.94	70	P	P	03 27 41.7	-0.9
	baz=315,SNR=6.4						
W47A	Westpoint	61.03	69	P	P	03 27 42.2	-1.0
	baz=315,SNR=5.8						
KURK	Kurchatov	61.04	316	eP	P	03 27 43.1	+0.2
	comp=Z,9.0nm,1.0s						
KURK				PcP	PcP	03 28 26.5	+0.8
KURK	Kurchatov	61.04	316	P	P	03 27 43.3	+0.4
KURK						03 28 26.5	
KURK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
M54A	Oil Creek Stat	61.06	59	P	P	03 27 42.4	-0.8
	baz=315						
Z45A	Winona	61.13	72	P	P	03 27 42.9	-0.9
	baz=315						
V48A	Smith Brothers	61.13	68	P	P	03 27 42.8	-1.0
	baz=315						
V48A	Smith Brothers	61.13	68	eP	P	03 27 43.5	-0.4
	comp=Z,6.3nm,1.0s						
KURBB	Kurchatov Arra	61.15	316	P	P	03 27 43.3	-0.4
	comp=Z,3.5nm,0.6s,baz=43,slow=6.7,SNR=31						
KURBB				PcP	PcP	03 28 26.5	+0.3
	comp=Z,2.5nm,0.5s,baz=37,slow=3.6,SNR=11						
U49A	Red Boiling Sp	61.19	67	P	P	03 27 43.3	-0.9
	baz=315						
Y46A	Houston	61.26	71	P	P	03 27 43.7	-0.9
	baz=315,SNR=5.8						
N54A	Moraine State	61.27	60	P	P	03 27 43.1	-1.6
	baz=315						
T50A	Nancy	61.37	66	P	P	03 27 44.3	-1.2
	baz=315						
541A	Lake Charles	61.38	77	P	P	03 27 45.4	-0.2
	baz=316						
X47A	Russelville	61.40	70	P	P	03 27 44.4	-1.3
	baz=315						
244A	Avery, Jackson	61.48	74	P	P	03 27 45.7	-0.5
	baz=315						
LONY	Lake Ozonia	61.48	53	P	P	03 27 45.0	-1.0
	baz=316,SNR=7.2						
LONY	Lake Ozonia	61.48	53	eP	P	03 27 45.1	-1.0
	comp=Z,10nm,0.8s						
W48A	Pulaski	61.49	69	P	P	03 27 45.4	-0.9
	baz=315,SNR=7.0						
145A	Houston Renfro	61.53	73	P	P	03 27 46.0	-0.6
	baz=315						
S51A	Beattyville	61.64	64	P	P	03 27 46.0	-1.2
	baz=315						
V49A	McMinnville	61.65	67	P	P	03 27 46.1	-1.3
	baz=315						
Z46A	Louisville	61.70	72	P	P	03 27 46.7	-1.0
	baz=315						
WMQ	Urumqi	61.78	306	P	P	03 27 52.8	+4.6
WMQ				pmax	pmax		
	comp=Z,22nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,120nm,3.7s						
WMQ				LR	LR		
	comp=Z,190nm,39.0s						
WMQ				LR	LR		
	comp=Z,200nm,36.1s						
FRNY	Flat Rock	61.82	53	eP	P	03 27 47.2	-1.0
	comp=Z,16nm,1.5s						
Y47A	UCPARC, Winfie	61.84	70	P	P	03 27 47.4	-1.2
	baz=315,SNR=8.0						
344A	Westbrook Farm	61.87	74	P	P	03 27 48.4	-0.4
	baz=316						
W49A	Belvidere	61.90	68	P	P	03 27 48.0	-1.0
	baz=315						
S52A	Salyersville	61.90	64	P	P	03 27 48.1	-0.8
	baz=315,SNR=6.0						
X48A	Hartselle	61.91	69	P	P	03 27 47.5	-1.6
	baz=315						
245A	Little AP, Sta	61.95	73	P	P	03 27 48.8	-0.6
	baz=316						
146A	Union	62.02	72	P	P	03 27 49.3	-0.5
	baz=316						
146A	Union	62.02	72	eP	P	03 27 50.0	+0.1
	comp=Z,37nm,1.0s						
NCB	Newcomb	62.12	54	eP	P	03 27 49.7	-0.7
	comp=Z,6.3nm,0.9s						
V50A	Pikevile	62.17	67	P	P	03 27 50.0	-0.9
	baz=315						
Z47A	Carrollton	62.20	71	P	P	03 27 50.1	-1.0
	baz=316,SNR=6.9						
Y48A	Jasper	62.23	70	P	P	03 27 49.8	-1.4
	baz=316						
MKAR	Makanchi Array	62.27	311	P	P	03 27 50.5	-0.9
	comp=Z,3.3nm,0.9s,baz=54,slow=6.2,SNR=16						
MKAR				PcP	PcP	03 28 30.1	-0.7
	comp=Z,1.1nm,0.6s,baz=32,slow=3.7,SNR=2.7						
MK01	Makanchi Array	62.28	311	eP	P	03 27 50.4	-1.0
X49A	Woodville	62.29	69	P	P	03 27 50.5	-1.1
	baz=316						
T52A	Hallie	62.35	64	P	P	03 27 51.3	-0.7
	baz=315						
Z48A	Northport	62.38	70	P	P	03 27 51.1	-1.1
	baz=316						
W50A	Signal Mountai	62.39	67	P	P	03 27 51.3	-1.0
	baz=316						
W50A	Signal Mountai	62.39	67	eP	P	03 27 52.4	+0.1
	comp=Z,7.4nm,0.9s						
MAKZ	Makanchi	62.40	311	eP	P	03 27 51.7	-0.5
	comp=Z,2.9nm,0.9s						
MAKZ	Makanchi	62.40	311	eP	P	03 27 51.7	-0.5
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TZTN	Tazewell	62.44	65	P	P	03 27 52.1	-0.6
	baz=316						
147A	Livingston	62.46	71	P	P	03 27 51.9	-0.8
	baz=316						
BINY	Binghamton	62.50	56	P	P	03 27 52.9	0.0
	baz=316,SNR=7.8						
BINY	Binghamton	62.50	56	eP	P	03 27 53.6	+0.6
	comp=Z,26nm,0.9s						
V51A	Loudon	62.51	66	P	P	03 27 52.0	-1.1
	baz=316						
O56A	Blue Knob Stat	62.52	59	P	P	03 27 52.0	-1.2
	baz=316						
SSPA	Standing Stone	62.62	58	P	P	03 27 53.4	-0.4
	baz=316						
SSPA	Standing Stone	62.62	58	eP	P	03 27 54.0	+0.2
	comp=Z,8.2nm,0.8s						
BVAR	Borovoye Array	62.63	322	P	P	03 27 53.7	+0.1
	comp=Z,4.2nm,0.6s,baz=50,slow=7.8,SNR=28						
BVAR				PcP	PcP	03 28 32.3	0.0
	comp=Z,3.8nm,0.7s,baz=50,slow=3.9,SNR=9.1						
BRVK	Borovoye	62.65	322	eP	P	03 27 54.0	+0.3
BRVK				ePcP	PcP	03 28 32.8	+0.6
BRVK	Borovoye	62.65	322	ceP	P	03 27 53.8	+0.1
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
X50B	Fort Payne	62.72	68	P	P	03 27 53.5	-1.0
	baz=316,SNR=5.3						
PRGR	Permogore	62.74	340	eP	P	03 27 53.5	-0.7
PRGR				e		03 28 27.8	
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ACCN	Adirondack Com	62.82	54	eP	P	03 27 55.1	+0.1
	comp=Z,16nm,0.9s						
148A	Greensboro	62.89	71	P	P	03 27 54.5	-1.2
	baz=316						
V52A	Sevierville	62.91	66	P	P	03 27 55.2	-0.6
	baz=316						
LRAL	Lakeview Retre	62.95	70	P	P	03 27 54.7	-1.3
	baz=316						
LBNH	Lisbon	63.07	52	P	P	03 27 55.5	-1.2
	baz=317						
Y50A	Piedmont	63.08	69	P	P	03 27 55.8	-1.0
	baz=316						
X51A	Calhoun	63.10	68	P	P	03 27 56.0	-1.1
	baz=316						
Z49A	Columbiana	63.11	70	P	P	03 27 55.8	-1.3
	baz=316,SNR=5.3						
U53A	Fall Branch	63.11	65	P	P	03 27 56.0	-1.1
	baz=316						
248A	Dixon Mills	63.19	72	P	P	03 27 57.0	-0.6
	baz=316						
347A	Saraland	63.21	73	P	P	03 27 57.2	-0.6
	baz=316						
W52A	Murphy	63.26	67	P	P	03 27 56.9	-1.2
	baz=316						
149A	Jones	63.38	71	P	P	03 27 57.9	-1.0
	baz=316,SNR=6.7						
Z50A	Ashland	63.42	69	P	P	03 27 58.0	-1.2
	baz=316,SNR=5.0						
Z50A	Ashland	63.42	69	eP	P	03 27 58.0	-1.2
	comp=Z,9.8nm,0.8s						
Z50A				epP	sP	03 28 13.8	-2.2
GYA	Guiyang	63.43	280	eP	P	03 28 01.0	+1.6
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
Y51A	Rockmart	63.46	68	P	P	03 27 57.9	-1.5
	baz=316						
V53A	Saluda	63.48	65	P	P	03 27 58.6	-1.0
	baz=316						
N59A	State Game Lan	63.53	57	P	P	03 27 59.1	-0.8
	baz=316						
N59A	State Game Lan	63.53	57	eP	P	03 28 00.4	+0.6
	comp=Z,12nm,0.8s						
PKME	Peaks-Kenny Pk	63.59	50	P	P	03 27 59.0	-1.1
	baz=318						
X52A	Dahlonega	63.63	67	P	P	03 27 59.7	-0.9
	baz=316						
249A	Camden	63.64	71	P	P	03 28 00.1	-0.5
	baz=316						
W53A	Cullowhee	63.64	66	P	P	03 27 59.7	-1.0
	baz=316						
BLA	Blacksburg	63.71	63	P	P	03 28 00.7	-0.4
	baz=316,SNR=5.5						
BLA	Blacksburg	63.71	63	eP	P	03 28 01.4	+0.3
	comp=Z,20nm,1.0s						
BLA	Blacksburg	63.71	63	eP	P	03 28 01.4	+0.3
BLA				pmax	pmax		
	comp=Z,20nm,1.0s						
Z51A	Franklin	63.81	69	P	P	03 28 00.3	-1.5
	baz=316						
150A	Eclectic	63.83	70	P	P	03 28 00.7	-1.2
	baz=316						
BG3	Lake Jocassee	63.90	66	eP	P	03 28 02.2	-0.1
	comp=Z,15nm,1.2s						
ARU	Arti	63.94	331	eP	P	03 28 02.1	-0.1
	comp=Z,6.7nm,0.7s						
ARU	Arti	63.94	331	c iP	P	03 28 01.7	-0.5
ARU						03 28 34.8	
ARU				S	S	03 36 35.1	+0.5
ARU				SS	SS	03 40 42.3	-0.2
ARU				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ARU				MLR	MLR		
	comp=Z,278nm,21.0s						
LUPA	Lehigh Univers	63.97	57	eP	P	03 28 03.4	+0.7
	comp=Z,1.5nm,0.7s						
ODNJ	Ogdensburg	64.02	56	eP	P	03 28 03.4	+0.4
	comp=Z,14nm,0.9s						
X53A	Estanollee	64.04	67	P	P	03 28 02.1	-1.1
	baz=316						
349A	Repton	64.05	72	P	P	03 28 02.3	-0.9
	baz=316						
Y52A	Lilburn	64.06	68	P	P	03 28 02.6	-0.8
	baz=316						
250A	Grady	64.14	71	P	P	03 28 03.1	-0.8
	baz=316						
BRAL	Brewton	64.26	72	P	P	03 28 03.8	-0.9
	baz=316						
151A	Opelika	64.29	70	P	P	03 28 03.6	-1.3
	baz=316						
BRNJ	Basking Ridge	64.33	56	eP	P	03 28 06.0	+1.0
	comp=Z,50nm,1.3s						
Y53A	Monroe	64.34	67	P	P	03 28 04.2	-1.1
	baz=316						
Z52A	Williamson	64.34	68	P	P	03 28 04.2	-1.0
	baz=316						
PAL	Palisades	64.44	56	P	P	03 28 05.4	-0.3
	baz=317						
PAL	Palisades	64.44	56	eP	P	03 28 06.5	+0.8
	comp=Z,26nm,0.9s						
PAL	Palisades	64.44	56	eP	P	03 28 06.5	+0.8
PAL				pmax	pmax		
	comp=Z,26nm,0.9s						
449A	Pace	64.46	72	P	P	03 28 05.5	-0.5
	baz=317						
IP07	Quail	64.51	61	eP	P	03 28 07.0	+0.7
	comp=Z,15nm,0.8s						
HRV	Adam Dziewonsk	64.52	53	P	P	03 28 04.7	-1.5
	baz=318						
IP06	Yanceyville	64.52	61	eP	P	03 28 07.1	+0.8
	comp=Z,8.8nm,0.7s						
152A	Waverly Hall	64.54	69	P	P	03 28 04.9	-1.7
	baz=316						
251A	Midway	64.56	70	P	P	03 28 05.5	-1.1
	baz=316						
KMSC	Kings Mountain	64.69	65	P	P	03 28 06.8	-0.7
	baz=317,SNR=6.7						
KMSC	Kings Mountain	64.69	65	eP	P	03 28 07.2	-0.3
	comp=Z,12nm,0.9s						
KMSC				epP	sP	03 28 21.7	-2.6
GOGA	Godfrey	64.73	68	P	P	03 28 06.6	-1.1
	baz=317						
GOGA	Godfrey	64.73	68	epP	pP	03 28 22.6	+2.7
Z53A	Monticello	64.77	68	P	P	03 28 06.8	-1.1
	baz=317,SNR=5.4						
450A	Crestview	64.80	72	P	P	03 28 07.1	-1.1
	baz=317						
Y54A	Tignall	64.85	67	P	P	03 28 07.5	-1.0
	baz=317,SNR=5.4						
252A	Lumpkin	65.02	70	P	P	03 28 08.2	-1.4
	baz=317						
351A	Pinckard	65.04	71	P	P	03 28 08.8	-0.9
	baz=317						
Z54A	Sparta	65.22	67	P	P	03 28 09.9	-1.0
	baz=317						
352A	Blakely	65.28	70	P	P	03 28 10.3	-1.0
	baz=317						
352A	Blakely	65.28	70	eP	P	03 28 11.2	-0.2
	comp=Z,17nm,0.9s						
253A	Americus	65.33	69	P	P	03 28 10.7	-1.0
	baz=317						
154A	Montrose	65.52	68	P	P	03 28 11.6	-1.3
	baz=317						
OTUK	Ortayu	65.58	318	P	P	03 28 13.5	+0.4
OTUK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
155A	Kite	65.88	68	P	P	03 28 14.2	-1.0
	baz=317						
FINES	FINESS Array B	66.10	350	P	P	03 28 14.6	-1.6
	comp=Z,2.0nm,0.6s,baz=21,slow=7.8,SNR=8.4						
FINES				PcP	PcP	03 28 45.3	-1.0
	comp=Z,3.0nm,0.9s,baz=106,slow=6.8,SNR=3.5						
FINES	FINESS Array B	66.10	350	i P	P	03 28 15.5	-0.6
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
PDGK	Podgornoye	66.17	310	P	P	03 28 18.1	+1.0
PDGK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
DAV	Davao City (W)	66.56	251	LR	LR	03 55 07.9	
	comp=Z,36nm,20.1s,baz=228,slow=34						

KMI	Kunming	66.80 281	P	P	03 28 22.1	+0.6
KMI			pP	sP	03 28 40.0	+1.6
KMI			sP	PcP	03 28 45.9	-4.2
KMI			pmax	pmax		
comp=Z,23nm,0.8s						
NHSC	New Hope	66.83 66	P	P	03 28 20.9	-0.4
baz=318						
456A	Hilliard	67.53 69	P	P	03 28 25.5	-0.2
baz=318						
NOA	NORSAR Array B	67.53 357	LR	LR	03 58 58.3	
comp=Z,36nm,19.8s,baz=290,slow=37						
HFS	Hagfors	68.35 356	P	P	03 28 29.0	-1.5
comp=Z,1.4nm,0.4s,baz=42,slow=2.3,SNR=18						
HFS	Hagfors	68.35 356	P	P	03 28 29.0	-1.5
VSU	Vasula	68.93 349	*ce*P	P	03 28 35.3	+1.3
VSU			pmax	pmax		
comp=Z,27nm,1.0s						
ABKAR	Akbulak array	69.53 326	*e*P	P	03 28 37.6	-0.3
PMG	Port Moresby	69.56 222	LR	LR	03 53 24.8	
comp=Z,61nm,19.8s,baz=106,slow=31						
SIJI	Sorong	69.83 241	P	P	03 28 39.7	-0.5
comp=Z,4.1nm,0.4s,baz=346,slow=12,SNR=4.4						
LSA	Lhasa	70.28 293	*e*P	P	03 28 42.1	-1.3
comp=Z,12nm,0.6s						
LSA	Lhasa	70.28 293	*e*P	P	03 28 42.1	-1.3
LSA			pmax	pmax		
comp=Z,12nm,0.6s						
OBN	Obninsk	70.61 342⇑	*e*P	P	03 28 43.8	-0.6
OBN			*e*		03 29 06.4	
OBN			*e*		03 31 23.3	
OBN			pmax	pmax		
comp=Z,5.0nm,0.4s						
KSH	Kashi	70.79 310	P	P	03 28 49.5	+3.5
KSH			pP	PcP	03 29 06.1	-0.5
SHL	Shillong	72.97 290	*e*P	P	03 28 58.0	-1.4
SHL	Shillong	72.97 290	*e*P	P	03 28 59.4	+0.1
comp=Z,16nm,0.6s						
SHL	Shillong	72.97 290	P	P	03 28 59.4	+0.1
SHL			pmax	pmax		
comp=Z,16nm,0.6s						
EKA	Eskdalemuir Ar	73.04 6	P	P	03 28 57.7	-1.3
comp=Z,0.5nm,0.6s,baz=347,slow=5.8,SNR=4.1						
RAR	Rarotonga	73.63 166	LR	LR	03 55 20.6	
comp=Z,141nm,19.1s,baz=94,slow=31						
VSR	Storozhevoye	73.74 339	*e*P	P	03 29 02.6	-0.6
VSR			pmax	pmax		
comp=Z,20nm,0.8s						
VORD	Divnogorie	73.95 339	*e*P	P	03 29 02.0	-2.4
VORD			pmax	pmax		
comp=N,1.0nm,0.8s						
CMAR	Chiang Mai Arr	74.12 280	P	P	03 29 06.0	+0.1
comp=N,3.5nm,0.8s,baz=31,slow=7.4,SNR=10						
CMAR	Chiang Mai Arr	74.12 280	*i* P	P	03 29 06.6	+0.7
CMAR			pmax	pmax		
comp=Z,4.0nm,0.8s						
CM01	Chiang Mai Arr	74.14 280	*e*P	P	03 29 06.4	+0.4
GUN	Gumba	74.63 295	*e*P	P	03 29 10.2	+0.9
comp=Z,26nm,0.5s						
JIRN	Jiri	74.65 295	*e*P	P	03 29 10.5	+1.1
comp=Z,92nm,0.7s						
RAMN	Ramite	74.97 294	*e*P	P	03 29 11.7	+0.6
comp=Z,66nm,0.7s						
KKN	Kakani	75.06 296	*e*P	P	03 29 12.5	+0.9
comp=Z,23nm,0.7s						
PKIN	Phulchoki	75.16 296	*e*P	P	03 29 12.5	+0.3
comp=Z,18nm,0.8s						
GKN	Gorkha	75.26 296	*e*P	P	03 29 13.2	+0.6
DMN	Daman	75.30 296	*e*P	P	03 29 13.8	+0.8
DANN	Dangsing	75.48 297	*e*P	P	03 29 14.7	+0.7
comp=Z,41nm,0.7s						
KOLN	Koldanda	76.02 297	*e*P	P	03 29 17.5	+0.5
comp=Z,16nm,0.7s						
PYUN	Piuthan	76.09 298	*e*P	P	03 29 17.9	+0.4
comp=Z,41nm,0.9s						
AKASG	Malin Array Be	76.13 345	P	P	03 29 15.7	-1.3
comp=Z,2.2nm,0.5s,baz=16,slow=6.0,SNR=8.8						
AKASG	Malin Array Be	76.13 345	*i* P	P	03 29 15.6	-1.3
AKASG			pmax	pmax		
comp=Z,1.0nm,0.4s						
AKBB	Malin Array Si	76.13 345	*e*P	P	03 29 16.1	-0.9
comp=Z,3.7nm,0.8s						
KIEV	Kiev	76.14 345	*e*P	P	03 29 15.8	-1.2
comp=Z,3.4nm,0.8s						
KIEV	Kiev	76.14 345	*i* P	P	03 29 15.2	-1.8
KIEV			pmax	pmax		
comp=Z,3.0nm,0.9s						
NIL	Nilore	76.78 308	*e*P	P	03 29 20.8	-0.3
comp=Z,30nm,0.9s						
NIL	Nilore	76.78 308	*e*P	P	03 29 20.8	-0.3
NIL			pmax	pmax		
comp=Z,31nm,0.9s						
CLL	Collm	77.20 356⇓	*i*P	P	03 29 22.8	-0.2
comp=Z,4.0nm,0.7s						
CLL			*i*		03 29 24.8	
CLL	Collm	77.20 356⇓	*i*P	P	03 29 22.8	-0.2
CLL			pmax	pmax		
comp=Z,4.0nm,0.7s						
BRG	Berggiesshubel	77.59 355	*i* PKP	P	03 29 25.0	-0.2
comp=Z,5.8nm,0.8s						
BRG	Berggiesshubel	77.59 355	*i* P	P	03 29 25.0	-0.2
BRG			pmax	pmax		
comp=Z,6.0nm,0.8s						
DPC	Dobruska-Polom	77.96 353	*e*P	P	03 29 27.8	+0.4
DPC	Dobruska-Polom	77.96 353	*e*P	P	03 29 27.8	+0.4
KRLC	Kraliky	78.20 353	*e*P	P	03 29 28.6	-0.1
KRLC	Kraliky	78.20 353	*e*P	P	03 29 28.6	-0.1
NKC	Novy Kostel	78.30 356	*e*P	P	03 29 29.5	+0.3
NKC	Novy Kostel	78.30 356	*e*P	P	03 29 29.5	+0.3
MORC	Moravsky Berou	78.44 353	*e*P	P	03 29 29.7	-0.3
GOPC	GO Pecny, Ondr	78.50 354	*e*P	P	03 29 30.6	+0.3
GOPC	GO Pecny, Ondr	78.50 354	*e*P	P	03 29 30.6	+0.3
SORM	Soroca	78.76 345⇓	*i*P	P	03 29 30.8	-0.9
SORM	Soroca	78.76 345⇓	P	P	03 29 30.8	-0.9
VRAC	Vranov	78.98 353⇑	*i*P	P	03 29 33.7	+0.7
VRAC	Vranov	78.98 353⇑	P	P	03 29 33.7	+0.7
VRAC	Vranov	78.98 353	*e*P	P	03 29 33.1	+0.1
KRUC	Moravsky	79.24 353	*e*P	P	03 29 33.9	-0.5
JAVC	Velka Javorina	79.34 352	*e*P	P	03 29 35.6	+0.6
KHC	Kasperske Hory	79.35 355	*e*P	P	03 29 35.3	+0.3
KHC	Kasperske Hory	79.35 355	*e*P	P	03 29 35.5	+0.5
comp=Z,1.6nm,0.7s						
KHC	Kasperske Hory	79.35 355	*e*P	P	03 29 35.5	+0.5
KHC			pmax	pmax		
comp=Z,2.0nm,0.7s						
TRPA	Tarpa	79.57 349⇑	*i*P	P	03 29 36.0	-0.2
GEC2	GERESS Array S	79.62 355	*e*P	P	03 29 36.8	+0.2
comp=Z,2.7nm,0.8s						
GEC2	GERESS Array S	79.62 355	*e*P	P	03 29 36.8	+0.2
GEC2			pmax	pmax		
comp=Z,3.0nm,0.8s						
GERES	GERESS Array B	79.62 355	P	P	03 29 36.5	-0.1
comp=Z,1.7nm,0.7s,baz=17,slow=5.6,SNR=20						
GEA0	GERESS Array S	79.63 355	*e*P	P	03 29 36.1	-0.5
KIV	Kislovodsk	79.65 334	*e*P	P	03 29 39.4	+2.6
KIV			pmax	pmax		
comp=Z,8.0nm,1.1s						
BUR08	Bucovina Ar. S	79.71 347	*e*P	P	03 29 37.0	0.0
BUR04	Bucovina Ar. S	79.73 347	*e*P	P	03 29 35.5	-1.7
BURAR	Bucovina Array	79.73 347⇓	*i*P	P	03 29 36.5	-0.7
BURAR	Bucovina Array	79.73 347⇓	P	P	03 29 36.5	-0.7
KBZ	Khabaz	79.80 334	P	P	03 29 37.2	-0.2
comp=Z,3.4nm,0.9s,baz=223,slow=1.6,SNR=4.5						
BFO	Black Forest	80.33 359	*i* P	P	03 29 41.2	+0.9
CONA	Conrad Observa	80.41 353	*e*P	P	03 29 41.3	+0.4
comp=Z,3.9nm,0.7s						
ECH	Echery	80.45 359	*e*P	P	03 29 40.9	-0.1
comp=Z,4.0nm,0.9s						
ECH	Echery	80.45 359	*e*P	P	03 29 40.9	-0.1
ECH			pmax	pmax		
comp=Z,4.0nm,0.9s						
ARSA	Arzberg	81.10 354	*i* P	P	03 29 44.9	+0.4
comp=Z,3.2nm,0.8s						
RETA	Reutte	81.11 357	*e*P	P	03 29 44.7	+0.2
comp=Z,4.2nm,1.3s						
WATA	Walderalm	81.23 356	*e*PcP	P	03 29 48.0	+2.6
comp=Z,2.0nm,0.5s						
MOTA	Moosalm	81.24 357	*e*P	P	03 29 44.9	-0.4
comp=Z,1.5nm,0.5s						
KBA	Koelnbreinsper	81.41 355	*e*PcP	P	03 29 47.2	+0.9
comp=Z,5.9nm,0.6s						
FETA	Feichten	81.58 357	*e*P	P	03 29 47.4	+0.3
comp=Z,4.9nm,0.9s						
SOKA	Soboth	81.71 354	*e*P	P	03 29 48.0	+0.2
comp=Z,6.0nm,1.0s						
MLR	Muntele Rosu	81.71 346	P	P	03 29 47.3	-0.5
comp=Z,1.1nm,1.0s,baz=270,slow=2.0,SNR=4.8						
MLR	Muntele Rosu	81.71 346⇑	*i*P	P	03 29 48.1	+0.3
MLR	Muntele Rosu	81.71 346⇑	P	P	03 29 48.1	+0.3
MYKA	Terra Mystica	81.84 355	*i* PcP	P	03 29 53.7	+5.3
comp=Z,2.2nm,0.5s						
VOIR		81.89 347⇑	*i*P	P	03 29 50.1	+1.4
VOIR		81.89 347⇑	P	P	03 29 50.1	+1.4
OBKA	Obir	81.91 354	*e*PcP	P	03 29 49.3	+0.5
comp=Z,2.9nm,0.8s						
ARR	Arges	82.02 347⇑	*i*P	P	03 29 50.0	+0.6
TLB	Topalu	82.26 345⇑	*i*P	P	03 29 50.8	+0.2
TLB	Topalu	82.26 345⇑	P	P	03 29 50.8	+0.2
TIRR	Tirgusor	82.32 344⇑	*i*P	P	03 29 51.2	+0.3
TIRR	Tirgusor	82.32 344	*e*P	P	03 29 51.4	+0.5
comp=Z,8.3nm,0.8s						
TIRR	Tirgusor	82.32 344	*e*P	P	03 29 51.4	+0.5
TIRR			pmax	pmax		
comp=Z,8.0nm,0.8s						
BNI	Bardonecchia	83.62 360	*e*P	P	03 29 59.1	+1.3
comp=Z,3.4nm,0.7s						
BNI	Bardonecchia	83.62 360	*e*P	P	03 29 59.1	+1.3
BNI			pmax	pmax		
comp=Z,3.0nm,0.7s						
WRA	Warramunga Arr	84.53 228	P	P	03 30 01.3	-1.2
comp=Z,1.7nm,0.8s,baz=32,slow=5.7,SNR=9.6						
VTS	Vitosha	84.94 348⇑	*i*P	P	03 30 04.6	+0.1
VTS	Vitosha	84.94 348⇑	P	P	03 30 04.6	+0.1
BRTR	Keskin Array B	85.87 339	P	P	03 30 08.6	-0.6
comp=Z,1.4nm,0.8s,baz=29,slow=3.5,SNR=9.2						
BRTR	Keskin Array B	85.87 339	*i* P	P	03 30 09.6	+0.4
BRTR			pmax	pmax		
comp=Z,1.0nm,0.8s						
PSI	Prapat	86.19 270	P	P	03 30 10.8	-0.3
comp=Z,1.9nm,0.3s,baz=360,slow=23,SNR=18						
FNA	Florina	86.95 349	*e*P	P	03 30 14.2	-0.2
comp=Z,7.4nm,0.7s						
FNA	Florina	86.95 349	*e*P	P	03 30 14.2	-0.2
FNA			pmax	pmax		
comp=Z,7.0nm,0.7s						
AS01	Alice Springs	87.93 227	*e*P	P	03 30 18.8	-0.3
ASAR	Alice Springs	87.95 227	P	P	03 30 19.0	-0.2
comp=Z,3.2nm,0.8s,baz=31,slow=4.4,SNR=22						
ES19	SONSECA Array	88.53 8	*e*P	P	03 30 21.6	-0.5
ESDC	Sonseca Array	88.55 8	P	P	03 30 21.0	-1.1
comp=Z,0.8nm,0.7s,baz=349,slow=4.3,SNR=5.5						
MMAI	Mount Meron Ar	91.85 336	P	P	03 30 36.9	-0.7
comp=Z,0.8nm,0.3s,baz=311,slow=4.8,SNR=3.0						
STKA	Stephens Creek	92.01 217	P	P	03 30 38.2	+0.3
comp=Z,0.8nm,0.8s,baz=345,slow=10.0,SNR=5.4						
TORD	Torodi Ar. Bea	115.29 5	PKP	PKPdf	03 36 09.4	-1.7
comp=Z,0.5nm,0.6s,baz=348,slow=2.5,SNR=10.0						
PLCA	Paso Flores	128.06 110	PKP	PKPdf	03 36 34.5	-0.3
comp=Z,3.0nm,0.9s,baz=301,slow=2.6,SNR=4.7						
TSUM	Tsumeb	146.37 340	PKPbc	PKPbc	03 37 10.6	+0.3
comp=Z,10nm,0.6s,baz=352,slow=5.9,SNR=12						
MAW	Mawson	148.69 218	PKPbc	PKPbc	03 37 15.4	+0.4
comp=Z,7.8nm,0.9s,baz=107,slow=2.6,SNR=7.8						
LBTB	Lobatse	149.54 324	PKPbc	PKPbc	03 37 18.6	-0.1
baz=336,slow=1.8						
BOSA	Boshof	152.92 321	PKPbc	PKPbc	03 37 26.1	-0.3
comp=Z,1.5nm,0.5s,baz=2.4,slow=1.9,SNR=8.1						
BOSA			PKPab	PKPab	03 37 37.7	0.0
comp=Z,5.9nm,0.9s,baz=142,slow=7.7,SNR=4.5						

IDC 18 03:18:30.5±1.9, 1°.59N×127°.15E, h0km, mb4.2/4, mb1 4.4/4, mb1mx3.5/59, mbtmp4.2/4, MS3.5/2, Ms1 3.5/2, ms1mx2.6/58, Error ellipse: s-maj=183.8km s-min=20.4km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.53	162	P	P	03 23 32.1	-0.1
4.6nm,0.4s,baz=341,slow=11,SNR=70							
ASAR	Alice Springs	25.95	166	P	P	03 24 04.8	0.0
1.3nm,0.4s,baz=346,slow=12,SNR=19							
ASAR				LR	LR	03 33 45.5	
comp=Z,76nm,19.2s,baz=336,slow=35							
DZM	Mont Dzumac	44.98	124	LR	LR	03 45 49.9	
comp=Z,70nm,18.5s,baz=34,slow=36							
MKAR	Makanchi Array	59.55	326	P	P	03 28 36.1	+0.3
1.5nm,0.4s,baz=116,slow=8.0,SNR=8.3							
KURBB	Kurchatov Arra	63.76	328	P	P	03 29 03.9	-0.3
2.2nm,0.6s,baz=133,slow=6.4,SNR=9.2							

*CSEM **18** 03:27:03.9±0.2, 44°.90N×11°.06E, h15km, ML2.1/5, Error ellipse: s-maj=7.4km s-min=4.7km az=91.0*
*ISCJB **18** 03:27:04.4±0.4, 45°.00N±0°.02×11°.06E±0°.04, h7km±6km, Error ellipse: s-maj=5.0km s-min=3.7km az=7.0*
*ROM **18** 03:27:04.2±0.1, 44°.939N±0°.001×10°.998E±0°.004, h3km, ML1.8/14*
*VIE **18** 03:27:07.2±0.8, 45°.12N×11°.07E, h10km±3km, mb1.6/3, ml2.0/8, Error ellipse: s-maj=5.2km s-min=3.8km az=17.0*
72 km NNW of Bologna

ISC 18 03:27:04.8±0.8, 44°.96N±0°.03×11°.05E±0°.03, h13km±7km, n49, σ0 75/59, 5C-1D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NDIM	Novi di Modena	0.12	237	*e*P	Pg	03 27 07.2	-0.8
NDIM				*i* S	Sg	03 27 10.3	0.0
NDIM				AML	AML		
comp=E,2935μm,0.1s							
NDIM				AML	AML		
comp=N,5755μm,0.2s							
NDIM				AML	AML		
comp=E,3010μm,0.6s							
NDIM				AML	AML		
comp=N,5570μm,0.2s							
T0802	SanFelice sul	0.13	129	*e*P	Pg	03 27 07.2	-0.9
T0802				*i* S	Sg	03 27 10.4	+0.1
T0802	SanFelice sul	0.13	129	*e*P	Pg	03 27 07.2	-0.9
T0802				*i* S	Sg	03 27 10.4	+0.1
T0825	Gonzaga (MN)	0.14	277	AML	AML		
comp=N,3010μm,0.3s							
T0825				AML	AML		
comp=E,3395μm,0.5s							
T0825				AML	AML		
comp=N,3010μm,0.3s							
T0825				AML	AML		
comp=E,3395μm,0.5s							
T0800	Massa Finalese	0.18	126	*e*P	Pg	03 27 07.9	-0.9
T0800				*i* S	Sg	03 27 12.2	+0.5
T0800	Massa Finalese	0.18	126	*e*P	Pg	03 27 07.9	-0.9
T0800				*i* S	Sg	03 27 12.2	+0.5
T0800				AML	AML		
comp=E,1825μm,0.9s							
T0800				AML	AML		
comp=N,1825μm,0.7s							
T0800				AML	AML		
comp=E,1910μm,0.9s							
T0800				AML	AML		
comp=N,1885μm,0.4s							
T0800				AML	AML		
comp=E,1820μm,0.9s							
T0800				AML	AML		
comp=N,1820μm,0.7s							
T0800				AML	AML		
comp=E,1905μm,0.9s							
T0800				AML	AML		
comp=N,1890μm,0.4s							
T0805	Bondeno (FE)	0.20	100	*e*P	Pg	03 27 08.8	-0.4
T0805	Bondeno (FE)	0.20	100	*e*P	Pg	03 27 08.8	-0.4
T0826	Rio Saliceto (	0.20	235⇑	*i*P	Pg	03 27 08.7	-0.6
T0826				*i* S	Sg	03 27 13.1	+0.8
T0826	Rio Saliceto (	0.20	235	*i* P	Pg	03 27 08.7	-0.6
T0826				*i* S	Sg	03 27 13.1	+0.8
T0826				AML	AML		
comp=E,1285μm,0.2s							
T0826				AML	AML		
comp=N,1550μm,0.3s							
T0826				AML	AML		
comp=E,1290μm,0.2s							
T0826				AML	AML		
comp=N,1550μm,0.3s							
T0826				AML	AML		
comp=N,1550μm,0.3s							
T0826				AML	AML		
comp=E,1290μm,0.2s							
RAVA	Ravarino	0.21	165⇑	*i*P	Pg	03 27 08.1	-1.2
RAVA				*i* S	Sg	03 27 12.3	-0.1
RAVA	Ravarino	0.21	165	*i* P	Pg	03 27 08.1	-1.2
RAVA				*i* S	Sg	03 27 12.3	-0.1
RAVA				AML	AML		
comp=E,1995μm,1.5s							
RAVA				AML	AML		
comp=N,2605μm,0.2s							
RAVA				AML	AML		
comp=E,1990μm,1.5s							
RAVA				AML	AML		
comp=N,2610μm,0.2s							
NOVE	Novellara	0.28	236	*e*P	Pg	03 27 09.9	-0.7
NOVE				*i* S	Sb	03 27 15.9	-0.5
NOVE	Novellara	0.28	236	*e*P	Pg	03 27 09.9	-0.7
NOVE				*i* S	Sb	03 27 15.9	-0.5
NOVE				AML	AML		
comp=E,389μm,0.2s							
NOVE				AML	AML		
comp=N,404μm,0.2s							
NOVE				AML	AML		
comp=E,390μm,0.2s							
NOVE				AML	AML		
comp=N,404μm,0.2s							
NOVE				AML	AML		
comp=E,390μm,0.2s							
NOVE				AML	AML		
comp=N,404μm,0.2s							
TEOL	Teolo	0.60	47⇑	*e*Pg	Pb	03 27 17.1	-0.1
TEOL				*e*Sg	Sb	03 27 27.0	+1.4
TEOL	Teolo	0.60	47	*e*Pg	Pb	03 27 17.1	-0.1
TEOL				*e*Sg	Sb	03 27 27.0	+1.4
ROVR	Rover˜¤ Verone	0.69	2	AML	AML		
comp=N,353μm,0.9s							
ROVR				AML	AML		
comp=E,164μm,0.9s							
ROVR				AML	AML		
comp=N,353μm,0.9s							
ROVR				AML	AML		
comp=E,164μm,0.9s							
MARN	Marana (Italy)	0.69	10⇑	*e*Pg	Pb	03 27 19.2	+0.4
MARN	Marana (Italy)	0.69	10	*e*Pg	Pb	03 27 19.2	+0.4
ERBM	Eremo	0.70	220	AML	AML		
comp=N,29μm,0.9s							
ERBM				AML	AML		
comp=E,35μm,1.1s							
ERBM				AML	AML		
comp=E,35μm,1.1s							
ERBM				AML	AML		
comp=N,29μm,0.9s							
BALD	Monte Baldo	0.74	348	*e*Pg	Pb	03 27 20.4	+0.6
BALD				*e*Sg	Sn	03 27 32.3	-0.3
BALD	Monte Baldo	0.74	348	*e*Pg	Pb	03 27 20.4	+0.6
BALD				*e*Sg	Sn	03 27 32.3	-0.3
SALO	Salr	0.76	331	*e*P	Pn	03 27 21.1	-0.2
SALO	Salr	0.76	331	*e*P	Pn	03 27 21.1	-0.2
SALO				AML	AML		
comp=E,150μm,1.5s							
SALO				AML	AML		
comp=N,156μm,0.2s							
SALO				AML	AML		
comp=E,150μm,1.5s							
SALO				AML	AML		
comp=N,156μm,0.2s							
MAGA	Magasa	0.87	340	*e*P	Pg	03 27 21.0	-0.7
MAGA	Magasa	0.87	340	*e*P	Pb	03 27 22.0	+0.1
MAGA				*i* S	Sn	03 27 37.5	+1.9
MAGA				AML	AML		
comp=E,502μm,1.2s							
MAGA				AML	AML		
comp=N,554μm,0.2s							
MAGA				AML	AML		
comp=E,502μm,1.2s							
MAGA				AML	AML		
comp=N,554μm,0.2s							
MAGA				AML	AML		
comp=N,554μm,0.2s							
MAGA				AML	AML		
comp=E,502μm,1.2s							
DOSS	Dosso del Somm	0.93	6⇑	*e*Pg	Pb	03 27 23.1	+0.1
DOSS	Dosso del Somm	0.93	6	*e*Pg	Pb	03 27 23.1	+0.1
POPM	Popiglio	0.93	193	AML	AML		
comp=E,29μm,0.3s							
POPM				AML	AML		
comp=E,29μm,0.3s							
POPM				AML	AML		
comp=N,32μm,0.3s							
POPM				AML	AML		
comp=N,32μm,0.3s							
CGRP	Cima Grappa	1.07	30	AML	AML		
comp=E,43μm,0.8s							
CGRP				AML	AML		
comp=N,40μm,0.4s							
CGRP				AML	AML		
comp=E,43μm,0.8s							
CGRP				AML	AML		
comp=N,40μm,0.4s							
RNI	Roncone	1.07	344⇓	*e*Pg	Pg	03 27 24.7	-0.7
RNI	Roncone	1.07	344	*e*Pg	Pg	03 27 24.7	-0.7
MAIM	Mastiano	1.11	201	AML	AML		
comp=N,23μm,0.7s							
MAIM				AML	AML		
comp=E,27μm,0.3s							
MAIM				AML	AML		
comp=N,23μm,0.7s							
MAIM				AML	AML		
comp=E,27μm,0.3s							
BOB	Bobbio (Coli)	1.15	261	AML	AML		
comp=N,28μm,1.4s							
BOB				AML	AML		
comp=E,30μm,1.5s							
BOB				AML	AML		
comp=N,28μm,1.4s							
BOB				AML	AML		
comp=E,30μm,1.5s							
MABI	Malga Bissina	1.16	341	AML	AML		
comp=E,43μm,0.2s							
MABI				AML	AML		
comp=E,43μm,0.2s							
MABI				AML	AML		
comp=N,31μm,0.1s							
MABI				AML	AML		
comp=N,31μm,0.1s							
PLMA	Palmaria, Port	1.25	224	AML	AML		
comp=E,27μm,0.6s							
PLMA				AML	AML		
comp=N,33μm,0.4s							
PLMA				AML	AML		
comp=E,27μm,0.6s							
PLMA				AML	AML		
comp=N,33μm,0.4s							
MSSA	Maissana	1.26	240	AML	AML		
comp=N,19μm,0.4s							
MSSA				AML	AML		
comp=E,20μm,1.5s							
MSSA				AML	AML		
comp=N,19μm,0.4s							
MSSA				AML	AML		
comp=E,20μm,1.5s							
BRMO	Bormio	1.59	343	AML	AML		
comp=E,20μm,1.6s							
BRMO				AML	AML		
comp=N,26μm,0.2s							
BRMO				AML	AML		
comp=E,20μm,1.6s							
BRMO				AML	AML		
comp=N,26μm,0.2s							
ABTA	Abfaltersbach	2.06	29	*e*Sn	Sn	03 28 04.4	-0.6
comp=N,0.4nm,0.1s							
ABTA	Abfaltersbach	2.06	29	Sn	Sn	03 28 04.4	-0.6
comp=N,0.4nm,0.1s							
FETA	Feichten	2.08	354	*e*Pg	Pg	03 27 44.2	-0.5
comp=N,0.1nm,0.1s							
FETA				Sg	Sg	03 28 11.4	-0.2
comp=N,0.1nm,0.1s							
FETA	Feichten	2.08	354	Pg	Pg	03 27 44.2	-0.5
comp=N,0.1nm,0.1s							
FETA				Sg	Sg	03 28 11.4	-0.2
comp=N,0.1nm,0.1s							
CING	Cingoli	2.21	135	AML	AML		
comp=N,9μm,1.4s							
CING				AML	AML		
comp=E,9μm,1.2s							
CING				AML	AML		
comp=N,9μm,1.4s							
CING				AML	AML		
comp=E,9μm,1.2s							
WTTA	Wattenberg	2.35	10	*e*Sg	Sg	03 28 19.6	-0.6
comp=E,1.9nm,0.3s							
WTTA	Wattenberg	2.35	10	Sg	Sg	03 28 19.6	-0.6
comp=E,1.9nm,0.3s							
MOTA	Moosalm	2.39	1	Pg	Pg	03 27 49.4	-1.2

comp=E,0.9nm,0.2s
MOTA Sg **Sg** **03 28 20.4 -1.2**
comp=E,0.2nm,0.0s
MOTA Moosalm 2.39 1 Pg **Pg** **03 27 49.4 -1.2**
comp=E,0.9nm,0.2s
MOTA Sg **Sg** **03 28 20.4 -1.2**
comp=E,0.2nm,0.0s
DAVA Damuels 2.47 341 Pn **Pn** **03 27 45.9 +1.0**
comp=E,0.3nm,0.2s
DAVA Sn **Sn** **03 28 15.3 +0.3**
comp=E,1.8nm,0.3s
DAVA Damuels 2.47 341 Pn **Pn** **03 27 45.9 +1.0**
comp=E,0.3nm,0.2s
DAVA Sn **Sn** **03 28 15.3 +0.3**
comp=E,1.8nm,0.3s

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*ROM **18** 03:29:06.5±0.1, 44°.832N±0°.004×11°.398E±0°.006, h8km, ML2.2/12*
*ISCJB **18** 03:29:07.9±0.4, 44°.90N±0°.03×11°.43E±0°.04, h9km±3km, Error ellipse: s-maj=4.9km s-min=4.1km az=155.5*
*IASPEI **18** 03:29:08.0±0.8, 44°.82N±0°.03×11°.37E±0°.03, h13km±5km, Error ellipse: s-maj=4.2km s-min=3.7km az=62.6, GT5 selection from ISC bulletin GT5 identified by Bondár and McLaughlin (2009) selection criteria Bondár and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
*CSEM **18** 03:29:08.0±0.2, 44°.85N×11°.38E, h12km, ML2.2, Error ellipse: s-maj=5.4km s-min=3.5km az=88.0*
*VIE **18** 03:29:10.4±0.7, 45°.02N×11°.23E, h12km±2km, mb1.9/7, ml2.1/8, Error ellipse: s-maj=5.2km s-min=4.6km az=123.0*
58 km N of Bologna

ISC 18 03:29:08.1±0.8, 44°.85N±0°.02×11°.36E±0°.03, h17km±4km, n52, σ0°75/68, 1C-1D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0805	**Bondeno (FE)**	**0.08**	**339**	**P**	**Pg**	**03 29 11.7**	**+0.4**
T0805				S	**Sg**	**03 29 14.4**	**+0.9**
T0805	**Bondeno (FE)**	**0.08**	**339**	**P**	**Pg**	**03 29 11.7**	**+0.4**
T0805				S	**Sg**	**03 29 14.4**	**+0.9**
T0805				END			
T0803	**Dosso, Cento (**	**0.08**	**185**	⇑P	**Pg**	**03 29 10.1**	**-1.2**
T0803				S	**Sg**	**03 29 12.6**	**-0.9**
T0803	**Dosso, Cento (**	**0.08**	**185**	*i* P	**Pg**	**03 29 10.1**	**-1.2**
T0803				*i* S	**Sg**	**03 29 12.7**	**-0.8**
T0803	**Dosso, Cento (**	**0.08**	**185**	P	**Pg**	**03 29 10.1**	**-1.2**
T0803				S	**Sg**	**03 29 12.6**	**-0.9**
T0803				AML	AML		
	comp=E,34000μm,0.4s						
T0803				AML	AML		
	comp=N,12450μm,1.6s						
T0803				AML	AML		
	comp=E,34000μm,0.4s						
T0803				AML	AML		
	comp=N,12450μm,1.6s						
T0803				END			
T0800	**Massa Finalese**	**0.08**	**271**	P	**Pg**	**03 29 10.6**	**-0.7**
T0800				S	**Sg**	**03 29 13.5**	**0.0**
T0800	**Massa Finalese**	**0.08**	**271**	P	**Pg**	**03 29 10.6**	**-0.7**
T0800				S	**Sg**	**03 29 13.5**	**0.0**
T0800				AML	AML		
	comp=E,9165μm,0.2s						
T0800				AML	AML		
	comp=N,7025μm,0.7s						
T0800				AML	AML		
	comp=E,10940μm,0.2s						
T0800				AML	AML		
	comp=N,5355μm,0.2s						
T0800				AML	AML		
	comp=E,9195μm,0.2s						
T0800				AML	AML		
	comp=E,10945μm,0.2s						
T0800				AML	AML		
	comp=N,7025μm,0.7s						
T0800				AML	AML		
	comp=N,5360μm,0.2s						
T0800				END			
T0800				END			
T0802	**SanFelice sul**	**0.13**	**282**	P	**Pg**	**03 29 11.4**	**-0.5**
T0802	**SanFelice sul**	**0.13**	**282**	P	**Pg**	**03 29 11.4**	**-0.5**
T0821	**Loc. Casaglia**	**0.14**	**66**	P	**Pg**	**03 29 11.4**	**-0.6**
T0821				S	**Sg**	**03 29 14.6**	**0.0**
T0821	**Loc. Casaglia**	**0.14**	**66**	P	**Pg**	**03 29 11.4**	**-0.6**
T0821				S	**Sg**	**03 29 14.6**	**0.0**
T0821				AML	AML		
	comp=E,1138μm,0.3s						
T0821				AML	AML		
	comp=N,1325μm,0.4s						
T0821				AML	AML		
	comp=E,1138μm,0.3s						
T0821				AML	AML		
	comp=N,1325μm,0.4s						
T0821				END			
T0821				END			
T0820	**Chiesuol del F**	**0.16**	**110**	P	**Pg**	**03 29 11.9**	**-0.4**
T0820	**Chiesuol del F**	**0.16**	**110**	P	**Pg**	**03 29 11.9**	**-0.4**
T0820				AML	AML		
	comp=E,1925μm,0.4s						
T0820				AML	AML		
	comp=N,2040μm,0.7s						
T0820				AML	AML		
	comp=E,2100μm,0.6s						
T0820				AML	AML		
	comp=N,1920μm,0.6s						
T0820				AML	AML		
	comp=N,1920μm,0.6s						
T0820				AML	AML		
	comp=E,1925μm,0.4s						
T0820				AML	AML		
	comp=E,2100μm,0.6s						
T0820				AML	AML		
	comp=N,2040μm,0.7s						
T0820				END			
SERM	**Sermide**	**0.17**	**344**	P	**Pb**	**03 29 13.2**	**+0.4**
SERM	**Sermide**	**0.17**	**344**	P	**Pb**	**03 29 13.2**	**+0.4**
RAVA	**Ravarino**	**0.20**	**242**	P	**Pg**	**03 29 12.8**	**0.0**
RAVA	**Ravarino**	**0.20**	**242**	P	**Pg**	**03 29 12.8**	**0.0**
RAVA				AML	AML		
	comp=E,4480μm,0.4s						
RAVA				AML	AML		
	comp=N,2480μm,0.2s						
RAVA				AML	AML		
	comp=E,4480μm,0.4s						
RAVA				AML	AML		
	comp=N,2480μm,0.2s						
RAVA				END			
FIU	**Minerbio Fiu**	**0.23**	**156**	⇓P	**Pg**	**03 29 12.8**	**-0.5**
FIU				S	**Sg**	**03 29 17.2**	**+0.4**
FIU	**Minerbio Fiu**	**0.23**	**156**	P	**Pg**	**03 29 12.8**	**-0.5**
FIU				S	**Sg**	**03 29 17.2**	**+0.4**
FIU				AML	AML		
	comp=E,844μm,0.7s						
FIU				AML	AML		
	comp=N,803μm,0.5s						
FIU				AML	AML		
	comp=E,844μm,0.7s						
FIU				AML	AML		
	comp=N,803μm,0.5s						
NDIM	**Novi di Modena**	**0.33**	**277**	AML	AML		
	comp=N,814μm,0.3s						
NDIM				AML	AML		
	comp=E,875μm,0.6s						
NDIM				AML	AML		
	comp=E,872μm,0.6s						
NDIM				AML	AML		
	comp=N,814μm,0.3s						
CMPO	**Campotto Po**	**0.41**	**130**	P	**Pb**	**03 29 16.7**	**-0.3**
CMPO	**Campotto Po**	**0.41**	**130**	P	**Pb**	**03 29 16.6**	**-0.3**
NOVE	**Novellara**	**0.46**	**264**	AML	AML		
	comp=E,400μm,0.6s						
NOVE				AML	AML		
	comp=E,400μm,0.6s						
NOVE				AML	AML		
	comp=N,355μm,0.8s						
NOVE				AML	AML		
	comp=N,355μm,0.8s						
TEOL	**Teolo**	**0.56**	**23**	P	**Pb**	**03 29 19.9**	**+0.4**
TEOL	**Teolo**	**0.56**	**23**	P	**Pb**	**03 29 19.9**	**+0.4**
ZCCA	**Zocca**	**0.57**	**209**	P	**Pb**	**03 29 20.6**	**+1.0**
ZCCA	**Zocca**	**0.57**	**209**	P	**Pb**	**03 29 20.6**	**+1.0**
ZCCA				AML	AML		
	comp=E,87μm,0.4s						
ZCCA				AML	AML		
	comp=N,110μm,0.4s						
ZCCA				AML	AML		
	comp=N,110μm,0.4s						
ZCCA				AML	AML		
	comp=E,87μm,0.4s						
ZOVE	**Zovencedo**	**0.61**	**8**	P	**Pb**	**03 29 20.8**	**+0.4**
ZOVE	**Zovencedo**	**0.61**	**8**	P	**Pb**	**03 29 20.8**	**+0.4**
ERBM	**Eremo**	**0.80**	**238**	P	**Pb**	**03 29 24.0**	**+0.4**
ERBM	**Eremo**	**0.80**	**238**	P	**Pn**	**03 29 25.0**	**+0.2**
ROVR	**Rover¯¤ Verone**	**0.83**	**346**	P	**Pb**	**03 29 24.8**	**+0.7**
ROVR	**Rover¯¤ Verone**	**0.83**	**346**	P	**Pb**	**03 29 24.8**	**+0.7**
SALO	**Salr**	**0.97**	**323**	P	**Pn**	**03 29 27.8**	**+0.8**
SALO	**Salr**	**0.97**	**323**	P	**Pn**	**03 29 27.8**	**+0.8**
MAGA	**Magasa**	**1.06**	**331**	P	**Pn**	**03 29 29.2**	**+0.8**
MAGA	**Magasa**	**1.06**	**331**	P	**Pn**	**03 29 29.2**	**+0.8**
ASQU	**Asqua**	**1.09**	**164**	AML	AML		
	comp=E,30μm,0.7s						
ASQU				AML	AML		
	comp=E,30μm,0.7s						
ASQU				AML	AML		
	comp=N,34μm,0.5s						
ASQU				AML	AML		
	comp=N,34μm,0.5s						
PLMA	**Palmaria, Port**	**1.34**	**234**	AML	AML		
	comp=N,53μm,0.9s						
PLMA				AML	AML		
	comp=E,52μm,0.4s						
PLMA				AML	AML		
	comp=E,52μm,0.4s						
PLMA				AML	AML		
	comp=N,53μm,0.9s						
MSSA	**Maissana**	**1.42**	**249**	AML	AML		
	comp=E,28μm,0.9s						
MSSA				AML	AML		
	comp=N,35μm,0.5s						
MSSA				AML	AML		
	comp=N,35μm,0.5s						
MSSA				AML	AML		
	comp=E,28μm,0.9s						
ABTA	**Abfaltersbach**	**2.06**	**23**	Pg	**Pg**	**03 29 47.5**	**-0.2**
	comp=E,0.5nm,0.1s						
ABTA				Sg	**Sg**	**03 30 15.0**	**+0.5**
	comp=E,881nm,0.0s						
ABTA	**Abfaltersbach**	**2.06**	**23**	Pg	**Pg**	**03 29 47.5**	**-0.2**
	comp=E,0.5nm,0.1s						
ABTA				Sg	**Sg**	**03 30 15.0**	**+0.5**
	comp=E,881nm,0.0s						
FETA	**Feichten**	**2.22**	**349**	*e*Pg	**Pg**	**03 29 50.3**	**-0.4**
FETA				Sg	**Sg**	**03 30 17.6**	**-1.9**
	comp=E,0.2nm,0.1s						
FETA	**Feichten**	**2.22**	**349**	Pg	**Pg**	**03 29 50.3**	**-0.4**
FETA				Sg	**Sg**	**03 30 17.6**	**-1.9**
	comp=E,0.2nm,0.1s						
WTTA	**Wattenberg**	**2.42**	**4**	Sg	**Sg**	**03 30 25.4**	**-0.7**
	comp=E,0.6nm,0.1s						
WTTA	**Wattenberg**	**2.42**	**4**	Sg	**Sg**	**03 30 25.4**	**-0.7**
	comp=E,0.6nm,0.1s						
MOTA	**Moosalm**	**2.50**	**356**	Pg	**Pg**	**03 29 54.6**	**-1.5**
	comp=E,1.5nm,0.3s						
MOTA				*e*Sn	**Sn**	**03 30 18.6**	**+0.1**
MOTA	**Moosalm**	**2.50**	**356**	Pg	**Pg**	**03 29 54.6**	**-1.5**
	comp=E,1.5nm,0.3s						
MOTA				Sn	**Sn**	**03 30 18.6**	**+0.1**
NVLJ	**Novalja**	**2.52**	**95**	*e*Pn	**Pn**	**03 29 49.0**	**+0.8**
NVLJ				Sn	**Sn**	**03 30 18.9**	**+0.3**
NVLJ	**Novalja**	**2.52**	**95**	*e*Pn	**Pn**	**03 29 49.0**	**+0.8**
NVLJ				Sn	**Sn**	**03 30 18.8**	**+0.3**
DAVA	**Damuels**	**2.65**	**338**	Pn	**Pn**	**03 29 50.5**	**+0.3**
	comp=E,0.5nm,0.2s						
DAVA				Sn	**Sn**	**03 30 21.0**	**-1.1**
	comp=E,1.9nm,0.3s						
DAVA	**Damuels**	**2.65**	**338**	Pn	**Pn**	**03 29 50.5**	**+0.3**
	comp=E,0.5nm,0.2s						
DAVA				Sn	**Sn**	**03 30 21.0**	**-1.1**
	comp=E,1.9nm,0.3s						

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*ISCJB **18** 03:32:44.2±0.5, 39°.93N±0°.02×25°.67E±0°.03, h3km±4km, Error ellipse: s-maj=4.6km s-min=3.3km az=155.8*
*CSEM **18** 03:32:44.8±0.1, 39°.94N×25°.66E, h10km, ML2.7, Error ellipse: s-maj=2.8km s-min=1.8km az=80.0*
*ATH **18** 03:32:44.0, 39°.92N×25°.63E, h24km±3km, ML1.8/6, Error ellipse: s-maj=3.2km s-min=1.0km az=274.0*
*ISK **18** 03:32:44.7, 39°.94N×25°.71E, h10km, ML2.7/11*
*DDA **18** 03:32:44.9, 39°.99N×25°.74E, h7km, Ml2.6*

ISC 18 03:32:44.5±1.0, 39°.94N±0°.02×25°.68E±0°.02, h11km±8km, n55, σ0°57/81, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.30**	**33**	PG	**Pg**	**03 32 51.2**	**+0.5**
GADA				SG	**Sb**	**03 32 56.0**	**-1.0**
GADA	**Gvkgeada**	**0.30**	**33**	*e*Pg	**Pg**	**03 32 51.2**	**+0.5**
GADA				*e*Sg	**Sb**	**03 32 56.0**	**-1.0**
LIA	**Limnos Island**	**0.39**	**265**	P	**Pg**	**03 32 51.5**	**-0.6**
LIA				S	**Sg**	**03 32 56.9**	**-0.4**
LIA				AML	AML	03 33 00.4	
	comp=E,269μm,0.4s						
LIA				AML	AML	03 33 04.9	
	comp=N,264μm,0.3s						
LIA	**Limnos Island**	**0.39**	**265**	P	**Pg**	**03 32 51.6**	**-0.6**
LIA				S	**Sg**	**03 32 57.1**	**-0.2**
EZN	**Ezine**	**0.51**	**102**	PG	**Pg**	**03 32 54.8**	**+0.4**
EZN				SG	**Sb**	**03 33 01.9**	**-0.9**
EZN	**Ezine**	**0.51**	**102**	*e*Pg	**Pg**	**03 32 54.8**	**+0.4**
EZN				*e*Sg	**Sb**	**03 33 01.9**	**-0.9**
SMTH	**Samothraki Isl**	**0.55**	**348**	P	**Pg**	**03 32 55.3**	**+0.1**
SMTH				S	**Sb**	**03 33 04.1**	**0.0**
SMTH				AML	AML	03 33 07.7	
	comp=N,115μm,0.3s						
SMTH				AML	AML	03 33 08.9	
	comp=E,122μm,0.2s						
SMTH	**Samothraki Isl**	**0.55**	**348**	P	**Pg**	**03 32 55.3**	**+0.1**
SMTH				S	**Sb**	**03 33 03.8**	**-0.3**
BAYC	**CANAKKALE_Bayr**	**0.69**	**106**	*i* P	**Pb**	**03 32 59.0**	**+0.3**
BAYC				*i* S	**Sg**	**03 33 06.7**	**-0.3**
BAYC	**CANAKKALE_Bayr**	**0.69**	**106**	P	**Pb**	**03 32 59.0**	**+0.3**
BAYC				S	**Sg**	**03 33 06.7**	**-0.3**
SIGR	**SIGRI**	**0.73**	**169**	PG	**Pb**	**03 32 59.5**	**+0.2**
SIGR				SG	**Sb**	**03 33 10.2**	**+0.8**
SIGR	**SIGRI**	**0.73**	**169**	P	**Pb**	**03 32 59.7**	**+0.4**
SIGR				S	**Sg**	**03 33 08.1**	**-0.2**
SIGR				AML	AML	03 33 14.5	
	comp=N,346μm,0.7s						
SIGR				AML	AML	03 33 14.9	
	comp=E,345μm,0.5s						
SIGR	**SIGRI**	**0.73**	**169**	P	**Pg**	**03 32 59.0**	**+0.3**
SIGR	**SIGRI**	**0.73**	**169**	*e*Pg	**Pb**	**03 32 59.5**	**+0.2**
SIGR				S	**Sg**	**03 33 08.4**	**+0.1**
SIGR				*e*Sg	**Sb**	**03 33 10.2**	**+0.8**
GELI	**Tayfur-Gelibol**	**0.76**	**52**	PG	**Pb**	**03 32 59.7**	**-0.1**
GELI	**Tayfur-Gelibol**	**0.76**	**52**	*e*Pg	**Pb**	**03 32 59.7**	**-0.1**
PRK	**Paraskevi**	**0.82**	**146**	P	**Pg**	**03 32 59.7**	**-0.7**
PRK				S	**Sg**	**03 33 10.4**	**-0.8**
PRK				AML	AML	03 33 15.5	
	comp=E,344μm,0.3s						
PRK				AML	AML	03 33 17.8	
	comp=N,285μm,0.6s						
PRK	**Paraskevi**	**0.82**	**146**	P	**Pg**	**03 32 59.9**	**-0.5**
PRK				S	**Sg**	**03 33 11.1**	**-0.1**
ENEZ	**Enez**	**0.88**	**24**	PG	**Pg**	**03 33 01.6**	**+0.2**
ENEZ	**Enez**	**0.88**	**24**	*e*Pg	**Pg**	**03 33 01.6**	**+0.2**
LPK	**Lapseki**	**0.94**	**62**	PG	**Pg**	**03 33 01.9**	**-0.6**
LPK	**Lapseki**	**0.94**	**62**	*e*Pg	**Pg**	**03 33 01.9**	**-0.6**
ERIK	**Erikli-Kesan**	**0.97**	**41**	PG	**Pb**	**03 33 03.4**	**0.0**
ERIK	**Erikli-Kesan**	**0.97**	**41**	*e*Pg	**Pb**	**03 33 03.4**	**0.0**
AYVA	**Ayvalik**	**1.00**	**128**	*i* P	**Pb**	**03 33 04.2**	**+0.3**
AYVA				*i* S	**Sn**	**03 33 18.4**	**-0.1**
AYVA	**Ayvalik**	**1.00**	**128**	P	**Pb**	**03 33 04.2**	**+0.3**
AYVA				S	**Sn**	**03 33 18.4**	**-0.1**
ALN	**Alexandroupoli**	**1.00**	**16**	PG	**Pg**	**03 33 03.6**	**-0.2**
ALN	**Alexandroupoli**	**1.00**	**16**	P	**Pg**	**03 33 03.8**	**0.0**
ALN				S	**Sn**	**03 33 17.9**	**-0.7**
ALN				AML	AML	03 33 22.9	
	comp=N,82μm,0.6s						
ALN				AML	AML	03 33 23.2	
	comp=E,88μm,0.4s						
ALN	**Alexandroupoli**	**1.00**	**16**	P	**Pg**	**03 33 03.7**	**0.0**
ALN				S	**Sn**	**03 33 18.0**	**-0.7**
KESN	**Edirne-Kesan**	**1.17**	**40**	*i* P	**Pg**	**03 33 05.4**	**-1.7**
KESN				*i* S	**Sb**	**03 33 22.3**	**0.0**
KESN	**Edirne-Kesan**	**1.17**	**40**	P	**Pg**	**03 33 05.4**	**-1.7**
KESN				S	**Sb**	**03 33 22.3**	**0.0**
RDO	**Rodhopi**	**1.22**	**355**	PN	**Pg**	**03 33 08.2**	**+0.3**
RDO	**Rodhopi**	**1.22**	**355**	P	**Pn**	**03 33 07.0**	**-0.5**
RDO				S	**Sn**	**03 33 24.7**	**+0.8**
RDO				AML	AML	03 33 29.0	
	comp=E,36μm,0.2s						
RDO				AML	AML	03 33 29.0	
	comp=N,41μm,0.3s						
RDO	**Rodhopi**	**1.22**	**355**	P	**Pn**	**03 33 07.2**	**-0.3**
RDO	**Rodhopi**	**1.22**	**355**	*e*Pn	**Pg**	**03 33 08.2**	**+0.3**
RDO				S	**Sn**	**03 33 24.5**	**+0.6**
DKL	**Dikili**	**1.28**	**132**	PN	**Pb**	**03 33 08.9**	**+0.3**
DKL	**Dikili**	**1.28**	**132**	*e*Pn	**Pb**	**03 33 08.9**	**+0.3**
KRBG	**Karabiga-Canak**	**1.32**	**69**	PN	**Pg**	**03 33 09.6**	**-0.3**
KRBG	**Karabiga-Canak**	**1.32**	**69**	*e*Pn	**Pg**	**03 33 09.6**	**-0.3**
RKY	**Sarkoy-Tekirda**	**1.37**	**56**	PN	**Pn**	**03 33 09.8**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.37**	**56**	*e*Pn	**Pn**	**03 33 09.8**	**+0.2**
BALY	**Balya**	**1.50**	**97**	*i* P	**Pn**	**03 33 12.0**	**+0.5**
BALY				*i* S	**Sg**	**03 33 33.2**	**+0.3**
BALY	**Balya**	**1.50**	**97**	P	**Pn**	**03 33 12.0**	**+0.5**
BALY				S	**Sg**	**03 33 33.2**	**+0.3**
CHOS	**Chios island**	**1.57**	**169**	PN	**Pb**	**03 33 13.5**	**-0.2**
CHOS	**Chios island**	**1.57**	**169**	P	**Pn**	**03 33 12.3**	**-0.1**
CHOS	**Chios island**	**1.57**	**169**	P	**Pn**	**03 33 12.4**	**-0.1**
CHOS	**Chios island**	**1.57**	**169**	*e*Pn	**Pb**	**03 33 13.5**	**-0.2**
BALB	**Balikesir**	**1.72**	**99**	PN	**Pn**	**03 33 15.2**	**+0.8**
BALB	**Balikesir**	**1.72**	**99**	*e*Pn	**Pn**	**03 33 15.2**	**+0.8**
KDZ	**Kurdzhali**	**1.73**	**353**	PN	**Pn**	**03 33 15.3**	**+0.8**
KDZ	**Kurdzhali**	**1.73**	**353**	*e*Pn	**Pn**	**03 33 15.3**	**+0.8**
EDRB	**Edirne**	**2.07**	**23**	PN	**Pn**	**03 33 20.5**	**+1.2**
EDRB	**Edirne**	**2.07**	**23**	*e*Pn	**Pn**	**03 33 20.5**	**+1.2**
KCTX	**Karacabey (Bur**	**2.08**	**80**	PN	**Pn**	**03 33 19.8**	**+0.5**
KCTX	**Karacabey (Bur**	**2.08**	**80**	*e*Pn	**Pn**	**03 33 19.8**	**+0.5**

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*IDC **18** 03:36:14.0±1.7, 14°.72N×92°.49W, h0km, mb3.8/6, mb1 4.1/9, mb1mx3.8/45, mbtmp3.8/9, ML3.5/2, MS3.4/5, Ms1 3.5/5, ms1mx3.0/44, Error ellipse: s-maj=97.9km s-min=17.6km az=47.0*
*ISCJB **18** 03:36:15.1±0.5, 14°.33N±0°.05×92°.96W±0°.05, h20km, mb4.3/28, Error ellipse: s-maj=8.3km s-min=6.6km az=42.3*
*MEX **18** 03:36:19.9±1.0, 14°.44N×93°.28W, h20km±192km, MD4.1*
*NEIC **18** 03:36:19.9±0.0, 14°.44N×93°.28W, h20km, mb4.2/28, MD4.1(MEX), After MEX.*

ISC 18 03:36:17.3±0.9, 14°.43N±0°.08×93°.17W±0°.06, h20km, n69, σ1°74/68, mb4.2/28, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.27**	**358**	*e*Pn	**Pn**	**03 36 38.5**	**-1.6**
PCIG				*e*Sn	**Sn**	**03 36 54.1**	**-2.4**
PCIG		**1.27**	**358**	*e*P	**Pn**	**03 36 38.5**	**-1.6**
PCIG				*e*S	**Sn**	**03 36 54.1**	**-2.4**
CCIG	**Comitan**	**2.10**	**28**	*e*Pn	**Pn**	**03 36 52.5**	**+1.0**
CCIG				*e*Sn	**Sn**	**03 37 15.3**	**-1.9**
CCIG				*e*Sn	**Sn**	**03 37 16.9**	**-0.3**
CCIG	**Comitan**	**2.10**	**28**	*e*P	**Pn**	**03 36 52.5**	**+1.0**
CCIG				*e*S	**Sn**	**03 37 16.9**	**-0.3**
TGIG		**2.34**	**1**	*e*Pn	**Pn**	**03 36 55.3**	**+0.6**
TGIG				*e*Sn	**Sn**	**03 37 22.4**	**-0.6**
TGIG		**2.34**	**1**	*e*P	**Pn**	**03 36 55.3**	**+0.6**
TGIG				*e*S	**Sn**	**03 37 22.4**	**-0.6**
CMIG	**Matias Romero**	**3.12**	**328**	Pn	**Pn**	**03 37 06.1**	**+0.6**
	6.4nm,0.3s,baz=145,slow=12,SNR=41						
CMIG				Sn	**Sb**	**03 37 47.0**	**-2.8**
	18nm,0.3s,baz=224,slow=23,SNR=7.5						
CMIG				LR	LR	03 38 29.5	
	comp=Z,144nm,18.2s,baz=217,slow=41						
HUIG	**Huatulco**	**3.13**	**296**	*e*Pn	**Pn**	**03 37 04.1**	**-1.6**
HUIG	**Huatulco**	**3.13**	**296**	*e*P	**Pn**	**03 37 04.1**	**-1.6**
TLIG	**Tlapa**	**6.05**	**302**	*e*Pn	**Pn**	**03 37 48.0**	**+2.0**
LVIG	**Laguna Verde**	**6.11**	**330**	*e*Pn	**Pn**	**03 37 49.6**	**+2.9**
ESTN	**Estel**	**6.74**	**100**	*e*Pn	Pn	03 37 52.0	-3.3
JTS	**JuntasAbangare**	**9.02**	**116**	Pn	Pn	03 38 18.8	-7.7
	baz=303,slow=17,SNR=1.6						
HKT	**Hockley**	**15.64**	**351**	*e*Pn	**Pn**	**03 39 57.9**	**+1.2**
	8.7nm,1.3s						
348A	**Jackson**	**17.59**	**15**	*e*Pn	**Pn**	**03 40 21.2**	**-0.1**
	50nm,1.4s						
TXAR	**Lajitas Array**	**17.73**	**329**	P	**P**	**03 40 25.7**	**+1.7**
	0.0nm,0.3s,baz=137,slow=9.6,SNR=11						
TX31	**Lajitas Ar. Si**	**17.73**	**329**	*e*P	**P**	**03 40 25.6**	**+1.6**
352A	**Blakely**	**18.58**	**23**	*e*P	**P**	**03 40 34.0**	**+0.8**
	25nm,1.1s						
MIAR	**Mount Ida**	**20.04**	**359**	*e*P	**P**	**03 40 49.5**	**+0.3**
	11nm,0.9s						
MNTX	**Cornudas Mount**	**20.51**	**329**	*e*P	**P**	**03 40 56.5**	**+2.2**
W41B	**Gary Mavity, V**	**20.68**	**2**	*e*P	**P**	**03 40 57.7**	**+1.6**
	5.3nm,0.9s						
W39A	**Magazine**	**20.69**	**359**	*e*P	**P**	**03 40 59.4**	**+3.2**
	4.1nm,0.8s						
X48A	**Hartselle**	**20.69**	**14**	*e*P	**P**	**03 40 58.2**	**+1.9**
	6.2nm,1.0s						
257A	**Skidaway Islan**	**20.70**	**30**	*e*P	**P**	**03 40 56.0**	**-0.3**
	358nm,1.8s						
Y52A	**Lilburn**	**21.04**	**22**	*e*P	**P**	**03 41 00.5**	**+0.5**
	22nm,1.4s						
RUSC	**La Rusia**	**21.50**	**111**	*e*P	**P**	**03 41 02.6**	**-3.0**
	4.8nm,1.2s						
319A	**Douglas**	**22.42**	**322**	*e*P	**P**	**03 41 16.6**	**+1.6**
	7.7nm,1.2s						
S39A	**Bolivar**	**23.17**	**360**	*e*P	**P**	**03 41 21.1**	**-1.7**
	6.7nm,0.9s						
ANMO	**Albuquerque**	**23.68**	**332**	P	**P**	**03 41 29.5**	**+1.5**
	0.6nm,0.4s,baz=140,slow=9.7,SNR=4.7						
ANMO	**Albuquerque**	**23.68**	**332**	*e*P	**P**	**03 41 29.5**	**+1.5**
	4.7nm,1.6s						
T25A	**Trinidad**	**24.74**	**338**	*e*P	**P**	**03 41 39.4**	**+1.5**
	6.9nm,1.1s						
P40A	**Paris**	**25.03**	**2**	*e*P	**P**	**03 41 40.8**	**+0.7**
	10nm,1.6s						
SDCO	**Great Sand Dun**	**25.68**	**337**	*e*P	**P**	**03 41 47.7**	**+1.3**
	3.1nm,1.0s						
GLA	**Glamis**	**27.04**	**317**	*e*P	**P**	**03 42 00.9**	**+2.4**
	7.7nm,0.8s						
PV13	**Radium Mtn., P**	**27.40**	**332**	*e*P	**P**	**03 42 03.5**	**+1.6**
	6.4nm,1.4s						
PV03	**Paradox Valley**	**27.50**	**333**	*e*P	**P**	**03 42 03.9**	**+1.2**
	3.9nm,1.2s						
PV12	**Saucer Basin,**	**27.53**	**333**	*e*P	**P**	**03 42 05.3**	**+2.3**
	8.4nm,1.1s						
PV04	**Paradox Valley**	**27.64**	**333**	*e*P	**P**	**03 42 05.5**	**+1.6**
	16nm,1.5s						
PV22	**Blue Mesa, Par**	**27.70**	**333**	*e*P	**P**	**03 42 05.9**	**+1.3**
	3.3nm,0.8s						
PV23	**Carpenter Ridg**	**27.73**	**333**	*e*P	**P**	**03 42 07.4**	**+2.5**
	35nm,1.9s						
DGR	**Domenigoni Val**	**28.86**	**316**	*e*P	**P**	**03 42 16.6**	**+1.9**
ECSD	**EROS Data Cent**	**29.36**	**355**	*e*P	**P**	**03 42 18.1**	**-0.8**
	4.5nm,1.4s						
MVL	**Millersville**	**29.43**	**27**	*e*

YKA	Yellowknife Ar	50.36	347	P	P	03 45 11.4	-1.3
	2.1nm,0.6s,baz=152,slow=7.3,SNR=28						
YKW3	Yellowknife Ar	50.42	347	eP	P	03 45 12.2	-1.0
	3.0nm,0.8s						
ILAR	Eielson Array	62.00	337	P	P	03 46 34.8	-1.1
	0.9nm,0.9s,baz=135,slow=4.7,SNR=8.9						
ILB	Eielson Array	62.00	337	eP	P	03 46 34.8	-1.1
AFI	Afiamalu	82.72	254	LR	LR	04 16 22.5	
	comp=Z,118nm,20.9s,baz=126,slow=29						
LZH	Lanzhou	127.25	343	ePKP	PKPdf	03 55 24.5	+3.3
LZH				pPKP	sPKPdf	03 55 37.6	+7.3
LZH				sPKP		03 55 42.3	
CM31	Chiang Mai Arr	145.21	340	ePKPdf	PKPbc	03 55 51.2	-2.9
CMAR	Chiang Mai Arr	145.21	340	PKPbc	PKPbc	03 55 51.2	-2.9
	0.7nm,0.4s,baz=319,slow=3.7,SNR=4.1						

MOS ***18*** *03:51:14.9±1.3, 52°.53N×160°.89E, h17km, mb4.2/12, Error ellipse: s-maj=8.2km s-min=4.4km az=105.0*
KRSC ***18*** *03:51:16.4±1.1, 52°.68N×160°.78E, h16km±14km, ML4.3*
IDC ***18*** *03:51:21.8±2.6, 52°.95N×160°.47E, h44km±25km, mb3.6/21, mb1 3.7/22, mb1mx3.6/74, mbtmp3.8/22, ML3.5/1, Error ellipse: s-maj=22.4km s-min=14.7km az=156.0*

ISC 18 03:51:18.0±1.1, 52°.87N±0°.04×160°.69E±0°.03, h19km±3km, n98, σ1§25/120, mb4.0/22, 1D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.47	300	eP	Pn	03 51 29.1	-0.5
SPN				eS	Sn	03 51 36.8	-0.5
SPN	Mys Shipunski	0.47	300	PN	Pn	03 51 29.1	-0.5
SPN				S	Sn	03 51 36.8	-0.5
NLC	Nalytchevo	0.87	291	eP	Pn	03 51 34.8	-0.3
NLC	Nalytchevo	0.87	291	PN	Pn	03 51 34.8	-0.3
SDLR	Sedlovina	1.17	292	eP	Pb	03 51 39.7	+0.1
SDLR				eS	Sg	03 51 56.3	+0.4
SDLR	Sedlovina	1.17	292	PN	Pb	03 51 39.7	+0.1
SDLR				S	Sg	03 51 56.3	+0.4
UGLR	Uglovaya	1.18	288	eP	Pb	03 51 39.9	+0.1
UGLR	Uglovaya	1.18	288	PN	Pb	03 51 39.9	+0.1
DALK	Dalny	1.18	279	eP	Pn	03 51 39.4	-0.1
DALK				eS	Sn	03 51 55.9	+0.9
DALK	Dalny	1.18	279	PN	Pn	03 51 39.4	-0.1
DALK				S	Sn	03 51 55.9	+0.9
PET	Petropavlovsk	1.24	278	eP	Pn	03 51 40.3	0.0
PET	Petropavlovsk	1.24	278	↓iPN	Pn	03 51 40.3	0.0
PET				eS	Sb	03 51 57.2	+0.8
PET				pmax	pmax		
	comp=Z,257nm,0.5s						
PET				smax	smax		
	comp=N,1μm,0.9s						
PET				smax	smax		
	comp=E,793nm,0.5s						
AVH	Avacha	1.24	290	eP	Pb	03 51 41.0	+0.1
AVH	Avacha	1.24	290	PN	Pb	03 51 41.0	+0.1
KRER	Koryakskii	1.25	291	eP	Pb	03 51 41.4	+0.3
KRER	Koryakskii	1.25	291	PN	Pb	03 51 41.4	+0.3
KOK	Koryaka	1.31	290	eP	Pb	03 51 42.3	+0.3
KOK	Koryaka	1.31	290	PN	Pb	03 51 42.3	+0.3
KRX	Arik	1.33	293	eP	Pb	03 51 42.1	-0.2
KRX				eS	Sb	03 52 00.1	+1.1
KRX	Arik	1.33	293	PN	Pb	03 51 42.1	-0.2
KRX				S	Sb	03 52 00.1	+1.1
KII	Karymskiy	1.39	328	eP	Pg	03 51 44.7	-0.1
KII				eS	Sg	03 52 04.4	+1.4
KII	Karymskiy	1.39	328	PN	Pg	03 51 44.7	-0.1
KII				S	Sg	03 52 04.4	+1.4
RUS	Russkaya	1.40	253	eP	Pn	03 51 41.6	-0.8
RUS				eS	Sn	03 51 59.4	-0.8
RUS	Russkaya	1.40	253	PN	Pn	03 51 41.6	-0.8
RUS				S	Sn	03 51 59.4	-0.8
KRMR	Karymshinskiy	1.55	270	eP	Pn	03 51 44.6	0.0
KRMR	Karymshinskiy	1.55	270	PN	Pn	03 51 44.6	0.0
MTVR	Mutnovka	1.57	257	eP	Pn	03 51 45.1	+0.1
MTVR				eS	Sn	03 52 05.2	+0.3
MTVR	Mutnovka	1.57	257	PN	Pn	03 51 45.1	+0.1
MTVR				S	Sn	03 52 05.2	+0.3
GRL	Gorelyy	1.62	260	eP	Pn	03 51 46.1	+0.4
GRL	Gorelyy	1.62	260	PN	Pn	03 51 46.1	+0.4
ASAK	Asacha	1.77	255	eP	Pn	03 51 48.1	+0.5
ASAK	Asacha	1.77	255	PN	Pn	03 51 48.1	+0.5
MKZ	Mys Kozlova	1.80	20	eP	Pb	03 51 49.8	-0.6
MKZ				eS	Sb	03 52 13.3	+0.8
MKZ	Mys Kozlova	1.80	20	PN	Pb	03 51 49.8	-0.6
MKZ				S	Sb	03 52 13.3	+0.8
PETK	Petropavlovsk-	1.82	279	P	Pn	03 51 49.3	+1.0
	comp=E,99nm,0.3s,baz=97,slow=20,SNR=140						
PETK				S	Sb	03 52 14.2	+1.0
	comp=E,37nm,0.3s,baz=89,slow=24,SNR=8.7						
GNL	Ganaly	1.85	298	eP	Pb	03 51 50.9	-0.3
GNL	Ganaly	1.85	298	PN	Pb	03 51 50.9	-0.3
KDTR	Khodutka, Kamc	1.92	238	eP	Pn	03 51 48.9	-0.7
APC	Apacha	2.14	273	eP	Pn	03 51 54.2	+1.6
APC				eS	Sb	03 52 21.6	-0.6
APC	Apacha	2.14	273	PN	Pn	03 51 54.2	+1.6
APC				S	Sb	03 52 21.6	-0.6
KZV	Kizimen	2.27	354	eP	Pb	03 51 57.7	-0.6
KZV				eS	Sb	03 52 27.6	+1.6
KZV	Kizimen	2.27	354	PN	Pb	03 51 57.7	-0.6
KZV				S	Sb	03 52 27.6	+1.6
TUMD	Tumrok D	2.35	356	eP	Pb	03 51 58.7	-1.0
TUMD				eS	Sb	03 52 29.4	+1.1
TUMR	Tumrok	2.44	353	eP	Pb	03 52 00.8	-0.6
TUMR				eS	Sb	03 52 33.0	+1.9
TUMR	Tumrok	2.44	353	PN	Pb	03 51 58.7	+1.8
KMNR	Kamenistaya	2.91	355	eP	Pb	03 52 08.2	-1.1
KMNR	Kamenistaya	2.91	355	PN	Pb	03 52 08.2	-1.1
BZMR	Bezymyannaya	3.08	358	eP	Pb	03 52 10.6	-1.6
BZMR	Bezymyannaya	3.08	358	PN	Pb	03 52 10.6	-1.6
BZGR	Bezymyannyi-Gr	3.08	0	eP	Pb	03 52 10.3	-1.9
BZGR	Bezymyannyi-Gr	3.08	0	PN	Pb	03 52 10.3	-1.9
KIRR	Kirishev	3.10	356	eP	Pb	03 52 11.4	-1.2
KIRR	Kirishev	3.10	356	PN	Pb	03 52 11.4	-1.2
BZWR	Bezymyannyi-We	3.11	358	eP	Pb	03 52 11.2	-1.5
BZWR	Bezymyannyi-We	3.11	358	PN	Pb	03 52 11.2	-1.5
KPT	Kopyto	3.12	355	eP	Pb	03 52 10.8	-2.1
KPT	Kopyto	3.12	355	PN	Pb	03 52 10.8	-2.1
ZLN	Zelenaya	3.16	1	eP	Pb	03 52 11.3	-2.3
ZLN	Zelenaya	3.16	1	PN	Pb	03 52 11.3	-2.3
LGNR	Loginova	3.23	0	eP	Pb	03 52 12.9	-1.9
LGNR	Loginova	3.23	0	PN	Pb	03 52 12.9	-1.9
CIRR	Tsirk	3.26	1	eP	Pb	03 52 13.1	-2.1
CIRR	Tsirk	3.26	1	PN	Pb	03 52 13.1	-2.1
KRSR	Krestovskiy	3.36	359	eP	Pb	03 52 14.6	-2.4
KRSR	Krestovskiy	3.36	359	PN	Pb	03 52 14.6	-2.4
SKR	Severo-Kuril's	3.58	234	ePN	Pn	03 52 16.2	+3.8
SKR				eS	Sn	03 52 51.8	-2.4
SKR				pmax	pmax		
	comp=Z,18nm,0.5s						
SKR				smax	smax		
	comp=N,149nm,0.6s						
SKR				smax	smax		
	comp=E,141nm,0.5s						
SRKR	Sorokina	3.81	4	eP	Pb	03 52 20.9	-3.7
SRKR	Sorokina	3.81	4	PN	Pb	03 52 20.9	-3.7
BKI	Bering	3.90	51	eP	Pn	03 52 18.3	+1.5
BKI	Bering	3.90	51	PN	Pn	03 52 18.3	+1.5
ASAJ	Asahikawa	14.81	241	P	Pn	03 54 46.0	-0.3
	comp=E,0.3nm,0.3s,baz=78,slow=20,SNR=3.4						
MJAR	Matsushiro Arr	22.69	233	P	P	03 56 18.3	0.0
	comp=E,1.8nm,0.6s,baz=14,slow=11,SNR=6.8						
MJAR	Matsushiro Arr	22.69	233	P	P	03 56 18.3	0.0
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TIXI	Tiksi	23.44	335	P	P	03 56 24.8	-0.8
	comp=Z,1.4nm,0.5s,baz=131,slow=12,SNR=3.5						
KSRS	Korea Array	27.47	249	P	P	03 57 04.0	+1.4
	comp=Z,0.4nm,0.3s,baz=50,slow=11,SNR=2.6						
ILAR	Eielson Array	28.72	45	P	P	03 57 13.0	-0.6
	comp=Z,0.1nm,0.4s,baz=254,slow=6.5,SNR=3.0						
H11N2	WAKE ISLAND Hy	33.42	169	T	T	04 33 21.1	
	baz=353,slow=76,SNR=36						
H11N3	WAKE ISLAND Hy	33.44	169	T	T	04 33 21.0	
	baz=353,slow=76,SNR=23						
H11N1	WAKE ISLAND Hy	33.44	169	T	T	04 33 21.1	
	baz=353,slow=76,SNR=25						
YKA	Yellowknife Ar	43.09	43	P	P	03 59 16.8	+0.6
	comp=Z,0.2nm,0.5s,baz=294,slow=7.5,SNR=2.5						
SPITS	Spitsbergen Ar	47.42	351	P	P	03 59 51.1	+0.7
	comp=Z,0.7nm,0.4s,baz=32,slow=8.5,SNR=9.7						
KURK	Kurchatov	48.16	302	P	P	03 59 55.5	-1.0
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KURBB	Kurchatov Arra	48.26	302	P	P	03 59 55.5	-1.7
	comp=Z,0.8nm,0.4s,baz=60,slow=7.5,SNR=6.6						
MKAR	Makanchi Array	48.58	296	P	P	03 59 58.0	-1.8
	comp=Z,0.8nm,0.4s,baz=55,slow=7.2,SNR=14						
BVAR	Borovoye Array	50.81	309	P	P	04 00 15.6	-1.1
	comp=Z,0.7nm,0.4s,baz=60,slow=8.1,SNR=5.7						
ARCES	ARCESS Array B	53.62	342	P	P	04 00 37.0	-0.3
	comp=Z,4.1nm,1.1s,baz=51,slow=9.6,SNR=7.1						
ARCES	ARCESS Array B	53.62	342	P	P	04 00 37.0	-0.3
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
PDAR	Pinedale Array	57.32	61	P	P	04 01 06.3	+1.6
	comp=Z,0.3nm,0.6s,baz=287,slow=7.4,SNR=3.5						
AKTO	Aktyubinsk	58.24	313	P	P	04 01 09.6	-1.1
	comp=Z,0.8nm,0.3s,baz=86,slow=13,SNR=2.4						
FINES	FINESS Array B	60.47	337	P	P	04 01 26.6	+0.7
	comp=Z,3.2nm,0.5s,baz=40,slow=8.6,SNR=22						
HFS	Hagfors	64.28	342	P	P	04 01 51.1	-0.3
	comp=Z,0.6nm,0.4s,baz=44,slow=6.4,SNR=7.4						
AKASG	Malin Array Be	69.00	329	P	P	04 02 21.4	-0.2
	comp=Z,1.2nm,0.5s,baz=28,slow=6.4,SNR=6.9						
KBZ	Khabaz	69.95	317	P	P	04 02 28.1	+0.5
	comp=Z,1.5nm,0.5s,baz=0.0,slow=3.0,SNR=3.0						
TXAR	Lajitas Array	70.39	67	P	P	04 02 32.1	+1.4
	comp=Z,0.5nm,0.8s,baz=294,slow=5.4,SNR=6.0						
PSI	Prapat	71.03	249	P	P	04 02 34.9	+0.2
	comp=Z,5.7nm,0.8s,baz=180,slow=16,SNR=3.5						
EKA	Eskdalemuir Ar	71.34	350	P	P	04 02 35.3	-0.6
	comp=Z,0.1nm,0.3s,baz=19,slow=5.7,SNR=4.3						
MLR	Muntele Rosu	74.63	329	P	P	04 02 55.3	-0.4
	comp=Z,0.3nm,0.6s,baz=307,slow=5.1,SNR=3.5						
GERES	GERESS Array B	74.86	338	P	P	04 02 56.7	-0.3
	comp=Z,0.3nm,0.5s,baz=19,slow=6.4,SNR=3.5						

MEX 18 03:52:02.3±0.8, 18°.62N×103°.53W, h46km±14km, MD3.8, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	Aquila	0.37	152	eP	Pn	03 52 10.1	-1.8
MMIG				eS	Sn	03 52 17.1	-1.4
R15V		0.70	322	eP	Pn	03 52 13.9	-2.0
R15V				eS	Sn	03 52 23.7	-2.1
EZ5V		0.86	355	iP	Pn	03 52 16.3	-2.0
EZ5V				eS	Sn	03 52 27.9	-2.0
CJM	Chamela	1.68	302	eP	Pn	03 52 27.6	-1.6
ZIIG	Zihuatanejo	2.21	117	eP	Pn	03 52 33.8	-2.7
ZIIG				iS	Sn	03 53 06.9	+4.4

IDC ***18*** *03:52:22.7±0.4, 37°.43S×51°.16E, h0km, mb4.4/28, mb1 4.4/29, mb1mx4.4/54, mbtmp4.3/29, ML3.7/1, MS3.9/7, Ms1 3.9/7, ms1mx3.4/52, Error ellipse: s-maj=15.8km s-min=12.3km az=47.0*
ISCJB ***18*** *03:52:23.9±0.3, 37°.53S±0°.05×51°.07E±0°.08, h16km, mb4.6/47, MS4.0/8, Error ellipse: s-maj=9.1km s-min=7.4km az=155.4*
NEIC ***18*** *03:52:24.5±0.2, 37°.46S×51°.12E, h10km, mb4.8/15, Error ellipse: s-maj=7.6km s-min=6.0km az=57.0*

ISC 18 03:52:25.7±0.3, 37°.52S±0°.07×51°.00E±0°.09, h16km, n132, σ1§08/124, mb4.6/47, MS3.9/9, 4C-4D, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABPO	Ambohimpanom	18.73	349	eP	P	03 56 43.1	-0.7
OPO	Ambohidratompo	19.17	349	P	P	03 56 46.4	-2.3
	0.2nm,0.3s,baz=96,slow=6.4,SNR=3.5						
BOSA	Boshof	23.27	285	P	P	03 57 32.4	-0.3
	9.5nm,0.9s,baz=113,slow=9.6,SNR=11						
BOSA	Boshof	23.27	285	eP	P	03 57 33.2	+0.5
	54nm,1.4s						
LBTB	Lobatse	24.95	293	P	P	03 57 47.6	-0.8
	9.2nm,0.9s,baz=138,slow=7.5,SNR=7.4						
LBTB	Lobatse	24.95	293	eP	P	03 57 47.7	-0.7
	24nm,1.1s						
SUR	Sutherland	25.21	273	P	P	03 57 51.3	+0.5
	1.0nm,0.8s,baz=129,slow=8.5,SNR=5.3						
LSZ	Lusaka	29.98	312	P	P	03 58 33.0	-0.6
	5.5nm,1.0s,baz=137,slow=9.5,SNR=9.8						
LSZ	Lusaka	29.98	312	eP	P	03 58 34.1	+0.4
	14nm,1.3s						
MAW	Mawson	30.87	171	P	P	03 58 40.9	0.0
	3.2nm,0.6s,baz=31,slow=16,SNR=4.3						
SYO	Syowa Base	32.16	188	↓eP	P	03 58 50.1	-2.0
TSUM	Tsumeb	34.36	293	eP	P	03 59 12.2	+0.1
	39nm,1.8s						
H08S1	Diego Carcia H	35.55	39	T	T	04 36 50.4	
	baz=211						
H08S2	Diego Carcia H	35.56	39	T	T	04 36 44.7	
	baz=211						
H08S3	Diego Garcia H	35.58	39	T	T	04 36 41.7	
	baz=211,SNR=4.7						
KMBO	Kilima Mbogo	38.37	338	LR	LR	04 13 59.7	
	comp=Z,193nm,20.3s,baz=94,slow=34						
SNAA	Sanae	43.63	202	P	P	04 00 28.9	-0.1
SNAA	Sanae	43.63	202	P	P	04 00 29.0	0.0
	7.4nm,0.8s,baz=105,slow=6.0,SNR=36						
SNAA				LR	LR	04 16 53.6	
	comp=Z,108nm,18.3s,baz=70,slow=34						
SNAA	Sanae	43.63	202	eP	P	04 00 29.0	0.0
	11nm,1.0s						
CASY	Casey	44.14	150	eP	P	04 00 32.9	0.0
	12nm,1.1s						
VNA1	Neumayer--Stat	44.99	204	P	P	04 00 39.0	-0.7
VNA3	Neumayer Olymp	45.58	203	P	P	04 00 44.5	0.0
ATD	Arta Tunnel	49.38	349	LR	LR	04 18 17.2	
	comp=Z,76nm,20.4s,baz=100,slow=32						
H01W2	Cape Leeuwin H	50.16	107	T	T	04 54 52.3	
	baz=247,slow=75						
H01W3	Cape Leeuwin H	50.16	107	T	T	04 55 01.3	
	baz=247,slow=75						
H01W1	Cape Leeuwin H	50.17	107	T	T	04 54 53.6	
	baz=247,slow=75						
QSPA	South Pole Qui	52.67	180	P	P	04 01 38.1	-0.9
	8.0nm,1.0s,baz=276,slow=4.7,SNR=5.6						
QSPA				LR	LR	04 22 01.0	
	comp=Z,336nm,19.9s,baz=260,slow=34						
VNDA	Vanda	57.97	166	P	P	04 02 16.1	-0.7
	1.1nm,0.9s,baz=255,slow=6.8,SNR=5.4						
RAYN	Ar Rayn	60.94	354	eP	P	04 02 38.1	+0.2
	4.7nm,1.0s						
KIC	Kosan Boka	67.78	297	ePKP2	P	04 03 24.2	+1.3
	52nm,1.2s						
LIC	Lucin	67.89	297	ePKP2	P	04 03 24.8	+1.2
	100nm,1.8s						
DBIC	Dimbokro	68.08	298	P	P	04 03 26.1	+1.3
	8.8nm,0.7s,baz=117,slow=6.5,SNR=10						
TIC	Toumodi	68.17	297	ePKP2	P	04 03 25.7	+0.3
TOA0	Torodi Ar. Sit	68.41	307	eP	P	04 03 27.2	+0.4
TORD	Torodi Ar. Bea	68.41	307	P	P	04 03 27.6	+0.8
	7.4nm,1.0s,baz=123,slow=5.6,SNR=24						
TORD				LR	LR	04 32 47.9	
	comp=Z,66nm,18.7s,baz=115,slow=35						
ASF	Jabal al Asfar	70.57	347	P	P	04 03 38.6	-1.3
	2.5nm,0.6s,baz=90,slow=2.0,SNR=6.1						
ASAR	Alice Springs	70.61	105	P	P	04 03 39.8	-0.7
	1.7nm,0.6s,baz=234,slow=5.9,SNR=16						
AS01	Alice Springs	70.64	105	eP	P	04 03 39.7	-1.0
CMAR	Chiang Mai Arr	71.66	48	P	P	04 03 44.6	-2.1
	1.7nm,0.5s,baz=236,slow=7.5,SNR=7.6						
CMAR				LR	LR	04 32 18.2	
	comp=Z,88nm,18.8s,baz=322,slow=34						
STKA	Stephens Creek	71.84	116	P	P	04 03 48.1	+0.3
	2.2nm,0.8s,baz=141,slow=6.6,SNR=3.5						
WRA	Warmunga Arr	73.00	102	P	P	04 03 53.8	-1.1
	2.2nm,0.8s,baz=232,slow=5.3,SNR=10						
WB2	Warramunga Arr	73.01	102	eP	P	04 03 54.2	-0.7
KOWA	Kowa	73.10	304	P	P	04 03 56.3	+1.0
	5.9nm,0.9s,baz=108,slow=9.6,SNR=8.6						
KOWA	Kowa	73.10	304	eP	P	04 03 55.9	+0.5
	14nm,1.1s						
TAM	Tamanrasset	73.68	317	eP	P	04 04 00.4	+1.6
	5.7nm,1.3s						
CSS	Mathiatis	73.96	345	eP	P	04 03 59.6	-0.4
	3.2nm,1.0s						
BRTR	Keskin Array B	78.51	346	P	P	04 04 25.1	-0.8
	1.2nm,0.9s,baz=171,slow=8.8,SNR=7.5						
BR131	Keskin Array S	78.51	346	eP	P	04 04 24.5	-1.4
KSH	Kashi	80.03	19	P	P	04 04 31.8	-2.4
KSH				pP	pP	04 04 38.8	-0.7
KSH				PP	PP	04 07 38.1	+1.4
KSH				S	S	04 14 32.4	-5.2
KSH				sS	sS	04 14 46.0	-0.4
KSH				pmax	pmax		
	comp=Z,32nm,0.8s						
CTA	Charters Tower	82.03	109	P	P	04 04 46.4	+1.0
	4.3nm,0.9s,baz=330,slow=20,SNR=2.5						
KK31	Karatay Array	82.19	14	eP	P	04 04 45.6	+0.1
KKAR	Karatay Array	82.19	14	eP	P	04 04 45.6	+0.1
GYA	Guiyang	82.34	48	eP	P	04 04 49.0	+2.2
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KEST	Kesra	82.48	327	P	P	04 04 48.3	+1.0
	5.6nm,0.9s,baz=257,slow=1.2,SNR=9.3						
KEST	Kesra	82.48	327	eP	P	04 04 47.9	+0.6
	9.8nm,1.0s						
CD2	Chengdu	84.06	43	P	P	04 04 56.0	+0.5
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
PLCA	Paso Flores	85.52	221	P	P	04 05 04.0	+0.9
	2.0nm,0.9s,baz=131,slow=4.5,SNR=3.7						
PLCA				LR	LR	04 37 22.1	
	comp=Z,36nm,22.0s,baz=227,slow=32						
MLR	Muntele Rosu	85.66	343	P	P	04 05 02.7	-0.6
	0.8nm,0.8s,baz=165,slow=12,SNR=7.2						
MLR	Muntele Rosu	85.66	343	↑iP	P	04 05 03.4	+0.1
MLR	Muntele Rosu	85.66	343	eP	P	04 05 02.9	-0.4
	50nm,2.0s						
VOIR		85.83	342	↑iP	P	04 05 03.5	-0.6
VRI	Vrincioaia	85.83	343	↓iP	P	04 05 03.9	-0.1
PLOR	Plostina	85.84	343	↑iP	P	04 05 03.8	-0.3
BZS	Buzias	86.89	340	↑iP	P	04 05 09.3	+0.1
SIRR	Siria	87.47	340	↓iP	P	04 05 12.4	+0.4
CPUP	Villa Florida	87.52	239	P	P	04 05 14.0	+1.0
	2.4nm,0.9s,baz=147,slow=4.5,SNR=3.1						
WMQ	Urumqi	87.53	26	P	P	04 05 14.1	+1.6
WMQ				pmax	pmax		
	comp=Z,20nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,160nm,3.9s						
WMQ				LR	LR		
	comp=N,130nm,27.1s						
WMQ				LR	LR		
	comp=Z,150nm,19.3s						
BUR4R	Bucovina Array	87.83	343	↓iP	P	04 05 14.3	+0.5
BUR04	Bucovina Ar. S	87.83	343	eP	P	04 05 14.1	+0.3
BUR08	Bucovina Ar. S	87.86	343	eP	P	04 05 14.6	+0.7
LZH	Lanzhou	88.09	40	eP	P	04 05 16.8	+1.4
LZH				pP	pP	04 05 20.1	-0.7
LZH				sP	sP	04 05 21.6	-1.1
LZH				ePP	PP	04 08 47.0	+4.3
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZH				pmax	pmax		
	comp=Z,74nm,8.6s						
LZH				LR	LR		
	comp=N,250nm,17.5s						
LZH				LR	LR		
	comp=E,250nm,16.8s						
LZH				LR	LR		
	comp=Z,340nm,19.5s						
MAKZ	Makanchi	88.42	21	eP	P	04 05 16.6	+0.1
	5.1nm,1.0s						
MK01	Makanchi Array	88.48	21	eP	P	04 05 16.3	-0.5
MKAR	Makanchi Array	88.50	21	P	P	04 05 15.8	-1.1
	0.7nm,0.6s,baz=193,slow=4.7,SNR=6.1						
GTA	Gaotai	88.73	36	eP	P	04 05 17.5	-0.8
GTA				pP	pP	04 05 21.9	-1.8
GTA				sP	sP	04 05 24.6	-1.0
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AKASG	Malin Array Be	89.91	346	P	P	04 05 21.7	-1.7
	0.5nm,0.5s,baz=165,slow=4.0,SNR=4.6						
KURBB	Kurchatov Arra	91.06	17	P	P	04 05 28.0	-0.7
	2.5nm,0.7s,baz=216,slow=4.9,SNR=25						
KURK	Kurchatov	91.16	17	eP	P	04 05 28.7	-0.5
	10nm,0.8s						
BVAR	Borovoye Array	91.73	12	P	P	04 05 31.0	-0.8
	2.3nm,0.7s,baz=179,slow=5.8,SNR=13						
ES19	SONSECA Array	91.89	321	eP	P	04 05 33.5	+0.5
ESDC	Sonseca Array	91.91	321	P	P	04 05 32.7	-0.3
	0.1nm,0.4s,baz=147,slow=4.3,SNR=7.4						
GEA0	GERESS Array S	92.14	336	eP	P	04 05 33.2	-0.7
GERES	GERESS Array B	92.14	336	P	P	04 05 33.4	-0.6
	0.4nm,0.7s,baz=163,slow=7.0,SNR=5.8						
NJ2	Nanjing	93.77	52	eP	P	04 05 44.1	+2.3
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
ZAA0	Zalesovo Array	95.67	19	eP	P	04 05 48.2	-1.6
	6.3nm,1.4s						
ZALV	Zalesovo Beam	95.67	19	P	P	04 05 48.2	-1.6
	2.0nm,0.6s,baz=215,slow=4.8,SNR=10.0						
ZALV	Zalesovo Beam	95.67	19	eP	P	04 05 47.7	-2.2
HHC	Hu-ho-hao-te	95.67	42	eP	P	04 05 51.4	+1.0
HHC				pmax	pmax		
	comp=Z,15nm,0.7s						
HHC				pmax	pmax		
	comp=Z,80nm,6.9s						
ACSO	Alum Creek Sta	144.37	289	ePKPdf	PKPbc	04 11 59.5	+0.2
V51A	Loudon	144.39	281	ePK

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	**Boshof**	**23.35**	**285**	P	**P**	**04 00 25.2**	**-1.2**
	6.5nm,0.9s,baz=118,slow=8.6,SNR=5.3						
BOSA	**Boshof**	**23.35**	**285**	*e*P	**P**	**04 00 26.4**	**+0.1**
LBTB	**Lobatse**	**25.01**	**292**	P	**P**	**04 00 40.5**	**-1.4**
	11nm,1.2s,baz=202,slow=6.5,SNR=3.9						
LBTB	**Lobatse**	**25.01**	**292**	*e*P	**P**	**04 00 40.5**	**-1.4**
	14nm,1.1s						
SUR	**Sutherland**	**25.30**	**272**	P	**P**	**04 00 44.8**	**+0.2**
	0.5nm,0.8s,baz=135,slow=8.6,SNR=3.4						
SUR	**Sutherland**	**25.30**	**272**	*e*P	**P**	**04 00 44.8**	**+0.2**
	72nm,1.4s						
LSZ	**Lusaka**	**30.01**	**311**	P	**P**	**04 01 26.5**	**-0.3**
	3.2nm,0.9s,baz=146,slow=11,SNR=4.8						
LSZ	**Lusaka**	**30.01**	**311**	*e*P	**P**	**04 01 26.5**	**-0.3**
	19nm,1.8s						
TSUM	**Tsumeb**	**34.42**	**293**	*e*P	**P**	**04 02 05.4**	**-0.1**
	14nm,1.1s						
H08S1	**Diego Garcia H**	**35.45**	**39**	T	T	04 39 31.8	
	baz=211,slow=76,SNR=3.9						
H08S2	**Diego Garcia H**	**35.45**	**39**	T	T	04 39 28.1	
	SNR=182						
H08S3	**Diego Garcia H**	**35.47**	**39**	T	T	04 39 32.6	
	baz=205,slow=76,SNR=7.3						
SNAA	**Sanae**	**43.73**	**202**	P	**P**	**04 03 22.2**	**-0.5**
SNAA	**Sanae**	**43.73**	**202**	P	**P**	**04 03 22.2**	**-0.5**
	3.5nm,0.8s,baz=92,slow=6.0,SNR=7.3						
SNAA	**Sanae**	**43.73**	**202**	*e*P	**P**	**04 03 22.2**	**-0.5**
	7.8nm,1.2s						
VNA1	**Neumayer--Stat**	**45.09**	**204**	P	**P**	**04 03 33.8**	**+0.4**
VNA3	**Neumayer Olymp**	**45.68**	**203**	P	**P**	**04 03 37.6**	**-0.6**
H01W2	**Cape Leeuwin H**	**50.09**	**107**	T	T	04 57 53.4	
	baz=247,slow=75,SNR=74						
H01W3	**Cape Leeuwin H**	**50.09**	**107**	T	T	04 57 42.3	
	baz=247,slow=75,SNR=60						
H01W1	**Cape Leeuwin H**	**50.10**	**107**	T	T	04 57 37.0	
	baz=247,slow=75,SNR=69						
DBIC	**Dimbokro**	**68.13**	**297**	P	**P**	**04 06 18.4**	**+0.3**
	8.9nm,0.8s,baz=146,slow=3.1,SNR=6.9						
DBIC	**Dimbokro**	**68.13**	**297**	*e*P	**P**	**04 06 18.4**	**+0.3**
	70nm,1.7s						
TOA0	**Torodi Ar. Sit**	**68.44**	**307**	*e*P	**P**	**04 06 20.6**	**+0.6**
TORD	**Torodi Ar. Bea**	**68.44**	**307**	P	**P**	**04 06 20.6**	**+0.7**
	5.2nm,1.0s,baz=130,slow=4.1,SNR=13						
TOA1	**Torodi Ar. Sit**	**68.45**	**307**	*e*P	**P**	**04 06 20.6**	**+0.6**
ASAR	**Alice Springs**	**70.53**	**105**	P	**P**	**04 06 33.2**	**+0.3**
	0.8nm,0.6s,baz=238,slow=5.8,SNR=6.3						
AS31	**Alice Springs**	**70.53**	**105**	*e*P	**P**	**04 06 33.2**	**+0.3**
	6.3nm,1.9s						
CM31	**Chiang Mai Arr**	**71.55**	**48**	*e*P	**P**	**04 06 38.6**	**-0.4**
CMAR	**Chiang Mai Arr**	**71.55**	**48**	P	**P**	**04 06 38.6**	**-0.4**
	1.4nm,0.3s,baz=237,slow=7.5,SNR=4.1						
WR1	**Warramunga Arr**	**72.92**	**102**	*e*P	**P**	**04 06 47.2**	**-0.2**
	40nm,1.9s						
WRA	**Warramunga Arr**	**72.92**	**102**	P	**P**	**04 06 47.2**	**-0.2**
	1.9nm,0.9s,baz=232,slow=5.0,SNR=6.1						
KOWA	**Kowa**	**73.14**	**304**	P	**P**	**04 06 49.3**	**+0.7**
	3.4nm,0.9s,baz=135,slow=8.6,SNR=4.4						
TAM	**Tamanrasset**	**73.70**	**317**	*e*P	**P**	**04 06 51.1**	**-0.8**
	14nm,2.0s						
BR101	**Keskin Array S**	**78.47**	**346**	*e*P	**P**	**04 07 17.7**	**-0.9**
BRTR	**Keskin Array B**	**78.47**	**346**	P	**P**	**04 07 17.7**	**-0.9**
	2.0nm,1.2s,baz=161,slow=12,SNR=4.0						
KK31	**Karatay Array**	**82.10**	**14**	*e*P	**P**	**04 07 39.5**	**+1.5**
KKAR	**Karatay Array**	**82.10**	**14**	*e*P	**P**	**04 07 39.5**	**+1.5**
KEST	**Kesra**	**82.48**	**327**	P	**P**	**04 07 41.5**	**+1.3**
	3.5nm,0.9s,baz=233,slow=3.8,SNR=4.5						
KEST	**Kesra**	**82.48**	**327**	*e*P	**P**	**04 07 42.8**	**+2.6**
	4.8nm,0.9s						
MLR	**Muntele Rosu**	**85.63**	**343**	*e*P	**P**	**04 07 56.6**	**+0.5**
	6.0nm,0.7s						
MK32	**Makanchi Array**	**88.41**	**21**	*e*P	**P**	**04 08 09.0**	**-0.4**
MKAR	**Makanchi Array**	**88.41**	**21**	P	**P**	**04 08 09.0**	**-0.4**
	0.9nm,0.9s,baz=293,slow=1.1,SNR=2.2						
AKASG	**Malin Array Be**	**89.87**	**346**	P	**P**	**04 08 15.7**	**-0.5**
	0.1nm,0.3s,baz=160,slow=4.5,SNR=1.9						
AKBB	**Malin Array Si**	**89.87**	**346**	*e*P	**P**	**04 08 15.7**	**-0.5**
	11nm,0.9s						
KURBB	**Kurchatov Arra**	**90.97**	**17**	P	**P**	**04 08 20.8**	**-0.4**
	1.3nm,0.7s,baz=210,slow=5.1,SNR=7.0						
KURK	**Kurchatov**	**91.07**	**17**	*e*P	**P**	**04 08 20.8**	**-0.9**
BVAR	**Borovoye Array**	**91.65**	**12**	P	**P**	**04 08 23.9**	**-0.5**
	1.1nm,0.6s,baz=159,slow=4.5,SNR=3.5						
ESDC	**Sonseca Array**	**91.92**	**321**	P	**P**	**04 08 26.3**	**+0.3**
	0.5nm,0.7s,baz=181,slow=6.2,SNR=4.0						
ZALV	**Zalesovo Beam**	**95.57**	**19**	P	**P**	**04 08 41.3**	**-1.1**
	1.0nm,0.5s,baz=221,slow=5.9,SNR=4.1						
ZAA1	**Zalesovo Array**	**95.58**	**19**	*e*P	**P**	**04 08 41.3**	**-1.1**
JOW	**Kunigami**	**96.54**	**61**	P	**P**	**04 08 47.8**	**+0.3**
	18nm,0.5s,baz=108,slow=20,SNR=6.0						
JOW	**Kunigami**	**96.54**	**61**	*e*P	**P**	**04 08 47.8**	**+0.3**
	224nm,1.8s						
V51A	**Loudon**	**144.47**	**281**	*e*PKPdf	PKPbc	04 14 52.7	+0.1
W50A	**Signal Mountai**	**145.05**	**280**	*e*PKPbc	**PKPdf**	**04 14 55.0**	**-0.1**
X48A	**Hartselle**	**146.19**	**278**	*e*PKPdf	**PKPab**	**04 14 58.1**	**-0.7**
V48A	**Smith Brothers**	**146.38**	**280**	*e*PKPdf	**PKPab**	**04 14 59.7**	**+0.2**
TOLK	**Toolik Lake Re**	**146.74**	**14**	*e*PKPdf	**PKPab**	**04 14 59.7**	**-0.3**
INK	**Inuvik**	**148.99**	**3**	PKPbc	**PKPbc**	**04 15 04.8**	**+0.1**
	4.6nm,0.8s,baz=204,slow=1.0,SNR=3.8						
FCC	**Fort Churchill**	**149.02**	**325**	*e*PKPbc	**PKPbc**	**04 15 04.8**	**-0.2**
COWI	**Conover**	**149.39**	**299**	*e*PKPbc	**PKPbc**	**04 15 06.8**	**+0.3**
MLY	**Manley**	**149.52**	**18**	*e*PKPbc	**PKPbc**	**04 15 07.0**	**+0.8**
P42A	**Winchester**	**149.92**	**286**	*e*PKPbc	**PKPbc**	**04 15 08.2**	**+0.3**
T42A	**Van Buren**	**150.04**	**281**	*e*PKPbc	**PKPbc**	**04 15 08.4**	**+0.2**
JFWS	**Jewell Farm**	**150.17**	**293**	*e*PKPbc	**PKPbc**	**04 15 08.8**	**+0.5**
CCM	**Cathedral Cave**	**150.36**	**283**	*e*PKPbc	**PKPbc**	**04 15 09.2**	**+0.2**
W41B	**Gary Mavity, V**	**150.50**	**277**	*e*PKPbc	**PKPbc**	**04 15 09.9**	**+0.5**
WHAR	**Wooly Hollow**	**150.57**	**277**	*e*PKPbc	**PKPbc**	**04 15 10.3**	**+0.8**
WRH	**Wood River Hil**	**150.62**	**17**	*e*PKPbc	**PKPbc**	**04 15 08.6**	**-0.2**
IL1	**Eielson Array**	**150.63**	**16**	*e*pPKPdf	**PKPbc**	**04 15 07.9**	**-0.9**
ILAR	**Eielson Array**	**150.63**	**16**	PKPbc	**PKPbc**	**04 15 08.0**	**-0.8**
	2.4nm,0.9s,baz=320,slow=3.2,SNR=13						
ILB	**Eielson Array**	**150.63**	**16**	*e*pPKPdf	**PKPbc**	**04 15 08.0**	**-0.8**
EYMN	**Ely**	**150.85**	**303**	*e*PKPbc	**PKPbc**	**04 15 10.0**	**+0.2**
E38A	**The Farm, Brul**	**151.03**	**300**	*e*PKPbc	**PKPbc**	**04 15 10.8**	**+0.4**
V40A	**Witts Springs**	**151.12**	**278**	*e*PKPbc	**PKPbc**	**04 15 10.9**	**-0.1**
R40A	**Maddies Statio**	**151.20**	**283**	*e*PKPbc	**PKPbc**	**04 15 11.0**	**0.0**
P40A	**Paris**	**151.22**	**286**	*e*PKPbc	**PKPbc**	**04 15 11.3**	**+0.4**
N39A	**Derby Farms, D**	**151.71**	**288**	*e*PKPbc	**PKPbc**	**04 15 12.7**	**+0.7**
YKA	**Yellowknife Ar**	**153.43**	**345**	PKP	**PKPdf**	**04 15 07.1**	**-0.5**
	0.3nm,0.8s,baz=17,slow=2.6,SNR=3.2						
YKA				PKPbc	**PKPbc**	**04 15 14.6**	**-0.6**
	1.0nm,0.8s,baz=22,slow=2.3,SNR=7.9						
YKA				PKPab	**PKPab**	**04 15 27.0**	**-0.4**
	1.0nm,0.8s,baz=32,slow=3.8,SNR=5.8						
YKB5	**Yellowknife Ar**	**153.43**	**345**	*e*PKPdf	**PKPdf**	**04 15 07.1**	**-0.4**
YKB5				*e*PKPbc	**PKPbc**	**04 15 14.6**	**-0.6**
YKB5				*e*PKPab	**PKPab**	**04 15 27.1**	**-0.4**
TXAR	**Lajitas Array**	**157.49**	**256**	PKP	**PKPdf**	**04 15 14.0**	**-0.2**
	0.4nm,0.9s,baz=192,slow=2.6,SNR=3.7						
TXAR				PKPab	**PKPab**	**04 15 47.0**	**+1.0**
	0.7nm,1.0s,baz=129,slow=7.1,SNR=3.4						
RVR	**Riverside**	**170.03**	**253**	*e*PKPdf	**PKPdf**	**04 15 25.6**	**+0.1**

MOS ***18*** *03:58:02.5±1.4, 52°.61N×160°.78E, h13km, mb4.9/44, Error ellipse: s-maj=6.0km s-min=3.5km az=103.2*
KRSC ***18*** *03:58:03.5±1.6, 52°.67N×160°.84E, h16km±18km, ML4.9*
BJI ***18*** *03:58:07.5, 52°.80N×160°.40E, h40km, mb4.6/27, mB4.8/15, Ms4.4/12, Ms7 4.3/11*
ISCJB ***18*** *03:58:08.4±0.4, 52°.78N±0°.03×160°.55E±0°.04, h50km±2km, mb4.5/126, MS4.0/33, Error ellipse: s-maj=5.3km s-min=3.1km az=146.9*
NEIC ***18*** *03:58:10.0±0.7, 52°.85N×160°.41E, h47km±6km, mb4.5/58, Error ellipse: s-maj=6.8km s-min=4.5km az=166.0*
IDC ***18*** *03:58:11.0±2.0, 52°.91N×160°.37E, h61km±18km, mb4.0/31, mb1 4.2/34, mb1mx4.0/74, mbtmp4.3/34, MS3.9/26, Ms1 3.9/26, ms1mx3.6/70, Error ellipse: s-maj=13.7km s-min=10.8km az=144.0*
ISC 18 03:58:07.3±0.5, 52°.85N±0°.04×160°.68E±0°.03, h30km±3km, n381, σ1°73/407, mb4.6/128, MS4.1/33, 22C-18D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.47**	**302**	*e*P	**Pb**	**03 58 16.9**	**-0.2**
SPN				*e*S	**Sn**	**03 58 24.9**	**-0.2**
SPN	**Mys Shipunski**	**0.47**	**302**	PN	**Pb**	**03 58 16.9**	**-0.2**
SPN				S	**Sn**	**03 58 24.9**	**-0.2**
NLC	**Nalytchevo**	**0.87**	**292**	*e*P	**Pn**	**03 58 22.6**	**-0.7**
NLC				*e*S	**Sn**	**03 58 35.6**	**+0.7**
NLC	**Nalytchevo**	**0.87**	**292**	PN	**Pn**	**03 58 22.6**	**-0.7**
NLC				S	**Sn**	**03 58 35.6**	**+0.7**
SDLR	**Sedlovina**	**1.16**	**292**	*e*P	**Pn**	**03 58 27.5**	**-0.1**
SDLR	**Sedlovina**	**1.16**	**292**	PN	**Pn**	**03 58 27.5**	**-0.1**
UGLR	**Uglovaya**	**1.18**	**288**	*e*P	**Pn**	**03 58 27.7**	**0.0**
UGLR	**Uglovaya**	**1.18**	**288**	PN	**Pn**	**03 58 27.7**	**0.0**
DALK	**Dalny**	**1.18**	**279**	*e*P	**Pn**	**03 58 27.6**	**0.0**
DALK				*e*S	**Sb**	**03 58 43.9**	**+0.1**
DALK	**Dalny**	**1.18**	**279**	PN	**Pn**	**03 58 27.6**	**0.0**
DALK				S	**Sb**	**03 58 43.9**	**+0.1**
PET	**Petropavlovsk**	**1.24**	**279**	*e*Pn	**Pn**	**03 58 28.1**	**-0.3**
PET				*e*Sn	**Sn**	**03 58 44.4**	**+0.3**
PET	**Petropavlovsk**	**1.24**	**279**	*e*P	**Pn**	**03 58 28.2**	**-0.3**
PET				*e*S	**Sn**	**03 58 44.5**	**+0.4**
PET	**Petropavlovsk**	**1.24**	**279**K	*i*PN	**Pn**	**03 58 28.5**	**+0.1**
PET				*i*S	**Sb**	**03 58 47.5**	**+2.0**
PET				pmax	pmax		
	comp=Z,1μm,0.6s						
PET				pmax	pmax		
	comp=Z,1μm,0.5s						
PET				smax	smax		
	comp=N,6μm,0.9s						
PET				smax	smax		
	comp=E,4μm,0.6s						
AVH	**Avacha**	**1.24**	**290**	*e*P	**Pn**	**03 58 28.9**	**+0.3**
AVH				*e*S	**Sb**	**03 58 46.4**	**+0.6**
AVH	**Avacha**	**1.24**	**290**	PN	**Pn**	**03 58 28.9**	**+0.3**
AVH				S	**Sb**	**03 58 46.4**	**+0.6**
KRER	**Koryakskii**	**1.25**	**292**	*e*P	**Pn**	**03 58 29.1**	**+0.3**
KRER	**Koryakskii**	**1.25**	**292**	PN	**Pn**	**03 58 29.1**	**+0.3**
KOK	**Koryaka**	**1.31**	**290**	*e*P	**Pb**	**03 58 30.4**	**-0.8**
KOK	**Koryaka**	**1.31**	**290**	PN	**Pb**	**03 58 30.4**	**-0.8**
KRX	**Arik**	**1.32**	**293**	*e*P	**Pn**	**03 58 30.2**	**+0.4**
KRX	**Arik**	**1.32**	**293**	PN	**Pn**	**03 58 30.2**	**+0.4**
RUS	**Russkaya**	**1.39**	**253**	*e*P	**Pn**	**03 58 29.5**	**-1.0**
RUS				*e*S	**Sn**	**03 58 47.3**	**-0.4**
RUS	**Russkaya**	**1.39**	**253**	PN	**Pn**	**03 58 29.5**	**-1.0**
RUS				S	**Sn**	**03 58 47.3**	**-0.4**
KII	**Karymskiy**	**1.39**	**329**	*e*P	**Pb**	**03 58 32.5**	**-0.2**
KII	**Karymskiy**	**1.39**	**329**	PN	**Pb**	**03 58 32.5**	**-0.2**
KRMR	**Karymshinskiy**	**1.55**	**270**	*e*P	**Pn**	**03 58 32.5**	**-0.2**
KRMR				*e*S	**Sn**	**03 58 52.2**	**+0.5**
KRMR	**Karymshinskiy**	**1.55**	**270**	PN	**Pn**	**03 58 32.5**	**-0.2**
KRMR				S	**Sn**	**03 58 52.2**	**+0.5**
MTVR	**Mutnovka**	**1.56**	**257**	*e*P	**Pn**	**03 58 32.7**	**-0.4**
MTVR				*e*S	**Sn**	**03 58 53.3**	**+0.9**
MTVR	**Mutnovka**	**1.56**	**257**	PN	**Pn**	**03 58 32.7**	**-0.4**
MTVR				S	**Sn**	**03 58 53.3**	**+0.9**
GRL	**Gorelyy**	**1.61**	**260**	*e*P	**Pn**	**03 58 34.0**	**+0.2**
GRL	**Gorelyy**	**1.61**	**260**	PN	**Pn**	**03 58 34.0**	**+0.2**
ASAK	**Asacha**	**1.76**	**256**	*e*P	**Pn**	**03 58 35.9**	**+0.2**
ASAK				*e*S	**Sb**	**03 58 59.2**	**-1.3**
ASAK	**Asacha**	**1.76**	**256**	PN	**Pn**	**03 58 35.9**	**+0.2**
ASAK				S	**Sb**	**03 58 59.2**	**-1.3**
I44RU	**PETROPAVLOVSK-**	**1.81**	**279**	P	**Pb**	**03 58 38.7**	**-1.0**
	baz=85,slow=18,SNR=0.8						
I44RU				S	**Sb**	**03 59 02.1**	**+0.2**
	baz=115,slow=71						
MKZ	**Mys Kozlova**	**1.82**	**20**	*e*P	**Pn**	**03 58 37.6**	**+1.2**
MKZ				*e*S	**Sb**	**03 59 01.2**	**-0.9**
MKZ	**Mys Kozlova**	**1.82**	**20**	PN	**Pn**	**03 58 37.6**	**+1.2**
MKZ				S	**Sb**	**03 59 01.2**	**-0.9**
PEA0B	**Petropavlovsk-**	**1.82**	**279**	*e*Pn	**Pn**	**03 58 37.1**	**+0.6**
PEA0B				*e*Sn	**Sn**	**03 58 58.7**	**+0.2**
PETK	**Petropavlovsk-**	**1.82**	**279**	P	**Pn**	**03 58 37.0**	**+0.5**
	comp=E,362nm,0.3s,baz=98,slow=20,SNR=418						
PETK				S	**Sb**	**03 59 01.9**	**-0.3**
	comp=E,184nm,0.3s,baz=88,slow=39,SNR=11						
PETK	**Petropavlovsk-**	**1.82**	**279**	*e*Pn	**Pn**	**03 58 36.8**	**+0.3**
PETK				*e*Sn	**Sn**	**03 58 60.0**	**+1.5**
PETK	**Petropavlovsk-**	**1.82**	**279**	*e*PN	**Pn**	**03 58 36.8**	**+0.3**
PETK				*e*		03 59 00.0	
PEA1	**Petropavlovsk-**	**1.82**	**279**	*e*Pn	**Pn**	**03 58 37.0**	**+0.5**
PEA1				*e*Sn	**Sb**	**03 59 01.9**	**-0.3**
GNL	**Ganaly**	**1.85**	**298**	*e*P	**Pb**	**03 58 38.8**	**-1.6**
GNL	**Ganaly**	**1.85**	**298**	PN	**Pb**	**03 58 38.8**	**-1.6**
KDTR	**Khodutka, Kamc**	**1.91**	**238**	*e*P	**Pn**	**03 58 36.7**	**-1.0**
KDTR				*e*S	**Sn**	**03 58 59.8**	**-0.8**
APC	**Apacha**	**2.13**	**273**	*e*P	**Pn**	**03 58 42.1**	**+1.3**
APC				*e*S	**Sb**	**03 59 11.9**	**+0.7**
APC	**Apacha**	**2.13**	**273**	PN	**Pn**	**03 58 42.1**	**+1.3**
APC				S	**Sb**	**03 59 11.9**	**+0.7**
TUMD	**Tumrok D**	**2.36**	**356**	*e*P	**Pb**	**03 58 46.4**	**-2.7**
TUMD				*e*S	**Sb**	**03 59 17.0**	**-0.8**
TUMR	**Tumrok**	**2.46**	**353**	PN	**Pn**	**03 58 46.4**	**+1.1**
PAU	**Pauzhetka**	**2.76**	**241**	*e*P	**Pn**	**03 58 50.2**	**+0.9**
PAU	**Pauzhetka**	**2.76**	**241**	PN	**Pn**	**03 58 50.2**	**+0.9**
ZLN	**Zelenaya**	**3.17**	**1**	*e*P	**Pb**	**03 58 59.8**	**-3.1**
ZLN	**Zelenaya**	**3.17**	**1**	PN	**Pb**	**03 58 59.8**	**-3.1**
LGNR	**Loginova**	**3.24**	**0**	*e*P	**Pb**	**03 59 00.5**	**-3.6**
LGNR	**Loginova**	**3.24**	**0**	PN	**Pb**	**03 59 00.5**	**-3.6**
CIRR	**Tsirk**	**3.27**	**1**	*e*P	**Pb**	**03 59 01.2**	**-3.4**
CIRR	**Tsirk**	**3.27**	**1**	PN	**Pb**	**03 59 01.2**	**-3.4**
ESO	**Esso**	**3.29**	**340**	*e*P	**Pn**	**03 59 00.1**	**+3.4**
ESO	**Esso**	**3.29**	**340**	PN	**Pn**	**03 59 00.1**	**+3.4**
KRSR	**Krestovskiy**	**3.37**	**359**	*e*P	**Pb**	**03 59 02.8**	**-3.5**
KRSR	**Krestovskiy**	**3.37**	**359**	PN	**Pb**	**03 59 02.8**	**-3.5**
KLY	**Klyuchi**	**3.47**	**360**	*e*P	**Pb**	**03 59 03.4**	**-4.5**
KLY	**Klyuchi**	**3.47**	**360**	PN	**Pb**	**03 59 03.4**	**-4.5**
SKR	**Severo-Kuril's**	**3.57**	**234**	*e*P	**Pn**	**03 58 59.8**	**-0.8**
SKR	**Severo-Kuril's**	**3.57**	**234**	*e*PN	**Pn**	**03 58 59.7**	**-0.8**
SKR				pmax	pmax		
	comp=Z,50nm,0.5s						
SKR				MLR	MLR		
	comp=Z,800nm,15.0s						
SKR				MLR	MLR		
	comp=Z,2μm,12.0s						
KBTR	**Krutoberegovo**	**3.59**	**19**	*e*P	**Pn**	**03 59 02.8**	**+2.1**
KBTR	**Krutoberegovo**	**3.59**	**19**	PN	**Pn**	**03 59 02.8**	**+2.1**
BDR	**Baidarnaya**	**3.74**	**5**	*e*P	**Pn**	**03 59 06.5**	**+3.6**
BDR	**Baidarnaya**	**3.74**	**5**	PN	**Pn**	**03 59 06.5**	**+3.6**
SMKR	**Semkarok**	**3.77**	**7**	*e*P	**Pn**	**03 59 06.6**	**+3.3**
SMKR	**Semkarok**	**3.77**	**7**	PN	**Pn**	**03 59 06.6**	**+3.3**
SRKR	**Sorokina**	**3.82**	**4**	*e*P	**Pn**	**03 59 08.1**	**+4.1**
SRKR	**Sorokina**	**3.82**	**4**	PN	**Pn**	**03 59 08.1**	**+4.1**
BKI	**Bering**	**3.91**	**51**	*e*P	**Pn**	**03 59 05.5**	**+0.3**
BKI	**Bering**	**3.91**	**51**	PN	**Pn**	**03 59 05.5**	**+0.3**
SMY	**Shemya**	**8.14**	**86**	*e*Pn	**Pn**	**04 00 02.2**	**-1.0**
SMY				*e*Sn	**Sn**	**04 01 28.6**	**-5.4**
SMY	**Shemya**	**8.14**	**86**	*e*PN	**Pn**	**04 00 02.2**	**-1.0**
MA2	**Magadan**	**8.70**	**325**	P	**Pn**	**04 00 13.8**	**+2.9**
	comp=Z,0.9nm,0.3s,baz=122,slow=11,SNR=3.8						
SEY	**Seymchan**	**11.02**	**340**	P	**Pn**	**04 00 44.3**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=60,slow=20,SNR=2.5						
SEY	**Seymchan**	**11.02**	**340**	*i*PN	**Pn**	**04 00 46.0**	**+3.5**
SHO	**Shikotan**	**12.85**	**231**	*e*PN	**Pn**	**04 01 04.1**	**-3.5**
SHO				S	**Sn**	**04 03 36.3**	**+6.8**
YSS	**Yuzh-Sakhalins**	**12.96**	**250**	*e*PN	**P**	**04 01 16.6**	**-2.8**
YSS				MLR	MLR		
	comp=Z,600nm,14.0s						
ASAJ	**Asahikawa**	**14.80**	**241**	P	**Pn**	**04 01 33.8**	**-0.5**
	comp=Z,1.5nm,0.3s,baz=91,slow=13,SNR=12						
ASAJ				LR	LR	04 08 14.1	
	comp=Z,258nm,18.7s,baz=91,slow=41						
ASAJ	**Asahikawa**	**14.80**	**241**	*e*Pn	**Pn**	**04 01 33.4**	**-0.9**
GRNR	**Gornyy**	**15.13**	**272**	*e*P	**P**	**04 01 45.0**	**+1.5**
GRNR				pmax	pmax		
	comp=Z,39nm,0.8s						
ATKA	**Atka Island**	**15.29**	**82**	*e*Pn	**Pn**	**04 01 42.1**	**+1.5**
	comp=Z,17nm,1.0s						
BILL	**Bilibino**	**15.47**	**8**	*e*Pn	**P**	**04 01 46.2**	**-0.9**
	comp=Z,28nm,1.0s						
BILL	**Bilibino**	**15.47**	**8**⇑	*e*P	**P**	**04 01 45.2**	**-2.0**
BILL				pmax	pmax		
	comp=Z,32nm,1.2s						
BILL				MLR	MLR		
	comp=Z,417nm,18.0s						
ERM	**Erimo**	**16.02**	**234**	*e*Pn	**Pn**	**04 01 44.1**	**-6.0**
	comp=Z,57nm,1.4s						
ERM	**Erimo**	**16.02**	**234**	*i*P	**Pn**	**04 01 45.3**	**-4.8**
KLR	**Kul'dur**	**18.49**	**270**	P	**P**	**04 02 19.1**	**-1.5**
	comp=Z,0.0nm,0.3s,baz=70,slow=8.0,SNR=7.6						
YAK	**Yakutsk**	**18.86**	**311**	*e*P	**Pn**	**04 02 25.1**	**-0.2**
	comp=Z,55nm,0.8s						
YAK	**Yakutsk**	**18.86**	**311**	*e*P	**P**	**04 02 23.1**	**-1.5**
YAK				*e*S	**Sn**	**04 05 52.5**	**-2.7**
YAK				pmax	pmax		
	comp=Z,34nm,0.9s						
YAK				pmax	pmax		
	comp=N,4.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,14nm,1.0s						
YAK				smax	smax		
	comp=N,10.0nm,1.3s						
YAK				smax	smax		
	comp=E,16nm,1.5s						
ZEA	**Zeya**	**19.90**	**286**	*e*P	**P**	**04 02 35.4**	**-0.6**
ZEA				pmax	pmax		
	comp=Z,23nm,1.0s						
USRK	**Ussuriysk Ar.**	**20.76**	**257**	P	**P**	**04 02 44.6**	**-0.8**
	comp=Z,7.5nm,1.0s,baz=69,slow=11,SNR=6.5						
USRK				LR	LR	04 11 13.5	
	comp=Z,339nm,19.3s,baz=53,slow=38						
MJB9	**Matsu-Tunnel**	**22.68**	**233**	*e*P	**P**	**04 03 07.0**	**+0.9**
	comp=Z,24nm,0.7s						
MAJO	**Matsushiro**	**22.68**	**233**	*e*P	**P**	**04 03 07.0**	**+0.9**
	comp=Z,23nm,0.7s						
MAJO	**Matsushiro**	**22.68**	**233**	*i*P	**P**	**04 03 04.9**	**-1.2**
MAJO				pmax	pmax		
	comp=Z,12nm,1.0s						
MAT	**Matsushiro**	**22.68**	**233**	P	**P**	**04 03 06.4**	**+0.3**
MAT				S	Sn	04 07 20.8	-6.5
MJAR	**Matsushiro Arr**	**22.68**	**233**	P	**P**	**04 03 06.3**	**+0.2**
	comp=Z,4.1nm,0.6s,baz=18,slow=10,SNR=17						
MJAR				LR	LR	04 12 33.0	
	comp=Z,231nm,21.5s,baz=15,slow=38						
TIXI	**Tiksi**	**23.45**	**335**	P	**P**	**04 03 12.8**	**-0.7**
	comp=Z,8.3nm,0.5s,baz=120,slow=11,SNR=22						
TIXI	**Tiksi**	**23.45**	**335**	*e*P	**P**	**04 03 12.5**	**-1.0**
	comp=Z,22nm,1.2s						
TIXI	**Tiksi**	**23.45**	**335**	*de*P	**P**	**04 03 13.0**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,17nm,1.0s						
CN2	**Changchun**	**24.89**	**263**	*e*P	**P**	**04 03 24.9**	**-2.3**
CN2				*e*PP	**PnPn**	**04 04 01.4**	**+1.1**
CN2				*e*S	**S**	**04 07 41.1**	**-7.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				LR	LR		
	comp=Z,400nm,17.0s						
CN2				LR	LR		
	comp=Z,490nm,17.0s						
KS01	**Wonju Array Si**	**27.46**	**249**	*e*P	**P**	**04 03 51.1**	**+0.7**
KSRS	**Korea Array**	**27.46**	**249**	P	**P**	**04 03 52.0**	**+1.6**
	comp=Z,1.8nm,0.6s,baz=38,slow=9.5,SNR=11						
KSRS				LR	LR	04 15 40.4	
	comp=Z,202nm,19.8s,baz=49,slow=38						
KSRS	**Korea Array**	**27.46**	**249**	P	**P**	**04 03 52.0**	**+1.6**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KSRS				MLR	MLR

SPITS Spitsbergen Ar 47.43 351 P **P 04 06 38.5 +0.2**
comp=E,3.0nm,0.3s,baz=79,slow=15,SNR=49
KURK Kurchatov 48.16 302 *e*P **P 04 06 43.1 -1.2**
KURK Kurchatov 48.16 302 *de*P **P 04 06 43.0 -1.2**
KURK pmax pmax
comp=Z,21nm,1.2s
KURBB Kurchatov Arra 48.26 302 P **P 04 06 42.9 -2.1**
comp=Z,4.6nm,0.5s,baz=59,slow=7.7,SNR=29
MK31 Makanchi Array 48.58 296 *e*P **P 04 06 46.0 -1.6**
MK31 Makanchi Array 48.58 296 *e*P **P 04 06 46.0 -1.6**
MK32 Makanchi Array 48.58 296 *e*P **P 04 06 46.0 -1.5**
MKAR Makanchi Array 48.58 296 P **P 04 06 46.0 -1.5**
comp=Z,2.7nm,0.5s,baz=57,slow=6.8,SNR=43
MKAR Makanchi Array 48.58 296 *e*P **P 04 06 46.0 -1.5**
comp=Z,30nm,0.5s
MK01 Makanchi Array 48.59 296 *e*P **P 04 06 45.5 -2.2**
MAKZ Makanchi 48.74 296 *e*P **P 04 06 47.3 -1.5**
comp=Z,5.1nm,1.0s
MAKZ Makanchi 48.74 296 *e*P **P 04 06 47.3 -1.5**
MAKZ pmax pmax
comp=Z,5.0nm,1.0s
DAG Danmarks Havn 50.65 360⇑ *i*P **P 04 07 03.4 +0.5**
comp=Z,10nm,0.8s
DAG Danmarks Havn 50.65 360 P **P 04 07 04.6 +1.7**
DAG pmax pmax
comp=Z,16nm,1.0s
BVAR Borovoye Array 50.81 309 P **P 04 07 02.5 -2.0**
comp=Z,2.2nm,0.4s,baz=60,slow=8.7,SNR=15
BVAR LR LR 04 30 42.2
comp=Z,240nm,18.4s,baz=60,slow=38
BRVK Borovoye 50.84 309 *e*P **P 04 07 04.4 -0.3**
comp=Z,3.6nm,0.7s
BRVK Borovoye 50.84 309 *ce*P **P 04 07 03.2 -1.5**
BRVK pmax pmax
comp=Z,6.0nm,1.2s
I07A Izee 51.06 66 *e*P **P 04 07 04.2 -2.4**
comp=Z,2.6nm,1.0s
KMI Kunming 51.13 261 P **P 04 07 09.4 +1.9**
KMI pmax pmax
comp=Z,9.0nm,1.1s
PDGK Podgornoye 52.30 294 P **P 04 07 15.8 -0.1**
PDGK pmax pmax
comp=Z,7.0nm,1.1s
OTUK Ortayu 52.91 303 P **P 04 07 20.4 +0.3**
OTUK pmax pmax
comp=Z,5.0nm,1.0s
FCC Fort Churchill 53.45 39 *e*P **P 04 07 25.2 +1.3**
comp=Z,2.7nm,0.7s
FCC Fort Churchill 53.45 39 *e*P **P 04 07 25.2 +1.3**
FCC pmax pmax
comp=Z,3.0nm,0.7s
ARA0 ARCESS Array S 53.62 342 *e*P **P 04 07 23.4 -1.8**
ARCES ARCESS Array B 53.62 342 P **P 04 07 23.4 -1.8**
comp=Z,6.5nm,0.8s,baz=47,slow=9.4,SNR=20
ARCES ARCESS Array B 53.62 342 *e*P **P 04 07 25.7 +0.6**
ARCES ARCESS Array B 53.62 342 *e*P **P 04 07 25.7 +0.6**
ARU Arti 53.81 318 *e*P **P 04 07 26.1 -0.6**
comp=Z,8.9nm,0.6s
ARU Arti 53.81 318 *c i*P **P 04 07 26.0 -0.6**
ARU S **S 04 14 59.4 +0.4**
ARU SS **SKiKP 04 18 37.3 -0.1**
ARU pmax pmax
comp=Z,10.0nm,1.0s
ARU MLR MLR
comp=Z,186nm,19.0s
SUMG Summit 54.16 7 *i*P **P 04 07 30.8 +1.4**
comp=Z,17nm,0.9s
SUMG Summit 54.16 7 *e*P **P 04 07 30.5 +1.1**
comp=Z,18nm,0.9s
SUMG Summit 54.16 7 *e*P **P 04 07 30.5 +1.1**
SUMG pmax pmax
comp=Z,18nm,0.9s
PRGR Permogore 54.83 328 *e*P **P 04 07 35.1 +1.2**
PRGR pmax pmax
comp=Z,9.0nm,0.5s
TMCR Tamitsa 55.15 333 *e*P **P 04 07 36.7 +0.5**
TMCR pmax pmax
comp=Z,51nm,1.1s
KVN Kaiserville 55.18 70 *e*P **P 04 07 39.2 +2.1**
comp=Z,4.4nm,1.1s
KVN Kaiserville 55.18 70 *e*P **P 04 07 39.2 +2.1**
KVN pmax pmax
comp=Z,4.0nm,1.1s
SGF Sodankyl 55.21 340 P **P 04 07 38.5 +1.9**
SGF pmax pmax
comp=Z,11nm,1.5s
NV01 Mina Array Sit 55.49 70 *e*P **P 04 07 41.1 +1.7**
NVAR Mina Array Bea 55.49 70 P **P 04 07 41.1 +1.8**
comp=Z,1.2nm,0.6s,baz=297,slow=7.7,SNR=7.6
RLMT Red Lodge 55.87 59 *e*P **P 04 07 44.6 +2.7**
RLMT *ep*P **sP 04 07 53.7 -1.0**
MSF Maaselka 55.97 338 P **P 04 07 43.2 +1.1**
MSF pmax pmax
comp=Z,24nm,0.8s
KSH Kashi 56.82 293 P P 04 07 55.8 +7.1
KSH pP sP 04 08 07.3 +5.8
KSH pmax pmax
comp=Z,280nm,5.1s
CRGC Crocker Grade 56.88 74 *e*P **P 04 07 53.2 +4.1**
HWUT Hardware Ranch 57.06 63 *e*P **P 04 07 52.8 +2.3**
HWUT *ep*P **sP 04 08 02.3 -1.0**
KK31 Karatay Array 57.31 300 *e*P **P 04 07 51.6 -0.4**
KK31 Karatay Array 57.31 300 *e*P **P 04 07 51.6 -0.4**
KKAR Karatay Array 57.31 300 *e*P **P 04 07 51.6 -0.4**
KKAR Karatay Array 57.31 300 *e*P **P 04 07 51.6 -0.4**
BW06 Boulder Array 57.33 61 *e*P **P 04 07 54.4 +2.0**
comp=Z,2.9nm,0.9s
PD31 Pinedale Array 57.33 61 *e*P **P 04 07 54.4 +1.9**
PD31 *ep*P **sP 04 08 04.2 -1.0**
PDAR Pinedale Array 57.33 61 P **P 04 07 54.1 +1.7**
comp=Z,1.7nm,0.8s,baz=298,slow=2.1,SNR=15
PDAR Pinedale Array 57.33 61 *e*P **P 04 07 53.8 +1.4**
KLMR Klimovskoe 57.33 330 *e*P **P 04 07 51.2 -0.6**
KLMR pmax pmax
comp=Z,22nm,1.2s
KLMR Klimovskoe 57.33 330 *e*P **P 04 07 51.3 -0.6**
KLMR AMP 04 07 53.6
comp=Z,22nm,1.2s
OUL Oulu 57.36 339 P **P 04 07 53.5 +1.5**
OUL pmax pmax
comp=Z,21nm,0.8s
JOF Joensuu 57.93 335 P **P 04 07 57.0 +1.0**
JOF pmax pmax
comp=Z,26nm,0.9s
SFJD Kangerlussuaq 58.16 14 LR LR 04 33 55.6
comp=Z,92nm,21.9s,baz=344,slow=37
ABKAR Akbulak array 58.22 311 *e*P **P 04 07 57.4 -0.8**
AKTO Aktyubinsk 58.24 313 P **P 04 07 56.7 -1.7**
comp=Z,1.3nm,0.3s,baz=75,slow=9.7,SNR=4.2
AKTO LR LR 04 35 47.8
comp=Z,215nm,18.9s,baz=44,slow=39
TMUT Trail Mountain 58.87 65 *e*P **P 04 08 05.5 +2.2**
comp=Z,3.1nm,0.8s
CCUT Cedar City 58.90 68 *e*P **P 04 08 05.4 +2.0**
comp=Z,2.2nm,0.9s
RSSD Black Hills 59.24 57 *e*P **P 04 08 07.4 +1.7**
comp=Z,4.9nm,0.8s
RSSD Black Hills 59.24 57 *e*P **P 04 08 07.4 +1.7**
RSSD pmax pmax
comp=Z,5.0nm,0.8s
JIRN Jiri 59.27 276 *e*P **P 04 08 05.3 -1.0**
GUN Gumba 59.27 277 *e*P **P 04 08 05.4 -0.9**
comp=Z,6.6nm,0.4s
LCMT Little Creek M 59.35 68 *e*P **P 04 08 08.7 +2.2**
comp=Z,2.7nm,0.9s
SRU San Rafael Swe 59.37 65 *e*P **P 04 08 08.7 +2.0**
comp=Z,4.7nm,0.8s
SRU San Rafael Swe 59.37 65 *e*P **P 04 08 08.7 +2.0**
SRU pmax pmax
comp=Z,5.0nm,0.8s
RAMN Ramite 59.54 275 *e*P **P 04 08 07.8 -0.2**
comp=Z,27nm,0.4s
KKN Kakani 59.72 277 *e*P **P 04 08 08.5 -0.7**
comp=Z,12nm,0.4s
PKIN Phulchoki 59.81 277 *e*P **P 04 08 09.2 -0.7**
VAF Ylistaro 59.84 339 *e*P **P 04 08 11.6 +2.3**
VAF pmax pmax
comp=Z,18nm,1.1s
GKN Gorkha 59.95 278 *e*P **P 04 08 10.2 -0.5**
comp=Z,14nm,0.4s
DANN Dangsing 60.23 278 *e*P **P 04 08 11.8 -1.0**
FIA0 FINESS Array S 60.48 337 *e*P **P 04 08 14.4 +0.8**
FIA0 FINESS Array S 60.48 337 *e*P **P 04 08 14.4 +0.8**
FINES FINESS Array B 60.48 337 P **P 04 08 14.4 +0.8**
comp=Z,11nm,0.5s,baz=35,slow=8.2,SNR=70
FINES LR LR 04 37 50.1
comp=Z,95nm,18.4s,baz=46,slow=39
FINES FINESS Array B 60.48 337 *i*P **P 04 08 14.3 +0.7**
FINES pmax pmax
comp=Z,11nm,0.5s
KOLN Koldanda 60.74 278 *e*P **P 04 08 15.2 -1.0**
comp=Z,10.0nm,0.5s
PV11 David Mesa, Pa 60.86 64 *e*P **P 04 08 19.1 +2.3**
comp=Z,9.3nm,1.2s
PYUN Piuthan 60.87 279 *e*P **P 04 08 16.4 -0.7**
PV18 Skein Mesa, Pa 60.87 64 *e*P **P 04 08 19.3 +2.3**
comp=Z,4.6nm,0.8s
PV03 Paradox Valley 60.90 64 *e*P **P 04 08 18.9 +1.8**
comp=Z,8.0nm,1.4s
PV13 Radium Mtn., P 60.98 64 *e*P **P 04 08 20.0 +2.3**
comp=Z,5.4nm,0.9s
ISCO Idaho Springs 61.53 61 *e*P **P 04 08 23.8 +2.3**
comp=Z,2.5nm,1.0s
ISCO Idaho Springs 61.53 61 *e*P **P 04 08 23.8 +2.3**
ISCO pmax pmax
comp=Z,3.0nm,1.0s
HNR Honiara 62.04 181 LR LR 04 30 52.1
comp=Z,95nm,21.2s,baz=327,slow=32
X16A Lo Mia Camp, P 62.23 69 *e*P **P 04 08 28.4 +2.2**
comp=Z,1.6nm,0.9s
S22A 4UR Ranch, Cre 62.37 63 *e*P **P 04 08 29.4 +2.2**
comp=Z,3.2nm,1.1s
NIL Nilore 62.53 290 *e*P **P 04 08 27.9 -0.1**
comp=Z,9.9nm,0.8s
NIL Nilore 62.53 290 *e*P **P 04 08 27.9 -0.1**
NIL pmax pmax
comp=Z,10.0nm,0.8s
OBN Obninsk 62.91 328‖ *e*P **P 04 08 30.5 +0.4**
OBN *e* 04 10 47.9
OBN *e*S **S 04 16 51.1 -6.3**
OBN pmax pmax
comp=Z,10.0nm,0.5s
OBN MLR MLR
comp=Z,139nm,21.0s
VSU Vasula 62.92 335 *ce*P **P 04 08 29.3 -0.8**
VSU pmax pmax
comp=Z,43nm,1.0s
NC303 NORSAR Array S 63.67 344 *e*P **P 04 08 35.9 +0.8**
NC204 NORSAR Array S 63.72 344 *e*P **P 04 08 36.4 +0.9**
NB201 NORSAR Array S 63.85 344 *e*P **P 04 08 36.1 -0.1**
NB2 NORSAR Subarra 63.87 344 P **P 04 08 36.8 +0.4**
comp=Z,3.2nm,0.6s,baz=20,slow=7.4
NB200 NORSAR Array S 63.87 344 *e*P **P 04 08 35.0 -1.5**
NOA NORSAR Array B 63.87 344 P **P 04 08 35.0 -1.5**
NOA LR LR 04 38 45.0
comp=Z,36nm,19.5s,baz=55,slow=38
NOA NORSAR Array B 63.87 344 P **P 04 08 35.0 -1.5**
HFS Hagfors 64.29 342 P **P 04 08 38.3 -0.8**
comp=Z,2.7nm,0.5s,baz=42,slow=6.6,SNR=22
HFS LR LR 04 41 09.1
comp=Z,105nm,19.4s,baz=29,slow=40
ANMO Albuquerque 64.63 65 *i*P **P 04 08 43.7 +1.7**
ANMO pmax pmax
comp=Z,1.0nm,1.0s
VSR Storozhevoye 65.24 324 *e*P **P 04 08 45.0 -0.5**
VSR pmax pmax
comp=Z,20nm,1.1s
VORD Divnogorie 65.40 324 *e*P **P 04 08 46.0 -0.5**
VORD pmax pmax
comp=Z,10.0nm,1.0s
IDID Didziasalis 65.68 333 *e*P **P 04 08 49.9 +1.6**
IDID IAmb IAmb 04 08 51.3
comp=Z,5.5nm,0.9s
SCHQ Schefferville 65.70 28 P **P 04 08 48.6 +0.2**
comp=Z,1.5nm,0.5s,baz=325,slow=8.0,SNR=4.6
SCHQ Schefferville 65.70 28 *e*P **P 04 08 48.6 +0.2**
comp=Z,3.3nm,0.9s
IIGN Ignalina 65.79 333 *e*P **P 04 08 50.4 +1.5**
IIGN IAmb IAmb 04 08 50.9
comp=Z,10nm,0.5s
GEYT Alibeck 67.52 303 LR LR 04 40 57.2
comp=Z,149nm,19.1s,baz=200,slow=38
MNTX Cornudas Mount 67.65 67 *e*P **P 04 09 02.5 +1.3**
WMOK Wichita Mounta 68.92 60 *e*P **P 04 09 10.3 +1.1**
comp=Z,3.4nm,0.9s
WMOK Wichita Mounta 68.92 60 *e*P **P 04 09 10.3 +1.1**
WMOK pmax pmax
comp=Z,3.0nm,0.9s
AKASG Malin Array Be 69.00 329 P **P 04 09 08.6 -0.7**
comp=Z,4.5nm,0.5s,baz=30,slow=6.4,SNR=23
AKASG Malin Array Be 69.00 329 *i*P **P 04 09 09.6 +0.3**
AKASG pmax pmax
comp=Z,5.0nm,0.5s
AKBB Malin Array Si 69.00 329 *e*P **P 04 09 09.4 +0.1**
comp=Z,11nm,0.9s
KIEV Kiev 69.01 329 *e*P **P 04 09 09.4 0.0**
comp=Z,13nm,1.0s
KIEV Kiev 69.01 329 *c i*P **P 04 09 08.9 -0.5**
KIEV pmax pmax
comp=Z,11nm,1.0s
AK11 Malin Array Si 69.04 329 *e*P **P 04 09 09.4 -0.1**
KIV Kislovodsk 69.85 317 *e*P **P 04 09 14.4 -0.5**
KIV pmax pmax
comp=Z,10.0nm,1.0s
KIV MLR MLR
comp=Z,156nm,17.0s
KBZ Khabaz 69.95 317 P **P 04 09 15.3 +0.1**
comp=Z,8.2nm,0.6s,baz=75,slow=1.4,SNR=12
TX31 Lajitas Ar. Si 70.40 67 *e*P **P 04 09 19.8 +1.4**
TXAR Lajitas Array 70.41 67 P **P 04 09 19.6 +1.2**
comp=Z,2.1nm,0.7s,baz=298,slow=4.7,SNR=32
AFI Afiamalu 70.60 152 LR LR 04 32 20.1
comp=Z,86nm,21.4s,baz=36,slow=29
EKA Eskdalemuir Ar 71.35 350 P **P 04 09 24.1 +0.5**
comp=Z,0.4nm,0.3s,baz=21,slow=5.9,SNR=18
SORM Soroca 71.53 329‖ *i*P **P 04 09 24.6 -0.2**
SORM Soroca 71.53 329‖ P **P 04 09 24.7 -0.1**
KWP Kalwaria Pacla 71.87 333 *e*P **P 04 09 28.4 +1.5**
comp=Z,271nm,0.6s
KWP Kalwaria Pacla 71.87 333 *e*P **P 04 09 28.4 +1.5**
GNI Garni 72.10 314 LR LR 04 45 44.6
comp=Z,118nm,20.4s,baz=62,slow=40
GNI Garni 72.10 314 *e*P **P 04 09 30.1 +1.5**
comp=Z,18nm,1.1s
GNI Garni 72.10 314 *ce*P **P 04 09 28.7 +0.1**
GNI pmax pmax
comp=Z,27nm,1.0s
OJC Ojcow 72.11 335 *e*P **P 04 09 29.6 +1.2**
OJC Ojcow 72.11 335 *e*P **P 04 09 30.3 +2.0**
comp=Z,9.9nm,1.0s
OJC Ojcow 72.11 335 *e*P **P 04 09 29.5 +1.2**
KSP Ksiaz 72.40 337 *e*P **P 04 09 32.1 +2.1**
KSP Ksiaz 72.40 337 *e*P **P 04 09 32.1 +2.1**
CLL Collm 72.70 339‖ *i*P **P 04 09 32.9 +1.1**
comp=Z,17nm,1.4s
CLL LmV 04 47 00.0
comp=Z,100nm,22.0s
CLL Collm 72.70 339 *e*P **P 04 09 32.9 +1.1**
comp=Z,8.0nm,1.0s
CLL Collm 72.70 339‖ *i*P **P 04 09 32.9 +1.1**
CLL *e**PP **pP 04 09 42.0 +0.7**
CLL pmax pmax
comp=Z,17nm,1.4s
NIE Niedzica 72.72 334 *e*P **P 04 09 33.6 +1.6**
NIE Niedzica 72.72 334 *e*P **P 04 09 33.6 +1.6**
CRVS Cervenica-Dubn 72.87 333 *e*P **P 04 09 33.9 +1.0**
CRVS pmax pmax
comp=Z,3.0nm,1.1s
CRVS Cervenica-Dubn 72.87 333 *e*P **P 04 09 33.9 +1.0**
UZH Uzhgorod 72.89 333 *e*P **P 04 09 32.5 -0.5**
UZH *e* 04 09 37.1
UZH *e* 04 09 47.3
BRG Berggiesshubel 72.91 339 *e*P **P 04 09 34.3 +1.3**
comp=Z,11nm,1.6s
BRG Berggiesshubel 72.91 339 *e*P **P 04 09 34.3 +1.3**
BRG pmax pmax
comp=Z,11nm,1.6s
BUR08 Bucovina Ar. S 72.94 330 *e*P **P 04 09 34.4 +0.9**
BUR04 Bucovina Ar. S 72.96 330 *e*P **P 04 09 33.9 +0.4**
BURAR Bucovina Array 72.96 330‖ *i*P **P 04 09 33.4 -0.1**
BURAR Bucovina Array 72.96 330‖ P **P 04 09 33.4 -0.1**
MORC Moravsky Berou 73.09 336⇑ *i*P **P 04 09 35.5 +1.3**
MORC Moravsky Berou 73.09 336 *e*P **P 04 09 35.7 +1.5**
comp=Z,6.4nm,1.0s
MORC Moravsky Berou 73.09 336⇑ P **P 04 09 35.5 +1.3**
MORC Moravsky Berou 73.09 336 *e*P **P 04 09 35.4 +1.3**
LANS Liptovska Anna 73.18 335 *e*P **P 04 09 36.4 +1.7**
LANS Liptovska Anna 73.18 335 *e*P **P 04 09 36.4 +1.7**
TRPA Tarpa 73.28 332⇑ *i*P **P 04 09 36.0 +0.8**
TESR Tescani 73.50 329‖ *i*P **P 04 09 35.3 -1.4**
VRAC Vranov 73.76 336‖‖ *i*P **P 04 09 39.8 +1.7**
VRAC Vranov 73.76 336‖‖ P **P 04 09 39.8 +1.7**
VRAC Vranov 73.76 336 *e*P **P 04 09 39.5 +1.4**
JAVC Velka Javorina 73.91 336 *e*P **P 04 09 41.7 +2.6**
VYHS Vyhne 73.95 335 *e*P **P 04 09 40.5 +1.3**
VYHS pmax pmax
comp=Z,20nm,2.7s
VYHS Vyhne 73.95 335 *e*P **P 04 09 40.5 +1.3**
KRUC Moravsky 74.03 336 *e*P **P 04 09 41.4 +1.7**
PSZ Piszkesteto 74.20 334⇑ *i*P **P 04 09 42.3 +1.5**
PSZ Piszkesteto 74.20 334 *e*P **P 04 09 42.8 +2.0**
comp=Z,5.4nm,0.9s
PSZ Piszkesteto 74.20 334⇑ P **P 04 09 42.4 +1.6**
CJR Cluj-Napoca 74.25 331‖ *i*P **P 04 09 41.3 +0.2**
CJR Cluj-Napoca 74.25 331‖ P **P 04 09 41.3 +0.2**
DRGR 74.44 331⇑ *i*P **P 04 09 42.3 +0.1**
DRGR 74.44 331⇑ P **P 04 09 42.3 +0.1**
MODS Modra-Piesok 74.46 336 *e*P **P 04 09 41.6 -0.6**
MODS pmax pmax
comp=Z,8.0nm,1.1s
MODS Modra-Piesok 74.46 336 *e*P **P 04 09 41.6 -0.6**
KHC Kasperske Hory 74.63 338 *e*P **P 04 09 46.6 +3.4**
KHC *ex* x 04 09 50.3
KHC Kasperske Hory 74.63 338 *e*P **P 04 09 45.0 +1.8**
comp=Z,2.5nm,1.0s
KHC Kasperske Hory 74.63 338 *e*P **P 04 09 45.0 +1.8**
KHC pmax pmax
comp=Z,3.0nm,1.0s
MLR Muntele Rosu 74.64 329 P **P 04 09 43.4 0.0**
comp=Z,1.3nm,0.6s,baz=333,slow=4.5,SNR=11
MLR LR LR 04 47 25.0
comp=Z,41nm,18.3s,baz=26,slow=40
MLR Muntele Rosu 74.64 329‖ *i*P **P 04 09 44.9 +1.5**
MEM Membach 74.72 344⇑ P **P 04 09 44.4 +0.7**
comp=Z,6.1nm,0.8s
DZM Mont Dzumac 74.77 174 LR LR 04 37 48.8
comp=Z,70nm,20.2s,baz=18,slow=32
GEC2 GERESS Array S 74.87 338 *e*P **P 04 09 46.8 +2.1**
comp=Z,4.4nm,1.1s
GEC2 GERESS Array S 74.87 338 *e*P **P 04 09 46.8 +2.1**
GEC2 pmax pmax
comp=Z,4.0nm,1.1s
GERES GERESS Array B 74.87 338 P **P 04 09 45.0 +0.3**
comp=Z,1.3nm,0.6s,baz=41,slow=4.3,SNR=13
GEA0 GERESS Array S 74.88 338 *e*P **P 04 09 45.6 +0.9**
VOIR 74.96 329⇑ *i*P **P 04 09 46.3 +1.0**
VOIR 74.96 329⇑ P **P 04 09 46.3 +1.0**
CONA Conrad Observa 75.22 336 *e*P **P 04 09 49.1 +2.3**
comp=Z,10nm,1.4s
SIRR Siria 75.22 332‖ *i*P **P 04 09 48.2 +1.5**
MOA Molln 75.67 337 *e*P **P 04 09 52.1 +2.8**
comp=Z,4.6nm,1.3s
BZS Buzias 75.83 332⇑ *i*P **P 04 09 51.1 +1.0**
BZS Buzias 75.83 332⇑ P **P 04 09 51.1 +1.0**
ILGA Ilgaz 75.85 321 *e*P **P 04 09 52.4 +1.8**
comp=Z,12nm,0.9s
ARSA Arzberg 75.94 336 *e*P **P 04 09 53.4 +2.7**
comp=Z,7.1nm,1.2s
WRAB Tennant Creek 76.00 205 *i*P **P 04 09 50.4 -0.9**
WRAB pmax pmax
comp=Z,6.0nm,1.1s
WR1 Warramunga Arr 76.01 205 *e*P **P 04 09 50.6 -0.7**
comp=Z,7.4nm,1.0s
WRA Warramunga Arr 76.01 205 P **P 04 09 50.6 -0.8**
comp=Z,2.2nm,0.8s,baz=25,slow=6.3,SNR=10
WRA Warramunga Arr 76.01 205 *i*P **P 04 09 52.2 +0.9**
WRA pmax pmax
comp=Z,1.0nm,0.7s
BFO Black Forest 76.48 341 *i*P **P 04 09 57.8 +4.0**
SOKA Soboth 76.59 336 *e*P **P 04 09 57.1 +2.5**
comp=Z,6.7nm,0.9s
KBA Koelnbreinsper 76.61 338 *e*P **P 04 09 56.9 +2.2**
comp=Z,14nm,0.8s,SNR=18
KBA Koelnbreinsper 76.61 338 P **P 04 09 57.0 +2.2**
ECH Echery 76.81 342 *e*P **P 04 09 58.7 +3.0**
comp=Z,8.2nm,1.2s
WTTA Wattenberg 76.82 339 *e*P **P 04 09 58.4 +2.4**
comp=Z,8.8nm,1.1s
MOTA Moosalm 76.86 339 *e*P **P 04 09 56.9 +0.8**
comp=Z,7.2nm,1.0s
OBKA Obir 76.86 337 *e*P **P 04 09 57.7 +1.6**
comp=Z,8.8nm,1.1s
MYKA Terra Mystica 76.97 337 *e*P **P 04 09 57.9 +1.3**
comp=Z,1.4nm,0.4s
BR101 Keskin Array S 77.03 321 *e*P **P 04 09 56.6 -0.6**
BR131 Keskin Array S 77.03 321 *e*P **P 04 09 59.0 +1.8**
BRTR Keskin Array B 77.03 321 P **P 04 09 56.6 -0.6**
comp=Z,3.2nm,1.0s,baz=72,slow=4.0,SNR=12
BRTR LR LR 04 49 54.1
comp=Z,77nm,18.4s,baz=69,slow=40
BRTR Keskin Array B 77.03 321 *i*P **P 04 09 58.0 +0.8**
BRTR pmax pmax
comp=Z,3.0nm,1.0s
ABTA Abfaltersbach 77.11 338 *e*P **P 04 10 00.0 +2.5**
comp=Z,7.3nm,0.9s,SNR=7.6
DAVA Damuels 77.17 340 *e*P **P 04 10 00.9 +3.0**
comp=Z,5.2nm,1.0s
FETA Feichten 77.25 339 *e*P **P 04 10 01.5 +3.2**
comp=Z,6.2nm,0.8s
DIVS Divibare 77.68 332 *e*P **P 04 10 01.3 +0.6**
comp=Z,6.6nm,1.2s
FUORN Ofenpass-Fuorn 77.73 340 *e*P **P 04 10 03.4 +2.3**
comp=Z,4.4nm,0.9s
TUE Stuetta 78.06 340 *e*P **P 04 10 04.8 +1.8**
comp=Z,6.3nm,0.9s
VTS Vitosha 78.10 329 *e*P **P 04 10 04.6 +1.4**
comp=Z,3.3nm,0.6s
VTS Vitosha 78.10 329 *e*P **P 04 10 04.6 +1.4**
VTS pmax pmax
comp=Z,3.0nm,0.6s
TTG Podgorica 79.43 332 *e*P **P 04 10 11.4 +1.2**
comp=Z,8.8nm,1.0s
TTG Podgorica 79.43 332 *e*P **P 04 10 11.4 +1.2**
TTG pmax pmax
comp=Z,9.0nm,1.0s
AS01 Alice Springs 79.67 205 *e*P **P 04 10 11.6 0.0**
AS31 Alice Springs 79.69 205 *e*P **P 04 10 12.1 +0.4**
comp=Z,0.7nm,0.8s
ASAR Alice Springs 79.69 205 P **P 04 10 12.1 +0.4**
comp=Z,2.1nm,0.7s,baz=14,slow=5.4,SNR=17
BNI Bardonecchia 79.95 342 *e*P **P 04 10 16.5 +3.3**
comp=Z,6.6nm,1.0s
BNI Bardonecchia 79.95 342 *e*P **P 04 10 16.5 +3.3**
BNI pmax pmax
comp=Z,7.0nm,1.0s
RAR Rarotonga 81.36 143 LR LR 04 42 05.9
comp=Z,96nm,20.6s,baz=122,slow=32
MMAI Mount Meron Ar 82.13 316 P **P 04 10 24.1 -0.9**
comp=Z,2.8nm,0.5s,baz=59,slow=8.6,SNR=5.2
TIP Timpagrande 83.15 333 *e*P **P 04 10 31.8 +1.7**
comp=Z,8.8nm,1.1s
RAYN Ar Rayn 85.48 304 *e*P **P 04 10 42.2 -0.1**
comp=Z,10nm,1.4s
RAYN Ar Rayn 85.48 304 P **P 04 10 42.1 -0.1**
RAYN pmax pmax
comp=Z,10.0nm,1.3s
STKA Stephens Creek 86.00 196 P **P 04 10 43.7 -0.5**
comp=Z,1.6nm,0.9s,baz=133,slow=23,SNR=3.6
STKA Stephens Creek 86.00 196 *e*P **P 04 10 43.7 -0.5**
comp=Z,1.2nm,1.1s
STKA Stephens Creek 86.00 196 *e*P **P 04 10 43.7 -0.5**
STKA pmax pmax
comp=Z,1.0nm,1.1s
ES19 SONSECA Array 86.85 348 *e*P **P 04 10 49.7 +0.9**
ESDC Sonseca Array 86.89 348 P **P 04 10 47.6 -1.3**
comp=Z,1.6nm,0.8s,baz=3.9,slow=4.1,SNR=9.2
KEST Kesra 88.32 337 LR LR 04 55 30.3
comp=Z,108nm,19.4s,baz=308,slow=39
ATD Arta Tunnel 96.87 299 LR LR 05 00 41.6
comp=Z,82nm,18.6s,baz=22,slow=39
PLCA Paso Flores 143.65 92 PKP **PKPdf 04 17 38.5 0.0**
comp=Z,1.6nm,0.8s,baz=53,slow=5.0,SNR=3.0

KRSC 18 04:00:49.3±0.9, 52.71N×160.64E, h23km±10km, ML3.5,
Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.54**	**317**	*e*P		Pb	04 01 00.1	0.0
SPN				*e*S		Sb	04 01 07.8	+0.3
NLC	**Nalytchevo**	**0.91**	**301**	*e*P		Pb	04 01 06.0	-0.3
NLC				*e*S		Sb	04 01 18.4	+0.4
DALK	**Dalny**	**1.19**	**287**	*e*P		Pb	04 01 11.1	+0.1
DALK				*e*S		Sb	04 01 27.2	+1.3
SDLR	**Sedlovina**	**1.20**	**299**	*e*P		Pb	04 01 11.3	-0.1

SDLR				eS	Sb	04 01 27.7	+1.1
UGLR	**Uglovaya**	**1.21 295**		eP	Pb	04 01 12.0	+0.5
PET	**Petropavlovsk**	**1.24 286**		eP	Pn	04 01 11.2	0.0
PET				eS	Sb	04 01 27.4	-0.2
KRER	**Koryakskii**	**1.29 298**		eP	Pb	04 01 12.9	0.0
RUS	**Russkaya**	**1.32 259**		eP	Pb	04 01 13.3	-0.1
RUS				eS	Sb	04 01 31.0	+1.1
KOK	**Koryaka**	**1.34 297**		eS	Sb	04 01 30.6	0.0
KRX	**Arik**	**1.37 299**		eP	Pb	04 01 13.8	-0.4
KRX				eS	Sb	04 01 31.8	+0.5
MTVR	**Mutnovka**	**1.51 262**		eP	Pb	04 01 15.9	-0.8
MTVR				eS	Sb	04 01 35.5	0.0
KRMR	**Karymshinskiy**	**1.53 276**		eP	Pb	04 01 16.3	-0.6
KRMR				eS	Sb	04 01 36.4	+0.6
ASAK	**Asacha**	**1.70 260**		eP	Pb	04 01 19.7	-0.2
KDTR	**Khodutka, Kamc**	**1.81 241**		eP	Pn	04 01 20.0	+1.0
KDTR				eS	Sb	04 01 42.6	-1.3
GNL	**Ganaly**	**1.90 303**		eP	Pb	04 01 22.1	-1.2

IDC 18 04:11:04.5±1.5, 57°.71N×32°.73W, h0km, mb3.5/4, mb1 3.6/5, mb1mx3.2/66, mbtmp3.5/5, ML3.5/1, MS3.4/9, Ms1 3.4/9, ms1mx3.1/52, Error ellipse: s-maj=53.0km s-min=22.6km az=32.0, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKA	**Eskdalemuir Ar**	**16.43**	**86**	Pn	Pn	04 14 55.5	-0.6
	baz=288,slow=12,SNR=3.7						
SCHQ	**Schefferville**	**19.03**	**276**	LR	LR	04 21 30.1	
	comp=Z,140nm,19.9s,baz=54,slow=33						
NOA	**NORSAR Array B**	**22.31**	**63**	LR	LR	04 23 09.1	
	comp=Z,55nm,20.5s,baz=270,slow=32						
HFS	**Hagfors**	**23.71**	**64**	LR	LR	04 24 00.9	
	comp=Z,66nm,19.0s,baz=346,slow=33						
GERES	**GERESS Array B**	**28.62**	**88**	LR	LR	04 28 12.9	
	comp=Z,90nm,18.7s,baz=338,slow=36						
AKASG	**Malin Array Be**	**35.74**	**74**	P	P	04 18 04.1	-0.4
	1.0nm,0.6s,baz=307,slow=8.5,SNR=6.9						
YKA	**Yellowknife Ar**	**38.51**	**312**	P	P	04 18 27.5	-0.4
	0.1nm,0.5s,baz=64,slow=9.3,SNR=3.3						
YKA				LR	LR	04 33 40.8	
	comp=Z,17nm,18.7s,baz=12,slow=35						
ILAR	**Eielson Array**	**48.08**	**328**	P	P	04 19 45.4	+0.3
	0.6nm,0.9s,baz=36,slow=6.2,SNR=4.0						
PDAR	**Pinedale Array**	**48.63**	**287**	LR	LR	04 38 58.7	
	comp=Z,68nm,18.5s,baz=338,slow=34						
TORD	**Torodi Ar. Bea**	**51.54**	**135**	P	P	04 20 12.2	+0.3
	0.5nm,0.9s,baz=339,slow=8.0,SNR=3.8						
ANMO	**Albuquerque**	**52.79**	**278**	LR	LR	04 41 45.6	
	comp=Z,76nm,19.7s,baz=334,slow=35						
YBH	**Yreka Blue Hor**	**55.97**	**295**	LR	LR	04 43 24.4	
	comp=Z,62nm,18.0s,baz=9.0,slow=35						
JTS	**JuntasAbangare**	**61.75**	**242**	LR	LR	04 47 19.4	
	comp=Z,24nm,19.1s,baz=52,slow=35						

*IDC **18** 04:11:41.7±0.6, 52°.78N×160°.71E, h0km, mb4.0/21, mb1 4.2/22, mb1mx4.0/73, mbtmp4.0/22, ML4.1/1, MS3.4/6, Ms1 3.4/6, ms1mx2.9/73, Error ellipse: s-maj=16.9km s-min=13.3km az=165.0*

*KRSC **18** 04:11:42.8±1.2, 52°.71N×160°.78E, h8km±12km, ML4.8*

*MOS **18** 04:11:42.2±1.1, 52°.60N×160°.84E, h15km, mb4.5/17, Error ellipse: s-maj=7.3km s-min=4.6km az=106.8*

*ISCJB **18** 04:11:43.9±0.8, 52°.64N±0°.03×160°.84E±0°.03, h27km±5km, mb4.3/51, MS3.7/8, Error ellipse: s-maj=5.0km s-min=3.2km az=167.5*

*BJI **18** 04:11:44.6, 52°.69N×160°.52E, h36km, mb4.7/12, mB4.8/7, Ms4.2/4, Ms7 4.0/4*

*NEIC **18** 04:11:45.6±2.0, 52°.79N×160°.70E, h25km±14km, mb4.5/19, Error ellipse: s-maj=8.2km s-min=4.9km az=170.0*

ISC 18 04:11:43.6±1.5, 52°.73N±0°.03×160°.72E±0°.03, h12km±8km, n181, σ1§42/208, mb4.3/51, MS3.6/8, 8C-2D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.56**	**311**	eP	Pb	04 11 56.0	+0.7
SPN				eS	Sb	04 12 03.9	+0.6
SPN	**Mys Shipunski**	**0.56**	**311**	PN	Pb	04 11 56.0	+0.7
SPN				S	Sb	04 12 03.9	+0.6
NLC	**Nalytchevo**	**0.94**	**298**	eP	Pb	04 12 01.8	0.0
NLC				eS	Sb	04 12 14.4	+0.2
NLC	**Nalytchevo**	**0.94**	**298**	PN	Pb	04 12 01.8	0.0
NLC				S	Sb	04 12 14.4	+0.2
DALK	**Dalny**	**1.23**	**285**	eP	Pn	04 12 06.3	-0.2
DALK				eS	Sn	04 12 23.2	+0.2
DALK	**Dalny**	**1.23**	**285**	PN	Pn	04 12 06.3	-0.2
DALK				S	Sn	04 12 23.2	+0.2
SDLR	**Sedlovina**	**1.24**	**297**	eP	Pn	04 12 06.7	-0.1
SDLR	**Sedlovina**	**1.24**	**297**	PN	Pn	04 12 06.7	-0.1
UGLR	**Uglovaya**	**1.25**	**293**	eP	Pn	04 12 06.8	0.0
UGLR	**Uglovaya**	**1.25**	**293**	PN	Pn	04 12 06.8	0.0
PET	**Petropavlovsk**	**1.29**	**284**	ePn	Pn	04 12 07.3	0.0
PET				eSn	Sb	04 12 24.4	+0.3
PET	**Petropavlovsk**	**1.29**	**284**	eP	Pn	04 12 07.2	-0.1
PET				eS	Sg	04 12 24.7	-0.4
PET	**Petropavlovsk**	**1.29**	**284**	α iPN	Pb	04 12 07.5	-0.2
PET				eS	Sb	04 12 23.8	-0.3
PET				pmax	pmax		
	comp=Z,200nm,0.3s						
PET				pmax	pmax		
	comp=Z,278nm,0.4s						
PET				smax	smax		
	comp=N,4μm,0.7s						
PET				smax	smax		
	comp=E,3μm,0.4s						
AVH	**Avacha**	**1.31**	**295**	eP	Pb	04 12 08.0	-0.2
AVH	**Avacha**	**1.31**	**295**	PN	Pb	04 12 08.0	-0.2
KRER	**Koryakskii**	**1.32**	**297**	eP	Pb	04 12 08.2	-0.2
KRER				eS	Sg	04 12 26.2	-0.1
KRER	**Koryakskii**	**1.32**	**297**	PN	Pb	04 12 08.2	-0.2
KRER				S	Sg	04 12 26.2	-0.1
KOK	**Koryaka**	**1.38**	**295**	eP	Pn	04 12 07.6	-1.1
KOK	**Koryaka**	**1.38**	**295**	PN	Pn	04 12 07.6	-1.1
RUS	**Russkaya**	**1.38**	**258**	eP	Pn	04 12 08.6	0.0
RUS				eS	Sb	04 12 26.6	-0.2
RUS	**Russkaya**	**1.38**	**258**	PN	Pn	04 12 08.6	0.0
RUS				S	Sb	04 12 26.6	-0.2
KRX	**Arik**	**1.40**	**298**	eP	Pn	04 12 09.2	+0.2
KRX				eS	Sb	04 12 27.1	-0.5
KRX	**Arik**	**1.40**	**298**	PN	Pn	04 12 09.2	+0.2
KRX				S	Sb	04 12 27.1	-0.5
KII	**Karymskiy**	**1.52**	**330**	eP	Pb	04 12 11.6	0.0
KII				eS	Sg	04 12 32.4	+0.1
KII	**Karymskiy**	**1.52**	**330**	PN	Pb	04 12 11.6	0.0
KII				S	Sg	04 12 32.4	+0.1
MTVR	**Mutnovka**	**1.57**	**262**	eP	Pb	04 12 11.8	-0.7
MTVR				eS	Sb	04 12 32.2	-0.2
MTVR	**Mutnovka**	**1.57**	**262**	PN	Pb	04 12 11.8	-0.7
MTVR				S	Sb	04 12 32.2	-0.2
KRMR	**Karymshinskiy**	**1.58**	**275**	eP	Pn	04 12 11.3	0.0
KRMR				eS	Sg	04 12 33.4	-0.9
KRMR	**Karymshinskiy**	**1.58**	**275**	PN	Pn	04 12 11.3	0.0
KRMR				S	Sg	04 12 33.4	-0.9
GRL	**Gorelyy**	**1.62**	**265**	eP	Pb	04 12 13.0	-0.5
GRL				eS	Sg	04 12 35.3	-0.5
GRL	**Gorelyy**	**1.62**	**265**	PN	Pb	04 12 13.0	-0.5
GRL				S	Sg	04 12 35.3	-0.5
ASAK	**Asacha**	**1.76**	**260**	eP	Pb	04 12 14.9	-0.8
ASAK				eS	Sb	04 12 38.0	+0.3
ASAK	**Asacha**	**1.76**	**260**	PN	Pb	04 12 14.9	-0.8
ASAK				S	Sb	04 12 38.0	+0.3
KDTR	**Khodutka, Kamc**	**1.87**	**241**	eP	Pn	04 12 15.8	+0.5
KDTR				eS	Sb	04 12 41.7	+0.9
PEA0B	**Petropavlovsk-**	**1.87**	**283**	ePn	Pn	04 12 16.3	+1.0
PEA0B				eSn	Sn	04 12 38.4	-0.4
PETK	**Petropavlovsk-**	**1.87**	**283**	Pn	Pn	04 12 16.2	+0.9
	comp=E,102nm,0.3s,baz=94,slow=20,SNR=154						
PETK				Sn	Sb	04 12 40.1	-0.8
	comp=E,190nm,0.3s,baz=92,slow=26,SNR=22						
PETK				LR	LR	04 13 05.0	
	comp=E,497nm,18.8s,baz=91,slow=45						
PETK	**Petropavlovsk-**	**1.87**	**283**	ePn	Pn	04 12 15.8	+0.5
PETK				eSn	Sn	04 12 38.5	-0.3
PEA1	**Petropavlovsk-**	**1.87**	**283**	ePn	Pn	04 12 16.2	+0.9
PEA1				eSn	Sb	04 12 40.1	-0.8
MKZ	**Mys Kozlova**	**1.93**	**18**	eP	Pn	04 12 16.6	+0.6
MKZ				eS	Sn	04 12 40.7	+0.6
MKZ	**Mys Kozlova**	**1.93**	**18**	PN	Pn	04 12 16.6	+0.6
MKZ				S	Sn	04 12 40.7	+0.6
GNL	**Ganaly**	**1.93**	**301**	eP	Pb	04 12 17.9	-0.8
GNL				eS	Sg	04 12 44.7	-1.0
GNL	**Ganaly**	**1.93**	**301**	PN	Pb	04 12 17.9	-0.8
GNL				S	Sg	04 12 44.7	-1.0
APC	**Apacha**	**2.17**	**277**	eP	Pb	04 12 21.3	-1.4
APC				eS	Sb	04 12 50.8	+1.3
APC	**Apacha**	**2.17**	**277**	PN	Pb	04 12 21.3	-1.4
APC				S	Sb	04 12 50.8	+1.3
KZV	**Kizimen**	**2.40**	**354**	eP	Pb	04 12 25.0	-1.8
KZV				eS	Sb	04 12 55.6	-0.7
KZV	**Kizimen**	**2.40**	**354**	PN	Pb	04 12 25.0	-1.8
KZV				S	Sb	04 12 55.6	-0.7
TUMD	**Tumrok D**	**2.49**	**356**	eP	Pn	04 12 25.6	+1.8
TUMD				eS	Sn	04 12 56.0	+2.0
TUMR	**Tumrok**	**2.58**	**353**	eP	Pb	04 12 28.1	-1.7
TUMR	**Tumrok**	**2.58**	**353**	PN	Pb	04 12 28.1	-1.7
KMNR	**Kamenistaya**	**3.05**	**355**	eP	Pb	04 12 35.2	-2.5
KMNR	**Kamenistaya**	**3.05**	**355**	PN	Pb	04 12 35.2	-2.5
KPT	**Kopyto**	**3.26**	**355**	eP	Pn	04 12 37.4	+3.0
KPT	**Kopyto**	**3.26**	**355**	PN	Pn	04 12 37.4	+3.0
ZLN	**Zelenaya**	**3.29**	**1**	eP	Pn	04 12 38.1	+3.1
ZLN	**Zelenaya**	**3.29**	**1**	PN	Pn	04 12 38.1	+3.1
LGNR	**Loginova**	**3.36**	**360**	eP	Pn	04 12 39.3	+3.3
LGNR	**Loginova**	**3.36**	**360**	PN	Pn	04 12 39.3	+3.3
SKR	**Severo-Kuril's**	**3.52**	**236**	ePN	Pn	04 12 38.5	+0.5
SKR				pmax	pmax		
	comp=Z,29nm,0.4s						
KBTR	**Krutoberegovo**	**3.69**	**18**	eP	Pn	04 12 41.5	+1.1
KBTR	**Krutoberegovo**	**3.69**	**18**	PN	Pn	04 12 41.5	+1.1
SMKR	**Semkarok**	**3.88**	**6**	eP	Pn	04 12 46.5	+3.4
SMKR	**Semkarok**	**3.88**	**6**	PN	Pn	04 12 46.5	+3.4
SRKR	**Sorokina**	**3.94**	**4**	eP	Pn	04 12 47.5	+3.7
SRKR	**Sorokina**	**3.94**	**4**	PN	Pn	04 12 47.5	+3.7
SMY	**Shemya**	**8.12**	**85**	ePn	Pn	04 13 41.7	+0.6
SMY	**Shemya**	**8.12**	**85**	ePN	Pn	04 13 41.7	+0.6
MA2	**Magadan**	**8.82**	**325**	LR	LR	04 17 11.7	
	comp=Z,136nm,19.3s,baz=142,slow=38						
ASAJ	**Asahikawa**	**14.77**	**242**	Pn	Pn	04 15 12.0	0.0
	comp=Z,1.2nm,0.3s,baz=85,slow=13,SNR=5.2						
ASAJ	**Asahikawa**	**14.77**	**242**	ePn	Pn	04 15 12.8	+0.8
ASAJ	**Asahikawa**	**14.77**	**242**	P	Pn	04 15 12.0	0.0
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BILL	**Bilibino**	**15.59**	**8**	eP	Pn	04 15 24.2	+1.4
BILL				eS	S	04 18 28.2	-2.4
BILL				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BILL				MLR	MLR		
	comp=Z,83nm,17.0s						
MAJO	**Matsushiro**	**22.63**	**233**	eP	P	04 16 45.0	+0.9
	comp=Z,7.8nm,0.7s						
MAJO	**Matsushiro**	**22.63**	**233**	i P	P	04 16 45.5	+1.4
MAT	**Matsushiro**	**22.63**	**233**	P	P	04 16 48.8	+4.7
MJAR	**Matsushiro Arr**	**22.63**	**233**	P	P	04 16 45.6	+1.5
	comp=Z,2.5nm,0.7s,baz=20,slow=12,SNR=9.6						
TIXI	**Tiksi**	**23.57**	**335**	P	P	04 16 52.0	-1.4
	comp=Z,2.1nm,0.6s,baz=114,slow=11,SNR=5.1						
TIXI				LR	LR	04 26 14.2	
	comp=Z,94nm,19.1s,baz=120,slow=37						
TIXI	**Tiksi**	**23.57**	**335**	ceP	P	04 16 53.1	-0.3
TIXI				pmax	pmax		
	comp=Z,6.0nm,2.5s						
CHGN	**Chignik**	**23.73**	**65**	eP	P	04 16 55.5	+0.4
	comp=Z,59nm,1.4s						
CN2	**Changchun**	**24.90**	**263**	eP	P	04 17 00.4	-5.7
SKT	**Skwentna**	**26.77**	**51**	eP	P	04 17 22.2	-0.6
	comp=Z,3.9nm,1.1s						
TOLK	**Toolik Lake Re**	**28.03**	**36**	eP	P	04 17 34.7	+0.6
	comp=Z,6.9nm,1.4s						
IL1	**Eielson Array**	**28.80**	**45**	eP	P	04 17 40.0	-0.9
ILAR	**Eielson Array**	**28.80**	**45**	P	P	04 17 41.1	+0.2
	comp=Z,0.4nm,0.5s,baz=252,slow=6.2,SNR=8.4						
ILB	**Eielson Array**	**28.80**	**45**	eP	P	04 17 41.1	+0.2
EYAK	**Cordova Ski Ar**	**29.68**	**53**	eP	P	04 17 43.8	-5.0
	comp=Z,8μm,0.6s						
EGAK	**Eagle**	**31.25**	**45**	eP	P	04 18 01.8	-0.7
	comp=Z,2.1nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**33.28**	**169**	T	T	04 53 47.3	
	baz=353,slow=76,SNR=97						
H11N3	**WAKE ISLAND Hy**	**33.30**	**169**	T	T	04 53 42.4	
	baz=353,slow=76,SNR=85						
H11N1	**WAKE ISLAND Hy**	**33.30**	**169**	T	T	04 54 00.3	
	baz=353,slow=76,SNR=85						
ULN	**Ulaanbaatar**	**33.95**	**284**	i P	P	04 18 26.0	-0.6
ULN				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TLY	**Talaya**	**34.21**	**292**	LR	LR	04 31 41.8	
	comp=Z,42nm,19.7s,baz=72,slow=35						
TLY	**Talaya**	**34.21**	**292**	i P	P	04 18 27.6	-1.0
TLY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
H11S1	**WAKE ISLAND Hy**	**34.47**	**170**	T	T	04 55 36.9	
	baz=352,slow=76,SNR=13						
H11S3	**WAKE ISLAND Hy**	**34.48**	**170**	T	T	04 55 25.9	
	baz=352,slow=76,SNR=24						
H11S2	**WAKE ISLAND Hy**	**34.49**	**170**	T	T	04 55 14.2	
	baz=352,slow=76,SNR=10						
NRIK	**Noril'sk**	**36.42**	**325**	LR	LR	04 35 14.9	
	comp=Z,141nm,19.6s,baz=25,slow=39						
NJ2	**Nanjing**	**36.51**	**252**	eP	P	04 18 49.5	+1.0
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
LZH	**Lanzhou**	**42.72**	**270**	eP	P	04 19 38.8	-1.6
LZH				pP	sP	04 19 50.0	+4.1
LZH				sP	pP	04 19 54.8	+10
LZH				ePP	PP	04 21 20.6	+1.2
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZH				pmax	pmax		
	comp=Z,65nm,5.4s						
LZH				LR	LR		
	comp=Z,260nm,13.0s						
LZH				LR	LR		
	comp=Z,270nm,13.3s						
LZH				LR	LR		
	comp=Z,320nm,16.7s						
GTA	**Gaotai**	**43.03**	**277**	eP	P	04 19 43.5	+0.6
GTA				pP	sP	04 19 52.9	+4.6
GTA				sP	pP	04 19 57.0	+10
GTA				S	S	04 26 06.0	-2.1
GTA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,62nm,4.3s						
GTA				LR	LR		
	comp=Z,130nm,14.3s						
GTA				LR	LR		
	comp=Z,130nm,15.2s						
GTA				LR	LR		
	comp=Z,160nm,16.5s						
YKA	**Yellowknife Ar**	**43.17**	**43**	P	P	04 19 43.0	-0.6
	comp=Z,0.7nm,0.8s,baz=296,slow=7.9,SNR=6.3						
YKA	**Yellowknife Ar**	**43.17**	**43**	P	P	04 19 43.0	-0.6
YKA	**Yellowknife Ar**	**43.17**	**43**	P	P	04 19 43.0	-0.6
YKB5	**Yellowknife Ar**	**43.17**	**43**	eP	P	04 19 43.0	-0.6
WMQ	**Urumqi**	**47.45**	**290**	P	P	04 20 18.5	+0.7
WMQ				pmax	pmax		
	comp=Z,22nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,160nm,4.5s						
WMQ				LR	LR		
	comp=Z,190nm,18.5s						
WMQ				LR	LR		
	comp=Z,150nm,22.3s						
SPA0	**Spitsbergen Ar**	**47.56**	**351**	eP	P	04 20 18.2	0.0
SPITS	**Spitsbergen Ar**	**47.56**	**351**	P	P	04 20 18.2	0.0
	comp=Z,1.9nm,0.6s,baz=67,slow=11,SNR=7.0						
D05A	**Enumclaw**	**47.79**	**64**	eP	P	04 20 22.0	+1.6
	comp=Z,35nm,0.9s						
KURK	**Kurchatov**	**48.25**	**302**	eP	P	04 20 22.4	-1.4
	comp=Z,3.8nm,0.6s						
KURK	**Kurchatov**	**48.25**	**302**	ceP	P	04 20 23.3	-0.5
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KURBB	**Kurchatov Arra**	**48.35**	**302**	P	P	04 20 23.0	-1.6
	comp=Z,2.2nm,0.6s,baz=60,slow=7.4,SNR=12						
MK31	**Makanchi Array**	**48.66**	**296**	eP	P	04 20 25.2	-1.9
MK31	**Makanchi Array**	**48.66**	**296**	eP	P	04 20 25.2	-1.9
MK32	**Makanchi Array**	**48.66**	**296**	eP	P	04 20 25.3	-1.8
MKAR	**Makanchi Array**	**48.66**	**296**	P	P	04 20 25.3	-1.8
	comp=Z,0.5nm,0.4s,baz=56,slow=6.8,SNR=11						
MKAR	**Makanchi Array**	**48.66**	**296**	eP	P	04 20 25.2	-1.8
	comp=Z,8.4nm,0.4s						
MKAR	**Makanchi Array**	**48.66**	**296**	ceP	P	04 20 30.3	+3.2
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MK01	**Makanchi Array**	**48.67**	**296**	eP	P	04 20 25.1	-2.0
NAC	**Naches**	**48.70**	**64**	eP	P	04 20 27.3	-0.1
BVAR	**Borovoye Array**	**50.91**	**309**	P	P	04 20 43.1	-1.1
	comp=Z,1.4nm,0.5s,baz=48,slow=8.6,SNR=5.5						
BRVK	**Borovoye**	**50.94**	**309**	i P	P	04 20 45.3	+1.0
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WVOR	**Wild Horse Val**	**52.64**	**67**	eP	P	04 20 52.9	-4.4
	comp=Z,6.6nm,0.9s						
WVOR	**Wild Horse Val**	**52.64**	**67**	eP	P	04 20 52.9	-4.4
WVOR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ARA0	**ARCESS Array S**	**53.75**	**342**	eP	P	04 21 04.0	-0.9
ARCES	**ARCESS Array B**	**53.75**	**342**	P	P	04 21 04.0	-0.9
	comp=Z,1.8nm,0.9s,baz=37,slow=11,SNR=4.7						
ARU	**Arti**	**53.92**	**318**	LR	LR	04 46 46.1	
	comp=Z,45nm,18.9s,baz=102,slow=39						
ARU	**Arti**	**53.92**	**318**	d iP	P	04 21 07.5	+1.1
ARU				S	S	04 28 41.9	+0.8
ARU				pmax	pmax		
	comp=Z,9.0nm,1.7s						
CNIC	**Niles Canyon**	**53.95**	**73**	eP	P	04 21 02.7	-4.1
NV01	**Mina Array Sit**	**55.51**	**70**	eP	P	04 21 17.0	-1.4
NVAR	**Mina Array Bea**	**55.51**	**70**	P	P	04 21 17.0	-1.4
	comp=Z,1.3nm,0.7s,baz=303,slow=7.3,SNR=7.7						
MNAS	**Manas**	**56.76**	**298**	P	P	04 21 26.2	-1.0
MNAS				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KSH	**Kashi**	**56.90**	**293**	P	P	04 21 31.6	+3.4
KSH				pP	sP	04 21 44.8	+11
KSH				pmax	pmax		
	comp=Z,230nm,6.0s						
PD31	**Pinedale Array**	**57.37**	**61**	eP	P	04 21 32.9	+1.3
PDAR	**Pinedale Array**	**57.37**	**61**	P	P	04 21 31.7	+0.1
	comp=Z,1.5nm,0.7s,baz=302,slow=3.9,SNR=13						
PDAR	**Pinedale Array**	**57.37**	**61**	eP	P	04 21 32.2	+0.6
JAY	**Jayapura**	**57.57**	**204**	LR	LR	04 44 48.3	
	comp=Z,32nm,20.2s,baz=346,slow=34						
JOF	**Joensuu**	**58.06**	**335**	P	P	04 21 35.9	+0.1
JOF				pmax	pmax		
	comp=Z,8.0nm,1.1s						
RPV	**Rancho Palos V**	**58.72**	**74**	eP	P	04 21 39.2	-1.7
MSU	**Marysvale**	**58.91**	**66**	eP	P	04 21 42.0	-0.5
MSU	**Marysvale**	**58.91**	**66**	eP	P	04 21 42.0	-0.5
RSSD	**Black Hills**	**59.29**	**57**	eP	P	04 21 45.8	+0.8
	comp=Z,5.2nm,0.6s						
RSSD	**Black Hills**	**59.29**	**57**	eP	P	04 21 45.8	+0.8
RSSD				pmax	pmax		
	comp=Z,5.0nm,0.6s						
LCMT	**Little Creek M**	**59.37**	**68**	eP	P	04 21 46.6	+1.1
	comp=Z,2.8nm,1.0s						
SRU	**San Rafael Swe**	**59.40**	**65**	eP	P	04 21 46.5	+0.7
	comp=Z,4.1nm,0.7s						
SRU	**San Rafael Swe**	**59.40**	**65**	eP	P	04 21 46.5	+0.7
SRU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
FIA1	**FINESS Array S**	**60.60**	**337**	eP	P	04 21 52.5	-0.9
FIA0	**FINESS Array S**	**60.60**	**337**	eP	P	04 21 53.5	+0.1
FIA0	**FINESS Array S**	**60.60**	**337**	eP	P	04 21 53.6	+0.1
FINES	**FINESS Array B**	**60.60**	**337**	P	P	04 21 53.5	+0.1
	comp=Z,3.1nm,0.6s,baz=26,slow=8.2,SNR=14						
FINES	**FINESS Array B**	**60.60**	**337**	ceP	P	04 22 01.3	+7.9
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
PV22	**Blue Mesa, Par**	**60.76**	**64**	eP	P	04 21 55.4	+0.2
	comp=Z,2.6nm,0.8s						
SWSC	**Sam W. Stewart**	**60.81**	**73**	eP	P	04 21 52.2	-3.1
PV02	**Paradox Valley**	**61.02**	**64**	eP	P	04 21 55.4	-1.6
	comp=Z,4.3nm,1.1s						
ISCO	**Idaho Springs**	**61.56**	**61**	P	P	04 22 02.1	+1.4
ISCO				pmax	pmax		
	comp=Z,3.0nm,1.1s						
NB2	**NORSAR Subarra**	**64.00**	**344**	P	P	04 22 15.9	-0.4
	comp=Z,0.6nm,0.6s,baz=19,slow=6.9						
HFS	**Hagfors**	**64.41**	**342**	P	P	04 22 18.4	-0.5
	comp=Z,1.6nm,0.6s,baz=104,slow=6.1,SNR=6.6						
WMOK	**Wichita Mounta**	**68.96**	**60**	eP	P	04 22 48.5	+0.1
	comp=Z,2.3nm,0.8s						
WMOK	**Wichita Mounta**	**68.96**	**60**	eP	P	04 22 48.5	+0.1
WMOK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKASG	**Malin Array Be**	**69.12**	**329**	P	P	04 22 48.8	-0.2
	comp=Z,1.1nm,0.5s,baz=26,slow=6.3,SNR=6.4						
AKASG	**Malin Array Be**	**69.12**	**329**	ceP	P	04 22 55.2	+6.1
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKBB	**Malin Array Si**	**69.12**	**329**	eP	P	04 22 48.8	-0.2
	comp=Z,3.0nm,0.9s						
AKBB	**Malin Array Si**	**69.12**	**329**	eP	P	04 22 48.8	-0.2
AKBB				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KBZ	**Khabaz**	**70.06**	**317**	P	P	04 22 55.0	0.0
	comp=Z,2.1nm,0.8s,baz=206,slow=16,SNR=3.6						
KBZ	**Khabaz**	**70.06**

baz=337,slow=9.1,SNR=3.0
TGY Tagaytay City 22.34 334 LR LR 04 37 39.7
comp=Z,350nm,18.6s,baz=140,slow=43
MKAR Makanchi Array 67.91 326 P P 04 32 20.5 +0.2
0.6nm,0.4s,baz=121,slow=8.2,SNR=5.4
KURBB Kurchatov Arra 72.16 328 P P 04 32 45.9 -0.2
0.2nm,0.5s,baz=117,slow=4.7,SNR=3.0

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*CSEM **18** 04:21:51.8±0.3, 38°.64N×43°.19E, h5km, ML2.3, Error ellipse: s-maj=6.3km s-min=6.0km az=91.0*
*ISK **18** 04:21:51.5, 38°.65N×43°.20E, h5km, ML2.3/3*
*ISCJB **18** 04:21:52.5±0.6, 38°.70N±0°.03×43°.17E±0°.04, h7km±10km, Error ellipse: s-maj=5.5km s-min=5.0km az=171.5*
*DDA **18** 04:21:52.4, 38°.68N×43°.17E, h7km, Ml3.0*
ISC 18 04:21:52.2±1.0, 38°.67N±0°.03×43°.20E±0°.04, h13km±8km, n16, σ0°.88/27, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.16**	**116**	PG	**Pb**	**04 21 56.3**	**-0.9**
VANB				SG	**Sg**	**04 21 59.8**	**+0.9**
VANB	**Van**	**0.16**	**116**	*e*Pg	**Pb**	**04 21 56.3**	**-0.9**
VANB				*e*Sg	**Sg**	**04 21 59.8**	**+0.9**
GEVA	**Gevas**	**0.37**	**198**	*i* P	**Pg**	**04 21 59.3**	**-0.4**
GEVA				*i* S	**Sb**	**04 22 07.2**	**+0.7**
GEVA	**Gevas**	**0.37**	**198**	P	**Pg**	**04 21 59.3**	**-0.4**
GEVA				S	**Sb**	**04 22 07.2**	**+0.7**
VMUR	**Van-Muradiye**	**0.43**	**42**	*i* P	**Pg**	**04 22 00.7**	**-0.2**
VMUR				*i* S	**Sb**	**04 22 07.9**	**-0.5**
VMUR	**Van-Muradiye**	**0.43**	**42**	P	**Pg**	**04 22 00.7**	**-0.2**
VMUR				S	**Sb**	**04 22 07.9**	**-0.5**
CLDR	**Caldiran**	**0.73**	**49**	PG	**Pb**	**04 22 06.4**	**-0.6**
CLDR	**Caldiran**	**0.73**	**49**	*e*Pg	**Pb**	**04 22 06.4**	**-0.6**
TUTA	**Tutak**	**0.80**	**338**	*i* P	**Pg**	**04 22 07.4**	**-0.2**
TUTA				*i* S	**Sb**	**04 22 19.1**	**+0.3**
TUTA	**Tutak**	**0.80**	**338**	P	**Pg**	**04 22 07.4**	**-0.2**
TUTA				S	**Sb**	**04 22 19.1**	**+0.3**
AGRB	**Hanur-Agry**	**0.92**	**350**	PG	**Pg**	**04 22 09.9**	**-0.2**
AGRB	**Hanur-Agry**	**0.92**	**350**	*e*Pg	**Pg**	**04 22 09.9**	**-0.2**
GURO	**Guroymak-BITLI**	**0.92**	**263**	PG	**Pg**	**04 22 09.7**	**-0.4**
GURO				SG	**Sb**	**04 22 22.9**	**+0.5**
GURO	**Guroymak-BITLI**	**0.92**	**263**	*e*Pg	**Pg**	**04 22 09.7**	**-0.4**
GURO				*e*Sg	**Sb**	**04 22 22.9**	**+0.5**
HAKT	**HAKKARI**	**1.18**	**160**	*e*P	**Pb**	**04 22 12.8**	**-1.8**
HAKT				*i* S	**Sn**	**04 22 32.8**	**+2.2**
HAKT	**HAKKARI**	**1.18**	**160**	P	**Pb**	**04 22 12.8**	**-1.8**

IDC 18 04:31:24.7±0.9, 37°.44S×51°.24E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.5/62, mbtmp3.7/7, Error ellipse: s-maj=32.7km s-min=26.8km az=81.0, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**43.78**	**202**	P	P	04 39 32.4	+0.7
	1.6nm,0.8s,baz=83,slow=8.2,SNR=11						
H01W2	**Cape Leeuwin H**	**49.99**	**107**	T	T	05 33 51.0	
	baz=247,slow=75,SNR=185						
H01W3	**Cape Leeuwin H**	**50.00**	**107**	T	T	05 33 51.6	
	baz=247,slow=75,SNR=162						
H01W1	**Cape Leeuwin H**	**50.01**	**107**	T	T	05 33 52.3	
	baz=247,slow=75,SNR=166						
VNDA	**Vanda**	**58.00**	**166**	P	P	04 41 17.0	-1.6
	0.3nm,0.7s,baz=257,slow=5.4,SNR=3.1						
TORD	**Torodi Ar. Bea**	**68.52**	**307**	P	P	04 42 28.9	-0.2
	0.6nm,0.8s,baz=195,slow=3.8,SNR=4.2						
ASAR	**Alice Springs**	**70.44**	**105**	P	P	04 42 42.1	+1.0
	0.4nm,0.7s,baz=235,slow=5.1,SNR=4.6						
WRA	**Warramunga Arr**	**72.83**	**102**	P	P	04 42 55.4	-0.2
	0.4nm,0.6s,baz=241,slow=5.8,SNR=3.9						
MKAR	**Makanchi Array**	**88.36**	**21**	P	P	04 44 16.0	-2.0
	0.3nm,0.7s,baz=190,slow=7.3,SNR=2.7						
KURBB	**Kurchatov Arra**	**90.92**	**17**	P	P	04 44 31.5	+1.7
	0.2nm,0.5s,baz=216,slow=4.6,SNR=3.2						
ILAR	**Eielson Array**	**150.59**	**16**	PKPbc	PKPbc	04 51 17.4	-0.1
	0.3nm,0.6s,baz=314,slow=3.3,SNR=5.1						

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*IDC **18** 04:31:32.5±0.8, 38°.96N×110°.62E, h0km, mb3.9/10, mb1 4.1/11, mb1mx3.7/89, mbtmp3.9/11, ML3.6/1, Error ellipse: s-maj=24.2km s-min=15.6km az=73.0*
*NEIC **18** 04:31:34.2±0.3, 38°.98N×110°.58E, h10km, mb4.3/5, Error ellipse: s-maj=6.4km s-min=4.9km az=69.0*
*ISCJB **18** 04:31:35.8±0.4, 39°.05N±0°.05×110°.59E±0°.06, h33km, mb4.1/15, Error ellipse: s-maj=8.0km s-min=6.6km az=19.6*
ISC 18 04:31:38.1±0.7, 39°.07N±0°.08×110°.51E±0°.08, h35km, n33, σ1°.02/36, mb4.0/15, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJT	**Baijiatuau**	**4.48**	**76**	*e*Pn	**Pn**	**04 32 42.6**	**-0.9**
BJT				*e*Sn	**Sn**	**04 33 34.5**	**+0.2**
ULN	**Ulaanbaatar**	**9.14**	**345**	*e*Pn	**Pn**	**04 33 47.4**	**-0.2**
SONA0	**Songino Array**	**9.25**	**343**	*e*Pn	**Pn**	**04 33 48.0**	**-1.1**
SONA0				*e*Sn	**Sn**	**04 35 30.3**	**-1.7**
SONM	**Songino Array**	**9.25**	**343**	Pn	**Pn**	**04 33 48.0**	**-1.1**
	0.6nm,0.3s,baz=159,slow=14,SNR=10						
SONM				Sn	**Sn**	**04 35 30.3**	**-1.7**
	0.6nm,0.3s,baz=124,slow=21,SNR=3.1						
SONM				Lg	Lg	04 36 28.7	
	0.7nm,0.3s,baz=165,slow=32,SNR=5.3						
SONA1	**Songino Array**	**9.26**	**343**	*e*Pn	**Pn**	**04 33 49.2**	**0.0**
MK01	**Makanchi Array**	**21.96**	**300**	*e*P	**P**	**04 36 29.8**	**+1.1**
MK31	**Makanchi Array**	**21.97**	**300**	*e*P	**P**	**04 36 28.6**	**-0.2**
MK32	**Makanchi Array**	**21.97**	**300**	*e*P	**P**	**04 36 29.1**	**+0.4**
MKAR	**Makanchi Array**	**21.97**	**300**	P	**P**	**04 36 29.1**	**+0.3**
	3.1nm,1.0s,baz=100,slow=12,SNR=14						
MKAR	**Makanchi Array**	**21.97**	**300**	*e*P	**P**	**04 36 28.7**	**-0.1**
	30nm,1.2s						
MAKZ	**Makanchi**	**22.18**	**300**	*e*P	**P**	**04 36 32.2**	**+1.2**
	7.5nm,1.2s						
CM31	**Chiang Mai Arr**	**22.86**	**209**	*e*P	**P**	**04 36 37.2**	**-1.3**
CMAR	**Chiang Mai Arr**	**22.86**	**209**	P	**P**	**04 36 37.2**	**-1.3**
	8.5nm,0.8s,baz=14,slow=9.3,SNR=27						
CM01	**Chiang Mai Arr**	**22.89**	**209**	*e*P	**P**	**04 36 38.3**	**-0.4**
ZALV	**Zalesovo Beam**	**22.93**	**319**	P	**P**	**04 36 39.7**	**+0.8**
	1.2nm,0.3s,baz=96,slow=10,SNR=3.6						
ZAA1	**Zalesovo Array**	**22.93**	**319**	*e*P	**P**	**04 36 39.6**	**+0.8**
TARG	**Taragay, Kyrgy**	**24.96**	**287**	*e*P	**P**	**04 36 58.9**	**+0.2**
	7.0nm,0.9s						
KURK	**Kurchatov**	**25.21**	**308**	*e*P	**P**	**04 37 01.5**	**+1.2**
KURBB	**Kurchatov Arra**	**25.24**	**308**	P	**P**	**04 37 01.2**	**+0.7**
	1.0nm,0.7s,baz=107,slow=10.0,SNR=7.1						
KK31	**Karatay Array**	**30.21**	**291**	*e*P	**P**	**04 37 45.7**	**+0.5**
KKAR	**Karatay Array**	**30.21**	**291**	*e*P	**P**	**04 37 45.9**	**+0.7**
TIXI	**Tiksi**	**33.96**	**10**	P	**P**	**04 38 17.9**	**+0.2**
	4.1nm,0.7s,baz=228,slow=4.3,SNR=10						
TIXI	**Tiksi**	**33.96**	**10**	*e*P	**P**	**04 38 19.0**	**+1.3**
GUMO	**Guam**	**39.52**	**120**	*e*P	**P**	**04 39 07.1**	**+1.5**
	166nm,1.2s						
BR101	**Keskin Array S**	**57.59**	**297**	*e*P	**P**	**04 41 25.4**	**+0.9**
BRTR	**Keskin Array B**	**57.59**	**297**	P	**P**	**04 41 25.4**	**+0.9**
	0.7nm,0.8s,baz=87,slow=5.3,SNR=4.4						
ILAR	**Eielson Array**	**60.37**	**29**	P	**P**	**04 41 43.7**	**+0.4**
	0.5nm,0.9s,baz=287,slow=7.6,SNR=6.4						
ILB	**Eielson Array**	**60.37**	**29**	*e*P	**P**	**04 41 43.7**	**+0.4**
WR1	**Warramunga Arr**	**62.80**	**155**	*e*P	**P**	**04 41 59.0**	**-1.1**
	6.9nm,1.0s						
WRA	**Warramunga Arr**	**62.80**	**155**	P	**P**	**04 41 59.0**	**-1.1**
	0.4nm,0.9s,baz=347,slow=7.5,SNR=5.5						
AS31	**Alice Springs**	**66.14**	**157**	*e*P	**P**	**04 42 20.1**	**-1.8**
	1.1nm,1.1s						
ASAR	**Alice Springs**	**66.14**	**157**	P	**P**	**04 42 20.1**	**-1.8**
	1.1nm,0.8s,baz=332,slow=5.1,SNR=7.4						
YKA	**Yellowknife Ar**	**72.49**	**20**	P	**P**	**04 43 01.2**	**+0.5**
	0.9nm,0.7s,baz=324,slow=5.7,SNR=10						

UCR 18 04:43:22.1±1.6, 10°.21N×85°.80W, h24km±4km, MD3.6, 1C-7D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VCR	**Vista de Mar**	**0.18**	**116**	⇑*i*P	Pb	04 43 27.9	+0.3
VCR				*e*S	Sb	04 43 31.8	+0.5
NY14	**Universidad de**	**0.51**	**31**	⇓*i*P	Pb	04 43 32.6	+0.2
NY14				*e*S	Sn	04 43 40.9	-1.0
LAPC	**Finca la Perla**	**0.66**	**33**	⇓*i*P	Pb	04 43 34.5	-0.6
GBS3	**Finca Las lm¯¡**	**0.66**	**31**	*e*P	Pb	04 43 34.7	-0.4
GBS3				*e*S	Sb	04 43 43.9	0.0
GPS2	**Hotel Rinc¯t**	**0.70**	**39**	*e*P	Pb	04 43 35.4	-0.3
BUEV	**Buena Vista**	**0.70**	**33**	*e*P	Pb	04 43 35.1	-0.7
GPS1	**Guardaparques**	**0.72**	**38**	*e*P	Pb	04 43 35.0	-1.1
GB1A	**Borinquen Arri**	**0.72**	**33**	*e*P	Pb	04 43 35.6	-0.6
GB1A				*e*S	Sb	04 43 45.2	-0.5
LIM1	**Limonal**	**0.73**	**48**	⇓*i*P	Pb	04 43 35.7	-0.5
LIM1				*e*S	Sn	04 43 47.5	+0.2
GUAB	**Guayabo de Bag**	**0.75**	**48**	*e*P	Pb	04 43 35.5	-1.0
MESS	**Mesas**	**0.80**	**48**	*e*P	Pb	04 43 36.8	-0.6
MESS				*e*P	Pn	04 43 36.8	-1.1
MESS				*e*S	Sb	04 43 46.8	-1.0
MESS				*e*S	Sn	04 43 48.0	-1.1
JTS	**JuntasAbangare**	**0.84**	**84**	⇓*i*P	Pb	04 43 37.4	-0.6
JTS				*e*P	Pn	04 43 37.5	-1.0
ACAL	**Aguas Claras**	**0.86**	**60**	⇓*i*P	Pb	04 43 38.0	-0.5
ACAL				*e*S	Sn	04 43 50.7	0.0
CRZ1	**La Cruz**	**0.88**	**11**	*e*P	Pn	04 43 38.9	0.0
CRZ1				*e*S	Sn	04 43 51.6	+0.7
AMAS	**Alto Masis**	**0.89**	**63**	*e*P	Pb	04 43 38.2	-0.7
AMAS				*e*S	Sb	04 43 50.9	+0.5
CASO	**Castillo**	**1.07**	**78**	*e*P	Pn	04 43 41.4	-0.3
CASO				*e*S	Sn	04 43 57.1	+1.3
CEDE	**Laguna Cede¯–o**	**1.11**	**75**	⇓*i*P	Pb	04 43 42.6	-0.1
CEDE				*e*S	Sn	04 43 57.9	+1.0
FORC	**Fortuna**	**1.14**	**77**	⇓*i*P	Pb	04 43 42.9	-0.3
FORC				*e*S	Sb	04 43 58.2	+0.6
SRA1	**San Ram¯‡n**	**1.30**	**95**	*e*S	Sb	04 44 02.9	+0.5
CGA2	**Cerro Gallo 2**	**1.33**	**98**	*e*P	Pn	04 43 45.5	+0.2
LCR2	**La Lucha 2**	**1.83**	**104**	*e*P	Pn	04 43 51.7	-0.5

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*MOS **18** 04:51:35.7±1.2, 52°.55N×160°.85E, h16km, mb4.7/13, Error ellipse: s-maj=7.1km s-min=3.9km az=98.9*
*KRSC **18** 04:51:35.3±2.0, 52°.58N×160°.94E, h16km±24km, ML4.4*
*IDC **18** 04:51:35.3±0.6, 52°.86N×160°.63E, h0km, mb4.0/27, mb1 4.2/28, mb1mx4.0/76, mbtmp4.0/28, ML4.2/1, MS3.1/1, Ms1 3.1/1, ms1mx2.4/74, Error ellipse: s-maj=16.4km s-min=12.1km az=145.0*
*NEIC **18** 04:51:39.9±2.1, 52°.84N×160°.63E, h31km±15km, mb4.5/13, Error ellipse: s-maj=8.3km s-min=5.8km az=160.0*
ISC 18 04:51:36.2±0.9, 52°.87N±0°.04×160°.74E±0°.03, h8km±5km, n194, σ1°.46/219, mb4.4/59, 2C-2D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.49**	**298**	*e*P	**Pn**	**04 51 49.8**	**+0.2**
SPN				*e*S	**Sn**	**04 51 57.6**	**+5.5**
SPN	**Mys Shipunski**	**0.49**	**298**	PN	**Pn**	**04 51 49.8**	**+0.2**
SPN				S	**Sn**	**04 51 57.6**	**+5.5**
NLC	**Nalytchevo**	**0.90**	**290**	*e*P	**Pn**	**04 51 55.5**	**+0.4**
NLC	**Nalytchevo**	**0.90**	**290**	PN	**Pn**	**04 51 55.5**	**+0.4**
SDLR	**Sedlovina**	**1.19**	**291**	*e*P	**Pn**	**04 52 00.4**	**+1.1**
SDLR	**Sedlovina**	**1.19**	**291**	PN	**Pn**	**04 52 00.4**	**+1.1**
UGLR	**Uglovaya**	**1.21**	**287**	*i* P	**Pg**	**04 52 00.6**	**+1.3**
UGLR	**Uglovaya**	**1.21**	**287**	PN	**Pg**	**04 52 00.6**	**+1.3**
DALK	**Dalny**	**1.21**	**278**	*e*P	**Pg**	**04 52 00.1**	**+0.6**
DALK				*e*S	**Sn**	**04 52 17.2**	**+1.1**
DALK	**Dalny**	**1.21**	**278**	PN	**Pg**	**04 52 00.1**	**+0.6**
DALK				S	**Sn**	**04 52 17.2**	**+1.1**
AVH	**Avacha**	**1.27**	**289**	*e*P	**Pg**	**04 52 01.9**	**+1.3**
AVH	**Avacha**	**1.27**	**289**	PN	**Pg**	**04 52 01.9**	**+1.3**
PET	**Petropavlovsk**	**1.27**	**278**	*e*Pn	**Pb**	**04 52 00.7**	**+0.3**
PET				*e*Sn	**Sn**	**04 52 18.0**	**+0.4**
PET	**Petropavlovsk**	**1.27**	**278**	*e*P	**Pg**	**04 52 01.0**	**+0.4**
PET	**Petropavlovsk**	**1.27**	**278**	*k i*PN	**Pg**	**04 52 01.0**	**+0.4**
PET				*e*S	**Sn**	**04 52 18.2**	**+0.6**
PET				pmax	pmax		
	comp=Z,559nm,0.6s						
PET				pmax	pmax		
	comp=Z,300nm,0.3s						
PET				smax	smax		
	comp=N,3μm,0.8s						
PET				smax	smax		
	comp=E,2μm,0.6s						
KRER	**Koryakskii**	**1.28**	**291**	*i* P	**Pg**	**04 52 02.0**	**+1.3**
KRER	**Koryakskii**	**1.28**	**291**	PN	**Pg**	**04 52 02.0**	**+1.3**
KRX	**Arik**	**1.35**	**292**	*e*P	**Pg**	**04 52 02.9**	**+0.8**
KRX	**Arik**	**1.35**	**292**	PN	**Pg**	**04 52 02.9**	**+0.8**
KII	**Karymskiy**	**1.40**	**327**	*e*P	**Pg**	**04 52 05.2**	**+2.2**
KII	**Karymskiy**	**1.40**	**327**	PN	**Pg**	**04 52 05.2**	**+2.2**
RUS	**Russkaya**	**1.43**	**253**	*e*P	**Pn**	**04 52 02.2**	**-0.2**
RUS				*e*S	**Sn**	**04 52 20.2**	**-1.2**
RUS	**Russkaya**	**1.43**	**253**	PN	**Pn**	**04 52 02.2**	**-0.2**
RUS				S	**Sn**	**04 52 20.2**	**-1.2**
KRMR	**Karymshinskiy**	**1.58**	**270**	*e*P	**Pn**	**04 52 05.0**	**+0.4**
KRMR	**Karymshinskiy**	**1.58**	**270**	PN	**Pn**	**04 52 05.0**	**+0.4**
MTVR	**Mutnovka**	**1.60**	**257**	*e*P	**Pb**	**04 52 05.7**	**-0.5**
MTVR				*e*S	**Sn**	**04 52 25.7**	**-0.3**
MTVR	**Mutnovka**	**1.60**	**257**	PN	**Pb**	**04 52 05.7**	**-0.5**
MTVR				S	**Sn**	**04 52 25.7**	**-0.3**
GRL	**Gorelyy**	**1.65**	**260**	*e*P	**Pb**	**04 52 06.8**	**-0.2**
GRL	**Gorelyy**	**1.65**	**260**	PN	**Pb**	**04 52 06.8**	**-0.2**
MKZ	**Mys Kozlova**	**1.79**	**19**	*e*P	**Pg**	**04 52 10.5**	**0.0**
MKZ				*e*S	**Sg**	**04 52 34.6**	**+1.0**
MKZ	**Mys Kozlova**	**1.79**	**19**	PN	**Pg**	**04 52 10.5**	**0.0**
MKZ				S	**Sg**	**04 52 34.6**	**+1.0**
ASAK	**Asacha**	**1.80**	**255**	*i* P	**Pb**	**04 52 08.7**	**-0.8**
ASAK				*e*S	**Sb**	**04 52 31.8**	**-0.4**
ASAK	**Asacha**	**1.80**	**255**	PN	**Pb**	**04 52 08.7**	**-0.8**
ASAK				S	**Sb**	**04 52 31.8**	**-0.4**
PEA0B	**Petropavlovsk-**	**1.85**	**279**	*e*Pn	**Pb**	**04 52 10.0**	**-0.3**
PEA0B				*e*Sn	**Sn**	**04 52 31.4**	**-0.6**
PEA1	**Petropavlovsk-**	**1.85**	**279**	*e*Pn	**Pn**	**04 52 09.3**	**+1.0**
PEA1				*e*Sn	**Sb**	**04 52 34.5**	**+0.8**
PETK	**Petropavlovsk-**	**1.85**	**279**	Pn	**Pn**	**04 52 09.3**	**+1.0**
	comp=E,221nm,0.3s,baz=97,slow=20,SNR=281						
PETK				Sn	**Sb**	**04 52 34.5**	**+0.8**
	comp=E,43nm,0.3s,baz=47,slow=20,SNR=4.2						
PETK	**Petropavlovsk-**	**1.85**	**279**	*e*Pn	**Pn**	**04 52 09.4**	**+1.0**
PETK				*e*Sn	**Sn**	**04 52 31.1**	**-0.8**
PETK	**Petropavlovsk-**	**1.85**	**279**	*e*Pn	**Pn**	**04 52 09.4**	**+1.0**
PETK				*e*		04 52 31.1	
GNL	**Ganaly**	**1.87**	**297**	*i* P	**Pg**	**04 52 11.6**	**-0.5**
GNL	**Ganaly**	**1.87**	**297**	PN	**Pg**	**04 52 11.6**	**-0.5**
KDTR	**Khodutka, Kamc**	**1.95**	**238**	*e*P	**Pn**	**04 52 09.6**	**0.0**
APC	**Apacha**	**2.17**	**273**	*e*P	**Pb**	**04 52 15.0**	**-0.7**
APC	**Apacha**	**2.17**	**273**	PN	**Pb**	**04 52 15.0**	**-0.7**
KZV	**Kizimen**	**2.26**	**353**	*e*P	**Pg**	**04 52 18.6**	**-0.9**
KZV				*e*S	**Sg**	**04 52 49.0**	**+0.1**
KZV	**Kizimen**	**2.26**	**353**	PN	**Pg**	**04 52 18.6**	**-0.9**
KZV				S	**Sg**	**04 52 49.0**	**+0.1**
TUMD	**Tumrok D**	**2.35**	**355**	*e*P	**Pb**	**04 52 19.3**	**+0.6**
TUMD				*e*S	**Sg**	**04 52 49.9**	**-1.6**
TUMR	**Tumrok**	**2.44**	**352**	*e*P	**Pb**	**04 52 21.4**	**+0.9**
TUMR				*e*S	**Sg**	**04 52 56.1**	**+1.5**
TUMR	**Tumrok**	**2.44**	**352**	PN	**Pb**	**04 52 21.4**	**+0.9**
TUMR				S	**Sg**	**04 52 56.1**	**+1.5**
KMNR	**Kamenistaya**	**2.91**	**354**	*e*P	**Pb**	**04 52 28.8**	**+0.5**
KMNR				*e*S	**Sg**	**04 53 08.3**	**-1.2**
KMNR	**Kamenistaya**	**2.91**	**354**	PN	**Pb**	**04 52 28.8**	**+0.5**
KMNR				S	**Sg**	**04 53 08.3**	**-1.2**
BZMR	**Bezymyannaya**	**3.08**	**357**	*e*P	**Pb**	**04 52 30.9**	**-0.3**
BZMR	**Bezymyannaya**	**3.08**	**357**	PN	**Pb**	**04 52 30.9**	**-0.3**
BZGR	**Bezymyannyi-Gr**	**3.08**	**360**	*e*P	**Pb**	**04 52 30.9**	**-0.3**
BZGR	**Bezymyannyi-Gr**	**3.08**	**360**	PN	**Pb**	**04 52 30.9**	**-0.3**
KIRR	**Kirishev**	**3.10**	**356**	*e*P	**Pb**	**04 52 31.3**	**-0.3**
KIRR	**Kirishev**	**3.10**	**356**	PN	**Pb**	**04 52 31.3**	**-0.3**
BZWR	**Bezymyannyi-We**	**3.10**	**357**	*e*P	**Pb**	**04 52 31.7**	**0.0**
BZWR	**Bezymyannyi-We**	**3.10**	**357**	PN	**Pb**	**04 52 31.7**	**0.0**
KPT	**Kopyto**	**3.12**	**355**	*e*P	**Pb**	**04 52 31.2**	**-0.7**
KPT	**Kopyto**	**3.12**	**355**	PN	**Pb**	**04 52 31.2**	**-0.7**
ZLN	**Zelenaya**	**3.15**	**1**	*e*P	**Pb**	**04 52 32.3**	**-0.2**
ZLN	**Zelenaya**	**3.15**	**1**	PN	**Pb**	**04 52 32.3**	**-0.2**
LGNR	**Loginova**	**3.22**	**359**	*e*P	**Pb**	**04 52 33.4**	**-0.4**
LGNR				*e*S	**Sg**	**04 53 16.5**	**-3.0**
LGNR	**Loginova**	**3.22**	**359**	PN	**Pb**	**04 52 33.4**	**-0.4**
LGNR				S	**Sg**	**04 53 16.5**	**-3.0**
CIRR	**Tsirk**	**3.25**	**0**	*e*P	**Pb**	**04 52 33.8**	**-0.4**
CIRR	**Tsirk**	**3.25**	**0**	PN	**Pb**	**04 52 33.8**	**-0.4**
KRSR	**Krestovskiy**	**3.35**	**358**	*e*P	**Pb**	**04 52 35.1**	**-0.9**
KRSR	**Krestovskiy**	**3.35**	**358**	PN	**Pb**	**04 52 35.1**	**-0.9**
KBTR	**Krutoberegovo**	**3.56**	**19**	*e*P	**Pb**	**04 52 35.9**	**-3.4**
KBTR	**Krutoberegovo**	**3.56**	**19**	PN	**Pb**	**04 52 35.9**	**-3.4**
SKR	**Severo-Kuril's**	**3.61**	**235**	*e*PN	**Pn**	**04 52 32.5**	**+0.1**
SKR				pmax	pmax		
	comp=Z,48nm,0.6s						
SMKR	**Semkarok**	**3.74**	**6**	*e*P	**Pb**	**04 52 40.3**	**-2.3**
SMKR	**Semkarok**	**3.74**	**6**	PN	**Pb**	**04 52 40.3**	**-2.3**
SRKR	**Sorokina**	**3.80**	**4**	*e*P	**Pb**	**04 52 41.5**	**-2.0**
SRKR	**Sorokina**	**3.80**	**4**	PN	**Pb**	**04 52 41.5**	**-2.0**
BKI	**Bering**	**3.87**	**51**	*e*P	**Pn**	**04 52 38.7**	**+2.7**
BKI				*e*S	**Sn**	**04 53 20.7**	**-0.9**
BKI	**Bering**	**3.87**	**51**	PN	**Pn**	**04 52 38.7**	**+2.7**
SMY	**Shemya**	**8.10**	**86**	*e*Pn	**Pn**	**04 53 36.4**	**+2.4**
SMY				*e*Sn	**Sn**	**04 55 05.1**	**-0.6**
SMY	**Shemya**	**8.10**	**86**	*e*PN	**Pn**	**04 53 36.4**	**+2.4**
TYV	**Tymovskoe**	**11.36**	**267**	*e*PN	**Pn**	**04 54 17.3**	**-1.4**
TYV				pmax	pmax		
	comp=Z,4.0nm,0.5s						
YSS	**Yuzh-Sakhalins**	**13.00**	**250**	*i* PN	**Pn**	**04 54 41.5**	**+0.4**
ASAJ	**Asahikawa**	**14.85**	**241**	Pn	**Pn**	**04 55 05.7**	**-0.6**
	comp=Z,1.5nm,0.3s,baz=87,slow=15,SNR=2.9						
BILL	**Bilibino**	**15.45**	**8**	⇑*e*P	**P**	**04 55 19.2**	**+0.4**
BILL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,156nm,21.0s						
KLR	**Kul'dur**	**18.53**	**270**	P	**P**	**04 55 52.6**	**-0.3**
	comp=Z,0.0nm,0.3s,baz=76,slow=9.6,SNR=8.5						
USRK	**Ussuriysk Ar.**	**20.80**	**257**	P	**P**	**04 56 16.7**	**-1.1**
	comp=Z,2.9nm,0.6s,baz=66,slow=11,SNR=3.5						
MJB9	**Matsu-Tunnel**	**22.72**	**233**	*e*P	**P**	**04 56 38.5**	**+0.1**
	comp=Z,9.5nm,0.6s						
MAJO	**Matsushiro**	**22.72**	**233**	*e*P	**P**	**04 56 38.6**	**+0.2**
	comp=Z,9.8nm,0.6s						
MAJO	**Matsushiro**	**22.72**	**233**	*e*P	**P**	**04 56 38.6**	**+0.2**
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MJAR	**Matsushiro Arr**	**22.72**	**233**	P	**P**	**04 56 37.0**	**-1.4**
	comp=Z,1.4nm,0.3s,baz=49,slow=9.2,SNR=3.9						
MJAR	**Matsushiro Arr**	**22.72**	**233**	P	**P**	**04 56 37.0**	**-1.4**
TIXI	**Tiksi**	**23.45**	**335**	*e*P	**P**	**04 56 42.8**	**-2.8**
	comp=Z,3.4nm,0.7s						
TIXI	**Tiksi**	**23.45**	**335**	*i* P	**P**	**04 56 45.3**	**-0.3**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KSRS	**Korea Array**	**27.50**	**249**	P	**P**	**04 57 21.9**	**-0.9**
	comp=Z,1.0nm,0.7s,baz=43,slow=10.0,SNR=4.9						
KSRS	**Korea Array**	**27.50**	**249**	P	**P**	**04 57 22.0**	**-0.9**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KS15	**Wonju Array Si**	**27.53**	**249**	*e*P	**P**	**04 57 21.9**	**-1.2**
KSAR	**Wonju Array Be**	**27.53**	**249**	P	**P**	**04 57 21.9**	**-1.2**
KSAR	**Wonju Array Be**	**27.53**	**249**	P	**P**	**04 57 22.0**	**-1.2**
ILAR	**Eielson Array**	**28.70**	**45**	P	**P**	**04 57 33.5**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=262,slow=6.2,SNR=3.7						
ILB	**Eielson Array**	**28.70**	**45**	*e*P	**P**	**04 57 33.5**	**+0.1**
H11N2	**WAKE ISLAND Hy**	**33.42**	**169**	T	T	05 33 34.3	
	baz=353,slow=76,SNR=154						
H11N3	**WAKE ISLAND Hy**	**33.44**	**169**	T	T	05 33 36.6	
	baz=353,slow=76,SNR=86						
H11N1	**WAKE ISLAND Hy**	**33.44**	**169**	T	T	05 33 36.8	
	ba

AKASG	Malin Array Be	69.01	329	eP		P	05 02 41.2 -0.6
AKASG				pmax		pmax	
comp=Z,2.0nm,0.5s							
AKBB	Malin Array Si	69.01	329	eP		P	05 02 41.6 -0.2
comp=Z,4.9nm,1.0s							
AKBB	Malin Array Si	69.01	329	eP		P	05 02 41.6 -0.2
AKBB				pmax		pmax	
comp=Z,5.0nm,1.0s							
KBZ	Khabaz	69.97	317	P		P	05 02 48.1 +0.3
comp=Z,3.8nm,0.7s,baz=2.7,slow=22,SNR=5.3							
TXAR	Lajitas Array	70.36	67	P		P	05 02 51.3 +0.7
comp=Z,0.5nm,0.6s,baz=293,slow=4.8,SNR=8.4							
TXAR	Lajitas Array	70.36	67	eP		P	05 02 52.5 +1.9
TXAR				pmax		pmax	
comp=Z,1.0nm,0.6s							
EKA	Eskdalemuir Ar	71.34	350	P		P	05 02 56.6 +0.5
comp=Z,0.8nm,0.7s,baz=19,slow=5.3,SNR=5.2							
KWP	Kalwaria Pacla	71.87	333	eP		P	05 03 01.1 +1.8
comp=Z,92nm,1.0s							
KWP	Kalwaria Pacla	71.87	333	eP		P	05 03 01.1 +1.8
CLL	Collm	72.70	339	eP		P	05 03 06.0 +1.8
CLL				esP		PcP	05 03 17.0 -4.6
CLL	Collm	72.70	339	eP		P	05 03 06.0 +1.8
BUR08	Bucovina Ar. S	72.94	330	eP		P	05 03 07.0 +1.1
BUR04	Bucovina Ar. S	72.96	330	eP		P	05 03 06.7 +0.7
MLR	Muntele Rosu	74.64	329	P		P	05 03 17.0 +1.1
comp=Z,0.5nm,0.6s,baz=270,slow=5.1,SNR=5.2							
GEC2	GERESS Array S	74.87	338	eP		P	05 03 17.5 +0.4
comp=Z,1.0nm,0.9s							
GEC2	GERESS Array S	74.87	338	eP		P	05 03 17.5 +0.4
GEC2				pmax		pmax	
comp=Z,1.0nm,0.9s							
GERES	GERESS Array B	74.87	338	P		P	05 03 17.5 +0.4
comp=Z,0.5nm,0.5s,baz=28,slow=6.5,SNR=5.3							
GERES	GERESS Array B	74.87	338	eP		P	05 03 18.5 +1.4
GERES				pmax		pmax	
comp=Z,1.0nm,0.5s							
CONA	Conrad Observa	75.22	336	eP		P	05 03 15.8 -3.4
comp=Z,3.7nm,1.2s							
MOA	Molln	75.67	337	eP		P	05 03 20.5 -1.2
comp=Z,3.7nm,1.1s							
ARSA	Arzberg	75.94	336	epP		P	05 03 26.1 +2.9
comp=Z,1.4nm,0.5s							
WR1	Warramunga Arr	76.05	206	eP		P	05 03 23.4 -0.6
comp=Z,7.8nm,1.1s							
WRA	Warramunga Arr	76.05	206	P		P	05 03 23.4 -0.6
comp=Z,1.3nm,0.9s,baz=21,slow=5.5,SNR=4.2							
SOKA	Soboth	76.59	336	eP		P	05 03 25.4 -1.6
comp=Z,1.5nm,0.3s							
KBA	Koelnbreinsper	76.61	338	epP		P	05 03 29.6 +2.4
comp=Z,4.3nm,0.6s							
KBA	Koelnbreinsper	76.61	338	P		P	05 03 28.7 +1.5
KBA				pmax		pmax	
comp=Z,7.0nm,1.1s							
WATA	Walderalm	76.76	339	epP		P	05 03 33.3 +5.3
comp=Z,3.7nm,0.4s							
MOTA	Moosalm	76.86	339	epP		P	05 03 31.6 +3.0
comp=Z,1.3nm,0.5s							
OBKA	Obir	76.86	337	epP		P	05 03 31.2 +2.7
comp=Z,6.3nm,1.2s							
BR101	Keskin Array S	77.04	321	eP		P	05 03 29.8 0.0
BRTR	Keskin Array B	77.04	321	P		P	05 03 29.8 0.0
comp=Z,0.9nm,0.8s,baz=82,slow=2.6,SNR=4.7							
ABTA	Abfaltersbach	77.11	338	eP		P	05 03 29.9 0.0
comp=Z,1.4nm,0.5s							
FETA	Feichten	77.24	339	eP		P	05 03 29.1 -1.6
comp=Z,2.8nm,0.8s							
AS31	Alice Springs	79.72	205	eP		P	05 03 44.6 +0.2
comp=Z,1.9nm,1.5s							
ASAR	Alice Springs	79.72	205	P		P	05 03 44.6 +0.2
comp=Z,0.9nm,0.7s,baz=15,slow=4.7,SNR=7.7							
MMAI	Mount Meron Ar	82.14	316	P		P	05 03 58.5 +1.0
comp=Z,0.7nm,0.3s,baz=57,slow=5.3,SNR=2.7							
ESDC	Sonseca Array	86.88	348	P		P	05 04 21.9 +0.6
comp=Z,0.1nm,0.4s,baz=11,slow=5.1,SNR=4.4							
PLCA	Paso Flores	143.61	92	PKP		PKPdf	05 11 10.9 -0.1
comp=Z,0.7nm,0.6s,baz=291,slow=7.4,SNR=3.2							
PLCA	Paso Flores	143.61	92	PKIKP		PKPdf	05 11 11.0 -0.1
PLCA				pmax		pmax	
comp=Z,1.0nm,0.6s							

MOS ***18*** *04:57:39.1±1.0, 52°.57N×160°.85E, h18km, mb4.6/21, Error ellipse: s-maj=7.3km s-min=3.9km az=100.6*
KRSC ***18*** *04:57:40.8±1.2, 52°.75N×160°.74E, h16km±14km, ML4.9*
BJI ***18*** *04:57:41.1, 52°.88N×160°.41E, h34km, mb4.5/18, mB4.7/10, Ms4.6/1, Ms7 4.4/2*
NEIC ***18*** *04:57:44.1±0.7, 52°.79N×160°.54E, h42km±6km, mb4.5/23, Error ellipse: s-maj=7.0km s-min=4.5km az=157.0*
IDC ***18*** *04:57:46.8±1.9, 52°.81N×160°.50E, h65km±16km, mb3.8/29, mb1 4.0/30, mb1mx3.8/75, mbtmp4.1/30, MS3.7/3, Ms1 3.7/3, ms1mx2.8/78, Error ellipse: s-maj=15.7km s-min=12.4km az=156.0*

ISC 18 04:57:42.5±1.1, 52°.69N±0°.04×160°.60E±0°.04, h31km±7km, n236, σ1§51/264, mb4.4/61, MS4.3/4, 17C-3D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.54	319	eP	Pb	04 57 52.8	-0.7
SPN				eS	Sb	04 58 00.4	-0.7
SPN	Mys Shipunski	0.54	319	PN	Pb	04 57 52.8	-0.7
SPN				S	Sb	04 58 00.4	-0.7
NLC	Nalytchevo	0.90	303	eP	Pn	04 57 58.5	-0.5
NLC				eS	Sb	04 58 11.3	+0.1
NLC	Nalytchevo	0.90	303	PN	Pn	04 57 58.5	-0.5
NLC				S	Sb	04 58 11.3	+0.1
DALK	Dalny	1.17	288	eP	Pn	04 58 03.2	+0.5
DALK				eS	Sb	04 58 18.9	0.0
DALK	Dalny	1.17	288	PN	Pn	04 58 03.2	+0.5
DALK				S	Sb	04 58 18.9	0.0
SDLR	Sedlovina	1.19	300	eP	Pn	04 58 03.5	+0.4
SDLR	Sedlovina	1.19	300	PN	Pn	04 58 03.5	+0.4
UGLR	Uglovaya	1.19	296	eP	Pn	04 58 03.7	+0.6
UGLR	Uglovaya	1.19	296	PN	Pn	04 58 03.7	+0.6
PET	Petropavlovsk	1.23	286	ePn	Pn	04 58 04.1	+0.6
PET				eSn	Sn	04 58 17.6	-1.3
PET	Petropavlovsk	1.23	286	eP	Pn	04 58 04.1	+0.6
PET				eS	Sb	04 58 20.7	+0.2
PET	Petropavlovsk	1.23	286	κ iPN	Pn	04 58 04.1	+0.6
PET				eS	Sb	04 58 20.7	+0.2
PET				pmax	pmax		
comp=Z,580nm,0.5s							
PET				pmax	pmax		
comp=Z,1μm,0.3s							
PET				smax	smax		
comp=N,6μm,0.5s							
PET				smax	smax		
comp=N,5μm,0.6s							
PET				smax	smax		
comp=E,6μm,0.6s							
AVH	Avacha	1.26	298	eP	Pn	04 58 04.8	+0.7
AVH	Avacha	1.26	298	PN	Pn	04 58 04.8	+0.7
KRER	Koryakskii	1.28	299	eP	Pn	04 58 05.0	+0.6
KRER	Koryakskii	1.28	299	PN	Pn	04 58 05.0	+0.6
RUS	Russkaya	1.30	259	eP	Pb	04 58 05.5	-0.8
RUS				eS	Sb	04 58 23.1	+0.5
RUS	Russkaya	1.30	259	PN	Pb	04 58 05.5	-0.8
RUS				S	Sb	04 58 23.1	+0.5
KOK	Koryaka	1.33	298	eP	Pn	04 58 05.9	+0.9
KOK	Koryaka	1.33	298	PN	Pn	04 58 05.9	+0.9
KRX	Arik	1.35	300	eP	Pn	04 58 05.9	+0.5
KRX	Arik	1.35	300	PN	Pn	04 58 05.9	+0.5
MTVR	Mutnovka	1.49	263	eP	Pb	04 58 08.7	-0.9
MTVR				eS	Sb	04 58 28.8	+0.6
MTVR	Mutnovka	1.49	263	PN	Pb	04 58 08.7	-0.9
MTVR				S	Sb	04 58 28.8	+0.6
KRMR	Karymshinskiy	1.51	276	eP	Pn	04 58 08.5	+1.2
KRMR				eS	Sb	04 58 27.7	-0.8
KRMR	Karymshinskiy	1.51	276	PN	Pn	04 58 08.5	+1.2
KRMR				S	Sb	04 58 27.7	-0.8
KII	Karymskiy	1.51	333	eP	Pn	04 58 08.4	+0.9
KII	Karymskiy	1.51	333	PN	Pn	04 58 08.4	+0.9
GRL	Gorelyy	1.55	266	eP	Pb	04 58 09.9	-0.7
GRL				eS	Sb	04 58 31.7	+1.9
GRL	Gorelyy	1.55	266	PN	Pb	04 58 09.9	-0.7
GRL				S	Sb	04 58 31.7	+1.9
ASAK	Asacha	1.68	260	eP	Pb	04 58 12.0	-0.8
ASAK	Asacha	1.68	260	PN	Pb	04 58 12.0	-0.8
KDTR	Khodutka, Kamc	1.79	241	eP	Pb	04 58 13.6	-0.9
KDTR				eS	Sb	04 58 38.4	+1.9
I44RU	PETROPAVLOVSK-	1.80	284	P	Pb	04 58 14.2	-0.6
baz=87,slow=18,SNR=0.6							
I44RU				S	Sb	04 58 37.5	+0.7
PEA0B	Petropavlovsk-	1.81	284	ePn	Pn	04 58 13.0	+1.5
PEA0B				eSn	Sn	04 58 31.6	-1.8
PETK	Petropavlovsk-	1.81	284	P	Pn	04 58 13.0	+1.5
comp=E,508nm,0.3s,baz=97,slow=20,SNR=531							
PETK				S	Sb	04 58 36.4	-0.7
comp=E,121nm,0.3s,baz=100,slow=15,SNR=10							
PETK	Petropavlovsk-	1.81	284	ePn	Pn	04 58 12.6	+1.1
PETK				eSn	Sb	04 58 34.6	-2.5
PEA1	Petropavlovsk-	1.81	285	ePn	Pn	04 58 13.0	+1.5
PEA1				eSn	Sb	04 58 36.4	-0.8
GNL	Ganaly	1.89	303	eP	Pn	04 58 14.7	+2.0
GNL				eS	Sb	04 58 39.7	+0.1
GNL	Ganaly	1.89	303	PN	Pn	04 58 14.7	+2.0
GNL				S	Sb	04 58 39.7	+0.1
MKZ	Mys Kozlova	1.98	19	eP	Pn	04 58 13.5	-0.4
MKZ				eS	Sn	04 58 37.3	-0.4
MKZ	Mys Kozlova	1.98	19	PN	Pn	04 58 13.5	-0.4
MKZ				S	Sn	04 58 37.3	-0.4
KZV	Kizimen	2.43	356	eP	Pn	04 58 21.3	+1.1
KZV				eS	Sn	04 58 50.7	+1.7
KZV	Kizimen	2.43	356	PN	Pn	04 58 21.3	+1.1
KZV				S	Sn	04 58 50.7	+1.7
TUMD	Tumrok D	2.52	357	eP	Pn	04 58 21.9	+0.6
TUMD				eS	Sn	04 58 53.5	+2.6
TUMR	Tumrok	2.61	354	eP	Pn	04 58 24.3	+1.7
TUMR				eS	Sn	04 58 57.2	+3.9
TUMR	Tumrok	2.61	354	PN	Pn	04 58 24.3	+1.7
TUMR				S	Sn	04 58 57.2	+3.9
KMNR	Kamenistaya	3.08	356	eP	Pn	04 58 31.7	+2.7
KMNR	Kamenistaya	3.08	356	PN	Pn	04 58 31.7	+2.7
KIRR	Kirishev	3.27	357	eP	Pn	04 58 34.2	+2.5
KIRR				eS	Sn	04 59 13.1	+3.5
KIRR	Kirishev	3.27	357	PN	Pn	04 58 34.2	+2.5
KIRR				S	Sn	04 59 13.1	+3.5
KPT	Kopyto	3.29	356	eP	Pn	04 58 34.2	+2.3
KPT	Kopyto	3.29	356	PN	Pn	04 58 34.2	+2.3
ZLN	Zelenaya	3.33	2	eP	Pn	04 58 35.1	+2.6
ZLN	Zelenaya	3.33	2	PN	Pn	04 58 35.1	+2.6
LGNR	Loginova	3.40	1	eP	Pn	04 58 36.4	+2.8
LGNR	Loginova	3.40	1	PN	Pn	04 58 36.4	+2.8
KOZ	Kozyrevsk	3.40	353	eP	Pn	04 58 35.9	+2.5
KOZ	Kozyrevsk	3.40	353	PN	Pn	04 58 35.9	+2.5
ESO	Esso	3.42	342	eP	Pn	04 58 35.5	+1.8
ESO	Esso	3.42	342	PN	Pn	04 58 35.5	+1.8
CIRR	Tsirk	3.43	1	eP	Pn	04 58 36.7	+2.8
CIRR	Tsirk	3.43	1	PN	Pn	04 58 36.7	+2.8
SKR	Severo-Kuril's	3.44	236	ePN	Pn	04 58 35.8	+1.9
SKR				pmax	pmax		
comp=Z,130nm,0.4s							
SKR				pmax	pmax		
comp=Z,300nm,1.7s							
SKR				MLR	MLR		
comp=Z,700nm,11.0s							
KRSR	Krestovskiy	3.53	360	eP	Pn	04 58 37.3	+2.0
KRSR	Krestovskiy	3.53	360	PN	Pn	04 58 37.3	+2.0
KLY	Klyuchi	3.63	0	eP	Pn	04 58 38.7	+2.2
KLY	Klyuchi	3.63	0	PN	Pn	04 58 38.7	+2.2
KBTR	Krutoberegovo	3.75	19	eP	Pn	04 58 39.5	+1.3
KBTR	Krutoberegovo	3.75	19	PN	Pn	04 58 39.5	+1.3
BDR	Baidarnaya	3.90	5	eP	Pn	04 58 42.9	+2.6
BDR	Baidarnaya	3.90	5	PN	Pn	04 58 42.9	+2.6
SMKR	Semkarok	3.93	7	eP	Pn	04 58 41.1	+0.4
SMKR	Semkarok	3.93	7	PN	Pn	04 58 41.1	+0.4
SRKR	Sorokina	3.98	5	eP	Pn	04 58 43.9	+2.5
SRKR	Sorokina	3.98	5	PN	Pn	04 58 43.9	+2.5
SMY	Shemya	8.20	84	ePn	Pn	04 59 38.6	-0.6
SMY				eSn	Sn	05 01 06.4	-4.3
SMY	Shemya	8.20	84	ePN	Pn	04 59 38.6	-0.6
MA2	Magadan	8.81	325	LR	LR	05 03 42.0	
comp=Z,349nm,18.9s,baz=126,slow=41							
MA2	Magadan	8.81	325	i PN	Pn	04 59 47.3	-0.2
MA2				pmax	pmax		
comp=Z,14nm,1.2s							
YSS	Yuzh-Sakhalins	12.86	251	ePN	P	05 00 51.2	-2.2
YSS				MLR	MLR		
comp=Z,200nm,13.0s							
ASAJ	Asahikawa	14.69	241	P	Pn	05 01 09.9	+2.0
comp=Z,1.9nm,0.3s,baz=70,slow=11,SNR=6.5							
ASAJ				LR	LR	05 07 19.2	
comp=Z,114nm,18.1s,baz=6.5,slow=39							
ASAJ	Asahikawa	14.69	241	ePn	Pn	05 01 09.4	+1.5
BILL	Bilibino	15.64	8	ePn	Pn	05 01 20.4	+0.1
comp=Z,8.2nm,0.9s							
BILL	Bilibino	15.64	8	↓eP	Pn	05 01 22.6	+2.3
BILL				pmax	pmax		
comp=Z,9.0nm,1.0s							
BILL				MLR	MLR		
comp=Z,200nm,18.0s							
ERM	Erimo	15.89	235	ePn	Pn	05 01 22.1	-1.5
comp=Z,75nm,1.5s							
ERM	Erimo	15.89	235	i P	Pn	05 01 20.7	-2.9
KLR	Kul'dur	18.44	271	P	Pn	05 01 56.9	+1.4
comp=Z,0.1nm,0.3s,baz=64,slow=10.0,SNR=11							
YAK	Yakutsk	18.93	312	i P	P	05 01 59.4	-1.1
YAK				pmax	pmax		
comp=Z,21nm,0.8s							
USRK	Ussuriysk Ar.	20.68	257	P	P	05 02 19.0	-0.7
comp=Z,4.5nm,0.5s,baz=63,slow=11,SNR=8.9							
MJB9	Matsu-Tunnel	22.54	233	eP	P	05 02 41.0	+1.2
comp=Z,34nm,1.0s							
MAJO	Matsushiro	22.55	233	eP	P	05 02 41.1	+1.3
comp=Z,24nm,0.8s							
MAJO	Matsushiro	22.55	233	i P	P	05 02 40.1	+0.3
MAJO				pmax	pmax		
comp=Z,25nm,0.9s							
MAT	Matsushiro	22.55	233	P	P	05 02 42.1	+2.3
MJAR	Matsushiro Arr	22.55	233	P	P	05 02 41.9	+2.1
comp=Z,8.7nm,0.7s,baz=17,slow=9.9,SNR=24							
TIXI	Tiksi	23.57	335	P	P	05 02 48.6	-1.3
comp=Z,3.5nm,0.4s,baz=118,slow=12,SNR=8.5							
TIXI	Tiksi	23.57	335	eP	P	05 02 48.5	-1.4
comp=Z,3.6nm,0.6s							
TIXI	Tiksi	23.57	335	ceP	P	05 02 48.1	-1.8
TIXI				pmax	pmax		
comp=Z,4.0nm,1.0s							
CN2	Changchun	24.83	263	eP	P	05 02 56.3	-5.4
HIA	Hailar	25.70	279	i P	P	05 03 09.9	+0.2
HIA				pmax	pmax		
comp=Z,5.0nm,0.8s							
KSRS	Korea Array	27.36	249	P	P	05 03 25.9	+1.3
comp=Z,2.0nm,0.7s,baz=43,slow=9.2,SNR=9.5							
KS15	Wonju Array Si	27.39	249	eP	P	05 03 25.9	+1.0
KSAR	Wonju Array Be	27.39	249	P	P	05 03 25.9	+1.0
KSAR	Wonju Array Be	27.39	249	P	P	05 03 25.9	+1.0
TOLK	Toolik Lake Re	28.10	36	eP	P	05 03 31.6	+0.5
comp=Z,2.2nm,0.6s							
ILAR	Eielson Array	28.88	45	P	P	05 03 38.3	+0.3
comp=Z,0.3nm,0.6s,baz=272,slow=6.6,SNR=5.3							
ILAR	Eielson Array	28.88	45	eP	P	05 03 40.8	+2.8
ILB	Eielson Array	28.88	45	eP	P	05 03 38.3	+0.3
JNU	Nakatsue	28.95	239	eP	P	05 03 40.5	+1.6
comp=Z,7.9nm,1.0s							
BMRM	Bremner River	30.25	52	eP	P	05 03 52.5	+2.3
comp=Z,5.7nm,1.0s							
EGAK	Eagle	31.33	44	eP	P	05 03 59.4	-0.2
comp=Z,1.6nm,0.7s							
H11N2	WAKE ISLAND Hy	33.26	169	T	T	05 39 46.4	
baz=353,slow=76,SNR=68							
H11N3	WAKE ISLAND Hy	33.28	169	T	T	05 39 48.0	
baz=353,slow=76,SNR=42							
H11N1	WAKE ISLAND Hy	33.28	169	T	T	05 39 47.7	
baz=353,slow=76,SNR=51							
ULN	Ulaanbaatar	33.89	284	ceP	P	05 04 20.4	-2.0
ULN				pmax	pmax		
comp=Z,3.0nm,1.0s							
SONA0	Songino Array	34.29	284	eP	P	05 04 25.4	-0.5
SONM	Songino Array	34.29	284	P	P	05 04 25.4	-0.5
comp=Z,1.0nm,0.3s,baz=60,slow=5.7,SNR=2.9							
NJ2	Nanjing	36.42	252	eP	P	05 04 44.3	+0.2
NJ2				pmax	pmax		
comp=Z,13nm,0.5s							
LZH	Lanzhou	42.65	270	eP	P	05 05 35.8	-0.3
LZH				pP	pP	05 05 47.3	+2.0
LZH				sP	sP	05 05 52.3	+3.3
LZH				ePP	PP	05 07 17.0	+1.9
LZH				pmax	pmax		
comp=Z,17nm,1.2s							
LZH				pmax	pmax		
comp=Z,67nm,5.3s							
LZH				LR	LR		
comp=Z,250nm,13.2s							
LZH				LR	LR		
comp=Z,270nm,13.4s							
LZH				LR	LR		
comp=Z,320nm,16.5s							
GTA	Gaotai	42.96	277	eP	P	05 05 39.8	+1.2
GTA				pP	pP	05 05 44.8	-2.9
GTA				sP	sP	05 05 48.3	-3.1
GTA				pmax	pmax		
comp=Z,6.0nm,0.7s							
YKA	Yellowknife Ar	43.25	42	P	P	05 05 39.7	-0.8
comp=Z,0.4nm,0.8s,baz=299,slow=7.5,SNR=3.4							
ZAA1	Zalesovo Array	43.25	303	eP	P	05 05 38.6	-2.0
ZALV	Zalesovo Beam	43.25	303	P	P	05 05 38.6	-2.0
comp=Z,1.0nm,0.3s,baz=59,slow=8.2,SNR=3.7							
RES	Resolute Bay	43.58	22	eP	P	05 05 43.0	0.0
comp=Z,11nm,1.4s							
RES	Resolute Bay	43.58	22	eP	P	05 05 43.0	0.0
RES				pmax	pmax		
comp=Z,11nm,1.4s							
NVS	Novosibirsk	43.60	305	eP	P	05 05 42.1	-1.2
WMQ	Urumqi	47.39	290	P	P	05 06 15.5	+1.9
WMQ				pP	sP	05 06 26.8	+0.2
WMQ				pmax	pmax		
comp=Z,15nm,0.7s							
WMQ				pmax	pmax		
comp=Z,120nm,4.1s							
WMQ				LR	LR		
comp=Z,460nm,15.5s							
SPA0	Spitsbergen Ar	47.58	351	eP	P	05 06 14.2	-0.4
SPITS	Spitsbergen Ar	47.58	351	P	P	05 06 14.2	-0.4
comp=Z,1.8nm,0.4s,baz=57,slow=11,SNR=25							
KURK	Kurchatov	48.21	302	eP	P	05 06 18.4	-1.4
comp=Z,6.9nm,0.6s							
KURK	Kurchatov	48.21	302	ceP	P	05 06 18.0	-1.7
KURK				pmax	pmax		
comp=Z,11nm,1.2s							
KURBB	Kurchatov Arra	48.31	302	P	P	05 06 19.1	-1.4
comp=Z,3.3nm,0.4s,baz=56,slow=7.9,SNR=43							
MK31	Makanchi Array	48.61	296	eP	P	05 06 21.7	-1.2
MK31	Makanchi Array	48.61	296	eP	P	05 06 21.7	-1.2
MK32	Makanchi Array	48.61	296	eP	P	05 06 21.5	-1.4
MKAR	Makanchi Array	48.61	296	P	P	05 06 21.5	-1.4
comp=Z,2.8nm,0.4s,baz=55,slow=6.7,SNR=60							
MKAR	Makanchi Array	48.61	296	eP	P	05 06 21.7	-1.2
comp=Z,38nm,0.4s							
MKAR	Makanchi Array	48.61	296	eP	P	05 06 21.7	-1.2
MK01	Makanchi Array	48.62	296	eP	P	05 06 21.3	-1.7
MAKZ	Makanchi	48.77	296	eP	P	05 06 22.0	-2.2
comp=Z,3.4nm,1.0s							
MAKZ	Makanchi	48.77	296	eP	P	05 06 22.0	-2.2
MAKZ				pmax	pmax		
comp=Z,3.0nm,1.0s							
DAG	Danmarks Havn	50.81	360	i P	P	05 06 39.7	+0.5
comp=Z,3.4nm,0.8s							
DAG	Danmarks Havn	50.81	360	P	P	05 06 41.3	+2.1
DAG				pmax	pmax		
comp=Z,5.0nm,0.9s							
YBH	Yreka Blue Hor	50.87	70	eP	P	05 06 40.1	-0.2
comp=Z,11nm,1.5s							
YBH	Yreka Blue Hor	50.87	70	eP	P	05 06 40.1	-0.2
YBH				pmax	pmax		
comp=Z,11nm,1.5s							
BVAR	Borovoye Array	50.88	309	P	P	05 06 38.6	-1.5
comp=Z,2.7nm,0.5s,baz=56,slow=8.3,SNR=14							
BRVK	Borovoye	50.91	309	i P	P	05 06 39.1	-1.2
BRVK				pmax	pmax		
comp=Z,1.0nm,0.6s							
KMI	Kunming	51.06	261	P	P	05 06 44.1	+2.1
KMI				pP	pP	05 06 49.8	-1.6
KMI				pmax	pmax		
comp=Z,10.0nm,0.9s							
OTUK	Ortayu	52.95	303	P	P	05 06 56.6	+1.0
OTUK				pmax	pmax		
comp=Z,4.0nm,0.9s							
ARA0	ARCESS Array S	53.76	342	eP	P	05 07 00.1	-1.2
ARCES	ARCESS Array B	53.76	342	P	P	05 07 00.1	-1.2
comp=Z,2.1nm,0.6s,baz=48,slow=9.7,SNR=13							
ARCES	ARCESS Array B	53.76	342	eP	P	05 07 01.0	-0.3
ARCES				pmax	pmax		
comp=Z,2.0nm,0.6s							
ARU	Arti	53.90	318	eP	P	05 07 01.3	-1.1
comp=Z,6.8nm,0.6s							
ARU	Arti	53.90	318	c iP	P	05 07 01.9	-0.5
ARU				S	S	05 14 35.5	+0.3
ARU				SS	SKiKP	05 18 14.4	+1.8
ARU				pmax	pmax		
comp=Z,7.0nm,1.0s							
SUMG	Summit	54.32	7	i P	P	05 07 07.1	+1.4
comp=Z,4.0nm,0.8s							
SUMG	Summit	54.32	7	eP	P	05 07 06.7	+0.9
comp=Z,14nm,1.4s							
SUMG	Summit	54.32	7	eP	P	05 07 06.7	+0.9
SUMG				pmax	pmax		
comp=Z,14nm,1.4s							
NV01	Mina Array Sit	55.59	70	eP	P	05 07 15.9	+0.7
NVAR	Mina Array Bea	55.59	70	P	P	05 07 15.9	+0.7
comp=Z,0.4nm,0.6s,baz=295,slow=8.1,SNR=4.1							
KSH	Kashi	56.84	293	P	P	05 07 27.8	+3.8
KSH				pP	sP	05 07 40.1	+3.0
KSH				pmax	pmax		
comp=Z,400nm,4.6s							
PD31	Pinedale Array	57.45	61	eP	P	05 07 29.1	+0.7
PDAR	Pinedale Array	57.45	61	P	P	05 07 29.1	+0.7
comp=Z,0.6nm,0.7s,baz=279,slow=5.0,SNR=6.1							
KLMR	Klimovskoe	57.45	330	eP	P	05 07 22.6	-5.2
KLMR				pmax	pmax		
comp=Z,6.0nm,0.9s							
KLMR	Klimovskoe	57.45	330	eP	P	05 07 22.7	-5.1
KLMR				AMP		05 07 29.6	
comp=

TXAR	**Lajitas Array**	**70.51**	**67**	P	**P**	**05 08 55.2 +0.9**
	comp=Z,0.7nm,0.6s,baz=300,slow=4.8,SNR=12					
EKA	**Eskdalemuir Ar**	**71.50**	**350**	P	**P**	**05 09 00.0 +0.3**
	comp=Z,0.3nm,0.3s,baz=19,slow=5.9,SNR=9.8					
KWP	**Kalwaria Pacla**	**71.99**	**333**	*e*P	**P**	**05 09 03.5 +0.7**
	comp=Z,105nm,1.1s					
KWP	**Kalwaria Pacla**	**71.99**	**333**	*e*P	**P**	**05 09 03.5 +0.7**
CLL	**Collm**	**72.84**	**339**	*e*P	**P**	**05 09 09.0 +1.3**
CLL	**Collm**	**72.84**	**339**	*e*P	**P**	**05 09 09.0 +1.3**
DPC	**Dobruska-Polom**	**72.98**	**337**	*e*P	P	05 09 14.8 +6.1
DPC	**Dobruska-Polom**	**72.98**	**337**	*e*P	P	05 09 14.8 +6.1
UZH	**Uzhgorod**	**73.01**	**333**	*e*P	**P**	**05 09 11.1 +2.3**
UZH				*e*		05 09 18.5
BUR08	**Bucovina Ar. S**	**73.05**	**330**	*e*P	**P**	**05 09 09.9 +0.7**
BUR04	**Bucovina Ar. S**	**73.07**	**330**	*e*P	**P**	**05 09 09.6 +0.2**
BURAR	**Bucovina Array**	**73.08**	**330⇑**	*i*P	**P**	**05 09 09.8 +0.4**
BURAR	**Bucovina Array**	**73.08**	**330⇑**	P	**P**	**05 09 09.8 +0.4**
T47A	**Sharon Grove**	**73.12**	**51**	*e*P	**P**	**05 09 09.7 0.0**
	comp=Z,11nm,1.5s					
MORC	**Moravsky Berou**	**73.22**	**336**	*e*P	**P**	**05 09 11.3 +1.2**
	comp=Z,3.0nm,1.0s					
MORC	**Moravsky Berou**	**73.22**	**336**	*e*P	**P**	**05 09 11.3 +1.2**
MORC				pmax	pmax	
	comp=Z,3.0nm,1.0s					
TRPA	**Tarpa**	**73.40**	**332⇑**	*i*P	**P**	**05 09 12.1 +1.0**
LEM	**Lembang**	**74.32**	**235**	LR	LR	05 45 09.8
	comp=Z,106nm,18.6s,baz=85,slow=38					
MLR	**Muntele Rosu**	**74.75**	**329⇑**	*i*P	**P**	**05 09 20.9 +1.7**
MLR	**Muntele Rosu**	**74.75**	**329⇑**	P	**P**	**05 09 20.9 +1.7**
KHC	**Kasperske Hory**	**74.76**	**338**	*e*P	P	05 09 24.5 +5.4
KHC	**Kasperske Hory**	**74.76**	**338**	*e*P	P	05 09 24.5 +5.4
TIRR	**Tirgusor**	**74.86**	**327⇑**	*i*P	**P**	**05 09 18.8 -0.9**
TIRR	**Tirgusor**	**74.86**	**327⇑**	P	**P**	**05 09 18.8 -0.9**
GEC2	**GERESS Array S**	**75.00**	**338**	*e*P	**P**	**05 09 21.0 +0.4**
	comp=Z,1.4nm,0.7s					
GEC2	**GERESS Array S**	**75.00**	**338**	*e*P	**P**	**05 09 21.0 +0.4**
GEC2				pmax	pmax	
	comp=Z,1.0nm,0.7s					
GERES	**GERESS Array B**	**75.00**	**338**	P	**P**	**05 09 21.0 +0.4**
	comp=Z,1.1nm,0.6s,baz=50,slow=2.1,SNR=6.6					
GEA0	**GERESS Array S**	**75.01**	**338**	*e*P	**P**	**05 09 20.1 -0.5**
VOIR		**75.08**	**329⇑**	*i*P	**P**	**05 09 22.5 +1.4**
VOIR		**75.08**	**329⇑**	P	**P**	**05 09 22.5 +1.4**
ARR	**Arges**	**75.27**	**330⇑**	*i*P	**P**	**05 09 20.1 -2.1**
WR1	**Warramunga Arr**	**75.85**	**205**	*e*P	**P**	**05 09 26.6 +1.0**
	comp=Z,8.2nm,1.3s					
WRA	**Warramunga Arr**	**75.85**	**205**	P	**P**	**05 09 26.6 +1.0**
	comp=Z,1.1nm,0.8s,baz=24,slow=6.3,SNR=4.9					
HUMR	**Humele**	**75.92**	**329⇑**	*i*P	**P**	**05 09 28.1 +2.3**
BR101	**Keskin Array S**	**77.12**	**321**	*e*P	**P**	**05 09 32.5 -0.4**
BRTR	**Keskin Array B**	**77.13**	**321**	P	**P**	**05 09 32.5 -0.4**
	comp=Z,1.0nm,0.8s,baz=36,slow=2.3,SNR=6.1					
BRTR	**Keskin Array B**	**77.13**	**321**	*e*P	**P**	**05 09 33.4 +0.5**
BRTR				pmax	pmax	
	comp=Z,1.0nm,0.8s					
AS31	**Alice Springs**	**79.52**	**205**	*e*P	**P**	**05 09 46.7 +0.7**
	comp=Z,1.0nm,1.1s					
ASAR	**Alice Springs**	**79.52**	**205**	P	**P**	**05 09 46.7 +0.7**
	comp=Z,0.6nm,0.7s,baz=16,slow=4.8,SNR=5.2					
ASAR	**Alice Springs**	**79.52**	**205**	*e*P	**P**	**05 09 47.9 +1.9**
ASAR				pmax	pmax	
	comp=Z,1.0nm,0.7s					
MMAI	**Mount Meron Ar**	**82.21**	**316**	P	**P**	**05 10 00.7 +0.2**
	comp=Z,2.2nm,0.5s,baz=46,slow=6.2,SNR=3.9					
ASF	**Jabal al Asfar**	**82.30**	**315**	P	**P**	**05 10 01.8 +0.8**
	comp=Z,1.3nm,0.4s,baz=268,slow=3.9,SNR=3.8					
ESDC	**Sonseca Array**	**87.04**	**348**	P	**P**	**05 10 25.5 +0.7**
	comp=Z,0.1nm,0.3s,baz=19,slow=3.9,SNR=3.9					

IDC ***18*** *05:11:29.7±0.5, 47°.94N×130°.85E, h0km, mb3.9/19, mb1 4.1/25, mb1mx4.0/79, mbtmp4.0/25, ML3.6/4, MS3.7/25, Ms1 3.8/25, ms1mx3.5/72, Error ellipse: s-maj=11.7km s-min=9.6km az=92.0*

BJI ***18*** *05:11:29.8, 48°.05N×131°.00E, h10km, mb4.4/26, mB4.8/19, ML5.1/10, Ms4.8/23, Ms7 4.5/19*

MOS ***18*** *05:11:30.6±1.3, 47°.99N×130°.84E, h12km, mb4.5/36, Error ellipse: s-maj=8.0km s-min=4.9km az=91.8*

MOS Felt (V) at Stolbovoye; (IV-V) at Ekaterino- Nikol'skoye; (IV) at Amurzet, Polevoye; (III) at Birobidzhan, Kul'dur; (II) at Khabarovsk.

ISCJB ***18*** *05:11:30.3±0.2, 48°.04N±0°.02×130°.94E±0°.03, h10km, mb4.4/78, MS4.0/27, Error ellipse: s-maj=3.4km s-min=2.8km az=39.0*

SKHL ***18*** *05:11:31.6±0.4, 47°.95N×130°.97E, h18km±4km, mb5.3/5, Ms4.9/6*

SKHL Felt (II) at Khabarovsk. Felt (III-IV) at Blagoslovennoe; (III) at Bidzhan, Kuldur, Birobidzhan. Felt (V) at Souznoe, Stolbovoe; (IV) at Ekaterino-Nikolskoe, Polevoe, Amurzet.

NEIC ***18*** *05:11:32.5±0.2, 48°.08N×130°.75E, h10km, mb4.5/39, Error ellipse: s-maj=5.3km s-min=4.4km az=128.0*

GCMT ***18*** *05:11:32.5±0.4, 47°.96N×130°.58E, h23km±3km, MW4.8/69, Moment Tensor Solution. s13,c16; s69,c99; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.17±.14; $M_{\theta\theta}$1.50±.11; $M_{\phi\phi}$-1.33±.11; $M_{r\theta}$-0.29±.15; $M_{\theta\phi}$0.46±.07; $M_{\phi r}$-0.64±.19; Best double couple: $M_0$1.65100×10^{16} NP1:ϕ_s38.00000°, δ84.00000°, λ-155.00000°. NP2: ϕ_s305.00000°, δ65.00000°, λ-7.00000°. Principal axes: T 1.6600, Plg13.0000°, Azm169.0000°; N -0.0160, Plg64.0000°, Azm51.0000°; P -1.6410, Plg22.0000°, Azm264.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 18 05:11:33.4±0.3, 48°.03N±0°.03×130°.89E±0°.03, h10km, n249, σ1§97/231, mb4.4/78, MS4.0/27, 8C-4D, Priamurye-Northeastern China border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLR	**Kul'dur**	**1.33**	**25**	Pg	**Pn**	**05 11 57.4**	**-0.6**
	92nm,0.3s,baz=209,slow=18,SNR=6180						
KLR				Lg	Lg	05 12 15.4	
	baz=204,slow=12						
KLR				LR	LR	05 12 37.1	
	comp=Z,1μm,21.5s,baz=5.0,slow=47						
KLR	**Kul'dur**	**1.33**	**25**	*e*Pg	**Pn**	**05 11 56.6**	**-1.4**
KLR				*e*Sg	**Sb**	**05 12 15.0**	**-0.5**
KLR	**Kul'dur**	**1.33**	**25**	P	**Pn**	**05 11 56.6**	**-1.4**
KLR				S	**Sb**	**05 12 15.0**	**-0.5**
KHBR	**Khabarovsk**	**2.82**	**79**	*e*Pn	**Pn**	**05 12 18.6**	**+0.2**
KHBR				*e*Pg	**Pb**	**05 12 23.3**	**-0.5**
KHBR				pPg	**Pg**	**05 12 24.3**	**-3.1**
KHBR				*e*Sg	**Sb**	**05 12 59.7**	**+1.4**
MDJ	**Mudanjiang**	**3.53**	**195**	Pn	Pn	05 12 23.0	-5.3
MDJ				Sn	**Sn**	**05 13 17.8**	**+7.7**
MDJ				smax	smax		
	comp=N,3μm,0.6s						
MDJ				smax	smax		
	comp=E,6μm,0.8s						
MDJ	**Mudanjiang**	**3.53**	**195**	*e*Pn	Pn	05 12 25.9	-2.4
MDJ				sPn	sPn	05 12 34.5	+2.4
MDJ				*e*Sg	**Sb**	**05 13 21.9**	**+3.1**
MDJ	**Mudanjiang**	**3.53**	**195**	*e*Pn	Pn	05 12 25.9	-2.4
MDJ				*e*Pb	Pb	05 12 34.5	-1.5
MDJ				*e*Sg	**Sb**	**05 13 21.9**	**+3.1**
USRK	**Ussuriysk Ar.**	**3.91**	**168**	Pn	Pn	05 12 30.6	-2.8
	36nm,0.3s,baz=344,slow=14,SNR=325						
USRK				Pg	**Pb**	**05 12 40.7**	**-1.7**
	122nm,0.3s,baz=349,slow=16,SNR=43						
USRK				Lg	Lg	05 13 29.2	
	197nm,0.3s,baz=1.1,slow=29,SNR=11						
GRTR	**Gornotajezhnoj**	**4.41**	**168⇑**	*i*Pn	Pn	05 12 37.5	-2.9
GRTR				*e*Pg	**Pb**	**05 12 49.7**	**-1.3**
GRTR				*e*Sg	**Sb**	**05 13 46.0**	**+1.8**
GRNR	**Gornyy**	**4.53**	**51⇓**	*e*Pn	**Pn**	**05 12 42.0**	**0.0**
GRNR				pPn	**pPn**	**05 12 47.2**	**+2.8**
GRNR				*e*Pg	Pb	05 12 57.2	+4.2
GRNR				*e*Sg	**Sb**	**05 13 52.2**	**+4.5**
GRNR	**Gornyy**	**4.53**	**51**	*e*P	**Pn**	**05 12 42.0**	**0.0**
GRNR				pmax	pmax		
	comp=Z,40nm,0.5s						
TEY	**Ternei**	**4.95**	**125**	*e*Pn	Pn	05 12 45.0	-2.7
TEY				AMB	AMB	05 12 51.3	
	comp=Z,176nm,0.7s						
TEY				*e*rx	rx	05 13 04.5	
TEY				*e*Sg	**Sb**	**05 14 02.6**	**+3.0**
TEY				A	A	05 14 10.9	
	comp=Z,3μm,0.7s						
TEY				A	A	05 14 10.9	
	comp=Z,2μm,0.7s						
TEY	**Ternei**	**4.95**	**125⇑**	*e*P	**Pn**	**05 12 45.2**	**-2.5**
TEY				*e*S	Sn	05 13 37.7	-7.3
TEY				pmax	pmax		
	comp=Z,7.0nm,0.6s						
TEY				smax	smax		
	comp=N,370nm,0.7s						
TEY				smax	smax		
	comp=E,310nm,0.7s						
TEY				smax	smax		
	comp=Z,9μm,0.7s						
TEY				MLR	MLR		
	comp=Z,5μm,14.0s						
EKMR	**Ekimchan**	**5.21**	**14⇑**	*i*Pn	**Pn**	**05 12 51.0**	**-0.4**
EKMR				pPn	**pPn**	**05 12 56.0**	**+2.2**
EKMR				sPn	**sPn**	**05 13 00.1**	**+4.9**
EKMR				*e*Pg	**Pb**	**05 13 09.0**	**+4.4**
EKMR				AMB	AMB	05 13 10.1	
	comp=Z,320nm,0.6s						
EKMR				*e*Sg	**Sg**	**05 14 15.2**	**-5.5**
EKMR				*e*Sg	Sb	05 14 18.7	+11
EKMR				A	A	05 14 25.0	
	comp=Z,570nm,0.7s						
EKMR				A	A	05 14 25.0	
	comp=Z,1μm,0.7s						
EKMR				AMS	AMS	05 14 59.5	
	comp=Z,2μm,8.0s						
EKMR				AMS	AMS	05 14 59.5	
	comp=Z,2μm,8.0s						
MSHR	**Mys Shultsa**	**5.45**	**178**	*d i*P	Pn	05 12 52.3	-2.4
CN2	**Changchun**	**5.68**	**224**	Pn	Pn	05 12 54.4	-3.4
CN2				Pg	**Pb**	**05 13 13.3**	**+0.7**
CN2				smax	smax		
	comp=Z,5μm,1.0s						
CN2				smax	smax		
	comp=Z,3μm,1.0s						
ZEA	**Zeya**	**6.16**	**339**	*e*Pn	**Pn**	**05 13 03.3**	**-1.1**
ZEA				AMB	AMB	05 13 04.0	
	comp=Z,150nm,0.6s						
ZEA				pPn	**pPn**	**05 13 08.4**	**+1.7**
ZEA				*e*Sn	**Sn**	**05 14 15.2**	**+0.4**
ZEA				*e*Sg	**Sg**	**05 14 47.9**	**-3.1**
ZEA				A	A	05 14 50.0	
	comp=Z,1μm,1.0s						
ZEA				AMS	AMS	05 15 30.0	
	comp=Z,4μm,8.0s						
ZEA				AMS	AMS	05 15 30.0	
	comp=Z,2μm,8.0s						
ZEA				AMS	AMS	05 15 30.0	
	comp=Z,4μm,10.0s						
ZEA	**Zeya**	**6.16**	**339**	*e*P	**Pn**	**05 13 03.1**	**-1.3**
ZEA				*e*		05 14 26.0	
ZEA				pmax	pmax		
	comp=N,73nm,0.8s						
ZEA				pmax	pmax		
	comp=E,59nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,150nm,0.6s						
ZEA				MLR	MLR		
	comp=Z,4μm,10.0s						
ZEA				MLR	MLR		
	comp=E,2μm,7.0s						
ZEA				MLR	MLR		
	comp=N,4μm,9.0s						
BMKR	**Bomnak**	**6.81**	**350**	*e*Pn	**Pn**	**05 13 11.8**	**-1.5**
BMKR				pPn	**pPn**	**05 13 17.3**	**+1.6**
BMKR				sPn	**sPn**	**05 13 22.8**	**+5.7**
BMKR				*e*Sg	**Sg**	**05 15 07.5**	**-4.4**
BMKR				A	A	05 15 12.0	
	comp=N,548nm,0.5s						
BMKR				A	A	05 15 12.0	
	comp=N,940nm,0.5s						
HIA	**Hailar**	**7.49**	**284**	*e*Pn	**Pn**	**05 13 23.1**	**+0.5**
HIA	**Hailar**	**7.49**	**284**	*e*Pn	**Pn**	**05 13 23.1**	**+0.5**
HIA	**Hailar**	**7.49**	**284**	*e*P	**Pn**	**05 13 23.1**	**+0.5**
UGL	**Uglegorsk**	**7.49**	**78**	*e*Pn	**Pn**	**05 13 21.2**	**-1.4**
UGL				*e*Pg	**Pb**	**05 13 46.0**	**+2.7**
UGL				*e*Sg	Sg	05 15 23.8	-10
UGL				A	A	05 15 34.0	
	comp=N,591nm,1.3s						
UGL				A	A	05 15 34.0	
	comp=N,2μm,1.3s						
UGL				AMS	AMS	05 16 44.0	
	comp=N,3μm,8.0s						
UGL				AMS	AMS	05 16 44.0	
	comp=N,3μm,8.0s						
UGL				AMS	AMS	05 16 44.0	
	comp=N,2μm,8.0s						
NKL	**Nikolayevsk**	**8.06**	**47**	*e*Pn	**Pn**	**05 13 30.0**	**-0.4**
NKL				*e*Pg	Pb	05 14 00.5	+7.5
NKL				*e*Sg	**Sg**	**05 15 47.0**	**-4.9**
NKL				A	A	05 15 56.0	
	comp=N,2μm,0.6s						
NKL	**Nikolayevsk**	**8.06**	**47**	*e*P	**Pn**	**05 13 30.0**	**-0.4**
SNY	**Shenyang**	**8.08**	**223**	*i*P	Pn	05 13 25.3	-5.5
SNY				S	Sn	05 14 50.4	-12
SNY				pmax	pmax		
	comp=Z,18nm,0.5s						
SNY				LR	LR		
	comp=N,4μm,12.7s						
SNY				LR	LR		
	comp=E,5μm,12.6s						
SNY				LR	LR		
	comp=Z,920nm,10.5s						
YSS	**Yuzh-Sakhalins**	**8.11**	**93**	*e*Pn	**Pn**	**05 13 29.0**	**-2.1**
YSS				*e*Sg	Sg	05 15 42.7	-11
YSS				A	A	05 15 49.0	
	comp=Z,270nm,3.0s						
YSS				A	A	05 15 49.0	
	comp=Z,336nm,3.0s						
YSS				AMS	AMS	05 16 35.7	
	comp=Z,1μm,14.0s						
YSS				AMS	AMS	05 16 35.7	
	comp=Z,890nm,14.0s						
YSS	**Yuzh-Sakhalins**	**8.11**	**93**	*e*P	Pn	05 13 15.3	-16
YSS				MLR	MLR		
	comp=Z,800nm,11.0s						
TYV	**Tymovskoe**	**8.17**	**65**	*e*Pn	**Pn**	**05 13 31.0**	**-1.0**
TYV				*e*Sg	Sg	05 15 46.6	-8.9
TYV				AMS	AMS	05 16 55.0	
	comp=Z,3μm,9.0s						
TYV				AMS	AMS	05 16 55.0	
	comp=Z,2μm,9.0s						
TYV				AMS	AMS	05 16 55.0	
	comp=Z,3μm,9.0s						
TYV	**Tymovskoe**	**8.17**	**65**	*e*P	**Pn**	**05 13 34.3**	**+2.3**
TYV				pmax	pmax		
	comp=Z,12nm,1.2s						
ASAJ	**Asahikawa**	**9.03**	**111**	Pn	Pn	05 13 39.7	-4.0
	comp=Z,0.4nm,0.3s,baz=10,slow=11,SNR=2.3						
ASAJ				Lg	Lg	05 16 18.9	
	comp=Z,0.4nm,0.3s,baz=80,slow=19,SNR=2.6						
ASAJ				LR	LR	05 16 53.1	
	comp=Z,639nm,19.1s,baz=178,slow=36						
OKH	**Okha**	**9.41**	**50**	*e*P	**Pn**	**05 13 49.8**	**+0.9**
OKH				*e*Sg	Sn	05 16 34.5	+60
OKH				AMS	AMS	05 17 23.9	
	comp=Z,2μm,10.0s						
OKH	**Okha**	**9.41**	**50**	*e*P	**Pn**	**05 13 46.9**	**-2.0**
OKH				MLR	MLR		
	comp=Z,2μm,10.0s						
CLNS	**Chul'man**	**9.55**	**340**	*e*P	**Pn**	**05 13 49.1**	**-1.7**
CLNS				*e*S	**Sn**	**05 15 45.5**	**+7.4**
CLNS				pmax	pmax		
	comp=E,3.0nm,0.7s						
CLNS				pmax	pmax		
	comp=Z,13nm,0.8s						
CLNS				pmax	pmax		
	comp=N,12nm,0.9s						
CLNS				smax	smax		
	comp=N,139nm,0.8s						
CLNS				smax	smax		
	comp=E,133nm,0.8s						
CLNS				MLR	MLR		
	comp=E,733nm,12.0s						
CLNS				MLR	MLR		
	comp=Z,860nm,10.0s						
CLNS				MLR	MLR		
	comp=N,606nm,10.0s						
KS01	**Wonju Array Si**	**10.77**	**193**	*e*Pn	**Pn**	**05 14 08.8**	**+1.2**
KSRS	**Korea Array**	**10.79**	**193**	Pn	**Pn**	**05 14 06.5**	**-1.4**
	comp=N,0.5nm,0.3s,baz=10,slow=13,SNR=21						
KSRS				Lg	Lg	05 17 06.7	
	comp=N,1.3nm,0.3s,baz=158,slow=25,SNR=5.0						
KSRS				LR	LR	05 17 45.1	
	comp=N,295nm,21.6s,baz=15,slow=35						
KS15	**Wonju Array Si**	**10.81**	**193**	*e*Pn	**Pn**	**05 14 06.5**	**-1.6**
INCN	**Inchon**	**10.99**	**198**	*e*P	**Pn**	**05 14 11.9**	**+1.2**
INCN	**Inchon**	**10.99**	**198**	*e*Pn	**Pn**	**05 14 11.9**	**+1.2**
INCN	**Inchon**	**10.99**	**198**	P	**Pn**	**05 14 11.9**	**+1.2**
INCN				pmax	pmax		
	comp=Z,38nm,1.2s						
TJN	**Taejon**	**11.93**	**194**	*i* P	**Pn**	**05 14 24.4**	**+0.9**
MJB9	**Matsu-Tunnel**	**12.68**	**152**	*e*Pn	**Pn**	**05 14 35.3**	**+1.5**
MAJO	**Matsushiro**	**12.69**	**152**	*e*P	**Pn**	**05 14 32.4**	**-1.4**
MAJO	**Matsushiro**	**12.69**	**152**	*e*Pn	**Pn**	**05 14 35.3**	**+1.5**
MAJO	**Matsushiro**	**12.69**	**152**	*i* P	**Pn**	**05 14 33.9**	**+0.1**
MAT	**Matsushiro**	**12.69**	**152**	P	**Pn**	**05 14 35.6**	**+1.8**
MJAR	**Matsushiro Arr**	**12.69**	**152**	Pn	Pn	05 14 31.4	-2.4
	comp=Z,0.4nm,0.3s,baz=331,slow=12,SNR=2.5						
MJAR				LR	LR	05 18 32.9	
	comp=Z,140nm,20.4s,baz=45,slow=34						
BJI	**Beijing**	**13.25**	**238⇓**	*e*P	**Pn**	**05 14 41.8**	**+0.4**
BJI				S	**Sn**	**05 17 09.1**	**+0.4**
BJI				pmax	pmax		
	comp=Z,14nm,0.9s						
BJI				LR	LR		
	comp=Z,8μm,12.3s						
BJI				LR	LR		
	comp=Z,6μm,11.8s						
BJT	**Baijiatuau**	**13.27**	**238**	*e*P	**Pn**	**05 14 41.5**	**-0.2**
BJT	**Baijiatuau**	**13.27**	**238**	*e*Pn	**Pn**	**05 14 41.5**	**-0.2**
BJT	**Baijiatuau**	**13.27**	**238**	*e*P	**Pn**	**05 14 41.5**	**-0.2**
INU	**Inuyama**	**13.46**	**158**	*e*Pn	**Pn**	**05 14 46.5**	**+2.0**
YAK	**Yakutsk**	**14.05**	**358**	*e*P	**Pn**	**05 14 50.7**	**-1.5**
YAK	**Yakutsk**	**14.05**	**358**	*e*Pn	**Pn**	**05 14 51.6**	**-0.7**
YAK	**Yakutsk**	**14.05**	**358**	*e*P	**Pn**	**05 14 50.7**	**-1.5**
YAK				*e*		05 17 27.7	
YAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.9s						
YAK				smax	smax		
	comp=N,17nm,1.3s						
YAK				smax	smax		
	comp=E,44nm,1.5s						
YAK				MLR	MLR		
	comp=Z,270nm,14.0s						
JNU	**Nakatsue**	**14.89**	**180**	Pn	**Pn**	**05 15 03.5**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=243,slow=4.5,SNR=3.3						
JNU				LR	LR	05 19 53.6	
	comp=Z,162nm,18.3s,baz=320,slow=34						
JNU	**Nakatsue**	**14.89**	**180**	*e*P	**Pn**	**05 15 05.8**	**+1.8**
JNU	**Nakatsue**	**14.89**	**180**	*e*Pn	**Pn**	**05 15 02.5**	**-1.5**
HHC	**Hu-ho-hao-te**	**15.54**	**250**	*e*P	**Pn**	**05 15 15.3**	**+2.8**
HHC				S	**Sn**	**05 18 07.3**	**+2.6**
HHC				pmax	pmax		
	comp=Z,19nm,1.4s						
HHC				pmax	pmax		
	comp=Z,180nm,5.2s						
HHC				LR	LR		
	comp=Z,1μm,9.4s						
HHC				LR	LR		
	comp=Z,2μm,8.0s						
HHC				LR	LR		
	comp=Z,980nm,9.6s						
ULN	**Ulaanbaatar**	**15.96**	**278**	*i* P	**Pn**	**05 15 20.1**	**+2.0**
ULN				pmax	pmax		
	comp=Z,29nm,1.7s						
JHJ	**Hachijo jima 2**	**16.34**	**153**	LR	LR	05 21 42.1	
	comp=Z,106nm,18.6s,baz=101,slow=38						
MA2	**Magadan**	**16.39**	**38**	Pn	**Pn**	**05 15 21.7**	**-1.7**
	comp=Z,0.9nm,0.3s,baz=221,slow=20,SNR=2.6						
MA2	**Magadan**	**16.39**	**38**	*e*P	**Pn**	**05 15 24.2**	**+0.9**
MA2	**Magadan**	**16.39**	**38**	*e*Pn	**Pn**	**05 15 24.2**	**+0.9**
	comp=Z,42nm,1.2s						
MA2	**Magadan**	**16.39**	**38**	*i* P	**Pn**	**05 15 24.3**	**+0.9**
MA2				pmax	pmax		
	comp=Z,26nm,1.0s						
SONA1	**Songino Array**	**16.40**	**278**	*e*Pn	**Pn**	**05 15 21.4**	**-2.3**
SONA0	**Songino Array**	**16.41**	**278**	*e*Pn	**Pn**	**05 15 22.0**	**-1.7**
SONM	**Songino Array**	**16.41**	**278**	Pn	**Pn**	**05 15 22.0**	**-1.7**
	baz=61,slow=12,SNR=2.6						
SONM				Lg	Lg	05 20 08.2	
	comp=Z,1.1nm,0.3s,baz=84,slow=31,SNR=4.0						
SONM				LR	LR	05 22 18.0	
	comp=Z,338nm,18.3s,baz=95,slow=40						
SKR	**Severo-Kuril's**	**16.62**	**71**	*e*P	**P**	**05 15 31.4**	**+2.7**
SKR				pmax	pmax		
	comp=Z,100nm,2.1s						
SKR				pmax	pmax		
	comp=Z,50nm,1.0s						
SKR				MLR	MLR		
	comp=Z,700nm,12.0s						
SKR				MLR	MLR		
	comp=Z,1μm,14.0s						
IRK	**Irkutsk**	**17.53**	**294**	*e*P	**Pn**	**05 15 41.2**	**+3.5**
PEA0B	**Petropavlovsk-**	**17.72**	**63**	*e*Pn	**Pn**	**05 15 41.7**	**+1.7**
	comp=Z,16nm,0.9s						
PEA1	**Petropavlovsk-**	**17.72**	**63**	*e*Pn	**Pn**	**05 15 42.1**	**+2.1**
PETK	**Petropavlovsk-**	**17.72**	**63**	P	**Pn**	**05 15 42.1**	**+2.1**
	comp=Z,0.4nm,0.3s,baz=260,slow=6.3,SNR=10						
PETK	**Petropavlovsk-**	**17.72**	**63**	*e*Pn	**Pn**	**05 15 41.6**	**+1.6**
PETK	**Petropavlovsk-**	**17.72**	**63**	*e*P	**Pn**	**05 15 41.6**	**+1.6**
TLY	**Talaya**	**17.90**	**292**	Lg	Lg	05 20 51.2	
TLY				LR	LR	05 23 27.0	
	comp=Z,105nm,20.6s,baz=90,slow=40						
TLY	**Talaya**	**17.90**	**292**	*e*P	**Pn**	**05 15 41.7**	**-0.6**
TLY	**Talaya**	**17.90**	**292**	*e*Pn	**Pn**	**05 15 41.7**	**-0.6**
	comp=Z,11nm,1.0s						
TLY	**Talaya**	**17.90**	**292**	*e*P	**Pn**	**05 15 45.4**	**+3.1**
TLY				pmax	pmax		
	comp=Z,12nm,0.9s						
TLY				MLR	MLR		
	comp=Z,311nm,8.0s						
ZAK	**Zakamensk**	**18.16**	**288**	*e*P	**Pn**	**05 15 45.8**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,12nm,1.3s						
NJ2	**Nanjing**	**18.39**	**214**	*e*P	**P**	**05 15 50.3**	**+1.9**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,1μm,11.9s						
NJ2				LR	LR		
	comp=Z,3μm,11.9s						
SEY	**Seymchan**	**19.11**	**31**	P	**P**	**05 15 56.8**	**+0.7**
	comp=Z,0.6nm,0.3s,baz=230,slow=9.8,SNR=20						
SEY				Lg	Lg	05 21 42.4	
	comp=Z,0.0nm,0.3s,baz=197,slow=20,SNR=4.3						
SEY	**Seymchan**	**19.11**	**31**	*e*P	**P**	**05 15 54.7**	**-1.4**
SEY	**Seymchan**	**19.11**	**31**	*c i

comp=Z,2μm,13.6s
TIXI Tiksi 23.71 358 P **P 05 16 43.0 -2.1**
comp=Z,5.6nm,0.7s,baz=154,slow=7.6,SNR=15
TIXI LR LR 05 26 47.5
comp=Z,213nm,18.8s,baz=129,slow=39
TIXI Tiksi 23.71 358 *e*P **P 05 16 42.7 -2.3**
TIXI Tiksi 23.71 358 *e*P **P 05 16 43.0 -2.1**
comp=Z,15nm,0.7s
TIXI Tiksi 23.71 358 *i* P **P 05 16 42.7 -2.3**
TIXI pmax pmax
comp=Z,21nm,0.9s
GTA Gaotai 23.93 260 *e*P **P 05 16 46.8 -0.8**
GTA pP pP 05 16 51.8 +1.2
GTA sP sP 05 16 54.8 +3.0
GTA S **S 05 21 03.4 -0.5**
GTA sS pS 05 21 10.8 +3.5
GTA pmax pmax
comp=Z,7.0nm,1.5s
GTA pmax pmax
comp=Z,97nm,4.1s
GTA LR LR
comp=Z,510nm,10.5s
GTA LR LR
comp=Z,510nm,10.5s
GTA LR LR
comp=Z,910nm,10.8s
TATO Taipei 24.18 201 *e*P **P 05 16 49.1 -0.8**
comp=Z,70nm,1.3s
SSLB Suanglung 25.45 202 *e*P **P 05 17 03.0 +1.6**
comp=Z,11nm,1.2s
TPUB Ta-pu 26.00 202 *e*P **P 05 17 05.9 -0.5**
comp=Z,20nm,1.2s
BILL Bilibino 26.79 29 *e*P **P 05 17 13.9 +0.7**
comp=Z,6.3nm,0.9s
BILL Bilibino 26.79 29 *ce*P **P 05 17 15.1 +2.0**
BILL *e* 05 17 52.3
BILL pmax pmax
comp=Z,4.0nm,0.9s
BILL MLR MLR
comp=Z,254nm,15.0s
GYA Guiyang 28.69 230 *e*P **P 05 17 32.8 +2.1**
GYA pmax pmax
comp=Z,10.0nm,0.7s
ZAA1 Zalesovo Array 29.17 299 *e*P **P 05 17 33.0 -1.5**
ZAA0 Zalesovo Array 29.17 299 *e*P **P 05 17 33.5 -1.0**
comp=Z,2.9nm,0.8s
ZALV Zalesovo Beam 29.17 299 P **P 05 17 33.0 -1.5**
comp=Z,2.5nm,0.6s,baz=87,slow=6.2,SNR=4.2
ZALV Zalesovo Beam 29.17 299 *e*P P 05 17 32.5 -2.0
NRIK Noril'sk 29.97 331 LR LR 05 30 55.2
comp=Z,195nm,18.9s,baz=112,slow=39
WMQ Urumqi 30.04 278 P **P 05 17 44.6 +2.1**
WMQ pmax pmax
comp=Z,22nm,0.8s
WMQ pmax pmax
comp=Z,110nm,5.3s
WMQ LR LR
comp=Z,3μm,10.1s
WMQ LR LR
comp=Z,1μm,8.3s
WMQ LR LR
comp=Z,460nm,14.9s
KMI Kunming 31.85 234 P **P 05 17 59.4 +0.7**
KMI pmax pmax
comp=Z,5.0nm,0.8s
KMI LR LR
comp=Z,560nm,18.5s
KMI LR LR
comp=Z,690nm,19.4s
MK31 Makanchi Array 32.48 286 *e*P P 05 18 00.8 -3.0
MK31 Makanchi Array 32.48 286 *e*P P 05 18 00.9 -3.0
MK32 Makanchi Array 32.48 286 *e*P P 05 18 01.8 -2.1
MKAR Makanchi Array 32.48 286 P P 05 18 01.8 -2.1
comp=Z,0.7nm,0.7s,baz=92,slow=9.7,SNR=8.5
MKAR Makanchi Array 32.48 286 *e*P **P 05 18 04.7 +0.8**
MKAR Makanchi Array 32.48 286 *e*P P 05 18 01.2 -2.7
comp=Z,14nm,0.6s
MKAR Makanchi Array 32.48 286 *i* P **P 05 18 04.6 +0.7**
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MK01 Makanchi Array 32.48 286 *e*P P 05 18 01.7 -2.2
MAKZ Makanchi 32.68 286 *e*P P 05 18 03.5 -2.1
comp=Z,4.1nm,0.9s
MAKZ Makanchi 32.68 286 *e*P P 05 18 03.5 -2.1
MAKZ pmax pmax
comp=Z,4.0nm,0.9s
KURK Kurchatov 33.56 295 *e*P **P 05 18 13.9 +0.7**
KURK Kurchatov 33.56 295 *e*P **P 05 18 11.8 -1.4**
KURK Kurchatov 33.56 295 *ce*P **P 05 18 13.9 +0.7**
KURK pmax pmax
comp=Z,3.0nm,1.0s
KURBB Kurchatov Arra 33.64 294 P P 05 18 11.8 -2.1
comp=Z,1.3nm,0.7s,baz=77,slow=9.6,SNR=7.6
LSA Lhasa 35.47 253 *e*P **P 05 18 29.4 -1.0**
LSA Lhasa 35.47 253 *e*P **P 05 18 29.4 -1.0**
comp=Z,4.9nm,0.6s
LSA Lhasa 35.47 253 *e*P **P 05 18 29.4 -1.0**
LSA pmax pmax
comp=Z,5.0nm,0.6s
PDGK Podgornoye 35.67 282 P **P 05 18 34.1 +2.4**
PDGK pmax pmax
comp=Z,4.0nm,1.0s
GUMO Guam 36.25 157 LR LR 05 33 29.6
comp=Z,80nm,18.4s,baz=63,slow=36
BVAR Borovoye Array 37.78 301 P **P 05 18 48.2 -1.2**
comp=Z,1.7nm,0.7s,baz=77,slow=9.3,SNR=7.7
BRVK Borovoye 37.83 301 *e*P **P 05 18 50.1 +0.3**
BRVK Borovoye 37.83 301 *e*P **P 05 18 49.0 -0.8**
comp=Z,5.8nm,0.9s
BRVK Borovoye 37.83 301 *ce*P **P 05 18 50.1 +0.3**
BRVK pmax pmax
comp=Z,7.0nm,1.2s
OTUK Ortayu 38.24 293 P P 05 18 51.0 -2.4
OTUK pmax pmax
comp=Z,3.0nm,0.8s
CMAR Chiang Mai Arr 39.30 232 LR LR 05 35 04.8
comp=Z,129nm,19.4s,baz=41,slow=36
KSH Kashi 39.81 279 P **P 05 19 11.1 +4.4**
KSH pP sP 05 19 14.5 +3.4
KSH pmax pmax
comp=Z,180nm,4.3s
MNAS Manas 40.62 285 P **P 05 19 11.6 -1.8**
MNAS pmax pmax
comp=Z,4.0nm,1.0s
SFK Sufi-Kurgan 41.19 281 P **P 05 19 17.0 -1.3**
SFK pmax pmax
comp=Z,3.0nm,0.9s
KK31 Karatay Array 41.61 287 *e*P P 05 19 19.5 -2.0
KK31 Karatay Array 41.61 287 *e*P P 05 19 19.5 -1.9
KKAR Karatay Array 41.61 287 *e*P P 05 19 19.4 -2.1
KKAR Karatay Array 41.61 287 *e*P P 05 19 19.4 -2.0
TOLK Toolik Lake Re 42.74 32 *e*P **P 05 19 29.9 -0.5**
comp=Z,3.9nm,0.9s
COLD Coldfoot 42.86 34 *e*P **P 05 19 29.5 -1.7**
comp=Z,8.4nm,0.8s
MLY Manley 43.23 37 *e*P **P 05 19 33.9 -0.5**
comp=Z,3.2nm,1.1s
SKT Skwentna 43.81 42 *e*P **P 05 19 37.5 -1.6**
comp=Z,5.1nm,1.0s
MIDW Midway 44.32 97 *e*P **P 05 19 42.6 -0.8**
comp=Z,233nm,1.4s
RND Reindeer 44.51 39 *e*P **P 05 19 45.5 +0.8**
comp=Z,1.4nm,1.0s
RND Reindeer 44.51 39 *e*P **P 05 19 45.5 +0.8**
RND pmax pmax
comp=Z,1.0nm,1.0s
CCB Clear Creek Bu 44.54 37 *e*P **P 05 19 43.7 -1.1**
comp=Z,13nm,1.4s
KDAK Kodiak Island 44.79 48 P P 05 19 43.5 -3.3
baz=190,slow=11
ILAR Eielson Array 44.87 37 P **P 05 19 46.2 -1.3**
comp=Z,2.4nm,0.7s,baz=287,slow=8.9,SNR=21
ILAR LR LR 05 40 05.6
comp=Z,87nm,18.6s,baz=297,slow=38
ILB Eielson Array 44.87 37 *e*P **P 05 19 46.1 -1.3**
IL1 Eielson Array 44.87 37 *e*P **P 05 19 46.4 -1.1**
GHO Glory Hole Cre 45.05 41 *e*P **P 05 19 48.1 -0.9**
comp=Z,13nm,1.3s
DHY Denali Highway 45.26 39 *e*P **P 05 19 49.3 -1.5**
comp=Z,4.7nm,1.2s
ABKAR Akbulak array 45.29 299 *e*P **P 05 19 49.3 -1.6**
SML Sawmill 45.30 41 *e*P **P 05 19 49.5 -1.4**
SML Sawmill 45.30 41 *e*P **P 05 19 49.5 -1.4**
comp=Z,11nm,0.9s
SML Sawmill 45.30 41 *e*P **P 05 19 49.5 -1.4**
SML pmax pmax
comp=Z,11nm,0.9s
SCM Sheep Creek Mo 45.73 41 *e*P **P 05 19 53.1 -1.3**
comp=Z,11nm,1.2s
SCM Sheep Creek Mo 45.73 41 *e*P **P 05 19 53.1 -1.3**
SCM pmax pmax
comp=Z,11nm,1.2s
AKTO Aktyubinsk 45.87 302 P **P 05 19 54.1 -1.5**
comp=Z,2.0nm,0.8s,baz=37,slow=11,SNR=6.5
RIDG Independ'e Rid 46.08 38 *e*P P 05 19 53.8 -3.3
comp=Z,5.0nm,0.8s
EGAK Eagle 47.15 36 *e*P **P 05 20 03.4 -2.0**
comp=Z,14nm,1.1s
PRGR Permogore 47.33 320 *e*P **P 05 20 07.2 +0.4**
PRGR pmax pmax
comp=Z,4.0nm,0.5s
DAWY Dawson 48.15 36 *e*P **P 05 20 13.7 +0.4**
comp=Z,4.3nm,1.0s
KBS Kingsbay 48.36 347 *e*P **P 05 20 13.2 -1.4**
KBS Kingsbay 48.36 347 *e*P **P 05 20 12.9 -1.7**
comp=Z,10.0nm,1.0s
KBS Kingsbay 48.36 347 *e*P **P 05 20 12.9 -1.7**
KBS pmax pmax
comp=Z,10.0nm,1.0s
INK Inuvik 48.41 30 *e*P **P 05 20 13.5 -1.6**
INK Inuvik 48.41 30 *e*P **P 05 20 13.5 -1.6**
comp=Z,13nm,1.1s
INK Inuvik 48.41 30 *e*P **P 05 20 13.5 -1.6**
INK pmax pmax
comp=Z,13nm,1.1s
KLMR Klimovskoe 50.32 321 *e*P P 05 20 26.7 -3.1
KLMR pmax pmax
comp=Z,12nm,1.0s
KLMR Klimovskoe 50.32 321 *e*P P 05 20 26.7 -3.1
KLMR AMP 05 20 37.8
comp=Z,12nm,1.0s
IPM Ipoh 50.37 220 *e*P **P 05 20 29.2 -1.5**
comp=Z,24nm,1.4s
FAKI Fak Fak 50.75 178 *e*P **P 05 20 31.9 -1.7**
comp=Z,61nm,1.2s
GEYT Alibeck 52.34 287 LR LR 05 42 44.3
comp=Z,148nm,18.3s,baz=55,slow=36
RES Resolute Bay 53.83 14 *e*P **P 05 20 53.4 -2.3**
comp=Z,6.9nm,1.0s
RES Resolute Bay 53.83 14 *e*P **P 05 20 53.4 -2.3**
RES pmax pmax
comp=Z,7.0nm,1.0s
DAG Danmarks Havn 53.98 352 *i* P **P 05 20 54.8 -2.0**
comp=Z,3.9nm,0.8s
OBN Obninsk 54.72 315 *e*P **P 05 21 01.2 -1.2**
OBN Obninsk 54.72 315 *ie*P **P 05 21 01.2 -1.2**
OBN *e* 05 23 04.6
OBN pmax pmax
comp=Z,8.0nm,0.4s
OBN MLR MLR
comp=Z,82nm,15.0s
FIA1 FINESS Array S 55.41 326 *e*P **P** 05 21 04.8 -2.6
FIA0 FINESS Array S 55.42 326 *e*P **P 05 21 05.4 -2.0**
FIA0 FINESS Array S 55.42 326 *e*P **P 05 21 05.4 -2.0**
FINES FINESS Array B 55.42 326 P **P 05 21 05.4 -2.0**
comp=Z,4.3nm,1.0s,baz=38,slow=7.2,SNR=9.5
FINES FINESS Array B 55.42 326 *e*P **P 05 21 08.8 +1.4**
FINES FINESS Array B 55.42 326 *i* P **P 05 21 08.8 +1.4**
FINES pmax pmax
comp=Z,4.0nm,0.6s
VSR Storozhevoye 55.70 310 *e*P **P 05 21 08.4 -1.2**
VSR pmax pmax
comp=Z,6.0nm,0.5s
KIV Kislovodsk 58.14 302 *e*P P 05 21 24.8 -2.3
KIV pmax pmax
comp=Z,11nm,1.1s
KIV MLR MLR
comp=Z,153nm,17.0s
YKA Yellowknife Ar 58.18 30 P **P 05 21 28.0 +1.0**
comp=Z,1.1nm,0.9s,baz=314,slow=7.5,SNR=8.1
YKA Yellowknife Ar 58.18 30 P **P 05 21 28.0 +1.0**
YKA pmax pmax
comp=Z,1.0nm,0.9s
GNI Garni 59.30 297 LR LR 05 49 16.7
comp=Z,113nm,18.7s,baz=58,slow=38
SUMG Summit 59.46 356 *i* P **P 05 21 34.5 -1.8**
comp=Z,12nm,1.1s
SUMG Summit 59.46 356 *e*P **P 05 21 34.2 -2.1**
comp=Z,11nm,1.0s
SUMG Summit 59.46 356 *e*P **P 05 21 34.2 -2.1**
SUMG pmax pmax
comp=Z,11nm,1.0s
KEKH Kekaha 60.32 89 *e*P **P 05 21 42.4 0.0**
comp=Z,187nm,1.2s
HFS Hagfors 60.78 329 P **P 05 21 43.1 -1.8**
comp=Z,3.4nm,1.0s,baz=97,slow=12,SNR=6.6
HFS LR LR 05 48 02.6
comp=Z,148nm,20.1s,baz=44,slow=36
NB2 NORSAR Subarra 60.94 331 P P 05 21 43.7 -2.4
comp=Z,1.3nm,0.6s,baz=40,slow=6.5
AKASG Malin Array Be 60.94 315 P P 05 21 43.9 -2.3
comp=Z,1.3nm,0.7s,baz=45,slow=7.8,SNR=8.6
AKASG Malin Array Be 60.94 315 *i* P **P 05 21 45.7 -0.5**
AKASG pmax pmax
comp=Z,1.0nm,0.6s
KIEV Kiev 60.95 315 *i* P **P 05 21 46.5 +0.2**
KIEV pmax pmax
comp=Z,2.0nm,1.0s
HUH Hualalai 64.52 88 *e*P **P 05 22 09.8 -1.0**
comp=Z,404nm,0.8s
BUR04 Bucovina Ar. S 64.97 314 *e*P **P 05 22 11.8 -1.4**
SMW South Mountain 65.22 46 *e*P **P 05 22 16.6 +1.8**
SFJD Kangerlussuaq 65.30 1 LR LR 05 50 53.9
comp=Z,45nm,21.0s,baz=352,slow=36
NIE Niedzica 65.97 318 P **P 05 22 18.4 -1.2**
NIE pmax pmax
comp=Z,2.0nm,1.2s
BR101 Keskin Array S 66.01 303 *e*P P 05 22 17.3 -2.8
BRTR Keskin Array B 66.02 303 P P 05 22 17.3 -2.9
comp=Z,0.4nm,0.7s,baz=108,slow=4.7,SNR=2.8
BRTR LR LR 05 53 24.6
comp=Z,86nm,18.4s,baz=344,slow=38
BRTR Keskin Array B 66.02 303 *i* P **P 05 22 23.0 +2.8**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
BVW Beverly 67.24 45 *e*P **P 05 22 26.7 -1.0**
CLL Collm 67.67 323 *e*P **P 05 22 29.0 -1.3**
CLL Collm 67.67 323 *e*P **P 05 22 29.0 -1.3**
CLL Collm 67.67 323 *e*P **P 05 22 29.0 -1.3**
WR1 Warramunga Arr 67.73 176 *e*P P 05 22 27.6 -3.3
comp=Z,5.4nm,1.0s
WRA Warramunga Arr 67.73 176 P P 05 22 27.6 -3.3
comp=Z,0.6nm,0.8s,baz=353,slow=7.5,SNR=3.7
KHC Kasperske Hory 69.11 321 P **P 05 22 38.7 -0.7**
KHC Kasperske Hory 69.11 321 P **P 05 22 38.7 -0.7**
KHC pmax pmax
comp=Z,2.0nm,2.5s
GERES GERESS Array B 69.28 321 LR LR 05 53 54.3
comp=Z,109nm,20.8s,baz=60,slow=37
YBH Yreka Blue Hor 69.53 50 LR LR 05 52 16.5
comp=Z,39nm,18.4s,baz=317,slow=35
MMAI Mount Meron Ar 69.63 297 LR LR 05 57 17.2
comp=Z,83nm,18.3s,baz=110,slow=39
EKA Eskdalemuir Ar 70.02 334 P **P 05 22 43.2 -1.7**
comp=Z,1.0nm,0.7s,baz=27,slow=4.8,SNR=6.0
KBA Koelnbreinsper 70.79 320 P **P 05 22 48.4 -1.6**
KBA pmax pmax
comp=Z,6.0nm,1.0s
AS01 Alice Springs 71.42 177 *e*P **P 05 22 51.9 -1.8**
ASAR Alice Springs 71.42 177 P **P 05 22 51.6 -2.0**
comp=Z,1.3nm,0.8s,baz=354,slow=6.4,SNR=7.0
GBGM Boggs Mountain 71.67 52 *e*P **P 05 22 54.4 -0.9**
MFID Camas Ranch 71.68 45 *e*P **P 05 22 53.7 -1.7**
comp=Z,3.6nm,1.2s
GCRM Castle Rock Sp 71.69 52 *e*P **P 05 22 53.5 -1.8**
BOZ Bozeman (W) 71.92 41 *e*P **P 05 22 56.8 0.0**
comp=Z,1.9nm,0.8s
BOZ Bozeman (W) 71.92 41 *e*P **P 05 22 56.8 0.0**
BOZ pmax pmax
comp=Z,2.0nm,0.8s
FUORN Ofenpass-Fuorn 72.46 322 *e*P **P 05 22 57.9 -2.2**
comp=Z,4.9nm,0.8s
HTUM Tustin Road 73.69 53 *e*P **P 05 23 04.6 -2.6**
KVN Kaiserville 73.87 49 *e*P **P 05 23 08.2 -0.3**
comp=Z,5.6nm,1.0s
KVN Kaiserville 73.87 49 *e*P **P 05 23 08.2 -0.3**
KVN pmax pmax
comp=Z,6.0nm,1.0s
NV01 Mina Array Sit 74.24 50 *e*P **P 05 23 10.0 -0.8**
NVAR Mina Array Bea 74.24 50 P **P 05 23 09.7 -1.0**
comp=Z,2.5nm,0.8s,baz=292,slow=4.7,SNR=12
NVAR LR LR 05 56 03.7
comp=Z,27nm,18.4s,baz=76,slow=36
PDAR Pinedale Array 75.06 42 P **P 05 23 12.9 -2.5**
comp=Z,0.3nm,0.6s,baz=335,slow=4.9,SNR=3.9
PDAR Pinedale Array 75.06 42 *e*P **P 05 23 14.2 -1.3**
RSSD Black Hills 76.32 37 P **P 05 23 23.3 +0.7**
RSSD pmax pmax
comp=Z,5.0nm,1.1s
STKA Stephens Creek 80.12 171 P **P 05 23 41.3 -1.9**
comp=Z,1.4nm,0.7s,baz=325,slow=12,SNR=2.2
STKA LR LR 05 59 20.1
comp=Z,37nm,19.2s,baz=22,slow=36
STKA Stephens Creek 80.12 171 *e*P **P 05 23 41.3 -1.9**
comp=Z,2.5nm,1.4s
STKA Stephens Creek 80.12 171 *e*P **P 05 23 41.3 -1.9**
STKA pmax pmax
comp=Z,3.0nm,1.4s
KEST Kesra 81.65 316 P **P 05 23 50.6 -1.1**
comp=Z,1.4nm,0.6s,baz=13,slow=1.6,SNR=3.5
KEST Kesra 81.65 316 *e*P P 05 23 49.0 -2.7
comp=Z,5.2nm,1.0s
TXAR Lajitas Array 88.77 45 P **P 05 24 26.3 -1.2**
comp=Z,0.2nm,0.8s,baz=350,slow=4.6,SNR=2.5
TXAR LR LR 06 06 52.3
comp=Z,42nm,18.0s,baz=0.0,slow=37
PPT Papeete 96.09 109 LR LR 06 11 06.4
comp=Z,117nm,18.1s,baz=25,slow=37
SIV San Ignacio 146.56 21 PKPbc **PKPdf 05 31 12.8 -0.9**
baz=344,slow=7.8
SNAA Sanae 148.21 206 PKP **PKPdf 05 31 15.0 +0.2**
SNAA Sanae 148.21 206 PKPbc **PKPdf 05 31 14.7 -0.2**
comp=Z,1.6nm,0.9s,baz=179,slow=4.7,SNR=6.1
VNA1 Neumayer--Stat 150.24 206 PKP **PKPdf 05 31 18.4 +0.4**
VNA3 Neumayer Olymp 150.35 205 PKP **PKPdf 05 31 19.1 +0.9**

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*KRSC **18** 05:20:30.6±2.5, 52°.63N×160°.87E, h17km±37km, ML4.7*
*ISCJB **18** 05:20:32.0±0.8, 52°.62N±0°.02×160°.78E±0°.03, h18km±5km, mb4.3/83, MS3.8/14, Error ellipse: s-maj=4.1km s-min=3.1km az=155.1*
*MOS **18** 05:20:31.8±1.0, 52°.58N×160°.80E, h18km, mb4.5/37, Error ellipse: s-maj=6.8km s-min=3.9km az=91.9*
*NEIC **18** 05:20:36.4±0.8, 52°.87N×160°.50E, h37km±8km, mb4.4/53, Error ellipse: s-maj=9.7km s-min=5.3km az=155.0*
*IDC **18** 05:20:38.6±2.3, 52°.87N×160°.30E, h62km±21km, mb3.7/23, mb1 3.9/24, mb1mx3.7/87, mbtmp4.0/24, MS3.7/13, Ms1 3.7/13, ms1mx3.3/74, Error ellipse: s-maj=16.2km s-min=11.5km az=167.0*

ISC 18 05:20:33.0±1.6, 52°.71N±0°.03×160°.75E±0°.03, h17km±9km, n229, σ1$76/265, mb4.4/83, MS3.8/14, 2C-2D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLC	**Nalytchevo**	**0.97**	**299**	*e*P	**Pb**	**05 20 50.0**	**-1.2**
NLC				*e*S	**Sb**	**05 21 02.7**	**-1.0**
NLC	**Nalytchevo**	**0.97**	**299**	PN	**Pb**	**05 20 50.0**	**-1.2**
NLC				S	**Sb**	**05 21 02.7**	**-1.0**
DALK	**Dalny**	**1.25**	**286**	*e*P	**Pn**	**05 20 54.7**	**-0.9**
DALK				*e*S	**Sb**	**05 21 11.5**	**-0.4**
DALK	**Dalny**	**1.25**	**286**	PN	**Pn**	**05 20 54.7**	**-0.9**
DALK				S	**Sb**	**05 21 11.5**	**-0.4**
SDLR	**Sedlovina**	**1.26**	**297**	*i* P	**Pn**	**05 20 54.9**	**-1.0**
SDLR				*e*S	**Sb**	**05 21 12.0**	**-0.3**
SDLR	**Sedlovina**	**1.26**	**297**	PN	**Pn**	**05 20 54.9**	**-1.0**
SDLR				S	**Sb**	**05 21 12.0**	**-0.3**
UGLR	**Uglovaya**	**1.27**	**294**	*i* P	**Pn**	**05 20 55.1**	**-0.9**
UGLR				*e*S	**Sb**	**05 21 12.3**	**-0.2**
UGLR	**Uglovaya**	**1.27**	**294**	PN	**Pn**	**05 20 55.1**	**-0.9**
UGLR				S	**Sb**	**05 21 12.3**	**-0.2**
PET	**Petropavlovsk**	**1.31**	**285**	*e*Pn	**Pn**	**05 20 55.5**	**-1.0**
PET				*e*Sn	**Sn**	**05 21 13.5**	**0.0**
PET	**Petropavlovsk**	**1.31**	**285**K	*i*PN	**Pn**	**05 20 55.4**	**-1.0**
PET				*e*S	**Sn**	**05 21 09.9**	**-3.6**
PET				pmax	pmax		
	comp=Z,382nm,0.5s						
PET				smax	smax		
	comp=N,3μm,0.7s						
PET				smax	smax		
	comp=N,5μm,0.6s						
PET				smax	smax		
	comp=E,3μm,0.6s						
PET				smax	smax		
	comp=E,3μm,0.5s						
AVH	**Avacha**	**1.34**	**295**	*e*P	**Pn**	**05 20 56.8**	**-0.1**
AVH	**Avacha**	**1.34**	**295**	PN	**Pn**	**05 20 56.8**	**-0.1**
KRER	**Koryakskii**	**1.35**	**297**	*i* P	**Pn**	**05 20 56.5**	**-0.6**
KRER				*e*S	**Sn**	**05 21 14.4**	**-0.3**
KRER	**Koryakskii**	**1.35**	**297**	PN	**Pn**	**05 20 56.5**	**-0.6**
KRER				S	**Sn**	**05 21 14.4**	**-0.3**
RUS	**Russkaya**	**1.39**	**259**	*e*P	**Pn**	**05 20 57.0**	**-0.6**
RUS				*e*S	**Sn**	**05 21 14.0**	**-1.6**
RUS	**Russkaya**	**1.39**	**259**	PN	**Pn**	**05 20 57.0**	**-0.6**
RUS				S	**Sn**	**05 21 14.0**	**-1.6**
KOK	**Koryaka**	**1.40**	**295**	*e*P	**Pn**	**05 20 57.9**	**+0.1**
KOK				*e*S	**Sg**	**05 21 18.6**	**+0.3**
KOK	**Koryaka**	**1.40**	**295**	PN	**Pn**	**05 20 57.9**	**+0.1**
KOK				S	**Sg**	**05 21 18.6**	**+0.3**
KRX	**Arik**	**1.43**	**298**	*i* P	**Pn**	**05 20 57.8**	**-0.4**
KRX	**Arik**	**1.43**	**298**	PN	**Pn**	**05 20 57.8**	**-0.4**
KII	**Karymskiy**	**1.54**	**330**	*e*P	**Pn**	**05 20 59.5**	**-0.2**
KII				*e*S	**Sn**	**05 21 20.3**	**+1.0**
KII	**Karymskiy**	**1.54**	**330**	PN	**Pn**	**05 20 59.5**	**-0.2**
KII				S	**Sn**	**05 21 20.3**	**+1.0**
MTVR	**Mutnovka**	**1.58**	**263**	*e*P	**Pn**	**05 21 00.2**	**-0.1**
MTVR				*e*S	**Sn**	**05 21 18.6**	**-1.9**
MTVR	**Mutnovka**	**1.58**	**263**	PN	**Pn**	**05 21 00.2**	**-0.1**
MTVR				S	**Sn**	**05 21 18.6**	**-1.9**
GRL	**Gorelyy**	**1.64**	**265**	*e*P	**Pn**	**05 21 01.3**	**+0.2**
GRL				*e*S	**Sb**	**05 21 22.7**	**-0.5**
GRL	**Gorelyy**	**1.64**	**265**	PN	**Pn**	**05 21 01.3**	**+0.2**
GRL				S	**Sb**	**05 21 22.7**	**-0.5**
ASAK	**Asacha**	**1.77**	**260**	*i* P	**Pn**	**05 21 03.2**	**+0.3**
ASAK				*e*S	**Sb**	**05 21 26.3**	**-0.6**
ASAK	**Asacha**	**1.77**	**260**	PN	**Pn**	**05 21 03.2**	**+0.3**
ASAK				S	**Sb**	**05 21 26.3**	**-0.6**
PEA0B	**Petropavlovsk-**	**1.89**	**283**	*e*Pn	**Pn**	**05 21 04.5**	**0.0**
PEA0B				*e*Sn	**Sb**	**05 21 30.6**	**+0.3**
PETK	**Petropavlovsk-**	**1.89**	**283**	P	**Pn**	**05 21 04.4**	**-0.1**
	comp=E,102nm,0.3s,baz=97,slow=20,SNR=212						
PETK				S	**Sn**	**05 21 27.9**	**+0.1**
	comp=E,80nm,0.3s,baz=178,slow=16,SNR=19						
PETK	**Petropavlovsk-**	**1.89**	**283**	*e*Pn	**Pn**	**05 21 04.5**	**+0.1**
PETK				*e*Sn	**Sn**	**05 21 25.9**	**-2.0**
MKZ	**Mys Kozlova**	**1.94**	**17**	*e*P	**Pn**	**05 21 05.2**	**+0.2**
MKZ				*e*S	**Sn**	**05 21 28.0**	**-0.9**
MKZ	**Mys Kozlova**	**1.94**	**17**	PN	**Pn**	**05 21 05.2**	**+0.2**
MKZ				S	**Sn**	**05 21 28.0**	**-0.9**
GNL	**Ganaly**	**1.96**	**301**	*i* P	**Pn**	**05 21 06.1**	**+0.7**
GNL				*e*S	**Sn**	**05 21 30.6**	**+1.0**
GNL	**Ganaly**	**1.96**	**301**	PN	**Pn**	**05 21 06.1**	**+0.7**
GNL				S	**Sn**	**05 21 30.6**	**+1.0**
APC	**Apacha**	**2.19**	**277**	*e*P	**Pn**	**05 21 09.5**	**+1.0**
APC				*e*S	**Sn**	**05 21 35.9**	**+0.7**
APC	**Apacha**	**2.19**	**277**	PN	**Pn**	**05 21 09.5**	**+1.0**
APC				S	**Sn**	**05 21 35.9**	**+0.7**
KZV	**Kizimen**	**2.42**	**354**	*i* P	**Pn**	**05 21 13.3**	**+1.4**
KZV				*e*S	**Sn**	**05 21 44.3**	**+3.2**
KZV	**Kizimen**	**2.42**	**354**	PN	**Pn**	**05 21 13.3**	**+1.4**
KZV				S	**Sn**	**05 21 44.3**	**+3.2**
MIPR	**Malaya Ipel'ka**	**2.48**	**261**	*e*P	**Pb**	**05 21 15.8**	**-1.2**
MIPR	**Malaya Ipel'ka**	**2.48**	**261**	PN	**Pb**	**05 21 15.8**	**-1.2**
TUMR	**Tumrok**	**2.60**	**352**	*e*P	**Pn**	**05 21 16.1**	**+1.8**
TUMR				*e*S	**Sn**	**05 21 48.0**	**+2.5**
TUMR	**Tumrok**	**2.60**	**352**	PN	**Pn**	**05 21 16.1**	**+1.8**
TUMR				S	**Sn**	**05 21 48.0**	**+2.5**
KMNR	**Kamenistaya**	**3.06**	**355**	*i* P	**Pn**	**05 21 23.9**	**+3.2**
KMNR				*e*S	**Sb**	**05 22 02.1**	**-2.1**
KMNR	**Kamenistaya**	**3.06**	**355**	PN	**Pn**	**05 21 23.9**	**+3.2**
KMNR				S	**Sb**	**05 22 02.1**	**-2.1**
BZMR	**Bezymyannaya**	**3.23**	**357**	*e*P	**Pn**	**05 21 26.0**	**+3.0**
BZMR	**Bezymyannaya**	**3.23**	**357**	PN	**Pn**	**05 21 26.0**	**+3.0**
BZGR	**Bezymyannyi-Gr**	**3.23**	**359**	*e*P	**Pn**	**05 21 25.3**	**+2.3**
BZGR				*e*S	**Sn**	**05 22 03.4**	**+2.3**
BZGR	**Bezymyannyi-Gr**	**3.23**	**359**	PN	**Pn**	**05 21 25.3**	**+2.3**
BZGR				S	**Sn**	**05 22 03.4**	**+2.3**
KIRR	**Kirishev**	**3.26**	**356**	*e*P	**Pn**	**05 21 25.7**	**+2.4**
KIRR	**Kirishev**	**3.26**	**356**	PN	**Pn**	**05 21 25.7**	**+2.4**
BZWR	**Bezymyannyi-We**	**3.26**	**357**	*e*P	**Pn**	**05 21 26.1**	**+2.7**
BZWR	**Bezymyannyi-We**	**3.26**	**357**	PN	**Pn**	**05 21 26.1**	**+2.7**
KPT	**Kopyto**	**3.27**	**355**	*e*P	**Pn**	**05 21 26.5**	**+3.0**
KPT	**Kopyto**	**3.27**	**355**	PN	**Pn**	**05 21 26.5**	**+3.0**

ZLN Zelenaya 3.31 1 *eP* **Pn 05 21 26.5 +2.4**
ZLN *eS* **Sb 05 22 08.4 -2.9**
ZLN Zelenaya 3.31 1 PN **Pn 05 21 26.5 +2.4**
ZLN S **Sb 05 22 08.4 -2.9**
LGNR Loginova 3.38 359 *eP* **Pn 05 21 28.0 +2.9**
LGNR *eS* **Sn 05 22 08.4 +3.5**
LGNR Loginova 3.38 359 PN **Pn 05 21 28.0 +2.9**
LGNR S **Sn 05 22 08.4 +3.5**
KOZ Kozyrevsk 3.39 352 *eP* **Pn 05 21 27.4 +2.3**
KOZ Kozyrevsk 3.39 352 PN **Pn 05 21 27.4 +2.3**
CIRR Tsirk 3.41 360 *eP* **Pn 05 21 28.3 +2.9**
CIRR Tsirk 3.41 360 PN **Pn 05 21 28.3 +2.9**
ESO Esso 3.44 340 *eP* **Pn 05 21 26.7 +1.0**
ESO Esso 3.44 340 PN **Pn 05 21 26.7 +1.0**
KRSR Krestovskiy 3.51 358 *eP* **Pn 05 21 29.8 +3.0**
KRSR Krestovskiy 3.51 358 PN **Pn 05 21 29.8 +3.0**
SKR Severo-Kuril's 3.53 237 *e*PN **Pn 05 21 27.1 +0.2**
SKR MLR MLR
comp=Z,700nm,11.0s
KLY Klyuchi 3.61 359 *eP* **Pn 05 21 31.6 +3.6**
KLY *eS* **Sn 05 22 12.9 +2.7**
KLY Klyuchi 3.61 359 PN **Pn 05 21 31.6 +3.6**
KBTR Krutoberegovo 3.71 18 *eP* **Pn 05 21 30.1 +0.8**
KBTR *eS* **Sn 05 22 12.2 -0.3**
KBTR Krutoberegovo 3.71 18 PN **Pn 05 21 30.1 +0.8**
BDR Baidarnaya 3.87 4 *eP* Pn 05 21 37.0 +5.3
BDR *eS* **Sb 05 22 24.1 -3.3**
BDR Baidarnaya 3.87 4 PN Pn 05 21 37.0 +5.3
BDR S **Sb 05 22 24.1 -3.3**
SMKR Semkarok 3.90 6 *eP* **Pn 05 21 34.2 +2.1**
SMKR *eS* **Sn 05 22 19.5 +2.0**
SMKR Semkarok 3.90 6 PN **Pn 05 21 34.2 +2.1**
SRKR Sorokina 3.96 3 *eP* **Pb 05 21 38.5 -3.7**
SRKR *eS* **Sb 05 22 26.4 -3.4**
SRKR Sorokina 3.96 3 PN **Pb 05 21 38.5 -3.7**
SRKR S **Sb 05 22 26.4 -3.4**
BKI Bering 3.97 49 *eP* **Pn 05 21 32.3 -0.6**
BKI *eS* **Sn 05 22 15.6 -3.4**
BKI Bering 3.97 49 PN **Pn 05 21 32.3 -0.6**
SMY Shemya 8.11 85 *e*Pn **Pn 05 22 30.5 +0.8**
SMY Shemya 8.11 85 *e*PN **Pn 05 22 30.5 +0.8**
MA2 Magadan 8.84 325 LR LR 05 26 14.6
comp=Z,347nm,20.0s,baz=164,slow=39
MA2 Magadan 8.84 325 *e*Pn **Pn 05 22 38.6 -1.2**
MA2 Magadan 8.84 325 *e*PN **Pn 05 22 38.6 -1.2**
ASAJ Asahikawa 14.77 242 P **Pn 05 24 01.2 +0.2**
comp=Z,1.0nm,0.3s,baz=131,slow=20,SNR=3.0
BILL Bilibino 15.61 8 *e*Pn **Pn 05 24 12.5 +0.7**
comp=Z,4.9nm,0.7s
BILL Bilibino 15.61 8 *eP* **Pn 05 24 12.2 +0.4**
BILL pmax pmax
comp=Z,6.0nm,0.9s
BILL MLR MLR
comp=Z,164nm,15.0s
ERM Erimo 15.97 235 *e*Pn **Pn 05 24 16.7 +0.1**
comp=Z,19nm,1.0s
ERM Erimo 15.97 235 *eP* **Pn 05 24 16.7 +0.1**
ERM pmax pmax
comp=Z,19nm,1.0s
KLR Kul'dur 18.53 271 LR LR 05 32 40.6
comp=Z,16nm,18.5s,baz=76,slow=40
USRK Ussuriysk Ar. 20.77 257 LR LR 05 33 60.0
comp=Z,212nm,18.1s,baz=63,slow=39
MJAR Matsushiro Arr 22.63 233 P **P 05 25 33.7 +0.8**
comp=Z,2.0nm,0.3s,baz=47,slow=8.7,SNR=4.1
MJB9 Matsu-Tunnel 22.63 233 *eP* **P 05 25 35.8 +2.9**
comp=Z,12nm,0.6s
MAJO Matsushiro 22.63 233 *eP* **P 05 25 35.1 +2.2**
comp=Z,12nm,0.6s
MAJO Matsushiro 22.63 233 *i* P **P 05 25 31.1 -1.8**
MAJO pmax pmax
comp=Z,7.0nm,0.8s
MAT Matsushiro 22.63 233 P **P 05 25 35.7 +2.8**
TIXI Tiksi 23.59 335 LR LR 05 35 47.9
comp=Z,142nm,19.5s,baz=102,slow=39
TIXI Tiksi 23.59 335 *eP* **P 05 25 40.0 -2.4**
comp=Z,38nm,1.5s
TIXI Tiksi 23.59 335 *eP* **P 05 25 40.0 -2.4**
TIXI pmax pmax
comp=Z,38nm,1.5s
CHGN Chignik 23.73 65 *eP* **P 05 25 46.1 +2.3**
comp=Z,43nm,1.4s
SVW2 Sparrevohn 24.84 53 *eP* **P 05 25 55.1 +1.0**
comp=Z,7.5nm,1.4s
OHAK Old Harbor 26.36 62 *eP* **P 05 26 07.6 -0.2**
comp=Z,11nm,0.7s
KDAK Kodiak Island 26.64 60 *eP* **P 05 26 11.5 +1.1**
comp=Z,11nm,1.1s
KDAK Kodiak Island 26.64 60 *eP* **P 05 26 11.5 +1.1**
KDAK pmax pmax
comp=Z,11nm,1.1s
BPAW Bear Paw Mtn. 27.02 46 *eP* **P 05 26 14.8 +1.1**
comp=Z,2.2nm,0.8s
SUA Susitna One 27.16 52 *eP* **P 05 26 17.3 +2.2**
comp=Z,5.8nm,1.2s
MLY Manley 27.17 44 *eP* **P 05 26 16.4 +1.3**
comp=Z,2.5nm,0.9s
TRF Thorofare Moun 27.32 48 *eP* **P 05 26 17.2 +0.6**
comp=Z,7.8nm,1.2s
KSRS Korea Array 27.45 249 LR LR 05 37 35.0
comp=Z,70nm,19.7s,baz=40,slow=37
RND Reindeer 27.96 48 *eP* **P 05 26 22.2 0.0**
comp=Z,3.9nm,1.2s
RND Reindeer 27.96 48 *eP* **P 05 26 22.2 0.0**
RND pmax pmax
comp=Z,4.0nm,1.2s
TOLK Toolik Lake Re 28.03 36 *eP* **P 05 26 23.8 +1.0**
comp=Z,3.4nm,0.9s
WRH Wood River Hil 28.29 45 *eP* **P 05 26 26.6 +1.6**
comp=Z,5.6nm,1.3s
SML Sawmill 28.29 51 *eP* **P 05 26 26.4 +1.3**
comp=Z,4.7nm,0.6s
SML Sawmill 28.29 51 *eP* **P 05 26 26.4 +1.3**
SML pmax pmax
comp=Z,5.0nm,0.6s
CCB Clear Creek Bu 28.41 45 *eP* **P 05 26 26.2 +0.1**
comp=Z,1.6nm,0.8s
DHY Denali Highway 28.64 48 *eP* **P 05 26 27.7 -0.7**
comp=Z,3.9nm,1.3s
SCM Sheep Creek Mo 28.76 51 *eP* **P 05 26 29.8 +0.5**
comp=Z,16nm,1.4s
SCM Sheep Creek Mo 28.76 51 *eP* **P 05 26 29.8 +0.5**
SCM pmax pmax
comp=Z,16nm,1.4s
IL1 Eielson Array 28.80 45 *eP* **P 05 26 31.2 +1.5**
ILAR Eielson Array 28.80 45 P **P 05 26 29.4 -0.2**
comp=Z,0.5nm,0.5s,baz=256,slow=6.3,SNR=9.8
ILAR Eielson Array 28.80 45 *eP* **P 05 26 31.0 +1.4**
ILAR pmax pmax
comp=Z,1.0nm,0.5s
ILB Eielson Array 28.80 45 *eP* **P 05 26 31.4 +1.7**
JNU Nakatsue 29.03 239 LR LR 05 39 02.4
comp=Z,70nm,18.3s,baz=124,slow=38
RIDG Independ'e Rid 29.74 47 *eP* **P 05 26 38.0 0.0**
comp=Z,4.1nm,1.2s
EGAK Eagle 31.25 45 *eP* **P 05 26 51.1 -0.1**
comp=Z,2.8nm,0.8s
H11N2 WAKE ISLAND Hy 33.26 169 T T 06 02 29.2
baz=353,slow=76,SNR=60
H11N3 WAKE ISLAND Hy 33.28 169 T T 06 02 26.7
baz=353,slow=76,SNR=66
H11N1 WAKE ISLAND Hy 33.28 169 T T 06 02 30.5
baz=353,slow=76,SNR=71
H11S1 WAKE ISLAND Hy 34.45 170 T T 06 03 55.8
baz=352,slow=76,SNR=10
H11S3 WAKE ISLAND Hy 34.46 170 T T 06 03 56.6
baz=352,slow=76,SNR=12
H11S2 WAKE ISLAND Hy 34.47 170 T T 06 03 57.4
baz=352,slow=76,SNR=8.8
HHC Hu-ho-hao-te 35.04 270 *eP* **P 05 27 25.6 +0.9**
HHC pmax pmax
comp=Z,17nm,0.5s
HHC pmax pmax
comp=Z,130nm,5.2s
NRIK Noril'sk 36.45 325 LR LR 05 43 52.7
comp=Z,362nm,18.3s,baz=57,slow=38
DLBC Dease Lake 37.95 53 P **P 05 27 51.8 +2.5**
comp=Z,2.1nm,0.7s,baz=255,slow=12,SNR=5.4
DLBC Dease Lake 37.95 53 *eP* **P 05 27 51.5 +2.2**
comp=Z,6.5nm,1.4s
LZH Lanzhou 42.74 270 *eP* **P 05 28 30.1 +0.8**
LZH pP sP 05 28 40.8 +4.1
LZH sP pP 05 28 45.8 +11
LZH *e*PP **PP 05 30 11.3 +3.0**
LZH pmax pmax
comp=Z,15nm,1.1s
LZH pmax pmax
comp=Z,46nm,5.2s
LZH LR LR
comp=N,170nm,13.2s
LZH LR LR
comp=E,170nm,13.1s
LZH LR LR
comp=Z,210nm,16.7s
YKA Yellowknife Ar 43.17 43 P **P 05 28 32.9 +0.7**
comp=Z,1.0nm,0.8s,baz=299,slow=8.0,SNR=7.9
ZALV Zalesovo Beam 43.32 303 LR LR 05 47 53.8
comp=Z,113nm,19.4s,baz=68,slow=38
RES Resolute Bay 43.53 22 *eP* **P 05 28 36.5 +1.6**
comp=Z,5.2nm,1.1s
RES Resolute Bay 43.53 22 *eP* **P 05 28 36.5 +1.6**
RES pmax pmax
comp=Z,5.0nm,1.1s
HUH Hualalai 46.99 118 *eP* **P 05 29 02.3 -1.0**
comp=Z,174nm,0.8s
WMQ Urumqi 47.47 290 P **P 05 29 09.0 +2.3**
WMQ pmax pmax
comp=Z,25nm,1.1s
WMQ pmax pmax
comp=Z,380nm,3.7s
WMQ LR LR
comp=N,190nm,18.3s
WMQ LR LR
comp=Z,140nm,21.5s
SPITS Spitsbergen Ar 47.58 351 P **P 05 29 06.4 -0.6**
comp=Z,2.3nm,0.5s,baz=49,slow=9.2,SNR=9.6
KURK Kurchatov 48.27 302 *i* P P 05 29 08.2 -4.5
KURK pmax pmax
comp=Z,5.0nm,1.2s
KURBB Kurchatov Arra 48.37 302 P **P 05 29 11.0 -2.5**
comp=Z,1.4nm,0.5s,baz=59,slow=7.4,SNR=13
MK31 Makanchi Array 48.68 296 *eP* **P 05 29 13.0 -2.9**
MK31 Makanchi Array 48.68 296 *eP* **P 05 29 13.0 -2.9**
MKAR Makanchi Array 48.68 296 P **P 05 29 12.9 -3.0**
comp=Z,0.8nm,0.5s,baz=58,slow=7.2,SNR=16
MKAR Makanchi Array 48.68 296 *eP* **P 05 29 12.9 -3.0**
comp=Z,12nm,0.6s
MKAR Makanchi Array 48.68 296 *eP* **P 05 29 12.9 -3.0**
MKAR pmax pmax
comp=Z,12nm,0.6s
MK01 Makanchi Array 48.69 296 *eP* **P 05 29 13.2 -2.8**
YBH Yreka Blue Hor 50.78 70 *eP* **P 05 29 34.3 +2.2**
comp=Z,3.6nm,1.2s
YBH Yreka Blue Hor 50.78 70 *eP* **P 05 29 34.3 +2.2**
YBH pmax pmax
comp=Z,4.0nm,1.2s
WALA Waterton Lakes 50.93 58 *eP* **P 05 29 33.8 +0.7**
comp=Z,9.7nm,1.2s
BVAR Borovoye Array 50.94 309 P **P 05 29 30.7 -2.2**
comp=Z,0.7nm,0.5s,baz=68,slow=9.4,SNR=3.3
BVAR LR LR 05 52 36.6
comp=Z,116nm,19.0s,baz=58,slow=38
MOD Modoc Plateau 52.04 68 *eP* **P 05 29 43.4 +1.8**
comp=Z,0.9nm,0.7s
OTUK Ortayu 53.02 303 P **P 05 29 50.5 +1.9**
OTUK pmax pmax
comp=Z,3.0nm,0.8s
FCC Fort Churchill 53.53 39 *eP* **P 05 29 52.7 +0.7**
comp=Z,2.2nm,0.6s
FCC Fort Churchill 53.53 39 *eP* **P 05 29 52.7 +0.7**
FCC pmax pmax
comp=Z,2.0nm,0.6s
ARCES ARCESS Array B 53.77 342 P **P 05 29 51.3 -2.4**
comp=Z,1.3nm,0.7s,baz=55,slow=11,SNR=5.8
DAV Davao City (W) 53.80 225 *eP* **P 05 29 55.5 +0.9**
comp=Z,468nm,0.4s
ARU Arti 53.95 318 *c i*P **P 05 29 53.6 -1.6**
ARU S **S 05 37 27.3 -2.3**
ARU SS **SKiKP 05 41 05.1 -1.6**
ARU pmax pmax
comp=Z,10.0nm,2.5s
MCMT McKenzie Canyo 54.21 61 *eP* **P 05 29 58.1 +0.5**
SUMG Summit 54.29 7 *eP* **P 05 29 58.8 +0.8**
comp=Z,4.9nm,0.9s
SUMG Summit 54.29 7 *eP* **P 05 29 58.8 +0.8**
SUMG pmax pmax
comp=Z,5.0nm,0.9s
PNTR Pine Nut 54.31 71 *eP* **P 05 30 00.4 +2.0**
comp=Z,4.8nm,0.8s
BOZ Bozeman (W) 54.35 60 *eP* **P 05 29 59.5 +1.0**
comp=Z,1.8nm,0.6s
BOZ Bozeman (W) 54.35 60 *eP* **P 05 29 59.5 +1.0**
BOZ pmax pmax
comp=Z,2.0nm,0.6s
WAKR Walker 54.80 71 *eP* **P 05 30 03.9 +2.0**
comp=Z,2.6nm,0.7s
KVN Kaiserville 55.19 70 *eP* **P 05 30 06.3 +1.6**
comp=Z,8.0nm,1.4s
KVN Kaiserville 55.19 70 *eP* **P 05 30 06.3 +1.6**
KVN pmax pmax
comp=Z,8.0nm,1.4s
GCMT Greycliff 55.24 58 *eP* **P 05 30 06.8 +1.8**
NV01 Mina Array Sit 55.50 70 *eP* **P 05 30 08.7 +1.7**
NVAR Mina Array Bea 55.50 70 P **P 05 30 08.7 +1.7**
comp=Z,1.2nm,0.6s,baz=302,slow=7.7,SNR=13
ELK Elko 55.65 66 P **P 05 30 11.0 +2.9**
comp=Z,1.4nm,0.6s,baz=50,slow=7.9,SNR=7.6
RLMT Red Lodge 55.90 59 *eP* **P 05 30 11.5 +1.7**
comp=Z,4.8nm,0.9s
HWUT Hardware Ranch 57.08 63 *eP* **P 05 30 20.0 +1.8**
comp=Z,3.3nm,0.8s
R11A Troy Canyon, C 57.10 69 *eP* **P 05 30 20.1 +1.7**
comp=Z,2.1nm,1.4s
BW06 Boulder Array 57.36 61 *eP* **P 05 30 21.6 +1.4**
comp=Z,3.7nm,0.9s
PD31 Pinedale Array 57.36 61 *eP* **P 05 30 21.6 +1.3**
PDAR Pinedale Array 57.36 61 P **P 05 30 21.5 +1.3**
comp=Z,1.9nm,0.7s,baz=308,slow=2.6,SNR=20
PDAR LR LR 05 55 55.0
comp=Z,40nm,18.8s,baz=343,slow=37
DUG Dugway, Tooele 57.37 65 P **P 05 30 22.1 +1.9**
DUG pmax pmax
comp=Z,3.0nm,1.3s
AKTO Aktyubinsk 58.37 313 P **P 05 30 24.6 -2.3**
comp=Z,0.6nm,0.4s,baz=281,slow=5.2,SNR=2.3
AKTO LR LR 05 57 45.1
comp=Z,79nm,20.5s,baz=46,slow=38
ULM Lac du Bonnet 58.79 47 P **P 05 30 30.1 +0.3**
comp=Z,1.8nm,0.4s,baz=315,slow=4.3,SNR=2.9
ULM Lac du Bonnet 58.79 47 *eP* **P 05 30 30.4 +0.6**
comp=Z,4.1nm,0.9s
ULM Lac du Bonnet 58.79 47 *eP* **P 05 30 30.4 +0.6**
ULM pmax pmax
comp=Z,4.0nm,0.9s
TMUT Trail Mountain 58.89 65 *eP* **P 05 30 32.7 +1.6**
comp=Z,3.6nm,0.7s
RSSD Black Hills 59.28 57 *eP* **P 05 30 34.7 +1.1**
comp=Z,6.6nm,0.8s
RSSD Black Hills 59.28 57 *eP* **P 05 30 34.7 +1.1**
RSSD pmax pmax
comp=Z,7.0nm,0.8s
SRU San Rafael Swe 59.39 65 *eP* **P 05 30 36.0 +1.6**
comp=Z,4.6nm,0.8s
SRU San Rafael Swe 59.39 65 *eP* **P 05 30 36.0 +1.6**
SRU pmax pmax
comp=Z,5.0nm,0.8s
KNB Kanab 59.59 68 *eP* **P 05 30 37.9 +2.1**
comp=Z,1.4nm,0.7s
KNB Kanab 59.59 68 *eP* **P 05 30 37.9 +2.1**
KNB pmax pmax
comp=Z,1.0nm,0.7s
FIA1 FINESS Array S 60.63 337 *eP* **P 05 30 42.1 -0.1**
FINES FINESS Array B 60.63 337 P **P 05 30 41.3 -0.9**
comp=Z,2.8nm,0.6s,baz=35,slow=7.7,SNR=9.3
FINES FINESS Array B 60.63 337 *i* P **P 05 30 41.5 -0.7**
FINES pmax pmax
comp=Z,3.0nm,0.6s
ISCO Idaho Springs 61.56 61 *eP* **P 05 30 51.2 +1.9**
comp=Z,2.5nm,1.0s
ISCO Idaho Springs 61.56 61 *eP* **P 05 30 51.2 +1.9**
ISCO pmax pmax
comp=Z,3.0nm,1.0s
HNR Honiara 61.90 181 LR LR 05 52 58.1
comp=Z,47nm,22.0s,baz=40,slow=31
ECSD EROS Data Cent 63.24 52 *eP* **P 05 31 00.6 +0.5**
comp=Z,1.7nm,0.8s
D41A Chassel 64.39 45 *eP* **P 05 31 08.0 +0.4**
comp=Z,14nm,1.1s
HFS Hagfors 64.43 342 P **P 05 31 06.0 -1.7**
comp=Z,0.7nm,0.4s,baz=35,slow=5.8,SNR=3.7
HFS Hagfors 64.43 342 P **P 05 31 06.0 -1.7**
HFS pmax pmax
comp=Z,1.0nm,0.4s
ANMO Albuquerque 64.65 65 P **P 05 31 10.4 +0.7**
comp=Z,0.5nm,0.3s,baz=285,slow=6.6,SNR=4.8
MNTX Cornudas Mount 67.67 67 *eP* **P 05 31 30.1 +1.2**
comp=Z,2.3nm,0.9s
WMOK Wichita Mounta 68.95 60 *eP* **P 05 31 37.4 +0.4**
comp=Z,3.3nm,0.8s
WMOK Wichita Mounta 68.95 60 *eP* **P 05 31 37.4 +0.4**
WMOK pmax pmax
comp=Z,3.0nm,0.8s
AKASG Malin Array Be 69.14 329 P **P 05 31 36.5 -1.3**
comp=Z,1.1nm,0.4s,baz=29,slow=6.7,SNR=6.6
KIEV Kiev 69.16 329 *i* P **P 05 31 35.8 -2.1**
KIEV pmax pmax
comp=Z,3.0nm,1.0s
HDIL Hopedale 69.16 50 *eP* **P 05 31 38.4 +0.3**
comp=Z,9.7nm,0.6s
R40A Maddies Statio 69.52 53 *eP* **P 05 31 39.9 -0.5**
comp=Z,2.4nm,0.6s
HHAR Hobbs 70.26 56 *eP* **P 05 31 44.2 -0.8**
comp=Z,3.1nm,0.6s
TX31 Lajitas Ar. Si 70.42 67 *eP* **P 05 31 47.2 +1.0**
TXAR Lajitas Array 70.42 67 P **P 05 31 47.0 +0.9**
comp=Z,1.9nm,0.6s,baz=302,slow=4.6,SNR=32
EKA Eskdalemuir Ar 71.50 350 P **P 05 31 51.8 -0.3**
comp=Z,0.2nm,0.4s,baz=20,slow=5.0,SNR=3.5
V48A Smith Brothers 74.18 51 *eP* **P 05 32 08.7 +0.3**
comp=Z,5.3nm,1.0s
WB2 Warramunga Arr 75.90 206 *eP* **P 05 32 17.8 -0.5**
comp=Z,16nm,1.4s
WRA Warramunga Arr 75.91 206 P **P 05 32 17.7 -0.7**
comp=Z,2.2nm,0.9s,baz=24,slow=6.3,SNR=9.6
WRA Warramunga Arr 75.91 206 *i* P **P 05 32 16.3 -2.1**
WRA pmax pmax
comp=Z,2.0nm,0.8s
BFO Black Forest 76.63 341 P **P 05 32 26.4 +4.1**
BFO pmax pmax
comp=Z,11nm,0.7s
KBA Koelnbreinsper 76.76 338 P **P 05 32 26.5 +3.2**
KBA pmax pmax
comp=Z,8.0nm,1.4s
BRTR Keskin Array B 77.17 321 P **P 05 32 24.0 -1.7**
comp=Z,0.4nm,0.5s,baz=354,slow=5.2,SNR=3.0
AS01 Alice Springs 79.56 205 *eP* **P 05 32 39.1 +0.3**
ASAR Alice Springs 79.58 205 P **P 05 32 39.3 +0.5**
comp=Z,1.2nm,0.6s,baz=16,slow=5.3,SNR=13
ASAR Alice Springs 79.58 205 *eP* **P 05 32 39.1 +0.3**
ASAR pmax pmax
comp=Z,1.0nm,0.6s
PPT Papeete 82.10 133 LR LR 06 00 08.8
comp=Z,75nm,21.4s,baz=16,slow=29
ATD Arta Tunnel 96.97 299 LR LR 06 22 58.8
comp=Z,50nm,18.3s,baz=334,slow=39

IDC ***18*** *05:36:25.0±5.3, 14°.61N×92°.58W, h0km, mb3.6/4, mb1 3.9/6, mb1mx3.6/44, mbtmp3.5/6, ML3.3/2, MS2.9/1, Ms1 2.9/1, ms1mx2.3/42, Error ellipse: s-maj=151.2km s-min=49.9km az=33.0*
NEIC ***18*** *05:36:26.8±0.0, 14°.08N×93°.12W, h16km, MD4.1(MEX), After MEX.*
MEX ***18*** *05:36:26.8±0.7, 14°.08N×93°.12W, h16km±104km, MD4.1*
ISC 18 05:36:28.7±1.6, 14°.2N±0°.1×93°.00W±0°.07, h37km, n15, σ1♀20/23, mb3.7/4, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
THIG		**0.98**	**46**	*eP*		**Pn**	**05 36 45.0**	**-1.0**
THIG				*eS*		**Sn**	**05 36 58.6**	**+0.1**
THIG		**0.98**	**46**	*eP*		**Pn**	**05 36 45.0**	**-1.0**
THIG				*eS*		**Sn**	**05 36 58.6**	**+0.1**
PCIG		**1.48**	**352**	*eP*		**Pn**	**05 36 50.7**	**-2.1**
PCIG				*eS*		**Sn**	**05 37 10.4**	**-0.6**
PCIG		**1.48**	**352**	*eP*		**Pn**	**05 36 50.7**	**-2.1**
PCIG				*eS*		**Sn**	**05 37 10.4**	**-0.6**
CCIG	**Comitan**	**2.20**	**22**	*eP*		**Pn**	**05 37 01.8**	**-1.1**
CCIG				*eS*		**Sn**	**05 37 30.9**	**+1.9**
CCIG	**Comitan**	**2.20**	**22**	*eP*		**Pn**	**05 37 01.8**	**-1.1**
CCIG				*eS*		**Sn**	**05 37 30.9**	**+1.9**
TGIG		**2.54**	**357**	*eP*		**Pn**	**05 37 08.1**	**+0.7**
TGIG				*eS*		**Sn**	**05 37 37.2**	**+0.1**
TGIG		**2.54**	**357**	*eP*		**Pn**	**05 37 08.1**	**+0.7**
TGIG				*eS*		**Sn**	**05 37 37.2**	**+0.1**
CMIG	**Matias Romero**	**3.38**	**328**	Pn		**Pn**	**05 37 18.2**	**-0.7**
	3.5nm,0.3s,baz=163,slow=14,SNR=42							
CMIG				Sn		**Sn**	**05 37 58.8**	**+1.1**
	6.5nm,0.3s,baz=292,slow=21,SNR=6.9							
TXAR	**Lajitas Array**	**17.98**	**328**	P		**P**	**05 40 36.6**	**+0.4**
	0.0nm,0.3s,baz=160,slow=14,SNR=2.3							
NNA	**Nana**	**30.58**	**148**	LR		LR	05 52 21.5	
	comp=Z,25nm,20.7s,baz=299,slow=31							
PDAR	**Pinedale Array**	**31.82**	**337**	P		**P**	**05 42 48.9**	**-1.3**
	0.1nm,0.4s,baz=144,slow=7.8,SNR=2.6							
NVAR	**Mina Array Bea**	**32.89**	**322**	P		**P**	**05 43 01.3**	**+1.7**
	1.0nm,0.7s,baz=138,slow=8.3,SNR=8.7							
YKA	**Yellowknife Ar**	**50.59**	**347**	P		**P**	**05 45 23.7**	**+0.2**
	1.2nm,0.7s,baz=152,slow=7.5,SNR=14							
ILAR	**Eielson Array**	**62.25**	**337**	P		**P**	**05 46 46.6**	**+0.1**
	0.6nm,1.0s,baz=128,slow=4.0,SNR=4.3							

NIED ***18*** *05:45:00, 38°.80N×142°.50E, h32km, Mw3.7 Best double couple: M0 3.60000×10^14 NP1:φ=93.00000°, δ21.00000°, λ133.00000°. NP2:φ=229.00000°, δ75.00000°, λ75.00000°.*
ISCJB ***18*** *05:45:37.0±0.9, 38°.83N±0°.04×142°.49E±0°.08, h50km±8km, mb3.9/11, Error ellipse: s-maj=11.3km s-min=5.5km az=21.4*
JMA ***18*** *05:45:37.3±0.1, 38°.82N×142°.46E, h42km±2km, M3.9*
JMA Felt II J1.
IDC ***18*** *05:45:40.1±2.8, 38°.78N×142°.33E, h62km±25km, mb3.5/11, mb1 3.7/14, mb1mx3.5/70, mbtmp3.8/14, ML3.2/3, MS2.5/3, Ms1 2.5/3, ms1mx2.3/64, Error ellipse: s-maj=20.1km s-min=15.8km az=103.0*
ISC 18 05:45:38.2±1.8, 38°.83N±0°.06×142°.45E±0°.10, h42km±17km, n35, σ1♀04/38, mb3.8/11, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.66**	**292**	P		**Pn**	**05 45 50.6**	**-0.5**
OFUJ				S		**Sn**	**05 46 00.1**	**-0.2**
MIYJ	**Miyakonagasawa**	**0.89**	**327**	P		**Pn**	**05 45 53.7**	**-0.5**
MIYJ				S		**Sn**	**05 46 05.5**	**-0.5**
JIO	**Ouri**	**0.94**	**247**	P		**Pn**	**05 45 54.0**	**-0.9**
JIO				S		**Sn**	**05 46 05.7**	**-1.5**
JMK	**Ichinoseki**	**0.97**	**277**	P		**Pn**	**05 45 54.9**	**-0.4**
JMK				S		**Sn**	**05 46 07.6**	**-0.2**
JOM	**Ohasama**	**1.10**	**306**	P		**Pn**	**05 45 57.2**	**0.0**
JOM				S		**Sn**	**05 46 11.7**	**+0.5**
JTH	**Tanohata**	**1.19**	**338**	P		**Pn**	**05 45 58.2**	**-0.2**
JTH				S		**Sn**	**05 46 14.1**	**+0.7**
JOU	**Okura**	**1.47**	**252**	P		**Pn**	**05 46 01.9**	**-0.4**
JOU				S		**Sn**	**05 46 20.4**	**+0.1**
JRG	**Rokugo**	**1.52**	**292**	P		**Pn**	**05 46 03.2**	**+0.3**
JRG				S		**Sn**	**05 46 22.9**	**+1.5**
JMM	**Marumori**	**1.62**	**234**	P		**Pn**	**05 46 03.5**	**-0.7**
JYK	**Kaneyama**	**1.63**	**274**	P		**Pn**	**05 46 04.5**	**+0.1**
JYK				S		**Sn**	**05 46 25.0**	**+0.8**
JANG	**Nango**	**1.70**	**335**	P		**Pn**	**05 46 04.9**	**-0.5**
JFK	**Kawauchi**	**1.92**	**221**	P		**Pn**	**05 46 07.6**	**-0.8**
MJAR	**Matsushiro Arr**	**4.07**	**237**	P		**Pn**	**05 46 40.0**	**+2.1**
	1.6nm,0.3s,baz=13,slow=15,SNR=4.5							
MJAR				LR		LR	05 48 27.3	
	comp=Z,81nm,18.3s,baz=240,slow=42							
MAT	**Matsushiro**	**4.07**	**237**	P		**Pn**	**05 46 40.6**	**+2.7**
MAT				*eS*		**Sn**	**05 47 27.1**	**+2.8**
ASAJ	**Asahikawa**	**5.28**	**1**	P		**Pn**	**05 46 55.8**	**+1.3**
	1.5nm,0.3s,baz=247,slow=9.7,SNR=4.2							
ASAJ				S		**Sn**	**05 47 54.0**	**0.0**
	baz=88,slow=15,SNR=3.0							
ASAJ				LR		LR	05 49 31.9	
	comp=Z,70nm,18.9s,baz=162,slow=43							
USRK	**Ussuriysk Ar.**	**9.50**	**308**	P		**Pn**	**05 47 52.9**	**+0.5**
	0.2nm,0.3s,baz=96,slow=13,SNR=2.5							
KSRS	**Korea Array**	**11.52**	**268**	P		Pn	05 48 24.4	+4.4
	0.3nm,0.3s,baz=77,slow=14,SNR=4.1							
KLR	**Kul'dur**	**12.92**	**327**	LR		LR	05 53 26.7	
	comp=Z,7.2nm,18.6s,baz=178,slow=36							
H11N2	**WAKE ISLAND Hy 28.44**	**125**		T		T	06 22 00.3	
	baz=317,slow=75,SNR=53							
H11N1	**WAKE ISLAND Hy 28.45**	**125**		T		T	06 22 01.0	
	baz=317,slow=75,SNR=78							
H11N3	**WAKE ISLAND Hy 28.45**	**125**		T		T	06 22 00.3	

baz=317,slow=75,SNR=54
H11S1 WAKE ISLAND Hy 29.22 127 T T 06 22 51.6
baz=318,slow=76,SNR=8.8
H11S3 WAKE ISLAND Hy 29.22 127 T T 06 22 51.5
baz=318,slow=76,SNR=16
H11S2 WAKE ISLAND Hy 29.23 127 T T 06 22 55.6
baz=318,slow=76,SNR=7.3
ZALV Zalesovo Beam 41.33 311 P **P 05 53 19.1 -0.4**
0.9nm,0.4s,baz=92,slow=7.9,SNR=4.7
MKAR Makanchi Array 43.88 301 P **P 05 53 40.4 0.0**
1.0nm,0.7s,baz=85,slow=9.3,SNR=6.9
KURBB Kurchatov Arra 45.56 307 P **P 05 53 53.1 -0.5**
2.3nm,0.6s,baz=80,slow=8.2,SNR=14
ILAR Eielson Array 47.54 33 P **P 05 54 09.5 +0.5**
1.0nm,0.7s,baz=262,slow=6.5,SNR=12
BVAR Borovoye Array 49.98 311 P **P 05 54 26.9 -1.0**
0.6nm,0.5s,baz=72,slow=9.3,SNR=3.1
WRA Warrarmunga Arr 58.96 189 P **P 05 55 31.9 -1.4**
3.2nm,0.7s,baz=7.0,slow=7.0,SNR=34
YKA Yellowknife Ar 61.84 31 P **P 05 55 52.8 +0.2**
0.2nm,0.6s,baz=300,slow=6.4,SNR=3.6
ASAR Alice Springs 62.68 189 P **P 05 55 57.8 -0.8**
1.0nm,0.6s,baz=4.6,slow=5.6,SNR=12
NVAR Mina Array Bea 73.26 54 P **P 05 57 06.5 +1.1**
0.9nm,1.1s,baz=282,slow=4.5,SNR=3.0
AKASG Malin Array Be 73.37 322 P **P 05 57 04.7 -0.8**
0.3nm,0.4s,baz=44,slow=6.6,SNR=3.2
TXAR Lajitas Array 88.38 53 P **P 05 58 25.9 -0.1**
0.2nm,0.6s,baz=308,slow=3.7,SNR=6.3

IDC 18 06:01:52.7±1.5, 18°.14N×148°.13E, h0km, mb3.5/3, mb1 3.9/3, mb1mx3.3/70, mbtmp3.5/3, MS3.1/1, Ms1 3.1/1, ms1mx2.4/42, Error ellipse: s-maj=281.4km s-min=27.6km az=113.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**24.57**	**246**	LR	LR	06 17 58.9	
	comp=Z,41nm,18.6s,baz=226,slow=39						
WRA	**Warrarmunga Arr**	**40.19**	**200**	P	P	06 09 30.9	-0.1
	0.9nm,0.7s,baz=23,slow=9.0,SNR=8.5						
ILAR	**Eielson Array**	**63.13**	**26**	P	P	06 12 22.4	+0.4
	0.1nm,0.4s,baz=261,slow=4.5,SNR=3.1						
YKA	**Yellowknife Ar**	**77.40**	**28**	P	P	06 13 48.8	-0.5
	0.2nm,0.5s,baz=286,slow=5.3,SNR=4.7						

IDC 18 06:06:22.5±9.2, 17°.41S×167°.94E, h72km±69km, mb3.7/4, mb1 3.9/5, mb1mx3.4/55, mbtmp4.0/5, ML3.4/1, MS3.3/2, Ms1 3.3/2, ms1mx2.8/42, Error ellipse: s-maj=120.1km s-min=52.7km az=87.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.84**	**197**	P	Pn	06 07 33.3	+0.3
	7.1nm,0.3s,baz=301,slow=7.4,SNR=30						
DZM				S	Sn	06 08 28.1	+0.2
	7.1nm,0.3s,baz=312,slow=22,SNR=5.7						
HNR	**Honiara**	**11.10**	**315**	LR	LR	06 12 11.8	
	comp=Z,87nm,18.9s,baz=232,slow=32						
CTA	**Charters Tower**	**20.71**	**259**	P	P	06 10 57.6	+0.5
	3.1nm,0.8s,baz=92,slow=13,SNR=3.3						
STKA	**Stephens Creek**	**27.85**	**234**	P	P	06 12 05.6	+0.2
	1.4nm,0.6s,baz=74,slow=9.4,SNR=4.5						
STKA				LR	LR	06 21 20.4	
	comp=Z,92nm,19.1s,baz=200,slow=32						
WRA	**Warrarmunga Arr**	**31.90**	**260**	P	P	06 12 40.6	-0.8
	1.1nm,0.7s,baz=81,slow=5.8,SNR=10						
ASAR	**Alice Springs**	**32.42**	**253**	P	P	06 12 46.2	+0.3
	2.7nm,0.5s,baz=80,slow=8.5,SNR=52						

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*NIED **18** 06:08:00, 40°.30N×142°.70E, h20km, Mw3.8 Best double couple: M₀=5.01000×10¹⁴ NP1:ϕ₁=149.00000°, δ31.00000°, λ-24.00000°. NP2:ϕ₂=260.00000°, δ78.00000°, λ-119.00000°.*
*JMA **18** 06:08:16.1±0.1, 40°.28N×142°.71E, h28km±2km, M3.8*
*NEIC **18** 06:08:17.1±0.7, 40°.32N×143°.15E, h35km, mb4.4/5, Error ellipse: s-maj=17.6km s-min=8.2km az=114.0*
*IDC **18** 06:08:18.9±3.0, 40°.24N×142°.84E, h52km±28km, mb3.4/8, mb1 3.6/10, mb1mx3.3/66, mbtmp3.7/10, ML3.8/2, MS2.6/3, Ms1 2.6/3, ms1mx2.4/46, Error ellipse: s-maj=27.1km s-min=18.6km az=114.0*

ISC 18 06:08:13.1±2.0, 40°.37N±0°.04×142°.79E±0°.08, h4km±12km, n48, σ1§69/45, mb4.0/12, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.83**	**239**	P	**Pb**	**06 08 30.1**	**-0.1**
JTH				S	**Sg**	**06 08 39.9**	**0.0**
JANG	**Nango**	**0.98**	**270**	P	**Pb**	**06 08 32.8**	**+0.2**
JANG				S	**Sg**	**06 08 44.3**	**-0.2**
MIYJ	**Miyakonagasawa**	**1.09**	**224**	P	**Pg**	**06 08 33.5**	**-0.5**
JKZ	**Kuzumaki**	**1.19**	**251**	P	**Pg**	**06 08 35.7**	**-0.2**
JTM	**Tenmabayashi**	**1.38**	**288**	P	**Pg**	**06 08 39.6**	**+0.1**
JTM				S	**Sg**	**06 08 56.0**	**-1.4**
JOM	**Ohasama**	**1.46**	**233**	P	**Pn**	**06 08 39.8**	**-0.5**
JAH	**Hinai**	**1.66**	**264**	P	**Pn**	**06 08 43.8**	**+0.8**
JAH				S	**Sn**	**06 09 03.7**	**-1.1**
ERM	**Erimo**	**1.66**	**9**	*e*Pn	**Pn**	**06 08 45.1**	**+2.0**
JEM	**Erimo**	**1.66**	**9**	P	**Pn**	**06 08 45.3**	**+2.2**
JOT	**Ohata**	**1.66**	**308**	P	**Pn**	**06 08 44.0**	**+0.9**
JMK	**Ichinoseki**	**1.87**	**221**	P	**Pn**	**06 08 46.3**	**+0.4**
JRG	**Rokugo**	**1.93**	**240**	P	**Pn**	**06 08 47.5**	**+0.8**
JRG				S	**Sn**	**06 09 11.5**	**+0.1**
ASAJ	**Asahikawa**	**3.74**	**358**	P	**Pn**	**06 09 14.8**	**+3.1**
	7.6nm,0.3s,baz=218,slow=6.3,SNR=12						
ASAJ				S	**Sb**	**06 10 04.3**	**-1.2**
	6.7nm,0.3s,baz=315,slow=31,SNR=8.9						
ASAJ				LR	LR	06 11 14.3	
	comp=Z,148nm,21.8s,baz=162,slow=45						
ASAJ	**Asahikawa**	**3.74**	**358**	*e*Pn	**Pn**	**06 09 14.5**	**+2.8**
ASAJ				S	**Sb**	**06 10 04.3**	**-1.2**
MJAR	**Matsushiro Arr**	**5.25**	**225**	P	**Pn**	**06 09 35.5**	**+3.0**
	1.5nm,0.3s,baz=34,slow=11,SNR=15						
MJB9	**Matsu-Tunnel**	**5.25**	**225**	*e*Pn	**Pn**	**06 09 35.3**	**+2.9**
MAJO	**Matsushiro**	**5.25**	**225**	*e*Pn	**Pn**	**06 09 35.4**	**+3.0**
MAT	**Matsushiro**	**5.25**	**225**	P	**Pn**	**06 09 35.7**	**+3.3**
INU	**Inuyama**	**6.78**	**224**	*e*Pn	Pn	06 09 58.8	+5.3
JHJ2	**Mitsune**	**7.63**	**199**	*e*Pn	**Pn**	**06 10 08.2**	**+3.1**
KLR	**Kul'dur**	**11.82**	**322**	LR	LR	06 15 43.2	
	comp=Z,6.7nm,18.9s,baz=102,slow=37						
MA2	**Magadan**	**19.87**	**12**	LR	LR	06 20 21.4	
	comp=Z,36nm,19.1s,baz=200,slow=36						
SEY	**Seymchan**	**23.31**	**11**	P	**P**	**06 13 21.7**	**-0.2**
	2.1nm,0.7s,baz=191,slow=20,SNR=4.2						
H11N2	**WAKE ISLAND Hy 29.14 128**			T	T	06 45 02.4	
	baz=314,slow=75,SNR=37						
H11N1	**WAKE ISLAND Hy 29.14 128**			T	T	06 45 05.5	
	baz=314,slow=75,SNR=52						
H11N3	**WAKE ISLAND Hy 29.15 128**			T	T	06 45 05.8	
	baz=314,slow=75,SNR=37						
H11S1	**WAKE ISLAND Hy 29.96 130**			T	T	06 45 51.6	
	baz=314,slow=76,SNR=20						
H11S3	**WAKE ISLAND Hy 29.96 130**			T	T	06 45 54.4	
	baz=314,slow=76,SNR=24						
H11S2	**WAKE ISLAND Hy 29.98 130**			T	T	06 45 55.2	
	baz=314,slow=76,SNR=16						
MK01	**Makanchi Array**	**43.34**	**299**	*e*P	**P**	**06 16 19.3**	**+3.0**
MK31	**Makanchi Array**	**43.34**	**299**	*e*P	**P**	**06 16 18.8**	**+2.6**
MK32	**Makanchi Array**	**43.34**	**299**	*e*P	**P**	**06 16 16.7**	**+0.4**
MKAR	**Makanchi Array**	**43.34**	**299**	P	**P**	**06 16 16.7**	**+0.4**
	0.4nm,0.4s,baz=86,slow=11,SNR=8.0						
MKAR	**Makanchi Array**	**43.34**	**299**	*e*P	**P**	**06 16 17.6**	**+1.3**
	5.1nm,0.6s						
MAKZ	**Makanchi**	**43.55**	**299**	*e*P	**P**	**06 16 18.9**	**+0.9**
	1.0nm,0.6s						
KURK	**Kurchatov**	**44.79**	**306**	*e*P	**P**	**06 16 27.9**	**+0.1**
	1.8nm,0.8s						
KURBB	**Kurchatov Arra**	**44.87**	**306**	P	**P**	**06 16 28.5**	**+0.1**
	0.9nm,0.5s,baz=79,slow=8.5,SNR=7.3						
ILAR	**Eielson Array**	**46.11**	**34**	P	**P**	**06 16 38.5**	**+0.4**
	0.5nm,0.7s,baz=270,slow=5.8,SNR=6.2						
ILB	**Eielson Array**	**46.11**	**34**	*e*P	**P**	**06 16 37.2**	**-0.9**
BVAR	**Borovoye Array**	**49.18**	**310**	P	**P**	**06 17 02.5**	**+0.4**
	0.5nm,0.3s,baz=82,slow=10,SNR=3.6						
INK	**Inuvik**	**50.93**	**28**	*e*P	P	06 17 11.8	-3.3
	8.9nm,1.4s						
ABKAR	**Akbulak array**	**56.65**	**309**	*e*P	**P**	**06 17 57.5**	**+0.2**
YKA	**Yellowknife Ar**	**60.39**	**31**	P	**P**	**06 18 24.2**	**+1.1**
	0.3nm,0.8s,baz=302,slow=6.1,SNR=3.4						
WR1	**Warrarmunga Arr**	**60.52**	**189**	*e*P	**P**	**06 18 21.9**	**-2.5**
	12nm,1.4s						
WRA	**Warrarmunga Arr**	**60.52**	**189**	P	**P**	**06 18 21.9**	**-2.5**
	0.5nm,0.7s,baz=7.9,slow=7.2,SNR=4.0						
FIA0	**FINESS Array S**	**66.37**	**332**	*e*P	**P**	**06 19 02.2**	**-0.6**
FINES	**FINESS Array B**	**66.37**	**332**	P	**P**	**06 19 02.2**	**-0.6**
	1.8nm,0.8s,baz=63,slow=19,SNR=2.7						
SNAA	**Sanae**	**144.25**	**198**	PKP	**PKPab**	**06 27 46.6**	**-0.6**
	0.3nm,0.4s,baz=108,slow=3.2,SNR=8.1						

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*ISCJB **18** 06:09:07.6±0.9, 36°.87N±0°.04×141°.22E±0°.09, h46km±6km, mb3.7/5, Error ellipse: s-maj=11.8km s-min=5.8km az=12.7*
*JMA **18** 06:09:09.5±0.1, 36°.93N×141°.06E, h51km±1km, M3.7*
JMA Felt II J1.
*IDC **18** 06:09:10.8±3.8, 36°.77N×141°.16E, h61km±31km, mb3.5/5, mb1 3.6/9, mb1mx3.3/70, mbtmp3.8/9, ML3.4/4, MS2.4/1, Ms1 2.4/1, ms1mx2.0/52, Error ellipse: s-maj=32.5km s-min=12.4km az=62.0*

ISC 18 06:09:09.0±1.4, 36°.89N±0°.04×141°.22E±0°.09, h42km±12km, n18, σ1§37/28, mb3.8/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.40**	**302**	P	**Pn**	**06 09 18.4**	**-0.3**
ONAJ				S	**Sn**	**06 09 24.5**	**-0.9**
JFK	**Kawauchi**	**0.55**	**330**	P	**Pn**	**06 09 20.1**	**-0.5**
JFK				S	**Sn**	**06 09 27.5**	**-1.3**
JHO	**Hitachi**	**0.59**	**242**	P	**Pn**	**06 09 20.7**	**-0.4**
JHO				S	**Sn**	**06 09 28.5**	**-1.1**
JFT	**Otama**	**0.94**	**312**	P	**Pn**	**06 09 25.6**	**-0.3**
JFT				S	**Sn**	**06 09 36.9**	**-1.3**
JMM	**Marumori**	**1.03**	**341**	P	**Pn**	**06 09 26.4**	**-0.7**
JMM				S	**Sn**	**06 09 38.7**	**-1.6**
JSB	**Shiboa**	**1.04**	**275**	P	**Pn**	**06 09 26.6**	**-0.6**
JSB				S	**Sn**	**06 09 39.1**	**-1.6**
JFY	**Yanaizu**	**1.32**	**294**	P	**Pn**	**06 09 30.0**	**-1.0**
JAG	**Ashikaga**	**1.49**	**253**	P	**Pn**	**06 09 32.7**	**-0.7**
JAG				S	**Sn**	**06 09 49.5**	**-2.2**
JOU	**Okura**	**1.54**	**344**	P	**Pn**	**06 09 33.8**	**-0.2**
JOU				S	**Sn**	**06 09 51.6**	**-1.2**
MJAR	**Matsushiro Arr**	**2.44**	**263**	P	**Pn**	**06 09 45.9**	**-0.6**
	9.0nm,0.3s,baz=86,slow=15,SNR=16						
MJAR				S	**Sn**	**06 10 15.8**	**+0.7**
	17nm,0.3s,baz=73,slow=15,SNR=10						
MJAR				LR	LR	06 11 03.3	
	comp=Z,68nm,18.6s,baz=210,slow=48						
JHJ	**Hachijo jima 2**	**3.94**	**198**	P	**Pn**	**06 10 07.0**	**0.0**
	45nm,0.3s,baz=308,slow=21,SNR=26						
JHJ				S	**Sn**	**06 10 50.9**	**-1.1**
	26nm,0.3s,baz=240,slow=20,SNR=3.9						
USRK	**Ussuriysk Ar.**	**10.13**	**319**	P	**Pn**	**06 11 35.2**	**+3.4**
	0.4nm,0.3s,baz=148,slow=13,SNR=4.5						
KSRS	**Korea Array**	**10.63**	**277**	P	**Pn**	**06 11 42.0**	**+3.3**
	0.3nm,0.3s,baz=80,slow=14,SNR=4.2						
SONM	**Songino Array**	**27.74**	**304**	P	**P**	**06 14 53.5**	**-0.1**
	1.3nm,0.5s,baz=108,slow=9.3,SNR=3.9						
ZALV	**Zalesovo Beam**	**41.90**	**313**	P	**P**	**06 16 55.5**	**+0.4**
	0.6nm,0.3s,baz=107,slow=4.8,SNR=2.8						
MKAR	**Makanchi Array**	**44.06**	**302**	P	**P**	**06 17 12.7**	**-0.1**
	0.3nm,0.6s,baz=90,slow=7.2,SNR=2.3						
KURBB	**Kurchatov Arra**	**45.97**	**308**	P	**P**	**06 17 27.1**	**-0.7**
	0.7nm,0.4s,baz=83,slow=8.2,SNR=3.2						
WRA	**Warrarmunga Arr**	**56.90**	**188**	P	**P**	**06 18 49.1**	**-0.7**
	0.6nm,0.7s,baz=6.7,slow=7.2,SNR=3.8						

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*ISCJB **18** 06:28:43.2±0.2, 6°.23S±0°.04×154°.52E±0°.04, h35km, mb4.7/70, MS4.0/32, Error ellipse: s-maj=6.1km s-min=5.1km az=40.8*
*IDC **18** 06:28:43.6±2.7, 6°.15S×154°.52E, h28km±17km, mb4.1/16, mb1 4.3/19, mb1mx4.2/50, mbtmp4.3/19, ML3.7/3, MS3.9/32, Ms1 4.0/32, ms1mx3.8/48, Error ellipse: s-maj=20.4km s-min=14.1km az=102.0*
*NEIC **18** 06:28:50.8±0.7, 6°.31S×154°.42E, h92km±6km, mb4.8/47, Error ellipse: s-maj=5.2km s-min=4.8km az=62.0*
*GCMT **18** 06:28:50.8±0.3, 6°.58S×154°.52E, h33km, MW5.0/48, Moment Tensor Solution. s34,c39; s48,c63; Duration: 0 Moment tensor: Scale 10¹⁶Nm; M_rr3.08±.22; M_θθ-1.68±.13; M_ϕϕ-1.40±.14; M_rθ1.25±.18; M_θϕ1.66±.08; M_ϕr-0.05±.21; Best double couple: M₀3.38400×10¹⁶ NP1:ϕ₁119.00000°, δ55.00000°, λ74.00000°. NP2: ϕ₂-326.00000°, δ38.00000°, λ112.00000°. Principal axes: T 3.4160, Plg74.0000°, Azm343.0000°; N -0.0650, Plg13.0000°, Azm128.0000°; P -3.3520, Plg9.0000°, Azm221.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*BJI **18** 06:28:52.2, 5°.64S×154°.54E, h93km, mb4.9/28, mB5.1/17*

ISC 18 06:28:45.5±0.3, 6°.16S±0°.05×154°.45E±0°.05, h35km, n142, σ1§66/136, mb4.8/70, MS4.0/32, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.00**	**310**	*e*Pn	Pn	06 29 38.1	+7.5
RABL				*e*Sn	Sn	06 30 21.6	+16
HNR	**Honiara**	**6.35**	**121**	*e*P	**Pn**	**06 30 20.0**	**+3.4**
HNR				*e*S	**Sn**	**06 31 24.0**	**-3.9**
HNR	**Honiara**	**6.35**	**121**	Pn	**Pn**	**06 30 20.8**	**+4.2**
	18nm,0.3s,baz=9.6,slow=2.7,SNR=4.8						
HNR				Sn	**Sn**	**06 31 32.9**	**+5.0**
	baz=228,slow=16,SNR=3.4						
HNR				LR	LR	06 33 00.0	
	comp=Z,2μm,18.1s,baz=272,slow=41						
HNR	**Honiara**	**6.35**	**121**	*e*Pn	Pn	06 30 22.7	+6.1
HNR				*e*Sn	**Sn**	**06 31 35.2**	**+7.3**
PMG	**Port Moresby**	**7.91**	**245**	Pn	**Pn**	**06 30 38.8**	**+0.7**
	6.3nm,0.3s,baz=30,slow=9.7,SNR=16						
PMG				Sn	**Sn**	**06 32 09.1**	**+2.7**
	6.2nm,0.3s,baz=161,slow=23,SNR=6.0						
PMG				LR	LR	06 33 53.4	
	comp=Z,1μm,19.7s,baz=40,slow=39						
PMG	**Port Moresby**	**7.91**	**245**	*e*Pn	**Pn**	**06 30 40.9**	**+2.8**
PMG				*e*Sn	**Sn**	**06 32 10.9**	**+4.4**
PATS	**Pohnpei**	**13.47**	**17**	*e*Pn	**Pn**	**06 31 55.8**	**+1.5**
COEN	**Coen**	**13.53**	**234**	*e*P	**P**	**06 32 03.3**	**-0.5**
JAY	**Jayapura**	**14.17**	**284**	LR	LR	06 37 59.4	
	comp=Z,1μm,19.6s,baz=122,slow=39						
CTA	**Charters Tower**	**15.97**	**209**	Pn	**Pn**	**06 32 28.2**	**+0.5**
	0.4nm,0.3s,baz=26,slow=14,SNR=10.0						
CTAO	**Charters Tower**	**15.97**	**209**	*e*Pn	**Pn**	**06 32 27.6**	**-0.1**
	11nm,0.8s						
EIDS	**Eidsvold**	**19.38**	**189**	*e*P	**P**	**06 33 07.1**	**-1.3**
	10.0nm,0.4s						
DZM	**Mont Dzumac**	**19.61**	**145**	*e*P	**P**	**06 33 10.9**	**-0.2**
	57nm,1.3s						
DZM				*e*LR	LR	06 37 50.7	
	734nm,26.1s						
DZM	**Mont Dzumac**	**19.61**	**145**	P	**P**	**06 33 11.2**	**+0.1**
	1.4nm,0.3s,baz=342,slow=14,SNR=7.1						
DZM				LR	LR	06 39 45.6	
	comp=Z,392nm,21.3s,baz=332,slow=34						
DZM	**Mont Dzumac**	**19.61**	**145**	*e*P	**P**	**06 33 11.0**	**-0.2**
	19nm,0.9s						
GUMO	**Guam**	**21.80**	**334**	LR	LR	06 40 54.3	
	comp=Z,84nm,22.0s,baz=150,slow=34						
WRAB	**Tennant Creek**	**23.85**	**233**	*e*P	**P**	**06 33 54.5**	**-1.3**
	8.7nm,0.8s						
WB2	**Warramunga Arr**	**23.86**	**233**	*e*P	**P**	**06 33 54.4**	**-1.5**
	12nm,1.1s						
WR1	**Warramunga Arr**	**23.86**	**233**	*e*P	**P**	**06 33 54.8**	**-1.2**
	14nm,1.0s						
WRA	**Warramunga Arr**	**23.86**	**233**	P	**P**	**06 33 54.8**	**-1.2**
	6.3nm,0.8s,baz=57,slow=9.7,SNR=26						
WRA				PcP	**PcP**	**06 37 38.1**	**-0.4**
	4.0nm,0.8s,baz=56,slow=2.2,SNR=8.4						
WRA				ScP	**ScP**	**06 41 14.2**	**-0.2**
	2.0nm,0.9s,baz=61,slow=2.8,SNR=5.3						
WRA				LR	LR	06 43 20.6	
	comp=Z,474nm,20.1s,baz=60,slow=37						
MTN	**Manton Dam**	**23.92**	**252**	*e*P	**P**	**06 33 55.4**	**-1.1**
	31nm,1.4s						
ARMA	**Armidale**	**24.28**	**186**	*e*P	**P**	**06 33 57.7**	**-2.0**
	10.0nm,1.0s						
AS01	**Alice Springs**	**26.30**	**226**	*e*P	**P**	**06 34 17.6**	**-0.5**
AS01				*e*PcP	**PcP**	**06 37 43.1**	**-0.8**
AS31	**Alice Springs**	**26.34**	**226**	*e*P	**P**	**06 34 16.6**	**-1.8**
	1.6nm,1.1s						
ASAR	**Alice Springs**	**26.34**	**226**	P	**P**	**06 34 16.6**	**-1.8**
	1.8nm,0.7s,baz=58,slow=8.8,SNR=16						
ASAR				PcP	**PcP**	**06 37 42.1**	**-1.9**
	1.5nm,0.7s,baz=47,slow=4.4,SNR=6.2						
ASAR				ScP	**ScP**	**06 41 21.3**	**-0.1**
	1.1nm,0.7s,baz=47,slow=2.8,SNR=8.3						
ASAR				LR	LR	06 44 23.7	
	comp=Z,434nm,21.1s,baz=92,slow=36						
STKA	**Stephens Creek**	**28.27**	**204**	P	**P**	**06 34 34.2**	**-1.4**
	2.3nm,0.9s,baz=350,slow=11,SNR=2.9						
STKA				PcP	**PcP**	**06 37 47.7**	**-0.7**
	2.5nm,0.8s,baz=72,slow=6.4,SNR=4.0						
STKA				ScP	**ScP**	**06 41 26.2**	**-0.8**
	2.9nm,0.9s,baz=321,slow=6.5,SNR=4.1						
STKA				LR	LR	06 45 54.0	
	comp=Z,377nm,19.8s,baz=8.7,slow=36						
FITZ	**Fitzroy Crossi**	**30.51**	**245**	*e*P	**P**	**06 34 54.5**	**-1.1**
	24nm,1.4s						
DAV	**Davao City (W)**	**31.66**	**294**	LR	LR	06 46 25.2	
	comp=Z,117nm,20.8s,baz=164,slow=34						
KNTN	**Kanton**	**33.89**	**86**	*e*P	**P**	**06 35 23.9**	**-1.5**
	176nm,1.5s						
AFI	**Afiamalu**	**34.10**	**106**	LR	LR	06 47 33.9	
	comp=Z,228nm,20.2s,baz=196,slow=33						
CBIJ	**Chichi jima**	**35.12**	**341**	*e*P	**P**	**06 35 35.5**	**-0.3**
	36nm,0.4s						
MYLDM	**Lahad Datu**	**37.61**	**287**	*e*P	**P**	**06 35 58.8**	**+1.5**
	32nm,1.3s						
BKZ	**Black Stump Fm**	**38.42**	**152**	*e*P	**P**	**06 36 02.9**	**-0.9**
	16nm,1.0s						
OXZ	**Oxford**	**40.14**	**160**	*e*P	**P**	**06 36 16.5**	**-1.5**
	153nm,0.5s						
JOW	**Kunigami**	**41.45**	**323**	LR	LR	06 50 01.7	
	comp=Z,264nm,20.6s,baz=166,slow=31						
NWAO	**Narrogin (SRO)**	**43.65**	**227**	LR	LR	06 54 42.7	
	comp=Z,312nm,21.9s,baz=302,slow=36						
YULB	**Yu-li**	**43.71**	**313**	*e*P	**P**	**06 36 47.4**	**-0.2**
	17nm,0.7s						
NACB	**Ninganchiao**	**43.99**	**314**	*e*P	**P**	**06 36 49.8**	**+0.1**
	45nm,1.0s						
TPUB	**Ta-pu**	**44.14**	**313**	*e*P	**P**	**06 36 51.0**	**0.0**
	48nm,1.3s						
SSLB	**Suanglung**	**44.20**	**314**	*e*P	**P**	**06 36 51.9**	**+0.4**
	22nm,0.9s						
YHNB	**Yeheng**	**44.45**	**315**	*e*P	**P**	**06 36 54.5**	**+1.0**
	34nm,0.9s						
JNU	**Nakatsue**	**45.02**	**332**	*e*P	**P**	**06 36 57.3**	**-0.6**
	14nm,0.9s						
MJAR	**Matsushiro Arr**	**45.12**	**341**	LR	LR	06 54 14.9	
	comp=Z,42nm,21.1s,baz=205,slow=34						
KSRS	**Korea Array**	**49.95**	**332**	P	**P**	**06 37 35.4**	**-0.6**
	3.5nm,0.8s,baz=151,slow=9.1,SNR=15						
KSRS				LR	LR	06 56 09.3	
	comp=Z,62nm,20.5s,baz=156,slow=33						
KS15	**Wonju Array Si**	**49.95**	**332**	*e*P	**P**	**06 37 35.9**	**-0.2**
KS01	**Wonju Array Si**	**49.98**	**332**	*e*P	**P**	**06 37 35.8**	**-0.5**
INCN	**Inchon**	**50.58**	**331**	*e*P	**P**	**06 37 41.4**	**+0.6**
	22nm,0.8s						
NJ2	**Nanjing**	**50.93**	**320**	*e*P	**P**	**06 37 46.8**	**+3.3**
NJ2				pmax	pmax		
	comp=Z,22nm,0.5s						
ASAJ	**Asahikawa**	**51.17**	**349**	LR	LR	06 57 06.7	
	comp=Z,143nm,21.3s,baz=152,slow=33						
USRK	**Ussuriysk Ar.**	**54.06**	**340**	P	**P**	**06 38 06.0**	**-0.5**
	1.6nm,0.6s,baz=172,slow=9.0,SNR=4.2						
PPT	**Papeete**	**55.76**	**107**	LR	LR	06 58 38.0	
	comp=Z,53nm,18.1s,baz=74,slow=32						
CN2	**Changchun**	**56.21**	**335**	*e*P	**P**	**06 38 20.9**	**-1.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ENH	**Enshi**	**56.27**	**313**	*e*P	**P**	**06 38 23.0**	**+0.2**
	21nm,0.8s						
TBI	**Tubuai**	**56.51**	**114**	*e*LR	LR	06 54 54.0	
	305nm,27.5s						
GYA	**Guiyang**	**56.52**	**307**	*e*P	**P**	**06 38 28.0**	**+3.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KMI	**Kunming**	**59.10**	**304**	P	**P**	**06 38 45.0**	**+1.9**
KMI				pP	sP	06 39 06.4	+8.6
KMI				pmax	pmax		
	comp=Z,26nm,1.0s						
KMI				LR	LR		
	comp=Z,260nm,17.6s						
PETK	**Petropavlovsk-**	**59.10**	**2**	P	**P**	**06 38 46.1**	**+3.8**
	1.1nm,0.5s,baz=150,slow=6.5,SNR=2.5						
PETK				LR	LR	07 00 27.1	
	comp=Z,123nm,21.8s,baz=178,slow=32						
PEA1	**Petropavlovsk-**	**59.11**	**2**	*e*P	**P**	**06 38 46.1**	**+3.8**
CM01	**Chiang Mai Arr**	**59.91**	**295**	*e*P	**P**	**06 38 49.6**	**+1.1**
CM31	**Chiang Mai Arr**	**59.94**	**295**	*e*P	**P**	**06 38 49.3**	**+0.7**
CMAR	**Chiang Mai Arr**	**59.94**	**295**	P	**P**	**06 38 50.0**	**+1.3**
	3.6nm,0.7s,baz=107,slow=4.7,SNR=6.3						
CMAR				LR	LR	07 03 36.8	
	comp=Z,89nm,19.9s,baz=175,slow=35						
CD2	**Chengdu**	**60.86**	**310**	P	**P**	**06 38 55.0**	**+0.2**
CD2				pmax	pmax		
	comp=Z,40nm,0.9s						
HHC	**Hu-ho-hao-te**	**61.10**	**324**	*e*P	**P**	**06 38 59.3**	**+3.0**
HHC				pmax	pmax		

WMQ pmax pmax
comp=Z,150nm,5.9s
WMQ LR LR
comp=N,110nm,19.3s
WMQ LR LR
comp=Z,130nm,22.1s
CNPM China Poot 78.23 25 *eP* **P** 06 40 41.1 -0.3
18nm,0.9s
SKT Skwentna 79.52 23 *eP* **P** 06 40 49.1 +0.7
3.4nm,0.9s
SUA Susitna One 79.53 24 *eP* **P** 06 40 47.8 -0.8
6.8nm,0.9s
MCK McKinley 81.49 22 *eP* **P** 06 40 57.1 -1.9
12nm,1.0s
MLY Manley 81.56 21 *eP* **P** 06 40 58.3 -1.1
3.3nm,0.9s
MK01 Makanchi Array 82.41 319 *eP* **P** 06 41 03.2 -0.9
MK31 Makanchi Array 82.42 319 *eP* **P** 06 41 03.5 -0.8
MK32 Makanchi Array 82.42 319 *eP* **P** 06 41 03.8 -0.4
MKAR Makanchi Array 82.42 319 P **P** 06 41 03.8 -0.4
1.3nm,0.8s,baz=107,slow=5.2,SNR=7.9
MKAR LR LR 07 16 29.9
comp=Z,57nm,20.7s,baz=92,slow=35
MKAR Makanchi Array 82.42 319 *eP* **P** 06 41 03.5 -0.7
7.5nm,0.8s
HDA Harding Lake 82.59 22 *eP* **P** 06 41 02.5 -2.2
38nm,0.9s
ILAR Eielson Array 82.80 22 P **P** 06 41 03.1 -2.6
1.5nm,0.8s,baz=257,slow=5.2,SNR=18
ILAR LR LR 07 14 37.8
comp=Z,179nm,19.2s,baz=256,slow=33
ILB Eielson Array 82.80 22 *eP* **P** 06 41 04.2 -1.6
IL1 Eielson Array 82.80 22 *eP* **P** 06 41 03.8 -2.0
ZALV Zalesovo Beam 83.18 326 LR LR 07 19 35.6
comp=Z,33nm,18.8s,baz=70,slow=37
QSPA South Pole Qui 83.81 180 P **P** 06 41 10.7 -0.6
7.0nm,0.9s,baz=326,slow=2.2,SNR=6.1
QSPA South Pole Qui 83.81 180 *eP* **P** 06 41 09.2 -2.0
9.2nm,0.9s
TOLK Toolik Lake Re 83.99 18 *eP* **P** 06 41 11.4 -0.4
3.8nm,0.9s
EGAK Eagle 84.96 23 *eP* **P** 06 41 15.9 -0.9
6.3nm,1.0s
KSH Kashi 85.06 310 P **P** 06 41 18.8 +0.8
KSH pmax pmax
comp=Z,320nm,5.3s
KURK Kurchatov 85.84 322 *eP* **P** 06 41 20.1 -1.3
4.3nm,1.4s
KURBB Kurchatov Arra 85.87 322 P **P** 06 41 20.3 -1.4
0.7nm,0.8s,baz=94,slow=3.7,SNR=3.5
NRIK Noril'sk 87.77 341 P **P** 06 41 28.8 -1.7
1.6nm,0.5s,baz=123,slow=8.0,SNR=3.6
NRIK LR LR 07 19 32.2
comp=Z,42nm,21.1s,baz=82,slow=35
YBH Yreka Blue Hor 88.73 48 LR LR 07 17 14.6
comp=Z,182nm,18.6s,baz=276,slow=33
PNTR Pine Nut 90.70 51 *eP* **P** 06 41 43.6 -1.7
7.8nm,0.9s
BVAR Borovoye Array 91.30 323 LR LR 07 21 31.1
comp=Z,52nm,21.9s,baz=108,slow=35
RYN Ryan 91.48 51 *eP* **P** 06 41 47.4 -1.4
4.6nm,0.9s
NV01 Mina Array Sit 91.63 52 *eP* **P** 06 41 49.3 -0.3
NVAR Mina Array Bea 91.63 52 P **P** 06 41 49.4 -0.2
5.4nm,0.9s,baz=254,slow=6.7,SNR=35
NVAR LR LR 07 17 09.6
comp=Z,104nm,19.7s,baz=90,slow=32
NV11 Mina Array Sit 91.75 52 *eP* **P** 06 41 50.1 +0.1
0.5nm,0.9s
KVN Kaiserville 91.86 51 *eP* **P** 06 41 49.3 -1.3
7.1nm,1.2s
DNR Dunn Ranch,Anz 92.46 57 *eP* **P** 06 41 53.7 +0.2
PFO Pinyon Flats O 92.61 57 *eP* **P** 06 41 53.0 -1.1
6.9nm,0.9s
XPFO Pizaon Flat 92.61 57 *eP* **P** 06 41 52.9 -1.2
6.5nm,0.8s
BMN Battle Mountai 92.68 50 *eP* **P** 06 41 53.8 -0.5
2.5nm,0.8s
RPN Rapa Nui 92.73 118 LR LR 07 15 21.5
comp=Z,62nm,21.0s,baz=262,slow=30
R11A Troy Canyon, C 93.75 52 *eP* **P** 06 41 59.2 -0.2
3.7nm,1.1s
SHPR Sheep Range 93.93 54 *eP* **P** 06 42 00.5 +0.4
3.7nm,1.0s
W13A Hualapai Mount 94.86 55 *eP* **P** 06 42 04.3 -0.3
3.7nm,0.9s
KNB Kanab 95.84 53 *eP* **P** 06 42 09.6 +0.7
6.0nm,1.2s
YKA Yellowknife Ar 95.85 28 P **P** 06 42 06.8 -1.3
1.0nm,1.0s,baz=268,slow=5.2,SNR=6.2
U15A North Rim 96.23 54 *eP* **P** 06 42 09.4 -1.4
2.2nm,0.9s
LPIG La Paz 97.25 67 LR LR 07 18 29.0
comp=Z,80nm,20.6s,baz=237,slow=31
ARU Arti 98.35 326 LR LR 07 29 01.5
comp=Z,53nm,18.4s,baz=28,slow=37
PDAR Pinedale Array 98.54 48 P **P** 06 42 19.6 -1.5
0.6nm,0.6s,baz=232,slow=2.0,SNR=9.0
PDAR LR LR 07 19 50.4
comp=Z,98nm,21.9s,baz=276,slow=31
GEYT Alibeck 98.74 307 LR LR 07 29 59.2
comp=Z,45nm,19.0s,baz=120,slow=37
AKTO Aktyubinsk 98.81 320 LR LR 07 26 13.9
comp=Z,32nm,21.6s,baz=86,slow=35
AK11 Malin Array Si 116.59 324 *e*PKPdf **PKPdf** 06 47 24.0 -1.9
BOSA Boshof 120.11 232 PKP **PKPdf** 06 47 32.0 -1.5
1.5nm,0.6s,baz=133,slow=2.8,SNR=5.0
LPAZ La Paz 132.33 118 PKP **PKPdf** 06 47 57.3 -0.5
0.9nm,0.8s,baz=270,slow=3.0,SNR=3.2
PTGA Pitinga 144.97 100 *e*PKPbc **PKPab** 06 48 17.8 -1.7
TOA0 Torodi Ar. Sit 152.28 287 *e*PKPbc **PKPbc** 06 48 37.5 -1.2
TORD Torodi Ar. Bea 152.28 287 PKPbc **PKPbc** 06 48 37.5 -1.2
4.7nm,0.6s,baz=90,slow=2.1,SNR=38
TOA1 Torodi Ar. Sit 152.28 287 *e*PKPbc **PKPbc** 06 48 37.5 -1.2

*DDA **18** 07:06:06.9,38°.91N×43°.65E,h10km,MI3.0*
*ATA **18** 07:06:06.8±0.8,38°.94N×43°.58E,h12km±8km,ML3.5, MW3.4*
*ISK **18** 07:06:06.3,38°.90N×43°.67E,h8km,ML3.3/5*
*ISCJB **18** 07:06:07.6±0.5,38°.92N±0°.03×43°.65E±0°.04,h8km±3km, Error ellipse: s-maj=5.6km s-min=3.8km az=27.0*
*CSEM **18** 07:06:07.0±0.3,38°.92N×43°.67E,h5km,ML3.0, Error ellipse: s-maj=6.0km s-min=4.3km az=110.0*

ISC 18 07:06:06.8±0.9,38°.93N±0°.02×43°.66E±0°.03,h11km±6km, n45,σ°48/63,1D,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
VMUR	**Van-Muradiye**	**0.09**	**310**	*i* P		**Pg**	**07 06 09.5**	**-0.1**
VMUR				*i* S		**Sg**	**07 06 11.8**	**+0.2**
VMUR	**Van-Muradiye**	**0.09**	**310**	P		**Pg**	**07 06 09.5**	**-0.1**
VMUR				S		**Sg**	**07 06 11.8**	**+0.2**
ERCV	**ERCIS-VAN**	**0.27**	**289**	PG		**Pg**	**07 06 12.3**	**-0.1**
ERCV				SG		**Sb**	**07 06 17.6**	**-0.8**
ERCV	**ERCIS-VAN**	**0.27**	**289**	*e*Pg		**Pg**	**07 06 12.3**	**-0.1**
ERCV				*e*Sg		**Sb**	**07 06 17.6**	**-0.8**
CLDR	**Caldiran**	**0.29**	**44**	PG		**Pg**	**07 06 12.8**	**-0.1**
CLDR	**Caldiran**	**0.29**	**44**	*i* P		**Pg**	**07 06 12.6**	**-0.2**
CLDR				*i* S		**Sb**	**07 06 18.6**	**-0.7**
CLDR	**Caldiran**	**0.29**	**44**	*e*Pg		**Pg**	**07 06 12.8**	**-0.1**
CLDR				S		**Sb**	**07 06 18.5**	**-0.7**
VANB	**Van**	**0.40**	**212**	PG		**Pb**	**07 06 15.6**	**-0.4**
VANB	**Van**	**0.40**	**212**	*e*Pg		**Pb**	**07 06 15.6**	**-0.4**
TVAN	**Van**	**0.45**	**206**	*i* P		**Pg**	**07 06 16.0**	**+0.3**
TVAN				*i* S		**Sb**	**07 06 24.7**	**+0.9**
TVAN	**Van**	**0.45**	**206**	P		**Pg**	**07 06 16.0**	**+0.3**
DYDN	**Diyadin**	**0.61**	**2**	*e*P		**Pb**	**07 06 19.4**	**-0.2**
DYDN				*e*S		**Sb**	**07 06 29.0**	**+0.6**
DYDN				IAML			07 06 30.5	
comp=Z,240nm,0.2s								
DYDN	**Diyadin**	**0.61**	**2**	*i* P		**Pb**	**07 06 19.5**	**-0.2**
DYDN				*i* S		**Sb**	**07 06 28.5**	**0.0**
DYDN	**Diyadin**	**0.61**	**2**	P		**Pb**	**07 06 19.5**	**-0.2**
DYDN				S		**Sb**	**07 06 28.5**	**0.0**
ADCV	**BITLIS_Adilcev**	**0.74**	**261**	*i* P		**Pg**	**07 06 20.9**	**-0.3**
ADCV				*i* S		**Sb**	**07 06 32.4**	**+0.3**
ADCV	**BITLIS_Adilcev**	**0.74**	**261**	P		**Pg**	**07 06 20.9**	**-0.3**
ADCV				S		**Sb**	**07 06 32.4**	**+0.3**
GEVA	**Gevas**	**0.78**	**217**	*e*P		**Pg**	**07 06 21.1**	**-0.8**
GEVA				⇓*e*S		**Sb**	**07 06 33.7**	**+0.5**
GEVA				IAML			07 06 39.1	
comp=Z,69nm,0.4s								
GEVA	**Gevas**	**0.78**	**217**	*i* P		**Pg**	**07 06 21.5**	**-0.4**
GEVA	**Gevas**	**0.78**	**217**	P		**Pg**	**07 06 21.5**	**-0.4**
TUTA	**Tutak**	**0.81**	**306**	*e*P		**Pg**	**07 06 21.9**	**-0.6**
TUTA				*e*S		**Sb**	**07 06 33.7**	**-0.4**
TUTA				IAML			07 06 37.0	
comp=Z,148nm,0.4s								
TUTA	**Tutak**	**0.81**	**306**	*i* P		**Pg**	**07 06 21.9**	**-0.6**
TUTA	**Tutak**	**0.81**	**306**	P		**Pg**	**07 06 21.9**	**-0.6**
AGRB	**Hanur-Agry**	**0.82**	**321**	PG		**Pg**	**07 06 22.9**	**+0.1**
AGRB				SG		**Sb**	**07 06 35.5**	**+0.9**
AGRB	**Hanur-Agry**	**0.82**	**321**	*e*Pg		**Pg**	**07 06 22.9**	**+0.1**
AGRB				*e*Sg		**Sb**	**07 06 35.5**	**+0.9**
IGDI	**IGDIR**	**0.99**	**19**	*e*P		**Pn**	**07 06 26.8**	**0.0**
IGDI				*e*S		**Sn**	**07 06 41.0**	**+0.2**
IGDI				IAML			07 06 49.5	
comp=Z,30nm,0.5s								
IGDI	**IGDIR**	**0.99**	**19**	*i* P		**Pn**	**07 06 27.1**	**+0.3**
EKAR	**Karacoban**	**1.28**	**285**	*e*P		**Pn**	**07 06 30.6**	**-0.4**
EKAR	**Karacoban**	**1.28**	**285**	*i* P		**Pg**	**07 06 32.4**	**+0.9**
EKAR	**Karacoban**	**1.28**	**285**	P		**Pg**	**07 06 32.4**	**+0.9**
EATA	**Eleskirt**	**1.30**	**316**	*e*P		**Pn**	**07 06 31.1**	**-0.1**
EATA	**Eleskirt**	**1.30**	**316**	*i* P		**Pn**	**07 06 31.2**	**-0.1**
EATA	**Eleskirt**	**1.30**	**316**	P		**Pn**	**07 06 31.2**	**-0.1**
GURO	**Guroymak-BITLI**	**1.33**	**254**	PN		**Pn**	**07 06 31.2**	**-0.3**
GURO	**Guroymak-BITLI**	**1.33**	**254**	*e*Pn		**Pn**	**07 06 31.2**	**-0.3**
HAKT	**HAKKARI**	**1.37**	**178**	*i* P		**Pn**	**07 06 32.2**	**0.0**
HAKT	**HAKKARI**	**1.37**	**178**	P		**Pn**	**07 06 32.2**	**0.0**
GNI	**Garni**	**1.48**	**34**	PN		**Pb**	**07 06 34.6**	**+0.2**
GNI	**Garni**	**1.48**	**34**	*e*Pn		**Pb**	**07 06 34.6**	**+0.2**
EAK	**Akyaka**	**1.75**	**359**	*e*P		**Pg**	**07 06 40.1**	**-0.4**
HOMI	**Horasan**	**1.75**	**310**	*e*P		**Pb**	**07 06 39.4**	**+0.2**
BNGL	**BINGOL**	**1.96**	**271**	*e*P		**Pb**	**07 06 42.0**	**-0.6**
BNGL				*e*S		**Sg**	**07 07 10.8**	**+1.1**
BNGL				IAML			07 07 14.8	
comp=Z,49nm,0.3s								
BNGL	**BINGOL**	**1.96**	**271**	*i* P		**Pb**	**07 06 42.1**	**-0.6**
BTMN	**Batman**	**2.15**	**242**	*i* P		**Pb**	**07 06 45.6**	**-0.2**
BTMN	**Batman**	**2.15**	**242**	P		**Pb**	**07 06 45.6**	**-0.2**
ECAT	**Cat-ERZURUM**	**2.19**	**289**	*e*PN12		**Pb**	**07 06 45.9**	**-0.7**

GUC 18 07:24:04.2±0.5,22°.69S×69°.12W,h101km±3km,ML3.6, 6C-2D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PB06	**IPOC Station P**	**0.41**	**267**	⇑*i* P		Pn	07 24 20.1	+0.3
PB06				*i* S		Sn	07 24 32.0	+0.6
PB06				IAML			07 24 32.8	
comp=E,2μm,0.1s								
PB15	**IPOC Station P**	**0.61**	**212**	⇑*i* P		Pn	07 24 21.8	+0.5
PB15				*i* S		Sn	07 24 35.0	+1.0
PB09	**IPOC Station P**	**0.89**	**353**	⇓*i* P		Pn	07 24 24.4	+0.6
PB09				*i* S		Sn	07 24 39.4	+0.9
PB04	**IPOC Station P**	**1.01**	**290**	⇓*e* P		Pn	07 24 25.7	+0.6
PB04				*e*S		Sn	07 24 42.1	+1.4
PB07	**IPOC Station P**	**1.19**	**323**	⇑*i* P		Pn	07 24 27.8	+0.8
PB07				*i* S		Sn	07 24 45.3	+1.1
PB07				IAML			07 24 46.2	
comp=N,2μm,0.3s								
PB02	**IPOC Station P**	**1.54**	**332**	⇑*i* P		Pn	07 24 31.8	+0.7
PB02				*i* S		Sn	07 24 52.7	+1.2
PB02				IAML			07 24 54.0	
comp=E,1μm,0.2s								
PB10	**IPOC Station P**	**1.55**	**238**	⇑*i* P		Pn	07 24 31.6	+0.4
PB10				*i* S		Sn	07 24 52.3	+0.6
PB01	**IPOC Station P**	**1.67**	**348**	⇑*i* P		Pn	07 24 33.4	+0.6
PB01				*i* S		Sn	07 24 55.3	+0.9
PB01				IAML			07 24 56.2	
comp=N,754nm,0.2s								

*IDC **18** 07:43:22.4±3.3,8°.10S×74°.35W,h148km±39km,mb3.9/3, mb1 3.6/7,mb1mx3.3/42,mbtmp4.1/7,Error ellipse: s-maj=44.9km s-min=21.9km az=21.0*
*ISCJB **18** 07:43:23.7±0.5,8°.36S±0°.05×74°.15W±0°.07,h158km, mb4.0/8,Error ellipse: s-maj=10.4km s-min=4.5km az=151.5*
*NEIC **18** 07:43:25.9±0.9,8°.30S×74°.13W,h162km±11km,mb4.1/6, Error ellipse: s-maj=13.0km s-min=9.0km az=71.0*

ISC 18 07:43:24.8±0.6,8°.42S±0°.06×74°.17W±0°.07,h158km,n44, σ1°68/47,mb3.9/8,Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**4.42**	**216**	P		**Pn**	**07 44 31.5**	**+0.6**
6.6nm,0.3s,baz=54,slow=9.3,SNR=24								
NNA				S		**Sn**	**07 45 19.2**	**-3.1**
19nm,0.3s,baz=20,slow=17,SNR=4.4								
NNA	**Nana**	**4.42**	**216**	*e*Pn		**Pn**	**07 44 31.7**	**+0.9**
NNA				*e*Sn		**Sn**	**07 45 18.6**	**-3.8**
OTAV	**Otavalo**	**9.60**	**333**	*e*Pn		**Pn**	**07 45 39.3**	**-0.7**
OTAV	**Otavalo**	**9.60**	**333**	*e*P		**Pn**	**07 45 38.9**	**-1.0**
LPAZ	**La Paz**	**9.79**	**144**	P		**Pn**	**07 45 43.2**	**+0.6**
0.2nm,0.3s,baz=333,slow=13,SNR=4.7								
LPAZ				S		**Sn**	**07 47 29.7**	**-1.9**
0.1nm,0.3s,baz=183,slow=17,SNR=2.6								
FLOC	**Florencia**	**10.04**	**351**	*e*P		**Pn**	**07 45 42.2**	**-3.2**
GCUF	**Volcan Galeras**	**10.09**	**342**	*e*P		**Pn**	**07 45 44.2**	**-2.2**
CRUC	**La Cruz**	**10.30**	**344**	*e*P		**Pn**	**07 45 47.6**	**-1.5**
SOTA	**Rioblanco**	**10.76**	**347**	*e*P		**Pn**	**07 45 53.5**	**-1.7**
SAML	**Samuel**	**10.87**	**94**	*e*Pn		**Pn**	**07 45 54.9**	**-1.3**
PCON	**Cinco Dias**	**10.90**	**348**	*e*P		**Pn**	**07 45 54.9**	**-2.3**
POPC	**Popayan, Colom**	**11.17**	**347**	*e*P		**Pn**	**07 45 59.5**	**-0.8**
MNMC	**Minye Minye**	**11.54**	**158**	*e*Pn		**P**	**07 46 14.3**	**+1.9**
SJAC	**San Juan de Ar**	**11.61**	**1**	*e*P		**Pn**	**07 46 02.9**	**-3.2**
HORQ	**Saladito**	**12.07**	**348**	*e*P		**Pn**	**07 46 12.2**	**0.0**
PRAC	**Prado**	**12.07**	**357**	*e*Pn		**Pn**	**07 46 11.8**	**-0.1**
VILC	**Villavicencio,**	**12.46**	**2**	*e*P		**Pn**	**07 46 16.1**	**-0.8**
YOTC	**Yotoco, Valle**	**12.51**	**350**	*e*P		**Pn**	**07 46 17.5**	**-0.2**
CHIC	**Chingaza**	**12.97**	**2**	*e*P		**Pn**	**07 46 22.1**	**-1.7**
RUSC	**La Rusia**	**14.26**	**4**	*e*Pn		**Pn**	**07 46 40.8**	**+0.6**
RUSC	**La Rusia**	**14.26**	**4**	*e*P		**P**	**07 46 42.7**	**-0.1**
PB04	**IPOC Station P**	**14.37**	**165**	*e*P		**P**	**07 46 46.3**	**+2.6**
HELC	**Santa Helena**	**14.57**	**355**	*e*Pn		**Pn**	**07 46 43.8**	**-0.2**
SIV	**San Ignacio**	**14.84**	**122**	P		**Pn**	**07 46 48.3**	**+1.2**
0.5nm,0.3s,baz=308,slow=11,SNR=16								
SIV				S		**Sn**	**07 49 27.7**	**-4.5**
0.2nm,0.3s,baz=240,slow=20,SNR=3.5								
PTBC	**PUERTO BERRIO,**	**14.86**	**359**	*e*P		**Pn**	**07 46 46.7**	**-0.6**
PAMC	**Pamplona, Colo**	**15.72**	**5**	*e*P		**Pn**	**07 46 58.7**	**+0.3**
ZARC	**Zaragoza, Cauc**	**15.82**	**357**	*e*P		**Pn**	**07 46 58.7**	**-0.4**
PTGA	**Pitinga**	**16.07**	**62**	P		**Pn**	**07 47 01.9**	**-0.3**
1.3nm,0.3s,baz=254,slow=17,SNR=13								
PTGA	**Pitinga**	**16.07**	**62**	*e*Pn		**P**	**07 47 03.9**	**+1.4**
4.3nm,0.6s								
MOTC	**Monteria, Cord**	**17.15**	**355**	*e*P		**P**	**07 47 12.6**	**-1.7**
GO02	**Mina Guanaco**	**17.22**	**166**	*e*P		**Pn**	**07 47 18.0**	**+1.8**
12nm,1.4s								
PVMO	**Portageville**	**46.92**	**343**	*e*P		**P**	**07 51 40.8**	**+1.3**
67nm,0.6s								
TXAR	**Lajitas Array**	**47.08**	**324**	P		P	07 51 36.0	-5.0
0.1nm,0.6s,baz=148,slow=8.6,SNR=2.5								
LCMT	**Little Creek M**	**58.16**	**324**	*e*P		**P**	**07 53 01.6**	**-0.8**
1.9nm,1.2s								
TMUT	**Trail Mountain**	**58.60**	**327**	*e*P		**P**	**07 53 06.0**	**+0.4**
1.4nm,0.8s								
BGU	**Big Grassy Mou**	**60.73**	**327**	*e*P		**P**	**07 53 20.7**	**+0.7**
5.7nm,1.2s								
DBIC	**Dimbokro**	**70.70**	**80**	P		**P**	**07 54 23.7**	**-0.5**
8.9nm,1.2s,baz=244,slow=7.2,SNR=4.4								
DBIC	**Dimbokro**	**70.70**	**80**	*e*P		**P**	**07 54 23.7**	**-0.5**
22nm,1.4s								
KOWA	**Kowa**	**73.19**	**72**	P		**P**	**07 54 38.7**	**-0.2**
1.5nm,0.6s,baz=260,slow=6.7,SNR=3.6								
TOA1	**Torodi Ar. Sit**	**78.31**	**75**	*e*P		**P**	**07 55 07.1**	**-1.0**
TORD	**Torodi Ar. Bea**	**78.31**	**75**	P		**P**	**07 55 07.1**	**-1.0**
0.7nm,0.4s,baz=262,slow=4.3,SNR=11								
LHI	**Lord Howe Isla**	**115.48**	**229**	*e*PKPdf		**PKPdf**	**08 01 50.9**	**+2.3**
WR1	**Warramunga Arr**	**140.23**	**225**	*e*PKPdf		**PKPdf**	**08 02 35.7**	**-0.1**
WRA	**Warramunga Arr**	**140.23**	**225**	PKP		**PKPdf**	**08 02 35.7**	**-0.1**
0.4nm,1.0s,baz=132,slow=2.0,SNR=2.6								

*IDC **18** 07:46:19.9±1.6,36°.62S×75°.38W,h0km,mb4.2/4, mb1 4.2/6,mb1mx3.9/35,mbtmp4.1/6,ML4.1/2,MS3.3/4, Ms1 3.3/4,ms1mx3.0/31,Error ellipse: s-maj=53.7km s-min=29.5km az=46.0*
*GUC **18** 07:46:21.8±0.4,36°.74S×75°.41W,h26km±3km,ML4.0*
*ISCJB **18** 07:46:22.5±0.5,36°.58S±0°.03×75°.44W±0°.05,h33km, mb4.5/7,MS3.2/2,Error ellipse: s-maj=6.0km s-min=4.6km az=24.2*
*NEIC **18** 07:46:23.0±0.0,36°.69S×75°.28W,h30km,mb4.2/4, ML3.9(GUC),After GUC.*

ISC 18 07:46:24.5±0.7,36°.60S±0°.05×75°.47W±0°.08,h35km,n39, σ1°38/52,mb4.3/7,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CCSP	**San Pedro de C**	**1.91**	**98**	*e*P		**Pn**	**07 46 52.3**	**-2.2**
CCSP				*i* S		**Sn**	**07 47 15.2**	**-2.2**
CCSP				IAML			07 47 17.4	
comp=N,1μm,0.3s								
CCHI	**Chillan**	**2.73**	**91**	*e*P		**Pn**	**07 47 05.1**	**-0.6**
CCHI				*e*S		**Sn**	**07 47 37.3**	**-0.2**
TMU	**Temuco**	**3.12**	**134**	*e*P		**Pn**	**07 47 10.1**	**-1.0**
TMU				*e*S		**Sn**	**07 47 43.7**	**-3.4**
GO05	**HualaæØ**	**3.29**	**62**	*e*Pn		**Pn**	**07 47 12.8**	**-0.7**
GO05				*e*Sn		**Sn**	**07 47 50.1**	**-1.3**
GO05	**HualaæØ**	**3.29**	**62**	*e*P		**Pn**	**07 47 12.8**	**-0.7**
GO05				*i* S		**Sn**	**07 47 51.0**	**-0.4**
GO05				IAML			07 47 54.3	
comp=N,406nm,0.2s								
ROC1	**El Roble**	**5.15**	**47**	*e*Pn		**Pn**	**07 47 39.5**	**+0.3**
ROC1				*e*Sn		**Sn**	**07 48 38.2**	**+0.6**
ROC1	**El Roble**	**5.15**	**47**	*i* P		**Pn**	**07 47 39.8**	**+0.5**
ROC1				*i* S		**Sn**	**07 48 38.1**	**+0.5**
CLCH	**Cerro Calan**	**5.16**	**53**	*e*P		**Pn**	**07 47 38.8**	**-0.4**
CLCH				*e*S		**Sn**	**07 48 37.5**	**-0.1**
PEL	**Peldehue**	**5.23**	**50**	*e*P		**Pn**	**07 47 40.1**	**-0.1**
PEL				*e*S		**Sn**	**07 48 39.8**	**+0.5**
PLCA	**Paso Flores**	**5.64**	**138**	Pn		**Pn**	**07 47 45.3**	**-0.6**
comp=N,2.2nm,0.3s,baz=322,slow=9.3,SNR=57								
PLCA				Sn		**Sn**	**07 48 53.6**	**+4.1**
comp=N,5.0nm,0.3s,baz=243,slow=22,SNR=7.3								
PLCA				LR		LR	07 49 56.4	
comp=N,307nm,18.7s,baz=321,slow=39								
PLCA	**Paso Flores**	**5.64**	**138**	*e*Pn		**Pn**	**07 47 45.0**	**-0.9**
PLCA				*e*Sn		**Sn**	**07 48 52.4**	**+2.9**
AAGR	**Agrelo**	**6.49**	**59**	*i* P		**Pn**	**07 47 59.4**	**+1.8**
ARCO	**CERRO ARCO**	**6.56**	**57**	*i* P		**Pn**	**07 48 00.2**	**+1.6**
AUSP	**Uspallata**	**6.66**	**51**	*i* P		**Pn**	**07 48 01.6**	**+1.5**
AUSP				*i* S		**Sn**	**07 49 14.9**	**+0.1**
RTLS	**Leoncito**	**7.01**	**49**	*i* P		**Pn**	**07 48 06.0**	**+1.2**
RTLS				IAML			07 48 09.1	
comp=Z,70nm,0.6s								
RTCV	**Cerro Valdivia**	**7.43**	**53**	*i* P		**Pn**	**07 48 11.6**	**+1.1**
GO04	**Tololo Observa**	**7.50**	**33**	*e*Pn		**Pn**	**07 48 10.0**	**-1.6**
GO04				*e*Sn		**Sn**	**07 49 34.8**	**-0.8**
LCO	**Las Campanas**	**8.56**	**29**	*e*Pn		**Pn**	**07 48 25.8**	**-0.4**
LCO				*e*Sn		**Sn**	**07 50 00.7**	**-1.0**
GO03	**Copiap**	**10.02**	**28**	*e*Pn		**Pn**	**07 48 44.4**	**-1.5**
TRQA	**Tornquist**	**10.84**	**102**	*e*Pn		**Pn**	**07 48 57.8**	**+0.6**
CHRN	**Cochrane**	**10.85**	**170**	*e*Pn		**Pn**	**07 48 56.3**	**-0.9**
GO02	**Mina Guanaco**	**12.46**	**25**	*e*Pn		**Pn**	**07 49 17.6**	**-2.0**
CPUP	**Villa Florida**	**18.53**	**62**	P		**P**	**07 50 36.0**	**-1.9**
comp=Z,0.1nm,0.3s,baz=252,slow=14,SNR=2.6								
CPUP				LR		LR	07 58 31.1	
comp=Z,114nm,18.0s,baz=223,slow=40								
CPUP	**Villa Florida**	**18.53**	**62**	*e*P		**P**	**07 50 36.5**	**-1.4**
comp=Z,8.6nm,1.1s								
NNA	**Nana**	**24.54**	**357**	LR		LR	07 59 08.3	
comp=Z,31nm,19.2s,baz=192,slow=31								
RUSC	**La Rusia**	**42.33**	**4**	*e*P		**P**	**07 54 14.8**	**-0.8**
comp=Z,1.4nm,1.0s								
SNAA	**Sanae**	**50.27**	**157**	*e*P		**P**	**07 55 17.6**	**+0.6**
comp=Z,8.4nm,1.1s								
TXAR	**Lajitas Array**	**70.73**	**334**	P		**P**	**07 57 38.4**	**+1.4**
comp=Z,0.5nm,0.6s,baz=154,slow=8.6,SNR=7.4								
TXAR				LR		LR	08 23 11.8	
comp=Z,32nm,19.2s,baz=0.0,slow=31								
DBIC	**Dimbokro**	**78.65**	**73**	P		**P**	**07 58 24.8**	**+1.7**
comp=Z,7.0nm,0.7s,baz=216,slow=8.7,SNR=9.2								
DBIC	**Dimbokro**	**78.65**	**73**	*e*P		**P**	**07 58 24.6**	**+1.4**
comp=Z,7.7nm,0.8s								
EML	**El Monte City P**	**79.21**	**326**	*e*P		**P**	**07 58 25.6**	**-0.1**
BOSA	**Boshof**	**81.31**	**119**	P		**P**	**07 58 37.4**	**-0.2**
comp=Z,2.6nm,0.8s,baz=218,slow=6.5,SNR=3.4								
TORD	**Torodi Ar. Bea**	**87.71**	**72**	P		**P**	**07 59 10.2**	**+0.4**
comp=Z,0.4nm,0.6s,baz=251,slow=4.0,SNR=3.1								
TOA1	**Torodi Ar. Sit**	**87.71**	**72**	*e*P		**P**	**07 59 10.2**	**+0.4**
SOSW	**Source of Smit**	**92.53**	**330**	*e*P		**P**	**07 59 32.6**	**+0.9**
POHA	**Pohakuloa**	**93.94**	**292**	*e*P		**P**	**07 59 37.5**	**-1.6**
comp=Z,146nm,0.6s								
ABKAR	**Akbulak array**	**145.49**	**54**	*e*PKPdf		**PKPab**	**08 05 59.4**	**+0.7**
MK32	**Makanchi Array**	**160.58**	**51**	*e*PKPdf		**PKPdf**	**08 06 19.8**	**-0.3**
MKAR	**Makanchi Array**	**160.58**	**51**	PKP		**PKPdf**	**08 06 19.8**	**-0.3**
comp=Z,

McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009

*ATH **18** 08:16:36.2, 40°.69N×20°.74E, h17km, ML2.9/11, Error ellipse: s-maj=1.7km s-min=0.9km az=132.0*

*SKO **18** 08:16:36.5, 40°.66N×20°.67E, h8km, M2.3, ML3.0*

*THE **18** 08:16:36.7, 40°.68N×20°.71E, h6km±1km, ML2.8/8, Error ellipse: s-maj=1.6km s-min=0.7km az=188.0*

*CSEM **18** 08:16:37.0±0.1, 40°.67N×20°.77E, h2km, ML2.8, Error ellipse: s-maj=2.6km s-min=1.7km az=62.0*

*PDG **18** 08:16:37.1±0.3, 40°.64N×20°.73E, h10km, ML3.0/9, Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*

*BEO **18** 08:16:38.8±0.8, 40°.75N×20°.74E, h10km±3km*

ISC 18 08:16:36.9±0.8, 40°.69N±0°.01×20.72E±0°.01, h12km±5km, n171, σ1^{9}20/256, 7C-17D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KBN	**Korca**	**0.08**	**140**	P		**Pg**	**Sg**	**08 16 39.1**	**-0.5**
KBN				S		**Sg**	**Sg**	**08 16 40.7**	**-0.9**
KBN	**Korca**	**0.08**	**140**	*i* PG		**Pg**	**Sg**	**08 16 39.4**	**-0.2**
KBN				*i* SG		**Sg**	**Sg**	**08 16 44.6**	**+3.0**
KBN	**Korca**	**0.08**	**140**	P		**Pg**	**Sg**	**08 16 39.1**	**-0.5**
KBN				S		**Sg**	**Sg**	**08 16 40.7**	**-0.9**
NEST	**Nestorio**	**0.37**	**137**	P		**Pg**	**Pg**	**08 16 44.0**	**-0.5**
NEST				S		**Sg**	**Sg**	**08 16 49.6**	**+0.2**
NEST				AML		AML	AML	08 16 50.6	
	comp=E,3469μm,0.4s								
NEST				AML		AML	AML	08 16 51.4	
	comp=N,3823μm,0.3s								
NEST	**Nestorio**	**0.37**	**137**	P		**Pg**	**Pg**	**08 16 43.7**	**-0.7**
NEST				S		**Sg**	**Sg**	**08 16 49.2**	**-0.2**
NEST	**Nestorio**	**0.37**	**137**	P		**Pg**	**Pg**	**08 16 43.8**	**-0.7**
NEST				S		**Sg**	**Sg**	**08 16 49.2**	**-0.2**
OHR	**Ohrid**	**0.43**	**8⇑**	*i* Pg		**Pg**	**Pg**	**08 16 44.8**	**-0.6**
OHR				*i* Sg		**Sb**	**Sb**	**08 16 52.5**	**-0.5**
OHR				*e*Lg		Lg	Lg	08 16 52.6	
	comp=E,2μm,0.6s								
OHR				*e*Lg		Lg	Lg	08 16 52.6	
	comp=N,763nm,0.6s								
FNA	**Florina**	**0.51**	**79**	P		**Pb**	**Pb**	**08 16 47.1**	**-0.7**
FNA				S		**Sg**	**Sg**	**08 16 53.4**	**-0.4**
FNA				AML		AML	AML	08 16 55.3	
	comp=N,27166μm,0.4s								
FNA				AML		AML	AML	08 16 56.5	
	comp=E,15543μm,0.3s								
FNA	**Florina**	**0.51**	**79**	P		**Pg**	**Pg**	**08 16 46.6**	**-0.3**
FNA				S		**Sb**	**Sb**	**08 16 54.5**	**-0.8**
FNA	**Florina**	**0.51**	**79**	P		**Pg**	**Pg**	**08 16 46.6**	**-0.3**
FNA				S		**Sg**	**Sg**	**08 16 53.3**	**-0.4**
BIA	**Bitola**	**0.57**	**54**	P		**Pb**	**Pb**	**08 16 48.0**	**-0.9**
BIA				S		**Sb**	**Sb**	**08 16 56.8**	**-0.2**
BIA	**Bitola**	**0.57**	**54⇑**	*i* Pg		**Pg**	**Pg**	**08 16 47.3**	**-0.7**
BIA				*i* Sg		**Sb**	**Sb**	**08 16 56.7**	**-0.2**
BIA				*e*Lg		Lg	Lg	08 16 57.6	
	comp=E,447nm,0.4s								
BIA				*e*Lg		Lg	Lg	08 16 58.1	
	comp=N,441nm,0.2s								
BIA	**Bitola**	**0.57**	**54**	P		**Pb**	**Pb**	**08 16 48.0**	**-0.9**
PENT	**Pentalofos**	**0.59**	**147**	P		**Pg**	**Pg**	**08 16 47.0**	**-1.4**
PENT				S		**Sg**	**Sg**	**08 16 56.6**	**+0.4**
PENT				AML		AML	AML	08 17 01.8	
	comp=E,1887μm,0.5s								
PENT				AML		AML	AML	08 17 01.9	
	comp=N,2018μm,0.6s								
PENT	**Pentalofos**	**0.59**	**147**	P		**Pg**	**Pg**	**08 16 47.2**	**-1.2**
PENT				S		**Sg**	**Sg**	**08 16 55.9**	**-0.3**
PENT	**Pentalofos**	**0.59**	**147**	P		**Pg**	**Pg**	**08 16 47.3**	**-1.2**
PENT				S		**Sg**	**Sg**	**08 16 55.9**	**-0.3**
KPRO	**Kipourio**	**0.88**	**146**	P		**Pg**	**Pg**	**08 16 52.5**	**-1.5**
KPRO				S		**Sg**	**Sg**	**08 17 05.3**	**-0.2**
KPRO				AML		AML	AML	08 17 08.9	
	comp=E,1828μm,0.5s								
KPRO				AML		AML	AML	08 17 14.9	
	comp=N,1198μm,0.5s								
KPRO	**Kipourio**	**0.88**	**146**	P		**Pg**	**Pg**	**08 16 52.4**	**-1.6**
KPRO				S		**Sb**	**Sb**	**08 17 05.7**	**-0.3**
KPRO	**Kipourio**	**0.88**	**146**	P		**Pg**	**Pg**	**08 16 52.7**	**-1.3**
KPRO				S		**Sg**	**Sg**	**08 17 05.3**	**-0.2**
KZN	**Kozani**	**0.89**	**115**	P		**Pg**	**Pg**	**08 16 53.3**	**-0.8**
KZN				S		**Sg**	**Sg**	**08 17 05.6**	**-0.2**
KZN				AML		AML	AML	08 17 09.3	
	comp=E,1866μm,0.3s								
KZN				AML		AML	AML	08 17 13.4	
	comp=N,1751μm,0.3s								
KZN	**Kozani**	**0.89**	**115**	P		**Pg**	**Pg**	**08 16 52.8**	**-1.3**
KZN				S		**Sb**	**Sb**	**08 17 06.0**	**-0.2**
KZN	**Kozani**	**0.89**	**115**	P		**Pg**	**Pg**	**08 16 53.2**	**-0.9**
KZN				S		**Sg**	**Sg**	**08 17 05.5**	**-0.2**
TIR	**Tirane**	**0.92**	**316**	*e*Pg		**Pb**	**Pb**	**08 16 54.8**	**-0.1**
TIR				*e*Sg		**Sb**	**Sb**	**08 17 07.4**	**+0.3**
TIR	**Tirane**	**0.92**	**316**	*e*Pg		**Pb**	**Pb**	**08 16 54.8**	**-0.1**
TIR				*e*Sg		**Sb**	**Sb**	**08 17 07.4**	**+0.3**
PHP	**Peshkopia**	**1.02**	**348**	P		**Pg**	**Pg**	**08 16 55.2**	**-1.3**
PHP				S		**Sb**	**Sb**	**08 17 10.2**	**+0.3**
PHP	**Peshkopia**	**1.02**	**348**	*i* PG		**Pn**	**Pn**	**08 16 58.4**	**+1.3**
PHP				*i* SG		**Sb**	**Sb**	**08 17 10.5**	**+0.6**
PHP	**Peshkopia**	**1.02**	**348**	P		**Pg**	**Pg**	**08 16 55.2**	**-1.3**
PHP				S		**Sb**	**Sb**	**08 17 10.2**	**+0.3**
JAN	**Janina**	**1.04**	**174**	P		**Pg**	**Pg**	**08 16 56.1**	**-0.8**
JAN				S		**Sg**	**Sg**	**08 17 10.0**	**-0.3**
JAN				AML		AML	AML	08 17 14.7	
	comp=N,675μm,0.4s								
JAN				AML		AML	AML	08 17 17.0	
	comp=E,1045μm,0.8s								
JAN	**Janina**	**1.04**	**174**	P		**Pg**	**Pg**	**08 16 56.0**	**-0.8**
JAN				S		**Sg**	**Sg**	**08 17 10.2**	**-0.2**
KTI	**Kastanea**	**1.11**	**105**	P		**Pg**	**Pg**	**08 16 57.0**	**-1.2**
KTI	**Kastanea**	**1.11**	**105**	P		**Pg**	**Pg**	**08 16 57.0**	**-1.2**
KASA	**Kassiopi**	**1.11**	**213**	P		**Pb**	**Pb**	**08 16 58.4**	**+0.2**
KASA	**Kassiopi**	**1.11**	**213**	P		**Pb**	**Pb**	**08 16 58.0**	**-0.1**
SGD	**Sagiada**	**1.14**	**199**	P		**Pg**	**Pg**	**08 16 56.6**	**-2.2**
SGD	**Sagiada**	**1.14**	**199**	P		**Pg**	**Pg**	**08 16 57.3**	**-1.5**
KEK	**Kerkira**	**1.20**	**216**	P		**Pb**	**Pb**	**08 16 59.7**	**+0.1**
KEK	**Kerkira**	**1.20**	**216**	P		**Pb**	**Pb**	**08 16 59.7**	**+0.1**
KEK				S		**Sn**	**Sn**	**08 17 16.8**	**+1.0**
KEK	**Kerkira**	**1.20**	**216**	P		**Pb**	**Pb**	**08 16 59.7**	**+0.1**
KEK				S		**Sn**	**Sn**	**08 17 16.8**	**+1.0**
GRG	**Griva**	**1.31**	**78**	P		**Pg**	**Pg**	**08 17 01.0**	**-1.1**
GRG				S		**Sg**	**Sg**	**08 17 18.0**	**-1.0**
GRG				AML		AML	AML	08 17 24.0	
	comp=E,685μm,0.5s								
GRG				AML		AML	AML	08 17 26.2	
	comp=N,781μm,0.5s								
GRG	**Griva**	**1.31**	**78**	P		**Pg**	**Pg**	**08 17 00.8**	**-1.2**
GRG				S		**Sn**	**Sn**	**08 17 19.5**	**+1.0**
GRG	**Griva**	**1.31**	**78**	P		**Pg**	**Pg**	**08 17 00.8**	**-1.2**
GRG				S		**Sg**	**Sg**	**08 17 18.1**	**-1.0**
SKO	**Skopje**	**1.39**	**23**	*e*Pg		**Pb**	**Pb**	**08 17 03.1**	**+0.1**
SKO				*e*Sg		**Sg**	**Sg**	**08 17 20.2**	**-1.6**
SKO	**Skopje**	**1.39**	**23**	P		**Pb**	**Pb**	**08 17 03.0**	**+0.1**
SKO				S		**Sn**	**Sn**	**08 17 21.5**	**+0.9**
SKO	**Skopje**	**1.39**	**23⇑**	*i* Pg		**Pn**	**Pn**	**08 17 01.9**	**-0.4**
SKO				*i* Sg		**Sn**	**Sn**	**08 17 22.0**	**+1.4**
SKO				*e*Lg		Lg	Lg	08 17 22.7	
	comp=E,11nm,0.4s								
SKO				*e*Lg		Lg	Lg	08 17 23.1	
	comp=N,17nm,0.4s								
SKO	**Skopje**	**1.39**	**23**	P		**Pb**	**Pb**	**08 17 03.0**	**+0.1**
SKO				*e*Sg		**Sg**	**Sg**	**08 17 20.2**	**-1.6**
SKO				S		**Sn**	**Sn**	**08 17 21.5**	**+0.9**
LIT	**Litokhoron**	**1.48**	**113**	P		**Pn**	**Pn**	**08 17 03.3**	**-0.1**
LIT	**Litokhoron**	**1.48**	**113**	P		**Pn**	**Pn**	**08 17 03.5**	**+0.1**
PUK	**Puka**	**1.49**	**336**	*i* PG		**Pg**	**Pg**	**08 17 05.3**	**-0.2**
PUK				*i* SG		**Sb**	**Sb**	**08 17 21.1**	**-2.4**
STIP	**Stip**	**1.50**	**47**	*i* Pn		**Pg**	**Pg**	**08 17 06.6**	**+0.9**
STIP				*i* Sg		**Sg**	**Sg**	**08 17 31.8**	**+6.7**
STIP				*e*Lg		Lg	Lg	08 17 33.4	
	comp=N,43nm,0.3s								
STIP				*e*Lg		Lg	Lg	08 17 33.8	
	comp=E,39nm,0.4s								
THL	**Klokotos Trika**	**1.50**	**138**	P		**Pn**	**Pn**	**08 17 03.0**	**-0.7**
THL				S		**Sg**	**Sg**	**08 17 24.8**	**-0.4**
THL				AML		AML	AML	08 17 31.6	
	comp=N,573μm,0.5s								
THL				AML		AML	AML	08 17 33.2	
	comp=E,232μm,0.6s								
THL	**Klokotos Trika**	**1.50**	**138**	P		**Pn**	**Pn**	**08 17 03.6**	**-0.1**
THL				S		**Sg**	**Sg**	**08 17 24.8**	**-0.4**
PRZK	**Prizren**	**1.52**	**1**	P		**Pg**	**Pg**	**08 17 05.4**	**-0.8**
VAY	**Valandovo**	**1.54**	**65**	*e*Pg		**Pg**	**Pg**	**08 17 05.5**	**-1.0**
VAY				*e*Sg		**Sg**	**Sg**	**08 17 27.0**	**+0.6**
VAY	**Valandovo**	**1.54**	**65**	P		**Pb**	**Pb**	**08 17 05.0**	**-0.4**
VAY				S		**Sn**	**Sn**	**08 17 25.0**	**+0.9**
VAY	**Valandovo**	**1.54**	**65**	*i* Pn		**Pb**	**Pb**	**08 17 04.9**	**-0.4**
VAY				*i* Sg		**Sg**	**Sg**	**08 17 27.1**	**+0.6**
VAY				*e*Lg		Lg	Lg	08 17 28.4	
	comp=N,189nm,0.7s								
VAY				*e*Lg		Lg	Lg	08 17 28.9	
	comp=E,90nm,0.5s								
VAY	**Valandovo**	**1.54**	**65**	P		**Pb**	**Pb**	**08 17 05.0**	**-0.4**
VAY	**Valandovo**	**1.54**	**65**	*e*Pg		**Pg**	**Pg**	**08 17 05.5**	**-1.0**
VAY				S		**Sn**	**Sn**	**08 17 25.0**	**+0.9**
VAY				*e*Sg		**Sg**	**Sg**	**08 17 27.0**	**+0.6**
DSL	**Palaion Diasel**	**1.58**	**169**	P		**Pg**	**Pg**	**08 17 06.9**	**-0.4**
DSL				S		**Sg**	**Sg**	**08 17 28.1**	**+0.3**
DSL				AML		AML	AML	08 17 33.5	
	comp=N,957μm,0.5s								
DSL				AML		AML	AML	08 17 37.3	
	comp=E,642μm,0.7s								
DSL	**Palaion Diasel**	**1.58**	**169**	P		**Pb**	**Pb**	**08 17 06.3**	**+0.2**
DSL				S		**Sg**	**Sg**	**08 17 27.6**	**-0.2**
ULC	**Ulcinj**	**1.69**	**319⇓**	*i* Pn		**Pg**	**Pg**	**08 17 08.2**	**-1.1**
ULC				*e*Sn		**Sg**	**Sg**	**08 17 32.6**	**+1.3**
ULC	**Ulcinj**	**1.69**	**319⇓**	*i* Pn		**Pg**	**Pg**	**08 17 08.2**	**-1.1**
ULC	**Ulcinj**	**1.69**	**319**	P		**Pg**	**Pg**	**08 17 08.7**	**-0.6**
ULC				*e*Sn		**Sg**	**Sg**	**08 17 32.6**	**+1.3**
THE	**Thessaloniki**	**1.71**	**91**	P		**Pn**	**Pn**	**08 17 05.7**	**-0.9**
THE	**Thessaloniki**	**1.71**	**91**	P		**Pn**	**Pn**	**08 17 06.4**	**-0.2**
KNT	**Kendrikon**	**1.72**	**73**	P		**Pn**	**Pn**	**08 17 06.7**	**0.0**
KNT	**Kendrikon**	**1.72**	**73**	P		**Pn**	**Pn**	**08 17 07.0**	**+0.3**
ZATK	**Zatriq**	**1.76**	**358**	P		**Pg**	**Pg**	**08 17 10.1**	**-0.6**
HORT	**Hortiatis**	**1.82**	**92**	P		**Pn**	**Pn**	**08 17 07.2**	**-0.9**
HORT	**Hortiatis**	**1.82**	**92**	P		**Pn**	**Pn**	**08 17 07.9**	**-0.2**
SCTE	**Santa Cesarea**	**1.82**	**251**	P		**Pn**	**Pn**	**08 17 09.1**	**+1.0**
SCTE	**Santa Cesarea**	**1.82**	**251**	P		**Pn**	**Pn**	**08 17 09.2**	**+1.0**
DRME	**Dracevica, Mon**	**1.89**	**323⇓**	*i* Pn		**Pb**	**Pb**	**08 17 11.0**	**-0.4**
DRME				*e*Sn		**Sg**	**Sg**	**08 17 38.3**	**+0.6**
DRME	**Dracevica, Mon**	**1.89**	**323⇓**	*i* Pn		**Pb**	**Pb**	**08 17 11.0**	**-0.4**
DRME				*e*Sn		**Sg**	**Sg**	**08 17 38.3**	**+0.6**
LKD2	**Lefkada island**	**1.90**	**181**	P		**Pb**	**Pb**	**08 17 11.4**	**-0.1**
LKD2	**Lefkada island**	**1.90**	**181**	P		**Pb**	**Pb**	**08 17 10.8**	**-0.7**
EVR	**Evrytania**	**1.96**	**154**	P		**Pn**	**Pn**	**08 17 11.3**	**+1.3**
EVR	**Evrytania**	**1.96**	**154**	P		**Pn**	**Pn**	**08 17 11.1**	**+1.0**
PEJK	**Peje**	**1.98**	**351**	P		**Pg**	**Pg**	**08 17 15.2**	**+0.3**
PVY	**Plav**	**1.99**	**344**	*e*Pn		**Pg**	**Pg**	**08 17 12.8**	**-0.3**
PVY				*e*Sn		**Sg**	**Sg**	**08 17 40.2**	**-0.6**
PVY	**Plav**	**1.99**	**344**	*e*Pn		**Pb**	**Pb**	**08 17 12.8**	**-0.3**
PVY				*e*Sn		**Sg**	**Sg**	**08 17 40.2**	**-0.6**
SOH	**Sokhos**	**2.01**	**85**	P		**Pn**	**Pn**	**08 17 11.6**	**+0.9**
SOH	**Sokhos**	**2.01**	**85**	P		**Pn**	**Pn**	**08 17 11.5**	**+0.8**
PDG	**Podgorica**	**2.06**	**328**	*e*Pn		**Pb**	**Pb**	**08 17 13.2**	**-1.0**
PDG				*e*Sg		**Sg**	**Sg**	**08 17 42.3**	**-0.8**
PDG	**Podgorica**	**2.06**	**328**	*e*Pn		**Pb**	**Pb**	**08 17 13.2**	**-1.0**
PDG				*e*Sn		**Sg**	**Sg**	**08 17 42.0**	**-1.1**
TTG	**Podgorica**	**2.06**	**328⇓**	*i* Pn		**Pb**	**Pb**	**08 17 13.5**	**-0.7**
TTG				*e*Sn		**Sg**	**Sg**	**08 17 42.0**	**-1.1**
AGG	**Agios Georgios**	**2.08**	**143**	P		**Pn**	**Pn**	**08 17 12.2**	**+0.6**
AGG				S		**Sn**	**Sn**	**08 17 39.7**	**+2.3**
AGG				AML		AML	AML	08 17 45.9	
	comp=E,685μm,0.4s								
AGG				AML		AML	AML	08 17 48.9	
	comp=N,945μm,0.7s								
AGG	**Agios Georgios**	**2.08**	**143**	P		**Pn**	**Pn**	**08 17 12.4**	**+0.8**
AGG				S		**Sn**	**Sn**	**08 17 39.4**	**+1.9**
PLG	**Polygyros**	**2.10**	**98**	P		**Pn**	**Pn**	**08 17 12.5**	**+0.6**
PLG				S		**Sn**	**Sn**	**08 17 39.1**	**+0.9**
PLG				AML		AML	AML	08 17 47.5	
	comp=N,163μm,0.4s								
PLG				AML		AML	AML	08 17 50.0	
	comp=E,180μm,0.6s								
PLG	**Polygyros**	**2.10**	**98**	P		**Pn**	**Pn**	**08 17 12.6**	**+0.6**
PLG				S		**Sn**	**Sn**	**08 17 39.2**	**+1.1**
BUM	**Brajici-Budva**	**2.11**	**320⇑**	*i* Pn		**Pn**	**Pn**	**08 17 13.6**	**+1.4**
BUM				*e*Sn		**Sg**	**Sg**	**08 17 43.0**	**-1.9**
BUM	**Brajici-Budva**	**2.11**	**320⇑**	*i* Pn		**Pn**	**Pn**	**08 17 13.6**	**+1.4**
BUM				*e*Sn		**Sg**	**Sg**	**08 17 43.0**	**-1.9**
PDO	**Prodromos**	**2.12**	**170**	P		**Pn**	**Pn**	**08 17 13.7**	**+1.6**
PDO	**Prodromos**	**2.12**	**170**	P		**Pn**	**Pn**	**08 17 13.5**	**+1.3**
FYTO	**Fytoko, Volos**	**2.13**	**126**	P		**Pn**	**Pn**	**08 17 13.0**	**+0.6**
FYTO	**Fytoko, Volos**	**2.13**	**126**	P		**Pn**	**Pn**	**08 17 13.1**	**+0.7**
PVO	**Paravola**	**2.16**	**163**	P		**Pb**	**Pb**	**08 17 14.9**	**-1.1**
PVO	**Paravola**	**2.16**	**163**	P		**Pb**	**Pb**	**08 17 14.3**	**+1.5**
SRS	**Serrai**	**2.22**	**78**	P		**Pb**	**Pb**	**08 17 15.6**	**-1.5**
SRS	**Serrai**	**2.22**	**78**	P		**Pb**	**Pb**	**08 17 14.9**	**+1.3**
BEY	**Berane**	**2.27**	**345**	*e*Pn		**Pb**	**Pb**	**08 17 16.4**	**-1.5**
BEY	**Berane**	**2.27**	**345**	P		**Pb**	**Pb**	**08 17 18.5**	**+0.6**
BEY				*e*Sn		**Sb**	**Sb**	**08 17 47.1**	**+1.2**
IVA	**Berane**	**2.27**	**345**	*e*Pn		**Pb**	**Pb**	**08 17 16.4**	**-1.5**
IVA				*e*Sn		**Sb**	**Sb**	**08 17 47.1**	**+1.2**
BARS	**Barje**	**2.28**	**21**	*e*Pn		**Pn**	**Pn**	**08 17 15.1**	**+0.7**
BARS				*e*Sg		**Sg**	**Sg**	**08 17 49.8**	**-0.4**
BARS	**Barje**	**2.28**	**21**	*e*Pn		**Pn**	**Pn**	**08 17 15.1**	**+0.7**
BARS				*e*Sg		**Sg**	**Sg**	**08 17 49.8**	**-0.4**
ANX	**Ano Chora**	**2.29**	**156**	P		**Pn**	**Pn**	**08 17 16.1**	**+1.5**
ANX	**Ano Chora**	**2.29**	**156**	P		**Pn**	**Pn**	**08 17 15.8**	**+1.2**
CEME	**Cevo**	**2.29**	**325⇓**	*i* Pn		**Pn**	**Pn**	**08 17 16.2**	**+1.5**
CEME				*e*Sn		**Sb**	**Sb**	**08 17 47.4**	**+0.7**
CEME	**Cevo**	**2.29**	**325⇓**	*i* Pn		**Pn**	**Pn**	**08 17 16.2**	**+1.5**
CEME				*e*Sn		**Sb**	**Sb**	**08 17 47.4**	**+0.7**
XOR	**Xorichti**	**2.31**	**124**	P		**Pn**	**Pn**	**08 17 15.4**	**+0.5**
XOR	**Xorichti**	**2.31**	**124**	P		**Pn**	**Pn**	**08 17 15.6**	**+0.7**
KOME	**Kolasin**	**2.34**	**338⇓**	*i* Pn		**Pb**	**Pb**	**08 17 17.9**	**-1.2**
KOME				*e*Sn		**Sb**	**Sb**	**08 17 49.0**	**+1.0**
KOME	**Kolasin**	**2.34**	**338⇓**	*i* Pn		**Pb**	**Pb**	**08 17 17.9**	**-1.2**
KOME				*e*Sn		**Sb**	**Sb**	**08 17 49.0**	**+1.0**
HCY	**Herceg Novi**	**2.42**	**317⇓**	*i* Pn		**Pn**	**Pn**	**08 17 18.3**	**+1.9**
HCY				*e*Sn		**Sb**	**Sb**	**08 17 50.4**	**+0.1**
HCY	**Herceg Novi**	**2.42**	**317⇓**	*i* Pn		**Pn**	**Pn**	**08 17 18.3**	**+1.9**
HCY				*e*Sn		**Sb**	**Sb**	**08 17 50.4**	**+0.1**
EFP	**Efpalio**	**2.44**	**157**	P		**Pn**	**Pn**	**08 17 17.5**	**+1.0**
EFP	**Efpalio**	**2.44**	**157**	P		**Pn**	**Pn**	**08 17 17.6**	**+1.0**
NKME	**Niksic**	**2.46**	**328⇓**	*i* Pn		**Pn**	**Pn**	**08 17 18.9**	**+2.0**
NKME				*e*Sn		**Sb**	**Sb**	**08 17 51.5**	**+0.1**
NKME	**Niksic**	**2.46**	**328⇓**	*i* Pn		**Pn**	**Pn**	**08 17 18.9**	**+2.0**
NKME				*e*Sn		**Sb**	**Sb**	**08 17 51.5**	**+0.1**
NKY	**Niksic**	**2.48**	**329⇓**	*i* Pn		**Pb**	**Pb**	**08 17 19.6**	**-2.0**
NKY				*e*Sn		**Sb**	**Sb**	**08 17 51.9**	**-0.3**
NKY	**Niksic**	**2.48**	**329⇓**	*i* Pn		**Pb**	**Pb**	**08 17 19.6**	**-2.0**
NKY				*e*Sn		**Sb**	**Sb**	**08 17 51.9**	**-0.3**
SERG	**Sergoula**	**2.50**	**155**	P		**Pn**	**Pn**	**08 17 19.4**	**+2.0**
SERG	**Sergoula**	**2.50**	**155**	P		**Pn**	**Pn**	**08 17 18.9**	**+1.5**
VLS	**Valsamata**	**2.51**	**182**	P		**Pn**	**Pn**	**08 17 18.2**	**+0.7**
VLS	**Valsamata**	**2.51**	**182**	P		**Pn**	**Pn**	**08 17 18.5**	**+0.9**
OUR	**Ouranopolis**	**2.51**	**97**	P		**Pn**	**Pn**	**08 17 17.4**	**-0.2**
OUR	**Ouranopolis**	**2.51**	**97**	P		**Pn**	**Pn**	**08 17 18.0**	**+0.4**
TRIZ	**Trizonia**	**2.55**	**155**	P		**Pn**	**Pn**	**08 17 19.2**	**+1.2**
TRIZ	**Trizonia**	**2.55**	**155**	P		**Pn**	**Pn**	**08 17 19.2**	**+1.2**
SELS	**Selova**	**2.55**	**7**	*e*Pn		**Pn**	**Pn**	**08 17 19.0**	**+0.9**
SKIA	**Skiathos**	**2.60**	**125**	P		**Pn**	**Pn**	**08 17 18.6**	**-0.3**
SKIA	**Skiathos**	**2.60**	**125**	P		**Pn**	**Pn**	**08 17 19.2**	**+0.3**
SJES	**Sjenica**	**2.63**	**348**	*e*Pn		**Pn**	**Pn**	**08 17 21.6**	**+2.3**
SJES				*e*Sn		**Sn**	**Sn**	**08 17 52.6**	**+1.4**
LAKA	**Lakka**	**2.63**	**158**	P		**Pn**	**Pn**	**08 17 21.6**	**+2.3**
LAKA	**Lakka**	**2.63**	**158**	P		**Pn**	**Pn**	**08 17 21.0**	**+1.7**
TREB	**Trebinje**	**2.69**	**320**	*e*Pn		**Pn**	**Pn**	**08 17 20.3**	**+0.2**
BRY	**Bratogost**	**2.75**	**324⇓**	*i* Pn		**Pn**	**Pn**	**08 17 23.0**	**+2.0**
BRY				*e*Sn		**Sb**	**Sb**	**08 17 58.2**	**-1.5**
BRY	**Bratogost**	**2.75**	**324⇓**	*i* Pn		**Pn**	**Pn**	**08 17 23.0**	**+2.0**
BRY				*e*Sn		**Sb**	**Sb**	**08 17 58.2**	**-1.5**
NOCI	**Noci**	**2.78**	**273**	P		**Pn**	**Pn**	**08 17 20.7**	**-0.6**
NOCI	**Noci**	**2.78**	**273**	P		**Pn**	**Pn**	**08 17 21.7**	**+0.4**
UPM	**Unac-Piva**	**2.85**	**332⇑**	*i* Pn		**Pn**	**Pn**	**08 17 24.9**	**+2.4**
UPM				*e*Sn		**Sb**	**Sb**	**08 18 00.9**	**-2.0**
UPM	**Unac-Piva**	**2.85**	**332⇑**	*i* Pn		**Pn**	**Pn**	**08 17 24.9**	**+2.4**
UPM	**Unac-Piva**	**2.85**	**332**	P		**Pb**	**Pb**	**08 17 25.7**	**-2.2**
UPM				*e*Sn		**Sb**	**Sb**	**08 18 00.9**	**-2.0**
IVAS	**Ivanjica**	**2.92**	**352**	*e*Pn		**Pn**	**Pn**	**08 17 24.3**	**+1.1**
IVAS	**Ivanjica**	**2.92**	**352**	*e*Pn		**Pn**	**Pn**	**08 17 24.3**	**+1.1**
ZAPS	**Zavoj**	**2.95**	**28**	*e*Pn		**Pn**	**Pn**	**08 17 25.5**	**+1.8**
BOVS	**Bovan**	**3.04**	**14**	*e*Pn		**Pn**	**Pn**	**08 17 25.3**	**+0.5**
BOVS	**Bovan**	**3.04**	**14**	*e*Pn		**Pn**	**Pn**	**08 17 25.2**	**-1.0**
STON	**Ston**	**3.14**	**315**	*e*Pn		**Pn**	**Pn**	**08 17 25.6**	**-1.0**
STON				Sn		**Sn**	**Sn**	**08 18 03.3**	**-0.2**
STON	**Ston**	**3.14**	**315**	*e*Pn		**Pn**	**Pn**	**08 17 25.1**	**-1.0**
STON				Sn		**Sn**	**Sn**	**08 18 03.3**	**-0.2**
GRUS	**Gruza**	**3.20**	**360**	*e*Pn		**Pn**	**Pn**	**08 17 28.3**	**+1.3**
GRUS	**Gruza**	**3.20**	**360**	*e*Pn		**Pn**	**Pn**	**08 17 28.3**	**+1.3**
ZAGS	**Zajecar**	**3.32**	**19**	*e*Pn		**Pn**	**Pn**	**08 17 29.2**	**+0.5**
ZAGS	**Zajecar**	**3.32**	**19**	*e*Pn		**Pn**	**Pn**	**08 17 29.2**	**+0.5**
BBLS	**Lazići**	**3.32**	**343**	*e*Pn		**Pn**	**Pn**	**08 17 30.8**	**+2.0**
BBLS	**Lazići**	**3.32**	**343**	*e*Pn		**Pn**	**Pn**	**08 17 30.8**	**+2.0**
DIVS	**Divibare**	**3.45**	**351**	*e*Pn		**Pn**	**Pn**	**08 17 31.8**	**+1.2**
DIVS	**Divibare**	**3.45**	**351**	*e*Pn		**Pn**	**Pn**	**08 17 31.8**	**+1.2**
TRUS	**Trudelj**	**3.54**	**356**	*e*Pn		**Pn**	**Pn**	**08 17 32.5**	**+0.8**
TRUS	**Trudelj**	**3.54**	**356**	*e*Pn		**Pn**	**Pn**	**08 17 32.5**	**+0.8**
KUBS	**Kucevo**	**3.79**	**10**	*e*Pn		**Pn**	**Pn**	**08 17 34.8**	**-0.4**
KUBS	**Kucevo**	**3.79**	**10**	*e*Pn		**Pn**	**Pn**	**08 17 34.8**	**-0.4**
PYL	**PYLOS**	**3.87**	**168**	P		**Pn**	**Pn**	**08 17 37.8**

7C-5D,Mendoza Province

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res
AAGR	**Agrelo**	**0.15**	**274**	*i* P		**Pg**	**08 29 07.2**	**-0.2**
ARCO	**CERRO ARCO**	**0.35**	**317**	*i* P		**Pg**	**08 29 09.8**	**-0.6**
ARCO				*e*P		**Pg**	**08 29 09.9**	**-0.6**
ARCO				*i* S		**Sg**	**08 29 14.9**	**-0.5**
ARCO				*e*S		**Sg**	**08 29 15.0**	**-0.5**
ARCO				IAML			08 29 16.0	
	comp=Z,193μm,0.3s							
AVIZ	**Vizcacheras**	**0.39**	**163**	*i* P		**Pn**	**08 29 13.1**	**-1.3**
ASAL	**Salagasta**	**0.53**	**343**	*i* P		**Pg**	**08 29 13.4**	**-0.3**
AUSP	**Uspallata**	**1.07**	**324**	*i* P		**Pb**	**08 29 22.2**	**-1.3**
RTCV	**Cerro Valdivia**	**1.23**	**4**	*i* P		**Pn**	**08 29 25.9**	**0.0**
FCH	**Farellones**	**1.40**	**260**	⇓*i*P		**Pn**	**08 29 27.9**	**-0.4**
FCH				*i* S		**Sn**	**08 29 45.9**	**-0.7**
FCH				IAML			08 29 46.9	
	comp=E,18μm,0.5s							
RTLS	**Leoncito**	**1.40**	**337**	*e*P		**Pn**	**08 29 28.1**	**-0.3**
RTLS				*e*S		**Sn**	**08 29 47.1**	**+0.4**
RTLS				IAML			08 29 51.1	
	comp=Z,19μm,0.3s							
ACAN	**Cantantal**	**1.48**	**57**	*i* P		**Pg**	**08 29 32.0**	**+0.3**
ZON	**Zonda**	**1.54**	**359**	*i* P		**Pb**	**08 29 31.9**	**+0.4**
ZON				*i* S		**Sg**	**08 29 53.5**	**+0.4**
SJA	**San Juan**	**1.56**	**3**	*i* P		**Pb**	**08 29 32.7**	**+0.9**
SJA				*e*S		**Sg**	**08 29 53.5**	**-0.2**
SJA				IAML			08 29 54.8	
	comp=Z,51μm,0.3s							
CLCH	**Cerro Calan**	**1.61**	**259**	⇓*i*P		**Pn**	**08 29 31.7**	**+0.7**
CLCH				*i* S		**Sn**	**08 29 51.7**	**+0.2**
CLCH				IAML			08 29 55.8	
	comp=E,48μm,0.4s							
RFA	**San Rafael**	**1.68**	**175**	*i* P		**Pb**	**08 29 33.5**	**-0.3**
RFA				*i* S		**Sg**	**08 29 59.1**	**+1.8**
RFA				IAML			08 30 00.9	
	comp=Z,11μm,0.3s							
PEL	**Peldehue**	**1.71**	**268**	⇓*i*P		**Pn**	**08 29 33.0**	**+0.7**
PEL				*i* S		**Sn**	**08 29 54.3**	**+0.4**
PEL				IAML			08 29 59.9	
	comp=E,17μm,1.1s							
ANTU	**Antumapu**	**1.73**	**254**	*e*P		**Pn**	**08 29 33.4**	**+0.8**
ANTU				*i* S		**Sb**	**08 29 56.0**	**0.0**
ANTU				IAML			08 29 60.0	
	comp=E,20μm,0.6s							
RTLL	**Cerro Villicun**	**1.77**	**5**	*i* P		**Pb**	**08 29 35.3**	**0.0**
RTLL				*e*S		**Sg**	**08 29 59.4**	**-0.8**
RTLL				IAML			08 30 02.7	
	comp=Z,28μm,0.3s							
RTLL	**Cerro Villicun**	**1.77**	**5**	⇑*i*P		**Pb**	**08 29 35.3**	**0.0**
RTLL				*i* S		**Sg**	**08 29 59.4**	**-0.8**
ROCH	**El Roble**	**1.99**	**273**	*e*P		**Pn**	**08 29 38.0**	**+1.7**
ROCH				*i* S		**Sn**	**08 30 02.2**	**+1.2**
ROC1	**El Roble**	**1.99**	**273**	*e*Pn		**Pb**	**08 29 38.4**	**-0.8**
ROC1				*e*Sn		**Sb**	**08 30 03.5**	**-0.3**
ROC1	**El Roble**	**1.99**	**273**	*e*P		**Pn**	**08 29 38.3**	**+1.9**
ROC1				*i* S		**Sb**	**08 30 03.6**	**-0.3**
AMOG	**MOGNA**	**2.15**	**4**	*i* P		**Pb**	**08 29 41.0**	**-0.9**
MRA	**San Martin**	**2.56**	**76**	*i* P		**Pb**	**08 29 46.7**	**-2.2**
MRA				*i* S		**Sg**	**08 30 28.1**	**+2.5**
MRA				IAML			08 30 29.1	
	comp=Z,5μm,0.5s							
ACDV	**Cuesta del Vie**	**2.94**	**352**	*i* P		**Pn**	**08 29 52.5**	**+3.1**
ACDV				*i* S		**Sb**	**08 30 34.5**	**+3.3**
ACDV				IAML			08 30 35.7	
	comp=Z,6μm,0.4s							
AROD	**Rodeo**	**3.00**	**346**	*i* P		**Pn**	**08 29 53.8**	**+3.4**
SUCO	**SUCO**	**3.17**	**96**	*i* P		**Pn**	**08 29 54.2**	**+1.8**
GO05	**HualaæØ**	**3.33**	**234**	*e*Pn		**Pn**	**08 29 55.6**	**+1.0**
GO05	**HualaæØ**	**3.33**	**234**	*i* P		**Pn**	**08 29 55.5**	**+1.0**
GO05				*i* S		**Sb**	**08 30 44.0**	**+2.0**
GO04	**Tololo Observa**	**3.44**	**327**	*e*Pn		**Pn**	**08 29 58.4**	**+2.0**
GO04	**Tololo Observa**	**3.44**	**327**	*e*P		**Pn**	**08 29 58.0**	**+1.6**
TLL	**Tololo Astrono**	**3.45**	**327**	*e*P		**Pn**	**08 29 58.3**	**+1.8**
AGUA	**GUANDACOL**	**3.60**	**2**	*i* P		**Pn**	**08 30 01.6**	**+3.2**
TCA	**Tanti**	**3.86**	**64**	*i* P		**Pn**	**08 30 03.8**	**+1.8**
TCA	**Tanti**	**3.86**	**64**	⇓*i*P		**Pn**	**08 30 03.5**	**+1.6**
PIL	**Pilar**	**4.28**	**72**	*i* P		**Pn**	**08 30 09.9**	**+2.2**
PIL				IAML			08 31 34.4	
	comp=Z,7μm,0.8s							
VCA	**Vinchina**	**4.36**	**5**	*i* P		**Pn**	**08 30 11.8**	**+2.8**
LCO	**Las Campanas**	**4.43**	**336**	*e*Pn		**Pn**	**08 30 11.4**	**+1.3**
LCO	**Las Campanas**	**4.43**	**336**	*i* Pg		**Pb**	**08 30 24.0**	**+3.1**
LCO				*i* S		**Sn**	**08 31 05.3**	**+3.8**
LCO				*i* Sg		**Sb**	**08 31 17.9**	**+3.6**
LCO	**Las Campanas**	**4.43**	**336**	⇑*i*P		**Pn**	**08 30 11.4**	**+1.3**
LCO				*e*S		**Sn**	**08 31 01.7**	**+0.2**
LCO	**Las Campanas**	**4.43**	**336**	P		**Pn**	**08 30 11.1**	**+1.0**
CCHI	**Chillan**	**4.49**	**218**	*i* P		Pb	08 30 16.3	-5.4
CANA	**Caviahue**	**5.17**	**202**	*i* P		Pn	08 30 24.9	+4.8
CANA				IAML			08 31 57.9	
	comp=Z,219nm,0.8s							
CYA	**Choya**	**5.25**	**29**	*i* P		**Pn**	**08 30 22.7**	**+1.7**
CYA				*e*S		**Sn**	**08 31 21.4**	**+0.2**
CYA				IAML			08 32 03.9	
	comp=Z,2μm,0.5s							
CYA				IAML			08 32 11.2	
	comp=N,2μm,0.6s							
GO03	**Copiap**	**5.65**	**346**	*e*Pn		**Pn**	**08 30 27.5**	**+0.9**
AHML	**Horco Molle**	**6.92**	**25**	*i* P		**Pn**	**08 30 45.0**	**+1.0**
AHML				IAML			08 32 56.2	
	comp=Z,636nm,0.6s							
TRQA	**Tornquist**	**7.35**	**134**	*e*Pn		**Pn**	**08 30 50.0**	**+0.1**
TRQA	**Tornquist**	**7.35**	**134**	*e*P		**Pn**	**08 30 50.0**	**+0.1**
PLCA	**Paso Flores**	**7.77**	**191**	Pn		**Pn**	**08 31 00.0**	**+4.3**
	comp=Z,0.5nm,0.3s,baz=17,slow=13,SNR=16							
PLCA				Lg		Lg	08 32 59.9	
	comp=Z,3.1nm,0.3s,baz=94,slow=3.1,SNR=3.2							
PLCA	**Paso Flores**	**7.77**	**191**	*e*Pn		**Pn**	**08 30 59.6**	**+3.9**
PLCA	**Paso Flores**	**7.77**	**191**	*i* P		Pb	08 31 06.9	-11
PLCA				IAML			08 33 19.9	
	comp=Z,71nm,0.6s							
PLCA	**Paso Flores**	**7.77**	**191**	*e*P		**Pn**	**08 30 59.6**	**+3.9**
GO02	**Mina Guanaco**	**7.95**	**354**	*e*Pn		**Pn**	**08 30 58.4**	**0.0**
SLA	**San Lorenzo**	**8.79**	**19**	*i* P		**Pn**	**08 31 11.9**	**+2.2**
PB10	**IPOC Station P**	**9.69**	**350**	*e*Pn		**Pn**	**08 31 21.1**	**-0.9**
HJA	**Humahuaca**	**10.26**	**17**	*i* P		**Pn**	**08 31 31.6**	**+1.5**
HJA				IAML			08 32 29.8	
	comp=Z,54nm,0.6s							
PB04	**IPOC Station P**	**10.80**	**353**	*e*Pn		**Pn**	**08 31 35.3**	**-2.1**
CPUP	**Villa Florida**	**11.92**	**59**	Pn		**Pn**	**08 31 51.6**	**-0.9**
	comp=Z,1.0nm,0.3s,baz=234,slow=12,SNR=25							
CPUP				Lg		Lg	08 35 16.9	
	comp=Z,2.5nm,0.3s,baz=194,slow=19,SNR=2.4							
CPUP				LR		LR	08 36 59.0	
	comp=Z,1μm,20.6s,baz=242,slow=40							
CPUP	**Villa Florida**	**11.92**	**59**	*e*Pn		**Pn**	**08 31 51.3**	**-1.2**
CPUP	**Villa Florida**	**11.92**	**59**	*e*P		**Pn**	**08 31 51.3**	**-1.2**
PB01	**IPOC Station P**	**12.03**	**356**	*e*Pn		**Pn**	**08 31 51.2**	**-2.9**
MNMC	**Minye Minye**	**13.93**	**356**	*e*Pn		**Pn**	**08 32 19.0**	**-1.3**
CHRN	**Cochrane**	**14.45**	**191**	*e*Pn		**Pn**	**08 32 27.9**	**+0.9**
LPAZ	**La Paz**	**16.74**	**2**	Pn		**Pn**	**08 32 57.3**	**-0.4**
	comp=Z,2.5nm,0.3s,baz=184,slow=7.1,SNR=207							
LPAZ				LR		LR	08 40 30.2	
	comp=Z,927nm,18.2s,baz=172,slow=41							
LPAZ	**La Paz**	**16.74**	**2**	*e*Pn		**Pn**	**08 32 56.2**	**-1.5**
LPAZ				*e*pP		**P**	**08 32 57.9**	**-2.0**
SIV	**San Ignacio**	**18.36**	**24**	P		**P**	**08 33 15.9**	**-1.3**
	comp=Z,2.0nm,0.3s,baz=207,slow=11,SNR=93							
SIV				LR		LR	08 40 35.5	
	comp=Z,218nm,20.2s,baz=200,slow=38							
SPB	**Sao Paulo**	**20.91**	**69**	*e*P		Pn	08 33 46.0	-1.5
	comp=Z,52nm,1.0s							
NNA	**Nana**	**22.31**	**338**	P		**P**	**08 33 60.0**	**-0.2**
	comp=Z,38nm,0.7s,baz=182,slow=11,SNR=14							
NNA				LR		LR	08 41 11.8	
	comp=Z,583nm,21.7s,baz=153,slow=33							
NNA	**Nana**	**22.31**	**338**	*e*P		**P**	**08 33 59.8**	**-0.4**
	comp=Z,44nm,0.8s							
NNA	**Nana**	**22.31**	**338**	*i* P		**P**	**08 34 00.8**	**+0.6**
SAML	**Samuel**	**24.55**	**13**	*e*P		**P**	**08 34 21.8**	**-0.5**
	comp=Z,52nm,0.8s							
PMSA	**Palmer Station**	**31.83**	**176**	LR		LR	08 47 07.3	
	comp=Z,203nm,20.0s,baz=350,slow=34							
PTGA	**Pitinga**	**33.21**	**16**	P		**P**	**08 35 38.8**	**-0.7**
	comp=Z,40nm,0.6s,baz=310,slow=22,SNR=72							
PTGA				LR		LR	08 49 31.3	
	comp=Z,172nm,21.3s,baz=171,slow=37							
PTGA	**Pitinga**	**33.21**	**16**	*e*P		**P**	**08 35 38.7**	**-0.8**
	comp=Z,35nm,0.7s							
OTAV	**Otavalo**	**34.42**	**342**	*e*P		**P**	**08 35 51.1**	**+0.6**
	comp=Z,11nm,0.8s							
OTAV	**Otavalo**	**34.42**	**342**	*e*P		**P**	**08 35 52.1**	**+1.6**
OTAV	**Otavalo**	**34.42**	**342**	*e*P		**P**	**08 35 51.5**	**+1.0**
OTAV				pmax		pmax		
	comp=Z,11nm,0.8s							
FLOC	**Florencia**	**35.12**	**348**	*e*P		**P**	**08 35 56.8**	**+0.7**
RPN	**Rapa Nui**	**35.53**	**269**	LR		LR	08 47 37.3	
	comp=Z,374nm,18.2s,baz=106,slow=31							
SOTA	**Rioblanco**	**35.84**	**346**	*e*P		**P**	**08 36 04.2**	**+1.4**
PCON	**Cinco Dias**	**35.98**	**347**	*e*P		**P**	**08 36 05.7**	**+1.6**
POPC	**Popayan, Colom**	**36.25**	**346**	*e*P		**P**	**08 36 06.2**	**+0.2**
SJAC	**San Juan de Ar**	**36.52**	**351**	*e*P		**P**	**08 36 05.5**	**-2.6**
PRAC	**Prado**	**37.08**	**350**	*e*P		**P**	**08 36 13.5**	**+0.7**
	comp=Z,30nm,0.7s							
PRAC	**Prado**	**37.08**	**350**	*e*P		**P**	**08 36 12.2**	**-0.7**
HORQ	**Saladito**	**37.15**	**347**	*e*P		**P**	**08 36 13.0**	**-0.8**
VILC	**Villavicencio,**	**37.31**	**352**	*e*P		**P**	**08 36 14.1**	**-0.8**
YOTC	**Yotoco, Valle**	**37.59**	**347**	*e*P		**P**	**08 36 17.5**	**+0.2**
CHIC	**Chingaza**	**37.83**	**352**	*e*P		**P**	**08 36 19.8**	**+0.2**
TOLC	**Tolima**	**38.00**	**349**	*e*P		**P**	**08 36 21.4**	**+0.5**
ROSC	**El Rosal**	**38.11**	**351**	P		**P**	**08 36 22.9**	**+1.0**
	comp=Z,15nm,0.5s,baz=123,slow=5.8,SNR=14							
ROSC				LR		LR	08 52 16.1	
	comp=Z,182nm,19.2s,baz=186,slow=36							
ROSC	**El Rosal**	**38.11**	**351**	*e*P		**P**	**08 36 22.8**	**+0.9**
	comp=Z,15nm,0.5s							
ROSC	**El Rosal**	**38.11**	**351**	*e*P		**P**	**08 36 23.4**	**+1.5**
PLMC	**San Jos¨ del**	**38.48**	**348**	*e*P		**P**	**08 36 24.5**	**-0.2**
NORC	**Norcasia**	**38.90**	**350**	*e*P		**P**	**08 36 27.6**	**-0.5**
RUSC	**La Rusia**	**39.00**	**353**	*e*P		**P**	**08 36 29.5**	**-0.1**
	comp=Z,62nm,0.7s							
RUSC	**La Rusia**	**39.00**	**353**	*e*P		**P**	**08 36 29.4**	**-0.1**
HELC	**Santa Helena**	**39.61**	**349**	*e*P		**P**	**08 36 34.3**	**-0.2**
	comp=Z,756nm,0.7s							
HELC	**Santa Helena**	**39.61**	**349**	*e*P		**P**	**08 36 33.9**	**-0.6**
BARC	**Barichara**	**39.70**	**353**	*e*P		**P**	**08 36 33.4**	**-1.7**
PTBC	**PUERTO BERRIO,**	**39.80**	**351**	*e*P		**P**	**08 36 33.4**	**-2.3**
SOLC	**Bahia Solano**	**39.98**	**346**	*e*P		**P**	**08 36 38.1**	**+0.9**
ZARC	**Zaragoza, Cauc**	**40.79**	**351**	*e*P		**P**	**08 36 42.0**	**-1.8**
MOTC	**Monteria, Cord**	**42.17**	**350**	*e*P		**P**	**08 36 55.4**	**+0.2**
CAPC	**Capurgana**	**42.32**	**347**	*e*P		**P**	**08 36 57.0**	**+0.6**
CODC	**Agust ›n Codaz**	**43.03**	**353**	*e*P		P	08 36 57.5	-4.7
PCRV	**Puerto La Cruz**	**43.20**	**6**	P		**P**	**08 37 02.7**	**-0.8**
	comp=Z,22nm,0.6s,baz=191,slow=6.3,SNR=18							
BCIP	**Isla Barro Col**	**43.36**	**344**	*e*P		**P**	**08 37 05.2**	**+0.4**
	comp=Z,37nm,0.8s							
BCIP	**Isla Barro Col**	**43.36**	**344**	*e*P		**P**	**08 37 04.8**	**0.0**
HDC	**Heredia**	**45.32**	**338**	*e*P		**P**	**08 37 20.7**	**0.0**
	comp=Z,70nm,0.9s							
GRGR	**Grenville**	**45.47**	**10**	*e*P		**P**	**08 37 20.5**	**-1.2**
	comp=Z,236nm,1.0s							
JTS	**JuntasAbangare**	**45.86**	**337**	P		**P**	**08 37 25.9**	**+1.1**
	comp=Z,3.7nm,0.5s,baz=291,slow=6.0,SNR=9.6							
ESPN	**Las Esperanzas**	**47.45**	**339**	*e*P		**P**	**08 37 36.7**	**-0.5**
	comp=Z,18nm,0.8s							
ESTN	**Estel**	**48.95**	**337**	*e*P		**P**	**08 37 47.5**	**-1.5**
	comp=Z,26nm,0.9s							
VNA3	**Neumayer Olymp**	**49.14**	**158**	P		**P**	**08 37 50.5**	**+0.8**
VNA1	**Neumayer–Stat**	**49.41**	**158**	P		P	08 37 56.3	+4.6
TGUH	**Tegucigalpa,Un**	**50.15**	**336**	*e*P		**P**	**08 37 58.0**	**+0.1**
	comp=Z,91nm,0.8s							
ICMP	**Isla Caja de M**	**50.73**	**3**	*e*P		**P**	**08 38 01.1**	**-1.3**
CRPR	**Cabo Rojo, PR**	**50.83**	**2**	*e*P		**P**	**08 38 01.7**	**-1.4**
	comp=Z,126nm,0.7s							
OBIP	**Obispado Ponce**	**50.89**	**3**	*e*P		**P**	**08 38 01.8**	**-1.7**
	comp=Z,120nm,1.1s							
SJG	**San Juan**	**50.97**	**3**	P		**P**	**08 38 02.1**	**-2.0**
	comp=Z,48nm,0.8s,baz=269,slow=3.9,SNR=17							
SJG	**San Juan**	**50.97**	**3**	*e*P		**P**	**08 38 02.2**	**-1.9**
	comp=Z,50nm,0.8s							
SJG	**San Juan**	**50.97**	**3**	*e*P		**P**	**08 38 02.2**	**-1.9**
SJG				pmax		pmax		
	comp=Z,50nm,0.8s							
MTP	**Monte Pirata**	**50.99**	**4**	*e*P		**P**	**08 38 01.9**	**-2.3**
	comp=Z,44nm,1.0s							
HUMP	**Col San Antoni**	**51.02**	**3**	*e*P		**P**	**08 38 02.4**	**-2.0**
	comp=Z,22nm,1.1s							
MPR	**Mayaguez**	**51.04**	**2**	*e*P		**P**	**08 38 02.9**	**-1.7**
	comp=Z,51nm,1.1s							
CBYP	**Canovanas**	**51.15**	**3**	*e*P		**P**	**08 38 03.8**	**-1.7**
	comp=Z,72nm,1.0s							
AOPR	**Arecibo Observ**	**51.18**	**2**	*e*P		**P**	**08 38 03.7**	**-2.0**
	comp=Z,70nm,1.2s							
SNAA	**Sanae**	**51.37**	**158**	P		**P**	**08 38 07.2**	**+0.6**
SNAA	**Sanae**	**51.37**	**158**	P		**P**	**08 38 07.4**	**+0.8**
	comp=Z,2.7nm,0.5s,baz=280,slow=8.2,SNR=39							
SNAA				LR		LR	09 01 41.9	
	comp=Z,177nm,18.2s,baz=301,slow=38							
SNAA	**Sanae**	**51.37**	**158**	*e*P		**P**	**08 38 07.0**	**+0.4**
	comp=Z,34nm,1.0s							
SNAA	**Sanae**	**51.37**	**158**	*i* P		**P**	**08 38 06.0**	**-0.6**
CCIG	**Comitan**	**53.99**	**332**	*e*P		**P**	**08 38 26.3**	**-0.4**
	comp=Z,30nm,0.7s							
CMIG	**Matias Romero**	**55.85**	**329**	P		**P**	**08 38 40.1**	**+0.1**
	comp=Z,15nm,0.8s,baz=139,slow=4.9,SNR=14							
NVL	**N'lazarevskaya**	**56.03**	**157**	⇓*i*P		P	08 38 47.0	+6.3
NVL				*e*S		**S**	**08 46 30.5**	**+2.4**
NVL				pmax		pmax		
	comp=Z,23nm,0.9s							
QSPA	**South Pole Qui**	**57.14**	**180**	P		**P**	**08 38 49.4**	**+0.5**
	comp=Z,6.4nm,0.6s,baz=338,slow=1.4,SNR=6.6							
QSPA				LR		LR	09 02 27.8	
	comp=Z,165nm,20.2s,baz=153,slow=35							
QSPA	**South Pole Qui**	**57.14**	**180**	*e*P		**P**	**08 38 48.8**	**-0.1**
	comp=Z,31nm,1.3s							
MYIG	**MOrida**	**57.40**	**336**	*e*P		**P**	**08 38 50.0**	**-1.0**
	comp=Z,114nm,0.8s							
TLIG	**Tlapa**	**57.92**	**326**	*e*P		**P**	**08 38 55.4**	**+0.5**
	comp=Z,13nm,0.8s							
859A	**Kempfer Cattle**	**61.92**	**348**	P		**P**	**08 39 21.6**	**-0.4**
	baz=168							
DWPF	**Disney Wildern**	**62.07**	**347**	P		**P**	**08 39 22.4**	**-0.6**
	baz=168							
857A	**Zephyrhills**	**62.37**	**346**	P		**P**	**08 39 24.4**	**-0.6**
	baz=167							
757A	**Oxford**	**63.00**	**347**	P		**P**	**08 39 28.7**	**-0.4**
	baz=167							
658A	**Bunnell**	**63.31**	**348**	P		**P**	**08 39 31.3**	**+0.1**
	baz=168							
656A	**Willston**	**63.50**	**346**	P		**P**	**08 39 32.0**	**-0.5**
	baz=167							
656A	**Willston**	**63.50**	**346**	*e*P		**P**	**08 39 32.9**	**+0.4**
	comp=Z,45nm,0.9s							
657A	**Interlachen**	**63.59**	**347**	P		**P**	**08 39 32.2**	**-0.8**
	baz=168							
557A	**Orange Park**	**63.98**	**347**	P		**P**	**08 39 34.7**	**-0.9**
	baz=168							
556A	**Lake Butler**	**64.09**	**347**	P		**P**	**08 39 35.3**	**-1.1**
	baz=167							
ZAIG	**Zacatecas**	**64.29**	**325**	*e*P		**P**	**08 39 39.7**	**+1.5**
	comp=Z,5.0nm,0.9s							
SACV	**Santiago Islan**	**64.29**	**49**	*e*P		**P**	**08 39 38.0**	**-0.1**
	comp=Z,55nm,1.3s							
555A	**McAlpin**	**64.32**	**346**	P		**P**	**08 39 37.3**	**-0.6**
	baz=167							
555A	**McAlpin**	**64.32**	**346**	*e*P		**P**	**08 39 38.2**	**+0.3**
	comp=Z,42nm,0.8s							
SBA	**Scott Base**	**64.52**	**191**	*e*P		**P**	**08 39 40.8**	**+2.1**
	comp=Z,13nm,1.4s							
SBA	**Scott Base**	**64.52**	**191**	*e*P		**P**	**08 39 40.8**	**+2.1**
SBA				pmax		pmax		
	comp=Z,13nm,1.4s							
553A	**Crawfordville**	**64.69**	**345**	P		**P**	**08 39 40.1**	**-0.2**
	baz=165							
LNIG	**Linares**	**64.71**	**329**	*e*P		**P**	**08 39 39.9**	**-0.7**
	comp=Z,6.9nm,0.9s							
456A	**Hilliard**	**64.72**	**347**	P		**P**	**08 39 40.1**	**-0.4**
	baz=168							
552A	**Lynn Haven**	**64.83**	**344**	P		**P**	**08 39 40.7**	**-0.5**
	baz=164							
455A	**Stateville**	**64.93**	**346**	P		**P**	**08 39 41.7**	**-0.2**
	baz=167							
454A	**Quitman**	**65.03**	**346**	P		**P**	**08 39 41.9**	**-0.6**
	baz=166							
BBSR	**BB Station**	**65.22**	**4**	*e*P		**P**	**08 39 43.9**	**+0.1**
	comp=Z,112nm,1.4s							
357A	**Townsend**	**65.31**	**348**	P		**P**	**08 39 43.4**	**-0.9**
	baz=168							
453A	**Whigham**	**65.31**	**345**	P		**P**	**08 39 43.1**	**-1.2**
	baz=166							
453A	**Whigham**	**65.31**	**345**	*e*P		**P**	**08 39 44.2**	**-0.1**
	comp=Z,60nm,0.9s							
356A	**Blackshear**	**65.33**	**347**	P		**P**	**08 39 43.2**	**-1.2**
	baz=168							
452A	**Marianna**	**65.49**	**344**	P		**P**	**08 39 44.8**	**-0.7**
	baz=165							
VNDA	**Vanda**	**65.53**	**191**	P		**P**	**08 39 46.9**	**+1.6**
	comp=Z,2.5nm,0.8s,baz=137,slow=5.3,SNR=16							
VNDA				LR		LR	09 07 31.0	
	comp=Z,105nm,18.4s,baz=140,slow=35							
VNDA	**Vanda**	**65.53**	**191**	*e*P		**P**	**08 39 47.0**	**+1.8**
	comp=Z,13nm,1.4s							
SYO	**Syowa Base**	**65.65**	**158**	⇑*e*P		**P**	**08 39 45.0**	**-1.1**
SYO	**Syowa Base**	**65.65**	**158**	⇑*es*P		sP	08 39 53.6	+0.2
TIGA	**Tifton**	**65.72**	**346**	P		**P**	**08 39 45.6**	**-1.4**
	baz=166,SNR=5.7							
TIGA	**Tifton**	**65.72**	**346**	*e*P		**P**	**08 39 46.6**	**-0.4**
	comp=Z,40nm,0.9s							
353A	**Camilla**	**65.76**	**345**	P		**P**	**08 39 46.2**	**-1.0**
	baz=166,SNR=9.5							
257A	**Skidaway Islan**	**65.77**	**348**	P		**P**	**08 39 44.9**	**-2.4**
	baz=168							
450A	**Crestview**	**65.78**	**343**	P		**P**	**08 39 46.4**	**-1.0**
	baz=163							
449A	**Pace**	**65.89**	**343**	P		**P**	**08 39 47.6**	**-0.5**
	baz=163							
256A	**Glennville**	**65.92**	**348**	P		**P**	**08 39 47.5**	**-0.8**
	baz=168							
255A	**Hazlehurst**	**65.98**	**347**	P		**P**	**08 39 47.7**	**-0.9**
	baz=167							
255A	**Hazlehurst**	**65.98**	**347**	*e*P		**P**	**08 39 48.0**	**-0.5**
	comp=Z,30nm,1.1s							
351A	**Pinckard**	**66.00**	**344**	P		**P**	**08 39 47.8**	**-0.9**
	baz=164,SNR=9.9							
352A	**Blakely**	**66.04**	**345**	P		**P**	**08 39 48.0**	**-1.0**
	baz=165,SNR=12							
352A	**Blakely**	**66.04**	**345**	*e*P		**P**	**08 39 48.6**	**-0.5**
	comp=Z,62nm,0.8s							
254A	**Abbeville**	**66.15**	**346**	P		**P**	**08 39 48.7**	**-1.1**
	baz=166							
448A	**Bay Minette**	**66.22**	**342**	P		**P**	**08 39 49.6**	**-0.6**
	baz=162							
BRAL	**Brewton**	**66.24**	**343**	P		**P**	**08 39 49.9**	**-0.4**
	baz=163							
BRAL	**Brewton**	**66.24**	**343**	*e*P		**P**	**08 39 50.3**	**0.0**
	comp=Z,53nm,0.8s							
447A	**Lucedale**	**66.30**	**341**	P		**P**	**08 39 49.7**	**-1.0**
	baz=162							
447A	**Lucedale**	**66.30**	**341**	*e*P		**P**	**08 39 51.4**	**+0.7**
	comp=Z,119nm,1.4s							
350A	**Dozier**	**66.31**	**344**	P		**P**	**08 39 50.0**	**-0.8**
	baz=164,SNR=6.3							
544A	**White Castle**	**66.38**	**339**	P		**P**	**08 39 50.7**	**-0.5**
	baz=159							
KVTX	**Kingsville**	**66.40**	**332**	*e*P		**P**	**08 39 53.0**	**+1.5**
	comp=Z,48nm,1.0s							
253A	**Americus**	**66.43**	**346**	P		**P**	**08 39 50.3**	**-1.3**
	baz=166,SNR=6.3							
253A	**Americus**	**66.43**	**346**	*e*P		**P**	**08 39 51.3**	**-0.2**
	comp=Z,35nm,0.8s							
349A	**Repton**	**66.45**	**343**	P		**P**	**08 39 51.1**	**-0.6**
	baz=163,SNR=7.0							
446A	**Poplarville**	**66.49**	**341**	P		**P**	**08 39 51.2**	**-0.7**
	baz=161							
252A	**Lumpkin**	**66.50**	**345**	P		**P**	**08 39 50.8**	**-1.2**
	baz=165,SNR=8.5							
156A	**Sylvania**	**66.51**	**348**	P		**P**	**08 39 51.6**	**-0.4**
	baz=168							
543A	**St. Martinvill**	**66.57**	**338**	P		**P**	**08 39 50.7**	**-1.7**

147A	Livingston	67.98 342	P	P	08 40 00.8	-0.5
	baz=162,SNR=5.4					
147A	Livingston	67.98 342	eP	P	08 40 00.9	-0.5
	comp=Z,34nm,0.8s					
LRAL	Lakeview Retre	68.01 343	P	P	08 40 00.7	-0.8
	baz=163,SNR=12					
LRAL	Lakeview Retre	68.01 343	eP	P	08 40 00.7	-0.8
	comp=Z,24nm,1.0s					
244A	Avery, Jackson	68.05 340	P	P	08 40 02.1	+0.4
	baz=160,SNR=22					
Z49A	Columbiana	68.05 344	P	P	08 40 00.8	-1.0
	baz=164,SNR=14					
JSC	Jenkinsville	68.06 349	eP	P	08 40 01.8	0.0
	comp=Z,18nm,0.9s					
JSC	Jenkinsville	68.06 349	eP	P	08 40 01.8	0.0
JSC			pmax	pmax		
	comp=Z,19nm,0.9s					
Y53A	Monroe	68.06 347	P	P	08 40 00.9	-0.9
	baz=166,SNR=11					
243A	Waterproof	68.13 339	P	P	08 40 02.3	0.0
	baz=159					
341A	Kurthwood	68.14 338	P	P	08 40 02.8	+0.4
	baz=158,SNR=8.9					
341A	Kurthwood	68.14 338	eP	P	08 40 02.9	+0.5
	comp=Z,53nm,1.1s					
146A	Union	68.15 342	P	P	08 40 02.6	+0.1
	baz=162					
146A	Union	68.15 342	eP	P	08 40 02.4	-0.1
	comp=Z,56nm,0.9s					
VBMS	Vicksburg	68.16 340	P	P	08 40 02.9	+0.4
	baz=160,SNR=12					
VBMS	Vicksburg	68.16 340	eP	P	08 40 03.0	+0.5
	comp=Z,102nm,0.8s					
Y52A	Lilburn	68.17 346	P	P	08 40 01.8	-0.7
	baz=166,SNR=16					
Y52A	Lilburn	68.17 346	eP	P	08 40 01.8	-0.7
	comp=Z,41nm,0.8s					
145A	Houston Renfro	68.36 341	P	P	08 40 04.0	+0.3
	baz=161,SNR=9.9					
Y51A	Rockmart	68.41 345	P	P	08 40 03.2	-0.9
	baz=165,SNR=20					
Z47A	Carrollton	68.43 343	P	P	08 40 03.6	-0.5
	baz=162,SNR=21					
Z48A	Northport	68.47 343	P	P	08 40 03.6	-0.8
	baz=163,SNR=23					
242A	Grayson	68.50 339	P	P	08 40 05.3	+0.7
	baz=159,SNR=6.1					
144A	Alexander Plac	68.52 340	P	P	08 40 05.1	+0.3
	baz=160					
CNNC	Cliffs of the	68.53 352	P	P	08 40 04.2	-0.5
	baz=172,SNR=5.7					
CNNC	Cliffs of the	68.53 352	eP	P	08 40 04.8	+0.1
	comp=Z,48nm,0.9s					
Y50A	Piedmont	68.54 345	P	P	08 40 04.0	-0.9
	baz=164,SNR=19					
X53A	Estanollee	68.64 347	P	P	08 40 04.7	-0.8
	baz=167,SNR=14					
Z46A	Louisville	68.65 342	P	P	08 40 05.9	+0.3
	baz=162,SNR=8.9					
Y49A	Blount Mountai	68.66 344	P	P	08 40 04.7	-0.9
	baz=164,SNR=11					
Y49A	Blount Mountai	68.66 344	eP	P	08 40 04.9	-0.8
	comp=Z,27nm,0.9s					
241A	Mo Tay, Goldon	68.70 338	P	P	08 40 06.4	+0.5
	baz=158					
241A	Mo Tay, Goldon	68.70 338	eP	P	08 40 06.1	+0.3
	comp=Z,38nm,1.0s					
SLBS	Sierra La Lagu	68.83 320	eP	P	08 40 07.7	+0.7
	comp=Z,6.9nm,0.8s					
X52A	Dahlonega	68.85 347	P	P	08 40 05.9	-0.9
	baz=166,SNR=20					
143A	Socs Landing,	68.87 340	P	P	08 40 07.2	+0.3
	baz=160,SNR=17					
143A	Socs Landing,	68.87 340	eP	P	08 40 08.0	+1.1
	comp=Z,133nm,0.8s					
142A	Monroe	68.89 339	P	P	08 40 07.6	+0.5
	baz=159					
Y48A	Jasper	68.89 344	P	P	08 40 06.0	-1.1
	baz=163,SNR=9.5					
KMSC	Kings Mountain	68.92 349	P	P	08 40 06.4	-0.8
	baz=168,SNR=9.4					
KMSC	Kings Mountain	68.92 349	eP	P	08 40 07.2	0.0
	comp=Z,21nm,0.8s					
240A	Hunter Patters	68.98 337	P	P	08 40 07.1	-0.5
	baz=158					
X51A	Calhoun	69.00 346	P	P	08 40 07.4	-0.3
	baz=165,SNR=39					
X51A	Calhoun	69.00 346	eP	P	08 40 07.7	0.0
	comp=Z,108nm,0.8s					
Z45A	Winona	69.02 341	P	P	08 40 08.1	+0.4
	baz=161,SNR=10					
Z45A	Winona	69.02 341	eP	P	08 40 08.2	+0.4
	comp=Z,81nm,0.8s					
NATX	Nacogdoches	69.02 336	P	P	08 40 08.3	+0.4
	baz=157,SNR=6.3					
NATX	Nacogdoches	69.02 336	eP	P	08 40 07.7	-0.2
	comp=Z,52nm,0.8s					
BG3	Lake Jocassee	69.04 347	eP	P	08 40 08.0	0.0
	comp=Z,24nm,0.8s					
Y47A	UCPARC, Winfie	69.05 343	P	P	08 40 07.5	-0.5
	baz=163,SNR=42					
X50B	Fort Payne	69.07 345	P	P	08 40 07.2	-1.0
	baz=165,SNR=22					
Z44A	Pea Ridge, Bel	69.13 341	P	P	08 40 08.6	+0.1
	baz=160,SNR=12					
435B	Jarrell	69.18 334	P	P	08 40 08.8	-0.1
	baz=154					
435B	Jarrell	69.18 334	eP	P	08 40 09.0	+0.1
	comp=Z,26nm,1.0s					
141A	Papa Simpson,	69.23 338	P	P	08 40 09.4	+0.2
	baz=158					
W53A	Cullowhee	69.26 347	P	P	08 40 08.6	-0.8
	baz=167,SNR=21					
X49A	Woodville	69.27 344	P	P	08 40 08.6	-0.8
	baz=164,SNR=12					
Y46A	Houston	69.28 342	P	P	08 40 08.8	-0.7
	baz=162,SNR=22					
HPIG		69.30 325	eP	P	08 40 09.6	-0.4
	comp=Z,15nm,1.0s					
Z43A	Armstrong Fami	69.30 340	P	P	08 40 09.1	-0.4
	baz=160					
W52A	Murphy	69.33 347	P	P	08 40 09.1	-0.6
	baz=166,SNR=18					
W52A	Murphy	69.33 347	eP	P	08 40 09.5	-0.3
	comp=Z,29nm,0.8s					
X48A	Hartselle	69.38 344	P	P	08 40 09.5	-0.5
	baz=164,SNR=32					
X48A	Hartselle	69.38 344	eP	P	08 40 09.7	-0.4
	comp=Z,51nm,0.9s					
Y45A	Yeager Farm, C	69.44 342	P	P	08 40 10.6	+0.1
	baz=161,SNR=20					
140A	Cam and Jess,	69.48 338	P	P	08 40 11.1	+0.5
	baz=158,SNR=6.1					
140A	Cam and Jess,	69.48 338	eP	P	08 40 11.2	+0.5
	comp=Z,45nm,0.8s					
Z42A	Norrel Spur, H	69.57 339	P	P	08 40 10.8	-0.4
	baz=159					
X47A	Russelville	69.64 343	P	P	08 40 10.7	-0.9
	baz=163,SNR=24					
V53A	Saluda	69.68 348	P	P	08 40 11.1	-0.8
	baz=167,SNR=14					
V53A	Saluda	69.68 348	eP	P	08 40 11.2	-0.7
	comp=Z,30nm,0.8s					
W50A	Signal Mountai	69.71 346	P	P	08 40 11.5	-0.6
	baz=165,SNR=28					
W50A	Signal Mountai	69.71 346	eP	P	08 40 11.7	-0.4
	comp=Z,65nm,0.8s					
Y44A	Strider, Charl	69.72 341	P	P	08 40 11.7	-0.4
	baz=161,SNR=6.7					
JCT	Junction City	69.76 332	P	P	08 40 12.5	-0.1
	baz=152,SNR=12					
JCT	Junction City	69.76 332	eP	P	08 40 12.8	+0.2
	comp=Z,37nm,0.8s					
JCT	Junction City	69.76 332	eP	P	08 40 12.8	+0.2
JCT			pmax	pmax		
	comp=Z,37nm,0.8s					
CPCT	Cooper Cave	69.79 346	eP	P	08 40 12.0	-0.6
	comp=Z,38nm,0.8s					
W49A	Belvidere	69.84 345	P	P	08 40 12.2	-0.7
	baz=164,SNR=25					
X46A	Booneville	69.85 343	P	P	08 40 12.2	-0.8
	baz=162,SNR=7.3					
Y43A	Makayla and Ka	69.87 340	P	P	08 40 13.2	+0.2
	baz=160,SNR=10					
X45A	UM Field Stati	69.93 342	P	P	08 40 12.6	-0.8
	baz=162,SNR=25					
V52A	Sevierville	69.99 347	P	P	08 40 12.7	-1.1
	baz=167,SNR=16					
V52A	Sevierville	69.99 347	eP	P	08 40 12.8	-1.0
	comp=Z,34nm,0.8s					
Z40A	Long Farm, Mag	70.00 338	P	P	08 40 14.2	+0.4
	baz=158,SNR=7.3					
W48A	Pulaski	70.01 344	P	P	08 40 13.3	-0.6
	baz=164,SNR=26					
OXF	Oxford	70.02 342	P	P	08 40 13.2	-0.7
	baz=162,SNR=28					
OXF	Oxford	70.02 342	eP	P	08 40 13.3	-0.7
	comp=Z,91nm,0.8s					
OXF	Oxford	70.02 342	eP	P	08 40 13.3	-0.7
OXF			pmax	pmax		
	comp=Z,91nm,0.8s					
Y42A	Garnett, Star	70.04 340	P	P	08 40 14.1	0.0
	baz=159,SNR=5.6					
V51A	Loudon	70.10 346	P	P	08 40 13.5	-0.9
	baz=166,SNR=15					
V51A	Loudon	70.10 346	eP	P	08 40 13.6	-0.9
	comp=Z,28nm,0.8s					
CCAR	Cane Creek	70.11 340	eP	P	08 40 14.8	+0.3
	comp=Z,49nm,1.0s					
V50A	Pikevile	70.12 346	P	P	08 40 13.8	-0.8
	baz=165,SNR=28					
PLAL	Pickwick Lake	70.13 343	eP	P	08 40 13.8	-0.9
	comp=Z,30nm,0.9s					
X44A	Crenshaw	70.20 341	P	P	08 40 14.5	-0.6
	baz=161					
WHTX	Lake Whitney,	70.22 334	P	P	08 40 14.5	-0.7
	baz=154					
W47A	Westpoint	70.27 344	P	P	08 40 14.9	-0.7
	baz=163,SNR=22					
U53A	Fall Branch	70.32 348	P	P	08 40 14.6	-1.2
	baz=168,SNR=13					
Y41A	Eaglette Beard	70.33 339	P	P	08 40 16.1	+0.2
	baz=159,SNR=11					
W46A	Michie	70.35 343	P	P	08 40 14.7	-1.3
	baz=162,SNR=6.0					
V49A	McMinnville	70.38 345	P	P	08 40 15.2	-1.0
	baz=165,SNR=34					
TXAR	Lajitas Array	70.40 328	P	P	08 40 16.5	-0.1
	comp=Z,4.9nm,0.7s,baz=151,slow=8.2,SNR=89					
TX31	Lajitas Ar. Si	70.40 328	eP	P	08 40 16.5	-0.1
X43A	Marvell	70.42 341	P	P	08 40 16.6	+0.2
	baz=160,SNR=9.6					
X43A	Marvell	70.42 341	eP	P	08 40 16.6	+0.2
	comp=Z,86nm,1.0s					
V48A	Smith Brothers	70.56 344	P	P	08 40 16.7	-0.6
	baz=164,SNR=52					
V48A	Smith Brothers	70.56 344	eP	P	08 40 16.6	-0.6
	comp=Z,73nm,0.8s					
W45A	Hickory Valley	70.57 342	P	P	08 40 16.8	-0.6
	baz=162,SNR=13					
Y40A	Okolona	70.66 338	P	P	08 40 17.9	0.0
	baz=158,SNR=5.0					
TZTN	Tazewell	70.67 347	P	P	08 40 16.9	-1.0
	baz=167,SNR=6.3					
TZTN	Tazewell	70.67 347	eP	P	08 40 16.8	-1.1
	comp=Z,11nm,0.8s					
X42A	Stuttgart	70.67 340	P	P	08 40 17.5	-0.4
	baz=160					
W44A	Shelby Farms P	70.72 342	P	P	08 40 17.4	-0.8
	baz=161					
VWCC	Virginia Weste	70.77 350	eP	P	08 40 18.4	-0.2
URVA	University of	70.79 353	eP	P	08 40 18.5	-0.1
BLA	Blacksburg	70.80 350	P	P	08 40 18.4	-0.3
	baz=165,SNR=7.1					
BLA	Blacksburg	70.80 350	eP	P	08 40 18.7	-0.1
	comp=Z,20nm,0.8s					
BLA	Blacksburg	70.80 350	eP	P	08 40 18.7	-0.1
BLA			pmax	pmax		
	comp=Z,20nm,0.8s					
V47A	Nunnelly	70.81 344	P	P	08 40 17.8	-0.9
	baz=163,SNR=46					
X41A	Kaden, Bauxite	70.87 339	P	P	08 40 18.2	-0.9
	baz=159					
W43A	Forest City	70.91 341	P	P	08 40 19.0	-0.4
	baz=160					
V46A	Holladay	70.92 343	P	P	08 40 18.5	-1.0
	baz=163,SNR=51					
JSRW	J. Sargeant Re	70.95 352	eP	P	08 40 19.8	+0.2
X40A	Basin Creek Fa	70.96 339	P	P	08 40 19.0	-0.7
	baz=159					
X40A	Basin Creek Fa	70.96 339	eP	P	08 40 18.5	-1.3
	comp=Z,12nm,1.4s					
V45A	Humboldt	71.07 343	P	P	08 40 19.7	-0.7
	baz=162,SNR=12					
IP05	Hopewell Churc	71.07 352	eP	P	08 40 20.4	+0.1
	comp=Z,66nm,1.2s					
U49A	Red Boiling Sp	71.08 345	P	P	08 40 19.4	-1.0
	baz=165,SNR=14					
UALR	University of	71.08 340	eP	P	08 40 19.7	-0.8
	comp=Z,20nm,1.0s					
T52A	Hallie	71.11 348	P	P	08 40 19.4	-1.2
	baz=167					
WVT	Waverly	71.17 344	P	P	08 40 20.1	-0.8
	baz=163					
WVT	Waverly	71.17 344	eP	P	08 40 20.1	-0.8
	comp=Z,138nm,0.8s					
WVT	Waverly	71.17 344	eP	P	08 40 20.1	-0.8
WVT			pmax	pmax		
	comp=Z,138nm,0.8s					
IP07	Quail	71.19 352	eP	P	08 40 21.7	+0.7
	comp=Z,38nm,1.0s					
IP06	Yanceyville	71.20 352	eP	P	08 40 21.8	+0.7
	comp=Z,15nm,0.9s					
IP01	Cuckoo	71.21 352	eP	P	08 40 21.8	+0.6
	comp=Z,28nm,1.1s					
U48A	Cassie Pea, Po	71.24 345	P	P	08 40 20.6	-0.8
	baz=164					
MIAR	Mount Ida	71.24 338	P	P	08 40 20.9	-0.5
	baz=158,SNR=14					
MIAR	Mount Ida	71.24 338	eP	P	08 40 20.9	-0.5
	comp=Z,19nm,1.1s					
MIAR	Mount Ida	71.24 338	eP	P	08 40 20.9	-0.5
MIAR			pmax	pmax		
	comp=Z,19nm,1.1s					
SPRD	Spring Road, M	71.28 352	eP	P	08 40 22.1	+0.6
	comp=Z,34nm,1.4s					
IP03	Louisa	71.29 352	eP	P	08 40 21.9	+0.3
	comp=Z,50nm,1.3s					
W42A	Bald Knob	71.31 340	P	P	08 40 20.9	-0.9
	baz=160					
CVRD	Centerville Ro	71.31 352	eP	P	08 40 22.3	+0.5
	comp=Z,12nm,0.8s					
HALT	Halls	71.33 342	eP	P	08 40 21.9	0.0
	comp=Z,135nm,1.4s					
U47A	Clarksville	71.34 344	P	P	08 40 21.2	-0.7
	baz=164,SNR=31					
IP04	Greensprings	71.37 352	eP	P	08 40 22.7	+0.6
	comp=Z,33nm,0.9s					
T50A	Nancy	71.37 346	P	P	08 40 21.1	-1.1
	baz=166,SNR=9.1					
X39A	Fountain Ranch	71.38 338	P	P	08 40 22.0	-0.3
	baz=158,SNR=29					
V44A	Blytheville	71.39 342	P	P	08 40 21.8	-0.5
	baz=161					
CBN	Corbin Frederi	71.40 353	P	P	08 40 22.1	-0.1
	baz=172					
W41B	Gary Mavity, V	71.43 340	P	P	08 40 22.0	-0.5
	baz=159,SNR=15					
W41B	Gary Mavity, V	71.43 340	eP	P	08 40 22.0	-0.5
	comp=Z,18nm,0.8s					
U46A	Springville	71.47 343	P	P	08 40 22.1	-0.7
	baz=163,SNR=17					
V43A	Jonesboro	71.52 341	P	P	08 40 22.4	-0.7
	baz=161					
WHAR	Wooly Hollow	71.55 340	eP	P	08 40 22.8	-0.5
	comp=Z,21nm,1.0s					
GNAR	Gosnell	71.55 342	eP	P	08 40 23.6	+0.4
	comp=Z,112nm,1.0s					
T49A	Edmonton	71.59 346	P	P	08 40 22.4	-1.1
	baz=165,SNR=24					
U45A	Rockin P Farm,	71.60 343	P	P	08 40 23.1	-0.4
	baz=162,SNR=21					
ABTX	Abilene, Hawle	71.60 333	P	P	08 40 23.4	-0.3
	baz=153,SNR=10.0					
ABTX	Abilene, Hawle	71.60 333	eP	P	08 40 23.6	-0.2
	comp=Z,32nm,0.8s					
UTMT	University of	71.62 343	eP	P	08 40 23.8	+0.2
	comp=Z,286nm,1.0s					
GLAT	Glass	71.65 343	eP	P	08 40 24.2	+0.3
	comp=Z,175nm,1.1s					
S52A	Salyersville	71.69 348	P	P	08 40 23.0	-1.0
	baz=167,SNR=18					
W40A	Ferguson Farm,	71.69 339	P	P	08 40 24.1	0.0
	baz=158,SNR=12					
W40A	Ferguson Farm,	71.69 339	eP	P	08 40 24.1	0.0
	comp=Z,33nm,1.1s					
U44B	Burton Farm, H	71.74 343	P	P	08 40 23.9	-0.5
	baz=162,SNR=9.8					
S51A	Beattyville	71.74 348	P	P	08 40 23.5	-0.8
	baz=167,SNR=19					
V42A	Cord	71.77 341	P	P	08 40 23.5	-1.1
	baz=160,SNR=13					
T48A	Bowling Green	71.78 345	P	P	08 40 23.5	-1.1
	baz=164,SNR=16					
LIC	Lamto	71.81 70	eP	P	08 40 25.5	+0.1
	comp=Z,151nm,2.0s					
T47A	Sharon Grove	71.82 345	P	P	08 40 23.8	-1.0
	baz=164,SNR=22					
T47A	Sharon Grove	71.82 345	eP	P	08 40 23.9	-1.0
	comp=Z,40nm,0.8s					
PVMO	Portageville	71.90 342	eP	P	08 40 25.9	+0.6
	comp=Z,392nm,1.1s					
W39A	Magazine	71.91 339	P	P	08 40 25.7	+0.2
	baz=158,SNR=39					
W39A	Magazine	71.91 339	eP	P	08 40 25.6	+0.2
	comp=Z,64nm,1.0s					
V41A	Mountainview	71.97 340	P	P	08 40 25.1	-0.7
	baz=159,SNR=30					
U44A	Portageville	71.98 342	P	P	08 40 25.7	-0.1
	baz=161,SNR=9.5					
U43A	Rector	72.04 342	P	P	08 40 25.8	-0.4
	baz=161					
T46A	Princeton	72.05 344	P	P	08 40 25.3	-0.9
	baz=163,SNR=26					
TIC	Toumodi	72.07 69	eP	P	08 40 26.8	-0.1
KIC	Kosan Boka	72.11 70	eP	P	08 40 27.2	0.0
	comp=Z,53nm,1.0s					
PARMO	Parma	72.14 342	eP	P	08 40 26.4	-0.4
	comp=Z,180nm,0.8s					
V40A	Witts Springs	72.18 340	P	P	08 40 26.3	-0.9
	baz=159,SNR=12					
V40A	Witts Springs	72.18 340	eP	P	08 40 26.2	-0.9
	comp=Z,14nm,0.8s					
T45A	Paducah	72.21 343	P	P	08 40 26.4	-0.8
	baz=162					
DBIC	Dimbokro	72.21 69	P	P	08 40 28.1	+0.3
	comp=Z,6.3nm,0.7s,baz=220,slow=8.4,SNR=7.3					
DBIC	Dimbokro	72.21 69	eP	P	08 40 28.1	+0.3
	comp=Z,18nm,0.9s					
DBIC	Dimbokro	72.21 69	eP	P	08 40 28.1	+0.3
DBIC			pmax	pmax		
	comp=Z,18nm,0.9s					
S48A	Wiedeman Farm,	72.24 346	P	P	08 40 25.7	-1.6
	baz=165,SNR=19					
U42A	Revenden	72.24 341	P	P	08 40 26.6	-0.8
	baz=160,SNR=23					
U41A	Viola	72.43 340	P	P	08 40 27.8	-0.8
	baz=160,SNR=24					
PBMO	Poplar Bluff	72.43 342	eP	P	08 40 28.0	-0.5
	comp=Z,50nm,0.8s					
V39A	Pettigrew	72.46 339	P	P	08 40 28.5	-0.4
	baz=158,SNR=31					
T44A	Benton	72.50 343	P	P	08 40 27.9	-1.1
	baz=162					
S46A	Don Dixon Farm	72.62 344	P	P	08 40 28.3	-1.3
	baz=163,SNR=11					
T43A	Greenville	72.68 342	P	P	08 40 29.3	-0.7
	baz=161,SNR=50					
U40A	Yellville	72.70 340	P	P	08 40 29.5	-0.7
	baz=159,SNR=34					
S45A	Carrier Mills	72.82 344	P	P	08 40 29.7	-1.1
	baz=162,SNR=14					
T42A	Van Buren	72.84 341	P	P	08 40 29.9	-1.1
	baz=160,SNR=8.3					
T42A	Van Buren	72.84 341	eP	P	08 40 30.1	-0.9
	comp=Z,12nm,1.1s					
USIN	University of	72.88 344	eP	P	08 40 30.0	-1.2
	comp=Z,43nm,0.8s					
R48A	Northridge Ran	72.91 346	P	P	08 40 30.4	-1.0
	baz=165,SNR=17					
U39A	Green Forest	72.91 339	P	P	08 40 30.8	-0.6
	baz=158,SNR=32					
R47A	Wooly Knot Far	72.95 345	P	P	08 40 30.0	-1.5
	baz=164,SNR=8.0					
HHAR	Hobbs	72.96 339	eP	P	08 40 31.2	-0.5
	comp=Z,43nm,1.1s					
S44A	Carbondale	73.00 343	P	P	08 40 30.9	-0.9
	baz=162,SNR=9.6					
SIUC	Southern Illin	73.01 343	eP	P	08 40 31.2	-0.7
	comp=Z,26nm,0.6s					
T41A	Mountain View	73.04 341	P	P	08 40 31.6	-0.6
	baz=160,SNR=56					
MVL	Millersville	73.08 354	eP	P	08 40 32.7	+0.4
	comp=Z,9.6nm,1.0s					
R46A	Gibon Southern	73.08 345	P	P	08 40 30.9	-1.5
	baz=163,SNR=7.0					
S43A	Fulton Ridge,	73.09 342	P	P	08 40 31.5	-1.0
	baz=161,SNR=37					
MCWV	Mont Chateau	73.13 351	P	P	08 40 32.0	-0.7
	baz=170					
WMOK	Wichita Mounta	73.16 334	P	P	08 40 32.1	-0.8
	baz=154,SNR=9.9					
WMOK	Wichita Mounta	73.16 334	eP	P	08 40 32.1	-0.8
	comp=Z,13nm,1.1s					
WMOK	Wichita Mounta	73.16 334	eP	P	08 40 32.2	-0.8
WMOK			pmax	pmax		
	comp=Z,13nm,1.1s					
GDL2	Guadalupe Moun	73.16 329	eP	P	08 40 33.3	+0.1
MNTX	Cornudas Mount	73.19 328	P	P	08 40 32.1	-1.1
	baz=148,SNR=37					
MNTX	Cornudas Mount	73.19 328	eP	P	08 40 32.1	-1.1
	comp=Z,16nm,0.8s					
TUL1	Leonard	73.20 337	P	P	08 40 32.3	-0.8
	baz=156,SNR=9.3					
TUL1	Leonard	73.20 337	eP	P	08 40 32.8	-0.4
	comp=Z,29nm,0.8s					
MAW	Mawson	73.22 163	P	P	08 40 31.8	-1.2
	comp=Z,1.1nm,0.3s,baz=252,slow=6.4,SNR=2.9					
MAW			LR	LR	09 14 25.7	
	comp=Z,198nm,18.0s,baz=238,slow=37					
MAW	Mawson	73.22 163	eP	P	08 40 32.5	-0.4
	comp=Z,2.7nm,1.3s					
MAW	Mawson	73.22 163	eP	P	08 40 32.5	-0.4
MAW			pmax	pmax		
	comp=Z,3.0nm,1.3s					
R45A	Skylar, Fairfi	73.34 344	P	P	08 40 32.6	-1.3
	baz=163,SNR=14					
PAGS	Pennsylvania G	73.34 354	eP	P	08 40 34.0	+0.2
	comp=Z,6.9nm,0.6s					
T40A	Mansfield	73.35 340	P	P	08 40 33.4	-0.6
	baz=159,SNR=12					
S42A	Caledonia	73.46 342	P	P	08 40 33.5	-1.1
	baz=161,SNR=27					
T39A	Clever	73.48 340	P	P	08 40 34.3	-0.5
	baz=158,SNR=14					
R44A	Waltonville	73.48 343	P	P	08 40 33.3	-1.4
	baz=162,SNR=5.6					
S41A	Jillco Farms,	73.54 341	P	P	08 40 34.6	-0.5
	baz=160,SNR=59					
FVM	French Village	73.57 342	eP	P	08 40 35.0	-0.3
	comp=Z,56nm,0.8s					
FVM	French Village	73.57 342	eP	P	08 40 35.0	-0.3
FVM			pmax	pmax		
	comp=Z,56nm,0.8s					
O56A	Blue Knob Stat	73.57 352	P	P	08 40 35.2	0.0
	baz=171,SNR=5.6					
O56A	Blue Knob Stat	73.57 352	eP	P	08 40 35.4	+0.1
	comp=Z,12nm,0.6s					
BRNJ	Basking Ridge	73.61 355	eP	P	08 40 36.3	+0.9
	comp=Z,13nm,1.1s					
HSIG		73.65 322	eP	P	08 40 36.8	+0.8
	comp=Z,42nm,1.5s					
OLIL	Olney	73.72 344	eP	P	08 40 34.9	-1.2
	comp=Z,42nm,1.1s					
R43A	Red Bud	73.72 343	P	P	08 40 35.1	-1.0
	baz=161,SNR=10					
S40A	Lebanon	73.76 340	P	P	08 40 36.0	-0.4
	baz=159,SNR=48					
T38A	Diamond	73.76 339	P	P	08 40 36.0	-0.5
	baz=158,SNR=30					
BLO	Bloomington	73.79 346	eP	P	08 40 35.5	-1.0
	comp=Z,35nm,0.8s					
BLO	Bloomington	73.79 346	eP	P	08 40 35.5	-1.0
BLO			pmax	pmax		
	comp=Z,35nm,0.8s					
Q46A	CEJHS Indians,	73.83 345	P	P	08 40 35.3	-1.4
	baz=164					
CCM	Cathedral Cave	73.85 342	P	P	08 40 36.3	-0.6
	baz=160					
CCM	Cathedral Cave	73.85 342	eP	P	08 40 36.5	-0.4
	comp=Z,61nm,1.0s					
CCM	Cathedral Cave	73.85 342	eP	P	08 40 36.5	-0.4
CCM			pmax	pmax		
	comp=Z,61nm,1.0s					

SSPA	Standing Stone baz=172	73.86 353	P	P	08 40 36.7	-0.2
SSPA	Standing Stone comp=Z,6.9nm,0.7s	73.86 353	eP	P	08 40 36.9	0.0
Q45A	Warren Harvey, baz=163,SNR=18	73.88 344	P	P	08 40 35.9	-1.1
N59A	State Game Lan baz=174,SNR=5.9	73.94 354	P	P	08 40 37.5	+0.2
N59A	State Game Lan comp=Z,43nm,1.4s	73.94 354	eP	P	08 40 38.1	+0.7
R42A	Luebbering baz=161,SNR=16	73.94 342	P	P	08 40 36.6	-0.8
MSTX	Muleshoe baz=151,SNR=20	74.02 331	P	P	08 40 37.6	-0.5
MSTX	Muleshoe comp=Z,40nm,0.8s	74.02 331	eP	P	08 40 38.3	+0.1
P47A	Martinsville baz=165,SNR=10	74.04 346	P	P	08 40 36.6	-1.4
S39A	Bolivar baz=159,SNR=48	74.08 340	P	P	08 40 37.7	-0.5
S39A	Bolivar comp=Z,103nm,1.4s	74.08 340	eP	P	08 40 38.1	-0.2
Q44A	Meyer Farm, Va baz=162,SNR=7.4	74.09 344	P	P	08 40 36.7	-1.5
R41A	Rosebud baz=160,SNR=46	74.11 342	P	P	08 40 37.7	-0.7
ACSO	Alum Creek Sta baz=167,SNR=19	74.16 349	P	P	08 40 38.0	-0.7
ACSO	Alum Creek Sta comp=Z,62nm,0.8s	74.16 349	eP	P	08 40 38.0	-0.7
S38A	Stockton baz=158,SNR=62	74.20 339	P	P	08 40 38.5	-0.5
Q43A	New Douglas baz=162,SNR=21	74.29 343	P	P	08 40 38.6	-0.9
M65A	Busby, Falmout baz=178	74.31 358	P	P	08 40 38.5	-1.0
R40A	Maddies Statio baz=160,SNR=83	74.34 341	P	P	08 40 39.3	-0.5
R40A	Maddies Statio comp=Z,81nm,0.7s	74.34 341	eP	P	08 40 39.4	-0.5
P46A	Rosedale baz=164	74.36 345	P	P	08 40 38.6	-1.3
AMTX	Amarillo baz=152	74.39 332	P	P	08 40 39.8	-0.4
AMTX	Amarillo comp=Z,40nm,1.1s	74.39 332	eP	P	08 40 40.4	+0.1
P45A	Graceland, Par baz=163,SNR=14	74.39 345	P	P	08 40 38.5	-1.5
P45A	Graceland, Par comp=Z,33nm,0.9s	74.39 345	eP	P	08 40 38.9	-1.1
N54A	Moraine State baz=170,SNR=8.4	74.43 351	P	P	08 40 39.9	-0.4
N54A	Moraine State comp=Z,30nm,1.1s	74.43 351	eP	P	08 40 40.0	-0.2
Q42A	Golden Eagle baz=161,SNR=8.6	74.47 342	P	P	08 40 39.6	-0.9
P44A	Sand Creek, Wi baz=163,SNR=7.4	74.53 344	P	P	08 40 39.5	-1.3
KSPA	Keystone Colle comp=Z,12nm,1.1s	74.57 354	eP	P	08 40 41.3	+0.2
R39A	Chumby, Stover baz=159,SNR=37	74.58 340	P	P	08 40 40.6	-0.5
Q41A	Truxton baz=160,SNR=18	74.69 342	P	P	08 40 41.0	-0.8
BRYW	Bryant College comp=Z,28nm,1.5s	74.69 358	eP	P	08 40 42.6	+0.9
R38A	Fenwick Farm, baz=158,SNR=17	74.71 340	P	P	08 40 41.0	-0.9
319A	Douglas comp=Z,30nm,0.8s	74.73 325	eP	P	08 40 43.4	+1.0
O47A	Sheridan baz=165,SNR=22	74.75 346	P	P	08 40 40.6	-1.5
P43A	Skaggs, Pawnee baz=162,SNR=21	74.91 343	P	P	08 40 42.1	-0.9
M54A	Oil Creek Stat baz=170,SNR=8.2	74.93 351	P	P	08 40 42.5	-0.6
M54A	Oil Creek Stat comp=Z,36nm,1.2s	74.93 351	eP	P	08 40 42.7	-0.4
Q40A	Laux Farm, Aux baz=160,SNR=37	74.95 341	P	P	08 40 42.8	-0.5
121A	Cookes Peak, D baz=147,SNR=15	74.98 326	P	P	08 40 44.7	+0.8
P42A	Winchester baz=161,SNR=21	75.06 343	P	P	08 40 42.9	-1.0
P42A	Winchester comp=Z,33nm,0.7s	75.06 343	eP	P	08 40 43.2	-0.7
SFIN	Lafayette baz=164,SNR=8.9	75.07 346	P	P	08 40 42.3	-1.6
SFIN	Lafayette comp=Z,17nm,0.8s	75.07 346	eP	P	08 40 42.7	-1.2
O45A	Potomac baz=163,SNR=18	75.08 345	P	P	08 40 42.6	-1.4
O44A	Mansfield baz=163,SNR=16	75.15 344	P	P	08 40 42.9	-1.5
BINY	Binghamton baz=174	75.23 354	P	P	08 40 44.1	-0.8
BINY	Binghamton comp=Z,17nm,1.2s	75.23 354	eP	P	08 40 44.9	0.0
Q39A	Willow Grove F baz=159,SNR=20	75.25 341	P	P	08 40 44.3	-0.7
HRV	Adam Dziewonsk baz=177	75.28 358	P	P	08 40 45.3	+0.2
HRV	Adam Dziewonsk comp=Z,7.4nm,0.6s	75.28 358	eP	P	08 40 44.5	-0.6
HRV	Adam Dziewonsk comp=Z,7.0nm,0.6s	75.28 358	eP pmax	P pmax	08 40 44.5	-0.6
P41A	Barry, Barry baz=161,SNR=12	75.32 342	P	P	08 40 44.4	-1.0
Q38A	Cooks Store, C baz=158,SNR=50	75.35 340	P	P	08 40 45.1	-0.5
P40A	Paris baz=160,SNR=32	75.44 342	P	P	08 40 45.6	-0.5
P40A	Paris comp=Z,70nm,0.8s	75.44 342	eP	P	08 40 45.8	-0.4
O43A	Sugar Creek Fa baz=162,SNR=9.7	75.47 344	P	P	08 40 45.3	-1.0
N46A	Monticello baz=164,SNR=16	75.49 346	P	P	08 40 44.8	-1.6
Q37A	Longview Farm, baz=158,SNR=10.0	75.51 339	P	P	08 40 45.5	-1.0
ERPA	Erie baz=170	75.57 351	P	P	08 40 46.0	-0.8
ERPA	Erie comp=Z,27nm,0.8s	75.57 351	eP	P	08 40 46.3	-0.5
O42A	Bath baz=161,SNR=10.0	75.57 343	P	P	08 40 45.7	-1.1
P39B	Salisbury baz=159,SNR=35	75.60 341	P	P	08 40 46.2	-0.8
TRY	Troy comp=Z,35nm,1.4s	75.60 356	eP	P	08 40 47.5	+0.6
N45A	Kentland baz=164	75.61 345	P	P	08 40 45.5	-1.5
N44A	Piper City baz=163,SNR=8.7	75.69 345	P	P	08 40 46.1	-1.4
O41A	Passleys Farm, baz=161,SNR=20	75.69 343	P	P	08 40 46.5	-1.0
HDIL	Hopedale baz=162,SNR=14	75.73 344	P	P	08 40 46.8	-0.9
HDIL	Hopedale comp=Z,56nm,0.6s	75.73 344	eP	P	08 40 47.2	-0.5
BNM	Barren Site	75.81 328	eP	P	08 40 49.2	+0.6
Y22E	IRIS PASSCAL I baz=148	75.88 328	P	P	08 40 46.8	-2.2
M46A	Old House Fiel baz=165	75.91 346	P	P	08 40 47.1	-1.6
M46A	Old House Fiel comp=Z,23nm,0.8s	75.91 346	eP	P	08 40 48.1	-0.6
MMNY	Mt. Morris Dam comp=Z,34nm,1.3s	75.94 353	eP	P	08 40 48.9	0.0
P38A	Dawn baz=159,SNR=16	75.94 340	P	P	08 40 48.2	-0.8
P38A	Dawn comp=Z,26nm,0.6s	75.94 340	eP	P	08 40 48.4	-0.6
LPM	Los Pinos Moun	75.95 328	eP	P	08 40 50.2	+0.8
O40A	La Belle baz=160,SNR=15	75.95 342	P	P	08 40 48.2	-0.8
N43A	Stutzman Famil baz=162,SNR=17	76.06 344	P	P	08 40 48.8	-0.8
P37A	Lathrop baz=158,SNR=16	76.14 340	P	P	08 40 49.0	-1.1
N42A	Yates City baz=162,SNR=26	76.16 343	P	P	08 40 49.3	-0.9
TUC	Tucson baz=144	76.23 324	P	P	08 40 50.9	0.0
TUC	Tucson comp=Z,4.4nm,0.9s	76.23 324	eP	P	08 40 51.3	+0.4
TUC	Tucson comp=Z,4.0nm,0.9s	76.23 324	eP pmax	P pmax	08 40 51.3	+0.4
M44A	Midewin, Midew baz=163,SNR=9.3	76.24 345	P	P	08 40 49.5	-1.1
M44A	Midewin, Midew comp=Z,43nm,0.8s	76.24 345	eP	P	08 40 49.7	-0.9
N41A	Harden Midland baz=161,SNR=38	76.25 343	P	P	08 40 49.7	-0.9
N41A	Harden Midland comp=Z,92nm,0.8s	76.25 343	eP	P	08 40 49.9	-0.8
FFD	Franklin Falls comp=Z,24nm,1.0s	76.25 358	eP	P	08 40 51.7	+1.1
ACCN	Adirondack Com comp=Z,20nm,1.4s	76.25 356	eP	P	08 40 51.1	+0.4
LAZ	Ladron	76.25 328	eP	P	08 40 51.9	+0.8
O39A	Kirksville baz=159,SNR=7.7	76.26 341	P	P	08 40 49.9	-0.8
AAM	Ann Arbor baz=167	76.28 349	P	P	08 40 49.8	-1.0
AAM	Ann Arbor comp=Z,13nm,0.6s	76.28 349	eP	P	08 40 50.0	-0.9
AAM	Ann Arbor comp=Z,13nm,0.6s	76.28 349	eP pmax	P pmax	08 40 50.0	-0.9
KSU1	Kansas State U baz=156,SNR=9.9	76.38 338	P	P	08 40 50.7	-0.7
KSU1	Kansas State U comp=Z,24nm,0.8s	76.38 338	eP	P	08 40 51.1	-0.3
O38A	Galt baz=159,SNR=8.2	76.39 341	P	P	08 40 50.7	-0.8
TASL	Snake Pit, Alb baz=148,SNR=34	76.41 329	P	P	08 40 52.5	+0.5
ANMO	Albuquerque comp=Z,13nm,0.9s,baz=173,slow=11,SNR=49	76.41 329	P	P	08 40 52.5	+0.5
ANMO	Albuquerque baz=148	76.41 329	P	P	08 40 52.5	+0.5
ANMO	Albuquerque comp=Z,30nm,1.2s	76.41 329	eP	P	08 40 52.6	+0.5
TASM	ASL Pad, Albuq baz=148,SNR=30	76.41 329	P	P	08 40 52.6	+0.5
M43A	Waltham Townsh baz=162,SNR=14	76.49 344	P	P	08 40 51.0	-1.0
N40A	Mertquake, Sal baz=160,SNR=22	76.60 342	P	P	08 40 51.7	-0.9
O37A	Wolven Farm, M baz=158,SNR=9.7	76.62 340	P	P	08 40 52.0	-0.8
M42A	Sheffield baz=162	76.69 344	P	P	08 40 51.9	-1.2
M41A	Milan baz=161,SNR=12	76.80 343	P	P	08 40 52.7	-1.1
N39A	Derby Farms, D baz=160,SNR=25	76.83 342	P	P	08 40 53.1	-0.9
N39A	Derby Farms, D comp=Z,56nm,0.6s	76.83 342	eP	P	08 40 53.4	-0.6
N38A	Joes South For baz=159,SNR=10	76.95 341	P	P	08 40 53.9	-0.7
214A	Organ Pipe Nat baz=143,SNR=21	76.96 323	P	P	08 40 55.8	+0.8
L44A	Lake County Fo baz=163,SNR=8.3	76.97 345	P	P	08 40 53.7	-1.0
LBNH	Lisbon baz=177	77.03 358	P	P	08 40 55.4	+0.4
LBNH	Lisbon comp=Z,14nm,0.8s	77.03 358	eP	P	08 40 55.9	+0.9
LBNH	Lisbon comp=Z,14nm,0.8s	77.03 358	eP pmax	P pmax	08 40 55.9	+0.9
M40A	Post Highland baz=160,SNR=12	77.07 343	P	P	08 40 54.1	-1.2
CBKS	Cedar Bluff baz=154	77.15 336	P	P	08 40 56.0	+0.1
CBKS	Cedar Bluff comp=Z,49nm,0.8s	77.15 336	eP	P	08 40 56.2	+0.3
CBKS	Cedar Bluff comp=Z,49nm,0.8s	77.15 336	eP pmax	P pmax	08 40 56.2	+0.3
L43A	Garden Prairie baz=163,SNR=16	77.15 345	P	P	08 40 54.9	-0.9
N37A	Lee Faris, Mou baz=158,SNR=7.6	77.18 340	P	P	08 40 55.3	-0.7
N37A	Lee Faris, Mou	77.18 340	eP	P	08 40 55.8	-0.2
L42A	Oliver, Polo baz=162	77.19 344	P	P	08 40 54.9	-1.1
L42A	Oliver, Polo comp=Z,28nm,0.9s	77.19 344	eP	P	08 40 55.4	-0.6
WVL	Waterville comp=Z,8.8nm,1.0s	77.30 359	eP	P	08 40 57.6	+1.1
M39A	Webster baz=160,SNR=10	77.31 342	P	P	08 40 55.5	-1.2
T25A	Trinidad baz=150,SNR=41	77.43 331	P	P	08 40 58.4	+0.7
T25A	Trinidad comp=Z,44nm,1.0s	77.43 331	eP	P	08 40 58.5	+0.7
EMMW	East Machias comp=Z,20nm,0.8s	77.44 1	eP	P	08 40 57.9	+0.6
N36A	Muff Farm, Cla baz=158,SNR=11	77.45 340	P	P	08 40 57.0	-0.5
L41A	Preston baz=161,SNR=20	77.45 344	P	P	08 40 56.5	-1.0
M38A	Pleasantville baz=159,SNR=23	77.52 341	P	P	08 40 56.9	-0.9
LONY	Lake Ozonia baz=175,SNR=5.2	77.53 356	P	P	08 40 57.4	-0.4
LONY	Lake Ozonia comp=Z,18nm,1.2s	77.53 356	eP	P	08 40 58.1	+0.3
K43A	Burlington baz=163,SNR=7.8	77.56 345	P	P	08 40 57.2	-0.8
K43A	Burlington comp=Z,32nm,0.7s	77.56 345	eP	P	08 40 57.4	-0.7
L40A	Anamosa baz=161,SNR=69	77.62 343	P	P	08 40 57.5	-0.8
L40A	Anamosa comp=Z,117nm,0.8s	77.62 343	eP	P	08 40 57.6	-0.8
X18A	Snowflake	77.64 326	eP	P	08 40 59.7	+0.7
FRNY	Flat Rock comp=Z,15nm,0.9s	77.69 356	eP	P	08 40 58.8	+0.1
KOWA	Kowa comp=Z,5.9nm,0.6s,baz=224,slow=6.4,SNR=15	77.69 64	P	P	08 40 59.7	+0.3
KOWA	Kowa comp=Z,43nm,1.5s	77.69 64	eP	P	08 40 59.9	+0.5
M37A	Trindle Farm, baz=158,SNR=17	77.74 341	P	P	08 40 58.7	-0.4
K42A	Prairie Point, baz=162,SNR=21	77.86 345	P	P	08 40 58.8	-0.9
L39A	Vinton baz=160,SNR=22	77.87 342	P	P	08 40 58.7	-1.0
K41A	Shullsburg baz=161,SNR=23	77.91 344	P	P	08 40 59.2	-0.8
BOSA	Boshof comp=Z,2.5nm,0.6s,baz=277,slow=3.4,SNR=5.1	77.96 116	P	P	08 41 01.1	+0.1
BOSA			LR	LR	09 13 06.7	
BOSA	Boshof comp=Z,157nm,18.0s,baz=278,slow=34	77.96 116	eP	P	08 41 01.0	0.0
BOSA	Boshof comp=Z,19nm,0.9s	77.96 116	P	P	08 41 01.1	+0.1
BOSA	Boshof comp=Z,4.0nm,0.9s	77.96 116	P pmax	P pmax	08 41 01.1	+0.1
SCIA	State Center baz=159	77.98 342	P	P	08 40 59.5	-0.9
SCIA	State Center comp=Z,34nm,0.9s	77.98 342	eP	P	08 41 00.2	-0.2
PKME	Peaks-Kenny Pk baz=179,SNR=5.7	77.99 360	P	P	08 41 00.5	+0.2
PKME	Peaks-Kenny Pk comp=Z,12nm,0.6s	77.99 360	eP	P	08 41 01.1	+0.7
M36A	Felix, Anita baz=158,SNR=5.5	78.00 340	P	P	08 40 59.6	-0.9
W18A	Petrified Fore baz=146,SNR=6.9	78.03 327	P	P	08 41 01.5	+0.5
W18A	Petrified Fore comp=Z,27nm,1.0s	78.03 327	eP	P	08 41 01.7	+0.6
SADO	Sadowa comp=Z,12nm,0.5s,baz=195,slow=9.2,SNR=20	78.08 352	P	P	08 41 00.4	-0.5
SADO	Sadowa comp=Z,40nm,1.3s	78.08 352	eP	P	08 41 00.4	-0.5
L38A	Oak Wood Farm, baz=159,SNR=7.4	78.13 342	P	P	08 41 00.2	-1.0
PLVO	Plevna comp=Z,28nm,1.1s	78.14 354	eP	P	08 41 01.2	0.0
JFWS	Jewell Farm baz=162,SNR=14	78.19 344	P	P	08 41 00.8	-0.7
JFWS	Jewell Farm comp=Z,32nm,0.8s	78.19 344	eP	P	08 41 01.0	-0.5
JFWS	Jewell Farm comp=Z,32nm,0.8s	78.19 344	eP pmax	P pmax	08 41 01.0	-0.5
K40A	Colesburg baz=161,SNR=11	78.20 343	P	P	08 41 00.5	-1.1
J43A	Natural Harves baz=163	78.23 345	P	P	08 41 01.0	-0.8
X16A	Lo Mia Camp, P comp=Z,25nm,1.1s	78.26 325	eP	P	08 41 03.0	+0.6
J42A	Columbus baz=162,SNR=18	78.32 345	P	P	08 41 01.4	-0.8
L37A	Phoenix Point, baz=159,SNR=7.4	78.33 341	P	P	08 41 01.4	-0.9
KSCO	Kaye Shedlock' baz=151	78.37 334	P	P	08 41 03.2	+0.4
KSCO	Kaye Shedlock' comp=Z,72nm,1.4s	78.37 334	eP	P	08 41 03.6	+0.8
K39A	Oelwein baz=160,SNR=16	78.39 343	P	P	08 41 01.3	-1.3
SDCO	Great Sand Dun baz=149,SNR=29	78.39 331	P	P	08 41 03.4	+0.3
SDCO	Great Sand Dun comp=Z,12nm,0.8s	78.39 331	eP	P	08 41 03.6	+0.4
K38A	Parkersburg baz=159	78.56 342	P	P	08 41 02.4	-1.2
L36A	Harm Buss Farm baz=158,SNR=6.1	78.56 341	P	P	08 41 02.7	-0.9
J41A	Loganville baz=162,SNR=15	78.56 344	P	P	08 41 02.7	-0.9
Y14A	Wickenburg comp=Z,24nm,1.3s	78.64 324	eP	P	08 41 05.0	+0.6
I43A	Langenfeld Bro baz=163,SNR=8.6	78.65 346	P	P	08 41 03.0	-1.1
J40A	Soldiers Grove baz=161,SNR=38	78.76 344	P	P	08 41 03.9	-0.8
I42A	Draeger Farm, baz=163,SNR=11	78.82 345	P	P	08 41 04.4	-0.6
I42A	Draeger Farm, comp=Z,39nm,0.9s	78.82 345	eP	P	08 41 04.5	-0.6
GLA	Glamis baz=142	78.86 322	P	P	08 41 06.1	+0.6
GLA	Glamis comp=Z,8.9nm,0.7s	78.86 322	eP	P	08 41 06.6	+1.0
GLA	Glamis	78.86 322	eP	P	08 41 06.6	+1.0
GLA			pmax	pmax		
	comp=Z,9.0nm,0.7s					
K37A	Belmond baz=159	78.89 342	P	P	08 41 04.3	-1.1
J39A	Decorah baz=160,SNR=45	78.93 343	P	P	08 41 04.6	-1.0
S22A	4UR Ranch, Cre baz=148,SNR=25	78.94 330	P	P	08 41 06.5	+0.4
S22A	4UR Ranch, Cre comp=Z,11nm,0.8s	78.94 330	eP	P	08 41 06.6	+0.4
BGNE	Belgrade baz=155	78.96 338	P	P	08 41 05.4	-0.5
BGNE	Belgrade comp=Z,66nm,0.7s	78.96 338	eP	P	08 41 06.0	+0.2
K36A	Gilmore City baz=158,SNR=5.3	79.00 341	P	P	08 41 05.3	-0.7
J38A	Wedel Dairy, R baz=160,SNR=6.5	79.11 343	P	P	08 41 05.4	-1.2
WUAZ	Wupatki baz=144,SNR=6.7	79.12 326	P	P	08 41 07.6	+0.5
WUAZ	Wupatki comp=Z,21nm,0.9s	79.12 326	eP	P	08 41 08.0	+0.9
TRQ	Mont Tremblant	79.13 356	eP	P	08 41 06.5	-0.2
H43A	Windswept, Lux baz=164,SNR=5.3	79.14 346	P	P	08 41 05.8	-0.9
H43A	Windswept, Lux comp=Z,34nm,0.7s	79.14 346	eP	P	08 41 06.5	-0.2
I41A	Arkdale baz=162,SNR=6.9	79.19 345	P	P	08 41 06.0	-1.0
I41A	Arkdale comp=Z,36nm,0.8s	79.19 345	eP	P	08 41 06.3	-0.7
I40A	Norwalk baz=161,SNR=10	79.20 344	P	P	08 41 06.2	-0.9
MVCO	Mesa Verde baz=147,SNR=19	79.21 329	P	P	08 41 07.9	+0.3
MVCO	Mesa Verde comp=Z,28nm,1.1s	79.21 329	eP	P	08 41 08.0	+0.3
IKP	In-Ko-Pah, Jac baz=141,SNR=7.3	79.22 321	P	P	08 41 08.2	+0.6
Y12C	Blythe baz=142,SNR=6.8	79.26 323	P	P	08 41 08.2	+0.6
Y12C	Blythe comp=Z,21nm,1.0s	79.26 323	eP	P	08 41 08.5	+0.9
SWSC	Sam W. Stewart baz=141,SNR=5.2	79.29 321	P	P	08 41 08.5	+0.6
Q24A	Divide baz=149,SNR=17	79.30 332	P	P	08 41 08.6	+0.5
Q24A	Divide comp=Z,34nm,0.9s	79.30 332	eP	P	08 41 08.8	+0.7
H42A	Shiocton baz=163	79.33 346	P	P	08 41 07.1	-0.7
I39A	Houston baz=160,SNR=23	79.38 343	P	P	08 41 07.1	-0.9
I39A	Houston comp=Z,56nm,0.8s	79.38 343	eP	P	08 41 07.3	-0.7
J37A	Redenius Farm, baz=159	79.38 342	P	P	08 41 06.8	-1.2
PQI	Presque Isle comp=Z,5.9nm,0.8s	79.40 0	eP	P	08 41 08.4	+0.3
BAR	Barrett comp=Z,19nm,0.9s	79.55 320	eP	P	08 41 10.0	+0.7
MONP2	Monument Peak baz=141,SNR=5.9	79.58 321	P	P	08 41 10.3	+0.7
J36A	Seneca 1, Swea baz=158,SNR=8.9	79.61 341	P	P	08 41 08.6	-0.7
J36A	Seneca 1, Swea comp=Z,41nm,0.8s	79.61 341	eP	P	08 41 08.7	-0.6
RAR	Rarotonga comp=Z,33nm,21.5s,baz=136,slow=30	79.62 252	LR	LR	09 08 30.9	
BC3	Big Chuckawall baz=142,SNR=18	79.66 322	P	P	08 41 10.5	+0.6
H41A	Junction City baz=162,SNR=5.6	79.67 345	P	P	08 41 08.7	-0.9
H41A	Junction City comp=Z,27nm,0.7s	79.67 345	eP	P	08 41 09.5	-0.1
I38A	Scanlan Farm, baz=160,SNR=30	79.75 343	P	P	08 41 09.1	-1.0
H40A	Chili baz=162,SNR=14	79.84 344	P	P	08 41 09.6	-0.9
F46A	Macinaw City C baz=166,SNR=5.1	79.85 349	P	P	08 41 09.9	-0.7
OGNE	Ogallala baz=152	79.85 335	P	P	08 41 10.7	-0.1
G43A	Wallace baz=164	79.88 346	P	P	08 41 10.0	-0.7
F45A	CMU Biological baz=166	79.89 348	P	P	08 41 10.0	-0.8
IRM	Iron Mountain baz=142,SNR=11	79.89 322	P	P	08 41 11.7	+0.5
I37A	Lemond, Waseca baz=159,SNR=10	80.00 342	P	P	08 41 10.7	-0.7
I37A	Lemond, Waseca comp=Z,71nm,0.7s	80.00 342	eP	P	08 41 10.9	-0.5
W13A	Hualapai Mount comp=Z,8.2nm,0.8s	80.00 324	eP	P	08 41 12.7	+0.8
PV01	Paradox Valley	80.01 329	eP	P	08 41 12.8	+0.8
G42A	Mountain baz=163,SNR=12	80.01 346	P	P	08 41 10.8	-0.6
G42A	Mountain comp=Z,38nm,0.8s	80.01 346	eP	P	08 41 10.9	-0.5
LBTB	Lobatse comp=Z,36nm,1.5s	80.09 113	eP	P	08 41 13.2	+0.5
LBTB	Lobatse	80.09 113	eP	P	08 41 13.2	+0.5
LBTB			pmax	pmax		
	comp=Z,36nm,1.5s					
H39A	Augusta baz=161,SNR=6.3	80.10 344	P	P	08 41 11.0	-1.0
G41A	Antigo baz=162	80.14 345	P	P	08 41 11.6	-0.6
PV13	Radium Mtn., P comp=Z,24nm,0.8s	80.14 329	eP	P	08 41 13.1	+0.5
PV02	Paradox Valley comp=Z,25nm,1.0s	80.14 329	eP	P	08 41 13.2	+0.6
PV15	Paradox Valley comp=Z,17nm,0.9s	80.14 329	eP	P	08 41 13.5	+0.8
XPFO	Piæon Flat comp=Z,25nm,1.0s	80.15 321	eP	P	08 41 13.7	+1.0
PFO	Pinyon Flats O baz=141,SNR=19	80.15 321	P	P	08 41 13.6	+0.9
PFO	Pinyon Flats O comp=Z,25nm,1.0s	80.15 321	eP	P	08 41 13.6	+0.9
PFO	Pinyon Flats O	80.15 321	*i* P	P	08 41 13.8	+1.1
I36A	Fitzsimmons Fa baz=158,SNR=7.5	80.16 342	P	P	08 41 11.4	-0.9
PV05	Paradox Valley	80.19 329	eP	P	08 41 13.1	+0.2
ISCO	Idaho Springs baz=149,SNR=22	80.20 332	P	P	08 41 13.3	+0.3
ISCO	Idaho Springs comp=Z,14nm,0.8s	80.20 332	eP	P	08 41 13.5	+0.5

ISCO	Idaho Springs	80.20	332	eP	P	08 41 13.5 +0.5
ISCO				pmax	pmax	
	comp=Z,14nm,0.8s					
BELC	Belle Mtn. Jos	80.21	322	P	P	08 41 13.6 +0.6
	baz=141					
SMCO	Snowmass	80.22	331	eP	P	08 41 14.4 +1.2
	comp=Z,27nm,0.8s					
PV03	Paradox Valley	80.23	329	eP	P	08 41 13.5 +0.4
PV18	Skein Mesa, Pa	80.25	329	eP	P	08 41 13.5 +0.3
	comp=Z,19nm,0.8s					
PV12	Saucer Basin,	80.26	329	eP	P	08 41 14.0 +0.7
	comp=Z,18nm,1.0s					
CRY	Cary Ranch	80.26	321	eP	P	08 41 14.2 +1.0
PV11	David Mesa, Pa	80.28	329	eP	P	08 41 13.7 +0.4
	comp=Z,16nm,1.0s					
U15A	North Rim	80.29	326	eP	P	08 41 14.3 +0.7
	comp=Z,15nm,0.8s					
PV07	Paradox Valley	80.30	329	eP	P	08 41 14.2 +0.7
	comp=Z,14nm,1.1s					
PV17	East Wray Mesa	80.30	329	eP	P	08 41 13.7 +0.3
	comp=Z,18nm,0.8s					
PV16	Nyswonger Mesa	80.31	329	eP	P	08 41 14.0 +0.5
	comp=Z,11nm,0.9s					
F44A	Big Bay de Noc	80.33	348	P	P	08 41 12.4 -0.7
	baz=165					
F43A	Flat Rock, Esc	80.33	347	P	P	08 41 12.4 -0.8
	baz=164,SNR=5.1					
PV19	Morning Glory	80.33	329	eP	P	08 41 14.2 +0.5
	comp=Z,12nm,1.0s					
H38A	Maiden Rock	80.33	343	P	P	08 41 12.2 -1.0
	baz=160					
PV04	Paradox Valley	80.37	329	eP	P	08 41 14.4 +0.6
	comp=Z,36nm,1.4s					
H37A	Dierke Farm, C	80.40	343	P	P	08 41 12.6 -0.9
	baz=159,SNR=6.9					
G40A	Rib Lake	80.41	345	P	P	08 41 12.7 -0.9
	baz=162,SNR=7.3					
G40A	Rib Lake	80.41	345	eP	P	08 41 13.3 -0.3
	comp=Z,11nm,0.8s					
PV10	Paradox Valley	80.41	329	eP	P	08 41 14.3 +0.1
PV22	Blue Mesa, Par	80.44	329	eP	P	08 41 14.6 +0.4
	comp=Z,17nm,1.0s					
F42A	Maple Grove Fa	80.45	346	P	P	08 41 13.1 -0.7
	baz=163					
PV23	Carpenter Ridg	80.47	329	eP	P	08 41 15.0 +0.6
	comp=Z,19nm,1.0s					
E45A	Wooded Hills,	80.48	348	P	P	08 41 13.7 -0.3
	baz=166					
MURC	Murrieta	80.53	321	P	P	08 41 15.3 +0.7
	baz=140,SNR=10					
PV21	Cone Mtn., Par	80.54	329	eP	P	08 41 15.4 +0.6
	comp=Z,11nm,0.9s					
PV09	Paradox Valley	80.56	329	eP	P	08 41 15.7 +0.7
ECSD	EROS Data Cent	80.61	340	P	P	08 41 14.3 -0.5
	baz=156,SNR=91					
ECSD	EROS Data Cent	80.61	340	eP	P	08 41 14.4 -0.4
	comp=Z,64nm,0.8s					
F41A	Three Lakes	80.62	346	P	P	08 41 14.4 -0.4
	baz=163					
G39A	Holcombe	80.65	344	P	P	08 41 13.8 -1.0
	baz=161					
GMRC	Granite Mounta	80.65	322	P	P	08 41 16.1 +0.8
	baz=142,SNR=24					
H36A	Jessenland, He	80.66	342	P	P	08 41 14.5 -0.5
	baz=159,SNR=13					
G38A	Ridgeland	80.70	344	P	P	08 41 13.8 -1.3
	baz=160,SNR=9.2					
E43A	Lone Tree Farm	80.82	347	P	P	08 41 15.4 -0.4
	baz=164,SNR=8.4					
E43A	Lone Tree Farm	80.82	347	eP	P	08 41 15.8 +0.1
	comp=Z,21nm,0.7s					
E44A	Grand Marais A	80.86	348	P	P	08 41 16.0 0.0
	baz=165					
BBRC	Big Bear Solar	80.90	321	P	P	08 41 17.6 +0.8
	baz=141,SNR=7.9					
CASY	Casey	80.94	180	eP	P	08 41 16.7 +0.4
	comp=Z,10nm,0.9s					
COWI	Conover	80.98	346	eP	P	08 41 16.2 -0.5
	comp=Z,20nm,0.9s					
SPMN	Marine on St.	80.98	343	P	P	08 41 15.5 -1.1
	baz=160,SNR=5.4					
SPMN	Marine on St.	80.98	343	eP	P	08 41 15.9 -0.7
	comp=Z,19nm,0.9s					
H35A	Sunnyside Ranc	81.01	341	P	P	08 41 16.0 -0.8
	baz=158,SNR=52					
F40A	Park Falls	81.01	345	P	P	08 41 16.4 -0.4
	baz=162,SNR=18					
KNB	Kanab	81.02	326	eP	P	08 41 18.2 +0.9
	comp=Z,36nm,0.9s					
KNB	Kanab	81.02	326	eP	P	08 41 18.2 +0.9
KNB				pmax	pmax	
	comp=Z,36nm,0.9s					
HEC	Hector,Ludlow	81.03	322	P	P	08 41 18.1 +0.8
	baz=141,SNR=9.0					
CIS	Catalina Islan	81.04	320	P	P	08 41 18.0 +0.7
	baz=140					
E42A	Champion	81.05	347	P	P	08 41 16.6 -0.4
	baz=164,SNR=16					
F39A	Loretta	81.19	344	P	P	08 41 17.1 -0.7
	baz=161,SNR=15					
FMP	Fort Macarthur	81.21	320	P	P	08 41 18.6 +0.4
	baz=140					
LCMT	Little Creek M	81.22	325	eP	P	08 41 18.9 +0.5
	comp=Z,13nm,1.1s					
G36A	St. Michael	81.22	342	P	P	08 41 17.1 -0.9
	baz=159					
TOA0	Torodi Ar. Sit	81.25	68	eP	P	08 41 19.1 +0.3
	comp=Z,17nm,0.8s					
TORD	Torodi Ar. Bea	81.25	68	P	P	08 41 18.8 0.0
	comp=Z,8.7nm,0.8s,baz=288,slow=6.9,SNR=43					
TOA1	Torodi Ar. Sit	81.25	68	eP	P	08 41 18.8 0.0
N23A	Red Feather La	81.27	332	P	P	08 41 18.9 +0.3
	baz=149,SNR=16					
N23A	Red Feather La	81.27	332	eP	P	08 41 19.3 +0.7
	comp=Z,40nm,1.3s					
BFSC	Mount Baldy Ra	81.27	321	P	P	08 41 19.2 +0.5
	baz=140,SNR=14					
E41A	Kenton	81.29	346	P	P	08 41 17.5 -0.8
	baz=163					
TUQ	Turquoise Moun	81.29	323	P	P	08 41 19.4 +0.6
	baz=141,SNR=6.6					
G35A	Watkins	81.40	342	P	P	08 41 18.0 -0.9
	baz=158,SNR=5.8					
G35A	Watkins	81.40	342	eP	P	08 41 19.5 +0.6
	comp=Z,21nm,1.1s					
F37A	Hinrichs Farm,	81.40	343	P	P	08 41 18.3 -0.6
	baz=160,SNR=11					
RRX	Edison Barstow	81.41	322	P	P	08 41 17.9 -1.3
	baz=141					
PHWY	Pilot Hill	81.43	333	eP	P	08 41 19.9 +0.3
	comp=Z,32nm,0.8s					
F38A	Pierce - Schro	81.45	344	P	P	08 41 18.4 -0.7
	baz=160,SNR=18					
E40A	Wakefield	81.47	345	P	P	08 41 19.0 -0.2
	baz=162					
MWC	Mount Wilson	81.47	320	eP	P	08 41 20.4 +0.6
	comp=Z,23nm,0.9s					
MWC	Mount Wilson	81.47	320	eP	P	08 41 20.4 +0.6
MWC				pmax	pmax	
	comp=Z,23nm,0.9s					
PASC	Pasadena Art C	81.50	320	eP	P	08 41 20.1 +0.4
	comp=Z,21nm,0.9s					
E39A	Mellen	81.54	345	P	P	08 41 19.0 -0.7
	baz=161,SNR=13					
MTPU	Mount Pierson	81.55	327	eP	P	08 41 20.8 +0.4
	comp=Z,16nm,0.9s					
O20A	White River Ci	81.55	330	P	P	08 41 20.2 +0.2
	baz=147,SNR=10					
O20A	White River Ci	81.55	330	eP	P	08 41 20.4 +0.3
	comp=Z,10nm,0.8s					
H32A	Carlson Farm,	81.56	340	P	P	08 41 19.1 -0.7
	baz=156,SNR=15					
SZCU	Shurtz Canyon	81.61	326	eP	P	08 41 21.3 +0.8
	comp=Z,13nm,1.0s					
DECC	Green Verdugo	81.64	320	P	P	08 41 21.3 +0.8
	baz=140					
GSC	Goldstone, Bar	81.64	322	P	P	08 41 21.0 +0.5
	baz=141,SNR=11					
GSC	Goldstone, Bar	81.64	322	eP	P	08 41 21.4 +0.9
	comp=Z,10nm,0.7s					
SRU	San Rafael Swe	81.67	328	eP	P	08 41 21.1 +0.4
	comp=Z,22nm,0.7s					
SRU	San Rafael Swe	81.67	328	eP	P	08 41 21.1 +0.4
SRU				pmax	pmax	
	comp=Z,23nm,0.7s					
CCUT	Cedar City	81.70	326	eP	P	08 41 22.1 +1.1
	comp=Z,25nm,0.9s					
G34A	Benson	81.73	341	P	P	08 41 19.7 -1.0
	baz=157,SNR=15					
SHPR	Sheep Range	81.75	324	eP	P	08 41 21.9 +0.8
	comp=Z,18nm,1.0s					
F36A	Milaca	81.75	343	P	P	08 41 19.7 -1.0
	baz=159,SNR=29					
F36A	Milaca	81.75	343	eP	P	08 41 19.8 -1.0
	comp=Z,26nm,0.8s					
D41A	Chassel	81.78	346	P	P	08 41 20.9 0.0
	baz=163,SNR=18					
D41A	Chassel	81.78	346	eP	P	08 41 20.8 0.0
	comp=Z,130nm,0.7s					
SHOC	Shoshone, Teco	81.83	323	P	P	08 41 21.8 +0.4
	baz=141					
G33A	Ortonville	81.91	341	P	P	08 41 20.4 -1.2
	baz=157,SNR=5.2					
BLG	Laguna Peak, P	81.92	320	P	P	08 41 22.6 +0.7
	baz=139					
MSU	Marysvale	81.92	327	eP	P	08 41 22.7 +0.6
MSU	Marysvale	81.92	327	eP	P	08 41 22.7 +0.6
EDW2	Edwards Air Fo	81.94	321	P	P	08 41 22.3 +0.2
	baz=140,SNR=16					
SUSD	Miller	81.96	339	P	P	08 41 21.1 -0.8
	baz=155,SNR=8.5					
P18A	Preston Nutter	81.98	329	eP	P	08 41 22.9 +0.5
	comp=Z,26nm,0.8s					
E38A	The Farm, Brul	81.98	344	P	P	08 41 21.1 -0.8
	baz=161,SNR=7.9					
E38A	The Farm, Brul	81.98	344	eP	P	08 41 21.3 -0.6
	comp=Z,33nm,0.7s					
F35A	Swanville	82.02	342	P	P	08 41 21.4 -0.7
	baz=158,SNR=10					
P17A	Butcher Ranch,	82.06	328	eP	P	08 41 22.8 +0.1
	comp=Z,31nm,1.2s					
OSI	Osito Audit: C	82.12	320	P	P	08 41 23.4 +0.4
	baz=139					
OSI	Osito Audit: C	82.12	320	eP	P	08 41 24.0 +1.0
	comp=Z,32nm,0.8s					
TMUT	Trail Mountain	82.13	328	eP	P	08 41 23.6 +0.3
	comp=Z,11nm,0.7s					
TCRU	Three Creeks R	82.13	327	eP	P	08 41 23.6 +0.4
	comp=Z,11nm,0.9s					
F34A	Alexandria	82.14	342	P	P	08 41 22.1 -0.7
	baz=158,SNR=7.0					
E37A	Wrenshall	82.14	344	P	P	08 41 22.1 -0.6
	baz=160					
SCZ2	Santa Cruz Isl	82.15	319	P	P	08 41 23.8 +0.6
	baz=139					
LRMC	Laurel Mtn Rad	82.23	322	P	P	08 41 24.1 +0.4
	baz=140					
G32A	Webster	82.26	340	P	P	08 41 22.4 -1.1
	baz=156,SNR=6.2					
G32A	Webster	82.26	340	eP	P	08 41 22.9 -0.6
	comp=Z,37nm,1.0s					
E36A	McGregor	82.30	343	P	P	08 41 22.9 -0.7
	baz=159,SNR=28					
RWWY	Rawlins	82.44	332	eP	P	08 41 25.1 +0.3
	comp=Z,48nm,1.0s					
G31A	Conde	82.44	339	P	P	08 41 23.4 -1.0
	baz=155					
SBC	Santa Barbara	82.53	320	P	P	08 41 25.7 +0.6
	baz=139					
ARVC	Arvin	82.57	321	P	P	08 41 25.8 +0.5
	baz=139					
FURC	Furnace Creek,	82.57	323	P	P	08 41 25.7 +0.5
	baz=141,SNR=14					
MPMC	Manual Prospec	82.58	322	P	P	08 41 25.8 +0.2
	baz=140,SNR=13					
E35A	Pequot Lakes	82.62	342	P	P	08 41 24.3 -1.0
	baz=158,SNR=9.0					
TPNV	Topopah Spring	82.64	323	P	P	08 41 26.6 +0.8
	baz=141,SNR=22					
TPNV	Topopah Spring	82.64	323	eP	P	08 41 26.6 +0.8
	comp=Z,32nm,1.3s					
TPNV	Topopah Spring	82.64	323	eP	P	08 41 26.7 +0.8
TPNV				pmax	pmax	
	comp=Z,33nm,1.3s					
D37A	Cotton	82.70	344	P	P	08 41 25.0 -0.7
	baz=160,SNR=14					
C40A	Isle Royale Na	82.71	346	P	P	08 41 24.9 -0.8
	baz=163					
F32A	Veblen	82.72	340	P	P	08 41 24.8 -1.0
	baz=156					
PSUT	Pine Spring	82.72	326	eP	P	08 41 27.1 +0.8
	comp=Z,18nm,0.9s					
E34A	Wadena	82.78	342	P	P	08 41 25.2 -0.9
	baz=158					
ISA	Isabella, Lake	82.79	321	P	P	08 41 27.4 +0.9
	baz=140,SNR=18					
ISA	Isabella, Lake	82.79	321	eP	P	08 41 27.5 +0.9
	comp=Z,22nm,0.9s					
ISA	Isabella, Lake	82.79	321	eP	P	08 41 27.5 +0.9
ISA				pmax	pmax	
	comp=Z,22nm,0.9s					
DAC	Darwin (Calif)	82.80	322	eP	P	08 41 28.2 +1.5
	comp=Z,28nm,0.9s					
DAC	Darwin (Calif)	82.80	322	eP	P	08 41 28.2 +1.5
DAC				pmax	pmax	
	comp=Z,28nm,0.9s					
C39A	Grand Marais	82.82	346	P	P	08 41 25.4 -0.8
	baz=162,SNR=17					
D36A	Goodland	82.89	343	P	P	08 41 25.8 -0.9
	baz=159,SNR=5.0					
D36A	Goodland	82.89	343	eP	P	08 41 26.2 -0.5
	comp=Z,11nm,0.6s					
MPU	Maple Canyon	82.90	328	eP	P	08 41 27.6 +0.5
	comp=Z,13nm,0.9s					
PKM	Mcpherson Peak	82.92	320	P	P	08 41 27.8 +0.5
	baz=139,SNR=16					
C38A	Sawbill Land.	82.97	345	P	P	08 41 26.1 -1.0
	baz=161,SNR=13					
E33A	Westby DABS, E	82.99	341	P	P	08 41 26.2 -1.1
	baz=157,SNR=11					
K22A	Casper	82.99	333	P	P	08 41 27.7 +0.1
	baz=149,SNR=21					
K22A	Casper	82.99	333	eP	P	08 41 27.8 +0.3
	comp=Z,30nm,0.8s					
D35A	Remer	83.02	343	P	P	08 41 26.5 -0.8
	baz=159,SNR=30					
NLU	North Lily Min	83.05	328	eP	P	08 41 28.0 0.0
	comp=Z,8.3nm,0.8s					
CWC	Cottonwood Cre	83.17	322	P	P	08 41 29.1 +0.5
	baz=140					
C37A	Embarrass	83.19	344	P	P	08 41 27.4 -0.8
	baz=160,SNR=8.2					
GRAC	Grapevine Rang	83.23	323	P	P	08 41 29.4 +0.6
	baz=140,SNR=18					
EYMN	Ely	83.24	345	P	P	08 41 27.6 -0.8
	baz=161,SNR=6.2					
EYMN	Ely	83.24	345	eP	P	08 41 28.0 -0.5
	comp=Z,25nm,0.8s					
VES	Vestal, Richgr	83.25	321	P	P	08 41 29.3 +0.6
	baz=139,SNR=22					
JLU	Jordanelle	83.30	329	eP	P	08 41 29.7 +0.4
	comp=Z,14nm,0.8s					
D34A	Park Rapids	83.32	342	P	P	08 41 27.9 -1.0
	baz=158,SNR=8.1					
D34A	Park Rapids	83.32	342	eP	P	08 41 31.5 +2.6
	comp=Z,12nm,0.6s					
SMMC	Simmler	83.33	320	P	P	08 41 30.4 +1.1
	baz=139,SNR=6.0					
RSSD	Black Hills	83.35	335	P	P	08 41 29.2 -0.2
	baz=151					
RSSD	Black Hills	83.35	335	eP	P	08 41 29.5 +0.1
	comp=Z,27nm,0.7s					
RSSD	Black Hills	83.35	335	eP	P	08 41 29.5 +0.1
RSSD				pmax	pmax	
	comp=Z,27nm,0.7s					
C36A	Pine Crest Far	83.36	344	P	P	08 41 28.3 -0.8
	baz=160,SNR=12					
R11A	Troy Canyon, C	83.40	325	P	P	08 41 30.4 +0.7
	baz=142,SNR=40					
R11A	Troy Canyon, C	83.40	325	eP	P	08 41 30.5 +0.7
	comp=Z,18nm,0.9s					
CTU	Camp Tracy	83.51	328	eP	P	08 41 30.3 +0.1
	comp=Z,7.4nm,0.8s					
D33A	AnnSam, Waubun	83.54	342	P	P	08 41 29.3 -0.7
	baz=157,SNR=11					
E31A	Nome	83.56	340	P	P	08 41 29.8 -0.3
	baz=156,SNR=30					
DUG	Dugway, Tooele	83.58	328	P	P	08 41 30.5 -0.1
	baz=144,SNR=14					
DUG	Dugway, Tooele	83.58	328	eP	P	08 41 31.0 +0.4
	comp=Z,9.4nm,0.6s					
DUG	Dugway, Tooele	83.58	328	eP	P	08 41 31.0 +0.4
DUG				pmax	pmax	
	comp=Z,9.0nm,0.6s					
C35A	Jirik Farms, M	83.58	343	P	P	08 41 29.1 -1.1
	baz=159,SNR=15					
TCUT	Toone Canyon	83.70	329	eP	P	08 41 31.8 +0.4
	comp=Z,25nm,0.7s					
TIN	Tinemaha, Big	83.72	322	P	P	08 41 31.9 +0.5
	baz=140,SNR=6.2					
C34A	RKJ Ranch, Bem	83.77	342	P	P	08 41 30.2 -0.9
	baz=158,SNR=7.5					
PAGB	Antelope Grade	83.78	320	eP	P	08 41 32.9 +1.3
	comp=Z,24nm,0.8s					
D32A	Dogwood Acres,	83.85	341	P	P	08 41 30.9 -0.7
	baz=156					
D31A	Mcclaflin, Tow	83.96	340	P	P	08 41 31.7 -0.5
	baz=156					
C33A	Trail	84.09	342	P	P	08 41 31.9 -0.9
	baz=157,SNR=9.6					
B35A	Bob, Littlefor	84.14	343	P	P	08 41 32.2 -0.8
	baz=159,SNR=22					
B35A	Bob, Littlefor	84.14	343	eP	P	08 41 32.4 -0.6
	comp=Z,40nm,0.6s					
HWUT	Hardware Ranch	84.17	329	eP	P	08 41 33.5 -0.2
	comp=Z,20nm,0.8s					
BGU	Big Grassy Mou	84.26	328	eP	P	08 41 34.1 0.0
	comp=Z,5.8nm,0.8s					
PD31	Pinedale Array	84.29	331	eP	P	08 41 33.8 -0.5
PDAR	Pinedale Array	84.29	331	P	P	08 41 33.6 -0.7
	comp=Z,5.1nm,0.5s,baz=130,slow=6.1,SNR=52					
PDAR	Pinedale Array	84.29	331	eP	P	08 41 34.0 -0.2
BW06	Boulder Array	84.29	331	P	P	08 41 33.4 -0.9
	baz=146,SNR=8.1					
BW06	Boulder Array	84.29	331	eP	P	08 41 33.3 -0.9
	comp=Z,6.3nm,0.6s					
SPUT	South Promonto	84.31	328	eP	P	08 41 34.1 -0.3
	comp=Z,27nm,0.8s					
C32A	Crookston	84.35	342	P	P	08 41 33.6 -0.5
	baz=157					
PMPB	Monarch Peak	84.44	320	eP	P	08 41 35.7 +0.7
	comp=Z,20nm,1.1s					
MLAC	Mammoth, Mammo	84.47	322	P	P	08 41 36.1 +0.7
	baz=140,SNR=7.6					
B34A	Aery, Baudette	84.48	343	P	P	08 41 33.8 -0.9
	baz=158,SNR=13					
OMMB	Old Mammoth Mi	84.54	322	eP	P	08 41 36.6 +0.8
	comp=Z,25nm,0.9s					
AGMN	Agassiz Nation	84.61	342	P	P	08 41 34.8 -0.6
	baz=157,SNR=20					
AGMN	Agassiz Nation	84.61	342	eP	P	08 41 34.8 -0.6
	comp=Z,25nm,0.6s					
C31A	Landman Farms,	84.64	341	P	P	08 41 34.9 -0.7
	baz=156,SNR=18					
NV11	Mina Array Sit	84.74	323	eP	P	08 41 36.9 +0.3
	comp=Z,0.9nm,0.9s					
NV01	Mina Array Sit	84.81	323	eP	P	08 41 37.5 +0.5
NVAR	Mina Array Bea	84.81	323	P	P	08 41 37.4 +0.3
	comp=Z,14nm,0.8s,baz=156,slow=5.4,SNR=123					
HVU	Hansel Valley	84.84	328	eP	P	08 41 36.7 -0.3
	comp=Z,32nm,0.7s					
HVU	Hansel Valley	84.84	328	eP	P	08 41 36.7 -0.3
HVU				pmax	pmax	
	comp=Z,32nm,0.7s					
AHID	Auburn Hatcher	84.92	330	eP	P	08 41 37.5 0.0
	comp=Z,12nm,0.8s					
RYN	Ryan	85.07	323	eP	P	08 41 38.9 +0.6
	comp=Z,19nm,1.0s					
A33A	Warroad	85.08	343	P	P	08 41 37.1 -0.7
	baz=158,SNR=12					
ELK	Elko	85.13	326	P	P	08 41 41.2 +2.6
	comp=Z,11nm,0.7s,baz=217,slow=7.4					
KVN	Kaiserville	85.19	324	eP	P	08 41 38.9 +0.1
	comp=Z,22nm,1.0s					
KVN	Kaiserville	85.19	324	eP	P	08 41 38.9 +0.1
KVN				pmax	pmax	
	comp=Z,22nm,1.0s					
B31A	Greenbush Farm	85.20	341	P	P	08 41 37.5 -0.8
	baz=156,SNR=11					
SAO	San Andreas Ge	85.20	320	eP	P	08 41 39.5 +0.8
	comp=Z,13nm,1.3s					
SAO	San Andreas Ge	85.20	320	eP	P	08 41 39.5 +0.8
SAO				pmax	pmax	
	comp=Z,13nm,1.3s					
MDND	Maddock	85.23	340	P	P	08 41 38.3 -0.3
	baz=154,SNR=9.1					
MDND	Maddock	85.23	340	eP	P	08 41 38.6 0.0
	comp=Z,74nm,0.8s					
REDW	Red Top Meadow	85.31	331	eP	P	08 41 39.2 -0.2
	comp=Z,17nm,1.0s					
SNOW	Snow King Moun	85.36	331	eP	P	08 41 39.5 -0.2
	comp=Z,16nm,1.0s					
LOHW	Long Hollow	85.42	331	eP	P	08 41 40.0 +0.1
	comp=Z,12nm,1.0s					
WAKR	Walker	85.44	322	eP	P	08 41 41.4 +1.3
	comp=Z,31nm,1.2s					
TPAW	Teton Pass	85.46	331	eP	P	08 41 40.3 +0.1
	comp=Z,22nm,1.0s					
A31A	Linda, St. Vin	85.54	342	P	P	08 41 39.2 -0.8
	baz=156					
CMB	Columbia Colle	85.58	322	eP	P	08 41 40.9 +0.2
	comp=Z,17nm,1.4s					
CMB	Columbia Colle	85.58	322	eP	P	08 41 40.9 +0.2
CMB				pmax	pmax	
	comp=Z,17nm,1.4s					
MOOW	Moose Ponds	85.59	331	eP	P	08 41 40.4 -0.4
	comp=Z,5.8nm,0.9s					
FXWY	Fox Creek	85.61	331	eP	P	08 41 40.9 0.0
	comp=Z,6.5nm,0.8s					
IMW	Indian Meadow	85.79	331	eP	P	08 41 42.6 +0.8
	comp=Z,23nm,0.9s					
BMN	Battle Mountai	85.82	325	eP	P	08 41 41.5 -0.4
	comp=Z,5.8nm,1.0s					
BMN	Battle Mountai	85.82	325	eP	P	08 41 41.5 -0.4
BMN				pmax	pmax	
	comp=Z,6.0nm,1.0s					
PNTR	Pine Nut	85.97	323	eP	P	08 41 43.6 +0.8
	comp=Z,37nm,0.8s					
YPP	Pitchstone Pla	86.04	331	eP	P	08 41 44.3 +1.2
	comp=Z,3.7nm,0.8s					
H17A	Grant Village	86.05	331	P	P	08 41 43.9 +0.8
	baz=146					
H17A	Grant Village	86.05	331	eP	P	08 41 44.0 +0.9
	comp=Z,6.2nm,0.8s					
RLMT	Red Lodge	86.14	332	P	P	08 41 43.3 -0.2
	baz=147,SNR=28					
RLMT	Red Lodge	86.14	332	eP	P	08 41 43.5 +0.1
	comp=Z,22nm,0.6s					
VCNR	Virginia City	86.15	323	eP	P	08 41 44.6 +0.9
	comp=Z,8.3nm,0.9s					
YFT	Old Faithful	86.20	331	eP	P	08 41 45.4 +1.6
	comp=Z,18nm,0.9s					
PAHR	Pah Rah Range	86.33	323	eP	P	08 41 45.0 +0.6
	comp=Z,20nm,0.8s					
LAO	LASA Array	86.34	335	P	P	08 41 44.0 -0.2
	baz=149,SNR=8.1					
LAO	LASA Array	86.34	335	eP	P	08 41 44.0 -0.2
	comp=Z,34nm,0.9s					
ULM	Lac du Bonnet	86.42	343	P	P	08 41 43.5 -0.9
	comp=Z,21nm,0.8s,baz=159,slow=4.1,SNR=34					
ULM	Lac du Bonnet	86.42	343	eP	P	08 41 43.5 -0.9
	comp=Z,25nm,0.8s					
ULM	Lac du Bonnet	86.42	343	eP	P	08 41 43.5 -0.9
ULM				pmax	pmax	
	comp=Z,25nm,0.8s					
YMR	Madison River	86.44	331	eP	P	08 41 45.5 +0.6
	comp=Z,41nm,0.8s					
AFDM	Forest Hills D	86.57	322	eP	P	08 41 45.9 +0.4
	comp=Z,11nm,1.0s					
YHB	Horse Butte	86.60	331	eP	P	08 41 45.4 -0.3
	comp=Z,26nm,1.3s					
QLMT	Earthquake Lak	86.76	331	eP	P	08 41 47.4 +0.9
GCMT	Greycliff	86.85	333	eP	P	08 41 46.9 +0.1
BEKR	Beckworth	86.94	323	eP	P	08 41 48.1 +0.7
	comp=Z,16nm,1.0s					
HLID	Hailey	86.99	329	P	P	08 41 47.8 +0.1
	baz=143,SNR=32					
HLID	Hailey	86.99	329	eP	P	08 41 48.2 +0.5
	comp=Z,22nm,1.0s					
DGMT	Dagmar	87.20	337	P	P	08 41 48.5 +0.2
	baz=151,SNR=28					
DGMT	Dagmar	87.20	337	eP	P	08 41 48.7 +0

comp=Z,3.6nm,0.6s,baz=191,slow=4.6,SNR=5.3
DLMT Dillon 87.67 331 *eP* **P 08 41 51.2 +0.4**
comp=Z,33nm,1.4s
HOPS Hopland Field 87.71 321 *eP* **P 08 41 51.4 +0.4**
comp=Z,38nm,1.3s
LRM Limekiln Ridge 87.98 331 *eP* **P 08 41 52.7 +0.2**
O03D Paynes Creek 88.00 322 P **P 08 41 51.7 -0.8**
baz=138
WVOR Wild Horse Val 88.04 325 *eP* **P 08 41 53.0 +0.4**
comp=Z,18nm,1.1s
WVOR Wild Horse Val 88.04 325 *eP* **P 08 41 53.0 +0.4**
WVOR pmax pmax
comp=Z,18nm,1.1s
MOD Modoc Plateau 88.44 324 *eP* **P 08 41 54.9 +0.4**
comp=Z,16nm,0.8s
HRY Holter Researc 88.46 332 *eP* **P 08 41 55.1 +0.6**
WDC Whiskeytown Da 88.59 322 *eP* **P 08 41 54.0 -1.1**
comp=Z,32nm,1.5s
WDC Whiskeytown Da 88.59 322 *eP* **P 08 41 54.0 -1.1**
WDC pmax pmax
comp=Z,32nm,1.5s
J08A Circle Bar Ran 88.67 326 *eP* **P 08 41 56.5 +1.0**
comp=Z,73nm,0.8s
EGMT Eagleton 88.75 334 P **P 08 41 55.3 -0.5**
baz=146
M04C Macdoel 89.12 323 P **P 08 41 57.6 -0.2**
baz=138
BMO Blue Mountains 89.29 328 *eP* **P 08 41 58.6 +0.2**
comp=Z,4.1nm,0.8s
BMO Blue Mountains 89.29 328 *eP* **P 08 41 58.6 +0.2**
BMO pmax pmax
comp=Z,4.0nm,0.8s
M02C Callahan 89.34 322 P **P 08 41 58.8 0.0**
baz=137
K05A Summer Lake 89.35 324 *eP* **P 08 41 59.8 +0.9**
comp=Z,26nm,0.8s
YBH Yreka Blue Hor 89.52 323 P **P 08 41 58.9 -0.7**
comp=Z,3.5nm,0.7s,baz=153,slow=7.6,SNR=14
YBH Yreka Blue Hor 89.52 323 *eP* **P 08 41 59.1 -0.5**
comp=Z,4.5nm,0.9s
YBH Yreka Blue Hor 89.52 323 *eP* **P 08 41 59.1 -0.5**
YBH pmax pmax
comp=Z,5.0nm,0.9s
K04D Chiloquin, OR 89.70 324 P **P 08 42 00.7 +0.2**
baz=138
I07A Izee 89.70 326 *eP* **P 08 42 01.3 +0.9**
comp=Z,11nm,1.0s
J05D Fort Rock, OR 89.93 325 P **P 08 42 01.8 +0.2**
baz=138
F10A Beach Ranch, E 90.12 328 *eP* **P 08 42 02.1 -0.2**
comp=Z,11nm,1.4s
PINE Pine Mountain 90.17 325 *eP* **P 08 42 03.4 +0.7**
comp=Z,24nm,0.8s
JTMT Jette 90.28 331 *eP* **P 08 42 03.6 +0.5**
comp=Z,6.6nm,0.7s
I05D Terrebonne, OR 90.77 325 P **P 08 42 05.7 +0.4**
baz=138,SNR=5.7
WALA Waterton Lakes 91.18 332 *eP* **P 08 42 07.3 +0.1**
comp=Z,20nm,1.0s
H04A Detroit Lake 91.43 325 *eP* **P 08 42 08.4 +0.1**
comp=Z,10.0nm,0.8s
D08A Wollman Farm, 91.70 328 *eP* **P 08 42 09.7 +0.2**
comp=Z,10nm,0.8s
C09A Chrisman Ranch 91.99 329 *eP* **P 08 42 10.2 -0.6**
comp=Z,11nm,0.8s
FFC Flin Flon 92.05 341 *i P* **P 08 42 10.9 0.0**
LTY Liberty 92.64 327 *eP* **P 08 42 13.6 -0.3**
comp=Z,5.8nm,0.9s
B08A Colville Reser 92.88 329 *eP* **P 08 42 14.3 -0.7**
comp=Z,5.5nm,0.8s
AFI Afiamalu 93.17 251 LR LR 09 15 26.7
comp=Z,161nm,20.8s,baz=122,slow=30
ESDC Sonseca Array 93.93 44 P **P 08 42 20.1 +0.1**
comp=Z,0.4nm,0.5s,baz=240,slow=5.0,SNR=3.3
FCC Fort Churchill 93.94 347 *eP* **P 08 42 19.2 -0.3**
comp=Z,9.5nm,0.7s
FCC Fort Churchill 93.94 347 *eP* **P 08 42 19.2 -0.3**
FCC pmax pmax
comp=Z,9.0nm,0.7s
KEST Kesra 100.02 54 LR LR 09 29 30.2
comp=Z,373nm,19.3s,baz=216,slow=36
YKA Yellowknife Ar 102.14 340 P **Pdif 08 42 55.6 -0.8**
comp=Z,1.1nm,0.8s,baz=141,slow=4.3,SNR=13
CLL Collm 110.28 41 *i* Pdif **Pdif 08 43 32.2 -0.6**
comp=Z,4.0nm,0.7s
CLL *e*PKiKP **PKiKP 08 47 35.0 +1.1**
CLL LmV 09 09 00.0
comp=Z,200nm,19.5s
CLL LmV 09 35 00.0
comp=Z,100nm,19.1s
CLL Collm 110.28 41 *i* P **Pdif 08 43 32.2 -0.6**
CLL pmax pmax
comp=Z,4.0nm,0.7s
BRG Berggiesshubel 110.60 42 *e*PKIKP **PKiKP 08 47 31.3 -3.2**
BRG pmax pmax
comp=Z,2.0nm,0.8s
ILAR Eielson Array 114.69 332 PKP PKPdf 08 47 41.1 -0.8
comp=Z,0.5nm,0.8s,baz=148,slow=1.1,SNR=5.1
SKT Skwentna 115.46 329 *e*PKPdf **PKPdf 08 47 42.8 -0.7**
TRF Thorofare Moun 115.51 330 *e*PKPdf **PKPdf 08 47 42.6 -1.1**
BPAW Bear Paw Mtn. 116.04 331 *e*PKPdf **PKPdf 08 47 44.7 +0.1**
PPLA Purkeypile 116.09 330 *e*PKPdf **PKPdf 08 47 45.0 +0.2**
TOLK Toolik Lake Re 117.20 336 P **PKPdf 08 47 46.6 -0.1**
baz=111
TOLK Toolik Lake Re 117.20 336 *e*PKPdf **PKPdf 08 47 46.4 -0.3**
BR101 Keskin Array S 118.93 59 *e*PKPdf **PKPdf 08 47 50.5 -0.6**
BRTR Keskin Array B 118.93 59 PKP **PKPdf 08 47 50.5 -0.6**
comp=Z,1.6nm,1.0s,baz=174,slow=2.7,SNR=4.9
BRTR Keskin Array B 118.93 59*c i*PKIKP **PKPdf 08 47 50.0 -1.0**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
AK11 Malin Array Si 119.47 46 *e*PKPdf **PKPdf 08 47 50.6 -0.8**
KIEV Kiev 119.50 46 *e*PKPdf **PKPdf 08 47 51.0 -0.5**
KIEV Kiev 119.50 46 *i* PKIKP **PKPdf 08 47 49.6 -1.9**
AKASG Malin Array Be 119.51 46 PKP **PKPdf 08 47 50.5 -1.1**
comp=Z,2.2nm,0.6s,baz=259,slow=2.5,SNR=14
AKBB Malin Array Si 119.51 46 *e*PKPdf **PKPdf 08 47 50.8 -0.7**
AKBB Malin Array Si 119.51 46 *e*PKIKP **PKPdf 08 47 50.8 -0.7**
AS01 Alice Springs 119.58 204 *e*PKPdf **PKPdf 08 47 51.4 -1.4**
ASAR Alice Springs 119.58 204 PKP **PKPdf 08 47 51.2 -1.6**
comp=Z,0.8nm,0.6s,baz=140,slow=2.1,SNR=9.7
ASAR PKKPbc **PKKPbc 08 58 03.0 -0.2**
comp=Z,0.6nm,0.7s,baz=340,slow=4.3,SNR=5.9
SPA0 Spitsbergen Ar 121.11 14 *e*PKPdf **PKPdf 08 47 53.9 -0.1**
SPITS Spitsbergen Ar 121.11 14 PKP **PKPdf 08 47 53.9 -0.1**
comp=Z,1.6nm,0.6s,baz=101,slow=7.5,SNR=5.8
ARA0 ARCESS Array S 122.01 24 *e*PKPdf **PKPdf 08 47 55.4 -0.5**
ARA0 *e*PKKPbc **PKKPbc 08 58 00.1 +5.4**
ARCES ARCESS Array B 122.01 24 PKP **PKPdf 08 47 55.4 -0.5**
comp=Z,1.5nm,0.5s,baz=258,slow=3.6,SNR=7.3
ARCES PKKPbc **PKKPbc 08 58 00.1 +5.4**
comp=Z,1.4nm,0.9s,baz=108,slow=6.0,SNR=4.1
ARCES ARCESS Array B 122.01 24 *e*PKPdf **PKPdf 08 47 55.9 +0.1**
WC3 Warramunga Arr 122.84 206 *e*PKPdf **PKPdf 08 47 57.8 -1.3**
WB2 Warramunga Arr 122.86 206 *e*PKPdf **PKPdf 08 47 58.0 -1.1**
WR1 Warramunga Arr 122.87 206 *e*PKPdf **PKPdf 08 47 57.8 -1.3**
WR1 *e*PKKPbc **PKKPbc 08 57 50.2 -0.5**
WRA Warramunga Arr 122.87 206 PKP **PKPdf 08 47 57.8 -1.3**
comp=Z,2.4nm,0.6s,baz=160,slow=1.7,SNR=37
WRA PKKPbc **PKKPbc 08 57 50.2 -0.5**
comp=Z,0.5nm,0.7s,baz=346,slow=4.2,SNR=4.9
ATKA Atka Island 124.53 314 *e*PKPdf **PKPdf 08 48 00.1 -1.1**
KIV Kislovodsk 126.62 57 *e*PKIKP **PKPdf 08 48 03.7 -1.9**
KIV pmax pmax
comp=Z,9.0nm,1.1s
KBZ Khabaz 126.72 57 PKP **PKPdf 08 48 04.2 -1.3**
comp=Z,1.6nm,0.8s,baz=108,slow=3.2,SNR=2.7
KLMR Klimovskoe 127.02 36 *e*PKIKP **PKPdf 08 48 03.1 -2.5**
KLMR pmax pmax
comp=Z,13nm,1.0s
KLMR Klimovskoe 127.02 36 *e*PKPdf **PKPdf 08 48 03.2 -2.4**
KLMR AMP 08 48 12.5
comp=Z,13nm,1.0s
GNI Garni 127.19 62 *i* PKIKP **PKPdf 08 48 06.8 -0.1**
PRGR Permogore 129.96 35 *e*PKIKP **PKPdf 08 48 10.9 -0.3**
PRGR pmax pmax
comp=Z,7.0nm,0.5s
BILL Bilibino 133.24 335⇑*i*PKIKP **PKPdf 08 48 17.8 +0.5**
BILL *e* 08 50 46.9
BILL pmax pmax
comp=Z,7.0nm,2.5s
BILL MLR MLR
comp=Z,73nm,18.0s
ARU Arti 137.22 41 PKP **PKPdf 08 48 25.2 +0.2**
comp=Z,5.6nm,0.2s,baz=280,slow=15,SNR=5.0
ARU Arti 137.22 41 *i* PKIKP **PKPdf 08 48 25.2 +0.2**
ARU 08 51 05.1
AKTO Aktyubinsk 137.59 50 PKP **PKPdf 08 48 26.5 +0.5**
comp=Z,2.1nm,0.7s,baz=117,slow=2.3,SNR=6.7
AKTO Aktyubinsk 137.59 50 PKIKP **PKPdf 08 48 26.1 +0.2**
AKTO pmax pmax
comp=Z,3.0nm,0.8s
AB31 Akbulak array 138.91 51 *i* PKIKP **PKPdf 08 48 28.4 0.0**
AB31 pmax pmax
comp=Z,4.0nm,0.6s
ABKAR Akbulak array 138.91 51 *e*PKPdf **PKPdf 08 48 28.9 +0.5**
TIXI Tiksi 140.27 351*c i*PKIKP **PKPdf 08 48 30.2 0.0**
TIXI pmax pmax
comp=Z,4.0nm,0.7s
SEY Seymchan 140.62 332 PKP **PKPdf 08 48 30.8 -0.3**
comp=Z,4.6nm,0.7s,baz=154,slow=7.9,SNR=11
SEY Seymchan 140.62 332 *i* PKIKP **PKPdf 08 48 30.0 -1.1**
PEA1 Petropavlovsk- 141.53 315 *e*PKPpre PKPpre 08 48 26.8
PETK Petropavlovsk- 141.53 315 PKhKP PKPpre 08 48 26.8
comp=Z,2.9nm,0.7s,baz=96,slow=5.8,SNR=4.1
BRVK Borovoye 144.62 43 *e*PKPdf **PKPdf 08 48 38.6 +0.1**
BVA0 Borovoye Array 144.69 43 *i* PKIKP **PKPdf 08 48 38.1 -0.5**
BVA0 pmax pmax
comp=Z,11nm,1.1s
BVAR Borovoye Array 144.69 43 PKP PKPbc 08 48 37.9 +0.4
comp=Z,3.1nm,0.5s,baz=265,slow=2.1,SNR=24
KK31 Karatay Array 146.63 61 *e*PKPdf **PKPbc 08 48 43.7 -0.2**
KK31 Karatay Array 146.63 61 *i* PKP2 **PKPdf 08 48 42.7 +0.4**
KK31 pmax pmax
comp=Z,4.0nm,0.7s
KKAR Karatay Array 146.63 61 *e*PKPdf **PKPbc 08 48 43.7 -0.2**
KKAR Karatay Array 146.63 61 *e*PKP2 **PKPbc 08 48 43.7 -0.2**
HYB Hyderabad 146.65 110 *i* PKP **PKPbc 08 48 45.0 +0.3**
HYB *e* 08 48 51.0
OTUK Ortayu 147.16 51 PKP2 **PKPdf 08 48 43.9 +0.9**
OTUK pmax pmax
comp=Z,12nm,0.9s
PSI Prapat 147.69 156 *e*PKPbc **PKPbc 08 48 47.1 -0.7**
PSI Prapat 147.69 156 *e*PKP2 **PKPbc 08 48 47.1 -0.7**
MNAS Manas 148.14 62 PKP2 **PKPdf 08 48 46.1 +1.1**
MNAS pmax pmax
comp=Z,13nm,0.9s
NIL Nilore 148.30 78 *e*PKPbc **PKPbc 08 48 49.1 +0.3**
NIL Nilore 148.30 78 *e*PKP2 **PKPbc 08 48 49.1 +0.3**
YAK Yakutsk 148.75 343 *e*PKIKP **PKPbc 08 48 47.1 -1.9**
YAK pmax pmax
comp=Z,19nm,0.6s
YAK pmax pmax
comp=E,3.0nm,0.8s
SFK Sufi-Kurgan 149.00 66 PKP2 **PKPbc 08 48 51.0 +0.3**
SFK pmax pmax
comp=Z,28nm,0.9s
FRU Bishkek 149.66 61 *e*PKP2 **PKPbc 08 48 53.0 +1.1**
FRU pmax pmax
comp=Z,40nm,1.4s
KURBB Kurchatov Arra 150.26 44 PKP **PKPdf 08 48 49.5 +1.6**
comp=Z,20nm,0.8s,baz=296,slow=2.9,SNR=15
KURBB PKPbc **pPKPdf 08 48 53.5 0.0**
comp=Z,22nm,0.7s,baz=296,slow=3.0,SNR=149
KURK Kurchatov 150.28 44 *e*PKPdf **PKPdf 08 48 49.5 +1.6**
KURK *e*PKPbc **PKiKP 08 48 53.8 -0.1**
KURK Kurchatov 150.28 44 *e*PKIKP **PKPdf 08 48 49.5 +1.6**
TKM2 Tokmak 2 150.36 60 PKIKP **PKPbc 08 48 54.0 +0.1**
TKM2 pmax pmax
comp=Z,26nm,0.9s
KULM Kulim 150.59 158 *e*PKPbc **PKPbc 08 48 54.3 -0.7**
KULM *e*PKPab **PKPab 08 49 01.4 -0.2**
NVS Novosibirsk 150.64 34 *e*PKIKP **PKPbc 08 48 54.2 +0.4**
NVS pmax pmax
comp=Z,31nm,0.9s
NVS pmax pmax
comp=E,10.0nm,1.0s
NRN Naryn 150.82 63 *e*PKPbc **PKPbc 08 48 56.0 +0.9**
KSH Kashi 150.91 67 PKPbc **PKPbc 08 48 55.4 +0.2**
KSH PKS PKSdf 08 52 14.4 -10
KSH PP **PP 08 52 32.4 -0.7**
NKL Nikolayevsk 151.00 323 *e*PKIKP **PKPbc 08 48 54.8 +0.1**
NKL pmax pmax
comp=Z,43nm,1.0s
ZAA1 Zalesovo Array 151.92 34 *e*PKPdf **PKPdf 08 48 49.7 -0.6**
ZAA1 *e*PKPbc **PKiKP 08 48 57.1 0.0**
ZAA0 Zalesovo Array 151.92 34 *e*PKPbc **PKPbc 08 48 57.1 +0.3**
ZALV Zalesovo Beam 151.92 34 PKP **PKPdf 08 48 49.7 -0.6**
comp=Z,0.9nm,0.4s,baz=267,slow=3.5,SNR=5.1
ZALV PKPbc **PKiKP 08 48 57.1 -0.1**
comp=Z,45nm,0.6s,baz=304,slow=3.2,SNR=119
TARG Taragay, Kyrgy 152.14 62 *e*PKPbc **PKPbc 08 48 58.8 +0.5**
TARG *e*PKPab **sPKPbc 08 49 05.7 -0.1**
YSS Yuzh-Sakhalins 152.46 309 *e*PKIKP **PKPbc 08 48 57.9 -0.4**
YSS *e* 08 49 04.2
YSS *e* 08 49 14.7
YSS pmax pmax
comp=Z,20nm,0.9s
PDGK Podgornoye 153.11 58 PKIKP **PKPbc 08 48 59.9 -0.1**
PDGK pmax pmax
comp=Z,4.0nm,0.8s
MAKZ Makanchi 153.82 50 *e*PKPdf **PKPdf 08 48 53.4 0.0**
MAKZ *e*PKPbc **PKiKP 08 49 01.5 +0.1**
MAKZ Makanchi 153.82 50 *e*PKIKP **PKPdf 08 48 53.4 0.0**
MAKZ *e* 08 49 01.5
MK31 Makanchi Array 154.03 50 *e*PKPdf **PKPdf 08 48 53.6 -0.1**
MK31 *e*PKPbc **sPKPdf 08 49 00.8 -0.4**
MK31 Makanchi Array 154.03 50 *e*PKIKP **PKPdf 08 48 53.6 -0.1**
MK31 *e* 08 49 00.8
MK32 Makanchi Array 154.03 50 *e*PKPdf **PKPdf 08 48 53.5 -0.2**
MK32 *e*PKPbc **sPKPdf 08 49 00.8 -0.3**
MKAR Makanchi Array 154.03 50 PKP **PKPdf 08 48 53.5 -0.2**
comp=Z,1.1nm,0.8s,baz=318,slow=1.6,SNR=7.4
MKAR PKPbc **sPKPdf 08 49 00.8 -0.4**
comp=Z,3.8nm,0.7s,baz=321,slow=1.7,SNR=23
MK01 Makanchi Array 154.04 50 *e*PKPdf **PKPdf 08 48 53.2 -0.5**
MK01 *e*PKPbc **sPKPdf 08 49 01.2 0.0**
ZEA Zeya 156.46 336 *e*PKP2 **PKPab 08 49 24.4 -0.9**
MJAR Matsushiro Arr 157.71 286 PKPab **PKPab 08 49 31.4 -0.1**
comp=Z,5.3nm,0.8s,baz=137,slow=2.2,SNR=13
MAJO Matsushiro 157.71 286 *e*PKPab **PKPab 08 49 31.9 +0.4**
MJB9 Matsu-Tunnel 157.71 286 *e*PKPab **PKPab 08 49 31.9 +0.5**
KLR Kul'dur 157.84 323 PKP **PKPdf 08 48 57.5 -1.1**
comp=Z,0.1nm,0.7s,baz=30,slow=4.8,SNR=4.9
WMQ Urumqi 158.68 53 *e*PKP **PKPdf 08 48 59.8 -0.1**
WMQ AMB AMB
comp=Z,270nm,4.9s
WMQ LR LR
comp=Z,140nm,30.5s
WMQ LR LR
comp=Z,160nm,21.5s
JNU Nakatsue 163.63 275 PKPab **PKPab 08 49 57.2 -0.2**
comp=Z,5.0nm,0.9s,baz=135,slow=7.1,SNR=2.9
JNU Nakatsue 163.63 275 *e*PKPdf **PKPdf 08 49 07.4 +1.9**
SONA1 Songino Array 164.80 13 *e*PKPab **PKPab 08 50 02.2 +0.2**
SONA0 Songino Array 164.81 13 *e*PKPdf **PKPdf 08 49 05.2 -1.0**
SONA0 *e*PKPab **PKPab 08 50 02.5 +0.5**
SONM Songino Array 164.81 13 PKP **PKPdf 08 49 05.2 -1.0**
comp=Z,0.5nm,0.5s,baz=197,slow=0.7,SNR=3.9
SONM PKPab **PKPab 08 50 02.5 +0.5**
comp=Z,2.0nm,0.7s,baz=328,slow=5.0,SNR=9.4
KSRS Korea Array 165.78 292 PKP **PKPdf 08 49 06.5 -0.6**
comp=Z,0.7nm,0.4s,baz=269,slow=0.6,SNR=6.4
KSRS PKPab **PKPab 08 50 07.3 +0.7**
comp=Z,2.4nm,0.8s,baz=75,slow=4.1,SNR=6.9
KS01 Wonju Array Si 165.80 293 *e*PKPdf **PKPdf 08 49 06.1 -1.1**
KS01 *e*PKPab **PKPab 08 50 07.2 +0.4**
KSAR Wonju Array Be 165.81 292 PKP **PKPdf 08 49 06.5 -0.6**
KSAR Wonju Array Be 165.81 292 PKIKP **PKPdf 08 49 06.6 -0.6**
GTA Gaotai 168.76 53 *e*PKP **PKPdf 08 49 09.6 +0.1**
GTA pPKP sPKPdf 08 49 16.4 -0.5
GTA sPKP 08 49 18.8
GTA PP **PP 08 54 12.3 +3.0**
GTA SKS **SKSdf 08 56 08.8 -3.8**
GTA SKKS **SKKSac 09 00 55.1 -0.7**
GTA AMB AMB
comp=Z,91nm,9.5s
GTA LR LR
comp=Z,150nm,18.4s
KMI Kunming 169.06 134 PKP **PKPdf 08 49 13.3 +3.1**
GYA Guiyang 172.24 147 *e*PKP **PKPdf 08 49 11.0 -0.8**
GYA PKPab **PKPab 08 50 37.0 +1.5**
GYA PP **PP 08 54 28.4 +2.4**
GYA AMB AMB
comp=Z,130nm,8.2s
HHC Hu-ho-hao-te 172.26 359 *e*PKP **PKPdf 08 49 13.5 +2.2**
HHC AMB AMB
comp=Z,200nm,6.1s
CD2 Chengdu 173.19 107 PKP **PKPdf 08 49 11.3 -0.6**
NJ2 Nanjing 173.58 263 *e*PKP **PKPdf 08 49 12.1 +0.1**

IDC ***18*** *08:36:42.9±4.2,24°.22S×67°.08W,h160km±41km,mb3.5/1, mb1 3.6/3,mb1mx3.0/51,mbtmp4.0/3,Error ellipse: s-maj=63.7km s-min=30.6km az=77.0*
ISCJB ***18*** *08:36:43.3±1.0,24°.17S±0°.07×67°.08W±0°.06,h169km, mb3.8/1,Error ellipse: s-maj=9.3km s-min=8.0km az=159.5*
GUC ***18*** *08:36:46.0±0.4,24°.12S×67°.53W,h210km,ML3.9*
ISC 18 08:36:42.8±1.1,24°.27S±0°.07×67°.06W±0°.08,h169km,n13, σ2°.15/20,3C-1D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB15	**IPOC Station P**	**2.45**	**295**	*i* S	**Sn**	**08 37 57.1**	**+0.3**
PB15				IAML		08 38 01.3	
comp=E,1μm,0.5s							
GO02	**Mina Guanaco**	**2.47**	**248**	*i* S	**Sn**	**08 37 50.7**	**-6.6**
PB06	**IPOC Station P**	**2.78**	**303**	*eP*	**Pn**	**08 37 29.9**	**+1.4**
PB06				*i* S	**Sn**	**08 38 03.4**	**-0.4**
PB06				IAML		08 38 06.1	
comp=E,296nm,0.2s							
PB14	**IPOC Station P**	**3.07**	**263**⇑	*i* P	**Pn**	**08 37 33.6**	**+1.5**
PB14				*i* S	**Sn**	**08 38 10.5**	**+0.1**
PB14				IAML		08 38 15.5	
comp=N,98nm,0.4s							
PB10	**IPOC Station P**	**3.29**	**282**⇓	*i* P	**Pn**	**08 37 36.5**	**+2.0**
PB10				*i* S	**Sn**	**08 38 13.9**	**-0.8**
PB10				IAML		08 38 18.9	
comp=E,73nm,0.5s							
PB04	**IPOC Station P**	**3.43**	**303**⇑	*i* P	**Pn**	**08 37 37.8**	**+1.2**
PB04				*i* S	**Sn**	**08 38 16.5**	**-1.8**
PB04				IAML		08 38 20.6	
comp=N,152nm,0.1s							
PB07	**IPOC Station P**	**3.63**	**314**⇑	*i* P	**Pn**	**08 37 40.2**	**+1.2**
PB07				*i* S	**Sn**	**08 38 21.4**	**-1.4**
PB07				IAML		08 38 25.4	
comp=E,147nm,0.4s							
PB02	**IPOC Station P**	**3.93**	**318**	*eP*	**Pn**	**08 37 44.1**	**+1.3**
PB02				*e*S	**Sn**	**08 38 27.7**	**-1.9**
PB02				IAML		08 38 31.5	
comp=E,152nm,0.4s							
LPAZ	**La Paz**	**8.00**	**353**	P	**Pn**	**08 38 38.2**	**+1.4**
comp=E,1.3nm,0.3s,baz=160,slow=12,SNR=15							
LPAZ				S	**Sn**	**08 40 04.0**	**-2.7**
comp=E,0.1nm,0.3s,baz=173,slow=12,SNR=2.4							
SIV	**San Ignacio**	**9.97**	**35**	P	**Pn**	**08 39 01.3**	**-0.8**
comp=E,0.4nm,0.3s,baz=230,slow=15,SNR=4.3							
SNAA	**Sanae**	**59.12**	**161**	P	**P**	**08 46 26.4**	**+1.3**
comp=E,1.9nm,1.2s,baz=282,slow=9.3,SNR=4.7							
WRA	**Warramunga Arr**	**131.37**	**207**	PKP	**PKPdf**	**08 55 35.4**	**-0.3**
comp=E,0.4nm,0.8s,baz=158,slow=1.8,SNR=4.8							
MKAR	**Makanchi Array**	**146.76**	**40**	PKPbc	**PKPab**	**08 56 05.8**	**-0.6**
comp=E,0.3nm,0.5s,baz=275,slow=3.1,SNR=3.6							

IDC 18 08:43:15.8±7.9,16°.08S×173°.51W,h0km,mb3.6/2, mb1 3.9/2,mb1mx3.4/51,mbtmp3.6/2,Error ellipse: s-maj=356.5km s-min=64.6km az=141.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**49.59**	**257**	P	P	08 52 09.0	-0.2
0.2nm,0.5s,baz=94,slow=6.8,SNR=8.3							
ASAR	**Alice Springs**	**49.80**	**252**	P	P	08 52 10.7	-0.1
1.1nm,0.6s,baz=87,slow=8.8,SNR=19							
BRTR	**Keskin Array B**	**146.61**	**320**	PKPbc	PKPdf	09 02 59.0	+0.6
1.4nm,1.1s,baz=35,slow=3.5,SNR=4.0							

IDC 18 08:51:46.4±5.0,5°.77S×147°.50E,h215km±50km,mb3.1/2, mb1 3.2/4,mb1mx2.9/47,mbtmp3.6/4,Error ellipse: s-maj=88.5km s-min=40.2km az=131.0,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.62**	**185**	P	Pn	08 52 45.0	+0.8
3.4nm,0.3s,baz=316,slow=7.6,SNR=5.8							
PMG				S	S	08 53 30.0	+0.6
2.9nm,0.3s,baz=178,slow=13,SNR=6.1							
WRA	**Warramunga Arr**	**19.03**	**221**	P	P	08 55 51.4	-1.0
0.5nm,0.3s,baz=37,slow=11,SNR=42							
ASAR	**Alice Springs**	**22.09**	**215**	P	P	08 56 25.0	+0.7
0.9nm,0.7s,baz=54,slow=8.9,SNR=6.3							
FITZ	**Fitzroy Crossi**	**24.61**	**238**	P	P	08 56 47.9	+0.8
1.8nm,0.5s,baz=47,slow=12,SNR=12							
TORD	**Torodi Ar. Bea**	**145.51**	**285**	PKPbc	PKPdf	09 10 59.2	-0.6
0.2nm,0.5s,baz=64,slow=2.9,SNR=3.7							

ISCJB ***18*** *08:52:46.3±0.3,41°.77N±0°.08×29°.27W±0°.04,h10km, mb4.5/69,MS3.8/42,Error ellipse: s-maj=11.4km s-min=4.6km az=179.2*
IDC ***18*** *08:52:46.6±1.1,41°.86N×29°.18W,h0km,mb3.9/12, mb1 4.0/13,mb1mx3.7/65,mbtmp3.8/13,ML4.5/1,MS3.8/43, Ms1 3.8/43,ms1mx3.8/60,Error ellipse: s-maj=30.4km s-min=18.0km az=7.0*
NEIC ***18*** *08:52:48.0±0.3,41°.75N×29°.26W,h10km,mb4.7/58,Error ellipse: s-maj=8.7km s-min=3.6km az=180.0*
GCMT ***18*** *08:52:48.0±0.3,42°.13N×29°.13W,h17km±1km,MW4.8/72, Moment Tensor Solution. s17,c18; s72,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.80±.16; $M_{\theta\theta}$0.29±.09; $M_{\phi\phi}$1.51±.10; $M_{r\theta}$1.49±.36; $M_{\phi\phi}$0.10±.05; $M_{\theta r}$-0.32±.23; Best double couple: M=2.07300×10^{16} NP1:φs334.00000°,δ57.00000°,λ-122.00000°. NP2: φs203.00000°,δ45.00000°,λ-50.00000°. Principal axes: T 1.5430, Plg7.0000°, Azm86.0000°; N 1.0570, Plg27.0000°, Azm353.0000°; P -2.6020, Plg62.0000°, Azm190.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 18 08:52:47.8±0.6,41°.7N±0°.1×29°.23W±0°.07,h10km,n136, σ0°.91/94,mb4.6/69,MS3.9/42,Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMOZ	**Porto Moniz, M**	**13.04**	**129**	eLR	LR	08 58 42.4	
270nm,20.0s							
PGAV	**Gavieira, Arco**	**15.63**	**82**	eLR	LR	08 59 50.8	
714nm,18.0s							
MTE	**Manteigas**	**16.41**	**87**	eLR	LR	09 00 15.1	
689nm,20.0s							
MVO	**Moncorvo**	**16.66**	**84**	eLR	LR	09 00 25.7	
378nm,20.0s							
PMRV	**Marv??o**	**16.75**	**91**	eLR	LR	09 00 31.0	
755nm,18.0s							
PVAQ	**Vaqueiros**	**17.13**	**97**	eLR	LR	09 00 46.9	
616nm,20.0s							
PAB	**San Pablo**	**19.00**	**88**	*es*P	sP	08 57 22.0	+8.3
ESDC	**Sonseca Array**	**19.25**	**88**	P	**P**	**08 57 11.2**	**-1.1**
0.3nm,0.3s,baz=97,slow=9.2,SNR=3.1							
ESDC				LR	LR	09 03 10.9	
comp=Z,325nm,20.2s,baz=265,slow=32							
ESLA	**Sonseca Array**	**19.25**	**88**	*eP*	**Pn**	**08 57 14.6**	**+1.3**
16nm,1.5s							
ES19	**SONSECA Array**	**19.29**	**87**	*eP*	**Pn**	**08 57 14.3**	**+0.5**
MDT	**Midelt**	**21.45**	**106**	LR	LR	09 04 09.7	
comp=Z,276nm,21.3s,baz=320,slow=32							
NRS	**Narsarsuaq**	**21.83**	**339**	*eP*	**P**	**08 57 40.3**	**+0.3**
27nm,1.2s							
EKA	**Eskdalemuir Ar**	**21.84**	**42**	P	**P**	**08 57 39.4**	**-0.9**
0.3nm,0.5s,baz=257,slow=8.7,SNR=3.1							
BORG	**Borgarnes**	**23.54**	**8**	LR	LR	09 04 25.6	
comp=Z,291nm,20.9s,baz=192,slow=30							
ANGG	**Ammassalik, Gr**	**24.44**	**352**	*eP*	**P**	**08 58 05.7**	**-0.6**
7.6nm,0.8s							
SSB	**Saint Sauveur**	**24.66**	**70**	*eP*	**P**	**08 58 08.6**	**0.0**
8.8nm,1.3s							
UCC	**Uccle**	**24.77**	**57**	*eP*	**P**	**08 58 10.6**	**+1.2**
17nm,0.6s							
WLF	**Walferdange**	**25.79**	**60**	*eP*	**P**	**08 58 19.8**	**+1.1**
35nm,1.5s							
BNI	**Bardonecchia**	**26.18**	**70**	*eP*	**P**	**08 58 22.1**	**-0.4**
13nm,1.4s							
ECH	**Echery**	**26.38**	**63**	*eP*	**P**	**08 58 24.0**	**-0.2**
25nm,1.4s							
SENIN	**Lac Senin/Sane**	**26.52**	**67**	*eP*	**P**	**08 58 26.4**	**+0.8**
12nm,1.1s							
EMMW	**East Machias**	**27.86**	**289**	*eP*	**P**	**08 58 36.8**	**-0.6**
31nm,1.4s							
SCHQ	**Schefferville**	**27.90**	**311**	LR	LR	09 07 47.2	
comp=Z,281nm,20.6s,baz=83,slow=32							
SFJD	**Kangerlussuaq**	**27.95**	**342**	L

PQI	Presque Isle	28.05	293	*eP*	P	08 58 40.1	+1.0
	12nm,1.0s						
GRFO	Grafenberg	29.07	60	*eP*	P	08 58 49.0	+0.9
	7.0nm,0.6s						
SCO	Scoresbysund	29.10	5	*eP*	P	08 58 48.8	+0.6
	23nm,1.4s						
KEST	Kesra	30.50	88	LR	LR	09 10 29.2	
	comp=Z,154nm,21.0s,baz=211,slow=35						
KHC	Kasperske Hory	30.62	61	*eP*	P	08 59 02.6	+0.6
	3.7nm,1.3s						
GEC2	GERESS Array S	30.72	62	*eP*	P	08 59 03.0	+0.1
	9.6nm,1.5s						
GERES	GERESS Array B	30.72	62	LR	LR	09 09 53.2	
	comp=Z,230nm,19.6s,baz=269,slow=34						
NOA	NORSAR Array B	31.10	38	LR	LR	09 09 43.2	
	comp=Z,59nm,20.9s,baz=250,slow=33						
JMIC	Jan Mayen	31.17	13	LR	LR	09 08 26.3	
	comp=Z,152nm,18.2s,baz=252,slow=30						
FRB	Frobisher Bay	31.66	328	LR	LR	09 08 44.2	
	comp=Z,69nm,18.0s,baz=103,slow=30						
HFS	Hagfors	31.99	40	LR	LR	09 10 32.2	
	comp=Z,229nm,20.7s,baz=248,slow=34						
VAE	Valguarnera	33.63	82	LR	LR	09 12 14.1	
	comp=Z,370nm,18.9s,baz=329,slow=35						
ABVI	Anegada Island	37.61	243	*eP*	P	09 00 01.3	-1.4
	126nm,1.1s						
FINES	FINESS Array B	38.19	40	LR	LR	09 13 52.9	
	comp=Z,187nm,21.6s,baz=248,slow=33						
BUR04	Bucovina Ar. S	38.50	62	*eP*	P	09 00 10.7	+0.5
TOA1	Torodi Ar. Sit	39.13	128	*eP*	P	09 00 17.0	+1.4
TOA0	Torodi Ar. Sit	39.14	128	*eP*	P	09 00 17.4	+1.7
	8.8nm,1.2s						
TORD	Torodi Ar. Bea	39.14	128	P	P	09 00 17.0	+1.3
	3.9nm,1.0s,baz=335,slow=5.6,SNR=13						
ARCES	ARCESS Array B	39.43	27	LR	LR	09 13 18.0	
	comp=Z,145nm,21.0s,baz=262,slow=31						
MLR	Muntele Rosu	39.48	65	LR	LR	09 16 16.7	
	comp=Z,49nm,20.1s,baz=269,slow=36						
AKASG	Malin Array Be	40.49	57	P	P	09 00 25.1	-1.4
	0.2nm,0.3s,baz=278,slow=7.5,SNR=8.1						
AKASG				LR	LR	09 16 35.4	
	comp=Z,242nm,19.0s,baz=290,slow=35						
AKBB	Malin Array Si	40.49	57	*eP*	P	09 00 25.6	-0.9
	9.7nm,1.3s						
SPA0	Spitsbergen Ar	40.85	13	*eP*	P	09 00 30.2	+1.0
SPITS	Spitsbergen Ar	40.85	13	LR	LR	09 13 20.8	
	comp=Z,71nm,18.1s,baz=255,slow=30						
DBIC	Dimbokro	41.05	141	LR	LR	09 15 40.1	
	comp=Z,155nm,20.8s,baz=294,slow=33						
D41A	Chassel	41.86	298	*eP*	P	09 00 36.1	-1.8
	11nm,1.0s						
IDI	Anoyia	42.26	80	LR	LR	09 16 54.4	
	comp=Z,54nm,21.2s,baz=270,slow=34						
T49A	Edmonton	43.09	283	*eP*	P	09 00 48.0	-0.1
	4.1nm,0.8s						
JFWS	Jewell Farm	44.26	293	*eP*	P	09 00 57.5	+0.2
	9.1nm,1.4s						
656A	Willston	44.44	272	*eP*	P	09 00 59.0	+0.2
	61nm,1.3s						
I39A	Houston	44.81	295	*eP*	P	09 01 00.4	-1.3
	5.1nm,0.7s						
L40A	Anamosa	45.24	292	*eP*	P	09 01 05.6	+0.5
	19nm,1.3s						
SIUC	Southern Illin	45.51	286	*eP*	P	09 01 08.0	+0.6
	7.8nm,0.8s						
G35A	Watkins	46.34	297	*eP*	P	09 01 13.8	0.0
	13nm,1.2s						
N39A	Derby Farms, D	46.57	291	*eP*	P	09 01 15.6	-0.1
	9.5nm,1.3s						
BRTR	Keskin Array B	46.75	70	LR	LR	09 20 32.8	
	comp=Z,42nm,20.6s,baz=266,slow=36						
PBMO	Poplar Bluff	46.79	285	*eP*	P	09 01 17.6	+0.2
	9.2nm,1.3s						
T42A	Van Buren	47.16	286	*eP*	P	09 01 19.4	-0.9
	7.1nm,1.2s						
R40A	Maddies Statio	47.46	288	*eP*	P	09 01 22.4	-0.3
	8.5nm,1.2s						
ECSD	EROS Data Cent	48.30	296	*eP*	P	09 01 29.3	+0.2
	7.7nm,1.2s						
S39A	Bolivar	48.47	288	*eP*	P	09 01 30.2	-0.3
	8.9nm,1.1s						
V40A	Witts Springs	48.95	285	*eP*	P	09 01 34.5	+0.3
	14nm,1.1s						
MIAR	Mount Ida	50.08	284	*eP*	P	09 01 42.9	0.0
	12nm,1.3s						
KBZ	Khabaz	51.46	62	LR	LR	09 23 44.5	
	comp=Z,110nm,20.4s,baz=328,slow=36						
YKA	Yellowknife Ar	52.05	324	P	P	09 01 58.1	+0.9
	0.4nm,0.9s,baz=71,slow=7.1,SNR=2.9						
GNI	Garni	54.26	65	LR	LR	09 28 28.9	
	comp=Z,35nm,18.5s,baz=304,slow=40						
ROSC	El Rosal	54.38	240	LR	LR	09 23 16.1	
	comp=Z,67nm,21.0s,baz=68,slow=34						
K22A	Casper	55.33	299	*eP*	P	09 02 22.0	+0.2
	9.9nm,1.3s						
ARU	Arti	55.46	42	P	P	09 02 21.7	-0.6
	4.3nm,0.2s,baz=286,slow=6.1,SNR=5.8						
ARU	Arti	55.46	42	*eP*	P	09 02 21.6	-0.6
	16nm,1.3s						
N23A	Red Feather La	55.76	297	*eP*	P	09 02 25.2	+0.2
	19nm,1.4s						
BW06	Boulder Array	57.25	300	*eP*	P	09 02 34.5	-1.1
	6.6nm,1.4s						
PD31	Pinedale Array	57.25	300	*eP*	P	09 02 34.9	-0.7
PDAR	Pinedale Array	57.25	300	P	P	09 02 34.9	-0.7
	1.1nm,0.9s,baz=64,slow=7.1,SNR=6.2						
PDAR				LR	LR	09 26 28.7	
	comp=Z,112nm,18.0s,baz=98,slow=35						
PDAR	Pinedale Array	57.25	300	*eP*	P	09 02 34.5	-1.1
SNOW	Snow King Moun	57.69	302	*eP*	P	09 02 38.6	0.0
	9.3nm,1.3s						
JTS	JuntasAbangare	57.81	254	LR	LR	09 23 03.8	
	comp=Z,195nm,21.7s,baz=94,slow=31						
AKTO	Aktyubinsk	57.83	49	P	P	09 02 39.2	0.0
	2.0nm,0.7s,baz=192,slow=7.1,SNR=6.3						
AKTO				LR	LR	09 26 36.0	
	comp=Z,98nm,21.4s,baz=301,slow=35						
DLMT	Dillon	57.93	304	*eP*	P	09 02 40.0	-0.2
	7.1nm,1.4s						
ANMO	Albuquerque	59.08	291	LR	LR	09 27 54.1	
	comp=Z,68nm,18.1s,baz=58,slow=36						
PV09	Paradox Valley	59.08	296	*eP*	P	09 02 49.8	+1.3
HWUT	Hardware Ranch	59.12	300	*eP*	P	09 02 48.3	-0.3
	5.0nm,1.1s						
NRIK	Noril'sk	60.02	21	LR	LR	09 28 01.1	
	comp=Z,40nm,21.5s,baz=355,slow=35						
TMUT	Trail Mountain	60.06	298	*eP*	P	09 02 55.4	+0.1
	9.1nm,1.3s						
TX31	Lajitas Ar. Si	60.10	284	*eP*	P	09 02 55.4	-0.1
TXAR	Lajitas Array	60.10	284	P	P	09 02 56.1	+0.6
	0.9nm,1.0s,baz=65,slow=5.1,SNR=6.9						
TXAR				LR	LR	09 29 21.5	
	comp=Z,91nm,18.7s,baz=0.0,slow=36						
DUG	Dugway, Tooele	60.65	299	*eP*	P	09 02 59.6	+0.5
	10nm,1.4s						
DAWY	Dawson	61.21	332	*eP*	P	09 03 02.2	-0.2
	5.4nm,1.2s						
CCUT	Cedar City	62.42	297	*eP*	P	09 03 11.8	+0.6
	5.0nm,1.2s						
J08A	Circle Bar Ran	62.58	305	*eP*	P	09 03 12.1	+0.1
	10nm,1.1s						
BRVK	Borovoye	63.03	42	*eP*	P	09 03 14.8	+0.1
	11nm,1.3s						
BVAR	Borovoye Array	63.10	42	P	P	09 03 15.0	-0.1
	0.9nm,0.6s,baz=328,slow=5.3,SNR=8.4						
BVAR				LR	LR	09 29 54.2	
	comp=Z,110nm,21.1s,baz=304,slow=35						
IL1	Eielson Array	63.28	335	*eP*	P	09 03 15.4	-0.8
ILAR	Eielson Array	63.28	335	P	P	09 03 15.3	-0.9
	0.5nm,0.8s,baz=37,slow=6.5,SNR=6.8						
ILB	Eielson Array	63.28	335	*eP*	P	09 03 15.4	-0.8
WRH	Wood River Hil	63.86	335	*eP*	P	09 03 19.5	-0.5
	8.9nm,1.4s						
W13A	Hualapai Mount	64.12	295	*eP*	P	09 03 22.9	+0.4
	3.2nm,1.1s						
MLY	Manley	64.29	336	*eP*	P	09 03 22.9	-0.1
	5.2nm,1.3s						
KVN	Kaiserville	64.70	301	*eP*	P	09 03 26.6	+0.3
	7.7nm,1.2s						
NVAR	Mina Array Bea	65.19	300	LR	LR	09 32 00.3	
	comp=Z,184nm,18.7s,baz=264,slow=36						
TRF	Thorofare Moun	65.27	335	*eP*	P	09 03 29.1	-0.4
	5.2nm,1.1s						
TIXI	Tiksi	65.90	7	*eP*	P	09 03 33.8	+0.6
	12nm,1.4s						
GHO	Glory Hole Cre	66.01	333	*eP*	P	09 03 35.2	+1.1
	21nm,1.5s						
YBH	Yreka Blue Hor	66.08	305	LR	LR	09 31 25.2	
	comp=Z,85nm,18.3s,baz=60,slow=35						
ARVC	Arvin	67.43	297	*eP*	P	09 03 40.1	-3.4
LPIG	La Paz	67.96	283	LR	LR	09 32 50.1	
	comp=Z,144nm,20.4s,baz=45,slow=35						
LPAZ	La Paz	67.97	221	LR	LR	09 30 06.4	
	comp=Z,118nm,21.2s,baz=18,slow=33						
KURK	Kurchatov	68.56	41	*eP*	P	09 03 50.0	-0.3
	6.9nm,1.0s						
KURBB	Kurchatov Arra	68.58	41	P	P	09 03 50.1	-0.3
	1.7nm,0.9s,baz=312,slow=7.0,SNR=18						
GATR	Gnd/Air Tx Cnt	68.88	298	*eP*	P	09 03 55.1	+2.4
ATD	Arta Tunnel	69.06	93	LR	LR	09 35 17.8	
	comp=Z,98nm,18.2s,baz=330,slow=37						
ZAA1	Zalesovo Array	69.26	35	*eP*	P	09 03 55.0	+0.3
ZALV	Zalesovo Beam	69.27	35	P	P	09 03 55.0	+0.3
	1.0nm,0.3s,baz=295,slow=7.8,SNR=2.8						
ZALV				LR	LR	09 33 50.7	
	comp=Z,63nm,19.8s,baz=250,slow=36						
KDAK	Kodiak Island	70.19	332	LR	LR	09 33 40.9	
	comp=Z,76nm,18.7s,baz=109,slow=35						
CPUP	Villa Florida	72.51	206	LR	LR	09 32 16.6	
	comp=Z,53nm,21.1s,baz=40,slow=33						
MAKZ	Makanchi	72.81	42	*eP*	P	09 04 16.4	0.0
	4.0nm,1.1s						
MK31	Makanchi Array	72.98	42	*eP*	P	09 04 17.3	-0.2
MK32	Makanchi Array	72.98	42	*eP*	P	09 04 16.1	-1.3
MKAR	Makanchi Array	72.98	42	P	P	09 04 16.1	-1.3
	0.9nm,0.7s,baz=323,slow=5.7,SNR=10						
MKAR				LR	LR	09 37 39.4	
	comp=Z,92nm,18.3s,baz=234,slow=37						
MKAR	Makanchi Array	72.98	42	*eP*	P	09 04 17.3	-0.2
	15nm,0.9s						
MK01	Makanchi Array	73.00	42	*eP*	P	09 04 17.3	-0.2
NRN	Naryn	73.21	49	*eP*	P	09 04 19.7	+0.4
	11nm,1.3s						
SONA1	Songino Array	82.58	28	*eP*	P	09 05 11.1	0.0
SONA0	Songino Array	82.59	28	*eP*	P	09 05 11.4	+0.3
SONM	Songino Array	82.59	28	P	P	09 05 11.4	+0.3
	3.1nm,1.0s,baz=328,slow=5.3,SNR=6.0						
PETK	Petropavlovsk-	85.39	356	LR	LR	09 41 42.2	
	comp=Z,53nm,20.2s,baz=44,slow=34						
BOSA	Boshof	86.17	134	LR	LR	09 40 29.2	
	comp=Z,142nm,21.7s,baz=336,slow=33						
PLCA	Paso Flores	90.19	210	LR	LR	09 45 16.1	
	comp=Z,68nm,18.4s,baz=57,slow=35						
ASAJ	Asahikawa	94.26	6	LR	LR	09 47 41.1	
	comp=Z,66nm,19.3s,baz=132,slow=35						
WB2	Warramunga Arr	154.23	38	*e*PKPab	PKPab	09 12 59.7	-2.4
ASAR	Alice Springs	157.17	43	PKPab	PKPab	09 13 12.8	-1.9
	0.5nm,0.9s,baz=342,slow=5.4,SNR=3.6						
AS01	Alice Springs	157.19	43	*e*PKPdf	PKPdf	09 12 42.5	-1.5

*CSEM **18** 09:03:12.4, 38°.76N×39°.27E, h7km, ML2.5*
*DDA **18** 09:03:12.4, 38°.76N×39°.27E, h7km, Ml2.5*
ISC 18 09:03:12.7±1.1, 38°.73N±0°.03×39°.29E±0°.04, h6km±20km, n13, σ1°.10/21, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTK	Pertek	0.19	26	PG	Pg	09 03 16.1	-0.4
ELZG	Elazig	0.33	226	*i* P	Pg	09 03 18.4	-0.7
ELZG				*i* S	Sg	09 03 25.1	+1.6
ELZG	Elazig	0.33	226	P	Pg	09 03 18.4	-0.7
ELZG				S	Sg	09 03 25.1	+1.6
SVRC	Sivrice-ELAZID	0.35	177	PG	Pg	09 03 18.2	-1.3
SVRC				SG	Sg	09 03 24.3	+0.2
TNCL	Tunceli-Merkez	0.44	27	*i* P	Pg	09 03 20.0	-1.2
TNCL				*i* S	Sg	09 03 27.6	+0.6
TNCL	Tunceli-Merkez	0.44	27	P	Pg	09 03 20.0	-1.2
TNCL				S	Sg	09 03 27.6	+0.6
MALT	Malatya	0.79	239	*e*PG	Pg	09 03 26.2	-1.7
MALT				*e*SG	Sg	09 03 37.9	-0.2
KEMA	Kemaliye	0.82	312	*i* P	Pg	09 03 27.4	-1.1
KEMA				*i* S	Sg	09 03 40.0	+0.8
KEMA	Kemaliye	0.82	312	P	Pg	09 03 27.4	-1.1
KEMA				S	Sg	09 03 40.0	+0.8
DIYA	Diyarbakir	1.03	140	*i* P	Pb	09 03 33.7	+0.6
DIYA	Diyarbakir	1.03	140	P	Pb	09 03 33.7	+0.6
AKCD	Akcadag	1.15	249	*i* P	Pg	09 03 34.0	-0.8
AKCD	Akcadag	1.15	249	P	Pg	09 03 34.0	-0.8

IDC 18 09:23:02.9±1.5, 19°.22N×145°.15E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.4/68, mbtmp3.8/5, MS3.6/2, Ms1 3.6/2, ms1mx2.7/63, Error ellipse: s-maj=124.4km s-min=25.2km az=111.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	40.34	196	P	P	09 30 42.3	-0.1
	0.9nm,0.3s,baz=14,slow=8.2,SNR=22						
FITZ	Fitzroy Crossi	41.74	208	P	P	09 30 54.9	+0.9
	1.2nm,0.3s,baz=31,slow=11,SNR=24						
ASAR	Alice Springs	44.01	195	P	P	09 31 11.2	-1.2
	0.5nm,0.7s,baz=17,slow=6.3,SNR=8.4						
BRDH	Bariadhala	49.87	284	LR	LR	09 54 09.4	
	comp=Z,163nm,19.8s,baz=182,slow=37						
STKA	Stephens Creek	50.92	184	P	P	09 32 05.7	-0.3
	1.2nm,0.9s,baz=12,slow=14,SNR=2.9						
ILAR	Eielson Array	63.41	26	P	P	09 33 34.1	+0.1
	0.4nm,0.7s,baz=251,slow=5.9,SNR=4.9						
BRTR	Keskin Array B	93.38	314	LR	LR	10 21 22.0	
	comp=Z,9.7nm,18.2s,baz=92,slow=38						

IDC 18 09:23:23.7±1.4, 0°.46N×125°.60E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.5/62, mbtmp3.9/4, MS2.9/1, Ms1 2.9/1, ms1mx2.3/58, Error ellipse: s-maj=162.6km s-min=22.7km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	6.57	360	LR	LR	09 27 47.7	
	comp=Z,84nm,18.5s,baz=139,slow=40						
WRA	Warramunga Arr	22.01	158	P	P	09 28 19.4	-0.5
	4.9nm,0.6s,baz=336,slow=10,SNR=40						
ASAR	Alice Springs	25.30	162	P	P	09 28 52.5	+0.4
	3.3nm,0.9s,baz=339,slow=6.5,SNR=43						
ASAR				PcP	PcP	09 32 25.1	-0.5
	0.4nm,0.7s,baz=351,slow=2.5,SNR=4.9						
STKA	Stephens Creek	35.55	156	P	P	09 30 22.7	0.0
	1.9nm,0.9s,baz=331,slow=12,SNR=3.5						
KURBB	Kurchatov Arra	63.90	329	P	P	09 33 58.3	-0.1
	0.4nm,0.6s,baz=127,slow=6.9,SNR=4.3						

*IDC **18** 09:38:28.1±1.6, 37°.39N×144°.17E, h0km, mb3.2/2, mb1 3.5/3, mb1mx3.2/66, mbtmp3.2/3, ML3.4/1, Error ellipse: s-maj=45.8km s-min=28.7km az=142.0*
*ISCJB **18** 09:38:30.3±0.9, 37°.58N±0°.05×144°.06E±0°.06, h33km, mb3.4/2, Error ellipse: s-maj=7.7km s-min=7.1km az=138.4*
*JMA **18** 09:38:32.5±0.2, 37°.58N×143°.89E, h41km, M3.1*
ISC 18 09:38:32.0±1.2, 37°.58N±0°.06×144°.10E±0°.08, h35km, n14, σ1°.70/21, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	Ouri	2.34	293	S	Sn	09 39 34.2	-1.3
OFUJ	Ofunato	2.43	309	*e*S	Sn	09 39 36.5	-1.2
JMK	Ichinoseki	2.65	302	*e*S	Sn	09 39 42.2	-0.9
JOM	Ohasama	2.90	311	S	Sn	09 39 48.6	-0.8
JFT	Otama	3.00	270	S	Sn	09 39 51.0	-0.6
JYK	Kaneyama	3.24	296	P	Pn	09 39 21.2	+0.9
JYK				*e*S	Sn	09 39 57.6	0.0
JANG	Nango	3.44	325	P	Pn	09 39 24.4	+1.3
JANG				*e*S	Sn	09 40 01.7	-0.9
JAG	Ashikaga	3.90	254	P	Pn	09 39 29.1	-0.2
JAG				*e*S	Sn	09 40 11.1	-2.8
JRY	Ryogami san	4.46	251	P	Pn	09 39 36.5	-0.6
JRY				S	Sn	09 40 24.1	-3.6
MJAR	Matsushiro Arr	4.83	259	Pn	Pn	09 39 43.0	+0.8
	1.6nm,0.3s,baz=92,slow=14,SNR=15						
MJAR				Sn	Sn	09 40 37.1	+0.3
	0.3nm,0.3s,baz=122,slow=35,SNR=2.8						
JCH	Churui	5.06	354	P	Pn	09 39 45.1	-0.2
JCH				*e*S	Sn	09 40 39.6	-2.9
JTKR	Abashiri--Toko	6.39	359	P	Pn	09 40 03.1	-0.4
JTKR				*e*S	Sn	09 41 12.1	-3.0
ILAR	Eielson Array	47.88	33	P	P	09 47 08.2	+2.1
	0.3nm,0.8s,baz=256,slow=7.3,SNR=4.1						
WRA	Warramunga Arr	57.95	191	P	P	09 48 20.9	+0.1
	0.4nm,0.9s,baz=13,slow=7.7,SNR=3.1						

*CSEM **18** 09:58:08.3, 51°.00N×1°.68E, h5km, ML3.1*
STR 18 09:58:08.3±0.5, 51°.N±9°.×±°, h5km, M3.6/6, mb4.8/1, MLv3.1/6, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELSH	Elham, Standar	0.38	294	Pg	Pg	09 58 15.5	0.0
ELSH	Elham, Standar	0.38	294	Pg	Pg	09 58 15.5	-0.1
ELSH				Sg	Sg	09 58 20.4	-0.1
MENF	Mencas	0.53	145	Pg	Pg	09 58 17.8	-0.7
MENF	Mencas	0.53	145	Pg	Pg	09 58 17.8	-0.7
DOU	Dourbes	2.07	115	Pn	Pn	09 58 42.0	-1.6
DOU				Pg	Pb	09 58 46.1	-0.1
DOU	Dourbes	2.07	115	Pn	Pn	09 58 42.0	-1.6
DOU	Dourbes	2.07	115	Pg	Pb	09 58 46.1	-0.1
LOR	Lormes	4.00	158	Pn	Pn	09 59 08.8	-1.4
CCA1	Carnmenellis	4.47	262	Pn	Pn	09 59 15.2	-1.5
CCA1	Carnmenellis	4.47	262	Pn	Pn	09 59 15.2	-1.5
KIZ	Kirchzarten	5.08	124	Pn	Pn	09 59 22.9	-2.1
KIZ	Kirchzarten	5.08	124	Pn	Pn	09 59 22.9	-2.1

*IDC **18** 10:19:30.5±1.0, 18°.56S×177°.25W, h0km, mb4.0/10, mb1 4.3/10, mb1mx4.0/47, mbtmp4.0/10, MS3.9/1, Ms1 3.9/1, ms1mx2.7/49, Error ellipse: s-maj=40.8km s-min=18.8km az=143.0*
*ISCJB **18** 10:19:33.8±0.8, 18°.7S±0°.2×177°.3W±0°.2, h33km, mb3.9/9, MS4.0/1, Error ellipse: s-maj=28.5km s-min=16.0km az=135.4*
ISC 18 10:19:35.7±0.9, 18°.6S±0°.2×177°.3W±0°.2, h35km, n11, σ0°.93/10, mb3.9/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	20.20	193	P	P	10 24 07.7	+0.3
	6.7nm,0.4s,baz=266,slow=3.8,SNR=5.6						
STKA	Stephens Creek	39.27	242	P	P	10 27 01.1	-0.2
	2.9nm,0.5s,baz=87,slow=11,SNR=24						
WRA	Warramunga Arr	45.59	260	P	P	10 27 52.6	-0.2
	0.6nm,0.3s,baz=96,slow=7.7,SNR=76						
ASAR	Alice Springs	45.67	255	P	P	10 27 52.8	-0.7
	5.0nm,0.7s,baz=88,slow=8.1,SNR=48						
FITZ	Fitzroy Crossi	54.00	261	P	P	10 28 57.2	+0.4
	2.5nm,0.9s,baz=82,slow=14,SNR=4.3						
NWAO	Narrogin (SRO)	59.86	242	LR	LR	10 54 46.2	
	comp=Z,93nm,18.0s,baz=313,slow=35						
MJAR	Matsushiro Arr	69.11	323	P	P	10 30 39.6	+1.2
	0.5nm,0.5s,baz=173,slow=6.0,SNR=4.1						
NVAR	Mina Array Bea	79.16	43	P	P	10 31 38.5	+1.1
	0.5nm,0.7s,baz=226,slow=9.4,SNR=5.6						
TXAR	Lajitas Array	85.44	57	P	P	10 32 10.4	+0.2
	0.1nm,0.3s,baz=243,slow=5.5,SNR=3.9						
ILAR	Eielson Array	86.31	13	P	P	10 32 12.2	-1.3
	0.2nm,0.4s,baz=220,slow=5.1,SNR=6.2						
YKA	Yellowknife Ar	94.50	24	P	P	10 32 51.0	-1.0
	0.2nm,0.6s,baz=238,slow=4.5,SNR=4.0						

*ISCJB **18** 10:36:39.0±0.5, 40°.11N±0°.03×27°.13E±0°.04, h2km±7km, Error ellipse: s-maj=5.0km s-min=4.5km az=7.2*
*CSEM **18** 10:36:39.2±0.1, 40°.08N×27°.14E, h5km, ML2.7, Error ellipse: s-maj=3.5km s-min=3.1km az=41.0*
*ISK **18** 10:36:39.1, 40°.12N×27°.14E, h6km, ML2.7/3*
*DDA **18** 10:36:41.0, 39°.92N×27°.14E, h7km, Ml2.4*
ISC 18 10:36:39.4±1.1, 40°.08N±0°.02×27°.14E±0°.02, h8km±10km, n33, σ0°.58/43, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRBG	Karabiga-Canak	0.33	21	PG	Pg	10 36 45.6	-0.4
KRBG				SG	Sg	10 36 50.5	+0.1
KRBG	Karabiga-Canak	0.33	21	*e*Pg	Pg	10 36 45.6	-0.4
KRBG				*e*Sg	Sg	10 36 50.5	+0.1
GONE	Gonen-Balikesi	0.42	95	PG	Pg	10 36 47.9	+0.3
GONE	Gonen-Balikesi	0.42	95	*e*Pg	Pg	10 36 47.9	+0.3
BALY	Balya	0.50	133	*i* P	Pg	10 36 48.4	-0.8
BALY	Balya	0.50	133	P	Pg	10 36 48.4	-0.8
BAYC	CANAKKALE_Bayr	0.57	234	*i* P	Pg	10 36 50.5	0.0
BAYC				*i* S	Sg	10 36 58.6	+0.6
BAYC	CANAKKALE_Bayr	0.57	234	P	Pg	10 36 50.5	0.0
BAYC				S	Sg	10 36 58.6	+0.6
RKY	Sarkoy-Tekirda	0.60	2	PG	Pg	10 36 50.5	-0.6
RKY	Sarkoy-Tekirda	0.60	2	*e*Pg	Pg	10 36 50.5	-0.6
SART	Tekirdag	0.61	3	*i* P	Pn	10 36 59.5	+5.0
ERIK	Erikli-Kesan	0.76	321	PG	Pg	10 36 53.6	-0.5
ERIK	Erikli-Kesan	0.76	321	*e*Pg	Pg	10 36 53.6	-0.5
STEP	BALIKESIR_Sava	0.83	148	*i* P	Pg	10 36 55.3	-0.2
STEP				*i* S	Sn	10 37 10.3	+0.3
STEP	BALIKESIR_Sava	0.83	148	P	Pg	10 36 55.3	-0.2
STEP				S	Sn	10 37 10.3	+0.3
AYVA	Ayvalik	0.85	205	*i* P	Pg	10 36 54.1	-1.6
AYVA				*i* S	Sn	10 37 09.5	-0.8
AYVA	Ayvalik	0.85	205	P	Pg	10 36 54.1	-1.6
AYVA				S	Sn	10 37 09.5	-0.8
GADA	Gvkgeada	0.96	277	PG	Pg	10 36 57.7	-0.2
GADA	Gvkgeada	0.96	277	*e*Pg	Pg	10 36 57.7	-0.2
ENEZ	Enez	1.00	311	PG	Pg	10 36 58.2	-0

ISC 18 10:39:58.5±0.8, 0°.4S±0°.1×125°.3E±0°.3, h57km, n14, σ0$87/13, mb4.2/12, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossing**	**17.57**	**179**	P	**P**	**10 43 59.9**	**0.0**
	0.2nm,0.3s,baz=65,slow=13,SNR=3.7						
LEM	**Lembang**	**18.79**	**250**	LR	LR	10 52 44.2	
	comp=Z,210nm,18.3s,baz=60,slow=41						
WRA	**Warramunga Arr**	**21.31**	**156**	P	**P**	**10 44 39.3**	**-1.5**
	2.9nm,0.5s,baz=336,slow=11,SNR=15						
ASAR	**Alice Springs**	**24.56**	**161**	P	**P**	**10 45 13.5**	**+0.3**
	9.5nm,1.1s,baz=340,slow=9.6,SNR=9.5						
STKA	**Stephens Creek**	**34.86**	**155**	P	**P**	**10 46 44.8**	**+0.4**
	1.3nm,0.4s,baz=339,slow=8.1,SNR=6.9						
MJAR	**Matsushiro Arr**	**38.67**	**17**	P	**P**	**10 47 16.0**	**-0.7**
	0.7nm,0.6s,baz=200,slow=9.2,SNR=2.8						
KLR	**Kul'dur**	**49.76**	**6**	P	**P**	**10 48 46.6**	**+1.4**
	0.1nm,0.5s,baz=252,slow=7.3,SNR=3.3						
SONM	**Songino Array**	**50.81**	**344**	P	**P**	**10 48 53.2**	**-0.1**
	0.7nm,0.5s,baz=151,slow=7.8,SNR=3.2						
PETK	**Petropavlovsk-**	**59.77**	**22**	P	**P**	**10 49 57.4**	**-0.1**
	2.8nm,0.9s,baz=161,slow=9.2,SNR=2.6						
MKAR	**Makanchi Array**	**60.21**	**327**	P	**P**	**10 49 59.9**	**-0.8**
	0.9nm,0.5s,baz=124,slow=8.0,SNR=6.9						
ZALV	**Zalesovo Beam**	**63.67**	**335**	P	**P**	**10 50 24.5**	**+0.8**
	1.2nm,0.3s,baz=126,slow=7.3,SNR=2.4						
KURBB	**Kurchatov Arra**	**64.51**	**329**	P	**P**	**10 50 28.7**	**-0.6**
	0.8nm,0.3s,baz=130,slow=6.3,SNR=4.5						
BVAR	**Borovoye Array**	**70.05**	**328**	P	**P**	**10 51 05.2**	**+0.8**
	0.7nm,0.7s,baz=134,slow=8.2,SNR=3.2						
AKTO	**Aktyubinsk**	**76.05**	**323**	P	**P**	**10 51 39.3**	**-0.6**
	1.2nm,0.3s,baz=85,slow=8.9,SNR=3.7						

*ISCJB **18** 10:49:00.7±1.4, 36°.86N±0°.05×141°.50E±0°.07, h8km±8km, mb3.5/3, Error ellipse: s-maj=10.3km s-min=7.2km az=155.6*

*NIED **18** 10:49:00, 36°.90N×141°.30E, h5km, Mw3.3 Best double couple: M0 9.68000×10^13 NP1:φ=1.00000°, δ63.00000°, λ-157.00000°. NP2:φ=260.00000°, δ70.00000°, λ-29.00000°.*

*IDC **18** 10:49:00.6±2.3, 36°.97N×141°.51E, h0km, mb3.5/3, mb1 3.6/5, mb1mx3.3/69, mbtmp3.5/5, ML3.0/2, MS2.5/1, Ms1 2.5/1, ms1mx2.0/53, Error ellipse: s-maj=45.4km s-min=28.1km az=45.0*

*JMA **18** 10:49:04.0±0.1, 36°.87N×141°.31E, h34km±1km, M3.5*

ISC 18 10:49:03.0±3.1, 36°.87N±0°.05×141°.32E±0°.09, h10km±19km, n13, σ0$64/19, mb3.7/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.48**	**299**	P	**Pb**	**10 49 13.7**	**+0.1**
ONAJ				S	**Sb**	**10 49 20.5**	**-0.3**
JFK	**Kawauchi**	**0.61**	**324**	P	**Pb**	**10 49 15.8**	**0.0**
JFK				S	**Sb**	**10 49 24.1**	**-0.5**
JHO	**Hitachi**	**0.66**	**247**	P	**Pb**	**10 49 16.4**	**-0.2**
JHO				S	**Sb**	**10 49 25.7**	**-0.1**
JFT	**Otama**	**1.02**	**310**	P	**Pb**	**10 49 22.9**	**+0.1**
JFT				S	**Sg**	**10 49 36.0**	**+0.1**
JMM	**Marumori**	**1.08**	**337**	P	**Pb**	**10 49 22.9**	**-0.9**
JYT	**Yasato**	**1.11**	**235**	P	**Pb**	**10 49 23.1**	**-1.2**
MJAR	**Matsushiro Arr**	**2.52**	**264**	Pn	**Pn**	**10 49 44.7**	**+0.6**
	2.2nm,0.3s,baz=91,slow=14,SNR=22						
MJAR				Sn	**Sb**	**10 50 18.8**	**-0.7**
	4.4nm,0.3s,baz=81,slow=11,SNR=6.0						
MAT	**Matsushiro**	**2.52**	**264**	P	**Pn**	**10 49 45.1**	**+1.0**
MAT				S	**Sb**	**10 50 19.4**	**-0.2**
JHJ	**Hachijo jima 2**	**3.95**	**199**	Pn	**Pn**	**10 50 04.8**	**+1.1**
	3.4nm,0.3s,baz=54,slow=16,SNR=3.7						
JHJ				Sn	**Sn**	**10 50 50.1**	**+0.1**
	5.7nm,0.3s,baz=45,slow=20,SNR=2.6						
KSRS	**Korea Array**	**10.71**	**277**	LR	LR	10 55 00.9	
	comp=Z,24nm,18.7s,baz=280,slow=33						
MKAR	**Makanchi Array**	**44.15**	**302**	P	**P**	**10 57 11.3**	**-0.4**
	0.3nm,0.5s,baz=71,slow=7.4,SNR=4.2						
WRA	**Warramunga Arr**	**56.89**	**188**	P	**P**	**10 58 47.8**	**-0.4**
	0.6nm,0.8s,baz=5.9,slow=7.4,SNR=9.0						
ASAR	**Alice Springs**	**60.61**	**188**	P	**P**	**10 59 14.3**	**+0.3**
	0.5nm,0.8s,baz=9.7,slow=7.1,SNR=4.8						

NNC 18 11:01:38.9±2.6, 38°.22N×71°.96E, h0km, mb3.8, mpv3.3, 3C-2D, Error ellipse: s-maj=20.8km s-min=15.8km az=176.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**2.15**	**33**	⇑P	Pn	11 02 16.1	-0.2
	15nm,0.3s						
SFK				⇓S	Sb	11 02 45.4	-0.9
	26nm,0.2s						
MNAS	**Manas**	**4.28**	**5**	⇓P	Pn	11 02 45.5	0.0
	2.3nm,0.5s						
MNAS				⇑S	Sn	11 03 37.0	+0.8
	12nm,0.6s						
KK31	**Karatay Array**	**5.00**	**348**	P	Pn	11 02 56.2	+1.0
	1.3nm,0.3s,baz=158,slow=11,SNR=9.3						
KK31				⇑S	Sn	11 03 54.8	+1.1
	2.0nm,0.3s,baz=325,slow=26,SNR=13						

IDC 18 11:04:50.1±1.6, 0°.12N×126°.29E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/55, mbtmp3.6/4, MS3.3/1, Ms1 3.3/1, ms1mx2.4/49, Error ellipse: s-maj=169.6km s-min=22.2km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**14.87**	**339**	LR	LR	11 14 57.7	
	comp=Z,125nm,19.5s,baz=264,slow=41						
WRA	**Warramunga Arr**	**21.44**	**159**	P	P	11 09 39.4	-0.7
	1.0nm,0.6s,baz=337,slow=11,SNR=12						
ASAR	**Alice Springs**	**24.77**	**163**	P	P	11 10 14.4	+0.6
	0.6nm,0.8s,baz=345,slow=12,SNR=5.2						
MKAR	**Makanchi Array**	**60.28**	**327**	P	P	11 15 00.7	+0.2
	0.6nm,0.6s,baz=122,slow=8.7,SNR=5.9						
KURBB	**Kurchatov Arra**	**64.55**	**329**	P	P	11 15 28.7	-0.2
	0.5nm,0.2s,baz=123,slow=6.8,SNR=2.2						

SJA 18 11:13:19.4±0.5, 31°.69S×69°.64W, h3km±2km, ML2.7, MW3.5, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLS	**Leoncito**	**0.31**	**110**	*i* P	Pg	11 13 24.9	-0.6
RTLS				IAML		11 13 33.3	
	comp=Z,996nm,0.1s						
RTLS				*i* S	Sb	11 13 33.4	0.0
AUSP	**Uspallata**	**0.57**	**158**	*i* P	Pg	11 13 28.9	-1.5
RTCV	**Cerro Valdivia**	**0.95**	**101**	*i* P	Pg	11 13 35.1	-2.6
RTCV				*i* S	Sn	11 13 54.6	+0.8
RTLL	**Cerro Villicun**	**1.06**	**70**	*i* P	Pg	11 13 38.8	-0.9
AMOG	**MOGNA**	**1.23**	**53**	*i* P	Pg	11 13 40.2	-2.9
ARCO	**CERRO ARCO**	**1.29**	**153**	*i* P	Pg	11 13 39.7	-4.6
ARCO				*i* S	Sn	11 14 04.8	+2.4
ARCO				IAML		11 14 12.7	
	comp=Z,143nm,0.3s						
AAGR	**Agrelo**	**1.55**	**154**	*i* P	Pn	11 13 47.4	-0.6

IDC 18 11:16:56.2±3.8, 17°.69S×174°.89W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.5/52, mbtmp3.9/3, Error ellipse: s-maj=171.7km s-min=79.9km az=156.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.68**	**242**	P	P	11 24 46.6	-0.2
	0.7nm,0.5s,baz=79,slow=10,SNR=4.8						
WRA	**Warramunga Arr**	**47.97**	**259**	P	P	11 25 37.2	+0.1
	0.6nm,0.4s,baz=95,slow=8.1,SNR=29						
WRA				PcP	PcP	11 27 05.6	0.0
	0.2nm,0.5s,baz=92,slow=3.5,SNR=3.2						
ASAR	**Alice Springs**	**48.08**	**254**	P	P	11 25 37.8	-0.2
	1.2nm,0.5s,baz=85,slow=8.0,SNR=43						
ASAR				PcP	PcP	11 27 05.3	-0.6
	0.5nm,0.8s,baz=105,slow=3.7,SNR=4.5						

IDC 18 11:25:51.6±4.2, 3°.01S×153°.95E, h0km, mb3.3/2, mb1 3.5/2, mb1mx3.2/49, mbtmp3.3/2, Error ellipse: s-maj=175.7km s-min=55.4km az=117.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.49**	**227**	P	P	11 31 22.2	+0.4
	0.3nm,0.3s,baz=52,slow=9.5,SNR=12						
ASAR	**Alice Springs**	**28.25**	**222**	P	P	11 31 46.1	-0.6
	0.1nm,0.4s,baz=49,slow=8.4,SNR=4.1						
TORD	**Torodi Ar. Bea**	**150.78**	**292**	PKPbc	PKPbc	11 45 46.9	-0.3
	0.1nm,0.3s,baz=98,slow=2.5,SNR=3.1						

IDC 18 11:30:41.7±3.2, 30°.01S×177°.25W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.6/42, mbtmp3.8/3, Error ellipse: s-maj=60.2km s-min=34.0km az=92.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.95**	**322**	Pn	Pn	11 31 02.4	0.0
	213nm,0.3s,baz=128,slow=17,SNR=13						
RAO				Sn	Sg	11 31 11.4	-1.0
	413nm,0.3s,baz=105,slow=20,SNR=14						
STKA	**Stephens Creek**	**35.20**	**256**	P	P	11 37 37.9	+0.2
	0.8nm,0.5s,baz=119,slow=10,SNR=5.0						
ASAR	**Alice Springs**	**43.78**	**266**	P	P	11 38 49.3	-0.1
	0.5nm,0.5s,baz=102,slow=7.7,SNR=17						
WRA	**Warramunga Arr**	**44.73**	**271**	P	P	11 38 56.7	-0.4
	0.9nm,0.3s,baz=110,slow=8.1,SNR=20						
FINES	**FINESS Array B**	**145.00**	**341**	PKPbc	PKPbc	11 50 19.0	-0.5
	2.9nm,1.0s,baz=69,slow=4.8,SNR=4.2						

MAN 18 11:33:30.9, 12°.02N×124°.19E, h87km, mb4.2, ML3.0, MS2.6, 1C, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.67**	**43**	*e*P	Pn	11 33 48.2	+1.3
CNP				*e*S	Sn	11 34 01.9	+3.1
BESP	**Borongan**	**1.29**	**109**	*e*P	Pn	11 33 54.2	+0.3
BESP				*e*S	Sn	11 34 12.8	+1.5
RCP	**Roxas**	**1.49**	**252**	*e*P	Pn	11 33 57.3	+0.9
RCP				*e*S	Sn	11 34 16.6	+0.9
GUIM	**Jordan**	**2.09**	**229**	*e*P	Pn	11 34 08.6	+4.3
GUIM				*e*S	Sn	11 34 30.1	+0.4

GCMT 18 11:43:28.0±0.4, 16°.33S×177°.67E, h14km±2km, MW4.8/70, Moment Tensor Solution. s13,c15; s70,c90; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=0.22±.09; Mθθ=0.24±.09; Mφφ0.46±.08; Mrθ-0.08±.16; Mφφ1.56±.07; Mφr-0.25±.17; **Best double couple:** M0 1.61800×10^16 **NP1:**φ=174.00000°, δ88.00000°, λ172.00000°. **NP2:**φ=264.00000°, δ82.00000°, λ2.00000°. **Principal axes:** T 1.7430, Plg7.0000°, Azm128.0000°; N -0.2490, Plg82.0000°, Azm339.0000°; P -1.4940, Plg4.0000°, Azm219.0000°; **nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.04**	**240**	*e*LR	LR	11 48 42.4	
	709nm,27.1s						
PPT2	**Papeete2**	**31.33**	**97**	*e*LQ	LQ	11 56 34.7	
	643nm,28.2s						
PPT2				*e*LR	LR	11 57 57.2	
	395nm,30.8s						
TBI	**Tubuai**	**31.64**	**108**	*e*LQ	LQ	11 56 48.0	
	412nm,26.5s						
TBI				*e*LR	LR	11 58 11.0	
	494nm,31.2s						
TAOE	**Nuku Hiva Isla**	**41.77**	**85**	*e*LQ	LQ	12 00 39.8	
	287nm,30.5s						
TAOE				*e*LR	LR	12 02 40.0	
	136nm,26.5s						
RKT	**Rikitea**	**44.93**	**106**	*e*LR	LR	12 04 14.9	
	322nm,32.0s						

*CSEM **18** 11:51:10.9±0.7, 34°.56N×32°.97E, h10km, ML2.9 Error ellipse: s-maj=12.8km s-min=6.8km az=167.0*

*NIC **18** 11:51:12.1±0.3, 34°.62N×32°.96E, h10km, ML2.9*

*DDA **18** 11:51:21.2, 35°.34N×32°.90E, h9km, Ml2.4*

ISC 18 11:51:06.0±3.4, 34°.4N±0°.1×33°.07E±0°.08, h4km±14km, n16, σ0$56/26, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SZAC	**Souni**	**0.40**	**337**	P	**Pb**	**11 51 15.9**	**+0.3**
	baz=153						
SZAC				S	**Sg**	**11 51 18.4**	**-0.5**
SZAC	**Souni**	**0.40**	**337**	P	**Pb**	**11 51 15.9**	**+0.3**
SZAC				S	**Sg**	**11 51 18.4**	**-0.5**
CSS	**Mathiatis**	**0.61**	**20**	P	**Pn**	**11 51 21.2**	**-0.3**
	baz=222						
CSS				S	**Sb**	**11 51 28.4**	**+0.2**
CSS	**Mathiatis**	**0.61**	**20**	P	**Pn**	**11 51 21.2**	**-0.3**
CSS				S	**Sb**	**11 51 28.4**	**+0.2**
LEF	**Lefka**	**0.74**	**348**	P	**Pg**	**11 51 20.7**	**+0.4**
LEF				S	**Sg**	**11 51 30.0**	**+0.1**
PPCY	**Paphos**	**0.78**	**310**	P	**Pn**	**11 51 23.5**	**-0.2**
	baz=116						
PPCY	**Paphos**	**0.78**	**310**	P	**Pn**	**11 51 23.5**	**-0.2**
ALFC	**Alefka**	**0.86**	**333**	P	**Pb**	**11 51 23.4**	**-0.1**
	baz=150						
ALFC				S	**Sg**	**11 51 33.4**	**-0.2**
ALFC	**Alefka**	**0.86**	**333**	P	**Pb**	**11 51 23.4**	**-0.1**
ALFC				S	**Sg**	**11 51 33.4**	**-0.2**
AKMC	**Akamas**	**0.88**	**316**	P	**Pn**	**11 51 24.9**	**-0.3**
	baz=127						
AKMC	**Akamas**	**0.88**	**316**	P	**Pn**	**11 51 24.9**	**-0.3**
GULN	**MERSIN_Gulnar**	**1.83**	**12**	*i* P	**Pb**	**11 51 40.3**	**+0.3**
GULN				*i* S	**Sn**	**11 52 02.2**	**+0.3**
GULN	**MERSIN_Gulnar**	**1.83**	**12**	P	**Pb**	**11 51 40.3**	**+0.3**
GULN				S	**Sn**	**11 52 02.2**	**+0.3**
GAZI	**Gazipasa**	**1.94**	**342**	*i* P	**Pn**	**11 51 40.7**	**+0.9**
GAZI	**Gazipasa**	**1.94**	**342**	P	**Pn**	**11 51 40.7**	**+0.9**
KERG	**Konya-Eregli**	**3.14**	**16**	*i* P	**Pb**	**11 52 02.0**	**-0.4**
KERG				*i* S	**Sb**	**11 52 39.2**	**-1.9**

*ISCJB **18** 12:14:13.8±0.5, 33°.32N±0°.02×35°.40E±0°.04, h4km±5km, Error ellipse: s-maj=6.6km s-min=2.9km az=28.9*

*GII **18** 12:14:13.9±0.0, 33°.22N×35°.42E, h1km, MD1.8/3*

*CSEM **18** 12:14:14.8, 33°.31N×35°.43E, h0km, ML2.8*

*GRAL **18** 12:14:14.8±0.2, 33°.31N×35°.43E, h0km±7km, MD2.8*

ISC 18 12:14:13.7±0.9, 33°.35N±0°.03×35°.44E±0°.04, h14km±8km, n23, σ0$56/40, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSDI	**Kefar Szold**	**0.24**	**130**	Pg	**Pg**	**12 14 19.0**	**+0.1**
KSDI				Sg	**Sg**	**12 14 23.6**	**+1.1**
SHBL	**Chebaa**	**0.25**	**90**	*e*P	**Pb**	**12 14 19.6**	**-0.5**
SHBL				*e*S	**Sg**	**12 14 23.2**	**+0.1**
SHBL	**Chebaa**	**0.25**	**90**	*e*P	**Pb**	**12 14 19.6**	**-0.5**
SHBL				*e*S	**Sg**	**12 14 23.2**	**+0.1**
QRWL	**Qaraoun**	**0.28**	**45**	*e*P	**Pb**	**12 14 20.5**	**-0.1**
QRWL				*e*S	**Sb**	**12 14 24.8**	**-0.5**
QRWL	**Qaraoun**	**0.28**	**45**	*e*P	**Pb**	**12 14 20.5**	**-0.1**
QRWL				*e*S	**Sb**	**12 14 24.8**	**-0.5**
MMA0B	**Mount Meron ar**	**0.33**	**185**	Pg	**Pg**	**12 14 20.0**	**-0.6**
MMA0B				Sg	**Sg**	**12 14 25.0**	**-0.3**
HNTI	**Hanita**	**0.34**	**220**	Pg	**Pg**	**12 14 20.2**	**-0.6**
HNTI				Sg	**Sg**	**12 14 25.5**	**-0.1**
RCY	**Rachaya**	**0.36**	**66**	*e*P	**Pb**	**12 14 21.8**	**-0.2**
RCY				*e*S	**Sb**	**12 14 27.0**	**-0.6**
DQRL	**Deir Qamar**	**0.37**	**17**	*e*P	**Pb**	**12 14 22.2**	**0.0**
DQRL				*e*S	**Sb**	**12 14 27.7**	**-0.2**
DQRL	**Deir Qamar**	**0.37**	**17**	*e*P	**Pb**	**12 14 22.2**	**0.0**
DQRL				*e*S	**Sb**	**12 14 27.7**	**-0.2**
KSHT	**Keshet**	**0.48**	**139**	Pg	**Pb**	**12 14 24.0**	**+0.1**
BHL	**Bhannes**	**0.58**	**18**	*e*P	**Pb**	**12 14 26.0**	**+0.2**
BHL	**Bhannes**	**0.58**	**18**	*e*P	**Pb**	**12 14 26.0**	**+0.2**
BLGI	**Bet Lehem HaGe**	**0.65**	**199**	Pg	**Pg**	**12 14 26.0**	**-0.4**
BLGI				Sg	**Sg**	**12 14 34.8**	**-0.1**
OFRI	**'Ofer**	**0.82**	**208**	Pg	**Pg**	**12 14 29.0**	**-0.6**
OFRI				Sg	**Sg**	**12 14 40.9**	**+0.5**
MMLI	**Mount Malkishu**	**0.91**	**181**	Pg	**Pg**	**12 14 30.4**	**-0.9**
MMLI				Sg	**Sg**	**12 14 42.5**	**-0.7**
HWQ	**Hawqa**	**1.02**	**24**	*e*P	**Pn**	**12 14 33.9**	**+0.2**
HWQ	**Hawqa**	**1.02**	**24**	*e*P	**Pn**	**12 14 33.9**	**+0.2**
HMDT	**Nahal Hemdat**	**1.09**	**176**	Pg	**Pb**	**12 14 33.7**	**-0.7**
HMDT				Sg	**Sb**	**12 14 48.3**	**-0.2**
SLTI	**Sal'it**	**1.15**	**197**	Pg	**Pb**	**12 14 35.0**	**-0.4**
SLTI				Sg	**Sb**	**12 14 50.3**	**+0.1**
DSI	**Dead Sea**	**1.77**	**182**	Pn	**Pn**	**12 14 44.9**	**+1.0**
DSI				Sn	**Sb**	**12 15 08.3**	**+0.3**
YTIR	**Yattir**	**2.00**	**188**	Pn	**Pn**	**12 14 48.8**	**+1.7**
MZDA	**Masada**	**2.03**	**182**	Pn	**Pn**	**12 14 48.3**	**+0.9**
MZDA				Sn	**Sb**	**12 15 15.3**	**-0.2**

*IDC **18** 12:16:59.9±1.3, 3°.39S×128°.70E, h0km, mb3.7/3, mb1 3.9/5, mb1mx3.5/61, mbtmp3.7/5, ML3.5/2, Error ellipse: s-maj=43.2km s-min=24.1km az=74.0*

*ISCJB **18** 12:17:02.3±0.6, 3°.35S±0°.05×129°.03E±0°.03, h18km±5km, mb3.6/2, Error ellipse: s-maj=8.5km s-min=5.2km az=2.2*

*DJA **18** 12:17:02.4±0.3, 3°S±2°×12°9E±°, h10km, M4.0/10, mB5.0/1, mb4.5/3, MLv3.8/10, Mw(mB)4.4/1*

ISC 18 12:17:02.7±1.0, 3°.34S±0°.06×129°.01E±0°.04, h13km±6km, n13, σ1$33/21, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.08**	**267**	P	**Pg**	**12 17 05.4**	**-0.1**
MSAI				S	**Sg**	**12 17 07.7**	**+0.2**
AAI	**Ambon**	**0.89**	**247**	P	**Pb**	**12 17 20.2**	**+0.2**
AAI				S	**Sb**	**12 17 31.6**	**-0.2**
BNDI	**Bandanaira**	**1.47**	**143**	P	**Pn**	**12 17 28.8**	**-0.2**
LBMI	**Labuha**	**3.08**	**331**	P	**Pn**	**12 17 51.0**	**-0.2**
LBMI				S	**Sn**	**12 18 28.1**	**+0.1**
FAKI	**Fak Fak**	**3.26**	**83**	P	**Pn**	**12 17 54.8**	**+1.2**
FAKI				S	**Sn**	**12 18 31.7**	**-0.6**
SANI	**Sanana**	**3.28**	**293**	P	**Pn**	**12 17 53.5**	**-0.4**
SANI				S	**Sn**	**12 18 33.0**	**+0.1**
SIJI	**Sorong**	**3.33**	**43**	Pn	**Pn**	**12 17 54.7**	**+0.1**
	8.5nm,0.3s,baz=67,slow=21,SNR=30						
SIJI				Sn	**Sn**	**12 18 34.5**	**+0.3**
	4.4nm,0.3s,baz=63,slow=20,SNR=8.6						
RKPI	**Ransiki, Papua**	**5.47**	**71**	P	**Pn**	**12 18 25.8**	**+1.7**
RKPI				S	**Sn**	**12 19 28.0**	**+1.0**
APSI	**Ampana**	**7.74**	**288**	P	**Pn**	**12 18 57.1**	**+1.8**
APSI				S	**Sn**	**12 20 26.1**	**+3.1**
WRA	**Warramunga Arr**	**17.30**	**163**	P	**Pn**	**12 21 03.6**	**-0.6**
	0.1nm,0.3s,baz=336,slow=13,SNR=15						
ASAR	**Alice Springs**	**20.75**	**167**	P	**P**	**12 21 42.9**	**-0.6**
	3.7nm,0.5s,baz=350,slow=9.7,SNR=75						
MKAR	**Makanchi Array**	**64.65**	**326**	P	**P**	**12 27 37.2**	**-3.2**
	0.2nm,0.5s,baz=111,slow=6.8,SNR=3.3						
KURBB	**Kurchatov Arra**	**68.90**	**328**	P	**P**	**12 28 07.7**	**+0.3**
	0.4nm,0.3s,baz=120,slow=5.6,SNR=4.4						

IDC 18 12:35:41.8±5.7, 20°.16S×176°.55W, h238km±64km, mb3.5/4, mb1 3.6/5, mb1mx3.1/52, mbtmp4.1/5, Error ellipse: s-maj=101.2km s-min=38.8km az=149.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.71**	**37**	P	Pn	12 37 33.3	+1.8
	1.2nm,0.3s,baz=147,slow=2.6,SNR=7.5						
AFI				S	S	12 38 57.3	-2.3
	3.2nm,0.3s,baz=203,slow=16,SNR=4.4						
CTA	**Charters Tower**	**34.88**	**264**	P	P	12 42 12.2	+1.3
	1.9nm,0.3s,baz=94,slow=10,SNR=9.4						
STKA	**Stephens Creek**	**39.16**	**244**	P	P	12 42 45.6	-1.1
	1.1nm,0.5s,baz=80,slow=11,SNR=5.5						
ASAR	**Alice Springs**	**45.92**	**256**	P	P	12 43 40.4	-0.8
	1.9nm,0.8s,baz=92,slow=8.1,SNR=27						
ASAR				PcP	PcP	12 45 14.5	+0.5
	0.2nm,0.6s,baz=109,slow=3.8,SNR=3.2						
WRA	**Warramunga Arr**	**45.99**	**261**	P	P	12 43 41.5	-0.3
	1.5nm,0.7s,baz=96,slow=7.8,SNR=65						

*IDC **18** 12:46:35.3±0.5, 2°.05N×129°.27E, h0km, mb4.2/19, mb1 4.4/20, mb1mx4.2/58, mbtmp4.2/20, ML4.2/1, Error ellipse: s-maj=28.6km s-min=11.0km az=73.0*

*ISCJB **18** 12:46:38.9±0.2, 2°.05N±0°.03×129°.28E±0°.03, h39km, mb4.2/28, Error ellipse: s-maj=4.7km s-min=4.3km az=37.8*

*NEIC **18** 12:46:39.2±2.2, 2°.06N×129°.35E, h27km±16km, mb4.6/11, Error ellipse: s-maj=7.4km s-min=4.1km az=59.0*

*DJA **18** 12:46:39.8±0.9, 2°N±7°×12°9E±°, h11km±7km, M4.7/9, mB5.1/2, mb4.7/8, MLv4.7/9, Mw(mB)4.4/2*

ISC 18 12:46:40.8±0.4, 2°.00N±0°.06×129°.33E±0°.05, h39km, n69, σ1$10/79, mb4.4/27, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.31**	**238**	*e*Pn	**Pn**	**12 47 15.8**	**-0.5**
LBMI	**Labuha**	**3.20**	**215**	P	**Pn**	**12 47 28.3**	**-0.2**
LBMI				S	**Sn**	**12 48 05.1**	**-0.3**
SIJI	**Sorong**	**3.45**	**146**	Pn	**Pn**	**12 47 31.7**	**-0.3**
	21nm,0.3s,baz=334,slow=14,SNR=64						
SIJI				Sn	**Sn**	**12 48 09.8**	**-1.9**
	16nm,0.3s,baz=159,slow=23,SNR=17						
KMSI	**Cibinong**	**5.53**	**255**	P	**Pn**	**12 48 00.7**	**+0.1**
	257nm,0.9s						
KMSI				S	**Sn**	**12 49 04.3**	**+1.3**
	257nm,0.9s						
FAKI	**Fak Fak**	**5.70**	**149**	P	**Pn**	**12 48 02.8**	**-0.1**
FAKI				S	**Sn**	**12 49 03.4**	**-3.6**
FAKI	**Fak Fak**	**5.70**	**149**	*e*Pn	**Pn**	**12 48 02.9**	**+0.1**
RKPI	**Ransiki, Papua**	**5.97**	**126**	P	**Pn**	**12 48 09.6**	**+2.9**
	56nm,0.5s,2μm						
RKPI				S	**Sn**	**12 49 17.3**	**+3.4**
	56nm,0.5s,2μm						
BAKI	**Biak**	**7.48**	**115**	P	**Pn**	**12 48 30.4**	**+3.0**
MRSI	**Marisa**	**7.54**	**258**	P	**Pn**	**12 48 28.6**	**+0.4**
	44nm,0.9s,815nm						
MRSI				S	**Sn**	**12 49 52.5**	**0.0**
	44nm,0.9s,815nm						
APSI	**Ampana**	**8.21**	**249**	P	**Pn**	**12 48 35.9**	**-1.5**

H11S1	**WAKE ISLAND Hy**	**40.13**	**63**	T	T	13 36 45.6	
	baz=250,slow=75,SNR=6.5						
H11N1	**WAKE ISLAND Hy**	**40.71**	**62**	T	T	13 37 27.8	
	baz=249,slow=75,SNR=4.0						
H11N2	**WAKE ISLAND Hy**	**40.72**	**62**	T	T	13 37 25.3	
	baz=249,slow=75,SNR=5.0						
H11N3	**WAKE ISLAND Hy**	**40.73**	**62**	T	T	13 37 28.9	
	baz=249,slow=75,SNR=4.9						
USRK	**Ussuriysk Ar.**	**42.08**	**3**	P	**P**	**12 54 29.6**	**+0.7**
	comp=Z,1.2nm,0.6s,baz=165,slow=7.9,SNR=4.6						
SHL	**Shillong**	**42.98**	**306**	*e*P	**P**	**12 54 36.3**	**-0.4**
SHL				*ep*P	**pP**	**12 54 48.0**	**+0.2**
KLR	**Kul'dur**	**47.09**	**2**	P	**P**	**12 55 09.1**	**+0.3**
	comp=Z,0.1nm,0.6s,baz=130,slow=11,SNR=4.0						
SONA0	**Songino Array**	**49.78**	**340**	*e*P	**P**	**12 55 29.9**	**+0.3**
SONM	**Songino Array**	**49.78**	**340**	P	**P**	**12 55 29.9**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=159,slow=6.2,SNR=2.8						
MK01	**Makanchi Array**	**60.43**	**325**	*e*P	**P**	**12 56 46.0**	**-0.5**
MK01				*ep*P	**pP**	**12 56 57.8**	**-0.2**
MK32	**Makanchi Array**	**60.45**	**325**	*e*P	**P**	**12 56 46.3**	**-0.3**
MKAR	**Makanchi Array**	**60.45**	**325**	P	**P**	**12 56 46.3**	**-0.3**
	comp=Z,2.0nm,0.5s,baz=112,slow=8.5,SNR=8.8						
MAKZ	**Makanchi**	**60.64**	**325**	*e*P	**P**	**12 56 47.2**	**-0.6**
MAKZ				*ep*P	**pP**	**12 56 58.6**	**-0.9**
SEY	**Seymchan**	**63.16**	**12**	P	**P**	**12 57 05.6**	**+1.1**
	comp=Z,1.4nm,0.7s,baz=218,slow=18,SNR=5.4						
ZALV	**Zalesovo Beam**	**63.30**	**332**	P	**P**	**12 57 04.9**	**-0.7**
	comp=Z,0.9nm,0.3s,baz=109,slow=13,SNR=4.4						
ZAA1	**Zalesovo Array**	**63.30**	**332**	*e*P	**P**	**12 57 04.9**	**-0.7**
KURK	**Kurchatov**	**64.59**	**327**	*e*P	**P**	**12 57 13.4**	**-0.7**
KURBB	**Kurchatov Arra**	**64.59**	**327**	P	**P**	**12 57 13.4**	**-0.7**
	comp=Z,5.9nm,0.8s,baz=125,slow=6.0,SNR=51						
KK31	**Karatay Array**	**66.26**	**317**	*e*P	**P**	**12 57 24.4**	**-0.6**
KK31				*ep*P	**pP**	**12 57 36.3**	**-0.5**
KKAR	**Karatay Array**	**66.26**	**317**	*e*P	**P**	**12 57 24.0**	**-1.1**
KKAR				*ep*P	**pP**	**12 57 36.3**	**-0.5**
TIXI	**Tiksi**	**69.54**	**360**	P	**P**	**12 57 45.1**	**-0.1**
	comp=Z,4.3nm,0.6s,baz=176,slow=5.3,SNR=17						
TIXI	**Tiksi**	**69.54**	**360**	*e*P	**P**	**12 57 44.8**	**-0.4**
	comp=Z,4.9nm,0.9s						
TIXI				*e*P	**P**	**12 57 45.1**	**-0.1**
TIXI				*ep*P	**pP**	**12 57 54.5**	**-2.4**
BVAR	**Borovoye Array**	**70.18**	**327**	P	**P**	**12 57 49.0**	**-0.4**
	comp=Z,3.3nm,0.8s,baz=124,slow=7.4,SNR=12						
BRVK	**Borovoye**	**70.25**	**327**	*e*P	**P**	**12 57 49.3**	**-0.6**
BRVK				*ep*P	**pP**	**12 58 01.3**	**-0.3**
ABKAR	**Akbulak array**	**75.12**	**321**	*e*P	**P**	**12 58 18.2**	**-0.7**
AKTO	**Aktyubinsk**	**76.62**	**321**	P	**P**	**12 58 27.0**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=123,slow=8.6,SNR=3.1						
VNDA	**Vanda**	**81.41**	**173**	P	**P**	**12 58 53.4**	**+0.3**
	comp=Z,1.7nm,0.8s,baz=328,slow=7.1,SNR=8.7						
ILAR	**Eielson Array**	**85.54**	**25**	P	**P**	**12 59 14.7**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=251,slow=6.1,SNR=8.1						
YKA	**Yellowknife Ar**	**99.97**	**25**	P	**Pdif**	**13 00 22.2**	**+0.7**
	comp=Z,0.4nm,0.9s,baz=298,slow=4.6,SNR=3.9						
TXAR	**Lajitas Array**	**120.55**	**54**	PKP	**PKPdf**	**13 05 30.0**	**+0.9**
	comp=Z,0.4nm,0.8s,baz=9.5,slow=3.8,SNR=4.4						
TORD	**Torodi Ar. Bea**	**125.92**	**288**	PKP	**PKPdf**	**13 05 39.5**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=19,slow=2.0,SNR=3.5						
TOA1	**Torodi Ar. Sit**	**125.92**	**288**	*e*PKPdf	**PKPdf**	**13 05 39.5**	**-0.1**
CPUP	**Villa Florida**	**154.98**	**166**	PKPab	**PKPab**	**13 06 55.7**	**+1.3**
	comp=Z,1.5nm,0.7s,baz=194,slow=12,SNR=3.9						

BJI ***18*** *12:50:36.9,2°.10N×129°.30E,h9km,mb4.9/50,mB5.1/35, Ms4.8/15,Ms7 4.5/11*

IDC ***18*** *12:50:37.3±0.4,2°.06N×129°.18E,h0km,mb4.7/40, mb1 4.8/43,mb1mx4.7/59,mbtmp4.7/43,ML4.5/3,MS3.6/19, Ms1 3.7/19,ms1mx3.4/64,Error ellipse: s-maj=15.9km s-min=8.8km az=75.0*

ISCJB ***18*** *12:50:40.6±0.5,2°.06N±0°.02×129°.24E±0°.02,h33km±5km, mb4.9/129,MS3.8/21,Error ellipse: s-maj=3.9km s-min=3.3km az=138.4*

MOS ***18*** *12:50:41.1±0.9,2°.09N×129°.19E,h39km,mb5.2/41,Error ellipse: s-maj=9.2km s-min=5.2km az=106.0*

NEIC ***18*** *12:50:42.6±0.4,2°.04N×129°.20E,h36km±3km,mb5.1/65, Error ellipse: s-maj=3.7km s-min=2.6km az=65.0*

GCMT ***18*** *12:50:42.6±0.4,2°.10N×129°.32E,h24km±1km,MW4.9/56, Moment Tensor Solution. s23,c24; s56,c83; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=3.21±.26; Mθθ0.57±.14; Mφφ2.63±.16; Mrθ-0.11±.21; Mrφ0.19±.07; Mθφ-0.15±.16; Best double couple: M0=2.93500×10^16 NP1:φs7.00000°,δ47.00000°,λ-88.00000°. NP2: φs184.00000°,δ43.00000°,λ-92.00000°. Principal axes: T 2.6520, Plg2.0000°, Azm95.0000°; N 0.5570, Plg1.0000°, Azm185.0000°; P -3.2170, Plg88.0000°, Azm318.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

DJA ***18*** *12:50:44.4±0.7,2°N±3°×12°9E±°,h27km±7km,M4.9/20, mb5.2/20,mB5.3/13,MLv5.1/12,Mw(mB)4.7/13*

ISC 18 12:50:41.2±0.3, 2°.03N±0°.03×129°.30E±0°.04, h26km±2km, h26km:pP-P,n353,σ1§34/399, mb5.0/128, MS3.7/21, 7C-9D, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.29**	**237**	*e*Pn	**Pn**	**12 51 18.4**	**+1.0**
LBMI	**Labuha**	**3.20**	**214**	P	**Pn**	**12 51 30.6**	**+0.8**
LBMI				S	**Sn**	**12 52 05.8**	**-1.3**
SIJI	**Sorong**	**3.48**	**146**	Pn	**Pn**	**12 51 33.9**	**+0.1**
	258nm,0.3s,baz=334,slow=13,SNR=350						
SIJI				Sn	**Sn**	**12 52 12.1**	**-2.1**
	162nm,0.3s,baz=201,slow=22,SNR=33						
SIJI				LR	LR	12 52 25.7	
	comp=Z,687nm,19.3s,baz=310,slow=30						
SANI	**Sanana**	**5.23**	**219**	P	**Pn**	**12 51 57.7**	**0.0**
SANI				S	**Sn**	**12 52 56.4**	**-0.8**
MSAI	**Masohi**	**5.35**	**184**	P	**Pn**	**12 52 01.6**	**+2.2**
	56nm,0.6s,1μm0.3nm						
MSAI				S	**Sn**	**12 53 00.4**	**+0.2**
	56nm,0.6s,1μm0.3nm						
KMSI	**Cibinong**	**5.50**	**255**	P	**Pn**	**12 52 03.5**	**+1.9**
	741nm,0.5s,8μm						
KMSI				S	**Sn**	**12 53 06.4**	**+2.3**
	741nm,0.5s,8μm						
FAKI	**Fak Fak**	**5.73**	**149**	P	**Pn**	**12 52 04.4**	**-0.3**
FAKI				S	**Sn**	**12 53 06.1**	**-3.5**
FAKI	**Fak Fak**	**5.73**	**149**	*e*Pn	**Pn**	**12 52 04.6**	**-0.1**
AAI	**Ambon**	**5.78**	**191**	P	**Pn**	**12 52 06.8**	**+1.5**
AAI	**Ambon**	**5.78**	**191**	P	**Pn**	**12 52 06.9**	**+1.6**
AAI				pmax	pmax		
	comp=Z,143nm,0.6s						
RKPI	**Ransiki, Papua**	**6.01**	**126**	P	**Pn**	**12 52 11.1**	**+2.5**
RKPI				S	**Sn**	**12 53 19.2**	**+2.6**
LUWI	**Luwuk**	**7.20**	**245**	P	**Pn**	**12 52 28.4**	**+3.6**
	comp=Z,250nm,0.7s,comp=Z,2μm						
LUWI	**Luwuk**	**7.20**	**245**	*e*Pn	**Pn**	**12 52 24.0**	**-0.9**
PALU	**Palau**	**7.38**	**44**	P	**Pn**	**12 52 28.4**	**+1.0**
	baz=7.4,SNR=5.8						
MRSI	**Marisa**	**7.51**	**258**	P	**Pn**	**12 52 31.2**	**+2.1**
	comp=Z,167nm,0.7s,comp=Z,1μm						
MRSI				S	**Sn**	**12 53 54.4**	**+0.9**
	comp=Z,167nm,0.7s,comp=Z,1μm						
BAKI	**Biak**	**7.52**	**115**	P	**Pn**	**12 52 32.6**	**+3.3**
APSI	**Ampana**	**8.18**	**249**	P	**Pn**	**12 52 39.9**	**+1.5**
APSI				S	**Sn**	**12 54 12.0**	**+1.9**
KDI	**Kendari**	**8.94**	**228**	P	**Pn**	**12 52 51.1**	**+2.4**
MPSI	**Mapaga**	**9.54**	**260**	P	**Pn**	**12 52 59.4**	**+2.4**
MPSI				S	**Sn**	**12 54 44.7**	**+1.2**
PCI	**Palu**	**9.89**	**253**	P	**Pn**	**12 53 01.6**	**-0.3**
PCI	**Palu**	**9.89**	**253**	P	**Pn**	**12 53 01.9**	**0.0**
PCI				pmax	pmax		
	comp=Z,90nm,1.1s						
TTSI	**Tana Toraja**	**10.73**	**242**	P	**Pn**	**12 53 13.2**	**-0.1**
TTSI				S	**Sn**	**12 55 08.3**	**-4.3**
MYLDM	**Lahad Datu**	**11.22**	**287**	*e*Pn	**Pn**	**12 53 19.0**	**-1.0**
SPSI	**Sidrap Palu**	**11.23**	**238**	P	**Pn**	**12 53 22.3**	**+2.2**
SPSI				S	**Sn**	**12 55 22.0**	**-2.8**
BKSI	**Bulukumba**	**11.71**	**231**	P	**Pn**	**12 53 29.9**	**+3.1**
GENI	**Genyem**	**11.80**	**113**	P	**Pn**	**12 53 31.9**	**+4.0**
JAY	**Jayapura**	**12.27**	**112**	Pn	**Pn**	**12 53 35.5**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=313,slow=19,SNR=2.8						
JAY				LR	LR	12 57 44.7	
	comp=Z,492nm,18.6s,baz=304,slow=34						
JAY	**Jayapura**	**12.27**	**112**	P	**Pn**	**12 53 38.2**	**+3.8**
BATI	**Baumata**	**13.38**	**205**	Pn	**Pn**	**12 53 49.0**	**-0.6**
	comp=Z,2.2nm,0.3s,baz=41,slow=11,SNR=3.0						
KKM	**Kota Kinabalu**	**13.64**	**287**	*e*Pn	**Pn**	**12 53 52.3**	**-1.0**
MTN	**Manton Dam**	**14.88**	**173**	P	**Pn**	**12 54 07.3**	**-2.8**
	baz=15,SNR=19						
MTN	**Manton Dam**	**14.88**	**173**	*e*Pn	**Pn**	**12 54 08.8**	**-1.3**
SBUM	**Sibu**	**17.07**	**272**	*e*Pn	**Pn**	**12 54 37.4**	**-0.8**
	comp=Z,53nm,1.1s						
KNRA	**Kununurra**	**17.60**	**182**	P	**Pn**	**12 54 45.2**	**+0.5**
	baz=18,SNR=12						
JAGI	**Jajag, Banyuwa**	**18.35**	**235**	*e*P	**Pn**	**12 54 54.0**	**-0.1**
	comp=Z,369nm,1.9s						
KSM	**Kuching**	**18.99**	**269**	*e*P	**Pn**	**12 55 01.4**	**-0.4**
	comp=Z,26nm,0.8s						
GUMO	**Guam**	**19.22**	**52**	LR	LR	13 01 48.9	
	comp=Z,306nm,19.2s,baz=226,slow=35						
SMRI	**Semarang**	**20.86**	**244**	*e*P	**P**	**12 55 21.3**	**-0.2**
	comp=Z,166nm,0.9s						
COEN	**Coen**	**21.01**	**139**	P	**P**	**12 55 22.6**	**-0.4**
	baz=21,SNR=6.8						
COEN	**Coen**	**21.01**	**139**	*e*P	**P**	**12 55 25.1**	**+2.1**
	comp=Z,64nm,1.0s						
PMG	**Port Moresby**	**21.11**	**123**	P	**P**	**12 55 25.2**	**+1.1**
	comp=Z,23nm,1.0s,baz=304,slow=17,SNR=2.4						
PMG				LR	LR	13 04 47.7	
	comp=Z,221nm,18.5s,baz=309,slow=40						
PMG	**Port Moresby**	**21.11**	**123**	*e*P	**P**	**12 55 26.0**	**+1.9**
	comp=Z,78nm,1.0s						
WRAB	**Tennant Creek**	**22.38**	**167**	*e*P	**P**	**12 55 38.2**	**+0.5**
	comp=Z,46nm,0.6s						
WRAB	**Tennant Creek**	**22.38**	**167**	*d i*P	**P**	**12 55 38.1**	**+0.4**
WRAB				pmax	pmax		
	comp=Z,61nm,1.0s						
WR1	**Warramunga Arr**	**22.39**	**167**	*e*P	**P**	**12 55 38.0**	**+0.3**
	comp=Z,51nm,0.7s						
WR1				*e*S	**S**	**12 59 36.8**	**-5.7**
WRA	**Warramunga Arr**	**22.39**	**167**	P	**P**	**12 55 38.0**	**+0.3**
	comp=Z,44nm,0.6s,baz=346,slow=10,SNR=116						
WRA				S	**S**	**12 59 36.8**	**-5.7**
	comp=Z,1.1nm,0.7s,baz=350,slow=24,SNR=5.1						
WB2	**Warramunga Arr**	**22.39**	**167**	*e*P	**P**	**12 55 36.4**	**-1.4**
WB2				*e*P	**P**	**12 55 38.2**	**+0.4**
TPUB	**Ta-pu**	**22.76**	**339**	*e*P	**P**	**12 55 40.3**	**-1.4**
	comp=Z,51nm,1.1s						
SSLB	**Suanglung**	**23.09**	**340**	*e*P	**P**	**12 55 44.6**	**-0.6**
	comp=Z,19nm,0.7s						
RABL	**Rabaul**	**23.67**	**105**	*e*P	**P**	**12 55 52.0**	**+1.0**
	comp=Z,62nm,0.6s						
YHNB	**Yeheng**	**23.78**	**342**	*e*P	**P**	**12 55 51.6**	**-0.4**
	comp=Z,34nm,0.8s						
QIS	**Mount Isa**	**24.61**	**156**	P	**P**	**12 56 01.0**	**+1.3**
	baz=25,SNR=112						
MBWA	**Marble Bar**	**24.87**	**202**	*e*P	**P**	**12 56 01.4**	**-0.5**
	comp=Z,21nm,0.9s						
MTSU	**Mount Surprise**	**24.90**	**144**	P	**P**	**12 56 02.9**	**+0.6**
	baz=25,SNR=5.7						
MYKOM	**Kota Tinggi**	**25.43**	**270**	*e*P	**P**	**12 56 06.7**	**-0.4**
	comp=Z,20nm,0.7s						
AS31	**Alice Springs**	**25.93**	**170**	*e*P	**P**	**12 56 12.0**	**+0.4**
	comp=Z,9.3nm,0.6s						
ASAR	**Alice Springs**	**25.93**	**170**	P	**P**	**12 56 11.9**	**+0.4**
	comp=Z,22nm,0.9s,baz=2.1,slow=9.8,SNR=103						
ASAR				PcP	**PcP**	**12 59 40.2**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=0.0,slow=1.9,SNR=2.4						
AS01	**Alice Springs**	**25.93**	**170**	*e*P	**P**	**12 56 11.6**	**0.0**
WRKA	**Warakurna**	**26.92**	**182**	P	**P**	**12 56 20.5**	**0.0**
	baz=27,SNR=24						
CTA	**Charters Tower**	**27.56**	**144**	P	**P**	**12 56 27.3**	**+1.0**
	comp=Z,2.6nm,0.6s,baz=331,slow=10,SNR=5.5						
CBIJ	**Chichi jima**	**27.82**	**25**	*e*P	**P**	**12 56 28.4**	**-0.2**
	comp=Z,83nm,0.8s						
JCJ	**Chichijima**	**27.82**	**25**	P	**P**	**12 56 28.4**	**-0.2**
	comp=Z,34nm,0.4s,baz=277,slow=18						
GIRL	**Giralia**	**28.58**	**210**	P	**P**	**12 56 36.6**	**+1.3**
	baz=29,SNR=18						
MEEK	**Meekatharra**	**30.30**	**199**	P	**P**	**12 56 52.1**	**+1.5**
	baz=30,SNR=4.9						
PSI	**Prapat**	**30.35**	**272**	P	**P**	**12 56 50.9**	**-0.4**
	comp=Z,8.8nm,1.0s,baz=0.3,slow=6.3,SNR=4.4						
PSI	**Prapat**	**30.35**	**272**	*e*P	**P**	**12 56 51.1**	**-0.3**
PSI				*ep*P	pP	12 56 58.0	-1.1
PSI	**Prapat**	**30.35**	**272**	*e*P	**P**	**12 56 51.1**	**-0.3**
PSI				*e*PP		12 56 58.0	
JNU	**Nakatsue**	**30.97**	**3**	P	**P**	**12 56 57.6**	**+1.2**
	comp=Z,7.1nm,0.8s,baz=100,slow=16,SNR=3.7						
JNU				LR	LR	13 10 07.3	
	comp=Z,124nm,18.1s,baz=123,slow=38						
JNU	**Nakatsue**	**30.97**	**3**	*e*P	**P**	**12 56 55.9**	**-0.5**
	comp=Z,46nm,1.5s						
NJ2	**Nanjing**	**31.45**	**343**	P	**P**	**12 57 03.3**	**+2.7**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
GSI	**Gunungsitoli**	**31.71**	**269**	*e*P	**P**	**12 57 01.4**	**-1.8**
	comp=Z,53nm,0.8s						
QLP	**Quilpie**	**31.89**	**154**	P	**P**	**12 57 05.2**	**+0.6**
	baz=32,SNR=10						
GYA	**Guiyang**	**32.60**	**320**	P	**P**	**12 57 12.9**	**+1.9**
GYA				PP	**PnPn**	**12 58 22.0**	**+3.0**
GYA				S	**S**	**13 02 28.4**	**+3.0**
GYA				SS	**SnSn**	**13 04 25.5**	**+4.6**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,5.0s						
GYA				LR	LR		
	comp=Z,540nm,17.4s						
GYA				LR	LR		
	comp=Z,560nm,17.9s						
GYA				LR	LR		
	comp=Z,500nm,17.7s						
FORT	**Forrest**	**32.64**	**182**	P	**P**	**12 57 11.6**	**+0.5**
	baz=33,SNR=14						
FORT	**Forrest**	**32.64**	**182**	*e*P	**P**	**12 57 11.4**	**+0.3**
	comp=Z,35nm,0.8s						
MORW	**Morawa**	**33.42**	**201**	P	**P**	**12 57 18.8**	**+0.8**
	baz=34,SNR=5.4						
ENH	**Enshi**	**33.80**	**328**	*e*P	**P**	**12 57 21.9**	**+0.7**
	comp=Z,81nm,1.6s						
CM01	**Chiang Mai Arr**	**33.91**	**301**	*e*P	**P**	**12 57 22.4**	**0.0**
INU	**Inuyama**	**33.92**	**11**	*e*P	**P**	**12 57 22.0**	**-0.3**
	comp=Z,28nm,0.8s						
CM31	**Chiang Mai Arr**	**33.94**	**301**	*e*P	**P**	**12 57 23.1**	**+0.5**
CMAR	**Chiang Mai Arr**	**33.94**	**301**	P	**P**	**12 57 23.1**	**+0.5**
	comp=Z,2.4nm,0.8s,baz=120,slow=7.4,SNR=8.6						
CMAR				PcP	**PcP**	**13 00 01.2**	**+0.4**
	comp=Z,1.9nm,0.8s,baz=108,slow=1.9,SNR=5.1						
CMAR				LR	LR	13 12 50.0	
	comp=Z,66nm,18.2s,baz=180,slow=39						
KMBL	**Kambalda**	**33.95**	**191**	P	**P**	**12 57 22.4**	**-0.1**
	baz=34,SNR=12						
RMQ	**Roma**	**34.01**	**148**	P	**P**	**12 57 24.1**	**+1.0**
	baz=34,SNR=5.5						
CHTO	**Chiang Mai**	**34.09**	**301**	*ep*P	P	12 57 36.0	+12
TJN	**Taejon**	**34.23**	**357**	*ce*P	**P**	**12 57 24.4**	**-0.4**
KMI	**Kunming**	**34.39**	**314**	P	**P**	**12 57 31.5**	**+4.8**
KMI				pmax	pmax		
	comp=Z,10.0nm,1.4s						
EIDS	**Eidsvold**	**34.45**	**144**	P	**P**	**12 57 26.7**	**-0.3**
	baz=34,SNR=13						
EIDS	**Eidsvold**	**34.45**	**144**	*e*P	**P**	**12 57 27.8**	**+0.8**
	comp=Z,24nm,0.8s						
BLDU	**Ballidu**	**34.60**	**199**	P	**P**	**12 57 28.4**	**+0.2**
	baz=35,SNR=7.4						
KLBR	**Kellerberrin**	**35.18**	**197**	P	**P**	**12 57 33.1**	**-0.1**
	baz=35,SNR=6.8						
BBOO	**Buckleboo**	**35.23**	**170**	P	**P**	**12 57 33.9**	**+0.4**
	baz=35,SNR=36						
BBOO	**Buckleboo**	**35.23**	**170**	*e*P	**P**	**12 57 34.0**	**+0.4**
	comp=Z,30nm,0.6s						
KS15	**Wonju Array Si**	**35.27**	**358**	*e*P	**P**	**12 57 34.1**	**+0.3**
KSAR	**Wonju Array Be**	**35.27**	**358**	P	**P**	**12 57 34.1**	**+0.3**
KSAR				PcP	**PcP**	**13 00 04.0**	**-0.2**
KSRS	**Korea Array**	**35.28**	**358**	P	**P**	**12 57 34.1**	**+0.2**
	comp=Z,6.7nm,0.9s,baz=175,slow=11,SNR=30						
KSRS				PcP	**PcP**	**13 00 04.0**	**-0.2**
	comp=Z,1.7nm,0.7s,baz=190,slow=3.2,SNR=6.5						
KSRS				LR	LR	13 10 46.2	
	comp=Z,131nm,20.8s,baz=185,slow=34						
KS01	**Wonju Array Si**	**35.30**	**358**	*e*P	**P**	**12 57 33.8**	**-0.3**
KS01				*e*PcP	**PcP**	**13 00 05.2**	**+0.9**
KS01				*e*S	**S**	**13 03 03.1**	**-3.5**
MJAR	**Matsushiro Arr**	**35.32**	**12**	P	**P**	**12 57 33.2**	**-1.2**
	comp=Z,22nm,0.8s,baz=194,slow=10,SNR=74						
MJAR				LR	LR	13 10 30.6	
	comp=Z,113nm,19.9s,baz=205,slow=34						
MAJO	**Matsushiro**	**35.32**	**12**	*e*P	**P**	**12 57 33.4**	**-1.0**
	comp=Z,44nm,0.8s						
MAJO	**Matsushiro**	**35.32**	**12**	*d i*P	**P**	**12 57 32.7**	**-1.6**
MAJO				pmax	pmax		
	comp=Z,41nm,0.9s						
MAT	**Matsushiro**	**35.32**	**12**	P	**P**	**12 57 33.1**	**-1.2**
MJB9	**Matsu-Tunnel**	**35.32**	**12**	*e*P	**P**	**12 57 33.4**	**-1.0**
	comp=Z,44nm,0.8s						
STKA	**Stephens Creek**	**35.68**	**162**	P	**P**	**12 57 38.0**	**+0.6**
	comp=Z,44nm,0.7s,baz=337,slow=8.9,SNR=96						
STKA				LR	LR	13 15 56.3	
	comp=Z,116nm,19.1s,baz=352,slow=42						
STKA	**Stephens Creek**	**35.68**	**162**	P	**P**	**12 57 38.1**	**+0.6**
	baz=36,SNR=84						
STKA	**Stephens Creek**	**35.68**	**162**	*e*P	**P**	**12 57 38.1**	**+0.6**
	comp=Z,7.1nm,0.7s						
STKA	**Stephens Creek**	**35.68**	**162**	*e*P	**P**	**12 57 38.1**	**+0.6**
STKA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MUN	**Mundaring**	**36.02**	**199**	P	**P**	**12 57 41.4**	**+1.0**
	baz=36,SNR=4.4						
HTT	**Hallett**	**36.42**	**166**	P	**P**	**12 57 44.6**	**+0.8**
	baz=36,SNR=5.9						
NWAO	**Narrogin (SRO)**	**36.59**	**197**	P	**P**	**12 57 45.1**	**-0.1**
	comp=Z,10nm,0.8s,baz=248,slow=10,SNR=3.7						
CMSA	**Cobar Meteorol**	**36.84**	**156**	P	**P**	**12 57 48.0**	**+0.7**
	baz=37,SNR=14						
XAN	**Xi'an**	**37.11**	**331**	P	**P**	**12 57 49.4**	**-0.3**
XAN				pP	pP	12 58 00.8	+3.3
XAN				pmax	pmax		
	comp=Z,26nm,1.2s						
XAN				pmax	pmax		
	comp=Z,370nm,4.7s						
ARMA	**Armidale**	**38.66**	**148**	P	**P**	**12 58 04.4**	**+1.4**
	baz=39,SNR=28						
ARMA	**Armidale**	**38.66**	**148**	*e*P	**P**	**12 58 04.4**	**+1.4**
	comp=Z,38nm,0.7s						
ARMA				*ep*P	pP	12 58 16.2	+5.4
BJT	**Baijiatuau**	**39.65**	**344**	*e*P	**P**	**12 58 10.4**	**-0.6**
	comp=Z,14nm,0.8s						
BJT	**Baijiatuau**	**39.65**	**344**	*e*P	**P**	**12 58 10.4**	**-0.6**
BJT				pmax	pmax		
	comp=Z,14nm,0.8s						
BJI	**Beijing**	**39.67**	**344**	‖*e*P	**P**	**12 58 10.8**	**-0.3**
BJI				pmax	pmax		
	comp=Z,24nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**40.13**	**63**	T	T	13 41 50.6	
	baz=253,slow=76						
H11S2	**WAKE ISLAND Hy**	**40.15**	**63**	T	T	13 41 51.6	
	baz=253,slow=76						
H11S1	**WAKE ISLAND Hy**	**40.15**	**63**	T	T	13 41 51.2	
	baz=253						
ARPS	**Mount Arapiles**	**40.32**	**164**	P	**P**	**12 58 17.9**	**+1.3**
	baz=40,SNR=23						
MSHR	**Mys Shultsa**	**40.41**	**2**	*ce*P	**P**	**12 58 15.7**	**-1.5**
H11N1	**WAKE ISLAND Hy**	**40.73**	**62**	T	T	13 42 15.3	
	baz=247						
H11N2	**WAKE ISLAND Hy**	**40.74**	**62**	T	T	13 42 16.9	
	baz=247,slow=74						
H11N3	**WAKE ISLAND Hy**	**40.75**	**62**	T	T	13 42 16.6	
	baz=247,slow=74						
LZH	**Lanzhou**	**41.28**	**328**	*e*P	**P**	**12 58 25.8**	**+1.1**
LZH				PP	**PnPn**	**13 00 05.6**	**+0.7**
LZH				*e*S	**S**	**13 04 37.8**	**+0.4**
LZH				pmax	pmax		
	comp=Z,75nm,1.3s						
LZH				pmax	pmax		
	comp=Z,200nm,5.4s						
ERM	**Erimo**	**41.72**	**16**	*i* P	**P**	**12 58 26.6**	**-1.3**
ERM				pmax	pmax		
	comp=Z,28nm,1.2s						
HHC	**Hu-ho-hao-te**	**41.84**	**340**	*e*P	**P**	**12 58 30.3**	**+1.1**
HHC				pmax	pmax		
	comp=Z,16nm,0.7s						
HHC				pmax	pmax		
	comp=Z,170nm,6.1s						
USRK	**Ussuriysk Ar.**	**42.06**	**3**	P	**P**	**12 58 31.3**	**+0.5**
	comp=Z,8.6nm,0.9s,baz=181,slow=7.1,SNR=18						
TOO	**Toolangi**	**42.16**	**161**	P	**P**	**12 58 33.7**	**+2.0**
	baz=42,SNR=16						
MDJ	**Mudanjiang**	**42.41**	**0**	*e*P	**P**	**12 58 34.6**	**+1.0**
	comp=Z,11nm,0.9s						
SHL	**Shillong**	**42.94**	**306**	*e*P	**P**	**12 58 39.0**	**+0.5**
SHL	**Shillong**	**42.94**	**306**	*e*P	**P**	**12 58 38.5**	**0.0**
	comp=Z,52nm,0.7s						
SHL	**Shillong**	**42.94**	**306**	*e*P	**P**	**12 58 38.5**	**0.0**
SHL				pmax	pmax	

WMQ	**Urumqi**	**55.59**	**324**	P	**P**	**13 00 15.5**	**+0.8**
WMQ				pP	pP	13 00 19.8	-3.1
WMQ				sP	sP	13 00 26.9	+0.9
WMQ				pmax	pmax		
	comp=Z,69nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,230nm,5.9s						
WMQ				LR	LR		
	comp=Z,270nm,23.9s						
WMQ				LR	LR		
	comp=Z,160nm,21.5s						
PETK	**Petropavlovsk-**	**56.08**	**20**	P	**P**	**13 00 18.5**	**+0.5**
	comp=Z,2.3nm,0.7s,baz=177,slow=2.5,SNR=4.5						
PETK				LR	LR	13 22 26.1	
	comp=Z,32nm,21.1s,baz=193,slow=34						
PEA1	**Petropavlovsk-**	**56.09**	**20**	*e*P	**P**	**13 00 18.5**	**+0.4**
HVS	**Khovu-Aksy**	**57.37**	**334**	*i* P	**P**	**13 00 24.2**	**-3.1**
HVS				pmax	pmax		
	comp=Z,7.0nm,0.9s						
RPZ	**Rata Peaks**	**58.91**	**146**	LR	LR	13 25 52.7	
	comp=Z,124nm,20.0s,baz=296,slow=36						
MA2	**Magadan**	**59.77**	**12**	P	**P**	**13 00 44.1**	**+0.3**
	comp=Z,19nm,0.8s,baz=216,slow=5.8,SNR=9.3						
MA2	**Magadan**	**59.77**	**12⇑**	*e*P	**P**	**13 00 44.5**	**+0.8**
MA2				pmax	pmax		
	comp=Z,21nm,1.3s						
YAK	**Yakutsk**	**59.86**	**0**	*e*P	**P**	**13 00 44.6**	**+0.3**
	comp=Z,75nm,0.7s						
YAK				*e*pP	**sP**	**13 00 56.4**	**+0.7**
YAK	**Yakutsk**	**59.86**	**0**	*e*P	**P**	**13 00 44.0**	**-0.3**
YAK				*e**PP	**sP**	**13 00 55.0**	**-0.6**
YAK				*e*		13 02 54.3	
YAK				*e*S	**S**	**13 08 52.5**	**-1.7**
YAK				*e**SS		13 09 13.4	
YAK				*e*		13 10 30.1	
YAK				*e*SS	**SS**	**13 12 48.5**	**-2.3**
YAK				pmax	pmax		
	comp=Z,52nm,0.8s						
YAK				pmax	pmax		
	comp=N,14nm,1.0s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,51nm,3.0s						
YAK				pmax	pmax		
	comp=N,18nm,3.5s						
YAK				pmax	pmax		
	comp=E,36nm,2.7s						
YAK				smax	smax		
	comp=N,27nm,3.1s						
YAK				smax	smax		
	comp=E,17nm,3.0s						
PDGK	**Podgornoye**	**60.35**	**320**	P	**P**	**13 00 47.6**	**-0.7**
PDGK				pmax	pmax		
	comp=Z,24nm,0.8s						
MK01	**Makanchi Array**	**60.39**	**325**	*e*P	**P**	**13 00 48.0**	**-0.4**
MK31	**Makanchi Array**	**60.41**	**325**	*e*P	**P**	**13 00 48.3**	**-0.2**
MK31	**Makanchi Array**	**60.41**	**325**	*i* P	**P**	**13 00 47.9**	**-0.6**
MK31				pmax	pmax		
	comp=Z,29nm,1.0s						
MK32	**Makanchi Array**	**60.41**	**325**	*e*P	**P**	**13 00 48.2**	**-0.2**
MKAR	**Makanchi Array**	**60.41**	**325**	P	**P**	**13 00 48.2**	**-0.2**
	comp=Z,9.9nm,0.7s,baz=116,slow=8.2,SNR=42						
MKAR				LR	LR	13 28 44.0	
	comp=Z,50nm,18.3s,baz=56,slow=38						
MKAR	**Makanchi Array**	**60.41**	**325**	*e*P	**P**	**13 00 48.3**	**-0.2**
	comp=Z,112nm,0.8s						
MKAR	**Makanchi Array**	**60.41**	**325**	*e*P	**P**	**13 00 48.3**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,112nm,0.8s						
MAKZ	**Makanchi**	**60.60**	**325**	*e*P	**P**	**13 00 49.5**	**-0.3**
	comp=Z,41nm,1.1s						
MAKZ	**Makanchi**	**60.60**	**325**	*e*P	**P**	**13 00 49.5**	**-0.3**
MAKZ				pmax	pmax		
	comp=Z,41nm,1.1s						
TARG	**Taragay, Kyrgy**	**60.72**	**318**	*e*P	**P**	**13 00 51.3**	**+0.1**
	comp=Z,8.0nm,0.7s						
NIL	**Nilore**	**60.99**	**308**	*e*P	**P**	**13 00 51.9**	**-0.8**
NIL				*e*pP	**sP**	**13 01 03.7**	**-0.3**
NIL	**Nilore**	**60.99**	**308**	*e*P	**P**	**13 00 51.9**	**-0.8**
NIL				*e**PP	**sP**	**13 01 03.7**	**-0.3**
KSH	**Kashi**	**61.05**	**315**	P	**P**	**13 00 54.4**	**+1.3**
KSH				sP	sP	13 01 03.3	-1.1
KSH				PP	**PP**	**13 03 11.8**	**+4.0**
KSH				S	**S**	**13 09 13.4**	**+2.8**
KSH				sS	sS	13 09 20.8	-3.4
KSH				SS	**SS**	**13 13 15.1**	**+4.4**
KSH				pmax	pmax		
	comp=Z,27nm,1.0s						
KSH				pmax	pmax		
	comp=Z,190nm,4.0s						
KSH				LR	LR		
	comp=Z,350nm,4.9s						
KSH				LR	LR		
	comp=Z,220nm,7.3s						
KSH				LR	LR		
	comp=Z,350nm,5.8s						
NRN	**Naryn**	**61.82**	**317**	*e*P	**P**	**13 00 57.8**	**-0.7**
NRN				*e*pP	**sP**	**13 01 09.2**	**-0.6**
NRN	**Naryn**	**61.82**	**317**	*e*P	**P**	**13 00 57.8**	**-0.7**
NRN				*e**PP	**sP**	**13 01 09.2**	**-0.6**
KZA	**Kyzart**	**62.59**	**317**	P	**P**	**13 01 04.4**	**+0.6**
	SNR=12						
TKM2	**Tokmak 2**	**62.71**	**318**	P	**P**	**13 01 04.2**	**-0.1**
	SNR=8.5						
TKM2	**Tokmak 2**	**62.71**	**318**	P	**P**	**13 01 03.6**	**-0.7**
TKM2				pmax	pmax		
	comp=Z,12nm,0.7s						
SFK	**Sufi-Kurgan**	**63.00**	**315**	P	**P**	**13 01 06.2**	**-0.1**
SFK				pmax	pmax		
	comp=Z,13nm,0.6s						
SEY	**Seymchan**	**63.14**	**12**	*c*eP	**P**	**13 01 05.5**	**-1.0**
UCH	**Uchtor**	**63.16**	**317**	P	**P**	**13 01 08.0**	**+0.4**
	SNR=14						
ZAA0	**Zalesovo Array**	**63.27**	**332**	*e*P	**P**	**13 01 06.5**	**-1.0**
	comp=Z,15nm,1.1s						
ZALV	**Zalesovo Beam**	**63.27**	**332**	P	**P**	**13 01 06.3**	**-1.2**
	comp=Z,5.6nm,0.7s,baz=114,slow=6.0,SNR=16						
ZALV				LR	LR	13 31 53.9	
	comp=Z,41nm,18.3s,baz=68,slow=39						
ZALV	**Zalesovo Beam**	**63.27**	**332**	*e*P	**P**	**13 01 06.1**	**-1.4**
ZAA1	**Zalesovo Array**	**63.27**	**332**	*e*P	**P**	**13 01 06.3**	**-1.2**
USP	**Ospenovka**	**63.59**	**318**	P	**P**	**13 01 09.7**	**-0.2**
	SNR=11						
AML	**Almayashu**	**63.68**	**317**	P	**P**	**13 01 11.2**	**+0.3**
	SNR=14						
EKS2	**Erkin-Say**	**63.83**	**317**	P	**P**	**13 01 12.2**	**+0.6**
	SNR=9.7						
NVS	**Novosibirsk**	**64.55**	**333**	*e*P	**P**	**13 01 14.2**	**-1.7**
NVS				pmax	pmax		
	comp=N,12nm,1.0s						
NVS				pmax	pmax		
	comp=Z,22nm,1.0s						
NVS				pmax	pmax		
	comp=E,12nm,1.1s						
KURK	**Kurchatov**	**64.55**	**327**	*e*P	**P**	**13 01 15.4**	**-0.5**
KURK				*e*P	**P**	**13 01 15.5**	**-0.5**
KURK	**Kurchatov**	**64.55**	**327**	*c i*P	**P**	**13 01 15.2**	**-0.8**
KURK				pmax	pmax		
	comp=Z,33nm,0.8s						
KURBB	**Kurchatov Arra**	**64.55**	**327**	P	**P**	**13 01 15.4**	**-0.6**
	comp=Z,21nm,0.8s,baz=124,slow=5.9,SNR=140						
MNAS	**Manas**	**64.63**	**317**	P	**P**	**13 01 16.4**	**-0.5**
MNAS				pmax	pmax		
	comp=Z,17nm,0.9s						
KK31	**Karatay Array**	**66.22**	**317**	*e*P	**P**	**13 01 26.7**	**-0.3**
KK31	**Karatay Array**	**66.22**	**317**	*i* P	**P**	**13 01 26.1**	**-0.9**
KK31				pmax	pmax		
	comp=Z,27nm,1.1s						
KKAR	**Karatay Array**	**66.22**	**317**	*e*P	**P**	**13 01 26.7**	**-0.3**
KKAR	**Karatay Array**	**66.22**	**317**	*e*P	**P**	**13 01 26.7**	**-0.3**
CASY	**Casey**	**69.47**	**188**	*e*P	**P**	**13 01 47.4**	**+0.5**
	comp=Z,16nm,0.9s						
TIXI	**Tiksi**	**69.52**	**360**	P	**P**	**13 01 46.9**	**-0.3**
	comp=Z,16nm,0.7s,baz=176,slow=3.8,SNR=43						
TIXI	**Tiksi**	**69.52**	**360**	*e*P	**P**	**13 01 46.1**	**-1.0**
	comp=Z,16nm,0.7s						
TIXI				*e*P	**P**	**13 01 46.9**	**-0.3**
TIXI	**Tiksi**	**69.52**	**360**	*d i*P	**P**	**13 01 46.3**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,13nm,0.8s						
BVA0	**Borovoye Array**	**70.14**	**327**	*i* P	**P**	**13 01 50.4**	**-1.0**
BVA0				pmax	pmax		
	comp=Z,27nm,1.0s						
BVAR	**Borovoye Array**	**70.14**	**327**	P	**P**	**13 01 51.0**	**-0.4**
	comp=Z,12nm,0.8s,baz=120,slow=7.5,SNR=48						
BVAR	**Borovoye Array**	**70.14**	**327**	P	**P**	**13 01 51.0**	**-0.4**
BRVK	**Borovoye**	**70.21**	**327**	*e*P	**P**	**13 01 51.3**	**-0.5**
	comp=Z,35nm,0.9s						
BRVK	**Borovoye**	**70.21**	**327**	*d i*P	**P**	**13 01 51.1**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,28nm,1.2s						
BILL	**Bilibino**	**70.56**	**14⇑**	*e*P	**P**	**13 01 53.5**	**-0.1**
BILL				*e*		13 02 13.8	
BILL				*e*		13 04 29.3	
BILL				*e*SS	SS	13 15 34.5	-2.5
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
NRIK	**Noril'sk**	**72.69**	**346**	P	**P**	**13 02 06.4**	**0.0**
	comp=Z,4.5nm,0.5s,baz=135,slow=7.1,SNR=5.2						
NRIK				LR	LR	13 38 16.1	
	comp=Z,32nm,19.3s,baz=114,slow=39						
GEYT	**Alibeck**	**73.95**	**309**	P	**P**	**13 02 13.7**	**-1.0**
	comp=Z,128nm,0.8s,baz=108,slow=4.8,SNR=5.0						
GYA0B	**ALIBECK ARRAY**	**73.95**	**309**	*e*P	**P**	**13 02 12.9**	**-1.7**
GYA0B				*e*pP	**sP**	**13 02 26.3**	**+0.3**
AB31	**Akbulak array**	**75.08**	**321**	P	**P**	**13 02 19.3**	**-1.6**
AB31				pmax	pmax		
	comp=Z,12nm,0.8s						
ABKAR	**Akbulak array**	**75.08**	**321**	*e*P	**P**	**13 02 19.8**	**-1.0**
AKTO	**Aktyubinsk**	**76.58**	**321**	P	**P**	**13 02 28.9**	**-0.5**
	comp=Z,5.1nm,0.9s,baz=76,slow=7.3,SNR=11						
AKTO				LR	LR	13 37 25.6	
	comp=Z,38nm,18.7s,baz=115,slow=37						
SVE	**Sverdlovsk**	**76.75**	**328⇓**	*e*P	**P**	**13 02 29.8**	**-0.4**
SVE				pmax	pmax		
	comp=Z,25nm,0.9s						
ARU	**Arti**	**77.74**	**328**	*e*P	**P**	**13 02 34.7**	**-1.1**
ARU				*e*pP	**PcP**	**13 02 46.1**	**+0.3**
ARU	**Arti**	**77.74**	**328**	*d i*P	**P**	**13 02 34.3**	**-1.5**
ARU						13 02 44.7	
ARU						13 05 26.9	
ARU				S	**S**	**13 12 25.6**	**-0.8**
ARU				SS	**SS**	**13 17 25.8**	**-0.9**
ARU				pmax	pmax		
	comp=Z,21nm,2.5s						
VNDA	**Vanda**	**81.43**	**173**	P	**P**	**13 02 55.4**	**-0.1**
	comp=Z,8.0nm,0.8s,baz=314,slow=5.9,SNR=30						
VNDA	**Vanda**	**81.43**	**173**	*e*P	**P**	**13 02 55.5**	**+0.1**
	comp=Z,8.8nm,0.9s						
VNDA	**Vanda**	**81.43**	**173**	*e*P	**P**	**13 02 55.5**	**+0.1**
VNDA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SBA	**Scott Base**	**82.31**	**173**	*e*P	**P**	**13 03 01.3**	**+1.3**
	comp=Z,6.6nm,0.9s						
SBA	**Scott Base**	**82.31**	**173**	*e*P	**P**	**13 03 01.3**	**+1.3**
SBA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
PPLA	**Purkeypile**	**82.97**	**27**	*e*P	P	13 02 58.9	-5.1
PPLA				*e*pP	pP	13 03 11.6	-0.8
MAW	**Mawson**	**83.06**	**201**	P	**P**	**13 03 04.8**	**+0.8**
	comp=Z,10nm,0.8s,baz=42,slow=5.9,SNR=9.0						
MAW	**Mawson**	**83.06**	**201**	P	**P**	**13 03 04.9**	**+0.8**
	baz=83,SNR=5.6						
MAW	**Mawson**	**83.06**	**201**	*e*P	**P**	**13 03 04.2**	**+0.1**
	comp=Z,2.6nm,0.9s						
SUA	**Susitna One**	**83.43**	**28**	*e*P	**P**	**13 03 06.4**	**+0.1**
	comp=Z,6.7nm,0.8s						
RAYN	**Ar Rayn**	**83.50**	**293**	*e*P	**P**	**13 03 06.2**	**-1.2**
	comp=Z,8.9nm,0.8s						
TRF	**Thorofare Moun**	**83.91**	**26**	*e*P	**P**	**13 03 09.1**	**+0.3**
	comp=Z,20nm,1.1s						
MLY	**Manley**	**83.93**	**25**	*e*P	**P**	**13 03 10.0**	**+1.2**
	comp=Z,10nm,0.9s						
PMR	**Palmer**	**84.21**	**28**	*e*P	**P**	**13 03 09.4**	**-0.7**
	comp=Z,13nm,1.0s						
PMR	**Palmer**	**84.21**	**28**	*e*P	**P**	**13 03 09.4**	**-0.7**
PMR				pmax	pmax		
	comp=Z,13nm,1.0s						
GHO	**Glory Hole Cre**	**84.33**	**28**	*e*P	**P**	**13 03 11.9**	**+1.0**
	comp=Z,11nm,1.0s						
GNI	**Garni**	**84.53**	**310**	*i* P	**P**	**13 03 11.6**	**-0.9**
GNI				pmax	pmax		
	comp=Z,17nm,0.9s						
MCK	**McKinley**	**84.54**	**26**	*e*P	**P**	**13 03 12.3**	**+0.4**
	comp=Z,24nm,1.0s						
MCK	**McKinley**	**84.54**	**26**	*e*P	**P**	**13 03 12.3**	**+0.4**
MCK				pmax	pmax		
	comp=Z,24nm,1.0s						
RND	**Reindeer**	**84.54**	**27**	*e*P	**P**	**13 03 12.1**	**+0.2**
	comp=Z,20nm,0.8s						
RND	**Reindeer**	**84.54**	**27**	*e*P	**P**	**13 03 12.1**	**+0.2**
RND				pmax	pmax		
	comp=Z,20nm,0.8s						
SML	**Sawmill**	**84.61**	**28**	*e*P	**P**	**13 03 13.0**	**+0.7**
	comp=Z,41nm,0.9s						
SML	**Sawmill**	**84.61**	**28**	*e*P	**P**	**13 03 13.0**	**+0.7**
SML				pmax	pmax		
	comp=Z,41nm,0.9s						
TOLK	**Toolik Lake Re**	**84.89**	**21**	P	**P**	**13 03 15.3**	**+1.8**
	baz=263						
TOLK	**Toolik Lake Re**	**84.89**	**21**	*e*P	**P**	**13 03 15.1**	**+1.5**
	comp=Z,18nm,1.1s						
MDM	**Murphy Dome**	**84.98**	**25**	*e*P	**P**	**13 03 14.7**	**+0.6**
	comp=Z,5.2nm,1.1s						
WRH	**Wood River Hil**	**84.99**	**26**	*e*P	**P**	**13 03 14.2**	**+0.2**
	comp=Z,14nm,1.1s						
SCM	**Sheep Creek Mo**	**85.09**	**28**	*e*P	**P**	**13 03 15.7**	**+1.0**
	comp=Z,35nm,1.0s						
SCM	**Sheep Creek Mo**	**85.09**	**28**	*e*P	**P**	**13 03 15.7**	**+1.0**
SCM				pmax	pmax		
	comp=Z,35nm,1.0s						
CCB	**Clear Creek Bu**	**85.13**	**25**	*e*P	**P**	**13 03 14.6**	**-0.1**
	comp=Z,19nm,1.3s						
DHY	**Denali Highway**	**85.18**	**27**	*e*P	**P**	**13 03 15.8**	**+0.6**
	comp=Z,7.0nm,0.7s						
PRGR	**Permogore**	**85.21**	**332**	*e*P	**P**	**13 03 14.6**	**-0.6**
PRGR				pmax	pmax		
	comp=Z,12nm,0.8s						
ZEI	**Tsey**	**85.25**	**313**	*e*P	P	13 03 26.9	+11
ZEI				pmax	pmax		
	comp=Z,24nm,1.3s						
IL1	**Eielson Array**	**85.54**	**25**	*e*P	**P**	**13 03 15.9**	**-0.9**
IL1				*e*pP	**pP**	**13 03 25.7**	**+0.5**
ILAR	**Eielson Array**	**85.54**	**25**	P	**P**	**13 03 16.3**	**-0.5**
	comp=Z,1.9nm,0.6s,baz=247,slow=5.6,SNR=24						
ILB	**Eielson Array**	**85.54**	**25**	*e*P	**P**	**13 03 16.4**	**-0.4**
KLU	**Klutina**	**85.73**	**29**	*e*P	**P**	**13 03 19.2**	**+1.2**
	comp=Z,11nm,0.9s						
DIV	**Divide**	**85.78**	**29**	*e*P	**P**	**13 03 19.6**	**+1.4**
	comp=Z,47nm,1.1s						
KBZ	**Khabaz**	**86.00**	**314**	P	**P**	**13 03 19.0**	**-0.5**
	comp=Z,3.4nm,0.7s,baz=63,slow=6.3,SNR=5.2						
KBZ	**Khabaz**	**86.00**	**314**	*e*P	**P**	**13 03 19.0**	**-0.5**
BMRM	**Bremner River**	**86.34**	**29**	*e*P	**P**	**13 03 22.4**	**+1.4**
	comp=Z,21nm,1.0s						
BMRM				*e*pP	**sP**	**13 03 32.1**	**-0.4**
CRQM	**Cirque**	**87.05**	**29**	*e*P	**P**	**13 03 25.1**	**+0.5**
	comp=Z,15nm,1.0s						
TGL	**Tana Glacier**	**87.20**	**29**	*e*P	**P**	**13 03 26.1**	**+0.9**
	comp=Z,19nm,1.2s						
EGAK	**Eagle**	**87.99**	**25**	*e*P	**P**	**13 03 29.0**	**+0.3**
	comp=Z,3.5nm,1.0s						
EGAK				*e*pP	**sP**	**13 03 39.8**	**-0.5**
KLMR	**Klimovskoe**	**88.14**	**331**	*e*P	**P**	**13 03 26.5**	**-2.9**
KLMR				pmax	pmax		
	comp=Z,20nm,0.9s						
KLMR	**Klimovskoe**	**88.14**	**331**	*e*P	**P**	**13 03 26.6**	**-2.9**
KLMR				AMP		13 03 39.7	
	comp=Z,20nm,0.9s						
DAWY	**Dawson**	**88.77**	**26**	*e*P	**P**	**13 03 33.4**	**+0.8**
DAWY				*e*pP	**sP**	**13 03 42.6**	**-1.6**
APA	**Apatity**	**90.40**	**338**	*e*P	**P**	**13 03 43.0**	**+3.0**
APA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ASF	**Jabal al Asfar**	**90.97**	**302**	P	**P**	**13 03 43.5**	**0.0**
	comp=Z,3.9nm,0.7s,baz=87,slow=3.7,SNR=7.2						
SYO	**Syowa Base**	**91.77**	**201⇑**	*i* X	**P**	**13 03 45.0**	**-1.3**
QSPA	**South Pole Qui**	**91.94**	**180**	P	**P**	**13 03 47.6**	**+0.2**
	comp=Z,6.9nm,0.8s,baz=340,slow=2.0,SNR=5.8						
MMAI	**Mount Meron Ar**	**92.18**	**303**	P	**P**	**13 03 49.1**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=64,slow=9.8,SNR=3.3						
SPITS	**Spitsbergen Ar**	**92.63**	**349**	P	**P**	**13 03 49.6**	**-0.6**
	comp=Z,2.7nm,0.7s,baz=101,slow=17,SNR=3.5						
SPITS				LR	LR	13 52 21.4	
	comp=Z,28nm,18.2s,baz=70,slow=40						
EIL	**Elat**	**92.79**	**300**	P	**P**	**13 03 51.5**	**-0.4**
	comp=Z,37nm,0.4s,baz=350,slow=6.1						
ARA0	**ARCESS Array S**	**92.92**	**340**	*e*P	**P**	**13 03 50.6**	**-1.1**
ARCES	**ARCESS Array B**	**92.92**	**340**	P	**P**	**13 03 50.6**	**-1.1**
	comp=Z,6.7nm,0.8s,baz=87,slow=5.5,SNR=9.7						
ARCES	**ARCESS Array B**	**92.92**	**340**	*e*P	**P**	**13 03 50.4**	**-1.3**
ARCES				*e*pP	**sP**	**13 04 02.0**	**-1.3**
ARCES	**ARCESS Array B**	**92.92**	**340**	*e*P	**P**	**13 03 50.4**	**-1.3**
ARCES				*e**PP	**sP**	**13 04 02.0**	**-1.3**
BR101	**Keskin Array S**	**93.07**	**310**	*e*P	**P**	**13 03 52.0**	**-1.2**
BRTR	**Keskin Array B**	**93.07**	**310**	P	**P**	**13 03 52.0**	**-1.2**
	comp=Z,1.3nm,0.8s,baz=94,slow=5.8,SNR=6.8						
FIA0	**FINESS Array S**	**94.53**	**332**	*e*P	**P**	**13 03 59.2**	**0.0**
FINES	**FINESS Array B**	**94.53**	**332**	P	**P**	**13 03 59.2**	**0.0**
	comp=Z,2.0nm,0.7s,baz=52,slow=9.0,SNR=4.5						
AKASG	**Malin Array Be**	**94.82**	**321**	P	**P**	**13 03 59.1**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=68,slow=4.4,SNR=4.7						
KIEV	**Kiev**	**94.83**	**321**	*i* P	**P**	**13 03 57.8**	**-3.0**
KIEV				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MLR	**Muntele Rosu**	**97.90**	**316**	P	**P**	**13 04 14.5**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=315,slow=5.3,SNR=3.7						
BUR04	**Bucovina Ar. S**	**97.97**	**319**	*e*P	**P**	**13 04 14.5**	**-0.8**
BUR04				*e*pP	**sP**	**13 04 25.7**	**-1.2**
BUR08	**Bucovina Ar. S**	**97.97**	**319**	*e*P	**P**	**13 04 14.6**	**-0.8**
BUR08				*e*pP	**sP**	**13 04 26.1**	**-0.9**
RES	**Resolute Bay**	**99.01**	**11**	*e*P	**Pdif**	**13 04 19.7**	**+0.5**
	comp=Z,8.8nm,0.8s						
RES				*e*pP	**sP**	**13 04 31.6**	**+0.8**
RES	**Resolute Bay**	**99.01**	**11**	*e*P	**Pdif**	**13 04 19.7**	**+0.5**
RES				*e**PP	**sP**	**13 04 31.6**	**+0.8**
RES				pmax	pmax		
	comp=Z,9.0nm,0.8s						
YKA	**Yellowknife Ar**	**99.97**	**25**	P	**Pdif**	**13 04 24.0**	**+0.3**
	comp=Z,1.5nm,0.9s,baz=295,slow=4.7,SNR=12						
YKB5	**Yellowknife Ar**	**99.97**	**25**	*e*Pdif	**Pdif**	**13 04 23.9**	**+0.2**
HLID	**Hailey**	**107.32**	**43**	P	**PKiKP**	**13 09 06.8**	**+0.9**
	baz=290						
BOZ	**Bozeman (W)**	**108.42**	**40**	P	**PKiKP**	**13 09 08.7**	**+0.8**
	baz=293						
ANMO	**Albuquerque**	**116.23**	**49**	P	**PKPdf**	**13 09 24.0**	**+0.9**
	baz=293						
TASL	**Snake Pit, Alb**	**116.23**	**49**	P	**PKPdf**	**13 09 23.9**	**+0.8**
	baz=293						
MNTX	**Cornudas Mount**	**118.31**	**52**	P	**PKPdf**	**13 09 27.5**	**+0.6**
	baz=292						
MNTX	**Cornudas Mount**	**118.31**	**52**	*e*PKPdf	**PKPdf**	**13 09 27.1**	**+0.2**
ECSD	**EROS Data Cent**	**118.68**	**36**	*e*PKPdf	**PKPdf**	**13 09 27.0**	**-0.3**
TX31	**Lajitas Ar. Si**	**120.56**	**54**	*e*PKPdf	**PKPdf**	**13 09 31.7**	**+0.3**
TXAR	**Lajitas Array**	**120.56**	**54**	PKP	**PKPdf**	**13 09 32.1**	**+0.7**
	comp=Z,1.1nm,0.7s,baz=201,slow=1.7,SNR=15						
JCT	**Junction City**	**123.17**	**51**	P	**PKPdf**	**13 09 36.7**	**+0.3**
	baz=296						
JCT	**Junction City**	**123.17**	**51**	*e*PKPdf	**PKPdf**	**13 09 36.5**	**+0.1**
JCT	**Junction City**	**123.17**	**51**	*e*PKIKP	**PKPdf**	**13 09 36.5**	**+0.1**
R38A	**Fenwick Farm,**	**123.54**	**40**	P	**PKPdf**	**13 09 36.3**	**-0.5**
	baz=305						
Q39A	**Willow Grove F**	**123.63**	**39**	P	**PKPdf**	**13 09 36.8**	**-0.1**
	baz=306						
S38A	**Stockton**	**123.85**	**41**	P	**PKPdf**	**13 09 37.5**	**+0.1**
	baz=305						
T38A	**Diamond**	**123.93**	**42**	P	**PKPdf**	**13 09 37.5**	**-0.1**
	baz=304						
R39A	**Chumby, Stover**	**124.02**	**40**	P	**PKPdf**	**13 09 37.6**	**-0.1**
	baz=306						
S39A	**Bolivar**	**124.20**	**40**	P	**PKPdf**	**13 09 37.8**	**-0.3**
	baz=305						
S39A	**Bolivar**	**124.20**	**40**	*e*PKPdf	**PKPdf**	**13 09 38.2**	**+0.1**
R40A	**Maddies Statio**	**124.52**	**39**	P	**PKPdf**	**13 09 38.6**	**0.0**
	baz=307						
R40A	**Maddies Statio**	**124.52**	**39**	*e*PKPdf	**PKPdf**	**13 09 38.7**	**0.0**
T39A	**Clever**	**124.54**	**41**	P	**PKPdf**	**13 09 38.9**	**+0.1**
	baz=305						
Q41A	**Truxton**	**124.77**	**38**	P	**PKPdf**	**13 09 39.5**	**+0.4**
	baz=308						
U39A	**Green Forest**	**124.84**	**42**	P	**PKPdf**	**13 09 39.4**	**+0.1**
	baz=304						
P42A	**Winchester**	**124.92**	**37**	P	**PKPdf**	**13 09 39.7**	**+0.3**
	baz=309						
V39A	**Pettigrew**	**125.03**	**43**	P	**PKPdf**	**13 09 39.8**	**0.0**
	baz=304						
T40A	**Mansfield**	**125.03**	**41**	P	**PKPdf**	**13 09 39.6**	**-0.1**
	baz=306						
R41A	**Rosebud**	**125.08**	**39**	P	**PKPdf**	**13 09 40.1**	**+0.4**
	baz=308						
U40A	**Yellville**	**125.27**	**42**	P	**PKPdf**	**13 09 40.3**	**+0.1**
	baz=305						
S41A	**Jillco Farms,**	**125.27**	**40**	P	**PKPdf**	**13 09 40.2**	**0.0**
	baz=307						
W39A	**Magazine**	**125.29**	**43**	P	**PKPdf**	**13 09 40.7**	**+0.5**
	baz=304						
CCM	**Cathedral Cave**	**125.31**	**39**	P	**PKPdf**	**13 09 40.3**	**+0.1**
	baz=308						
X39A	**Fountain Ranch**	**125.43**	**44**	P	**PKPdf**	**13 09 41.1**	**+0.6**
	baz=303						
T41A	**Mountain View**	**125.58**	**40**	P	**PKPdf**	**13 09 40.7**	**-0.1**
	baz=306						
V40A	**Witts Springs**	**125.60**	**42**	P	**PKPdf**	**13 09 40.9**	**0.0**
	baz=305						
V40A	**Witts Springs**	**125.60**	**42**	*e*PKPdf	**PKPdf**	**13 09 41.0**	**0.0**
MIAR	**Mount Ida**	**125.79**	**44**	P	**PKPdf**	**13 09 42.0**	**+0.8**
	baz=303						
**M

	comp=N,2125μm,0.3s							
NOVE					AML	AML		
	comp=E,2180μm,0.7s							
NOVE					AML	AML		
	comp=N,2120μm,0.3s							
NOVE					AML	AML		
	comp=N,2120μm,0.3s							
NOVE					AML	AML		
	comp=E,2180μm,0.7s							
SBPO	**S.Benedetto Po**	**0.17**	**1**	*e*P	**Pg**	**13 16 43.5**	**-0.4**	
SBPO				*e*S	**Sg**	**13 16 49.7**	**+3.1**	
SBPO	**S.Benedetto Po**	**0.17**	**1**	*e*P	**Pg**	**13 16 43.5**	**-0.4**	
SBPO				*e*S	**Sg**	**13 16 49.7**	**+3.1**	
SBPO					AML	AML		
	comp=E,2085μm,0.3s							
SBPO					AML	AML		
	comp=N,8335μm,0.3s							
SBPO					AML	AML		
	comp=E,2085μm,0.3s							
SBPO					AML	AML		
	comp=N,8335μm,0.3s							
SBPO					AML	AML		
	comp=E,2085μm,0.3s							
SBPO					AML	AML		
	comp=N,8335μm,0.3s							
RAVA	**Ravarino**	**0.19**	**130**	*e*P	**Pg**	**13 16 43.8**	**-0.3**	
RAVA				*e*S	**Sg**	**13 16 48.7**	**+1.7**	
RAVA	**Ravarino**	**0.19**	**130**	*e*P	**Pg**	**13 16 43.8**	**-0.3**	
RAVA				*e*S	**Sg**	**13 16 48.7**	**+1.7**	
RAVA					AML	AML		
	comp=E,2375μm,0.6s							
RAVA					AML	AML		
	comp=N,1710μm,0.6s							
RAVA					AML	AML		
	comp=E,2370μm,0.6s							
RAVA					AML	AML		
	comp=N,1705μm,0.6s							
T0802	**SanFelice sul**	**0.19**	**91**	*e*P	**Pg**	**13 16 43.4**	**-0.7**	
T0802				*e*S	**Sg**	**13 16 47.8**	**+0.8**	
T0802	**SanFelice sul**	**0.19**	**91**	*e*P	**Pg**	**13 16 43.4**	**-0.7**	
T0802				*e*S	**Sg**	**13 16 47.9**	**+0.8**	
T0802					AML	AML		
	comp=E,2940μm,0.2s							
T0802					AML	AML		
	comp=N,2885μm,0.7s							
T0802					AML	AML		
	comp=E,2940μm,0.2s							
T0802					AML	AML		
	comp=N,2880μm,0.8s							
T0800	**Massa Finalese**	**0.24**	**97**	*e*P	**Pg**	**13 16 44.2**	**-0.7**	
T0800				*e*S	**Sg**	**13 16 49.7**	**+1.3**	
T0800	**Massa Finalese**	**0.24**	**97**	*e*P	**Pg**	**13 16 44.2**	**-0.7**	
T0800				*e*S	**Sg**	**13 16 49.7**	**+1.3**	
T0800					AML	AML		
	comp=E,2050μm,1.1s							
T0800					AML	AML		
	comp=N,2380μm,0.6s							
T0800					AML	AML		
	comp=E,1845μm,1.1s							
T0800					AML	AML		
	comp=N,2120μm,0.5s							
T0800					AML	AML		
	comp=E,2050μm,1.1s							
T0800					AML	AML		
	comp=N,2380μm,0.6s							
T0800					AML	AML		
	comp=E,1845μm,1.1s							
T0800					AML	AML		
	comp=N,2120μm,0.5s							
T0805	**Bondeno (FE)**	**0.29**	**82**	*e*P	**Pg**	**13 16 45.3**	**-0.6**	
T0805				*e*S	**Sb**	**13 16 51.2**	**-0.3**	
T0805	**Bondeno (FE)**	**0.29**	**82**	*e*P	**Pg**	**13 16 45.3**	**-0.6**	
T0805				*e*S	**Sb**	**13 16 51.2**	**-0.3**	
TEOL	**Teolo**	**0.72**	**48**	*e*Pg	**Pb**	**13 16 54.3**	**+0.2**	
TEOL				*e*Sg	**Sn**	**13 17 06.2**	**-0.2**	
TEOL	**Teolo**	**0.72**	**48**	*e*P	**Pg**	**13 16 52.9**	**-0.9**	
TEOL	**Teolo**	**0.72**	**48**	*e*Pg	**Pb**	**13 16 54.3**	**+0.2**	
TEOL				*e*S	**Sb**	**13 17 03.8**	**-0.1**	
TEOL				*e*Sg	**Sn**	**13 17 06.2**	**-0.2**	
TEOL	**Teolo**	**0.72**	**48**	*e*P	**Pg**	**13 16 52.9**	**-0.9**	
TEOL				*e*S	**Sb**	**13 17 03.8**	**-0.1**	
TEOL					AML	AML		
	comp=E,392μm,0.3s							
TEOL					AML	AML		
	comp=N,426μm,0.3s							
TEOL					AML	AML		
	comp=N,426μm,0.3s							
TEOL					AML	AML		
	comp=E,392μm,0.3s							
ROVR	**Rover¯¤ Verone**	**0.78**	**8**	*e*P	**Pb**	**13 16 55.2**	**0.0**	
ROVR				*e*S	**Sn**	**13 17 07.8**	**-0.2**	
ROVR	**Rover¯¤ Verone**	**0.78**	**8**	*e*P	**Pb**	**13 16 55.2**	**0.0**	
ROVR				*e*S	**Sn**	**13 17 07.8**	**-0.2**	
ROVR					AML	AML		
	comp=E,249μm,0.2s							
ROVR					AML	AML		
	comp=N,390μm,0.9s							
ROVR					AML	AML		
	comp=E,249μm,0.2s							
ROVR					AML	AML		
	comp=N,390μm,0.9s							
MARN	**Marana (Italy)**	**0.79**	**15**	*e*Pg	**Pg**	**13 16 54.8**	**-0.2**	
MARN				*e*Sg	**Sn**	**13 17 07.6**	**-0.5**	
MARN	**Marana (Italy)**	**0.79**	**15**	*e*Pg	**Pg**	**13 16 54.8**	**-0.2**	
MARN				*e*Sg	**Sn**	**13 17 07.6**	**-0.5**	
SALO	**Salr**	**0.79**	**340**	*e*P	**Pb**	**13 16 55.0**	**-0.3**	
SALO				*e*S	**Sb**	**13 17 07.3**	**+1.4**	
SALO	**Salr**	**0.79**	**340**	*e*P	**Pn**	**13 16 56.0**	**-0.6**	
SALO				*e*S	**Sb**	**13 17 07.3**	**+1.4**	
BALD	**Monte Baldo**	**0.81**	**355**	*e*Pg	**Pb**	**13 16 55.8**	**+0.1**	
BALD	**Monte Baldo**	**0.81**	**355**	*e*Pg	**Pb**	**13 16 55.8**	**+0.1**	
MAGA	**Magasa**	**0.92**	**347**	*e*P	**Pg**	**13 16 56.0**	**-1.6**	
MAGA				*e*S	**Sb**	**13 17 09.9**	**+0.2**	
MAGA	**Magasa**	**0.92**	**347**	*e*P	**Pg**	**13 16 56.0**	**-1.6**	
MAGA				*e*S	**Sb**	**13 17 09.9**	**+0.2**	
MAGA					AML	AML		
	comp=E,366μm,1.1s							
MAGA					AML	AML		
	comp=N,268μm,0.4s							
MAGA					AML	AML		
	comp=E,366μm,1.1s							
MAGA					AML	AML		
	comp=N,268μm,0.4s							
DOSS	**Dosso del Somm**	**1.02**	**11**	*e*Pg	**Pg**	**13 16 58.3**	**-1.2**	
DOSS				*e*Sg	**Sb**	**13 17 13.2**	**+0.5**	
DOSS	**Dosso del Somm**	**1.02**	**11**	*e*Pg	**Pg**	**13 16 58.3**	**-1.2**	
DOSS				*e*Sg	**Sb**	**13 17 13.2**	**+0.5**	
MSSA	**Maissana**	**1.15**	**241**	AML	AML			
	comp=E,76μm,0.5s							
MSSA					AML	AML		
	comp=N,73μm,0.7s							
MSSA					AML	AML		
	comp=N,73μm,0.7s							
MSSA					AML	AML		
	comp=E,76μm,0.5s							
CGRP	**Cima Grappa**	**1.18**	**32**	*e*P	**Pg**	**13 17 01.5**	**-1.0**	
CGRP				*e*S	**Sb**	**13 17 17.8**	**+0.5**	
CGRP	**Cima Grappa**	**1.18**	**32**	*e*P	**Pg**	**13 17 01.5**	**-1.0**	
CGRP				*e*S	**Sb**	**13 17 17.8**	**+0.5**	
SFI	**Santa Sofia**	**1.18**	**145**	AML	AML			
	comp=N,73μm,0.8s							
SFI					AML	AML		
	comp=E,53μm,0.8s							
SFI					AML	AML		
	comp=N,73μm,0.8s							
SFI					AML	AML		
	comp=E,53μm,0.8s							
MABI	**Malga Bissina**	**1.21**	**347**	AML	AML			
	comp=N,22μm,0.5s							
MABI					AML	AML		
	comp=E,25μm,0.7s							
MABI					AML	AML		
	comp=N,22μm,0.5s							
MABI					AML	AML		
	comp=E,25μm,0.7s							
KOSI	**Kohlern**	**1.62**	**11**	AML	AML			
	comp=E,45μm,0.7s							
KOSI					AML	AML		
	comp=N,43μm,1.5s							
KOSI					AML	AML		
	comp=E,45μm,0.7s							
KOSI					AML	AML		
	comp=N,43μm,1.5s							

*CSEM **18** 13:17:21.9, 44°.86N×10°.97E, h7km, ML2.6/6*
ROM 18 13:17:21.9±0.1, 44°.859N±0°.004×10°.966E±0°.003, h7km, Md1.1/5, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NDIM	**Novi di Modena**	**0.06**	**301**	AML	AML		
	comp=E,9235μm,0.2s						
NDIM				AML	AML		
	comp=N,25155μm,1.6s						
NDIM				AML	AML		
	comp=E,9355μm,0.2s						
NDIM				AML	AML		
	comp=N,7025μm,0.1s						
T0826	**Rio Saliceto (**	**0.11**	**260**	P	Pg	13 17 25.9	+1.6
T0826				S	Sg	13 17 29.3	+3.3
T0826	**Rio Saliceto (**	**0.11**	**260**	P	Pg	13 17 25.9	+1.6
T0826				S	Sg	13 17 29.3	+3.3
T0826				END			
T0826				END			
T0825	**Gonzaga (MN)**	**0.14**	**323**	P	Pg	13 17 26.8	+1.9
T0825				S	Sg	13 17 31.2	+4.3
T0825	**Gonzaga (MN)**	**0.14**	**323**	P	Pg	13 17 26.8	+1.9
T0825				S	Sg	13 17 31.2	+4.3
T0825				AML	AML		
	comp=E,5755μm,0.1s						
T0825				AML	AML		
	comp=N,2825μm,0.1s						
T0825				END			
T0825				END			
T0802	**SanFelice sul**	**0.15**	**84**	P	Pg	13 17 27.3	+2.2
T0802				S	Sg	13 17 31.6	+4.4
T0802	**SanFelice sul**	**0.15**	**84**	P	Pg	13 17 27.3	+2.2
T0802				S	Sg	13 17 31.6	+4.4
T0802				END			
T0802				END			
NOVE	**Novellara**	**0.19**	**251**	P	Pg	13 17 27.4	+1.7
NOVE				S	Sg	13 17 32.1	+3.9
NOVE	**Novellara**	**0.19**	**251**	P	Pg	13 17 27.4	+1.7
NOVE				S	Sg	13 17 32.1	+3.9
NOVE				END			
NOVE				END			
T0800	**Massa Finalese**	**0.20**	**93**	P	Pg	13 17 27.0	+1.1
T0800				S	Sg	13 17 33.0	+4.4
T0800	**Massa Finalese**	**0.20**	**93**	P	Pg	13 17 27.9	+2.1
T0800				S	Sg	13 17 33.0	+4.4
T0800				END			
T0800				END			
T0805	**Bondeno (FE)**	**0.26**	**77**	P	Pb	13 17 29.1	+0.2
T0805	**Bondeno (FE)**	**0.26**	**77**	P	Pb	13 17 29.1	+0.2

*KRNET **18** 13:21:56.7±0.1, 41°.96N×76°.37E, h17km, mb2.6*
*SOME **18** 13:21:57.1, 41°.97N×76°.38E, h10km*
*NNC **18** 13:21:57.7±0.7, 42°.03N×76°.35E, h0km, mb2.7, mpv2.7, Error ellipse: s-maj=4.1km s-min=2.4km az=173.0*
*KNET **18** 13:21:59.2±0.4, 42°.03N×76°.19E, h4km±2km, ml2.0, Error ellipse: s-maj=2.5km s-min=1.4km az=113.0*
ISC 18 13:21:57.5±1.0, 41°.99N±0°.03×76°.36E±0°.02, h9km±8km, n48, σ1°.17/87, 27C-25D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**0.27**	**342**	⇓P	**Pg**	**13 22 03.1**	**+0.1**
	278nm,0.1s,SNR=1743						
ULHL				⇑S	**Sg**	**13 22 07.5**	**+0.8**
	216nm,0.1s						
ULHL	**Ulahol**	**0.27**	**342**	⇓*i*P	**Pg**	**13 22 03.1**	**+0.1**
	baz=42						
ULHL				⇓*i*S	**Sg**	**13 22 07.3**	**+0.5**
	baz=42						
BOOM	**Boomskoye usch**	**0.59**	**328**	⇓*i*P	**Pg**	**13 22 08.8**	**-0.2**
	baz=29						
BOOM				⇓*i*S	**Sg**	**13 22 17.1**	**+0.4**
	baz=29						
NRN	**Naryn**	**0.62**	**206**	⇓*i*P	**Pg**	**13 22 08.6**	**-1.0**
	baz=9.0						
NRN				⇓*i*S	**Sg**	**13 22 16.8**	**-0.9**
	baz=9.0						
KZA	**Kyzart**	**0.83**	**276**	P	**Pg**	**13 22 12.9**	**-0.7**
	22nm,0.2s,SNR=65						
KZA				⇑S	**Sg**	**13 22 24.1**	**-0.3**
	55nm,0.2s						
KZA	**Kyzart**	**0.83**	**276**	⇓*i*P	**Pg**	**13 22 12.6**	**-1.0**
	baz=79						
KZA				⇓*i*S	**Sg**	**13 22 23.9**	**-0.5**
	baz=79						
IZV	**Izvestkoviy**	**1.06**	**10**	*e*P	**Pb**	**13 22 17.8**	**-0.3**
	10nm,0.1s						
IZV				*e*S	**Sn**	**13 22 32.4**	**-1.3**
	56nm,0.2s						
TKM2	**Tokmak 2**	**1.09**	**329**	⇑P	**Pg**	**13 22 17.8**	**-0.6**
	2.0nm,0.3s						
TKM2				⇓S	**Sb**	**13 22 32.8**	**-0.1**
	17nm,0.4s						
TKM2	**Tokmak 2**	**1.09**	**329**	⇑P	**Pg**	**13 22 17.9**	**-0.6**
	5.6nm,0.1s,SNR=106						
TKM2				⇓S	**Sn**	**13 22 33.2**	**-1.1**
	36nm,0.1s						
TKM2	**Tokmak 2**	**1.09**	**329**	⇓*i*P	**Pg**	**13 22 17.7**	**-0.6**
	baz=30						
TKM2				⇓*i*S	**Sb**	**13 22 33.0**	**+0.1**
	baz=30						
KST	**Kastek**	**1.09**	**345**	*e*P	**Pg**	**13 22 18.2**	**-0.4**
	12nm,0.4s						
KST				*e*S	**Sn**	**13 22 33.0**	**-1.3**
	65nm,0.4s						
TARG	**Taragay, Kyrgy**	**1.11**	**103**	⇓*i*P	**Pg**	**13 22 17.2**	**-1.8**
	baz=2.0						
TARG				⇓*i*S	**Sg**	**13 22 32.2**	**-1.3**
	baz=2.0						
TNSS	**Tian-Shan**	**1.13**	**22**	*e*P	**Pg**	**13 22 18.6**	**-0.7**
	33nm,0.2s						
TNSS				*e*S	**Sb**	**13 22 33.9**	**-0.6**
	60nm,0.2s						
MTBS	**Maitube**	**1.14**	**3**	*e*P	**Pb**	**13 22 19.1**	**-0.4**
	10nm,0.1s						
MTBS				*e*S	**Sn**	**13 22 34.5**	**-1.0**
	42nm,0.2s						
KBK	**Karagaybulak**	**1.24**	**303**	⇑P	**Pn**	**13 22 20.9**	**-0.3**
	6.9nm,0.1s,SNR=25						
KBK				⇑S	**Sn**	**13 22 37.7**	**-0.4**
	28nm,0.2s						
KBK	**Karagaybulak**	**1.24**	**303**	⇑*i*P	**Pn**	**13 22 20.5**	**-0.6**
	baz=4.0						
KBK				⇑*i*S	**Sg**	**13 22 37.3**	**-0.1**
	baz=4.0						
MDOK	**Medeo**	**1.28**	**23**	⇓P	**Pn**	**13 22 21.1**	**-0.5**
	3.3nm,0.2s						
MDOK				⇑S	**Sn**	**13 22 38.4**	**-0.6**
	19nm,0.4s						
MDOK	**Medeo**	**1.28**	**23**	*e*P	**Pn**	**13 22 21.3**	**-0.4**
	20nm,0.2s						
MDOK				*e*S	**Sn**	**13 22 38.2**	**-0.8**
	29nm,0.3s						
KNDC	**Almaty**	**1.30**	**20**	P	**Pg**	**13 22 22.3**	**-0.3**
KNDC				S	**Sn**	**13 22 40.2**	**+0.7**
DGS	**Degeres**	**1.32**	**341**	*e*P	**Pb**	**13 22 22.3**	**-0.3**
	8.0nm,0.2s						
DGS				*e*S	**Sn**	**13 22 40.0**	**0.0**
	42nm,0.5s						
KOTS	**Kotyrbulak**	**1.36**	**24**	*e*P	**Pb**	**13 22 22.9**	**-0.3**
	22nm,0.2s						
KOTS				*e*S	**Sg**	**13 22 41.2**	**-0.2**
	41nm,0.2s						
UCH	**Uchtor**	**1.39**	**280**	⇑P	**Pn**	**13 22 23.3**	**-0.2**
	2.2nm,0.2s,SNR=7.7						
UCH				⇓S	**Sg**	**13 22 42.6**	**+0.2**
	7.2nm,0.2s						
UCH	**Uchtor**	**1.39**	**280**	⇓*i*P	**Pn**	**13 22 23.3**	**-0.2**
	baz=82						
UCH				⇓*i*S	**Sb**	**13 22 41.8**	**-0.2**
	baz=82						
CHMS	**Chumysh**	**1.56**	**311**	⇑P	**Pb**	**13 22 26.6**	**+0.1**
	5.6nm,0.3s,SNR=11						
CHMS				⇓S	**Sg**	**13 22 47.9**	**+0.3**
	9.6nm,0.2s						
CHMS	**Chumysh**	**1.56**	**311**	⇑*i*P	**Pb**	**13 22 26.3**	**-0.2**
	baz=12						
CHMS				⇑*i*S	**Sg**	**13 22 46.9**	**-0.7**
	baz=12						
PRZ	**Przheval'sk**	**1.59**	**71**	⇑*i*P	**Pn**	**13 22 26.0**	**-0.1**
	baz=70						
PRZ				⇑*i*S	**Sb**	**13 22 47.5**	**-0.1**
	baz=70						
KTBS	**Karatobe**	**1.74**	**8**	*e*P	**Pg**	**13 22 29.8**	**-1.0**
	12nm,0.2s						
KTBS				*e*S	**Sg**	**13 22 52.9**	**-0.5**
	38nm,0.2s						
SATY	**Saty**	**1.85**	**54**	*e*P	**Pb**	**13 22 31.0**	**-0.6**
	37nm,0.2s						
SATY				*e*S	**Sb**	**13 22 55.1**	**+0.1**
	83nm,0.2s						
USP	**Ospenovka**	**1.87**	**314**	⇑P	**Pb**	**13 22 32.0**	**+0.1**
	5.7nm,0.1s,SNR=23						
USP	**Ospenovka**	**1.87**	**314**	⇑*i*P	**Pb**	**13 22 31.3**	**-0.6**
	baz=14						
USP				⇑*i*S	**Sg**	**13 22 56.4**	**-1.3**
	baz=14						
KUU	**Kurty**	**1.90**	**360**	*e*P	**Pg**	**13 22 32.8**	**-1.2**
	16nm,0.1s						
KUU				*e*S	**Sg**	**13 22 58.0**	**-0.7**
	104nm,0.4s						
CHKK	**Chushkaly**	**1.92**	**14**	*e*P	**Pb**	**13 22 33.0**	**+0.3**
	18nm,0.4s						
CHKK				*e*S	**Sg**	**13 22 58.6**	**-0.6**
	81nm,0.3s						
ZHN	**Zhinishke**	**1.93**	**52**	*e*P	**Pb**	**13 22 32.1**	**-0.9**
	17nm,0.2s						
ZHN				*e*S	**Sb**	**13 22 57.3**	**+0.1**
	220nm,0.2s						
AML	**Almayashu**	**1.99**	**275**	⇑P	**Pb**	**13 22 34.3**	**+0.3**
	3.1nm,0.3s,SNR=22						
AML	**Almayashu**	**1.99**	**275**	⇑*i*P	**Pn**	**13 22 33.0**	**+1.4**
	baz=76						
AML				⇑*i*S	**Sb**	**13 22 59.2**	**+0.2**
	baz=76						
KURS	**Kuram**	**2.01**	**41**	*e*P	**Pb**	**13 22 33.8**	**-0.4**
	5.1nm,0.2s						
KURS				*e*S	**Sg**	**13 22 59.9**	**-2.1**
	23nm,0.2s						
KPKS	**Kokpek**	**2.26**	**49**	*e*P	**Pb**	**13 22 38.6**	**0.0**
	33nm,0.1s						
KPKS				*e*S	**Sg**	**13 23 07.9**	**-2.3**
	77nm,0.5s						
UZB	**Uzynbulak**	**2.28**	**59**	*e*P	**Pb**	**13 22 38.9**	**-0.1**
	7.2nm,0.2s						
UZB				*e*S	**Sb**	**13 23 08.5**	**+1.2**
	28nm,0.4s						
MRKS	**Merke**	**2.44**	**289**	*e*P	**Pb**	**13 22 42.8**	**+1.3**
	5.3nm,0.3s						
MRKS				*e*S	**Sg**	**13 23 15.4**	**-0.5**
	13nm,0.3s						
ARXS	**Arharly**	**2.47**	**25**	*e*P	**Pb**	**13 22 41.9**	**-0.2**
	19nm,0.4s						
ARXS				*e*S	**Sb**	**13 23 13.8**	**+1.2**
	58nm,0.4s						
SHLS	**Shalkode**	**2.57**	**62**	*e*P	**Pg**	**13 22 49.1**	**+2.2**
	5.4nm,0.2s						
SHLS				*e*S	**Sg**	**13 23 25.8**	**+5.7**
	31nm,0.5s						
PDGK	**Podgornoye**	**2.67**	**59**	⇓Pn	**Pb**	**13 22 43.0**	**-2.6**
PDGK				⇓Lg	Lg	13 23 21.4	
	18nm,0.6s						
PDGK	**Podgornoye**	**2.67**	**59**	⇑*i*eP	**Pn**	**13 22 42.4**	**+1.6**
	baz=58						
PDGK				⇑*i*S	**Sn**	**13 23 15.2**	**+1.9**
	baz=58						
MNAS	**Manas**	**2.90**	**281**	⇓Pg	**Pb**	**13 22 50.9**	**+1.4**
MNAS				⇑Lg	Lg	13 23 29.6	
	3.5nm,0.5s						
SFK	**Sufi-Kurgan**	**2.93**	**228**	⇑Lg	Lg	13 23 30.5	
	8.8nm,0.4s						
DJR	**Jarkent**	**3.43**	**46**	*e*P	**Pb**	**13 22 58.6**	**+0.1**
	5.5nm,0.5s						
DJR				*e*S	**Sb**	**13 23 42.7**	**+2.4**
	14nm,0.4s						
KK31	**Karatay Array**	**4.46**	**286**	⇑Pg	**Pb**	**13 23 19.5**	**+3.5**
	0.3nm,0.3s,baz=92,slow=18,SNR=4.0						
KK31				⇑Lg	Lg	13 24 19.2	
	0.7nm,0.3s,baz=106,slow=28,SNR=3.5						
MK31	**Makanchi Array**	**6.41**	**40**	⇓Pg	Pb	13 23 54.2	+5.0
	0.5nm,0.6s						
MK31				⇓Lg	Lg	13 25 20.1	
	0.9nm,0.7s						

*NIED **18** 13:32:00, 23°.70N×121°.60E, h5km, Mw3.8 Best double couple: M0=6.25000×10^14 NP1:φs=354.00000°, δ53.00000°, λ-39.00000°. NP2:φs=111.00000°, δ60.00000°, λ-136.00000°.*
*TAP **18** 13:32:02.9, 23°.67N×121°.54E, h6km, ML4.0, C*
*JMA **18** 13:32:02.6±0.1, 23°.66N×121°.58E, h0km, M3.5*
*ISCJB **18** 13:32:03.3±0.3, 23°.66N±0°.01×121°.56E±0°.01, h4km±2km, mb3.5/8, MS3.1/1, Error ellipse: s-maj=2.4km s-min=1.5km az=31.2*
*IDC **18** 13:32:15.0±7.0, 23°.46N×121°.60E, h99km±68km, mb3.3/8, mb1 3.5/9, mb1mx3.2/71, mbtmp3.7/9, ML3.3/1, MS3.1/3, Ms1 3.1/3, ms1mx2.7/38, Error ellipse: s-maj=31.8km s-min=18.0km az=77.0*
ISC 18 13:32:03.1±1.1, 23°.67N±0°.01×121°.57E±0°.02, h0km±8km, n120, σ1°.03/175, mb3.7/8, 11C-19D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	**Guangfu**	**0.13**	**270**	⇑*i*P	**Pg**	**13 32 05.5**	**-0.2**
	baz=277						
EGFH				S	**Sg**	**13 32 07.1**	**-0.2**
	baz=277						
ESL	**Shilin**	**0.19**	**319**	⇓*i*P	**Pg**	**13 32 06.6**	**-0.2**
	baz=320						
ESL				*i* S	**Sg**	**13 32 09.5**	**+0.2**
	baz=320						
HGSD	**Ruisui**	**0.22**	**218**	*e*P	**Pg**	**13 32 08.7**	**+1.3**
	baz=204						
HGSD				*e*S	**Sg**	**13 32 13.0**	**+2.7**
	baz=204						
ENLB	**Shoufeng**	**0.23**	**7**	⇓P	**Pg**	**13 32 09.8**	**+2.2**
	baz=11						
EHY	**Hungye**	**0.28**	**235**	⇑*i*P	**Pg**	**13 32 08.5**	**0.0**
	baz=239						
EHY				*e*S	**Sg**	**13 32 12.9**	**+0.8**
	baz=239						
HWA	**Hwalien**	**0.31**	**6**	⇓P	**Pb**	**13 32 10.3**	**-1.2**
	baz=359						
HWA				*e*S	**Sb**	**13 32 16.8**	**-0.3**
	baz=359						
YULB	**Yu-li**	**0.37**	**222**	⇑P	**Pg**	**13 32 10.6**	**+0.3**
	baz=230						
YULB				*e*S	**Sg**	**13 32 16.4**	**+1.3**
	baz=230						
VWDT	**VWDT**	**0.40**	**282**	⇑P	**Pg**	**13 32 10.9**	**0.0**
	baz=283						
VWDT				*e*S	**Sg**	**13 32 16.2**	**+0.1**
	baz=283						
TWF1	**Yuli**	**0.40**	**219**	⇑P	**Pg**	**13 32 11.3**	**+0.5**
	baz=224						
TWF1				*e*S	**Sb**	**13 32 17.9**	**-2.0**
	baz=224						
TWD	**Chiawan**	**0.41**	**3**	⇓*i*P	**Pg**	**13 32 11.6**	**+0.6**
	baz=356						
TWD				S	**Sb**	**13 32 18.3**	**-1.7**
	baz=356						
NACB	**Ninganchiao**	**0.50**	**2**	⇓P	**Pg**	**13 32 13.0**	**+0.2**
	baz=352						
NACB				*e*S	**Sb**	**13 32 21.1**	**-1.6**
	baz=352						
CHGB	**Renai**	**0.53**	**317**	⇓P	**Pg**	**13 32 13.4**	**+0.1**
	baz=329						
CHGB				*e*S	**Sg**	**13 32 19.8**	**-0.5**
	baz=329						
FULB	**Fuli**	**0.53**	**209**	⇑P	**Pb**	**13 32 15.4**	**+0.1**
	baz=212						
SSLB	**Suanglung**	**0.58**	**282**	⇑P	**Pg**	**13 32 14.0**	**-0.2**
	baz=283						
SSLB				S	**Sg**	**13 32 20.9**	**-0.7**
	baz=283						
CHKT	**Chengkung**	**0.60**	**198**	*e*P	**Pb**	**13 32 15.8**	**-0.6**
	baz=195						
CHKT				*e*S	**Sb**	**13 32 24.6**	**-0.8**
	baz=195						
SMLT	**Sun Moon Lake**	**0.65**	**289**	⇑P	**Pg**	**13 32 15.6**	**0.0**
	baz=290						
SMLT				S	**Sg**	**13 32 23.6**	**-0.4**
	baz=290						
TYC	**Yuchr**	**0.69**	**290**	*e*P	**Pg**	**13 32 16.1**	**-0.3**
	baz=291						
TYC				*e*S	**Sg**	**13 32 25.2**	**-0.3**
	baz=291						
ELDTW	**Lidau**	**0.70**	**227**	⇑P	**Pg**	**13 32 16.2**	**-0.3**
	baz=224						

ELDTW					eS		Sg	13 32 25.5	0.0
	baz=224								
ENA	**Nanao**	**0.77**	**12**	P			**Pg**	**13 32 18.2**	**+0.3**
	baz=354								
ENA					eS		**Sb**	**13 32 30.0**	**-0.4**
	baz=354								
NANB	**Nanao**	**0.77**	**12**	⇓P			**Pg**	**13 32 18.2**	**+0.3**
	baz=354								
NANB				S			**Sb**	**13 32 30.3**	**-0.1**
	baz=354								
NNSB	**Datong**	**0.78**	**347**	⇓P			**Pg**	**13 32 18.1**	**+0.2**
	baz=340								
NNSB					eS		**Sg**	**13 32 28.4**	**+0.4**
	baz=340								
NNSH	**Datong**	**0.78**	**347**	⇓P			**Pg**	**13 32 18.1**	**+0.1**
	baz=339								
NNSH					eS		**Sb**	**13 32 29.5**	**-1.2**
	baz=339								
NNS	**Nan Shan**	**0.79**	**347**	⇓iP			**Pg**	**13 32 18.4**	**+0.2**
	baz=340								
NNS					eS		**Sb**	**13 32 29.7**	**-1.3**
	baz=340								
WJS	**Zhushan**	**0.79**	**281**	eP			**Pb**	**13 32 19.2**	**-0.4**
	baz=282								
ENAH	**Nanao**	**0.81**	**16**	eP			**Pb**	**13 32 19.1**	**-0.9**
	baz=14								
WNT	**Mingjian**	**0.84**	**285**	eP			**Pb**	**13 32 20.4**	**-0.2**
	baz=291								
WNT					eS		**Sb**	**13 32 32.2**	**-0.1**
	baz=291								
STYT	**Tauyuan**	**0.90**	**236**	eP			**Pg**	**13 32 20.2**	**-0.2**
	baz=227								
STYT					eS		**Sb**	**13 32 33.0**	**-1.2**
	baz=227								
WGK	**Gukeng**	**0.93**	**271**	eP			**Pn**	**13 32 21.9**	**-1.4**
	baz=272								
WGK					eS		**Sb**	**13 32 34.2**	**-0.7**
	baz=272								
TPUB	**Ta-pu**	**0.94**	**247**	⇑P			**Pb**	**13 32 21.7**	**-0.6**
	baz=255								
TPUB					eS		**Sb**	**13 32 34.2**	**-1.1**
	baz=255								
TCU	**Taichung**	**0.95**	**300**	eP			**Pn**	**13 32 22.2**	**-1.4**
	baz=308								
TCU					eS		**Sn**	**13 32 35.3**	**-2.6**
	baz=308								
WDLH	**Douliu**	**0.95**	**271**	eP			**Pb**	**13 32 21.6**	**-0.8**
	baz=274								
TWG	**Pinlang**	**0.96**	**209**	eP			**Pg**	**13 32 20.9**	**-0.7**
	baz=207								
TWG					eS		**Sb**	**13 32 34.9**	**-1.0**
	baz=207								
TWGBT	**Beinan**	**0.96**	**208**	eP			**Pg**	**13 32 20.9**	**-0.6**
	baz=207								
ENTT	**Nioudou**	**0.97**	**360**	⇓P			**Pg**	**13 32 21.9**	**+0.2**
	baz=348								
ENTT					eS		**Sb**	**13 32 35.5**	**-0.6**
	baz=348								
TWC	**Suao**	**0.97**	**15**	⇓P			**Pb**	**13 32 22.0**	**-0.8**
	baz=15								
TWC					eS		**Sb**	**13 32 35.6**	**-0.6**
	baz=15								
WTP	**Ta-pu**	**0.97**	**245**	eP			**Pb**	**13 32 22.0**	**-0.8**
	baz=252								
WTP					eS		**Sb**	**13 32 35.3**	**-1.0**
	baz=252								
TTN	**Taitung**	**0.99**	**203**	eP			**Pg**	**13 32 21.7**	**-0.4**
	baz=202								
TWQ1	**Liyutan**	**0.99**	**313**	eP			**Pg**	**13 32 22.4**	**+0.2**
	baz=321								
TWQ1					eS		**Sb**	**13 32 35.6**	**-1.3**
	baz=321								
YHNB	**Yeheng**	**1.01**	**350**	⇓P			**Pb**	**13 32 22.9**	**-0.7**
	baz=338								
YHNB					eS		**Sb**	**13 32 36.8**	**-0.6**
	baz=338								
EOS1	**EOS1**	**1.01**	**30**	eP			**Pn**	**13 32 23.9**	**-0.7**
	baz=47								
WCHH	**Zhanghua**	**1.01**	**294**	eP			**Pg**	**13 32 22.5**	**0.0**
	baz=296								
CHN2	**Minshiung**	**1.01**	**262**	eP			**Pg**	**13 32 22.7**	**+0.2**
	baz=265								
NSK	**Sanguang**	**1.02**	**349**	⇓P			**Pb**	**13 32 23.0**	**-0.7**
	baz=338								
NSK					eS		**Sg**	**13 32 35.2**	**-0.7**
	baz=338								
TWE	**Neicheng**	**1.05**	**5**	⇓P			**Pb**	**13 32 23.5**	**-0.6**
	baz=352								
TWE					eS		**Sn**	**13 32 38.4**	**-2.0**
	baz=352								
CHY	**Chiayi**	**1.07**	**261**	eP			**Pb**	**13 32 23.8**	**-0.6**
	baz=263								
CHN1	**Nanshi**	**1.07**	**244**	⇑P			**Pn**	**13 32 24.5**	**-0.9**
	baz=243								
CHN1					eS		**Sb**	**13 32 37.9**	**-1.2**
	baz=243								
TWK	**Hsinying**	**1.07**	**248**	eP			**Pb**	**13 32 23.9**	**-0.7**
	baz=248								
TWK					eS		**Sn**	**13 32 39.5**	**-1.5**
	baz=248								
SGST	**Jiashian**	**1.08**	**237**	eP			**Pb**	**13 32 24.0**	**-0.6**
	baz=236								
SGST					eS		**Sn**	**13 32 41.0**	**-0.1**
	baz=236								
SLBB	**Yuanshan**	**1.08**	**3**	⇓eP			**Pn**	**13 32 24.3**	**-1.3**
	baz=347								
SLBB					eS		**Sn**	**13 32 39.8**	**-1.5**
	baz=347								
SLGT	**Liugui**	**1.08**	**232**	eP			**Pn**	**13 32 24.4**	**-1.1**
	baz=233								
NSTT	**Nanjuang**	**1.09**	**332**	⇓P			**Pb**	**13 32 24.1**	**-0.8**
	baz=325								
NSTT					eS		**Sg**	**13 32 37.1**	**-1.0**
	baz=325								
LIOB	**Emei**	**1.10**	**333**	⇓P			**Pn**	**13 32 24.6**	**-1.2**
	baz=325								
LIOB					eS		**Sg**	**13 32 38.5**	**+0.1**
	baz=325								
ILA	**Ilan**	**1.10**	**8**	eP			**Pb**	**13 32 23.9**	**-1.2**
	baz=351								
NWLT	**Wulai**	**1.10**	**357**	eP			**Pb**	**13 32 24.4**	**-0.7**
	baz=354								
NWLT					eS		**Sn**	**13 32 39.8**	**-2.1**
	baz=354								
NMLH	**Miaoli**	**1.12**	**321**	eP			**Pn**	**13 32 25.4**	**-0.7**
	baz=321								
RLNB	**Erlin**	**1.13**	**281**	eP			**Pn**	**13 32 25.7**	**-0.4**
	baz=282								
RLNB					eS		**Sg**	**13 32 40.2**	**+0.7**
	baz=282								
ECL	**Taimali**	**1.21**	**208**	eP			**Pn**	**13 32 25.2**	**-2.0**
	baz=191								
EGS		**1.22**	**16**	eP			**Pb**	**13 32 26.3**	**-0.6**
	baz=355								
WSF	**Szhu**	**1.24**	**269**	eP			**Pn**	**13 32 26.0**	**-1.6**
	baz=272								
SBCB	**Hsinchu**	**1.24**	**335**	eP			**Pb**	**13 32 26.8**	**-0.6**
	baz=334								
CHN3	**Shinhua**	**1.26**	**242**	eP			**Pg**	**13 32 27.8**	**+0.6**
	baz=258								
SSD	**Sandimen**	**1.26**	**223**	eP			**Pn**	**13 32 26.9**	**-1.1**
	baz=227								
CHN8	**Yiju**	**1.29**	**256**	eP			**Pg**	**13 32 27.9**	**+0.1**
	baz=256								
CHN8					eS		**Sg**	**13 32 45.5**	**+1.0**
	baz=256								
TATO	**Taipei**	**1.30**	**357**	P			**Pg**	**13 32 28.1**	**+0.1**
	baz=354								
TATO					eS		**Sg**	**13 32 46.4**	**+1.4**
	baz=354								
TWA	**Mucha**	**1.30**	**0**	eP			**Pg**	**13 32 28.5**	**+0.3**
	baz=349								
TWA					eS		**Sg**	**13 32 45.6**	**+0.6**
	baz=349								
TIPB	**Shuangxi**	**1.32**	**10**	⇓P			**Pn**	**13 32 27.4**	**-1.3**
	baz=351								
TIPB					eS		**Sg**	**13 32 46.2**	**+0.7**
	baz=351								
NCUH	**Zhongli**	**1.34**	**345**	eP			**Pg**	**13 32 29.5**	**+0.7**
	baz=341								
NCUH					eS		**Sg**	**13 32 47.5**	**+1.3**
	baz=341								
NCU	**National Centr**	**1.34**	**345**	eP			**Pb**	**13 32 28.6**	**-0.5**
	baz=342								
NCU					eS		**Sg**	**13 32 47.9**	**+1.6**
	baz=342								
SCLT	**Jiali**	**1.36**	**249**	eP			**Pn**	**13 32 27.4**	**-1.9**
	baz=252								
MASBT	**Mashibuluo**	**1.36**	**220**	eP			**Pb**	**13 32 28.5**	**-1.0**
	baz=212								
MASBT					eS		**Sg**	**13 32 47.0**	**+0.2**
	baz=212								
SGLT	**Jiouru**	**1.37**	**227**	eP			**Pg**	**13 32 30.0**	**+0.7**
	baz=227								
TWB1	**Santiao Chiao**	**1.39**	**16**	eP			**Pg**	**13 32 29.7**	**0.0**
	baz=355								
NWF	**Wu-fen Shan**	**1.41**	**8**	eP			**Pg**	**13 32 30.0**	**-0.1**
	baz=4.0								
NWF					eS		**Sg**	**13 32 49.0**	**+0.6**
	baz=4.0								
WFSB	**Wu-fen Shan**	**1.41**	**8**	eP			**Pg**	**13 32 30.2**	**+0.1**
	baz=4.0								
WFSB					eS		**Sg**	**13 32 48.6**	**+0.2**
	baz=4.0								
TWS1	**Kuangyinshan**	**1.43**	**354**	eP			**Pg**	**13 32 30.7**	**+0.2**
	baz=351								
TWS1					eS		**Sg**	**13 32 50.3**	**+1.2**
	baz=351								
JYNG	**Yonagunijimaku**	**1.48**	**58**	P			**Pg**	**13 32 31.6**	**+0.2**
JYNG				S			**Sg**	**13 32 50.3**	**-0.3**
YM04	**YM04**	**1.48**	**359**	eP			**Pg**	**13 32 31.3**	**-0.1**
	baz=354								
YM10	**YM10**	**1.48**	**360**	eP			**Pb**	**13 32 30.9**	**-0.6**
	baz=356								
YM11	**YM11**	**1.49**	**0**	eP			**Pg**	**13 32 31.7**	**0.0**
	baz=356								
NTST	**Danshui**	**1.49**	**356**	eP			**Pg**	**13 32 31.6**	**-0.1**
	baz=351								
YM07	**YM07**	**1.50**	**2**	eP			**Pb**	**13 32 30.7**	**-1.2**
	baz=358								
YM07					eS		**Sb**	**13 32 50.7**	**-0.7**
	baz=358								
YM08	**YM08**	**1.51**	**1**	eP			**Pb**	**13 32 31.2**	**-0.8**
	baz=357								
YOJ	**Yonaguni jima**	**1.53**	**59**	eP			**Pg**	**13 32 32.1**	**-0.4**
	baz=57								
YOJ					eS		**Sg**	**13 32 51.9**	**-0.5**
	baz=57								
YOJ	**Yonaguni jima**	**1.53**	**59**	P			**Pg**	**13 32 32.7**	**+0.2**
YOJ				eS			**Sg**	**13 32 52.2**	**-0.2**
SCZT	**Fangliau**	**1.56**	**214**	eP			**Pb**	**13 32 31.7**	**-1.2**
	baz=217								
SCZT					eS		**Sg**	**13 32 54.9**	**+1.7**
	baz=217								
TWY	**Chenhua**	**1.60**	**1**	eP			**Pg**	**13 32 33.4**	**-0.4**
	baz=357								
LAY	**Lan-yu**	**1.62**	**181**	eP			**Pn**	**13 32 31.9**	**-1.0**
	baz=170								
WDGT	**Dungji**	**1.80**	**257**	eP			**Pn**	**13 32 34.5**	**-0.9**
	baz=262								
PHUB	**P'eng-hu**	**1.84**	**266**	eP			**Pn**	**13 32 34.6**	**-1.3**
	baz=270								
PNG	**Penghu**	**1.85**	**267**	eP			**Pn**	**13 32 35.6**	**-0.5**
	baz=269								
PNG					eS		**Sn**	**13 32 58.7**	**-1.5**
	baz=269								
TWK1	**Hengchun**	**1.86**	**203**	eP			**Pb**	**13 32 37.2**	**-0.7**
	baz=188								
VCHM	**Qimei**	**2.02**	**257**	eP			**Pn**	**13 32 37.4**	**-1.0**
	baz=263								
HATJ	**Hateruma jima**	**2.08**	**79**	eS			**Sb**	**13 33 05.9**	**-2.2**
IRIF	**Iriomote-Funau**	**2.08**	**71**	P			**Pb**	**13 32 40.0**	**-1.7**
IRIF				eS			**Sb**	**13 33 06.1**	**-2.1**
JKRS	**Kuro-shima**	**2.30**	**75**	S			**Sb**	**13 33 12.1**	**-2.4**
VWUC	**VWUC**	**2.34**	**305**	eP			**Pn**	**13 32 41.1**	**-1.7**
	baz=307								
JIJ	**Ishigaki jima**	**2.45**	**73**	P			**Pn**	**13 32 44.1**	**-0.2**
JIJ				eS			**Sn**	**13 33 14.4**	**-0.6**
JISG	**Ishigakijimahi**	**2.66**	**69**	P			**Pn**	**13 32 47.1**	**-0.2**
JISG				eS			**Sn**	**13 33 19.7**	**-0.6**
MATB	**Ma-tsu**	**2.88**	**329**	eP			**Pn**	**13 32 50.3**	**+0.1**
	baz=328								
KNM	**Kinmen**	**2.96**	**285**	eP			**Pn**	**13 32 52.9**	**+1.5**
	baz=288								
QZH	**Quanzhou**	**3.00**	**296**	Pn			**Pg**	**13 33 00.3**	**-0.3**
QZH				Sn			**Sn**	**13 33 28.3**	**-0.2**
QZH				smax			smax		
	comp=N,250nm,0.9s								
QZH				smax			smax		
	comp=E,160nm,0.7s								
KNMB	**Chin-men Tao**	**3.02**	**286**	eP			**Pn**	**13 32 51.5**	**-0.6**
	baz=290								
JTJ	**Tarama**	**3.02**	**71**	eS			**Sn**	**13 33 30.1**	**+1.1**
JIRB	**Irabujima**	**3.48**	**70**	eS			**Sn**	**13 33 41.0**	**+0.5**
KSRS	**Korea Array**	**14.78**	**20**	P			**P**	**13 35 40.5**	**+0.9**
	comp=E,0.1nm,0.3s,baz=196,slow=12,SNR=8.3								
KSRS				LR			LR	13 43 08.0	
	comp=E,60nm,18.3s,baz=205,slow=44								
DAV	**Davao City (W)**	**16.95**	**166**	LR			LR	13 43 21.8	
	comp=E,75nm,18.6s,baz=74,slow=40								
CMAR	**Chiang Mai Arr**	**21.73**	**260**	P			**P**	**13 36 58.3**	**+2.1**
	comp=E,1.6nm,0.8s,baz=64,slow=9.2,SNR=6.1								
SONM	**Songino Array**	**26.98**	**337**	P			**P**	**13 37 49.8**	**+3.2**
	comp=E,1.6nm,0.9s,baz=156,slow=9.2,SNR=4.6								
MKAR	**Makanchi Array**	**38.95**	**316**	P			**P**	**13 39 32.0**	**+1.1**
	comp=E,0.6nm,0.7s,baz=114,slow=11,SNR=4.1								
MKAR				LR			LR	13 55 35.3	
	comp=E,32nm,19.9s,baz=235,slow=36								
ZALV	**Zalesovo Beam**	**40.87**	**327**	P			**P**	**13 39 48.9**	**+2.4**
	comp=E,1.0nm,0.6s,baz=126,slow=7.3,SNR=3.7								
H11N1	**WAKE ISLAND Hy**	**42.16**	**86**	T			T	14 24 56.0	
	baz=283,slow=75,SNR=83								
H11N2	**WAKE ISLAND Hy**	**42.16**	**86**	T			T	14 24 56.1	
	baz=283,slow=75,SNR=88								
H11N3	**WAKE ISLAND Hy**	**42.18**	**86**	T			T	14 24 56.5	
	baz=283,slow=75,SNR=118								
H11S3	**WAKE ISLAND Hy**	**42.28**	**88**	T			T	14 25 00.7	
	baz=284,slow=74,SNR=284								
H11S1	**WAKE ISLAND Hy**	**42.29**	**88**	T			T	14 25 01.5	
	baz=284,slow=74,SNR=111								
H11S2	**WAKE ISLAND Hy**	**42.30**	**88**	T			T	14 25 02.1	
	baz=284,slow=74,SNR=98								
WRA	**Warramunga Arr**	**45.10**	**163**	P			**P**	**13 40 19.5**	**-1.8**
	comp=E,0.6nm,0.6s,baz=344,slow=8.7,SNR=5.8								
ASAR	**Alice Springs**	**48.55**	**165**	P			**P**	**13 40 47.1**	**-1.2**
	comp=E,0.5nm,0.9s,baz=343,slow=7.8,SNR=5.0								
ILAR	**Eielson Array**	**69.51**	**27**	P			**P**	**13 43 14.4**	**+1.2**
	comp=E,0.3nm,0.6s,baz=298,slow=7.4,SNR=3.2								
YKA	**Yellowknife Ar**	**83.30**	**23**	P			**P**	**13 44 30.7**	**-0.8**
	comp=E,0.5nm,0.7s,baz=313,slow=5.1,SNR=7.3								

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*SOME **18** 13:33:40.7, 44°.65N×82°.25E, h10km*
*NNC **18** 13:33:42.3±0.9, 44°.66N×82°.03E, h0km, mb2.9, mpv2.5,*
Error ellipse: s-maj=13.4km s-min=2.5km az=116.0
ISC 18 13:33:42.7±3.7,**44°.65N**±0°.07×**82°.1E**±0°.1,**h11**km±23km,**n6,**
σ1§**28**/11,**5C-1D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.65**	**260**	eP	**Pg**	**13 34 13.6**	**-0.8**
	4.1nm,0.2s						
DJR				eS	**Sg**	**13 34 37.3**	**+1.6**
	5.4nm,0.3s						
KAPS	**Kapalarasan**	**2.02**	**289**	eP	**Pb**	**13 34 19.6**	**+0.1**
	1.6nm,0.2s						
KAPS				eS	**Sg**	**13 34 47.6**	**+0.1**
	4.4nm,0.5s						
MK31	**Makanchi Array**	**2.15**	**4**	⇑Pn	**Pn**	**13 34 19.5**	**+0.9**
	1.0nm,0.2s,baz=183,slow=14,SNR=131						
MK31				⇑Sn	**Sb**	**13 34 47.5**	**-1.0**
	1.3nm,0.2s,baz=184,slow=26,SNR=23						
MAKZ	**Makanchi**	**2.16**	**359**	⇑Pn	**Pn**	**13 34 19.6**	**+0.8**
	0.6nm,0.1s						
MAKZ				⇓Sn	**Sb**	**13 34 47.8**	**-1.0**
	4.0nm,0.3s						
PDGK	**Podgornoye**	**2.27**	**235**	⇑Pg	**Pb**	**13 34 23.4**	**-0.3**
	0.8nm,0.4s						
PDGK				⇑Lg	Lg	13 34 55.3	
	9.1nm,0.6s						
SHLS	**Shalkode**	**2.39**	**232**	eP	**Pn**	**13 34 23.2**	**+1.3**
	4.2nm,0.1s						
SHLS				eS	**Sb**	**13 34 53.6**	**-1.8**
	16nm,0.3s						

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*ISCJB **18** 13:34:46.8±0.3, 1°.07S±0°.01×78°.81W±0°.02, h21km±2km,*
mb4.8/142, MS3.9/21, Error ellipse: s-maj=3.7km
s-min=2.3km az=178.2
*IGQ **18** 13:34:46.4±0.2, 1°.5±1°×7°.9W±°, h5km±2km, M5.1/24,*
MLv5.1/24
*NEIC **18** 13:34:50.5±0.2, 1°.03S×78°.67W, h35km, mb4.9/130,*
MW4.6(IGQ), Error ellipse: s-maj=7.1km s-min=4.7km
az=54.0
NEIC Felt [VII] at Pujili, [VI] at Ambato and [III] at Guayaquil.
Also felt at Latacunga, Portoviejo, Puyo, Quevedo, Quito,
Riobamba and Santo Domingo. Felt in the central zone of
the mountains.
*IDC **18** 13:34:50.8±3.5, 1°.07S×78°.71W, h33km±26km, mb4.2/23,*
mb1 4.4/30, mb1mx4.2/60, mbtmp4.4/30, ML4.0/5, MS3.9/24,
Ms1 3.9/24, ms1mx3.7/47, Error ellipse: s-maj=18.2km
s-min=11.4km az=60.0
ISC 18 13:34:47.4±1.0,**1°.08S**±0°.02×**78°.77W**±0°.02,**h16**km±6km,
n554,σ1§**65**/567,**mb4.8**/142,**MS3.9**/21,**Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILLI	**Illinizas Sur**	**0.36**	**6**	P	**Pg**	**13 34 53.9**	**-1.2**
ILLI				S	**Sg**	**13 34 59.7**	**-0.6**
ILLI	**Illinizas Sur**	**0.36**	**6**	P	**Pg**	**13 34 53.9**	**-1.2**
ILLI				S	**Sg**	**13 34 59.7**	**-0.6**
PIS1	**Pisayambo**	**0.38**	**87**	P	**Pb**	**13 34 55.5**	**-0.7**
PIS1				S	**Sb**	**13 35 00.8**	**-1.3**
PIS1	**Pisayambo**	**0.38**	**87**	P	**Pb**	**13 34 55.5**	**-0.7**
PIS1				S	**Sb**	**13 35 00.8**	**-1.3**
PISA	**Pisayambo**	**0.38**	**87**	P	**Pb**	**13 34 55.4**	**-0.7**
PISA	**Pisayambo**	**0.38**	**87**	P	**Pb**	**13 34 55.4**	**-0.7**
PAST	**Pastocalle**	**0.40**	**18**	P	**Pg**	**13 34 54.7**	**-1.0**
PAST	**Pastocalle**	**0.40**	**18**	P	**Pg**	**13 34 54.7**	**-1.0**
IGUA	**Igualata**	**0.43**	**163**	P	**Pb**	**13 34 56.0**	**-1.0**
IGUA	**Igualata**	**0.43**	**163**	P	**Pb**	**13 34 56.0**	**-1.0**
JUI6	**Juive**	**0.46**	**139**	P	**Pn**	**13 34 56.3**	**-3.4**
JUI6	**Juive**	**0.46**	**139**	P	**Pn**	**13 34 56.3**	**-3.4**
BIL2	**Estacion Bilba**	**0.46**	**145**	P	**Pb**	**13 34 56.3**	**-1.0**
BIL2	**Estacion Bilba**	**0.46**	**145**	P	**Pb**	**13 34 56.3**	**-1.0**
BMOR	**Cotopaxi Volca**	**0.46**	**42**	P	**Pg**	**13 34 56.2**	**-0.7**
BMOR	**Cotopaxi Volca**	**0.46**	**42**	P	**Pg**	**13 34 56.2**	**-0.7**
BBIL	**Ulba Tungurahu**	**0.47**	**143**	P	**Pn**	**13 34 56.6**	**-3.2**
BBIL				S	**Sn**	**13 35 03.6**	**-4.3**
BBIL	**Ulba Tungurahu**	**0.47**	**143**	P	**Pn**	**13 34 56.6**	**-3.2**
BBIL				S	**Sn**	**13 35 03.6**	**-4.3**
POND	**Pondoa**	**0.47**	**137**	P	**Pn**	**13 34 56.5**	**-3.3**
POND				S	**Sn**	**13 35 03.8**	**-4.2**
POND	**Pondoa**	**0.47**	**137**	P	**Pn**	**13 34 56.5**	**-3.3**
POND				S	**Sn**	**13 35 03.8**	**-4.2**
CAMI	**Rancho Maria**	**0.48**	**34**	P	**Pg**	**13 34 56.7**	**-0.4**
CAMI	**Rancho Maria**	**0.48**	**34**	P	**Pg**	**13 34 56.7**	**-0.4**
RUN5	**Runtun**	**0.48**	**134**	P	**Pn**	**13 34 56.7**	**-3.3**
RUN5	**Runtun**	**0.48**	**134**	P	**Pn**	**13 34 56.7**	**-3.3**
RETU	**Refugio**	**0.49**	**139**	P	**Pn**	**13 34 57.2**	**-3.2**
RETU	**Refugio**	**0.49**	**139**	P	**Pn**	**13 34 57.2**	**-3.2**
BNAS	**Cotopaxi Volca**	**0.49**	**36**	P	**Pg**	**13 34 56.9**	**-0.5**
BNAS	**Cotopaxi Volca**	**0.49**	**36**	P	**Pg**	**13 34 56.9**	**-0.5**
BRUN	**Tungurahua Vol**	**0.49**	**134**	P	**Pb**	**13 34 56.8**	**-1.2**
BRUN	**Tungurahua Vol**	**0.49**	**134**	P	**Pb**	**13 34 56.8**	**-1.2**
BULB	**Ulba Tungurahu**	**0.51**	**135**	P	**Pn**	**13 34 57.2**	**-3.2**
BULB	**Ulba Tungurahu**	**0.51**	**135**	P	**Pn**	**13 34 57.2**	**-3.2**
BMAS	**Trigal station**	**0.51**	**146**	P	**Pn**	**13 34 57.3**	**-3.2**
BMAS				S	**Sn**	**13 35 05.3**	**-3.9**
BMAS	**Trigal station**	**0.51**	**146**	P	**Pn**	**13 34 57.3**	**-3.2**
BMAS				S	**Sn**	**13 35 05.3**	**-3.9**
BREF	**Cotopaxi Volca**	**0.52**	**39**	P	**Pg**	**13 34 57.5**	**-0.5**
BREF	**Cotopaxi Volca**	**0.52**	**39**	P	**Pg**	**13 34 57.5**	**-0.5**
NAS2	**Nasa**	**0.52**	**35**	P	**Pg**	**13 34 57.6**	**-0.3**
NAS2	**Nasa**	**0.52**	**35**	P	**Pg**	**13 34 57.6**	**-0.3**
ARRY	**Arrayan**	**0.53**	**144**	P	**Pb**	**13 34 57.4**	**-1.2**
ARRY	**Arrayan**	**0.53**	**144**	P	**Pb**	**13 34 57.4**	**-1.2**
BPAT	**Tungurahua Vol**	**0.54**	**142**	P	**Pn**	**13 34 57.9**	**-3.0**
BPAT				S	**Sn**	**13 35 06.2**	**-3.8**
BPAT	**Tungurahua Vol**	**0.54**	**142**	P	**Pn**	**13 34 57.9**	**-3.0**
BPAT				S	**Sn**	**13 35 06.2**	**-3.8**
BTAM	**Cotopaxi Volca**	**0.54**	**43**	P	**Pg**	**13 34 57.7**	**-0.7**
BTAM	**Cotopaxi Volca**	**0.54**	**43**	P	**Pg**	**13 34 57.7**	**-0.7**
BVC2	**Cotopaxi Volca**	**0.55**	**41**	P	**Pg**	**13 34 57.8**	**-0.7**
BVC2	**Cotopaxi Volca**	**0.55**	**41**	P	**Pg**	**13 34 57.8**	**-0.7**
VC1	**Cotopaxi 1**	**0.56**	**40**	P	**Pg**	**13 34 58.2**	**-0.6**
VC1	**Cotopaxi 1**	**0.56**	**40**	P	**Pg**	**13 34 58.2**	**-0.6**
ARIO	**Riobamba**	**0.58**	**173**	P	**Pb**	**13 34 58.4**	**-1.1**
ARIO				S	**Sb**	**13 35 06.6**	**-1.0**
ARIO	**Riobamba**	**0.58**	**173**	P	**Pb**	**13 34 58.4**	**-1.1**
ARIO				S	**Sb**	**13 35 06.6**	**-1.0**
COV1	**Cotopaxi Volc**	**0.59**	**46**	P	**Pg**	**13 34 57.5**	**-1.8**
COV1	**Cotopaxi Volc**	**0.59**	**46**	P	**Pg**	**13 34 57.5**	**-1.8**
PITA	**Cotopaxi Volc**	**0.61**	**33**	P	**Pg**	**13 34 58.9**	**-0.7**
PITA	**Cotopaxi Volc**	**0.61**	**33**	P	**Pg**	**13 34 58.9**	**-0.7**
RIOE1	**Riobamba**	**0.68**	**168**	P	**Pb**	**13 34 59.9**	**-1.3**
RIOE1	**Riobamba**	**0.68**	**168**	P	**Pb**	**13 34 59.9**	**-1.3**
NINA	**Atacazo Ninahu**	**0.70**	**12**	P	**Pg**	**13 35 00.7**	**-0.5**
NINA	**Atacazo Ninahu**	**0.70**	**12**	P	**Pg**	**13 35 00.7**	**-0.5**
AQUE	**Quevedo**	**0.72**	**272**	P	**Pb**	**13 34 59.5**	**-2.2**
AQUE				S	**Sb**	**13 35 09.4**	**-2.0**
AQUE	**Quevedo**	**0.72**	**272**	P	**Pb**	**13 34 59.5**	**-2.2**
AQUE				S	**Sb**	**13 35 09.4**	**-2.0**
ANTM	**Antisana-La Mi**	**0.76**	**45**	P	**Pg**	**13 35 01.2**	**-1.2**
ANTM	**Antisana-La Mi**	**0.76**	**45**	P	**Pg**	**13 35 01.2**	**-1.2**
ANTG	**

MALC	Bahia Malaga	5.25	16	eP	Pn	13 36 08.7	+3.3
MALC	Bahia Malaga	5.25	16	eP	Pn	13 36 08.7	+3.3
YOTC	Yotoco, Valle	5.58	26	eP	Pn	13 36 11.4	+1.5
YOTC	Yotoco, Valle	5.58	26	eP	Pn	13 36 11.4	+1.5
PRAC	Prado	6.14	39	ePn	Pn	13 36 21.3	+3.7
PRAC	Prado	6.14	39	eP	Pn	13 36 21.0	+3.4
PRAC	Prado	6.14	39	eP	Pn	13 36 21.0	+3.4
PLMC	San Jos¨ del	6.44	23	eP	Pn	13 36 19.8	-1.9
PLMC	San Jos¨ del	6.44	23	eP	Pn	13 36 19.8	-1.9
ANIL	Santa Ana	6.47	31	eP	Pn	13 36 26.7	+4.3
ANIL	Santa Ana	6.47	31	eP	Pn	13 36 26.7	+4.3
GUYC	Guyana, Colomb	7.11	28	eP	Pn	13 36 34.7	+3.4
GUYC	Guyana, Colomb	7.11	28	eP	Pn	13 36 34.7	+3.4
VILC	Villavicencio,	7.23	45	eP	Pn	13 36 38.0	+5.3
VILC	Villavicencio,	7.23	45	eP	Pn	13 36 38.0	+5.3
ROSC	El Rosal	7.37	37	Pn	Pn	13 36 37.0	+2.2
	1.1nm,0.3s,baz=181,slow=6.3,SNR=13						
ROSC				Lg	Lg	13 38 45.9	
	2.0nm,0.3s,baz=288,slow=22,SNR=2.5						
ROSC				LR	LR	13 40 02.3	
	comp=Z,3µm,21.1s,baz=237,slow=42						
ROSC	El Rosal	7.37	37	ePn	Pn	13 36 37.7	+2.9
ROSC				Lg	Lg	13 38 45.9	
ROSC	El Rosal	7.37	37	eP	Pn	13 36 38.6	+3.8
ROSC	El Rosal	7.37	37	eP	Pn	13 36 38.6	+3.8
CHIC	Chingaza	7.58	42	eP	Pn	13 36 43.3	+5.6
CHIC	Chingaza	7.58	42	eP	Pn	13 36 43.3	+5.6
HELC	Santa Helena	7.91	24	ePn	Pn	13 36 43.8	+1.6
HELC	Santa Helena	7.91	24	eP	Pn	13 36 44.6	+2.4
HELC	Santa Helena	7.91	24	eP	Pn	13 36 44.6	+2.4
PTBC	PUERTO BERRIO,	8.70	30	eP	Pn	13 36 53.9	+1.1
PTBC	PUERTO BERRIO,	8.70	30	eP	Pn	13 36 53.9	+1.1
RUSC	La Rusia	8.95	39	ePn	Pn	13 36 57.9	+1.3
RUSC	La Rusia	8.95	39	eP	Pn	13 37 02.1	+5.5
RUSC	La Rusia	8.95	39	eP	Pn	13 37 02.1	+5.5
BARC	Barichara	9.44	36	eP	Pn	13 37 07.9	+4.8
BARC	Barichara	9.44	36	eP	Pn	13 37 07.9	+4.8
CAPC	Capurgana	9.75	8	eP	Pn	13 37 10.6	+3.4
CAPC	Capurgana	9.75	8	eP	Pn	13 37 10.6	+3.4
BCIP	Isla Barro Col	10.23	354	ePn	Pn	13 37 16.9	+3.2
BCIP	Isla Barro Col	10.23	354	eP	Pn	13 37 17.2	+3.5
BCIP	Isla Barro Col	10.23	354	eP	Pn	13 37 17.2	+3.5
NNA	Nana	11.01	170	Pn	Pn	13 37 26.3	+1.8
	9.5nm,0.3s,baz=338,slow=13,SNR=15						
NNA				Sn	Sn	13 39 30.1	+2.6
	1.4nm,0.3s,baz=33,slow=13,SNR=4.5						
NNA				Lg	Lg	13 40 37.2	
	baz=286,slow=9.5,SNR=1.6						
NNA	Nana	11.01	170	ePn	Pn	13 37 27.6	+3.1
NNA				Sn	Sn	13 39 30.1	+2.6
NNA				Lg	Lg	13 40 37.2	
SDV	Santo Domingo	12.79	39	Pn	Pn	13 37 52.1	+3.1
	4.7nm,0.3s,baz=211,slow=3.2,SNR=3.0						
SDV				LR	LR	13 43 25.9	
	comp=Z,2µm,20.8s,baz=222,slow=40						
SDV	Santo Domingo	12.79	39	ePn	Pn	13 37 48.0	-1.0
JTS	JuntasAbangare	12.86	332	Pn	Pn	13 37 53.7	+4.0
	0.5nm,0.3s,baz=156,slow=20,SNR=2.5						
JTS				LR	LR	13 42 09.3	
	comp=Z,287nm,20.8s,baz=220,slow=34						
TGUH	Tegucigalpa,Un	17.23	331	ePn	P	13 38 50.9	+1.7
	67nm,1.3s						
SAML	Samuel	17.37	117	ePn	Pn	13 38 47.1	-2.3
	36nm,1.1s						
PCRV	Puerto La Cruz	17.97	51	P	P	13 38 58.4	+1.1
	1.0nm,0.3s,baz=284,slow=8.0,SNR=3.0						
PCRV				LR	LR	13 47 38.0	
	comp=Z,1µm,19.7s,baz=238,slow=43						
LPAZ	La Paz	18.40	146	P	P	13 39 04.9	+2.3
	0.3nm,0.3s,baz=311,slow=8.6,SNR=11						
LPAZ				LR	LR	13 47 57.2	
	comp=Z,692nm,18.1s,baz=312,slow=43						
LPAZ	La Paz	18.40	146	eP	P	13 39 03.7	+1.1
	9.9nm,0.8s						
PTGA	Pitinga	18.80	89	P	Pn	13 39 07.7	+0.6
	0.4nm,0.3s,baz=254,slow=20,SNR=3.0						
PTGA				S	Sn	13 42 30.8	-6.5
	0.4nm,0.3s,baz=344,slow=22,SNR=3.6						
PTGA				LR	LR	13 46 40.9	
	comp=Z,1µm,18.7s,baz=282,slow=38						
PTGA	Pitinga	18.80	89	eP	P	13 39 04.9	-1.7
	23nm,1.0s						
PTGA				S	Sn	13 42 30.8	-6.5
MNMC	Minye Minye	20.07	154	eP	Pn	13 39 22.4	0.0
	36nm,0.8s						
PB01	IPOC Station P	21.82	156	eP	P	13 39 42.5	+3.2
	30nm,1.1s						
AOPR	Arecibo Observ	22.63	31	eP	P	13 39 49.4	+1.5
	107nm,1.3s						
SJG	San Juan	22.75	32	P	P	13 39 49.9	+0.7
	47nm,1.1s,baz=227,slow=4.8,SNR=7.0						
SJG	San Juan	22.75	32	eP	P	13 39 50.0	+0.8
	65nm,1.2s						
SIV	San Ignacio	22.89	131	P	P	13 39 51.4	+0.6
	5.6nm,0.8s,baz=330,slow=13,SNR=16						
HUMP	Col San Antoni	22.94	33	eP	P	13 39 51.4	+0.3
	79nm,1.4s						
CBYP	Canovanas	23.04	33	eP	P	13 39 52.6	+0.3
	159nm,1.4s						
CMIG	Matias Romero	24.05	319	P	P	13 40 03.8	+1.7
	4.4nm,0.9s,baz=112,slow=7.0,SNR=6.1						
CMIG				LR	LR	13 47 50.0	
	comp=Z,130nm,21.8s,baz=167,slow=32						
ANWB	Willy Bob	25.03	41	eP	P	13 40 11.0	-0.1
	86nm,0.9s						
GO02	Mina Guanaco	25.53	160	eP	P	13 40 17.2	+1.3
	22nm,1.0s						
CPUP	Villa Florida	32.50	142	LR	LR	13 57 28.4	
	comp=Z,380nm,19.3s,baz=320,slow=42						
LNIG	Linares	32.69	324	eP	P	13 41 22.3	+2.9
	12nm,1.1s						
155A	Kite	33.70	354	P	P	13 41 28.8	+0.9
	baz=173						
152A	Waverly Hall	34.03	351	P	P	13 41 30.7	-0.1
	baz=169						
152A	Waverly Hall	34.03	351	eP	P	13 41 31.3	+0.5
	6.9nm,0.9s						
Z54A	Sparta	34.34	354	P	P	13 41 32.9	-0.7
	baz=173						
Z53A	Monticello	34.47	353	P	P	13 41 33.8	-0.9
	baz=171						
Z52A	Williamson	34.50	352	P	P	13 41 35.5	+0.6
	baz=170						
GOGA	Godfrey	34.59	353	P	P	13 41 35.5	-0.2
	baz=172						
Z50A	Ashland	34.81	349	P	P	13 41 37.2	-0.4
	baz=167						
Z50A	Ashland	34.81	349	eP	P	13 41 37.9	+0.3
	9.3nm,0.9s						
Z49A	Columbiana	34.86	349	P	P	13 41 38.2	+0.1
	baz=166						
Y54A	Tignall	34.95	354	P	P	13 41 39.1	+0.3
	baz=173						
Z48A	Northport	35.26	347	P	P	13 41 41.1	-0.4
	baz=164						
Y51A	Rockmart	35.29	351	P	P	13 41 41.6	-0.2
	baz=169						
X52A	Dahlonega	35.82	353	P	P	13 41 47.4	+1.1
	baz=171						
BG3	Lake Jocassee	36.09	354	eP	P	13 41 49.7	+1.0
	6.0nm,0.8s						
X49A	Woodville	36.10	349	P	P	13 41 48.1	-0.6
	baz=167						
KMSC	Kings Mountain	36.11	356	P	P	13 41 49.1	+0.3
	baz=176						
W53A	Cullowhee	36.29	354	P	P	13 41 49.9	-0.6
	baz=172						
W49A	Belvidere	36.68	350	P	P	13 41 53.6	-0.1
	baz=167						
CPCT	Cooper Cave	36.73	352	eP	P	13 41 54.6	+0.5
	9.0nm,0.8s						
V53A	Saluda	36.75	354	P	P	13 41 52.5	-1.8
	baz=173						
V52A	Sevierville	37.00	353	P	P	13 41 56.0	-0.4
	baz=172						
V50A	Pikeville	37.03	351	P	P	13 41 56.2	-0.4
	baz=169						
V51A	Loudon	37.06	352	P	P	13 41 56.5	-0.4
	baz=171						
JCT	Junction City	37.23	329	P	P	13 41 59.1	+0.6
	baz=144,SNR=5.3						
JCT	Junction City	37.23	329	eP	P	13 41 59.4	+0.9
	32nm,1.1s						
V49A	McMinnville	37.25	350	P	P	13 41 58.6	+0.1
	baz=168						
V48A	Smith Brothers	37.39	349	P	P	13 41 59.6	-0.1
	baz=167						
V48A	Smith Brothers	37.39	349	eP	P	13 41 59.5	-0.2
	39nm,1.6s						
U53A	Fall Branch	37.42	355	P	P	13 41 59.0	-1.0
	baz=174						
V47A	Nunnelly	37.61	348	P	P	13 41 59.4	-2.2
	baz=166						
MIAR	Mount Ida	38.06	340	P	P	13 42 05.0	-0.4
	baz=155						
U48A	Cassie Pea, Po	38.09	350	P	P	13 42 05.4	-0.1
	baz=167						
T52A	Hallie	38.19	355	P	P	13 42 06.5	+0.1
	baz=173						
W41B	Gary Mavity, V	38.20	342	P	P	13 42 05.9	-0.6
	baz=158						
X39A	Fountain Ranch	38.22	339	P	P	13 42 05.5	-1.2
	baz=155						
T50A	Nancy	38.32	352	P	P	13 42 07.6	+0.1
	baz=170						
WHAR	Wooly Hollow	38.32	342	eP	P	13 42 06.1	-1.5
	7.6nm,0.9s						
TXAR	Lajitas Array	38.48	324	P	P	13 42 11.1	+1.9
	2.7nm,1.0s,baz=138,slow=9.5,SNR=3.2						
TXAR				LR	LR	13 57 56.9	
	comp=Z,57nm,18.9s,baz=0.0,slow=36						
TX31	Lajitas Ar. Si	38.48	324	eP	P	13 42 10.6	+1.5
T49A	Edmonton	38.50	351	P	P	13 42 08.7	-0.4
	baz=169						
V42A	Cord	38.54	343	P	P	13 42 07.4	-1.9
	baz=159						
T48A	Bowling Green	38.65	350	P	P	13 42 08.6	-1.7
	baz=168						
W39A	Magazine	38.72	340	P	P	13 42 10.8	-0.1
	baz=156						
W39A	Magazine	38.72	340	eP	P	13 42 10.3	-0.6
	12nm,1.1s						
V41A	Mountainview	38.74	342	P	P	13 42 11.0	-0.2
	baz=158						
S51A	Beattyville	38.78	354	P	P	13 42 11.2	-0.2
	baz=172						
T46A	Princeton	38.86	348	P	P	13 42 10.4	-1.7
	baz=165						
ABTX	Abilene, Hawle	38.89	331	P	P	13 42 12.8	+0.4
	baz=145,SNR=5.5						
ABTX	Abilene, Hawle	38.89	331	eP	P	13 42 15.4	+3.0
	26nm,1.0s						
IP03	Louisa	38.91	1	eP	P	13 42 12.9	+0.4
	22nm,1.3s						
SPRD	Spring Road, M	38.91	1	eP	P	13 42 13.6	+1.1
	16nm,1.2s						
CVRD	Centerville Ro	38.96	1	eP	P	13 42 12.4	-0.4
	16nm,1.1s						
V40A	Witts Springs	38.96	342	P	P	13 42 13.1	+0.1
	baz=157						
V40A	Witts Springs	38.96	342	eP	P	13 42 10.1	-2.9
	12nm,1.2s						
U42A	Revenden	39.00	344	P	P	13 42 13.7	+0.4
	baz=160						
S48A	Wiedeman Farm,	39.13	351	P	P	13 42 14.1	-0.1
	baz=168						
RPN	Rapa Nui	39.13	226	LR	LR	13 54 02.2	
	comp=Z,166nm,18.4s,baz=93,slow=29						
U41A	Viola	39.19	343	P	P	13 42 15.0	+0.1
	baz=159						
V39A	Pettigrew	39.26	341	P	P	13 42 16.8	+1.3
	baz=156						
T43A	Greenville	39.44	345	P	P	13 42 17.3	+0.4
	baz=162						
U40A	Yellville	39.48	342	P	P	13 42 18.4	+1.1
	baz=157						
S45A	Carrier Mills	39.62	348	P	P	13 42 19.5	+1.2
	baz=164						
U39A	Green Forest	39.70	341	P	P	13 42 19.8	+0.6
	baz=156						
T41A	Mountain View	39.80	344	P	P	13 42 19.5	-0.4
	baz=159						
S43A	Fulton Ridge,	39.85	346	P	P	13 42 20.2	-0.1
	baz=162						
TRQA	Tornquist	39.91	159	eP	P	13 42 22.4	+1.5
	15nm,1.0s						
TUL1	Leonard	40.08	338	P	P	13 42 22.8	+0.6
	baz=153						
T40A	Mansfield	40.12	343	P	P	13 42 22.2	-0.4
	baz=158						
R45A	Skylar, Fairfi	40.15	348	P	P	13 42 21.6	-1.1
	baz=165						
PLCA	Paso Flores	40.17	170	P	P	13 42 24.8	+1.7
	7.1nm,1.0s,baz=5.0,slow=12,SNR=4.7						
PLCA	Paso Flores	40.17	170	eP	P	13 42 24.8	+1.7
	74nm,2.0s						
S42A	Caledonia	40.22	345	P	P	13 42 22.8	-0.7
	baz=161						
WMOK	Wichita Mounta	40.26	334	eP	P	13 42 24.8	+0.9
	8.1nm,1.1s						
R44A	Waltonville	40.27	347	P	P	13 42 23.7	-0.1
	baz=164						
S41A	Jillco Farms,	40.30	344	P	P	13 42 24.2	+0.1
	baz=160						
Q47A	Bedord North L	40.44	351	P	P	13 42 24.8	-0.4
	baz=168						
S40A	Lebanon	40.53	343	P	P	13 42 25.6	-0.4
	baz=158						
T38A	Diamond	40.56	341	P	P	13 42 25.9	-0.4
	baz=156						
CCM	Cathedral Cave	40.61	345	P	P	13 42 25.7	-0.9
	baz=160						
Q45A	Warren Harvey,	40.70	349	P	P	13 42 26.7	-0.6
	baz=165						
R42A	Luebbering	40.70	345	P	P	13 42 27.5	+0.1
	baz=161						
S39A	Bolivar	40.86	342	P	P	13 42 28.5	-0.1
	baz=157						
S39A	Bolivar	40.86	342	eP	P	13 42 30.3	+1.6
	5.0nm,1.0s						
R41A	Rosebud	40.87	345	P	P	13 42 28.6	-0.1
	baz=160						
MVL	Millersville	40.94	3	eP	P	13 42 29.3	0.0
	17nm,1.2s						
R40A	Maddies Statio	41.10	344	P	P	13 42 29.5	-1.2
	baz=159						
O56A	Blue Knob Stat	41.15	0	P	P	13 42 31.3	+0.2
	baz=180						
O56A	Blue Knob Stat	41.15	0	eP	P	13 42 30.8	-0.3
	12nm,1.0s						
PAGS	Pennsylvania G	41.15	2	eP	P	13 42 32.1	+1.0
	23nm,1.4s						
MNTX	Cornudas Mount	41.22	325	P	P	13 42 32.7	+0.9
	baz=137,SNR=10						
MNTX	Cornudas Mount	41.22	325	eP	P	13 42 32.7	+0.9
	11nm,1.0s						
R39A	Chumby, Stover	41.35	343	P	P	13 42 32.8	+0.1
	baz=158						
SSPA	Standing Stone	41.52	1	P	P	13 42 34.6	+0.5
	baz=181						
SSPA	Standing Stone	41.52	1	eP	P	13 42 33.7	-0.4
	16nm,1.1s						
MSTX	Muleshoe	41.52	329	P	P	13 42 35.6	+1.2
	baz=142,SNR=10						
MSTX	Muleshoe	41.52	329	eP	P	13 42 35.5	+1.1
	40nm,1.0s						
Q40A	Laux Farm, Aux	41.71	344	P	P	13 42 35.0	-0.7
	baz=160						
AMTX	Amarillo	41.71	331	P	P	13 42 37.3	+1.5
	baz=144						
AMTX	Amarillo	41.71	331	eP	P	13 42 37.4	+1.5
	16nm,0.7s						
N59A	State Game Lan	41.88	3	P	P	13 42 37.8	+0.7
	baz=184						
P39B	Salisbury	42.36	344	P	P	13 42 40.3	-0.6
	baz=159						
121A	Cookes Peak, D	43.23	323	P	P	13 42 49.7	+1.3
	baz=135,SNR=9.4						
319A	Douglas	43.36	321	eP	P	13 42 51.0	+1.7
	17nm,1.1s						
N39A	Derby Farms, D	43.59	345	P	P	13 42 51.8	+0.9
	baz=160						
BNM	Barren Site	43.73	326	eP	P	13 42 53.8	+1.3
LPM	Los Pinos Moun	43.85	326	eP	P	13 42 54.7	+1.3
CBKS	Cedar Bluff	44.13	336	P	P	13 42 55.1	-0.3
	baz=149						
LAZ	Ladron	44.20	326	eP	P	13 42 57.1	+0.9
TASL	Snake Pit, Alb	44.22	327	P	P	13 42 57.3	+1.0
	baz=138,SNR=13						
ANMO	Albuquerque	44.22	327	P	P	13 42 57.4	+1.1
	18nm,1.0s,baz=144,slow=10.0,SNR=9.4						
ANMO				LR	LR	14 01 07.0	
	comp=Z,52nm,19.0s,baz=152,slow=36						
ANMO	Albuquerque	44.22	327	P	P	13 42 57.3	+1.0
	baz=138						
ANMO	Albuquerque	44.22	327	eP	P	13 42 57.1	+0.7
	26nm,1.0s						
TASM	ASL Pad, Albuq	44.22	327	P	P	13 42 57.5	+1.2
	baz=138,SNR=13						
L40A	Anamosa	44.39	347	P	P	13 42 58.0	+0.6
	baz=162						
K43A	Burlington	44.43	350	P	P	13 42 58.0	+0.4
	baz=166						
T25A	Trinidad	44.84	331	P	P	13 43 02.5	+1.2
	baz=142,SNR=9.8						
T25A	Trinidad	44.84	331	eP	P	13 43 02.5	+1.2
	32nm,1.3s						
L38A	Oak Wood Farm,	44.89	345	P	P	13 43 02.2	+0.9
	baz=160						
TUC	Tucson	44.93	321	P	P	13 43 03.2	+1.3
	baz=131						
TUC	Tucson	44.93	321	eP	P	13 43 03.3	+1.3
	9.5nm,1.0s						
K40A	Colesburg	44.98	347	P	P	13 43 02.7	+0.6
	baz=162						
JFWS	Jewell Farm	44.99	348	P	P	13 43 02.5	+0.4
	baz=164						
JFWS	Jewell Farm	44.99	348	eP	P	13 43 02.6	+0.4
	30nm,1.2s						
K39A	Oelwein	45.16	346	P	P	13 43 03.0	-0.4
	baz=161						
J42A	Columbus	45.16	349	P	P	13 43 03.8	+0.4
	baz=165						
K38A	Parkersburg	45.32	345	P	P	13 43 05.3	+0.6
	baz=160						
J41A	Loganville	45.38	348	P	P	13 43 05.8	+0.6
	baz=164						
KSCO	Kaye Shedlock'	45.52	334	eP	P	13 43 08.7	+2.1
	34nm,1.3s						
LBNH	Lisbon	45.53	7	P	P	13 43 07.3	+0.9
	baz=189						
J40A	Soldiers Grove	45.56	348	P	P	13 43 07.5	+0.9
	baz=163						
SADO	Sadowa	45.65	360	P	P	13 43 09.8	+2.5
	9.1nm,1.1s,baz=306,slow=11,SNR=3.2						
SADO	Sadowa	45.65	360	eP	P	13 43 09.0	+1.7
	19nm,1.4s						
LONY	Lake Ozonia	45.65	4	P	P	13 43 07.5	+0.2
	baz=186						
LONY	Lake Ozonia	45.65	4	eP	P	13 43 08.3	+1.0
	15nm,1.3s						
I42A	Draeger Farm,	45.68	350	P	P	13 43 08.4	+0.9
	baz=166						
J39A	Decorah	45.71	347	P	P	13 43 07.7	-0.2
	baz=162						
SDCO	Great Sand Dun	45.85	330	P	P	13 43 11.3	+1.9
	baz=141,SNR=39						
SDCO	Great Sand Dun	45.85	330	eP	P	13 43 11.0	+1.6
	23nm,1.0s						
PLVO	Plevna	45.94	2	eP	P	13 43 10.9	+1.3
	12nm,1.0s						
214A	Organ Pipe Nat	46.02	319	P	P	13 43 12.3	+1.8
	baz=129,SNR=8.2						
I39A	Houston	46.17	347	P	P	13 43 11.2	-0.2
	baz=162						
W18A	Petrified Fore	46.20	324	P	P	13 43 14.3	+2.3
	baz=134,SNR=6.0						
W18A	Petrified Fore	46.20	324	eP	P	13 43 13.8	+1.8
	29nm,1.1s						
S22A	4UR Ranch, Cre	46.52	329	P	P	13 43 16.8	+2.1
	baz=140,SNR=8.2						
S22A	4UR Ranch, Cre	46.52	329	eP	P	13 43 16.7	+2.0
	9.5nm,1.2s						
I38A	Scanlan Farm,	46.53	347	P	P	13 43 13.8	-0.4
	baz=161						
Q24A	Divide	46.64	332	P	P	13 43 16.7	+1.1
	baz=142						
H40A	Chili	46.66	349	P	P	13 43 16.2	+0.9
	baz=164						
X16A	Lo Mia Camp, P	46.74	322	eP	P	13 43 17.4	+1.1
	12nm,0.8s						
G43A	Wallace	46.81	351	P	P	13 43 16.5	+0.1
	baz=168						
G42A	Mountain	46.91	351	P	P	13 43 18.1	+0.9
	baz=167						
F45A	CMU Biological	46.94	354	P	P	13 43 18.6	+1.1
	baz=171						
MVCO	Mesa Verde	47.01	327	P	P	13 43 19.3	+0.9
	baz=137						
MVCO	Mesa Verde	47.01	327	eP	P	13 43 18.8	+0.4
	7.7nm,0.9s						
G41A	Antigo	47.01	350	P	P	13 43 19.4	+1.4
	baz=166						
113A	Mohawk Valley,	47.16	319	eP	P	13 43 19.6	+0.3
	9.5nm,1.1s						
ECSD	EROS Data Cent	47.39	342	P	P	13 43 21.6	+0.6
	baz=155						
ECSD	EROS Data Cent	47.39	342	eP	P	13 43 19.5	-1.5
	11nm,1.5s						
Y14A	Wickenburg	47.40	321	eP	P	13 43 22.6	+1.3
	10nm,1.1s						
H36A	Jessenland, He	47.42	345	P	P	13 43 21.0	-0.2
	baz=159						
WUAZ	Wupatki	47.44	323	P	P	13 43 24.0	+2.3
	baz=133,SNR=17						
WUAZ	Wupatki	47.44	323	eP	P	13 43 23.8	+2.1
	36nm,1.0s						
G39A	Holcombe	47.46	348	P	P	13 43 21.3	-0.2
	baz=163						
G38A	Ridgeland	47.49	347	P	P	13 43 21.3	-0.4
	baz=162						
F41A	Three Lakes	47.50	350	P	P	13 43 22.5	+0.6
	baz=166						
ISCO	Idaho Springs	47.52	332	P	P	13 43 24.8	+2.3
	baz=142,SNR=6.9						
ISCO	Idaho Springs	47.52	332	eP	P	13 43 24.2	+1.7
	6.7nm,1.1s						
SMCO	Snowmass	47.69	330	eP	P	13 43 25.4	+1.5
	15nm,1.2s						
PV01	Paradox Valley	47.73	328	eP	P	13 43 25.4	+1.4
	12nm,1.2s						
PV15	Paradox Valley	47.83	328	eP	P	13 43 26.1	+1.2
	26nm,1.2s						
PV02	Paradox Valley	47.87	328	eP	P	13 43 26.2	+1.1
	23nm,1.0s						
PV03	Paradox Valley	47.96	328	eP	P	13 43 26.1	+0.4
PV07	Paradox Valley	47.99	328	eP	P	13 43 27.7	+1.6
	17nm,1.2s						
F39A	Loretta	48.01	349	P	P	13 43 26.4	+0.6
	baz=164						
GLA	Glamis	48.03	318	P	P	13 43 27.2	+1.0
	baz=128						
GLA	Glamis	48.03	318	eP	P	13 43 29.4	+3.2
	8.9nm,1.0s						
PV04	Paradox Valley	48.09	328	eP	P	13 43 26.3	-0.5
PV10	Paradox Valley	48.15	328	eP	P	13 43 25.2	-2.1
	20nm,1.0s						
E40A	Wakefield	48.33	350	P	P	13 43 27.5	-0.7
	baz=165						
H32A	Carlson Farm,	48.34	342	P	P	13 43 27.4	-1.0
	baz=155						
E39A	Mellen	48.38	349	P	P	13 43 29.8	+1.1
	baz=164						
F36A	Milaca	48.52	346	P	P	13 43 30.1	+0.4
	baz=160						
N23A	Red Feather La	48.54	332	P	P	13 43 31.3	+1.0
	baz=142,SNR=7.3						
N23A	Red Feather La	48.54	332	eP	P	13 43 29.5	-0.8
U15A	North Rim	48.61	324	eP	P	13 43 33.7	+2.8
	8.3nm,1.0s						
SWSC	Sam W. Stewart	48.62	318	P	P	13 43 30.2	-0.5
	baz=127						
W13A	Hualapai Mount	48.71	321	eP	P	13 43 33.0	+1.4
	12nm,1.0s						
BC3	Big Chuckawall	48.82	319	P	P	13

D37A	Cotton	49.51 348	P	P	13 43 37.8 +0.6
	baz=162				
LCMT	Little Creek M	49.57 323	eP	P	13 43 39.5 +1.5
	6.7nm,1.0s				
GMRC	Granite Mounta	49.64 320	P	P	13 43 40.0 +1.3
	baz=128,SNR=6.9				
P18A	Preston Nutter	49.71 328	eP	P	13 43 38.8 -0.6
	9.9nm,1.1s				
RWWY	Rawlins	49.75 332	eP	P	13 43 39.1 -0.4
	24nm,0.9s				
P17A	Butcher Ranch,	49.86 328	eP	P	13 43 39.7 -0.6
	15nm,1.0s				
SZCU	Shurtz Canyon	49.87 324	eP	P	13 43 39.8 -0.6
	8.7nm,0.9s				
MSU	Marysvale	49.97 326	eP	P	13 43 40.6 -0.6
TMUT	Trail Mountain	49.98 327	eP	P	13 43 41.1 -0.3
	5.4nm,0.7s				
CCUT	Cedar City	50.00 324	eP	P	13 43 41.6 +0.2
	6.8nm,1.1s				
C36A	Pine Crest Far	50.16 348	P	P	13 43 41.8 -0.4
	baz=162				
K22A	Casper	50.20 333	P	P	13 43 43.8 +1.0
	baz=143,SNR=5.7				
TUQ	Turquoise Moun	50.21 320	P	P	13 43 44.2 +1.2
	baz=128,SNR=7.9				
RSSD	Black Hills	50.34 336	P	P	13 43 45.2 +1.3
	baz=146				
RSSD	Black Hills	50.34 336	eP	P	13 43 43.4 -0.5
	21nm,0.9s				
C35A	Jirik Farms, M	50.36 347	P	P	13 43 42.8 -1.0
	baz=160				
SHPR	Sheep Range	50.40 322	eP	P	13 43 44.5 +0.1
	12nm,1.0s				
BFSC	Mount Baldy Ra	50.63 318	P	P	13 43 47.5 +1.3
	baz=126				
CIS	Catalina Islan	50.67 316	P	P	13 43 45.2 -1.2
	baz=124				
GSC	Goldstone, Bar	50.70 319	P	P	13 43 47.2 +0.6
	baz=127,SNR=7.9				
GSC	Goldstone, Bar	50.70 319	eP	P	13 43 46.6 -0.1
	15nm,1.1s				
SHOC	Shoshone, Teco	50.72 320	P	P	13 43 47.2 +0.5
	baz=128				
MPU	Maple Canyon	50.73 327	eP	P	13 43 47.0 +0.1
	5.9nm,1.0s				
MWC	Mount Wilson	50.90 317	eP	P	13 43 48.2 -0.1
	17nm,1.2s				
B35A	Bob, Littlefor	50.93 347	P	P	13 43 49.6 +1.6
	baz=160				
B35A	Bob, Littlefor	50.93 347	eP	P	13 43 46.6 -1.4
	13nm,1.4s				
PSUT	Pine Spring	50.94 325	eP	P	13 43 49.2 +0.6
	5.2nm,1.1s				
JLU	Jordanelle	51.05 328	eP	P	13 43 49.8 +0.4
	13nm,1.0s				
EDW2	Edwards Air Fo	51.23 318	P	P	13 43 51.5 +0.9
	baz=126,SNR=7.5				
B34A	Aery, Baudette	51.25 346	P	P	13 43 50.8 +0.4
	baz=159,SNR=5.8				
CTU	Camp Tracy	51.27 328	eP	P	13 43 51.1 +0.1
	11nm,1.0s				
SNCC	San Nicolas Is	51.36 316	P	P	13 43 50.9 -0.6
	baz=123				
TPNV	Topopah Spring	51.36 321	P	P	13 43 52.7 +1.1
	baz=129,SNR=7.2				
AGMN	Agassiz Nation	51.37 345	P	P	13 43 51.7 +0.3
	baz=158				
AGMN	Agassiz Nation	51.37 345	eP	P	13 43 50.4 -1.0
	14nm,1.3s				
LRMC	Laurel Mtn Rad	51.38 319	P	P	13 43 53.1 +1.3
	baz=126,SNR=7.8				
TCUT	Toone Canyon	51.40 329	eP	P	13 43 51.1 -0.9
	25nm,0.9s				
DUG	Dugway, Tooele	51.49 327	P	P	13 43 54.2 +1.6
	baz=134,SNR=6.9				
DUG	Dugway, Tooele	51.49 327	eP	P	13 43 52.2 -0.4
	14nm,1.3s				
MPMC	Manual Prospec	51.60 320	P	P	13 43 54.6 +1.1
	baz=127,SNR=6.0				
BW06	Boulder Array	51.69 331	P	P	13 43 54.3 +0.1
	baz=139				
BW06	Boulder Array	51.69 331	eP	P	13 43 54.3 +0.1
	9.9nm,1.4s				
PD31	Pinedale Array	51.69 331	eP	P	13 43 54.8 +0.6
PDAR	Pinedale Array	51.69 331	P	P	13 43 55.0 +0.9
	0.6nm,0.7s,baz=123,slow=5.5,SNR=11				
PDAR			LR	LR	14 07 13.4
	comp=Z,116nm,18.6s,baz=168,slow=38				
PDAR	Pinedale Array	51.69 331	eP	P	13 43 54.5 +0.3
DAC	Darwin (Calif)	51.80 320	eP	P	13 43 54.7 -0.3
	4.6nm,1.0s				
HWUT	Hardware Ranch	51.83 329	eP	P	13 43 55.1 -0.1
	18nm,0.9s				
R11A	Troy Canyon, C	51.84 323	P	P	13 43 56.7 +1.4
	baz=130,SNR=9.0				
R11A	Troy Canyon, C	51.84 323	eP	P	13 43 55.9 +0.6
	9.4nm,1.3s				
A33A	Warroad	51.85 346	P	P	13 43 55.0 +0.1
	baz=159,SNR=5.3				
ISA	Isabella, Lake	52.01 319	P	P	13 43 57.2 +0.8
	baz=126,SNR=5.4				
ISA	Isabella, Lake	52.01 319	eP	P	13 43 57.9 +1.5
	11nm,1.1s				
SPUT	South Promonto	52.08 328	eP	P	13 43 57.2 +0.2
	34nm,1.0s				
GRAC	Grapevine Rang	52.09 321	P	P	13 43 57.9 +1.0
	baz=128,SNR=5.9				
BGU	Big Grassy Mou	52.12 327	eP	P	13 43 57.7 +0.4
	16nm,1.1s				
AHID	Auburn Hatcher	52.45 330	eP	P	13 43 58.5 -1.3
	13nm,1.1s				
PKM	Mcpherson Peak	52.46 317	P	P	13 44 00.9 +0.9
	baz=124,SNR=5.2				
VES	Vestal, Richgr	52.52 319	P	P	13 44 00.9 +0.8
	baz=125,SNR=5.1				
REDW	Red Top Meadow	52.77 331	eP	P	13 44 03.1 +0.9
	17nm,1.1s				
SNOW	Snow King Moun	52.79 331	eP	P	13 44 01.8 -0.6
	14nm,1.1s				
MOOW	Moose Ponds	53.00 331	eP	P	13 44 02.0 -1.8
	9.1nm,1.0s				
ULM	Lac du Bonnet	53.19 346	P	P	13 44 04.1 -0.7
	8.7nm,0.9s,baz=75,slow=12,SNR=3.3				
ULM	Lac du Bonnet	53.19 346	eP	P	13 44 02.6 -2.2
	11nm,1.0s				
ELK	Elko	53.22 326	P	P	13 44 07.2 +1.7
	0.7nm,0.6s,baz=188,slow=3.5,SNR=2.5				
RLMT	Red Lodge	53.36 333	P	P	13 44 07.5 +1.1
	baz=141,SNR=6.9				
RLMT	Red Lodge	53.36 333	eP	P	13 44 05.8 -0.6
	13nm,1.1s				
NV11	Mina Array Sit	53.46 322	eP	P	13 44 06.4 -0.8
	1.3nm,1.0s				
NVAR	Mina Array Bea	53.55 322	P	P	13 44 09.9 +1.9
	13nm,0.9s,baz=138,slow=7.2,SNR=21				
NVAR			LR	LR	14 05 20.2
	comp=Z,56nm,21.1s,baz=248,slow=34				
GCMT	Greycliff	54.06 334	eP	P	13 44 10.3 -1.2
BMN	Battle Mountai	54.15 324	eP	P	13 44 13.6 +1.3
	24nm,1.4s				
HLID	Hailey	54.70 329	P	P	13 44 17.5 +1.2
	baz=134,SNR=12				
HLID	Hailey	54.70 329	eP	P	13 44 14.5 -1.7
	12nm,0.9s				
BOZ	Bozeman (W)	54.80 332	P	P	13 44 17.6 +0.7
	baz=138,SNR=34				
BOZ	Bozeman (W)	54.80 332	eP	P	13 44 15.8 -1.1
	28nm,1.0s				
DLMT	Dillon	55.09 331	eP	P	13 44 17.3 -1.7
	9.7nm,1.1s				
MFID	Camas Ranch	55.34 328	eP	P	13 44 19.6 -1.2
	24nm,1.0s				
EGMT	Eagleton	55.84 335	P	P	13 44 24.3 +0.1
	baz=142,SNR=7.8				
EGMT	Eagleton	55.84 335	eP	P	13 44 24.8 +0.6
	26nm,1.1s				
WVOR	Wild Horse Val	56.25 325	eP	P	13 44 28.3 +1.0
	27nm,1.1s				
SCHQ	Schefferville	56.58 8	LR	LR	14 13 28.7
	comp=Z,22nm,18.0s,baz=248,slow=41				
MSO	Missoula	56.80 332	P	P	13 44 31.4 +0.2
	baz=136,SNR=10				
MSO	Missoula	56.80 332	eP	P	13 44 31.3 +0.2
	28nm,1.1s				
O03D	Paynes Creek	56.84 321	P	P	13 44 32.4 +0.9
	baz=125				
M04C	Macdoel	57.73 323	P	P	13 44 38.2 +0.4
	baz=126,SNR=8.8				
N02D	Trinity Center	57.79 322	P	P	13 44 39.4 +1.1
	baz=125				
M02C	Callahan	58.12 322	P	P	13 44 41.7 +1.1
	baz=125				
YBH	Yreka Blue Hor	58.23 322	P	P	13 44 41.8 +0.4
	11nm,0.9s,baz=189,slow=2.8,SNR=4.6				
YBH			LR	LR	14 09 01.5
	comp=Z,43nm,19.2s,baz=142,slow=35				
YBH	Yreka Blue Hor	58.23 322	eP	P	13 44 40.5 -0.8
	13nm,1.0s				
G08A	Pilot Rock	58.27 328	eP	P	13 44 41.4 -0.1
	27nm,1.0s				
J05D	Fort Rock, OR	58.27 325	P	P	13 44 43.3 +1.6
	baz=128,SNR=12				
PINE	Pine Mountain	58.42 325	eP	P	13 44 40.9 -1.8
	34nm,1.0s				
WALA	Waterton Lakes	58.42 334	eP	P	13 44 42.2 -0.3
	19nm,0.9s				
J04D	Umpqua Nationa	58.76 324	P	P	13 44 46.4 +1.3
	baz=127				
I05D	Terrebonne, OR	58.98 325	P	P	13 44 48.4 +2.0
	baz=128				
L02D	Cave Junction,	59.02 322	P	P	13 44 44.3 -2.4
	baz=125				
I04A	Tendick Farm,	59.26 324	P	P	13 44 47.3 -1.1
	baz=127				
NEW	Newport	59.34 331	P	P	13 44 49.9 +1.1
	7.9nm,0.9s,baz=149,slow=6.8,SNR=4.5				
NEW	Newport	59.34 331	P	P	13 44 50.4 +1.6
	baz=134				
G05D	Wamic, OR	59.52 326	P	P	13 44 51.1 +1.0
	baz=128				
I03D	Drain, OR	59.76 324	P	P	13 44 50.2 -1.6
	baz=126				
FCC	Fort Churchill	60.88 351	eP	P	13 44 56.9 -2.2
	8.4nm,1.0s				
F04D	Rainier, OR	60.98 326	P	P	13 45 01.1 +1.0
	baz=127				
C06D	Leavenworth	60.99 329	P	P	13 45 01.2 +1.0
	baz=130				
B05A	Bryant	61.83 329	P	P	13 45 05.3 -0.5
	baz=129				
A04D	Lummi Island	62.43 329	P	P	13 45 09.8 +0.1
	baz=128				
FRB	Frobisher Bay	65.11 5	LR	LR	14 14 58.2
	comp=Z,49nm,18.2s,baz=228,slow=37				
BBB	Bella Bella	67.27 330	P	P	13 45 41.9 +0.7
	12nm,0.9s,baz=111,slow=8.6,SNR=1.7				
YKA	Yellowknife Ar	68.91 343	P	P	13 45 51.7 +0.4
	5.1nm,1.0s,baz=138,slow=5.7,SNR=14				
YKA			LR	LR	14 18 32.0
	comp=Z,5.9nm,20.7s,baz=144,slow=38				
YKW3	Yellowknife Ar	68.97 343	eP	P	13 45 49.9 -1.8
	8.8nm,1.0s				
SFJD	Kangerlussuaq	70.77 11	LR	LR	14 19 46.2
	comp=Z,37nm,18.2s,baz=194,slow=38				
PPT2	Papeete2	71.39 252	eLR	LR	14 08 09.7
	150nm,23.8s				
DLBC	Dease Lake	71.75 334	P	P	13 46 10.0 +1.1
	12nm,1.0s,baz=116,slow=6.7,SNR=2.2				
DLBC	Dease Lake	71.75 334	eP	P	13 46 08.1 -0.8
	23nm,0.9s				
DBIC	Dimbokro	74.15 83	LR	LR	14 16 56.3
	comp=Z,148nm,19.2s,baz=231,slow=34				
KOWA	Kowa	75.52 75	P	P	13 46 32.3 +0.5
	1.4nm,0.6s,baz=267,slow=7.7,SNR=3.4				
KOWA			LR	LR	14 17 14.2
	comp=Z,134nm,21.0s,baz=222,slow=34				
BORG	Borgarnes	77.64 22	LR	LR	14 18 03.8
	comp=Z,42nm,21.4s,baz=207,slow=33				
SUMG	Summit	77.77 12	eP	P	13 46 43.0 -0.9
	41nm,1.6s				
DAWY	Dawson	78.53 337	eP	P	13 46 47.1 -0.8
	14nm,0.9s				
INK	Inuvik	78.63 342	P	P	13 46 51.5 +3.3
	21nm,1.1s,baz=121,slow=6.2,SNR=10				
INK	Inuvik	78.63 342	eP	P	13 46 47.5 -0.7
	28nm,1.0s				
ESDC	Sonseca Array	79.02 49	P	P	13 46 51.7 +0.5
	1.7nm,0.8s,baz=267,slow=5.0,SNR=12				
EGAK	Eagle	79.53 337	eP	P	13 46 51.5 -1.8
	37nm,0.9s				
PAX	Paxson	80.56 335	eP	P	13 46 57.8 -1.1
	18nm,1.1s				
TOA0	Torodi Ar. Sit	80.96 77	eP	P	13 46 59.8 -2.2
TORD	Torodi Ar. Bea	80.96 77	P	P	13 47 01.2 -0.8
	1.9nm,1.1s,baz=268,slow=3.4,SNR=5.3				
TORD			LR	LR	14 20 17.0
	comp=Z,160nm,21.7s,baz=235,slow=34				
RAR	Rarotonga	81.22 249	LR	LR	14 14 35.7
	comp=Z,143nm,21.1s,baz=178,slow=29				
GHO	Glory Hole Cre	81.67 333	eP	P	13 47 04.0 -0.8
	24nm,0.8s				
PMR	Palmer	81.70 333	eP	P	13 47 02.6 -2.4
	25nm,1.5s				
IL1	Eielson Array	81.79 336	eP	P	13 47 04.5 -0.9
ILAR	Eielson Array	81.79 336	P	P	13 47 05.5 +0.1
	12nm,0.9s,baz=116,slow=5.4,SNR=16				
ILAR			PP	PP	13 50 18.4 +5.9
	1.5nm,1.1s,baz=115,slow=7.9,SNR=6.3				
ILB	Eielson Array	81.79 336	eP	P	13 47 04.0 -1.4
RND	Reindeer	82.15 335	eP	P	13 47 06.4 -1.0
	126nm,1.9s				
MDM	Murphy Dome	82.39 336	eP	P	13 47 08.6 0.0
	30nm,1.0s				
SUA	Susitna One	82.40 333	eP	P	13 47 07.9 -0.9
	28nm,0.8s				
EKA	Eskdalemuir Ar	82.72 34	P	P	13 47 10.6 +0.1
	0.5nm,0.5s,baz=254,slow=2.7,SNR=4.7				
TRF	Thorofare Moun	82.78 335	eP	P	13 47 10.5 -0.3
	14nm,0.9s				
SKT	Skwentna	82.91 333	eP	P	13 47 11.1 -0.2
	42nm,0.9s				
BPAW	Bear Paw Mtn.	83.26 335	eP	P	13 47 12.8 -0.3
	40nm,0.9s				
MLY	Manley	83.43 336	eP	P	13 47 13.1 -0.9
	22nm,0.9s				
PPLA	Purkeypile	83.45 334	eP	P	13 47 13.2 -1.0
	35nm,0.9s				
TOLK	Toolik Lake Re	84.08 340	P	P	13 47 18.1 +0.8
	baz=108				
SNAA	Sanae	84.57 162	P	P	13 47 20.2 +0.4
	0.9nm,0.8s,baz=212,slow=18,SNR=4.0				
KEST	Kesra	89.09 54	P	P	13 47 42.2 -0.3
	5.8nm,0.9s,baz=340,slow=6.0,SNR=4.8				
HFS	Hagfors	92.16 30	LR	LR	14 26 53.1
	comp=Z,55nm,20.0s,baz=284,slow=34				
FINES	FINESS Array B	98.02 28	LR	LR	14 27 50.3
	comp=Z,52nm,20.8s,baz=202,slow=32				
BVAR	Borovoye Array	122.23 21	PKP	PKPdf	13 53 41.3 -0.4
	0.2nm,0.4s,baz=258,slow=7.1,SNR=3.1				
ASAJ	Asahikawa	123.60 325	PKP	PKPdf	13 53 44.7 +0.1
	2.0nm,0.9s,baz=30,slow=14,SNR=2.7				
KLR	Kul'dur	125.36 336	PKP	PKPdf	13 53 47.0 -0.8
	0.0nm,0.4s,baz=282,slow=20,SNR=2.0				
ZAA0	Zalesovo Array	125.59 12	ePKPdf	PKPdf	13 53 48.0 -0.1
ZALV	Zalesovo Beam	125.59 12	PKP	PKPdf	13 53 48.2 +0.1
	0.7nm,0.3s,baz=12,slow=2.1,SNR=6.2				
ZALV	Zalesovo Beam	125.59 12	ePKPdf	PKPdf	13 53 47.5 -0.6
KURK	Kurchatov	126.95 18	ePKPdf	PKPdf	13 53 50.4 -0.4
KURBB	Kurchatov Arra	127.01 18	PKP	PKPdf	13 53 51.6 +0.7
	1.3nm,0.9s,baz=322,slow=2.3,SNR=11				
STKA	Stephens Creek	129.67 226	PKP	PKPdf	13 53 57.7 +1.1
	2.2nm,0.9s,baz=258,slow=19,SNR=2.8				
MAKZ	Makanchi	131.44 18	ePKPdf	PKPdf	13 53 59.5 0.0
MKAR	Makanchi Array	131.55 17	PKP	PKPdf	13 54 00.1 +0.3
	0.8nm,0.9s,baz=336,slow=2.7,SNR=6.1				
MK01	Makanchi Array	131.58 17	ePKPdf	PKPdf	13 53 59.4 -0.5
CN2	Changchun	132.31 336	ePKP	PKPdf	13 53 56.3 -4.9
KSH	Kashi	135.34 28	PKP	PKPdf	13 54 06.1 -1.1
KSH			sPKP		13 54 22.6
KSH			PP	PP	13 56 46.0 +3.5
WMQ	Urumqi	135.76 14	PKP	PKPdf	13 54 07.0 -0.8
WMQ			LR	LR	
	comp=Z,140nm,28.9s				
KS01	Wonju Array Si	136.23 329	ePKPdf	PKPdf	13 54 08.5 -0.2
KSRS	Korea Array	136.24 329	PKP	PKPdf	13 54 07.8 -0.9
	2.2nm,0.9s,baz=39,slow=1.7,SNR=8.3				
KSAR	Wonju Array Be	136.26 329	PKP	PKPdf	13 54 07.8 -1.0
HHC	Hu-ho-hao-te	139.32 348	ePKP	PKPdf	13 54 13.5 -1.0
AS01	Alice Springs	139.80 230	ePKPdf	PKPdf	13 54 14.1 -1.7
ASAR	Alice Springs	139.84 230	PKhKP	PKPpre	13 54 09.2
	0.4nm,0.6s,baz=122,slow=3.8,SNR=7.9				
ASAR			PKP	PKPdf	13 54 15.2 -0.7
	1.4nm,0.8s,baz=122,slow=3.5,SNR=12				
WRA	Warramunga Arr	141.41 235	PKhKP	PKPpre	13 54 14.5
	1.3nm,0.7s,baz=118,slow=2.8,SNR=7.3				
WRA			PKP	PKPdf	13 54 18.6 -0.2
	3.6nm,0.8s,baz=127,slow=1.8,SNR=9.7				
NJ2	Nanjing	144.99 333	ePKPbc	PKPbc	13 54 23.0 -0.9
LZH	Lanzhou	145.08 356	ePKPbc	PKPdf	13 54 25.3 +0.3
LZH			pPKP	sPKPdf	13 54 36.8 +4.7
LZH			sPKP		13 54 41.0
LZH			LR	LR	
	comp=Z,290nm,20.0s				
FITZ	Fitzroy Crossi	149.34 230	PKPbc	PKPbc	13 54 37.1 +0.4
	7.3nm,0.8s,baz=149,slow=3.1,SNR=6.1				
ENH	Enshi	149.92 346	ePKPbc	PKPbc	13 54 37.4 -0.4
LSA	Lhasa	149.96 18	ePKPbc	PKPdf	13 54 35.5 +1.8
CD2	Chengdu	150.23 356	PKPbc	PKPdf	13 54 31.1 -2.4
GYA	Guiyang	154.23 349	ePKPbc	PKPdf	13 54 37.3 -2.4
GYA			PKPab	PKPab	13 55 01.0 -0.4
GYA			PKS	PKSdf	13 58 10.6 -3.6
GYA			PP	PP	13 58 37.3 +2.5
GYA			AMB	AMB	
	comp=Z,120nm,7.9s				

IDC 18 13:40:31.1±999.0, 47°.16N×48°.15E, h0km, Error ellipse: s-maj=500.1km s-min=201.9km az=131.0, Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASONI	11.70	329	i		14 54 00.0	
	baz=140,slow=324,SNR=1.0						
I26DE	FREYUNG INFRAS	22.99	287	i		16 00 50.0	
	baz=82,slow=322,SNR=2.4						
I48TN	KESRA INFRASON	30.92	263	i		16 50 00.0	
	baz=56,slow=312,SNR=1.0						

IDC 18 13:55:24.6±7.3, 17°.63S×178°.82W, h608km±82km, mb3.0/5, mb1 3.2/5, mb1mx2.7/55, mbtmp4.0/5, Error ellipse: s-maj=109.1km s-min=41.2km az=156.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	33.10	260	P	P	14 01 12.4	0.0
	3.8nm,0.9s,baz=106,slow=6.4,SNR=3.0						
STKA	Stephens Creek	38.42	241	P	P	14 01 55.9	0.0
	1.8nm,1.1s,baz=83,slow=16,SNR=5.0						
WRA	Warramunga Arr	44.30	259	P	P	14 02 42.1	-0.2
	0.8nm,0.5s,baz=95,slow=7.4,SNR=32						
WRA				PcP	PcP	14 04 12.8	-0.2
	0.6nm,1.1s,baz=90,slow=3.4,SNR=2.5						
ASAR	Alice Springs	44.49	254	P	P	14 02 43.9	+0.1
	5.4nm,0.6s,baz=87,slow=8.6,SNR=109						
ASAR				PcP	PcP	14 04 13.1	-0.5
	0.2nm,0.5s,baz=102,slow=3.8,SNR=4.2						
TXAR	Lajitas Array	86.18	58	P	P	14 07 03.1	0.0
	0.1nm,0.3s,baz=211,slow=5.1,SNR=3.4						

*ISCJB **18** 13:58:49.9±0.4, 24°.46N±0°.02×122°.31E±0°.02, h65km±4km, Error ellipse: s-maj=3.7km s-min=2.4km az=165.6*
*JMA **18** 13:58:49.7±0.2, 24°.41N×122°.28E, h71km±3km, M2.1*
*TAP **18** 13:58:49.9, 24°.48N×122°.29E, h73km, ML3.2, B*
ISC 18 13:58:50.5±1.3, 24°.45N±0°.03×122°.31E±0°.02, h64km±7km, n74, σ0°.84/132, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.19	301	eP	Pn	13 59 00.8	+0.5
EOS1	baz=295			eS	Sn	13 59 08.8	+1.5
TWC	Suao	0.44	290	P	Pn	13 59 01.9	-0.2
TWC	baz=291			eS	Sn	13 59 10.4	-0.3
ENAH	Nanao	0.45	269	eP	Pn	13 59 02.2	-0.1
ENAH	baz=266			eS	Sn	13 59 10.9	+0.1
NANB	Nanao	0.51	267	eP	Pn	13 59 02.8	0.0
NANB	baz=264			eS	Sn	13 59 11.9	+0.1
ENA	Nanau	0.52	267	eP	Pn	13 59 02.6	-0.2
ENA	baz=264			eS	Sn	13 59 12.8	+0.8
EGS	baz=326	0.52	319	eP	Pn	13 59 02.3	-0.6
JYNG	Yonagunijimaku	0.58	90	P	Pn	13 59 04.0	+0.4
JYNG				eS	Sn	13 59 13.6	+0.4
NTC	Toucheng	0.59	313	P	Pn	13 59 03.3	-0.4
NTC	baz=316			eS	Sn	13 59 12.9	-0.4
ILA	Ilan	0.59	302	eP	Pn	13 59 03.6	-0.2
ILA	baz=302			eS	Sn	13 59 13.9	+0.5
TWB1	Santiao Chiao	0.62	333	eS	Sn	13 59 13.1	-0.9
TWE	Neicheng	0.64	295	P	Pn	13 59 04.1	-0.1
TWE	baz=297			eS	Sn	13 59 14.4	+0.1
YOJ	Yonaguni jima	0.64	89	eP	Pn	13 59 04.6	+0.3
YOJ	baz=91			eS	Sn	13 59 14.9	+0.5
YOJ	Yonaguni jima	0.64	89	P	Pn	13 59 04.3	0.0
YOJ				eS	Sn	13 59 14.7	+0.3
TIPB	Shuangxi	0.68	320	eP	Pn	13 59 03.2	-1.6
TIPB	baz=325			eS	Sn	13 59 13.8	-1.4
SLBB	Yuanshan	0.68	296	P	Pn	13 59 04.9	+0.1
SLBB	baz=297			eS	Sn	13 59 15.1	-0.1
ENTT	Nioudou	0.70	286	eP	Pn	13 59 05.2	+0.2
ENTT	baz=287			eS	Sn	13 59 16.3	+0.8
NACB	Ninganchiao	0.71	247	P	Pn	13 59 04.5	-0.5
NACB	baz=238			eS	Sn	13 59 15.3	-0.4
TWD	Chiawan	0.75	240	P	Pn	13 59 05.0	-0.5
TWD	baz=237			eS	Sn	13 59 16.4	-0.2
NWF	Wu-fen Shan	0.78	322	eP	Pn	13 59 05.5	-0.5
NWF	baz=321			eS	Sn	13 59 17.1	-0.2
WFSB	Wu-fen Shan	0.78	322	P	Pn	13 59 05.4	-0.5
WFSB	baz=321			eS	Sn	13 59 17.1	-0.1
NWLT	Wulai	0.80	294	eP	Pn	13 59 06.2	0.0
NWLT	baz=294			eS	Sn	13 59 18.5	+0.7
TWA	Mucha	0.84	309	P	Pn	13 59 06.3	-0.4
TWA	baz=314			eS	Sn	13 59 18.3	-0.3
NNSB	Datong	0.84	268	P	Pn	13 59 06.5	-0.3
NNSB	baz=266			eS	Sn	13 59 18.6	-0.2
NNSH	Datong	0.84	268	P	Pn	13 59 06.6	-0.2
NNSH	baz=267			eS	Sn	13 59 18.6	-0.2
ENLB	Shoufeng	0.84	230	P	Pn	13 59 06.8	+0.1
ENLB	baz=220			eS	Sn	13 59 19.5	+0.8
NNS	Nan Shan	0.85	269	P	Pn	13 59 06.8	-0.1
NNS	baz=267			eS	Sn	13 59 18.8	-0.2
YHNB	Yeheng	0.87	284	eP	Pn	13 59 07.0	-0.1
YHNB	baz=282			eS	Sn	13 59 19.6	+0.1

NSK	Sanguang	0.89	285	*eP*	Pn	13 59 07.5	+0.1
	baz=283						
NSK				*eS*	Sn	13 59 19.8	0.0
	baz=283						
TATO	Taipei	0.91	305	P	Pn	13 59 07.0	-0.5
	baz=311						
TATO				*eS*	Sn	13 59 19.5	-0.5
	baz=311						
ESL	Shilin	1.02	232	*eP*	Pn	13 59 08.1	-0.9
	baz=222						
ESL				*eS*	Sn	13 59 21.8	-0.9
	baz=222						
TWS1	Kuangyinshan	1.03	309	P	Pn	13 59 08.7	-0.3
	baz=316						
TWS1				*eS*	Sn	13 59 22.7	-0.2
	baz=316						
TWY	Chenhua	1.04	322	*eP*	Pn	13 59 08.8	-0.4
	baz=321						
TWY				*eS*	Sn	13 59 22.3	-0.7
	baz=321						
NTST	Danshui	1.05	312	P	Pn	13 59 08.9	-0.4
	baz=319						
NTST				*eS*	Sn	13 59 23.0	-0.3
	baz=319						
CHGB	Renai	1.10	249	P	Pn	13 59 10.2	0.0
	baz=240						
CHGB				*eS*	Sn	13 59 24.7	-0.2
	baz=240						
EGFH	Guangfu	1.12	226	*eP*	Pn	13 59 09.7	-0.5
	baz=219						
EGFH				*eS*	Sn	13 59 24.7	-0.3
	baz=219						
NCU	National Centr	1.14	297	*eS*	Sn	13 59 26.2	+0.8
	baz=304						
NCUH	Zhongli	1.14	297	*eP*	Pn	13 59 10.5	0.0
	baz=304						
NCUH				*eS*	Sn	13 59 25.5	+0.1
	baz=304						
LIOB	Emei	1.19	279	*eP*	Pn	13 59 11.4	+0.2
	baz=288						
LIOB				*eS*	Sn	13 59 26.9	+0.3
	baz=288						
NSTT	Nanjuang	1.20	279	*eP*	Pn	13 59 11.7	+0.4
	baz=287						
NSTT				*eS*	Sn	13 59 27.2	+0.4
	baz=287						
HGSD	Ruisui	1.25	220	*eP*	Pn	13 59 11.3	-0.6
	baz=211						
HGSD				*eS*	Sn	13 59 28.6	+0.6
	baz=211						
VWDT	VWDT	1.27	237	*eP*	Pn	13 59 12.2	0.0
	baz=228						
VWDT				*eS*	Sn	13 59 28.2	-0.3
	baz=228						
EHY	Hungye	1.30	224	*eP*	Pn	13 59 11.5	-1.1
	baz=222						
EHY				*eS*	Sn	13 59 27.6	-1.7
	baz=222						
IRIF	Iriomote-Funau	1.30	95	P	Pn	13 59 12.6	0.0
IRIF				*eS*	Sn	13 59 29.1	-0.2
NMLH	Miaoli	1.38	274	*eS*	Sn	13 59 31.0	-0.1
	baz=272						
SSLB	Suanglung	1.40	242	*eP*	Pn	13 59 14.3	+0.3
	baz=235						
SSLB				*eS*	Sn	13 59 31.4	-0.2
	baz=235						
YULB	Yu-li	1.40	221	*eP*	Pn	13 59 12.9	-1.1
	baz=227						
YULB				*eS*	Sn	13 59 29.8	-1.9
	baz=227						
SMLT	Sun Moon Lake	1.40	246	*eP*	Pn	13 59 14.3	+0.2
	baz=238						
TYC	Yuchr	1.43	248	*eP*	Pn	13 59 14.6	+0.3
	baz=243						
TYC				*eS*	Sn	13 59 32.8	+0.5
	baz=243						
TWF1	Yuli	1.43	220	*eP*	Pn	13 59 13.3	-1.1
	baz=226						
FULB	Fuli	1.56	217	*eP*	Pn	13 59 15.4	-0.6
	baz=209						
FULB				*eS*	Sn	13 59 34.8	-0.5
	baz=209						
JKRS	Kuro-shima	1.57	98	P	Pn	13 59 16.6	+0.4
JKRS				S	Sn	13 59 36.2	+0.6
WJS	Zhushan	1.57	247	*eP*	Pn	13 59 17.5	+1.3
	baz=257						
WJS				*eS*	Sn	13 59 37.6	+2.0
	baz=257						
WNT	Mingjian	1.59	249	*eP*	Pn	13 59 17.3	+0.8
	baz=258						
CHKT	Chengkung	1.60	213	*eP*	Pn	13 59 15.1	-1.6
	baz=205						
ALS	Alishan	1.66	236	*eP*	Pn	13 59 18.3	+0.6
	baz=227						
ALS				*eS*	Sn	13 59 38.6	+0.4
	baz=227						
JIJ	Ishigaki jima	1.68	93	P	Pn	13 59 17.4	-0.2
JIJ				S	Sn	13 59 37.6	-0.6
ELDTW	Lidau	1.73	223	*eP*	Pn	13 59 17.5	-0.9
	baz=216						
ELDTW				*eS*	Sn	13 59 38.2	-1.3
	baz=216						
WDLH	Douliu	1.79	245	*eP*	Pn	13 59 20.2	+1.1
	baz=254						
WDLH				*eS*	Sn	13 59 42.9	+2.1
	baz=254						
JISG	Ishigakijimahi	1.83	85	P	Pn	13 59 19.4	-0.3
JISG				*eS*	Sn	13 59 41.7	-0.2
RLNB	Erlin	1.86	253	*eS*	Sn	13 59 43.7	+1.1
	baz=261						
CHN2	Minshiung	1.91	242	*eS*	Sn	13 59 46.2	+2.4
	baz=252						
STYT	Tauyuan	1.91	228	*eP*	Pn	13 59 21.3	+0.4
	baz=222						
STYT				*eS*	Sn	13 59 43.9	-0.1
	baz=222						
TPUB	Ta-pu	1.92	234	*eP*	Pn	13 59 21.7	+0.8
	baz=232						
TPUB				*eS*	Sn	13 59 45.3	+1.3
	baz=232						
WTP	Ta-pu	1.96	232	*eP*	Pn	13 59 22.6	+1.1
	baz=231						
WTP				*eS*	Sn	13 59 46.6	+1.4
	baz=231						
CHY	Chiayi	1.97	241	*eS*	Sn	13 59 46.5	+1.4
	baz=251						
TWGBT	Beinan	1.98	215	*eP*	Pn	13 59 20.1	-1.7
	baz=213						
TWGBT				*eS*	Sn	13 59 43.0	-2.5
	baz=213						
TWG	Pinlang	1.98	215	*eP*	Pn	13 59 20.2	-1.6
	baz=213						
TWG				*eS*	Sn	13 59 43.1	-2.4
	baz=213						
CHN1	Nanshi	2.06	233	*eP*	Pn	13 59 23.7	+0.9
	baz=231						
WSF	Szhu	2.07	247	*eS*	Sn	13 59 48.7	+1.0
	baz=256						
SLGT	Liugui	2.10	227	*eP*	Pn	13 59 24.6	+1.2
	baz=218						
SLGT				*eS*	Sn	13 59 50.0	+1.4
	baz=218						
JTJ	Tarama	2.19	85	S	Sn	13 59 51.7	+1.1
MASBT	Mashibuluo	2.39	220	*eP*	Pn	13 59 27.9	+0.6
	baz=219						
MASBT				*eS*	Sn	13 59 56.9	+1.4
	baz=219						
JIRB	Irabujima	2.64	81	S	Sn	14 00 01.9	+0.4
VWUC	VWUC	2.65	282	*eP*	Pn	13 59 29.6	-1.2
	baz=281						

*IDC **18** 14:01:10.9±0.6, 10°.70S×113°.42E, h0km, mb4.0/17, mb1 4.1/18, mb1mx4.0/59, mbtmp4.1/18, ML4.7/1, MS3.1/3, Ms1 3.2/3, ms1mx2.8/62, Error ellipse: s-maj=21.1km s-min=11.4km az=56.0*

*DJA **18** 14:01:16.8±1.4, 11°.5±9°.×11°.3E±°, h30km±21km, M4.5/17, mb4.5/3, MLv4.5/17*

*NEIC **18** 14:01:19.9±2.6, 10°.59S×113°.66E, h66km±23km, mb4.2/2, Error ellipse: s-maj=19.2km s-min=9.0km az=76.0*

ISC 18 14:01:12.5±1.8, 10°.75S±0°.05×113°.45E±0°.05, h13km±11km, n48, σ2.9 03/59, mb4.1/20, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAGI	Jajag, Banyuwa	2.37	17	P	Pn	14 01 52.3	+1.0
JAGI				S	Sn	14 02 20.5	+0.2
GMJI	Gumukmas	2.46	360	P	Pn	14 01 53.1	+0.6
GMJI				S	Sn	14 02 22.7	+0.2
IGBI	Denpasar	2.55	41	P	Pn	14 01 55.1	+1.4
IGBI				S	Sn	14 02 25.1	+0.4
DNP	Denpasar	2.70	40	P	Pn	14 01 58.0	+2.3
DNP				S	Sn	14 02 29.7	+1.4
BLJI	Banyuglugur	2.99	3	P	Pn	14 02 01.7	+1.9
BLJI				S	Sn	14 02 36.2	+0.6
PWJI	Pagerwojo	3.16	329	P	Pn	14 02 02.1	0.0
PWJI				S	Sn	14 02 37.8	-1.9
SRBI	Singaraja	3.17	33	P	Pn	14 02 04.8	+2.5
PCJI	Pacitan	3.39	318	P	Pb	14 02 09.6	-2.9
WOJI	Wonogiri, Jawa	3.82	319	P	Pn	14 02 12.2	+1.0
WOJI				S	Sn	14 02 53.4	-2.6
NGJI	Ngawi	3.89	330	P	Pg	14 02 28.1	+0.9
NGJI				S	Sb	14 03 06.0	-2.3
GRJI	Gresik	3.93	346	P	Pn	14 02 15.2	+2.5
GRJI				S	Sn	14 02 58.9	+0.1
TWSI	Taliwang, Sumb	3.94	60	P	Pn	14 02 14.1	+1.3
TWSI				S	Sn	14 02 56.9	-2.0
UGM	Wanagama	4.04	314	P	Pn	14 02 15.0	+0.8
UGM				S	Sn	14 02 58.4	-3.0
PLAI	Plampang	4.68	66	P	Pn	14 02 23.9	+0.9
PLAI				S	Sn	14 03 13.8	-3.4
KPJI	Karang Pucung	5.61	307	P	Pn	14 02 37.5	+1.8
WBSI	Waikabubak, Su	5.96	80	P	Pn	14 02 42.7	+2.1
LEM	Lembang	6.96	304	LR	LR	14 06 11.2	
	comp=Z,153nm,19.3s,baz=144,slow=44						
BATI	Baumata	10.06	88	Pn	Pn	14 03 38.1	+1.1
	7.0nm,0.3s,baz=332,slow=3.5,SNR=5.5						
BATI				Sn	Sn	14 05 24.5	-5.4
	5.9nm,0.3s,baz=168,slow=22,SNR=6.5						
MBWA	Marble Bar	11.98	150	*e*Pn	Pn	14 03 59.1	-4.1
FITZ	Fitzroy Crossi	13.88	123	Pn	Pn	14 04 27.2	-1.9
	0.3nm,0.3s,baz=290,slow=12,SNR=6.5						
FITZ				Sn	Sn	14 06 50.5	-13
	0.6nm,0.3s,baz=192,slow=24,SNR=6.2						
SIJI	Sorong	20.25	62	P	P	14 05 48.3	+0.4
	7.3nm,0.6s,baz=292,slow=8.6,SNR=8.0						
DAV	Davao City (W)	21.43	35	LR	LR	14 16 28.0	
	comp=Z,29nm,19.3s,baz=166,slow=43						
WRA	Warramunga Arr	22.10	117	P	P	14 06 08.5	+0.6
	1.9nm,0.6s,baz=288,slow=12,SNR=18						
WRA				S	S	14 10 05.9	-5.6
	0.5nm,0.8s,baz=287,slow=24,SNR=3.8						
WRAB	Tennant Creek	22.11	117	*e*P	P	14 06 09.0	+1.0
	5.5nm,0.9s						
NWAO	Narrogin (SRO)	22.34	172	P	P	14 06 16.1	+5.8
	24nm,1.2s,baz=348,slow=6.7,SNR=2.7						
ASAR	Alice Springs	23.34	126	P	P	14 06 22.1	+1.2
	2.2nm,0.5s,baz=301,slow=9.6,SNR=88						
ASAR				PcP	PcP	14 10 08.1	+0.1
	0.4nm,0.6s,baz=310,slow=1.9,SNR=5.4						
ASAR				S	S	14 10 37.0	+3.4
	0.6nm,0.7s,baz=307,slow=24,SNR=3.0						
CMAR	Chiang Mai Arr	32.36	334	P	P	14 07 43.4	+1.3
	0.7nm,0.6s,baz=168,slow=9.0,SNR=2.8						
CMAR				LR	LR	14 22 10.5	
	comp=Z,52nm,18.3s,baz=185,slow=39						
STKA	Stephens Creek	33.43	133	P	P	14 07 52.2	+0.9
	2.1nm,0.8s,baz=322,slow=14,SNR=4.5						
H08S2	Diego Garcia H	40.52	271	T	T	14 52 01.6	
	baz=96,slow=75,SNR=14						
H08S3	Diego Garcia H	40.53	271	T	T	14 52 09.9	
	baz=96,slow=75,SNR=23						
H08S1	Diego Carcia H	40.54	271	T	T	14 52 07.3	
	baz=96,slow=75,SNR=3.9						
KSAR	Wonju Array Be	49.82	15	P	P	14 10 04.9	-0.5
KSRS	Korea Array	49.84	15	P	P	14 10 04.9	-0.6
	0.9nm,0.7s,baz=200,slow=6.8,SNR=3.6						
MJAR	Matsushiro Arr	52.51	25	P	P	14 10 25.5	-0.1
	1.0nm,0.8s,baz=198,slow=7.7,SNR=3.0						
USRK	Ussuriysk Ar.	57.23	16	P	P	14 10 59.8	+0.2
	2.9nm,0.7s,baz=193,slow=7.8,SNR=4.9						
SONM	Songino Array	58.66	354	P	P	14 11 09.8	0.0
	0.9nm,0.6s,baz=176,slow=10,SNR=5.3						
KLR	Kul'dur	61.86	14	P	P	14 11 30.5	-1.0
	0.1nm,0.6s,baz=208,slow=9.9,SNR=3.9						
MKAR	Makanchi Array	63.70	337	P	P	14 11 43.9	0.0
	0.6nm,0.5s,baz=135,slow=8.8,SNR=9.1						
MAW	Mawson	65.77	199	P	P	14 11 56.8	-0.2
	3.1nm,0.7s,baz=253,slow=13,SNR=3.6						
KURBB	Kurchatov Arra	68.26	337	P	P	14 12 13.1	0.0
	0.9nm,0.5s,baz=151,slow=5.9,SNR=8.4						
KURK	Kurchatov	68.30	337	P	P	14 12 13.1	-0.2
ZALV	Zalesovo Beam	68.88	342	P	P	14 12 16.1	-0.7
	1.2nm,0.6s,baz=169,slow=4.1,SNR=6.1						
VNDA	Vanda	71.16	170	P	P	14 12 31.5	+0.9
	1.1nm,0.8s,baz=299,slow=3.8,SNR=4.7						
BVAR	Borovoye Array	73.38	335	P	P	14 12 44.4	+0.2
	0.9nm,0.8s,baz=132,slow=8.6,SNR=5.8						
TIXI	Tiksi	82.86	5	*e*P	P	14 13 35.8	-0.6
	2.7nm,0.7s						
SNAA	Sanae	87.81	196	P	P	14 14 02.2	+0.8
	2.0nm,0.9s,baz=101,slow=3.6,SNR=6.2						
BRTR	Keskin Array B	89.08	311	P	P	14 14 08.7	+0.7
	1.1nm,0.8s,baz=128,slow=9.5,SNR=4.4						
YKA	Yellowknife Ar	117.98	23	PKP	PKPdf	14 19 59.0	+0.2
	0.5nm,0.7s,baz=297,slow=1.8,SNR=5.9						

*MOS **18** 14:04:41.5±1.0, 33°.19S×179°.52E, h234km, mb4.8/13, Error ellipse: s-maj=12.1km s-min=11.1km az=103.0*

*ISCJB **18** 14:04:43.2±0.2, 33°.31S±0°.02×179°.52E±0°.05, h250km, mb4.7/60, Error ellipse: s-maj=6.0km s-min=2.4km az=9.5*

*NEIC **18** 14:04:44.0±0.2, 33°.21S×179°.56E, h250km, mb4.8/37, Error ellipse: s-maj=9.3km s-min=6.5km az=170.0*

*IDC **18** 14:04:47.0±1.6, 33°.10S×179°.58E, h273km±14km, mb4.3/26, mb1 4.3/27, mb1mx4.2/49, mbtmp4.9/27, Error ellipse: s-maj=11.1km s-min=9.4km az=93.0*

ISC 18 14:04:43.4±0.3, 33°.26S±0°.04×179.74E±0°.06, h250km, n389, σ1.9 84/432, mb4.7/59, 16C-18D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.45	195	*e*Pn	Pn	14 05 49.7	-2.8
MXZ	Matakaoa Point	4.45	195	P	Pn	14 05 56.4	+3.9
MXZ				S	S	14 06 46.4	-1.1
RAO	Raoul Island	4.47	27	P	Pn	14 05 50.7	-2.1
	62nm,0.3s,baz=37,slow=20,SNR=6.0						
RAO				S	S	14 06 40.0	-8.0
	392nm,0.3s,baz=76,slow=22,SNR=4.9						
RIZ	Raoul Island	4.47	27	P	Pn	14 05 52.0	-0.8
RIZ				S	S	14 06 41.8	-6.3
WMGZ	Waiomatatini S	4.68	193	P	Pn	14 05 57.8	+2.6
WMGZ				S	S	14 06 51.7	-0.8
HAZ	Te Kaha	4.76	199	P	Pn	14 05 56.4	+0.2
HAZ				S	S	14 06 53.8	-0.5
KUZ	Kuaotunu	4.79	222	P	Pn	14 05 58.1	+1.5
PUZ	Puketiti	4.95	194	P	Pn	14 05 57.3	-1.3
PUZ				S	S	14 06 56.1	-2.4
RUGZ	Raukumara Rang	4.99	199	P	Pn	14 06 00.2	+1.0
RUGZ				S	S	14 06 56.8	-2.7
TWGZ	Tauwhareparae	5.11	196	P	Pn	14 06 02.4	+1.8
TWGZ				S	S	14 07 00.9	-1.2
OPRZ	Ohinepanea	5.26	209	P	Pn	14 06 02.5	+0.2
TGRZ	Tauranga	5.29	211	P	Pn	14 06 07.7	+5.1
CNGZ	Carnagh Statio	5.36	193	P	Pn	14 06 02.6	-0.9
CNGZ				S	S	14 07 04.1	-3.4
MWZ	Matawai	5.38	199	P	Pn	14 06 02.4	-1.4
MWZ				S	S	14 07 07.0	-1.0
TKGZ	Te Karaka	5.39	196	P	Pn	14 06 02.1	-1.9
TKGZ				S	S	14 07 06.2	-2.1
EDRZ	Edgecumbe	5.42	206	P	Pn	14 06 08.8	+4.4
URZ	Urewera	5.43	202	P	Pn	14 06 03.2	-1.2
	1.2nm,0.3s,baz=288,slow=4.5,SNR=14						
URZ				S	S	14 07 07.0	-2.1
	20nm,0.3s,baz=85,slow=20,SNR=8.3						
URZ	Urewera	5.43	202	*e*Pn	Pn	14 06 03.6	-0.7
URZ				S	S	14 07 07.0	-2.1
URZ	Urewera	5.43	202	P	Pn	14 06 03.1	-1.3
URZ				S	S	14 07 07.8	-1.3
OUZ	Omahuta	5.45	247	*e*Pn	Pn	14 06 07.0	+2.3
KMRZ	Kaimai	5.53	213	P	Pn	14 06 12.7	+7.1
KARZ	Kaharoa	5.54	210	P	Pn	14 06 10.5	+4.7
RIGZ	Rimuhau	5.67	196	P	Pn	14 06 05.3	-2.1
RIGZ				P	S	14 07 12.5	-2.0
RIGZ	Rimuhau	5.67	196	P	S	14 07 12.5	-2.0
RRRZ	Republican Roa	5.71	206	P	Pn	14 06 14.1	+6.2
MUGZ	Murupara	5.74	204	P	Pn	14 06 07.7	-0.6
HSRZ	Hossack Road	5.79	208	P	Pn	14 06 12.1	+3.3
HRRZ	Handcock Road	5.84	208	P	Pn	14 06 16.5	+7.0
SNGZ	Shannon Statio	5.85	199	P	Pn	14 06 07.7	-1.9
SNGZ				S	S	14 07 16.5	-2.0
PRGZ	Paritu Road	5.85	194	P	Pn	14 06 08.2	-1.4
PRGZ				P	S	14 07 15.2	-3.4
PRGZ	Paritu Road	5.85	194	P	S	14 07 15.2	-3.4
GRRZ	Galatos Road	5.88	209	P	Pn	14 06 15.4	+5.4
PRRZ	Plateau Road	5.89	207	P	Pn	14 06 11.5	+1.4
ALRZ	Allen Road	5.97	207	P	Pn	14 06 13.1	+2.1
KNZ	Kokohu	5.99	196	P	Pn	14 06 08.7	-2.6
WPRZ	Whakapapatarin	6.00	208	P	Pn	14 06 14.8	+3.3
RAHZ	Arahi	6.04	200	P	Pn	14 06 11.1	-0.9
MTHZ	Maungataniwha	6.06	202	P	Pn	14 06 11.2	-1.0
MHGZ	Mahia Peninsul	6.07	194	P	Pn	14 06 13.1	+0.8
TLZ	Tolley Road	6.11	213	P	Pn	14 06 16.1	+3.3
KUTZ	Kaahu Road	6.11	210	P	Pn	14 06 17.6	+4.7
WHHZ	Waihua	6.15	199	P	Pn	14 06 12.7	-0.6
MRHZ	Matea Rd	6.18	205	P	Pn	14 06 13.2	-0.5
NMHZ	Naumai	6.29	201	P	Pn	14 06 16.5	+1.3
WATZ	Wairara	6.33	210	P	Pn	14 06 20.8	+5.1
ARHZ	Aropaoanui	6.39	200	P	Pn	14 06 14.4	-2.0
BKZ	Black Stump Fm	6.45	203	*e*Pn	Pn	14 06 15.0	-2.2
BKZ	Black Stump Fm	6.45	203	P	Pn	14 06 15.6	-1.6
RATZ	Rangitukua	6.45	209	P	Pn	14 06 19.4	+2.2
RITZ	Rihia Road	6.51	208	P	Pn	14 06 20.0	+2.0
HIZ	Hauiti	6.57	216	*e*Pn	Pn	14 06 18.2	-0.4
HIZ	Hauiti	6.57	216	P	Pn	14 06 21.6	+3.0
MCHZ	McNeill Hill	6.64	201	P	Pn	14 06 17.5	-2.0
KRVZ	Karewarewa	6.70	208	P	Pn	14 06 22.1	+1.8
KWHZ	Kaweka Forest	6.71	203	P	Pn	14 06 18.1	-2.3
FWVZ	Far West T-bar	6.88	208	P	Pn	14 06 22.4	-0.3
WHVZ	Whangaehu Hut	6.88	208	P	Pn	14 06 24.0	+1.3
BHHZ	Black Hill Sta	6.89	204	P	Pn	14 06 20.6	-2.0
KAHZ	Kahuranaki	6.92	199	P	Pn	14 06 20.4	-2.6
KRHZ	Kereru	6.93	202	P	Pn	14 06 20.0	-3.1
MOVZ	Moawhango	6.93	207	P	Pn	14 06 22.5	-0.7
VRZ	Vera Road	7.11	213	P	Pn	14 06 26.8	+1.5
PXZ	Pawanui	7.14	198	P	Pn	14 06 23.7	-2.1
PNHZ	Pukenui	7.23	202	P	Pn	14 06 23.4	-3.5
PRHZ	Porangahau	7.43	199	P	Pn	14 06 28.7	-0.7
TSZ	Takapari Road	7.44	203	P	Pn	14 06 28.5	-1.0
PKE	Pukeiti	7.53	216	P	Pn	14 06 33.6	+2.9
KHEZ	Kahui Hut	7.59	216	P	Pn	14 06 34.1	+2.6
BFZ	Birch Farm	7.92	200	*e*Pn	Pn	14 06 33.8	-1.8
MRZ	Mangatainoka R	8.11	203	P	Pn	14 06 33.4	-4.5
HOWZ	Holdsworth Sta	8.34	203	P	Pn	14 06 36.9	-4.0
OGWZ	Otaki Gorge	8.38	205	P	Pn	14 06 37.4	-4.0
KIW	Kapiti Island	8.51	206	P	Pn	14 06 40.7	-2.4
CAW	Cannon Point	8.68	204	P	Pn	14 06 40.6	-4.5
SNZO	South Karori	8.98	205	*e*Pn	Pn	14 06 46.5	-2.5
BHW	Baring Head	9.01	204	P	Pn	14 06 45.9	-3.4
PLWZ	Palliser	9.03	202	P	Pn	14 06 46.5	-3.1
TCW	Tory Channel	9.05	207	P	Pn	14 06 46.6	-3.4
TUWZ	Tuamarina	9.37	208	P	Pn	14 06 50.2	-3.7
NNZ	Nelson	9.42	211	P	Pn	14 06 52.6	-2.0
NNZ	Nelson	9.42	211	P	Pn	14 06 52.6	-2.0
QRZ	Quartz Range	9.50	215	P	Pn	14 06 54.4	-1.1
THZ	Tophouse	10.07	211	*e*Pn	Pn	14 07 01.1	-1.8
THZ	Tophouse	10.07	211	P	Pn	14 07 01.2	-1.6
KHZ	Kahutara	10.37	206	*e*Pn	Pn	14 07 02.6	-3.9
KHZ	Kahutara	10.37	206	P	Pn	14 07 01.8	-4.7
DSZ	Denniston Nort	10.55	214	P	Pn	14 07 07.1	-1.8
LTZ	Lake Taylor	11.18	210	*e*Pn	Pn	14 07 12.7	-4.0
LTZ	Lake Taylor	11.18	210	P	Pn	14 07 13.8	-2.9
INZ	Inchbonnie	11.49	212	P	Pn	14 07 16.3	-4.2
OKCZ	Okains Bay	11.68	205	P	Pn	14 07 20.7	-2.2
OXZ	Oxford	11.73	209	*e*Pn	Pn	14 07 18.6	-4.9
OXZ	Oxford	11.73	209	P	Pn	14 07 18.8	-4.7
MQZ	McQueen's Vall	11.81	206	*e*Pn	Pn	14 07 20.2	-4.2
MQZ	McQueen's Vall	11.81	206	P	Pn	14 07 20.3	-4.2
WVZ	Waitaha Valley	12.09	213	P	Pn	14 07 24.5	-3.4
RPZ	Rata Peaks	12.45	211	P	Pn	14 07 29.6	-2.8
	2.4nm,0.3s,baz=332,slow=1.0,SNR=14						
RPZ				S	S	14 09 38.3	-13
	15nm,0.3s,baz=75,slow=18,SNR=15						
RPZ	Rata Peaks	12.45	211	*e*Pn	Pn	14 07 26.6	-5.9
RPZ				S	S	14 09 38.3	-13
RPZ	Rata Peaks	12.45	211	P	Pn	14 07 29.7	-2.8
FOZ	Fox Glacier	12.87	214	*e*Pn	Pn	14 07 32.6	-4.9
FOZ	Fox Glacier	12.87	214	P	Pn	14 07 34.7	-2.8
LBZ	Lake Benmore	13.37	211	*e*Pn	Pn	14 07 39.5	-4.1
LBZ	Lake Benmore	13.37	211	P	Pn	14 07 40.2	-3.5
ODZ	Otahua Downs	13.71	208	*e*Pn	Pn	14 07 44.0	-3.9
ODZ	Otahua Downs	13.71	208	P	Pn	14 07 44.7	-3.1
WKZ	Wanaka	14.23	213	*e*P	Pn	14 07 50.5	-3.7
MLZ	Mavora Lakes	15.05	213	*e*P	P	14 08 01.2	-2.5
WHZ	Wether Hill Ro	15.53	212	*e*P	P	14 08 06.8	-2.1
	185nm,2.0s						
DCZ	Deep Cove	15.58	215	*e*P	P	14 08 06.9	-2.5
	56nm,1.4s						
DZM	Mont Dzumac	16.20	310	P	Pn	14 08 17.9	-0.2
	0.6nm,0.3s,baz=127,slow=14,SNR=20						
DZM	Mont Dzumac	16.20	310	*e*P	P	14 08 16.5	-0.1
	37nm,1.0s						
PYZ	Puysegur Point	16.32	214	*e*P	P	14 08 16.3	-1.2
	204nm,1.8s						
AFI	Afiamalu	20.75	24	P	P	14 09 07.0	+1.4
	10nm,0.6s,baz=211,slow=12,SNR=2.1						
AFI				S	S	14 12 40.8	-1.0
	16nm,0.7s,baz=217,slow=20,SNR=2.9						
ARMA	Armidale	24.02	269	P	P	14 09 37.6	+1.7
	baz=24,SNR=4.9						
ARMA	Armidale	24.02	269	*e*P	P	14 09 36.0	0.0
	18nm,0.9s						
EIDS	Eidsvold

FORT	Forrest	43.53	259	P		P	14 12 23.0	+0.3
	baz=44,SNR=14							
SBA	Scott Base	45.06	184	eP		P	14 12 37.3	+3.2
	comp=Z,31nm,1.1s							
SBA	Scott Base	45.06	184	eP		P	14 12 37.3	+3.2
SBA				pmax		pmax		
	comp=Z,31nm,1.1s							
WRKA	Warakurna	45.30	266	P		P	14 12 36.4	-0.3
	baz=46,SNR=30							
JAY	Jayapura	47.62	302	P		P	14 12 54.9	0.0
	comp=Z,23nm,0.9s,baz=32,slow=3.7,SNR=4.9							
KDU	Kakadu	47.62	284	P		P	14 12 54.7	-0.1
	baz=48,SNR=5.8							
MTN	Manton Dam	48.63	283	P		P	14 13 02.4	-0.1
	baz=49,SNR=8.7							
KNRA	Kununurra	49.10	278	P		P	14 13 06.5	+0.5
	baz=50,SNR=8.6							
FITZ	Fitzroy Crossi	50.52	273	P		P	14 13 16.9	+0.3
	comp=Z,19nm,0.8s,baz=126,slow=5.9,SNR=39							
FITZ	Fitzroy Crossi	50.52	273	P		P	14 13 16.7	+0.1
	baz=51,SNR=10							
FITZ	Fitzroy Crossi	50.52	273	eP		P	14 13 16.4	-0.2
	comp=Z,22nm,0.9s							
NWAO	Narrogin (SRO)	51.64	252	P		P	14 13 25.1	+0.3
	comp=Z,7.9nm,1.1s,baz=39,slow=16,SNR=2.1							
KLBR	Kellerberrin	51.66	254	P		P	14 13 24.6	-0.3
	baz=52,SNR=5.4							
CASY	Casey	51.72	209	eP		P	14 13 24.7	-0.1
	comp=Z,6.0nm,0.7s							
MEEK	Meekatharra	52.73	260	P		P	14 13 32.3	-0.7
	baz=53,SNR=5.3							
FAKI	Fak Fak	53.63	294	eP		P	14 13 38.7	-0.8
	comp=Z,28nm,0.9s							
MORW	Morawa	53.93	256	P		P	14 13 41.3	-0.2
	baz=54,SNR=7.0							
SIJI	Sorong	55.69	295	P		P	14 13 53.9	-0.4
	comp=Z,9.5nm,0.3s,baz=179,slow=23,SNR=4.6							
SOEI	Soe	55.94	281	eP		P	14 13 56.1	-0.1
	comp=Z,68nm,1.0s							
QSPA	South Pole Qui	56.86	180	P		P	14 14 04.9	+3.0
	comp=Z,104nm,0.8s,baz=34,slow=2.0,SNR=76							
QSPA	South Pole Qui	56.86	180	eP		P	14 14 04.8	+2.9
	comp=Z,113nm,0.8s							
MAW	Mawson	68.96	201	P		P	14 15 22.6	+1.4
	comp=Z,20nm,0.9s,baz=142,slow=7.4,SNR=11							
MAW	Mawson	68.96	201	P		P	14 15 22.7	+1.6
	baz=69,SNR=7.1							
MAW	Mawson	68.96	201	eP		P	14 15 21.9	+0.8
	comp=Z,6.0nm,1.0s							
MAW	Mawson	68.96	201	eP		P	14 15 22.0	+0.8
MAW				pmax		pmax		
	comp=Z,6.0nm,1.0s							
KKM	Kota Kinabalu	71.68	290	eP		P	14 15 37.9	-0.7
	comp=Z,11nm,0.9s							
KSM	Kuching	73.72	283	eP		P	14 15 49.4	-1.1
	comp=Z,6.6nm,0.8s							
SYO	Syowa Base	73.90	194	⇓i P		P	14 15 49.2	-1.4
SNAA	Sanae	75.35	179	P		P	14 16 00.6	+1.6
SNAA	Sanae	75.35	179	P		P	14 16 00.8	+1.9
	comp=Z,55nm,0.9s,baz=189,slow=5.6,SNR=168							
SNAA	Sanae	75.35	179	eP		P	14 16 00.2	+1.2
	comp=Z,55nm,0.9s							
SNAA	Sanae	75.35	179	c i P		P	14 16 00.3	+1.3
VNA3	Neumayer Olymp	75.58	177	P		P	14 16 01.9	+1.7
NVL	N'lazarevskaya	75.91	184	⇓i P		P	14 16 02.2	+0.2
NVL				e*PP		pP	14 16 56.7	-3.9
NVL				pmax		pmax		
	comp=Z,25nm,0.8s							
VNA2	Neumayer--Watz	75.99	178	P		P	14 16 04.7	+2.1
	baz=173,slow=4.3							
VNA1	Neumayer--Stat	76.23	177	P		P	14 16 06.1	+2.2
MJAR	Matsushiro Arr	79.54	327	P		P	14 16 20.6	-1.8
	comp=Z,1.8nm,0.8s,baz=165,slow=5.6,SNR=8.2							
PLCA	Paso Flores	81.95	134	P		P	14 16 38.5	+3.0
	comp=Z,1.5nm,0.6s,baz=243,slow=8.9,SNR=3.9							
PSI	Prapat	83.85	277	P		P	14 16 43.9	-1.8
	comp=Z,3.1nm,0.4s,baz=180,slow=3.1,SNR=4.7							
ASAJ	Asahikawa	84.12	334	P		P	14 16 46.6	+0.5
	comp=Z,5.0nm,0.7s,baz=160,slow=5.9,SNR=14							
ASAJ	Asahikawa	84.12	334	eP		P	14 16 46.4	+0.4
	comp=Z,36nm,1.8s							
GSI	Gunungsitoli	84.15	275	eP		P	14 16 46.1	-0.9
	comp=Z,48nm,0.8s							
TJN	Taejon	84.81	320	ceP		P	14 16 50.3	+0.6
KSRS	Korea Array	85.31	321	P		P	14 16 52.3	+0.2
	comp=Z,3.0nm,0.7s,baz=143,slow=5.8,SNR=17							
KS15	Wonju Array Si	85.33	321	eP		P	14 16 51.6	-0.6
KSAR	Wonju Array Be	85.33	321	P		P	14 16 52.3	+0.1
KSAR	Wonju Array Be	85.33	321	P		P	14 16 52.3	+0.1
KS01	Wonju Array Si	85.35	321	eP		P	14 16 52.0	-0.3
NIKH	Nikolski High	86.44	7	eP		P	14 16 58.0	+0.8
	comp=Z,46nm,0.7s							
YSS	Yuzh-Sakhalins	86.51	336	eP		P	14 16 58.3	+0.5
	comp=Z,14nm,0.6s							
YSS	Yuzh-Sakhalins	86.51	336	⇑eP		P	14 16 59.2	+1.5
YSS				pmax		pmax		
	comp=Z,10.0nm,0.8s							
NJ2	Nanjing	86.68	312	eP		P	14 17 00.4	+1.5
NJ2				pmax		pmax		
	comp=Z,16nm,0.6s							
MSHR	Mys Shultsa	87.62	326	ceP		P	14 17 03.9	+0.7
PEA0B	Petropavlovsk-	88.12	347	eP		P	14 17 05.9	+0.6
	comp=Z,144nm,1.5s							
PETK	Petropavlovsk-	88.12	347	P		P	14 17 05.6	+0.3
	comp=Z,26nm,0.6s,baz=108,slow=7.1,SNR=62							
PETK	Petropavlovsk-	88.12	347	eP		P	14 17 05.5	+0.2
PETK	Petropavlovsk-	88.12	347	eP		P	14 17 05.5	+0.2
FMP	Fort Macarthur	88.47	47	eP		P	14 17 09.7	+2.3
USRK	Ussuriysk Ar.	88.51	328	P		P	14 17 07.8	+0.5
	comp=Z,3.0nm,0.8s,baz=142,slow=7.0,SNR=8.3							
NONG	Nongkai	89.05	292	P		P	14 17 11.7	+1.2
PFO	Pinyon Flats O	89.54	48	i P		P	14 17 17.8	+5.2
ISA	Isabella, Lake	89.67	46	eP		P	14 17 13.5	+0.4
	comp=Z,5.5nm,0.9s							
ISA	Isabella, Lake	89.67	46	eP		P	14 17 13.5	+0.4
ISA				pmax		pmax		
	comp=Z,6.0nm,0.9s							
CMB	Columbia Colle	90.16	43	eP		P	14 17 16.1	+0.8
	comp=Z,7.7nm,1.0s							
CMB	Columbia Colle	90.16	43	eP		P	14 17 16.1	+0.8
CMB				pmax		pmax		
	comp=Z,8.0nm,1.0s							
CN2	Changchun	91.28	324	eP		P	14 17 18.8	-1.4
CN2				epP		pP	14 18 20.8	0.0
CN2				SKS		SKSac	14 27 25.0	-2.9
CN2				eS		S	14 27 53.0	-3.7
CN2				pmax		pmax		
	comp=Z,30nm,0.9s							
CN2				pmax		pmax		
	comp=Z,200nm,6.0s							
GYA	Guiyang	91.33	301	eP		P	14 17 22.0	+0.9
GYA				pP		pP	14 18 23.3	+1.7
GYA				sP		sP	14 18 49.3	+1.6
GYA				PP		PP	14 21 05.6	+3.0
GYA				SKS		SKSac	14 27 28.4	-0.9
GYA				S		S	14 27 56.5	-1.7
GYA				pmax		pmax		
	comp=Z,10.0nm,1.0s							
YBH	Yreka Blue Hor	91.46	39	P		P	14 17 22.0	+0.8
	comp=Z,4.3nm,0.9s,baz=116,slow=2.9,SNR=4.3							
NV01	Mina Array Sit	91.63	44	eP		P	14 17 23.4	+1.1
NVAR	Mina Array Bea	91.63	44	P		P	14 17 23.1	+0.8
	comp=Z,5.2nm,0.8s,baz=223,slow=7.8,SNR=21							
ENH	Enshi	91.65	305	eP		P	14 17 22.7	+0.3
	comp=Z,15nm,0.8s							
NV11	Mina Array Sit	91.72	44	eP		P	14 17 24.7	+2.1
	comp=Z,0.5nm,1.0s							
TPNV	Topopah Spring	91.86	46	eP		P	14 17 25.0	+1.7
	comp=Z,3.4nm,0.8s							
TPNV	Topopah Spring	91.86	46	eP		P	14 17 25.0	+1.7
TPNV				pmax		pmax		
	comp=Z,3.0nm,0.8s							
KVN	Kaiserville	92.17	44	eP		P	14 17 26.4	+1.7
	comp=Z,5.8nm,1.0s							
KVN	Kaiserville	92.17	44	eP		P	14 17 26.4	+1.7
KVN				pmax		pmax		
	comp=Z,6.0nm,1.0s							
TUC	Tucson	92.38	53	eP		P	14 17 28.1	+2.4
	comp=Z,3.5nm,0.9s							
TUC	Tucson	92.38	53	eP		P	14 17 28.2	+2.4
TUC				pmax		pmax		
	comp=Z,4.0nm,0.9s							
CMAR	Chiang Mai Arr	92.56	290	P		P	14 17 27.6	+0.9
	comp=Z,0.6nm,0.5s,baz=140,slow=3.5,SNR=2.9							
MOD	Modoc Plateau	92.87	40	eP		P	14 17 29.1	+1.3
	comp=Z,10nm,1.2s							
K05A	Summer Lake	93.12	39	eP		P	14 17 30.3	+1.3
	comp=Z,123nm,2.0s							
KMI	Kunming	93.42	298	P		P	14 17 33.8	+2.9
KMI				pmax		pmax		
	comp=Z,8.0nm,1.0s							
KMI				LR		LR		
	comp=Z,130nm,27.1s							
BMN	Battle Mountai	93.59	43	eP		P	14 17 32.7	+1.5
	comp=Z,5.8nm,1.0s							
BMN	Battle Mountai	93.59	43	eP		P	14 17 32.7	+1.5
BMN				pmax		pmax		
	comp=Z,6.0nm,1.0s							
PINE	Pine Mountain	93.83	39	eP		P	14 17 34.8	+2.5
	comp=Z,12nm,0.9s							
U15A	North Rim	93.97	49	eP		P	14 17 34.8	+1.6
	comp=Z,3.4nm,0.9s							
ELK	Elko	94.94	44	P		P	14 17 40.0	+2.5
	comp=Z,1.7nm,0.8s,baz=268,slow=5.8,SNR=4.3							
CD2	Chengdu	96.00	303	P		P	14 17 41.8	-0.5
CD2				pmax		pmax		
	comp=Z,10.0nm,0.6s							
SVOH	Skagit Valley	96.12	35	eP		P	14 17 45.4	+3.1
BVW	Beverly	96.44	37	eP		P	14 17 46.9	+3.0
HHC	Hu-ho-hao-te	96.85	315	eP		P	14 17 46.4	+0.4
HHC				pmax		pmax		
	comp=Z,21nm,0.6s							
HHC				pmax		pmax		
	comp=Z,320nm,5.2s							
LZH	Lanzhou	98.90	307	eP		P	14 17 56.1	+0.7
LZH				pP		pP	14 18 55.0	-1.2
LZH				PP		PP	14 22 03.0	+2.0
LZH				pmax		pmax		
	comp=Z,20nm,1.5s							
LZH				pmax		pmax		
	comp=Z,93nm,9.2s							
PDAR	Pinedale Array	99.52	45	P		Pdif	14 18 00.4	+2.4
	comp=Z,0.3nm,0.8s,baz=203,slow=4.4,SNR=4.5							
ILAR	Eielson Array	101.14	14	P		Pdif	14 18 06.2	+1.8
	comp=Z,0.5nm,0.8s,baz=217,slow=7.1,SNR=6.9							
ILAR				PKiKP		PKiKP	14 22 28.1	+0.4
	comp=Z,0.8nm,0.8s,baz=248,slow=2.0,SNR=6.6							
YKA	Yellowknife Ar	108.85	27	PKiKP		PKiKP	14 22 42.1	+0.2
	comp=Z,0.4nm,0.6s,baz=265,slow=1.7,SNR=5.9							
YKA				PKKPbc		PKKPbc	14 33 50.7	-1.7
	comp=Z,1.2nm,0.7s,baz=44,slow=3.1,SNR=13							
WMQ	Urumqi	113.47	308	PKP		PKiKP	14 22 51.8	+0.3
WMQ				LR		LR		
	comp=Z,120nm,20.5s							
WMQ				LR		LR		
	comp=Z,96nm,18.5s							
WMQ				LR		LR		
	comp=Z,83nm,22.5s							
MK01	Makanchi Array	118.10	309	ePKIKP		PKPdf	14 22 59.2	-1.0
MK31	Makanchi Array	118.11	309	ePKPdf		PKPdf	14 22 59.2	-1.0
MK31	Makanchi Array	118.11	309	ePKIKP		PKPdf	14 22 59.2	-1.0
MKAR	Makanchi Array	118.11	309	PKP		PKPdf	14 22 59.5	-0.7
	comp=Z,2.9nm,0.6s,baz=91,slow=1.2,SNR=36							
MKAR				PKKPbc		PKKPab	14 33 21.9	+0.2
	comp=Z,0.4nm,0.6s,baz=292,slow=3.1,SNR=4.4							
MKAR	Makanchi Array	118.11	309	ePKIKP		PKPdf	14 22 59.3	-1.0
MAKZ	Makanchi	118.32	309	ePKPdf		PKPdf	14 22 59.5	-1.1
MAKZ	Makanchi	118.32	309	ePKIKP		PKPdf	14 22 59.5	-1.1
ZAA0	Zalesovo Array	118.86	318	ePKPdf		PKPdf	14 23 00.2	-1.2
ZALV	Zalesovo Beam	118.86	318	PKP		PKPdf	14 23 00.4	-1.0
	comp=Z,4.9nm,0.7s,baz=142,slow=1.7,SNR=22							
ZALV	Zalesovo Beam	118.86	318	ePKPdf		PKPdf	14 22 59.9	-1.5
ZALV	Zalesovo Beam	118.86	318	ePKIKP		PKPdf	14 22 59.9	-1.5
NVS	Novosibirsk	120.01	318	ePKIKP		PKPdf	14 23 02.5	-1.1
RES	Resolute Bay	120.54	18	ePKPdf		PKPdf	14 23 03.9	-0.1
RES	Resolute Bay	120.54	18	ePKIKP		PKPdf	14 23 03.9	-0.1
NRN	Naryn	120.63	302	ePKPdf		PKPdf	14 23 04.2	-1.4
ULHL	Ulahol	120.72	303	P		PKPdf	14 23 05.6	-0.1
	SNR=5.3							
KZA	Kyzart	121.37	302	P		PKPdf	14 23 07.5	+0.4
	SNR=7.7							
TKM2	Tokmak 2	121.38	303	P		PKPdf	14 23 06.5	-0.4
	SNR=10							
NRIK	Noril'sk	121.44	335	PKP		PKPdf	14 23 05.8	-0.2
	comp=Z,5.7nm,0.6s,baz=74,slow=2.3,SNR=7.4							
KURK	Kurchatov	121.61	313	ePKPdf		PKPdf	14 23 05.9	-0.9
KURK				PKKPbc		PKKPbc	14 33 10.4	+2.6
KURK	Kurchatov	121.61	313	c i PKIKP		PKPdf	14 23 06.2	-0.6
KURK				pmax		pmax		
	comp=Z,21nm,1.0s							
KURBB	Kurchatov Arra	121.64	313	PKP		PKPdf	14 23 06.3	-0.6
	comp=Z,13nm,0.7s,baz=113,slow=1.8,SNR=100							
KURBB				PKKPbc		PKKPbc	14 33 10.4	+2.7
	comp=Z,0.2nm,0.3s,baz=303,slow=4.9,SNR=3.0							
UCH	Uchtor	121.93	302	P		PKPdf	14 23 08.5	+0.2
	SNR=9.7							
CHMS	Chumysh	122.00	303	P		PKPdf	14 23 07.8	-0.1
	SNR=6.4							
AML	Almayashu	122.48	302	P		PKPdf	14 23 08.9	-0.4
	SNR=11							
LSZ	Lusaka	124.62	214	ePKPdf		PKPdf	14 23 13.9	0.0
KK31	Karatay Array	125.01	302	ePKPdf		PKPdf	14 23 13.2	-0.4
KK31	Karatay Array	125.01	302	ePKIKP		PKPdf	14 23 13.2	-0.4
KKAR	Karatay Array	125.01	302	ePKPdf		PKPdf	14 23 13.4	-0.2
KKAR	Karatay Array	125.01	302	ePKIKP		PKPdf	14 23 13.4	-0.2
BVAR	Borovoye Array	127.04	314	PKP		PKPdf	14 23 17.2	+0.1
	comp=Z,11nm,0.7s,baz=94,slow=2.1,SNR=57							
BRVK	Borovoye	127.13	314	ePKPdf		PKPdf	14 23 16.7	-0.6
BRVK	Borovoye	127.13	314	c i PKIKP		PKPdf	14 23 17.1	-0.2
BRVK				pmax		pmax		
	comp=Z,16nm,1.0s							
GEYT	Alibeck	132.96	293	SKPbc		SKPbc	14 26 30.8	-2.0
	comp=Z,81nm,0.9s,baz=335,slow=2.1,SNR=17							
ABKAR	Akbulak array	133.25	309	ePKPdf		PKPdf	14 23 28.4	-0.6
ARU	Arti	134.01	319	PKP		PKPdf	14 23 30.5	+0.3
	comp=Z,7.7nm,0.3s,baz=76,slow=0.9,SNR=3.7							
ARU				SKPbc		SKPbc	14 26 33.6	-1.9
	comp=Z,6.5nm,0.2s,baz=87,slow=0.7,SNR=11							
ARU	Arti	134.01	319	ePKPdf		PKPdf	14 23 30.1	-0.2
ARU				SKPbc		SKPbc	14 26 33.6	-1.9
ARU	Arti	134.01	319	i PKIKP		PKPdf	14 23 30.0	-0.2
ARU							14 26 02.3	
SPITS	Spitsbergen Ar	134.40	355	PKP		PKPdf	14 23 30.8	+0.3
	comp=Z,12nm,1.0s,baz=70,slow=4.7,SNR=8.9							
SPITS				SKPbc		SKPbc	14 26 34.6	-1.6
	comp=Z,3.1nm,0.7s,baz=70,slow=6.3,SNR=4.1							
AKTO	Aktyubinsk	134.54	310	PKP		PKPdf	14 23 31.4	0.0
	comp=Z,6.0nm,0.6s,baz=117,slow=4.5,SNR=14							
SUMG	Summit	135.96	16	i P		PKPdf	14 23 36.6	+2.7
	comp=Z,9.3nm,1.1s							
SUMG	Summit	135.96	16	ePKPdf		PKPdf	14 23 35.9	+2.0
SUMG	Summit	135.96	16	ePKIKP		PKPdf	14 23 35.9	+2.0
PRGR	Permogore	139.30	328	ePKIKP		PKPdf	14 23 37.7	-2.1
PRGR				pmax		pmax		
	comp=Z,16nm,0.9s							
ARCES	ARCESS Array B	140.93	346	PKhKP		PKPpre	14 23 36.1	
	comp=Z,5.3nm,0.9s,baz=22,slow=1.3,SNR=7.7							
ARCES				PKP		PKiKP	14 23 44.2	-1.1
	comp=Z,8.5nm,0.8s,baz=64,slow=2.1,SNR=12							
GNI	Garni	143.58	294	i PKIKP		PKPbc	14 23 46.3	-0.3
ZEI	Tsey	144.28	299	i PKIKP		PKPab	14 23 47.8	-0.6
ZEI				pmax		pmax		
	comp=Z,17nm,0.8s							
KBZ	Khabaz	144.99	300	PKP		PKPab	14 23 50.6	-0.1
	comp=Z,20nm,0.9s,baz=102,slow=3.1,SNR=22							
KIV	Kislovodsk	145.13	301	ePKPbc		PKPdf	14 23 50.7	-0.2
KIV	Kislovodsk	145.13	301	i PKIKP		PKPdf	14 23 50.1	-0.8
KIV				pmax		pmax		
	comp=Z,18nm,1.1s							
MOS	Moscow	145.50	322	i PKIKP		PKPdf	14 23 50.6	-0.4
MOS				pmax		pmax		
	comp=Z,91nm,0.8s							
VORD	Divnogorie	146.24	314	ePKP2		PKPbc	14 23 53.5	-0.5
VORD				pmax		pmax		
	comp=Z,40nm,1.0s							
VSR	Storozhevoye	146.25	314	ePKIKP		PKPdf	14 23 52.8	+0.4
VSR				pmax		pmax		
	comp=Z,70nm,1.0s							
OBN	Obninsk	146.31	322	ePKPdf		PKPbc	14 23 53.4	-0.6
OBN	Obninsk	146.31	322	⇑ePKIKP		PKPdf	14 23 51.4	-1.0
OBN				e			14 25 18.0	
OBN				e			14 27 20.5	
OBN				pmax		pmax		
	comp=Z,56nm,0.7s							
FIA1	FINESS Array S	147.09	337	ePKPbc		PKPbc	14 23 55.8	-0.2
FINES	FINESS Array B	147.09	337	PKPbc		PKPbc	14 23 56.0	0.0
	comp=Z,46nm,0.8s,baz=45,slow=3.5,SNR=91							
ANN	Anapa	148.80	303	i PKP2		PKPbc	14 24 00.9	-0.1
ANN				pmax		pmax		
	comp=Z,48nm,1.0s							
VSU	Vasula	148.96	332	i PKP2		PKPbc	14 24 00.7	-0.3
MMAI	Mount Meron Ar	150.22	279	PKPbc		PKPbc	14 24 05.7	+0.7
	comp=Z,13nm,0.7s,baz=73,slow=5.0,SNR=17							
IZAR	Zarasai	150.94	329	eP		PKPbc	14 24 06.4	+0.6
IZAR				IAmb		IAmb	14 24 07.4	
	comp=Z,23nm,0.8s							
MICGM	Minsk	150.96	325	⇓eP		PKPbc	14 24 05.0	-0.9
MICGM				PM			14 24 06.0	
	comp=Z,0.3nm,0.8s							
MNK	Minsk	150.96	325	⇓ePKIKP		PKPbc	14 24 05.0	-0.9
MNK				pmax		pmax		
	comp=Z,330nm,0.8s							
IDID	Didziasalis	151.00	328	eP		PKPbc	14 24 06.7	+0.7
IDID				IAmb		IAmb	14 24 07.5	
	comp=Z,39nm,1.0s							
NC303	NORSAR Array S	151.02	348	ePKPdf		PKPdf	14 23 59.7	-0.1
NC303				ePKPbc		PKPbc	14 24 06.0	+0.2
NC405	NORSAR Array S	151.06	348	ePKPbc		PKPbc	14 24 04.8	-1.2
NC204	NORSAR Array S	151.07	349	ePKPbc		PKPbc	14 24 05.3	-0.7
SIM	Simferopol'	151.09	304	dePKIKP		PKPbc	14 24 06.9	+0.4
SIM				pmax		pmax		
	comp=Z,20nm,0.8s							
ISAL	Salakas	151.11	329	eP		PKPbc	14 24 06.9	+0.7
ISAL				IAmb		IAmb	14 24 07.7	
	comp=Z,19nm,0.9s							
NB201	NORSAR Array S	151.20	348	ePKPbc		PKPbc	14 24 04.8	-1.6
IIGN	Ignalina	151.21	328	eP		PKPbc	14 24 07.2	+0.8
IIGN				IAmb		IAmb	14 24 08.0	
	comp=Z,39nm,0.8s							
NB2	NORSAR Subarra	151.22	348	PKP		PKPbc	14 24 06.0	-0.4
	comp=Z,19nm,0.8s,baz=19,slow=2.5							
NOA	NORSAR Array B	151.22	348	PKPbc		PKPbc	14 24 06.5	+0.1
NBO00	NORSAR Array S	151.30	349	ePKPdf		PKPdf	14 23 59.9	-0.4
NBO00				ePKPbc		PKPbc	14 24 06.2	-0.3
NC602	NORSAR Array S	151.45	348	ePKPbc		PKPbc	14 24 06.3	-0.6
NAO01	NORSAR Array S	151.46	349	ePKPbc		PKPbc	14 24 06.5	-0.4
HFS	Hagfors	151.59	345	PKPbc		PKPbc	14 24 07.2	0.0
	comp=Z,29nm,0.7s,baz=108,slow=3.2,SNR=59							
HFS				PKPab		PKPab	14 24 16.6	-0.2
	comp=Z,8.3nm,0.8s,baz=35,slow=5.3,SNR=5.4							
ILGA	Ilgaz	151.96	296	ePKPbc		PKPbc	14 24 08.8	-0.2
BR131	Keskin Array S	152.11	293	ePKPbc		PKPbc	14 24 08.3	-0.9
BRTR	Keskin Array B	152.11	293	PKP		PKPdf	14 24 01.3	-1.1
	comp=Z,0.5nm,0.4s,baz=5.7,slow=1.2,SNR=4.6							
BRTR				PKPbc		PKPbc	14 24 08.7	-0.5
	comp=Z,7.8nm,0.8s,baz=134,slow=3.6,SNR=29							
BRTR				PKPab		PKPab	14 24 19.3	-0.6
	comp=Z,2.6nm,0.8s,baz=76,slow=5.2,SNR=6.3							
AKASG	Malin Array Be	152.26	318	PKP		PKPdf	14 24 01.2	-0.8
	comp=Z,0.4nm,0.4s,baz=39,slow=2.0,SNR=5.7							
AKASG				PKPbc		PKPbc	14 24 08.7	-0.2
	comp=Z,16nm,0.6s,baz=62,slow=2.5,SNR=60							
AKASG				PKPab		PKPab	14 24 19.4	-0.6
	comp=Z,8.6nm,0.7s,baz=48,slow=4.7,SNR=11							
AKBB	Malin Array Si	152.26	318	ePKPbc		PKPbc	14 24 08.6	-0.4
KIEV	Kiev	152.27	318	ePKPbc		PKPbc	14 24 08.4	-0.6
AK11	Malin Array Si	152.30	318	ePKPdf		PKPdf	14 24 00.8	-1.2
AK11				ePKPbc		PKPbc	14 24 08.7	-0.4
AK11				ePKPab		PKPab	14 24 19.1	-1.1
LIC	Lamto	152.74	170	ePKP1		PKPdf	14 24 05.0	+1.1
	comp=Z,100nm,0.6s							
ANTO	Ankara	152.75	294	⇓i P		PKPab	14 24 26.9	+4.4
ANTO	Ankara	152.75	294	ePKPbc		PKPbc	14 24 10.4	-0.2
ANTO	Ankara	152.75	294	⇓PKP2		PKPab	14 24 26.9	+4.4
KONO	Kongsberg	152.80	349	ePKPbc		PKPbc	14 24 10.2	+0.3
KIC	Kosan Boka	152.92	170	ePKP1		PKPdf	14 24 05.2	+1.1
	comp=Z,31nm,0.3s							
TIC	Toumodi	153.15	169	ePKP1		PKPdf	14 24 04.2	-0.3
DBIC	Dimbokro	153.20	170	PKP		PKPdf	14 24 04.6	+0.1
	comp=Z,11nm,1.0s,baz=216,slow=2.2,SNR=5.6							
DBIC				PKPbc		PKiKP	14 24 13.3	+1.1
	comp=Z,9.6nm,0.5s,baz=139,slow=2.3,SNR=61							
DBIC	

*ISCJB **18** 14:26:24.4±1.2, 36°.87N±0°.04×141°.53E±0°.07, h15km±8km, mb3.5/4, MS3.6/4, Error ellipse: s-maj=8.9km s-min=6.7km az=12.1.*
*IDC **18** 14:26:24.4±1.4, 36°.89N×141°.47E, h0km, mb3.4/4, mb1 3.4/7, mb1mx3.3/67, mbtmp3.4/7, ML2.8/3, MS3.5/4, Ms1 3.5/4, ms1mx2.7/46, Error ellipse: s-maj=31.8km s-min=20.3km az=78.0*
*JMA **18** 14:26:27.3±0.1, 36°.87N×141°.33E, h34km±1km, M3.6*
JMA Felt I J1.

ISC 18 14:26:25.6±1.9, 36°.87N±0°.04×141°.32E±0°.08, h5km±11km, n26, σ0°60/26, mb3.5/4, MS3.6/4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.48**	**299**	P	**Pb**	**14 26 37.2**	**+0.7**
ONAJ				S	**Sb**	**14 26 44.4**	**+0.5**
JFK	**Kawauchi**	**0.61**	**324**	P	**Pb**	**14 26 39.3**	**+0.6**
JFK				S	**Sb**	**14 26 47.7**	**+0.1**
JHO	**Hitachi**	**0.66**	**247**	P	**Pb**	**14 26 39.9**	**+0.3**
JHO				S	**Sb**	**14 26 49.3**	**+0.2**
JFT	**Otama**	**1.02**	**310**	P	**Pn**	**14 26 46.2**	**-0.3**
JFT				S	**Sb**	**14 26 59.6**	**+0.2**
JMM	**Marumori**	**1.08**	**337**	P	**Pg**	**14 26 46.3**	**+0.1**
JMM				*e*S	**Sg**	**14 26 59.6**	**-0.6**
JYT	**Yasato**	**1.11**	**235**	P	**Pg**	**14 26 46.5**	**-0.4**
JSB	**Shiboa**	**1.13**	**275**	P	**Pn**	**14 26 48.5**	**+0.4**
JSB				*e*S	**Sn**	**14 27 03.6**	**-0.4**
JFY	**Yanaizu**	**1.40**	**293**	P	**Pg**	**14 26 52.4**	**0.0**
JFY				S	**Sn**	**14 27 10.6**	**0.0**
MJAR	**Matsushiro Arr**	**2.52**	**263**	Pn	**Pn**	**14 27 08.2**	**+0.9**
	2.0nm,0.3s,baz=89,slow=14,SNR=29						
MJAR				Sn	**Sb**	**14 27 41.4**	**-1.3**
	5.4nm,0.3s,baz=71,slow=17,SNR=6.0						
MAT	**Matsushiro**	**2.53**	**263**	P	**Pn**	**14 27 08.4**	**+1.1**
MAT				S	**Sb**	**14 27 41.9**	**-0.9**
JHJ	**Hachijo jima 2**	**3.95**	**199**	Pn	**Pn**	**14 27 27.4**	**+0.6**
	5.8nm,0.3s,baz=58,slow=19,SNR=9.3						
JHJ				Sn	**Sn**	**14 28 13.6**	**-0.1**
	4.4nm,0.3s,baz=54,slow=19,SNR=2.7						
ASAJ	**Asahikawa**	**7.30**	**7**	Pn	**Pn**	**14 28 12.0**	**-0.8**
	0.1nm,0.3s,baz=206,slow=13,SNR=2.4						
H11N2	**WAKE ISLAND Hy 28.13**	**120**		T	T	15 01 43.9	
	baz=313,slow=75,SNR=155						
H11N1	**WAKE ISLAND Hy 28.11**	**120**		T	T	15 01 46.4	
	baz=313,slow=75,SNR=162						
H11N3	**WAKE ISLAND Hy 28.15**	**120**		T	T	15 01 45.3	
	baz=313,slow=75,SNR=150						
H11S1	**WAKE ISLAND Hy 28.83**	**123**		T	T	15 02 36.5	
	baz=315,slow=76,SNR=81						
H11S3	**WAKE ISLAND Hy 28.84**	**123**		T	T	15 02 36.6	
	baz=315,slow=76,SNR=70						
H11S2	**WAKE ISLAND Hy 28.85**	**123**		T	T	15 02 37.8	
	baz=315,slow=76,SNR=77						
NRIK	**Noril'sk**	**43.38**	**335**	LR	LR	14 52 47.0	
	comp=Z,45nm,18.8s,baz=156,slow=36						
MKAR	**Makanchi Array**	**44.14**	**302**	P	**P**	**14 34 35.0**	**0.0**
	0.3nm,0.6s,baz=88,slow=9.2,SNR=4.2						
KURBB	**Kurchatov Arra**	**46.04**	**308**	P	**P**	**14 34 50.1**	**0.0**
	0.4nm,0.7s,baz=84,slow=7.9,SNR=3.5						
WRA	**Warramunga Arr**	**56.89**	**188**	P	**P**	**14 36 11.3**	**-0.2**
	0.8nm,0.9s,baz=6.0,slow=7.4,SNR=10						
ASAR	**Alice Springs**	**60.62**	**188**	P	**P**	**14 36 37.1**	**-0.3**
	0.2nm,0.7s,baz=19,slow=12,SNR=3.7						
FINES	**FINESS Array B**	**68.92**	**332**	LR	LR	15 09 29.2	
	comp=Z,43nm,19.4s,baz=60,slow=38						
NOA	**NORSAR Array B**	**74.31**	**337**	LR	LR	15 15 36.5	
	comp=Z,19nm,18.0s,baz=25,slow=40						
AKASG	**Malin Array Be**	**74.38**	**322**	LR	LR	15 14 18.4	
	comp=Z,38nm,18.0s,baz=40,slow=39						

IDC 18 14:29:41.6±11.0, 51°.46N×157°.26E, h0km, Error ellipse: s-maj=117.2km s-min=35.8km az=9.0, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I44RU	**PETROPAVLOVSK-**	**1.67**	**9**	*i*		14 40 30.0	
	baz=190,slow=322,SNR=14						
PETK	**Petropavlovsk-**	**1.67**	**9**	Pn	Pn	14 30 12.2	0.0
	0.5nm,0.3s,baz=188,slow=16,SNR=8.5						
I45RU	**USSURIYSK INFR**	**18.40**	**257**	*i*		16 22 10.0	
	baz=55,slow=375,SNR=3.2						

*NIED **18** 14:30:00, 34°.80N×140°.10E, h50km, Mw4.0 Best double couple: M0 1.28000×10^15 NP1:φ=273.00000°, δ=58.00000°, λ=-157.00000°. NP2:φ=170.00000°, δ=71.00000°, λ=-34.00000°.*
*ISCJB **18** 14:30:54.4±0.5, 34°.80N±0°.04×140°.08E±0°.05, h66km±3km, mb3.6/7, Error ellipse: s-maj=7.3km s-min=6.1km az=34.4*
*JMA **18** 14:30:54.6±0.2, 34°.82N×140°.11E, h64km±2km, M3.5*
JMA Felt I J1.
*IDC **18** 14:30:56.4±1.5, 34°.77N×139°.99E, h67km±13km, mb3.4/7, mb1 3.6/10, mb1mx3.3/68, mbtmp3.6/10, MS3.1/10, Ms1 3.1/10, ms1mx2.9/42, Error ellipse: s-maj=26.5km s-min=6.1km az=72.0*

ISC 18 14:30:55.1±0.8, 34°.84N±0°.05×140°.11E±0°.04, h59km±7km, n32, σ1°30/33, mb3.7/7, MS3.5/5, 4C-6D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO4	**Boso 4**	**0.24**	**51**	↑↑P	**Pn**	**14 31 05.2**	**+0.6**
BSO4				X		14 31 13.2	
TATJ	**Tateyama 2**	**0.26**	**317**	↓↓P	**Pn**	**14 31 05.7**	**+0.8**
TATJ				S	**Sn**	**14 31 13.9**	**+2.0**
BSO3	**Boso 3**	**0.33**	**97**	↑↑P	**Pn**	**14 31 05.5**	**+0.4**
BSO3				X		14 31 14.3	
KTR	**Katsuura**	**0.35**	**29**	↑↑P	**Pn**	**14 31 05.8**	**+0.2**
KTR				S	**Sn**	**14 31 13.4**	**+0.3**
JIM2	**Oshima 3**	**0.57**	**258**	↓↓P	**Pn**	**14 31 07.7**	**-0.2**
JIM2				*e*S	**Sn**	**14 31 16.8**	**-0.3**
BSO1	**Boso 1**	**0.74**	**104**	↑↑P	**Pn**	**14 31 09.3**	**+0.1**
BSO1				X		14 31 19.6	
KTJJ	**Kamata 2**	**0.86**	**276**	↓↓P	**Pn**	**14 31 11.1**	**-0.3**
KTJJ				S	**Sn**	**14 31 22.4**	**-0.9**
JOD2	**Odawara 2**	**0.94**	**297**	↓↓P	**Pn**	**14 31 12.1**	**-0.2**
JOD2				S	**Sn**	**14 31 24.3**	**-0.8**
JIZS	**Izushimoda**	**1.02**	**263**	↓↓P	**Pn**	**14 31 13.5**	**+0.1**
JIZS				S	**Sn**	**14 31 26.9**	**0.0**
JYN	**Shimob**	**1.44**	**298**	↓↓P	**Pn**	**14 31 19.4**	**+0.4**
JHJ	**Hachijo jima 2**	**1.74**	**189**	P	**Pn**	**14 31 23.4**	**+0.3**
	61nm,0.3s,baz=32,slow=16,SNR=61						
JHJ				S	**Sn**	**14 31 43.7**	**-0.4**
	131nm,0.3s,baz=62,slow=19,SNR=9.3						
JHJ				LR	LR	14 32 09.0	
	comp=Z,135nm,18.9s,baz=122,slow=44						
MJAR	**Matsushiro Arr**	**2.30**	**318**	P	**Pn**	**14 31 31.5**	**+0.9**
	27nm,0.3s,baz=152,slow=12,SNR=599						
MJAR				S	**Sn**	**14 31 58.8**	**+1.0**
	65nm,0.3s,baz=136,slow=16,SNR=13						
MJAR				LR	LR	14 32 06.7	
	comp=Z,60nm,20.4s,baz=180,slow=31						
MAT	**Matsushiro**	**2.30**	**318**	P	**Pn**	**14 31 32.0**	**+1.4**
MAT				S	**Sn**	**14 31 58.9**	**+1.1**
JNU	**Nakatsue**	**7.86**	**260**	P	**Pn**	**14 32 46.5**	**-0.2**
	0.1nm,0.3s,baz=40,slow=18,SNR=2.0						
JNU				LR	LR	14 36 08.4	
	comp=Z,114nm,21.6s,baz=124,slow=40						
ASAJ	**Asahikawa**	**9.46**	**11**	P	**Pn**	**14 33 06.0**	**-2.6**
	0.8nm,0.3s,baz=226,slow=12,SNR=13						
ASAJ				S	**Sn**	**14 34 48.5**	**-4.9**
	0.6nm,0.3s,baz=319,slow=31,SNR=7.2						
ASAJ				LR	LR	14 37 28.4	
	comp=Z,422nm,22.0s,baz=42,slow=41						
KSRS	**Korea Array**	**10.20**	**288**	P	**Pn**	**14 33 20.2**	**+1.5**
	0.0nm,0.3s,baz=101,slow=13,SNR=3.0						
KSRS				LR	LR	14 37 27.3	
	comp=Z,39nm,19.8s,baz=196,slow=38						
KLR	**Kul'dur**	**15.65**	**339**	LR	LR	14 40 38.5	
	comp=Z,23nm,19.4s,baz=75,slow=37						
PETK	**Petropavlovsk-**	**22.11**	**29**	LR	LR	14 43 37.6	
	comp=Z,50nm,21.5s,baz=229,slow=34						
H11N2	**WAKE ISLAND Hy 28.05**	**115**		T	T	15 06 25.9	
	baz=308,slow=75,SNR=56						
H11N1	**WAKE ISLAND Hy 28.05**	**116**		T	T	15 06 28.4	
	baz=308,slow=75,SNR=48						
H11N3	**WAKE ISLAND Hy 28.07**	**115**		T	T	15 06 29.2	
	baz=308,slow=75,SNR=30						
H11S1	**WAKE ISLAND Hy 28.67**	**118**		T	T	15 07 09.1	
	baz=310,slow=75,SNR=32						
H11S3	**WAKE ISLAND Hy 28.67**	**118**		T	T	15 07 10.4	
	baz=310,slow=75,SNR=41						
H11S2	**WAKE ISLAND Hy 28.68**	**118**		T	T	15 07 10.8	
	baz=310,slow=75,SNR=34						
ZALV	**Zalesovo Beam**	**42.65**	**314**	P	**P**	**14 38 45.7**	**+0.3**
	0.6nm,0.4s,baz=101,slow=8.0,SNR=3.7						
ZALV				LR	LR	14 56 35.4	
	comp=Z,44nm,20.6s,baz=68,slow=36						
MKAR	**Makanchi Array**	**44.42**	**304**	P	**P**	**14 38 59.6**	**-0.3**
	0.3nm,0.6s,baz=88,slow=11,SNR=4.2						
MKAR				LR	LR	14 59 00.4	
	comp=Z,82nm,21.0s,baz=37,slow=38						
KURBB	**Kurchatov Arra**	**46.55**	**309**	P	**P**	**14 39 16.8**	**+0.2**
	0.6nm,0.4s,baz=82,slow=7.5,SNR=3.5						
BVAR	**Borovoye Array**	**51.29**	**313**	LR	LR	15 01 42.7	
	comp=Z,67nm,18.8s,baz=66,slow=36						
ILAR	**Eielson Array**	**51.91**	**31**	P	**P**	**14 39 58.7**	**+1.3**
	0.6nm,0.9s,baz=270,slow=6.0,SNR=5.6						
WRA	**Warramunga Arr**	**54.76**	**187**	P	**P**	**14 40 18.4**	**-0.3**
	1.4nm,0.7s,baz=2.4,slow=7.5,SNR=15						
WRA				LR	LR	15 04 09.5	
	comp=Z,37nm,20.1s,baz=115,slow=36						
ASAR	**Alice Springs**	**58.48**	**187**	P	**P**	**14 40 45.2**	**+0.1**
	0.7nm,0.9s,baz=21,slow=11,SNR=7.8						
NVAR	**Mina Array Bea**	**77.16**	**52**	P	**P**	**14 42 43.9**	**+1.1**
	0.4nm,0.7s,baz=275,slow=5.9,SNR=4.2						

*IDC **18** 14:44:26.2±1.1, 19°.24S×167°.92E, h0km, mb4.1/10, mb1 4.3/11, mb1mx4.0/46, mbtmp4.1/11, ML3.5/1, MS3.2/5, Ms1 3.2/5, ms1mx2.9/46, Error ellipse: s-maj=41.9km s-min=18.3km az=144.0*
*ISCJB **18** 14:44:28.9±0.8, 19°.28S±0°.09×167°.8E±0°.1, h26km, mb4.1/11, MS3.2/4, Error ellipse: s-maj=20.4km s-min=9.2km az=26.4*
*NEIC **18** 14:44:31.4±0.7, 19°.34S×167°.93E, h35km, mb4.3/2, Error ellipse: s-maj=20.8km s-min=11.1km az=140.0*

ISC 18 14:44:30.1±0.9, 19°.3S±0°.1×168°.0E±0°.2, h26km, n18, σ0°87/16, mb4.1/11, MS3.2/4, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.07**	**207**	Pn	**Pn**	**14 45 17.3**	**+0.2**
	5.3nm,0.3s,baz=65,slow=11,SNR=467						
DZM				Sn	**Sn**	**14 45 52.8**	**-0.3**
	8.9nm,0.3s,baz=114,slow=22,SNR=4.9						
HNR	**Honiara**	**12.52**	**321**	LR	LR	14 51 33.4	
	comp=Z,47nm,18.6s,baz=282,slow=34						
AFI	**Afiamalu**	**20.15**	**78**	LR	LR	14 55 25.2	
	comp=Z,114nm,20.9s,baz=266,slow=33						
CTA	**Charters Tower**	**20.45**	**264**	P	**P**	**14 49 05.1**	**-0.7**
	3.2nm,0.8s,baz=42,slow=12,SNR=2.9						
CTAO	**Charters Tower**	**20.45**	**264**	*e*P	**P**	**14 49 07.0**	**+1.2**
URZ	**Urewera**	**20.48**	**159**	LR	LR	14 56 00.7	
	comp=Z,63nm,20.7s,baz=24,slow=34						
STKA	**Stephens Creek**	**26.78**	**237**	P	**P**	**14 50 08.9**	**+0.9**
	1.6nm,0.8s,baz=113,slow=17,SNR=4.0						
STKA				LR	LR	14 58 45.2	
	comp=Z,72nm,20.7s,baz=41,slow=32						
WRAB	**Tennant Creek**	**31.63**	**263**	*e*P	**P**	**14 50 50.2**	**-1.0**
	1.3nm,0.4s						
WRA	**Warramunga Arr**	**31.64**	**263**	P	**P**	**14 50 50.2**	**-1.2**
	1.0nm,0.4s,baz=101,slow=8.3,SNR=32						
ASAR	**Alice Springs**	**31.93**	**256**	P	**P**	**14 50 53.7**	**-0.2**
	4.8nm,0.6s,baz=81,slow=8.7,SNR=158						
FITZ	**Fitzroy Crossi**	**40.03**	**265**	P	**P**	**14 52 03.4**	**+0.1**
	5.9nm,0.6s,baz=129,slow=6.5,SNR=16						
FITZ				LR	LR	15 06 01.2	
	comp=Z,60nm,20.4s,baz=4.0,slow=32						
PETK	**Petropavlovsk-**	**72.68**	**354**	P	**P**	**14 55 56.1**	**+0.7**
	1.4nm,0.7s,baz=148,slow=8.5,SNR=5.2						
ULN	**Ulaanbaatar**	**86.22**	**324**	P	**P**	**14 57 09.8**	**+0.4**
	1.2nm,0.3s						
SONM	**Songino Array**	**86.57**	**324**	P	**P**	**14 57 11.7**	**+0.7**
	0.4nm,0.7s,baz=152,slow=6.5,SNR=4.7						
NVAR	**Mina Array Bea**	**89.77**	**49**	P	**P**	**14 57 26.8**	**+0.1**
	0.6nm,0.7s,baz=238,slow=5.2,SNR=4.1						
ILAR	**Eielson Array**	**90.68**	**18**	P	**P**	**14 57 28.2**	**-1.8**
	0.5nm,0.7s,baz=233,slow=4.7,SNR=6.7						
TXAR	**Lajitas Array**	**97.87**	**62**	P	**P**	**14 58 04.4**	**+0.4**
	0.2nm,0.7s,baz=229,slow=6.9,SNR=3.0						
YKA	**Yellowknife Ar**	**101.31**	**28**	P	**Pdif**	**14 58 18.4**	**+0.1**
	0.3nm,0.7s,baz=260,slow=4.7,SNR=3.3						

*NEIC **18** 14:59:26.1±0.0, 44°.47S×166°.81E, h5km, ML4.1(WEL), After WEL.*

WEL 18 14:59:27.4, 45°S±5°×16°7E±1°0, h5km±11km, ML4.1/6, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSZ	**Milford Sound**	**0.67**	**97**	P*	Pb	14 59 42.1	+0.5
MSZ				S*	Sb	14 59 51.4	+0.2
MSZ	**Milford Sound**	**0.67**	**97**	P	Pb	14 59 42.1	+0.6
MSZ				S	Sb	14 59 51.3	+0.1
DCZ	**Deep Cove**	**0.88**	**173**	P*	Pb	14 59 44.9	-0.2
DCZ	**Deep Cove**	**0.88**	**173**	P	Pb	14 59 45.0	-0.1
DCZ				S	Sb	14 59 56.7	-0.4
MLZ	**Mavora Lakes**	**1.11**	**134**	P*	Pn	14 59 50.2	+0.6
MLZ	**Mavora Lakes**	**1.11**	**134**	P	Pn	14 59 50.2	+0.6
MLZ				S	Sn	15 00 05.5	+0.2
JCZ	**Jackson Bay**	**1.39**	**69**	Pn	Pn	14 59 51.8	-1.7
JCZ	**Jackson Bay**	**1.39**	**69**	P	Pn	14 59 51.8	-1.7
JCZ				S	Sb	15 00 09.4	-2.5
WHZ	**Wether Hill Ro**	**1.46**	**153**	Pn	Pb	14 59 54.8	-0.3
WHZ	**Wether Hill Ro**	**1.46**	**153**	P	Pb	14 59 54.9	-0.2
WHZ				S	Sg	15 00 15.3	+0.9
WKZ	**Wanaka**	**1.46**	**100**	Pn	Pg	14 59 55.3	-0.1
WKZ	**Wanaka**	**1.46**	**100**	P	Pg	14 59 55.6	+0.1
WKZ				S	Sg	15 00 15.2	+0.8
PYZ	**Puysegur Point**	**1.59**	**188**	Pn	Pn	14 59 55.3	-0.8
PYZ	**Puysegur Point**	**1.59**	**188**	P	Pn	14 59 55.4	-0.8
EAZ	**Earnscleugh**	**1.77**	**112**	Pn	Pb	15 00 00.2	0.0
EAZ	**Earnscleugh**	**1.77**	**112**	P	Pb	15 00 00.3	+0.1
EAZ				S	Sb	15 00 22.1	-0.5
LBZ	**Lake Benmore**	**2.29**	**86**	Pn	Pn	15 00 06.1	+0.2
LBZ	**Lake Benmore**	**2.29**	**86**	P	Pn	15 00 06.0	+0.2
LBZ				S	Sn	15 00 33.2	-1.3
FOZ	**Fox Glacier**	**2.30**	**63**	Pn	Pn	15 00 03.6	-2.2
FOZ	**Fox Glacier**	**2.30**	**63**	P	Pn	15 00 03.7	-2.2
TUZ	**Tuapeka**	**2.31**	**127**	Pn	Pn	15 00 07.1	+1.1
TUZ	**Tuapeka**	**2.31**	**127**	P	Pn	15 00 07.2	+1.2
TUZ				S	Sn	15 00 35.1	+0.3
APZ	**The Paps**	**2.34**	**163**	Pn	Pn	15 00 08.0	+1.5
APZ	**The Paps**	**2.34**	**163**	P	Pn	15 00 07.7	+1.1
APZ				S	Sn	15 00 36.8	+1.0
ODZ	**Otahua Downs**	**2.64**	**101**	Pn	Pn	15 00 10.8	+0.3
ODZ	**Otahua Downs**	**2.64**	**101**	P	Pn	15 00 10.9	+0.4
HHSZ	**Highcliff Hill**	**2.86**	**118**	Pn	Pn	15 00 14.8	+1.3
HHSZ	**Highcliff Hill**	**2.86**	**118**	P	Pn	15 00 14.9	+1.3
HHSZ				S	Sn	15 00 46.8	-1.5
RPZ	**Rata Peaks**	**3.05**	**75**	Pn	Pn	15 00 15.1	-1.2
RPZ	**Rata Peaks**	**3.05**	**75**	P	Pn	15 00 15.1	-1.1
RPZ				P	Pb	15 00 15.2	-6.9
WVZ	**Waitaha Valley**	**3.11**	**62**	Pn	Pn	15 00 14.4	-2.6
WVZ	**Waitaha Valley**	**3.11**	**62**	P	Pn	15 00 14.4	-2.5
INZ	**Inchbonnie**	**3.73**	**62**	P	Pn	15 00 23.4	-2.1
OXZ	**Oxford**	**3.86**	**73**	Pn	Pn	15 00 24.7	-2.7
OXZ	**Oxford**	**3.86**	**73**	P	Pn	15 00 24.8	-2.5
EYCZ	**Eyrewell**	**4.04**	**75**	P	Pn	15 00 27.9	-1.9
MQZ	**McQueen's Vall**	**4.17**	**80**	Pn	Pn	15 00 29.2	-2.4
MQZ	**McQueen's Vall**	**4.17**	**80**	P	Pn	15 00 29.2	-2.4
LTZ	**Lake Taylor**	**4.24**	**67**	Pn	Pn	15 00 29.6	-3.0
LTZ	**Lake Taylor**	**4.24**	**67**	P	Pn	15 00 29.6	-2.9
DSZ	**Denniston Nort**	**4.53**	**53**	P	Pn	15 00 34.2	-2.4
THZ	**Tophouse**	**5.17**	**59**	P	Pn	15 00 43.6	-1.8
KHZ	**Kahutara**	**5.24**	**68**	P	Pn	15 00 44.1	-2.1
QRZ	**Quartz Range**	**5.55**	**49**	P	Pn	15 00 48.7	-1.9
NNZ	**Nelson**	**5.78**	**56**	P	Pn	15 00 52.5	-1.2
TUWZ	**Tuamarina**	**6.00**	**61**	P	Pn	15 00 56.2	-0.5
TCW	**Tory Channel**	**6.33**	**60**	P	Pn	15 01 01.5	+0.2
VRZ	**Vera Road**	**7.96**	**49**	P	Pn	15 01 22.9	-0.8
HIZ	**Hauiti**	**8.46**	**47**	P	Pn	15 01 29.9	-0.7
HRRZ	**Handcock Road**	**9.32**	**52**	Pn	Pn	15 01 39.5	-2.9

*ISCJB **18** 15:03:07.4±0.4, 35°.37N±0°.04×140°.39E±0°.05, h66km±4km, mb3.8/8, Error ellipse: s-maj=7.3km s-min=5.8km az=144.7*
*JMA **18** 15:03:08.5±0.1, 35°.44N×140°.40E, h54km±2km, M3.0*
JMA Felt I J1.

*IDC **18** 15:03:08.9±2.0, 35°.32N×140°.27E, h59km±17km, mb3.4/7, mb1 3.6/11, mb1mx3.4/68, mbtmp3.8/11, MS2.9/1, Ms1 2.9/1, ms1mx2.2/64, Error ellipse: s-maj=27.0km s-min=6.5km az=69.0*

ISC 18 15:03:08.5±0.8, 35°.40N±0°.05×140°.40E±0°.05, h59km±7km, n29, σ1°15/32, mb3.7/8, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCN	**Nagara**	**0.16**	**276**	P	**Pn**	**15 03 17.7**	**0.0**
KTR	**Katsuura**	**0.26**	**195**	P	**Pn**	**15 03 18.0**	**-0.3**
KTR				S	**Sn**	**15 03 25.1**	**-0.2**
BSO4	**Boso 4**	**0.41**	**187**	P	**Pn**	**15 03 19.6**	**+0.1**
CHOJ	**Chosi**	**0.48**	**51**	P	**Pn**	**15 03 19.9**	**-0.3**
CHOJ				S	**Sn**	**15 03 28.3**	**-0.4**
BSO3	**Boso 3**	**0.60**	**171**	P	**Pn**	**15 03 21.3**	**0.0**
BSO1	**Boso 1**	**0.88**	**147**	P	**Pn**	**15 03 24.2**	**-0.3**
BSO1				S	**Sn**	**15 03 37.4**	**+1.0**
JIM2	**Oshima 3**	**1.05**	**230**	P	**Pn**	**15 03 26.3**	**-0.9**
JIM2				S	**Sn**	**15 03 40.0**	**-1.0**
JOD2	**Odawara 2**	**1.08**	**263**	P	**Pn**	**15 03 27.2**	**-0.4**
JOD2				S	**Sn**	**15 03 40.7**	**-1.1**
MJAR	**Matsushiro Arr**	**2.11**	**303**	P	**Pn**	**15 03 41.3**	**-0.2**
	12nm,0.3s,baz=98,slow=13,SNR=95						
MJAR				S	**Sn**	**15 04 05.6**	**-1.0**
	7.9nm,0.3s,baz=142,slow=21,SNR=9.0						
MAT	**Matsushiro**	**2.11**	**303**	P	**Pn**	**15 03 41.9**	**+0.4**
MAT				*e*S	**Sn**	**15 04 06.3**	**-0.4**
JHJ	**Hachijo jima 2**	**2.33**	**193**	P	**Pn**	**15 03 43.9**	**-0.6**
	55nm,0.3s,baz=313,slow=23,SNR=50						
JHJ				S	**Sn**	**15 04 10.4**	**-1.6**
	99nm,0.3s,baz=65,slow=23,SNR=12						
JCJ	**Chichijima**	**8.42**	**169**	P	**Pn**	**15 05 05.6**	**-2.2**
	28nm,0.3s,baz=313,slow=23,SNR=6.5						
ASAJ	**Asahikawa**	**8.87**	**10**	P	**Pn**	**15 05 11.8**	**-2.1**
	0.6nm,0.3s,baz=211,slow=11,SNR=11						
ASAJ				S	**Sn**	**15 06 50.1**	**-2.1**
	0.2nm,0.3s,baz=300,slow=20,SNR=3.3						
KSRS	**Korea Array**	**10.26**	**285**	P	**Pn**	**15 05 35.9**	**+2.9**
	0.2nm,0.3s,baz=97,slow=14,SNR=5.1						
KSRS				LR	LR	15 08 59.3	
	comp=Z,67nm,20.7s,baz=133,slow=34						
USRK	**Ussuriysk Ar.**	**10.90**	**326**	P	**Pn**	**15 05 43.6**	**+1.9**
	baz=153,slow=13,SNR=3.5						
SONM	**Songino Array**	**28.06**	**307**	P	**P**	**15 08 54.1**	**-0.2**
	0.6nm,0.5s,baz=115,slow=10,SNR=3.0						
H11N2	**WAKE ISLAND Hy 28.08**	**117**		T	T	15 38 17.9	
	baz=309,slow=75,SNR=47						
H11N1	**WAKE ISLAND Hy 28.09**	**117**		T	T	15 38 18.4	
	baz=309,slow=75,SNR=49						
H11N3	**WAKE ISLAND Hy 28.10**	**117**		T	T	15 38 19.2	
	baz=309,slow=75,SNR=34						
H11S3	**WAKE ISLAND Hy 28.73**	**119**		T	T	15 38 58.1	
	baz=311,slow=76,SNR=24						
H11S1	**WAKE ISLAND Hy 28.73**	**119**		T	T	15 38 57.6	
	baz=311,slow=76,SNR=31						
H11S2	**WAKE ISLAND Hy 28.74**	**119**		T	T	15 38 59.3	
	baz=311,slow=76,SNR=25						
ZALV	**Zalesovo Beam**	**42.43**	**314**	P	**P**	**15 10 57.3**	**+0.2**
	1.1nm,0.6s,baz=101,slow=7.2,SNR=4.1						
MKAR	**Makanchi Array**	**44.31**	**303**	P	**P**	**15 11 12.2**	**-0.3**
	0.5nm,0.6s,baz=90,slow=9.4,SNR=7.8						
KURBB	**Kurchatov Arra**	**46.38**	**309**	P	**P**	**15 11 28.9**	**+0.2**
	0.8nm,0.4s,baz=84,slow=7.8,SNR=8.1						
ILAR	**Eielson Array**	**51.31**	**32**	P	**P**	**15 12 07.5**	**+1.2**
	0.6nm,0.8s,baz=264,slow=5.8,SNR=9.0						
WRA	**Warramunga Arr**	**55.34**	**187**	P	**P**	**15 12 36.2**	**-0.1**
	0.4nm,0.4s,baz=1.2,slow=7.7,SNR=8.1						
ARU	**Arti**	**57.05**	**319**	P	**P**	**15 12 48.1**	**0.0**
	7.0nm,0.2s,baz=93,slow=21,SNR=6.6						
ASAR	**Alice Springs**	**59.07**	**187**	P	**P**	**15 13 02.5**	**-0.1**
	0.2nm,0.5s,baz=19,slow=12,SNR=5.4						

IDC 18 15:11:12.9±4.5, 34°.16N×78°.81E, h0km, mb3.4/4, mb1 3.7/5, mb1mx3.3/68, mbtmp3.5/5, ML3.7/1, Error ellipse: s-maj=172.8km s-min=24.1km az=82.0, Kashmir-Xizang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**12.90**	**11**	Pn	Pn	15 14 18.4	+0.9
	0.4nm,0.3s,baz=193,slow=15,SNR=17						
MKAR				Sn	Sn	15 16 37.2	-4.5
	0.0nm,0.3s,baz=198,slow=24,SNR=3.5						
ZALV	**Zalesovo Beam**	**20.24**	**10**	P	P	15 15 49.7	+0.2
	0.3nm,0.3s,baz=188,slow=9.5,SNR=2.6						
ILAR	**Eielson Array**	**75.12**	**19**	P	P	15 22 56.8	+0.3
	0.2nm,0.6s,baz=308,slow=5.3,

GAZI	**Gazipasa**	**0.97**	**285**	*i* P	**Pg**	**15 22 14.9**	**+0.8**
GAZI				*i* S	**Sn**	**15 22 27.9**	**+0.6**
GAZI	**Gazipasa**	**0.97**	**285**	P	**Pg**	**15 22 14.9**	**+0.8**
GAZI				S	**Sn**	**15 22 27.9**	**+0.6**
KERG	**Konya-Eregli**	**1.52**	**20**	*i* P	**Pn**	**15 22 21.2**	**-0.5**
KERG	**Konya-Eregli**	**1.52**	**20**	P	**Pn**	**15 22 21.2**	**-0.5**
GULE	**Gulek**	**1.67**	**39**	*i* P	**Pb**	**15 22 25.3**	**-0.3**
GULE	**Gulek**	**1.67**	**39**	P	**Pb**	**15 22 25.3**	**-0.3**
KEPZ	**Antalya-Kepez**	**1.76**	**302**	*i* P	**Pn**	**15 22 22.4**	**-2.5**
KEPZ	**Antalya-Kepez**	**1.76**	**302**	P	**Pn**	**15 22 22.4**	**-2.5**

KRSC 18 15:24:17.5±2.3, 53°.19N×157°.11E, h264km±20km, ML3.7, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APC	**Apacha**	**0.27**	**173**	*e*P	Pn	15 24 52.5	+1.1
GNL	**Ganaly**	**0.71**	**44**	*e*P	Pn	15 24 54.2	+1.5
ASAK	**Asacha**	**0.94**	**149**	*e*P	Pn	15 24 55.5	+1.7
PET	**Petropavlovsk**	**0.95**	**100**	*e*P	Pn	15 24 55.1	+1.5
MTVR	**Mutnovka**	**0.96**	**137**	*e*P	Pn	15 24 56.3	+2.3
KRER	**Koryakskii**	**0.99**	**83**	*e*P	Pn	15 24 55.9	+1.8
DALK	**Dalny**	**1.01**	**99**	*e*P	Pn	15 24 55.2	+1.3
UGLR	**Uglovaya**	**1.03**	**88**	*e*P	Pn	15 24 56.4	+2.2
SDLR	**Sedlovina**	**1.07**	**85**	*e*P	Pn	15 24 55.9	+1.5
RUS	**Russkaya**	**1.14**	**131**	*e*P	Pn	15 24 55.5	+0.8
RUS				*e*S	S	15 25 25.2	+1.1
KDTR	**Khodutka, Kamc**	**1.51**	**156**	*e*P	Pn	15 24 57.0	-0.1
KDTR				*e*S	S	15 25 27.6	-0.8
SPN	**Mys Shipunski**	**1.76**	**92**	*e*P	Pn	15 24 59.2	+0.2
SPN				*e*S	S	15 25 31.6	-0.2
SKR	**Severo-Kuril's**	**2.59**	**194**	*e*S	S	15 25 46.3	+0.9
MKZ	**Mys Kozlova**	**3.06**	**62**	*e*P	Pn	15 25 11.1	-0.2
MKZ				*e*S	S	15 25 51.7	-2.3

*IDC **18** 15:24:18.7±1.7, 18°.36S×177°.69W, h481km±28km, mb3.4/5, mb1 3.5/6, mb1mx3.0/49, mbtmp4.3/6, Error ellipse: s-maj=34.6km s-min=19.5km az=133.0*

ISC 18 15:24:19.3±0.8, 18°.0S±0°.2×177°.9W±0°.1, h481km, n8, σ2°00/11, mb3.6/4, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.17**	**56**	P	**P**	**15 26 07.8**	**+1.1**
	2.7nm,0.3s,baz=346,slow=14,SNR=3.6						
AFI				S	**S**	**15 27 33.8**	**-0.9**
	1.4nm,0.3s,baz=93,slow=22,SNR=2.9						
URZ	**Urewera**	**20.65**	**191**	P	**P**	**15 28 20.8**	**-3.9**
	15nm,0.8s,baz=289,slow=4.5,SNR=5.8						
URZ				S	**S**	**15 31 47.8**	**+3.7**
	12nm,0.6s,baz=249,slow=7.4,SNR=14						
STKA	**Stephens Creek**	**39.00**	**241**	P	**P**	**15 31 04.0**	**+0.5**
	1.7nm,0.6s,baz=81,slow=8.9,SNR=9.9						
WRA	**Warramunga Arr**	**45.08**	**260**	P	**P**	**15 31 51.1**	**-0.6**
	0.6nm,0.3s,baz=97,slow=6.9,SNR=31						
ASAR	**Alice Springs**	**45.22**	**254**	P	**P**	**15 31 52.9**	**+0.1**
	6.0nm,0.5s,baz=90,slow=8.9,SNR=254						
ASAR				PcP	**PcP**	**15 33 22.6**	**-0.6**
	0.7nm,0.5s,baz=105,slow=3.8,SNR=6.8						
FITZ	**Fitzroy Crossi**	**53.48**	**261**	P	**P**	**15 32 54.4**	**+0.3**
	1.3nm,0.6s,baz=84,slow=6.8,SNR=4.1						
BRTR	**Keskin Array B**	**145.18**	**315**	PKPbc	**PKPdf**	**15 43 02.5**	**+0.6**
	0.4nm,0.6s,baz=157,slow=4.1,SNR=3.5						
MMAI	**Mount Meron Ar**	**146.59**	**303**	PKPbc	**PKPbc**	**15 43 06.8**	**0.0**
	0.5nm,0.4s,baz=87,slow=5.9,SNR=2.8						

*DSN **18** 15:40:37.3±2.1, 27°.84N×58°.68E, h15km, ML3.7/7, Error ellipse: s-maj=46.8km s-min=12.2km az=152.0*
*TEH **18** 15:40:44.4, 28°.33N×57°.47E, h6km, ML3.1*
*CSEM **18** 15:40:42.8±0.7, 28°.15N×57°.40E, h20km, ML3.1, Error ellipse: s-maj=31.8km s-min=16.5km az=110.0*

ISC 18 15:40:40.9±1.5, 28°.16N±0°.04×57°.43E±0°.06, h7km±14km, n35, σ1°84/40, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIAN	**Nian**	**0.79**	**221**	*e*Pg	**Pn**	**15 40 59.3**	**+0.8**
NIAN				*e*		15 41 14.2	
	comp=Z,99nm,0.1s						
IBND	**Bandar-abas**	**1.06**	**228**	*e*		15 41 29.2	
	comp=Z,10μm,0.2s						
IBND				*e*Pg	**Pn**	**15 41 04.6**	**+2.5**
GENO	**Geno**	**1.34**	**236**	*e*		15 41 29.0	
	comp=Z,99nm,0.2s						
GENO				*e*Pn	**Pg**	**15 41 07.7**	**+1.0**
BNDS	**Bandar-Abbas**	**1.34**	**236**	*e*Pg	**Pn**	**15 41 05.3**	**-0.9**
BNDS	**Bandar-Abbas**	**1.34**	**236**	*e*Pg	**Pn**	**15 41 05.3**	**-0.9**
BNDS				*e*Sg	**Sb**	**15 41 23.3**	**-0.7**
KHSK	**Kohestak**	**1.44**	**193**	*e*Pn	**Pg**	**15 41 10.9**	**+2.5**
KHSK				*e*		15 41 34.8	
	comp=N,99nm,0.1s						
KHSK				*e*		15 41 35.3	
	comp=Z,99nm,0.1s						
NGRK	**Negar Kerman**	**1.60**	**338**	*e*Sg	**Sn**	**15 41 30.5**	**-0.6**
NGRK				*e*Pg	**Pn**	**15 41 09.0**	**-1.0**
NGRK				*e*		15 41 36.7	
	comp=N,99nm,0.1s						
NGRK				*e*		15 41 37.0	
	comp=E,99nm,0.1s						
NGRK				*e*		15 41 37.6	
	comp=Z,99nm,0.1s						
CHMN	**Cheshme madani**	**1.70**	**3**	*e*Pn	**Pn**	**15 41 11.0**	**-0.3**
CHMN				*e*		15 41 19.0	
	comp=Z,99nm,0.1s						
CHMN				*e*		15 41 33.2	
	comp=E,99nm,0.1s						
CHMN				*e*		15 41 33.3	
	comp=N,99nm,0.2s						
KRBR	**Kerman**	**1.91**	**342**	*e*Pn	**Pn**	**15 41 14.1**	**0.0**
KRBR	**Kerman**	**1.91**	**342**	*e*Pn	**Pn**	**15 41 14.1**	**0.0**
KRBR				*e*Sg	**Sb**	**15 41 39.2**	**-1.2**
TVBK	**TV Kerman**	**1.91**	**342**	*e*Pn	**Pn**	**15 41 14.8**	**+0.6**
TVBK				*e*		15 41 20.5	
	comp=Z,99nm,0.2s						
TVBK				*e*		15 41 48.2	
	comp=E,99nm,0.1s						
TVBK				*e*		15 41 53.9	
	comp=N,99nm,0.1s						
KHGB	**Koh Gabri**	**2.36**	**340**	*e*Pn	**Pb**	**15 41 21.8**	**-2.1**
KHGB				*e*		15 41 57.5	
	comp=N,99nm,0.3s						
KHGB				*e*		15 41 57.5	
	comp=Z,99nm,0.3s						
KHGB				*e*		15 41 59.1	
	comp=E,99nm,0.2s						
SHME	**Shamm**	**2.39**	**209**	*e*P	**Pn**	**15 41 21.9**	**+1.3**
	SNR=7.2						
SHME				S	**Sg**	**15 41 57.9**	**+0.1**
BANOM	**Banah**	**2.44**	**205**	*e*P	**Pn**	**15 41 22.8**	**+1.6**
	SNR=16						
BANOM				S	**Sg**	**15 41 57.5**	**-1.9**
BANOM	**Banah**	**2.44**	**205**	P	**Pn**	**15 41 22.8**	**+1.6**
	SNR=16						
BANOM				S	**Sg**	**15 41 57.5**	**-1.9**
MSFE	**Esma-Masafi**	**3.01**	**202**	P	**Pn**	**15 41 28.3**	**-0.7**
MDH	**Madha**	**3.02**	**200**	P	**Pn**	**15 41 26.9**	**-2.3**
MDH	**Madha**	**3.02**	**200**	P	**Pn**	**15 41 26.9**	**-2.3**
ZHSF	**Zahedan**	**3.27**	**63**	*e*Pn	**Pn**	**15 41 33.8**	**+1.0**
ZHSF	**Zahedan**	**3.27**	**63**	*e*Pn	**Pn**	**15 41 33.8**	**+1.0**
UOSS	**Minazif**	**3.38**	**199**	P	**Pn**	**15 41 32.9**	**-1.2**
UOSS	**Minazif**	**3.38**	**199**	P	**Pn**	**15 41 32.9**	**-1.2**
HATD	**Hatta, Dubai**	**3.52**	**200**	P	**Pn**	**15 41 34.6**	**-1.4**
HATD	**Hatta, Dubai**	**3.52**	**200**	P	**Pn**	**15 41 34.6**	**-1.4**
NAZ	**Nazwa, Dubai**	**3.53**	**207**	P	**Pn**	**15 41 38.7**	**+2.5**
NAZ	**Nazwa, Dubai**	**3.53**	**207**	P	**Pn**	**15 41 38.7**	**+2.5**
ASUD	**Al Ashush, Dub**	**3.99**	**209**	*i* P	**Pn**	**15 41 44.8**	**+2.3**
	SNR=8.6						
ASUD	**Al Ashush, Dub**	**3.99**	**209**	P	**Pn**	**15 41 44.8**	**+2.3**
	SNR=8.6						
IMEH	**Mehriz**	**4.04**	**323**	*e*		15 43 00.9	
	comp=Z,164nm,0.3s						
SOHO	**SOHO**	**4.09**	**192**	*i* P	**Pn**	**15 41 40.7**	**-3.1**
	SNR=7.2						
SOHO	**SOHO**	**4.09**	**192**	P	**Pn**	**15 41 40.7**	**-3.1**
	SNR=7.2						
AJN	**Ajban**	**4.20**	**212**	P	**Pn**	**15 41 47.2**	**+1.9**
ALNE	**Al Ain**	**4.36**	**201**	P	**Pn**	**15 41 47.1**	**-0.5**
IKOO	**Kooshah**	**4.46**	**17**	*e*Pn	**Pn**	**15 41 52.3**	**+3.1**
IKOO				*e*		15 42 02.0	
	comp=Z,320nm,0.1s						
IKAZ	**Kazeroun**	**5.15**	**290**	*e*	**Sn**	**15 43 01.6**	**+2.9**

comp=Z,361nm,0.1s

*ISCJB **18** 15:41:18.3±0.8, 12°.93N±0°.09×144°.8E±0°.3, h57km, mb3.5/7, MS3.1/7, Error ellipse: s-maj=37.1km s-min=10.3km az=13.0*
*IDC **18** 15:41:19.1±1.3, 13°.00N×144°.89E, h49km±10km, mb3.3/7, mb1 3.6/7, mb1mx3.3/60, mbtmp3.5/7, MS3.2/8, Ms1 3.2/8, ms1mx3.0/31, Error ellipse: s-maj=39.7km s-min=16.5km az=97.0*

ISC 18 15:41:19.8±1.1, 13°.0N±0°.1×144°.9E±0°.3, h57km, n21, σ0°39/9, mb3.5/7, MS3.1/7, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.61**	**359**	P	**Pn**	**15 41 33.1**	**+0.2**
	baz=166,slow=11						
GUMO				S	**Sn**	**15 41 42.0**	**-0.3**
	213nm,0.3s,baz=17,slow=19,SNR=37						
JAY	**Jayapura**	**15.94**	**195**	LR	LR	15 49 50.3	
	comp=Z,95nm,20.8s,baz=348,slow=32						
JHJ	**Hachijo jima 2**	**20.59**	**348**	LR	LR	15 53 28.9	
	comp=Z,73nm,18.9s,baz=98,slow=36						
H11S3	**WAKE ISLAND Hy**	**21.69**	**73**	T	T	16 09 21.8	
	baz=258,slow=75,SNR=16						
H11S1	**WAKE ISLAND Hy**	**21.70**	**73**	T	T	16 09 27.9	
	baz=258,slow=75,SNR=13						
H11S2	**WAKE ISLAND Hy**	**21.71**	**73**	T	T	16 09 29.8	
	baz=258,slow=75,SNR=11						
H11N1	**WAKE ISLAND Hy**	**22.15**	**70**	T	T	16 10 02.4	
	baz=255,slow=75,SNR=32						
H11N2	**WAKE ISLAND Hy**	**22.16**	**69**	T	T	16 09 53.6	
	baz=255,slow=75,SNR=20						
H11N3	**WAKE ISLAND Hy**	**22.17**	**70**	T	T	16 09 55.0	
	baz=255,slow=75,SNR=27						
JNU	**Nakatsue**	**23.78**	**330**	LR	LR	15 55 15.0	
	comp=Z,74nm,18.7s,baz=123,slow=35						
MJAR	**Matsushiro Arr**	**24.22**	**347**	P	**P**	**15 46 31.5**	**+0.2**
	0.5nm,0.6s,baz=164,slow=7.5,SNR=3.3						
MJAR				LR	LR	15 54 37.1	
	comp=Z,101nm,21.9s,baz=280,slow=33						
ASAJ	**Asahikawa**	**31.09**	**357**	LR	LR	15 59 21.9	
	comp=Z,42nm,21.7s,baz=183,slow=35						
WRA	**Warramunga Arr**	**34.31**	**198**	P	**P**	**15 48 01.0**	**-0.1**
	1.3nm,0.7s,baz=20,slow=9.3,SNR=15						
KLR	**Kul'dur**	**37.74**	**346**	LR	LR	16 04 46.9	
	comp=Z,4.4nm,18.6s,slow=37						
ASAR	**Alice Springs**	**37.97**	**196**	P	**P**	**15 48 32.2**	**-0.1**
	0.4nm,0.6s,baz=20,slow=9.4,SNR=9.7						
PETK	**Petropavlovsk-**	**41.32**	**12**	LR	LR	16 03 40.5	
	comp=Z,20nm,21.8s,baz=190,slow=32						
SONM	**Songino Array**	**47.24**	**325**	LR	LR	16 10 23.9	
	comp=Z,61nm,18.6s,baz=136,slow=37						
MKAR	**Makanchi Array**	**61.94**	**316**	P	**P**	**15 51 33.8**	**0.0**
	0.1nm,0.4s,baz=96,slow=8.0,SNR=2.8						
KURBB	**Kurchatov Arra**	**65.10**	**320**	P	**P**	**15 51 54.3**	**-0.2**
	0.3nm,0.4s,baz=103,slow=6.5,SNR=3.7						
ILAR	**Eielson Array**	**69.12**	**25**	P	**P**	**15 52 19.1**	**-0.6**
	0.7nm,0.5s,baz=249,slow=6.1,SNR=11						
YKA	**Yellowknife Ar**	**83.40**	**27**	P	**P**	**15 53 41.4**	**+0.6**
	0.2nm,0.6s,baz=287,slow=4.5,SNR=2.1						

IDC 18 15:46:36.2±1.7, 13°.23N×144°.39E, h52km±19km, mb3.2/4, mb1 3.5/4, mb1mx3.1/65, mbtmp3.5/4, Error ellipse: s-maj=39.2km s-min=19.2km az=99.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.59**	**52**	P	Pn	15 46 50.3	+1.7
	121nm,0.3s,baz=246,slow=20,SNR=40						
GUMO				S	Sn	15 46 59.3	+1.8
	337nm,0.3s,baz=336,slow=19,SNR=71						
WRA	**Warramunga Arr**	**34.42**	**197**	P	P	15 53 18.2	-0.7
	0.4nm,0.6s,baz=22,slow=9.2,SNR=6.8						
ASAR	**Alice Springs**	**38.08**	**196**	P	P	15 53 49.9	-0.2
	0.2nm,0.5s,baz=16,slow=12,SNR=7.8						
KURBB	**Kurchatov Arra**	**64.60**	**320**	P	P	15 57 08.5	+0.2
	0.1nm,0.3s,baz=106,slow=6.1,SNR=2.6						
ILAR	**Eielson Array**	**69.09**	**25**	P	P	15 57 36.6	+0.1
	0.5nm,0.5s,baz=246,slow=6.1,SNR=9.6						

*IDC **18** 15:54:02.3±0.8, 1°.17N×126°.55E, h0km, mb4.0/9, mb1 4.0/11, mb1mx3.7/69, mbtmp4.0/11, ML3.2/2, Error ellipse: s-maj=46.0km s-min=13.9km az=68.0*
*ISCJB **18** 15:54:05.6±0.5, 1°.17N±0°.09×126°.6E±0°.2, h39km, mb4.2/11, Error ellipse: s-maj=23.4km s-min=9.4km az=157.1*
*NEIC **18** 15:54:07.2±0.4, 1°.19N×126°.75E, h35km, mb4.0/1, Error ellipse: s-maj=33.1km s-min=6.8km az=73.0*

ISC 18 15:54:07.8±0.8, 1°.2N±0°.1×126°.6E±0°.2, h39km, n14, σ0°42/14, mb4.0/11, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.07**	**114**	Pn	**Pn**	**15 55 21.6**	**+0.4**
	0.4nm,0.3s,baz=326,slow=16,SNR=3.7						
FITZ	**Fitzroy Crossi**	**19.17**	**183**	P	**P**	**15 58 28.1**	**0.0**
	0.1nm,0.3s,baz=10,slow=2,SNR=3.4						
WRAB	**Tennant Creek**	**22.30**	**161**	*e*P	**P**	**15 59 01.3**	**-0.7**
	5.5nm,0.9s						
WRA	**Warramunga Arr**	**22.31**	**161**	P	**P**	**15 59 01.5**	**-0.5**
	2.7nm,0.7s,baz=340,slow=11,SNR=33						
ASAR	**Alice Springs**	**25.68**	**164**	P	**P**	**15 59 34.3**	**0.0**
	1.3nm,0.7s,baz=348,slow=12,SNR=18						
STKA	**Stephens Creek**	**35.80**	**158**	P	**P**	**16 01 03.3**	**-0.2**
	1.4nm,0.7s,baz=333,slow=10,SNR=6.8						
KSAR	**Wonju Array Be**	**36.11**	**2**	P	**P**	**16 01 05.6**	**-0.4**
KSRS	**Korea Array**	**36.12**	**2**	P	**P**	**16 01 05.6**	**-0.5**
	0.7nm,0.6s,baz=176,slow=9.0,SNR=3.8						
SONM	**Songino Array**	**49.68**	**342**	P	**P**	**16 02 55.8**	**0.0**
	1.2nm,0.7s,baz=155,slow=8.6,SNR=8.4						
MKAR	**Makanchi Array**	**59.59**	**326**	P	**P**	**16 04 07.8**	**+0.1**
	2.2nm,0.4s,baz=119,slow=7.5,SNR=52						
KURBB	**Kurchatov Arra**	**63.83**	**328**	P	**P**	**16 04 36.1**	**0.0**
	3.7nm,0.6s,baz=128,slow=6.2,SNR=36						
KURK	**Kurchatov**	**63.84**	**328**	*e*P	**P**	**16 04 36.4**	**+0.2**
	61nm,0.8s						
BVAR	**Borovoye Array**	**69.40**	**328**	P	**P**	**16 05 11.7**	**+0.1**
	0.4nm,0.4s,baz=128,slow=8.4,SNR=4.6						
AKTO	**Aktyubinsk**	**75.59**	**322**	P	**P**	**16 05 49.2**	**+0.6**
	1.6nm,0.6s,baz=108,slow=5.9,SNR=4.2						

*ISCJB **18** 15:58:25.0±0.8, 1°.3N±0°.1×91°.79E±0°.09, h10km, mb3.9/9, MS3.6/1, Error ellipse: s-maj=18.3km s-min=12.1km az=23.2*
*IDC **18** 15:58:25.6±1.1, 1°.26N×91°.80E, h0km, mb3.8/9, mb1 4.0/12, mb1mx3.7/76, mbtmp3.9/12, ML4.0/3, MS3.3/2, Ms1 3.4/2, ms1mx2.7/67, Error ellipse: s-maj=33.6km s-min=18.5km az=39.0*
*NEIC **18** 15:58:26.9±0.6, 1°.25N×91°.78E, h10km, mb4.2/1, Error ellipse: s-maj=14.0km s-min=8.5km az=203.0*

ISC 18 15:58:27.2±1.1, 1°.3N±0°.2×91°.94E±0°.08, h10km, n22, σ1°68/16, mb4.1/9, North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**7.13**	**78**	Pn	**Pn**	**16 00 13.1**	**+1.4**
	2.0nm,0.3s,baz=360,slow=5.8,SNR=8.8						
PSI				Sn	**Sn**	**16 01 28.1**	**-4.8**
	1.9nm,0.3s,baz=360,slow=19,SNR=2.6						
PALK	**Pallekele**	**12.66**	**298**	Pn	**Pn**	**16 01 25.1**	**-2.4**
	1.3nm,0.3s,baz=114,slow=12,SNR=14						
PALK				Sn	Sn	16 03 34.5	-14
	3.8nm,0.3s,baz=294,slow=4.4,SNR=11						
CMAR	**Chiang Mai Arr**	**18.35**	**22**	P	**P**	**16 02 42.9**	**+0.8**
	0.1nm,0.3s,baz=217,slow=13,SNR=14						
CMAR				LR	LR	16 09 55.5	
	comp=Z,44nm,18.0s,baz=115,slow=37						
CHTO	**Chiang Mai**	**18.68**	**21**	*e*P	**Pn**	**16 02 47.4**	**+1.4**
	3.0nm,0.8s						
H08S2	**Diego Garcia H**	**21.35**	**245**	T	T	16 24 57.9	
	baz=65,slow=75,SNR=32						
H08S3	**Diego Garcia H**	**21.35**	**245**	T	T	16 24 59.2	
	baz=65,slow=75,SNR=51						
H08S1	**Diego Garcia H**	**21.37**	**245**	T	T	16 25 00.2	
	baz=65,slow=75,SNR=9.9						
H01W3	**Cape Leeuwin H**	**41.60**	**152**	T	T	16 50 32.3	
	baz=326,slow=75,SNR=17						
H01W2	**Cape Leeuwin H**	**41.61**	**152**	T	T	16 50 33.2	
	baz=326,slow=75,SNR=16						
H01W1	**Cape Leeuwin H**	**41.61**	**152**	T	T	16 50 34.0	
	baz=326,slow=75,SNR=19						

WRA	**Warramunga Arr**	**46.63**	**119**	P	**P**	**16 06 56.4**	**+0.3**
	1.1nm,1.2s,baz=298,slow=8.5,SNR=3.7						
ASAR	**Alice Springs**	**47.75**	**124**	P	**P**	**16 07 05.5**	**+0.7**
	0.3nm,0.9s,baz=301,slow=7.9,SNR=3.0						
SONM	**Songino Array**	**47.98**	**13**	P	**P**	**16 07 07.7**	**+1.3**
	2.1nm,0.6s,baz=195,slow=8.5,SNR=15						
JNU	**Nakatsue**	**48.31**	**45**	LR	LR	16 28 14.5	
	comp=Z,54nm,18.1s,baz=124,slow=37						
KURBB	**Kurchatov Arra**	**50.41**	**349**	P	**P**	**16 07 25.2**	**+0.5**
	0.5nm,0.8s,baz=173,slow=6.9,SNR=5.0						
KURK	**Kurchatov**	**50.48**	**349**	P	**P**	**16 07 25.2**	**-0.1**
ZALV	**Zalesovo Beam**	**52.77**	**355**	P	**P**	**16 07 42.6**	**+0.3**
	1.6nm,0.5s,baz=166,slow=7.1,SNR=4.9						
BRTR	**Keskin Array B**	**65.17**	**314**	P	**P**	**16 09 08.7**	**-0.3**
	0.9nm,0.6s,baz=146,slow=6.3,SNR=5.6						
AKASG	**Malin Array Be**	**71.98**	**324**	P	**P**	**16 09 50.4**	**-0.6**
	0.3nm,0.3s,baz=91,slow=5.2,SNR=3.0						
TIXI	**Tiksi**	**74.03**	**11**	P	**P**	**16 10 02.7**	**-0.1**
	1.0nm,0.4s,baz=274,slow=8.1,SNR=2.8						
GERES	**GERESS Array B**	**81.26**	**319**	P	**P**	**16 10 44.4**	**+0.6**
	1.8nm,0.6s,baz=96,slow=4.0,SNR=14						
TXAR	**Lajitas Array**	**146.05**	**25**	PKPbc	**PKPbc**	**16 18 08.4**	**+0.2**
	0.1nm,0.4s,baz=252,slow=1.7,SNR=3.1						

*IDC **18** 16:00:11.8±21.0, 23°.29S×179°.41W, h435km±197km, mb3.6/7, mb1 3.8/7, mb1mx3.2/52, mbtmp4.5/7, Error ellipse: s-maj=124.7km s-min=34.7km az=64.0*
*ISCJB **18** 16:00:20.4±2.9, 23°.3S±0°.5×179°.8W±0°.4, h536km, mb4.0/7, Error ellipse: s-maj=71.5km s-min=31.9km az=33.2*

ISC 18 16:00:22.0±1.6, 23°.5S±0°.3×179°.8W±0°.2, h536km, n11, σ0°56/10, mb4.1/7, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**31.64**	**270**	P	**P**	**16 06 01.9**	**+0.4**
	11nm,0.4s,baz=95,slow=11,SNR=43						
STKA	**Stephens Creek**	**35.02**	**248**	P	**P**	**16 06 29.9**	**0.0**
	1.9nm,0.4s,baz=78,slow=8.7,SNR=16						
ASAR	**Alice Springs**	**42.26**	**260**	P	**P**	**16 07 28.4**	**-0.3**
	3.4nm,0.5s,baz=96,slow=7.4,SNR=136						
WRA	**Warramunga Arr**	**42.60**	**266**	P	**P**	**16 07 30.5**	**-0.8**
	4.6nm,0.5s,baz=92,slow=8.4,SNR=286						
FITZ	**Fitzroy Crossi**	**51.03**	**265**	P	**P**	**16 08 35.1**	**+0.2**
	1.6nm,0.5s,baz=104,slow=4.5,SNR=12						
SIJI	**Sorong**	**52.47**	**288**	P	**P**	**16 08 45.1**	**-0.3**
	6.4nm,0.6s,baz=96,slow=10,SNR=8.1						
SNAA	**Sanae**	**85.05**	**179**	P	**P**	**16 12 00.5**	**-0.2**
	0.6nm,0.8s,baz=192,slow=18,SNR=3.2						
HFS	**Hagfors**	**142.20**	**349**	PKhKP	PKPpre	16 18 49.1	
	1.0nm,0.3s,baz=90,slow=2.9,SNR=12						
AKASG	**Malin Array Be**	**144.74**	**328**	PKP	**PKPdf**	**16 18 57.5**	**0.0**
	0.5nm,0.4s,baz=40,slow=4.0,SNR=5.5						
BRTR	**Keskin Array B**	**147.48**	**308**	PKPbc	**PKPbc**	**16 19 05.8**	**-0.3**
	0.3nm,0.6s,baz=113,slow=1.9,SNR=2.5						
MMAI	**Mount Meron Ar**	**147.69**	**295**	PKPbc	**PKPbc**	**16 19 07.8**	**+1.0**
	0.4nm,0.3s,baz=96,slow=4.3,SNR=3.9						

*IDC **18** 16:06:17.5±1.5, 11°.76N×125°.67E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.3/68, mbtmp3.5/5, Error ellipse: s-maj=160.7km s-min=18.9km az=68.0*
*ISCJB **18** 16:06:20.8±0.9, 11°.08N±0°.03×123°.99E±0°.03, h5km±6km, mb3.6/5, Error ellipse: s-maj=6.1km s-min=4.2km az=137.4*
*MAN **18** 16:06:21.5, 11°.04N×124°.04E, h8km, mb4.6, ML3.4, MS3.3*

ISC 18 16:06:20.8±1.1, 11°.11N±0°.03×124°.02E±0°.03, h11km±8km, n17, σ1°17/29, mb3.6/5, 3C-2D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.59**	**96**	*e*P	**Pb**	**16 06 32.7**	**-0.4**
OCLP				*e*S	**Sb**	**16 06 41.5**	**+0.1**
LLP	**Lapu-Lapu**	**0.79**	**183**	*e*P	**Pg**	**16 06 35.5**	**-0.6**
LLP				*e*S	**Sg**	**16 06 46.1**	**-0.4**
PLP	**Palo**	**0.95**	**87**	*e*P	**Pb**	**16 06 39.4**	**+0.1**
PLP				*i* S	**Sn**	**16 06 53.7**	**+0.1**
MSLP	**Maasin**	**1.28**	**139**	*e*P	**Pn**	**16 06 44.0**	**-0.6**
MSLP				*e*S	**Sn**	**16 07 02.4**	**+0.6**
RCP	**Roxas**	**1.32**	**290**	*e*P	**Pg**	**16 06 46.4**	**+0.1**
TBP	**Tagbilaran**	**1.42**	**186**	*e*P	**Pg**	**16 06 48.5**	**+0.4**
TBP				*i* S	**Sg**	**16 07 08.3**	**+1.8**
BESP	**Borongan**	**1.48**	**71**	*e*P	**Pn**	**16 06 47.4**	**0.0**
BESP				*e*S	**Sg**	**16 07 08.7**	**+0.3**
GUIM	**Jordan**	**1.48**	**251**	*e*P	**Pb**	**16 06 48.1**	**-0.3**
GUIM				*e*S	**Sg**	**16 07 07.8**	**-0.7**
CNP	**Catarman**	**1.53**	**24**	*e*P	**Pb**	**16 06 49.1**	**-0.1**
CNP				*e*S	**Sg**	**16 07 11.5**	**+1.5**
SNPH	**

JAY	**Jayapura**	**4.71**	**70**	P	**Pn**	**16 35 04.2**	**-0.6**
JAY				S	**Sn**	**16 35 59.5**	**+0.9**
SIJI	**Sorong**	**5.99**	**303**	P	**Pn**	**16 35 24.1**	**+1.7**
	2.0nm,0.3s,baz=70,slow=23,SNR=17						
SIJI				S	**Sn**	**16 36 30.0**	**-0.1**
	0.2nm,0.3s,baz=187,slow=19,SNR=2.8						
WRA	**Warramunga Arr**	**15.79**	**187**	P	**Pn**	**16 37 34.1**	**-2.0**
	0.3nm,0.3s,baz=10,slow=13,SNR=7.2						
WRA				S	**Sn**	**16 40 27.1**	**-3.4**
	0.4nm,0.3s,baz=12,slow=21,SNR=6.6						
FITZ	**Fitzroy Crossi**	**17.32**	**216**	P	**P**	**16 37 58.1**	**+1.4**
	0.4nm,0.3s,baz=51,slow=9.9,SNR=8.7						
FITZ				S	**Sn**	**16 41 04.1**	**-3.5**
	0.5nm,0.3s,baz=185,slow=14,SNR=7.3						
CTA	**Charters Tower**	**18.57**	**149**	P	**Pn**	**16 38 13.6**	**+2.8**
	0.2nm,0.3s,baz=355,slow=12,SNR=3.5						
ASAR	**Alice Springs**	**19.52**	**187**	P	**Pn**	**16 38 23.5**	**+1.2**
	0.4nm,0.3s,baz=9.7,slow=10.0,SNR=32						
ASAR				S	**S**	**16 41 54.3**	**-5.7**
	0.1nm,0.3s,baz=5.4,slow=13,SNR=4.1						
MKAR	**Makanchi Array**	**69.49**	**324**	P	**P**	**16 45 02.7**	**+1.1**
	0.2nm,0.5s,baz=108,slow=7.7,SNR=4.8						
BVAR	**Borovoye Array**	**79.13**	**326**	P	**P**	**16 45 56.9**	**-0.7**
	0.4nm,0.5s,baz=116,slow=6.6,SNR=3.0						
ILAR	**Eielson Array**	**88.16**	**25**	P	**P**	**16 46 45.3**	**+1.7**
	0.5nm,0.9s,baz=245,slow=4.3,SNR=4.5						

*IDC **18** 16:38:34.1±1.0,3.′86S×136.′31E, h0km, mb3.7/4, mb1 4.1/9, mb1mx3.8/45, mbtmp4.0/9, ML4.0/5, MS3.0/2, Ms1 3.0/2, ms1mx2.6/51, Error ellipse: s-maj=27.2km s-min=18.4km az=59.0*

*ISCJB **18** 16:38:36.2±0.8, 4.′12S±0.′06×136.′14E±0.′08, h27km, mb3.5/4, Error ellipse: s-maj=12.6km s-min=7.4km az=156.6*

ISC 18 16:38:37.2±0.8,**4.′19S**±0.′07×**136.′23E**±0.′09,**h27**km,**n11**, σ2°**85**/14,**mb3.8**/4,**Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**4.76**	**70**	Pn	**Pn**	**16 39 45.2**	**-2.1**
	1.5nm,0.3s,baz=218,slow=3.1,SNR=9.3						
JAY				LR	LR	16 41 56.8	
	comp=Z,145nm,18.4s,baz=222,slow=44						
SIJI	**Sorong**	**5.96**	**303**	Pn	**Pn**	**16 40 03.8**	**0.0**
	3.2nm,0.3s,baz=110,slow=9.9,SNR=21						
SIJI				Sn	**Sn**	**16 41 10.8**	**-0.3**
	baz=197,slow=19,SNR=2.3						
PMG	**Port Moresby**	**12.02**	**116**	LR	LR	16 46 56.4	
	comp=Z,92nm,20.0s,baz=12,slow=42						
WRA	**Warramunga Arr**	**15.77**	**187**	Pn	**Pn**	**16 42 15.1**	**-2.5**
	0.5nm,0.3s,baz=4.8,slow=13,SNR=5.1						
WRA				Sn	**Sn**	**16 45 07.3**	**-4.3**
	0.5nm,0.3s,baz=11,slow=21,SNR=5.0						
FITZ	**Fitzroy Crossi**	**17.28**	**216**	P	**P**	**16 42 41.8**	**+3.8**
	1.1nm,0.3s,baz=24,slow=10,SNR=12						
FITZ				S	**Sn**	**16 45 45.1**	**-3.2**
	0.5nm,0.3s,baz=198,slow=16,SNR=4.4						
CTA	**Charters Tower**	**18.58**	**149**	P	**Pn**	**16 42 55.0**	**+2.2**
	0.2nm,0.3s,baz=335,slow=12,SNR=5.1						
ASAR	**Alice Springs**	**19.50**	**186**	P	**Pn**	**16 43 05.8**	**+2.0**
	1.4nm,0.3s,baz=10.0,slow=9.9,SNR=26						
ASAR				S	**Sn**	**16 46 39.0**	**-2.9**
	0.1nm,0.3s,baz=8.2,slow=12,SNR=4.0						
STKA	**Stephens Creek**	**28.00**	**170**	P	**P**	**16 44 30.1**	**+4.1**
	1.0nm,0.6s,baz=350,slow=12,SNR=3.4						
CMAR	**Chiang Mai Arr**	**43.08**	**303**	P	**P**	**16 46 35.2**	**-0.2**
	0.3nm,0.7s,baz=131,slow=6.6,SNR=3.2						
MKAR	**Makanchi Array**	**69.47**	**324**	P	**P**	**16 49 42.4**	**-1.0**
	0.5nm,0.5s,baz=121,slow=6.6,SNR=8.3						
ILAR	**Eielson Array**	**88.20**	**25**	P	**P**	**16 51 25.6**	**0.0**
	0.4nm,0.7s,baz=258,slow=4.0,SNR=5.9						

IDC 18 16:46:32.1±1.8,**1.′37N**×**127.′13E**,**h0**km,**mb3.7**/4, **mb1 3.9**/4,**mb1mx3.5**/53,**mbtmp3.8**/4,**MS3.6**/1,**Ms1 3.6**/1, **ms1mx2.5**/53,**Error ellipse: s-maj=174.0km s-min=20.6km az=67.0**,**Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.33**	**162**	P	P	16 51 31.7	0.0
	0.9nm,0.5s,baz=341,slow=11,SNR=15						
ASAR	**Alice Springs**	**25.75**	**166**	P	P	16 52 04.6	0.0
	0.6nm,0.4s,baz=347,slow=13,SNR=7.9						
ASAJ	**Asahikawa**	**44.73**	**16**	LR	LR	17 11 42.5	
	comp=Z,71nm,21.3s,baz=188,slow=34						
MKAR	**Makanchi Array**	**59.71**	**326**	P	P	16 56 38.5	-0.1
	0.8nm,0.4s,baz=120,slow=7.7,SNR=20						
KURBB	**Kurchatov Arra**	**63.93**	**328**	P	P	16 57 07.0	0.0
	1.0nm,0.5s,baz=122,slow=6.5,SNR=12						

*NIED **18** 17:07:00,39.′20N×144.′50E, h5km, Mw4.0 Best double couple: M0=1.26000×10^15 NP1:φ=25.00000°, δ20.00000°, λ-103.00000°. NP2:φ=219.00000°, δ71.00000°, λ-86.00000°.*

*IDC **18** 17:07:24.3±0.7,38.′91N×144.′84E, h0km, mb3.8/17, mb1 4.0/21, mb1mx3.8/76, mbtmp3.9/21, ML3.7/4, MS3.0/8, Ms1 3.0/8, ms1mx2.7/69, Error ellipse: s-maj=18.1km s-min=14.6km az=122.0*

*MOS **18** 17:07:27.2±1.5,39.′08N×144.′80E, h31km, mb4.7/2, Error ellipse: s-maj=12.8km s-min=7.2km az=95.7*

*ISCJB **18** 17:07:28.2±0.5,39.′16N±0.′03×144.′61E±0.′04, h33km, mb3.8/18, MS3.2/4, Error ellipse: s-maj=5.2km s-min=3.9km az=41.2*

*NEIC **18** 17:07:29.9±0.6,39.′05N×144.′73E, h35km, mb4.8/1, Error ellipse: s-maj=11.8km s-min=9.0km az=127.0*

*JMA **18** 17:07:29.5±0.2,39.′16N×144.′52E, h51km, M4.1*

ISC 18 17:07:30.0±0.7,**39.′11N**±0.′06×**144.′71E**±0.′06,**h35**km,**n59**, σ2°**28**/71,**mb3.8**/18,**MS3.2**/4,**3C-1D**,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**2.29**	**283**	P	**Pn**	**17 08 03.8**	**-1.4**
MIYJ				*e*S	**Sn**	**17 08 28.9**	**-3.3**
JTH	**Tanohata**	**2.35**	**292**	P	**Pn**	**17 08 04.4**	**-1.7**
JTH				*e*S	**Sn**	**17 08 30.5**	**-3.2**
OFUJ	**Ofunato**	**2.37**	**270**	P	**Pn**	**17 08 04.7**	**-1.6**
OFUJ				*e*S	**Sn**	**17 08 30.6**	**-3.5**
JOM	**Ohasama**	**2.68**	**279**	P	**Pn**	**17 08 09.4**	**-1.1**
JOM				*e*S	**Sn**	**17 08 39.1**	**-2.6**
JMK	**Ichinoseki**	**2.72**	**268**	P	**Pn**	**17 08 09.9**	**-1.3**
JMK				*e*S	**Sn**	**17 08 39.7**	**-3.1**
JANG	**Nango**	**2.77**	**298**	P	**Pn**	**17 08 10.0**	**-1.8**
ERM	**Erimo**	**3.14**	**338**	*e*P	**Pn**	**17 08 15.3**	**-1.5**
ERM	**Erimo**	**3.14**	**338**	*e*P	**Pn**	**17 08 15.3**	**-1.5**
JYK	**Kaneyama**	**3.40**	**268**	P	**Pn**	**17 08 19.5**	**-0.9**
JNBK	**Urakawa-nobuka**	**3.50**	**335**	P	**Pn**	**17 08 20.7**	**-1.2**
JNBK				*e*S	**Sn**	**17 08 59.3**	**-2.7**
JOT	**Ohata**	**3.61**	**310**	P	**Pn**	**17 08 22.4**	**-0.9**
JOT				*e*S	**Sn**	**17 09 02.3**	**-2.4**
JCH	**Churui**	**3.65**	**344**	P	**Pn**	**17 08 22.7**	**-1.2**
JCH				*e*S	**Sn**	**17 09 03.5**	**-2.2**
JKB	**Kayabe**	**3.95**	**316**	P	**Pn**	**17 08 26.9**	**-1.1**
JKB				*e*S	**Sn**	**17 09 09.9**	**-3.1**
NEM2	**Nemuro 2**	**4.33**	**10**	P	**Pn**	**17 08 30.4**	**-2.8**
NEM2				*e*S	**Sn**	**17 09 17.6**	**-4.7**
JTKR	**Abashiri--Toko**	**4.90**	**353**	P	**Pn**	**17 08 39.4**	**-1.6**
JTKR				*e*S	**Sn**	**17 09 34.2**	**-2.2**
JOSM	**Okushiri--Mats**	**4.97**	**308**	P	**Pn**	**17 08 41.4**	**-0.7**
YUK	**Yuzh-Kuril'sk**	**5.00**	**10**	*c i*P	**Pn**	**17 08 40.7**	**-1.7**
YUK				*e*S	**Sn**	**17 09 34.3**	**-4.6**
YUK				pmax	pmax		
	comp=N,46nm,0.3s						
YUK				pmax	pmax		
	comp=Z,74nm,0.3s						
YUK				pmax	pmax		
	comp=E,43nm,0.2s						
YUK				smax	smax		
	comp=N,109nm,0.5s						
YUK				smax	smax		
	comp=E,386nm,0.5s						
SHO	**Shikotan**	**5.02**	**18**	*c i*P	**Pn**	**17 08 40.0**	**-2.7**
SHO				*e*S	**Sn**	**17 09 33.1**	**-6.3**
SHO				pmax	pmax		
	comp=N,20nm,0.3s						
SHO				pmax	pmax		
	comp=E,18nm,0.3s						
SHO				pmax	pmax		
	comp=Z,31nm,0.3s						
SHO				smax	smax		
	comp=N,32nm,0.2s						
SHO				smax	smax		
	comp=E,91nm,0.5s						
JHR	**Hokuryu**	**5.15**	**335**	P	**Pn**	**17 08 45.3**	**+0.8**
JHR				*e*S	**Sn**	**17 09 43.0**	**+0.4**
ASAJ	**Asahikawa**	**5.25**	**343**	Pn	**Pn**	**17 08 45.4**	**-0.5**
	comp=E,2.8nm,0.3s,baz=189,slow=12,SNR=65						
ASAJ				Sn	**Sn**	**17 09 47.2**	**+2.0**
	comp=E,1.3nm,0.3s,baz=340,slow=31,SNR=6.8						
JRY	**Ryogami san**	**5.55**	**238**	P	**Pn**	**17 08 47.7**	**-2.4**
MJAR	**Matsushiro Arr**	**5.75**	**246**	Pn	**Pn**	**17 08 52.0**	**-0.8**
	comp=E,2.5nm,0.3s,baz=57,slow=10,SNR=26						
MJAR				Sn	**Sn**	**17 09 57.3**	**-0.2**
	comp=E,1.5nm,0.3s,baz=76,slow=22,SNR=4.4						
MAJO	**Matsushiro**	**5.75**	**246**	*e*P	**Pn**	**17 08 52.3**	**-0.5**
	comp=E,22nm,0.6s						
MAJO	**Matsushiro**	**5.75**	**246**	*e*P	**Pn**	**17 08 52.3**	**-0.5**
MAJO				pmax	pmax		
	comp=Z,22nm,0.6s						
MAT	**Matsushiro**	**5.75**	**246**	P	**Pn**	**17 08 52.3**	**-0.5**
MAT				S	**Sn**	**17 09 51.4**	**-6.1**
JOD2	**Odawara 2**	**5.90**	**231**	P	**Pn**	**17 08 52.3**	**-2.6**
KUR	**Kuril'sk**	**6.55**	**20**	*de*P	**Pn**	**17 09 01.9**	**-1.9**
KUR				*i* S	**Sn**	**17 10 11.2**	**-6.0**
KUR				pmax	pmax		
	comp=Z,27nm,0.8s						
KUR				pmax	pmax		
	comp=N,19nm,0.2s						
KUR				pmax	pmax		
	comp=E,13nm,0.2s						
KUR				smax	smax		
	comp=N,39nm,0.4s						
KUR				smax	smax		
	comp=E,29nm,0.6s						
JHJ	**Hachijo jima 2**	**7.18**	**215**	Pn	Pn	17 09 07.4	-5.1
	comp=E,13nm,0.3s,baz=151,slow=23,SNR=22						
JHJ				Sn	Sn	17 10 23.4	-9.4
	comp=E,41nm,0.3s,baz=265,slow=22,SNR=11						
YSS	**Yuzh-Sakhalins**	**7.97**	**350**	⇑*i*P	**Pn**	**17 09 27.2**	**+4.0**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YSS				pmax	pmax		
	comp=N,10.0nm,0.7s						
YSS				pmax	pmax		
	comp=E,10.0nm,0.7s						
TEY	**Ternei**	**8.45**	**317**	*e*P	**Pn**	**17 09 30.0**	**+0.2**
USRK	**Ussuriysk Ar.**	**10.79**	**302**	Pn	**Pn**	**17 10 03.2**	**+1.4**
	comp=E,0.6nm,0.3s,baz=104,slow=14,SNR=19						
USRK				LR	LR	17 14 29.7	
	comp=E,71nm,21.7s,baz=83,slow=39						
MDJ	**Mudanjiang**	**12.54**	**301**	*e*P	**Pn**	**17 10 25.8**	**0.0**
	comp=E,16nm,1.0s						
JNU	**Nakatsue**	**12.67**	**246**	LR	LR	17 15 08.2	
	comp=E,73nm,20.0s,baz=123,slow=36						
KSRS	**Korea Array**	**13.29**	**268**	LR	LR	17 15 24.5	
	comp=E,51nm,19.4s,baz=153,slow=36						
KLR	**Kul'dur**	**13.72**	**322**	LR	LR	17 15 25.3	
	comp=E,6.2nm,20.4s,baz=162,slow=34						
ZEA	**Zeya**	**18.87**	**327**	*e*P	**P**	**17 11 46.8**	**-0.2**
ZEA				pmax	pmax		
	comp=Z,15nm,0.8s						
GUMO	**Guam**	**25.42**	**180**	LR	LR	17 22 31.8	
	comp=Z,22nm,19.3s,baz=17,slow=36						
SONM	**Songino Array**	**28.89**	**300**	P	**P**	**17 13 26.1**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=100,slow=8.4,SNR=4.3						
ZALV	**Zalesovo Beam**	**42.49**	**311**	P	**P**	**17 15 22.3**	**+0.8**
	comp=Z,0.5nm,0.4s,baz=86,slow=7.8,SNR=3.5						
ZALV				LR	LR	17 36 20.3	
	comp=Z,17nm,18.5s,baz=71,slow=41						
NRIK	**Noril'sk**	**42.52**	**334**	LR	LR	17 34 21.3	
	comp=Z,53nm,18.3s,baz=92,slow=38						
CMAR	**Chiang Mai Arr**	**44.53**	**256**	P	**P**	**17 15 39.3**	**+0.9**
	comp=Z,0.8nm,0.9s,baz=33,slow=6.3,SNR=4.1						
MKAR	**Makanchi Array**	**45.25**	**301**	P	**P**	**17 15 44.5**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=83,slow=9.1,SNR=6.3						
ILAR	**Eielson Array**	**46.34**	**33**	P	**P**	**17 15 52.5**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=258,slow=6.9,SNR=10						
KURK	**Kurchatov**	**46.73**	**307**	*e*P	**P**	**17 15 56.1**	**+0.8**
	comp=Z,8.1nm,0.6s						
KURK	**Kurchatov**	**46.73**	**307**	P	**P**	**17 15 57.0**	**+1.6**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURBB	**Kurchatov Arra**	**46.81**	**307**	P	**P**	**17 15 57.0**	**+1.1**
	comp=Z,1.2nm,0.6s,baz=82,slow=8.2,SNR=14						
BVAR	**Borovoye Array**	**51.12**	**312**	P	**P**	**17 16 29.6**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=67,slow=11,SNR=4.5						
BRVK	**Borovoye**	**51.17**	**312**	*e*P	**P**	**17 16 30.9**	**+1.5**
BRVK	**Borovoye**	**51.17**	**312**	*e*P	**P**	**17 16 30.9**	**+1.5**
INK	**Inuvik**	**51.35**	**28**	P	**P**	**17 16 30.9**	**+0.5**
	comp=Z,1.5nm,0.7s,baz=300,slow=2.7,SNR=3.4						
AKTO	**Aktyubinsk**	**59.23**	**312**	P	**P**	**17 17 28.9**	**+1.4**
	comp=Z,0.8nm,0.6s,baz=97,slow=8.1,SNR=3.1						
WRA	**Warramunga Arr**	**59.54**	**191**	P	**P**	**17 17 27.6**	**-2.2**
	comp=Z,1.0nm,0.6s,baz=8.5,slow=6.9,SNR=13						
RES	**Resolute Bay**	**59.93**	**15**	P	**P**	**17 17 32.0**	**+0.1**
	comp=Z,2.3nm,0.8s,baz=353,slow=16,SNR=3.3						
YKA	**Yellowknife Ar**	**60.70**	**32**	P	**P**	**17 17 38.4**	**+1.1**
	comp=Z,0.2nm,0.6s,baz=306,slow=6.2,SNR=3.2						
ASAR	**Alice Springs**	**63.26**	**191**	P	**P**	**17 17 53.9**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=11,slow=6.2,SNR=10						
FINES	**FINESS Array B**	**68.17**	**333**	P	**P**	**17 18 27.4**	**+1.2**
	comp=Z,1.8nm,0.7s,baz=49,slow=13,SNR=4.3						
FINES				LR	LR	17 51 11.5	
	comp=Z,37nm,18.5s,baz=359,slow=38						
KBZ	**Khabaz**	**71.50**	**312**	P	**P**	**17 18 48.8**	**+1.8**
	comp=Z,2.5nm,0.8s,baz=190,slow=6.1,SNR=3.0						
AKASG	**Malin Array Be**	**74.22**	**323**	P	**P**	**17 19 03.9**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=50,slow=7.6,SNR=5.0						
TXAR	**Lajitas Array**	**86.80**	**54**	P	**P**	**17 20 10.7**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=316,slow=3.7,SNR=4.9						

*KRNET **18** 17:16:58.5±0.1,39.′85N×77.′06E, mb2.5*

*SOME **18** 17:17:03.6,40.′12N×77.′13E, h10km*

ISC 18 17:17:02.2±1.8,**39.′99N**±0.′08×**77.′06E**±0.′06,**h10**km,**n17**, σ1°**82**/34,**12C-4D**,**Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	**Naryn**	**1.65**	**331**	⇑*i*P	**Pn**	**17 17 31.5**	**-0.1**
	baz=33						
NRN				⇑*i*S	**Sg**	**17 17 56.2**	**+0.7**
	baz=33						
ULHL	**Ulahol**	**2.34**	**345**	⇑*e*P	**Pb**	**17 17 42.5**	**-2.1**
	baz=46						
ULHL				⇑*i*S	**Sb**	**17 18 15.1**	**+1.4**
	baz=46						
KZA	**Kyzart**	**2.50**	**327**	⇑*i*P	**Pn**	**17 17 44.4**	**+1.1**
	baz=29						
KZA				⇑*i*S	**Sb**	**17 18 17.8**	**-0.6**
	baz=29						
BOOM	**Boomskoye usch**	**2.64**	**342**	⇑*i*P	**Pn**	**17 17 46.2**	**+1.1**
	baz=43						
BOOM				⇑*i*S	**Sb**	**17 18 21.8**	**-0.5**
	baz=43						
SFK	**Sufi-Kurgan**	**2.73**	**272**	⇓*i*P	**Pn**	**17 17 46.5**	**+0.2**
	baz=75						
SFK				⇓*i*S	**Sn**	**17 18 21.2**	**+1.7**
	baz=75						
UCH	**Uchtor**	**2.95**	**320**	⇑*i*P	**Pn**	**17 17 50.2**	**+0.6**
	baz=22						
UCH				⇑*i*S	**Sn**	**17 18 27.9**	**+2.6**
	baz=22						
TNSS	**Tian-Shan**	**3.05**	**358**	*e*P	**Pg**	**17 17 58.3**	**-2.4**
	3.0nm,0.7s						
TNSS				*e*S	**Sg**	**17 18 37.6**	**-2.6**
	5.8nm,0.8s						
KBK	**Karagaybulak**	**3.10**	**330**	⇓*i*P	**Pn**	**17 17 52.4**	**+0.9**
	baz=31						
KBK				⇓*i*S	**Sb**	**17 18 32.4**	**-3.2**
	baz=31						
KST	**Kastek**	**3.16**	**345**	*e*P	**Pg**	**17 18 01.0**	**-1.9**
	1.5nm,0.3s						
KST				*e*S	**Sg**	**17 18 42.2**	**-1.6**
	3.9nm,0.6s						
MDOK	**Medeo**	**3.17**	**360**	*e*P	**Pb**	**17 18 00.2**	**+1.4**
	1.9nm,0.8s						
MDOK				*e*S	**Sb**	**17 18 41.1**	**+3.5**
	6.9nm,0.9s						
SATY	**Saty**	**3.23**	**18**	*e*P	**Pb**	**17 18 00.6**	**+0.8**
	2.0nm,0.2s						
SATY				*e*S	**Sb**	**17 18 41.6**	**+2.3**
	4.1nm,0.3s						
KOTS	**Kotyrbulak**	**3.25**	**1**	*e*P	**Pb**	**17 18 00.3**	**+0.3**
	1.4nm,0.3s						
KOTS				*e*S	**Sb**	**17 18 41.2**	**+1.5**
	9.3nm,0.6s						
AML	**Almayashu**	**3.33**	**311**	⇑*i*P	**Pn**	**17 17 55.3**	**+0.6**
	baz=13						
AML				⇑*i*S	**Sn**	**17 18 36.7**	**+2.3**
	baz=13						
DGS	**Degeres**	**3.39**	**344**	*e*P	**Pb**	**17 18 03.2**	**+0.7**
	1.8nm,0.5s						
DGS				*e*S	**Sb**	**17 18 46.2**	**+2.3**
	3.7nm,0.7s						
SHLS	**Shalkode**	**3.65**	**29**	*e*P	**Pg**	**17 18 09.8**	**-2.3**
	2.0nm,0.2s						
SHLS				*e*S	**Sg**	**17 18 57.3**	**-2.0**
	5.4nm,0.7s						
KTBS	**Karatobe**	**3.73**	**356**	*e*P	**Pb**	**17 18 09.3**	**+1.0**
	0.5nm,0.6s						
KTBS				*e*S	**Sb**	**17 18 56.5**	**+2.9**
	2.9nm,0.9s						
CHKK	**Chushkaly**	**3.87**	**359**	*e*P	**Pb**	**17 18 09.8**	**-0.7**
	0.6nm,0.3s						
CHKK				*e*S	**Sb**	**17 18 57.4**	**0.0**
	6.4nm,0.4s						

*JMA **18** 17:49:50.7±0.1,23.′65N×121.′64E, h0km, M2.9*

*ISCJB **18** 17:49:51.8±0.3,23.′68N±0.′01×121.′59E±0.′02, h5km±2km, Error ellipse: s-maj=2.7km s-min=1.7km az=34.6*

*TAP **18** 17:49:51.6,23.′69N×121.′52E, h3km, ML3.4, C*

ISC 18 17:49:51.8±0.9,**23.′67N**±0.′02×**121.′57E**±0.′02,**h8**km±7km, **n83**, σ0°**60**/127,**2C-13D**,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	**Guangfu**	**0.14**	**268**	⇓*i*P	**Pg**	**17 49 54.1**	**-0.6**
	baz=267						
EGFH				S	**Sg**	**17 49 55.9**	**-0.8**
	baz=267						
ESL	**Shilin**	**0.19**	**317**	⇓*i*P	**Pg**	**17 49 55.3**	**-0.4**
	baz=319						
ESL				*i* S	**Sg**	**17 49 57.6**	**-0.7**
	baz=319						
HGSD	**Ruisui**	**0.23**	**217**	⇓P	**Pg**	**17 49 57.0**	**+0.7**
	baz=197						
HGSD				S	**Sg**	**17 50 01.1**	**+1.7**
	baz=197						
ENLB	**Shoufeng**	**0.23**	**6**	*e*P	**Pg**	**17 49 57.9**	**+1.5**
	baz=19						
EHY	**Hungye**	**0.29**	**234**	P	**Pg**	**17 49 57.1**	**-0.3**
	baz=233						
EHY				S	**Sg**	**17 50 02.0**	**+0.7**
	baz=233						
HWA	**Hwalien**	**0.30**	**5**	*e*P	**Pb**	**17 49 58.9**	**-0.6**
	baz=3.0						
HWA				*e*S	**Sb**	**17 50 03.8**	**-0.8**
	baz=3.0						
YULB	**Yu-li**	**0.38**	**222**	*e*P	**Pg**	**17 49 59.2**	**0.0**
	baz=229						
YULB				S	**Sb**	**17 50 05.5**	**-1.3**
	baz=229						
TWD	**Chiawan**	**0.40**	**3**	*e*P	**Pb**	**17 50 00.1**	**-1.1**
	baz=358						
TWD				*e*S	**Sg**	**17 50 05.6**	**+0.6**
	baz=358						
VWDT	**VWDT**	**0.41**	**281**	⇓P	**Pg**	**17 49 59.5**	**-0.2**
	baz=280						
VWDT				*e*S	**Sg**	**17 50 05.5**	**+0.5**
	baz=280						
TWF1	**Yuli**	**0.41**	**218**	*e*P	**Pg**	**17 49 59.9**	**+0.2**
	baz=223						
TWF1				*e*S	**Sb**	**17 50 06.1**	**-1.6**
	baz=223						
NACB	**Ninganchiao**	**0.50**	**2**	*e*P	**Pg**	**17 50 01.3**	**-0.1**
	baz=357						
NACB				*e*S	**Sg**	**17 50 08.9**	**+1.0**
	baz=357						
CHGB	**Renai**	**0.53**	**316**	⇓P	**Pg**	**17 50 02.0**	**-0.1**
	baz=318						
CHGB				*e*S	**Sg**	**17 50 08.7**	**-0.4**
	baz=318						
FULB	**Fuli**	**0.54**	**209**	⇓*e*P	**Pb**	**17 50 03.9**	**+0.3**
	baz=223						
FULB				*e*S	**Sb**	**17 50 12.6**	**+1.2**
	baz=223						
SSLB	**Suanglung**	**0.58**	**281**	⇓P	**Pg**	**17 50 02.6**	**-0.4**
	baz=281						
SSLB				*e*S	**Sg**	**17 50 09.7**	**-0.9**
	baz=281						
CHKT	**Chengkung**	**0.60**	**199**	*e*P	**Pb**	**17 50 04.1**	**-0.5**
	baz=179						
CHKT				*e*S	**Sb**	**17 50 14.0**	**+0.7**
	baz=179						
SMLT	**Sun Moon Lake**	**0.65**	**289**	⇓P	**Pg**	**17 50 04.1**	**-0.3**
	baz=288						
SMLT				S	**Sg**	**17 50 12.7**	**-0.3**
	baz=288						
ELDTW	**Lidau**	**0.70**	**227**	⇑*e*P	**Pg**	**17 50 05.0**	**-0.4**
	baz=233						
ENA	**Nanau**	**0.77**	**11**	⇓P	**Pb**	**17 50 06.8**	**-0.6**
	baz=3.0						
ENA				*e*S	**Sb**	**17 50 18.7**	**+0.7**
	baz=3.0						
NANB	**Nanao**	**0.77**	**12**	*e*P	**Pb**	**17 50 06.7**	**-0.7**
	baz=5.0						
NNSB	**Datong**	**0.77**	**347**	⇓*e*P	**Pb**	**17 50 06.9**	**-0.7**
	baz=340						
NNSB				*e*S	**Sg**	**17 50 16.2**	**-0.6**
	baz=340						
NNSH	**Datong**	**0.77**	**347**	*e*P	**Pg**	**17 50 06.5**	**-0.1**
	baz=342						
NNSH				*e*S	**Sg**	**17 50 16.6**	**-0.1**
	baz=342						
NNS	**Nan Shan**	**0.78**	**346**	⇓P	**Pb**	**17 50 07.1**	**-0.7**
	baz=340						
NNS				*e*S	**Sg**	**17 50 16.9**	**-0.3**
	baz=340						
WJS	**Zhushan**	**0.79**	**281**	*e*P	**Pb**	**17 50 08.1**	**+0.3**
	baz=279						
ENAH	**Nanao**	**0.80**	**16**	*e*P	**Pb**	**17 50 07.6**	**-0.

CHN2	Minshiung	1.02	262	eP		Pn	17 50 12.2 -0.2
	baz=262						
CHN2				eS		Sb	17 50 25.8 +0.6
	baz=262						
NSY	Sanyi	1.05	315	eP		Pb	17 50 12.4 +0.1
	baz=316						
CHY	Chiayi	1.07	261	eP		Pb	17 50 12.5 -0.1
	baz=259						
CHN1	Nanshi	1.08	243	eP		Pb	17 50 12.9 +0.2
	baz=241						
CHN1				eS		Sn	17 50 28.7 +0.3
	baz=241						
TWK	Hsinying	1.08	248	eP		Pb	17 50 12.8 +0.1
	baz=246						
TWK				eS		Sn	17 50 28.4 0.0
	baz=246						
SGST	Jiashian	1.08	237	eP		Pb	17 50 12.7 -0.2
	baz=234						
NSTT	Nanjuang	1.09	331	eP		Pb	17 50 12.9 0.0
	baz=323						
NSTT				eS		Sg	17 50 26.0 -0.8
	baz=323						
SLGT	Liugui	1.09	232	eP		Pb	17 50 12.5 -0.4
	baz=220						
SLGT				eS		Sn	17 50 29.5 +0.8
	baz=220						
LIOB	Emei	1.09	332	eP		Pb	17 50 13.0 0.0
	baz=334						
NWLT	Wulai	1.10	357	eP		Pb	17 50 13.1 0.0
	baz=358						
NMLH	Miaoli	1.12	320	eP		Pn	17 50 13.8 0.0
	baz=322						
RLNB	Erlin	1.13	281	eP		Pb	17 50 13.5 -0.2
	baz=281						
RLNB				eS		Sb	17 50 29.2 +0.7
	baz=281						
ECL	Taimali	1.22	208	eP		Pg	17 50 13.8 -1.3
	baz=188						
SBCB	Hsinchu	1.24	334	eP		Pn	17 50 15.6 +0.1
	baz=336						
WSF	Szhu	1.24	269	eP		Pg	17 50 14.8 -0.8
	baz=269						
WSF				eS		Sb	17 50 31.6 0.0
	baz=269						
CHN3	Shinhua	1.26	242	eP		Pn	17 50 16.6 +0.8
	baz=240						
SSD	Sandimen	1.27	223	eP		Pb	17 50 15.8 -0.1
	baz=224						
SSD				eS		Sn	17 50 33.9 +0.8
	baz=224						
TATO	Taipei	1.30	357	eP		Pn	17 50 16.8 +0.6
	baz=358						
TIPB	Shuangxi	1.31	10	eP		Pg	17 50 16.4 -0.6
	baz=357						
NCUH	Zhongli	1.34	345	eP		Pg	17 50 16.9 -0.5
	baz=359						
SCLT	Jiali	1.36	249	eP		Pn	17 50 16.7 -0.4
	baz=251						
MASBT	Mashibuluo	1.37	220	eP		Pn	17 50 16.7 -0.5
	baz=216						
SGLT	Jiouru	1.37	227	eP		Pb	17 50 18.8 +1.1
	baz=225						
NWF	Wu-fen Shan	1.40	8	eP		Pb	17 50 19.3 +1.0
	baz=8.0						
WFSB	Wu-fen Shan	1.40	8	eP		Pb	17 50 18.8 +0.5
	baz=8.0						
TWS1	Kuangyinshan	1.43	354	eP		Pg	17 50 19.4 +0.2
	baz=355						
JYNG	Yonagunijimaku	1.47	58	S		Sn	17 50 39.2 +1.1
YM04	YM04	1.47	359	eP		Pb	17 50 19.2 -0.3
	baz=358						
YM10	YM10	1.48	360	eP		Pg	17 50 19.8 -0.3
	baz=356						
NTST	Danshui	1.49	356	eP		Pg	17 50 19.9 -0.5
	baz=355						
YM07	YM07	1.50	2	eP		Pn	17 50 19.4 +0.4
	baz=358						
YM12	YM12	1.50	360	eP		Pg	17 50 20.9 +0.4
	baz=356						
YOJ	Yonaguni jima	1.53	59	eP		Pn	17 50 19.7 +0.2
	baz=58						
YOJ				eS		Sg	17 50 40.2 -0.8
	baz=58						
YOJ	Yonaguni jima	1.53	59	P		Pn	17 50 19.6 +0.2
YOJ				S		Sb	17 50 40.1 +0.1
SCZT	Fangliau	1.57	214	eP		Pb	17 50 21.0 -0.1
	baz=211						
PHUB	P'eng-hu	1.84	265	eP		Pn	17 50 24.5 +0.7
	baz=265						
PNG	Penghu	1.85	267	eP		Pn	17 50 23.8 -0.1
	baz=270						
PNG				eS		Sn	17 50 48.4 +0.8
	baz=270						
IRIF	Iriomote-Funau	2.08	71	P		Pn	17 50 27.0 0.0
IRIF				S		Sn	17 50 53.7 +0.6
JKRS	Kuro-shima	2.30	75	P		Pn	17 50 29.7 -0.3
JKRS				S		Sn	17 50 59.7 +1.2
JIJ	Ishigaki jima	2.45	73	P		Pn	17 50 32.0 -0.1
JIJ				S		Sn	17 51 02.2 0.0
JISG	Ishigakijimahi	2.66	69	P		Pn	17 50 34.6 -0.4
JISG				S		Sn	17 51 07.0 -0.4
JTJ	Tarama	3.02	71	S		Sn	17 51 16.1 -0.1
JIRB	Irabujima	3.48	70	S		Sn	17 51 27.2 -0.5
JIKM	Ikemajima	3.58	69	S		Sn	17 51 29.9 -0.1

IDC 18 17:50:51.1±1.7, 1.′02N×126.′25E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/53, mbtmp3.6/4, Error ellipse: s-maj=178.9km s-min=20.6km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.29	160	P	P	17 55 48.4	-1.9
	1.6nm,0.9s,baz=338,slow=11,SNR=9.1						
ASAR	Alice Springs	25.64	164	P	P	17 56 24.0	+1.3
	0.3nm,0.5s,baz=344,slow=12,SNR=12						
MKAR	Makanchi Array	59.52	326	P	P	18 00 56.5	+0.2
	0.5nm,0.4s,baz=119,slow=8.3,SNR=12						
KURBB	Kurchatov Arra	63.76	328	P	P	18 01 24.6	-0.3
	0.9nm,0.6s,baz=129,slow=6.1,SNR=12						

*NIED **18** 18:03:00, 23.′60N×121.′80E, h32km, Mw3.9 Best double couple: M07.01000×10^14 NP1:φ8=76.00000°, δ2.00000°, λ-91.00000°. NP2:φ8=257.00000°, δ88.00000°, λ-90.00000°.*
*JMA **18** 18:03:47.6±0.3, 23.′60N×121.′76E, h0km, M3.6*
*IDC **18** 18:03:48.2±1.1, 23.′36N×121.′41E, h0km, mb3.4/8, mb1 3.6/9, mb1mx3.4/68, mbtmp3.5/9, Error ellipse: s-maj=35.9km s-min=21.3km az=69.0*
*TAP **18** 18:03:49.6, 23.′68N×121.′54E, h5km, ML3.9, C*
*ISCJB **18** 18:03:50.0±0.3, 23.′68N±0.′01×121.′58E±0.′01, h8km±2km, mb3.4/8, Error ellipse: s-maj=2.5km s-min=1.6km az=31.7*
ISC 18 18:03:50.0±0.8, 23.′65N±0.′02×121.′54E±0.′02, h13km±5km, n118, σ1$07/170, mb3.5/8, 4C-16D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	Guangfu	0.10	279	⇓iP		Pg	18 03 52.3 -0.6
	baz=274						
EGFH				S		Sg	18 03 54.3 -0.7
	baz=274						
ESL	Shilin	0.18	329	⇓iP		Pg	18 03 53.4 -0.8
	baz=318						
ESL				i S		Sg	18 03 56.1 -0.9
	baz=318						
HGSD	Ruisui	0.19	213	P		Pg	18 03 55.2 +1.0
	baz=202						
HGSD				eS		Sg	18 03 59.5 +2.3
	baz=202						
EHY	Hungye	0.24	233	⇓P		Pg	18 03 55.2 0.0
	baz=237						
EHY				S		Sg	18 03 59.8 +1.1
	baz=237						
ENLB	Shoufeng	0.26	14	⇑eP		Pb	18 03 56.5 0.0
	baz=13						
HWA	Hwalien	0.33	11	eP		Pb	18 03 56.8 -1.0
	baz=359						
HWA				eS		Sb	18 04 02.5 -0.4
	baz=359						
YULB	Yu-li	0.34	220	⇓P		Pb	18 03 57.3 -0.6
	baz=233						
YULB				S		Sb	18 04 03.2 0.0
	baz=233						
TWF1	Yuli	0.37	216	eP		Pb	18 03 58.2 -0.2
	baz=227						
TWF1				eS		Sb	18 04 04.8 +0.6
	baz=227						
VWDT	VWDT	0.38	285	⇓P		Pb	18 03 57.6 -0.9
	baz=282						
VWDT				S		Sb	18 04 03.3 -0.9
	baz=282						
TWD	Chiawan	0.43	7	⇓P		Pg	18 03 58.4 -0.1
	baz=353						
TWD				eS		Sg	18 04 04.4 +0.2
	baz=353						
FULB	Fuli	0.51	206	⇓eP		Pn	18 04 01.5 -1.5
	baz=226						
FULB				eS		Sb	18 04 10.8 +2.8
	baz=226						
NACB	Ninganchiao	0.52	6	P		Pg	18 03 59.7 -0.5
	baz=352						
NACB				eS		Sg	18 04 06.2 -1.0
	baz=352						
CHGB	Renai	0.52	321	⇓P		Pb	18 04 00.2 -1.0
	baz=329						
CHGB				eS		Sg	18 04 06.7 -0.7
	baz=329						
SSLB	Suanglung	0.55	284	⇓P		Pb	18 04 00.7 -0.8
	baz=283						
SSLB				eS		Sb	18 04 08.2 -1.2
	baz=283						
CHKT	Chengkung	0.57	196	eP		Pn	18 04 02.1 -1.7
	baz=195						
CHKT				eS		Sn	18 04 11.8 -1.4
	baz=195						
SMLT	Sun Moon Lake	0.63	292	⇓P		Pb	18 04 02.3 -0.6
	baz=289						
SMLT				eS		Sg	18 04 09.7 -0.8
	baz=289						
ELDTW	Lidau	0.66	226	P		Pb	18 04 03.0 -0.5
	baz=224						
ELDTW				eS		Sn	18 04 13.8 -1.8
	baz=224						
TYC	Yuchr	0.67	292	⇓P		Pb	18 04 02.9 -0.6
	baz=290						
TYC				eS		Sb	18 04 12.3 -0.4
	baz=290						
WJS	Zhushan	0.76	283	eP		Pn	18 04 06.6 +0.1
	baz=281						
WJS				eS		Sn	18 04 18.1 +0.3
	baz=281						
NNSB	Datong	0.78	350	⇓P		Pg	18 04 04.9 -0.3
	baz=338						
NNSB				eS		Sg	18 04 14.3 -1.2
	baz=338						
NNSH	Datong	0.78	350	eP		Pg	18 04 04.7 -0.5
	baz=340						
NNSH				eS		Sg	18 04 14.6 -1.0
	baz=340						
ENA	Nanau	0.79	14	⇑P		Pb	18 04 05.1 -0.6
	baz=25						
ENA				eS		Sg	18 04 16.1 +0.3
	baz=25						
NANB	Nanao	0.80	14	P		Pb	18 04 05.1 -0.6
	baz=25						
NANB				eS		Sg	18 04 16.2 +0.3
	baz=25						
NNS	Nan Shan	0.80	349	⇓P		Pg	18 04 05.0 -0.4
	baz=338						
NNS				eS		Sg	18 04 14.8 -1.1
	baz=338						
WNT	Mingjian	0.81	286	eP		Pn	18 04 06.5 -0.7
	baz=290						
WNT				eS		Sb	18 04 18.3 +1.5
	baz=290						
ENAH	Nanao	0.83	18	eP		Pb	18 04 05.8 -0.5
	baz=15						
STYT	Tauyuan	0.87	236	eP		Pn	18 04 07.1 -0.8
	baz=226						
STYT				eS		Sn	18 04 20.0 -0.5
	baz=226						
WGK	Gukeng	0.89	272	eP		Pn	18 04 08.7 +0.5
	baz=272						
TPUB	Ta-pu	0.90	247	⇑P		Pn	18 04 08.7 +0.3
	baz=257						
TPUB				eS		Sn	18 04 21.5 +0.2
	baz=257						
WDLH	Douliu	0.92	272	eP		Pn	18 04 09.1 +0.6
	baz=272						
TCU	Taichung	0.93	302	eP		Pn	18 04 08.8 +0.1
	baz=302						
TWGBT	Beinan	0.93	207	eP		Pb	18 04 07.1 -0.9
	baz=206						
TWGBT				eS		Sn	18 04 21.6 -0.4
	baz=206						
TWG	Pinlang	0.93	207	eP		Pb	18 04 07.0 -1.0
	baz=206						
TWG				eS		Sn	18 04 21.3 -0.7
	baz=206						
WTP	Ta-pu	0.94	245	⇑eP		Pn	18 04 09.3 +0.4
	baz=253						
WTP				eS		Sn	18 04 22.2 0.0
	baz=253						
TWH	Lutao	0.94	183	eP		Pn	18 04 07.6 -1.3
	baz=170						
TWH				eS		Sn	18 04 21.3 -0.9
	baz=170						
CHN2	Minshiung	0.98	263	eP		Pn	18 04 10.3 +0.9
	baz=263						
CHN2				eS		Sn	18 04 23.8 +0.6
	baz=263						
ENTT	Nioudou	0.98	2	eP		Pg	18 04 08.5 -0.5
	baz=352						
ENTT				eS		Sg	18 04 20.7 -1.1
	baz=352						
TWQ1	Liyutan	0.98	315	⇓eP		Pn	18 04 10.5 +1.0
	baz=314						
WCHH	Zhanghua	0.99	296	eP		Pn	18 04 10.1 +0.5
	baz=295						
TWC	Suao	0.99	17	eP		Pb	18 04 08.8 -0.3
	baz=8.0						
TWC				eS		Sb	18 04 22.7 +0.7
	baz=8.0						
YHNB	Yeheng	1.02	352	⇓P		Pb	18 04 09.6 0.0
	baz=339						
YHNB				eS		Sg	18 04 21.9 -1.2
	baz=339						
NSK	Sanguang	1.03	351	eP		Pb	18 04 09.8 +0.1
	baz=338						
NSK				eS		Sg	18 04 21.5 -1.8
	baz=338						
CHY	Chiayi	1.03	262	eP		Pn	18 04 10.0 -0.2
	baz=262						
TWK	Hsinying	1.04	248	eP		Pn	18 04 11.3 +1.0
	baz=247						
TWK				eS		Sn	18 04 27.0 +2.3
	baz=247						
CHN1	Nanshi	1.04	243	eP		Pn	18 04 11.3 +1.1
	baz=242						
CHN1				eS		Sn	18 04 25.9 +1.3
	baz=242						
NSY	Sanyi	1.04	317	eP		Pn	18 04 11.2 +0.9
	baz=316						
EOS1	EOS1	1.04	31	eP		Pn	18 04 10.7 +0.4
	baz=47						
SGST	Jiashian	1.04	237	eP		Pn	18 04 10.9 +0.6
	baz=236						
SGST				eS		Sn	18 04 27.0 +2.1
	baz=236						
SLGT	Liugui	1.05	231	eP		Pn	18 04 10.8 +0.4
	baz=232						
TWE	Neicheng	1.07	6	eP		Pg	18 04 10.0 -0.6
	baz=6.0						
TWE				eS		Sg	18 04 23.5 -1.1
	baz=6.0						
NSTT	Nanjuang	1.09	333	eP		Pn	18 04 11.3 +0.3
	baz=331						
NSTT				eS		Sg	18 04 23.6 -1.5
	baz=331						
LIOB	Emei	1.10	334	⇓P		Pn	18 04 11.4 +0.4
	baz=332						
LIOB				eS		Sg	18 04 24.9 -0.5
	baz=332						
RLNB	Erlin	1.10	283	eP		Pn	18 04 11.3 +0.2
	baz=283						
NMLH	Miaoli	1.11	322	eP		Pn	18 04 11.9 +0.7
	baz=321						
NWLT	Wulai	1.12	358	eP		Pg	18 04 10.3 -1.2
	baz=344						
NWLT				eS		Sg	18 04 24.7 -1.4
	baz=344						
ECL	Taimali	1.18	207	eP		Pn	18 04 11.5 -0.7
	baz=192						
WSF	Szhu	1.21	270	eP		Pn	18 04 13.9 +1.3
	baz=270						
WSF				eS		Sb	18 04 28.5 +0.4
	baz=270						
CHN3	Shinhua	1.22	242	eP		Pn	18 04 13.4 +0.6
	baz=243						
NTC	Toucheng	1.23	13	eP		Pg	18 04 12.0 -1.5
	baz=353						
SSD	Sandimen	1.23	223	eP		Pn	18 04 13.4 +0.5
	baz=221						
SSD				eS		Sn	18 04 31.6 +2.3
	baz=221						
EGS		1.24	17	eP		Pb	18 04 13.2 -0.1
	baz=355						
SBCB	Hsinchu	1.24	336	eP		Pn	18 04 14.4 +1.3
	baz=326						
SBCB				eS		Sb	18 04 30.2 +1.0
	baz=326						
CHN8	Yiju	1.25	256	eP		Pn	18 04 14.2 +1.0
	baz=258						
TATO	Taipei	1.32	358	eP		Pg	18 04 13.8 -1.5
	baz=354						
SCLT	Jiali	1.32	249	eP		Pn	18 04 14.5 +0.4
	baz=254						
MASBT	Mashibuluo	1.33	219	eP		Pn	18 04 14.7 +0.5
	baz=219						
SGLT	Jiouru	1.33	226	eP		Pn	18 04 16.7 +2.4
	baz=227						
TIPB	Shuangxi	1.34	11	eP		Pg	18 04 14.2 -1.5
	baz=353						
NCUH	Zhongli	1.35	346	eP		Pb	18 04 15.6 +0.5
	baz=358						
NCU	National Centr	1.35	346	eP		Pb	18 04 16.4 +1.3
	baz=355						
TWB1	Santiao Chiao	1.41	17	eP		Pb	18 04 16.3 +0.2
NWF	Wu-fen Shan	1.43	9	eP		Pn	18 04 16.3 +0.6
	baz=4.0						
WFSB	Wu-fen Shan	1.43	9	eP		Pn	18 04 16.0 +0.4
	baz=357						
WFSB				eS		Sg	18 04 35.2 -0.8
	baz=357						
TWS1	Kuangyinshan	1.45	356	eP		Pg	18 04 17.4 -0.4
	baz=350						
YM04	YM04	1.49	0	eP		Pn	18 04 16.6 0.0
	baz=354						
YM10	YM10	1.50	1	eP		Pn	18 04 17.0 +0.3
	baz=354						
NTST	Danshui	1.51	357	eP		Pn	18 04 17.4 +0.7
	baz=351						
YM11	YM11	1.51	1	eP		Pn	18 04 16.6 -0.2
	baz=354						
JYNG	Yonagunijimaku	1.51	58	P		Pn	18 04 17.0 +0.2
JYNG				eS		Sn	18 04 37.4 +1.0
YM07	YM07	1.52	3	eP		Pn	18 04 16.7 -0.2
	baz=9.0						
YM12	YM12	1.52	1	eP		Pg	18 04 19.0 -0.2
	baz=354						
YM08	YM08	1.53	2	eP		Pn	18 04 16.6 -0.4
	baz=355						
SCZT	Fangliau	1.53	214	eP		Pg	18 04 18.6 -0.8
	baz=211						
SCZT				eS		Sn	18 04 40.6 +3.8
	baz=211						
YOJ	Yonaguni jima	1.57	59	eP		Pn	18 04 17.8 +0.2
	baz=54						
YOJ				eS		Sn	18 04 38.7 +0.9
	baz=54						
YOJ	Yonaguni jima	1.57	59	P		Pn	18 04 18.0 +0.4
YOJ				eS		Sn	18 04 38.2 +0.4
TWY	Chenhua	1.62	2	eP		Pb	18 04 19.6 -0.1
	baz=355						
WDGT	Dungji	1.77	258	eP		Pb	18 04 21.0 -1.2
	baz=260						
PHUB	P'eng-hu	1.81	266	eP		Pb	18 04 21.9 -1.1
	baz=268						
PHUB				eS		Sg	18 04 46.3 -1.8
	baz=268						
PNG	Penghu	1.82	268	eP		Pb	18 04 22.0 -1.1
	baz=270						
TWKBT	Hengchun	1.83	202	eP		Pb	18 04 21.7 -1.6
	baz=189						
VCHM	Qimei	1.98	258	eP		Pb	18 04 24.1 -1.8
	baz=261						
IRIF	Iriomote-Funau	2.12	71	P		Pn	18 04 25.7 +0.6
IRIF				S		Sn	18 04 51.7 +0.4
VWUC	VWUC	2.32	305	eP		Pn	18 04 27.7 -0.2
	baz=307						
JKRS	Kuro-shima	2.34	75	P		Pn	18 04 29.0 +0.9
JKRS				eS		Sn	18 04 57.6 +0.9
JIJ	Ishigaki jima	2.49	73	P		Pn	18 04 29.9 -0.3
JIJ				S		Sn	18 05 00.6 +0.2
JISG	Ishigakijimahi	2.70	69	P		Pn	18 04 32.9 -0.2
JISG				S		Sn	18 05 05.6 -0.1
MATB	Ma-tsu	2.88	330	eP		Pn	18 04 35.9 +0.4
	baz=325						
KNM	Kinmen	2.94	286	eP		Pb	18 04 39.1 -3.1
	baz=287						
QZH	Quanzhou	2.98	296	Pn		Pn	18 04 38.8 +1.9
QZH				Sn		Sn	18 05 13.4 +0.9
QZH				smax	smax		
	comp=N,180nm,1.1s						
QZH				smax	smax		
	comp=E,140nm,1.0s						
KNMB	Chin-men Tao	2.99	286	eP		Pn	18 04 37.7 +0.6
	baz=288						
JTJ	Tarama	3.06	71	P		Pn	18 04 38.2 +0.2
JTJ				S		Sn	18 05 14.3 -0.1
JIRB	Irabujima	3.52	70	P		Pn	18 04 45.2 +0.8
JIRB				eS		Sn	18 05 25.0 -0.9
JIKM	Ikemajima	3.62	69	S		Sn	18 05 27.8 -0.5
KSRS	Korea Array	14.81	20	Pn		P	18 07 24.5 -0.5
	baz=190,slow=11,SNR=3.1						
CMAR	Chiang Mai Arr	21.70	260	P		P	18 08 39.7 -1.2
	comp=E,0.4nm,0.7s,baz=68,slow=11,SNR=2.4						
SONM	Songino Array	26.98	337	P		P	18 09 32.1 +0.6
	comp=E,0.3nm,0.5s,baz=161,slow=9.2,SNR=3.4						
MKAR	Makanchi Array	38.94	316	P		P	18 11 17.2 +1.6
	comp=E,0.8nm,0.9s,baz=94,slow=12,SNR=4.5						
ZALV	Zalesovo Beam	40.86	327	P		P	18 11 34.1 +2.6
	comp=E,0.5nm,0.5s,baz=123,slow=7.3,SNR=3.6						
H11N1	WAKE ISLAND Hy 42.20	86		T		T	18 56 39.8
	baz=283,slow=75,SNR=204						
H11N2	WAKE ISLAND Hy 42.20	86		T		T	18 56 39.3
	baz=283,slow=75,SNR=329						
H11N3	WAKE ISLAND Hy 42.21	86		T		T	18 56 41.0
	baz=283,slow=75,SNR=197						
H11S3	WAKE ISLAND Hy 42.31	88		T		T	18 56 48.9
	baz=284,slow=75,SNR=534						
H11S1	WAKE ISLAND Hy 42.32	88		T		T	18 56 49.4
	baz=284,slow=75,SNR=327						
H11S2	WAKE ISLAND Hy 42.33	88		T		T	18 56 49.4
	baz=284,slow=75,SNR=219						
KURBB	Kurchatov Arra	42.72	320	P		P	18 11 47.4 +0.7
	comp=E,0.3nm,0.6s,baz=111,slow=9.2,SNR=2.9						
WRA	Warramunga Arr	45.09	163	P		P	18 12 05.0 -1.1
	comp=E,1.6nm,1.1s,baz=344,slow=8.6,SNR=2.6						
ASAR	Alice Springs	48.55	165	P		P	18 12 30.3 -2.8
	comp=E,0.5nm,0.9s,baz=345,slow=7.0,SNR=2.8						
ILAR	Eielson Array	69.53	27	P		P	18 15 00.6 +2.4
	comp=E,0.3nm,0.7s,baz=297,slow=8.0,SNR=2.9						

*IDC **18** 18:03:54.5±0.7, 5.′52S×152.′22E, h0km, mb4.2/15, mb1 4.5/16, mb1mx4.2/55, mbtmp4.3/16, ML2.9/1, MS3.2/5, Ms1 3.2/5, ms1mx2.9/49, Error ellipse: s-maj=23.2km s-min=15.3km az=118.0*
*ISCJB **18** 18:03:58.5±0.6, 5.′57S±0.′08×152.′21E±0.′09, h40km, mb4.3/18, MS3.2/3, Error ellipse: s-maj=15.6km s-min=8.4km az=37.7*
*NEIC **18** 18:04:00.3±1.7, 5.′58S×152.′17E, h40km±15km, mb4.8/3, Error ellipse: s-maj=10.8km s-min=10.3km az=123.0*
ISC 18 18:04:00.3±0.7, 5.′6S±0.′1×152.′2E±0.′1, h40km, n26, σ0$80/24, mb4.2/18, MS3.2/3, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	6.31	233	Pn	Pn	18 05 29.9	-1.0
	16nm,0.3s,baz=53,slow=5.3,SNR=55						
PMG				Sn	Sn	18 06 44.2	+2.4
	7.8nm,0.3s,baz=150,slow=20,SNR=4.4						
HNR	Honiara	8.56	117	LR	LR	18 09 34.0	
	comp=Z,73nm,18.3s,baz=268,slow=40						
JAY	Jayapura	11.89	284	LR	LR	18 10 44.5	
	comp=Z,104nm,18.4s,baz=254,slow=35						
GUMO	Guam	20.39	339	LR	LR	18 16 49.9	
	comp=Z,32nm,19.1s,baz=173,slow=38						

DZM Mont Dzumac 21.41 141 P P 18 08 45.8 +0.8
6.1nm,0.9s,baz=349,slow=22,SNR=5.8
DZM LR LR 18 16 30.9
comp=Z,99nm,18.1s,baz=185,slow=35
SIJI Sorong 21.44 282 P **P 18 08 45.2 -0.2**
7.1nm,0.8s,baz=76,slow=9.0,SNR=6.2
WRAB Tennant Creek 22.50 229 *eP* **P 18 08 56.0 -0.8**
15nm,0.6s
WRA Warramunga Arr 22.52 229 P **P 18 08 56.0 -0.8**
12nm,0.6s,baz=53,slow=9.8,SNR=94
WRA PcP **PcP 18 12 50.7 +0.8**
1.0nm,0.8s,baz=47,slow=2.1,SNR=5.0
ASAR Alice Springs 25.21 223 P **P 18 09 22.3 -0.2**
8.6nm,0.5s,baz=58,slow=9.0,SNR=134
STKA Stephens Creek 28.01 200 P **P 18 09 46.5 -1.1**
1.7nm,0.7s,baz=22,slow=13,SNR=4.3
BATI Baumata 28.66 259 LR LR 18 24 35.2
comp=Z,175nm,18.1s,baz=121,slow=43
FITZ Fitzroy Crossi 28.80 242 P **P 18 09 54.6 -0.2**
8.4nm,0.5s,baz=60,slow=7.6,SNR=44
MBWA Marble Bar 35.10 241 *eP* **P 18 10 49.8 -0.3**
25nm,0.7s
CMAR Chiang Mai Arr 57.70 296 P **P 18 13 47.8 +0.4**
1.2nm,0.8s,baz=122,slow=5.9,SNR=5.6
PETK Petropavlovsk- 58.63 4 P **P 18 13 53.5 +0.2**
1.4nm,0.6s,baz=143,slow=5.0,SNR=3.0
SONM Songino Array 66.67 328 P **P 18 14 47.7 +0.5**
1.1nm,0.6s,baz=137,slow=5.0,SNR=6.9
MKAR Makanchi Array 80.53 319 P **P 18 16 07.9 -0.6**
0.6nm,0.5s,baz=102,slow=5.8,SNR=7.0
ZALV Zalesovo Beam 81.47 327 P **P 18 16 12.6 -0.7**
0.9nm,0.4s,baz=111,slow=5.7,SNR=5.2
ILAR Eielson Array 83.08 22 P **P 18 16 21.2 -0.3**
5.3nm,0.7s,baz=249,slow=5.4,SNR=51
KURK Kurchatov 84.02 322 P **P 18 16 26.5 0.0**
KURBB Kurchatov Arra 84.05 322 P **P 18 16 26.5 -0.2**
1.0nm,0.6s,baz=109,slow=4.1,SNR=9.9
BVAR Borovoye Array 89.51 323 P **P 18 16 52.4 -1.0**
1.6nm,0.6s,baz=87,slow=6.3,SNR=15
BRVK Borovoye 89.58 323 *eP* **P 18 16 53.8 +0.1**
3.0nm,0.7s
NVAR Mina Array Bea 93.00 52 P **P 18 17 10.8 +0.6**
0.5nm,0.6s,baz=284,slow=3.6,SNR=3.2
GERES GERESS Array B 124.41 328 PKP **PKPdf 18 22 55.2 -0.1**
0.4nm,0.5s,baz=46,slow=2.8,SNR=2.4
TORD Torodi Ar. Bea 150.00 287 PKPbc **PKPbc 18 23 47.7 +0.1**
2.2nm,0.8s,baz=73,slow=2.7,SNR=11

IDC 18 18:05:39.8±689.0, 22°.16N×52°.07E, h0km, Error ellipse: s-maj=357.8km s-min=154.9km az=76.0, Eastern Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I32KE	**NAIROBI INFRAS**	**27.61**	**215**	*i*		20 55 30.0	
baz=32,slow=320,SNR=1.0							
I48TN	**KESRA INFRASON**	**39.48**	**300**	*i*		22 06 40.0	
baz=96,slow=331,SNR=0.6							
I26DE	**FREYUNG INFRAS**	**40.38**	**321**	*i*		22 13 10.0	
baz=119,slow=321,SNR=0.3							

BJI ***18*** *18:13:51.5, 0°.00N×123°.40E, h155km, mb4.9/38, mB4.9/22*
NEIC ***18*** *18:13:53.0±0.2, 0°.01N×123°.31E, mb4.8/53, Error ellipse: s-maj=5.4km s-min=4.2km az=77.0*
IDC ***18*** *18:13:52.8±0.7, 0°.01N×123°.21E, h164km±6km, mb4.3/35, mb1 4.3/41, mb1mx4.2/62, mbtmp4.7/41, MS3.1/2, Ms1 3.1/2, ms1mx2.7/55, Error ellipse: s-maj=11.2km s-min=7.1km az=77.0*
ISCJB ***18*** *18:13:52.6±0.2, 0°.02S±0°.02×123°.35E±0°.02, h174km±2km, mb4.7/106, Error ellipse: s-maj=3.3km s-min=3.1km az=22.2*
DJA ***18*** *18:13:53.6±0.2, 0°.S±°×12°.3E±°, h143km±3km, M4.8/24, mb5.0/24, mB5.1/10, MLv5.1/18, Mw(mB)4.5/10*
MOS ***18*** *18:13:54.7±1.0, 0°.00S×123°.24E, h199km, mb4.8/31, Error ellipse: s-maj=10.8km s-min=5.8km az=108.6*
ISC 18 18:13:53.1±0.5, 0°.05S±0°.03×123°.32E±0°.04, h165km±4km, h166km:pP-P, n305, σ1945/344, mb4.7/105, 9C-2D, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.91**	**47**	P	**Pn**	**18 14 19.7**	**+1.0**
KMSI				S	**Sn**	**18 14 38.9**	**+0.6**
LUWI	**Luwuk**	**1.12**	**209**	P	**Pn**	**18 14 20.1**	**-0.3**
LUWI				S	**Sn**	**18 14 39.2**	**-2.2**
LUWI	**Luwuk**	**1.12**	**209**	*e*Pn	**Pn**	**18 14 19.9**	**-0.5**
MRSI	**Marisa**	**1.47**	**291**	P	**Pn**	**18 14 23.0**	**-0.6**
MRSI				S	**Sn**	**18 14 44.9**	**-2.2**
APSI	**Ampana**	**1.87**	**243**	P	**Pn**	**18 14 28.0**	**+0.2**
APSI				S	**Sn**	**18 14 53.1**	**-1.5**
SANI	**Sanana**	**3.33**	**127**	P	**Pn**	**18 14 43.7**	**-1.5**
SANI				S	**Sn**	**18 15 20.7**	**-5.1**
MPSI	**Mapaga**	**3.44**	**276**	P	**Pn**	**18 14 47.2**	**+0.6**
MPSI				S	**Sn**	**18 15 27.3**	**-1.0**
PCI	**Palu**	**3.58**	**256**	P	**Pn**	**18 14 49.3**	**+0.8**
PCI				S	**Sn**	**18 15 28.7**	**-2.8**
KDI	**Kendari**	**3.94**	**190**	P	**Pn**	**18 14 52.6**	**-0.5**
TNTI	**Ternate**	**4.13**	**79**	*e*Pn	**Pn**	**18 14 55.1**	**-0.5**
LBMI	**Labuha**	**4.22**	**98**	P	**Pn**	**18 14 55.8**	**-0.9**
LBMI				S	**Sn**	**18 15 44.0**	**-2.3**
TTSI	**Tana Toraja**	**4.59**	**230**	P	**Pn**	**18 15 02.6**	**+1.1**
TTSI				S	**Sn**	**18 15 54.4**	**-0.5**
SPSI	**Sidrap Palu**	**5.26**	**222**	P	**Pn**	**18 15 11.6**	**+1.3**
SPSI				S	**Sn**	**18 16 11.4**	**+0.7**
SGKI	**Sangatta, Kali**	**5.73**	**265**	P	**Pn**	**18 15 16.8**	**+0.3**
SGKI				S	**Sn**	**18 16 21.9**	**0.0**
AAI	**Ambon**	**6.07**	**127**	P	**Pn**	**18 15 22.5**	**+1.6**
AAI				S	**Sn**	**18 16 29.0**	**-0.8**
SMKI	**Samarinda**	**6.12**	**266**	P	**Pn**	**18 15 22.8**	**+1.2**
BKSI	**Bulukumba**	**6.13**	**211**	P	**Pn**	**18 15 23.2**	**+1.5**
MSAI	**Masohi**	**6.49**	**120**	P	**Pn**	**18 15 25.1**	**-1.5**
MSAI				S	**Sn**	**18 16 39.6**	**-0.4**
BKB	**Balikpapan**	**6.53**	**259**	P	**Pn**	**18 15 27.8**	**+0.8**
SKMP	**Bagumbayan, Su**	**6.64**	**11**	*e*P	**Pn**	**18 15 29.3**	**+0.8**
SKMP				*e*S	**Sn**	**18 16 44.8**	**+1.2**
MYLDM	**Lahad Datu**	**7.08**	**317**	*e*Pn	**Pn**	**18 15 37.3**	**+2.9**
DAV	**Davao City (W)**	**7.43**	**18**	LR	LR	18 18 52.8	
comp=Z,200nm,20.3s,baz=210,slow=40							
KBKI	**Kotabaru**	**7.84**	**246**	P	**Pn**	**18 15 45.4**	**+1.0**
PAGZ	**Pagadian**	**7.85**	**0**	*e*P	**Pn**	**18 15 46.7**	**+2.2**
SIJI	**Sorong**	**7.99**	**96**	P	**Pn**	**18 15 47.1**	**+0.7**
13nm,0.3s,baz=308,slow=12,SNR=59							
SIJI				S	**Sn**	**18 17 17.4**	**+1.6**
1.1nm,0.3s,baz=218,slow=19,SNR=3.3							
MTKI	**Muara Teweh, K**	**8.47**	**264**	P	**Pn**	**18 15 54.2**	**+1.5**
KKM	**Kota Kinabalu**	**9.32**	**311**	*e*Pn	**Pn**	**18 16 07.2**	**+3.1**
FAKI	**Fak Fak**	**9.37**	**108**	P	**Pn**	**18 16 03.6**	**-1.1**
FAKI				S	**Sn**	**18 17 43.3**	**-5.7**
FAKI	**Fak Fak**	**9.37**	**108**	*e*Pn	**Pn**	**18 16 04.1**	**-0.6**
FAKI				*e*Sn	**Sn**	**18 17 45.1**	**-3.9**
SOEI	**Soe**	**9.69**	**174**	P	**Pn**	**18 16 11.9**	**+3.0**
BATI	**Baumata**	**10.09**	**178**	P	**Pn**	**18 16 16.6**	**+2.3**
1.3nm,0.3s,baz=280,slow=6.1,SNR=2.7							
PLAI	**Plampang**	**10.32**	**212**	P	**Pn**	**18 16 19.0**	**+1.9**
TWSI	**Taliwang, Sumb**	**10.75**	**216**	P	**Pn**	**18 16 25.0**	**+2.2**
RKPI	**Ransiki, Papua**	**10.96**	**98**	P	P	18 16 39.0	+5.7
RCP	**Roxas**	**11.55**	**357**	*e*P	**P**	**18 16 39.0**	**-1.0**
DNP	**Denpasar**	**11.77**	**223**	P	**P**	**18 16 47.0**	**+4.5**
STKI	**Sintang**	**11.84**	**271**	P	**Pn**	**18 16 39.4**	**+2.4**
IGBI	**Denpasar**	**11.92**	**223**	P	**P**	**18 16 48.2**	**+4.0**
PBKI	**Pangkalan Bun**	**11.94**	**257**	P	**P**	**18 16 42.4**	**-2.0**
JAGI	**Jajag, Banyuwa**	**12.38**	**227**	P	**Pn**	**18 16 46.2**	**+2.2**
JAGI	**Jajag, Banyuwa**	**12.38**	**227**	*e*Pn	**Pn**	**18 16 46.3**	**+2.2**
GMJI	**Gumukmas**	**12.79**	**230**	P	**Pn**	**18 16 49.8**	**+0.6**
BAKI	**Biak**	**12.84**	**95**	P	Pn	18 16 44.6	-5.3
KSM	**Kuching**	**13.10**	**277**	*e*Pn	**P**	**18 16 56.4**	**-0.8**
PALU	**Palau**	**13.33**	**56**	P	**Pn**	**18 16 56.5**	**+0.3**
baz=13,SNR=9.6							
NGJI	**Ngawi**	**13.88**	**238**	P	**P**	**18 17 05.9**	**0.0**
PWJI	**Pagerwojo**	**13.94**	**235**	P	**P**	**18 17 05.4**	**-1.2**
TGY	**Tagaytay City**	**14.26**	**351**	P	**Pn**	**18 17 08.6**	**+0.7**
31nm,0.3s,baz=183,slow=8.0,SNR=9.9							
PCJI	**Pacitan**	**14.55**	**236**	P	**P**	**18 17 13.4**	**0.0**
WOJI	**Wonogiri, Jawa**	**14.58**	**238**	P	**Pn**	**18 17 12.3**	**+0.6**
SMRI	**Semarang**	**14.60**	**241**	P	**P**	**18 17 16.1**	**+2.1**
MTN	**Manton Dam**	**14.89**	**149**	P	**P**	**18 17 17.1**	**0.0**
baz=15,SNR=6.3							
MTN	**Manton Dam**	**14.89**	**149**	*e*Pn	**P**	**18 17 17.8**	**+0.7**
KDU	**Kakadu**	**15.49**	**144**	P	**P**	**18 17 24.5**	**+0.7**
baz=16,SNR=8.8							

BALP Baler 15.79 354 *eP* **P 18 17 28.9 +1.8**
KPJI Karang Pucung 16.07 243 P **Pn 18 17 29.7 -0.3**
KNRA Kununurra 16.43 161 P **Pn 18 17 36.1 +1.7**
baz=16,SNR=9.2
LEM Lembang 17.05 246 P **P 18 17 41.5 +0.3**
5.5nm,0.3s,baz=127,slow=9.5,SNR=7.2
CISI Cisompet, Garu 17.16 244 *eP* **P 18 17 42.2 -0.1**
90nm,0.7s
JAY Jayapura 17.55 98 P **Pn 18 17 48.0 0.0**
0.4nm,0.3s,baz=198,slow=20,SNR=3.4
JAY Jayapura 17.55 98 P **Pn 18 17 48.0 0.0**
APYP Conner 17.92 354 *eP* **Pn 18 17 51.8 -0.3**
FITZ Fitzroy Crossi 18.08 173 P **Pn 18 17 53.5 -0.6**
6.1nm,0.3s,baz=11,slow=9.7,SNR=154
FITZ Fitzroy Crossi 18.08 173 P **Pn 18 17 53.5 -0.6**
baz=18,SNR=45
FITZ Fitzroy Crossi 18.08 173 *eP* **Pn 18 17 53.4 -0.6**
50nm,0.6s
MYKOM Kota Tinggi 19.55 275 *eP* **Pn 18 18 10.0 -1.4**
33nm,1.0s
MNAI Manna 20.79 258 *eP* **P 18 18 21.9 +0.4**
MBWA Marble Bar 21.27 189 *eP* **P 18 18 26.5 -0.1**
25nm,0.8s
WRAB Tennant Creek 22.52 152 *eP* **P 18 18 39.7 +0.5**
25nm,1.0s
WRAB Tennant Creek 22.52 152 *c i*P **P 18 18 39.0 -0.3**
WRAB pmax pmax
comp=Z,6.0nm,0.7s
WRA Warramunga Arr 22.52 152 P **P 18 18 39.2 -0.1**
comp=Z,9.7nm,0.6s,baz=329,slow=11,SNR=186
WRA pP **pP 18 19 08.5 -0.8**
comp=Z,16nm,0.7s,baz=330,slow=11,SNR=11
WRA ScP **ScP 18 25 48.6 -0.9**
comp=Z,2.4nm,0.7s,baz=328,slow=2.5,SNR=11
WRA Warramunga Arr 22.52 152 *i* P **P 18 18 39.2 -0.1**
WRA pmax pmax
comp=Z,17nm,0.5s
WB2 Warramunga Arr 22.53 152 *eP* **P 18 18 38.7 -0.6**
IPM Ipoh 22.72 282 *eP* **P 18 18 42.8 +1.6**
comp=Z,28nm,0.6s
KULM Kulim 23.25 284 *eP* **P 18 18 47.1 +1.1**
TPUB Ta-pu 23.36 354 *eP* **P 18 18 48.3 +1.4**
comp=Z,37nm,0.8s
YULB Yu-li 23.39 355 *eP* **P 18 18 46.5 -0.7**
comp=Z,32nm,1.0s
SSLB Suanglung 23.81 355 *eP* **P 18 18 49.7 -1.3**
comp=Z,42nm,0.9s
GIRL Giralia 24.13 201 P **P 18 18 55.1 +1.2**
baz=24,SNR=13
PSI Prapat 24.55 277 P **P 18 18 57.5 -0.4**
comp=Z,2.8nm,0.3s,baz=190,slow=1.3,SNR=4.4
YHNB Yeheng 24.65 356 *eP* **P 18 18 59.3 +0.7**
comp=Z,31nm,0.9s
TATO Taipei 24.94 356 *eP* **P 18 19 01.1 -0.2**
WRKA Warakurna 25.30 169 P **P 18 19 05.3 +0.7**
baz=25,SNR=34
AS31 Alice Springs 25.63 157 *eP* **P 18 19 08.6 +1.1**
comp=Z,3.2nm,0.6s
ASAR Alice Springs 25.63 157 P **P 18 19 08.2 +0.7**
comp=Z,3.6nm,0.7s,baz=350,slow=14,SNR=70
ASAR pP **pP 18 19 40.8 -0.8**
comp=Z,7.3nm,0.9s,baz=324,slow=7.8,SNR=7.1
ASAR ScP **ScP 18 25 57.8 -0.3**
comp=Z,1.5nm,0.8s,baz=339,slow=2.8,SNR=8.8
AS01 Alice Springs 25.64 157 *eP* **P 18 19 08.3 +0.7**
AS01 *e*pP **pP 18 19 40.0 -1.8**
GSI Gunungsitoli 25.77 273 *eP* **P 18 19 09.6 +0.7**
QIS Mount Isa 25.87 143 P **P 18 19 11.0 +1.3**
baz=26,SNR=9.6
CHAI Chaiyaphum 26.36 308 P **P 18 19 16.5 +2.4**
comp=Z,14nm,0.7s
MEEK Meekatharra 26.82 189 P **P 18 19 18.0 -0.2**
baz=27,SNR=17
NANT Nan 29.05 311 P **P 18 19 40.9 +2.8**
comp=Z,12nm,0.7s,comp=Z,87nm
MORW Morawa 29.68 193 P **P 18 19 43.6 +0.1**
baz=30,SNR=11
LAMP Lampang 29.70 310 P **P 18 19 46.9 +3.1**
comp=Z,5.6nm,0.7s
CM01 Chiang Mai Arr 30.16 309 *eP* **P 18 19 49.3 +1.4**
CM01 *e*PcP **PcP 18 22 46.0 +0.8**
CMAR Chiang Mai Arr 30.20 309 P **P 18 19 48.1 -0.1**
comp=Z,7.5nm,0.7s,baz=135,slow=6.9,SNR=34
CMAR PcP **PcP 18 22 46.4 +1.1**
comp=Z,2.3nm,0.7s,baz=173,slow=2.1,SNR=9.3
CMAR ScP **ScP 18 26 11.5 -0.7**
comp=Z,1.2nm,0.8s,baz=156,slow=2.5,SNR=7.0
CHTO Chiang Mai 30.40 309 P **P 18 19 52.7 +2.7**
comp=Z,120nm,0.9s
CHTO Chiang Mai 30.40 309 *eP* **P 18 19 51.4 +1.4**
comp=Z,18nm,0.8s
CHTO Chiang Mai 30.40 309 *eP* **P 18 19 51.4 +1.4**
CHTO pmax pmax
comp=Z,18nm,0.8s
FORT Forrest 30.89 172 P **P 18 19 54.7 +0.6**
baz=31,SNR=54
FORT Forrest 30.89 172 *eP* **P 18 19 54.7 +0.6**
comp=Z,75nm,0.6s
BLDU Ballidu 31.04 191 P **P 18 19 55.3 -0.1**
baz=31,SNR=41
KMBL Kambalda 31.17 182 P **P 18 19 56.8 +0.2**
baz=31,SNR=7.0
KLBR Kellerberrin 31.81 189 P **P 18 20 02.3 +0.1**
baz=32,SNR=24
KMI Kunming 31.98 323 P **P 18 20 06.8 +2.8**
KMI pmax pmax
comp=Z,10.0nm,0.7s
MUN Mundaring 32.46 191 P **P 18 20 08.0 +0.1**
baz=33,SNR=3.9
CBIJ Chichi jima 32.52 32 *eP* **P 18 20 08.3 -0.1**
comp=Z,140nm,0.5s
JCJ Chichijima 32.52 32 P **P 18 20 07.9 -0.6**
comp=Z,129nm,0.4s,baz=248,slow=20,SNR=8.8
ENH Enshi 32.90 338 *eP* **P 18 20 13.6 +1.8**
comp=Z,37nm,1.0s
ENH *e*S **S 18 25 21.4 +4.0**
NWAO Narrogin (SRO) 33.20 189 P **P 18 20 14.3 +0.1**
comp=Z,13nm,0.4s,baz=256,slow=8.0,SNR=33
NWAO Narrogin (SRO) 33.20 189 P **P 18 20 14.6 +0.3**
baz=33,SNR=22
JNU Nakatsue 33.76 11 P **P 18 20 19.3 +0.2**
comp=Z,8.6nm,0.8s,baz=225,slow=3.0,SNR=5.2
BBOO Buckleboo 34.73 161 P **P 18 20 28.2 +0.7**
baz=35,SNR=8.5
RKGY Rocky Gully 34.89 189 P **P 18 20 30.3 +1.5**
baz=35,SNR=27
PATS Pohnpei 35.58 78 P **P 18 20 33.4 -1.6**
baz=36,SNR=3.1
CD2 Chengdu 35.96 331 P **P 18 20 39.4 +1.3**
CD2 pmax pmax
comp=Z,70nm,0.9s
STKA Stephens Creek 36.07 153 P **P 18 20 40.2 +1.3**
comp=Z,9.2nm,0.5s,baz=328,slow=8.9,SNR=36
STKA ScP **ScP 18 26 32.5 0.0**
comp=Z,4.1nm,0.8s,baz=333,slow=10,SNR=5.4
STKA Stephens Creek 36.07 153 P **P 18 20 39.9 +1.0**
baz=36,SNR=8.0
STKA Stephens Creek 36.07 153 *eP* **P 18 20 40.2 +1.3**
comp=Z,2.6nm,0.8s
STKA ScP **ScP 18 26 32.5 0.0**
STKA Stephens Creek 36.07 153 *eP* **P 18 20 40.2 +1.3**
STKA pmax pmax
comp=Z,3.0nm,0.8s
HTT Hallett 36.30 158 P **P 18 20 42.5 +1.5**
baz=36,SNR=23
JHJ Hachijo jima 2 36.46 24 P **P 18 20 41.2 -1.0**
comp=Z,71nm,0.8s,baz=60,slow=20,SNR=3.3
XAN Xi'an 36.50 340 P **P 18 20 43.0 +0.4**
XAN sP sP 18 21 33.3 -3.6
XAN pmax pmax
comp=Z,25nm,1.1s
INU Inuyama 37.47 19 *eP* **P 18 20 50.5 -0.2**
comp=Z,35nm,1.0s
KSAR Wonju Array Be 37.55 6 P **P 18 20 51.5 +0.3**
KSAR PcP **PcP 18 23 06.0 +0.2**
KSAR ScP **ScP 18 26 37.0 -0.8**
KSAR Wonju Array Be 37.55 6 P **P 18 20 51.6 +0.3**
KSAR 18 23 06.1
KSRS Korea Array 37.56 6 P **P 18 20 51.5 +0.1**
comp=Z,4.7nm,0.8s,baz=184,slow=9.9,SNR=20
KSRS PcP **PcP 18 23 06.0 +0.2**
comp=Z,1.2nm,0.5s,baz=180,slow=2.6,SNR=4.8
KSRS ScP **ScP 18 26 37.0 -0.9**
comp=Z,0.2nm,0.3s,baz=211,slow=4.1,SNR=5.1
KS01 Wonju Array Si 37.58 6 *eP* **P 18 20 51.4 -0.2**
CMSA Cobar Meteorol 37.81 148 P **P 18 20 55.5 +1.9**
baz=38,SNR=22

MAJO Matsushiro 38.95 19 *eP* **P 18 21 02.2 -0.9**
comp=Z,30nm,0.8s
MAJO Matsushiro 38.95 19 *c i*P **P 18 21 01.9 -1.2**
MAJO pmax pmax
comp=Z,27nm,0.9s
MAT Matsushiro 38.95 19 P **P 18 21 02.1 -1.0**
MJAR Matsushiro Arr 38.95 19 P **P 18 21 02.0 -1.0**
comp=Z,22nm,0.8s,baz=198,slow=9.8,SNR=93
MJAR ScP **ScP 18 26 42.4 -0.8**
comp=Z,1.1nm,0.6s,baz=204,slow=5.1,SNR=4.2
MJB9 Matsu-Tunnel 38.95 19 *eP* **P 18 21 02.5 -0.6**
comp=Z,30nm,0.8s
SHL Shillong 39.62 312 *eP* **P 18 21 09.0 0.0**
SHL Shillong 39.62 312 *eP* **P 18 21 09.2 +0.2**
comp=Z,25nm,1.0s
SHL Shillong 39.62 312 *eP* **P 18 21 09.2 +0.2**
SHL pmax pmax
comp=Z,25nm,1.0s
ARPS Mount Arapiles 40.37 157 P **P 18 21 16.6 +1.8**
baz=40,SNR=13
ARMA Armidale 40.45 141 P **P 18 21 17.0 +1.3**
baz=40,SNR=7.4
LSA Lhasa 42.60 317 *eP* **P 18 21 35.7 +2.0**
comp=Z,18nm,0.6s
LSA Lhasa 42.60 317 *eP* **P 18 21 35.7 +2.0**
LSA pmax pmax
comp=Z,18nm,0.6s
MSHR Mys Shultsa 43.02 8 *c*eP **P 18 21 36.4 +0.2**
ODAN Odare 43.70 311 *eP* **P 18 21 43.7 +1.5**
comp=Z,65nm,0.7s
TAPN Taplejung 43.72 311 *eP* **P 18 21 43.9 +1.4**
comp=Z,28nm,0.4s
RAMN Ramite 44.35 310 *eP* **P 18 21 49.1 +1.7**
comp=Z,128nm,0.6s
USRK Ussuriysk Ar. 44.73 9 P **P 18 21 48.7 -1.1**
comp=Z,4.6nm,0.4s,baz=184,slow=6.9,SNR=17
GTA Gaotai 44.78 334 ||P **P 18 21 51.1 +0.6**
GTA pmax pmax
comp=Z,27nm,0.6s
MDJ Mudanjiang 44.82 6 P **P 18 21 47.5 -3.1**
MDJ pmax pmax
comp=Z,27nm,0.8s
MDJ pmax pmax
comp=Z,130nm,3.3s
MDJ Mudanjiang 44.82 6 *eP* **P 18 21 50.7 +0.1**
comp=Z,17nm,0.8s
JIRN Jiri 45.03 311 *eP* **P 18 21 54.2 +1.3**
comp=Z,129nm,0.5s
GUN Gumba 45.39 311 *eP* **P 18 21 57.0 +1.2**
comp=Z,114nm,0.4s
PKIN Phulchoki 45.59 310 *eP* **P 18 21 58.0 +0.8**
comp=Z,32nm,0.5s
KKN Kakani 45.78 310 *eP* **P 18 21 59.6 +0.9**
comp=Z,43nm,0.5s
DMN Daman 45.83 310 *eP* **P 18 22 00.3 +1.2**
comp=Z,60nm,0.7s
GKN Gorkha 46.38 310 *eP* **P 18 22 04.3 +1.0**
comp=Z,69nm,0.4s
TEY Ternei 46.42 13 *eP* **P 18 22 03.0 0.0**
KOLN Koldanda 47.06 309 *eP* **P 18 22 09.9 +1.2**
comp=Z,148nm,0.7s
ASAJ Asahikawa 47.22 19 P **P 18 22 09.8 +0.5**
comp=Z,25nm,0.7s,baz=229,slow=11,SNR=37
ASAJ Asahikawa 47.22 19 *eP* **P 18 22 09.3 +0.1**
comp=Z,34nm,0.9s
DANN Dangsing 47.23 310 *eP* **P 18 22 10.9 +0.9**
comp=Z,213nm,0.7s
DZM Mont Dzumac 47.37 120 P **P 18 22 12.7 +1.8**
comp=Z,2.7nm,0.8s,baz=270,slow=12,SNR=4.0
PYUN Piuthan 47.70 309 *eP* **P 18 22 14.8 +1.2**
comp=Z,262nm,0.8s
KLR Kul'dur 49.63 7 P **P 18 22 26.5 -1.2**
comp=Z,0.4nm,0.6s,baz=206,slow=4.8,SNR=14
ULN Ulaanbaatar 49.78 346 *eP* **P 18 22 29.1 0.0**
comp=Z,14nm,0.8s
ULN Ulaanbaatar 49.78 346 *c e*P **P 18 22 28.6 -0.4**
ULN pmax pmax
comp=Z,10.0nm,0.8s
YSS Yuzh-Sakhalins 49.81 17 *eP* **P 18 22 28.9 -0.1**
comp=Z,36nm,1.3s
YSS Yuzh-Sakhalins 49.81 17 *eP* **P 18 22 28.9 -0.1**
YSS pmax pmax
comp=Z,36nm,1.3s
SONM Songino Array 49.92 345 P **P 18 22 29.9 -0.1**
comp=Z,15nm,0.7s,baz=161,slow=8.3,SNR=74
SONM PcP **PcP 18 23 47.3 -0.6**
comp=Z,3.0nm,0.6s,baz=160,slow=4.2,SNR=4.8
SONA1 Songino Array 49.92 345 *eP* **P 18 22 29.6 -0.5**
GRNR Gornyy 51.85 11 *eP* **P 18 22 45.0 +0.8**
GRNR pmax pmax
comp=Z,52nm,1.0s
ZAK Zakamensk 53.08 344 *eP* **P 18 22 52.2 -1.2**
ZAK *e* 18 23 58.4
ZAK pmax pmax
comp=Z,4.0nm,0.9s
WMQ Urumqi 54.00 329 P **P 18 23 02.1 +1.9**
WMQ pP pP 18 23 37.9 -0.2
WMQ sP sP 18 23 55.3 -1.0
WMQ pmax pmax
comp=Z,32nm,1.1s
WMQ pmax pmax
comp=Z,240nm,5.7s
WMQ LR LR
comp=Z,120nm,19.5s
WMQ LR LR
comp=Z,77nm,19.5s
WMQ LR LR
comp=Z,71nm,17.9s
TLY Talaya 54.16 345 *eP* **P 18 23 01.9 +0.7**
comp=Z,9.2nm,0.9s
TLY Talaya 54.16 345 *eP* **P 18 23 01.9 +0.7**
TLY pmax pmax
comp=Z,9.0nm,0.9s
MOY Mondy 54.87 343 *eP* **P 18 23 06.4 0.0**
MOY pmax pmax
comp=Z,14nm,1.3s
HVS Khovu-Aksy 56.84 338 *i* P **P 18 23 20.0 -0.4**
HVS pmax pmax
comp=Z,12nm,0.7s
NIL Nilore 57.66 311 *eP* **P 18 23 26.7 +0.3**
comp=Z,9.7nm,0.8s
NIL Nilore 57.66 311 *eP* **P 18 23 26.7 +0.3**
NIL pmax pmax
comp=Z,10.0nm,0.8s
KSH Kashi 58.43 318 P **P 18 23 32.3 +0.5**
KSH pP pP 18 24 12.3 +2.1
KSH PP **PP 18 25 44.3 +1.3**
KSH S **S 18 31 18.1 -3.9**
KSH sS sS 18 32 30.1 +1.4
KSH pmax pmax
comp=Z,12nm,0.7s
KSH pmax pmax
comp=Z,240nm,5.1s
KSH LR LR
comp=Z,300nm,5.6s
KSH LR LR
comp=Z,270nm,5.0s
KSH LR LR
comp=Z,500nm,5.1s
PRZ Przheval'sk 58.45 322 *eP* **P 18 23 33.1 +1.1**
comp=Z,11nm,0.6s
PRZ Przheval'sk 58.45 322 *eP* **P 18 23 33.1 +1.1**
PRZ pmax pmax
comp=Z,11nm,0.6s
MK01 Makanchi Array 58.80 328 *eP* **P 18 23 33.5 -0.6**
MK31 Makanchi Array 58.82 328 *eP* **P 18 23 33.8 -0.4**
MK31 Makanchi Array 58.82 328 *eP* **P 18 23 33.8 -0.4**
MKAR Makanchi Array 58.82 328 P **P 18 23 33.8 -0.4**
comp=Z,5.4nm,0.5s,baz=124,slow=8.6,SNR=88
MKAR pP **pP 18 24 11.8 -1.0**
comp=Z,3.5nm,1.0s,baz=118,slow=9.4,SNR=2.1
MKAR PcP **PcP 18 24 21.2 -0.8**
comp=Z,4.0nm,0.5s,baz=162,slow=3.0,SNR=19
MKAR ScP **ScP 18 28 04.7 -2.2**
comp=Z,1.0nm,0.8s,baz=139,slow=4.5,SNR=4.9
MKAR Makanchi Array 58.82 328 *eP* **P 18 23 33.8 -0.4**
comp=Z,42nm,0.4s
MKAR pP **pP 18 24 11.8 -1.0**
MKAR PcP **PcP 18 24 21.2 -0.8**
MKAR ScP **ScP 18 28 04.7 -2.2**
MAKZ Makanchi 59.00 328 *eP* **P 18 23 34.7 -0.7**
comp=Z,5.0nm,0.9s
MAKZ *e*pP **pP 18 24 14.3 +0.4**
MAKZ *e*PcP **PcP 18 24 21.7 -1.0**
MAKZ Makanchi 59.00 328 *eP* **P 18 23 34.7 -0.7**
MAKZ *e* 18 24 21.7

MAKZ pmax pmax
comp=Z,5.0nm,0.9s
NRN Naryn 59.39 320 *e*P **P 18 23 38.3 -0.3**
comp=Z,2.8nm,0.6s
NRN Naryn 59.39 320 *e*P **P 18 23 38.3 -0.3**
NRN pmax pmax
comp=Z,3.0nm,0.6s
KZA Kyzart 60.20 320 P **P 18 23 44.7 +0.4**
SNR=6.4
PETK Petropavlovsk- 60.21 23 P **P 18 23 44.5 +0.9**
comp=Z,9.9nm,0.5s,baz=197,slow=3.6,SNR=22
TKM2 Tokmak 2 60.42 321 P **P 18 23 45.3 -0.2**
SNR=10.0
KBL Kabul 61.22 310 *e*P **P 18 23 51.8 +0.8**
comp=Z,15nm,0.7s
KBL Kabul 61.22 310 *e*P **P 18 23 51.8 +0.8**
KBL pmax pmax
comp=Z,15nm,0.7s
AML Almayashu 61.23 320 P **P 18 23 51.6 +0.4**
SNR=6.4
USP Ospenovka 61.29 321 P **P 18 23 51.0 -0.2**
SNR=7.6
EKS2 Erkin-Say 61.44 320 P **P 18 23 52.4 +0.2**
SNR=7.0
YAK Yakutsk 62.11 3 *e*P **P 18 23 55.5 -0.7**
comp=Z,78nm,0.8s
YAK Yakutsk 62.11 3 *e*P **P 18 23 54.8 -1.3**
YAK *e* 18 24 33.8
YAK *e* 18 26 10.0
YAK *e*PPP PPP 18 27 41.9
YAK *e*S **S 18 32 08.6 +0.8**
YAK *e*SS **SS 18 36 18.5 +4.7**
YAK pmax pmax
comp=Z,58nm,0.9s
YAK pmax pmax
comp=N,10.0nm,1.0s
YAK pmax pmax
comp=E,3.0nm,1.1s
YAK pmax pmax
comp=Z,29nm,3.2s
YAK pmax pmax
comp=N,19nm,3.0s
YAK pmax pmax
comp=E,44nm,3.5s
YAK smax smax
comp=N,14nm,2.5s
YAK smax smax
comp=E,27nm,2.8s
ZAA0 Zalesovo Array 62.49 335 *e*P **P 18 23 57.4 -1.4**
comp=E,3.4nm,0.8s
ZALV Zalesovo Beam 62.49 335 P **P 18 23 57.0 -1.9**
comp=E,2.2nm,0.4s,baz=125,slow=4.9,SNR=14
ZALV Zalesovo Beam 62.49 335 *e*P **P 18 23 56.9 -1.9**
ZALV Zalesovo Beam 62.49 335 *e*P **P 18 23 56.9 -1.9**
KURBB Kurchatov Arra 63.17 330 P **P 18 24 02.4 -0.9**
comp=E,5.3nm,0.7s,baz=134,slow=6.0,SNR=62
KURK Kurchatov 63.18 330 *e*P **P 18 24 02.5 -0.9**
comp=E,15nm,0.8s
KURK Kurchatov 63.18 330 *e*P **P 18 24 02.5 -0.9**
KURK pmax pmax
comp=Z,15nm,0.8s
MA2 Magadan 63.20 15 *e*P **P 18 24 04.4 +0.9**
comp=Z,37nm,1.0s
MA2 Magadan 63.20 15 *e*P **P 18 24 04.4 +0.9**
MA2 pmax pmax
comp=Z,37nm,1.0s
KK31 Karatay Array 63.76 319 *e*P **P 18 24 07.8 +0.3**
KK31 Karatay Array 63.76 319 *e*P **P 18 24 07.8 +0.3**
KKAR Karatay Array 63.76 319 *e*P **P 18 24 07.8 +0.3**
KKAR Karatay Array 63.76 319 *e*P **P 18 24 07.8 +0.3**
NVS Novosibirsk 63.78 335 *e*P **P 18 24 04.9 -2.4**
SEY Seymchan 66.48 14 *c e*P **P 18 24 25.1 +0.5**
CASY Casey 66.71 186 *e*P **P 18 24 26.7 +0.8**
comp=Z,6.6nm,0.8s
WSAR Wadi Sarin 66.86 295 P **P 18 24 26.9 -1.0**
comp=Z,4.2nm,0.6s,baz=128,slow=5.8,SNR=6.3
SMY Shemya 67.43 31 *e*P **P 18 24 32.2 +1.5**
comp=Z,23nm,0.6s
SMY Shemya 67.43 31 *e*P **P 18 24 32.2 +1.5**
SMY pmax pmax
comp=Z,23nm,0.6s
BVAR Borovoye Array 68.69 329 P **P 18 24 37.2 -1.4**
comp=Z,1.1nm,0.3s,baz=152,slow=11,SNR=9.9
BRVK Borovoye 68.76 329 *i*P **P 18 24 38.6 -0.5**
BRVK pmax pmax
comp=Z,4.0nm,0.9s
TIXI Tiksi 71.67 2 *e*P **P 18 24 53.5 -2.9**
TIXI Tiksi 71.67 2 *c e*P **P 18 24 55.0 -1.4**
TIXI pmax pmax
comp=Z,22nm,1.0s
NRIK Noril'sk 73.31 347 P **P 18 25 05.5 -0.6**
comp=Z,12nm,0.6s,baz=131,slow=6.2,SNR=6.9
BILL Bilibino 74.07 15 *e*P **P 18 25 10.1 -0.5**
comp=Z,18nm,1.8s
BILL Bilibino 74.07 15⇑ *e*P **P 18 25 09.7 -0.9**
BILL *e* 18 25 25.5
BILL *e* 18 27 58.6
BILL *e*S S 18 35 06.1 +37
BILL pmax pmax
comp=Z,3.0nm,1.3s
AKTO Aktyubinsk 74.54 323 P **P 18 25 12.8 -0.9**
comp=Z,4.4nm,0.6s,baz=89,slow=10,SNR=18
SVE Sverdlovsk 75.43 330 *e*P **P 18 25 17.4 -1.2**
SVE pmax pmax
comp=Z,11nm,0.9s
ARU Arti 76.34 329 *e*P **P 18 25 21.9 -1.9**
comp=Z,7.4nm,0.9s
ARU Arti 76.34 329 *c i*P **P 18 25 21.8 -1.9**
ARU 18 25 29.9
ARU 18 28 12.7
ARU S **S 18 34 55.0 +0.1**
ARU SS **SS 18 39 48.0 -4.7**
ARU pmax pmax
comp=Z,8.0nm,1.0s
RAYN Ar Rayn 78.85 294 *e*P **P 18 25 38.6 +0.2**
comp=Z,3.0nm,0.8s
MAW Mawson 79.06 200 P **P 18 25 37.3 -1.3**
comp=Z,3.2nm,0.6s,baz=54,slow=19,SNR=3.7
VNDA Vanda 80.15 172 P **P 18 25 44.9 +0.5**
comp=Z,2.1nm,0.7s,baz=299,slow=5.9,SNR=11
VNDA Vanda 80.15 172 *e*P **P 18 25 45.6 +1.3**
comp=Z,2.2nm,0.7s
VNDA Vanda 80.15 172 *e*P **P 18 25 45.6 +1.3**
VNDA pmax pmax
comp=Z,2.0nm,0.7s
FALS False Pass 80.46 34 *e*P **P 18 25 47.2 +0.8**
comp=Z,93nm,0.7s
PRGR Permogore 84.20 332 *e*P **P 18 26 02.5 -3.2**
PRGR pmax pmax
comp=Z,17nm,0.7s
VORD Divnogorie 86.27 321 *e*P **P 18 26 14.4 -1.7**
VORD pmax pmax
comp=Z,20nm,0.8s
VSR Storozhevoye 86.36 321 *e*P **P 18 26 14.7 -1.9**
VSR pmax pmax
comp=Z,20nm,0.8s
KDAK Kodiak Island 86.89 32 P **P 18 26 18.9 -0.1**
comp=Z,5.3nm,0.6s,baz=244,slow=2.3,SNR=9.2
KDAK Kodiak Island 86.89 32 *i*P **P 18 26 19.5 +0.5**
ASF Jabal al Asfar 86.99 302 P **P 18 26 19.9 -0.3**
comp=Z,1.9nm,0.5s,baz=49,slow=7.0,SNR=4.3
KLMR Klimovskoe 87.01 331 *e*P **P 18 26 16.5 -3.1**
KLMR pmax pmax
comp=Z,9.0nm,0.6s
KLMR Klimovskoe 87.01 331 *e*P **P 18 26 16.5 -3.1**
KLMR AMP 18 26 18.7
comp=Z,9.0nm,0.6s
BPAW Bear Paw Mtn. 88.16 26 *e*P **P 18 26 25.2 +0.2**
comp=Z,4.4nm,0.9s
OBN Obninsk 88.17 325⇓ *e*P **P 18 26 23.0 -2.2**
OBN *e* 18 29 48.7
OBN *e*SS SS 18 42 42.8 -5.2
OBN pmax pmax
comp=Z,7.0nm,0.5s
MMAI Mount Meron Ar 88.28 303 P **P 18 26 26.4 +0.1**
comp=Z,2.7nm,0.6s,baz=91,slow=8.6,SNR=6.9
MLY Manley 88.33 25 *e*P **P 18 26 26.3 +0.5**
comp=Z,8.0nm,1.0s
MCK McKinley 89.04 26 *e*P **P 18 26 28.9 -0.3**
comp=Z,6.3nm,0.8s
RND Reindeer 89.07 27 *e*P **P 18 26 28.8 -0.6**
comp=Z,5.5nm,0.6s
RND Reindeer 89.07 27 *e*P **P 18 26 28.8 -0.6**
RND pmax pmax
comp=Z,6.0nm,0.6s
WRH Wood River Hil 89.44 26 *e*P **P 18 26 30.5 -0.5**
comp=Z,4.9nm,0.8s
CCB Clear Creek Bu 89.56 25 *e*P **P 18 26 30.8 -0.8**
comp=Z,17nm,0.5s
CCB *e*S **S 18 37 12.9 +4.8**
DHY Denali Highway 89.73 27 *e*P **P 18 26 32.9 +0.3**
comp=Z,4.4nm,0.8s
BRTR Keskin Array B 89.78 310 P **P 18 26 30.7 -2.6**
comp=Z,0.9nm,0.8s,baz=98,slow=4.8,SNR=4.6
BRTR Keskin Array B 89.78 310 *i*P **P 18 26 33.0 -0.3**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
ILAR Eielson Array 89.96 25 P **P 18 26 31.9 -1.4**
comp=Z,0.7nm,0.5s,baz=241,slow=5.0,SNR=12
ILAR LR LR 19 12 52.2
comp=Z,6.0nm,19.2s,baz=294,slow=39
ILAR Eielson Array 89.96 25 P **P 18 26 32.0 -1.4**
RIDG Independ'e Rid 90.86 26 *e*P **P 18 26 37.8 +0.1**
comp=Z,5.1nm,0.9s
TGL Tana Glacier 91.94 29 *e*P **P 18 26 43.6 +0.8**
comp=Z,7.9nm,0.8s
AKASG Malin Array Be 92.64 321 P **P 18 26 43.6 -2.5**
comp=Z,0.6nm,0.4s,baz=76,slow=4.7,SNR=4.1
AKASG Malin Array Be 92.64 321 *i*P **P 18 26 43.5 -2.6**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
KIEV Kiev 92.65 321 *i*P **P 18 26 44.3 -1.8**
KIEV pmax pmax
comp=Z,2.0nm,0.9s
ARCES ARCESS Array B 92.79 340 P **P 18 26 44.3 -2.1**
comp=Z,2.1nm,0.6s,baz=88,slow=6.1,SNR=9.6
DAWY Dawson 93.25 26 *e*P **P 18 26 49.5 +0.8**
comp=Z,5.8nm,0.9s
SPA0 Spitsbergen Ar 93.50 349 *e*P **P 18 26 48.4 -1.1**
SPITS Spitsbergen Ar 93.50 349 P **P 18 26 48.4 -1.1**
comp=Z,20nm,0.8s,baz=94,slow=8.7,SNR=46
FINES FINESS Array B 93.52 331 P **P 18 26 47.5 -2.4**
comp=Z,1.0nm,0.4s,baz=96,slow=5.7,SNR=12
FINES FINESS Array B 93.52 331 *i*P **P 18 26 48.0 -1.9**
FINES pmax pmax
comp=Z,1.0nm,0.4s
INK Inuvik 94.91 21 P **P 18 26 55.8 -0.3**
comp=Z,1.8nm,0.6s,baz=290,slow=6.5,SNR=5.7
BUR04 Bucovina Ar. S 95.51 318 *e*P **P 18 26 58.5 -1.0**
BUR08 Bucovina Ar. S 95.52 318 *e*P **P 18 26 58.6 -0.9**
SKAG Skagway 95.81 30 *e*P **P 18 27 02.0 +1.5**
comp=Z,12nm,0.9s
HFS Hagfors 99.72 331 P **Pdif 18 27 15.6 -2.4**
comp=Z,1.3nm,0.4s,baz=107,slow=5.0,SNR=13
BMO Blue Mountains 110.46 41 *e*Pdif **Pdif 18 28 06.0 -0.3**
BMO Blue Mountains 110.46 41 *e*P **Pdif 18 28 06.0 -0.3**
NVAR Mina Array Bea 111.95 48 PKiKP **PKiKP 18 32 10.0 +0.6**
comp=Z,0.8nm,0.8s,baz=248,slow=3.3,SNR=4.2
PDAR Pinedale Array 116.43 41 PKP **PKPdf 18 32 18.1 +0.2**
comp=Z,0.5nm,0.5s,baz=290,slow=3.7,SNR=3.7
LAO LASA Array 116.58 36 *e*PKPdf **PKPdf 18 32 19.4 +1.7**
RSSD Black Hills 119.25 37 *e*PKPdf **PKPdf 18 32 23.5 +0.3**
ULM Lac du Bonnet 119.88 28 PKP **PKPdf 18 32 23.3 -0.6**
comp=Z,1.4nm,0.3s,baz=300,slow=4.1,SNR=4.5
TORD Torodi Ar. Bea 120.73 285 PKP **PKPdf 18 32 25.9 -0.7**
comp=Z,0.7nm,0.5s,baz=82,slow=2.1,SNR=6.7
ANMO Albuquerque 122.08 48 PKP **PKPdf 18 32 30.1 +1.2**
comp=Z,2.2nm,0.8s,baz=321,slow=14,SNR=5.5
ANMO Albuquerque 122.08 48 *e*PKPdf **PKPdf 18 32 30.5 +1.6**
ANMO Albuquerque 122.08 48 *e*PKIKP **PKPdf 18 32 30.5 +1.6**
ECSD EROS Data Cent 123.81 34 *e*PKPdf **PKPdf 18 32 32.0 +0.3**
F36A Milaca 124.05 30 *e*PKPdf **PKPdf 18 32 32.3 +0.3**
MNTX Cornudas Mount 124.27 51 *e*PKPdf **PKPdf 18 32 34.5 +1.5**
TX31 Lajitas Ar. Si 126.59 53 *e*PKPdf **PKPdf 18 32 38.6 +1.0**
TXAR Lajitas Array 126.59 53 PKP **PKPdf 18 32 38.6 +1.0**
comp=Z,0.7nm,0.8s,baz=216,slow=1.1,SNR=8.3
S39A Bolivar 129.58 38 *e*PKPdf **PKPdf 18 32 43.1 +0.2**
R40A Maddies Statio 129.83 37 *e*PKPdf **PKPdf 18 32 43.6 +0.3**
HHAR Hobbs 130.06 40 *e*PKPpre PKPpre 18 32 32.0
V40A Witts Springs 131.07 39 *e*PKPdf **PKPdf 18 32 46.4 +0.6**
MIAR Mount Ida 131.35 41 *e*PKPdf **PKPdf 18 32 48.5 +2.2**
MIAR Mount Ida 131.35 41 *e*PKIKP **PKPdf 18 32 48.5 +2.2**
M54A Oil Creek Stat 133.79 24 *e*PKPdf **PKPdf 18 32 51.0 +0.3**
CPCT Cooper Cave 136.26 33 *e*PKPpre PKPpre 18 32 48.1
W52A Murphy 136.85 33 *e*PKPpre PKPpre 18 32 48.8
VWCC Virginia Weste 137.18 28 *e*PKPpre PKPpre 18 32 48.5
IP03 Louisa 137.41 25 *e*PKPpre PKPpre 18 32 50.9
IP03 *e*PKPdf **PKiKP 18 32 59.8 +0.3**
SPRD Spring Road, M 137.47 25 *e*PKPpre PKPpre 18 32 49.1
IP07 Quail 137.49 25 *e*PKPdf **PKPdf 18 32 55.8 -1.9**
IP01 Cuckoo 137.51 25 *e*PKPpre PKPpre 18 32 51.3
152A Waverly Hall 138.16 36 *e*PKPdf **PKPdf 18 33 00.2 +1.1**
KMSC Kings Mountain 138.19 31 *e*PKPpre PKPpre 18 32 48.3

NNC 18 18:15:31.4±2.1, 37.78N×71.47E, h0km, mb3.6, mpv3.2, 2C-2D, Error ellipse: s-maj=16.3km s-min=13.1km az=178.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan** 3.7nm,0.3s	**2.74**	**35**	⇑P	Pn	18 16 16.6	-0.2
SFK	8.6nm,0.3s			⇑S	Sn	18 16 52.3	+1.5
MNAS	**Manas** 6.5nm,0.9s	**4.77**	**9**	⇓P	Pn	18 16 44.5	-0.2
MNAS	8.5nm,0.7s			⇓S	Sn	18 17 41.6	+0.9
KK31	**Karatay Array** 0.6nm,0.3s,baz=16,slow=19,SNR=9.6	**5.37**	**352**	P	Pn	18 16 53.8	+1.0
KK31	3.4nm,0.5s,baz=177,slow=17,SNR=19			S	Sn	18 17 56.4	+1.1

IGQ 18 18:17:31.4±0.7, 3°S±5°×8°1W±°, h12km, MLv4.2/1, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGUAY	**Guayaquil**	**1.28**	**30**	P	Pn	18 17 53.4	-1.8
AGUAY				S	Sb	18 18 11.4	-0.5
MILO	**Milagro-Astudi**	**1.36**	**50**	P	Pn	18 17 55.6	-0.7
MILO				S	Sg	18 18 15.7	+0.4
COHC	**Cochancay**	**1.51**	**62**	P	Pn	18 17 56.2	-2.1
QUEV	**Quevedo**	**2.48**	**32**	P	Pn	18 18 09.7	-2.0
QUEV				S	Sn	18 18 40.1	-1.8
BMAS	**Trigal station**	**2.68**	**52**	P	Pn	18 18 14.0	-0.8
ARRY	**Arrayan**	**2.70**	**52**	P	Pn	18 18 14.8	-0.3
BPAT	**Tungurahua Vol**	**2.72**	**53**	P	Pn	18 18 14.1	-1.3
BPAT				S	Sn	18 18 49.3	+0.8
RETU	**Refugio**	**2.74**	**52**	P	Pn	18 18 15.8	0.0
POND	**Pondoa**	**2.75**	**51**	P	Pn	18 18 15.1	-0.7
BULB	**Ulba Tungurahu**	**2.78**	**52**	P	Pn	18 18 16.4	+0.2
PIS1	**Pisayambo**	**3.04**	**46**	P	Pn	18 18 19.6	-0.2
PISA	**Pisayambo**	**3.04**	**46**	P	Pn	18 18 20.5	+0.6
MAG1	**Magdalena**	**3.18**	**15**	P	Pn	18 18 20.9	-0.5
BMOR	**Cotopaxi Volca**	**3.23**	**41**	P	Pn	18 18 23.1	+0.6
BNAS	**Cotopaxi Volca**	**3.26**	**40**	P	Pn	18 18 21.8	-1.0
BTAM	**Cotopaxi Volca**	**3.31**	**42**	P	Pn	18 18 23.5	-0.1
BVC2	**Cotopaxi Volca**	**3.31**	**41**	P	Pn	18 18 22.9	-0.8
PITA	**Cotopaxi Volc**	**3.37**	**40**	P	Pn	18 18 25.4	+1.0
GGPC	**Guagua Pichinc**	**3.58**	**34**	P	Pn	18 18 27.8	+0.4
PINO	**Pino**	**3.59**	**34**	P	Pn	18 18 27.6	+0.1
OTAV	**Otavalo**	**4.00**	**32**	P	Pn	18 18 32.9	-0.2
OTAV				S	Sn	18 19 20.8	+0.6
CUIC	**Cuicocha-Domo**	**4.11**	**33**	P	Pn	18 18 34.3	-0.1

MAN 18 18:18:26.8, 11°55N×124°71E, h9km, mb3.5, ML2.2, MS1.6, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.51**	**191**	*e*P	Pg	18 18 36.8	+0.1
CNP	**Cataman**	**0.95**	**357**	*e*P	Pg	18 18 45.2	0.0
CNP				*e*S	Sn	18 19 00.0	-0.1
MSLP	**Maasin**	**1.42**	**174**	*e*P	Pn	18 18 52.8	+0.1
MSLP				*e*S	Sg	18 19 24.0	+12
LLP	**Lapu-Lapu**	**1.43**	**211**	*e*P	Pn	18 18 51.2	-1.7
LLP				*e*S	Sg	18 19 12.9	+0.2

IDC 18 18:22:17.3±431.0, 64°49N×145°39W, h0km, Error ellipse: s-maj=176.4km s-min=25.7km az=112.0, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I53US	**FAIRBANKS INFR** baz=109,slow=316,SNR=22	**1.13**	**291**	*i*		18 28 20.0	
I18DK	**QAANAAQ INFRAS** baz=281,slow=340,SNR=0.4	**25.53**	**29**	*i*		20 59 00.0	
I44RU	**PETROPAVLOVSK** baz=47,slow=328,SNR=0.3	**30.49**	**275**	*i*		21 29 30.0	

*ISCJB **18** 18:23:20.5±0.6, 32°6N±0°1×40°0W±0°1, h10km, mb4.1/12, MS3.4/23, Error ellipse: s-maj=16.9km s-min=15.9km az=19.3*
*IDC **18** 18:23:20.7±0.7, 32°59N×39°98W, h0km, mb3.9/10, mb1 4.1/10, mb1mx3.7/67, mbtmp3.9/10, MS3.4/23, Ms1 3.4/23, ms1mx3.2/57, Error ellipse: s-maj=21.7km s-min=18.7km az=20.0*
*NEIC **18** 18:23:22.2±0.5, 32°59N×39°97W, h10km, mb4.4/1, Error ellipse: s-maj=13.9km s-min=12.7km az=200.0*
*CSEM **18** 18:23:22.2, 32°59N×39°97W, h10km, mb4.4/1*
ISC 18 18:23:22.3±0.8, 32°6N±0°1×40°0W±0°1, h10km, n36, σ0°67/12, mb3.9/12, MS3.3/23, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJG	**San Juan** comp=Z,51nm,21.7s,baz=92,slow=31	**27.62**	**245**	LR	LR	18 37 42.7	
SCHQ	**Schefferville** comp=Z,74nm,20.3s,baz=130,slow=34	**29.21**	**328**	LR	LR	18 40 05.9	
MDT	**Midelt** comp=Z,64nm,18.4s,baz=347,slow=34	**29.66**	**80**	LR	LR	18 40 11.3	
SFJD	**Kangerlussuaq** comp=Z,53nm,21.6s,baz=153,slow=29	**35.02**	**353**	LR	LR	18 40 28.1	
KOWA	**Kowa** 2.0nm,0.5s,baz=309,slow=6.5,SNR=4.5	**37.31**	**110**	P	**P**	**18 30 35.4**	**+0.6**
KOWA				LR	LR	18 42 58.6	
	comp=Z,54nm,21.3s,baz=216,slow=32						
PTGA	**Pitinga** 1.0nm,0.3s,baz=340,slow=15,SNR=2.9	**38.15**	**214**	P	**P**	**18 30 42.1**	**+0.2**
RCBR	**Riachuelo** 59nm,0.5s,baz=35,slow=0.6,SNR=4.5	**38.39**	**173**	P	**P**	**18 30 43.8**	**-0.2**
DBIC	**Dimbokro** comp=Z,50nm,18.3s,baz=244,slow=34	**41.59**	**121**	LR	LR	18 47 11.3	
TORD	**Torodi Ar. Bea** 4.2nm,1.0s,baz=297,slow=4.5,SNR=9.9	**42.64**	**107**	P	**P**	**18 31 18.6**	**-0.6**
TORD				LR	LR	18 46 24.6	
	comp=Z,83nm,21.0s,baz=180,slow=32						
GERES	**GERESS Array B** comp=Z,17nm,18.2s,baz=241,slow=33	**42.87**	**51**	LR	LR	18 47 01.5	
NOA	**NORSAR Array B** comp=Z,17nm,21.7s,baz=235,slow=31	**43.46**	**33**	LR	LR	18 45 36.7	
ULM	**Lac du Bonnet** comp=Z,35nm,18.4s,baz=336,slow=38	**44.38**	**311**	LR	LR	18 51 04.7	
HFS	**Hagfors** comp=Z,24nm,19.4s,baz=284,slow=32	**44.40**	**35**	LR	LR	18 46 53.2	
H10N2	**ASCENSION HYDR** baz=330,slow=75,SNR=109	**46.95**	**144**	T	T	19 21 43.2	
H10N3	**ASCENSION HYDR** baz=330,slow=75,SNR=116	**46.95**	**144**	T	T	19 21 48.0	
H10N1	**ASCENSION HYDR** baz=330,slow=75,SNR=136	**46.97**	**144**	T	T	19 21 45.9	
H10S1	**ASCENSION HYDR** baz=331,slow=75,SNR=94	**47.83**	**145**	T	T	19 22 51.3	
H10S3	**ASCENSION HYDR** baz=331,slow=75,SNR=76	**47.84**	**145**	T	T	19 22 44.8	
H10S2	**ASCENSION HYDR** baz=331,slow=75,SNR=80	**47.85**	**145**	T	T	19 22 57.4	
FINES	**FINESS Array B** comp=Z,30nm,19.2s,baz=184,slow=34	**50.59**	**35**	LR	LR	18 52 21.7	
AKASG	**Malin Array Be** 1.0nm,0.7s,baz=276,slow=6.3,SNR=6.8	**52.81**	**48**	P	**P**	**18 32 36.6**	**-1.0**
TXAR	**Lajitas Array** comp=Z,34nm,19.4s,baz=0.0,slow=34	**54.00**	**285**	LR	LR	18 54 19.3	
ANMO	**Albuquerque** comp=Z,72nm,20.6s,baz=58,slow=33	**54.40**	**292**	LR	LR	18 53 37.9	
PDAR	**Pinedale Array** 1.5nm,1.0s,baz=84,slow=6.1,SNR=7.9	**54.60**	**302**	P	**P**	**18 32 51.0**	**-0.2**
YKA	**Yellowknife Ar** comp=Z,5.7nm,21.6s,baz=77,slow=34	**54.66**	**327**	LR	LR	18 54 44.6	
BRTR	**Keskin Array B** 0.7nm,0.9s,baz=309,slow=6.2,SNR=4.0	**58.33**	**60**	P	**P**	**18 33 18.0**	**+0.4**
BRTR				LR	LR	18 56 34.4	
	comp=Z,17nm,19.5s,baz=84,slow=34						
CPUP	**Villa Florida** comp=Z,59nm,19.3s,baz=196,slow=37	**60.88**	**198**	LR	LR	19 00 31.7	
INK	**Inuvik** comp=Z,57nm,19.4s,baz=148,slow=34	**61.44**	**335**	LR	LR	18 58 15.2	
NVAR	**Mina Array Bea** 0.2nm,0.4s,baz=90,slow=7.5,SNR=2.9	**62.24**	**300**	P	**P**	**18 33 43.8**	**-0.9**
NVAR				LR	LR	19 00 38.4	
	comp=Z,50nm,18.2s,baz=276,slow=36						
YBH	**Yreka Blue Hor** comp=Z,22nm,18.2s,baz=29,slow=36	**64.21**	**304**	LR	LR	19 01 47.6	
ILAR	**Eielson Array** 0.9nm,1.1s,baz=66,slow=4.3,SNR=6.7	**67.73**	**334**	P	**P**	**18 34 20.3**	**+0.7**
ILAR				LR	LR	19 01 31.8	
	comp=Z,29nm,20.2s,baz=280,slow=34						
AKTO	**Aktyubinsk** comp=Z,38nm,19.3s,baz=114,slow=34	**70.29**	**42**	LR	LR	19 03 36.1	
ATD	**Arta Tunnel** comp=Z,50nm,18.1s,baz=1.0,slow=35	**77.87**	**84**	LR	LR	19 09 18.8	
KURK	**Kurchatov** 2.9nm,0.7s	**80.97**	**34**	*e*P	**P**	**18 35 36.8**	**-0.1**
KURBB	**Kurchatov Arra** 1.1nm,0.9s,baz=314,slow=5.7,SNR=6.2	**80.98**	**35**	P	**P**	**18 35 37.5**	**+0.5**
MKAR	**Makanchi Array** 0.7nm,0.8s,baz=297,slow=6.1,SNR=7.3	**85.41**	**36**	P	**P**	**18 36 00.8**	**+0.7**

MEX 18 18:37:43.0±0.5, 17°12N×100°62W, h8km±4km, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.34**	**101**	*e*P	Pg	18 37 49.3	-0.4
CAIG				*i*S	Sg	18 37 54.5	+0.2
ACP2	**Acapulco**	**0.74**	**109**	*i*P	Pg	18 37 55.3	-1.9
ACP2				*e*S	Sg	18 38 06.0	-0.8
ACX	**Acapulco**	**0.77**	**109**	*i*P	Pg	18 37 56.9	-0.8
ACX				*e*S	Sg	18 38 05.9	-1.8
ZIIG	**Zihuatanejo**	**0.95**	**301**	*e*P	Pg	18 37 58.6	-2.6
ZIIG				*e*S	Sg	18 38 11.1	-2.4
ARIG	**Puente Sto Nin**	**1.19**	**12**	*e*P	Pb	18 38 03.0	-2.8
ARIG				*e*S	Sg	18 38 16.7	-4.5
PLIG	**Platanillo**	**1.66**	**40**	*i*P	Pn	18 38 08.7	-3.8
PLIG				*e*S	Sn	18 38 28.9	-5.1
TLIG	**Tlapa**	**2.01**	**77**	*e*P	Pn	18 38 14.1	-3.2
TLIG				*e*S	Sn	18 38 38.8	-3.9

IDC 18 18:56:26.3±13.0, 2°73N×92°92E, h0km, mb3.6/3, mb1 3.7/5, mb1mx3.4/66, mbtmp3.7/5, ML3.7/2, Error ellipse: s-maj=255.2km s-min=55.1km az=161.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	**Pallekele** 0.2nm,0.3s,baz=118,slow=7.8,SNR=2.6	**12.97**	**291**	Pn	Pn	18 59 33.0	+0.8
PALK	0.3nm,0.3s,baz=299,slow=7.4,SNR=3.1			Sn	Sn	19 01 41.2	-16
CMAR	**Chiang Mai Arr** 0.1nm,0.3s,baz=215,slow=13,SNR=9.2	**16.71**	**20**	Pn	Pn	19 00 22.7	+0.6
MKAR	**Makanchi Array** 0.6nm,0.6s,baz=174,slow=8.9,SNR=8.6	**44.85**	**350**	P	P	19 04 42.4	0.0
KURBB	**Kurchatov Arra** 0.3nm,0.7s,baz=168,slow=7.0,SNR=4.2	**49.25**	**348**	P	P	19 05 15.8	-0.8
ZALV	**Zalesovo Beam** 0.5nm,0.6s,baz=184,slow=8.1,SNR=4.2	**51.49**	**354**	P	P	19 05 33.7	+0.2

MEX 18 19:12:29.4±0.5, 13°97N×93°14W, h15km±126km, MD3.8, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.26**	**42**	*i*P	Pn	19 12 48.2	-4.4
THIG				*e*S	Sb	19 13 03.9	-5.1
PCIG		**1.73**	**357**	*e*P	Pn	19 12 55.1	-3.9
PCIG				*e*S	Sn	19 13 15.9	-5.0
CCIG	**Comitan**	**2.50**	**23**	*e*P	Pn	19 13 09.1	-0.6
CCIG				*e*S	Sn	19 13 35.8	-4.3
TGIG		**2.80**	**0**	*e*P	Pn	19 13 11.8	-2.0
TGIG				*e*S	Sn	19 13 43.0	-4.3

*IDC **18** 19:15:24.2±1.2, 41°03N×108°95E, h0km, mb3.1/4, mb1 3.4/6, mb1mx3.2/70, mbtmp3.2/6, ML2.9/2, Error*

ellipse: s-maj=50.5km s-min=17.1km az=62.0
BJI ***18*** *19:15:28.7, 40°.85N×108°.18E, h6km, ML3.9/15*
ISC 18 19:15:29.3±0.8, 40°.91N±0°.06×108°.19E±0°.05, h10km, n12, σ4§47/13, mb3.6/3, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTO	**Baotou**	**1.43**	**102**	*e*Pg	**Pn**	**19 15 53.1**	**-2.3**
BTO				Sg	**Sb**	**19 16 12.3**	**-2.0**
BTO				smax	smax		
	comp=N,730nm,0.4s						
BTO				smax	smax		
	comp=E,2μm,0.3s						
LZH	**Lanzhou**	**5.90**	**217**	*e*Pg	**Pb**	**19 17 13.6**	**+1.3**
LZH				Sg	**Sb**	**19 18 30.5**	**+7.5**
LZH				smax	smax		
	comp=N,200nm,1.2s						
LZH				smax	smax		
	comp=E,170nm,1.2s						
BJI	**Beijing**	**6.15**	**95**	Pg	**Pb**	**19 17 20.3**	**+3.8**
BJI				Sg	**Sb**	**19 18 38.0**	**+7.8**
BJI				smax	smax		
	comp=N,110nm,0.7s						
BJI				smax	smax		
	comp=E,81nm,0.6s						
GTA	**Gaotai**	**6.59**	**260**	*e*Pn	Pn	19 17 02.4	-3.9
XAN	**Xi'an**	**6.88**	**175**	Pn	**Pn**	**19 17 07.8**	**-2.5**
XAN				Sg	**Sg**	**19 19 04.9**	**-5.3**
XAN				smax	smax		
	comp=N,34nm,0.5s						
XAN				smax	smax		
	comp=E,35nm,0.9s						
SONM	**Songino Array**	**7.04**	**350**	Pn	Pn	19 17 08.8	-3.8
	0.3nm,0.3s,baz=169,slow=15,SNR=11						
SONM				Lg	Lg	19 19 05.2	
	3.1nm,0.3s,baz=164,slow=27,SNR=5.1						
TLY	**Talaya**	**11.22**	**345**	Pn	**Pn**	**19 18 08.5**	**-1.2**
	0.0nm,0.3s,baz=144,slow=8.7,SNR=3.6						
TLY				Lg	Lg	19 21 13.9	
	0.0nm,0.3s,baz=36,slow=19,SNR=2.0						
WMQ	**Urumqi**	**15.42**	**288**	*e*P	**Pn**	**19 19 05.5**	**-1.4**
MKAR	**Makanchi Array**	**19.54**	**296**	P	**P**	**19 19 57.0**	**+0.1**
	0.2nm,0.6s,baz=105,slow=11,SNR=3.1						
KURBB	**Kurchatov Arra**	**22.72**	**305**	P	**P**	**19 20 32.7**	**+1.5**
	0.1nm,0.4s,baz=104,slow=12,SNR=2.4						
WRA	**Warramunga Arr**	**65.24**	**153**	P	P	19 26 06.2	-4.8
	0.4nm,0.8s,baz=345,slow=7.1,SNR=4.8						
ASAR	**Alice Springs**	**68.55**	**155**	P	**P**	**19 26 27.9**	**-4.2**
	0.5nm,0.6s,baz=343,slow=6.4,SNR=11						

NDI ***18*** *19:35:10.5±2.6, 25°.88N×90°.58E, h10km, ML3.2*
ISC 18 19:35:11.0±1.1, 25°.96N±0°.05×90°.49E±0°.04, h30km±13km, n8, σ1§26/15, India-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TURI	**Tura**	**0.43**	**199**	*e*P	**Pb**	**19 35 20.5**	**+0.1**
TURI				*e*S	**Sb**	**19 35 27.2**	**+0.4**
GUWA	**GUWAHATI**	**1.11**	**77**	*e*P	**Pn**	**19 35 30.7**	**+0.3**
GUWA				*e*S	**Sn**	**19 35 45.1**	**+0.5**
SHL	**Shillong**	**1.31**	**107**	*e*PG	**Pb**	**19 35 35.0**	**-0.2**
SHL				*e*SG	**Sb**	**19 35 51.0**	**-0.8**
SHL	**Shillong**	**1.31**	**107**	*e*P	**Pn**	**19 35 32.8**	**-0.7**
SHL				*e*S	**Sn**	**19 35 48.8**	**-1.3**
SHL				IAML		19 35 51.9	
	comp=N,377nm,0.2s						
SHL				IAML		19 35 52.1	
	comp=E,484nm,0.0s						
GTK	**Tadong**	**2.17**	**309**	*e*P	**Pb**	**19 35 48.8**	**-0.9**
GTK				*e*S	**Sb**	**19 36 16.3**	**+0.1**
GTK				IAML		19 36 18.3	
	comp=E,55nm,0.1s						
GTK				IAML		19 36 18.4	
	comp=N,44nm,0.1s						
TEZP	**TEZPUR**	**2.17**	**72**	*e*P	**Pn**	**19 35 45.9**	**+0.8**
TEZP				*e*S	**Sb**	**19 36 13.6**	**-2.7**
TEZP				IAML		19 36 18.4	
	comp=N,217nm,0.1s						
TEZP				IAML		19 36 18.8	
	comp=E,196nm,0.3s						
AGT	**Agartala**	**2.18**	**161**	*e*S	**Sn**	**19 36 12.1**	**+1.0**
AGT				IAML		19 36 24.6	
AGT				IAML		19 36 25.2	
	comp=E,71nm,0.3s						
ZIRO	**ZIRO**	**3.39**	**62**	*e*P	**Pb**	**19 36 11.3**	**+0.8**
ZIRO				*e*S	**Sb**	**19 36 53.3**	**+2.0**
ZIRO				IAML		19 37 01.0	
	comp=E,314nm,0.8s						
ZIRO				IAML		19 37 01.4	
	comp=N,435nm,0.8s						

NIED ***18*** *19:38:00, 37°.90N×142°.20E, h32km, Mw3.6 Best double couple: M0 3.14000×10^14 NP1:φs323.00000°, δ36.00000°, λ101.00000°. NP2:φs129.00000°, δ55.00000°, λ82.00000°.*
IDC ***18*** *19:38:31.5±1.4, 37°.93N×142°.48E, h0km, mb3.7/6, mb1 3.7/8, mb1mx3.5/69, mbtmp3.6/8, ML3.3/2, Error ellipse: s-maj=34.7km s-min=18.9km az=78.0*
JMA ***18*** *19:38:37.8±0.1, 37°.90N×142°.19E, h41km±2km, M3.9*
ISC 18 19:38:33.1±2.1, 37°.87N±0°.05×142°.40E±0°.07, h13km±13km, n25, σ1§50/28, mb3.6/6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**1.01**	**305**	P	**Pn**	**19 38 53.9**	**+0.8**
JIO				S	**Sb**	**19 39 05.0**	**-0.8**
JMM	**Marumori**	**1.27**	**270**	P	**Pb**	**19 38 57.2**	**+0.2**
JMM				S	**Sb**	**19 39 11.5**	**-1.8**
JFK	**Kawauchi**	**1.31**	**248**	P	**Pb**	**19 38 57.8**	**+0.1**
JFK				S	**Sb**	**19 39 12.7**	**-1.8**
JMK	**Ichinoseki**	**1.42**	**320**	P	**Pg**	**19 39 00.2**	**-0.3**
JMK				S	**Sn**	**19 39 16.7**	**-0.6**
JOU	**Okura**	**1.46**	**290**	P	**Pb**	**19 39 00.2**	**+0.1**
JOU				S	**Sn**	**19 39 16.8**	**-1.4**
JFT	**Otama**	**1.68**	**258**	P	**Pb**	**19 39 03.9**	**0.0**
JFT				S	**Sn**	**19 39 23.0**	**-0.6**
JOM	**Ohasama**	**1.82**	**332**	P	**Pb**	**19 39 06.2**	**-0.1**
JOM				S	**Sn**	**19 39 27.3**	**+0.2**
JYS	**Shiratake**	**1.88**	**281**	P	**Pb**	**19 39 06.1**	**-1.2**
JYK	**Kaneyama**	**1.92**	**304**	P	**Pb**	**19 39 06.9**	**-1.0**
JFY	**Yanaizu**	**2.19**	**259**	P	**Pn**	**19 39 10.8**	**+1.5**
MJAR	**Matsushiro Arr**	**3.60**	**250**	Pn	**Pn**	**19 39 31.4**	**+2.8**
	2.7nm,0.3s,baz=61,slow=10,SNR=22						
MJAR				Sn	**Sn**	**19 40 13.2**	**+2.1**
	1.3nm,0.3s,baz=291,slow=30,SNR=2.6						
JHJ	**Hachijo jima 2**	**5.20**	**205**	Sn	**Sn**	**19 40 45.6**	**-4.9**
	6.3nm,0.3s,baz=229,slow=19,SNR=2.1						
ASAJ	**Asahikawa**	**6.24**	**1**	Pn	**Pn**	**19 40 05.8**	**+0.9**
	0.7nm,0.3s,baz=201,slow=17,SNR=10.0						
ASAJ				Sn	**Sn**	**19 41 16.0**	**-0.1**
	0.5nm,0.3s,baz=5.9,slow=31,SNR=6.2						
H11N2	**WAKE ISLAND Hy**	**27.93**	**123**	T	T	20 13 48.7	
	baz=316						
H11N1	**WAKE ISLAND Hy**	**27.93**	**124**	T	T	20 14 59.8	
	baz=316						
H11N3	**WAKE ISLAND Hy**	**27.94**	**123**	T	T	20 14 46.8	
	baz=316						
SONM	**Songino Array**	**27.99**	**302**	P	**P**	**19 44 24.3**	**+0.6**
	0.5nm,0.5s,baz=101,slow=9.4,SNR=4.6						
H11S1	**WAKE ISLAND Hy**	**28.68**	**126**	T	T	20 15 49.3	
	baz=317						
H11S3	**WAKE ISLAND Hy**	**28.68**	**126**	T	T	20 14 44.6	
	baz=317						
H11S2	**WAKE ISLAND Hy**	**28.70**	**126**	T	T	20 15 54.1	
	baz=317						
ZALV	**Zalesovo Beam**	**41.94**	**312**	P	**P**	**19 46 23.2**	**-0.1**
	0.4nm,0.3s,baz=98,slow=7.4,SNR=3.9						
MKAR	**Makanchi Array**	**44.35**	**302**	P	**P**	**19 46 42.7**	**-0.3**
	0.3nm,0.7s,baz=82,slow=11,SNR=3.7						
KURBB	**Kurchatov Arra**	**46.11**	**307**	P	**P**	**19 46 57.0**	**+0.2**
	1.2nm,0.5s,baz=80,slow=7.8,SNR=13						
WRA	**Warramunga Arr**	**58.00**	**189**	P	**P**	**19 48 25.9**	**+0.3**
	0.8nm,0.6s,baz=6.7,slow=7.4,SNR=13						
ASAR	**Alice Springs**	**61.73**	**189**	P	**P**	**19 48 52.5**	**+1.3**
	0.3nm,0.7s,baz=14,slow=7.7,SNR=3.3						

ISCJB ***18*** *19:43:51.3±0.3, 49°.82N±0°.02×18°.46E±0°.02, h0km, Error ellipse: s-maj=3.0km s-min=2.2km az=17.5*
IPEC ***18*** *19:43:52.7±0.2, 49°.82N×18°.58E, h0km±3km, ML2.4/4, Error ellipse: s-maj=1.4km s-min=1.1km az=154.0*
CSEM ***18*** *19:43:52.4±0.2, 49°.80N×18°.50E, h1km, ML3.1/13, Error ellipse: s-maj=4.8km s-min=3.1km az=21.0*

PRU ***18*** *19:43:53.4, 49°.81N×18°.49E, h0km*
VIE ***18*** *19:43:54.6±0.8, 49°.61N×18°.44E, h0km, mb2.1/4, ml2.8/4, Error ellipse: s-maj=5.6km s-min=4.1km az=48.0 28 km SSE of Ostrava Suspected Mining induced.*
ISC 18 19:43:52.4±0.7, 49.75N±0°.02×18.57E±0°.02, h0km, n53, σ0§68/98, 4D, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.28**	**288**	⇓*i*PG	**Pg**	**19 43 58.7**	**+0.9**
OKC				*e*SG	**Sg**	**19 44 01.9**	**+0.4**
	comp=Z,232nm,0.4s						
OKC	**Ostrava-Krasne**	**0.28**	**288**	Pg	**Pg**	**19 43 58.7**	**+0.9**
OKC				Sg	**Sg**	**19 44 01.9**	**+0.4**
	232nm,0.4s						
RAC	**Raciborz**	**0.41**	**324**	*e*Pg	**Pg**	**19 44 00.6**	**+0.4**
RAC				*e*Sg	**Sg**	**19 44 06.2**	**+0.7**
CHZP	**Chorzow**	**0.60**	**27**	*e*Pg	**Pg**	**19 44 03.9**	**-0.1**
CHZP				*e*Sg	**Sg**	**19 44 10.8**	**-1.0**
MORC	**Moravsky Berou**	**0.66**	**272**	*e*Pg	**Pg**	**19 44 05.5**	**+0.4**
MORC				*e*Sg	**Sg**	**19 44 13.6**	**0.0**
	67nm,0.2s						
MORC	**Moravsky Berou**	**0.66**	**272**	*e*PG	**Pg**	**19 44 05.5**	**+0.4**
MORC				*e*SG	**Sg**	**19 44 13.7**	**+0.1**
MORC	**Moravsky Berou**	**0.66**	**272**	*e*Pg	**Pg**	**19 44 05.5**	**+0.4**
	baz=86						
MORC				*e*Sg	**Sg**	**19 44 13.6**	**0.0**
	67nm,0.2s,baz=86						
LANS	**Liptovska Anna**	**0.84**	**135**	*e*PG	**Pb**	**19 44 10.1**	**+0.2**
LANS				*e*SG	**Sb**	**19 44 22.6**	**+0.8**
LANS	**Liptovska Anna**	**0.84**	**135**	*e*Pg	**Pb**	**19 44 10.1**	**+0.2**
LANS				*e*Sg	**Sb**	**19 44 22.6**	**+0.8**
OJC	**Ojcow**	**0.92**	**59**	*e*Pg	**Pg**	**19 44 09.8**	**-0.2**
OJC				*e*Sg	**Sg**	**19 44 22.1**	**+0.1**
OJC	**Ojcow**	**0.92**	**59**	*e*Pg	**Pg**	**19 44 09.8**	**-0.2**
OJC				*e*Sg	**Sg**	**19 44 22.1**	**+0.1**
JAVC	**Velka Javorina**	**1.07**	**214**	*e*Pg	**Pn**	**19 44 14.7**	**+0.1**
JAVC				*e*Sg	**Sb**	**19 44 28.0**	**-0.3**
	37nm,0.5s						
JAVC	**Velka Javorina**	**1.07**	**214**	*e*PG	**Pn**	**19 44 14.8**	**+0.1**
JAVC				*e*SG	**Sb**	**19 44 28.1**	**-0.3**
JAVC	**Velka Javorina**	**1.07**	**214**	*e*Pg	**Pn**	**19 44 14.7**	**+0.1**
	baz=31						
JAVC				*e*Sg	**Sb**	**19 44 28.0**	**-0.3**
	37nm,0.5s,baz=31						
NIE	**Niedzica**	**1.18**	**106**	*e*Pg	**Pn**	**19 44 15.9**	**-0.2**
NIE				*e*Sg	**Sn**	**19 44 34.0**	**+1.1**
KRLC	**Kraliky**	**1.20**	**286**	*e*PG	**Pg**	**19 44 14.3**	**-1.0**
KRLC				*e*SG	**Sg**	**19 44 30.0**	**-0.8**
	comp=Z,23nm,0.2s						
KRLC	**Kraliky**	**1.20**	**286**	Pg	**Pg**	**19 44 14.3**	**-1.0**
KRLC				Sg	**Sg**	**19 44 30.0**	**-0.8**
	23nm,0.2s						
VYHS	**Vyhne**	**1.27**	**172**	*e*PG	**Pn**	**19 44 18.0**	**+0.6**
VYHS				*e*SG	**Sn**	**19 44 36.0**	**+0.8**
VYHS				*e*LG	Lg	19 44 43.4	
VYHS	**Vyhne**	**1.27**	**172**	*e*Pg	**Pn**	**19 44 18.1**	**+0.6**
VYHS				*e*Sn	**Sn**	**19 44 36.0**	**+0.8**
VRAC	**Vranov**	**1.36**	**252**	*e*Pg	**Pb**	**19 44 18.7**	**0.0**
VRAC				*e*Sg	**Sg**	**19 44 36.2**	**+0.2**
	64nm,0.4s						
VRAC	**Vranov**	**1.36**	**252**	*e*PG	**Pb**	**19 44 18.7**	**0.0**
VRAC				*e*SG	**Sg**	**19 44 36.2**	**+0.2**
VRAC	**Vranov**	**1.36**	**252**	*e*Pg	**Pb**	**19 44 18.7**	**0.0**
	baz=68						
VRAC				*e*Sg	**Sg**	**19 44 36.2**	**+0.2**
	64nm,0.4s,baz=68						
DPC	**Dobruska-Polom**	**1.56**	**293**	*e*PG	**Pn**	**19 44 21.0**	**-0.5**
DPC				*e*SG	**Sn**	**19 44 41.4**	**-1.1**
	comp=Z,31nm,0.3s						
DPC	**Dobruska-Polom**	**1.56**	**293**	Pg	**Pn**	**19 44 21.0**	**-0.5**
DPC				Sg	**Sn**	**19 44 41.4**	**-1.1**
	31nm,0.3s						
KRUC	**Moravsky**	**1.58**	**245**	*e*Pg	**Pb**	**19 44 22.1**	**-0.3**
KRUC				*e*Sg	**Sg**	**19 44 43.2**	**+0.2**
	39nm,0.2s						
KRUC	**Moravsky**	**1.58**	**245**	*e*PG	**Pb**	**19 44 22.2**	**-0.2**
KRUC				*e*SG	**Sg**	**19 44 43.2**	**+0.2**
KRUC	**Moravsky**	**1.58**	**245**	*e*Pg	**Pb**	**19 44 22.1**	**-0.3**
	baz=61						
KRUC				*e*Sg	**Sg**	**19 44 43.2**	**+0.2**
	39nm,0.2s,baz=61						
MODS	**Modra-Piesok**	**1.62**	**212**	*e*PG	**Pn**	**19 44 21.4**	**-0.8**
MODS				*e*SG	**Sb**	**19 44 44.1**	**0.0**
MODS				*e*LG	Lg	19 44 46.4	
MODS	**Modra-Piesok**	**1.62**	**212**	*e*Pg	**Pn**	**19 44 21.4**	**-0.8**
MODS				*e*Sn	**Sb**	**19 44 44.1**	**0.0**
KECS	**Kecovo**	**1.79**	**134**	*e*SN	**Sb**	**19 44 48.7**	**-0.3**
KECS	**Kecovo**	**1.79**	**134**	*e*Sn	**Sb**	**19 44 48.7**	**-0.3**
UPC	**Upice**	**1.81**	**296**	⇓*e*PG	**Pn**	**19 44 25.2**	**+0.4**
UPC				*e*SG	**Sn**	**19 44 48.4**	**0.0**
	comp=Z,27nm,0.6s						
UPC	**Upice**	**1.81**	**296**	Pg	**Pn**	**19 44 25.2**	**+0.4**
UPC				Sg	**Sn**	**19 44 48.4**	**0.0**
	27nm,0.6s						
KSP	**Ksiaz**	**1.82**	**308**	*e*Pb	**Pn**	**19 44 24.1**	**-0.8**
KSP				*e*Pg	**Pb**	**19 44 25.8**	**-0.7**
KSP				*e*Sg	**Sn**	**19 44 48.8**	**+0.1**
KSP	**Ksiaz**	**1.82**	**308**	*e*Pb	**Pn**	**19 44 24.1**	**-0.8**
KSP				*e*Sg	**Sn**	**19 44 48.8**	**+0.1**
ZST	**Bratislava**	**1.83**	**212**	*e*SN	**Sn**	**19 44 47.4**	**-1.5**
ZST				*e*LG	Lg	19 44 49.8	
ZST	**Bratislava**	**1.83**	**212**	*e*Sn	**Sn**	**19 44 47.4**	**-1.5**
PSZ	**Piszkesteto**	**2.04**	**154**	*e*Pn	**Pb**	**19 44 29.7**	**-0.5**
PSZ				*e*Sn	**Sg**	**19 44 58.0**	**+0.3**
PSZ	**Piszkesteto**	**2.04**	**154**	*e*Pn	**Pb**	**19 44 29.7**	**-0.5**
PSZ				*e*Sn	**Sg**	**19 44 58.0**	**+0.3**
CRVS	**Cervenica-Dubn**	**2.08**	**113**	*e*PG	**Pg**	**19 44 32.2**	**0.0**
CRVS	**Cervenica-Dubn**	**2.08**	**113**	*e*Pg	**Pg**	**19 44 32.2**	**0.0**
CONA	**Conrad Observa**	**2.55**	**225**	*e*Pn	**Pn**	**19 44 35.2**	**+0.1**
	0.9nm,0.1s						
CONA				*e*Sn	**Sn**	**19 45 06.1**	**-0.8**
	2.8nm,0.2s						
CONA	**Conrad Observa**	**2.55**	**225**	Pn	**Pn**	**19 44 35.2**	**+0.1**
	0.9nm,0.1s						
CONA				Sn	**Sn**	**19 45 06.1**	**-0.8**
	2.8nm,0.2s						
PRU	**Pruhonice**	**2.61**	**277**	⇓*e*PG	**Pb**	**19 44 40.1**	**+0.1**
PRU				*e*SG	**Sb**	**19 45 13.3**	**+0.6**
	comp=Z,12nm,0.4s						
PRU	**Pruhonice**	**2.61**	**277**	Pg	**Pb**	**19 44 40.1**	**+0.1**
PRU				Sg	**Sb**	**19 45 13.3**	**+0.6**
	12nm,0.4s						
PVCC	**Panska Ves**	**2.69**	**288**	⇓*e*SG	**Sb**	**19 45 15.9**	**+1.2**
	comp=Z,32nm,0.4s						
PVCC	**Panska Ves**	**2.69**	**288**	Sg	**Sb**	**19 45 15.9**	**+1.2**
	32nm,0.4s						
BRG	**Berggiesshubel**	**3.17**	**292**	PG	**Pb**	**19 44 49.7**	**+0.2**
BRG				SG	**Sb**	**19 45 30.9**	**+2.2**
	10.0nm,0.7s						
KHC	**Kasperske Hory**	**3.31**	**261**	*e*PN	**Pn**	**19 44 45.7**	**+0.2**
KHC				*e*PG	**Pb**	**19 44 53.9**	**+1.9**
KHC				*e*SG	**Sg**	**19 45 36.6**	**-2.1**
	comp=Z,12nm,0.4s						
KHC	**Kasperske Hory**	**3.31**	**261**	Pn	**Pn**	**19 44 45.7**	**+0.2**
MOA	**Molln**	**3.42**	**238**	*i* Pn	**Pn**	**19 44 46.5**	**-0.4**
	0.6nm,0.2s						
MOA				*e*Sg	**Sg**	**19 45 42.0**	**-0.2**
	2.9nm,0.2s						
MOA	**Molln**	**3.42**	**238**	Pn	**Pn**	**19 44 46.5**	**-0.4**
	0.6nm,0.2s						
MOA				Sg	**Sg**	**19 45 42.0**	**-0.2**
	2.9nm,0.2s						
CLL	**Collm**	**3.88**	**296**	*e*Sg	**Sg**	**19 45 56.0**	**-0.8**
	comp=Z,10.0nm,0.7s						

ISCJB ***18*** *19:52:21.1±1.0, 37°.63N±0°.05×141°.82E±0°.10, h82km±7km, mb3.4/4, Error ellipse: s-maj=14.0km s-min=5.7km az=27.3*
IDC ***18*** *19:52:21.3±3.2, 37°.72N×141°.95E, h79km±25km, mb3.3/4, mb1 3.3/7, mb1mx3.0/66, mbtmp3.5/7, Error ellipse: s-maj=29.3km s-min=19.5km az=113.0*
JMA ***18*** *19:52:22.8±0.1, 37°.65N×141°.70E, h77km±1km, M3.8*
ISC 18 19:52:21.0±1.6, 37°.62N±0°.06×141°.9E±0°.1, h75km±11km, n28, σ1§13/36, mb3.5/4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.87**	**253**	P	**Pn**	**19 52 38.4**	**+0.2**
JFK				S	**Sn**	**19 52 49.7**	**-1.4**
JMM	**Marumori**	**0.93**	**286**	P	**Pn**	**19 52 39.0**	**+0.2**
JMM				S	**Sn**	**19 52 50.7**	**-1.4**
JIO	**Ouri**	**0.95**	**331**	P	**Pn**	**19 52 40.1**	**+1.1**
JIO				S	**Sn**	**19 52 52.4**	**-0.1**
JOU	**Okura**	**1.24**	**307**	P	**Pn**	**19 52 42.8**	**0.0**
JOU				S	**Sn**	**19 52 57.6**	**-1.5**
JFT	**Otama**	**1.27**	**266**	P	**Pn**	**19 52 43.3**	**+0.2**
JFT				S	**Sn**	**19 52 58.0**	**-1.7**
JMK	**Ichinoseki**	**1.44**	**338**	P	**Pn**	**19 52 46.2**	**+0.9**
JMK				S	**Sn**	**19 53 03.8**	**+0.2**
JYS	**Shiratake**	**1.59**	**293**	P	**Pn**	**19 52 47.2**	**0.0**
JYS				S	**Sn**	**19 53 06.2**	**-0.9**
JFY	**Yanaizu**	**1.78**	**264**	P	**Pn**	**19 52 49.8**	**0.0**
JFY				S	**Sn**	**19 53 10.3**	**-1.4**
JYK	**Kaneyama**	**1.79**	**317**	P	**Pn**	**19 52 50.3**	**+0.4**
JYK				S	**Sn**	**19 53 11.1**	**-0.7**
JOM	**Ohasama**	**1.91**	**345**	P	**Pn**	**19 52 52.8**	**+1.2**
JOM				S	**Sn**	**19 53 15.6**	**+0.8**
JYA	**Atsumi**	**2.00**	**300**	P	**Pn**	**19 52 52.7**	**+0.1**
JRG	**Rokugo**	**2.04**	**331**	P	**Pn**	**19 52 54.1**	**+0.8**
JNS	**Sasagawa**	**2.08**	**276**	P	**Pn**	**19 52 53.9**	**+0.2**
JAG	**Ashikaga**	**2.31**	**240**	P	**Pn**	**19 52 57.2**	**+0.3**
JAG				S	**Sn**	**19 53 22.8**	**-1.6**
MJAR	**Matsushiro Arr**	**3.16**	**251**	P	**Pn**	**19 53 09.1**	**+0.7**
	2.4nm,0.3s,baz=58,slow=10,SNR=26						
MJAR				S	**Sn**	**19 53 46.6**	**+1.5**
	3.1nm,0.3s,baz=146,slow=27,SNR=5.9						
MAT	**Matsushiro**	**3.16**	**251**	P	**Pn**	**19 53 09.3**	**+0.9**
MAT				*e*S	**Sn**	**19 53 45.2**	**+0.1**
ASAJ	**Asahikawa**	**6.51**	**4**	P	**Pn**	**19 53 52.7**	**-1.3**
	0.5nm,0.3s,baz=230,slow=5.8,SNR=5.9						
ASAJ				S	**Sn**	**19 55 04.1**	**-2.7**
	0.5nm,0.3s,baz=342,slow=20,SNR=4.3						
KSRS	**Korea Array**	**11.12**	**273**	P	**Pn**	**19 54 59.2**	**+2.2**
	0.1nm,0.3s,baz=88,slow=15,SNR=3.9						
SONM	**Songino Array**	**27.80**	**303**	P	**P**	**19 58 03.4**	**+0.4**
	0.8nm,0.8s,baz=94,slow=9.3,SNR=4.4						
H11N2	**WAKE ISLAND Hy**	**28.11**	**122**	T	T	20 27 53.8	
	baz=315						
H11N1	**WAKE ISLAND Hy**	**28.12**	**122**	T	T	20 27 56.6	
	baz=315						
H11N3	**WAKE ISLAND Hy**	**28.13**	**122**	T	T	20 27 57.9	
	baz=315						
H11S1	**WAKE ISLAND Hy**	**28.84**	**124**	T	T	20 28 49.0	
	baz=316						
H11S3	**WAKE ISLAND Hy**	**28.85**	**125**	T	T	20 28 49.6	
	baz=316						
H11S2	**WAKE ISLAND Hy**	**28.86**	**125**	T	T	20 28 48.8	
	baz=316						
MKAR	**Makanchi Array**	**44.16**	**302**	P	**P**	**20 00 20.5**	**-1.6**
	0.4nm,0.8s,baz=72,slow=9.3,SNR=2.3						
KURBB	**Kurchatov Arra**	**45.96**	**308**	P	**P**	**20 00 36.4**	**+0.1**
	0.8nm,0.5s,baz=80,slow=8.0,SNR=6.2						
WRA	**Warramunga Arr**	**57.70**	**188**	P	**P**	**20 02 04.3**	**+0.4**
	0.2nm,0.4s,baz=5.2,slow=6.7,SNR=7.5						

IDC ***18*** *20:03:02.7±1.1, 24°.95N×124°.24E, h0km, mb3.4/5, mb1 3.6/7, mb1mx3.3/67, mbtmp3.5/7, ML3.4/1, Error ellipse: s-maj=37.7km s-min=19.2km az=67.0*
ISCJB ***18*** *20:03:10.7±0.5, 25°.14N±0°.07×124°.62E±0°.05, h88km±6km, mb3.4/5, Error ellipse: s-maj=13.2km s-min=5.0km az=157.5*
JMA ***18*** *20:03:12.1±0.1, 25°.11N×124°.59E, h79km±3km, M3.2*
ISC 18 20:03:11.5±0.8, 25°.16N±0°.09×124°.60E±0°.05, h80km±10km, n19, σ0§63/31, mb3.6/5, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTJ	**Tarama**	**0.53**	**170**	P	**Pn**	**20 03 25.7**	**+0.3**
JTJ				S	**Sn**	**20 03 35.9**	**+0.2**
JIRB	**Irabujima**	**0.62**	**122**	P	**Pn**	**20 03 26.4**	**+0.2**
JIRB				S	**Sn**	**20 03 37.1**	**-0.1**
JISG	**Ishigakijimahi**	**0.63**	**205**	P	**Pn**	**20 03 26.6**	**+0.2**
JISG				S	**Sn**	**20 03 37.1**	**-0.3**
JIKM	**Ikemajima**	**0.63**	**112**	P	**Pn**	**20 03 27.0**	**+0.6**
JIKM				S	**Sn**	**20 03 38.3**	**+0.8**
JMJ	**Miyako jima 2**	**0.72**	**119**	P	**Pn**	**20 03 27.8**	**+0.5**
JMJ				S	**Sn**	**20 03 39.6**	**+0.6**
JOGS	**Gusukube**	**0.83**	**118**	P	**Pn**	**20 03 29.2**	**+0.6**
JOGS				S	**Sn**	**20 03 42.1**	**+0.8**
JIJ	**Ishigaki jima**	**0.90**	**208**	P	**Pn**	**20 03 29.1**	**-0.2**
JIJ				S	**Sn**	**20 03 41.7**	**-0.9**
JKRS	**Kuro-shima**	**1.06**	**210**	P	**Pn**	**20 03 31.6**	**+0.3**
JKRS				S	**Sn**	**20 03 46.2**	**+0.1**
IRIF	**Iriomote-Funau**	**1.14**	**224**	P	**Pn**	**20 03 32.4**	**+0.2**
IRIF				S	**Sn**	**20 03 47.9**	**+0.1**
HATJ	**Hateruma jima**	**1.32**	**214**	*e*S	**Sn**	**20 03 52.4**	**+0.7**
YOJ	**Yonaguni jima**	**1.60**	**245**	P	**Pn**	**20 03 38.9**	**+0.8**
YOJ				*e*S	**Sn**	**20 03 59.1**	**+0.8**
JYNG	**Yonagunijimaku**	**1.66**	**245**	P	**Pn**	**20 03 39.7**	**+0.8**
JYNG				*e*S	**Sn**	**20 04 00.7**	**+1.0**
JOW	**Kunigami**	**3.70**	**62**	Pn	**Pn**	**

KEV Kevo 16.91 196 *eP* **Pn 20 18 46.9 -4.3**
comp=Z,99nm,1.1s
KEV Kevo 16.91 196 *eP* **Pn 20 18 46.9 -4.3**
KEV pmax pmax
comp=Z,99nm,1.1s
JMIC Jan Mayen 17.00 238 LR LR 20 22 47.4
comp=Z,66nm,21.6s,baz=54,slow=28
ARCES ARCESS Array B 17.16 198 Pn **Pn 20 18 51.5 -2.9**
comp=Z,1.1nm,0.3s,baz=1.6,slow=9.4,SNR=20
ARCES Sn Sn 20 21 50.6 -15
comp=Z,0.4nm,0.3s,baz=18,slow=19,SNR=4.1
ARCES LR LR 20 25 14.8
comp=Z,340nm,21.3s,baz=360,slow=36
ARE0 ARCESS Array S 17.16 198 *eP* **Pn 20 18 52.2 -2.1**
SUMG Summit 17.21 271⇑*iP* **Pn 20 18 53.3 -2.1**
comp=Z,14nm,0.9s
TRO Tromso 17.22 206 *eP* **Pn 20 18 52.6 -2.4**
KIF Kilpisjarvi 17.80 204 *eP* **Pn 20 19 00.7 -1.5**
RES Resolute Bay 18.14 323 P **Pn 20 19 04.3 -2.2**
comp=Z,0.4nm,0.3s,baz=14,slow=14,SNR=12
RES S Sn 20 22 13.8 -15
comp=Z,0.1nm,0.3s,baz=306,slow=8.7,SNR=2.4
RES LR LR 20 25 43.4
comp=Z,257nm,19.0s,baz=354,slow=36
SCO Scoresbysund 18.26 252 *i* P **P 20 19 09.3 +1.1**
comp=Z,18nm,1.1s
SCO Scoresbysund 18.26 252 P **P 20 19 10.7 +2.5**
SCO pmax pmax
comp=Z,18nm,1.2s
HEF Hetta 18.33 200 *eP* **Pn 20 19 05.5 -3.4**
NRIK Noril'sk 18.51 125 P **P 20 19 07.5 -3.5**
comp=Z,1.5nm,0.3s,baz=5.2,slow=8.0,SNR=13
NRIK S Sn 20 22 20.5 -18
comp=Z,0.8nm,0.3s,baz=285,slow=20,SNR=3.3
NRIK LR LR 20 27 03.7
comp=Z,556nm,18.7s,baz=5.0,slow=40
TIXI Tiksi 18.68 81 P **Pn 20 19 13.0 -0.1**
comp=Z,0.1nm,0.3s,baz=352,slow=7.6,SNR=11
TIXI LR LR 20 25 51.0
comp=Z,269nm,19.0s,baz=350,slow=35
TIXI Tiksi 18.68 81*ceP* **Pn 20 19 13.6 +0.5**
TIXI pmax pmax
comp=Z,36nm,2.5s
APA Apatity 19.02 189⇓*iP* **P 20 19 12.3 -4.2**
APA pmax pmax
comp=Z,47nm,0.8s
APA MLR MLR
comp=Z,800nm,15.0s
STEI Steigen 19.03 210 *eP* **P 20 19 13.3 -3.3**
SGF Sodankyl 19.24 197 P **P 20 19 17.3 -1.6**
SGF pmax pmax
comp=Z,44nm,1.8s
KONS Konsvik 20.53 212 *eP* **P 20 19 28.1 -4.9**
MSF Maaselka 20.74 194 P **P 20 19 35.0 -0.2**
MSF pmax pmax
comp=Z,52nm,0.9s
MOR8 Moi Rana 20.82 210 *eP* **P 20 19 33.8 -2.3**
OUL Oulu 21.62 197 P **P 20 19 43.8 -0.9**
OUL pmax pmax
comp=Z,93nm,0.8s
TMCR Tamitsa 22.41 183 *eP* **P 20 19 53.8 +0.6**
TMCR pmax pmax
comp=Z,266nm,1.0s
NSS Namsos 22.54 213 *eP* **P 20 19 54.7 +0.1**
SFJD Kangerlussuaq 23.49 280 P **P 20 20 05.6 +1.3**
comp=Z,12nm,1.0s,baz=5.1,slow=10,SNR=4.7
SFJD LR LR 20 28 57.7
comp=Z,547nm,18.9s,baz=4.0,slow=36
JOF Joensuu 23.71 191 P **P 20 20 05.5 -1.1**
JOF pmax pmax
comp=Z,70nm,1.1s
VAF Ylistaro 23.73 201 P **P 20 20 08.1 +1.3**
VAF pmax pmax
comp=Z,31nm,1.0s
BORG Borgarnes 23.92 249 LR LR 20 28 42.9
comp=Z,68nm,18.4s,baz=4.6,slow=35
BILL Bilibino 24.34 48 *eP* **P 20 20 14.3 +1.8**
comp=Z,14nm,1.2s
BILL Bilibino 24.34 48*ceP* **P 20 20 14.3 +1.8**
BILL *e* 20 20 42.8
BILL *eS* S 20 25 42.4 +70
BILL pmax pmax
comp=Z,10.0nm,1.2s
BILL MLR MLR
comp=Z,312nm,19.0s
MOL Molde 24.66 217 *eP* **P 20 20 14.6 -0.9**
PRGR Permogore 24.96 174⇓*iP* **P 20 20 17.6 -0.5**
PRGR *e* 20 20 49.3
PRGR *eS* **S 20 24 42.9 +1.0**
PRGR pmax pmax
comp=Z,82nm,0.9s
TOLK Toolik Lake Re 25.02 9 P **P 20 20 20.1 +1.4**
baz=358,SNR=5.1
FINES FINESS Array B 25.27 197 P **P 20 20 20.3 -0.6**
comp=Z,25nm,0.9s,baz=14,slow=9.8,SNR=47
FINES LR LR 20 29 57.2
comp=Z,353nm,21.1s,baz=0.5,slow=36
FINES FINESS Array B 25.27 197 *i* P **P 20 20 20.6 -0.3**
FINES pmax pmax
comp=Z,25nm,0.9s
INK Inuvik 25.39 355 P **P 20 20 22.8 +0.9**
comp=Z,17nm,0.9s,baz=2.8,slow=12,SNR=24
INK LR LR 20 31 24.7
comp=Z,340nm,19.6s,baz=357,slow=39
INK Inuvik 25.39 355 *eP* **P 20 20 22.0 +0.1**
KLMR Klimovskoe 25.73 181 *eP* **P 20 20 23.0 -2.1**
KLMR pmax pmax
comp=Z,71nm,1.2s
KLMR Klimovskoe 25.73 181 *eP* **P 20 20 23.0 -2.1**
KLMR AMP 20 20 24.9
comp=Z,71nm,1.2s
KLMR LQ LQ 20 29 13.1
KLMR LR LR 20 29 45.6
NB2 NORSAR Subarra 26.06 213 P **P 20 20 27.8 -0.4**
comp=Z,20nm,1.7s,baz=4.2,slow=9.3
NB2 NORSAR Subarra 26.06 213 P **P 20 20 27.8 -0.4**
baz=4.2,slow=9.3
NOA NORSAR Array B 26.06 213 P **P 20 20 26.2 -2.0**
NOA LR LR 20 29 21.2
comp=Z,91nm,21.5s,baz=5.0,slow=33
HFS Hagfors 26.89 210 P **P 20 20 35.0 -0.5**
comp=Z,3.1nm,0.8s,baz=46,slow=4.3,SNR=4.5
HFS LR LR 20 31 22.8
comp=Z,114nm,19.5s,baz=3.5,slow=37
VSU Vasula 28.25 196*ceP* **P 20 20 46.3 -1.4**
VSU pmax pmax
comp=Z,73nm,1.7s
YAK Yakutsk 28.27 84 *eP* **P 20 20 46.2 -1.7**
YAK *e**PP **sP 20 20 53.3 +4.4**
YAK *e*PPP PPP 20 21 42.7
YAK *eS* **S 20 25 34.8 +0.6**
YAK pmax pmax
comp=Z,8.0nm,0.9s
YAK pmax pmax
comp=N,5.0nm,1.7s
YAK pmax pmax
comp=E,2.0nm,0.7s
YAK smax smax
comp=N,35nm,3.0s
YAK smax smax
comp=E,59nm,3.5s
YAK MLR MLR
comp=Z,478nm,23.0s
YAK MLR MLR
comp=N,837nm,24.0s
YAK MLR MLR
comp=E,151nm,25.0s
SEY Seymchan 28.72 62 P **P 20 20 52.3 +0.4**
comp=E,2.3nm,0.8s,baz=355,slow=12,SNR=5.5
SEY Seymchan 28.72 62 *i* P **P 20 20 53.1 +1.2**
ILAR Eielson Array 28.93 7 P **P 20 20 55.2 +1.4**
comp=E,3.4nm,1.0s,baz=356,slow=7.9,SNR=32
ILAR LR LR 20 31 25.9
comp=E,146nm,21.6s,baz=354,slow=34
EGAK Eagle 28.95 2 *eP* **P 20 20 54.0 0.0**
comp=E,24nm,1.7s
NRS Narsarsuaq 28.96 273 P **P 20 20 54.9 +0.8**
NRS pmax pmax
comp=Z,39nm,1.1s
SVE Sverdlovsk 30.00 158⇓*eP* **P 20 21 03.3 0.0**
SVE pmax pmax
comp=Z,32nm,1.5s
ARU Arti 30.36 160 P **P 20 21 06.4 -0.1**
comp=Z,13nm,0.9s,baz=352,slow=4.6,SNR=25
ARU LR LR 20 34 44.1
comp=Z,188nm,20.1s,baz=12,slow=39

ARU Arti 30.36 160*c iP* **P 20 21 06.2 -0.3**
ARU 20 22 03.2
ARU 20 24 03.8
ARU S **S 20 26 09.2 +2.2**
ARU SS **SnSn 20 27 44.2 +3.4**
ARU pmax pmax
comp=Z,40nm,1.7s
YKA Yellowknife Ar 30.95 338 P **P 20 21 12.0 +0.3**
comp=Z,3.9nm,0.9s,baz=1.5,slow=8.3,SNR=30
YKA PcP **PcP 20 24 06.8 -0.6**
comp=Z,1.6nm,0.8s,baz=349,slow=2.8,SNR=9.3
YKA LR LR 20 34 08.3
comp=Z,65nm,18.3s,baz=4.5,slow=37
OBN Obninsk 31.50 185 *eP* **P 20 21 15.5 -0.9**
comp=Z,215nm,1.1s
OBN Obninsk 31.50 185*c iP* **P 20 21 15.6 -0.9**
OBN *i* 20 22 21.1
OBN *i S* **S 20 26 32.4 +7.6**
OBN pmax pmax
comp=Z,77nm,1.0s
OBN MLR MLR
comp=Z,317nm,16.0s
MA2 Magadan 31.98 65 *i P* **P 20 21 20.8 +0.1**
MA2 pmax pmax
comp=Z,17nm,1.2s
MICGM Minsk 32.20 194 *e* **P 20 21 21.0 -1.7**
MNK Minsk 32.20 194 *eP* **P 20 21 21.0 -1.7**
KLNR Kaliningrad 32.24 202 *i P* **P 20 21 22.6 -0.4**
KLNR pmax pmax
comp=Z,63nm,0.9s
EKA Eskdalemuir Ar 32.35 228 P **P 20 21 24.5 +0.5**
comp=Z,0.6nm,0.7s,baz=58,slow=18,SNR=3.3
NVS Novosibirsk 32.78 134 *eP* **P 20 21 27.2 -0.5**
NVS *e* 20 22 35.2
NVS pmax pmax
comp=N,11nm,0.9s
NVS pmax pmax
comp=Z,23nm,0.9s
ZALV Zalesovo Beam 33.74 132 P **P 20 21 35.9 -0.3**
comp=Z,6.5nm,0.7s,baz=350,slow=8.4,SNR=31
ZALV PcP **PcP 20 24 14.8 -0.5**
comp=Z,1.8nm,0.7s,baz=298,slow=3.2,SNR=4.0
ZALV LR LR 20 38 18.7
comp=Z,138nm,18.6s,baz=68,slow=42
FCC Fort Churchill 34.02 319 *eP* **P 20 21 38.6 +0.1**
comp=Z,8.8nm,1.0s
FCC Fort Churchill 34.02 319 *eP* **P 20 21 38.6 +0.1**
FCC pmax pmax
comp=Z,9.0nm,1.0s
BRVK Borovoye 34.05 148 *eP* **P 20 21 39.1 +0.2**
comp=Z,68nm,1.0s
BRVK Borovoye 34.05 148*ceP* **P 20 21 39.4 +0.5**
BRVK pmax pmax
comp=Z,46nm,1.7s
BVAR Borovoye Array 34.09 148 P **P 20 21 39.7 +0.5**
comp=Z,16nm,0.8s,baz=350,slow=8.0,SNR=124
BVAR PcP **PcP 20 24 15.5 -0.8**
comp=Z,1.6nm,0.8s,baz=318,slow=1.9,SNR=3.4
BVAR LR LR 20 38 31.1
comp=Z,459nm,18.4s,baz=2.5,slow=42
DLBC Dease Lake 35.27 352 *eP* **P 20 21 51.6 +2.2**
comp=Z,32nm,1.1s
VSR Storozhevoye 35.39 182 *eP* **P 20 21 49.4 -1.0**
VSR pmax pmax
comp=Z,60nm,1.3s
VORD Divnogorie 35.64 182 *eP* **P 20 21 51.3 -1.3**
VORD pmax pmax
comp=Z,70nm,1.3s
CLL Collm 35.74 210⇑*iP* **P 20 21 53.3 -0.2**
comp=Z,18nm,1.1s
CLL *e* 20 22 02.0
CLL Collm 35.74 210⇑*iP* **P 20 21 53.3 -0.2**
CLL *e* 20 22 02.0
CLL pmax pmax
comp=Z,18nm,1.1s
AKASG Malin Array Be 35.98 192 P **P 20 21 54.7 -0.9**
comp=Z,18nm,0.8s,baz=0.2,slow=9.0,SNR=65
AKASG PcP **PcP 20 24 21.1 -0.7**
comp=Z,0.3nm,0.4s,baz=356,slow=2.9,SNR=2.7
AKASG LR LR 20 37 03.1
comp=Z,390nm,18.2s,baz=355,slow=37
KIEV Kiev 35.99 192 *eP* **P 20 21 54.1 -1.5**
comp=Z,21nm,0.9s
KIEV Kiev 35.99 192 *i* P **P 20 21 54.6 -1.0**
SNR=14
KIEV Kiev 35.99 192*c iP* **P 20 21 54.6 -1.0**
KIEV pmax pmax
comp=Z,23nm,0.9s
KSP Ksiaz 36.11 206 *eP* **P 20 21 57.2 +0.6**
KSP Ksiaz 36.11 206 *eP* **P 20 21 57.2 +0.6**
BRG Berggiesshubel 36.15 209 *eP* **P 20 21 56.9 0.0**
comp=Z,18nm,1.2s
BRG Berggiesshubel 36.15 209 *eP* **P 20 21 56.9 0.0**
BRG pmax pmax
comp=Z,18nm,1.2s
AKTO Aktyubinsk 36.35 161 P **P 20 21 58.8 +0.2**
comp=Z,16nm,0.9s,baz=353,slow=10.0,SNR=42
AKTO LR LR 20 40 39.3
comp=Z,280nm,18.5s,baz=356,slow=43
ZEA Zeya 36.38 89 *eP* **P 20 22 00.5 +1.6**
ZEA pmax pmax
comp=Z,46nm,1.4s
ZEA MLR MLR
comp=Z,200nm,16.0s
UPC Upice 36.45 207 AMS AMS 20 44 10.0
comp=Z,200nm,16.0s
IRK Irkutsk 36.47 112 *eP* **P 20 21 57.7 -2.0**
IRK *e* 20 23 21.5
IRK pmax pmax
comp=Z,33nm,1.9s
PVCC Panska Ves 36.48 208 *eP* **P 20 22 00.3 +0.6**
PVCC Panska Ves 36.48 208 *eP* **P 20 22 00.3 +0.6**
SCHQ Schefferville 36.57 292 LR LR 20 37 18.9
comp=Z,184nm,18.0s,baz=56,slow=37
DPC Dobruska-Polom 36.60 206 *eP* **P 20 22 01.4 +0.5**
DPC AMS AMS 20 44 10.0
comp=Z,200nm,16.6s
DPC Dobruska-Polom 36.60 206 *eP* **P 20 22 01.4 +0.5**
DPC MLR MLR
comp=Z,200nm,16.6s
OJC Ojcow 36.64 203 *eP* **P 20 22 01.3 +0.1**
OJC Ojcow 36.64 203 *eP* **P 20 22 01.3 +0.1**
KURK Kurchatov 36.70 139 P **P 20 22 01.9 +0.2**
KURK PcP **PcP 20 24 23.4 -0.5**
KURK Kurchatov 36.70 139*ceP* **P 20 22 01.3 -0.4**
KURK pmax pmax
comp=Z,20nm,1.0s
KURBB Kurchatov Arra 36.79 139 P **P 20 22 01.9 -0.5**
comp=Z,16nm,0.9s,baz=353,slow=8.7,SNR=90
KURBB PcP **PcP 20 24 23.4 -0.8**
comp=Z,2.4nm,0.8s,baz=349,slow=2.9,SNR=7.1
NKC Novy Kostel 36.84 211 *eP* **P 20 22 03.9 +1.0**
NKC Novy Kostel 36.84 211 *eP* **P 20 22 03.9 +1.0**
MOY Mondy 36.85 116 *eP* **P 20 22 03.3 +0.2**
MOY pmax pmax
comp=Z,29nm,1.7s
LVV L'vov 36.95 198*d iP* **P 20 22 04.2 +0.4**
LVV MLR MLR
comp=N,130nm,12.0s
LVV MLR MLR
comp=E,100nm,12.0s
LVV MLR MLR
comp=Z,110nm,13.0s
HVS Khovu-Aksy 36.99 123*d iP* **P 20 22 04.8 +0.6**
HVS pmax pmax
comp=Z,27nm,0.9s
TLY Talaya 36.99 113 *eP* **P 20 22 04.2 0.0**
TLY pmax pmax
comp=Z,10.0nm,1.4s
TLY MLR MLR
comp=Z,391nm,16.0s
PRU Pruhonice 37.02 208 *eP* **P 20 22 05.0 +0.6**
PRU *eS* **S 20 27 54.9 +4.7**
PRU AMS AMS 20 44 50.0
comp=Z,300nm,15.5s
PRU Pruhonice 37.02 208 *eP* **P 20 22 05.0 +0.6**
PRU *eS* **S 20 27 54.9 +4.7**
PRU MLR MLR
comp=Z,300nm,15.5s
OKC Ostrava-Krasne 37.07 204 *eP* **P 20 22 05.3 +0.5**
OKC *eS* **S 20 27 56.1 +5.2**
OKC AMS AMS 20 45 00.0
comp=Z,200nm,20.4s
OKC Ostrava-Krasne 37.07 204 *eP* **P 20 22 05.3 +0.5**
OKC *eS* **S 20 27 56.1 +5.2**

OKC MLR MLR
comp=Z,200nm,20.4s
GOPC GO Pecny, Ondr 37.08 208 *eP* **P 20 22 05.5 +0.5**
GOPC *eS* **S 20 27 53.4 +2.2**
GOPC AMS AMS 20 45 00.0
comp=Z,300nm,15.9s
GOPC GO Pecny, Ondr 37.08 208 *eP* **P 20 22 05.5 +0.5**
GOPC *eS* **S 20 27 53.4 +2.2**
GOPC MLR MLR
comp=Z,300nm,15.9s
MORC Moravsky Berou 37.14 205⇓*iP* **P 20 22 06.4 +0.9**
MORC Moravsky Berou 37.14 205⇓P **P 20 22 06.5 +0.9**
MORC Moravsky Berou 37.14 205 *eP* **P 20 22 05.6 +0.1**
KWP Kalwaria Pacla 37.17 199 *eP* **P 20 22 05.9 +0.2**
KWP Kalwaria Pacla 37.17 199 *eP* **P 20 22 05.9 +0.2**
NIE Niedzica 37.43 202 *eP* **P 20 22 08.4 +0.4**
NIE Niedzica 37.43 202 *eP* **P 20 22 08.4 +0.4**
VRAC Vranov 37.64 206⇓*iP* **P 20 22 10.7 +1.0**
VRAC Vranov 37.64 206⇓P **P 20 22 10.7 +1.0**
VRAC Vranov 37.64 206 *eP* **P 20 22 09.8 +0.1**
LANS Liptovska Anna 37.72 203 *eP* **P 20 22 10.9 +0.5**
LANS Liptovska Anna 37.72 203 *eP* **P 20 22 10.9 +0.5**
KRUC Moravsky 37.89 206 *eP* **P 20 22 11.8 0.0**
KHC Kasperske Hory 37.90 209 *eP* **P 20 22 13.0 +1.1**
KHC *ex* x 20 22 22.7
KHC *eS* **S 20 28 05.3 +1.6**
KHC AMS AMS 20 45 20.0
comp=Z,300nm,16.8s
KHC Kasperske Hory 37.90 209 *eP* **P 20 22 13.0 +1.1**
KHC *eS* **S 20 28 05.3 +1.6**
KHC MLR MLR
comp=Z,300nm,16.8s
WET Wettzell 37.91 210 P **P 20 22 13.3 +1.3**
CRVS Cervenica-Dubn 37.92 201 *eP* **P 20 22 12.1 0.0**
CRVS pmax pmax
comp=Z,13nm,1.3s
CRVS Cervenica-Dubn 37.92 201 *eP* **P 20 22 12.1 0.0**
JAVC Velka Javorina 38.06 205 *eP* **P 20 22 14.2 +0.9**
UZH Uzhgorod 38.18 200⇑*iP* **P 20 22 13.9 -0.3**
UZH *e* 20 22 16.3
UZH *e* 20 22 22.7
UZH *eS* **S 20 28 05.3 -2.5**
GERES GERESS Array B 38.18 209 P **P 20 22 15.1 +0.7**
comp=Z,5.4nm,0.8s,baz=11,slow=8.4,SNR=42
GERES LR LR 20 39 10.8
comp=Z,71nm,19.2s,baz=5.0,slow=38
ZAK Zakamensk 38.27 113 *eP* P 20 22 08.8 -6.3
ZAK pmax pmax
comp=Z,5.0nm,1.6s
VYHS Vyhne 38.39 204 *eP* **P 20 22 16.2 +0.2**
VYHS pmax pmax
comp=Z,51nm,2.7s
VYHS Vyhne 38.39 204 *eP* **P 20 22 16.2 +0.2**
MODS Modra-Piesok 38.55 205 *eP* **P 20 22 17.1 -0.3**
MODS pmax pmax
comp=Z,28nm,1.1s
MODS Modra-Piesok 38.55 205 *eP* **P 20 22 17.1 -0.3**
SORM Soroca 38.56 193⇓*iP* **P 20 22 17.1 -0.3**
SORM Soroca 38.56 193⇓P **P 20 22 17.1 -0.3**
TRPA Tarpa 38.67 200⇑*iP* **P 20 22 18.8 +0.5**
TRPA Tarpa 38.67 200⇑*eP* **P 20 22 18.6 +0.3**
PETK Petropavlovsk- 38.81 59 P **P 20 22 19.5 0.0**
comp=Z,6.6nm,1.0s,baz=66,slow=3.7,SNR=5.1
PETK LR LR 20 38 59.9
comp=Z,105nm,18.2s,baz=356,slow=37
CDF Champ du Feu 38.83 216 *eP* **P 20 22 20.0 +0.2**
CDF pmax pmax
comp=Z,12nm,1.3s
BFO Black Forest 38.88 215 *eP* **P 20 22 20.1 0.0**
comp=Z,4.5nm,1.1s
BFO Black Forest 38.88 215 *eP* **P 20 22 20.1 0.0**
BFO pmax pmax
comp=Z,4.0nm,1.1s
PSZ Piszkesteto 38.94 202⇑*iP* **P 20 22 21.6 +0.9**
PSZ Piszkesteto 38.94 202⇑*eP* **P 20 22 21.4 +0.7**
PSZ Piszkesteto 38.94 202⇑P **P 20 22 21.7 +1.0**
PET Petropavlovsk 38.95 58 *i* P **P 20 22 20.3 -0.3**
PET pmax pmax
comp=Z,11nm,1.0s
CONA Conrad Observa 39.04 207 *e*pP **P 20 22 22.1 +0.6**
comp=Z,15nm,1.0s,SNR=11
BURAR Bucovina Array 39.14 197⇓*iP* **P 20 22 22.7 +0.3**
BURAR Bucovina Array 39.14 197⇓P **P 20 22 22.7 +0.3**
MOA Molln 39.16 208 *e*pP **P 20 22 22.8 +0.3**
comp=Z,8.1nm,0.9s
GRR Gorron 39.18 224 *eP* **P 20 22 21.8 -0.8**
GRR pmax pmax
comp=Z,20nm,1.4s
SOP Sopron 39.26 206⇑*eP* **P 20 22 24.0 +0.7**
PRAR RASCA 39.37 196⇑*iP* **P 20 22 24.4 +0.2**
HINF Hinteralfeld 39.44 216 *eP* **P 20 22 24.8 -0.1**
HINF pmax pmax
comp=Z,10.0nm,1.2s
RETA Reutte 39.63 212 *i* pP **P 20 22 26.8 +0.3**
comp=Z,7.4nm,1.3s,SNR=5.5
ARSA Arzberg 39.73 207 *e*pP **P 20 22 28.0 +0.8**
comp=Z,3.8nm,0.9s
WATA Walderalm 39.76 211 *i* pP **P 20 22 27.9 +0.3**
comp=Z,1.0nm,0.5s
MOTA Moosalm 39.77 212 *e*pP **P 20 22 27.1 -0.6**
comp=Z,3.2nm,0.7s
DAVA Damuels 39.87 213 *i* pP **P 20 22 30.2 +1.6**
comp=Z,10nm,1.5s
KBA Koelnbreinsper 39.96 209 *i* pP **P 20 22 30.4 +1.1**
comp=Z,13nm,1.0s,SNR=6.9
KBA Koelnbreinsper 39.96 209 P **P 20 22 31.0 +1.7**
TESR Tescani 40.21 195⇑*iP* **P 20 22 30.5 -0.7**
SOKA Soboth 40.31 207 *i* pP **P 20 22 32.8 +0.7**
comp=Z,11nm,0.9s,SNR=9.7
ABTA Abfaltersbach 40.32 210 *e*pP **P 20 22 33.9 +1.7**
comp=Z,4.5nm,1.0s
MYKA Terra Mystica 40.40 209 *i* pP **P 20 22 33.9 +1.0**
comp=Z,14nm,0.9s
BEHE Becsehely 40.47 206⇑*eP* **P 20 22 34.4 +1.1**
OBKA Obir 40.49 208 *i* pP **P 20 22 34.7 +1.0**
comp=Z,22nm,0.9s,SNR=15
SIRR Siria 40.55 200⇑*iP* **P 20 22 35.5 +1.4**
AVF Avril sur Loir 40.60 220 *eP* **P 20 22 34.2 -0.2**
AVF pmax pmax
comp=Z,23nm,1.6s
MKAR Makanchi Array 40.77 136 P **P 20 22 35.0 -0.9**
comp=Z,14nm,0.9s,baz=353,slow=6.3,SNR=99
MKAR PP **PnPn 20 24 12.8 -0.7**
comp=Z,3.9nm,0.9s,baz=8.9,slow=8.6,SNR=4.5
MKAR LR LR 20 43 28.1
comp=Z,376nm,18.3s,baz=38,slow=42
BGF Bois d'Agland 40.85 220 *eP* **P 20 22 36.4 -0.1**
BGF pmax pmax
comp=Z,18nm,1.1s
VRI Vrincioaia 40.86 195⇑*iP* **P 20 22 37.4 +0.8**
VRI Vrincioaia 40.86 195⇑P **P 20 22 37.4 +0.8**
PLOR Plostina 40.88 195⇑*iP* **P 20 22 37.5 +0.7**
PLOR Plostina 40.88 195⇑P **P 20 22 37.5 +0.7**
SONM Songino Array 40.99 111 P **P 20 22 37.9 +0.2**
comp=Z,5.3nm,0.9s,baz=346,slow=7.8,SNR=28
SONM PP **PP 20 24 10.5 -1.4**
comp=Z,1.4nm,0.8s,baz=353,slow=10,SNR=3.5
SONM LR LR 20 40 09.7
comp=Z,262nm,19.1s,baz=354,slow=37
ULN Ulaanbaatar 40.99 110 *eP* **P 20 22 38.2 +0.3**
comp=Z,11nm,1.0s
ULN Ulaanbaatar 40.99 110*ceP* **P 20 22 38.0 +0.1**
ULN pmax pmax
comp=Z,21nm,1.7s
TCF Toulx Ste Croi 41.15 221 *eP* **P 20 22 38.6 -0.4**
TCF pmax pmax
comp=Z,7.0nm,1.0s
KLR Kul'dur 41.15 85 P **P 20 22 38.8 -0.2**
comp=Z,0.4nm,1.0s,baz=340,slow=11,SNR=8.3
BZS Buzias 41.20 200⇓*iP* **P 20 22 40.6 +1.2**
BZS Buzias 41.20 200⇓P **P 20 22 40.6 +1.2**
MLR Muntele Rosu 41.25 196 P **P 20 22 41.0 +1.1**
comp=Z,1.2nm,0.7s,baz=354,slow=8.7,SNR=17
MLR LR LR 20 40 22.5
comp=Z,115nm,18.3s,baz=11,slow=37
MLR Muntele Rosu 41.25 196⇑*iP* **P 20 22 41.6 +1.7**
MLR Muntele Rosu 41.25 196⇑P **P 20 22 41.6 +1.7**
VOIR 41.32 197⇓*iP* **P 20 22 41.9 +1.5**
VOIR 41.32 197⇓P **P 20 22 41.9 +1.5**
CFR Carcaliu 41.52 193⇑*iP* **P 20 22 42.5 +0.5**
CFR Carcaliu 41.52 193⇑P **P 20 22 42.5 +0.5**
GOF Gofitskoye 41.56 178 *eP* **P 20 22 43.0 +0.7**
ISR Istrita 41.61 195⇑*iP* **P 20 22 44.2 +1.4**
ISR Istrita 41.61 195⇑P **P 20 22 44.2 +1.4**

SIM Simferopol' 41.69 187 *ce*P **P 20 22 43.8 +0.4**
SIM S **S 20 29 08.1 +7.7**
SIM pmax pmax
comp=Z,13nm,0.9s
SIM MLR MLR
comp=Z,410nm,15.0s
LPL La Plagne 41.74 216 *e*P **P 20 22 44.7 +0.6**
LPL pmax pmax
comp=Z,12nm,1.2s
LPG La Plagne 41.76 216 *e*P **P 20 22 45.1 +0.8**
LPG pmax pmax
comp=Z,16nm,1.4s
ANN Anapa 41.82 184 *e*P **P 20 22 42.7 -1.7**
ANN *e*S **S 20 28 57.6 -4.7**
ANN pmax pmax
comp=Z,118nm,1.6s
ANN MLR MLR
comp=Z,245nm,12.0s
HARR Harsova 42.02 194⇑ *i*P **P 20 22 46.7 +0.7**
HARR Harsova 42.02 194 ⇑P **P 20 22 46.7 +0.7**
MDVR Moldovita 42.04 200⇑ *i*P **P 20 22 47.2 +0.9**
TLB Topalu 42.12 194⇓ *i*P **P 20 22 47.4 +0.5**
TLB Topalu 42.12 194 ⇓P **P 20 22 47.4 +0.5**
TIRR Tirgusor 42.24 193⇑ *i*P **P 20 22 48.1 +0.2**
TIRR Tirgusor 42.24 193 ⇑P **P 20 22 48.1 +0.2**
ORIF Oris-en-Rattie 42.37 217 *e*P **P 20 22 49.3 +0.2**
ORIF pmax pmax
comp=Z,4.0nm,0.8s
CAF Calviac 42.52 221 *e*P **P 20 22 50.1 -0.1**
CAF pmax pmax
comp=Z,8.0nm,1.4s
ULM Lac du Bonnet 42.60 319 P **P 20 22 50.3 -0.5**
comp=Z,8.9nm,0.9s,baz=9.0,slow=8.8,SNR=9.0
ULM LR LR 20 40 31.5
comp=Z,288nm,18.5s,baz=14,slow=36
KIV Kislovodsk 42.66 178 *e*P **P 20 22 51.3 -0.1**
comp=Z,42nm,1.0s
KIV Kislovodsk 42.66 178 *i* P **P 20 22 52.0 +0.6**
SNR=12
KIV Kislovodsk 42.66 178 *e*P **P 20 22 50.1 -1.3**
KIV pmax pmax
comp=Z,45nm,1.0s
KIV MLR MLR
comp=Z,269nm,16.0s
KVAR Kislovodsk Arr 42.66 178 LR LR 20 42 37.3
comp=Z,273nm,20.5s,slow=39
KBZ Khabaz 42.88 178 P **P 20 22 54.4 +1.3**
comp=Z,27nm,0.9s,baz=328,slow=5.7,SNR=30
KBZ PP **PP 20 24 34.1 +1.9**
comp=Z,7.6nm,0.9s,baz=335,slow=8.4,SNR=4.0
KBZ LR LR 20 42 46.3
comp=Z,278nm,21.0s,baz=356,slow=39
NCK Nalchik 43.12 177 *i* P **P 20 22 55.1 0.0**
NCK pmax pmax
comp=Z,51nm,0.9s
SBF Sospel 43.37 215 *e*P **P 20 22 57.1 -0.1**
SBF pmax pmax
comp=Z,25nm,1.2s
FRF La Foret Royal 43.70 216 *e*P **P 20 22 59.7 0.0**
FRF pmax pmax
comp=Z,12nm,1.3s
A33A Warroad 43.89 319 P **P 20 23 01.2 -0.1**
baz=3.6
USP Ospenovka 43.98 144 P **P 20 23 02.7 +0.6**
SNR=20
YSS Yuzh-Sakhalins 44.10 74⇑ *e*P **P 20 23 03.3 +0.5**
YSS *e* 20 23 06.0
YSS pmax pmax
comp=Z,20nm,0.9s
YSS MLR MLR
comp=Z,100nm,14.0s
VTS Vitosha 44.20 199 P **P 20 23 04.4 +0.5**
CHMS Chumysh 44.26 144 P **P 20 23 05.3 +1.0**
SNR=17
B34A Aery, Baudette 44.31 318 P **P 20 23 04.5 -0.1**
baz=3.6
TKM2 Tokmak 2 44.37 143 P **P 20 23 06.3 +0.9**
SNR=29
B35A Bob, Littlefor 44.40 317 P **P 20 23 05.5 +0.2**
baz=3.7
FRU Bishkek 44.42 144 *e*P **P 20 23 07.0 +1.4**
FRU *e* 20 24 52.0
FRU pmax pmax
comp=Z,90nm,2.0s
AGMN Agassiz Nation 44.55 319 P **P 20 23 06.5 0.0**
baz=3.5,SNR=5.9
EKS2 Erkin-Say 44.56 145 P **P 20 23 07.5 +0.6**
SNR=10
KBK Karagaybulak 44.61 144 P **P 20 23 08.4 +1.2**
SNR=14
PGF Pioggiola 44.63 214 *e*P **P 20 23 07.1 -0.2**
C40A Isle Royale Na 44.64 313 P **P 20 23 07.6 +0.4**
baz=3.9
AQU L'Aquila 44.68 209 P **P 20 23 09.6 +1.9**
DGMT Dagmar 44.69 327 P **P 20 23 08.1 +0.5**
baz=2.9
EYMN Ely 44.72 315 P **P 20 23 08.0 +0.2**
baz=3.8,SNR=5.6
C39A Grand Marais 44.78 314 P **P 20 23 08.1 -0.3**
baz=3.9
A04D Lummi Island 44.91 344 P **P 20 23 10.5 +1.2**
baz=1.4
C38A Sawbill Land. 44.94 315 P **P 20 23 09.7 +0.1**
baz=3.8,SNR=9.3
C36A Pine Crest Far 44.96 316 P **P 20 23 09.7 -0.1**
baz=3.7
C37A Embarrass 44.96 316 P **P 20 23 09.9 +0.1**
baz=3.7
UCH Uchtor 45.02 144 P **P 20 23 12.3 +1.4**
SNR=35
ULHL Ulahol 45.07 142 P **P 20 23 11.7 +0.8**
SNR=13
C35A Jirik Farms, M 45.07 317 P **P 20 23 10.5 -0.1**
baz=3.6
C33A Trail 45.09 319 P **P 20 23 10.4 -0.3**
baz=3.5
AML Almayashu 45.09 145 P **P 20 23 12.8 +1.5**
SNR=16
C31A Landman Farms, 45.13 321 P **P 20 23 11.0 -0.1**
baz=3.4
MDND Maddock 45.15 323 P **P 20 23 11.4 +0.2**
baz=3.2
C34A RKJ Ranch, Bem 45.16 318 P **P 20 23 11.2 -0.1**
baz=3.5
KZA Kyzart 45.20 144 P **P 20 23 13.2 +1.0**
SNR=19
NEW Newport 45.26 339 P **P 20 23 13.8 +1.6**
baz=1.9,SNR=5.4
NEW Newport 45.26 339 *e*P **P 20 23 14.0 +1.8**
comp=Z,26nm,1.5s
NEW Newport 45.26 339 *e*P **P 20 23 14.0 +1.8**
NEW pmax pmax
comp=Z,26nm,1.5s
EGMT Eagleton 45.31 332 P **P 20 23 13.1 +0.4**
baz=2.5,SNR=11
EGMT Eagleton 45.31 332 *e*P **P 20 23 12.7 0.0**
comp=Z,20nm,1.0s
B05A Bryant 45.36 344 P **P 20 23 13.8 +0.9**
baz=1.5
D41A Chassel 45.47 312 P **P 20 23 12.9 -0.9**
baz=3.9
D37A Cotton 45.54 316 P **P 20 23 14.7 +0.3**
baz=3.7,SNR=5.3
D36A Goodland 45.56 316 P **P 20 23 14.5 0.0**
baz=3.6,SNR=7.3
MDJ Mudanjiang 45.61 88 *e*P **P 20 23 14.3 -0.7**
comp=Z,24nm,1.4s
SRS Serrai 45.66 198 P **P 20 23 15.5 +0.1**
D35A Remer 45.69 317 P **P 20 23 15.2 -0.4**
baz=3.6
D34A Park Rapids 45.73 318 P **P 20 23 15.5 -0.4**
baz=3.5
E44A Grand Marais A 45.78 310 P **P 20 23 16.1 -0.2**
baz=4.0
D31A Mcclaflin, Tow 45.87 321 P **P 20 23 16.8 -0.3**
baz=3.3
FNA Florina 46.04 200 P **P 20 23 18.4 -0.1**
E38A The Farm, Brul 46.06 315 P **P 20 23 18.4 0.0**
baz=3.7
E42A Champion 46.07 311 P **P 20 23 18.4 -0.1**
baz=3.9
E43A Lone Tree Farm 46.08 311 P **P 20 23 19.0 +0.4**
baz=4.0
E41A Kenton 46.08 312 P **P 20 23 18.6 0.0**
baz=3.9
E40A Wakefield 46.14 313 P **P 20 23 19.4 +0.2**
baz=3.8

USRK Ussuriysk Ar. 46.18 85 P **P 20 23 18.9 -0.5**
comp=Z,7.1nm,0.9s,baz=354,slow=7.0,SNR=8.0
USRK PcP **PcP 20 24 54.2 -0.9**
comp=Z,1.9nm,0.7s,baz=57,slow=5.3,SNR=2.7
USRK LR LR 20 43 52.2
comp=Z,157nm,18.3s,baz=332,slow=38
E36A McGregor 46.22 317 P **P 20 23 19.9 +0.1**
baz=3.6,SNR=8.8
E35A Pequot Lakes 46.23 318 P **P 20 23 19.6 -0.2**
baz=3.5
E39A Mellen 46.24 314 P **P 20 23 19.8 -0.1**
baz=3.8
E34A Wadena 46.30 318 P **P 20 23 20.2 -0.2**
baz=3.5
E33A Westby DABS, E 46.35 319 P **P 20 23 20.7 -0.1**
baz=3.4
F44A Big Bay de Noc 46.45 310 P **P 20 23 21.2 -0.3**
baz=4.0
GNI Garni 46.47 176 P **P 20 23 22.5 +0.5**
comp=Z,13nm,0.8s,baz=45,slow=20,SNR=6.9
GNI LR LR 20 46 27.1
comp=Z,183nm,20.1s,baz=342,slow=41
GNI Garni 46.47 176 P **P 20 23 23.5 +1.5**
GNI Garni 46.47 176 *ce*P **P 20 23 23.0 +1.0**
GNI pmax pmax
comp=Z,101nm,1.7s
LAO LASA Array 46.54 329 P **P 20 23 22.9 +0.6**
baz=2.7
LAO LASA Array 46.54 329 *e*P **P 20 23 24.0 +1.7**
comp=Z,11nm,0.8s
F46A Macinaw City C 46.57 308 P **P 20 23 21.3 -1.2**
baz=4.0
MSO Missoula 46.62 336 P **P 20 23 24.1 +1.0**
baz=2.1,SNR=19
F43A Flat Rock, Esc 46.63 311 P **P 20 23 22.3 -0.7**
baz=3.9
F40A Park Falls 46.68 313 P **P 20 23 23.4 +0.1**
baz=3.8
F45A CMU Biological 46.70 309 P **P 20 23 23.4 0.0**
baz=4.0
F38A Pierce - Schro 46.72 315 P **P 20 23 24.1 +0.5**
baz=3.6,SNR=9.4
F39A Loretta 46.72 314 P **P 20 23 24.2 +0.6**
baz=3.7,SNR=6.3
F42A Maple Grove Fa 46.75 312 P **P 20 23 24.2 +0.3**
baz=3.9
ANTO Ankara 46.77 188 *e*P **P 20 23 25.0 +0.7**
comp=Z,92nm,1.2s
ANTO Ankara 46.77 188 *e*P **P 20 23 25.0 +0.7**
ANTO pmax pmax
comp=Z,92nm,1.2s
F41A Three Lakes 46.81 312 P **P 20 23 24.7 +0.3**
baz=3.8
F36A Milaca 46.88 317 P **P 20 23 24.9 -0.1**
baz=3.5,SNR=5.1
BRTR Keskin Array B 46.91 187 P **P 20 23 26.2 +0.8**
comp=Z,23nm,1.1s,baz=1.7,slow=4.1,SNR=56
BRTR PP **PP 20 25 13.2 -2.1**
comp=Z,1.4nm,0.9s,baz=354,slow=12,SNR=3.4
BRTR LR LR 20 44 35.4
comp=Z,165nm,20.7s,baz=354,slow=38
ASAJ Asahikawa 46.91 75 P **P 20 23 23.4 -1.7**
comp=Z,12nm,1.0s,baz=322,slow=9.8,SNR=9.2
ASAJ LR LR 20 43 21.1
comp=Z,188nm,20.3s,baz=359,slow=36
F35A Swanville 46.93 318 P **P 20 23 25.4 0.0**
baz=3.5
F34A Alexandria 47.02 318 P **P 20 23 26.1 +0.1**
baz=3.4
LONY Lake Ozonia 47.19 298 P **P 20 23 26.2 -1.2**
baz=4.5
G43A Wallace 47.23 311 P **P 20 23 27.4 -0.2**
baz=3.9
G42A Mountain 47.28 312 P **P 20 23 28.2 +0.2**
baz=3.8
G40A Rib Lake 47.33 313 P **P 20 23 28.5 0.0**
baz=3.7
G39A Holcombe 47.36 314 P **P 20 23 28.5 -0.2**
baz=3.6
SHO Shikotan 47.41 71 P P 20 23 38.4 +9.3
SPMN Marine on St. 47.49 316 P **P 20 23 29.7 0.0**
baz=3.5
G38A Ridgeland 47.50 315 P **P 20 23 30.0 +0.2**
baz=3.6,SNR=8.2
G36A St. Michael 47.52 317 P **P 20 23 30.0 +0.1**
baz=3.5
G35A Watkins 47.57 318 P **P 20 23 30.3 0.0**
baz=3.4
G32A Webster 47.66 320 P **P 20 23 31.0 0.0**
baz=3.2
G33A Ortonville 47.67 319 P **P 20 23 30.9 -0.2**
baz=3.3
G31A Conde 47.71 321 P **P 20 23 31.3 -0.1**
baz=3.2
MSHR Mys Shultsa 47.74 86 *i* P **P 20 23 32.7 +1.1**
BOZ Bozeman (W) 47.79 334 P **P 20 23 33.1 +0.9**
baz=2.2,SNR=20
BOZ Bozeman (W) 47.79 334 *e*P **P 20 23 33.2 +0.9**
comp=Z,29nm,1.3s
BOZ Bozeman (W) 47.79 334 *e*P **P 20 23 33.2 +1.0**
BOZ pmax pmax
comp=Z,29nm,1.3s
H41A Junction City 47.96 313 P **P 20 23 33.2 -0.1**
baz=3.7
H39A Augusta 47.97 314 P **P 20 23 33.6 +0.2**
baz=3.6
H40A Chili 47.98 314 P **P 20 23 33.8 +0.2**
baz=3.7
H42A Shiocton 48.01 312 P **P 20 23 33.7 0.0**
baz=3.8
H38A Maiden Rock 48.02 315 P **P 20 23 34.0 +0.2**
baz=3.5
H43A Windswept, Lux 48.02 311 P **P 20 23 33.3 -0.5**
baz=3.8
ESDC Sonseca Array 48.02 227 P **P 20 23 34.3 +0.4**
comp=Z,0.9nm,0.7s,baz=6.1,slow=7.7,SNR=5.7
H35A Sunnyside Ranc 48.10 318 P **P 20 23 34.6 +0.1**
baz=3.4
H37A Dierke Farm, C 48.14 316 P **P 20 23 35.2 +0.5**
baz=3.5
H36A Jessenland, He 48.18 317 P **P 20 23 35.1 +0.1**
baz=3.4
H32A Carlson Farm, 48.40 320 P **P 20 23 36.7 -0.1**
baz=3.2
SUSD Miller 48.52 322 P **P 20 23 38.1 +0.4**
baz=3.1
I43A Langenfeld Bro 48.62 311 P **P 20 23 38.5 0.0**
baz=3.7
I42A Draeger Farm, 48.65 312 P **P 20 23 38.9 +0.3**
baz=3.7
I38A Scanlan Farm, 48.65 315 P **P 20 23 38.8 +0.1**
baz=3.5
I37A Lemond, Waseca 48.72 316 P **P 20 23 39.5 +0.3**
baz=3.4
I40A Norwalk 48.72 314 P **P 20 23 39.7 +0.4**
baz=3.6
I36A Fitzsimmons Fa 48.74 317 P **P 20 23 39.6 +0.2**
baz=3.4
I39A Houston 48.80 315 P **P 20 23 39.8 -0.1**
baz=3.5
GEYT Alibeck 48.85 162 P **P 20 23 41.0 +0.7**
comp=Z,9.9nm,0.9s,baz=324,slow=7.1,SNR=6.1
GEYT LR LR 20 49 08.1
comp=Z,102nm,19.0s,baz=30,slow=42
GTA Gaotai 49.01 118 *e*P **P 20 23 40.6 -1.0**
GTA pP sP 20 23 45.8 +3.1
GTA sP pP 20 23 49.6 +7.2
GTA pmax pmax
comp=Z,5.0nm,1.8s
GTA pmax pmax
comp=Z,86nm,5.2s
GTA LR LR
comp=Z,650nm,16.7s
GTA LR LR
comp=Z,330nm,17.1s
GTA LR LR
comp=Z,910nm,19.0s
RSSD Black Hills 49.03 327 P **P 20 23 42.6 +0.7**
baz=2.8
HRV Adam Dziewonsk 49.13 295 P **P 20 23 41.2 -1.1**
baz=4.4
J43A Natural Harves 49.13 312 P **P 20 23 42.5 +0.1**
baz=3.7
ECSD EROS Data Cent 49.14 320 P **P 20 23 42.8 +0.3**
baz=3.2,SNR=23
ECSD EROS Data Cent 49.14 320 *e*P **P 20 23 42.6 +0.1**
comp=Z,44nm,1.1s
J41A Loganville 49.22 313 P **P 20 23 43.5 +0.5**
baz=3.6
J40A Soldiers Grove 49.22 314 P **P 20 23 43.3 +0.2**
baz=3.6
J42A Columbus 49.23 312 P **P 20 23 43.3 +0.2**
baz=3.7
I05D Terrebonne, OR 49.27 343 P **P 20 23 45.0 +1.5**
baz=1.4
J38A Wedel Dairy, R 49.38 316 P **P 20 23 44.1 -0.2**
baz=3.5
J37A Redenius Farm, 49.43 317 P **P 20 23 45.2 +0.5**
baz=3.4
J36A Seneca 1, Swea 49.45 317 P **P 20 23 45.4 +0.6**
baz=3.4
JFWS Jewell Farm 49.68 313 P **P 20 23 46.6 0.0**
baz=3.6
K43A Burlington 49.80 311 P **P 20 23 47.7 +0.2**
baz=3.7
I04A Tendick Farm, 49.83 344 P **P 20 23 48.6 +0.8**
baz=1.4
HLID Hailey 49.90 336 P **P 20 23 49.2 +0.8**
baz=2.0
HLID Hailey 49.90 336 *e*P **P 20 23 49.0 +0.6**
comp=Z,4.0nm,0.9s
I03D Drain, OR 49.95 345 P **P 20 23 49.5 +0.9**
baz=1.3
K39A Oelwein 49.96 315 P **P 20 23 47.9 -0.8**
baz=3.5
K37A Belmond 49.98 317 P **P 20 23 48.7 -0.1**
baz=3.4
K36A Gilmore City 50.14 317 P **P 20 23 50.5 +0.5**
baz=3.3
J05D Fort Rock, OR 50.32 343 P **P 20 23 53.6 +2.0**
baz=1.4
L43A Garden Prairie 50.34 312 P **P 20 23 51.3 -0.3**
baz=3.6
J04D Umpqua Nationa 50.38 344 P **P 20 23 53.5 +1.4**
baz=1.4
L41A Preston 50.53 314 P **P 20 23 52.6 -0.4**
baz=3.5
L39A Vinton 50.55 315 P **P 20 23 52.4 -0.8**
baz=3.4
BW06 Boulder Array 50.56 332 P **P 20 23 53.6 0.0**
baz=2.3
PDAR Pinedale Array 50.56 332 P **P 20 23 53.9 +0.3**
comp=Z,5.8nm,0.9s,baz=3.8,slow=4.5,SNR=20
PDAR LR LR 20 45 40.4
comp=Z,355nm,18.7s,baz=12,slow=36
L42A Oliver, Polo 50.56 313 P **P 20 23 53.2 -0.1**
baz=3.6
M54A Oil Creek Stat 50.56 303 P **P 20 23 53.3 0.0**
baz=4.0
L40A Anamosa 50.58 314 P **P 20 23 53.2 -0.1**
baz=3.5
K22A Casper 50.58 329 P **P 20 23 53.1 -0.5**
baz=2.5
L37A Phoenix Point, 50.62 317 P **P 20 23 53.6 -0.2**
baz=3.3
L36A Harm Buss Farm 50.69 318 P **P 20 23 54.0 -0.2**
baz=3.3
SCIA State Center 50.82 316 P **P 20 23 55.1 -0.1**
baz=3.4
N59A State Game Lan 50.95 299 P **P 20 23 56.3 +0.1**
baz=4.2
M46A Old House Fiel 51.00 309 P **P 20 23 56.4 -0.2**
baz=3.7
M44A Midewin, Midew 51.10 311 P **P 20 23 57.1 -0.2**
baz=3.6
N54A Moraine State 51.13 303 P **P 20 23 57.6 +0.1**
baz=4.0
M39A Webster 51.20 315 P **P 20 23 57.4 -0.6**
baz=3.4
M41A Milan 51.23 313 P **P 20 23 57.3 -1.0**
baz=3.5
M40A Post Highland 51.24 314 P **P 20 23 58.0 -0.4**
baz=3.4
M38A Pleasantville 51.31 316 P **P 20 23 58.6 -0.2**
baz=3.3
SSPA Standing Stone 51.34 301 P **P 20 23 57.7 -1.5**
baz=4.1
KEST Kesra 51.42 213 P **P 20 24 00.1 +0.2**
comp=Z,13nm,0.9s,baz=286,slow=1.3,SNR=11
KEST LR LR 20 46 11.3
comp=Z,125nm,19.5s,baz=266,slow=36
IDI Anoyia 51.45 197 LR LR 20 45 38.8
comp=Z,88nm,21.8s,baz=292,slow=36
N46A Monticello 51.53 310 P **P 20 24 00.3 -0.2**
baz=3.7
N45A Kentland 51.62 311 P **P 20 24 01.2 0.0**
baz=3.6
O56A Blue Knob Stat 51.74 302 P **P 20 24 02.2 0.0**
baz=4.0
N40A Mertquake, Sal 51.77 314 P **P 20 24 01.5 -0.8**
baz=3.4
HWUT Hardware Ranch 51.77 334 *e*P **P 20 24 03.0 +0.4**
comp=Z,23nm,1.1s
N39A Derby Farms, D 51.81 315 P **P 20 24 02.0 -0.6**
baz=3.3
M04C Macdoel 51.83 343 P **P 20 24 04.1 +1.1**
baz=1.4
YBH Yreka Blue Hor 51.90 344 LR LR 20 47 42.5
comp=Z,117nm,18.7s,baz=356,slow=38
N38A Joes South For 51.93 316 P **P 20 24 03.4 -0.1**
baz=3.3
N36A Muff Farm, Cla 51.98 318 P **P 20 24 03.4 -0.5**
baz=3.2
N37A Lee Faris, Mou 52.01 317 P **P 20 24 03.4 -0.8**
baz=3.2
ACSO Alum Creek Sta 52.01 306 P **P 20 24 04.3 +0.1**
baz=3.8
SFIN Lafayette 52.06 310 P **P 20 24 03.4 -1.1**
baz=3.6
OGNE Ogallala 52.13 325 P **P 20 24 05.5 +0.4**
baz=2.8
M02C Callahan 52.24 344 P **P 20 24 07.0 +1.1**
baz=1.3
N23A Red Feather La 52.31 328 P **P 20 24 07.1 +0.4**
baz=2.5
O37A Wolven Farm, M 52.59 317 P **P 20 24 08.5 0.0**
baz=3.2
KSRS Korea Array 52.64 90 P **P 20 24 08.4 -0.4**
comp=Z,3.2nm,0.9s,baz=353,slow=6.8,SNR=13
KSRS LR LR 20 46 02.0
comp=Z,75nm,19.6s,baz=336,slow=36
KSAR Wonju Array Be 52.65 90 P **P 20 24 08.4 -0.5**
KSAR Wonju Array Be 52.65 90 P **P 20 24 08.4 -0.5**
P46A Rosedale 52.83 310 P **P 20 24 09.7 -0.4**
baz=3.6
P45A Graceland, Par 52.94 311 P **P 20 24 10.8 -0.3**
baz=3.5
P42A Winchester 53.01 313 P **P 20 24 10.6 -0.9**
baz=3.4
P38A Dawn 53.11 316 P **P 20 24 11.4 -0.9**
baz=3.2,SNR=6.7
P40A Paris 53.14 315 P **P 20 24 11.6 -0.9**
baz=3.3
O20A White River Ci 53.15 330 P **P 20 24 13.1 +0.2**
baz=2.3
P37A Lathrop 53.18 317 P **P 20 24 12.0 -0.8**
baz=3.2
TIA Tai'an 53.21 101 P **P 20 24 12.1 -1.0**
TIA pmax pmax
comp=Z,6.0nm,1.2s
P39B Salisbury 53.21 315 P **P 20 24 12.3 -0.7**
baz=3.3
DUG Dugway, Tooele 53.22 335 P **P 20 24 14.0 +0.7**
baz=2.0
DUG Dugway, Tooele 53.22 335 *e*P **P 20 24 14.2 +0.9**
comp=Z,4.0nm,0.8s
DUG Dugway, Tooele 53.22 335 *e*P **P 20 24 14.2 +0.9**
DUG pmax pmax
comp=Z,4.0nm,0.8s
O03D Paynes Creek 53.32 343 P **P 20 24 14.3 +0.4**
baz=1.3
ISCO Idaho Springs 53.40 328 P **P 20 24 15.5 +0.8**
baz=2.5,SNR=7.2
ISCO Idaho Springs 53.40 328 *e*P **P 20 24 16.0 +1.2**
comp=Z,18nm,1.4s
NIL Nilore 53.53 146 *e*P **P 20 24 15.7 +0.2**
comp=Z,62nm,0.8s
NIL Nilore 53.53 146 *e*P **P 20 24 15.7 +0.2**
NIL pmax pmax
comp=Z,62nm,0.8s
MMAI Mount Meron Ar 53.59 186 P **P 20 24 16.5 +0.5**
comp=Z,7.2nm,0.9s,baz=354,slow=7.8,SNR=13
MMAI LR LR 20 49 39.5
comp=Z,88nm,18.7s,baz=330,slow=39
Q39A Willow Grove F 53.66 316 P **P 20 24 15.6 -0.8**
baz=3.2

Q40A	Laux Farm, Aux	53.67	315	P	P	20 24 15.5	-1.0
	baz=3.3						
Q41A	Truxton	53.68	314	P	P	20 24 15.3	-1.1
	baz=3.3						
Q42A	Golden Eagle	53.69	313	P	P	20 24 15.4	-1.1
	baz=3.4						
KSU1	Kansas State U	53.76	319	P	P	20 24 16.4	-0.7
	baz=3.0						
Q38A	Cooks Store, C	53.77	316	P	P	20 24 16.3	-0.9
	baz=3.2						
Q37A	Longview Farm,	53.89	317	P	P	20 24 17.1	-1.0
	baz=3.1						
KSCO	Kaye Shedlock'	54.08	325	P	P	20 24 19.5	-0.1
	baz=2.6						
CBKS	Cedar Bluff	54.17	322	P	P	20 24 19.6	-0.5
	baz=2.8						
MAJO	Matsushiro	54.19	80	*i* P	P	20 24 18.5	-1.7
MAJO				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MAT	Matsushiro	54.19	80	P	P	20 24 19.3	-0.9
MJAR	Matsushiro Arr	54.19	80	P	P	20 24 19.6	-0.7
	comp=Z,5.5nm,1.0s,baz=351,slow=7.1,SNR=14						
MJAR				LR	LR	20 48 00.4	
	comp=Z,81nm,18.1s,baz=260,slow=37						
R44A	Waltonville	54.28	312	P	P	20 24 19.5	-1.3
	baz=3.4						
R43A	Red Bud	54.29	313	P	P	20 24 19.5	-1.4
	baz=3.4						
R42A	Luebbering	54.33	314	P	P	20 24 20.1	-1.1
	baz=3.3						
R41A	Rosebud	54.34	314	P	P	20 24 20.3	-1.0
	baz=3.3,SNR=7.6						
R40A	Maddies Statio	54.38	315	P	P	20 24 20.3	-1.3
	baz=3.2						
R39A	Chumby, Stover	54.39	316	P	P	20 24 20.8	-0.9
	baz=3.2						
ASF	Jabal al Asfar	54.43	184	P	P	20 24 22.7	+0.5
	comp=Z,9.1nm,0.8s,baz=338,slow=5.4,SNR=18						
R38A	Fenwick Farm,	54.56	317	P	P	20 24 21.9	-1.0
	baz=3.1						
CCM	Cathedral Cave	54.57	314	P	P	20 24 22.1	-0.9
	baz=3.3						
S42A	Caledonia	54.84	313	P	P	20 24 23.7	-1.2
	baz=3.3						
BLA	Blacksburg	54.89	303	P	P	20 24 25.0	-0.3
	baz=3.8						
S43A	Fulton Ridge,	55.00	313	P	P	20 24 25.2	-0.9
	baz=3.3						
S39A	Bolivar	55.03	316	P	P	20 24 25.4	-0.9
	baz=3.2,SNR=6.0						
S41A	Jillco Farms,	55.06	314	P	P	20 24 25.6	-0.9
	baz=3.2,SNR=6.2						
S40A	Lebanon	55.08	315	P	P	20 24 25.7	-1.0
	baz=3.2,SNR=5.6						
NVAR	Mina Array Bea	55.11	340	P	P	20 24 28.6	+1.4
	comp=Z,2.1nm,0.8s,baz=12,slow=5.0,SNR=10						
NVAR				PcP	PcP	20 25 28.0	-0.4
	comp=Z,0.3nm,0.3s,baz=20,slow=3.0,SNR=2.6						
NVAR				LR	LR	20 49 18.6	
	comp=Z,373nm,18.3s,baz=348,slow=37						
S38A	Stockton	55.11	316	P	P	20 24 26.1	-0.8
	baz=3.1,SNR=7.1						
R11A	Troy Canyon, C	55.13	337	P	P	20 24 28.3	+1.0
	baz=1.8,SNR=16						
T49A	Edmonton	55.25	308	P	P	20 24 27.1	-0.8
	baz=3.5						
T48A	Bowling Green	55.29	309	P	P	20 24 27.7	-0.5
	baz=3.5						
T50A	Nancy	55.30	308	P	P	20 24 27.5	-0.8
	baz=3.6						
SDCO	Great Sand Dun	55.44	328	P	P	20 24 29.7	0.0
	baz=2.4						
SDCO	Great Sand Dun	55.44	328	*e*P	P	20 24 30.0	+0.4
	comp=Z,4.9nm,1.2s						
S22A	4UR Ranch, Cre	55.49	329	P	P	20 24 30.9	+0.9
	baz=2.3,SNR=14						
T43A	Greenville	55.50	313	P	P	20 24 28.9	-0.8
	baz=3.3						
T40A	Mansfield	55.53	315	P	P	20 24 29.0	-0.9
	baz=3.2						
T41A	Mountain View	55.60	314	P	P	20 24 29.3	-1.2
	baz=3.2,SNR=5.9						
T39A	Clever	55.69	316	P	P	20 24 30.1	-1.1
	baz=3.1						
TZTN	Tazewell	55.71	306	P	P	20 24 30.9	-0.4
	baz=3.6						
TZTN	Tazewell	55.71	306	*e*P	P	20 24 31.3	0.0
T38A	Diamond	55.72	317	P	P	20 24 30.2	-1.2
	baz=3.1						
U53A	Fall Branch	55.84	305	P	P	20 24 31.7	-0.5
	baz=3.6						
U48A	Cassie Pea, Po	55.89	309	P	P	20 24 31.9	-0.6
	baz=3.5						
U47A	Clarksville	56.00	310	P	P	20 24 32.6	-0.6
	baz=3.4						
T25A	Trinidad	56.01	327	P	P	20 24 33.0	-0.7
	baz=2.5						
MVCO	Mesa Verde	56.07	331	P	P	20 24 35.2	+1.0
	baz=2.2,SNR=6.5						
MVCO	Mesa Verde	56.07	331	*e*P	P	20 24 35.1	+1.0
	comp=Z,41nm,1.3s						
U42A	Revenden	56.27	314	P	P	20 24 34.5	-0.7
	baz=3.2						
U41A	Viola	56.31	314	P	P	20 24 34.5	-1.0
	baz=3.2						
U40A	Yellville	56.34	315	P	P	20 24 34.0	-1.8
	baz=3.1						
U39A	Green Forest	56.34	316	P	P	20 24 34.2	-1.6
	baz=3.1						
V52A	Sevierville	56.41	306	P	P	20 24 35.4	-0.9
	baz=3.6						
V51A	Loudon	56.49	307	P	P	20 24 34.7	-2.2
	baz=3.5						
TPNV	Topopah Spring	56.54	338	P	P	20 24 37.7	+0.3
	baz=1.7						
V53A	Saluda	56.55	306	P	P	20 24 36.6	-0.7
	baz=3.6						
V47A	Nunnelly	56.62	310	P	P	20 24 36.5	-1.2
	baz=3.4						
V50A	Pikeville	56.66	308	P	P	20 24 37.3	-0.7
	baz=3.5						
V48A	Smith Brothers	56.67	309	P	P	20 24 37.2	-0.9
	baz=3.4						
V42A	Cord	56.82	314	P	P	20 24 38.0	-1.1
	baz=3.2						
V41A	Mountainview	56.88	315	P	P	20 24 38.3	-1.3
	baz=3.1						
V40A	Witts Springs	56.89	315	P	P	20 24 38.3	-1.4
	baz=3.1						
V39A	Pettigrew	56.89	316	P	P	20 24 38.5	-1.2
	baz=3.1						
TUL1	Leonard	56.91	318	P	P	20 24 39.2	-0.6
	baz=3.0						
EIL	Elat	56.93	186	LR	LR	20 51 59.2	
	comp=Z,61nm,18.7s,baz=20,slow=39						
KMSC	Kings Mountain	56.99	304	P	P	20 24 39.8	-0.6
	baz=3.6						
W53A	Cullowhee	57.06	306	P	P	20 24 39.8	-1.2
	baz=3.6						
CWC	Cottonwood Cre	57.09	340	P	P	20 24 41.3	0.0
	baz=1.5						
JNU	Nakatsue	57.14	88	LR	LR	20 49 56.0	
	comp=Z,98nm,18.0s,baz=123,slow=37						
W50A	Signal Mountai	57.14	308	P	P	20 24 40.3	-1.2
	baz=3.5						
DAC	Darwin (Calif)	57.24	339	*e*P	P	20 24 44.0	+1.6
	comp=Z,13nm,1.4s						
DAC	Darwin (Calif)	57.24	339	*e*P	P	20 24 44.0	+1.6
DAC				pmax	pmax		
	comp=Z,13nm,1.4s						
MPMC	Manual Prospec	57.46	339	P	P	20 24 45.4	+1.4
	baz=1.6,SNR=6.3						
W41B	Gary Mavity, V	57.49	315	P	P	20 24 43.1	-0.8
	baz=3.1						
W39A	Magazine	57.53	316	P	P	20 24 42.9	-1.3
	baz=3.0						
JHJ	Hachijo jima 2	57.69	79	LR	LR	20 50 54.4	
	comp=Z,80nm,18.9s,baz=292,slow=38						
X53A	Estanollee	57.73	306	P	P	20 24 44.8	-0.8
	baz=3.5						
WUAZ	Wupatki	57.85	333	P	P	20 24 47.7	+1.1
	baz=2.0,SNR=5.6						
WUAZ	Wupatki	57.85	333	*e*P	P	20 24 47.0	+0.4
	comp=Z,25nm,1.1s						
X49A	Woodville	57.87	309	P	P	20 24 45.4	-1.2
	baz=3.4						
ISA	Isabella, Lake	57.88	340	P	P	20 24 47.5	+0.7
	baz=1.5						
X47A	Russelville	57.94	310	P	P	20 24 45.9	-1.2
	baz=3.3						
X48A	Hartselle	57.97	310	P	P	20 24 46.4	-0.9
	baz=3.4						
OXF	Oxford	58.02	312	P	P	20 24 47.3	-0.4
	baz=3.2						
AMTX	Amarillo	58.16	324	P	P	20 24 48.1	-0.6
	baz=2.6						
MIAR	Mount Ida	58.17	316	P	P	20 24 48.4	-0.3
	baz=3.0,SNR=5.6						
MIAR	Mount Ida	58.17	316	*e*P	P	20 24 48.7	0.0
	comp=Z,11nm,1.0s						
MIAR	Mount Ida	58.17	316	*e*P	P	20 24 48.7	0.0
MIAR				pmax	pmax		
	comp=Z,11nm,1.0s						
W18A	Petrified Fore	58.20	332	P	P	20 24 49.6	+0.5
	baz=2.1						
WMOK	Wichita Mounta	58.20	321	P	P	20 24 48.8	-0.1
	baz=2.8						
X40A	Basin Creek Fa	58.20	315	P	P	20 24 48.5	-0.4
	baz=3.1						
GSC	Goldstone, Bar	58.20	338	P	P	20 24 49.6	+0.5
	baz=1.6						
LSA	Lhasa	58.22	128	*e*P	P	20 24 49.5	-0.2
	comp=Z,10nm,0.9s						
LSA	Lhasa	58.22	128	P	P	20 24 50.0	+0.3
X39A	Fountain Ranch	58.23	316	P	P	20 24 48.9	-0.3
	baz=3.0,SNR=5.5						
ANMO	Albuquerque	58.27	328	P	P	20 24 50.1	+0.5
	comp=Z,4.9nm,0.9s,baz=4.3,slow=6.8,SNR=14						
ANMO				LR	LR	20 50 42.3	
	comp=Z,455nm,18.1s,baz=22,slow=37						
ANMO	Albuquerque	58.27	328	P	P	20 24 49.7	+0.1
	baz=2.3						
ANMO	Albuquerque	58.27	328	*ce*P	P	20 24 49.7	+0.1
ANMO				pmax	pmax		
	comp=Z,19nm,1.7s						
TASL	Snake Pit, Alb	58.27	328	P	P	20 24 49.8	+0.2
	baz=2.3,SNR=7.8						
TASM	ASL Pad, Albuq	58.27	328	P	P	20 24 49.7	+0.1
	baz=2.3,SNR=8.2						
Y54A	Tignall	58.34	305	P	P	20 24 48.8	-1.0
	baz=3.5						
Y53A	Monroe	58.39	306	P	P	20 24 49.2	-1.0
	baz=3.5						
Y52A	Lilburn	58.41	307	P	P	20 24 49.6	-0.7
	baz=3.5						
Y51A	Rockmart	58.42	308	P	P	20 24 49.5	-0.9
	baz=3.4						
Y50A	Piedmont	58.46	308	P	P	20 24 49.7	-1.1
	baz=3.4						
Y48A	Jasper	58.51	310	P	P	20 24 50.0	-1.1
	baz=3.3						
Y49A	Blount Mountai	58.53	309	P	P	20 24 50.4	-0.8
	baz=3.4						
Y47A	UCPARC, Winfie	58.55	310	P	P	20 24 50.4	-0.9
	baz=3.3						
Y44A	Strider, Charl	58.60	313	P	P	20 24 51.5	-0.2
	baz=3.2						
Y46A	Houston	58.62	311	P	P	20 24 51.3	-0.6
	baz=3.2						
RRX	Edison Barstow	58.63	339	P	P	20 24 52.0	+0.1
	baz=1.6						
EDW2	Edwards Air Fo	58.65	340	P	P	20 24 53.2	+1.1
	baz=1.5						
HEC	Hector,Ludlow	58.66	338	P	P	20 24 53.2	+0.9
	baz=1.6						
Y45A	Yeager Farm, C	58.67	312	P	P	20 24 52.3	+0.1
	baz=3.2						
PKM	Mcpherson Peak	58.68	341	P	P	20 24 53.6	+1.1
	baz=1.4						
Y43A	Makayla and Ka	58.69	313	P	P	20 24 52.1	-0.2
	baz=3.1						
GMRC	Granite Mounta	58.69	337	P	P	20 24 53.6	+1.1
	baz=1.7,SNR=6.6						
Y40A	Okolona	58.69	316	P	P	20 24 52.4	+0.1
	baz=3.0						
Y41A	Eaglette Beard	58.79	315	P	P	20 24 52.9	-0.1
	baz=3.1						
GOGA	Godfrey	58.83	306	P	P	20 24 52.7	-0.6
	baz=3.5						
Z53A	Monticello	58.96	306	P	P	20 24 53.3	-0.9
	baz=3.5						
Z48A	Northport	59.06	310	P	P	20 24 53.9	-1.0
	baz=3.3						
Z50A	Ashland	59.10	308	P	P	20 24 53.9	-1.3
	baz=3.4						
MSTX	Muleshoe	59.11	325	P	P	20 24 54.9	-0.5
	baz=2.5,SNR=5.7						
PDMCI	Parker Dam,Lak	59.13	336	P	P	20 24 56.2	+0.9
	baz=1.8						
Z49A	Columbiana	59.19	309	P	P	20 24 54.5	-1.3
	baz=3.3						
DANN	Dangsing	59.22	136	*e*P	P	20 24 55.9	-0.5
	comp=Z,71nm,0.9s						
BFSC	Mount Baldy Ra	59.28	339	P	P	20 24 57.8	+1.2
	baz=1.5						
IRM	Iron Mountain	59.30	337	P	P	20 24 57.6	+1.0
	baz=1.7,SNR=6.8						
PYUN	Piuthan	59.44	136	*e*P	P	20 24 56.6	-1.2
	comp=Z,64nm,1.0s						
Z40A	Long Farm, Mag	59.45	316	P	P	20 24 58.0	+0.4
	baz=3.0						
155A	Kite	59.56	305	P	P	20 24 58.7	+0.4
	baz=3.5						
154A	Montrose	59.60	306	P	P	20 24 57.8	-0.8
	baz=3.5						
GKN	Gorkha	59.61	135	*e*P	P	20 24 58.0	-0.9
	comp=Z,34nm,0.8s						
Y12C	Blythe	59.69	336	P	P	20 24 60.0	+0.7
	baz=1.7						
GUN	Gumba	59.75	133	*e*P	P	20 24 59.4	-0.8
	comp=Z,66nm,1.0s						
148A	Greensboro	59.79	310	P	P	20 24 59.1	-0.8
	baz=3.3						
KOLN	Koldanda	59.79	136	*e*P	P	20 24 59.1	-1.2
	comp=Z,18nm,0.8s						
147A	Livingston	59.80	311	P	P	20 25 00.0	+0.1
	baz=3.2						
149A	Jones	59.80	309	P	P	20 24 58.8	-1.2
	baz=3.3						
BC3	Big Chuckawall	59.81	337	P	P	20 25 01.1	+0.8
	baz=1.7						
KKN	Kakani	59.85	134	*e*P	P	20 24 59.9	-0.8
	comp=Z,63nm,1.1s						
146A	Union	59.87	311	P	P	20 25 00.3	-0.2
	baz=3.2						
PFO	Pinyon Flats O	59.88	338	P	P	20 25 01.3	+0.6
	baz=1.6						
JIRN	Jiri	60.02	133	*e*P	P	20 25 01.2	-0.8
	comp=Z,78nm,1.2s						
DMN	Daman	60.02	134	*e*P	P	20 25 01.1	-0.8
	comp=Z,20nm,0.7s						
PKIN	Phulchoki	60.06	134	*e*P	P	20 25 01.2	-1.0
	comp=Z,16nm,0.7s						
141A	Papa Simpson,	60.08	315	P	P	20 25 02.1	+0.2
	baz=3.0						
CIS	Catalina Islan	60.13	340	P	P	20 25 03.2	+0.9
	baz=1.5						
256A	Glennville	60.17	304	P	P	20 25 01.3	-1.2
	baz=3.5						
251A	Midway	60.24	308	P	P	20 25 02.0	-1.0
	baz=3.4						
255A	Hazlehurst	60.25	305	P	P	20 25 02.2	-0.9
	baz=3.5						
254A	Abbeville	60.28	306	P	P	20 25 02.2	-1.1
	baz=3.4						
252A	Lumpkin	60.30	307	P	P	20 25 02.5	-0.9
	baz=3.4						
ABTX	Abilene, Hawle	60.34	322	P	P	20 25 03.4	-0.3
	baz=2.6						
GLA	Glamis	60.40	336	P	P	20 25 05.2	+1.0
	baz=1.7						
249A	Camden	60.44	310	P	P	20 25 03.6	-0.7
	baz=3.3						
SWSC	Sam W. Stewart	60.53	337	P	P	20 25 06.0	+1.0
	baz=1.6						
244A	Avery, Jackson	60.54	313	P	P	20 25 05.2	+0.1
	baz=3.1						
MONP2	Monument Peak	60.59	338	P	P	20 25 06.5	+0.8
	baz=1.6						
121A	Cookes Peak, D	60.71	330	P	P	20 25 06.5	0.0
	baz=2.1						
RAMN	Ramite	60.74	133	*e*P	P	20 25 05.3	-1.5
	comp=Z,25nm,0.7s						
IKP	In-Ko-Pah, Jac	60.83	338	P	P	20 25 08.4	+1.3
	baz=1.6						
ODAN	Odare	60.87	132	*e*P	P	20 25 06.7	-1.0
	comp=Z,38nm,0.9s						
WHTX	Lake Whitney,	60.88	320	P	P	20 25 07.1	-0.3
	baz=2.8						
353A	Camilla	60.92	307	P	P	20 25 06.5	-1.2
	baz=3.4						
TUC	Tucson	61.03	333	P	P	20 25 09.6	+1.0
	baz=1.9						
TUC	Tucson	61.03	333	*e*P	P	20 25 09.5	+1.0
	comp=Z,22nm,1.1s						
TUC	Tucson	61.03	333	*e*P	P	20 25 09.5	+1.0
TUC				pmax	pmax		
	comp=Z,22nm,1.1s						
348A	Jackson	61.03	310	P	P	20 25 08.0	-0.4
	baz=3.2						
351A	Pinckard	61.06	308	P	P	20 25 07.7	-0.9
	baz=3.3						
347A	Saraland	61.08	311	P	P	20 25 08.1	-0.6
	baz=3.2						
341A	Kurthwood	61.35	315	P	P	20 25 10.5	-0.1
	baz=3.0						
214A	Organ Pipe Nat	61.44	334	P	P	20 25 11.4	+0.2
	baz=1.8						
MNTX	Cornudas Mount	61.47	327	P	P	20 25 10.9	-0.5
	baz=2.3						
NAZ	Nazwa, Dubai	61.70	165	P	P	20 25 12.6	-0.4
UOSS	Minazif	61.75	164	P	P	20 25 13.0	-0.5
HATD	Hatta, Dubai	61.87	164	P	P	20 25 14.0	-0.2
ASUD	Al Ashush, Dub	62.06	165	P	P	20 25 15.5	0.0
553A	Crawfordville	62.08	307	P	P	20 25 13.6	-2.0
	baz=3.3						
SHL	Shillong	62.37	127	*e*P	P	20 25 17.0	-0.8
JCT	Junction City	62.48	322	P	P	20 25 18.1	-0.1
	baz=2.6,SNR=12						
JCT	Junction City	62.48	322	*e*P	P	20 25 18.5	+0.2
	comp=Z,59nm,1.2s						
JCT	Junction City	62.48	322	*e*P	P	20 25 18.5	+0.2
JCT				pmax	pmax		
	comp=Z,59nm,1.2s						
SOHO	SOHO	62.57	164	P	P	20 25 18.0	-0.8
541A	Lake Charles	62.62	315	P	P	20 25 18.1	-1.0
	baz=2.9						
HKT	Hockley	62.84	318	*i* P	P	20 25 19.2	-1.4
HKT				pmax	pmax		
	comp=Z,29nm,1.1s						
RAYN	Ar Rayn	63.05	175	*e*P	P	20 25 22.6	+0.4
	comp=Z,16nm,1.1s						
RAYN	Ar Rayn	63.05	175	*i* P	P	20 25 22.8	+0.7
	SNR=16						
KMI	Kunming	63.39	116	P	P	20 25 25.3	+0.7
KMI				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KMI				LR	LR		
	comp=Z,230nm,19.2s						
WSAR	Wadi Sarin	63.50	162	LR	LR	20 55 40.5	
	comp=Z,49nm,19.9s,baz=58,slow=39						
MZR	Muzera	63.65	167	P	P	20 25 26.0	0.0
TXAR	Lajitas Array	63.76	325	P	P	20 25 26.9	0.0
	comp=Z,6.7nm,0.8s,baz=359,slow=3.8,SNR=22						
TXAR				LR	LR	20 53 58.2	
	comp=Z,340nm,18.6s,baz=0.0,slow=37						
BRDH	Bariadhala	65.23	128	LR	LR	20 57 07.1	
	comp=Z,402nm,18.5s,baz=344,slow=39						
LPIG	La Paz	69.19	332	LR	LR	20 57 49.1	
	comp=Z,122nm,18.0s,baz=36,slow=37						
CMAR	Chiang Mai Arr	69.80	121	P	P	20 26 04.5	-0.9
	comp=Z,3.9nm,0.8s,baz=347,slow=7.3,SNR=18						
CMAR				LR	LR	20 59 05.4	
	comp=Z,207nm,20.0s,baz=6.0,slow=38						
KOWA	Kowa	73.07	225	LR	LR	20 57 34.3	
	comp=Z,51nm,21.4s,baz=56,slow=35						
TORD	Torodi Ar. Bea	74.17	220	P	P	20 26 31.0	-0.6
	comp=Z,1.9nm,0.7s,baz=354,slow=6.6,SNR=9.4						
TORD				LR	LR	21 01 02.7	
	comp=Z,30nm,20.1s,baz=115,slow=37						
PALK	Pallekele	80.04	140	LR	LR	21 06 38.1	
	comp=Z,191nm,19.5s,baz=344,slow=39						
JTS	JuntasAbangare	81.88	306	LR	LR	21 04 37.6	
	comp=Z,50nm,18.0s,baz=92,slow=36						

*IDC **18** 20:29:31.1±2.2, 37.°17N×140.°93E, h0^{km}, mb3.5/2, mb1 3.7/4, mb1mx3.2/68, mbtmp3.6/4, ML3.4/2, Error ellipse: s-maj=39.2km s-min=30.3km az=68.0*

*ISCJB **18** 20:29:39.9±0.8, 36.°57N±0.°04×140.°64E±0.°07, h18^{km}±5^{km}, mb3.4/2, Error ellipse: s-maj=9.4km s-min=6.3km az=21.5*

*JMA **18** 20:29:40.3, 36.°58N×140.°59E, h19^{km}±1^{km}, M3.8 Broadband fault plane solution: P waves. NP1: ϕ_s16.00000°, δ53.00000°, λ-80.00000°. NP2: ϕ_s180.00000°, δ38.00000°, λ-103.00000°. Principal axes: T Plg8.0000°, Azm99.0000°; N Plg8.0000°, Azm190.0000°; P Plg79.0000°, Azm325.0000°;*

JMA Felt III J1.

ISC 18 20:29:40.2±1.1, 36.°60N±0.°05×140.°59E±0.°06, h22^{km}±6^{km}, n16, σ0^{s}97/16, 3C-1D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	Hitachi	0.02	304	⇓P	Pb	20 29 43.7	-0.3
JHO				S	Sb	20 29 45.8	-0.8
JYT	Yasato	0.49	221	⇑P	Pb	20 29 49.6	-0.5
JYT				S	Sb	20 29 56.3	-0.5
ONAJ	Iwakimizuishiy	0.53	18	⇑P	Pb	20 29 50.8	-0.1
ONAJ				S	Sb	20 29 58.4	+0.2
JSB	Shiboa	0.65	305	⇑P	Pb	20 29 53.1	+0.1
JSB				S	Sb	20 30 02.5	+0.8
JFK	Kawauchi	0.80	16	P	Pb	20 29 55.2	-0.3
MJAR	Matsushiro Arr	1.92	269	Pn	Pn	20 30 11.1	-0.5
	9.8nm,0.3s,baz=79,slow=9.2,SNR=112						
MJAR				Sn	Sb	20 30 37.6	-0.4
	18nm,0.3s,baz=93,slow=29,SNR=12						
MAT	Matsushiro	1.92	269	P	Pn	20 30 12.4	+0.8
MAT				S	Sb	20 30 38.2	+0.1
JHJ	Hachijo jima 2	3.53	191	Pn	Pn	20 30 35.0	+1.1
	5.7nm,0.3s,baz=72,slow=20,SNR=5.8						
JHJ				Sn	Sn	20 31 17.1	+2.2
	5.2nm,0.3s,baz=72,slow=19,SNR=2.7						
H11N2	WAKE ISLAND Hy	28.50	119	T	T	21 05 20.8	
	baz=312,slow=75,SNR=79						
H11N1	WAKE ISLAND Hy	28.51	119	T	T	21 05 22.5	
	baz=312,slow=75,SNR=81						
H11N3	WAKE ISLAND Hy	28.52	119	T	T	21 05 22.2	
	baz=312,slow=75,SNR=49						
H11S1	WAKE ISLAND Hy	29.19	121	T	T	21 06 12.2	
	baz=314,slow=76,SNR=179						
H11S3	WAKE ISLAND Hy	29.19	121	T	T	21 06 12.2	
	baz=314,slow=76,SNR=133						
H11S2	WAKE ISLAND Hy	29.20	121	T	T	21 06 13.8	
	baz=314,slow=76,SNR=131						
ZALV	Zalesovo Beam	41.72	313	P	P	20 37 19.7	-7.6
	0.2nm,0.3s,baz=76,slow=7.4,SNR=2.1						
WRA	Warramunga Arr	56.54	187	P	P	20 39 19.6	-1.4
	0.3nm,0.6s,baz=3.1,slow=7.5,SNR=3.8						

*ISCJB **18** 20:37:52.0±0.8, 6.°2N±0.°1×123.°8E±0.°3, h579^{km}, mb3.4/10, Error ellipse: s-maj=44.8km s-min=9.6km az=158.9*

*IDC **18** 20:37:53.7±1.9, 6.°16N×123.°75E, h579^{km}±20^{km}, mb2.9/10, mb1 3.0/11, mb1mx2.8/64, mbtmp4.0/11, Error ellipse: s-maj=52.7km s-min=8.4km az=67.0*

ISC 18 20:37:53.5±0.8, 6.°2N±0.°2×123.°8E±0.°4, h579^{km}, n11, σ0^{s}85/18, mb3.5/10, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	16.31	181	P	P	20 41 15.2	+0.3
	2.3nm,0.3s,baz=45,slow=2.9,SNR=3.6						
FITZ	Fitzroy Crossi	24.22	176	P	P	20 42 25.6	-0.4
	0.8nm,0.4s,baz=342,slow=13,SNR=4.8						
CMAR	Chiang Mai Arr	27.13	299	P	P

0.4nm,0.7s,baz=347,slow=25,SNR=6.1
ASAR ScP **ScP** **20 48 53.2 +0.8**
0.4nm,0.7s,baz=334,slow=3.0,SNR=4.0
SONM Songino Array 44.07 343 P **P** **20 45 11.5 +0.4**
0.3nm,0.4s,baz=149,slow=5.9,SNR=4.2
MKAR Makanchi Array 53.88 326 P **P** **20 46 23.7 +0.3**
2.1nm,0.5s,baz=122,slow=8.0,SNR=39
MKAR PcP **PcP** **20 47 19.4 -0.2**
0.4nm,0.5s,baz=117,slow=5.3,SNR=5.4
ZALV Zalesovo Beam 57.08 334 P **P** **20 46 44.6 -0.8**
0.4nm,0.4s,baz=131,slow=4.4,SNR=3.0
KURBB Kurchatov Arra 58.10 328 P **P** **20 46 52.5 +0.2**
2.3nm,0.5s,baz=132,slow=6.5,SNR=35
BVAR Borovoye Array 63.67 327 P **P** **20 47 28.8 0.0**
0.3nm,0.4s,baz=144,slow=13,SNR=3.8
ARCES ARCESS Array B 87.13 340 P **P** **20 49 37.6 -0.7**
1.3nm,0.9s,baz=72,slow=5.8,SNR=2.3

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*ISCJB **18** 20:40:29.1±0.8, 72°.51N±0°.08×3°.4E±0°.2, h10km, mb3.0/2, MS3.2/1, Error ellipse: s-maj=11.4km s-min=8.2km az=27.7*
*BER **18** 20:40:29.2±2.3, 72°.42N×2°.17E, h0km±76km, ML2.7(NAO)*
*NAO **18** 20:40:29.0±3.6, 72°.39N×2°.53E, ML2.7*
*IDC **18** 20:40:30.3±1.6, 72°.30N×2°.90E, h0km, mb3.1/2, mb1 3.4/6, mb1mx3.1/67, mbtmp3.4/6, ML2.8/4, MS2.9/4, Ms1 2.9/4, ms1mx2.6/35, Error ellipse: s-maj=25.2km s-min=21.0km az=29.0*
ISC 18 20:40:31.0±1.1, 72°.46N±0°.10×3°.06E±0°.09, h10km, n17, σ0973/18, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPA0	**Spitsbergen Ar**	**6.64**	**24**	Pn	**Pn**	**20 42 08.7**	**+0.2**
	baz=216,slow=16						
SPA0	**Spitsbergen Ar**	**6.64**	**24**	Pn	**Pn**	**20 42 08.7**	**+0.2**
	baz=216,slow=16						
SPITS	**Spitsbergen Ar**	**6.64**	**24**	Pn	**Pn**	**20 42 08.9**	**+0.4**
	baz=211,slow=17,SNR=13						
KBS	**Kingsbay**	**6.85**	**14**	Pn	**Pn**	**20 42 10.3**	**-1.0**
KBS	**Kingsbay**	**6.85**	**14**	Pn	**Pn**	**20 42 10.3**	**-1.0**
ARA0	**ARCESS Array S**	**7.86**	**101**	Pn	**Pn**	**20 42 26.1**	**+1.0**
	baz=304,slow=11						
ARA0				Sn	**Sn**	**20 43 53.8**	**-0.3**
	baz=310,slow=22						
ARA0	**ARCESS Array S**	**7.86**	**101**	Pn	**Pn**	**20 42 26.1**	**+1.0**
	baz=304,slow=11						
ARA0				Sn	**Sn**	**20 43 53.8**	**-0.3**
	baz=310,slow=22						
ARCES	**ARCESS Array B**	**7.86**	**101**	Pn	**Pn**	**20 42 26.1**	**+1.0**
	0.2nm,0.3s,baz=302,slow=12,SNR=7.3						
ARCES				Sn	**Sn**	**20 43 52.7**	**-1.3**
	0.1nm,0.3s,baz=306,slow=19,SNR=2.7						
NOA	**NORSAR Array B**	**11.89**	**160**	LR	LR	20 47 07.5	
	comp=Z,32nm,22.0s,baz=10.0,slow=34						
HFS	**Hagfors**	**13.06**	**156**	Pn	**Pn**	**20 43 36.0**	**-0.3**
	baz=357,slow=16						
HFS	**Hagfors**	**13.06**	**156**	Pn	**Pn**	**20 43 35.8**	**-0.4**
	0.2nm,0.3s,baz=8.8,slow=13,SNR=6.7						
HFS				LR	LR	20 47 59.1	
	comp=Z,42nm,21.7s,baz=304,slow=35						
HFS	**Hagfors**	**13.06**	**156**	Pn	**Pn**	**20 43 36.0**	**-0.3**
	baz=357,slow=16						
FINES	**FINESS Array B**	**14.12**	**130**	Pn	**Pn**	**20 43 50.2**	**-0.4**
	0.1nm,0.3s,baz=335,slow=12,SNR=3.8						
FINES				LR	LR	20 48 44.4	
	comp=Z,66nm,18.3s,baz=20,slow=35						
SFJD	**Kangerlussuaq**	**18.77**	**280**	P	**Pn**	**20 44 50.5**	**+0.3**
	2.1nm,0.3s,baz=14,slow=8.3,SNR=7.2						
GERES	**GERESS Array B**	**24.18**	**163**	P	**P**	**20 45 47.2**	**0.0**
	0.3nm,0.6s,baz=345,slow=8.3,SNR=4.8						
AKASG	**Malin Array Be**	**24.70**	**138**	P	**P**	**20 45 51.1**	**-0.6**
	0.2nm,0.4s,baz=339,slow=9.7,SNR=2.9						
KVAR	**Kislovodsk Arr**	**34.13**	**125**	LR	LR	21 01 14.0	
	comp=Z,42nm,18.2s,baz=217,slow=36						

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*IDC **18** 20:44:16.8±1.1, 11°.10S×166°.01E, h0km, mb4.0/8, mb1 4.1/9, mb1mx3.9/56, mbtmp3.9/9, ML3.2/1, MS3.5/10, Ms1 3.5/10, ms1mx3.2/49, Error ellipse: s-maj=38.6km s-min=21.9km az=120.0*
*ISCJB **18** 20:44:23.9±0.8, 11°.20S±0°.07×165°.9E±0°.2, h61km, mb4.0/8, Error ellipse: s-maj=23.4km s-min=10.6km az=179.5*
ISC 18 20:44:24.8±0.9, 11°.20S±0°.09×166°.0E±0°.2, h61km, n15, σ1964/10, mb3.8/8, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.82**	**178**	Pn	**Pn**	**20 46 54.6**	**-2.4**
	0.2nm,0.3s,baz=14,slow=19,SNR=2.6						
DZM				Sn	**Sn**	**20 48 59.3**	**+2.7**
	0.2nm,0.3s,baz=330,slow=20,SNR=2.0						
DZM				LR	LR	20 50 33.8	
	comp=Z,186nm,21.3s,baz=2.5,slow=34						
PMG	**Port Moresby**	**18.64**	**274**	LR	LR	20 54 56.2	
	comp=Z,144nm,21.9s,baz=105,slow=34						
AFI	**Afiamalu**	**21.84**	**99**	LR	LR	20 55 14.1	
	comp=Z,100nm,19.7s,baz=60,slow=30						
STKA	**Stephens Creek**	**30.52**	**224**	P	**P**	**20 50 33.1**	**+0.8**
	2.2nm,1.0s,baz=38,slow=18,SNR=2.4						
STKA				LR	LR	21 01 53.0	
	comp=Z,107nm,20.2s,baz=27,slow=34						
WRA	**Warramunga Arr**	**31.68**	**250**	P	**P**	**20 50 41.9**	**-0.9**
	1.7nm,0.9s,baz=78,slow=9.3,SNR=6.2						
GUMO	**Guam**	**32.36**	**319**	LR	LR	21 02 04.4	
	comp=Z,47nm,21.7s,baz=112,slow=33						
ASAR	**Alice Springs**	**32.97**	**244**	P	**P**	**20 50 53.4**	**-0.7**
	1.5nm,0.8s,baz=74,slow=9.8,SNR=11						
ASAR				LR	LR	21 03 39.3	
	comp=Z,87nm,18.4s,baz=54,slow=35						
ASAJ	**Asahikawa**	**59.03**	**340**	LR	LR	21 16 21.8	
	comp=Z,32nm,20.8s,baz=205,slow=33						
PETK	**Petropavlovsk-**	**64.45**	**354**	LR	LR	21 16 26.3	
	comp=Z,29nm,20.3s,baz=156,slow=30						
CMAR	**Chiang Mai Arr**	**72.42**	**294**	LR	LR	21 28 17.3	
	comp=Z,53nm,19.1s,baz=200,slow=36						
SONM	**Songino Array**	**78.95**	**324**	P	**P**	**20 56 23.2**	**+1.1**
	0.4nm,0.3s,baz=108,slow=4.7,SNR=3.7						
ILAR	**Eielson Array**	**83.58**	**18**	P	**P**	**20 56 44.9**	**-1.2**
	0.5nm,0.6s,baz=215,slow=5.6,SNR=7.7						
NVAR	**Mina Array Bea**	**85.92**	**50**	P	**P**	**20 56 59.5**	**+0.8**
	0.3nm,0.5s,baz=249,slow=7.6,SNR=3.7						
NVAR				LR	LR	21 27 29.1	
	comp=Z,45nm,20.1s,baz=120,slow=30						
MKAR	**Makanchi Array**	**93.82**	**317**	P	**P**	**20 57 35.9**	**+0.5**
	1.6nm,0.8s,baz=97,slow=6.5,SNR=15						
ZALV	**Zalesovo Beam**	**93.84**	**324**	P	**P**	**20 57 35.6**	**+0.3**
	0.5nm,0.6s,baz=76,slow=6.1,SNR=3.5						

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*IDC **18** 20:50:55.0±1.2, 38°.93N×20°.56E, h0km, mb3.5/6, mb1 3.6/9, mb1mx3.4/70, mbtmp3.5/9, ML3.3/3, Error ellipse: s-maj=25.2km s-min=18.8km az=66.0*
*BEO **18** 20:50:58.3±1.5, 38°.94N×20°.63E, h5km±6km*
*CSEM **18** 20:50:59.5±0.1, 38°.88N×20°.20E, h20km, ML3.3, Error ellipse: s-maj=4.0km s-min=1.9km az=52.0*
*THE **18** 20:51:00.7, 38°.86N×20°.24E, h22km, ML3.2/13, Error ellipse: s-maj=0.8km s-min=0.4km az=209.0*
*ATH **18** 20:51:00.1, 38°.86N×20°.31E, h38km±1km, ML3.3/15, Error ellipse: s-maj=1.7km s-min=0.8km az=255.0*
ISC 18 20:51:00.0±0.9, 38°.87N±0°.02×20°.26E±0°.02, h34km±2km, n207, σ1925/252, mb3.5/6, 4C, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKD2	**Lefkada island**	**0.32**	**104**	P	**Pb**	**20 51 08.7**	**+0.6**
LKD2				S	**Sn**	**20 51 13.7**	**+0.7**
LKD2				AML	AML	20 51 14.4	
	comp=E,20534μm,0.3s						
LKD2				AML	AML	20 51 14.4	
	comp=N,21148μm,0.3s						
LKD2	**Lefkada island**	**0.32**	**104**	P	**Pb**	**20 51 08.2**	**+0.1**
LKD2				S	**Sn**	**20 51 13.8**	**+0.7**
LKD2	**Lefkada island**	**0.32**	**104**	P	**Pb**	**20 51 08.5**	**+0.4**
LKD2				S	**Sn**	**20 51 14.0**	**+0.9**
MGNA	**Meganis**	**0.47**	**117**	P	**Pb**	**20 51 10.2**	**+0.1**
MGNA				S	**Sb**	**20 51 16.7**	**-0.3**
MGNA				AML	AML	20 51 17.6	
	comp=N,12380μm,0.2s						
MGNA				AML	AML	20 51 17.7	
	comp=E,14392μm,0.3s						
MGNA	**Meganis**	**0.47**	**117**	P	**Pb**	**20 51 10.2**	**+0.1**
MGNA				S	**Sb**	**20 51 17.1**	**0.0**
FSK	**Fiskardo**	**0.47**	**150**	P	**Pb**	**20 51 10.6**	**+0.3**
FSK				S	**Sb**	**20 51 17.2**	**0.0**
FSK	**Fiskardo**	**0.47**	**150**	P	**Pb**	**20 51 10.5**	**+0.3**
FSK				S	**Sb**	**20 51 17.7**	**+0.5**
DSL	**Palaion Diasel**	**0.70**	**68**	P	**Pb**	**20 51 14.8**	**+0.9**
DSL				S	**Sn**	**20 51 23.8**	**+0.6**
DSL				AML	AML	20 51 25.1	
	comp=E,15334μm,0.4s						
DSL				AML	AML	20 51 25.3	
	comp=N,10297μm,0.3s						
DSL	**Palaion Diasel**	**0.70**	**68**	P	**Pn**	**20 51 14.4**	**+0.9**
DSL				S	**Sb**	**20 51 24.8**	**+1.4**
DSL	**Palaion Diasel**	**0.70**	**68**	P	**Pn**	**20 51 14.4**	**+0.9**
DSL				S	**Sb**	**20 51 24.8**	**+1.4**
VLS	**Valsamata**	**0.74**	**160**	P	**Pn**	**20 51 14.7**	**+0.6**
VLS				S	**Sb**	**20 51 24.8**	**+0.5**
VLS				AML	AML	20 51 25.8	
	comp=E,8563μm,0.3s						
VLS				AML	AML	20 51 26.1	
	comp=N,8561μm,0.2s						
VLS	**Valsamata**	**0.74**	**160**	P	**Pn**	**20 51 14.3**	**+0.3**
VLS				S	**Sb**	**20 51 25.1**	**+0.7**
VLS	**Valsamata**	**0.74**	**160**	P	**Pn**	**20 51 14.6**	**+0.6**
VLS				S	**Sb**	**20 51 25.0**	**+0.7**
SGD	**Sagiada**	**0.74**	**358**	P	**Pb**	**20 51 15.6**	**+1.0**
SGD	**Sagiada**	**0.74**	**358**	P	**Pn**	**20 51 14.9**	**+0.8**
SGD	**Sagiada**	**0.74**	**358**	P	**Pn**	**20 51 14.9**	**+0.8**
PDO	**Prodromos**	**0.77**	**110**	P	**Pb**	**20 51 15.5**	**+0.5**
PDO				S	**Sb**	**20 51 26.1**	**+0.8**
PDO				AML	AML	20 51 27.2	
	comp=E,7895μm,0.3s						
PDO				AML	AML	20 51 27.2	
	comp=N,8991μm,0.4s						
PDO	**Prodromos**	**0.77**	**110**	P	**Pn**	**20 51 14.9**	**+0.5**
PDO				S	**Sb**	**20 51 26.3**	**+1.1**
PDO	**Prodromos**	**0.77**	**110**	P	**Pn**	**20 51 15.2**	**+0.8**
PDO				S	**Sb**	**20 51 26.3**	**+1.1**
KFL	**Anninata**	**0.86**	**151**	P	**Pn**	**20 51 16.1**	**+0.4**
KFL				S	**Sb**	**20 51 29.0**	**+1.1**
KFL	**Anninata**	**0.86**	**151**	P	**Pn**	**20 51 16.1**	**+0.4**
KFL				S	**Sb**	**20 51 29.0**	**+1.1**
KFL	**Anninata**	**0.86**	**151**	P	**Pn**	**20 51 16.3**	**+0.6**
KFL				S	**Sb**	**20 51 28.7**	**+0.8**
JAN	**Janina**	**0.91**	**30**	P	**Pb**	**20 51 17.8**	**+0.4**
JAN				S	**Sb**	**20 51 29.7**	**+0.4**
JAN				AML	AML	20 51 31.6	
	comp=E,1358μm,0.2s						
JAN				AML	AML	20 51 32.0	
	comp=N,1771μm,0.3s						
JAN	**Janina**	**0.91**	**30**	P	**Pn**	**20 51 17.4**	**+1.0**
JAN				S	**Sb**	**20 51 30.8**	**+1.5**
JAN	**Janina**	**0.91**	**30**	P	**Pn**	**20 51 17.4**	**+1.0**
JAN				S	**Sb**	**20 51 30.0**	**+0.7**
KASA	**Kassiopi**	**0.91**	**344**	P	**Pb**	**20 51 17.9**	**+0.6**
KASA				S	**Sb**	**20 51 30.6**	**+1.4**
KASA	**Kassiopi**	**0.91**	**344**	P	**Pb**	**20 51 18.0**	**+0.6**
KASA				S	**Sb**	**20 51 30.9**	**+1.6**
KEK	**Kerkira**	**0.92**	**337**	P	**Pn**	**20 51 17.3**	**+0.8**
KEK	**Kerkira**	**0.92**	**337**	P	**Pb**	**20 51 17.7**	**+0.2**
KEK				S	**Sb**	**20 51 30.4**	**+1.0**
KEK	**Kerkira**	**0.92**	**337**	P	**Pb**	**20 51 17.7**	**+0.2**
KEK				S	**Sb**	**20 51 30.4**	**+1.0**
PVO	**Paravola**	**1.02**	**104**	P	**Pb**	**20 51 19.6**	**+0.3**
PVO				AML	AML	20 51 35.3	
	comp=E,2604μm,0.4s						
PVO				AML	AML	20 51 37.8	
	comp=N,2140μm,0.5s						
PVO	**Paravola**	**1.02**	**104**	P	**Pn**	**20 51 19.0**	**+1.1**
PVO				S	**Sb**	**20 51 33.6**	**+1.3**
PVO	**Paravola**	**1.02**	**104**	P	**Pn**	**20 51 19.2**	**+1.3**
PVO				S	**Sb**	**20 51 33.6**	**+1.3**
VTN	**Vitineika**	**1.20**	**142**	P	**Pb**	**20 51 23.0**	**+0.8**
VTN	**Vitineika**	**1.20**	**142**	P	**Pb**	**20 51 22.3**	**+0.1**
EVR	**Evrytania**	**1.21**	**87**	P	**Pb**	**20 51 22.9**	**+0.5**
EVR	**Evrytania**	**1.21**	**87**	P	**Pn**	**20 51 21.7**	**+1.1**
EVR				S	**Sb**	**20 51 37.9**	**+0.1**
EVR	**Evrytania**	**1.21**	**87**	P	**Pn**	**20 51 21.7**	**+1.1**
EVR				S	**Sb**	**20 51 37.9**	**+0.1**
RLS	**Riolos of Patr**	**1.25**	**130**	P	**Pn**	**20 51 22.2**	**+1.2**
RLS				S	**Sn**	**20 51 37.7**	**+1.1**
RLS				AML	AML	20 51 40.5	
	comp=N,1953μm,0.4s						
RLS				AML	AML	20 51 41.0	
	comp=E,2389μm,0.6s						
RLS	**Riolos of Patr**	**1.25**	**130**	P	**Pn**	**20 51 22.1**	**+1.2**
RLS				S	**Sb**	**20 51 39.6**	**+0.9**
RLS	**Riolos of Patr**	**1.25**	**130**	P	**Pn**	**20 51 22.1**	**+1.2**
RLS				S	**Sn**	**20 51 38.0**	**+1.5**
ANX	**Ano Chora**	**1.33**	**101**	P	**Pb**	**20 51 24.6**	**+0.2**
ANX	**Ano Chora**	**1.33**	**101**	P	**Pn**	**20 51 23.7**	**+1.5**
ANX	**Ano Chora**	**1.33**	**101**	P	**Pn**	**20 51 23.7**	**+1.5**
UPR	**University Cam**	**1.33**	**116**	P	**Pb**	**20 51 24.9**	**+0.4**
UPR	**University Cam**	**1.33**	**116**	P	**Pb**	**20 51 24.1**	**-0.3**
EFP	**Efpalio**	**1.36**	**108**	P	**Pn**	**20 51 24.0**	**+1.5**
EFP				AML	AML	20 51 46.7	
	comp=N,941μm,0.5s						
EFP				AML	AML	20 51 47.7	
	comp=E,974μm,0.4s						
EFP	**Efpalio**	**1.36**	**108**	P	**Pn**	**20 51 23.9**	**+1.3**
KPRO	**Kipourio**	**1.38**	**38**	P	**Pb**	**20 51 25.5**	**+0.2**
KPRO				AML	AML	20 51 46.6	
	comp=N,985μm,0.3s						
KPRO				AML	AML	20 51 51.8	
	comp=E,816μm,0.5s						
KPRO	**Kipourio**	**1.38**	**38**	P	**Pn**	**20 51 24.7**	**+1.8**
KPRO				S	**Sb**	**20 51 42.6**	**0.0**
KPRO	**Kipourio**	**1.38**	**38**	P	**Pn**	**20 51 24.7**	**+1.8**
KPRO				S	**Sb**	**20 51 42.6**	**0.0**
DRO	**Drossia**	**1.46**	**128**	P	**Pn**	**20 51 25.6**	**+1.7**
DRO				AML	AML	20 51 52.3	
	comp=N,1550μm,0.4s						
DRO				AML	AML	20 51 53.7	
	comp=E,2278μm,0.5s						
DRO	**Drossia**	**1.46**	**128**	P	**Pn**	**20 51 25.1**	**+1.1**
DRO	**Drossia**	**1.46**	**128**	P	**Pn**	**20 51 25.1**	**+1.1**
SERG	**Sergoula**	**1.48**	**107**	P	**Pb**	**20 51 26.4**	**-0.6**
SERG	**Sergoula**	**1.48**	**107**	P	**Pn**	**20 51 25.7**	**+1.5**
SERG	**Sergoula**	**1.48**	**107**	P	**Pn**	**20 51 25.7**	**+1.5**
LAKA	**Lakka**	**1.48**	**115**	P	**Pn**	**20 51 26.1**	**+1.8**
LAKA	**Lakka**	**1.48**	**115**	P	**Pn**	**20 51 25.6**	**+1.3**
LAKA				S	**Sb**	**20 51 45.4**	**-0.2**
LAKA	**Lakka**	**1.48**	**115**	P	**Pn**	**20 51 25.6**	**+1.3**
LAKA				S	**Sb**	**20 51 45.4**	**-0.2**
PENT	**Pentalofos**	**1.49**	**27**	P	**Pb**	**20 51 27.2**	**+0.1**
PENT	**Pentalofos**	**1.49**	**27**	P	**Pn**	**20 51 26.1**	**+1.7**
PENT	**Pentalofos**	**1.49**	**27**	P	**Pn**	**20 51 26.1**	**+1.7**
TRIZ	**Trizonia**	**1.50**	**109**	P	**Pn**	**20 51 26.2**	**+1.6**
TRIZ	**Trizonia**	**1.50**	**109**	P	**Pn**	**20 51 25.9**	**+1.4**
TRIZ	**Trizonia**	**1.50**	**109**	P	**Pn**	**20 51 25.9**	**+1.4**
THL	**Klokotos Trika**	**1.53**	**62**	P	**Pn**	**20 51 26.4**	**+1.5**
THL				AML	AML	20 51 51.8	
	comp=E,447μm,0.4s						
THL				AML	AML	20 51 52.3	
	comp=N,552μm,0.6s						
THL	**Klokotos Trika**	**1.53**	**62**	P	**Pn**	**20 51 26.3**	**+1.4**
THL	**Klokotos Trika**	**1.53**	**62**	P	**Pn**	**20 51 26.3**	**+1.4**
AGG	**Agios Georgios**	**1.62**	**84**	P	**Pb**	**20 51 29.1**	**-0.3**
AGG				AML	AML	20 51 47.9	
	comp=N,1058μm,0.3s						
AGG				AML	AML	20 51 48.9	
	comp=E,2454μm,0.5s						
AGG	**Agios Georgios**	**1.62**	**84**	P	**Pn**	**20 51 27.9**	**+1.7**
AGG	**Agios Georgios**	**1.62**	**84**	P	**Pn**	**20 51 27.9**	**+1.7**
NEST	**Nestorio**	**1.66**	**21**	P	**Pb**	**20 51 30.0**	**0.0**
NEST	**Nestorio**	**1.66**	**21**	P	**Pn**	**20 51 28.7**	**+1.9**
NEST	**Nestorio**	**1.66**	**21**	P	**Pn**	**20 51 28.7**	**+1.9**
KLV	**Kalavryta, Ach**	**1.70**	**118**	P	**Pn**	**20 51 28.9**	**+1.6**
KLV	**Kalavryta, Ach**	**1.70**	**118**	P	**Pn**	**20 51 28.7**	**+1.5**
AMT	**Artemida-Makis**	**1.75**	**139**	P	**Pn**	**20 51 29.5**	**+1.5**
AMT				AML	AML	20 52 05.0	
	comp=N,781μm,0.5s						
AMT				AML	AML	20 52 06.1	
	comp=E,740μm,0.6s						
AMT	**Artemida-Makis**	**1.75**	**139**	P	**Pn**	**20 51 28.9**	**+0.9**
AMT	**Artemida-Makis**	**1.75**	**139**	P	**Pn**	**20 51 28.9**	**+0.9**
DSF	**Desfina**	**1.83**	**104**	P	**Pn**	**20 51 31.0**	**+1.9**
DSF	**Desfina**	**1.83**	**104**	P	**Pn**	**20 51 30.7**	**+1.6**
KZN	**Kozani**	**1.85**	**39**	P	**Pn**	**20 51 31.6**	**+2.3**
KZN	**Kozani**	**1.85**	**39**	P	**Pn**	**20 51 31.3**	**+1.9**
GUR	**Goura**	**1.88**	**119**	P	**Pn**	**20 51 32.0**	**+2.2**
GUR	**Goura**	**1.88**	**119**	P	**Pn**	**20 51 31.6**	**+1.8**
THAL	**Thalero**	**2.06**	**113**	P	**Pn**	**20 51 33.0**	**+0.8**
THAL	**Thalero**	**2.06**	**113**	P	**Pn**	**20 51 33.3**	**+1.1**
TRIP	**Tripoli**	**2.07**	**130**	P	**Pn**	**20 51 35.0**	**+2.5**
TRIP	**Tripoli**	**2.07**	**130**	P	**Pn**	**20 51 34.4**	**+2.0**
FNA	**Florina**	**2.10**	**24**	*e*Pg	**Pn**	**20 51 33.5**	**+0.8**
FNA				*e*Sg	**Sn**	**20 51 59.1**	**+1.4**
FNA	**Florina**	**2.10**	**24**	P	**Pn**	**20 51 34.4**	**+1.6**
FNA	**Florina**	**2.10**	**24**	*e*Pg	**Pn**	**20 51 33.5**	**+0.8**
FNA	**Florina**	**2.10**	**24**	P	**Pn**	**20 51 34.5**	**+1.8**
FNA				*e*Sg	**Sn**	**20 51 59.1**	**+1.4**
LIT	**Litokhoron**	**2.12**	**54**	P	**Pn**	**20 51 33.7**	**+0.7**
LIT	**Litokhoron**	**2.12**	**54**	P	**Pn**	**20 51 34.2**	**+1.2**
ITM	**Ithomi**	**2.14**	**142**	P	**Pn**	**20 51 34.7**	**+1.5**
ITM	**Ithomi**	**2.14**	**142**	P	**Pn**	**20 51 34.8**	**+1.5**
FYTO	**Fytoko, Volos**	**2.15**	**75**	P	**Pn**	**20 51 34.4**	**+0.9**
FYTO	**Fytoko, Volos**	**2.15**	**75**	P	**Pn**	**20 51 34.7**	**+1.3**
LKR	**Lokris**	**2.15**	**95**	P	**Pn**	**20 51 34.0**	**+0.5**
LKR	**Lokris**	**2.15**	**95**	P	**Pn**	**20 51 34.4**	**+1.0**
OHR	**Ohrid**	**2.28**	**10**	*i* Pn	**Pn**	**20 51 35.9**	**+0.6**
OHR				*i* Sn	**Sn**	**20 52 04.9**	**+2.8**
LTK	**Loutraki**	**2.29**	**111**	P	**Pn**	**20 51 35.5**	**+0.2**
LTK	**Loutraki**	**2.29**	**111**	P	**Pn**	**20 51 36.2**	**+0.9**
PYL	**PYLOS**	**2.29**	**149**	P	**Pn**	**20 51 35.2**	**-0.2**
PYL	**PYLOS**	**2.29**	**149**	P	**Pn**	**20 51 36.1**	**+0.7**
BIA	**Bitola**	**2.30**	**20**	*e*Pn	**Pn**	**20 51 38.5**	**+3.0**
SMIA	**Simia**	**2.30**	**89**	P	**Pn**	**20 51 36.1**	**+0.6**
SMIA	**Simia**	**2.30**	**89**	P	**Pn**	**20 51 36.6**	**+1.1**
XOR	**Xorichti**	**2.33**	**77**	P	**Pn**	**20 51 36.5**	**+0.5**
XOR	**Xorichti**	**2.33**	**77**	P	**Pn**	**20 51 37.0**	**+1.0**
NEO	**Neokhori**	**2.34**	**78**	P	**Pn**	**20 51 36.9**	**+0.8**
NEO	**Neokhori**	**2.34**	**78**	P	**Pn**	**20 51 37.3**	**+1.2**
VIL2	**Platees**	**2.45**	**105**	P	**Pn**	**20 51 38.0**	**+0.5**
VIL	**Vilia**	**2.49**	**105**	P	**Pn**	**20 51 38.9**	**+0.7**
SKIA	**Skiathos**	**2.51**	**82**	P	**Pn**	**20 51 38.0**	**-0.4**
SKIA	**Skiathos**	**2.51**	**82**	P	**Pn**	**20 51 39.0**	**+0.6**
GRG	**Griva**	**2.66**	**38**	P	**Pn**	**20 51 41.5**	**+1.0**
GRG	**Griva**	**2.66**	**38**	P	**Pn**	**20 51 41.9**	**+1.5**
DYR	**Agios Nikonas**	**2.67**	**141**	P	**Pn**	**20 51 41.5**	**+1.0**
DYR	**Agios Nikonas**	**2.67**	**141**	P	**Pn**	**20 51 41.9**	**+1.3**
DID	**Didima**	**2.71**	**119**	P	**Pn**	**20 51 41.4**	**+0.2**
DID	**Didima**	**2.71**	**119**	P	**Pn**	**20 51 42.1**	**+0.9**
KRND	**KRANIDI**	**2.72**	**122**	P	**Pn**	**20 51 41.0**	**-0.2**
KRND	**KRANIDI**	**2.72**	**122**	P	**Pn**	**20 51 41.9**	**+0.7**
TAR1	**Taranto**	**2.83**	**307**	*e*Pn	**Pn**	**20 51 43.3**	**+0.5**
TAR1				Sn	**Sn**	**20 52 15.1**	**-0.6**
PAIG	**Paliouri**	**2.85**	**67**	P	**Pn**	**20 51 43.7**	**+0.6**
PAIG	**Paliouri**	**2.85**	**67**	P	**Pn**	**20 51 44.3**	**+1.3**
ATH	**Athens Observa**	**2.86**	**107**	P	**Pn**	**20 51 43.6**	**+0.5**
ATH	**Athens Observa**	**2.86**	**107**	P	**Pn**	**20 51 44.3**	**+1.2**
PLG	**Polygyros**	**2.88**	**58**	P	**Pn**	**20 51 43.9**	**+0.4**
PLG	**Polygyros**	**2.88**	**58**	P	**Pn**	**20 51 44.6**	**+1.1**
ATHU	**Athens Univers**	**2.91**	**107**	P	**Pn**	**20 51 41.6**	**-2.2**
ATHU	**Athens Univers**	**2.91**	**107**	P	**Pn**	**20 51 43.6**	**-0.3**
VLY	**Voula,Athens**	**2.96**	**109**	P	**Pn**	**20 51 44.2**	**-0.3**
VLY	**Voula,Athens**	**2.96**	**109**	P	**Pn**	**20 51 45.2**	**+0.7**
FASA	**Fasano**	**2.96**	**312**	*e*Pn	**Pn**	**20 51 45.9**	**+1.3**
FASA				Sn	**Sn**	**20 52 19.2**	**+0.2**
MASS	**Massafra**	**2.98**	**307**	*e*Pn	**Pn**	**20 51 46.2**	**+1.4**
DION	**Dionisos Attik**	**2.99**	**104**	P	**Pn**	**20 51 44.9**	**-0.1**
DION	**Dionisos Attik**	**2.99**	**104**	P	**Pn**	**20 51 45.8**	**+0.8**
VLI	**Veliai**	**3.02**	**135**	P	**Pn**	**20 51 46.7**	**+1.4**
VLI	**Veliai**	**3.02**	**135**	P	**Pn**	**20 51 47.0**	**+1.7**
VAY	**Valandovo**	**3.02**	**35**	*e*Pg	**Pn**	**20 51 48.3**	**+2.9**
VAY	**Valandovo**	**3.02**	**35**	*i* Pn	**Pn**	**20 51 44.9**	**-0.5**
VAY	**Valandovo**	**3.02**	**35**	*e*Pg	**Pn**	**20 51 48.3**	**+2.9**
KNT	**Kendrikon**	**3.06**	**41**	P	**Pn**	**20 51 47.1**	**+1.2**
KNT	**Kendrikon**	**3.06**	**41**	P	**Pn**	**20 51 47.5**	**+1.6**
SOH	**Sokhos**	**3.08**	**50**	P	**Pn**	**20 51 47.3**	**+1.1**
SOH				AML	AML	20 52 24.9	
	comp=E,215μm,0.8s						
SOH				AML	AML	20 52 25.5	
	comp=N,161μm,0.6s						
SOH	**Sokhos**	**3.08**	**50**	P	**P

n64,σ0°88/114, 43C-34D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOTS	**Kotyrbulak**	**0.39**	**301**	*e*P	**Pb**	**21 07 50.0**	**-0.1**
	158nm,0.1s						
KOTS				*e*S	**Sb**	**21 07 55.4**	**-0.6**
	195nm,0.1s						
MDOK	**Medeo**	**0.40**	**289**	⇓P	**Pb**	**21 07 50.0**	**-0.2**
	82nm,0.4s						
MDOK				⇓S	**Sb**	**21 07 55.8**	**-0.7**
	59nm,0.3s						
MDOK	**Medeo**	**0.40**	**289**	⇓*i*P	**Pb**	**21 07 50.1**	**-0.2**
	baz=85						
MDOK				⇑*i*S	**Sb**	**21 07 55.6**	**-0.8**
	baz=85						
MDOK	**Medeo**	**0.40**	**289**	⇓*i*P	**Pb**	**21 07 50.1**	**-0.2**
	258nm,0.1s						
MDOK				⇑*i*S	**Sb**	**21 07 55.7**	**-0.7**
	213nm,0.2s						
TNSS	**Tian-Shan**	**0.45**	**270**	⇑*i*P	**Pb**	**21 07 51.2**	**-0.1**
	baz=67						
TNSS				⇑*i*S	**Sb**	**21 07 57.7**	**-0.5**
	baz=67						
TNSS	**Tian-Shan**	**0.45**	**270**	⇑*i*P	**Pb**	**21 07 51.2**	**-0.1**
	104nm,0.4s						
TNSS				⇑*i*S	**Sb**	**21 07 57.7**	**-0.5**
	189nm,0.3s						
KNDC	**Almaty**	**0.47**	**293**	⇑P	**Pb**	**21 07 51.6**	**+0.1**
	38nm,0.4s						
KNDC				⇑S	**Sb**	**21 07 58.7**	**+0.2**
	70nm,0.2s						
AAA	**Alma-Ata**	**0.51**	**290**	*e*P	**Pb**	**21 07 52.6**	**+0.5**
	baz=87						
AAA				*e*S	**Sb**	**21 07 59.8**	**+0.4**
	baz=87						
AAA	**Alma-Ata**	**0.51**	**290**	*e*P	**Pb**	**21 07 52.5**	**+0.5**
	406nm,0.1s						
AAA				*e*S	**Sb**	**21 07 59.8**	**+0.4**
	235nm,0.2s						
SATY	**Saty**	**0.62**	**88**	⇑*i*P	**Pb**	**21 07 54.3**	**+0.3**
	176nm,0.1s						
SATY				⇑*i*S	**Sb**	**21 08 02.9**	**+0.2**
	1μm,0.1s						
KURS	**Kuram**	**0.63**	**44**	⇑*i*P	**Pb**	**21 07 54.3**	**+0.1**
	baz=46						
KURS				⇓*i*S	**Sb**	**21 08 02.9**	**-0.1**
	baz=46						
KURS	**Kuram**	**0.63**	**44**	⇑*i*P	**Pb**	**21 07 54.3**	**+0.1**
	7.8nm,0.2s						
KURS				⇓*i*S	**Sb**	**21 08 02.9**	**-0.1**
	144nm,0.4s						
ZHN	**Zhinishke**	**0.65**	**78**	*e*P	**Pb**	**21 07 54.4**	**-0.2**
	baz=81						
ZHN				*e*S	**Sb**	**21 08 03.2**	**-0.5**
	baz=81						
ZHN	**Zhinishke**	**0.65**	**78**	*e*P	**Pb**	**21 07 54.4**	**-0.2**
	92nm,0.1s						
ZHN				*e*S	**Sb**	**21 08 03.1**	**-0.5**
	1μm,0.2s						
IZV	**Izvestkoviy**	**0.70**	**270**	*e*P	**Pb**	**21 07 55.5**	**+0.1**
	baz=68						
IZV				*e*S	**Sb**	**21 08 05.3**	**+0.3**
	baz=68						
IZV	**Izvestkoviy**	**0.70**	**270**	*e*P	**Pb**	**21 07 55.5**	**+0.1**
	48nm,0.1s						
IZV				*e*S	**Sb**	**21 08 05.4**	**+0.3**
	338nm,0.3s						
PRZ	**Przheval'sk**	**0.83**	**132**	⇑*i*P	**Pn**	**21 07 59.1**	**+0.3**
	baz=32						
PRZ				⇑*i*S	**Sn**	**21 08 11.0**	**-0.1**
	baz=32						
MTBS	**Maitube**	**0.84**	**277**	⇑*i*P	**Pb**	**21 07 57.9**	**+0.2**
	baz=75						
MTBS				⇑*i*S	**Sb**	**21 08 09.4**	**+0.4**
	baz=75						
MTBS	**Maitube**	**0.84**	**277**	⇑*i*P	**Pb**	**21 07 57.9**	**+0.2**
	33nm,0.2s						
MTBS				⇑*i*S	**Sb**	**21 08 09.3**	**+0.4**
	70nm,0.4s						
CHKK	**Chushkaly**	**0.92**	**333**	*e*P	**Pg**	**21 07 59.2**	**+0.3**
	baz=33						
CHKK				*e*S	**Sg**	**21 08 11.4**	**+0.5**
	baz=33						
CHKK	**Chushkaly**	**0.92**	**333**	*e*P	**Pg**	**21 07 59.2**	**+0.3**
	33nm,0.1s						
CHKK				*e*S	**Sg**	**21 08 11.4**	**+0.5**
	1μm,0.2s						
KPKS	**Kokpek**	**0.92**	**62**	*e*P	**Pn**	**21 07 59.5**	**-0.6**
	baz=65						
KPKS				*e*S	**Sb**	**21 08 11.9**	**+0.4**
	baz=65						
KPKS	**Kokpek**	**0.92**	**62**	*e*P	**Pn**	**21 07 59.5**	**-0.6**
	60nm,0.1s						
KPKS				*e*S	**Sb**	**21 08 11.8**	**+0.4**
	258nm,0.3s						
KTBS	**Karatobe**	**0.93**	**317**	*e*P	**Pn**	**21 07 59.6**	**-0.5**
	17nm,0.1s						
KTBS				*e*S	**Sg**	**21 08 11.8**	**+0.5**
	190nm,0.2s						
UZB	**Uzynbulak**	**1.07**	**84**	*e*P	**Pg**	**21 08 01.8**	**0.0**
	baz=85						
UZB				*e*S	**Sg**	**21 08 16.0**	**+0.2**
	baz=85						
UZB	**Uzynbulak**	**1.07**	**84**	*e*P	**Pg**	**21 08 01.8**	**0.0**
	59nm,0.1s						
UZB				*e*S	**Sg**	**21 08 16.0**	**+0.2**
	161nm,0.1s						
KST	**Kastek**	**1.17**	**271**	⇑*i*P	**Pg**	**21 08 03.7**	**0.0**
	baz=69						
KST				⇑*i*S	**Sg**	**21 08 19.7**	**+0.7**
	baz=69						
KST	**Kastek**	**1.17**	**271**	⇑*i*P	**Pg**	**21 08 03.7**	**0.0**
	28nm,0.2s						
KST				⇑*i*S	**Sg**	**21 08 19.7**	**+0.7**
	45nm,0.4s						
ARXS	**Arharly**	**1.19**	**9**	*e*P	**Pg**	**21 08 03.9**	**-0.2**
	42nm,0.1s						
ARXS				*e*S	**Sn**	**21 08 19.4**	**-0.5**
	52nm,0.1s						
KUU	**Kurty**	**1.24**	**314**	⇓*i*P	**Pg**	**21 08 05.0**	**0.0**
	baz=13						
KUU				⇓*i*S	**Sn**	**21 08 20.8**	**-0.2**
	baz=13						
KUU	**Kurty**	**1.24**	**314**	⇓*i*P	**Pg**	**21 08 05.0**	**0.0**
	14nm,0.1s						
KUU				⇓*i*S	**Sn**	**21 08 20.8**	**-0.2**
	478nm,0.2s						
ULHL	**Ulahol**	**1.26**	**231**	⇓P	**Pg**	**21 08 05.7**	**+0.4**
	19nm,0.2s,SNR=158						
ULHL				⇓S	**Sg**	**21 08 22.3**	**+0.7**
	63nm,0.1s						
ULHL	**Ulahol**	**1.26**	**231**	⇓*i*P	**Pg**	**21 08 05.6**	**+0.3**
	baz=30						
ULHL				⇓*i*S	**Sg**	**21 08 22.2**	**+0.6**
	baz=30						
DGS	**Degeres**	**1.33**	**280**	*e*P	**Pg**	**21 08 06.5**	**-0.2**
	baz=78						
DGS				*e*S	**Sg**	**21 08 24.2**	**+0.2**
	baz=78						
DGS	**Degeres**	**1.33**	**280**	*e*P	**Pg**	**21 08 06.5**	**-0.2**
	56nm,0.3s						
DGS				*e*S	**Sg**	**21 08 24.2**	**+0.2**
	114nm,0.2s						
SHLS	**Shalkode**	**1.40**	**84**	*e*P	Pg	21 08 13.0	+5.0
	baz=86						
SHLS				*e*S	Sg	21 08 35.4	+9.3
	baz=86						
SHLS	**Shalkode**	**1.40**	**84**	*e*P	Pg	21 08 12.9	+5.0
	19nm,0.2s						
SHLS				*e*S	Sg	21 08 35.4	+9.3
	98nm,0.2s						
PDGK	**Podgornoye**	**1.44**	**78**	⇑P	**Pb**	**21 08 08.0**	**0.0**
	13nm,0.4s						
PDGK				⇓S	**Sg**	**21 08 27.2**	**-0.2**
	60nm,0.6s						
PDGK	**Podgornoye**	**1.44**	**78**	⇑*i*P	**Pb**	**21 08 08.0**	**0.0**
	baz=79						
PDGK				⇑*i*S	**Sg**	**21 08 27.9**	**+0.4**
	baz=79						
TKM2	**Tokmak 2**	**1.45**	**266**	⇓P	**Pb**	**21 08 08.5**	**+0.3**
	4.5nm,0.4s						
TKM2				⇑S	**Sg**	**21 08 28.6**	**+0.8**
	23nm,0.3s						
TKM2	**Tokmak 2**	**1.45**	**266**	⇑P	**Pg**	**21 08 09.0**	**0.0**
	9.7nm,0.1s,SNR=22						
TKM2	**Tokmak 2**	**1.45**	**266**	⇑*i*P	**Pb**	**21 08 07.8**	**-0.4**
	baz=65						
TKM2				⇑*i*S	**Sb**	**21 08 27.2**	**+0.5**
	baz=65						
KZA	**Kyzart**	**1.96**	**242**	⇓P	**Pg**	**21 08 18.4**	**-0.3**
	3.0nm,0.1s,SNR=17						
KZA	**Kyzart**	**1.96**	**242**	⇑*i*P	**Pb**	**21 08 17.4**	**+0.4**
	baz=41						
KZA				⇑*i*S	**Sg**	**21 08 43.6**	**-0.6**
	baz=41						
KBK	**Karagaybulak**	**1.96**	**260**	⇑P	**Pg**	**21 08 18.1**	**-0.7**
	4.1nm,0.1s,SNR=21						
KBK				⇑S	**Sg**	**21 08 44.7**	**+0.5**
	9.7nm,0.1s						
KBK	**Karagaybulak**	**1.96**	**260**	⇓*i*P	**Pb**	**21 08 17.1**	**+0.2**
	baz=59						
KBK				⇓*i*S	**Sb**	**21 08 42.7**	**+1.3**
	baz=59						
NRN	**Naryn**	**1.98**	**216**	⇓*i*P	**Pg**	**21 08 18.7**	**-0.4**
	baz=16						
NRN				⇓*i*S	**Sg**	**21 08 45.4**	**+0.6**
	baz=16						
TDK	**Taldyqorghan**	**2.06**	**17**	*e*P	**Pb**	**21 08 18.7**	**+0.2**
	39nm,0.2s						
TDK				*e*S	**Sg**	**21 08 45.5**	**-1.8**
	94nm,0.4s						
CHMS	**Chumysh**	**2.06**	**270**	⇓P	**Pb**	**21 08 19.1**	**+0.5**
	7.6nm,0.1s,SNR=5.7						
CHMS	**Chumysh**	**2.06**	**270**	⇓*i*P	**Pb**	**21 08 17.8**	**-0.8**
	baz=69						
CHMS				⇓*i*S	**Sb**	**21 08 44.2**	**0.0**
	baz=69						
DJR	**Jarkent**	**2.07**	**50**	⇓*i*P	**Pb**	**21 08 18.6**	**-0.1**
	18nm,0.2s						
DJR				⇓*i*S	**Sb**	**21 08 45.1**	**+0.6**
	78nm,0.4s						
FRU1	**Bishkek**	**2.17**	**265**	⇑*e*P	**Pb**	**21 08 19.5**	**-0.9**
	baz=64						
FRU1				⇑*i*S	**Sb**	**21 08 47.7**	**+0.5**
	baz=64						
USP	**Ospenovka**	**2.25**	**277**	⇑P	**Pb**	**21 08 22.1**	**+0.3**
	30nm,0.3s,SNR=58						
USP	**Ospenovka**	**2.25**	**277**	⇑*e*P	**Pb**	**21 08 20.8**	**-1.1**
	baz=76						
USP				⇑*i*S	**Sb**	**21 08 49.3**	**-0.4**
	baz=76						
UCH	**Uchtor**	**2.39**	**251**	⇑P	**Pg**	**21 08 26.1**	**-0.9**
	9.9nm,0.4s,SNR=11						
UCH	**Uchtor**	**2.39**	**251**	⇓*i*P	**Pb**	**21 08 24.0**	**-0.4**
	baz=51						
UCH				⇓*i*S	**Sb**	**21 08 54.3**	**+0.2**
	baz=51						
KAPS	**Kapalarasan**	**2.59**	**29**	*e*P	**Pb**	**21 08 28.7**	**+1.1**
	5.3nm,0.2s						
KAPS				*e*S	**Sg**	**21 09 02.0**	**-2.4**
	41nm,0.4s						
EKS2	**Erkin-Say**	**2.81**	**264**	⇑P	**Pb**	**21 08 31.1**	**-0.3**
	1.2nm,0.1s,SNR=11						
AML	**Almayashu**	**3.00**	**254**	⇓P	**Pb**	**21 08 35.1**	**+0.4**
	2.6nm,0.2s,SNR=8.2						
AML	**Almayashu**	**3.00**	**254**	⇓*i*P	**Pb**	**21 08 32.1**	**-2.6**
	baz=53						
AML				⇓*i*S	**Sb**	**21 09 08.8**	**-2.7**
	baz=53						
MNAS	**Manas**	**3.77**	**263**	⇑Pg	**Pb**	**21 08 49.8**	**+2.1**
	1.3nm,0.6s						
MNAS				⇑Lg	Lg	21 09 40.0	
	2.7nm,0.6s						
SFK	**Sufi-Kurgan**	**4.29**	**227**	⇓Lg	Lg	21 09 58.5	
	5.0nm,0.6s						
MK31	**Makanchi Array**	**5.04**	**40**	⇓Pn	**Pn**	**21 08 59.4**	**+2.8**
	0.1nm,0.2s,baz=245,slow=15,SNR=6.5						
MK31				⇓Pg	**Pg**	**21 09 14.2**	**-3.4**
	0.3nm,0.3s,baz=223,slow=15,SNR=3.9						
MK31				Sn	**Sn**	**21 09 55.9**	**+1.2**
	0.5nm,0.3s,baz=215,slow=27,SNR=8.1						
MK31				Lg	Lg	21 10 19.4	
	2.1nm,0.6s,baz=218,slow=29,SNR=8.0						
KK31	**Karatay Array**	**5.17**	**273**	⇑Pg	**Pg**	**21 09 15.9**	**-4.1**
	0.6nm,0.5s,baz=85,slow=15,SNR=11						
KK31				Lg	Lg	21 10 26.5	
	1.5nm,0.5s,baz=84,slow=29,SNR=8.7						

ISCJB ***18*** *21:39:01.3±0.6, 38°.03N±0°.02×26°.17E±0°.04, h9km±5km, Error ellipse: s-maj=4.9km s-min=3.3km az=155.6*
CSEM ***18*** *21:39:01.9±0.1, 38°.04N×26°.19E, h15km, ML2.8, Error ellipse: s-maj=2.1km s-min=1.8km az=90.0*
ATH ***18*** *21:39:01.6, 38°.05N×26°.19E, h31km±1km, ML3.0/3, Error ellipse: s-maj=2.2km s-min=1.1km az=57.0*
ISK ***18*** *21:39:01.7, 38°.06N×26°.22E, h14km, ML2.8/9*
THE ***18*** *21:39:02.4, 38°.04N×26°.16E, h12km, ML2.9/4, Error ellipse: s-maj=1.2km s-min=0.4km az=62.0*

ISC 18 21:39:01.7±1.0, 38°.05N±0°.02×26°.17E±0°.02, h13km±9km, n71, σ0°47/96, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CESE	**ˆe¯me**	**0.30**	**20**	PG	**Pg**	**21 39 08.0**	**+0.1**
CESE				SG	**Sg**	**21 39 12.4**	**+0.3**
CESE	**ˆe¯me**	**0.30**	**20**	*e*Pg	**Pg**	**21 39 08.0**	**+0.1**
CESE				*e*Sg	**Sg**	**21 39 12.4**	**+0.3**
CHOS	**Chios island**	**0.35**	**345**	PG	**Pb**	**21 39 09.7**	**-0.2**
CHOS				SG	**Sb**	**21 39 14.9**	**-0.5**
CHOS	**Chios island**	**0.35**	**345**	P	**Pb**	**21 39 09.6**	**-0.3**
CHOS				S	**Sb**	**21 39 14.8**	**-0.6**
CHOS				AML	AML	21 39 15.6	
	comp=E,4623μm,0.2s						
CHOS				AML	AML	21 39 16.6	
	comp=N,3557μm,0.3s						
CHOS	**Chios island**	**0.35**	**345**	P	**Pb**	**21 39 09.7**	**-0.2**
CHOS				S	**Sb**	**21 39 15.1**	**-0.3**
CHOS	**Chios island**	**0.35**	**345**	*e*Pg	**Pb**	**21 39 09.7**	**-0.2**
CHOS				S	**Sb**	**21 39 15.1**	**-0.3**
URLA	**Izmir**	**0.46**	**47**	PG	**Pg**	**21 39 09.8**	**-1.0**
URLA				SG	**Sg**	**21 39 16.9**	**0.0**
URLA	**Izmir**	**0.46**	**47**	*e*Pg	**Pg**	**21 39 09.8**	**-1.0**
URLA				*e*Sg	**Sg**	**21 39 16.9**	**0.0**
KRBN	**Karaburun**	**0.62**	**29**	PG	**Pg**	**21 39 13.6**	**-0.3**
KRBN				SG	**Sb**	**21 39 22.8**	**-0.3**
KRBN	**Karaburun**	**0.62**	**29**	*e*Pg	**Pg**	**21 39 13.6**	**-0.3**
KRBN				*e*Sg	**Sb**	**21 39 22.8**	**-0.3**
SMG	**Samos**	**0.63**	**123**	P	**Pb**	**21 39 15.1**	**+0.6**
SMG				S	**Sb**	**21 39 23.8**	**+0.6**
SMG				AML	AML	21 39 25.3	
	comp=E,7352μm,0.3s						
SMG				AML	AML	21 39 25.4	
	comp=N,10138μm,0.4s						
SMG	**Samos**	**0.63**	**123**	P	**Pb**	**21 39 14.6**	**+0.1**
SMG				S	**Sb**	**21 39 24.0**	**+0.8**
SMG	**Samos**	**0.63**	**123**	P	**Pb**	**21 39 14.6**	**+0.1**
SMG				S	**Sb**	**21 39 23.8**	**+0.6**
PSRA	**Psara**	**0.69**	**316**	P	**Pn**	**21 39 16.5**	**-0.7**
PSRA				S	**Sb**	**21 39 26.0**	**+1.0**
PSRA	**Psara**	**0.69**	**316**	P	**Pb**	**21 39 16.0**	**+0.5**
PSRA				S	**Sb**	**21 39 25.9**	**+1.0**
FOCM	**Foˆ§a**	**0.80**	**33**	PG	**Pg**	**21 39 16.7**	**-0.5**
FOCM				SG	**Sb**	**21 39 28.3**	**+0.2**
FOCM	**Foˆ§a**	**0.80**	**33**	*e*Pg	**Pg**	**21 39 16.7**	**-0.5**
FOCM				*e*Sg	**Sb**	**21 39 28.3**	**+0.2**
GCAM	**G?zelcaml?**	**0.91**	**112**	PG	**Pb**	**21 39 19.1**	**-0.2**
GCAM				SG	**Sg**	**21 39 31.8**	**+0.6**
GCAM	**G?zelcaml?**	**0.91**	**112**	*e*Pg	**Pb**	**21 39 19.1**	**-0.2**
GCAM				*e*Sg	**Sg**	**21 39 31.8**	**+0.6**
APE	**Apeiranthos**	**1.10**	**208**	PN	**Pb**	**21 39 21.9**	**-0.8**
APE	**Apeiranthos**	**1.10**	**208**	P	**Pb**	**21 39 22.4**	**-0.3**
APE	**Apeiranthos**	**1.10**	**208**	P	**Pb**	**21 39 22.4**	**-0.3**
APE	**Apeiranthos**	**1.10**	**208**	*e*Pn	**Pb**	**21 39 21.9**	**-0.8**
APE	**Apeiranthos**	**1.10**	**208**	P	**Pb**	**21 39 22.4**	**-0.3**
DKL	**Dikili**	**1.17**	**29**	PN	**Pn**	**21 39 23.6**	**-0.2**
DKL	**Dikili**	**1.17**	**29**	*e*Pn	**Pn**	**21 39 23.6**	**-0.2**
SIGR	**SIGRI**	**1.19**	**348**	PN	**Pn**	**21 39 23.7**	**-0.4**
SIGR	**SIGRI**	**1.19**	**348**	P	**Pn**	**21 39 23.6**	**-0.4**
SIGR	**SIGRI**	**1.19**	**348**	P	**Pn**	**21 39 23.6**	**-0.4**
SIGR				S	**Sg**	**21 39 40.1**	**0.0**
SIGR	**SIGRI**	**1.19**	**348**	P	**Pn**	**21 39 23.7**	**-0.4**
SIGR				S	**Sg**	**21 39 40.1**	**0.0**
PRK	**Paraskevi**	**1.20**	**4**	P	**Pn**	**21 39 24.0**	**-0.1**
PRK				AML	AML	21 39 43.6	
	comp=N,631μm,0.4s						
PRK				AML	AML	21 39 43.9	
	comp=E,1170μm,0.4s						
PRK	**Paraskevi**	**1.20**	**4**	P	**Pn**	**21 39 23.8**	**-0.4**
PRK				S	**Sg**	**21 39 41.0**	**+0.6**
PRK	**Paraskevi**	**1.20**	**4**	P	**Pn**	**21 39 23.9**	**-0.3**
PRK				S	**Sg**	**21 39 41.0**	**+0.6**
AMGA	**Amorgos Island**	**1.23**	**190**	P	**Pn**	**21 39 23.9**	**-0.8**
AMGA	**Amorgos Island**	**1.23**	**190**	P	**Pn**	**21 39 24.2**	**-0.5**
BODT	**Bodrum**	**1.34**	**137**	PN	**Pn**	**21 39 26.1**	**0.0**
BODT	**Bodrum**	**1.34**	**137**	P	**Pn**	**21 39 25.4**	**-0.7**
BODT				S	**Sb**	**21 39 43.8**	**+0.1**
BODT	**Bodrum**	**1.34**	**137**	P	**Pn**	**21 39 25.4**	**-0.7**
BODT	**Bodrum**	**1.34**	**137**	*e*Pn	**Pn**	**21 39 26.1**	**0.0**
BODT				S	**Sb**	**21 39 43.8**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**1.36**	**94**	PN	**Pb**	**21 39 26.8**	**-0.3**
AYDB	**Zeytinkoy-Aydi**	**1.36**	**94**	*e*Pn	**Pb**	**21 39 26.8**	**-0.3**
GPNR	**Gulpinar-Canak**	**1.41**	**359**	PN	**Pn**	**21 39 27.0**	**0.0**
GPNR	**Gulpinar-Canak**	**1.41**	**359**	*e*Pn	**Pn**	**21 39 27.0**	**0.0**
MLSB	**Milas**	**1.48**	**120**	PN	**Pn**	**21 39 28.0**	**0.0**
MLSB	**Milas**	**1.48**	**120**	*e*Pn	**Pn**	**21 39 28.0**	**0.0**
DAT	**Datca**	**1.73**	**139**	PN	**Pn**	**21 39 31.8**	**+0.2**
DAT	**Datca**	**1.73**	**139**	*e*Pn	**Pn**	**21 39 31.8**	**+0.2**
DION	**Dionisos Attik**	**1.77**	**272**	P	**Pn**	**21 39 32.8**	**+0.7**
DION	**Dionisos Attik**	**1.77**	**272**	P	**Pn**	**21 39 32.5**	**+0.5**
EZN	**Ezine**	**1.78**	**4**	PN	**Pn**	**21 39 32.5**	**+0.4**
EZN	**Ezine**	**1.78**	**4**	*e*Pn	**Pn**	**21 39 32.5**	**+0.4**
PTL	**Penteli**	**1.82**	**271**	P	**Pn**	**21 39 33.6**	**+0.9**
PTL	**Penteli**	**1.82**	**271**	P	**Pn**	**21 39 33.3**	**+0.5**
VLY	**Voula,Athens**	**1.89**	**265**	P	**Pn**	**21 39 34.1**	**+0.4**
VLY	**Voula,Athens**	**1.89**	**265**	P	**Pn**	**21 39 34.0**	**+0.3**
MHLA	**Plaka, Milos I**	**1.91**	**228**	P	**Pn**	**21 39 32.9**	**-1.0**
MHLA	**Plaka, Milos I**	**1.91**	**228**	P	**Pn**	**21 39 33.5**	**-0.4**
MHLO	**Agia Marina, M**	**1.96**	**227**	P	**Pn**	**21 39 33.9**	**-0.7**
MHLO	**Agia Marina, M**	**1.96**	**227**	P	**Pn**	**21 39 34.4**	**-0.2**
LIA	**Limnos Island**	**2.00**	**338**	P	**Pn**	**21 39 35.9**	**+0.7**
LIA	**Limnos Island**	**2.00**	**338**	P	**Pn**	**21 39 35.6**	**+0.4**
KULA	**Kula-Manisa**	**2.01**	**76**	PN	**Pn**	**21 39 35.9**	**+0.5**
KULA	**Kula-Manisa**	**2.01**	**76**	*e*Pn	**Pn**	**21 39 35.9**	**+0.5**
BALB	**Balikesir**	**2.08**	**39**	PN	**Pn**	**21 39 36.7**	**+0.5**
BALB	**Balikesir**	**2.08**	**39**	*e*Pn	**Pn**	**21 39 36.7**	**+0.5**
DID	**Didima**	**2.39**	**258**	P	**Pn**	**21 39 41.0**	**+0.5**
DID	**Didima**	**2.39**	**258**	P	**Pn**	**21 39 41.0**	**+0.5**
ALN	**Alexandroupoli**	**2.85**	**358**	P	**Pn**	**21 39 46.3**	**-0.5**
ALN	**Alexandroupoli**	**2.85**	**358**	P	**Pn**	**21 39 46.7**	**-0.1**
VLI	**Veliai**	**2.90**	**244**	P	**Pn**	**21 39 47.7**	**+0.1**
VLI	**Veliai**	**2.90**	**244**	P	**Pn**	**21 39 47.9**	**+0.4**

ISCJB ***18*** *21:45:52.7±0.6, 43°.97N±0°.06×105°.18W±0°.05, h0km, mb3.8/1, Error ellipse: s-maj=8.6km s-min=5.2km az=171.7*
IDC ***18*** *21:45:54.4±1.0, 43°.88N×105°.37W, h0km, mb3.9/1, mb1 3.8/5, mb1mx3.4/65, mbtmp3.5/5, ML3.5/4, Error ellipse: s-maj=22.8km s-min=7.6km az=149.0*
NEIC ***18*** *21:45:55.6±0.7, 44°.08N×105°.35W, h0km, ML2.9, Error ellipse: s-maj=16.4km s-min=7.9km az=162.0, Suspected Mining explosion.*
NEIC 26 km [16 miles] SSE of Gillette.

ISC 18 21:45:54.8±0.7, 44°.00N±0°.06×105°.28W±0°.04, h0km, n12, σ1°59/18, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.90**	**82**	Pg	**Pb**	**21 46 13.7**	**+0.2**
PDAR	**Pinedale Array**	**3.35**	**250**	Pn	**Pn**	**21 46 50.1**	**+1.4**
	1.8nm,0.3s,baz=75,slow=14,SNR=20						
PDAR				Pg	**Pb**	**21 46 56.0**	**+0.7**
	8.9nm,0.3s,baz=76,slow=17,SNR=48						
PDAR				Sn	**Sn**	**21 47 28.8**	**-0.6**
	4.3nm,0.3s,baz=79,slow=17,SNR=3.9						
PDAR				Lg	Lg	21 47 37.1	
	15nm,0.3s,baz=72,slow=35,SNR=8.9						
O20A	**White River Ci**	**4.45**	**211**	*e*Pn	**Pn**	**21 47 03.9**	**+0.1**
O20A				*e*Pb	**Pb**	**21 47 16.2**	**+2.3**
O20A				*e*Pg	**Pg**	**21 47 20.5**	**+0.4**
O20A				*e*Sg	**Sg**	**21 48 13.5**	**-4.2**
BOZ	**Bozeman (W)**	**4.79**	**292**	*e*Pn	**Pn**	**21 47 08.2**	**-0.2**
BOZ				*e*Sb	**Sb**	**21 48 18.3**	**+0.2**
ECSD	**EROS Data Cent**	**6.27**	**89**	*e*Pn	**Pn**	**21 47 30.8**	**+2.2**
	10nm,0.5s						
ECSD				*e*Pg	**Pg**	**21 47 53.3**	**-1.6**
ECSD				*e*Sg	**Sg**	**21 49 17.3**	**+1.2**
AGMN	**Agassiz Nation**	**7.82**	**53**	*e*Pn	**Pn**	**21 47 50.8**	**+1.0**
	11nm,0.3s						
ULM	**Lac du Bonnet**	**8.95**	**42**	Pn	**Pn**	**21 48 04.4**	**-0.9**
	1.5nm,0.3s,baz=234,slow=12,SNR=16						
ULM				Lg	Lg	21 50 33.2	
	0.4nm,0.3s,baz=247,slow=3.8,SNR=3.0						
NEW	**Newport**	**9.26**	**302**	Lg	Lg	21 50 42.2	
	0.1nm,0.3s,baz=205,slow=10,SNR=2.2						
I56US	**NEWPORT INFRAS**	**9.26**	**302**	*i*		22 40 50.0	
	baz=113,slow=320,SNR=1.7						
TXAR	**Lajitas Array**	**14.70**	**174**	Pn	**Pn**	**21 49 23.1**	**-0.9**
	0.2nm,0.3s,baz=359,slow=18,SNR=3.4						
YKA	**Yellowknife Ar**	**19.31**	**347**	P	**Pn**	**21 50 22.0**	**-0.1**
	0.1nm,0.3s,baz=159,slow=12,SNR=3.5						
MKAR	**Makanchi Array**	**89.34**	**355**	P	**P**	**21 58 53.5**	**+0.6**
	0.4nm,0.6s,baz=19,slow=4.9,SNR=5.2						

ISCJB ***18*** *22:02:20.2±0.2, 44°.85N±0°.02×11°.00E±0°.02, h25km±2km, Error ellipse: s-maj=3.2km s-min=2.1km az=166.6*
ROM ***18*** *22:02:20.7±0.0, 44°.865N±0°.001×10°.979E±0°.003, h9km, ML3.2/78*
CSEM ***18*** *22:02:20.6±0.1, 44°.91N×11°.02E, h10km, ML3.5/22, Error ellipse: s-maj=2.6km s-min=2.0km az=164.0*
*

NOVE				⇓eS	Sb	22 02 30.3	+1.1
NOVE	**Novellara**	**0.20**	**239**	*e*P	**Pg**	22 02 24.9	0.0
NOVE				*e*S	**Sb**	22 02 30.3	+1.1
NOVE				AML	AML		
	comp=E,32550µm,0.2s						
NOVE				AML	AML		
	comp=N,25300µm,0.8s						
NOVE				AML	AML		
	comp=E,32550µm,0.2s						
NOVE				AML	AML		
	comp=N,25300µm,0.8s						
NOVE				AML	AML		
	comp=E,32550µm,0.2s						
NOVE				AML	AML		
	comp=N,25250µm,0.8s						
T0800	**Massa Finalese**	**0.21**	**105**	⇑*e*P	**Pg**	22 02 24.7	-0.4
T0800				⇑*e*S	**Sb**	22 02 29.3	-0.2
T0800	**Massa Finalese**	**0.21**	**105**	*e*P	**Pg**	22 02 24.7	-0.4
T0800				*e*S	**Sb**	22 02 29.3	-0.2
T0800				AML	AML		
	comp=E,65500µm,0.2s						
T0800				AML	AML		
	comp=N,72450µm,0.3s						
T0800				AML	AML		
	comp=E,78650µm,0.2s						
T0800				AML	AML		
	comp=N,68800µm,0.4s						
T0800				AML	AML		
	comp=E,65500µm,0.2s						
T0800				AML	AML		
	comp=N,72450µm,0.3s						
T0800				AML	AML		
	comp=E,78650µm,0.2s						
T0800				AML	AML		
	comp=N,68800µm,0.4s						
GAZZ	**Gazzo Veronese**	**0.23**	**24**	⇑*e*Pg	**Pb**	22 02 26.3	+0.1
GAZZ	**Gazzo Veronese**	**0.23**	**24**	*e*Pg	**Pb**	22 02 26.3	+0.1
T0805	**Bondeno (FE)**	**0.26**	**86**	*e*P	**Pg**	22 02 25.7	-0.2
T0805	**Bondeno (FE)**	**0.26**	**86**	*e*P	**Pg**	22 02 25.6	-0.2
SERM	**Sermide**	**0.26**	**66**	⇑*e*P	**Pg**	22 02 26.1	+0.2
SERM	**Sermide**	**0.26**	**66**	*e*P	**Pg**	22 02 26.1	+0.2
SERM				AML	AML		
	comp=E,4495µm,0.4s						
SERM				AML	AML		
	comp=N,4360µm,0.6s						
SERM				AML	AML		
	comp=E,5975µm,0.9s						
SERM				AML	AML		
	comp=N,7570µm,0.5s						
SERM				AML	AML		
	comp=E,4495µm,0.4s						
SERM				AML	AML		
	comp=N,4365µm,0.6s						
SERM				AML	AML		
	comp=E,5975µm,0.9s						
SERM				AML	AML		
	comp=N,7570µm,0.5s						
MNTV	**Mantova**	**0.27**	**334**	AML	AML		
	comp=N,29400µm,0.4s						
MNTV				AML	AML		
	comp=E,26000µm,0.5s						
MNTV				AML	AML		
	comp=E,26000µm,0.5s						
MNTV				AML	AML		
	comp=N,29400µm,0.4s						
MODE	**Modena**	**0.27**	**182**	⇓*e*P	**Pb**	22 02 26.9	+0.1
MODE	**Modena**	**0.27**	**182**	*e*P	**Pb**	22 02 26.9	+0.1
MODE				AML	AML		
	comp=E,45600µm,0.5s						
MODE				AML	AML		
	comp=N,20400µm,0.7s						
MODE				AML	AML		
	comp=E,45650µm,0.5s						
MODE				AML	AML		
	comp=N,20450µm,0.7s						
MODE				AML	AML		
	comp=E,45600µm,0.5s						
MODE				AML	AML		
	comp=N,20450µm,0.7s						
T0822	**Casumaru (Bond**	**0.28**	**104**	⇑*e*P	**Pg**	22 02 25.8	-0.5
T0822				⇑*e*S	**Sb**	22 02 31.6	+0.1
T0822	**Casumaru (Bond**	**0.28**	**104**	*e*P	**Pg**	22 02 25.8	-0.5
T0822				*e*S	**Sb**	22 02 31.6	+0.1
T0803	**Dosso, Cento (**	**0.31**	**116**	*e*P	**Pg**	22 02 26.2	-0.5
T0803	**Dosso, Cento (**	**0.31**	**116**	*e*P	**Pg**	22 02 26.2	-0.5
T0821	**Loc. Casaglia**	**0.41**	**90**	AML	AML		
	comp=N,6605µm,0.3s						
T0821				AML	AML		
	comp=E,5815µm,1.0s						
T0821				AML	AML		
	comp=E,6055µm,1.0s						
T0821				AML	AML		
	comp=N,6695µm,0.3s						
T0821				AML	AML		
	comp=E,5815µm,1.0s						
T0821				AML	AML		
	comp=N,6610µm,0.3s						
T0821				AML	AML		
	comp=E,6055µm,1.0s						
T0821				AML	AML		
	comp=N,6700µm,0.3s						
OPPE	**Oppeano**	**0.43**	**20**	AML	AML		
	comp=E,6275µm,0.6s						
OPPE				AML	AML		
	comp=N,7500µm,1.1s						
OPPE				AML	AML		
	comp=E,6280µm,0.6s						
OPPE				AML	AML		
	comp=N,7500µm,1.1s						
FIU	**Minerbio Fiu**	**0.46**	**125**	AML	AML		
	comp=E,3805µm,0.7s						
FIU				AML	AML		
	comp=E,3805µm,0.7s						
FIU				AML	AML		
	comp=N,3585µm,0.6s						
FIU				AML	AML		
	comp=N,3585µm,0.6s						
FIU				AML	AML		
	comp=E,3805µm,0.7s						
FIU				AML	AML		
	comp=N,3585µm,0.6s						
ZCCA	**Zocca**	**0.55**	**179**	AML	AML		
	comp=N,2315µm,1.6s						
ZCCA				AML	AML		
	comp=E,3225µm,0.4s						
ZCCA				AML	AML		
	comp=N,2305µm,0.9s						
ZCCA				AML	AML		
	comp=E,3440µm,0.4s						
ZCCA				AML	AML		
	comp=E,3220µm,0.4s						
ZCCA				AML	AML		
	comp=N,2305µm,0.9s						
ZCCA				AML	AML		
	comp=E,3440µm,0.4s						
ZCCA				AML	AML		
	comp=N,2315µm,1.6s						
ERBM	**Eremo**	**0.62**	**219**	AML	AML		
	comp=E,1425µm,0.8s						
ERBM				AML	AML		
	comp=N,1440µm,0.8s						
ERBM				AML	AML		
	comp=E,1425µm,0.8s						
ERBM				AML	AML		
	comp=N,1445µm,0.8s						
TEOL	**Teolo**	**0.68**	**47**	⇑*e*Pg	**Pb**	22 02 34.0	+0.2
TEOL				*e*Sg	**Sn**	22 02 44.7	-0.9
TEOL	**Teolo**	**0.68**	**47**	⇓*e*P	**Pb**	22 02 33.8	0.0
TEOL	**Teolo**	**0.68**	**47**	*e*Pg	**Pb**	22 02 34.0	+0.2
TEOL				*e*Sg	**Sn**	22 02 44.7	-0.9
TEOL	**Teolo**	**0.68**	**47**	*e*P	**Pb**	22 02 33.8	0.0
TEOL				AML	AML		
	comp=E,8500µm,0.3s						
TEOL				AML	AML		
	comp=N,7225µm,1.3s						
TEOL				AML	AML		
	comp=E,8500µm,0.3s						
TEOL				AML	AML		
	comp=N,7225µm,1.3s						
CMPO	**Campotto Po**	**0.68**	**118**	*e*P	**Pb**	22 02 34.2	+0.4
CMPO	**Campotto Po**	**0.68**	**118**	*e*P	**Pb**	22 02 34.2	+0.4
CMPO				AML	AML		
	comp=E,5280µm,1.3s						
CMPO				AML	AML		
	comp=N,5005µm,0.8s						
CMPO				AML	AML		
	comp=E,5280µm,1.3s						
CMPO				AML	AML		
	comp=N,5005µm,0.8s						
FNVD	**Fontana Vidola**	**0.74**	**171**	AML	AML		
	comp=N,1960µm,0.9s						
FNVD				AML	AML		
	comp=E,2160µm,0.8s						
FNVD				AML	AML		
	comp=N,1955µm,0.9s						
FNVD				AML	AML		
	comp=E,2160µm,0.8s						
ROVR	**Rover¨¤ Verone**	**0.75**	**6**	AML	AML		
	comp=N,10090µm,0.4s						
ROVR				AML	AML		
	comp=E,5780µm,0.4s						
ROVR				AML	AML		
	comp=E,5780µm,0.4s						
ROVR				AML	AML		
	comp=N,10090µm,0.4s						
MARN	**Marana (Italy)**	**0.76**	**13**	⇓*e*Pg	**Pb**	22 02 35.3	+0.2
MARN				*e*Sg	**Sn**	22 02 48.6	+1.0
MARN	**Marana (Italy)**	**0.76**	**13**	*e*Pg	**Pb**	22 02 35.3	+0.2
MARN				*e*Sg	**Sn**	22 02 48.6	+1.0
ADRI	**Adria, Italy**	**0.76**	**79**	⇑*e*Pg	**Pb**	22 02 35.7	+0.5
ADRI	**Adria, Italy**	**0.76**	**79**	*e*Pg	**Pb**	22 02 35.7	+0.5
IMOL	**Imola, Italy**	**0.78**	**134**	AML	AML		
	comp=N,4185µm,0.3s						
IMOL				AML	AML		
	comp=E,2655µm,0.3s						
IMOL				AML	AML		
	comp=E,323µm,0.6s						
IMOL				AML	AML		
	comp=N,232µm,0.4s						
SALO	**Salr**	**0.78**	**337**	AML	AML		
	comp=N,5235µm,0.2s						
SALO				AML	AML		
	comp=E,4515µm,0.6s						
SALO				AML	AML		
	comp=N,5235µm,0.2s						
SALO				AML	AML		
	comp=E,4510µm,0.6s						
BALD	**Monte Baldo**	**0.79**	**353**	⇑*e*Pg	**Pb**	22 02 36.6	+0.8
BALD				*e*Sg	**Sn**	22 02 49.0	+0.4
BALD	**Monte Baldo**	**0.79**	**353**	*e*Pg	**Pb**	22 02 36.6	+0.8
BALD				*e*Sg	**Sn**	22 02 49.0	+0.4
VLC	**Villacollemand**	**0.85**	**209**	AML	AML		
	comp=E,721µm,1.1s						
VLC				AML	AML		
	comp=N,1051µm,0.9s						
VLC				AML	AML		
	comp=E,721µm,1.1s						
VLC				AML	AML		
	comp=N,1051µm,0.9s						
POPM	**Popiglio**	**0.87**	**190**	AML	AML		
	comp=N,2045µm,0.5s						
POPM				AML	AML		
	comp=E,1430µm,0.7s						
POPM				AML	AML		
	comp=N,2045µm,0.5s						
POPM				AML	AML		
	comp=E,1430µm,0.7s						
BDI	**Bagni Di Lucca**	**0.88**	**197**	AML	AML		
	comp=E,1630µm,0.7s						
BDI				AML	AML		
	comp=N,2210µm,0.6s						
BDI				AML	AML		
	comp=E,1550µm,1.6s						
BDI				AML	AML		
	comp=N,2445µm,0.6s						
MAGA	**Magasa**	**0.90**	**345**	AML	AML		
	comp=E,24250µm,0.3s						
MAGA				AML	AML		
	comp=E,24250µm,0.3s						
MAGA				AML	AML		
	comp=N,23300µm,1.4s						
MAGA				AML	AML		
	comp=N,23300µm,1.4s						
CTL8	**Castelleone**	**0.93**	**294**	AML	AML		
	comp=E,706µm,0.7s						
CTL8				AML	AML		
	comp=E,2630µm,0.7s						
CTL8				AML	AML		
	comp=N,2280µm,1.1s						
CTL8				AML	AML		
	comp=E,706µm,0.7s						
CTL8				AML	AML		
	comp=N,592µm,0.6s						
CTL8				AML	AML		
	comp=E,2635µm,0.7s						
CTL8				AML	AML		
	comp=N,2280µm,1.1s						
CTL8				AML	AML		
	comp=N,592µm,0.6s						
DOSS	**Dosso del Somm**	**0.99**	**9**	⇓*e*Pg	**Pb**	22 02 39.5	+0.3
DOSS				*e*Sg	**Sn**	22 02 55.5	+1.9
DOSS	**Dosso del Somm**	**0.99**	**9**	*e*Pg	**Pb**	22 02 39.5	+0.3
DOSS				*e*Sg	**Sn**	22 02 55.5	+1.9
MAIM	**Mastiano**	**1.04**	**199**	AML	AML		
	comp=E,984µm,0.4s						
MAIM				AML	AML		
	comp=E,984µm,0.4s						
MAIM				AML	AML		
	comp=N,1355µm,0.8s						
MAIM				AML	AML		
	comp=N,1355µm,0.8s						
BOB	**Bobbio (Coli)**	**1.08**	**263**	AML	AML		
	comp=E,963µm,1.2s						
BOB				AML	AML		
	comp=N,1505µm,0.6s						
RNI	**Roncone**	**1.10**	**348**	⇓*e*Pg	**Pb**	22 02 41.1	0.0
RNI	**Roncone**	**1.10**	**348**	*e*Pg	**Pb**	22 02 41.1	0.0
CRMI	**Carmignano**	**1.11**	**180**	AML	AML		
	comp=E,617µm,0.4s						
CRMI				AML	AML		
	comp=N,344µm,0.4s						
CRMI				AML	AML		
	comp=E,617µm,0.4s						
CRMI				AML	AML		
	comp=N,344µm,0.4s						
CGRP	**Cima Grappa**	**1.14**	**31**	⇓*e*Pg	**Pb**	22 02 41.9	0.0
CGRP				*e*Sg	**Sn**	22 02 59.3	+2.0
CGRP	**Cima Grappa**	**1.14**	**31**	*e*Pg	**Pb**	22 02 41.8	0.0
CGRP				*e*Sg	**Sn**	22 02 59.3	+2.0
CGRP	**Cima Grappa**	**1.14**	**31**	AML	AML		
	comp=N,1400µm,0.4s						
CGRP				AML	AML		
	comp=E,1720µm,0.4s						
CGRP				AML	AML		
	comp=E,1720µm,0.4s						
CGRP				AML	AML		
	comp=N,1400µm,0.4s						
PLMA	**Palmaria, Port**	**1.17**	**223**	AML	AML		
	comp=N,1460µm,0.5s						
PLMA				AML	AML		
	comp=E,782µm,0.5s						
PLMA				AML	AML		
	comp=N,1460µm,0.5s						
PLMA				AML	AML		
	comp=E,782µm,0.5s						
SFI	**Santa Sofia**	**1.18**	**147**	AML	AML		
	comp=N,698µm,0.4s						
SFI				AML	AML		
	comp=E,550µm,1.1s						
MSSA	**Maissana**	**1.19**	**241**	AML	AML		
	comp=N,810µm,0.9s						
MSSA				AML	AML		
	comp=E,623µm,1.6s						
MABI	**Malga Bissina**	**1.19**	**345**	AML	AML		
	comp=N,776µm,0.8s						
MABI				AML	AML		
	comp=E,1096µm,1.1s						
MTLO	**Montello**	**1.21**	**41**	⇓*e*Pg	**Pb**	22 02 43.1	+0.2
MTLO				*e*Sg	**Sg**	22 03 01.1	+1.6
MTLO	**Montello**	**1.21**	**41**	*e*Pg	**Pb**	22 02 43.1	+0.2
MTLO				*e*Sg	**Sg**	22 03 01.1	+1.6
CTI	**Castel Tesino**	**1.24**	**23**	AML	AML		
	comp=E,2540µm,0.4s						
CTI				AML	AML		
	comp=E,2540µm,0.4s						
CTI				AML	AML		
	comp=N,3150µm,0.2s						
CTI				AML	AML		
	comp=N,3150µm,0.2s						
ASQU	**Asqua**	**1.26**	**151**	AML	AML		
	comp=E,626µm,0.9s						
ASQU				AML	AML		
	comp=N,568µm,0.5s						
IESO	**Jesolo**	**1.28**	**61**	*e*Pg	**Pb**	22 02 44.0	0.0
IESO	**Jesolo**	**1.28**	**61**	*e*Pg	**Pb**	22 02 44.0	0.0
VARN	**Col Varnada, M**	**1.35**	**36**	⇓*e*Pg	**Pn**	22 02 44.6	-0.1
VARN	**Col Varnada, M**	**1.35**	**36**	*e*Pg	**Pn**	22 02 44.6	-0.1
CRE	**Caprese Michel**	**1.47**	**151**	AML	AML		
	comp=E,451µm,0.8s						
CRE				AML	AML		
	comp=N,672µm,0.3s						
OZOL	**Ozolo**	**1.50**	**2**	*e*Pg	**Pn**	22 02 47.1	+0.4
OZOL	**Ozolo**	**1.50**	**2**	*e*Pg	**Pn**	22 02 47.1	+0.4
CAE	**Caneva**	**1.52**	**43**	*e*Pg	**Pn**	22 02 47.1	+0.3
CAE	**Caneva**	**1.52**	**43**	*e*Pg	**Pn**	22 02 47.2	+0.3
CARE	**Lago del Cares**	**1.53**	**353**	*e*Pg	**Pn**	22 02 47.9	+0.5
CARE	**Lago del Cares**	**1.53**	**353**	*e*Pg	**Pn**	22 02 47.8	+0.5
PARC	**Parchiule**	**1.55**	**143**	AML	AML		
	comp=E,239µm,0.6s						
PARC				AML	AML		
	comp=N,279µm,0.5s						
POLC	**Polcenigo**	**1.56**	**43**	AML	AML		
	comp=E,1255µm,0.8s						
POLC				AML	AML		
	comp=N,2025µm,0.4s						
AGOR	**Agordo**	**1.58**	**29**	*e*Pg	**Pn**	22 02 48.3	+0.6
AGOR	**Agordo**	**1.58**	**29**	AML	AML		
	comp=N,814µm,0.4s						
AGOR				AML	AML		
	comp=E,700µm,1.3s						
APPI	**Appiano**	**1.59**	**7**	AML	AML		
	comp=N,2210µm,0.3s						
APPI				AML	AML		
	comp=E,2035µm,0.3s						
KOSI	**Kohlern**	**1.59**	**10**	*e*Pg	**Pb**	22 02 49.2	-0.2
KOSI	**Kohlern**	**1.59**	**10**	*e*Pg	**Pb**	22 02 49.2	-0.2
KOSI	**Kohlern**	**1.59**	**10**	AML	AML		
	comp=E,916µm,1.6s						
KOSI				AML	AML		
	comp=N,624µm,0.9s						
BOSI	**Bolzano**	**1.61**	**9**	AML	AML		
	comp=N,2420µm,0.6s						
BOSI				AML	AML		
	comp=E,2340µm,0.4s						
BRMO	**Bormio**	**1.63**	**346**	AML	AML		
	comp=E,403µm,0.6s						
BRMO				AML	AML		
	comp=N,788µm,0.9s						
BADI	**Badiali**	**1.67**	**146**	AML	AML		
	comp=E,388µm,0.5s						
BADI				AML	AML		
	comp=N,268µm,0.5s						
FROS	**Frosini**	**1.70**	**175**	AML	AML		
	comp=N,450µm,0.5s						
FROS				AML	AML		
	comp=E,372µm,0.5s						
MLNI	**Malnisio**	**1.70**	**42**	*e*Pg	**Pn**	22 02 49.8	+0.3
MLNI	**Malnisio**	**1.70**	**42**	*e*Pg	**Pn**	22 02 49.8	+0.3
ATMC	**Monte Cedrone**	**1.71**	**148**	AML	AML		
	comp=N,364µm,0.7s						
ATMC				AML	AML		
	comp=E,427µm,0.4s						
CAFI	**Castiglion Fio**	**1.73**	**155**	AML	AML		
	comp=E,220µm,0.5s						
CAFI				AML	AML		
	comp=N,174µm,0.6s						
NARO	**Abbazia di Nar**	**1.74**	**137**	AML	AML		
	comp=E,200µm,0.8s						
NARO				AML	AML		
	comp=N,234µm,0.5s						
CIMO	**Cimolais**	**1.75**	**36**	*e*Pn	**Pn**	22 02 50.3	+0.2
CIMO	**Cimolais**	**1.75**	**36**	*e*Pn	**Pn**	22 02 50.3	+0.2
ATPC	**Poggio Castell**	**1.78**	**142**	AML	AML		
	comp=E,331µm,0.3s						
ATPC				AML	AML		
	comp=N,287µm,1.2s						
ATPI	**Pietralunga -**	**1.79**	**144**	AML	AML		
	comp=E,204µm,1.3s						
ATPI				AML	AML		
	comp=N,260µm,1.1s						
TRIF	**Trifonti**	**1.79**	**181**	AML	AML		
	comp=N,172µm,0.7s						
TRIF				AML	AML		
	comp=E,208µm,1.3s						
MPAG	**Monte Paganucc**	**1.81**	**134**	AML	AML		
	comp=N,348µm,0.5s						
MPAG				AML	AML		
	comp=E,254µm,0.6s						
STAL	**STALIGIAL**	**1.83**	**42**	AML	AML		
	comp=E,1260µm,0.3s						
STAL				AML	AML		
	comp=E,1240µm,0.2s						
STAL				AML	AML		
	comp=N,1315µm,0.3s						
STAL				AML	AML		
	comp=N,1215µm,0.3s						
ABSI	**Aberstueckl**	**1.84**	**8**	AML	AML		
	comp=E,1825µm,0.7s						
ABSI				AML	AML		
	comp=N,916µm,0.5s						
ATVO	**AVT- Monte Val**	**1.84**	**145**	AML	AML		
	comp=E,221µm,0.7s						
ATVO				AML	AML		
	comp=N,230µm,0.5s						
ATVA	**AVT- Monte Val**	**1.88**	**149**	AML	AML		
	comp=E,143µm,0.6s						
ATVA				AML	AML		
	comp=N,111µm,0.5s						
TUE	**Stuetta**	**1.93**	**325**	AML	AML		
	comp=E,358µm,0.4s						
TUE				AML	AML		
	comp=N,407µm,0.5s						
QLNO	**Quiliano**	**1.96**	**254**	AML	AML		
	comp=E,182µm,0.6s						
QLNO				AML	AML		
	comp=N,208µm,0.6s						
SSFR	**Montelago di S**	**1.97**	**138**	AML	AML		
	comp=N,491µm,0.3s						
SSFR				AML	AML		
	comp=E,518µm,0.3s						
ATTE	**AVT- Monte Tez**	**1.98**	**149**	AML	AML		
	comp=N,164µm,0.8s						
ATTE				AML	AML		
	comp=E,182µm,0.4s						
ARVD	**Arcevia**	**2.00**	**134**	AML	AML		
	comp=E,182µm,1.0s						
ARVD				AML	AML		
	comp=N,151µm,0.5s						
FINB	**Finale Ligure**	**2.02**	**250**	AML	AML		
	comp=E,1175µm,0.3s						
FINB				AML	AML		
	comp=N,22µm,0.4s						
ROSI	**Rosskopf**	**2.05**	**9**	AML	AML		
	comp=N,1095µm,0.3s						
ROSI				AML	AML		
	comp=E,865µm,0.4s						
GEPF	**Gemona**	**2.05**	**47**	AML	AML		
	comp=E,368µm,0.4s						
GEPF				AML	AML		
	comp=N,309µm,1.0s						
ATCC	**AVT- Casa Cast**	**2.10**	**144**	AML	AML		
	comp=E,320µm,0.8s						
ATCC				AML	AML		
	comp=N,208µm,0.5s						
CASP	**Castiglione de**	**2.11**	**182**	AML	AML		
	comp=N,226µm,0.5s						
CASP				AML	AML		
	comp=E,122µm,0.6s						
VINO	**Villanova**	**2.12**	**49**	AML	AML		
	comp=E,402µm,0.3s						
VINO				AML	AML		
	comp=N,436µm,0.5s						
FETA	**Feichten**	**2.12**	**356**	*e*Pn	**Pb**	22 02 58.7	+0.2
	comp=N,2.2nm,0.2s,SNR=50						
FETA				*e*Pg	**Pg**	22 03 01.3	+0.3
	comp=N,14nm,0.1s						
FETA				*e*Sg	**Sg**	22 03 29.6	+1.0
	comp=N,32nm,0.3s						
FETA	**Feichten**	**2.12**	**356**	Pn	**Pb**	22 02 58.7	+0.2
	comp=N,2.2nm,0.2s,SNR=50						
ABTA	**Abfaltersbach**	**2.14**	**30**	*e*Pn	**Pn**	22 02 57.0	+1.5
	comp=N,8.7nm,0.2s,SNR=31						
ABTA	**Abfaltersbach**	**2.14**	**30**	Pn	**Pn**	22 02 57.0	+1.5
	comp=N,8.7nm,0.2s,SNR=31						

MGAB	**Montegabbione**	**2.16**	**157**	AML	AML			
	comp=E,202μm,0.8s							
MGAB				AML	AML			
	comp=N,182μm,0.9s							
SACS	**San Casciano d**	**2.17**	**161**	AML	AML			
	comp=E,86μm,0.7s							
SACS				AML	AML			
	comp=N,83μm,0.9s							
RISI	**Rein**	**2.19**	**20**	AML	AML			
	comp=E,1054μm,0.4s							
RISI				AML	AML			
	comp=N,1255μm,0.4s							
RORO	**Rocca Rossa**	**2.22**	**250**	AML	AML			
	comp=E,180μm,0.6s							
RORO				AML	AML			
	comp=N,230μm,1.4s							
CING	**Cingoli**	**2.22**	**133**	AML	AML			
	comp=N,116μm,0.5s							
CING				AML	AML			
	comp=E,98μm,0.8s							
PTCC	**Patocco-Chiusa**	**2.25**	**47**	AML	AML			
	comp=E,256μm,0.9s							
PTCC				AML	AML			
	comp=N,288μm,0.4s							
MOMA	**Monte Martano**	**2.40**	**150**	AML	AML			
	comp=N,136μm,0.3s							
MOMA				AML	AML			
	comp=E,136μm,0.5s							
WTTA	**Wattenberg**	**2.41**	**11**	*i* Pn	**Pb**	**22 03 02.1**	**-1.3**	
	comp=E,1.4nm,0.1s							
WTTA				*e*Pg	**Pb**	**22 03 03.6**	**+0.2**	
	comp=E,8.5nm,0.2s,SNR=19							
WTTA				*e*Sg	**Sg**	**22 03 36.7**	**-0.9**	
	comp=E,42nm,0.2s							
WTTA	**Wattenberg**	**2.41**	**11**	Pn	**Pb**	**22 03 02.4**	**-1.0**	
WTTA	**Wattenberg**	**2.41**	**11**	Pg	**Pb**	**22 03 03.6**	**+0.2**	
	comp=E,8.5nm,0.2s,SNR=19							
WTTA				Sg	**Sg**	**22 03 35.5**	**-2.2**	
IMI	**Imperia**	**2.41**	**247**	AML	AML			
	comp=N,438μm,0.3s							
IMI				AML	AML			
	comp=E,266μm,0.5s							
FDMO	**Fiordimonte**	**2.42**	**140**	AML	AML			
	comp=E,112μm,0.5s							
FDMO				AML	AML			
	comp=N,94μm,0.4s							
MOTA	**Moosalm**	**2.44**	**2**	*e*Pn	**Pn**	**22 03 01.7**	**+1.9**	
	comp=N,13nm,0.3s,SNR=70							
MOTA	**Moosalm**	**2.44**	**2**	Pn	**Pn**	**22 03 01.7**	**+1.9**	
	comp=N,13nm,0.3s,SNR=70							
WATA	**Walderalm**	**2.47**	**10**	*e*Pn	**Pb**	**22 03 03.1**	**-1.3**	
	comp=N,10nm,0.1s,SNR=25							
WATA	**Walderalm**	**2.47**	**10**	Pn	**Pb**	**22 03 03.1**	**-1.3**	
	comp=N,10nm,0.1s,SNR=25							
DAVA	**Damuels**	**2.50**	**343**	*e*Pn	**Pb**	**22 03 03.6**	**-1.3**	
	comp=N,5.2nm,0.1s,SNR=18							
DAVA				*e*Sn	**Sb**	**22 03 36.5**	**+0.9**	
	comp=N,84nm,0.4s							
DAVA	**Damuels**	**2.50**	**343**	Pn	**Pb**	**22 03 03.6**	**-1.3**	
	comp=N,5.2nm,0.1s,SNR=18							
DAVA				Sn	**Sb**	**22 03 36.5**	**+0.9**	
	comp=N,84nm,0.4s							
MYKA	**Terra Mystica**	**2.55**	**46**	*e*Pn	**Pn**	**22 03 01.9**	**+0.8**	
	comp=N,2.0nm,0.3s							
MYKA				*e*Pg	**Pg**	**22 03 08.5**	**-0.7**	
	comp=N,17nm,0.2s							
MYKA				Sg	**Sg**	**22 03 42.2**	**0.0**	
	comp=N,41nm,0.3s							
MYKA	**Terra Mystica**	**2.55**	**46**	Pn	**Pn**	**22 03 01.9**	**+0.8**	
	comp=N,2.0nm,0.3s							
CEY	**Cerknica**	**2.58**	**70⇑**	*i* Pn	**Pn**	**22 03 01.5**	**0.0**	
RETA	**Reutte**	**2.59**	**357**	*e*Pn	**Pb**	**22 03 04.6**	**-1.8**	
	comp=N,20nm,0.4s,SNR=14							
RETA				*e*Sn	**Sb**	**22 03 37.8**	**-0.2**	
	comp=N,26nm,0.4s							
RETA	**Reutte**	**2.59**	**357**	Pn	**Pb**	**22 03 04.6**	**-1.8**	
	comp=N,20nm,0.4s,SNR=14							
RETA				Sn	**Sb**	**22 03 37.8**	**-0.2**	
	comp=N,26nm,0.4s							
ENR	**Entracque**	**2.62**	**256**	AML	AML			
	comp=N,124μm,0.3s							
ENR				AML	AML			
	comp=E,98μm,0.6s							
SBF	**Sospel**	**2.73**	**249**	*e*Pn	**Pn**	**22 03 05.4**	**+1.8**	
	SNR=1.0							
SBF				*e*Sn	**Sn**	**22 03 37.8**	**+1.4**	
	comp=E,101nm,0.3s							
SBF	**Sospel**	**2.73**	**249**	*e*Pn	**Pn**	**22 03 05.4**	**+1.8**	
	SNR=1.0							
SBF				*e*Sn	**Sn**	**22 03 37.8**	**+1.4**	
	comp=E,51nm,0.3s							
KBA	**Koelnbreinsper**	**2.74**	**37**	*e*Pn	**Pn**	**22 03 05.7**	**+1.9**	
	comp=E,1.0nm,0.2s							
KBA				*i* Pg	**Pg**	**22 03 12.3**	**-0.5**	
	comp=E,18nm,0.2s							
KBA				*e*Sg	**Sg**	**22 03 49.0**	**+0.8**	
	comp=E,38nm,0.4s							
KBA	**Koelnbreinsper**	**2.74**	**37**	Pn	**Pn**	**22 03 05.7**	**+1.9**	
	comp=E,1.0nm,0.2s							
PGF	**Pioggiola**	**2.75**	**212**	*e*Pn	**Pn**	**22 03 05.0**	**+1.1**	
	SNR=1.0							
PGF				*e*Sn	**Sn**	**22 03 37.0**	**+0.1**	
	comp=E,74nm,0.5s,SNR=1.0							
PGF	**Pioggiola**	**2.75**	**212**	*e*Pn	**Pn**	**22 03 05.0**	**+1.1**	
	SNR=1.0							
LJU	**Ljubljana**	**2.76**	**64⇑**	*i* Pn	**Pn**	**22 03 04.5**	**+0.6**	
LUCF	**Luceram**	**2.78**	**250**	P	**Pn**	**22 03 07.0**	**+2.7**	
LUCF	**Luceram**	**2.78**	**250**	P	**Pn**	**22 03 06.0**	**+1.7**	
LUCF				S	**Sb**	**22 03 42.5**	**-1.1**	
NVLJ	**Novalja**	**2.81**	**96**	*i* Pn	**Pn**	**22 03 04.7**	**+0.1**	
NVLJ				Sn	**Sn**	**22 03 36.5**	**-1.6**	
NVLJ	**Novalja**	**2.81**	**96**	*i* Pn	**Pn**	**22 03 04.6**	**+0.1**	
NVLJ				Sn	**Sn**	**22 03 36.5**	**-1.6**	
ISO	**Isola**	**2.89**	**257**	P	**Pn**	**22 03 07.3**	**+1.5**	
ISO	**Isola**	**2.89**	**257**	P	**Pn**	**22 03 07.3**	**+1.5**	
MVIF	**Mont Vial**	**2.91**	**251**	P	**Pn**	**22 03 08.6**	**+2.5**	
MVIF	**Mont Vial**	**2.91**	**251**	P	**Pn**	**22 03 08.6**	**+2.5**	
OBKA	**Obir**	**2.98**	**56**	*e*Pn	**Pn**	**22 03 07.8**	**+0.7**	
	comp=E,2.6nm,0.1s							
OBKA				*e*Pg	**Pg**	**22 03 15.7**	**-1.7**	
	comp=E,21nm,0.4s							
OBKA				*e*Sn	**Sn**	**22 03 43.5**	**+0.9**	
	comp=E,38nm,0.3s							
OBKA				*e*Sg	**Sg**	**22 03 56.7**	**+0.7**	
	comp=E,94nm,0.4s							
OBKA	**Obir**	**2.98**	**56**	Pn	**Pn**	**22 03 07.8**	**+0.7**	
	comp=E,2.6nm,0.1s							
MBDF	**Montbardon**	**2.99**	**268**	*e*Pn	**Pn**	**22 03 07.9**	**+0.7**	
	SNR=1.0							
MBDF				*e*Sn	**Sn**	**22 03 41.5**	**-1.3**	
	comp=E,32nm,0.4s,SNR=1.0							
MBDF				*e*Sg	**Sg**	**22 03 53.6**	**-2.6**	
	comp=E,32nm,0.4s,SNR=1.0							
MBDF	**Montbardon**	**2.99**	**268**	*e*Pn	**Pn**	**22 03 07.9**	**+0.7**	
	SNR=1.0							
MBDF				*e*Sn	**Sn**	**22 03 41.5**	**-1.3**	
	comp=E,16nm,0.4s,SNR=1.0							
MBDF				*e*Sg	**Sg**	**22 03 53.6**	**-2.6**	
	comp=E,16nm,0.4s,SNR=1.0							
LPL	**La Plagne**	**3.05**	**283**	*e*Pn	**Pn**	**22 03 09.3**	**+1.2**	
LPL				*e*Sn	**Sn**	**22 03 45.0**	**+0.5**	
	comp=E,26nm,0.5s							
LPL	**La Plagne**	**3.05**	**283**	*e*Pn	**Pn**	**22 03 09.3**	**+1.2**	
LPL				*e*Sn	**Sn**	**22 03 45.0**	**+0.5**	
	comp=E,13nm,0.5s							
AQU	**L'Aquila**	**3.10**	**144**	*e*Pn	**Pn**	**22 03 10.2**	**+1.5**	
CALF	**Calern**	**3.12**	**250**	P	**Pn**	**22 03 10.2**	**+1.2**	
CALF	**Calern**	**3.12**	**250**	P	**Pn**	**22 03 10.2**	**+1.2**	
OZLJ	**Ozalj**	**3.26**	**76**	*e*Pn	**Pn**	**22 03 11.3**	**+0.5**	
OZLJ				Sn	**Sn**	**22 03 48.4**	**-0.9**	
OZLJ	**Ozalj**	**3.26**	**76**	*e*Pn	**Pn**	**22 03 11.3**	**+0.5**	
OZLJ				Sn	**Sn**	**22 03 48.4**	**-0.9**	
CRES	**Cresnjev**	**3.30**	**72⇑**	*i* Pn	**Pn**	**22 03 12.1**	**+0.7**	
SOKA	**Soboth**	**3.36**	**57**	*i* Pn	**Pn**	**22 03 13.0**	**+0.8**	
	comp=E,2.6nm,0.2s							
SOKA				*e*Pg	**Pg**	**22 03 23.1**	**-1.5**	
	comp=E,6.9nm,0.3s							
SOKA				*i* Sn	**Sn**	**22 03 52.4**	**+0.6**	
	comp=E,9.2nm,0.4s							
SOKA				Sg	**Sg**	**22 04 05.6**	**-2.4**	
	comp=E,30nm,0.6s							
SOKA	**Soboth**	**3.36**	**57**	Pn	**Pn**	**22 03 13.0**	**+0.8**	
	comp=E,2.6nm,0.2s							
FRF	**La Foret Royal**	**3.38**	**248**	*e*Pn	**Pn**	**22 03 13.4**	**+1.0**	
	SNR=1.0							
FRF				*e*Sn	**Sn**	**22 03 53.9**	**+1.7**	
	comp=E,43nm,0.3s,SNR=1.0							
FRF	**La Foret Royal**	**3.38**	**248**	*e*Pn	**Pn**	**22 03 13.4**	**+1.0**	
	SNR=1.0							
FRF				*e*Sn	**Sn**	**22 03 53.9**	**+1.7**	
	comp=E,21nm,0.3s,SNR=1.0							
UDBI	**Udbina**	**3.44**	**95**	*e*Pn	**Pn**	**22 03 13.9**	**+0.5**	
UDBI				Sn	**Sn**	**22 03 53.6**	**-0.3**	
UDBI	**Udbina**	**3.44**	**95**	*e*Pn	**Pn**	**22 03 13.9**	**+0.5**	
UDBI				Sn	**Sn**	**22 03 53.6**	**-0.3**	
LMR	**La Mourre**	**3.57**	**245**	*e*Pn	**Pn**	**22 03 16.1**	**+1.1**	
	SNR=1.0							
LMR				*e*Sn	**Sn**	**22 03 57.6**	**+0.7**	
	comp=E,78nm,0.3s							
LMR	**La Mourre**	**3.57**	**245**	*e*Pn	**Pn**	**22 03 16.1**	**+1.1**	
	SNR=1.0							
LMR				*e*Sn	**Sn**	**22 03 57.6**	**+0.7**	
	comp=E,39nm,0.3s							
ORIF	**Oris-en-Rattie**	**3.61**	**272**	*e*Pn	**Pn**	**22 03 17.5**	**+1.8**	
	SNR=1.0							
ORIF				*e*Sn	**Sn**	**22 03 59.3**	**+1.2**	
	comp=E,21nm,0.4s							
ORIF	**Oris-en-Rattie**	**3.61**	**272**	P	**Pn**	**22 03 17.8**	**+2.1**	
ORIF	**Oris-en-Rattie**	**3.61**	**272**	*e*Pn	**Pn**	**22 03 17.5**	**+1.8**	
	SNR=1.0							
ORIF				*e*Sn	**Sn**	**22 03 59.3**	**+1.2**	
	comp=E,10nm,0.4s							
KIZ	**Kirchzarten**	**3.71**	**327**	P	**Pn**	**22 03 18.6**	**+1.6**	
KIZ	**Kirchzarten**	**3.71**	**327**	P	**Pn**	**22 03 18.6**	**+1.6**	
MOA	**Molln**	**3.73**	**37**	*i* Pn	**Pn**	**22 03 19.1**	**+1.8**	
	comp=E,4.6nm,0.2s							
MOA				*i* Sn	**Sn**	**22 04 03.9**	**+3.0**	
	comp=E,9.8nm,0.2s							
MOA	**Molln**	**3.73**	**37**	Pn	**Pn**	**22 03 19.1**	**+1.8**	
	comp=E,4.6nm,0.2s							
MOA				Sn	**Sn**	**22 04 03.9**	**+3.0**	
	comp=E,9.8nm,0.2s							
CABF	**La Chapelle**	**3.81**	**298**	*e*Pn	**Pn**	**22 03 19.0**	**+0.5**	
	SNR=1.0							
CABF				*e*Sn	**Sn**	**22 04 02.7**	**-0.4**	
	comp=E,14nm,0.4s							
CABF	**La Chapelle**	**3.81**	**298**	*e*Pn	**Pn**	**22 03 19.0**	**+0.5**	
	SNR=1.0							
CABF				*e*Sn	**Sn**	**22 04 02.7**	**-0.4**	
	comp=E,6.9nm,0.4s							
ARSA	**Arzberg**	**3.95**	**52**	*i* Pn	**Pn**	**22 03 20.6**	**+0.3**	
	comp=E,5.5nm,0.2s,SNR=7.3							
ARSA				*e*Sn	**Sn**	**22 04 06.9**	**+0.6**	
	comp=E,4.4nm,0.3s							
ARSA	**Arzberg**	**3.95**	**52**	Pn	**Pn**	**22 03 20.6**	**+0.3**	
	comp=E,5.5nm,0.2s,SNR=7.3							
ARSA				Sn	**Sn**	**22 04 06.9**	**+0.6**	
	comp=E,4.4nm,0.3s							
SMRF	**Simiane la Rot**	**3.97**	**258**	*e*Pn	**Pn**	**22 03 23.2**	**+2.6**	
	SNR=1.0							
SMRF				*e*Sg	**Sg**	**22 04 24.7**	**-2.9**	
	comp=E,16nm,0.5s,SNR=1.0							
SMRF	**Simiane la Rot**	**3.97**	**258**	*e*Pn	**Pn**	**22 03 23.2**	**+2.6**	
	SNR=1.0							
SMRF				*e*Sg	**Sg**	**22 04 24.7**	**-2.9**	
	comp=E,8.2nm,0.5s,SNR=1.0							
RUSF	**Rustrel**	**4.04**	**258**	P	**Pn**	**22 03 23.4**	**+1.8**	
RUSF	**Rustrel**	**4.04**	**258**	P	**Pn**	**22 03 23.4**	**+1.8**	
OPP	**Oppenau**	**4.07**	**333**	P	**Pn**	**22 03 23.6**	**+1.7**	
OPP	**Oppenau**	**4.07**	**333**	P	**Pn**	**22 03 23.6**	**+1.7**	
HINF	**Hinteralfeld**	**4.07**	**317**	*e*Pn	**Pn**	**22 03 22.9**	**+0.9**	
	SNR=1.0							
HINF				*e*Sn	**Sn**	**22 04 08.4**	**-1.0**	
	comp=E,29nm,0.3s,SNR=1.0							
HINF	**Hinteralfeld**	**4.07**	**317**	*e*Pn	**Pn**	**22 03 22.9**	**+0.9**	
	SNR=1.0							
HINF				*e*Sn	**Sn**	**22 04 08.4**	**-1.0**	
	comp=E,14nm,0.3s,SNR=1.0							
ECH	**Echery**	**4.22**	**323**	P	**Pn**	**22 03 25.5**	**+1.4**	
ECH	**Echery**	**4.22**	**323**	P	**Pn**	**22 03 25.5**	**+1.4**	
WLS	**Welschbruch**	**4.30**	**326**	P	**Pn**	**22 03 27.1**	**+2.0**	
WLS	**Welschbruch**	**4.30**	**326**	P	**Pn**	**22 03 27.1**	**+2.0**	
CDF	**Champ du Feu**	**4.33**	**325**	*e*Pn	**Pn**	**22 03 26.5**	**+0.9**	
	SNR=1.0							
CDF				*e*Sn	**Sn**	**22 04 12.1**	**-3.7**	
	comp=E,20nm,0.3s,SNR=1.0							
CDF	**Champ du Feu**	**4.33**	**325**	*e*Pn	**Pn**	**22 03 26.5**	**+0.9**	
	SNR=1.0							
BEHE	**Becsehely**	**4.37**	**67⇓**	*e*Pn	**Pn**	**22 03 26.2**	**+0.2**	
BEHE				*e*Sn	**Sg**	**22 04 40.9**	**+0.5**	
BEHE	**Becsehely**	**4.37**	**67⇓**	*e*Pn	**Pn**	**22 03 26.2**	**+0.2**	
BLY	**Banja Luka**	**4.43**	**90**	*e*Pn	**Pn**	**22 03 27.0**	**+0.1**	
HAU	**Haudompre**	**4.45**	**316**	*e*Pn	**Pn**	**22 03 28.2**	**+1.1**	
	SNR=1.0							
HAU				*e*Sn	**Sn**	**22 04 17.3**	**-1.3**	
	comp=E,50nm,0.2s,SNR=1.0							
HAU	**Haudompre**	**4.45**	**316**	*e*Pn	**Pn**	**22 03 28.2**	**+1.1**	
	SNR=1.0							
HAU				*e*Sn	**Sn**	**22 04 17.3**	**-1.3**	
	comp=E,25nm,0.2s,SNR=1.0							
VIVF	**Saint-Julien-l**	**4.47**	**272**	*e*P	**Pn**	**22 03 28.6**	**+1.2**	
VIVF				*e*Sn	**Sn**	**22 04 18.6**	**-0.6**	
	comp=E,5.6nm,0.3s,SNR=1.0							
VIVF	**Saint-Julien-l**	**4.47**	**272**	*e*P	**Pn**	**22 03 28.6**	**+1.2**	
VIVF				*e*Sn	**Sn**	**22 04 18.6**	**-0.6**	
	comp=E,2.8nm,0.3s,SNR=1.0							
CONA	**Conrad Observa**	**4.54**	**47**	*i* Pn	**Pn**	**22 03 29.2**	**+0.7**	
	comp=E,0.4nm,0.1s,SNR=6.9							
CONA	**Conrad Observa**	**4.54**	**47**	Pn	**Pn**	**22 03 29.2**	**+0.7**	
	comp=E,0.4nm,0.1s,SNR=6.9							
KHC	**Kasperske Hory**	**4.59**	**22**	*e*PN	**Pn**	**22 03 29.8**	**+0.7**	
KHC				*e*PG	**Pg**	**22 03 47.9**	**-0.3**	
KHC				*e*SN	**Sn**	**22 04 21.6**	**-0.6**	
KHC				*ex*	x	22 04 39.4		
KHC				*e*SG	**Sg**	**22 04 46.2**	**-1.4**	
	comp=E,19nm,0.9s							
KHC	**Kasperske Hory**	**4.59**	**22**	Pn	**Pn**	**22 03 29.8**	**+0.7**	
KHC				Sn	**Sn**	**22 04 21.6**	**-0.6**	
KHC				Sg	**Sg**	**22 04 46.2**	**-1.4**	
	comp=E,19nm,0.9s							
SOP	**Sopron**	**4.77**	**52**	*e*Pn	**Pn**	**22 03 32.3**	**+0.7**	
SOP				*e*Sn	**Sn**	**22 04 24.9**	**-1.7**	
SOP	**Sopron**	**4.77**	**52**	*e*Pn	**Pn**	**22 03 32.3**	**+0.7**	
SOP				*e*Sn	**Sn**	**22 04 24.9**	**-1.7**	
THEF	**They Montfort**	**4.78**	**316**	P	**Pn**	**22 03 34.0**	**+2.3**	
THEF	**They Montfort**	**4.78**	**316**	P	**Pn**	**22 03 33.0**	**+1.4**	
LASF	**Ste Croix**	**5.15**	**263**	*e*Pn	**Pn**	**22 03 37.5**	**+0.7**	
	SNR=1.0							
LASF				*e*Sn	**Sn**	**22 04 34.8**	**-1.1**	
	comp=E,2.4nm,0.2s,SNR=1.0							
LASF	**Ste Croix**	**5.15**	**263**	*e*Pn	**Pn**	**22 03 37.5**	**+0.7**	
	SNR=1.0							
LASF				*e*Sn	**Sn**	**22 04 34.8**	**-1.1**	
	comp=E,1.2nm,0.2s,SNR=1.0							
SMF	**Signal de Mont**	**5.28**	**292**	*e*Pn	**Pn**	**22 03 40.0**	**+1.5**	
	SNR=1.0							
SMF				*e*Sn	**Sn**	**22 04 37.4**	**-1.6**	
	comp=E,12nm,0.3s,SNR=1.0							
SMF	**Signal de Mont**	**5.28**	**292**	*e*Pn	**Pn**	**22 03 40.0**	**+1.5**	
	SNR=1.0							
SMF				*e*Sn	**Sn**	**22 04 37.4**	**-1.6**	
	comp=E,6.1nm,0.3s,SNR=1.0							
STON	**Ston**	**5.28**	**110**	*e*Pn	**Pn**	**22 03 37.9**	**-0.6**	
STON				Sn	**Sn**	**22 04 35.0**	**-3.9**	
STON	**Ston**	**5.28**	**110**	*e*Pn	**Pn**	**22 03 37.9**	**-0.6**	
STON				Sn	**Sn**	**22 04 35.0**	**-3.9**	
ZST	**Bratislava**	**5.37**	**50**	*e*PN	**Pn**	**22 03 39.6**	**-0.1**	
ZST				*e*SN	**Sn**	**22 04 37.8**	**-3.4**	
ZST	**Bratislava**	**5.37**	**50**	*e*Pn	**Pn**	**22 03 39.6**	**-0.1**	
ZST				*e*Sn	**Sn**	**22 04 37.8**	**-3.4**	
NKC	**Novy Kostel**	**5.43**	**10**	*e*PN	**Pn**	**22 03 41.9**	**+1.3**	
NKC				*e*PG	**Pg**	**22 04 03.6**	**-0.5**	
NKC				*e*SN	**Sn**	**22 04 41.1**	**-1.6**	
NKC				*e*SG	**Sg**	**22 05 14.3**	**-0.1**	
	comp=E,9.6nm,0.4s							
NKC	**Novy Kostel**	**5.43**	**10**	Pn	**Pn**	**22 03 41.9**	**+1.3**	
NKC				Sg	**Sg**	**22 05 14.3**	**-0.1**	
	comp=E,9.6nm,0.4s							
LOR	**Lormes**	**5.48**	**298**	*e*Pn	**Pn**	**22 03 42.0**	**+0.7**	
	SNR=1.0							
LOR				*e*Sn	**Sn**	**22 04 41.7**	**-2.3**	
	comp=E,12nm,0.3s,SNR=1.0							
LOR	**Lormes**	**5.48**	**298**	P	**Pn**	**22 03 42.8**	**+1.5**	
LOR	**Lormes**	**5.48**	**298**	*e*Pn	**Pn**	**22 03 42.0**	**+0.7**	
	SNR=1.0							
ABH	**Alteburg**	**5.49**	**336**	P	**Pn**	**22 03 43.0**	**+1.5**	
ABH	**Alteburg**	**5.49**	**336**	P	**Pn**	**22 03 42.0**	**+0.5**	
MODS	**Modra-Piesok**	**5.56**	**49**	*e*PN	**Pn**	**22 03 42.0**	**-0.5**	
MODS				*e*SN	**Sn**	**22 04 43.3**	**-2.8**	
MODS	**Modra-Piesok**	**5.56**	**49**	*e*Pn	**Pn**	**22 03 42.0**	**-0.5**	
KRUC	**Moravsky**	**5.58**	**40**	*e*PN	**Pn**	**22 03 42.5**	**-0.1**	
KRUC				*e*SN	**Sn**	**22 04 44.3**	**-2.1**	
SSF	**Saint Saulge**	**5.62**	**295**	*e*Pn	**Pn**	**22 03 44.5**	**+1.2**	
	SNR=1.0							
SSF				*e*Sn	**Sn**	**22 04 45.7**	**-1.9**	
	comp=E,4.1nm,0.3s,SNR=1.0							
SSF	**Saint Saulge**	**5.62**	**295**	*e*Pn	**Pn**	**22 03 44.5**	**+1.2**	
	SNR=1.0							
PRU	**Pruhonice**	**5.64**	**24**	*e*PN	**Pn**	**22 03 45.0**	**+1.6**	
PRU				*e*PG	**Pg**	**22 04 06.0**	**-2.1**	
PRU				*e*SN	**Sn**	**22 04 46.9**	**-0.9**	
PRU				*ex*	x	22 05 01.2		
PRU				*ex*	x	22 05 22.1		
PRU	**Pruhonice**	**5.64**	**24**	Pn	**Pn**	**22 03 45.0**	**+1.6**	
PRU				Sn	**Sn**	**22 04 46.9**	**-0.9**	
CSKK	**Cs̆‡kako**	**5.64**	**62⇓**	*e*Pg	**Pn**	**22 03 43.3**	**-0.2**	
CSKK				*e*Sn	**Sn**	**22 04 46.1**	**-1.8**	
CSKK	**Cs̆‡kako**	**5.64**	**62⇓**	*e*Pn	**Pn**	**22 03 43.3**	**-0.2**	
CSKK				*e*Sn	**Sn**	**22 04 46.1**	**-1.8**	
AVF	**Avril sur Loir**	**5.64**	**292**	*e*Pn	**Pn**	**22 03 44.8**	**+1.3**	
	SNR=1.0							
AVF				*e*Sn	**Sn**	**22 04 45.7**	**-2.2**	
	comp=E,5.7nm,0.6s,SNR=1.0							
AVF	**Avril sur Loir**	**5.64**	**292**	*e*Pn	**Pn**	**22 03 44.8**	**+1.3**	
	SNR=1.0							
GOPC	**GO Pecny, Ondr**	**5.64**	**26**	*e*PN	**Pn**	**22 03 44.9**	**+1.3**	
GOPC				*ex*	x	22 04 01.1		
GOPC				*e*PG	**Pg**	**22 04 05.9**	**-2.4**	
GOPC				*e*SN	**Sn**	**22 04 47.0**	**-1.1**	
GOPC				*e*SG	**Sg**	**22 05 21.6**	**+0.3**	
	comp=E,8.6nm,0.6s							
GOPC	**GO Pecny, Ondr**	**5.64**	**26**	Pn	**Pn**	**22 03 44.9**	**+1.3**	
GOPC				Sn	**Sn**	**22 04 47.0**	**-1.1**	
GOPC				Sg	**Sg**	**22 05 21.6**	**+0.3**	
	comp=E,8.6nm,0.6s							
PRA	**Prague**	**5.68**	**23**	*e*SN	**Sn**	**22 04 48.1**	**-0.8**	
PRA	**Prague**	**5.68**	**23**	Sn	**Sn**	**22 04 48.1**	**-0.8**	
HAPS	**Han Pijesak,Bl**	**5.77**	**95**	*e*Pn	**Pn**	**22 03 45.2**	**-0.2**	
TREB	**Trebinje**	**5.78**	**110⇑**	*i* Pn	**Pn**	**22 03 45.8**	**+0.4**	
BRY	**Bratogost**	**5.83**	**107⇑**	*i* Pn	**Pn**	**22 03 47.2**	**+1.0**	
BGF	**Bois d'Agland**	**5.92**	**289**	*e*Pn	**Pn**	**22 03 48.9**	**+1.6**	
	SNR=1.0							
BGF				*e*Sn	**Sn**	**22 04 54.2**	**-0.6**	
	comp=E,18nm,0.6s							
BGF	**Bois d'Agland**	**5.92**	**289**	*e*Pn	**Pn**	**22 03 48.9**	**+1.6**	
	SNR=1.0							
UPM	**Unac-Piva**	**5.97**	**104**	*e*Pn	**Pn**	**22 03 50.0**	**+1.8**	
HCY	**Herceg Novi**	**5.99**	**112**	*e*Pn	**Pn**	**22 03 48.7**	**+0.4**	
TEKS	**Tekeris**	**6.12**	**90**	*e*Pn	**Pn**	**22 03 50.1**	**+0.1**	
TEKS	**Tekeris**	**6.12**	**90**	*e*P	**Pn**	**22 03 50.8**	**+0.8**	
BBLS	**Lazići**	**6.14**	**97**	*e*P	**Pn**	**22 03 50.6**	**+0.2**	
HYF	**Humbligny**	**6.25**	**295**	*e*Pn	**Pn**	**22 03 53.2**	**+1.3**	
HYF				*e*Sn	**Sn**	**22 05 02.6**	**-0.4**	
HYF	**Humbligny**	**6.25**	**295**	*e*Pn	**Pn**	**22 03 53.2**	**+1.3**	
TCF	**Toulx Ste Croi**	**6.29**	**286**	*e*Pn	**Pn**	**22 03 54.7**	**+2.2**	
	SNR=1.0							
TCF				*e*Sn	**Sn**	**22 05 03.6**	**-0.5**	
	comp=E,5.0nm,0.3s							
TCF	**Toulx Ste Croi**	**6.29**	**286**	*e*Pn	**Pn**	**22 03 54.7**	**+2.2**	
	SNR=1.0							
BRG	**Berggiesshubel**	**6.30**	**17**	PN	**Pn**	**22 03 54.1**	**+1.6**	
BRG				PG	**Pg**	**22 04 20.1**	**-0.8**	
BRG				SG	**Sg**	**22 05 39.6**	**-2.7**	
	comp=E,5.1nm,0.8s							
CAF	**Calviac**	**6.32**	**273**	*e*Pn	**Pn**	**22 03 54.7**	**+1.9**	
	SNR=1.0							
CAF				*e*Sn	**Sn**	**22 05 02.8**	**-1.9**	
CAF	**Calviac**	**6.32**	**273**	*e*Pn	**Pn**	**22 03 54.7**	**+1.9**	
	SNR=1.0							
MTLF	**Montolieu**	**6.48**	**259**	*e*Pn	**Pn**	**22 03 58.8**	**+3.7**	
	SNR=1.0							
MTLF				*e*Sn	**S

ZALV				PcP	PcP	22 15 51.0	-0.3
	1.0nm,0.5s,baz=106,slow=3.6,SNR=5.0						
RAMN	Ramite	45.90	280	eP	P	22 14 24.6	-0.3
	6.9nm,0.4s						
JIRN	Jiri	46.05	281	eP	P	22 14 26.4	+0.2
	15nm,0.3s						
GUN	Gumba	46.25	281	eP	P	22 14 27.8	+0.1
	8.8nm,0.4s						
MKAR	Makanchi Array	46.63	308	P	P	22 14 29.5	-0.4
	0.6nm,0.6s,baz=93,slow=8.5,SNR=8.3						
MKAR				PcP	pP	22 15 54.5	-2.1
	0.4nm,0.3s,baz=82,slow=5.2,SNR=8.9						
DMN	Daman	46.99	281	eP	P	22 14 32.9	-0.3
GKN	Gorkha	47.28	282	eP	P	22 14 35.1	-0.2
DANN	Dangsing	47.94	283	eP	P	22 14 40.6	+0.2
	13nm,0.5s						
KOLN	Koldanda	48.23	282	eP	P	22 14 42.4	-0.1
	13nm,0.6s						
PYUN	Piuthan	48.66	283	eP	P	22 14 45.8	+0.1
	28nm,0.5s						
KURBB	Kurchatov Arra	49.18	313	P	P	22 14 48.4	-0.5
	1.1nm,0.2s,baz=95,slow=5.8,SNR=6.9						
FITZ	Fitzroy Crossi	49.33	197	P	P	22 14 51.2	+0.8
	2.8nm,0.9s,baz=39,slow=6.5,SNR=2.8						
WRA	Warramunga Arr	49.65	186	P	P	22 14 52.4	-0.4
	1.4nm,0.7s,baz=0.9,slow=7.6,SNR=12						
WRA				PcP	PcP	22 16 06.7	+0.5
	0.4nm,0.4s,baz=358,slow=3.8,SNR=4.5						
ASAR	Alice Springs	53.38	186	P	P	22 15 19.8	-0.1
	0.9nm,0.5s,baz=359,slow=5.7,SNR=12						
BVAR	Borovoye Array	54.19	316	P	P	22 15 25.1	-0.1
	2.4nm,0.5s,baz=96,slow=7.6,SNR=14						
BVAR				PcP	PcP	22 16 22.5	-0.6
	0.8nm,0.5s,baz=134,slow=4.2,SNR=5.5						
ILAR	Eielson Array	56.72	30	P	P	22 15 43.5	+0.8
	0.3nm,0.6s,baz=261,slow=5.2,SNR=3.6						
STKA	Stephens Creek	61.38	178	P	P	22 16 15.0	+0.4
	1.4nm,0.5s,baz=348,slow=8.1,SNR=5.0						
AKTO	Aktyubinsk	62.17	314	P	P	22 16 18.6	-1.1
	1.5nm,0.6s,baz=68,slow=13,SNR=5.7						
KBZ	Khabaz	74.15	311	P	P	22 17 33.1	+0.1
	2.5nm,0.8s,baz=83,slow=8.1,SNR=2.7						
FINES	FINESS Array B	74.30	333	P	P	22 17 33.5	0.0
	1.2nm,0.5s,baz=57,slow=5.8,SNR=5.3						
AKASG	Malin Array Be	78.81	322	P	P	22 17 58.2	-0.4
	0.6nm,0.4s,baz=50,slow=5.8,SNR=4.3						
HFS	Hagfors	79.85	335	P	P	22 18 03.9	-0.1
	1.6nm,0.6s,baz=70,slow=4.7,SNR=4.5						
NB2	NORSAR Subarra	80.07	337	P	P	22 18 04.7	-0.5
	comp=Z,0.5nm,0.5s,baz=47,slow=5.1						
BRTR	Keskin Array B	82.14	311	P	P	22 18 16.2	-0.3
	comp=Z,2.0nm,0.8s,baz=108,slow=4.1,SNR=8.9						
TORD	Torodi Ar. Bea	120.73	310	PKP	PKPdf	22 24 43.6	-0.7
	comp=Z,0.5nm,0.8s,baz=342,slow=1.3,SNR=2.7						
KOWA	Kowa	123.36	316	PKP	PKPdf	22 24 49.4	+0.1
	comp=Z,1.2nm,0.7s,baz=104,slow=4.2,SNR=2.4						
LPAZ	La Paz	151.71	68	PKPbc	PKPbc	22 25 49.0	+1.3
	comp=Z,0.9nm,0.8s,baz=271,slow=3.3,SNR=4.5						

SFS ***18*** *22:08:48.0, 39°.69N×5°.94E, h10km, ML4.1*
STR ***18*** *22:09:47.7±4.1, 39°.N±34°×°.±1°.2, h5km, M4.8/13, mB5.2/13, mb5.2/12, MLv5.1/8, Mw(mB)4.6/13, Mwp4.8/1, Mwp4.3/1*
BJI ***18*** *22:09:48.7, 39°.45N×6°.50E, h6km, mb4.7/35, mB5.1/21, Ms4.8/3, Ms7 4.5/3*
ISCJB ***18*** *22:09:49.1±0.6, 39°.35N±0°.02×6°.27E±0°.02, h11km±4km, mb4.6/90, MS3.6/13, Error ellipse: s-maj=2.8km s-min=2.1km az=158.6*
LDG ***18*** *22:09:49.9±0.1, 39°.16N×6°.61E, h12km, Ml4.5/45, Error ellipse: s-maj=3.1km s-min=2.0km az=16.0*
IDC ***18*** *22:09:49.3±0.4, 39°.30N×6°.36E, h0km, mb4.5/31, mb1 4.5/37, mb1mx4.4/65, mbtmp4.4/37, ML4.8/4, MS3.5/10, Ms1 3.5/10, ms1mx3.1/53, Error ellipse: s-maj=12.3km s-min=10.7km az=126.0*
CSEM ***18*** *22:09:50.3±0.1, 39°.27N×6°.32E, h9km, mb4.8/51, Error ellipse: s-maj=3.0km s-min=2.4km az=157.0*
CRAAG ***18*** *22:09:50.0, 39°.19N×6°.25E, Mb4.5*
IGIL ***18*** *22:09:50.0, 39°.18N×6°.40E, h11km*
MOS ***18*** *22:09:50.1±1.2, 39°.30N×6°.29E, h22km, mb4.9/37, Error ellipse: s-maj=4.8km s-min=2.5km az=80.8*
NEIC ***18*** *22:09:50.4±0.2, 39°.26N×6°.35E, h10km, mb4.5/24, ML4.5(LDG), Error ellipse: s-maj=3.8km s-min=3.3km az=23.0*
NEIC Felt at Nice, France.
GCMT ***18*** *22:09:50.4±0.5, 39°.28N×6°.50E, h28km±1km, MW4.9/67, Moment Tensor Solution. s28,c30; s67,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.83±.23; $M_{\theta\theta}$-0.48±.12; $M_{\phi\phi}$-2.34±.15; $M_{r\theta}$-0.13±.17; $M_{\theta\phi}$-0.51±.06; $M_{r\phi}$0.46±.20; Best double couple: $M_0$2.69100×10^{16} NP1:ϕ_S10.00000°, δ50.00000°, λ85.00000°. NP2: ϕ_S198.00000°, δ41.00000°, λ96.00000°. Principal axes: T 2.8800, Plg84.0000°, Azm241.0000°; N -0.3730, Plg4.0000°, Azm14.0000°; P -2.5030, Plg5.0000°, Azm104.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ROM ***18*** *22:09:56.9±0.6, 39°.80N±0°.02×6°.72E±0°.06, h9km±2km, ML4.2/13*
CNRM ***18*** *22:10:03.9, 38°.95N×5°.58E, h30km*
ISC 18 22:09:50.4±0.7, 39°.27N±0°.04×6°.36E±0°.03, h12km±4km, n919, σ2$16/1023, mb4.7/92, MS3.7/13, 25C-25D, Western Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAEH	'Ain El Ouahch	2.51	171	P	Pn	22 10 31.7	+0.6
CAEH	'Ain El Ouahch	2.51	171	P	Pn	22 10 31.7	+0.6
DFRA	Djebel Bou Aff	2.75	188	P	Pn	22 10 32.0	-2.4
CKFL	Kef-Lekhel	2.88	174	P	Pn	22 10 34.1	-2.1
CASM	Ain Smara	3.00	178	P	Pn	22 10 35.3	-2.6
ABSA	Djebel Ababsia	3.12	163	P	Pn	22 10 36.5	-3.0
SET	Setif	3.16	194	P	Pn	22 10 39.0	-1.0
SET	Setif	3.16	194	P	Pn	22 10 39.0	-1.0
CTEI	Djebel Teioual	3.20	179	P	Pn	22 10 38.2	-2.4
CKHR	Kef el Ahmar	3.31	192	P	Pn	22 10 36.6	-5.6
SMPL	Sampolo	3.59	37	P	Pn	22 10 45.4	-0.5
SMPL	Sampolo	3.59	37	P	Pn	22 10 45.4	-0.5
SMPL				S	Sn	22 11 23.2	-5.1
ABA	Alger-Bouzarea	3.60	228	P	Pn	22 10 45.0	-1.0
ABA	Alger-Bouzarea	3.60	228	P	Pn	22 10 45.0	-1.0
PGF	Pioggiola	3.84	31	ePn	Pn	22 10 48.1	-1.3
PGF	Pioggiola	3.84	31	eP	Pn	22 10 52.1	+2.7
PGF				eSn	Sn	22 11 29.7	-4.8
	2μm,0.3s						
PGF	Pioggiola	3.84	31	ePn	Pn	22 10 48.1	-1.3
PGF				eSn	Sn	22 11 29.7	-4.8
PGF	Pioggiola	3.84	31	eP	Pn	22 10 48.1	-1.3
PGF				e		22 11 29.7	
PGF	Pioggiola	3.84	31	ePn	Pn	22 10 48.1	-1.3
PGF	Pioggiola	3.84	31	eP	Pn	22 10 52.1	+2.7
PGF				eSn	Sn	22 11 29.7	-4.8
	818nm,0.3s						
PGF	Pioggiola	3.84	31	P	Pn	22 10 48.2	-1.3
PGF				S	Sn	22 11 27.7	-6.8
LMR	La Mourre	4.07	1	ePn	Pn	22 10 51.8	-0.6
	SNR=1.0						
LMR	La Mourre	4.07	1	eP	Pn	22 10 55.7	+3.3
LMR				eSn	Sn	22 11 34.9	-5.0
	582nm,0.2s						
LMR	La Mourre	4.07	1	ePn	Pn	22 10 51.8	-0.6
LMR				eSn	Sn	22 11 34.9	-5.0
LMR	La Mourre	4.07	1	eP	Pn	22 10 51.8	-0.6
LMR				e		22 11 34.9	
LMR	La Mourre	4.07	1	ePn	Pn	22 10 51.8	-0.6
	SNR=1.0						
LMR	La Mourre	4.07	1	eP	Pn	22 10 55.7	+3.3
LMR				eSn	Sn	22 11 34.9	-5.0
	291nm,0.2s						
EMHD	Djebel Mahouad	4.08	223	P	Pn	22 10 52.0	-0.8
EMHD	Djebel Mahouad	4.08	223	P	Pn	22 10 52.0	-0.8
KEST	Kesra	4.25	145	Pn	Pn	22 10 53.1	-2.0
	7.0nm,0.3s,baz=230,slow=1.0,SNR=16						
KEST				Sn	Sn	22 11 34.8	-10
	60nm,0.3s,baz=275,slow=12,SNR=11						
KEST	Kesra	4.25	145	ePn	Pn	22 10 53.4	-1.6
KEST				Sn	Sn	22 11 34.8	-10
KEST	Kesra	4.25	145	ePn	Pn	22 10 53.4	-1.6
KEST				Sn	Sn	22 11 34.8	-10
FRF	La Foret Royal	4.29	3	ePn	Pn	22 10 55.2	-0.4
	SNR=1.0						
FRF	La Foret Royal	4.29	3	eP	Pn	22 10 59.6	+4.0
FRF				eSn	Sn	22 11 41.0	-4.6
	471nm,0.3s						
FRF	La Foret Royal	4.29	3	ePn	Pn	22 10 55.2	-0.4
FRF				eSn	Sn	22 11 41.0	-4.6
FRF	La Foret Royal	4.29	3	eP	Pn	22 10 55.2	-0.4
FRF				e		22 11 41.0	
FRF	La Foret Royal	4.29	3	ePn	Pn	22 10 55.2	-0.4
	SNR=1.0						
FRF	La Foret Royal	4.29	3	eP	Pn	22 10 59.6	+4.0
FRF				eSn	Sn	22 11 41.0	-4.6
	236nm,0.3s						
CALF	Calern	4.50	5	P	Pn	22 10 58.2	-0.3
CALF	Calern	4.50	5	P	Pn	22 10 58.2	-0.3
REVF	Revere	4.53	9	P	Pn	22 10 59.5	+0.7
REVF	Revere	4.53	9	P	Pn	22 10 59.5	+0.7
SBF	Sospel	4.66	10	ePn	Pn	22 10 59.9	-0.8
	SNR=1.0						
SBF	Sospel	4.66	10	eP	Pn	22 11 04.7	+4.0
SBF				eSn	Sn	22 11 50.2	-4.5
	623nm,0.4s						
SBF	Sospel	4.66	10	ePn	Pn	22 10 59.9	-0.8
SBF				eSn	Sn	22 11 50.2	-4.5
SBF	Sospel	4.66	10	eP	Pn	22 10 59.9	-0.8
SBF				e		22 11 50.2	
SBF	Sospel	4.66	10	ePn	Pn	22 10 59.9	-0.8
	SNR=1.0						
SBF	Sospel	4.66	10	eP	Pn	22 11 04.7	+4.0
SBF				eSn	Sn	22 11 50.2	-4.5
	312nm,0.4s						
MVIF	Mont Vial	4.66	7	P	Pn	22 11 01.1	+0.3
MVIF	Mont Vial	4.66	7	P	Pn	22 11 01.1	+0.3
LUCF	Luceram	4.68	9	P	Pn	22 11 00.7	-0.2
LUCF	Luceram	4.68	9	P	Pn	22 11 00.7	-0.2
NEGI	Seborga	4.69	12	P	Pn	22 10 59.5	-1.4
NEGI	Seborga	4.69	12	P	Pn	22 10 59.5	-1.4
NEGI				AML	AML		
	comp=E,1099μm,0.2s						
NEGI				AML	AML		
	comp=N,826μm,0.2s						
NEGI				AML	AML		
	comp=N,826μm,0.2s						
NEGI				AML	AML		
	comp=E,1099μm,0.2s						
RUSF	Rustrel	4.72	352	P	Pn	22 11 02.2	+0.8
RUSF	Rustrel	4.72	352	P	Pn	22 11 02.2	+0.8
SMRF	Simiane la Rot	4.74	353	ePn	Pn	22 11 02.5	+0.8
	SNR=1.0						
SMRF	Simiane la Rot	4.74	353	eP	Pn	22 11 05.6	+3.9
SMRF				eSn	Sn	22 11 53.2	-3.5
	comp=E,159nm,0.3s,SNR=1.0						
SMRF	Simiane la Rot	4.74	353	ePn	Pn	22 11 02.5	+0.8
SMRF				eSn	Sn	22 11 53.2	-3.5
SMRF	Simiane la Rot	4.74	353	ePn	Pn	22 11 02.5	+0.8
	SNR=1.0						
SMRF	Simiane la Rot	4.74	353	eP	Pn	22 11 05.6	+3.9
SMRF				eSn	Sn	22 11 53.2	-3.5
	comp=E,80nm,0.3s,SNR=1.0						
EBR	Ebro Roquetas	4.76	291	P	Pn	22 11 01.6	-0.4
EBR	Ebro Roquetas	4.76	291	P	Pn	22 11 01.6	-0.4
IMI	Imperia	4.78	13	P	Pn	22 11 00.5	-1.8
IMI	Imperia	4.78	13	P	Pn	22 11 00.5	-1.8
IMI				S	Sn	22 11 48.0	-10
SAOF	Saorge	4.80	10	P	Pn	22 11 03.7	+1.2
SAOF	Saorge	4.80	10	P	Pn	22 11 03.7	+1.2
SAOF	Saorge	4.80	10	P	Pn	22 11 01.8	-0.8
SAOF				S	Sn	22 11 49.2	-8.9
SAOF				AML	AML		
	comp=E,450μm,0.2s						
SAOF				AML	AML		
	comp=N,518μm,0.7s						
SAOF				AML	AML		
	comp=N,518μm,0.7s						
SAOF				AML	AML		
	comp=E,450μm,0.2s						
EBNR	Beni Rached	4.85	234	P	Pb	22 11 10.0	-5.3
ISO	Isola	4.94	6	P	Pn	22 11 05.2	+0.7
ISO	Isola	4.94	6	P	Pn	22 11 06.2	+1.7
ISO	Isola	4.94	6	P	Pn	22 11 05.2	+0.7
RORO	Rocca Rossa	5.01	14	P	Pn	22 11 03.9	-1.4
RORO	Rocca Rossa	5.01	14	P	Pn	22 11 03.9	-1.4
RORO				S	Sn	22 11 54.4	-8.7
RORO				AML	AML		
	comp=E,824μm,0.2s						
RORO				AML	AML		
	comp=N,751μm,0.2s						
RORO				AML	AML		
	comp=N,751μm,0.2s						
RORO				AML	AML		
	comp=E,824μm,0.2s						
ENR	Entracque	5.02	9	P	Pn	22 11 05.4	-0.2
ENR	Entracque	5.02	9	P	Pn	22 11 05.4	-0.2
ENR				S	Sn	22 11 56.3	-7.2
ENR				AML	AML		
	comp=E,986μm,0.2s						
ENR				AML	AML		
	comp=N,980μm,0.7s						
ENR				AML	AML		
	comp=N,980μm,0.7s						
ENR				AML	AML		
	comp=E,986μm,0.2s						
STV	Sant Anna di V	5.03	8	P	Pn	22 11 06.0	+0.3
STV	Sant Anna di V	5.03	8	P	Pn	22 11 06.0	+0.3
STV	Sant Anna di V	5.03	8	P	Pn	22 11 05.6	-0.1
STV				S	Sn	22 11 56.5	-7.2
STV				AML	AML		
	comp=E,960μm,0.7s						
STV				AML	AML		
	comp=N,614μm,0.8s						
STV				AML	AML		
	comp=N,614μm,0.8s						
STV				AML	AML		
	comp=E,960μm,0.7s						
ECHA	Ech Chlef	5.04	233	P	Pn	22 11 12.0	+6.3
FINB	Finale Ligure	5.12	16	P	Pn	22 11 05.5	-1.4
FINB	Finale Ligure	5.12	16	P	Pn	22 11 05.5	-1.4
FINB				S	Sn	22 11 56.6	-9.2
FINB				AML	AML		
	comp=E,1965μm,1.2s						
FINB				AML	AML		
	comp=N,52μm,1.4s						
FINB				AML	AML		
	comp=E,1965μm,1.2s						
FINB				AML	AML		
	comp=N,52μm,1.4s						
MTLF	Montolieu	5.13	324	ePn	Pn	22 11 05.0	-2.0
	SNR=1.0						
MTLF				eSn	Sn	22 12 00.9	-5.2
	comp=N,252nm,0.5s,SNR=1.0						
MTLF	Montolieu	5.13	324	ePn	Pn	22 11 05.0	-2.0
MTLF				eSn	Sn	22 12 00.9	-5.2
MTLF	Montolieu	5.13	324	eP	Pn	22 11 05.0	-2.0
MTLF				e		22 12 00.9	
MTLF	Montolieu	5.13	324	ePn	Pn	22 11 05.0	-2.0
	SNR=1.0						
MTLF				eSn	Sn	22 12 00.9	-5.2
	comp=N,126nm,0.5s,SNR=1.0						
LASF	Ste Croix	5.16	339	ePn	Pn	22 11 06.0	-1.4
	SNR=1.0						
LASF				eSn	Sn	22 12 02.4	-4.5
	comp=N,289nm,0.3s						
LASF	Ste Croix	5.16	339	ePn	Pn	22 11 06.0	-1.4
LASF				eSn	Sn	22 12 02.4	-4.5
LASF	Ste Croix	5.16	339	ePn	Pn	22 11 06.0	-1.4
	SNR=1.0						
LASF				eSn	Sn	22 12 02.4	-4.5
	comp=N,144nm,0.3s						
PZZ	Stroppo	5.27	6	P	Pn	22 11 10.2	+1.2
PZZ	Stroppo	5.27	6	P	Pn	22 11 10.2	+1.2
PZZ				AML	AML		
	comp=E,650μm,0.7s						
PZZ				AML	AML		
	comp=N,842μm,0.2s						
PZZ				AML	AML		
	comp=N,842μm,0.2s						
PZZ				AML	AML		
	comp=E,650μm,0.7s						
QLNO	Quiliano	5.27	16	P	Pn	22 11 07.8	-1.1
QLNO	Quiliano	5.27	16	P	Pn	22 11 07.8	-1.1
QLNO				S	Sn	22 12 00.5	-9.0
QLNO				AML	AML		
	comp=E,1435μm,0.3s						
QLNO				AML	AML		
	comp=N,534μm,0.3s						
QLNO				AML	AML		
	comp=N,534μm,0.3s						
QLNO				AML	AML		
	comp=E,1435μm,0.3s						
DOI	San Damiano	5.27	7	P	Pn	22 11 10.4	+1.3
DOI	San Damiano	5.27	7	P	Pn	22 11 09.9	+0.8
DOI	San Damiano	5.27	7	P	Pn	22 11 09.9	+0.8
DOI				S	Sn	22 12 03.7	-6.1
DOI				AML	AML		
	comp=E,753μm,0.9s						
DOI				AML	AML		
	comp=N,736μm,0.6s						
DOI				AML	AML		
	comp=N,736μm,0.6s						
DOI				AML	AML		
	comp=E,753μm,0.9s						
EANR	'Ain N'Sour	5.33	233	P	Pn	22 11 15.0	+5.1
MLS	Moulis	5.42	315	P	Pn	22 11 10.9	-0.2
MLS	Moulis	5.42	315	P	Pn	22 11 10.9	-0.2
PLMA	Palmaria, Port	5.45	28	P	Pn	22 11 10.5	-0.8
PLMA	Palmaria, Port	5.45	28	P	Pn	22 11 10.5	-0.8
PLMA				AML	AML		
	comp=E,118μm,0.3s						
PLMA				AML	AML		
	comp=N,142μm,0.3s						
PLMA				AML	AML		
	comp=N,142μm,0.3s						
PLMA				AML	AML		
	comp=E,118μm,0.3s						
MBDF	Montbardon	5.46	3	ePn	Pn	22 11 13.0	+1.2
	SNR=1.0						
MBDF				eSn	Sn	22 12 11.4	-3.2
	comp=E,155nm,0.4s,SNR=1.0						
MBDF	Montbardon	5.46	3	ePn	Pn	22 11 13.0	+1.2
MBDF				eSn	Sn	22 12 11.4	-3.2
MBDF	Montbardon	5.46	3	eP	Pn	22 11 13.0	+1.2
MBDF				e		22 12 11.4	
MBDF	Montbardon	5.46	3	ePn	Pn	22 11 13.0	+1.2
	SNR=1.0						
PCP	Piancastagn	5.52	16	AML	AML		
	comp=N,424μm,0.8s						
PCP				AML	AML		
	comp=E,351μm,0.8s						
PCP				AML	AML		
	comp=E,351μm,0.8s						
PCP				AML	AML		
	comp=N,424μm,0.8s						
MSSA	Maissana	5.57	24	P	Pn	22 11 12.1	-1.0
MSSA	Maissana	5.57	24	P	Pn	22 11 12.1	-1.0
MSSA				AML	AML		
	comp=E,142μm,1.2s						
MSSA				AML	AML		
	comp=N,111μm,1.4s						
MSSA				AML	AML		
	comp=N,111μm,1.4s						
MSSA				AML	AML		
	comp=E,142μm,1.2s						
MAIM	Mastiano	5.58	32	P	Pn	22 11 12.6	-0.6
MAIM	Mastiano	5.58	32	P	Pn	22 11 12.6	-0.6
MAIM				AML	AML		
	comp=E,106μm,1.0s						
MAIM				AML	AML		
	comp=N,152μm,0.6s						
MAIM				AML	AML		
	comp=N,152μm,0.6s						
MAIM				AML	AML		
	comp=E,106μm,1.0s						
ETRT	Tiaret	5.59	228	P	Pn	22 11 14.0	+0.5
ETRT	Tiaret	5.59	228	P	Pn	22 11 14.0	+0.5
BHB	Bricherasio	5.61	7	P	Pn	22 11 13.4	-0.2
BHB	Bricherasio	5.61	7	P	Pn	22 11 13.4	-0.2
BHB				AML	AML		
	comp=E,194μm,0.3s						
BHB				AML	AML		
	comp=N,167μm,0.6s						
BHB				AML	AML		
	comp=E,194μm,0.3s						
BHB				AML	AML		
	comp=N,167μm,0.6s						
CLTB	Caltabellotta	5.64	105	ePn	Pn	22 11 12.1	-2.0
CLTB	Caltabellotta	5.64	105	ePn	Pn	22 11 12.1	-2.0
ORIF	Oris-en-Rattie	5.66	357	ePn	Pn	22 11 15.4	+1.0
	SNR=1.0						
ORIF				eSn	Sn	22 12 16.0	-3.3
	comp=N,83nm,0.5s,SNR=1.0						
ORIF	Oris-en-Rattie	5.66	357	ePn	Pn	22 11 15.4	+1.0
ORIF				eSn	Sn	22 12 16.0	-3.3
ORIF	Oris-en-Rattie	5.66	357	P	Pn	22 11 15.4	+1.0
ORIF	Oris-en-Rattie	5.66	357	P	Pn	22 11 16.7	+2.3
ORIF	Oris-en-Rattie	5.66	357	ePn	Pn	22 11 15.4	+1.0
	SNR=1.0						
ORIF	Oris-en-Rattie	5.66	357	P	Pn	22 11 16.7	+2.3
ORIF	Oris-en-Rattie	5.66	357	P	Pn	22 11 15.2	+0.8
ORIF				AML	AML		
	comp=E,220μm,0.4s						
ORIF				AML	AML		
	comp=N,158μm,1.0s						
ORIF				AML	AML		
	comp=E,220μm,0.4s						
ORIF				AML	AML		
	comp=N,158μm,1.0s						
RRL	Rocca Remolon	5.66	3	P	Pn	22 11 15.9	+1.4
RRL	Rocca Remolon	5.66	3	P	Pn	22 11 15.9	+1.4
RRL				AML	AML		
	comp=E,593μm,0.5s						
RRL				AML	AML		
	comp=N,318μm,1.1s						
RRL				AML	AML		
	comp=E,593μm,0.5s						
RRL				AML	AML		
	comp=N,318μm,1.1s						
VIVF	Saint-Julien-I	5.72	348	ePn	Pn	22 11 14.7	-0.5
	SNR=1.0						
VIVF				eSn	Sn	22 12 14.0	-6.9
	comp=N,138nm,0.3s,SNR=1.0						
VIVF	Saint-Julien-I	5.72	348	ePn	Pn	22 11 14.7	-0.5
VIVF				eSn	Sn	22 12 14.0	-6.9
VIVF	Saint-Julien-I	5.72	348	eP	Pn	22 11 14.7	-0.5
VIVF				e		22 12 14.0	
VIVF	Saint-Julien-I	5.72	348	ePn	Pn	22 11 14.7	-0.5
	SNR=1.0						
VLC	Villacollemand	5.74	30	ePn	Pn	22 11 15.0	-0.4
VLC	Villacollemand	5.74	30	ePn	Pn	22 11 15.0	-0.4
VLC	Villacollemand	5.74	30	P	Pn	22 11 15.2	-0.3
VLC				AML	AML		
	comp=E,79μm,0.8s						
VLC				AML	AML		
	comp=N,67μm,0.5s						
VLC				AML	AML		
	comp=N,67μm,0.5s						
VLC				AML	AML		
	comp=E,79μm,0.8s						
BDI	Bagni Di Lucca	5.74	32	P	Pn	22 11 15.5	0.0
BDI				pmax	pmax		
	comp=Z,3.0nm,0.4s						
BDI	Bagni Di Lucca	5.74	32	P	Pn	22 11 15.5	0.0
	comp=Z,3.0nm,0.4s						
BDI	Bagni Di Lucca	5.74	32	P	Pn	22 11 15.0	-0.5
BDI				AML	AML		
	comp=E,182μm,1.2s						
BDI				AML	AML		
	comp=N,195μm,0.7s						
BDI				AML	AML		
	comp=E,182μm,1.2s						
BDI				AML	AML		
	comp=N,195μm,0.7s						
ROTM	Rocchetta Tana	5.77	14	AML	AML		
	comp=E,1595μm,0.4s						
ROTM				AML	AML		
	comp=N,2245μm,1.3s						
ROTM				AML	AML		
	comp=E,1595μm,0.4s						
ROTM				AML	AML		
	comp=N,2245μm,1.3s						
BNI	Bardonecchia	5.79	2	ePn	Pn	22 11 18.0	+1.8
BNI	Bardonecchia	5.79	2	eP	Pn	22 11 18.0	+1.8
BNI	Bardonecchia	5.79	2	P	Pn	22 11 17.7	+1.5
BNI	Bardonecchia	5.79	2	ePn	Pn	22 11 18.0	+1.8
BNI	Bardonecchia	5.79	2	P	Pn	22 11 17.7	+1.5
BNI				AML	AML		
	comp=E,210μm,0.4s						
BNI	

POPM Popiglio 5.80 33 P **Pn 22 11 15.9 -0.3**
POPM Popiglio 5.80 33 P **Pn 22 11 15.9 -0.3**
EPF Esparros 5.90 312 *e*Pn **Pn 22 11 18.2 +0.6**
SNR=1.0
EPF *e*Sn **Sn 22 12 22.7 -2.5**
comp=E,192nm,0.6s
EPF Esparros 5.90 312 *e*Pn **Pn 22 11 18.2 +0.6**
EPF *e*Sn **Sn 22 12 22.7 -2.5**
EPF Esparros 5.90 312 *e*P **Pn 22 11 18.2 +0.6**
EPF *e* 22 12 22.7
EPF Esparros 5.90 312 *e*Pn **Pn 22 11 18.2 +0.6**
SNR=1.0
EPF *e*Sn **Sn 22 12 22.7 -2.5**
comp=E,96nm,0.6s
RSP Reno Superiore 5.92 6 P **Pn 22 11 17.9 0.0**
RSP Reno Superiore 5.92 6 P **Pn 22 11 17.9 0.0**
RSP AML AML
comp=E,298µm,0.9s
RSP AML AML
comp=N,197µm,0.5s
RSP AML AML
comp=N,197µm,0.5s
RSP AML AML
comp=E,298µm,0.9s
MONC Moncucco Torin 5.92 11 AML AML
comp=N,692µm,0.3s
MONC AML AML
comp=E,600µm,0.3s
MONC AML AML
comp=N,692µm,0.3s
MONC AML AML
comp=E,600µm,0.3s
BOB Bobbio (Coli) 5.96 22 P **Pn 22 11 18.7 +0.3**
BOB Bobbio (Coli) 5.96 22 P **Pn 22 11 18.7 +0.3**
BOB AML AML
comp=E,254µm,0.8s
BOB AML AML
comp=N,352µm,0.5s
BOB AML AML
comp=E,254µm,0.8s
BOB AML AML
comp=N,352µm,0.5s
ERBM Eremo 5.97 29 P **Pn 22 11 19.4 +0.8**
ERBM Eremo 5.97 29 P **Pn 22 11 19.4 +0.8**
ERBM AML AML
comp=E,87µm,0.7s
ERBM AML AML
comp=N,93µm,1.4s
ERBM AML AML
comp=E,87µm,0.7s
ERBM AML AML
comp=N,93µm,1.4s
CART Cartagena 6.02 256 *e*Pn **Pn 22 11 19.1 -0.1**
CART Cartagena 6.02 256 *i* P **Pn 22 11 19.1 -0.1**
CRE Caprese Michel 6.04 42 P **Pn 22 11 20.0 +0.3**
CRE pmax pmax
comp=Z,1.0nm,0.7s
CRE Caprese Michel 6.04 42 P **Pn 22 11 20.0 +0.3**
comp=Z,1.0nm,0.7s
GIB Gibilmanna 6.13 100 P **Pn 22 11 18.7 -2.2**
GIB pmax pmax
comp=Z,8.0nm,0.5s
SSB Saint Sauveur 6.16 348 *e*Pn **Pn 22 11 21.1 -0.1**
SSB Saint Sauveur 6.16 348 *e*P **Pn 22 11 21.1 -0.1**
SSB Saint Sauveur 6.16 348 *e*P **Pn 22 11 21.1 -0.1**
AQU L'Aquila 6.17 58 *e*Pn **Pn 22 11 21.4 +0.1**
AQU L'Aquila 6.17 58 *e*P **Pn 22 11 21.4 +0.1**
AQU L'Aquila 6.17 58 *e*P **Pn 22 11 21.4 +0.1**
SFI Santa Sofia 6.19 40 P **Pn 22 11 23.2 +1.5**
SFI Santa Sofia 6.19 40 P **Pn 22 11 23.2 +1.5**
LSD Lago del Serru 6.21 5 AML AML
comp=E,386µm,0.3s
LSD AML AML
comp=N,296µm,1.6s
LSD AML AML
comp=N,296µm,1.6s
LSD AML AML
comp=E,386µm,0.3s
LPG La Plagne 6.23 3 *e*P **Pn 22 11 24.7 +2.3**
SNR=1.0
LPG *e*Sn **Sn 22 12 28.9 -4.8**
comp=E,120nm,0.7s,SNR=1.0
LPG La Plagne 6.23 3 *e*P **Pn 22 11 24.7 +2.3**
LPG *e*Sn **Sn 22 12 28.9 -4.8**
LPG La Plagne 6.23 3 *e*P **Pn 22 11 25.7 +3.3**
LPG La Plagne 6.23 3 *e*P **Pn 22 11 24.7 +2.3**
SNR=1.0
LPL La Plagne 6.25 2 *e*P **Pn 22 11 24.8 +2.2**
SNR=1.0
LPL *e*Sn **Sn 22 12 29.4 -4.7**
comp=E,74nm,0.4s
LPL La Plagne 6.25 2 *e*P **Pn 22 11 24.8 +2.2**
LPL *e*Sn **Sn 22 12 29.4 -4.7**
LPL La Plagne 6.25 2 *e*P **Pn 22 11 25.7 +3.1**
LPL La Plagne 6.25 2 *e*P **Pn 22 11 24.8 +2.2**
SNR=1.0
TRAV Traversella 6.33 9 AML AML
comp=N,274µm,0.3s
TRAV AML AML
comp=E,184µm,0.8s
TRAV AML AML
comp=N,274µm,0.3s
TRAV AML AML
comp=E,184µm,0.8s
ETSF Etsaut 6.37 307 *e*Pn **Pn 22 11 23.9 -0.2**
SNR=1.0
ETSF *e*Sn **Sn 22 12 33.8 -2.9**
comp=E,188nm,0.8s
ETSF Etsaut 6.37 307 *e*Pn **Pn 22 11 23.9 -0.2**
ETSF *e*Sn **Sn 22 12 33.8 -2.9**
ETSF Etsaut 6.37 307 *e*P **Pn 22 11 23.9 -0.2**
ETSF *e* 22 12 33.8
ETSF Etsaut 6.37 307 *e*Pn **Pn 22 11 23.9 -0.2**
SNR=1.0
ETSF *e*Sn **Sn 22 12 33.8 -2.9**
comp=E,94nm,0.8s
LBL Lubilhac 6.39 340 P **Pn 22 11 23.9 -0.6**
LBL Lubilhac 6.39 340 P **Pn 22 11 23.9 -0.6**
CAF Calviac 6.50 332 *e*Pn **Pn 22 11 26.0 +0.2**
SNR=1.0
CAF *e*Sn **Sn 22 12 34.9 -4.9**
comp=E,117nm,0.3s,SNR=1.0
CAF Calviac 6.50 332 *e*Pn **Pn 22 11 26.0 +0.2**
CAF *e*Sn **Sn 22 12 34.9 -4.9**
CAF Calviac 6.50 332 *e*P **Pn 22 11 26.0 +0.2**
CAF *e* 22 12 34.9
CAF Calviac 6.50 332 *e*Pn **Pn 22 11 26.0 +0.2**
SNR=1.0
CTL8 Castelleone 6.51 22 AML AML
comp=N,882µm,0.6s
CTL8 AML AML
comp=E,1138µm,0.7s
CTL8 AML AML
comp=E,310µm,0.6s
CTL8 AML AML
comp=N,253µm,0.6s
CTL8 AML AML
comp=E,310µm,0.6s
CTL8 AML AML
comp=E,1138µm,0.7s
CTL8 AML AML
comp=N,253µm,0.6s
CTL8 AML AML
comp=N,882µm,0.6s
VAE Valguarnera 6.57 103 Pn **Pn 22 11 27.6 +0.7**
comp=N,0.7nm,0.3s,baz=210,slow=20,SNR=4.1
VAE Sn **Sn 22 12 46.1 +4.4**
comp=N,1.5nm,0.3s,baz=192,slow=19,SNR=1.4
VAE LR LR 22 14 15.6
comp=N,811nm,19.1s,baz=192,slow=41
CMPO Campotto Po 6.68 36 P **Pn 22 11 30.2 +1.9**
CMPO Campotto Po 6.68 36 P **Pn 22 11 30.2 +1.9**
SBPO S.Benedetto Po 6.70 29 AML AML
comp=E,152µm,0.8s
SBPO AML AML
comp=N,355µm,1.0s
SBPO AML AML
comp=N,355µm,1.0s
SBPO AML AML
comp=E,152µm,0.8s
DIX Grande Dixence 6.85 6 P **Pn 22 11 34.1 +3.2**
SJPF Ste Jean 6.89 306 *e*Pn **Pn 22 11 30.7 -0.5**
SNR=1.0
SJPF *e*Sn **Sn 22 12 46.2 -3.4**
comp=E,65nm,0.5s
SJPF Ste Jean 6.89 306 *e*Pn **Pn 22 11 30.7 -0.5**
SJPF *e*Sn **Sn 22 12 46.2 -3.4**
SJPF Ste Jean 6.89 306 *e*P **Pn 22 11 30.7 -0.5**
SJPF *e* 22 12 46.2
SJPF Ste Jean 6.89 306 *e*Pn **Pn 22 11 30.7 -0.5**
SNR=1.0
CFF Clermont-Ferra 6.92 341 P **Pn 22 11 31.8 +0.2**
CFF pmax pmax
comp=Z,3.0nm,0.7s
CFF Clermont-Ferra 6.92 341 P **Pn 22 11 31.8 +0.2**
comp=Z,3.0nm,0.7s
PYM Petit Puy Mans 6.94 340 P **Pn 22 11 31.8 -0.1**
PYM Petit Puy Mans 6.94 340 P **Pn 22 11 31.8 -0.1**
MUGIO Muggio 6.94 16 P **Pn 22 11 32.7 +0.8**
MUGIO Muggio 6.94 16 P **Pn 22 11 32.7 +0.8**
RJF Les Rejaudoux 7.02 331 *e*Pn **Pn 22 11 32.1 -0.9**
SNR=1.0
RJF *e*Sn **Sn 22 12 47.4 -5.3**
comp=Z,70nm,0.3s
RJF Les Rejaudoux 7.02 331 *e*Pn **Pn 22 11 32.1 -0.9**
RJF *e*Sn **Sn 22 12 47.4 -5.3**
RJF Les Rejaudoux 7.02 331 *e*P **Pn 22 11 32.1 -0.9**
RJF *e* 22 12 47.4
RJF Les Rejaudoux 7.02 331 *e*Pn **Pn 22 11 32.1 -0.9**
SNR=1.0
LFF La Frestale 7.04 325 *e*Pn **Pn 22 11 32.2 -1.1**
SNR=1.0
LFF *e*Sn **Sn 22 12 49.6 -3.6**
comp=Z,88nm,0.4s
LFF La Frestale 7.04 325 *e*Pn **Pn 22 11 32.2 -1.1**
LFF *e*Sn **Sn 22 12 49.6 -3.6**
LFF La Frestale 7.04 325 *e*P **Pn 22 11 32.2 -1.1**
LFF *e* 22 12 49.6
LFF La Frestale 7.04 325 *e*Pn **Pn 22 11 32.2 -1.1**
SNR=1.0
SALO Salr 7.05 25 AML AML
comp=N,194µm,0.5s
SALO AML AML
comp=E,131µm,0.6s
SALO AML AML
comp=N,194µm,0.5s
SALO AML AML
comp=E,131µm,0.6s
SENIN Lac Senin/Sane 7.13 5 *e*Pn **Pn 22 11 36.8 +2.2**
SENIN Lac Senin/Sane 7.13 5 *e*Pn **Pn 22 11 36.8 +2.2**
AGO Saint Agoulin 7.19 342 P **Pn 22 11 35.3 0.0**
AGO Saint Agoulin 7.19 342 P **Pn 22 11 35.3 0.0**
ROVR Rover^¤ Verone 7.26 27 AML AML
comp=E,113µm,0.3s
ROVR AML AML
comp=E,113µm,0.3s
ROVR AML AML
comp=N,211µm,0.4s
ROVR AML AML
comp=N,211µm,0.4s
GIMEL St. Georges / 7.26 359 P **Pn 22 11 37.3 +0.9**
GIMEL St. Georges / 7.26 359 P **Pn 22 11 37.3 +0.9**
CUC Castrocucco 7.33 81 *e*Pn **Pn 22 11 34.5 -2.8**
CUC Castrocucco 7.33 81 *e*Pn **Pn 22 11 34.5 -2.8**
CABF La Chapelle 7.34 359 *e*Pn **Pn 22 11 38.0 +0.5**
SNR=1.0
CABF *e*Sn **Sn 22 12 55.7 -5.1**
comp=N,39nm,0.6s
CABF La Chapelle 7.34 359 *e*Pn **Pn 22 11 38.0 +0.5**
CABF *e*Sn **Sn 22 12 55.7 -5.1**
CABF La Chapelle 7.34 359 *e*P **Pn 22 11 38.0 +0.5**
CABF *e* 22 12 55.7
CABF La Chapelle 7.34 359 *e*Pn **Pn 22 11 38.0 +0.5**
SNR=1.0
UCM Universidad Co 7.47 281 *e*P **Pn 22 11 39.9 +0.7**
TUE Stuetta 7.53 16 *e*Pn **Pn 22 11 41.4 +1.3**
TUE Stuetta 7.53 16 *e*Pn **Pn 22 11 41.4 +1.3**
LRVF ch^cteau la Ri 7.54 321 P **Pn 22 11 39.7 -0.3**
LRVF ch^cteau la Ri 7.54 321 P **Pn 22 11 39.7 -0.3**
SMF Signal de Mont 7.60 347 *e*Pn **Pn 22 11 40.9 -0.1**
SNR=1.0
SMF *e*Sn **Sn 22 12 59.1 -7.9**
comp=N,45nm,0.4s
SMF Signal de Mont 7.60 347 *e*Pn **Pn 22 11 40.9 -0.1**
SMF *e*Sn **Sn 22 12 59.1 -7.9**
SMF Signal de Mont 7.60 347 *e*P **Pn 22 11 40.9 -0.1**
SMF *e* 22 12 59.1
SMF Signal de Mont 7.60 347 *e*Pn **Pn 22 11 40.9 -0.1**
SNR=1.0
TCF Toulx Ste Croi 7.65 338 *e*Pn **Pn 22 11 41.1 -0.6**
SNR=1.0
TCF *e*Sn **Sn 22 13 04.0 -4.3**
comp=N,40nm,0.5s
TCF Toulx Ste Croi 7.65 338 *e*Pn **Pn 22 11 41.1 -0.6**
TCF *e*Sn **Sn 22 13 04.0 -4.3**
TCF Toulx Ste Croi 7.65 338 *e*P **Pn 22 11 41.1 -0.6**
TCF *e* 22 13 04.0
TCF Toulx Ste Croi 7.65 338 *e*Pn **Pn 22 11 41.1 -0.6**
SNR=1.0
SOI Samo 7.68 96 P **Pn 22 11 40.9 -1.1**
SOI Samo 7.68 96 P **Pn 22 11 40.9 -1.1**
BGF Bois d'Agland 7.73 342 *e*Pn **Pn 22 11 42.1 -0.6**
SNR=1.0
BGF *e*Sn **Sn 22 13 06.9 -3.2**
comp=N,74nm,0.4s
BGF Bois d'Agland 7.73 342 *e*Pn **Pn 22 11 42.1 -0.6**
BGF *e*Sn **Sn 22 13 06.9 -3.2**
BGF Bois d'Agland 7.73 342 *e*P **Pn 22 11 42.1 -0.6**
BGF *e* 22 13 06.9
BGF Bois d'Agland 7.73 342 *e*Pn **Pn 22 11 42.1 -0.6**
SNR=1.0
CTI Castel Tesino 7.81 28 P **Pn 22 11 45.3 +1.3**
CTI pmax pmax
comp=Z,2.0nm,0.3s
CTI Castel Tesino 7.81 28 P **Pn 22 11 45.3 +1.3**
comp=Z,2.0nm,0.3s
ORI Oriolo Calabro 7.82 81 P **Pn 22 11 41.3 -2.7**
AVF Avril sur Loir 7.84 345 *e*Pn **Pn 22 11 44.0 -0.1**
SNR=1.0
AVF *e*Sn **Sn 22 13 07.6 -5.1**
comp=Z,22nm,0.4s
AVF Avril sur Loir 7.84 345 *e*Pn **Pn 22 11 44.0 -0.1**
AVF *e*Sn **Sn 22 13 07.6 -5.1**
AVF Avril sur Loir 7.84 345 *e*P **Pn 22 11 44.0 -0.1**
AVF *e* 22 13 07.6
AVF Avril sur Loir 7.84 345 *e*Pn **Pn 22 11 44.0 -0.1**
SNR=1.0
GRI Girifalco 7.84 90 P **Pn 22 11 39.9 -4.4**
FUORN Ofenpass-Fuorn 7.88 20 *e*Pn **Pn 22 11 48.1 +3.0**
FUORN Ofenpass-Fuorn 7.88 20 *e*Pn **Pn 22 11 48.1 +3.0**
ES19 SONSECA Array 7.95 276 *e*Pn **Pn 22 11 46.6 +0.9**
ES19 SONSECA Array 7.95 276 *e*Pn **Pn 22 11 46.7 +0.9**
ESDC Sonseca Array 8.00 276 Pn **Pn 22 11 47.0 +0.5**
comp=Z,9.8nm,0.3s,baz=87,slow=14,SNR=108
ESDC Sn **Sn 22 13 13.0 -3.9**
baz=87,slow=26,SNR=2.6
ESDC LR LR 22 15 02.7
comp=Z,243nm,19.6s,baz=95,slow=39
ESLA Sonseca Array 8.00 276 *e*Pn **Pn 22 11 47.2 +0.7**
ESLA Sonseca Array 8.00 276 *e*Pn **Pn 22 11 47.2 +0.7**
MATE Matera 8.06 77 ↑*i*P **Sn 22 13 14.9 -3.4**
SSF Saint Saulge 8.06 346 *e*Pn **Pn 22 11 47.5 +0.2**
SNR=1.0
SSF *e*Sn **Sn 22 13 13.9 -4.5**
comp=Z,21nm,0.4s
SSF Saint Saulge 8.06 346 *e*Pn **Pn 22 11 47.5 +0.2**
SSF *e*Sn **Sn 22 13 13.9 -4.5**
SSF Saint Saulge 8.06 346 *e*P **Pn 22 11 47.5 +0.2**
SSF *e* 22 13 13.9
SSF Saint Saulge 8.06 346 *e*Pn **Pn 22 11 47.5 +0.2**
SNR=1.0
TIP Timpagrande 8.07 87 *e*Pn **Pn 22 11 45.0 -2.5**
TIP Timpagrande 8.07 87 *e*Pn **Pn 22 11 45.0 -2.5**
LOMF Lomont 8.09 2 P **Pn 22 11 47.6 -0.1**
LOMF Lomont 8.09 2 P **Pn 22 11 47.6 -0.1**
LOR Lormes 8.20 348 *e*Pn **Pn 22 11 49.7 +0.5**
baz=167,SNR=1.0
LOR *e*Sn **Sn 22 13 16.5 -5.3**
comp=Z,37nm,0.6s,baz=165
LOR Lormes 8.20 348 *e*Pn **Pn 22 11 49.7 +0.5**
LOR *e*Sn **Sn 22 13 16.5 -5.3**
LOR Lormes 8.20 348 P **Pn 22 11 49.7 +0.5**
LOR Lormes 8.20 348 *e*P **Pn 22 11 49.7 +0.5**
LOR *e* 22 13 16.5
LOR Lormes 8.20 348 *e*Pn **Pn 22 11 49.7 +0.5**
SNR=1.0
ABSI Aberstueckl 8.29 24 AML AML
comp=E,82µm,0.4s
ABSI AML AML
comp=N,124µm,0.9s
ABSI AML AML
comp=N,124µm,0.9s
ABSI AML AML
comp=E,82µm,0.4s
PAB San Pablo 8.30 275 *e*Pn **Pn 22 11 51.4 +0.8**
PAB San Pablo 8.30 275 *e*P **Pn 22 11 51.4 +0.8**
PAB San Pablo 8.30 275 *e*P **Pn 22 11 51.4 +0.8**
FETA Feichten 8.38 21 *i* Pn **Pn 22 11 53.9 +2.1**
comp=E,6.1nm,0.3s,SNR=9.9
FETA *e*Sn **Sn 22 13 21.9 -4.4**
comp=E,13nm,0.6s
FETA Feichten 8.38 21 Pn **Pn 22 11 53.9 +2.1**
comp=E,6.1nm,0.3s,SNR=9.9
DAVA Damuels 8.41 17 *i* Pn **Pn 22 11 55.7 +3.4**
comp=E,9.2nm,0.5s
DAVA *e*Sn **Sn 22 13 23.0 -4.3**
comp=E,20nm,0.3s
HYF Humbligny 8.45 342 *e*Pn **Pn 22 11 53.2 +0.7**
HYF Humbligny 8.45 342 *e*Pn **Pn 22 11 53.2 +0.7**
HYF Humbligny 8.45 342 *e*Pn **Pn 22 11 53.2 +0.7**
CHIF Chize 8.48 326 P **Pn 22 11 52.0 -1.0**
CHIF Chize 8.48 326 P **Pn 22 11 51.0 -1.9**
HINF Hinteralfeld 8.55 2 *e*Pn **Pn 22 11 54.2 +0.2**
SNR=1.0
HINF *e*Sn **Sn 22 13 22.9 -7.6**
comp=E,17nm,0.4s
HINF Hinteralfeld 8.55 2 *e*Pn **Pn 22 11 54.2 +0.2**
HINF *e*Sn **Sn 22 13 22.9 -7.6**
HINF Hinteralfeld 8.55 2 *e*P **Pn 22 11 54.2 +0.2**
HINF *e* 22 13 22.9
HINF Hinteralfeld 8.55 2 *e*Pn **Pn 22 11 54.2 +0.2**
SNR=1.0
SLE Schleitheim 8.63 10 P **Pn 22 11 55.5 +0.4**
SLE Schleitheim 8.63 10 P **Pn 22 11 55.5 +0.4**
FVI Forni Avoltri 8.70 31 P **Pn 22 11 59.4 +3.3**
FVI pmax pmax
comp=Z,1.0nm,0.4s
JAVS Javornik 8.72 38 *i* Pn **Pn 22 11 58.0 +1.6**
ABTA Abfaltersbach 8.72 29 *e*Pn **Pn 22 11 59.6 +3.2**
comp=Z,7.2nm,0.4s,SNR=16
ABTA *i* Sn **Sn 22 13 32.0 -2.8**
comp=Z,4.9nm,0.4s
HAU Haudompre 8.74 360 *e*Pn **Pn 22 11 56.3 -0.2**
SNR=1.0
HAU *e*Sn **Sn 22 13 28.6 -6.3**
comp=Z,54nm,0.3s
HAU Haudompre 8.74 360 *e*Pn **Pn 22 11 56.3 -0.2**
HAU *e*Sn **Sn 22 13 28.6 -6.3**
HAU Haudompre 8.74 360 *e*P **Pn 22 11 56.3 -0.2**
HAU *e* 22 13 28.6
HAU Haudompre 8.74 360 *e*Pn **Pn 22 11 56.3 -0.2**
SNR=1.0
MFF Saint Martin d 8.74 329 *e*Pn **Pn 22 11 55.9 -0.7**
SNR=1.0
MFF *e*Sn **Sn 22 13 30.7 -4.4**
comp=Z,24nm,0.4s
MFF Saint Martin d 8.74 329 *e*Pn **Pn 22 11 55.9 -0.7**
MFF *e*Sn **Sn 22 13 30.7 -4.4**
MFF Saint Martin d 8.74 329 *e*P **Pn 22 11 55.9 -0.7**
MFF *e* 22 13 30.7
MFF Saint Martin d 8.74 329 *e*Pn **Pn 22 11 55.9 -0.7**
SNR=1.0
KIZ Kirchzarten 8.76 7 P **Pn 22 11 56.3 -0.5**
KIZ Kirchzarten 8.76 7 P **Pn 22 11 56.3 -0.5**
UDBI Udbina 8.76 50 *e*Pn **Pn 22 11 58.2 +1.3**
MOTA Moosalm 8.78 22 *e*Pn **Pn 22 11 59.2 +1.9**
comp=Z,20nm,0.4s,SNR=30
MOTA *i* Sn **Sn 22 13 32.4 -3.8**
comp=Z,13nm,0.4s
MOTA Moosalm 8.78 22 Pn **Pn 22 11 59.2 +1.9**
comp=Z,20nm,0.4s,SNR=30
WTTA Wattenberg 8.87 24 *e*Pn **Pn 22 12 01.1 +2.6**
comp=Z,4.4nm,0.2s
WTTA Wattenberg 8.87 24 Pn **Pn 22 12 01.1 +2.6**
comp=Z,4.4nm,0.2s
WATA Walderalm 8.91 24 *e*Pn **Pn 22 12 01.3 +2.2**
comp=Z,11nm,0.3s,SNR=13
WATA Walderalm 8.91 24 Pn **Pn 22 12 01.3 +2.2**
comp=Z,11nm,0.3s,SNR=13
THEF They Montfort 8.96 358 P **Pn 22 11 59.9 +0.3**
THEF They Montfort 8.96 358 P **Pn 22 11 59.9 +0.3**
ECH Echery 8.96 3 *e*Pn **Pn 22 11 58.5 -1.2**
ECH Echery 8.96 3 P **Pn 22 11 59.2 -0.5**
ECH Echery 8.96 3 *e*P **Pn 22 11 58.5 -1.2**
ECH Echery 8.96 3 *e*Pn **Pn 22 11 58.5 -1.2**
ECH Echery 8.96 3 P **Pn 22 11 59.2 -0.5**
SFTF Sexfontaines 8.99 354 *e*Pn **Pn 22 12 00.4 +0.5**
baz=172
SFTF *e*Sn **Sn 22 13 34.6 -6.4**
comp=Z,16nm,0.4s
SFTF Sexfontaines 8.99 354 *e*Pn **Pn 22 12 00.4 +0.5**
SFTF *e*Sn **Sn 22 13 34.6 -6.4**
SFTF Sexfontaines 8.99 354 *e*Pn **Pn 22 12 00.4 +0.5**
VISS Visnje 9.04 41 *e*Pn **Pn 22 12 01.4 +0.7**
BOJS Bojanci 9.06 44 *i* Pn **Pn 22 12 01.9 +1.0**
MPAL Palemas 9.15 247 P **Pn 22 12 04.6 +2.3**
CDF Champ du Feu 9.17 4 *e*Pn **Pn 22 12 01.6 -0.9**
SNR=1.0
CDF *e*Sn **Sn 22 13 39.7 -5.9**
comp=Z,28nm,0.7s
CDF Champ du Feu 9.17 4 *e*Pn **Pn 22 12 01.6 -0.9**
CDF *e*Sn **Sn 22 13 39.7 -5.9**
CDF Champ du Feu 9.17 4 *e*P **Pn 22 12 01.6 -0.9**
CDF *e* 22 13 39.7
CDF Champ du Feu 9.17 4 *e*Pn **Pn 22 12 01.6 -0.9**
SNR=1.0
BFO Black Forest 9.17 8 *e*Pn **Pn 22 12 03.7 +1.2**
BFO Black Forest 9.17 8 *e*P **Pn 22 12 03.7 +1.2**
BFO Black Forest 9.17 8 *e*P **Pn 22 12 03.7 +1.2**
WLS Welschbruch 9.17 4 P **Pn 22 12 02.1 -0.4**
WLS Welschbruch 9.17 4 P **Pn 22 12 02.1 -0.4**
HORN Hornachuelos 9.21 265 P **Pn 22 12 04.0 +0.9**
MEZF Maizieres J'vi 9.28 355 *e*Pn **Pn 22 12 04.7 +0.8**
baz=171,SNR=1.0
MEZF *e*Sn **Sn 22 13 41.5 -6.7**
comp=Z,38nm,0.6s
MEZF Maizieres J'vi 9.28 355 *e*Pn **Pn 22 12 04.7 +0.8**
MEZF *e*Sn **Sn 22 13 41.5 -6.7**
MEZF Maizieres J'vi 9.28 355 *e*Pn **Pn 22 12 04.7 +0.8**
SNR=1.0
STON Ston 9.29 64 *e*Pn **Pn 22 12 05.2 +1.1**
STON Ston 9.29 64 *e*Pn **Pn 22 12 05.1 +1.1**
PAGF Fort de Pagny 9.30 357 *e*Pn **Pn 22 12 04.5 +0.3**
baz=179
PAGF *e*Sn **Sn 22 13 41.9 -6.7**
comp=Z,28nm,0.5s,baz=178
PAGF Fort de Pagny 9.30 357 *e*Pn **Pn 22 12 04.5 +0.3**
PAGF *e*Sn **Sn 22 13 41.9 -6.7**
PAGF Fort de Pagny 9.30 357 *e*Pn **Pn 22 12 04.5 +0.3**
KBA Koelnbreinsper 9.32 31 *i* Pn **Pn 22 12 06.9 +2.2**
comp=Z,4.6nm,0.3s,SNR=9.4
KBA *e*Sn **Sn 22 13 49.0 -0.5**
comp=Z,2.9nm,0.3s
KBA Koelnbreinsper 9.32 31 P **Pn 22 12 08.5 +3.8**
KBA Koelnbreinsper 9.32 31 Pn **Pn 22 12 06.9 +2.2**
comp=Z,4.6nm,0.3s,SNR=9.4
KBA Sn **Sn 22 13 49.0 -0.5**
comp=Z,2.9nm,0.3s
OBKA Obir 9.40 37 *i* Pn **Pn 22 12 08.3 +2.6**
comp=Z,3.6nm,0.6s
OBKA Obir 9.40 37 Pn **Pn 22 12 08.3 +2.6**
comp=Z,3.6nm,0.6s
PERS Pernice 9.76 38 *i* Pn **Pn 22 12 12.6 +2.0**
TTG Podgorica 10.27 68 *e*Pn **Pn 22 12 17.2 -0.3**
TTG Podgorica 10.27 68 *e*P **Pn 22 12 17.2 -0.3**
TTG Podgorica 10.27 68 *e*P **Pn 22 12 17.2 -0.3**
PBRG Braganca 10.29 288 *e*P **Pn 22 12 17.6 -0.3**
comp=Z,87nm,1.7s
PBRG Braganca 10.29 288 *e*P **Pn 22 12 17.6 -0.3**
MOA Molln 10.31 31 *e*Pn **Pn 22 12 20.4 +2.3**
comp=Z,4.3nm,0.4s
MOA Molln 10.31 31 Pn **Pn 22 12 20.4 +2.3**
comp=Z,4.3nm,0.4s
WLF Walferdange 10.40 359 ↓↓P **Pn 22 12 20.7 +1.5**
WLF Walferdange 10.40 359 *e*Pn **Pn 22 12 20.7 +1.5**
WLF Walferdange 10.40 359 *e*Pn **Pn 22 12 20.7 +1.5**
ARSA Arzberg 10.40 37 *i* Pn **Pn 22 12 20.8 +1.5**
comp=Z,7.7nm,0.6s,SNR=8.1
ARSA Arzberg 10.40 37 Pn **Pn 22 12 20.8 +1.5**
comp=Z,7.7nm,0.6s,SNR=8.1
MVO Moncorvo 10.42 285 *e*P **Pn 22 12 19.8 +0.2**
comp=Z,178nm,0.7s
MVO *e*LR LR 22 15 33.2
comp=Z,545nm,18.0s
MVO Moncorvo 10.42 285 *e*P **Pn 22 12 19.8 +0.2**

LDF	**La Druitiere**	**10.43**	**336**	*e*Pn	**Pn**	**22 12 19.0**	**-0.6**
	SNR=1.0						
LDF				*e*Sn	**Sn**	**22 14 11.1**	**-5.2**
	comp=Z,20nm,0.6s						
LDF	**La Druitiere**	**10.43**	**336**	*e*Pn	**Pn**	**22 12 19.0**	**-0.6**
LDF				*e*Sn	**Sn**	**22 14 11.1**	**-5.2**
LDF	**La Druitiere**	**10.43**	**336**	*e*P	**Pn**	**22 12 19.0**	**-0.6**
LDF				*e*		22 14 11.1	
LDF	**La Druitiere**	**10.43**	**336**	*e*Pn	**Pn**	**22 12 19.0**	**-0.6**
	SNR=1.0						
GRR	**Gorron**	**10.50**	**333**	*e*Pn	**Pn**	**22 12 19.4**	**-1.2**
	SNR=1.0						
GRR				*e*Sn	**Sn**	**22 14 11.3**	**-6.8**
	comp=Z,23nm,0.5s						
GRR	**Gorron**	**10.50**	**333**	*e*Pn	**Pn**	**22 12 19.4**	**-1.2**
GRR				*e*Sn	**Sn**	**22 14 11.3**	**-6.8**
GRR	**Gorron**	**10.50**	**333**	*e*P	**Pn**	**22 12 19.4**	**-1.2**
GRR				*e*		22 14 11.3	
GRR	**Gorron**	**10.50**	**333**	*e*Pn	**Pn**	**22 12 19.4**	**-1.2**
	SNR=1.0						
PMRV	**Marv??o**	**10.66**	**275**	*e*P	**Pn**	**22 12 23.2**	**+0.3**
	comp=Z,41nm,1.3s						
PMRV				*e*LR	LR	22 15 46.0	
	comp=Z,281nm,18.0s						
PMRV	**Marv??o**	**10.66**	**275**	*e*P	**Pn**	**22 12 23.2**	**+0.3**
FLN	**La Foliniere**	**10.69**	**335**	*e*Pn	**Pn**	**22 12 22.3**	**-1.0**
	baz=156,SNR=1.0						
FLN				*e*Sn	**Sn**	**22 14 17.5**	**-5.3**
	comp=Z,25nm,0.6s,baz=159						
FLN	**La Foliniere**	**10.69**	**335**	*e*Pn	**Pn**	**22 12 22.3**	**-1.0**
FLN				*e*Sn	**Sn**	**22 14 17.5**	**-5.3**
FLN	**La Foliniere**	**10.69**	**335**	*e*P	**Pn**	**22 12 22.3**	**-1.0**
FLN				*e*		22 14 17.5	
FLN	**La Foliniere**	**10.69**	**335**	*e*Pn	**Pn**	**22 12 22.3**	**-1.0**
	SNR=1.0						
PCBR	**Castelo Branco**	**10.71**	**277**	*e*P	**Pn**	**22 12 22.6**	**-0.9**
	comp=Z,32nm,1.9s						
PCBR	**Castelo Branco**	**10.71**	**277**	*e*P	**Pn**	**22 12 22.6**	**-0.9**
MTE	**Manteigas**	**10.76**	**280**	*e*P	**Pn**	**22 12 23.6**	**-0.7**
	comp=Z,45nm,1.4s						
MTE				*e*LR	LR	22 15 35.3	
	comp=Z,452nm,18.0s						
MTE	**Manteigas**	**10.76**	**280**	*e*Pn	**Pn**	**22 12 23.9**	**-0.4**
MTE	**Manteigas**	**10.76**	**280**	*e*P	**Pn**	**22 12 23.6**	**-0.7**
MTE	**Manteigas**	**10.76**	**280**	*e*Pn	**Pn**	**22 12 23.9**	**-0.4**
PESTR	**Estremoz**	**10.86**	**272**	*e*P	**Pn**	**22 12 25.2**	**-0.4**
	comp=Z,26nm,0.8s						
PESTR	**Estremoz**	**10.86**	**272**	*e*Pn	**Pn**	**22 12 25.9**	**+0.3**
PESTR	**Estremoz**	**10.86**	**272**	*e*P	**Pn**	**22 12 25.2**	**-0.4**
PESTR	**Estremoz**	**10.86**	**272**	*e*Pn	**Pn**	**22 12 25.9**	**+0.3**
GIVF	**Givet**	**10.89**	**355**	*e*Pn	**Pn**	**22 12 26.9**	**+0.9**
	SNR=1.0						
GIVF				*e*Sn	**Sn**	**22 14 22.4**	**-5.3**
	comp=Z,16nm,0.5s						
GIVF	**Givet**	**10.89**	**355**	*e*Pn	**Pn**	**22 12 26.9**	**+0.9**
GIVF				*e*Sn	**Sn**	**22 14 22.4**	**-5.3**
GIVF	**Givet**	**10.89**	**355**	*e*Pn	**Pn**	**22 12 26.9**	**+0.9**
	SNR=1.0						
BAIF	**Baives**	**10.90**	**353**	*e*Pn	**Pn**	**22 12 26.9**	**+0.8**
	SNR=1.0						
BAIF	**Baives**	**10.90**	**353**	*e*Pn	**Pn**	**22 12 26.9**	**+0.8**
BAIF	**Baives**	**10.90**	**353**	*e*Pn	**Pn**	**22 12 26.9**	**+0.8**
	SNR=1.0						
WET	**Wettzell**	**10.92**	**23**	P	**Pn**	**22 12 28.9**	**+2.5**
WET	**Wettzell**	**10.92**	**23**	P	**Pn**	**22 12 28.9**	**+2.5**
GEA0	**GERESS Array S**	**10.92**	**26**	*e*Pn	**Pn**	**22 12 25.8**	**-0.7**
GEA0	**GERESS Array S**	**10.92**	**26**	*e*Pn	**Pn**	**22 12 25.8**	**-0.7**
GEC2	**GERESS Array S**	**10.93**	**26**	*e*Pn	**Pn**	**22 12 28.3**	**+1.7**
GEC2	**GERESS Array S**	**10.93**	**26**	*e*Pn	**Pn**	**22 12 28.3**	**+1.7**
GERES	**GERESS Array B**	**10.93**	**26**	Pn	**Pn**	**22 12 26.1**	**-0.5**
	comp=Z,0.9nm,0.3s,baz=206,slow=12,SNR=25						
GERES				Sn	Sn	22 14 18.9	-10
	comp=Z,0.4nm,0.3s,baz=220,slow=21,SNR=3.3						
PVRL	**Vila Real**	**10.95**	**285**	*e*P	**Pn**	**22 12 26.9**	**+0.1**
	comp=Z,67nm,1.2s						
PVRL	**Vila Real**	**10.95**	**285**	*e*P	**Pn**	**22 12 26.9**	**+0.1**
MDT	**Midelt**	**10.97**	**237**	Pn	**Pn**	**22 12 28.1**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=67,slow=13,SNR=4.6						
MDT				Sn	**Sn**	**22 14 25.0**	**-4.9**
	comp=Z,0.1nm,0.3s,baz=48,slow=16,SNR=2.3						
GRFO	**Grafenberg**	**10.98**	**17**	*e*Pn	**Pn**	**22 12 28.1**	**+0.8**
GRFO	**Grafenberg**	**10.98**	**17**	*e*Pn	**Pn**	**22 12 28.1**	**+0.8**
POLO	**Lamas de Ólo**	**11.01**	**286**	*e*P	**Pn**	**22 12 27.6**	**-0.2**
	comp=Z,38nm,1.5s						
POLO	**Lamas de Olo**	**11.01**	**286**	*e*P	**Pn**	**22 12 27.6**	**-0.2**
PVIS	**Viseu**	**11.04**	**282**	*e*P	**Pn**	**22 12 27.8**	**-0.3**
	comp=Z,47nm,1.5s						
PVIS	**Viseu**	**11.04**	**282**	*e*P	**Pn**	**22 12 27.8**	**-0.3**
SGMF	**Saint Gilles**	**11.05**	**327**	*e*Pn	**Pn**	**22 12 26.8**	**-1.4**
	SNR=1.0						
SGMF				*e*Sn	**Sn**	**22 14 25.8**	**-5.8**
	comp=Z,16nm,0.5s						
SGMF	**Saint Gilles**	**11.05**	**327**	*e*Pn	**Pn**	**22 12 26.8**	**-1.4**
SGMF				*e*Sn	**Sn**	**22 14 25.8**	**-5.8**
SGMF	**Saint Gilles**	**11.05**	**327**	*e*Pn	**Pn**	**22 12 26.8**	**-1.4**
	SNR=1.0						
QUIF	**Quistinic**	**11.06**	**325**	*e*Pn	**Pn**	**22 12 26.6**	**-1.7**
	SNR=1.0						
QUIF				*e*Sn	**Sn**	**22 14 26.0**	**-5.8**
	comp=Z,22nm,0.5s						
QUIF	**Quistinic**	**11.06**	**325**	*e*Pn	**Pn**	**22 12 26.6**	**-1.7**
QUIF				*e*Sn	**Sn**	**22 14 26.0**	**-5.8**
QUIF	**Quistinic**	**11.06**	**325**	*e*P	**Pn**	**22 12 26.6**	**-1.7**
QUIF				*e*		22 14 26.0	
QUIF	**Quistinic**	**11.06**	**325**	*e*Pn	**Pn**	**22 12 26.6**	**-1.7**
	SNR=1.0						
KHC	**Kasperske Hory**	**11.13**	**25**	*e*P	**Pn**	**22 12 30.5**	**+1.2**
KHC				*ex*	x	22 12 34.1	
KHC				*ex*	x	22 14 23.9	
KHC				*e*S	**Sn**	**22 14 26.5**	**-7.2**
KHC				AMS	AMS	22 19 50.0	
	comp=Z,400nm,9.4s						
KHC	**Kasperske Hory**	**11.13**	**25**	*e*Pn	**Pn**	**22 12 29.5**	**+0.1**
KHC	**Kasperske Hory**	**11.13**	**25**	*e*P	**Pn**	**22 12 30.5**	**+1.2**
KHC				*e*S	**Sn**	**22 14 26.5**	**-7.2**
KHC				MLR	MLR		
	comp=Z,400nm,9.4s						
KHC	**Kasperske Hory**	**11.13**	**25**	*e*Pn	**Pn**	**22 12 29.5**	**+0.1**
KHC	**Kasperske Hory**	**11.13**	**25**	*e*P	**Pn**	**22 12 30.5**	**+1.2**
	comp=Z,400nm,9.4s						
BCLA	**Clavier**	**11.18**	**356**	⇑P	**Pn**	**22 12 30.5**	**+0.6**
SOP	**Sopron**	**11.20**	**38**	P	**Pn**	**22 12 31.6**	**+1.4**
SOP				pmax	pmax		
	comp=Z,16nm,0.8s						
SOP	**Sopron**	**11.20**	**38**	P	**Pn**	**22 12 31.6**	**+1.4**
	comp=Z,16nm,0.8s						
PVAQ	**Vaqueiros**	**11.22**	**265**	*e*P	**Pn**	**22 12 28.8**	**-1.7**
	comp=Z,31nm,1.3s						
PVAQ				*e*LR	LR	22 15 47.8	
	comp=Z,162nm,16.0s						
PVAQ	**Vaqueiros**	**11.22**	**265**	*e*P	**Pn**	**22 12 28.8**	**-1.7**
PCAB	**Cabril**	**11.23**	**287**	*e*P	**Pn**	**22 12 30.6**	**-0.1**
	comp=Z,126nm,1.3s						
PCAB	**Cabril**	**11.23**	**287**	*e*P	**Pn**	**22 12 30.6**	**-0.1**
EVO	**Evora**	**11.23**	**271**	*e*P	**Pn**	**22 12 29.9**	**-0.8**
	comp=Z,26nm,1.7s						
EVO	**Evora**	**11.23**	**271**	*e*P	**Pn**	**22 12 29.9**	**-0.8**
DIVS	**Divibare**	**11.27**	**60**	*e*Pn	**Pn**	**22 12 31.2**	**-0.1**
DIVS	**Divibare**	**11.27**	**60**	*e*Pn	**Pn**	**22 12 31.2**	**-0.1**
PMTG	**Montargil**	**11.33**	**274**	*e*P	**Pn**	**22 12 32.3**	**+0.2**
	comp=Z,28nm,1.2s						
PMTG	**Montargil**	**11.33**	**274**	*e*P	**Pn**	**22 12 32.3**	**+0.2**
SNF	**Seneffe**	**11.34**	**353**	⇑P	**Pn**	**22 12 32.6**	**+0.6**
MEM	**Membach**	**11.35**	**359**	⇓P	**Pn**	**22 12 32.4**	**+0.2**
MEM	**Membach**	**11.35**	**359**	P	**Pn**	**22 12 33.9**	**+1.7**
MEM				pmax	pmax		
	comp=Z,74nm,0.4s						
MEM	**Membach**	**11.35**	**359**	P	**Pn**	**22 12 33.9**	**+1.7**
	comp=Z,74nm,0.4s						
PCVE	**Castro Verde**	**11.41**	**266**	*e*P	**Pn**	**22 12 35.5**	**+2.3**
	comp=Z,45nm,1.7s						
PCVE	**Castro Verde**	**11.41**	**266**	*e*P	**Pn**	**22 12 35.5**	**+2.3**
COI	**Coimbra**	**11.42**	**279**	*e*P	**Pn**	**22 12 33.6**	**+0.3**
ROSF	**Rostrenen**	**11.42**	**326**	*e*Pn	**Pn**	**22 12 31.2**	**-2.1**
	SNR=1.0						
ROSF				*e*Sn	**Sn**	**22 14 34.8**	**-5.9**
	comp=Z,47nm,0.6s						
ROSF	**Rostrenen**	**11.42**	**326**	*e*Pn	**Pn**	**22 12 31.2**	**-2.1**
ROSF				*e*Sn	**Sn**	**22 14 34.8**	**-5.9**
ROSF	**Rostrenen**	**11.42**	**326**	P	**Pn**	**22 12 31.9**	**-1.3**
ROSF	**Rostrenen**	**11.42**	**326**	*e*P	**Pn**	**22 12 31.2**	**-2.1**
ROSF				*e*		22 14 34.8	
ROSF	**Rostrenen**	**11.42**	**326**	*e*Pn	**Pn**	**22 12 31.2**	**-2.1**
	SNR=1.0						
PTOM	**Tomar**	**11.43**	**276**	*e*P	**Pn**	**22 12 33.4**	**-0.1**
	comp=Z,40nm,1.7s						
PTOM	**Tomar**	**11.43**	**276**	*e*P	**Pn**	**22 12 33.4**	**-0.1**
PGAV	**Gavieira, Arco**	**11.45**	**288**	*e*P	**Pn**	**22 12 32.8**	**-0.9**
	comp=Z,60nm,1.1s						
PGAV				*e*LR	LR	22 16 09.0	
	comp=Z,422nm,18.0s						
PGAV	**Gavieira, Arco**	**11.45**	**288**	*e*P	**Pn**	**22 12 32.8**	**-0.9**
PCAS	**Casmilo, Conde**	**11.49**	**279**	*e*P	**Pn**	**22 12 34.1**	**-0.1**
	comp=Z,46nm,0.7s						
PCAS	**Casmilo, Conde**	**11.49**	**279**	*e*P	**Pn**	**22 12 34.1**	**-0.1**
HGN	**Heimansgroeve**	**11.50**	**359**	*e*P	**Pn**	**22 12 35.2**	**+0.9**
	comp=Z,10nm,0.3s						
MESJ	**Messejana**	**11.51**	**267**	*e*P	**Pn**	**22 12 38.7**	**+4.2**
	comp=Z,58nm,1.5s						
BEBN	**Eben Emael**	**11.54**	**358**	⇓P	**Pn**	**22 12 37.8**	**+2.9**
ALMR	**Almeirim**	**11.60**	**274**	*e*P	**Pn**	**22 12 36.0**	**+0.3**
ALMR	**Almeirim**	**11.60**	**274**	*e*P	**Pn**	**22 12 36.1**	**+0.4**
	comp=Z,62nm,1.4s						
ALMR	**Almeirim**	**11.60**	**274**	*e*P	**Pn**	**22 12 36.1**	**+0.4**
PTO	**Porto**	**11.60**	**284**	*e*P	**Pn**	**22 12 36.3**	**+0.6**
	comp=Z,40nm,1.0s						
PTO	**Porto**	**11.60**	**284**	*e*P	**Pn**	**22 12 36.3**	**+0.6**
FNA	**Florina**	**11.61**	**78**	*e*Pn	**Pn**	**22 12 36.9**	**+0.9**
FNA	**Florina**	**11.61**	**78**	*e*P	**Pn**	**22 12 36.9**	**+0.9**
FNA	**Florina**	**11.61**	**78**	*e*P	**Pn**	**22 12 36.9**	**+0.9**
UCC	**Uccle**	**11.62**	**354**	*e*Pn	**Pn**	**22 12 36.9**	**+1.0**
UCC	**Uccle**	**11.62**	**354**	*e*P	**Pn**	**22 12 36.9**	**+1.0**
NKC	**Novy Kostel**	**11.78**	**19**	*e*P	**Pn**	**22 12 39.1**	**+0.9**
NKC	**Novy Kostel**	**11.78**	**19**	*e*P	**Pn**	**22 12 39.1**	**+0.9**
MOX	**Moxa**	**11.96**	**16**	P	**Pn**	**22 12 45.2**	**+4.5**
MOX				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MODS	**Modra-Piesok**	**12.03**	**37**	*e*P	**Pn**	**22 12 42.6**	**+1.0**
MODS	**Modra-Piesok**	**12.03**	**37**	*e*PN	**Pn**	**22 12 42.6**	**+1.0**
MODS	**Modra-Piesok**	**12.03**	**37**	*e*P	**Pn**	**22 12 42.6**	**+1.0**
PFVI	**Vila Bisbo**	**12.14**	**265**	*e*Pn	**Pn**	**22 12 42.0**	**-1.1**
PFVI	**Vila Bisbo**	**12.14**	**265**	*e*Pn	**Pn**	**22 12 42.0**	**-1.1**
KRUC	**Moravsky**	**12.14**	**33**	*e*PN	**Pn**	**22 12 45.1**	**+2.0**
PRU	**Pruhonice**	**12.19**	**26**	*e*P	**Pn**	**22 12 46.4**	**+2.6**
PRU				AMS	AMS	22 21 10.0	
	comp=Z,300nm,9.4s						
PRU	**Pruhonice**	**12.19**	**26**	*e*P	**Pn**	**22 12 46.4**	**+2.6**
PRU				MLR	MLR		
	comp=Z,300nm,9.4s						
PRU	**Pruhonice**	**12.19**	**26**	*e*P	**Pn**	**22 12 46.4**	**+2.6**
	comp=Z,300nm,9.4s						
GOPC	**GO Pecny, Ondr**	**12.21**	**27**	*e*P	**Pn**	**22 12 45.7**	**+1.6**
GOPC				*ex*	x	22 12 49.3	
GOPC				AMS	AMS	22 20 30.0	
	comp=Z,400nm,10.0s						
GOPC	**GO Pecny, Ondr**	**12.21**	**27**	*e*P	**Pn**	**22 12 45.7**	**+1.6**
GOPC				MLR	MLR		
	comp=Z,400nm,10.0s						
GOPC	**GO Pecny, Ondr**	**12.21**	**27**	*e*P	**Pn**	**22 12 45.7**	**+1.6**
	comp=Z,400nm,10.0s						
AGG	**Agios Georgios**	**12.40**	**86**	*e*Pn	**Pn**	**22 12 47.1**	**+0.4**
AGG	**Agios Georgios**	**12.40**	**86**	*e*Pn	**Pn**	**22 12 47.1**	**+0.4**
VRAC	**Vranov**	**12.42**	**33**	⇓P	**P**	**22 13 01.8**	**+2.9**
VRAC	**Vranov**	**12.42**	**33**	⇓P	**P**	**22 13 01.8**	**+2.9**
VRAC	**Vranov**	**12.42**	**33**	*e*PN	**Pn**	**22 12 48.3**	**+1.4**
ITM	**Ithomi**	**12.42**	**95**	*e*Pn	**Pn**	**22 12 46.8**	**-0.2**
ITM	**Ithomi**	**12.42**	**95**	*e*Pn	**Pn**	**22 12 46.8**	**-0.2**
LIT	**Litokhoron**	**12.46**	**81**	*e*Pn	**Pn**	**22 12 47.1**	**-0.4**
LIT	**Litokhoron**	**12.46**	**81**	*e*P	**Pn**	**22 12 47.1**	**-0.4**
LIT	**Litokhoron**	**12.46**	**81**	*e*P	**Pn**	**22 12 47.1**	**-0.4**
WTSB	**Winterswijk**	**12.70**	**1**	*e*P	**Pn**	**22 12 51.8**	**+1.1**
	comp=Z,11nm,0.4s						
BRG	**Berggiesshubel**	**12.77**	**22**	*e*P	**Pn**	**22 12 55.3**	**+3.6**
	comp=Z,3.4nm,0.9s						
BRG				*e*		22 13 03.6	
	comp=Z,8.2nm,1.0s						
	comp=N,264nm,11.5s						
	comp=E,310nm,14.2s						
	comp=Z,228nm,16.2s						
BRG	**Berggiesshubel**	**12.77**	**22**	*e*P	**Pn**	**22 12 55.3**	**+3.6**
BRG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BRG				MLR	MLR		
	comp=N,264nm,11.5s						
BRG				MLR	MLR		
	comp=E,310nm,14.2s						
BRG				MLR	MLR		
	comp=Z,228nm,16.2s						
VYHS	**Vyhne**	**12.87**	**40**	*e*P	**P**	**22 13 06.3**	**+2.4**
VYHS	**Vyhne**	**12.87**	**40**	*e*	**P**	**22 13 06.3**	**+2.4**
CLL	**Collm**	**12.91**	**19**	*e*P	**Pn**	**22 12 54.0**	**+0.5**
	comp=Z,5.0nm,1.1s						
CLL				*e*(sPP)		22 13 08.0	
CLL	**Collm**	**12.91**	**19**	*e*P	Pn	22 12 41.0	-13
CLL				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BZS	**Buzias**	**12.92**	**56**	⇓*i*P	**P**	**22 13 07.2**	**+2.7**
BZS	**Buzias**	**12.92**	**56**	⇓P	**P**	**22 13 07.2**	**+2.7**
PSZ	**Piszkesteto**	**13.06**	**44**	⇓*i*P	**P**	**22 13 09.3**	**+3.2**
PSZ	**Piszkesteto**	**13.06**	**44**	⇓P	**P**	**22 13 09.3**	**+3.2**
KRLC	**Kraliky**	**13.09**	**31**	*e*P	**Pn**	**22 12 58.1**	**+2.0**
KRLC	**Kraliky**	**13.09**	**31**	*e*P	**Pn**	**22 12 58.1**	**+2.0**
KRLC	**Kraliky**	**13.09**	**31**	*e*P	**Pn**	**22 12 58.1**	**+2.0**
DPC	**Dobruska-Polom**	**13.13**	**29**	*e*P	**P**	**22 13 03.3**	**-3.5**
DPC				*ex*	x	22 13 07.5	
DPC				AMS	AMS	22 20 00.0	
	comp=Z,300nm,8.9s						
DPC	**Dobruska-Polom**	**13.13**	**29**	*e*P	**P**	**22 13 03.3**	**-3.5**
DPC				MLR	MLR		
	comp=Z,300nm,8.9s						
UPC	**Upice**	**13.14**	**28**	AMS	AMS	22 18 40.0	
	comp=Z,300nm,11.1s						
VTS	**Vitosha**	**13.16**	**70**	⇓*i*P	**Pn**	**22 12 58.9**	**+1.7**
VTS	**Vitosha**	**13.16**	**70**	*e*Pn	**Pn**	**22 12 57.7**	**+0.4**
VTS	**Vitosha**	**13.16**	**70**	⇓P	**Pn**	**22 12 58.9**	**+1.7**
VTS	**Vitosha**	**13.16**	**70**	*e*Pn	**Pn**	**22 12 57.7**	**+0.4**
VTS	**Vitosha**	**13.16**	**70**	P	**Pn**	**22 12 58.9**	**+1.7**
MORC	**Moravsky Berou**	**13.18**	**33**	*e*Pn	**Pn**	**22 13 00.3**	**+3.1**
MORC	**Moravsky Berou**	**13.18**	**33**	*e*P	**Pn**	**22 13 00.3**	**+3.1**
MORC	**Moravsky Berou**	**13.18**	**33**	*e*P	**Pn**	**22 13 00.3**	**+3.1**
OKC	**Ostrava-Krasne**	**13.48**	**35**	AMS	AMS	22 19 20.0	
	comp=Z,200nm,11.6s						
LANS	**Liptovska Anna**	**13.62**	**39**	*e*P	**P**	**22 13 15.7**	**+3.5**
LANS	**Liptovska Anna**	**13.62**	**39**	*e*	**P**	**22 13 15.7**	**+3.5**
DRGR		**14.11**	**52**	⇓*i*P	**P**	**22 13 20.8**	**+3.0**
DRGR		**14.11**	**52**	⇓P	**P**	**22 13 20.8**	**+3.0**
NIE	**Niedzica**	**14.20**	**40**	*e*P	**P**	**22 13 22.2**	**+3.4**
NIE	**Niedzica**	**14.20**	**40**	*e*P	**P**	**22 13 22.2**	**+3.4**
LOT	**Lotru**	**14.26**	**59**	⇓*i*P	**P**	**22 13 21.9**	**+2.4**
CRVS	**Cervenica-Dubn**	**14.48**	**43**	*e*P	**P**	**22 13 25.3**	**+3.4**
CRVS	**Cervenica-Dubn**	**14.48**	**43**	*e*P	**P**	**22 13 25.2**	**+3.4**
OJC	**Ojcow**	**14.50**	**37**	*e*Pn	**Pn**	**22 13 17.7**	**+2.4**
OJC	**Ojcow**	**14.50**	**37**	*e*P	**Pn**	**22 13 17.7**	**+2.4**
OJC	**Ojcow**	**14.50**	**37**	*e*Pn	**Pn**	**22 13 17.7**	**+2.4**
TRPA	**Tarpa**	**14.65**	**48**	⇓*i*P	**P**	**22 13 26.6**	**+2.9**
UZH	**Uzhgorod**	**14.78**	**46**	*e*P	**Pn**	**22 13 20.8**	**+1.7**
UZH				*e*S	**Sn**	**22 16 07.2**	**+4.5**
VOIR		**15.12**	**60**	⇑*i*P	**P**	**22 13 32.1**	**+3.1**
VOIR		**15.12**	**60**	⇑P	**P**	**22 13 32.1**	**+3.1**
VOIR		**15.12**	**60**	P	**P**	**22 13 32.1**	**+3.1**
IDI	**Anoyia**	**15.27**	**99**	Pn	**P**	**22 13 31.0**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=274,slow=18,SNR=3.2						
IDI	**Anoyia**	**15.27**	**99**	Pn	**P**	**22 13 31.0**	**+0.3**
DOPR	**Dopca**	**15.51**	**58**	⇑*i*P	**P**	**22 13 34.8**	**+1.6**
KWP	**Kalwaria Pacla**	**15.57**	**43**	*e*P	**P**	**22 13 35.9**	**+2.0**
KWP	**Kalwaria Pacla**	**15.57**	**43**	*e*Pn	**P**	**22 13 33.0**	**-0.9**
	comp=Z,404nm,1.2s						
KWP	**Kalwaria Pacla**	**15.57**	**43**	*e*P	**P**	**22 13 35.9**	**+2.0**
KWP	**Kalwaria Pacla**	**15.57**	**43**	*e*Pn	**P**	**22 13 33.0**	**-0.9**
	comp=Z,404nm,1.2s						
KWP	**Kalwaria Pacla**	**15.57**	**43**	*e*P	**P**	**22 13 35.9**	**+2.0**
MLR	**Muntele Rosu**	**15.73**	**60**	Pn	**P**	**22 13 37.5**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=204,slow=4.2,SNR=21						
MLR	**Muntele Rosu**	**15.73**	**60**	⇓*i*P	**P**	**22 13 38.9**	**+3.0**
MLR	**Muntele Rosu**	**15.73**	**60**	*e*Pn	**Pn**	**22 13 32.9**	**+1.0**
	comp=Z,17nm,1.0s						
MLR	**Muntele Rosu**	**15.73**	**60**	*e*P	**Pn**	**22 13 32.9**	**+1.0**
MLR				pmax	pmax		
	comp=Z,17nm,1.0s						
MLR	**Muntele Rosu**	**15.73**	**60**	*e*Pn	**Pn**	**22 13 32.9**	**+1.0**
	comp=Z,17nm,1.0s						
MLR	**Muntele Rosu**	**15.73**	**60**	⇓*i*P	**P**	**22 13 38.9**	**+3.0**
BUR04	**Bucovina Ar. S**	**16.00**	**52**	*e*Pn	**P**	**22 13 38.4**	**-0.4**
BUR04	**Bucovina Ar. S**	**16.00**	**52**	*e*Pn	**P**	**22 13 38.4**	**-0.4**
BURAR	**Bucovina Array**	**16.00**	**52**	⇑*i*P	**P**	**22 13 41.7**	**+2.9**
ISR	**Istrita**	**16.04**	**62**	⇑*i*P	**P**	**22 13 42.2**	**+3.0**
ISR	**Istrita**	**16.04**	**62**	⇑P	**P**	**22 13 42.2**	**+3.0**
ISR	**Istrita**	**16.04**	**62**	P	**P**	**22 13 42.2**	**+3.0**
PLOR	**Plostina**	**16.31**	**60**	⇓*i*P	**P**	**22 13 44.6**	**+2.4**
PLOR	**Plostina**	**16.31**	**60**	⇓P	**P**	**22 13 44.6**	**+2.4**
PLOR	**Plostina**	**16.31**	**60**	P	**P**	**22 13 44.6**	**+2.4**
VRI	**Vrincioaia**	**16.37**	**60**	⇓*i*P	**P**	**22 13 44.0**	**+1.2**
VRI	**Vrincioaia**	**16.37**	**60**	⇓P	**P**	**22 13 44.0**	**+1.2**
VRI	**Vrincioaia**	**16.37**	**60**	P	**P**	**22 13 44.0**	**+1.2**
TAM	**Tamanrasset**	**16.44**	**183**	*e*Pn	**Pn**	**22 13 40.4**	**-0.7**
	comp=Z,16nm,1.0s						
TAM				*e*Sn	**Sn**	**22 16 37.5**	**-6.1**
TAM	**Tamanrasset**	**16.44**	**183**	*e*P	**Pn**	**22 13 40.4**	**-0.7**
TAM				*e*		22 16 37.5	
TAM				pmax	pmax		
	comp=Z,16nm,1.0s						
TAM	**Tamanrasset**	**16.44**	**183**	*e*Pn	**Pn**	**22 13 40.4**	**-0.7**
	comp=Z,16nm,1.0s						
TAM				*e*Sn	**Sn**	**22 16 37.5**	**-6.1**
DSB	**Dublin**	**16.49**	**332**	*e*Pn	**Pn**	**22 13 41.8**	**+0.4**
	comp=Z,124nm,1.9s						
DSB	**Dublin**	**16.49**	**332**	*e*Pn	**Pn**	**22 13 41.8**	**+0.4**
	comp=Z,124nm,1.9s						
TESR	**Tescani**	**16.51**	**57**	⇑*i*P	**P**	**22 13 44.3**	**0.0**
TLB	**Topalu**	**16.97**	**65**	⇑*i*P	**P**	**22 13 49.0**	**-0.4**
TLB	**Topalu**	**16.97**	**65**	⇑P	**P**	**22 13 49.0**	**-0.4**
TLB	**Topalu**	**16.97**	**65**	P	**P**	**22 13 49.0**	**-0.4**
ESK	**Eskdalemuir**	**17.29**	**341**	*e*Pn	**Pn**	**22 13 51.8**	**+0.3**
	comp=Z,65nm,1.8s						
ESK	**Eskdalemuir**	**17.29**	**341**	*e*P	**Pn**	**22 13 51.8**	**+0.3**
ESK				pmax	pmax		
	comp=Z,65nm,1.8s						
ESK	**Eskdalemuir**	**17.29**	**341**	*e*P	**Pn**	**22 13 51.8**	**+0.3**
	comp=Z,65nm,1.8s						
EKA	**Eskdalemuir Ar**	**17.29**	**341**	P	**Pn**	**22 13 51.5**	**0.0**
	baz=158,slow=14,SNR=17						
HORU	**Horodok**	**17.43**	**49**	P	**P**	**22 13 56.3**	**+1.8**
HORU	**Horodok**	**17.43**	**49**	P	**P**	**22 13 56.3**	**+1.8**
MILM	**Milestii Mici**	**18.05**	**58**	⇑*i*P	**P**	**22 14 02.9**	**+1.6**
SORM	**Soroca**	**18.15**	**54**	⇑*i*P	**P**	**22 14 03.8**	**+1.4**
SORM	**Soroca**	**18.15**	**54**	⇑P	**P**	**22 14 03.8**	**+1.4**
SORM	**Soroca**	**18.15**	**54**	P	**P**	**22 14 03.8**	**+1.4**
SUW	**Suwalki**	**18.66**	**32**	*e*P	**Pn**	**22 14 09.7**	**+1.4**
**SUW

NCK pmax pmax
comp=Z,9.0nm,1.0s
NCK Nalchik 28.10 69 *i* P **P 22 15 43.0 +1.1**
comp=Z,9.0nm,1.0s
GNI Garni 29.39 76 *e*P **P 22 15 51.8 -1.9**
comp=Z,9.5nm,1.0s
GNI Garni 29.39 76 *i* P **P 22 15 53.9 +0.3**
GNI pmax pmax
comp=Z,18nm,1.0s
KLMR Klimovskoe 29.79 33 *e*P **P 22 15 55.3 -1.4**
KLMR pmax pmax
comp=Z,10.0nm,1.2s
KLMR Klimovskoe 29.79 33 *e*P **P 22 15 55.3 -1.4**
KLMR AMP 22 16 10.8
comp=Z,10.0nm,1.2s
TMCR Tamitsa 31.11 26 *e*P **P 22 16 06.8 -1.5**
TMCR pmax pmax
comp=Z,19nm,1.1s
ARCES ARCESS Array B 32.00 13 P **P 22 16 15.6 -0.6**
comp=Z,2.4nm,0.5s,baz=210,slow=9.1,SNR=26
ARCES PcP **PcP 22 19 05.9 +0.3**
comp=Z,3.1nm,0.7s,baz=203,slow=2.5,SNR=6.6
ARCES ARCESS Array B 32.00 13 *e*P **P 22 16 16.1 0.0**
ARCES PcP **PcP 22 19 05.9 +0.3**
ARCES ARCESS Array B 32.00 13 *e*P **P 22 16 16.1 0.0**
ARCES 22 19 05.9
PRGR Permogore 32.77 34 *e*P **P 22 16 21.2 -1.7**
PRGR pmax pmax
comp=Z,7.0nm,0.8s
DBIC Dimbokro 33.99 200 P **P 22 16 34.8 +0.8**
comp=Z,12nm,0.8s,baz=351,slow=11,SNR=8.6
DBIC Dimbokro 33.99 200 *e*P **P 22 16 32.3 -1.7**
comp=Z,13nm,0.8s
TIC Toumodi 34.06 200 *e*P **P 22 16 35.1 +0.4**
KIC Kosan Boka 34.26 200 *e*P **P 22 16 37.1 +0.7**
comp=Z,94nm,1.3s
LIC Lamto 34.47 200 *e*P **P 22 16 38.9 +0.8**
comp=Z,56nm,0.7s
LIC Lamto 34.47 200 *e*P **P 22 16 38.9 +0.8**
comp=Z,36nm,0.7s,baz=31
LIC *e*pP **sP 22 16 43.1 -0.2**
LIC Lamto 34.47 200 *e*P **P 22 16 38.9 +0.8**
comp=Z,36nm,0.7s
LIC *e*pP **sP 22 16 43.1 -0.2**
SACV Santiago Islan 35.73 236 *e*P **P 22 16 47.2 -1.9**
comp=Z,90nm,1.5s
RAYN Ar Rayn 36.60 104 *e*P **P 22 16 56.1 -0.4**
comp=Z,4.1nm,0.8s
RAYN Ar Rayn 36.60 104 P **P 22 16 56.1 -0.4**
RAYN pmax pmax
comp=Z,4.0nm,0.8s
RAYN Ar Rayn 36.60 104 *e*P **P 22 16 56.1 -0.4**
comp=Z,4.1nm,0.8s
AKTO Aktyubinsk 37.57 55 P **P 22 17 04.5 +0.1**
comp=Z,7.4nm,0.7s,baz=283,slow=9.6,SNR=20
AKTO PcP **PcP 22 19 22.5 +0.4**
comp=Z,1.3nm,0.5s,baz=256,slow=4.2,SNR=3.9
ARU Arti 37.95 46 *e*P **P 22 17 07.8 +0.3**
comp=Z,2.7nm,0.5s
ARU Arti 37.95 46*c i*P **P 22 17 07.7 +0.1**
ARU 22 18 32.2
ARU *e* 22 19 23.6
ARU S **S 22 23 00.0 +1.0**
ARU SS **SnSn 22 25 36.9 -3.6**
ARU pmax pmax
comp=Z,41nm,1.0s
ABKAR Akbulak array 38.90 57 *e*P **P 22 17 16.1 +0.4**
SVE Sverdlovsk 39.12 45||*e*P **P 22 17 18.3 +0.9**
SVE pmax pmax
comp=Z,25nm,1.0s
SPITS Spitsbergen Ar 39.24 3 P **P 22 17 19.9 +1.7**
comp=Z,4.0nm,0.8s,baz=181,slow=14,SNR=3.4
SPITS LR LR 22 35 28.6
comp=Z,24nm,18.6s,baz=185,slow=39
GEYT Alibeck 40.02 75 P **P 22 17 25.2 0.0**
comp=Z,2.5nm,1.0s,baz=284,slow=12,SNR=6.5
UOSS Minazif 44.04 94 *e*P **P 22 17 56.6 -1.5**
comp=Z,28nm,1.5s
UOSS Minazif 44.04 94 *e*P **P 22 17 56.6 -1.5**
comp=Z,28nm,1.5s
BRVK Borovoye 44.88 50 *e*P **P 22 18 05.9 +1.4**
comp=Z,3.8nm,0.5s
BRVK Borovoye 44.88 50*c i*P **P 22 18 05.6 +1.1**
BRVK pmax pmax
comp=Z,29nm,1.7s
BVAR Borovoye Array 44.95 50 P **P 22 18 06.1 +1.1**
comp=Z,2.3nm,0.5s,baz=258,slow=7.2,SNR=22
BVAR PcP **PcP 22 19 47.1 +1.0**
comp=Z,2.2nm,0.6s,baz=245,slow=2.6,SNR=7.9
KMBO Kilima Mbogo 49.18 137 P P 22 18 53.4 +15
comp=Z,8.4nm,0.9s,baz=333,slow=8.1,SNR=18
KBL Kabul 49.47 75 P **P 22 18 42.7 +1.9**
KBL Kabul 49.47 75 P **P 22 18 42.7 +1.9**
SCHQ Schefferville 49.91 314 P **P 22 18 43.5 -0.1**
comp=Z,5.7nm,0.7s,baz=69,slow=7.1,SNR=6.2
SCHQ Schefferville 49.91 314 *e*P **P 22 18 44.2 +0.6**
KURBB Kurchatov Arra 50.40 52 P **P 22 18 47.9 +0.5**
comp=Z,6.1nm,0.6s,baz=284,slow=7.6,SNR=41
KURBB PcP **PcP 22 20 06.6 +0.9**
comp=Z,3.2nm,0.8s,baz=283,slow=4.0,SNR=9.7
KURK Kurchatov 50.43 52 *e*P **P 22 18 48.5 +0.9**
comp=Z,33nm,0.3s
KURK PcP **PcP 22 20 06.6 +0.8**
KURK Kurchatov 50.43 52 *e*P **P 22 18 48.5 +0.9**
KURK 22 20 06.6
KURK pmax pmax
comp=Z,33nm,0.3s
NVS Novosibirsk 51.96 46 *e*P **P 22 19 00.3 +1.3**
NVS pmax pmax
comp=Z,14nm,0.8s
NVS pmax pmax
comp=E,5.0nm,0.7s
KSH Kashi 52.50 66 P **P 22 19 02.6 -0.8**
KSH pP pP 22 19 07.6 +0.3
KSH PP **PP 22 21 00.0 -2.1**
KSH S **S 22 26 25.8 -4.0**
KSH sS pS 22 26 33.8 -0.6
KSH SS **SS 22 30 01.8 -5.7**
KSH pmax pmax
comp=E,8.0nm,0.5s
KSH pmax pmax
comp=E,180nm,3.5s
KSH LR LR
comp=E,570nm,9.5s
KSH LR LR
comp=E,270nm,6.0s
KSH LR LR
comp=E,190nm,7.0s
NIL Nilore 53.00 74 *e*P **P 22 19 07.2 +0.2**
comp=E,22nm,0.9s
NIL Nilore 53.00 74 *e*P **P 22 19 07.2 +0.2**
NIL pmax pmax
comp=Z,22nm,0.9s
NIL Nilore 53.00 74 *e*P **P 22 19 07.2 +0.2**
comp=Z,22nm,0.9s
ZALV Zalesovo Beam 53.11 46 P **P 22 19 08.4 +0.9**
comp=Z,7.9nm,0.6s,baz=284,slow=8.4,SNR=39
MAKZ Makanchi 53.80 56 *e*P **P 22 19 12.2 -0.6**
MAKZ *e*pP **pP 22 19 13.5 -3.1**
MAKZ Makanchi 53.80 56 *e*P **P 22 19 12.2 -0.6**
MK31 Makanchi Array 54.00 55 *e*P **P 22 19 13.9 -0.3**
MK31 *e*sP **pP 22 19 14.9 -3.2**
MK31 Makanchi Array 54.00 55 *e*P **P 22 19 13.9 -0.3**
MKAR Makanchi Array 54.00 55 P **P 22 19 14.9 +0.6**
comp=Z,12nm,0.7s,baz=286,slow=6.2,SNR=125
MKAR PcP **PcP 22 20 19.8 +0.5**
comp=Z,3.3nm,0.7s,baz=292,slow=3.6,SNR=3.7
MKAR Makanchi Array 54.00 55*c e*P **P 22 19 14.8 +0.5**
MKAR pmax pmax
comp=Z,12nm,0.7s
MK01 Makanchi Array 54.02 55 *e*P **P 22 19 14.8 +0.4**
PKME Peaks-Kenny Pk 54.40 303 P **P 22 19 16.6 -0.5**
baz=68
LBNH Lisbon 56.53 302 P **P 22 19 30.4 -2.1**
baz=66
LSZ Lusaka 57.97 155 *e*P **P 22 19 41.7 -1.2**
comp=Z,9.2nm,0.9s
LSZ Lusaka 57.97 155 *e*P **P 22 19 41.7 -1.2**
LSZ pmax pmax
comp=Z,9.0nm,0.9s
WMQ Urumqi 58.69 57 P **P 22 19 49.8 +2.0**
WMQ pP sP 22 19 54.9 +1.8
WMQ sP pP 22 19 58.4 +6.7
WMQ pmax pmax
comp=Z,15nm,0.7s
WMQ pmax pmax
comp=Z,220nm,4.7s
WMQ LR LR
comp=Z,180nm,28.3s
WMQ LR LR
comp=Z,120nm,24.7s
WMQ LR LR
comp=Z,80nm,22.5s
HVS Khovu-Aksy 59.19 47 *i* P **P 22 19 51.6 +0.5**
HVS pmax pmax
comp=Z,15nm,0.7s
N59A State Game Lan 60.54 300 P **P 22 20 00.8 +0.3**
baz=62
SSPA Standing Stone 62.09 301 P **P 22 20 10.9 -0.1**
baz=61
SSPA Standing Stone 62.09 301 *e*P **P 22 20 12.8 +1.8**
TIXI Tiksi 62.24 18*ce*P **P 22 20 11.5 +0.1**
TIXI pmax pmax
comp=Z,7.0nm,1.7s
FCC Fort Churchill 62.31 325 *e*P **P 22 20 13.0 +0.9**
comp=Z,1.3nm,0.5s
FCC Fort Churchill 62.31 325 *e*P **P 22 20 13.0 +0.9**
FCC pmax pmax
comp=Z,1.0nm,0.5s
O56A Blue Knob Stat 62.72 301 P **P 22 20 15.5 +0.3**
baz=60
PYUN Piuthan 63.00 75 *e*P **P 22 20 17.5 0.0**
comp=Z,40nm,0.8s
N54A Moraine State 63.32 302 P **P 22 20 19.7 +0.5**
baz=60
SPRD Spring Road, M 63.37 298 *e*P **P 22 20 21.6 +2.1**
IP01 Cuckoo 63.43 298 *e*P **P 22 20 22.1 +2.2**
DANN Dangsing 63.44 74 *e*P **P 22 20 20.5 -0.1**
IP04 Greensprings 63.48 299 *e*P **P 22 20 22.0 +1.7**
IP07 Quail 63.53 298 *e*P **P 22 20 22.5 +1.9**
KOLN Koldanda 63.63 75 *e*P **P 22 20 21.4 -0.3**
comp=Z,8.7nm,0.7s
GKN Gorkha 64.28 74 *e*P **P 22 20 25.4 -0.5**
comp=Z,17nm,0.8s
TLY Talaya 64.40 43 *e*P **P 22 20 28.3 +2.2**
TLY Talaya 64.40 43 *e*P **P 22 20 27.7 +1.5**
TLY pmax pmax
comp=Z,10.0nm,0.9s
DMN Daman 64.84 74 *e*P **P 22 20 29.9 +0.2**
comp=Z,24nm,0.7s
KKN Kakani 64.88 74 *e*P **P 22 20 29.4 -0.5**
comp=Z,15nm,0.6s
ZAK Zakamensk 64.89 45 *e*P P 22 20 22.2 -7.2
ZAK pmax pmax
comp=Z,4.0nm,1.2s
PKIN Phulchoki 65.08 74 *e*P **P 22 20 30.7 -0.6**
comp=Z,11nm,0.7s
GUN Gumba 65.26 73 *e*P **P 22 20 32.5 0.0**
comp=Z,37nm,0.8s
JIRN Jiri 65.62 73 *e*P **P 22 20 34.9 0.0**
comp=Z,32nm,0.9s
ACSO Alum Creek Sta 65.65 303 P **P 22 20 34.5 +0.1**
baz=58
C39A Grand Marais 66.01 313 P **P 22 20 36.8 +0.1**
baz=58
RAMN Ramite 66.32 74 *e*P **P 22 20 38.6 -0.6**
comp=Z,31nm,0.8s
E40A Wakefield 66.62 312 P **P 22 20 39.0 -1.6**
baz=57
EYMN Ely 66.72 314 P **P 22 20 40.3 -0.8**
baz=57
ODAN Odare 66.95 74 *e*P **P 22 20 42.8 -0.5**
comp=Z,22nm,1.1s
F40A Park Falls 67.04 311 P **P 22 20 43.5 +0.3**
baz=57
C37A Embarrass 67.22 314 P **P 22 20 44.7 +0.3**
baz=56
KMSC Kings Mountain 67.25 297 P **P 22 20 46.0 +1.3**
baz=57
U53A Fall Branch 67.44 299 P **P 22 20 47.0 +1.0**
baz=57
F39A Loretta 67.50 311 P **P 22 20 46.1 -0.1**
baz=56
N46A Monticello 67.71 305 P **P 22 20 47.9 +0.3**
baz=57
O47A Sheridan 67.71 304 P **P 22 20 47.9 +0.3**
baz=57
ULM Lac du Bonnet 67.81 317 P **P 22 20 48.3 +0.2**
comp=Z,3.2nm,0.5s,baz=50,slow=5.6,SNR=5.5
J42A Columbus 67.87 308 P **P 22 20 47.9 -0.7**
baz=56
V53A Saluda 67.97 299 P **P 22 20 50.4 +1.0**
baz=57
SONM Sonino Array 67.99 46 P **P 22 20 50.6 +1.1**
comp=Z,4.7nm,0.9s,baz=302,slow=7.2,SNR=28
TZTN Tazewell 68.00 300 P **P 22 20 50.5 +1.0**
baz=57
F38A Pierce - Schro 68.03 312 P **P 22 20 51.2 +1.6**
baz=56
D36A Goodland 68.08 314 P **P 22 20 50.3 +0.5**
baz=56
YKA Yellowknife Ar 68.11 335 P **P 22 20 50.5 +0.8**
comp=Z,2.7nm,0.7s,baz=50,slow=6.5,SNR=20
LSA Lhasa 68.15 69 *e*P **P 22 20 51.2 +0.1**
comp=Z,5.3nm,0.8s
B34A Aery, Baudette 68.16 315 P **P 22 20 51.2 +0.9**
baz=55
FFC Flin Flon 68.17 324 *e*P **P 22 20 51.1 +0.9**
comp=Z,4.0nm,1.0s
FFC Flin Flon 68.17 324 *e*P **P 22 20 51.1 +0.9**
FFC pmax pmax
comp=Z,4.0nm,1.0s
SFIN Lafayette 68.22 305 P **P 22 20 51.5 +0.7**
baz=56
A33A Warroad 68.31 316 P **P 22 20 51.5 +0.3**
baz=55
ULN Ulaanbaatar 68.34 45 *e*P **P 22 20 52.7 +1.1**
comp=Z,4.7nm,1.0s
ULN Ulaanbaatar 68.34 45*ce*P **P 22 20 51.9 +0.3**
ULN pmax pmax
comp=Z,13nm,2.5s
V52A Sevierville 68.41 299 P **P 22 20 51.8 -0.3**
baz=56
BG3 Lake Jocassee 68.42 298 *e*P **P 22 20 54.4 +2.2**
W53A Cullowhee 68.49 298 P **P 22 20 53.6 +0.9**
baz=56
E36A McGregor 68.51 313 P **P 22 20 52.8 +0.3**
baz=55
R48A Northridge Ran 68.52 302 P **P 22 20 53.6 +0.9**
baz=56
F37A Hinrichs Farm, 68.60 312 P **P 22 20 53.7 +0.7**
baz=55
INK Inuvik 68.62 345 P **P 22 20 53.7 +0.9**
comp=Z,5.4nm,0.8s,baz=18,slow=11,SNR=11
INK Inuvik 68.62 345 *e*P **P 22 20 53.5 +0.7**
comp=Z,8.1nm,0.9s
O45A Potomac 68.69 305 P **P 22 20 53.7 -0.1**
baz=56
GTA Gaotai 68.75 56 *e*P **P 22 20 54.9 +0.6**
GTA pP sP 22 20 59.1 -0.6
GTA sP pP 22 21 02.3 +4.1
GTA ScP 22 25 21.0
GTA pmax pmax
comp=Z,5.0nm,1.1s
Y54A Tignall 68.88 297 P **P 22 20 56.5 +1.5**
baz=56,SNR=7.8
WCI Wyandotte Cave 68.89 303 P **P 22 20 55.5 +0.5**
baz=56
L42A Oliver, Polo 68.93 307 P **P 22 20 55.1 -0.1**
baz=56
V51A Loudon 68.94 299 P **P 22 20 56.3 +0.9**
baz=56
X53A Estanollee 68.95 298 P **P 22 20 56.9 +1.5**
baz=56
SPMN Marine on St. 68.99 312 P **P 22 20 56.4 +0.9**
baz=55
R47A Wooly Knot Far 69.01 303 P **P 22 20 55.9 +0.1**
baz=56
T49A Edmonton 69.02 301 P **P 22 20 55.7 -0.1**
baz=56
F36A Milaca 69.04 313 P **P 22 20 55.7 -0.1**
baz=55
P45A Graceland, Par 69.11 304 P **P 22 20 56.6 +0.3**
baz=56
YAK Yakutsk 69.21 25 *i* P **P 22 20 57.4 +0.8**
YAK pmax pmax
comp=Z,10.0nm,0.8s
X52A Dahlonega 69.30 298 P **P 22 20 57.7 +0.1**
baz=56
Z54A Sparta 69.33 296 P **P 22 20 58.4 +0.5**
baz=56
155A Kite 69.42 296 P **P 22 20 59.5 +1.1**
baz=56
J39A Decorah 69.42 309 P **P 22 20 57.5 -0.7**
baz=55
Y53A Monroe 69.50 297 P **P 22 20 59.2 +0.3**
baz=56
U49A Red Boiling Sp 69.51 301 P **P 22 20 58.8 -0.1**
baz=56
V50A Pikevile 69.52 300 P **P 22 20 58.9 -0.1**
baz=56
T48A Bowling Green 69.58 302 P **P 22 20 59.3 -0.1**
baz=56
GOGA Godfrey 69.67 297 P **P 22 21 00.8 +0.9**
baz=56
R46A Gibon Southern 69.70 303 P **P 22 20 59.9 -0.1**
baz=56
Q45A Warren Harvey, 69.73 304 P **P 22 21 00.7 +0.5**
baz=56
BOSA Boshof 69.79 162 P **P 22 21 01.3 +0.7**
comp=Z,3.8nm,0.6s,baz=341,slow=6.1,SNR=11
BOSA LR LR 22 54 58.4
comp=Z,78nm,18.4s,baz=342,slow=39
Z53A Monticello 69.82 297 P **P 22 21 01.9 +1.1**
baz=56
Y52A Lilburn 69.83 298 P **P 22 21 01.4 +0.5**
baz=56
K39A Oelwein 69.89 309 P **P 22 21 01.2 +0.1**
baz=55
W50A Signal Mountai 69.93 299 P **P 22 21 02.0 +0.4**
baz=56
V49A McMinnville 70.01 300 P **P 22 21 01.5 -0.5**
baz=56
U48A Cassie Pea, Po 70.02 301 P **P 22 21 01.7 -0.3**
baz=56
T47A Sharon Grove 70.12 302 P **P 22 21 03.1 +0.4**
baz=55,SNR=8.9
S46A Don Dixon Farm 70.13 303 P **P 22 21 02.2 -0.4**
baz=55
P43A Skaggs, Pawnee 70.18 305 P **P 22 21 02.9 -0.1**
baz=55
254A Abbeville 70.37 296 P **P 22 21 04.4 +0.2**
baz=55
Z52A Williamson 70.45 297 P **P 22 21 06.0 +1.2**
baz=55,SNR=6.1
Y51A Rockmart 70.50 298 P **P 22 21 05.1 +0.1**
baz=55
U47A Clarksville 70.55 301 P **P 22 21 05.4 +0.1**
baz=55,SNR=8.1
X50B Fort Payne 70.58 299 P **P 22 21 05.8 +0.3**
baz=55
T46A Princeton 70.61 302 P **P 22 21 05.9 +0.3**
baz=55
W49A Belvidere 70.62 300 P **P 22 21 05.5 -0.3**
baz=55
V48A Smith Brothers 70.64 301 P **P 22 21 06.0 +0.1**
baz=55
Q43A New Douglas 70.69 305 P **P 22 21 06.4 +0.3**
baz=55
P42A Winchester 70.73 306 P **P 22 21 06.6 +0.3**
baz=55
859A Kempfer Cattle 70.87 291 P **P 22 21 08.1 +0.8**
baz=55
TOLK Toolik Lake Re 70.92 351 P **P 22 21 08.8 +1.8**
baz=20
152A Waverly Hall 70.96 297 P **P 22 21 08.3 +0.5**
baz=55
Y50A Piedmont 70.96 298 P **P 22 21 08.7 +0.9**
baz=55
X49A Woodville 71.01 299 P **P 22 21 08.6 +0.5**
baz=55,SNR=5.8
W48A Pulaski 71.06 300 P **P 22 21 08.5 +0.1**
baz=55
WVT Waverly 71.09 301 P **P 22 21 08.5 -0.1**
baz=55
P41A Barry, Barry 71.13 306 P **P 22 21 08.5 -0.3**
baz=54
R43A Red Bud 71.22 304 P **P 22 21 09.4 +0.1**
baz=54
252A Lumpkin 71.35 296 P **P 22 21 10.2 0.0**
baz=55
353A Camilla 71.36 295 P **P 22 21 10.1 -0.2**
baz=55
W47A Westpoint 71.44 301 P **P 22 21 10.8 +0.1**
baz=55
Y49A Blount Mountai 71.44 299 P **P 22 21 11.0 +0.3**
baz=55
Z50A Ashland 71.45 298 P **P 22 21 11.5 +0.7**
baz=55
V46A Holladay 71.47 301 P **P 22 21 10.4 -0.4**
baz=55,SNR=6.5
X48A Hartselle 71.53 300 P **P 22 21 11.5 +0.2**
baz=55,SNR=6.6
Q41A Truxton 71.66 305 P **P 22 21 12.0 +0.1**
baz=54
S43A Fulton Ridge, 71.72 304 P **P 22 21 12.1 -0.3**
baz=54
251A Midway 71.77 297 P **P 22 21 13.0 +0.3**
baz=55
P40A Paris 71.83 306 P **P 22 21 12.9 -0.1**
baz=54
Z49A Columbiana 71.90 298 P **P 22 21 13.1 -0.4**
baz=54
Y48A Jasper 71.92 299 P **P 22 21 13.2 -0.4**
baz=54
BILL Bilibino 71.95 8↑*e*P **P 22 21 14.1 +0.9**
BILL *e* 22 21 34.6
BILL *e* 22 23 53.5
BILL *e*S S 22 30 22.0 -12
BILL pmax pmax
comp=Z,3.0nm,1.3s
BILL MLR MLR
comp=Z,53nm,17.0s
W46A Michie 72.03 301 P **P 22 21 14.0 -0.3**
baz=54
X47A Russelville 72.04 300 P **P 22 21 14.4 +0.1**
baz=54
ECSD EROS Data Cent 72.07 312 P **P 22 21 14.8 +0.4**
baz=53
ECSD EROS Data Cent 72.07 312 *e*P **P 22 21 15.2 +0.8**
comp=Z,4.8nm,0.9s
S42A Caledonia 72.07 304 P **P 22 21 15.1 +0.7**
baz=54
CCM Cathedral Cave 72.19 305 P **P 22 21 15.1 -0.1**
baz=54
059Z Ave Maria 72.25 290 P **P 22 21 17.2 +1.6**
baz=54
LRAL Lakeview Retre 72.31 298 P **P 22 21 16.4 +0.4**
baz=54,SNR=5.9
LRAL Lakeview Retre 72.31 298 *e*P **P 22 21 16.8 +0.8**
comp=Z,7.6nm,0.8s
Y47A UCPARC, Winfie 72.39 300 P **P 22 21 16.7 +0.3**
baz=54
149A Jones 72.43 298 P **P 22 21 17.1 +0.4**
baz=54,SNR=5.6
Z48A Northport 72.50 299 P **P 22 21 17.2 +0.1**
baz=54,SNR=6.0
P38A Dawn 72.70 307 P **P 22 21 18.4 +0.3**
baz=53
R40A Maddies Statio 72.70 305 P **P 22 21 18.3 +0.1**
baz=53
S41A Jillco Farms, 72.79 305 P **P 22 21 19.2 +0.5**
baz=54,SNR=12
249A Camden 73.02 298 P **P 22 21 20.7 +0.5**
baz=54
OXF Oxford 73.08 301 P **P 22 21 19.7 -0.8**
baz=54
OXF Oxford 73.08 301 *e*P **P 22 21 20.2 -0.3**
comp=Z,26nm,1.1s
OXF Oxford 73.08 301 *e*P **P 22 21 20.2 -0.3**
OXF pmax pmax
comp=Z,26nm,1.1s
Y46A Houston 73.08 300 P **P 22 21 19.9 -0.6**
baz=54
X45A UM Field Stati 73.12 301 P **P 22 21 19.7 -1.0**
baz=54
T41A Mountain View 73.12 304 P **P 22 21 21.3 +0.5**
baz=53,SNR=7.1
Q38A Cooks Store, C 73.15 307 P **P 22 21 20.9 +0.1**
baz=53
R39A Chumby, Stover 73.17 306 P **P 22 21 21.9 +0.8**
baz=53
U42A Revenden 73.19 303 P **P 22 21 22.0 +0.9**
baz=53
EGAK Eagle 73.20 346 *e*P **P 22 21 22.5 +1.8**
comp=Z,11nm,1.1s
S40A Lebanon 73.26 305 P **P 22 21 22.1 +0.5**
baz=53,SNR=6.0
LZH Lanzhou 73.27 57 *e*P **P 22 21 20.9 -0.9**
LZH pP pP 22 21 24.5 -1.3
LZH sP sP 22 21 25.8 -1.4

LZH *e*PP **PP** **22 24 06.3 +1.6**
LZH pmax pmax
comp=Z,18nm,1.2s
LZH pmax pmax
comp=Z,65nm,7.5s
LZH LR LR
comp=Z,180nm,16.2s
LZH LR LR
comp=Z,190nm,16.1s
LZH LR LR
comp=Z,230nm,19.0s
DAWY Dawson 73.50 345 *e*P **P** **22 21 24.4 +1.8**
comp=Z,19nm,1.1s
Z46A Louisville 73.54 299 P **P** **22 21 24.0 +0.7**
baz=54
T40A Mansfield 73.54 305 P **P** **22 21 24.1 +0.8**
baz=53
Y45A Yeager Farm, C 73.55 300 P **P** **22 21 23.8 +0.5**
baz=54
V42A Cord 73.62 303 P **P** **22 21 24.1 +0.5**
baz=53
U41A Viola 73.64 304 P **P** **22 21 23.9 +0.1**
baz=53
S39A Bolivar 73.73 305 P **P** **22 21 24.8 +0.5**
baz=53
R38A Fenwick Farm, 73.80 306 P **P** **22 21 25.3 +0.7**
baz=53
247A Quitman 73.99 298 P **P** **22 21 26.4 +0.5**
baz=54
HIA Hailar 74.07 39 *i* P **P** **22 21 27.2 +1.1**
HIA pmax pmax
comp=Z,9.0nm,0.9s
V41A Mountainview 74.13 303 P **P** **22 21 26.8 +0.1**
baz=53
S38A Stockton 74.14 306 P **P** **22 21 26.8 +0.1**
baz=52
T39A Clever 74.17 305 P **P** **22 21 26.9 +0.1**
baz=53
ILAR Eielson Array 74.19 348 P **P** **22 21 28.5 +2.0**
comp=Z,3.5nm,1.1s,baz=7.4,slow=5.4,SNR=25
U40A Yellville 74.23 304 P **P** **22 21 26.8 -0.5**
baz=53
347A Saraland 74.33 298 P **P** **22 21 27.7 -0.2**
baz=53
145A Houston Renfro 74.56 299 P **P** **22 21 29.2 0.0**
baz=53
SEY Seymchan 74.57 15 *i* P **P** **22 21 28.9 +0.2**
T38A Diamond 74.74 305 P **P** **22 21 30.5 +0.3**
baz=52
HHC Hu-ho-hao-te 75.15 49 *e*P **P** **22 21 32.0 -0.6**
HHC pmax pmax
comp=Z,17nm,0.6s
HHC pmax pmax
comp=Z,130nm,6.1s
X40A Basin Creek Fa 75.36 303 P **P** **22 21 33.9 +0.1**
baz=52
W39A Magazine 75.54 304 P **P** **22 21 35.7 +0.9**
baz=52
MIAR Mount Ida 75.81 303 P **P** **22 21 36.8 +0.5**
baz=52
EGMT Eagleton 76.24 322 P **P** **22 21 39.4 +0.7**
baz=46
XAN Xi'an 77.81 56 P **P** **22 21 49.0 +1.2**
XAN pmax pmax
comp=Z,16nm,1.0s
BOZ Bozeman (W) 78.87 321 P **P** **22 21 53.5 0.0**
baz=44
WMOK Wichita Mounta 79.02 306 P **P** **22 21 54.2 -0.2**
baz=50
KMI Kunming 79.16 67 P **P** **22 21 56.9 +1.3**
KMI pmax pmax
comp=Z,8.0nm,0.9s
N23A Red Feather La 79.18 314 P **P** **22 21 56.5 +1.0**
baz=47
ISCO Idaho Springs 79.74 313 P **P** **22 21 59.8 +1.1**
baz=47
ISCO Idaho Springs 79.74 313 *e*P **P** **22 22 00.4 +1.8**
comp=Z,5.2nm,1.2s
ISCO Idaho Springs 79.74 313 *e*P **P** **22 22 00.4 +1.8**
ISCO pmax pmax
comp=Z,5.0nm,1.2s
PDAR Pinedale Array 79.83 318 P **P** **22 21 59.5 +0.6**
comp=Z,1.0nm,0.8s,baz=64,slow=3.4,SNR=5.3
PDAR LR LR 22 53 52.1
comp=Z,20nm,19.4s,baz=64,slow=33
BW06 Boulder Array 79.83 318 P **P** **22 22 00.3 +1.4**
baz=45
CHTO Chiang Mai 80.27 74 *e*P **P** **22 22 01.6 +0.2**
comp=Z,8.2nm,1.1s
CHTO Chiang Mai 80.27 74 *e*P **P** **22 22 01.6 +0.2**
CHTO pmax pmax
comp=Z,8.0nm,1.1s
CHTO Chiang Mai 80.27 74 *e*P **P** **22 22 01.6 +0.2**
comp=Z,8.2nm,1.1s
CMAR Chiang Mai Arr 80.49 74 P **P** **22 22 02.8 +0.2**
comp=Z,5.7nm,0.8s,baz=305,slow=6.9,SNR=28
CMAR Chiang Mai Arr 80.49 74 *i* P **P** **22 22 03.0 +0.4**
CMAR pmax pmax
comp=Z,6.0nm,0.8s
CMAR Chiang Mai Arr 80.49 74 *i* P **P** **22 22 03.0 +0.4**
comp=Z,6.0nm,0.8s
T25A Trinidad 80.86 311 P **P** **22 22 05.4 +0.9**
baz=47
ABTX Abilene, Hawle 80.93 305 P **P** **22 22 05.8 +1.0**
baz=49
SDCO Great Sand Dun 81.08 312 P **P** **22 22 06.8 +1.0**
baz=47
KDAK Kodiak Island 81.71 349 *i* P **P** **22 22 10.9 +2.5**
JCT Junction City 82.44 303 *e*P **P** **22 22 11.4 -1.4**
comp=Z,7.5nm,0.8s
JCT Junction City 82.44 303 *e*P **P** **22 22 11.4 -1.4**
JCT pmax pmax
comp=Z,8.0nm,0.8s
DUG Dugway, Tooele 83.38 318 P **P** **22 22 17.4 -0.2**
comp=Z,23nm,1.2s
DUG Dugway, Tooele 83.38 318 P **P** **22 22 17.4 -0.2**
DUG pmax pmax
comp=Z,23nm,1.2s
USRK Ussuriysk Ar. 83.53 36 P **P** **22 22 18.6 +0.4**
comp=Z,3.6nm,0.9s,baz=276,slow=5.6,SNR=6.7
ANMO Albuquerque 83.56 310 LR LR 22 58 53.0
comp=Z,51nm,18.3s,baz=60,slow=35
ANMO Albuquerque 83.56 310 *i* P **P** **22 22 17.9 -0.9**
ANMO pmax pmax
comp=Z,1.0nm,0.9s
ELK Elko 84.22 319 P **P** **22 22 26.7 +4.7**
comp=Z,6.4nm,1.1s,baz=101,slow=5.5,SNR=9.2
MSHR Mys Shultsa 84.39 38*c*e*P* **P** **22 22 22.9 +0.4**
PETK Petropavlovsk- 84.70 17 P **P** **22 22 24.5 +0.6**
comp=Z,1.8nm,0.5s,baz=8.5,slow=2.9,SNR=5.6
NJ2 Nanjing 85.37 52 *e*P **P** **22 22 27.3 -0.4**
NJ2 pmax pmax
comp=Z,11nm,0.5s
TXAR Lajitas Array 85.69 305 P **P** **22 22 32.0 +2.5**
comp=Z,1.1nm,0.7s,baz=71,slow=6.8,SNR=3.0
TXAR LR LR 22 58 28.0
comp=Z,55nm,20.5s,baz=0.0,slow=34
TXAR Lajitas Array 85.69 305 P **P** **22 22 32.0 +2.5**
YSS Yuzh-Sakhalins 85.75 28 ‖ *i*P **P** **22 22 30.8 +1.6**
YSS *e* 22 22 38.6
YSS pmax pmax
comp=Z,30nm,1.1s
OTAV Otavalo 85.83 267 *e*P **P** **22 22 32.0 +1.3**
comp=Z,11nm,1.3s
KSAR Wonju Array Be 86.64 43 P **P** **22 22 34.8 +0.9**
KSAR Wonju Array Be 86.64 43 P **P** **22 22 34.8 +0.9**
KSRS Korea Array 86.65 43 P **P** **22 22 34.8 +0.9**
comp=Z,0.4nm,0.3s,baz=324,slow=4.7,SNR=4.1
YBH Yreka Blue Hor 87.03 324 LR LR 22 59 30.5
comp=Z,29nm,19.0s,baz=42,slow=34
MJAR Matsushiro Arr 92.48 37 P **P** **22 23 01.1 -0.4**
comp=Z,1.2nm,0.6s,baz=328,slow=4.4,SNR=4.8
QSPA South Pole Qui 129.13 180 PKP **PKPdf** **22 28 58.4 +1.0**
comp=Z,6.3nm,0.9s,baz=285,slow=3.8,SNR=4.0
WRA Warramunga Arr 131.54 82 PKP **PKPdf** **22 29 03.2 -0.1**
comp=Z,0.5nm,0.6s,baz=313,slow=2.5,SNR=7.8
ASAR Alice Springs 133.26 87 PKP **PKPdf** **22 29 06.2 -0.3**
comp=Z,0.6nm,0.5s,baz=303,slow=1.4,SNR=6.7
STKA Stephens Creek 143.15 93 PKhKP PKPpre 22 29 21.4
comp=Z,1.5nm,0.7s,baz=304,slow=8.1,SNR=5.4

ISCJB ***18*** *22:18:52.3±0.5, 19°.21N±0°.05×108°.45W±0°.03, h10km, mb4.1/26, MS3.6/16, Error ellipse: s-maj=7.7km s-min=3.8km az=21.7*
IDC ***18*** *22:18:52.0±1.1, 19°.24N×108°.66W, h0km, mb3.8/5, mb1 4.3/8, mb1mx4.0/43, mbtmp4.0/8, ML4.2/3, MS3.5/18, Ms1 3.5/18, ms1mx3.4/42, Error ellipse: s-maj=21.6km s-min=19.4km az=158.0*
NEIC ***18*** *22:18:54.9±0.8, 19°.28N×108°.49W, h10km, mb4.1/52, Error ellipse: s-maj=12.4km s-min=6.2km az=211.0*
ISC 18 22:18:53.0±0.7, 19°.14N±0°.09×108°.67W±0°.06, h10km, n198, σ1§54/185, mb4.2/26, MS3.7/16, Revilla Gigedo Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H06E1	**SOCORRO T-PHAS**	**2.17**	**261**	Pn	**Pn**	**22 19 30.6**	**+1.4**
H06E1				Sn	**Sn**	**22 19 53.9**	**-2.2**
H06E1				T	T	22 21 59.8	
H06S1	**SOCORRO T**	**2.21**	**260**	Pn	**Pn**	**22 19 30.5**	**+0.9**
H06S1				Sn	**Sn**	**22 19 53.9**	**-3.2**
H06S1				T	T	22 21 53.5	
	SNR=44						
H06N1	**SOCORRO T-PHAS**	**2.21**	**263**	Pn	Pn	22 19 28.2	-1.6
H06N1				Sn	**Sn**	**22 19 54.6**	**-2.6**
H06N1				T	T	22 21 52.1	
	SNR=38						
LPIG	**La Paz**	**5.17**	**343**	Pn	**Pn**	**22 20 09.4**	**-1.1**
	9.3nm,0.3s,baz=141,slow=6.5,SNR=4.3						
ZAIG	**Zacatecas**	**6.75**	**57**	*e*Pn	**Pn**	**22 20 30.9**	**-1.5**
HPIG		**8.23**	**19**	*e*Pn	**Pn**	**22 20 52.0**	**-0.8**
SRIG	**Santa Rosalia**	**8.78**	**339**	*e*Pn	**Pn**	**22 21 00.1**	**+0.1**
TLIG	**Tlapa**	**9.72**	**98**	*e*Pn	**Pn**	**22 21 13.4**	**+0.3**
HSIG		**10.05**	**348**	*e*Pn	**Pn**	**22 21 20.1**	**+2.6**
LNIG	**Linares**	**10.28**	**54**	*e*Pn	**Pn**	**22 21 21.7**	**+1.1**
TX31	**Lajitas Ar. Si**	**11.12**	**23**	*e*Pn	**Pn**	**22 21 31.5**	**-0.8**
TXAR	**Lajitas Array**	**11.12**	**23**	Pn	**Pn**	**22 21 30.6**	**-1.7**
	0.3nm,0.3s,baz=197,slow=15,SNR=10						
TXAR				LR	LR	22 25 16.3	
	comp=Z,298nm,19.2s,baz=0.0,slow=35						
319A	**Douglas**	**12.20**	**358**	*e*Pn	**Pn**	**22 21 48.7**	**+1.7**
833A	**Chaparral WMA,**	**12.47**	**41**	P	**Pn**	**22 21 47.1**	**-3.5**
	baz=224						
MNTX	**Cornudas Mount**	**12.85**	**13**	P	**Pn**	**22 21 55.4**	**-0.4**
	baz=193,SNR=8.9						
MNTX	**Cornudas Mount**	**12.85**	**13**	*e*Pn	**Pn**	**22 21 56.4**	**+0.6**
TUC	**Tucson**	**13.25**	**352**	P	**Pn**	**22 22 03.1**	**+1.7**
	baz=170						
CMIG	**Matias Romero**	**13.26**	**97**	Pn	**Pn**	**22 22 01.9**	**+0.4**
	1.7nm,0.3s,baz=287,slow=10.0,SNR=28						
CMIG				LR	LR	22 26 00.5	
	comp=Z,117nm,21.1s,baz=287,slow=32						
214A	**Organ Pipe Nat**	**13.29**	**345**	P	**Pn**	**22 22 04.7**	**+2.8**
	baz=162						
121A	**Cookes Peak, D**	**13.36**	**3**	P	**Pn**	**22 22 02.9**	**0.0**
	baz=183						
JCT	**Junction City**	**13.86**	**34**	P	**Pn**	**22 22 07.5**	**-2.1**
	baz=217						
JCT	**Junction City**	**13.86**	**34**	*e*Pn	**Pn**	**22 22 10.0**	**+0.4**
GLA	**Glamis**	**14.91**	**339**	P	**Pn**	**22 22 26.8**	**+2.8**
	baz=156						
GLA	**Glamis**	**14.91**	**339**	*e*Pn	**Pn**	**22 22 26.2**	**+2.3**
IKP	**In-Ko-Pah, Jac**	**15.02**	**335**	P	**Pn**	**22 22 29.3**	**+3.9**
	baz=151						
BNM	**Barren Site**	**15.06**	**7**	*e*Pn	**Pn**	**22 22 24.7**	**-1.5**
Y14A	**Wickenburg**	**15.24**	**346**	*e*Pn	**Pn**	**22 22 28.1**	**-0.2**
	9.2nm,1.1s						
LAZ	**Ladron**	**15.26**	**5**	*e*Pn	**Pn**	**22 22 25.4**	**-3.4**
X18A	**Snowflake**	**15.37**	**356**	*e*Pn	**Pn**	**22 22 32.4**	**+2.2**
	21nm,1.1s						
X16A	**Lo Mia Camp, P**	**15.41**	**351**	*e*Pn	**Pn**	**22 22 32.9**	**+2.1**
	11nm,1.1s						
Y12C	**Blythe**	**15.46**	**341**	P	**Pn**	**22 22 33.5**	**+2.3**
	baz=158						
109C	**Camp Elliot, M**	**15.64**	**333**	P	**P**	**22 22 39.8**	**+2.1**
	baz=148						
ABTX	**Abilene, Hawle**	**15.68**	**29**	P	**Pn**	**22 22 32.2**	**-2.0**
	baz=213						
HKT	**Hockley**	**15.86**	**45**	*e*Pn	**Pn**	**22 22 33.8**	**-2.7**
	31nm,1.6s						
TASM	**ASL Pad, Albuq**	**15.86**	**7**	P	**Pn**	**22 22 37.5**	**+0.9**
	baz=187						
ANMO	**Albuquerque**	**15.86**	**7**	Pn	**P**	**22 22 40.5**	**+0.1**
	0.1nm,0.3s,baz=188,slow=11,SNR=6.7						
ANMO	**Albuquerque**	**15.86**	**7**	P	**Pn**	**22 22 37.0**	**+0.3**
	baz=187						
ANMO	**Albuquerque**	**15.86**	**7**	*e*Pn	**Pn**	**22 22 36.8**	**+0.1**
	6.9nm,1.1s						
TASL	**Snake Pit, Alb**	**15.86**	**7**	P	**Pn**	**22 22 37.0**	**+0.3**
	baz=187						
PDMCI	**Parker Dam,Lak**	**15.87**	**343**	P	**Pn**	**22 22 38.7**	**+2.2**
	baz=160						
XPFO	**Pigeon Flat**	**16.00**	**336**	*e*Pn	**Pn**	**22 22 39.2**	**+0.9**
	6.3nm,1.0s						
PFO	**Pinyon Flats O**	**16.00**	**336**	P	**Pn**	**22 22 40.7**	**+2.3**
	baz=152						
PFO	**Pinyon Flats O**	**16.00**	**336**	*e*Pn	**Pn**	**22 22 39.7**	**+1.4**
	7.1nm,1.0s						
IRM	**Iron Mountain**	**16.03**	**340**	P	**Pn**	**22 22 40.1**	**+1.4**
	baz=157						
WHTX	**Lake Whitney,**	**16.29**	**36**	P	**Pn**	**22 22 40.0**	**-2.0**
	baz=221						
WUAZ	**Wupatki**	**16.49**	**352**	P	**Pn**	**22 22 45.9**	**+1.2**
	baz=170						
WUAZ	**Wupatki**	**16.49**	**352**	*e*Pn	**Pn**	**22 22 46.4**	**+1.8**
	30nm,1.4s						
W13A	**Hualapai Mount**	**16.55**	**345**	*e*Pn	**Pn**	**22 22 46.5**	**+1.0**
	12nm,1.2s						
GMRC	**Granite Mounta**	**16.77**	**340**	P	**Pn**	**22 22 51.1**	**+2.9**
	baz=156,SNR=5.5						
BFSC	**Mount Baldy Ra**	**17.03**	**334**	P	**Pn**	**22 22 54.2**	**+2.7**
	baz=149						
HEC	**Hector,Ludlow**	**17.04**	**338**	P	**Pn**	**22 22 54.2**	**+2.7**
	baz=154						
U15A	**North Rim**	**17.51**	**350**	*e*Pn	**Pn**	**22 22 55.9**	**-1.7**
	17nm,1.5s						
WMOK	**Wichita Mounta**	**17.84**	**27**	*e*Pn	**Pn**	**22 22 59.6**	**-1.8**
	3.7nm,0.7s						
KNB	**Kanab**	**18.18**	**349**	*e*Pn	**Pn**	**22 23 03.9**	**-1.8**
	17nm,1.1s						
SHPR	**Sheep Range**	**18.22**	**343**	*e*Pn	**Pn**	**22 23 05.3**	**-0.9**
	13nm,1.5s						
T25A	**Trinidad**	**18.32**	**11**	P	**Pn**	**22 23 04.7**	**-2.8**
	baz=192						
PKM	**Mcpherson Peak**	**18.54**	**330**	P	**Pn**	**22 23 12.5**	**+2.3**
	baz=144						
MPMC	**Manual Prospec**	**18.56**	**337**	P	**P**	**22 23 11.2**	**+0.9**
	baz=152						
SDCO	**Great Sand Dun**	**18.74**	**8**	*e*P	**P**	**22 23 12.2**	**-0.1**
	21nm,1.8s						
DAC	**Darwin (Calif)**	**18.79**	**337**	*e*P	**Pn**	**22 23 15.7**	**+2.5**
	13nm,1.5s						
CCUT	**Cedar City**	**18.80**	**348**	*e*P	**Pn**	**22 23 15.3**	**+1.9**
	24nm,1.7s						
PV05	**Paradox Valley**	**18.87**	**359**	*e*P	**P**	**22 23 15.3**	**+1.6**
	16nm,1.3s						
TPNV	**Topopah Spring**	**18.95**	**341**	*e*P	**P**	**22 23 15.8**	**+1.4**
	6.9nm,1.0s						
MTPU	**Mount Pierson**	**19.08**	**351**	*e*P	**P**	**22 23 16.6**	**+0.5**
	6.6nm,0.9s						
CWC	**Cottonwood Cre**	**19.12**	**336**	P	**Pn**	**22 23 19.9**	**+2.7**
	baz=151						
PV04	**Paradox Valley**	**19.18**	**359**	*e*P	**P**	**22 23 16.9**	**-0.2**
	50nm,1.9s						
PAGB	**Antelope Grade**	**19.43**	**331**	*e*P	**P**	**22 23 19.9**	**+0.3**
	25nm,1.6s						
MSU	**Marysvale**	**19.54**	**352**	*e*P	**P**	**22 23 21.2**	**+0.2**
PSUT	**Pine Spring**	**19.84**	**348**	*e*P	**P**	**22 23 26.5**	**+2.2**
	13nm,0.9s						
SRU	**San Rafael Swe**	**19.96**	**356**	*e*P	**P**	**22 23 26.6**	**+1.0**
	9.4nm,1.2s						
PMPB	**Monarch Peak**	**20.09**	**330**	*e*P	**P**	**22 23 29.7**	**+2.8**
	26nm,1.2s						
TMUT	**Trail Mountain**	**20.20**	**354**	*e*P	**P**	**22 23 28.7**	**+0.4**
	7.6nm,1.0s						
344A	**Westbrook Farm**	**20.29**	**49**	P	**P**	**22 23 28.2**	**-0.8**
	baz=237						
P17A	**Butcher Ranch,**	**20.34**	**355**	*e*P	**P**	**22 23 32.0**	**+2.3**
	9.2nm,1.0s						
MIAR	**Mount Ida**	**20.37**	**38**	*e*P	**P**	**22 23 29.1**	**-0.8**
	6.3nm,1.0s						
P18A	**Preston Nutter**	**20.46**	**357**	*e*P	**P**	**22 23 32.6**	**+1.4**
	33nm,1.5s						
W39A	**Magazine**	**20.72**	**36**	P	**P**	**22 23 32.8**	**-0.9**
	baz=223,SNR=6.3						
ISCO	**Idaho Springs**	**20.76**	**7**	*e*P	**P**	**22 23 33.3**	**-1.1**
	9.5nm,1.5s						
NV11	**Mina Array Sit**	**20.92**	**339**	*e*P	**P**	**22 23 38.0**	**+2.1**
	0.7nm,1.0s						
446A	**Poplarville**	**20.96**	**53**	P	**P**	**22 23 33.2**	**-3.1**
	baz=241						
MPU	**Maple Canyon**	**20.96**	**354**	*e*P	**P**	**22 23 38.0**	**+1.6**
	13nm,1.1s						
NV01	**Mina Array Sit**	**20.97**	**338**	*e*P	**P**	**22 23 38.2**	**+1.6**
NVAR	**Mina Array Bea**	**20.97**	**338**	P	**P**	**22 23 37.6**	**+1.1**
	4.9nm,1.1s,baz=161,slow=11,SNR=8.9						
NVAR				LR	LR	22 31 24.9	
	comp=Z,124nm,19.4s,baz=226,slow=36						
W40A	**Ferguson Farm,**	**21.12**	**38**	P	**P**	**22 23 37.3**	**-0.7**
	baz=225						
V39A	**Pettigrew**	**21.27**	**35**	P	**P**	**22 23 37.9**	**-1.7**
	baz=222,SNR=5.8						
DUG	**Dugway, Tooele**	**21.28**	**351**	P	**P**	**22 23 40.8**	**+1.0**
	baz=169,SNR=14						
DUG	**Dugway, Tooele**	**21.28**	**351**	*e*P	**P**	**22 23 41.6**	**+1.7**
	23nm,1.2s						
WAKR	**Walker**	**21.45**	**336**	*e*P	**P**	**22 23 43.7**	**+2.1**
	23nm,1.2s						
KVN	**Kaiserville**	**21.46**	**340**	*e*P	**P**	**22 23 43.9**	**+2.1**
	9.9nm,0.8s						
JLU	**Jordanelle**	**21.52**	**354**	*e*P	**P**	**22 23 44.5**	**+2.0**
	11nm,1.1s						
W41B	**Gary Mavity, V**	**21.59**	**39**	P	**P**	**22 23 41.8**	**-1.2**
	baz=226,SNR=9.5						
WHAR	**Wooly Hollow**	**21.65**	**39**	*e*P	**P**	**22 23 43.0**	**-0.6**
U39A	**Green Forest**	**21.76**	**35**	P	**P**	**22 23 43.3**	**-1.6**
	baz=222						
T38A	**Diamond**	**21.83**	**32**	P	**P**	**22 23 43.5**	**-2.1**
	baz=219						
PNTR	**Pine Nut**	**22.02**	**337**	*e*P	**P**	**22 23 48.5**	**+0.7**
	25nm,1.0s						
247A	**Quitman**	**22.14**	**51**	P	**P**	**22 23 46.1**	**-2.9**
	baz=239						
ELK	**Elko**	**22.26**	**347**	P	**P**	**22 23 52.6**	**+2.3**
	2.1nm,0.8s,baz=228,slow=7.5,SNR=6.8						
SPUT	**South Promonto**	**22.33**	**352**	*e*P	**P**	**22 23 51.2**	**+0.1**
	8.9nm,1.0s						
HWUT	**Hardware Ranch**	**22.53**	**354**	*e*P	**P**	**22 23 53.5**	**+0.3**
	5.4nm,1.0s						
147A	**Livingston**	**22.71**	**50**	P	**P**	**22 23 53.0**	**-2.0**
	baz=238						
248A	**Dixon Mills**	**22.80**	**51**	P	**P**	**22 23 55.6**	**-0.5**
	baz=240						
S39A	**Bolivar**	**22.83**	**33**	P	**P**	**22 23 55.6**	**-0.6**
	baz=220						
HVU	**Hansel Valley**	**22.84**	**352**	*e*P	**P**	**22 23 58.6**	**+2.1**
	9.2nm,1.2s						
T40A	**Mansfield**	**22.84**	**35**	P	**P**	**22 23 55.0**	**-1.4**
	baz=222						
R38A	**Fenwick Farm,**	**22.92**	**31**	P	**P**	**22 23 55.8**	**-1.4**
	baz=218						
Y46A	**Houston**	**22.96**	**46**	P	**P**	**22 23 56.6**	**-1.0**
	baz=235						
U42A	**Revenden**	**23.00**	**38**	P	**P**	**22 23 56.1**	**-1.9**
	baz=226						
T41A	**Mountain View**	**23.18**	**36**	P	**P**	**22 23 58.1**	**-1.9**
	baz=224						
S40A	**Lebanon**	**23.18**	**34**	P	**P**	**22 23 57.2**	**-2.7**
	baz=222						
249A	**Camden**	**23.21**	**52**	P	**P**	**22 23 59.4**	**-0.8**
	baz=242						
R39A	**Chumby, Stover**	**23.45**	**32**	P	**P**	**22 24 01.7**	**-0.8**
	baz=220						
PDAR	**Pinedale Array**	**23.56**	**358**	P	**P**	**22 24 03.5**	**-0.5**
	1.6nm,0.8s,baz=156,slow=11,SNR=7.5						
PDAR				LR	LR	22 31 45.4	
	comp=Z,47nm,21.9s,baz=208,slow=33						
S41A	**Jillco Farms,**	**23.58**	**35**	P	**P**	**22 24 02.3**	**-1.6**
	baz=223						
149A	**Jones**	**23.75**	**51**	P	**P**	**22 24 04.8**	**-0.8**
	baz=241						
LRAL	**Lakeview Retre**	**23.81**	**50**	P	**P**	**22 24 05.7**	**-0.5**
	baz=240						
LRAL	**Lakeview Retre**	**23.81**	**50**	*e*P	**P**	**22 24 06.2**	**0.0**
	12nm,1.1s						
R40A	**Maddies Statio**	**23.82**	**33**	P	**P**	**22 24 05.4**	**-0.8**
	baz=221						
250A	**Grady**	**23.85**	**53**	P	**P**	**22 24 05.8**	**-0.8**
	baz=243						
X47A	**Russelville**	**24.00**	**46**	P	**P**	**22 24 06.5**	**-1.5**
	baz=236,SNR=5.9						
T43A	**Greenville**	**24.05**	**38**	P	**P**	**22 24 06.2**	**-2.2**
	baz=227						
CCM	**Cathedral Cave**	**24.20**	**35**	P	**P**	**22 24 07.7**	**-2.1**
	baz=223						
CCM	**Cathedral Cave**	**24.20**	**35**	*e*P	**P**	**22 24 09.4**	**-0.4**
	5.0nm,0.8s						
REDW	**Red Top Meadow**	**24.22**	**356**	*e*P	**P**	**22 24 10.6**	**+0.4**
	18nm,1.3s						
Z49A	**Columbiana**	**24.23**	**50**	P	**P**	**22 24 09.0**	**-1.2**
	baz=240						
LOHW	**Long Hollow**	**24.45**	**357**	*e*P	**P**	**22 24 12.6**	**+0.3**
	15nm,1.3s						
FXWY	**Fox Creek**	**24.50**	**356**	*e*P	**P**	**22 24 13.1**	**+0.3**
	7.0nm,1.1s						
X48A	**Hartselle**	**24.52**	**47**	P	**P**	**22 24 11.3**	**-1.5**
	baz=237,SNR=5.5						
251A	**Midway**	**24.55**	**54**	P	**P**	**22 24 11.8**	**-1.3**
	baz=244						
V46A	**Holladay**	**24.57**	**43**	P	**P**	**22 24 11.5**	**-1.7**
	baz=233,SNR=6.6						
W47A	**Westpoint**	**24.59**	**45**	P	**P**	**22 24 12.2**	**-1.3**
	baz=235						
MOOW	**Moose Ponds**	**24.60**	**356**	*e*P	**P**	**22 24 13.6**	**0.0**
	6.4nm,1.1s						
Z50A	**Ashland**	**24.71**	**51**	P	**P**	**22 24 13.9**	**-0.6**
	baz=241,SNR=7.1						
MOD	**Modoc Plateau**	**24.75**	**339**	*e*P	**P**	**22 24 16.0**	**+1.0**
	28nm,1.3s						
HLID	**Hailey**	**24.82**	**350**	P	**P**	**22 24 16.8**	**+1.2**
	baz=167,SNR=5.2						
HLID	**Hailey**	**24.82**	**350**	*e*P	**P**	**22 24 16.7**	**+1.1**
	4.1nm,0.8s						
WVT	**Waverly**	**24.96**	**43**	P	**P**	**22 24 15.6**	**-1.1**
	baz=233						
W48A	**Pulaski**	**24.98**	**46**	P	**P**	**22 24 16.3**	**-0.5**
	baz=236,SNR=5.9						
V47A	**Nunnelly**	**24.98**	**44**	P	**P**	**22 24 16.1**	**-0.7**
	baz=234						
X49A	**Woodville**	**25.05**	**48**	P	**P**	**22 24 17.0**	**-0.6**
	baz=238						
554A	**Perry**	**25.14**	**60**	P	**P**	**22 24 18.4**	**0.0**
	baz=250						
Y50A	**Piedmont**	**25.16**	**50**	P	**P**	**22 24 17.4**	**-1.1**
	baz=240,SNR=5.4						
353A	**Camilla**	**25.17**	**56**	P	**P**	**22 24 17.8**	**-0.8**
	baz=247						
RSSD	**Black Hills**	**25.21**	**8**	P	**P**	**22 24 18.3**	**-0.9**
	baz=190						
Z51A	**Franklin**	**25.29**	**51**	P	**P**	**22 24 18.2**	**-1.5**
	baz=242						
152A	**Waverly Hall**	**25.33**	**53**	P	**P**	**22 24 18.7**	**-1.4**
	baz=244						
454A	**Quitman**	**25.40**	**58**	P	**P**	**22 24 20.3**	**-0.4**
	baz=249						
W49A	**Belvidere**	**25.42**	**47**	P	**P**	**22 24 19.5**	**-1.4**
	baz=237,SNR=8.2						
U47A	**Clarksville**	**25.49**	**43**	P	**P**	**22 24 20.8**	**-0.7**
	baz=233						
YBH	**Yreka Blue Hor**	**25.50**	**335**	LR	LR	22 33 52.8	
	comp=Z,97nm,19.8s,baz=158,slow=36						
X50B	**Fort Payne**	**25.50**	**49**	P	**P**	**22 24 20.1**	**-1.6**
	baz=239,SNR=8.9						
R44A	**Waltonville**	**25.55**	**38**	P	**P**	**22 24 20.9**	**-1.1**
	baz=227						
Y51A	**Rockmart**	**25.64**	**50**	P	**P**	**22 24 21.4**	**-1.6**
	baz=241,SNR=9.6						
TIGA	**Tifton**	**25.70**	**57**	P	**P**	**22 24 23.2**	**-0.2**
	baz=248						
TIGA	**Tifton**	**25.70**	**57**	*e*P	**P**	**22 24 23.9**	**+0.5**
	24nm,0.9s						
Z52A	**Williamson**	**25.79**	**52**	P	**P**	**22 24 24.0**	**-0.3**
	baz=243,SNR=12						
455A	**Stateville**	**25.90**	**59**	P	**P**	**22 24 24.9**	**-0.3**
	baz=250						
T47A	**Sharon Grove**	**25.94**	**42**	P	**P**	**22 24 24.5**	**-1.0**
	baz=232						
V49A	**McMinnville**	**26.02**	**46**	P	**P**	**22 24 26.0**	**-0.4**
	baz=236						
R45A	**Skylar, Fairfi**	**26.04**	**39

	baz=244							
BOZ	Bozeman (W)	26.50	355	P		P	22 24 30.8	+0.1
	baz=173							
BOZ	Bozeman (W)	26.50	355	eP		P	22 24 31.5	+0.8
	4.4nm,1.3s							
V50A	Pikevile	26.52	47	P		P	22 24 29.4	-1.4
	baz=238							
154A	Montrose	26.54	55	P		P	22 24 30.1	-0.9
	baz=246							
GOGA	Godfrey	26.60	53	P		P	22 24 30.8	-0.8
	baz=244							
GOGA	Godfrey	26.60	53	eP		P	22 24 32.8	+1.2
	5.0nm,0.8s							
X52A	Dahlonega	26.83	50	P		P	22 24 32.7	-1.0
	baz=241							
Z54A	Sparta	27.00	54	P		P	22 24 34.5	-0.7
	baz=245							
155A	Kite	27.04	55	P		P	22 24 34.4	-1.2
	baz=247							
V51A	Loudon	27.11	47	P		P	22 24 34.5	-1.6
	baz=238							
T50A	Nancy	27.43	45	P		P	22 24 39.3	+0.2
	baz=236							
G42A	Mountain	30.98	28	P		P	22 25 10.0	-0.5
	baz=219							
E39A	Mellen	30.99	25	P		P	22 25 09.5	-1.0
	baz=214							
RUSC	La Rusia	37.05	106	eP		P	22 26 03.7	-0.4
	5.0nm,1.2s							
TAOE	Nuku Hiva Isla	41.68	231	eT		T	23 11 03.6	
	30nm,0.2s							
YKA	Yellowknife Ar	43.51	356	P		P	22 26 55.1	-1.3
	0.7nm,0.8s,baz=164,slow=8.0,SNR=3.9							
YKA				LR		LR	22 45 34.3	
	comp=Z,13nm,18.9s,baz=146,slow=37							
RKT	Rikitea	49.23	213	eT		T	23 20 37.5	
	4.1nm,0.2s							
INK	Inuvik	51.57	348	eP		P	22 27 59.8	+0.8
	5.1nm,1.0s							
IL1	Eielson Array	52.21	340	eP		P	22 28 03.8	0.0
ILAR	Eielson Array	52.21	340	P		P	22 28 04.2	+0.4
	1.3nm,0.7s,baz=152,slow=6.8,SNR=16							
ILAR				LR		LR	22 48 38.4	
	comp=Z,38nm,18.5s,baz=108,slow=34							
LPAZ	La Paz	53.19	129	P		P	22 28 13.6	+1.2
	1.6nm,0.7s,baz=342,slow=4.7,SNR=7.9							
LPAZ	La Paz	53.19	129	eP		P	22 28 14.4	+2.0
	3.4nm,0.9s							
PPT	Papeete	54.28	230	LR		LR	22 46 14.1	
	comp=Z,63nm,19.0s,baz=356,slow=30							
PPT2	Papeete2	54.30	230	eLR		LR	22 43 45.4	
	158nm,29.5s							
RAR	Rarotonga	64.11	234	LR		LR	22 49 44.1	
	comp=Z,75nm,20.9s,baz=166,slow=29							
AFI	Afiamalu	70.28	247	LR		LR	22 55 25.1	
	comp=Z,79nm,18.1s,baz=81,slow=31							
PETK	Petropavlovsk-	77.06	322	LR		LR	23 00 58.9	
	comp=Z,21nm,18.2s,baz=122,slow=33							
SPITS	Spitsbergen Ar	78.05	10	LR		LR	23 05 59.9	
	comp=Z,69nm,18.3s,baz=5.0,slow=36							
NOA	NORSAR Array B	86.82	25	LR		LR	23 10 09.0	
	comp=Z,22nm,18.6s,baz=305,slow=36							
HFS	Hagfors	88.34	25	LR		LR	23 12 44.3	
	comp=Z,39nm,18.4s,baz=310,slow=37							
MDT	Midelt	91.00	55	LR		LR	23 11 22.9	
	comp=Z,38nm,18.8s,baz=212,slow=35							
DZM	Mont Dzumac	92.50	248	LR		LR	23 07 07.4	
	comp=Z,29nm,18.2s,baz=59,slow=31							
HNR	Honiara	94.34	262	LR		LR	23 04 41.1	
	comp=Z,42nm,21.9s,baz=164,slow=29							
GERES	GERESS Array B	95.14	34	LR		LR	23 15 21.6	
	comp=Z,25nm,18.2s,baz=277,slow=36							

*ISCJB **18** 22:25:09.9±0.5, 50°.27N±0°.03×18°.77E±0°.03, h0km, Error ellipse: s-maj=4.7km s-min=2.3km az=10.8*
*IPEC **18** 22:25:11.3±0.2, 50°.28N×18°.86E, h0km±1km, ML2.0/3, Error ellipse: s-maj=2.4km s-min=1.1km az=169.0*
*CSEM **18** 22:25:11.1±0.4, 50°.25N×18°.83E, h2km, ML2.8/12, Error ellipse: s-maj=8.6km s-min=4.1km az=18.0*
*PRU **18** 22:25:11.7, 50°.26N×18°.84E, h0km*
*WAR **18** 22:25:12.1, 50°.24N×18°.92E, h1km, Mw2.5*
*VIE **18** 22:25:16.1±1.7, 49°.76N×18°.80E, h0km, mb2.0/3, ml2.3/3, Error ellipse: s-maj=12.1km s-min=10.0km az=173.0 40 km ESE of Ostrava Suspected Mining induced.*

ISC 18 22:25:11.3±0.8, 50°.20N±0°.03×18°.86E±0°.02, h0km, n49, σ0s80/83, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHZP	Chorzow	0.13	43	ePg	Pg	22 25 13.5	-0.3
CHZP				eSg	Sg	22 25 14.8	-0.6
CHZP	Chorzow	0.13	43	ePg	Pg	22 25 13.5	-0.3
CHZP				eSg	Sg	22 25 14.8	-0.6
OKC	Ostrava-Krasne	0.58	232	ePG	Pb	22 25 24.4	0.0
OKC				eSG	Sb	22 25 32.8	-0.4
	comp=Z,29nm,0.4s						
OKC	Ostrava-Krasne	0.58	232	Pg	Pb	22 25 24.4	0.0
OKC				Sg	Sb	22 25 32.8	-0.4
	29nm,0.4s						
OJC	Ojcow	0.60	88	ePg	Pg	22 25 22.8	-0.1
OJC				eSg	Sg	22 25 30.7	0.0
OJC	Ojcow	0.60	88	ePg	Pg	22 25 22.8	-0.1
OJC				eSg	Sg	22 25 30.7	0.0
OJC	Ojcow	0.60	88	ePg	Pg	22 25 22.8	-0.1
MORC	Moravsky Berou	0.95	244	ePg	Pb	22 25 30.3	-0.3
MORC				eSg	Sg	22 25 42.3	+0.6
	21nm,0.2s						
MORC	Moravsky Berou	0.95	244	ePG	Pb	22 25 30.3	-0.3
MORC				eSG	Sg	22 25 42.4	+0.7
MORC	Moravsky Berou	0.95	244	ePg	Pb	22 25 30.3	-0.3
	baz=59						
MORC				eSg	Sg	22 25 42.3	+0.6
	21nm,0.2s,baz=59						
LANS	Liptovska Anna	1.12	159	ePG	Pn	22 25 34.1	-0.2
LANS				eSG	Sn	22 25 49.6	-0.8
LANS	Liptovska Anna	1.12	159	ePg	Pn	22 25 34.1	-0.2
LANS				eSg	Sn	22 25 49.6	-0.8
NIE	Niedzica	1.22	129	ePg	Pg	22 25 34.9	+0.3
NIE				eSg	Sn	22 25 53.3	+0.5
NIE	Niedzica	1.22	129	ePg	Pg	22 25 34.9	+0.3
NIE				eSg	Sn	22 25 53.3	+0.5
NIE	Niedzica	1.22	129	ePg	Pg	22 25 34.9	+0.3
NIE				eSg	Sn	22 25 53.3	+0.5
KRLC	Kraliky	1.34	266	ePG	Pg	22 25 36.8	-0.2
KRLC				eSG	Sg	22 25 54.1	-0.3
	comp=Z,5.2nm,0.3s						
KRLC	Kraliky	1.34	266	Pg	Pg	22 25 36.8	-0.2
KRLC				Sg	Sg	22 25 54.1	-0.3
	5.2nm,0.3s						
JAVC	Velka Javorina	1.55	210	ePn	Pg	22 25 41.4	+0.5
JAVC	Velka Javorina	1.55	210	ePN	Pg	22 25 41.5	+0.5
JAVC	Velka Javorina	1.55	210	ePn	Pg	22 25 41.4	+0.5
	baz=28						
DPC	Dobruska-Polom	1.63	276	ePG	Pb	22 25 42.0	-0.3
DPC				eSG	Sn	22 26 03.3	+0.2
	comp=Z,18nm,0.5s						
DPC	Dobruska-Polom	1.63	276	Pg	Pb	22 25 42.0	-0.3
DPC				Sg	Sn	22 26 03.3	+0.2
	18nm,0.5s						
VYHS	Vyhne	1.71	180	ePN	Pn	22 25 42.6	+0.3
VYHS				eSN	Sn	22 26 04.5	-0.3
VYHS				eLG	Lg	22 26 13.6	
VYHS	Vyhne	1.71	180	ePg	Pn	22 25 42.6	+0.3
VYHS				eSn	Sn	22 26 04.5	-0.3
VRAC	Vranov	1.72	240	ePn	Pn	22 25 43.0	+0.5
VRAC				eSg	Sg	22 26 06.7	+0.3
	17nm,0.4s						
VRAC	Vranov	1.72	240	ePN	Pn	22 25 43.0	+0.5
VRAC				eSG	Sg	22 26 06.7	+0.3
VRAC	Vranov	1.72	240	ePn	Pn	22 25 43.0	+0.5
	baz=56						
VRAC				eSg	Sg	22 26 06.7	+0.3
	17nm,0.4s,baz=56						
KSP	Ksiaz	1.76	293	ePg	Pg	22 25 45.4	+0.4
KSP				eSg	Sg	22 26 07.9	+0.1
KSP	Ksiaz	1.76	293	ePg	Pg	22 25 45.4	+0.4
KSP				eSg	Sg	22 26 07.9	+0.1
KSP	Ksiaz	1.76	293	ePg	Pg	22 25 45.4	+0.4
KSP				eSg	Sg	22 26 07.9	+0.1
UPC	Upice	1.85	281	eSG	Sb	22 26 09.7	+0.1
	comp=Z,9.8nm,0.4s						
UPC	Upice	1.85	281	Sg	Sb	22 26 09.7	+0.1
	9.8nm,0.4s						
KRUC	Moravsky	1.96	236	ePN	Pn	22 25 46.6	+0.8
KRUC				eSg	Sg	22 26 14.1	-0.2
	6.4nm,0.4s						
KRUC	Moravsky	1.96	236	ePN	Pn	22 25 46.7	+0.9
KRUC				eSG	Sg	22 26 14.1	-0.2
KRUC	Moravsky	1.96	236	ePn	Pn	22 25 46.6	+0.8
	baz=52						
KRUC				eSg	Sg	22 26 14.1	-0.2
	6.4nm,0.4s,baz=52						
GOPC	GO Pecny, Ondr	2.64	265	eSG	Sb	22 26 33.6	+1.2
	comp=Z,7.8nm,0.5s						
GOPC	GO Pecny, Ondr	2.64	265	Sg	Sb	22 26 33.6	+1.2
	7.8nm,0.5s						
PVCC	Panska Ves	2.77	279	eSG	Sg	22 26 38.8	-1.3
	comp=Z,13nm,0.4s						
PVCC	Panska Ves	2.77	279	Sg	Sg	22 26 38.8	-1.3
	13nm,0.4s						
PRU	Pruhonice	2.79	267	ePG	Pb	22 26 02.4	+0.5
PRU				eSG	Sb	22 26 38.2	+1.6
	comp=Z,5.5nm,0.4s						
PRU	Pruhonice	2.79	267	Pg	Pb	22 26 02.4	+0.5
PRU				Sg	Sb	22 26 38.2	+1.6
	5.5nm,0.4s						
BRG	Berggiesshubel	3.21	284	SG	Sg	22 26 52.6	-1.7
	4.6nm,0.5s						
KHC	Kasperske Hory	3.59	255	ePG	Pg	22 26 18.7	-1.4
KHC				ex	x	22 27 02.2	
KHC				eSG	Sg	22 27 05.4	-1.2
	comp=Z,7.7nm,0.5s						
KHC	Kasperske Hory	3.59	255	Pg	Pg	22 26 18.7	-1.4
KHC				Sg	Sg	22 27 05.4	-1.2
	7.7nm,0.5s						
MOA	Molln	3.83	234	eSg	Sg	22 27 11.5	-2.7
	2.2nm,0.3s						
MOA	Molln	3.83	234	Sg	Sg	22 27 11.5	-2.7
	2.2nm,0.3s						
CLL	Collm	3.88	289	ePg	Pg	22 26 26.0	+0.4
CLL				eSg	Sg	22 27 15.0	-0.9
	comp=Z,4.0nm,0.5s						
NKC	Novy Kostel	4.12	273	eSG	Sg	22 27 22.1	-1.4
	comp=Z,3.9nm,0.4s						
NKC	Novy Kostel	4.12	273	Sg	Sg	22 27 22.1	-1.4
	comp=Z,3.9nm,0.4s						

*ISCJB **18** 22:33:54.5±0.6, 17°.2S±0°.1×175°.4W±0°.1, h250km, mb3.9/9, Error ellipse: s-maj=22.2km s-min=9.4km az=44.2*
*IDC **18** 22:33:55.9±2.1, 17°.2S×175°.41W, h245km±20km, mb3.7/9, mb1 3.8/10, mb1mx3.4/51, mbtmp4.3/10, Error ellipse: s-maj=25.4km s-min=13.5km az=138.0*

ISC 18 22:33:55.5±0.7, 17°.3S±0°.1×175°.2W±0°.2, h250km, n15, σ1s49/18, mb3.8/9, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	4.75	45	P	Pn	22 35 09.8	+1.4
	7.9nm,0.3s,baz=202,slow=2.8,SNR=9.2						
AFI				S	S	22 36 03.0	-3.4
	77nm,0.3s,baz=221,slow=20,SNR=20						
URZ	Urewera	21.92	196	P	P	22 38 29.8	+1.1
	9.5nm,0.5s,baz=4.4,slow=13,SNR=7.7						
URZ				S	S	22 42 08.9	-3.6
	25nm,1.1s,baz=90,slow=20,SNR=2.2						
CTA	Charters Tower	36.53	259	P	P	22 40 37.0	-0.7
	5.3nm,0.9s,baz=75,slow=12,SNR=3.4						
STKA	Stephens Creek	41.57	241	P	P	22 41 19.3	+0.1
	3.3nm,0.6s,baz=91,slow=10,SNR=11						
WRA	Warramunga Arr	47.72	259	P	P	22 42 06.7	-1.1
	2.1nm,0.5s,baz=96,slow=7.0,SNR=42						
ASAR	Alice Springs	47.87	254	P	P	22 42 08.6	-0.4
	15nm,0.7s,baz=88,slow=8.5,SNR=132						
ASAR				PcP	PcP	22 43 33.2	-0.2
	0.9nm,0.5s,baz=104,slow=3.9,SNR=4.5						
FITZ	Fitzroy Crossi	56.12	260	P	P	22 43 09.1	-0.5
	2.8nm,0.9s,baz=78,slow=8.6,SNR=3.2						
VNDA	Vanda	61.30	186	P	P	22 43 45.2	+1.0
	1.1nm,0.8s,baz=1.5,slow=8.3,SNR=3.9						
ILAR	Eielson Array	84.66	12	P	P	22 46 01.0	+0.3
	0.6nm,0.6s,baz=224,slow=5.7,SNR=10.0						
PDAR	Pinedale Array	84.86	42	P	P	22 46 03.1	+0.6
	0.3nm,0.7s,baz=217,slow=4.4,SNR=3.0						
BVAR	Borovoye Array	118.29	321	PKP	PKPdf	22 52 12.6	-0.3
	0.4nm,0.4s,baz=107,slow=1.0,SNR=5.8						
ARCES	ARCESS Array B	126.24	351	PKP	PKPdf	22 52 27.7	0.0
	2.4nm,1.0s,baz=3.8,slow=2.7,SNR=3.4						
BRTR	Keskin Array B	146.46	318	PKPbc	PKPbc	22 53 08.1	+0.4
	1.0nm,0.8s,baz=146,slow=2.7,SNR=5.8						
GERES	GERESS Array B	147.72	349	PKPbc	PKPbc	22 53 11.2	+0.4
	0.6nm,0.6s,baz=38,slow=2.4,SNR=8.0						
MMAI	Mount Meron Ar	148.32	305	PKPbc	PKPbc	22 53 14.1	+1.2
	0.8nm,0.4s,baz=84,slow=7.4,SNR=5.9						

*NIED **18** 22:44:00, 38°.30N×141°.80E, h47km, Mw3.8 Best double couple: M0=4.89000×10^14 NP1:φs=312.00000°, δ56.00000°, λ37.00000°. NP2:φs=199.00000°, δ60.00000°, λ140.00000°.*
*ISCJB **18** 22:44:51.5±0.8, 38°.24N±0°.04×142°.01E±0°.08, h62km±7km, mb3.8/5, Error ellipse: s-maj=10.9km s-min=5.4km az=17.1*
*IDC **18** 22:44:52.3±2.9, 38°.24N×142°.14E, h56km±23km, mb3.6/5, mb1 3.7/9, mb1mx3.3/68, mbtmp3.8/9, ML3.2/4, MS3.6/5, Ms1 3.6/5, ms1mx2.8/62, Error ellipse: s-maj=42.2km s-min=17.5km az=81.0*
*JMA **18** 22:44:53.6±0.1, 38°.27N×141°.85E, h61km±1km, M4.0*
JMA Felt I J1.

ISC 18 22:44:52.4±1.7, 38°.24N±0°.05×142°.0E±0°.1, h51km±13km, n34, σ1s07/39, mb3.8/5, MS3.6/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	Ouri	0.55	294	P	Pn	22 45 05.1	+0.8
JIO				S	Sn	22 45 13.0	+0.2
JMK	Ichinoseki	0.94	320	P	Pn	22 45 09.9	+0.6
JMK				S	Sn	22 45 21.6	-0.1
JMM	Marumori	1.01	249	P	Pn	22 45 10.4	+0.1
JMM				S	Sn	22 45 22.9	-0.6
JOU	Okura	1.05	277	P	Pn	22 45 11.0	+0.2
JOU				S	Sn	22 45 23.9	-0.6
JFK	Kawauchi	1.24	226	P	Pn	22 45 13.9	+0.5
JFK				eS	Sn	22 45 28.8	-0.2
JOM	Ohasama	1.35	336	P	Pn	22 45 15.5	+0.6
JOM				eS	Sn	22 45 32.0	+0.3
JYK	Kaneyama	1.45	299	P	Pn	22 45 16.4	+0.2
JYK				eS	Sn	22 45 33.9	-0.2
JFT	Otama	1.49	242	P	Pn	22 45 17.6	+0.8
JFT				eS	Sn	22 45 35.0	-0.1
JYS	Shirataka	1.51	270	P	Pn	22 45 17.4	+0.3
JYS				S	Sn	22 45 35.2	-0.5
JRG	Rokugo	1.57	318	P	Pn	22 45 18.3	+0.4
JRG				eS	Sn	22 45 37.5	+0.5
JYA	Atsumi	1.82	282	P	Pn	22 45 21.5	+0.2
JYA				S	Sn	22 45 44.6	+1.4
JFY	Yanaizu	1.99	246	P	Pn	22 45 24.5	+0.9
JFY				eS	Sn	22 45 47.2	-0.1
MJAR	Matsushiro Arr	3.45	242	P	Pn	22 45 45.4	+1.8
	4.7nm,0.3s,baz=59,slow=9.8,SNR=37						
MJAR				S	Sn	22 46 24.3	+1.0
	0.6nm,0.3s,baz=17,slow=26,SNR=2.9						
MAT	Matsushiro	3.45	242	P	Pn	22 45 45.6	+1.9
MAT				eS	Sn	22 46 25.8	+2.5
JHJ	Hachijo jima 2	5.41	200	P	Pn	22 46 10.6	0.0
	10nm,0.3s,baz=4.9,slow=16,SNR=14						
JHJ				S	Sn	22 47 08.1	-3.4
	15nm,0.3s,baz=41,slow=22,SNR=11						
ASAJ	Asahikawa	5.89	4	P	Pn	22 46 16.9	-0.2
	0.4nm,0.3s,baz=193,slow=17,SNR=2.3						
ASAJ				S	Sn	22 47 20.6	-2.6
	0.4nm,0.3s,baz=105,slow=20,SNR=2.4						
USRK	Ussuriysk Ar.	9.60	312	P	Pn	22 47 08.5	+0.7
	0.5nm,0.3s,baz=125,slow=14,SNR=8.0						
H11N2	WAKE ISLAND Hy 28.40	123		T	T	23 21 00.8	
	baz=316,slow=75,SNR=151						
H11N1	WAKE ISLAND Hy 28.41	124		T	T	23 21 06.0	
	baz=316,slow=75,SNR=146						
H11N3	WAKE ISLAND Hy 28.42	123		T	T	23 21 04.3	
	baz=316,slow=75,SNR=129						
H11S1	WAKE ISLAND Hy 29.16	125		T	T	23 21 58.7	
	baz=318,slow=76,SNR=72						
H11S3	WAKE ISLAND Hy 29.16	126		T	T	23 22 05.2	
	baz=318,slow=76,SNR=79						
H11S2	WAKE ISLAND Hy 29.17	126		T	T	23 22 07.8	
	baz=318,slow=76,SNR=92						
NRIK	Noril'sk	42.37	335	LR	LR	23 12 05.5	
	comp=Z,52nm,18.4s,baz=353,slow=38						
MKAR	Makanchi Array	43.88	301	P	P	22 52 53.5	-0.1
	0.6nm,0.6s,baz=82,slow=10,SNR=6.3						
KURBB	Kurchatov Arra	45.63	307	P	P	22 53 07.5	0.0
	0.5nm,0.3s,baz=82,slow=8.1,SNR=5.2						
PMG	Port Moresby	47.64	173	LR	LR	23 12 17.9	
	comp=Z,53nm,21.4s,baz=58,slow=34						
BVAR	Borovoye Array	50.11	312	PcP	PcP	22 55 00.6	-0.4
	0.5nm,0.5s,baz=70,slow=4.7,SNR=5.5						
LEM	Lembang	55.06	223	LR	LR	23 21 13.1	
	comp=Z,135nm,18.1s,baz=201,slow=40						
ARU	Arti	55.77	318	LR	LR	23 18 50.6	
	comp=Z,47nm,20.1s,baz=346,slow=36						
WRA	Warramunga Arr	58.31	188	P	P	22 54 41.3	-0.7
	1.1nm,0.5s,baz=6.7,slow=7.2,SNR=16						
ASAR	Alice Springs	62.04	188	P	P	22 55 07.3	-0.2
	0.6nm,0.7s,baz=3.4,slow=4.0,SNR=5.1						
FINES	FINESS Array B	67.97	332	P	P	22 55 45.4	-0.2
	0.8nm,0.8s,baz=55,slow=12,SNR=3.3						
URZ	Urewera	82.70	153	LR	LR	23 34 30.2	
	comp=Z,32nm,19.5s,baz=4.0,slow=36						

KRSC 18 22:46:31.9±1.2, 55°.73N×160°.91E, h182km±10km, ML3.9, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZLN	Zelenaya	0.29	349	eP	Pn	22 46 57.3	+1.1
LGNR	Loginova	0.37	341	eP	Pn	22 46 57.6	+0.9
KMNR	Kamenistaya	0.38	274	eP	Pn	22 46 57.3	+0.8
KRSR	Krestovskiy	0.52	339	eP	Pn	22 46 57.2	+0.2
KRSR				eS	Sn	22 47 17.8	+1.2
TUMD	Tumrok D	0.60	209	eP	Pn	22 46 58.3	+1.0
TUMD				eS	Sn	22 47 17.6	+0.7
TUMR	Tumrok	0.62	224	eP	Pn	22 46 59.0	+1.5
TUMR				eS	Sn	22 47 18.6	+1.3
KZV	Kizimen	0.71	210	eP	Pn	22 46 59.2	+1.1
KZV				eS	Sn	22 47 19.0	+0.8
SRKR	Sorokina	0.94	9	eP	Pn	22 47 00.0	+0.7
SRKR				eS	Sn	22 47 20.4	-0.3
KBTR	Krutoberegovo	1.18	65	eP	Pn	22 47 02.4	+1.4
KBTR				eS	Sn	22 47 24.7	+1.1
ESO	Esso	1.26	280	eP	Pn	22 47 01.5	-0.3
MKZ	Mys Kozlova	1.27	158	eP	Pn	22 47 02.9	+1.1
GNL	Ganaly	2.67	221	eP	Pn	22 47 18.0	+1.3
SPN	Mys Shipunski	2.69	191	eP	Pn	22 47 16.6	-0.2
SPN				eS	Sn	22 47 49.3	-2.5
KRX	Arik	2.72	210	eP	Pn	22 47 19.5	+2.2
NLC	Nalytchevo	2.72	200	eP	Pn	22 47 18.1	+0.9
NLC				eS	Sn	22 47 51.9	-0.6
SDLR	Sedlovina	2.73	206	eP	Pn	22 47 19.0	+1.6
KRER	Koryakskii	2.74	208	eP	Pn	22 47 20.0	+2.4
UGLR	Uglovaya	2.80	207	eP	Pn	22 47 19.9	+1.6
DALK	Dalny	2.98	206	eP	Pn	22 47 21.3	+1.0
APC	Apacha	3.57	220	eP	Pn	22 47 29.4	+1.9
MTVR	Mutnovka	3.63	207	eP	Pn	22 47 29.7	+1.3
ASAK	Asacha	3.79	209	eP	Pn	22 47 31.9	+1.5
KDTR	Khodutka, Kamc	4.27	204	eP	Pn	22 47 36.9	+0.5

*ISCJB **18** 22:55:33.6±1.1, 35°.5S±0°.1×107°.4W±0°.2, h10km, mb4.2/12, MS3.4/3, Error ellipse: s-maj=30.2km s-min=16.7km az=152.2*
*IDC **18** 22:55:33.7±2.3, 35°.56S×107°.26W, h0km, mb3.9/4, mb1 4.2/4, mb1mx3.8/33, mbtmp3.9/4, MS3.4/4, Ms1 3.4/4, ms1mx3.1/29, Error ellipse: s-maj=73.3km s-min=39.4km az=2.0*
*NEIC **18** 22:55:35.4±0.6, 35°.45S×107°.31W, h10km, mb4.3/8, Error ellipse: s-maj=20.2km s-min=13.0km az=56.0*

ISC 18 22:55:35.4±1.1, 35°.5S±0°.2×107°.3W±0°.2, h10km, n18, σ0s83/16, mb4.1/12, MS3.4/3, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	Rapa Nui	8.49	348	LR	LR	22 59 53.9	
	comp=Z,214nm,18.9s,baz=104,slow=30						
TRQA	Tornquist	36.13	108	P	P	23 02 38.0	+0.2
	1.5nm,0.7s						
EFI	East Falkland	38.39	131	P	P	23 02 56.4	-0.2
	18nm,1.0s						
PMSA	Palmer Station	39.05	152	P	P	23 03 02.3	+0.2
	37nm,0.7s						
LPAZ	La Paz	39.75	72	P	P	23 03 08.1	-1.2
	1.0nm,0.8s,baz=248,slow=5.4,SNR=4.8						
LPAZ				LR	LR	23 15 49.7	
	comp=Z,27nm,18.8s,baz=146,slow=31						
OTAV	Otavalo	44.55	43	P	P	23 03 48.5	+0.3
	1.2nm,0.6s						
SAML	Samuel	48.06	68	P	P	23 04 15.6	+0.2
	0.4nm,0.7s						
JTS	JuntasAbangare	50.17	29	LR	LR	23 20 20.5	
	comp=Z,56nm,19.4s,baz=268,slow=30						
ROSC	El Rosal	50.65	45	P	P	23 04 36.6	+1.1
	2.9nm,0.5s,baz=228,slow=18,SNR=3.8						
ROSC				LR	LR	23 21 55.5	
	comp=Z,42nm,20.9s,baz=257,slow=31						
NVAR	Mina Array Bea	74.22	351	P	P	23 07 12.3	-0.2
	0.3nm,0.4s,baz=165,slow=7.4,SNR=2.6						
PDAR	Pinedale Array	77.88	358	P	P	23 07 34.1	+0.8
	1.1nm,0.9s,baz=154,slow=6.8,SNR=5.1						
MFID	Camas Ranch	78.89	354	eP	P	23 07 36.6	-2.1
	3.7nm,0.9s						
HLID	Hailey	78.92	355	eP	P	23 07 39.2	+0.3
	2.2nm,0.9s						
SACV	Santiago Islan	93.53	74	P	P	23 08 51.9	0.0
	9.3nm,1.0s						
SFJD	Kangerlussuaq	110.78	21	ePKP	PKiKP	23 14 07.9	+0.3
KEV	Kevo	137.72	22	PKPdf	PKPdf	23 14 58.9	+0.1
AKASG	Malin Array Be	145.33	50	PKPbc	PKPbc	23 15 12.1	-0.8
	0.2nm,0.2s,baz=282,slow=3.4,SNR=4.1						
SONM	Songino Array	152.18	307	PKPbc	PKPbc	23 15 31.4	+0.3
	0.2nm,0.3s,baz=122,slow=1.9,SNR=2.3						

**IDC 18 23:05:26.3±3.0, 32°.20S×178°.15W, h0km

MKZ	**Mys Kozlova**	**2.57**	**56**	*e*P	Pn	23 18 33.8	+1.4
MKZ				S	Sn	23 19 06.0	-0.9
KBTR	**Krutoberegovo**	**4.10**	**40**	P	Pn	23 18 52.3	+1.3

DJA 18 23:23:12.5±0.6, 9°S±4′×11°8E±°, h28km±4km, M3.8/9, MLv3.8/9, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.52**	**337**	P	Pn	23 23 23.8	-0.3
PLAI				S	Sn	23 23 31.8	-0.2
TWSI	**Taliwang, Sumb**	**1.22**	**298**	P	Pn	23 23 34.0	+0.2
TWSI				S	Sn	23 23 49.3	-0.1
WBSI	**Waikabubak, Su**	**1.43**	**103**	P	Pn	23 23 35.0	-1.7
WSI	**Waingapu**	**2.31**	**99**	P	Pb	23 24 04.8	+11
IGBI	**Denpasar**	**2.84**	**280**	P	Pn	23 23 56.9	+0.9
IGBI				S	Sn	23 24 29.1	-0.3
EDFI	**Ende, Flores**	**3.71**	**82**	P	Pn	23 24 07.6	-0.4
JAGI	**Jajag, Banyuwa**	**3.87**	**282**	P	Pn	23 24 11.1	+0.9
JAGI				S	Sn	23 24 53.9	-1.0
BKSI	**Bulukumba**	**4.50**	**28**	P	Pn	23 24 19.8	+1.0
BKSI				S	Sn	23 25 10.7	+0.5
GMJI	**Gumukmas**	**4.60**	**283**	P	Pn	23 24 20.8	+0.6
GMJI				S	Sn	23 25 12.6	-0.2
PWJI	**Pagerwojo**	**6.24**	**281**	P	Pn	23 24 45.2	+2.4

IDC 18 23:26:25.0±55.0, 16°29S×176°23W, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.7/51, mbtmp4.1/3, Error ellipse: s-maj=1032.0km s-min=177.0km az=78.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.23**	**240**	P	P	23 34 11.9	0.0
	2.2nm,0.9s,baz=80,slow=12,SNR=3.2						
WRA	**Warramunga Arr**	**46.99**	**258**	P	P	23 34 58.2	-0.1
	0.4nm,0.4s,baz=92,slow=8.1,SNR=8.5						
ASAR	**Alice Springs**	**47.24**	**253**	P	P	23 34 60.0	-0.3
	5.3nm,0.6s,baz=88,slow=8.4,SNR=49						

ISCJB 18 23:35:06.4±1.7, 19°5N±0°1×146°1E±0°5, h100km, mb4.0/11, Error ellipse: s-maj=62.9km s-min=17.2km az=175.0
IDC 18 23:35:13.7±17.0, 19°43N×146°06E, h151km±145km, mb3.7/11, mb1 3.8/11, mb1mx3.4/63, mbtmp4.1/11, Error ellipse: s-maj=106.4km s-min=16.6km az=80.0
ISC 18 23:35:07.8±2.1, 19°5N±0°2×146°2E±0°5, h100km, n11, σ0°67/11, mb4.1/11, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**24.03**	**322**	P	**P**	**23 40 13.3**	**0.0**
	1.0nm,0.5s,baz=148,slow=9.6,SNR=5.6						
WRA	**Warramunga Arr**	**40.85**	**197**	P	**P**	**23 42 40.1**	**+0.2**
	1.1nm,0.4s,baz=18,slow=8.6,SNR=13						
FITZ	**Fitzroy Crossi**	**42.44**	**210**	P	**P**	**23 42 52.8**	**-0.1**
	1.5nm,0.6s,baz=27,slow=11,SNR=10						
SONM	**Songino Array**	**42.88**	**321**	P	**P**	**23 42 57.1**	**+0.8**
	0.3nm,0.5s,baz=134,slow=8.3,SNR=2.9						
ZALV	**Zalesovo Beam**	**57.73**	**322**	P	**P**	**23 44 47.5**	**-0.6**
	1.5nm,0.6s,baz=103,slow=7.5,SNR=6.2						
MKAR	**Makanchi Array**	**58.31**	**314**	P	**P**	**23 44 52.0**	**-0.2**
	0.5nm,0.4s,baz=88,slow=7.3,SNR=8.0						
KURBB	**Kurchatov Arra**	**61.11**	**318**	P	**P**	**23 45 10.9**	**-0.4**
	2.6nm,0.5s,baz=91,slow=7.5,SNR=26						
BVAR	**Borovoye Array**	**66.22**	**320**	P	**P**	**23 45 44.9**	**0.0**
	1.5nm,0.3s,baz=100,slow=7.9,SNR=14						
ARCES	**ARCESS Array B**	**81.94**	**342**	P	**P**	**23 47 16.9**	**+0.9**
	3.8nm,1.1s,baz=48,slow=7.4,SNR=2.1						
FINES	**FINESS Array B**	**86.42**	**335**	P	**P**	**23 47 38.1**	**-0.7**
	0.6nm,0.3s,baz=63,slow=4.0,SNR=16						
HFS	**Hagfors**	**91.88**	**338**	P	**P**	**23 48 03.6**	**-1.0**
	3.1nm,1.1s,baz=72,slow=9.3,SNR=3.1						

ISCJB 18 23:45:36.7±0.5, 5°30N±0°03×73°72W±0°04, h156km±4km, mb3.3/4, Error ellipse: s-maj=6.8km s-min=5.0km az=33.4
IDC 18 23:45:37.4±0.9, 5°30N×73°69W, h158km±8km, mb3.1/4, mb1 3.4/5, mb1mx3.1/39, mbtmp3.7/5, Error ellipse: s-maj=26.0km s-min=20.3km az=96.0
RSNC 18 23:45:38.4±1.1, 5°29N×73°73W, h146km±6km, ML3.6, Mw3.7
ISC 18 23:45:37.5±0.8, 5°29N±0°04×73°71W±0°05, h151km±6km, n26, σ0°79/42, mb3.2/4, 3C, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIC	**Chingaza**	**0.66**	**182**	⇑*i*P	**Pn**	**23 46 00.2**	**-0.2**
CHIC				*e*S	**Sn**	**23 46 16.6**	**-1.2**
CHIC				*i*		23 46 19.9	
	comp=Z,833nm,0.5s						
ROSC	**El Rosal**	**0.75**	**234**	P	**Pn**	**23 46 01.9**	**+0.9**
	comp=Z,122nm,0.3s,baz=153,slow=4.5,SNR=398						
ROSC				S	**Sn**	**23 46 19.9**	**+1.1**
	comp=Z,243nm,0.3s,baz=351,slow=21,SNR=11						
ROSC	**El Rosal**	**0.75**	**234**	⇑*i*P	**Pn**	**23 46 01.9**	**+0.9**
ROSC				*e*S	**Sn**	**23 46 19.0**	**+0.1**
ROSC				*i*		23 46 22.9	
	comp=Z,875nm,0.3s						
RUSC	**La Rusia**	**0.86**	**46**	*e*P	**Pn**	**23 46 02.5**	**+0.7**
RUSC				*e*S	**Sn**	**23 46 20.8**	**+0.3**
RUSC				*i*		23 46 22.7	
	comp=Z,378nm,0.3s						
VILC	**Villavicencio,**	**1.17**	**179**	*i*P	**Pn**	**23 46 03.7**	**-0.4**
VILC				*e*S	**Sn**	**23 46 23.8**	**-0.7**
VILC				*i*		23 46 27.0	
	comp=Z,924nm,0.3s						
NORC	**Norcasia**	**1.19**	**283**	*e*P	**Pn**	**23 46 03.6**	**-0.5**
NORC				*e*S	**Sn**	**23 46 23.8**	**-0.6**
BARC	**Barichara**	**1.40**	**22**	*e*P	**Pn**	**23 46 06.4**	**+0.1**
BARC				*e*S	**Sn**	**23 46 27.8**	**-0.7**
BARC				*i*		23 46 33.9	
	comp=Z,832nm,0.2s						
PTBC	**PUERTO BERRIO,**	**1.45**	**329**	*e*P	**Pn**	**23 46 05.8**	**-0.8**
PTBC				*e*S	**Sn**	**23 46 27.8**	**-1.2**
PTBC				*i*		23 46 31.1	
	comp=Z,306nm,0.2s						
GUYC	**Guyana, Colomb**	**1.67**	**268**	*e*P	**Pn**	**23 46 10.2**	**+0.7**
GUYC				*e*S	**Sn**	**23 46 34.6**	**+0.6**
GUYC				*i*		23 46 39.2	
	comp=Z,258nm,0.3s						
TOLC	**Tolima**	**1.75**	**246**	*e*P	**Pn**	**23 46 10.2**	**0.0**
TOLC				*e*S	**Sn**	**23 46 34.5**	**-0.8**
ANIL	**Santa Ana**	**1.86**	**245**	*e*P	**Pn**	**23 46 10.9**	**-0.6**
ANIL				*i*		23 46 39.8	
	comp=Z,735nm,0.4s						
PRAC	**Prado**	**1.96**	**217**	⇑*i*P	**Pn**	**23 46 12.1**	**-0.2**
PRAC				*e*S	**Sn**	**23 46 38.5**	**-0.5**
HELC	**Santa Helena**	**2.02**	**296**	*e*P	**Pn**	**23 46 13.2**	**0.0**
HELC				*e*S	**Sn**	**23 46 40.1**	**-0.7**
HELC				*i*		23 46 48.1	
	comp=Z,241nm,0.3s						
SJAC	**San Juan de Ar**	**2.02**	**187**	*i*P	**Pn**	**23 46 13.2**	**+0.1**
SJAC				*i*		23 46 41.4	
	comp=Z,761nm,0.3s						
PAMC	**Pamplona, Colo**	**2.27**	**26**	*e*P	**Pn**	**23 46 16.9**	**+0.6**
YOTC	**Yotoco, Valle**	**2.93**	**244**	*e*P	**Pn**	**23 46 23.5**	**-0.7**
YOTC				*e*S	**Sn**	**23 46 59.9**	**-0.3**
YOTC				*i*		23 47 03.1	
	comp=Z,46nm,0.5s						
OCAC	**Ocana**	**2.95**	**8**	*e*P	**Pn**	**23 46 24.7**	**+0.2**
OCAC				*e*S	**Sn**	**23 47 01.2**	**+0.4**
DBBC	**Dabeiba**	**3.02**	**305**	*e*P	**Pn**	**23 46 25.4**	**+0.2**
DBBC				*e*S	**Sn**	**23 47 02.4**	**+0.3**
SDV	**Santo Domingo**	**4.70**	**40**	P	**Pn**	**23 46 47.1**	**0.0**
	comp=Z,11nm,0.3s,baz=236,slow=9.8,SNR=68						
SDV				S	**Sn**	**23 47 40.2**	**-1.2**
	comp=Z,17nm,0.3s,baz=232,slow=19,SNR=21						
LPAZ	**La Paz**	**22.14**	**166**	P	**P**	**23 50 22.4**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=9.5,slow=6.1,SNR=2.6						
TXAR	**Lajitas Array**	**37.06**	**314**	PcP	**PcP**	**23 54 51.4**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=139,slow=4.7,SNR=6.3						
YKA	**Yellowknife Ar**	**64.49**	**340**	P	**P**	**23 55 57.1**	**-0.5**
	comp=Z,0.9nm,0.5s,baz=137,slow=6.0,SNR=8.4						
TORD	**Torodi Ar. Bea**	**74.63**	**78**	P	**P**	**23 56 59.4**	**-1.3**
	comp=Z,0.2nm,0.5s,baz=265,slow=7.1,SNR=3.4						
ILAR	**Eielson Array**	**78.09**	**335**	P	**P**	**23 57 19.2**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=85,slow=4.5,SNR=3.7						
ASAR	**Alice Springs**	**147.73**	**233**	PKPbc	**PKPdf**	**00 05 03.3**	**+1.0**
	comp=Z,0.3nm,0.4s,baz=115,slow=4.5,SNR=4.9						
WRA	**Warramunga Arr**	**149.07**	**239**	PKPbc	**PKPdf**	**00 05 06.9**	**+2.4**

comp=Z,0.6nm,0.5s,baz=109,slow=2.8,SNR=7.8

ISCJB 18 23:52:22.8±0.3, 34°66N±0°02×28°51E±0°03, h31km, Error ellipse: s-maj=3.7km s-min=2.9km az=35.0
DDA 18 23:52:23.5, 34°92N×28°53E, h19km, Ml3.6
ISK 18 23:52:24.6, 34°94N×28°43E, h10km, ML3.2/6
CSEM 18 23:52:24.6±0.3, 34°88N×28°40E, h10km, ML2.5, Error ellipse: s-maj=6.8km s-min=3.0km az=159.0
ATH 18 23:52:25.5, 34°92N×28°36E, h35km±10km, ML2.5/3, Error ellipse: s-maj=10.5km s-min=1.5km az=165.0
GII 18 23:52:30.2±0.0, 34°48N×28°89E, h30km
ISC 18 23:52:23.5±1.0, 34°68N±0°04×28°47E±0°03, h31km, n106, σ1°64/146, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**1.38**	**309**	PN	**Pn**	**23 52 47.9**	**+1.3**
KARP				SN	**Sn**	**23 53 04.9**	**+1.0**
KARP	**Karpathos**	**1.38**	**309**	P	**Pb**	**23 52 48.1**	**-0.6**
KARP				S	**Sn**	**23 53 03.3**	**-0.6**
KARP	**Karpathos**	**1.38**	**309**	P	**Pn**	**23 52 47.5**	**+0.9**
KARP	**Karpathos**	**1.38**	**309**	*e*Pn	**Pn**	**23 52 47.9**	**+1.3**
KARP				S	**Sn**	**23 53 03.0**	**-0.9**
KARP				*e*Sn	**Sn**	**23 53 04.9**	**+1.0**
ARG	**Arkhangelos**	**1.56**	**350**	PN	**Pn**	**23 52 49.9**	**+0.8**
ARG				SN	**Sn**	**23 53 07.4**	**-0.9**
ARG	**Arkhangelos**	**1.56**	**350**	P	**Pn**	**23 52 50.6**	**+1.5**
ARG				S	**Sn**	**23 53 06.0**	**-2.2**
ARG				AML	AML	23 53 09.7	
	comp=N,265μm,0.5s						
ARG				AML	AML	23 53 12.3	
	comp=E,354μm,0.5s						
ARG	**Arkhangelos**	**1.56**	**350**	P	**Pn**	**23 52 49.8**	**+0.7**
ARG				S	**Sn**	**23 53 06.1**	**-2.2**
ARG				*e*Sn	**Sn**	**23 53 07.4**	**-0.9**
KSL	**Kastellorizon**	**1.73**	**31**	P	**Pn**	**23 52 52.9**	**+1.6**
KSL				S	**Sn**	**23 53 12.7**	**+0.3**
KSL				AML	AML	23 53 16.1	
	comp=N,100μm,0.4s						
KSL				AML	AML	23 53 19.5	
	comp=E,177μm,0.4s						
AKAS	**Kas**	**1.81**	**30**	PN	**Pn**	**23 52 53.3**	**+0.6**
AKAS				SN	**Sn**	**23 53 14.8**	**+0.2**
AKAS	**Kas**	**1.81**	**30**	*i* P	**Pn**	**23 52 53.2**	**+0.6**
AKAS				*i* S	**Sn**	**23 53 12.7**	**-1.9**
AKAS	**Kas**	**1.81**	**30**	*e*Pn	**Pn**	**23 52 53.3**	**+0.6**
AKAS				S	**Sn**	**23 53 12.6**	**-1.9**
AKAS				*e*Sn	**Sn**	**23 53 14.8**	**+0.2**
ZKR	**Zakros**	**1.90**	**284**	P	**Pb**	**23 52 56.5**	**-1.0**
ZKR				AML	AML	23 53 19.1	
	comp=E,373μm,0.5s						
ZKR				AML	AML	23 53 19.3	
	comp=N,200μm,0.4s						
ZKR	**Zakros**	**1.90**	**284**	P	**Pn**	**23 52 56.0**	**+2.2**
FETY	**Fethiye**	**2.02**	**14**	PN	**Pn**	**23 52 55.3**	**-0.1**
FETY	**Fethiye**	**2.02**	**14**	P	**Pn**	**23 52 55.0**	**-0.4**
FETY	**Fethiye**	**2.02**	**14**	*e*Pn	**Pn**	**23 52 55.3**	**-0.1**
FETY				S	**Sn**	**23 53 17.6**	**-2.0**
DALY	**Dalyan (Mu¨la**	**2.14**	**4**	PN	**Pn**	**23 52 57.6**	**+0.6**
DALY	**Dalyan (Mu¨la**	**2.14**	**4**	*i* P	**Pn**	**23 52 58.0**	**+0.9**
DALY				*i* S	**Sn**	**23 53 21.3**	**-1.3**
DALY	**Dalyan (Mu¨la**	**2.14**	**4**	*e*Pn	**Pn**	**23 52 57.6**	**+0.6**
DALY	**Dalyan (Mu¨la**	**2.14**	**4**	P	**Pn**	**23 52 58.0**	**+0.9**
DALY				S	**Sn**	**23 53 21.3**	**-1.3**
DAT	**Datca**	**2.17**	**341**	PN	**Pn**	**23 52 58.4**	**+0.8**
DAT	**Datca**	**2.17**	**341**	*i* P	**Pn**	**23 52 58.5**	**+0.8**
DAT				*i* S	**Sn**	**23 53 19.2**	**-4.4**
DAT	**Datca**	**2.17**	**341**	*e*Pn	**Pn**	**23 52 58.4**	**+0.8**
DAT				S	**Sn**	**23 53 19.2**	**-4.4**
TURN	**Turunc**	**2.19**	**3**	PN	**Pn**	**23 52 57.1**	**-0.7**
TURN	**Turunc**	**2.19**	**3**	*i* P	**Pn**	**23 52 57.8**	**0.0**
TURN				*i* S	**Sn**	**23 53 21.1**	**-2.8**
TURN	**Turunc**	**2.19**	**3**	*e*Pn	**Pn**	**23 52 57.1**	**-0.7**
TURN	**Turunc**	**2.19**	**3**	P	**Pn**	**23 52 57.8**	**0.0**
TURN				S	**Sn**	**23 53 21.1**	**-2.8**
ELL	**Elmali**	**2.38**	**29**	PN	**Pn**	**23 53 01.7**	**+1.3**
ELL	**Elmali**	**2.38**	**29**	*e*Pn	**Pn**	**23 53 01.7**	**+1.3**
NPS	**Neapolis**	**2.42**	**285**	P	**Pn**	**23 53 01.9**	**+1.0**
NPS	**Neapolis**	**2.42**	**285**	P	**Pn**	**23 53 02.3**	**+1.4**
LAST	**Lasithi**	**2.50**	**282**	P	**Pn**	**23 53 04.0**	**+1.9**
LAST	**Lasithi**	**2.50**	**282**	P	**Pn**	**23 53 04.1**	**+1.9**
BODT	**Bodrum**	**2.56**	**339**	PN	**Pn**	**23 53 02.3**	**-0.5**
BODT	**Bodrum**	**2.56**	**339**	*e*Pn	**Pn**	**23 53 02.3**	**-0.5**
MLSB	**Milas**	**2.67**	**348**	PN	**Pn**	**23 53 05.2**	**+0.8**
MLSB	**Milas**	**2.67**	**348**	*e*Pn	**Pn**	**23 53 05.2**	**+0.8**
GOLH	**Golhisar**	**2.70**	**19**	*i* P	**Pn**	**23 53 06.3**	**+1.4**
GOLH				*i* S	**Sn**	**23 53 37.0**	**+0.4**
GOLH	**Golhisar**	**2.70**	**19**	P	**Pn**	**23 53 06.3**	**+1.4**
GOLH				S	**Sn**	**23 53 37.0**	**+0.4**
KORT	**Korkueli**	**2.78**	**33**	PN	**Pn**	**23 53 08.1**	**+2.2**
KORT	**Korkueli**	**2.78**	**33**	*i* P	**Pn**	**23 53 08.6**	**+2.7**
KORT				*i* S	**Sn**	**23 53 41.5**	**+3.0**
KORT	**Korkueli**	**2.78**	**33**	*e*Pn	**Pn**	**23 53 08.1**	**+2.2**
KORT	**Korkueli**	**2.78**	**33**	P	**Pn**	**23 53 08.6**	**+2.7**
KORT				S	**Sn**	**23 53 41.5**	**+3.0**
TAVA	**DENIZLI_Tavas**	**2.81**	**7**	*i* P	**Pn**	**23 53 07.9**	**+1.6**
TAVA				*i* S	**Sn**	**23 53 39.4**	**+0.3**
TAVA	**DENIZLI_Tavas**	**2.81**	**7**	P	**Pn**	**23 53 07.9**	**+1.6**
TAVA				S	**Sn**	**23 53 39.4**	**+0.3**
ANTB	**Antalya**	**2.84**	**38**	PN	**Pn**	**23 53 08.8**	**+2.1**
ANTB	**Antalya**	**2.84**	**38**	*e*Pn	**Pn**	**23 53 08.8**	**+2.1**
SANT	**Santorini**	**2.98**	**305**	P	**Pn**	**23 53 08.6**	**0.0**
SANT	**Santorini**	**2.98**	**305**	P	**Pn**	**23 53 09.1**	**+0.4**
AMGA	**Amorgos Island**	**3.00**	**316**	P	**Pn**	**23 53 08.9**	**0.0**
AMGA	**Amorgos Island**	**3.00**	**316**	P	**Pn**	**23 53 09.2**	**+0.3**
AYDN	**Tasoluk**	**3.02**	**351**	*i* P	**Pn**	**23 53 10.2**	**+1.1**
AYDN				*i* S	**Sn**	**23 53 43.4**	**-0.9**
AYDN	**Tasoluk**	**3.02**	**351**	P	**Pn**	**23 53 10.2**	**+1.1**
AYDN				S	**Sn**	**23 53 43.3**	**-0.9**
SIVA	**Sivas**	**3.03**	**277**	P	**Pn**	**23 53 11.9**	**+2.6**
SIVA	**Sivas**	**3.03**	**277**	P	**Pn**	**23 53 11.8**	**+2.6**
BRDR	**BURDUR-Merkez**	**3.28**	**23**	*i* P	**Pn**	**23 53 14.9**	**+2.1**
BRDR				*i* S	**Sn**	**23 53 52.5**	**+1.8**
BRDR	**BURDUR-Merkez**	**3.28**	**23**	P	**Pn**	**23 53 14.9**	**+2.1**
BRDR				S	**Sn**	**23 53 52.5**	**+1.8**
AYDB	**Zeytinkoy-Aydi**	**3.30**	**352**	PN	**Pn**	**23 53 14.1**	**+1.0**
AYDB	**Zeytinkoy-Aydi**	**3.30**	**352**	*e*Pn	**Pn**	**23 53 14.1**	**+1.0**
SMG	**Samos**	**3.30**	**337**	P	**Pn**	**23 53 13.2**	**+0.1**
SMG	**Samos**	**3.30**	**337**	P	**Pn**	**23 53 13.3**	**+0.3**
APE	**Apeiranthos**	**3.38**	**316**	P	**Pn**	**23 53 13.9**	**-0.2**
APE	**Apeiranthos**	**3.38**	**316**	P	**Pn**	**23 53 14.4**	**+0.3**
SUTC	**Sutluce-Ispart**	**3.46**	**36**	PN	**Pn**	**23 53 18.3**	**+2.9**
SUTC	**Sutluce-Ispart**	**3.46**	**36**	*e*Pn	**Pn**	**23 53 18.3**	**+2.9**
GAZI	**Gazipasa**	**3.50**	**63**	*i* P	**Pn**	**23 53 16.5**	**+0.7**
GAZI				*i* S	**Sn**	**23 53 53.9**	**-2.3**
GAZI	**Gazipasa**	**3.50**	**63**	S	**Sn**	**23 53 53.9**	**-2.3**
GAZI	**Gazipasa**	**3.50**	**63**	P	**Pn**	**23 53 16.5**	**+0.7**
ISP	**Isparta**	**3.55**	**27**	PN	**Pn**	**23 53 18.6**	**+2.1**
ISP	**Isparta**	**3.55**	**27**	*e*Pn	**Pn**	**23 53 18.6**	**+2.1**
VAM	**Vamos**	**3.58**	**283**	P	**Pn**	**23 53 19.6**	**+2.8**
VAM	**Vamos**	**3.58**	**283**	P	**Pn**	**23 53 19.4**	**+2.6**
LEF	**Lefka**	**3.66**	**82**	P	**Pn**	**23 53 18.7**	**+0.8**
IMMV	**Iera Moni Meta**	**3.76**	**283**	P	**Pn**	**23 53 22.1**	**+2.7**
IMMV	**Iera Moni Meta**	**3.76**	**283**	P	**Pn**	**23 53 21.9**	**+2.5**
KULA	**Kula-Manisa**	**3.83**	**2**	PN	**Pn**	**23 53 21.8**	**+1.4**
KULA	**Kula-Manisa**	**3.83**	**2**	*e*Pn	**Pn**	**23 53 21.8**	**+1.4**
CSS	**Mathiatis**	**4.01**	**85**	Pn	**Pn**	**23 53 24.4**	**+1.6**
CSS				Sn	**Sn**	**23 54 07.6**	**-1.1**
ERMK	**Ermenek**	**4.12**	**60**	*i* P	**Pn**	**23 53 26.4**	**+2.0**
ERMK				*i* S	**Sn**	**23 54 12.8**	**+1.2**
ERMK	**Ermenek**	**4.12**	**60**	S	**Sn**	**23 54 12.8**	**+1.2**
ERMK	**Ermenek**	**4.12**	**60**	P	**Pn**	**23 53 26.4**	**+2.0**
CHOS	**Chios island**	**4.18**	**333**	P	**Pn**	**23 53 25.5**	**+0.3**
CHOS	**Chios island**	**4.18**	**333**	P	**Pn**	**23 53 25.7**	**+0.5**
ANKY	**Antikythira Is**	**4.39**	**287**	P	**Pn**	**23 53 29.5**	**+1.5**
ANKY	**Antikythira Is**	**4.39**	**287**	P	**Pn**	**23 53 29.9**	**+1.9**
VLI	**Veliai**	**4.94**	**296**	P	**Pn**	**23 53 36.4**	**+0.8**
VLI	**Veliai**	**4.94**	**296**	P	**Pn**	**23 53 37.0**	**+1.4**
KRND	**KRANIDI**	**5.09**	**304**	P	**Pn**	**23 53 37.9**	**+0.3**
KRND	**KRANIDI**	**5.09**	**304**	P	**Pn**	**23 53 38.6**	**+1.1**
DID	**Didima**	**5.09**	**305**	P	**Pn**	**23 53 38.7**	**+1.1**
DID	**Didima**	**5.09**	**305**	P	**Pn**	**23 53 39.1**	**+1.4**
ITM	**Ithomi**	**5.87**	**297**	P	**Pn**	**23 53 47.5**	**-0.8**
ITM	**Ithomi**	**5.87**	**297**	P	**Pn**	**23 53 49.1**	**+0.8**
MMA0B	**Mount Meron ar**	**6.00**	**104**	Pn	**Pn**	**23 53 52.0**	**+1.8**
MMLI	**Mount Malkishu**	**6.22**	**109**	Pn	**Pn**	**23 53 54.4**	**+1.3**
KZIT	**Kziot**	**6.25**	**125**	Pn	**Pn**	**23 53 54.4**	**+0.9**
KZIT				Sn	**Sn**	**23 55 01.5**	**-2.4**
AMAZ	**Amatzia**	**6.25**	**118**	Pn	**Pn**	**23 53 54.6**	**+1.0**
HMDT	**Nahal Hemdat**	**6.37**	**110**	Pn	**Pn**	**23 53 56.7**	**+1.5**
YTIR	**Yattir**	**6.49**	**119**	Pn	**Pn**	**23 53 58.2**	**+1.3**
YTIR				Sn	**Sn**	**23 55 08.1**	**-1.8**
DSI	**Dead Sea**	**6.57**	**116**	Pn	**Pn**	**23 54 00.2**	**+2.2**
DSI				Sn	**Sn**	**23 55 10.2**	**-1.6**
RMNI	**Mount Ramon**	**6.69**	**126**	Pn	**Pn**	**23 54 01.3**	**+1.7**
ZFRI	**Zfri**	**6.99**	**124**	Pn	**Pn**	**23 54 04.0**	**+0.3**
ZFRI				Sn	**Sn**	**23 55 18.8**	**-3.4**
PRNI	**Paran**	**7.00**	**126**	Pn	**Pn**	**23 54 04.2**	**+0.3**
PRNI				Sn	**Sn**	**23 55 19.8**	**-2.7**
HRFI	**Mount Harif**	**7.23**	**128**	Pn	**Pn**	**23 54 08.1**	**+1.1**
HRFI				Sn	**Sn**	**23 55 25.6**	**-2.5**
MBRI	**Mt Berech**	**7.31**	**130**	Pn	**Pn**	**23 54 09.5**	**+1.3**
EIL	**Elat**	**7.42**	**130**	Pn	**Pn**	**23 54 10.9**	**+1.3**
EIL				Sn	**Sn**	**23 55 29.6**	**-3.2**

CSEM 18 23:53:29.6±0.5, 35°63N×31°76E, h12km, ML3.0, Error ellipse: s-maj=11.2km s-min=3.6km az=99.0
NIC 18 23:53:37.9±0.3, 35°08N×31°95E, h20km, ML3.0, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKMC	**Akamas**	**0.32**	**99**	P	Pb	23 53 44.7	-0.2
	baz=279						
AKMC	**Akamas**	**0.32**	**99**	P	Pb	23 53 44.7	-0.2
PPCY	**Paphos**	**0.38**	**121**	P	Pb	23 53 46.3	+0.4
	baz=301						
PPCY	**Paphos**	**0.38**	**121**	P	Pb	23 53 46.3	+0.4
ALFC	**Alefka**	**0.54**	**82**	P	Pb	23 53 49.0	+0.3
	baz=261						
ALFC				S	Sb	23 53 56.5	+0.5
SZAC	**Souni**	**0.83**	**113**	P	Pb	23 53 53.2	-0.5
	baz=293						
SZAC	**Souni**	**0.83**	**113**	P	Pb	23 53 53.2	-0.5

IDC 19 00:15:30.1±13.0, 20°63S×178°28W, h610km±103km, mb3.0/4, mb1 3.2/5, mb1mx2.8/47, mbtmp4.0/5, Error ellipse: s-maj=245.7km s-min=46.4km az=141.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**14.30**	**261**	P	P	00 18 33.3	+1.6
	0.7nm,0.3s,baz=80,slow=18,SNR=8.9						
CTA	**Charters Tower**	**33.21**	**265**	P	P	00 21 18.7	0.0
	2.0nm,0.4s,baz=108,slow=16,SNR=3.3						
ASAR	**Alice Springs**	**44.23**	**257**	P	P	00 22 47.5	+0.4
	1.3nm,0.6s,baz=92,slow=7.9,SNR=13						
WRA	**Warramunga Arr**	**44.32**	**262**	P	P	00 22 46.8	-1.0
	0.9nm,0.6s,baz=97,slow=7.6,SNR=19						
ILAR	**Eielson Array**	**88.50**	**13**	P	P	00 27 18.1	-0.2
	0.4nm,0.7s,baz=214,slow=5.7,SNR=5.0						
HFS	**Hagfors**	**139.62**	**351**	PKhKP	PKPpre	00 33 43.1	
	0.4nm,0.3s,baz=72,slow=4.7,SNR=8.0						
AKASG	**Malin Array Be**	**142.99**	**331**	PKP	PKPdf	00 33 52.5	-2.8
	0.7nm,0.5s,baz=47,slow=4.4,SNR=4.4						
BRTR	**Keskin Array B**	**146.72**	**312**	PKPbc	PKPbc	00 34 04.7	-0.4
	0.7nm,1.0s,baz=32,slow=8.5,SNR=3.2						
MMAI	**Mount Meron Ar**	**147.64**	**299**	PKPbc	PKPbc	00 34 08.1	+0.5
	0.4nm,0.4s,baz=76,slow=7.7,SNR=3.0						
GERES	**GERESS Array B**	**150.25**	**344**	PKPbc	PKPbc	00 34 13.1	-0.3
	0.1nm,0.3s,baz=4.3,slow=3.9,SNR=2.7						

*NIED 19 00:21:00, 35°90N×141°00E, h20km, Mw3.8 Best double couple: M0:5.09000×10^14 NP1:φ0=66.00000°, δ54.00000°, λ-26.00000°. NP2:φ0=172.00000°, δ69.

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FNA	**Florina**	**0.25**	**318**	P	**Pb**	**00 24 05.9**	**-0.1**
FNA				S	**Sb**	**00 24 09.9**	**-0.4**
FNA				AML	AML	00 24 11.3	
	comp=N,1158μm,0.2s						
FNA				AML	AML	00 24 11.5	
	comp=E,805μm,0.2s						
FNA	**Florina**	**0.25**	**318**	P	**Pb**	**00 24 06.0**	**0.0**
FNA				S	**Sb**	**00 24 10.2**	**-0.1**
FNA	**Florina**	**0.25**	**318**	P	**Pb**	**00 24 06.0**	**0.0**
FNA				S	**Sb**	**00 24 10.2**	**-0.1**
KZN	**Kozani**	**0.32**	**156**	P	**Pb**	**00 24 06.8**	**-0.1**
KZN				S	**Sb**	**00 24 11.9**	**+0.1**
KZN				AML	AML	00 24 13.5	
	comp=N,499μm,0.5s						
KZN				AML	AML	00 24 14.0	
	comp=E,416μm,0.4s						
KZN	**Kozani**	**0.32**	**156**	P	**Pb**	**00 24 06.9**	**0.0**
KZN				S	**Sb**	**00 24 12.0**	**+0.1**
KZN	**Kozani**	**0.32**	**156**	P	**Pb**	**00 24 06.9**	**0.0**
KZN				S	**Sb**	**00 24 12.0**	**+0.1**
NEST	**Nestorio**	**0.46**	**247**	P	**Pb**	**00 24 09.0**	**-0.2**
NEST				S	**Sb**	**00 24 15.8**	**+0.2**
NEST	**Nestorio**	**0.46**	**247**	P	**Pb**	**00 24 08.9**	**-0.2**
NEST				S	**Sb**	**00 24 15.6**	**0.0**
NEST	**Nestorio**	**0.46**	**247**	P	**Pb**	**00 24 08.9**	**-0.2**
NEST				S	**Sb**	**00 24 15.6**	**0.0**
PENT	**Pentalofos**	**0.53**	**222**	P	**Pb**	**00 24 10.4**	**0.0**
PENT	**Pentalofos**	**0.53**	**222**	P	**Pb**	**00 24 10.2**	**-0.2**
PENT	**Pentalofos**	**0.53**	**222**	P	**Pb**	**00 24 10.2**	**-0.2**
KBN	**Korca**	**0.62**	**273**	*i* PG	**Pb**	**00 24 12.4**	**+0.5**
KBN				*i* SG	**Sn**	**00 24 21.6**	**-0.7**
KBN	**Korca**	**0.62**	**273**	*i* Pg	**Pb**	**00 24 12.4**	**+0.5**
KBN				*i* Sg	**Sn**	**00 24 21.5**	**-0.7**
KPRO	**Kipourio**	**0.67**	**196**	P	**Pb**	**00 24 12.7**	**+0.1**
KPRO				AML	AML	00 24 25.6	
	comp=N,97μm,0.4s						
KPRO				AML	AML	00 24 26.5	
	comp=E,108μm,0.4s						
KPRO	**Kipourio**	**0.67**	**196**	P	**Pb**	**00 24 12.6**	**0.0**
KPRO	**Kipourio**	**0.67**	**196**	P	**Pb**	**00 24 12.6**	**0.0**
GRG	**Griva**	**0.71**	**59**	P	**Pn**	**00 24 14.7**	**+0.5**
GRG	**Griva**	**0.71**	**59**	P	**Pn**	**00 24 14.4**	**+0.2**
GRG	**Griva**	**0.71**	**59**	P	**Pn**	**00 24 14.4**	**+0.2**
LIT	**Litokhoron**	**0.84**	**126**	P	**Pn**	**00 24 16.8**	**+0.8**
LIT				AML	AML	00 24 32.1	
	comp=E,75μm,0.2s						
LIT				AML	AML	00 24 33.3	
	comp=N,73μm,0.2s						
LIT	**Litokhoron**	**0.84**	**126**	P	**Pn**	**00 24 16.5**	**+0.5**
LIT	**Litokhoron**	**0.84**	**126**	P	**Pn**	**00 24 16.5**	**+0.5**
THL	**Klokotos Trika**	**1.08**	**163**	P	**Pb**	**00 24 19.2**	**-0.3**
THL	**Klokotos Trika**	**1.08**	**163**	P	**Pn**	**00 24 19.7**	**+0.5**
THL	**Klokotos Trika**	**1.08**	**163**	P	**Pn**	**00 24 19.7**	**+0.5**
AGG	**Agios Georgios**	**1.67**	**160**	P	**Pb**	**00 24 29.1**	**-0.5**
AGG	**Agios Georgios**	**1.67**	**160**	P	**Pb**	**00 24 29.3**	**-0.4**
AGG	**Agios Georgios**	**1.67**	**160**	P	**Pb**	**00 24 29.3**	**-0.4**

*CSEM **19** 00:24:42.1±0.3, 37.°15N×1.°97E, h10km, ML2.9, Error ellipse: s-maj=6.9km s-min=4.7km az=145.0*
*CRAAG **19** 00:24:43.8, 36.°92N×1.°93E, Ml2.9*
*MDD **19** 00:24:46.0±1.5, 37.°26N×1.°95E, h25km±19km, mb4.0/14, Error ellipse: s-maj=18.4km s-min=5.5km az=142.0, PRXIMO*
*LDG **19** 00:24:46.8±0.3, 37.°23N×1.°96E, h25km, Ml2.9/5, Error ellipse: s-maj=6.5km s-min=2.8km az=145.0*

ISC 19 00:24:38.4±1.1, 37.°12N±0.°04×2.°05E±0.°04, h10km, n88, σ3§08/147, 2C-1D, Western Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABA	**Alger-Bouzarea**	**0.85**	**112**	P	**Pn**	**00 24 59.0**	**+2.6**
ABA	**Alger-Bouzarea**	**0.85**	**112**	P	**Pn**	**00 24 59.0**	**+2.6**
EBNR	**Beni Rached**	**0.93**	**207**	P	**Pn**	**00 24 59.8**	**+2.2**
EBNR	**Beni Rached**	**0.93**	**207**	P	**Pn**	**00 24 59.8**	**+2.2**
EIBI	**Ibiza**	**1.98**	**344**	⇓P	**Pb**	**00 25 15.0**	**+0.4**
	28nm,0.2s,SNR=18						
EIBI				S	**Sn**	**00 25 35.3**	**-1.7**
	5.2nm,0.1s						
EIBI	**Ibiza**	**1.98**	**344**	P	**Pb**	**00 25 15.0**	**+0.4**
	28nm,0.2s,SNR=18						
EIBI				S	**Sn**	**00 25 35.3**	**-1.7**
	5.2nm,0.1s						
EBEN2	**Beniarda presa**	**2.36**	**312**	P	**Pn**	**00 25 19.0**	**+1.8**
	1.1nm,0.1s,SNR=7.9						
EBEN2				S	**Sn**	**00 25 43.9**	**-2.3**
	4.0nm,0.1s,SNR=7.9						
ETOS	**Mallorca**	**2.71**	**12**	⇑P	**Pn**	**00 25 24.6**	**+2.6**
	1.9nm,0.0s,SNR=18						
ETOS				S	**Sn**	**00 25 53.9**	**-1.0**
	6.7nm,0.2s,SNR=7.5						
ETOS	**Mallorca**	**2.71**	**12**	P	**Pn**	**00 25 24.6**	**+2.6**
	1.9nm,0.0s,SNR=18						
ETOS				S	**Sn**	**00 25 53.9**	**-1.0**
	6.7nm,0.2s,SNR=7.5						
EMUR	**La Murta**	**2.72**	**286**	P	**Pb**	**00 25 25.5**	**-1.6**
	1.4nm,0.2s,SNR=7.9						
EMUR				S	**Sn**	**00 25 54.3**	**-0.8**
	1.8nm,0.2s,SNR=7.9						
EMUR	**La Murta**	**2.72**	**286**	P	**Pb**	**00 25 25.5**	**-1.6**
	1.4nm,0.2s,SNR=7.9						
EMUR				S	**Sn**	**00 25 54.3**	**-0.8**
	1.8nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**3.23**	**299**	P	**Pn**	**00 25 32.4**	**+3.2**
	2.3nm,0.2s,SNR=32						
ETOB				S	**Sn**	**00 26 07.1**	**-0.7**
	1.9nm,0.2s						
ETOB	**Tobarra**	**3.23**	**299**	P	**Pn**	**00 25 32.4**	**+3.2**
	2.3nm,0.2s,SNR=32						
ETOB				S	**Sn**	**00 26 07.1**	**-0.7**
	1.9nm,0.2s						
ENIJ	**Nijar**	**3.41**	**269**	P	**Pn**	**00 25 34.4**	**+2.7**
	0.7nm,0.1s,SNR=7.9						
ENIJ				S	**Sn**	**00 26 10.0**	**-2.2**
	2.4nm,0.2s,SNR=7.9						
ENIJ	**Nijar**	**3.41**	**269**	P	**Pn**	**00 25 34.4**	**+2.7**
	0.7nm,0.1s,SNR=7.9						
ENIJ				S	**Sn**	**00 26 10.0**	**-2.2**
	2.4nm,0.2s,SNR=7.9						
SESP	**Santiago Espad**	**3.79**	**287**	P	**Pn**	**00 25 40.6**	**+3.7**
	2.2nm,0.1s,SNR=7.9						
SESP				S	**Sn**	**00 26 20.4**	**-1.2**
	1.7nm,0.1s,SNR=7.9						
SESP	**Santiago Espad**	**3.79**	**287**	P	**Pn**	**00 25 40.6**	**+3.7**
	2.2nm,0.1s,SNR=7.9						
SESP				S	**Sn**	**00 26 20.4**	**-1.2**
	1.7nm,0.1s,SNR=7.9						
EMOS	**Mosqueruela**	**3.79**	**329**	P	**Pn**	**00 25 40.1**	**+3.0**
	3.1nm,0.1s,SNR=50						
EMOS				S	**Sn**	**00 26 20.1**	**-1.7**
	6.0nm,0.3s						
EMOS	**Mosqueruela**	**3.79**	**329**	P	**Pn**	**00 25 40.1**	**+3.0**
	3.1nm,0.1s,SNR=50						
EMOS				S	**Sn**	**00 26 20.1**	**-1.7**
	6.0nm,0.3s						
ERTA	**Horta de San J**	**4.06**	**341**	P	**Pn**	**00 25 43.9**	**+3.3**
	4.5nm,0.1s,SNR=46						
ERTA				S	**Sn**	**00 26 26.7**	**-1.5**
	0.4nm,0.2s						
ERTA	**Horta de San J**	**4.06**	**341**	P	**Pn**	**00 25 43.9**	**+3.3**
	4.5nm,0.1s,SNR=46						
ERTA				S	**Sn**	**00 26 26.7**	**-1.5**
	0.4nm,0.2s						
GORA	**Gorafe**	**4.08**	**277**	P	**Pn**	**00 25 44.8**	**+3.9**
	1.2nm,0.1s,SNR=7.9						
GORA				S	**Sn**	**00 26 27.7**	**-1.0**
	1.0nm,0.1s,SNR=7.9						
GORA	**Gorafe**	**4.08**	**277**	P	**Pn**	**00 25 44.8**	**+3.9**
	1.2nm,0.1s,SNR=7.9						
GORA				S	**Sn**	**00 26 27.7**	**-1.0**
	1.0nm,0.1s,SNR=7.9						
EQES	**Quesada**	**4.13**	**281**	P	**Pn**	**00 25 46.0**	**+4.3**
	0.5nm,0.1s,SNR=17						
EQES				S	**Sn**	**00 26 30.5**	**+0.4**
	0.3nm,0.1s						
EQES	**Quesada**	**4.13**	**281**	P	**Pn**	**00 25 46.0**	**+4.3**
	0.5nm,0.1s,SNR=17						
EQES				S	**Sn**	**00 26 30.5**	**+0.4**
	0.3nm,0.1s						
EPOB	**Poblet**	**4.29**	**350**	P	**Pn**	**00 25 46.7**	**+2.8**
	0.5nm,0.1s,SNR=9.5						
EPOB				S	**Sn**	**00 26 31.3**	**-2.7**
	0.1nm,0.1s						
EPOB	**Poblet**	**4.29**	**350**	P	**Pn**	**00 25 46.7**	**+2.8**
	0.5nm,0.1s,SNR=9.5						
EPOB				S	**Sn**	**00 26 31.3**	**-2.7**
	0.1nm,0.1s						
EQUE	**Quentar**	**4.39**	**273**	P	**Pn**	**00 25 49.2**	**+4.0**
	0.2nm,0.1s,SNR=6.0						
EQUE				S	**Sn**	**00 26 36.0**	**-0.4**
	0.1nm,0.2s						
EQUE	**Quentar**	**4.39**	**273**	P	**Pn**	**00 25 49.2**	**+4.0**
	0.2nm,0.1s,SNR=6.0						
EQUE				S	**Sn**	**00 26 36.0**	**-0.4**
	0.1nm,0.2s						
ELGU	**Los Guajares,**	**4.55**	**269**	P	**Pn**	**00 25 48.7**	**+1.3**
	1.0nm,0.2s,SNR=7.9						
ELGU				S	**Sn**	**00 26 36.1**	**-4.3**
	0.3nm,0.1s,SNR=7.9						
ELGU	**Los Guajares,**	**4.55**	**269**	P	**Pn**	**00 25 48.7**	**+1.3**
	1.0nm,0.2s,SNR=7.9						
ELGU				S	**Sn**	**00 26 36.1**	**-4.3**
	0.3nm,0.1s,SNR=7.9						
CFON	**Fontmartina**	**4.64**	**4**	P	**Pn**	**00 25 50.7**	**+2.0**
	0.8nm,0.1s,SNR=7.9						
CFON				S	**Sn**	**00 26 39.5**	**-3.2**
	0.5nm,0.1s,SNR=7.9						
CFON	**Fontmartina**	**4.64**	**4**	P	**Pn**	**00 25 50.7**	**+2.0**
	0.8nm,0.1s,SNR=7.9						
CFON				S	**Sn**	**00 26 39.5**	**-3.2**
	0.5nm,0.1s,SNR=7.9						
EMIR	**Miracle**	**4.80**	**355**	P	**Pn**	**00 25 54.8**	**+3.9**
	1.7nm,0.1s,SNR=12						
EMIR				S	**Sn**	**00 26 45.2**	**-1.4**
	0.3nm,0.3s						
EMIR	**Miracle**	**4.80**	**355**	P	**Pn**	**00 25 54.8**	**+3.9**
	1.7nm,0.1s,SNR=12						
EMIR				S	**Sn**	**00 26 45.2**	**-1.4**
	0.3nm,0.3s						
CSOR	**Sort**	**5.30**	**353**	⇑P	**Pn**	**00 26 01.8**	**+4.1**
	1.6nm,0.2s,SNR=18						
CSOR				S	**Sn**	**00 26 56.4**	**-2.4**
	0.2nm,0.1s						
CSOR	**Sort**	**5.30**	**353**	P	**Pn**	**00 26 01.8**	**+4.1**
	1.6nm,0.2s,SNR=18						
CSOR				S	**Sn**	**00 26 56.4**	**-2.4**
	0.2nm,0.1s						
CLLI	**Llivia**	**5.35**	**359**	P	**Pn**	**00 26 02.9**	**+4.5**
	0.6nm,0.2s,SNR=6.3						
CLLI				S	**Sn**	**00 26 57.0**	**-3.2**
	0.1nm,0.2s						
CLLI	**Llivia**	**5.35**	**359**	P	**Pn**	**00 26 02.9**	**+4.5**
	0.6nm,0.2s,SNR=6.3						
CLLI				S	**Sn**	**00 26 57.0**	**-3.2**
	0.1nm,0.2s						
EADA	**Adamuz**	**5.37**	**283**	P	**Pn**	**00 26 01.3**	**+2.8**
	0.4nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**00 26 57.6**	**-2.8**
	0.3nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**5.37**	**283**	P	**Pn**	**00 26 01.3**	**+2.8**
	0.4nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**00 26 57.6**	**-2.8**
	0.3nm,0.1s,SNR=7.9						
ESDC	**Sonseca Array**	**5.37**	**300**	P	**Pn**	**00 26 02.4**	**+3.8**
	0.1nm,0.3s,baz=117,slow=13,SNR=4.5						
ESDC				S	**Sn**	**00 26 56.7**	**-3.9**
	0.4nm,0.3s,baz=114,slow=24,SNR=6.1						
ESDC	**Sonseca Array**	**5.37**	**300**	P	**Pn**	**00 26 02.4**	**+3.8**
	0.1nm,0.3s,SNR=4.5						
ESDC				S	**Sn**	**00 26 56.7**	**-3.9**
	0.4nm,0.3s,SNR=6.1						
SJAF	**Saint Jean de**	**5.39**	**7**	P	**Pn**	**00 26 01.2**	**+2.3**
	0.6nm,0.2s,SNR=7.9						
SJAF				S	**Sn**	**00 26 58.4**	**-2.7**
	0.0nm,0.1s,SNR=7.9						
SJAF	**Saint Jean de**	**5.39**	**7**	P	**Pn**	**00 26 01.2**	**+2.3**
	0.6nm,0.2s,SNR=7.9						
SJAF				S	**Sn**	**00 26 58.4**	**-2.7**
	SNR=7.9						
PAB	**San Pablo**	**5.58**	**298**	P	**Pn**	**00 26 03.7**	**+2.1**
	0.4nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**00 27 01.3**	**-4.6**
	0.1nm,0.1s,SNR=7.9						
PAB	**San Pablo**	**5.58**	**298**	P	**Pn**	**00 26 03.7**	**+2.1**
	0.4nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**00 27 01.3**	**-4.6**
	0.1nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**6.01**	**281**	P	**Pn**	**00 26 09.6**	**+2.2**
	1.0nm,0.2s,SNR=5.6						
ECAB				S	**Sn**	**00 27 13.6**	**-2.7**
	0.1nm,0.2s						
ECAB	**El Cabril**	**6.01**	**281**	P	**Pn**	**00 26 09.6**	**+2.2**
	1.0nm,0.2s,SNR=5.6						
ECAB				S	**Sn**	**00 27 13.6**	**-2.7**
	0.1nm,0.2s						
EPF	**Esparros**	**6.05**	**348**	*e*Pn	**Pn**	**00 26 12.1**	**+4.2**
EPF	**Esparros**	**6.05**	**348**	P	**Pn**	**00 26 12.1**	**+4.2**
EPF	**Esparros**	**6.05**	**348**	*e*Pn	**Pn**	**00 26 12.1**	**+4.2**
ETSF	**Etsaut**	**6.11**	**342**	*e*Pn	**Pn**	**00 26 12.3**	**+3.5**
ETSF	**Etsaut**	**6.11**	**342**	P	**Pn**	**00 26 12.3**	**+3.5**
ETSF	**Etsaut**	**6.11**	**342**	*e*Pn	**Pn**	**00 26 12.3**	**+3.5**
MTLF	**Montolieu**	**6.21**	**1**	*e*Pn	**Pn**	**00 26 14.3**	**+4.1**
MTLF				*e*Sn	**Sn**	**00 27 18.3**	**-3.0**
	0.2nm,0.2s						
MTLF	**Montolieu**	**6.21**	**1**	P	**Pn**	**00 26 14.3**	**+4.1**
MTLF				S	**Sn**	**00 27 18.3**	**-3.0**
	0.1nm,0.2s						
MTLF	**Montolieu**	**6.21**	**1**	*e*Pn	**Pn**	**00 26 14.3**	**+4.1**
MTLF				*e*Sn	**Sn**	**00 27 18.3**	**-3.0**
	0.1nm,0.2s						
IELO	**Elcoad**	**6.25**	**337**	P	**Pn**	**00 26 13.9**	**+3.2**
	0.5nm,0.2s,SNR=7.9						
IELO	**Elcoad**	**6.25**	**337**	P	**Pn**	**00 26 13.9**	**+3.2**
	0.5nm,0.2s,SNR=7.9						
ATE	**Arette**	**6.32**	**341**	P	**Pn**	**00 26 15.9**	**+4.2**
	2.0nm,0.2s,SNR=7.9						
ATE	**Arette**	**6.32**	**341**	P	**Pn**	**00 26 15.9**	**+4.2**
	2.0nm,0.2s,SNR=7.9						
SJPF	**Ste Jean**	**6.49**	**338**	*e*Pn	**Pn**	**00 26 18.1**	**+4.1**
SJPF				*e*Sg	**Sg**	**00 28 06.2**	**-0.5**
	5.0nm,0.3s						
SJPF	**Ste Jean**	**6.49**	**338**	Pn	**Pn**	**00 26 18.1**	**+4.1**
SJPF	**Ste Jean**	**6.49**	**338**	*e*Pn	**Pn**	**00 26 18.1**	**+4.1**
SJPF				*e*Sg	**Sg**	**00 28 06.2**	**-0.5**
	2.5nm,0.3s						
EMIN	**Mina Concepcio**	**6.97**	**278**	P	**Pn**	**00 26 23.7**	**+3.1**
	0.7nm,0.2s,SNR=6.8						
EMIN	**Mina Concepcio**	**6.97**	**278**	P	**Pn**	**00 26 23.7**	**+3.1**
	0.7nm,0.2s,SNR=6.8						
LMR	**La Mourre**	**7.08**	**27**	*e*Pn	**Pn**	**00 26 25.7**	**+3.7**
LMR				*e*Sn	**Sn**	**00 27 39.6**	**-2.9**
	0.8nm,0.2s						
LMR	**La Mourre**	**7.08**	**27**	P	**Pn**	**00 26 25.7**	**+3.7**
LMR				S	**Sn**	**00 27 39.6**	**-2.9**
	0.4nm,0.2s						
LMR	**La Mourre**	**7.08**	**27**	*e*Pn	**Pn**	**00 26 25.7**	**+3.7**
LMR				*e*Sn	**Sn**	**00 27 39.6**	**-2.9**
	0.4nm,0.2s						
PBAR	**Barrancos**	**7.29**	**281**	*e*Pn	**Pn**	**00 26 28.2**	**+3.3**
PBAR	**Barrancos**	**7.29**	**281**	P	**Pn**	**00 26 28.2**	**+3.3**
PBAR	**Barrancos**	**7.29**	**281**	P	**Pn**	**00 26 28.2**	**+3.3**
FRF	**La Foret Royal**	**7.33**	**27**	*e*Pn	**Pn**	**00 26 29.1**	**+3.7**
FRF				*e*Sn	**Sn**	**00 27 44.9**	**-3.7**
	1.6nm,0.3s						
FRF	**La Foret Royal**	**7.33**	**27**	P	**Pn**	**00 26 29.1**	**+3.7**
FRF				S	**Sn**	**00 27 44.9**	**-3.7**
	0.8nm,0.3s						
FRF	**La Foret Royal**	**7.33**	**27**	*e*Pn	**Pn**	**00 26 29.1**	**+3.7**
FRF				*e*Sn	**Sn**	**00 27 44.9**	**-3.7**
	0.8nm,0.3s						
PGF	**Pioggiola**	**7.61**	**42**	*e*Sn	**Sn**	**00 27 51.3**	**-4.5**
	1.4nm,0.3s						
PGF	**Pioggiola**	**7.61**	**42**	S	**Sn**	**00 27 51.3**	**-4.5**
	0.7nm,0.3s						
PGF	**Pioggiola**	**7.61**	**42**	*e*Sn	**Sn**	**00 27 51.3**	**-4.5**
	0.7nm,0.3s						
PVAQ	**Vaqueiros**	**7.80**	**275**	*e*Pn	**Pn**	**00 26 34.6**	**+2.7**
PVAQ				*e*Sn	**Sn**	**00 27 56.9**	**-3.3**
PVAQ	**Vaqueiros**	**7.80**	**275**	P	**Pn**	**00 26 34.6**	**+2.7**
PVAQ				S	**Sn**	**00 27 56.9**	**-3.3**
PVAQ	**Vaqueiros**	**7.80**	**275**	P	**Pn**	**00 26 34.6**	**+2.7**
PVAQ				S	**Sn**	**00 27 56.9**	**-3.3**
CAF	**Calviac**	**7.80**	**0**	*e*Pn	**Pn**	**00 26 35.1**	**+3.2**
CAF	**Calviac**	**7.80**	**0**	P	**Pn**	**00 26 35.1**	**+3.2**
CAF	**Calviac**	**7.80**	**0**	*e*Pn	**Pn**	**00 26 35.1**	**+3.2**
SBF	**Sospel**	**7.88**	**30**	*e*Pn	**Pn**	**00 26 36.2**	**+3.1**
SBF	**Sospel**	**7.88**	**30**	P	**Pn**	**00 26 36.2**	**+3.1**
SBF	**Sospel**	**7.88**	**30**	*e*Pn	**Pn**	**00 26 36.2**	**+3.1**

*ISCJB **19** 00:28:52.1±0.3, 14.°67S±0.°06×167.°49E±0.°06, h35km, mb4.7/45, MS3.5/2, Error ellipse: s-maj=9.1km s-min=8.4km az=16.5*
*NEIC **19** 00:28:56.2±3.1, 14.°63S×167.°52E, h56km±29km, mb4.5/24, Error ellipse: s-maj=13.1km s-min=9.9km az=184.0*
*IDC **19** 00:29:01.0±3.3, 13.°42S×166.°57E, h47km±28km, mb4.1/12, mb1 4.2/14, mb1mx4.0/52, mbtmp4.4/14, ML4.7/2, MS4.0/1, Ms1 4.0/1, ms1mx3.0/39, Error ellipse: s-maj=28.1km s-min=17.6km az=89.0*
*BJI **19** 00:29:14.0, 15.°00S×167.°80E, h263km, mb4.6/17, mB4.9/8*

ISC 19 00:28:54.6±0.4, 14.°70S±0.°09×167.°55E±0.°08, h35km, n72, σ1§80/56, mb4.7/46, 1C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.41**	**188**	P	Pn	00 31 04.2	+24
	2.5nm,0.3s,baz=60,slow=2.4,SNR=32						
HNR	**Honiara**	**9.10**	**304**	P	Pn	00 30 48.2	-15
	38nm,0.3s,baz=161,slow=3.9,SNR=9.2						
HNR				S	Sn	00 32 11.9	-33
	79nm,0.3s,baz=161,slow=23,SNR=8.2						
HNR				LR	LR	00 33 48.0	
	comp=Z,178nm,19.2s,baz=165,slow=38						
RAO	**Raoul Island**	**19.75**	**140**	P	**P**	**00 33 22.8**	**+1.2**
	167nm,0.7s						
AFI	**Afiamalu**	**20.05**	**90**	P	**P**	**00 33 25.1**	**+0.1**
	942nm,1.6s						
PMG	**Port Moresby**	**20.62**	**282**	LR	LR	00 40 51.6	
	comp=Z,77nm,18.3s,baz=262,slow=36						
PMG	**Port Moresby**	**20.62**	**282**	P	**P**	**00 33 31.0**	**-0.1**
	3.3nm,0.3s						
CTA	**Charters Tower**	**21.01**	**252**	P	**P**	**00 33 36.3**	**+1.0**
	2.6nm,0.6s,baz=82,slow=15,SNR=4.2						
CTAO	**Charters Tower**	**21.01**	**252**	*e*P	**P**	**00 33 37.7**	**+2.4**
	10nm,0.5s						
PATS	**Pohnpei**	**23.28**	**336**	*e*P	**P**	**00 34 03.4**	**+4.1**
	132nm,1.6s						
KNTN	**Kanton**	**23.63**	**62**	*e*P	**P**	**00 34 03.1**	**+0.3**
	108nm,1.4s						
SNZO	**South Karori**	**27.23**	**168**	P	**P**	**00 34 34.3**	**-1.0**
	119nm,0.9s						
OXZ	**Oxford**	**28.79**	**173**	*e*P	**P**	**00 34 47.9**	**-1.3**
	103nm,1.7s						
STKA	**Stephens Creek**	**29.22**	**230**	P	P	00 35 01.2	+8.0
	2.6nm,0.8s,baz=40,slow=9.3,SNR=7.4						
MQZ	**McQueen's Vall**	**29.24**	**172**	*e*P	**P**	**00 34 51.6**	**-1.5**
	202nm,1.8s						
RAR	**Rarotonga**	**31.71**	**107**	P	**P**	**00 35 15.8**	**+0.6**
	3.4nm,0.3s						
WRAB	**Tennant Creek**	**32.09**	**256**	*e*P	**P**	**00 35 17.5**	**-1.1**
	1.0nm,0.4s						
WRA	**Warramunga Arr**	**32.10**	**256**	P	**P**	**00 35 17.5**	**-1.2**
	2.0nm,0.6s,baz=86,slow=9.1,SNR=24						
WRA				LR	LR	00 47 54.0	
	comp=Z,248nm,19.0s,baz=85,slow=36						
AS01	**Alice Springs**	**32.90**	**249**	*e*P	**P**	**00 35 26.1**	**+0.3**
ASAR	**Alice Springs**	**32.94**	**249**	P	**P**	**00 35 26.6**	**+0.6**
	1.7nm,0.7s,baz=72,slow=9.6,SNR=23						
H11S2	**WAKE ISLAND Hy**	**32.99**	**359**	T	T	01 09 43.8	
	baz=184,slow=76,SNR=6.6						
H11S3	**WAKE ISLAND Hy**	**32.99**	**358**	T	T	01 09 49.2	
	baz=184,slow=76,SNR=5.0						
H11S1	**WAKE ISLAND Hy**	**33.01**	**359**	T	T	01 09 44.0	
	baz=184,slow=76,SNR=5.9						
TAU	**Tasmania Unive**	**33.05**	**208**	P	**P**	**00 35 25.8**	**-0.9**
	2.7nm,0.6s						
MBWA	**Marble Bar**	**45.82**	**255**	*e*P	**P**	**00 37 12.3**	**-1.2**
	25nm,1.3s						
MJAR	**Matsushiro Arr**	**58.01**	**332**	P	P	00 38 37.8	-6.2
	2.2nm,0.7s,baz=168,slow=8.9,SNR=6.1						
MAJO	**Matsushiro**	**58.01**	**332**	P	P	00 38 38.6	-5.4
	2.0nm,0.5s						
ERM	**Erimo**	**60.75**	**339**	*e*P	**P**	**00 39 01.3**	**-1.4**
	36nm,1.3s						
VNDA	**Vanda**	**62.90**	**181**	P	P	00 39 30.4	+14
	1.7nm,0.8s,baz=304,slow=4.0,SNR=7.7						
SBA	**Scott Base**	**63.17**	**180**	P	**P**	**00 39 19.4**	**+0.9**
	8.1nm,1.6s						
YSS	**Yuzh-Sakhalins**	**65.29**	**342**	P	**P**	**00 39 30.9**	**-1.9**
	11nm,0.4s						
NJ2	**Nanjing**	**65.85**	**316**	*e*P	**P**	**00 39 36.4**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.7s						
USRK	**Ussuriysk Ar.**	**66.98**	**333**	P	P	00 39 39.8	-3.9
	6.3nm,1.0s,baz=145,slow=7.0,SNR=7.2						
GYA	**Guiyang**	**71.92**	**305**	*e*P	**P**	**00 40 15.0**	**+0.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
QSPA	**South Pole Qui**	**75.33**	**180**	P	**P**	**00 40 34.3**	**+0.1**
	3.2nm,0.3s						
HHC	**Hu-ho-hao-te**	**75.74**	**320**	*e*P	**P**	**00 40 37.8**	**+0.9**
HHC				pmax	pmax		
	comp=Z,21nm,0.9s						
HHC			

1.4nm,0.7s,baz=45,slow=10,SNR=4.5
BRTR Keskin Array B 132.70 311 PKP **PKPdf 00 48 08.3 +2.1**
0.9nm,0.9s,baz=302,slow=2.3,SNR=4.3
GERES GERESS Array B 139.74 333 PKP **PKPdf 00 48 22.0 +3.1**
0.3nm,0.6s,baz=62,slow=3.2,SNR=4.1
KEST Kesra 151.36 321 PKPbc **PKPbc 00 48 46.2 +1.0**
6.8nm,0.8s,baz=261,slow=2.7,SNR=13
ESDC Sonseca Array 154.03 345 PKPbc **PKPbc 00 48 50.8 -0.2**
0.3nm,0.4s,baz=352,slow=3.5,SNR=5.3
ESDC PKPab **pPKPbc 00 49 03.2 +0.8**
0.9nm,0.6s,baz=9.7,slow=4.4,SNR=7.0
TORD Torodi Ar. Bea 166.19 265 PKP **PKPdf 00 49 00.7 +3.7**
1.0nm,0.9s,baz=249,slow=0.9,SNR=4.3

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*IDC **19** 00:31:22.1±1.8, 0.°74S×12.°98W, h0km, mb4.0/11, mb1 4.1/13, mb1mx3.7/60, mbtmp4.0/13, ML3.4/2, MS3.7/13, Ms1 3.7/13, ms1mx3.4/53, Error ellipse: s-maj=50.1km s-min=20.5km az=74.0*
*ISCJB **19** 00:31:23.2±0.7, 0.°62S±0.°09×12.°75W±0.°10, h10km, mb4.0/12, MS3.7/10, Error ellipse: s-maj=16.3km s-min=10.1km az=39.4*
*NEIC **19** 00:31:24.0±0.5, 0.°72S×12.°90W, h10km, mb4.2/2, Error ellipse: s-maj=14.4km s-min=11.1km az=118.0*
ISC 19 00:31:24.3±0.8, 0.°6S±0.°1×12.°8W±0.°1, h10km, n39, σ2§41/22, mb4.2/12, MS3.6/10, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**7.37**	**193**		T		T	00 40 22.2	
	baz=10.0,slow=74,SNR=239								
H10N1	**ASCENSION HYDR**	**7.39**	**193**		T		T	00 40 25.4	
	baz=10.0,slow=74,SNR=409								
H10N3	**ASCENSION HYDR**	**7.39**	**193**		T		T	00 40 13.6	
	baz=10.0,slow=74,SNR=252								
H10S1	**ASCENSION HYDR**	**8.48**	**193**		T		T	00 41 57.9	
	baz=40,slow=73,SNR=9.1								
H10S3	**ASCENSION HYDR**	**8.50**	**193**		T		T	00 41 58.2	
	baz=40,slow=73,SNR=5.4								
H10S2	**ASCENSION HYDR**	**8.50**	**193**		T		T	00 41 54.9	
	baz=40,slow=73,SNR=5.6								
LIC	**Lamto**	**10.30**	**49**	*e*PKIKP			Pn	00 34 02.8	+11
	90nm,1.5s								
TIC	**Toumodi**	**10.58**	**47**	*e*PKIKP			Pn	00 34 03.0	+6.9
KIC	**Kosan Boka**	**10.60**	**49**	*e*PKIKP			Pn	00 34 02.4	+6.0
	146nm,1.8s								
DBIC	**Dimbokro**	**10.72**	**47**	Pn			**Pn**	**00 34 00.3**	**+2.3**
	0.2nm,0.3s,baz=234,slow=17,SNR=3.8								
DBIC				Sn			**Sn**	**00 35 59.1**	**+1.0**
	0.5nm,0.3s,baz=90,slow=16,SNR=3.2								
DBIC				LR			LR	00 37 31.2	
	comp=Z,658nm,21.6s,baz=207,slow=34								
KOWA	**Kowa**	**17.34**	**30**	P			**Pn**	**00 35 26.8**	**+0.2**
	0.2nm,0.3s,baz=207,slow=11,SNR=12								
KOWA				LR			LR	00 42 04.5	
	comp=Z,380nm,18.3s,baz=218,slow=37								
TORD	**Torodi Ar. Bea**	**19.82**	**46**	P			**Pn**	**00 35 57.8**	**+0.8**
	4.6nm,0.7s,baz=230,slow=10,SNR=58								
TORD				S			**S**	**00 39 29.6**	**-9.2**
	0.5nm,0.6s,baz=233,slow=23,SNR=2.4								
TORD				LR			LR	00 43 06.5	
	comp=Z,406nm,19.7s,baz=230,slow=35								
RCBR	**Riachuelo**	**23.65**	**257**	P			**P**	**00 36 35.2**	**-0.9**
	4.2nm,0.6s								
MDT	**Midelt**	**34.13**	**12**	LR			LR	00 52 03.5	
	comp=Z,117nm,18.5s,baz=187,slow=36								
KEST	**Kesra**	**41.62**	**27**	LR			LR	00 58 10.0	
	comp=Z,210nm,18.1s,baz=316,slow=38								
LSZ	**Lusaka**	**43.00**	**112**	P			**P**	**00 39 25.6**	**+1.1**
	3.4nm,0.7s,baz=295,slow=6.1,SNR=9.6								
LBTB	**Lobatse**	**44.31**	**126**	P			**P**	**00 39 34.9**	**+0.1**
	5.3nm,0.7s,baz=294,slow=8.1,SNR=8.2								
BOSA	**Boshof**	**45.78**	**131**	P			**P**	**00 39 45.0**	**-1.5**
	6.5nm,0.9s,baz=298,slow=7.5,SNR=7.2								
CPUP	**Villa Florida**	**49.89**	**235**	LR			LR	00 58 06.6	
	comp=Z,96nm,21.7s,baz=106,slow=32								
KMBO	**Kilima Mbogo**	**50.03**	**91**	LR			LR	01 00 40.8	
	comp=Z,166nm,18.2s,baz=268,slow=35								
GERES	**GERESS Array B**	**54.31**	**21**	P			**P**	**00 40 52.3**	**+1.3**
	0.6nm,0.7s,baz=205,slow=5.9,SNR=6.2								
GERES				LR			LR	01 05 14.0	
	comp=Z,73nm,19.2s,baz=256,slow=37								
EKA	**Eskdalemuir Ar**	**56.31**	**7**	P			**P**	**00 41 05.9**	**+0.8**
	0.4nm,0.6s,baz=191,slow=7.2,SNR=2.8								
MMAI	**Mount Meron Ar**	**56.33**	**49**	LR			LR	01 05 30.4	
	comp=Z,52nm,19.3s,baz=355,slow=36								
MLR	**Muntele Rosu**	**57.23**	**32**	LR			LR	01 07 41.4	
	comp=Z,30nm,19.9s,baz=223,slow=38								
BRTR	**Keskin Array B**	**58.34**	**41**	P			**P**	**00 41 19.6**	**-0.4**
	0.4nm,0.8s,baz=246,slow=11,SNR=3.3								
ABPO	**Ambohimpanom**	**61.56**	**111**	P			**P**	**00 41 42.6**	**+0.1**
	1.3nm,0.6s								
AKASG	**Malin Array Be**	**62.33**	**29**	LR			LR	01 11 33.1	
	comp=Z,36nm,18.5s,baz=60,slow=39								
HFS	**Hagfors**	**63.97**	**14**	LR			LR	01 11 27.2	
	comp=Z,42nm,18.4s,baz=199,slow=38								
NOA	**NORSAR Array B**	**64.19**	**13**	LR			LR	01 10 30.5	
	comp=Z,17nm,19.0s,baz=50,slow=36								
FINES	**FINESS Array B**	**68.60**	**19**	P			**P**	**00 42 26.4**	**-0.8**
	2.4nm,1.0s,baz=256,slow=9.7,SNR=4.0								
VNA1	**Neumayer--Stat**	**69.99**	**178**	P			PKiKP	00 48 56.9	+8.1
VNA3	**Neumayer Olymp**	**70.55**	**179**	P			**PKiKP**	**00 48 48.2**	**-1.5**
BVAR	**Borovoye Array**	**86.36**	**37**	P			**P**	**00 44 08.3**	**+1.5**
	1.0nm,0.7s,baz=270,slow=4.3,SNR=6.3								
KURBB	**Kurchatov Arra**	**91.30**	**40**	P			**P**	**00 44 31.6**	**+1.4**
	0.3nm,0.8s,baz=224,slow=2.6,SNR=4.3								
KURK	**Kurchatov**	**91.36**	**39**	P			**P**	**00 44 31.6**	**+1.1**
MKAR	**Makanchi Array**	**93.92**	**43**	P			**P**	**00 44 43.4**	**+0.9**
	0.7nm,0.7s,baz=260,slow=2.2,SNR=5.0								
CHTO	**Chiang Mai**	**110.73**	**70**	*e*PKP			**PKiKP**	**00 49 58.8**	**+0.3**
ASAR	**Alice Springs**	**139.64**	**129**	PKhKP			PKPpre	00 50 43.8	
	0.8nm,0.6s,baz=224,slow=2.7,SNR=9.1								
ASAR				PKP			**PKPdf**	**00 50 52.0**	**-1.3**
	1.1nm,1.0s,baz=251,slow=2.3,SNR=4.2								
CTAO	**Charters Tower**	**150.93**	**136**	*e*PKPbc			**PKPbc**	**00 51 17.6**	**-0.8**

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*ISCJB **19** 00:36:16.4±0.3, 16.°40S±0.°07×174.°67W±0.°07, h10km, mb4.7/55, MS4.6/28, Error ellipse: s-maj=12.3km s-min=6.6km az=43.8*
*IDC **19** 00:36:16.6±0.5, 16.°16S×174.°71W, h0km, mb4.3/18, mb1 4.6/18, mb1mx4.4/46, mbtmp4.3/18, MS4.6/30, Ms1 4.6/30, ms1mx4.6/37, Error ellipse: s-maj=20.6km s-min=14.8km az=129.0*
*NEIC **19** 00:36:18.3±0.3, 16.°39S×174.°62W, h10km, mb4.6/13, Error ellipse: s-maj=14.2km s-min=7.5km az=130.0*
*GCMT **19** 00:36:18.3±0.1, 15.°91S×174.°56W, h15km± 1km, MW5.3/123, Moment Tensor Solution. s86,c133; s123,c211; Duration: 1§1 Moment tensor: Scale 10¹⁷ Nm; Mrr=0.11±.02; Mθθ=0.52±.02; Mφφ=0.63±.02; Mrθ=0.00±.03; Mrφ=-0.89±.02; Mθφ=0.20±.03; Best double couple: M=1.07600×10¹⁷ NP1:φs=17.00000°, δ=88.00000°, λ=10.00000°. NP2:φs=286.00000°, δ=80.00000°, λ=178.00000°. Principal axes: T 1.1400, Plg=8.0000°, Azm=242.0000°; N -0.1280, Plg=80.0000°, Azm=25.0000°; P -1.0120, Plg=6.0000°, Azm=151.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*BJI **19** 00:36:20.5, 16.°61S×174.°58W, h29km, mb4.9/11, mB5.3/7, Ms5.2/5, Ms7 4.9/5*
ISC 19 00:36:18.4±0.4, 16.°31S±0.°09×174.°6W±0.°1, h10km, n168, σ1§32/131, mb4.7/55, MS4.7/28, 3C, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.63**	**49**	Pn			Pn	00 37 07.9	-6.9
	17nm,0.3s,baz=328,slow=1.7,SNR=12								
AFI				LR			LR	00 38 22.6	
	comp=Z,12μm,21.9s,baz=197,slow=35								
RAO	**Raoul Island**	**13.23**	**193**	LR			LR	00 43 18.9	
	comp=Z,2μm,19.7s,baz=340,slow=32								
DZM	**Mont Dzumac**	**18.79**	**249**	*e*P			**Pn**	**00 40 40.6**	**+2.0**
	374nm,1.5s								
DZM				*e*LR			LR	00 45 24.5	
	11μm,25.9s								
DZM	**Mont Dzumac**	**18.79**	**249**	P			**Pn**	**00 40 39.6**	**+1.0**
	0.6nm,0.3s,baz=82,slow=14,SNR=30								
DZM				LR			LR	00 46 41.6	
	comp=Z,5μm,20.6s,baz=85,slow=33								
DZM	**Mont Dzumac**	**18.79**	**249**	*e*P			**Pn**	**00 40 39.9**	**+1.3**
	165nm,1.2s								
URZ	**Urewera**	**23.05**	**197**	P			**P**	**00 41 25.4**	**+1.6**
	30nm,1.0s,baz=356,slow=13,SNR=3.0								
URZ				LR			LR	00 49 53.7	
	comp=Z,3μm,18.4s,baz=18,slow=35								
URZ	**Urewera**	**23.05**	**197**	*e*P			**P**	**00 41 22.4**	**-1.4**
	122nm,1.5s								
PAE	**Paea**	**23.97**	**97**	*e*T			T	01 05 54.4	
	12nm,0.4s								
PPT	**Papeete**	**23.97**	**97**	LR			LR	00 48 14.2	
	comp=Z,800nm,21.8s,baz=266,slow=30								
PPT2	**Papeete2**	**23.97**	**97**	*e*LQ			LQ	00 46 15.9	
	8μm,25.8s								
PPT2				*e*LR			LR	00 47 14.5	
	2μm,25.5s								
PPT2	**Papeete2**	**23.97**	**97**	*e*T			T	01 05 55.5	
	15nm,0.3s								
TIAR	**Tiarei**	**24.19**	**97**	*e*T			T	01 06 10.7	
	7.5nm,0.3s								
TVO	**Taravao**	**24.28**	**97**	*e*T			T	01 06 18.1	
	5.1nm,0.3s								
TBI	**Tubuai**	**24.64**	**111**	*e*LQ			LQ	00 46 34.1	
	2μm,28.2s								
TBI				*e*LR			LR	00 47 35.4	
	681nm,24.2s								
TBI	**Tubuai**	**24.64**	**111**	*e*T			T	01 07 08.4	
	57nm,0.3s								
BFZ	**Birch Farm**	**25.55**	**196**	*e*P			**P**	**00 41 42.7**	**-4.6**
	49nm,0.9s								
HNR	**Honiara**	**25.72**	**282**	LR			LR	00 50 16.4	
	comp=Z,2μm,19.2s,baz=118,slow=33								
PMOR	**Pomariorio Ree**	**25.75**	**91**	*e*T			T	01 07 57.9	
	6.0nm,0.2s								
VAH	**Vaihoa**	**25.98**	**91**	*e*T			T	01 08 15.5	
	15nm,0.3s								
OXZ	**Oxford**	**29.23**	**200**	*e*P			**P**	**00 42 18.4**	**-2.0**
	50nm,1.2s								
MQZ	**McQueen's Vall**	**29.37**	**199**	*e*P			**P**	**00 42 19.1**	**-2.5**
	316nm,1.8s								
RPZ	**Rata Peaks**	**29.91**	**201**	LR			LR	00 53 58.8	
	comp=Z,2μm,19.6s,baz=20,slow=35								
LBZ	**Lake Benmore**	**30.80**	**202**	*e*P			**P**	**00 42 32.6**	**-1.7**
	91nm,1.6s								
EIDS	**Eidsvold**	**33.23**	**249**	*e*P			**P**	**00 42 58.1**	**+2.2**
	18nm,1.3s								
TAOE	**Nuku Hiva Isla**	**34.40**	**82**	*e*S			S	00 48 25.5	-9.0
	153nm,24.8s								
TAOE				*e*LQ			LQ	00 50 34.0	
	1μm,22.1s								
TAOE				*e*LR			LR	00 52 01.7	
	3μm,27.5s,baz=255								
TAOE	**Nuku Hiva Isla**	**34.40**	**82**	*e*T			T	01 18 31.0	
	68nm,0.3s								
CTA	**Charters Tower**	**37.31**	**258**	LR			LR	00 56 55.6	
	comp=Z,1μm,20.8s,baz=76,slow=33								
RKT	**Rikitea**	**37.83**	**107**	*e*LQ			LQ	00 52 07.0	
	1μm,27.5s								
RKT				*e*LR			LR	00 53 41.6	
	321nm,27.2s								
RKT	**Rikitea**	**37.83**	**107**	*e*T			T	01 23 29.0	
	16nm,0.3s								
H11S2	**WAKE ISLAND Hy**	**39.17**	**331**	T			T	01 25 02.9	
	baz=149,slow=75,SNR=126								
H11S3	**WAKE ISLAND Hy**	**39.19**	**331**	T			T	01 25 03.8	
	baz=149,slow=75,SNR=46								
H11S1	**WAKE ISLAND Hy**	**39.19**	**331**	T			T	01 25 04.2	
	baz=149,slow=75,SNR=53								
H11N3	**WAKE ISLAND Hy**	**40.15**	**332**	T			T	01 26 15.0	
	baz=151,slow=76,SNR=396								
H11N1	**WAKE ISLAND Hy**	**40.16**	**332**	T			T	01 26 13.5	
	baz=151,slow=76,SNR=568								
H11N2	**WAKE ISLAND Hy**	**40.17**	**332**	T			T	01 26 18.8	
	baz=151,slow=76,SNR=408								
OPA	**Opana**	**41.12**	**24**	*e*P			**P**	**00 44 01.3**	**-1.5**
	216nm,1.2s								
STKA	**Stephens Creek**	**42.58**	**240**	P			**P**	**00 44 12.8**	**-1.9**
	14nm,1.0s,baz=64,slow=7.2,SNR=12								
STKA				LR			LR	00 59 30.2	
	comp=Z,1μm,21.9s,baz=80,slow=33								
STKA	**Stephens Creek**	**42.58**	**240**	*e*P			**P**	**00 44 14.7**	**-0.1**
	6.5nm,1.1s								
JAY	**Jayapura**	**46.04**	**283**	P			**P**	**00 44 41.0**	**-1.7**
	3.0nm,0.6s,baz=227,slow=19,SNR=1.9								
JAY				LR			LR	01 02 13.0	
	comp=Z,475nm,21.6s,baz=210,slow=34								
BBOO	**Buckleboo**	**47.35**	**240**	*e*P			**P**	**00 44 52.0**	**-0.8**
	73nm,1.5s								
WRA	**Warramunga Arr**	**48.51**	**258**	P			**P**	**00 44 59.3**	**-2.6**
	1.8nm,0.9s,baz=94,slow=7.6,SNR=6.3								
WRA				LR			LR	01 03 36.8	
	comp=Z,910nm,20.2s,baz=90,slow=34								
AS01	**Alice Springs**	**48.69**	**253**	*e*P			**P**	**00 45 02.2**	**-1.1**
AS31	**Alice Springs**	**48.73**	**253**	*e*P			**P**	**00 45 02.9**	**-0.7**
	4.5nm,1.0s								
ASAR	**Alice Springs**	**48.73**	**253**	P			**P**	**00 45 01.4**	**-2.3**
	6.2nm,0.7s,baz=84,slow=8.4,SNR=46								
ASAR				LR			LR	01 03 57.6	
	comp=Z,3μm,21.4s,baz=89,slow=34								
FAKI	**Fak Fak**	**53.89**	**278**	*e*P			**P**	**00 45 40.3**	**-2.1**
	43nm,1.3s								
SOEI	**Soe**	**59.73**	**268**	*e*P			**P**	**00 46 22.7**	**-1.4**
	58nm,1.0s								
BATI	**Baumata**	**60.21**	**267**	LR			LR	01 09 57.2	
	comp=Z,445nm,21.6s,baz=104,slow=34								
SBA	**Scott Base**	**62.25**	**184**	*e*P			**P**	**00 46 40.0**	**+0.1**
	52nm,1.5s								
VNDA	**Vanda**	**62.36**	**186**	P			**P**	**00 46 42.1**	**+1.4**
	0.6nm,0.5s,baz=9.5,slow=6.1,SNR=2.9								
VNDA				LR			LR	01 07 59.1	
	comp=Z,186nm,21.8s,baz=32,slow=30								
VNDA	**Vanda**	**62.36**	**186**	*e*P			**P**	**00 46 42.8**	**+2.1**
	12nm,0.8s								
NWAO	**Narrogin (SRO)**	**63.16**	**241**	LR			LR	01 11 59.4	
	comp=Z,718nm,21.9s,baz=334,slow=34								
DAV	**Davao City (W)**	**63.58**	**287**	LR			LR	01 11 16.1	
	comp=Z,295nm,22.0s,baz=156,slow=33								
JHJ	**Hachijo jima 2**	**65.68**	**319**	LR			LR	01 15 41.2	
	comp=Z,162nm,18.2s,baz=100,slow=36								
MJAR	**Matsushiro Arr**	**68.90**	**321**	P			**P**	**00 47 23.8**	**+0.2**
	1.2nm,0.7s,baz=173,slow=4.2,SNR=4.0								
MJAR				LR			LR	01 11 57.2	
	comp=Z,408nm,21.7s,baz=135,slow=31								
CASY	**Casey**	**69.10**	**205**	*e*P			**P**	**00 47 24.6**	**+0.3**
	0.3nm,0.8s								
ASAJ	**Asahikawa**	**71.71**	**329**	LR			LR	01 14 22.4	
	comp=Z,521nm,20.8s,baz=168,slow=32								
PETK	**Petropavlovsk-**	**73.15**	**343**	P			**P**	**00 47 48.8**	**-0.2**
	4.6nm,0.6s,baz=119,slow=9.2,SNR=5.8								
PETK				LR			LR	01 13 38.6	
	comp=Z,335nm,21.9s,baz=150,slow=31								
CMB	**Columbia Colle**	**74.21**	**42**	*e*P			**P**	**00 47 55.9**	**+0.2**
	4.3nm,0.9s								
AFDM	**Forest Hills D**	**74.38**	**41**	*e*P			**P**	**00 47 56.3**	**-0.3**
	9.0nm,1.3s								
NV01	**Mina Array Sit**	**75.78**	**42**	*e*P			**P**	**00 48 04.0**	**-0.9**
NVAR	**Mina Array Bea**	**75.78**	**42**	P			**P**	**00 48 04.5**	**-0.4**
	3.8nm,0.9s,baz=224,slow=10,SNR=7.9								
NV11	**Mina Array Sit**	**75.88**	**42**	*e*P			**P**	**00 48 05.1**	**-0.3**
	0.7nm,1.1s								
KSRS	**Korea Array**	**76.00**	**316**	P			**P**	**00 48 04.0**	**-1.8**
	1.1nm,0.8s,baz=114,slow=4.5,SNR=3.0								
KSAR	**Wonju Array Be**	**76.02**	**316**	P			**P**	**00 48 04.0**	**-2.0**
KS01	**Wonju Array Si**	**76.04**	**316**	*e*P			**P**	**00 48 08.6**	**+2.5**
KVN	**Kaiserville**	**76.26**	**42**	*e*P			**P**	**00 48 07.5**	**-0.1**
	9.4nm,1.3s								
TPNV	**Topopah Spring**	**76.32**	**45**	*e*P			**P**	**00 48 07.5**	**-0.5**
	5.8nm,1.1s								
LEM	**Lembang**	**76.42**	**267**	LR			LR	01 21 36.1	
	comp=Z,420nm,20.5s,baz=164,slow=36								
SHPR	**Sheep Range**	**76.82**	**45**	*e*P			**P**	**00 48 11.3**	**+0.4**
	8.8nm,1.3s								
PINE	**Pine Mountain**	**77.32**	**37**	*e*P			**P**	**00 48 14.5**	**+1.0**
	44nm,1.9s								
USRK	**Ussuriysk Ar.**	**77.42**	**324**	LR			LR	01 15 50.3	
	comp=Z,859nm,21.9s,baz=115,slow=31								
BMN	**Battle Mountai**	**77.60**	**41**	*e*P			**P**	**00 48 14.6**	**-0.5**
	11nm,0.6s								
X16A	**Lo Mia Camp, P**	**78.39**	**49**	*e*P			**P**	**00 48 22.3**	**+2.6**
	3.3nm,0.9s								
CCUT	**Cedar City**	**78.59**	**45**	*e*P			**P**	**00 48 20.8**	**+0.1**
	13nm,1.5s								
U15A	**North Rim**	**78.77**	**47**	*e*P			**P**	**00 48 22.7**	**+0.9**
	25nm,1.8s								
NJ2	**Nanjing**	**79.80**	**308**	*e*P			**P**	**00 48 27.5**	**+0.4**
NJ2				pmax			pmax		
	comp=Z,11nm,0.8s								
DIV	**Divide**	**80.55**	**14**	*e*P			**P**	**00 48 31.9**	**+1.2**
	18nm,1.2s								
BMRM	**Bremner River**	**80.68**	**14**	*e*P			**P**	**00 48 32.4**	**+1.1**
	17nm,1.2s								
HLID	**Hailey**	**81.07**	**40**	*e*P			**P**	**00 48 34.3**	**+0.3**
	7.6nm,1.3s								
MNTX	**Cornudas Mount**	**81.70**	**54**	*e*P			**P**	**00 48 37.2**	**-0.1**
	10nm,1.6s								
DHY	**Denali Highway**	**81.94**	**12**	*e*P			**P**	**00 48 38.8**	**+0.6**
	9.5nm,1.4s								
TX31	**Lajitas Ar. Si**	**82.08**	**56**	*e*P			**P**	**00 48 39.2**	**-0.3**
TXAR	**Lajitas Array**	**82.08**	**56**	P			**P**	**00 48 38.2**	**-1.4**
	1.8nm,1.0s,baz=224,slow=3.5,SNR=9.8								
ANMO	**Albuquerque**	**82.27**	**50**	P			**P**	**00 48 39.3**	**-1.3**
	1.1nm,0.9s,baz=138,slow=2.1,SNR=4.5								
ANMO	**Albuquerque**	**82.27**	**50**	*e*P			**P**	**00 48 40.4**	**-0.2**
	24nm,2.0s								
RIDG	**Independ'e Rid**	**83.06**	**13**	*e*P			**P**	**00 48 44.7**	**+0.9**
	13nm,1.2s								
WRH	**Wood River Hil**	**83.06**	**11**	*e*P			**P**	**00 48 43.8**	**+0.1**
	24nm,1.4s								
FXWY	**Fox Creek**	**83.21**	**41**	*e*P			**P**	**00 48 45.5**	**+0.2**
	6.3nm,1.4s								
CCB	**Clear Creek Bu**	**83.28**	**11**	*e*P			**P**	**00 48 44.6**	**-0.2**
	22nm,1.5s								
MDM	**Murphy Dome**	**83.48**	**11**	*e*P			**P**	**00 48 46.9**	**+1.0**
	20nm,1.4s								
IL1	**Eielson Array**	**83.56**	**12**	*e*P			**P**	**00 48 45.4**	**-0.9**
ILAR	**Eielson Array**	**83.56**	**12**	P			**P**	**00 48 44.1**	**-2.2**
	1.9nm,1.0s,baz=225,slow=4.8,SNR=16								
ILB	**Eielson Array**	**83.56**	**12**	*e*P			**P**	**00 48 47.2**	**+0.9**
PDAR	**Pinedale Array**	**83.72**	**42**	P			**P**	**00 48 46.6**	**-1.3**
	2.1nm,0.9s,baz=214,slow=5.0,SNR=9.9								
PDAR	**Pinedale Array**	**83.72**	**42**	*e*P			**P**	**00 48 46.1**	**-1.8**
DAWY	**Dawson**	**84.59**	**15**	*e*P			**P**	**00 48 52.0**	**+0.3**
	15nm,1.4s								
BILL	**Bilibino**	**85.26**	**353**	*e*P			**P**	**00 48 55.4**	**+0.6**
	29nm,1.7s								
MAW	**Mawson**	**86.56**	**199**	P			**P**	**00 49 01.5**	**0.0**
	2.3nm,0.7s,baz=127,slow=15,SNR=2.2								
MAW				LR			LR	01 26 06.8	
	comp=Z,426nm,18.5s,baz=99,slow=34								
PSI	**Prapat**	**87.39**	**274**	LR			LR	01 30 32.1	
	comp=Z,323nm,18.1s,baz=92,slow=37								
HHC	**Hu-ho-hao-te**	**88.80**	**313**	*e*P			**P**	**00 49 13.6**	**+0.8**
HHC				pmax			pmax		
	comp=Z,250nm,7.3s								
PLCA	**Paso Flores**	**89.76**	**133**	LR			LR	01 20 11.1	
	comp=Z,278nm,21.9s,baz=273,slow=29								
YKA	**Yellowknife Ar**	**91.39**	**24**	P			**P**	**00 49 23.4**	**-0.8**
	2.7nm,1.1s,baz=240,slow=4.4,SNR=9.0								
CMAR	**Chiang Mai Arr**	**91.80**	**289**	P			**P**	**00 49 27.4**	**+0.2**
	1.7nm,0.3s,baz=54,slow=2.3,SNR=3.5								
CMAR				LR			LR	01 26 12.6	
	comp=Z,44nm,21.9s,baz=155,slow=33								
SNAA	**Sanae**	**92.06**	**177**	P			P	00 49 34.8	+7.3
SNAA	**Sanae**	**92.06**	**177**	P			**P**	**00 49 29.2**	**+1.7**
	2.2nm,1.0s,baz=180,slow=20,SNR=2.5								
JTS	**JuntasAbangare**	**92.51**	**80**	LR			LR	01 20 40.3	
	comp=Z,509nm,21.8s,baz=313,slow=29								
LZH	**Lanzhou**	**92.83**	**307**	*e*P			**P**	**00 49 32.1**	**+0.3**
LZH				pP			sP	00 49 42.0	+5.7
LZH				sP			pP	00 49 46.3	+11
LZH				*e*PP			**PP**	**00 53 18.3**	**+4.0**
LZH				pmax			pmax		
	comp=Z,16nm,1.5s								
LZH				pmax			pmax		
	comp=Z,67nm,9.3s								
LZH				LR			LR		
	comp=N,170nm,17.2s								
LZH				LR			LR		
	comp=E,160nm,17.5s								
LZH				LR			LR		
	comp=Z,200nm,19.6s								
SONM	**Songino Array**	**94.75**	**318**	LR			LR	01 26 50.8	
	comp=Z,161nm,21.1s,baz=114,slow=32								
ULM	**Lac du Bonnet**	**95.37**	**39**	LR			LR	01 26 44.6	
	comp=Z,599nm,20.3s,baz=253,slow=32								
BRDH	**Bariadhala**	**99.50**	**291**	LR			LR	01 36 30.3	
	comp=Z,136nm,18.2s,baz=172,slow=36								
KSH	**Kashi**	**115.08**	**306**	PKP			**PKPdf**	**00 55 01.0**	**+0.7**
KSH				PP			PP	00 56 08.3	+8.2
BVAR	**Borovoye Array**	**117.88**	**322**	PKP			**PKPdf**	**00 55 05.7**

mb4.5/14, MS4.2/5, Error ellipse: s-maj=13.3km s-min=12.1km az=162.6
*IDC **19** 00:47:23.0±1.1, 47°.27S×12°.33W, h0km, mb4.1/5, mb1 4.2/5, mb1mx3.9/35, mbtmp4.1/5, MS3.8/3, Ms1 3.7/3, ms1mx3.3/31, Error ellipse: s-maj=49.0km s-min=23.7km az=97.0*
*NEIC **19** 00:47:24.4±0.4, 47°.29S×12°.51W, h10km, mb4.6/9, Error ellipse: s-maj=14.5km s-min=11.1km az=173.0*
ISC 19 00:47:24.6±0.6, 47°.3S±0°.1×12°.6W±0°.1, h10km, n33, σ1°29/28, mb4.4/14, MS4.0/5, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**23.54**	**176**	P	**P**	**00 52 35.7**	**+1.2**
VNA3	**Neumayer Olymp**	**24.09**	**178**	P	P	00 52 32.2	-7.7
SNAA	**Sanae**	**24.90**	**173**	P	**P**	**00 52 47.5**	**+0.2**
SNAA	**Sanae**	**24.90**	**173**	P	**P**	**00 52 46.9**	**-0.3**
3.1nm,0.9s,baz=321,slow=11,SNR=9.0							
SNAA	**Sanae**	**24.90**	**173**	*e*P	**P**	**00 52 47.0**	**-0.3**
4.3nm,1.0s							
BOSA	**Boshof**	**34.73**	**71**	P	**P**	**00 54 13.1**	**-1.8**
5.2nm,1.0s,baz=241,slow=5.5,SNR=5.3							
BOSA				LR	LR	01 05 59.2	
comp=Z,91nm,18.3s,baz=224,slow=32							
BOSA	**Boshof**	**34.73**	**71**	*e*P	**P**	**00 54 13.7**	**-1.2**
12nm,1.4s							
TSUM	**Tsumeb**	**37.26**	**52**	*e*P	**P**	**00 54 37.2**	**+0.5**
7.6nm,0.8s							
LBTB	**Lobatse**	**37.47**	**67**	*e*P	**P**	**00 54 36.9**	**-1.5**
6.2nm,1.3s							
H10S2	**ASCENSION HYDR**	**38.22**	**357**	T	T	01 35 49.8	
baz=178,slow=75,SNR=14							
H10S3	**ASCENSION HYDR**	**38.23**	**357**	T	T	01 35 39.4	
baz=178,slow=75,SNR=18							
H10S1	**ASCENSION HYDR**	**38.24**	**357**	T	T	01 35 40.3	
baz=178,slow=75,SNR=18							
CRZF	**Crozet Islands**	**42.93**	**114**	*e*P	**P**	**00 55 21.9**	**-1.4**
172nm,1.2s							
LSZ	**Lusaka**	**46.40**	**60**	*e*P	**P**	**00 55 51.3**	**-0.1**
12nm,1.5s							
GO02	**Mina Guanaco**	**49.79**	**276**	*e*P	**P**	**00 56 18.7**	**+0.9**
18nm,0.8s							
PB01	**IPOC Station P**	**52.51**	**279**	*e*P	**P**	**00 56 38.4**	**+0.4**
22nm,1.4s							
LPAZ	**La Paz**	**54.97**	**285**	*e*P	**P**	**00 56 55.3**	**-1.4**
5.5nm,1.4s							
VNDA	**Vanda**	**55.44**	**179**	P	**P**	**00 56 59.0**	**+0.5**
1.3nm,1.0s,baz=156,slow=7.8,SNR=3.3							
SAML	**Samuel**	**57.31**	**295**	*e*P	**P**	**00 57 12.5**	**-0.2**
10.0nm,1.2s							
TOA0	**Torodi Ar. Sit**	**61.48**	**16**	*e*P	**P**	**00 57 40.8**	**-0.6**
TORD	**Torodi Ar. Bea**	**61.48**	**16**	P	**P**	**00 57 41.2**	**-0.2**
1.7nm,0.6s,baz=202,slow=8.2,SNR=14							
KOWA	**Kowa**	**61.96**	**9**	LR	LR	01 20 11.1	
comp=Z,79nm,18.1s,baz=192,slow=32							
RUSC	**La Rusia**	**75.00**	**296**	*e*P	**P**	**00 59 05.6**	**-1.3**
4.7nm,1.3s							
ESDC	**Sonseca Array**	**86.90**	**7**	P	**P**	**01 00 10.0**	**+0.8**
0.7nm,0.7s,baz=179,slow=4.6,SNR=5.0							
ES19	**SONSECA Array**	**86.94**	**7**	*e*P	**P**	**01 00 10.2**	**+0.9**
URZ	**Urewera**	**94.41**	**188**	LR	LR	01 41 14.0	
comp=Z,44nm,18.5s,baz=48,slow=34							
KSH	**Kashi**	**116.79**	**60**	PKP	**PKPdf**	**01 06 09.9**	**+1.1**
KSH				PP	**PP**	**01 07 21.8**	**+3.9**
KSH				AMB	AMB		
comp=Z,250nm,4.7s							
WMQ	**Urumqi**	**126.38**	**62**	*e*P	**PKPdf**	**01 06 27.9**	**+0.9**
WMQ				LR	LR		
comp=N,120nm,22.7s							
WMQ				LR	LR		
comp=E,130nm,22.7s							
WMQ				LR	LR		
comp=Z,140nm,20.7s							
CD2	**Chengdu**	**129.34**	**85**	PKP	**PKPdf**	**01 06 31.9**	**-1.2**
LZH	**Lanzhou**	**132.44**	**79**	*e*PKP	**PKPdf**	**01 06 39.5**	**+0.5**
LZH				pPKP	sPKPdf	01 06 43.3	-0.3
LZH				sPKP		01 06 44.6	
LZH				LR	LR		
comp=N,86nm,17.9s							
LZH				LR	LR		
comp=E,92nm,18.1s							
LZH				LR	LR		
comp=Z,140nm,20.0s							
IL1	**Eielson Array**	**149.94**	**322**	*e*PKPbc	**PKPbc**	**01 07 13.0**	**-0.8**
ILAR	**Eielson Array**	**149.94**	**322**	PKPbc	**PKPbc**	**01 07 12.9**	**-0.9**
comp=Z,0.6nm,0.6s,baz=64,slow=0.3,SNR=9.5							
BPAW	**Bear Paw Mtn.**	**151.84**	**322**	*e*PKPbc	**PKPbc**	**01 07 20.3**	**+2.0**

IDC 19 00:49:06.1±3.6, 5°.33S×152°.71E, h0km, mb3.3/2, mb1 3.6/2, mb1mx3.3/48, mbtmp3.3/2, Error ellipse: s-maj=166.1km s-min=46.0km az=122.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.03**	**229**	P	P	00 54 12.2	-0.8
0.4nm,0.5s,baz=55,slow=10,SNR=4.0							
ASAR	**Alice Springs**	**25.70**	**223**	P	P	00 54 38.8	+0.6
0.4nm,0.6s,baz=56,slow=9.1,SNR=3.6							
TORD	**Torodi Ar. Bea**	**150.38**	**287**	PKPbc	PKPbc	01 09 00.3	-0.3
0.7nm,0.8s,baz=97,slow=2.3,SNR=9.3							

IDC 19 00:55:26.0±4.2, 3°.54S×154°.84E, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.4/46, mbtmp3.7/2, Error ellipse: s-maj=206.1km s-min=49.4km az=121.0, North of Solomon Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.80**	**229**	P	P	01 00 59.5	+0.5
1.1nm,0.4s,baz=54,slow=9.5,SNR=10							
ASAR	**Alice Springs**	**28.45**	**223**	P	P	01 01 22.2	-0.6
0.5nm,0.9s,baz=57,slow=9.1,SNR=4.5							
TORD	**Torodi Ar. Bea**	**151.79**	**291**	PKPbc	PKPbc	01 15 23.6	-0.2
0.3nm,0.6s,baz=68,slow=1.8,SNR=3.9							

*ISCJB **19** 01:09:17.9±0.6, 37°.74N±0°.03×29°.25E±0°.04, h1km±6km, Error ellipse: s-maj=4.9km s-min=4.9km az=140.8*
*DDA **19** 01:09:17.8, 37°.70N×29°.25E, h8km, Ml2.7*
*CSEM **19** 01:09:18.1±0.1, 37°.73N×29°.25E, h2km, ML2.6, Error ellipse: s-maj=3.0km s-min=2.6km az=62.0*
*ISK **19** 01:09:18.4, 37°.75N×29°.20E, h6km, ML2.6/11*
ISC 19 01:09:18.1±0.9, 37°.75N±0°.02×29°.23E±0°.03, h9km±7km, n44, σ0°37/53, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.16**	**273**	PG	**Pg**	**01 09 21.4**	**-0.1**
DENT				SG	**Sg**	**01 09 24.4**	**+0.5**
DENT	**Denizli**	**0.16**	**273**	*e*Pg	**Pg**	**01 09 21.4**	**-0.1**
DENT				*e*Sg	**Sg**	**01 09 24.4**	**+0.5**
DNZL	**Cakiroluk**	**0.16**	**249**	*i* P	**Pg**	**01 09 21.6**	**0.0**
DNZL				*i* S	**Sg**	**01 09 24.0**	**-0.1**
DNZL	**Cakiroluk**	**0.16**	**249**	P	**Pg**	**01 09 21.6**	**0.0**
DNZL				S	**Sg**	**01 09 24.0**	**-0.1**
TAVA	**DENIZLI_Tavas**	**0.38**	**222**	*i* P	**Pg**	**01 09 25.2**	**-0.4**
TAVA				*i* S	**Sg**	**01 09 30.6**	**0.0**
TAVA	**DENIZLI_Tavas**	**0.38**	**222**	P	**Pg**	**01 09 25.2**	**-0.4**
TAVA				S	**Sg**	**01 09 30.6**	**0.0**
GOLH	**Golhisar**	**0.57**	**153**	*i* P	**Pg**	**01 09 28.4**	**-0.8**
GOLH	**Golhisar**	**0.57**	**153**	P	**Pg**	**01 09 28.4**	**-0.8**
BRDR	**BURDUR-Merkez**	**0.66**	**94**	*i* P	**Pg**	**01 09 30.2**	**-0.7**
BRDR	**BURDUR-Merkez**	**0.66**	**94**	P	**Pg**	**01 09 30.2**	**-0.7**
KZIL	**AFYON_Kizioren**	**0.88**	**54**	*i* P	**Pg**	**01 09 34.9**	**-0.2**
KZIL	**AFYON_Kizioren**	**0.88**	**54**	P	**Pg**	**01 09 34.9**	**-0.2**
KULA	**Kula-Manisa**	**0.89**	**330**	PG	**Pn**	**01 09 36.5**	**-0.3**
KULA				SG	**Sb**	**01 09 48.2**	**+0.5**
KULA	**Kula-Manisa**	**0.89**	**330**	*e*Pg	**Pn**	**01 09 36.5**	**-0.3**
KULA				*e*Sg	**Sb**	**01 09 48.2**	**+0.5**
MANT	**Manisa**	**0.91**	**325**	*i* P	**Pb**	**01 09 36.4**	**+0.2**
MANT	**Manisa**	**0.91**	**325**	P	**Pb**	**01 09 36.4**	**+0.2**
TURN	**Turunc**	**1.01**	**210**	PN	Pn	01 09 42.6	+4.3
DALY	**Dalyan (Mu¨la**	**1.04**	**207**	PG	**Pn**	**01 09 38.8**	**+0.1**
DALY	**Dalyan (Mu¨la**	**1.04**	**207**	*e*Pg	**Pn**	**01 09 38.8**	**+0.1**
AYDN	**Tasoluk**	**1.07**	**266**	*i* P	**Pg**	**01 09 38.7**	**-0.1**
AYDN				*i* S	**Sg**	**01 09 52.7**	**-0.1**
AYDN	**Tasoluk**	**1.07**	**266**	P	**Pg**	**01 09 38.7**	**-0.1**
AYDN				S	**Sg**	**01 09 52.7**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	**1.08**	**281**	PG	**Pn**	**01 09 39.1**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**1.08**	**281**	*e*Pg	**Pn**	**01 09 39.1**	**-0.4**
FETY	**Fethiye**	**1.12**	**186**	PN	**Pn**	**01 09 40.0**	**+0.1**
FETY	**Fethiye**	**1.12**	**186**	P	**Pn**	**01 09 39.8**	**-0.1**
FETY	**Fethiye**	**1.12**	**186**	*e*Pn	**Pn**	**01 09 40.0**	**+0.1**
ELL	**Elmali**	**1.13**	**151**	PN	**Pn**	**01 09 40.6**	**+0.4**
ELL	**Elmali**	**1.13**	**151**	*e*Pn	**Pn**	**01 09 40.6**	**+0.4**
KORT	**Korkueli**	**1.16**	**130**	PN	**Pg**	**01 09 41.2**	**+0.8**
KORT	**Korkueli**	**1.16**	**130**	*e*Pn	**Pg**	**01 09 41.2**	**+0.8**
MLSB	**Milas**	**1.24**	**249**	PN	**Pg**	**01 09 41.6**	**-0.3**
MLSB	**Milas**	**1.24**	**249**	*e*Pn	**Pg**	**01 09 41.6**	**-0.3**
SIMA	**Simav-Kutahya**	**1.35**	**352**	PN	**Pg**	**01 09 44.0**	**0.0**
SIMA	**Simav-Kutahya**	**1.35**	**352**	*e*Pn	**Pg**	**01 09 44.0**	**0.0**
DEMI	**Demirci**	**1.35**	**343**	*i* P	**Pg**	**01 09 44.2**	**+0.1**
DEMI	**Demirci**	**1.35**	**343**	P	**Pg**	**01 09 44.2**	**+0.1**
AKAS	**Kas**	**1.54**	**169**	PN	**Pg**	**01 09 47.8**	**+0.1**
AKAS	**Kas**	**1.54**	**169**	*e*Pn	**Pg**	**01 09 47.8**	**+0.1**
DAT	**Datca**	**1.67**	**233**	PN	**Pb**	**01 09 48.5**	**-0.5**
DAT	**Datca**	**1.67**	**233**	*e*Pn	**Pb**	**01 09 48.5**	**-0.5**
TVSB	**Tavsanli**	**1.71**	**6**	PN	**Pb**	**01 09 49.3**	**-0.4**
TVSB	**Tavsanli**	**1.71**	**6**	*e*Pn	**Pb**	**01 09 49.3**	**-0.4**
ARG	**Arkhangelos**	**1.77**	**210**	PN	**Pb**	**01 09 50.6**	**0.0**
ARG	**Arkhangelos**	**1.77**	**210**	*e*Pn	**Pb**	**01 09 50.6**	**0.0**

*ISCJB **19** 01:19:39.3±0.8, 51°.40N±0°.04×16°.16E±0°.04, h0km, Error ellipse: s-maj=5.9km s-min=2.9km az=24.3*
*CSEM **19** 01:19:41.2±0.4, 51°.37N×16°.14E, h2km, ML2.8/11, Error ellipse: s-maj=6.0km s-min=3.6km az=18.0*
*PRU **19** 01:19:41.6, 51°.41N×16°.15E, h0km*
*VIE **19** 01:19:44.0±0.4, 51°.15N×16°.14E, h0km, mb2.0/2, ml2.3/6, Error ellipse: s-maj=4.0km s-min=2.0km az=29.0 61 km W of Wroclaw Suspected Mining induced.*
ISC 19 01:19:42.0±1.3, 51°.34N±0°.06×16°.13E±0°.03, h0km, n41, σ0°74/73, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.51**	**168**	*e*Pg	**Pg**	**01 19 52.4**	**+0.7**
KSP				*e*Sg	**Sb**	**01 20 00.6**	**-1.1**
UPC	**Upice**	**0.83**	**185**	*e*PG	**Pg**	**01 19 58.6**	**+0.6**
UPC				*e*SG	**Sb**	**01 20 11.1**	**-0.1**
UPC	**Upice**	**0.83**	**185**	Pg	**Pg**	**01 19 58.6**	**+0.6**
UPC				Sg	**Sb**	**01 20 11.1**	**-0.1**
DPC	**Dobruska-Polom**	**1.00**	**173**	*e*PG	**Pg**	**01 20 01.4**	**+0.3**
DPC				*e*SG	**Sb**	**01 20 15.6**	**-0.3**
comp=Z,14nm,0.4s							
DPC	**Dobruska-Polom**	**1.00**	**173**	Pg	**Pg**	**01 20 01.4**	**+0.3**
DPC				Sg	**Sb**	**01 20 15.6**	**-0.3**
14nm,0.4s							
PVCC	**Panska Ves**	**1.28**	**231**	*e*PG	**Pn**	**01 20 06.9**	**-0.2**
PVCC				*e*SG	**Sn**	**01 20 24.8**	**-0.1**
comp=Z,66nm,0.4s							
PVCC	**Panska Ves**	**1.28**	**231**	Pg	**Pn**	**01 20 06.9**	**-0.2**
PVCC				Sg	**Sn**	**01 20 24.8**	**-0.1**
66nm,0.4s							
KRLC	**Kraliky**	**1.33**	**162**	*e*PG	**Pg**	**01 20 07.3**	**-0.2**
KRLC				*e*SG	**Sb**	**01 20 25.8**	**+0.3**
comp=Z,4.4nm,0.3s							
KRLC	**Kraliky**	**1.33**	**162**	Pg	**Pg**	**01 20 07.3**	**-0.2**
KRLC				Sg	**Sb**	**01 20 25.8**	**+0.3**
4.4nm,0.3s							
BRG	**Berggiesshubel**	**1.45**	**252**	PG	**Pn**	**01 20 09.2**	**-0.4**
BRG				SG	**Sn**	**01 20 29.5**	**+0.2**
26nm,0.6s							
GOPC	**GO Pecny, Ondr**	**1.66**	**211**	*e*PG	**Pb**	**01 20 13.1**	**-0.4**
GOPC				*e*SG	**Sg**	**01 20 35.8**	**+0.4**
comp=Z,6.7nm,0.3s							
GOPC	**GO Pecny, Ondr**	**1.66**	**211**	Pg	**Pb**	**01 20 13.1**	**-0.4**
GOPC				Sg	**Sg**	**01 20 35.8**	**+0.4**
6.7nm,0.3s							
PRU	**Pruhonice**	**1.69**	**217**	*e*PG	**Pb**	**01 20 13.6**	**-0.3**
PRU				*e*SG	**Sg**	**01 20 37.1**	**+1.0**
comp=Z,24nm,0.4s							
PRU	**Pruhonice**	**1.69**	**217**	Pg	**Pb**	**01 20 13.6**	**-0.3**
PRU				Sg	**Sg**	**01 20 37.1**	**+1.0**
24nm,0.4s							
MORC	**Moravsky Berou**	**1.81**	**149**	*e*Pn	**Pn**	**01 20 13.5**	**-0.9**
MORC				*e*Sg	**Sg**	**01 20 40.6**	**+0.6**
MORC	**Moravsky Berou**	**1.81**	**149**	*e*PN	**Pn**	**01 20 13.5**	**-0.9**
MORC				*e*SG	**Sg**	**01 20 40.6**	**+0.6**
CLL	**Collm**	**1.96**	**270**	*e*Pg	**Pn**	**01 20 17.0**	**+0.5**
CLL				*e*Sg	**Sg**	**01 20 44.0**	**-1.0**
comp=Z,10.0nm,0.4s							
OKC	**Ostrava-Krasne**	**1.98**	**139**	*e*SG	**Sb**	**01 20 44.3**	**+0.2**
OKC	**Ostrava-Krasne**	**1.98**	**139**	Sg	**Sb**	**01 20 44.3**	**+0.2**
VRAC	**Vranov**	**2.05**	**171**	*e*Sg	**Sg**	**01 20 48.3**	**+0.3**
VRAC	**Vranov**	**2.05**	**171**	*e*SG	**Sg**	**01 20 48.3**	**+0.3**
KRUC	**Moravsky**	**2.29**	**176**	*e*PN	**Pn**	**01 20 22.3**	**+1.3**
KRUC				*e*SG	**Sg**	**01 20 57.7**	**+2.3**
NKC	**Novy Kostel**	**2.58**	**246**	*e*PN	**Pn**	**01 20 25.1**	**0.0**
NKC				*e*PG	**Pg**	**01 20 31.2**	**-0.3**
NKC				*e*SG	**Sg**	**01 21 06.0**	**+1.0**
comp=Z,18nm,0.3s							
NKC	**Novy Kostel**	**2.58**	**246**	Pn	**Pn**	**01 20 25.1**	**0.0**
JAVC	**Velka Javorina**	**2.67**	**158**	*e*SG	**Sg**	**01 21 08.6**	**+0.8**
KHC	**Kasperske Hory**	**2.75**	**218**	*e*PN	**Pn**	**01 20 26.4**	**-1.0**
KHC				*e*PG	**Pb**	**01 20 33.0**	**+1.0**
KHC				*e*SG	**Sg**	**01 21 11.2**	**+0.9**
comp=Z,4.3nm,0.3s							
KHC	**Kasperske Hory**	**2.75**	**218**	Pn	**Pn**	**01 20 26.4**	**-1.0**
MODS	**Modra-Piesok**	**3.06**	**165**	*e*SG	**Sg**	**01 21 18.5**	**-1.8**
MODS				*e*LG	Lg	01 21 31.7	
MODS	**Modra-Piesok**	**3.06**	**165**	*e*Sg	**Sg**	**01 21 18.5**	**-1.8**
LANS	**Liptovska Anna**	**3.06**	**134**	*e*PG	**Pg**	**01 20 41.0**	**+0.3**
LANS				*e*SG	**Sg**	**01 21 20.2**	**-0.2**
LANS	**Liptovska Anna**	**3.06**	**134**	*e*Pg	**Pg**	**01 20 41.0**	**+0.3**
LANS				*e*Sg	**Sg**	**01 21 20.2**	**-0.2**
VYHS	**Vyhne**	**3.34**	**147**	*e*SG	**Sg**	**01 21 30.6**	**+1.3**
VYHS	**Vyhne**	**3.34**	**147**	*e*Sg	**Sg**	**01 21 30.6**	**+1.3**
CONA	**Conrad Observa**	**3.42**	**183**	*i* Pn	**Pn**	**01 20 36.3**	**-0.3**
comp=Z,0.2nm,0.1s							
CONA				Sg	**Sg**	**01 21 30.6**	**-1.2**
comp=Z,4.0nm,0.3s							
CONA	**Conrad Observa**	**3.42**	**183**	Pn	**Pn**	**01 20 36.3**	**-0.3**
comp=Z,0.2nm,0.1s							
CONA				Sg	**Sg**	**01 21 30.6**	**-1.2**
comp=Z,4.0nm,0.3s							
MOA	**Molln**	**3.70**	**200**	*i* Pn	**Pn**	**01 20 40.4**	**0.0**
comp=Z,0.4nm,0.3s							
MOA				Sg	**Sg**	**01 21 40.7**	**0.0**
comp=Z,0.7nm,0.3s							
MOA	**Molln**	**3.70**	**200**	Pn	**Pn**	**01 20 40.4**	**0.0**
comp=Z,0.4nm,0.3s							
MOA				Sg	**Sg**	**01 21 40.7**	**0.0**
comp=Z,0.7nm,0.3s							
ARSA	**Arzberg**	**4.11**	**186**	*e*Pn	**Pn**	**01 20 45.8**	**-0.3**
comp=Z,1.0nm,0.3s							
ARSA				Sg	**Sg**	**01 21 53.3**	**-0.7**
comp=Z,1.0nm,0.5s							
ARSA	**Arzberg**	**4.11**	**186**	Pn	**Pn**	**01 20 45.8**	**-0.3**
comp=Z,1.0nm,0.3s							
ARSA				Sg	**Sg**	**01 21 53.3**	**-0.7**
comp=Z,1.0nm,0.5s							
KBA	**Koelnbreinsper**	**4.64**	**204**	*e*Pn	**Pn**	**01 20 52.6**	**-0.9**
comp=Z,0.8nm,0.3s							
KBA				Sg	**Sg**	**01 22 11.1**	**+0.2**
comp=Z,0.9nm,0.3s							
KBA	**Koelnbreinsper**	**4.64**	**204**	Pn	**Pn**	**01 20 52.6**	**-0.9**
comp=Z,0.8nm,0.3s							
KBA				Sg	**Sg**	**01 22 11.1**	**+0.2**
comp=Z,0.9nm,0.3s							

IDC 19 01:20:09.6±1.7, 1°.14N×126°.34E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.5/53, mbtmp3.8/4, Error ellipse: s-maj=176.6km s-min=21.0km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.37**	**160**	P	P	01 25 08.2	-1.4
0.6nm,0.4s,baz=338,slow=11,SNR=9.1							
ASAR	**Alice Springs**	**25.73**	**164**	P	P	01 25 43.1	+1.2
0.4nm,0.4s,baz=346,slow=12,SNR=6.6							
MKAR	**Makanchi Array**	**59.46**	**326**	P	P	01 30 14.8	+0.4
0.9nm,0.5s,baz=120,slow=7.9,SNR=14							
KURBB	**Kurchatov Arra**	**63.71**	**328**	P	P	01 30 42.4	-0.6
1.8nm,0.6s,baz=126,slow=6.1,SNR=17							

*ISCJB **19** 01:28:36.3±0.3, 37°.16N±0°.02×3°.88W±0°.01, h5km±2km, Error ellipse: s-maj=3.1km s-min=1.9km az=179.4*
*CSEM **19** 01:28:36.9±0.1, 37°.02N×3°.84W, ML3.2/14, Error ellipse: s-maj=2.4km s-min=1.6km az=171.0*
*MDD **19** 01:28:37.5±0.2, 37°.01N×3°.84W, h0km, mbLg3.1/42, Error ellipse: s-maj=2.3km s-min=1.3km az=25.0, PRXIMO*
MDD EMS: III INTENSIDAD MAXIMA.
*SFS **19** 01:28:37.0, 37°.00N×3°.84W, h0km, ML3.0*
*IGIL **19** 01:28:37.5, 37°.00N×3°.85W, h1km*
*INMG **19** 01:28:37.9±1.8, 36°.89N×3°.73W, h23km±3km, ML2.9, Error ellipse: s-maj=4.2km s-min=2.7km az=159.0*
*CNRM **19** 01:28:38.9, 36°.70N×4°.13W, h15km, ML2.7*
*LDG **19** 01:28:38.2±0.1, 36°.95N×3°.84W, h2km, Ml3.6/4, Error ellipse: s-maj=3.0km s-min=2.0km az=163.0*
ISC 19 01:28:36.9±0.9, 37°.02N±0°.02×3°.82W±0°.02, h14km±7km, n177, σ1°47/319, 8C-4D, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELGU	**Los Guajares,**	**0.22**	**135**	⇑Pg	**Pg**	**01 28 41.7**	**-0.1**
282nm,0.2s,SNR=18							
ELGU				Lg	Lg	01 28 45.5	
18μm,0.2s,SNR=7.9							
ELGU	**Los Guajares,**	**0.22**	**135**	Pg	**Pg**	**01 28 41.7**	**-0.1**
282nm,0.2s,SNR=18							
ELGU				Lg	Lg	01 28 45.5	
18μm,0.2s,SNR=7.9							
EGOR	**Sierra Gorda,**	**0.24**	**291**	⇑Pg	**Pg**	**01 28 41.9**	**-0.3**
61nm,0.1s,SNR=18							
EGOR				Lg	Lg	01 28 45.9	
329nm,0.1s,SNR=7.9							
EGOR	**Sierra Gorda,**	**0.24**	**291**	Pg	**Pg**	**01 28 41.9**	**-0.3**
61nm,0.1s,SNR=18							
EGOR				Lg	Lg	01 28 45.9	
329nm,0.1s,SNR=7.9							
EQUE	**Quentar**	**0.36**	**59**	⇓Pg	**Pg**	**01 28 43.8**	**-0.3**
230nm,0.2s,SNR=18							
EQUE				Lg	Lg	01 28 49.2	
3μm,0.2s,SNR=5.0							
EQUE	**Quentar**	**0.36**	**59**	Pg	**Pg**	**01 28 43.8**	**-0.3**
230nm,0.2s,SNR=18							
EQUE				Lg	Lg	01 28 49.2	
3μm,0.2s,SNR=5.0							
EMAL	**Malaga-Limoner**	**0.55**	**242**	*e*P	**Pg**	**01 28 47.0**	**-0.7**
EMAL				*e*S	**Sg**	**01 28 54.6**	**-0.4**
GORA	**Gorafe**	**0.77**	**54**	⇓Pg	**Pg**	**01 28 51.4**	**-0.5**
91nm,0.5s,SNR=18							
GORA				Lg	Lg	01 29 03.1	
806nm,0.4s,SNR=7.9							
GORA	**Gorafe**	**0.77**	**54**	Pg	**Pg**	**01 28 51.4**	**-0.5**
91nm,0.5s,SNR=18							
GORA				Lg	Lg	01 29 03.1	
806nm,0.4s,SNR=7.9							
EMIJ	**Mijas**	**0.89**	**239**	Pg	**Pg**	**01 28 52.3**	**-1.8**
6.6nm,0.2s,SNR=147							
EMIJ				Lg	Lg	01 29 04.3	
302nm,0.5s,SNR=18							
EMIJ	**Mijas**	**0.89**	**239**	Pg	**Pg**	**01 28 52.3**	**-1.8**
6.6nm,0.2s,SNR=147							
EMIJ				Lg	Lg	01 29 04.3	
302nm,0.5s,SNR=18							
EQES	**Quesada**	**0.98**	**37**	⇑Pg	**Pg**	**01 28 56.1**	**+0.2**
18nm,0.3s,SNR=18							
EQES				Lg	Lg	01 29 09.8	
465nm,0.4s,SNR=5.0							
EQES	**Quesada**	**0.98**	**37**	Pg	**Pg**	**01 28 56.1**	**+0.2**
18nm,0.3s,SNR=18							
EQES				Lg	Lg	01 29 09.8	
465nm,0.4s,SNR=5.0							
EALB	**Alboran**	**1.25**	**149**	Pg	**Pn**	**01 28 59.6**	**-0.4**
12nm,0.1s,SNR=7.9							
EALB				Lg	Lg	01 29 15.6	
163nm,0.6s,SNR=7.9							
EALB	**Alboran**	**1.25**	**149**	Pg	**Pn**	**01 28 59.6**	**-0.4**
12nm,0.1s,SNR=7.9							
EALB				Lg	Lg	01 29 15.6	
163nm,0.6s,SNR=7.9							
LIJA	**Lijar**	**1.27**	**265**	*e*P	**Pg**	**01 29 03.5**	**+2.1**
EADA	**Adamuz**	**1.29**	**333**	⇑Pg	**Pb**	**01 29 01.3**	**+0.3**
5.3nm,0.1s,SNR=18							
EADA				Lg	Lg	01 29 18.5	
153nm,0.2s,SNR=4.6							
EADA	**Adamuz**	**1.29**	**333**	Pg	**Pb**	**01 29 01.3**	**+0.3**
5.3nm,0.1s,SNR=18							
EADA				Lg	Lg	01 29 18.5	
153nm,0.2s,SNR=4.6							
ENIJ	**Nijar**	**1.29**	**92**	⇑Pg	**Pn**	**01 29 01.2**	**+0.6**
24nm,0.3s,SNR=18							
ENIJ				Lg	Lg	01 29 20.0	
406nm,0.3s,SNR=7.9							
ENIJ	**Nijar**	**1.29**	**92**	Pg	**Pn**	**01 29 01.2**	**+0.6**
24nm,0.3s,SNR=18							
ENIJ				Lg	Lg	01 29 20.0	
406nm,0.3s,SNR=7.9							
HORN	**Hornachuelos**	**1.41**	**306**	P	**Pg**	**01 29 04.5**	**+0.6**
HORN				S	**Sg**	**01 29 23.6**	**+1.3**
**E

56nm,0.4s,SNR=7.9
PAB San Pablo 2.55 351 Pn **Pn 01 29 18.8 +0.8**
3.1nm,0.3s,SNR=7.9
PAB San Pablo 2.55 351 Pg **Pg 01 29 25.0 -0.8**
3.7nm,0.2s,SNR=7.9
PAB Sn **Sn 01 29 50.4 +1.5**
4.2nm,0.2s,SNR=7.9
PAB Lg Lg 01 29 58.7
56nm,0.4s,SNR=7.9
ESDC Sonseca Array 2.65 358 Pn **Pn 01 29 20.5 +1.2**
0.4nm,0.1s,baz=178,slow=12,SNR=32
ESDC Pg **Pg 01 29 26.5 -1.2**
1.9nm,0.1s,baz=177,slow=16,SNR=7.9
ESDC Sn **Sn 01 29 53.8 +2.5**
7.9nm,0.3s,baz=173,slow=16,SNR=7.9
ESDC Lg Lg 01 30 01.8
21nm,0.3s,baz=178,slow=28,SNR=7.9
ESDC Sonseca Array 2.65 358 Pn **Pn 01 29 20.5 +1.2**
0.4nm,0.1s,SNR=32
ESDC Sonseca Array 2.65 358 Pg **Pg 01 29 26.5 -1.2**
1.9nm,0.1s,SNR=7.9
ESDC Sn **Sn 01 29 53.8 +2.5**
7.9nm,0.3s,SNR=7.9
ESDC Lg Lg 01 30 01.8
21nm,0.3s,SNR=7.9
RSA Sarsar 2.69 218 P **Pn 01 29 15.8 -4.0**
PBAR Barrancos 2.80 295 *e*Pn **Pn 01 29 21.9 +0.6**
PBAR *e*Sn **Sn 01 29 55.7 +0.8**
PBAR *e*Sg **Sg 01 30 08.7 +1.8**
PBAR A A 01 30 23.6
51nm,0.7s
PBAR Barrancos 2.80 295 Pn **Pn 01 29 21.9 +0.6**
PBAR Sn **Sn 01 29 55.7 +0.8**
PBAR Lg Lg 01 30 08.7
51nm,0.7s
PBAR Barrancos 2.80 295 Pn **Pn 01 29 21.9 +0.6**
PBAR Sn **Sn 01 29 55.7 +0.8**
PBAR *e*Sg **Sg 01 30 08.7 +1.8**
EGRO El Granado 2.96 281 Pn **Pn 01 29 23.7 +0.2**
0.3nm,0.1s,SNR=10
EGRO Sn **Sn 01 29 58.6 -0.3**
1.1nm,0.2s,SNR=7.9
EGRO Lg Lg 01 30 11.7
44nm,0.8s,SNR=5.0
EGRO El Granado 2.96 281 Pn **Pn 01 29 23.7 +0.2**
0.3nm,0.1s,SNR=10
EGRO Sn **Sn 01 29 58.6 -0.3**
1.1nm,0.2s,SNR=7.9
EGRO Lg Lg 01 30 11.7
44nm,0.8s,SNR=5.0
EBAD Badajoz 3.06 305 Pn **Pn 01 29 25.2 +0.3**
0.1nm,0.1s,SNR=28
EBAD Sn **Sn 01 30 01.0 -0.3**
5.8nm,0.2s,SNR=5.4
EBAD Lg Lg 01 30 12.8
24nm,0.5s,SNR=5.0
EBAD Badajoz 3.06 305 Pn **Pn 01 29 25.2 +0.3**
0.1nm,0.1s,SNR=28
EBAD Sn **Sn 01 30 01.0 -0.3**
5.8nm,0.2s,SNR=5.4
EBAD Lg Lg 01 30 12.8
24nm,0.5s,SNR=5.0
AFON Font Roja 3.07 57 ⇑Pn **Pn 01 29 27.0 +1.8**
7.7nm,0.3s,SNR=18
AFON Sn **Sn 01 30 04.0 +2.3**
24nm,0.3s,SNR=7.9
AFON Lg Lg 01 30 16.6
114nm,0.5s,SNR=7.9
AFON Font Roja 3.07 57 Pn **Pn 01 29 27.0 +1.8**
7.7nm,0.3s,SNR=18
AFON Sn **Sn 01 30 04.0 +2.3**
24nm,0.3s,SNR=7.9
AFON Lg Lg 01 30 16.6
114nm,0.5s,SNR=7.9
PVAQ Vaqueiros 3.13 278 *e*Pn **Pn 01 29 26.1 +0.2**
PVAQ *e*Sn **Sn 01 30 03.7 +0.6**
PVAQ *e*Sg **Sg 01 30 19.8 +2.3**
PVAQ A A 01 30 32.2
17nm,0.7s
PVAQ Vaqueiros 3.13 278 Pn **Pn 01 29 26.1 +0.2**
PVAQ Sn **Sn 01 30 03.7 +0.6**
PVAQ Lg Lg 01 30 19.8
17nm,0.7s
PVAQ Vaqueiros 3.13 278 Pn **Pn 01 29 26.1 +0.2**
PVAQ Sn **Sn 01 30 03.7 +0.6**
PVAQ *e*Sg **Sg 01 30 19.8 +2.3**
PBDV Barranco-do-Ve 3.29 275 *e*Pn **Pn 01 29 28.9 +0.8**
PBDV *e*Sn **Sn 01 30 07.9 +0.9**
PBDV *e*Sg **Sg 01 30 21.9 -0.7**
PBDV A A 01 30 37.5
13nm,0.7s
PBDV Barranco-do-Ve 3.29 275 Pn **Pn 01 29 28.9 +0.8**
PBDV Sn **Sn 01 30 07.9 +0.9**
PBDV Lg Lg 01 30 21.9
13nm,0.7s
PBDV Barranco-do-Ve 3.29 275 Pn **Pn 01 29 28.9 +0.8**
PBDV Sn **Sn 01 30 07.9 +0.9**
PBDV *e*Sg **Sg 01 30 21.9 -0.7**
EBEN2 Beniarda presa 3.31 59 Pn **Pn 01 29 30.9 +2.5**
0.9nm,0.1s,SNR=7.9
EBEN2 Sn **Sn 01 30 09.8 +2.2**
10nm,0.2s,SNR=7.9
PBEJ Beja 3.37 289 *e*Pn **Pn 01 29 30.6 +1.5**
PBEJ *e*Sn **Sn 01 30 11.6 +2.7**
PBEJ Beja 3.37 289 Pn **Pn 01 29 30.6 +1.5**
PBEJ Beja 3.37 289 Pn **Pn 01 29 30.6 +1.5**
PBEJ *e*Sn **Sn 01 30 11.6 +2.7**
PCVE Castro Verde 3.42 282 *e*Pn **Pn 01 29 30.9 +1.2**
PCVE *e*Sg **Sg 01 30 26.3 -0.3**
PCVE A A 01 30 38.1
13nm,0.6s
PCVE Castro Verde 3.42 282 Pn **Pn 01 29 30.9 +1.2**
PCVE Lg Lg 01 30 26.3
13nm,0.6s
PCVE Castro Verde 3.42 282 Pn **Pn 01 29 30.9 +1.2**
PCVE *e*Sg **Sg 01 30 26.3 -0.3**
PESTR Estremoz 3.50 303 *e*Pn **Pn 01 29 32.4 +1.4**
PESTR *e*Sn **Sn 01 30 12.0 -0.2**
PESTR *e*Sg **Sg 01 30 29.7 +0.4**
PESTR A A 01 30 39.9
19nm,0.5s
PESTR Estremoz 3.50 303 *e*Pn **Pn 01 29 32.4 +1.4**
PESTR Estremoz 3.50 303 P **Pn 01 29 32.7 +1.7**
PESTR *e*Sn **Sn 01 30 12.0 -0.2**
PESTR *e*Sg **Sg 01 30 29.7 +0.4**
EPLA Plasencia 3.51 330 ⇑Pn **Pn 01 29 32.9 +1.8**
2.3nm,0.1s,SNR=18
EPLA Sn **Sn 01 30 12.5 -0.1**
2.0nm,0.2s,SNR=6.8
EPLA Lg Lg 01 30 27.5
35nm,0.4s,SNR=5.0
EPLA Plasencia 3.51 330 Pn **Pn 01 29 32.9 +1.8**
2.3nm,0.1s,SNR=18
EPLA Sn **Sn 01 30 12.5 -0.1**
2.0nm,0.2s,SNR=6.8
EPLA Lg Lg 01 30 27.5
35nm,0.4s,SNR=5.0
MESJ Messejana 3.59 284 *e*P **Pn 01 29 32.3 +0.1**
MESJ Messejana 3.59 284 *e*Pn **Pn 01 29 32.8 +0.6**
MESJ *e*Sg **Sg 01 30 31.5 -0.8**
MESJ A A 01 30 52.9
12nm,0.6s
MESJ Messejana 3.59 284 Pn **Pn 01 29 32.8 +0.6**
MESJ Lg Lg 01 30 31.5
12nm,0.6s
MESJ Messejana 3.59 284 Pn **Pn 01 29 32.8 +0.6**
MESJ *e*Sg **Sg 01 30 31.5 -0.8**
GUD Guadarrama 3.62 356 Pn **Pn 01 29 34.0 +1.3**
0.1nm,0.1s,SNR=7.9
GUD Pg **Pg 01 29 44.8 -1.5**
0.8nm,0.2s,SNR=7.9
GUD Sn **Sn 01 30 16.2 +0.8**
4.9nm,0.3s,SNR=7.9
GUD Lg Lg 01 30 29.9
42nm,0.4s,SNR=7.9
GUD Guadarrama 3.62 356 Pn **Pn 01 29 34.0 +1.3**
0.1nm,0.1s,SNR=7.9
EVO Evora 3.65 296 *e*Pn **Pn 01 29 34.4 +1.5**
EVO *e*Sn **Sn 01 30 16.2 +0.5**
EVO *e*Sg **Sg 01 30 34.7 +0.8**
EVO A A 01 30 52.0
14nm,0.5s
EVO Evora 3.65 296 Pn **Pn 01 29 34.4 +1.5**
EVO Sn **Sn 01 30 16.2 +0.5**
EVO Lg Lg 01 30 34.7
14nm,0.5s
EVO Evora 3.65 296 Pn **Pn 01 29 34.4 +1.5**
EVO Evora 3.65 296 *e*P **Pn 01 29 34.7 +1.8**
EVO *e*S **Sn 01 30 15.7 0.0**
EVO Sn Sb 01 30 16.2 -9.0
EVO *e*Sg **Sg 01 30 34.7 +0.8**
PMRV Marv??o 3.70 312 *e*Pn **Pn 01 29 35.3 +1.7**
PMRV *e*Sn **Sn 01 30 16.5 -0.5**
PMRV *e*Sg **Sg 01 30 33.7 -1.9**
PMRV A A 01 30 48.2
25nm,0.5s
PMRV Marv??o 3.70 312 Pn **Pn 01 29 35.3 +1.7**
PMRV Marv??o 3.70 312 Pn **Pn 01 29 35.3 +1.7**
PMRV *e*Sn **Sn 01 30 16.5 -0.5**
PMRV *e*Sg **Sg 01 30 33.7 -1.9**
PNCL Nicolau / Gran 3.89 288 *e*Pn **Pn 01 29 37.1 +0.8**
PNCL *e*Sn **Sn 01 30 22.4 +0.6**
PNCL *e*Sg **Sg 01 30 39.9 -2.0**
PNCL A A 01 30 51.2
14nm,0.5s
PNCL Nicolau / Gran 3.89 288 *e*Pn **Pn 01 29 37.1 +0.8**
PNCL *e*Sn **Sn 01 30 22.4 +0.6**
PNCL *e*Sg **Sg 01 30 39.9 -2.0**
PTEO Sao Teotonio 3.94 279 *e*Pn **Pn 01 29 39.1 +2.1**
PTEO *e*Sn **Sn 01 30 25.3 +2.2**
PTEO A A 01 30 57.1
19nm,0.7s
PTEO Sao Teotonio 3.94 279 *e*Pn **Pn 01 29 39.1 +2.1**
PTEO *e*Sn **Sn 01 30 25.3 +2.2**
PCBR Castelo Branco 4.02 316 *e*Pn **Pn 01 29 39.9 +1.9**
PCBR *e*Sn **Sn 01 30 25.6 +0.7**
PCBR *e*Sg **Sg 01 30 46.0 +0.1**
PCBR A A 01 30 56.5
17nm,0.7s
PCBR Castelo Branco 4.02 316 *e*Pn **Pn 01 29 39.9 +1.9**
PCBR *e*Sn **Sn 01 30 25.6 +0.7**
PCBR *e*Sg **Sg 01 30 46.0 +0.1**
PMTG Montargil 4.03 302 *e*Pn **Pn 01 29 39.5 +1.3**
PMTG *e*Sn **Sn 01 30 25.0 -0.2**
PMTG *e*Sg **Sg 01 30 45.8 -0.5**
PMTG A A 01 30 57.5
22nm,0.6s
PMTG Montargil 4.03 302 *e*Pn **Pn 01 29 39.5 +1.3**
PMTG *e*Sn **Sn 01 30 25.0 -0.2**
PMTG *e*Sg **Sg 01 30 45.8 -0.5**
CZD Col de Zad 4.11 194 P **Pn 01 29 36.5 -3.0**
EMOS Mosqueruela 4.24 37 Pn **Pn 01 29 42.7 +1.4**
2.7nm,0.6s,SNR=7.9
EMOS Pg **Pb 01 29 54.7 +3.3**
0.6nm,0.2s,SNR=7.9
EMOS Sn **Sn 01 30 31.6 +0.9**
6.0nm,0.4s,SNR=7.9
EMOS Lg Lg 01 30 51.3
70nm,0.8s,SNR=7.9
EMOS Mosqueruela 4.24 37 Pn **Pn 01 29 42.7 +1.4**
2.7nm,0.6s,SNR=7.9
EMOS Sn **Sn 01 30 31.6 +0.9**
6.0nm,0.4s,SNR=7.9
EMOS Lg Lg 01 30 51.3
70nm,0.8s,SNR=7.9
ALMR Almeirim 4.31 301 *e*Sn **Sn 01 30 32.2 0.0**
ALMR *e*Sg **Sg 01 30 56.3 +1.0**
ALMR A A 01 31 09.3
34nm,0.6s
ALMR Almeirim 4.31 301 *e*Sn **Sn 01 30 32.2 0.0**
ALMR *e*Sg **Sg 01 30 56.3 +1.0**
PTOM Tomar 4.44 307 *e*Pn **Pn 01 29 45.3 +1.4**
PTOM *e*Sn **Sn 01 30 34.4 -1.0**
PTOM *e*Sg **Sg 01 31 00.9 +1.4**
PTOM A A 01 31 03.5
28nm,0.7s
PTOM Tomar 4.44 307 *e*Pn **Pn 01 29 45.3 +1.4**
PTOM *e*Sn **Sn 01 30 34.4 -1.0**
PTOM *e*Sg **Sg 01 31 00.9 +1.4**
MTE Manteigas 4.45 320 *e*Pn **Pn 01 29 45.5 +1.4**
MTE *e*Sn **Sn 01 30 35.8 0.0**
MTE *e*Sg **Sg 01 30 59.1 -0.8**
MTE A A 01 31 00.8
32nm,0.5s
MTE Manteigas 4.45 320 *e*Pn **Pn 01 29 45.5 +1.4**
MTE *e*Sn **Sn 01 30 35.8 0.0**
MTE *e*Sg **Sg 01 30 59.1 -0.8**
EIBI Ibiza 4.54 62 Pn **Pn 01 29 47.1 +1.8**
3.2nm,0.2s,SNR=11
EIBI Sn **Sn 01 30 38.8 +0.9**
9.4nm,0.4s,SNR=5.0
EIBI Ibiza 4.54 62 Pn **Pn 01 29 47.1 +1.8**
3.2nm,0.2s,SNR=11
EIBI Sn **Sn 01 30 38.8 +0.9**
9.4nm,0.4s,SNR=5.0
PMAFR Mafra 4.72 296 *e*Pn **Pn 01 29 49.8 +2.0**
PMAFR Mafra 4.72 296 *e*Pn **Pn 01 29 49.8 +2.0**
PCAS Casmilo, Conde 4.75 311 *e*Pn **Pn 01 29 47.9 -0.2**
PCAS *e*Sn **Sn 01 30 42.7 -0.3**
PCAS *e*Sg **Sg 01 31 07.0 -2.4**
PCAS A A 01 31 18.7
18nm,0.7s
PCAS Casmilo, Conde 4.75 311 *e*Pn **Pn 01 29 47.9 -0.2**
PCAS *e*Sn **Sn 01 30 42.7 -0.3**
PCAS *e*Sg **Sg 01 31 07.0 -2.4**
MVO Moncorvo 4.83 330⇓*e*Pn **Pn 01 29 50.8 +1.6**
MVO *e*Sn **Sn 01 30 43.7 -1.3**
MVO *e*Sg **Sg 01 31 08.6 -3.3**
MVO A A 01 31 13.1
14nm,0.7s
MVO Moncorvo 4.83 330 ⇓Pn **Pn 01 29 50.8 +1.6**
17nm,0.3s,SNR=18
MVO Sn **Sn 01 30 43.7 -1.3**
5.4nm,0.2s,SNR=7.9
MVO Lg Lg 01 31 11.5
43nm,0.7s,SNR=5.0
MVO Moncorvo 4.83 330 Pn **Pn 01 29 50.8 +1.6**
17nm,0.3s,SNR=18
MVO *e*Sn **Sn 01 30 43.7 -1.3**
MVO *e*Sg **Sg 01 31 08.6 -3.3**
MVO Lg Lg 01 31 11.5
43nm,0.7s,SNR=5.0
PVIS Viseu 4.87 320 *e*Pn **Pn 01 29 50.9 +1.1**
PVIS *e*Sn **Sn 01 30 44.8 -1.1**
PVIS *e*Sg **Sg 01 31 13.0 -0.1**
PVIS A A 01 31 27.5
8.9nm,0.5s
PVIS Viseu 4.87 320 *e*Pn **Pn 01 29 50.9 +1.1**
PVIS *e*Sn **Sn 01 30 44.8 -1.1**
PVIS *e*Sg **Sg 01 31 13.0 -0.1**
ERTA Horta de San J 5.09 38 Pn **Pn 01 29 55.0 +2.2**
0.6nm,0.3s,SNR=7.9
ERTA Lg Lg 01 31 16.2
37nm,1.0s,SNR=7.9
ERTA Horta de San J 5.09 38 Pn **Pn 01 29 55.0 +2.2**
0.6nm,0.3s,SNR=7.9
ERTA Lg Lg 01 31 16.2
37nm,1.0s,SNR=7.9
PVRL Vila Real 5.21 326 *e*Pn **Pn 01 29 56.1 +1.6**
PVRL *e*Sn **Sn 01 30 52.7 -1.8**
PVRL Vila Real 5.21 326 *e*Pn **Pn 01 29 56.1 +1.6**
PVRL *e*Sn **Sn 01 30 52.7 -1.8**
PBRG Braganca 5.28 336 *e*Pn **Pn 01 29 57.1 +1.6**
PBRG *e*Sn **Sn 01 30 55.0 -1.2**
PBRG *e*Sg **Sg 01 31 24.6 -1.8**
PBRG A A 01 31 36.2
8.9nm,0.6s
PBRG Braganca 5.28 336 *e*Pn **Pn 01 29 57.1 +1.6**
PBRG *e*Sn **Sn 01 30 55.0 -1.2**
PBRG *e*Sg **Sg 01 31 24.6 -1.8**
POLO Lamas de Olo 5.33 326 *e*Pn **Pn 01 29 57.8 +1.7**
POLO *e*Sn **Sn 01 30 55.5 -1.9**
POLO A A 01 31 37.9
5.5nm,0.7s
POLO Lamas de Olo 5.33 326 *e*Pn **Pn 01 29 57.8 +1.7**
POLO *e*Sn **Sn 01 30 55.5 -1.9**
PCAB Cabril 5.70 326 *e*Pn **Pn 01 30 03.0 +1.8**
PCAB *e*Sn **Sn 01 31 03.8 -2.7**
PCAB *e*Sg **Sg 01 31 38.9 -1.0**
PCAB A A 01 31 46.8
16nm,0.7s
PCAB Cabril 5.70 326 *e*Pn **Pn 01 30 03.0 +1.8**
PCAB *e*Sg **Sg 01 31 38.9 -1.0**
EPOB Poblet 5.76 40 Pn **Pn 01 30 02.5 +0.5**
0.3nm,0.3s,SNR=6.0
EPOB Sn **Sn 01 31 06.3 -1.7**
2.1nm,0.4s,SNR=5.0
EPOB Lg Lg 01 31 39.8
10nm,0.7s,SNR=7.9
EPOB Poblet 5.76 40 Pn **Pn 01 30 02.5 +0.5**
0.3nm,0.3s,SNR=6.0
EPOB Lg Lg 01 31 39.8
10nm,0.7s,SNR=7.9
ELOB Lobios 5.84 327 Pn **Pn 01 30 04.9 +1.7**
0.6nm,0.2s,SNR=6.4
ELOB Sn **Sn 01 31 07.0 -3.1**
1.4nm,0.3s,SNR=7.9
ELOB Lg Lg 01 31 40.5
33nm,1.0s,SNR=7.9
ELOB Lobios 5.84 327 Pn **Pn 01 30 04.9 +1.7**
0.6nm,0.2s,SNR=6.4
ELOB Lg Lg 01 31 40.5
33nm,1.0s,SNR=7.9
ETOS Mallorca 5.89 60 Pn **Pn 01 30 04.7 +0.9**
2.7nm,0.4s,SNR=7.9
ETOS Sn **Sn 01 31 09.2 -1.9**
0.6nm,0.3s,SNR=7.9
ETOS Mallorca 5.89 60 Pn **Pn 01 30 04.7 +0.9**
2.7nm,0.4s,SNR=7.9
PGAV Gavieira, Arco 6.01 327 *e*Pn **Pn 01 30 07.4 +1.8**
PGAV *e*Sn **Sn 01 31 12.4 -1.9**
PGAV *e*Sg **Sg 01 31 46.5 -3.4**
PGAV A A 01 32 02.5
9.7nm,0.6s
PGAV Gavieira, Arco 6.01 327 *e*Pn **Pn 01 30 07.4 +1.8**
IELO Elcoad 6.14 18 Pn **Pn 01 30 08.3 +1.0**
1.2nm,0.3s,SNR=7.9
IELO Sn **Sn 01 31 16.7 -0.7**
1.1nm,0.3s,SNR=7.9
IELO Lg Lg 01 31 51.2
34nm,1.0s,SNR=7.9
IELO Elcoad 6.14 18 Pn **Pn 01 30 08.3 +1.0**
1.2nm,0.3s,SNR=7.9
IELO Lg Lg 01 31 51.2
34nm,1.0s,SNR=7.9
EORO Oroz-Betelu 6.17 17 Pn **Pn 01 30 09.0 +1.3**
0.3nm,0.1s,SNR=11
EORO Pg **Pg 01 30 32.3 -2.7**
13nm,0.7s,SNR=7.9
EORO Lg Lg 01 31 54.1
41nm,0.6s,SNR=5.0
EORO Oroz-Betelu 6.17 17 Pn **Pn 01 30 09.0 +1.3**
0.3nm,0.1s,SNR=11
EORO Lg Lg 01 31 54.1
41nm,0.6s,SNR=5.0
ELAN Lanestosa 6.21 3 Pn **Pn 01 30 10.2 +2.0**
2.5nm,0.4s,SNR=6.4
ELAN Sn **Sn 01 31 17.8 -1.2**
2.5nm,0.5s,SNR=7.9
ELAN Lg Lg 01 31 56.4
4.9nm,0.4s,SNR=7.9
ELAN Lanestosa 6.21 3 Pn **Pn 01 30 10.2 +2.0**
2.5nm,0.4s,SNR=6.4
ELAN Lg Lg 01 31 56.4
4.9nm,0.4s,SNR=7.9
EARI Arriondas 6.36 351 Pn **Pn 01 30 11.7 +1.5**
2.9nm,0.5s,SNR=6.6
EARI Lg Lg 01 32 02.3
34nm,0.8s,SNR=4.8
EARI Arriondas 6.36 351 Pn **Pn 01 30 11.7 +1.5**
2.9nm,0.5s,SNR=6.6
EARI Lg Lg 01 32 02.3
34nm,0.8s,SNR=4.8
ETSF Etsaut 6.38 22 *e*Pn **Pn 01 30 12.4 +1.8**
ETSF *e*Sn **Sn 01 31 21.6 -1.7**
ETSF *e*Sg **Sg 01 32 00.1 -1.5**
8.6nm,0.6s
ETSF Etsaut 6.38 22 *e*Pn **Pn 01 30 12.4 +1.8**
ETSF *e*Sg **Sg 01 32 00.1 -1.5**
4.3nm,0.6s
EMIR Miracle 6.40 39 Pn **Pn 01 30 12.5 +1.7**
0.6nm,0.2s,SNR=6.5
EMIR Sn **Sn 01 31 20.7 -3.0**
2.5nm,0.3s,SNR=7.9
EMIR Lg Lg 01 31 59.6
28nm,0.8s,SNR=7.9
EMIR Miracle 6.40 39 Pn **Pn 01 30 12.5 +1.7**
0.6nm,0.2s,SNR=6.5
EMIR Lg Lg 01 31 59.6
28nm,0.8s,SNR=7.9
SJPF Ste Jean 6.40 17 *e*Pn **Pn 01 30 13.1 +2.3**
SJPF *e*Sn **Sn 01 31 22.6 -1.1**
SJPF *e*Sg **Sg 01 32 00.1 -2.1**
107nm,1.4s
SJPF Ste Jean 6.40 17 *e*Pn **Pn 01 30 13.1 +2.3**
ECHI Chisagues Biel 6.43 28 Pn **Pn 01 30 13.1 +1.9**
0.1nm,0.1s,SNR=7.9
ECHI Chisagues Biel 6.43 28 Pn **Pn 01 30 13.1 +1.9**
0.1nm,0.1s,SNR=7.9
EALK Alkurruntz 6.44 15 Pn **Pn 01 30 13.1 +1.7**
1.9nm,0.3s,SNR=6.6
EALK Sn **Sn 01 31 23.4 -1.3**
6.2nm,0.4s,SNR=7.9
EALK Lg Lg 01 31 56.5
46nm,0.9s,SNR=7.9
EALK Alkurruntz 6.44 15 Pn **Pn 01 30 13.1 +1.7**
1.9nm,0.3s,SNR=6.6
EALK Lg Lg 01 31 56.5
46nm,0.9s,SNR=7.9
ATE Arette 6.51 21 Pn **Pn 01 30 14.3 +2.0**
1.0nm,0.2s,SNR=7.9
ATE Sn **Sn 01 31 27.1 +0.7**
1.7nm,0.4s,SNR=7.9
ATE Lg Lg 01 32 04.7
16nm,0.8s,SNR=7.9
ATE Arette 6.51 21 Pn **Pn 01 30 14.3 +2.0**
1.0nm,0.2s,SNR=7.9
ATE Sn **Sn 01 31 27.1 +0.7**
1.7nm,0.4s,SNR=7.9
ATE Lg Lg 01 32 04.7
16nm,0.8s,SNR=7.9
CSOR Sort 6.57 34 Pn **Pn 01 30 14.7 +1.4**
0.1nm,0.2s,SNR=7.9
CSOR Sn **Sn 01 31 26.9 -1.0**
2.4nm,0.4s,SNR=7.9
CSOR Lg Lg 01 32 05.8
15nm,0.8s,SNR=7.9
CSOR Sort 6.57 34 Pn **Pn 01 30 14.6 +1.4**
0.1nm,0.2s,SNR=7.9
CSOR Lg Lg 01 32 05.8
15nm,0.8s,SNR=7.9
EAGO Agolada(Pontev 6.64 332 Pn **Pn 01 30 15.9 +1.9**
0.3nm,0.1s,SNR=7.9
EAGO Sn **Sn 01 31 27.4 -2.1**
0.3nm,0.1s,SNR=7.9
EAGO Lg Lg 01 32 08.7
8.5nm,0.6s,SNR=7.9
EAGO Agolada(Pontev 6.64 332 Pn **Pn 01 30 15.9 +1.9**
0.3nm,0.1s,SNR=7.9
EAGO Lg Lg 01 32 08.7
8.5nm,0.6s,SNR=7.9
CFON Fontmartina 6.77 44 Pn **Pn 01 30 17.5 +1.6**
0.5nm,0.2s,SNR=7.9
CFON Sn **Sn 01 31 30.2 -2.7**
0.6nm,0.2s,SNR=7.9
CFON Fontmartina 6.77 44 Pn **Pn 01 30 17.5 +1.6**
0.5nm,0.2s,SNR=7.9
EPON Pontenova 6.79 339 Pn **Pn 01 30 16.9 +0.8**
0.2nm,0.2s,SNR=7.9
EPON Sn **Sn 01 31 30.0 -3.3**
0.9nm,0.3s,SNR=7.9
EPON Lg Lg 01 32 15.7
30nm,1.2s,SNR=7.9
EPON Pontenova 6.79 339 Pn **Pn 01 30 16.9 +0.8**
0.2nm,0.2s,SNR=7.9
EPON Lg Lg 01 32 15.7
30nm,1.2s,SNR=7.9
EPF Esparros 6.80 27 *e*Pn **Pn 01 30 17.4 +1.1**
EPF *e*Sn **Sn 01 31 31.3 -2.2**
EPF *e*Sg **Sg 01 32 14.0 -0.9**
18nm,0.7s
EPF Esparros 6.80 27 *e*Pn **Pn 01 30 17.4 +1.1**
EPF *e*Sg **Sg 01 32 14.0 -0.9**
9.0nm,0.7s
CLLI Llivia 7.04 38 Pn **Pn 01 30 22.0 +2.3**
0.2nm,0.3s,SNR=6.3
CLLI Sn **Sn 01 31 38.0 -1.7**
2.0nm,0.7s,SNR=7.9
CLLI Llivia 7.04 38 Pn **Pn 01 30 22.0 +2.3**
0.2nm,0.3s,SNR=6.3
MTLF Montolieu 7.82 34 *e*Pn **Pn 01 30 31.5 +1.2**
MTLF Montolieu 7.82 34 *e*Pg **Pg 01 31 03.9 -2.6**
MTLF *e*Sn **Sn 01 31 56.6 -2.0**
MTLF *e*Sg **Sg 01 32 44.8 -2.9**
11nm,1.0s
MTLF Montolieu 7.82 34 *e*Pn **Pn 01 30 31.5 +1.2**

LFF	La Frestale	8.63	22	*e*Pn	Pn	01 30 42.4 +1.1
LFF	La Frestale	8.63	22	*e*Pn	Pn	01 30 42.4 +1.1
CAF	Calviac	9.06	28	*e*Pn	Pn	01 30 48.0 +0.7
CAF	Calviac	9.06	28	*e*Pn	Pn	01 30 48.0 +0.7
LASF	Ste Croix	9.15	37	*e*Pn	Pn	01 30 49.2 +0.7
LASF	Ste Croix	9.15	37	*e*Pn	Pn	01 30 49.2 +0.7

IDC ***19*** *01:46:12.2±0.5,39°.18N×29°.12E, h0km, mb4.4/26, mb1 4.5/37, mb1mx4.4/65, mbtmp4.4/37, ML3.8/11, MS4.1/5, Ms1 4.1/5, ms1mx3.3/66, Error ellipse: s-maj=11.2km s-min=9.5km az=0.0*
MOS ***19*** *01:46:13.4±0.9,39°.19N×29°.19E, h15km, mb4.9/33, Error ellipse: s-maj=3.7km s-min=2.4km az=109.5*
ISCJB ***19*** *01:46:13.9±0.2,39°.14N±0°.01×29°.16E±0°.01, h20km±1km, mb4.6/78, MS4.1/7, Error ellipse: s-maj=1.8km s-min=1.4km az=32.5*
DDA ***19*** *01:46:13.1,39°.12N×29°.16E, h26km, Ml4.9*
ISK ***19*** *01:46:13.4,39°.14N×29°.15E, h10km, ML4.9/32*
NEIC ***19*** *01:46:13.4±0.0,39°.14N×29°.16E, h9km, mb4.6/52, ML4.9(ISK), After ISK.*
PDG ***19*** *01:46:14.0±0.5,39°.16N×29°.15E, h15km±1km, ML4.5/10, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
CSEM ***19*** *01:46:14.2±0.1,39°.14N×29°.19E, h10km, mb4.7/50, Error ellipse: s-maj=1.9km s-min=1.6km az=15.0*
THE ***19*** *01:46:17.7,39°.07N×29°.08E, h28km±13km, ML4.5/2, Error ellipse: s-maj=13.3km s-min=1.0km az=70.0*
GII ***19*** *01:46:18.0±0.2,38°.73N×28°.82E, h32km*
ISC 19 01:46:14.2±0.5,39°.14N±0°.02×29°.13E±0°.01, h13km±3km, n971,σ1§57/1109, mb4.7/78, MS4.2/7, 61C-53D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMAA	**Simav-Kutahya**	**0.12**	**251**	PG	**Pg**	**01 46 17.2**	**-0.2**
SMAA				SG	**Sg**	**01 46 20.5**	**+0.8**
SMAA	**Simav-Kutahya**	**0.12**	**251**	*i* Pg	**Pg**	**01 46 17.2**	**-0.2**
SMAA				*e*Sg	**Sg**	**01 46 20.5**	**+0.8**
SIMA	**Simav-Kutahya**	**0.12**	**244**	PG	**Pg**	**01 46 17.4**	**-0.1**
SIMA				SG	**Sg**	**01 46 19.6**	**-0.3**
SIMA	**Simav-Kutahya**	**0.12**	**244**	*i* Pg	**Pg**	**01 46 17.4**	**-0.1**
SIMA				*e*Sg	**Sg**	**01 46 19.6**	**-0.3**
SHAP	**Saphane-Kutahy**	**0.14**	**147**	PG	**Pg**	**01 46 17.1**	**-0.6**
SHAP				SG	**Sg**	**01 46 19.4**	**-1.1**
SHAP	**Saphane-Kutahy**	**0.14**	**147**	*i* Pg	**Pg**	**01 46 17.1**	**-0.6**
SHAP				*e*Sg	**Sg**	**01 46 19.1**	**-1.1**
GEDZ	**Gediz**	**0.24**	**113**	PG	**Pg**	**01 46 18.9**	**-0.4**
GEDZ				SG	**Sg**	**01 46 22.3**	**-0.5**
GEDZ	**Gediz**	**0.24**	**113**	*i* Pg	**Pg**	**01 46 18.9**	**-0.4**
GEDZ				*e*Sg	**Sg**	**01 46 22.3**	**-0.5**
DEMI	**Demirci**	**0.33**	**253**	⇑*i*P	**Pg**	**01 46 21.0**	**0.0**
DEMI				*i* S	**Sg**	**01 46 25.9**	**+0.5**
DEMI	**Demirci**	**0.33**	**253**	P	**Pg**	**01 46 21.0**	**0.0**
DEMI				S	**Sg**	**01 46 26.0**	**+0.5**
TVSB	**Tavsanli**	**0.41**	**40**	PG	**Pg**	**01 46 21.0**	**-1.3**
TVSB	**Tavsanli**	**0.41**	**40**	*i* Pg	**Pg**	**01 46 21.0**	**-1.3**
DST	**Dursunbey**	**0.61**	**320**	PG	**Pg**	**01 46 25.6**	**-0.5**
DST	**Dursunbey**	**0.61**	**320**	P	**Pg**	**01 46 25.6**	**-0.5**
DST	**Dursunbey**	**0.61**	**320**	*i* Pg	**Pg**	**01 46 25.6**	**-0.5**
DURS	**Dursunbey**	**0.68**	**313**	⇑*i*P	**Pg**	**01 46 27.6**	**+0.1**
DURS				*i* S	**Sg**	**01 46 37.3**	**+0.8**
DURS	**Dursunbey**	**0.68**	**313**	P	**Pg**	**01 46 27.6**	**+0.1**
DURS				S	**Sg**	**01 46 37.3**	**+0.8**
KULA	**Kula-Manisa**	**0.72**	**210**	PG	**Pg**	**01 46 27.5**	**-0.7**
KULA	**Kula-Manisa**	**0.72**	**210**	*i* Pg	**Pg**	**01 46 27.5**	**-0.7**
KUTH	**Kutahya**	**0.74**	**69**	PG	**Pg**	**01 46 27.8**	**-0.8**
KUTH	**Kutahya**	**0.74**	**69**	*e*Pg	**Pg**	**01 46 27.8**	**-0.8**
MANT	**Manisa**	**0.78**	**215**	⇑*i*P	**Pg**	**01 46 28.6**	**-0.8**
MANT				*i* S	**Sg**	**01 46 38.2**	**-1.5**
MANT	**Manisa**	**0.78**	**215**	*e*Pn	**Pg**	**01 46 28.7**	**-0.8**
MANT				*e*Sn	**Sg**	**01 46 39.3**	**-0.4**
MANT	**Manisa**	**0.78**	**215**	P	**Pg**	**01 46 28.6**	**-0.8**
MANT				S	**Sg**	**01 46 38.2**	**-1.5**
MANT				*e*Sn	**Sg**	**01 46 39.3**	**-0.4**
AUBOZ	**BOZOYUK**	**1.04**	**42**	PG	**Pb**	**01 46 33.4**	**-0.7**
AUBOZ	**BOZOYUK**	**1.04**	**42**	⇑*i*P	**Pb**	**01 46 33.4**	**-0.7**
AUBOZ				*i* S	**Sg**	**01 46 48.3**	**+0.4**
AUBOZ	**BOZOYUK**	**1.04**	**42**	P	**Pb**	**01 46 33.4**	**-0.7**
AUBOZ				S	**Sg**	**01 46 48.3**	**+0.4**
AKHS	**Akhisar**	**1.05**	**256**	⇑*i*P	**Pb**	**01 46 34.3**	**0.0**
AKHS				*i* S	**Sn**	**01 46 49.6**	**+0.3**
AKHS	**Akhisar**	**1.05**	**256**	P	**Pb**	**01 46 34.3**	**0.0**
AKHS				S	**Sn**	**01 46 49.6**	**+0.3**
AUKUT	**KUTAHYA**	**1.07**	**40**	⇑*i*P	Pb	01 46 27.7	-6.9
AUKUT				*i* S	Sb	01 46 37.9	-11
AUKUT	**KUTAHYA**	**1.07**	**40**	P	Pb	01 46 27.7	-7.0
AUKUT				S	Sb	01 46 37.9	-11
STEP	**BALIKESIR_Sava**	**1.12**	**283**	⇓*i*P	**Pn**	**01 46 35.9**	**+0.3**
STEP				*i* S	**Sn**	**01 46 52.0**	**+1.1**
STEP	**BALIKESIR_Sava**	**1.12**	**283**	P	**Pn**	**01 46 35.9**	**+0.3**
STEP				S	**Sn**	**01 46 52.0**	**+1.1**
KZIL	**AFYON_Kizioren**	**1.19**	**138**	⇑*i*P	**Pn**	**01 46 34.7**	**-1.9**
KZIL				*i* S	**Sb**	**01 46 51.5**	**-0.4**
KZIL	**AFYON_Kizioren**	**1.19**	**138**	P	**Pn**	**01 46 34.7**	**-1.9**
KZIL				S	**Sb**	**01 46 51.5**	**-0.4**
CAVI	**Cavuskoy**	**1.20**	**27**	PN	**Pn**	**01 46 36.2**	**-0.5**
CAVI	**Cavuskoy**	**1.20**	**27**	*e*Pn	**Pn**	**01 46 36.2**	**-0.5**
IZI	**Iznik**	**1.23**	**13**	PN	**Pb**	**01 46 37.7**	**+0.4**
IZI	**Iznik**	**1.23**	**13**	*e*Pn	**Pb**	**01 46 37.7**	**+0.4**
BORA	**Eskisehir**	**1.27**	**54**	PN	**Pn**	**01 46 37.2**	**-0.5**
BORA	**Eskisehir**	**1.27**	**54**	*i* P	**Pn**	**01 46 37.2**	**-0.5**
BORA				*i* S	**Sn**	**01 46 54.9**	**+0.2**
BORA	**Eskisehir**	**1.27**	**54**	P	**Pn**	**01 46 37.2**	**-0.5**
BORA				S	**Sn**	**01 46 54.9**	**+0.2**
KCTX	**Karacabey (Bur**	**1.27**	**332**	PN	**Pb**	**01 46 38.3**	**+0.3**
KCTX	**Karacabey (Bur**	**1.27**	**332**	*e*Pn	**Pb**	**01 46 38.3**	**+0.3**
BALY	**Balya**	**1.31**	**298**	⇓*i*P	**Pn**	**01 46 37.8**	**-0.5**
BALY				*i* S	**Sg**	**01 46 56.8**	**+0.3**
BALY	**Balya**	**1.31**	**298**	P	**Pn**	**01 46 37.8**	**-0.5**
BALY				S	**Sg**	**01 46 56.8**	**+0.3**
DENT	**Denizli**	**1.39**	**183**	PN	**Pn**	**01 46 39.6**	**+0.3**
DENT	**Denizli**	**1.39**	**183**	*e*Pn	**Pn**	**01 46 39.6**	**+0.3**
ESKT	**Eskisehir**	**1.39**	**74**	PN	**Pn**	**01 46 39.0**	**-0.5**
ESKT	**Eskisehir**	**1.39**	**74**	*i* P	**Pn**	**01 46 37.0**	**-2.5**
ESKT				*i* S	**Sg**	**01 47 05.0**	**+5.9**
ESKT	**Eskisehir**	**1.39**	**74**	*e*Pn	**Pn**	**01 46 39.0**	**-0.5**
SEYT	**Eskypehyr**	**1.39**	**74**	P	**Pn**	**01 46 37.0**	**-2.5**
SEYT				S	**Sg**	**01 47 04.9**	**+5.9**
GONE	**Gonen-Balikesi**	**1.44**	**310**	PN	**Pb**	**01 46 40.6**	**-0.2**
GONE	**Gonen-Balikesi**	**1.44**	**310**	*e*Pn	**Pb**	**01 46 40.6**	**-0.2**
ARMT	**Armutlu**	**1.44**	**352**	PN	**Pn**	**01 46 40.1**	**+0.1**
ARMT	**Armutlu**	**1.44**	**352**	*e*Pn	**Pn**	**01 46 40.1**	**+0.1**
YLV	**Yalova**	**1.44**	**8**	PN	**Pn**	**01 46 40.2**	**+0.1**
YLV	**Yalova**	**1.44**	**8**	P	**Pn**	**01 46 40.2**	**+0.1**
YLV	**Yalova**	**1.44**	**8**	*e*Pn	**Pn**	**01 46 40.2**	**+0.1**
DNZL	**Cakiroluk**	**1.45**	**182**	⇑*i*P	**Pn**	**01 46 39.6**	**-0.7**
DNZL				*i* S	**Sg**	**01 47 01.2**	**+0.4**
DNZL	**Cakiroluk**	**1.45**	**182**	P	**Pn**	**01 46 39.6**	**-0.7**
DNZL				S	**Sg**	**01 47 01.2**	**+0.4**
GPA	**Golpazari**	**1.47**	**38**	P	**Pn**	**01 46 40.8**	**+0.4**
GPA	**Golpazari**	**1.47**	**38**	P	**Pn**	**01 46 40.8**	**+0.4**
BOLV	**Bolvadin**	**1.48**	**106**	*i* P	**Pn**	**01 46 41.4**	**-0.3**
BOLV				*i* S	**Sn**	**01 47 00.2**	**+0.1**
BOLV	**Bolvadin**	**1.48**	**106**	P	**Pb**	**01 46 41.4**	**-0.3**
BOLV				S	**Sn**	**01 47 00.2**	**+0.1**
SBT5	**Esenkoy-Cinarc**	**1.50**	**353**	PN	**Pn**	**01 46 41.0**	**+0.2**
SBT5	**Esenkoy-Cinarc**	**1.50**	**353**	*e*Pn	**Pn**	**01 46 41.0**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**1.53**	**220**	PN	**Pn**	**01 46 41.0**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**1.53**	**220**	*e*Pn	**Pn**	**01 46 41.0**	**-0.4**
EDC	**Edincik**	**1.55**	**322**	PN	**Pn**	**01 46 41.6**	**+0.1**
EDC	**Edincik**	**1.55**	**322**	P	**Pn**	**01 46 42.0**	**+0.5**
EDC	**Edincik**	**1.55**	**322**	*e*Pn	**Pn**	**01 46 41.6**	**+0.1**
EDC	**Edincik**	**1.55**	**322**	P	**Pn**	**01 46 42.0**	**+0.5**
BRDR	**BURDUR-Merkez**	**1.62**	**153**	⇑*i*P	**Pn**	**01 46 41.9**	**-0.6**
BRDR				*i* S	**Sg**	**01 47 08.9**	**+2.7**
BRDR	**BURDUR-Merkez**	**1.62**	**153**	P	**Pn**	**01 46 41.9**	**-0.6**
BRDR				S	**Sg**	**01 47 08.9**	**+2.7**
GEYV	**SAKARYA_Geyve**	**1.62**	**33**	⇓*i*P	**Pn**	**01 46 42.6**	**+0.1**
GEYV				*i* S	**Sg**	**01 47 06.3**	**0.0**
GEYV	**SAKARYA_Geyve**	**1.62**	**33**	P	**Pn**	**01 46 42.6**	**+0.1**
GEYV				S	**Sg**	**01 47 06.3**	**0.0**
KNL	**Bal¯–kesir**	**1.67**	**313**	⇓*i*P	**Pn**	**01 46 43.8**	**+0.6**
KNL				*i* S	**Sb**	**01 47 06.6**	**+0.7**
GULT	**Gulveren**	**1.68**	**39**	PN	**Pn**	**01 46 43.8**	**+0.4**
GULT	**Gulveren**	**1.68**	**39**	*e*Pn	**Pn**	**01 46 43.8**	**+0.4**
TAVA	**DENIZLI_Tavas**	**1.68**	**186**	⇑*i*P	**Pn**	**01 46 42.6**	**-0.8**
TAVA				*i* S	**Sg**	**01 47 09.1**	**+0.9**
TAVA	**DENIZLI_Tavas**	**1.68**	**186**	P	**Pn**	**01 46 42.6**	**-0.8**
TAVA				S	**Sg**	**01 47 09.1**	**+0.9**
BUY	**Buyukada**	**1.71**	**360**	PN	**Pn**	**01 46 43.8**	**+0.1**
BUY	**Buyukada**	**1.71**	**360**	⇓*i*P	**Pn**	**01 46 43.8**	**+0.1**
BUY				*i* S	**Sb**	**01 47 07.0**	**+0.1**
BUY	**Buyukada**	**1.71**	**360**	*e*Pn	**Pn**	**01 46 43.8**	**+0.1**
BUY				S	**Sb**	**01 47 07.0**	**+0.1**
ISP	**Isparta**	**1.71**	**140**	PN	**Pn**	**01 46 43.3**	**-0.5**
ISP	**Isparta**	**1.71**	**140**	⇑*i*P	**Pn**	**01 46 43.4**	**-0.4**
ISP				S	**Sn**	**01 47 05.9**	**+0.2**
ISP	**Isparta**	**1.71**	**140**	*e*Pn	**Pn**	**01 46 43.3**	**-0.5**
ISP				*e*Sn	**Sn**	**01 47 02.6**	**-3.0**
ISP	**Isparta**	**1.71**	**140**	P	**Pn**	**01 46 43.1**	**-0.8**
ISP	**Isparta**	**1.71**	**140**	*i* Pn	**Pn**	**01 46 42.7**	**-1.1**
ISP	**Isparta**	**1.71**	**140**	*c i*P	**Pn**	**01 46 43.0**	**-0.8**
ISP	**Isparta**	**1.71**	**140**	*e*Pn	**Pn**	**01 46 43.3**	**-0.5**
ISP				*e*Sn	**Sn**	**01 47 02.6**	**-3.0**
ISP				S	**Sn**	**01 47 05.9**	**+0.2**
DKL	**Dikili**	**1.73**	**268**	PN	**Pn**	**01 46 44.2**	**+0.3**
DKL	**Dikili**	**1.73**	**268**	*e*Pn	**Pn**	**01 46 44.2**	**+0.3**
HRT	**Hereke**	**1.73**	**14**	PN	**Pn**	**01 46 43.8**	**-0.3**
HRT	**Hereke**	**1.73**	**14**	P	**Pn**	**01 46 44.1**	**0.0**
HRT	**Hereke**	**1.73**	**14**	*e*Pn	**Pn**	**01 46 43.8**	**-0.3**
HRT	**Hereke**	**1.73**	**14**	P	**Pn**	**01 46 44.1**	**0.0**
BAGO	**Egridir - ISPA**	**1.74**	**131**	*i* P	**Pn**	**01 46 44.3**	**+0.1**
BAGO				*i* S	**Sg**	**01 47 09.3**	**-0.8**
AYDN	**Tasoluk**	**1.77**	**214**	⇑*i*P	**Pn**	**01 46 44.2**	**-0.4**
AYDN				*i* S	**Sg**	**01 47 12.3**	**+1.2**
AYDN	**Tasoluk**	**1.77**	**214**	P	**Pn**	**01 46 44.2**	**-0.4**
AYDN				S	**Sg**	**01 47 12.3**	**+1.2**
SPNC	**Sapanca-Adapaz**	**1.79**	**30**	PN	**Pn**	**01 46 45.3**	**+0.4**
SPNC	**Sapanca-Adapaz**	**1.79**	**30**	*e*Pn	**Pn**	**01 46 45.3**	**+0.4**
SBT2	**Guzelce-Avcila**	**1.80**	**345**	PN	**Pn**	**01 46 45.4**	**+0.6**
SBT2	**Guzelce-Avcila**	**1.80**	**345**	*e*Pn	**Pn**	**01 46 45.4**	**+0.6**
SAUV	**Serdivan-Sakar**	**1.85**	**30**	PN	**Pn**	**01 46 45.9**	**+0.3**
SAUV	**Serdivan-Sakar**	**1.85**	**30**	*e*Pn	**Pn**	**01 46 45.9**	**+0.3**
KRBG	**Karabiga-Canak**	**1.89**	**312**	PN	**Pn**	**01 46 46.6**	**+0.5**
KRBG	**Karabiga-Canak**	**1.89**	**312**	*e*Pn	**Pn**	**01 46 46.6**	**+0.5**
AUSIV	**SIVRIHISAR**	**1.90**	**80**	PN	**Pn**	**01 46 45.3**	**-1.1**
AUSIV	**SIVRIHISAR**	**1.90**	**80**	*e*Pn	**Pn**	**01 46 45.3**	**-1.1**
AYVA	**Ayvalik**	**1.90**	**276**	⇓*i*P	**Pn**	**01 46 46.7**	**+0.4**
AYVA				*i* S	**Sg**	**01 47 16.2**	**+1.0**
AYVA	**Ayvalik**	**1.90**	**276**	P	**Pn**	**01 46 46.7**	**+0.4**
AYVA				S	**Sg**	**01 47 16.2**	**+1.0**
KAVV	**Kandilli-Istan**	**1.92**	**359**	PN	**Pn**	**01 46 46.7**	**+0.1**
KAVV	**Kandilli-Istan**	**1.92**	**359**	*e*Pn	**Pn**	**01 46 46.7**	**+0.1**
ISK	**Istanbul-Kandi**	**1.93**	**359**	PN	**Pn**	**01 46 46.5**	**-0.1**
ISK	**Istanbul-Kandi**	**1.93**	**359**	P	**Pn**	**01 46 46.6**	**-0.1**
ISK	**Istanbul-Kandi**	**1.93**	**359**	P	**Pn**	**01 46 46.6**	**-0.1**
GOLH	**Golhisar**	**1.93**	**170**	*i* P	**Pn**	**01 46 45.8**	**-1.1**
GOLH				*i* S	**Sg**	**01 47 18.9**	**+2.7**
GOLH	**Golhisar**	**1.93**	**170**	P	**Pn**	**01 46 45.8**	**-1.1**
GOLH				S	**Sg**	**01 47 18.9**	**+2.7**
SBT3	**Marmara-Eregli**	**1.96**	**334**	PN	**Pn**	**01 46 47.4**	**+0.5**
SBT3	**Marmara-Eregli**	**1.96**	**334**	*e*Pn	**Pn**	**01 46 47.4**	**+0.5**
AUMIH	**MIHALICIK**	**1.96**	**67**	PN	**Pn**	**01 46 47.2**	**-0.2**
AUMIH	**MIHALICIK**	**1.96**	**67**	*e*Pn	**Pn**	**01 46 47.2**	**-0.2**
SILT	**Sile**	**2.05**	**11**	PN	**Pn**	**01 46 48.8**	**+0.4**
SILT	**Sile**	**2.05**	**11**	*e*Pn	**Pn**	**01 46 48.8**	**+0.4**
DGB	**¯zmir**	**2.06**	**239**	*i* P	**Pb**	**01 46 50.3**	**-1.2**
DGB				*i* S	**Sb**	**01 47 17.8**	**+0.7**
BAYC	**CANAKKALE_Bayr**	**2.08**	**288**	*i* P	**Pn**	**01 46 49.4**	**+0.4**
BAYC				*i* S	**Sg**	**01 47 19.9**	**-1.3**
BAYC	**CANAKKALE_Bayr**	**2.08**	**288**	P	**Pn**	**01 46 49.3**	**+0.4**
BAYC				S	**Sg**	**01 47 19.9**	**-1.3**
KLYT	**Kilyos**	**2.11**	**358**	PN	**Pn**	**01 46 49.4**	**+0.2**
KLYT	**Kilyos**	**2.11**	**358**	*e*Pn	**Pn**	**01 46 49.4**	**+0.2**
MLSB	**Milas**	**2.12**	**210**	PN	**Pn**	**01 46 49.2**	**-0.3**
MLSB	**Milas**	**2.12**	**210**	*e*Pn	**Pn**	**01 46 49.2**	**-0.3**
URLA	**Izmir**	**2.12**	**249**	PN	**Pn**	**01 46 49.9**	**+0.4**
URLA	**Izmir**	**2.12**	**249**	*i* P	**Pn**	**01 46 50.4**	**+0.9**
URLA				*i* S	**Sg**	**01 47 22.7**	**+0.2**
URLA	**Izmir**	**2.12**	**249**	*e*Pn	**Pn**	**01 46 49.9**	**+0.4**
URLA	**Izmir**	**2.12**	**249**	P	**Pn**	**01 46 50.4**	**+0.9**
URLA				S	**Sg**	**01 47 22.7**	**+0.2**
CTKS	**Kestanelik-??a**	**2.15**	**347**	PN	**Pn**	**01 46 49.7**	**0.0**
CTKS	**Kestanelik-??a**	**2.15**	**347**	*e*Pn	**Pn**	**01 46 49.7**	**0.0**
RKY	**Sarkoy-Tekirda**	**2.15**	**317**	PN	**Pn**	**01 46 50.5**	**+0.6**
RKY	**Sarkoy-Tekirda**	**2.15**	**317**	*e*Pn	**Pn**	**01 46 50.5**	**+0.6**
KIZT	**Kizilcal**	**2.16**	**96**	PN	**Pn**	**01 46 50.2**	**+0.2**
KIZT	**Kizilcal**	**2.16**	**96**	*e*Pn	**Pn**	**01 46 50.2**	**+0.2**
LPK	**Lapseki**	**2.20**	**305**	PN	**Pn**	**01 46 50.2**	**-0.3**
LPK	**Lapseki**	**2.20**	**305**	*e*Pn	**Pn**	**01 46 50.2**	**-0.3**
SLVT	**Silivri**	**2.20**	**342**	PN	**Pn**	**01 46 51.4**	**+0.9**
SLVT	**Silivri**	**2.20**	**342**	*e*Pn	**Pn**	**01 46 51.4**	**+0.9**
PRK	**Paraskevi**	**2.22**	**274**	*e*Pn	**Pn**	**01 46 51.4**	**+0.7**
PRK	**Paraskevi**	**2.22**	**274**	P	**Pn**	**01 46 51.4**	**+0.7**
PRK	**Paraskevi**	**2.22**	**274**	*e*P	**Pn**	**01 46 51.4**	**+0.7**
PRK	**Paraskevi**	**2.22**	**274**	P	**Pn**	**01 46 51.4**	**+0.7**
SUTC	**Sutluce-Ispart**	**2.22**	**138**	PN	**Pn**	**01 46 50.9**	**0.0**
SUTC	**Sutluce-Ispart**	**2.22**	**138**	*e*Pn	**Pn**	**01 46 50.9**	**0.0**
ZEY	**¯zmir**	**2.24**	**247**	*i* P	**Pn**	**01 46 51.4**	**+0.4**
ZEY				*i* S	**Sg**	**01 47 26.5**	**+0.3**
CRLT	**Corlu**	**2.25**	**332**	PN	**Pn**	**01 46 52.1**	**+0.9**
CRLT	**Corlu**	**2.25**	**332**	*e*Pn	**Pn**	**01 46 52.1**	**+0.9**
EZN	**Ezine**	**2.27**	**288**	PN	**Pn**	**01 46 52.1**	**+0.7**
EZN	**Ezine**	**2.27**	**288**	*e*Pn	**Pn**	**01 46 52.2**	**+0.8**
EZN				*e*Sn	**Sn**	**01 47 19.3**	**0.0**
EZN	**Ezine**	**2.27**	**288**	P	**Pn**	**01 46 52.2**	**+0.8**
EZN				S	**Sn**	**01 47 19.3**	**0.0**
EZN	**Ezine**	**2.27**	**288**	*e*P	**Pn**	**01 46 52.2**	**+0.8**
EZN				*e*		01 47 19.3	
EZN	**Ezine**	**2.27**	**288**	P	**Pn**	**01 46 52.2**	**+0.8**
EZN				S	**Sn**	**01 47 19.3**	**0.0**
SMG	**Samos**	**2.29**	**232**	*e*Pn	**Pn**	**01 46 51.8**	**0.0**
SMG	**Samos**	**2.29**	**232**	P	**Pn**	**01 46 51.8**	**0.0**
SMG	**Samos**	**2.29**	**232**	P	**Pn**	**01 46 51.8**	**0.0**
TURN	**Turunc**	**2.30**	**190**	PN	**Pn**	**01 46 53.7**	**+1.9**
TURN	**Turunc**	**2.30**	**190**	*e*Pn	**Pn**	**01 46 53.7**	**+1.9**
KORT	**Korkueli**	**2.34**	**155**	PN	**Pn**	**01 46 52.9**	**+0.3**
KORT	**Korkueli**	**2.34**	**155**	*e*Pn	**Pn**	**01 46 52.9**	**+0.3**
DALY	**Dalyan (Mu¯la**	**2.35**	**189**	PN	**Pn**	**01 46 52.7**	**+0.2**
DALY	**Dalyan (Mu¯la**	**2.35**	**189**	*e*Pn	**Pn**	**01 46 52.7**	**+0.2**
GELI	**Tayfur-Gelibol**	**2.40**	**302**	PN	**Pn**	**01 46 54.0**	**+0.8**
GELI	**Tayfur-Gelibol**	**2.40**	**302**	*e*Pn	**Pn**	**01 46 54.0**	**+0.8**
CTYL	**Yalikoy Yolu**	**2.42**	**345**	PN	**Pn**	**01 46 53.9**	**+0.4**
CTYL	**Yalikoy Yolu**	**2.42**	**345**	*e*Pn	**Pn**	**01 46 53.9**	**+0.4**
ELL	**Elmali**	**2.47**	**165**	PN	**Pn**	**01 46 54.8**	**+0.6**
ELL	**Elmali**	**2.47**	**165**	P	**Pn**	**01 46 55.1**	**+0.9**
ELL	**Elmali**	**2.47**	**165**	*e*Pn	**Pn**	**01 46 54.8**	**+0.6**
ELL	**Elmali**	**2.47**	**165**	P	**Pn**	**01 46 55.1**	**+0.9**
YKAV	**Yalikavak-Bodr**	**2.48**	**216**	PN	**Pn**	**01 46 55.8**	**+1.5**
YKAV	**Yalikavak-Bodr**	**2.48**	**216**	*e*Pn	**Pn**	**01 46 55.8**	**+1.5**
FETY	**Fethiye**	**2.50**	**181**	PN	**Pn**	**01 46 53.9**	**-0.7**
FETY	**Fethiye**	**2.50**	**181**	*e*Pn	**Pn**	**01 46 54.2**	**-0.4**
FETY	**Fethiye**	**2.50**	**181**	P	**Pn**	**01 46 54.2**	**-0.4**
FETY	**Fethiye**	**2.50**	**181**	*e*Pn	**Pn**	**01 46 53.9**	**-0.7**
FETY	**Fethiye**	**2.50**	**181**	P	**Pn**	**01 46 54.2**	**-0.4**
CHOS	**Chios island**	**2.52**	**254**	PN	**Pn**	**01 46 56.1**	**+1.2**
CHOS	**Chios island**	**2.52**	**254**	*e*Pn	**Pn**	**01 46 55.0**	**+0.1**
CHOS				*e*Sn	**Sn**	**01 47 23.1**	**-2.3**
CHOS	**Chios island**	**2.52**	**254**	P	**Pn**	**01 46 55.0**	**+0.1**
CHOS				S	**Sn**	**01 47 23.1**	**-2.3**
CHOS	**Chios island**	**2.52**	**254**	P	**Pn**	**01 46 55.0**	**+0.1**
CHOS	**Chios island**	**2.52**	**254**	*e*Pn	**Pn**	**01 46 56.1**	**+1.2**
CHOS				S	**Sn**	**01 47 23.1**	**-2.3**
BODT	**Bodrum**	**2.52**	**215**	PN	**Pn**	**01 46 55.2**	**+0.3**
BODT	**Bodrum**	**2.52**	**215**	*e*Pn	**Pn**	**01 46 53.7**	**-1.2**
BODT				*e*Sn	**Sn**	**01 47 23.6**	**-1.9**
BODT	**Bodrum**	**2.52**	**215**	P	**Pn**	**01 46 53.7**	**-1.2**
BODT				S	**Sn**	**01 47 23.6**	**-1.9**
BODT	**Bodrum**	**2.52**	**215**	P	**Pn**	**01 46 53.7**	**-1.2**
BODT	**Bodrum**	**2.52**	**215**	*e*Pn	**Pn**	**01 46 55.2**	**+0.3**
BODT				S	**Sn**	**01 47 23.6**	**-1.9**
ERIK	**Erikli-Kesan**	**2.52**	**308**	PN	**Pn**	**01 46 55.5**	**+0.6**
ERIK	**Erikli-Kesan**	**2.52**	**308**	*e*Pn	**Pn**	**01 46 55.5**	**+0.6**
MRSB	**Marmaris-Mugla**	**2.53**	**197**	PN	**Pn**	**01 46 56.2**	**+1.2**
MRSB	**Marmaris-Mugla**	**2.53**	**197**	*e*Pn	**Pn**	**01 46 56.2**	**+1.2**
ANTB	**Antalya**	**2.54**	**151**	PN	**Pn**	**01 46 55.7**	**+0.6**
ANTB	**Antalya**	**2.54**	**151**	*e*Pn	**Pn**	**01 46 55.7**	**+0.6**
SIGR	**SIGRI**	**2.54**	**273**	PN	**Pn**	**01 46 56.6**	**+1.5**
SIGR	**SIGRI**	**2.54**	**273**	*e*Pn	**Pn**	**01 46 55.6**	**+0.5**
SIGR	**SIGRI**	**2.54**	**273**	P	**Pn**	**01 46 55.6**	**+0.5**
SIGR	**SIGRI**	**2.54**	**273**	P	**Pn**	**01 46 55.6**	**+0.5**
SIGR	**SIGRI**	**2.54**	**273**	*e*Pn	**Pn**	**01 46 56.6**	**+1.5**
GOKC	**Gokceada-Canak**	**2.69**	**294**	PN	**Pn**	**01 46 58.4**	**+1.2**
GOKC	**Gokceada-Canak**	**2.69**	**294**	*e*Pn	**Pn**	**01 46 58.4**	**+1.2**
DAT	**Datca**	**2.70**	**207**	PN	**Pn**	**01 46 57.8**	**+0.4**
DAT	**Datca**	**2.70**	**207**	*e*Pn	**Pn**	**01 46 57.8**	**+0.4**
GADA	**Gvkgeada**	**2.70**	**294**	PN	**Pn**	**01 46 58.5**	**+1.1**
GADA	**Gvkgeada**	**2.70**	**294**	*e*Pn	**Pn**	**01 46 58.0**	**+0.6**
GADA	**Gvkgeada**	**2.70**	**294**	P	**Pn**	**01 46 58.0**	**+0.6**
GADA	**Gvkgeada**	**2.70**	**294**	P	**Pn**	**01 46 58.0**	**+0.6**
GADA	**Gvkgeada**	**2.70**	**294**	*e*Pn	**Pn**	**01 46 58.5**	**+1.1**
LADK	**Ladik-KONYA**	**2.70**	**109**	PN	**Pn**	**01 46 57.8**	**+0.3**
LADK	**Ladik-KONYA**	**2.70**	**109**	*e*Pn	**Pn**	**01 46 57.8**	**+0.3**
PHSR	**Pinarhisar**	**2.77**	**334**	PN	**

KNT	Kendrikon	5.18 295	eP	Pn	01 47 32.9	+1.4
KNT	Kendrikon	5.18 295	P	Pn	01 47 32.9	+1.4
LIT	Litokhoron	5.21 283	ePn	Pn	01 47 33.1	+1.2
LIT	Litokhoron	5.21 283	P	Pn	01 47 33.1	+1.2
LIT	Litokhoron	5.21 283	eP	Pn	01 47 33.1	+1.2
LIT	Litokhoron	5.21 283	P	Pn	01 47 33.1	+1.2
AGG	Agios Georgios	5.29 271	ePn	Pn	01 47 34.7	+1.7
AGG	Agios Georgios	5.29 271	ePn	Pn	01 47 34.7	+1.7
ZIMR		5.33 329	⇓iP	Pn	01 47 34.7	+1.3
ZIMR		5.33 329	S	Sn	01 48 35.8	+1.2
TIRR	Tirgusor	5.34 355	⇓iP	Pn	01 47 34.6	+1.0
TIRR	Tirgusor	5.34 355	ePn	Pn	01 47 34.1	+0.6
TIRR			eSn	Sn	01 48 29.3	-5.7
TIRR	Tirgusor	5.34 355	eP	Pn	01 47 34.2	+0.6
TIRR			e		01 48 29.3	
TIRR	Tirgusor	5.34 355	ePn	Pn	01 47 34.2	+0.6
TIRR	Tirgusor	5.34 355	⇓iP	Pn	01 47 34.6	+1.0
TIRR			eSn	Sn	01 48 29.3	-5.7
TIRR			S	Sn	01 48 32.2	-2.8
CSS	Mathiatis	5.36 140	ePn	Pn	01 47 32.6	-1.3
CSS	Mathiatis	5.36 140	Pn	Pn	01 47 31.8	-2.1
CSS			Sn	Sn	01 48 31.0	-4.4
CSS	Mathiatis	5.36 140	ePn	Pn	01 47 32.6	-1.3
VAM	Vamos	5.41 228	P	Pn	01 47 38.6	+4.0
VAM	Vamos	5.41 228	P	Pn	01 47 38.6	+4.0
GRG	Griva	5.47 292	P	Pn	01 47 37.6	+2.2
GRG			pmax	pmax		
	comp=Z,75nm,0.8s					
GRG	Griva	5.47 292	P	Pn	01 47 37.6	+2.2
	comp=Z,75nm,0.8s					
VAY	Valandovo	5.47 296	ePn	Pn	01 47 37.3	+1.9
VAY	Valandovo	5.47 296	P	Pn	01 47 37.3	+1.9
VAY	Valandovo	5.47 296	i Pn	Pn	01 47 37.2	+1.9
VAY	Valandovo	5.47 296	eP	Pn	01 47 37.3	+1.9
VAY	Valandovo	5.47 296	P	Pn	01 47 37.3	+1.9
TLB	Topalu	5.50 352	⇓iP	Pn	01 47 37.0	+1.2
SGRR	Singureni	5.60 336	⇓iP	Pn	01 47 38.3	+1.1
HARR	Harsova	5.62 351	⇓iP	Pn	01 47 38.6	+1.2
AMRR	Amara	5.63 347	⇓iP	Pn	01 47 39.6	+2.1
ANX	Ano Chora	5.65 267	P	Pn	01 47 39.6	+1.6
ANX	Ano Chora	5.65 267	P	Pn	01 47 39.6	+1.6
VTS	Vitosha	5.66 309	⇓iP	Pn	01 47 39.8	+1.7
VTS	Vitosha	5.66 309	ePn	Pn	01 47 39.5	+1.4
VTS			eSn	Sn	01 48 38.9	-4.1
VTS	Vitosha	5.66 309	P	Pn	01 47 39.6	+1.5
VTS	Vitosha	5.66 309	eP	Pn	01 47 39.5	+1.4
VTS			e		01 48 38.9	
VTS	Vitosha	5.66 309	ePn	Pn	01 47 39.5	+1.4
VTS	Vitosha	5.66 309	⇓iP	Pn	01 47 39.8	+1.7
VTS			eSn	Sn	01 48 38.9	-4.1
LAKA	Lakka	5.66 263	ePn	Pn	01 47 39.8	+1.7
LAKA	Lakka	5.66 263	P	Pn	01 47 39.8	+1.7
LAKA	Lakka	5.66 263	P	Pn	01 47 39.8	+1.7
KZN	Kozani	5.79 284	P	Pn	01 47 42.0	+2.1
KZN	Kozani	5.79 284	P	Pn	01 47 42.0	+2.1
STIP	Stip	5.88 298	i Pn	Pn	01 47 39.9	-1.1
SULR		5.94 340	⇑iP	Pn	01 47 43.3	+1.6
PGOR	Pogoanele	5.98 345	⇓iP	Pn	01 47 45.2	+2.8
ITM	Ithomi	6.00 253	ePn	Pn	01 47 44.5	+1.8
ITM	Ithomi	6.00 253	P	Pn	01 47 44.5	+1.8
ITM	Ithomi	6.00 253	P	Pn	01 47 44.5	+1.8
TLCR		6.05 358	⇓iP	Pn	01 47 44.8	+1.5
KPRO	Kipourio	6.05 280	P	Pn	01 47 45.9	+2.4
KPRO	Kipourio	6.05 280	P	Pn	01 47 45.9	+2.4
CFR	Carcaliu	6.08 353	⇓iP	Pn	01 47 44.4	+0.7
CFR	Carcaliu	6.08 353	P	Pn	01 47 44.1	+0.4
CFR			pmax	pmax		
	comp=Z,82nm,0.7s					
CFR	Carcaliu	6.08 353	P	Pn	01 47 44.1	+0.4
	comp=Z,82nm,0.7s					
FNA	Florina	6.18 288	ePn	Pn	01 47 47.4	+2.2
FNA	Florina	6.18 288	eP	Pn	01 47 47.4	+2.2
FNA	Florina	6.18 288	ePn	Pn	01 47 47.4	+2.2
HUMR	Humele	6.21 331	⇑iP	Pn	01 47 46.4	+0.8
PDO	Prodromos	6.22 268	P	Pn	01 47 49.3	+3.6
PDO	Prodromos	6.22 268	P	Pn	01 47 49.3	+3.6
DSL	Palaion Diasel	6.24 272	ePn	Pn	01 47 49.0	+3.0
DSL	Palaion Diasel	6.24 272	P	Pn	01 47 49.0	+3.0
DSL	Palaion Diasel	6.24 272	P	Pn	01 47 49.0	+3.0
PENT	Pentalofos	6.25 282	P	Pn	01 47 48.4	+2.2
PENT	Pentalofos	6.25 282	P	Pn	01 47 48.4	+2.2
BIA	Bitola	6.27 290	ePn	Pn	01 47 48.7	+2.2
BIA	Bitola	6.27 290	P	Pn	01 47 48.7	+2.2
BIA	Bitola	6.27 290	i Pn	Pn	01 47 49.0	+2.6
BIA	Bitola	6.27 290	P	Pn	01 47 48.7	+2.2
ISR	Istrita	6.28 343	⇓iP	Pn	01 47 48.9	+2.4
ISR	Istrita	6.28 343	P	Pn	01 47 48.5	+2.0
ISR			pmax	pmax		
	comp=Z,171nm,0.8s					
ISR	Istrita	6.28 343	P	Pn	01 47 48.5	+2.0
	comp=Z,171nm,0.8s					
SECR		6.32 340	⇓iP	Pn	01 47 49.2	+2.2
SEV	Sevastopol'	6.38 31	i P	Pn	01 47 46.4	-1.4
SEV			eS	Sn	01 48 55.2	-5.3
SEV	Sevastopol'	6.38 31	i P	Pn	01 47 46.4	-1.4
SEV			eS	Sn	01 48 55.2	-5.3
GIUM	Giurgiulesti	6.38 354	⇑iP	Pn	01 47 50.3	+2.5
JAN	Janina	6.43 277	ePn	Pn	01 47 51.1	+2.5
JAN	Janina	6.43 277	P	Pn	01 47 51.1	+2.5
JAN	Janina	6.43 277	eP	Pn	01 47 51.1	+2.5
JAN	Janina	6.43 277	P	Pn	01 47 51.1	+2.5
GRER		6.44 346	⇓iP	Pn	01 47 51.7	+3.0
SKO	Skopje	6.50 298	i Pn	Pn	01 47 50.2	+0.6
YAL	Yalta	6.53 33	eP	Pn	01 47 50.3	+0.4
YAL			eS	Sn	01 49 01.2	-3.1
YAL	Yalta	6.53 33	eP	Pn	01 47 50.3	+0.4
YAL			eS	Sn	01 49 01.2	-3.1
CRAR	CRAIOVA	6.54 324	⇑iP	Pn	01 47 51.5	+1.5
KBN	Korca	6.58 286	i PN	Pn	01 47 53.1	+2.4
LKD2	Lefkada island	6.61 270	ePn	Pn	01 47 55.1	+4.0
LKD2	Lefkada island	6.61 270	P	Pn	01 47 55.1	+4.0
LKD2	Lefkada island	6.61 270	P	Pn	01 47 55.1	+4.0
OHR	Ohrid	6.68 290	i Pn	Pn	01 47 52.5	+0.4
PETR	Petresti	6.73 349	⇑iP	Pn	01 47 54.6	+2.0
MLR	Muntele Rosu	6.77 341	Pn	Pn	01 47 54.7	+1.3
	comp=Z,1.5nm,0.3s,baz=166,slow=2.2,SNR=119					
MLR	Muntele Rosu	6.77 341	⇓iP	Pn	01 47 55.3	+1.9
MLR	Muntele Rosu	6.77 341	ePn	Pn	01 47 54.5	+1.1
MLR	Muntele Rosu	6.77 341	ePn	Pn	01 47 54.5	+1.1
MLR	Muntele Rosu	6.77 341	⇓iP	Pn	01 47 55.3	+1.9
MTUR	Matau	6.79 335	⇑iP	Pn	01 47 55.3	+1.7
ALU	Alushta	6.79 34	eP	Pn	01 47 52.1	-1.4
ALU			eS	Sn	01 49 06.1	-4.6
ALU	Alushta	6.79 34	eP	Pn	01 47 52.1	-1.4
ALU			eS	Sn	01 49 06.1	-4.6
SIM	Simferopol'	6.89 31	eP	Pn	01 47 55.9	+1.0
SIM			eS	Sn	01 49 10.0	-3.2
SIM			pmax	pmax		
	comp=Z,207nm,0.3s					
SIM			smax	smax		
	comp=E,351nm,0.8s					
SIM	Simferopol'	6.89 31	eP	Pn	01 47 55.9	+1.0
	comp=E,207nm,0.3s					
SIM			eS	Sn	01 49 10.0	-3.2
SGD	Sagiada	6.91 277	P	Pn	01 47 58.3	+3.2
SGD	Sagiada	6.91 277	P	Pn	01 47 58.3	+3.2
PLOR	Plostina	6.95 346	⇓iP	Pn	01 47 57.5	+1.7
PLOR	Plostina	6.95 346	P	Pn	01 47 57.5	+1.7
PLOR	Plostina	6.95 346	⇓iP	Pn	01 47 57.5	+1.7
VRI	Vrincioaia	6.95 346	⇑iP	Pn	01 47 57.6	+1.8
VRI	Vrincioaia	6.95 346	P	Pn	01 47 57.0	+1.2
VRI			pmax	pmax		
	comp=Z,2μm,1.3s					
VRI	Vrincioaia	6.95 346	P	Pn	01 47 57.0	+1.2
	comp=Z,2μm,1.3s					
VOIR		6.98 336	⇓iP	Pn	01 47 57.7	+1.5
VOIR		6.98 336	P	Pn	01 47 57.1	+0.9
VOIR			pmax	pmax		
	comp=Z,77nm,0.9s					
VOIR		6.98 336	P	Pn	01 47 57.1	+0.9
	comp=Z,77nm,0.9s					
PHP	Peshkopia	7.10 294	i PN	Pn	01 47 59.5	+1.7
SUDU	Sudak	7.22 35	eP	Pn	01 47 59.0	-0.4
SUDU			eS	Sn	01 49 19.7	-1.5
SUDU	Sudak	7.22 35	eP	Pn	01 47 59.0	-0.4
SUDU			eS	Sn	01 49 19.7	-1.5
HWQ	Hawqa	7.32 129	eP	Pn	01 48 01.1	+0.2
DOPR	Dopca	7.36 339	⇑iP	Pn	01 48 03.3	+1.9
DOPR	Dopca	7.36 339	S	Sn	01 49 25.3	+0.6
TIR	Tirane	7.42 290	⇑iP	Pn	01 48 06.7	+4.5
TIR	Tirane	7.42 290	ePn	Pn	01 48 05.0	+2.8
TIR	Tirane	7.42 290	i PN	Pn	01 48 06.6	+4.4
TIR	Tirane	7.42 290	eP	Pn	01 48 05.0	+2.8
TIR	Tirane	7.42 290	ePn	Pn	01 48 05.0	+2.8
LOT	Lotru	7.45 330	⇓iP	Pn	01 48 04.2	+1.5
LOT	Lotru	7.45 330	S	Sn	01 49 25.5	-1.6
FEO	Feodosiya	7.50 36	eP	Pn	01 48 03.5	+0.3
FEO			eS	Sn	01 49 26.2	-1.8
FEO	Feodosiya	7.50 36	eP	Pn	01 48 03.5	+0.3
FEO			eS	Sn	01 49 26.2	-1.8
DQRL	Deir Qamar	7.51 134	eP	Pn	01 48 03.5	0.0
VLO	Vlora	7.53 283	i PN	Pn	01 48 12.1	+8.4
TESR	Tescani	7.59 347	⇑iP	Pn	01 48 04.5	0.0
BCI	Bajram Curri	7.59 298	i PN	Pn	01 48 06.6	+2.0
PUK	Puka	7.60 295	i PN	Pn	01 48 06.6	+1.8
PVY	Plav	7.76 299	ePn	Pn	01 48 08.7	+1.8
PVY			eSn	Sn	01 49 33.8	-0.9
PVY	Plav	7.76 299	ePn	Pn	01 48 08.7	+1.8
PVY			eSn	Sn	01 49 33.8	-0.9
HNTI	Hanita	7.78 139	Pn	Pn	01 48 06.7	-0.4
HNTI			Sn	Sn	01 49 32.1	-2.9
MILM	Milestii Mici	7.78 358	⇑iP	Pn	01 48 08.4	+1.3
MDB	Medias	7.82 335	⇓iP	Pn	01 48 09.7	+2.0
MDB	Medias	7.82 335	P	Pn	01 48 09.6	+1.9
MDB	Medias	7.82 335	P	Pn	01 48 09.6	+1.9
KIS	Kishinev	7.86 358	⇑iP	Pn	01 48 08.0	-0.2
KIS			eS	Sn	01 49 38.0	+1.1
KIS			eLi		01 49 59.0	
KIS			eLg1		01 50 16.0	
KIS			eLg2		01 50 31.0	
KIS			eRg	Rg	01 51 11.0	
KIS			LRM	MLR	01 51 38.0	
	comp=Z,2μm,12.0s					
KIS	Kishinev	7.86 358	⇑iP	Pn	01 48 09.4	+1.2
KIS	Kishinev	7.86 358	⇑iP	Pn	01 48 08.0	-0.2
KIS			eS	Sn	01 49 38.0	+1.1
KIS			MLR	MLR		
	comp=N,1μm,12.0s					
KIS			MLR	MLR		
	comp=Z,2μm,12.0s					
KIS			MLR	MLR		
	comp=Z,2μm,12.0s					
KIS	Kishinev	7.86 358	⇑iP	Pn	01 48 08.0	-0.2
KIS			eS	Sn	01 49 38.0	+1.1
	comp=Z,2μm,12.0s					
SHBL	Chebaa	7.87 135	eP	Pn	01 48 08.2	-0.3
MDVR	Moldovita	7.89 318	⇓iP	Pn	01 48 09.1	+0.4
MDVR	Moldovita	7.89 318	S	Sn	01 49 36.0	-1.8
BEY	Berane	7.91 301	ePn	Pn	01 48 10.5	+1.5
BEY			eSn	Sn	01 49 37.5	-1.0
IVA	Berane	7.91 301	ePn	Pn	01 48 10.5	+1.5
IVA			eSn	Sn	01 49 37.5	-1.0
KSDI	Kefar Szold	7.94 136	Pn	Pn	01 48 09.1	-0.3
MMA0B	Mount Meron ar	7.95 138	Pn	Pn	01 48 09.2	-0.3
MMAI	Mount Meron Ar	7.95 138	Pn	Pn	01 48 09.6	+0.1
	comp=Z,12nm,0.3s,baz=323,slow=12,SNR=92					
MMAI			Sn	Sn	01 49 35.4	-3.9
	comp=Z,6.3nm,0.3s,baz=304,slow=24,SNR=6.6					
JOSR	Joseni	8.01 342	⇓iP	Pn	01 48 11.5	+1.2
ULC	Ulcinj	8.03 294	⇑iPn	Pn	01 48 12.8	+2.2
ULC			eSn	Sn	01 49 41.6	+0.2
ULC	Ulcinj	8.03 294	⇑iPn	Pn	01 48 12.8	+2.2
ULC			eSn	Sn	01 49 41.6	+0.2
OFRI	'Ofer	8.05 142	Pn	Pn	01 48 11.0	+0.1
IAS	Iasi	8.13 352	⇑iP	Pn	01 48 13.4	+1.5
DRME	Dracevica, Mon	8.15 295	⇓iPn	Pn	01 48 14.5	+2.4
DRME			eSn	Sn	01 49 43.8	-0.3
DRME	Dracevica, Mon	8.15 295	⇓iPn	Pn	01 48 14.5	+2.4
DRME			eSn	Sn	01 49 43.8	-0.3
DEV	Deva	8.15 328	S	Sn	01 49 44.0	-0.2
DEV	Deva	8.15 328	P	Pn	01 48 14.2	+2.0
DEV			S	Sn	01 49 44.0	-0.2
DEV			pmax	pmax		
	comp=Z,111nm,0.9s					
DEV	Deva	8.15 328	P	Pn	01 48 14.2	+2.0
	comp=Z,111nm,0.9s					
DEV			S	Sn	01 49 44.0	-0.2
KOME	Kolasin	8.16 300	⇑iPn	Pn	01 48 14.2	+1.8
KOME			eSn	Sn	01 49 44.2	-0.3
KOME	Kolasin	8.16 300	⇑iPn	Pn	01 48 14.2	+1.8
KOME			eSn	Sn	01 49 44.2	-0.3
PDG	Podgorica	8.18 297	⇑iP	Pn	01 48 16.3	+3.8
PDG	Podgorica	8.18 297	⇓iPn	Pn	01 48 14.8	+2.3
PDG			eSn	Sn	01 49 44.9	+0.1
TTG	Podgorica	8.18 297	⇓iPn	Pn	01 48 14.8	+2.3
TTG			eSn	Sn	01 49 44.9	+0.1
TTG	Podgorica	8.18 297	ePn	Pn	01 48 16.0	+3.5
TTG	Podgorica	8.18 297	eP	Pn	01 48 16.0	+3.5
TTG	Podgorica	8.18 297	ePn	Pn	01 48 16.0	+3.5
KSHT	Keshet	8.19 137	Pn	Pn	01 48 14.3	+1.5
KERU	Kerch	8.22 39	eP	Pb	01 48 31.0	-5.4
KERU	Kerch	8.22 39	eP	Pb	01 48 31.0	-5.4
ANN	Anapa	8.38 45	eP	Pn	01 48 10.7	-4.6
ANN			eS	Sn	01 49 43.7	-6.1
ANN			pmax	pmax		
	comp=Z,9.0nm,1.2s					
ANN	Anapa	8.38 45	eP	Pn	01 48 10.7	-4.6
	comp=Z,9.0nm,1.2s					
ANN			eS	Sn	01 49 43.7	-6.1
BUM	Brajici-Budva	8.39 295	ePn	Pn	01 48 18.1	+2.6
BUM			eSn	Sn	01 49 49.5	-0.6
BUM	Brajici-Budva	8.39 295	ePn	Pn	01 48 18.1	+2.6
BUM			eSn	Sn	01 49 49.5	-0.6
SLTI	Sal'it	8.40 143	Pn	Pn	01 48 14.5	-1.1
MMLI	Mount Malkishu	8.42 141	Pn	Pn	01 48 15.5	-0.4
MMLI			Sn	Sn	01 49 48.4	-2.4
DIVS	Divibare	8.45 309	ePn	Pn	01 48 17.1	+0.8
DIVS	Divibare	8.45 309	ePn	Pn	01 48 17.1	+0.8
CEME	Cevo	8.45 297	⇓iPn	Pn	01 48 20.0	+3.6
CEME			eSn	Sn	01 51 3.3	-0.4
CEME	Cevo	8.45 297	⇓iPn	Pn	01 48 20.0	+3.6
CEME			eSn	Sn	01 51 3.3	-0.4
NKY	Niksic	8.50 299	ePn	Pn	01 48 19.1	+2.0
NKY			eSn	Sn	01 49 52.2	-0.6
NKY	Niksic	8.50 299	P	Pn	01 48 19.0	+2.0
NKY			S	Sn	01 49 52.0	-0.8
NKME	Niksic	8.51 298	⇓iPn	Pn	01 48 19.2	+2.1
NKME			eSn	Sn	01 49 52.2	-0.8
NKME	Niksic	8.51 298	⇓iPn	Pn	01 48 19.2	+2.1
NKME			eSn	Sn	01 49 52.2	-0.8
BZS	Buzias	8.53 322	⇑iP	Pn	01 48 17.3	-0.1
BZS	Buzias	8.53 322	P	Pn	01 48 17.0	-0.3
BZS			pmax	pmax		
	comp=Z,36nm,0.7s					
BZS	Buzias	8.53 322	⇑iP	Pn	01 48 17.3	-0.1
BEO	Beograd	8.58 314	ePn	Pn	01 48 17.7	-0.3
BEO	Beograd	8.58 314	eP	Pn	01 48 17.7	-0.3
CJR	Cluj-Napoca	8.59 334	⇓iP	Pn	01 48 20.3	+2.0
CJR	Cluj-Napoca	8.59 334	P	Pn	01 48 20.2	+2.0
CJR	Cluj-Napoca	8.59 334	P	Pn	01 48 20.2	+2.0
BANR	Banloc	8.60 319	⇑iP	Pn	01 48 20.0	+1.7
HMDT	Nahal Hemdat	8.62 141	Pn	Pn	01 48 18.5	-0.1
HMDT			Sn	Sn	01 49 52.9	-2.8
ARCR	ARCALIA	8.67 338	⇑iP	Pn	01 48 20.6	+1.2
BBLS	Lazići	8.69 306	ePn	Pn	01 48 21.2	+1.6
UPM	Unac-Piva	8.71 301	⇓iPn	Pn	01 48 21.9	+1.9
UPM			eSn	Sn	01 49 57.0	-1.2
UPM	Unac-Piva	8.71 301	⇓iPn	Pn	01 48 21.9	+1.9
UPM			eSn	Sn	01 49 57.0	-1.2
HCY	Herceg Novi	8.71 296	ePn	Pn	01 48 21.2	+1.3
HCY			eSn	Sn	01 49 57.0	-1.0
HCY	Herceg Novi	8.71 296	P	Pn	01 48 22.6	+2.7
HCY			S	Sn	01 49 56.0	-2.0
HCY	Herceg Novi	8.71 296	ePn	Pn	01 48 21.2	+1.3
HCY	Herceg Novi	8.71 296	P	Pn	01 48 22.6	+2.7
HCY			S	Sn	01 49 56.0	-2.0
HCY			eSn	Sn	01 49 57.0	-1.0
BRY	Bratogost	8.84 299	⇑iPn	Pn	01 48 23.9	+2.1
BRY			eSn	Sn	01 50 00.3	-1.0
BRY	Bratogost	8.84 299	P	Pn	01 48 24.5	+2.7
BRY			S	Sn	01 50 01.0	-0.3
BRY	Bratogost	8.84 299	⇑iPn	Pn	01 48 23.9	+2.1
BRY	Bratogost	8.84 299	P	Pn	01 48 24.5	+2.7
BRY			eSn	Sn	01 50 00.3	-1.0
BRY			S	Sn	01 50 01.0	-0.3
BURAR	Bucovina Array	8.94 343	⇑iP	Pn	01 48 24.1	+1.1
AMAZ	Amatzia	8.94 146	Pn	Pn	01 48 22.1	-1.0
BUR04	Bucovina Ar. S	8.94 343	ePn	Pn	01 48 23.6	+0.5
BUR04	Bucovina Ar. S	8.94 343	ePn	Pn	01 48 23.6	+0.5
TEKS	Tekeris	8.97 310	ePn	Pn	01 48 24.5	+1.1
DRGR		8.97 331	⇑iP	Pn	01 48 23.2	-0.3
DRGR		8.97 331	P	Pn	01 48 23.1	-0.4
DRGR		8.97 331	⇑iP	Pn	01 48 23.2	-0.3
SIRR	Siria	8.99 325	⇓iP	Pn	01 48 23.6	-0.2
SORM	Soroca	9.01 357	⇑iP	Pn	01 48 24.0	0.0
SORM	Soroca	9.01 357	P	Pn	01 48 23.9	0.0
SORM	Soroca	9.01 357	⇑iP	Pn	01 48 24.0	0.0
DSI	Dead Sea	9.11 144	Pn	Pn	01 48 25.1	-0.3
DSI			Sn	Sn	01 50 05.2	-2.7
YTIR	Yattir	9.17 146	Pn	Pn	01 48 26.3	0.0
KZIT	Kziot	9.28 151	Pn	Pn	01 48 26.9	-0.8
MZDA	Masada	9.33 145	Pn	Pn	01 48 28.0	-0.3
ASF	Jabal al Asfar	9.39 135	Pn	Pn	01 48 30.5	+1.2
	comp=Z,0.8nm,0.3s,baz=217,slow=9.0,SNR=7.7					
BMR	Baia Mare	9.46 336	⇓iP	Pn	01 48 31.0	+0.9
BMR	Baia Mare	9.46 336	P	Pn	01 48 32.1	+2.0
BMR			pmax	pmax		
	comp=Z,62nm,0.8s					
BMR	Baia Mare	9.46 336	⇓iP	Pn	01 48 31.0	+0.9
TIP	Timpagrande	9.61 274	⇓iP	Pn	01 48 33.8	+1.6
TIP	Timpagrande	9.61 274	ePn	Pn	01 48 33.8	+1.6
TIP	Timpagrande	9.61 274	ePn	Pn	01 48 33.8	+1.6
MATE	Matera	9.67 283	⇑iP	Pn	01 48 34.8	+1.9
PRNI	Paran	10.01 149	Pn	Pn	01 48 36.6	-1.1
TRPA	Tarpa	10.17 334	⇑iP	Pn	01 48 41.3	+1.5
CUC	Castrocucco	10.31 279	ePn	Pn	01 48 44.2	+2.3
CUC	Castrocucco	10.31 279	ePn	Pn	01 48 44.2	+2.3
MBRI	Mt Berech	10.47 151	Pn	Pn	01 48 42.7	-1.4
BLY	Banja Luka	10.51 306	⇓iP	Pn	01 48 46.5	+2.0
BLY	Banja Luka	10.51 306	ePn	Pn	01 48 46.5	+2.0
BLY			eSn	Sn	01 50 42.0	0.0
BLY	Banja Luka	10.51 306	ePn	Pn	01 48 46.5	+2.0
BLY			eSn	Sn	01 50 42.0	0.0
EIL	Elat	10.60 151	Pn	Pn	01 48 47.9	+2.1
	comp=Z,0.6nm,0.3s,baz=351,slow=12,SNR=13					
UZH	Uzhgorod	10.69 335	eP	Pn	01 48 50.2	+3.3
UZH	Uzhgorod	10.69 335	eP	Pn	01 48 50.2	+3.3
PSZ	Piszkesteto	11.03 326	⇓ePn	Pn	01 48 55.5	+3.8
PSZ			eSn	Sn	01 50 52.7	-2.3
PSZ	Piszkesteto	11.03 326	ePn	Pn	01 48 54.2	+2.5
PSZ	Piszkesteto	11.03 326	eP	Pn	01 48 54.2	+2.5
PSZ	Piszkesteto	11.03 326	eP	Pn	01 48 54.2	+2.5
CRVS	Cervenica-Dubn	11.21 333	eP	Pn	01 48 55.0	+1.0
CRVS	Cervenica-Dubn	11.21 333	ePN	Pn	01 48 55.0	+1.0
CRVS	Cervenica-Dubn	11.21 333	eP	Pn	01 48 55.0	+1.0
KECS	Kecovo	11.23 329	eP	Pn	01 48 55.0	+0.7
KECS	Kecovo	11.23 329	ePN	Pn	01 48 55.0	+0.7
KECS	Kecovo	11.23 329	eP	Pn	01 48 55.0	+0.7
KIV	Kislovodsk	11.24 60	ePn	Pn	01 48 57.5	+2.9
KIV	Kislovodsk	11.24 60	eP	Pn	01 48 55.9	+1.3
KIV			pmax	pmax		
	comp=Z,31nm,1.1s					
KIV			MLR	MLR		
	comp=Z,152nm,10.0s					
KIV	Kislovodsk	11.24 60	eP	Pn	01 48 55.9	+1.3
	comp=Z,152nm,10.0s					
KIV	Kislovodsk	11.24 60	ePn	Pn	01 48 57.5	+2.9
KVAR	Kislovodsk Arr	11.25 60	Pn	Pn	01 48 57.9	+3.2
	baz=63,slow=9.8,SNR=8.7					
LVV	L'vov	11.28 343	eP	Pn	01 48 56.4	+1.4
LVV			eS	Sn	01 51 06.0	+5.2
LVV			MLR	MLR		
	comp=E,400nm,13.0s					
LVV			MLR	MLR		
	comp=N,800nm,12.0s					
LVV			MLR	MLR		
	comp=Z,900nm,12.0s					
LVV	L'vov	11.28 343	eP	Pn	01 48 56.4	+1.4
LVV			eS	Sn	01 51 06.0	+5.2
KBZ	Khabaz	11.31 62	Pn	Pn	01 48 58.2	+2.9
	comp=Z,0.2nm,0.3s,baz=241,slow=12,SNR=3.6					
UDBI	Udbina	11.32 303	P	Pn	01 48 58.1	+2.4
KWP	Kalwaria Pacla	11.45 339	ePn	Pn	01 48 58.7	+1.4
KWP	Kalwaria Pacla	11.45 339	P	Pn	01 48 59.2	+1.9
KWP	Kalwaria Pacla	11.45 339	ePn	Pn	01 48 58.7	+1.4
KWP	Kalwaria Pacla	11.45 339	P	Pn	01 48 59.2	+1.9
AK11	Malin Array Si	11.54 0	ePn	Pn	01 48 59.1	+0.6
AK11	Malin Array Si	11.54 0	ePn	Pn	01 48 59.1	+0.6
KIEV	Kiev	11.55 0	ePn	Pn	01 48 58.7	0.0
KIEV			eSn	Sn	01 51 14.6	+7.0
KIEV	Kiev	11.55 0	i P	Pn	01 48 59.3	+0.5
KIEV	Kiev	11.55 0	ePn	Pn	01 48 58.7	0.0
KIEV	Kiev	11.55 0	i P	Pn	01 48 59.3	+0.5
KIEV			eSn	Sn	01 51 14.6	+7.0
AKASG	Malin Array Be	11.56 0	Pn	Pn	01 48 57.0	-1.9

KBA	Koelnbreinsper	13.98	310	Pn	Pn	01 49 33.3 +1.2
	comp=Z,0.5nm,0.3s					
KBA	Koelnbreinsper	13.98	310	P	P	01 49 36.9 -3.2
	comp=Z,20nm,1.1s					
VSR	Storozhevoye	13.98	27	eP	Pn	01 49 31.2 -0.7
VSR				eS	Sn	01 52 05.6 -1.3
VSR				pmax	pmax	
	comp=Z,20nm,0.9s					
VSR				smax	smax	
	comp=E,40nm,1.0s					
ABTA	Abfaltersbach	14.33	307	ePn	Pn	01 49 38.8 +2.0
	comp=E,7.2nm,0.8s					
ABTA	Abfaltersbach	14.33	307	Pn	Pn	01 49 38.8 +2.0
	comp=E,7.2nm,0.8s					
VORR	Voronezh	14.38	26	eP	Pn	01 49 38.0 +0.7
VORR				pmax	pmax	
	comp=Z,250nm,1.2s					
VORR	Voronezh	14.38	26	eP	Pn	01 49 38.0 +0.7
	comp=Z,250nm,1.2s					
DPC	Dobruska-Polom	14.41	325	eP	P	01 49 42.2 -2.6
DPC				epP	Pn	01 49 48.9 +11
DPC				AMS	AMS	01 56 20.0
	comp=Z,800nm,15.4s					
DPC	Dobruska-Polom	14.41	325	eP	P	01 49 42.2 -2.6
DPC				MLR	MLR	
	comp=Z,800nm,15.4s					
UPC	Upice	14.66	325	AMS	AMS	01 56 30.0
	comp=Z,900nm,10.5s					
GEA0	GERESS Array S	14.71	316	ePn	Pn	01 49 42.2 +0.2
GEA0	GERESS Array S	14.71	316	ePn	Pn	01 49 42.2 +0.2
GEC2	GERESS Array S	14.72	316	ePn	Pn	01 49 43.6 +1.5
GEC2	GERESS Array S	14.72	316	eP	Pn	01 49 43.6 +1.5
GEC2	GERESS Array S	14.72	316	ePn	Pn	01 49 43.6 +1.5
GERES	GERESS Array B	14.72	316	Pn	Pn	01 49 42.8 +0.7
	comp=Z,0.2nm,0.3s,baz=119,slow=14,SNR=20					
GOPC	GO Pecny, Ondr	14.82	321	AMS	AMS	01 56 30.0
	comp=Z,600nm,13.1s					
VLC	Villacollemand	14.87	296	ePn	Pn	01 49 46.4 +2.2
VLC	Villacollemand	14.87	296	ePn	Pn	01 49 46.4 +2.2
KHC	Kasperske Hory	14.95	317	eP	Pn	01 49 46.0 +0.8
KHC				epP	P	01 49 54.1 +3.3
KHC				AMS	AMS	01 55 50.0
	comp=Z,800nm,12.0s					
KHC	Kasperske Hory	14.95	317	ePn	Pn	01 49 44.6 -0.6
KHC	Kasperske Hory	14.95	317	eP	Pn	01 49 44.6 -0.6
KHC	Kasperske Hory	14.95	317	ePn	Pn	01 49 44.6 -0.6
PRU	Pruhonice	14.99	321	AMS	AMS	01 56 40.0
	comp=Z,600nm,18.1s					
WTTA	Wattenberg	15.10	308	ePn	Pn	01 49 49.8 +2.5
	comp=Z,4.3nm,0.5s					
WTTA	Wattenberg	15.10	308	Pn	Pn	01 49 49.8 +2.5
	comp=Z,4.3nm,0.5s					
PRA	Prague	15.10	321	AMS	AMS	01 57 00.0
	comp=Z,600nm,11.3s					
WET	Wettzell	15.33	316	P	P	01 49 56.3 +1.3
WET				pmax	pmax	
	comp=Z,19nm,1.0s					
WET	Wettzell	15.33	316	P	P	01 49 56.3 +1.3
	comp=Z,19nm,1.0s					
MICGM	Minsk	15.39	357	e	Pn	01 49 45.0 -5.9
MNK	Minsk	15.39	357	eP	Pn	01 49 45.0 -5.9
MNK	Minsk	15.39	357	eP	Pn	01 49 45.0 -5.9
SUW	Suwalki	15.42	347	ePn	P	01 49 56.6 +0.8
	comp=Z,63nm,0.9s					
SUW	Suwalki	15.42	347	eP	P	01 49 56.6 +0.8
SUW				pmax	pmax	
	comp=Z,63nm,0.9s					
MOTA	Moosalm	15.46	308	eP	P	01 49 54.7 -1.8
	comp=Z,5.0nm,0.5s,SNR=8.1					
FETA	Feichten	15.56	306	eP	P	01 49 57.0 -0.6
	comp=Z,17nm,1.0s,SNR=26					
PGF	Pioggiola	15.60	289	eP	P	01 49 56.8 -1.3
PGF				pmax	pmax	
	comp=Z,33nm,1.2s					
PGF	Pioggiola	15.60	289	eP	P	01 49 56.8 -1.3
	comp=Z,33nm,1.2s					
FUORN	Ofenpass-Fuorn	15.70	305	ePn	P	01 49 59.2 -0.1
	comp=Z,28nm,1.1s					
FUORN	Ofenpass-Fuorn	15.70	305	ePn	P	01 49 59.2 -0.1
	comp=Z,28nm,1.1s					
RETA	Reutte	15.73	308	i pP	P	01 50 01.1 +1.6
	comp=Z,5.4nm,0.6s,SNR=11					
NACGM	Naroch	15.85	355	eP	Pn	01 49 56.0 -0.9
NACGM				eS	Sn	01 52 51.0 -1.3
BRG	Berggiesshubel	15.87	323	eP	P	01 50 02.4 +1.5
	comp=Z,10nm,1.0s					
BRG	Berggiesshubel	15.87	323	eP	P	01 50 02.4 +1.5
BRG				pmax	pmax	
	comp=Z,10.0nm,1.0s					
BRG	Berggiesshubel	15.87	323	eP	P	01 50 02.4 +1.5
	comp=Z,10.0nm,1.0s					
KEST	Kesra	16.07	264	Pn	Pn	01 50 00.6 +0.6
	comp=Z,0.1nm,0.3s,baz=29,slow=3.0,SNR=2.6					
KEST	Kesra	16.07	264	ePn	Pn	01 50 01.4 +1.4
	comp=Z,9.5nm,0.8s					
KEST	Kesra	16.07	264	ePn	Pn	01 50 01.4 +1.4
	comp=Z,9.5nm,0.8s					
DAVA	Damuels	16.19	306	i pP	pP	01 50 06.8 -1.4
	comp=Z,15nm,0.9s,SNR=17					
NKC	Novy Kostel	16.20	319	P	P	01 50 07.0 +2.4
NKC				pmax	pmax	
	comp=Z,4.0nm,0.9s					
TUE	Stuetta	16.23	303	ePn	P	01 50 05.8 +0.6
	comp=Z,24nm,0.9s					
TUE	Stuetta	16.23	303	ePn	P	01 50 05.8 +0.6
	comp=Z,24nm,0.9s					
IDID	Didziasalis	16.26	355	eP	Pn	01 50 00.5 -1.7
IDID				IAmb	IAmb	01 50 10.0
	comp=Z,13nm,0.9s					
IDID	Didziasalis	16.26	355	eP	Pn	01 50 00.5 -1.7
IIGN	Ignalina	16.34	354	eP	Pn	01 50 01.4 -1.7
IIGN				IAmb	IAmb	01 50 08.0
	comp=Z,15nm,1.0s					
GRF	Grafenberg Arr	16.54	315	P	P	01 50 10.6 +2.3
GRF				pmax	pmax	
	comp=Z,17nm,1.4s					
GRFO	Grafenberg	16.54	315	ePn	P	01 50 09.3 +1.0
	comp=Z,16nm,1.1s					
GRFO	Grafenberg	16.54	315	eP	P	01 50 09.3 +1.0
GRFO				pmax	pmax	
	comp=Z,17nm,1.1s					
GRFO	Grafenberg	16.54	315	eP	P	01 50 09.3 +1.0
	comp=Z,17nm,1.1s					
ISAL	Salakas	16.56	354	eP	Pn	01 50 04.0 -2.0
ISAL				IAmb	IAmb	01 50 09.5
	comp=Z,17nm,1.2s					
CLL	Collm	16.60	322	eP	Pn	01 50 06.0 -0.5
CLL				esP	P	01 50 09.0 0.0
	comp=Z,33nm,2.1s					
CLL				i PP	sP	01 50 14.5 +0.4
	comp=Z,16nm,1.1s					
CLL	Collm	16.60	322	ePn	P	01 50 10.4 +1.5
	comp=Z,12nm,1.0s					
CLL	Collm	16.60	322	eP	Pn	01 50 06.0 -0.5
CLL	Collm	16.60	322	eP	Pn	01 50 06.0 -0.5
CLL	Collm	16.60	322	ePn	P	01 50 10.4 +1.5
	comp=Z,12nm,1.0s					
KLNR	Kaliningrad	16.61	342	i P	Pn	01 50 06.6 +0.1
KLNR				pmax	pmax	
	comp=Z,58nm,0.9s					
THTN	Thala	16.64	264	ePn	P	01 50 10.6 +1.0
	comp=Z,14nm,1.0s					
THTN	Thala	16.64	264	ePn	P	01 50 10.6 +1.0
	comp=Z,14nm,1.0s					
IZAR	Zarasai	16.73	354	eP	Pn	01 50 06.4 -1.7
IZAR				IAmb	IAmb	01 50 11.5
	comp=Z,8.0nm,0.8s					
IZAR	Zarasai	16.73	354	eP	Pn	01 50 06.4 -1.7
OBN	Obninsk	16.75	15	ePn	Pn	01 50 08.7 +0.4
	comp=Z,67nm,0.9s					
OBN	Obninsk	16.75	15	d iP	Pn	01 50 08.9 +0.6
OBN				eS	Sn	01 53 13.5 -0.6
OBN	Obninsk	16.75	15	ePn	Pn	01 50 08.7 +0.4
	comp=Z,67nm,0.9s					
OBN				eS	Sn	01 53 13.5 -0.6
SAOF	Saorge	16.84	294	P	P	01 50 13.9 +2.2
SAOF				pmax	pmax	
	comp=Z,16nm,1.1s					
SAOF	Saorge	16.84	294	P	P	01 50 13.9 +2.2
	comp=Z,16nm,1.1s					
MOX	Moxa	16.87	319	P	P	01 50 15.8 +3.8
MOX				pmax	pmax	
	comp=Z,7.0nm,1.3s					
MOX	Moxa	16.87	319	P	P	01 50 15.8 +3.8
	comp=Z,7.0nm,1.3s					
SBF	Sospel	16.91	293	eP	Pn	01 50 11.5 +1.0
SBF				pmax	pmax	
	comp=Z,16nm,0.8s					
SBF	Sospel	16.91	293	eP	Pn	01 50 11.5 +1.0
	comp=Z,16nm,0.8s					
ISO	Isola	17.23	294	P	P	01 50 18.8 +2.7
ISO	Isola	17.23	294	P	P	01 50 18.8 +2.7
STU	Stuttgart	17.24	310	ePn	P	01 50 18.1 +2.1
	comp=Z,42nm,1.2s					
STU	Stuttgart	17.24	310	ePn	P	01 50 18.1 +2.1
	comp=Z,42nm,1.2s					
SENIN	Lac Senin/Sane	17.55	301	ePn	P	01 50 20.8 +1.0
	comp=Z,22nm,1.0s					
MOS	Moscow	17.55	16	eP	Pn	01 50 17.5 -0.9
MOS				e		01 53 40.0
MOS				pmax	pmax	
	comp=Z,100nm,1.5s					
MOS				pmax	pmax	
	comp=Z,73nm,1.0s					
MOS	Moscow	17.55	16	eP	Pn	01 50 17.5 -0.9
	comp=Z,73nm,1.0s					
MOS				eS	S	01 53 40.0 -1.4
BFO	Black Forest	17.57	308	ePn	Pn	01 50 17.6 -1.1
	comp=Z,39nm,1.1s					
BFO	Black Forest	17.57	308	eP	Pn	01 50 17.6 -1.1
BFO				pmax	pmax	
	comp=Z,39nm,1.1s					
BFO	Black Forest	17.57	308	ePn	Pn	01 50 17.6 -1.1
	comp=Z,39nm,1.1s					
BNI	Bardonecchia	17.65	297	ePn	P	01 50 22.9 +2.1
	comp=Z,27nm,1.1s					
BNI	Bardonecchia	17.65	297	eP	P	01 50 22.9 +2.1
BNI				pmax	pmax	
	comp=Z,27nm,1.1s					
BNI	Bardonecchia	17.65	297	eP	P	01 50 22.9 +2.1
	comp=Z,27nm,1.1s					
LPG	La Plagne	17.70	298	eP	P	01 50 24.1 +2.6
LPG				pmax	pmax	
	comp=Z,44nm,1.1s					
LPL	La Plagne	17.71	298	eP	P	01 50 23.0 +1.4
LPL				pmax	pmax	
	comp=Z,72nm,1.4s					
LPL	La Plagne	17.71	298	eP	P	01 50 23.0 +1.4
	comp=Z,72nm,1.4s					
ORIF	Oris-en-Rattie	18.18	296	eP	P	01 50 27.7 +1.1
ORIF				pmax	pmax	
	comp=Z,22nm,0.8s					
ORIF	Oris-en-Rattie	18.18	296	eP	P	01 50 27.7 +1.1
	comp=Z,22nm,0.8s					
ECH	Echery	18.25	307	eP	Pn	01 50 26.4 -0.7
	comp=Z,30nm,1.1s					
ECH	Echery	18.25	307	eP	Pn	01 50 26.4 -0.7
ECH				pmax	pmax	
	comp=Z,30nm,1.1s					
ECH	Echery	18.25	307	eP	Pn	01 50 26.4 -0.7
	comp=Z,30nm,1.1s					
CDF	Champ du Feu	18.25	308	eP	P	01 50 28.6 +1.3
CDF	Champ du Feu	18.25	308	eP	P	01 50 28.6 +1.3
HINF	Hinterlafeld	18.29	306	eP	Pn	01 50 27.8 +0.1
HINF	Hinterlafeld	18.29	306	eP	Pn	01 50 27.8 +0.1
CABF	La Chapelle	18.42	301	eP	Pn	01 50 29.8 +0.5
CABF				pmax	pmax	
	comp=Z,57nm,1.2s					
CABF	La Chapelle	18.42	301	eP	Pn	01 50 29.8 +0.5
	comp=Z,57nm,1.2s					
SSB	Saint Sauveur	19.18	297	eP	Pn	01 50 40.1 +1.7
	comp=Z,9.3nm,0.9s					
SSB	Saint Sauveur	19.18	297	eP	Pn	01 50 40.1 +1.7
SSB				pmax	pmax	
	comp=Z,9.0nm,0.9s					
SSB	Saint Sauveur	19.18	297	eP	Pn	01 50 40.1 +1.7
	comp=Z,9.3nm,0.9s					
VSU	Vasula	19.40	356	c iP	P	01 50 39.7 0.0
VSU				pmax	pmax	
	comp=Z,104nm,1.0s					
WLF	Walferdange	19.42	310	⇑P	Pn	01 50 41.4 +0.1
	comp=Z,21nm,1.2s					
WLF	Walferdange	19.42	310	eP	Pn	01 50 41.4 +0.1
	comp=Z,28nm,1.0s					
WLF	Walferdange	19.42	310	eP	Pn	01 50 41.4 +0.1
WLF				pmax	pmax	
	comp=Z,28nm,1.0s					
WLF	Walferdange	19.42	310	eP	Pn	01 50 41.4 +0.1
	comp=Z,28nm,1.0s					
MEM	Membach	19.91	313	⇑P	Pn	01 50 47.8 +0.8
	comp=Z,27nm,1.3s					
MEM	Membach	19.91	313	eP	Pn	01 50 47.8 +0.8
MEM				pmax	pmax	
	comp=Z,39nm,1.1s					
MEM	Membach	19.91	313	eP	Pn	01 50 47.8 +0.8
	comp=Z,39nm,1.1s					
HGN	Heimansgroeve	20.02	313	eP	Pn	01 50 48.4 0.0
	comp=Z,44nm,0.9s					
HGN				epP	sP	01 50 52.9 +1.1
WTSB	Winterswijk	20.12	317	eP	Pn	01 50 49.1 -0.4
	comp=Z,75nm,1.4s					
BEBN	Eben Emael	20.18	313	⇑P	Pn	01 50 51.0 +0.8
BEBN	Eben Emael	20.18	313	P	Pn	01 50 50.9 +0.7
BCLA	Clavier	20.23	312	⇑P	Pn	01 50 51.2 +0.3
	comp=Z,29nm,1.4s					
AVF	Avril sur Loir	20.29	301	eP	P	01 50 50.1 +0.5
AVF				pmax	pmax	
	comp=Z,27nm,1.0s					
GIVF	Givet	20.38	310	eP	P	01 50 50.8 +0.2
GIVF				pmax	pmax	
	comp=Z,24nm,1.0s					
WIT	Witteveen	20.64	319	eP	Pn	01 50 56.8 +1.3
WIT	Witteveen	20.64	319	eP	Pn	01 50 56.8 +1.3
PUL	Pulkovo	20.66	2	ceP	Pn	01 50 55.1 -0.7
PUL				pmax	pmax	
	comp=Z,97nm,0.9s					
CAF	Calviac	20.86	295	eP	P	01 50 57.2 +1.3
CAF	Calviac	20.86	295	eP	P	01 50 57.2 +1.3
RAYN	Ar Rayn	20.88	133	eP	Pn	01 50 58.1 -0.5
	comp=Z,16nm,1.0s					
RAYN	Ar Rayn	20.88	133	i P	P	01 50 56.2 +0.1
	SNR=20					
RAYN	Ar Rayn	20.88	133	P	P	01 50 56.2 +0.1
	SNR=20					
UCC	Uccle	20.94	312	⇑P	Pn	01 50 58.7 -0.4
UCC	Uccle	20.94	312	eP	Pn	01 50 59.2 +0.1
	comp=Z,18nm,0.9s					
UCC	Uccle	20.94	312	eP	Pn	01 50 59.2 +0.1
UCC				pmax	pmax	
	comp=Z,18nm,0.9s					
RJF	Les Rejaudoux	21.29	296	eP	P	01 51 01.3 +0.8
RJF				pmax	pmax	
	comp=Z,25nm,1.2s					
RJF	Les Rejaudoux	21.29	296	eP	P	01 51 01.3 +0.8
	comp=Z,25nm,1.2s					
MUD	Monsted U'grnd	21.77	329	i P	P	01 51 06.8 +1.5
	comp=Z,65nm,1.0s					
MUD	Monsted U'grnd	21.77	329	i P	P	01 51 06.8 +1.5
MUD				pmax	pmax	
	comp=Z,65nm,1.0s					
FIA0	FINESS Array S	22.41	356	eP	P	01 51 11.7 -0.6
FIA0	FINESS Array S	22.41	356	eP	P	01 51 11.7 -0.6
FINES	FINESS Array B	22.41	356	P	P	01 51 11.7 -0.6
	comp=Z,19nm,0.8s,baz=165,slow=16,SNR=42					
FIA1	FINESS Array S	22.41	356	eP	P	01 51 11.7 -0.5
GEYT	Alibeck	22.67	84	P	P	01 51 15.9 +0.6
	comp=Z,42nm,0.6s,baz=294,slow=11,SNR=37					
GYA0B	ALIBECK ARRAY	22.67	84	eP	P	01 51 17.6 +2.3
	comp=Z,21nm,0.9s					
GYA0B	ALIBECK ARRAY	22.67	84	eP	P	01 51 17.6 +2.3
	comp=Z,21nm,0.9s					
KLMR	Klimovskoe	22.69	13	eP	P	01 51 12.6 -2.6
KLMR				eS	S	01 55 22.2 -0.8
KLMR				pmax	pmax	
	comp=Z,100nm,1.2s					
KLMR	Klimovskoe	22.69	13	eP	P	01 51 12.6 -2.6
KLMR				AMP		01 51 20.9
KLMR				eS	S	01 55 22.2 -0.8
KLMR				LQ	LQ	01 57 53.7
HFS	Hagfors	23.16	340	P	P	01 51 19.8 -0.3
	comp=Z,5.7nm,0.6s,baz=148,slow=8.7,SNR=14					
AKTO	Aktyubinsk	23.26	51	P	P	01 51 20.6 -0.7
	comp=Z,12nm,0.8s,baz=248,slow=10.0,SNR=31					
GRR	Gorron	23.42	303	eP	P	01 51 21.6 -1.2
GRR	Gorron	23.42	303	eP	P	01 51 21.6 -1.2
KONO	Kongsberg	23.97	335	i P	P	01 51 29.2 +1.2
KONO				pmax	pmax	
	comp=Z,15nm,1.0s					
ABKAR	Akbulak array	24.14	55	eP	P	01 51 30.1 +0.3
NC602	NORSAR Array S	24.25	339	eP	P	01 51 30.2 -0.4
NC405	NORSAR Array S	24.51	339	eP	P	01 51 32.2 -0.9
NAO01	NORSAR Array S	24.52	338	eP	P	01 51 33.9 +0.7
NB201	NORSAR Array S	24.57	339	eP	P	01 51 32.8 -0.9
NB2	NORSAR Subarra	24.59	339	P	P	01 51 33.0 -0.8
	comp=Z,10nm,0.8s,baz=143,slow=9.3					
NB200	NORSAR Array S	24.59	339	eP	P	01 51 33.5 -0.3
NOA	NORSAR Array B	24.59	339	P	P	01 51 33.5 -0.3
NC303	NORSAR Array S	24.70	339	eP	P	01 51 34.9 +0.1
PRGR	Permogore	24.71	19	eP	P	01 51 34.0 -0.8
PRGR				pmax	pmax	
	comp=Z,26nm,0.8s					
NC204	NORSAR Array S	24.91	339	eP	P	01 51 37.2 +0.5
ESDC	Sonseca Array	25.50	282	P	P	01 51 42.1 -0.1
	comp=Z,2.4nm,1.0s,baz=72,slow=9.7,SNR=6.8					
ESDC				LR	LR	02 03 26.7
	comp=Z,227nm,18.1s,baz=335,slow=41					
TMCR	Tamitsa	25.61	9	eP	P	01 51 42.7 -0.2
TMCR				pmax	pmax	
	comp=Z,44nm,1.1s					
TAM	Tamanrasset	25.87	238	eP	P	01 51 47.9 +2.1
	comp=Z,5.1nm,1.0s					
TAM	Tamanrasset	25.87	238	eP	P	01 51 47.9 +2.1
	comp=Z,5.1nm,1.0s					
ARU	Arti	25.98	39	P	P	01 51 45.6 -0.8
	comp=Z,16nm,0.7s,baz=241,slow=8.3,SNR=31					
ARU				LR	LR	02 04 18.7
	comp=Z,157nm,20.5s,baz=216,slow=42					
ARU	Arti	25.98	39	eP	P	01 51 46.0 -0.4
	comp=Z,33nm,0.9s					
ARU	Arti	25.98	39	d iP	P	01 51 45.9 -0.4
ARU						01 52 21.0
ARU				S	S	01 56 18.1 +1.7
ARU				SS	SnSn	01 57 13.4 +0.1
ARU				pmax	pmax	
	comp=Z,63nm,1.7s					
ARU				MLR	MLR	
	comp=Z,219nm,18.0s					
SHME	Shamm	26.13	112	P	P	01 51 48.7 +0.7
BANOM	Banah	26.32	112	P	P	01 51 51.1 +1.3
BANOM	Banah	26.32	112	P	P	01 51 51.1 +1.3
ASUD	Al Ashush, Dub	26.42	115	P	P	01 51 51.8 +1.1
ASUD	Al Ashush, Dub	26.42	115	P	P	01 51 51.8 +1.1
NAZ	Nazwa, Dubai	26.43	114	P	P	01 51 51.5 +0.8
NAZ	Nazwa, Dubai	26.43	114	P	P	01 51 51.5 +0.8
UOSS	Minazif	26.84	114	P	P	01 51 56.4 +1.9
UOSS	Minazif	26.84	114	P	P	01 51 56.4 +1.9
HATD	Hatta, Dubai	26.86	114	P	P	01 51 55.3 +0.6
HATD	Hatta, Dubai	26.86	114	P	P	01 51 55.3 +0.6
EKA	Eskdalemuir Ar	26.93	318	P	P	01 51 53.7 -1.3
	comp=Z,3.2nm,0.6s,baz=114,slow=9.1,SNR=22					
ESK	Eskdalemuir	26.94	318	i P	P	01 51 55.0 -0.1
SVE	Sverdlovsk	27.18	39	eP	P	01 51 57.4 +0.2
SVE				pmax	pmax	
	comp=Z,40nm,1.6s					
SOHO	SOHO	27.58	115	i P	P	01 52 01.3 +0.2
	SNR=6.3					
SOHO	SOHO	27.58	115	P	P	01 52 01.3 +0.2
	SNR=6.3					
ARA0	ARCESS Array S	30.52	357	eP	P	01 52 25.6 -1.2
ARCES	ARCESS Array B	30.52	357	P	P	01 52 25.6 -1.2
	comp=Z,9.7nm,0.7s,baz=171,slow=8.2,SNR=31					
KK31	Karatay Array	31.20	69	eP	P	01 52 33.8 +0.7
KK31	Karatay Array	31.20	69	eP	P	01 52 33.8 +0.7
KKAR	Karatay Array	31.20	69	eP	P	01 52 33.8 +0.7
KKAR	Karatay Array	31.20	69	eP	P	01 52 33.8 +0.7
BRVK	Borovoye	31.28	50	eP	P	01 52 34.6 +1.0
	comp=Z,2.7nm,0.8s					
BRVK	Borovoye	31.28	50	ceP	P	01 52 33.9 +0.2
BRVK				pmax	pmax	
	comp=Z,8.0nm,1.7s					
BVAR	Borovoye Array	31.34	50	P	P	01 52 34.8 +0.6
	comp=Z,1.0nm,0.8s,baz=261,slow=5.9,SNR=4.6					
FRU	Bishkek	34.22	69	eP	P	01 53 01.0 +1.4
FRU				e		01 55 34.0
FRU				pmax	pmax	
	comp=Z,50nm,1.7s					
TOA1	Torodi Ar. Sit	35.46	231	eP	P	01 53 10.8 +0.4
TOA0	Torodi Ar. Sit	35.46	231	eP	P	01 53 11.0 +0.5
TORD	Torodi Ar. Bea	35.46	231	P	P	01 53 10.8 +0.4
	comp=Z,2.1nm,0.7s,baz=35,slow=8.5,SNR=17					
NRN	Naryn	35.49	71	eP	P	01 53 09.4 -1.5
	comp=Z,8.3nm,1.0s					
NRN	Naryn	35.49	71	eP	P	01 53 09.4 -1.5
NRN				pmax	pmax	
	comp=Z,8.0nm,1.0s					
NRN	Naryn	35.49	71	eP	P	01 53 09.4 -1.5
	comp=Z,8.3nm,1.0s					
NIL	Nilore	35.67	85	eP	P	01 53 13.7 +1.5
	comp=Z,21nm,0.9s					
NIL	Nilore	35.67	85	eP	P	01 53 13.7 +1.5
NIL				pmax	pmax	
	comp=Z,21nm,0.9s					
NIL	Nilore	35.67	85	eP	P	01 53 13.7 +1.5
	comp=Z,21nm,0.9s					
KURBB	Kurchatov Arra	36.20	55	P	P	01 53 16.4 -0.1
	comp=Z,3.8nm,0.7s,baz=278,slow=8.8,SNR=28					
KURK	Kurchatov	36.26	55	eP	P	01 53 17.5 +0.6
	comp=Z,7.2nm,1.0s					
KURK	Kurchatov	36.26	55	ceP	P	01 53 16.8 -0.1
KURK				pmax	pmax	
	comp=Z,10.0nm,1.2s					
KOWA	Kowa	38.09	239	P	P	01 53 33.1 +0.3
	comp=Z,1.5nm,0.7s,baz=35,slow=10.0,SNR=2.9					
MAKZ	Makanchi	38.79	61	eP	P	01 53 39.2 +0.7
	comp=Z,6.0nm,1.3s					
MAKZ	Makanchi	38.79	61	eP	P	01 53 39.2 +0.7
MAKZ				pmax	pmax	
	comp=Z,6.0nm,1.3s					
MK31	Makanchi Array	39.00	61	eP	P	01 53 40.6 +0.3
MK31	Makanchi Array	39.00	61	eP	P	01 53 40.6 +0.3
MK32	Makanchi Array	39.00	61	eP	P	01 53 40.2 -0.1
MKAR	Makanchi Array	39.00	61	P	P	01 53 40.2 -0.1
	comp=Z,4.9nm,0.8s,baz=261,slow=6.7,SNR=39					
MKAR	Makanchi Array	39.00	61	eP	P	01 53 40.6 +0.3
	comp=Z,30nm,0.6s					
MKAR	Makanchi Array	39.00	61	ceP	P	01 53 40.7 +0.4
MKAR				pmax	pmax	
	comp=Z,5.0nm,0.8s					
MK01	Makanchi Array	39.01	61	eP	P	01 53 40.5 +0.1
NVS	Novosibirsk	39.06	48	eP	P	01 53 40.6 +0.1
NVS				e		01 55 12.8
NVS				pmax	pmax	
	comp=Z,14nm,0.8s					
SPA0	Spitsbergen Ar	39.51	356	eP	P	01 53 44.2 +0.2
SPITS	Spitsbergen Ar	39.51	356	P	P	01 53 44.2 +0.2
	comp=Z,6.6nm,0.8s,baz=150,slow=12,SNR=5.5					
ZAA0	Zalesovo Array	39.99	49	eP	P	01 53 48.1 -0.3
	comp=Z,6.8nm,0.8s					
ZAA1	Zalesovo Array	39.99	49	eP	P	01 53 48.3 -0.1
ZALV	Zalesovo Beam	39.99	49	P	P	01 53 48.3 -0.1
	comp=Z,6.0nm,0.7s,baz=267,slow=8.9,SNR=26					
ZALV	Zalesovo Beam	39.99	49	eP	P	01 53 48.2 -0.2
KBS	Kingsbay	40.50	355	eP	P	01 53 53.2 +1.0
	comp=Z,15nm,0.7s					
KBS	Kingsbay	40.50	355	eP	P	01 53 53.2 +1.0
KBS

SUMG					pmax	pmax		
	comp=Z,10.0nm,0.9s							
GKN	**Gorkha**	**46.92**	**86**	*e*P	**P**		**01 54 44.2**	**-0.6**
	comp=Z,43nm,1.2s							
GUN	**Gumba**	**47.93**	**86**	*e*P	**P**		**01 54 52.5**	**-0.4**
	comp=Z,34nm,1.1s							
JIRN	**Jiri**	**48.29**	**86**	*e*P	**P**		**01 54 55.2**	**-0.5**
MOY	**Mondy**	**50.02**	**51**	*e*P	**P**		**01 55 09.8**	**+1.5**
TLY	**Talaya**	**51.60**	**50**	*e*P	**P**		**01 55 21.8**	**+1.7**
TLY					pmax	pmax		
	comp=Z,11nm,1.0s							
ZAK	**Zakamensk**	**51.77**	**52**	*e*P	**P**		**01 55 21.9**	**+0.4**
ZAK					pmax	pmax		
	comp=Z,8.0nm,1.1s							
GTA	**Gaotai**	**53.36**	**66**	*e*P	**P**		**01 55 34.1**	**+0.6**
GTA					pP	pP	01 55 37.4	-0.1
GTA					sP	sP	01 55 40.3	+1.3
GTA					pmax	pmax		
	comp=Z,9.0nm,0.9s							
SONA0	**Songino Array**	**54.55**	**54**	*e*P	**P**		**01 55 41.7**	**-0.3**
SONA1	**Songino Array**	**54.55**	**54**	*e*P	**P**		**01 55 41.6**	**-0.4**
SONM	**Songino Array**	**54.55**	**54**	P	**P**		**01 55 41.7**	**-0.3**
	comp=Z,5.2nm,0.9s,baz=284,slow=8.1,SNR=24							
ULN	**Ulaanbaatar**	**54.95**	**54**	*e*P	**P**		**01 55 45.5**	**+0.5**
	comp=Z,7.2nm,0.9s							
ULN	**Ulaanbaatar**	**54.95**	**54**	*ce*P	**P**		**01 55 44.7**	**-0.3**
ULN					pmax	pmax		
	comp=Z,6.0nm,0.7s							
PALK	**Pallekele**	**56.05**	**110**	LR	LR		02 22 57.3	
	comp=Z,168nm,18.4s,baz=262,slow=39							
TIXI	**Tiksi**	**56.32**	**22**	*e*P	**P**		**01 55 54.1**	**-0.1**
	comp=Z,3.3nm,0.8s							
TIXI	**Tiksi**	**56.32**	**22**	*ce*P	**P**		**01 55 52.9**	**-1.3**
TIXI					pmax	pmax		
	comp=Z,4.0nm,1.2s							
LZH	**Lanzhou**	**57.68**	**68**	*e*P	**P**		**01 56 05.1**	**+0.5**
LZH					pP	sP	01 56 11.3	+1.1
LZH					sP	pP	01 56 14.0	+5.4
LZH					*e*PP	**PP**	**01 58 14.3**	**+2.0**
LZH					pmax	pmax		
	comp=Z,15nm,1.3s							
LZH					pmax	pmax		
	comp=Z,49nm,7.5s							
LZH					LR	LR		
	comp=N,110nm,15.2s							
LZH					LR	LR		
	comp=E,110nm,16.3s							
LZH					LR	LR		
	comp=Z,140nm,18.5s							
CD2	**Chengdu**	**60.10**	**73**	P	**P**		**01 56 19.8**	**-1.6**
CD2					pmax	pmax		
	comp=Z,6.0nm,0.6s							
HHC	**Hu-ho-hao-te**	**60.84**	**59**	*e*P	**P**		**01 56 26.8**	**+0.4**
HHC					pmax	pmax		
	comp=Z,28nm,0.9s							
HHC					pmax	pmax		
	comp=Z,180nm,6.3s							
HIA	**Hailar**	**62.00**	**48**	*i* P	**P**		**01 56 34.6**	**+0.7**
HIA					pmax	pmax		
	comp=Z,8.0nm,1.1s							
SCHQ	**Schefferville**	**62.22**	**319**	P	**P**		**01 56 33.7**	**-1.7**
	comp=Z,2.3nm,0.3s,baz=59,slow=2.8,SNR=4.0							
SCHQ	**Schefferville**	**62.22**	**319**	*e*P	**P**		**01 56 33.7**	**-1.7**
	comp=Z,7.6nm,0.8s							
CM31	**Chiang Mai Arr**	**63.09**	**88**	*e*P	**P**		**01 56 41.0**	**-0.7**
CMAR	**Chiang Mai Arr**	**63.09**	**88**	P	**P**		**01 56 41.0**	**-0.7**
	comp=Z,2.2nm,0.3s,baz=302,slow=7.2,SNR=4.7							
BOSA	**Boshof**	**67.50**	**184**	P	**P**		**01 57 10.6**	**+0.7**
	comp=Z,4.5nm,1.0s,baz=346,slow=8.1,SNR=4.5							
BILL	**Bilibino**	**68.41**	**16**	*ce*P	**P**		**01 57 14.1**	**-1.1**
BILL				*e*			01 57 39.1	
BILL				*e*PPP	PPP		02 01 22.0	
BILL				*e*SS	SS		02 10 42.4	+4.0
BILL				pmax	pmax			
	comp=Z,7.0nm,1.2s							
BILL				MLR	MLR			
	comp=Z,130nm,21.0s							
SEY	**Seymchan**	**68.66**	**24**	*ce*P	**P**		**01 57 15.7**	**-1.1**
USRK	**Ussuriysk Ar.**	**71.81**	**48**	P	**P**		**01 57 35.8**	**-0.7**
	comp=Z,5.2nm,0.9s,baz=317,slow=3.7,SNR=7.4							
KS01	**Wonju Array Si**	**73.35**	**55**	*e*P	**P**		**01 57 44.7**	**-1.0**
KS15	**Wonju Array Si**	**73.36**	**55**	*e*P	**P**		**01 57 45.5**	**-0.3**
KSAR	**Wonju Array Be**	**73.36**	**55**	P	**P**		**01 57 45.5**	**-0.3**
KSAR	**Wonju Array Be**	**73.36**	**55**	P	**P**		**01 57 45.5**	**-0.3**
KSRS	**Korea Array**	**73.38**	**55**	P	**P**		**01 57 45.5**	**-0.4**
	comp=Z,11nm,0.8s,baz=306,slow=5.5,SNR=32							
YKA	**Yellowknife Ar**	**74.59**	**343**	P	**P**		**01 57 52.0**	**-0.5**
	comp=Z,1.2nm,0.8s,baz=36,slow=5.8,SNR=7.0							
MLY	**Manley**	**76.17**	**360**	*e*P	**P**		**01 58 02.8**	**+1.2**
	comp=Z,5.8nm,1.0s							
MDM	**Murphy Dome**	**76.22**	**359**	*e*P	**P**		**01 58 02.9**	**+1.0**
	comp=Z,9.2nm,1.0s							
ILAR	**Eielson Array**	**76.38**	**358**	P	**P**		**01 58 02.2**	**-0.5**
	comp=Z,0.6nm,1.0s,baz=13,slow=4.4,SNR=6.3							
ILB	**Eielson Array**	**76.38**	**358**	*e*P	**P**		**01 58 02.2**	**-0.5**
CCB	**Clear Creek Bu**	**76.52**	**359**	*e*P	**P**		**01 58 03.7**	**+0.1**
	comp=Z,5.2nm,1.2s							
WRH	**Wood River Hil**	**76.70**	**359**	*e*P	**P**		**01 58 05.0**	**+0.4**
	comp=Z,8.2nm,1.0s							
DAWY	**Dawson**	**76.73**	**355**	*e*P	**P**		**01 58 05.5**	**+0.7**
	comp=Z,6.3nm,1.2s							
BPAW	**Bear Paw Mtn.**	**77.10**	**0**	*e*P	**P**		**01 58 07.1**	**+0.2**
	comp=Z,4.4nm,1.0s							
DHY	**Denali Highway**	**78.09**	**358**	*e*P	**P**		**01 58 13.5**	**+0.9**
	comp=Z,5.1nm,0.9s							
SCM	**Sheep Creek Mo**	**79.33**	**358**	*e*P	**P**		**01 58 20.4**	**+1.0**
	comp=Z,20nm,1.2s							
SCM	**Sheep Creek Mo**	**79.33**	**358**	*e*P	**P**		**01 58 20.4**	**+1.0**
SCM					pmax	pmax		
	comp=Z,20nm,1.2s							
SUA	**Susitna One**	**79.75**	**360**	*e*P	**P**		**01 58 22.1**	**+0.4**
	comp=Z,24nm,1.4s							
MAJO	**Matsushiro**	**80.33**	**51**	*e*P	**P**		**01 58 24.4**	**-0.8**
MAJO	**Matsushiro**	**80.33**	**51**	*e*P	**P**		**01 58 24.4**	**-0.8**
MAT	**Matsushiro**	**80.33**	**51**	P	**P**		**01 58 25.5**	**+0.3**
MJAR	**Matsushiro Arr**	**80.33**	**51**	P	**P**		**01 58 24.4**	**-0.8**
	comp=Z,5.9nm,0.8s,baz=307,slow=5.3,SNR=11							
JHJ	**Hachijo jima 2**	**83.59**	**52**	LR	LR		02 37 55.7	
	comp=Z,115nm,20.9s,baz=68,slow=37							
CPCT	**Cooper Cave**	**83.78**	**311**	*e*P	**P**		**01 58 44.0**	**+0.7**
	comp=Z,8.8nm,1.1s							
Y52A	**Lilburn**	**84.61**	**310**	*e*P	**P**		**01 58 48.4**	**+0.9**
	comp=Z,7.0nm,0.9s							
LAO	**LASA Array**	**85.69**	**331**	*e*P	**P**		**01 58 53.8**	**+1.0**
	comp=Z,9.9nm,0.8s							
152A	**Waverly Hall**	**85.84**	**309**	*e*P	**P**		**01 58 54.0**	**+0.4**
	comp=Z,8.6nm,1.0s							
R40A	**Maddies Statio**	**86.03**	**318**	*e*P	**P**		**01 58 54.5**	**0.0**
	comp=Z,12nm,1.4s							
PLAL	**Pickwick Lake**	**86.17**	**313**	*e*P	**P**		**01 58 54.7**	**-0.5**
	comp=Z,9.1nm,1.1s							
PBMO	**Poplar Bluff**	**86.17**	**316**	*e*P	**P**		**01 58 55.0**	**-0.2**
	comp=Z,9.2nm,1.0s							
T42A	**Van Buren**	**86.34**	**316**	*e*P	**P**		**01 58 56.0**	**-0.1**
	comp=Z,10nm,1.3s							
LRAL	**Lakeview Retre**	**86.94**	**311**	*e*P	**P**		**01 58 59.0**	**-0.1**
	comp=Z,8.9nm,1.1s							
FXWY	**Fox Creek**	**90.07**	**332**	*e*P	**P**		**01 59 14.9**	**+0.8**
	comp=Z,4.3nm,1.3s							
TMUT	**Trail Mountain**	**93.90**	**330**	*e*P	**P**		**01 59 29.4**	**-2.5**
	comp=Z,12nm,1.1s							
TXAR	**Lajitas Array**	**98.91**	**320**	P	**P**		**01 59 52.8**	**-1.9**
	comp=Z,0.4nm,0.9s,baz=43,slow=6.8,SNR=4.2							

CSEM ***19*** *01:46:16.9, 40°.54N×21°.59E, h19km, ML1.5/2*
ATH 19 01:46:16.9, 40°.54N×21°.59E, h19km±5km, ML1.5/2, Error ellipse: s-maj=5.0km s-min=1.3km az=24.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZN	**Kozani**	**0.27**	**148**	P	Pb	01 46 22.3	-0.7
KZN				S	Sg	01 46 27.5	+0.2
KZN				AML	AML	01 46 27.8	
	comp=N,427μm,0.2s						
KZN				AML	AML	01 46 28.8	
	comp=E,288μm,0.1s						
KZN	**Kozani**	**0.27**	**148**	P	Pb	01 46 22.7	-0.3
KZN				S	Sg	01 46 27.5	+0.3
FNA	**Florina**	**0.29**	**327**	P	Pg	01 46 23.3	-0.1
FNA				S	Sb	01 46 28.5	+0.4
FNA				AML	AML	01 46 29.1	
	comp=E,147μm,0.3s						
FNA				AML	AML	01 46 29.6	
	comp=N,148μm,0.3s						
FNA	**Florina**	**0.29**	**327**	P	Pg	01 46 23.3	-0.2
FNA				S	Sb	01 46 28.2	+0.2
NEST	**Nestorio**	**0.43**	**254**	P	Pg	01 46 24.8	-0.9
NEST				S	Sg	01 46 31.8	+0.1
NEST	**Nestorio**	**0.43**	**254**	P	Pg	01 46 25.2	-0.5
NEST				S	Sg	01 46 31.8	+0.1
PENT	**Pentalofos**	**0.48**	**225**	P	Pg	01 46 25.8	-0.9
PENT				S	Sb	01 46 34.4	+0.8
PENT	**Pentalofos**	**0.48**	**225**	P	Pg	01 46 26.2	-0.5
PENT				S	Sb	01 46 34.0	+0.5
KPRO	**Kipourio**	**0.60**	**196**	P	Pg	01 46 29.4	+0.4
KPRO	**Kipourio**	**0.60**	**196**	P	Pg	01 46 29.0	+0.1
LIT	**Litokhoron**	**0.82**	**122**	P	Pn	01 46 33.1	-0.2
LIT	**Litokhoron**	**0.82**	**122**	P	Pg	01 46 32.8	0.0

ISCJB ***19*** *01:47:54.0±0.6, 34°.00N±0°.02×25°.19E±0°.02, h16km±4km, mb4.6/73, MS4.0/14, Error ellipse: s-maj=3.9km s-min=2.3km az=35.7*
BJI ***19*** *01:47:54.7, 34°.23N×24°.55E, h37km, mb4.9/20, mB5.2/11, Ms4.9/3, Ms7 4.6/1*
HLW ***19*** *01:47:57.1, 34°.13N×25°.51E, h18km±12km, Md4.3, Ml4.6*
CSEM ***19*** *01:47:58.4±0.1, 34°.11N×25°.19E, h35km, mb4.7/29, Error ellipse: s-maj=4.2km s-min=2.5km az=29.0*
IDC ***19*** *01:47:58.0±3.0, 34°.20N×25°.13E, h30km±21km, mb4.3/25, mb1 4.4/33, mb1mx4.3/61, mbtmp4.5/33, ML4.8/6, MS3.9/16, Ms1 3.9/16, ms1mx3.6/63, Error ellipse: s-maj=13.3km s-min=10.1km az=152.0*
MOS ***19*** *01:47:59.3±1.3, 34°.27N×25°.11E, h49km, mb4.9/20, Error ellipse: s-maj=7.0km s-min=3.5km az=99.3*
NEIC ***19*** *01:48:00.2±0.0, 34°.37N×25°.04E, h40km, mb4.6/35, ML4.2(THE), After ATH.*
ATH ***19*** *01:48:00.3, 34°.37N×25°.04E, h40km±2km, ML3.9/13, Error ellipse: s-maj=4.7km s-min=1.4km az=359.0*
THE ***19*** *01:48:02.1, 34°.32N×25°.07E, h25km±2km, ML4.1/8, Error ellipse: s-maj=2.9km s-min=0.9km az=195.0*
GII ***19*** *01:48:04.8±0.1, 33°.87N×25°.81E, h32km, mb4.6/5, MD4.6/5*
ISC 19 01:47:57.9±0.6, 34°.09N±0°.04×25°.22E±0°.03, h30km±3km, n540, σ1°.73/585, mb4.6/72, MS3.9/14, 3C-4D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.98**	**340**	P	**Pb**	**01 48 16.7**	**+0.3**
SIVA				AML	AML	01 48 39.6	
	comp=N,65194μm,0.5s						
SIVA				AML	AML	01 48 44.9	
SIVA	**Sivas**	**0.98**	**340**	P	**Pn**	**01 48 15.5**	**-0.1**
SIVA				S	**Sn**	**01 48 26.2**	**-2.3**
SIVA	**Sivas**	**0.98**	**340**	P	**Pn**	**01 48 15.5**	**-0.1**
SIVA				S	**Sn**	**01 48 26.2**	**-2.3**
LAST	**Lasithi**	**1.09**	**11**	P	**Pb**	**01 48 18.5**	**+0.3**
LAST				AML	AML	01 48 45.8	
	comp=E,15599μm,0.7s						
LAST				AML	AML	01 48 46.1	
	comp=N,13998μm,0.6s						
LAST	**Lasithi**	**1.09**	**11**	P	**Pb**	**01 48 18.4**	**+0.2**
LAST				S	**Sn**	**01 48 30.2**	**-1.0**
LAST	**Lasithi**	**1.09**	**11**	P	**Pb**	**01 48 17.8**	**-0.4**
LAST				S	**Sn**	**01 48 30.2**	**-1.0**
GVD	**Gavdhos**	**1.20**	**309**	P	**Pb**	**01 48 19.7**	**-0.3**
GVD				AML	AML	01 48 45.9	
	comp=N,21064μm,0.4s						
GVD				AML	AML	01 48 47.6	
	comp=E,22638μm,0.5s						
GVD	**Gavdhos**	**1.20**	**309**	P	**Pn**	**01 48 18.7**	**+0.1**
GVD				S	**Sn**	**01 48 31.7**	**-2.1**
GVD	**Gavdhos**	**1.20**	**309**	P	**Pn**	**01 48 18.7**	**+0.1**
GVD				S	**Sn**	**01 48 31.7**	**-2.1**
NPS	**Neapolis**	**1.21**	**15**	P	**Pb**	**01 48 20.6**	**+0.3**
NPS				AML	AML	01 48 41.6	
	comp=E,12219μm,0.8s						
NPS				AML	AML	01 48 43.3	
	comp=N,10287μm,0.9s						
NPS	**Neapolis**	**1.21**	**15**	P	**Pb**	**01 48 20.5**	**+0.3**
NPS				S	**Sn**	**01 48 33.7**	**-0.5**
NPS	**Neapolis**	**1.21**	**15**	P	**Pb**	**01 48 20.5**	**+0.3**
NPS	**Neapolis**	**1.21**	**15**	P	**Pb**	**01 48 19.9**	**-0.3**
NPS				S	**Sn**	**01 48 33.7**	**-0.5**
IACM	**Heraklion**	**1.22**	**354**	P	**Pb**	**01 48 20.4**	**+0.1**
IACM	**Heraklion**	**1.22**	**354**	P	**Pn**	**01 48 19.4**	**+0.6**
IACM				S	**Sn**	**01 48 32.4**	**-1.9**
IACM	**Heraklion**	**1.22**	**354**	P	**Pn**	**01 48 19.3**	**+0.5**
IACM				S	**Sn**	**01 48 32.4**	**-1.9**
IDI	**Anoyia**	**1.23**	**347**	Pn	**Pn**	**01 48 18.5**	**-0.5**
	comp=N,132nm,0.3s,baz=174,slow=9.4,SNR=155						
IDI				Sn	**Sb**	**01 48 37.1**	**+1.2**
	comp=N,452nm,0.3s,baz=53,slow=19,SNR=9.1						
IDI				LR	LR	01 49 06.6	
	comp=N,6μm,20.0s,baz=114,slow=62						
IDI	**Anoyia**	**1.23**	**347**	‖ *i*P	**Pb**	**01 48 20.2**	**-0.3**
IDI	**Anoyia**	**1.23**	**347**	*e*Pn	**Pn**	**01 48 19.6**	**+0.6**
IDI				*e*Sn	**Sb**	**01 48 37.1**	**+1.2**
IDI	**Anoyia**	**1.23**	**347**	*e*Pn	**Pn**	**01 48 19.6**	**+0.6**
IDI	**Anoyia**	**1.23**	**347**	‖ *i*P	**Pb**	**01 48 20.2**	**-0.3**
IDI				*e*Sn	**Sb**	**01 48 37.1**	**+1.2**
ZKR	**Zakros**	**1.31**	**38**	P	**Pb**	**01 48 22.9**	**+1.1**
ZKR				AML	AML	01 48 55.0	
	comp=N,7131μm,0.6s						
ZKR				AML	AML	01 48 57.9	
	comp=E,18667μm,0.8s						
ZKR	**Zakros**	**1.31**	**38**	P	**Pb**	**01 48 22.6**	**+0.7**
ZKR				S	**Sb**	**01 48 38.9**	**+0.6**
ZKR	**Zakros**	**1.31**	**38**	P	**Pb**	**01 48 22.6**	**+0.7**
VAM	**Vamos**	**1.56**	**328**	P	**Pn**	**01 48 23.7**	**+0.1**
VAM				AML	AML	01 48 59.3	
	comp=E,11529μm,1.1s						
VAM				AML	AML	01 49 06.6	
	comp=N,10265μm,0.7s						
VAM	**Vamos**	**1.56**	**328**	P	**Pn**	**01 48 24.0**	**+0.5**
VAM	**Vamos**	**1.56**	**328**	P	**Pn**	**01 48 24.0**	**+0.5**
VAM	**Vamos**	**1.56**	**328**	P	**Pn**	**01 48 23.2**	**-0.3**
IMMV	**Iera Moni Meta**	**1.71**	**324**	P	**Pn**	**01 48 26.1**	**+0.5**
IMMV				AML	AML	01 49 14.0	
	comp=N,8718μm,0.5s						
IMMV				AML	AML	01 49 14.6	
	comp=E,16366μm,0.8s						
IMMV	**Iera Moni Meta**	**1.71**	**324**	P	**Pn**	**01 48 26.1**	**+0.5**
IMMV	**Iera Moni Meta**	**1.71**	**324**	P	**Pn**	**01 48 25.4**	**-0.1**
KARP	**Karpathos**	**2.16**	**47**	P	**Pb**	**01 48 35.2**	**-1.0**
KARP	**Karpathos**	**2.16**	**47**	*e*Pn	**Pb**	**01 48 35.1**	**-1.2**
KARP	**Karpathos**	**2.16**	**47**	P	**Pb**	**01 48 34.9**	**-1.4**
KARP	**Karpathos**	**2.16**	**47**	P	**Pb**	**01 48 34.9**	**-1.4**
THR9	**Santorini-Faro**	**2.26**	**3**	P	**Pn**	**01 48 34.3**	**+1.1**
THR9	**Santorini-Faro**	**2.26**	**3**	P	**Pn**	**01 48 34.3**	**+1.1**
THR6	**Thira Island,**	**2.27**	**4**	P	**Pn**	**01 48 33.3**	**+0.1**
THR6	**Thira Island,**	**2.27**	**4**	P	**Pn**	**01 48 33.3**	**+0.1**
SAP1	**Santorini-Akro**	**2.27**	**4**	P	**Pn**	**01 48 33.9**	**+0.7**
SAP1	**Santorini-Akro**	**2.27**	**4**	P	**Pn**	**01 48 33.9**	**+0.7**
SANT	**Santorini**	**2.28**	**5**	P	**Pn**	**01 48 33.1**	**-0.4**
SANT	**Santorini**	**2.28**	**5**	*e*Pn	**Pn**	**01 48 34.3**	**+0.8**
SANT	**Santorini**	**2.28**	**5**	P	**Pn**	**01 48 33.4**	**-0.1**
SANT	**Santorini**	**2.28**	**5**	P	**Pn**	**01 48 33.4**	**-0.1**
SANT	**Santorini**	**2.28**	**5**	*e*Pn	**Pn**	**01 48 34.3**	**+0.8**
THT1	**Athinios (Pele**	**2.30**	**4**	P	**Pn**	**01 48 33.5**	**-0.1**
THT1	**Athinios (Pele**	**2.30**	**4**	P	**Pn**	**01 48 33.5**	**-0.1**
THR3	**Thira Island,**	**2.32**	**4**	P	**Pn**	**01 48 34.2**	**+0.3**
THR3	**Thira Island,**	**2.32**	**4**	P	**Pn**	**01 48 34.2**	**+0.3**
THR8	**Santorini-Mono**	**2.32**	**5**	P	**Pn**	**01 48 34.3**	**+0.3**
THR8	**Santorini-Mono**	**2.32**	**5**	P	**Pn**	**01 48 34.3**	**+0.3**
SAP2K	**Karterados**	**2.32**	**4**	P	**Pn**	**01 48 34.0**	**0.0**
THR5	**Thira Island,**	**2.32**	**2**	P	**Pn**	**01 48 34.4**	**+0.4**
THR5	**Thira Island,**	**2.32**	**2**	P	**Pn**	**01 48 34.4**	**+0.4**
THR7	**Fira-Santorini**	**2.33**	**4**	P	**Pn**	**01 48 34.2**	**0.0**
THR7	**Fira-Santorini**	**2.33**	**4**	P	**Pn**	**01 48 34.2**	**0.0**
SAP3	**Santorini-Thir**	**2.34**	**2**	P	**Pn**	**01 48 34.5**	**+0.2**
SAP3	**Santorini-Thir**	**2.34**	**2**	P	**Pn**	**01 48 34.5**	**+0.2**
THT2	**Imerovigli**	**2.34**	**4**	P	**Pn**	**01 48 34.6**	**+0.3**
THT2	**Imerovigli**	**2.34**	**4**	P	**Pn**	**01 48 34.6**	**+0.3**
THR2	**Thira island,**	**2.36**	**4**	P	**Pn**	**01 48 34.3**	**-0.2**
THR2	**Thira island,**	**2.36**	**4**	P	**Pn**	**01 48 34.3**	**-0.2**
ANKY	**Antikythira Is**	**2.37**	**319**	P	**Pn**	**01 48 35.0**	**+0.3**
ANKY				AML	AML	01 49 34.5	
	comp=E,2904μm,0.9s						
ANKY				AML	AML	01 49 37.4	
	comp=N,3500μm,1.1s						
ANKY	**Antikythira Is**	**2.37**	**319**	P	**Pn**	**01 48 35.2**	**+0.5**
ANKY	**Antikythira Is**	**2.37**	**319**	P	**Pn**	**01 48 34.6**	**-0.1**
CMBO	**Columbo, Santo**	**2.38**	**4**	P	**Pn**	**01 48 34.7**	**-0.1**
CMBO	**Columbo, Santo**	**2.38**	**4**	P	**Pn**	**01 48 34.7**	**-0.1**
CMBO	**Columbo, Santo**	**2.38**	**4**	P	**Pn**	**01 48 34.7**	**-0.1**
SLUM	**Salum**	**2.59**	**180**	P	**Pn**	**01 48 39.2**	**+1.5**
	baz=186						
SLUM				AMP		01 49 00.0	
	baz=186						
SLUM				S	**Sn**	**01 49 08.9**	**+0.7**
	baz=186						
SLUM	**Salum**	**2.59**	**180**	P	**Pn**	**01 48 39.2**	**+1.5**
MHLO	**Agia Marina, M**	**2.68**	**346**	P	**Pn**	**01 48 39.0**	**+0.1**
MHLO	**Agia Marina, M**	**2.68**	**346**	P	**Pn**	**01 48 38.8**	**-0.1**
MHLA	**Plaka, Milos I**	**2.73**	**346**	P	**Pn**	**01 48 40.0**	**+0.4**
MHLA	**Plaka, Milos I**	**2.73**	**346**	P	**Pn**	**01 48 39.6**	**0.0**
KYTH	**Kithira**	**2.81**	**321**	P	**Pn**	**01 48 40.9**	**+0.2**
KYTH				AML	AML	01 49 45.9	
	comp=N,1418μm,0.5s						
KYTH				AML	AML	01 49 46.6	
	comp=E,2235μm,0.7s						
KYTH	**Kithira**	**2.81**	**321**	P	**Pn**	**01 48 41.4**	**+0.7**
NISR	**Nisiros**	**2.96**	**31**	P	**Pn**	**01 48 43.5**	**+0.8**
NISR	**Nisiros**	**2.96**	**31**	P	**Pn**	**01 48 44.1**	**+1.4**
APE	**Apeiranthos**	**2.98**	**5**	P	**Pn**	**01 48 42.8**	**-0.4**
APE	**Apeiranthos**	**2.98**	**5**	P	**Pn**	**01 48 43.1**	**0.0**
SERI	**Serifos**	**3.12**	**349**	P	**Pn**	**01 48 44.8**	**-0.2**
SERI	**Serifos**	**3.12**	**349**	P	**Pn**	**01 48 44.8**	**-0.2**
MNVA	**Monemvasia**	**3.15**	**326**	P	**Pn**	**01 48 45.6**	**+0.3**
MNVA	**Monemvasia**	**3.15**	**326**	P	**Pn**	**01 48 45.3**	**0.0**
ARG	**Arkhangelos**	**3.19**	**47**	P	**Pn**	**01 48 47.8**	**+1.9**
ARG	**Arkhangelos**	**3.19**	**47**	P	**Pn**	**01 48 48.8**	**+2.9**
ARG	**Arkhangelos**	**3.19**	**47**	P	**Pn**	**01 48 48.8**	**+2.9**
VLI	**Veliai**	**3.22**	**325**	P	**Pn**	**01 48 46.4**	**0.0**
VLI	**Veliai**	**3.22**	**325**	P	**Pn**	**01 48 45.8**	**-0.5**
VLI	**Veliai**	**3.22**	**325**	P	**Pn**	**01 48 46.2**	**-0.1**
DAT	**Datca**	**3.26**	**35**	*i* P	**Pn**	**01 48 48.0**	**+1.0**
DAT	**Datca**	**3.26**	**35**	P	**Pn**	**01 48 48.0**	**+1.0**
YDRA	**Hydra**	**3.55**	**337**	P	**Pn**	**01 48 49.8**	**-1.1**
YDRA	**Hydra**	**3.55**	**337**	P	**Pn**	**01 48 50.3**	**-0.6**
DYR	**Agios Nikonas**	**3.56**	**319**	P	**Pn**	**01 48 51.8**	**+0.7**
DYR	**Agios Nikonas**	**3.56**	**319**	P	**Pn**	**01 48 51.3**	**+0.3**
KRND	**KRANIDI**	**3.69**	**333**	P	**Pn**	**01 48 52.1**	**-0.8**
KRND	**KRANIDI**	**3.69**	**333**	P	**Pn**	**01 48 52.3**	**-0.5**
KRND	**KRANIDI**	**3.69**	**333**	P	**Pn**	**01 48 52.4**	**-0.4**
DID	**Didima**	**3.77**	**335**	P	**Pn**	**01 48 53.4**	**-0.5**
DID	**Didima**	**3.77**	**335**	P	**Pn**	**01 48 52.9**	**-1.1**
DID	**Didima**	**3.77**	**335**	P	**Pn**	**01 48 53.6**	**-0.4**
DALY	**Dalyan (Mu¨la**	**3.90**	**45**	*i* P	**Pn**	**01 48 56.7**	**+1.0**
DALY	**Dalyan (Mu¨la**	**3.90**	**45**	P	**Pn**	**01 48 56.7**	**+1.0**
TURN	**Turunc**	**3.91**	**44**	*i* P	**Pn**	**01 48 54.0**	**-1.8**
TURN	**Turunc**	**3.91**	**44**	P	**Pn**	**01 48 54.0**	**-1.8**
VLY	**Voula,Athens**	**3.93**	**343**	P	**Pn**	**01 48 55.5**	**-0.6**
VLY	**Voula,Athens**	**3.93**	**343**	P	**Pn**	**01 48 55.8**	**-0.3**
PYL	**PYLOS**	**3.99**	**316**	P	**Pn**	**01 48 57.8**	**+0.9**
PYL				AML	AML	01 50 27.6	
	comp=N,543μm,1.0s						
PYL				AML	AML	01 50 27.9	
	comp=E,501μm,1.1s						
PYL	**PYLOS**	**3.99**	**316**	P	**Pn**	**01 48 57.4**	**+0.5**
PYL	**PYLOS**	**3.99**	**316**	P	**Pn**	**01 48 57.4**	**+0.5**
VLX	**Vlachokerasia**	**4.01**	**326**	P	**Pn**	**01 48 57.8**	**+0.5**
VLX	**Vlachokerasia**	**4.01**	**326**	P	**Pn**	**01 48 57.5**	**+0.2**
FETY	**Fethiye**	**4.05**	**50**	P	**Pn**	**01 48 57.6**	**-0.2**
ATH	**Athens Observa**	**4.06**	**343**	P	**Pn**	**01 48 57.2**	**-0.7**
ATH	**Athens Observa**	**4.06**	**343**	P	**Pn**	**01 48 57.6**	**-0.3**
ATH	**Athens Observa**	**4.06**	**343**	P	**Pn**	**01 48 57.6**	**-0.3**
ITM	**Ithomi**	**4.09**	**320**	P	**Pn**	**01 48 58.3**	**+0.1**
ITM				AML	AML	01 50 29.8	
	comp=E,417μm,1.2s						
ITM				AML	AML	01 50 31.2	
	comp=N,632μm,1.7s						
ITM	**Ithomi**	**4.09**	**320**	*e*Pn	**Pn**	**01 48 58.1**

baz=160
RSH 7.83 111 P Pn 01 49 48.2 -1.5
baz=112
ZNM Zenema 8.03 124 P Pn 01 49 53.7 +1.2
baz=125
TAMRE El Minia 8.04 141 P Pn 01 49 53.7 +1.0
baz=142
OFRI 'Ofer 8.30 97 Pn Pn 01 49 56.0 -0.2
OFRI Sn Sn 01 51 23.7 -5.2
OFRI 'Ofer 8.30 97 Pn Pn 01 49 56.0 -0.2
ANTO Ankara 8.36 44 *e*Pn Pn 01 49 58.2 +1.2
ANTO Ankara 8.36 44 *e*P Pn 01 49 58.2 +1.2
ANTO Ankara 8.36 44 *e*P Pn 01 49 58.2 +1.2
HNTI Hanita 8.36 94 Pn Pn 01 49 57.5 +0.5
HNTI Sn Sn 01 51 25.7 -4.8
HNTI Hanita 8.36 94 Pn Pn 01 49 57.5 +0.5
KZIT Kziot 8.37 110 Pn Pn 01 49 56.4 -0.8
KZIT Sn Sn 01 51 24.2 -6.5
KZIT Kziot 8.37 110 Pn Pn 01 49 56.4 -0.8
TIR Tirane 8.39 331 *e*Pn Pn 01 49 56.7 -0.7
TIR Tirane 8.39 331 *e*P Pn 01 49 56.7 -0.7
TIR Tirane 8.39 331 *e*P Pn 01 49 56.7 -0.7
SLTI Sal'it 8.44 100 Pn Pn 01 49 57.4 -0.6
SLTI Sn Sn 01 51 26.9 -5.3
SLTI Sal'it 8.44 100 Pn Pn 01 49 57.4 -0.6
BLGI Bet Lehem HaGe 8.44 96 Sn Sn 01 51 27.5 -4.9
TIP Timpagrande 8.49 309 *e*Pn Pn 01 49 57.7 -1.1
TIP Timpagrande 8.49 309 *e*Pn Pn 01 49 57.7 -1.1
HNKL Nakhl 8.51 117 P Pn 01 49 58.3 -0.8
baz=118
HNKL Nakhl 8.51 117 P Pn 01 49 58.3 -0.8
AMAZ Amatzia 8.55 105 Pn Pn 01 49 59.2 -0.4
AMAZ Sn Sn 01 51 29.8 -5.2
AMAZ Amatzia 8.55 105 Pn Pn 01 49 59.2 -0.4
MMA0B Mount Meron ar 8.56 94 Sn Sn 01 51 30.9 -4.6
MMAI Mount Meron Ar 8.56 94 Pn Pn 01 49 59.6 -0.3
comp=E,11nm,0.3s,baz=268,slow=12,SNR=19
MMAI Sn Sn 01 51 31.3 -4.2
comp=E,36nm,0.3s,baz=268,slow=17,SNR=8.5
CEL Celeste 8.61 302 *e*Pn Pn 01 49 59.5 -1.0
CEL *e*Sn Sn 01 51 31.9 -4.7
CEL Celeste 8.61 302 *e*Pn Pn 01 49 59.5 -1.0
CEL *e*Sn Sn 01 51 31.9 -4.7
MMLI Mount Malkishu 8.70 98 Pn Pn 01 50 01.2 -0.5
MMLI Sn Sn 01 51 32.5 -6.2
MMLI Mount Malkishu 8.70 98 Pn Pn 01 50 01.2 -0.5
KSDI Kefar Szold 8.75 93 Pn Pn 01 50 01.9 -0.4
KSDI Sn Sn 01 51 34.5 -5.4
KSDI Kefar Szold 8.75 93 Pn Pn 01 50 01.9 -0.4
YTIR Yattir 8.77 105 Pn Pn 01 50 02.8 +0.2
YTIR Sn Sn 01 51 34.9 -5.6
YTIR Yattir 8.77 105 Pn Pn 01 50 02.8 +0.2
BRTR Keskin Array B 8.78 48 LR LR 01 54 43.2
comp=E,583nm,21.6s,baz=242,slow=46
RMNI Mount Ramon 8.79 111 Pn Pn 01 50 02.1 -0.8
RMNI Mount Ramon 8.79 111 Pn Pn 01 50 02.1 -0.8
HMDT Nahal Hemdat 8.83 99 Pn Pn 01 50 03.8 +0.4
HMDT Sn Sn 01 51 36.9 -5.0
HMDT Nahal Hemdat 8.83 99 Pn Pn 01 50 03.8 +0.4
DSI Dead Sea 8.91 104 Pn Pn 01 50 04.1 -0.4
DSI Sn Sn 01 51 38.2 -5.6
DSI Dead Sea 8.91 104 Pn Pn 01 50 04.1 -0.4
KSHT Keshet 8.91 94 Pn Pn 01 50 04.8 +0.2
KSHT Keshet 8.91 94 Pn Pn 01 50 04.8 +0.2
WDD Wied Dalam 8.95 284 *e*Pn Pn 01 50 03.1 -2.0
WDD *e*Sn Sn 01 51 39.9 -5.0
WDD Wied Dalam 8.95 284 *e*Pn Pn 01 50 03.1 -2.0
WDD *e*Sn Sn 01 51 39.9 -5.0
MZDA Masada 8.98 105 Pn Pn 01 50 05.3 -0.2
MZDA Sn Sn 01 51 40.1 -5.5
MZDA Masada 8.98 105 Pn Pn 01 50 05.3 -0.2
PRNI Paran 9.09 112 Pn Pn 01 50 07.0 0.0
PRNI Sn Sn 01 51 42.5 -5.7
PRNI Paran 9.09 112 Pn Pn 01 50 07.0 0.0
ZFRI Zfri 9.13 110 Pn Pn 01 50 07.2 -0.3
ZFRI Zfri 9.13 110 Pn Pn 01 50 07.3 -0.3
ZFRI Sn Sn 01 51 42.4 -6.9
ZFRI Zfri 9.13 110 Pn Pn 01 50 07.3 -0.3
HRFI Mount Harif 9.26 113 Pn Pn 01 50 10.1 +0.8
HRFI Sn Sn 01 51 46.7 -5.7
HRFI Mount Harif 9.26 113 Pn Pn 01 50 10.1 +0.8
MBRI Mt Berech 9.28 115 Pn Pn 01 50 09.5 -0.2
MBRI Sn Sn 01 51 47.4 -5.7
MBRI Mt Berech 9.28 115 Pn Pn 01 50 09.5 -0.2
HKAT Jabal Katrina 9.33 124 P Pn 01 50 09.7 -0.7
baz=125
EIL Elat 9.37 115 Pn Pn 01 50 17.9 +7.1
comp=E,19nm,0.3s,baz=272,slow=1.8,SNR=140
EIL Sn Sn 01 51 57.4 +2.2
comp=E,17nm,0.3s,baz=24,slow=20,SNR=6.6
EIL Elat 9.37 115 Pn Pn 01 50 10.7 -0.1
EIL Sn Sn 01 51 49.9 -5.3
EIL Elat 9.37 115 Pn Pn 01 50 10.7 -0.1
EIL *e*Sn Sn 01 51 57.4 +2.2
VAE Valguarnera 9.41 294 Pn Pn 01 50 12.1 +0.6
comp=E,3.0nm,0.3s,baz=150,slow=7.4,SNR=7.6
VAE Sn Sn 01 51 46.0 -10
comp=E,2.8nm,0.3s,baz=20,slow=10,SNR=3.7
NUB 9.49 120 P Pn 01 50 11.8 -0.7
baz=120
CUC Castrocucco 9.55 311 *e*Pn Pn 01 50 12.8 -0.5
CUC *e*Sn Sn 01 51 56.5 -3.0
CUC Castrocucco 9.55 311 *e*Pn Pn 01 50 12.8 -0.5
CUC *e*Sn Sn 01 51 56.5 -3.0
TTG Podgorica 9.55 332 *e*Pn Pn 01 50 08.7 -4.6
TTG *e*Sn Sn 01 51 52.2 -7.4
TTG Podgorica 9.55 332 *e*P Pn 01 50 08.7 -4.6
TTG *e* 01 51 52.2
TTG Podgorica 9.55 332 *e*Pn Pn 01 50 08.6 -4.6
TTG *e*Sn Sn 01 51 52.2 -7.4
HHRG Al Ghardaqah 9.93 131 P Pn 01 50 19.9 +1.5
baz=133
ASF Jabal al Asfar 9.97 98 Pn Pn 01 50 19.2 0.0
comp=E,1.4nm,0.3s,baz=296,slow=1.7,SNR=11
ASF Sn Sn 01 52 05.0 -5.2
comp=E,4.5nm,0.3s,baz=345,slow=16,SNR=4.3
CLTB Caltabellotta 10.35 293 *e*Pn Pn 01 50 23.3 -1.0
CLTB *e*Sn Sn 01 52 15.3 -4.0
CLTB Caltabellotta 10.35 293 *e*Pn Pn 01 50 23.3 -1.0
CLTB *e*Sn Sn 01 52 15.3 -4.0
STON Ston 10.56 328 *e*Pn Pn 01 50 22.5 -4.5
STON Sn Sn 01 52 11.9 -12
HSFG 10.62 133 P Pn 01 50 27.6 -0.3
baz=133
MLR Muntele Rosu 11.40 3 LR LR 01 55 45.0
comp=E,187nm,21.9s,baz=98,slow=41
UDBI Udbina 12.73 328 *i* Pn Pn 01 50 53.6 -3.2
NVLJ Novalja 13.16 326 *e*Pn Pn 01 50 59.0 -3.6
KIS Kishinev 13.18 11 *e*P Pn 01 51 05.0 +2.2
KIS *e*Rg Rg 01 54 40.0
KIS LRM MLR 01 56 44.0
comp=E,900nm,12.0s
KIS Kishinev 13.18 11 *e*P Pn 01 51 05.0 +2.2
KIS MLR MLR
comp=N,600nm,12.0s
KIS MLR MLR
comp=Z,900nm,12.0s
KIS MLR MLR
comp=Z,900nm,12.0s
KIS Kishinev 13.18 11 *e*P Pn 01 51 05.0 +2.2
comp=Z,900nm,12.0s
MODS Modra-Piesok 15.46 340 *e*P Pn 01 51 28.5 -5.1
MODS Modra-Piesok 15.46 340 *e*PN Pn 01 51 28.5 -5.1
SMOL Smolenice 15.54 340 *e*P P 01 51 38.6 -0.2
SMOL Smolenice 15.54 340 *e*P P 01 51 38.5 -0.2
SMOL Smolenice 15.54 340 *e*P P 01 51 38.6 -0.2
JAVC Velka Javorina 15.79 341 *e*P P 01 51 41.8 +0.2
KRUC Moravsky 16.33 339 *e*P P 01 51 46.8 -0.7
VRAC Vranov 16.50 340 P P 01 51 49.0 -0.4
VRAC Vranov 16.50 340 *e*P P 01 51 48.9 -0.4
VRAC Vranov 16.50 340 *e*P P 01 51 48.9 -0.4
GNI Garni 16.69 63 Pn P 01 51 52.1 +0.4
comp=Z,1.1nm,0.3s,baz=239,slow=2.0,SNR=5.3
GNI LR LR 01 59 42.5
comp=Z,690nm,18.9s,baz=268,slow=42
GNI Garni 16.69 63 *e*Pn P 01 51 54.5 +2.8
GNI Garni 16.69 63 *e*Pn P 01 51 54.5 +2.8
KIV Kislovodsk 16.74 49 *e*Pn P 01 51 53.9 +1.8
comp=Z,71nm,1.4s
KIV *e*pP pP 01 52 01.9 +1.7
KIV Kislovodsk 16.74 49 *e*P P 01 51 53.4 +1.3
KIV pmax pmax
comp=Z,31nm,1.0s
KIV Kislovodsk 16.74 49 *e*P P 01 51 53.4 +1.3
comp=Z,31nm,1.0s
KIV Kislovodsk 16.74 49 *e*Pn P 01 51 53.9 +1.8
comp=Z,71nm,1.4s
KVAR Kislovodsk Arr 16.74 49 Pn P 01 51 52.3 +0.1
baz=269,slow=4.0,SNR=15
KBZ Khabaz 16.76 50 Pn P 01 51 52.2 0.0
comp=Z,1.4nm,0.3s,baz=218,slow=5.9,SNR=14
AK11 Malin Array Si 16.83 9 *e*Pn Pn 01 51 50.7 -0.4
AK11 Malin Array Si 16.83 9 *e*Pn Pn 01 51 50.7 -0.4
AKASG Malin Array Be 16.86 9 Pn Pn 01 51 51.1 -0.3
comp=Z,9.7nm,0.3s,baz=200,slow=11,SNR=13
AKBB Malin Array Si 16.86 9 *e*Pn Pn 01 51 51.1 -0.3
comp=Z,31nm,0.6s
AKBB Malin Array Si 16.86 9 *e*P Pn 01 51 51.1 -0.3
AKBB pmax pmax
comp=Z,31nm,0.6s
AKBB Malin Array Si 16.86 9 *e*P Pn 01 51 51.1 -0.3
comp=Z,31nm,0.6s
FUORN Ofenpass-Fuorn 16.89 322 *e*Pn P 01 51 55.8 +1.8
comp=Z,15nm,0.8s
FUORN Ofenpass-Fuorn 16.89 322 *e*Pn P 01 51 55.8 +1.8
comp=Z,15nm,0.8s
GEA0 GERESS Array S 17.05 333 *e*Pn Pn 01 51 52.2 -1.7
GEA0 GERESS Array S 17.05 333 *e*Pn Pn 01 51 52.2 -1.7
GEC2 GERESS Array S 17.05 333 *e*Pn Pn 01 51 52.6 -1.4
comp=Z,28nm,0.6s
GEC2 GERESS Array S 17.05 333 *e*P Pn 01 51 52.6 -1.4
GEC2 pmax pmax
comp=Z,28nm,0.6s
GEC2 GERESS Array S 17.05 333 *e*Pn Pn 01 51 52.6 -1.4
comp=Z,28nm,0.6s
GERES GERESS Array B 17.05 333 Pn Pn 01 51 52.7 -1.3
comp=Z,3.6nm,0.3s,baz=146,slow=12,SNR=53
GERES LR LR 01 59 57.8
comp=Z,568nm,18.8s,baz=78,slow=42
KRLC Kraliky 17.14 341 *e*P P 01 51 56.1 -0.4
KRLC Kraliky 17.14 341 *e*P P 01 51 56.1 -0.4
KRLC Kraliky 17.14 341 *e*P P 01 51 56.1 -0.4
KHC Kasperske Hory 17.34 334 *e*P P 01 51 58.7 +0.1
KHC *e*pP pP 01 52 02.9 -3.8
KHC *ex* x 01 52 20.0
KHC Kasperske Hory 17.34 334 *e*Pn P 01 51 58.7 +0.1
comp=Z,24nm,1.4s
KHC Kasperske Hory 17.34 334 *e*P P 01 51 58.7 +0.1
KHC Kasperske Hory 17.34 334 *e*P P 01 51 58.7 +0.1
DPC Dobruska-Polom 17.51 341 *e*P P 01 52 00.4 -0.2
DPC Dobruska-Polom 17.51 341 *e*P P 01 52 00.4 -0.2
GOPC GO Pecny, Ondr 17.58 337 *e*P P 01 52 01.2 -0.1
GOPC GO Pecny, Ondr 17.58 337 *e*P P 01 52 01.2 -0.1
GOPC GO Pecny, Ondr 17.58 337 *e*P P 01 52 01.2 -0.1
WET Wettzell 17.61 332 P P 01 52 01.4 -0.3
WET pmax pmax
comp=Z,45nm,1.1s
WET Wettzell 17.61 332 P P 01 52 01.4 -0.3
comp=Z,45nm,1.1s
PRU Pruhonice 17.73 337 *e*P Pn 01 52 00.3 -1.9
PRU Pruhonice 17.73 337 *e*P Pn 01 52 00.3 -1.9
PRU Pruhonice 17.73 337 *e*P Pn 01 52 00.3 -1.9
KSP Ksiaz 17.97 341 *e*Pn Pn 01 52 02.8 -2.4
KSP Ksiaz 17.97 341 *e*P Pn 01 52 02.8 -2.4
KSP Ksiaz 17.97 341 *e*P Pn 01 52 02.8 -2.4
PVCC Panska Ves 18.18 338 *e*P Pn 01 52 07.0 -0.9
PVCC Panska Ves 18.18 338 *e*P Pn 01 52 07.0 -0.9
PVCC Panska Ves 18.18 338 *e*P Pn 01 52 07.0 -0.9
GRB1 Grafenberg Arr 18.29 331 P P 01 52 08.9 -0.3
GRB1 pmax pmax
comp=Z,60nm,1.1s
GRB1 Grafenberg Arr 18.29 331 P P 01 52 08.9 -0.3
comp=Z,60nm,1.1s
SENIN Lac Senin/Sane 18.32 317 *e*P P 01 52 09.6 -0.1
comp=Z,10nm,0.7s
SENIN Lac Senin/Sane 18.32 317 *e*P P 01 52 09.6 -0.1
comp=Z,10nm,0.7s
SLE Schleitheim 18.56 322 P Pn 01 52 13.4 +0.9
SLE Schleitheim 18.56 322 P Pn 01 52 13.4 +0.9
NKC Novy Kostel 18.66 334 *e*P P 01 52 13.0 -0.2
NKC Novy Kostel 18.66 334 *e*P P 01 52 13.0 -0.2
NKC Novy Kostel 18.66 334 *e*P P 01 52 13.0 -0.2
BRG Berggiesshubel 18.68 337 *e*P P 01 52 12.6 -0.8
comp=Z,22nm,1.5s
BRG Berggiesshubel 18.68 337 *e*P P 01 52 12.6 -0.8
BRG pmax pmax
comp=Z,23nm,1.5s
GRFO Grafenberg 18.70 331 *e*P P 01 52 13.0 -0.6
comp=Z,101nm,1.3s
GRFO Grafenberg 18.70 331 *e*P P 01 52 13.0 -0.6
GRFO pmax pmax
comp=Z,101nm,1.3s
GRFO Grafenberg 18.70 331 *e*P P 01 52 13.0 -0.6
comp=Z,101nm,1.3s
GRA1 Grafenberg Arr 18.70 331 P Pn 01 52 14.4 +0.2
comp=Z,66nm,1.0s
GRF Grafenberg Arr 18.70 331 P Pn 01 52 14.4 +0.2
GRF pmax pmax
comp=Z,66nm,1.0s
BFO Black Forest 19.02 323 *e*P Pn 01 52 18.0 0.0
comp=Z,9.6nm,0.8s
BFO Black Forest 19.02 323 *e*P Pn 01 52 18.0 0.0
BFO pmax pmax
comp=Z,10.0nm,0.8s
BFO Black Forest 19.02 323 *e*P Pn 01 52 18.0 0.0
comp=Z,9.6nm,0.8s
MOX Moxa 19.30 333 P P 01 52 20.8 +0.5
MOX pmax pmax
comp=Z,18nm,0.8s
MOX Moxa 19.30 333 P P 01 52 20.8 +0.5
comp=Z,18nm,0.8s
MOF Molkenrain 19.31 321 P Pn 01 52 23.4 +1.7
CLL Collm 19.36 336 ⇓*i*P P 01 52 20.0 -0.9
comp=Z,39nm,1.5s
CLL *e* 01 52 26.0
CLL *e* 01 52 30.0
CLL *e*PPP PPP 01 52 44.0
CLL Collm 19.36 336 *e*P P 01 52 20.6 -0.3
comp=Z,14nm,0.9s
CLL Collm 19.36 336 *e*P P 01 52 20.6 -0.3
CLL pmax pmax
comp=Z,14nm,0.9s
CLL Collm 19.36 336 *e*P P 01 52 20.5 -0.3
comp=Z,14nm,0.9s
ECH Echery 19.53 322 *e*P P 01 52 22.4 -0.3
comp=Z,6.4nm,0.7s
ECH Echery 19.53 322 *e*P P 01 52 22.5 -0.3
ECH pmax pmax
comp=Z,6.0nm,0.7s
ECH Echery 19.53 322 *e*P P 01 52 22.5 -0.3
comp=Z,6.4nm,0.7s
TOD Tromm 19.68 327 P Pn 01 52 26.0 +0.1
TOD Tromm 19.68 327 P Pn 01 52 26.0 +0.1
LANF Langenberg 19.71 324 P Pn 01 52 26.9 +0.6
LANF Langenberg 19.71 324 P Pn 01 52 26.9 +0.6
KTD Kalmit 19.81 325 P Pn 01 52 27.9 +0.4
KTD Kalmit 19.81 325 P Pn 01 52 27.9 +0.4
SUW Suwalki 19.97 356 *e*P P 01 52 26.0 -1.3
SUW Suwalki 19.97 356 *e*P P 01 52 26.1 -1.3
comp=Z,75nm,0.9s
SUW Suwalki 19.97 356 *e*P P 01 52 26.1 -1.3
SUW pmax pmax
comp=Z,75nm,0.9s
SUW Suwalki 19.97 356 *e*P P 01 52 26.1 -1.3
comp=Z,75nm,0.9s
RUP Ruppelstein 20.56 325 P P 01 52 33.9 -0.1
RUP Ruppelstein 20.56 325 P P 01 52 33.9 -0.1
RAYN Ar Rayn 20.62 115 *e*P Pn 01 52 38.7 +1.5
comp=Z,10nm,0.9s
RAYN Ar Rayn 20.62 115 *e*P Pn 01 52 38.7 +1.5
comp=Z,10nm,0.9s
TAM Tamanrasset 20.62 242 P Pn 01 52 38.7 +1.4
WLF Walferdange 20.97 324 ⇑P Pn 01 52 41.9 +0.8
comp=Z,29nm,1.2s
WLF Walferdange 20.97 324 *e*P Pn 01 52 40.7 -0.4
comp=Z,36nm,1.0s
WLF Walferdange 20.97 324 *e*P Pn 01 52 40.7 -0.4
WLF pmax pmax
comp=Z,36nm,1.0s
WLF Walferdange 20.97 324 *e*P Pn 01 52 40.7 -0.4
comp=Z,36nm,1.0s
MEM Membach 21.67 325 ⇓P P 01 52 45.8 -0.1
comp=Z,15nm,1.0s
MEM Membach 21.67 325 P P 01 52 50.1 +4.3
MEM pmax pmax
comp=Z,23nm,0.6s
MEM Membach 21.67 325 P P 01 52 45.7 -0.1
comp=Z,15nm,1.0s
BUG Bochum--Univer 21.68 329 P P 01 52 49.6 +3.7
BUG pmax pmax
comp=Z,25nm,0.9s
HGN Heimansgroeve 21.81 326 *e*P P 01 52 46.6 -0.7
comp=Z,22nm,1.1s
HGN Heimansgroeve 21.81 326 *e*P P 01 52 46.6 -0.7
comp=Z,22nm,1.1s
BCLA Clavier 21.88 324 ⇑P P 01 52 50.7 +2.6
comp=Z,9.6nm,1.2s
BSD Bornholm Skovb 22.22 344 *i* P P 01 52 45.4 -6.2
comp=Z,93nm,1.4s
BSD Bornholm Skovb 22.22 344 *i* P P 01 52 45.4 -6.2
BSD pmax pmax
comp=Z,93nm,1.4s
WTSB Winterswijk 22.26 329 *e*P P 01 52 51.9 -0.3
comp=Z,21nm,0.6s
WTSB Winterswijk 22.26 329 *e*P P 01 52 51.9 -0.2
comp=Z,21nm,0.6s
OBN Obninsk 22.46 17 P P 01 52 55.7 +1.4
comp=Z,47nm,0.6s
OBN Obninsk 22.46 17 P P 01 52 55.7 +1.4
comp=Z,47nm,0.6s
LLD Lille Linde 23.09 341 *i* P P 01 52 59.3 -1.5
comp=Z,69nm,0.8s
LLD Lille Linde 23.09 341 *i* P P 01 52 59.3 -1.5
LLD pmax pmax
comp=Z,69nm,0.8s
LLD Lille Linde 23.09 341 *i* P P 01 52 59.3 -1.5
comp=Z,69nm,0.8s
ES19 SONSECA Array 23.89 292 *e*P P 01 53 09.0 +0.1
ES19 SONSECA Array 23.89 292 *e*P P 01 53 09.0 +0.1
ESDC Sonseca Array 23.94 292 P P 01 53 08.6 -0.8
comp=Z,1.8nm,0.5s,baz=79,slow=9.8,SNR=11
MDT Midelt 24.89 275 P P 01 53 17.7 -0.4
comp=Z,1.8nm,0.6s,baz=99,slow=15,SNR=6.7
MUD Monsted U'grnd 24.93 339 *i* P P 01 53 17.8 -0.3
comp=Z,9.7nm,0.6s
MUD Monsted U'grnd 24.93 339 *i* P P 01 53 17.8 -0.3
MUD pmax pmax
comp=Z,10.0nm,0.6s
MUD Monsted U'grnd 24.93 339 *i* P P 01 53 17.8 -0.3
comp=Z,10.0nm,0.6s
PBRG Braganca 26.25 296 *e*P P 01 53 29.6 -0.7
comp=Z,27nm,1.6s
PBRG Braganca 26.25 296 *e*P P 01 53 29.6 -0.7
PBAR Barrancos 26.30 288 *e*P P 01 53 30.6 -0.1
comp=Z,55nm,1.5s
PBAR Barrancos 26.30 288 *e*P P 01 53 30.6 -0.1
MVO Moncorvo 26.40 295 *e*P P 01 53 30.3 -1.4
comp=Z,33nm,1.8s
MVO *e*LR LR 01 57 12.2
comp=Z,297nm,20.0s
MVO Moncorvo 26.40 295 *e*P P 01 53 30.3 -1.4
PMRV Marv??o 26.58 291 *e*P P 01 53 34.6 +1.3
comp=Z,18nm,1.9s
PMRV *e*LR LR 01 54 54.4
comp=Z,259nm,20.0s
PMRV Marv??o 26.58 291 *e*P P 01 53 34.6 +1.3
PESTR Estremoz 26.73 290 *e*P P 01 53 34.1 -0.5
comp=Z,24nm,1.8s
PESTR Estremoz 26.73 290 *e*P P 01 53 34.1 -0.5
MTE Manteigas 26.73 293 *e*LR LR 01 55 57.3
comp=Z,289nm,22.0s
GEYT Alibeck 26.80 72 P P 01 53 36.4 +1.0
comp=Z,1.1nm,0.3s,baz=249,slow=32,SNR=11
PVAQ Vaqueiros 26.86 287 *e*P P 01 53 35.0 -0.8
comp=Z,26nm,1.6s
PVAQ Vaqueiros 26.86 287 *e*P P 01 53 35.0 -0.8
EVO Evora 27.06 289 *e*P P 01 53 38.2 +0.6
comp=Z,19nm,1.5s
EVO Evora 27.06 289 *e*P P 01 53 38.2 +0.6
HFS Hagfors 27.13 347 P P 01 53 36.1 -1.9
comp=Z,7.1nm,0.5s,baz=141,slow=9.6,SNR=20
PMTG Montargil 27.22 290 *e*P P 01 53 41.7 +2.7
comp=Z,15nm,1.3s
FIA0 FINESS Array S 27.38 1 *e*P P 01 53 38.0 -2.1
FIA0 FINESS Array S 27.38 1 *e*P P 01 53 38.0 -2.1
FINES FINESS Array B 27.38 1 P P 01 53 38.0 -2.1
comp=Z,3.1nm,0.4s,baz=170,slow=9.6,SNR=18
FINES LR LR 02 06 18.2
comp=Z,204nm,18.9s,baz=188,slow=40
FIA1 FINESS Array S 27.38 1 *e*P P 01 53 37.8 -2.3
PGAV Gavieira, Arco 27.40 297 *e*LR LR 01 54 06.7
comp=Z,460nm,20.0s
KONO Kongsberg 27.56 343 *e*P P 01 53 40.5 -1.3
comp=Z,21nm,1.3s
KONO Kongsberg 27.56 343 *e*P P 01 53 40.5 -1.3
KONO pmax pmax
comp=Z,21nm,1.3s
NC602 NORSAR Array S 28.10 346 *e*P P 01 53 45.6 -1.1
NB201 NORSAR Array S 28.44 346 *e*P P 01 53 47.7 -2.0
NB2 NORSAR Subarra 28.44 346 P P 01 53 48.2 -1.6
comp=Z,2.3nm,0.6s,baz=156,slow=9.3
NB200 NORSAR Array S 28.44 346 *e*P P 01 53 49.3 -0.5
NOA NORSAR Array B 28.44 346 P P 01 53 49.3 -0.5
EKA Eskdalemuir Ar 28.95 326 P P 01 53 53.3 -0.9
comp=Z,1.7nm,0.5s,baz=154,slow=10,SNR=12
EKA PcP PcP 01 57 02.2 -0.2
comp=Z,1.1nm,0.7s,baz=123,slow=2.6,SNR=3.9
AKTO Aktyubinsk 28.95 46 P P 01 53 54.9 +0.5
comp=Z,2.1nm,0.4s,baz=332,slow=11,SNR=4.8
ESK Eskdalemuir 28.96 326 *e*P P 01 53 53.7 -0.7
comp=Z,24nm,1.4s
ESK Eskdalemuir 28.96 326 *e*P P 01 53 53.7 -0.7
ESK pmax pmax
comp=Z,24nm,1.4s
VAF Ylistaro 29.02 358 P P 01 53 53.3 -1.4
JOF Joensuu 29.10 6 P P 01 53 53.8 -1.7
TOA1 Torodi Ar. Sit 29.85 231 *e*P P 01 54 03.2 +0.5
TOA0 Torodi Ar. Sit 29.85 231 *e*P P 01 54 03.3 +0.6
comp=Z,12nm,0.9s
TORD Torodi Ar. Bea 29.85 231 P P 01 54 03.2 +0.5
comp=Z,9.1nm,0.4s,baz=31,slow=8.7,SNR=146
ARU Arti 31.89 35 P P 01 54 20.5 +0.3
comp=Z,5.4nm,0.5s,baz=257,slow=14,SNR=7.5
ARU Arti 31.89 35 *e*P P 01 54 20.5 +0.3
comp=Z,8.6nm,0.6s
ARU Arti 31.89 35 *e*P P 01 54 20.5 +0.3
ARU pmax pmax
comp=Z,9.0nm,0.6s
KOWA Kowa 32.84 241 P P 01 54 28.9 -0.1
comp=Z,2.5nm,0.3s,baz=58,slow=8.6,SNR=25
KOWA Kowa 32.84 241 *e*P P 01 54 29.6 +0.6
APA Apatity 33.85 6 ⇑*i*P P 01 54 34.5 -2.7
APA pmax pmax
comp=Z,6.0nm,0.9s
APA MLR MLR
comp=Z,400nm,9.0s
ARA0 ARCESS Array S 35.50 0 *e*P P 01 54 49.6 -1.8
ARCES ARCESS Array B 35.50 0 P P 01 54 49.6 -1.8
comp=Z,3.2nm,0.5s,baz=170,slow=9.3,SNR=27
ARCES LR LR 02 10 41.4
comp=Z,161nm,20.0s,baz=199,slow=38
ARCES ARCESS Array B 35.50 0 *e*P P 01 54 49.5 -1.9
KK31 Karatay Array 36.15 62 *e*P P 01 54 58.5 +1.1
KK31 Karatay Array 36.15 62 *e*P P 01 54 58.5 +1.1
KKAR Karatay Array 36.15 62 *e*P P 01 54 58.5 +1.1
KKAR Karatay Array 36.15 62 *e*P P 01 54 58.5 +1.1
KMBO Kilima Mbogo 36.81 160 LR LR 02 12 37.3
comp=Z,156nm,18.9s,baz=296,slow=40
BVAR Borovoye Array 37.05 45 P P 01 55 04.4 -0.5
comp=Z,1.3nm,0.8s,baz=220,slow=36,SNR=4.4
BVAR LR LR 02 15 27.8
comp=Z,112nm,18.5s,baz=256,slow=44
DBIC Dimbokro 38.95 232 P P 01 55 20.6 -0.6
comp=Z,1.9nm,0.3s,baz=18,slow=4.9,SNR=10
DBIC Dimbokro 38.95 232 *e*P P 01 55 21.4 +0.1
comp=Z,24nm,1.3s
DBIC Dimbokro 38.95 232 *e*P P 01 55 21.4 +0.1
DBIC pmax pmax
comp=Z,24nm,1.3s
TIC Toumodi 39.08 233 *e*P P 01 55 22.5 +0.1
KIC Kosan Boka 39.10 232 *e*P P 01 55 22.1 -0.5
comp=Z,242nm,2.2s
LIC Lamto 39.39 232 *e*P P 01 55 24.0 -1.0
comp=Z,152nm,2.0s
NRN Naryn 40.32 64 *e*P P 01 55 34.3 +1.4
comp=Z,11nm,1.1s
NRN *e*pP sP 01 55 45.1 -0.4
NRN Naryn 40.32 64 *e*P P 01 55 34.3 +1.4
NRN *e*PP sP 01 55 45.1 -0.4
NRN pmax pmax
comp=Z,11nm,1.1s
NRN Naryn 40.32 64 *e*P P 01 55 34.3 +1.4
comp=Z,11nm,1.1s

NRN				*e*P	**sP**	**01 55 45.1**	**-0.4**
KSH	**Kashi**	**40.56**	**67**	P	**P**	**01 55 34.4**	**-0.2**
KSH				pP	sP	01 55 48.3	+1.0
KSH				PP	**PnPn**	**01 57 11.3**	**-0.9**
KSH				pmax	pmax		
	comp=Z,210nm,6.3s						
KURBB	**Kurchatov Arra**	**41.76**	**50**	P	**P**	**01 55 44.0**	**-0.1**
	comp=Z,4.6nm,0.6s,baz=278,slow=8.3,SNR=26						
KURK	**Kurchatov**	**41.82**	**50**	*e*P	**P**	**01 55 45.6**	**+1.0**
KURK	**Kurchatov**	**41.82**	**50**	*e*P	**P**	**01 55 45.6**	**+1.0**
MAKZ	**Makanchi**	**44.11**	**56**	*e*P	**P**	**01 56 04.6**	**+1.3**
	comp=Z,4.9nm,0.6s						
MAKZ	**Makanchi**	**44.11**	**56**	*e*P	**P**	**01 56 04.6**	**+1.3**
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MK31	**Makanchi Array**	**44.33**	**56**	*e*P	**P**	**01 56 06.2**	**+1.1**
MK31	**Makanchi Array**	**44.33**	**56**	*e*P	**P**	**01 56 06.2**	**+1.1**
MK32	**Makanchi Array**	**44.33**	**56**	*e*P	**P**	**01 56 06.1**	**+1.0**
MK32				*e*ScP	**ScP**	**02 01 38.0**	**-0.7**
MKAR	**Makanchi Array**	**44.33**	**56**	P	**P**	**01 56 06.1**	**+1.0**
	comp=Z,11nm,0.5s,baz=273,slow=7.1,SNR=122						
MKAR				ScP	**ScP**	**02 01 38.0**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=281,slow=3.9,SNR=3.0						
MKAR	**Makanchi Array**	**44.33**	**56**	*e*P	**P**	**01 56 06.2**	**+1.1**
	comp=Z,114nm,0.5s						
MKAR	**Makanchi Array**	**44.33**	**56**	*e*P	**P**	**01 56 06.2**	**+1.1**
MK01	**Makanchi Array**	**44.34**	**56**	*e*P	**P**	**01 56 05.9**	**+0.8**
SPA0	**Spitsbergen Ar**	**44.35**	**357**	*e*P	**P**	**01 56 04.6**	**-0.2**
SPITS	**Spitsbergen Ar**	**44.35**	**357**	P	**P**	**01 56 04.6**	**-0.2**
	comp=Z,2.6nm,0.5s,baz=140,slow=9.4,SNR=14						
SPITS				LR	LR	02 17 20.3	
	comp=Z,243nm,20.4s,baz=210,slow=40						
NVS	**Novosibirsk**	**44.81**	**44**	*e*P	**P**	**01 56 09.5**	**+0.8**
NVS				pmax	pmax		
	comp=Z,16nm,1.0s						
KBS	**Kingsbay**	**45.29**	**356**	P	**P**	**01 56 11.7**	**-0.5**
ZAA0	**Zalesovo Array**	**45.71**	**45**	*e*P	**P**	**01 56 16.2**	**+0.3**
	comp=Z,7.1nm,0.6s						
ZALV	**Zalesovo Beam**	**45.71**	**45**	P	**P**	**01 56 15.9**	**0.0**
	comp=Z,8.1nm,0.4s,baz=267,slow=8.7,SNR=26						
ZALV	**Zalesovo Beam**	**45.71**	**45**	*e*P	**P**	**01 56 15.8**	**-0.1**
ZAA1	**Zalesovo Array**	**45.71**	**45**	*e*P	**P**	**01 56 15.9**	**0.0**
WMQ	**Urumqi**	**48.50**	**59**	P	**P**	**01 56 40.1**	**+2.2**
WMQ				pP	sP	01 56 50.5	-0.2
WMQ				sP	pP	01 56 56.6	+10
WMQ				pmax	pmax		
	comp=Z,38nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,140nm,4.3s						
WMQ				LR	LR		
	comp=Z,370nm,24.7s						
WMQ				LR	LR		
	comp=Z,290nm,24.7s						
NRIK	**Noril'sk**	**48.82**	**25**	LR	LR	02 19 05.3	
	comp=Z,104nm,19.8s,baz=232,slow=38						
PYUN	**Piuthan**	**49.27**	**80**	*e*P	**P**	**01 56 44.3**	**+0.1**
	comp=Z,22nm,0.6s						
DANN	**Dangsing**	**49.81**	**80**	*e*P	**P**	**01 56 49.9**	**+1.5**
	comp=Z,44nm,0.6s						
KOLN	**Koldanda**	**49.90**	**81**	*e*P	**P**	**01 56 49.6**	**+0.6**
	comp=Z,7.5nm,0.6s						
GKN	**Gorkha**	**50.66**	**80**	*e*P	**P**	**01 56 55.4**	**+0.7**
	comp=Z,10nm,0.4s						
DMN	**Daman**	**51.19**	**80**	*e*P	**P**	**01 56 59.6**	**+0.8**
	comp=Z,13nm,0.6s						
KKN	**Kakani**	**51.26**	**80**	*e*P	**P**	**01 57 00.4**	**+1.1**
	comp=Z,15nm,0.6s						
PKIN	**Phulchoki**	**51.44**	**80**	*e*P	**P**	**01 57 01.4**	**+0.7**
	comp=Z,14nm,0.8s						
GUN	**Gumba**	**51.71**	**79**	*e*P	**P**	**01 57 03.7**	**+0.9**
	comp=Z,20nm,0.5s						
JIRN	**Jiri**	**52.06**	**80**	*e*P	**P**	**01 57 06.3**	**+0.9**
	comp=Z,13nm,0.5s						
RAMN	**Ramite**	**52.67**	**80**	*e*P	**P**	**01 57 09.6**	**-0.2**
	comp=Z,4.5nm,0.4s						
ZAK	**Zakamensk**	**57.42**	**48**	*e*P	**P**	**01 57 44.8**	**+1.2**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.5s						
LBTB	**Lobatse**	**58.78**	**180**	*e*P	**P**	**01 57 55.7**	**+2.4**
	comp=Z,2.1nm,0.6s						
LBTB	**Lobatse**	**58.78**	**180**	*e*P	**P**	**01 57 55.7**	**+2.4**
LBTB				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SONA0	**Songino Array**	**60.13**	**50**	*e*P	**P**	**01 58 03.7**	**+1.2**
SONM	**Songino Array**	**60.13**	**50**	P	**P**	**01 58 03.7**	**+1.2**
	comp=Z,2.7nm,0.5s,baz=284,slow=7.5,SNR=21						
SONA1	**Songino Array**	**60.13**	**50**	*e*P	**P**	**01 58 03.4**	**+0.8**
ULN	**Ulaanbaatar**	**60.53**	**50**	*e*P	**P**	**01 58 06.5**	**+1.2**
	comp=Z,18nm,1.5s						
ULN	**Ulaanbaatar**	**60.53**	**50**	*e*P	**P**	**01 58 06.5**	**+1.2**
ULN				pmax	pmax		
	comp=Z,18nm,1.5s						
BOSA	**Boshof**	**62.37**	**180**	P	**P**	**01 58 18.7**	**+1.0**
	comp=Z,2.6nm,0.5s,baz=360,slow=7.2,SNR=12						
LZH	**Lanzhou**	**62.63**	**63**	*e*P	**P**	**01 58 19.4**	**-0.3**
LZH				pP	sP	01 58 31.3	-1.3
LZH				sP	pP	01 58 36.0	+7.0
LZH				*e*PP	**PP**	**02 00 38.5**	**+1.2**
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
LZH				pmax	pmax		
	comp=Z,75nm,7.2s						
LZH				LR	LR		
	comp=Z,310nm,14.8s						
LZH				LR	LR		
	comp=Z,300nm,15.2s						
LZH				LR	LR		
	comp=Z,370nm,18.6s						
CD2	**Chengdu**	**64.72**	**69**	P	**P**	**01 58 33.5**	**+0.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**66.19**	**56**	*e*P	**P**	**01 58 44.5**	**+1.7**
HHC				pmax	pmax		
	comp=Z,16nm,0.7s						
HHC				pmax	pmax		
	comp=Z,210nm,7.1s						
CM31	**Chiang Mai Arr**	**66.65**	**83**	*e*P	**P**	**01 58 46.5**	**+0.5**
CMAR	**Chiang Mai Arr**	**66.65**	**83**	P	**P**	**01 58 46.5**	**+0.5**
	comp=Z,1.0nm,0.4s,baz=303,slow=8.3,SNR=3.6						
CMAR				LR	LR	02 36 08.7	
	comp=Z,76nm,18.8s,baz=266,slow=43						
NJ2	**Nanjing**	**75.52**	**61**	*e*P	**P**	**01 59 40.5**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
USRK	**Ussuriysk Ar.**	**77.56**	**45**	P	**P**	**01 59 50.5**	**-0.3**
	comp=Z,4.2nm,0.5s,baz=352,slow=3.9,SNR=9.9						
YKA	**Yellowknife Ar**	**78.48**	**342**	P	**P**	**01 59 54.5**	**-1.1**
	comp=Z,0.7nm,0.5s,baz=32,slow=5.3,SNR=9.4						
KS15	**Wonju Array Si**	**78.87**	**52**	*e*P	**P**	**01 59 58.2**	**0.0**
KSAR	**Wonju Array Be**	**78.87**	**52**	P	**P**	**01 59 58.2**	**0.0**
KSAR	**Wonju Array Be**	**78.87**	**52**	P	**P**	**01 59 58.2**	**0.0**
KSRS	**Korea Array**	**78.89**	**52**	P	**P**	**01 59 58.2**	**-0.1**
	comp=Z,2.6nm,0.5s,baz=310,slow=4.4,SNR=11						
KSRS				LR	LR	02 40 07.3	
	comp=Z,86nm,18.2s,baz=155,slow=40						
MDM	**Murphy Dome**	**81.14**	**357**	*e*P	**P**	**02 00 10.9**	**+0.9**
	comp=Z,15nm,1.3s						
MDM				*e*pP	**pP**	**02 00 21.0**	**+1.4**
MLY	**Manley**	**81.15**	**358**	*e*P	**P**	**02 00 11.3**	**+1.1**
	comp=Z,4.1nm,0.8s						
IL1	**Eielson Array**	**81.27**	**357**	*e*P	**P**	**02 00 10.3**	**-0.4**
ILAR	**Eielson Array**	**81.27**	**357**	P	**P**	**02 00 10.7**	**0.0**
	comp=Z,0.7nm,0.6s,baz=344,slow=3.7,SNR=8.0						
ILAR				LR	LR	02 37 04.9	
	comp=Z,59nm,21.8s,baz=348,slow=36						
ILB	**Eielson Array**	**81.27**	**357**	*e*P	**P**	**02 00 10.7**	**0.0**
DAWY	**Dawson**	**81.42**	**353**	*e*P	**P**	**02 00 12.1**	**+0.6**
	comp=Z,4.4nm,0.8s						
CCB	**Clear Creek Bu**	**81.44**	**357**	*e*P	**P**	**02 00 11.8**	**+0.3**
	comp=Z,12nm,1.4s						
WRH	**Wood River Hil**	**81.62**	**357**	*e*P	**P**	**02 00 12.6**	**+0.1**
	comp=Z,7.8nm,0.7s						
BPAW	**Bear Paw Mtn.**	**82.09**	**358**	*e*P	**P**	**02 00 15.3**	**+0.2**
	comp=Z,14nm,1.4s						
DHY	**Denali Highway**	**82.98**	**357**	*e*P	**P**	**02 00 20.4**	**+0.5**
	comp=Z,6.8nm,0.8s						
PPLA	**Purkeypile**	**83.33**	**359**	*e*P	**P**	**02 00 22.2**	**+0.5**
	comp=Z,9.9nm,0.5s						
ASAJ	**Asahikawa**	**83.56**	**40**	LR	LR	02 42 14.7	
	comp=Z,70nm,19.5s,baz=340,slow=39						
J36A	**Seneca 1, Swea**	**85.26**	**320**	*e*P	**P**	**02 00 32.3**	**+0.7**
	comp=Z,13nm,0.7s						
MAJO	**Matsushiro**	**86.00**	**48**	*e*P	**P**	**02 00 35.7**	**+0.2**
MAJO	**Matsushiro**	**86.00**	**48**	*e*P	**P**	**02 00 35.7**	**+0.2**
MJAR	**Matsushiro Arr**	**86.00**	**48**	P	**P**	**02 00 35.7**	**+0.2**
	comp=Z,2.5nm,0.9s,baz=294,slow=8.2,SNR=4.7						
ECSD	**EROS Data Cent**	**86.16**	**322**	*e*P	**P**	**02 00 36.5**	**+0.4**
	comp=Z,2.9nm,0.8s						
LRAL	**Lakeview Retre**	**87.76**	**309**	*e*P	**P**	**02 00 44.6**	**+0.5**
	comp=Z,14nm,1.3s						
DAV	**Davao City (W)**	**94.58**	**78**	LR	LR	02 50 06.4	
	comp=Z,40nm,18.8s,baz=321,slow=39						
YBH	**Yreka Blue Hor**	**99.00**	**336**	LR	LR	02 48 57.9	
	comp=Z,30nm,18.3s,baz=32,slow=37						
WR1	**Warramunga Arr**	**116.41**	**97**	*e*PKPdf	**PKPdf**	**02 06 38.9**	**-0.1**
WRA	**Warramunga Arr**	**116.41**	**97**	PKP	**PKPdf**	**02 06 38.9**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=314,slow=2.0,SNR=3.0						
ASAR	**Alice Springs**	**117.80**	**101**	PKP	**PKPdf**	**02 06 43.2**	**+1.6**
	comp=Z,0.2nm,0.4s,baz=321,slow=1.3,SNR=2.6						
AS31	**Alice Springs**	**117.80**	**101**	*e*PKPdf	**PKPdf**	**02 06 43.2**	**+1.6**

*IDC **19** 01:58:20.6±5.7, 25°.75S×66°.55W, h0km, mb3.5/1, mb1 3.7/2, mb1mx3.4/33, mbtmp3.6/2, ML3.8/1, MS3.8/2, Ms1 3.8/2, ms1mx3.1/26, Error ellipse: s-maj=178.4km s-min=54.9km az=59.0*
*GUC **19** 01:58:49.8±0.3, 23°.73S×67°.30W, h245km±8km, ML3.9*
*ISCJB **19** 01:58:50.2±1.2, 23°.8S±0°.1×67°.25W±0°.09, h250km, mb3.3/1, Error ellipse: s-maj=15.0km s-min=10.9km az=11.7*

ISC 19 01:58:51.1±1.5, 23°.8S±0°.1×67°.3W±0°.1, h250km, n13, σ0.9±57/18, 5C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB15	**IPOC Station P**	**2.06**	**286**	⇑*i*P	**Pn**	**01 59 34.1**	**-0.4**
PB15				*i* S	**S**	**02 00 08.1**	**-0.5**
PB06	**IPOC Station P**	**2.35**	**297**	⇑*i*P	**Pn**	**01 59 37.0**	**0.0**
PB06				*i* S	**S**	**02 00 12.8**	**-0.4**
PB09	**IPOC Station P**	**2.68**	**318**	⇑*i*P	**Pn**	**01 59 40.7**	**+0.2**
PB10	**IPOC Station P**	**2.98**	**275**	⇑*i*P	**Pn**	**01 59 44.0**	**+0.5**
PB10				*i* S	**S**	**02 00 24.9**	**+0.1**
PB04	**IPOC Station P**	**2.99**	**299**	*e*P	**Pn**	**01 59 44.2**	**+0.4**
PB04				*i* S	**S**	**02 00 25.6**	**+0.2**
PB04				IAML		02 00 29.0	
	comp=E,83nm,0.4s						
PB07	**IPOC Station P**	**3.15**	**311**	⇑*i*P	**Pn**	**01 59 45.7**	**+0.2**
PB07				*i* S	**S**	**02 00 28.2**	**-0.2**
PB07				IAML		02 00 29.9	
	comp=E,90nm,0.4s						
PB01	**IPOC Station P**	**3.41**	**323**	⇓*i*P	**Pn**	**01 59 48.2**	**-0.1**
PB01				*i* S	**S**	**02 00 32.9**	**-0.6**
PB01				IAML		02 00 36.3	
	comp=N,68nm,0.1s						
PB02	**IPOC Station P**	**3.44**	**316**	*e*P	**Pn**	**01 59 48.9**	**+0.3**
PB02				*i* S	**S**	**02 00 33.6**	**-0.5**
PB02				IAML		02 00 37.5	
	comp=E,113nm,0.2s						
LPAZ	**La Paz**	**7.52**	**354**	Pn	**Pn**	**02 00 39.6**	**+0.6**
	comp=E,0.4nm,0.3s,baz=170,slow=9.4,SNR=11						
PCRV	**Puerto La Cruz**	**33.88**	**5**	LR	LR	02 21 12.7	
	comp=E,174nm,19.3s,baz=46,slow=38						
TORD	**Torodi Ar. Bea**	**76.77**	**69**	P	**P**	**02 10 14.8**	**-0.9**
	comp=E,1.0nm,1.1s,baz=253,slow=6.6,SNR=3.6						
SCHQ	**Schefferville**	**78.32**	**0**	LR	LR	02 46 06.5	
	comp=E,50nm,21.3s,baz=82,slow=36						
MKAR	**Makanchi Array**	**146.56**	**39**	PKPbc	**PKPab**	**02 18 06.0**	**+1.3**
	comp=E,0.3nm,0.7s,baz=310,slow=2.7,SNR=3.8						

*IDC **19** 02:16:18.4±1.5, 34°.05N×25°.19E, h0km, mb3.7/2, mb1 3.5/4, mb1mx3.2/53, mbtmp3.4/4, ML3.7/2, Error ellipse: s-maj=27.7km s-min=21.7km az=95.0*
*ATH **19** 02:16:20.0, 34°.01N×25°.12E, h27km±2km, ML2.9/5, Error ellipse: s-maj=4.2km s-min=1.8km az=6.0*
*ISCJB **19** 02:16:21.5±1.2, 33°.97N±0°.08×25°.15E±0°.07, h39km±17km, mb3.5/2, Error ellipse: s-maj=14.1km s-min=9.0km az=10.6*
*CSEM **19** 02:16:22.2±0.4, 34°.06N×25°.12E, h20km, ML2.9, Error ellipse: s-maj=8.7km s-min=4.4km az=5.0*
*THE **19** 02:16:24.2, 34°.17N×25°.13E, h19km±8km, ML2.9/2, Error ellipse: s-maj=8.9km s-min=3.6km az=120.0*

ISC 19 02:16:22.1±2.0, 34°.05N±0°.08×25°.18E±0°.05, h29km±13km, n32, σ0.9±96/43, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**1.02**	**343**	P	**Pn**	**02 16 39.8**	**-0.6**
SIVA				S	**Sn**	**02 16 55.0**	**+1.3**
SIVA				AML	AML	02 17 01.1	
	comp=E,2786μm,0.6s						
SIVA				AML	AML	02 17 05.6	
	comp=N,2132μm,0.7s						
SIVA	**Sivas**	**1.02**	**343**	P	**Pn**	**02 16 39.6**	**-0.8**
SIVA				S	**Sb**	**02 16 53.0**	**-1.0**
SIVA	**Sivas**	**1.02**	**343**	P	**Pn**	**02 16 39.9**	**-0.5**
SIVA				S	**Sb**	**02 16 53.0**	**-1.0**
LAST	**Lasithi**	**1.14**	**12**	P	**Pn**	**02 16 42.2**	**+0.1**
LAST				S	**Sb**	**02 16 58.7**	**+1.0**
LAST	**Lasithi**	**1.14**	**12**	P	**Pn**	**02 16 42.3**	**+0.1**
LAST	**Lasithi**	**1.14**	**12**	P	**Pn**	**02 16 42.4**	**+0.2**
LAST				S	**Sb**	**02 16 58.9**	**+1.2**
GVD	**Gavdhos**	**1.20**	**312**	P	**Pn**	**02 16 43.0**	**+0.1**
GVD				S	**Sb**	**02 16 58.9**	**-0.3**
GVD				AML	AML	02 17 04.8	
	comp=N,925μm,0.4s						
GVD				AML	AML	02 17 10.2	
	comp=E,1216μm,0.7s						
GVD	**Gavdhos**	**1.20**	**312**	P	**Pn**	**02 16 43.0**	**+0.1**
GVD	**Gavdhos**	**1.20**	**312**	P	**Pn**	**02 16 43.0**	**+0.1**
GVD				S	**Sb**	**02 16 59.0**	**-0.3**
IDI	**Anoyia**	**1.26**	**349**	Pn	**Pn**	**02 16 43.8**	**-0.1**
	comp=E,6.1nm,0.3s,baz=18,slow=13,SNR=57						
IDI				Sn	**Sn**	**02 17 00.4**	**+0.5**
	comp=E,14nm,0.3s,baz=81,slow=16,SNR=9.5						
NPS	**Neapolis**	**1.27**	**16**	P	**Pb**	**02 16 45.3**	**0.0**
NPS				AML	AML	02 17 10.1	
	comp=N,462μm,0.5s						
NPS				AML	AML	02 17 10.4	
	comp=E,444μm,0.7s						
NPS	**Neapolis**	**1.27**	**16**	P	**Pb**	**02 16 44.9**	**-0.4**
VAM	**Vamos**	**1.58**	**330**	P	**Pn**	**02 16 48.8**	**+0.6**
VAM				AML	AML	02 17 25.8	
	comp=E,428μm,0.9s						
VAM				AML	AML	02 17 29.9	
	comp=N,467μm,0.7s						
VAM	**Vamos**	**1.58**	**330**	P	**Pn**	**02 16 49.4**	**+1.3**
VAM				S	**Sn**	**02 17 06.6**	**-1.0**
VAM	**Vamos**	**1.58**	**330**	P	**Pn**	**02 16 48.6**	**+0.5**
VAM				S	**Sn**	**02 17 06.6**	**-1.0**
IMMV	**Iera Moni Meta**	**1.72**	**325**	P	**Pn**	**02 16 50.1**	**+0.1**
IMMV				AML	AML	02 17 30.1	
	comp=N,364μm,0.7s						
IMMV				AML	AML	02 17 38.0	
	comp=E,430μm,0.9s						
IMMV	**Iera Moni Meta**	**1.72**	**325**	P	**Pn**	**02 16 50.2**	**+0.1**
IMMV	**Iera Moni Meta**	**1.72**	**325**	P	**Pn**	**02 16 50.3**	**+0.2**
KARP	**Karpathos**	**2.21**	**47**	P	**Pn**	**02 16 58.3**	**+1.3**
KARP	**Karpathos**	**2.21**	**47**	P	**Pn**	**02 16 58.2**	**+1.3**
ANKY	**Antikythira Is**	**2.38**	**320**	P	**Pn**	**02 16 59.3**	**+0.2**
ANKY	**Antikythira Is**	**2.38**	**320**	P	**Pn**	**02 16 59.5**	**+0.3**
VLI	**Veliai**	**3.23**	**326**	P	**Pn**	**02 17 10.9**	**0.0**
VLI	**Veliai**	**3.23**	**326**	P	**Pn**	**02 17 11.3**	**+0.4**
ARG	**Arkhangelos**	**3.24**	**47**	P	**Pn**	**02 17 12.4**	**+1.3**
ARG	**Arkhangelos**	**3.24**	**47**	P	**Pn**	**02 17 12.5**	**+1.5**
DYR	**Agios Nikonas**	**3.57**	**320**	P	**Pn**	**02 17 16.2**	**+0.7**
DYR	**Agios Nikonas**	**3.57**	**320**	P	**Pn**	**02 17 16.3**	**+0.7**
MMAI	**Mount Meron Ar**	**8.60**	**94**	Pn	**Pn**	**02 18 23.9**	**-0.8**
	comp=E,0.9nm,0.3s,baz=269,slow=14,SNR=5.1						
MMAI				Sn	**Sn**	**02 19 57.1**	**-3.6**
	comp=E,1.0nm,0.3s,baz=260,slow=25,SNR=4.1						
GERES	**GERESS Array B**	**17.08**	**333**	P	**Pn**	**02 20 19.4**	**+0.8**
	comp=E,0.1nm,0.3s,baz=157,slow=12,SNR=2.7						
TORD	**Torodi Ar. Bea**	**29.80**	**231**	P	**P**	**02 22 27.0**	**+0.4**
	comp=E,0.4nm,0.4s,baz=33,slow=8.5,SNR=15						
MKAR	**Makanchi Array**	**44.38**	**56**	P	**P**	**02 24 30.4**	**+0.4**
	comp=E,0.6nm,0.6s,baz=268,slow=7.9,SNR=5.1						

RSNC 19 02:28:45.0±0.6, 5°.80N×77°.53W, h3km±7km, ML2.5, Mw3.7, 1C, Near west coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOLC	**Bahia Solano**	**0.44**	**15**	*i* P	Pg	02 28 52.9	-0.5
SOLC				*e*S	Sg	02 28 59.1	0.0
SOLC				*i*		02 29 02.1	
	comp=Z,1μm,0.3s						
PLMC	**San Jos˜¹ del**	**1.53**	**126**	*e*P	Pn	02 29 11.1	-2.1
PLMC				*i*		02 29 14.6	
	comp=Z,128nm,0.1s						
DBBC	**Dabeiba**	**1.78**	**47**	*i* P	Pn	02 29 15.3	-1.4
DBBC				*i*		02 29 21.5	
	comp=Z,13nm,0.2s						
MALC	**Bahia Malaga**	**1.79**	**174**	*e*P	Pn	02 29 16.1	-0.7
MALC				*e*S	Sn	02 29 38.8	-1.2
HELC	**Santa Helena**	**2.02**	**79**	⇑*i*P	Pn	02 29 18.9	-1.4
HELC				*i*		02 29 19.8	
	comp=Z,35nm,0.6s						
YOTC	**Yotoco, Valle**	**2.16**	**147**	*e*P	Pn	02 29 20.5	-1.5
YOTC				*i*		02 30 03.7	
	comp=Z,14nm,0.4s						
HORQ	**Saladito**	**2.47**	**159**	*e*P	Pn	02 29 25.4	-1.1
HORQ				*i*		02 30 15.4	
	comp=Z,9.5nm,0.6s						
ANIL	**Santa Ana**	**2.48**	**122**	*e*P	Pn	02 29 25.4	-1.3
ANIL				*e*S	Sn	02 29 56.6	-1.0
ANIL				*i*		02 30 09.6	
	comp=Z,67nm,0.4s						
TOLC	**Tolima**	**2.51**	**119**	*e*P	Pn	02 29 27.1	+0.1
NORC	**Norcasia**	**2.66**	**95**	*e*P	Pn	02 29 28.9	+0.2
CAPC	**Capurgana**	**2.82**	**4**	*e*P	Pn	02 29 30.1	-0.9
CAPC				*i*		02 29 42.4	
	comp=Z,9.8nm,0.3s						
ZARC	**Zaragoza, Cauc**	**3.14**	**58**	*e*P	Pn	02 29 35.0	-0.4
ZARC				*i*		02 30 26.5	
	comp=Z,18nm,0.5s						
PTBC	**PUERTO BERRIO,**	**3.14**	**76**	*e*P	Pn	02 29 35.4	0.0
PTBC				*i*		02 29 49.0	
	comp=Z,13nm,0.6s						
PTBC				*e*S	Sn	02 30 12.5	-0.9

*ISCJB **19** 02:33:24.8±0.6, 33°.06S±0°.07×178°.0W±0°.1, h33km, mb4.6/8, MS3.6/1, Error ellipse: s-maj=17.7km s-min=6.4km az=31.5*
*NEIC **19** 02:33:24.2±0.6, 32°.90S×178°.08W, h10km, mb4.5/4, Error ellipse: s-maj=22.0km s-min=10.5km az=129.0*
*IDC **19** 02:33:25.2±1.2, 31°.88S×178°.49W, h0km, mb4.3/3, mb1 4.5/3, mb1mx3.8/45, mbtmp4.3/3, MS3.4/2, Ms1 3.4/2, ms1mx2.8/45, Error ellipse: s-maj=61.1km s-min=34.5km az=4.0*

ISC 19 02:33:26.7±0.8, 33°.1S±0°.1×177°.8W±0°.1, h33km, n31, σ1.9±81/31, mb4.4/7, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.63**	**217**	Pn	**Pn**	**02 35 03.5**	**+1.7**
	2.1nm,0.3s,baz=243,slow=14,SNR=3.1						
URZ				Sn	**Sn**	**02 36 18.6**	**+2.5**
	9.9nm,0.3s,baz=266,slow=23,SNR=15						
URZ	**Urewera**	**6.63**	**217**	*e*Pn	**Pn**	**02 35 03.0**	**+1.3**
URZ				*e*Sn	**Sn**	**02 36 16.8**	**+0.7**
OUZ	**Omahuta**	**7.42**	**251**	*e*Pn	**Pn**	**02 35 13.4**	**+0.7**
BKZ	**Black Stump Fm**	**7.64**	**215**	*e*Pn	**Pn**	**02 35 16.3**	**+0.7**
BKZ				*e*Sn	**Sn**	**02 36 39.5**	**-1.5**
BFZ	**Birch Farm**	**8.97**	**210**	*e*Pn	**Pn**	**02 35 34.0**	**+0.1**
BFZ				*e*Sn	**Sn**	**02 37 13.8**	**+0.1**
MQZ	**McQueen's Vall**	**12.98**	**212**	*e*Pn	**Pn**	**02 36 26.1**	**-2.6**
MQZ				*e*Sn	Sn	02 38 42.4	-10
DZM	**Mont Dzumac**	**17.69**	**304**	LR	LR	02 42 42.0	
	comp=Z,76nm,18.1s,baz=198,slow=34						
CTA	**Charters Tower**	**34.44**	**283**	P	**P**	**02 40 09.8**	**-1.6**
	3.2nm,0.5s,baz=130,slow=11,SNR=3.6						
AS31	**Alice Springs**	**43.17**	**270**	*e*P	**P**	**02 41 22.2**	**-2.3**
	1.5nm,0.4s						
ASAR	**Alice Springs**	**43.17**	**270**	P	**P**	**02 41 22.4**	**-2.1**
	3.0nm,0.7s,baz=106,slow=7.7,SNR=29						
WB2	**Warramunga Arr**	**44.38**	**275**	*e*P	**P**	**02 41 37.4**	**+3.2**
WR1	**Warramunga Arr**	**44.39**	**275**	*e*P	**P**	**02 41 32.8**	**-1.5**
	6.4nm,1.0s						
WRA	**Warramunga Arr**	**44.39**	**275**	P	**P**	**02 41 32.8**	**-1.5**
	2.7nm,0.6s,baz=115,slow=7.7,SNR=18						
WRA				LR	LR	02 59 55.5	
	comp=Z,73nm,18.8s,baz=200,slow=36						
SNCC	**San Nicolas Is**	**85.78**	**46**	*e*P	**P**	**02 46 01.1**	**-1.5**
EML	**El Monte Cty P**	**87.17**	**47**	*e*P	**P**	**02 46 06.7**	**-2.7**
TJR	**Tejon Ranch**	**87.48**	**45**	*e*P	**P**	**02 46 14.1**	**+3.1**
GVDA	**Garner Valley**	**87.80**	**47**	*e*P	**P**	**02 46 09.5**	**-3.1**
CCCA	**Chr Cany lake**	**88.64**	**45**	*e*P	**P**	**02 46 17.9**	**+1.4**
R11A	**Troy Canyon, C**	**91.60**	**44**	*e*P	**P**	**02 46 32.4**	**+2.0**
	1.6nm,0.6s						
KLU	**Klutina**	**97.71**	**15**	*e*P	**P**	**02 46 57.3**	**-0.3**
	9.8nm,0.6s						
SCM	**Sheep Creek Mo**	**97.72

ATAB	**Bozova**	**1.23 219**	P	**Pb**	**03 00 24.2**	**+0.5**
SANL	**SANLIURFA_Merk**	**1.27 190**	*i* P	**Pn**	**03 00 24.6**	**+0.4**
SANL	**SANLIURFA_Merk**	**1.27 190**	P	**Pn**	**03 00 24.6**	**+0.4**
MAZI	**Mazidag**	**1.34 136**	PN	**Pn**	**03 00 24.9**	**-0.3**
MAZI	**Mazidag**	**1.34 136**	*e*Pn	**Pn**	**03 00 24.9**	**-0.3**
SVAN	**Silvan-Diyarba**	**1.54 100**	PN	**Pn**	**03 00 27.8**	**-0.1**
SVAN	**Silvan-Diyarba**	**1.54 100**	*e*Pn	**Pn**	**03 00 27.8**	**-0.1**
SURC	**SANLIURFA_SURC**	**1.63 199**	*i* P	**Pg**	**03 00 31.9**	**+0.3**
SURC	**SANLIURFA_SURC**	**1.63 199**	P	**Pg**	**03 00 31.9**	**+0.3**

*ISCJB **19** 03:27:45.7±0.5, 39°.12N±0°.04×29°.14E±0°.03, h11km±4km, Error ellipse: s-maj=6.2km s-min=4.4km az=170.3*
*DDA **19** 03:27:45.4, 39°.08N×29°.14E, h7km, Ml2.5*
*CSEM **19** 03:27:45.6±0.1, 39°.11N×29°.14E, h12km, ML2.1, Error ellipse: s-maj=3.2km s-min=2.5km az=172.0*
*ISK **19** 03:27:45.4, 39°.16N×29°.14E, h5km, ML2.1/5*
ISC 19 03:27:45.7±0.9, 39°.11N±0°.03×29°.14E±0°.02, h15km±5km, n26, σ0°.61/40, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHAP	**Saphane-Kutahy**	**0.10**	**145**	PG	**Pg**	**03 27 49.3**	**+0.1**
SHAP				SG	**Sg**	**03 27 51.4**	**0.0**
SHAP	**Saphane-Kutahy**	**0.10**	**145**	*i* Pg	**Pg**	**03 27 49.3**	**+0.1**
SHAP				*e*Sg	**Sg**	**03 27 51.4**	**0.0**
SMAA	**Simav-Kutahya**	**0.13**	**266**	PG	**Pg**	**03 27 49.0**	**-0.4**
SMAA				SG	**Sg**	**03 27 50.6**	**-1.2**
SMAA	**Simav-Kutahya**	**0.13**	**266**	*i* Pg	**Pg**	**03 27 49.0**	**-0.4**
SMAA				*e*Sg	**Sg**	**03 27 50.6**	**-1.2**
SIMA	**Simav-Kutahya**	**0.13**	**259**	PG	**Pg**	**03 27 49.2**	**-0.2**
SIMA	**Simav-Kutahya**	**0.13**	**259**	*i* Pg	**Pg**	**03 27 49.2**	**-0.2**
GEDZ	**Gediz**	**0.22**	**107**	PG	**Pg**	**03 27 50.5**	**-0.2**
GEDZ				SG	**Sg**	**03 27 54.5**	**+0.5**
GEDZ	**Gediz**	**0.22**	**107**	*e*Pg	**Pg**	**03 27 50.5**	**-0.2**
GEDZ				*e*Sg	**Sg**	**03 27 54.5**	**+0.5**
DEMI	**Demirci**	**0.34**	**259**	*i* P	**Pg**	**03 27 52.6**	**-0.1**
DEMI				*i* S	**Sg**	**03 27 57.1**	**-0.5**
DEMI	**Demirci**	**0.34**	**259**	P	**Pg**	**03 27 52.6**	**-0.1**
DEMI				S	**Sg**	**03 27 57.1**	**-0.5**
TVSB	**Tavsanli**	**0.42**	**36**	PG	**Pg**	**03 27 53.5**	**-0.7**
TVSB				SG	**Sg**	**03 27 59.0**	**-1.0**
TVSB	**Tavsanli**	**0.42**	**36**	*e*Pg	**Pg**	**03 27 53.5**	**-0.7**
TVSB				*e*Sg	**Sg**	**03 27 59.0**	**-1.0**
KULA	**Kula-Manisa**	**0.70**	**213**	PG	**Pb**	**03 27 59.6**	**-0.1**
KULA	**Kula-Manisa**	**0.70**	**213**	*e*Pg	**Pb**	**03 27 59.6**	**-0.1**
DURS	**Dursunbey**	**0.71**	**314**	*i* P	**Pg**	**03 27 59.6**	**-0.1**
DURS	**Dursunbey**	**0.71**	**314**	P	**Pg**	**03 27 59.6**	**-0.1**
MANT	**Manisa**	**0.77**	**217**	*i* P	**Pg**	**03 28 00.2**	**-0.5**
MANT				*i* S	**Sg**	**03 28 10.0**	**-0.9**
MANT	**Manisa**	**0.77**	**217**	P	**Pg**	**03 28 00.2**	**-0.5**
MANT				S	**Sg**	**03 28 10.0**	**-0.9**
BALB	**Balikesir**	**1.11**	**299**	PN	**Pb**	**03 28 06.9**	**+0.2**
BALB	**Balikesir**	**1.11**	**299**	*e*Pn	**Pb**	**03 28 06.9**	**+0.2**
STEP	**BALIKESIR_Sava**	**1.14**	**284**	*i* P	**Pn**	**03 28 07.9**	**+0.8**
STEP				*i* S	**Sb**	**03 28 22.3**	**+0.6**
STEP	**BALIKESIR_Sava**	**1.14**	**284**	P	**Pn**	**03 28 07.9**	**+0.8**
STEP				S	**Sb**	**03 28 22.3**	**+0.6**
KZIL	**AFYON_Kizioren**	**1.15**	**137**	*i* P	**Pg**	**03 28 07.0**	**-1.0**
KZIL	**AFYON_Kizioren**	**1.15**	**137**	P	**Pg**	**03 28 07.0**	**-1.0**
BORA	**Eskisehir**	**1.27**	**52**	*i* P	**Pg**	**03 28 09.9**	**-0.3**
BORA	**Eskisehir**	**1.27**	**52**	P	**Pg**	**03 28 09.9**	**-0.3**

IDC 19 03:57:16.8±7.1, 18°.22S×176°.93W, h0km, mb3.9/3, mb1 4.2/3, mb1mx3.6/60, mbtmp3.9/3, Error ellipse: s-maj=308.5km s-min=37.2km az=143.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.96**	**260**	P	P	04 05 41.5	-0.5
	0.4nm,0.4s,baz=97,slow=7.0,SNR=12						
ASAR	**Alice Springs**	**46.06**	**254**	P	P	04 05 43.1	+0.2
	2.1nm,0.5s,baz=86,slow=8.7,SNR=29						
ILAR	**Eielson Array**	**85.88**	**12**	P	P	04 09 58.1	0.0
	0.3nm,0.4s,baz=223,slow=4.3,SNR=5.7						

*ISCJB **19** 04:01:37.8±0.2, 33°.09N±0°.01×116°.05W±0°.01, h7km±2km, Error ellipse: s-maj=2.1km s-min=1.9km az=16.5*
*NEIC **19** 04:01:38.4±0.0, 33°.08N×116°.05W, h10km, ML3.3(PAS), After PAS.*
NEIC Felt at Desert Hot Springs, Escondido and Santee.
*ECX **19** 04:01:39.1±0.6, 33°.06N×116°.06W, h8km, MD3.0, ML3.3*
ISC 19 04:01:37.1±0.8, 33°.06N±0°.02×116°.05W±0°.01, h11km±6km, n107, σ0°.84/154, 5C-5D, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRR	**Carrizo Plain**	**0.19**	**159**	⇓*i*P	**Pb**	**04 01 42.7**	**+0.2**
CRR	**Carrizo Plain**	**0.19**	**159**	*e*Pg	**Pb**	**04 01 42.7**	**+0.2**
ERRC	**Elmore Ranch**	**0.20**	**74**	*e*Pg	**Pb**	**04 01 42.9**	**+0.2**
CBKC	**Canebrake**	**0.23**	**227**	⇑*i*P	**Pb**	**04 01 43.4**	**0.0**
CBKC	**Canebrake**	**0.23**	**227**	*e*Pg	**Pb**	**04 01 43.4**	**0.0**
SWSC	**Sam W. Stewart**	**0.24**	**119**	P	**Pb**	**04 01 43.3**	**-0.1**
	baz=304,SNR=251						
SWSC				S	**Sb**	**04 01 47.0**	**+1.5**
	baz=304						
SWSC	**Sam W. Stewart**	**0.24**	**119**	⇑*i*P	**Pb**	**04 01 43.3**	**-0.1**
SWSC				*e*S	**Sb**	**04 01 47.0**	**+1.5**
SWSC	**Sam W. Stewart**	**0.24**	**119**	*e*Pg	**Pb**	**04 01 43.3**	**-0.1**
COK	**Cook Ranch**	**0.34**	**128**	⇑*i*P	**Pb**	**04 01 45.7**	**+0.5**
MONP2	**Monument Peak**	**0.36**	**242**	P	**Pb**	**04 01 45.5**	**0.0**
	baz=58,SNR=323						
MONP2				S	**Sb**	**04 01 50.5**	**-0.8**
	baz=58						
BORC	**Borrego Spring**	**0.37**	**304**	*e*Pg	**Pb**	**04 01 45.3**	**-0.4**
WESC	**Westside Schoo**	**0.40**	**138**	⇓*i*P	**Pb**	**04 01 46.8**	**+0.6**
WESC	**Westside Schoo**	**0.40**	**138**	*e*Pg	**Pb**	**04 01 47.0**	**+0.8**
IKP	**In-Ko-Pah, Jac**	**0.41**	**187**	P	**Pb**	**04 01 46.6**	**+0.1**
	baz=6.4,SNR=95						
IKP				S	**Sb**	**04 01 52.6**	**-0.1**
	baz=6.4						
IKP	**In-Ko-Pah, Jac**	**0.41**	**187**	⇓*e*P	**Pb**	**04 01 46.6**	**+0.1**
YUH	**Yuha Desert**	**0.43**	**166**	⇓*i*P	**Pb**	**04 01 46.8**	**+0.2**
YUH	**Yuha Desert**	**0.43**	**166**	*e*Pg	**Pb**	**04 01 46.8**	**+0.2**
BATC	**Bat Cave Butte**	**0.43**	**24**	*e*Pg	**Pb**	**04 01 46.9**	**+0.1**
CLIC	**Calipatria**	**0.45**	**80**	*e*Pg	**Pb**	**04 01 47.3**	**+0.4**
ERIC	**Ernies Place**	**0.45**	**134**	*e*Pg	**Pb**	**04 01 48.0**	**+0.9**
RMX	**La Rumorosa**	**0.46**	**183**	*e*P	**Pn**	**04 01 48.3**	**-1.4**
RMX				⇓*e*		04 01 54.0	
RMX				IAML		04 01 54.0	
	comp=E,2μm,0.2s						
RMX				*e*S	**Sb**	**04 01 55.5**	**+1.4**
RMX				IAML		04 01 56.0	
	comp=E,2μm,0.1s						
RMX				*e*		04 01 56.0	
FRK	**Frink**	**0.48**	**45**	*e*Pg	**Pb**	**04 01 47.2**	**-0.4**
DREC	**Desert Rsrch C**	**0.57**	**117**	*e*P	**Pn**	**04 01 49.9**	**-1.2**
DREC	**Desert Rsrch C**	**0.57**	**117**	*e*Pg	**Pn**	**04 01 50.7**	**-0.3**
DREC				*e*Sg	**Sn**	**04 01 59.8**	**-0.5**
CTCC	**Cactus City**	**0.59**	**5**	*e*Pg	**Pb**	**04 01 49.6**	**+0.1**
CTW	**Cottonwood Mou**	**0.63**	**13**	*e*Pg	**Pb**	**04 01 49.8**	**-0.3**
FRD	**Ford Ranch, An**	**0.63**	**313**	*e*Pg	**Pb**	**04 01 50.1**	**-0.1**
FRD				*e*Sg	**Sb**	**04 01 58.5**	**-0.7**
XPFO	**Piæon Flat**	**0.65**	**328**	*e*Pg	**Pg**	**04 01 49.8**	**+0.1**
XPFO				*e*Sg	**Sg**	**04 01 58.0**	**-0.2**
PFO	**Pinyon Flats O**	**0.65**	**328**	P	**Pb**	**04 01 50.0**	**-0.5**
	baz=147,SNR=39						
PFO				S	**Sg**	**04 01 58.3**	**0.0**
	baz=147						
PFO	**Pinyon Flats O**	**0.65**	**328**	*e*Pg	**Pb**	**04 01 50.5**	**0.0**
PFO				*e*Sg	**Sg**	**04 01 58.5**	**+0.3**
BAR	**Barrett**	**0.65**	**234**	*e*P	**Pb**	**04 01 50.4**	**0.0**
BAR	**Barrett**	**0.65**	**234**	*e*Pg	**Pb**	**04 01 50.4**	**0.0**
BAR				*e*Sg	**Sb**	**04 01 59.0**	**-0.4**
SNDA	**J Saunders Pla**	**0.68**	**316**	*e*Pg	**Pb**	**04 01 51.1**	**+0.1**
SNDA				*e*Sg	**Sb**	**04 02 00.9**	**+0.4**
EML	**El Monte Cty P**	**0.69**	**256**	⇑*i*P	**Pb**	**04 01 51.1**	**0.0**
EML				*e*S	**Sb**	**04 02 00.4**	**-0.3**
EML	**El Monte Cty P**	**0.69**	**256**	*e*Pg	**Pb**	**04 01 51.2**	**+0.1**
EML				*e*Sg	**Sb**	**04 02 00.3**	**-0.3**
BTCC	**Brunts Corner**	**0.70**	**94**	*e*Pg	**Pb**	**04 01 51.7**	**+0.5**
DNR	**Dunn Ranch,Anz**	**0.70**	**316**	*e*Pg	**Pb**	**04 01 51.7**	**+0.3**
HAY	**Hayfield**	**0.71**	**25**	*e*Pg	**Pb**	**04 01 51.7**	**+0.1**
PLM	**Palomar**	**0.74**	**293**	*e*Pg	**Pb**	**04 01 52.3**	**+0.2**
DPP	**Dos Picos Cty**	**0.75**	**265**	*e*Pg	**Pb**	**04 01 52.4**	**+0.2**
DPP				*e*Sg	**Sb**	**04 02 02.3**	**-0.2**
CRY	**Cary Ranch**	**0.77**	**311**	*e*Pg	**Pb**	**04 01 52.6**	**+0.2**
CRY				*e*Sg	**Sb**	**04 02 02.6**	**-0.3**
HWB	**Hans Werner Br**	**0.77**	**268**	*e*Pg	**Pb**	**04 01 52.5**	**+0.1**
HWB				*e*Sg	**Sb**	**04 02 02.8**	**-0.1**
BC3	**Big Chuckawall**	**0.77**	**40**	P	**Pg**	**04 01 52.2**	**+0.1**
	baz=222,SNR=80						
BC3				S	**Sb**	**04 02 02.6**	**-0.6**
	baz=222						
SDRC	**San Diego Road**	**0.82**	**247**	⇑*e*P	**Pb**	**04 01 53.3**	**0.0**
TJIG	**Tijuana**	**0.82**	**220**	*e*P	**Pb**	**04 01 53.4**	**+0.1**
109C	**Camp Elliot, M**	**0.91**	**259**	P	**Pg**	**04 01 54.7**	**+0.1**
	baz=77,SNR=61						
109C				S	**Sg**	**04 02 06.4**	**+0.1**
	baz=77						
CPE	**Camp Elliot**	**0.91**	**259**	*e*Pg	**Pg**	**04 01 55.0**	**+0.4**
CPE				*e*Sg	**Sb**	**04 02 06.7**	**-0.1**
CBX	**Cerro Bola**	**0.91**	**215**	*e*P	**Pn**	**04 01 55.3**	**-0.6**
CBX				*e*S	**Sb**	**04 02 07.3**	**+0.2**
CBX				IAML		04 02 09.1	
	comp=N,2μm,0.3s						
BELC	**Belle Mtn. Jos**	**0.94**	**3**	P	**Pb**	**04 01 55.0**	**-0.4**
	baz=183,SNR=26						
BELC				S	**Sb**	**04 02 07.7**	**-0.2**
	baz=183						
BELC	**Belle Mtn. Jos**	**0.94**	**3**	*e*Pg	**Pg**	**04 01 55.4**	**+0.2**
DGR	**Domenigoni Val**	**0.99**	**306**	*e*Pg	**Pb**	**04 01 55.9**	**-0.4**
DGR				*e*Sn	**Sn**	**04 02 10.4**	**-0.7**
BACC	**Bachelor Mtn.**	**1.00**	**304**	*e*Pg	**Pn**	**04 01 56.7**	**-0.4**
BACC				*e*Sn	**Sg**	**04 02 09.8**	**+0.5**
GLA	**Glamis**	**1.03**	**90**	P	**Pb**	**04 01 55.9**	**-1.0**
	baz=272,SNR=73						
HMTC	**Hemet**	**1.03**	**309**	*e*Pg	**Pb**	**04 01 56.5**	**-0.4**
TPC	**Twentynine Pal**	**1.04**	**360**	*e*Pg	**Pg**	**04 01 57.1**	**-0.1**
TPC				*e*Sn	**Sg**	**04 02 10.9**	**+0.2**
MURC	**Murrieta**	**1.10**	**300**	P	**Pb**	**04 01 57.4**	**-0.7**
	baz=118,SNR=193						
MURC				S	**Sg**	**04 02 12.5**	**-0.1**
	baz=118						
BBSC	**Beaumont Base**	**1.16**	**318**	*e*Sn	**Sn**	**04 02 15.5**	**+0.4**
IRM	**Iron Mountain**	**1.33**	**34**	P	**Pn**	**04 02 00.9**	**-0.7**
	baz=216,SNR=70						
IRM				S	**Sn**	**04 02 19.0**	**-0.2**
	baz=216						
IRM	**Iron Mountain**	**1.33**	**34**	*e*Pn	**Pg**	**04 02 03.2**	**+0.6**
SVD	**Seven Oaks Dam**	**1.36**	**320**	*e*Pn	**Pg**	**04 02 03.4**	**+0.1**
SVD				*e*Sn	**Sg**	**04 02 21.3**	**+0.3**
BBRC	**Big Bear Solar**	**1.40**	**329**	Pg	**Pg**	**04 02 04.0**	**0.0**
	baz=148						
BBRC				Sb	**Sg**	**04 02 21.8**	**-0.5**
	baz=148						
BBRC	**Big Bear Solar**	**1.40**	**329**	*e*Pn	**Pg**	**04 02 04.1**	**0.0**
BBRC				*e*Sn	**Sg**	**04 02 22.3**	**0.0**
PBX	**Punta Banda**	**1.44**	**204**	*e*P	**Pb**	**04 02 03.5**	**-0.4**
Y12C	**Blythe**	**1.45**	**61**	S	**Sb**	**04 02 22.1**	**-0.4**
	baz=243						
Y12C	**Blythe**	**1.45**	**61**	*e*Pn	**Pn**	**04 02 02.2**	**-1.0**
Y12C				*e*Sn	**Sg**	**04 02 24.1**	**+0.4**
ECNX	**Esteban Cantu**	**1.48**	**199**	*e*P	**Pb**	**04 02 04.1**	**-0.5**
ZAX	**El Zacaton**	**1.56**	**187**	*e*P	**Pb**	**04 02 05.9**	**-0.1**
ZAX				*e*S	**Sg**	**04 02 26.8**	**-0.4**
ZAX				IAML		04 02 33.2	
	comp=N,235nm,0.5s						
ZAX				*e*		04 02 33.2	
GMRC	**Granite Mounta**	**1.75**	**11**	Pb	**Pb**	**04 02 08.9**	**-0.4**
	baz=191,SNR=28						
GMRC				Sb	**Sb**	**04 02 31.9**	**+0.6**
	baz=191						
GMRC	**Granite Mounta**	**1.75**	**11**	*e*Pn	**Pg**	**04 02 10.4**	**-0.2**
HEC	**Hector,Ludlow**	**1.78**	**352**	Sb	**Sg**	**04 02 33.6**	**-0.7**
	baz=172						
BFSC	**Mount Baldy Ra**	**1.78**	**312**	Pb	**Pb**	**04 02 09.5**	**-0.4**
	baz=130,SNR=25						
BFSC				Sb	**Sb**	**04 02 32.7**	**+0.4**
	baz=130						
SSK	**Sunset Peak**	**1.79**	**310**	*e*Pn	**Pb**	**04 02 10.3**	**+0.3**
PSRC	**Puddingstone R**	**1.79**	**305**	*e*Pn	**Pb**	**04 02 10.4**	**+0.5**
PSRC				*e*Sn	**Sg**	**04 02 33.4**	**-1.3**
ECBX	**El Chinero**	**1.80**	**152**	*e*P	**Pb**	**04 02 10.1**	**+0.1**
ECBX				*e*S	**Sb**	**04 02 33.5**	**+1.1**
VTV	**Victorville**	**1.84**	**325**	*e*Sn	**Sg**	**04 02 34.8**	**-1.4**
PEM	**Pine Mountain**	**1.88**	**306**	*e*Pn	**Pb**	**04 02 11.8**	**+0.5**
RRX	**Edison Barstow**	**1.97**	**337**	Sb	**Sb**	**04 02 38.6**	**+1.0**
	baz=156						
FMP	**Fort Macarthur**	**1.99**	**290**	Pb	**Pb**	**04 02 13.5**	**+0.2**
	baz=108						
FMP				Sb	**Sb**	**04 02 39.2**	**+1.3**
	baz=108						
CIAC	**Catalina I. Ai**	**2.01**	**280**	*e*Pn	**Pb**	**04 02 14.2**	**+0.6**
CIS	**Catalina Islan**	**2.01**	**280**	Pb	**Pb**	**04 02 13.8**	**+0.1**
	baz=98,SNR=14						
CIS				Sb	**Sb**	**04 02 39.6**	**+0.8**
	baz=98						
PDMCI	**Parker Dam,Lak**	**2.02**	**52**	Sb	**Sb**	**04 02 39.5**	**+0.7**
	baz=233						
MWC	**Mount Wilson**	**2.04**	**305**	*e*Pn	**Pb**	**04 02 14.4**	**+0.2**
MWC				*e*Sn	**Sb**	**04 02 38.3**	**-1.4**
HOLC	**Holcomb Ridge**	**2.04**	**313**	*e*Pn	**Pb**	**04 02 14.9**	**+0.6**
SPIG	**San Pedro Mart**	**2.07**	**166**	*e*P	**Pb**	**04 02 14.8**	**-0.1**
SPX	**San Pedro Mart**	**2.07**	**166**	*e*P	**Pb**	**04 02 14.6**	**-0.3**
NEE2	**Needles Airpor**	**2.08**	**35**	Sb	**Sb**	**04 02 41.7**	**+1.1**
	baz=216						
CHFC	**Chilao Flat St**	**2.08**	**308**	*e*Pn	**Pb**	**04 02 14.9**	**0.0**
PASC	**Pasadena Art C**	**2.10**	**302**	*e*Pn	**Pb**	**04 02 15.4**	**+0.3**
PASC				*e*Sn	**Sb**	**04 02 39.7**	**-1.5**
DECC	**Green Verdugo**	**2.25**	**303**	Pb	**Pb**	**04 02 18.1**	**+0.4**
	baz=121						
DECC				Sb	**Sg**	**04 02 47.3**	**-2.0**
	baz=121						
GSC	**Goldstone, Bar**	**2.32**	**345**	Sb	**Sg**	**04 02 49.5**	**-2.2**
	baz=164						
EDW2	**Edwards Air Fo**	**2.43**	**319**	Pb	**Pb**	**04 02 21.6**	**+0.8**
	baz=138						
EDW2				Sb	**Sg**	**04 02 53.0**	**-2.2**
	baz=138						
SBI	**Santa Barbara**	**2.53**	**280**	*e*Sn	**Sb**	**04 02 52.4**	**-1.2**
OSI	**Osito Audit: C**	**2.71**	**306**	Sb	**Sb**	**04 02 59.9**	**+1.0**
	baz=124						
W13A	**Hualapai Mount**	**2.71**	**41**	*e*Pn	**Pb**	**04 02 23.1**	**-2.6**
W13A				*e*Sn	**Sn**	**04 02 55.4**	**+1.7**
BLG	**Laguna Peak, P**	**2.73**	**293**	Sb	**Sb**	**04 03 01.4**	**+2.1**
	baz=111						
ISA	**Isabella, Lake**	**3.28**	**323**	*e*Pg	**Pb**	**04 02 35.7**	**+0.4**
ISA				*e*Sn	**Sn**	**04 03 06.7**	**-0.8**
CARC	**Carrizo Plain**	**3.86**	**306**	*e*Sg	**Sg**	**04 03 38.4**	**-2.8**
TPNV	**Topopah Spring**	**3.88**	**358**	*e*Pg	**Pg**	**04 02 50.3**	**-1.2**
X16A	**Lo Mia Camp, P**	**4.07**	**69**	*e*Pn	**Pn**	**04 02 39.4**	**0.0**
TUC	**Tucson**	**4.50**	**98**	*e*Pn	**Pn**	**04 02 45.3**	**0.0**
LCMT	**Little Creek M**	**4.56**	**29**	*e*Pn	**Pn**	**04 02 45.5**	**-0.7**
LCMT				*e*Sg	**Sg**	**04 04 02.8**	**-0.8**
U15A	**North Rim**	**4.56**	**42**	*e*Pn	**Pn**	**04 02 48.3**	**+2.0**
U15A				*e*Sn	**Sn**	**04 03 39.8**	**+0.3**
KNB	**Kanab**	**4.75**	**33**	*e*Pn	**Pn**	**04 02 48.6**	**-0.2**
R11A	**Troy Canyon, C**	**5.29**	**4**	*e*Pn	**Pn**	**04 02 58.3**	**+2.1**
PSUT	**Pine Spring**	**5.74**	**17**	*e*Pn	**Pn**	**04 03 03.8**	**+1.3**
JHUM	**Huhtala Lane,**	**6.50**	**311**	*e*Sn	**Sn**	**04 04 29.9**	**+3.0**
CNIC	**Niles Canyon**	**6.63**	**315**	*e*Pg	**Pb**	**04 03 33.2**	**+0.8**
CNIC				*e*Sn	**Sn**	**04 04 31.7**	**+1.8**

*ISCJB **19** 04:02:23.8±0.7, 28°.6N±0°.1×138°.3E±0°.2, h529km, mb3.3/14, Error ellipse: s-maj=21.7km s-min=13.8km az=173.3*
*IDC **19** 04:02:26.1±5.7, 28°.60N×138°.28E, h538km±73km, mb3.0/14, mb1 3.0/14, mb1mx2.8/69, mbtmp3.9/14, Error ellipse: s-maj=20.2km s-min=12.7km az=82.0*
ISC 19 04:02:25.3±0.9, 28°.6N±0°.1×138°.3E±0°.2, h529km, n14, σ0°.60/14, mb3.4/14, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**31.25**	**317**	P	**P**	**04 08 02.0**	**+0.3**
	0.5nm,0.5s,baz=126,slow=7.6,SNR=4.6						
MKAR	**Makanchi Array**	**46.85**	**309**	P	**P**	**04 10 07.5**	**+0.1**
	0.4nm,0.3s,baz=87,slow=10,SNR=7.4						
FITZ	**Fitzroy Crossi**	**48.00**	**196**	P	**P**	**04 10 16.7**	**+0.4**
	3.1nm,0.9s,baz=30,slow=8.1,SNR=3.0						
WRA	**Warramunga Arr**	**48.40**	**185**	P	**P**	**04 10 19.1**	**-0.2**
	1.5nm,0.5s,baz=0.3,slow=7.8,SNR=26						
KURBB	**Kurchatov Arra**	**49.52**	**314**	P	**P**	**04 10 26.6**	**-0.5**
	0.7nm,0.4s,baz=95,slow=8.2,SNR=6.3						
ASAR	**Alice Springs**	**52.13**	**185**	P	**P**	**04 10 46.2**	**-0.3**
	0.2nm,0.6s,baz=352,slow=6.1,SNR=3.1						
BVAR	**Borovoye Array**	**54.59**	**317**	P	**P**	**04 11 03.9**	**+0.2**
	0.9nm,0.5s,baz=102,slow=6.9,SNR=5.4						
KDAK	**Kodiak Island**	**55.26**	**38**	P	**P**	**04 11 09.0**	**+0.8**
	3.5nm,0.9s,baz=270,slow=5.1,SNR=3.9						
ILAR	**Eielson Array**	**58.08**	**29**	P	**P**	**04 11 26.2**	**-1.2**
	0.2nm,0.4s,baz=252,slow=5.8,SNR=6.6						
AKTO	**Aktyubinsk**	**62.54**	**315**	P	**P**	**04 11 56.6**	**-0.6**
	0.6nm,0.3s,baz=113,slow=7.7,SNR=2.9						
YKA	**Yellowknife Ar**	**72.45**	**28**	P	**P**	**04 12 58.0**	**+0.3**
	0.3nm,0.5s,baz=300,slow=5.8,SNR=4.3						
FINES	**FINESS Array B**	**75.06**	**333**	P	**P**	**04 13 12.2**	**-0.3**
	0.5nm,0.3s,baz=83,slow=6.0,SNR=5.7						
HFS	**Hagfors**	**80.66**	**335**	P	**P**	**04 13 42.5**	**-0.2**
	1.4nm,0.8s,baz=45,slow=4.7,SNR=2.6						
BRTR	**Keskin Array B**	**82.44**	**311**	P	**P**	**04 13 53.1**	**+0.7**
	0.3nm,0.6s,baz=104,slow=10,SNR=3.2						

*NIED **19** 04:04:00, 35°.90N×141°.00E, h14km, Mw4.0 Best double couple: M0 1.13000×10^15 NP1:φs59.00000°, δ42.00000°, λ-51.00000°. NP2:φs192.00000°, δ58.00000°, λ-120.00000°.*
*IDC **19** 04:04:14.5±0.7, 35°.88N×141°.03E, h0km, mb3.8/12, mb1 4.0/14, mb1mx3.8/72, mbtmp3.7/14, ML3.3/2, MS4.2/2, Ms1 4.2/2, ms1mx2.7/67, Error ellipse: s-maj=19.2km s-min=18.3km az=100.0*
*ISCJB **19** 04:04:16.0±0.7, 35°.91N±0°.03×141°.00E±0°.04, h20km±4km, mb3.9/16, MS4.3/2, Error ellipse: s-maj=6.2km s-min=5.2km az=147.7*
*JMA **19** 04:04:16.1±0.1, 35°.89N×141°.02E, h22km±1km, M4.0*
JMA Felt II J1.
*NEIC **19** 04:04:19.7±0.4, 35°.87N×140°.92E, h35km, mb4.3/6, Error ellipse: s-maj=10.9km s-min=8.3km az=183.0*
NEIC Recorded [2 JMA] in Ibaraki.
ISC 19 04:04:16.3±1.3, 35°.96N±0°.04×140°.91E±0°.05, h11km±8km, n51, σ1°.47/51, mb3.9/16, 2C-1D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.26**	**189**	⇓P	**Pg**	**04 04 21.7**	**+0.1**
CHOJ				S	**Sg**	**04 04 25.5**	**+0.3**
JYT	**Yasato**	**0.64**	**295**	⇑P	**Pb**	**04 04 29.8**	**+0.4**
JYT				*e*S	**Sn**	**04 04 39.4**	**-1.9**
JHO	**Hitachi**	**0.70**	**337**	⇑P	**Pb**	**04 04 30.8**	**+0.2**
JHO				*e*S	**Sn**	**04 04 41.8**	**-1.2**
BSO3	**Boso 3**	**1.20**	**196**	P	**Pn**	**04 04 37.2**	**-1.5**
BSO3				*e*X		04 04 51.4	
MJAR	**Matsushiro Arr**	**2.26**	**286**	Pn	**Pn**	**04 04 53.8**	**+0.3**
	9.5nm,0.3s,baz=112,slow=7.7,SNR=34						
MJAR				Sn	**Sb**	**04 05 23.4**	**-1.5**
	12nm,0.3s,baz=78,slow=18,SNR=5.4						
MAJO	**Matsushiro**	**2.26**	**286**	*e*Pn	**Pn**	**04 04 54.2**	**+0.6**
MAJO				*e*Sn	**Sb**	**04 05 23.2**	**-1.8**
MAT	**Matsushiro**	**2.26**	**286**	P	**Pn**	**04 04 53.8**	**+0.2**
MAT				*e*S	**Sn**	**04 05 20.8**	**-0.6**
MJB9	**Matsu-Tunnel**	**2.26**	**286**	*e*Pn	**Pn**	**04 04 54.4**	**+0.8**
MJB9				*e*Sn	**Sb**	**04 05 23.0**	**-2.2**
JHJ	**Hachijo jima 2**	**2.98**	**198**	Pn	**Pn**	**04 05 03.0**	**-0.4**
	8.8nm,0.3s,baz=72,slow=20,SNR=2.3						
JHJ				Sn	**Sn**	**04 05 40.2**	**+1.0**
	19nm,0.3s,baz=40,slow=18,SNR=2.7						
INU	**Inuyama**	**3.23**	**260**	*e*Pg	**Pb**	**04 05 13.0**	**-0.6**

mb5.0/24,mB5.2/15,MLv5.3/18,Mw(mB)4.5/15
ISC 19 04:27:56.7±0.4,**2°91**S±0°04×**100°93**E±0°04,**h52**km±2km,
h52km:**pP-P,n605**,σ1§**26**/629,**mb5.1**/122,**MS4.0**/48,
29C-10D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.93**	**279**	P	**Pn**	**04 28 14.9**	**+1.4**
KRJI	**Kerinci**	**0.98**	**33**	P	**Pn**	**04 28 14.3**	**0.0**
MASI	**Maura Aman, Be**	**1.33**	**100**	P	**Pn**	**04 28 18.7**	**-0.3**
PDSI	**Padang**	**2.04**	**347**	P	**Pn**	**04 28 28.9**	**+0.2**
SISI	**Saibi**	**2.42**	**311**	P	**Pn**	**04 28 35.0**	**+1.2**
MNAI	**Manna**	**2.48**	**125**	*e*Pn	**Pn**	**04 28 35.5**	**+0.7**
RGRI	**Rengat**	**2.91**	**29**	P	**Pn**	**04 28 41.4**	**+0.8**
BKNI	**Bangkinang**	**3.22**	**2**	P	**Pn**	**04 28 46.9**	**+2.1**
BKNI	**Bangkinang**	**3.22**	**2**	*e*Pn	**Pn**	**04 28 46.8**	**+1.9**
MDSI	**Maura Dua**	**3.60**	**116**	P	**Pn**	**04 28 52.8**	**+2.7**
LWLI	**Liwa**	**3.76**	**124**	P	**Pn**	**04 28 56.1**	**+3.7**
MNSI	**Mandailing Nat**	**3.92**	**340**	P	**Pn**	**04 28 55.9**	**+1.4**
KLI	**Kotabumi**	**4.38**	**116**	P	**Pn**	**04 29 04.3**	**+3.6**
KLI	**Kotabumi**	**4.38**	**116**	P	**Pn**	**04 29 00.5**	**-0.2**
DSRI	**Dabo**	**4.38**	**57**	P	**Pn**	**04 29 02.3**	**+1.6**
KASI	**Kota Agung**	**4.41**	**126**	P	**Pn**	**04 29 03.3**	**+2.2**
GSI	**Gunungsitoli**	**5.36**	**321**	P	**Pn**	**04 29 13.9**	**-0.4**
GSI	**Gunungsitoli**	**5.36**	**321**	*e*Pn	**Pn**	**04 29 14.2**	**0.0**
MYKOM	**Kota Tinggi**	**5.51**	**32**	*e*Pn	**Pn**	**04 29 17.4**	**+1.1**
PSI	**Prapat**	**6.02**	**341**	P	**Pn**	**04 29 21.3**	**-2.0**
	6.2nm,0.3s,baz=180,slow=9.4,SNR=19						
PSI				S	**Sn**	**04 30 23.1**	**-7.9**
	6.1nm,0.3s,baz=180,slow=18,SNR=2.9						
PSI				LR	LR	04 32 05.5	
	comp=Z,4μm,20.6s,baz=91,slow=42						
KCSI	**Kotacane, Aceh**	**7.13**	**334**	P	**Pn**	**04 29 39.6**	**+1.1**
TPTI		**7.18**	**329**	P	**Pn**	**04 29 40.6**	**+1.4**
IPM	**Ipoh**	**7.34**	**1**	*e*Pn	**Pn**	**04 29 44.1**	**+2.6**
LEM	**Lembang**	**7.72**	**120**	P	Pn	04 29 52.1	+5.4
	8.3nm,0.3s,baz=319,slow=19,SNR=2.9						
LEM				S	Sn	04 31 25.3	+12
	2.9nm,0.3s,baz=330,slow=20,SNR=1.6						
KULM	**Kulim**	**8.15**	**358**	*e*Pn	**Pn**	**04 29 54.0**	**+1.5**
KULM				*e*Sn	**Sn**	**04 31 23.9**	**+0.5**
CISI	**Cisompet, Garu**	**8.27**	**124**	P	**Pn**	**04 29 53.3**	**-0.8**
CISI	**Cisompet, Garu**	**8.27**	**124**	*e*Pn	**Pn**	**04 29 53.4**	**-0.7**
CISI				*e*Sn	**Sn**	**04 31 25.6**	**-0.6**
MLSI	**Meulaboh, Aceh**	**8.44**	**328**	P	**Pn**	**04 29 57.7**	**+1.2**
	165nm,0.5s,3μm1.0nm						
KPJI	**Karang Pucung**	**9.10**	**119**	P	**Pn**	**04 30 08.8**	**+3.3**
COCO	**West Island**	**10.07**	**204**	*e*Pn	**Pn**	**04 30 18.2**	**-0.5**
COCO	**West Island**	**10.07**	**204**	*i* P	**Pn**	**04 30 19.0**	**+0.3**
KSM	**Kuching**	**10.34**	**65**	*e*Pn	**Pn**	**04 30 25.3**	**+2.7**
TRTT	**Trang**	**10.75**	**353**	P	**Pn**	**04 30 30.9**	**+2.8**
	29nm,0.7s						
UGM	**Wanagama**	**10.77**	**118**	*e*Pn	**Pn**	**04 30 27.1**	**-1.2**
SBUM	**Sibu**	**12.48**	**65**	*e*Pn	**Pn**	**04 30 55.6**	**+3.8**
MTKI	**Muara Teweh, K**	**14.10**	**82**	P	**P**	**04 31 22.8**	**+2.8**
JAGI	**Jajag, Banyuwa**	**14.27**	**113**	*e*Pn	**Pn**	**04 31 14.3**	**-1.8**
PBA	**Port Blair**	**16.60**	**331**	*e*Pn	Pn	04 31 46.6	+0.6
	283nm,1.2s						
SRAK	**Srakaew**	**16.85**	**4**	P	**Pn**	**04 31 49.4**	**+0.2**
	143nm,0.9s,1μm						
KKM	**Kota Kinabalu**	**17.67**	**60**	*e*Pn	**P**	**04 32 01.6**	**+1.8**
	28nm,1.0s						
CHAI	**Chaiyaphum**	**18.72**	**3**	P	**P**	**04 32 11.4**	**+0.2**
	7.5nm,0.9s						
SPSI	**Sidrap Palu**	**18.84**	**94**	P	**Pn**	**04 32 15.1**	**+1.6**
	18nm,0.8s						
TTSI	**Tana Toraja**	**18.87**	**91**	P	**Pn**	**04 32 15.4**	**+1.5**
	54nm,1.1s,777nm						
PCI	**Palu**	**19.00**	**84**	P	**Pn**	**04 32 15.9**	**+0.4**
PCI	**Palu**	**19.00**	**84**	P	**Pn**	**04 32 15.4**	**-0.1**
PCI				pmax	pmax		
	comp=Z,85nm,1.7s						
MPSI	**Mapaga**	**19.24**	**81**	P	**Pn**	**04 32 19.0**	**+0.7**
	comp=Z,65nm,1.1s,comp=Z,751nm						
BKSI	**Bulukumba**	**19.30**	**98**	P	**Pn**	**04 32 18.5**	**-0.5**
MYLDM	**Lahad Datu**	**19.31**	**65**	*e*P	**Pn**	**04 32 20.1**	**+0.9**
PBKT	**Sadao Pong**	**19.36**	**0**	P	**Pn**	**04 32 19.1**	**-0.5**
	comp=Z,23nm,1.2s						
PBKT	**Sadao Pong**	**19.36**	**0**	*e*P	**P**	**04 32 17.4**	**-0.7**
	comp=Z,11nm,0.9s						
WBSI	**Waikabubak, Su**	**19.52**	**111**	P	**Pn**	**04 32 22.9**	**+1.2**
	comp=Z,110nm,1.1s						
PHIT	**Phitsanulok**	**19.98**	**359**	P	**Pn**	**04 32 28.6**	**+1.6**
	comp=Z,34nm,0.8s						
APSI	**Ampana**	**20.81**	**85**	P	**P**	**04 32 34.7**	**+0.7**
MRSI	**Marisa**	**21.28**	**81**	P	**P**	**04 32 40.8**	**+1.8**
	comp=Z,34nm,1.1s,comp=Z,676nm						
CM01	**Chiang Mai Arr**	**21.29**	**355**	*e*P	**P**	**04 32 35.6**	**-3.4**
CMAR	**Chiang Mai Arr**	**21.32**	**355**	P	**P**	**04 32 37.0**	**-2.5**
	comp=Z,12nm,0.9s,baz=186,slow=9.9,SNR=25						
CMAR				PcP	**PcP**	**04 36 43.0**	**+0.6**
	comp=Z,0.9nm,0.3s,baz=194,slow=3.4,SNR=5.3						
CMAR				LR	LR	04 41 33.6	
	comp=Z,462nm,18.1s,baz=178,slow=38						
CHTO	**Chiang Mai**	**21.68**	**355**	P	**P**	**04 32 44.4**	**+1.2**
	comp=Z,78nm,0.9s						
CHTO	**Chiang Mai**	**21.68**	**355**	*e*P	**P**	**04 32 43.4**	**+0.2**
	comp=Z,13nm,0.8s						
CHTO	**Chiang Mai**	**21.68**	**355**	*e*P	**P**	**04 32 43.4**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,13nm,0.8s						
KDI	**Kendari**	**21.68**	**93**	P	**P**	**04 32 46.7**	**+3.4**
LUWI	**Luwuk**	**21.91**	**86**	P	**P**	**04 32 49.6**	**+3.8**
CMAI	**Chiengmai2**	**22.78**	**355**	P	**P**	**04 32 57.7**	**+2.5**
	comp=Z,178nm,0.7s,comp=Z,7μm						
SOEI	**Soe**	**24.16**	**107**	*e*P	**P**	**04 33 06.6**	**-1.8**
	comp=Z,48nm,1.2s						
MBWA	**Marble Bar**	**25.77**	**136**	*e*P	**P**	**04 33 21.0**	**-1.8**
	comp=Z,70nm,0.9s						
TGY	**Tagaytay City**	**26.07**	**49**	P	**P**	**04 33 25.4**	**-0.3**
	comp=Z,147nm,0.4s,baz=225,slow=4.3,SNR=4.5						
DAV	**Davao City (W)**	**26.53**	**68**	LR	LR	04 44 45.6	
	comp=Z,606nm,21.9s,baz=273,slow=38						
BRDH	**Bariadhala**	**27.00**	**341**	LR	LR	04 46 25.0	
	comp=Z,388nm,18.7s,baz=177,slow=41						
KMI	**Kunming**	**27.93**	**4**	P	**P**	**04 33 42.4**	**0.0**
KMI				pP	sP	04 34 00.9	-1.1
KMI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KMI				LR	LR		
	comp=Z,960nm,17.8s						
KMI				LR	LR		
	comp=Z,570nm,18.2s						
KMI				LR	LR		
	comp=Z,830nm,18.2s						
FITZ	**Fitzroy Crossi**	**28.54**	**124**	P	**P**	**04 33 47.8**	**0.0**
	comp=Z,7.8nm,1.0s,baz=312,slow=5.8,SNR=13						
FITZ				LR	LR	04 45 06.7	
	comp=Z,251nm,21.6s,baz=306,slow=36						
FITZ	**Fitzroy Crossi**	**28.54**	**124**	P	**P**	**04 33 47.9**	**+0.2**
	baz=29,SNR=10						
FITZ	**Fitzroy Crossi**	**28.54**	**124**	*e*P	**P**	**04 33 47.8**	**0.0**
	comp=Z,31nm,1.4s						
H08S2	**Diego Garcia H**	**28.69**	**259**	T	T	05 03 02.4	
	baz=82,slow=75,SNR=176						
H08S3	**Diego Garcia H**	**28.70**	**259**	T	T	05 03 12.8	
	baz=82,slow=75,SNR=451						
H08S1	**Diego Carcia H**	**28.71**	**259**	T	T	05 03 06.0	
	baz=82,slow=75,SNR=23						
SHL	**Shillong**	**29.64**	**343**	*e*P	**P**	**04 33 55.0**	**-2.6**
GYA	**Guiyang**	**29.72**	**10⇑**	*i* P	**P**	**04 33 57.5**	**-0.7**
GYA				pP	sP	04 34 16.0	-1.8
GYA				PP	**PnPn**	**04 35 00.3**	**+4.7**
GYA				S	**S**	**04 38 53.8**	**+2.9**
GYA				sS	sS	04 39 18.3	+4.8
GYA				SS	**ScP**	**04 40 32.6**	**-6.6**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,4.9s						
GYA				LR	LR		
	comp=Z,540nm,17.8s						
GYA				LR	LR		
	comp=Z,560nm,18.0s						
GYA				LR	LR		
	comp=Z,500nm,17.9s						
KNRA	**Kununurra**	**30.20**	**117**	P	**P**	**04 34 01.9**	**-0.6**
	baz=30,SNR=4.1						
SIJI	**Sorong**	**30.39**	**87**	P	**P**	**04 34 03.4**	**-0.9**
	comp=Z,7.3nm,0.5s,baz=286,slow=7.5,SNR=7.0						
FAKI	**Fak Fak**	**31.28**	**91**	*e*P	**P**	**04 34 11.0**	**-1.1**
	comp=Z,26nm,1.0s						
MTN	**Manton Dam**	**31.47**	**110**	*e*P	**P**	**04 34 11.2**	**-2.5**
	comp=Z,17nm,1.4s						
ODAN	**Odare**	**32.36**	**337**	*e*P	**P**	**04 34 23.0**	**+1.4**
	comp=Z,367nm,1.0s						
TAPN	**Taplejung**	**32.67**	**338**	*e*P	**P**	**04 34 26.1**	**+1.6**
	comp=Z,364nm,0.9s						
RAMN	**Ramite**	**32.75**	**336**	*e*P	**P**	**04 34 26.9**	**+1.8**
	comp=Z,72nm,0.7s						
YULB	**Yu-li**	**32.83**	**36**	*e*P	**P**	**04 34 25.0**	**-0.5**
	comp=Z,30nm,1.4s						
SSLB	**Suanglung**	**32.93**	**35**	*e*P	**P**	**04 34 24.4**	**-2.1**
	comp=Z,19nm,1.0s						
NWAO	**Narrogin (SRO)**	**33.54**	**155**	LR	LR	04 46 51.1	
	comp=Z,228nm,19.9s,baz=196,slow=34						
NWAO	**Narrogin (SRO)**	**33.54**	**155**	*e*P	**P**	**04 34 28.3**	**-3.4**
	comp=Z,44nm,1.3s						
NWAO	**Narrogin (SRO)**	**33.54**	**155**	*e*P	**P**	**04 34 28.3**	**-3.4**
NWAO				pmax	pmax		
	comp=Z,44nm,1.3s						
JIRN	**Jiri**	**33.55**	**336**	*e*P	**P**	**04 34 33.6**	**+1.4**
	comp=Z,140nm,0.5s						
CD2	**Chengdu**	**33.74**	**4**	P	**P**	**04 34 34.6**	**+1.2**
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
LSA	**Lhasa**	**33.75**	**345**	*e*P	**P**	**04 34 35.3**	**+1.3**
	comp=Z,25nm,1.0s						
LSA	**Lhasa**	**33.75**	**345**	*e*P	**P**	**04 34 35.3**	**+1.3**
LSA				pmax	pmax		
	comp=Z,25nm,1.0s						
PKIN	**Phulchoki**	**33.81**	**335**	*e*P	**P**	**04 34 35.3**	**+1.0**
	comp=Z,62nm,0.9s						
GUN	**Gumba**	**33.90**	**336**	*e*P	**P**	**04 34 36.7**	**+1.5**
	comp=Z,209nm,0.5s						
DMN	**Daman**	**33.96**	**334**	*e*P	**P**	**04 34 37.0**	**+1.4**
	comp=Z,41nm,0.6s						
ENH	**Enshi**	**34.00**	**13**	*e*P	**P**	**04 34 34.5**	**-1.1**
	comp=Z,30nm,1.0s						
KKN	**Kakani**	**34.04**	**335**	*e*P	**P**	**04 34 37.4**	**+1.1**
	comp=Z,98nm,0.8s						
H01W3	**Cape Leeuwin H**	**34.10**	**160**	T	T	05 11 09.3	
	baz=337,slow=76,SNR=7.7						
H01W2	**Cape Leeuwin H**	**34.11**	**160**	T	T	05 11 20.8	
	baz=337,slow=76,SNR=7.1						
H01W1	**Cape Leeuwin H**	**34.11**	**160**	T	T	05 11 10.7	
	baz=337,slow=76,SNR=12						
GKN	**Gorkha**	**34.51**	**334**	*e*P	**P**	**04 34 41.5**	**+1.3**
	comp=Z,139nm,1.0s						
KOLN	**Koldanda**	**34.77**	**332**	*e*P	**P**	**04 34 44.0**	**+1.4**
	comp=Z,146nm,0.9s						
DANN	**Dangsing**	**35.19**	**333**	*e*P	**P**	**04 34 47.5**	**+1.2**
	comp=Z,166nm,0.5s						
PYUN	**Piuthan**	**35.34**	**332**	*e*P	**P**	**04 34 48.8**	**+1.4**
	comp=Z,88nm,0.7s						
WR1	**Warramunga Arr**	**36.74**	**120**	*e*P	**P**	**04 34 59.0**	**-0.4**
	comp=Z,22nm,0.4s						
WRA	**Warramunga Arr**	**36.74**	**120**	P	**P**	**04 34 59.0**	**-0.4**
	comp=Z,13nm,0.4s,baz=302,slow=8.9,SNR=186						
WRA				S	**S**	**04 40 35.6**	**-4.1**
	comp=Z,2.9nm,1.0s,baz=293,slow=16,SNR=5.9						
WRA	**Warramunga Arr**	**36.74**	**120**	P	**P**	**04 34 59.0**	**-0.4**
WRAB	**Tennant Creek**	**36.74**	**120**	*e*P	**P**	**04 34 59.1**	**-0.3**
	comp=Z,40nm,1.1s						
WRAB	**Tennant Creek**	**36.74**	**120**	*c i*P	**P**	**04 34 58.6**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,48nm,1.7s						
WB2	**Warramunga Arr**	**36.75**	**120**	*e*P	**P**	**04 34 59.0**	**-0.4**
XAN	**Xi'an**	**37.52**	**11**	P	**P**	**04 35 04.4**	**-1.4**
XAN				pP	pP	04 35 19.6	+0.2
XAN				sP	sP	04 35 26.6	+1.0
XAN				PP	**PnPn**	**04 36 33.0**	**-0.6**
XAN				S	**S**	**04 40 46.6**	**-4.6**
XAN				sS	sS	04 41 12.6	-1.6
XAN				pmax	pmax		
	comp=Z,57nm,0.8s						
XAN				pmax	pmax		
	comp=Z,250nm,3.6s						
XAN				LR	LR		
	comp=Z,540nm,18.0s						
XAN				LR	LR		
	comp=Z,500nm,18.7s						
XAN				LR	LR		
	comp=Z,730nm,23.4s						
FORT	**Forrest**	**37.75**	**140**	*e*P	**P**	**04 35 08.5**	**+0.7**
	comp=Z,19nm,0.9s						
AS31	**Alice Springs**	**37.97**	**126**	*e*P	**P**	**04 35 10.5**	**+0.7**
	comp=Z,6.1nm,0.8s						
AS31				*e*PcP	**PcP**	**04 37 25.9**	**+1.1**
ASAR	**Alice Springs**	**37.97**	**126**	P	**P**	**04 35 09.8**	**0.0**
	comp=Z,4.8nm,0.5s,baz=297,slow=7.7,SNR=35						
ASAR				PcP	**PcP**	**04 37 25.9**	**+1.1**
	comp=Z,2.5nm,0.8s,baz=324,slow=2.5,SNR=5.9						
ASAR				S	**S**	**04 40 55.6**	**-2.8**
	comp=Z,2.6nm,1.0s,baz=294,slow=14,SNR=8.2						
ASAR				LR	LR	04 53 38.7	
	comp=Z,127nm,19.6s,baz=314,slow=41						
AS01	**Alice Springs**	**38.01**	**126**	*e*P	**P**	**04 35 09.7**	**-0.4**
NJ2	**Nanjing**	**38.72**	**25**	*e*P	**P**	**04 35 17.3**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,19nm,0.8s						
LZH	**Lanzhou**	**38.89**	**4**	*e*P	**P**	**04 35 16.3**	**-1.2**
LZH				pP	pP	04 35 30.6	-0.5
LZH				sP	sP	04 35 36.8	-0.5
LZH				PP	**PnPn**	**04 36 54.5**	**+4.3**
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
LZH				pmax	pmax		
	comp=Z,97nm,5.3s						
LZH				LR	LR		
	comp=Z,400nm,13.2s						
LZH				LR	LR		
	comp=Z,380nm,14.0s						
LZH				LR	LR		
	comp=Z,500nm,17.0s						
JOW	**Kunigami**	**39.65**	**40**	LR	LR	04 51 30.2	
	comp=Z,102nm,18.6s,baz=274,slow=36						
JOW	**Kunigami**	**39.65**	**40**	*e*P	**P**	**04 35 23.9**	**+0.2**
	comp=Z,102nm,1.4s						
QIS	**Mount Isa**	**41.56**	**118**	P	**P**	**04 35 39.7**	**0.0**
	baz=42,SNR=14						
GTA	**Gaotai**	**42.13**	**359**	P	**P**	**04 35 45.5**	**+1.4**
GTA				pP	pP	04 36 00.9	+3.0
GTA				sP	sP	04 36 08.1	+4.1
GTA				PcP	**PcP**	**04 37 39.1**	**+1.2**
GTA				S	**S**	**04 42 02.0**	**+1.8**
GTA				sS	sS	04 42 28.4	+4.9
GTA				SS	**SS**	**04 45 08.3**	**-1.4**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,56nm,5.2s						
GTA				LR	LR		
	comp=Z,400nm,20.3s						
GTA				LR	LR		
	comp=Z,250nm,17.2s						
GTA				LR	LR		
	comp=Z,540nm,19.9s						
BBOO	**Buckleboo**	**44.35**	**136**	P	**P**	**04 36 03.2**	**+1.1**
	baz=44,SNR=5.1						
BBOO	**Buckleboo**	**44.35**	**136**	*e*P	**P**	**04 36 01.1**	**-1.0**
	comp=Z,31nm,1.3s						
HHC	**Hu-ho-hao-te**	**44.62**	**12**	*e*P	**P**	**04 36 05.8**	**+1.6**
HHC				PP	**PP**	**04 37 51.0**	**+1.8**
HHC				S	**S**	**04 42 38.8**	**+2.1**
HHC				pmax	pmax		
	comp=Z,17nm,0.7s						
HHC				pmax	pmax		
	comp=Z,160nm,5.9s						
HHC				LR	LR		
	comp=Z,490nm,13.8s						
HHC				LR	LR		
	comp=Z,550nm,14.7s						
HHC				LR	LR		
	comp=Z,620nm,13.7s						
NIL	**Nilore**	**44.77**	**327**	*e*P	**P**	**04 36 05.9**	**+0.5**
	comp=Z,92nm,0.8s						
NIL	**Nilore**	**44.77**	**327**	*e*P	**P**	**04 36 05.9**	**+0.5**
NIL				pmax	pmax		
	comp=Z,93nm,0.8s						
MTSU	**Mount Surprise**	**45.11**	**113**	P	**P**	**04 36 08.1**	**-0.2**
	baz=45,SNR=7.4						
JNU	**Nakatsue**	**45.68**	**36**	P	**P**	**04 36 13.1**	**+0.6**
	comp=Z,28nm,0.9s,baz=221,slow=6.4,SNR=8.3						
JNU				pP	**pP**	**04 36 24.8**	**-1.7**
	comp=Z,51nm,1.0s,baz=188,slow=5.0,SNR=8.4						
JNU				LR	LR	04 56 01.3	
	comp=Z,232nm,19.9s,baz=300,slow=37						
JNU	**Nakatsue**	**45.68**	**36**	*e*P	**P**	**04 36 13.5**	**+1.0**
	comp=Z,78nm,1.1s						
JNU				pP	**pP**	**04 36 24.8**	**-1.7**
HTT	**Hallett**	**46.70**	**135**	P	**P**	**04 36 22.2**	**+1.5**
	baz=47,SNR=5.1						
KS15	**Wonju Array Si**	**47.31**	**29**	*e*P	**P**	**04 36 24.6**	**-0.7**
KSAR	**Wonju Array Be**	**47.31**	**29**	P	**P**	**04 36 24.6**	**-0.7**
KSAR				pP	**pP**	**04 36 37.4**	**-1.9**
KSAR	**Wonju Array Be**	**47.31**	**29**	P	**P**	**04 36 24.6**	**-0.7**
KSAR				*PP	**pP**	**04 36 37.4**	**-1.9**
KSRS	**Korea Array**	**47.34**	**29**	P	**P**	**04 36 24.6**	**-0.9**
	comp=Z,3.0nm,0.9s,baz=219,slow=7.9,SNR=8.0						
KSRS				pP	**pP**	**04 36 37.4**	**-2.1**
	comp=Z,15nm,1.1s,baz=220,slow=8.1,SNR=8.7						
KS01	**Wonju Array Si**	**47.35**	**29**	*e*P	**P**	**04 36 24.9**	**-0.6**
CTA	**Charters Tower**	**47.38**	**115**	P	**P**	**04 36 25.9**	**-0.2**
	comp=Z,14nm,1.0s,baz=289,slow=11,SNR=7.4						
CTA	**Charters Tower**	**47.38**	**115**	P	**P**	**04 36 26.3**	**+0.2**
	baz=48						
CTAO	**Charters Tower**	**47.38**	**115**	*e*P	**P**	**04 36 26.3**	**+0.2**
	comp=Z,44nm,1.4s						
CTAO	**Charters Tower**	**47.38**	**115**	*e*P	**P**	**04 36 26.3**	**+0.2**
CTAO				pmax	pmax		
	comp=Z,45nm,1.4s						
QLP	**Quilpie**	**47.68**	**124**	P	**P**	**04 36 29.4**	**+1.1**
	baz=48,SNR=4.2						
STKA	**Stephens Creek**	**47.86**	**132**	P	**P**	**04 36 30.6**	**+1.0**
	comp=Z,5.3nm,0.5s,baz=312,slow=6.7,SNR=17						
STKA				pP	**pP**	**04 36 42.8**	**-0.9**
	comp=Z,11nm,0.7s,baz=301,slow=7.1,SNR=7.5						
STKA				LR	LR	04 57 30.3	
	comp=Z,186nm,21.2s,baz=317,slow=37						
STKA	**Stephens Creek**	**47.86**	**132**	P	**P**	**04 36 30.6**	**+1.0**
	baz=48,SNR=9.3						
WMQ	**Urumqi**	**48.02**	**347**	P	**P**	**04 36 31.8**	**+1.1**
WMQ				pP	pP	04 36 46.3	+1.6
WMQ				sP	sP	04 36 53.0	+2.2
WMQ				pmax	pmax		
	comp=Z,480nm,3.7s						
WMQ				LR	LR		
	comp=Z,320nm,29.1s						
WMQ				LR	LR		
	comp=Z,200nm,24.1s						
WMQ				LR	LR		
	comp=Z,250nm,31.5s						
KSH	**Kashi**	**48.05**	**334**	P	**P**	**04 36 30.8**	**-0.3**
KSH				pP	pP	04 36 40.1	-5.1
KSH				sP	sP	04 36 54.3	+3.1
KSH				PP	**PP**	**04 38 24.4**	**+0.7**
KSH				S	**S**	**04 43 23.9**	**-2.0**
KSH				sS	sS	04 43 51.8	+2.3
KSH				ScS	**ScS**	**04 46 17.1**	**-2.8**
KSH				pmax	pmax		
	comp=Z,54nm,0.8s						
KSH				LR	LR		
	comp=Z,380nm,5.7s						
KSH				LR	LR		
	comp=Z,280nm,4.5s						
KSH				LR	LR		
	comp=Z,220nm,6.4s						
WSAR	**Wadi Sarin**	**48.72**	**305**	LR	LR	04 55 12.5	
	comp=Z,103nm,20.4s,baz=137,slow=34						
TARG	**Taragay, Kyrgy**	**49.15**	**337**	*e*P	**P**	**04 36 41.3**	**+1.4**
	comp=Z,17nm,0.8s						
SFK	**Sufi-Kurgan**	**49.57**	**332**	P	**P**	**04 36 44.2**	**+1.3**
SFK				pmax	pmax		
	comp=Z,62nm,1.0s						
NRN	**Naryn**	**49.63**	**335**	*e*P	**P**	**04 36 44.4**	**+1.0**
NRN	**Naryn**	**49.63**	**335**	*e*P	**P**	**04 36 44.4**	**+1.0**
PDGK	**Podgornoye**	**49.92**	**340**	P	**P**	**04 36 45.9**	**+0.5**
PDGK				pmax	pmax		
	comp=Z,32nm,0.8s						
ULHL	**Ulahol**	**50.21**	**336**	P	**P**	**04 36 48.6**	**+0.9**
	SNR=13						
KZA	**Kyzart**	**50.48**	**335**	P	**P**	**04 36 51.2**	**+1.3**
	SNR=18						
SONA0	**Songino Array**	**50.76**	**5**	*e*P	**P**	**04 36 52.2**	**+0.5**
SONA0				*e*PcP	**PcP**	**04 38 08.3**	**+0.2**
SONA0				*e*ScP	**ScP**	**04 41 59.4**	**-0.6**
SONM	**Songino Array**	**50.76**	**5**	P	**P**	**04 36 52.2**	**+0.5**
	comp=Z,47nm,0.9s,baz=185,slow=8.6,SNR=153						
SONM				PcP	**PcP**	**04 38 08.3**	**+0.2**
	comp=Z,2.5nm,0.5s,baz=187,slow=4.5,SNR=5.8						
SONM				ScP	**ScP**	**04 41 59.4**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=169,slow=2.9,SNR=3.6						
SONM				LR	LR	05 00 58.0	
	comp=Z,274nm,19.8s,baz=186,slow=39						
SONA1	**Songino Array**	**50.78**	**5**	*e*P	**P**	**04 36 51.5**	**-0.2**
CMSA	**Cobar Meteorol**	**50.82**	**129**	P	**P**	**04 36 53.6**	**+1.3**
	baz=51,SNR=20						
ULN	**Ulaanbaatar**	**50.85**	**5**	*e*P	**P**	**04 36 52.7**	**+0.4**
	comp=Z,29nm,0.9s						
ULN	**Ulaanbaatar**	**50.85**	**5**	*d i*P	**P**	**04 36 52.1**	**-0.3**
ULN				pmax	pmax		
	comp=Z,30nm,0.8s						
UCH	**Uchtor**	**50.91**	**335**	P	**P**	**04 36 54.6**	**+1.3**
	SNR=15						
TKM2	**Tokmak 2**	**51.03**	**336**	P	**P**	**04 36 54.9**	**+1.0**
	SNR=51						
KBK	**Karagaybulak**	**51.08**	**335**	P	**P**	**04 36 55.8**	**+1.6**
	SNR=17						
AML	**Almayashu**	**51.18**	**334**	P	**P**	**04 36 56.5**	**+1.3**
	SNR=30						
FRU	**Bishkek**	**51.36**	**335**	*e*P	**P**	**04 36 57.0**	**+0.9**
FRU				*i*		04 37 10.0	
CHMS	**Chumysh**	**51.44**	**336**	P	**P**	**04 36 57.5**	**+0.8**
	SNR=9.1						
CN2	**Changchun**	**51.46**	**23**	*e*P	**P**

comp=Z,48nm,0.9s,baz=170,slow=9.5,SNR=4.8
GEYT LR LR 05 04 07.7
comp=Z,89nm,21.5s,baz=140,slow=38
KURK Kurchatov 56.74 343 *e*P **P 04 37 35.2 +0.1**
KURK Kurchatov 56.74 343 P **P 04 37 34.9 -0.2**
KURK S **S 04 45 22.1 -1.9**
KURK pmax pmax
comp=Z,6.0nm,0.6s
ZAA0 Zalesovo Array 58.23 349 *e*P **P 04 37 45.5 0.0**
comp=Z,113nm,0.9s
ZALV Zalesovo Beam 58.23 349 P **P 04 37 45.5 0.0**
comp=Z,101nm,0.8s,baz=163,slow=5.6,SNR=187
ZALV S **S 04 45 41.7 -1.8**
comp=Z,0.7nm,0.5s,baz=166,slow=13,SNR=2.6
ZAA1 Zalesovo Array 58.24 349 *e*P **P 04 37 45.5 -0.1**
ZAA1 *e*S **S 04 45 41.7 -1.9**
HNR Honiara 58.98 99 LR LR 05 04 21.3
comp=Z,40nm,21.5s,baz=287,slow=37
NVS Novosibirsk 59.39 348⇓*i*P **P 04 37 53.5 -0.1**
NVS *e* 04 38 06.7
NVS *e*S **S 04 45 50.6 -7.9**
NVS pmax pmax
comp=Z,29nm,1.0s
NVS pmax pmax
comp=N,16nm,1.1s
NVS pmax pmax
comp=E,14nm,1.1s
NVS smax smax
comp=E,9.0nm,1.2s
ASAJ Asahikawa 59.85 34 P **P 04 37 55.1 -1.9**
comp=E,3.8nm,0.4s,baz=321,slow=13,SNR=3.9
ASAJ LR LR 05 02 33.2
comp=E,71nm,22.0s,baz=228,slow=35
ASAJ Asahikawa 59.85 34 *e*P **P 04 37 56.2 -0.7**
comp=E,27nm,1.4s
ZEA Zeya 60.58 18 *e*P **P 04 38 02.2 +0.4**
ZEA pmax pmax
comp=Z,19nm,0.6s
BVA0 Borovoye Array 61.36 340 *i*P **P 04 38 06.4 -0.7**
BVA0 pmax pmax
comp=Z,16nm,1.0s
BVAR Borovoye Array 61.36 340 P **P 04 38 06.5 -0.5**
comp=Z,13nm,0.8s,baz=134,slow=8.3,SNR=63
BVAR LR LR 05 08 39.9
comp=Z,72nm,20.4s,baz=139,slow=40
BRVK Borovoye 61.42 339 *e*P **P 04 38 07.2 -0.3**
comp=Z,17nm,1.0s
BRVK Borovoye 61.42 339 *e*P **P 04 38 07.2 -0.3**
BRVK pmax pmax
comp=Z,17nm,1.0s
YSS Yuzh-Sakhalins 61.77 31⇑*e*P **P 04 38 09.7 -0.2**
YSS *e* 04 38 22.7
YSS pmax pmax
comp=Z,40nm,0.9s
AB31 Akbulak array 62.88 331 *i*P **P 04 38 17.3 0.0**
AB31 pmax pmax
comp=Z,82nm,1.2s
ABKAR Akbulak array 62.88 331 *e*P **P 04 38 17.6 +0.2**
CASY Casey 63.61 176 *e*P **P 04 38 21.4 -0.5**
comp=Z,6.0nm,1.1s
KMBO Kilima Mbogo 63.65 270 LR LR 05 02 18.1
comp=Z,117nm,18.9s,baz=92,slow=32
AKTO Aktyubinsk 64.60 331 P **P 04 38 28.4 -0.2**
comp=Z,10nm,0.9s,baz=99,slow=7.2,SNR=27
DZM Mont Dzumac 66.25 113 P **P 04 38 40.1 +0.1**
comp=Z,3.9nm,0.7s,baz=267,slow=17,SNR=3.3
DZM LR LR 05 11 31.3
comp=Z,82nm,18.2s,baz=218,slow=40
DZM Mont Dzumac 66.25 113 *e*P **P 04 38 40.1 +0.1**
comp=Z,22nm,1.2s
GNI Garni 66.82 316 LR LR 05 08 47.4
comp=Z,33nm,21.6s,baz=98,slow=37
GNI Garni 66.82 316 *i*P **P 04 38 43.5 +0.1**
GNI pmax pmax
comp=Z,27nm,1.0s
SVE Sverdlovsk 67.87 337*d i*P **P 04 38 49.9 +0.4**
SVE pmax pmax
comp=Z,45nm,1.0s
YAK Yakutsk 68.39 14 *e*P **P 04 38 51.1 -1.5**
YAK *e* 04 39 09.0
YAK *e* 04 41 21.5
YAK *e*S **S 04 47 51.4 +1.5**
YAK *e**SS **pS 04 48 09.6 +2.0**
YAK pmax pmax
comp=Z,56nm,0.9s
YAK pmax pmax
comp=E,9.0nm,1.0s
YAK pmax pmax
comp=N,13nm,1.1s
YAK pmax pmax
comp=Z,13nm,0.9s
YAK pmax pmax
comp=N,11nm,1.2s
YAK pmax pmax
comp=E,6.0nm,0.9s
YAK smax smax
comp=N,82nm,4.1s
YAK smax smax
comp=E,50nm,3.5s
YAK MLR MLR
comp=Z,630nm,21.0s
YAK MLR MLR
comp=N,503nm,20.0s
YAK MLR MLR
comp=E,141nm,22.0s
ARU Arti 68.41 336 *e*P **P 04 38 52.8 0.0**
comp=E,31nm,1.1s
ARU Arti 68.41 336*c i*P **P 04 38 52.6 -0.2**
ARU *PP **pP 04 39 08.8 +1.3**
ARU 04 41 20.3
ARU S **S 04 47 52.2 +1.9**
ARU SS **SS 04 52 11.4 -3.5**
ARU pmax pmax
comp=Z,29nm,1.0s
KBZ Khabaz 69.60 319 P **P 04 39 01.9 +1.4**
comp=Z,10nm,0.8s,baz=116,slow=6.1,SNR=16
MAW Mawson 69.64 195 LR LR 05 05 27.1
comp=Z,126nm,18.2s,baz=36,slow=32
KIV Kislovodsk 69.83 319 *e*P **P 04 39 02.6 +0.5**
KIV pmax pmax
comp=Z,20nm,1.0s
MMAI Mount Meron Ar 71.32 306 P **P 04 39 13.8 +2.5**
comp=Z,3.0nm,0.5s,baz=99,slow=8.9,SNR=5.8
MMAI LR LR 05 11 02.1
comp=Z,72nm,20.5s,baz=90,slow=36
NRIK Noril'sk 72.68 355 P **P 04 39 18.0 -0.6**
comp=Z,12nm,0.6s,baz=158,slow=5.2,SNR=19
NRIK LR LR 05 13 39.8
comp=Z,164nm,19.6s,baz=178,slow=38
PETK Petropavlovsk- 73.16 32 P **P 04 39 21.5 -0.3**
comp=Z,6.0nm,0.8s,baz=202,slow=1.6,SNR=6.6
PETK LR LR 05 14 32.9
comp=Z,63nm,18.0s,baz=264,slow=38
PETK Petropavlovsk- 73.16 32 *e*P **P 04 39 21.2 -0.7**
PEA1 Petropavlovsk- 73.17 32 *e*P **P 04 39 21.5 -0.3**
MA2 Magadan 73.48 24 *e*P **P 04 39 23.8 +0.2**
comp=Z,28nm,1.0s
MA2 Magadan 73.48 24⇑*e*P **P 04 39 23.2 -0.4**
MA2 pmax pmax
comp=Z,20nm,1.0s
BR101 Keskin Array S 74.62 312 *e*P **P 04 39 31.1 +0.2**
BR131 Keskin Array S 74.62 312 *e*P **P 04 39 31.1 +0.2**
BRTR Keskin Array B 74.62 312 P **P 04 39 31.1 +0.2**
comp=Z,6.6nm,0.8s,baz=130,slow=6.9,SNR=26
BRTR LR LR 05 14 23.6
comp=Z,37nm,20.7s,baz=98,slow=37
VORD Divnogorie 74.87 325 *e*P **P 04 39 31.6 -0.2**
VORD pmax pmax
comp=Z,20nm,1.1s
VSR Storozhevoye 75.05 325 *e*P **P 04 39 32.4 -0.4**
VSR pmax pmax
comp=Z,40nm,1.1s
BOSA Boshof 76.03 241 P **P 04 39 41.8 +2.7**
comp=Z,2.3nm,0.9s,baz=107,slow=3.8,SNR=3.6
BOSA LR LR 05 05 36.7
comp=Z,199nm,21.9s,baz=38,slow=30
SEY Seymchan 76.13 22 P **P 04 39 39.0 +0.3**
comp=Z,14nm,0.9s,baz=231,slow=5.9,SNR=30
SEY Seymchan 76.13 22*ce*P **P 04 39 38.4 -0.4**
TIXI Tiksi 76.61 9 *e*P **P 04 39 39.9 -1.4**
comp=Z,46nm,1.3s
TIXI Tiksi 76.61 9*ce*P **P 04 39 40.3 -1.0**
TIXI pmax pmax
comp=Z,29nm,1.0s
PRGR Permogore 76.87 336 *e*P **P 04 39 42.8 -0.2**
PRGR *e**PP **pP 04 39 57.1 -0.8**
PRGR pmax pmax
comp=Z,44nm,0.9s
SYO Syowa Base 77.31 199⇑*e*X P 04 39 36.8 -8.5
MOS Moscow 77.75 329 *e*P **P 04 39 48.0 0.0**
MOS *e* 04 40 07.3
MOS pmax pmax
comp=Z,34nm,0.7s
OBN Obninsk 78.05 328 *e*P **P 04 39 48.9 -0.8**
OBN *e* 04 39 58.3
OBN *e* 04 42 46.7
OBN *e*PPP PPP 04 44 31.7
OBN pmax pmax
comp=Z,156nm,1.7s
KLMR Klimovskoe 79.05 334 *e*P **P 04 39 53.5 -1.5**
KLMR *e**PP **sP 04 40 13.8 -2.1**
KLMR pmax pmax
comp=Z,41nm,1.4s
KLMR Klimovskoe 79.05 334 *e*P **P 04 39 53.6 -1.5**
KLMR AMP 04 39 56.5
comp=Z,41nm,1.4s
KLMR *e*pP **sP 04 40 13.8 -2.1**
TIRR Tirgusor 79.65 316⇑*i*P **P 04 39 59.7 +1.0**
TIRR Tirgusor 79.65 316 *e*P **P 04 39 59.6 +1.0**
comp=Z,13nm,1.0s
TIRR Tirgusor 79.65 316 ⇑P **P 04 39 59.7 +1.0**
TLB Topalu 79.94 316⇓*i*P **P 04 40 01.9 +1.6**
TLB Topalu 79.94 316 ⇓P **P 04 40 01.9 +1.6**
CFR Carcaliu 80.02 317⇑*i*P **P 04 40 02.2 +1.5**
CFR Carcaliu 80.02 317 ⇑P **P 04 40 02.2 +1.5**
HARR Harsova 80.04 316⇑*i*P **P 04 40 02.5 +1.7**
HARR Harsova 80.04 316 ⇑P **P 04 40 02.5 +1.7**
IDI Anoyia 80.32 306 P **P 04 40 03.8 +1.1**
comp=Z,11nm,0.9s,baz=76,slow=8.3,SNR=3.8
IDI LR LR 05 20 17.1
comp=Z,13nm,19.9s,baz=262,slow=39
IDI Anoyia 80.32 306 *e*P **P 04 40 03.8 +1.1**
comp=Z,19nm,1.0s
SORM Soroca 80.63 320⇓*i*P **P 04 40 04.7 +0.8**
SORM Soroca 80.63 320 ⇓P **P 04 40 04.7 +0.8**
AKASG Malin Array Be 80.77 322 P **P 04 40 04.5 -0.1**
comp=Z,3.0nm,0.8s,baz=86,slow=5.2,SNR=16
AKASG LR LR 05 19 29.6
comp=Z,30nm,21.8s,baz=90,slow=38
AKBB Malin Array Si 80.77 322 *e*P **P 04 40 05.1 +0.5**
comp=Z,9.5nm,1.2s
KIEV Kiev 80.78 322 *e*P **P 04 40 05.0 +0.4**
comp=Z,9.2nm,1.2s
KIEV Kiev 80.78 322*c i*P **P 04 40 04.1 -0.5**
KIEV pmax pmax
comp=Z,6.0nm,1.2s
AK11 Malin Array Si 80.80 322 *e*P **P 04 40 05.2 +0.5**
AK11 *e*pP **sP 04 40 23.3 -2.3**
VNDA Vanda 81.09 169 P **P 04 40 06.7 +0.8**
comp=Z,0.5nm,0.5s,baz=307,slow=7.2,SNR=2.5
VNDA LR LR 05 11 00.0
comp=Z,62nm,21.6s,baz=300,slow=32
VNDA Vanda 81.09 169 *e*P **P 04 40 06.7 +0.8**
VNDA *e*pP **pP 04 40 22.9 +2.0**
VNDA Vanda 81.09 169 *e*P **P 04 40 06.7 +0.8**
VNDA *e**PP **pP 04 40 22.9 +2.0**
TMCR Tamitsa 81.14 337 *e*P **P 04 40 06.9 +0.6**
TMCR pmax pmax
comp=Z,41nm,1.2s
VRI Vrincioaia 81.14 317⇑*i*P **P 04 40 08.6 +1.8**
VRI Vrincioaia 81.14 317 ⇑P **P 04 40 08.6 +1.8**
PLOR Plostina 81.19 317⇓*i*P **P 04 40 08.7 +1.6**
PLOR Plostina 81.19 317 ⇓P **P 04 40 08.7 +1.6**
TESR Tescani 81.35 318⇑*i*P **P 04 40 08.6 +0.8**
MLR Muntele Rosu 81.59 317 P **P 04 40 10.6 +1.2**
comp=Z,1.8nm,0.9s,baz=94,slow=3.0,SNR=11
MLR LR LR 05 21 42.4
comp=Z,8.6nm,19.4s,baz=82,slow=40
MLR Muntele Rosu 81.59 317⇑*i*P **P 04 40 10.9 +1.6**
MLR Muntele Rosu 81.59 317 ⇑P **P 04 40 10.9 +1.6**
BURAR Bucovina Array 82.55 319⇑*i*P **P 04 40 16.4 +2.1**
BUR04 Bucovina Ar. S 82.56 319 *e*P **P 04 40 16.1 +1.8**
MICGM Minsk 82.59 326 *e*P **P 04 40 16.0 +1.8**
VTS Vitosha 82.94 313⇑*i*P **P 04 40 17.4 +0.9**
VTS Vitosha 82.94 313 *e*P **P 04 40 17.1 +0.6**
comp=Z,7.9nm,1.0s
VTS *e*pP **pP 04 40 31.8 +0.3**
VTS Vitosha 82.94 313 ⇑P **P 04 40 17.4 +0.9**
IDID Didziasalis 83.44 326 *e*P **P 04 40 22.5 +3.9**
IDID IAmb IAmb 04 40 24.4
comp=Z,17nm,1.1s
BILL Bilibino 83.69 20*c i*P **P 04 40 17.7 -1.8**
BILL *e*PPP PPP 04 45 21.9
BILL pmax pmax
comp=Z,9.0nm,1.7s
IIGN Ignalina 83.74 326 *e*P P 04 40 25.3 +5.3
IIGN IAmb IAmb 04 40 27.0
comp=Z,28nm,1.3s
VSU Vasula 84.26 329*ce*P **P 04 40 23.0 +0.4**
VSU pmax pmax
comp=Z,76nm,1.7s
MDVR Moldovita 84.39 315⇓*i*P **P 04 40 24.0 +0.3**
KWP Kalwaria Pacla 84.59 320 *e*P **P 04 40 25.6 +1.1**
KWP Kalwaria Pacla 84.59 320 *e*P **P 04 40 25.6 +1.1**
BZS Buzias 84.60 316⇑*i*P **P 04 40 25.9 +1.2**
BZS Buzias 84.60 316 ⇑P **P 04 40 25.9 +1.2**
SIRR Siria 84.68 317⇑*i*P **P 04 40 26.5 +1.4**
SUW Suwalki 85.16 325 *e*P **P 04 40 28.2 +0.9**
SUW Suwalki 85.16 325 *e*P **P 04 40 28.2 +0.9**
MSF Maaselka 85.33 337 P **P 04 40 26.1 -1.8**
FIA1 FINESS Array S 85.34 332 *e*P **P 04 40 28.9 +0.9**
FIA0 FINESS Array S 85.34 332 *e*P **P 04 40 28.9 +0.9**
FIA0 FINESS Array S 85.34 332 *e*P **P 04 40 28.9 +0.9**
FINES FINESS Array B 85.34 332 P **P 04 40 28.9 +0.9**
comp=Z,6.4nm,0.9s,baz=96,slow=5.7,SNR=11
FINES LR LR 05 23 18.2
comp=Z,83nm,19.5s,baz=112,slow=39
FINES FINESS Array B 85.34 332 *i*P **P 04 40 29.2 +1.2**
FINES pmax pmax
comp=Z,6.0nm,0.9s
DIVS Divibare 85.50 314 *e*P **P 04 40 29.7 +0.4**
comp=Z,10nm,1.2s
PDG Podgorica 85.80 313⇑*i*P **P 04 40 31.6 +0.9**
NIE Niedzica 86.10 320 *e*P **P 04 40 33.8 +1.7**
NIE Niedzica 86.10 320 *e*P **P 04 40 33.8 +1.7**
OUL Oulu 86.36 336 P **P 04 40 34.3 +1.4**
OUL pmax pmax
comp=Z,28nm,1.2s
SGF Sodankyl 86.73 338 P **P 04 40 36.5 +1.8**
SGF pmax pmax
comp=Z,20nm,1.5s
QSPA South Pole Qui 87.05 180 LR LR 05 14 29.0
comp=Z,106nm,18.6s,baz=310,slow=32
VAF Ylistaro 87.26 333 P **P 04 40 39.1 +1.7**
VAF pmax pmax
comp=Z,32nm,1.4s
ARA0 ARCESS Array S 87.64 340 *e*P **P 04 40 39.9 +0.7**
ARCES ARCESS Array B 87.64 340 P **P 04 40 39.9 +0.7**
comp=Z,13nm,0.9s,baz=98,slow=5.3,SNR=17
ARCES LR LR 05 23 33.4
comp=Z,78nm,21.5s,baz=100,slow=38
JAVC Velka Javorina 87.73 319 *e*P **P 04 40 41.9 +1.8**
MORC Moravsky Berou 87.93 320 P **P 04 40 42.4 +1.4**
MORC pmax pmax
comp=Z,8.0nm,1.6s
MORC Moravsky Berou 87.93 320 *e*P **P 04 40 42.4 +1.4**
AQU L'Aquila 90.11 312 P **P 04 40 52.4 +1.0**
AQU pmax pmax
comp=Z,16nm,0.7s
BRG Berggiesshubel 90.33 321 *e*P **P 04 40 53.8 +1.6**
comp=Z,11nm,1.2s
BRG Berggiesshubel 90.33 321 *e*P **P 04 40 53.8 +1.6**
BRG pmax pmax
comp=Z,11nm,1.2s
GEA0 GERESS Array S 90.34 319 *e*P **P 04 40 53.7 +1.3**
GEC2 GERESS Array S 90.34 319 *e*P **P 04 40 54.3 +1.9**
comp=Z,15nm,1.3s
GEC2 GERESS Array S 90.34 319 *e*P **P 04 40 54.3 +1.9**
GEC2 pmax pmax
comp=Z,15nm,1.3s
GERES GERESS Array B 90.34 319 P **P 04 40 53.9 +1.5**
comp=Z,2.6nm,0.8s,baz=97,slow=4.6,SNR=11
KHC Kasperske Hory 90.44 319 *e*P **P 04 40 54.0 +1.2**
KHC Kasperske Hory 90.44 319 *e*P **P 04 40 54.0 +1.2**
KBA Koelnbreinsper 90.46 317 P **P 04 40 53.1 0.0**
KBA pmax pmax
comp=Z,4.0nm,1.6s
WET Wettzell 90.90 319 P **P 04 40 55.5 +0.6**
WET pmax pmax
comp=Z,10.0nm,1.3s
CLL Collm 90.95 321 *e*P **P 04 40 56.0 +1.0**
comp=Z,9.0nm,1.5s
CLL *e*pP **pP 04 41 10.0 -0.3**
CLL *e*sP **sP 04 41 16.0 -0.1**
CLL Collm 90.95 321 *e*P **P 04 40 56.0 +1.0**
CLL *e**SP **sP 04 41 16.0 -0.1**
CLL pmax pmax
comp=Z,9.0nm,1.5s
HFS Hagfors 91.12 330 P **P 04 40 56.3 +0.6**
comp=Z,7.6nm,0.8s,baz=108,slow=4.7,SNR=9.0
HFS LR LR 05 27 52.9
comp=Z,54nm,18.2s,baz=86,slow=40
SNAA Sanae 91.56 198 LR LR 05 13 49.3
comp=Z,102nm,21.4s,baz=68,slow=30
SPA0 Spitsbergen Ar 91.71 348 *e*P **P 04 40 57.1 -1.0**
SPITS Spitsbergen Ar 91.71 348 P **P 04 40 57.1 -1.0**
comp=Z,9.0nm,0.9s,baz=126,slow=7.4,SNR=4.4
SPITS LR LR 05 28 17.5
comp=Z,114nm,20.4s,baz=255,slow=40
MOX Moxa 91.79 320 P **P 04 41 00.6 +1.6**
MOX pmax pmax
comp=Z,7.0nm,1.2s
NB2 NORSAR Subarra 92.39 331 P **P 04 41 01.8 +0.3**
comp=Z,1.2nm,0.8s,baz=93,slow=5.3
NOA NORSAR Array B 92.39 331 LR LR 05 27 18.6
comp=Z,73nm,20.6s,baz=85,slow=39
NIKH Nikolski High 92.44 37 *e*P **P 04 41 01.5 -0.4**
comp=Z,42nm,0.9s
KEST Kesra 92.97 305 P **P 04 41 06.9 +2.1**
comp=Z,4.1nm,1.0s,baz=80,slow=4.2,SNR=4.4
KEST Kesra 92.97 305 *e*P **P 04 41 05.4 +0.5**
comp=Z,7.5nm,1.0s
TORD Torodi Ar. Bea 99.64 283 LR LR 05 27 05.9
comp=Z,35nm,18.1s,baz=100,slow=36
FFC Flin Flon 125.08 16 *e*PKPpre PKPpre 04 46 43.6
J08A Circle Bar Ran 126.69 35 *e*PKPpre PKPpre 04 46 49.8
DLMT Dillon 128.52 30 *e*PKPdf **PKPdf 04 46 59.2 +0.9**
NV01 Mina Array Sit 129.71 40 *e*PKPdf **PKPdf 04 47 02.5 +1.7**
NVAR Mina Array Bea 129.71 40 PKP **PKPdf 04 47 01.2 +0.3**
comp=Z,0.5nm,0.5s,baz=270,slow=1.8,SNR=5.7
GATR Gnd/Air Tx Cnt 130.28 46 *e*PKPdf **PKPdf 04 47 02.6 +0.7**
CARC Carrizo Plain 130.37 45 *e*PKPpre PKPpre 04 46 52.6
R11A Troy Canyon, C 131.48 39 *e*PKPdf **PKPdf 04 47 06.7 +2.5**
PD31 Pinedale Array 131.91 30 *e*PKPdf **PKPdf 04 47 04.7 -0.3**
PDAR Pinedale Array 131.91 30 PKP **PKPdf 04 47 04.7 -0.3**
comp=Z,0.2nm,0.3s,baz=259,slow=0.9,SNR=3.3
PASC Pasadena Art C 132.12 45 *e*PKPpre PKPpre 04 46 54.5
RSSD Black Hills 133.40 25 *e*PKPdf **PKPdf 04 47 08.3 +0.6**
RSSD Black Hills 133.40 25 *e*PKIKP **PKPdf 04 47 08.3 +0.6**
ANMO Albuquerque 139.23 35 PKP **PKPdf 04 47 20.2 +1.4**
comp=Z,1.6nm,0.9s,baz=264,slow=4.9,SNR=7.5
MNTX Cornudas Mount 142.14 38 *e*PKPdf **PKPdf 04 47 23.6 -0.3**
TUL1 Leonard 143.71 23 *e*PKPpre PKPpre 04 47 23.9
CPUP Villa Florida 144.12 215 PKP **PKPdf 04 47 27.7 +0.3**
comp=Z,3.0nm,0.9s,baz=180,slow=9.1,SNR=3.6
U39A Green Forest 144.14 20 P **PKPab 04 47 24.3 -0.6**
baz=335,SNR=6.1
WCI Wyandotte Cave 144.24 10 P **PKPab 04 47 24.8 -0.4**
baz=348
WCI Wyandotte Cave 144.24 10 *e*PKPdf **PKPab 04 47 25.2 +0.1**
WCI Wyandotte Cave 144.24 10 *e*PKIKP **PKPab 04 47 25.2 +0.1**
T42A Van Buren 144.29 17 P **PKPab 04 47 24.8 -0.6**
baz=339
T42A Van Buren 144.29 17 *e*PKPdf **PKPab 04 47 25.1 -0.3**
S45A Carrier Mills 144.32 13 P **PKPab 04 47 25.0 -0.5**
baz=344
U40A Yellville 144.37 19 P **PKPab 04 47 25.2 -0.5**
baz=336,SNR=7.2
T43A Greenville 144.46 16 P **PKPab 04 47 25.2 -0.9**
baz=340
S46A Don Dixon Farm 144.50 12 P **PKPab 04 47 25.3 -0.8**
baz=345
V39A Pettigrew 144.57 21 P **PKPab 04 47 25.8 -0.7**
baz=334,SNR=23
U41A Viola 144.68 18 P **PKPab 04 47 26.3 -0.5**
baz=337,SNR=8.3
ABTX Abilene, Hawle 144.70 31 P **PKPab 04 47 26.7 -0.4**
baz=323
PBMO Poplar Bluff 144.71 16 *e*PKPdf **PKPab 04 47 26.5 -0.4**
S48A Wiedeman Farm, 144.83 10 P **PKPab 04 47 27.0 -0.4**
baz=348,SNR=5.5
CBN Corbin Frederi 144.84 358 P **PKPab 04 47 26.8 -0.6**
baz=2.8
TX31 Lajitas Ar. Si 144.84 39 *e*PKPdf **PKPdf 04 47 28.4 -0.4**
TX31 *e*PKPdf PKPbc 04 47 28.6 +0.7
TXAR Lajitas Array 144.84 39 PKP **PKPdf 04 47 28.6 -0.2**
comp=Z,11nm,0.7s,baz=267,slow=1.1,SNR=115
U42A Revenden 144.88 17 P **PKPab 04 47 27.2 -0.3**
baz=338,SNR=22
V40A Witts Springs 144.88 20 P **PKPab 04 47 26.9 -0.8**
baz=336,SNR=16
V40A Witts Springs 144.88 20 *e*PKPdf **PKPab 04 47 27.1 -0.6**
IP04 Greensprings 144.98 359 *e*PKPbc PKPbc 04 47 28.2 +0.3
CVRD Centerville Ro 144.99 358 *e*PKPbc **PKPab 04 47 27.9 -0.1**
SPRD Spring Road, M 145.04 358 *e*PKPbc **PKPbc 04 47 28.0 -0.1**
IP03 Louisa 145.05 359 *e*PKPbc **PKPbc 04 47 28.1 -0.1**
T46A Princeton 145.08 12 P **PKPbc 04 47 28.0 -0.2**
baz=344,SNR=13
W39A Magazine 145.10 21 P **PKPbc 04 47 27.9 -0.5**
baz=334,SNR=14
W39A Magazine 145.10 21 *e*PKPbc **PKPbc 04 47 27.8 -0.6**
U43A Rector 145.10 16 P **PKPbc 04 47 27.5 -0.9**
baz=340
IP01 Cuckoo 145.11 358 *e*PKPbc **PKPbc 04 47 28.2 -0.1**
V41A Mountainview 145.12 19 P **PKPbc 04 47 27.8 -0.7**
baz=337,SNR=33
IP06 Yanceyville 145.13 358 *e*PKPbc **PKPab 04 47 28.5 +0.1**
IP07 Quail 145.15 359 *e*PKPbc **PKPab 04 47 28.6 0.0**
U44A Portageville 145.17 15 P **PKPbc 04 47 28.0 -0.6**
baz=341
S51A Beattyville 145.19 6 P **PKPbc 04 47 28.0 -0.6**
baz=352,SNR=23
S52A Salyersville 145.21 6 P **PKPbc 04 47 28.2 -0.5**
baz=353
IP05 Hopewell Churc 145.23 358 *e*PKPbc **PKPbc 04 47 28.7 0.0**
T47A Sharon Grove 145.29 11 P **PKPbc 04 47 28.4 -0.5**
baz=346,SNR=9.4
T47A Sharon Grove 145.29 11 *e*PKPbc **PKPbc 04 47 28.5 -0.5**
T48A Bowling Green 145.31 10 P **PKPbc 04 47 28.6 -0.5**
baz=347,SNR=22
V42A Cord 145.34 18 P **PKPbc 04 47 28.6 -0.5**
baz=338,SNR=18
W40A Ferguson Farm, 145.35 20 P **PKPbc 04 47 28.7 -0.5**
baz=335,SNR=13
W40A Ferguson Farm, 145.35 20 *e*PKPbc **PKPbc 04 47 28.9 -0.3**
U44B Burton Farm, H 145.41 15 P **PKPbc 04 47 29.2 -0.1**
baz=342
T49A Edmonton 145.46 9 P **PKPdf 04 47 28.4 -1.1**
baz=348,SNR=10
URVA University of 145.48 358 *e*PKPdf **PKPbc 04 47 29.5 0.0**
GLAT Glass 145.49 15 *e*PKPbc **PKPab 04 47 30.0 +0.2**
UTMT University of 145.53 14 *e*PKPdf **PKPab 04 47 30.1 +0.1**
WHAR Wooly Hollow 145.53 19 *e*PKPdf **PKPdf 04 47 29.2 -0.5**
U45A Rockin P Farm, 145.55 14 P **PKPdf 04 47 29.5 -0.2**
baz=343
X39A Fountain Ranch 145.59 22 P **PKPbc 04 47 30.0 0.0**
baz=333
GNAR Gosnell 145.59 16 *e*PKPdf **PKPab 04 47 30.3 +0.1**
V43A Jonesboro 145.61 17 P **PKPdf 04 47 29.5 -0.3**
baz=339
T50A Nancy 145.65 8 P **PKPdf 04 47 29.1 -0.7**
baz=350,SNR=9.5
W41B Gary Mavity, V 145.65 19 P **PKPdf 04 47 29.6 -0.3**
baz=336,SNR=11
W41B Gary Mavity, V 145.65 19 *e*PKPdf **PKPdf 04 47 29.4 -0.5**
U46A Springville 145.67 13 P **PKPdf 04 47 29.9 +0.1**
baz=344,SNR=6.8
V44A Blytheville 145.75 16 P **PKPbc 04 47 30.2 -0.2**
baz=340
MIAR Mount Ida 145.75 22 P **PKPbc 04 47 30.6 0.0**
baz=334
MIAR Mount Ida 145.75 22 *e*PKPdf **PKPbc 04 47 30.5 0.0**
T52A Hallie 145.78 6 P **PKPdf 04 47 30.2 +0.2**
baz=353,SNR=9.3
U47A Clarksville 145.78 12 P **PKPdf 04 47 30.2 +0.1**
baz=345,SNR=23
HBAR Harrisburg 145.79 17 *e*PKPdf **PKPab 04 47 31.0 0.0**
W42A Bald Knob 145.79 18 P **PKPdf 04 47 30.0 -0.1**
baz=336
HALT Halls 145.82 15 *e*PKPdf **PKPbc 04 47 30.7 +0.1**
BLA Blacksburg 145.84 2 P **PKPdf 04 47 30.0 -0.3**
baz=358
BLA Blacksburg 145.84 2 *e*PKPdf **PKPdf 04 47 29.5 -0.7**
BLA Blacksburg 145.84 2 *e*PKP2 **PKPdf 04 47 29.5 -0.7**
U48A Cassie Pea, Po 145.86 11 P **PKPdf 04 47 30.1 -0.1**
baz=347,SNR=18

WVT	Waverly baz=344	145.97	13	P	PKPdf	04 47 30.7 +0.3
WVT	Waverly	145.97	13	*e*PKPdf	PKPbc	04 47 30.9 -0.2
WVT	Waverly	145.97	13	*e*PKP2	PKPbc	04 47 30.9 -0.2
UALR	University of	145.98	20	*e*PKPdf	PKPbc	04 47 31.2 0.0
U49A	Red Boiling Sp baz=348,SNR=12	146.00	10	P	PKPdf	04 47 30.5 0.0
X40A	Basin Creek Fa baz=335	146.07	21	P	PKPdf	04 47 30.9 +0.3
V45A	Humboldt baz=342	146.08	14	P	PKPdf	04 47 30.8 +0.3
X41A	Kaden, Bauxite baz=335	146.18	20	P	PKPdf	04 47 30.9 +0.1
W43A	Forest City baz=339	146.21	17	P	PKPdf	04 47 31.2 +0.4
V46A	Holladay baz=344,SNR=18	146.22	13	P	PKPbc	04 47 31.6 -0.3
TZTN	Tazewell baz=352,SNR=6.4	146.28	6	P	PKPbc	04 47 31.7 -0.4
TZTN	Tazewell	146.28	6	*e*PKPdf	PKPbc	04 47 31.8 -0.4
JCT	Junction City baz=320	146.29	33	P	PKPbc	04 47 32.4 +0.1
JCT	Junction City	146.29	33	*e*PKPdf	PKPbc	04 47 32.1 -0.2
JCT	Junction City	146.29	33	*e*PKP2	PKPbc	04 47 32.1 -0.2
WHTX	Lake Whitney, baz=325	146.30	29	P	PKPbc	04 47 31.8 -0.5
V47A	Nunnelly baz=345,SNR=8.2	146.33	12	P	PKPdf	04 47 31.6 +0.6
Y40A	Okolona baz=334	146.34	22	P	PKPbc	04 47 31.7 -0.6
W44A	Shelby Farms P baz=340	146.42	16	P	PKPbc	04 47 32.0 -0.5
X42A	Stuttgart baz=337	146.42	19	P	PKPbc	04 47 31.9 -0.6
U53A	Fall Branch baz=354	146.56	5	P	PKPdf	04 47 32.1 +0.7
V48A	Smith Brothers baz=346,SNR=15	146.56	11	P	PKPdf	04 47 31.9 +0.5
V48A	Smith Brothers	146.56	11	*e*PKPdf	PKPbc	04 47 32.5 -0.3
W45A	Hickory Valley baz=341,SNR=9.4	146.57	15	P	PKPbc	04 47 32.4 -0.6
X43A	Marvell baz=338	146.69	18	P	PKPbc	04 47 33.2 -0.1
X43A	Marvell	146.69	18	*e*PKPdf	PKPbc	04 47 33.8 +0.5
Y41A	Eaglette Beard baz=335	146.70	21	P	PKPbc	04 47 32.9 -0.4
V49A	McMinnville baz=347,SNR=8.3	146.70	10	P	PKPdf	04 47 32.4 +0.7
W46A	Michie baz=343,SNR=5.6	146.80	14	P	PKPdf	04 47 32.6 +0.8
W47A	Westpoint baz=344,SNR=33	146.87	13	P	PKPbc	04 47 33.0 -0.8
V51A	Loudon baz=350	146.91	8	P	PKPbc	04 47 33.3 -0.6
V51A	Loudon	146.91	8	*e*PKPdf	PKPbc	04 47 33.6 -0.3
X44A	Crenshaw baz=339	146.93	17	P	PKPbc	04 47 33.5 -0.4
V50A	Pikeville baz=349,SNR=9.6	146.93	9	P	PKPbc	04 47 33.2 -0.7
Z40A	Long Farm, Mag baz=333	146.97	22	P	PKPbc	04 47 34.2 0.0
V52A	Sevierville baz=352,SNR=7.6	146.97	7	P	PKPbc	04 47 33.6 -0.5
V52A	Sevierville	146.97	7	*e*PKPdf	PKPdf	04 47 32.9 +0.8
PLAL	Pickwick Lake	147.01	14	*e*PKPdf	PKPbc	04 47 33.4 -0.8
Y42A	Garnett, Star baz=336	147.02	20	P	PKPbc	04 47 34.1 -0.2
W48A	Pulaski baz=345,SNR=20	147.12	12	P	PKPbc	04 47 33.5 -1.0
OXF	Oxford baz=341,SNR=9.6	147.12	16	P	PKPbc	04 47 33.9 -0.6
OXF	Oxford	147.12	16	*e*PKPdf	PKPbc	04 47 34.3 -0.2
OXF	Oxford	147.12	16	*e*PKP2	PKPbc	04 47 34.3 -0.2
X45A	UM Field Stati baz=341,SNR=5.2	147.21	16	P	PKPbc	04 47 34.1 -0.7
435B	Jarrell baz=324	147.22	30	P	PKPbc	04 47 34.9 0.0
435B	Jarrell	147.22	30	*e*PKPdf	PKPbc	04 47 35.6 +0.7
V53A	Saluda baz=353,SNR=10.0	147.22	6	P	PKPbc	04 47 34.4 -0.4
CPCT	Cooper Cave	147.23	8	*e*PKPdf	PKPbc	04 47 34.6 -0.2
Y43A	Makayla and Ka baz=338	147.23	18	P	PKPbc	04 47 35.0 +0.2
W49A	Belvidere baz=347,SNR=15	147.27	11	P	PKPbc	04 47 34.1 -0.9
X46A	Booneville baz=342,SNR=6.4	147.29	15	P	PKPbc	04 47 34.3 -0.7
W50A	Signal Mountai baz=348	147.36	9	P	PKPbc	04 47 34.6 -0.7
W50A	Signal Mountai	147.36	9	*e*PKPdf	PKPdf	04 47 30.9 -1.9
Y44A	Strider, Charl baz=339	147.41	17	P	PKPbc	04 47 35.3 0.0
140A	Cam and Jess, baz=332	147.45	23	P	PKPbc	04 47 35.6 +0.1
Z42A	Norrel Spur, H baz=336	147.48	20	P	PKPbc	04 47 35.8 +0.2
X47A	Russelville baz=344,SNR=19	147.51	14	P	PKPbc	04 47 34.5 -1.1
W52A	Murphy baz=351	147.66	7	P	PKPbc	04 47 35.6 -0.4
W52A	Murphy	147.66	7	*e*PKPdf	PKPdf	04 47 31.6 -1.8
W53A	Cullowhee baz=352,SNR=9.7	147.68	6	P	PKPbc	04 47 35.9 -0.3
Y45A	Yeager Farm, C baz=340	147.69	16	P	PKPbc	04 47 35.9 -0.2
X48A	Hartselle baz=345,SNR=13	147.75	12	P	PKPbc	04 47 35.3 -1.0
X48A	Hartselle	147.75	12	*e*PKPdf	PKPbc	04 47 35.5 -0.8
NATX	Nacogdoches baz=330	147.77	25	P	PKPbc	04 47 36.3 -0.1
Z43A	Armstrong Fami baz=337	147.78	19	P	PKPbc	04 47 36.0 -0.4
CNNC	Cliffs of the baz=2.1	147.82	358	P	PKPbc	04 47 36.3 0.0
CNNC	Cliffs of the	147.82	358	*e*PKPbc	PKPbc	04 47 37.0 +0.7
X49A	Woodville baz=346,SNR=19	147.84	11	P	PKPbc	04 47 36.0 -0.5
Y46A	Houston baz=341,SNR=6.8	147.86	15	P	PKPbc	04 47 35.8 -0.8
KMSC	Kings Mountain baz=356,SNR=8.5	147.86	3	P	PKPbc	04 47 36.1 -0.5
KMSC	Kings Mountain	147.86	3	*e*PKPdf	PKPbc	04 47 36.2 -0.4
BG3	Lake Jocassee	147.88	6	*e*PKPbc	PKPbc	04 47 36.5 -0.1
240A	Hunter Patters baz=332	147.90	24	P	PKPbc	04 47 36.7 -0.1
Z44A	Pea Ridge, Bel baz=338,SNR=7.7	147.98	18	P	PKPbc	04 47 37.0 +0.1
X50B	Fort Payne baz=348	148.02	10	P	PKPbc	04 47 36.3 -0.7
X51A	Calhoun baz=349	148.05	9	P	PKPbc	04 47 36.8 -0.2
X51A	Calhoun	148.05	9	*e*PKPbc	PKPbc	04 47 36.9 -0.2
Y47A	UCPARC, Winfie baz=343,SNR=5.2	148.10	14	P	PKPbc	04 47 36.3 -0.9
Z45A	Winona baz=340	148.11	17	P	PKPbc	04 47 36.6 -0.7
142A	Monroe baz=335	148.14	21	P	PKPbc	04 47 37.2 -0.1
PAULI	Pauline	148.15	4	*e*PKPbc	PKPbc	04 47 37.2 -0.1
X52A	Dahlonega baz=351,SNR=7.2	148.15	8	P	PKPbc	04 47 37.2 -0.2
833A	Chaparral WMA, baz=319	148.16	35	P	PKPbc	04 47 38.1 +0.5
143A	Socs Landing, baz=336	148.19	20	P	PKPbc	04 47 37.4 -0.1
143A	Socs Landing,	148.19	20	*e*PKPbc	PKPbc	04 47 38.8 +1.3
Y48A	Jasper baz=344	148.25	13	P	PKPbc	04 47 36.6 -1.0
241A	Mo Tay, Goldon baz=333	148.25	23	P	PKPbc	04 47 38.0 +0.3
241A	Mo Tay, Goldon	148.25	23	*e*PKPbc	PKPbc	04 47 38.6 +0.9
X53A	Estanollee baz=352,SNR=6.4	148.32	7	P	PKPbc	04 47 37.9 +0.1
Y49A	Blount Mountai baz=346,SNR=10	148.46	12	P	PKPbc	04 47 37.7 -0.5
Y49A	Blount Mountai	148.46	12	*e*PKPbc	PKPbc	04 47 37.7 -0.5
Z46A	Louisville baz=341	148.49	16	P	PKPbc	04 47 38.4 +0.2
242A	Grayson baz=334	148.50	22	P	PKPbc	04 47 38.5 +0.2
144A	Alexander Plac baz=338	148.58	19	P	PKPbc	04 47 38.8 +0.3
Y51A	Rockmart baz=348	148.67	10	P	PKPbc	04 47 38.4 -0.3
Z48A	Northport baz=344	148.67	14	P	PKPbc	04 47 37.8 -0.9
HODGE	Hodges	148.70	5	*e*PKPbc	PKPbc	04 47 38.9 +0.2
Z47A	Carrollton baz=342,SNR=8.9	148.72	15	P	PKPbc	04 47 38.3 -0.5
JSC	Jenkinsville	148.72	3	*e*PKPbc	PKPbc	04 47 39.0 +0.2
JSC	Jenkinsville	148.72	3	*e*PKP2	PKPbc	04 47 39.0 +0.2
145A	Houston Renfro baz=339	148.76	18	P	PKPbc	04 47 39.1 +0.1
341A	Kurthwood baz=332	148.76	24	P	PKPbc	04 47 39.2 +0.2
HKT	Hockley	148.77	29	*e*PKPbc	PKPbc	04 47 40.3 +1.3
HKT	Hockley	148.77	29	*e*PKP2	PKPbc	04 47 40.3 +1.3
Y52A	Lilburn baz=350,SNR=6.5	148.86	8	P	PKPbc	04 47 39.3 +0.1
Y52A	Lilburn	148.86	8	*e*PKPbc	PKPbc	04 47 39.5 +0.4
Y53A	Monroe baz=351,SNR=5.1	148.93	7	P	PKPbc	04 47 39.4 +0.1
146A	Union baz=340	148.98	16	P	PKPbc	04 47 39.8 +0.3
146A	Union	148.98	16	*e*PKPbc	PKPbc	04 47 40.4 +0.8
Y54A	Tignall baz=353,SNR=7.7	149.03	6	P	PKPbc	04 47 39.6 0.0
244A	Avery, Jackson baz=337	149.03	19	P	PKPbc	04 47 39.9 +0.2
342A	Flagon Creek P baz=334	149.05	22	P	PKPbc	04 47 39.8 +0.1
Z49A	Columbiana baz=345,SNR=5.1	149.08	12	P	PKPbc	04 47 39.3 -0.5
LRAL	Lakeview Retre baz=344	149.13	13	P	PKPbc	04 47 39.4 -0.5
LRAL	Lakeview Retre	149.13	13	*e*PKPbc	PKPbc	04 47 39.6 -0.2
Z50A	Ashland baz=346,SNR=6.0	149.14	11	P	PKPbc	04 47 39.5 -0.4
Z50A	Ashland	149.14	11	*e*PKPbc	PKPbc	04 47 39.5 -0.4
147A	Livingston baz=342	149.16	15	P	PKPbc	04 47 39.7 -0.3
147A	Livingston	149.16	15	*e*PKPbc	PKPbc	04 47 40.3 +0.4
245A	Little AP, Sta baz=338	149.30	18	P	PKPbc	04 47 40.4 +0.1
148A	Greensboro baz=343	149.37	14	P	PKPbc	04 47 40.4 -0.1
GOGA	Godfrey baz=351	149.38	7	P	PKPbc	04 47 40.4 -0.1
GOGA	Godfrey	149.38	7	*e*PKPbc	PKPbc	04 47 40.7 +0.2
GOGA	Godfrey	149.38	7	*e*PKP2	PKPbc	04 47 40.7 +0.2
343A	Vidalia baz=335	149.40	21	P	PKPbc	04 47 40.9 +0.3
Z52A	Williamson baz=349,SNR=7.3	149.47	9	P	PKPbc	04 47 41.0 +0.3
Z53A	Monticello baz=351,SNR=6.6	149.50	7	P	PKPbc	04 47 40.8 0.0
344A	Westbrook Farm baz=336	149.56	20	P	PKPbc	04 47 41.8 +0.8
344A	Westbrook Farm	149.56	20	*e*PKPbc	PKPbc	04 47 41.6 +0.7
149A	Jones baz=345	149.59	13	P	PKPbc	04 47 40.8 -0.2
Z54A	Sparta baz=352,SNR=6.9	149.63	6	P	PKPbc	04 47 41.2 0.0
247A	Quitman baz=341	149.66	16	P	PKPbc	04 47 41.7 +0.5
Z55A	Blythe baz=354	149.71	5	P	PKPbc	04 47 41.4 +0.1
150A	Eclectic baz=346	149.75	12	P	PKPbc	04 47 41.0 -0.4
345A	Thompson Farm, baz=338	149.92	19	P	PKPbc	04 47 42.1 +0.2
152A	Waverly Hall baz=349	149.93	10	P	PKPbc	04 47 41.9 0.0
152A	Waverly Hall	149.93	10	*e*PKPdf	PKPdf	04 47 38.5 +1.4
NHSC	New Hope baz=358	149.94	2	P	PKPbc	04 47 41.9 +0.1
151A	Opelika baz=347,SNR=6.2	149.96	11	P	PKPbc	04 47 41.8 -0.2
346A	Big Creek Wild baz=339	150.03	18	P	PKPbc	04 47 42.4 +0.2
542A	Morse baz=332	150.07	24	P	PKPbc	04 47 42.2 -0.1
153A	Fort Valley baz=350	150.08	8	P	PKPbc	04 47 42.3 0.0
249A	Camden baz=344	150.12	14	P	PKPbc	04 47 42.4 +0.1
154A	Montrose baz=352	150.21	7	P	PKPbc	04 47 42.7 +0.1
155A	Kite baz=353	150.28	6	P	PKPbc	04 47 43.0 +0.3
347A	Saraland baz=341	150.29	16	P	PKPbc	04 47 42.9 +0.1
250A	Grady baz=345	150.31	12	P	PKPbc	04 47 42.9 +0.1
250A	Grady	150.31	12	*e*PKPbc	PKPbc	04 47 43.4 +0.6
156A	Sylvania baz=355	150.33	4	P	PKPbc	04 47 43.3 +0.5
445A	Amite baz=337	150.35	20	P	PKPbc	04 47 43.6 +0.6
251A	Midway baz=347	150.37	11	P	PKPbc	04 47 43.4 +0.4
348A	Jackson baz=342	150.45	15	P	PKPbc	04 47 43.5 +0.4
252A	Lumpkin baz=348	150.58	10	P	PKPbc	04 47 43.8 +0.4
LNIG	Linares	150.61	40	*e*PKPdf	PKPbc	04 47 43.6 -0.2
LNIG				*e*PKPab	PKPab	04 47 49.3 -1.2
446A	Poplarville baz=339	150.62	18	P	PKPbc	04 47 43.4 -0.2
253A	Americus baz=350	150.62	9	P	PKPbc	04 47 43.7 +0.1
253A	Americus	150.62	9	*e*PKPbc	PKPbc	04 47 43.9 +0.3
349A	Repton baz=343	150.70	14	P	PKPbc	04 47 44.2 +0.4
447A	Lucedale baz=340	150.83	17	P	PKPbc	04 47 44.0 0.0
350A	Dozier baz=345	150.83	13	P	PKPbc	04 47 44.2 +0.1
254A	Abbeville baz=351	150.85	7	P	PKPbc	04 47 44.1 0.0
BRAL	Brewton baz=343	150.90	14	P	PKPbc	04 47 45.0 +0.7
448A	Bay Minette baz=342	150.92	16	P	PKPbc	04 47 44.9 +0.6
255A	Hazlehurst baz=353	150.96	6	P	PKPbc	04 47 44.5 +0.1
256A	Glennville baz=354	150.97	5	P	PKPbc	04 47 44.8 +0.4
352A	Blakely baz=348	151.06	10	P	PKPbc	04 47 44.7 +0.1
352A	Blakely	151.06	10	*e*PKPbc	PKPbc	04 47 45.1 +0.5
351A	Pinckard baz=346	151.12	12	P	PKPbc	04 47 44.9 +0.2
449A	Pace baz=343	151.25	15	P	PKPbc	04 47 43.8 -1.2
353A	Camilla baz=349	151.30	9	P	PKPbc	04 47 45.5 +0.3
TIGA	Tifton baz=350	151.31	8	P	PKPbc	04 47 45.6 +0.4
TIGA	Tifton	151.31	8	*e*PKPbc	PKPbc	04 47 46.1 +0.9
355A	Pearson baz=352	151.50	7	P	PKPbc	04 47 45.4 -0.2
452A	Marianna baz=347	151.62	11	P	PKPbc	04 47 45.1 -0.8
451A	Vernon baz=346	151.73	12	P	PKPbc	04 47 45.3 -0.9
658A	Bunnell baz=355	153.56	4	P	PKPbc	04 47 49.7 -0.6
858A	St. Cloud baz=354	154.75	5	P	PKPbc	04 47 51.8 -1.0
959A	Okeechobee baz=356	155.47	4	P	PKPdf	04 47 53.4 +8.1
LPAZ	La Paz comp=Z,1.4nm,0.9s,baz=140,slow=5.6,SNR=4.3	158.07 209		PKP	PKPdf	04 47 48.3 -1.4
LPAZ	La Paz	158.07 209		*e*PKPdf	PKPdf	04 47 48.3 -1.4
LPAZ				*e*PKPdf	PKPdf	04 47 52.3 +2.7
OTAV	Otavalo	177.27 193		*e*PKPdf	PKPdf	04 48 04.8 +1.8

*ISCJB **19** 04:37:31.6±0.5,20.°54S±0.°03×178.°61W±0.°02, h586km±6km,mb5.0/309, Error ellipse: s-maj=4.9km s-min=2.9km az=155.6*
*MOS **19** 04:37:31.8±0.8,20.°41S×178.°59W,h587km,mb5.0/35, Error ellipse: s-maj=8.6km s-min=8.0km az=70.4*
*BJI **19** 04:37:33.7,20.°14S×177.°99W,h622km,mb5.1/49, mB5.3/24*
*NEIC **19** 04:37:34.9±0.1,20.°55S×178.°62W,mb5.0/242,Error ellipse: s-maj=4.4km s-min=2.8km az=147.0*
*GCMT **19** 04:37:34.9±0.3,20.°28S×178.°73W,h614km±2km, MW5.3/74,Moment Tensor Solution. s74,c109; Duration: 1s1 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.88±.03; $M_{\theta\theta}$0.38±.05; $M_{\phi\phi}$0.49±.05; $M_{r\theta}$-0.74±.05; $M_{\theta\phi}$0.00±.05; $M_{\phi r}$-0.77±.05; Best double couple: $M_0$1.25700×10^{17} NP1:ϕ_s41.00000°,δ74.00000°, λ-87.00000°. NP2:ϕ_s209.00000°,δ16.00000°, λ-101.00000°. Principal axes: T 1.0410, Plg29.0000°, Azm129.0000°; N 0.4330, Plg3.0000°, Azm220.0000°; P -1.4730, Plg61.0000°, Azm316.0000°; nsta1 refers to body waves, cutoff=40s.*
*IDC **19** 04:37:34.1±0.5,20.°51S×178.°57W,h604km±5km,mb4.5/36, mb1 4.6/39,mb1mx4.5/51,mbtmp5.5/39 Error ellipse: s-maj=8.1km s-min=6.3km az=154.0*
*WEL **19** 04:37:34.0,20.°55S×178.°62W,h615km*
ISC 19 04:37:34.0±0.3,20.°54S±0.°04×178.°52W±0.°04, h608km±3km,h609km;pP-P,n1082,σ1s27/1222,mb5.0/309, 34C-51D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue baz=8.1,SNR=4.3	8.22	81	P	P	04 39 34.9	-0.8
RIZ	Raoul Island	8.68	177	P	P	04 39 37.3	-2.6
RIZ				S	S	04 41 22.3	-1.0
RAO	Raoul Island 94nm,0.3s,baz=72,slow=20,SNR=4.0	8.69	177	P	P	04 39 38.7	-1.4
RAO				S	S	04 41 19.4	-4.0
RAO	Raoul Island 98nm,0.3s,baz=90,slow=20,SNR=4.4	8.69	177	*e*P	P	04 39 38.5	-1.5
RAO				*e*S	S	04 41 22.1	-1.3
GLKZ	Green Lake	8.70	177	P	P	04 39 38.5	-1.6
GLKZ				S	S	04 41 21.5	-2.1
AFI	Afiamalu 29nm,0.3s,baz=192,slow=9.3,SNR=16	9.22	45	P	P	04 39 42.5	-3.0
AFI				S	S	04 41 25.2	-8.0
AFI	Afiamalu 17nm,0.3s,baz=233,slow=20,SNR=9.4	9.22	45	*e*P	P	04 39 42.5	-3.0
AFI				*e*S	S	04 41 27.9	-5.3
AFI	Afiamalu	9.22	45	*e*P	P	04 39 42.5	-3.0
AFI				*e*S	S	04 41 27.9	-5.3
DZM	Mont Dzumac 5.7nm,0.3s,baz=83,slow=17,SNR=50	14.10	261	P	P	04 40 33.5	-0.3
DZM				S	S	04 43 00.3	-0.3
OUZ	Omahuta baz=71,slow=18,SNR=3.7 264nm,0.9s	16.19	204	*e*P	P	04 40 54.6	+2.1
OUZ	Omahuta	16.19	204	P	P	04 40 55.2	+2.6
GRZ	Great Barrier	16.52	197	P	P	04 40 58.0	+2.4
RAR	Rarotonga 3.6nm,0.3s,baz=230,slow=6.7,SNR=14	17.53	96	P	P	04 41 05.2	+0.1
RAR	Rarotonga 138nm,0.9s	17.53	96	*e*P	P	04 41 05.0	-0.1
TGRZ	Tauranga	17.72	194	P	P	04 41 08.2	+1.8
KMRZ	Kaimai	17.90	194	P	P	04 41 10.0	+1.8
OMRZ	Omania	18.06	193	P	P	04 41 10.7	+1.0
URZ	Urewera 16nm,0.3s,baz=5.8,slow=4.9,SNR=66	18.06	191	P	P	04 41 06.8	-2.7
URZ				S	S	04 43 58.3	-6.3
URZ	Urewera 2.6nm,0.3s,baz=96,slow=24,SNR=12	18.06	191	*e*P	P	04 41 07.6	-1.9
URZ				*e*S	S	04 44 01.7	-2.9
RAGZ	Rawiri	18.24	190	P	P	04 41 11.4	+0.1
RRRZ	Republican Roa	18.25	193	P	P	04 41 12.2	+0.8
MUGZ	Murupara	18.33	192	P	P	04 41 10.8	-1.3
HRRZ	Handcock Road	18.35	193	P	P	04 41 12.6	+0.4
RIGZ	Rimuhau	18.39	189	P	P	04 41 11.5	-1.1
RIGZ				P	P	04 41 12.4	-0.2
RIGZ				S	S	04 44 05.1	-4.8
TLZ	Tolley Road	18.46	195	P	P	04 41 15.6	+2.3
SNGZ	Shannon Statio	18.53	190	P	P	04 41 12.5	-1.3
PRGZ	Paritu Road	18.58	189	P	P	04 41 15.4	+1.0
MTHZ	Maungataniwha	18.68	191	P	P	04 41 14.1	-1.2
RAHZ	Arahi	18.70	191	P	P	04 41 14.7	-0.8
KNZ	Kokohu	18.71	189	P	P	04 41 14.6	-0.9
MRHZ	Matea Rd	18.75	192	P	P	04 41 14.9	-1.0
MHGZ	Mahia Peninsul	18.80	189	P	P	04 41 17.1	+0.7
HIZ	Hauiti	18.80	196	P	P	04 41 18.5	+2.1
KNTN	Kanton 116nm,0.7s	18.86	21	*e*P	P	04 41 15.2	-2.1
HATZ	Hinemaiaia	18.87	193	P	P	04 41 16.2	-0.8
RATZ	Rangitukua	18.92	194	P	P	04 41 17.0	-0.5
NMHZ	Naumai	18.93	191	P	P	04 41 16.2	-1.4
BKZ	Black Stump Fm 18nm,0.6s	19.05	192	*e*P	P	04 41 17.7	-1.0
BKZ	Black Stump Fm	19.05	192	P	P	04 41 16.6	-2.1
ARHZ	Aropaoanui	19.05	191	P	P	04 41 18.7	0.0
KRVZ	Karewarewa	19.16	194	P	P	04 41 18.9	-0.9
TWVZ	Taurewa	19.19	194	P	P	04 41 19.5	-0.5
WTVZ	West Tongariro	19.20	194	P	P	04 41 19.2	-0.8
MCHZ	McNeill Hill	19.28	191	P	P	04 41 19.5	-1.2
COVZ	Chateau Observ	19.29	194	P	P	04 41 19.7	-1.2
KWHZ	Kaweka Forest	19.32	192	P	P	04 41 19.4	-1.7
FWVZ	Far West T-bar	19.34	194	P	P	04 41 20.6	-0.8
WHVZ	Whangaehu Hut	19.36	194	P	P	04 41 20.7	-0.9
VRZ	Vera Road	19.41	196	P	P	04 41 23.2	+1.4
CKHZ	Cape Kidnapper	19.43	190	P	P	04 41 21.4	-0.6
MOVZ	Moawhango	19.44	193	P	P	04 41 20.8	-1.4
BHHZ	Black Hill Sta	19.45	193	P	P	04 41 19.7	-2.6
KRHZ	Kereru	19.54	192	P	P	04 41 21.3	-1.8
KAHZ	Kahuranaki	19.59	191	P	P	04 41 22.6	-0.9
PXZ	Pawanui	19.82	191	P	P	04 41 24.4	-1.2
PNHZ	Pukenui	19.83	192	P	P	04 41 24.2	-1.5
TSZ	Takapari Road	20.02	192	P	P	04 41 26.1	-1.3
PRHZ	Porangahau	20.09	191	P	P	04 41 27.3	-0.8
DVHZ	Dannevirke	20.21	192	P	P	04 41 28.0	-1.1
POWZ	Post Office Ro	20.38	193	P	P	04 41 30.2	-0.4
PRWZ	Pori Road	20.50	192	P	P	04 41 30.8	-0.8
BFZ	Birch Farm 51nm,1.1s	20.57	191	*e*P	P	04 41 32.0	-0.2
BFZ				*e*S	S	04 44 40.2	-4.2
BFZ	Birch Farm	20.57	191	P	P	04 41 30.9	-1.3
MRZ	Mangatainoka R	20.68	193	P	P	04 41 31.1	-2.1
OGWZ	Otaki Gorge	20.91	194	P	P	04 41 34.0	-1.4
HOWZ	Holdsworth Sta	20.92	193	P	P	04 41 33.6	-1.9
MTW	Mount Morrison	21.17	193	P	P	04 41 36.2	-1.5
DUWZ	D'Urville Isla	21.20	196	P	P	04 41 36.7	-1.3
CAW	Cannon Point	21.21	193	P	P	04 41 36.3	-1.8
TRWZ	Traveller	21.37	192	P	P	04 41 38.9	-0.6
PAWZ	Paruwai Farm	21.40	193	P	P	04 41 38.8	-1.0
SNZO	South Karori 69nm,0.9s	21.49	194	*e*P	P	04 41 39.6	-0.8
SNZO				*e*S	S	04 44 52.0	-6.9
BHW	Baring Head	21.55	194	P	P	04 41 39.6	-1.4
PLWZ	Palliser	21.62	193	P	P	04 41 40.0	-1.7
THZ	Tophouse 108nm,1.4s	22.37	197	*e*P	P	04 41 47.5	-0.9
THZ				*e*S	S	04 45 08.4	-4.5
KHZ	Kahutara 60nm,1.0s	22.81	195	*e*P	P	04 41 50.8	-1.5
TARA	Tarawa 265nm,1.0s	23.32	338	*e*P	P	04 41 57.1	0.0
OXZ	Oxford 69nm,1.1s	24.06	197	*e*P	P	04 42 02.3	-0.9
RPZ	Rata Peaks 10nm,0.5s,baz=60,slow=5.4,SNR=9.9	24.70	198	P	P	04 42 09.0	+0.1
TBI	Tubuai 194nm,0.9s	27.08	101	*e*P	P	04 42 30.6	+0.5
MLZ	Mavora Lakes 34nm,0.7s	27.10	201	*e*P	P	04 42 30.2	+0.2
PAE	Paea 24nm,1.1s	27.48	89	*e*P	P	04 42 33.4	-0.3
PPT2	Papeete2 127nm,1.1s	27.50	89	*e*P	P	04 42 34.0	+0.1
PPT	Papeete 122nm,0.9s,baz=303,slow=6.2,SNR=7.2	27.50	89	P	P	04 42 34.1	+0.2
PPTF	Pamatai, Papee 159nm,1.0s	27.51	89	*e*P	P	04 42 34.5	+0.5
DCZ	Deep Cove 51nm,0.9s	27.52	202	*e*P	P	04 42 34.1	+0.5
WHZ	Wether Hill Ro 107nm,0.7s

baz=30,SNR=5.9
VAH Vaihoa 29.84 85 *e*P **P 04 42 53.7 -0.4**
177nm,1.0s
RMQ Roma 30.53 253 P **P 04 43 01.3 +1.4**
baz=31,SNR=11
CNB Canberra Magne 31.80 236 P **P 04 43 11.9 +1.2**
baz=32,SNR=12
YNG Young 32.25 238 P **P 04 43 15.3 +0.9**
baz=32
CTA Charters Tower 33.00 265 P **P 04 43 21.5 +0.6**
32nm,0.6s,baz=92,slow=10,SNR=40
CTA PcP **PcP 04 45 46.4 +0.2**
13nm,0.8s,baz=64,slow=3.3,SNR=4.5
CTA S **S 04 47 56.7 -1.4**
1.4nm,0.4s,baz=90,slow=20,SNR=3.3
CTA ScP **ScP 04 48 36.7 +3.1**
6.7nm,0.8s,baz=106,slow=2.3,SNR=5.1
CTAO Charters Tower 33.00 265 *e*P **P 04 43 21.3 +0.4**
CTAO Charters Tower 33.00 265 *e*P **P 04 43 21.3 +0.4**
CMSA Cobar Meteorol 33.83 244 P **P 04 43 28.5 +0.8**
baz=34,SNR=32
QLP Quilpie 34.58 253 P **P 04 43 34.6 +0.6**
baz=35,SNR=27
PMG Port Moresby 34.88 283 *e*P **P 04 43 36.7 +0.1**
PMG Port Moresby 34.88 283 *e*P **P 04 43 36.7 +0.1**
MTSU Mount Surprise 35.10 267 P **P 04 43 39.0 +0.5**
baz=35,SNR=22
PATS Pohnpei 35.48 318 P **P 04 43 42.4 +0.8**
baz=36
PATS Pohnpei 35.48 318 *e*P **P 04 43 42.6 +1.0**
79nm,1.1s
TOO Toolangi 35.48 234 P **P 04 43 42.3 +0.9**
baz=36,SNR=18
TOO Toolangi 35.48 234 P **P 04 43 42.3 +0.9**
TOO pmax pmax
comp=Z,72nm,1.1s
MOO Moorlands 36.13 225 P **P 04 43 47.7 +1.1**
baz=36,SNR=3.4
COEN Coen 37.10 274 P **P 04 43 55.6 +0.7**
baz=37,SNR=18
COEN Coen 37.10 274 *e*P **P 04 43 55.4 +0.5**
STKA Stephens Creek 37.33 244 P **P 04 43 57.5 +0.9**
comp=Z,46nm,0.7s,baz=93,slow=10,SNR=78
STKA PcP **PcP 04 45 59.2 +0.2**
comp=Z,13nm,0.8s,baz=89,slow=4.4,SNR=4.3
STKA S **S 04 49 01.4 -1.0**
comp=Z,3.7nm,0.7s,baz=292,slow=18,SNR=3.1
STKA Stephens Creek 37.33 244 P **P 04 43 57.7 +1.1**
baz=37,SNR=44
STKA Stephens Creek 37.33 244 *e*P **P 04 43 57.4 +0.9**
comp=Z,15nm,1.0s
STKA *e*PcP **PcP 04 45 59.2 +0.2**
STKA *e*S **S 04 49 01.4 -1.0**
MANU Manus Island 38.02 294 *e*P **P 04 44 03.2 +0.8**
comp=Z,174nm,1.0s
TAOE Nuku Hiva Isla 38.79 78 *e*P **P 04 44 09.1 +0.4**
comp=Z,104nm,0.9s
QIS Mount Isa 39.13 262 P **P 04 44 10.8 -0.4**
baz=39,SNR=7.5
HTT Hallett 39.78 242 P **P 04 44 17.0 +0.7**
baz=40,SNR=39
RKT Rikitea 40.40 102 *e*P **P 04 44 21.7 +0.4**
comp=Z,68nm,1.0s
BBOO Buckleboo 42.09 243 P **P 04 44 35.0 +0.5**
baz=42,SNR=130
BBOO Buckleboo 42.09 243 *e*P **P 04 44 34.8 +0.3**
BBOO *e*S **S 04 50 10.7 -0.8**
JAY Jayapura 43.59 289 P **P 04 44 47.0 +0.5**
comp=Z,204nm,0.9s,baz=139,slow=3.2,SNR=31
JAY Jayapura 43.59 289 P **P 04 44 46.4 -0.1**
JAY Jayapura 43.59 289 *e*P **P 04 44 47.0 +0.5**
AS01 Alice Springs 43.99 257 *e*P **P 04 44 48.7 -0.7**
AS31 Alice Springs 44.03 257 *e*P **P 04 44 49.9 +0.1**
comp=Z,37nm,0.8s
AS31 *e*PcP **PcP 04 46 21.6 +0.1**
AS31 *e*ScP **ScP 04 49 16.7 +0.5**
ASAR Alice Springs 44.03 257 P **P 04 44 50.2 +0.4**
comp=Z,155nm,0.8s,baz=97,slow=7.7,SNR=791
ASAR PcP **PcP 04 46 21.6 +0.1**
comp=Z,25nm,0.8s,baz=102,slow=3.8,SNR=14
ASAR ScP **ScP 04 49 16.7 +0.5**
comp=Z,2.6nm,0.8s,baz=106,slow=4.3,SNR=5.2
ASAR S **S 04 50 38.0 -1.4**
comp=Z,25nm,1.0s,baz=93,slow=15,SNR=33
ASAR ScS **ScS 04 53 41.6 +0.2**
comp=Z,2.0nm,1.0s,baz=78,slow=5.1,SNR=4.6
WB2 Warramunga Arr 44.10 262 *e*P **P 04 44 49.8 -0.4**
WB2 *e*PcP **PcP 04 46 22.4 +0.7**
WRAB Tennant Creek 44.10 262 *e*P **P 04 44 49.5 -0.8**
WRAB Tennant Creek 44.10 262 *d i*P **P 04 44 49.0 -1.3**
WRAB pmax pmax
comp=Z,122nm,1.0s
WR1 Warramunga Arr 44.11 262 *e*P **P 04 44 50.1 -0.2**
comp=Z,204nm,1.0s
WR1 *e*PcP **PcP 04 46 22.0 +0.3**
WR1 *e*ScP **ScP 04 49 17.4 +0.8**
WRA Warramunga Arr 44.11 262 P **P 04 44 50.1 -0.3**
comp=Z,52nm,0.6s,baz=98,slow=8.1,SNR=254
WRA PcP **PcP 04 46 22.0 +0.3**
comp=Z,22nm,1.0s,baz=97,slow=4.3,SNR=10
WRA ScP **ScP 04 49 17.4 +0.8**
comp=Z,2.9nm,1.0s,baz=100,slow=4.6,SNR=3.8
WRA S **S 04 50 37.7 -2.7**
comp=Z,3.6nm,0.7s,baz=98,slow=12,SNR=6.7
WRA ScS **ScS 04 53 41.6 -0.4**
comp=Z,2.0nm,0.9s,baz=117,slow=5.4,SNR=4.6
WC1 Warramunga Arr 44.12 262 P **P 04 44 50.4 0.0**
baz=44
HPAH Hawaii Prepara 46.10 30 *e*P **P 04 45 05.8 +0.4**
comp=Z,152nm,0.8s
KDU Kakadu 47.46 271 P **P 04 45 15.6 -0.1**
baz=48,SNR=22
BAKI Biak 48.29 288 P **P 04 45 22.4 +0.5**
MTN Manton Dam 48.68 271 P **P 04 45 24.4 -0.3**
baz=49,SNR=19
MTN Manton Dam 48.68 271 *e*P **P 04 45 24.1 -0.6**
FORT Forrest 48.83 247 P **P 04 45 25.5 -0.2**
baz=49,SNR=51
FORT Forrest 48.83 247 *e*P **P 04 45 25.3 -0.4**
WRKA Warakurna 48.99 254 P **P 04 45 27.2 +0.2**
baz=49,SNR=243
GUMO Guam 49.45 310 P **P 04 45 30.7 +0.4**
comp=Z,170nm,0.8s,baz=163,slow=11,SNR=5.9
KNRA Kununurra 50.17 266 P **P 04 45 35.6 0.0**
baz=50,SNR=17
FAKI Fak Fak 51.03 283 P **P 04 45 41.6 -0.4**
FAKI Fak Fak 51.03 283 *e*P **P 04 45 41.4 -0.5**
comp=Z,104nm,1.1s
FITZ Fitzroy Crossi 52.54 263 P **P 04 45 53.0 +0.3**
comp=Z,28nm,0.5s,baz=126,slow=4.8,SNR=137
FITZ S **S 04 52 34.3 -1.1**
comp=Z,4.3nm,1.0s,baz=283,slow=19,SNR=3.5
FITZ Fitzroy Crossi 52.54 263 P **P 04 45 52.9 +0.3**
baz=53,SNR=23
FITZ Fitzroy Crossi 52.54 263 *e*P **P 04 45 53.1 +0.5**
comp=Z,38nm,0.7s
KMBL Kambalda 54.10 246 P **P 04 46 03.3 -0.2**
baz=54,SNR=8.8
SOEI Soe 56.02 272 P **P 04 46 18.3 +1.1**
SOEI Soe 56.02 272 *e*P **P 04 46 18.7 +1.5**
comp=Z,384nm,0.9s
LBMI Labuha 56.29 284 P **P 04 46 19.1 +0.2**
BATI Baumata 56.44 271 P **P 04 46 21.1 +1.1**
comp=Z,132nm,0.7s,baz=101,slow=5.2,SNR=10.0
BATI Baumata 56.44 271 P **P 04 46 21.3 +1.3**
TNTI Ternate 57.00 285 *e*P **P 04 46 24.3 +0.6**
comp=Z,140nm,0.9s
SANI Sanana 57.11 281 P **P 04 46 23.9 -0.6**
MBWA Marble Bar 57.37 258 *e*P **P 04 46 25.9 -0.2**
comp=Z,93nm,0.8s
MEEK Meekatharra 57.45 251 P **P 04 46 26.3 -0.3**
baz=58,SNR=8.4
KLBR Kellerberrin 57.60 245 P **P 04 46 27.7 +0.1**
baz=58,SNR=26
SBA Scott Base 57.80 184 *e*P **P 04 46 31.2 +3.2**
comp=Z,32nm,1.1s
SBA *e*pP **pP 04 48 29.7 +6.0**
SBA Scott Base 57.80 184 P **P 04 46 31.2 +3.2**
SBA pmax pmax
comp=Z,32nm,1.1s
VNDA Vanda 57.83 185 P **P 04 46 30.0 +1.7**
comp=Z,3.2nm,0.6s,baz=355,slow=6.8,SNR=14
VNDA ScP **ScP 04 50 13.6 -1.0**
comp=Z,4.9nm,0.8s,baz=358,slow=4.7,SNR=8.0
VNDA Vanda 57.83 185 P **P 04 46 30.0 +1.7**
VNDA pmax pmax
comp=Z,3.0nm,0.6s

NWAO Narrogin (SRO) 57.91 243 P **P 04 46 30.1 +0.4**
comp=Z,37nm,0.8s,baz=320,slow=4.5,SNR=10
NWAO Narrogin (SRO) 57.91 243 P **P 04 46 30.1 +0.4**
baz=58,SNR=8.2
NWAO P **P 04 46 30.1 +0.4**
baz=58,SNR=8.2
RKGY Rocky Gully 58.00 241 P **P 04 46 31.0 +0.8**
baz=58,SNR=8.8
BLDU Ballidu 58.59 246 P **P 04 46 34.0 -0.2**
baz=59,SNR=30
EDFI Ende, Flores 58.74 272 P **P 04 46 34.9 -0.7**
MUN Mundaring 58.87 244 P **P 04 46 36.5 +0.4**
baz=59,SNR=7.2
BASI Baing, Sumba 59.33 270 P **P 04 46 39.9 +0.5**
MORW Morawa 59.36 248 P **P 04 46 39.5 +0.1**
baz=59,SNR=8.7
KDI Kendari 59.51 278 P **P 04 46 40.2 -0.4**
WSI Waingapu 59.76 271 P **P 04 46 42.4 +0.1**
LUWI Luwuk 60.46 281 *e*P **P 04 46 47.6 +0.7**
comp=Z,185nm,0.9s
BKSI Bulukumba 61.35 275 P **P 04 46 52.2 -0.5**
APSI Ampana 61.55 281 P **P 04 46 54.6 +0.6**
MRSI Marisa 61.82 282 P **P 04 46 54.8 -1.0**
GIRL Giralia 62.07 255 P **P 04 46 58.3 +1.1**
baz=62,SNR=25
SPSI Sidrap Palu 62.16 277 P **P 04 46 56.9 -1.0**
PLAI Plampang 62.39 271 P **P 04 46 59.0 -0.4**
TTSI Tana Toraja 62.44 278 P **P 04 46 59.4 -0.4**
PCI Palu 63.22 280 P **P 04 47 06.1 +1.3**
PCI Palu 63.22 280 P **P 04 47 06.5 +1.7**
PCI pmax pmax
comp=Z,250nm,1.1s
TWSI Taliwang, Sumb 63.25 270 P **P 04 47 04.5 -0.5**
MPSI Mapaga 63.64 281 P **P 04 47 07.3 -0.1**
CASY Casey 63.72 205 *e*P **P 04 47 07.4 +0.4**
SRBI Singaraja 65.03 271 P **P 04 47 15.9 -0.2**
JAGI Jajag, Banyuwa 65.90 270 *e*P **P 04 47 19.4 -2.2**
JHJ Hachijo jima 2 66.57 323 P **P 04 47 25.1 -0.2**
comp=Z,318nm,1.0s,baz=121,slow=5.9,SNR=5.3
MYLDM Lahad Datu 66.87 285 *e*P **P 04 47 29.7 +2.1**
comp=Z,54nm,0.9s
PCJI Pacitan 68.77 269 P **P 04 47 39.7 +0.6**
KKM Kota Kinabalu 69.30 285 *e*P **P 04 47 42.4 0.0**
comp=Z,74nm,0.8s
QSPA South Pole Qui 69.53 180 P **P 04 47 44.3 +1.4**
comp=Z,20nm,0.9s,baz=0.9,slow=1.7,SNR=12
QSPA pP **pP 04 49 44.0 -1.0**
comp=Z,7.8nm,0.9s,baz=345,slow=2.6,SNR=3.3
QSPA S **S 04 56 05.5 +2.2**
comp=Z,1.4nm,0.4s,baz=75,slow=23,SNR=12
QSPA South Pole Qui 69.53 180 *e*P **P 04 47 44.2 +1.3**
comp=Z,17nm,0.8s
QSPA *e*pP **pP 04 49 47.7 +2.7**
JOW Kunigami 69.82 310 P **P 04 47 45.4 +0.3**
comp=Z,32nm,0.7s,baz=234,slow=2.8,SNR=5.7
JOW Kunigami 69.82 310 *e*P **P 04 47 45.4 +0.3**
comp=Z,59nm,0.9s
MJAR Matsushiro Arr 69.95 324 P **P 04 47 45.3 -0.4**
comp=Z,22nm,0.8s,baz=166,slow=6.0,SNR=42
MAJO Matsushiro 69.96 324 *e*P **P 04 47 45.2 -0.5**
comp=Z,30nm,0.8s
MAJO Matsushiro 69.96 324 *e*P **P 04 47 45.2 -0.5**
MAJO pmax pmax
comp=Z,30nm,0.8s
MJB9 Matsu-Tunnel 69.96 324 *e*P **P 04 47 45.9 +0.2**
comp=Z,30nm,0.8s
SBUM Sibu 71.53 280 *e*P **P 04 47 56.2 +0.8**
comp=Z,43nm,1.2s
ERM Erimo 71.62 331 *i*P **P 04 47 56.1 +0.9**
ERM pmax pmax
comp=Z,15nm,0.8s
JNU Nakatsue 71.97 317 P **P 04 47 57.5 -0.1**
comp=Z,72nm,0.9s,baz=116,slow=4.0,SNR=24
JNU Nakatsue 71.97 317 *e*P **P 04 47 56.9 -0.7**
comp=Z,137nm,1.1s
YUK Yuzh-Kuril'sk 72.07 334 *e*P **P 04 47 57.0 -0.8**
YUK *e**PP **pP 04 49 57.0 -4.3**
YUK 04 50 47.6
YUK *e*S **S 04 56 33.5 +1.5**
YUK pmax pmax
comp=Z,211nm,1.0s
YUK pmax pmax
comp=N,192nm,1.1s
YUK pmax pmax
comp=E,136nm,0.6s
YUK pmax pmax
comp=Z,394nm,1.5s
CISI Cisompet, Garu 72.13 268 *e*P **P 04 47 58.4 -0.5**
comp=Z,245nm,1.3s
KUR Kuril'sk 72.26 336 *i*P **P 04 47 59.7 +0.9**
LEM Lembang 72.55 269 P **P 04 48 02.2 +0.7**
comp=Z,229nm,0.9s,baz=105,slow=10,SNR=17
LEM Lembang 72.55 269 P **P 04 48 01.7 +0.2**
KSM Kuching 72.94 278 *e*P **P 04 48 04.1 +0.6**
comp=Z,96nm,0.9s
TWG Pinlang 72.99 303 *e*P **P 04 48 01.3 -2.3**
comp=Z,209nm,0.7s
YULB Yu-li 73.12 304 *e*P **P 04 48 02.4 -1.9**
comp=Z,36nm,1.0s
SMY Shemya 73.24 355 *e*P **P 04 48 03.5 -0.7**
comp=Z,140nm,1.0s
SMY Shemya 73.24 355 *e*P **P 04 48 03.5 -0.7**
SMY pmax pmax
comp=Z,140nm,1.0s
NACB Ninganchiao 73.30 304 *e*P **P 04 48 03.9 -1.4**
comp=Z,145nm,1.1s
ASAJ Asahikawa 73.53 332 P **P 04 48 07.8 +1.7**
comp=Z,74nm,0.8s,baz=209,slow=6.8,SNR=53
ASAJ Asahikawa 73.53 332 *e*P **P 04 48 07.7 +1.5**
comp=Z,117nm,1.0s
SSLB Suanglung 73.59 304 *e*P **P 04 48 06.0 -1.0**
comp=Z,46nm,0.8s
TPUB Ta-pu 73.59 303 *e*P **P 04 48 05.7 -1.3**
comp=Z,164nm,0.8s
NIKH Nikolski High 73.68 6 *e*P **P 04 48 06.4 -0.3**
comp=Z,214nm,0.9s
YHNB Yeheng 73.73 305 *e*P **P 04 48 07.2 -0.7**
comp=Z,85nm,1.0s
TATO Taipei 73.81 305 *e*P **P 04 48 07.9 -0.2**
comp=Z,133nm,0.9s
SKR Severo-Kuril's 74.36 344 *i*P **P 04 48 10.2 -0.4**
UNV Unalaska Valle 74.80 7 *e*P **P 04 48 12.0 -1.0**
comp=Z,57nm,0.8s
YSS Yuzh-Sakhalins 75.72 334 *e*P **P 04 48 18.1 -0.1**
comp=Z,86nm,0.9s
YSS Yuzh-Sakhalins 75.72 334 *κ i*P **P 04 48 19.3 +1.0**
YSS pmax pmax
comp=Z,90nm,1.3s
PEA0B Petropavlovsk- 76.19 346 *e*P **P 04 48 20.8 +0.1**
comp=Z,164nm,1.3s
PETK Petropavlovsk- 76.19 346 P **P 04 48 20.6 -0.2**
comp=Z,60nm,0.8s,baz=121,slow=7.8,SNR=56
PEA1 Petropavlovsk- 76.19 346 *e*P **P 04 48 20.6 -0.2**
TJN Taejon 76.27 318 *i*P **P 04 48 22.1 +0.5**
MDSI Maura Dua 76.56 270 P **P 04 48 22.5 -1.2**
KSRS Korea Array 76.60 319 P **P 04 48 24.1 +0.8**
comp=Z,26nm,1.0s,baz=138,slow=6.2,SNR=51
KS15 Wonju Array Si 76.61 319 *e*P **P 04 48 24.6 +1.2**
KSAR Wonju Array Be 76.61 319 P **P 04 48 24.1 +0.8**
KSAR Wonju Array Be 76.61 319 P **P 04 48 24.2 +0.8**
KS01 Wonju Array Si 76.63 319 *e*P **P 04 48 23.3 -0.2**
KS01 *e*PcP PcP 04 48 23.8 -8.1
SDPT Sand Point 77.14 10 *e*P **P 04 48 24.9 -1.0**
comp=Z,108nm,0.7s
SPIA Saint Paul Isl 77.73 5 *e*P **P 04 48 29.1 +0.1**
comp=Z,165nm,1.1s
SCZ2 Santa Cruz Isl 77.98 47 P **P 04 48 32.3 +1.3**
baz=235
SBI Santa Barbara 78.10 47 *e*P **P 04 48 30.7 -0.9**
SBC Santa Barbara 78.18 46 P **P 04 48 33.5 +1.6**
baz=235
PKM Mcpherson Peak 78.37 46 P **P 04 48 34.5 +1.2**
baz=235
SAO San Andreas Ge 78.39 43 *e*P **P 04 48 33.8 +0.7**
comp=Z,21nm,1.1s
SAO San Andreas Ge 78.39 43 *e*P **P 04 48 33.8 +0.7**
SAO pmax pmax
comp=Z,21nm,1.1s
CHGN Chignik 78.41 11 *e*P **P 04 48 32.4 -0.2**
comp=Z,100nm,0.9s
CIS Catalina Islan 78.48 48 P **P 04 48 35.2 +1.6**
baz=236
SMMC Simmler 78.49 45 P **P 04 48 35.0 +1.3**
baz=235
PAGB Antelope Grade 78.57 45 *e*P **P 04 48 35.8 +1.7**
comp=Z,9.3nm,0.9s

SLD San Luis Dam 78.72 43 *e*P **P 04 48 34.9 +0.1**
USRK Ussuriysk Ar. 78.73 326 P **P 04 48 35.9 +1.3**
comp=Z,41nm,0.8s,baz=141,slow=3.3,SNR=50
GDXM Geysers 78.78 41 *e*P **P 04 48 37.1 +2.0**
comp=Z,19nm,1.0s
MASI Maura Aman, Be 78.83 271 P **P 04 48 35.0 -1.0**
TYV Tymovskoe 78.88 336 *e*P **P 04 48 35.8 +0.5**
TYV pmax pmax
comp=Z,300nm,2.9s
TYV pmax pmax
comp=Z,88nm,1.4s
DECC Green Verdugo 79.02 47 P **P 04 48 37.3 +0.8**
baz=236
MYKOM Kota Tinggi 79.06 276 *e*P **P 04 48 37.7 +0.6**
comp=Z,86nm,1.0s
PASC Pasadena Art C 79.07 47 *e*P **P 04 48 36.5 -0.2**
KMRM Mail Ridge 79.09 40 *e*P **P 04 48 37.8 +1.0**
comp=Z,103nm,0.9s
109C Camp Elliot, M 79.12 49 P **P 04 48 37.7 +0.7**
baz=237
ARVC Arvin 79.17 46 P **P 04 48 38.0 +0.8**
baz=235
VES Vestal, Richgr 79.40 45 P **P 04 48 39.1 +0.7**
baz=235,SNR=6.3
MURC Murrieta 79.44 48 P **P 04 48 39.5 +0.7**
baz=237
BFSC Mount Baldy Ra 79.47 47 P **P 04 48 39.5 +0.5**
baz=236
NJ2 Nanjing 79.53 310 *e*P **P 04 48 40.3 +1.2**
NJ2 pmax pmax
comp=Z,52nm,1.2s
EDW2 Edwards Air Fo 79.60 47 P **P 04 48 40.1 +0.5**
baz=236,SNR=10
MONP2 Monument Peak 79.60 49 P **P 04 48 40.5 +0.8**
baz=237
IKP In-Ko-Pah, Jac 79.69 49 P **P 04 48 41.3 +1.2**
baz=238
ISA Isabella, Lake 79.71 46 P **P 04 48 41.1 +0.9**
baz=236,SNR=14
ISA Isabella, Lake 79.71 46 *e*P **P 04 48 41.6 +1.5**
comp=Z,38nm,1.3s
ISA *e*pP **pP 04 50 51.1 +3.9**
ISA Isabella, Lake 79.71 46 *e*P **P 04 48 41.6 +1.5**
ISA pmax pmax
comp=Z,38nm,1.3s
CMB Columbia Colle 79.82 43 *e*P **P 04 48 41.6 +1.0**
comp=Z,22nm,1.0s
CMB Columbia Colle 79.82 43 *e*P **P 04 48 41.6 +1.0**
CMB pmax pmax
comp=Z,21nm,1.0s
PFO Pinyon Flats O 79.96 48 P **P 04 48 42.5 +1.0**
baz=237
AFDM Forest Hills D 79.99 42 *e*P **P 04 48 42.4 +1.0**
comp=Z,22nm,1.0s
BBRC Big Bear Solar 80.00 48 P **P 04 48 42.5 +0.7**
baz=237
WDC Whiskeytown Da 80.02 40 *e*P **P 04 48 43.1 +1.6**
comp=Z,43nm,1.0s
ORV Oroville 80.03 41 *e*P **P 04 48 42.2 +0.6**
comp=Z,24nm,0.9s
ORV Oroville 80.03 41 *e*P **P 04 48 42.2 +0.6**
ORV pmax pmax
comp=Z,24nm,0.9s
SWSC Sam W. Stewart 80.07 49 P **P 04 48 42.9 +0.9**
baz=238
LRMC Laurel Mtn Rad 80.14 46 P **P 04 48 43.3 +0.8**
baz=236
N02D Trinity Center 80.16 39 P **P 04 48 43.7 +1.3**
baz=232,SNR=10
MDJ Mudanjiang 80.27 325 *e*P **P 04 48 43.8 +1.0**
comp=Z,72nm,0.9s
RRX Edison Barstow 80.28 47 P **P 04 48 43.9 +0.8**
baz=237
O03D Paynes Creek 80.29 40 P **P 04 48 44.1 +1.0**
baz=233,SNR=15
M02C Callahan 80.33 39 P **P 04 48 44.9 +1.7**
baz=232,SNR=14
L02D Cave Junction, 80.37 38 P **P 04 48 44.6 +1.3**
baz=231
CWC Cottonwood Cre 80.41 45 P **P 04 48 44.8 +0.9**
baz=236
MDPB Devils Postpil 80.43 44 *e*P **P 04 48 45.5 +1.4**
comp=Z,29nm,1.0s
OMMB Old Mammoth Mi 80.47 44 *e*P **P 04 48 45.8 +1.5**
comp=Z,20nm,1.1s
BELC Belle Mtn. Jos 80.50 48 P **P 04 48 45.2 +0.9**
baz=237
MLAC Mammoth, Mammo 80.59 44 P **P 04 48 46.0 +1.1**
baz=235
MPMC Manual Prospec 80.59 46 P **P 04 48 45.8 +1.0**
baz=236,SNR=18
YBH Yreka Blue Hor 80.63 39 P **P 04 48 46.2 +1.5**
comp=Z,33nm,0.8s,baz=168,slow=2.0,SNR=49
YBH Yreka Blue Hor 80.63 39 *e*P **P 04 48 46.3 +1.5**
comp=Z,42nm,0.9s
YBH Yreka Blue Hor 80.63 39 *e*P **P 04 48 46.3 +1.5**
YBH pmax pmax
comp=Z,42nm,0.9s
GSC Goldstone, Bar 80.64 47 P **P 04 48 45.9 +0.9**
baz=237,SNR=5.1
GSC Goldstone, Bar 80.64 47 *e*P **P 04 48 46.3 +1.3**
comp=Z,23nm,1.2s
GSC Goldstone, Bar 80.64 47 *e*P **P 04 48 46.3 +1.3**
GSC pmax pmax
comp=Z,23nm,1.2s
DAC Darwin (Calif) 80.65 46 *e*P **P 04 48 46.4 +1.3**
comp=Z,9.4nm,0.8s
TIN Tinemaha, Big 80.66 45 P **P 04 48 46.4 +1.3**
baz=236
BC3 Big Chuckawall 80.69 49 P **P 04 48 46.6 +1.2**
baz=238,SNR=6.5
WAKR Walker 80.70 43 *e*P **P 04 48 47.1 +1.7**
comp=Z,57nm,1.2s
HEC Hector,Ludlow 80.71 47 P **P 04 48 46.2 +0.9**
baz=237
GLA Glamis 80.82 50 P **P 04 48 47.3 +1.4**
baz=238,SNR=5.2
PNTR Pine Nut 80.94 42 *e*P **P 04 48 48.2 +1.6**
comp=Z,65nm,0.9s
KDAK Kodiak Island 80.97 14 *e*P **P 04 48 46.4 +0.4**
comp=Z,64nm,1.1s
KDAK Kodiak Island 80.97 14 *i*P **P 04 48 46.0 0.0**
VCNR Virginia City 81.03 42 *e*P **P 04 48 48.5 +1.4**
comp=Z,31nm,1.2s
YERR Yerington 81.11 43 *e*P **P 04 48 48.5 +1.0**
comp=Z,66nm,1.3s
GMRC Granite Mounta 81.15 48 P **P 04 48 48.4 +0.7**
baz=238,SNR=8.0
M04C Macdoel 81.17 39 P **P 04 48 48.9 +1.3**
baz=232
IRM Iron Mountain 81.18 49 P **P 04 48 48.9 +1.2**
baz=238,SNR=14
GRAC Grapevine Rang 81.20 45 P **P 04 48 48.8 +1.1**
baz=236,SNR=9.8
FURC Furnace Creek, 81.24 46 P **P 04 48 48.7 +0.8**
baz=236,SNR=7.3
GRNR Gornyy 81.32 333 *e*P **P 04 48 49.8 +1.8**
GRNR pmax pmax
comp=Z,84nm,1.0s
TUQ Turquoise Moun 81.32 47 P **P 04 48 49.1 +0.6**
baz=237
SHOC Shoshone, Teco 81.33 47 P **P 04 48 49.1 +0.7**
baz=237
RYN Ryan 81.36 43 *e*P **P 04 48 49.3 +0.6**
comp=Z,15nm,0.9s
MAW Mawson 81.36 200 P **P 04 48 48.6 +0.6**
comp=Z,5.5nm,0.5s,baz=129,slow=3.9,SNR=8.6
MAW Mawson 81.36 200 *e*P **P 04 48 48.5 +0.6**
comp=Z,4.6nm,1.3s
NV01 Mina Array Sit 81.39 44 *e*P **P 04 48 49.6 +0.7**
NV01 *e*pP **pP 04 50 57.6 +0.9**
NV01 *e*PKKPbc **PKKPbc 05 07 19.9 +0.7**
NVAR Mina Array Bea 81.39 44 P **P 04 48 49.8 +0.8**
comp=Z,18nm,0.8s,baz=223,slow=8.9,SNR=80
NVAR pP **pP 04 50 56.0 -0.6**
comp=Z,3.1nm,1.0s,baz=230,slow=7.5,SNR=4.4
NVAR PKKPbc **PKKPbc 05 07 19.9 +0.7**
comp=Z,1.0nm,0.8s,baz=84,slow=3.7,SNR=7.2
NVAR PKPPKP **P'P'df 05 15 28.0 +6.5**
comp=Z,1.1nm,0.8s,baz=142,slow=1.7,SNR=5.5
Y12C Blythe 81.40 49 P **P 04 48 50.0 +1.2**
baz=238,SNR=8.4
Y12C Blythe 81.40 49 *e*P **P 04 48 50.3 +1.5**
comp=Z,17nm,0.9s
DL2 Dalian 81.43 317 P **P 04 48 49.5 +0.7**
DL2 pmax pmax
comp=Z,50nm,1.0s

PAHR	Pah Rah Range	81.43	42	eP	P	04 48 50.0	+1.0
	comp=Z,37nm,1.1s						
113A	Mohawk Valley,	81.44	50	eP	P	04 48 50.7	+1.7
	comp=Z,30nm,1.1s						
NKL	Nikolayevsk	81.44	337	eP	P	04 48 48.4	-0.1
NKL				pmax	pmax		
	comp=N,25nm,1.0s						
NKL				pmax	pmax		
	comp=E,30nm,1.0s						
NKL				pmax	pmax		
	comp=Z,86nm,1.0s						
I03D	Drain, OR	81.48	37	P	P	04 48 50.2	+1.2
	baz=231						
NV11	Mina Array Sit	81.49	44	eP	P	04 48 50.2	+0.9
	comp=Z,3.7nm,1.3s						
214A	Organ Pipe Nat	81.72	52	P	P	04 48 51.9	+1.4
	baz=240,SNR=9.2						
K04D	Chiloquin, OR	81.73	39	P	P	04 48 51.4	+1.0
	baz=232						
NEE2	Needles Airpor	81.87	48	P	P	04 48 52.4	+1.2
	baz=238						
KVN	Kaiserville	81.87	43	eP	P	04 48 52.0	+0.7
	comp=Z,39nm,1.1s						
KVN	Kaiserville	81.87	43	eP	P	04 48 52.0	+0.7
KVN				pmax	pmax		
	comp=Z,39nm,1.1s						
J04D	Umpqua Nationa	81.91	38	P	P	04 48 52.6	+1.2
	baz=232,SNR=14						
TPNV	Topopah Spring	81.92	46	P	P	04 48 52.4	+0.9
	baz=237,SNR=23						
TPNV	Topopah Spring	81.92	46	eP	P	04 48 52.6	+1.0
	comp=Z,27nm,0.8s						
TPNV	Topopah Spring	81.92	46	eP	P	04 48 52.6	+1.0
TPNV				pmax	pmax		
	comp=Z,27nm,0.8s						
PDMCI	Parker Dam,Lak	81.96	49	P	P	04 48 52.5	+0.9
	baz=238,SNR=7.0						
CN2	Changchun	82.04	323	eP	P	04 48 52.0	+0.2
CN2				pmax	pmax		
	comp=Z,80nm,1.2s						
I04A	Tendick Farm,	82.07	37	P	P	04 48 52.7	+0.7
	baz=232						
WHN	Wuhan	82.08	307	P	P	04 48 53.4	+1.1
WHN				pmax	pmax		
	comp=Z,98nm,1.1s						
MOD	Modoc Plateau	82.16	40	eP	P	04 48 53.6	+1.0
	comp=Z,35nm,0.8s						
K05A	Summer Lake	82.30	39	eP	P	04 48 54.8	+1.4
	comp=Z,83nm,0.9s						
KLR	Kul'dur	82.32	330	P	P	04 48 53.8	+0.8
	comp=Z,1.8nm,0.9s,baz=103,slow=3.5,SNR=52						
J05D	Fort Rock, OR	82.44	38	P	P	04 48 55.3	+1.3
	baz=233,SNR=36						
G03D	McMinnville, O	82.48	36	P	P	04 48 55.4	+1.4
	baz=231						
W13A	Hualapai Mount	82.56	48	eP	P	04 48 56.1	+1.2
	comp=Z,17nm,1.0s						
Y14A	Wickenburg	82.58	50	eP	P	04 48 56.0	+1.1
	comp=Z,28nm,1.2s						
IPM	Ipoh	82.65	278	eP	P	04 48 56.1	+0.4
	comp=Z,86nm,0.8s						
UBPT	Khong Chiam	82.69	289	P	P	04 48 56.0	+0.4
	comp=Z,90nm,0.7s						
H04A	Detroit Lake	82.75	37	eP	P	04 48 56.2	+0.8
	comp=Z,81nm,1.3s						
PINE	Pine Mountain	82.92	38	eP	P	04 48 58.0	+1.5
	comp=Z,84nm,0.9s						
TIA	Tai'an	82.94	313	P	P	04 48 56.9	+0.4
TIA				pmax	pmax		
	comp=Z,18nm,1.2s						
I05D	Terrebonne, OR	83.02	37	P	P	04 48 57.8	+1.0
	baz=232,SNR=8.3						
R11A	Troy Canyon, C	83.12	45	P	P	04 48 58.0	+0.4
	baz=237						
E03A	Lebam	83.16	35	eP	P	04 48 59.0	+1.6
	comp=Z,84nm,1.0s						
F04D	Rainier, OR	83.17	35	P	P	04 48 58.8	+1.4
	baz=231						
BMN	Battle Mountai	83.21	42	eP	P	04 48 58.8	+0.8
	comp=Z,31nm,0.9s						
KULM	Kulim	83.30	278	eP	P	04 48 59.2	+0.4
	comp=Z,57nm,0.9s						
RSO	Redoubt South	83.38	13	eP	P	04 48 57.8	-0.6
TUC	Tucson	83.39	52	P	P	04 49 00.4	+1.5
	baz=241						
TUC	Tucson	83.39	52	eP	P	04 49 00.6	+1.6
	comp=Z,23nm,0.9s						
TUC	Tucson	83.39	52	P	P	04 49 00.5	+1.6
SVW2	Sparrevohn	83.43	11	eP	P	04 48 58.0	-0.4
	comp=Z,14nm,0.7s						
WVOR	Wild Horse Val	83.47	40	eP	P	04 49 00.1	+0.9
	comp=Z,37nm,1.1s						
NLWA	Neilton Lookou	83.54	34	eP	P	04 49 00.8	+1.6
	comp=Z,46nm,1.0s						
G05D	Wamic, OR	83.58	37	P	P	04 49 00.4	+0.9
	baz=232						
MA2	Magadan	83.70	345	P	P	04 48 59.1	-0.5
	comp=Z,20nm,0.8s,baz=140,slow=6.8,SNR=9.8						
MA2	Magadan	83.70	345	eP	P	04 48 58.7	-1.0
	comp=Z,39nm,1.0s						
MA2	Magadan	83.70	345	i P	P	04 48 58.7	-1.0
MA2				pmax	pmax		
	comp=Z,35nm,1.1s						
I07A	Izee	83.92	38	eP	P	04 49 02.6	+1.3
	comp=Z,25nm,0.9s						
X16A	Lo Mia Camp, P	83.94	50	eP	P	04 49 03.1	+1.3
	comp=Z,20nm,1.1s						
G06A	Carlson Farm,	83.96	37	eP	P	04 49 02.5	+1.1
	comp=Z,46nm,1.4s						
LCMT	Little Creek M	83.99	47	eP	P	04 49 03.2	+1.3
	comp=Z,19nm,1.2s						
PSI	Prapat	84.01	275	P	P	04 49 01.8	-0.7
	comp=Z,45nm,0.9s,baz=179,slow=0.9,SNR=39						
PSI	Prapat	84.01	275	eP	P	04 49 01.0	-1.5
	comp=Z,59nm,0.9s						
319A	Douglas	84.06	54	eP	P	04 49 04.2	+1.9
	comp=Z,45nm,1.0s						
J08A	Circle Bar Ran	84.11	39	eP	P	04 49 03.2	+1.0
	comp=Z,46nm,1.2s						
CCUT	Cedar City	84.19	46	eP	P	04 49 04.2	+1.3
	comp=Z,9.5nm,0.9s						
LON	Longmire	84.23	35	eP	P	04 49 03.4	+0.7
	comp=Z,13nm,1.1s						
LON	Longmire	84.23	35	eP	P	04 49 03.4	+0.7
LON				pmax	pmax		
	comp=Z,13nm,1.1s						
KNB	Kanab	84.28	47	eP	P	04 49 04.6	+1.2
	comp=Z,19nm,1.2s						
KNB	Kanab	84.28	47	eP	P	04 49 04.6	+1.2
KNB				pmax	pmax		
	comp=Z,19nm,1.2s						
U15A	North Rim	84.35	48	eP	P	04 49 05.1	+1.3
	comp=Z,25nm,0.8s						
PSUT	Pine Spring	84.37	45	eP	P	04 49 04.8	+1.0
	comp=Z,9.9nm,0.9s						
D05A	Enumclaw	84.41	35	eP	P	04 49 05.2	+1.7
	comp=Z,104nm,1.3s						
WUAZ	Wupatki	84.54	49	P	P	04 49 05.6	+1.0
	baz=240						
WUAZ	Wupatki	84.54	49	eP	P	04 49 06.1	+1.4
	comp=Z,23nm,1.2s						
RC01	Rabbit Creek A	84.59	14	eP	P	04 49 03.6	-0.4
	comp=Z,72nm,1.1s						
SKNT	Sakolnakorn	84.67	290	P	P	04 49 05.3	-0.1
	comp=Z,56nm,1.2s,comp=Z,3μm						
SUA	Susitna One	84.71	13	eP	P	04 49 04.1	-0.7
	comp=Z,54nm,0.8s						
GSI	Gunungsitoli	84.75	273	P	P	04 49 06.9	+1.0
GSI	Gunungsitoli	84.75	273	eP	P	04 49 07.0	+1.1
	comp=Z,132nm,0.9s						
G08A	Pilot Rock	84.94	38	eP	P	04 49 07.2	+0.9
	comp=Z,40nm,1.0s						
A04D	Lummi Island	84.99	33	P	P	04 49 07.3	+1.2
	baz=231,SNR=5.2						
SKT	Skwentna	85.01	12	eP	P	04 49 04.8	-1.3
	comp=Z,26nm,1.2s						
B05A	Bryant	85.02	34	P	P	04 49 07.2	+0.8
	baz=232,SNR=11						
X18A	Snowflake	85.07	50	eP	P	04 49 08.3	+1.0
	comp=Z,8.9nm,0.8s						
TRTT	Trang	85.10	280	P	P	04 49 08.3	+0.7
	comp=Z,62nm,1.1s						
LTY	Liberty	85.16	35	eP	P	04 49 08.1	+0.8
	comp=Z,40nm,1.3s						
PMR	Palmer	85.17	14	eP	P	04 49 05.6	-1.2
	comp=Z,109nm,1.4s						
PMR	Palmer	85.17	14	eP	P	04 49 05.6	-1.2
PMR				pmax	pmax		
	comp=Z,109nm,1.4s						
RAGM	Ragged Mountai	85.19	16	eP	P	04 49 07.0	0.0
	comp=Z,57nm,1.2s						
MTPU	Mount Pierson	85.24	47	eP	P	04 49 09.8	+1.6
	comp=Z,14nm,0.9s						
SRAK	Srakaew	85.25	287	P	P	04 49 08.1	-0.1
	comp=Z,69nm,1.2s						
HAWA	Hanford	85.27	37	eP	P	04 49 09.1	+1.4
	comp=Z,45nm,0.9s						
GHO	Glory Hole Cre	85.38	14	eP	P	04 49 07.6	-0.3
	comp=Z,99nm,0.8s						
C06D	Leavenworth	85.44	35	P	P	04 49 08.8	+0.3
	baz=233						
MSU	Marysvale	85.48	46	eP	P	04 49 10.6	+1.4
B06A	Marblemount	85.50	34	eP	P	04 49 09.4	+0.8
	comp=Z,16nm,0.8s						
SML	Sawmill	85.54	14	eP	P	04 49 08.6	-0.1
	comp=Z,31nm,1.0s						
SML	Sawmill	85.54	14	eP	P	04 49 08.6	-0.1
SML				pmax	pmax		
	comp=Z,31nm,1.0s						
DIV	Divide	85.55	15	eP	P	04 49 08.6	-0.2
	comp=Z,84nm,1.1s						
BJT	Baijiatuau	85.57	316	eP	P	04 49 09.9	+0.7
	comp=Z,32nm,0.9s						
BJI	Beijing	85.58	316	P	P	04 49 09.8	+0.5
BJI				pmax	pmax		
	comp=Z,41nm,1.4s						
E08A	Dider Farm, El	85.59	37	eP	P	04 49 10.2	+1.0
	comp=Z,34nm,0.8s						
BMO	Blue Mountains	85.65	39	eP	P	04 49 10.3	+0.6
	comp=Z,19nm,0.8s						
BMO				epP	pP	04 51 20.8	+1.5
ENH	Enshi	85.66	304	eP	P	04 49 10.7	+0.8
	comp=Z,125nm,1.0s						
BMRM	Bremner River	85.71	16	eP	P	04 49 09.3	-0.2
	comp=Z,74nm,1.1s						
PPLA	Purkeypile	85.72	12	eP	P	04 49 08.0	-1.6
	comp=Z,26nm,1.4s						
121A	Cookes Peak, D	85.73	53	P	P	04 49 11.4	+1.0
	baz=242,SNR=9.7						
MFID	Camas Ranch	85.73	40	eP	P	04 49 10.8	+0.7
	comp=Z,28nm,1.0s						
SCM	Sheep Creek Mo	85.79	14	eP	P	04 49 09.8	-0.1
	comp=Z,92nm,0.8s						
SCM	Sheep Creek Mo	85.79	14	eP	P	04 49 09.8	-0.1
SCM				pmax	pmax		
	comp=Z,92nm,0.8s						
TPTI		85.80	275	P	P	04 49 10.9	-0.1
NONG	Nongkai	85.83	291	P	P	04 49 11.9	+1.0
	comp=Z,52nm,1.1s,comp=Z,3μm						
KLU	Klutina	85.83	15	eP	P	04 49 09.8	-0.2
	comp=Z,28nm,0.9s						
CRQM	Cirque	85.91	17	eP	P	04 49 10.7	+0.1
	comp=Z,68nm,1.2s						
DUG	Dugway, Tooele	85.92	44	P	P	04 49 11.5	+0.4
	baz=239						
DUG	Dugway, Tooele	85.92	44	eP	P	04 49 12.4	+1.2
	comp=Z,8.7nm,1.3s						
DUG	Dugway, Tooele	85.92	44	P	P	04 49 12.3	+1.2
WRAK	Wrangell Islan	85.95	24	eP	P	04 49 11.9	+1.3
	comp=Z,40nm,0.9s						
TGL	Tana Glacier	85.99	17	eP	P	04 49 11.0	+0.1
	comp=Z,56nm,1.1s						
D08A	Wollman Farm,	86.00	36	eP	P	04 49 12.2	+1.1
	comp=Z,40nm,0.9s						
CHAI	Chaiyaphum	86.02	288	P	P	04 49 12.8	+0.9
	comp=Z,11nm,0.8s						
E09A	Wood Farm, Sta	86.12	37	eP	P	04 49 12.6	+0.9
	comp=Z,60nm,1.3s						
GYA	Guiyang	86.25	300	eP	P	04 49 14.8	+1.9
GYA				pP	pP	04 51 27.3	+4.5
GYA				sP	sP	04 52 27.0	+3.4
GYA				PP	PP	04 52 50.4	+4.6
GYA				S	S	04 58 58.8	+0.1
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
SEY	Seymchan	86.31	347	P	P	04 49 12.2	+0.1
	comp=Z,44nm,0.8s,baz=148,slow=7.1,SNR=138						
SEY	Seymchan	86.31	347	d iP	P	04 49 11.5	-0.6
F10A	Beach Ranch, E	86.33	38	eP	P	04 49 13.3	+0.4
	comp=Z,86nm,0.9s						
F10A				epP	pP	04 51 23.4	+0.7
EPT	El Paso	86.35	54	eP	P	04 49 15.0	+1.7
	comp=Z,48nm,1.4s						
TMUT	Trail Mountain	86.53	46	eP	P	04 49 15.9	+1.7
	comp=Z,23nm,1.1s						
B08A	Colville Reser	86.54	35	eP	P	04 49 13.5	-0.2
SYO	Syowa Base	86.58	193	⊓ iP	P	04 49 11.6	-1.9
LLLB	Lilloоet	86.59	32	eP	P	04 49 14.6	+0.8
	comp=Z,38nm,1.1s						
TRF	Thorofare Moun	86.59	12	eP	P	04 49 12.7	-1.0
	comp=Z,74nm,0.8s						
JIS	Juneau Island	86.60	22	eP	P	04 49 14.6	+1.0
	comp=Z,17nm,1.0s						
BESE	Bessie Mountai	86.67	21	eP	P	04 49 15.2	+1.2
	comp=Z,32nm,1.0s						
HLID	Hailey	86.67	41	P	P	04 49 15.7	+1.1
	baz=238						
HLID	Hailey	86.67	41	eP	P	04 49 15.7	+1.1
	comp=Z,27nm,0.9s						
LHMI	Lhok Sumawe	86.71	277	P	P	04 49 15.9	+0.6
LHMI	Lhok Sumawe	86.71	277	eP	P	04 49 15.8	+0.6
	comp=Z,159nm,0.8s						
C09A	Chrisman Ranch	86.79	36	eP	P	04 49 15.6	+0.7
	comp=Z,33nm,0.9s						
HARP	HAARP	86.80	15	eP	P	04 49 15.0	+0.4
	comp=Z,42nm,0.9s						
DHY	Denali Highway	86.87	14	eP	P	04 49 14.6	-0.4
	comp=Z,17nm,0.9s						
CTU	Camp Tracy	86.87	44	eP	P	04 49 16.5	+0.9
	comp=Z,11nm,1.2s						
MLSI	Meulaboh, Aceh	86.88	276	P	P	04 49 16.4	+0.4
SRU	San Rafael Swe	86.90	46	eP	P	04 49 16.9	+1.1
	comp=Z,18nm,0.9s						
SRU	San Rafael Swe	86.90	46	P	P	04 49 16.9	+1.1
P17A	Butcher Ranch,	86.94	46	eP	P	04 49 17.4	+1.4
	comp=Z,22nm,1.3s						
PHET	Kaeng Krachan	87.01	285	P	P	04 49 19.0	+2.4
	comp=Z,39nm,0.9s,comp=Z,304nm						
JLU	Jordanelle	87.03	45	eP	P	04 49 17.0	+0.6
	comp=Z,6.3nm,1.0s						
BPAW	Bear Paw Mtn.	87.04	12	eP	P	04 49 14.4	-1.3
	comp=Z,11nm,1.0s						
LAZ	Ladron	87.06	52	eP	P	04 49 18.2	+1.5
MNTX	Cornudas Mount	87.17	55	P	P	04 49 17.9	+0.9
	baz=244,SNR=27						
MNTX	Cornudas Mount	87.17	55	eP	P	04 49 18.2	+1.2
	comp=Z,25nm,1.1s						
MNTX				epP	pP	04 51 30.8	+3.6
PBKT	Sadao Pong	87.17	289	P	P	04 49 17.9	+0.7
	comp=Z,59nm,1.2s,comp=Z,5μm						
PBKT	Sadao Pong	87.17	289	eP	P	04 49 18.0	+0.7
	comp=Z,70nm,1.2s						
SKAG	Skagway	87.19	20	eP	P	04 49 17.7	+1.3
	comp=Z,62nm,1.4s						
PAX	Paxson	87.21	14	eP	P	04 49 15.8	-0.8
	comp=Z,21nm,1.0s						
PAX	Paxson	87.21	14	eP	P	04 49 15.8	-0.8
PAX				pmax	pmax		
	comp=Z,21nm,1.0s						
TCUT	Toone Canyon	87.31	44	eP	P	04 49 19.0	+1.2
	comp=Z,37nm,1.1s						
BNM	Barren Site	87.33	52	eP	P	04 49 19.0	+1.0
P18A	Preston Nutter	87.34	46	eP	P	04 49 19.2	+1.1
	comp=Z,20nm,1.3s						
PV05	Paradox Valley	87.38	48	eP	P	04 49 19.6	+1.5
	comp=Z,16nm,1.0s						
MVCO	Mesa Verde	87.39	49	P	P	04 49 18.5	+0.3
	baz=242						
LPM	Los Pinos Moun	87.39	52	eP	P	04 49 19.4	+1.2
BWN	Browne	87.40	12	eP	P	04 49 17.0	-0.3
	comp=Z,111nm,1.1s						
ZEA	Zeya	87.43	331	eP	P	04 49 18.1	+0.5
ZEA				pmax	pmax		
	comp=Z,52nm,1.0s						
HWUT	Hardware Ranch	87.46	44	eP	P	04 49 19.0	+0.6
	comp=Z,6.1nm,0.9s						
TX31	Lajitas Ar. Si	87.49	58	eP	P	04 49 19.9	+1.2
TX31				epP	pP	04 51 30.7	+1.7
TXAR	Lajitas Array	87.49	58	P	P	04 49 20.1	+1.4
	comp=Z,14nm,0.9s,baz=222,slow=5.5,SNR=21						
TXAR				pP	pP	04 51 29.8	+0.8
	comp=Z,8.8nm,1.1s,baz=232,slow=6.7,SNR=16						
TXAR				PKKPbc	PKKPbc	05 07 05.0	+0.8
	comp=Z,0.8nm,0.7s,baz=110,slow=3.7,SNR=10						
PV09	Paradox Valley	87.56	47	eP	P	04 49 20.1	+1.0
PV10	Paradox Valley	87.56	47	eP	P	04 49 21.1	+2.1
	comp=Z,12nm,0.9s						
PV19	Morning Glory	87.57	48	eP	P	04 49 20.0	+1.0
	comp=Z,9.7nm,1.0s						
PV17	East Wray Mesa	87.57	48	eP	P	04 49 19.9	+0.9
	comp=Z,12nm,1.1s						
PV18	Skein Mesa, Pa	87.59	48	eP	P	04 49 20.4	+1.4
	comp=Z,13nm,1.2s						
PV16	Nyswonger Mesa	87.61	48	eP	P	04 49 20.1	+0.9
	comp=Z,17nm,1.4s						
PV23	Carpenter Ridg	87.62	47	eP	P	04 49 20.4	+1.1
	comp=Z,13nm,0.8s						
PV03	Paradox Valley	87.64	48	eP	P	04 49 20.0	+0.7
	comp=Z,18nm,1.4s						
PV11	David Mesa, Pa	87.64	48	eP	P	04 49 20.7	+1.4
	comp=Z,24nm,1.3s						
PV04	Paradox Valley	87.66	47	eP	P	04 49 20.4	+1.0
	comp=Z,8.6nm,0.9s						
PV02	Paradox Valley	87.69	48	eP	P	04 49 20.9	+1.3
	comp=Z,7.6nm,1.1s						
NEW	Newport	87.69	36	P	P	04 49 19.3	+0.1
	baz=235,SNR=6.9						
NEW	Newport	87.69	36	eP	P	04 49 19.2	+0.1
	comp=Z,16nm,1.0s						
NEW	Newport	87.69	36	eP	P	04 49 19.2	+0.1
NEW				pmax	pmax		
	comp=Z,16nm,1.0s						
PV21	Cone Mtn., Par	87.69	47	eP	P	04 49 20.6	+1.0
	comp=Z,23nm,1.4s						
PV12	Saucer Basin,	87.70	48	eP	P	04 49 19.3	-0.3
	comp=Z,14nm,0.8s						
PV01	Paradox Valley	87.77	48	eP	P	04 49 20.4	+0.5
	comp=Z,9.2nm,0.9s						
XAN	Xi'an	87.77	308	P	P	04 49 20.8	+1.0
XAN				pmax	pmax		
	comp=Z,81nm,1.1s						
XAN				pmax	pmax		
	comp=Z,440nm,6.5s						
TASM	ASL Pad, Albuq	87.81	51	P	P	04 49 20.9	+0.7
	baz=243,SNR=23						
ANMO	Albuquerque	87.81	51	P	P	04 49 20.9	+0.7
	comp=Z,16nm,1.1s,baz=214,slow=6.9,SNR=27						
ANMO	Albuquerque	87.81	51	P	P	04 49 20.8	+0.6
	baz=243						
ANMO	Albuquerque	87.81	51	eP	P	04 49 20.8	+0.6
	comp=Z,18nm,1.1s						
ANMO	Albuquerque	87.81	51	d iP	P	04 49 17.8	-2.4
ANMO				pmax	pmax		
	comp=Z,17nm,1.1s						
TASL	Snake Pit, Alb	87.81	51	P	P	04 49 20.9	+0.7
	baz=243,SNR=23						
PV22	Blue Mesa, Par	87.81	47	eP	P	04 49 20.7	+0.6
	comp=Z,12nm,1.1s						
PV07	Paradox Valley	87.86	48	eP	P	04 49 21.2	+0.9
	comp=Z,17nm,1.4s						
PHIT	Phitsanulok	87.90	289	P	P	04 49 22.8	+2.1
	comp=Z,61nm,1.1s						
MLY	Manley	87.93	11	eP	P	04 49 18.6	-1.2
	comp=Z,28nm,0.8s						
MLY				epP	pP	04 51 33.6	+3.3
PV15	Paradox Valley	87.93	48	eP	P	04 49 21.4	+0.7
	comp=Z,10nm,1.0s						
WRH	Wood River Hil	87.95	13	eP	P	04 49 19.1	-0.7
	comp=Z,84nm,0.9s						
WRH				epP	pP	04 51 32.5	+2.1
SNAA	Sanae	87.98	179	P	P	04 49 20.0	-0.2
	comp=Z,1.7nm,0.7s,baz=204,slow=8.7,SNR=4.6						
SNAA				pP	pP	04 51 30.2	-0.3
	comp=Z,3.7nm,0.8s,baz=177,slow=5.7,SNR=3.7						
SNAA				S	SKSac	04 58 50.1	-0.9
	comp=Z,2.0nm,0.8s,baz=165,slow=20,SNR=9.1						
SNAA	Sanae	87.98	179	eP	P	04 49 20.0	-0.2
	comp=Z,4.8nm,1.2s						
SNAA				epP	pP	04 51 31.2	+0.6
SNAA	Sanae	87.98	179	eP	P	04 49 20.0	-0.2
SNAA				e*PP	pP	04 51 31.2	+0.6
SNAA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
SRDT	SRDT	88.00	286	P	P	04 49 23.2	+2.0
	comp=Z,54nm,1.1s,comp=Z,2μm						
RIDG	Independ'e Rid	88.02	14	eP	P	04 49 19.9	-0.3
	comp=Z,44nm,1.0s						
DOT	Dot Lake	88.12	15	eP	P	04 49 21.0	+0.2
	comp=Z,106nm,0.9s						
HDA	Harding Lake	88.13	13	eP	P	04 49 20.0	-0.7
	comp=Z,45nm,0.7s						
CCB	Clear Creek Bu	88.16	13	eP	P	04 49 19.9	-0.9
	comp=Z,63nm,0.8s						
CCB				epP	pP	04 51 32.7	+1.3
NANT	Nan	88.25	291	P	P	04 49 23.5	+1.2
	comp=Z,16nm,1.1s,comp=Z,454nm						
DLBC	Dease Lake	88.28	23	eP	P	04 49 22.3	+0.7
	comp=Z,22nm,0.9s						
MCMT	McKenzie Canyo	88.30	40	eP	P	04 49 23.4	+1.1
AHID	Auburn Hatcher	88.34	43	eP	P	04 49 23.6	+1.1
	comp=Z,32nm,1.2s						
BSI	Banda Aceh	88.34	276	P	P	04 49 22.3	-0.6
MDM	Murphy Dome	88.35	12	eP	P	04 49 20.6	-1.1
	comp=Z,72nm,0.9s						
COLA	College	88.35	13	eP	P	04 49 20.9	-0.7
	comp=Z,80nm,0.8s						
COLA	College	88.35	13	eP	P	04 49 20.9	-0.7
COLA				pmax	pmax		
	comp=Z,80nm,0.8s						
SCRK	Sand Creek	88.42	14	eP	P	04 49 22.1	-0.1
	comp=Z,19nm,0.8s						
HIA	Hailar	88.45	325	eP	P	04 49 22.7	+0.1
	comp=Z,28nm,0.9s						
ILAR	Eielson Array	88.46	13	P	P	04 49 21.2	-0.9
	comp=Z,26nm,0.9s,baz=227,slow=5.4,SNR=163						
ILAR				pP	pP	04 51 32.4	-0.5
	comp=Z,2.2nm,1.0s,baz=222,slow=6.2,SNR=5.3						
ILAR				PP	PP	04 53 04.2	+1.9
	comp=Z,1.6nm,0.8s,baz=223,slow=7.6,SNR=4.4						
ILAR				PKKPbc	PKKPdf	05 06 59.8	+1.8
	comp=Z,0.3nm,0.6s,baz=351,slow=1.7,SNR=4.9						
ILB	Eielson Array	88.46	13	eP	P	04 49 21.3	-0.9
ILB				epP	pP	04 51 32.4	-0.5
ILB				ePP	PP	04 53 04.2	+1.9
ILB				ePKKPdf	PKKPdf	05 06 59.8	+1.8
IL1	Eielson Array	88.46	13	eP	P	04 49 20.3	-1.9
IL1				epP	pP	04 51 32.8	-0.1
MSO	Missoula	88.70	38	P	P	04 49 24.2	+0.2
	baz=238,SNR=7.1						
MSO	Missoula	88.70	38	eP	P	04 49 24.1	+0.2
	comp=Z,6.5nm,0.9s						
DLMT	Dillon	88.73	40	eP	P	04 49 25.1	+1.0
	comp=Z,24nm,1.0s						
REDW	Red Top Meadow	88.79	42	eP	P	04 49 25.4	+0.8
	comp=Z,44nm,1.0s						
TPAW	Teton Pass	88.79	42	eP	P	04 49

LRM	Limekiln Ridge	89.05	40	eP		P	04 49 26.9	+1.1
LOHW	Long Hollow	89.07	42	eP		P	04 49 26.6	+0.8
	comp=Z,13nm,0.8s							
RDOG	Red Dog Mine	89.08	6	eP		P	04 49 25.2	+0.2
	comp=Z,29nm,1.1s							
LAMP	Lampang	89.09	290	P		P	04 49 27.7	+1.5
	comp=Z,38nm,0.9s,comp=Z,284nm							
LNIG	Linares	89.11	63	eP		P	04 49 26.1	-0.1
	comp=Z,14nm,1.0s							
LNIG				epP		pP	04 51 38.3	+1.3
QLMT	Earthquake Lak	89.17	41	eP		P	04 49 27.8	+1.6
BW06	Boulder Array	89.33	43	P		P	04 49 27.1	0.0
	baz=241,SNR=24							
BW06	Boulder Array	89.33	43	eP		P	04 49 27.1	0.0
	comp=Z,18nm,0.8s							
PD31	Pinedale Array	89.33	43	eP		P	04 49 27.6	+0.5
PD31				ePKKPdf		PKKPbc	05 06 59.2	-1.3
PDAR	Pinedale Array	89.33	43	P		P	04 49 27.2	+0.1
	comp=Z,12nm,0.7s,baz=207,slow=3.0,SNR=73							
PDAR				PKKPbc		PKKPbc	05 06 59.2	-1.3
	comp=Z,1.1nm,0.8s,baz=90,slow=4.4,SNR=9.5							
PDAR	Pinedale Array	89.33	43	eP		P	04 49 26.4	-0.6
YFT	Old Faithful	89.34	41	eP		P	04 49 30.2	+3.1
	comp=Z,18nm,0.9s							
YMR	Madison River	89.37	41	eP		P	04 49 29.2	+1.9
	comp=Z,21nm,0.9s							
BOZ	Bozeman (W)	89.43	40	P		P	04 49 28.3	+0.8
	baz=240,SNR=23							
BOZ	Bozeman (W)	89.43	40	eP		P	04 49 28.2	+0.8
	comp=Z,21nm,1.0s							
BOZ				epP		pP	04 51 40.3	+2.0
BOZ	Bozeman (W)	89.43	40	eP		P	04 49 28.2	+0.8
BOZ				e*PP		pP	04 51 40.3	+2.0
BOZ				pmax		pmax		
	comp=Z,21nm,1.0s							
H17A	Grant Village	89.48	42	P		P	04 49 29.6	+1.8
	baz=240							
H17A	Grant Village	89.48	42	eP		P	04 49 30.6	+2.8
	comp=Z,18nm,0.9s							
PLCA	Paso Flores	89.60	134	P		P	04 49 29.7	+1.3
	comp=Z,3.1nm,0.7s,baz=270,slow=4.3,SNR=6.8							
PLCA				PP		PP	04 53 11.1	0.0
	comp=Z,3.8nm,1.2s,baz=266,slow=6.9,SNR=3.0							
PLCA				PKKPbc		PKKPbc	05 06 58.5	-0.9
	comp=Z,1.1nm,0.8s,baz=232,slow=4.5,SNR=3.8							
DAWY	Dawson	89.63	16	eP		P	04 49 27.9	+0.2
	comp=Z,44nm,0.9s							
CM01	Chiang Mai Arr	89.64	290	eP		P	04 49 29.3	+0.6
CM31	Chiang Mai Arr	89.67	290	eP		P	04 49 30.9	+2.0
CM31				ePP		PP	04 53 13.7	+1.0
CM31				ePKKPdf		PKKPbc	05 07 04.8	+6.4
CMAR	Chiang Mai Arr	89.67	290	P		P	04 49 30.6	+1.7
	comp=Z,46nm,0.9s,baz=122,slow=3.0,SNR=118							
CMAR				PP		PP	04 53 13.7	+1.0
	comp=Z,0.9nm,0.3s,baz=125,slow=5.6,SNR=5.4							
CMAR				PKKPbc		PKKPbc	05 07 04.8	+6.4
	comp=Z,1.6nm,0.4s,baz=244,slow=26,SNR=4.1							
SDCO	Great Sand Dun	89.75	49	P		P	04 49 29.0	-0.2
	baz=244,SNR=16							
SDCO	Great Sand Dun	89.75	49	eP		P	04 49 29.5	+0.3
	comp=Z,8.2nm,1.0s							
EGAK	Eagle	89.77	15	eP		P	04 49 28.2	-0.1
	comp=Z,47nm,0.9s							
CHTO	Chiang Mai	89.80	290	P		P	04 49 30.7	+1.2
	comp=Z,382nm,0.9s,comp=Z,5μm							
CHTO	Chiang Mai	89.80	290	eP		P	04 49 30.8	+1.2
	comp=Z,54nm,0.8s							
CHTO	Chiang Mai	89.80	290	eP		P	04 49 30.8	+1.2
CHTO				pmax		pmax		
	comp=Z,54nm,0.8s							
HRY	Holter Researc	89.88	39	eP		P	04 49 30.4	+1.0
WALA	Waterton Lakes	89.91	36	eP		P	04 49 30.2	+0.8
	comp=Z,18nm,0.9s							
CMAI	Chiengmai2	90.12	291	P		P	04 49 32.4	+1.2
	comp=Z,439nm,1.1s,comp=Z,9μm							
MSTX	Muleshoe	90.13	54	P		P	04 49 30.8	0.0
	baz=245							
MSTX	Muleshoe	90.13	54	eP		P	04 49 31.4	+0.6
	comp=Z,16nm,0.9s							
T25A	Trinidad	90.27	50	P		P	04 49 31.4	-0.2
	baz=244,SNR=7.3							
T25A	Trinidad	90.27	50	eP		P	04 49 32.1	+0.6
	comp=Z,11nm,1.0s							
RWWY	Rawlins	90.35	45	eP		P	04 49 32.2	+0.3
	comp=Z,36nm,1.1s							
CD2	Chengdu	90.40	303	P		P	04 49 33.5	+1.4
CD2				pmax		pmax		
	comp=Z,20nm,0.8s							
833A	Chaparral WMA,	90.50	60	P		P	04 49 32.6	+0.1
	baz=247							
Q24A	Divide	90.54	48	P		P	04 49 33.4	+0.5
	baz=244							
ISCO	Idaho Springs	90.58	47	P		P	04 49 33.7	+0.6
	baz=244,SNR=5.8							
ISCO	Idaho Springs	90.58	47	eP		P	04 49 33.9	+0.8
	comp=Z,4.8nm,0.9s							
ISCO	Idaho Springs	90.58	47	eP		P	04 49 33.9	+0.8
ISCO				pmax		pmax		
	comp=Z,5.0nm,0.9s							
RLMT	Red Lodge	90.65	41	P		P	04 49 34.0	+0.9
	baz=241							
RLMT	Red Lodge	90.65	41	eP		P	04 49 33.7	+0.6
	comp=Z,8.2nm,0.9s							
GCMT	Greycliff	90.72	41	eP		P	04 49 34.7	+1.3
N23A	Red Feather La	90.84	46	P		P	04 49 34.2	0.0
	baz=243,SNR=16							
N23A	Red Feather La	90.84	46	eP		P	04 49 35.3	+1.1
	comp=Z,22nm,1.0s							
JCT	Junction City	91.02	58	P		P	04 49 35.4	+0.4
	baz=247							
K22A	Casper	91.25	45	P		P	04 49 36.2	+0.3
	baz=243,SNR=9.5							
K22A	Casper	91.25	45	eP		P	04 49 36.5	+0.7
	comp=Z,18nm,1.0s							
PHWY	Pilot Hill	91.35	46	eP		P	04 49 37.2	+0.6
	comp=Z,7.7nm,0.8s							
TOLK	Toolik Lake Re	91.38	10	P		P	04 49 35.6	-0.1
	baz=207							
TOLK	Toolik Lake Re	91.38	10	eP		P	04 49 36.1	+0.3
	comp=Z,34nm,1.4s							
EGMT	Eagleton	91.76	39	P		P	04 49 37.7	-0.2
	baz=241							
EGMT	Eagleton	91.76	39	eP		P	04 49 38.7	+0.7
	comp=Z,11nm,1.0s							
YAK	Yakutsk	91.97	338	eP		P	04 49 37.8	-0.6
	comp=Z,72nm,0.8s							
YAK	Yakutsk	91.97	338	*i* P		P	04 49 37.3	-1.1
YAK				pmax		pmax		
	comp=Z,58nm,0.8s							
ABTX	Abilene, Hawle	91.98	56	P		P	04 49 39.5	+0.2
	baz=247							
ABTX	Abilene, Hawle	91.98	56	eP		P	04 49 40.4	+1.1
	comp=Z,22nm,1.2s							
ABTX				epP		pP	04 51 54.8	+4.2
KSCO	Kaye Shedlock'	92.33	49	P		P	04 49 42.0	+1.1
	baz=245							
KSCO	Kaye Shedlock'	92.33	49	eP		P	04 49 42.0	+1.1
	comp=Z,20nm,0.8s							
LZH	Lanzhou	92.41	308	‖P		P	04 49 42.3	+0.9
LZH				pP		pP	04 51 56.3	+3.6
LZH				sP		sP	04 52 56.4	+3.4
LZH				pmax		pmax		
	comp=Z,28nm,1.4s							
LZH				pmax		pmax		
	comp=Z,100nm,9.2s							
LAO	LASA Array	93.26	41	eP		P	04 49 46.5	+1.6
	comp=Z,72nm,0.6s							
LAO				epP		pP	04 51 56.7	+0.4
WMOK	Wichita Mounta	93.46	54	P		P	04 49 46.2	+0.2
	baz=248							
RSSD	Black Hills	93.52	44	P		P	04 49 46.2	-0.1
	baz=245							
RSSD	Black Hills	93.52	44	eP		P	04 49 46.6	+0.3
	comp=Z,7.1nm,0.9s							
RSSD	Black Hills	93.52	44	eP		P	04 49 46.6	+0.3
RSSD				pmax		pmax		
	comp=Z,7.0nm,0.9s							
INK	Inuvik	94.44	15	P		P	04 49 48.4	-1.2
	comp=Z,13nm,1.1s,baz=227,slow=6.1,SNR=26							
INK	Inuvik	94.44	15	eP		P	04 49 48.8	-0.8
	comp=Z,17nm,1.1s							
INK	Inuvik	94.44	15	eP		P	04 49 48.8	-0.8
INK				pmax		pmax		
	comp=Z,17nm,1.1s							
ULN	Ulaanbaatar	95.08	319	eP		P	04 49 53.0	-0.2
	comp=Z,6.9nm,0.8s							
ULN	Ulaanbaatar	95.08	319	*d* *i* P		P	04 49 52.4	-0.8
ULN				pmax		pmax		
	comp=Z,6.0nm,0.9s							
DGMT	Dagmar	95.27	40	eP		P	04 49 55.1	+1.2
	comp=Z,31nm,1.3s							
SONA0	Songino Array	95.47	319	eP		P	04 49 54.0	-1.0
SONA0				ePP		PP	04 53 57.7	+0.8
SONA1	Songino Array	95.47	319	eP		P	04 49 54.1	-0.9
SONM	Songino Array	95.47	319	P		P	04 49 54.0	-0.9
	comp=Z,2.7nm,0.8s,baz=151,slow=1.6,SNR=13							
SONM				PP		PP	04 53 57.7	+0.8
	comp=Z,1.6nm,1.0s,baz=115,slow=6.5,SNR=3.2							
SONM	Songino Array	95.47	319	P		P	04 49 54.0	-0.9
GTA	Gaotai	96.62	309	P		P	04 50 00.5	+0.2
GTA				pP		pP	04 52 10.4	-1.7
GTA				sP		sP	04 53 10.8	-1.5
GTA				pmax		pmax		
	comp=Z,10.0nm,1.7s							
YKA	Yellowknife Ar	96.75	25	P		P	04 49 59.6	-0.5
	comp=Z,2.7nm,0.7s,baz=240,slow=4.4,SNR=18							
YKA				pP		pP	04 52 13.8	+1.8
	comp=Z,0.8nm,0.9s,baz=242,slow=5.4,SNR=3.6							
YKA				PP		PP	04 54 06.7	+0.7
	comp=Z,0.8nm,0.8s,baz=247,slow=6.6,SNR=3.3							
YKA				PKKPbc		PKKPbc	05 06 39.1	-2.6
	comp=Z,0.4nm,0.6s,baz=53,slow=2.1,SNR=5.5							
YKB5	Yellowknife Ar	96.75	25	eP		P	04 49 59.6	-0.5
YKB5				ePKKPbc		PKKPbc	05 06 39.1	-2.6
ECSD	EROS Data Cent	98.32	46	epP		pP	04 52 23.1	+3.5
ZAK	Zakamensk	98.35	321	eP		Pdif	04 50 02.9	-4.8
ZAK				pmax		pmax		
	comp=Z,3.0nm,1.2s							
TLY	Talaya	98.63	322	*i* P		Pdif	04 50 08.1	-0.7
TLY				pmax		pmax		
	comp=Z,3.0nm,0.9s							
TIXI	Tiksi	98.66	345	*i* P		Pdif	04 50 07.1	-1.3
TIXI				pmax		pmax		
	comp=Z,4.0nm,1.2s							
LPAZ	La Paz	102.49	113	P		Pdif	04 50 29.1	+1.5
	comp=Z,0.9nm,0.7s,baz=212,slow=9.5,SNR=4.9							
LPAZ				PKKPbc		PKKPbc	05 06 24.9	-0.3
	comp=Z,1.5nm,0.8s,baz=42,slow=6.5,SNR=6.9							
ZAA1	Zalesovo Array	110.22	321	ePKIKP		PKiKP	04 54 56.0	-1.5
ZALV	Zalesovo Beam	110.22	321	PKiKP		PKiKP	04 54 56.0	-1.5
	comp=Z,6.9nm,0.6s,baz=161,slow=1.0,SNR=28							
MK31	Makanchi Array	110.87	313	*i* PKIKP		PKiKP	04 54 57.4	-1.7
MK31				pmax		pmax		
	comp=Z,8.0nm,0.8s							
MK32	Makanchi Array	110.87	313	ePdif		Pdif	04 51 04.6	+1.2
MK32				ePKiKP		PKiKP	04 54 58.0	-1.1
MKAR	Makanchi Array	110.87	313	Pdiff		Pdif	04 51 04.6	+1.2
	comp=Z,1.2nm,0.7s,baz=93,slow=6.1,SNR=6.2							
MKAR				PKIKP		PKiKP	04 54 58.0	-1.1
	comp=Z,7.0nm,0.7s,baz=64,slow=2.1,SNR=52							
MKAR				SKP			04 57 38.2	
	comp=Z,1.4nm,0.9s,baz=71,slow=1.7,SNR=3.6							
NVS	Novosibirsk	111.24	322	ePKIKP		PKiKP	04 54 57.9	-1.5
NVS				*e*			05 00 45.2	
NVS				pmax		pmax		
	comp=Z,10.0nm,0.9s							
NVS				pmax		pmax		
	comp=N,2.0nm,0.6s							
NVS				pmax		pmax		
	comp=E,5.0nm,0.7s							
KURK	Kurchatov	113.69	317	ePKiKP		PKiKP	04 55 03.0	-1.2
KURK				ePP		PP	04 56 05.3	-3.7
KURK	Kurchatov	113.69	317	*d* *i* PKIKP		PKiKP	04 55 02.9	-1.3
KURBB	Kurchatov Arra	113.75	317	PKiKP		PKiKP	04 55 03.0	-1.3
	comp=E,8.9nm,0.7s,baz=94,slow=1.9,SNR=90							
KURBB				PP		PP	04 56 05.3	-4.1
	comp=E,2.0nm,0.9s,baz=94,slow=7.3,SNR=6.9							
KURBB				SKP			04 57 42.8	
	comp=E,1.5nm,0.7s,baz=88,slow=2.1,SNR=5.6							
KURBB				SKKPbc		SKKPbc	05 08 35.9	-3.2
	comp=E,0.7nm,0.6s,baz=273,slow=4.2,SNR=5.5							
KSH	Kashi	114.51	305	PKP		PKPdf	04 55 06.8	+0.4
KSH				PKS		PKSdf	04 58 44.3	+1.1
KSH				SKS		SKSdf	05 01 24.4	+2.6
KSH				AMB		AMB		
	comp=E,280nm,5.1s							
NRN	Naryn	114.71	307	ePKPdf		PKPdf	04 55 06.7	-0.3
NRN	Naryn	114.71	307	ePKIKP		PKPdf	04 55 06.7	-0.3
SFK	Sufi-Kurgan	116.46	305	PKIKP		PKPdf	04 55 09.4	-0.9
SFK				pmax		pmax		
	comp=Z,23nm,1.0s							
MNAS	Manas	117.40	308	PKIKP		PKPdf	04 55 10.8	-1.1
MNAS				pmax		pmax		
	comp=Z,15nm,0.7s							
PQI	Presque Isle	118.62	47	ePKPdf		PKPdf	04 55 12.9	-1.0
BVAR	Borovoye Array	118.80	320	PKP		PKPdf	04 55 13.1	-0.9
	comp=Z,28nm,0.8s,baz=90,slow=1.9,SNR=98							
BVAR				PP		PP	04 56 41.5	-2.5
	comp=Z,1.6nm,0.7s,baz=99,slow=7.7,SNR=3.4							
BVAR				SKP			04 57 53.3	
	comp=Z,2.4nm,0.8s,baz=126,slow=2.0,SNR=4.0							
BRVK	Borovoye	118.86	320	ePKPdf		PKPdf	04 55 12.5	-1.7
BRVK	Borovoye	118.86	320	*d* *i* PKIKP		PKPdf	04 55 11.4	-2.7
KK31	Karatay Array	118.89	309	ePKPdf		PKPdf	04 55 13.9	-0.7
KK31	Karatay Array	118.89	309	ePKIKP		PKPdf	04 55 13.9	-0.7
KKAR	Karatay Array	118.89	309	ePKPdf		PKPdf	04 55 13.9	-0.7
KKAR	Karatay Array	118.89	309	ePKIKP		PKPdf	04 55 13.9	-0.7
KBL	Kabul	119.48	299	ePKPdf		PKPdf	04 55 16.4	+0.2
KBL	Kabul	119.48	299	ePKIKP		PKPdf	04 55 16.4	+0.2
OPO	Ambohidratompo	120.69	232	PKP		PKPdf	04 55 19.1	+0.1
	comp=Z,6.0nm,0.7s,baz=205,slow=1.9,SNR=7.9							
SPA0	Spitsbergen Ar	121.88	356	ePKPdf		PKPdf	04 55 19.2	-0.1
SPITS	Spitsbergen Ar	121.88	356	PKP		PKPdf	04 55 18.8	-0.6
	comp=Z,25nm,0.8s,baz=58,slow=3.6,SNR=14							
ILULI	Ilulissat	121.94	20	ePKPdf		PKPdf	04 55 18.9	-0.7
ILULI	Ilulissat	121.94	20	ePKIKP		PKPdf	04 55 18.9	-0.7
DAG	Danmarks Havn	122.83	5	‖ *i* PKIKP		PKPdf	04 55 19.5	-1.6
DAG				pmax		pmax		
	comp=Z,12nm,1.0s							
SFJD	Kangerlussuaq	123.16	22	*i* PKIKP		PKPdf	04 55 20.9	-1.1
SFJD				pmax		pmax		
	comp=Z,11nm,0.8s							
SUMG	Summit	123.31	13	ePKPdf		PKPdf	04 55 22.2	-0.5
SUMG	Summit	123.31	13	‖ *i* PKIKP		PKPdf	04 55 22.2	-0.5
SUMG				pmax		pmax		
	comp=Z,27nm,1.1s							
SVE	Sverdlovsk	123.75	325	ePKIKP		PKPdf	04 55 23.0	-0.4
SVE				pmax		pmax		
	comp=Z,45nm,0.9s							
ARU	Arti	124.96	325	PKP		PKPdf	04 55 25.5	-0.2
	comp=Z,26nm,0.7s,baz=102,slow=0.6,SNR=39							
ARU				PP		PP	04 57 20.0	-4.8
	comp=Z,2.1nm,0.3s,baz=63,slow=6.8,SNR=6.7							
ARU	Arti	124.96	325	ePKPdf		PKPdf	04 55 25.4	-0.3
ARU				ePP		PP	04 57 20.6	-4.3
ARU	Arti	124.96	325	ePKIKP		PKPdf	04 55 25.4	-0.3
ARU				*e*			04 57 20.6	
AB31	Akbulak array	125.78	317	*i* PKIKP		PKPdf	04 55 26.8	-0.7
AB31				pmax		pmax		
	comp=Z,11nm,0.9s							
ABKAR	Akbulak array	125.78	317	ePKPdf		PKPdf	04 55 27.0	-0.5
BOSA	Boshof	126.01	206	PKP		PKPdf	04 55 29.4	+0.6
	comp=Z,9.2nm,1.0s,baz=198,slow=3.1,SNR=8.3							
BOSA	Boshof	126.01	206	ePKPdf		PKPdf	04 55 29.4	+0.6
BOSA				ePKPdf		PKiKP	04 55 29.8	+0.4
AKTO	Aktyubinsk	126.77	318	PKP		PKPdf	04 55 29.2	-0.2
	comp=Z,19nm,0.8s,baz=75,slow=2.0,SNR=54							
IVI	Ivigtut	126.80	27	ePKPdf		PKPdf	04 55 28.1	-1.0
NRS	Narsarsuaq	127.99	27	*i* PKIKP		PKPdf	04 55 30.1	-1.3
NRS				pmax		pmax		
	comp=Z,31nm,1.1s							
SCO	Scoresbysund	128.13	10	ePKPdf		PKPdf	04 55 31.5	+0.1
SCO	Scoresbysund	128.13	10	ePKIKP		PKPdf	04 55 31.5	+0.1
GEYT	Alibek	128.40	303	PKP		PKPdf	04 55 32.6	-0.4
	comp=Z,5.9nm,0.4s,baz=284,slow=1.2,SNR=2.7							
ARA0	ARCESS Array S	128.87	349	ePKPdf		PKPdf	04 55 31.9	-1.0
ARCES	ARCESS Array B	128.87	349	PKP		PKPdf	04 55 31.9	-0.9
	comp=Z,12nm,0.6s,baz=15,slow=1.2,SNR=38							
ARCES	ARCESS Array B	128.87	349	ePKPdf		PKPdf	04 55 32.1	-0.7
ARCES	ARCESS Array B	128.87	349	ePKIKP		PKPdf	04 55 32.2	-0.7
PRGR	Permogore	128.87	335	ePKIKP		PKPdf	04 55 32.6	-0.4
PRGR				pmax		pmax		
	comp=Z,15nm,0.8s							
UOSS	Minazif	129.62	286	ePKPdf		PKPdf	04 55 35.0	-0.6
KLMR	Klimovskoe	131.72	336	ePKIKP		PKPdf	04 55 37.5	-0.9
KLMR				*e*			04 58 03.9	
KLMR				pmax		pmax		
	comp=Z,34nm,1.2s							
FIA1	FINESS Array S	135.67	343	ePKPdf		PKPdf	04 55 44.2	-1.7
FIA1				ePKPdf		PKiKP	04 55 44.9	-2.7
FIA0	FINESS Array S	135.67	343	ePKPpre		PKPpre	04 55 36.7	
FIA0				ePKPdf		PKPdf	04 55 46.0	+0.2
FIA0				eSKPbc		SKPbc	04 58 22.4	+1.3
FIA0				ePP		SKPab	04 58 27.8	+0.7
FIA0	FINESS Array S	135.67	343	ePKHKP		PKPpre	04 55 36.7	
FIA0				*e*			04 55 46.0	
FIA0				*e*			04 58 27.8	
FINES	FINESS Array B	135.67	343	PKhKP		PKPpre	04 55 36.7	
	comp=Z,2.8nm,0.7s,baz=64,slow=4.4,SNR=8.5							
FINES				PKP		PKPdf	04 55 46.0	+0.2
	comp=Z,12nm,0.7s,baz=81,slow=2.5,SNR=18							
FINES				SKPbc		SKPbc	04 58 22.4	+1.3
	comp=Z,12nm,1.0s,baz=104,slow=4.6,SNR=12							
FINES				SKPab		SKPab	04 58 27.8	+0.7
	comp=Z,7.9nm,1.0s,baz=62,slow=4.9,SNR=6.9							
LSZ	Lusaka	135.78	218	ePKPdf		PKPdf	04 55 47.6	0.0
OBN	Obninsk	136.56	331	ePKIKP		PKPdf	04 55 46.6	-1.0
OBN				ePPP		PPP	05 01 45.0	
VSR	Storozhevoye	137.53	325	ePKIKP		PKPdf	04 55 47.6	-2.0
VSR				pmax		pmax		
	comp=Z,30nm,1.3s							
VORD	Divnogorie	137.60	325	ePKIKP		PKPdf	04 55 48.4	-1.3
VORD				pmax		pmax		
	comp=Z,10.0nm,0.7s							
VSU	Vasula	137.93	340	*i* PKIKP		PKPdf	04 55 48.4	-1.7
GNI	Garni	138.34	308	PKP		PKPdf	04 55 51.7	0.0
	comp=Z,14nm,0.8s,baz=18,slow=6.4,SNR=5.1							
KBZ	Khabaz	138.57	314	PKP		PKPdf	04 55 52.2	+0.5
	comp=Z,6.2nm,0.9s,baz=150,slow=5.8,SNR=6.6							
KBZ				PP		PP	04 58 45.5	-5.6
	comp=Z,4.3nm,0.9s,baz=60,slow=8.5,SNR=3.6							
KIV	Kislovodsk	138.63	314	ePKIKP		PKPdf	04 55 50.1	-1.9
KIV				pmax		pmax		
	comp=Z,13nm,1.0s							
NC303	NORSAR Array S	138.76	353	ePKPpre		PKPpre	04 55 42.2	
KMBO	Kilima Mbogo	138.89	243	PKP		PKPdf	04 55 57.2	+3.6
	comp=Z,2.2nm,0.7s,baz=70,slow=5.2,SNR=5.8							
KMBO				PP		PP	04 58 47.8	-6.0
	comp=Z,6.8nm,1.0s,baz=45,slow=4.3,SNR=6.1							
NAO01	NORSAR Array S	139.19	353	ePKPpre		PKPpre	04 55 44.0	
RAYN	Ar Rayn	139.20	283	ePKPpre		PKPpre	04 55 45.4	
ATD	Arta Tunnel	139.34	264	PKhKP		PKPpre	04 55 45.7	
	comp=Z,6.0nm,0.5s,baz=90,slow=20,SNR=3.3							
HFS	Hagfors	139.50	351	PKhKP		PKPpre	04 55 45.3	
	comp=Z,13nm,0.7s,baz=57,slow=5.3,SNR=24							
HFS				SKPbc		SKPbc	04 58 33.3	+1.2
	comp=Z,8.9nm,0.8s,baz=76,slow=6.1,SNR=8.3							
KONO	Kongsberg	140.50	354	ePKPpre		PKPpre	04 55 49.4	
KONO	Kongsberg	140.50	354	ePKHKP		PKPpre	04 55 49.4	
ANN	Anapa	141.73	318	*i* PKIKP		PKPpre	04 55 53.5	
ANN				pmax		pmax		
	comp=Z,53nm,1.8s							
SUW	Suwalki	142.70	339	ePKHKP		PKPpre	04 55 55.7	
AKASG	Malin Array Be	142.81	331	PKhKP		PKPpre	04 55 55.7	
	comp=Z,75nm,0.6s,baz=42,slow=4.2,SNR=534							
AKASG				SKPbc		SKPbc	04 58 41.2	+0.5
	comp=Z,11nm,1.1s,baz=42,slow=3.1,SNR=11							
AKBB	Malin Array Si	142.81	331	ePKPpre		PKPpre	04 55 55.8	
AKBB				eSKPbc		SKPbc	04 58 41.2	+0.5
AKBB	Malin Array Si	142.81	331	ePKHKP		PKPpre	04 55 55.8	
KIEV	Kiev	142.82	331	*d* *i* PKHKP		PKPpre	04 55 55.5	
MCD	Coleburn Disti	142.84	4	eP		PKPpre	04 55 55.5	
AK11	Malin Array Si	142.85	331	ePKPpre		PKPpre	04 55 55.6	
KPL	Plockton	142.88	6	eP		PKPpre	04 55 55.3	
MDO	Dochfour	142.90	5	eP		PKPpre	04 55 56.1	
SHEL	Horse Pasture	143.04	168	*i* PKIKP		PKPdf	04 56 01.2	+0.6
ILIC	ilic-Erzincan	143.09	309	eP		PKPab	04 55 58.0	-0.2
MME1	Meikle Cairn	143.13	4	eP		PKPab	04 55 56.1	-1.5
URFA	Urfa	143.54	306	eP		PKPab	04 55 58.6	-1.3
MALT	Malatya	143.57	307	eP		PKPbc	04 56 00.2	+0.2
MUD	Monsted U'grnd	143.68	353	‖ *i* PKIKP		PKPbc	04 55 59.2	-0.4
MUD				pmax		pmax		
	comp=Z,250nm,1.0s							
SIM	Simferopol'	143.71	320	*d* *i* PKIKP		PKPab	04 56 00.4	+0.2
SIM				pmax		pmax		
	comp=Z,237nm,0.9s							
EDU	Dundee	143.89	4	eP		PKPbc	04 55 59.4	-0.8
INVG	Invergeld

WPS	Cemaes, Angles	146.88	7	eP	PKPbc	04 56 07.9	-1.0
TESR	Tescani	146.94	327	⇓iP	PKPbc	04 56 08.8	-0.6
RCY	Rachaya	146.94	300	eP	PKPbc	04 56 10.2	+0.2
MERS	Mersin	146.97	307	eP	PKPbc	04 56 09.4	-0.5
BHL	Bhannes	146.99	301	eP	PKPbc	04 56 10.1	+0.1
WLF1	Llynfaes	147.00	6	eP	PKPbc	04 56 08.6	-0.7
YRC	Rhoscolyn	147.02	7	eP	PKPbc	04 56 08.4	-0.9
OJC	Ojcow	147.02	338	ePKPdf	PKPbc	04 56 09.2	-0.2
OJC	Ojcow	147.02	338	ePKPdf	PKPdf	04 56 06.2	-0.1
OJC	Ojcow	147.02	338	ePKIKP	PKPdf	04 56 06.3	-0.1
AFSR	Af´ar-Bala (A	147.02	312	eP	PKPbc	04 56 08.6	-1.4
ANTO	Ankara	147.03	313	eP	PKPdf	04 56 08.3	+1.5
ANTO	Ankara	147.03	313	⇓iP	PKPdf	04 56 07.5	+0.7
ANTO	Ankara	147.03	313	ePKPdf	PKPdf	04 56 07.9	+1.1
ANTO	Ankara	147.03	313	⇓PKIKP	PKPdf	04 56 07.8	+0.7
CFR	Carcaliu	147.03	324	⇑iP	PKPbc	04 56 09.4	-0.2
CFR	Carcaliu	147.03	324	⇑PKP2	PKPbc	04 56 09.4	-0.2
LOD	Lodumlu	147.04	313	eP	PKPdf	04 56 07.8	+1.0
BR231	Keskin MP Arra	147.05	313	ePKPbc	PKPbc	04 56 10.2	+0.1
WPM1	Penmaenmawr	147.08	6	eP	PKPbc	04 56 09.0	-0.5
DQRL	Deir Qamar	147.11	301	eP	PKPbc	04 56 10.9	+0.5
YLL	Llanberis	147.17	6	eP	PKPbc	04 56 08.9	-0.8
SULT	Sultanhani-AKS	147.22	309	eP	PKPdf	04 56 08.8	+1.6
KULU	Kulu	147.24	311	eP	PKPbc	04 56 09.4	-1.2
TIRR	Tirgusor	147.33	323	⇓iP	PKPbc	04 56 10.6	+0.2
TIRR	Tirgusor	147.33	323	ePKPbc	PKPbc	04 56 10.3	-0.1
TIRR	Tirgusor	147.33	323	⇓PKP2	PKPbc	04 56 10.6	+0.2
VRI	Vrincioaia	147.33	326	⇑iP	PKPbc	04 56 10.6	+0.1
VRI	Vrincioaia	147.33	326	⇑PKP2	PKPbc	04 56 10.6	+0.1
UZH	Uzhgorod	147.37	334	ePKIKP	PKPbc	04 56 09.2	-1.2
UZH				i		04 56 10.8	
STNC	Stoke	147.38	4	eP	PKPbc	04 56 10.1	-0.2
PLOR	Plostina	147.38	327	⇓iP	PKPbc	04 56 10.5	-0.1
PLOR	Plostina	147.38	327	⇓PKP2	PKPbc	04 56 10.5	-0.1
KIZK	Mersin	147.39	306	eP	PKPdf	04 56 08.8	+1.4
MMAI	Mount Meron Ar	147.41	299	PKPbc	PKPbc	04 56 11.8	+0.7
	comp=Z,161nm,0.9s,baz=57,slow=5.3,SNR=78						
HARR	Harsova	147.46	324	⇑iP	PKPbc	04 56 11.2	+0.5
HARR	Harsova	147.46	324	⇑PKP2	PKPbc	04 56 11.2	+0.5
TLB	Topalu	147.46	324	⇓iP	PKPbc	04 56 11.1	+0.3
TLB	Topalu	147.46	324	⇓PKP2	PKPbc	04 56 11.1	+0.3
CRVS	Cervenica-Dubn	147.49	335	ePKIKP	PKPdf	04 56 07.3	+0.1
CRVS				e		04 56 15.7	
LLW	Llanuwychllyn	147.51	6	eP	PKPbc	04 56 09.8	-0.8
FOEL	Foel Wylfa	147.51	5	eP	PKPbc	04 56 09.3	-1.4
NIE	Niedzica	147.51	337	ePKPdf	PKPbc	04 56 11.3	+0.5
NIE	Niedzica	147.51	337	⇓ePKP2	PKPbc	04 56 11.3	+0.5
CHBY	Cihanbeyli	147.51	310	eP	PKPdf	04 56 09.4	+1.7
IWEX	Carrickbyrne,	147.58	9	eP	PKPbc	04 56 09.8	-1.0
KSP	Ksiaz	147.58	342	ePKPdf	PKPbc	04 56 11.3	+0.4
KSP	Ksiaz	147.58	342	⇓ePKP2	PKPbc	04 56 11.3	+0.4
BMR	Baia Mare	147.60	332	⇑iP	PKPbc	04 56 11.5	+0.5
BMR	Baia Mare	147.60	332	⇑PKP2	PKPbc	04 56 11.5	+0.5
ARCR	ARCALIA	147.64	330	⇓iP	PKPbc	04 56 11.2	0.0
EREN	Erenkoy	147.69	304	eP	PKPdf	04 56 09.4	+1.5
KEBE	Keben-Mersin	147.73	306	eP	PKPdf	04 56 08.6	+0.6
IKL	Isikli	147.82	306	eP	PKPbc	04 56 11.0	-1.0
MDUB	Mudurnu	147.83	315	eP	PKPbc	04 56 10.6	-1.4
WACR	West Acre	147.87	1	eP	PKPbc	04 56 11.0	-0.5
ICOR	Ion Corvin	147.89	323	⇑iP	PKPbc	04 56 12.5	+0.6
HLM1	Long Mynd	147.90	5	eP	PKPdf	04 56 07.6	-0.1
OKC	Ostrava-Krasne	147.90	340	⇑ePKP	PKPbc	04 56 12.2	+0.5
OKC	Ostrava-Krasne	147.90	340	⇑ePKP2	PKPbc	04 56 12.2	+0.5
AUMIH	MIHALICIK	147.93	314	eP	PKPbc	04 56 12.1	-0.2
ISR	Istrita	147.93	326	⇓iP	PKPbc	04 56 12.4	+0.4
ISR	Istrita	147.93	326	⇓PKP2	PKPbc	04 56 12.4	+0.4
DOPR	Dopca	147.95	328	⇓iP	PKPbc	04 56 12.8	+0.8
AKKU	Akkuyu-Mersin	147.95	306	eP	PKPdf	04 56 09.2	+0.9
UPC	Upice	147.97	342	⇑ePKP	PKPbc	04 56 12.3	+0.4
UPC				ePKPAB	PKPab	04 56 17.7	+0.8
UPC	Upice	147.97	342	ePKP2	PKPbc	04 56 12.3	+0.4
CLL	Collm	147.99	346	ePKPdf	PKPdf	04 56 07.2	-0.7
CLL	Collm	147.99	346	⇓ePKHKP	PKPdf	04 56 08.0	+0.1
CLL				i		04 56 11.9	
CLL				i		04 56 16.6	
CLL				pmax	pmax		
	comp=Z,170nm,0.8s						
CLL				pmax	pmax		
	comp=Z,79nm,0.9s						
MLR	Muntele Rosu	147.99	327	PKPbc	PKPbc	04 56 11.9	-0.4
	baz=12,slow=3.5						
MLR	Muntele Rosu	147.99	327	⇓iP	PKPbc	04 56 10.4	-1.9
MLR	Muntele Rosu	147.99	327	ePKPdf	PKPdf	04 56 08.1	-0.1
MLR				ePKPbc	PKPbc	04 56 11.9	-0.4
MLR	Muntele Rosu	147.99	327	⇓PKHKP	PKPbc	04 56 10.4	-1.9
DPC	Dobruska-Polom	148.02	342	ePKPDF	PKPdf	04 56 08.4	+0.4
DPC			⇑	ePKP	PKiKP	04 56 12.8	-0.5
DPC				ePKPAB	PKPab	04 56 18.1	+1.0
DPC	Dobruska-Polom	148.02	342	ePKHKP	PKPdf	04 56 08.4	+0.4
DPC				e		04 56 18.1	
LANS	Liptovska Anna	148.03	337	ePKHKP	PKPpre	04 56 08.8	
LANS				e		04 56 18.5	
LADK	Ladik-KONYA	148.05	310	eP	PKPdf	04 56 09.8	+1.2
AUSIV	SIVRIHISAR	148.09	313	eP	PKPdf	04 56 09.4	+0.8
KIZT	Kizilcal	148.10	312	eP	PKPbc	04 56 11.9	-0.9
KRLC	Kraliky	148.12	341	⇑ePKP	PKPbc	04 56 12.7	+0.3
KRLC	Kraliky	148.12	341	⇑ePKP2	PKPbc	04 56 12.7	+0.3
BERE	Bereket-Mersin	148.13	306	eP	PKPbc	04 56 12.6	-0.4
MORC	Moravsky Berou	148.15	340	⇑ePKPdf	PKPdf	04 56 08.4	+0.1
MORC	Moravsky Berou	148.15	340	⇑PKHKP	PKPdf	04 56 08.5	+0.2
KONT	Konya--Tatoy	148.16	310	eP	PKPdf	04 56 09.8	+1.2
BRG	Berggiesshubel	148.18	345	i PKHKP	PKPpre	04 56 08.4	
BRG				i		04 56 12.3	
BRG				i		04 56 17.6	
BRG				e		04 59 43.8	
BRG				pmax	pmax		
	comp=Z,25nm,1.4s						
BRG				pmax	pmax		
	comp=Z,83nm,0.9s						
BRG				pmax	pmax		
	comp=Z,14nm,1.5s						
KECS	Kecovo	148.21	336	ePKP2	PKPbc	04 56 13.2	+0.7
KECS	Kecovo	148.21	336	ePKP	PKPbc	04 56 13.2	+0.7
KECS				e		04 56 18.5	
SECR		148.24	326	⇑iP	PKPbc	04 56 13.1	+0.3
CJR	Cluj-Napoca	148.27	330	⇓iP	PKPbc	04 56 12.9	+0.1
CJR	Cluj-Napoca	148.27	330	⇓PKP2	PKPbc	04 56 12.9	+0.1
SAUV	Serdivan-Sakar	148.27	316	eP	PKPbc	04 56 11.8	-1.1
TEKE	Tekeli-Mersin	148.29	306	eP	PKPbc	04 56 12.4	-0.7
PVCC	Panska Ves	148.34	344	⇑ePKP	PKPbc	04 56 13.5	+0.7
PVCC	Panska Ves	148.34	344	⇑ePKP2	PKPbc	04 56 13.5	+0.7
MCH1	Michaelchurch	148.41	5	eP	PKPdf	04 56 07.3	-1.2
VOIR		148.49	327	⇓iP	PKPdf	04 56 10.1	+1.1
LTVH	L"tav"rtes,	148.51	333	⇓ex	PKPbc	04 56 13.7	+0.4
CSS	Mathiatis	148.52	304	eP	PKPdf	04 56 11.2	+1.9
CSS	Mathiatis	148.52	304	ePKPbc	PKPbc	04 56 13.4	-0.4
CSS	Mathiatis	148.52	304	P	PKPbc	04 56 13.2	-0.6
CSS	Mathiatis	148.52	304	P	PKPbc	04 56 13.2	-0.6
DRGR		148.61	331	⇓iP	PKPbc	04 56 13.5	-0.2
BORA	Eskisehir	148.62	314	eP	PKPbc	04 56 13.4	-0.6
ROSA	Rosais	148.65	48	ePKPbc	PKPbc	04 56 14.6	+0.7
HRT	Hereke	148.65	316	eP	PKPbc	04 56 12.6	-1.4
PRD	Provadia	148.69	322	P	PKPbc	04 56 14.2	+0.3
PRA	Prague	148.79	344	⇑ePKP	PKPbc	04 56 14.3	+0.4
LEF	Lefka	148.81	304	eP	PKPbc	04 56 13.6	-0.8
VYHS	Vyhne	148.81	337	ePKP	PKPbc	04 56 14.1	0.0
VYHS				e		04 56 20.9	
PRU	Pruhonice	148.84	344	⇑ePKP	PKPbc	04 56 14.2	+0.2
PRU				ePKPAB	PKPab	04 56 21.2	+0.7
PRU	Pruhonice	148.84	344	⇑ePKHKP	PKPbc	04 56 14.2	+0.2
PRU				e		04 56 21.2	
GOPC	GO Pecny, Ondr	148.84	343	⇑ePKP	PKPbc	04 56 14.3	+0.2
GOPC				ePKPAB	PKPab	04 56 21.3	+0.8
GOPC	GO Pecny, Ondr	148.84	343	⇑ePKHKP	PKPbc	04 56 14.3	+0.2
GOPC				e		04 56 21.3	
CAVI	Cavuskoy	148.86	315	eP	PKPbc	04 56 12.8	-1.7
VRAC	Vranov	148.86	341	⇓PKHKP	PKPpre	04 56 14.6	
PSZ	Piszkesteto	148.90	336	ePKPbc	PKPbc	04 56 14.2	-0.2
PSZ	Piszkesteto	148.90	336	⇓PKHKP	PKPbc	04 56 14.1	-0.2
MOX	Moxa	148.91	347	PKHKP	PKPpre	04 56 09.4	
SZAC	Souni	148.94	304	P	PKPbc	04 56 14.5	-0.3
YLV	Yalova	148.98	316	eP	PKPbc	04 56 14.5	-0.3
ALFC	Alefka	149.02	305	P	PKPbc	04 56 14.2	-0.8
LOT	Lotru	149.11	329	⇑iP	PKPbc	04 56 14.4	-0.6
NKC	Novy Kostel	149.12	346	⇑ePKP	PKPbc	04 56 15.1	+0.3
NKC				ePKPAB	PKPab	04 56 22.1	+0.4
HUMR	Humele	149.15	326	⇑iP	PKPbc	04 56 14.5	-0.5
CTKS	Kestanelik-??a	149.17	318	eP	PKPbc	04 56 13.2	-1.9
SBT5	Esenkoy-Cinarc	149.26	317	eP	PKPbc	04 56 14.0	-1.3
AKMC	Akamas	149.28	305	P	PKPbc	04 56 14.0	-1.6
ARMT	Armutlu	149.31	317	eP	PKPdf	04 56 12.6	+2.2
PPCY	Paphos	149.31	304	P	PKPbc	04 56 14.8	-0.8
SUTC	Sutluce-Ispart	149.33	310	eP	PKPbc	04 56 14.3	-1.5
SBT2	Guzelce-Avcila	149.36	317	eP	PKPdf	04 56 12.2	+2.0
MODS	Modra-Piesok	149.46	339	ePKHKP	PKPbc	04 56 15.1	-0.5
MODS				e		04 56 23.2	
MODS	Modra-Piesok	149.46	339	ePKP	PKPbc	04 56 15.1	-0.5
MODS				e		04 56 23.2	
SZH	Strazhica	149.47	323	P	PKPbc	04 56 15.5	-0.3
SIRR	Siria	149.48	332	⇑iP	PKPbc	04 56 15.8	+0.1
TVSB	Tavsanli	149.49	314	eP	PKPbc	04 56 14.6	-1.5
ISP	Isparta	149.53	311	eP	PKPbc	04 56 14.1	-2.1
ISP	Isparta	149.53	311	⇓iP	PKPbc	04 56 15.2	-1.0
ISP	Isparta	149.53	311	ePKPbc	PKPbc	04 56 15.5	-0.7
ISP	Isparta	149.53	311	⇓PKHKP	PKPbc	04 56 15.2	-1.0
JMB	Yambol	149.61	322	P	PKPbc	04 56 16.1	0.0
UCC	Uccle	149.72	356	ePKPbc	PKPbc	04 56 16.1	+0.1
GEDZ	Gediz	149.73	314	eP	PKPbc	04 56 14.4	-2.2
KHC	Kasperske Hory	149.88	344	ePKPDF	PKPdf	04 56 11.3	+0.3
KHC			⇑	ePKP	PKPbc	04 56 16.8	+0.2
KHC				ePKPAB	PKPab	04 56 25.4	+0.5
KHC				epPKP	pPKPab	04 58 38.0	-0.6
KHC	Kasperske Hory	149.88	344	ePKPdf	PKPdf	04 56 10.8	-0.2
KHC	Kasperske Hory	149.88	344	ePKIKP	PKPdf	04 56 11.3	+0.3
KHC				e		04 56 16.8	
KHC				e		04 56 25.4	
GRFO	Grafenberg	149.90	347	ePKPbc	PKPbc	04 56 17.2	+0.7
SRE	Strehaia	149.96	328	⇑iP	PKPbc	04 56 15.7	-1.2
SIMA	Simav-Kutahya	150.00	314	eP	PKPbc	04 56 15.4	-1.9
BZS	Buzias	150.00	331	⇓iP	PKPbc	04 56 16.5	-0.4
KORT	Korkueli	150.00	309	eP	PKPbc	04 56 16.8	-0.6
BCLA	Clavier	150.03	355	⇓PKP	PKPbc	04 56 16.5	-0.3
BCLA				⇓PKPab	PKPab	04 56 23.6	-1.8
GEC2	GERESS Array S	150.11	344	ePKPdf	PKPdf	04 56 11.3	-0.2
GEC2				ePKPbc	PKPbc	04 56 17.0	-0.2
GEC2	GERESS Array S	150.11	344	ePKIKP	PKPdf	04 56 11.3	-0.2
GEC2				e		04 56 17.0	
GERES	GERESS Array B	150.11	344	PKP	PKPdf	04 56 11.2	-0.3
	comp=Z,2.7nm,0.9s,baz=338,slow=1.4,SNR=9.9						
GERES				PKPbc	PKPbc	04 56 17.0	-0.2
	comp=Z,29nm,0.8s,baz=42,slow=2.2,SNR=73						
GERES				SKP		04 58 49.5	
	comp=Z,1.7nm,0.3s,baz=27,slow=1.1,SNR=9.5						
GEA0	GERESS Array S	150.11	344	ePKPdf	PKPdf	04 56 10.2	-1.3
HERR	Herculane	150.18	329	⇑iP	PKPbc	04 56 17.4	0.0
CONA	Conrad Observa	150.31	340	i PKPdf	PKPdf	04 56 11.6	-0.2
	comp=Z,9.6nm,1.1s						
CONA				i PKiKP	PKPbc	04 56 17.8	+0.1
	comp=Z,57nm,0.8s,SNR=18						
CONA				i PKPab	PKPab	04 56 27.3	+0.5
	comp=Z,52nm,1.4s						
GIVF	Givet	150.38	356	ePKIKP	PKPdf	04 56 11.0	-0.7
GIVF				pmax	pmax		
	comp=Z,95nm,0.9s						
ELL	Elmali	150.43	309	eP	PKPdf	04 56 15.2	+2.8
BAIF	Baives	150.47	356	ePKIKP	PKPdf	04 56 09.7	-2.1
BAIF				pmax	pmax		
	comp=Z,63nm,1.0s						
KULA	Kula-Manisa	150.50	313	eP	PKPbc	04 56 17.0	-1.4
MANT	Manisa	150.58	313	ePKPbc	PKPbc	04 56 18.9	+0.1
MDVR	Moldovita	150.59	330	⇓iP	PKPbc	04 56 18.0	-0.4
WLF	Walferdange	150.70	354	ePKPdf	PKPdf	04 56 12.9	+0.7
WLF	Walferdange	150.70	354	ePKIKP	PKPdf	04 56 12.9	+0.7
KDZ	Kurdzhali	150.80	321	P	PKPbc	04 56 18.6	-0.3
MOA	Molln	150.86	342	i PKPdf	PKPdf	04 56 11.7	-0.8
	comp=Z,3.9nm,0.8s						
MOA				i PKPbc	PKPbc	04 56 18.4	-0.5
	comp=Z,23nm,0.8s,SNR=9.9						
MOA				i PKPab	PKPab	04 56 29.2	+0.2
	comp=Z,31nm,1.0s						
AKAS	Kas	150.87	308	eP	PKPbc	04 56 17.5	-1.9
ALN	Alexandroupoli	150.88	320	ePKPbc	PKPbc	04 56 18.5	-0.6
PGB	Panagyurishte	150.92	324	P	PKPbc	04 56 18.7	-0.6
ARSA	Arzberg	151.01	340	i PKPdf	PKPdf	04 56 12.0	-0.8
	comp=Z,6.1nm,1.2s						
ARSA				i PKPbc	PKPbc	04 56 18.6	-0.6
	comp=Z,16nm,0.9s,SNR=6.5						
ARSA				i PKPab	PKPab	04 56 28.9	-0.8
	comp=Z,7.9nm,1.0s						
RDO	Rodhopi	151.04	321	P	PKPbc	04 56 18.9	-0.5
RDO	Rodhopi	151.04	321	P	PKPbc	04 56 18.9	-0.5
FETY	Fethiye	151.08	310	eP	PKPbc	04 56 17.8	-2.0
STU	Stuttgart	151.16	349	ePKPbc	PKPbc	04 56 19.1	-0.5
RZN	Rozhen	151.18	322	P	PKPbc	04 56 19.2	-0.8
VTS	Vitosha	151.41	325	⇑iP	PKPbc	04 56 20.2	-0.2
VTS	Vitosha	151.41	325	P	PKPbc	04 56 20.3	-0.2
VTS	Vitosha	151.41	325	P	PKPbc	04 56 20.2	-0.2
VTS	Vitosha	151.41	325	P	PKPbc	04 56 20.3	-0.2
VTS	Vitosha	151.41	325	⇑PKIKP	PKPbc	04 56 20.2	-0.2
SOKA	Soboth	151.68	340	i PKPdf	PKPdf	04 56 13.2	-0.7
	comp=Z,6.5nm,1.0s,SNR=21						
SOKA				i PKPbc	PKPbc	04 56 20.0	-0.9
	comp=Z,34nm,0.9s						
SOKA				i PKPab	PKPab	04 56 32.3	-0.3
	comp=Z,40nm,1.4s						
BFO	Black Forest	151.73	350	ePKPdf	PKPdf	04 56 13.5	-0.4
BFO				ePKPbc	PKPbc	04 56 20.5	-0.3
BFO	Black Forest	151.73	350	ePKIKP	PKPdf	04 56 13.5	-0.4
BFO				e		04 56 20.5	
FLN	La Foliniere	151.80	3	ePKIKP	PKPdf	04 56 12.8	-1.1
FLN				pmax	pmax		
	comp=Z,46nm,0.9s						
CDF	Champ du Feu	151.80	352	ePKIKP	PKPdf	04 56 12.9	-1.1
CDF				pmax	pmax		
	comp=Z,28nm,0.8s						
MMB	Musomiste	151.81	323	P	PKPbc	04 56 20.5	-0.7
KBA	Koelnbreinsper	151.82	343	i PKPdf	PKPdf	04 56 12.7	-1.5
	comp=Z,7.3nm,1.2s						
KBA				i PKPbc	PKPbc	04 56 20.0	-1.3
	comp=Z,32nm,0.8s,SNR=11						
KBA	Koelnbreinsper	151.82	343	PKIKP	PKPdf	04 56 13.8	-0.4
NVR	Nevrokopi	151.89	323	P	PKPbc	04 56 20.9	-0.5
NVR	Nevrokopi	151.89	323	P	PKPbc	04 56 20.9	-0.5
DIVS	Divibare	151.91	331	ePKPdf	PKPdf	04 56 13.5	-0.8
KKB	Krupnik	151.98	324	P	PKPbc	04 56 21.1	-0.5
OBKA	Obir	151.98	341	i PKPdf	PKPdf	04 56 13.3	-1.1
	comp=Z,2.0nm,0.7s						
OBKA				i PKPbc	PKPbc	04 56 20.4	-1.1
	comp=Z,11nm,0.8s,SNR=5.7						
OBKA				i PKPab	PKPab	04 56 33.3	-0.6
	comp=Z,15nm,1.1s						
LDF	La Druitiere	151.98	2	ePKIKP	PKPdf	04 56 13.0	-1.1
LDF				pmax	pmax		
	comp=Z,32nm,1.0s						
ECH	Echery	152.01	352	ePKPdf	PKPdf	04 56 14.0	-0.3
ECH	Echery	152.01	352	ePKIKP	PKPdf	04 56 14.0	-0.3
WATA	Walderalm	152.04	345	ePKPdf	PKPdf	04 56 13.3	-1.1
	comp=Z,3.5nm,0.6s						
WATA				i PKPbc	PKPbc	04 56 21.0	-0.7
	comp=Z,47nm,1.1s,SNR=7.2						
WATA				i PKPab	PKPab	04 56 34.1	0.0
	comp=Z,73nm,1.4s						
RETA	Reutte	152.08	346	i PKPdf	PKPdf	04 56 13.5	-0.9
	comp=Z,6.0nm,1.0s						
RETA				i PKPbc	PKPbc	04 56 21.1	-0.6
	comp=Z,17nm,0.7s,SNR=7.0						
RETA				i PKPab	PKPab	04 56 33.9	-0.4
	comp=Z,42nm,1.0s						
WTTA	Wattenberg	152.09	345	i PKPdf	PKPdf	04 56 13.8	-0.8
	comp=Z,10.0nm,1.2s						
WTTA				i PKPbc	PKPbc	04 56 21.4	-0.5
	comp=Z,33nm,0.7s,SNR=9.7						
WTTA				i PKPab	PKPab	04 56 34.3	-0.2
	comp=Z,33nm,0.8s						
MOTA	Moosalm	152.14	346	i PKPdf	PKPdf	04 56 13.0	-1.7
	comp=Z,8.6nm,0.8s,SNR=5.8						
MOTA				i PKPbc	PKPbc	04 56 20.2	-1.8
	comp=Z,27nm,0.7s						
MOTA				i PKPab	PKPab	04 56 33.6	-1.1
	comp=Z,24nm,0.7s						
MYKA	Terra Mystica	152.14	342	i PKPdf	PKPdf	04 56 13.6	-1.0
	comp=Z,3.0nm,0.7s						
MYKA				i PKPbc	PKPbc	04 56 20.6	-1.2
	comp=Z,24nm,0.7s,SNR=8.8						
MYKA				i PKPab	PKPab	04 56 33.7	-0.9
	comp=Z,17nm,0.8s						
GRR	Gorron	152.15	3	ePKIKP	PKPdf	04 56 13.4	-1.0
GRR				pmax	pmax		
	comp=Z,32nm,0.9s						
HAU	Haudompre	152.32	353	ePKIKP	PKPdf	04 56 13.9	-0.8
HAU				pmax	pmax		
	comp=Z,17nm,0.8s						
ABTA	Abfaltersbach	152.35	344	i PKPdf	PKPdf	04 56 13.6	-1.3
	comp=Z,23nm,1.0s,SNR=14						
ABTA				i PKPbc	PKPbc	04 56 21.3	-1.0
	comp=Z,65nm,0.9s						
HINF	Hinteralfeld	152.44	352	ePKIKP	PKPdf	04 56 13.9	-1.0
HINF				pmax	pmax		
	comp=Z,13nm,0.9s						
DAVA	Damuels	152.46	348	i PKPdf	PKPdf	04 56 14.4	-0.7
	comp=Z,7.5nm,1.0s						
DAVA				i PKPbc	PKPbc	04 56 22.1	-0.5
	comp=Z,33nm,1.2s,SNR=7.0						
DAVA				i PKPab	PKPab	04 56 35.3	-0.6
	comp=Z,28nm,1.0s						
FETA	Feichten	152.53	346	i PKPdf	PKPdf	04 56 14.6	-0.6
	comp=Z,20nm,0.9s,SNR=12						
FETA				i PKPbc	PKPbc	04 56 22.5	-0.3
	comp=Z,33nm,0.8s						
FETA				i PKPab	PKPab	04 56 35.7	-0.6
	comp=Z,35nm,1.1s						
KNT	Kendrikon	152.56	323	P	PKPab	04 56 36.5	+0.1
BLY	Banja Luka	152.57	335	ePKPbc	PKPbc	04 56 21.9	-0.8
STIP	Stip	152.59	325	i PKP	PKPbc	04 56 21.5	-1.4
VAY	Valandovo	152.63	324	i PKP	PKPbc	04 56 21.6	-1.3
PLG	Polygyros	152.76	321	P	PKPab	04 56 37.5	+0.1
SKO	Skopje	152.78	326	i PKP	PKPbc	04 56 23.0	-0.3
TRI	Trieste	152.94	341	ePKPbc	PKPbc	04 56 22.2	-1.3
TRI				ePKPab	PKPab	04 56 37.2	-0.7
FUORN	Ofenpass-Fuorn	153.01	347	ePKPdf	PKPdf	04 56 15.9	-0.2
TUE	Stuetta	153.34	348	ePKPdf	PKPdf	04 56 15.8	-0.7
LIT	Litokhoron	153.49	322	ePKPab	PKPab	04 56 40.5	0.0
LIT	Litokhoron	153.49	322	P	PKPab	04 56 40.3	-0.2
SSF	Saint Saulge	153.49	357	ePKIKP	PKPdf	04 56 15.6	-0.8
SSF				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BIA	Bitola	153.52	325	i PKP	PKPbc	04 56 24.6	-0.4
TTG	Podgorica	153.53	330	ePKPdf	PKPdf	04 56 15.8	-0.7
TTG	Podgorica	153.53	330	ePKIKP	PKPdf	04 56 15.8	-0.7
FNA	Florina	153.66	324	P	PKPbc	04 56 24.2	-1.1
FNA	Florina	153.66	324	P	PKPbc	04 56 24.2	-1.1
CABF	La Chapelle	153.72	353	ePKIKP	PKPdf	04 56 17.3	+0.5
CABF				pmax	pmax		
	comp=Z,25nm,1.0s						
OHR	Ohrid	153.74	326	i PKP	PKPbc	04 56 24.5	-1.0
AVF	Avril sur Loir	153.77	357	ePKIKP	PKPdf	04 56 16.0	-0.8
AVF				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SENIN	Lac Senin/Sane	153.81	351	ePKPdf	PKPdf	04 56 17.2	+0.1
SMF	Signal de Mont	153.89	356	ePKIKP	PKPdf	04 56 15.8	-1.2
BGF	Bois d'Agland	154.03	358	ePKIKP	PKPdf	04 56 16.3	-0.9
BGF				pmax	pmax		

TOA1			*e*PKPab	**PKPab**	**04 58 04.8**	**-0.1**
TOA1			*ep*PKPdf	**pPKPdf**	**04 58 55.6**	**-1.3**
TOA1			*ep*PKPab	**pPKPab**	**05 00 17.1**	**+0.1**
TOA1			*e*PP	**PP**	**05 01 56.2**	**+0.4**
TAM	**Tamanrasset**	**175.62 302**	*e*PKPdf	**PKPdf**	**04 56 36.3**	**+0.2**
TAM			*e*PKPab	**PKPab**	**04 58 19.3**	**+0.7**
TAM	**Tamanrasset**	**175.62 302**	*e*PKIKP	**PKPdf**	**04 56 36.3**	**+0.2**
TAM			*e*		04 58 19.3	

*IDC **19** 04:45:56.5±1.4, 32°.99S×178°.28W, h0km, mb4.2/5, mb1 4.5/6, mb1mx4.0/50, mbtmp4.3/6, ML4.1/1, Error ellipse: s-maj=55.1km s-min=26.9km az=158.0*
*NEIC **19** 04:45:58.6±0.5, 32°.99S×178°.42W, h10km, mb4.4/7, Error ellipse: s-maj=15.6km s-min=8.3km az=133.0*
*WEL **19** 04:45:58.0, 32°.99S×178°.42W, h10km, ML4.8/6*
ISC 19 04:45:57.7±0.8, 32°.94S±0°.07×178°.3W±0°.1, h10km, n45, σ1§94/54, mb4.5/10, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.68**	**5**	P	**Pn**	**04 46 51.8**	**-2.8**
GLKZ				S	Sn	04 47 30.3	-7.7
RAO	**Raoul Island**	**3.69**	**5**	Sn	**Sn**	**04 47 34.6**	**-3.6**
	67nm,0.3s,baz=53,slow=20,SNR=2.9						
RIZ	**Raoul Island**	**3.69**	**5**	S	**Sn**	**04 47 35.2**	**-3.2**
MXZ	**Matakaoa Point**	**5.39**	**210**	S	**Sn**	**04 48 19.6**	**-0.8**
WMGZ	**Waiomatatini S**	**5.57**	**208**	P	**Pn**	**04 47 22.5**	**+1.9**
WMGZ				S	**Sn**	**04 48 25.1**	**+0.4**
HAZ	**Te Kaha**	**5.79**	**213**	P	**Pn**	**04 47 25.3**	**+1.7**
HAZ				S	**Sn**	**04 48 30.4**	**+0.4**
PUZ	**Puketiti**	**5.85**	**208**	S	**Sn**	**04 48 30.0**	**-1.7**
RUGZ	**Raukumara Rang**	**6.00**	**212**	P	**Pn**	**04 47 26.3**	**-0.4**
RUGZ				S	**Sn**	**04 48 35.9**	**+0.3**
TWGZ	**Tauwhareparae**	**6.05**	**209**	P	**Pn**	**04 47 28.6**	**+1.3**
TWGZ				S	**Sn**	**04 48 36.8**	**+0.2**
CNGZ	**Carnagh Statio**	**6.23**	**206**	P	**Pn**	**04 47 30.8**	**+1.1**
MWZ	**Matawai**	**6.38**	**211**	P	**Pn**	**04 47 31.7**	**0.0**
MWZ				S	**Sn**	**04 48 44.4**	**-0.2**
URZ	**Urewera**	**6.50**	**214**	Pn	**Pn**	**04 47 33.5**	**0.0**
	3.9nm,0.3s,baz=108,slow=12,SNR=15						
URZ				Sn	**Sn**	**04 48 46.3**	**-1.4**
	8.1nm,0.3s,baz=127,slow=21,SNR=6.6						
URZ	**Urewera**	**6.50**	**214**	P	**Pn**	**04 47 33.7**	**+0.2**
URZ				S	**Sn**	**04 48 45.9**	**-1.8**
RIGZ	**Rimuhau**	**6.59**	**208**	P	**Pn**	**04 47 34.5**	**-0.2**
RIGZ				S	**Sn**	**04 48 48.8**	**-1.2**
OUZ	**Omahuta**	**7.12**	**249**	*e*Pn	Pn	04 47 45.7	+3.8
BKZ	**Black Stump Fm**	**7.52**	**213**	*e*Pn	**Pn**	**04 47 44.4**	**-3.1**
BKZ				*e*Sn	**Sn**	**04 49 08.7**	**-4.1**
BFZ	**Birch Farm**	**8.89**	**208**	*e*Pn	**Pn**	**04 48 03.3**	**-2.9**
BFZ				*e*Sn	**Sn**	**04 49 39.8**	**-6.5**
DZM	**Mont Dzumac**	**17.32**	**305**	P	**P**	**04 50 04.1**	**+2.9**
	0.2nm,0.3s,baz=119,slow=11,SNR=4.5						
DZM	**Mont Dzumac**	**17.32**	**305**	*e*Pn	**P**	**04 50 04.1**	**+2.9**
	13nm,1.1s						
CTA	**Charters Tower**	**34.05**	**283**	P	**P**	**04 52 44.0**	**+1.7**
	2.8nm,0.5s,baz=111,slow=11,SNR=5.8						
AS31	**Alice Springs**	**42.80**	**270**	*e*P	**P**	**04 53 56.0**	**+0.2**
	1.3nm,0.8s						
ASAR	**Alice Springs**	**42.80**	**270**	P	**P**	**04 53 56.0**	**+0.2**
	1.6nm,0.6s,baz=109,slow=7.8,SNR=10						
WB2	**Warramunga Arr**	**44.01**	**275**	*e*P	**P**	**04 54 05.4**	**-0.2**
	9.9nm,1.2s						
WRAB	**Tennant Creek**	**44.01**	**275**	*e*P	**P**	**04 54 04.8**	**-0.9**
	13nm,1.3s						
WR1	**Warramunga Arr**	**44.02**	**275**	*e*P	**P**	**04 54 05.5**	**-0.1**
	15nm,1.1s						
WRA	**Warramunga Arr**	**44.02**	**275**	P	**P**	**04 54 05.5**	**-0.1**
	3.2nm,0.4s,baz=116,slow=7.9,SNR=53						
JAY	**Jayapura**	**48.89**	**300**	*e*P	**P**	**04 54 44.9**	**+0.8**
FITZ	**Fitzroy Crossi**	**52.16**	**272**	P	**P**	**04 55 08.5**	**-0.2**
	3.7nm,0.8s,baz=134,slow=5.5,SNR=4.8						
FITZ	**Fitzroy Crossi**	**52.16**	**272**	*e*P	**P**	**04 55 08.5**	**-0.2**
	6.4nm,0.9s						
CASY	**Casey**	**52.80**	**209**	*e*P	**P**	**04 55 12.2**	**-0.6**
	3.9nm,1.3s						
MWC	**Mount Wilson**	**87.53**	**46**	*e*P	**P**	**04 58 50.0**	**+3.9**
DNR	**Dunn Ranch,Anz**	**87.96**	**47**	*e*P	**P**	**04 58 50.5**	**+2.5**
PFO	**Pinyon Flats O**	**88.09**	**47**	*e*P	**P**	**04 58 51.3**	**+2.7**
NV01	**Mina Array Sit**	**90.26**	**43**	*e*P	**P**	**04 59 00.7**	**+1.9**
NVAR	**Mina Array Bea**	**90.26**	**43**	P	**P**	**04 59 00.7**	**+1.9**
	0.2nm,0.5s,baz=208,slow=11,SNR=3.5						
MK32	**Makanchi Array**	**119.20**	**309**	*e*PKPdf	**PKPdf**	**05 04 47.7**	**+1.0**
MKAR	**Makanchi Array**	**119.20**	**309**	PKP	**PKPdf**	**05 04 47.7**	**+1.0**
	0.2nm,0.6s,baz=94,slow=1.9,SNR=2.9						
KURK	**Kurchatov**	**122.61**	**313**	*e*PKPdf	**PKPdf**	**05 04 52.7**	**-0.4**
KURBB	**Kurchatov Arra**	**122.64**	**313**	PKP	**PKPdf**	**05 04 52.7**	**-0.4**
	0.2nm,0.5s,baz=110,slow=2.1,SNR=4.1						
FIA0	**FINESS Array S**	**147.43**	**338**	*e*PKPdf	**PKPbc**	**05 05 40.9**	**-0.2**
FINES	**FINESS Array B**	**147.43**	**338**	PKPbc	**PKPbc**	**05 05 40.9**	**-0.1**
	2.4nm,0.4s,baz=37,slow=4.0,SNR=27						
NB2	**NORSAR Subarra**	**151.21**	**350**	PKP	**PKPbc**	**05 05 49.5**	**-1.1**
	comp=Z,2.0nm,1.0s,baz=17,slow=4.0						
HFS	**Hagfors**	**151.67**	**347**	PKPbc	**PKPbc**	**05 05 51.4**	**-0.2**
	comp=Z,2.8nm,0.9s,baz=68,slow=12,SNR=2.8						
AKASG	**Malin Array Be**	**153.12**	**319**	PKPbc	**PKPbc**	**05 05 54.6**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=352,slow=36,SNR=1.9						
AKBB	**Malin Array Si**	**153.12**	**319**	*e*PKPbc	**PKPbc**	**05 05 54.6**	**-0.6**

*CSEM **19** 04:54:38.4, 39°.16N×29°.15E, h10km, ML2.3*
ISK 19 04:54:38.4, 39°.16N×29°.15E, h10km, ML2.3/4, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMAA	**Simav-Kutahya**	**0.14**	**245**	PG	Pg	04 54 42.5	+0.9
SMAA				SG	Sg	04 54 45.0	+1.1
SMAA	**Simav-Kutahya**	**0.14**	**245**	*e*Pg	Pg	04 54 42.5	+0.9
SMAA				*e*Sg	Sg	04 54 45.0	+1.1
SIMA	**Simav-Kutahya**	**0.15**	**239**	PG	Pg	04 54 42.2	+0.5
SIMA				SG	Sg	04 54 44.2	+0.1
SIMA	**Simav-Kutahya**	**0.15**	**239**	*e*Pg	Pg	04 54 42.2	+0.5
SIMA				*e*Sg	Sg	04 54 44.2	+0.1
SHAP	**Saphane-Kutahy**	**0.15**	**156**	PG	Pg	04 54 42.7	+0.9
SHAP				SG	Sg	04 54 44.7	+0.6
SHAP	**Saphane-Kutahy**	**0.15**	**156**	*e*Pg	Pg	04 54 42.7	+0.9
SHAP				*e*Sg	Sg	04 54 44.7	+0.6
TVSB	**Tavsanli**	**0.38**	**40**	PG	Pg	04 54 46.0	+0.1
TVSB				SG	Sb	04 54 52.4	-0.9
TVSB	**Tavsanli**	**0.38**	**40**	*e*Pg	Pg	04 54 46.0	+0.1
TVSB				*e*Sg	Sb	04 54 52.4	-0.9
KULA	**Kula-Manisa**	**0.75**	**211**	PG	Pg	04 54 52.5	-0.3
KULA	**Kula-Manisa**	**0.75**	**211**	*e*Pg	Pg	04 54 52.5	-0.3
CAVI	**Cavuskoy**	**1.17**	**27**	PN	Pn	04 55 01.0	+0.1
CAVI	**Cavuskoy**	**1.17**	**27**	*e*Pn	Pn	04 55 01.0	+0.1
YLV	**Yalova**	**1.42**	**7**	PN	Pn	04 55 04.5	+0.2
YLV	**Yalova**	**1.42**	**7**	*e*Pn	Pn	04 55 04.5	+0.2
ARMT	**Armutlu**	**1.42**	**351**	PN	Pb	04 55 05.2	+0.2
ARMT	**Armutlu**	**1.42**	**351**	*e*Pn	Pb	04 55 05.2	+0.2

*IDC **19** 05:17:12.3±1.0, 28°.07N×57°.20E, h0km, mb3.9/12, mb1 4.0/13, mb1mx3.7/66, mbtmp3.9/13, ML3.9/1, Error ellipse: s-maj=23.3km s-min=20.9km az=138.0*
*DSN **19** 05:17:12.2±1.6, 27°.59N×58°.86E, h15km, ML4.1/7, Error ellipse: s-maj=31.7km s-min=15.4km az=140.0*
*THR **19** 05:17:14.7±0.5, 28°.19N×57°.44E, h14km±5km, ML3.9*
*TEH **19** 05:17:16.1, 28°.21N×57°.46E, h28km, ML3.7*
*ISCJB **19** 05:17:16.1±0.4, 28°.14N±0°.03×57°.51E±0°.06, h30km, mb3.9/12, Error ellipse: s-maj=7.4km s-min=4.4km az=19.5*
*CSEM **19** 05:17:17.7±0.4, 28°.23N×57°.48E, h20km, ML3.9, Error ellipse: s-maj=12.8km s-min=6.7km az=110.0*
ISC 19 05:17:15.9±0.7, 28°.06N±0°.04×57°.63E±0°.05, h30km, n79, σ1§95/81, mb3.9/12, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIAN	**Nian**	**0.87**	**235**	*e*Pg	**Pb**	**05 17 33.7**	**+1.3**
NIAN				*e*		05 17 56.1	
	comp=Z,99nm,0.1s						
NIAN	**Nian**	**0.87**	**235**	*e*Pg	**Pb**	**05 17 33.7**	**+1.3**
IBND	**Bandar-abas**	**1.15**	**238**	*e*Pg	**Pb**	**05 17 39.5**	**+2.4**
IBND				*e*		05 18 00.1	
	comp=Z,47μm,0.2s						
IBND	**Bandar-abas**	**1.15**	**238**	*e*Pg	**Pb**	**05 17 39.5**	**+2.4**
KHSK	**Kohestak**	**1.40**	**202**	*e*Pn	**Pb**	**05 17 43.1**	**+1.7**
KHSK				*e*		05 17 45.4	
	comp=Z,99nm,0.2s						
KHSK	**Kohestak**	**1.40**	**202**	*e*Pn	**Pb**	**05 17 43.1**	**+1.7**
GENO	**Geno**	**1.45**	**243**	*e*Pn	**Pb**	**05 17 42.2**	**-0.2**
GENO				*e*Sg	**Sb**	**05 18 03.5**	**+2.9**
GENO				*e*		05 18 07.7	
	comp=Z,99nm,0.1s						
GENO	**Geno**	**1.45**	**243**	*e*Pn	**Pb**	**05 17 42.2**	**-0.2**
GENO				*e*Sg	**Sb**	**05 18 03.5**	**+2.9**
BNDS	**Bandar-Abbas**	**1.45**	**243**	*e*Pg	**Pn**	**05 17 40.0**	**-0.3**
BNDS				AML	AML	05 18 02.8	
	comp=E,2μm,0.6s						
BNDS	**Bandar-Abbas**	**1.45**	**243**	*e*Pg	**Pn**	**05 17 40.0**	**-0.3**
BNDS	**Bandar-Abbas**	**1.45**	**243**	*e*Pg	**Pn**	**05 17 40.0**	**-0.3**
NGRK	**Negar Kerman**	**1.76**	**334**	*e*Pn	**Pn**	**05 17 42.7**	**-2.0**
NGRK				*e*		05 17 51.2	
	comp=Z,99nm,0.1s						
NGRK	**Negar Kerman**	**1.76**	**334**	*e*Pn	**Pn**	**05 17 42.7**	**-2.0**
CHMN	**Cheshme madani**	**1.79**	**357**	*e*Pn	**Pn**	**05 17 44.2**	**-0.9**
CHMN				*e*		05 17 48.5	
	comp=Z,99nm,0.2s						
CHMN	**Cheshme madani**	**1.79**	**357**	*e*Pn	**Pn**	**05 17 44.2**	**-0.9**
KRBR	**Kerman**	**2.06**	**338**	*e*Pg	**Pn**	**05 17 49.0**	**+0.2**
KRBR				AML	AML	05 18 24.8	
	comp=N,1μm,0.4s						
KRBR	**Kerman**	**2.06**	**338**	*e*Pg	**Pn**	**05 17 49.0**	**+0.2**
KRBR	**Kerman**	**2.06**	**338**	*e*Pg	**Pn**	**05 17 49.0**	**+0.2**
SHME	**Shamm**	**2.41**	**214**	P	**Pn**	**05 17 56.8**	**+3.5**
BANOM	**Banah**	**2.44**	**209**	P	**Pn**	**05 17 57.3**	**+3.6**
BANOM	**Banah**	**2.44**	**209**	P	**Pn**	**05 17 57.3**	**+3.6**
KHGB	**Koh Gabri**	**2.52**	**337**	*e*Pn	**Pn**	**05 17 55.5**	**+0.5**
KHGB				*e*		05 18 01.7	
	comp=Z,99nm,0.1s						
KHGB	**Koh Gabri**	**2.52**	**337**	*e*Pn	**Pn**	**05 17 55.7**	**+0.7**
MSFE	**Esma-Masafi**	**3.00**	**206**	P	**Pn**	**05 18 04.2**	**+2.8**
MSFE				S	**Sb**	**05 18 43.0**	**-1.8**
ZHSF	**Zahedan**	**3.16**	**60**	*e*Pn	**Pn**	**05 18 07.3**	**+3.6**
ZHSF	**Zahedan**	**3.16**	**60**	*e*Pn	**Pn**	**05 18 07.3**	**+3.6**
ZHSF	**Zahedan**	**3.16**	**60**	*e*Pn	**Pn**	**05 18 07.3**	**+3.6**
UOSS	**Minazif**	**3.36**	**203**	P	**Pn**	**05 18 06.2**	**-0.1**
UOSS	**Minazif**	**3.36**	**203**	P	**Pn**	**05 18 06.2**	**-0.1**
HATD	**Hatta, Dubai**	**3.49**	**203**	P	**Pn**	**05 18 08.7**	**+0.5**
HATD	**Hatta, Dubai**	**3.49**	**203**	P	**Pn**	**05 18 08.7**	**+0.5**
HATD	**Hatta, Dubai**	**3.49**	**203**	*e*Pn	**Pb**	**05 18 14.7**	**-2.3**
NAZ	**Nazwa, Dubai**	**3.53**	**210**	P	**Pn**	**05 18 12.4**	**+3.7**
NAZ	**Nazwa, Dubai**	**3.53**	**210**	P	**Pn**	**05 18 12.4**	**+3.7**
NAZ	**Nazwa, Dubai**	**3.53**	**210**	*e*Pn	Pn	05 18 14.5	+5.7
ASUD	**Al Ashush, Dub**	**4.00**	**212**	P	**Pn**	**05 18 16.5**	**+1.4**
ASUD	**Al Ashush, Dub**	**4.00**	**212**	P	**Pn**	**05 18 16.5**	**+1.4**
SOHO	**SOHO**	**4.04**	**194**	P	**Pn**	**05 18 13.5**	**-2.1**
GHIR	**Ghir-Karzin**	**4.11**	**274**	*e*Pn	**Pn**	**05 18 16.8**	**+0.1**
GHIR	**Ghir-Karzin**	**4.11**	**274**	*e*Pn	**Pn**	**05 18 16.8**	**+0.1**
GHIR	**Ghir-Karzin**	**4.11**	**274**	*e*Pn	**Pn**	**05 18 16.8**	**+0.1**
IMEH	**Mehriz**	**4.23**	**322**	*e*Pn	**Pn**	**05 18 20.4**	**+1.9**
IMEH				*e*		05 19 31.7	
	comp=N,1μm,0.3s						
IMEH				*e*		05 19 34.4	
	comp=Z,1μm,0.4s						
IMEH	**Mehriz**	**4.23**	**322**	*e*Pn	**Pn**	**05 18 20.4**	**+1.9**
IPAR	**Pars**	**4.39**	**295**	*e*Pn	**Pn**	**05 18 22.1**	**+1.3**
IPAR				*e*		05 19 47.6	
	comp=E,2μm,0.3s						
IPAR				*e*		05 19 47.9	
	comp=N,2μm,0.5s						
IPAR				*e*		05 19 49.8	
	comp=Z,928nm,0.3s						
IPAR	**Pars**	**4.39**	**295**	*e*Pn	**Pn**	**05 18 22.1**	**+1.3**
IKOO	**Kooshah**	**4.51**	**15**	*e*Pn	**Pn**	**05 18 22.5**	**+0.1**
IKOO				*e*		05 18 49.8	
	comp=Z,720nm,0.2s						
IKOO				*e*		05 19 47.4	
	comp=E,2μm,0.3s						
IKOO				*e*		05 19 49.8	
	comp=N,1μm,0.2s						
IKOO	**Kooshah**	**4.51**	**15**	*e*Pn	**Pn**	**05 18 22.5**	**+0.1**
WSAR	**Wadi Sarin**	**4.89**	**169**	Pn	**Pn**	**05 18 28.6**	**+1.2**
	comp=N,4.6nm,0.3s,baz=7.1,slow=13,SNR=9.9						
WSAR				Sn	**Sn**	**05 19 21.3**	**-1.6**
	comp=N,1.1nm,0.3s,baz=72,slow=19,SNR=3.2						
ICHK	**Chekchek**	**5.02**	**327**	*e*		05 19 56.2	
	comp=Z,669nm,0.4s						
ICHK				*e*		05 19 56.2	
	comp=Z,669nm,0.4s						
ICHK				*e*		05 20 00.3	
	comp=E,1μm,0.3s						
ICHK				*e*		05 20 03.5	
	comp=N,459nm,0.2s						
IDAH	**Dahanechah**	**5.04**	**22**	*e*Pn	**Pn**	**05 18 31.8**	**+2.0**
IDAH				*e*		05 18 45.5	
	comp=Z,336nm,0.2s						
IDAH				*e*		05 19 30.1	
	comp=N,837nm,0.2s						
IDAH				*e*		05 19 30.2	
	comp=E,973nm,0.3s						
IDAH	**Dahanechah**	**5.04**	**22**	*e*Pn	**Pn**	**05 18 31.8**	**+2.0**
IKAZ	**Kazeroun**	**5.36**	**290**	*e*Pn	**Pn**	**05 18 34.5**	**+0.4**
IKAZ				*e*		05 19 38.1	
	comp=Z,2μm,0.2s						
IKAZ	**Kazeroun**	**5.36**	**290**	*e*Pn	**Pn**	**05 18 34.5**	**+0.4**
IMON	**Monand**	**5.41**	**18**	*e*Pn	**Pn**	**05 18 36.3**	**+1.6**
IMON				*e*		05 18 41.0	
	comp=Z,253nm,0.1s						
IMON				*e*		05 19 42.9	
	comp=E,1μm,0.3s						
IMON	**Monand**	**5.41**	**18**	*e*Pn	**Pn**	**05 18 36.3**	**+1.6**
IRAM	**Ramesheh**	**5.89**	**311**	*e*Pn	**Pn**	**05 18 41.0**	**-0.3**
IRAM				*e*		05 19 49.1	
	comp=N,415nm,0.2s						
IRAM				*e*		05 19 51.0	
	comp=E,622nm,0.2s						
IRAM				*e*		05 19 54.0	
	comp=Z,290nm,0.2s						
IRAM	**Ramesheh**	**5.89**	**311**	*e*Pn	**Pn**	**05 18 41.0**	**-0.3**
SHRT	**Shahrakht**	**6.02**	**22**	*e*Pn	**Pn**	**05 18 45.2**	**+2.3**
SHRT	**Shahrakht**	**6.02**	**22**	*e*Pn	**Pn**	**05 18 45.2**	**+2.3**
SHRT	**Shahrakht**	**6.02**	**22**	*e*Pn	**Pn**	**05 18 45.2**	**+2.3**
ANAR	**Anarak**	**6.12**	**328**	*e*Pn	**Pn**	**05 18 47.4**	**+3.0**
ANAR				*e*		05 20 41.4	
	comp=Z,99nm,0.5s						
ANAR	**Anarak**	**6.12**	**328**	*e*Pn	**Pn**	**05 18 47.4**	**+3.0**
SLWS		**7.06**	**244**	P	**Pn**	**05 18 57.7**	**+0.5**
BTHS		**7.30**	**238**	P	**Pn**	**05 19 00.8**	**+0.4**
KHMZ	**Khomeyn**	**8.69**	**313**	*e*Pn	**Pn**	**05 19 19.9**	**+0.2**
KHMZ	**Khomeyn**	**8.69**	**313**	*e*Pn	**Pn**	**05 19 19.9**	**+0.2**
KHMZ	**Khomeyn**	**8.69**	**313**	*e*Pn	**Pn**	**05 19 19.9**	**+0.2**
AKTO	**Aktyubinsk**	**22.34**	**1**	P	**P**	**05 22 10.8**	**-0.4**
	comp=Z,0.8nm,0.3s,baz=191,slow=11,SNR=2.1						
BRTR	**Keskin Array B**	**22.99**	**307**	P	**P**	**05 22 16.9**	**-1.4**
	comp=Z,5.3nm,0.8s,baz=118,slow=9.1,SNR=19						
MKAR	**Makanchi Array**	**26.89**	**39**	P	**P**	**05 22 58.4**	**+4.3**
	comp=Z,0.2nm,0.6s,baz=242,slow=3.1,SNR=2.7						
ZALV	**Zalesovo Beam**	**32.63**	**30**	P	**P**	**05 23 48.7**	**+3.9**
	comp=Z,0.6nm,0.3s,baz=246,slow=7.2,SNR=3.3						
FINES	**FINESS Array B**	**39.44**	**337**	P	**P**	**05 24 40.9**	**-2.1**
	comp=Z,1.4nm,0.6s,baz=129,slow=11,SNR=4.7						
HFS	**Hagfors**	**43.64**	**330**	P	**P**	**05 25 15.6**	**-1.9**
	comp=Z,2.0nm,0.9s,baz=129,slow=12,SNR=3.9						
EKA	**Eskdalemuir Ar**	**50.91**	**320**	P	**P**	**05 26 13.4**	**-0.8**
	comp=Z,0.8nm,0.8s,baz=99,slow=8.1,SNR=3.3						
ESDC	**Sonseca Array**	**51.54**	**300**	P	**P**	**05 26 17.0**	**-2.1**
	comp=Z,0.3nm,0.4s,baz=61,slow=7.0,SNR=3.3						
TORD	**Torodi Ar. Bea**	**53.99**	**266**	P	**P**	**05 26 35.8**	**-1.7**
	comp=Z,3.7nm,0.5s,baz=63,slow=7.3,SNR=68						
KOWA	**Kowa**	**58.48**	**270**	P	**P**	**05 27 08.4**	**-1.1**
	comp=Z,1.6nm,0.5s,baz=76,slow=10,SNR=3.8						
DBIC	**Dimbokro**	**62.65**	**263**	P	**P**	**05 27 36.8**	**-1.2**
	comp=Z,4.8nm,1.0s,baz=41,slow=11,SNR=2.1						
WRA	**Warramunga Arr**	**88.14**	**114**	P	**P**	**05 30 05.4**	**+1.2**
	comp=Z,0.6nm,0.8s,baz=315,slow=4.0,SNR=2.0						

*ISCJB **19** 05:20:15.8±0.5, 35°.39N±0°.03×32°.72E±0°.05, h9km±5km, Error ellipse: s-maj=6.6km s-min=4.4km az=176.2*
*CSEM **19** 05:20:15.9±0.2, 35°.41N×32°.69E, h5km, ML2.7, Error ellipse: s-maj=5.7km s-min=3.2km az=100.0*
*DDA **19** 05:20:15.7, 35°.43N×32°.68E, h11km, Ml2.8*
*ISK **19** 05:20:16.9, 35°.40N×32°.89E, h9km, ML2.6/7*
*NIC **19** 05:20:17.6±0.3, 35°.35N×32°.68E, h31km, ML2.7*
ISC 19 05:20:16.2±0.9, 35°.40N±0°.02×32°.69E±0°.03, h11km±9km, n32, σ1§03/49, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALFC	**Alefka**	**0.26**	**196**	P	**Pg**	**05 20 22.1**	**+0.6**
	baz=19						
ALFC				S	**Sg**	**05 20 25.7**	**+0.6**
ALFC	**Alefka**	**0.26**	**196**	P	**Pg**	**05 20 22.1**	**+0.6**
ALFC				S	**Sg**	**05 20 25.7**	**+0.6**
LEF	**Lefka**	**0.33**	**150**	PG	**Pg**	**05 20 23.3**	**+0.5**
LEF				SG	**Sg**	**05 20 27.6**	**+0.4**
LEF	**Lefka**	**0.33**	**150**	P	**Pg**	**05 20 23.3**	**+0.5**
LEF				S	**Sg**	**05 20 27.4**	**+0.2**
AKMC	**Akamas**	**0.48**	**218**	P	**Pg**	**05 20 25.0**	**-0.5**
	baz=42						
AKMC	**Akamas**	**0.48**	**218**	P	**Pg**	**05 20 25.0**	**-0.5**
PPCY	**Paphos**	**0.59**	**209**	P	**Pg**	**05 20 26.6**	**-1.1**
	baz=30						
PPCY	**Paphos**	**0.59**	**209**	P	**Pg**	**05 20 26.6**	**-1.1**
CSS	**Mathiatis**	**0.69**	**130**	PG	**Pg**	**05 20 28.7**	**-0.8**
CSS				SG	**Sg**	**05 20 36.9**	**-1.6**
CSS	**Mathiatis**	**0.69**	**130**	P	**Pg**	**05 20 28.7**	**-0.8**
	baz=305						
CSS				S	**Sg**	**05 20 36.2**	**-2.3**
CSS	**Mathiatis**	**0.69**	**130**	P	**Pg**	**05 20 28.7**	**-0.8**
CSS				S	**Sg**	**05 20 36.2**	**-2.3**
TEKE	**Tekeli-Mersin**	**0.81**	**25**	*e*Pg	**Pg**	**05 20 32.6**	**+0.7**
TEKE				SG	**Sg**	**05 20 43.1**	**+0.5**
TEKE	**Tekeli-Mersin**	**0.81**	**25**	*e*Pg	**Pg**	**05 20 32.6**	**+0.7**
TEKE				*e*Sg	**Sg**	**05 20 43.1**	**+0.5**
GAZI	**Gazipasa**	**0.88**	**340**	*i* P	**Pg**	**05 20 31.9**	**-1.3**
GAZI				*i* S	**Sg**	**05 20 43.6**	**-1.1**
GAZI	**Gazipasa**	**0.88**	**340**	P	**Pg**	**05 20 31.9**	**-1.3**
GAZI				S	**Sg**	**05 20 43.6**	**-1.1**
AKKU	**Akkuyu-Mersin**	**1.03**	**43**	PG	**Pb**	**05 20 34.9**	**-1.1**
AKKU	**Akkuyu-Mersin**	**1.03**	**43**	*e*Pg	**Pb**	**05 20 34.9**	**-1.1**
BERE	**Bereket-Mersin**	**1.04**	**25**	PG	**Pg**	**05 20 35.8**	**-0.4**
BERE	**Bereket-Mersin**	**1.04**	**25**	*e*Pg	**Pg**	**05 20 35.8**	**-0.4**
GULN	**MERSIN_Gulnar**	**1.04**	**42**	*i* P	**Pb**	**05 20 36.6**	**+0.3**
GULN				*i* S	**Sg**	**05 20 48.9**	**-1.0**
GULN	**MERSIN_Gulnar**	**1.04**	**42**	P	**Pb**	**05 20 36.6**	**+0.3**
GULN				S	**Sg**	**05 20 48.9**	**-1.0**
IKL	**Isikli**	**1.16**	**44**	PG	**Pb**	**05 20 36.9**	**-1.4**
IKL	**Isikli**	**1.16**	**44**	*e*Pg	**Pb**	**05 20 36.9**	**-1.4**
TEVE	**Tevekalti-Mers**	**1.20**	**31**	PN	**Pb**	**05 20 38.9**	**-0.1**
TEVE	**Tevekalti-Mers**	**1.20**	**31**	*e*Pn	**Pb**	**05 20 38.9**	**-0.1**
ERMK	**Ermenek**	**1.25**	**8**	*i* P	**Pn**	**05 20 39.8**	**0.0**
ERMK				*i* S	**Sb**	**05 20 56.8**	**+0.7**
ERMK	**Ermenek**	**1.25**	**8**	P	**Pn**	**05 20 39.8**	**0.0**
ERMK				S	**Sb**	**05 20 56.8**	**+0.7**
KEBE	**Keben-Mersin**	**1.33**	**38**	PN	**Pn**	**05 20 40.9**	**+0.1**
KEBE	**Keben-Mersin**	**1.33**	**38**	*e*Pn	**Pn**	**05 20 40.9**	**+0.1**
KIZK	**Mersin**	**1.60**	**47**	PN	**Pn**	**05 20 44.6**	**+0.2**
KERG	**Konya-Eregli**	**2.32**	**30**	*i* P	**Pn**	**05 20 56.1**	**+1.7**
KERG				*i* S	**Sn**	**05 21 24.4**	**+1.4**
KERG	**Konya-Eregli**	**2.32**	**30**	P	**Pn**	**05 20 56.1**	**+1.7**
KERG				S	**Sn**	**05 21 24.4**	**+1.4**

IDC 19 05:27:49.7±2.6, 14°.76N×91°.06W, h0km, mb3.4/2, mb1 3.8/5, mb1mx3.5/43, mbtmp3.5/5, ML3.5/3, Error ellipse: s-maj=110.0km s-min=29.2km az=39.0, Guatemala

| Code | Station Name | Δ° | AZ° | Ph

52nm,21.5s
AS31 Alice Springs 43.00 270 eP P 05 41 48.2 0.0
1.8nm,0.6s
ASAR Alice Springs 43.00 270 P P 05 41 48.1 -0.1
6.7nm,0.8s,baz=108,slow=7.7,SNR=42
WR1 Warramunga Arr 44.22 275 eP P 05 41 57.4 -0.6
WRA Warramunga Arr 44.22 275 P P 05 41 57.4 -0.6
8.9nm,0.6s,baz=115,slow=7.8,SNR=165
FITZ Fitzroy Crossi 52.37 272 P P 05 43 00.1 -0.9
3.3nm,0.6s,baz=135,slow=5.9,SNR=6.9
FITZ Fitzroy Crossi 52.37 272 eP P 05 43 00.1 -0.9
3.9nm,0.9s
LEOC Leona Valley 87.52 45 eP P 05 46 37.5 +0.9
PFO Pinyon Flats O 87.95 47 eP P 05 46 37.6 -1.1
LBCM Butte Creek Ri 90.13 39 eP P 05 46 51.3 +2.5
NVAR Mina Array Bea 90.13 43 P P 05 46 51.5 +2.6
0.5nm,0.9s,baz=218,slow=8.7,SNR=2.5
CPUP Villa Florida 98.42 129 LR LR 06 26 03.4
comp=Z,40nm,18.6s,baz=223,slow=32
MK32 Makanchi Array 119.37 309 ePKPdf PKPdf 05 52 38.4 +0.6
MKAR Makanchi Array 119.37 309 PKP PKPdf 05 52 38.4 +0.6
0.4nm,0.6s,baz=129,slow=2.0,SNR=3.1
ZALV Zalesovo Beam 119.90 317 PKP PKPdf 05 52 38.6 +0.2
0.5nm,0.3s,baz=99,slow=8.9,SNR=3.2
ZAA1 Zalesovo Array 119.90 317 ePKPdf PKPdf 05 52 38.6 +0.2
NRIK Noril'sk 121.94 335 PKP PKPdf 05 52 42.8 +0.8
3.2nm,0.4s,baz=90,slow=8.1,SNR=2.1
KURK Kurchatov 122.77 313 ePKPdf PKPdf 05 52 44.3 +0.2
KURBB Kurchatov Arra 122.80 313 PKP PKPdf 05 52 44.3 +0.1
1.3nm,0.7s,baz=108,slow=2.1,SNR=12
BVAR Borovoye Array 128.19 314 PKP PKPdf 05 52 55.9 +1.5
0.9nm,0.5s,baz=22,slow=1.6,SNR=6.2
ARA0 ARCESS Array S 141.06 347 ePKPpre PKPpre 05 53 15.0
ARCES ARCESS Array B 141.06 347 PKhKP PKPpre 05 53 15.0
1.7nm,0.9s,baz=2.5,slow=2.1,SNR=3.9
KBZ Khabaz 146.45 301 PKPbc PKPbc 05 53 29.1 -0.4
1.9nm,0.7s,baz=146,slow=3.6,SNR=3.2
FIA1 FINESS Array S 147.51 339 ePKPdf PKPdf 05 53 28.3 -1.0
FIA1 ePKPbc pPKPdf 05 53 32.7 -0.1
FIA1 ePKPbc PKPab 05 53 33.1 -0.9
FIA0 FINESS Array S 147.51 339 ePKPbc PKPbc 05 53 33.0 +1.0
FINES FINESS Array B 147.51 339 PKPbc PKPbc 05 53 33.0 +1.0
8.5nm,0.6s,baz=37,slow=3.5,SNR=33
NB2 NORSAR Subarra151.26 351 PKP PKPbc 05 53 43.2 +1.8
comp=Z,0.9nm,0.7s,baz=17,slow=2.6
HFS Hagfors 151.73 348 PKPbc PKPbc 05 53 42.6 +0.1
comp=Z,2.8nm,0.6s,baz=48,slow=2.1,SNR=4.1
AKASG Malin Array Be 153.26 320 PKPbc PKPbc 05 53 44.7 -1.5
comp=Z,0.6nm,0.4s,baz=43,slow=2.2,SNR=5.5
AK11 Malin Array Si 153.31 320 ePKPdf PKPdf 05 53 40.0 +1.2
AK11 ePKPbc PKiKP 05 53 47.3 +0.9
BR101 Keskin Array S 153.70 294 ePKPbc PKPbc 05 53 48.5 +0.8
BRTR Keskin Array B 153.70 294 PKPbc PKPbc 05 53 48.5 +0.8
comp=Z,1.1nm,0.6s,baz=104,slow=2.9,SNR=5.3
TORD Torodi Ar. Bea 160.29 179 PKPab PKPab 05 54 31.3 +2.2
comp=Z,0.7nm,0.8s,baz=188,slow=3.7,SNR=4.1
TOA1 Torodi Ar. Sit 160.29 179 ePKPab PKPab 05 54 31.3 +2.2

IDC 19 05:38:58.3±4.6, 2°.49N×90°.01E, h0km, mb3.5/3, mb1 3.5/3, mb1mx3.1/67, mbtmp3.5/3, Error ellipse: s-maj=148.0km s-min=81.0km az=65.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	Diego Garcia H	20.17	240	T	T	06 04 42.7	
baz=59,slow=74							
H08S3	Diego Garcia H	20.17	240	T	T	06 04 43.0	
baz=59,slow=74							
H08S1	Diego Carcia H	20.18	240	T	T	06 04 44.0	
baz=59							
H01W3	Cape Leeuwin H	43.52	151	T	T	06 33 21.7	
baz=325,slow=76,SNR=6.8							
H01W2	Cape Leeuwin H	43.54	151	T	T	06 33 18.0	
baz=325,slow=76,SNR=5.7							
H01W1	Cape Leeuwin H	43.54	151	T	T	06 33 15.6	
baz=325,slow=76,SNR=4.8							
MKAR	Makanchi Array	44.64	352	P	P	05 47 12.5	-0.2
0.2nm,0.4s,baz=175,slow=8.7,SNR=3.6							
SONM	Songino Array	47.34	15	P	P	05 47 33.9	-0.1
0.7nm,0.7s,baz=193,slow=7.1,SNR=5.0							
KURBB	Kurchatov Arra	48.94	350	P	P	05 47 46.1	-0.1
0.4nm,0.7s,baz=177,slow=7.2,SNR=5.3							
TXAR	Lajitas Array	145.75	22	PKPbc	PKPdf	05 58 39.3	-0.5
0.4nm,0.6s,baz=330,slow=1.3,SNR=6.6							

NNC 19 05:45:56.1±6.7, 37°.85N×71°.72E, h0km, mb3.9, mpv3.5, 7C, Error ellipse: s-maj=50.6km s-min=39.1km az=175.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	2.57	32	⇑P	Pn	05 46 39.0	-0.1
26nm,0.3s							
SFK				⇑S	Sb	05 47 13.5	-1.9
15nm,0.4s							
MNAS	Manas	4.67	7	⇑P	Pn	05 47 07.4	-0.5
3.7nm,0.4s							
MNAS				⇑S	Sn	05 48 03.1	+0.2
8.9nm,0.4s							
KK31	Karatay Array	5.33	350	P	Pn	05 47 16.6	-0.2
0.5nm,0.2s,baz=156,slow=11,SNR=17							
KK31				⇑S	Sn	05 48 19.9	+0.9
9.5nm,0.3s,baz=164,slow=23							
AB31	Akbulak array	14.22	327	⇑P	Pn	05 49 13.1	-5.6
0.5nm,0.3s,baz=133,slow=15,SNR=16							
AB31				⇑S	Sn	05 51 42.7	-14
1.2nm,0.6s							

IDC 19 06:03:32.5±3.9, 2°.76S×101°.18E, h0km, mb3.6/3, mb1 3.7/3, mb1mx3.3/65, mbtmp3.6/3, Error ellipse: s-maj=161.0km s-min=31.7km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	36.59	120	P	P	06 10 40.6	-0.1
0.9nm,1.1s,baz=301,slow=8.6,SNR=5.0							
SONM	Songino Array	50.59	5	P	P	06 12 34.0	+0.8
0.4nm,0.6s,baz=177,slow=8.1,SNR=2.5							
MKAR	Makanchi Array	52.08	344	P	P	06 12 44.1	-0.2
0.3nm,0.4s,baz=156,slow=8.5,SNR=4.2							
TXAR	Lajitas Array	144.56	39	PKP	PKPab	06 23 10.1	-0.3
0.1nm,0.5s,baz=200,slow=0.5,SNR=4.3							

JMA 19 06:10:46.3±0.1, 37°.95N×144°.38E, h35km, M3.6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.41	299	P	Pn	06 11 24.8	+1.6
OFUJ				eS	Sn	06 11 53.2	+1.8
JIO	Ouri	2.44	283	P	Pn	06 11 25.2	+1.6
JIO				S	Sn	06 11 54.2	+2.0
MIYJ	Miyakonagasawa	2.58	310	P	Pn	06 11 26.9	+1.4
MIYJ				S	Sn	06 11 57.6	+2.0
JMK	Ichinoseki	2.67	293	P	Pn	06 11 28.9	+2.1
JMK				S	Sn	06 12 00.4	+2.4
JOM	Ohasama	2.85	303	P	Pn	06 11 31.4	+2.1
JOM				S	Sn	06 12 04.7	+2.2
JFT	Otama	3.23	264	P	Pn	06 11 36.9	+2.3
JFT				eS	Sn	06 12 14.0	+2.1
JANG	Nango	3.29	318	eS	Sn	06 12 14.9	+1.7
JYK	Kaneyama	3.30	288	P	Pn	06 11 37.9	+2.4
JOT	Ohata	4.28	324	S	Sn	06 12 38.0	+0.3
BSO1	Boso 1	4.29	221	P	Pn	06 11 47.5	-1.0
BSO1				eS	Sn	06 12 36.2	-0.8
JKB	Kayabe	4.70	328	eS	Sn	06 12 48.9	+1.0
JCH	Churui	4.72	351	P	Pn	06 11 55.5	+0.5
JCH				eS	Sn	06 12 46.5	-2.0
JRY	Ryogami san	4.79	248	P	Pn	06 11 56.7	+0.7
JRY				S	Sn	06 12 49.2	-1.1
JOD2	Odawara 2	5.03	239	P	Pn	06 12 00.9	+1.6
MAT	Matsushiro	5.12	256	P	Pn	06 12 03.2	+2.7
NEM2	Nemuro 2	5.51	10	P	Pn	06 12 03.6	-2.2
JTKR	Abashiri--Toko	6.03	357	P	Pn	06 12 12.9	0.0

IDC 19 06:15:04.3±3.5, 30°.22S×138°.53E, h0km, mb1 3.2/3, mb1mx3.0/45, mbtmp3.0/3, ML2.8/3, Error ellipse: s-maj=99.7km s-min=20.8km az=46.0, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	3.11	123	Pn	Pn	06 15 53.9	-0.8
0.5nm,0.3s,baz=301,slow=11,SNR=4.9							
STKA				Pg	Pb	06 16 02.2	+1.7
1.3nm,0.3s,baz=299,slow=14,SNR=11							
STKA				Sn	Sn	06 16 32.4	-0.3
2.7nm,0.3s,baz=270,slow=20,SNR=4.6							
STKA				Lg	Lg	06 16 40.2	
1.4nm,0.3s,baz=18,slow=20,SNR=4.9							
ASAR	Alice Springs	7.72	327	Pn	Pn	06 16 58.1	0.0
0.1nm,0.3s,baz=150,slow=12,SNR=6.4							
ASAR				Sn	Sn	06 18 20.9	-5.3
0.1nm,0.3s,baz=150,slow=20,SNR=1.2							
WRA	Warramunga Arr	10.91	339	Pn	Pn	06 17 41.8	0.0
0.1nm,0.3s,baz=156,slow=12,SNR=6.4							
WRA				Sn	Sn	06 19 41.9	-2.7
0.1nm,0.3s,baz=161,slow=24,SNR=2.2							

*IDC **19** 06:29:11.1±1.4, 57°.20N×153°.89W, h0km, mb3.4/6, mb1 3.5/0, mb1mx3.3/79, mbtmp3.3/8, ML2.8/2, MS3.0/1, Ms1 3.0/1, ms1mx2.4/37, Error ellipse: s-maj=25.6km s-min=18.9km az=162.0*
*ISCJB **19** 06:29:15.0±0.5, 57°.31N±0°.05×153°.26W±0°.05, h52km±5km, mb3.5/5, Error ellipse: s-maj=7.6km s-min=4.3km az=172.0*
*NEIC **19** 06:29:17.6±0.0, 57°.36N×153°.44W, h35km, ML3.3(AEIC), After AEIC.*

ISC 19 06:29:16.9±1.3, 57°.43N±0°.04×153°.38W±0°.04, h33km±3km, n58, σ1°.20/64, mb3.6/5, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	Old Harbor	0.22	167	P	Pn	06 29 23.4	+0.3
OHAK				S	Sb	06 29 28.6	+0.4
KDAK	Kodiak Island	0.55	50	Pg	Pn	06 29 29.3	+1.0
120nm,0.3s,baz=226,slow=4.5,SNR=3069							
KDAK				Lg	Lg	06 29 38.4	
290nm,0.3s,baz=323,slow=20,SNR=146							
KDAK				LR	LR	06 29 56.2	
comp=Z,212nm,18.7s,baz=260,slow=49							
MGLS	Mageik Landsli	1.19	307	P	Pn	06 29 36.9	-0.3
CAHL	Cahill	1.20	302	P	Pn	06 29 37.0	-0.4
KAHG	Katmai Hook Gl	1.23	330	P	Pn	06 29 38.3	+0.5
KAKN	Katmai Knife C	1.25	315	P	Pn	06 29 37.9	-0.2
KAKN				S	Sn	06 29 54.7	+0.9
KAPH	Katmai Pasha	1.28	337	P	Pn	06 29 39.2	+0.8
ACHA	Angle Creek He	1.30	308	P	Pn	06 29 39.1	+0.3
ACHA				S	Sn	06 29 55.4	+0.3
KABU	Katmai Buttres	1.32	310	P	Pn	06 29 39.4	+0.4
KABU				S	Sn	06 29 57.0	+1.5
ANCK	Angle Creek	1.37	305	P	Pn	06 29 40.0	+0.3
KAHC	Katmai Hardscr	1.50	325	P	Pn	06 29 41.7	+0.2
CDD	Cape Douglas	1.51	355	P	Pn	06 29 43.0	+1.4
PLK3	Peulik 3	1.58	281	P	Pn	06 29 42.8	+0.3
PLK3				S	Sn	06 30 03.3	+1.5
KELA	Mount Kelaz	1.61	310	P	Pn	06 29 42.9	-0.1
PLK4	Peulik 4	1.62	278	P	Pn	06 29 43.6	+0.4
PLK2	Peulik 2	1.62	283	P	Pn	06 29 43.8	+0.7
PLK1	Peulik 1	1.78	283	P	Pn	06 29 45.9	+0.7
AUI	Augustine Isla	1.91	359	P	Pn	06 29 48.5	+1.5
AUI				S	Sn	06 30 12.8	+3.0
AUJK	Augustine Jueg	1.92	360	P	Pn	06 29 48.8	+1.5
AUW	Augustine West	1.94	359	P	Pn	06 29 49.2	+1.7
CNPM	China Poot	2.38	27	P	Pn	06 29 54.7	+1.2
HOM	Homer	2.41	21	P	Pn	06 29 55.5	+1.6
ANNE	Aniakchak Nort	2.60	260	P	Pn	06 29 56.3	-0.3
BRLK	Bradley Lake	2.68	28	P	Pn	06 29 58.0	+0.4
AZAC	Aniakchak	2.70	261	P	Pn	06 29 58.5	+0.6
RDWB	Redoubt West	3.08	5	P	Pn	06 30 04.2	+1.0
VNHG	Veniaminof 1	3.41	252	P	Pn	06 30 07.1	-0.5
SLKM	Skilak Lake	3.49	27	P	Pn	06 30 09.1	+0.3
CKL	Chakachamna La	3.81	8	P	Pn	06 30 14.3	+1.0
SVW2	Sparrevohn	3.84	344	P	Pn	06 30 14.1	+0.5
RC01	Rabbit Creek A	4.12	25	P	Pn	06 30 17.9	+0.6
SUA	Susitna One	4.26	17	P	Pn	06 30 20.2	+0.8
SDPT	Sand Point	4.46	245	P	Pn	06 30 20.1	-2.0
HIN	Hinchinbrook I	4.64	47	P	Pn	06 30 24.4	-0.2
KNK	Knik Glacier	4.72	30	P	Pn	06 30 25.6	0.0
SML	Sawmill	5.08	28	P	Pn	06 30 31.2	+0.6
RAGM	Ragged Mountai	5.39	53	P	Pn	06 30 34.6	-0.3
GOAT	Goat Mountain	5.47	51	P	Pn	06 30 36.0	0.0
BMRM	Bremner River	5.73	48	P	Pn	06 30 39.6	0.0
BERG	Berg Lake	5.82	55	P	Pn	06 30 40.6	-0.2
TRF	Thorofare Moun	6.23	13	P	Pn	06 30 47.0	+0.5
VRDI	Verde Repeater	6.34	49	P	Pn	06 30 48.1	0.0
BARK	Barkley Ridge	6.38	58	P	Pn	06 30 48.8	+0.4
ISLE	Juniper Island	6.52	56	P	Pn	06 30 50.5	0.0
BAGL	Bagley Icefiel	6.59	58	P	Pn	06 30 51.9	+0.6
KIAG	Kiagna River	6.65	54	P	Pn	06 30 52.5	+0.2
BALM	Baldy	6.71	53	P	Pn	06 30 53.1	0.0
GRNC	Granite Creek	6.84	56	P	Pn	06 30 54.9	-0.1
PNL	Peninsula	7.65	67	P	Pn	06 31 05.3	-0.5
ILAR	Eielson Array	8.00	20	Pn	Pn	06 31 09.2	-1.4
0.1nm,0.3s,baz=211,slow=14,SNR=4.1							
ILAR				Sn	Sn	06 32 34.4	-5.5
0.1nm,0.3s,baz=212,slow=22,SNR=1.8							
DLBC	Dease Lake	12.43	76	LR	LR	06 36 59.5	
comp=Z,64nm,18.6s,baz=150,slow=37							
INK	Inuvik	14.08	31	Pn	P	06 32 38.9	-2.0
0.0nm,0.3s,baz=211,slow=5.9,SNR=1.5							
YKA	Yellowknife Ar	19.82	59	P	P	06 33 45.5	+1.2
0.2nm,0.6s,baz=277,slow=10.0,SNR=2.3							
PDAR	Pinedale Array	31.08	99	P	P	06 35 33.5	+1.6
0.4nm,0.6s,baz=321,slow=7.0,SNR=4.2							
TXAR	Lajitas Array	44.33	108	P	P	06 37 25.2	+1.6
0.2nm,0.7s,baz=311,slow=4.8,SNR=4.5							
SONM	Songino Array	56.16	307	P	P	06 38 52.6	-0.4
0.8nm,0.7s,baz=38,slow=8.6,SNR=4.2							
MKAR	Makanchi Array	66.32	322	P	P	06 40 00.4	-1.2
0.2nm,0.4s,baz=29,slow=8.4,SNR=4.3							
AKASG	Malin Array Be	72.21	358	P	P	06 40 37.0	-1.0
0.5nm,0.5s,baz=2.6,slow=5.9,SNR=4.2							

*ISCJB **19** 06:29:44.8±0.6, 47°.93N±0°.03×14°.23E±0°.05, h0km, Error ellipse: s-maj=5.2km s-min=3.5km az=142.2*
*CSEM **19** 06:29:45.3±0.2, 47°.91N×14°.23E, h2km, ML2.5/6, Error ellipse: s-maj=6.5km s-min=3.7km az=54.0, Suspected Mining explosion.*
*VIE **19** 06:29:45.1±0.3, 47°.90N×14°.22E, h0km, mb1.4/5, ml2.0/6, Error ellipse: s-maj=3.1km s-min=2.1km az=53.0 10 km NNE of Klaus Suspected Mining explosion.*
*PRU **19** 06:29:46.5, 47°.93N×14°.30E, h0km*

ISC 19 06:29:45.2±0.8, 47°.92N±0°.03×14°.29E±0°.04, h0km, n16, σ0°.45/25, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOA	Molln	0.07	194	i Pg	Pg	06 29 46.1	-0.3
9.0nm,0.1s							
MOA				Sg	Sg	06 29 47.8	+0.5
288nm,0.3s							
MOA	Molln	0.07	194	Pg	Pg	06 29 46.1	-0.3
9.0nm,0.1s							
MOA				Sg	Sg	06 29 47.8	+0.5
288nm,0.3s							
CONA	Conrad Observa	1.06	89	i Pg	Pb	06 30 06.4	0.0
0.7nm,0.2s							
CONA				Sg	Sb	06 30 21.3	+0.5
15nm,0.5s							
CONA	Conrad Observa	1.06	89	Pg	Pb	06 30 06.4	0.0
0.7nm,0.2s							
CONA				Sg	Sb	06 30 21.3	+0.5
15nm,0.5s							
KBA	Koelnbreinsper	1.06	218	eSg	Sn	06 30 22.5	-0.4
7.8nm,0.4s							
ARSA	Arzberg	1.07	128	ePg	Pb	06 30 06.6	+0.1
0.5nm,0.1s							
ARSA				Sg	Sn	06 30 22.3	-0.6
7.4nm,0.4s							
ARSA	Arzberg	1.07	128	Pg	Pb	06 30 06.6	+0.1
0.5nm,0.1s							
ARSA				Sg	Sn	06 30 22.3	-0.6
7.4nm,0.4s							
KHC	Kasperske Hory	1.30	339	ePG	Pb	06 30 10.5	-0.1
KHC				eSG	Sb	06 30 28.4	+0.5
comp=Z,11nm,0.4s							
KHC	Kasperske Hory	1.30	339	Pg	Pb	06 30 10.5	-0.1
KHC				Sg	Sb	06 30 28.4	+0.5
11nm,0.4s							
OBKA	Obir	1.42	173	Pg	Pb	06 30 12.7	+0.2
OBKA	Obir	1.42	173	Pg	Pb	06 30 12.7	+0.2
WET	Wettzell	1.55	323	Pg	Pn	06 30 14.1	+0.1
WET				Sg	Sb	06 30 36.1	+1.2
PRU	Pruhonice	2.08	4	eSG	Sb	06 30 50.4	+0.2
comp=Z,4.9nm,0.5s							
PRU	Pruhonice	2.08	4	Sg	Sb	06 30 50.4	+0.2
4.9nm,0.5s							
MOTA	Moosalm	2.23	256	eSg	Sg	06 30 56.5	-0.3
9.0nm,0.4s							
MOTA	Moosalm	2.23	256	Sg	Sg	06 30 56.5	-0.3
9.0nm,0.4s							

IDC 19 06:40:03.4±1.9, 1°.44N×127°.02E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/52, mbtmp3.5/4, Error ellipse: s-maj=180.4km s-min=22.4km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.43	162	P	P	06 45 03.0	-1.0
0.3nm,0.4s,baz=340,slow=11,SNR=18							
ASAR	Alice Springs	25.84	165	P	P	06 45 37.8	+1.0
0.3nm,0.3s,baz=347,slow=12,SNR=5.0							
MKAR	Makanchi Array	59.59	326	P	P	06 50 08.6	-0.6
0.2nm,0.4s,baz=122,slow=7.9,SNR=5.3							
KURBB	Kurchatov Arra	63.81	328	P	P	06 50 38.0	+0.5
0.4nm,0.5s,baz=130,slow=6.0,SNR=3.6							

*CSEM **19** 06:42:44.6, 39°.85N×20°.29E, h42km, ML1.8/2*
*ATH **19** 06:42:44.6, 39°.85N×20°.29E, h42km±4km, ML1.8/2, Error ellipse: s-maj=10.2km s-min=2.4km az=300.0*

THE 19 06:42:52.8, 40°.52N×21°.59E, h17km±4km, ML1.8/3, Error ellipse: s-maj=4.9km s-min=1.0km az=54.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZN	Kozani	0.26	147	P	Pg	06 42 58.2	-0.4
KZN				S	Sb	06 43 03.0	-0.2
KZN	Kozani	0.26	147	P	Pg	06 42 58.2	-0.4
KZN				S	Sb	06 43 03.0	-0.2
FNA	Florina	0.31	328	P	Pg	06 42 59.2	-0.2
FNA				S	Sg	06 43 04.2	+0.2
FNA	Florina	0.31	328	P	Pg	06 42 59.2	-0.2
FNA				S	Sg	06 43 04.2	+0.2
NEST	Nestorio	0.43	256	P	Pg	06 43 01.4	-0.1
NEST	Nestorio	0.43	256	P	Pg	06 43 01.1	-0.4
NEST				S	Sb	06 43 08.1	-0.1
NEST	Nestorio	0.43	256	P	Pg	06 43 01.1	-0.4
NEST				S	Sb	06 43 08.1	-0.1
NEST	Nestorio	0.43	256	P	Pg	06 43 01.1	-0.4
PENT	Pentalofos	0.48	227	P	Pg	06 42 58.5	-3.9
PENT				S	Sb	06 43 09.9	+0.4
PENT				AML	AML	06 43 14.9	
comp=E,138μm,0.4s							
PENT				AML	AML	06 43 15.2	
comp=N,128μm,0.3s							
PENT	Pentalofos	0.48	227	P	Pg	06 43 01.5	-0.9
PENT	Pentalofos	0.48	227	P	Pg	06 43 01.5	-0.9
PENT	Pentalofos	0.48	227	P	Pg	06 42 59.0	-3.4
PENT				S	Sb	06 43 10.2	+0.7
KPRO	Kipourio	0.59	197	P	Pg	06 43 02.8	-1.8
KPRO				S	Sn	06 43 15.0	-0.8
KPRO				AML	AML	06 43 17.9	
comp=N,148μm,0.4s							
KPRO				AML	AML	06 43 18.9	
comp=E,142μm,0.3s							
KPRO	Kipourio	0.59	197	P	Pb	06 43 05.1	+0.3
KPRO	Kipourio	0.59	197	P	Pb	06 43 05.1	+0.3
KPRO	Kipourio	0.59	197	P	Pg	06 43 01.9	-2.7
KPRO				S	Sb	06 43 14.0	+1.1
THL	Klokotos Trika	1.01	161	P	Pb	06 43 08.2	-3.6
THL				S	Sg	06 43 25.7	+0.1
THL	Klokotos Trika	1.01	161	P	Pb	06 43 08.3	-3.5
THL				S	Sn	06 43 25.8	-0.2

*IDC **19** 06:51:51.6±0.6, 14°.39N×144°.21E, h0km, mb3.9/12, mb1 4.1/12, mb1mx3.9/59, mbtmp3.9/12, MS3.4/4, Ms1 3.4/4, ms1mx2.8/67, Error ellipse: s-maj=23.2km s-min=13.2km az=77.0*
*NEIC **19** 06:51:52.9±0.3, 14°.38N×144°.24E, h10km, mb4.4/5, Error ellipse: s-maj=11.5km s-min=5.0km az=83.0*
*ISCJB **19** 06:51:54.2±0.4, 14°.39N±0°.05×144°.3E±0°.1, h33km, mb4.0/17, MS3.6/3, Error ellipse: s-maj=14.7km s-min=6.0km az=159.8*

ISC 19 06:51:56.2±0.6, 14°.37N±0°.08×144°.3E±0°.1, h35km, n37, σ0°.84/31, mb3.8/17, MS3.6/3, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	0.95	145	Pn	Pn	06 52 12.7	-0.4
230nm,0.3s,baz=292,slow=2.8,SNR=74							
GUMO				Sn	Sn	06 52 24.6	-0.9
146nm,0.3s,baz=177,slow=19,SNR=18							
GUMO				T	T	06 53 27.7	
92nm,0.3s,baz=126,slow=17,SNR=8.4							
CBIJ	Chichi jima	12.81	351	ePn	Pn	06 54 54.4	-1.5
DAV	Davao City (W)	19.77	250	LR	LR	07 05 18.5	
comp=Z,50nm,18.8s,baz=156,slow=41							
H11S3	WAKE ISLAND Hy 21.85	76		T	T	07 19 47.6	
baz=262,slow=75,SNR=80							
H11S1	WAKE ISLAND Hy 21.87	76		T	T	07 19 47.6	
baz=262,slow=75,SNR=56							
H11S2	WAKE ISLAND Hy 21.87	76		T	T	07 19 47.6	
baz=262,slow=75,SNR=48							
H11N1	WAKE ISLAND Hy 22.23	73		T	T	07 20 09.2	
baz=259,slow=75,SNR=15							
H11N2	WAKE ISLAND Hy 22.24	73		T	T	07 20 14.2	
baz=259,slow=75,SNR=7.0							
H11N3	WAKE ISLAND Hy 22.25	73		T	T	07 20 14.5	
baz=259,slow=75,SNR=12							
MJAR	Matsushiro Arr	22.74	347	P	P	06 56 55.5	+0.1
0.8nm,0.2s,baz=179,slow=14,SNR=4.2							
MAJO	Matsushiro	22.74	347	eP	P	06 56 55.5	+0.1
KSRS	Korea Array	27.22	331	P	P	06 57 36.0	-0.8
0.9nm,0.6s,baz=153,slow=10,SNR=4.2							
KS15	Wonju Array Si	27.23	331	eP	P	06 57 36.0	-0.9
KSAR	Wonju Array Be	27.23	331	P	P	06 57 36.0	-0.9
WRAB	Tennant Creek	35.47	196	eP	P	06 58 49.9	+0.4
16nm,1.0s							
WB2	Warramunga Arr	35.48	196	eP	P	06 58 48.9	-0.7
WR1	Warramunga Arr	35.48	196	eP	P	06 58 50.0	+0.3
12nm,1.0s							
WRA	Warramunga Arr	35.48	196	P	P	06 58 50.0	+0.3
7.2nm,0.9s,baz=8.0,slow=9.6,SNR=36							
KLR	Kul'dur	36.26	346	P	P	06 58 56.0	0.0
0.1nm,0.6s,baz=145,slow=7

LPAZ	**La Paz**	**148.68**	**98**	PKPbc	**PKPab**	**07 11 43.5**	**-1.7**
	2.4nm,0.7s,baz=265,slow=2.6,SNR=12						

IDC 19 07:01:52.7±3.8, 5°.69S×150°.90E, h0km, mb3.4/2, mb1 3.8/2, mb1mx3.2/46, mbtmp3.5/2, Error ellipse: s-maj=142.2km s-min=51.8km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.45**	**227**	P	P	07 06 43.2	+0.4
	0.7nm,0.4s,baz=54,slow=10,SNR=9.5						
ASAR	**Alice Springs**	**24.24**	**221**	P	P	07 07 11.3	-0.2
	1.0nm,0.7s,baz=53,slow=9.1,SNR=14						
TORD	**Torodi Ar. Bea**	**148.76**	**286**	PKPbc	PKPbc	07 21 42.6	-0.7
	0.2nm,0.6s,baz=88,slow=4.2,SNR=1.5						

IDC 19 07:09:27.4±1.9, 1°.35N×127°.01E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.4/56, mbtmp3.6/4, MS2.8/1, Ms1 2.8/1, ms1mx2.3/50, Error ellipse: s-maj=176.4km s-min=22.5km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.35**	**162**	P	P	07 14 26.9	-0.3
	1.3nm,0.9s,baz=340,slow=11,SNR=7.2						
WRA				LR	LR	07 25 02.9	
	comp=Z,24nm,19.4s,baz=65,slow=42						
ASAR	**Alice Springs**	**25.76**	**165**	P	P	07 15 00.3	+0.3
	0.6nm,0.6s,baz=346,slow=11,SNR=4.7						
MKAR	**Makanchi Array**	**59.66**	**326**	P	P	07 19 33.3	-0.2
	0.3nm,0.4s,baz=121,slow=8.5,SNR=4.5						
KURBB	**Kurchatov Arra**	**63.88**	**328**	P	P	07 20 02.0	+0.1
	0.7nm,0.6s,baz=127,slow=5.9,SNR=6.3						

IDC 19 07:10:30.5±1.6, 2°.66N×128°.30E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.5/58, mbtmp3.7/6, MS4.1/1, Ms1 4.1/1, ms1mx2.6/58, Error ellipse: s-maj=95.3km s-min=20.6km az=70.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**13.49**	**328**	LR	LR	07 20 04.1	
	comp=Z,907nm,20.3s,baz=112,slow=42						
FITZ	**Fitzroy Crossi**	**20.80**	**187**	P	Pn	07 15 14.9	-1.0
	8.8nm,1.2s,baz=12,slow=9.3,SNR=3.4						
WRA	**Warramunga Arr**	**23.24**	**165**	P	P	07 15 40.1	+0.6
	2.2nm,0.3s,baz=344,slow=10,SNR=17						
ASAR	**Alice Springs**	**26.73**	**169**	P	P	07 16 10.9	-1.1
	0.3nm,0.6s,baz=355,slow=9.3,SNR=3.6						
STKA	**Stephens Creek**	**36.60**	**161**	P	P	07 17 37.2	-1.3
	0.8nm,0.4s,baz=339,slow=8.6,SNR=3.1						
MKAR	**Makanchi Array**	**59.32**	**325**	P	P	07 20 35.2	+0.9
	0.1nm,0.4s,baz=120,slow=8.5,SNR=2.1						
KURBB	**Kurchatov Arra**	**63.48**	**327**	P	P	07 21 02.1	-0.2
	0.4nm,0.4s,baz=129,slow=6.6,SNR=3.8						

*CSEM **19** 07:20:40.0±0.1, 40°.67N×22°.99E, h10km, ML1.2, Error ellipse: s-maj=3.3km s-min=2.3km az=33.0*
*ATH **19** 07:20:40.3, 40°.68N×22°.97E, h10km±4km, ML1.2/4, Error ellipse: s-maj=4.4km s-min=1.2km az=207.0*
THE 19 07:20:40.6, 40°.69N×22°.98E, h8km±2km, ML1.3/3, Error ellipse: s-maj=2.7km s-min=0.5km az=203.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THE	**Thessaloniki**	**0.06**	**188**	P	Pg	07 20 42.1	-0.3
THE				S	Sg	07 20 43.2	-0.5
THE				AML	AML	07 20 44.7	
	comp=E,455μm,0.3s						
THE				AML	AML	07 20 45.0	
	comp=N,442μm,0.3s						
THE	**Thessaloniki**	**0.06**	**188**	P	Pg	07 20 42.2	-0.2
THE				S	Sg	07 20 43.6	-0.1
THE	**Thessaloniki**	**0.06**	**188**	P	Pg	07 20 42.2	-0.2
THE				S	Sg	07 20 43.6	-0.1
HORT	**Hortiatis**	**0.13**	**135**	P	Pg	07 20 43.7	+0.2
HORT				AML	AML	07 20 46.3	
	comp=E,513μm,0.2s						
HORT				AML	AML	07 20 46.7	
	comp=N,523μm,0.3s						
HORT				S	Sg	07 20 46.7	+1.2
HORT	**Hortiatis**	**0.13**	**135**	P	Pg	07 20 43.5	0.0
HORT				S	Sg	07 20 46.1	+0.5
HORT	**Hortiatis**	**0.13**	**135**	P	Pg	07 20 43.5	0.0
HORT				S	Sg	07 20 46.2	+0.6
SOH	**Sokhos**	**0.32**	**66**	P	Pg	07 20 46.7	-0.2
SOH	**Sokhos**	**0.32**	**66**	P	Pg	07 20 46.8	0.0
SOH	**Sokhos**	**0.32**	**66**	P	Pg	07 20 46.7	-0.1
KNT	**Kendrikon**	**0.47**	**353**	P	Pg	07 20 49.5	-0.3
KNT	**Kendrikon**	**0.47**	**353**	P	Pg	07 20 49.5	-0.3
KNT	**Kendrikon**	**0.47**	**353**	P	Pg	07 20 49.6	-0.2
PLG	**Polygyros**	**0.48**	**131**	P	Pg	07 20 49.3	-0.6
PLG				S	Sg	07 20 56.6	+0.5
PLG				AML	AML	07 21 02.1	
	comp=E,50μm,0.3s						
PLG				AML	AML	07 21 02.6	
	comp=N,28μm,0.3s						
PLG	**Polygyros**	**0.48**	**131**	P	Pg	07 20 49.5	-0.4
PLG	**Polygyros**	**0.48**	**131**	P	Pg	07 20 49.4	-0.5
GRG	**Griva**	**0.51**	**301**	P	Pg	07 20 50.0	-0.5
GRG				AML	AML	07 20 58.7	
	comp=N,80μm,0.2s						
GRG				AML	AML	07 20 58.8	
	comp=E,105μm,0.3s						
GRG				S	Sb	07 20 59.3	-0.2
GRG	**Griva**	**0.51**	**301**	P	Pg	07 20 50.1	-0.4
GRG				S	Sg	07 20 58.2	+1.0
GRG	**Griva**	**0.51**	**301**	P	Pg	07 20 50.1	-0.4
GRG				S	Sg	07 20 58.2	+1.0
SRS	**Serrai**	**0.63**	**47**	P	Pg	07 20 52.1	-0.7
SRS	**Serrai**	**0.63**	**47**	P	Pg	07 20 52.2	-0.6
SRS	**Serrai**	**0.63**	**47**	P	Pg	07 20 52.2	-0.6
NVR	**Nevrokopi**	**0.94**	**45**	P	Pg	07 20 58.8	+0.1
NVR	**Nevrokopi**	**0.94**	**45**	P	Pg	07 20 58.5	-0.1

*KRNET **19** 07:45:57.5±0.1, 39°.52N×76°.93E, mb3.3*
ISC 19 07:45:58.8±3.9, 39°.6N±0°.1×76°.82E±0°.09, h16km±24km, n10, σ1°57/17, 13C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	**Naryn**	**1.95**	**342**	⇑*iP*	**Pb**	**07 46 34.7**	**+0.6**
	baz=39						
NRN				⇑*iS*	**Sg**	**07 47 02.4**	**+0.8**
	baz=39						
TARG	**Taragay, Kyrgy**	**2.27**	**19**	⇑*iP*	**Pb**	**07 46 38.9**	**-0.7**
	baz=16						
TARG				⇑*iS*	**Sb**	**07 47 09.3**	**+1.8**
	baz=16						
SFK	**Sufi-Kurgan**	**2.59**	**281**	⇑*iP*	**Pb**	**07 46 44.4**	**-0.6**
	baz=82						
SFK				⇑*iS*	**Sb**	**07 47 18.3**	**+1.7**
	baz=82						
ULHL	**Ulahol**	**2.69**	**351**	P	**Pb**	**07 46 47.3**	**+0.6**
	SNR=33						
ULHL	**Ulahol**	**2.69**	**351**	⇑*iP*	**Pb**	**07 46 45.7**	**-1.0**
	baz=49						
ULHL				⇑*iS*	**Sb**	**07 47 20.1**	**+0.5**
	baz=49						
KZA	**Kyzart**	**2.76**	**335**	⇑P	**Pb**	**07 46 49.8**	**+1.9**
	SNR=38						
KZA	**Kyzart**	**2.76**	**335**	⇑*iP*	**Pb**	**07 46 46.5**	**-1.5**
	baz=34						
KZA				⇑*iS*	**Sb**	**07 47 22.8**	**+1.1**
	baz=34						
BOOM	**Boomskoye usch**	**2.98**	**347**	⇑*iP*	**Pb**	**07 46 49.3**	**-2.2**
	baz=46						
BOOM				⇑*iS*	**Sb**	**07 47 27.3**	**-0.4**
	baz=46						
UCH	**Uchtor**	**3.17**	**327**	⇓*iP*	**Pb**	**07 46 52.5**	**-2.4**
	baz=27						
UCH				⇓*iS*	**Sb**	**07 47 32.6**	**-0.8**
	baz=27						
TKM2	**Tokmak 2**	**3.46**	**345**	P	**Pb**	**07 46 57.7**	**-2.1**
	SNR=5.3						

*SOME **19** 07:47:03.9, 42°.38N×72°.23E, h20km*
*KRNET **19** 07:47:04.0±0.1, 42°.36N×72°.22E, h18km, mb3.5*

*NNC **19** 07:47:04.5±1.3, 42°.46N×72°.17E, h0km, mb3.6, mpv3.4, Error ellipse: s-maj=19.1km s-min=3.1km az=7.0*
ISC 19 07:47:03.8±1.1, 42°.34N±0°.03×72°.21E±0°.02, h3km±10km, n46, σ1°31/85, 39C-8D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAS	**Manas**	**0.26**	**56**	⇑P	**Pg**	**07 47 09.1**	**+0.2**
	32nm,0.2s						
MNAS				⇑S	**Sg**	**07 47 12.8**	**+0.6**
	214nm,0.2s						
MNAS	**Manas**	**0.26**	**56**	⇑*iP*	**Pg**	**07 47 09.1**	**+0.2**
	baz=58						
MNAS				⇑*iS*	**Sg**	**07 47 12.9**	**+0.6**
	baz=58						
ARK	**Arkit**	**0.57**	**199**	⇑*iP*	**Pg**	**07 47 15.6**	**+0.8**
	baz=97						
ARK				⇑*iS*	**Sb**	**07 47 24.2**	**-1.0**
	baz=97						
TOKL	**Toktogul**	**0.64**	**129**	⇑*iP*	**Pg**	**07 47 16.1**	**+0.1**
	baz=31						
TOKL				⇑*iS*	**Sg**	**07 47 25.2**	**+1.0**
	baz=31						
MRKS	**Merke**	**0.85**	**62**	*eP*	**Pg**	**07 47 19.8**	**-0.3**
	baz=62						
MRKS				*eS*	**Sg**	**07 47 31.2**	**0.0**
	baz=62						
MRKS	**Merke**	**0.85**	**62**	*eP*	**Pg**	**07 47 19.8**	**-0.3**
	39nm,0.1s						
MRKS				*eS*	**Sg**	**07 47 31.2**	**0.0**
	244nm,0.2s						
AML	**Almayashu**	**1.12**	**100**	P	**Pg**	**07 47 25.2**	**-0.1**
	43nm,0.2s,SNR=31						
AML	**Almayashu**	**1.12**	**100**	⇑*iP*	**Pg**	**07 47 24.9**	**-0.4**
	baz=1.0						
AML				⇑*iS*	**Sb**	**07 47 40.6**	**-0.7**
	baz=1.0						
ARSB	**Arslanbob**	**1.17**	**150**	⇑*iP*	**Pb**	**07 47 25.8**	**-1.0**
	baz=51						
ARSB				⇑*iS*	**Sg**	**07 47 42.2**	**+0.8**
	baz=51						
EKS2	**Erkin-Say**	**1.20**	**74**	⇑P	**Pb**	**07 47 26.4**	**-0.9**
	5.5nm,0.1s,SNR=29						
EKS2	**Erkin-Say**	**1.20**	**74**	⇓*iP*	**Pb**	**07 47 26.4**	**-0.9**
	baz=75						
EKS2				⇓*iS*	**Sn**	**07 47 43.1**	**-1.5**
	baz=75						
KK31	**Karatay Array**	**1.46**	**302**	⇓P	**Pn**	**07 47 30.2**	**-1.0**
	16nm,0.3s,baz=114,slow=16,SNR=402						
KK31				⇓S	**Sn**	**07 47 48.9**	**-2.0**
	91nm,0.3s,baz=119,slow=25						
IUG	**Iuzhnay**	**1.63**	**264**	*eP*	**Pb**	**07 47 34.3**	**-0.3**
	baz=63						
IUG				*eS*	**Sg**	**07 47 56.7**	**+0.5**
	baz=63						
IUG	**Iuzhnay**	**1.63**	**264**	*eP*	**Pb**	**07 47 34.3**	**-0.3**
	155nm,0.3s						
IUG				*eS*	**Sg**	**07 47 56.6**	**+0.5**
	792nm,0.4s						
UCH	**Uchtor**	**1.71**	**93**	⇑P	**Pb**	**07 47 35.6**	**-0.6**
	9.2nm,0.2s,SNR=11						
UCH	**Uchtor**	**1.71**	**93**	⇑*iP*	**Pb**	**07 47 35.4**	**-0.8**
	baz=94						
UCH				⇑*iS*	**Sg**	**07 47 58.7**	**-0.2**
	baz=94						
FRU1	**Bishkek**	**1.85**	**75**	⇑*iP*	**Pb**	**07 47 37.4**	**-0.9**
	baz=75						
FRU1				⇑*iS*	**Sg**	**07 48 02.2**	**-1.0**
	baz=75						
BRLS	**Borolday**	**1.88**	**292**	*eP*	**Pb**	**07 47 38.2**	**-0.6**
	baz=84						
BRLS				*eS*	**Sg**	**07 48 03.6**	**-0.6**
	baz=84						
BRLS	**Borolday**	**1.88**	**292**	*eP*	**Pb**	**07 47 38.2**	**-0.6**
	6.7nm,0.3s						
BRLS				*eS*	**Sg**	**07 48 03.6**	**-0.6**
	219nm,0.5s						
USP	**Ospenovka**	**1.92**	**61**	⇑P	**Pb**	**07 47 38.8**	**-0.7**
	63nm,0.3s,SNR=14						
USP	**Ospenovka**	**1.92**	**61**	⇑*iP*	**Pb**	**07 47 38.6**	**-0.9**
	baz=61						
USP				⇑*iS*	**Sb**	**07 48 03.6**	**-0.4**
	baz=61						
CHM	**Chimkent**	**1.93**	**270**	*eP*	**Pb**	**07 47 40.0**	**+0.3**
	baz=70						
CHM				*eS*	**Sg**	**07 48 06.4**	**+0.5**
	baz=70						
CHM	**Chimkent**	**1.93**	**270**	*eP*	**Pb**	**07 47 40.0**	**+0.3**
	171nm,0.1s						
CHM				*eS*	**Sg**	**07 48 06.4**	**+0.5**
	451nm,0.5s						
CHMS	**Chumysh**	**1.99**	**70**	⇑P	**Pb**	**07 47 39.8**	**-0.9**
	34nm,0.2s,SNR=7.6						
CHMS	**Chumysh**	**1.99**	**70**	⇓*iP*	**Pb**	**07 47 39.7**	**-0.9**
	baz=70						
CHMS				⇓*iS*	**Sb**	**07 48 05.7**	**-0.1**
	baz=70						
KBK	**Karagaybulak**	**2.05**	**80**	⇑P	**Pb**	**07 47 41.7**	**-0.1**
	22nm,0.2s,SNR=12						
KBK	**Karagaybulak**	**2.05**	**80**	⇑*iP*	**Pb**	**07 47 40.8**	**-1.0**
	baz=81						
KBK				⇑*iS*	**Sb**	**07 48 07.5**	**-0.3**
	baz=81						
KZA	**Kyzart**	**2.27**	**96**	⇑*iP*	**Pb**	**07 47 43.9**	**-1.9**
	baz=96						
KZA				⇑*iS*	**Sb**	**07 48 13.6**	**-0.9**
	baz=96						
BTK	**Batken**	**2.51**	**205**	⇑*iP*	**Pb**	**07 47 47.7**	**-1.9**
	baz=5.0						
BTK				⇑*iS*	**Sb**	**07 48 19.0**	**-2.0**
	baz=5.0						
SFK	**Sufi-Kurgan**	**2.52**	**157**	⇑*eP*	**Pn**	**07 47 47.5**	**+1.5**
	baz=57						
SFK				⇑*eS*	**Sb**	**07 48 19.7**	**-1.8**
	baz=57						
TKM2	**Tokmak 2**	**2.56**	**76**	⇓Pn	**Pb**	**07 47 49.3**	**-1.3**
	13nm,0.5s						
TKM2				⇓Lg	Lg	07 48 23.7	
	44nm,0.3s						
TKM2	**Tokmak 2**	**2.56**	**76**	⇑*iP*	**Pb**	**07 47 48.1**	**-2.5**
	baz=76						
TKM2				⇑*iS*	**Sb**	**07 48 20.0**	**-2.6**
	baz=76						
BOOM	**Boomskoye usch**	**2.77**	**86**	⇑*iP*	**Pn**	**07 47 50.9**	**+1.7**
	baz=86						
BOOM				⇑*iS*	**Sb**	**07 48 24.7**	**-3.7**
	baz=86						
DGS	**Degeres**	**2.77**	**70**	*eP*	**Pb**	**07 47 53.3**	**-0.8**
	baz=70						
DGS				*eS*	**Sb**	**07 48 29.7**	**+1.2**
	baz=70						
DGS	**Degeres**	**2.77**	**70**	*eP*	**Pb**	**07 47 53.3**	**-0.8**
	17nm,0.2s						
DGS				*eS*	**Sb**	**07 48 29.8**	**+1.2**
	96nm,0.3s						
KST	**Kastek**	**2.85**	**75**	*eP*	**Pb**	**07 47 55.2**	**-0.3**
	baz=75						
KST				*eS*	**Sg**	**07 48 33.2**	**-2.3**
	baz=75						
KST	**Kastek**	**2.85**	**75**	*eP*	**Pb**	**07 47 55.2**	**-0.3**
	18nm,0.5s						
KST				*eS*	**Sg**	**07 48 33.1**	**-2.3**
	82nm,0.6s						
DRK	**Karamyk**	**2.88**	**186**	⇑*iP*	**Pn**	**07 47 52.7**	**+1.8**
	baz=86						
DRK				⇑*iS*	**Sn**	**07 48 27.7**	**+1.5**
	baz=86						
NRN	**Naryn**	**2.97**	**107**	⇑*eP*	**Pn**	**07 47 53.5**	**+1.3**
	baz=7.0						
NRN				⇑*iS*	**Sn**	**07 48 29.7**	**+1.2**
	baz=7.0						
IZV	**Izvestkoviy**	**3.32**	**76**	*eP*	**Pb**	**07 48 02.9**	**-0.6**
	baz=77						
IZV				*eS*	**Sb**	**07 48 46.2**	**+1.9**
	baz=77						
IZV	**Izvestkoviy**	**3.32**	**76**	*eP*	**Pb**	**07 48 02.9**	**-0.6**
	12nm,0.2s						
IZV				*eS*	**Sb**	**07 48 46.1**	**+1.9**
	57nm,0.2s						
KUU	**Kurty**	**3.40**	**61**	*eP*	**Pb**	**07 48 04.1**	**-0.6**
	baz=62						
KUU				*eS*	**Sb**	**07 48 48.0**	**+1.6**
	baz=62						
KUU	**Kurty**	**3.40**	**61**	*eP*	**Pb**	**07 48 04.1**	**-0.6**
	8.8nm,0.3s						
KUU				*eS*	**Sb**	**07 48 48.0**	**+1.6**
	50nm,0.3s						
CHKK	**Chushkaly**	**3.81**	**65**	*eP*	**Pb**	**07 48 12.1**	**+0.4**
	baz=65						
CHKK				*eS*	**Sb**	**07 49 01.4**	**+3.1**
	baz=65						
CHKK	**Chushkaly**	**3.81**	**65**	*eP*	**Pb**	**07 48 12.1**	**+0.4**
	7.1nm,0.3s						
CHKK				*eS*	**Sb**	**07 49 01.4**	**+3.1**
	61nm,0.2s						
ARXS	**Arharly**	**4.51**	**64**	*eP*	**Pb**	**07 48 25.6**	**+1.9**
	9.3nm,0.5s						
ARXS				*eS*	**Sg**	**07 49 26.2**	**-2.4**
	39nm,0.5s						

*IDC **19** 07:54:14.2±1.3, 32°.67S×178°.18W, h0km, mb4.2/4, mb1 4.3/6, mb1mx3.9/48, mbtmp4.2/6, ML3.8/2, MS3.3/1, Ms1 3.3/1, ms1mx2.5/46, Error ellipse: s-maj=36.1km s-min=32.6km az=156.0*
*NEIC **19** 07:54:15.5±0.5, 32°.68S×178°.12W, h10km, mb4.4/5, Error ellipse: s-maj=11.6km s-min=8.2km az=126.0*
*ISCJB **19** 07:54:17.1±1.2, 32°.82S±0°.08×178°.1W±0°.2, h34km, mb4.2/8, Error ellipse: s-maj=23.8km s-min=8.5km az=18.1*
ISC 19 07:54:19.1±0.9, 32°.8S±0°.1×178°.1W±0°.1, h34km, n27, σ0°77/30, mb4.3/8, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.73**	**214**	Pn	**Pn**	**07 55 54.7**	**-0.7**
	1.8nm,0.3s,baz=49,slow=19,SNR=14						
URZ				Sn	**Sn**	**07 57 11.4**	**+0.5**
	7.6nm,0.3s,baz=1.7,slow=22,SNR=16						
URZ	**Urewera**	**6.73**	**214**	*e*Pn	**Pn**	**07 55 54.7**	**-0.7**
URZ				*e*Sn	**Sn**	**07 57 11.4**	**+0.5**
URZ				*e*Sn	**Sn**	**07 57 11.9**	**+1.0**
OUZ	**Omahuta**	**7.33**	**248**	*e*Pn	**Pn**	**07 56 04.1**	**+0.4**
BKZ	**Black Stump Fm**	**7.75**	**213**	*e*Pn	**Pn**	**07 56 09.3**	**-0.1**
BKZ				*e*Sn	**Sn**	**07 57 35.7**	**-0.3**
RPZ	**Rata Peaks**	**13.85**	**215**	Pn	**Pn**	**07 57 32.1**	**-0.8**
	0.4nm,0.3s,baz=342,slow=19,SNR=2.5						
RPZ				Sn	Sn	07 59 51.9	-13
	0.4nm,0.3s,baz=43,slow=15,SNR=3.9						
DZM	**Mont Dzumac**	**17.38**	**304**	LR	LR	08 03 42.7	
	comp=Z,95nm,19.3s,baz=183,slow=33						
CTA	**Charters Tower**	**34.19**	**283**	P	**P**	**08 01 01.9**	**+0.5**
	2.7nm,0.6s,baz=118,slow=11,SNR=5.1						
CTAO	**Charters Tower**	**34.19**	**283**	*e*P	**P**	**08 01 02.1**	**+0.7**
	4.3nm,0.8s						
AS01	**Alice Springs**	**42.93**	**270**	*e*P	**P**	**08 02 14.2**	**-0.7**
AS31	**Alice Springs**	**42.97**	**270**	*e*P	**P**	**08 02 14.7**	**-0.5**
	1.0nm,0.6s						
ASAR	**Alice Springs**	**42.97**	**270**	P	**P**	**08 02 14.7**	**-0.5**
	1.8nm,0.6s,baz=107,slow=7.6,SNR=24						
WB2	**Warramunga Arr**	**44.16**	**275**	*e*P	**P**	**08 02 23.9**	**-0.8**
	4.3nm,0.8s						
WRAB	**Tennant Creek**	**44.17**	**275**	*e*P	**P**	**08 02 23.1**	**-1.7**
	4.7nm,0.8s						
WR1	**Warramunga Arr**	**44.17**	**275**	*e*P	**P**	**08 02 23.9**	**-1.0**
	7.1nm,1.1s						
WRA	**Warramunga Arr**	**44.17**	**275**	P	**P**	**08 02 23.9**	**-1.0**
	2.1nm,0.3s,baz=115,slow=7.6,SNR=107						
FITZ	**Fitzroy Crossi**	**52.33**	**272**	P	**P**	**08 03 26.4**	**-1.4**
	1.5nm,0.9s,baz=135,slow=7.1,SNR=2.4						
RVR	**Riverside**	**87.56**	**46**	*e*P	**P**	**08 07 03.6**	**+0.1**
KURK	**Kurchatov**	**122.63**	**313**	*e*PKPdf	**PKPdf**	**08 13 10.3**	**-0.3**
KURBB	**Kurchatov Arra**	**122.66**	**313**	PKP	**PKPdf**	**08 13 10.3**	**-0.4**
	0.4nm,0.7s,baz=110,slow=2.4,SNR=3.8						
FIA1	**FINESS Array S**	**147.34**	**339**	*e*PKPbc	**PKPbc**	**08 13 58.4**	**+0.1**
FIA0	**FINESS Array S**	**147.34**	**339**	*e*PKPbc	**PKPbc**	**08 13 58.3**	**0.0**
FINES	**FINESS Array B**	**147.34**	**339**	PKPbc	**PKPbc**	**08 13 58.3**	**0.0**
	6.5nm,1.1s,baz=26,slow=4.4,SNR=9.1						
AKASG	**Malin Array Be**	**153.11**	**320**	PKPbc	**PKPbc**	**08 14 12.5**	**-0.1**
	0.2nm,0.3s,baz=42,slow=1.7,SNR=2.5						
BR101	**Keskin Array S**	**153.60**	**294**	*e*PKPbc	**PKPbc**	**08 14 14.7**	**+0.4**
BRTR	**Keskin Array B**	**153.60**	**294**	PKPbc	**PKPbc**	**08 14 14.7**	**+0.4**
	0.7nm,0.8s,baz=108,slow=3.2,SNR=3.5						
TORD	**Torodi Ar. Bea**	**160.46**	**179**	PKPab	**PKPab**	**08 14 57.9**	**+1.2**
	0.3nm,0.6s,baz=197,slow=4.3,SNR=2.6						
TOA1	**Torodi Ar. Sit**	**160.46**	**179**	*e*PKPab	**PKPab**	**08 14 57.9**	**+1.2**

*CSEM **19** 07:55:20.8, 36°.14N×54°.57E, h14km, ML3.0*
TEH 19 07:55:21.7, 36°.09N×54°.42E, h15km, ML3.3, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGLO	**Ghaloghah**	**0.63**	**311**	*e*Pg	Pg	07 55 33.2	-1.0
IGLO				*e*Sg	Sb	07 55 44.2	+0.9
IGLO				*e*		07 55 45.2	
	comp=E,31μm,0.1s						
IGLO				*e*		07 55 45.9	
	comp=N,30μm,0.2s						
IGLO				*e*		07 55 46.2	
	comp=Z,15μm,0.2s						
IANJ	**Anjilo**	**0.75**	**214**	*e*Pg	Pg	07 55 35.2	-1.1
IANJ				*e*		07 55 49.0	
	comp=E,145nm,0.0s						
IANJ				*e*		07 55 54.6	
	comp=Z,10μm,0.1s						
ISHM	**Shahmirzad**	**0.96**	**253**	*e*Pg	Pb	07 55 39.5	-0.7
ISHM				*e*		07 55 57.0	
	comp=E,5μm,0.0s						
ISHM				*e*		07 55 57.2	
	comp=N,79nm,0.1s						
ISHM				*e*		07 55 59.5	
	comp=Z,16μm,0.1s						
SHRO	**Shahrood**	**1.29**	**94**	*e*Pg	Pn	07 55 42.5	-2.8
IALA	**Alasht**	**1.31**	**270**	*e*Pg	Pn	07 55 45.1	-0.6
IALA				*e*		07 56 05.6	
	comp=E,11μm,0.1s						
IALA				*e*		07 56 09.5	
	comp=Z,5μm,0.1s						
ILAS	**Lasjerd**	**1.39**	**240**	*e*Pg	Pb	07 55 47.2	-0.3
ILAS				*e*		07 56 11.6	
	comp=E,22μm,0.1s						
IMND	**Minoodasht**	**1.41**	**34**	*e*Pg	Pn	07 55 47.0	+0.2
IMND				*e*		07 56 07.3	
	comp=N,4μm,0.1s						
IMND				*e*		07 56 10.1	
	comp=Z,3μm,0.2s						
IMND				*e*		07 56 10.3	
	comp=E,5μm,0.2s						
IFIR	**Firoozkooh**	**1.43**	**252**	*e*Pn	Pn	07 55 46.4	-1.0
IFIR				*e*		07 56 11.3	
	comp=E,11μm,0.1s						
IFIR				*e*		07 56 11.5	
	comp=N,8μm,0.1s						
IFIR				*e*		07 56 12.5	
	comp=Z,9μm,0.1s						
IPRN	**Peran**	**1.69**	**276**	*e*Pn	Pn	07 55 50.9	0.0
IPRN				*e*		07 56 19.0	
	comp=Z,4μm,0.2s						
IPRN				*e*		07 56 20.2	
	comp=E,11μm,0.1s						
IPRN				*e*		07 56 20.4	
	comp=N,12μm,0.1s						
IDMV	**Damavand**	**2.01**	**256**	*e*Pn	Pn	07 55 56.

SHRT	Shahrakht	5.41	115	ePn	Pn	07 56 41.5	-0.4

ISCJB 19 07:59:50.0±2.3, 32°.48S±0°.06×71°.9W±0°.2, h15km±11km, Error ellipse: s-maj=24.7km s-min=7.8km az=162.2
SJA 19 07:59:49.5±0.7, 32°.43S×71°.69W, h10km±37km, ML2.3, MW3.3
GUC 19 07:59:50.5±0.6, 32°.29S×71°.24W, h6km±6km, ML2.4
ISC 19 07:59:47.8±2.4, 32°.36S±0°.04×71°.7W±0°.1, h4km±13km, n13, σ0°.94/20, 2C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROC1	El Roble	0.82	139	*i* P	Pn	08 00 06.6	+0.3
ROC1				*i* S	Sn	08 00 18.0	-0.9
ROCH	El Roble	0.82	138	*e*P	Pb	08 00 05.8	+1.1
ROCH				*i* S	Sb	08 00 15.6	-0.5
ROCH				IAML		08 00 20.7	
	comp=N,204nm,0.3s						
CLCH	Cerro Calan	1.40	138	*e*P	Pg	08 00 15.3	+0.7
CLCH				*i* S	Sn	08 00 33.1	0.0
CLCH				IAML		08 00 45.1	
	comp=E,176nm,0.8s						
FCH	Farellones	1.50	130	⇑*i* P	Pb	08 00 16.4	0.0
FCH				*i* S	Sn	08 00 36.1	+0.2
FCH				IAML		08 00 39.5	
	comp=E,108nm,0.2s						
LMEL	Las Melosas	1.92	141	⇑*i* P	Pb	08 00 23.3	-0.2
LMEL				*i* S	Sg	08 00 48.7	-0.8
LMEL				IAML		08 00 55.2	
	comp=N,125nm,0.2s						
AUSP	Uspallata	1.93	87	*i* P	Pg	08 00 26.4	+1.6
RTLS	Leoncito	2.08	75	*i* P	Pg	08 00 29.1	+1.5
RTLS				IAML		08 01 02.3	
	comp=Z,21nm,0.3s						
TLL	Tololo Astrono	2.31	19	*i* P	Pb	08 00 29.6	-0.4
TLL				*e*P	Pb	08 00 29.6	-0.4
TLL				*i* S	Sb	08 00 59.6	+0.6
ARCO	CERRO ARCO	2.35	102	*i* P	Pg	08 00 32.1	-0.7
ARCO				IAML		08 01 13.5	
	comp=Z,19nm,0.4s						
AAGR	Agrelo	2.49	108	*i* P	Pg	08 00 34.7	-0.8
RTCV	Cerro Valdivia	2.69	80	*i* P	Pg	08 00 37.4	-1.9
RTLL	Cerro Villicun	2.90	70	*i* P	Pb	08 00 40.5	+0.5
AMOG	MOGNA	3.05	63	*i* P	Pb	08 00 42.8	+0.2

IDC 19 08:03:05.6±1.1, 28°.36N×142°.14E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.6/61, mbtmp3.6/7, Error ellipse: s-maj=49.5km s-min=16.6km az=80.0
ISCJB 19 08:03:08.7±0.9, 28°.23N±0°.08×142°.1E±0°.3, h36km, mb3.5/8, Error ellipse: s-maj=39.0km s-min=8.8km az=170.0
ISC 19 08:03:10.8±1.0, 28°.25N±0°.10×142°.1E±0°.3, h36km, n15, σ1°.39/11, mb3.6/8, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	1.16	175	Pn	Pn	08 03 31.9	+1.6
	baz=288,slow=19						
JCJ				Sn	Sn	08 03 42.4	-2.6
	baz=225,slow=19						
KLR	Kul'dur	22.40	342	P	P	08 08 05.5	-0.4
	0.1nm,0.6s,baz=156,slow=10,SNR=5.6						
H11N2	WAKE ISLAND Hy	24.17	105	T	T	08 33 25.6	
	baz=296,slow=75,SNR=50						
H11N1	WAKE ISLAND Hy	24.18	105	T	T	08 33 24.5	
	baz=296,slow=75,SNR=33						
H11N3	WAKE ISLAND Hy	24.19	105	T	T	08 33 24.7	
	baz=296,slow=75,SNR=37						
H11S3	WAKE ISLAND Hy	24.55	108	T	T	08 34 00.1	
	baz=297,slow=76,SNR=19						
H11S1	WAKE ISLAND Hy	24.55	108	T	T	08 33 57.9	
	baz=297,slow=76,SNR=9.6						
H11S2	WAKE ISLAND Hy	24.56	108	T	T	08 34 10.1	
	baz=297,slow=76,SNR=17						
WRA	Warramunga Arr	48.49	190	P	P	08 11 49.1	-0.9
	0.9nm,0.5s,baz=11,slow=8.4,SNR=18						
MKAR	Makanchi Array	49.67	309	P	P	08 11 59.5	+0.6
	0.1nm,0.4s,baz=80,slow=8.0,SNR=2.2						
MKAR				PcP	PcP	08 13 19.8	-0.1
	0.3nm,0.6s,baz=108,slow=4.7,SNR=3.2						
KURBB	Kurchatov Arra	52.17	314	P	P	08 12 17.4	-0.3
	0.4nm,0.4s,baz=90,slow=8.6,SNR=3.0						
ASAR	Alice Springs	52.21	189	P	P	08 12 20.4	+2.2
	0.3nm,0.6s,baz=13,slow=8.6,SNR=1.8						
BVAR	Borovoye Array	57.13	317	P	P	08 12 53.2	-0.4
	0.6nm,0.4s,baz=96,slow=5.6,SNR=3.4						
YKA	Yellowknife Ar	71.17	29	P	P	08 14 25.3	-0.1
	0.2nm,0.4s,baz=296,slow=5.9,SNR=2.9						
FINES	FINESS Array B	76.87	334	P	P	08 14 58.4	-0.4
	1.1nm,0.7s,baz=80,slow=7.6,SNR=1.7						

NIED 19 08:07:00, 26°.80N×130°.30E, h5km, Mw3.7 Best double couple: M0=3.64000×10^14 NP1:φ0=225.00000°, δ=34.00000°, λ=-82.00000°. NP2:φ0=35.00000°, δ=56.00000°, λ=-95.00000°.
IDC 19 08:07:13.1±1.2, 26°.77N×130°.28E, h0km, mb3.7/8, mb1 3.8/9, mb1mx3.5/64, mbtmp3.7/9, ML3.3/1, Error ellipse: s-maj=38.9km s-min=21.0km az=69.0
ISCJB 19 08:07:15.2±1.7, 26°.80N±0°.03×130°.24E±0°.04, h30km±14km, mb3.6/8, Error ellipse: s-maj=5.6km s-min=5.4km az=147.9
JMA 19 08:07:15.3±0.1, 26°.77N×130°.27E, h48km, M3.6
ISC 19 08:07:14.7±3.4, 26°.80N±0°.04×130°.29E±0°.05, h16km±22km, n24, σ1°.77/39, mb3.7/8, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMZ	Minamidaito 2	1.28	139	P	Pn	08 07 37.1	-0.8
JMZ				S	Sb	08 07 52.8	-1.8
JZK	Kikaishima	1.54	349	P	Pb	08 07 42.3	-0.5
JZK				S	Sn	08 08 00.5	-0.7
JTK	Tokunoshima	1.55	310	P	Pn	08 07 41.2	-0.4
JTK				S	Sn	08 07 59.9	-1.5
JOKE	Okinoerabujima	1.64	291	P	Pn	08 07 42.7	-0.1
JOKE				S	Sn	08 08 02.0	-1.6
JAM	Amami Oshima	1.72	339	P	Pn	08 07 43.6	-0.4
JAM				S	Sn	08 08 03.6	-2.0
JAMN	Amaminishikomi	1.75	326	P	Pn	08 07 43.8	-0.6
JAMN				S	Sn	08 08 04.2	-2.2
JOW	Kunigami	1.81	272	Pn	Pn	08 07 44.7	-0.5
	51nm,0.3s,baz=109,slow=9.7,SNR=526						
JOW				Sn	Sn	08 08 05.2	-2.5
	145nm,0.3s,baz=274,slow=27,SNR=28						
JOW	Kunigami	1.81	272	P	Pn	08 07 44.6	-0.5
JOW				S	Sn	08 08 05.4	-2.3
JNTH	Nagotoyohara	2.05	263	P	Pn	08 07 47.7	-0.8
JNTH				S	Sn	08 08 10.7	-3.1
JIH	Iheya	2.09	277	P	Pn	08 07 48.8	-0.3
JIH				S	Sn	08 08 13.9	-0.9
JJT3	Tamagusuku3	2.34	254	P	Pn	08 07 52.3	-0.2
JJT3				S	Sn	08 08 19.7	-1.3
JTAJ	Takarajima	2.54	338	P	Pn	08 07 54.6	-0.6
JTAJ				*e*S	Sn	08 08 22.7	-3.1
JAGN	Aguni-jima	2.74	266	P	Pn	08 07 57.6	-0.4
JAGN				S	Sn	08 08 28.4	-2.3
JKE	Kume jima 2	3.18	262	P	Pn	08 08 03.3	-0.7
JKE				S	Sn	08 08 38.4	-3.2
JYAK	Yakushimahirau	3.43	3	S	Sn	08 08 45.2	-2.7
JNU	Nakatsue	6.33	4	Pn	Pn	08 08 48.0	+0.7
	0.7nm,0.3s,baz=183,slow=18,SNR=5.1						
JNU				Sn	Sn	08 09 54.8	-4.5
	0.6nm,0.3s,baz=154,slow=22,SNR=1.9						
MKAR	Makanchi Array	42.55	311	P	P	08 15 11.2	+1.6
	0.3nm,0.6s,baz=106,slow=9.0,SNR=4.5						
KURBB	Kurchatov Arra	45.73	316	P	P	08 15 36.4	+1.4
	0.5nm,0.6s,baz=101,slow=8.9,SNR=3.1						
WRA	Warramunga Arr	46.63	175	P	P	08 15 42.7	+0.3
	0.3nm,0.4s,baz=354,slow=8.6,SNR=5.2						
ASAR	Alice Springs	50.29	176	P	P	08 16 11.7	+1.2
	0.5nm,0.8s,baz=9.0,slow=14,SNR=3.4						
BVAR	Borovoye Array	51.09	318	P	P	08 16 18.2	+1.9
	0.7nm,0.6s,baz=99,slow=9.1,SNR=3.9						
FINES	FINESS Array B	73.28	331	P	P	08 18 45.0	0.0
	1.5nm,0.5s,baz=81,slow=8.6,SNR=3.4						
AKASG	Malin Array Be	76.30	320	P	P	08 19 03.1	+0.5
	0.2nm,0.4s,baz=58,slow=6.5,SNR=5.0						
BRTR	Keskin Array B	78.14	308	P	P	08 19 14.5	+1.0
	1.0nm,0.9s,baz=71,slow=6.2,SNR=2.8						

ISN 19 08:13:03.2±0.9, 37°.24N×42°.63E, h0km±3km, ML3.0
DDA 19 08:13:05.4, 37°.24N×42°.53E, h7km, Ml2.9
CSEM 19 08:13:05.5±0.2, 37°.23N×42°.61E, h2km, ML3.0, Error ellipse: s-maj=7.1km s-min=4.1km az=53.0
ISK 19 08:13:10.2, 37°.54N×42°.44E, h7km, ML3.0/8
ISC 19 08:13:05.0±1.3, 37°.23N±0°.04×42°.58E±0°.03, h6km±10km, n31, σ1°.12/50, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRT	Sirnak	0.30	337	PG	Pg	08 13 11.0	+0.1
SIRT				SG	Sg	08 13 13.9	-0.9
SIRT	Sirnak	0.30	337	*e*Pg	Pg	08 13 11.0	+0.1
SIRT				*e*Sg	Sg	08 13 13.9	-0.9
SIRN	S¨–rnak	0.30	333	*i* P	Pg	08 13 10.8	-0.1
SIRN				*i* S	Sg	08 13 14.7	-0.3
SIRN	S¨–rnak	0.30	333	P	Pg	08 13 10.8	-0.1
SIRN				S	Sg	08 13 14.7	-0.3
SRTM	Siirt_Merkez	0.93	326	*i* P	Pg	08 13 23.0	+0.2
SRTM				*i* S	Sg	08 13 35.5	+0.6
SRTM	Siirt_Merkez	0.93	326	P	Pg	08 13 23.0	+0.2
SRTM				S	Sg	08 13 35.5	+0.6
HAKT	HAKKARI	0.95	69	*i* P	Pb	08 13 24.4	+0.4
HAKT				*i* S	Sn	08 13 38.5	-0.8
HAKT	HAKKARI	0.95	69	P	Pb	08 13 24.5	+0.4
HAKT				S	Sn	08 13 38.5	-0.8
GEVA	Gevas	1.15	19	*i* P	Pg	08 13 27.0	-0.1
GEVA				*i* S	Sn	08 13 43.9	-0.1
GEVA	Gevas	1.15	19	P	Pg	08 13 27.0	-0.1
GEVA				S	Sn	08 13 43.9	-0.1
BTMN	Batman	1.24	303	*i* P	Pg	08 13 29.2	+0.5
BTMN				*i* S	Sn	08 13 46.6	+0.6
BTMN	Batman	1.24	303	P	Pg	08 13 29.2	+0.5
BTMN				S	Sn	08 13 46.6	+0.6
GURO	Guroymak-BITLI	1.39	342	PG	Pn	08 13 31.2	0.0
GURO	Guroymak-BITLI	1.39	342	*e*Pg	Pn	08 13 31.2	0.0
SVAN	Silvan-Diyarba	1.44	310	PN	Pb	08 13 32.8	+0.6
SVAN				SN	Sb	08 13 49.2	-1.6
SVAN	Silvan-Diyarba	1.44	310	*i* P	Pb	08 13 32.6	+0.4
SVAN				*i* S	Sn	08 13 51.5	+0.6
SVAN	Silvan-Diyarba	1.44	310	P	Pb	08 13 32.6	+0.4
SVAN	Silvan-Diyarba	1.44	310	*e*Pn	Pb	08 13 32.8	+0.6
SVAN				S	Sn	08 13 51.5	+0.6
MARD	Mardin	1.44	274	*i* P	Pn	08 13 31.6	-0.3
MARD				*i* S	Sn	08 13 51.2	0.0
MAZI	Mazidag	1.72	278	PN	Pg	08 13 39.4	+1.4
DYBB	Diyarbakir	2.07	291	PN	Pb	08 13 43.6	+0.5
HANI	Diyarbakir_Han	2.10	305	*i* P	Pn	08 13 42.4	+1.6
HANI				*i* S	Sn	08 14 04.8	-2.5
HANI	Diyarbakir_Han	2.10	305	P	Pn	08 13 42.4	+1.6
HANI				S	Sn	08 14 04.8	-2.5
BNGB	Bing¨¶l	2.32	320	PN	Pn	08 13 45.5	+1.7
BINT	Bingol	2.33	316	*e*Pn	Pn	08 13 45.5	+1.4
SVRC	Sivrice-ELAZID	2.84	295	PN	Pb	08 13 54.3	-1.9
SVRC	Sivrice-ELAZID	2.84	295	*e*Pn	Pb	08 13 54.3	-1.9
URFA	Urfa	3.01	275	PN	Pb	08 13 57.6	-1.4
PTK	Pertek	3.02	304	PN	Pn	08 13 55.9	+2.3
PTK	Pertek	3.02	304	*e*Pn	Pn	08 13 55.9	+2.3
RTB	Rutbah	4.58	205	*e*Pn	Pn	08 14 16.0	+1.1
	SNR=3.0						
RTB				*e*Sn	Sn	08 15 07.0	-1.6
	SNR=3.0						

TAP 19 08:16:53.1, 22°.36N×120°.70E, h32km, ML3.5, 6C-6D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCZT	Fangliau	0.08	282	⇓*i* P	Pb	08 16 58.8	+0.3
	baz=282						
SCZT				S	Sb	08 17 02.6	+0.4
	baz=282						
EAST	Anshuo	0.14	79	⇓*i* P	Pn	08 16 59.5	+0.3
	baz=72						
EAST				*i* S	Sb	08 17 04.1	+1.1
	baz=72						
SSPT	Xinbi	0.18	316	⇑P	Pn	08 17 00.1	+0.5
	baz=318						
SSPT				S	Sn	08 17 05.5	+1.9
	baz=318						
TAW	Tawu	0.18	89	⇓*i* P	Pn	08 16 59.6	0.0
	baz=90						
TAW				*i* S	Sn	08 17 04.5	+0.8
	baz=90						
MASBT	Mashibuluo	0.26	346	⇓P	Pn	08 17 00.8	0.0
	baz=352						
MASBT				S	Sn	08 17 05.9	+0.1
	baz=352						
WLCH	Liuqiu	0.30	269	P	Pn	08 17 02.3	+1.1
	baz=264						
WLCH				*e*S	Sn	08 17 09.7	+3.1
	baz=264						
TWP	Hsiaoliuchiu	0.31	268	⇑P	Pn	08 17 02.4	+0.9
	baz=264						
TWP				*e*S	Sn	08 17 10.0	+3.0
	baz=264						
ECL	Taimali	0.34	44	*i* P	Pn	08 17 01.8	0.0
	baz=46						
ECL				*i* S	Sn	08 17 07.5	-0.1
	baz=46						
HEN	Hengchun	0.35	174	*e*P	Pb	08 17 01.6	+0.2
	baz=169						
HEN				S	Sn	08 17 08.0	+0.1
	baz=169						
SSD	Sandimen	0.39	351	⇑*i* P	Pn	08 17 02.5	-0.1
	baz=353						
SSD				*e*S	Sn	08 17 09.3	+0.3
	baz=353						
SGLT	Jiouru	0.41	332	*e*P	Pn	08 17 03.9	+1.0
	baz=341						
SGLT				*e*S	Sn	08 17 11.9	+2.4
	baz=341						
KAU	Kaohsiung	0.42	300	*e*P	Pn	08 17 04.2	+1.2
	baz=288						
KAU				*e*S	Sn	08 17 12.9	+3.3
	baz=288						
TWK1	Hengchun	0.42	167	⇓*i* P	Pn	08 17 02.8	-0.1
	baz=161						
TWK1				S	Sn	08 17 09.8	+0.1
	baz=161						
TWKBT	Hengchun	0.43	166	⇓P	Pn	08 17 02.8	-0.2
	baz=161						
TWKBT				S	Sn	08 17 09.6	-0.2
	baz=161						
TSEB	Hengchuen, Pin	0.49	158	*e*P	Pb	08 17 03.6	+0.2
	baz=164						
TSEB				*e*S	Sn	08 17 11.5	+0.1
	baz=164						
TTN	Taitung	0.57	46	P	Pn	08 17 06.0	+1.0
	baz=59						
TTN				*e*S	Sn	08 17 14.4	+1.0
	baz=59						
TWG	Pinlang	0.58	36	⇑*i* P	Pn	08 17 05.4	+0.3
	baz=50						
TWG				*i* S	Sn	08 17 13.7	+0.2
	baz=50						
TWGBT	Beinan	0.58	37	⇑P	Pn	08 17 05.5	+0.3
	baz=50						
TWGBT				S	Sn	08 17 13.9	+0.3
	baz=50						
SLGT	Liugui	0.64	355	*e*P	Pn	08 17 06.3	+0.4
	baz=356						
SLGT				*e*S	Sn	08 17 15.9	+0.8
	baz=356						
SGST	Jiashian	0.73	351	*e*P	Pb	08 17 08.0	+0.6
	baz=352						
CHN3	Shinhua	0.78	337	*e*P	Pb	08 17 09.1	+0.9
	baz=336						
TWH	Lutao	0.80	64	⇑*i* P	Pn	08 17 07.9	-0.3
	baz=66						
TWH				S	Sb	08 17 19.2	+0.2
	baz=66						
CHN1	Nanshi	0.84	349	*e*P	Pn	08 17 09.0	+0.2
	baz=348						
ELDTW	Lidau	0.88	19	*e*P	Pb	08 17 09.9	0.0
	baz=19						
WTP	Ta-pu	0.89	355	*e*P	Pb	08 17 10.6	+0.5
	baz=340						
TWK	Hsinying	0.93	348	*e*P	Pb	08 17 11.1	+0.3
	baz=348						
SCLT	Jiali	0.94	330	*e*P	Pn	08 17 09.8	-0.3
	baz=330						
TPUB	Ta-pu	0.94	356	*e*P	Pb	08 17 10.6	-0.3
	baz=342						

CHKT	Chengkung	0.96	40	*e*P	Pn	08 17 10.5	+0.1
	baz=39						
FULB	Fuli	1.00	33	P	Pb	08 17 11.7	-0.3
	baz=46						
FULB				*e*S	Sb	08 17 26.1	+1.2
	baz=46						
TWF1	Yuli	1.13	29	*e*P	Pb	08 17 14.0	-0.1
	baz=29						
TWF1				*e*S	Sb	08 17 28.8	+0.2
	baz=29						
YULB	Yu-li	1.17	28	*e*P	Pn	08 17 13.3	0.0
	baz=27						
HGSD	Ruisui	1.31	30	*e*P	Pn	08 17 16.1	+0.9
	baz=15						
WSF	Szhu	1.35	341	*e*P	Pn	08 17 15.3	-0.4
	baz=341						
WSF				*e*S	Sn	08 17 32.7	+0.1
	baz=341						
SSLB	Suanglung	1.44	9	*e*P	Pn	08 17 17.9	+0.8
	baz=9.0						
SSLB				*e*S	Sb	08 17 36.4	-1.1
	baz=9.0						
WJS	Zhushan	1.46	1	*e*P	Pb	08 17 19.6	-0.1
	baz=346						
EGFH	Guangfu	1.47	27	*e*P	Pn	08 17 18.2	+0.8
	baz=24						
SMLT	Sun Moon Lake	1.53	7	*e*P	Pn	08 17 18.7	+0.4
	baz=7.0						
SMLT				*e*S	Sn	08 17 38.4	+1.1
	baz=7.0						
TYC	Yuchr	1.55	5	*e*P	Pn	08 17 19.1	+0.6
	baz=349						
PHUB	P'eng-hu	1.55	318	*e*P	Pn	08 17 16.4	-2.1
	baz=318						
RLNB	Erlin	1.56	348	*e*P	Pn	08 17 18.5	-0.1
	baz=337						
RLNB				*e*S	Sn	08 17 38.8	+1.1
	baz=337						
ESL	Shilin	1.60	25	*e*P	Pn	08 17 20.4	+1.2
	baz=22						
PNG	Penghu	1.60	319	*e*P	Pn	08 17 17.5	-1.7
	baz=319						
CHGB	Renai	1.75	14	*e*P	Pn	08 17 22.4	+1.0
	baz=357						
TWD	Chiawan	1.90	25	*e*P	Pn	08 17 23.6	+0.2
	baz=22						
TDCB	Techi	1.94	12	*e*P	Pn	08 17 24.5	+0.6
	baz=356						
TWT	Tachien	1.94	13	*e*P	Pn	08 17 24.8	+0.7
	baz=356						
NACB	Ninganchiao	1.99	24	*e*P	Pn	08 17 25.1	+0.6
	baz=20						
NNSB	Datong	2.16	17	*e*P	Pn	08 17 28.4	+1.4
	baz=17						
NNSB				*e*S	Sn	08 17 55.1	+2.4
	baz=17						
NNSH	Datong	2.16	17	*e*P	Pn	08 17 28.6	+1.6
	baz=13						
NNS	Nan Shan	2.16	16	*e*P	Pn	08 17 28.8	+1.7
	baz=13						
NANB	Nanao	2.28	25	*e*P	Pn	08 17 28.5	0.0
	baz=21						
NSTT	Nanjuang	2.28	7	*e*P	Pn	08 17 28.3	-0.3
	baz=350						
LIOB	Emei	2.30	7	*e*P	Pn	08 17 28.6	-0.3
	baz=351						
YHNB	Yeheng	2.38	15	*e*P	Pn	08 17 31.1	+1.0
	baz=11						
NSK	Sanguang	2.39	15	*e*P	Pn	08 17 31.4	+1.3
	baz=11						
ENTT	Nioudou	2.41	19	*e*P	Pn	08 17 31.6	+1.3
	baz=28						
TWC	Suao	2.48	25	*e*P	Pn	08 17 32.3	+1.1
	baz=21						
EOS1	EOS1	2.55	31	*e*P	Pn	08 17 34.5	+2.3
	baz=26						
TIPB	Shuangxi	2.80	21	*e*P	Pn	08 17 36.1	+0.4
	baz=28						
KNM	Kinmen	2.92	315	*e*P	Pn	08 17 38.1	+0.7
	baz=312						
YOJ	Yonaguni jima	2.98	45	*e*P	Pn	08 17 40.2	+2.0
	baz=41						
KNMB	Chin-men Tao	2.99	315	*e*P	Pn	08 17 37.7	-0.6
	baz=314						
MATB	Ma-tsu	3.84	350	*e*P	Pn	08 17 49.5	-0.6
	baz=347						

IDC 19 08:27:11.4±2.0, 5°.62S×150°.80E, h0km, mb3.4/3, mb1 3.8/3, mb1mx3.4/45, mbtmp3.5/3, Error ellipse: s-maj=131.8km s-min=28.4km az=125.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.42	227	P	P	08 32 01.2	0.0
	0.6nm,0.5s,baz=53,slow=10,SNR=10						
ASAR	Alice Springs	24.22	221	P	P	08 32 30.1	0.0
	1.0nm,0.7s,baz=53,slow=9.3,SNR=15						
ILAR	Eielson Array	83.67	22	P	P	08 39 41.6	-0.2
	0.3nm,0.6s,baz=234,slow=4.6,SNR=6.3						
TORD	Torodi Ar. Bea	148.64	286	PKPbc	PKPbc	08 47 01.2	-0.4
	0.3nm,0.6s,baz=62,slow=2.8,SNR=2.5						

ISCJB 19 08:38:51.4±0.6, 51°.43N±0°.03×16°.23E±0°.03, h0km, Error ellipse: s-maj=4.0km s-min=2.7km az=15.8
IDC 19 08:38:53.5±1.4, 51°.41N×16°.32E, h0km, mb1 3.5/3, mb1mx3.1/67, mbtmp3.5/3, ML3.0/3, Error ellipse: s-maj=38.8km s-min=9.0km az=116.0
CSEM 19 08:38:53.6±0.3, 51°.43N×16°.23E, h2km, ML3.3/12, Mw2.8, Error ellipse: s-maj=4.1km s-min=2.2km az=5.0
PRU 19 08:38:54.9, 51°.41N×16°.20E, h0km
VIE 19 08:38:56.7±1.1, 51°.25N×16°.16E, h0km, mb2.3/6, ml2.8/6, Error ellipse: s-maj=10.5km s-min=5.8km az=126.0 62 km WNW of Wroclaw Suspected Mining induced.
WAR 19 08:38:58.9, 51°.02N×15°.79E, h1km, Mw2.8
ISC 19 08:38:52.4±0.8, 51°.49N±0°.04×16°.27E±0°.02, h0km, n51, σ0°.88/91, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.64	179	*i* Pg	Pg	08 39 05.8	+1.1
KSP				*e*Sg	Sg	08 39 13.7	+0.8
KSP	Ksiaz	0.64	179	*i* Pg	Pg	08 39 05.8	+1.1
KSP				*e*Sg	Sg	08 39 13.7	+0.8
UPC	Upice	0.99	190	*e*PG	Pg	08 39 11.8	+0.5
UPC				*e*SG	Sg	08 39 24.3	+0.1
	comp=Z,130nm,0.4s						
UPC	Upice	0.99	190	Pg	Pg	08 39 11.8	+0.5
UPC				Sg	Sg	08 39 24.3	+0.1
	130nm,0.4s						
DPC	Dobruska-Polom	1.14	178	*e*PG	Pg	08 39 14.8	+0.7
DPC				*e*SG	Sg	08 39 28.7	-0.1
	comp=Z,45nm,0.4s						
DPC	Dobruska-Polom	1.14	178	Pg	Pg	08 39 14.8	+0.7
DPC				Sg	Sg	08 39 28.7	-0.1
	45nm,0.4s						
PVCC	Panska Ves	1.44	229	*e*PG	Pg	08 39 20.4	+0.5
PVCC				*e*SG	Sb	08 39 39.1	+0.2
	comp=Z,186nm,0.3s						
PVCC	Panska Ves	1.44	229	Pg	Pg	08 39 20.4	+0.5
PVCC				Sg	Sb	08 39 39.1	+0.2
	186nm,0.3s						
KRLC	Kraliky	1.45	167	*e*PG	Pn	08 39 20.4	+0.5
KRLC				*e*SG	Sg	08 39 39.0	+0.2
	comp=Z,7.1nm,0.3s						
KRLC	Kraliky	1.45	167	Pg	Pn	08 39 20.4	+0.5
KRLC				Sg	Sg	08 39 39.0	+0.2

comp=Z,35nm,0.5s
PRU Pruhonice 1.86 217 Pg **Pb 08 39 27.3 +0.1**
PRU Sg **Sb 08 39 50.8 -0.1**
35nm,0.5s
MORC Moravsky Berou 1.89 154 *e*Pn **Pn 08 39 26.3 +0.3**
MORC *e*Sg **Sg 08 39 53.4 +0.3**
MORC Moravsky Berou 1.89 154 *e*PN **Pn 08 39 26.3 +0.3**
MORC *e*SG **Sg 08 39 53.4 +0.3**
OKC Ostrava-Krasne 2.04 143 *e*PG **Pg 08 39 31.7 +0.3**
OKC *e*SG **Sg 08 39 57.6 -0.1**
OKC Ostrava-Krasne 2.04 143 Pg **Pg 08 39 31.7 +0.3**
OKC Sg **Sg 08 39 57.6 -0.1**
CLL Collm 2.05 266 *e*Pg **Pg 08 39 32.0 +0.3**
CLL *e*Sg **Sb 08 39 58.0 +1.4**
comp=Z,21nm,0.4s
VRAC Vranov 2.19 174 *e*Pn **Pn 08 39 30.9 +0.9**
VRAC *e*Sg **Sg 08 40 02.0 -0.6**
VRAC Vranov 2.19 174 *e*PN **Pn 08 39 30.9 +0.9**
VRAC *e*SG **Sg 08 40 02.0 -0.6**
KRUC Moravsky 2.43 178 *e*PN **Pn 08 39 34.0 +0.7**
KRUC *e*SG **Sg 08 40 09.8 -0.5**
OJC Ojcow 2.57 118 *e*Pg **Pg 08 39 42.8 +1.2**
OJC *e*Sg **Sg 08 40 17.1 +2.2**
OJC Ojcow 2.57 118 *e*Pg **Pg 08 39 42.8 +1.2**
OJC *e*Sg **Sg 08 40 17.1 +2.2**
NKC Novy Kostel 2.73 244 *e*PG **Pg 08 39 45.4 +0.8**
NKC *e*SG **Sg 08 40 20.8 +0.9**
comp=Z,22nm,0.3s
NKC Novy Kostel 2.73 244 Pg **Pg 08 39 45.4 +0.8**
NKC Sg **Sg 08 40 20.8 +0.9**
comp=Z,22nm,0.3s
JAVC Velka Javorina 2.78 161 *e*PN **Pn 08 39 40.3 +2.1**
JAVC *e*SG **Sg 08 40 22.9 +1.3**
KHC Kasperske Hory 2.92 217 *e*PG **Pb 08 39 46.2 +0.9**
KHC *e*SN **Sn 08 40 15.0 -0.9**
KHC *e*SG **Sg 08 40 24.7 -1.4**
comp=Z,14nm,0.3s
KHC Kasperske Hory 2.92 217 Pg **Pb 08 39 46.2 +0.9**
KHC Sn **Sn 08 40 15.0 -0.9**
KHC Sg **Sg 08 40 24.7 -1.4**
comp=Z,14nm,0.3s
SMOL Smolenice 3.07 165 *e*PG **Pb 08 39 46.5 -1.3**
SMOL Smolenice 3.07 165 *e*Pg **Pb 08 39 46.5 -1.3**
LANS Liptovska Anna 3.11 138 *e*PG **Pg 08 39 52.5 +0.6**
LANS *e*SG **Sg 08 40 32.5 +0.3**
LANS Liptovska Anna 3.11 138 *e*Pg **Pg 08 39 52.5 +0.6**
LANS *e*Sg **Sg 08 40 32.5 +0.3**
GERES GERESS Array B 3.12 213 Pg **Pb 08 39 49.5 +0.9**
comp=Z,4.9nm,0.3s,baz=29,slow=16,SNR=30
GERES Lg Lg 08 40 28.9
comp=Z,4.4nm,0.3s,baz=34,slow=27,SNR=4.9
MODS Modra-Piesok 3.18 168 *e*PG **Pg 08 39 53.6 +0.3**
MODS *e*SG **Sg 08 40 35.4 +0.9**
MODS *e*LG Lg 08 40 37.2
MODS Modra-Piesok 3.18 168 *e*Pg **Pg 08 39 53.6 +0.3**
MODS *e*Sg **Sg 08 40 35.4 +0.9**
VYHS Vyhne 3.42 150 *e*PG **Pg 08 39 58.7 +0.8**
VYHS *e*SG **Sg 08 40 41.5 -0.7**
VYHS Vyhne 3.42 150 *e*Pg **Pg 08 39 58.7 +0.8**
VYHS *e*Sg **Sg 08 40 41.5 -0.7**
CONA Conrad Observa 3.57 184 Sg **Sg 08 40 46.4 -0.6**
comp=Z,6.9nm,0.2s
CONA Conrad Observa 3.57 184 Sg **Sg 08 40 46.4 -0.6**
comp=Z,6.9nm,0.2s
MOA Molln 3.87 200 *i* Pn **Pn 08 39 54.1 +1.0**
comp=Z,2.1nm,0.3s
MOA *e*Sg **Sg 08 40 55.6 -0.8**
comp=Z,7.3nm,0.4s
MOA Molln 3.87 200 Pn **Pn 08 39 54.1 +1.0**
comp=Z,2.1nm,0.3s
MOA Sg **Sg 08 40 55.6 -0.8**
comp=Z,7.3nm,0.4s
ARSA Arzberg 4.27 187 *e*Sg **Sg 08 41 09.8 +0.4**
comp=Z,6.3nm,0.5s
ARSA Arzberg 4.27 187 Sg **Sg 08 41 09.8 +0.4**
comp=Z,6.3nm,0.5s
KBA Koelnbreinsper 4.81 205 *e*Sg **Sg 08 41 28.3 +1.5**
comp=Z,5.1nm,0.4s
HFS Hagfors 8.79 352 Pn **Pn 08 41 00.3 -0.3**
comp=Z,0.2nm,0.3s,baz=172,slow=15,SNR=1.5
FINES FINESS Array B 11.34 25 Pn **Pn 08 41 33.2 -2.3**
comp=Z,0.2nm,0.3s,baz=209,slow=11,SNR=4.5
FINES Sn Sn 08 43 33.3 -10
comp=Z,0.2nm,0.3s,baz=217,slow=23,SNR=2.0
ARCES ARCESS Array B 18.63 10 Pn **P 08 43 09.1 -2.1**
comp=Z,0.2nm,0.3s,baz=199,slow=13,SNR=5.7

*IDC **19** 08:56:17.9±3.2,24°.03S×66°.48W,h184km±30km,mb3.6/3, mb1 3.6/6,mb1mx3.3/41,mbtmp4.1/6,Error ellipse: s-maj=44.9km s-min=26.5km az=113.0*
*ISCJB **19** 08:56:18.8±0.3,23°.95S±0°.02×66°.75W±0°.03,h200km, mb4.0/5,Error ellipse: s-maj=4.4km s-min=3.2km az=177.9*
*SJA **19** 08:56:18.6±0.5,23°.90S×66°.68W,h224km±6km,ML3.5, MW3.5*
*NEIC **19** 08:56:19.4±1.5,24°.05S×66°.67W,h223km±18km,mb4.1/4, Error ellipse: s-maj=33.6km s-min=12.8km az=88.0*
*GUC **19** 08:56:21.4±0.5,23°.78S×67°.43W,h257km±17km,ML4.7*
ISC 19 08:56:18.3±0.6,**23°.93S**±0°.04×**66°.77W**±0°.05,**h200**km,**n38,**
σ1º**82**/60,**mb4.0**/5,**8C-1D,Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**1.40**	**124**	*e*P		**Pn**	**Pn**	**08 56 54.0**	**+2.6**
SLA				*e*S		**Sn**	**Sn**	**08 57 19.8**	**+2.8**
SLA				IAML				08 57 20.5	
comp=Z,70nm,0.5s									
YJA	**Yavi**	**2.10**	**34**	*e*P		**Pn**	**Pn**	**08 57 00.9**	**+2.5**
YJA				*e*S		**Sn**	**Sn**	**08 57 31.8**	**+2.3**
GO02	**Mina Guanaco**	**2.84**	**244**	*e*Pn		**Pn**	**Pn**	**08 57 09.5**	**+3.0**
GO02				*e*S		**Sn**	**Sn**	**08 57 47.1**	**+3.1**
PB06	**IPOC Station P**	**2.85**	**295**	⇑*i*P		**Pn**	**Pn**	**08 57 09.0**	**+2.6**
PB06				*i* S		**Sn**	**Sn**	**08 57 44.7**	**+0.9**
PB06				IAML				08 57 47.5	
comp=N,1μm,0.2s									
PB09	**IPOC Station P**	**3.12**	**313**	⇑*i*P		**Pn**	**Pn**	**08 57 12.7**	**+3.1**
PB09				*i* S		**Sn**	**Sn**	**08 57 51.2**	**+1.6**
PB09				IAML				08 57 54.5	
comp=E,434nm,0.2s									
PB14	**IPOC Station P**	**3.38**	**257**	*e*P		**Pn**	**Pn**	**08 57 15.8**	**+2.9**
PB14	**IPOC Station P**	**3.38**	**257**	⇓*i*P		**Pn**	**Pn**	**08 57 15.4**	**+2.5**
PB14				*i* S		**Sn**	**Sn**	**08 57 56.5**	**+0.9**
PB10	**IPOC Station P**	**3.49**	**276**	*e*Pn		**Pn**	**Pn**	**08 57 16.8**	**+2.9**
PB10				*e*S		**Sn**	**Sn**	**08 57 58.2**	**+0.9**
PB10	**IPOC Station P**	**3.49**	**276**	*e*P		**Pn**	**Pn**	**08 57 16.7**	**+2.9**
PB10	**IPOC Station P**	**3.49**	**276**	⇑*i*P		**Pn**	**Pn**	**08 57 16.7**	**+2.9**
PB10				*i* S		**Sn**	**Sn**	**08 57 57.6**	**+0.3**
PB04	**IPOC Station P**	**3.49**	**296**	*e*Pn		**Pn**	**Pn**	**08 57 16.5**	**+2.4**
PB04				*e*S		**Sn**	**Sn**	**08 57 58.9**	**+1.2**
PB04	**IPOC Station P**	**3.49**	**296**	⇑*i*P		**Pn**	**Pn**	**08 57 16.5**	**+2.4**
PB04				*i* S		**Sn**	**Sn**	**08 57 57.9**	**+0.2**
PB04				IAML				08 58 04.4	
comp=N,959nm,0.3s									
PB07	**IPOC Station P**	**3.62**	**307**	⇑*i*P		**Pn**	**Pn**	**08 57 17.7**	**+2.1**
PB07				*i* S		**Sn**	**Sn**	**08 58 00.6**	**+0.2**
PB07				IAML				08 58 01.7	
comp=N,939nm,0.2s									
PB01	**IPOC Station P**	**3.82**	**318**	*e*Pn		**Pn**	**Pn**	**08 57 20.0**	**+2.0**
PB01				*e*S		**Sn**	**Sn**	**08 58 06.8**	**+2.1**
PB01	**IPOC Station P**	**3.82**	**318**	⇑*i*P		**Pn**	**Pn**	**08 57 19.9**	**+2.0**
PB01				*i* S		**Sn**	**Sn**	**08 58 05.3**	**+0.6**
PB01				IAML				08 58 07.6	
comp=E,446nm,0.3s									
PB02	**IPOC Station P**	**3.88**	**311**	⇑*i*P		**Pn**	**Pn**	**08 57 20.5**	**+1.7**
PB02				*i* S		**Sn**	**Sn**	**08 58 05.8**	**-0.5**
PB02				IAML				08 58 07.2	
comp=E,784nm,0.3s									
PB08	**IPOC Station P**	**4.37**	**329**	⇑*i*P		**Pn**	**Pn**	**08 57 27.8**	**+2.5**
PB08				*i* S		**Sn**	**Sn**	**08 58 18.9**	**+1.2**
PB08				IAML				08 58 20.4	
comp=E,136nm,0.2s									
GO03	**Copiap**	**4.80**	**220**	*e*Pn		**Pn**	**Pn**	**08 57 31.3**	**+1.0**
GO03				*e*S		**Sn**	**Sn**	**08 58 26.3**	**-0.6**
VCA	**Vinchina**	**4.95**	**195**	*e*P		**Pn**	**Pn**	**08 57 35.5**	**+3.3**
VCA				IAML				08 58 36.1	
comp=Z,29nm,0.5s									
MNMC	**Minye Minye**	**5.45**	**331**	*e*Pn		**Pn**	**Pn**	**08 57 40.0**	**+1.1**
MNMC				*e*S		**Sn**	**Sn**	**08 58 41.8**	**-0.7**
ACLC	**CERRO LA CRUZ**	**5.47**	**182**	*e*P		**Pn**	**Pn**	**08 57 40.8**	**+1.9**
ACLC				*e*S		**Sn**	**Sn**	**08 58 42.0**	**-0.7**
LCO	**Las Campanas**	**6.16**	**214**	*e*Pn		**Pn**	**Pn**	**08 57 47.8**	**-0.1**
LCO				*e*S		**Sn**	**Sn**	**08 58 57.7**	**-1.2**
APLL	**PUNTA DE LOS L**	**6.44**	**178**	*e*P		**Pn**	**Pn**	**08 57 52.4**	**+1.1**
ACDV	**Cuesta del Vie**	**6.56**	**198**	*e*P		**Pn**	**Pn**	**08 57 55.5**	**+2.6**
ACDV				IAML				08 57 56.4	
comp=Z,28nm,0.4s									
GO04	**Tololo Observa**	**7.18**	**209**	*e*Pn		**Pn**	**Pn**	**08 58 01.1**	**+0.1**
GO04				*e*S		**Sn**	**Sn**	**08 59 21.1**	**-1.5**
LPAZ	**La Paz**	**7.71**	**350**	P		**Pn**	**Pn**	**08 58 10.3**	**+1.8**
comp=Z,2.9nm,0.3s,baz=162,slow=13,SNR=90									
LPAZ				S			**Sn**	**08 59 34.7**	**-1.3**
baz=249,slow=22,SNR=1.5									
ACAN	**Cantantal**	**8.32**	**182**	*e*P		**Pn**	**Pn**	**08 58 16.6**	**+0.8**
SIV	**San Ignacio**	**9.54**	**35**	P		**Pn**	**Pn**	**08 58 30.8**	**-1.0**
comp=Z,1.2nm,0.3s,baz=224,slow=12,SNR=53									
SIV				S			**Sn**	**09 00 17.6**	**-1.1**
comp=Z,0.1nm,0.3s,baz=269,slow=18,SNR=1.5									
TRQA	**Tornquist**	**14.66**	**165**	*e*Pn		**Pn**	**Pn**	**08 59 35.4**	**-1.0**
SAML	**Samuel**	**15.29**	**14**	*e*P		**P**	**P**	**08 59 45.1**	**+0.6**
comp=Z,3.5nm,0.7s									
PLCA	**Paso Flores**	**17.05**	**190**	P		**P**	**P**	**09 00 03.5**	**-0.3**
comp=Z,0.1nm,0.3s,baz=346,slow=12,SNR=4.9									
PTGA	**Pitinga**	**23.99**	**17**	P		**P**	**P**	**09 01 14.9**	**0.0**
comp=Z,2.1nm,0.5s,baz=198,slow=13,SNR=5.1									
PTGA	**Pitinga**	**23.99**	**17**	*e*P		**P**	**P**	**09 01 15.2**	**+0.4**
comp=Z,2.2nm,0.6s									
W50A	**Signal Mountai**	**61.38**	**343**	*e*P		**P**	**P**	**09 06 11.9**	**-1.3**
comp=Z,3.8nm,0.4s									
319A	**Douglas**	**68.41**	**322**	*e*P		**P**	**P**	**09 06 58.7**	**0.0**
comp=Z,4.1nm,0.7s									
KOWA	**Kowa**	**72.22**	**65**	P		**P**	**P**	**09 07 22.3**	**+0.3**
comp=Z,0.6nm,0.3s,baz=245,slow=4.0,SNR=2.9									
TORD	**Torodi Ar. Bea**	**76.35**	**69**	P		**P**	**P**	**09 07 45.7**	**-0.2**
comp=Z,0.8nm,0.4s,baz=253,slow=5.1,SNR=19									
SLD	**San Luis Dam**	**79.43**	**319**	*e*P		**P**	**P**	**09 08 02.5**	**+0.1**

*ISCJB **19** 08:59:52.8±0.5,54°.10N±0°.09×165°.13W±0°.08,h85km±3km, mb3.4/6,Error ellipse: s-maj=16.8km s-min=3.8km az=153.9*
*IDC **19** 08:59:52.9±7.8,54°.32N×165°.27W,h61km±57km,mb3.3/7, mb1 3.5/8,mb1mx3.2/78,mbtmp3.6/8,ML3.2/2,Error ellipse: s-maj=65.5km s-min=31.9km az=27.0*
*NEIC **19** 08:59:53.2±0.0,53°.91N×164°.99W,h65km,mb3.4/3, ML3.5(AEIC),After AEIC.*
ISC 19 08:59:53.4±0.9,**54°.10N**±0°.1×**165°.08W**±0°.06,**h77**km±7km,
n70,σ1º**46**/72,**mb3.5**/6,**Fox Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AKSA	**Akutan Strait**	**0.39**	**291**	P		**Pn**	**Pn**	**09 00 05.7**	**-0.2**
AKA	**Akutan**	**0.43**	**289**	P		**Pn**	**Pn**	**09 00 06.4**	**+0.2**
AKUT	**Akutan**	**0.43**	**289**	P		**Pn**	**Pn**	**09 00 06.1**	**-0.1**
AKUT				S		**Sn**	**Sn**	**09 00 15.6**	**-0.1**
AHB	**Akutan Harbor**	**0.45**	**285**	P		**Pn**	**Pn**	**09 00 06.3**	**-0.1**
HSB	**Akutan Spr's B**	**0.53**	**291**	P		**Pn**	**Pn**	**09 00 06.9**	**-0.2**
WESP	**Westdahl Peak**	**0.54**	**23**	P		**Pn**	**Pn**	**09 00 07.4**	**+0.1**
WESP				S		**Sn**	**Sn**	**09 00 16.7**	**-0.8**
WESE	**West Dahl East**	**0.56**	**31**	P		**Pn**	**Pn**	**09 00 07.2**	**-0.2**
AKMO	**Akutan Morgan**	**0.56**	**280**	P		**Pn**	**Pn**	**09 00 07.3**	**-0.1**
AKMO				S		**Sn**	**Sn**	**09 00 17.4**	**-0.3**
WECS	**Westdahl Cape**	**0.56**	**18**	P		**Pn**	**Pn**	**09 00 07.7**	**+0.2**
LVA	**Lava Point**	**0.59**	**286**	P		**Pn**	**Pn**	**09 00 07.7**	**+0.1**
UNV	**Unalaska Valle**	**0.86**	**260**	P		**Pn**	**Pn**	**09 00 10.3**	**-0.2**
UNV				S		**Sn**	**Sn**	**09 00 22.9**	**-0.4**
MTBL	**Makushin Table**	**0.95**	**269**	P		**Pn**	**Pn**	**09 00 11.9**	**+0.3**
SSLS	**Shishaldin Sou**	**0.95**	**41**	P		**Pn**	**Pn**	**09 00 11.6**	**-0.1**
MREP	**Makushin Rep't**	**1.01**	**260**	P		**Pn**	**Pn**	**09 00 12.7**	**+0.3**
MSW	**Makushin Switc**	**1.01**	**266**	P		**Pn**	**Pn**	**09 00 12.6**	**+0.2**
MSW				S		**Sn**	**Sn**	**09 00 27.0**	**+0.4**
BRPK	**Brown Peak**	**1.02**	**50**	P		**Pn**	**Pn**	**09 00 11.9**	**-0.5**
BRPK				S		**Sn**	**Sn**	**09 00 26.3**	**-0.4**
MCIR	**Makushin Cirqu**	**1.07**	**268**	P		**Pn**	**Pn**	**09 00 13.6**	**+0.4**
ISLZ	**Isanotski Laza**	**1.08**	**47**	P		**Pn**	**Pn**	**09 00 13.2**	**-0.1**
FALS	**False Pass**	**1.30**	**48**	P		**Pn**	**Pn**	**09 00 16.0**	**+0.1**
FALS				S		**Sn**	**Sn**	**09 00 33.6**	**+0.8**
OKER	**Okmok East Rim**	**1.85**	**254**	P		**Pn**	**Pn**	**09 00 24.0**	**+0.7**
OKTU	**Okmok Mt. Tuli**	**1.87**	**252**	P		**Pn**	**Pn**	**09 00 24.2**	**+0.8**
DRIA	**Deer Island**	**1.91**	**58**	P		**Pn**	**Pn**	**09 00 24.0**	**+0.1**
DT1	**Dutton Round H**	**1.97**	**55**	P		**Pn**	**Pn**	**09 00 24.9**	**+0.2**
OKAK	**Okmok**	**1.99**	**259**	P		**Pn**	**Pn**	**09 00 26.2**	**+1.2**
DOL	**Dolgoi Island**	**2.20**	**57**	P		**Pn**	**Pn**	**09 00 28.1**	**+0.3**
PS4A	**Pavlof South-4**	**2.31**	**53**	P		**Pn**	**Pn**	**09 00 30.0**	**+0.8**
NIKH	**Nikolski High**	**2.48**	**247**	P		**Pn**	**Pn**	**09 00 32.7**	**+1.1**
SDPT	**Sand Point**	**2.99**	**61**	P		**Pn**	**Pn**	**09 00 38.9**	**+0.4**
SPIA	**Saint Paul Isl**	**4.33**	**319**	P		**Pn**	**Pn**	**09 00 58.1**	**+1.5**
CHGN	**Chignik**	**4.46**	**56**	*e*Pn		**Pn**	**Pn**	**09 00 59.2**	**+0.7**
CHGN				*e*Sn		**Sn**	**Sn**	**09 01 53.7**	**+4.6**
KOFP	**Korovin Flat P**	**5.70**	**256**	P		**Pn**	**Pn**	**09 01 16.1**	**+0.7**
ATKA	**Atka Island**	**5.78**	**256**	P		**Pn**	**Pn**	**09 01 17.3**	**+0.8**
OHAK	**Old Harbor**	**7.42**	**59**	*e*Pn		**Pn**	**Pn**	**09 01 38.4**	**-0.3**
KDAK	**Kodiak Island**	**7.98**	**57**	P		**Pn**	**Pn**	**09 01 45.2**	**-1.2**
0.7nm,0.3s,baz=258,slow=14,SNR=20									
KDAK				S		**Sn**	**Sn**	**09 03 08.6**	**-6.3**
0.2nm,0.3s,baz=315,slow=19,SNR=2.0									
KDAK	**Kodiak Island**	**7.98**	**57**	*e*Pn		**Pn**	**Pn**	**09 01 45.3**	**-1.1**
SVW2	**Sparrevohn**	**8.75**	**32**	*e*Pn		**Pn**	**Pn**	**09 01 58.4**	**+1.4**
RSO	**Redoubt South**	**9.29**	**41**	*e*Pn		**Pn**	**Pn**	**09 02 07.7**	**+3.2**
CNPM	**China Poot**	**9.39**	**48**	*e*Pn		**Pn**	**Pn**	**09 02 05.4**	**-0.4**
SUA	**Susitna One**	**10.69**	**40**	*e*Pn		**Pn**	**Pn**	**09 02 23.5**	**+0.1**
SKT	**Skwentna**	**10.73**	**36**	*e*Pn		**Pn**	**Pn**	**09 02 19.4**	**-4.6**
GHO	**Glory Hole Cre**	**11.57**	**41**	*e*Pn		**Pn**	**Pn**	**09 02 33.7**	**-1.7**
CAST	**Castle Rocks**	**11.59**	**30**	*e*Pn		**Pn**	**Pn**	**09 02 34.1**	**-1.4**
SML	**Sawmill**	**11.82**	**42**	*e*Pn		**Pn**	**Pn**	**09 02 40.2**	**+1.4**
SCM	**Sheep Creek Mo**	**12.24**	**43**	*e*Pn		**Pn**	**Pn**	**09 02 42.7**	**-1.8**
BPAW	**Bear Paw Mtn.**	**12.42**	**30**	*e*Pn		**Pn**	**Pn**	**09 02 48.0**	**+1.1**
KLU	**Klutina**	**12.65**	**46**	*e*Pn		**Pn**	**Pn**	**09 02 47.7**	**-2.4**
RAGM	**Ragged Mountai**	**12.74**	**52**	*e*Pn		**Pn**	**Pn**	**09 02 49.5**	**-1.9**
DHY	**Denali Highway**	**12.92**	**38**	*e*Pn		**Pn**	**Pn**	**09 02 54.0**	**+0.2**
PAX	**Paxson**	**13.58**	**41**	*e*Pn		**Pn**	**Pn**	**09 03 00.3**	**-2.1**
CRQM	**Cirque**	**13.59**	**51**	*e*Pn		**Pn**	**Pn**	**09 03 03.6**	**+1.0**
TGL	**Tana Glacier**	**13.73**	**52**	*e*Pn		**Pn**	**Pn**	**09 03 05.5**	**+1.1**
ILAR	**Eielson Array**	**14.16**	**33**	P		**Pn**	**Pn**	**09 03 06.8**	**-3.1**
0.1nm,0.3s,baz=225,slow=11,SNR=3.7									
RIDG	**Independ'e Rid**	**14.24**	**39**	*e*Pn		**Pn**	**Pn**	**09 03 11.8**	**+0.7**
SCRK	**Sand Creek**	**14.69**	**39**	*e*Pn		**Pn**	**Pn**	**09 03 17.8**	**+0.9**
EGAK	**Eagle**	**16.15**	**39**	*e*Pn		**P**	**P**	**09 03 40.0**	**+2.8**
4.9nm,1.5s									
DAWY	**Dawson**	**16.49**	**42**	*e*Pn		**P**	**P**	**09 03 41.4**	**+0.4**
1.4nm,0.8s									
INK	**Inuvik**	**20.56**	**34**	P		**P**	**P**	**09 04 23.6**	**-1.8**
0.9nm,0.5s,baz=245,slow=9.3,SNR=8.1									
INK	**Inuvik**	**20.56**	**34**	*e*P		**P**	**P**	**09 04 23.9**	**-1.5**
4.1nm,1.3s									
YKA	**Yellowknife Ar**	**27.21**	**52**	P		**P**	**P**	**09 05 30.3**	**+0.8**
0.5nm,0.6s,baz=277,slow=9.9,SNR=13									
H11N2	**WAKE ISLAND Hy**	**40.38**	**223**	T			**T**	09 50 22.9	
baz=25,slow=76,SNR=63									
H11N3	**WAKE ISLAND Hy**	**40.38**	**223**	T			**T**	09 50 25.1	
baz=25,slow=76,SNR=106									
H11N1	**WAKE ISLAND Hy**	**40.40**	**223**	T			**T**	09 50 27.9	
baz=25,slow=76,SNR=72									
H11S1	**WAKE ISLAND Hy**	**41.56**	**223**	T			**T**	09 52 22.4	
baz=25,slow=76,SNR=84									
H11S2	**WAKE ISLAND Hy**	**41.57**	**223**	T			**T**	09 52 22.5	
baz=25,slow=76,SNR=65									
H11S3	**WAKE ISLAND Hy**	**41.58**	**223**	T			**T**	09 52 23.6	
baz=25,slow=76,SNR=59									
TXAR	**Lajitas Array**	**50.20**	**94**	P		**P**	**P**	**09 08 43.1**	**+1.7**
0.2nm,0.4s,baz=273,slow=3.5,SNR=4.0									
MKAR	**Makanchi Array**	**64.51**	**315**	P		**P**	**P**	**09 10 21.6**	**-0.1**
0.1nm,0.5s,baz=54,slow=7.4,SNR=2.1									
FINES	**FINESS Array B**	**64.56**	**354**	P		**P**	**P**	**09 10 21.0**	**-0.8**
0.3nm,0.3s,baz=24,slow=7.6,SNR=2.8									
HFS	**Hagfors**	**66.21**	**1**	P		**P**	**P**	**09 10 31.7**	**-0.8**
0.8nm,0.3s,baz=18,slow=2.9,SNR=6.6									
AKASG	**Malin Array Be**	**74.98**	**351**	P		**P**	**P**	**09 11 24.6**	**-1.3**
0.4nm,0.4s,baz=358,slow=4.6,SNR=3.1									

IDC 19 09:18:47.5±2.7,**5°.26S**×**127°.98E**,**h364**km±27km,**mb3.0**/3,
mb1 3.5/7,**mb1mx3.1**/56,**mbtmp4.2**/7,**Error ellipse:**
s-maj=40.1km s-min=12.0km az=67.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.51**	**221**	P		**P**	**P**	09 20 25.8	-0.1
12nm,0.3s,baz=67,slow=3.5,SNR=6.3									
BATI				S			S	09 21 43.1	-0.7
18nm,0.3s,baz=333,slow=18,SNR=8.8									
FITZ	**Fitzroy Crossi**	**12.96**	**190**	P		P	P	09 21 39.4	+0.2
1.7nm,0.3s,baz=17,slow=10,SNR=46									
WRA	**Warramunga Arr**	**15.85**	**158**	P		P	P	09 22 10.7	-0.1
2.7nm,0.3s,baz=333,slow=12,SNR=55									
WRA				S			S	09 24 56.3	-3.1
0.5nm,0.3s,baz=338,slow=22,SNR=8.0									
ASAR	**Alice Springs**	**19.17**	**163**	P		P	P	09 22 46.2	0.0
2.0nm,0.3s,baz=343,slow=12,SNR=128									
ASAR				S			S	09 26 03.8	+0.5
0.8nm,0.3s,baz=349,slow=22,SNR=22									
STKA	**Stephens Creek**	**29.39**	**156**	P		P	P	09 24 18.8	+0.2
1.2nm,0.6s,baz=338,slow=11,SNR=1.8									
MKAR	**Makanchi Array**	**65.68**	**327**	P		P	P	09 28 54.5	+0.5
0.3nm,0.4s,baz=123,slow=5.6,SNR=4.5									
KURBB	**Kurchatov Arra**	**69.99**	**329**	P		P	P	09 29 20.0	-0.5
0.4nm,0.7s,baz=120,slow=4.8,SNR=2.8									

*IDC **19** 09:19:34.4±1.7,20°.85S×178°.89W,h588km±21km, mb3.5/17,mb1 3.7/19,mb1mx3.5/48,mbtmp4.4/19,Error ellipse: s-maj=16.1km s-min=11.7km az=145.0*
*ISCJB **19** 09:19:35.6±0.6,21°.0S±0°.1×179°.0W±0°.1,h619km, mb3.9/17,Error ellipse: s-maj=17.5km s-min=10.2km az=151.9*
ISC 19 09:19:36.5±0.6,**21°.0S**±0°.1×**178°.9W**±0°.1,**h619**km,**n33,**
σ0º**99**/33,**mb4.1**/17,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**9.82**	**45**	P		P	P	09 21 48.1	-6.0
12nm,0.3s,baz=194,slow=3.8,SNR=18									
AFI				S			S	09 23 36.1	-11
3.9nm,0.3s,baz=168,slow=19,SNR=4.2									
DZM	**Mont Dzumac**	**13.65**	**263**	P		**P**	**P**	**09 22 30.9**	**-0.6**
1.1nm,0.3s,baz=32,slow=5.7,SNR=13									
URZ	**Urewera**	**17.54**	**190**	P		**P**	**P**	**09 23 03.5**	**-3.3**
9.9nm,0.3s,baz=250,slow=2.9,SNR=43									
RPZ	**Rata Peaks**	**24.14**	**198**	P		**P**	**P**	**09 24 05.7**	**-0.3**
5.2nm,0.4s,baz=20,slow=3.1,SNR=12									
CTA	**Charters Tower**	**32.57**	**265**	P		**P**	**P**	**09 25 19.6**	**+0.4**
3.3nm,0.4s,baz=99,slow=12,SNR=9.4									
STKA	**Stephens Creek**	**36.78**	**245**	P		**P**	**P**	**09 25 54.9**	**+0.9**
2.6nm,0.4s,baz=92,slow=12,SNR=12									
JAY	**Jayapura**	**43.38**	**290**	P		**P**	**P**	**09 26 46.8**	**+0.2**
6.2nm,0.3s,baz=143,slow=6.2,SNR=9.9									
ASAR	**Alice Springs**	**43.55**	**257**	P		**P**	**P**	**09 26 48.0**	**+0.2**
4.1nm,0.6s,baz=91,slow=8.6,SNR=24									
ASAR				S			**S**	**09 32 33.5**	**-0.2**
1.9nm,1.0s,baz=103,slow=16,SNR=8.7									
WRA	**Warramunga Arr**	**43.66**	**263**	P		**P**	**P**	**09 26 48.5**	**-0.2**
0.9nm,0.3s,baz=97,slow=7.5,SNR=8.2									
WRA				S			**S**	**09 32 34.7**	**-0.6**
1.3nm,0.9s,baz=102,slow=15,SNR=5.3									
VNDA	**Vanda**	**57.34**	**185**	P		**P**	**P**	**09 28 28.4**	**+1.7**
1.2nm,0.7s,baz=21,slow=7.2,SNR=11									
MJAR	**Matsushiro Arr**	**70.10**	**324**	P		**P**	**P**	**09

BALY	Balya	0.85	258	P	Pb	09 42 42.4	+0.6
SIMA	Simav-Kutahya	0.86	165	PG	Pg	09 42 41.2	-0.1
SIMA	Simav-Kutahya	0.86	165	*e*Pg	Pg	09 42 41.2	-0.1
DEMI	Demirci	0.88	179	*i* P	Pb	09 42 42.3	0.0
DEMI				*i* S	Sn	09 42 59.1	+2.5
DEMI	Demirci	0.88	179	P	Pb	09 42 42.3	0.0
CAVI	Cavuskoy	0.92	72	PG	Pb	09 42 42.8	-0.2
CAVI				SG	Sb	09 42 55.9	+0.5
CAVI	Cavuskoy	0.92	72	*e*Pg	Pb	09 42 42.8	-0.2
CAVI				*e*Sg	Sb	09 42 55.9	+0.5
STEP	BALIKESIR_Sava	0.93	235	*i* P	Pg	09 42 42.9	+0.3
STEP				*i* S	Sn	09 42 57.5	-0.5
STEP	BALIKESIR_Sava	0.93	235	P	Pg	09 42 42.9	+0.3
STEP				S	Sn	09 42 57.5	-0.5
ADVT	Abdulvahap	0.94	57	PG	Pb	09 42 43.3	-0.1
ADVT	Abdulvahap	0.94	57	*e*Pg	Pb	09 42 43.3	-0.1
SHAP	Saphane-Kutahy	0.98	156	PG	Pg	09 42 43.7	+0.1
SHAP	Saphane-Kutahy	0.98	156	*e*Pg	Pg	09 42 43.7	+0.1
AUBOZ	BOZOYUK	1.02	90	PG	Pb	09 42 44.8	0.0
AUBOZ	BOZOYUK	1.02	90	*e*Pg	Pb	09 42 44.8	0.0
SBT3	Marmara-Eregli	1.11	330	PN	Pn	09 42 46.4	-0.1
SBT3	Marmara-Eregli	1.11	330	*e*Pn	Pn	09 42 46.4	-0.1
HRT	Hereke	1.16	39	PN	Pn	09 42 47.2	-0.3
HRT	Hereke	1.16	39	*e*Pn	Pn	09 42 47.2	-0.3
AKHS	Akhisar	1.25	214	*i* P	Pg	09 42 48.9	+0.3
AKHS	Akhisar	1.25	214	P	Pg	09 42 48.9	+0.3
BORA	Eskisehir	1.35	91	PN	Pb	09 42 50.2	-0.1
BORA	Eskisehir	1.35	91	*e*Pn	Pb	09 42 50.2	-0.1
KLYT	Kilyos	1.35	11	PN	Pb	09 42 50.3	-0.1
KLYT	Kilyos	1.35	11	*e*Pn	Pb	09 42 50.3	-0.1
KULA	Kula-Manisa	1.41	181	PN	Pn	09 42 50.9	+0.1
KULA	Kula-Manisa	1.41	181	*e*Pn	Pn	09 42 50.9	+0.1
MANT	Manisa	1.43	185	*i* P	Pg	09 42 52.9	+0.7
MANT				*i* S	Sb	09 43 09.4	-1.0
MANT	Manisa	1.43	185	P	Pg	09 42 52.9	+0.7
MANT				S	Sb	09 43 09.4	-1.0
GULT	Gulveren	1.48	69	PN	Pb	09 42 52.2	-0.4
GULT	Gulveren	1.48	69	*e*Pn	Pb	09 42 52.2	-0.4

*ISCJB **19** 09:47:47.8±0.7, 40.°40N±0.°04×40.°18E±0.°05, h9km±5km, Error ellipse: s-maj=7.7km s-min=5.9km az=156.1*
*CSEM **19** 09:47:47.3±0.1, 40.°32N×40.°20E, h10km, ML2.6, Error ellipse: s-maj=4.1km s-min=3.1km az=175.0*
*DDA **19** 09:47:47.5, 40.°31N×40.°18E, h7km, Ml2.6*
*ISK **19** 09:47:48.1, 40.°47N×40.°14E, h6km, ML2.6/5*
ISC 19 09:47:47.6±1.0, 40.°36N±0.°04×40.°19E±0.°03, h12km±7km, n24, σ0.57/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYT	Ayd¨–ntepe-Bay	0.05	315	PG	Pg	09 47 50.2	0.0
BAYT	Ayd¨–ntepe-Bay	0.05	315	*e*Pg	Pg	09 47 50.2	0.0
KOPT	Kop Dagi	0.41	145	*i* P	Pg	09 47 55.1	-0.8
KOPT	Kop Dagi	0.41	145	P	Pg	09 47 55.2	-0.8
MACK	Trabzon	0.67	332	*i* P	Pb	09 48 01.7	+0.5
MACK	Trabzon	0.67	332	P	Pb	09 48 01.7	+0.5
KELT	Kelkit	0.74	254	*i* P	Pg	09 48 01.9	-0.1
KELT				*i* S	Sb	09 48 12.2	-0.6
KELT	Kelkit	0.74	254	P	Pg	09 48 01.9	-0.1
KELT				S	Sb	09 48 12.2	-0.6
CHOM	Cayeli-Rize	0.86	30	PG	Pg	09 48 03.7	-0.5
CHOM				SG	Sg	09 48 15.2	-0.2
CHOM	Cayeli-Rize	0.86	30	*e*Pg	Pg	09 48 03.7	-0.5
CHOM				*e*Sg	Sg	09 48 15.2	-0.2
ERZM	Erzurum	1.01	116	*i* P	Pg	09 48 06.6	-0.5
ERZM	Erzurum	1.01	116	P	Pg	09 48 06.6	-0.5
ESPY	Espiye-Giresun	1.24	297	PN	Pn	09 48 11.0	+0.2
ESPY				SN	Sg	09 48 27.3	-0.4
ESPY	Espiye-Giresun	1.24	297	*e*Pn	Pn	09 48 11.0	+0.2
ESPY				*e*Sn	Sg	09 48 27.3	-0.4
DDEM	Demirkent	1.30	65	*i* P	Pn	09 48 11.7	-0.1
DDEM	Demirkent	1.30	65	P	Pn	09 48 11.7	-0.1
DBOC	Borcka	1.49	48	*i* P	Pn	09 48 14.6	+0.3
DBOC	Borcka	1.49	48	P	Pn	09 48 14.6	+0.3
SUSE	Susehri	1.52	265	*i* P	Pn	09 48 14.7	-0.2
SUSE	Susehri	1.52	265	P	Pn	09 48 14.7	-0.2
BCA	Borcka	1.54	45	PN	Pn	09 48 16.0	+1.1
BCA	Borcka	1.54	45	*e*Pn	Pn	09 48 16.0	+1.1
VRTB	Varto-Mus	1.55	140	PN	Pg	09 48 18.5	+1.2
PTK	Pertek	1.59	203	PN	Pg	09 48 18.7	+0.6

*SOME **19** 09:49:34.5, 43.°48N×82.°05E, h15km*
*NNC **19** 09:49:47.9±2.2, 44.°72N×79.°94E, h0km, mb2.9, mpv2.7, Error ellipse: s-maj=70.0km s-min=15.0km az=105.0*
ISC 19 09:49:28.7±2.8, 43.°2N±0.°1×82.°5E±0.°1, h21km±6km, n11, σ2.31/19, 3C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	Podgornoye	2.20	274	⇓Pg	Pb	09 50 08.6	+0.8
PDGK	7.1nm,0.5s						
				⇓Sn	Sb	09 50 35.7	+1.0
	54nm,0.8s						
SHLS	Shalkode	2.22	270	*e*P	Pn	09 50 04.2	-0.2
SHLS	21nm,0.3s						
				*e*S	Sn	09 50 25.6	-5.6
	53nm,0.6s						
DJR	Jarkent	2.26	301	*e*P	Pb	09 50 08.4	-0.4
DJR	51nm,0.4s						
				*e*S	Sn	09 50 32.8	+0.6
	24nm,0.4s						
UZB	Uzynbulak	2.54	270	*e*P	Pb	09 50 14.7	+1.0
UZB	17nm,0.3s						
				*e*S	Sb	09 50 43.5	-1.0
	24nm,0.7s						
KPKS	Kokpek	2.79	277	*e*P	Pb	09 50 18.9	+1.0
KPKS	16nm,0.2s						
				*e*S	Sb	09 50 50.8	-0.9
	23nm,0.3s						
SATY	Saty	3.00	269	*e*P	Pb	09 50 22.6	+1.2
SATY	14nm,0.3s						
				*e*S	Sb	09 50 57.2	-0.4
	16nm,0.4s						
KAPS	Kapalarasan	3.07	314	*e*P	Pb	09 50 22.0	-0.6
KAPS	3.1nm,0.4s						
				*e*S	Sn	09 50 56.3	+4.3
	6.5nm,0.3s						
ARXS	Arharly	3.53	288	*e*P	Pb	09 50 29.9	-0.7
ARXS	1.8nm,0.4s						
				*e*S	Sb	09 51 10.0	-3.0
	20nm,0.5s						
MK31	Makanchi Array	3.59	358	Pn	Pb	09 50 31.4	-0.1
MK31	0.7nm,0.7s,baz=185,slow=6.7,SNR=12						
				⇑Pg	Pn	09 50 37.6	+14
	0.4nm,0.3s,baz=182,slow=17,SNR=10						
KTBS	Karatobe	4.26	279	*e*P	Pb	09 50 45.7	+2.8
KTBS	1.4nm,0.5s						
				*e*S	Sb	09 51 36.5	+2.5
	6.4nm,0.6s						
KURBB	Kurchatov Arra	7.90	341	⇑Pn	Pn	09 51 15.9	-6.3
KURBB	2.1nm,0.5s,baz=63,slow=14						
				⇑Sn	Sn	09 52 28.2	-23
	4.0nm,0.8s						
KURBB				⇓Lg	Lg	09 52 59.8	
	12nm,0.8s						

*IDC **19** 09:54:31.9±1.1, 12.°91N×90.°97W, h0km, mb3.8/7, mb1 4.1/8, mb1mx3.8/42, mbtmp3.8/8, ML3.3/1, Error ellipse: s-maj=60.9km s-min=17.1km az=52.0*
*ISCJB **19** 09:54:35.0±0.8, 13.°0N±0.°2×91.°1W±0.°2, h33km, mb4.0/7, Error ellipse: s-maj=33.5km s-min=7.7km az=37.6*
ISC 19 09:54:36.7±1.0, 12.°9N±0.°2×91.°2W±0.°2, h33km, n11, σ1.57/13, mb3.8/7, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	5.48	320	Pn	Pn	09 55 55.3	-0.9
CMIG	0.8nm,0.3s,baz=154,slow=13,SNR=30						
				Sn	Sn	09 56 56.0	-2.1
	2.2nm,0.3s,baz=73,slow=7.2,SNR=6.8						
JTS	JuntasAbangare	6.63	113	Pn	Pn	09 56 14.0	+2.1
JTS	1.0nm,0.3s,baz=40,slow=6.9,SNR=8.7						
				Sn	Sn	09 57 24.2	-2.2
	0.3nm,0.3s,baz=22,slow=19,SNR=1.9						
TXAR	Lajitas Array	20.04	327	P	Pn	09 59 09.5	+0.5
	2.6nm,0.9s,baz=154,slow=12,SNR=25						
LPIG	La Paz	21.25	304	P	P	09 59 20.6	+0.3
	30nm,0.3s,baz=225,slow=7.1,SNR=4.4						
NVAR	Mina Array Bea	35.01	321	P	P	10 01 28.6	+2.1
	3.0nm,0.9s,baz=135,slow=7.7,SNR=11						
LPAZ	La Paz	36.89	141	P	P	10 01 42.0	-1.2
	1.2nm,0.8s,baz=3.6,slow=4.0,SNR=4.9						
ULM	Lac du Bonnet	37.42	355	P	P	10 01 45.7	-1.0
	2.8nm,0.8s,baz=174,slow=10,SNR=4.6						
SIV	San Ignacio	41.37	133	P	P	10 02 19.0	-1.0
	1.3nm,0.8s,baz=307,slow=9.8,SNR=6.4						
YKA	Yellowknife Ar	52.26	346	P	P	10 03 44.9	+0.4
	0.5nm,0.6s,baz=145,slow=8.3,SNR=7.2						
ILAR	Eielson Array	64.14	337	P	P	10 05 08.8	+1.2
	0.9nm,1.0s,baz=140,slow=4.9,SNR=7.7						
WRA	Warramunga Arr	135.90	255	PKP	PKPdf	10 13 54.2	-0.9
	0.4nm,0.8s,baz=90,slow=2.6,SNR=4.6						

*ISK **19** 10:09:03.2, 38.°09N×42.°51E, h11km, ML2.4/4*
*CSEM **19** 10:09:04.7±0.3, 38.°07N×42.°51E, h10km, ML2.8, Error ellipse: s-maj=7.2km s-min=5.6km az=163.0*
*DDA **19** 10:09:04.5, 37.°97N×42.°52E, h7km, Ml2.8*
ISC 19 10:09:04.4±1.1, 38.°08N±0.°03×42.°51E±0.°03, h9km±9km, n16, σ0.57/33, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRTM	Siirt_Merkez	0.47	259	*i* P	Pg	10 09 14.1	+0.5
SRTM				*i* S	Sg	10 09 20.7	+0.8
SRTM	Siirt_Merkez	0.47	259	P	Pg	10 09 14.1	+0.5
SRTM				S	Sg	10 09 20.7	+0.8
GEVA	Gevas	0.49	62	*i* P	Pb	10 09 15.0	-0.2
GEVA				*i* S	Sb	10 09 23.8	+1.2
GEVA	Gevas	0.49	62	P	Pb	10 09 15.0	-0.2
GEVA				S	Sb	10 09 23.8	+1.2
SIRT	Sirnak	0.58	186	PG	Pg	10 09 14.9	-0.8
SIRT				SG	Sg	10 09 23.7	+0.4
SIRT	Sirnak	0.58	186	*e*Pg	Pg	10 09 14.9	-0.8
SIRT				*e*Sg	Sg	10 09 23.7	+0.4
GURO	Guroymak-BITLI	0.60	321	PG	Pg	10 09 15.3	-0.8
GURO				SG	Sg	10 09 24.0	0.0
GURO	Guroymak-BITLI	0.60	321	*e*Pg	Pg	10 09 15.3	-0.8
GURO				*e*Sg	Sg	10 09 24.0	0.0
BTMN	Batman	1.00	259	*i* P	Pn	10 09 24.7	+0.1
BTMN				*i* S	Sn	10 09 38.9	0.0
BTMN	Batman	1.00	259	P	Pn	10 09 24.7	+0.1
BTMN				S	Sn	10 09 38.8	0.0
SVAN	Silvan-Diyarba	1.04	274	PG	Pg	10 09 23.4	-0.9
SVAN				SG	Sb	10 09 38.3	0.0
SVAN	Silvan-Diyarba	1.04	274	*i* P	Pb	10 09 24.9	+0.4
SVAN				*i* S	Sn	10 09 39.8	0.0
SVAN	Silvan-Diyarba	1.04	274	P	Pb	10 09 24.9	+0.4
SVAN				*e*Sg	Sb	10 09 38.3	0.0
SVAN				S	Sn	10 09 39.8	0.0
MARD	Mardin	1.57	241	*i* P	Pb	10 09 33.1	-0.5
MARD				*i* S	Sg	10 09 55.0	0.0
MAZI	Mazidag	1.75	250	PN	Pn	10 09 34.8	-0.2
MAZI				SN	Sn	10 09 57.0	-0.4
MAZI	Mazidag	1.75	250	*e*Pn	Pn	10 09 34.8	-0.2
MAZI				*e*Sn	Sn	10 09 57.0	-0.4

*IDC **19** 10:13:22.8±1.0, 14.°42N×144.°22E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.5/71, mbtmp3.6/6, MS3.2/2, Ms1 3.2/2, ms1mx2.6/55, Error ellipse: s-maj=35.2km s-min=18.9km az=71.0*
*ISCJB **19** 10:13:25.8±0.8, 14.°4N±0.°1×144.°2E±0.°2, h33km, mb3.7/6, MS3.5/1, Error ellipse: s-maj=26.2km s-min=9.8km az=142.7*
ISC 19 10:13:27.9±1.0, 14.°4N±0.°1×144.°3E±0.°2, h35km, n16, σ0.67/9, mb3.8/6, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	0.96	144	Pn	Pn	10 13 44.3	-0.6
GUMO	98nm,0.3s,baz=339,slow=8.6,SNR=47						
				Sn	Sn	10 13 57.4	+0.1
	90nm,0.3s,baz=186,slow=13,SNR=12						
GUMO				T	T	10 14 59.5	
	116nm,0.3s,baz=330,slow=22,SNR=5.6						
DAV	Davao City (W)	19.76	250	LR	LR	10 26 48.3	
	comp=Z,38nm,18.3s,baz=166,slow=41						
H11S3	WAKE ISLAND Hy 21.86	76		T	T	10 41 16.2	
	baz=262,slow=75,SNR=37						
H11S1	WAKE ISLAND Hy 21.87	76		T	T	10 41 17.6	
	baz=262,slow=75,SNR=22						
H11S2	WAKE ISLAND Hy 21.88	76		T	T	10 41 19.7	
	baz=262,slow=75,SNR=30						
H11N1	WAKE ISLAND Hy 22.24	73		T	T	10 41 53.2	
	baz=259,slow=75,SNR=6.3						
H11N2	WAKE ISLAND Hy 22.25	73		T	T	10 41 53.1	
	baz=259,slow=75,SNR=4.6						
H11N3	WAKE ISLAND Hy 22.26	73		T	T	10 41 53.1	
	baz=259,slow=75,SNR=5.3						
WRA	Warramunga Arr	35.48	196	P	P	10 20 21.4	+0.1
	1.0nm,0.5s,baz=7.5,slow=9.5,SNR=17						
ASAR	Alice Springs	39.15	195	P	P	10 20 52.6	+0.2
	0.2nm,0.5s,baz=18,slow=13,SNR=6.1						
STKA	Stephens Creek	46.06	183	P	P	10 21 48.4	+0.1
	1.7nm,0.7s,baz=353,slow=12,SNR=4.7						
MKAR	Makanchi Array	60.54	316	P	P	10 23 35.0	+0.2
	0.2nm,0.5s,baz=101,slow=7.5,SNR=3.1						
KURBB	Kurchatov Arra	63.67	320	P	P	10 23 54.6	-1.0
	0.6nm,0.3s,baz=104,slow=7.5,SNR=3.4						
ARU	Arti	75.81	325	LR	LR	11 00 13.9	
	comp=Z,25nm,21.8s,baz=133,slow=37						
YKA	Yellowknife Ar	82.42	27	P	P	10 25 46.4	+0.1
	0.2nm,0.6s,baz=283,slow=4.4,SNR=3.8						
LPAZ	La Paz	148.69	98	PKPbc	PKPbc	10 33 14.2	+1.1
	0.7nm,0.5s,baz=56,slow=3.6,SNR=4.9						

*ISK **19** 10:22:32.3, 40.°66N×39.°93E, h12km±7km, ML2.3/3*
*ISCJB **19** 10:22:33.0±0.6, 40.°64N±0.°03×39.°91E±0.°04, h5km±8km, Error ellipse: s-maj=5.8km s-min=5.3km az=24.4*
*CSEM **19** 10:22:33.0±0.2, 40.°65N×39.°91E, h10km, ML2.9, Error ellipse: s-maj=3.7km s-min=3.3km az=20.0*
*DDA **19** 10:22:33.5, 40.°63N×39.°87E, h7km, Ml2.9*
ISC 19 10:22:33.1±1.0, 40.°65N±0.°03×39.°91E±0.°03, h13km±10km, n14, σ0.40/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYT	Ayd¨–ntepe-Bay	0.31	146	PG	Pg	10 22 38.9	-0.5
BAYT				SG	Sg	10 22 44.0	+0.3
BAYT	Ayd¨–ntepe-Bay	0.31	146	*e*Pg	Pg	10 22 38.9	-0.5
BAYT				*e*Sg	Sg	10 22 44.0	+0.3
MACK	Trabzon	0.32	340	*i* P	Pg	10 22 39.8	+0.2
MACK				*i* S	Sb	10 22 45.6	-0.1
MACK	Trabzon	0.32	340	P	Pg	10 22 39.8	+0.2
MACK				S	Sb	10 22 45.6	-0.1
KELT	Kelkit	0.71	226	*i* P	Pg	10 22 46.6	-0.2
KELT				*i* S	Sg	10 22 56.4	+0.2
KELT	Kelkit	0.71	226	P	Pg	10 22 46.6	-0.2
KELT				S	Sg	10 22 56.4	+0.2
KOPT	Kop Dagi	0.77	144	*i* P	Pb	10 22 48.5	0.0
KOPT				*i* S	Sb	10 22 59.9	+0.8
KOPT	Kop Dagi	0.77	144	P	Pb	10 22 48.5	0.0
KOPT				S	Sb	10 22 59.8	+0.8
CHOM	Cayeli-Rize	0.78	55	PG	Pg	10 22 47.7	-0.6
CHOM				SG	Sg	10 22 58.8	+0.2
CHOM	Cayeli-Rize	0.78	55	*e*Pg	Pg	10 22 47.7	-0.6
CHOM				*e*Sg	Sg	10 22 58.8	+0.2
ESPY	Espiye-Giresun	0.94	287	PG	Pg	10 22 51.0	-0.2
ESPY	Espiye-Giresun	0.94	287	*e*Pg	Pg	10 22 51.0	-0.2
SUSE	Susehri	1.38	252	*i* P	Pn	10 22 58.1	-0.1
SUSE				*i* S	Sg	10 23 17.2	-0.3
SUSE	Susehri	1.38	252	P	Pn	10 22 58.1	-0.1
SUSE				S	Sg	10 23 17.2	-0.3

*CSEM **19** 10:24:49.2±0.2, 59.°76N×18.°58E, h2km, ML1.8, Error ellipse: s-maj=5.3km s-min=4.4km az=74.0, Mining explosion.*
UPP 19 10:24:49.0±0.5, 59.°75N×18.°60E, h0km±3km, ML1.8, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPP	Uppsala	0.51	283	P	Pg	10 24 58.7	0.0
UPP				S	Sg	10 25 05.4	+0.2
UPP	Uppsala	0.51	283	P	Pg	10 24 58.7	0.0
UPP				S	Sg	10 25 05.4	+0.2
FLYU	Flymyra	0.53	317	P	Pg	10 24 59.0	-0.1
FLYU				S	Sg	10 25 06.1	+0.2
FLYU	Flymyra	0.53	317	P	Pg	10 24 59.0	-0.1
FLYU				S	Sg	10 25 06.1	+0.2
GRAU	Graesoe	0.59	357	P	Pg	10 25 00.2	-0.1
GRAU	Graesoe	0.59	357	P	Pg	10 25 00.2	-0.1
FIBU	Brunna	0.65	284	P	Pg	10 25 01.3	-0.2
FIBU	Brunna	0.65	284	P	Pg	10 25 01.3	-0.1
NYNU	Nynaeshamn	0.80	203	P	Pg	10 25 03.9	-0.4
NYNU	Nynaeshamn	0.80	203	P	Pg	10 25 03.9	-0.5
OSTU	Oestervaala	0.88	304	P	Pg	10 25 05.4	-0.6
OSTU	Oestervaala	0.88	304	P	Pg	10 25 05.4	-0.5
ESKU	Eskilstuna	1.24	246	P	Pg	10 25 11.7	-1.0
ESKU	Eskilstuna	1.24	246	P	Pg	10 25 11.7	-1.0
IGGU	Iggoen	1.30	331	P	Pg	10 25 13.1	-0.8
IGGU	Iggoen	1.30	331	P	Pg	10 25 13.1	-0.8
FALU	Falun	1.58	300	P	Pn	10 25 18.0	-0.1
FALU	Falun	1.58	300	P	Pn	10 25 18.0	-0.2
VIKU	Vikbolandet	1.59	219	P	Pn	10 25 17.9	-0.4
VIKU	Vikbolandet	1.59	219	P	Pn	10 25 17.9	-0.4
NRAU	Nora	1.82	266	P	Pn	10 25 22.0	+0.5
NRAU	Nora	1.82	266	P	Pn	10 25 22.0	+0.5
GOTU	Gotland	2.07	180	P	Pn	10 25 25.9	+1.0
GOTU	Gotland	2.07	180	P	Pn	10 25 25.9	+1.0
ASKU	Askersund	2.11	248	P	Pn	10 25 26.4	+0.9
ASKU	Askersund	2.11	248	P	Pn	10 25 26.4	+0.9
ROTU	Roteberg	2.17	322	P	Pn	10 25 27.1	+0.8
ROTU	Roteberg	2.17	322	P	Pn	10 25 27.1	+0.8
VSU	Vasula	4.39	104	*e*P	Pn	10 25 57.3	+0.6
	SNR=50						

DJA 19 10:53:18.6±1.9, 1.°N±7.°×12.°7E±.°, h15km±18km, M3.8/6, MLv3.8/6, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	Labuha	1.96	161	P	Pn	10 53 51.6	+0.3
LBMI				S	Sn	10 54 16.3	+0.7
KMSI	Cibinong	2.94	257	P	Pn	10 54 05.3	+0.5
SANI	Sanana	3.36	195	P	Pn	10 54 10.5	-0.1

*ISCJB **19** 10:53:27.1±1.0, 38.°29S±0.°03×146.°22E±0.°04, h1km±6km, mb5.1/50, MS4.4/33, Error ellipse: s-maj=6.6km s-min=3.8km az=140.8*
*MOS **19** 10:53:28.8±0.9, 38.°29S×146.°11E, h10km, mb5.1/28, MS4.3/5, Error ellipse: s-maj=16.7km s-min=6.8km az=102.6*
*IDC **19** 10:53:28.4±0.4, 38.°32S×146.°21E, h0km, mb4.9/18, mb1 4.9/21, mb1mx4.8/43, mbtmp4.9/21, ML5.3/4, MS4.4/30, Ms1 4.4/30, ms1mx4.3/41, Error ellipse: s-maj=16.8km s-min=12.7km az=64.0*
*BJI **19** 10:53:28.7, 38.°32S×146.°35E, h6km, mb4.9/35, mB5.5/23, Ms5.1/10, Ms7 4.8/8*
*GCMT **19** 10:53:29.8±0.4, 38.°28S×146.°24E, h16km±1km, MW5.0/61, Moment Tensor Solution. s22,c26; s61,c81; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.61±.13; $M_{\theta\theta}$-1.46±.09; $M_{\phi\phi}$0.84±.08; $M_{r\theta}$-1.74±.36; $M_{\theta\phi}$-0.71±.06; $M_{\phi r}$-2.88±.57; Best double couple: $M_0$3.66400×10^{16} NP1:ϕ_s214.00000°, δ85.00000°, λ68.00000°. NP2: ϕ_s112.00000°, δ22.00000°, λ167.00000°. Principal axes: T 3.7180, Plg46.0000°, Azm102.0000°; N -0.1030, Plg21.0000°, Azm216.0000°; P -3.6110, Plg36.0000°, Azm323.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **19** 10:53:29.0±0.0, 38.°30S×146.°20E, h10km, mb5.2/37, ML5.4(AUST), After AUST.*
NEIC Felt [V] at Moe-Yallourn, Morwell, Traralgon and Warragul; [IV] at Ararat, Bairnsdale, Craigieburn, Cranbourne, Crib Point, Hastings, Healesville, Maryborough, Melbourne, Pakenham, Sale, Somerville, Sunbury and Wonthaggi. Felt widely in Victoria and in parts of New South Wales.
*AUST **19** 10:53:29.2±0.2, 38.°30S×146.°20E, h10km, Error ellipse: s-maj=4.5km s-min=2.5km az=60.0*
ISC 19 10:53:29.8±0.4, 38.°28S±0.°04×146.°20E±0.°05, h10km±2km, h10km:pP-P, n396, σ1.52/381, mb5.0/50, MS4.4/34, 6C-3D, Near southeast coast of Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOO	Toolangi	0.91	321	P	Pg	10 53 46.9	-0.4
TOO	baz=0.9,SNR=1000						
				S	Sg	10 53 58.8	-0.3
	baz=0.9						
TOO	Toolangi	0.91	321	P	Pg	10 53 47.2	-0.1
TOO				S	Sg	10 53 59.2	+0.1
TOO	Toolangi	0.91	321	P	Pg	10 53 47.2	-0.1
TOO				S	Sg	10 53 59.2	+0.1
GEES	Gees Lookout	3.24	168	P	Pn	10 54 20.3	-0.4
CORO	Coronation Par	3.25	167	P	Pn	10 54 20.3	-0.5
CAN	Canberra	3.71	38	P	Pn	10 54 27.2	0.0
CAN	baz=3.7						
		3.71	38	*e*Pn	Pn	10 54 27.1	-0.1
CAN	Canberra	3.71	38	*e*P	Pn	10 54 27.1	-0.1
ARPS	Mount Arapiles	3.78	292	P	Pn	10 54 28.4	+0.2
ARPS	baz=3.8,SNR=1000						
		3.78	292	P	Pn	10 54 28.3	+0.1
ARPS	Mount Arapiles	3.78	292	P	Pn	10 54 29.8	-0.1
CNB	Canberra Magne	3.90	42	P	Pn	10 54 29.8	-0.1
CNB	baz=3.9,SNR=430						
		3.90	42	P	Pn	10 54 30.3	+0.5
MOO	Moorlands	4.22	170	P	Pn	10 54 33.4	-0.8
MOO	baz=4.2,SNR=32						
		4.35	25	P	Pn	10 54 35.9	-0.2
YNG	Young						
YNG	baz=4.4,SNR=475						
TAU	Tasmania Unive	4.70	170	*e*Pn	Pn	10 54 40.0	-0.7
TAU	Tasmania Unive	4.70	170	*e*P	Pn	10 54 40.0	-0.7
MGCD	Mangrove Creek	6.44	40	P	Pn	10 55 05.0	+0.3
MGCD	baz=6.5,SNR=43						
CMSA	Cobar Meteorol	6.74	356	P	Pn	10 55 08.4	-0.4
CMSA	baz=

comp=Z,252nm,1.2s
QIS Mount Isa 18.56 340 P **Pn 10 57 47.5 +0.4**
baz=19,SNR=24
LBZ Lake Benmore 18.98 116 *e*P **Pn 10 57 52.2 +0.2**
comp=Z,365nm,1.9s
ODZ Otahua Downs 19.43 118 *e*P **Pn 10 57 57.2 -0.1**
comp=Z,252nm,1.3s
RPZ Rata Peaks 19.49 114 P **Pn 10 57 58.7 +0.6**
comp=Z,5.0nm,0.3s,baz=261,slow=4.6,SNR=21
RPZ S **Sn 11 01 27.0 -10**
comp=Z,0.4nm,0.3s,baz=0.0,slow=20,SNR=2.2
RPZ LR LR 11 04 08.7
comp=Z,2μm,19.8s,baz=279,slow=33
RPZ Rata Peaks 19.49 114 *e*P **P 10 57 57.3 +0.4**
comp=Z,70nm,0.9s
RPZ *e*Sn **Sn 11 01 27.1 -10**
OXZ Oxford 20.16 113 *e*P **P 10 58 03.8 -0.4**
comp=Z,79nm,0.9s
LTZ Lake Taylor 20.28 111 *e*P **P 10 58 06.4 +0.8**
comp=Z,234nm,1.8s
MQZ McQueen's Vall 20.64 114 *e*P **P 10 58 09.3 -0.1**
comp=Z,95nm,1.5s
THZ Tophouse 20.71 108 *e*P **P 10 58 10.3 +0.1**
comp=Z,166nm,1.3s
WR1 Warramunga Arr 20.97 327 *e*P **P 10 58 13.3 +0.2**
comp=Z,307nm,1.0s
WR1 *e*S **S 11 02 03.8 -3.1**
WRA Warramunga Arr 20.98 327 P **P 10 58 13.3 +0.2**
comp=Z,194nm,1.0s,baz=148,slow=9.0,SNR=41
WRA S **S 11 02 03.8 -3.1**
comp=Z,13nm,0.7s,baz=154,slow=25,SNR=4.3
WRA Lg Lg 11 04 34.2
comp=Z,67nm,1.2s,baz=168,slow=28,SNR=2.6
WRAB Tennant Creek 20.98 327 *e*P **P 10 58 13.3 +0.1**
comp=Z,234nm,0.9s
WRAB Tennant Creek 20.98 327 *e*P **P 10 58 13.3 +0.1**
WRAB pmax pmax
comp=Z,234nm,0.9s
BFZ Birch Farm 23.26 105 *e*P **P 10 58 36.7 -0.6**
comp=Z,161nm,1.4s
BKZ Black Stump Fm 23.60 102 *e*P **P 10 58 41.3 +0.5**
comp=Z,71nm,1.2s
DZM Mont Dzumac 23.73 53 *e*P **P 10 58 46.3 +4.0**
comp=Z,57nm,1.3s
DZM *e*LR LR 11 04 26.2
comp=Z,293nm,20.8s
DZM Mont Dzumac 23.73 53 P **P 10 58 44.2 +2.0**
comp=Z,12nm,0.9s,baz=303,slow=18,SNR=5.1
DZM LR LR 11 07 23.3
comp=Z,525nm,18.0s,baz=229,slow=35
DZM Mont Dzumac 23.73 53 *e*P **P 10 58 42.5 +0.2**
comp=Z,58nm,1.5s
NWAO Narrogin (SRO) 24.10 274 P **P 10 58 46.3 +0.7**
comp=Z,34nm,0.9s,baz=327,slow=11,SNR=7.7
NWAO LR LR 11 08 48.3
comp=Z,612nm,18.1s,baz=336,slow=38
NWAO Narrogin (SRO) 24.10 274 *e*P **P 10 58 46.1 +0.5**
comp=Z,50nm,1.0s
NWAO Narrogin (SRO) 24.10 274 *e*P **P 10 58 46.1 +0.5**
NWAO pmax pmax
comp=Z,50nm,1.0s
URZ Urewera 24.21 100 P **P 10 58 46.5 -0.1**
comp=Z,46nm,0.9s,baz=272,slow=3.8,SNR=12
URZ LR LR 11 07 53.7
comp=Z,1μm,18.1s,baz=358,slow=36
COEN Coen 24.38 353 *e*P **P 10 58 47.0 -1.2**
comp=Z,190nm,1.6s
FITZ Fitzroy Crossi 26.96 313 P **P 10 59 11.5 -0.1**
comp=Z,35nm,0.9s,baz=158,slow=10,SNR=21
FITZ Lg Lg 11 07 47.7
comp=Z,74nm,1.3s,baz=297,slow=20,SNR=3.2
FITZ LR LR 11 10 25.8
comp=Z,4μm,18.9s,baz=140,slow=38
FITZ Fitzroy Crossi 26.96 313 *e*P **P 10 59 12.1 +0.5**
comp=Z,52nm,1.0s
MBWA Marble Bar 28.48 299 *e*P **P 10 59 25.5 +0.3**
comp=Z,54nm,0.8s
MTN Manton Dam 28.67 328 *e*P **P 10 59 26.3 -0.5**
comp=Z,27nm,0.6s
HNR Honiara 31.27 27 LR LR 11 11 24.6
comp=Z,417nm,18.3s,baz=205,slow=34
BATI Baumata 34.50 318 LR LR 11 15 38.2
comp=Z,2μm,18.1s,baz=178,slow=38
CASY Casey 34.62 205 *e*P **P 11 00 18.6 -0.1**
comp=Z,20nm,0.9s
GENI Genyem 35.95 350 P **P 11 00 32.1 +1.5**
JAY Jayapura 35.95 351 LR LR 11 15 29.0
comp=Z,317nm,19.7s,slow=37
WBSI Waikabubak, Su 37.32 313 P **P 11 00 43.5 +1.1**
FAKI Fak Fak 37.44 337 *e*P **P 11 00 43.2 -0.1**
comp=Z,35nm,1.0s
BAKI Biak 38.06 343 P **P 11 00 49.9 +1.4**
NLAI Namlea 39.01 329 P **P 11 00 58.1 +1.6**
VNDA Vanda 39.91 175 P **P 11 01 03.4 0.0**
comp=Z,12nm,0.9s,baz=350,slow=9.0,SNR=58
VNDA LR LR 11 15 42.3
comp=Z,1μm,18.5s,baz=353,slow=33
SANI Sanana 40.54 328 P **P 11 01 09.1 -0.2**
SBA Scott Base 40.62 173 *e*P **P 11 01 10.8 +1.5**
comp=Z,59nm,1.6s
SBA Scott Base 40.62 173 *e*P **P 11 01 10.8 +1.5**
SBA pmax pmax
comp=Z,59nm,1.6s
SRBI Singaraja 41.04 309 P **P 11 01 15.4 +2.0**
LBMI Labuha 41.22 331 P **P 11 01 16.4 +1.5**
SPSI Sidrap Palu 41.81 318 P **P 11 01 20.5 +0.8**
GMJI Gumukmas 41.99 307 P **P 11 01 22.7 +1.4**
BLJI Banyuglugur 42.31 307 P **P 11 01 25.5 +1.7**
TTSI Tana Toraja 42.56 319 P **P 11 01 26.9 +1.0**
NGJI Ngawi 43.95 305 P **P 11 01 39.4 +2.3**
UGM Wanagama 44.14 304 *e*P **P 11 01 38.4 -0.3**
comp=Z,530nm,1.7s
AFI Afiamalu 44.35 68 LR LR 11 17 17.6
comp=Z,154nm,18.1s,baz=158,slow=32
MRSI Marisa 44.57 324 P **P 11 01 42.1 0.0**
CISI Cisompet, Garu 46.20 301 *e*P P 11 01 59.9 +4.8
comp=Z,69nm,0.8s
LEM Lembang 46.87 302 P **P 11 02 02.1 +1.7**
comp=Z,64nm,0.9s,baz=74,slow=7.4,SNR=5.2
LEM LR LR 11 23 14.7
comp=Z,696nm,19.5s,baz=150,slow=38
DAV Davao City (W) 49.04 332 LR LR 11 25 55.5
comp=Z,136nm,19.0s,baz=164,slow=40
RAR Rarotonga 49.21 86 LR LR 11 22 10.3
comp=Z,154nm,18.1s,baz=254,slow=35
KSM Kuching 51.57 312 *e*P **P 11 02 36.5 +0.2**
comp=Z,30nm,1.0s
GUMO Guam 51.61 358 LR LR 11 25 23.6
comp=Z,129nm,18.1s,baz=189,slow=37
QSPA South Pole Qui 51.83 180 P **P 11 02 38.1 +0.3**
comp=Z,44nm,0.9s,baz=349,slow=2.6,SNR=31
MAW Mawson 52.78 209 P **P 11 02 45.1 +0.6**
comp=Z,7.9nm,1.1s,baz=46,slow=7.0,SNR=4.5
MAW LR LR 11 23 09.0
comp=Z,120nm,18.0s,baz=62,slow=34
MYKOM Kota Tinggi 55.80 305 *e*P **P 11 03 07.7 +0.4**
comp=Z,20nm,1.0s
PPT2 Papeete2 59.22 89 *e*S **S 11 11 45.8 +6.3**
comp=Z,113nm,26.8s
PPT2 *e*LR LR 11 21 04.0
comp=Z,327nm,22.8s,baz=230
PPT Papeete 59.23 89 LR LR 11 27 34.7
comp=Z,225nm,18.1s,baz=228,slow=35
GSI Gunungsitoli 59.60 300 *e*P **P 11 03 35.4 +1.4**
comp=Z,85nm,1.0s
IPM Ipoh 59.66 305 *e*P **P 11 03 34.4 0.0**
comp=Z,17nm,1.0s
PSI Prapat 59.78 302 LR LR 11 29 06.8
comp=Z,556nm,21.9s,baz=91,slow=36
PSI Prapat 59.78 302 *e*P **P 11 03 33.2 -2.2**
comp=Z,30nm,1.1s
PSI Prapat 59.78 302 *e*P **P 11 03 33.2 -2.2**
PSI pmax pmax
comp=Z,30nm,1.1s
SYO Syowa Base 60.37 203⇑ *e*pP pP 11 03 42.8 +1.0
SYO Syowa Base 60.37 203⇑ *e*X **PcP 11 04 19.2 -4.2**
NVL N'lazarevskaya 66.44 195 *e*P **P 11 04 17.5 -1.2**
NVL pmax pmax
comp=Z,9.0nm,0.8s
NVL MLR MLR
comp=Z,419nm,15.0s
JOW Kunigami 66.92 343 LR LR 11 32 47.6
comp=Z,283nm,21.2s,baz=123,slow=35
SNAA Sanae 68.17 190 P **P 11 04 29.2 -0.6**
SNAA Sanae 68.17 190 P **P 11 04 28.7 -1.1**
comp=Z,8.9nm,1.0s,baz=173,slow=7.8,SNR=11
SNAA LR LR 11 33 34.4
comp=Z,512nm,18.5s,baz=182,slow=35
SNAA Sanae 68.17 190 *e*P **P 11 04 29.5 -0.3**
comp=Z,23nm,1.3s
SNAA Sanae 68.17 190 *e*P **P 11 04 29.5 -0.3**
SNAA pmax pmax
comp=Z,23nm,1.3s
VNA3 Neumayer Olymp 69.42 188 P **P 11 04 36.8 -0.7**
VNA1 Neumayer--Stat 69.82 189 P **P 11 04 39.4 -0.5**
TAOE Nuku Hiva Isla 71.74 87 *e*LR LR 11 27 01.0
comp=Z,298nm,24.2s
CM31 Chiang Mai Arr 71.77 313 *e*P **P 11 04 53.5 +1.1**
CMAR Chiang Mai Arr 71.77 313 P **P 11 04 53.5 +1.1**
comp=Z,6.7nm,0.7s,baz=164,slow=6.0,SNR=9.4
CMAR LR LR 11 40 42.3
comp=Z,194nm,18.0s,baz=182,slow=40
JNU Nakatsue 72.46 347 LR LR 11 38 11.8
comp=Z,149nm,19.0s,baz=123,slow=37
GYA Guiyang 74.30 324 *e*P **P 11 05 10.8 +3.4**
GYA pmax pmax
comp=Z,10.0nm,1.0s
NJ2 Nanjing 74.47 336 *e*P **P 11 05 11.4 +3.3**
NJ2 pmax pmax
comp=Z,12nm,0.5s
WHN Wuhan 74.65 332 ⇓P **P 11 05 13.3 +4.1**
MJAR Matsushiro Arr 74.82 353 P **P 11 05 09.8 -0.3**
comp=Z,4.4nm,0.8s,baz=183,slow=7.0,SNR=7.2
MAJO Matsushiro 74.82 353 *e*P **P 11 05 09.8 -0.3**
MAJO Matsushiro 74.82 353 *e*P **P 11 05 10.6 +0.5**
MAJO pmax pmax
comp=Z,8.0nm,1.0s
MAT Matsushiro 74.82 353 P **P 11 05 12.9 +2.8**
MAT S **S 11 14 49.4 +2.7**
KMI Kunming 75.09 320 P P 11 05 17.6 +5.4
KMI pmax pmax
comp=Z,15nm,1.0s
KSRS Korea Array 77.23 345 P **P 11 05 24.4 +0.7**
comp=Z,5.0nm,1.0s,baz=158,slow=6.5,SNR=11
KSRS LR LR 11 43 06.6
comp=Z,83nm,18.0s,baz=144,slow=38
TIA Tai'an 78.85 336 P **P 11 05 36.5 +3.7**
TIA pmax pmax
comp=Z,8.0nm,1.2s
BRDH Bariadhala 79.34 310 LR LR 11 45 14.1
comp=Z,350nm,20.0s,baz=146,slow=39
CD2 Chengdu 79.41 324 P **P 11 05 36.8 +0.7**
CD2 pmax pmax
comp=Z,30nm,0.8s
XAN Xi'an 79.85 329 P **P 11 05 38.8 +0.4**
XAN pmax pmax
comp=Z,7.0nm,0.7s
XAN pmax pmax
comp=Z,410nm,6.1s
ERM Erimo 79.97 358 *e*P **P 11 05 39.3 +0.6**
ERM *e**PP **sP 11 05 43.0 -0.3**
ERM *i* 11 08 41.2
ERM pmax pmax
comp=Z,24nm,1.2s
SHL Shillong 81.39 312 *e*P **P 11 05 47.0 0.0**
SHL Shillong 81.39 312 *e*P **P 11 05 47.3 +0.3**
SHL Shillong 81.39 312 *e*P **P 11 05 47.3 +0.3**
USRK Ussuriysk Ar. 83.11 350 P **P 11 05 56.4 +1.1**
comp=Z,6.2nm,0.8s,baz=197,slow=4.0,SNR=7.0
USRK LR LR 11 41 11.5
comp=Z,191nm,21.0s,baz=167,slow=34
LZH Lanzhou 83.73 327 *e*P **P 11 05 59.3 +0.4**
LZH pP pP 11 06 02.5 +0.2
LZH *e*PP **PP 11 09 15.0 +2.6**
LZH pmax pmax
comp=Z,21nm,1.4s
LZH pmax pmax
comp=Z,100nm,9.0s
LZH LR LR
comp=Z,700nm,16.2s
LZH LR LR
comp=Z,930nm,19.0s
RPN Rapa Nui 83.99 120 LR LR 11 38 30.0
comp=Z,170nm,18.6s,baz=244,slow=32
HHC Hu-ho-hao-te 84.88 334 *e*P **P 11 06 05.5 +0.9**
HHC pmax pmax
comp=Z,25nm,0.9s
HHC pmax pmax
comp=Z,270nm,7.0s
YSS Yuzh-Sakhalins 84.91 358 *i* P **P 11 06 05.2 +0.8**
YSS *i* PCP **pP 11 06 08.1 +0.3**
YSS *i* XP **sP 11 06 09.8 +0.8**
YSS pmax pmax
comp=Z,6.0nm,1.0s
ODAN Odare 85.02 310 *e*P **P 11 06 06.2 +0.4**
comp=Z,41nm,0.8s
OPO Ambohidratompo 85.51 250 P **P 11 06 10.3 +1.8**
comp=Z,11nm,1.1s,baz=107,slow=9.2,SNR=3.7
OPO LR LR 11 38 36.8
comp=Z,107nm,20.1s,baz=96,slow=32
RAMN Ramite 85.57 309 *e*P **P 11 06 08.5 -0.1**
comp=Z,37nm,0.8s
JIRN Jiri 86.33 310 *e*P **P 11 06 13.2 +0.7**
comp=Z,119nm,1.3s
GUN Gumba 86.70 310 *e*P **P 11 06 14.8 +0.5**
comp=Z,125nm,1.4s
PKIN Phulchoki 86.75 309 *e*P **P 11 06 14.6 +0.2**
comp=Z,55nm,1.3s
GKN Gorkha 87.53 309 *e*P **P 11 06 18.3 +0.3**
comp=Z,31nm,0.7s
EFI East Falkland 87.94 165⇑ *i*P **P 11 06 19.4 -0.2**
EFI *i* 11 06 20.6
EFI *i* *SP **sP 11 06 24.0 -0.2**
EFI pmax pmax
comp=Z,28nm,1.1s
KOLN Koldanda 88.00 308 *e*P **P 11 06 18.3 -2.1**
comp=Z,16nm,0.6s
GTA Gaotai 88.26 326 P **P 11 06 22.4 +1.2**
GTA pP sP 11 06 25.8 0.0
GTA sP pP 11 06 28.4 +3.8
GTA S **S 11 17 06.3 +0.4**
GTA SS **SS 11 22 58.8 +2.8**
GTA pmax pmax
comp=Z,3.0nm,1.2s
GTA pmax pmax
comp=Z,54nm,4.9s
GTA LR LR
comp=Z,130nm,18.2s
GTA LR LR
comp=Z,190nm,17.9s
GTA LR LR
comp=Z,250nm,20.6s
DANN Dangsing 88.31 309 *e*P **P 11 06 21.9 -0.1**
comp=Z,50nm,0.6s
HIA Hailar 90.27 343 *e*P **P 11 06 30.5 +0.3**
HIA *i* *PP **sP 11 06 34.3 -0.6**
HIA *i* *SP **pP 11 06 35.4 +1.7**
HIA pmax pmax
comp=Z,5.0nm,1.2s
PETK Petropavlovsk- 91.56 7 P **P 11 06 37.6 +1.4**
comp=Z,2.5nm,0.6s,baz=156,slow=7.4,SNR=3.7
PETK LR LR 11 50 42.5
comp=Z,56nm,18.0s,baz=177,slow=38
PEA1 Petropavlovsk- 91.57 7 *e*P **P 11 06 37.6 +1.4**
PET Petropavlovsk 91.58 7⇑ *i*P **P 11 06 36.9 +0.8**
PET *i* AP **sP 11 06 40.6 -0.2**
PET pmax pmax
comp=Z,26nm,1.2s
ULN Ulaanbaatar 92.59 335 *e*P **P 11 06 41.8 +0.5**
comp=Z,11nm,1.1s
ULN Ulaanbaatar 92.59 335 *c* *i*P **P 11 06 41.6 +0.4**
ULN *i* 11 06 42.2
ULN *i* *SP **sP 11 06 45.7 -0.2**
ULN pmax pmax
comp=Z,3.0nm,0.7s
SONA0 Songino Array 92.79 334 *e*P **P 11 06 42.2 +0.1**
SONM Songino Array 92.79 334 P **P 11 06 42.2 +0.1**
comp=Z,1.7nm,0.7s,baz=164,slow=3.3,SNR=5.4
SONM LR LR 11 52 34.5
comp=Z,97nm,19.4s,baz=128,slow=38
BOSA Boshof 93.55 229 P **P 11 06 47.2 +0.9**
comp=Z,4.3nm,0.8s,baz=146,slow=5.8,SNR=5.9
ZAK Zakamensk 96.03 334 *e*P **P 11 06 55.8 -1.1**
ZAK pmax pmax
comp=Z,5.0nm,1.2s
WMQ Urumqi 97.36 322 P Pdif 11 07 03.8 +0.7
WMQ pP sP 11 07 07.8 +0.1
WMQ sP pP 11 07 11.4 +4.9
WMQ pmax pmax
comp=Z,19nm,0.8s
WMQ pmax pmax
comp=Z,170nm,4.3s
WMQ LR LR
comp=Z,140nm,17.5s
WMQ LR LR
comp=Z,160nm,32.9s
KSH Kashi 100.67 312 P **Pdif 11 07 20.5 +2.5**
KSH pP sP 11 07 24.3 +1.6
KSH pmax pmax
comp=Z,220nm,5.7s
MK32 Makanchi Array 102.15 321 *e*Pdif **Pdif 11 07 24.0 -0.3**
MKAR Makanchi Array 102.15 321 P **Pdif 11 07 24.0 -0.3**
comp=Z,0.5nm,0.8s,baz=123,slow=5.3,SNR=4.0
BILL Bilibino 107.08 8 *i* P **Pdif 11 07 46.5 +0.9**
BILL *i* 11 12 17.5
BILL pmax pmax
comp=Z,1.0nm,1.1s
DECC Green Verdugo 114.06 65 P PKPdf 11 12 08.4 -0.8
baz=239
ILAR Eielson Array 115.16 26 PKP **PKPdf 11 12 09.1 -1.1**
comp=Z,1.3nm,0.7s,baz=289,slow=2.9,SNR=15
ILAR Eielson Array 115.16 26 PKIKP **PKPdf 11 12 09.1 -1.1**
ILAR pmax pmax
comp=Z,2.0nm,0.8s
ILB Eielson Array 115.16 26 *e*PKiKP **PKPdf 11 12 09.1 -1.1**
NV01 Mina Array Sit 116.17 61 *e*PKPdf **PKPdf 11 12 13.6 +0.2**
NVAR Mina Array Bea 116.17 61 PKP **PKPdf 11 12 13.9 +0.6**
comp=Z,0.9nm,0.8s,baz=240,slow=4.1,SNR=5.4
NVAR PKKPab **PKKPab 11 22 53.0 +7.0**
comp=Z,0.4nm,0.6s,baz=212,slow=5.3,SNR=3.9
EGAK Eagle 117.18 27 *e*PKPdf **PKPdf 11 12 13.9 -0.2**
DAWY Dawson 117.46 29 *e*PKPdf **PKPdf 11 12 14.9 +0.2**
B05A Bryant 118.34 49 P **PKPdf 11 12 16.9 +0.1**
baz=243
PSUT Pine Spring 119.30 62 *e*PKPdf **PKPdf 11 12 20.1 +0.7**
MFID Camas Ranch 120.14 57 *e*PKPdf **PKPdf 11 12 20.8 +0.1**
DUG Dugway, Tooele 120.76 61 P **PKPdf 11 12 21.6 -0.4**
baz=244
INK Inuvik 121.56 25 *e*PKPdf **PKPdf 11 12 22.0 -0.4**
INK Inuvik 121.56 25 *e*PKIKP **PKPdf 11 12 22.0 -0.4**
P17A Butcher Ranch, 121.89 63 *e*PKPdf **PKPdf 11 12 24.0 -0.2**
MNTX Cornudas Mount 122.31 73 P **PKPdf 11 12 24.7 -0.3**
baz=242
MNTX Cornudas Mount 122.31 73 *e*PKPdf **PKPdf 11 12 24.8 -0.3**
TX31 Lajitas Ar. Si 122.49 76 *e*PKPdf **PKPdf 11 12 25.0 -0.6**
TX31 *e*PKPdf **PKiKP 11 12 25.4 -0.3**
TXAR Lajitas Array 122.49 76 PKP **PKPdf 11 12 25.5 -0.1**
comp=Z,1.2nm,0.8s,baz=203,slow=3.8,SNR=18
MVCO Mesa Verde 122.50 66 P **PKPdf 11 12 25.3 -0.2**
baz=244
MVCO Mesa Verde 122.50 66 *e*PKPdf **PKPdf 11 12 25.8 +0.2**
BNM Barren Site 122.51 70 *e*PKPdf **PKPdf 11 12 25.7 0.0**
MSO Missoula 122.75 54 P **PKPdf 11 12 25.1 -0.4**
baz=247
PV12 Saucer Basin, 122.76 65 *e*PKPdf **PKPdf 11 12 26.2 +0.2**
TASM ASL Pad, Albuq 122.99 69 P **PKPdf 11 12 26.3 -0.3**
baz=244
ANMO Albuquerque 122.99 69 PKP **PKPdf 11 12 26.4 -0.1**
comp=Z,1.1nm,0.6s,baz=204,slow=2.0,SNR=6.5
ANMO Albuquerque 122.99 69 P **PKPdf 11 12 26.4 -0.1**
baz=244
ANMO Albuquerque 122.99 69 *e*PKPdf **PKPdf 11 12 26.6 +0.1**
ANMO Albuquerque 122.99 69⇓ *i*PKIKP **PKPdf 11 12 26.8 +0.3**
TASL Snake Pit, Alb 122.99 69 P **PKPdf 11 12 26.2 -0.3**
baz=244
DLMT Dillon 123.05 56 *e*PKPdf **PKPdf 11 12 27.1 +0.9**
FXWY Fox Creek 123.41 58 *e*PKPdf **PKPdf 11 12 27.6 +0.5**
REDW Red Top Meadow 123.42 58 *e*PKPdf **PKPdf 11 12 27.2 +0.1**
BOZ Bozeman (W) 123.77 56 P **PKPdf 11 12 27.8 +0.2**
baz=248
BOZ Bozeman (W) 123.77 56 *e*PKPdf **PKPdf 11 12 28.3 +0.7**
BOZ Bozeman (W) 123.77 56 *e*PKIKP **PKPdf 11 12 28.3 +0.7**
O20A White River Ci 123.91 63 P **PKPdf 11 12 28.8 +0.7**
baz=246
O20A White River Ci 123.91 63 *e*PKPdf **PKPdf 11 12 29.0 +0.9**
S22A 4UR Ranch, Cre 123.93 66 P **PKPdf 11 12 28.8 +0.4**
baz=245
S22A 4UR Ranch, Cre 123.93 66 *e*PKPdf **PKPdf 11 12 29.3 +0.9**
KIV Kislovodsk 124.03 302 *i* PKIKP **PKPdf 11 12 28.3 +0.2**
KIV pmax pmax
comp=Z,9.0nm,1.1s
PD31 Pinedale Array 124.05 59 *e*PKPdf **PKPdf 11 12 27.9 -0.5**
PDAR Pinedale Array 124.05 59 PKP **PKPdf 11 12 27.9 -0.5**
comp=Z,0.6nm,0.8s,baz=126,slow=4.0,SNR=5.4
OTAV Otavalo 124.22 122 *e*PKPdf **PKPdf 11 12 29.8 -0.1**
OTAV Otavalo 124.22 122 *e*P **PKPdf 11 12 24.9 -5.0**
SMCO Snowmass 124.42 64 *e*PKPdf **PKPdf 11 12 30.2 +0.8**
SDCO Great Sand Dun 124.89 67 P **PKPdf 11 12 29.9 -0.3**
baz=246
SDCO Great Sand Dun 124.89 67 *e*PKPdf **PKPdf 11 12 30.6 +0.5**
RWWY Rawlins 125.25 62 *e*PKPdf **PKPdf 11 12 31.1 +0.4**
MSTX Muleshoe 125.30 72 *e*PKPdf **PKPdf 11 12 30.9 0.0**
ISCO Idaho Springs 125.63 64 P **PKPdf 11 12 32.1 +0.5**
baz=247
ISCO Idaho Springs 125.63 64 *e*PKPdf **PKPdf 11 12 32.4 +0.8**
ISCO Idaho Springs 125.63 64 *e*PKIKP **PKPdf 11 12 32.4 +0.8**
N23A Red Feather La 125.82 63 P **PKPdf 11 12 32.4 +0.6**
baz=247
N23A Red Feather La 125.82 63 *e*PKPdf **PKPdf 11 12 32.7 +0.8**
K22A Casper 126.08 61 P **PKPdf 11 12 32.8 +0.6**
baz=248
JTS JuntasAbangare 126.53 107⇓ *i*PKIKP **PKPdf 11 12 33.2 -0.5**
SOTA Rioblanco 126.85 122 *e*P **PKPdf 11 12 35.7 +0.8**
PCON Cinco Dias 127.14 122 *e*P **PKPdf 11 12 33.5 -2.1**
YKA Yellowknife Ar 127.22 35 PKP **PKPdf 11 12 33.3 -0.1**
comp=Z,3.6nm,0.7s,baz=259,slow=1.6,SNR=28
YKB5 Yellowknife Ar 127.22 35 *e*PKPdf **PKPdf 11 12 33.4 -0.1**
ESTN Estel 127.23 104 *e*PKPdf **PKPdf 11 12 34.0 -1.0**
PRGR Permogore 127.67 324 *e*PKIKP **PKPdf 11 12 33.5 -0.8**
PRGR pmax pmax
comp=Z,9.0nm,1.1s
LAO LASA Array 127.67 56 P **PKPdf 11 12 35.9 +1.0**
baz=251
MARP Paez Belalcaza 127.81 122 *e*P **PKPdf 11 12 35.5 -1.0**
YOTC Yotoco, Valle 128.39 121 *e*P **PKPdf 11 12 35.5 -1.9**
WMOK Wichita Mounta 128.61 73 P **PKPdf 11 12 37.0 -0.1**
baz=246
WMOK Wichita Mounta 128.61 73 *e*PKPdf **PKPdf 11 12 37.2 +0.1**
WMOK Wichita Mounta 128.61 73 *e*PKIKP **PKPdf 11 12 37.2 +0.1**
BR101 Keskin Array S 128.73 294 *e*PKPdf **PKPdf 11 12 37.0 -0.3**
BRTR Keskin Array B 128.73 294 PKP **PKPdf 11 12 37.0 -0.3**
comp=Z,1.5nm,0.9s,baz=126,slow=2.0,SNR=4.3
BRTR Keskin Array B 128.73 294 PKIKP **PKPdf 11 12 37.0 -0.3**
BRTR pmax pmax
comp=Z,2.0nm,1.0s
BCIP Isla Barro Col 129.57 113 *e*PKPdf **PKPdf 11 12 38.8 -0.7**
ISP Isparta 130.30 291 *e*PKIKP **PKPdf 11 12 39.9 -0.4**
KLMR Klimovskoe 130.44 322 *e*PKIKP **PKPdf 11 12 38.5 -1.1**
KLMR pmax pmax
comp=Z,8.0nm,1.0s
KLMR Klimovskoe 130.44 322 *e*PKPdf **PKPdf 11 12 38.5 -1.1**
KLMR AMP 11 12 40.3
comp=Z,8.0nm,1.0s
HELC Santa Helena 130.54 119 *e*PKPdf **PKPdf 11 12 41.8 0.0**
HELC Santa Helena 130.54 119 *e*P **PKPdf 11 12 41.5 -0.3**
OBN Obninsk 131.06 314 *e*PKIKP **PKPdf 11 12 41.2 +0.3**
OBN *e* 11 14 58.3
OBN *e*PPP PPP 11 17 48.9
RUSC La Rusia 131.98 122 *e*PKPdf **PKPdf 11 12 44.1 -0.6**
HHAR Hobbs 132.85 73 *e*PKPdf **PKPdf 11 12 42.8 -2.2**
ECSD EROS Data Cent 133.28 62 P **PKPdf 11 12 44.5 -1.1**
baz=254
ECSD EROS Data Cent 133.28 62 *e*PKPdf **PKPdf 11 12 44.8 -0.8**
C31A Landman Farms, 133.53 57 P **PKPdf 11 12 45.7 -0.2**
baz=257
R38A Fenwick Farm, 133.54 70 P **PKPdf 11 12 45.2 -1.0**
baz=250
W41B Gary Mavity, V 133.72 75 P **PKPdf 11 12 45.6 -1.1**
baz=248
W41B Gary Mavity, V 133.72 75 *e*PKPdf **PKPdf 11 12 46.6 0.0**
S39A Bolivar 133.81 71 P **PKPdf 11 12 45.8 -1.0**
baz=250
S39A Bolivar 133.81 71 *e*PKPdf **PKPdf 11 12 46.1 -0.7**
RES Resolute Bay 134.10 19 *e*PKPdf **PKPdf 11 12 45.9 -0.3**
RES Resolute Bay 134.10 19 *e*PKIKP **PKPdf 11 12 45.9 -0.3**
T40A Mansfield 134.22 72 P **PKPdf 11 12 46.7 -0.8**
baz=250
R39A Chumby, Stover 134.23 71 P **PKPdf 11 12 46.8 -0.8**
baz=251
P38A Dawn 134.29 69 P **PKPdf 11 12 46.5 -1.1**
baz=252
AKASG Malin Array Be 134.68 307 PKP **PKPdf 11 12 48.4 +0.4**
comp=Z,1.4nm,0.6s,baz=70,slow=2.1,SNR=5.9
AKBB Malin Array Si 134.68 307 *e*PKPdf **PKPdf 11 12 48.4 +0.4**
KIEV Kiev 134.69 307⇑ *i*PKIKP **PKPdf 11 12 48.7 +0.8**
U42A Revenden 134.91 74 P **PKPdf 11 12 47.7 -1.1**
baz=249

ULM	Lac du Bonnet	135.21	54	PKP	PKPdf	11 12 47.9	-1.0	
	comp=Z,2.5nm,0.7s,baz=274,slow=3.9,SNR=4.1							
ULM	Lac du Bonnet	135.21	54	ePKPdf	PKPdf	11 12 49.4	+0.4	
T42A	Van Buren	135.25	73	ePKPdf	PKPdf	11 12 48.7	-0.8	
P40A	Paris	135.35	69	ePKPdf	PKPdf	11 12 50.2	+0.6	
R41A	Rosebud	135.46	71	P	PKPdf	11 12 48.7	-1.1	
	baz=251							
Q41A	Truxton	135.77	70	P	PKPdf	11 12 49.5	-0.8	
	baz=252							
ARA0	ARCESS Array S	135.96	334	ePKPdf	PKPdf	11 12 50.6	+0.8	
ARCES	ARCESS Array B	135.96	334	PKP	PKPdf	11 12 50.6	+0.8	
	comp=Z,5.5nm,0.8s,baz=72,slow=4.0,SNR=10							
PLAL	Pickwick Lake	136.84	77	ePKPdf	PKPdf	11 12 51.5	-1.0	
FCC	Fort Churchill	136.87	41	ePKPdf	PKPdf	11 12 51.0	-0.7	
FIA0	FINESS Array S	136.96	322	ePKPpre	PKPpre	11 12 46.8		
FIA0				ePKIKP	PKiKP	11 12 53.9	+0.3	
FIA0	FINESS Array S	136.96	322	ePKIKP	PKPpre	11 12 46.8		
FIA0				e		11 12 53.9		
FINES	FINESS Array B	136.96	322	PKhKP	PKPpre	11 12 46.8		
	comp=Z,1.6nm,0.7s,baz=98,slow=4.2,SNR=3.3							
FINES				PKP	PKiKP	11 12 53.9	+0.3	
	comp=Z,3.0nm,0.7s,baz=116,slow=4.4,SNR=11							
X49A	Woodville	138.02	78	P	PKPdf	11 12 53.5	-1.1	
	baz=249							
E40A	Wakefield	138.52	60	P	PKPdf	11 12 56.4	+1.1	
	baz=260							
Y51A	Rockmart	138.77	80	P	PKPdf	11 12 54.8	-1.3	
	baz=249							
TOA0	Torodi Ar. Sit	139.78	241	ePKPpre	PKPpre	11 12 50.4		
TORD	Torodi Ar. Bea	139.78	241	PKhKP	PKPpre	11 12 49.8		
	comp=Z,2.0nm,0.8s,baz=126,slow=2.8,SNR=7.2							
TOA1	Torodi Ar. Sit	139.79	241	ePKPpre	PKPpre	11 12 49.8		
W52A	Murphy	140.07	79	ePKPdf	PKPdf	11 12 59.2	+0.7	
V52A	Sevierville	140.57	78	ePKPdf	PKPdf	11 12 58.0	-1.3	
UPC	Upice	143.05	306	AMS	AMS	12 27 20.0		
	comp=Z,100nm,22.7s							
TAM	Tamanrasset	143.08	257	ePKPdf	PKPbc	11 13 02.2	+1.0	
TAM	Tamanrasset	143.08	257	ePKIKP	PKPbc	11 13 02.2	+0.9	
HFS	Hagfors	143.16	322	PKhKP	PKPpre	11 12 58.8		
	comp=Z,2.0nm,0.6s,baz=178,slow=10,SNR=3.5							
BOJS	Bojanci	143.26	297	*i* PKPdf	PKPbc	11 13 00.5	-0.4	
SOKA	Soboth	143.53	299	ePKPdf	PKPdf	11 13 04.3	-0.1	
	comp=Z,4.7nm,0.8s							
GOPC	GO Pecny, Ondr	143.83	305	AMS	AMS	12 29 50.0		
	comp=Z,100nm,22.7s							
PRU	Pruhonice	143.99	305	AMS	AMS	12 27 50.0		
	comp=Z,100nm,19.9s							
NB2	NORSAR Subarra	144.07	324	PKP	PKPab	11 13 01.2	-1.1	
	comp=Z,1.8nm,0.8s,baz=73,slow=4.1							
BRG	Berggiesshubel	144.36	306	ePKP	PKPdf	11 13 05.0	-0.6	
	comp=Z,8.3nm,0.9s							
BRG				e		11 13 08.2		
	comp=Z,21nm,1.1s							
BRG	Berggiesshubel	144.36	306	ePKIKP	PKPdf	11 13 04.9	-0.6	
BRG				e		11 13 08.2		
BRG				pmax	pmax			
	comp=Z,8.0nm,0.9s							
MYKA	Terra Mystica	144.48	299	ePKPdf	PKPbc	11 13 04.9	+0.3	
	comp=Z,7.7nm,1.1s							
GEC2	GERESS Array S	144.53	303	ePKPdf	PKPbc	11 13 04.9	+0.2	
GEC2	GERESS Array S	144.53	303	ePKIKP	PKPbc	11 13 04.9	+0.2	
GERES	GERESS Array B	144.53	303	PKP	PKPbc	11 13 04.9	+0.2	
	comp=Z,10nm,0.8s,baz=90,slow=3.3,SNR=29							
KOWA	Kowa	144.59	236	PKP	PKPab	11 13 05.5	0.0	
	comp=Z,24nm,0.7s,baz=131,slow=2.4,SNR=39							
KOWA	Kowa	144.59	236	ePKPdf	PKPab	11 13 05.5	0.0	
KOWA				ePKPdf	PKPbc	11 13 05.8	+0.1	
KHC	Kasperske Hory	144.62	303	ePKP	PKPbc	11 13 05.4	+0.5	
KHC				ex	x	11 13 18.0		
KHC	Kasperske Hory	144.62	303	ePKPdf	PKPbc	11 13 05.1	+0.2	
KHC	Kasperske Hory	144.62	303	ePKIKP	PKPbc	11 13 05.4	+0.5	
N54A	Moraine State	144.63	71	P	PKPab	11 13 04.1	-0.9	
	baz=259							
N54A	Moraine State	144.63	71	ePKPdf	PKPab	11 13 04.4	-0.6	
ALLY	Alegheny Colle	144.65	70	ePKPdf	PKPab	11 13 04.5	-0.6	
KBA	Koelnbreinsper	144.71	300	ePKPab	PKPab	11 13 05.0	-0.4	
	comp=Z,9.9nm,0.8s							
ERPA	Erie	144.84	69	ePKPdf	PKPab	11 13 05.2	-0.5	
CLL	Collm	144.93	307	ePKPdf	PKPab	11 13 05.0	-0.7	
	comp=Z,19nm,1.3s							
CLL				*i* PKiKP	pPKPdf	11 13 09.3	-0.7	
	comp=Z,27nm,1.2s							
CLL				e		11 13 20.0		
CLL	Collm	144.93	307	ePKPdf	PKPbc	11 13 05.8	+0.1	
CLL	Collm	144.93	307	ePKIKP	PKPbc	11 13 05.9	+0.1	
M54A	Oil Creek Stat	144.98	70	P	PKPab	11 13 05.2	-1.1	
	baz=260							
M54A	Oil Creek Stat	144.98	70	ePKPdf	PKPab	11 13 05.3	-1.0	
ABTA	Abfaltersbach	145.26	299	ePKPdf	PKPbc	11 13 06.7	-0.4	
	comp=Z,25nm,1.3s,SNR=9.7							
NKC	Novy Kostel	145.33	305	ePKP	PKPbc	11 13 06.7	-0.4	
NKC	Novy Kostel	145.33	305	ePKIKP	PKPbc	11 13 06.7	-0.4	
IP04	Greensprings	145.43	76	ePKPbc	PKPbc	11 13 07.2	-0.6	
IP07	Quail	145.44	77	ePKPbc	PKPdf	11 13 07.1	-0.7	
IP03	Louisa	145.48	76	ePKPbc	PKPdf	11 13 07.2	-0.7	
IP06	Yanceyville	145.48	77	ePKPdf	PKPdf	11 13 07.2	-0.7	
JSRW	J. Sargeant Re	145.50	77	ePKPdf	PKPdf	11 13 06.1	-1.8	
IP01	Cuckoo	145.54	77	ePKPdf	PKPdf	11 13 07.4	-0.6	
SUMG	Summit	145.55	2	ePKPdf	PKPab	11 13 07.8	-0.1	
SUMG	Summit	145.55	2	ePKIKP	PKPab	11 13 07.8	-0.1	
O56A	Blue Knob Stat	145.56	72	P	PKPdf	11 13 07.2	-0.8	
	baz=258							
O56A	Blue Knob Stat	145.56	72	ePKPdf	PKPdf	11 13 07.5	-0.5	
SPRD	Spring Road, M	145.58	76	ePKPdf	PKPdf	11 13 07.5	-0.6	
HUMP	Col San Antoni	145.61	117	ePKPdf	PKPdf	11 13 08.3	-0.4	
IP05	Hopewell Churc	145.63	77	ePKPdf	PKPdf	11 13 07.9	-0.3	
CVRD	Centerville Ro	145.65	76	ePKPdf	PKPdf	11 13 07.4	-0.8	
KEST	Kesra	145.68	279	PKPbc	PKPab	11 13 09.7	+0.5	
	comp=Z,55nm,0.9s,baz=202,slow=1.7,SNR=22							
CBYP	Canovanas	145.69	117	ePKPdf	PKPdf	11 13 07.1	-1.8	
URVA	University of	145.73	77	ePKPdf	PKPdf	11 13 08.2	-0.1	
MTP	Monte Pirata	145.79	117	ePKPdf	PKPdf	11 13 08.0	-1.0	
SADO	Sadowa	145.79	64	ePKPdf	PKPdf	11 13 07.8	-0.4	
WTTA	Wattenberg	145.88	300	ePKPab	PKPbc	11 13 08.9	-0.3	
	comp=Z,41nm,0.8s,SNR=16							
WATA	Walderalm	145.93	300	*i* PKPab	PKPdf	11 13 08.7	+0.2	
	comp=Z,82nm,1.1s,SNR=8.2							
SSPA	Standing Stone	146.14	72	P	PKPdf	11 13 08.5	-0.5	
	baz=259							
SSPA	Standing Stone	146.14	72	ePKPdf	PKPdf	11 13 09.0	0.0	
THTN	Thala	146.14	279	ePKPdf	PKPdf	11 13 09.0	-0.3	
MOTA	Moosalm	146.25	300	*i* PKPbc	PKPdf	11 13 08.8	-0.3	
	comp=Z,59nm,0.8s,SNR=21							
MMNY	Mt. Morris Dam	146.46	68	ePKPdf	PKPdf	11 13 09.7	+0.3	
RETA	Reutte	146.48	300	*i* PKPbc	PKPbc	11 13 10.5	-0.4	
	comp=Z,34nm,1.1s							
FETA	Feichten	146.50	300	*i* PKPab	PKPbc	11 13 10.9	-0.1	
	comp=Z,60nm,1.1s,SNR=22							
SDMD	Soldier's Deli	146.69	74	ePKPdf	PKPdf	11 13 09.8	-0.2	
FUORN	Ofenpass-Fuorn	146.80	299	ePKPdf	PKPbc	11 13 11.6	-0.4	
PAGS	Pennsylvania G	146.94	73	ePKPdf	PKPdf	11 13 09.7	-0.6	
GDHS	Morne Mazeau,	147.07	124	ePKPdf	PKPdf	11 13 10.8	-0.5	
DAVA	Damuels	147.08	300	ePKPbc	PKPbc	11 13 11.9	-0.8	
	comp=Z,37nm,0.9s,SNR=12							
MVL	Millersville	147.18	73	ePKPdf	PKPdf	11 13 11.4	+0.8	
PLVO	Plevna	147.28	64	ePKPdf	PKPdf	11 13 11.7	+1.0	
TUE	Stuetta	147.43	299	ePKPdf	PKPbc	11 13 12.5	-1.2	
ILULI	Ilulissat	147.62	11	ePKPbc	PKPbc	11 13 13.1	-0.1	
ILULI	Ilulissat	147.62	11	ePKP2	PKPbc	11 13 13.1	-0.1	
N59A	State Game Lan	147.77	72	P	PKPbc	11 13 13.6	-1.0	
	baz=261							
N59A	State Game Lan	147.77	72	ePKPdf	PKPdf	11 13 12.2	+0.5	
BINY	Binghamton	147.80	69	ePKPdf	PKPdf	11 13 11.8	+0.1	
PSUB	Penn St. - Bra	147.84	74	ePKPdf	PKPdf	11 13 12.4	+0.6	
KSPA	Keystone Colle	147.87	71	ePKPdf	PKPdf	11 13 12.3	+0.5	
LUPA	Lehigh Univers	148.02	73	ePKPbc	PKPbc	11 13 14.5	-0.8	
BFO	Black Forest	148.10	302	ePKPbc	PKPbc	11 13 14.5	-0.8	
BFO	Black Forest	148.10	302	ePKP2	PKPbc	11 13 14.5	-0.8	
BRNJ	Basking Ridge	148.64	73	ePKPdf	PKPdf	11 13 12.5	-0.6	
BRNJ				ePKPbc	pPKPdf	11 13 16.6	0.0	
ODNJ	Ogdensburg	148.67	72	ePKPdf	PKPdf	11 13 12.8	-0.3	
ODNJ				ePKPbc	pPKPdf	11 13 15.9	-0.7	
SENIN	Lac Senin/Sane	148.85	298	ePKPbc	PKPbc	11 13 17.4	-0.1	
ECH	Echery	148.89	302	epPKPdf	pPKPdf	11 13 16.8	0.0	
ECH	Echery	148.89	302	ePKP2	pPKPdf	11 13 16.8	0.0	
LONY	Lake Ozonia	149.03	65	P	PKPbc	11 13 16.6	-1.1	
	baz=267							
LONY	Lake Ozonia	149.03	65	epPKPdf	pPKPdf	11 13 17.0	-0.2	
PAL	Palisades	149.18	72	P	PKPbc	11 13 17.4	-0.8	
	baz=262							
PAL	Palisades	149.18	72	ePKPbc	PKPbc	11 13 17.9	-0.3	
PAL	Palisades	149.18	72	ePKP2	PKPbc	11 13 17.9	-0.3	
NCB	Newcomb	149.25	66	epPKPdf	pPKPdf	11 13 17.6	+0.1	
BNI	Bardonecchia	149.26	296	ePKPbc	PKPbc	11 13 18.2	-0.3	
TRY	Troy	149.56	69	ePKPdf	PKPdf	11 13 14.6	+0.1	
TRY				ePKPbc	sPKPdf	11 13 19.2	0.0	
SFJD	Kangerlussuaq	149.70	13	PKPbc	PKPbc	11 13 18.2	-0.4	
	comp=Z,10nm,0.7s,baz=227,slow=2.7,SNR=3.6							
SFJD	Kangerlussuaq	149.70	13	ePKPbc	PKPbc	11 13 18.0	-0.6	
VT1	Waterbury	150.32	66	ePKPbc	PKPbc	11 13 20.2	-0.7	
QUA2	Belchertown	150.49	70	ePKPdf	PKPdf	11 13 14.7	-1.3	
SSB	Saint Sauveur	150.78	296	ePKPbc	PKPbc	11 13 22.0	0.0	
SSB	Saint Sauveur	150.78	296	ePKIKP	PKPbc	11 13 22.0	0.0	
LBNH	Lisbon	150.92	66	P	PKPbc	11 13 21.8	-0.5	
	baz=268							
LBNH	Lisbon	150.92	66	ePKPbc	PKPbc	11 13 22.3	0.0	
LBNH	Lisbon	150.92	66	ePKIKP	PKPbc	11 13 22.3	0.0	
BRYW	Bryant College	151.06	71	ePKPbc	PKPbc	11 13 22.5	-0.2	
SCHQ	Schefferville	152.24	43	PKPbc	PKPbc	11 13 24.5	-0.5	
	comp=Z,8.7nm,0.9s,baz=340,slow=3.6,SNR=6.6							
SCHQ	Schefferville	152.24	43	ePKPbc	PKPbc	11 13 24.3	-0.7	
PKME	Peaks-Kenny Pk	152.79	64	P	PKPbc	11 13 26.2	-0.3	
	baz=272							
PKME	Peaks-Kenny Pk	152.79	64	ePKPbc	PKPbc	11 13 26.5	0.0	
EKA	Eskdalemuir Ar	153.28	320	PKPbc	PKPbc	11 13 27.0	-0.3	
	comp=Z,1.8nm,0.7s,baz=71,slow=3.1,SNR=5.3							
PQI	Presque Isle	153.57	60	ePKPbc	PKPbc	11 13 26.7	-1.5	
ESDC	Sonseca Array	156.81	283	PKPab	PKPab	11 13 52.8	-2.2	
	comp=Z,0.4nm,0.5s,baz=71,slow=2.6,SNR=3.0							

IDC 19 10:59:24.6±0.4, 74.0°, 48.94°N×42.73°E, h0km, Error ellipse: s-maj=293.6km s-min=152.8km az=139.0, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	8.48	339	*i*			11 54 00.0	
	baz=154,slow=320,SNR=0.5							
I26DE	FREYUNG INFRAS	19.04	281	*i*			12 59 00.9	
	baz=78,slow=398,SNR=0.4							
I48TN	KESRA INFRASON	27.71	254	*i*			13 48 10.0	
	baz=50,slow=297,SNR=0.4							

RSNC 19 11:12:11.1±0.8, 6.01°N×73.84°W, h109km±11km, ML1.5, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RUSC	La Rusia	0.76	99	eP		Pn	11 12 30.1	-0.3
RUSC				*i*			11 12 30.9	
	comp=Z,12nm,0.2s							
RUSC				eS		Sn	11 12 45.0	+0.1
PTBC	PUERTO BERRIO,	0.81	311	eP		Pn	11 12 28.9	-1.4
PTBC				eS		Sn	11 12 44.7	-0.1
PTBC				*i*			11 12 46.8	
	comp=Z,3.8nm,0.1s							
NORC	Norcasia	1.12	247	eP		Pn	11 12 33.6	+0.1
NORC				eS		Sn	11 12 49.9	-0.5
CHIC	Chingaza	1.38	176	eP		Pn	11 12 40.8	+4.0
ZARC	Zaragoza, Cauc	1.79	326	eP		Pn	11 12 40.8	-0.6
ZARC				eS		Sn	11 13 04.3	-0.1
ZARC				*i*			11 13 06.3	
	comp=Z,4.8nm,0.2s							

MEX 19 11:25:37.5±0.8, 18.58°N×103.03°W, h59km±22km, MD3.6, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MMIG	Aquila	0.41	226	eP		Pn	11 25 46.9	-1.6
MMIG				eS		Sn	11 25 55.1	-1.3
EZ5V		1.05	329	eP		Pn	11 25 55.2	-1.2
EZ5V				eS		Sn	11 26 08.7	-1.6
R15V		1.08	303	eP		Pn	11 25 55.0	-1.6
R15V				eS		Sn	11 26 08.3	-2.4
ZIIG	Zihuatanejo	1.78	123	*i* P		Pn	11 26 04.3	-1.6
ZIIG				eS		Sn	11 26 25.0	-2.4
CJM	Chamela	2.11	296	eP		Pn	11 26 10.1	-0.3
ARIG	Puente Sto Nin	2.56	96	eP		Pn	11 26 16.0	-0.7

*SJA **19** 11:41:31.3±0.5, 22.60°S×67.10°W, h234km±5km, ML3.4, MW3.8*
*ISCJB **19** 11:41:32.1±0.3, 22.53°S±0.02°×67.09°W±0.03, h206km±2km, mb4.3/46, Error ellipse: s-maj=5.3km s-min=3.9km az=162.8*
*NEIC **19** 11:41:32.5±0.5, 22.51°S×66.99°W, h187km±5km, mb4.5/29, Error ellipse: s-maj=7.9km s-min=5.2km az=87.0*
*SCB **19** 11:41:33.2±0.7, 22.16°S×66.95°W, h180km±5km, Ml4.3/2, Error ellipse: s-maj=19.7km s-min=7.6km az=30.0*
*GUC **19** 11:41:33.3±0.4, 22.60°S×67.14°W, h181km±8km, ML4.8*
*IDC **19** 11:41:33.4±1.8, 22.44°S×66.80°W, h189km±15km, mb4.1/15, mb1 4.1/19, mb1mx3.9/39, mbtmp4.5/19, Error ellipse: s-maj=16.7km s-min=11.4km az=80.0*
ISC 19 11:41:33.5±0.5, 22.51S±0.04×67.04W±0.04, h196km±5km, n304, σ1§05/329, mb4.5/46, 8C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MOCB	Mochara	1.81	46	ePn		Pn	11 42 10.2	-0.1
MOCB				eSn		Sn	11 42 37.1	-1.7
	792nm,0.5s							
SLA	San Lorenzo	2.61	148	*i* P		Pn	11 42 18.6	+0.1
SLA				*i* S		Sn	11 42 54.1	+0.2
SLA				IAML			11 42 55.9	
	comp=Z,87nm,0.8s							
SLA	San Lorenzo	2.61	148	⇑*i* P		Pn	11 42 18.8	+0.2
PB01	IPOC Station P	2.70	302	ePn		Pn	11 42 19.7	+0.2
PB01				eSn		Sn	11 42 55.2	-0.3
PB01	IPOC Station P	2.70	302	⇑*i* P		Pn	11 42 19.8	+0.2
PB01				*i* S		Sn	11 42 54.9	-0.5
PB01				IAML			11 42 56.5	
	comp=E,2μm,0.4s							
PB07	IPOC Station P	2.75	286	⇑*i* P		Pn	11 42 20.0	-0.2
PB07				*i* S		Sn	11 42 55.2	-1.4
PB07				IAML			11 42 55.6	
	comp=N,3μm,0.3s							
PB04	IPOC Station P	2.88	273	ePn		Pn	11 42 21.5	-0.2
PB04				eSn		Sn	11 42 57.6	-1.7
PB04	IPOC Station P	2.88	273	⇑*i* P		Pn	11 42 21.5	-0.2
PB04				*i* S		Sn	11 42 57.9	-1.4
PB04				IAML			11 43 02.1	
	comp=E,2μm,0.3s							
PB02	IPOC Station P	2.90	294	⇑*i* P		Pn	11 42 21.9	-0.1
PB08	IPOC Station P	3.07	320	⇑*i* P		Pn	11 42 25.5	+1.3
PB08				*i* S		Sn	11 43 05.0	+1.2
PB08				IAML			11 43 09.9	
	comp=N,673nm,0.6s							
PB10	IPOC Station P	3.39	252	ePn		Pn	11 42 27.3	-0.3
PB10	IPOC Station P	3.39	252	*i* P		Pn	11 42 26.9	-0.7
PB10				*i* S		Sn	11 43 07.7	-2.2
PB10	IPOC Station P	3.39	252	⇑*i* P		Pn	11 42 27.1	-0.4
PB10				*i* S		Sn	11 43 06.9	-3.0
GO02	Mina Guanaco	3.52	221	ePn		Pn	11 42 29.4	-0.1
GO02	Mina Guanaco	3.52	221	eP		Pn	11 42 29.6	0.0
GO02				eS		Sn	11 43 11.9	-1.5
PB14	IPOC Station P	3.73	235	*i* P		Pn	11 42 31.1	-1.0
PB14				*i* S		Sn	11 43 15.1	-2.9
PB14	IPOC Station P	3.73	235	eP		Pn	11 42 31.4	-0.8
PB14				*i* S		Sn	11 43 15.2	-2.9
MNMC	Minye Minye	4.12	324	ePn		Pn	11 42 37.1	0.0
MNMC	Minye Minye	4.12	324	⇑*i* P		Pn	11 42 37.1	0.0
MNMC				eS		Sn	11 43 25.4	-1.5
AHML	Horco Molle	4.53	160	*i* P		Pn	11 42 40.2	-1.6
AHML				IAML			11 42 42.9	
	comp=Z,26nm,0.3s							
BBOJ	La Paz, Jacaqu	5.61	349	ePn		Pn	11 42 57.5	+1.2
GO03	Copiap	5.83	209	ePn		Pn	11 42 56.2	-2.4
CYA	Choya	6.01	170	*i* P		Pn	11 42 59.1	-1.7
CYA				IAML			11 43 02.2	
	comp=Z,14nm,0.3s							
BBOD	La Paz, Gloria	6.03	346	ePn		Pn	11 43 03.0	+1.4
LPAZ	La Paz	6.28	350	P		Pn	11 43 05.8	+0.8
	comp=Z,11nm,0.3s,baz=162,slow=7.1,SNR=179							
LPAZ				S		Sn	11 44 17.0	-0.1
	comp=Z,0.9nm,0.3s,baz=333,slow=18,SNR=2.8							
LPAZ	La Paz	6.28	350	ePn		Pn	11 43 05.7	+0.8
LPAZ				eSn		Sn	11 44 13.7	-3.5
BBOB	La Paz, Bander	6.42	351	ePn		Pn	11 43 07.2	+0.5
BBOB				eSn		Sn	11 44 15.9	-4.5
	comp=Z,138nm,0.9s							
LCO	Las Campanas	7.26	206	ePn		Pn	11 43 14.1	-3.2
LCO	Las Campanas	7.26	206	*i* P		Pn	11 43 14.4	-2.9
APLL	PUNTA DE LOS L	7.87	177	*i* P		Pn	11 43 22.5	-2.5
GO04	Tololo Observa	8.34	203	ePn		Pn	11 43 27.8	-3.6
SIV	San Ignacio	8.59	42	P		Pn	11 43 31.3	-3.3
	comp=Z,17nm,0.3s,baz=231,slow=14,SNR=98							
SIV				S		Sn	11 44 57.6	-14
	comp=Z,6.2nm,0.3s,baz=239,slow=17,SNR=7.5							
SIV	San Ignacio	8.59	42	eP		Pn	11 43 31.2	-3.4
CPUP	Villa Florida	9.63	115	P		Pn	11 43 46.9	-1.1
	comp=Z,0.8nm,0.3s,baz=294,slow=8.3,SNR=2.8							
CPUP	Villa Florida	9.63	115	ePn		Pn	11 43 49.3	+1.3
ROC1	El Roble	11.00	198	ePn		Pn	11 44 04.9	-1.0
GO05	HualaæØ	13.17	198	ePn		Pn	11 44 32.8	-0.4
SAML	Samuel	13.99	16	ePn		Pn	11 44 41.8	-1.7
TRQA	Tornquist	16.09	165	eP		P	11 45 08.1	-0.6
	comp=Z,5.7nm,0.6s							
SPB	Sao Paulo	18.08	97	eP		P	11 45 29.7	-0.8
	comp=Z,30nm,1.0s							
PLCA	Paso Flores	18.41	188	P		P	11 45 34.1	+0.1
	baz=27,slow=14							
PLCA	Paso Flores	18.41	188	eP		P	11 45 34.3	+0.3
	comp=Z,15nm,0.7s							
PTGA	Pitinga	22.72	19	P		P	11 46 16.5	-2.2
	comp=Z,11nm,0.2s,baz=87,slow=23,SNR=25							
PTGA	Pitinga	22.72	19	eP		P	11 46 16.8	-2.0
	comp=Z,13nm,0.8s							
RUSC	La Rusia	28.84	347	eP		P	11 47 13.8	-0.5
	comp=Z,3.8nm,0.5s							
RUSC	La Rusia	28.84	347	eP		P	11 47 14.0	-0.3
BARC	Barichara	29.54	348	eP		P	11 47 17.7	-2.5
HELC	Santa Helena	29.71	343	eP		P	11 47 20.2	-1.6
	comp=Z,17nm,0.5s							
PTBC	PUERTO BERRIO,	29.77	345	eP		P	11 47 18.8	-3.2
PCRV	Puerto La Cruz	32.57	4	P		P	11 47 46.7	+0.2
	comp=Z,14nm,0.8s,baz=326,slow=3.6,SNR=5.9							
SJCC	San Jacinto, C	33.18	345	eP		P	11 47 49.6	-2.2
FDF	Fort de France	37.46	9	eP		P	11 48 27.1	-1.2
	comp=Z,60nm,0.7s							
353A	Camilla	56.03	342	P		P	11 50 52.0	+0.1
	baz=161							
252A	Lumpkin	56.78	342	P		P	11 50 56.8	-0.4
	baz=160							
546A	Slidell	56.79	336	P		P	11 50 57.5	+0.3
	baz=155							
251A	Midway	57.07	341	P		P	11 50 58.9	-0.3
	baz=160							
152A	Waverly Hall	57.41	342	P		P	11 51 01.2	-0.4
	baz=161							
Z54A	Sparta	57.45	344	P		P	11 51 01.5	-0.3
	baz=163							
151A	Opelika	57.45	342	P		P	11 51 01.4	-0.5
	baz=160							
Z53A	Monticello	57.68	344	P		P	11 51 03.0	-0.4
	baz=162							
150A	Eclectic	57.73	341	P		P	11 51 03.4	-0.5
	baz=159							
GOGA	Godfrey	57.77	344	P		P	11 51 03.9	-0.2
	baz=162							
248A	Dixon Mills	57.80	339	P		P	11 51 03.8	-0.5
	baz=157							
Z52A	Williamson	57.82	343	P		P	11 51 04.2	-0.3
	baz=161							
Y54A	Tignall	58.01	345	P		P	11 51 05.7	0.0
	baz=163							
Z50A	Ashland	58.31	341	P		P	11 51 07.6	-0.2
	baz=159							
Y52A	Lilburn	58.36	343	P		P	11 51 07.9	-0.3
	baz=162							
LRAL	Lakeview Retre	58.43	340	P		P	11 51 08.1	-0.5
	baz=158							
Z49A	Columbiana	58.43	341	P		P	11 51 08.2	-

T49A	Edmonton	61.81 343	P	P	11 51 30.9	-0.7
	baz=161					
U46A	Springville	61.87 341	P	P	11 51 31.3	-0.7
	baz=158					
T48A	Bowling Green	62.05 343	P	P	11 51 32.4	-0.7
	baz=160					
MIAR	Mount Ida	62.09 335	P	P	11 51 33.4	-0.1
	baz=152					
MIAR	Mount Ida	62.09 335	eP	P	11 51 33.5	+0.1
	comp=Z,3.6nm,0.6s					
T47A	Sharon Grove	62.13 342	P	P	11 51 33.0	-0.7
	baz=159					
X39A	Fountain Ranch	62.27 335	P	P	11 51 35.0	+0.3
	baz=152					
T46A	Princeton	62.41 341	P	P	11 51 35.3	-0.3
	baz=158					
TXAR	Lajitas Array	62.45 324	P	P	11 51 37.4	+1.2
	comp=Z,0.2nm,0.7s,baz=147,slow=7.2,SNR=4.1					
S48A	Wiedeman Farm,	62.47 343	P	P	11 51 35.2	-0.7
	baz=160					
V41A	Mountainview	62.67 337	P	P	11 51 36.7	-0.6
	baz=154					
W39A	Magazine	62.75 336	P	P	11 51 38.2	+0.4
	baz=152,SNR=5.4					
W39A	Magazine	62.75 336	eP	P	11 51 38.4	+0.5
	comp=Z,6.3nm,0.8s					
U42A	Revenden	62.85 338	P	P	11 51 37.9	-0.6
	baz=155					
V40A	Witts Springs	62.93 337	P	P	11 51 38.6	-0.4
	baz=153					
V40A	Witts Springs	62.93 337	eP	P	11 51 39.1	0.0
	comp=Z,3.3nm,0.6s					
T44A	Benton	62.98 340	P	P	11 51 38.7	-0.6
	baz=157					
WCI	Wyandotte Cave	63.07 343	P	P	11 51 39.0	-0.9
	baz=160					
U41A	Viola	63.08 338	P	P	11 51 39.3	-0.7
	baz=154					
T43A	Greenville	63.20 339	P	P	11 51 40.2	-0.6
	baz=156,SNR=6.8					
S45A	Carrier Mills	63.21 341	P	P	11 51 40.1	-0.7
	baz=158					
V39A	Pettigrew	63.26 336	P	P	11 51 41.2	-0.1
	baz=152,SNR=6.8					
T42A	Van Buren	63.42 339	P	P	11 51 41.4	-0.8
	baz=155					
U40A	Yellville	63.43 337	P	P	11 51 42.0	-0.3
	baz=153					
PAL	Palisades	63.51 354	P	P	11 51 42.4	-0.3
	baz=173					
S43A	Fulton Ridge,	63.58 340	P	P	11 51 42.5	-0.7
	baz=156					
U39A	Green Forest	63.68 336	P	P	11 51 43.4	-0.5
	baz=153,SNR=5.4					
R45A	Skylar, Fairfi	63.69 341	P	P	11 51 42.9	-1.0
	baz=158					
R44A	Waltonville	63.88 341	P	P	11 51 44.1	-1.1
	baz=157					
S42A	Caledonia	63.99 339	P	P	11 51 45.1	-0.8
	baz=156,SNR=6.7					
FVM	French Village	64.06 340	eP	P	11 51 46.0	-0.4
	comp=Z,8.8nm,0.8s					
S41A	Jillco Farms,	64.14 338	P	P	11 51 46.8	-0.2
	baz=155,SNR=11					
R43A	Red Bud	64.17 340	P	P	11 51 45.7	-1.4
	baz=156					
Q45A	Warren Harvey,	64.21 342	P	P	11 51 46.2	-1.1
	baz=158					
T39A	Clever	64.21 337	P	P	11 51 46.7	-0.7
	baz=153					
P47A	Martinsville	64.24 344	P	P	11 51 46.6	-0.9
	baz=160					
N54A	Moraine State	64.28 349	P	P	11 51 47.7	0.0
	baz=167					
CCM	Cathedral Cave	64.40 339	P	P	11 51 48.1	-0.4
	baz=155					
CCM	Cathedral Cave	64.40 339	eP	P	11 51 48.3	-0.3
	comp=Z,12nm,0.7s					
S40A	Lebanon	64.41 338	P	P	11 51 48.5	-0.2
	baz=154,SNR=5.3					
R42A	Luebbering	64.45 339	P	P	11 51 48.5	-0.4
	baz=156					
Q44A	Meyer Farm, Va	64.47 341	P	P	11 51 48.5	-0.5
	baz=158					
T38A	Diamond	64.56 336	P	P	11 51 49.7	+0.1
	baz=152,SNR=7.0					
R41A	Rosebud	64.66 339	P	P	11 51 49.9	-0.4
	baz=155,SNR=8.0					
P45A	Graceland, Par	64.68 342	P	P	11 51 49.7	-0.6
	baz=159					
M54A	Oil Creek Stat	64.76 350	P	P	11 51 50.7	-0.2
	baz=167					
S39A	Bolivar	64.79 337	P	P	11 51 50.9	-0.2
	baz=153,SNR=9.2					
S39A	Bolivar	64.79 337	eP	P	11 51 51.2	+0.1
	comp=Z,9.5nm,0.6s					
P44A	Sand Creek, Wi	64.87 342	P	P	11 51 50.6	-1.0
	baz=158					
Q42A	Golden Eagle	64.94 340	P	P	11 51 51.8	-0.3
	baz=156					
S38A	Stockton	64.95 337	P	P	11 51 51.9	-0.2
	baz=153					
R40A	Maddies Statio	64.95 338	P	P	11 51 51.8	-0.4
	baz=154,SNR=5.4					
R40A	Maddies Statio	64.95 338	eP	P	11 51 52.1	-0.1
	comp=Z,5.9nm,0.7s					
Q41A	Truxton	65.21 339	P	P	11 51 53.4	-0.4
	baz=155					
MNTX	Cornudas Mount	65.22 324	P	P	11 51 53.3	-0.8
	baz=141					
R39A	Chumby, Stover	65.24 338	P	P	11 51 53.9	-0.1
	baz=154					
P43A	Skaggs, Pawnee	65.30 341	P	P	11 51 53.9	-0.4
	baz=157					
O45A	Potomac	65.35 343	P	P	11 51 53.2	-1.4
	baz=159					
ERPA	Erie	65.41 349	P	P	11 51 54.8	-0.2
	baz=167					
R38A	Fenwick Farm,	65.44 337	P	P	11 51 54.7	-0.5
	baz=153,SNR=5.4					
P40A	Paris	66.00 339	P	P	11 51 58.3	-0.5
	baz=155					
Q38A	Cooks Store, C	66.02 338	P	P	11 51 58.8	-0.2
	baz=153					
P39B	Salisbury	66.19 338	P	P	11 51 59.6	-0.5
	baz=154					
Q37A	Longview Farm,	66.25 337	P	P	11 52 00.3	-0.1
	baz=152					
N43A	Stutzman Famil	66.39 342	P	P	11 52 00.5	-0.8
	baz=158					
O40A	La Belle	66.47 339	P	P	11 52 00.9	-0.9
	baz=155					
M44A	Midewin, Midew	66.50 343	P	P	11 52 01.0	-1.0
	baz=159					
N42A	Yates City	66.55 341	P	P	11 52 01.5	-0.8
	baz=157					
LBNH	Lisbon	66.57 356	P	P	11 52 02.9	+0.5
	baz=175					
P38A	Dawn	66.58 338	P	P	11 52 02.4	-0.1
	baz=153					
M43A	Waltham Townsh	66.79 342	P	P	11 52 02.9	-0.9
	baz=158					
P37A	Lathrop	66.84 337	P	P	11 52 03.7	-0.4
	baz=153					
O38A	Galt	67.01 338	P	P	11 52 04.7	-0.5
	baz=154					
N40A	Mertquake, Sal	67.07 340	P	P	11 52 05.0	-0.6
	baz=155					
LONY	Lake Ozonia	67.16 354	P	P	11 52 06.2	+0.1
	baz=172					
LONY	Lake Ozonia	67.16 354	eP	P	11 52 06.6	+0.5
	comp=Z,11nm,0.8s					
N39A	Derby Farms, D	67.36 339	P	P	11 52 06.9	-0.6
	baz=154					
DBIC	Dimbokro	67.38 72	P	P	11 52 07.2	-0.9
	comp=Z,4.8nm,0.7s,baz=225,slow=5.4,SNR=5.9					
L43A	Garden Prairie	67.42 343	P	P	11 52 07.2	-0.6
	baz=158					
PKME	Peaks-Kenny Pk	67.48 358	P	P	11 52 07.6	-0.4
	baz=178					
L42A	Oliver, Polo	67.52 342	P	P	11 52 07.8	-0.6
	baz=157					
M40A	Post Highland	67.52 340	P	P	11 52 07.6	-0.8
	baz=156					
QSPA	South Pole Qui	67.69 180	P	P	11 52 10.7	+1.3
	comp=Z,7.7nm,0.9s,baz=261,slow=0.9,SNR=4.8					
K43A	Burlington	67.80 343	P	P	11 52 09.5	-0.6
	baz=159					
M39A	Webster	67.80 340	P	P	11 52 09.3	-0.8
	baz=155					
L41A	Preston	67.83 341	P	P	11 52 09.7	-0.6
	baz=157					
Y22E	IRIS PASSCAL I	67.87 325	P	P	11 52 10.1	-0.9
	baz=140					
L40A	Anamosa	68.03 341	P	P	11 52 11.2	-0.4
	baz=156					
M38A	Pleasantville	68.08 339	P	P	11 52 11.3	-0.6
	baz=154					
K42A	Prairie Point,	68.14 342	P	P	11 52 11.7	-0.6
	baz=158					
K41A	Shullsburg	68.26 342	P	P	11 52 12.3	-0.7
	baz=157					
CBKS	Cedar Bluff	68.27 333	P	P	11 52 12.2	-1.0
	baz=148					
L39A	Vinton	68.33 340	P	P	11 52 12.8	-0.6
	baz=155					
JFWS	Jewell Farm	68.53 342	P	P	11 52 14.3	-0.3
	baz=157					
K40A	Colesburg	68.59 341	P	P	11 52 14.4	-0.6
	baz=156					
L38A	Oak Wood Farm,	68.65 340	P	P	11 52 15.4	0.0
	baz=154					
TRQ	Mont Tremblant	68.75 354	eP	P	11 52 16.3	+0.3
K39A	Oelwein	68.82 341	P	P	11 52 15.9	-0.6
	baz=155					
I43A	Langenfeld Bro	68.85 344	P	P	11 52 15.8	-0.8
	baz=159					
J41A	Loganville	68.87 342	P	P	11 52 16.3	-0.4
	baz=157					
L37A	Phoenix Point,	68.89 339	P	P	11 52 16.3	-0.6
	baz=154					
I42A	Draeger Farm,	69.06 343	P	P	11 52 17.4	-0.5
	baz=158					
J40A	Soldiers Grove	69.11 342	P	P	11 52 17.7	-0.5
	baz=157					
J39A	Decorah	69.34 341	P	P	11 52 19.1	-0.6
	baz=156					
H42A	Shiocton	69.53 344	P	P	11 52 20.3	-0.4
	baz=159					
I39A	Houston	69.76 341	P	P	11 52 21.8	-0.4
	baz=156					
I39A	Houston	69.76 341	eP	P	11 52 22.1	-0.1
	comp=Z,12nm,1.0s					
BGNE	Belgrade	69.84 336	P	P	11 52 22.2	-0.6
	baz=150					
H41A	Junction City	69.93 343	P	P	11 52 22.8	-0.4
	baz=158					
H40A	Chili	70.14 342	P	P	11 52 23.9	-0.6
	baz=157					
J36A	Seneca 1, Swea	70.16 339	P	P	11 52 24.1	-0.6
	baz=153					
I38A	Scanlan Farm,	70.17 341	P	P	11 52 24.3	-0.4
	baz=155					
F43A	Flat Rock, Esc	70.43 345	P	P	11 52 25.4	-0.8
	baz=160					
H39A	Augusta	70.44 342	P	P	11 52 26.0	-0.3
	baz=156					
H38A	Maiden Rock	70.73 341	P	P	11 52 27.7	-0.3
	baz=155					
F41A	Three Lakes	70.83 344	P	P	11 52 28.4	-0.2
	baz=158					
E43A	Lone Tree Farm	70.91 346	P	P	11 52 28.7	-0.4
	baz=160					
E42A	Champion	71.17 345	P	P	11 52 30.4	-0.3
	baz=160					
F40A	Park Falls	71.26 343	P	P	11 52 31.2	0.0
	baz=158					
ECSD	EROS Data Cent	71.29 338	P	P	11 52 31.3	-0.2
	baz=151					
SPMN	Marine on St.	71.38 341	P	P	11 52 32.1	+0.2
	baz=155					
F39A	Loretta	71.47 343	P	P	11 52 32.2	-0.3
	baz=157					
H35A	Sunnyside Ranc	71.54 339	P	P	11 52 32.7	-0.2
	baz=153					
E40A	Wakefield	71.69 344	P	P	11 52 33.9	+0.1
	baz=158					
E39A	Mellen	71.80 343	P	P	11 52 34.3	-0.1
	baz=157					
KOWA	Kowa	71.85 65	P	P	11 52 33.8	-1.5
	comp=Z,6.1nm,0.5s,baz=246,slow=6.0,SNR=17					
KOWA	Kowa	71.85 65	eP	P	11 52 33.8	-1.5
KOWA			eP	P	11 52 34.8	-0.6
D41A	Chassel	71.92 345	P	P	11 52 35.2	+0.1
	baz=159					
F36A	Milaca	72.18 341	P	P	11 52 36.3	-0.4
	baz=154					
F36A	Milaca	72.18 341	eP	P	11 52 36.6	0.0
	comp=Z,3.4nm,0.7s					
H32A	Carlson Farm,	72.25 338	P	P	11 52 37.2	0.0
	baz=151					
E38A	The Farm, Brul	72.28 343	P	P	11 52 37.1	-0.2
	baz=156					
E36A	McGregor	72.69 341	P	P	11 52 39.0	-0.7
	baz=155					
D37A	Cotton	73.03 342	P	P	11 52 41.4	-0.3
	baz=156					
C38A	Sawbill Land.	73.22 343	P	P	11 52 42.0	-0.8
	baz=157					
GMRC	Grnite Mounta	73.32 320	P	P	11 52 42.0	-1.9
	baz=134					
GMRC	Granite Mounta	73.32 320	eP	P	11 52 44.8	+0.9
C37A	Embarrass	73.48 343	P	P	11 52 44.1	-0.2
	baz=156					
EYMN	Ely	73.49 343	P	P	11 52 44.1	-0.3
	baz=156					
C36A	Pine Crest Far	73.69 342	P	P	11 52 45.3	-0.2
	baz=155					
C35A	Jirik Farms, M	73.97 341	P	P	11 52 46.8	-0.4
	baz=154					
B35A	Bob, Littlefor	74.49 342	P	P	11 52 50.0	-0.2
	baz=154					
AGMN	Agassiz Nation	75.07 341	P	P	11 52 53.4	0.0
	baz=153					
C31A	Landman Farms,	75.22 339	P	P	11 52 54.0	-0.4
	baz=151					
A33A	Warroad	75.50 341	P	P	11 52 56.0	+0.1
	baz=153					
PD31	Pinedale Array	75.86 329	eP	P	11 52 57.9	-0.5
PDAR	Pinedale Array	75.86 329	P	P	11 52 59.4	+1.0
	comp=Z,0.3nm,0.6s,baz=124,slow=5.6,SNR=4.4					
TOA0	Torodi Ar. Sit	76.08 69	eP	P	11 52 58.4	-1.6
TOA0			eP	P	11 52 58.9	-1.1
TOA0			epP	pP	11 53 49.5	+2.6
TOA1	Torodi Ar. Sit	76.08 69	eP	P	11 52 58.8	-1.1
TOA1			epP	pP	11 53 48.9	+1.9
TORD	Torodi Ar. Bea	76.08 69	P	P	11 52 58.8	-1.1
	comp=Z,8.6nm,0.4s,baz=256,slow=5.6,SNR=166					
TORD			pP	pP	11 53 48.9	+1.9
	comp=Z,3.4nm,0.6s,baz=252,slow=5.9,SNR=3.7					
VNDA	Vanda	76.15 190	P	P	11 53 01.6	+2.2
	comp=Z,0.7nm,0.8s,baz=144,slow=3.0,SNR=5.3					
VNDA	Vanda	76.15 190	eP	P	11 53 00.6	+1.3
ULM	Lac du Bonnet	76.81 341	P	P	11 53 02.8	-0.4
	comp=Z,5.1nm,0.6s,baz=163,slow=5.6,SNR=13					
O03D	Paynes Creek	80.63 321	eP	P	11 53 26.0	+1.6
MDT	Midelt	81.08 49	P	P	11 53 27.5	+0.5
	comp=Z,10nm,0.8s,baz=237,slow=4.8,SNR=19					
PBDV	Barranco-do-Ve	81.41 44	eP	P	11 53 29.6	+1.1
	comp=Z,34nm,1.2s					
BOSA	Boshof	81.44 117	P	P	11 53 29.1	-0.1
	comp=Z,2.8nm,0.5s,baz=254,slow=4.5,SNR=6.0					
PCVE	Castro Verde	81.57 43	eP	P	11 53 30.0	+0.7
	comp=Z,13nm,1.4s					
MESJ	Messejana	81.58 43	eP	P	11 53 30.2	+0.8
	comp=Z,17nm,1.8s					
PVAQ	Vaqueiros	81.64 44	eP	P	11 53 30.6	+0.9
	comp=Z,13nm,1.1s					
EVO	Evora	82.12 43	eP	P	11 53 29.6	-2.6
	comp=Z,12nm,1.7s					
PMTG	Montargil	82.31 42	eP	P	11 53 33.6	+0.4
	comp=Z,15nm,1.8s					
PBAR	Barrancos	82.53 44	eP	P	11 53 34.8	+0.5
	comp=Z,26nm,1.5s					
TAM	Tamanrasset	83.74 62	eP	P	11 53 40.8	-0.3
	comp=Z,9.9nm,0.9s					
FCC	Fort Churchill	84.01 346	eP	P	11 53 42.1	+0.8
	comp=Z,4.3nm,0.7s					
MVO	Moncorvo	84.30 41	eP	P	11 53 43.6	+0.2
	comp=Z,29nm,2.1s					
PAB	San Pablo	85.03 44	eP	P	11 53 47.6	+0.5
	comp=Z,10nm,0.9s					
ESDC	Sonseca Array	85.35 44	P	P	11 53 49.2	+0.5
	comp=Z,0.5nm,0.4s,baz=241,slow=4.2,SNR=12					
ES19	SONSECA Array	85.41 44	eP	P	11 53 48.7	-0.2
KEST	Kesra	92.54 52	P	P	11 54 22.9	+0.2
	comp=Z,1.9nm,0.7s,baz=270,slow=1.0,SNR=3.2					
KEST	Kesra	92.54 52	eP	P	11 54 22.8	+0.1
	comp=Z,3.7nm,1.0s					
YKA	Yellowknife Ar	92.72 340	P	P	11 54 23.4	+0.7
	comp=Z,0.5nm,0.4s,baz=129,slow=4.6,SNR=7.8					
YKA			pP	pP	11 55 14.6	+3.3
	comp=Z,0.2nm,0.5s,baz=123,slow=4.7,SNR=3.6					
ASAR	Alice Springs	129.78 205	PKP	PKPdf	12 00 20.1	-0.1
	comp=Z,0.8nm,1.0s,baz=151,slow=2.1,SNR=4.4					
WR1	Warramunga Arr	132.92 208	ePKPdf	PKPdf	12 00 26.7	+0.5
WRA	Warramunga Arr	132.92 208	PKP	PKPdf	12 00 26.7	+0.5
	comp=Z,0.4nm,0.5s,baz=162,slow=1.9,SNR=5.2					
KURK	Kurchatov	141.19 35	ePKPpre	PKPpre	12 00 36.0	
KURK			ePKPdf	PKPdf	12 00 41.6	+1.2
KURBB	Kurchatov Arra	141.20 35	PKhKP	PKPpre	12 00 36.0	
	comp=Z,0.3nm,0.6s,baz=306,slow=3.2,SNR=3.0					
KURBB			PKP	PKPdf	12 00 41.6	+1.2
	comp=Z,0.5nm,0.6s,baz=300,slow=2.0,SNR=6.2					
ZAA1	Zalesovo Array	142.09 27	ePKPdf	PKPdf	12 00 42.8	+0.9
ZALV	Zalesovo Beam	142.10 27	PKP	PKPdf	12 00 42.8	+0.9
	comp=Z,1.0nm,0.4s,baz=317,slow=6.1,SNR=4.3					
KSH	Kashi	144.35 53	PKP	PKPab	12 00 43.4	-1.8
KSH			PP	PP	12 04 06.4	+2.2
KSH			AMB	AMB		
	comp=Z,250nm,6.2s					
MK32	Makanchi Array	145.39 38	ePKPdf	PKPab	12 00 48.8	+0.1
MKAR	Makanchi Array	145.39 38	PKPbc	PKPab	12 00 48.8	0.0
	comp=Z,2.9nm,0.6s,baz=310,slow=3.8,SNR=28					
SONA0	Songino Array	154.19 10	ePKPab	PKPab	12 01 25.5	+0.8
SONM	Songino Array	154.19 10	PKPab	PKPab	12 01 25.5	+0.8
	comp=Z,1.8nm,0.7s,baz=326,slow=4.1,SNR=5.8					
LZH	Lanzhou	164.32 28	ePKP	PKPdf	12 01 14.9	+0.9
LZH			pPKP	pPKPdf	12 02 06.0	+0.8
LZH			PKP	PKPab	12 02 12.6	+3.5
LZH			sPKP		12 02 27.5	
CMAR	Chiang Mai Arr	166.26 105	PKPab	PKPab	12 02 17.9	-0.3
	comp=Z,0.9nm,0.6s,baz=247,slow=5.8,SNR=5.3					
CD2	Chengdu	168.28 43	PKP	PKPdf	12 01 16.1	-0.9

IDC 19 11:49:31.3±7.8, 7°.41S×129°.02E, h118km±83km, mb3.4/1, mb1 3.7/4, mb1mx3.3/52, mbtmp4.0/4, ML4.0/3, Error ellipse: s-maj=71.4km s-min=27.5km az=30.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	5.98	242	P	Pn	11 50 58.2	+0.8
	5.2nm,0.3s,baz=139,slow=20,SNR=5.3						
BATI				S	Sn	11 52 04.7	0.0
	5.3nm,0.3s,baz=287,slow=20,SNR=5.4						
WRA	Warramunga Arr	13.48	158	P	Pn	11 52 36.4	-1.5
	0.7nm,0.3s,baz=341,slow=13,SNR=40						
WRA				S	Sn	11 54 57.9	-8.8
	1.9nm,0.3s,baz=334,slow=22,SNR=11						
ASAR	Alice Springs	16.83	164	P	P	11 53 21.1	+0.9
	0.7nm,0.3s,baz=342,slow=9.9,SNR=77						
ASAR				S	Sn	11 56 17.3	-10
	0.2nm,0.3s,baz=328,slow=15,SNR=4.5						
MKAR	Makanchi Array	68.04	327	P	P	12 00 18.1	0.0
	0.4nm,0.4s,baz=117,slow=7.8,SNR=6.4						

*ISCJB **19** 11:49:56.9±0.4, 30°.12N±0°.04×138°.62E±0°.07, h400km, mb3.2/12, Error ellipse: s-maj=8.2km s-min=4.8km az=19.5*
*JMA **19** 11:49:59.0±0.4, 30°.37N×139°.00E, h441km, M3.8*
*IDC **19** 11:49:59.9±1.4, 30°.25N×138°.72E, h426km±14km, mb3.0/12, mb1 3.3/17, mb1mx3.1/64, mbtmp3.9/17, Error ellipse: s-maj=16.7km s-min=13.7km az=118.0*
ISC 19 11:49:58.4±0.7, 30°.26N±0°.07×138°.76E±0°.09, h400km, n40, σ1°91/51, mb3.3/12, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	2.98	17	P	Pn	11 51 05.8	+4.5
	22nm,0.3s,baz=72,slow=20,SNR=4.3						
JHJ				S	S	11 51 54.1	+1.7
	25nm,0.3s,baz=54,slow=17,SNR=2.9						
JHJ2	Mitsune	2.98	17	S	S	11 51 56.6	+4.2
JCJ	Chichijima	4.36	135	S	S	11 52 13.7	-1.6
	149nm,0.3s,baz=288,slow=22,SNR=16						
BSO3	Boso 3	4.77	18	P	Pn	11 51 19.6	+2.0
BSO3				eS	S	11 52 22.8	+0.7
BSO1	Boso 1	4.77	23	P	Pn	11 51 20.1	+2.8
BSO1				S	S	11 52 23.9	+2.3
BSO4	Boso 4	4.90	15	P	Pn	11 51 21.7	+2.5
BSO4				eS	S	11 52 26.8	+1.9
JHU	Hanno	5.59	4	P	Pn	11 51 28.3	+1.8
JHU				eS	S	11 52 37.9	-0.5
JRY	Ryogami san	5.74	1	P	Pn	11 51 30.8	+2.6
JRY				S	S	11 52 42.0	+0.7
JAG	Ashikaga	6.18	5	P	Pn	11 51 33.8	+1.0
JAG				S	S	11 52 48.3	-1.6
MJAR	Matsushiro Arr	6.28	356	P	Pn	11 51 35.9	+1.9
	1.8nm,0.3s,baz=267,slow=4.1,SNR=14						
MJAR				S	S	11 52 51.9	-0.1
	0.6nm,0.3s,baz=227,slow=26,SNR=4.1						
MAT	Matsushiro	6.29	356	P	Pn	11 51 36.2	+2.2
MAT				eS	S	11 52 50.6	-1.5
JHO	Hitachi	6.51	13	P	Pn	11 51 37.6	+1.1
JHO				eS	S	11 52 54.1	-2.5
JNU	Nakatsue	7.30	295	P	P	11 51 47.8	+1.9
	0.9nm,0.3s,baz=97,slow=4.6,SNR=9.6						
JFK	Kawauchi	7.30	13	S	S	11 53 09.6	-3.3
JSJ	Shimokoshiki	7.89	283	P	P	11 51 54.9	+2.4
JMK	Ichinoseki	8.91	12	P	P	11 52 04.0	+0.3
JMK				eS	S	11 53 41.4	-5.1
KSRS	Korea Array	11.51	311	P	Pn	11 52 34.8	+1.0
	0.5nm,0.3s,baz=127,slow=10,SNR=11						
ASAJ	Asahikawa	14.16	11	P	P	11 53 03.8	+2.2
	0.9nm,0.3s,baz=236,slow=7.1,SNR=9.5						
KLR	Kul'dur	19.68	346	P	P	11 54 00.2	+0.6
	0.1nm,0.3s,baz=156,slow=7.8,SNR=33						
CMAR	Chiang Mai Arr	37.94	261	P	P	11 56 39.1	-0.6
	1.3nm,0.5s,baz=66,slow=5.7,SNR=6.6						
RAMN	Ramite	45.59	279	eP	P	11 57 40.0	-1.0
	16nm,0.6s						
JIRN	Jiri	45.73	280	eP	P	11 57 41.7	-0.6
GUN	Gumba	45.93	281	eP	P	11 57 43.1	-0.7
	24nm,0.4s						
MKAR	Makanchi Array	46.16	307	P	P	11 57 43.8	-1.1
	0.4nm,0.6s,baz=101,slow=6.2,SNR=5.0						
KKN	Kakani	46.47	281	eP	P	11 57 46.8	-1.0
	5.4nm,0.2s						
DMN	Daman	46.67	281	eP	P	11 57 48.3	-1.1
	7.6nm,0.3s						
GKN	Gorkha	46.96	281	eP	P	11 57 51.2	-0.2
	11nm,0.3s						
DANN	Dangsing	47.60	282	eP	P	11 57 55.9	-0.6
	22nm,0.4s						
KOLN	Koldanda	47.90	281	eP	P	11 57 57.8	-0.9
	14nm,0.5s						
PYUN	Piuthan	48.32	282	eP	P	11 58 01.2	-0.7
	53nm,0.4s						
KURBB	Kurchatov Arra	48.69	313	P	P	11 58 02.7	-1.3
	0.7nm,0.4s,baz=92,slow=7.1,SNR=11						
WRA	Warramunga Arr	50.09	185	P	P	11 58 12.9	-1.9
	0.8nm,0.5s,baz=1.1,slow=7.6,SNR=5.1						
BVAR	Borovoye Array	53.69	316	P	P	11 58 39.8	-0.7
	0.7nm,0.5s,baz=103,slow=8.2,SNR=4.1						
ASAR	Alice Springs	53.82	186	P	P	11 58 41.2	-0.6
	0.4nm,0.6s,baz=9.5,slow=3.9,SNR=2.9						
ILAR	Eielson Array	56.43	30	P	P	11 58 58.8	-0.9
	0.7nm,0.6s,baz=262,slow=5.0,SNR=13						
YKA	Yellowknife Ar	70.79	28	P	P	12 00 31.6	-0.8
	0.5nm,0.4s,baz=297,slow=6.0,SNR=5.4						
FINES	FINESS Array B	73.78	333	P	P	12 00 48.3	-1.6
	0.9nm,0.5s,baz=98,slow=2.9,SNR=6.4						
NVAR	Mina Array Bea	80.90	51	P	P	12 01 29.2	-0.4
	0.4nm,0.5s,baz=282,slow=6.2,SNR=3.7						
PDAR	Pinedale Array	84.04	43	P	P	12 01 44.4	-1.2
	0.2nm,0.5s,baz=98,slow=3.0,SNR=3.

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.15**	**154**	*i* P	**Pg**	**12 02 13.2**	**-0.1**
ELZG				*i* S	**Sg**	**12 02 15.2**	**-0.3**
ELZG	**Elazig**	**0.15**	**154**	P	**Pg**	**12 02 13.2**	**-0.1**
ELZG				S	**Sg**	**12 02 15.2**	**-0.3**
SVRC	**Sivrice-ELAZID**	**0.41**	**129**	PG	**Pg**	**12 02 18.1**	**0.0**
SVRC	**Sivrice-ELAZID**	**0.41**	**129**	*e*Pg	**Pg**	**12 02 18.1**	**0.0**
PTK	**Pertek**	**0.46**	**56**	PG	**Pg**	**12 02 18.9**	**-0.2**
PTK				SG	**Sg**	**12 02 26.0**	**+0.8**
PTK	**Pertek**	**0.46**	**56**	*e*Pg	**Pg**	**12 02 18.9**	**-0.2**
PTK				*e*Sg	**Sg**	**12 02 26.0**	**+0.8**
MALT	**Malatya**	**0.49**	**229**	PG	**Pg**	**12 02 19.3**	**-0.2**
MALT				SG	**Sb**	**12 02 27.2**	**-1.3**
MALT	**Malatya**	**0.49**	**229**	*e*Pg	**Pg**	**12 02 19.3**	**-0.2**
MALT				*e*Sg	**Sb**	**12 02 27.2**	**-1.3**
TNCL	**Tunceli-Merkez**	**0.69**	**46**	*i* P	**Pg**	**12 02 23.0**	**-0.5**
TNCL				*i* S	**Sg**	**12 02 33.2**	**+0.7**
TNCL	**Tunceli-Merkez**	**0.69**	**46**	P	**Pg**	**12 02 23.0**	**-0.5**
TNCL				S	**Sg**	**12 02 33.2**	**+0.7**
KEMA	**Kemaliye**	**0.71**	**334**	*i* P	**Pg**	**12 02 23.7**	**0.0**
KEMA				*i* S	**Sb**	**12 02 34.0**	**-0.8**
KEMA	**Kemaliye**	**0.71**	**334**	P	**Pg**	**12 02 23.7**	**0.0**
KEMA				S	**Sb**	**12 02 34.0**	**-0.8**
HEKM	**Malatya_Hekimh**	**0.77**	**289**	*i* P	**Pg**	**12 02 25.0**	**+0.1**
HEKM				*i* S	**Sb**	**12 02 37.9**	**+1.1**
HEKM	**Malatya_Hekimh**	**0.77**	**289**	P	**Pg**	**12 02 25.0**	**+0.1**
AKCD	**Akcadag**	**0.84**	**246**	*i* P	**Pg**	**12 02 26.1**	**-0.1**
AKCD				*i* S	**Sb**	**12 02 39.8**	**+1.2**
AKCD	**Akcadag**	**0.84**	**246**	P	**Pg**	**12 02 26.1**	**-0.1**
ILIC	**ilic-Erzincan**	**0.85**	**343**	PG	**Pg**	**12 02 24.8**	**-1.7**
ILIC	**ilic-Erzincan**	**0.85**	**343**	*e*Pg	**Pg**	**12 02 24.8**	**-1.7**
KELT	**Kelkit**	**1.54**	**10**	*i* P	**Pb**	**12 02 39.1**	**+0.1**
KELT				*i* S	**Sg**	**12 03 00.8**	**+1.3**
KELT	**Kelkit**	**1.54**	**10**	P	**Pb**	**12 02 39.1**	**+0.1**
KELT				S	**Sg**	**12 03 00.8**	**+1.3**

IDC ***19*** *12:03:03.2±0.8, 1°.29N×126°.92E, h0km, mb4.2/7, mb1 4.3/7, mb1mx3.9/62, mbtmp4.2/7, MS3.3/3, Ms1 3.3/3, ms1mx2.8/62, Error ellipse: s-maj=70.2km s-min=15.6km az=70.0*
ISCJB ***19*** *12:03:06.6±0.7, 1°.44N±0°.07×127°.2E±0°.1, h35km, mb4.1/8, MS3.3/2, Error ellipse: s-maj=15.9km s-min=10.2km az=175.0*
DJA ***19*** *12:03:09.7±0.5, 1°.N±5°.×12°.7E±°, h10km, M4.2/7, MLv4.2/7*
ISC 19 12:03:09.1±0.9, 1°.40N±0°.10×127°.0E±0°.1, h35km, n16, σ1°74/13, mb4.2/8, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**2.08**	**166**	P	**Pn**	**12 03 44.8**	**+3.2**
KMSI	**Cibinong**	**3.12**	**255**	P	**Pn**	**12 03 57.7**	**+1.9**
SANI	**Sanana**	**3.57**	**196**	P	**Pn**	**12 04 02.6**	**+0.6**
NLAI	**Namlea**	**4.61**	**179**	P	**Pn**	**12 04 18.1**	**+1.8**
SIJI	**Sorong**	**4.83**	**118**	LR	LR	12 06 37.4	
	comp=Z,254nm,18.3s,baz=331,slow=44						
LUWI	**Luwuk**	**4.87**	**240**	P	**Pn**	**12 04 21.3**	**+1.4**
WRA	**Warramunga Arr**	**22.40**	**162**	P	**P**	**12 08 02.7**	**-2.0**
	4.9nm,0.6s,baz=342,slow=11,SNR=77						
JOW	**Kunigami**	**25.32**	**3**	LR	LR	12 18 38.7	
	comp=Z,69nm,21.7s,baz=83,slow=37						
ASAR	**Alice Springs**	**25.80**	**165**	P	**P**	**12 08 35.2**	**-1.9**
	1.6nm,0.3s,baz=342,slow=11,SNR=33						
STKA	**Stephens Creek**	**35.87**	**159**	P	**P**	**12 10 04.5**	**-1.3**
	1.7nm,0.5s,baz=331,slow=13,SNR=5.9						
KLR	**Kul'dur**	**47.83**	**4**	P	**P**	**12 11 43.5**	**+0.3**
	0.1nm,0.5s,baz=225,slow=11,SNR=4.6						
SONM	**Songino Array**	**49.58**	**342**	P	**P**	**12 11 57.7**	**+0.8**
	2.0nm,0.9s,baz=157,slow=7.8,SNR=8.4						
MKAR	**Makanchi Array**	**59.62**	**326**	P	**P**	**12 13 09.3**	**-0.4**
	2.2nm,0.3s,baz=118,slow=7.5,SNR=45						
KURBB	**Kurchatov Arra**	**63.84**	**328**	P	**P**	**12 13 37.3**	**-0.6**
	2.2nm,0.4s,baz=125,slow=6.1,SNR=34						
BVAR	**Borovoye Array**	**69.41**	**327**	P	**P**	**12 14 13.1**	**-0.4**
	0.8nm,0.3s,baz=123,slow=5.3,SNR=4.7						
RAR	**Rarotonga**	**74.91**	**112**	LR	LR	12 48 24.7	
	comp=Z,22nm,18.3s,baz=262,slow=36						

ISCJB ***19*** *12:08:25.0±0.7, 2°.92S±0°.09×139°.69E±0°.08, h54km, mb3.6/4, MS3.3/1, Error ellipse: s-maj=14.9km s-min=8.7km az=146.7*
IDC ***19*** *12:08:26.6±1.4, 3°.02S×139°.84E, h64km±18km, mb3.4/4, mb1 3.8/6, mb1mx3.4/50, mbtmp3.9/6, MS3.4/1, Ms1 3.3/1, ms1mx2.6/32, Error ellipse: s-maj=23.4km s-min=15.2km az=106.0*
ISC 19 12:08:26.0±0.8, 3°.11S±0°.09×139°.8E±0°.1, h54km, n7, σ2°77/10, mb3.6/4, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**1.10**	**58**	P	**Pn**	**12 08 45.3**	**+0.1**
	65nm,0.3s,baz=239,slow=12,SNR=625						
JAY				S	**Sn**	**12 08 58.6**	**-0.8**
	263nm,0.3s,baz=52,slow=17,SNR=28						
SIJI	**Sorong**	**8.79**	**284**	P	**Pn**	**12 10 30.9**	**+0.3**
	3.2nm,0.3s,baz=218,slow=21,SNR=11						
SIJI				S	Sn	12 11 59.6	-8.7
	1.1nm,0.3s,baz=307,slow=20,SNR=4.2						
WRA	**Warramunga Arr**	**17.55**	**197**	P	**P**	**12 12 29.6**	**+2.1**
	0.9nm,0.3s,baz=11,slow=13,SNR=33						
WRA				S	**Sn**	**12 15 35.7**	**-6.1**
	0.3nm,0.3s,baz=14,slow=23,SNR=5.5						
ASAR	**Alice Springs**	**21.21**	**195**	P	**P**	**12 13 09.2**	**+1.9**
	1.4nm,0.5s,baz=24,slow=11,SNR=32						
ASAR				S	**S**	**12 17 01.0**	**+0.5**
	1.6nm,0.9s,baz=20,slow=24,SNR=4.8						
STKA	**Stephens Creek**	**28.67**	**177**	P	**P**	**12 14 20.1**	**+2.3**
	1.1nm,0.5s,baz=304,slow=10,SNR=3.5						
STKA				LR	LR	12 27 21.2	
	comp=Z,80nm,20.2s,baz=17,slow=40						
MKAR	**Makanchi Array**	**70.75**	**322**	P	**P**	**12 19 36.0**	**-0.6**
	0.1nm,0.4s,baz=127,slow=6.0,SNR=3.1						
ILAR	**Eielson Array**	**85.75**	**24**	P	**P**	**12 20 57.7**	**-1.4**
	0.4nm,0.8s,baz=248,slow=4.2,SNR=5.9						

IDC ***19*** *12:21:09.1±7.4, 4°.81N×73°.16W, h0km, Error ellipse: s-maj=604.7km s-min=17.3km az=6.0*
ISCJB ***19*** *12:21:10.1±0.6, 3°.98N±0°.02×75°.00W±0°.02, h4km±5km, Error ellipse: s-maj=3.9km s-min=3.4km az=6.4*
RSNC ***19*** *12:21:11.4±1.1, 3°.98N×75°.01W, h4km±4km, ML3.8, Mw4.0*
ISC 19 12:21:10.6±1.2, 3°.98N±0°.02×75°.00W±0°.03, h4km±9km, n21, σ1°26/36, 4C, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRAC	**Prado**	**0.29**	**156**	⇑*i* P	**Pg**	**12 21 16.6**	**+0.4**
PRAC				*e*S	**Sg**	**12 21 21.5**	**+1.4**
ANIL	**Santa Ana**	**0.64**	**322**	⇑*i* P	**Pg**	**12 21 22.4**	**-0.6**
ANIL				*e*S	**Sg**	**12 21 31.5**	**+0.1**
TOLC	**Tolima**	**0.68**	**332**	*e*P	**Pg**	**12 21 23.1**	**-0.5**
TOLC				*e*S	**Sg**	**12 21 32.9**	**+0.4**
ROSC	**El Rosal**	**1.09**	**39**	Pg	**Pg**	**12 21 31.3**	**-0.2**
	49nm,0.3s,baz=117,slow=11,SNR=69						
ROSC				Lg	Lg	12 21 47.4	
	156nm,0.3s,baz=41,slow=19,SNR=26						
ROSC	**El Rosal**	**1.09**	**39**	⇑*i* P	**Pg**	**12 21 31.3**	**-0.2**
ROSC				*e*S	**Sb**	**12 21 46.9**	**-0.1**
ROSC				*i*		12 21 54.2	
	comp=Z,1μm,0.5s						
SJAC	**San Juan de Ar**	**1.27**	**124**	*e*P	**Pn**	**12 21 32.9**	**-2.2**
SJAC				*i*		12 21 53.0	
	comp=Z,4μm,0.3s						
GUYC	**Guyana, Colomb**	**1.29**	**343**	*e*P	**Pn**	**12 21 34.5**	**-1.3**
GUYC				*e*S	**Sb**	**12 21 51.4**	**-1.4**
GUYC				*i*		12 21 59.1	
	comp=Z,829nm,0.5s						
VILC	**Villavicencio,**	**1.31**	**84**	*e*P	**Pn**	**12 21 34.6**	**-1.2**
VILC				*e*S	**Sb**	**12 21 51.8**	**-1.3**
VILC				*i*		12 22 01.1	
	comp=Z,1μm,0.5s						
YOTC	**Yotoco, Valle**	**1.34**	**270**	*i* P	**Pn**	**12 21 34.8**	**-1.3**
YOTC				*i*		12 21 35.4	
	comp=Z,696nm,0.2s						
YOTC				*e*S	**Sb**	**12 21 52.8**	**-1.0**
BETC	**Betania**	**1.36**	**199**	*e*P	**Pn**	**12 21 34.6**	**-1.8**
BETC				*e*S	**Sb**	**12 21 53.1**	**-1.4**
CHIC	**Chingaza**	**1.42**	**63**	*i* P	**Pn**	**12 21 36.9**	**-0.7**
CHIC				*e*S	**Sb**	**12 21 55.2**	**-1.3**
CHIC				*i*		12 22 01.1	
	comp=Z,1μm,0.2s						
MARP	**Paez Belalcaza**	**1.48**	**220**	*e*P	**Pn**	**12 21 37.3**	**-0.9**
MARP				*e*S	**Sn**	**12 21 56.7**	**-1.3**
MARP				*i*		12 21 57.8	
	comp=Z,1μm,0.4s						
PLMC	**San Jos¨ del**	**1.57**	**306**	*i* P	**Pn**	**12 21 39.0**	**-0.3**
PLMC				*e*S	**Sb**	**12 22 00.4**	**-0.1**
NORC	**Norcasia**	**1.58**	**5**	*e*P	**Pn**	**12 21 37.5**	**-1.9**
NORC				*e*S	**Sn**	**12 21 59.0**	**-1.2**
HORQ	**Saladito**	**1.69**	**253**	⇑*i* P	**Pn**	**12 21 41.0**	**-0.2**
HORQ				*i*		12 21 41.9	
	comp=Z,567nm,0.3s						
HORQ				*e*S	**Sb**	**12 22 03.6**	**-0.6**
HELC	**Santa Helena**	**2.25**	**347**	*e*P	**Pn**	**12 21 49.3**	**+0.3**
HELC				*i*		12 21 52.0	
	comp=Z,218nm,0.3s						
HELC				*e*S	**Sn**	**12 22 17.6**	**+0.2**
FLOC	**Florencia**	**2.47**	**195**	*e*P	**Pn**	**12 21 51.4**	**-0.2**
FLOC				*i*		12 22 28.9	
	comp=Z,2μm,0.3s						
PTBC	**PUERTO BERRIO,**	**2.60**	**12**	*e*P	**Pn**	**12 21 53.4**	**0.0**
PTBC				*e*S	**Sn**	**12 22 25.4**	**0.0**
PTBC				*i*		12 22 28.5	
	comp=Z,349nm,0.4s						
RUSC	**La Rusia**	**2.69**	**45**	*e*P	**Pn**	**12 21 55.6**	**+0.5**
RUSC				*i*		12 22 39.9	
	comp=Z,377nm,0.6s						
ASAR	**Alice Springs**	**145.92**	**232**	PKPbc	**PKPab**	**12 40 55.5**	**+2.8**
	comp=Z,0.2nm,0.6s,baz=132,slow=4.0,SNR=4.6						
WRA	**Warramunga Arr**	**147.30**	**239**	PKPbc	**PKPab**	**12 41 01.4**	**+3.2**
	comp=Z,0.4nm,0.7s,baz=111,slow=2.3,SNR=5.5						

IDC ***19*** *12:23:20.8±1.6, 34°.89N×27°.44E, h0km, mb3.5/4, mb1 3.5/7, mb1mx3.3/62, mbtmp3.4/7, ML3.5/3, MS2.8/1, Ms1 2.8/1, ms1mx2.1/45, Error ellipse: s-maj=39.1km s-min=17.1km az=159.0*
DDA ***19*** *12:23:21.9, 35°.21N×27°.31E, h12km, MI3.7*
ISCJB ***19*** *12:23:22.3±0.9, 35°.13N±0°.03×27°.26E±0°.03, h9km±5km, mb3.3/4, Error ellipse: s-maj=6.2km s-min=3.2km az=156.7*
CSEM ***19*** *12:23:23.2±0.3, 35°.18N×27°.21E, h5km, ML3.5, Error ellipse: s-maj=6.8km s-min=3.0km az=160.0*
THE ***19*** *12:23:24.0, 35°.24N×27°.22E, h0km, ML3.6/5, Error ellipse: s-maj=2.4km s-min=0.9km az=141.0*
ATH ***19*** *12:23:24.0, 35°.29N×27°.14E, h24km±1km, ML3.5/8, Error ellipse: s-maj=3.9km s-min=1.0km az=144.0*
ISK ***19*** *12:23:24.9, 35°.29N×27°.25E, h12km, ML3.8/18*
ISC 19 12:23:22.9±1.1, 35°.21N±0°.03×27°.25E±0°.02, h11km±8km, n134, σ1°25/180, mb3.4/4, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.34**	**348**	PG	**Pb**	**12 23 31.1**	**+0.1**
KARP	**Karpathos**	**0.34**	**348**	P	**Pg**	**12 23 30.0**	**+0.2**
KARP				S	**Sb**	**12 23 35.9**	**-0.7**
KARP				AML	AML	12 23 36.4	
	comp=N,34442μm,0.2s						
KARP				AML	AML	12 23 37.4	
	comp=E,46538μm,0.3s						
KARP	**Karpathos**	**0.34**	**348**	P	**Pg**	**12 23 30.1**	**+0.3**
KARP				S	**Sb**	**12 23 35.8**	**-0.7**
KARP	**Karpathos**	**0.34**	**348**	P	**Pg**	**12 23 30.2**	**+0.4**
KARP	**Karpathos**	**0.34**	**348**	*e*Pg	**Pb**	**12 23 31.1**	**+0.1**
KARP				S	**Sb**	**12 23 35.8**	**-0.7**
ZKR	**Zakros**	**0.85**	**264**	P	**Pg**	**12 23 37.2**	**-2.1**
ZKR				S	**Sg**	**12 23 50.6**	**+0.2**
ZKR				AML	AML	12 23 54.0	
	comp=E,6654μm,0.7s						
ZKR				AML	AML	12 23 54.1	
	comp=N,4306μm,0.6s						
ZKR	**Zakros**	**0.85**	**264**	P	**Pg**	**12 23 38.2**	**-1.1**
ZKR	**Zakros**	**0.85**	**264**	P	**Pg**	**12 23 38.2**	**-1.1**
ZKR				S	**Sg**	**12 23 50.4**	**0.0**
ARG	**Arkhangelos**	**1.23**	**35**	PN	**Pg**	**12 23 47.5**	**+0.9**
ARG				SN	**Sn**	**12 24 04.3**	**+1.7**
ARG	**Arkhangelos**	**1.23**	**35**	P	**Pg**	**12 23 46.8**	**+0.3**
ARG				S	**Sn**	**12 24 05.5**	**+2.8**
ARG				AML	AML	12 24 07.8	
	comp=E,5301μm,0.3s						
ARG				AML	AML	12 24 09.8	
	comp=N,4118μm,0.6s						
ARG	**Arkhangelos**	**1.23**	**35**	P	**Pg**	**12 23 46.8**	**+0.3**
ARG				S	**Sn**	**12 24 04.4**	**+1.8**
ARG	**Arkhangelos**	**1.23**	**35**	P	**Pg**	**12 23 47.0**	**+0.4**
ARG	**Arkhangelos**	**1.23**	**35**	*e*Pn	**Pg**	**12 23 47.5**	**+0.9**
ARG				S	**Sn**	**12 24 04.4**	**+1.8**
NPS	**Neapolis**	**1.34**	**273**	P	**Pn**	**12 23 47.6**	**0.0**
NPS				S	**Sg**	**12 24 06.6**	**+0.5**
NPS				AML	AML	12 24 14.9	
	comp=N,5199μm,0.6s						
NPS				AML	AML	12 24 17.3	
	comp=E,5127μm,0.7s						
NPS	**Neapolis**	**1.34**	**273**	P	**Pn**	**12 23 47.7**	**+0.2**
NPS				S	**Sg**	**12 24 07.5**	**+1.5**
NPS	**Neapolis**	**1.34**	**273**	P	**Pn**	**12 23 47.7**	**+0.2**
NPS				S	**Sg**	**12 24 05.9**	**-0.1**
LAST	**Lasithi**	**1.45**	**269**	P	**Pn**	**12 23 49.1**	**0.0**
LAST				S	**Sg**	**12 24 09.7**	**+0.1**
LAST				AML	AML	12 24 22.3	
	comp=E,2058μm,1.1s						
LAST				AML	AML	12 24 22.8	
	comp=N,2511μm,0.6s						
LAST	**Lasithi**	**1.45**	**269**	P	**Pn**	**12 23 49.5**	**+0.4**
LAST				S	**Sb**	**12 24 09.1**	**+0.6**
LAST	**Lasithi**	**1.45**	**269**	P	**Pn**	**12 23 49.5**	**+0.4**
LAST				S	**Sb**	**12 24 09.0**	**+0.6**
DAT	**Datca**	**1.54**	**10**	PN	**Pb**	**12 23 51.7**	**+0.3**
DAT				SN	**Sb**	**12 24 11.4**	**+0.4**
DAT	**Datca**	**1.54**	**10**	*i* P	**Pn**	**12 23 50.5**	**+0.2**
DAT				*i* S	**Sb**	**12 24 10.9**	**-0.1**
DAT	**Datca**	**1.54**	**10**	P	**Pn**	**12 23 50.5**	**+0.2**
DAT	**Datca**	**1.54**	**10**	*e*Pn	**Pb**	**12 23 51.7**	**+0.3**
DAT				S	**Sb**	**12 24 10.9**	**-0.1**
DAT				*e*Sn	**Sb**	**12 24 11.4**	**+0.4**
DATC	**Datca-Mugla**	**1.58**	**12**	PN	**Pb**	**12 23 52.3**	**+0.2**
DATC	**Datca-Mugla**	**1.58**	**12**	*e*Pn	**Pb**	**12 23 52.3**	**+0.2**
MRSB	**Marmaris-Mugla**	**1.69**	**27**	PN	**Pb**	**12 23 54.3**	**+0.4**
MRSB	**Marmaris-Mugla**	**1.69**	**27**	*e*Pn	**Pb**	**12 23 54.3**	**+0.4**
BODT	**Bodrum**	**1.85**	**2**	PN	**Pb**	**12 23 56.1**	**-0.6**
BODT	**Bodrum**	**1.85**	**2**	P	**Pn**	**12 23 54.5**	**0.0**
BODT				S	**Sb**	**12 24 19.2**	**-0.6**
BODT	**Bodrum**	**1.85**	**2**	P	**Pn**	**12 23 54.5**	**0.0**
BODT	**Bodrum**	**1.85**	**2**	*e*Pn	**Pb**	**12 23 56.1**	**-0.6**
BODT				S	**Sb**	**12 24 19.2**	**-0.6**
BDRM	**Kayabasi**	**1.86**	**5**	*i* P	**Pb**	**12 23 56.5**	**-0.3**
BDRM				*i* S	**Sg**	**12 24 22.7**	**+0.1**
BDRM	**Kayabasi**	**1.86**	**5**	P	**Pb**	**12 23 56.5**	**-0.3**
BDRM				S	**Sg**	**12 24 22.7**	**+0.1**
SANT	**Santorini**	**1.86**	**309**	PN	**Pb**	**12 23 56.7**	**-0.2**
SANT	**Santorini**	**1.86**	**309**	P	**Pn**	**12 23 54.8**	**+0.1**
SANT				S	**Sn**	**12 24 16.1**	**-2.1**
SANT				AML	AML	12 24 24.4	
	comp=E,3061μm,0.5s						
SANT				AML	AML	12 24 29.6	
	comp=N,1289μm,0.5s						
SANT	**Santorini**	**1.86**	**309**	P	**Pn**	**12 23 54.8**	**+0.1**
SANT				S	**Sn**	**12 24 19.0**	**+0.8**
SANT	**Santorini**	**1.86**	**309**	P	**Pn**	**12 23 54.8**	**+0.1**
SANT	**Santorini**	**1.86**	**309**	*e*Pn	**Pb**	**12 23 56.7**	**-0.2**
SANT				S	**Sn**	**12 24 19.0**	**+0.8**
THR6	**Thira Island,**	**1.89**	**308**	P	**Pn**	**12 23 55.5**	**+0.5**
THR6	**Thira Island,**	**1.89**	**308**	P	**Pn**	**12 23 55.5**	**+0.5**
SAP1	**Santorini-Akro**	**1.89**	**308**	P	**Pn**	**12 23 55.7**	**+0.6**
SAP1	**Santorini-Akro**	**1.89**	**308**	P	**Pn**	**12 23 55.7**	**+0.6**
YKAV	**Yalikavak-Bodr**	**1.91**	**1**	PN	**Pb**	**12 23 57.4**	**-0.3**
YKAV	**Yalikavak-Bodr**	**1.91**	**1**	*e*Pn	**Pb**	**12 23 57.4**	**-0.3**
THR9	**Santorini-Faro**	**1.92**	**307**	P	**Pn**	**12 23 56.1**	**+0.7**
THR9	**Santorini-Faro**	**1.92**	**307**	P	**Pn**	**12 23 56.1**	**+0.7**
THR2	**Thira island,**	**1.92**	**310**	P	**Pn**	**12 23 56.0**	**+0.5**
THR2	**Thira island,**	**1.92**	**310**	P	**Pn**	**12 23 56.0**	**+0.5**
IDI	**Anoyia**	**1.93**	**273**	Pn	**Pb**	**12 23 58.0**	**-0.1**
	comp=N,18nm,0.3s,baz=82,slow=14,SNR=77						
IDI				Sn	**Sg**	**12 24 25.5**	**+0.5**
	comp=N,39nm,0.3s,baz=227,slow=11,SNR=12						
IDI				LR	LR	12 25 05.4	
	comp=N,211nm,19.4s,baz=84,slow=49						
IDI	**Anoyia**	**1.93**	**273**	PN	**Pb**	**12 23 58.8**	**+0.7**
IDI	**Anoyia**	**1.93**	**273**	*e*Pn	**Pb**	**12 23 58.8**	**+0.7**
AMGA	**Amorgos Island**	**1.95**	**326**	P	**Pn**	**12 23 55.3**	**-0.7**
AMGA				AML	AML	12 24 28.0	
	comp=E,1424μm,0.6s						
AMGA				AML	AML	12 24 32.8	
	comp=N,1224μm,0.4s						
AMGA	**Amorgos Island**	**1.95**	**326**	P	**Pn**	**12 23 55.8**	**-0.2**
CMBO	**Columbo, Santo**	**1.95**	**311**	P	**Pn**	**12 23 55.4**	**-0.5**
CMBO	**Columbo, Santo**	**1.95**	**311**	P	**Pn**	**12 23 55.4**	**-0.5**
THR5	**Thira Island,**	**1.96**	**308**	P	**Pn**	**12 23 56.1**	**+0.1**
THR5	**Thira Island,**	**1.96**	**308**	P	**Pn**	**12 23 56.1**	**+0.1**
DALY	**Dalyan (Mu¨la**	**1.97**	**35**	PN	**Pb**	**12 23 58.5**	**-0.2**
DALY	**Dalyan (Mu¨la**	**1.97**	**35**	*i* P	**Pb**	**12 23 58.6**	**0.0**
DALY				*i* S	**Sg**	**12 24 27.4**	**+1.3**
DALY	**Dalyan (Mu¨la**	**1.97**	**35**	*e*Pn	**Pb**	**12 23 58.5**	**-0.2**
DALY				S	**Sg**	**12 24 27.4**	**+1.3**
TURN	**Turunc**	**1.99**	**33**	PN	**Pn**	**12 23 54.6**	**-1.8**
TURN				SN	**Sn**	**12 24 17.1**	**-4.2**
TURN	**Turunc**	**1.99**	**33**	*i* P	**Pn**	**12 23 54.8**	**-1.6**
TURN				*i* S	**Sn**	**12 24 19.1**	**-2.2**
TURN	**Turunc**	**1.99**	**33**	P	**Pn**	**12 23 54.8**	**-1.6**
TURN				S	**Sn**	**12 24 19.1**	**-2.2**
SIVA	**Sivas**	**2.01**	**265**	P	**Pn**	**12 23 58.1**	**+1.4**
SIVA				S	**Sn**	**12 24 22.0**	**+0.2**
SIVA				AML	AML	12 24 42.1	
	comp=E,1985μm,0.8s						
SIVA				AML	AML	12 24 45.5	
	comp=N,2098μm,0.7s						
SIVA	**Sivas**	**2.01**	**265**	P	**Pb**	**12 23 58.5**	**-0.9**
SIVA	**Sivas**	**2.01**	**265**	P	**Pn**	**12 23 57.8**	**+1.1**
SIVA				S	**Sn**	**12 24 22.0**	**+0.2**
FETY	**Fethiye**	**2.06**	**46**	PN	**Pb**	**12 23 59.7**	**-0.6**
FETY	**Fethiye**	**2.06**	**46**	*e*Pn	**Pb**	**12 23 59.7**	**-0.6**
MLSB	**Milas**	**2.12**	**11**	PN	**Pb**	**12 24 00.1**	**-1.3**
MLSB	**Milas**	**2.12**	**11**	*e*Pn	**Pb**	**12 24 00.1**	**-1.3**
AKAS	**Kas**	**2.17**	**61**	PN	**Pb**	**12 24 01.3**	**-1.0**
AKAS	**Kas**	**2.17**	**61**	*i* P	**Pn**	**12 23 59.2**	**+0.1**
AKAS	**Kas**	**2.17**	**61**	P	**Pn**	**12 23 59.2**	**+0.1**
AKAS	**Kas**	**2.17**	**61**	*e*Pn	**Pb**	**12 24 01.3**	**-1.0**
APE	**Apeiranthos**	**2.32**	**324**	PN	**Pn**	**12 24 02.4**	**+1.4**
APE	**Apeiranthos**	**2.32**	**324**	P	**Pn**	**12 24 00.4**	**-0.6**
APE	**Apeiranthos**	**2.32**	**324**	P	**Pn**	**12 24 00.9**	**-0.1**
APE	**Apeiranthos**	**2.32**	**324**	*e*Pn	**Pn**	**12 24 02.4**	**+1.4**
GCAM	**G?zelcaml?**	**2.48**	**360**	PN	**Pb**	**12 24 05.6**	**-1.9**
GCAM	**G?zelcaml?**	**2.48**	**360**	*i* P	**Pb**	**12 24 05.7**	**-1.8**
GCAM	**G?zelcaml?**	**2.48**	**360**	*e*Pn	**Pb**	**12 24 05.6**	**-1.9**
AYDN	**Tasoluk**	**2.50**	**12**	*i* P	**Pn**	**12 24 05.0**	**+1.5**
AYDN				*i* S	**Sb**	**12 24 37.0**	**-1.5**
AYDN	**Tasoluk**	**2.50**	**12**	P	**Pn**	**12 24 05.0**	**+1.5**
AYDN				S	**Sb**	**12 24 37.0**	**-1.5**
VAM	**Vamos**	**2.50**	**275**	P	**Pn**	**12 24 05.0**	**+1.5**
VAM	**Vamos**	**2.50**	**275**	P	**Pn**	**12 24 05.4**	**+1.9**
VAM	**Vamos**	**2.50**	**275**	P	**Pn**	**12 24 04.6**	**+1.1**
SMG	**Samos**	**2.51**	**353**	P	**Pn**	**12 24 03.6**	**-0.1**
SMG	**Samos**	**2.51**	**353**	P	**Pn**	**12 24 03.6**	**-0.1**
TAVA	**DENIZLI_Tavas**	**2.62**	**30**	*i* P	**Pb**	**12 24 08.0**	**-1.9**
TAVA				*i* S	**Sb**	**12 24 41.7**	**-0.4**
TAVA	**DENIZLI_Tavas**	**2.62**	**30**	P	**Pb**	**12 24 08.0**	**-1.9**
TAVA				S	**Sb**	**12 24 41.7**	**-0.4**
ELL	**Elmali**	**2.65**	**54**	PN	**Pn**	**12 24 07.9**	**+2.3**
ELL	**Elmali**	**2.65**	**54**	*e*Pn	**Pn**	**12 24 07.9**	**+2.3**
IMMV	**Iera Moni Meta**	**2.68**	**276**	P	**Pn**	**12 24 07.7**	**+1.7**
IMMV	**Iera Moni Meta**	**2.68**	**276**	P	**Pn**	**12 24 07.6**	**+1.7**
IMMV	**Iera Moni Meta**	**2.68**	**276**	P	**Pn**	**12 24 07.2**	**+1.2**
GOLH	**Golhisar**	**2.75**	**42**	*i* P	**Pn**	**12 24 08.0**	**+0.9**
GOLH				*i* S	**Sg**	**12 24 49.3**	**-2.1**
GOLH	**Golhisar**	**2.75**	**42**	P	**Pn**	**12 24 08.0**	**+0.9**
AYDB	**Zeytinkoy-Aydi**	**2.78**	**11**	PN	**Pn**	**12 24 09.6**	**+2.2**
AYDB	**Zeytinkoy-Aydi**	**2.78**	**11**	*e*Pn	**Pn**	**12 24 09.6**	**+2.2**
DNZL	**Cakiroluk**

KARP				S	Sb	12 31 42.3	-0.5
KARP	**Karpathos**	**0.32**	**356**	P	Pg	12 31 36.7	-0.1
KARP				S	Sg	12 31 41.5	+0.3
KARP				*e*Sg	Sb	12 31 42.5	-0.3
ZKR	**Zakros**	**0.81**	**262**	P	Pg	12 31 44.5	-1.3
ZKR				S	Sb	12 31 57.0	+0.2
ZKR				AML	AML	12 32 00.4	
	comp=E,2806μm,0.4s						
ZKR				AML	AML	12 32 00.9	
	comp=N,1955μm,0.7s						
ZKR	**Zakros**	**0.81**	**262**	P	Pg	12 31 44.8	-1.1
ZKR				S	Sn	12 31 58.9	-0.2
ZKR	**Zakros**	**0.81**	**262**	P	Pg	12 31 45.0	-0.9
ZKR				S	Sb	12 31 56.8	-0.1
ARG	**Arkhangelos**	**1.24**	**38**	PN	Pg	12 31 54.3	+0.1
ARG				SN	Sg	12 32 11.4	+1.0
ARG	**Arkhangelos**	**1.24**	**38**	P	Pb	12 31 53.7	+0.1
ARG				S	Sg	12 32 11.9	+1.5
ARG				AML	AML	12 32 14.4	
	comp=E,1641μm,0.3s						
ARG				AML	AML	12 32 16.4	
	comp=N,1089μm,0.6s						
ARG	**Arkhangelos**	**1.24**	**38**	P	Pb	12 31 53.5	-0.1
ARG				S	Sg	12 32 11.1	+0.7
ARG	**Arkhangelos**	**1.24**	**38**	P	Pb	12 31 53.7	+0.1
ARG	**Arkhangelos**	**1.24**	**38**	*e*Pn	Pg	12 31 54.3	+0.1
ARG				S	Sg	12 32 11.1	+0.7
NPS	**Neapolis**	**1.29**	**272**	P	Pg	12 31 54.9	-0.2
NPS				S	Sg	12 32 12.2	+0.2
NPS				AML	AML	12 32 21.1	
	comp=E,1567μm,0.5s						
NPS				AML	AML	12 32 21.4	
	comp=N,1700μm,0.6s						
NPS	**Neapolis**	**1.29**	**272**	P	Pn	12 31 54.2	+0.2
NPS				S	Sg	12 32 12.4	+0.5
NPS	**Neapolis**	**1.29**	**272**	P	Pn	12 31 54.2	+0.2
NPS				S	Sg	12 32 11.9	0.0
LAST	**Lasithi**	**1.40**	**268**	P	Pb	12 31 56.3	-0.1
LAST	**Lasithi**	**1.40**	**268**	P	Pn	12 31 56.0	+0.4
LAST				S	Sg	12 32 16.4	+0.9
LAST	**Lasithi**	**1.40**	**268**	P	Pn	12 31 56.0	+0.4
LAST				S	Sg	12 32 16.4	+0.9
DAT	**Datca**	**1.53**	**12**	PN	Pb	12 31 58.3	-0.2
DAT	**Datca**	**1.53**	**12**	*i* P	Pn	12 31 56.8	-0.5
DAT				*i* S	Sb	12 32 17.4	-0.4
DAT	**Datca**	**1.53**	**12**	P	Pn	12 31 56.8	-0.5
DAT	**Datca**	**1.53**	**12**	*e*Pn	Pb	12 31 58.3	-0.2
DAT				S	Sb	12 32 17.4	-0.4
DATC	**Datca-Mugla**	**1.57**	**14**	PN	Pb	12 31 58.8	-0.4
DATC	**Datca-Mugla**	**1.57**	**14**	*e*Pn	Pb	12 31 58.8	-0.4
SANT	**Santorini**	**1.81**	**309**	PN	Pn	12 32 02.0	+0.9
SANT	**Santorini**	**1.81**	**309**	P	Pn	12 32 02.0	+0.9
SANT	**Santorini**	**1.81**	**309**	P	Pn	12 32 01.8	+0.7
BODT	**Bodrum**	**1.83**	**3**	PN	Pn	12 32 02.3	+0.9
BODT	**Bodrum**	**1.83**	**3**	P	Pn	12 32 01.0	-0.4
BODT				S	Sn	12 32 25.0	+0.6
BODT	**Bodrum**	**1.83**	**3**	P	Pn	12 32 01.0	-0.4
BODT	**Bodrum**	**1.83**	**3**	*e*Pn	Pn	12 32 02.3	+0.9
BODT				S	Sn	12 32 25.0	+0.6
THR6	**Thira Island,**	**1.84**	**308**	P	Pn	12 32 02.2	+0.7
THR6	**Thira Island,**	**1.84**	**308**	P	Pn	12 32 02.2	+0.7
BDRM	**Kayabasi**	**1.84**	**6**	*i* P	Pn	12 32 01.6	+0.1
BDRM				*i* S	Sg	12 32 30.8	+1.2
BDRM	**Kayabasi**	**1.84**	**6**	P	Pn	12 32 01.6	+0.1
BDRM				S	Sg	12 32 30.8	+1.2
IDI	**Anoyia**	**1.88**	**272**	PN	Pn	12 32 03.0	+0.9
IDI	**Anoyia**	**1.88**	**272**	*e*Pn	Pn	12 32 03.0	+0.9
THR5	**Thira Island,**	**1.91**	**309**	P	Pn	12 32 03.2	+0.8
THR5	**Thira Island,**	**1.91**	**309**	P	Pn	12 32 03.2	+0.8
AMGA	**Amorgos Island**	**1.91**	**327**	P	Pn	12 32 01.8	-0.7
AMGA	**Amorgos Island**	**1.91**	**327**	P	Pn	12 32 02.4	-0.1
DALY	**Dalyan (Mu¨la**	**1.98**	**36**	PN	Pb	12 32 05.0	-1.1
DALY	**Dalyan (Mu¨la**	**1.98**	**36**	*i* P	Pb	12 32 05.0	-1.1
DALY				*i* S	Sg	12 32 33.9	0.0
DALY	**Dalyan (Mu¨la**	**1.98**	**36**	P	Pb	12 32 05.0	-1.1
DALY				S	Sg	12 32 33.9	0.0
TURN	**Turunc**	**2.00**	**35**	PN	Pn	12 32 01.7	-2.0
TURN	**Turunc**	**2.00**	**35**	*i* P	Pn	12 32 00.5	-3.2
TURN				*i* S	Sn	12 32 26.2	-2.3
TURN	**Turunc**	**2.00**	**35**	P	Pn	12 32 00.5	-3.2
TURN	**Turunc**	**2.00**	**35**	*e*Pn	Pn	12 32 01.7	-2.0
TURN				S	Sn	12 32 26.2	-2.3
FETY	**Fethiye**	**2.08**	**47**	PN	Pn	12 32 06.3	+1.5
FETY	**Fethiye**	**2.08**	**47**	P	Pn	12 32 04.1	-0.7
FETY	**Fethiye**	**2.08**	**47**	*e*Pn	Pn	12 32 06.3	+1.5
MLSB	**Milas**	**2.11**	**13**	PN	Pn	12 32 06.3	+1.0
MLSB	**Milas**	**2.11**	**13**	*e*Pn	Pn	12 32 06.3	+1.0
AKAS	**Kas**	**2.21**	**62**	PN	Pn	12 32 08.1	+1.4
AKAS	**Kas**	**2.21**	**62**	*i* P	Pn	12 32 05.6	-1.0
AKAS				*i* S	Sn	12 32 33.0	-0.8
AKAS	**Kas**	**2.21**	**62**	P	Pn	12 32 05.6	-1.0
AKAS	**Kas**	**2.21**	**62**	*e*Pn	Pn	12 32 08.1	+1.4
AKAS				S	Sn	12 32 33.0	-0.8
APE	**Apeiranthos**	**2.27**	**324**	PN	Pn	12 32 08.6	+1.1
APE	**Apeiranthos**	**2.27**	**324**	P	Pn	12 32 07.0	-0.5
APE	**Apeiranthos**	**2.27**	**324**	P	Pn	12 32 07.6	+0.1
APE	**Apeiranthos**	**2.27**	**324**	*e*Pn	Pn	12 32 08.6	+1.1
AYDN	**Tasoluk**	**2.49**	**13**	*i* P	Pn	12 32 11.5	+1.0
AYDN				*i* S	Sb	12 32 43.5	-1.8
AYDN	**Tasoluk**	**2.49**	**13**	P	Pn	12 32 11.5	+1.0
AYDN				S	Sb	12 32 43.5	-1.8
TAVA	**DENIZLI_Tavas**	**2.63**	**31**	*i* P	Pn	12 32 13.8	+1.4
TAVA				*i* S	Sb	12 32 48.9	-0.6
TAVA	**DENIZLI_Tavas**	**2.63**	**31**	P	Pn	12 32 13.8	+1.4
TAVA				S	Sb	12 32 48.9	-0.6
ELL	**Elmali**	**2.67**	**55**	PN	Pn	12 32 15.1	+2.0
ELL	**Elmali**	**2.67**	**55**	*e*Pn	Pn	12 32 15.1	+2.0
GOLH	**Golhisar**	**2.77**	**43**	*i* P	Pn	12 32 15.1	+0.7
GOLH				*i* S	Sn	12 32 50.2	+2.4
GOLH	**Golhisar**	**2.77**	**43**	P	Pn	12 32 15.1	+0.7
GOLH				S	Sn	12 32 50.2	+2.4
KORT	**Korkueli**	**3.11**	**54**	PN	Pn	12 32 21.4	+2.3
KORT	**Korkueli**	**3.11**	**54**	*i* P	Pn	12 32 10.7	-8.4
KORT	**Korkueli**	**3.11**	**54**	*e*Pn	Pn	12 32 21.4	+2.3
URLA	**Izmir**	**3.16**	**352**	PN	Pn	12 32 20.9	+1.2
URLA	**Izmir**	**3.16**	**352**	*e*Pn	Pn	12 32 20.9	+1.2
CHOS	**Chios island**	**3.28**	**344**	PN	Pn	12 32 22.5	+1.1
CHOS	**Chios island**	**3.28**	**344**	*e*Pn	Pn	12 32 22.5	+1.1
KEPZ	**Antalya-Kepez**	**3.95**	**64**	*i* P	Pn	12 32 30.9	+0.4
KEPZ				*i* S	Sn	12 33 16.8	+0.1
KEPZ	**Antalya-Kepez**	**3.95**	**64**	P	Pn	12 32 30.9	+0.4
KEPZ				S	Sn	12 33 16.8	+0.1

*IDC **19** 12:34:21.7±1.4, 34°.58S×178°.81W, h0^km^, mb4.0/2, mb1 4.3/4, mb1mx3.9/47, mbtmp4.1/4, ML4.1/2, MS3.3/4, Ms1 3.3/4, ms1mx2.9/48, Error ellipse: s-maj=40.4km s-min=33.6km az=130.0*

*ISCJB **19** 12:34:24.1±0.7, 35°.03S±0°.08×178°.4W±0°.1, h46^km^, mb4.2/4, MS3.2/3, Error ellipse: s-maj=19.0km s-min=5.6km az=34.8*

*NEIC **19** 12:34:25.2±3.5, 34°.68S×178°.82W, h23^km^±24^km^, mb4.5/2, Error ellipse: s-maj=23.2km s-min=8.9km az=102.0*

*WEL **19** 12:34:29.8±1.0, 35°.S±21°.×17°.9W±2°.2, h145^km^±54^km^*

ISC 19 12:34:27.3±0.8, 34°.92S±0°.09×178°.6W±0°.1, h46^km^, n85, σ2Φ07/99, mb4.1/4, MS3.1/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNGZ	**Carnagh Statio**	**4.37**	**215**	P	Pn	12 35 32.6	+1.5
TKGZ	**Te Karaka**	**4.51**	**218**	P	Pn	12 35 34.6	+1.6
TKGZ				S	Sn	12 36 25.1	+0.9
MWZ	**Matawai**	**4.60**	**221**	P	Pn	12 35 35.4	+1.0
MWZ				S	Sn	12 36 27.0	+0.6
RIGZ	**Rimuhau**	**4.76**	**216**	P	Pn	12 35 37.1	+0.6
RIGZ				S	Sn	12 36 30.3	-0.1
URZ	**Urewera**	**4.78**	**225**	Pn	Pn	12 35 37.9	+1.1
	5.6nm,0.3s,baz=255,slow=3.8,SNR=46						
URZ				Sn	Sn	12 36 31.3	+0.5
	23nm,0.3s,baz=171,slow=23,SNR=12						
URZ	**Urewera**	**4.78**	**225**	*e*Pn	Pn	12 35 37.9	+1.1
URZ				*e*Pn	Pn	12 35 38.0	+1.3
URZ				*e*Sn	Sn	12 36 31.3	+0.5
URZ	**Urewera**	**4.78**	**225**	P	Pn	12 35 37.9	+1.1
PRGZ	**Paritu Road**	**4.87**	**214**	P	Pn	12 35 38.7	+0.6
SNGZ	**Shannon Statio**	**5.03**	**219**	P	Pn	12 35 40.8	+0.6
SNGZ				S	Sn	12 36 37.7	+0.7
KNZ	**Kokohu**	**5.05**	**215**	P	Pn	12 35 40.4	-0.1
KNZ				S	Sn	12 36 37.4	0.0
MHGZ	**Mahia Peninsul**	**5.05**	**212**	P	Pn	12 35 40.6	+0.2
RTZ	**Ruatahuna**	**5.10**	**222**	P	Pn	12 35 43.4	+2.1
MUGZ	**Murupara**	**5.12**	**225**	P	Pn	12 35 42.6	+1.1
MUGZ				S	Sn	12 36 38.3	-1.0
RAHZ	**Arahi**	**5.26**	**220**	P	Pn	12 35 44.2	+0.8
RAHZ				S	Sn	12 36 43.2	+0.5
WHHZ	**Waihua**	**5.31**	**217**	P	Pn	12 35 44.5	+0.5
WHHZ				S	Sn	12 36 44.8	+1.0
MTHZ	**Maungataniwha**	**5.34**	**221**	P	Pn	12 35 46.1	+1.6
MTHZ				S	Sn	12 36 45.3	+0.5
NMHZ	**Naumai**	**5.54**	**220**	P	Pn	12 35 49.3	+2.0
NMHZ				S	Sn	12 36 51.0	+1.3
ARHZ	**Aropaoanui**	**5.57**	**218**	P	Pn	12 35 48.0	+0.5
ARHZ				S	Sn	12 36 50.8	+0.6
MRHZ	**Matea Rd**	**5.57**	**224**	P	Pn	12 35 49.2	+1.5
MRHZ				S	Sn	12 36 49.1	-1.3
RAO	**Raoul Island**	**5.69**	**6**	Sn	Sn	12 36 47.5	-5.7
	121nm,0.3s,baz=75,slow=20,SNR=4.2						
BKZ	**Black Stump Fm**	**5.76**	**221**	*e*Pn	Pn	12 35 52.2	+1.9
MCHZ	**McNeill Hill**	**5.86**	**218**	P	Pn	12 35 51.9	+0.3
MCHZ				S	Sn	12 36 57.2	-0.1
KWHZ	**Kaweka Forest**	**5.98**	**220**	P	Pn	12 35 54.3	+0.9
KAHZ	**Kahuranaki**	**6.04**	**215**	P	Pn	12 35 53.3	-0.8
KAHZ				S	Sn	12 36 59.6	-2.3
KRHZ	**Kereru**	**6.17**	**219**	P	Pn	12 35 55.6	-0.3
BHHZ	**Black Hill Sta**	**6.22**	**221**	P	Pn	12 35 57.5	+0.9
PXZ	**Pawanui**	**6.23**	**214**	P	Pn	12 35 56.0	-0.7
MOVZ	**Moawhango**	**6.34**	**223**	P	Pn	12 35 58.5	+0.4
FWVZ	**Far West T-bar**	**6.35**	**225**	P	Pn	12 36 00.8	+2.2
WPHZ	**Waipukurau**	**6.46**	**216**	P	Pn	12 35 58.3	-1.5
PNHZ	**Pukenui**	**6.46**	**218**	P	Pn	12 35 58.6	-1.3
PRHZ	**Porangahau**	**6.53**	**214**	P	Pn	12 35 59.3	-1.4
TSZ	**Takapari Road**	**6.69**	**218**	P	Pn	12 36 01.5	-1.5
ANWZ	**Angora Road**	**6.75**	**214**	P	Sn	12 37 17.0	-2.4
DVHZ	**Dannevirke**	**6.77**	**216**	P	Pn	12 36 02.4	-1.7
DVHZ	**Dannevirke**	**6.77**	**216**	P	Sn	12 37 17.9	-2.0
BFZ	**Birch Farm**	**7.04**	**214**	P	Pn	12 36 05.4	-2.3
BFZ	**Birch Farm**	**7.04**	**214**	P	Sn	12 37 20.9	-5.4
POWZ	**Post Office Ro**	**7.04**	**218**	P	Sn	12 37 24.1	-2.3
PRWZ	**Pori Road**	**7.06**	**216**	P	Pn	12 36 06.8	-1.3
PRWZ	**Pori Road**	**7.06**	**216**	P	Sn	12 37 25.1	-2.0
CPWZ	**Castlepoint**	**7.24**	**213**	P	Sn	12 37 29.5	-1.8
TIWZ	**Tintock**	**7.28**	**215**	P	Sn	12 37 30.3	-2.0
MRZ	**Mangatainoka R**	**7.34**	**217**	P	Pn	12 36 10.0	-1.8
MRZ	**Mangatainoka R**	**7.34**	**217**	P	Sn	12 37 30.0	-3.7
TMWZ	**Te Maipa**	**7.54**	**213**	P	Sn	12 37 29.7	-9.0
HOWZ	**Holdsworth Sta**	**7.55**	**216**	P	Pn	12 36 12.8	-1.9
HOWZ	**Holdsworth Sta**	**7.55**	**216**	P	Sn	12 37 33.8	-5.2
OGWZ	**Otaki Gorge**	**7.66**	**218**	P	Pn	12 36 14.8	-1.5
MTW	**Mount Morrison**	**7.76**	**215**	P	Sn	12 37 37.2	-6.9
KIW	**Kapiti Island**	**7.82**	**219**	P	Sn	12 37 41.7	-4.1
CAW	**Cannon Point**	**7.93**	**217**	P	Pn	12 36 17.2	-2.7
PAWZ	**Paruwai Farm**	**7.97**	**214**	P	Pn	12 36 17.6	-2.9
MSWZ	**Moikau Station**	**8.08**	**215**	P	Pn	12 36 18.7	-3.3
PLWZ	**Palliser**	**8.20**	**214**	P	Pn	12 36 20.4	-3.2
TUWZ	**Tuamarina**	**8.74**	**220**	P	Pn	12 36 29.8	-1.2
THZ	**Tophouse**	**9.53**	**222**	P	Pn	12 36 40.5	-1.4
KHZ	**Kahutara**	**9.66**	**217**	*e*Pn	Pn	12 36 43.8	+0.2
KHZ	**Kahutara**	**9.66**	**217**	P	Pn	12 36 42.7	-1.0
LTZ	**Lake Taylor**	**10.57**	**219**	*e*Pn	Pn	12 36 54.5	-1.7
LTZ	**Lake Taylor**	**10.57**	**219**	P	Pn	12 36 55.2	-1.0
OKCZ	**Okains Bay**	**10.89**	**214**	P	Pn	12 36 56.8	-3.7
INZ	**Inchbonnie**	**10.98**	**222**	P	Pn	12 37 01.0	-0.6
MQZ	**McQueen's Vall**	**11.06**	**215**	P	Pn	12 37 00.4	-2.4
MQZ				P	Pn	12 37 00.6	-2.2
OXZ	**Oxford**	**11.08**	**218**	P	Pn	12 37 00.9	-2.2
RPZ	**Rata Peaks**	**11.86**	**219**	Pn	Pn	12 37 13.7	0.0
	1.5nm,0.3s,baz=42,slow=3.1,SNR=7.8						
RPZ				Sn	Sn	12 39 13.4	-11
	1.8nm,0.3s,baz=130,slow=22,SNR=18						
RPZ	**Rata Peaks**	**11.86**	**219**	P	Pn	12 37 11.2	-2.6
DZM	**Mont Dzumac**	**18.31**	**310**	*e*LR	LR	12 42 36.4	
	257nm,26.1s						
DZM	**Mont Dzumac**	**18.31**	**310**	LR	LR	12 44 33.2	
	comp=Z,128nm,18.3s,baz=186,slow=34						
PPT2	**Papeete2**	**31.09**	**64**	*e*LR	LR	12 48 43.1	
	62nm,28.0s						
PPT	**Papeete**	**31.10**	**64**	LR	LR	12 50 44.6	
	comp=Z,43nm,19.7s,baz=212,slow=32						
AS31	**Alice Springs**	**42.54**	**272**	*e*P	**P**	**12 42 18.6**	**-0.1**
	3.7nm,0.3s						
ASAR	**Alice Springs**	**42.54**	**272**	P	**P**	**12 42 17.9**	**-0.8**
	1.4nm,0.6s,baz=117,slow=8.0,SNR=22						
ASAR				PcP	**PcP**	**12 44 10.9**	**+0.3**
	0.6nm,0.5s,baz=116,slow=3.8,SNR=3.7						
ASAR				LR	LR	12 59 26.9	
	comp=Z,46nm,19.7s,baz=34,slow=36						
WR1	**Warramunga Arr**	**43.94**	**277**	*e*P	**P**	**12 42 28.8**	**-1.1**
	7.6nm,1.1s						
WR1				*e*PcP	**PcP**	**12 44 15.1**	**-0.2**
WRA	**Warramunga Arr**	**43.94**	**277**	P	**P**	**12 42 28.8**	**-1.1**
	1.2nm,0.5s,baz=118,slow=7.6,SNR=16						
WRA				PcP	**PcP**	**12 44 15.1**	**-0.2**
	0.4nm,0.5s,baz=115,slow=3.4,SNR=3.0						
RPN	**Rapa Nui**	**58.84**	**103**	LR	LR	13 06 55.0	
	comp=Z,12nm,18.1s,baz=124,slow=33						
VNA3	**Neumayer Olymp**	**73.84**	**176**	P	**P**	**12 45 59.3**	**+2.7**
VNA1	**Neumayer--Stat**	**74.50**	**177**	P	**P**	**12 46 03.8**	**+3.4**
PLM	**Palomar**	**89.22**	**48**	*e*P	**P**	**12 47 22.9**	**+4.5**
PFO	**Pinyon Flats O**	**89.65**	**48**	*e*P	**P**	**12 47 18.0**	**-2.3**
BVAR	**Borovoye Array**	**129.19**	**313**	PKP	**PKPdf**	**12 53 30.1**	**+0.3**
	0.3nm,0.5s,baz=96,slow=1.4,SNR=3.0						
FIA0	**FINESS Array S**	**149.15**	**337**	*e*PKPbc	**PKPbc**	**12 54 10.1**	**+0.4**
FINES	**FINESS Array B**	**149.15**	**337**	PKPbc	**PKPbc**	**12 54 10.1**	**+0.4**
	2.8nm,0.6s,baz=35,slow=5.1,SNR=15						
TORD	**Torodi Ar. Bea**	**158.32**	**181**	PKPab	**PKPab**	**12 54 56.4**	**+2.3**
	2.6nm,0.8s,baz=178,slow=4.4,SNR=13						
TOA1	**Torodi Ar. Sit**	**158.32**	**181**	*e*PKPab	**PKPab**	**12 54 56.4**	**+2.2**

IDC 19 12:35:17.9±3.4, 17°.24S×166°.79E, h0^km^, mb3.8/2, mb1 3.9/3, mb1mx3.4/48, mbtmp3.6/3, ML2.8/1, Error ellipse: s-maj=63.6km s-min=37.0km az=71.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.81**	**184**	Pn	Pn	12 36 31.1	-0.7
	0.4nm,0.3s,baz=6.4,slow=21,SNR=6.9						
DZM				Sn	Sn	12 37 29.1	+0.7
	0.2nm,0.3s,baz=104,slow=21,SNR=2.5						
WRA	**Warramunga Arr**	**30.84**	**260**	P	P	12 41 36.9	+0.8
	0.8nm,1.1s,baz=86,slow=8.3,SNR=9.4						
ASAR	**Alice Springs**	**31.41**	**253**	P	P	12 41 40.2	-0.9
	1.3nm,0.6s,baz=80,slow=9.0,SNR=31						
BRTR	**Keskin Array B**	**133.75**	**309**	PKP	PKPdf	12 54 37.5	+0.2
	0.5nm,0.5s,baz=64,slow=3.4,SNR=2.7						

*IDC **19** 12:40:07.0±0.7, 11°.42S×66°.40E, h0^km^, mb4.3/13, mb1 4.4/13, mb1mx4.0/70, mbtmp4.3/13, MS3.7/16, Ms1 3.7/16, ms1mx3.3/73, Error ellipse: s-maj=21.1km s-min=19.6km az=5.0*

*ISCJB **19** 12:40:07.0±0.5, 11°.41S±0°.08×66°.44E±0°.08, h13^km^, mb4.5/25, MS3.8/15, Error ellipse: s-maj=12.7km s-min=11.2km az=137.2*

*NEIC **19** 12:40:08.7±0.2, 11°.40S×66°.40E, h10^km^, mb4.6/12, Error ellipse: s-maj=8.7km s-min=7.2km az=120.0*

ISC 19 12:40:09.0±0.6, 11°.4S±0°.1×66°.4E±0°.1, h13^km^, n215, σ0Φ69/184, mb4.6/25, MS3.8/15, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08N3	**Diego Garcia H**	**6.80**	**42**	T	T	12 48 55.3	
	baz=221,slow=74,SNR=1347						
H08N1	**Diego Garcia H**	**6.82**	**42**	T	T	12 49 02.8	
	baz=221,slow=74,SNR=1450						
H08N2	**Diego Garcia H**	**6.83**	**42**	T	T	12 48 42.7	
	baz=221,slow=74,SNR=806						
H08S1	**Diego Garcia H**	**7.09**	**58**	T	T	12 49 15.5	
	baz=236,slow=75,SNR=13						
H08S2	**Diego Garcia H**	**7.11**	**59**	T	T	12 49 13.1	
	baz=236,slow=75,SNR=33						
H08S3	**Diego Garcia H**	**7.11**	**58**	T	T	12 49 20.3	
	baz=236,slow=75,SNR=43						
MRIV	**Mauritius Mete**	**12.27**	**223**	*e*Pn	**Pn**	**12 43 03.1**	**-0.5**
OPO	**Ambohidratompo**	**19.84**	**247**	LR	LR	12 50 33.7	
	comp=Z,276nm,19.2s,baz=78,slow=32						
PSI	**Prapat**	**35.32**	**68**	LR	LR	12 59 26.2	
	comp=Z,151nm,18.2s,baz=265,slow=33						
LSZ	**Lusaka**	**37.33**	**260**	P	**P**	**12 47 20.4**	**-1.2**
	3.5nm,0.8s,baz=82,slow=7.5,SNR=5.3						
LSZ	**Lusaka**	**37.33**	**260**	*e*P	**P**	**12 47 21.9**	**+0.3**
	8.1nm,1.1s						
LBTB	**Lobatse**	**40.86**	**245**	P	**P**	**12 47 52.4**	**+1.4**
	1.5nm,0.7s,baz=95,slow=12,SNR=3.4						
LEM	**Lembang**	**40.94**	**87**	LR	LR	13 04 03.0	
	comp=Z,120nm,18.5s,baz=222,slow=35						
BRDH	**Bariadhala**	**41.98**	**36**	LR	LR	13 06 48.7	
	comp=Z,162nm,18.6s,baz=186,slow=38						
BOSA	**Boshof**	**42.00**	**240**	LR	LR	13 03 37.5	
	comp=Z,163nm,19.4s,baz=80,slow=34						
CMAR	**Chiang Mai Arr**	**43.75**	**48**	LR	LR	13 04 43.8	
	comp=Z,96nm,18.1s,baz=194,slow=34						
NIL	**Nilore**	**45.31**	**8**	*e*P	**P**	**12 48 27.6**	**+0.8**
	12nm,0.7s						
H01W3	**Cape Leeuwin H**	**49.15**	**126**	T	T	13 41 31.3	
	baz=285,slow=75,SNR=61						
H01W2	**Cape Leeuwin H**	**49.15**	**126**	T	T	13 41 32.0	
	baz=285,slow=75,SNR=24						
H01W1	**Cape Leeuwin H**	**49.17**	**126**	T	T	13 41 32.6	
	baz=285,slow=75,SNR=60						
MAW	**Mawson**	**56.16**	**182**	LR	LR	13 07 34.2	
	comp=Z,100nm,21.8s,baz=45,slow=29						
FITZ	**Fitzroy Crossi**	**57.48**	**104**	LR	LR	13 10 27.0	
	comp=Z,34nm,21.8s,baz=282,slow=32						
KBZ	**Khabaz**	**58.93**	**340**	LR	LR	13 16 30.7	
	comp=Z,40nm,18.4s,baz=161,slow=37						
MAKZ	**Makanchi**	**59.64**	**12**	*e*P	**P**	**12 50 12.2**	**-0.6**
	2.7nm,0.8s						
MK01	**Makanchi Array**	**59.67**	**13**	*e*P	**P**	**12 50 12.2**	**-0.9**
MK31	**Makanchi Array**	**59.69**	**13**	*e*P	**P**	**12 50 12.8**	**-0.3**
MK32	**Makanchi Array**	**59.69**	**13**	*e*P	**P**	**12 50 12.8**	**-0.4**
MK32				*e*PcP	**PcP**	**12 51 00.3**	**+0.3**
MKAR	**Makanchi Array**	**59.69**	**13**	P	**P**	**12 50 12.8**	**-0.4**
	1.8nm,0.6s,baz=203,slow=7.6,SNR=17						
MKAR				PcP	**PcP**	**12 51 00.3**	**+0.3**
	0.7nm,0.8s,baz=204,slow=3.2,SNR=3.6						
MKAR	**Makanchi Array**	**59.69**	**13**	*e*P	**P**	**12 50 12.8**	**-0.4**
	16nm,0.6s						
MKAR				PcP	**PcP**	**12 51 00.3**	**+0.3**
ABKAR	**Akbulak array**	**60.69**	**355**	*e*P	**P**	**12 50 19.9**	**-0.1**
AKTO	**Aktyubinsk**	**62.04**	**354**	P	**P**	**12 50 29.1**	**0.0**
	5.8nm,0.9s,baz=175,slow=8.6,SNR=11						
KURBB	**Kurchatov Arra**	**62.70**	**9**	P	**P**	**12 50 33.2**	**-0.3**
	4.7nm,0.7s,baz=209,slow=7.0,SNR=28						
KURK	**Kurchatov**	**62.80**	**9**	*e*P	**P**	**12 50 33.2**	**-0.9**
KURK				*e*P	**P**	**12 50 34.2**	**0.0**
BVAR	**Borovoye Array**	**64.29**	**3**	P	**P**	**12 50 44.3**	**+0.3**
	2.6nm,0.7s,baz=164,slow=7.2,SNR=17						
BRVK	**Borovoye**	**64.32**	**3**	*e*P	**P**	**12 50 44.4**	**+0.3**
	3.4nm,0.8s						
ASAR	**Alice Springs**	**65.02**	**111**	P	**P**	**12 50 48.6**	**-0.8**
	1.5nm,0.8s,baz=272,slow=6.4,SNR=11						
AS01	**Alice Springs**	**65.06**	**111**	*e*P	**P**	**12 50 49.8**	**+0.1**
WRA	**Warramunga Arr**	**65.61**	**107**	P	**P**	**12 50 53.4**	**+0.1**
	1.9nm,0.7s,baz=275,slow=5.7,SNR=14						
WR1	**Warramunga Arr**	**65.61**	**107**	*e*P	**P**	**12 50 53.4**	**+0.1**
ZAA0	**Zalesovo Array**	**66.99**	**12**	*e*P	**P**	**12 51 01.1**	**-0.2**
	6.0nm,1.0s						
ZALV	**Zalesovo Beam**	**66.99**	**12**	P	**P**	**12 51 00.7**	**-0.6**

	baz=41						
W50A	Signal Mountai	145.08	317	P	PKPbc	12 59 45.8	-0.4
	baz=54						
W50A	Signal Mountai	145.08	317	*e*PKPbc	PKPab	12 59 46.3	0.0
U48A	Cassie Pea, Po	145.09	320	P	PKPbc	12 59 44.7	-1.4
	baz=51						
T47A	Sharon Grove	145.13	321	P	PKPbc	12 59 45.3	-0.9
	baz=50						
V49A	McMinnville	145.13	319	P	PKPbc	12 59 45.6	-0.7
	baz=53,SNR=5.2						
X51A	Calhoun	145.14	316	P	PKPbc	12 59 45.7	-0.6
	baz=55						
M38A	Pleasantville	145.17	333	P	PKPbc	12 59 45.7	-0.5
	baz=37						
P42A	Winchester	145.19	328	P	PKPbc	12 59 45.4	-0.9
	baz=43						
P42A	Winchester	145.19	328	*e*PKPbc	PKPdf	12 59 46.9	+0.2
N39A	Derby Farms, D	145.28	331	P	PKPbc	12 59 46.1	-0.5
	baz=38						
N39A	Derby Farms, D	145.28	331	*e*PKPbc	PKPdf	12 59 46.7	-0.2
Q43A	New Douglas	145.31	326	P	PKPdf	12 59 46.8	-0.2
	baz=44						
355A	Pearson	145.36	310	P	PKPdf	12 59 48.3	+1.0
	baz=62						
F10A	Beach Ranch, E	145.44	4	*e*PKPbc	PKPab	12 59 47.6	+0.3
R44A	Waltonville	145.46	325	P	PKPab	12 59 47.3	-0.2
	baz=46						
P41A	Barry, Barry	145.49	328	P	PKPbc	12 59 47.0	-0.3
	baz=41						
S45A	Carrier Mills	145.56	324	P	PKPdf	12 59 47.3	-0.2
	baz=47						
O40A	La Belle	145.56	330	P	PKPdf	12 59 47.0	-0.4
	baz=40						
Z52A	Williamson	145.59	314	P	PKPbc	12 59 47.7	-0.1
	baz=58,SNR=5.9						
U47A	Clarksville	145.60	321	P	PKPdf	12 59 46.5	-1.1
	baz=50						
GCMT	Greycliff	145.60	355	*e*PKPdf	PKPab	12 59 48.6	+0.7
Y51A	Rockmart	145.65	315	P	PKPdf	12 59 47.8	0.0
	baz=56,SNR=6.6						
X50B	Fort Payne	145.74	317	P	PKPdf	12 59 47.4	-0.5
	baz=55						
V48A	Smith Brothers	145.74	319	P	PKPdf	12 59 47.5	-0.4
	baz=52						
V48A	Smith Brothers	145.74	319	*e*PKPdf	PKPdf	12 59 47.9	0.0
W49A	Belvidere	145.76	318	P	PKPdf	12 59 47.9	0.0
	baz=53,SNR=7.8						
SIUC	Southern Illin	145.90	324	*e*PKPdf	PKPab	12 59 49.2	+0.1
R43A	Red Bud	145.91	326	P	PKPbc	12 59 48.5	-0.1
	baz=44						
BOZ	Bozeman (W)	145.91	358	*e*PKPdf	PKPab	12 59 49.2	+0.1
S44A	Carbondale	145.94	324	P	PKPbc	12 59 48.8	0.0
	baz=46						
061Z	Ochoppi	145.97	300	P	PKPab	12 59 54.1	+4.4
	baz=71						
152A	Waverly Hall	146.08	313	P	PKPbc	12 59 49.2	-0.1
	baz=58						
152A	Waverly Hall	146.08	313	*e*PKPdf	PKPab	12 59 49.7	-0.3
P40A	Paris	146.10	329	P	PKPbc	12 59 48.8	-0.4
	baz=40						
P40A	Paris	146.10	329	*e*PKPdf	PKPbc	12 59 49.0	-0.2
Y50A	Piedmont	146.12	316	P	PKPbc	12 59 49.6	+0.1
	baz=55						
V47A	Nunnelly	146.13	320	P	PKPdf	12 59 48.5	0.0
	baz=50						
WVT	Waverly	146.13	321	P	PKPdf	12 59 48.5	0.0
	baz=50						
WVT	Waverly	146.13	321	*e*PKPdf	PKPdf	12 59 47.9	-0.6
X49A	Woodville	146.16	317	P	PKPbc	12 59 49.1	-0.4
	baz=54						
DLMT	Dillon	146.18	359	*e*PKPdf	PKPab	12 59 49.9	-0.2
W48A	Pulaski	146.18	319	P	PKPdf	12 59 48.0	-0.6
	baz=52						
RLMT	Red Lodge	146.23	354	*e*PKPdf	PKPab	12 59 50.1	-0.3
RSSD	Black Hills	146.40	347	*e*PKPdf	PKPbc	12 59 50.2	-0.1
S43A	Fulton Ridge,	146.49	325	P	PKPbc	12 59 50.3	-0.1
	baz=45,SNR=5.6						
655A	Horseshoe Beac	146.51	307	P	PKPab	12 59 52.9	+1.2
	baz=64						
V46A	Holladay	146.52	321	P	PKPdf	12 59 49.5	+0.3
	baz=50						
Q40A	Laux Farm, Aux	146.52	329	P	PKPbc	12 59 50.4	-0.1
	baz=41						
W47A	Westpoint	146.54	319	P	PKPbc	12 59 49.9	-0.8
	baz=51						
BMO	Blue Mountains	146.55	5	*e*PKPdf	PKPbc	12 59 50.6	+0.1
U45A	Rockin P Farm,	146.56	322	P	PKPbc	12 59 50.4	-0.3
	baz=48						
151A	Opelika	146.59	313	P	PKPbc	12 59 50.7	-0.2
	baz=57						
Y49A	Blount Mountai	146.60	316	P	PKPbc	12 59 50.7	-0.2
	baz=54,SNR=6.7						
Y49A	Blount Mountai	146.60	316	*e*PKPdf	PKPbc	12 59 51.1	+0.2
Z50A	Ashland	146.61	315	P	PKPbc	12 59 50.9	-0.1
	baz=56,SNR=6.3						
Z50A	Ashland	146.61	315	*e*PKPdf	PKPbc	12 59 51.0	0.0
X48A	Hartselle	146.67	318	P	PKPbc	12 59 50.5	-0.6
	baz=53						
X48A	Hartselle	146.67	318	*e*PKPdf	PKPbc	12 59 50.3	-0.8
R41A	Rosebud	146.68	327	P	PKPbc	12 59 50.2	-0.8
	baz=42						
MCMT	McKenzie Canyo	146.72	359	*e*PKPdf	PKPbc	12 59 51.4	+0.2
S42A	Caledonia	146.75	326	P	PKPbc	12 59 51.2	+0.1
	baz=44,SNR=6.3						
CCM	Cathedral Cave	146.79	327	P	PKPbc	12 59 50.4	-0.8
	baz=43						
251A	Midway	146.88	313	P	PKPbc	12 59 51.3	-0.4
	baz=58						
U44B	Burton Farm, H	146.92	323	P	PKPbc	12 59 51.5	-0.2
	baz=47						
150A	Eclectic	147.04	314	P	PKPbc	12 59 52.0	-0.1
	baz=56						
Z49A	Columbiana	147.06	315	P	PKPbc	12 59 51.7	-0.5
	baz=55						
Y48A	Jasper	147.08	317	P	PKPbc	12 59 51.5	-0.7
	baz=53						
V45A	Humboldt	147.08	321	P	PKPbc	12 59 52.3	+0.2
	baz=49						
R40A	Maddies Statio	147.15	328	P	PKPdf	12 59 51.0	+0.8
	baz=41						
R40A	Maddies Statio	147.15	328	*e*PKPdf	PKPbc	12 59 51.5	-0.8
X47A	Russelville	147.16	319	P	PKPbc	12 59 51.6	-0.9
	baz=52						
T42A	Van Buren	147.44	325	P	PKPbc	12 59 53.2	+0.1
	baz=44,SNR=13						
T42A	Van Buren	147.44	325	*e*PKPbc	PKPbc	12 59 53.3	+0.1
LRAL	Lakeview Retre	147.47	316	P	PKPbc	12 59 53.1	-0.3
	baz=55						
LRAL	Lakeview Retre	147.47	316	*e*PKPdf	PKPbc	12 59 53.1	-0.3
250A	Grady	147.55	313	P	PKPbc	12 59 53.0	-0.6
	baz=57						
MOOW	Moose Ponds	147.71	356	*e*PKPdf	PKPdf	12 59 52.0	+0.8
S40A	Lebanon	147.79	328	P	PKPbc	12 59 53.6	-0.5
	baz=41						
FXWY	Fox Creek	147.84	356	*e*PKPdf	PKPdf	12 59 51.7	+0.2
TPAW	Teton Pass	147.98	356	*e*PKPbc	PKPbc	12 59 55.1	+0.3
HLID	Hailey	147.98	1	*e*PKPbc	PKPbc	12 59 54.8	+0.1
U42A	Revenden	148.01	325	P	PKPbc	12 59 54.4	-0.3
	baz=45						
MFID	Camas Ranch	148.08	3	*e*PKPbc	PKPbc	12 59 54.8	0.0
REDW	Red Top Meadow	148.10	356	*e*PKPbc	PKPbc	12 59 55.1	0.0
T40A	Mansfield	148.14	327	P	PKPbc	12 59 54.7	-0.4
	baz=42,SNR=6.7						
Y46A	Houston	148.21	319	P	PKPbc	12 59 54.6	-0.7
	baz=51						
S38A	Stockton	148.49	329	P	PKPbc	12 59 54.8	-1.1
	baz=39						
BW06	Boulder Array	148.59	354	*e*PKPbc	PKPbc	12 59 55.5	-0.9
PD31	Pinedale Array	148.59	354	*e*PKPbc	PKPbc	12 59 56.5	+0.1
PDAR	Pinedale Array	148.59	354	PKPbc	PKPbc	12 59 56.3	-0.1
	comp=Z,2.3nm,0.8s,baz=82,slow=1.9,SNR=18						
PDAR	Pinedale Array	148.59	354	*e*PKPdf	PKPdf	12 59 53.0	+0.3
T39A	Clever	148.68	328	P	PKPbc	12 59 56.3	-0.2
	baz=40						
U40A	Yellville	148.90	326	P	PKPbc	12 59 55.8	-1.3
	baz=42						
T38A	Diamond	149.15	329	P	PKPbc	12 59 56.8	-0.8
	baz=39						
U39A	Green Forest	149.22	327	P	PKPbc	12 59 56.5	-1.4
	baz=41						
N23A	Red Feather La	149.89	348	*e*pPKPdf	pPKPdf	12 59 57.5	-1.9
HWUT	Hardware Ranch	149.89	357	*e*PKPbc	PKPbc	12 59 58.9	-0.7
TCUT	Toone Canyon	150.37	357	*e*PKPbc	PKPbc	13 00 00.1	-0.8
MIAR	Mount Ida	150.63	325	*e*PKPbc	PKPbc	13 00 01.0	-0.3
BMN	Battle Mountai	150.94	6	*e*PKPbc	PKPbc	13 00 02.1	0.0
DUG	Dugway, Tooele	151.35	359	*e*PKPbc	PKPbc	13 00 02.9	-0.2
SMCO	Snowmass	151.75	349	*e*PKPbc	PKPbc	13 00 04.1	-0.2
P18A	Preston Nutter	151.76	354	*e*PKPbc	PKPbc	13 00 04.1	-0.1
KVN	Kaiserville	152.21	8	*e*PKPbc	PKPbc	13 00 04.8	-0.3
PV22	Blue Mesa, Par	152.67	352	*e*pPKPdf	pPKPdf	13 00 02.7	-0.9
NV01	Mina Array Sit	152.79	8	*e*PKPbc	PKPbc	13 00 06.5	+0.1
NVAR	Mina Array Bea	152.79	8	PKPbc	PKPbc	13 00 07.7	+1.2
	comp=Z,2.0nm,0.8s,baz=274,slow=1.8,SNR=11						
NV11	Mina Array Sit	152.81	8	*e*PKPbc	PKPbc	13 00 05.5	-0.9
PV12	Saucer Basin,	152.89	352	*e*PKPbc	PKPbc	13 00 05.4	-1.3
PSUT	Pine Spring	153.01	0	*e*PKPbc	PKPbc	13 00 07.3	+0.4
DPD	Davis Peak	155.43	14	*e*PKPbc	PKPbc	13 00 11.8	
ANMO	Albuquerque	155.71	346	*e*PKPdf	PKPdf	13 00 02.5	-1.0
EML	El Monte Cty P	158.44	7	*e*PKPdf	PKPdf	13 00 06.7	-0.1
DREC	Desert Rsrch C	158.66	4	*e*PKPdf	PKPdf	13 00 07.4	+0.4
TXAR	Lajitas Array	159.92	334	PKPab	PKPab	13 00 47.9	0.0
	comp=Z,0.9nm,0.9s,baz=56,slow=4.8,SNR=7.7						

*ISCJB **19** 12:45:05.4±0.4, 13°.09N±0°.06×145°.04E±0°.09, h35km, mb4.0/15, MS3.3/5, Error ellipse: s-maj=12.8km s-min=7.3km az=161.6*
*NEIC **19** 12:45:07.9±1.3, 13°.17N×145°.10E, h43km±12km, mb4.2/2, Error ellipse: s-maj=13.8km s-min=10.6km az=72.0*
*IDC **19** 12:45:08.3±1.0, 13°.27N×144°.95E, h41km±7km, mb3.8/13, mb1 4.0/13, mb1mx3.7/66, mbtmp4.0/13, MS3.4/5, Ms1 3.4/5, ms1mx2.9/69, Error ellipse: s-maj=23.3km s-min=13.8km az=93.0*

ISC 19 12:45:07.2±0.6, 13°.15N±0°.09×145°.1E±0°.1, h35km, n54, σ1°.21/41, mb4.1/15, MS3.2/5, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	0.49	333	P	Pn	12 45 18.8	+1.1
	2μm,0.3s,baz=165,slow=12,SNR=1682						
GUMO				S	Sn	12 45 25.7	+0.6
	3μm,0.3s,baz=330,slow=20,SNR=34						
GUMO	Guam	0.49	333	*e*Pn	Pn	12 45 18.8	+1.1
GUMO				*e*Sn	Sn	12 45 25.1	0.0
GUMO				*e*Sn	Sn	12 45 25.7	+0.6
PATS	Pohnpei	14.44	114	*e*Pn	Pn	12 48 28.8	-0.4
DAV	Davao City (W)	20.13	254	LR	LR	12 58 19.0	
	comp=Z,48nm,18.2s,baz=92,slow=40						
H11S3	WAKE ISLAND Hy	21.43	73	T	T	13 12 33.4	
	baz=259,slow=75,SNR=29						
H11S1	WAKE ISLAND Hy	21.45	73	T	T	13 12 32.0	
	baz=259,slow=75,SNR=16						
H11S2	WAKE ISLAND Hy	21.45	73	T	T	13 12 32.2	
	baz=259,slow=75,SNR=14						
H11N2	WAKE ISLAND Hy	21.90	70	T	T	13 13 03.1	
	baz=16,slow=74,SNR=23						
H11N3	WAKE ISLAND Hy	21.91	70	T	T	13 12 49.1	
	baz=258,slow=74,SNR=43						
JNU	Nakatsue	23.75	329	P	P	12 50 17.3	+0.9
	10nm,0.7s,baz=135,slow=6.6,SNR=7.0						
HNR	Honiara	26.84	146	LR	LR	13 00 06.5	
	comp=Z,81nm,21.9s,baz=316,slow=33						
KSRS	Korea Array	28.66	331	P	P	12 51 01.8	+1.1
	1.9nm,0.8s,baz=138,slow=9.8,SNR=7.0						
KS15	Wonju Array Si	28.67	331	*e*P	P	12 51 00.1	-0.7
KSAR	Wonju Array Be	28.67	331	P	P	12 51 01.8	+1.0
WR1	Warramunga Arr	34.54	198	*e*P	P	12 51 53.0	+0.5
	4.5nm,0.8s						
WR1				*e*PcP	PcP	12 54 28.4	+1.4
WRA	Warramunga Arr	34.54	198	P	P	12 51 53.0	+0.5
	2.8nm,0.8s,baz=21,slow=9.7,SNR=10						
WRA				PcP	PcP	12 54 28.4	+1.4
	1.9nm,0.8s,baz=8.9,slow=2.9,SNR=7.9						
FITZ	Fitzroy Crossi	36.50	212	P	P	12 52 08.8	-0.5
	5.9nm,0.9s,baz=9.1,slow=7.4,SNR=6.1						
AS31	Alice Springs	38.19	197	*e*P	P	12 52 24.0	+0.4
	1.2nm,0.5s						
ASAR	Alice Springs	38.19	197	P	P	12 52 25.1	+1.4
	0.8nm,0.6s,baz=19,slow=11,SNR=18						
ASAR				PcP	PcP	12 54 39.2	+1.3
	1.3nm,0.8s,baz=19,slow=2.4,SNR=9.4						
DZM	Mont Dzumac	40.78	149	LR	LR	13 07 59.1	
	comp=Z,63nm,18.1s,baz=358,slow=34						
PETK	Petropavlovsk-	41.11	12	LR	LR	13 10 30.2	
	comp=Z,30nm,18.2s,baz=197,slow=37						
CM31	Chiang Mai Arr	44.63	283	*e*P	P	12 53 15.3	-1.4
CMAR	Chiang Mai Arr	44.63	283	P	P	12 53 16.7	0.0
	1.0nm,0.3s,baz=81,slow=5.9,SNR=6.0						
ODAN	Odare	55.50	294	*e*P	P	12 55 05.2	+26
RAMN	Ramite	56.20	294	*e*P	P	12 55 03.1	+19
JIRN	Jiri	56.59	295	*e*P	P	12 55 05.6	+18
GUN	Gumba	56.88	295	*e*P	P	12 55 06.2	+17
PKIN	Phulchoki	57.30	294	*e*P	P	12 55 02.3	+10
DMN	Daman	57.55	294	*e*P	P	12 55 02.2	+8.2
GKN	Gorkha	57.98	295	*e*P	P	12 55 02.5	+5.6
DANN	Dangsing	58.76	295	*e*P	P	12 55 01.8	-0.7
	9.7nm,0.6s						
PYUN	Piuthan	59.44	295	*e*P	P	12 54 57.8	-9.3
LBZ	Lake Benmore	61.64	160	*e*PcP	PcP	12 56 01.6	-1.1
MK32	Makanchi Array	61.96	316	*e*P	P	12 55 22.7	-1.0
MKAR	Makanchi Array	61.96	316	P	P	12 55 22.7	-1.0
	0.7nm,0.5s,baz=94,slow=7.7,SNR=8.0						
KURK	Kurchatov	65.06	320	*e*P	P	12 55 42.8	-1.3
KURBB	Kurchatov Arra	65.10	320	P	P	12 55 42.8	-1.6
	1.3nm,0.5s,baz=103,slow=6.8,SNR=14						
ILAR	Eielson Array	68.87	25	P	P	12 56 06.7	-1.4
	0.6nm,0.6s,baz=256,slow=6.1,SNR=10						
ILB	Eielson Array	68.87	25	*e*P	P	12 56 06.7	-1.4
BVAR	Borovoye Array	70.41	322	P	P	12 56 15.5	-2.3
	0.4nm,0.4s,baz=102,slow=10,SNR=4.1						
YBH	Yreka Blue Hor	82.99	49	P	P	12 57 31.4	+2.2
	1.5nm,0.7s,baz=117,slow=2.3,SNR=5.2						
YKA	Yellowknife Ar	83.15	27	P	P	12 57 29.5	+0.2
	0.4nm,0.6s,baz=288,slow=5.7,SNR=3.0						
SLD	San Luis Dam	85.09	53	*e*P	P	12 57 37.5	-2.3
NV01	Mina Array Sit	87.02	51	*e*P	P	12 57 50.3	+0.7
NVAR	Mina Array Bea	87.02	51	P	P	12 57 51.0	+1.4
	0.3nm,0.5s,baz=272,slow=5.3,SNR=3.0						
KVAR	Kislovodsk Arr	89.70	315	LR	LR	13 40 05.0	
	comp=Z,27nm,20.0s,baz=58,slow=37						
TOA1	Torodi Ar. Sit	135.30	304	*e*PKPdf	PKPdf	13 04 25.2	+0.9
TORD	Torodi Ar. Bea	135.30	304	PKP	PKPdf	13 04 25.2	+0.9
	1.6nm,0.7s,baz=39,slow=2.4,SNR=11						
KOWA	Kowa	138.89	311	PKP	PKPdf	13 04 32.4	+1.5
	2.2nm,0.5s,baz=302,slow=3.8,SNR=4.4						
DBIC	Dimbokro	144.25	302	PKP	PKPab	13 04 38.1	-0.2
	5.3nm,0.6s,baz=45,slow=3.8,SNR=9.6						
KIC	Kosan Boka	144.32	301	*e*PKP1	PKPab	13 04 37.7	-1.0
	66nm,1.4s						
TIC	Toumodi	144.39	302	*e*PKP1	PKPab	13 04 38.4	-0.6
LIC	Lamto	144.63	301	*e*PKP1	PKPab	13 04 38.5	-1.3
	41nm,0.5s						
LPAZ	La Paz	147.73	100	PKPbc	PKPdf	13 04 48.8	+1.7
	1.0nm,0.4s,baz=236,slow=3.6,SNR=4.2						

SJA 19 12:53:01.7±0.3, 30°.05S×63°.62W, h53km±34km, ML3.0, MW3.6, Cordoba Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TCA	Tanti	1.54	213	*i* P	Pn	12 53 28.4	+1.5
TCA				*i* S	Sn	12 53 48.1	+2.2
TCA				IAML		12 53 52.3	
	comp=Z,79nm,0.4s						
CYA	Choya	2.49	309	*i* P	Pn	12 53 41.8	+2.0
CYA				IAML		12 54 16.4	
	comp=Z,79nm,0.2s						
APLL	PUNTA DE LOS L	2.54	261	*i* P	Pn	12 53 42.6	+2.0
ACLC	CERRO LA CRUZ	2.96	281	*i* P	Pn	12 53 48.6	+2.2
MRA	San Martin	2.97	217	*i* P	Pn	12 53 48.9	+2.4
MRA				IAML		12 54 31.0	
	comp=Z,84nm,0.4s						
SUCO	SUCO	3.46	198	*i* P	Pn	12 53 55.6	+2.4

*DDA **19** 12:54:30.7, 37°.00N×28°.95E, h7km, Ml2.9, Suspected Mining explosion.*
*ISCJB **19** 12:54:31.1±0.4, 37°.02N±0°.03×28°.92E±0°.04, h0km, Error ellipse: s-maj=4.6km s-min=3.5km az=19.5*
*CSEM **19** 12:54:31.3±0.2, 37°.01N×28°.92E, h1km, ML2.5, Error ellipse: s-maj=5.5km s-min=4.9km az=70.0, Suspected Mining explosion.*
*ISK **19** 12:54:32.2, 36°.90N×28°.85E, h11km, ML2.5/9*

ISC 19 12:54:31.3±0.8, 37°.03N±0°.02×28°.98E±0°.02, h0km, n36, σ1°.47/51, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DALY	Dalyan (Mu¨la	0.34	231	PG	Pg	12 54 36.6	-1.2
DALY	Dalyan (Mu¨la	0.34	231	*i* P	Pg	12 54 36.6	-1.2
DALY				*i* S	Sg	12 54 42.0	-0.2
DALY	Dalyan (Mu¨la	0.34	231	P	Pg	12 54 36.6	-1.2
DALY				S	Sg	12 54 42.0	-0.2
TURN	Turunc	0.34	243	PG	Pn	12 54 42.6	-1.0
TURN				SG	Sb	12 54 49.8	+3.5
TURN	Turunc	0.34	243	*i* P	Pn	12 54 43.1	-0.5
TURN				*i* S	Sb	12 54 51.8	+5.5
TURN	Turunc	0.34	243	*e*Pg	Pn	12 54 42.6	-1.0
TURN	Turunc	0.34	243	P	Pn	12 54 43.1	-0.5
TURN				*e*Sg	Sb	12 54 49.8	+3.5
TURN				S	Sg	12 54 51.8	+9.5
FETY	Fethiye	0.40	168	PG	Pg	12 54 38.3	-0.8
FETY				SG	Sg	12 54 44.7	+0.4
FETY	Fethiye	0.40	168	P	Pg	12 54 37.9	-1.2
FETY	Fethiye	0.40	168	*e*Pg	Pg	12 54 38.3	-0.8
FETY				S	Sg	12 54 44.4	+0.1
TAVA	DENIZLI_Tavas	0.44	353	*i* P	Pg	12 54 39.8	0.0
TAVA				*i* S	Sg	12 54 45.5	+0.1
TAVA	DENIZLI_Tavas	0.44	353	P	Pg	12 54 39.8	0.0
TAVA				S	Sg	12 54 45.5	+0.1
GOLH	Golhisar	0.51	66	*i* P	Pg	12 54 40.5	-0.5
GOLH				*i* S	Sb	12 54 50.0	-1.1
GOLH	Golhisar	0.51	66	P	Pg	12 54 40.5	-0.5
GOLH				S	Sb	12 54 50.0	-1.1
DNZL	Cakiroluk	0.66	4	*i* P	Pg	12 54 44.1	+0.1
DNZL				*i* S	Sb	12 54 54.4	-1.3
DNZL	Cakiroluk	0.66	4	P	Pg	12 54 44.1	+0.1
DNZL				S	Sb	12 54 54.4	-1.3
ELL	Elmali	0.79	111	PG	Pn	12 54 49.3	-0.6
ELL	Elmali	0.79	111	*e*Pg	Pn	12 54 49.3	-0.6
AKAS	Kas	0.94	148	PG	Pb	12 54 49.6	-1.0
AKAS	Kas	0.94	148	*i* P	Pg	12 54 48.9	-0.5
AKAS				*i* S	Sn	12 55 07.4	+1.2
AKAS	Kas	0.94	148	P	Pg	12 54 48.9	-0.5
AKAS	Kas	0.94	148	*e*Pg	Pb	12 54 49.6	-1.0
AKAS				S	Sn	12 55 07.4	+1.2
ARG	Arkhangelos	1.07	221	PG	Pg	12 54 49.6	-2.2
ARG	Arkhangelos	1.07	221	*e*Pg	Pg	12 54 49.6	-2.2
AYDN	Tasoluk	1.08	306	*i* P	Pg	12 54 50.8	-1.3
AYDN	Tasoluk	1.08	306	P	Pg	12 54 50.8	-1.3
KORT	Korkueli	1.09	91	PN	Pn	12 54 56.4	+2.3
KORT	Korkueli	1.09	91	*e*Pn	Pn	12 54 56.4	+2.3
DAT	Datca	1.17	255	PG	Pg	12 54 52.7	-1.0
DAT	Datca	1.17	255	*i* P	Pn	12 54 54.9	-0.1
DAT	Datca	1.17	255	*e*Pg	Pg	12 54 52.7	-1.0
DAT	Datca	1.17	255	P	Pn	12 54 54.9	-0.1
AYDB	Zeytinkoy-Aydi	1.26	317	PN	Pn	12 54 56.6	+0.2
AYDB	Zeytinkoy-Aydi	1.26	317	*e*Pn	Pn	12 54 56.6	+0.2
BODT	Bodrum	1.34	272	PN	Pg	12 54 56.2	-0.8
BODT	Bodrum	1.34	272	*e*Pn	Pg	12 54 56.2	-0.8

IDC 19 12:56:24.3±10.0, 31°.00S×178°.76W, h149km±100km, mb3.6/3, mb1 3.7/4, mb1mx3.3/50, mbtmp4.0/4, Error ellipse: s-maj=83.0km s-min=49.7km az=8.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	8.00	204	P	Pn	12 58 17.5	-0.1
	0.2nm,0.3s,baz=268,slow=6.4,SNR=3.1						
URZ				S	Sn	12 59 47.4	+0.7
	1.3nm,0.3s,baz=315,slow=22,SNR=8.3						
CTA	Charters Tower	33.26	281	P	P	13 02 48.4	+0.7
	1.2nm,0.4s,baz=90,slow=4.0,SNR=3.0						
ASAR	Alice Springs	42.43	268	P	P	13 04 04.5	-0.2
	0.4nm,0.3s,baz=104,slow=7.3,SNR=7.2						
WRA	Warramunga Arr	43.47	273	P	P	13 04 12.3	-0.7
	0.9nm,0.3s,baz=110,slow=8.1,SNR=48						
FINES	FINESS Array B	145.48	339	PKPbc	PKPdf	13 15 43.5	-0.4
	2.6nm,0.8s,baz=35,slow=3.4,SNR=6.4						

MEX 19 12:58:49.8±0.8, 17°.30N×100°.59W, h16km±11km, MD3.8, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.40	128	*e*P	Pg	12 58 56.8	-1.1
CAIG				*e*S	Sg	12 59 01.6	-1.8
ACP2	Acapulco	0.80	122	*e*P	Pb	12 59 02.3	-2.9
ACP2				*e*S	Sb	12 59 11.6	-4.2
ACX	Acapulco	0.82	121	*e*P	Pb	12 59 02.9	-2.9
ACX				*i* S	Sb	12 59 11.7	-4.9
ZIIG	Zihuatanejo	0.89	290	*e*P	Pb	12 59 03.5	-3.3
ZIIG				*e*S	Sb	12 59 14.7	-3.7
ARIG	Puente Sto Nin	1.01	13	*e*P	Pb	12 59 05.2	-3.7
ARIG				*e*S	Sb	12 59 17.7	-4.2
PLIG	Platanillo	1.50	43	*e*P	Pn	12 59 12.7	-3.6
PLIG				*

1.2nm,0.5s,baz=162,slow=9.0,SNR=19
KURBB **Kurchatov Arra** 51.65 345 P P 13 09 39.9 +0.4
0.8nm,0.5s,baz=164,slow=6.8,SNR=8.1
KURK **Kurchatov** 51.71 345 *e*P P 13 09 40.1 +0.2
8.8nm,0.9s
USRK **Ussuriysk Ar.** 52.72 31 P P 13 09 48.4 +0.7
2.2nm,0.7s,baz=244,slow=6.3,SNR=3.6
ZALV **Zalesovo Beam** 53.48 351 P P 13 09 53.5 +0.5
2.6nm,0.6s,baz=181,slow=6.7,SNR=11
BVAR **Borovoye Array** 56.17 341 P P 13 10 12.3 -0.2
1.1nm,0.7s,baz=152,slow=6.7,SNR=6.7
KLR **Kul'dur** 56.20 27 P P 13 10 13.5 +0.7
0.2nm,1.0s,baz=264,slow=4.7,SNR=5.5
TIXI **Tiksi** 73.12 10 P P 13 12 01.8 -1.0
0.7nm,0.2s,baz=225,slow=4.3,SNR=2.7

MAN 19 13:08:32.7,9°.98N×123°.17E,h10km,mb4.6,ML3.4,MS3.3, 5C,Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	**Sibulan**	0.64	174⇑	*i*P	Pb	13 08 45.8	-0.2
SNPH				*i* S	Sn	13 08 57.6	-0.5
TBP	**Tagbilaran**	0.74	113	*e*P	Pb	13 08 47.8	+0.2
TBP				*i* S	Sn	13 09 01.5	+1.0
LLP	**Lapu-Lapu**	0.85	67⇑	*e*P	Pg	13 08 47.0	-2.1
LLP				*i* S	Sg	13 08 58.4	-1.8
GUIM	**Jordan**	0.86	318	*e*P	Pg	13 08 49.2	-0.1
GUIM				*e*S	Sn	13 09 03.1	-0.4
DCPH	**Dipolog City**	1.40	173⇑	*e*P	Pn	13 08 57.1	-1.2
DCPH				*e*S	Sn	13 09 16.4	-0.4
JAP	**San Jose, Anti**	1.42	302⇑	*e*P	Pg	13 09 01.5	+1.4
RCP	**Roxas**	1.62	345⇑	*e*P	Pb	13 09 02.2	-0.6
RCP				*e*S	Sg	13 09 26.1	+1.1
MSLP	**Maasin**	1.67	85	*e*P	Pn	13 09 01.3	-0.7
MSLP				*e*S	Sb	13 09 24.4	-0.3
OCLP	**Ormoc**	1.77	53	*e*P	Pn	13 09 02.3	-1.1
OCLP				*e*S	Sn	13 09 24.0	-2.0
CUYO	**Cuyo Island**	2.29	292	*e*P	Pn	13 09 11.2	+0.7
BUKP	**Musuan**	2.80	138	*e*P	Pn	13 09 17.7	+0.1
BUKP				*e*S	Sn	13 09 53.7	+2.1
BUSP	**Coron**	3.54	305	*e*P	Pn	13 09 28.6	+0.8

IDC 19 13:08:48.7±999.0,47°.66N×47°.04E,h0km,Error ellipse: s-maj=445.4km s-min=192.6km az=133.0, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASONI**	0.89	330	*i*		14 16 30.0	
baz=142,slow=324,SNR=0.5							
I26DE	**FREYUNG INFRAS**	22.13	286	*i*		15 23 50.0	
baz=81,slow=310,SNR=1.1							
I48TN	**KESRA INFRASON**	30.25	261	*i*		16 14 40.0	
baz=56,slow=311,SNR=0.3							

ISCJB ***19*** *13:22:25.1±0.2,59°.70N±0°.02×153°.30W±0°.05, h137km±2km,mb3.5/8,Error ellipse: s-maj=4.5km s-min=2.6km az=41.4*
IDC ***19*** *13:22:25.0±1.0,59°.68N×153°.08W,h124km±20km,mb3.3/8, mb1 3.4/11,mb1mx3.2/78,mbtmp3.7/11,Error ellipse: s-maj=28.6km s-min=11.1km az=115.0*
NEIC ***19*** *13:22:27.4±0.0,59°.67N×153°.35W,h128km,ML3.5(AEIC), After AEIC.*

ISC 19 13:22:26.3±0.7,59°.67N±0°.03×153°.25W±0°.04, h134km±5km,n130,σ0°.90/152,mb3.6/8,Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPT	**Oil Point**	0.02	150	P	Pn	13 22 44.9	+0.4
AUNW	**Augustine NWes**	0.32	201	P	Pn	13 22 44.9	-0.1
AUW	**Augustine West**	0.32	200	P	Pn	13 22 45.0	-0.1
AUI	**Augustine Isla**	0.35	195	P	Pn	13 22 44.9	-0.2
AUI				S	Sn	13 22 58.5	-0.9
ILIM	**Iliamna**	0.43	20	P	Pn	13 22 45.5	-0.1
MCNL	**McNeil River**	0.74	229	P	Pn	13 22 47.0	-0.4
CDD	**Cape Douglas**	0.77	195	P	Pn	13 22 47.4	-0.3
HOM	**Homer**	0.82	90	P	Pn	13 22 48.2	+0.3
HOM				S	Sn	13 23 04.5	0.0
RSO	**Redoubt South**	0.83	17	*e*Pn	Pn	13 22 48.3	-0.1
RSO				*e*Sn	Sn	13 23 04.2	-0.9
RDWB	**Redoubt West**	0.84	14	P	Pn	13 22 48.1	-0.3
RDWB				S	Sn	13 23 04.1	-1.1
NCT	**North Crescent**	0.91	10	P	Pn	13 22 48.8	0.0
RDJH	**Redoubt Jeurge**	0.95	13	P	Pn	13 22 49.2	-0.1
RDJH				S	Sn	13 23 06.0	-0.7
DFR	**Drift River**	0.96	17	P	Pn	13 22 49.3	0.0
CNPM	**China Poot**	1.04	97	P	Pn	13 22 50.0	+0.1
CNPM				S	Sn	13 23 07.4	-0.5
BRLK	**Bradley Lake**	1.20	85	P	Pn	13 22 51.4	-0.1
KAPH	**Katmai Pasha**	1.22	208	P	Pn	13 22 51.5	-0.3
KAPH				S	Sn	13 23 10.1	-1.0
KAHC	**Katmai Hardscr**	1.37	222	P	Pn	13 22 53.0	-0.4
KAHC				S	Sn	13 23 12.3	-1.6
KARR	**Katmai Rainbow**	1.40	213	P	Pn	13 22 53.4	-0.2
CKL	**Chakachamna La**	1.59	16	P	Pn	13 22 56.1	+0.3
CKT	**Bend**	1.62	18	P	Pn	13 22 56.2	+0.1
SPCR	**Spurr Chakacha**	1.62	18	P	Pn	13 22 56.2	+0.1
SPCR				S	Sn	13 23 17.6	-1.2
SPU	**Mount Spurr**	1.63	21	*e*Pn	Pn	13 22 56.1	-0.1
SPU				*e*Sn	Sn	13 23 17.7	-1.2
SPWE	**Spurr West**	1.64	12	P	Pn	13 22 56.8	+0.4
KAKN	**Katmai Knife C**	1.67	215	P	Pn	13 22 56.2	-0.5
KAKN				S	Sn	13 23 18.2	-1.6
SPCP	**Crater Peak Br**	1.69	18	P	Pn	13 22 57.3	+0.3
SPCP				S	Sn	13 23 20.6	+0.2
SLKM	**Skilak Lake**	1.73	60	P	Pn	13 22 57.3	-0.1
SPCG	**Spurr Capps Gl**	1.74	20	P	Pn	13 22 57.7	+0.2
SPCG				S	Sn	13 23 21.1	-0.2
KABU	**Katmai Buttres**	1.76	218	P	Pn	13 22 57.5	-0.2
KABU				S	Sn	13 23 20.7	-0.9
KELA	**Mount Kelaz**	1.78	227	P	Pn	13 22 57.6	-0.4
SVW2	**Sparrevohn**	1.84	322	P	Pn	13 22 57.9	-0.6
SVW2				S	Sn	13 23 21.0	-2.3
ANCK	**Angle Creek**	1.88	219	P	Pn	13 22 58.9	-0.2
KDAK	**Kodiak Island**	1.93	169	P	Pn	13 22 58.4	-1.1
18nm,0.3s,baz=40,slow=14,SNR=486							
KDAK				S	Sn	13 23 22.8	-2.2
65nm,0.3s,baz=123,slow=22,SNR=58							
CAHL	**Cahill**	1.94	214	P	Pn	13 22 59.6	-0.3
FIB	**Fire Island**	2.14	44	P	Pn	13 23 03.2	+1.1
SUA	**Susitna One**	2.18	33	P	Pn	13 23 03.2	+0.4
SUA				S	Sn	13 23 30.4	-0.4
RC01	**Rabbit Creek A**	2.25	49	P	Pn	13 23 03.7	+0.2
RC01				S	Sn	13 23 30.4	-1.7
OHAK	**Old Harbor**	2.46	180	P	Pn	13 23 04.6	-1.5
OHAK				S	Sn	13 23 33.5	-3.1
SKT	**Skwentna**	2.46	19	P	Pn	13 23 06.0	-0.2
PLK2	**Peulik 2**	2.50	221	P	Pn	13 23 06.5	0.0
PLK5	**Peulik 5**	2.52	230	P	Pn	13 23 07.2	+0.3
PLK1	**Peulik 1**	2.56	224	P	Pn	13 23 07.3	-0.1
PMR	**Palmer**	2.80	45	P	Pn	13 23 09.6	-0.7
KNK	**Knik Glacier**	2.94	52	P	Pn	13 23 11.7	-0.6
KNK				S	Sn	13 23 45.3	-2.4
GHO	**Glory Hole Cre**	2.99	43	P	Pn	13 23 12.2	-0.8
SML	**Sawmill**	3.23	46	P	Pn	13 23 15.2	-0.8
PPLA	**Purkeypile**	3.28	9	*e*Pn	Pn	13 23 17.1	+0.4
TT01	**Tatalina**	3.51	339	P	Pn	13 23 18.9	-0.6
MID	**Middleton Isla**	3.53	91	P	Pn	13 23 19.8	0.0
SCM	**Sheep Creek Mo**	3.63	51	P	Pn	13 23 20.7	-0.5
ANNE	**Aniakchak Nort**	3.75	225	P	Pn	13 23 22.5	-0.4
ANNW	**Aniakchak Nort**	3.77	226	P	Pn	13 23 23.3	+0.2
DIV	**Divide**	3.99	65	P	Pn	13 23 26.4	+0.5
TRF	**Thorofare Moun**	4.05	19	P	Pn	13 23 26.2	-0.7
KTH	**Kantishna Hill**	4.05	15	P	Pn	13 23 26.1	-0.7
KLU	**Klutina**	4.05	60	P	Pn	13 23 26.6	-0.2
CHUM	**Lake Minchumin**	4.25	6	P	Pn	13 23 29.1	-0.1
RND	**Reindeer**	4.30	27	P	Pn	13 23 29.5	-0.5
CHGN	**Chignik**	4.36	221	P	Pn	13 23 30.2	-0.6
RAGM	**Ragged Mountai**	4.36	77	P	Pn	13 23 31.0	+0.1
DHY	**Denali Highway**	4.43	37	P	Pn	13 23 31.3	-0.6
BMRM	**Bremner River**	4.49	69	P	Pn	13 23 32.7	+0.1
MCK	**McKinley**	4.56	25	P	Pn	13 23 33.2	-0.3
BPAW	**Bear Paw Mtn.**	4.57	13	P	Pn	13 23 32.6	-1.0
VNHG	**Veniaminof 1**	4.68	225	P	Pn	13 23 35.1	-0.1
NICHA	**Nichawak Mount**	4.70	79	P	Pn	13 23 35.8	+0.4
HARP	**HAARP**	4.80	52	P	Pn	13 23 36.7	+0.1
BERG	**Berg Lake**	4.84	77	P	Pn	13 23 37.5	+0.2
BWN	**Browne**	4.86	20	*e*Pn	Pn	13 23 37.3	-0.1
PAX	**Paxson**	5.00	45	P	Pn	13 23 39.3	-0.1
KHIT	**Khitrov Hills**	5.07	77	P	Pn	13 23 40.5	+0.1
VRDI	**Verde Repeater**	5.10	68	P	Pn	13 23 41.0	+0.2
CRQM	**Cirque**	5.16	73	*e*Pn	Pn	13 23 41.7	0.0
NEA	**Nenana**	5.30	20	P	Pn	13 23 42.3	-1.0
TGL	**Tana Glacier**	5.31	74	*e*Pn	Pn	13 23 43.7	+0.1
TGL				*e*Sn	Sn	13 24 41.6	-2.1
KULT	**Kultieth River**	5.32	79	P	Pn	13 23 44.1	+0.4
MCARA	**McCarthy VSAT**	5.34	67	P	Pn	13 23 44.6	+0.8
WRH	**Wood River Hil**	5.39	25	P	Pn	13 23 43.5	-1.0
BARK	**Barkley Ridge**	5.45	78	P	Pn	13 23 46.0	+0.7
MLY	**Manley**	5.50	11	P	Pn	13 23 44.8	-1.3
ISLE	**Juniper Island**	5.53	70	P	Pn	13 23 47.1	+0.5
KIAG	**Kiagna River**	5.56	72	P	Pn	13 23 47.4	+0.4
BALM	**Baldy**	5.58	71	P	Pn	13 23 48.1	+0.9
HDA	**Harding Lake**	5.60	29	P	Pn	13 23 46.6	-0.8
CCB	**Clear Creek Bu**	5.61	25	P	Pn	13 23 46.2	-1.2
BAGL	**Bagley Icefiel**	5.65	77	P	Pn	13 23 48.9	+0.9
MESA	**MESA**	5.71	80	P	Pn	13 23 49.8	+0.8
RIDG	**Independ'e Rid**	5.71	41	P	Pn	13 23 49.2	+0.3
PS08	**TAPS Pump Stn8**	5.74	29	P	Pn	13 23 48.3	-0.9
COLA	**College**	5.79	23	*e*Pn	Pn	13 23 48.8	-1.1
MDM	**Murphy Dome**	5.80	22	P	Pn	13 23 48.8	-1.2
SDPT	**Sand Point**	5.82	225	*e*Pn	Pn	13 23 50.1	-0.3
GRNC	**Granite Creek**	5.83	75	P	Pn	13 23 51.3	+0.6
ILAR	**Eielson Array**	5.92	27	P	Pn	13 23 50.7	-0.9
3.6nm,0.3s,baz=216,slow=14,SNR=334							
ILAR				S	Sn	13 24 54.5	-3.7
1.5nm,0.3s,baz=208,slow=17,SNR=7.9							
ILB	**Eielson Array**	5.92	27	P	Pn	13 23 50.5	-1.1
BARN	**Barnard Glacie**	5.92	71	P	Pn	13 23 52.6	+0.8
IL1	**Eielson Array**	5.92	27	*e*Pn	Pn	13 23 49.7	-1.9
DOT	**Dot Lake**	5.92	44	*e*Pn	Pn	13 23 51.8	+0.2
CTGM	**Chitina Glacie**	6.06	73	P	Pn	13 23 54.9	+1.2
CHX	**Chaix Hills**	6.13	81	P	Pn	13 23 55.6	+1.1
SCRK	**Sand Creek**	6.15	41	P	Pn	13 23 53.9	-1.0
LOGN	**Logan Glacier**	6.21	74	P	Pn	13 23 56.2	+0.5
IM01	**Indian Mountai**	6.35	358	P	Pn	13 23 57.4	0.0
BCA3	**Beaver Creek A**	6.47	53	P	Pn	13 23 59.3	+0.2
PRP	**Porcupine Dome**	6.86	28	P	Pn	13 24 03.6	-0.7
PNL	**Peninsula**	7.02	84	P	Pn	13 24 06.8	+0.3
FALS	**False Pass**	7.32	233	*e*Pn	Pn	13 24 10.8	+0.4
EGAK	**Eagle**	7.62	43	P	Pn	13 24 13.8	-0.6
COLD	**Coldfoot**	7.71	9	P	Pn	13 24 14.7	-0.9
FYU	**Fort Yukon**	7.81	24	*e*Pn	Pn	13 24 15.4	-1.5
DAWY	**Dawson**	7.89	50	*e*Pn	Pn	13 24 18.3	+0.3
BM3	**Burnt Mountain**	8.67	23	P	Pn	13 24 26.6	-1.9
TOLK	**Toolik Lake Re**	9.14	9	*e*Pn	Pn	13 24 34.6	-0.3
UNV	**Unalaska Valle**	9.32	237	*e*Pn	Pn	13 24 36.7	-0.6
DLBC	**Dease Lake**	12.00	86	P	Pn	13 25 14.4	+1.5
0.1nm,0.3s,baz=296,slow=6.4,SNR=3.1							
INK	**Inuvik**	12.18	37	P	Pn	13 25 14.2	-0.8
0.3nm,0.3s,baz=241,slow=11,SNR=7.9							
INK	**Inuvik**	12.18	37	*e*Pn	Pn	13 25 14.3	-0.7
ATKA	**Atka Island**	13.87	247	*e*P	Pn	13 25 39.0	+2.1
YKA	**Yellowknife Ar**	18.70	65	P	P	13 26 33.4	-0.5
0.1nm,0.3s,baz=278,slow=10.0,SNR=4.0							
SEY	**Seymchan**	25.65	301	P	P	13 27 43.8	+0.8
1.2nm,0.8s,baz=98,slow=14,SNR=3.2							
ASAJ	**Asahikawa**	40.79	277	P	P	13 29 54.5	+0.5
2.8nm,0.8s,baz=318,slow=16,SNR=3.4							
KLR	**Kul'dur**	42.54	291	P	P	13 30 08.3	+0.1
0.2nm,0.8s,baz=36,slow=5.8,SNR=6.7							
KSRS	**Korea Array**	53.13	283	P	P	13 31 30.2	+0.5
0.7nm,0.5s,baz=38,slow=6.8,SNR=4.3							
KSAR	**Wonju Array Be**	53.16	283	P	P	13 31 30.2	+0.3
SONA0	**Songino Array**	54.88	306	*e*P	P	13 31 43.6	+1.0
SONM	**Songino Array**	54.88	306	P	P	13 31 43.6	+1.0
1.9nm,0.7s,baz=37,slow=7.9,SNR=6.0							
KURK	**Kurchatov**	62.23	326	*e*P	P	13 32 33.6	+0.4
BVAR	**Borovoye Array**	62.30	332	P	P	13 32 33.2	-0.4
0.5nm,0.5s,baz=30,slow=12,SNR=3.4							
KURBB	**Kurchatov Arra**	62.34	326	P	P	13 32 33.6	-0.3
0.2nm,0.3s,baz=8.6,slow=6.8,SNR=2.9							
MK32	**Makanchi Array**	64.61	321	*e*P	P	13 32 48.1	-0.8
MKAR	**Makanchi Array**	64.61	321	P	P	13 32 48.1	-0.8
0.2nm,0.6s,baz=28,slow=6.5,SNR=3.2							

IDC 19 13:32:28.4±969.0,48°.36N×46°.53E,h0km,Error ellipse: s-maj=411.7km s-min=181.1km az=132.0, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASONI**	0.11	329	*i*		14 35 20.0	
baz=142,slow=320,SNR=0.8							
I26DE	**FREYUNG INFRAS**	21.62	284	*i*		15 42 10.0	
baz=81,slow=380,SNR=1.4							
I48TN	**KESRA INFRASON**	30.03	259	*i*		16 40 00.0	
baz=55,slow=288,SNR=0.3							

BJI ***19*** *13:40:53.3,43°.40N×127°.30W,h6km,mb5.2/52,mB5.5/29, Ms5.2/19,Ms7 4.9/17*
IDC ***19*** *13:40:55.4±0.5,43°.43N×127°.32W,h0km,mb4.7/36, mb1 4.7/40,mb1mx4.6/70,mbtmp4.7/40,ML4.0/3,MS4.4/53, Ms1 4.4/53,ms1mx4.4/65,Error ellipse: s-maj=15.1km s-min=8.2km az=33.0*
MOS ***19*** *13:40:55.3±0.9,43°.43N×127°.24W,h10km,mb5.3/56, MS4.6/5,Error ellipse: s-maj=5.1km s-min=4.1km az=113.1*
GCMT ***19*** *13:40:57.3±0.2,43°.36N×127°.50W,h18km,MW5.3/123, Moment Tensor Solution. s68,c98; s123,c228; Duration: 1s1 Moment tensor: Scale 10^17^Nm; M_{rr}0.07±.02; $M_{\theta\theta}$-0.73±.02; $M_{\phi\phi}$0.65±.02; $M_{r\theta}$-0.09±.04; $M_{\theta\phi}$-0.75±.02; $M_{\phi r}$-0.13±.03; Best double couple: $M_0$1.03300×10^17^ NP1:ϕ_s21.00000°,δ89.00000°, λ-9.00000°. NP2:ϕ_s111.00000°,δ81.00000°, λ-179.00000°. Principal axes: T 0.9930, Plg5.0000°, Azm67.0000°; N 0.0810, Plg81.0000°, Azm194.0000°; P -1.0730, Plg7.0000°, Azm336.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISCJB ***19*** *13:40:57.8±0.5,43°.43N±0°.01×127°.17W±0°.02,h28km±3km, mb5.0/219,MS4.5/57 Error ellipse: s-maj=3.0km s-min=1.8km az=149.1*
NEIC ***19*** *13:40:57.3±0.1,43°.44N×127°.27W,h10km,mb5.2/197, Error ellipse: s-maj=2.3km s-min=1.4km az=47.0*
NEIC Felt at Albany, Portland, North Bend, Salem and Seal Rock.

ISC 19 13:40:58.0±0.5,43°.46N±0°.04×127°.28W±0°.04,h17km±2km, h17km:pP-P,n1110,σ1°.28/1105,mb5.2/222,MS4.5/59, 8C-13D,Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	2.23	104	*e*Pn	Pn	13 41 31.4	-2.8
KBO	**Bosley Butte**	2.56	118	*e*Pn	Pn	13 41 36.1	-2.7
I03D	**Drain, OR**	2.86	84	P	Pn	13 41 41.1	-1.6
baz=266,SNR=125							
UMPQ	**Umpqua Communi**	2.88	92	*e*Pn	Pn	13 41 41.1	-1.9
DBO	**Dodson Butte**	2.96	95	*e*Pn	Pn	13 41 42.5	-1.7
L02D	**Cave Junction,**	3.00	114	P	Pn	13 41 42.7	-2.0
baz=297,SNR=44							
L02D				S	Sn	13 42 18.6	-1.6
baz=297							
HSO	**Harness Mounta**	3.05	87	*e*Pn	Pn	13 41 43.9	-1.5
HSO	**Harness Mounta**	3.05	87	*e*P	Pn	13 41 43.9	-1.5
COR	**Corvallis**	3.08	67	*e*Pn	Pn	13 41 44.7	-1.1
COR	**Corvallis**	3.08	67	*e*P	Pn	13 41 44.7	-1.1
KTRM	**Thompson Ridge**	3.26	117	*e*Pn	Pn	13 41 46.9	-1.5
HUMO	**Hull Mountain**	3.28	104	*e*Pn	Pn	13 41 46.5	-2.0
G03D	**McMinnville, O**	3.37	57	P	Pn	13 41 49.1	-0.6
baz=240,SNR=509							
G03D				S	Sn	13 42 31.0	+1.7
baz=240							
KMOR	**Kings Mountain**	3.48	50	*e*Pn	Pn	13 41 50.7	-0.6
I04A	**Tendick Farm,**	3.55	83	P	Pn	13 41 51.5	-0.7
baz=266,SNR=26							
I04A				S	Sn	13 42 34.3	+0.5
baz=266							
JCC	**Jacoby Creek,**	3.57	136	*e*Pn	Pn	13 41 52.9	+0.3
IRO	**Indian Ridge**	3.68	80	*e*Pn	Pn	13 41 53.6	-0.6
KHMM	**Horse Mountain**	3.69	133	*e*Pn	Pn	13 41 54.8	+0.6
MEGW	**Megler CREST B**	3.71	40	*e*Pn	Pn	13 41 54.1	-0.3
J04D	**Umpqua Nationa**	3.77	91	P	Pn	13 41 55.5	-0.1
baz=275,SNR=332							
YBH	**Yreka Blue Hor**	3.79	116	Pn	Pn	13 41 55.3	-0.3
23nm,0.3s,baz=288,slow=11,SNR=338							
YBH				Sn	Sn	13 42 39.6	-0.1
7.5nm,0.3s,baz=106,slow=22,SNR=6.0							
YBH	**Yreka Blue Hor**	3.79	116	*e*Pn	Pn	13 41 54.7	-0.8
YBH				Sn	Sn	13 42 39.6	-0.1
YBH	**Yreka Blue Hor**	3.79	116	*e*P	Pn	13 41 54.7	-0.8
YBH						13 42 39.6	
FRIS	**Frissel Point**	3.82	77	*e*Pn	Pn	13 41 56.5	+0.3
G04A	**Mulino**	3.86	61	*e*Pn	Pn	13 41 54.9	-1.6
H04A	**Detroit Lake**	3.87	70	*e*Pn	Pn	13 41 56.4	-0.3
M02C	**Callahan**	3.87	121	P	Pn	13 41 55.4	-1.3
baz=304,SNR=21							
M02C				S	Sn	13 42 41.2	-0.6
baz=304							
PRLK	**Prince Lake**	3.92	77	*e*Pn	Pn	13 41 57.2	-0.2
B040	**Montague**	3.93	113	*e*Pn	Pn	13 41 57.7	+0.1
B023	**Clatskanie**	4.00	47	*e*Pn	Pn	13 41 58.0	-0.4
WIFE	**Three Sisters-**	4.00	79	*e*Pn	Pn	13 41 58.5	-0.1
F04D	**Rainier, OR**	4.01	48	P	Pn	13 41 58.6	0.0
baz=230,SNR=120							
KCSM	**Cold Springs**	4.04	135	*e*Sn	Sn	13 42 44.6	-1.6
E03A	**Lebam**	4.06	39	*e*Pn	Pn	13 41 58.6	-0.6
B019	**Raymond**	4.10	38	*e*Pn	Pn	13 41 59.7	0.0
MOON	**Moon Mountain**	4.11	80	*e*Pn	Pn	13 42 00.1	+0.3
K04D	**Chiloquin, OR**	4.13	100	P	Pn	13 41 59.7	-0.6
baz=283,SNR=42							
BMW	**Boistfort Moun**	4.17	42	*e*Pn	Pn	13 42 00.3	-0.4
BMW	**Boistfort Moun**	4.17	42	*e*P	Pn	13 42 00.4	-0.4
KMRM	**Mail Ridge**	4.19	139	*e*Pn	Pn	13 42 01.7	+0.6
N02D	**Trinity Center**	4.20	125	P	Pn	13 41 59.2	-2.1
baz=308							
LGBM	**Gray Butte**	4.31	118	*e*Pn	Pn	13 42 03.5	+0.5
TDH	**Tom, Dick, Har**	4.34	63	*e*Pn	Pn	13 42 03.7	+0.5
LVP	**Lakeview Peak**	4.34	51	*e*Pn	Pn	13 42 03.6	+0.4
M04C	**Macdoel**	4.35	111	P	Pn	13 42 02.4	-0.9
baz=294,SNR=31							
I05D	**Terrebonne, OR**	4.38	76	P	Pn	13 42 03.4	-0.3
baz=260,SNR=66							
B017	**Montesano**	4.41	35	*e*Pn	Pn	13 42 04.0	+0.1
J05D	**Fort Rock, OR**	4.41	90	P	Pn	13 42 03.3	-0.9
baz=274,SNR=237							
LGMM	**Garner Mountai**	4.43	113	*e*Pn	Pn	13 42 04.9	+0.5
FL2	**Flat Top 2**	4.45	50	*e*Pn	Pn	13 42 05.1	+0.4
ERK	**Elk Rock**	4.52	49	*e*Pn	Pn	13 42 06.0	+0.3
WDC	**Whiskeytown Da**	4.55	128	*e*Pn	Pn	13 42 07.2	+1.2
WDC	**Whiskeytown Da**	4.55	128	*e*P	Pn	13 42 07.2	+1.2
B201	**Coldwater, Mou**	4.56	50	*e*Pn	Pn	13 42 06.5	+0.4
ESD	**East Dome**	4.56	51	*e*Pn	Pn	13 42 07.2	+0.9
B202	**Windy Ridge, M**	4.60	51	*e*Pn	Pn	13 42 07.2	+0.5
NLWA	**Neilton Lookou**	4.61	30	*e*Pn	Pn	13 42 06.6	-0.3
PINE	**Pine Mountain**	4.61	84	*e*Pn	Pn	13 42 06.4	-0.6
TDL	**Tradedollar La**	4.62	49	*e*Pn	Pn	13 42 07.5	+0.5
G05D	**Wamic, OR**	4.63	65	P	Pn	13 42 07.4	+0.3
baz=249,SNR=104							
GMO	**Grizzlie Mount**	4.67	76	*e*Pn	Pn	13 42 07.4	-0.4
KCPM	**Cahto Peak**	4.67	142	*e*Pn	Pn	13 42 08.4	+0.6
K05A	**Summer Lake**	4.73	97	*e*Pn	Pn	13 42 08.0	-0.6
SMW	**South Mountain**	4.75	34	*e*Pn	Pn	13 42 08.6	-0.3
B941	**Kapowsin**	5.02	44	*e*Pn	Pn	13 42 12.9	+0.5
GLK	**Glacier Lake**	5.08	50	*e*Pn	Pn	13 42 14.4	+1.1
LON	**Longmire**	5.08	48	*e*Pn	Pn	13 42 13.9	+0.6
LON	**Longmire**	5.08	48	*e*P

DPW	Davenport	7.74	52	ePn	Pn	13 42 50.3	+0.5
DPW	Davenport	7.74	52	eP	Pn	13 42 50.3	+0.5
PNT	Penticton	7.90	39	ePn	Pn	13 42 52.4	+0.5
PNT	Penticton	7.90	39	eP	Pn	13 42 52.4	+0.5
SAO	San Andreas Ge	8.04	144	ePn	Pn	13 42 54.0	+0.2
SAO	San Andreas Ge	8.04	144	eP	Pn	13 42 54.1	+0.2
LLLB	Lillooet	8.05	25	ePn	Pn	13 42 55.4	+1.4
BMN	Battle Mountai	8.08	109	ePn	Pn	13 42 55.4	+0.8
BMN	Battle Mountai	8.08	109	eP	Pn	13 42 55.4	+0.8
RYN	Ryan	8.18	123	ePn	Pn	13 42 56.4	+0.4
KVN	Kaiserville	8.19	119	ePn	Pn	13 42 56.8	+0.6
KVN	Kaiserville	8.19	119	eP	Pn	13 42 56.8	+0.6
MFID	Camas Ranch	8.33	86	ePn	Pn	13 42 56.9	-1.1
NV01	Mina Array Sit	8.44	123	ePn	Pn	13 43 00.7	+1.1
NVAR	Mina Array Bea	8.44	123	Pn	Pn	13 43 01.5	+1.8
	baz=299,slow=14,SNR=38						
NVAR				LR	LR	13 45 42.0	
	comp=Z,798nm,21.4s,baz=54,slow=34						
MDPB	Devils Postpil	8.53	130	ePn	Pn	13 43 01.9	+1.1
NV11	Mina Array Sit	8.53	123	ePn	Pn	13 43 01.7	+0.9
NEW	Newport	8.56	52	Pn	Pn	13 43 01.1	+0.1
	21nm,0.3s,baz=246,slow=12,SNR=84						
NEW				LR	LR	13 46 21.6	
	comp=Z,7µm,20.6s,baz=241,slow=38						
NEW	Newport	8.56	52	P	Pn	13 43 01.1	+0.1
	baz=239						
NEW	Newport	8.56	52	ePn	Pn	13 43 01.0	-0.1
NEW	Newport	8.56	52	eP	Pn	13 43 01.0	-0.1
OMMB	Old Mammoth Mi	8.59	130	ePn	Pn	13 43 01.1	-0.6
MLAC	Mammoth, Mammo	8.66	129	P	Pn	13 43 03.8	+1.1
	baz=315						
BBB	Bella Bella	8.75	357	Pn	Pn	13 43 06.7	+3.1
	4.7nm,0.3s,baz=213,slow=9.5,SNR=38						
BBB				Sn	Sn	13 44 40.4	-1.3
	1.0nm,0.3s,baz=286,slow=16,SNR=6.1						
BBB				LR	LR	13 45 50.5	
	comp=Z,4µm,19.4s,baz=182,slow=34						
BBB	Bella Bella	8.75	357	ePn	Pn	13 43 04.1	+0.5
BBB				Sn	Sn	13 44 40.4	-1.3
PMPB	Monarch Peak	8.78	143	ePn	Pn	13 43 03.1	-1.0
ELK	Elko	9.35	103	Pn	Pn	13 43 17.1	+5.0
	1.3nm,0.3s,baz=338,slow=13,SNR=56						
HLID	Hailey	9.35	85	P	Pn	13 43 12.1	+0.1
	baz=274						
HLID	Hailey	9.35	85	ePn	Pn	13 43 11.9	-0.1
TIN	Tinemaha, Big	9.41	130	P	Pn	13 43 13.2	+0.4
	baz=316						
PAGB	Antelope Grade	9.43	143	ePn	Pn	13 43 12.3	-0.6
VES	Vestal, Richgr	9.88	138	P	Pn	13 43 20.3	+1.2
	baz=323						
SMMC	Simmler	9.89	143	P	Pn	13 43 21.3	+2.0
	baz=328						
CWC	Cottonwood Cre	9.94	132	P	Pn	13 43 23.2	+3.1
	baz=318						
GRAC	Grapevine Rang	9.95	127	P	Pn	13 43 21.6	+1.6
	baz=314						
MSO	Missoula	10.01	66	P	Pn	13 43 20.7	-0.2
	baz=255						
MSO	Missoula	10.01	66	ePn	Pn	13 43 20.3	-0.7
JTMT	Jette	10.06	60	ePn	Pn	13 43 21.4	-0.4
R11A	Troy Canyon, C	10.21	116	P	Pn	13 43 25.1	+1.3
	baz=304						
R11A	Troy Canyon, C	10.21	116	ePn	Pn	13 43 24.7	+0.9
ISA	Isabella, Lake	10.32	136	P	Pn	13 43 27.5	+2.2
	baz=322						
ISA	Isabella, Lake	10.32	136	ePn	Pn	13 43 25.6	+0.3
ISA	Isabella, Lake	10.32	136	eP	Pn	13 43 25.6	+0.3
PKM	Mcpherson Peak	10.33	143	P	Pn	13 43 25.5	+0.1
	baz=328						
DIB	Dawson Inlet,	10.35	342	ePn	Pn	13 43 27.6	+2.2
MCMT	McKenzie Canyo	10.46	77	ePn	Pn	13 43 27.9	+0.6
MPMC	Manual Prospec	10.54	131	P	Pn	13 43 29.7	+1.2
	baz=318						
ARVC	Arvin	10.58	139	P	Pn	13 43 29.5	+0.8
	baz=324						
FURC	Furnace Creek,	10.60	128	P	Pn	13 43 28.2	-0.8
	baz=314						
TPNV	Topopah Spring	10.64	124	P	Pn	13 43 29.0	-0.7
	baz=311						
DLMT	Dillon	10.68	75	ePn	Pn	13 43 30.2	0.0
SBC	Santa Barbara	10.75	144	P	Pn	13 43 30.9	-0.2
	baz=329						
WALA	Waterton Lakes	10.81	54	ePn	Pn	13 43 32.5	+0.6
HVU	Hansel Valley	10.82	94	ePn	Pn	13 43 32.8	+0.7
HVU	Hansel Valley	10.82	94	eP	Pn	13 43 32.8	+0.7
LRM	Limekiln Ridge	10.83	72	ePn	Pn	13 43 32.1	-0.2
BGU	Big Grassy Mou	10.87	99	ePn	Pn	13 43 33.6	+0.8
LRMC	Laurel Mtn Rad	10.88	134	P	Pn	13 43 32.1	-0.8
	baz=320						
OSI	Osito Audit: C	11.05	140	P	Pn	13 43 34.8	-0.4
	baz=326						
OSI	Osito Audit: C	11.05	140	ePn	Pn	13 43 36.2	+1.0
SPUT	South Promonto	11.18	96	ePn	Pn	13 43 38.5	+1.4
EDW2	Edwards Air Fo	11.18	137	P	Pn	13 43 37.3	+0.2
	baz=323						
PSUT	Pine Spring	11.27	111	ePn	Pn	13 43 39.6	+1.3
DUG	Dugway, Tooele	11.27	102	P	Pn	13 43 37.3	-1.1
	baz=292						
DUG	Dugway, Tooele	11.27	102	ePn	Pn	13 43 38.8	+0.5
DUG	Dugway, Tooele	11.27	102	eP	Pn	13 43 38.8	+0.5
BLG	Laguna Peak, P	11.31	143	P	Pn	13 43 38.4	-0.4
	baz=328						
SHOC	Shoshone, Teco	11.34	128	P	Pn	13 43 39.5	+0.4
	baz=315						
BOZ	Bozeman (W)	11.38	74	P	Pn	13 43 40.0	+0.3
	baz=264						
BOZ	Bozeman (W)	11.38	74	ePn	Pn	13 43 39.1	-0.5
BOZ	Bozeman (W)	11.38	74	eP	Pn	13 43 39.2	-0.5
HRY	Holter Researc	11.39	68	ePn	Pn	13 43 39.3	-0.7
QLMT	Earthquake Lak	11.47	78	ePn	Pn	13 43 41.6	+0.6
GSC	Goldstone, Bar	11.48	132	P	Pn	13 43 42.2	+1.1
	baz=318						
GSC	Goldstone, Bar	11.48	132	ePn	Pn	13 43 45.3	+4.2
DECC	Green Verdugo	11.53	140	P	Pn	13 43 41.8	+0.1
	baz=326						
SHPR	Sheep Range	11.59	123	ePn	Pn	13 43 43.4	+0.6
YHB	Horse Butte	11.64	78	ePn	Pn	13 43 44.0	+0.6
PASC	Pasadena Art C	11.66	140	ePn	Pn	13 43 44.0	+0.4
MWC	Mount Wilson	11.68	139	ePn	Pn	13 43 45.1	+1.2
MWC				eSn	Sn	13 45 57.5	+3.5
MWC	Mount Wilson	11.68	139	eP	Pn	13 43 45.1	+1.2
MWC				e		13 45 57.5	
RRX	Edison Barstow	11.70	134	P	Pn	13 43 44.5	+0.4
	baz=320						
HWUT	Hardware Ranch	11.74	94	ePn	Pn	13 43 44.8	0.0
FXWY	Fox Creek	11.80	84	ePn	Pn	13 43 46.7	+1.1
YMR	Madison River	11.80	78	ePn	Pn	13 43 46.5	+0.9
IMW	Indian Meadow	11.84	82	ePn	Pn	13 43 47.3	+1.1
AHID	Auburn Hatcher	11.85	88	ePn	Pn	13 43 47.5	+1.3
BFSC	Mount Baldy Ra	11.86	138	P	Pn	13 43 47.1	+0.7
	baz=324						
CTU	Camp Tracy	11.87	98	ePn	Pn	13 43 47.3	+0.9
TPAW	Teton Pass	11.87	84	ePn	Pn	13 43 47.9	+1.3
TUQ	Turquoise Moun	11.87	129	P	Pn	13 43 47.7	+1.1
	baz=316						
YFT	Old Faithful	11.89	80	ePn	Pn	13 43 49.0	+2.1
YPP	Pitchstone Pla	11.92	80	ePn	Pn	13 43 48.6	+1.3
REDW	Red Top Meadow	11.95	85	ePn	Pn	13 43 49.0	+1.3
TCUT	Toone Canyon	11.98	96	ePn	Pn	13 43 48.9	+0.8
FMP	Fort Macarthur	11.99	141	P	Pn	13 43 49.3	+1.3
	baz=327						
MOOW	Moose Ponds	11.99	83	ePn	Pn	13 43 49.4	+1.1
YNR	Norris Junctio	12.01	78	ePn	Pn	13 43 49.9	+1.4
SNOW	Snow King Moun	12.01	84	ePn	Pn	13 43 49.9	+1.4
H17A	Grant Village	12.08	80	P	Pn	13 43 50.9	+1.4
	baz=271						
H17A	Grant Village	12.08	80	ePn	Pn	13 43 50.9	+1.4
HEC	Hector,Ludlow	12.09	132	P	Pn	13 43 50.6	+1.2
	baz=319						
LOHW	Long Hollow	12.11	84	ePn	Pn	13 43 51.5	+1.7
JLU	Jordanelle	12.11	98	ePn	Pn	13 43 48.8	-1.1
CCUT	Cedar City	12.12	114	ePn	Pn	13 43 51.6	+1.6
MPU	Maple Canyon	12.18	101	ePn	Pn	13 43 50.3	-0.5
CIS	Catalina Islan	12.20	142	P	Pn	13 43 49.2	-1.7
	baz=328						
SZCU	Shurtz Canyon	12.27	114	ePn	Pn	13 43 52.3	+0.2
MSU	Marysvale	12.43	108	ePn	Pn	13 43 54.6	+0.4
MSU	Marysvale	12.43	108	eP	Pn	13 43 54.6	+0.4
GMRC	Granite Mounta	12.49	130	P	Pn	13 43 55.1	+0.1
	baz=317						
LCMT	Little Creek M	12.50	116	ePn	Pn	13 43 56.8	+1.8
SCI2	San Clemente I	12.50	144	P	Pn	13 43 55.3	+0.3
	baz=329						
LDFC	Landfair	12.59	128	ePn	Pn	13 43 56.8	+0.4
MURC	Murrieta	12.60	138	P	Pn	13 43 56.1	-0.4
	baz=324						
CRAG	Craig	12.61	345	ePn	Pn	13 43 57.7	+1.4
MTPU	Mount Pierson	12.65	110	ePn	Pn	13 43 59.4	+2.0
TMUT	Trail Mountain	12.76	104	ePn	Pn	13 43 58.8	0.0
GCMT	Greycliff	12.76	73	ePn	Pn	13 43 59.5	+0.8
KNB	Kanab	12.77	115	ePn	Pn	13 43 59.4	+0.5
KNB	Kanab	12.77	115	eP	Pn	13 43 59.4	+0.5
PKCU	Pink Cliffs	12.88	113	ePn	Pn	13 44 00.5	+0.1
BELC	Belle Mtn. Jos	12.90	133	P	Pn	13 44 02.4	+1.8
	baz=320						
PFO	Pinyon Flats O	12.96	136	P	Pn	13 44 00.7	-0.7
	baz=323						
PFO	Pinyon Flats O	12.96	136	ePn	Pn	13 44 00.3	-1.1
PFO	Pinyon Flats O	12.96	136	eP	Pn	13 44 00.3	-1.1
XPFO	Piæon Flat	12.96	136	ePn	Pn	13 44 00.2	-1.2
BW06	Boulder Array	12.97	87	P	Pn	13 44 00.7	-0.9
	baz=279						
BW06	Boulder Array	12.97	87	ePn	Pn	13 44 01.8	+0.2
PD31	Pinedale Array	12.97	87	ePn	Pn	13 44 02.0	+0.4
PDAR	Pinedale Array	12.97	87	Pn	Pn	13 44 03.1	+1.5
	0.3nm,0.3s,baz=268,slow=12,SNR=81						
PDAR				LR	LR	13 49 24.7	
	comp=Z,4µm,21.1s,baz=282,slow=39						
PDAR	Pinedale Array	12.97	87	ePn	Pn	13 44 02.0	+0.4
RLMT	Red Lodge	13.01	76	P	Pn	13 44 02.8	+0.7
	baz=269						
RLMT	Red Lodge	13.01	76	ePn	Pn	13 44 02.6	+0.5
P17A	Butcher Ranch,	13.02	102	ePn	Pn	13 44 02.1	-0.2
EGMT	Eagleton	13.06	63	P	Pn	13 44 02.1	-0.5
	baz=256						
EGMT	Eagleton	13.06	63	ePn	Pn	13 44 01.6	-1.0
NEE2	Needles Airpor	13.10	127	P	Pn	13 44 03.8	+0.7
	baz=315						
CTCC	Cactus City	13.17	134	ePn	Pn	13 44 07.2	+3.1
109C	Camp Elliot, M	13.23	140	P	Pn	13 44 04.6	-0.3
	baz=326						
IRM	Iron Mountain	13.24	130	P	Pn	13 44 04.7	-0.4
	baz=318						
W13A	Hualapai Mount	13.30	124	ePn	Pn	13 44 07.6	+1.5
P18A	Preston Nutter	13.32	101	ePn	Pn	13 44 06.5	+0.1
SRU	San Rafael Swe	13.32	103	ePn	Pn	13 44 06.3	-0.1
SRU	San Rafael Swe	13.32	103	eP	Pn	13 44 06.3	-0.1
WRAK	Wrangell Islan	13.38	348	ePn	Pn	13 44 07.2	+0.4
BC3	Big Chuckawall	13.45	133	P	Pn	13 44 07.9	-0.2
	baz=320						
U15A	North Rim	13.46	116	ePn	Pn	13 44 10.4	+2.1
MONP2	Monument Peak	13.55	137	P	Pn	13 44 09.7	+0.1
	baz=324						
BAR	Barrett	13.61	139	ePn	P	13 44 14.8	-4.1
PDMCI	Parker Dam,Lak	13.70	127	P	Pn	13 44 11.4	0.0
	baz=316						
SWSC	Sam W. Stewart	13.82	136	P	Pn	13 44 12.9	-0.1
	baz=323						
SWSC	Sam W. Stewart	13.82	136	ePn	Pn	13 44 12.1	-0.9
Y12C	Blythe	13.89	130	P	Pn	13 44 13.8	-0.2
	baz=318						
Y12C	Blythe	13.89	130	ePn	Pn	13 44 14.8	+0.9
IKP	In-Ko-Pah, Jac	13.90	137	P	Pn	13 44 15.2	+0.9
	baz=324						
GLA	Glamis	14.25	133	P	Pn	13 44 17.7	-1.2
	baz=320						
GLA	Glamis	14.25	133	ePn	Pn	13 44 18.7	-0.2
GLA	Glamis	14.25	133	eP	Pn	13 44 18.7	-0.2
PV09	Paradox Valley	14.57	104	ePn	Pn	13 44 23.1	-0.4
O20A	White River Ci	14.58	97	P	Pn	13 44 22.2	-1.3
	baz=289						
O20A	White River Ci	14.58	97	ePn	Pn	13 44 22.9	-0.7
WUAZ	Wupatki	14.60	118	P	Pn	13 44 23.1	-0.8
	baz=308						
WUAZ	Wupatki	14.60	118	ePn	Pn	13 44 24.9	+1.0
Y14A	Wickenburg	14.63	126	ePn	Pn	13 44 25.6	+1.5
PV04	Paradox Valley	14.77	104	ePn	Pn	13 44 25.5	-0.7
PV05	Paradox Valley	14.78	105	ePn	Pn	13 44 26.9	+0.6
PV03	Paradox Valley	14.87	104	ePn	Pn	13 44 27.5	-0.1
RWWY	Rawlins	14.89	90	ePn	Pn	13 44 25.9	-2.0
PV07	Paradox Valley	14.94	103	ePn	Pn	13 44 27.9	-0.5
PV02	Paradox Valley	14.97	104	ePn	Pn	13 44 29.1	+0.2
113A	Mohawk Valley,	15.04	131	ePn	Pn	13 44 29.8	+0.2
	124nm,1.7s						
PV15	Paradox Valley	15.10	103	ePn	Pn	13 44 30.2	-0.4
	31nm,1.2s						
DLBC	Dease Lake	15.10	354	Pn	P	13 44 33.6	-1.9
	0.2nm,0.3s,baz=185,slow=11,SNR=22						
DLBC				LR	LR	13 49 41.5	
	comp=Z,3µm,18.5s,baz=170,slow=35						
DLBC	Dease Lake	15.10	354	ePn	P	13 44 33.8	-1.7
	113nm,1.0s						
PV01	Paradox Valley	15.12	104	ePn	Pn	13 44 30.2	-0.8
	23nm,1.2s						
K22A	Casper	15.19	86	P	Pn	13 44 30.0	-1.8
	baz=280						
K22A	Casper	15.19	86	ePn	Pn	13 44 29.8	-2.0
	38nm,1.3s						
LAO	LASA Array	15.21	70	P	Pn	13 44 30.7	-1.2
	baz=265						
LAO	LASA Array	15.21	70	ePn	Pn	13 44 30.7	-1.2
	420nm,1.8s						
X16A	Lo Mia Camp, P	15.25	121	ePn	P	13 44 35.1	-2.4
	44nm,1.1s						
JIS	Juneau Island	15.49	346	ePn	P	13 44 38.0	-1.7
	181nm,1.2s						
MVCO	Mesa Verde	15.61	107	P	Pn	13 44 34.9	-2.4
	baz=299						
MVCO	Mesa Verde	15.61	107	ePn	Pn	13 44 38.4	+1.1
	111nm,1.8s						
SMCO	Snowmass	15.83	99	ePn	Pn	13 44 40.2	-0.2
	52nm,1.5s						
BESE	Bessie Mountai	15.86	345	ePn	P	13 44 42.3	-1.6
	236nm,1.3s						
W18A	Petrified Fore	15.91	116	P	Pn	13 44 39.6	-1.6
	baz=307						
W18A	Petrified Fore	15.91	116	ePn	Pn	13 44 41.2	+0.1
	238nm,1.9s						
N23A	Red Feather La	16.02	92	P	Pn	13 44 40.9	-1.7
	baz=286						
N23A	Red Feather La	16.02	92	ePn	Pn	13 44 41.4	-1.2
	36nm,0.9s						
X18A	Snowflake	16.13	118	ePn	Pn	13 44 44.9	+0.9
	170nm,1.5s						
214A	Organ Pipe Nat	16.18	130	P	Pn	13 44 44.1	-0.4
	baz=319						
PHWY	Pilot Hill	16.26	90	ePn	Pn	13 44 44.2	-1.6
	142nm,2.0s						
S22A	4UR Ranch, Cre	16.53	103	P	Pn	13 44 48.2	-1.0
	baz=297						
S22A	4UR Ranch, Cre	16.53	103	ePn	Pn	13 44 48.7	-0.5
	19nm,0.8s						
ISCO	Idaho Springs	16.59	95	P	Pn	13 44 48.8	-1.2
	baz=290						
ISCO	Idaho Springs	16.59	95	ePn	Pn	13 44 48.7	-1.3
	35nm,0.9s						
ISCO	Idaho Springs	16.59	95	eP	Pn	13 44 48.7	-1.3
ISCO				pmax	pmax		
	comp=Z,35nm,0.9s						
SKAG	Skagway	16.77	346	ePn	P	13 44 54.0	0.0
	comp=Z,216nm,1.5s						
DGMT	Dagmar	16.79	65	P	Pn	13 44 50.8	-1.3
	baz=261						
DGMT	Dagmar	16.79	65	ePn	Pn	13 44 51.8	-0.4
	comp=Z,154nm,1.1s						
RSSD	Black Hills	16.79	80	P	Pn	13 44 50.4	-1.9
	baz=276						
RSSD	Black Hills	16.79	80	ePn	Pn	13 44 52.2	-0.1
	comp=Z,205nm,1.9s						
RSSD	Black Hills	16.79	80	eP	Pn	13 44 52.2	-0.1
RSSD				pmax	pmax		
	comp=Z,205nm,1.9s						
TUC	Tucson	17.09	125	P	Pn	13 44 55.7	-0.4
	baz=315						
TUC	Tucson	17.09	125	ePn	P	13 44 58.9	+1.1
	comp=Z,206nm,1.9s						
TUC	Tucson	17.09	125	eP	P	13 44 58.9	+1.1
TUC				pmax	pmax		
	comp=Z,206nm,1.9s						
Q24A	Divide	17.23	98	P	Pn	13 44 56.9	-1.1
	baz=292						
Q24A	Divide	17.23	98	ePn	Pn	13 44 57.3	-0.7
	comp=Z,60nm,0.9s						
SDCO	Great Sand Dun	17.47	102	P	Pn	13 45 00.2	-0.8
	baz=296						
SDCO	Great Sand Dun	17.47	102	ePn	Pn	13 45 01.4	+0.4
	comp=Z,126nm,1.6s						
LAZ	Ladron	18.05	113	ePn	P	13 45 10.1	+1.6
TASM	ASL Pad, Albuq	18.20	111	P	Pn	13 45 08.5	-1.5
	baz=304						
ANMO	Albuquerque	18.20	111	P	P	13 45 11.3	+1.1
	comp=Z,0.4nm,0.3s,baz=308,slow=12,SNR=30						
ANMO				LR	LR	13 51 54.0	
	comp=Z,1µm,20.6s,baz=299,slow=36						
ANMO	Albuquerque	18.20	111	P	Pn	13 45 08.5	-1.4
	baz=304						
ANMO	Albuquerque	18.20	111	ePn	P	13 45 10.7	+0.6
	comp=Z,24nm,1.0s						
ANMO	Albuquerque	18.20	111	c iP	P	13 45 11.2	+1.1
ANMO				pmax	pmax		
	comp=Z,33nm,1.7s						
TASL	Snake Pit, Alb	18.20	111	P	Pn	13 45 08.3	-1.6
	baz=304						
LENM	Lemitar	18.30	114	eP	P	13 45 11.4	+0.2
Y22D	IRIS PASSCAL I	18.39	114	P	P	13 45 11.7	-0.5
	baz=307						
Y22E	IRIS PASSCAL I	18.39	114	P	P	13 45 11.0	-1.1
	baz=307						
LPM	Los Pinos Moun	18.45	113	eP	Pn	13 45 14.6	+1.7
T25A	Trinidad	18.52	102	P	P	13 45 12.8	-0.8
	baz=297						
T25A	Trinidad	18.52	102	eP	Pn	13 45 14.0	+0.2
	comp=Z,119nm,1.6s						
BNM	Barren Site	18.54	113	eP	Pn	13 45 14.8	+0.6
319A	Douglas	18.65	124	eP	Pn	13 45 17.5	+2.1
	comp=Z,150nm,1.5s						
121A	Cookes Peak, D	18.79	119	P	P	13 45 15.3	-1.3
	baz=311						
OGNE	Ogallala	18.85	89	P	P	13 45 15.5	-1.6
	baz=286						
OGNE	Ogallala	18.85	89	eP	P	13 45 16.8	-0.3
	comp=Z,40nm,0.8s						
KSCO	Kaye Shedlock'	19.04	95	P	P	13 45 18.1	-1.1
	baz=291						
KSCO	Kaye Shedlock'	19.04	95	eP	P	13 45 19.4	+0.1
	comp=Z,71nm,0.8s						
HSIG		19.47	132	eP	P	13 45 22.9	-0.9
	comp=Z,52nm,1.6s						
TGL	Tana Glacier	19.69	337	eP	Pn	13 45 27.3	-0.3
	comp=Z,161nm,1.3s						
CRQM	Cirque	19.78	337	eP	P	13 45 28.1	+0.9
	comp=Z,276nm,1.4s						
MDND	Maddock	19.79	68	P	Pn	13 45 28.2	-0.6
	baz=267						
MDND	Maddock	19.79	68	eP	Pn	13 45 28.9	+0.1
	comp=Z,148nm,1.0s						
BALM	Baldy	19.79	338	eP	Pn	13 45 28.8	0.0
	comp=Z,135nm,1.2s						
BALM	Baldy	19.79	338	eP	Pn	13 45 28.8	0.0
BALM				pmax	pmax		
	comp=Z,135nm,1.2s						
FFC	Flin Flon	19.92	47	eP	Pn	13 45 29.5	-0.8
	comp=Z,68nm,0.7s						
FFC	Flin Flon	19.92	47	eP	Pn	13 45 29.5	-0.8
FFC				pmax	pmax		
	comp=Z,67nm,0.7s						
RAGM	Ragged Mountai	19.95	334	eP	Pn	13 45 30.8	+0.1
	comp=Z,299nm,1.7s						
SUSD	Miller	20.38	77	P	P	13 45 33.6	-0.1
	baz=277						
BMRM	Bremner River	20.38	335	eP	Pn	13 45 35.3	-0.4
	comp=Z,100nm,1.2s						
YKA	Yellowknife Ar	20.47	17	P	P	13 45 35.5	+1.1
	comp=Z,14nm,0.8s,baz=206,slow=11,SNR=45						
YKA				S	S	13 49 22.9	+0.2
	comp=Z,0.5nm,0.8s,baz=201,slow=18,SNR=2.9						
YKA				PcP	PcP	13 49 47.4	+1.8
	comp=Z,1.0nm,0.8s,baz=201,slow=1.4,SNR=3.0						
YKW3	Yellowknife Ar	20.52	17	eP	P	13 45 35.7	+0.7
	comp=Z,29nm,0.8s						
G31A	Conde	20.82	75	P	P	13 45 36.4	-2.0
	baz=276						
DIV	Divide	20.87	334	eP	P	13 45 40.0	+1.1
	comp=Z,136nm,1.0s						
MNTX	Cornudas Mount	20.88	117	P	P	13 45 39.5	+0.3
	baz=310						
MNTX	Cornudas Mount	20.88	117	eP	Pn	13 45 41.4	-0.3
	comp=Z,67nm,1.7s						
E31A	Nome	20.95	71	P	P	13 45 40.4	+0.5
	baz=272						
C31A	Landman Farms,	21.05	68	P	P	13 45 41.6	+0.8
	baz=269						
D31A	Mcclaflin, Tow	21.05	70	P	P	13 45 42.1	+1.2
	baz=271						
B31A	Greenbush Farm	21.12	66	P	P	13 45 42.6	+1.0
	baz=268						
KLU	Klutina	21.20	335	eP	P	13 45 43.4	+1.0
	comp=Z,94nm,1.0s						
CBKS	Cedar Bluff	21.21	93	P	P	13 45 43.1	+0.4
	baz=292						
CBKS	Cedar Bluff	21.21	93	eP	P	13 45 43.1	+0.4
	comp=Z,282nm,1.8s						
CBKS	Cedar Bluff	21.21	93	eP	P	13 45 43.1	+0.4
CBKS				pmax	pmax		
	comp=Z,282nm,1.8s						
GDL2	Guadalupe Moun	21.23	114	eP	P	13 45 45.9	+2.8
MSTX	Muleshoe	21.27	108	P	P	13 45 43.6	+0.1
	baz=304						
MSTX	Muleshoe	21.27	108	eP	P	13 45 44.3	+0.7
	comp=Z,109nm,1.8s						
G32A	Webster	21.32	75	P	P	13 45 43.9	+0.1
	baz=276						
KDAK	Kodiak Island	21.35	321	P	P	13 45 45.6	+1.6
	comp=Z,146nm,1.0s,baz=128,slow=5.9,SNR=46						
KDAK				LR	LR	13 51 53.8	
	comp=Z,3µm,21.7s,baz=125,slow=31						
KDAK	Kodiak

comp=Z,144nm,1.0s
ULM Lac du Bonnet 22.41 61 P P 13 45 55.7 +0.3
comp=Z,18nm,0.7s,baz=271,slow=11,SNR=40
ULM LR LR 13 54 55.4
comp=Z,3µm,21.0s,baz=262,slow=37
ULM Lac du Bonnet 22.41 61 eP P 13 45 55.3 -0.1
comp=Z,188nm,1.6s
ULM Lac du Bonnet 22.41 61 eP P 13 45 55.3 -0.1
ULM pmax pmax
comp=Z,188nm,1.6s
DOT Dot Lake 22.41 340 eP P 13 45 56.3 +0.8
comp=Z,84nm,0.9s
G34A Benson 22.62 74 P P 13 45 58.4 +0.7
baz=277
A33A Warroad 22.64 65 P P 13 45 57.5 -0.4
baz=268
SCRK Sand Creek 22.67 341 eP P 13 45 59.3 +1.0
comp=Z,52nm,1.2s
RIDG Independ'e Rid 22.68 340 eP P 13 45 59.6 +1.3
comp=Z,116nm,1.1s
EGAK Eagle 22.76 345 eP P 13 46 00.1 +1.1
comp=Z,48nm,1.2s
D34A Park Rapids 22.78 70 P P 13 45 59.6 +0.1
baz=273
D34A Park Rapids 22.78 70 eP P 13 45 59.9 +0.4
comp=Z,114nm,0.8s
SUA Susitna One 22.79 330 eP P 13 46 00.6 +1.1
comp=Z,201nm,1.2s
F34A Alexandria 22.83 73 P P 13 46 00.8 +0.8
baz=276
E34A Wadena 22.83 71 P P 13 46 00.2 +0.3
baz=274
DHY Denali Highway 22.85 336 eP P 13 46 01.6 +1.5
comp=Z,233nm,1.1s
RSO Redoubt South 22.92 327 eP P 13 46 01.3 +0.4
C34A RKJ Ranch, Bem 22.95 68 P P 13 46 00.8 -0.4
baz=272
B34A Aery, Baudette 23.12 66 P P 13 46 02.4 -0.5
baz=270
H35A Sunnyside Ranc 23.26 76 P P 13 46 04.7 +0.3
baz=278
F35A Swanville 23.30 73 P P 13 46 05.4 +0.7
baz=276
E35A Pequot Lakes 23.35 71 P P 13 46 05.6 +0.3
baz=274
KSU1 Kansas State U 23.38 90 P P 13 46 05.6 -0.1
baz=291
KSU1 Kansas State U 23.38 90 eP P 13 46 05.5 -0.2
comp=Z,303nm,1.7s
SKT Skwentna 23.41 331 eP P 13 46 06.6 +0.8
comp=Z,233nm,1.7s
G35A Watkins 23.43 74 P P 13 46 06.3 +0.2
baz=277
G35A Watkins 23.43 74 eP P 13 46 06.8 +0.7
comp=Z,46nm,0.8s
RND Reindeer 23.54 336 eP P 13 46 08.5 +1.5
comp=Z,66nm,1.1s
RND Reindeer 23.54 336 eP P 13 46 08.5 +1.5
RND pmax pmax
comp=Z,66nm,1.1s
TX31 Lajitas Ar. Si 23.55 119 eP P 13 46 08.1 +0.6
TXAR Lajitas Array 23.55 119 P P 13 46 09.3 +1.8
comp=Z,3.8nm,0.5s,baz=298,slow=8.8,SNR=60
TXAR PcP PcP 13 49 52.7 +0.2
comp=Z,0.4nm,0.6s,baz=222,slow=1.1,SNR=6.6
TXAR LR LR 13 56 01.1
comp=Z,1µm,19.2s,baz=0.0,slow=38
D35A Remer 23.56 70 P P 13 46 07.5 +0.2
baz=273
C35A Jirik Farms, M 23.58 68 P P 13 46 07.7 +0.2
baz=272
CHGN Chignik 23.59 314 eP P 13 46 08.5 +1.0
comp=Z,121nm,0.9s
WMOK Wichita Mounta 23.68 102 P P 13 46 07.8 -0.8
baz=300
WMOK Wichita Mounta 23.68 102 eP P 13 46 09.5 +0.9
comp=Z,54nm,1.0s
WMOK Wichita Mounta 23.68 102 eP P 13 46 09.5 +0.9
WMOK pmax pmax
comp=Z,54nm,1.0s
B35A Bob, Littlefor 23.73 66 P P 13 46 08.9 -0.1
baz=271
B35A Bob, Littlefor 23.73 66 eP P 13 46 08.5 -0.5
comp=Z,77nm,1.6s
HDA Harding Lake 23.77 339 eP P 13 46 08.9 -0.4
comp=Z,58nm,1.1s
MCK McKinley 23.81 336 eP P 13 46 10.0 +0.4
comp=Z,75nm,1.0s
MCK McKinley 23.81 336 eP P 13 46 10.0 +0.4
MCK pmax pmax
comp=Z,75nm,1.0s
LPIG La Paz 23.82 139 LR LR 13 54 43.7
comp=Z,2µm,20.0s,baz=332,slow=35
J36A Seneca 1, Swea 23.85 79 P P 13 46 09.9 -0.3
baz=282
J36A Seneca 1, Swea 23.85 79 eP P 13 46 10.6 +0.4
comp=Z,274nm,1.8s
L36A Harm Buss Farm 23.89 82 P P 13 46 10.1 -0.5
baz=284
H36A Jessenland, He 23.92 76 P P 13 46 10.6 -0.2
baz=279
K36A Gilmore City 23.92 81 P P 13 46 10.8 0.0
baz=283
G36A St. Michael 23.95 74 P P 13 46 11.5 +0.5
baz=278
I36A Fitzsimmons Fa 23.95 77 P P 13 46 11.1 -0.1
baz=280
M36A Felix, Anita 23.96 84 P P 13 46 11.2 -0.1
baz=286
TRF Thorofare Moun 24.01 334 eP P 13 46 12.5 +0.8
comp=Z,407nm,1.9s
F36A Milaca 24.03 72 P P 13 46 11.5 -0.3
baz=276
F36A Milaca 24.03 72 eP P 13 46 12.7 +0.9
comp=Z,73nm,0.9s
N36A Muff Farm, Cla 24.03 85 P P 13 46 11.9 0.0
baz=287
HPIG 24.05 126 eP P 13 46 13.4 +1.1
comp=Z,69nm,1.6s
IL1 Eielson Array 24.05 339 eP P 13 46 11.8 0.0
ILAR Eielson Array 24.05 339 P P 13 46 12.9 +1.1
comp=Z,41nm,0.8s,baz=152,slow=8.7,SNR=403
ILAR PcP PcP 13 49 53.2 +0.3
comp=Z,0.7nm,0.8s,baz=171,slow=2.1,SNR=4.2
ILAR LR LR 13 54 02.2
comp=Z,2µm,21.9s,baz=156,slow=33
ILB Eielson Array 24.05 339 eP P 13 46 12.2 +0.4
WRH Wood River Hil 24.13 338 eP P 13 46 13.5 +0.9
comp=Z,168nm,1.4s
E36A McGregor 24.15 71 P P 13 46 12.7 -0.2
baz=275
D36A Goodland 24.16 69 P P 13 46 11.7 -1.3
baz=274
D36A Goodland 24.16 69 eP P 13 46 12.6 -0.5
comp=Z,56nm,0.8s
CCB Clear Creek Bu 24.19 338 eP P 13 46 13.4 +0.3
comp=Z,140nm,1.5s
ABTX Abilene, Hawle 24.20 107 P P 13 46 12.5 -1.0
baz=305
ABTX Abilene, Hawle 24.20 107 eP P 13 46 14.7 +1.2
comp=Z,173nm,1.7s
PPLA Purkeypile 24.25 332 eP P 13 46 15.3 +1.4
comp=Z,187nm,1.0s
BWN Browne 24.29 336 eP P 13 46 15.2 +1.1
comp=Z,417nm,1.5s
C36A Pine Crest Far 24.35 68 P P 13 46 14.9 +0.2
baz=273
COLA College 24.38 339 eP P 13 46 15.8 +1.0
comp=Z,44nm,0.9s
COLA College 24.38 339 eP P 13 46 15.8 +1.0
COLA pmax pmax
comp=Z,44nm,0.9s
I37A Lemond, Waseca 24.39 77 P P 13 46 14.4 -0.7
baz=281
I37A Lemond, Waseca 24.39 77 eP P 13 46 16.4 +1.2
comp=Z,106nm,0.6s
SDPT Sand Point 24.41 311 eP P 13 46 15.7 +0.4
comp=Z,100nm,1.0s
J37A Redenius Farm, 24.42 79 P P 13 46 15.0 -0.5
baz=282
SVW2 Sparrevohn 24.42 326 eP P 13 46 15.5 +0.2
comp=Z,42nm,1.0s
K37A Belmond 24.48 80 P P 13 46 14.7 -1.3
baz=283
M37A Trindle Farm, 24.52 83 P P 13 46 15.8 -0.5
baz=286
L37A Phoenix Point, 24.55 81 P P 13 46 15.9 -0.7
baz=284

MDM Murphy Dome 24.55 339 eP P 13 46 17.1 +0.7
comp=Z,53nm,1.0s
N37A Lee Faris, Mou 24.59 85 P P 13 46 16.3 -0.7
baz=287
N37A Lee Faris, Mou 24.59 85 eP P 13 46 17.1 +0.1
comp=Z,52nm,0.7s
SPMN Marine on St. 24.61 74 P P 13 46 17.0 -0.2
baz=278
SPMN Marine on St. 24.61 74 eP P 13 46 17.2 0.0
comp=Z,100nm,0.7s
H37A Dierke Farm, C 24.63 75 P P 13 46 16.9 -0.5
baz=280
D37A Cotton 24.66 69 P P 13 46 17.9 +0.3
baz=274
F37A Hinrichs Farm, 24.67 73 P P 13 46 16.8 -0.9
baz=277
BPAW Bear Paw Mtn. 24.70 335 eP P 13 46 18.4 +0.6
comp=Z,71nm,0.8s
E37A Wrnshall 24.73 71 P P 13 46 18.7 +0.5
baz=276
C37A Embarrass 24.79 68 P P 13 46 18.8 +0.1
baz=273
O37A Wolven Farm, M 24.82 86 P P 13 46 19.7 +0.6
baz=289
P37A Lathrop 24.86 88 P P 13 46 20.3 +0.8
baz=290
SCIA State Center 24.99 82 P P 13 46 21.2 +0.6
baz=285
SCIA State Center 24.99 82 eP P 13 46 23.4 +2.8
comp=Z,85nm,1.3s
Q37A Longview Farm, 25.03 89 P P 13 46 20.8 -0.3
baz=291
H38A Maiden Rock 25.06 75 P P 13 46 21.2 -0.1
baz=280
L38A Oak Wood Farm, 25.11 81 P P 13 46 21.2 -0.6
baz=285
K38A Parkersburg 25.12 80 P P 13 46 22.5 +0.6
baz=284
K38A Parkersburg 25.12 80 eP P 13 46 23.3 +1.4
comp=Z,362nm,2.0s
INK Inuvik 25.13 355 P P 13 46 22.2 +0.6
comp=Z,31nm,1.0s,baz=168,slow=11,SNR=34
INK LR LR 13 55 55.0
comp=Z,3µm,18.0s,baz=172,slow=36
INK Inuvik 25.13 355 eP P 13 46 22.0 +0.4
comp=Z,50nm,1.0s
INK Inuvik 25.13 355 eP P 13 46 22.0 +0.4
INK pmax pmax
comp=Z,50nm,1.0s
M38A Pleasantville 25.14 83 P P 13 46 22.3 +0.4
baz=286
I38A Scanlan Farm, 25.14 76 P P 13 46 21.6 -0.4
baz=281
F38A Pierce - Schro 25.16 72 P P 13 46 22.1 0.0
baz=277
J38A Wedel Dairy, R 25.18 78 P P 13 46 22.8 +0.5
baz=282
EYMN Ely 25.24 67 P P 13 46 22.1 -0.7
baz=273
EYMN Ely 25.24 67 eP P 13 46 22.6 -0.2
comp=Z,80nm,1.3s
TUL1 Leonard 25.27 97 P P 13 46 23.0 -0.1
baz=297
TUL1 Leonard 25.27 97 eP P 13 46 23.4 +0.2
comp=Z,103nm,1.5s
G38A Ridgeland 25.28 74 P P 13 46 23.3 +0.1
baz=279
N38A Joes South For 25.29 84 P P 13 46 22.7 -0.6
baz=287
MLY Manley 25.30 337 eP P 13 46 24.3 +1.0
comp=Z,125nm,1.0s
E38A The Farm, Brul 25.31 70 P P 13 46 23.5 0.0
baz=276
O38A Galt 25.32 86 P P 13 46 23.9 +0.3
baz=289
JCT Junction City 25.36 112 P P 13 46 23.4 -0.7
baz=308
JCT Junction City 25.36 112 eP P 13 46 24.3 +0.2
comp=Z,103nm,1.8s
JCT Junction City 25.36 112 eP P 13 46 24.3 +0.2
JCT pmax pmax
comp=Z,103nm,1.8s
C38A Sawbill Land. 25.40 68 P P 13 46 24.1 -0.2
baz=274
P38A Dawn 25.44 87 P P 13 46 24.4 -0.3
baz=290
P38A Dawn 25.44 87 eP P 13 46 24.9 +0.2
comp=Z,35nm,0.8s
FCC Fort Churchill 25.51 41 eP P 13 46 25.9 +0.8
comp=Z,161nm,1.4s
FCC Fort Churchill 25.51 41 eP P 13 46 25.9 +0.8
FCC pmax pmax
comp=Z,161nm,1.4s
Q38A Cooks Store, C 25.61 89 P P 13 46 26.2 -0.1
baz=291
R38A Fenwick Farm, 25.69 90 P P 13 46 27.1 +0.1
baz=292
J39A Decorah 25.73 78 P P 13 46 27.8 +0.5
baz=283
G39A Holcombe 25.74 73 P P 13 46 27.4 0.0
baz=279
K39A Oelwein 25.74 79 P P 13 46 27.6 +0.1
baz=284
I39A Houston 25.75 77 P P 13 46 27.5 0.0
baz=282
I39A Houston 25.75 77 eP P 13 46 27.8 +0.3
comp=Z,44nm,0.6s
H39A Augusta 25.76 75 P P 13 46 27.6 0.0
baz=280
N39A Derby Farms, D 25.79 84 P P 13 46 27.8 -0.1
baz=287
N39A Derby Farms, D 25.79 84 eP P 13 46 28.9 +1.0
comp=Z,29nm,1.0s
L39A Vinton 25.81 81 P P 13 46 28.0 0.0
baz=285
F39A Loretta 25.83 72 P P 13 46 27.8 -0.3
baz=278
M39A Webster 25.86 82 P P 13 46 28.6 +0.1
baz=286
T38A Diamond 25.86 93 P P 13 46 28.2 -0.4
baz=295
S38A Stockton 25.90 92 P P 13 46 29.4 +0.5
baz=294
O39A Kirksville 25.95 85 P P 13 46 28.5 -0.8
baz=289
E39A Mellen 26.02 71 P P 13 46 30.5 +0.6
baz=277
Q39A Willow Grove F 26.05 88 P P 13 46 30.4 +0.2
baz=291
P39B Salisbury 26.05 87 P P 13 46 30.3 0.0
baz=290
WHTX Lake Whitney, 26.08 106 P P 13 46 31.1 +0.5
baz=305
R39A Chumby, Stover 26.27 89 P P 13 46 32.6 +0.4
baz=292
K40A Colesburg 26.28 79 P P 13 46 32.7 +0.4
baz=284
S39A Bolivar 26.30 91 P P 13 46 32.9 +0.4
baz=293
S39A Bolivar 26.30 91 eP P 13 46 32.3 -0.3
comp=Z,65nm,1.5s
M40A Post Highland 26.35 82 P P 13 46 33.3 +0.4
baz=287
F40A Park Falls 26.38 72 P P 13 46 34.0 +0.8
baz=278
I40A Norwalk 26.38 76 P P 13 46 33.7 +0.4
baz=282
L40A Anamosa 26.38 80 P P 13 46 34.1 +0.9
baz=285
L40A Anamosa 26.38 80 eP P 13 46 33.3 +0.1
comp=Z,58nm,0.8s
H40A Chili 26.40 75 P P 13 46 34.1 +0.7
baz=281
J40A Soldiers Grove 26.40 77 P P 13 46 33.7 +0.3
baz=283
G40A Rib Lake 26.42 73 P P 13 46 34.3 +0.7
baz=279
G40A Rib Lake 26.42 73 eP P 13 46 33.7 +0.1
comp=Z,138nm,2.0s
HHAR Hobbs 26.44 94 eP P 13 46 33.4 -0.5
comp=Z,25nm,1.1s
N40A Mertquake, Sal 26.45 83 P P 13 46 33.5 -0.4
baz=288
E40A Wakefield 26.46 70 P P 13 46 34.2 +0.3
baz=277
O40A La Belle 26.48 85 P P 13 46 34.2 0.0
baz=289
T39A Clever 26.54 92 P P 13 46 34.7 0.0

baz=295
P40A Paris 26.55 86 P P 13 46 34.7 -0.1
baz=290
P40A Paris 26.55 86 eP P 13 46 34.2 -0.6
comp=Z,119nm,1.6s
435B Jarrell 26.69 108 P P 13 46 36.1 0.0
baz=307
Q40A Laux Farm, Aux 26.72 87 P P 13 46 36.4 +0.1
baz=291
U39A Green Forest 26.73 94 P P 13 46 36.6 +0.1
baz=296
C40A Isle Royale Na 26.82 67 P P 13 46 37.4 +0.4
baz=275
C40A Isle Royale Na 26.82 67 eP P 13 46 37.2 +0.1
R40A Maddies Statio 26.84 89 P P 13 46 37.7 +0.3
baz=292
R40A Maddies Statio 26.84 89 eP P 13 46 36.8 -0.6
comp=Z,14nm,0.8s
V39A Pettigrew 26.85 95 P P 13 46 37.1 -0.5
baz=297
JFWS Jewell Farm 26.86 78 P P 13 46 37.6 0.0
baz=284
JFWS Jewell Farm 26.86 78 P P 13 46 38.5 +0.9
comp=Z,16nm,0.7s
JFWS Jewell Farm 26.86 78 P P 13 46 38.5 +0.9
JFWS pmax pmax
comp=Z,16nm,0.7s
I41A Arkdale 26.88 76 P P 13 46 37.7 +0.1
baz=282
K41A Shullsburg 26.90 79 P P 13 46 38.4 +0.5
baz=285
L41A Preston 26.90 80 P P 13 46 37.6 -0.3
baz=286
H41A Junction City 26.92 74 P P 13 46 38.7 +0.7
baz=281
H41A Junction City 26.92 74 eP P 13 46 38.3 +0.3
comp=Z,166nm,1.9s
J41A Loganville 26.93 77 P P 13 46 38.6 +0.5
baz=283
S40A Lebanon 26.94 91 P P 13 46 38.6 +0.3
baz=294
833A Chaparral WMA, 27.01 115 P P 13 46 39.9 +0.9
baz=312
COWI Conover 27.03 71 eP P 13 46 39.6 +0.5
comp=Z,92nm,1.8s
N41A Harden Midland 27.04 83 P P 13 46 39.1 -0.1
baz=288
N41A Harden Midland 27.04 83 eP P 13 46 39.0 -0.1
comp=Z,18nm,0.8s
W39A Magazine 27.05 96 P P 13 46 40.0 +0.7
baz=298
W39A Magazine 27.05 96 eP P 13 46 39.4 +0.1
comp=Z,157nm,1.9s
M41A Milan 27.06 82 P P 13 46 37.7 -1.7
baz=287
E41A Kenton 27.10 70 P P 13 46 38.6 -1.1
baz=278
F41A Three Lakes 27.11 72 P P 13 46 39.7 -0.1
baz=279
F41A Three Lakes 27.11 72 eP P 13 46 40.8 +1.1
comp=Z,22nm,1.0s
T40A Mansfield 27.11 92 P P 13 46 38.8 -1.1
baz=294
X39A Fountain Ranch 27.14 98 P P 13 46 39.9 -0.2
baz=299
G41A Antigo 27.14 73 P P 13 46 39.9 -0.1
baz=280
U40A Yellville 27.20 93 P P 13 46 40.2 -0.5
baz=296
O41A Passleys Farm, 27.20 84 P P 13 46 39.7 -0.9
baz=289
P41A Barry, Barry 27.22 85 P P 13 46 40.3 -0.5
baz=290
D41A Chassel 27.30 69 P P 13 46 41.4 0.0
baz=277
D41A Chassel 27.30 69 eP P 13 46 45.5 +4.1
comp=Z,54nm,1.1s
Q41A Truxton 27.35 87 P P 13 46 42.2 +0.3
baz=291
V40A Witts Springs 27.46 94 P P 13 46 43.2 +0.1
baz=297
V40A Witts Springs 27.46 94 eP P 13 46 42.2 -0.9
comp=Z,72nm,1.6s
R41A Rosebud 27.48 88 P P 13 46 42.4 -0.8
baz=292
S41A Jillco Farms, 27.49 90 P P 13 46 42.5 -0.8
baz=294
MIAR Mount Ida 27.51 97 P P 13 46 42.5 -0.8
baz=299
MIAR Mount Ida 27.51 97 eP P 13 46 43.3 -0.1
comp=Z,13nm,0.9s
MIAR Mount Ida 27.51 97 eP P 13 46 43.3 -0.1
MIAR pmax pmax
comp=Z,13nm,0.9s
L42A Oliver, Polo 27.52 80 P P 13 46 41.8 -1.6
baz=286
L42A Oliver, Polo 27.52 80 eP P 13 46 43.6 +0.2
comp=Z,127nm,1.5s
K42A Prairie Point, 27.54 78 P P 13 46 42.4 -1.3
baz=284
W40A Ferguson Farm, 27.57 96 P P 13 46 43.6 -0.4
baz=298
W40A Ferguson Farm, 27.57 96 eP P 13 46 44.5 +0.6
comp=Z,27nm,0.8s
J42A Columbus 27.57 77 P P 13 46 43.1 -0.8
baz=284
UNV Unalaska Valle 27.58 306 eP P 13 46 44.2 +0.4
comp=Z,97nm,1.0s
I42A Draeger Farm, 27.59 76 P P 13 46 42.6 -1.4
baz=283
N42A Yates City 27.59 83 P P 13 46 41.8 -2.3
baz=288
M42A Sheffield 27.60 81 P P 13 46 42.8 -1.4
baz=287
G42A Mountain 27.66 73 P P 13 46 43.7 -1.0
baz=280
G42A Mountain 27.66 73 eP P 13 46 45.2 +0.5
comp=Z,90nm,1.4s
CCM Cathedral Cave 27.68 89 P P 13 46 44.0 -0.9
baz=293
CCM Cathedral Cave 27.68 89 eP P 13 46 44.5 -0.3
comp=Z,31nm,1.0s
CCM Cathedral Cave 27.68 89 eP P 13 46 44.6 -0.3
CCM pmax pmax
comp=Z,31nm,1.0s
T41A Mountain View 27.70 91 P P 13 46 45.8 +0.6
baz=295
H42A Shiocton 27.73 74 P P 13 46 45.5 +0.2
baz=282
O42A Bath 27.76 84 P P 13 46 45.3 -0.3
baz=289
P42A Winchester 27.77 85 P P 13 46 45.3 -0.5
baz=290
P42A Winchester 27.77 85 eP P 13 46 44.7 -1.0
comp=Z,18nm,0.9s
F42A Maple Grove Fa 27.77 72 P P 13 46 45.7 0.0
baz=279
TOLK Toolik Lake Re 27.81 343 P P 13 46 46.0 +0.2
baz=144
TOLK Toolik Lake Re 27.81 343 eP P 13 46 46.6 +0.8
comp=Z,115nm,1.3s
E42A Champion 27.82 70 P P 13 46 45.5 -0.7
baz=278
Q42A Golden Eagle 27.87 87 P P 13 46 46.6 0.0
baz=291
U41A Viola 27.88 93 P P 13 46 46.8 0.0
baz=296
R42A Luebbering 27.92 88 P P 13 46 46.8 -0.2
baz=292
V41A Mountainview 27.96 94 P P 13 46 47.2 -0.3
baz=297
Y40A Okolona 27.98 98 P P 13 46 46.8 -0.8
baz=300
J43A Natural Harves 28.05 77 P P 13 46 47.6 -0.7
baz=284
X40A Basin Creek Fa 28.07 97 P P 13 46 48.1 -0.4
baz=299
WHAR Wooly Hollow 28.09 95 eP P 13 46 47.5 -1.1
comp=Z,17nm,0.8s
S42A Caledonia 28.11 89 P P 13 46 48.0 -0.8
baz=293
L43A Garden Prairie 28.13 79 P P 13 46 48.4 -0.5
baz=286
I43A Langenfeld Bro 28.13 75 P P 13 46 47.8 -1.1
baz=283
W41B Gary Mavity, V 28.17 95 P P 13 46 48.4 -0.9
baz=298
W41B Gary Mavity, V 28.17 95 eP P 13 46 49.5 +0.2

	comp=Z,83nm,1.9s							
G43A	**Wallace**	28.17	72	P		P	13 46 48.8	-0.5
	baz=281							
NATX	**Nacogdoches**	28.18	104	P		P	13 46 49.1	-0.3
	baz=304							
NATX	**Nacogdoches**	28.18	104	P		P	13 46 50.0	+0.6
N43A	**Stutzman Famil**	28.18	82	P		P	13 46 48.8	-0.5
	baz=288							
M43A	**Waltham Townsh**	28.18	81	P		P	13 46 48.4	-1.0
	baz=287							
T42A	**Van Buren**	28.20	91	P		P	13 46 48.9	-0.6
	baz=295							
T42A	**Van Buren**	28.20	91	*e*P		P	13 46 49.1	-0.4
	comp=Z,15nm,0.8s							
HDIL	**Hopedale**	28.21	83	P		P	13 46 48.9	-0.7
	baz=289							
H43A	**Windswept, Lux**	28.27	74	P		P	13 46 49.8	-0.3
	baz=282							
Z40A	**Long Farm, Mag**	28.28	100	P		P	13 46 49.8	-0.5
	baz=301							
K43A	**Burlington**	28.28	78	P		P	13 46 49.3	-1.0
	baz=285							
O43A	**Sugar Creek Fa**	28.29	83	P		P	13 46 49.4	-0.9
	baz=289							
FVM	**French Village**	28.30	88	*e*P		P	13 46 50.1	-0.4
	comp=Z,17nm,0.8s							
FVM	**French Village**	28.30	88	*e*P		P	13 46 50.1	-0.4
FVM				pmax		pmax		
	comp=Z,17nm,0.8s							
X41A	**Kaden, Bauxite**	28.30	97	P		P	13 46 50.0	-0.5
	baz=299							
P43A	**Skaggs, Pawnee**	28.35	85	P		P	13 46 50.8	-0.1
	baz=290							
U42A	**Revenden**	28.38	92	P		P	13 46 51.3	+0.1
	baz=296							
HKT	**Hockley**	28.40	108	*e*P		P	13 46 51.5	+0.2
	comp=Z,123nm,1.8s							
HKT	**Hockley**	28.40	108	*e*P		P	13 46 51.5	+0.2
HKT				pmax		pmax		
	comp=Z,123nm,1.8s							
E43A	**Lone Tree Farm**	28.46	70	P		P	13 46 52.1	+0.3
	baz=279							
E43A	**Lone Tree Farm**	28.46	70	*e*P		P	13 46 52.1	+0.3
	comp=Z,20nm,0.6s							
Q43A	**New Douglas**	28.47	86	P		P	13 46 51.5	-0.4
	baz=291							
140A	**Cam and Jess,**	28.47	101	P		P	13 46 51.9	-0.2
	baz=302							
V42A	**Cord**	28.51	93	P		P	13 46 52.3	0.0
	baz=297							
Y41A	**Eaglette Beard**	28.53	98	P		P	13 46 49.1	-3.4
	baz=300							
R43A	**Red Bud**	28.55	88	P		P	13 46 49.0	-3.6
	baz=292							
W42A	**Bald Knob**	28.65	94	P		P	13 46 51.6	-2.0
	baz=299							
S43A	**Fulton Ridge,**	28.72	89	P		P	13 46 52.4	-1.8
	baz=294							
L44A	**Lake County Fo**	28.72	79	P		P	13 46 52.4	-1.8
	baz=286							
T43A	**Greenville**	28.76	90	P		P	13 46 53.0	-1.6
	baz=294							
M44A	**Midewin, Midew**	28.86	80	P		P	13 46 54.5	-0.8
	baz=287							
X42A	**Stuttgart**	28.91	96	P		P	13 46 54.9	-1.0
	baz=299							
F44A	**Big Bay de Noc**	28.92	71	P		P	13 46 55.5	-0.4
	baz=280							
O44A	**Mansfield**	28.94	83	P		P	13 46 55.1	-1.0
	baz=290							
141A	**Papa Simpson,**	28.97	100	P		P	13 46 54.2	-2.2
	baz=302							
N44A	**Piper City**	28.97	82	P		P	13 46 54.3	-2.1
	baz=288							
U43A	**Rector**	28.98	91	P		P	13 46 53.7	-2.8
	baz=296							
Q44A	**Meyer Farm, Va**	28.98	86	P		P	13 46 52.1	-4.3
	baz=292							
P44A	**Sand Creek, Wi**	29.06	84	P		P	13 46 54.6	-2.6
	baz=291							
V43A	**Jonesboro**	29.13	93	P		P	13 46 56.0	-1.8
	baz=297							
Y42A	**Garnett, Star**	29.15	97	P		P	13 46 56.6	-1.4
	baz=300							
E44A	**Grand Marais A**	29.15	69	P		P	13 46 56.7	-1.2
	baz=279							
R44A	**Waltonville**	29.18	87	P		P	13 46 56.5	-1.8
	baz=293							
S44A	**Carbondale**	29.27	88	P		P	13 46 57.4	-1.6
	baz=294							
T44A	**Benton**	29.27	90	P		P	13 46 58.1	-0.9
	baz=294							
241A	**Mo Tay, Goldon**	29.27	101	P		P	13 46 58.1	-1.0
	baz=303							
LNIG	**Linares**	29.32	120	*e*P		P	13 46 59.9	+0.2
	comp=Z,74nm,1.8s							
W43A	**Forest City**	29.33	94	P		P	13 46 59.6	-0.1
	baz=298							
N45A	**Kentland**	29.40	81	P		P	13 47 00.1	-0.1
	baz=288							
M45A	**Boilermakers S**	29.43	80	P		P	13 47 00.9	+0.5
	baz=288							
O45A	**Potomac**	29.44	82	P		P	13 47 00.6	0.0
	baz=289							
F45A	**CMU Biological**	29.59	71	P		P	13 47 00.1	-1.8
	baz=281							
Q45A	**Warren Harvey,**	29.61	85	P		P	13 47 01.2	-0.8
	baz=292							
P45A	**Graceland, Par**	29.68	84	P		P	13 47 01.9	-0.8
	baz=291							
P45A	**Graceland, Par**	29.68	84	*e*P		P	13 47 03.1	+0.5
	comp=Z,15nm,0.8s							
E45A	**Wooded Hills,**	29.70	70	P		P	13 47 01.9	-1.0
	baz=280							
Y43A	**Makayla and Ka**	29.73	96	P		P	13 47 02.6	-0.5
	baz=300							
R45A	**Skylar, Fairfi**	29.74	87	P		P	13 47 02.1	-1.1
	baz=293							
U44B	**Burton Farm, H**	29.76	91	P		P	13 46 59.9	-3.5
	baz=296							
S45A	**Carrier Mills**	29.76	88	P		P	13 47 01.4	-2.0
	baz=294							
441A	**DeRidder**	29.79	104	P		P	13 47 01.9	-1.8
	baz=305							
SFIN	**Lafayette**	29.85	82	P		P	13 47 02.9	-1.3
	baz=289							
SFIN	**Lafayette**	29.85	82	*e*P		P	13 47 04.7	+0.4
	comp=Z,43nm,1.5s							
N46A	**Monticello**	29.95	81	P		P	13 47 04.0	-1.1
	baz=289							
ANM	**Nome**	30.05	328	*e*P		P	13 47 06.3	+0.6
	comp=Z,34nm,1.1s							
ANM	**Nome**	30.05	328	*e*P		P	13 47 06.3	+0.6
ANM				pmax		pmax		
	comp=Z,34nm,1.1s							
342A	**Flagon Creek P**	30.05	102	P		P	13 47 04.2	-1.8
	baz=304							
F46A	**Macinaw City C**	30.10	71	P		P	13 47 04.7	-1.6
	baz=281							
Q46A	**CEJHS Indians,**	30.14	85	P		P	13 47 05.3	-1.4
	baz=292							
Y44A	**Strider, Charl**	30.23	96	P		P	13 47 02.6	-4.9
	baz=299							
V45A	**Humboldt**	30.30	92	P		P	13 47 04.7	-3.5
	baz=297							
R46A	**Gibon Southern**	30.33	86	P		P	13 47 05.7	-2.7
	baz=293							
243A	**Waterproof**	30.38	100	P		P	13 47 06.1	-2.8
	baz=303							
S46A	**Don Dixon Farm**	30.39	87	P		P	13 47 06.6	-2.4
	baz=294							
W45A	**Hickory Valley**	30.40	93	P		P	13 47 06.4	-2.7
	baz=298							
T46A	**Princeton**	30.52	89	P		P	13 47 08.5	-1.6
	baz=295							
OXF	**Oxford**	30.54	94	P		P	13 47 08.7	-1.6
	baz=298							
OXF	**Oxford**	30.54	94	*e*P		P	13 47 10.8	+0.5
	comp=Z,252nm,1.9s							
OXF	**Oxford**	30.54	94	*e*P		P	13 47 10.8	+0.5
OXF				pmax		pmax		
	comp=Z,252nm,1.9s							
O47A	**Sheridan**	30.57	82	P		P	13 47 08.6	-2.0
	baz=290							
X45A	**UM Field Stati**	30.59	94	P		P	13 47 09.6	-1.2
	baz=299							
343A	**Vidalia**	30.60	101	P		P	13 47 10.4	-0.5
	baz=304							
144A	**Alexander Plac**	30.74	98	P		P	13 47 10.5	-1.7
	baz=301							
Y45A	**Yeager Farm, C**	30.76	95	P		P	13 47 09.3	-2.9
	baz=300							
P47A	**Martinsville**	30.76	83	P		P	13 47 10.3	-2.0
	baz=291							
443A	**Delano Plantat**	30.78	102	P		P	13 47 09.0	-3.4
	baz=304							
Q47A	**Bedord North L**	30.84	84	P		P	13 47 08.6	-4.4
	baz=292							
VBMS	**Vicksburg**	30.89	99	P		P	13 47 09.7	-3.8
	baz=302							
V46A	**Holladay**	30.89	91	P		P	13 47 12.3	-1.1
	baz=296							
Z45A	**Winona**	30.89	96	P		P	13 47 10.1	-3.3
	baz=300							
WVT	**Waverly**	30.95	90	P		P	13 47 11.1	-2.9
	baz=296							
WVT	**Waverly**	30.95	90	*e*P		P	13 47 12.8	-1.2
	comp=Z,9.0nm,0.9s							
WVT	**Waverly**	30.95	90	*e*P		P	13 47 12.8	-1.2
WVT				pmax		pmax		
	comp=Z,9.0nm,0.9s							
RDOG	**Red Dog Mine**	30.95	335	*e*P		P	13 47 14.2	+0.5
	comp=Z,48nm,1.2s							
W46A	**Michie**	31.00	92	P		P	13 47 12.0	-2.4
	baz=298							
R47A	**Wooly Knot Far**	31.01	85	P		P	13 47 12.2	-2.3
	baz=293							
145A	**Houston Renfro**	31.11	98	P		P	13 47 12.3	-3.1
	baz=301							
T47A	**Sharon Grove**	31.12	88	P		P	13 47 12.3	-3.1
	baz=295							
WCI	**Wyandotte Cave**	31.21	85	P		P	13 47 13.1	-3.1
	baz=293							
U47A	**Clarksville**	31.21	89	P		P	13 47 13.2	-3.1
	baz=296							
Y46A	**Houston**	31.25	95	P		P	13 47 14.3	-2.3
	baz=299							
PLAL	**Pickwick Lake**	31.29	92	*e*P		P	13 47 16.5	-0.5
	comp=Z,60nm,1.8s							
V47A	**Nunnelly**	31.31	90	P		P	13 47 14.9	-2.3
	baz=296							
245A	**Little AP, Sta**	31.43	99	P		P	13 47 17.1	-1.2
	baz=302							
R48A	**Northridge Ran**	31.45	85	P		P	13 47 16.7	-1.7
	baz=293							
T48A	**Bowling Green**	31.58	87	P		P	13 47 18.0	-1.5
	baz=295							
S48A	**Wiedeman Farm,**	31.61	86	P		P	13 47 15.5	-4.2
	baz=294							
U48A	**Cassie Pea, Po**	31.73	89	P		P	13 47 17.7	-3.1
	baz=295							
V48A	**Smith Brothers**	31.86	90	P		P	13 47 18.2	-3.8
	baz=297							
V48A	**Smith Brothers**	31.86	90	*e*P		P	13 47 21.8	-0.1
	comp=Z,45nm,1.8s							
W48A	**Pulaski**	32.05	91	P		P	13 47 20.1	-3.6
	baz=297							
346A	**Big Creek Wild**	32.09	99	P		P	13 47 19.1	-4.9
	baz=303							
Z47A	**Carrollton**	32.15	95	P		P	13 47 21.4	-3.1
	baz=300							
T49A	**Edmonton**	32.21	87	P		P	13 47 21.5	-3.6
	baz=295							
147A	**Livingston**	32.27	96	P		P	13 47 21.4	-4.2
	baz=301							
U49A	**Red Boiling Sp**	32.28	88	P		P	13 47 23.6	-2.1
	baz=296							
X48A	**Hartselle**	32.29	92	P		P	13 47 23.4	-2.3
	baz=298							
X48A	**Hartselle**	32.29	92	*e*P		P	13 47 25.6	-0.2
	comp=Z,57nm,1.8s							
Z48A	**Northport**	32.44	95	P		P	13 47 23.5	-3.6
	baz=300							
Y48A	**Jasper**	32.46	93	P		P	13 47 25.0	-2.3
	baz=299							
V49A	**McMinnville**	32.52	89	P		P	13 47 24.8	-3.0
	baz=296							
W49A	**Belvidere**	32.55	91	P		P	13 47 24.9	-3.1
	baz=297							
T50A	**Nancy**	32.75	87	P		P	13 47 26.6	-3.2
	baz=295							
X49A	**Woodville**	32.78	92	P		P	13 47 27.5	-2.5
	baz=298							
148A	**Greensboro**	32.80	96	P		P	13 47 27.9	-2.3
	baz=301							
Y49A	**Blount Mountai**	33.03	93	P		P	13 47 29.7	-2.6
	baz=299							
V50A	**Pikevile**	33.15	89	P		P	13 47 30.3	-3.0
	baz=297							
348A	**Jackson**	33.20	98	P		P	13 47 32.7	-1.0
	baz=303							
W50A	**Signal Mountai**	33.20	90	P		P	13 47 31.0	-2.8
	baz=297							
W50A	**Signal Mountai**	33.20	90	*e*P		P	13 47 33.8	0.0
	comp=Z,18nm,0.7s							
Z49A	**Columbiana**	33.27	94	P		P	13 47 33.4	-1.0
	baz=300							
X50B	**Fort Payne**	33.30	91	P		P	13 47 32.8	-1.9
	baz=298							
249A	**Camden**	33.47	96	P		P	13 47 35.3	-0.8
	baz=302							
Y50A	**Piedmont**	33.51	92	P		P	13 47 35.9	-0.5
	baz=299							
CPCT	**Cooper Cave**	33.66	89	*e*P		P	13 47 38.9	+1.2
	comp=Z,10.0nm,0.7s							
Z50A	**Ashland**	33.69	93	*e*P		P	13 47 38.4	+0.4
	comp=Z,71nm,1.7s							
349A	**Repton**	33.75	97	P		P	13 47 37.1	-1.4
	baz=302							
X51A	**Calhoun**	33.83	91	P		P	13 47 37.7	-1.5
	baz=298							
X51A	**Calhoun**	33.83	91	*e*P		P	13 47 39.7	+0.5
	comp=Z,36nm,0.8s							
TZTN	**Tazewell**	33.89	87	P		P	13 47 37.8	-1.9
	baz=296							
150A	**Eclectic**	33.94	95	P		P	13 47 38.0	-2.1
	baz=301							
Y51A	**Rockmart**	33.99	92	P		P	13 47 39.8	-0.9
	baz=299							
250A	**Grady**	34.09	96	P		P	13 47 39.6	-1.8
	baz=302							
SADO	**Sadowa**	34.19	71	P		P	13 47 43.7	+1.5
	comp=Z,6.5nm,0.6s,baz=296,slow=8.3,SNR=5.5							
Z51A	**Franklin**	34.20	93	P		P	13 47 39.8	-2.7
	baz=300							
W52A	**Murphy**	34.26	89	*e*P		P	13 47 42.2	-0.8
	comp=Z,12nm,0.6s							
151A	**Opelika**	34.48	94	P		P	13 47 42.5	-2.4
	baz=301							
RES	**Resolute Bay**	34.50	15	P		P	13 47 46.6	+2.1
	comp=Z,8.6nm,0.8s,baz=222,slow=9.3,SNR=9.3							
RES	**Resolute Bay**	34.50	15	*e*P		P	13 47 45.0	+0.5
	comp=Z,11nm,0.9s							
RES	**Resolute Bay**	34.50	15	*e*P		P	13 47 45.0	+0.5
RES				pmax		pmax		
	comp=Z,11nm,0.9s							
X52A	**Dahlonega**	34.51	90	P		P	13 47 43.8	-1.3
	baz=298							
251A	**Midway**	34.65	95	P		P	13 47 44.4	-1.9
	baz=301							
U53A	**Fall Branch**	34.67	86	P		P	13 47 43.8	-2.8
	baz=296							
Y52A	**Lilburn**	34.74	91	P		P	13 47 44.5	-2.6
	baz=299							
Y52A	**Lilburn**	34.74	91	*e*P		P	13 47 47.0	-0.2
	comp=Z,24nm,0.6s							
N54A	**Moraine State**	34.75	77	P		P	13 47 44.0	-3.2
	baz=290							
N54A	**Moraine State**	34.75	77	*e*P		P	13 47 46.9	-0.3
	comp=Z,34nm,1.4s							
W53A	**Cullowhee**	34.78	89	P		P	13 47 43.6	-4.0
	baz=297							
M54A	**Oil Creek Stat**	34.79	76	P		P	13 47 44.6	-3.0
	baz=290							
M54A	**Oil Creek Stat**	34.79	76	*e*P		P	13 47 48.1	+0.5
	comp=Z,92nm,2.0s							
V53A	**Saluda**	34.81	88	P		P	13 47 44.5	-3.3
	baz=297							
Z52A	**Williamson**	34.81	92	P		P	13 47 45.4	-2.4
	baz=300							
351A	**Pinckard**	34.94	96	P		P	13 47 47.2	-1.6
	baz=302							
X53A	**Estanollee**	34.99	90	P		P	13 47 47.4	-1.9
	baz=298							
Y53A	**Monroe**	35.09	91	P		P	13 47 48.1	-2.0
	baz=299							
252A	**Lumpkin**	35.19	94	P		P	13 47 49.1	-1.8
	baz=301							
MCWV	**Mont Chateau**	35.32	80	P		P	13 47 50.7	-1.3
	baz=292							
MCWV	**Mont Chateau**	35.32	80	*e*P		P	13 47 52.2	+0.2
	comp=Z,20nm,0.4s							
Z53A	**Monticello**	35.38	92	P		P	13 47 51.4	-1.2
	baz=300							
GOGA	**Godfrey**	35.40	91	P		P	13 47 52.3	-0.5
	baz=300							
GOGA	**Godfrey**	35.40	91	*e*P		P	13 47 52.8	0.0
	comp=Z,23nm,1.1s							
GOGA	**Godfrey**	35.40	91	*e*P		P	13 47 52.8	0.0
GOGA				pmax		pmax		
	comp=Z,23nm,1.1s							
452A	**Marianna**	35.47	97	P		P	13 47 52.3	-1.1
	baz=303							
253A	**Americus**	35.59	94	P		P	13 47 53.1	-1.4
	baz=301							
Y54A	**Tignall**	35.74	90	P		P	13 47 54.3	-1.4
	baz=299							
BLA	**Blacksburg**	35.88	84	P		P	13 47 55.8	-1.2
	baz=295							
BLA	**Blacksburg**	35.88	84	*e*P		P	13 47 57.0	+0.1
	comp=Z,99nm,1.9s							
BLA	**Blacksburg**	35.88	84	*e*P		P	13 47 57.0	+0.1
BLA				pmax		pmax		
	comp=Z,99nm,1.9s							
353A	**Camilla**	35.90	95	P		P	13 47 56.0	-1.1
	baz=302							
PAULI	**Pauline**	35.92	88	*e*P		P	13 47 57.6	+0.4
	comp=Z,23nm,1.2s							
Z54A	**Sparta**	35.94	91	P		P	13 47 56.2	-1.2
	baz=300							
O56A	**Blue Knob Stat**	36.01	78	P		P	13 47 55.9	-2.1
	baz=292							
KMSC	**Kings Mountain**	36.13	87	*e*P		P	13 47 58.6	-0.4
	comp=Z,10nm,0.9s							
VWCC	**Virginia Weste**	36.18	83	*e*P		P	13 47 59.8	+0.3
254A	**Abbeville**	36.26	93	P		P	13 47 58.2	-2.0
	baz=301							
TIGA	**Tifton**	36.31	94	P		P	13 47 58.8	-1.8
	baz=302							
SSPA	**Standing Stone**	36.36	77	P		P	13 47 59.0	-1.9
	baz=291							
SSPA	**Standing Stone**	36.36	77	*e*P		P	13 48 01.1	+0.1
	comp=Z,47nm,1.9s							
Z55A	**Blythe**	36.46	91	P		P	13 48 00.4	-1.4
	baz=300							
155A	**Kite**	36.52	92	P		P	13 48 01.0	-1.3
	baz=300							
JSC	**Jenkinsville**	36.58	89	*e*P		P	13 48 02.8	-0.1
	comp=Z,24nm,0.7s							
JSC	**Jenkinsville**	36.58	89	*e*P		P	13 48 02.8	-0.1
JSC				pmax		pmax		
	comp=Z,24nm,0.7s							
TRQ	**Mont Tremblant**	36.92	67	*e*P		P	13 48 06.0	+0.2
IP04	**Greensprings**	37.19	81	*e*P		P	13 48 08.6	+0.5
	comp=Z,76nm,2.0s							
IP03	**Louisa**	37.28	81	*e*P		P	13 48 08.8	0.0
	comp=Z,78nm,1.8s							
IP07	**Quail**	37.31	81	*e*P		P	13 48 08.8	-0.2
	comp=Z,68nm,1.7s							
IP06	**Yanceyville**	37.34	81	*e*P		P	13 48 09.1	-0.2
	comp=Z,54nm,1.8s							
SPRD	**Spring Road, M**	37.37	81	*e*P		P	13 48 09.1	-0.5
	comp=Z,64nm,1.8s							
IP01	**Cuckoo**	37.38	81	*e*P		P	13 48 09.5	-0.1
	comp=Z,46nm,1.5s							
CVRD	**Centerville Ro**	37.41	81	*e*P		P	13 48 08.9	-0.9
	comp=Z,80nm,1.8s							
CBN	**Corbin Frederi**	37.66	81	*e*P		P	13 48 12.1	+0.1
	comp=Z,683nm,0.3s							
MVL	**Millersville**	37.68	77	*e*P		P	13 48 12.1	-0.1
	comp=Z,11nm,0.9s							
FRB	**Frobisher Bay**	38.56	38	P		P	13 48 21.8	+2.5
SCHQ	**Schefferville**	39.93	52	P		P	13 48 31.5	+0.6
	comp=Z,4.2nm,0.6s,baz=273,slow=7.5,SNR=4.5							
SCHQ				LR		LR	14 05 10.3	
	comp=Z,2μm,18.7s,baz=283,slow=36							
BILL	**Bilibino**	41.89	329	*e*P		P	13 48 46.5	-0.3
	comp=Z,44nm,1.1s							
BILL	**Bilibino**	41.89	329	*e*P		P	13 48 47.2	+0.4
BILL				pmax		pmax		
	comp=Z,52nm,1.2s							
BILL				MLR		MLR		
	comp=Z,985nm,16.0s							
SFJD	**Kangerlussuaq**	45.87	32	LR		LR	14 08 55.4	
	comp=Z,500nm,20.1s,baz=280,slow=37							
PET	**Petropavlovsk**	48.17	309	*e*P		P	13 49 36.9	0.0
	comp=Z,55nm,0.9s							
PET	**Petropavlovsk**	48.17	309	⇓*i*P		P	13 49 36.2	-0.7
PET				*e*S		S	13 56 33.2	-1.7
PET				*e*SS		SS	13 59 58.2	-5.5
PET				pmax		pmax		
	comp=Z,74nm,0.9s							
IVI	**Ivigtut**	48.22	40	*e*P		P	13 49 38.3	+1.1
	comp=Z,54nm,1.3s							
SEY	**Seymchan**	48.29	323	P		P	13 49 37.8	0.0
	comp=Z,28nm,1.0s,baz=141,slow=9.1,SNR=36							
SEY	**Seymchan**	48.29	323	⇓*i*P		P	13 49 37.9	+0.2
PEA0B	**Petropavlovsk-**	48.68	309	*e*P		P	13 49 40.5	-0.4
	comp=Z,113nm,1.4s							
PETK	**Petropavlovsk-**	48.68	309	P		P	13 49 40.6	-0.3
	comp=Z,24nm,0.7s,baz=79,slow=12,SNR=55							
PETK				LR		LR	14 06 43.8	
	comp=Z,376nm,21.9s,baz=73,slow=32							
SUMG	**Summit**	48.85	24	*e*P		P	13 49 42.6	+0.3
	comp=Z,34nm,0.9s							
SUMG	**Summit**	48.85	24	*e*P		P	13 49 42.7	+0.3
SUMG				pmax		pmax		
	comp=Z,34nm,0.9s							
JTS	**JuntasAbangare**	49.34	119	P		P	13 49 45.4	-1.0
	comp=Z,3.7nm,0.5s,baz=332,slow=9.5,SNR=4.1							
JTS				LR		LR	14 13 54.9	
	comp=Z,174nm,18.6s,baz=15,slow=40							
MA2	**Magadan**	50.07	319	P		P	13 49 51.6	+0.2
	comp=Z,31nm,0.9s,baz=77,slow=6.6,SNR=11							
MA2	**Magadan**	50.07	319	*e*P		P	13 49 51.8	+0.4
	comp=Z,46nm,1.0s							
MA2	**Magadan**	50.07	319	⇑*e*P		P	13 49 52.1	+0.7
TAOE	**Nuku Hiva Isla**	53.36	196	*e*LR		LR	14 05 32.9	
	comp=Z,250nm,27.6s							
TAOE	**Nuku Hiva Isla**	53.36	196	*e*T		T	14 47 23.6	
	comp=Z,234nm,0.2s							
TIXI	**Tiksi**	53.50	338	P		P	13 50 16.5	-0.3
	comp=Z,16nm,1.0s,baz=67,slow=7.9,SNR=24							
TIXI	**Tiksi**	53.50	338	*e*P		P	13 50 16.4	-0.4
	comp=Z,21nm,1.0s							
TIXI	**Tiksi**	53.50	338	*d i*P		P	13 50 16.8	0.0
TIXI				pmax		pmax		
	comp=Z,18nm,1.0s							
MOTC	**Monteria, Cord**	56.57	112	*e*P		P	13 50 37.1	-2.7
SPITS	**Spitsbergen Ar**	56.65	8	P		P	13 50 39.1	-0.4
	comp=Z,16nm,0.9s,baz=285,slow=16,SNR=3.6							
SPITS				LR		LR	14 16 07.5	
	comp=Z,355nm,18.6s,baz=0.0,slow=37							
SJG	**San Juan**	56.89	96	*e*P		P	13 50 42.0	0.0
	comp=Z,50nm,1.3s							
SJG	**San Juan**	56.89	96	*e*P		P	13 50 42.0	0.0
SJG				pmax		pmax		
	comp=Z,50nm,1.3s							
HUMP	**Col San Antoni**	57.09	96	*e*P		P	13 50 43.6	+0

YAK pmax pmax
comp=Z,26nm,1.8s
YAK pmax pmax
comp=E,22nm,1.9s
YAK pmax pmax
comp=N,10.0nm,1.8s
YAK smax smax
comp=N,30nm,2.8s
YAK smax smax
comp=E,69nm,3.5s
YAK MLR MLR
comp=Z,767nm,19.0s
YAK MLR MLR
comp=E,736nm,22.0s
YAK MLR MLR
comp=N,602nm,20.0s
PTBC PUERTO BERRIO, 59.02 113 *e*P **P 13 50 56.0 -1.0**
H11N3 WAKE ISLAND Hy 59.27 269 T T 14 54 55.8
baz=50,slow=75,SNR=1264
H11N2 WAKE ISLAND Hy 59.28 269 T T 14 54 55.4
baz=50,slow=75,SNR=1149
H11N1 WAKE ISLAND Hy 59.29 269 T T 14 54 56.6
baz=50,slow=75,SNR=962
YOTC Yotoco, Valle 59.66 116 *e*P **P 13 51 00.7 -0.8**
BARC Barichara 59.84 111 *e*P **P 13 51 02.8 0.0**
HORQ Saladito 59.85 117 *e*P **P 13 51 01.2 -1.8**
TOLC Tolima 59.88 115 *e*P **P 13 51 05.2 +1.9**
SDV Santo Domingo 59.94 108 *e*P **P 13 51 04.1 +0.5**
YSS Yuzh-Sakhalins 60.03 308 *e*P **P 13 51 03.3 -0.2**
comp=N,36nm,0.8s
YSS Yuzh-Sakhalins 60.03 308⇓ *i*P **P 13 51 03.3 -0.2**
YSS pmax pmax
comp=Z,40nm,0.7s
YSS MLR MLR
comp=Z,300nm,15.0s
H11S1 WAKE ISLAND Hy 60.20 268 T T 14 56 06.9
baz=50,slow=75,SNR=7344
H11S2 WAKE ISLAND Hy 60.20 268 T T 14 56 04.6
baz=50,slow=75,SNR=2037
H11S3 WAKE ISLAND Hy 60.21 268 T T 14 56 07.0
baz=50,slow=75,SNR=4277
ROSC El Rosal 60.36 114 P **P 13 51 07.9 +1.3**
comp=Z,5.1nm,0.4s,baz=346,slow=6.7,SNR=7.4
ROSC LR LR 14 22 40.8
comp=Z,91nm,18.1s,baz=293,slow=42
ROSC El Rosal 60.36 114 *e*P **P 13 51 07.3 +0.7**
RUSC La Rusia 60.41 112 *e*P **P 13 51 05.8 -1.3**
comp=Z,23nm,1.6s
RUSC La Rusia 60.41 112 *e*P P 13 51 00.8 -6.3
PRAC Prado 60.82 115 *e*P **P 13 51 09.2 -0.2**
comp=Z,12nm,0.9s
PRAC Prado 60.82 115 *e*P **P 13 51 08.6 -0.8**
PCON Cinco Dias 60.87 117 *e*P **P 13 51 10.6 +0.2**
SOTA Rioblanco 60.88 118 *e*P **P 13 51 11.1 +0.8**
PMOR Pomariorio Ree 61.16 203 *e*T T 14 57 06.0
comp=Z,29nm,0.2s
OTAV Otavalo 61.17 121 *e*P **P 13 51 12.6 +0.3**
comp=Z,40nm,1.5s
OTAV Otavalo 61.17 121 *e*P **P 13 51 12.2 0.0**
OTAV Otavalo 61.17 121⇑ *e*P **P 13 51 14.2 +2.0**
OTAV pmax pmax
comp=Z,45nm,2.5s
VAH Vaihoa 61.31 203 *e*T T 14 57 17.2
comp=Z,21nm,0.4s
ASAJ Asahikawa 61.69 305 P **P 13 51 14.7 -0.2**
comp=Z,15nm,0.8s,baz=108,slow=11,SNR=10
ASAJ Asahikawa 61.69 305 *e*P **P 13 51 14.7 -0.2**
comp=Z,23nm,0.9s
ERM Erimo 62.54 303 *e*P **P 13 51 19.8 -0.8**
comp=Z,46nm,1.0s
ERM Erimo 62.54 303 *d i*P **P 13 51 21.0 +0.4**
ERM pmax pmax
comp=Z,68nm,1.7s
PCRV Puerto La Cruz 63.27 102 LR LR 14 21 44.3
comp=Z,281nm,19.4s,baz=300,slow=39
TIAR Tiarei 64.00 204 *e*T T 15 00 38.7
comp=Z,25nm,0.2s
PPT Papeete 64.08 204 LR LR 14 12 45.8
comp=Z,93nm,19.8s,baz=14,slow=30
PPT2 Papeete2 64.10 204 *e*S **S 14 00 06.8 -0.4**
comp=Z,392nm,29.2s
PPT2 *e*LQ LQ 14 07 35.6
comp=Z,2μm,30.2s
PPT2 *e*LR LR 14 10 21.0
comp=Z,248nm,27.2s
PPT2 Papeete2 64.10 204 *e*T T 15 00 45.9
comp=Z,3.5nm,0.3s
ZEA Zeya 64.16 320 *e*P **P 13 51 30.8 -0.3**
ZEA pmax pmax
comp=Z,44nm,1.0s
TVO Taravao 64.19 203 *e*T T 15 00 52.8
comp=Z,4.5nm,0.3s
NRIK Noril'sk 64.62 347 P **P 13 51 33.9 0.0**
comp=Z,19nm,1.0s,baz=31,slow=4.7,SNR=20
NRIK LR LR 14 20 23.3
comp=Z,227nm,20.8s,baz=48,slow=37
TEY Ternei 64.64 309 *e*P **P 13 51 33.7 -0.7**
ARCES ARCESS Array B 65.56 10 P **P 13 51 40.2 +0.2**
comp=Z,4.6nm,0.9s,baz=350,slow=6.2,SNR=5.9
ARCES LR LR 14 20 55.1
comp=Z,258nm,19.9s,baz=344,slow=37
RKT Rikitea 66.62 188 *e*S **S 14 00 42.1 +4.4**
comp=Z,446nm,29.8s
RKT *e*LQ LQ 14 08 46.3
comp=Z,1μm,30.5s
RKT *e*LR LR 14 11 46.4
comp=Z,524nm,27.8s
RKT Rikitea 66.62 188 *e*T T 15 03 59.6
comp=Z,8.7nm,0.3s
USRK Ussuriysk Ar. 67.75 310 P **P 13 51 54.4 0.0**
comp=Z,23nm,1.1s,baz=48,slow=5.7,SNR=23
USRK LR LR 14 19 10.3
comp=Z,227nm,20.4s,baz=40,slow=34
MDJ Mudanjiang 68.80 312 P **P 13 51 59.6 -1.4**
MDJ pmax pmax
comp=Z,11nm,1.6s
MDJ pmax pmax
comp=Z,340nm,3.2s
MJAR Matsushiro Arr 68.89 301 P **P 13 52 01.2 -0.5**
comp=Z,6.1nm,0.8s,baz=34,slow=3.5,SNR=8.2
MAJO Matsushiro 68.89 301 *d i*P **P 13 52 01.8 +0.1**
MAJO *i* *PP **pP 13 52 08.3 +0.9**
MAJO *i* 13 52 26.1
MAJO pmax pmax
comp=Z,58nm,2.5s
AFI Afiamalu 70.08 226 LR LR 14 14 54.5
comp=Z,267nm,21.8s,baz=48,slow=29
NB2 NORSAR Subarra 70.53 20 P **P 13 52 12.0 +0.6**
comp=Z,10.0nm,1.0s,baz=330,slow=6.2
NOA NORSAR Array B 70.53 20 LR LR 14 21 43.6
comp=Z,134nm,21.3s,baz=345,slow=35
HIA Hailar 70.64 320 *c i*P **P 13 52 11.8 -0.4**
HIA *i* *PP **pP 13 52 18.0 +0.1**
HIA pmax pmax
comp=Z,18nm,1.0s
EKA Eskdalemuir Ar 70.79 30 P **P 13 52 14.0 +1.0**
comp=Z,0.2nm,0.3s,baz=316,slow=5.9,SNR=2.7
EKA LR LR 14 22 01.8
comp=Z,238nm,21.4s,baz=335,slow=35
EKA Eskdalemuir Ar 70.79 30 P **P 13 52 14.0 +1.0**
RAR Rarotonga 70.94 212 LR LR 14 17 09.1
comp=Z,294nm,21.2s,baz=3.0,slow=31
HFS Hagfors 71.93 19 P **P 13 52 20.7 +0.9**
comp=Z,9.2nm,1.1s,baz=342,slow=7.6,SNR=4.9
HFS LR LR 14 23 37.5
comp=Z,203nm,18.9s,baz=331,slow=36
TMCR Tamitsa 72.10 7 *e*P **P 13 52 21.4 +0.7**
TMCR pmax pmax
comp=Z,22nm,0.9s
RPN Rapa Nui 72.14 163 LR LR 14 17 08.0
comp=Z,158nm,18.1s,baz=322,slow=30
FIA1 FINESS Array S 73.24 13 *e*P **P 13 52 27.8 +0.2**
FINES FINESS Array B 73.24 13 P **P 13 52 28.3 +0.7**
comp=Z,2.1nm,0.6s,baz=357,slow=8.4,SNR=8.2
FINES LR LR 14 22 46.3
comp=Z,310nm,21.1s,baz=346,slow=34
SNY Shenyang 73.93 313 ⇓P **P 13 52 31.8 -0.2**
SNY pmax pmax
comp=Z,30nm,0.9s
SNY LR LR
comp=Z,350nm,14.2s
SNY LR LR
comp=Z,320nm,6.4s
SNY LR LR
comp=Z,440nm,6.1s
PTGA Pitinga 74.20 107 *e*P **P 13 52 33.9 -0.1**
comp=Z,22nm,1.5s

KSRS Korea Array 74.52 307 P **P 13 52 35.7 +0.2**
comp=Z,4.7nm,1.0s,baz=63,slow=7.3,SNR=14
KS01 Wonju Array Si 74.52 307 *e*P **P 13 52 35.2 -0.3**
KSAR Wonju Array Be 74.55 307 P **P 13 52 35.7 0.0**
KSAR Wonju Array Be 74.55 307 P **P 13 52 35.7 0.0**
IRK Irkutsk 74.81 330 *e*P **P 13 52 36.0 -1.0**
IRK pmax pmax
comp=Z,46nm,2.1s
PRGR Permogore 75.10 4 *e*P **P 13 52 39.2 +0.8**
PRGR pmax pmax
comp=Z,25nm,0.9s
KLMR Klimovskoe 75.49 7 *e*P **P 13 52 40.5 -0.1**
KLMR pmax pmax
comp=Z,35nm,1.2s
KLMR Klimovskoe 75.49 7 *e*P **P 13 52 40.6 -0.1**
KLMR AMP 13 52 47.6
comp=Z,35nm,1.2s
TLY Talaya 75.49 330 *e*P **P 13 52 41.3 +0.3**
comp=Z,21nm,1.1s
TLY Talaya 75.49 330 *e*P **P 13 52 41.8 +0.9**
TLY pmax pmax
comp=Z,25nm,1.2s
TLY MLR MLR
comp=Z,134nm,11.0s
TJN Taejon 75.58 307⇑ *i*P **P 13 52 42.2 +0.6**
TJN *i* *PP **pP 13 52 45.9 -1.4**
VSU Vasula 76.17 14⇓ *e*P **P 13 52 45.2 +0.6**
VSU pmax pmax
comp=Z,34nm,1.0s
MOY Mondy 76.45 331 *e*P **P 13 52 47.8 +1.3**
MOY pmax pmax
comp=Z,32nm,1.8s
DL2 Dalian 77.05 312 P **P 13 52 50.8 +0.9**
DL2 pmax pmax
comp=Z,22nm,0.8s
ULN Ulaanbaatar 77.25 326 *e*P **P 13 52 51.4 +0.2**
comp=Z,10nm,0.9s
ULN Ulaanbaatar 77.25 326 *c i*P **P 13 52 51.5 +0.4**
ULN *i* *SP **pP 13 52 55.8 -1.0**
ULN pmax pmax
comp=Z,35nm,2.5s
SONA1 Songino Array 77.53 326 *e*P **P 13 52 52.8 +0.2**
SONM Songino Array 77.54 326 P **P 13 52 53.2 +0.5**
comp=Z,13nm,0.9s,baz=47,slow=3.7,SNR=43
SONM LR LR 14 26 55.2
comp=Z,411nm,19.1s,baz=40,slow=36
SAML Samuel 77.97 115 *e*P **P 13 52 53.5 -1.9**
comp=Z,5.0nm,1.1s
IZAR Zarasai 78.65 15 *e*P **P 13 52 59.7 +1.2**
IZAR IAmb IAmb 13 53 07.2
comp=Z,12nm,1.0s
NVS Novosibirsk 78.69 343 *i*P **P 13 52 59.2 +0.5**
NVS pmax pmax
comp=N,8.0nm,1.2s
NVS pmax pmax
comp=Z,37nm,1.2s
NVS pmax pmax
comp=E,15nm,1.3s
ISAL Salakas 78.80 15 *e*P **P 13 53 00.6 +1.3**
ISAL IAmb IAmb 13 53 07.1
comp=Z,6.5nm,0.8s
IIGN Ignalina 79.03 15 *e*P **P 13 53 01.7 +1.1**
IIGN IAmb IAmb 13 53 08.1
comp=Z,8.6nm,0.9s
ZAA0 Zalesovo Array 79.16 341 *e*P **P 13 53 01.4 +0.1**
comp=Z,17nm,1.4s
ZALV Zalesovo Beam 79.16 341 P **P 13 53 01.9 +0.6**
comp=Z,7.5nm,1.1s,baz=18,slow=6.2,SNR=18
ZALV LR LR 14 30 16.9
comp=Z,226nm,18.0s,baz=68,slow=37
ZALV Zalesovo Beam 79.16 341 *e*P **P 13 53 01.3 0.0**
ZALV Zalesovo Beam 79.16 341 *e*P **P 13 53 01.3 0.0**
GUMO Guam 79.25 278 LR LR 14 20 13.8
comp=Z,246nm,21.9s,baz=82,slow=30
CLL Collm 79.52 24 *e*P **P 13 53 04.0 +0.6**
comp=Z,4.0nm,0.7s
CLL *e*pP **pP 13 53 07.0 -2.1**
CLL *i* 13 53 10.5
comp=Z,12nm,1.2s
CLL *i* PcP **sP 13 53 13.9 +2.7**
CLL Collm 79.52 24 *e*P **P 13 53 04.0 +0.6**
CLL *e* 13 53 07.0
CLL *i* 13 53 10.5
CLL pmax pmax
comp=Z,4.0nm,0.7s
SVE Sverdlovsk 79.86 356⇓ *e*P **P 13 53 05.9 +0.8**
SVE pmax pmax
comp=Z,33nm,1.9s
BRG Berggiesshubel 80.18 24 *e*P **P 13 53 08.5 +1.5**
comp=Z,5.9nm,1.0s
BRG *e* 13 53 13.0
comp=Z,19nm,1.3s
comp=N,268nm,19.2s
comp=E,133nm,18.6s
comp=Z,218nm,19.7s
BRG Berggiesshubel 80.18 24 *e*P **P 13 53 08.5 +1.5**
BRG *e* 13 53 13.0
BRG pmax pmax
comp=Z,6.0nm,1.0s
BRG MLR MLR
comp=N,268nm,19.2s
BRG MLR MLR
comp=E,133nm,18.6s
BRG MLR MLR
comp=Z,218nm,19.7s
LPAZ La Paz 80.35 123 P **P 13 53 08.8 -0.2**
comp=Z,4.9nm,0.8s,baz=316,slow=6.5,SNR=13
LPAZ LR LR 14 29 21.0
comp=Z,118nm,21.3s,baz=317,slow=36
LPAZ La Paz 80.35 123 *e*P **P 13 53 08.1 -0.9**
comp=Z,6.8nm,0.9s
LPAZ La Paz 80.35 123 *e*P **P 13 53 08.7 -0.3**
ARU Arti 80.36 357 *e*P **P 13 53 07.2 -0.6**
comp=Z,14nm,1.0s
ARU Arti 80.36 357 *d i*P **P 13 53 08.1 +0.3**
ARU 13 56 08.1
ARU S **S 14 03 13.8 +1.2**
ARU pmax pmax
comp=Z,17nm,2.5s
BFO Black Forest 80.61 28 *e*P **P 13 53 08.0 -1.3**
comp=Z,6.8nm,0.6s
BFO Black Forest 80.61 28 *ce*P **P 13 53 09.9 +0.5**
BFO pmax pmax
comp=Z,8.0nm,1.2s
HHC Hu-ho-hao-te 80.75 319 *e*P **P 13 53 10.3 -0.1**
HHC sP PcP 13 53 17.0 -0.1
HHC S **S 14 03 13.9 -3.6**
HHC pmax pmax
comp=Z,32nm,0.8s
HHC pmax pmax
comp=Z,190nm,5.6s
HHC LR LR
comp=Z,380nm,15.6s
HHC LR LR
comp=Z,330nm,14.7s
HHC LR LR
comp=Z,670nm,16.4s
OBN Obninsk 80.85 9 *e*P **P 13 53 10.8 +0.4**
OBN *e* 13 53 15.6
OBN *e* 13 56 15.0
OBN *e*PPP PPP 13 58 04.6
OBN pmax pmax
comp=Z,8.0nm,1.3s
OBN MLR MLR
comp=Z,167nm,18.0s
TIA Tai'an 81.45 312 P **P 13 53 13.9 -0.2**
TIA pmax pmax
comp=Z,7.0nm,1.0s
KHC Kasperske Hory 81.61 25 *e*P **P 13 53 18.5 +3.8**
KHC *e*pP **PcP 13 53 21.5 +0.9**
KHC Kasperske Hory 81.61 25 *e*P **P 13 53 18.5 +3.8**
KHC *e* 13 53 21.5
MNMC Minye Minye 81.67 126 *e*P **P 13 53 13.9 -1.7**
comp=Z,17nm,1.0s
GERES GERESS Array B 81.91 25 P **P 13 53 17.6 +1.2**
comp=Z,0.7nm,0.7s,baz=267,slow=2.7,SNR=4.1
GERES LR LR 14 31 23.8
comp=Z,296nm,18.4s,baz=318,slow=37
GEA0 GERESS Array S 81.91 25 *e*P **P 13 53 16.5 +0.1**
OJC Ojcow 82.38 21 *e*P P 13 53 26.6 +7.9
OJC Ojcow 82.38 21 *e*P P 13 53 26.5 +7.8
DGZ Jazzator, Alta 82.39 338 *i*P **P 13 53 19.7 +0.8**
DGZ *i* XP **pP 13 53 25.9 +1.2**
BRVK Borovoye 82.68 349 *e*P **P 13 53 20.2 +0.1**
comp=Z,19nm,1.0s
BRVK Borovoye 82.68 349 *d i*P **P 13 53 21.0 +0.8**

BRVK *i* *SP **sP 13 53 27.5 -0.5**
BRVK pmax pmax
comp=Z,48nm,1.2s
ESDC Sonseca Array 82.70 41 P **P 13 53 21.4 +0.8**
comp=Z,0.3nm,0.5s,baz=322,slow=4.5,SNR=6.5
ESDC LR LR 14 27 45.0
comp=Z,132nm,18.2s,baz=295,slow=34
BVAR Borovoye Array 82.70 349 P **P 13 53 21.0 +0.7**
comp=Z,6.8nm,1.0s,baz=350,slow=7.3,SNR=26
BVAR LR LR 14 35 04.3
comp=Z,279nm,18.1s,baz=17,slow=39
BVAR Borovoye Array 82.70 349 P **P 13 53 21.0 +0.7**
BVAR Borovoye Array 82.70 349 P **P 13 53 21.0 +0.7**
PB01 IPOC Station P 83.23 127 *e*P **P 13 53 22.4 -1.0**
comp=Z,37nm,1.5s
NIE Niedzica 83.25 21 *e*P **P 13 53 25.0 +1.8**
NIE Niedzica 83.25 21 *e*P **P 13 53 25.0 +1.8**
LANS Liptovska Anna 83.28 21 *e*P P 13 53 31.5 +8.1
LANS Liptovska Anna 83.28 21 *e*P P 13 53 31.5 +8.1
MODS Modra-Piesok 83.38 23 *e*P P 13 53 30.8 +6.9
MODS pmax pmax
comp=Z,22nm,1.2s
MODS Modra-Piesok 83.38 23 *e*P P 13 53 30.8 +6.9
ZST Bratislava 83.49 23 *e*P P 13 53 31.5 +7.0
ZST pmax pmax
comp=Z,2.0nm,1.4s
ZST Bratislava 83.49 23 *e*P P 13 53 31.5 +7.0
KURK Kurchatov 83.54 344 *e*P **P 13 53 23.9 -0.7**
comp=Z,20nm,1.1s
KURK Kurchatov 83.54 344 *d i*P **P 13 53 25.1 +0.5**
KURK *i* *SP **pP 13 53 31.1 +0.7**
KURK pmax pmax
comp=Z,138nm,1.2s
NJ2 Nanjing 83.59 309 *e*P **P 13 53 24.3 -0.9**
NJ2 pmax pmax
comp=Z,21nm,0.9s
KURBB Kurchatov Arra 83.64 344 P **P 13 53 25.4 +0.2**
comp=Z,8.2nm,0.9s,baz=18,slow=4.8,SNR=38
VYHS Vyhne 83.71 22 *e*P P 13 53 32.9 +7.3
VYHS pmax pmax
comp=Z,5.0nm,1.3s
VYHS Vyhne 83.71 22 *e*P P 13 53 32.9 +7.3
AKASG Malin Array Be 84.02 15 P **P 13 53 27.0 0.0**
comp=Z,0.4nm,0.3s,baz=338,slow=4.3,SNR=7.7
AKASG LR LR 14 32 15.7
comp=Z,244nm,19.1s,baz=350,slow=37
AKBB Malin Array Si 84.02 15 *e*P **P 13 53 26.2 -0.9**
comp=Z,8.6nm,0.9s
AKBB Malin Array Si 84.02 15 *e*P **P 13 53 26.2 -0.9**
AKBB pmax pmax
comp=Z,9.0nm,0.9s
CRVS Cervenica-Dubn 84.02 20 *e*P P 13 53 33.0 +5.8
CRVS pmax pmax
comp=Z,14nm,1.6s
CRVS Cervenica-Dubn 84.02 20 *e*P P 13 53 33.0 +5.8
KIEV Kiev 84.02 15 *e*P **P 13 53 26.1 -1.0**
comp=Z,9.1nm,1.0s
KIEV Kiev 84.02 15⇑ *e*P **P 13 53 28.7 +1.6**
KIEV pmax pmax
comp=Z,11nm,1.0s
KECS Kecovo 84.16 21 *e*P P 13 53 35.3 +7.4
KECS pmax pmax
comp=Z,6.0nm,1.0s
KECS Kecovo 84.16 21 *e*P P 13 53 35.3 +7.4
HNR Honiara 84.19 251 LR LR 14 25 05.4
comp=Z,321nm,19.2s,baz=33,slow=32
PERS Pernice 84.31 25 *i*P **P 13 53 29.4 +0.6**
PERS *i* 13 53 35.5
JAVS Javornik 84.64 26 *e*P **P 13 53 31.0 +0.4**
BOJS Bojanci 85.36 25 *e*P **P 13 53 34.2 +0.2**
AKTO Aktyubinsk 86.38 357 P **P 13 53 39.0 +0.1**
comp=Z,1.4nm,0.9s,baz=346,slow=8.4,SNR=4.3
AKTO LR LR 14 34 37.1
comp=Z,122nm,19.6s,baz=10,slow=37
MK31 Makanchi Array 86.40 340 *e*P **P 13 53 38.0 -1.2**
MK31 Makanchi Array 86.40 340 *e*P **P 13 53 38.0 -1.2**
MKAR Makanchi Array 86.40 340 P **P 13 53 39.0 -0.2**
comp=Z,2.8nm,1.0s,baz=32,slow=3.2,SNR=18
MKAR LR LR 14 35 15.6
comp=Z,147nm,18.9s,baz=22,slow=38
MKAR Makanchi Array 86.40 340 *e*P **P 13 53 37.8 -1.3**
comp=Z,30nm,1.2s
MKAR Makanchi Array 86.40 340 *i*P **P 13 53 39.0 -0.2**
MKAR pmax pmax
comp=Z,3.0nm,1.0s
MK01 Makanchi Array 86.42 340 *e*P **P 13 53 38.2 -1.1**
MAKZ Makanchi 86.46 340 *e*P **P 13 53 38.8 -0.7**
comp=Z,14nm,1.1s
MAKZ Makanchi 86.46 340 *e*P **P 13 53 39.1 -0.4**
GTA Gaotai 87.18 325 P **P 13 53 43.0 -0.2**
GTA pP PcP 13 53 46.9 +1.5
GTA sP pP 13 53 49.3 +0.3
GTA SKS **SKSac 14 04 10.0 0.0**
GTA S **SKKSac 14 04 19.4 +0.5**
GTA SS **SS 14 10 06.8 +2.4**
GTA pmax pmax
comp=Z,6.0nm,1.7s
GTA pmax pmax
comp=Z,320nm,6.6s
GTA LR LR
comp=Z,550nm,19.9s
GTA LR LR
comp=Z,380nm,21.3s
GTA LR LR
comp=Z,600nm,23.7s
XAN Xi'an 87.39 316 P **P 13 53 43.9 -0.4**
XAN pP pP 13 53 48.4 -1.7
XAN sP sP 13 53 51.0 -1.1
XAN pmax pmax
comp=Z,15nm,1.6s
XAN pmax pmax
comp=Z,370nm,4.7s
ABKAR Akbulak array 87.45 355 *e*P **P 13 53 44.6 +0.4**
WMQ Urumqi 87.65 335 P **P 13 53 46.3 +0.9**
WMQ pP pP 13 53 51.9 +0.7
WMQ pmax pmax
comp=Z,11nm,0.7s
WMQ pmax pmax
comp=Z,200nm,3.6s
WMQ LR LR
comp=Z,900nm,19.3s
WMQ LR LR
comp=Z,760nm,18.3s
WMQ LR LR
comp=Z,810nm,20.3s
MDT Midelt 87.78 45 LR LR 14 31 35.3
comp=Z,184nm,18.9s,baz=343,slow=35
LZH Lanzhou 88.19 321 *e*P **P 13 53 48.3 +0.1**
LZH pP PcP 13 53 51.5 +1.6
LZH sP pP 13 53 53.4 -0.6
LZH PP **PP 13 57 16.5 +2.1**
LZH SKS **SKSac 14 04 13.5 -2.8**
LZH *e*S **S 14 04 29.8 -2.1**
LZH *e*SS **SS 14 10 19.5 +0.2**
LZH pmax pmax
comp=Z,33nm,1.4s
LZH pmax pmax
comp=Z,310nm,9.7s
LZH LR LR
comp=Z,920nm,17.0s
LZH LR LR
comp=Z,1μm,18.9s
MLR Muntele Rosu 88.29 18 LR LR 14 33 14.9
comp=Z,92nm,19.5s,baz=340,slow=36
DZM Mont Dzumac 89.10 238 *e*LR LR 14 22 08.0
comp=Z,635nm,22.2s
DZM Mont Dzumac 89.10 238 P **P 13 53 52.2 -0.1**
comp=Z,8.9nm,1.1s,baz=94,slow=9.7,SNR=2.5
DZM LR LR 14 25 03.4
comp=Z,366nm,21.9s,baz=5.0,slow=30
ENH Enshi 90.09 314 *e*P **P 13 53 56.5 -0.5**
comp=Z,24nm,1.2s
ANN Anapa 91.08 11 *e*P P 13 53 54.6 -6.7
ANN *e* *PP **PcP 13 53 58.6 -3.7**
ANN *e*S **SKSac 14 04 24.5 -7.9**
ANN *e*SS **SS 14 11 02.3 +2.3**
ANN pmax pmax
comp=Z,40nm,1.0s
KEST Kesra 91.84 34 P **P 13 54 05.7 +0.6**
comp=Z,0.9nm,0.6s,baz=338,slow=5.4,SNR=2.2
KEST LR LR 14 36 00.7
comp=Z,187nm,18.3s,baz=279,slow=36
VAE Valguarnera 92.25 30 LR LR 14 35 59.3
comp=Z,219nm,18.2s,baz=341,slow=36
CD2 Chengdu 92.48 318 P **P 13 54 06.9 -1.2**

CD2					pmax	pmax		
	comp=Z,10.0nm,0.8s							
KBZ	**Khabaz**	**92.76**	**7**	LR	LR	14 38 51.8		
	comp=Z,182nm,18.8s,baz=354,slow=38							
CPUP	**Villa Florida**	**94.49**	**122**	LR	LR	14 37 56.1		
	comp=Z,91nm,20.3s,baz=334,slow=36							
GYA	**Guiyang**	**94.62**	**313**	*e*P	**P**	**13 54 18.0**	**-0.1**	
GYA				PP	**PP**	**13 58 07.5**	**+2.0**	
GYA				SKS	**SKSac**	**14 04 52.3**	**-0.7**	
GYA				S	**S**	**14 05 27.0**	**-3.5**	
GYA				pmax	pmax			
	comp=Z,20nm,1.0s							
GYA				pmax	pmax			
	comp=Z,120nm,5.8s							
KSH	**Kashi**	**94.77**	**342**	P	**P**	**13 54 19.5**	**+0.9**	
KSH				PP	**PP**	**13 58 10.3**	**+4.2**	
KSH				S	**S**	**14 05 27.5**	**-4.0**	
KSH				SS	**SS**	**14 11 59.1**	**+5.6**	
KSH				pmax	pmax			
	comp=Z,200nm,5.4s							
KSH				LR	LR			
	comp=Z,980nm,15.1s							
BRTR	**Keskin Array B**	**95.42**	**15**	LR	LR	14 38 56.9		
	comp=Z,144nm,20.4s,baz=349,slow=36							
GNI	**Garni**	**96.47**	**6**	LR	LR	14 39 34.1		
	comp=Z,97nm,21.8s,baz=349,slow=36							
IDI	**Anoyia**	**97.62**	**23**	LR	LR	14 41 08.0		
	comp=Z,114nm,19.6s,baz=288,slow=37							
GEYT	**Alibeck**	**98.85**	**356**	LR	LR	14 45 35.1		
	comp=Z,97nm,18.3s,baz=15,slow=39							
LSZ	**Lusaka**	**144.96**	**44**	*e*PKPbc	**PKPab**	**14 00 33.4**	**-0.4**	
LSZ	**Lusaka**	**144.96**	**44**	*e*PKIKP	**PKPab**	**14 00 33.4**	**-0.4**	
NVL	**N'lazarevskaya**	**146.00**	**157**	*e*PKP2	**PKPab**	**14 00 39.2**	**+3.3**	
NVL				pmax	pmax			
	comp=Z,10.0nm,0.8s							
BOSA	**Boshof**	**153.46**	**65**	PKPbc	**PKPbc**	**14 00 54.9**	**-0.6**	
	comp=Z,4.0nm,0.9s,baz=269,slow=4.4,SNR=4.5							
SYO	**Syowa Base**	**153.49**	**169**	⇓*e*PKPdf	**PKPdf**	**14 00 48.4**	**+2.0**	

*DDA **19** 13:41:27.7,35°.26N×26°.80E,h20km, MI3.3*
*CSEM **19** 13:41:30.9±0.4,35°.25N×27°.18E,h10km,ML2.8, Error ellipse: s-maj=11.8km s-min=3.8km az=156.0*
*THE **19** 13:41:30.7,35°.25N×27°.17E,h0km±2km,ML2.7/5, Error ellipse: s-maj=5.1km s-min=1.5km az=141.0*
*ATH **19** 13:41:30.1,35°.26N×27°.18E,h24km±1km,ML2.7/6, Error ellipse: s-maj=4.3km s-min=1.1km az=323.0*
*ISCJB **19** 13:41:31.5±0.9,35°.28N±0°.06×27°.20E±0°.05,h21km±6km, Error ellipse: s-maj=11.5km s-min=3.9km az=152.9*
*ISK **19** 13:41:34.5,35°.62N×27°.12E,h7km,ML2.8/7*

ISC 19 13:41:30.6±1.2,35°.24N±0°.05×27°.19E±0°.03,h14km±8km, n76,σ1§05/102, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.31**	**356**	PG	**Pg**	**13 41 36.9**	**-0.1**	
KARP	**Karpathos**	**0.31**	**356**	P	**Pg**	**13 41 36.8**	**-0.2**	
KARP				S	**Sb**	**13 41 42.0**	**-0.8**	
KARP				AML	AML	13 41 44.4		
	comp=E,4815μm,0.2s							
KARP				AML	AML	13 41 44.8		
	comp=N,5064μm,0.3s							
KARP	**Karpathos**	**0.31**	**356**	P	**Pg**	**13 41 36.9**	**-0.1**	
KARP				S	**Sb**	**13 41 42.4**	**-0.4**	
KARP	**Karpathos**	**0.31**	**356**	P	**Pg**	**13 41 36.9**	**-0.1**	
KARP				S	**Sb**	**13 41 42.0**	**-0.8**	
ZKR	**Zakros**	**0.81**	**261**	P	**Pg**	**13 41 44.5**	**-1.7**	
ZKR				S	**Sn**	**13 41 58.6**	**-0.7**	
ZKR				AML	AML	13 42 01.1		
	comp=N,775μm,0.4s							
ZKR				AML	AML	13 42 01.9		
	comp=E,1600μm,0.3s							
ZKR	**Zakros**	**0.81**	**261**	P	**Pg**	**13 41 45.2**	**-1.1**	
ZKR				S	**Sb**	**13 41 58.1**	**+0.9**	
ZKR	**Zakros**	**0.81**	**261**	P	**Pg**	**13 41 45.2**	**-1.1**	
ZKR				S	**Sb**	**13 41 57.9**	**+0.7**	
ARG	**Arkhangelos**	**1.23**	**38**	PG	**Pg**	**13 41 54.8**	**+0.4**	
ARG				SG	**Sb**	**13 42 08.7**	**-0.8**	
ARG	**Arkhangelos**	**1.23**	**38**	P	**Pg**	**13 41 54.6**	**+0.1**	
ARG				S	**Sn**	**13 42 11.3**	**+1.3**	
ARG				AML	AML	13 42 16.9		
	comp=E,901μm,0.6s							
ARG				AML	AML	13 42 17.9		
	comp=N,784μm,0.5s							
ARG	**Arkhangelos**	**1.23**	**38**	P	**Pg**	**13 41 54.4**	**0.0**	
ARG				S	**Sn**	**13 42 11.0**	**+1.0**	
ARG	**Arkhangelos**	**1.23**	**38**	P	**Pn**	**13 41 54.0**	**+0.6**	
ARG	**Arkhangelos**	**1.23**	**38**	*e*Pg	**Pn**	**13 41 54.8**	**+0.4**	
ARG				*e*Sg	**Sb**	**13 42 08.7**	**-0.8**	
ARG				S	**Sn**	**13 42 10.9**	**+1.0**	
NPS	**Neapolis**	**1.29**	**271**	P	**Pb**	**13 41 54.7**	**0.0**	
NPS				S	**Sb**	**13 42 11.2**	**+0.1**	
NPS				AML	AML	13 42 23.1		
	comp=E,602μm,0.5s							
NPS				AML	AML	13 42 23.9		
	comp=N,598μm,0.5s							
NPS	**Neapolis**	**1.29**	**271**	P	**Pn**	**13 41 54.6**	**+0.4**	
NPS				S	**Sn**	**13 42 13.7**	**+2.4**	
NPS	**Neapolis**	**1.29**	**271**	P	**Pn**	**13 41 54.6**	**+0.4**	
NPS				S	**Sg**	**13 42 11.7**	**-0.6**	
LAST	**Lasithi**	**1.40**	**267**	P	**Pb**	**13 41 56.7**	**+0.1**	
LAST				S	**Sg**	**13 42 15.6**	**-0.3**	
LAST				AML	AML	13 42 25.6		
	comp=E,232μm,0.5s							
LAST				AML	AML	13 42 32.1		
	comp=N,288μm,0.7s							
LAST	**Lasithi**	**1.40**	**267**	P	**Pn**	**13 41 56.4**	**+0.6**	
LAST				S	**Sg**	**13 42 16.4**	**+0.5**	
LAST	**Lasithi**	**1.40**	**267**	P	**Pn**	**13 41 56.4**	**+0.6**	
LAST				S	**Sg**	**13 42 15.4**	**-0.5**	
DAT	**Datca**	**1.52**	**12**	PN	**Pn**	**13 41 57.1**	**-0.3**	
DAT				SN	**Sn**	**13 42 13.9**	**-3.1**	
DAT	**Datca**	**1.52**	**12**	*i* P	**Pn**	**13 41 57.6**	**+0.1**	
DAT	**Datca**	**1.52**	**12**	*e*Pn	**Pn**	**13 41 57.1**	**-0.3**	
DAT	**Datca**	**1.52**	**12**	P	**Pn**	**13 41 57.6**	**+0.1**	
DATC	**Datca-Mugla**	**1.56**	**14**	PN	**Pn**	**13 41 58.3**	**+0.4**	
DATC	**Datca-Mugla**	**1.56**	**14**	*e*Pn	**Pn**	**13 41 58.3**	**+0.4**	
SANT	**Santorini**	**1.80**	**309**	PN	**Pb**	**13 42 03.2**	**-0.2**	
SANT	**Santorini**	**1.80**	**309**	P	**Pn**	**13 42 01.4**	**+0.1**	
SANT	**Santorini**	**1.80**	**309**	P	**Pn**	**13 42 01.5**	**+0.2**	
SANT	**Santorini**	**1.80**	**309**	*e*Pn	**Pb**	**13 42 03.2**	**-0.2**	
BODT	**Bodrum**	**1.82**	**3**	PN	**Pn**	**13 42 01.5**	**0.0**	
BODT	**Bodrum**	**1.82**	**3**	*e*Pn	**Pn**	**13 42 01.5**	**0.0**	
THR3	**Thira Island,**	**1.86**	**309**	P	**Pn**	**13 42 02.1**	**+0.1**	
THR3	**Thira Island,**	**1.86**	**309**	P	**Pn**	**13 42 02.3**	**+0.2**	
THR2	**Thira island,**	**1.86**	**311**	P	**Pb**	**13 42 03.5**	**-1.0**	
THR2	**Thira island,**	**1.86**	**311**	P	**Pn**	**13 42 03.0**	**+0.9**	
AMGA	**Amorgos Island**	**1.90**	**327**	P	**Pn**	**13 42 02.8**	**+0.2**	
AMGA	**Amorgos Island**	**1.90**	**327**	P	**Pn**	**13 42 02.9**	**+0.2**	
SIVA	**Sivas**	**1.96**	**264**	P	**Pn**	**13 42 03.5**	**+0.1**	
SIVA	**Sivas**	**1.96**	**264**	P	**Pn**	**13 42 03.8**	**+0.4**	
DALY	**Dalyan (Mu¨la**	**1.97**	**37**	PN	**Pb**	**13 42 05.5**	**-0.7**	
DALY	**Dalyan (Mu¨la**	**1.97**	**37**	*i* P	**Pb**	**13 42 06.0**	**-0.2**	
DALY				*i* S	**Sg**	**13 42 35.3**	**+1.3**	
DALY	**Dalyan (Mu¨la**	**1.97**	**37**	*e*Pn	**Pb**	**13 42 05.5**	**-0.7**	
DALY	**Dalyan (Mu¨la**	**1.97**	**37**	P	**Pb**	**13 42 06.0**	**-0.2**	
TURN	**Turunc**	**1.99**	**35**	PN	**Pn**	**13 42 02.0**	**-1.8**	
TURN	**Turunc**	**1.99**	**35**	*i* P	**Pn**	**13 42 01.1**	**-2.7**	
TURN				*i* S	**Sn**	**13 42 26.5**	**-2.0**	
TURN	**Turunc**	**1.99**	**35**	P	**Pn**	**13 42 01.1**	**-2.7**	
TURN	**Turunc**	**1.99**	**35**	*e*Pn	**Pn**	**13 42 02.0**	**-1.8**	
TURN				S	**Sn**	**13 42 26.5**	**-2.0**	
FETY	**Fethiye**	**2.07**	**47**	PN	**Pb**	**13 42 08.1**	**+0.1**	
FETY	**Fethiye**	**2.07**	**47**	P	**Pb**	**13 42 07.3**	**-0.7**	
FETY	**Fethiye**	**2.07**	**47**	*e*Pn	**Pb**	**13 42 08.1**	**+0.1**	
AKAS	**Kas**	**2.20**	**63**	*i* P	**Pn**	**13 42 06.0**	**-0.8**	
AKAS				*i* S	**Sn**	**13 42 33.9**	**-0.1**	
AKAS	**Kas**	**2.20**	**63**	P	**Pn**	**13 42 06.0**	**-0.8**	
AKAS				S	**Sn**	**13 42 33.8**	**-0.1**	
APE	**Apeiranthos**	**2.26**	**324**	PN	**Pn**	**13 42 08.6**	**+0.9**	
APE	**Apeiranthos**	**2.26**	**324**	P	**Pn**	**13 42 07.5**	**-0.2**	
APE				AML	AML	13 42 36.9		
	comp=N,159μm,0.3s							
APE				AML	AML	13 42 37.1		
	comp=E,218μm,0.3s							
APE	**Apeiranthos**	**2.26**	**324**	P	**Pn**	**13 42 07.8**	**+0.1**	
APE	**Apeiranthos**	**2.26**	**324**	*e*Pn	**Pn**	**13 42 08.6**	**+0.9**	
VAM	**Vamos**	**2.45**	**275**	P	**Pn**	**13 42 12.1**	**+1.9**	
VAM	**Vamos**	**2.45**	**275**	P	**Pn**	**13 42 11.5**	**+1.3**	
AYDN	**Tasoluk**	**2.48**	**13**	*i* P	**Pn**	**13 42 11.8**	**+1.2**	
AYDN	**Tasoluk**	**2.48**	**13**	P	**Pn**	**13 42 11.8**	**+1.2**	
SMG	**Samos**	**2.48**	**354**	P	**Pn**	**13 42 10.2**	**-0.4**	
SMG	**Samos**	**2.48**	**354**	P	**Pn**	**13 42 10.6**	**0.0**	
GVD	**Gavdhos**	**2.58**	**262**	P	**Pn**	**13 42 12.6**	**+0.8**	
GVD	**Gavdhos**	**2.58**	**262**	P	**Pn**	**13 42 12.7**	**+0.8**	
TAVA	**DENIZLI_Tavas**	**2.62**	**32**	*i* P	**Pn**	**13 42 15.2**	**+2.6**	
TAVA				*i* S	**Sb**	**13 42 50.2**	**+0.7**	
TAVA	**DENIZLI_Tavas**	**2.62**	**32**	P	**Pn**	**13 42 15.2**	**+2.6**	
TAVA				S	**Sb**	**13 42 50.2**	**+0.7**	
IMMV	**Iera Moni Meta**	**2.63**	**276**	P	**Pn**	**13 42 11.8**	**-0.9**	
IMMV	**Iera Moni Meta**	**2.63**	**276**	P	**Pn**	**13 42 12.6**	**-0.1**	
AYDB	**Zeytinkoy-Aydi**	**2.76**	**12**	PN	**Pn**	**13 42 15.5**	**+1.0**	
AYDB	**Zeytinkoy-Aydi**	**2.76**	**12**	*e*Pn	**Pn**	**13 42 15.5**	**+1.0**	
GOLH	**Golhisar**	**2.76**	**43**	*i* P	**Pn**	**13 42 15.0**	**+0.4**	
GOLH				*i* S	**Sg**	**13 43 01.4**	**+2.0**	
GOLH	**Golhisar**	**2.76**	**43**	P	**Pn**	**13 42 15.0**	**+0.4**	
ANKY	**Antikythira Is**	**3.23**	**282**	P	**Pn**	**13 42 22.1**	**+1.3**	
ANKY	**Antikythira Is**	**3.23**	**282**	P	**Pn**	**13 42 22.0**	**+1.1**	
KYTH	**Kithira**	**3.52**	**288**	P	**Pn**	**13 42 26.5**	**+1.6**	
KEPZ	**Antalya-Kepez**	**3.94**	**64**	*i* P	**Pn**	**13 42 30.8**	**+0.1**	
KEPZ	**Antalya-Kepez**	**3.94**	**64**	P	**Pn**	**13 42 30.8**	**+0.1**	

*ISCJB **19** 13:45:18.2±0.5,20°.75S±0°.1×177°.93W±0°.10,h450km, mb3.8/18, Error ellipse: s-maj=17.3km s-min=8.3km az=143.5*
*IDC **19** 13:45:19.3±2.0,20°.59S×177°.90W,h451km±22km, mb3.4/17,mb1 3.6/19,mb1mx3.4/49,mbtmp4.3/19, Error ellipse: s-maj=15.8km s-min=10.4km az=134.0*

ISC 19 13:45:19.2±0.6,20°.65±0°.1×177°.9W±0°.1,h450km,n28, σ1§31/28,mb3.8/18, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.85**	**42**	P	**P**	**13 47 26.1**	**+2.1**	
	7.1nm,0.3s,baz=201,slow=4.2,SNR=10							
AFI				S	**S**	**13 49 04.1**	**-2.4**	
	2.4nm,0.3s,baz=174,slow=19,SNR=4.1							
URZ	**Urewera**	**18.13**	**193**	P	**P**	**13 49 01.8**	**-1.2**	
	1.0nm,0.3s,baz=344,slow=6.3,SNR=6.3							
URZ				S	**S**	**13 52 09.1**	**+2.6**	
	0.2nm,0.3s,baz=347,slow=18,SNR=4.6							
STKA	**Stephens Creek**	**37.84**	**244**	P	**P**	**13 51 56.2**	**+0.2**	
	1.2nm,0.5s,baz=91,slow=11,SNR=5.4							
JAY	**Jayapura**	**44.16**	**289**	P	**P**	**13 52 47.6**	**+0.7**	
	22nm,1.1s,baz=138,slow=18,SNR=3.7							
ASAR	**Alice Springs**	**44.59**	**257**	P	**P**	**13 52 50.1**	**-0.1**	
	0.9nm,0.4s,baz=88,slow=8.6,SNR=38							
WRA	**Warramunga Arr**	**44.68**	**262**	P	**P**	**13 52 50.0**	**-0.9**	
	0.7nm,0.3s,baz=97,slow=7.1,SNR=35							
FITZ	**Fitzroy Crossi**	**53.11**	**262**	P	**P**	**13 53 53.4**	**-0.3**	
	5.3nm,1.2s,baz=69,slow=8.6,SNR=6.0							
SIJI	**Sorong**	**53.36**	**285**	P	**P**	**13 53 55.4**	**-0.2**	
	8.2nm,0.8s,baz=97,slow=2.5,SNR=3.5							
NWAO	**Narrogin (SRO)**	**58.41**	**243**	P	**P**	**13 54 29.9**	**-0.7**	
	4.8nm,0.8s,baz=79,slow=16,SNR=4.6							
RPN	**Rapa Nui**	**62.37**	**111**	P	**P**	**13 54 56.6**	**-0.4**	
	21nm,0.3s,baz=243,slow=14,SNR=2.9							
ASAJ	**Asahikawa**	**73.86**	**332**	P	**P**	**13 56 08.2**	**+1.4**	
	6.0nm,0.8s,baz=215,slow=12,SNR=7.0							
PETK	**Petropavlovsk-**	**76.39**	**345**	P	**P**	**13 56 20.4**	**-0.4**	
	2.9nm,0.7s,baz=123,slow=7.3,SNR=4.7							
KSRS	**Korea Array**	**77.02**	**319**	P	**P**	**13 56 25.2**	**+0.6**	
	0.9nm,0.6s,baz=129,slow=6.2,SNR=5.7							
USRK	**Ussuriysk Ar.**	**79.10**	**326**	P	**P**	**13 56 37.1**	**+1.4**	
	1.9nm,0.7s,baz=120,slow=8.5,SNR=2.8							
YBH	**Yreka Blue Hor**	**80.30**	**39**	P	**P**	**13 56 43.3**	**+1.0**	
	1.3nm,0.5s,baz=165,slow=16,SNR=4.2							
NVAR	**Mina Array Bea**	**81.03**	**43**	P	**P**	**13 56 47.2**	**+0.8**	
	0.7nm,0.8s,baz=231,slow=6.7,SNR=3.7							
TXAR	**Lajitas Array**	**87.03**	**57**	P	**P**	**13 57 17.1**	**+0.9**	
	0.5nm,0.7s,baz=220,slow=6.7,SNR=4.9							
ILAR	**Eielson Array**	**88.39**	**13**	P	**P**	**13 57 20.6**	**-1.0**	
	0.5nm,0.7s,baz=220,slow=6.7,SNR=4.9							
PDAR	**Pinedale Array**	**88.96**	**43**	P	**P**	**13 57 25.3**	**+0.2**	
	0.6nm,0.7s,baz=212,slow=3.2,SNR=3.9							
CMAR	**Chiang Mai Arr**	**90.24**	**290**	P	**P**	**13 57 32.4**	**+1.1**	
	1.0nm,0.7s,baz=118,slow=2.1,SNR=6.2							
MKAR	**Makanchi Array**	**111.33**	**313**	PKiKP	**PKiKP**	**14 02 59.0**	**-2.1**	
	0.2nm,0.6s,baz=18,slow=0.5,SNR=3.0							
KURBB	**Kurchatov Arra**	**114.18**	**217**	PKP	PKPdf	14 03 04.0	-2.4	
	0.3nm,0.6s,baz=90,slow=2.8,SNR=3.3							
BVAR	**Borovoye Array**	**119.21**	**320**	PKP	**PKPdf**	**14 03 13.8**	**-2.1**	
	0.5nm,0.4s,baz=52,slow=1.0,SNR=4.6							
GNI	**Garni**	**138.84**	**308**	PKP	**PKPdf**	**14 03 52.8**	**-0.9**	
	4.6nm,0.4s,baz=135,slow=14,SNR=2.8							
AKASG	**Malin Array Be**	**143.14**	**331**	PKhKP	PKPpre	14 03 56.6		
	2.1nm,0.6s,baz=43,slow=4.3,SNR=14							
BRTR	**Keskin Array B**	**146.97**	**312**	PKPbc	**PKPdf**	**14 04 09.5**	**+1.5**	
	0.5nm,0.4s,baz=103,slow=6.2,SNR=3.3							
MMAI	**Mount Meron Ar**	**147.95**	**300**	PKPbc	**PKPbc**	**14 04 12.5**	**-0.9**	
	1.3nm,0.5s,baz=76,slow=6.1,SNR=3.6							
GERES	**GERESS Array B**	**150.32**	**344**	PKPbc	**PKPbc**	**14 04 17.8**	**-0.9**	
	0.5nm,0.4s,baz=318,slow=1.3,SNR=3.5							

*IDC **19** 14:00:05.8±0.7,28°.61N×76°.65E,h0km,mb3.9/21, mb1 4.1/22,mb1mx3.9/65,mbtmp3.9/22,ML3.5/1, Error ellipse: s-maj=19.4km s-min=15.0km az=34.0*
*NEIC **19** 14:00:07.6±0.5,28°.73N×76°.69E,h10km,mb4.1/4, Error ellipse: s-maj=10.7km s-min=8.8km az=51.0*
*ISCJB **19** 14:00:08.4±0.5,28°.67N±0°.03×76°.64E±0°.03,h29km±3km, mb3.8/24, Error ellipse: s-maj=5.2km s-min=3.7km az=39.7*
*NDI **19** 14:00:08.6±2.1,28°.66N×76°.59E,h10km,ML3.8*
*NNC **19** 14:00:24.9±6.5,29°.96N×77°.24E,h86km±48km,mb3.7, Error ellipse: s-maj=109.1km s-min=49.8km az=73.0*

ISC 19 14:00:08.5±1.1,28°.57N±0°.03×76°.64E±0°.04,h23km±8km, n71,σ1§97/97,mb4.0/24, 1C-4D, Northern India

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BHGR	**Bahadurgarh**	**0.29**	**66**	*e*P	**Pb**	**14 00 15.0**	**-0.2**	
BHGR				*e*S	**Sb**	**14 00 19.1**	**-0.7**	
SONA	**Sohna**	**0.50**	**129**	*e*P	**Pn**	**14 00 20.6**	**+0.2**	
SONA				*e*S	**Sn**	**14 00 28.3**	**0.0**	
SONA				IAML		14 00 28.6		
	comp=N,987nm,0.1s							
SONA				IAML		14 00 29.2		
	comp=E,2μm,0.8s							
NDI	**New Delhi**	**0.52**	**77**	*e*P	**Pb**	**14 00 19.0**	**0.0**	
NDI				*e*S	**Sb**	**14 00 27.0**	**+0.8**	
KHET	**Khetri**	**0.88**	**236**	*e*P	**Pn**	**14 00 26.2**	**+0.6**	
KHET				*e*S	**Sn**	**14 00 38.1**	**+0.4**	
KHET				IAML		14 00 41.2		
	comp=E,1μm,0.2s							
KKR	**Kurukshetra**	**1.40**	**7**	*e*P	**Pn**	**14 00 32.5**	**-0.2**	
KKR				*e*S	**Sn**	**14 00 49.1**	**-1.4**	
DDI	**Dehra Dun**	**2.14**	**35**	*e*P	**Pb**	**14 00 45.7**	**-0.9**	
DDI				*e*S	**Sn**	**14 01 10.2**	**+1.3**	
DDI				IAML		14 01 15.4		
	comp=N,3μm,0.7s							
DDI				IAML		14 01 16.1		
	comp=E,3μm,0.5s							
SMLA	**Simla**	**2.59**	**10**	*e*P	**Pn**	**14 00 50.3**	**+1.2**	
SMLA				*e*S	**Sn**	**14 01 21.4**	**+1.5**	
SMLA				IAML		14 01 22.0		
SMLA				IAML		14 01 22.3		
	comp=N,2μm,0.2s							
BHK	**Bhakra**	**2.85**	**356**	*e*P	**Pn**	**14 00 52.6**	**0.0**	
BHK				*e*S	**Sn**	**14 01 24.4**	**-1.8**	
JOSI	**Joshimath**	**3.22**	**51**	*e*P	**Pn**	**14 01 01.0**	**+3.0**	
DHRM	**DHARAMSHALA**	**3.68**	**356**	*e*P	**Pn**	**14 01 04.6**	**+0.3**	
DHRM				*e*S	**Sn**	**14 01 45.9**	**-1.2**	
DHRM				IAML		14 01 59.0		
	comp=E,735nm,0.3s							
DHRM				IAML		14 02 02.8		
	comp=N,706nm,0.2s							
THN	**Thein Dam**	**3.93**	**349**	*ex*	**Pb**	**14 01 20.0**	**+2.8**	
THN				*e*S	**Sn**	**14 01 52.0**	**-1.0**	
SARP	**Sargodha**	**4.79**	**315**	P	**Pn**	**14 01 19.0**	**-0.3**	
BHPL	**Bhopal**	**5.35**	**172**	*e*P	**Pn**	**14 01 29.9**	**+2.8**	
BHPL				*e*S	**Sn**	**14 02 27.6**	**-0.5**	
BHPL				IAML		14 03 01.2		
	comp=N,71nm,0.5s							
BHPL				IAML		14 03 01.4		
	comp=E,104nm,0.4s							
PYUN	**Piuthan**	**5.62**	**93**	*e*Pn	**Pn**	**14 01 33.3**	**+2.4**	
PYUN				*e*Sn	**Sn**	**14 02 35.0**	**+0.1**	
	comp=E,246nm,0.3s							
NIL	**Nilore**	**5.84**	**331**	*e*Pn	**Pn**	**14 01 33.6**	**-0.1**	
CHCP	**Chirah Chowk**	**5.84**	**331**	P	**Pn**	**14 01 33.9**	**+0.1**	
THW	**Thamme Wali**	**5.96**	**316**	P	**Pn**	**14 01 33.7**	**-1.7**	
THW				S	**Sn**	**14 02 40.0**	**-3.0**	
KOLN	**Koldanda**	**6.20**	**96**	*e*Pn	**Pn**	**14 01 41.8**	**+2.9**	
KOLN				*e*Sn	**Sn**	**14 02 49.8**	**+0.6**	
	comp=E,118nm,0.4s							
DANN	**Dangsing**	**6.27**	**90**	*e*Pn	**Pn**	**14 01 43.3**	**+3.3**	
DANN				*e*Sn	**Sn**	**14 02 53.1**	**+1.9**	
	comp=E,117nm,0.3s							
CEP	**Cherat**	**6.62**	**323**	P	**Pn**	**14 01 44.5**	**-0.1**	
GKN	**Gorkha**	**7.08**	**93**	*e*Pn	**Pn**	**14 01 52.8**	**+1.9**	
GKN				*e*Sn	**Sn**	**14 03 09.1**	**-1.6**	
	comp=E,109nm,0.4s							
DMN	**Daman**	**7.54**	**95**	*e*Pn	**Pn**	**14 01 59.6**	**+2.2**	
DMN				*e*Sn	**Sn**	**14 03 21.2**	**-1.1**	
	comp=E,50nm,0.4s							
KKN	**Kakani**	**7.67**	**94**	*e*Pn	**Pn**	**14 02 01.4**	**+2.3**	
KKN				*e*Sn	**Sn**	**14 03 23.1**	**-2.3**	
	comp=E,86nm,0.4s							
PKIN	**Phulchoki**	**7.80**	**95**	*e*Pn	**Pn**	**14 02 03.7**	**+2.7**	
PKIN				*e*Sn	**Sn**	**14 03 27.2**	**-1.5**	
	comp=E,120nm,0.3s							
GUN	**Gumba**	**8.18**	**92**	*e*Pn	**Pn**	**14 02 07.6**	**+1.4**	
GUN				*e*Sn	**Sn**	**14 03 36.1**	**-2.0**	
	comp=E,127nm,0.4s							
JIRN	**Jiri**	**8.48**	**94**	*e*Pn	**Pn**	**14 02 11.7**	**+1.3**	
JIRN				*e*Sn	**Sn**	**14 03 43.3**	**-2.4**	
	comp=E,88nm,0.2s							
KBL	**Kabul**	**8.80**	**314**	*e*Pn	**Pn**	**14 02 14.3**	**-0.3**	
RAMN	**Ramite**	**8.97**	**98**	*e*Pn	**Pn**	**14 02 18.9**	**+1.9**	
RAMN				*e*Sn	**Sn**	**14 03 55.4**	**-2.1**	
	comp=E,182nm,0.4s							
ODAN	**Odare**	**9.68**	**98**	*e*Pn	**Pn**	**14 02 29.0**	**+2.3**	
ODAN				*e*Sn	**Sn**	**14 04 13.0**	**-1.9**	
	comp=E,55nm,0.3s							
TAPN	**Taplejung**	**9.87**	**94**	*e*Pn	**Pn**	**14 02 31.1**	**+1.8**	
TAPN				*e*Sn	**Sn**	**14 04 17.1**	**-2.4**	
	comp=E,8.1nm,0.2s							
POO	**Poona**	**10.31**	**195**	*e*S	**Sn**	**14 04 26.4**	**-3.9**	
HYB	**Hyderabad**	**11.24**	**171**	*i* P	**Pn**	**14 02 48.0**	**+0.1**	
HYB				*e*S	**Sn**	**14 04 47.5**	**-5.4**	
SFK	**Sufi-Kurgan**	**11.71**	**348**	⇓P	**Pn**	**14 02 53.2**	**-1.2**	
	comp=E,3.4nm,0.4s							
SFK				⇓S	**Sn**	**14 04 56.3**	**-8.1**	
	comp=E,15nm,0.4s							
NRN	**Naryn**	**12.85**	**358**	*e*Pn	**Pn**	**14 03 08.4**	**-1.6**	
TARG	**Taragay, Kyrgy**	**13.17**	**4**	*e*Pn	**Pn**	**14 03 14.3**	**-0.2**	
MNAS	**Manas**	**14.29**	**348**	⇓P	**Pn**	**14 03 26.9**	**-2.7**	
	comp=E,3.3nm,0.5s							
MNAS				⇓S	Sn	14 05 51.6	-16	
	comp=E,6.1nm,0.6s							
KK31	**Karatay Array**	**15.32**	**343**	P	**Pn**	**14 03 39.8**	**-3.6**	
	comp=E,1.2nm,0.3s,baz=153,slow=11,SNR=24							
KK31				S	Sn	14 06 18.4	-14	
	comp=E,5.5nm,0.6s,baz=156,slow=22,SNR=13							
KK31	**Karatay Array**	**15.32**	**343**	*e*Pn	**Pn**	**14 03 39.7**	**-3.7**	
KKAR	**Karatay Array**	**15.32**	**343**	*e*Pn	**Pn**	**14 03 39.5**	**-3.8**	
MAKZ	**Makanchi**	**18.68**	**12**	*e*P	**P**	**14 04 23.1**	**-2.0**	
	comp=E,8.6nm,1.7s							
MK01	**Makanchi Array**	**18.71**	**12**	*e*P	**P**	**14 04 23.2**	**-2.1**	
MK31	**Makanchi Array**	**18.73**	**12**	*e*P	**P**	**14 04 23.6**	**-2.0**	
MKAR	**Makanchi Array**	**18.73**	**12**	P	**P**	**14 04 23.6**	**-2.0**	
	comp=E,0.2nm,0.3s,baz=205,sl

comp=Z,182nm,20.9s,baz=73,slow=34
MTN Manton Dam 23.01 248 *e*P **P 14 07 23.5 +0.2**
comp=Z,37nm,0.9s
WRAB Tennant Creek 23.63 228 *e*P **P 14 07 28.8 -0.3**
comp=Z,46nm,1.3s
WRAB Tennant Creek 23.63 228*c i*P **P 14 07 29.2 +0.1**
WRAB pmax pmax
comp=Z,35nm,1.2s
WRA Warramunga Arr 23.64 228 P **P 14 07 29.2 0.0**
comp=Z,14nm,0.6s,baz=53,slow=9.8,SNR=80
WRA PcP **PcP 14 11 12.4 0.0**
comp=Z,1.7nm,0.9s,baz=47,slow=1.9,SNR=4.7
WRA S **S 14 11 38.2 -1.0**
comp=Z,2.9nm,1.1s,baz=60,slow=20,SNR=4.7
WRA LR LR 14 18 36.1
comp=Z,172nm,18.3s,baz=70,slow=41
AS01 Alice Springs 26.32 222 *e*P **P 14 07 53.5 0.0**
AS31 Alice Springs 26.35 222 *e*P **P 14 07 53.2 -0.6**
comp=Z,4.0nm,0.8s
ASAR Alice Springs 26.35 222 P **P 14 07 53.4 -0.4**
comp=Z,1.7nm,0.6s,baz=54,slow=9.0,SNR=44
ASAR PcP **PcP 14 11 19.1 +0.6**
comp=Z,1.6nm,0.7s,baz=62,slow=3.0,SNR=4.1
ASAR LR LR 14 18 04.5
comp=Z,118nm,20.8s,baz=33,slow=36
STKA Stephens Creek 29.10 200 P **P 14 08 17.7 -0.5**
comp=Z,2.6nm,0.8s,baz=26,slow=13,SNR=4.8
STKA LR LR 14 19 32.7
comp=Z,230nm,21.2s,baz=20,slow=35
STKA Stephens Creek 29.10 200 *e*P **P 14 08 18.1 -0.1**
STKA pmax pmax
comp=Z,3.0nm,0.8s
BATI Baumata 29.52 258 LR LR 14 21 12.8
comp=Z,328nm,18.1s,baz=172,slow=38
FITZ Fitzroy Crossi 29.84 241 P **P 14 08 23.9 -1.0**
comp=Z,17nm,0.7s,baz=68,slow=7.5,SNR=33
FITZ LR LR 14 19 42.9
comp=Z,121nm,20.3s,baz=81,slow=35
MYLDM Lahad Datu 35.74 285 *e*P **P 14 09 17.8 +1.3**
comp=Z,36nm,1.2s
MBWA Marble Bar 36.16 240 *e*P **P 14 09 18.7 -1.3**
comp=Z,13nm,0.8s
URZ Urewera 40.06 150 P **P 14 09 53.6 +1.0**
comp=Z,7.5nm,0.9s,baz=291,slow=5.4,SNR=3.0
SBUM Sibu 41.28 279 *e*P **P 14 10 01.7 -1.3**
comp=Z,5.8nm,0.8s
RPZ Rata Peaks 42.08 160 P **P 14 10 10.3 +1.2**
comp=Z,8.1nm,0.8s,baz=356,slow=4.5,SNR=3.3
JNU Nakatsue 42.98 332 P **P 14 10 17.1 +0.5**
comp=Z,38nm,0.9s,baz=96,slow=3.9,SNR=14
JNU Nakatsue 42.98 332 *e*P **P 14 10 16.4 -0.1**
comp=Z,39nm,0.9s
KSM Kuching 43.01 277 *e*P **P 14 10 16.2 -0.9**
comp=Z,12nm,0.8s
MJAR Matsushiro Arr 43.22 343 LR LR 14 26 45.9
comp=Z,512nm,19.1s,baz=170,slow=34
LEM Lembang 45.12 265 LR LR 14 35 15.7
comp=Z,60nm,18.3s,baz=345,slow=44
ERM Erimo 47.28 350⇑*i*P **P 14 10 50.5 +0.1**
ERM pmax pmax
comp=Z,23nm,1.0s
TJN Taejon 47.30 332*d i*P **P 14 10 51.7 +1.0**
KSRS Korea Array 47.92 333 P **P 14 10 55.9 +0.4**
comp=Z,7.8nm,0.8s,baz=150,slow=7.9,SNR=29
KSAR Wonju Array Be 47.92 333 P **P 14 10 55.9 +0.3**
KSAR Wonju Array Be 47.92 333 P **P 14 10 55.9 +0.3**
RAR Rarotonga 48.73 114 LR LR 14 30 04.5
comp=Z,60nm,18.0s,baz=309,slow=34
NJ2 Nanjing 48.80 321 *e*P **P 14 11 03.9 +1.5**
NJ2 pmax pmax
comp=Z,17nm,0.6s
ASAJ Asahikawa 49.42 350 P **P 14 11 07.5 +0.6**
comp=Z,12nm,0.8s,baz=153,slow=2.3,SNR=7.9
ASAJ LR LR 14 31 10.7
comp=Z,93nm,19.1s,baz=194,slow=35
ASAJ Asahikawa 49.42 350 *e*P **P 14 11 06.0 -0.9**
comp=Z,14nm,1.0s
USRK Ussuriysk Ar. 52.14 341 P **P 14 11 27.8 +0.4**
comp=Z,8.1nm,0.7s,baz=164,slow=6.7,SNR=17
TIA Tai'an 52.66 323 P **P 14 11 31.5 +0.1**
TIA pmax pmax
comp=Z,8.0nm,0.9s
ENH Enshi 54.14 313 *e*P **P 14 11 42.2 -0.2**
comp=Z,21nm,1.1s
XAN Xi'an 56.59 316 P **P 14 12 00.0 0.0**
XAN pmax pmax
comp=Z,11nm,0.8s
XAN pmax pmax
comp=Z,330nm,6.1s
KLR Kul'dur 56.73 344*d i*P **P 14 12 01.2 +0.6**
KLR *i* *PP **pP 14 12 17.3 -0.3**
KLR *e* 14 12 56.3
PETK Petropavlovsk- 57.68 3 P **P 14 12 07.5 +0.3**
comp=Z,8.9nm,0.8s,baz=157,slow=6.8,SNR=16
PETK LR LR 14 33 20.3
comp=Z,73nm,22.0s,baz=188,slow=32
PETK Petropavlovsk- 57.68 3 *e*P **P 14 12 07.2 0.0**
PETK Petropavlovsk- 57.68 3 *e*P **P 14 12 07.2 0.0**
CM01 Chiang Mai Arr 57.92 295 *e*P **P 14 12 09.8 +0.4**
CM31 Chiang Mai Arr 57.92 295 *e*P **P 14 12 10.2 +0.6**
CMAR Chiang Mai Arr 57.92 295 P **P 14 12 10.9 +1.3**
comp=Z,9.2nm,0.8s,baz=113,slow=5.3,SNR=36
CHTO Chiang Mai 58.03 295 *e*P **P 14 12 10.7 +0.4**
comp=Z,18nm,1.3s
CHTO Chiang Mai 58.03 295 *e*P **P 14 12 10.7 +0.4**
CHTO pmax pmax
comp=Z,18nm,1.3s
CD2 Chengdu 58.73 310 P **P 14 12 14.0 -1.1**
CD2 pmax pmax
comp=Z,7.0nm,0.5s
HHC Hu-ho-hao-te 58.99 324 *e*P **P 14 12 19.1 +2.3**
HHC pmax pmax
comp=Z,24nm,0.8s
HHC pmax pmax
comp=Z,340nm,6.4s
HIA Hailar 60.94 336⇑*i*P **P 14 12 30.7 +0.8**
HIA pmax pmax
comp=Z,5.0nm,1.1s
LZH Lanzhou 61.20 316 *e*P **P 14 12 32.6 +0.5**
LZH pP pP 14 12 51.0 +1.8
LZH sP sP 14 12 59.3 +2.8
LZH pmax pmax
comp=Z,21nm,1.3s
LZH pmax pmax
comp=Z,82nm,7.5s
LZH LR LR
comp=Z,290nm,15.0s
LZH LR LR
comp=Z,300nm,15.2s
LZH LR LR
comp=Z,380nm,18.6s
ZEA Zeya 62.03 343 *e*P **P 14 12 37.2 +0.2**
ZEA pmax pmax
comp=Z,23nm,1.0s
MA2 Magadan 64.04 359⇑*i*P **P 14 12 51.0 +0.7**
MA2 pmax pmax
comp=Z,13nm,0.9s
GTA Gaotai 65.63 317⇑P **P 14 13 02.3 +1.1**
GTA pP sP 14 13 22.8 -3.0
GTA sP PcP 14 13 29.8 -2.5
GTA pmax pmax
comp=Z,10.0nm,1.4s
ULN Ulaanbaatar 65.93 328*c i*P **P 14 13 04.7 +1.7**
ULN *i* *SP **sP 14 13 27.6 0.0**
ULN pmax pmax
comp=Z,2.0nm,0.6s
SONM Songino Array 66.26 328 P **P 14 13 05.0 -0.1**
comp=Z,1.6nm,0.7s,baz=152,slow=9.6,SNR=6.4
SONA1 Songino Array 66.26 328 *e*P **P 14 13 05.1 0.0**
SEY Seymchan 67.39 360⇓*i*P **P 14 13 12.8 +1.1**
YAK Yakutsk 68.85 348 *i*P **P 14 13 20.8 -0.1**
YAK *i* AP 15 13 36.5
YAK *e*XP 15 13 46.3
YAK pmax pmax
comp=Z,13nm,1.2s
ZAK Zakamensk 69.42 329 *e*P **P 14 13 24.1 -0.8**
ZAK pmax pmax
comp=Z,5.0nm,1.1s
TLY Talaya 70.01 330 *e*P **P 14 13 29.6 +1.3**
TLY pmax pmax
comp=Z,3.0nm,0.7s
ODAN Odare 70.57 300 *e*P **P 14 13 33.1 +0.5**
comp=Z,28nm,0.8s
RAMN Ramite 71.27 300 *e*P **P 14 13 37.2 +0.4**
comp=Z,12nm,0.8s
JIRN Jiri 71.81 301 *e*P **P 14 13 40.6 +0.4**
comp=Z,16nm,0.7s
GUN Gumba 72.15 301 *e*P **P 14 13 42.8 +0.6**
comp=Z,25nm,0.7s
PKIN Phulchoki 72.47 301 *e*P **P 14 13 44.7 +0.7**
KNGR Kungurtug, Tuv 72.62 327⇓*i*P **P 14 13 45.6 +1.3**
KKN Kakani 72.63 301 *e*P **P 14 13 45.3 +0.4**
comp=Z,25nm,1.0s
DMN Daman 72.73 301 *e*P **P 14 13 46.2 +0.6**
comp=Z,46nm,1.0s
VNDA Vanda 72.98 178 *e*P **P 14 13 46.4 +0.6**
comp=Z,5.4nm,1.1s
BILL Bilibino 73.12 5 *e*P **P 14 13 46.0 -0.7**
comp=Z,8.3nm,0.9s
BILL Bilibino 73.12 5 *e*P **P 14 13 46.9 +0.2**
BILL *e* 14 14 02.9
BILL *e*PPP PPP 14 18 12.6
BILL pmax pmax
comp=Z,12nm,1.0s
BILL MLR MLR
comp=Z,126nm,20.0s
GKN Gorkha 73.23 301 *e*P **P 14 13 48.7 +0.3**
comp=Z,34nm,1.0s
SBA Scott Base 73.53 177 P **P 14 13 47.9 -1.1**
KOLN Koldanda 74.06 300 *e*P **P 14 13 53.5 +0.2**
comp=Z,11nm,0.7s
PYUN Piuthan 74.67 301 *e*P **P 14 13 56.8 0.0**
comp=Z,29nm,1.0s
WMQ Urumqi 75.71 317 P **P 14 14 03.5 +1.2**
WMQ pP pP 14 14 22.3 +2.3
WMQ pmax pmax
comp=Z,35nm,0.7s
WMQ pmax pmax
comp=Z,210nm,3.7s
WMQ LR LR
comp=Z,980nm,20.9s
WMQ LR LR
comp=Z,730nm,22.3s
WMQ LR LR
comp=Z,810nm,18.1s
SVW2 Sparrevohn 76.63 23 *e*P **P 14 14 07.6 +0.5**
comp=Z,17nm,1.6s
KRAR Krasnoyarsk 77.71 330⇑*e*P **P 14 14 13.9 +0.7**
TIXI Tiksi 77.76 352⇑*i*P **P 14 14 14.5 +1.3**
TIXI *i* 14 14 23.0
TIXI *i* *PP **pP 14 14 31.6 +0.7**
DGZ Jazzator, Alta 78.03 323⇑*i*P **P 14 14 15.6 +0.2**
DGZ *i* AP **pP 14 14 33.0 -0.2**
DGZ pmax pmax
comp=Z,7.0nm,1.0s
TRF Thorofare Moun 80.01 22 *e*P **P 14 14 25.2 -0.8**
comp=Z,3.6nm,0.8s
MK01 Makanchi Array 80.28 319 *e*P **P 14 14 27.4 -0.2**
MK31 Makanchi Array 80.29 319 *e*P **P 14 14 27.5 -0.1**
MKAR Makanchi Array 80.29 319 P **P 14 14 27.9 +0.3**
comp=Z,6.0nm,0.8s,baz=107,slow=5.7,SNR=41
MKAR Makanchi Array 80.29 319 *e*P **P 14 14 27.6 0.0**
comp=Z,40nm,0.9s
SCM Sheep Creek Mo 80.36 25 *e*P **P 14 14 27.8 0.0**
comp=Z,8.4nm,1.0s
MAKZ Makanchi 80.50 319 *e*P **P 14 14 28.1 -0.6**
comp=Z,12nm,0.9s
RND Reindeer 80.53 23 *e*P **P 14 14 27.0 -1.6**
comp=Z,8.6nm,0.8s
RND Reindeer 80.53 23 *e*P **P 14 14 27.0 -1.6**
RND pmax pmax
comp=Z,9.0nm,0.8s
MCK McKinley 80.67 23 *e*P **P 14 14 27.9 -1.4**
comp=Z,15nm,0.9s
MCK McKinley 80.67 23 *e*P **P 14 14 27.9 -1.4**
MCK pmax pmax
comp=Z,15nm,0.9s
DIV Divide 80.68 26 *e*P **P 14 14 26.4 -3.0**
comp=Z,9.7nm,1.0s
MLY Manley 80.69 21 *e*P **P 14 14 29.0 -0.5**
comp=Z,8.4nm,0.8s
KLU Klutina 80.78 25 *e*P **P 14 14 29.1 -0.9**
comp=Z,13nm,1.1s
DHY Denali Highway 80.95 23 *e*P **P 14 14 30.3 -0.7**
comp=Z,4.4nm,0.8s
ZAA0 Zalesovo Array 81.09 326 *e*P **P 14 14 30.4 -1.3**
comp=Z,4.7nm,0.9s
ZALV Zalesovo Beam 81.09 326 P **P 14 14 31.0 -0.7**
comp=Z,3.4nm,0.6s,baz=115,slow=4.9,SNR=18
ZALV Zalesovo Beam 81.09 326 *e*P **P 14 14 30.3 -1.4**
ZALV Zalesovo Beam 81.09 326 *e*P **P 14 14 30.3 -1.4**
PDGK Podgornoye 81.23 315 *e*P **P 14 14 33.6 +0.7**
WRH Wood River Hil 81.37 22 *e*P **P 14 14 31.6 -1.4**
comp=Z,5.7nm,1.0s
CCB Clear Creek Bu 81.56 22 *e*P **P 14 14 32.2 -1.7**
comp=Z,4.9nm,0.8s
MDM Murphy Dome 81.56 22 *e*P **P 14 14 32.3 -1.7**
comp=Z,8.8nm,1.4s
CRQM Cirque 81.66 26 *e*P **P 14 14 33.9 -0.9**
comp=Z,7.1nm,0.8s
IL1 Eielson Array 81.97 22 *e*P **P 14 14 34.2 -1.9**
ILAR Eielson Array 81.97 22 P **P 14 14 34.5 -1.6**
comp=Z,3.9nm,0.8s,baz=251,slow=5.5,SNR=45
ILB Eielson Array 81.97 22 *e*P **P 14 14 34.1 -2.0**
NVS Novosibirsk 82.27 327 *e*P **P 14 14 34.7 -3.1**
RIDG Independ'e Rid 82.27 23 *e*P **P 14 14 37.0 -0.8**
comp=Z,6.8nm,1.0s
DOT Dot Lake 82.54 24 *e*P **P 14 14 38.1 -1.0**
comp=Z,31nm,0.9s
SCRK Sand Creek 82.71 23 *e*P **P 14 14 39.4 -0.7**
comp=Z,3.6nm,0.8s
KSH Kashi 82.93 311 P **P 14 14 44.3 +2.5**
KSH pP sP 14 15 04.9 -2.0
KSH PP **PP 14 17 57.1 +3.9**
KSH pmax pmax
comp=Z,310nm,5.6s
TOLK Toolik Lake Re 83.03 18 *e*P **P 14 14 41.4 -0.2**
comp=Z,31nm,2.0s
KURK Kurchatov 83.72 322 *e*P **P 14 14 44.9 -0.6**
comp=Z,16nm,1.1s
KURK Kurchatov 83.72 322*ce*P **P 14 14 45.1 -0.4**
KURK pmax pmax
comp=Z,18nm,1.2s
KURBB Kurchatov Arra 83.75 322 P **P 14 14 45.6 0.0**
comp=Z,4.8nm,0.9s,baz=109,slow=4.0,SNR=27
TKM2 Tokmak 2 83.91 314 P **P 14 14 47.9 +1.0**
SNR=9.7
KZA Kyzart 83.99 313 P **P 14 14 49.0 +1.5**
SNR=12
NIL Nilore 83.99 304 *e*P **P 14 14 46.8 -0.5**
comp=Z,14nm,0.8s
NIL Nilore 83.99 304 *e*P **P 14 14 46.8 -0.5**
NIL pmax pmax
comp=Z,14nm,0.8s
EGAK Eagle 84.17 23 *e*P **P 14 14 47.2 -0.2**
comp=Z,5.0nm,0.9s
KBK Karagaybulak 84.33 314 P **P 14 14 50.1 +1.1**
SNR=5.4
CHMS Chumysh 84.53 314 P **P 14 14 50.5 +0.7**
SNR=6.9
UCH Uchtor 84.56 313 P **P 14 14 51.4 +0.9**
SNR=12
DAWY Dawson 84.59 24 *e*P **P 14 14 49.7 0.0**
comp=Z,13nm,1.6s
SFK Sufi-Kurgan 84.89 311 *e*P **P 14 14 52.4 +0.4**
AML Almayashu 85.14 313 P **P 14 14 54.6 +1.3**
SNR=24
EKS2 Erkin-Say 85.17 313 P **P 14 14 54.2 +1.1**
SNR=7.1
QSPA South Pole Qui 85.32 180 P **P 14 14 53.2 -0.2**
comp=Z,3.9nm,0.7s,baz=350,slow=1.8,SNR=3.9
QSPA LR LR 14 50 02.0
comp=Z,133nm,18.1s,baz=82,slow=34
MAW Mawson 85.76 203 P **P 14 14 54.9 -0.4**
comp=Z,2.9nm,0.7s,baz=83,slow=3.8,SNR=6.7
NRIK Noril'sk 85.86 341 P **P 14 14 55.3 -0.5**
comp=Z,2.9nm,0.5s,baz=128,slow=4.4,SNR=6.0
NRIK LR LR 14 55 43.6
comp=Z,76nm,18.4s,baz=124,slow=37
MNAS Manas 86.07 313 *e*P **P 14 14 58.4 +0.7**
OTUK Ortayu 87.18 319 P **P 14 15 02.6 -0.2**
OTUK pmax pmax
comp=Z,8.0nm,0.9s
INK Inuvik 88.27 21 *e*P **P 14 15 06.0 -1.5**
comp=Z,6.6nm,1.1s
INK Inuvik 88.27 21 *e*P **P 14 15 06.0 -1.5**
INK pmax pmax
comp=Z,7.0nm,1.1s
YBH Yreka Blue Hor 88.86 48 LR LR 14 46 46.8
comp=Z,71nm,20.6s,baz=290,slow=30
BVAR Borovoye Array 89.19 323 P **P 14 15 11.5 -0.6**
comp=Z,17nm,0.7s,baz=100,slow=5.3,SNR=103
BRVK Borovoye 89.26 323 *e*P **P 14 15 11.6 -0.9**
comp=Z,15nm,0.9s
BRVK Borovoye 89.26 323*c i*P **P 14 15 11.8 -0.7**
BRVK pmax pmax
comp=Z,16nm,0.8s
NVAR Mina Array Bea 91.89 52 LR LR 14 49 50.0
comp=Z,72nm,20.3s,baz=96,slow=31
YKA Yellowknife Ar 95.23 28 P **P 14 15 39.8 0.0**
comp=Z,0.8nm,0.8s,baz=266,slow=4.7,SNR=5.9
ABKAR Akbulak array 95.44 319 *e*P **P 14 15 39.2 -1.9**
ARU Arti 96.26 326 *e*P **P 14 15 42.8 -1.9**
comp=Z,2.2nm,0.4s
ARU Arti 96.26 326*d i*P **P 14 15 43.0 -1.7**
ARU 14 19 37.1
ARU S **SKSac 14 26 14.0 -1.5**
ARU SS **SS 14 33 26.9 -5.5**
ARU pmax pmax
comp=Z,10.0nm,1.2s
AKTO Aktyubinsk 96.68 320 P **P 14 15 45.1 -1.7**
comp=Z,2.8nm,0.9s,baz=104,slow=5.1,SNR=9.2
LPIG La Paz 98.05 66 LR LR 14 51 55.1
comp=Z,27nm,20.5s,baz=44,slow=30
PDAR Pinedale Array 98.65 48 LR LR 14 53 07.3
comp=Z,34nm,20.3s,baz=288,slow=31
AKASG Malin Array Be 114.44 324 PKP PKPdf 14 20 56.0 -0.1
comp=Z,0.5nm,0.4s,baz=60,slow=2.4,SNR=7.1
AKASG Malin Array Be 114.44 324 *e*PKIKP PKPdf 14 20 57.3 +1.1
BUR04 Bucovina Ar. S 118.14 323 *e*PKPdf **PKPdf 14 21 03.5 0.0**
BRG Berggiesshubel 122.59 330 *e*PKP **PKPdf 14 21 13.7 +1.8**
comp=Z,6.5nm,1.1s
BRG Berggiesshubel 122.59 330 *e*PKIKP **PKPdf 14 21 13.7 +1.8**
BRG pmax pmax
comp=Z,7.0nm,1.1s
CLL Collm 122.77 331 *e*PKPdf **PKPdf 14 21 13.0 +0.8**
comp=Z,5.0nm,0.9s
CLL *ep*PKPdf **pPKPdf 14 21 29.0 -2.0**
CLL *es*PKPdf **sPKPdf 14 21 37.0 -0.9**
CLL Collm 122.77 331 *e*PKIKP **PKPdf 14 21 13.0 +0.8**
CLL pmax pmax
comp=Z,5.0nm,0.9s
FNA Florina 123.66 317 *e*PKPdf **PKPdf 14 21 13.8 -0.5**
FNA Florina 123.66 317 *e*PKIKP **PKPdf 14 21 13.8 -0.5**
KHC Kasperske Hory 123.87 329 *e*PKP **PKPdf 14 21 15.0 +0.6**
KHC Kasperske Hory 123.87 329 *e*PKPdf **PKPdf 14 21 14.7 +0.2**
KHC Kasperske Hory 123.87 329 *e*PKIKP **PKPdf 14 21 15.0 +0.6**
GEC2 GERESS Array S 123.99 329 *e*PKPdf **PKPdf 14 21 14.5 -0.3**
GEC2 GERESS Array S 123.99 329 *e*PKIKP **PKPdf 14 21 14.5 -0.3**
GERES GERESS Array B 123.99 329 PKP **PKPdf 14 21 15.1 +0.4**
comp=Z,2.5nm,0.7s,baz=64,slow=3.1,SNR=14
GEA0 GERESS Array S 123.99 329 *e*PKPdf **PKPdf 14 21 14.1 -0.6**
EKA Eskdalemuir Ar 125.92 343 PKP **PKPdf 14 21 19.0 +0.9**
comp=Z,1.7nm,0.7s,baz=35,slow=3.9,SNR=5.9
TUE Stuetta 127.77 329 *e*PKPdf **PKPdf 14 21 22.4 +0.2**
BNI Bardonecchia 130.10 329 *e*PKPdf **PKPdf 14 21 26.6 0.0**
BNI Bardonecchia 130.10 329 *e*PKIKP **PKPdf 14 21 26.6 0.0**
LPAZ La Paz 134.38 118 PKP **PKPdf 14 21 37.6 +1.5**
comp=Z,2.6nm,0.7s,baz=256,slow=4.6,SNR=11
MDT Midelt 144.99 326 PKP **PKPab 14 21 52.9 -0.7**
comp=Z,11nm,1.0s,baz=70,slow=5.0,SNR=13
SPB Sao Paulo 145.62 146 *e*PKPdf **PKPab 14 21 56.0 0.0**
PTGA Pitinga 146.71 98 *e*PKPdf **PKPdf 14 21 58.2 +0.6**
TOA0 Torodi Ar. Sit 150.38 288 *e*PKPbc **PKPbc 14 22 08.2 -0.5**
TORD Torodi Ar. Bea 150.38 288 PKPbc **PKPbc 14 22 08.3 -0.4**
comp=Z,21nm,0.8s,baz=70,slow=2.3,SNR=80
KOWA Kowa 155.27 295 PKPbc PKPbc 14 22 19.2
comp=Z,2.1nm,0.7s,baz=66,slow=3.6,SNR=3.7
KOWA PKPab **PKPab 14 22 35.5 -0.3**
comp=Z,2.3nm,0.7s,baz=85,slow=3.0,SNR=3.8
DBIC Dimbokro 157.80 276 PKPab **PKPab 14 22 45.2 -1.6**
comp=Z,6.0nm,0.9s,baz=112,slow=8.3,SNR=3.6

TRN 19 14:04:09.7, 15°.30N×60°.09W, h24km, MD3.6, 4C-1D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MVM	**Montagne Vaucl**	**1.08**	**226**⇓	*e*P	Pb	14 04 30.5	+0.9
LPMF	**Morne Lapointe**	**1.11**	**230**⇓	*e*P	Pb	14 04 30.7	+0.4
DLPL	**La Plaine**	**1.12**	**272**	*e*P	Pb	14 04 31.6	+1.2
DLPL				*e*S	Sn	14 04 46.6	+2.1
BAMF	**Morne Balai**	**1.13**	**245**⇑	*i*P	Pb	14 04 31.7	+1.1
CXM	**Morne La Croix**	**1.15**	**245**⇑	*i*P	Pb	14 04 32.1	+1.1
CXM				*e*S	Sb	14 04 49.4	+3.8
GBMF	**Grand Be**	**1.16**	**244**	*e*P	Pb	14 04 31.9	+0.9
ZAM	**Aeronautique**	**1.16**	**231**	*e*P	Pb	14 04 31.6	+0.5
FDF	**Fort de France**	**1.17**	**241**	*e*P	Pb	14 04 32.1	+0.8
FDF				*e*S	Sb	14 04 48.2	+2.1
PML	**Morne Lenard**	**1.18**	**244**	*e*P	Pb	14 04 32.4	+1.0
PCM	**Pelee Case Pet**	**1.19**	**246**	*e*P	Pb	14 04 31.7	+0.2
PCM	**Pelee Case Pet**	**1.19**	**246**	*e*P	Pb	14 04 32.4	+0.9
TRMF	**Trois Ilets**	**1.20**	**231**	*e*P	Pb	14 04 32.2	+0.5
BIM	**Bigot**	**1.23**	**231**	*e*P	Pb	14 04 33.1	+0.8
BIM				*e*S	Sb	14 04 49.4	+1.6
MGG	**Marie-Galante**	**1.33**	**297**	*e*P	Pb	14 04 34.3	+0.4
MGG				*e*S	Sb	14 04 52.7	+2.1
BBL	**Barber's Block**	**1.35**	**280**	*e*P	Pb	14 04 34.6	+0.3
BBL				*e*S	Sb	14 04 52.5	+1.3
TBG	**Guadaloupe-3**	**1.60**	**290**	*e*P	Pb	14 04 38.4	0.0
TBG				*e*S	Sb	14 04 58.4	+0.1
TAG	**Tarade**	**1.69**	**296**⇑	*i*P	Pb	14 04 39.7	-0.4
SSG	**Sans Toucher**	**1.72**	**297**	*e*P	Pb	14 04 40.0	-0.6
SLB	**Belfond**	**1.73**	**212**	*e*P	Pb	14 04 40.8	-0.1
SLB				*e*S	Sb	14 05 02.4	+0.2
SEG	**Port Louis**	**1.75**	**309**	*e*P	Pn	14 04 39.4	+0.9
MCLT	**Moule a Chique**	**1.79**	**208**	*e*P	Pb	14 04 40.6	-1.1
MCLT				*e*S	Sb	14 05 02.7	-1.1
SSV	**Crater Summit**	**2.24**	**209**	*e*P	Pb	14 04 47.4	-2.1
SVCV	**St. Vincent, C**	**2.26**	**207**	*e*P	Pb	14 04 48.0	-1.9
SVCV				*e*S	Sn	14 05 15.0	+2.1
SVB	**Belmont**	**2.31**	**209**	*e*P	Pb	14 04 49.0	-1.7
SVB				*e*S	Sb	14 05 17.2	-1.7
FCV	**Fort Charlotte**	**2.41**	**208**	*e*P	Pn	14 04 49.2	+1.6
BPA	**Boggy Peak**	**2.43**	**316**	*e*P	Pn	14 04 50.1	+2.2
BPA				*e*S	Sn	14 05 18.5	+1.6
MLYT	**Lee's Yard**	**2.46**	**305**	*e*P	Pn	14 04 50.7	+2.3
MLYT				*e*S	Sb	14 05 20.9	-2.4
ANWB	**Willy Bob**	**2.86**	**326**	*e*P	Pn	14 04 54.7	+0.9
ANWB				*e*S	Sn	14 05 30.1	+2.6
GRHS	**Sauteurs**	**3.41**	**206**	*e*P	Pn	14 05 03.2	+1.8
SMRT	**St. Maarten**	**3.96**	**314**	*e*P	Pn	14 05 10.4	+1.5

DDA ***19*** *14:30:32.9, 39°.10N×29°.15E, h7km, Ml2.3*
CSEM ***19*** *14:30:33.6±0.1, 39°.11N×29°.16E, h5km, ML2.3, Error ellipse: s-maj=3.1km s-min=2.4km az=124.0*

ISK 19 14:30:33.3, 39°.12N×29°.16E, h5km, ML2.3/5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHAP	**Saphane-Kutahy**	**0.11**	**151**	PG	Pg	14 30 36.3	+0.7
SHAP				SG	Sg	14 30 37.9	+0.7
SHAP	**Saphane-Kutahy**	**0.11**	**151**	*e*Pg	Pg	14 30 36.3	+0.7
SHAP				*e*Sg	Sg	14 30 37.9	+0.7
SIMA	**Simav-Kutahya**	**0.14**	**256**	PG	Pg	14 30 36.6	+0.4
SIMA				SG	Sg	14 30 39.0	+0.9
SIMA	**Simav-Kutahya**	**0.14**	**256**	*e*Pg	Pg	14 30 36.6	+0.4
SIMA				*e*Sg	Sg	14 30 39.0	+0.9
DEMI	**Demirci**	**0.35**	**258**	*i*P	Pg	14 30 40.1	0.0
DEMI	**Demirci**	**0.35**	**258**	P	Pg	14 30 40.1	0.0
TVSB	**Tavsanli**	**0.41**	**35**	PG	Pg	14 30 41.6	+0.3
TVSB	**Tavsanli**	**0.41**	**35**	*e*Pg	Pg	14 30 41.6	+0.3
KULA	**Kula-Manisa**	**0.71**	**213**	PG	Pg	14 30 47.6	+0.6
KULA	**Kula-Manisa**	**0.71**	**213**	*e*Pg	Pg	14 30 47.6	+0.6
DURS	**Dursunbey**	**0.72**	**313**	*i*P	Pg	14 30 47.6	+0.6
DURS				*i*S	Sb	14 30 57.5	-0.9
DURS	**Dursunbey**	**0.72**	**313**	P	Pb	14 30 47.7	-0.6
DURS				S	Sb	14 30 57.5	-1.0
MANT	**Manisa**	**0.78**	**217**	*i*P	Pg	14 30 48.2	-0.1
MANT	**Manisa**	**0.78**	**217**	P	Pg	14 30 48.2	-0.1
STEP	**BALIKESIR_Sava**	**1.15**	**284**	*i*P	Pg	14 30 50.0	-5.2
CAVI	**Cavuskoy**	**1.21**	**26**	PN	Pb	14 30 56.7	+0.1
CAVI	**Cavuskoy**	**1.21**	**26**	*e*Pn	Pb	14 30 56.7	+0.1
BORA	**Eskisehir**	**1.26**	**52**	PN	Pn	14 30 57.8	+0.2
BORA	**Eskisehir**	**1.26**	**52**	*e*Pn	Pn	14 30 57.8	+0.2
YLV	**Yalova**	**1.46**	**7**	PN	Pb	14 31 00.9	0.0
YLV	**Yalova**	**1.46**	**7**	*e*Pn	Pb	14 31 00.9	0.0
ARMT	**Armutlu**	**1.47**	**351**	PN	Pg	14 31 01.4	0.0
ARMT	**Armutlu**	**1.47**	**351**	*e*Pn	Pg	14 31 01.4	0.0
GONE	**Gonen-Balikesi**	**1.47**	**310**	PN	Pg	14 31 01.4	0.0
GONE	**Gonen-Balikesi**	**1.47**	**310**	*e*Pn	Pg	14 31 01.4	0.0

DDA 19 14:30:43.2, 39°.12N×29°.13E, h7km, MI2.5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEMI	**Demirci**	**0.33**	**257**	*i* P	Pg	14 30 45.6	-4.1
DEMI				*i* S	Sg	14 30 55.0	+0.9
DEMI	**Demirci**	**0.33**	**257**	*i* S	Pg	14 30 45.1	-4.6
DEMI	**Demirci**	**0.33**	**257**	S	Pg	14 30 45.2	-4.5
DURS	**Dursunbey**	**0.70**	**314**	*i* P	Pn	14 30 59.6	0.0
DURS				*i* S	Sn	14 31 12.1	+1.3
MANT	**Manisa**	**0.77**	**216**	*i* P	Pb	14 30 58.7	-0.4
MANT				*i* S	Sg	14 31 07.8	-0.2
MANT	**Manisa**	**0.77**	**216**	S	Pb	14 30 58.4	-0.6
MANT	**Manisa**	**0.77**	**216**	*i* S	Pb	14 30 58.4	-0.6

IDC 19 15:20:59.7±40.0, 14°.23S×167°.93E, h521km±213km, mb2.6/3, mb1 2.8/4, mb1mx2.6/49, mbtmp3.6/4, Error ellipse: s-maj=826.5km s-min=102.7km az=66.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.93**	**190**	P	P	15 22 56.0	0.0
	0.2nm,0.3s,baz=94,slow=19,SNR=3.2						
STKA	**Stephens Creek**	**29.81**	**229**	P	P	15 26 23.2	-1.0
	1.4nm,0.8s,baz=61,slow=13,SNR=2.8						
WRA	**Warramunga Arr**	**32.57**	**255**	P	P	15 26 48.1	0.0
	0.3nm,0.5s,baz=84,slow=8.2,SNR=6.0						
ASAR	**Alice Springs**	**33.45**	**249**	P	P	15 26 55.6	+0.1
	0.2nm,0.3s,baz=74,slow=9.7,SNR=16						

GUC 19 15:35:19.9±0.4, 24°.14S×67°.56W, h201km±11km, ML3.9, 2C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB15	**IPOC Station P**	**1.98**	**298**	*eP*	Pn	15 36 00.1	+1.5
PB15				*i* S	S	15 36 30.4	+2.4
PB15				IAML		15 36 32.3	
	comp=E,1μm,0.3s						
GO02	**Mina Guanaco**	**2.10**	**241**	*eP*	Pn	15 36 00.5	+0.6
GO02				*i* S	S	15 36 32.9	+2.5
GO02				IAML		15 36 35.1	
	comp=E,409nm,0.1s						
PB06	**IPOC Station P**	**2.33**	**307**	⇑*i* P	Pn	15 36 03.7	+1.5
PB06				*i* S	S	15 36 36.8	+2.3
PB06				IAML		15 36 39.7	
	comp=E,322nm,0.1s						
ANCH	**Antofagasta**	**2.64**	**279**	⇑*i* P	Pn	15 36 38.8	+33
ANCH				*i* S	S	15 37 14.6	+34
PB09	**IPOC Station P**	**2.80**	**326**	*eP*	Pn	15 36 09.1	+1.6
PB09				*i* S	S	15 36 45.9	+1.9
PB09				IAML		15 36 47.4	
	comp=N,145nm,0.5s						
PB10	**IPOC Station P**	**2.81**	**282**	*eP*	Pn	15 36 09.2	+1.8
PB04	**IPOC Station P**	**2.98**	**307**	*eP*	Pn	15 36 11.1	+1.5
PB04				*i* S	S	15 36 50.5	+2.8
PB04				IAML		15 36 56.1	
	comp=N,159nm,0.2s						

MEX 19 15:36:33.9±0.4, 14°.47N×92°.55W, h28km±11km, MD3.7, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.52**	**32**	*i* P	Pb	15 36 39.7	-4.9
THIG				*e*S	Sb	15 36 48.9	-2.8
PCIG		**1.39**	**332**	*eP*	Pn	15 36 55.3	-2.2
PCIG				*e*S	Sn	15 37 11.6	-3.4
CCIG	**Comitan**	**1.85**	**12**	*eP*	Pn	15 37 01.9	-2.0
CCIG				*e*S	Sn	15 37 23.6	-2.9
TGIG		**2.37**	**346**	*e*S	Sn	15 37 36.0	-3.1

*DDA **19** 15:39:57.2, 39°.09N×29°.18E, h7km, Md2.9*
*ISK **19** 15:39:57.9, 39°.08N×29°.14E, h5km, ML2.6/2*
*ISCJB **19** 15:39:58.2±0.5, 39°.06N±0°.04×29°.15E±0°.04, h8km±4km, Error ellipse: s-maj=7.5km s-min=4.6km az=170.5*
*CSEM **19** 15:39:58.2±0.2, 39°.06N×29°.16E, h10km, ML2.6, Error ellipse: s-maj=4.7km s-min=2.9km az=165.0*

ISC 19 15:39:57.7±1.0, 39°.17N±0°.04×29°.17E±0°.02, h5km±11km, n22, σ1§03/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHAP	**Saphane-Kutahy**	**0.15**	**163**	PG	**Pg**	**15 40 00.3**	**-0.5**
SHAP				SG	**Sg**	**15 40 02.1**	**-0.7**
SHAP	**Saphane-Kutahy**	**0.15**	**163**	*e*Pg	**Pg**	**15 40 00.3**	**-0.5**
SHAP				*e*Sg	**Sg**	**15 40 02.1**	**-0.7**
SMAA	**Simav-Kutahya**	**0.16**	**245**	PG	**Pg**	**15 40 01.2**	**+0.3**
SMAA	**Simav-Kutahya**	**0.16**	**245**	*e*Pg	**Pg**	**15 40 01.2**	**+0.3**
SIMA	**Simav-Kutahya**	**0.17**	**239**	PG	**Pg**	**15 40 01.0**	**0.0**
SIMA				SG	**Sg**	**15 40 03.3**	**+0.1**
SIMA	**Simav-Kutahya**	**0.17**	**239**	*e*Pg	**Pg**	**15 40 01.0**	**0.0**
SIMA				*e*Sg	**Sg**	**15 40 03.3**	**+0.1**
GEDZ	**Gediz**	**0.23**	**123**	PG	**Pg**	**15 40 03.2**	**+1.0**
GEDZ	**Gediz**	**0.23**	**123**	*e*Pg	**Pg**	**15 40 03.2**	**+1.0**
TVSB	**Tavsanli**	**0.36**	**39**	PG	**Pb**	**15 40 07.4**	**+0.7**
TVSB	**Tavsanli**	**0.36**	**39**	*e*Pg	**Pb**	**15 40 07.4**	**+0.7**
DEMI	**Demirci**	**0.37**	**250**	*i* P	**Pg**	**15 40 04.8**	**-0.1**
DEMI				*i* S	**Sg**	**15 40 09.3**	**-0.4**
DEMI	**Demirci**	**0.37**	**250**	P	**Pg**	**15 40 04.8**	**-0.1**
DEMI				S	**Sg**	**15 40 09.4**	**-0.4**
DURS	**Dursunbey**	**0.69**	**309**	*i* P	**Pb**	**15 40 13.3**	**+1.2**
DURS				*i* S	**Sn**	**15 40 24.6**	**-0.6**
DURS	**Dursunbey**	**0.69**	**309**	P	**Pb**	**15 40 13.4**	**+1.2**
DURS				S	**Sn**	**15 40 24.6**	**-0.6**
KUTH	**Kutahya**	**0.70**	**71**	PG	**Pb**	**15 40 12.5**	**0.0**
KUTH	**Kutahya**	**0.70**	**71**	*e*Pg	**Pb**	**15 40 12.5**	**0.0**
MANT	**Manisa**	**0.83**	**215**	*i* P	**Pg**	**15 40 13.5**	**0.0**
MANT				*i* S	**Sg**	**15 40 22.2**	**-2.1**
MANT	**Manisa**	**0.83**	**215**	P	**Pg**	**15 40 13.5**	**0.0**
MANT				S	**Sg**	**15 40 22.2**	**-2.1**
AUKUT	**KUTAHYA**	**1.03**	**40**	*i* P	**Pg**	**15 40 15.2**	**-2.2**
AUKUT				*i* S	Sg	15 40 21.5	-9.3
AUKUT	**KUTAHYA**	**1.03**	**40**	P	**Pg**	**15 40 15.2**	**-2.2**
BORA	**Eskisehir**	**1.22**	**54**	*i* P	**Pg**	**15 40 22.3**	**+1.1**
BORA				*i* S	**Sb**	**15 40 38.4**	**+0.9**
BORA	**Eskisehir**	**1.22**	**54**	P	**Pg**	**15 40 22.3**	**+1.1**
BORA				S	**Sb**	**15 40 38.4**	**+0.9**

*ISCJB **19** 15:41:47.0±0.7, 27°.56N±0°.06×127°.51E±0°.09, h152km±6km, mb3.0/2, Error ellipse: s-maj=15.3km s-min=5.8km az=34.8*
*JMA **19** 15:41:48.3±0.3, 27°.67N×127°.38E, h132km±5km, M3.3*
*IDC **19** 15:41:48.1±2.7, 27°.52N×127°.54E, h150km±20km, mb2.8/2, mb1 3.1/4, mb1mx2.8/63, mbtmp3.4/4, Error ellipse: s-maj=101.1km s-min=18.6km az=88.0*

ISC 19 15:41:47.5±1.1, 27°.60N±0°.07×127°.44E±0°.09, h147km±10km, n17, σ0§72/29, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIH	**Iheya**	**0.73**	**140**	P	**Pn**	**15 42 10.5**	**+0.6**
JIH				S	**Sn**	**15 42 26.6**	**-0.2**
JAGN	**Aguni-jima**	**1.02**	**190**	P	**Pn**	**15 42 12.2**	**+0.1**
JAGN				S	**Sn**	**15 42 30.5**	**-0.4**
JOKE	**Okinoerabujima**	**1.03**	**103**	P	**Pn**	**15 42 12.7**	**+0.5**
JOKE				S	**Sn**	**15 42 30.8**	**-0.3**
JOW	**Kunigami**	**1.07**	**136**	P	**Pn**	**15 42 13.3**	**+0.7**
	36nm,0.3s,baz=310,slow=7.9,SNR=95						
JOW				S	**Sn**	**15 42 31.1**	**-0.5**
	36nm,0.3s,baz=107,slow=19,SNR=12						
JOW	**Kunigami**	**1.07**	**136**	P	**Pn**	**15 42 13.2**	**+0.7**
JOW				S	**Sn**	**15 42 31.2**	**-0.5**
JNTH	**Nagotoyohara**	**1.20**	**154**	P	**Pn**	**15 42 14.6**	**+0.9**
JNTH				S	**Sn**	**15 42 33.3**	**-0.4**
JTK	**Tokunoshima**	**1.35**	**82**	P	**Pn**	**15 42 15.7**	**+0.5**
JTK				S	**Sn**	**15 42 35.5**	**-0.9**
JKE	**Kume jima 2**	**1.40**	**205**	P	**Pn**	**15 42 15.8**	**+0.1**
JKE				S	**Sn**	**15 42 36.4**	**-0.9**
JJT3	**Tamagusuku3**	**1.48**	**168**	P	**Pn**	**15 42 17.9**	**+1.3**
JJT3				S	**Sn**	**15 42 39.7**	**+0.8**
JAMN	**Amaminishikomi**	**1.66**	**67**	P	**Pn**	**15 42 18.5**	**0.0**
JAMN				S	**Sn**	**15 42 41.2**	**-1.1**
JAM	**Amami Oshima**	**2.08**	**67**	P	**Pn**	**15 42 23.4**	**+0.1**
JAM				S	**Sn**	**15 42 49.8**	**-1.0**
JTAJ	**Takarajima**	**2.19**	**45**	P	**Pn**	**15 42 24.8**	**+0.2**
JTAJ				*e*S	**Sn**	**15 42 53.9**	**+0.6**
JZK	**Kikaishima**	**2.35**	**72**	*e*S	**Sn**	**15 42 57.1**	**+0.4**
JNU	**Nakatsue**	**6.25**	**28**	P	**Pn**	**15 43 18.5**	**+1.0**
	2.5nm,0.3s,baz=227,slow=11,SNR=31						
KSRS	**Korea Array**	**9.83**	**2**	P	**Pn**	**15 44 06.0**	**+0.8**
	0.1nm,0.3s,baz=182,slow=13,SNR=4.2						
WRA	**Warramunga Arr**	**47.73**	**171**	P	**P**	**15 50 08.6**	**-1.0**
	0.2nm,0.6s,baz=350,slow=8.4,SNR=5.4						
ASAR	**Alice Springs**	**51.35**	**172**	P	**P**	**15 50 36.9**	**-0.2**
	0.2nm,0.5s,baz=360,slow=11,SNR=4.8						

*IDC **19** 15:46:09.1±1.3, 11°.11N×124°.38E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.5/70, mbtmp3.7/7, Error ellipse: s-maj=150.6km s-min=17.6km az=66.0*
*MAN **19** 15:46:11.1, 11°.02N×124°.03E, h9km, mb4.6, ML3.5, MS3.4*
*ISCJB **19** 15:46:12.0±0.7, 11°.05N±0°.03×124°.04E±0°.04, h24km±7km, mb3.6/7, Error ellipse: s-maj=6.6km s-min=5.4km az=32.6*

ISC 19 15:46:11.8±1.1, 11°.02N±0°.03×124°.06E±0°.03, h15km±8km, n21, σ1§05/34, mb3.7/7, 5C-1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.54**	**87**	*eP*	**Pg**	**15 46 22.1**	**-0.4**
OCLP				*e*S	**Sb**	**15 46 30.6**	**+0.1**
LLP	**Lapu-Lapu**	**0.70**	**188**	⇑*eP*	**Pg**	**15 46 25.1**	**-0.4**
LLP				*i* S	**Sb**	**15 46 35.9**	**+0.6**
PLP	**Palo**	**0.91**	**81**	⇓*eP*	**Pg**	**15 46 28.8**	**-0.7**
PLP				*i* S	**Sn**	**15 46 43.5**	**+0.6**
MSLP	**Maasin**	**1.18**	**138**	*eP*	**Pb**	**15 46 33.3**	**-0.6**
MSLP				*e*S	**Sn**	**15 46 51.5**	**+2.0**
TBP	**Tagbilaran**	**1.33**	**188**	*eP*	**Pg**	**15 46 38.2**	**+0.7**
TBP				*e*S	**Sg**	**15 46 57.2**	**+2.3**
MMPH	**Masbate**	**1.40**	**342**	*eP*	**Pg**	**15 46 40.1**	**+1.4**
MMPH				*e*S	**Sg**	**15 46 59.1**	**+2.2**
RCP	**Roxas**	**1.40**	**293**	⇑*eP*	**Pn**	**15 46 35.8**	**-0.9**
RCP				*e*S	**Sg**	**15 46 55.4**	**-1.6**
GUIM	**Jordan**	**1.50**	**255**	*eP*	**Pn**	**15 46 37.5**	**-0.6**
GUIM				*e*S	**Sn**	**15 46 57.3**	**-0.1**
CNP	**Catarman**	**1.60**	**22**	*eP*	**Pn**	**15 46 38.7**	**-0.8**
CNP				*e*S	**Sb**	**15 47 01.4**	**+0.4**
KALP	**Kalibo**	**1.81**	**291**	*eP*	**Pn**	**15 46 41.2**	**-1.3**
SNPH	**Sibulan**	**1.85**	**206**	⇑*i* P	**Pb**	**15 46 44.8**	**-0.6**
SNPH				*i* S	**Sg**	**15 47 10.7**	**-0.8**
JAP	**San Jose, Anti**	**2.09**	**263**	⇑*eP*	**Pg**	**15 46 52.2**	**+0.2**
DCPH	**Dipolog City**	**2.52**	**196**	⇑*eP*	**Pn**	**15 46 52.5**	**+0.3**
PAGZ	**Pagadian**	**3.22**	**192**	*eP*	**Pn**	**15 47 00.6**	**-1.2**
PAGZ				*e*S	**Sn**	**15 47 41.7**	**+1.7**
WRA	**Warramunga Arr**	**32.39**	**162**	P	**P**	**15 52 41.0**	**-0.1**
	0.4nm,1.0s,baz=343,slow=8.9,SNR=3.3						
WRA				PcP	**PcP**	**15 55 27.5**	**-1.2**
	0.2nm,0.6s,baz=339,slow=2.6,SNR=5.0						
ASAR	**Alice Springs**	**35.79**	**164**	P	**P**	**15 53 10.5**	**-0.1**
	0.7nm,0.7s,baz=335,slow=6.4,SNR=17						
ASAR				PcP	**PcP**	**15 55 37.6**	**-0.8**
	0.2nm,0.6s,baz=355,slow=3.7,SNR=4.3						
SONM	**Songino Array**	**39.59**	**341**	P	**P**	**15 53 42.7**	**0.0**
	0.4nm,0.3s,baz=163,slow=10,SNR=3.5						
MKAR	**Makanchi Array**	**50.13**	**323**	P	**P**	**15 55 06.9**	**+0.4**
	0.8nm,0.8s,baz=122,slow=7.4,SNR=5.6						
ZALV	**Zalesovo Beam**	**52.94**	**332**	P	**P**	**15 55 27.0**	**-0.3**
	0.4nm,0.4s,baz=116,slow=6.6,SNR=2.7						
KURBB	**Kurchatov Arra**	**54.23**	**326**	P	**P**	**15 55 37.5**	**+0.6**
	1.5nm,0.7s,baz=125,slow=7.2,SNR=13						
BVAR	**Borovoye Array**	**59.82**	**326**	P	**P**	**15 56 17.2**	**+0.7**
	0.4nm,0.7s,baz=118,slow=5.2,SNR=4.1						

*BJI **19** 15:56:30.6, 53°.32N×171°.60E, h12km, mb5.7/52, mB5.9/69, Ms6.1/91, Ms7 5.9/81*
*ISCJB **19** 15:56:30.0±0.5, 53°.30N±0°.02×171°.66E±0°.01, h9km±2km, mb6.0/712, MS5.7/683, Error ellipse: s-maj=3.1km s-min=1.3km az=1.9*
*GCMT **19** 15:56:32.5±0.1, 53°.30N×171°.49E, h22km, MW6.0/145, Moment Tensor Solution. s134,c284; s145,c501; Duration: 2s5 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.17±.01; $M_{\theta\theta}$-1.02±.01; $M_{\phi\phi}$1.19±.01; $M_{r\theta}$0.00±.02; $M_{\theta\phi}$-0.78±.01; $M_{\phi r}$-0.09±.02; Best double couple: $M_0$1.35300×10^{18} NP1:ϕ_s207.00000°, δ89.00000°, λ3.00000°. NP2:ϕ_s117.00000°, δ87.00000°, λ179.00000°. Principal axes: T 1.4400, Plg3.0000°, Azm72.0000°; N -0.1710, Plg87.0000°, Azm230.0000°; P -1.2660, Plg1.0000°, Azm342.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **19** 15:56:32.5±0.1, 53°.35N×171°.62E, h14km, mb6.2/299, ME6.8, MS5.7/299, MW6.0, MW6.1, MW6.0, ML5.9(AEIC) Error ellipse: s-maj=2.4km s-min=1.3km az=179.0, Moment Tensor Solution. s95 Moment tensor: Scale 10^{18}Nm; M_{rr}0.01; $M_{\theta\theta}$-1.05; $M_{\phi\phi}$1.04; $M_{r\theta}$-0.13; $M_{\theta\phi}$-0.79; $M_{\phi r}$-0.20; Best double couple: $M_0$1.30000×10^{18} NP1: ϕ_s26.00000°, δ89.00000°, λ-10.00000°. NP2:ϕ_s117.00000°, δ80.00000°, λ-179.00000°. Principal axes: T 1.3200, Plg7.0000°, Azm72.0000°; N 0.0200, Plg79.0000°, Azm201.0000°; P -1.3400, Plg8.0000°, Azm341.0000°; Broadband fault plane solution: P waves. NP1: ϕ_s24.00000°, δ85.00000°, λ-10.00000°. NP2:ϕ_s115.00000°, δ80.00000°, λ-175.00000°. Principal axes: T Plg4.0000°, Azm70.0000°; N Plg0.0000°, Azm0.0000°; P Plg11.0000°, Azm339.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt on Shemya.
*MOS **19** 15:56:33.7±0.9, 53°.28N×171°.52E, h38km, mb6.2/150, MS5.7/119 Error ellipse: s-maj=4.5km s-min=3.6km az=128.6*
*IDC **19** 15:56:33.6±2.0, 53°.38N×171°.64E, h17km±12km, mb5.4/64, mb1 5.4/66, mb1mx5.4/83, mbtmp5.5/66, ML5.1/2, MS5.4/62, Ms1 5.4/62, ms1mx5.3/76, Error ellipse: s-maj=9.2km s-min=6.9km az=154.0*
*NEIC **19** 15:56:34.0±0.0, 53°.39N×171°.80E, h19km Best double couple: NP1:ϕ_s122.00000°, δ85.00000°, λ-153.00000°. NP2:ϕ_s29.00000°, δ64.00000°, λ-5.00000°. Principal axes: T 1.1400, Plg14.0000°, Azm252.0000°; N 0.0700, Plg63.0000°, Azm131.0000°; P -1.2000, Plg22.0000°, Azm348.0000°;*
*KRSC **19** 15:56:35.3±1.8, 53°.30N×171°.03E, h54km±18km, ML6.3*
*NEIC **19** 15:56:54.2±0.0, 53°.57N×171°.46E, h10km Best double couple: NP1:ϕ_s119.00000°, δ90.00000°, λ133.00000°. NP2:ϕ_s210.00000°, δ43.00000°, λ0.00000°. Principal axes: T 1.6800, Plg32.0000°, Azm64.0000°; N -0.2700, Plg43.0000°, Azm299.0000°; P -1.4100, Plg31.0000°, Azm175.0000°;*

ISC 19 15:56:33.6±0.3, 53°.26N±0°.03×171°.60E±0°.02, h20km±2km, h21km: pP-P, n2373, σ1§41/2508, mb6.1/768, MS5.7/713, 47C-156D, Near Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMY	**Shemya**	**1.60**	**109**	P	**Pn**	**15 56 59.5**	**-1.2**
SMY				S	**Sn**	**15 57 19.8**	**-0.9**
SMY	**Shemya**	**1.60**	**109**	P	**Pn**	**15 56 59.5**	**-1.2**
SMY				S	**Sn**	**15 57 19.8**	**-0.9**
BKI	**Bering**	**3.83**	**303**	*i* P	**Pn**	**15 57 30.7**	**-0.6**
BKI				*e*S	**Sn**	**15 58 12.3**	**-3.4**
BKI	**Bering**	**3.83**	**303**	P	**Pn**	**15 57 30.7**	**-0.6**
BKI				S	**Sn**	**15 58 12.3**	**-3.4**
LSNW	**Little Sitkin**	**4.41**	**104**	P	**Pn**	**15 57 38.9**	**-0.4**
LSSA	**Little Sitkin**	**4.41**	**105**	P	**Pn**	**15 57 39.0**	**-0.4**
LSPA	**Little Sitkin**	**4.45**	**104**	P	**Pn**	**15 57 39.3**	**-0.5**
CETU	**Semis' Tuman**	**4.98**	**102**	P	**Pn**	**15 57 46.3**	**-0.9**
AMKA	**Amchitka**	**5.09**	**109**	P	**Pn**	**15 57 47.2**	**-1.4**
AMKA				S	**Sn**	**15 58 46.0**	**-0.7**
CERAA	**Semis' Rag'd T**	**5.11**	**102**	P	**Pn**	**15 57 47.8**	**-1.1**
KBTR	**Krutoberegovo**	**5.88**	**304**	*e*P	**Pn**	**15 57 59.9**	**+0.5**
KBTR	**Krutoberegovo**	**5.88**	**304**	P	**Pn**	**15 57 59.9**	**+0.5**
KBG	**Krutoberegovo**	**5.96**	**304**	*e*P	**Pn**	**15 57 59.0**	**-1.5**
KBG				*e*S	**Sn**	**15 59 03.0**	**-5.0**
KBG	**Krutoberegovo**	**5.96**	**304**	P	**Pn**	**15 57 59.0**	**-1.5**
KBG				S	**Sn**	**15 59 03.0**	**-5.0**
MKZ	**Mys Kozlova**	**5.98**	**286**	*i* P	**Pn**	**15 58 00.3**	**-0.5**
MKZ				*e*S	**Sn**	**15 59 04.3**	**-4.2**
MKZ	**Mys Kozlova**	**5.98**	**286**	P	**Pn**	**15 58 00.3**	**-0.5**
MKZ				S	**Sn**	**15 59 04.3**	**-4.2**
TAPA	**Tanaga Point A**	**6.62**	**98**	P	**Pn**	**15 58 08.4**	**-1.3**
SMKR	**Semkarok**	**6.72**	**304**	*e*P	**Pn**	**15 58 11.9**	**+0.9**
SMKR	**Semkarok**	**6.72**	**304**	P	**Pn**	**15 58 11.9**	**+0.9**
BDR	**Baidarnaya**	**6.84**	**303**	*e*P	**Pn**	**15 58 13.0**	**+0.2**
BDR				*e*S	**Sn**	**15 59 24.8**	**-5.2**
BDR	**Baidarnaya**	**6.84**	**303**	P	**Pn**	**15 58 13.0**	**+0.2**
BDR				S	**Sn**	**15 59 24.8**	**-5.2**
ZLN	**Zelenaya**	**6.85**	**298**	*i* P	**Pn**	**15 58 14.6**	**+1.8**
ZLN	**Zelenaya**	**6.85**	**298**	P	**Pn**	**15 58 14.6**	**+1.8**
TUMD	**Tumrok D**	**6.85**	**291**	*e*P	**Pn**	**15 58 12.7**	**-0.1**
TUMD				*e*S	**Sn**	**15 59 25.7**	**-4.4**
KZV	**Kizimen**	**6.89**	**290**	*e*P	**Pn**	**15 58 13.9**	**+0.4**
KZV	**Kizimen**	**6.89**	**290**	P	**Pn**	**15 58 13.9**	**+0.4**
SRKR	**Sorokina**	**6.90**	**304**	*e*P	**Pn**	**15 58 13.5**	**0.0**
SRKR	**Sorokina**	**6.90**	**304**	P	**Pn**	**15 58 13.5**	**0.0**
CIRR	**Tsirk**	**6.91**	**299**	*e*P	**Pn**	**15 58 14.7**	**+1.0**
CIRR	**Tsirk**	**6.91**	**299**	P	**Pn**	**15 58 14.7**	**+1.0**
LGNR	**Loginova**	**6.93**	**298**	*e*P	**Pn**	**15 58 15.0**	**+0.9**
LGNR	**Loginova**	**6.93**	**298**	P	**Pn**	**15 58 15.0**	**+0.9**
KICM	**Kanaga Island**	**6.96**	**97**	P	**Pn**	**15 58 13.1**	**-1.2**
SPN	**Mys Shipunski**	**6.96**	**273**	*e*P	**Pn**	**15 58 13.6**	**-0.7**
SPN				*e*S	**Sn**	**15 59 27.5**	**-5.3**
SPN	**Mys Shipunski**	**6.96**	**273**	P	**Pn**	**15 58 13.6**	**-0.7**
SPN				S	**Sn**	**15 59 27.5**	**-5.3**
BZMR	**Bezymyannaya**	**6.99**	**297**	*e*P	**Pn**	**15 58 15.9**	**+1.1**
BZMR	**Bezymyannaya**	**6.99**	**297**	P	**Pn**	**15 58 15.9**	**+1.1**
BZWR	**Bezymyannyi-We**	**6.99**	**297**	*e*P	**Pn**	**15 58 16.2**	**+1.3**
BZWR	**Bezymyannyi-We**	**6.99**	**297**	P	**Pn**	**15 58 16.2**	**+1.3**
TUMR	**Tumrok**	**7.01**	**291**	*e*P	**Pn**	**15 58 15.2**	**+0.2**
TUMR				*e*S	**Sn**	**15 59 30.0**	**-4.1**
TUMR	**Tumrok**	**7.01**	**291**	P	**Pn**	**15 58 12.7**	**-2.3**
TUMR				S	**Sn**	**15 59 25.7**	**-8.4**
KIRH	**Kanaga Island**	**7.03**	**97**	P	**Pn**	**15 58 13.7**	**-1.5**
KLY	**Klyuchi**	**7.03**	**300**	*e*P	**Pn**	**15 58 15.0**	**-0.2**
KLY	**Klyuchi**	**7.03**	**300**	P	**Pn**	**15 58 15.0**	**-0.2**
KRSR	**Krestovskiy**	**7.04**	**299**	*e*P	**Pn**	**15 58 16.8**	**+1.3**
KRSR	**Krestovskiy**	**7.04**	**299**	P	**Pn**	**15 58 16.8**	**+1.3**
KMNR	**Kamenistaya**	**7.07**	**295**	*e*P	**Pn**	**15 58 17.0**	**+1.1**
KMNR	**Kamenistaya**	**7.07**	**295**	P	**Pn**	**15 58 17.0**	**+1.1**
KIRR	**Kirishev**	**7.07**	**297**	*e*P	**Pn**	**15 58 17.0**	**+1.0**
KIRR	**Kirishev**	**7.07**	**297**	P	**Pn**	**15 58 17.0**	**+1.0**
KPT	**Kopyto**	**7.14**	**297**	*e*P	**Pn**	**15 58 18.0**	**+1.2**
KPT				*e*S	**Sn**	**15 59 33.6**	**-3.7**
KPT	**Kopyto**	**7.14**	**297**	P	**Pn**	**15 58 18.0**	**+1.2**
KPT				S	**Sn**	**15 59 33.6**	**-3.7**
KII	**Karymskiy**	**7.27**	**281**	*i* P	**Pn**	**15 58 18.0**	**-0.6**
KII	**Karymskiy**	**7.27**	**281**	P	**Pn**	**15 58 18.0**	**-0.6**
ADAG	**Mount Adagdak**	**7.30**	**95**	P	**Pn**	**15 58 17.0**	**-2.0**
KOZ	**Kozyrevsk**	**7.36**	**297**	*e*P	**Pn**	**15 58 21.2**	**+1.5**
KOZ	**Kozyrevsk**	**7.36**	**297**	P	**Pn**	**15 58 21.2**	**+1.5**
NLC	**Nalytchevo**	**7.36**	**274**	*e*P	**Pn**	**15 58 19.1**	**-0.7**
NLC				*e*S	**Sn**	**15 59 36.7**	**-5.9**
NLC	**Nalytchevo**	**7.36**	**274**	P	**Pn**	**15 58 19.1**	**-0.7**
NLC				S	**Sn**	**15 59 36.7**	**-5.9**
ETKA	**Kagalaska Isla**	**7.45**	**96**	P	**Pn**	**15 58 19.1**	**-1.9**
GSTR	**Great Sitkin T**	**7.59**	**94**	*e*Pn	**Pn**	**15 58 21.5**	**-1.5**
SDLR	**Sedlovina**	**7.63**	**275**	*e*P	**Pn**	**15 58 23.1**	**-0.5**
SDLR				*e*S	**Sn**	**15 59 43.2**	**-6.2**
SDLR	**Sedlovina**	**7.63**	**275**	P	**Pn**	**15 58 23.1**	**-0.5**
SDLR				S	**Sn**	**15 59 43.2**	**-6.2**
OSSR	**Ossora**	**7.65**	**325**	*e*P	**Pn**	**15 58 25.6**	**+1.9**
OSSR	**Ossora**	**7.65**	**325**	P	**Pn**	**15 58 25.6**	**+1.9**
UGLR	**Uglovaya**	**7.67**	**275**	*e*P	**Pn**	**15 58 23.9**	**-0.2**
UGLR	**Uglovaya**	**7.67**	**275**	P	**Pn**	**15 58 23.9**	**-0.2**
KRER	**Koryakskii**	**7.71**	**275**	*e*P	**Pn**	**15 58 24.8**	**+0.1**
KRER	**Koryakskii**	**7.71**	**275**	P	**Pn**	**15 58 24.8**	**+0.1**
AVH	**Avacha**	**7.72**	**275**	*e*P	**Pn**	**15 58 24.7**	**0.0**
AVH	**Avacha**	**7.72**	**275**	P	**Pn**	**15 58 24.7**	**0.0**
DALK	**Dalny**	**7.73**	**273**	*e*P	**Pn**	**15 58 24.3**	**-0.5**
DALK				*e*S	**Sn**	**15 59 44.8**	**-6.9**
DALK	**Dalny**	**7.73**	**273**	P	**Pn**	**15 58 24.3**	**-0.5**
DALK				S	**Sn**	**15 59 44.8**	**-6.9**
KRX	**Arik**	**7.76**	**276**	*i* P	**Pn**	**15 58 24.9**	**-0.5**
KRX	**Arik**	**7.76**	**276**	P	**Pn**	**15 58 24.9**	**-0.5**
KOK	**Koryaka**	**7.78**	**275**	*e*P	**Pn**	**15 58 25.6**	**0.0**
KOK	**Koryaka**	**7.78**	**275**	P	**Pn**

NIKH	**Nikolski High**	**11.75**	**84**	*e*Pn	**Pn**	**15 59 18.9**	**-0.9**
UNV	**Unalaska Valle**	**13.03**	**79**	*e*Pn	**Pn**	**15 59 35.8**	**-1.4**
MA2	**Magadan**	**13.11**	**307**	Pn	**Pn**	**15 59 38.6**	**+0.1**
	comp=Z,1.0nm,0.3s,baz=96,slow=9.7,SNR=22						
MA2				LR	LR	16 04 23.9	
	comp=Z,12μm,21.7s,baz=110,slow=36						
MA2	**Magadan**	**13.11**	**307**	*e*Pn	**Pn**	**15 59 39.4**	**+0.9**
AKUT	**Akutan**	**13.43**	**77**	*e*Pn	**Pn**	**15 59 41.8**	**-0.9**
SEY	**Seymchan**	**13.98**	**321**	Pn	**Pn**	**15 59 51.2**	**+1.0**
	comp=Z,1.4nm,0.3s,baz=123,slow=13,SNR=102						
SEY				LR	LR	16 05 23.8	
	comp=Z,20μm,18.4s,baz=120,slow=38						
SEY	**Seymchan**	**13.98**	**321**	*d i*P	**Pn**	**15 59 51.1**	**+0.9**
FALS	**False Pass**	**14.73**	**74**	*e*Pn	**Pn**	**15 59 59.7**	**-0.9**
BILL	**Bilibino**	**15.04**	**352**	*e*Pn	**Pn**	**16 00 06.3**	**+1.6**
	comp=Z,2μm,1.3s						
BILL	**Bilibino**	**15.04**	**352**	*d i*P	**Pn**	**16 00 06.4**	**+1.7**
BILL				*e*S	**Sn**	**16 02 50.5**	**+0.1**
BILL				pmax	pmax		
	comp=Z,3μm,1.7s						
BILL				MLR	MLR		
	comp=Z,34μm,21.0s						
ANM	**Nome**	**16.30**	**37**	*e*Pn	**P**	**16 00 23.2**	**-0.6**
	comp=Z,2μm,1.4s						
ANM	**Nome**	**16.30**	**37**	*e*P	**P**	**16 00 23.2**	**-0.6**
ANM				pmax	pmax		
	comp=Z,2μm,1.4s						
SDPT	**Sand Point**	**16.38**	**71**	*e*Pn	**Pn**	**16 00 21.0**	**-1.1**
	comp=Z,2μm,1.4s						
OKH	**Okha**	**17.05**	**283⇑**	*i*P	**P**	**16 00 33.6**	**+1.4**
OKH				pmax	pmax		
	comp=Z,15μm,5.4s						
OKH				MLR	MLR		
	comp=Z,22μm,15.0s						
KUR	**Kuril'sk**	**17.39**	**252***c*	*i*P	**Pn**	**16 00 34.1**	**-0.7**
KUR				*e*S	Sn	16 03 36.4	-11
KUR				pmax	pmax		
	comp=Z,15μm,4.8s						
KUR				pmax	pmax		
	comp=Z,403nm,0.9s						
KUR				pmax	pmax		
	comp=N,150nm,0.8s						
KUR				pmax	pmax		
	comp=E,197nm,0.8s						
KUR				smax	smax		
	comp=N,7μm,6.2s						
KUR				smax	smax		
	comp=E,5μm,4.5s						
KUR				MLR	MLR		
	comp=Z,11μm,15.0s						
KUR				MLR	MLR		
	comp=E,5μm,10.0s						
KUR				MLR	MLR		
	comp=N,8μm,14.0s						
CHGN	**Chignik**	**17.49**	**68**	*e*Pn	**Pn**	**16 00 35.5**	**-0.4**
	comp=N,3μm,1.5s						
TYV	**Tymovskoe**	**17.91**	**274**	*e*P	**P**	**16 00 44.1**	**+2.5**
TYV				pmax	pmax		
	comp=Z,231nm,1.6s						
TYV				pmax	pmax		
	comp=Z,14μm,5.5s						
TYV				MLR	MLR		
	comp=N,26μm,14.0s						
TYV				MLR	MLR		
	comp=Z,21μm,15.0s						
NKL	**Nikolayevsk**	**18.45**	**282**	*e*P	**Pn**	**16 00 50.0**	**+2.2**
NKL				pmax	pmax		
	comp=N,430nm,1.6s						
NKL				pmax	pmax		
	comp=E,2μm,1.6s						
NKL				pmax	pmax		
	comp=Z,1μm,1.6s						
NKL				pmax	pmax		
	comp=E,10μm,6.0s						
NKL				pmax	pmax		
	comp=Z,11μm,6.0s						
NKL				MLR	MLR		
	comp=N,20μm,14.0s						
NKL				MLR	MLR		
	comp=E,18μm,14.0s						
NKL				MLR	MLR		
	comp=Z,36μm,16.0s						
SHO	**Shikotan**	**18.81**	**250**	*e*P	**P**	**16 00 48.4**	**-3.2**
SHO				*e*S	**Sn**	**16 04 21.0**	**-0.9**
SHO				pmax	pmax		
	comp=Z,2μm,5.0s						
SHO				pmax	pmax		
	comp=N,113nm,1.7s						
SHO				pmax	pmax		
	comp=Z,267nm,1.7s						
SHO				pmax	pmax		
	comp=E,152nm,1.3s						
UGL	**Uglegorsk**	**18.92**	**269⇑**	*i*P	**Pn**	**16 00 55.7**	**+2.3**
UGL				*e*S	**Sn**	**16 04 25.3**	**+0.9**
UGL				pmax	pmax		
	comp=Z,703nm,1.2s						
UGL				smax	smax		
	comp=E,24μm,9.2s						
UGL				smax	smax		
	comp=N,136nm,2.7s						
UGL				MLR	MLR		
	comp=Z,11μm,13.0s						
UGL				MLR	MLR		
	comp=N,14μm,14.0s						
RDOG	**Red Dog Mine**	**19.15**	**30**	*e*P	**Pn**	**16 00 57.6**	**+1.4**
	comp=N,832nm,1.2s						
SVW2	**Sparrevohn**	**19.26**	**53**	*e*P	**Pn**	**16 00 57.2**	**-0.3**
	comp=N,667nm,1.2s						
YUK	**Yuzh-Kuril'sk**	**19.26**	**252**	*e*P	**P**	**16 00 55.5**	**-1.0**
YUK				*e*S	**S**	**16 04 34.7**	**+1.1**
YUK				pmax	pmax		
	comp=Z,1μm,1.3s						
YUK				pmax	pmax		
	comp=N,393nm,1.4s						
YUK				pmax	pmax		
	comp=E,724nm,1.1s						
YUK				pmax	pmax		
	comp=Z,3μm,3.8s						
LAGR	**Lagunnoye**	**19.29**	**252**	*e*P	**P**	**16 00 56.3**	**-0.6**
LAGR				*e*S	**S**	**16 04 35.8**	**+1.6**
LAGR				pmax	pmax		
	comp=Z,3μm,3.3s						
LAGR				pmax	pmax		
	comp=E,1μm,0.9s						
LAGR				pmax	pmax		
	comp=Z,2μm,0.9s						
LAGR				pmax	pmax		
	comp=N,322nm,0.7s						
LAGR				MLR	MLR		
	comp=Z,7μm,11.0s						
GRPR	**Tuman**	**19.34**	**252**	*e*P	**P**	**16 00 56.6**	**-0.8**
GRPR				*e*S	**S**	**16 04 35.9**	**+0.8**
GRPR				pmax	pmax		
	comp=Z,2μm,4.0s						
GRPR				pmax	pmax		
	comp=Z,642nm,1.2s						
GRPR				pmax	pmax		
	comp=N,600nm,1.0s						
GRPR				pmax	pmax		
	comp=E,427nm,1.0s						
GRPR				MLR	MLR		
	comp=Z,6μm,12.0s						
GRPR				MLR	MLR		
	comp=N,2μm,9.0s						
YSS	**Yuzh-Sakhalins**	**19.46**	**263**	*e*P	**Pn**	**16 01 00.4**	**+0.4**
	comp=N,1μm,1.6s						
YSS	**Yuzh-Sakhalins**	**19.46**	**263**	*i* P	**Pn**	**16 01 00.7**	**+0.7**
YSS				pmax	pmax		
	comp=Z,738nm,1.7s						
GLVR	**Golovnino**	**19.64**	**252**	*e*P	**P**	**16 00 59.7**	**-1.0**
GLVR				*e*S	**S**	**16 04 34.8**	**-6.3**
GLVR				pmax	pmax		
	comp=Z,3μm,3.5s						
GLVR				pmax	pmax		
	comp=Z,1μm,1.2s						
OHAK	**Old Harbor**	**20.26**	**65**	*e*P	**P**	**16 01 05.9**	**-1.5**
	comp=Z,4μm,1.3s						
RSO	**Redoubt South**	**20.56**	**55**	*e*P	**P**	**16 01 11.7**	**+0.8**
KDAK	**Kodiak Island**	**20.61**	**63**	P	**P**	**16 01 10.2**	**-0.9**
	comp=Z,484nm,0.9s,baz=276,slow=5.4,SNR=87						
KDAK				S	**S**	**16 04 59.7**	**-0.5**
	comp=Z,53nm,1.2s,baz=180,slow=20,SNR=4.6						
KDAK	**Kodiak Island**	**20.61**	**63**	*e*P	**P**	**16 01 08.3**	**-2.8**
	comp=Z,849nm,0.9s						
KDAK				S	**S**	**16 04 59.7**	**-0.5**
KDAK				LR	LR		
	comp=Z,25μm,21.0s						
KDAK	**Kodiak Island**	**20.61**	**63***c*	*e*P	**P**	**16 01 10.0**	**-1.1**
HOM	**Homer**	**21.07**	**58**	*e*P	**P**	**16 01 16.6**	**+0.5**
	comp=Z,3μm,1.1s						
ASAJ	**Asahikawa**	**21.09**	**256**	P	**P**	**16 01 17.2**	**+0.8**
	comp=Z,106nm,0.9s,baz=18,slow=6.0,SNR=32						
ASAJ				LR	LR	16 08 54.9	
	comp=Z,5μm,22.0s,baz=61,slow=35						
ASAJ	**Asahikawa**	**21.09**	**256**	*e*P	**P**	**16 01 16.9**	**+0.4**
	comp=Z,795nm,1.5s						
PPLA	**Purkeypile**	**21.14**	**49**	*e*P	**P**	**16 01 18.2**	**+1.1**
	comp=Z,2μm,1.4s						
PPLA				LR	LR		
	comp=Z,13μm,20.0s						
CNPM	**China Poot**	**21.28**	**58**	PFAKE		16 01 30.0	+12
CNPM				LR	LR		
	comp=Z,12μm,22.0s						
CAST	**Castle Rocks**	**21.29**	**47**	*e*P	**P**	**16 01 20.1**	**+1.6**
	comp=Z,409nm,1.2s						
CAST				LR	LR		
	comp=Z,8μm,18.0s						
SKT	**Skwentna**	**21.31**	**51**	*e*P	**P**	**16 01 19.1**	**+0.4**
	comp=Z,1μm,1.4s						
SKT				LR	LR		
	comp=Z,11μm,20.0s						
BRLK	**Bradley Lake**	**21.46**	**57**	PFAKE		16 01 30.0	+10
BRLK				LR	LR		
	comp=Z,11μm,20.0s						
SUA	**Susitna One**	**21.62**	**53**	*e*P	**P**	**16 01 22.5**	**+0.3**
	comp=Z,1μm,1.2s						
SUA				LR	LR		
	comp=Z,9μm,20.0s						
GRNR	**Gornyy**	**21.66**	**278**	*e*P	**P**	**16 01 25.1**	**+2.5**
GRNR				*e*S	**S**	**16 05 24.1**	**+2.8**
GRNR				pmax	pmax		
	comp=N,50nm,1.0s						
GRNR				pmax	pmax		
	comp=E,84nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,150nm,1.0s						
KTH	**Kantishna Hill**	**21.83**	**47**	PFAKE		16 01 40.0	+16
KTH				LR	LR		
	comp=Z,16μm,18.0s						
BPAW	**Bear Paw Mtn.**	**21.91**	**46**	*e*P	**P**	**16 01 25.4**	**+0.3**
	comp=Z,622nm,1.2s						
BPAW				LR	LR		
	comp=Z,19μm,18.0s						
ERM	**Erimo**	**22.07**	**251**	*e*P	**P**	**16 01 27.8**	**+0.8**
	comp=Z,284nm,0.9s						
ERM	**Erimo**	**22.07**	**251**	*d i*P	**P**	**16 01 27.9**	**+0.9**
ERM				*i*		16 01 50.7	
ERM				pmax	pmax		
	comp=Z,633nm,1.7s						
RC01	**Rabbit Creek A**	**22.08**	**54**	*e*P	**P**	**16 01 25.5**	**-1.5**
	comp=Z,551nm,1.1s						
RC01				LR	LR		
	comp=Z,16μm,20.0s						
TRF	**Thorofare Moun**	**22.09**	**48**	*e*P	**P**	**16 01 27.2**	**0.0**
	comp=Z,452nm,0.9s						
TRF				LR	LR		
	comp=Z,14μm,20.0s						
MLY	**Manley**	**22.22**	**43**	*e*P	**P**	**16 01 28.5**	**-0.1**
	comp=Z,638nm,1.3s						
MLY				LR	LR		
	comp=Z,12μm,18.0s						
PMR	**Palmer**	**22.40**	**53**	*e*P	**P**	**16 01 28.8**	**-1.6**
	comp=Z,800nm,1.5s						
PMR				LR	LR		
	comp=Z,15μm,19.0s						
PMR	**Palmer**	**22.40**	**53**	*e*P	**P**	**16 01 28.8**	**-1.6**
PMR				pmax	pmax		
	comp=Z,800nm,1.5s						
PMR				MLR	MLR		
	comp=Z,15μm,19.0s						
GHO	**Glory Hole Cre**	**22.51**	**52**	*e*P	**P**	**16 01 32.2**	**+0.5**
	comp=Z,1μm,1.2s						
GHO				LR	LR		
	comp=Z,19μm,20.0s						
BWN	**Browne**	**22.58**	**46**	*e*P	**P**	**16 01 33.6**	**+1.3**
	comp=Z,7μm,1.8s						
BWN				LR	LR		
	comp=Z,15μm,18.0s						
RND	**Reindeer**	**22.72**	**48**	*e*P	**P**	**16 01 33.3**	**-0.6**
	comp=Z,1μm,1.2s						
RND				LR	LR		
	comp=Z,14μm,18.0s						
MCK	**McKinley**	**22.73**	**47**	*e*P	**P**	**16 01 33.1**	**-0.8**
	comp=Z,785nm,1.2s						
MCK				LR	LR		
	comp=Z,18μm,19.0s						
MCK	**McKinley**	**22.73**	**47**	*e*P	**P**	**16 01 33.1**	**-0.8**
MCK				pmax	pmax		
	comp=Z,785nm,1.2s						
MCK				MLR	MLR		
	comp=Z,18μm,19.0s						
SML	**Sawmill**	**22.80**	**52**	*e*P	**P**	**16 01 34.8**	**+0.2**
	comp=Z,2μm,1.5s						
SML				LR	LR		
	comp=Z,16μm,18.0s						
SML	**Sawmill**	**22.80**	**52**	*e*P	**P**	**16 01 34.8**	**+0.2**
SML				pmax	pmax		
	comp=Z,2μm,1.5s						
SML				MLR	MLR		
	comp=Z,16μm,18.0s						
COLD	**Coldfoot**	**23.05**	**38**	PFAKE		16 01 50.0	+13
COLD				LR	LR		
	comp=Z,12μm,20.0s						
WRH	**Wood River Hil**	**23.22**	**45**	*e*P	**P**	**16 01 37.9**	**-1.0**
	comp=Z,781nm,1.2s						
WRH				LR	LR		
	comp=Z,14μm,19.0s						
MDM	**Murphy Dome**	**23.25**	**44**	*e*P	**P**	**16 01 38.6**	**-0.6**
	comp=Z,815nm,1.1s						
MDM				LR	LR		
	comp=Z,12μm,19.0s						
SCM	**Sheep Creek Mo**	**23.27**	**52**	*e*P	**P**	**16 01 38.4**	**-1.2**
	comp=Z,1μm,1.2s						
SCM				LR	LR		
	comp=Z,17μm,19.0s						
SCM	**Sheep Creek Mo**	**23.27**	**52**	*e*P	**P**	**16 01 38.4**	**-1.2**
SCM				pmax	pmax		
	comp=Z,1μm,1.2s						
SCM				MLR	MLR		
	comp=Z,17μm,19.0s						
DHY	**Denali Highway**	**23.35**	**49**	*e*P	**P**	**16 01 38.6**	**-1.8**
	comp=Z,1μm,1.7s						
DHY				LR	LR		
	comp=Z,12μm,18.0s						
CCB	**Clear Creek Bu**	**23.37**	**45**	*e*P	**P**	**16 01 39.5**	**-0.9**
	comp=Z,2μm,1.8s						
CCB				LR	LR		
	comp=Z,17μm,18.0s						
COLA	**College**	**23.39**	**44**	*e*P	**P**	**16 01 40.3**	**-0.3**
	comp=Z,792nm,1.0s						
COLA	**College**	**23.39**	**44**	*e*P	**P**	**16 01 40.3**	**-0.3**
COLA				pmax	pmax		
	comp=Z,792nm,1.0s						
YAK	**Yakutsk**	**23.68**	**308**	*e*P	**P**	**16 01 42.0**	**-1.5**
	comp=Z,1μm,1.0s						
YAK				LR	LR		
	comp=Z,20μm,18.0s						
YAK	**Yakutsk**	**23.68**	**308**	*d i*P	**P**	**16 01 42.1**	**-1.4**
YAK				*e**PP	**sP**	**16 01 51.9**	**-0.2**
YAK				*e*S	**S**	**16 05 59.1**	**+2.1**
YAK				*e**SS	Sn	16 06 13.4	-5.2
YAK				*e*SS	**SnSn**	**16 06 42.3**	**+7.5**
YAK				pmax	pmax		
	comp=Z,754nm,1.1s						
YAK				pmax	pmax		
	comp=E,463nm,1.5s						
YAK				pmax	pmax		
	comp=N,155nm,1.6s						
YAK				smax	smax		
	comp=N,5μm,3.0s						
YAK				smax	smax		
	comp=E,6μm,4.6s						
YAK				MLR	MLR		
	comp=Z,20μm,18.0s						
YAK				MLR	MLR		
	comp=N,73μm,19.0s						
YAK				MLR	MLR		
	comp=E,19μm,17.0s						
HDA	**Harding Lake**	**23.70**	**46**	*e*P	**P**	**16 01 41.7**	**-2.0**
	comp=E,633nm,1.4s						
HDA				LR	LR		
	comp=Z,17μm,18.0s						
TOLK	**Toolik Lake Re**	**23.75**	**35**	P	**P**	**16 01 44.1**	**-0.1**
	baz=249,SNR=20						
TOLK	**Toolik Lake Re**	**23.75**	**35**	*e*P	**P**	**16 01 43.8**	**-0.4**
	comp=Z,405nm,0.9s						
TOLK				LR	LR		
	comp=Z,18μm,20.0s						
ILAR	**Eielson Array**	**23.78**	**45**	P	**P**	**16 01 43.6**	**-0.8**
	comp=Z,219nm,1.0s,baz=250,slow=7.7,SNR=400						
ILAR				PcP	**PcP**	**16 05 26.6**	**-0.7**
	comp=Z,4.2nm,0.8s,baz=277,slow=3.4,SNR=3.9						
ILAR				P3KPbc		16 35 00.4	
	comp=Z,0.2nm,0.8s,baz=113,slow=2.3,SNR=2.5						
ILB	**Eielson Array**	**23.78**	**45**	*e*P	**P**	**16 01 43.5**	**-0.8**
MID	**Middleton Isla**	**23.78**	**58**	*e*P	**P**	**16 01 43.8**	**-0.6**
	comp=Z,1μm,1.2s						
MID	**Middleton Isla**	**23.78**	**58**	*e*P	**P**	**16 01 43.8**	**-0.6**
MID				pmax	pmax		
	comp=Z,1μm,1.2s						
IL1	**Eielson Array**	**23.78**	**45**	*e*P	**P**	**16 01 42.6**	**-1.8**
KLU	**Klutina**	**23.93**	**53**	*e*P	**P**	**16 01 44.9**	**-1.1**
	comp=Z,615nm,1.0s						
KLU				LR	LR		
	comp=Z,15μm,18.0s						
DIV	**Divide**	**24.00**	**54**	*e*P	**P**	**16 01 45.5**	**-1.1**
	comp=Z,563nm,1.1s						
DIV				LR	LR		
	comp=Z,18μm,21.0s						
TEY	**Ternei**	**24.12**	**264⇑**	*e*P	**P**	**16 01 48.0**	**+0.2**
TEY				*e*		16 02 32.0	
TEY				*e*		16 06 54.0	
TEY				pmax	pmax		
	comp=E,52nm,1.3s						
TEY				pmax	pmax		
	comp=Z,95nm,1.3s						
TEY				pmax	pmax		
	comp=E,2μm,9.0s						
TEY				pmax	pmax		
	comp=Z,5μm,7.0s						
TEY				MLR	MLR		
	comp=E,6μm,15.0s						
TEY				MLR	MLR		
	comp=Z,8μm,15.0s						
PAX	**Paxson**	**24.20**	**49**	*e*P	**P**	**16 01 47.2**	**-1.3**
	comp=Z,910nm,1.2s						
PAX				LR	LR		
	comp=Z,13μm,20.0s						
PAX	**Paxson**	**24.20**	**49**	*e*P	**P**	**16 01 47.2**	**-1.3**
PAX				pmax	pmax		
	comp=Z,910nm,1.2s						
PAX				MLR	MLR		
	comp=Z,13μm,20.0s						
HARP	**HAARP**	**24.32**	**51**	*e*P	**P**	**16 01 48.5**	**-1.0**
	comp=Z,860nm,1.3s						
RIDG	**Independ'e Rid**	**24.54**	**48**	*e*P	**P**	**16 01 49.5**	**-2.0**
	comp=Z,553nm,1.0s						
RIDG				LR	LR		
	comp=Z,16μm,20.0s						
RAGM	**Ragged Mountai**	**24.56**	**56**	*e*P	**P**	**16 01 51.2**	**-0.5**
	comp=Z,2μm,1.2s						
BMRM	**Bremner River**	**24.58**	**54**	*e*P	**P**	**16 01 51.0**	**-0.9**
	comp=Z,1μm,1.1s						
BMRM				LR	LR		
	comp=Z,20μm,20.0s						
FYU	**Fort Yukon**	**24.77**	**41**	PFAKE		16 02 00.0	+6.5
FYU				LR	LR		
	comp=Z,10μm,18.0s						
DOT	**Dot Lake**	**24.88**	**48**	*e*P	**P**	**16 01 52.9**	**-1.7**
	comp=Z,2μm,1.0s						
DOT				LR	LR		
	comp=Z,44μm,19.0s						
SCRK	**Sand Creek**	**24.94**	**47**	*e*P	**P**	**16 01 53.5**	**-1.7**
	comp=Z,341nm,0.9s						
SCRK				LR	LR		
	comp=Z,15μm,18.0s						
KLR	**Kul'dur**	**25.04**	**277**	P	**P**	**16 01 56.8**	**+0.8**
	comp=Z,1.8nm,0.8s,baz=53,slow=9.8,SNR=54						
KLR				LR	LR	16 13 10.8	
	comp=Z,2μm,18.0s,baz=64,slow=40						
KLR	**Kul'dur**	**25.04**	**277***c i*P		**P**	**16 01 57.2**	**+1.2**
KLR				*i* *SP	**sP**	**16 02 05.0**	**+0.3**
CRQM	**Cirque**	**25.30**	**55**	*e*P	**P**	**16 01 58.3**	**-0.3**
	comp=Z,1μm,1.0s						
CRQM				LR	LR		
	comp=Z,19μm,20.0s						
TGL	**Tana Glacier**	**25.45**	**55**	*e*P	**P**	**16 01 59.4**	**-0.4**
	comp=Z,1μm,1.0s						
TGL				LR	LR		
	comp=Z,20μm,20.0s						
BALM	**Baldy**	**25.67**	**54**	PFAKE		16 02 10.0	+8.1
BALM				LR	LR		
	comp=Z,21μm,20.0s						
ZEA	**Zeya**	**26.07**	**289**	*e*P	**P**	**16 02 05.2**	**-0.1**
ZEA				*e*		16 02 20.0	
ZEA				*e*		16 02 45.0	
ZEA				*e*PPP	PPP	16 03 02.0	
ZEA				*e*S	**S**	**16 06 35.5**	**+0.3**
ZEA				*e*SS	**SnSn**	**16 07 31.0**	**-2.2**
ZEA				pmax	pmax		
	comp=N,120nm,1.2s						
ZEA				pmax	pmax		
	comp=E,200nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,710nm,1.8s						
ZEA				pmax	pmax		
	comp=E,3μm,5.0s						
ZEA				pmax	pmax		
	comp=Z,3μm,5.0s						
ZEA				pmax	pmax		
	comp=Z,3μm,7.0s						
ZEA				pmax	pmax		
	comp=E,2μm,6.0s						
ZEA				smax	smax		
	comp=E,12μm,12.0s						
ZEA				MLR	MLR		
	comp=Z,24μm,15.0s						
ZEA				MLR	MLR		
	comp=E,9μm,16.0s						
ZEA				MLR	MLR		
	comp=N,28μm,13.0s						
TIXI	**Tiksi**	**26.10**	**331**	P	**P**	**16 02 05.2**	**-0.3**
	comp=N,363nm,1.1s,baz=117,slow=10.0,SNR=276						
TIXI				PcP	**PcP**	**16 05 33.5**	**+1.3**
	comp=N,5.2nm,0.6s,baz=90,slow=4.0,SNR=3.1						
TIXI				LR	LR	16 13 19.0	
	comp=N,12μm,18.1s,baz=73,slow=39						
TIXI	**Tiksi**	**26.10**	**331**	*e*P	**P**	**16 02 05.0**	**-0.4**
	comp=N,1μm,1.4s						
TIXI				PcP	**PcP**	**16 05 33.5**	**+1.3**
TIXI	**Tiksi**	**26.10**	**331**	*i* P	**P**	**16 02 05.1**	**-0.3**
TIXI				pmax	pmax		
	comp=Z,1μm,1.7s						
EGAK	**Eagle**	**26.22**	**45**	*e*P	**P**	**16 02 05.3**	**-1.3**
	comp=Z,560nm,1.0s						
EGAK				LR	LR		
	comp=Z,14μm,18.0s						
MIDW	**Midway**	**26.32**	**158**	*e*P	**P**	**16 02 07.6**	**-0.2**
	comp=Z,776nm,1.4s						
MIDW				LR	LR		
	comp=Z,7μm,20.0s						
CLNS	**Chul'man**	**26.58**	**297**	*e*P	**P**	**16 02 09.6**	**-0.4**
CLNS				*e**PP	**pP**	**16 02 16.5**	**+0.3**
CLNS				*e*		16 02 56.4	
CLNS				*e*		16 05 33.2	
CLNS				*e*S	**S**	**16 06 40.3**	**-3.1**
CLNS				pmax	pmax		
	comp=N,60nm,1.4s						
CLNS				pmax	pmax		
	comp=Z,151nm,1.6s						
CLNS				pmax	pmax		
	comp=E,117nm,1.5s						
CLNS				pmax	pmax		
	comp=E,58nm,1.1s						
CLNS				pmax	pmax		
	comp=Z,108nm,1.2s						
CLNS				pmax	pmax		
	comp=N,76nm,1.1s						
CLNS				smax	smax		
	comp=E,9μm,14.2s						
CLNS				smax	smax		
	comp=N,2μm,16.1s						
CLNS				MLR	MLR		
	comp=Z,13μm,19.0s						
CLNS				MLR	MLR		
	comp=E,12μm,19.0s						
DAWY	**Dawson**	**26.96**	**47**	*e*P	**P**	**16 02 13.0**	**-0.4**
	comp=E,463nm,1.1s						
DAWY				LR	LR		
	comp=Z,14μm,20.0s						
YKU2	**Yakutat**	**27.16**	**57**	PFAKE		16 02 30.0	+15

YKU2				LR	LR		
	comp=Z,21µm,19.0s						
USRK	**Ussuriysk Ar.**	**27.34**	**267**	P	**P**	**16 02 18.2**	**+1.3**
	comp=Z,12nm,0.7s,baz=58,slow=8.4,SNR=25						
USRK				LR	LR	16 16 08.2	
	comp=Z,5µm,18.1s,baz=38,slow=43						
MDJ	**Mudanjiang**	**28.55**	**270**	P	**P**	**16 02 27.0**	**-0.7**
MDJ				pP	pP	16 02 31.4	-2.5
MDJ				PP	**PnPn**	**16 03 17.4**	**-0.1**
MDJ				S	**S**	**16 07 14.3**	**-0.2**
MDJ				sS	sS	16 07 23.6	-1.1
MDJ				pmax	pmax		
	comp=Z,2µm,4.8s						
MDJ				LR	LR		
	comp=Z,13µm,15.1s						
MDJ				LR	LR		
	comp=Z,12µm,16.7s						
MDJ				LR	LR		
	comp=Z,15µm,15.1s						
MDJ	**Mudanjiang**	**28.55**	**270**	*e*P	**P**	**16 02 29.8**	**+2.1**
	comp=Z,450nm,1.9s						
MDJ				LR	LR		
	comp=Z,7µm,18.0s						
MJAR	**Matsushiro Arr**	**28.61**	**248**	P	**P**	**16 02 29.5**	**+1.1**
	comp=Z,20nm,1.2s,baz=19,slow=8.1,SNR=12						
MJAR				LR	LR	16 13 04.3	
	comp=Z,2µm,21.9s,baz=55,slow=35						
MJB9	**Matsu-Tunnel**	**28.61**	**248**	*e*P	**P**	**16 02 28.5**	**+0.1**
	comp=Z,514nm,1.5s						
MAJO	**Matsushiro**	**28.62**	**248**	*e*P	**P**	**16 02 28.7**	**+0.3**
	comp=Z,483nm,1.5s						
MAJO	**Matsushiro**	**28.62**	**248**	*e*P	**P**	**16 02 29.2**	**+0.8**
MAJO				pmax	pmax		
	comp=Z,47nm,1.3s						
MAT	**Matsushiro**	**28.62**	**248**	P	**P**	**16 02 28.7**	**+0.3**
MAT				S	**S**	**16 07 21.4**	**+5.7**
MSHR	**Mys Shultsa**	**28.76**	**265***c*	*i*P	**P**	**16 02 30.7**	**+1.1**
SKAG	**Skagway**	**29.34**	**56**	*e*P	**P**	**16 02 34.6**	**0.0**
	comp=Z,140nm,1.1s						
SKAG				LR	LR		
	comp=Z,17µm,18.0s						
INK	**Inuvik**	**29.47**	**38**	P	**P**	**16 02 35.4**	**-0.2**
	comp=Z,25nm,0.6s,baz=256,slow=12,SNR=73						
INK				S	**S**	**16 07 25.8**	**-2.6**
	comp=Z,10nm,1.0s,baz=168,slow=19,SNR=8.2						
INK	**Inuvik**	**29.47**	**38**	*e*P	**P**	**16 02 35.2**	**-0.4**
	comp=Z,406nm,1.4s						
INK				S	**S**	**16 07 25.8**	**-2.6**
INK				LR	LR		
	comp=Z,9µm,18.0s						
BESE	**Bessie Mountai**	**29.78**	**58**	*e*P	**P**	**16 02 38.5**	**0.0**
	comp=Z,258nm,1.4s						
JIS	**Juneau Island**	**30.09**	**59**	*e*P	**P**	**16 02 41.7**	**+0.5**
	comp=Z,310nm,1.2s						
JIS				LR	LR		
	comp=Z,19µm,18.0s						
JHJ	**Hachijo jima 2**	**30.33**	**241**	LR	LR	16 13 57.8	
	comp=Z,1µm,19.4s,baz=63,slow=34						
CN2	**Changchun**	**31.49**	**271**	*e*P	**P**	**16 02 53.6**	**-0.1**
CN2				*e*PP	**PnPn**	**16 03 58.3**	**+1.5**
CN2				*e*S	**S**	**16 07 55.6**	**-5.0**
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,13µm,20.0s						
CN2				LR	LR		
	comp=Z,7µm,20.0s						
CN2				LR	LR		
	comp=Z,6µm,22.0s						
CRAG	**Craig**	**31.57**	**63**	*e*P	**P**	**16 02 54.9**	**+0.7**
	comp=Z,510nm,1.4s						
CRAG				LR	LR		
	comp=Z,16µm,18.0s						
WRAK	**Wrangell Islan**	**31.67**	**61**	*e*P	**P**	**16 02 56.0**	**+0.9**
	comp=Z,286nm,1.1s						
WRAK				LR	LR		
	comp=Z,14µm,20.0s						
BOD	**Bodaibo**	**32.05**	**302**	*e*P	**P**	**16 02 57.6**	**-0.8**
BOD				pmax	pmax		
	comp=Z,395nm,1.3s						
HIA	**Hailar**	**32.10**	**284**	*e*P	**P**	**16 02 58.5**	**-0.6**
	comp=Z,180nm,1.3s						
HIA				LR	LR		
	comp=Z,16µm,18.0s						
HIA	**Hailar**	**32.10**	**284***c*	*i*P	**P**	**16 02 59.2**	**+0.1**
HIA				*i* *PP	**pP**	**16 03 06.1**	**+0.8**
HIA				pmax	pmax		
	comp=Z,41nm,1.2s						
DLBC	**Dease Lake**	**32.26**	**57**	*e*P	**P**	**16 03 01.8**	**+1.3**
	comp=Z,330nm,1.1s						
DLBC				LR	LR		
	comp=Z,23µm,19.0s						
DIB	**Dawson Inlet,**	**32.74**	**67**	*e*P	**P**	**16 03 04.9**	**+0.4**
	comp=Z,277nm,1.2s						
DIB				LR	LR		
	comp=Z,18µm,18.0s						
H11N2	**WAKE ISLAND Hy**	**33.67**	**188**	T	T	16 38 34.8	
	baz=5.5,slow=76,SNR=3824						
H11N3	**WAKE ISLAND Hy**	**33.68**	**188**	T	T	16 38 36.2	
	baz=5.5,slow=76,SNR=8158						
H11N1	**WAKE ISLAND Hy**	**33.69**	**188**	T	T	16 38 35.3	
	baz=5.5,slow=76,SNR=9458						
SNY	**Shenyang**	**33.75**	**270**	⇓P	**P**	**16 03 14.6**	**+1.1**
SNY				S	**S**	**16 08 33.4**	**-2.4**
SNY				LR	LR		
	comp=Z,14µm,15.7s						
SNY				LR	LR		
	comp=Z,12µm,15.3s						
SNY				LR	LR		
	comp=Z,17µm,16.7s						
KSRS	**Korea Array**	**33.92**	**260**	P	**P**	**16 03 16.9**	**+1.9**
	comp=Z,6.4nm,0.8s,baz=52,slow=7.4,SNR=15						
KSRS				PcP	**PcP**	**16 05 54.9**	**+1.9**
	comp=Z,4.0nm,1.0s,baz=29,slow=3.6,SNR=3.2						
KSRS				ScP	**ScP**	**16 09 36.9**	**+0.6**
	comp=Z,2.1nm,0.9s,baz=72,slow=3.7,SNR=4.2						
KSRS				LR	LR	16 17 04.2	
	comp=Z,4µm,19.8s,baz=47,slow=36						
KS01	**Wonju Array Si**	**33.92**	**260**	*e*P	**P**	**16 03 15.3**	**+0.3**
KS15	**Wonju Array Si**	**33.95**	**260**	*e*P	**P**	**16 03 16.5**	**+1.3**
KSAR	**Wonju Array Be**	**33.95**	**260**	P	**P**	**16 03 16.9**	**+1.7**
KSAR				PcP	**PcP**	**16 05 54.9**	**+1.8**
KSAR				ScP	**ScP**	**16 09 36.9**	**+0.4**
KSAR	**Wonju Array Be**	**33.95**	**260**	P	**P**	**16 03 16.9**	**+1.7**
KSAR						16 05 54.9	
JCJ	**Chichijima**	**34.04**	**231**	LR	LR	16 13 51.0	
	comp=Z,4µm,20.8s,baz=16,slow=30						
WAKE	**Wake Island**	**34.13**	**188**	*e*P	**P**	**16 03 18.6**	**+1.7**
	comp=Z,545nm,1.5s						
WAKE				LR	LR		
	comp=Z,5µm,18.0s						
CIT	**Chita**	**34.41**	**292**	*e*P	**P**	**16 03 19.2**	**0.0**
CIT				*e*		16 03 29.8	
CIT				*e*		16 03 36.3	
CIT				*e*S	**S**	**16 08 47.6**	**+1.7**
CIT				pmax	pmax		
	comp=Z,360nm,1.3s						
H11S1	**WAKE ISLAND Hy**	**34.90**	**188**	T	T	16 40 05.9	
	baz=5.4,slow=76						
H11S3	**WAKE ISLAND Hy**	**34.91**	**188**	T	T	16 40 09.1	
	baz=5.4,slow=76						
H11S2	**WAKE ISLAND Hy**	**34.91**	**188**	T	T	16 40 08.4	
	baz=5.4,slow=76						
TJN	**Taejon**	**34.97**	**259***c*	*i*P	**P**	**16 03 25.8**	**+1.7**
JNU	**Nakatsue**	**35.23**	**252**	P	**P**	**16 03 28.2**	**+1.8**
	comp=Z,20nm,0.8s,baz=45,slow=6.8,SNR=6.4						
JNU				LR	LR	16 17 43.2	
	comp=Z,3µm,20.2s,baz=70,slow=36						
JNU	**Nakatsue**	**35.23**	**252**	*e*P	**P**	**16 03 27.0**	**+0.6**
	comp=Z,134nm,1.3s						
BBB	**Bella Bella**	**35.58**	**67**	*e*P	**P**	**16 03 29.7**	**+0.6**
	comp=Z,611nm,1.4s						
BBB				LR	LR		
	comp=Z,10µm,18.0s						
DL2	**Dalian**	**36.73**	**268**	P	**P**	**16 03 40.0**	**+0.9**
DL2				PP	**PP**	**16 05 07.0**	**+4.3**
DL2				S	**S**	**16 09 28.6**	**+7.1**
DL2				pmax	pmax		
	comp=Z,580nm,6.5s						
DL2				LR	LR		
	comp=Z,10µm,17.8s						
DL2				LR	LR		
	comp=Z,8µm,28.4s						
YKW3	**Yellowknife Ar**	**38.17**	**46**	*e*P	**P**	**16 03 51.0**	**-0.1**
	comp=Z,244nm,1.1s						
YKA	**Yellowknife Ar**	**38.20**	**46**	P	**P**	**16 03 51.7**	**+0.4**
	comp=Z,93nm,0.9s,baz=289,slow=8.2,SNR=179						
YKA				ScP	**ScP**	**16 09 52.2**	**+0.5**
	comp=Z,5.6nm,0.9s,baz=288,slow=3.1,SNR=5.9						
OPA	**Opana**	**39.13**	**132**	PFAKE		16 04 10.0	+10
OPA				LR	LR		
	comp=Z,10µm,20.0s						
BJI	**Beijing**	**39.29**	**273**	P	**P**	**16 04 02.3**	**+1.6**
BJI				PP	**PnPn**	**16 05 33.8**	**+0.3**
BJI				S	**S**	**16 10 00.4**	**+0.2**
BJI				LR	LR		
	comp=Z,5µm,13.7s						
BJI				LR	LR		
	comp=Z,9µm,12.7s						
BJI				LR	LR		
	comp=Z,8µm,23.7s						
BJT	**Baijiatuau**	**39.30**	**273**	*e*P	**P**	**16 04 01.1**	**+0.2**
	comp=Z,340nm,1.9s						
BJT				LR	LR		
	comp=Z,9µm,18.0s						
BJT	**Baijiatuau**	**39.30**	**273**	*e*P	**P**	**16 04 01.1**	**+0.2**
BJT				pmax	pmax		
	comp=Z,340nm,1.9s						
BJT				MLR	MLR		
	comp=Z,9µm,18.0s						
JOHN	**Johnston Islan**	**39.34**	**151**	PFAKE		16 04 10.0	+8.7
JOHN				LR	LR		
	comp=Z,6µm,20.0s						
KIP	**Kipapa**	**39.36**	**132**	*e*P	**P**	**16 04 01.8**	**+0.3**
	comp=Z,385nm,1.3s						
KIP				LR	LR		
	comp=Z,10µm,18.0s						
KIP	**Kipapa**	**39.36**	**132***d*	*i*P	**P**	**16 04 03.4**	**+1.9**
KIP				pmax	pmax		
	comp=Z,2µm,1.2s						
IRK	**Irkutsk**	**39.39**	**297**	⇓*i*P	**P**	**16 04 00.7**	**-0.8**
IRK				*e*		16 04 19.5	
IRK				*e*		16 05 32.3	
IRK				*e*S	**S**	**16 09 54.7**	**-6.9**
IRK				pmax	pmax		
	comp=Z,193nm,1.8s						
NRIK	**Noril'sk**	**39.69**	**326**	P	**P**	**16 04 03.4**	**-0.3**
	comp=Z,121nm,1.2s,baz=75,slow=8.2,SNR=159						
NRIK				LR	LR	16 21 43.8	
	comp=Z,12µm,19.3s,baz=78,slow=38						
LLLB	**Lilloоet**	**39.76**	**66**	*e*P	**P**	**16 04 05.2**	**+0.6**
	comp=Z,457nm,1.1s						
LLLB				LR	LR		
	comp=Z,18µm,18.0s						
PGC	**Sidney**	**39.91**	**69**	*e*P	**P**	**16 04 05.9**	**+0.2**
	comp=Z,434nm,1.5s						
PGC				LR	LR		
	comp=Z,12µm,20.0s						
TLY	**Talaya**	**40.01**	**296**	P	**P**	**16 04 06.8**	**+0.2**
	comp=Z,29nm,1.0s,baz=43,slow=8.2,SNR=53						
TLY	**Talaya**	**40.01**	**296**	*e*P	**P**	**16 04 06.5**	**-0.2**
	comp=Z,135nm,1.4s						
TLY				LR	LR		
	comp=Z,29µm,18.0s						
TLY	**Talaya**	**40.01**	**296**	P	**P**	**16 04 07.1**	**+0.5**
	SNR=48						
TLY	**Talaya**	**40.01**	**296***d*	*i*P	**P**	**16 04 06.7**	**+0.1**
TLY				*e*S	**S**	**16 10 10.9**	**0.0**
TLY				*e*SSS	SSS	16 13 33.6	
TLY				pmax	pmax		
	comp=Z,98nm,1.3s						
TLY				MLR	MLR		
	comp=Z,23µm,17.0s						
ULN	**Ulaanbaatar**	**40.10**	**289**	*e*P	**P**	**16 04 07.7**	**0.0**
	comp=Z,116nm,1.2s						
ULN				LR	LR		
	comp=Z,14µm,21.0s						
ULN	**Ulaanbaatar**	**40.10**	**289**	P	**P**	**16 04 08.2**	**+0.5**
	SNR=58						
ULN	**Ulaanbaatar**	**40.10**	**289***d*	*i*P	**P**	**16 04 07.8**	**+0.2**
ULN				pmax	pmax		
	comp=Z,143nm,1.7s						
A04D	**Lummi Island**	**40.29**	**69**	P	**P**	**16 04 09.7**	**+0.8**
	baz=302,SNR=26						
NLWA	**Neilton Lookou**	**40.35**	**71**	*e*P	**P**	**16 04 10.2**	**+0.7**
	comp=Z,603nm,1.3s						
NLWA				LR	LR		
	comp=Z,14µm,19.0s						
RES	**Resolute Bay**	**40.45**	**24**	*e*P	**P**	**16 04 10.1**	**+0.1**
	comp=Z,128nm,1.2s						
RES	**Resolute Bay**	**40.45**	**24**	*e*P	**P**	**16 04 10.1**	**+0.1**
RES				pmax	pmax		
	comp=Z,128nm,1.2s						
SONA1	**Songino Array**	**40.48**	**290**	*e*P	**P**	**16 04 10.4**	**-0.3**
SONM	**Songino Array**	**40.49**	**290**	P	**P**	**16 04 11.4**	**+0.5**
	comp=Z,16nm,0.5s,baz=61,slow=9.5,SNR=81						
SONM				ScP	**ScP**	**16 10 01.2**	**+0.1**
	comp=Z,8.9nm,1.2s,baz=51,slow=4.7,SNR=5.1						
SONM				LR	LR	16 20 48.1	
	comp=Z,11µm,20.2s,baz=59,slow=36						
KHLH	**Kahului Airpor**	**40.54**	**130**	PFAKE		16 04 20.0	+8.7
KHLH				LR	LR		
	comp=Z,10µm,20.0s						
HDW	**Hoodsport**	**40.67**	**71**	*e*P	**P**	**16 04 13.1**	**+0.8**
HLK	**Haleakala**	**40.74**	**130**	PFAKE		16 04 30.0	+17
HLK				LR	LR		
	comp=Z,9µm,19.0s						
GNW	**Green Mountain**	**40.85**	**71**	*e*P	**P**	**16 04 14.3**	**+0.7**
ZAK	**Zakamensk**	**40.87**	**295**	*e*P	**P**	**16 04 13.5**	**-0.4**
ZAK				*e*		16 05 53.8	
ZAK				pmax	pmax		
	comp=Z,79nm,1.7s						
ZAK				pmax	pmax		
	comp=Z,44nm,1.5s						
B05A	**Bryant**	**40.88**	**69**	P	**P**	**16 04 14.2**	**+0.4**
	baz=303,SNR=85						
E03A	**Lebam**	**40.99**	**72**	*e*P	**P**	**16 04 15.1**	**+0.3**
	comp=Z,669nm,1.3s						
E03A				LR	LR		
	comp=Z,9µm,19.0s						
JCW	**Jim Creek**	**41.01**	**69**	*e*P	**P**	**16 04 15.4**	**+0.5**
B06A	**Marblemount**	**41.08**	**69**	*e*P	**P**	**16 04 15.1**	**-0.4**
	comp=Z,398nm,1.4s						
B06A				LR	LR		
	comp=Z,10µm,20.0s						
TIA	**Tai'an**	**41.19**	**268**	P	**P**	**16 04 18.0**	**+1.4**
TIA				S	**S**	**16 10 32.6**	**+3.8**
TIA				ScS	**ScS**	**16 14 21.3**	**+1.8**
TIA				pmax	pmax		
	comp=Z,330nm,5.1s						
TIA				LR	LR		
	comp=Z,3µm,15.9s						
TIA				LR	LR		
	comp=Z,4µm,15.5s						
TIA				LR	LR		
	comp=Z,4µm,17.0s						
F03A	**Seaside**	**41.34**	**73**	*e*P	**P**	**16 04 18.3**	**+0.6**
	comp=Z,1µm,1.4s						
F03A				LR	LR		
	comp=Z,10µm,20.0s						
MHA	**Mahukona**	**41.39**	**130**	*e*P	**P**	**16 04 19.4**	**+1.1**
MHA	**Mahukona**	**41.39**	**130**	*e*P	**P**	**16 04 19.4**	**+1.1**
MOY	**Mondy**	**41.44**	**297**	*e*P	**P**	**16 04 18.1**	**-0.4**
MOY				pmax	pmax		
	comp=Z,213nm,1.7s						
JOW	**Kunigami**	**41.46**	**248**	P	**P**	**16 04 20.3**	**+1.4**
	comp=Z,61nm,0.9s,baz=67,slow=26,SNR=4.2						
JOW				LR	LR	16 20 48.4	
	comp=Z,1µm,21.4s,baz=100,slow=35						
JOW	**Kunigami**	**41.46**	**248**	*e*P	**P**	**16 04 19.2**	**+0.4**
	comp=Z,355nm,1.3s						
D05A	**Enumclaw**	**41.53**	**71**	*e*P	**P**	**16 04 19.9**	**+0.7**
	comp=Z,760nm,1.4s						
D05A				LR	LR		
	comp=Z,7µm,19.0s						
HHC	**Hu-ho-hao-te**	**41.54**	**278**	*e*P	**P**	**16 04 20.6**	**+1.1**
HHC				sP	sP	16 04 29.4	+1.1
HHC				S	**S**	**16 10 32.8**	**-1.3**
HHC				sS	sS	16 10 44.8	+0.3
HHC				SS	**SS**	**16 13 34.1**	**-4.6**
HHC				pmax	pmax		
	comp=Z,2µm,5.2s						
HHC				LR	LR		
	comp=Z,20µm,16.4s						
HHC				LR	LR		
	comp=Z,11µm,15.6s						
HHC				LR	LR		
	comp=Z,8µm,14.7s						
F04D	**Rainier, OR**	**41.57**	**72**	P	**P**	**16 04 19.8**	**+0.2**
	baz=305,SNR=8.8						
C06D	**Leavenworth**	**41.74**	**69**	P	**P**	**16 04 21.0**	**+0.1**
	baz=304,SNR=6.4						
OBSR	**Observation Ro**	**41.79**	**71**	*e*P	**P**	**16 04 22.3**	**+0.7**
HUH	**Hualalai**	**41.86**	**131**	PFAKE		16 04 30.0	+7.5
HUH				LR	LR		
	comp=Z,9µm,19.0s						
LON	**Longmire**	**41.88**	**71**	*e*P	**P**	**16 04 21.7**	**-0.4**
	comp=Z,118nm,1.1s						
LON				LR	LR		
	comp=Z,7µm,21.0s						
LON	**Longmire**	**41.88**	**71**	*e*P	**P**	**16 04 21.7**	**-0.4**
LON				pmax	pmax		
	comp=Z,118nm,1.1s						
LON				MLR	MLR		
	comp=Z,7µm,21.0s						
PANH	**Panhandle Gap,**	**41.91**	**71**	*e*P	**P**	**16 04 23.0**	**+0.4**
KHLU	**Kahalu'u**	**41.92**	**131**	PFAKE		16 04 30.0	+7.3
KHLU				LR	LR		
	comp=Z,8µm,20.0s						
G03D	**McMinnville, O**	**41.92**	**74**	P	**P**	**16 04 23.1**	**+0.7**
	baz=306,SNR=17						
POHA	**Pohakuloa**	**41.94**	**130**	*e*P	**P**	**16 04 23.9**	**+0.8**
	comp=Z,357nm,1.3s						
POHA				LR	LR		
	comp=Z,8µm,18.0s						
B202	**Windy Ridge, M**	**41.98**	**72**	*e*P	**P**	**16 04 23.6**	**+0.6**
HMH	**Humu'ula Sheep**	**42.09**	**130**	PFAKE		16 04 40.0	+16
HMH				LR	LR		
	comp=Z,10µm,19.0s						
MWH	**Moku'aweowe**	**42.15**	**130**	*e*P	**P**	**16 04 25.5**	**+0.4**
	comp=Z,337nm,1.2s						
MWH				LR	LR		
	comp=Z,9µm,18.0s						
MLH	**Mauna Loa**	**42.23**	**130**	PFAKE		16 04 40.0	+15
MLH				LR	LR		
	comp=Z,8µm,20.0s						
LTY	**Liberty**	**42.23**	**70**	*e*P	**P**	**16 04 24.6**	**-0.5**
	comp=Z,298nm,1.3s						
LTY				LR	LR		
	comp=Z,8µm,19.0s						
COR	**Corvallis**	**42.27**	**75**	*e*P	**P**	**16 04 25.8**	**+0.6**
	comp=Z,653nm,1.0s						
COR				LR	LR		
	comp=Z,10µm,21.0s						
COR	**Corvallis**	**42.27**	**75**	*e*P	**P**	**16 04 25.8**	**+0.6**
COR				pmax	pmax		
	comp=Z,653nm,1.0s						
COR				MLR	MLR		
	comp=Z,10µm,21.0s						
AIN	**Ainahou**	**42.31**	**130**	PFAKE		16 04 40.0	+14
AIN				LR	LR		
	comp=Z,9µm,19.0s						
TBM	**Table Mountain**	**42.33**	**70**	*e*P	**P**	**16 04 26.0**	**+0.2**
SSE	**Sheshan**	**42.33**	**259**	P	**P**	**16 04 28.9**	**+3.0**
SSE				PP	**PP**	**16 06 07.5**	**+3.5**
SSE				S	**S**	**16 10 48.8**	**+3.0**
SSE				pmax	pmax		
	comp=Z,810nm,4.1s						
SSE				LR	LR		
	comp=Z,2µm,14.1s						
UWB	**Uwekahuna B**	**42.34**	**130**	PFAKE		16 04 40.0	+14
UWB				LR	LR		
	comp=Z,8µm,20.0s						
SBLHI	**Steaming Bluff**	**42.35**	**130**	PFAKE		16 04 40.0	+14
SBLHI				LR	LR		
	comp=Z,8µm,18.0s						
WRMHI	**West Rim**	**42.35**	**130**	PFAKE		16 04 40.0	+14
WRMHI				LR	LR		
	comp=Z,9µm,20.0s						
HATHI	**Halema'uma'u T**	**42.35**	**130**	PFAKE		16 04 40.0	+14
HATHI				LR	LR		
	comp=Z,9µm,19.0s						
NPH	**North Pit**	**42.35**	**130**	PFAKE		16 04 40.0	+14
NPH				LR	LR		
	comp=Z,8µm,19.0s						
B08A	**Colville Reser**	**42.37**	**68**	*e*P	**P**	**16 04 26.1**	**0.0**
	comp=Z,486nm,1.2s						
B08A				LR	LR		
	comp=Z,8µm,18.0s						
RIM	**Rim**	**42.37**	**130**	PFAKE		16 04 40.0	+14
RIM				LR	LR		
	comp=Z,8µm,19.0s						
KKO	**Keanakako'i**	**42.37**	**130**	PFAKE		16 04 40.0	+14
KKO				LR	LR		
	comp=Z,8µm,19.0s						
WTV	**Waterville**	**42.39**	**69**	*e*P	**P**	**16 04 26.2**	**-0.1**
PUH	**Pauahi**	**42.42**	**130**	PFAKE		16 04 40.0	+13
PUH				LR	LR		
	comp=Z,7µm,19.0s						
HLP	**Hilina Pali**	**42.44**	**130**	PFAKE		16 04 40.0	+13
HLP				LR	LR		
	comp=Z,10µm,18.0s						
NPOC	**North of Pu'u**	**42.45**	**130**	PFAKE		16 04 40.0	+13
NPOC				LR	LR		
	comp=Z,8µm,20.0s						
STCH	**Steam Cracks**	**42.45**	**130**	PFAKE		16 04 40.0	+13
STCH				LR	LR		
	comp=Z,8µm,20.0s						
JCUZ	**Jacuzzi**	**42.46**	**130**	PFAKE		16 04 40.0	+13
JCUZ				LR	LR		
	comp=Z,8µm,20.0s						
HULD	**Heiheiahulu Di**	**42.49**	**130**	PFAKE		16 04 40.0	+13
HULD				LR	LR		
	comp=Z,6µm,18.0s						
BTO	**Baotou**	**42.61**	**278**	*e*P	**P**	**16 04 29.0**	**+0.8**
KEBM	**Edson Butte**	**42.68**	**77**	*e*P	**P**	**16 04 29.3**	**+0.5**
	comp=Z,824nm,1.1s						
KEBM				LR	LR		
	comp=Z,9µm,20.0s						
I03D	**Drain, OR**	**42.76**	**76**	P	**P**	**16 04 30.2**	**+0.9**
	baz=307,SNR=52						
H04A	**Detroit Lake**	**42.85**	**74**	*e*P	**P**	**16 04 30.0**	**-0.1**
	comp=Z,642nm,1.2s						
H04A				LR	LR		
	comp=Z,6µm,20.0s						
TIY	**Taiyuan**	**43.02**	**273**	*e*P	P	16 04 36.6	+5.1
TIY				S	**S**	**16 10 51.5**	**-4.4**
TIY				pmax	pmax		
	comp=Z,2µm,5.1s						
TIY				LR	LR		
	comp=Z,10µm,13.2s						
TIY				LR	LR		
	comp=Z,6µm,15.1s						
TIY				LR	LR		
	comp=Z,5µm,15.8s						
G05D	**Wamic, OR**	**43.02**	**72**	P	**P**	**16 04 31.9**	**+0.4**
	baz=306,SNR=35						
NJ2	**Nanjing**	**43.03**	**262**	*e*P	P	16 04 37.4	+5.8
NJ2				pP	sP	16 04 39.3	-1.1
NJ2				sP	pP	16 04 41.0	+3.1
NJ2				S	**S**	**16 10 58.3**	**+2.3**
NJ2				sS	sS	16 11 06.4	0.0
NJ2				ScS	**ScS**	**16 14 31.6**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,94nm,1.2s						
NJ2				pmax	pmax		
	comp=Z,2µm,3.9s						
NJ2				LR	LR		
	comp=Z,7µm,18.4s						
NJ2				LR	LR		
	comp=Z,8µm,15.2s						
NJ2				LR	LR		
	comp=Z,5µm,15.2s						
E07A	**Sunnyside**	**43.09**	**70**	*e*P	**P**	**16 04 31.8**	**-0.1**
	comp=Z,544nm,1.3s						
E07A				LR	LR		
	comp=Z,7µm,19.0s						
KBO	**Bosley Butte**	**43.15**	**78**	*e*P	**P**	**16 04 32.9**	**+0.3**
	comp=Z,940nm,1.3s						
KBO				LR	LR		
	comp=Z,7µm,20.0s						
DBO	**Dodson Butte**	**43.17**	**76**	*e*P	**P**	**16 04 33.7**	**+1.0**
IRO	**Indian Ridge**	**43.22**	**75**	*e*P	**P**	**16 04 33.5**	**+0.3**
I04A	**Tendick Farm,**	**43.25**	**75**	P	**P**	**16 04 33.7**	**+0.4**
	baz=307,SNR=97						
I04A				S	**S**	**16 11 00.6**	**+1.4**
	baz=307						
PRLK	**Prince Lake**	**43.26**	**74**	*e*P	**P**	**16 04 34.0**	**+0.5**
C09A	**Chrisman Ranch**	**43.27**	**68**	*e*P	**P**	**16 04 33.0**	**-0.4**
	comp=Z,586nm,1.3s						
C09A				LR	LR		
	comp=Z,8µm,19.0s						
D08A	**Wollman Farm,**	**43.33**	**69**	*e*P	**P**	**16 04 33.2**	**-0.6**
	comp=Z,362nm,1.3s						
D08A				LR	LR		
	comp=Z,7µm,19.0s						
HAWA	**Hanford**	**43.37**	**70**	*e*P	**P**	**16 04 34.1**	**0.0**
	comp=Z,606nm,1.2s						
HAWA				LR	LR		

comp=Z,9μm,19.0s
G06A Carlson Farm, 43.42 72 *e*P **P 16 04 34.0 -0.6**
comp=Z,243nm,1.4s
G06A LR LR
comp=Z,8μm,20.0s
F07A Phinny Hill Vi 43.44 71 *e*P **P 16 04 34.8 +0.1**
comp=Z,640nm,1.3s
F07A LR LR
comp=Z,10μm,20.0s
I05D Terrebonne, OR 43.55 74 P **P 16 04 35.9 +0.2**
baz=307,SNR=31
L02D Cave Junction, 43.55 78 P **P 16 04 36.4 +0.8**
baz=308,SNR=87
E08A Dider Farm, El 43.58 70 *e*P **P 16 04 35.5 -0.4**
comp=Z,352nm,1.2s
E08A LR LR
comp=Z,8μm,20.0s
NEW Newport 43.64 66 P **P 16 04 36.4 0.0**
baz=305,SNR=150
NEW Newport 43.64 66 *e*P **P 16 04 36.0 -0.4**
comp=Z,431nm,1.1s
NEW LR LR
comp=Z,10μm,18.0s
NEW Newport 43.64 66 *e*P **P 16 04 36.0 -0.4**
NEW pmax pmax
comp=Z,431nm,1.1s
NEW MLR MLR
comp=Z,10μm,18.0s
HUMO Hull Mountain 43.65 77 *e*P **P 16 04 36.9 +0.4**
comp=Z,339nm,1.1s
HUMO LR LR
comp=Z,11μm,20.0s
J04D Umpqua Nationa 43.76 75 P **P 16 04 38.2 +0.6**
baz=308,SNR=102
KTRM Thompson Ridge 43.83 78 *e*P **P 16 04 39.1 +0.9**
KNGR Kungurtug, Tuv 43.85 298 *i*P **P 16 04 38.1 -0.1**
E09A Wood Farm, Sta 44.08 69 *e*P **P 16 04 39.5 -0.4**
comp=Z,494nm,1.2s
E09A LR LR
comp=Z,8μm,18.0s
PINE Pine Mountain 44.10 74 *e*P **P 16 04 40.6 +0.2**
comp=Z,443nm,1.3s
PINE LR LR
comp=Z,7μm,21.0s
JCC Jacoby Creek, 44.13 79 *e*P **P 16 04 41.2 +0.9**
comp=Z,956nm,1.3s
JCC LR LR
comp=Z,7μm,18.0s
J05D Fort Rock, OR 44.24 75 P **P 16 04 42.3 +0.8**
baz=308,SNR=336
KHMM Horse Mountain 44.27 79 *e*P **P 16 04 42.6 +1.0**
comp=Z,1μm,1.3s
KHMM LR LR
comp=Z,8μm,18.0s
YBH Yreka Blue Hor 44.33 77 *e*P **P 16 04 42.9 +0.8**
comp=Z,617nm,1.2s
YBH LR LR
comp=Z,7μm,20.0s
YBH Yreka Blue Hor 44.33 77 *e*P **P 16 04 42.9 +0.8**
YBH pmax pmax
comp=Z,617nm,1.2s
YBH MLR MLR
comp=Z,7μm,20.0s
K04D Chiloquin, OR 44.34 76 P **P 16 04 42.9 +0.7**
baz=308,SNR=42
B040 Montague 44.44 77 *e*P **P 16 04 43.5 +0.6**
M02C Callahan 44.46 78 P **P 16 04 44.1 +1.0**
baz=309,SNR=138
KMRM Mail Ridge 44.69 80 *e*P **P 16 04 46.0 +1.0**
comp=Z,744nm,1.2s
KMRM LR LR
comp=Z,8μm,20.0s
I07A Izee 44.75 73 *e*P **P 16 04 45.3 -0.1**
comp=Z,238nm,1.2s
I07A LR LR
comp=Z,5μm,20.0s
K05A Summer Lake 44.78 75 *e*P **P 16 04 46.2 +0.4**
comp=Z,689nm,1.1s
K05A LR LR
comp=Z,7μm,21.0s
N02D Trinity Center 44.81 78 P **P 16 04 46.9 +1.0**
baz=309,SNR=99
M04C Macdoel 44.81 77 P **P 16 04 46.7 +0.8**
baz=309,SNR=196
LGBM Gray Butte 44.88 78 *e*P **P 16 04 47.4 +0.7**
GUMO Guam 44.90 218 LR LR 16 20 46.8
comp=Z,3μm,21.9s,baz=30,slow=32
F10A Beach Ranch, E 44.91 69 PFAKE 16 05 00.0 +13
F10A LR LR
comp=Z,6μm,19.0s
LGMM Garner Mountai 44.93 77 *e*P **P 16 04 47.8 +0.9**
WALA Waterton Lakes 44.94 64 *e*P **P 16 04 47.0 +0.1**
comp=Z,1μm,1.1s
WALA LR LR
comp=Z,17μm,18.0s
TULEG Thule 44.95 17 PFAKE 16 05 00.0 +14
TULEG LR LR
comp=Z,8μm,18.0s
KKPM Kettenpom Peak 44.96 80 *e*P **P 16 04 47.8 +0.7**
KCPM Cahto Peak 45.11 80 *e*P **P 16 04 48.8 +0.5**
comp=Z,704nm,1.3s
WDC Whiskeytown Da 45.16 79 *e*P **P 16 04 48.7 +0.1**
comp=Z,461nm,1.2s
WDC LR LR
comp=Z,5μm,19.0s
WDC Whiskeytown Da 45.16 79 *e*P **P 16 04 48.7 +0.1**
WDC pmax pmax
comp=Z,461nm,1.2s
WDC MLR MLR
comp=Z,5μm,19.0s
BSMT Bassoo Peak 45.16 66 *e*P **P 16 04 49.0 +0.3**
GTC Three Chop Rid 45.31 81 *e*P **P 16 04 50.1 +0.3**
JTMT Jette 45.50 66 *e*P **P 16 04 51.2 -0.1**
comp=Z,710nm,1.4s
JTMT LR LR
comp=Z,12μm,20.0s
BMO Blue Mountains 45.54 71 *e*P **P 16 04 51.2 -0.5**
comp=Z,416nm,1.4s
BMO LR LR
comp=Z,10μm,19.0s
BMO Blue Mountains 45.54 71 *e*P **P 16 04 51.2 -0.5**
BMO pmax pmax
comp=Z,416nm,1.4s
BMO MLR MLR
comp=Z,10μm,19.0s
HVS Khovu-Aksy 45.56 300*d i*P **P 16 04 51.4 -0.3**
HVS pmax pmax
comp=Z,77nm,1.1s
MOD Modoc Plateau 45.63 76 *e*P **P 16 04 52.7 +0.1**
comp=Z,680nm,1.3s
MOD LR LR
comp=Z,8μm,20.0s
O03D Paynes Creek 45.77 78 P **P 16 04 53.5 -0.1**
baz=310,SNR=204
O03D Paynes Creek 45.77 78 *e*P **P 16 04 53.4 -0.1**
J08A Circle Bar Ran 45.79 73 *e*P **P 16 04 53.5 -0.1**
comp=Z,234nm,1.3s
HOPS Hopland Field 45.86 81 *e*P **P 16 04 54.1 0.0**
comp=Z,898nm,1.3s
HOPS LR LR
comp=Z,10μm,18.0s
GDXM Geysers 46.14 81 *e*P **P 16 04 57.0 +0.6**
comp=Z,505nm,1.2s
GDXM LR LR
comp=Z,15μm,18.0s
MSO Missoula 46.23 66 P **P 16 04 56.9 -0.2**
baz=307,SNR=138
MSO Missoula 46.23 66 *e*P **P 16 04 56.6 -0.5**
comp=Z,400nm,1.3s
MSO LR LR
comp=Z,6μm,18.0s
WVOR Wild Horse Val 46.27 74 *e*P **P 16 04 57.2 -0.3**
comp=Z,314nm,1.3s
WVOR LR LR
comp=Z,8μm,22.0s
WVOR Wild Horse Val 46.27 74 *e*P **P 16 04 57.2 -0.3**
WVOR pmax pmax
comp=Z,315nm,1.3s
WVOR MLR MLR
comp=Z,8μm,22.0s
ORV Oroville 46.43 79 *e*P **P 16 04 57.9 -0.7**
comp=Z,313nm,1.1s
ORV LR LR
comp=Z,5μm,18.0s
ORV Oroville 46.43 79 *e*P **P 16 04 57.9 -0.7**
ORV pmax pmax
comp=Z,313nm,1.1s
ORV MLR MLR
comp=Z,5μm,18.0s
MCCM Marconi Confer 46.53 81 *e*P **P 16 04 59.1 -0.3**
comp=Z,471nm,1.3s
MCCM LR LR
comp=Z,7μm,18.0s
TATO Taipei 46.74 253 PFAKE 16 05 10.0 +8.8
TATO LR LR
comp=Z,6μm,21.0s
WHN Wuhan 46.80 265 ⇑P **P 16 05 02.8 +1.3**
WHN S **S 16 11 42.5 -8.0**
WHN pmax pmax
comp=Z,260nm,1.5s
WHN LR LR
comp=Z,12μm,18.9s
WHN LR LR
comp=Z,22μm,14.4s
WHN LR LR
comp=Z,23μm,14.8s
BEKR Beckworth 46.90 78 *e*P **P 16 05 02.1 -0.4**
comp=Z,370nm,1.2s
BEKR LR LR
comp=Z,5μm,18.0s
YHNB Yeheng 47.04 253 PFAKE 16 05 20.0 +16
YHNB LR LR
comp=Z,5μm,22.0s
AFDM Forest Hills D 47.13 79 *e*P **P 16 05 03.7 -0.4**
comp=Z,294nm,1.2s
AFDM LR LR
comp=Z,6μm,19.0s
IND Independence 47.22 78 *e*P **P 16 05 05.4 +0.3**
MFID Camas Ranch 47.26 71 *e*P **P 16 05 04.5 -0.7**
comp=Z,244nm,1.1s
PEAR Peavine Mounta 47.30 78 *e*P **P 16 05 06.0 +0.3**
NACB Ninganchiao 47.30 252 PFAKE 16 05 20.0 +14
NACB LR LR
comp=Z,4μm,22.0s
HRY Holter Researc 47.46 65 *e*P **P 16 05 06.4 -0.3**
KBS Kingsbay 47.51 355 *e*P **P 16 05 06.5 0.0**
comp=Z,119nm,1.0s
KBS LR LR
comp=Z,2μm,22.0s
KBS Kingsbay 47.51 355 *e*P **P 16 05 06.5 0.0**
KBS pmax pmax
comp=Z,119nm,1.0s
KBS MLR MLR
comp=Z,2μm,22.0s
KBS Kingsbay 47.51 355 *e*P **P 16 05 06.5 0.0**
PATS Pohnpei 47.54 198 *e*P **P 16 05 07.4 -0.1**
comp=Z,316nm,1.5s
PATS LR LR
comp=Z,6μm,19.0s
RUBR Rubicon Trail 47.55 79 *e*P **P 16 05 07.5 -0.1**
comp=Z,184nm,1.0s
RUBR LR LR
comp=Z,4μm,20.0s
PAHR Pah Rah Range 47.57 77 *e*P **P 16 05 07.7 0.0**
comp=Z,561nm,1.2s
PAHR LR LR
comp=Z,8μm,19.0s
XAN Xi'an 47.59 272 P **P 16 05 08.6 +0.8**
XAN pP pP 16 05 13.1 -1.1
XAN sP sP 16 05 15.6 -1.1
XAN PcP **PcP 16 06 38.3 +0.9**
XAN S **S 16 12 01.3 -0.7**
XAN ScS **ScS 16 14 59.3 -0.9**
XAN SS **SS 16 15 22.8 -6.9**
XAN pmax pmax
comp=Z,880nm,5.5s
XAN LR LR
comp=Z,10μm,13.5s
XAN LR LR
comp=Z,9μm,15.1s
XAN LR LR
comp=Z,12μm,15.7s
LRM Limekiln Ridge 47.66 67 *e*P **P 16 05 08.2 -0.3**
VCNR Virginia City 47.68 78 *e*P **P 16 05 08.9 +0.2**
comp=Z,542nm,1.2s
VCNR LR LR
comp=Z,5μm,19.0s
FFC Flin Flon 47.70 52 *e*P **P 16 05 07.7 -0.7**
comp=Z,151nm,1.3s
FFC LR LR
comp=Z,12μm,21.0s
FFC Flin Flon 47.70 52 *e*P **P 16 05 07.7 -0.7**
FFC pmax pmax
comp=Z,151nm,1.3s
FFC MLR MLR
comp=Z,12μm,21.0s
EGMT Eagleton 47.78 63 P **P 16 05 08.7 -0.4**
baz=308,SNR=56
EGMT Eagleton 47.78 63 *e*P **P 16 05 08.5 -0.6**
comp=Z,390nm,1.2s
EGMT LR LR
comp=Z,14μm,18.0s
PNTR Pine Nut 47.85 78 *e*P **P 16 05 10.1 +0.1**
comp=Z,597nm,1.0s
PNTR LR LR
comp=Z,5μm,18.0s
DLMT Dillon 47.87 67 *e*P **P 16 05 09.1 -0.8**
comp=Z,112nm,1.1s
SPA0 Spitsbergen Ar 47.95 353 *e*P **P 16 05 09.5 -0.6**
SPA0 Spitsbergen Ar 47.95 353 *e*P **P 16 05 09.4 -0.6**
SPITS Spitsbergen Ar 47.95 353 P **P 16 05 09.4 -0.6**
comp=Z,195nm,0.8s,baz=55,slow=7.2,SNR=84
SPITS LR LR 16 25 51.0
comp=Z,8μm,18.9s,baz=20,slow=37
SSLB Suanglung 47.97 252 PFAKE 16 05 20.0 +9.2
SSLB LR LR
comp=Z,5μm,22.0s
BFC Buffalo Canyon 47.97 78 *e*P **P 16 05 11.0 +0.1**
HLID Hailey 47.97 70 P **P 16 05 10.7 -0.1**
baz=309,SNR=211
HLID Hailey 47.97 70 *e*P **P 16 05 10.3 -0.5**
comp=Z,219nm,1.1s
HLID LR LR
comp=Z,10μm,19.0s
MCMT McKenzie Canyo 48.06 68 *e*P **P 16 05 10.6 -1.0**
CMB Columbia Colle 48.08 80 *e*P **P 16 05 11.5 0.0**
comp=Z,255nm,1.1s
CMB LR LR
comp=Z,6μm,20.0s
CMB Columbia Colle 48.08 80 *e*P **P 16 05 11.5 0.0**
CMB pmax pmax
comp=Z,255nm,1.1s
CMB MLR MLR
comp=Z,6μm,20.0s
YULB Yu-li 48.08 252 *e*P **P 16 05 12.4 +0.8**
comp=Z,415nm,2.0s
YERR Yerington 48.13 78 *e*P **P 16 05 12.1 0.0**
comp=Z,535nm,1.2s
YERR LR LR
comp=Z,6μm,18.0s
BOZ Bozeman (W) 48.26 66 P **P 16 05 12.8 -0.2**
baz=309,SNR=342
BOZ Bozeman (W) 48.26 66 *e*P **P 16 05 12.6 -0.3**
comp=Z,506nm,1.3s
SAO San Andreas Ge 48.30 82 *e*P **P 16 05 12.4 -0.8**
comp=Z,146nm,1.1s
SAO LR LR
comp=Z,6μm,18.0s
WAKR Walker 48.33 79 *e*P **P 16 05 13.8 +0.2**
comp=Z,480nm,1.2s
WAKR LR LR
comp=Z,7μm,19.0s
ZAA0 Zalesovo Array 48.34 308 *e*P **P 16 05 11.6 -1.7**
comp=Z,219nm,1.9s
ZALV Zalesovo Beam 48.34 308 P **P 16 05 11.8 -1.5**
comp=Z,14nm,0.6s,baz=54,slow=6.5,SNR=55
ZALV LR LR 16 26 05.4
comp=Z,7μm,18.4s,baz=43,slow=37
ZALV Zalesovo Beam 48.34 308 *e*P **P 16 05 11.6 -1.6**
ZALV Zalesovo Beam 48.34 308 *e*P **P 16 05 11.6 -1.6**
KULLO Kullorsuaq 48.36 16 *i*P **P 16 05 13.2 +0.1**
comp=Z,6μm,15.0s
KULLO Kullorsuaq 48.36 16 *i*P **P 16 05 13.2 +0.1**
KULLO MLR MLR
comp=Z,6μm,15.0s
BMN Battle Mountai 48.36 75 *e*P **P 16 05 13.8 -0.1**
comp=Z,528nm,1.3s
BMN LR LR
comp=Z,8μm,21.0s
BMN Battle Mountai 48.36 75 *e*P **P 16 05 13.8 -0.1**
BMN pmax pmax
comp=Z,528nm,1.3s
BMN MLR MLR
comp=Z,8μm,21.0s
QZH Quanzhou 48.44 256 P **P 16 05 18.5 +4.1**
QZH S **S 16 12 18.0 +4.0**
QZH pmax pmax
comp=Z,140nm,1.8s
QZH LR LR
comp=Z,4μm,14.7s
QZH LR LR
comp=Z,3μm,15.6s
QZH LR LR
comp=Z,3μm,12.8s
TPUB Ta-pu 48.53 252 *e*P **P 16 05 19.0 +3.8**
comp=Z,120nm,1.0s
TPUB LR LR
comp=Z,4μm,18.0s
NVS Novosibirsk 48.54 310⇑*i*P **P 16 05 14.3 -0.5**
NVS *e* 16 07 03.1
NVS *e*S **S 16 12 07.9 -6.9**
NVS pmax pmax
comp=Z,364nm,1.8s
NVS pmax pmax
comp=N,102nm,1.7s
NVS pmax pmax
comp=E,154nm,1.6s
NVS pmax pmax
comp=Z,307nm,1.9s
NVS pmax pmax
comp=N,131nm,2.0s
NVS pmax pmax
comp=E,139nm,2.0s
NVS smax smax
comp=N,189nm,2.4s
NVS smax smax
comp=E,219nm,2.6s
TWG Pinlang 48.65 252 PFAKE 16 05 30.0 +14
TWG LR LR
comp=Z,13μm,19.0s
HOPEN Hopen 48.75 350 *e*P **P 16 05 15.9 -0.2**
KVN Kaiserville 48.75 77 *e*P **P 16 05 16.9 0.0**
comp=Z,433nm,1.1s
KVN LR LR
comp=Z,7μm,20.0s
KVN Kaiserville 48.75 77 *e*P **P 16 05 16.9 0.0**
KVN pmax pmax
comp=Z,433nm,1.1s
KVN MLR MLR
comp=Z,7μm,20.0s
RYN Ryan 48.78 78 *e*P **P 16 05 17.1 0.0**
comp=Z,352nm,1.2s
RYN LR LR
comp=Z,5μm,19.0s
FCC Fort Churchill 48.79 44 *e*P **P 16 05 16.2 -0.4**
comp=Z,362nm,1.1s
FCC LR LR
comp=Z,14μm,22.0s
FCC Fort Churchill 48.79 44 *e*P **P 16 05 16.2 -0.4**
FCC pmax pmax
comp=Z,362nm,1.1s
FCC MLR MLR
comp=Z,14μm,22.0s
QLMT Earthquake Lak 48.84 67 *e*P **P 16 05 17.3 -0.2**
YHB Horse Butte 49.02 67 *e*P **P 16 05 18.8 -0.1**
comp=Z,627nm,1.1s
NV01 Mina Array Sit 49.04 78 *e*P **P 16 05 19.1 0.0**
NVAR Mina Array Bea 49.04 78 P **P 16 05 19.4 +0.2**
comp=Z,186nm,0.9s,baz=293,slow=7.6,SNR=589
NVAR ScP **ScP 16 10 36.5 +0.1**
comp=Z,2.1nm,0.8s,baz=294,slow=2.9,SNR=4.1
LHV Little Huntoon 49.04 78 *e*P **P 16 05 19.7 +0.8**
PMPB Monarch Peak 49.05 82 *e*P **P 16 05 18.7 -0.4**
comp=Z,161nm,0.9s
PMPB LR LR
comp=Z,4μm,19.0s
MDCM Deadman Creek 49.09 79 *e*P **P 16 05 20.1 +0.5**
MINS Minaret Summit 49.11 79 *e*P **P 16 05 20.5 +0.6**
MDPB Devils Postpil 49.12 79 *e*P **P 16 05 19.9 +0.1**
comp=Z,408nm,1.0s
MDPB LR LR
comp=Z,6μm,19.0s
HSPB Hornsund (broa 49.12 353 *e*P **P 16 05 18.5 -0.5**
NV11 Mina Array Sit 49.13 78 *e*P **P 16 05 19.7 0.0**
comp=Z,26nm,1.3s
MRDM Red Cones 49.15 79 *e*P **P 16 05 20.5 +0.4**
OMMB Old Mammoth Mi 49.18 79 *e*P **P 16 05 20.4 +0.1**
comp=Z,340nm,1.2s
OMMB LR LR
comp=Z,7μm,18.0s
YMR Madison River 49.20 67 *e*P **P 16 05 20.2 -0.1**
comp=Z,584nm,1.2s
YMR LR LR
comp=Z,6μm,20.0s
GCMT Greycliff 49.21 65 *e*P **P 16 05 20.4 +0.2**
LZH Lanzhou 49.23 278⇓P **P 16 05 21.8 +1.2**
LZH pP pP 16 05 26.3 -0.6
LZH sP sP 16 05 28.6 -0.8
LZH PP **PP 16 07 16.3 +2.1**
LZH S **S 16 12 25.8 +0.5**
LZH sS pS 16 12 33.4 +0.5
LZH SS **SS 16 15 53.4 -3.0**
LZH pmax pmax
comp=Z,250nm,1.3s
LZH pmax pmax
comp=Z,1μm,6.2s
LZH LR LR
comp=Z,21μm,14.6s
LZH LR LR
comp=Z,23μm,15.0s
LZH LR LR
comp=Z,27μm,16.8s
MLAC Mammoth, Mammo 49.26 79 P **P 16 05 21.6 +0.7**
baz=312
PSMM Smith Mountain 49.27 82 *e*P **P 16 05 21.2 +0.4**
YNR Norris Junctio 49.33 67 *e*P **P 16 05 21.5 +0.1**
comp=Z,360nm,1.2s
YNR LR LR
comp=Z,6μm,19.0s
GTA Gaotai 49.38 284⇓P **P 16 05 22.0 +0.3**
GTA pP pP 16 05 25.3 -2.7
GTA sP sP 16 05 28.3 -2.2
GTA S **S 16 12 27.8 +0.5**
GTA ScS **ScS 16 15 12.1 -0.2**
GTA pmax pmax
comp=Z,70nm,1.3s
GTA pmax pmax
comp=Z,400nm,5.6s
GTA LR LR
comp=Z,22μm,17.9s
GTA LR LR
comp=Z,21μm,17.9s
GTA LR LR
comp=Z,18μm,18.2s
YFT Old Faithful 49.41 67 *e*P **P 16 05 22.6 +0.7**
comp=Z,292nm,1.0s
YPP Pitchstone Pla 49.55 67 *e*P **P 16 05 23.5 +0.5**
comp=Z,706nm,2.0s
H17A Grant Village 49.59 67 P **P 16 05 24.6 +1.3**
baz=310,SNR=131
H17A Grant Village 49.59 67 *e*P **P 16 05 24.2 +0.9**
comp=Z,616nm,1.3s
DGZ Jazzator, Alta 49.64 302 *i*P **P 16 05 23.6 +0.1**
DGZ pmax pmax
comp=Z,36nm,1.0s
PAGB Antelope Grade 49.71 82 *e*P **P 16 05 23.9 -0.2**
comp=Z,408nm,1.4s
PAGB LR LR
comp=Z,3μm,20.0s
IMW Indian Meadow 49.71 68 *e*P **P 16 05 24.4 +0.1**
comp=Z,284nm,1.1s
FXWY Fox Creek 49.83 68 *e*P **P 16 05 24.8 -0.3**
comp=Z,106nm,1.1s
RLMT Red Lodge 49.85 65 P **P 16 05 25.6 +0.3**
baz=310,SNR=315
RLMT Red Lodge 49.85 65 *e*P **P 16 05 25.4 +0.2**
comp=Z,622nm,1.2s
ENH Enshi 49.91 268 *e*P **P 16 05 25.4 -0.2**
comp=Z,264nm,1.2s
ENH LR LR
comp=Z,6μm,21.0s
MOOW Moose Ponds 49.91 68 *e*P **P 16 05 25.7 0.0**
comp=Z,136nm,1.1s
TPAW Teton Pass 49.96 68 *e*P **P 16 05 26.0 -0.2**
comp=Z,237nm,1.5s
TPAW LR LR
comp=Z,6μm,20.0s
TIN Tinemaha, Big 50.01 79 P **P 16 05 26.8 +0.4**
baz=313,SNR=36
HVU Hansel Valley 50.04 71 *e*P **P 16 05 26.5 -0.2**
comp=Z,250nm,1.1s

HVU					LR	LR		
	comp=Z,6μm,18.0s							
HVU	**Hansel Valley**	**50.04**	**71**	*e*P	**P**	**16 05 26.5**	**-0.2**	
HVU					pmax	pmax		
	comp=Z,250nm,1.1s							
HVU					MLR	MLR		
	comp=Z,6μm,18.0s							
DAG	**Danmarks Havn**	**50.07**	**3**	⇓*i*P	**P**	**16 05 25.4**	**-0.8**	
	comp=Z,103nm,0.9s							
	comp=Z,6μm,18.0s							
DAG	**Danmarks Havn**	**50.07**	**3**	⇓*i*P	**P**	**16 05 25.4**	**-0.8**	
DAG					pmax	pmax		
	comp=Z,100nm,0.9s							
DAG					MLR	MLR		
	comp=Z,6μm,18.0s							
LOHW	**Long Hollow**	**50.08**	**68**	*e*P	**P**	**16 05 26.7**	**-0.3**	
	comp=Z,184nm,1.3s							
SNOW	**Snow King Moun**	**50.09**	**68**	*e*P	**P**	**16 05 27.0**	**-0.2**	
	comp=Z,156nm,1.3s							
SNOW					LR	LR		
	comp=Z,5μm,20.0s							
REDW	**Red Top Meadow**	**50.10**	**68**	*e*P	**P**	**16 05 27.1**	**-0.1**	
	comp=Z,297nm,1.5s							
REDW					LR	LR		
	comp=Z,6μm,20.0s							
SMMC	**Simmler**	**50.14**	**82**	P	**P**	**16 05 27.7**	**+0.4**	
	baz=314,SNR=8.0							
VES	**Vestal, Richgr**	**50.32**	**81**	P	**P**	**16 05 28.2**	**-0.4**	
	baz=313,SNR=75							
AHID	**Auburn Hatcher**	**50.35**	**69**	*e*P	**P**	**16 05 28.8**	**-0.3**	
	comp=Z,276nm,1.2s							
AHID					LR	LR		
	comp=Z,11μm,19.0s							
DGMT	**Dagmar**	**50.42**	**59**	P	**P**	**16 05 29.2**	**-0.1**	
	baz=309,SNR=63							
DGMT	**Dagmar**	**50.42**	**59**	*e*P	**P**	**16 05 28.9**	**-0.4**	
	comp=Z,505nm,1.1s							
DGMT					LR	LR		
	comp=Z,12μm,22.0s							
BGU	**Big Grassy Mou**	**50.45**	**72**	*e*P	**P**	**16 05 29.6**	**-0.2**	
	comp=Z,116nm,1.2s							
BGU					LR	LR		
	comp=Z,4μm,20.0s							
LAO	**LASA Array**	**50.49**	**62**	P	**P**	**16 05 30.4**	**+0.5**	
	baz=310,SNR=209							
LAO	**LASA Array**	**50.49**	**62**	*e*P	**P**	**16 05 30.3**	**+0.4**	
	comp=Z,875nm,1.3s							
LAO					LR	LR		
	comp=Z,10μm,18.0s							
CWC	**Cottonwood Cre**	**50.51**	**80**	P	**P**	**16 05 30.4**	**+0.2**	
	baz=313							
SPUT	**South Promonto**	**50.53**	**71**	*e*P	**P**	**16 05 30.1**	**-0.3**	
	comp=Z,239nm,1.2s							
PKM	**Mcpherson Peak**	**50.54**	**82**	P	**P**	**16 05 30.8**	**+0.2**	
	baz=314,SNR=58							
GRAC	**Grapevine Rang**	**50.55**	**79**	P	**P**	**16 05 31.0**	**+0.5**	
	baz=313,SNR=30							
R11A	**Troy Canyon, C**	**50.69**	**76**	P	**P**	**16 05 31.6**	**0.0**	
	baz=312,SNR=445							
R11A	**Troy Canyon, C**	**50.69**	**76**	PFAKE		16 05 40.0	+8.4	
R11A					LR	LR		
	comp=Z,7μm,20.0s							
ISA	**Isabella, Lake**	**50.81**	**81**	P	**P**	**16 05 31.5**	**-0.9**	
	baz=314,SNR=54							
ISA	**Isabella, Lake**	**50.81**	**81**	*e*P	**P**	**16 05 31.4**	**-1.0**	
	comp=Z,235nm,1.2s							
ISA					LR	LR		
	comp=Z,6μm,18.0s							
ISA	**Isabella, Lake**	**50.81**	**81**	*e*P	**P**	**16 05 31.4**	**-1.0**	
ISA					pmax	pmax		
	comp=Z,235nm,1.2s							
ISA					MLR	MLR		
	comp=Z,6μm,18.0s							
HWUT	**Hardware Ranch**	**50.84**	**70**	*e*P	**P**	**16 05 32.6**	**-0.1**	
	comp=Z,259nm,1.3s							
HWUT					LR	LR		
	comp=Z,6μm,19.0s							
DAC	**Darwin (Calif)**	**50.91**	**79**	*e*P	**P**	**16 05 35.0**	**+1.7**	
	comp=Z,236nm,1.2s							
DAC					LR	LR		
	comp=Z,6μm,18.0s							
SBC	**Santa Barbara**	**50.91**	**83**	P	**P**	**16 05 33.2**	**+0.2**	
	baz=314,SNR=5.3							
ARVC	**Arvin**	**50.96**	**81**	P	**P**	**16 05 32.8**	**-0.7**	
	baz=314,SNR=9.5							
DUG	**Dugway, Tooele**	**51.06**	**73**	P	**P**	**16 05 34.6**	**+0.2**	
	baz=312,SNR=190							
DUG	**Dugway, Tooele**	**51.06**	**73**	*e*P	**P**	**16 05 34.5**	**+0.2**	
	comp=Z,440nm,1.1s							
DUG					LR	LR		
	comp=Z,6μm,20.0s							
DUG	**Dugway, Tooele**	**51.06**	**73**	*e*P	**P**	**16 05 34.5**	**+0.2**	
DUG					pmax	pmax		
	comp=Z,440nm,1.1s							
DUG					MLR	MLR		
	comp=Z,6μm,20.0s							
MPMC	**Manual Prospec**	**51.12**	**80**	P	**P**	**16 05 34.8**	**-0.1**	
	baz=313,SNR=188							
BJO	**Bjornoya**	**51.18**	**351**	*e*P	**P**	**16 05 34.4**	**-0.1**	
BW06	**Boulder Array**	**51.21**	**68**	P	**P**	**16 05 35.5**	**0.0**	
	baz=311,SNR=146							
BW06	**Boulder Array**	**51.21**	**68**	*e*P	**P**	**16 05 35.2**	**-0.3**	
	comp=Z,469nm,1.2s							
BW06					LR	LR		
	comp=Z,7μm,19.0s							
PDAR	**Pinedale Array**	**51.21**	**68**	P	**P**	**16 05 35.8**	**+0.3**	
	comp=Z,214nm,1.0s,baz=302,slow=3.3,SNR=505							
FURC	**Furnace Creek,**	**51.21**	**79**	P	**P**	**16 05 35.8**	**+0.5**	
	baz=313,SNR=26							
TPNV	**Topopah Spring**	**51.24**	**78**	P	**P**	**16 05 36.1**	**+0.3**	
	baz=313,SNR=597							
TPNV	**Topopah Spring**	**51.24**	**78**	*e*P	**P**	**16 05 35.9**	**+0.1**	
	comp=Z,565nm,1.0s							
TPNV					LR	LR		
	comp=Z,6μm,20.0s							
TPNV	**Topopah Spring**	**51.24**	**78**	*e*P	**P**	**16 05 35.9**	**+0.1**	
TPNV					pmax	pmax		
	comp=Z,565nm,1.0s							
TPNV					MLR	MLR		
	comp=Z,6μm,20.0s							
TCUT	**Toone Canyon**	**51.25**	**71**	*e*P	**P**	**16 05 35.8**	**-0.1**	
	comp=Z,439nm,1.3s							
SCZ2	**Santa Cruz Isl**	**51.27**	**83**	P	**P**	**16 05 35.7**	**-0.1**	
	baz=314,SNR=22							
CTU	**Camp Tracy**	**51.34**	**71**	*e*P	**P**	**16 05 36.2**	**-0.3**	
	comp=Z,240nm,1.2s							
CTU					LR	LR		
	comp=Z,4μm,21.0s							
OSI	**Osito Audit: C**	**51.38**	**82**	P	**P**	**16 05 36.6**	**-0.1**	
	baz=314							
OSI	**Osito Audit: C**	**51.38**	**82**	PFAKE		16 05 50.0	+13	
OSI					LR	LR		
	comp=Z,4μm,18.0s							
LRMC	**Laurel Mtn Rad**	**51.40**	**80**	P	**P**	**16 05 36.5**	**-0.5**	
	baz=314,SNR=28							
BLG	**Laguna Peak, P**	**51.53**	**83**	P	**P**	**16 05 37.5**	**-0.3**	
	baz=314,SNR=29							
JLU	**Jordanelle**	**51.57**	**71**	*e*P	**P**	**16 05 38.2**	**-0.1**	
	comp=Z,272nm,1.2s							
JLU					LR	LR		
	comp=Z,5μm,21.0s							
PSUT	**Pine Spring**	**51.57**	**75**	*e*P	**P**	**16 05 38.3**	**0.0**	
	comp=Z,274nm,1.1s							
PSUT					LR	LR		
	comp=Z,7μm,20.0s							
EDW2	**Edwards Air Fo**	**51.63**	**81**	P	**P**	**16 05 38.3**	**-0.3**	
	baz=314,SNR=107							
NLU	**North Lily Min**	**51.64**	**72**	*e*P	**P**	**16 05 38.7**	**-0.1**	
	comp=Z,186nm,1.2s							
SNCC	**San Nicolas Is**	**51.85**	**84**	P	**P**	**16 05 40.0**	**-0.2**	
	baz=315,SNR=11							
SNCC	**San Nicolas Is**	**51.85**	**84**	*e*P	**P**	**16 05 39.9**	**-0.3**	
	comp=Z,490nm,1.2s							
SNCC					LR	LR		
	comp=Z,4μm,20.0s							
MPU	**Maple Canyon**	**51.86**	**72**	*e*P	**P**	**16 05 40.3**	**-0.1**	
	comp=Z,196nm,1.1s							
MPU					LR	LR		
	comp=Z,6μm,20.0s							
DECC	**Green Verdugo**	**51.86**	**82**	P	**P**	**16 05 40.1**	**-0.2**	
	baz=314,SNR=21							
SHOC	**Shoshone, Teco**	**51.94**	**79**	P	**P**	**16 05 40.9**	**+0.1**	
	baz=314,SNR=151							
BLKC	**Black Mountain**	**51.95**	**80**	*e*P	**P**	**16 05 41.2**	**+0.3**	
PASC	**Pasadena Art C**	**52.01**	**82**	*e*P	**P**	**16 05 40.7**	**-0.7**	
	comp=Z,305nm,1.1s							
PASC					LR	LR		
	comp=Z,4μm,19.0s							
GSC	**Goldstone, Bar**	**52.04**	**80**	P	**P**	**16 05 41.6**	**-0.1**	
	baz=314,SNR=213							
GSC	**Goldstone, Bar**	**52.04**	**80**	*e*P	**P**	**16 05 41.3**	**-0.4**	
	comp=Z,637nm,1.2s							
GSC					LR	LR		
	comp=Z,5μm,18.0s							
GSC	**Goldstone, Bar**	**52.04**	**80**	*e*P	**P**	**16 05 41.3**	**-0.4**	
GSC					pmax	pmax		
	comp=Z,637nm,1.2s							
GSC					MLR	MLR		
	comp=Z,5μm,18.0s							
MWC	**Mount Wilson**	**52.05**	**82**	*e*P	**P**	**16 05 41.5**	**-0.3**	
	comp=Z,1μm,1.4s							
MWC					LR	LR		
	comp=Z,5μm,18.0s							
MWC	**Mount Wilson**	**52.05**	**82**	*e*P	**P**	**16 05 41.6**	**-0.3**	
MWC					pmax	pmax		
	comp=Z,1μm,1.4s							
MWC					MLR	MLR		
	comp=Z,5μm,18.0s							
SHPR	**Sheep Range**	**52.19**	**78**	*e*P	**P**	**16 05 42.5**	**-0.3**	
	comp=Z,363nm,1.8s							
SHPR					LR	LR		
	comp=Z,11μm,18.0s							
RRX	**Edison Barstow**	**52.22**	**80**	P	**P**	**16 05 43.0**	**0.0**	
	baz=314							
FMP	**Fort Macarthur**	**52.26**	**82**	P	**P**	**16 05 42.5**	**-0.7**	
	baz=315							
BFSC	**Mount Baldy Ra**	**52.27**	**81**	P	**P**	**16 05 43.2**	**-0.2**	
	baz=314,SNR=62							
TCRU	**Three Creeks R**	**52.33**	**74**	PFAKE		16 06 00.0	+16	
TCRU					LR	LR		
	comp=Z,8μm,18.0s							
ZSN	**Zaisan**	**52.38**	**301**	⇓*i*P	**P**	**16 05 43.7**	**-0.3**	
	comp=Z,34nm,1.7s							
ZSN				*i* PP	**PP**	**16 07 41.8**	**-0.6**	
ZSN				*i* S	**S**	**16 13 08.1**	**-0.3**	
CIS	**Catalina Islan**	**52.41**	**83**	P	**P**	**16 05 43.9**	**-0.5**	
	baz=315,SNR=21							
TUQ	**Turquoise Moun**	**52.47**	**79**	P	**P**	**16 05 44.8**	**-0.2**	
	baz=314,SNR=128							
CCUT	**Cedar City**	**52.52**	**75**	*e*P	**P**	**16 05 45.5**	**+0.1**	
	comp=Z,244nm,1.2s							
CCUT					LR	LR		
	comp=Z,6μm,20.0s							
MSU	**Marysvale**	**52.55**	**74**	*e*P	**P**	**16 05 46.2**	**+0.6**	
MSU	**Marysvale**	**52.55**	**74**	*e*P	**P**	**16 05 46.2**	**+0.6**	
TMUT	**Trail Mountain**	**52.58**	**72**	*e*P	**P**	**16 05 46.3**	**+0.4**	
	comp=Z,516nm,1.1s							
TMUT					LR	LR		
	comp=Z,4μm,20.0s							
SCI2	**San Clemente I**	**52.62**	**83**	P	**P**	**16 05 45.8**	**-0.1**	
	baz=315,SNR=12							
HEC	**Hector,Ludlow**	**52.65**	**80**	P	**P**	**16 05 46.0**	**-0.1**	
	baz=314,SNR=35							
SZCU	**Shurtz Canyon**	**52.65**	**75**	PFAKE		16 06 00.0	+14	
SZCU					LR	LR		
	comp=Z,6μm,20.0s							
BBRC	**Big Bear Solar**	**52.69**	**81**	P	**P**	**16 05 46.5**	**-0.2**	
	baz=314,SNR=6.0							
SUMG	**Summit**	**52.72**	**11**	⇓*i*P	**P**	**16 05 46.6**	**0.0**	
	comp=Z,379nm,1.1s							
	comp=Z,5μm,16.0s							
SUMG	**Summit**	**52.72**	**11**	*e*P	**P**	**16 05 46.2**	**-0.4**	
	comp=Z,375nm,1.1s							
SUMG	**Summit**	**52.72**	**11**	*e*P	**P**	**16 05 46.2**	**-0.4**	
SUMG					pmax	pmax		
	comp=Z,375nm,1.1s							
P17A	**Butcher Ranch,**	**52.73**	**72**	*e*P	**P**	**16 05 46.9**	**0.0**	
	comp=Z,541nm,1.5s							
P17A					LR	LR		
	comp=Z,5μm,21.0s							
SEM	**Semipalatinsk**	**52.75**	**307**	⇓*i*P	**P**	**16 05 45.4**	**-1.5**	
	comp=Z,131nm,1.7s							
SEM				*i* S	**S**	**16 13 09.9**	**-3.9**	
SEM					LR	LR	16 29 38.5	
	comp=Z,3μm,14.0s							
MTPU	**Mount Pierson**	**52.87**	**74**	*e*P	**P**	**16 05 48.6**	**+0.5**	
	comp=Z,431nm,1.4s							
MTPU					LR	LR		
	comp=Z,8μm,18.0s							
CD2	**Chengdu**	**52.89**	**273**	P	**P**	**16 05 48.6**	**+0.6**	
CD2				sP	pP	16 05 54.9	+0.5	
CD2				PP	**PP**	**16 07 48.0**	**+0.7**	
CD2				S	**S**	**16 13 16.6**	**+0.8**	
CD2				sS	pS	16 13 24.6	+1.1	
CD2				SS	**SS**	**16 16 54.8**	**+0.4**	
CD2				pmax	pmax			
	comp=Z,260nm,1.3s							
CD2				pmax	pmax			
	comp=Z,2μm,4.9s							
CD2				LR	LR			
	comp=Z,12μm,19.0s							
CD2				LR	LR			
	comp=Z,12μm,15.5s							
P18A	**Preston Nutter**	**52.91**	**71**	*e*P	**P**	**16 05 48.3**	**0.0**	
	comp=Z,329nm,1.3s							
P18A					LR	LR		
	comp=Z,6μm,19.0s							
GZH	**Guangzhou**	**52.93**	**259**	P	P	16 05 54.0	+5.7	
GZH				S	**S**	**16 13 18.3**	**+1.9**	
GZH				LR	LR			
	comp=Z,5μm,12.5s							
GZH				LR	LR			
	comp=Z,7μm,12.3s							
LCMT	**Little Creek M**	**52.96**	**76**	*e*P	**P**	**16 05 48.8**	**+0.3**	
	comp=Z,494nm,1.2s							
LCMT					LR	LR		
	comp=Z,6μm,21.0s							
K22A	**Casper**	**52.96**	**66**	P	**P**	**16 05 48.2**	**-0.3**	
	baz=312,SNR=97							
K22A	**Casper**	**52.96**	**66**	*e*P	**P**	**16 05 48.0**	**-0.5**	
	comp=Z,294nm,1.1s							
K22A					LR	LR		
	comp=Z,5μm,18.0s							
MURC	**Murrieta**	**52.99**	**82**	P	**P**	**16 05 48.4**	**-0.3**	
	baz=315,SNR=39							
GMRC	**Granite Mounta**	**53.08**	**79**	P	**P**	**16 05 49.5**	**0.0**	
	baz=314,SNR=103							
SRU	**San Rafael Swe**	**53.10**	**72**	*e*P	**P**	**16 05 49.8**	**+0.2**	
	comp=Z,568nm,1.1s							
SRU					LR	LR		
	comp=Z,3μm,20.0s							
SRU	**San Rafael Swe**	**53.10**	**72**	*e*P	**P**	**16 05 49.8**	**+0.2**	
SRU					pmax	pmax		
	comp=Z,568nm,1.1s							
SRU					MLR	MLR		
	comp=Z,3μm,20.0s							
MDND	**Maddock**	**53.17**	**57**	P	**P**	**16 05 50.1**	**+0.3**	
	baz=312,SNR=89							
MDND	**Maddock**	**53.17**	**57**	*e*P	**P**	**16 05 50.0**	**+0.2**	
	comp=Z,1μm,1.1s							
MDND					LR	LR		
	comp=Z,11μm,19.0s							
LDFC	**Landfair**	**53.20**	**79**	*e*P	**P**	**16 05 49.7**	**-0.6**	
	comp=Z,400nm,0.9s							
LDFC					LR	LR		
	comp=Z,4μm,21.0s							
KNB	**Kanab**	**53.20**	**75**	*e*P	**P**	**16 05 50.7**	**+0.4**	
	comp=Z,550nm,1.2s							
KNB					LR	LR		
	comp=Z,5μm,21.0s							
PKCU	**Pink Cliffs**	**53.20**	**75**	*e*P	**P**	**16 05 51.2**	**+0.7**	
	comp=Z,279nm,1.2s							
PKCU					LR	LR		
	comp=Z,6μm,20.0s							
RWWY	**Rawlins**	**53.23**	**68**	*e*P	**P**	**16 05 50.0**	**-0.6**	
	comp=Z,420nm,1.3s							
RWWY					LR	LR		
	comp=Z,5μm,20.0s							
WMQ	**Urumqi**	**53.29**	**296**	P	**P**	**16 05 51.6**	**+0.8**	
WMQ				pP	sP	16 05 58.5	-1.2	
WMQ				PP	**PP**	**16 07 57.5**	**+6.8**	
WMQ				S	**S**	**16 13 21.4**	**+0.4**	
WMQ				SS	**SS**	**16 16 59.0**	**-1.2**	
WMQ				pmax	pmax			
	comp=Z,230nm,1.5s							
WMQ				pmax	pmax			
	comp=Z,1μm,3.9s							
WMQ				LR	LR			
	comp=Z,74μm,22.7s							
WMQ				LR	LR			
	comp=Z,80μm,24.3s							
KURK	**Kurchatov**	**53.33**	**308**	*e*P	**P**	**16 05 50.0**	**-0.9**	
	comp=Z,484nm,1.2s							
KURK				S	**S**	**16 13 18.6**	**-2.5**	
KURK				LR	LR			
	comp=Z,13μm,19.0s							
KURK	**Kurchatov**	**53.33**	**308**	P	**P**	**16 05 50.5**	**-0.4**	
	SNR=177							
KURK	**Kurchatov**	**53.33**	**308**	*e*P	**P**	**16 05 50.0**	**-0.9**	
KURK				S	**S**	**16 13 18.6**	**-2.5**	
KURK				pmax	pmax			
	comp=Z,484nm,1.2s							
KURK				MLR	MLR			
	comp=Z,13μm,19.0s							
RSSD	**Black Hills**	**53.34**	**63**	P	**P**	**16 05 51.2**	**-0.1**	
	baz=312							
RSSD	**Black Hills**	**53.34**	**63**	*e*P	**P**	**16 05 50.8**	**-0.5**	
	comp=Z,486nm,1.3s							
RSSD					LR	LR		
	comp=Z,9μm,20.0s							
RSSD	**Black Hills**	**53.34**	**63**	*e*P	**P**	**16 05 50.8**	**-0.5**	
RSSD					pmax	pmax		
	comp=Z,486nm,1.3s							
RSSD					MLR	MLR		
	comp=Z,9μm,20.0s							
ULM	**Lac du Bonnet**	**53.42**	**53**	P	**P**	**16 05 51.2**	**-0.3**	
	comp=Z,94nm,0.9s,baz=311,slow=7.5,SNR=115							
ULM					LR	LR	16 30 28.7	
	comp=Z,8μm,18.7s,baz=318,slow=38							
ULM	**Lac du Bonnet**	**53.42**	**53**	*e*P	**P**	**16 05 50.9**	**-0.6**	
	comp=Z,199nm,1.1s							
PFO	**Pinyon Flats O**	**53.42**	**81**	P	**P**	**16 05 51.4**	**-0.6**	
	baz=315,SNR=27							
PFO	**Pinyon Flats O**	**53.42**	**81**	*e*P	**P**	**16 05 51.1**	**-0.9**	
	comp=Z,122nm,1.2s							
PFO					LR	LR		
	comp=Z,5μm,19.0s							
PFO	**Pinyon Flats O**	**53.42**	**81**	*e*P	**P**	**16 05 51.1**	**-0.9**	
PFO					pmax	pmax		
	comp=Z,122nm,1.2s							
PFO					MLR	MLR		
	comp=Z,5μm,19.0s							
BELC	**Belle Mtn. Jos**	**53.42**	**80**	P	**P**	**16 05 51.4**	**-0.6**	
	baz=315,SNR=100							
XPFO	**Piæon Flat**	**53.42**	**81**	*e*P	**P**	**16 05 51.2**	**-0.8**	
	comp=Z,105nm,1.2s							
XPFO					LR	LR		
	comp=Z,4μm,20.0s							
KURBB	**Kurchatov Arra**	**53.43**	**308**	P	**P**	**16 05 50.9**	**-0.7**	
	comp=Z,150nm,1.0s,baz=50,slow=7.3,SNR=494							
KURBB				S	**S**	**16 13 18.6**	**-3.9**	
	comp=Z,6.2nm,1.1s,baz=45,slow=13,SNR=6.6							
109C	**Camp Elliot, M**	**53.55**	**82**	P	**P**	**16 05 52.4**	**-0.3**	
	baz=315,SNR=7.3							
CPE	**Camp Elliot**	**53.55**	**82**	*e*P	**P**	**16 05 52.1**	**-0.6**	
	comp=Z,370nm,1.4s							
CPE					LR	LR		
	comp=Z,3μm,20.0s							
A31A	**Linda, St. Vin**	**53.66**	**55**	P	**P**	**16 05 52.7**	**-0.6**	
	baz=312							
O20A	**White River Ci**	**53.70**	**70**	P	**P**	**16 05 54.0**	**0.0**	
	baz=313,SNR=53							
O20A	**White River Ci**	**53.70**	**70**	*e*P	**P**	**16 05 53.7**	**-0.3**	
	comp=Z,599nm,1.4s							
O20A					LR	LR		
	comp=Z,5μm,20.0s							
NEE2	**Needles Airpor**	**53.70**	**79**	P	**P**	**16 05 53.7**	**-0.1**	
	baz=314,SNR=17							
B31A	**Greenbush Farm**	**53.77**	**56**	P	**P**	**16 05 53.9**	**-0.2**	
	baz=312,SNR=8.4							
IRM	**Iron Mountain**	**53.82**	**80**	P	**P**	**16 05 54.7**	**-0.1**	
	baz=315,SNR=191							
ILULI	**Ilulissat**	**53.90**	**17**	⇓*i*P	**P**	**16 05 54.1**	**-0.7**	
	comp=Z,105nm,1.1s							
	comp=Z,5μm,16.0s							
ILULI	**Ilulissat**	**53.90**	**17**	*e*P	**P**	**16 05 54.1**	**-0.7**	
	comp=Z,103nm,1.1s							
ILULI					LR	LR		
	comp=Z,5μm,19.0s							
ILULI	**Ilulissat**	**53.90**	**17**	⇓*i*P	**P**	**16 05 54.1**	**-0.7**	
ILULI					pmax	pmax		
	comp=Z,110nm,1.1s							
ILULI					MLR	MLR		
	comp=Z,6μm,16.0s							
W13A	**Hualapai Mount**	**53.90**	**78**	*e*P	**P**	**16 05 55.4**	**-0.2**	
	comp=Z,260nm,1.2s							
W13A					LR	LR		
	comp=Z,4μm,18.0s							
U15A	**North Rim**	**53.91**	**76**	*e*P	**P**	**16 05 56.2**	**+0.4**	
	comp=Z,426nm,1.1s							
U15A					LR	LR		
	comp=Z,6μm,21.0s							
MONP2	**Monument Peak**	**53.95**	**82**	P	**P**	**16 05 55.7**	**-0.2**	
	baz=315,SNR=18							
BAR	**Barrett**	**53.95**	**82**	*e*P	**P**	**16 05 55.2**	**-0.5**	
	comp=Z,236nm,1.4s							
BAR					LR	LR		
	comp=Z,3μm,20.0s							
BC3	**Big Chuckawall**	**53.99**	**80**	P	**P**	**16 05 55.5**	**-0.6**	
	baz=315,SNR=64							
MK31	**Makanchi Array**	**54.14**	**302**	*e*P	**P**	**16 05 55.4**	**-1.5**	
MK31	**Makanchi Array**	**54.14**	**302**	*e*P	**P**	**16 05 55.4**	**-1.5**	
MKAR	**Makanchi Array**	**54.14**	**302**	P	**P**	**16 05 55.6**	**-1.3**	
	comp=Z,19nm,0.6s,baz=56,slow=7.7,SNR=157							
MKAR					PKP2bc		16 36 36.0	
	comp=Z,2.0nm,1.1s,baz=209,slow=2.2,SNR=4.6							
MKAR	**Makanchi Array**	**54.14**	**302**	*e*P	**P**	**16 05 55.3**	**-1.6**	
	comp=Z,193nm,0.8s							
MKAR				⇑*e*		16 36 36.0		
MKAR	**Makanchi Array**	**54.14**	**302**	*e*P	**P**	**16 05 55.3**	**-1.6**	
MKAR					pmax	pmax		
	comp=Z,193nm,0.8s							
MK01	**Makanchi Array**	**54.15**	**302**	*e*P	**P**	**16 05 55.0**	**-2.0**	
C31A	**Landman Farms,**	**54.15**	**56**	P	**P**	**16 05 56.7**	**-0.3**	
	baz=312,SNR=40							
HAMF	**Hammerfest**	**54.27**	**347**	*e*P	**P**	**16 05 56.8**	**-0.7**	
SWSC	**Sam W. Stewart**	**54.28**	**81**	P	**P**	**16 05 57.5**	**-0.6**	
	baz=315,SNR=6.5							
MAKZ	**Makanchi**	**54.29**	**302**	*e*P	**P**	**16 05 56.3**	**-1.7**	
	comp=Z,80nm,1.0s							
MAKZ					LR	LR		
	comp=Z,8μm,20.0s							
MAKZ	**Makanchi**	**54.29**	**302**	*e*P	**P**	**16 05 56.3**	**-1.7**	
MAKZ					pmax	pmax		
	comp=Z,80nm,1.0s							
MAKZ					MLR	MLR		
	comp=Z,8μm,20.0s							
IKP	**In-Ko-Pah, Jac**	**54.31**	**82**	P	**P**	**16 05 58.1**	**-0.3**	
	baz=315,SNR=18							
PDMCI	**Parker Dam,Lak**	**54.31**	**79**	P	**P**	**16 05 58.1**	**-0.1**	
	baz=315,SNR=97							
PV09	**Paradox Valley**	**54.31**	**72**	*e*P	**P**	**16 05 58.4**	**-0.2**	
GYA	**Guiyang**	**54.38**	**267**	⇑*i*P	**P**	**16 05 59.8**	**+0.8**	
GYA				pP	pP	16 06 05.3	-0.2	
GYA				PP	**PP**	**16 08 04.4**	**+3.5**	
GYA				S	**S**	**16 13 35.6**	**-0.6**	
GYA				SS	**SS**	**16 17 18.0**	**-0.2**	
GYA				pmax	pmax			
	comp=Z,100nm,1.0s							
GYA				pmax	pmax			
	comp=Z,1μm,5.6s							
GYA				LR	LR			
	comp=Z,4μm,16.5s							
GYA				LR	LR			
	comp=Z,4μm,18.0s							
GYA				LR	LR			
	comp=Z,3μm,19.3s							
PV10	**Paradox Valley**	**54.45**	**72**	*e*P	**P**	**16 05 59.8**	**+0.2**	
	comp=Z,476nm,1.0s							
PHWY	**Pilot Hill**	**54.46**	**67**	*e*P	**P**	**16

KEV LR LR
comp=Z,300nm,20.0s
KEV Kevo 54.62 346 *eP* **P 16 05 59.5 -0.5**
KEV pmax pmax
comp=Z,166nm,1.3s
PV05 Paradox Valley 54.62 72 *eP* **P 16 06 00.9 +0.1**
comp=Z,708nm,1.1s
PV07 Paradox Valley 54.63 71 *eP* **P 16 06 00.7 -0.1**
comp=Z,379nm,1.2s
PV03 Paradox Valley 54.64 72 *eP* **P 16 06 00.9 0.0**
comp=Z,865nm,1.3s
D31A Mcclaflin, Tow 54.66 57 P **P 16 06 00.0 -0.6**
baz=313,SNR=32
C32A Crookston 54.73 56 P **P 16 06 00.8 -0.4**
baz=313,SNR=12
AGMN Agassiz Nation 54.73 55 P **P 16 06 00.8 -0.4**
baz=313,SNR=170
AGMN Agassiz Nation 54.73 55 *eP* **P 16 06 00.7 -0.5**
comp=Z,321nm,1.0s
AGMN LR LR
comp=Z,12μm,20.0s
PV02 Paradox Valley 54.73 72 *eP* **P 16 06 01.8 +0.1**
comp=Z,655nm,1.2s
GLA Glamis 54.78 80 P **P 16 06 01.8 0.0**
baz=315,SNR=82
GLA Glamis 54.78 80 *eP* **P 16 06 01.6 -0.2**
comp=Z,346nm,1.1s
GLA LR LR
comp=Z,4μm,19.0s
GLA Glamis 54.78 80 *eP* **P 16 06 01.6 -0.2**
GLA pmax pmax
comp=Z,346nm,1.1s
GLA MLR MLR
comp=Z,4μm,19.0s
PV15 Paradox Valley 54.79 71 *eP* **P 16 06 01.8 -0.2**
comp=Z,474nm,1.1s
PV01 Paradox Valley 54.88 72 *eP* **P 16 06 02.5 -0.2**
comp=Z,480nm,1.3s
E31A Nome 54.91 57 P **P 16 06 01.8 -0.7**
baz=313,SNR=53
D32A Dogwood Acres, 54.95 56 P **P 16 06 02.1 -0.7**
baz=313,SNR=7.5
D32A Dogwood Acres, 54.95 56 *eP* **P 16 06 02.1 -0.7**
comp=Z,210nm,1.0s
D32A LR LR
comp=Z,10μm,19.0s
ARCES ARCESS Array B 55.04 346 P **P 16 06 02.3 -0.8**
comp=Z,74nm,0.9s,baz=20,slow=8.2,SNR=80
ARCES ScP **ScP 16 11 02.5 +0.9**
comp=Z,20nm,1.1s,baz=352,slow=4.9,SNR=6.6
ARCES LR LR 16 31 22.2
comp=Z,4μm,18.6s,baz=18,slow=38
ARCES ARCESS Array B 55.04 346 *eP* **P 16 06 02.1 -1.0**
ARE0 ARCESS Array S 55.04 346 *eP* **P 16 06 02.5 -0.5**
comp=Z,191nm,1.1s
ARE0 ARCESS Array S 55.04 346 *eP* **P 16 06 02.6 -0.5**
SMCO Snowmass 55.07 70 *eP* **P 16 06 04.2 0.0**
comp=Z,292nm,1.4s
SMCO LR LR
comp=Z,7μm,21.0s
WUAZ Wupatki 55.08 76 P **P 16 06 04.7 +0.7**
baz=315,SNR=139
WUAZ Wupatki 55.08 76 *eP* **P 16 06 04.3 +0.2**
comp=Z,371nm,1.2s
WUAZ LR LR
comp=Z,5μm,21.0s
C33A Trail 55.15 55 P **P 16 06 03.9 -0.3**
baz=313,SNR=38
B34A Aery, Baudette 55.20 54 P **P 16 06 04.1 -0.4**
baz=313,SNR=40
Y14A Wickenburg 55.23 78 *eP* **P 16 06 04.8 -0.2**
comp=Z,223nm,1.2s
Y14A LR LR
comp=Z,4μm,19.0s
ISCO Idaho Springs 55.40 68 P **P 16 06 07.5 +1.0**
baz=314,SNR=262
ISCO Idaho Springs 55.40 68 *eP* **P 16 06 07.2 +0.7**
comp=Z,529nm,1.3s
ISCO LR LR
comp=Z,10μm,20.0s
BVAR Borovoye Array 55.49 314 P **P 16 06 06.0 -0.6**
comp=Z,113nm,1.0s,baz=53,slow=7.6,SNR=274
BVAR S **S 16 13 48.5 -1.7**
comp=Z,8.9nm,1.1s,baz=52,slow=17,SNR=6.2
BVAR LR LR 16 32 15.7
comp=Z,7μm,18.6s,baz=50,slow=39
APA Apatity 55.50 342 ⇓*iP* **P 16 06 05.2 -1.2**
APA *i* 16 07 03.0
APA *i* 16 08 18.0
APA *i* PPP PPP 16 09 22.0
APA *i* S **S 16 13 45.0 -4.9**
APA *i* 16 15 55.0
APA *i* SSS SSS 16 19 44.0
APA pmax pmax
comp=Z,100nm,1.1s
BRVK Borovoye 55.51 314 *eP* **P 16 06 06.0 -0.7**
comp=Z,212nm,1.1s
BRVK LR LR
comp=Z,10μm,22.0s
BRVK Borovoye 55.51 314 P **P 16 06 06.4 -0.3**
SNR=110
BRVK Borovoye 55.51 314 *eP* **P 16 06 06.0 -0.7**
BRVK pmax pmax
comp=Z,212nm,1.1s
BRVK MLR MLR
comp=Z,10μm,22.0s
D33A AnnSam, Waubun 55.53 56 P **P 16 06 06.7 -0.3**
baz=314,SNR=16
MVCO Mesa Verde 55.56 72 P **P 16 06 07.7 +0.1**
baz=314,SNR=95
MVCO Mesa Verde 55.56 72 *eP* **P 16 06 07.4 -0.2**
comp=Z,221nm,0.8s
MVCO LR LR
comp=Z,5μm,21.0s
113A Mohawk Valley, 55.61 80 *eP* **P 16 06 07.1 -0.6**
comp=Z,256nm,1.4s
113A LR LR
comp=Z,5μm,18.0s
C34A RKJ Ranch, Bem 55.64 55 P **P 16 06 07.4 -0.4**
baz=314,SNR=20
G31A Conde 55.65 59 P **P 16 06 07.2 -0.6**
baz=314,SNR=5.7
B35A Bob, Littlefor 55.73 54 P **P 16 06 08.1 -0.3**
baz=314,SNR=132
B35A Bob, Littlefor 55.73 54 *eP* **P 16 06 08.0 -0.3**
comp=Z,229nm,1.1s
B35A LR LR
comp=Z,9μm,19.0s
TGY Tagaytay City 55.74 245 P **P 16 06 10.1 +1.3**
comp=Z,94nm,0.6s,baz=53,slow=10,SNR=3.2
F32A Veblen 55.76 58 P **P 16 06 07.8 -0.8**
baz=314
SUSD Miller 55.80 60 P **P 16 06 08.4 -0.5**
baz=314,SNR=9.5
TRO Tromso 55.80 349 *eP* **P 16 06 08.1 -0.5**
X16A Lo Mia Camp, P 55.81 77 *eP* **P 16 06 09.9 +0.6**
comp=Z,306nm,1.2s
X16A LR LR
comp=Z,7μm,19.0s
E33A Westby DABS, E 55.89 56 P **P 16 06 09.3 -0.3**
baz=314
D34A Park Rapids 55.89 55 P **P 16 06 09.2 -0.4**
baz=314,SNR=113
D34A Park Rapids 55.89 55 *eP* **P 16 06 09.1 -0.5**
comp=Z,347nm,0.6s
D34A LR LR
comp=Z,9μm,20.0s
SFJD Kangerlussuaq 55.92 19 P **P 16 06 09.0 -0.4**
comp=Z,29nm,1.0s,baz=342,slow=6.4,SNR=11
SFJD S **S 16 13 52.8 -2.8**
comp=Z,7.7nm,0.6s,baz=218,slow=24,SNR=7.0
SFJD LR LR 16 31 23.5
comp=Z,5μm,21.2s,baz=328,slow=37
SFJD PKP2bc 16 36 29.4
comp=Z,5.1nm,0.5s,baz=153,slow=4.5,SNR=4.6
SFJD Kangerlussuaq 55.92 19 *eP* **P 16 06 08.9 -0.5**
comp=Z,99nm,1.1s
SFJD S **S 16 13 52.8 -2.8**
SFJD ⇑*e* 16 36 29.4
G32A Webster 55.99 58 P **P 16 06 09.3 -1.0**
baz=314
G32A Webster 55.99 58 *eP* **P 16 06 09.8 -0.6**
comp=Z,305nm,1.0s
G32A LR LR
comp=Z,15μm,18.0s
JMIC Jan Mayen 56.05 0 *eP* **P 16 06 11.8 +1.5**
C35A Jirik Farms, M 56.07 54 P **P 16 06 10.3 -0.5**
baz=314,SNR=78

S22A 4UR Ranch, Cre 56.14 71 P **P 16 06 12.9 +1.1**
baz=314,SNR=391
S22A 4UR Ranch, Cre 56.14 71 *eP* **P 16 06 12.9 +1.1**
comp=Z,731nm,1.3s
S22A LR LR
comp=Z,5μm,20.0s
SCO Scoresbysund 56.17 5⇓*iP* **P 16 06 11.1 -0.1**
comp=Z,175nm,1.3s
comp=Z,5μm,19.0s
SCO Scoresbysund 56.17 5 *eP* **P 16 06 11.1 -0.1**
comp=Z,175nm,1.3s
SCO LR LR
comp=Z,6μm,19.0s
SCO Scoresbysund 56.17 5⇓*iP* **P 16 06 11.1 -0.1**
SCO pmax pmax
comp=Z,180nm,1.3s
SCO MLR MLR
comp=Z,5μm,19.0s
Q24A Divide 56.24 69 P **P 16 06 13.2 +0.7**
baz=314,SNR=88
Q24A Divide 56.24 69 *eP* **P 16 06 13.2 +0.7**
comp=Z,275nm,1.1s
Q24A LR LR
comp=Z,8μm,19.0s
E34A Wadena 56.30 56 P **P 16 06 12.2 -0.3**
baz=314,SNR=10
W18A Petrified Fore 56.31 75 P **P 16 06 13.5 +0.6**
baz=315,SNR=17
W18A Petrified Fore 56.31 75 *eP* **P 16 06 13.2 +0.2**
comp=Z,399nm,1.2s
W18A LR LR
comp=Z,8μm,20.0s
D35A Remer 56.46 55 P **P 16 06 13.4 -0.2**
baz=314,SNR=69
H32A Carlson Farm, 56.55 59 P **P 16 06 13.4 -0.9**
baz=314,SNR=35
G33A Ortonville 56.58 58 P **P 16 06 13.7 -0.7**
baz=314,SNR=52
C36A Pine Crest Far 56.58 54 P **P 16 06 14.2 -0.2**
baz=314,SNR=59
OGNE Ogallala 56.58 65 P **P 16 06 15.4 +0.8**
baz=314,SNR=43
OGNE Ogallala 56.58 65 *eP* **P 16 06 15.2 +0.6**
comp=Z,2μm,1.5s
OGNE LR LR
comp=Z,4μm,21.0s
BRZS Berezniki 56.60 310⇓*iP* **P 16 06 13.7 -0.9**
comp=Z,239nm,1.5s
BRZS *i* S **S 16 14 04.1 -1.1**
X18A Snowflake 56.60 76 *eP* **P 16 06 15.6 +0.6**
comp=Z,495nm,1.4s
X18A LR LR
comp=Z,6μm,18.0s
E35A Pequot Lakes 56.65 55 P **P 16 06 14.9 0.0**
baz=314,SNR=8.6
SVE Sverdlovsk 56.66 322*c iP* **P 16 06 15.0 +0.2**
SVE *e* 16 08 17.5
SVE *e*PPP PPP 16 09 44.2
SVE *e*S **S 16 14 04.0 -1.6**
SVE pmax pmax
comp=Z,141nm,1.4s
SVE MLR MLR
comp=Z,8μm,16.0s
F34A Alexandria 56.76 57 P **P 16 06 15.3 -0.4**
baz=314,SNR=27
214A Organ Pipe Nat 56.76 80 P **P 16 06 16.1 +0.1**
baz=316,SNR=180
D36A Goodland 56.83 54 P **P 16 06 15.8 -0.4**
baz=315,SNR=27
D36A Goodland 56.83 54 PFAKE 16 06 30.0 +14
D36A LR LR
comp=Z,11μm,18.0s
RCP Roxas 56.87 242⇓*eP* **P 16 06 18.3 +1.5**
SDCO Great Sand Dun 56.89 70 P **P 16 06 17.9 +0.8**
baz=315,SNR=436
SDCO Great Sand Dun 56.89 70 *eP* **P 16 06 17.7 +0.6**
comp=Z,524nm,1.3s
SDCO LR LR
comp=Z,5μm,19.0s
C37A Embarrass 56.91 53 P **P 16 06 16.6 -0.2**
baz=315,SNR=67
G34A Benson 56.95 57 P **P 16 06 16.6 -0.5**
baz=314,SNR=25
MSLP Maasin 56.97 239 *eP* **P 16 06 17.0 -0.5**
F35A Swanville 57.05 56 P **P 16 06 17.8 0.0**
baz=315,SNR=27
EYMN Ely 57.09 53 P **P 16 06 18.0 -0.1**
baz=315,SNR=182
EYMN Ely 57.09 53 *eP* **P 16 06 17.8 -0.3**
comp=Z,326nm,1.1s
EYMN LR LR
comp=Z,8μm,21.0s
XMAS Kiritimati 57.10 142 *eP* **P 16 06 19.7 +1.3**
D37A Cotton 57.20 54 P **P 16 06 18.4 -0.4**
baz=315,SNR=103
E36A McGregor 57.24 55 P **P 16 06 19.1 0.0**
baz=315,SNR=170
C38A Sawbill Land. 57.36 53 P **P 16 06 19.7 -0.3**
baz=315,SNR=115
TMCR Tamitsa 57.51 338 *eP* **P 16 06 20.8 +0.1**
TMCR pmax pmax
comp=Z,869nm,1.1s
ECSD EROS Data Cent 57.51 59 P **P 16 06 20.3 -0.8**
baz=315,SNR=144
ECSD EROS Data Cent 57.51 59 *eP* **P 16 06 20.1 -1.0**
comp=Z,208nm,1.1s
ECSD LR LR
comp=Z,13μm,18.0s
G35A Watkins 57.55 57 P **P 16 06 20.8 -0.5**
baz=315
G35A Watkins 57.55 57 PFAKE 16 06 30.0 +8.7
G35A LR LR
comp=Z,11μm,18.0s
KNTN Kanton 57.57 160 *eP* **P 16 06 22.5 +0.8**
comp=Z,166nm,1.1s
BUTP Butuan 57.57 237 *eP* **P 16 06 21.8 0.0**
F36A Milaca 57.57 56 P **P 16 06 21.2 -0.3**
baz=315,SNR=70
F36A Milaca 57.57 56 *eP* **P 16 06 20.7 -0.8**
comp=Z,152nm,1.1s
F36A LR LR
comp=Z,11μm,19.0s
KSCO Kaye Shedlock' 57.61 67 P **P 16 06 22.9 +0.9**
baz=315,SNR=30
KSCO Kaye Shedlock' 57.61 67 *eP* **P 16 06 22.3 +0.3**
comp=Z,1μm,1.5s
KSCO LR LR
comp=Z,6μm,19.0s
E37A Wrenshall 57.63 54 P **P 16 06 21.9 +0.1**
baz=315,SNR=11
TUC Tucson 57.70 78 P **P 16 06 23.0 +0.4**
baz=316
TUC Tucson 57.70 78 *eP* **P 16 06 22.9 +0.3**
comp=Z,395nm,1.4s
TUC Tucson 57.70 78 *eP* **P 16 06 22.9 +0.3**
TUC pmax pmax
comp=Z,395nm,1.4s
ARU Arti 57.72 323 *eP* **P 16 06 21.6 -0.6**
comp=Z,185nm,1.1s
ARU LR LR
comp=Z,14μm,19.0s
ARU Arti 57.72 323 *i* P **P 16 06 21.7 -0.6**
ARU 16 07 13.5
ARU 16 08 28.9
ARU *e*S **S 16 14 18.9 -0.6**
ARU 16 16 03.3
ARU SS **SS 16 18 03.1 -6.0**
ARU pmax pmax
comp=Z,297nm,1.7s
ARU MLR MLR
comp=Z,13μm,18.0s
KMI Kunming 57.73 269 P **P 16 06 24.0 +0.9**
KMI pP pP 16 06 27.8 -1.8
KMI sP sP 16 06 30.8 -1.2
KMI PcP **PcP 16 07 15.3 -0.5**
KMI PP **PP 16 08 32.6 +1.6**
KMI S **S 16 14 19.3 -1.7**
KMI ScS **ScS 16 16 12.4 +0.7**
KMI pmax pmax
comp=Z,830nm,6.0s
KMI LR LR
comp=Z,8μm,18.1s
KMI LR LR
comp=Z,7μm,17.1s
KMI LR LR
comp=Z,6μm,21.9s
PRGR Permogore 57.73 333 *eP* **P 16 06 20.4 -1.9**

PRGR *e*S **S 16 14 15.1 -4.4**
PRGR pmax pmax
comp=Z,514nm,1.0s
H35A Sunnyside Ranc 57.74 57 P **P 16 06 22.5 -0.1**
baz=315,SNR=49
LOF Lofoten 57.83 350 *eP* **P 16 06 22.2 -0.7**
STEI Steigen 57.84 350 *eP* **P 16 06 22.1 -0.9**
BUSP Coron 57.87 245 *eP* **P 16 06 22.6 -1.3**
G36A St. Michael 57.91 56 P **P 16 06 23.9 +0.1**
baz=315,SNR=24
T25A Trinidad 57.93 70 P **P 16 06 25.1 +0.7**
baz=315,SNR=158
T25A Trinidad 57.93 70 *eP* **P 16 06 25.0 +0.6**
comp=Z,598nm,1.3s
T25A LR LR
comp=Z,5μm,19.0s
E38A The Farm, Brul 58.01 54 P **P 16 06 24.3 -0.3**
baz=316,SNR=121
E38A The Farm, Brul 58.01 54 *eP* **P 16 06 24.0 -0.6**
comp=Z,403nm,1.1s
E38A LR LR
comp=Z,10μm,19.0s
SHLS Shalkode 58.10 301⇓*iP* **P 16 06 23.5 -1.9**
comp=Z,210nm,1.5s
SHLS *i* S **S 16 14 21.9 -3.4**
F37A Hinrichs Farm, 58.12 55 P **P 16 06 25.2 -0.1**
baz=315,SNR=25
QIZ Qiongzhong 58.13 259 P **P 16 06 26.4 +0.7**
QIZ S **S 16 14 30.6 +4.8**
QIZ LR LR
comp=Z,3μm,12.8s
QIZ LR LR
comp=Z,4μm,11.8s
QIZ LR LR
comp=Z,4μm,13.1s
QIZ Qiongzhong 58.13 259 PFAKE 16 06 40.0 +14
QIZ LR LR
comp=Z,4μm,19.0s
C40A Isle Royale Na 58.22 51 P **P 16 06 25.8 -0.2**
baz=316,SNR=15
C40A Isle Royale Na 58.22 51 *eP* **P 16 06 25.8 -0.2**
comp=Z,283nm,1.4s
C40A LR LR
comp=Z,7μm,19.0s
KPKS Kokpek 58.28 301⇓*iP* **P 16 06 26.1 -0.5**
comp=Z,160nm,1.4s
KPKS *i* PP **PP 16 08 35.3 0.0**
KPKS *e*S **S 16 14 27.0 -0.6**
H36A Jessenland, He 58.28 57 P **P 16 06 27.0 +0.6**
baz=315,SNR=40
F38A Pierce - Schro 58.32 55 P **P 16 06 27.1 +0.4**
baz=316,SNR=196
LAZ Ladron 58.32 74 *eP* **P 16 06 28.0 +0.8**
TASM ASL Pad, Albuq 58.33 73 P **P 16 06 27.7 +0.5**
baz=316,SNR=93
ANMO Albuquerque 58.33 73 P **P 16 06 27.5 +0.3**
comp=Z,97nm,1.0s,baz=309,slow=9.1,SNR=171
ANMO S **S 16 14 29.8 +1.2**
comp=Z,1.0nm,0.5s,baz=184,slow=20,SNR=3.1
ANMO Albuquerque 58.33 73 P **P 16 06 27.9 +0.7**
baz=316
ANMO Albuquerque 58.33 73 *eP* **P 16 06 27.3 +0.1**
comp=Z,230nm,1.3s
ANMO S **S 16 14 29.8 +1.2**
ANMO LR LR
comp=Z,6μm,18.0s
TASL Snake Pit, Alb 58.33 73 P **P 16 06 27.7 +0.5**
baz=316,SNR=100
UZB Uzynbulak 58.33 301⇓*iP* **P 16 06 26.4 -0.7**
comp=Z,85nm,1.6s
UZB *i* PP **PP 16 08 35.3 -0.6**
UZB *e*S **S 16 14 27.6 -0.8**
UZB LR LR 16 31 59.0
comp=Z,2μm,13.2s
BGNE Belgrade 58.34 62 P **P 16 06 27.0 0.0**
baz=315,SNR=33
BGNE Belgrade 58.34 62 *eP* **P 16 06 26.7 -0.3**
comp=Z,1μm,1.1s
BGNE LR LR
comp=Z,9μm,19.0s
SPMN Marine on St. 58.38 56 P **P 16 06 27.3 +0.1**
baz=316,SNR=54
SPMN Marine on St. 58.38 56 *eP* **P 16 06 26.9 -0.2**
comp=Z,436nm,1.1s
SPMN LR LR
comp=Z,11μm,20.0s
LENM Lemitar 58.59 74 *eP* **P 16 06 29.4 +0.4**
ZHN Zhinishke 58.62 301 *i* P **P 16 06 28.6 -0.4**
comp=Z,150nm,2.2s
ZHN *e*S **S 16 14 31.5 -0.5**
ZHN LR LR 16 32 33.1
comp=Z,1μm,11.8s
I36A Fitzsimmons Fa 58.63 57 P **P 16 06 28.7 -0.2**
baz=316,SNR=13
E39A Mellen 58.66 53 P **P 16 06 28.6 -0.5**
baz=316,SNR=72
LPM Los Pinos Moun 58.68 74 *eP* **P 16 06 30.2 +0.5**
Y22D IRIS PASSCAL I 58.69 74 *eP* **P 16 06 30.0 +0.4**
comp=Z,660nm,1.3s
Y22D LR LR
comp=Z,10μm,21.0s
Y22E IRIS PASSCAL I 58.69 74 P **P 16 06 31.0 +1.4**
baz=316
SATY Saty 58.71 301⇓*iP* **P 16 06 29.4 -0.3**
comp=Z,221nm,1.8s
SATY LR LR 16 32 05.0
comp=Z,3μm,15.7s
MANU Manus Island 58.73 209 *eP* **P 16 06 30.6 +0.8**
comp=Z,257nm,1.6s
H37A Dierke Farm, C 58.78 56 P **P 16 06 30.5 +0.5**
baz=316,SNR=51
BUKP Musuan 58.79 237 *eP* **P 16 06 30.1 -0.2**
BNM Barren Site 58.80 74 *eP* **P 16 06 31.0 +0.4**
F39A Loretta 58.81 54 P **P 16 06 30.2 0.0**
baz=316,SNR=59
G38A Ridgeland 58.89 55 P **P 16 06 30.3 -0.4**
baz=316,SNR=101
E40A Wakefield 58.93 53 P **P 16 06 31.2 +0.3**
baz=316,SNR=117
I37A Lemond, Waseca 58.95 57 P **P 16 06 31.4 +0.3**
baz=316,SNR=115
I37A Lemond, Waseca 58.95 57 *eP* **P 16 06 31.4 +0.3**
comp=Z,1μm,1.1s
I37A LR LR
comp=Z,11μm,18.0s
J36A Seneca 1, Swea 58.96 58 P **P 16 06 31.0 -0.3**
baz=316,SNR=41
J36A Seneca 1, Swea 58.96 58 *eP* **P 16 06 30.8 -0.4**
comp=Z,404nm,1.0s
J36A LR LR
comp=Z,16μm,18.0s
H38A Maiden Rock 59.03 56 P **P 16 06 31.9 +0.2**
baz=316,SNR=119
D41A Chassel 59.12 52 P **P 16 06 32.4 +0.2**
baz=317,SNR=25
D41A Chassel 59.12 52 *eP* **P 16 06 31.8 -0.4**
comp=Z,388nm,1.3s
D41A LR LR
comp=Z,10μm,20.0s
PRZ Przheval'sk 59.13 301 *eP* **P 16 06 32.7 +0.1**
comp=Z,252nm,1.4s
PRZ LR LR
comp=Z,8μm,19.0s
PRZ Przheval'sk 59.13 301 *eP* **P 16 06 32.7 +0.1**
PRZ pmax pmax
comp=Z,252nm,1.4s
PRZ MLR MLR
comp=Z,8μm,19.0s
G39A Holcombe 59.14 55 P **P 16 06 32.1 -0.3**
baz=316,SNR=23
KUU Kurty 59.17 303⇓*iP* **P 16 06 31.4 -1.2**
comp=Z,175nm,1.6s
KUU *i* S **S 16 14 37.6 -1.3**
F40A Park Falls 59.20 54 P **P 16 06 32.5 -0.3**
baz=316,SNR=57
DAV Davao City (W) 59.22 236 P **P 16 06 34.5 +1.2**
comp=Z,222nm,0.4s,baz=51,slow=14,SNR=3.8
DAV LR LR 16 28 53.0
comp=Z,1μm,20.7s,baz=58,slow=33
DAV Davao City (W) 59.22 236⇓*eP* **P 16 06 35.0 +1.7**
319A Douglas 59.26 78 *eP* **P 16 06 33.8 +0.2**
comp=Z,537nm,1.3s
319A LR LR
comp=Z,6μm,18.0s
121A Cookes Peak, D 59.29 76 P **P 16 06 34.6 +0.7**
baz=317,SNR=80
MDOK Medeo 59.33 302 *i* P **P 16 06 33.4 -0.6**

comp=Z,1μm,1.5s
MDOK *i* S **S** **16 14 40.6 -0.8**
MDOK LR LR 16 32 27.7
comp=Z,3μm,13.7s
CBKS Cedar Bluff 59.34 65 P **P** **16 06 34.0 0.0**
baz=316,SNR=30
CBKS Cedar Bluff 59.34 65 *e*P **P** **16 06 33.6 -0.3**
comp=Z,547nm,1.1s
CBKS LR LR
comp=Z,6μm,18.0s
CBKS Cedar Bluff 59.34 65 *e*P **P** **16 06 33.6 -0.3**
CBKS pmax pmax
comp=Z,547nm,1.1s
CBKS MLR MLR
comp=Z,6μm,18.0s
ANGG Ammassalik, Gr 59.36 14 *e*P **P** **16 06 31.5 -2.1**
comp=Z,136nm,1.0s
ANGG LR LR
comp=Z,10μm,19.0s
E41A Kenton 59.36 52 P **P** **16 06 33.8 -0.1**
baz=317,SNR=29
AAA Alma-Ata 59.37 302 *e*P **P** **16 06 34.0 -0.1**
comp=Z,90nm,1.3s
AAA *e*S **S** **16 14 41.4 -0.2**
AAA Alma-Ata 59.37 302 *e*P **P** **16 06 34.0 -0.1**
AAA *e*S **S** **16 14 37.6 -4.0**
AAA pmax pmax
comp=Z,700nm,4.2s
AAA smax smax
comp=N,1μm,8.6s
J37A Redenius Farm, 59.38 58 P **P** **16 06 34.0 -0.1**
baz=316,SNR=48
K36A Gilmore City 59.40 59 P **P** **16 06 33.9 -0.3**
baz=316,SNR=38
KONS Konsvik 59.45 350 *e*P **P** **16 06 33.9 -0.3**
I38A Scanlan Farm, 59.47 56 P **P** **16 06 34.7 -0.1**
baz=316,SNR=42
BTLS Baital 59.48 305⇓ *i*P **P** **16 06 34.1 -0.7**
comp=N,92nm,1.4s
BTLS *i* S **S** **16 14 41.8 -1.1**
BTLS LR LR 16 34 28.8
comp=N,1μm,12.1s
H39A Augusta 59.53 55 P **P** **16 06 34.9 -0.2**
baz=316,SNR=24
COWI Conover 59.54 53 *e*P **P** **16 06 34.4 -0.8**
comp=N,184nm,1.1s
COWI LR LR
comp=Z,7μm,20.0s
MOR8 Moi Rana 59.63 349 *e*P **P** **16 06 33.9 -1.6**
G40A Rib Lake 59.63 54 P **P** **16 06 35.6 -0.3**
baz=317,SNR=38
G40A Rib Lake 59.63 54 *e*P **P** **16 06 35.1 -0.8**
comp=Z,254nm,1.3s
G40A LR LR
comp=Z,11μm,20.0s
PAGZ Pagadian 59.67 239 *e*P **P** **16 06 36.9 +0.5**
L36A Harm Buss Farm 59.67 59 P **P** **16 06 35.5 -0.7**
baz=316,SNR=25
K37A Belmond 59.72 58 P **P** **16 06 36.1 -0.4**
baz=316,SNR=26
F41A Three Lakes 59.82 53 P **P** **16 06 37.0 -0.1**
baz=317,SNR=38
F41A Three Lakes 59.82 53 *e*P **P** **16 06 36.7 -0.4**
comp=Z,312nm,1.2s
F41A LR LR
comp=Z,8μm,20.0s
E42A Champion 59.88 52 P **P** **16 06 37.5 -0.1**
baz=317,SNR=28
J38A Wedel Dairy, R 59.91 57 P **P** **16 06 37.7 -0.1**
baz=316,SNR=88
TARG Taragay, Kyrgy 59.98 300 *e*P **P** **16 06 38.0 -0.8**
HSIG 59.99 81 *e*P **P** **16 06 38.3 -0.3**
comp=Z,419nm,1.3s
HSIG LR LR
comp=Z,3μm,20.0s
KLMR Klimovskoe 60.00 335 *e*P **P** **16 06 36.9 -1.2**
KLMR *e*S **S** **16 14 47.3 -1.7**
KLMR pmax pmax
comp=Z,716nm,1.3s
KLMR MLR MLR
comp=Z,13μm,20.0s
KLMR Klimovskoe 60.00 335 *e*P **P** **16 06 36.9 -1.2**
KLMR AMP 16 06 39.5
comp=Z,716nm,1.3s
KLMR *e*S **S** **16 14 47.4 -1.6**
KLMR *e*S **S** **16 14 47.4 -1.6**
KLMR LQ LQ 16 27 03.2
KLMR LQ LQ 16 27 03.2
KLMR LR LR 16 31 48.2
KLMR AMP 16 36 19.1
comp=Z,13μm,19.8s
I39A Houston 60.01 56 P **P** **16 06 37.9 -0.5**
baz=317,SNR=56
I39A Houston 60.01 56 *e*P **P** **16 06 37.6 -0.8**
comp=Z,374nm,1.1s
I39A LR LR
comp=Z,12μm,20.0s
H40A Chili 60.01 55 P **P** **16 06 38.1 -0.3**
baz=317,SNR=46
M36A Felix, Anita 60.07 60 P **P** **16 06 38.4 -0.6**
baz=316,SNR=7.7
L37A Phoenix Point, 60.13 59 P **P** **16 06 38.8 -0.5**
baz=316,SNR=52
G41A Antigo 60.17 54 P **P** **16 06 39.2 -0.3**
baz=317,SNR=8.4
SKMP Bagumbayan, Su 60.21 237 *e*P **P** **16 06 39.2 -0.9**
TKM2 Tokmak 2 60.24 303 P **P** **16 06 39.9 -0.4**
SNR=62
K38A Parkersburg 60.25 58 P **P** **16 06 39.6 -0.5**
baz=317,SNR=15
K38A Parkersburg 60.25 58 *e*P **P** **16 06 39.3 -0.9**
comp=Z,241nm,1.2s
K38A LR LR
comp=Z,15μm,18.0s
F42A Maple Grove Fa 60.27 52 P **P** **16 06 39.9 -0.3**
baz=317,SNR=8.6
J39A Decorah 60.29 57 P **P** **16 06 39.6 -0.8**
baz=317,SNR=89
E43A Lone Tree Farm 60.35 51 P **P** **16 06 40.6 -0.1**
baz=318,SNR=28
E43A Lone Tree Farm 60.35 51 *e*P **P** **16 06 40.2 -0.6**
comp=Z,193nm,1.0s
E43A LR LR
comp=Z,9μm,18.0s
H41A Junction City 60.37 54 P **P** **16 06 40.6 -0.3**
baz=317,SNR=27
H41A Junction City 60.37 54 *e*P **P** **16 06 40.4 -0.5**
comp=Z,314nm,1.2s
H41A LR LR
comp=Z,10μm,20.0s
ULHL Ulahol 60.41 302 P **P** **16 06 41.3 -0.2**
SNR=46
I40A Norwalk 60.43 55 P **P** **16 06 41.0 -0.3**
baz=317,SNR=29
N36A Muff Farm, Cla 60.45 61 P **P** **16 06 41.2 -0.3**
baz=317,SNR=8.3
SRIG Santa Rosalia 60.47 83 *e*P **P** **16 06 41.4 -0.4**
comp=Z,303nm,1.2s
SRIG LR LR
comp=Z,3μm,21.0s
M37A Trindle Farm, 60.49 60 P **P** **16 06 41.6 -0.2**
baz=317,SNR=16
G42A Mountain 60.51 53 P **P** **16 06 41.6 -0.2**
baz=317,SNR=18
G42A Mountain 60.51 53 *e*P **P** **16 06 41.3 -0.6**
comp=Z,210nm,1.1s
G42A LR LR
comp=Z,8μm,21.0s
L38A Oak Wood Farm, 60.52 58 P **P** **16 06 41.7 -0.3**
baz=317,SNR=32
USP Ospenovka 60.54 304 P **P** **16 06 42.3 +0.1**
SNR=39
SCIA State Center 60.56 59 P **P** **16 06 42.1 -0.1**
baz=317,SNR=22
SCIA State Center 60.56 59 *e*P **P** **16 06 41.8 -0.5**
comp=Z,735nm,1.2s
SCIA LR LR
comp=Z,15μm,19.0s
CHMS Chumysh 60.61 303 P **P** **16 06 42.5 -0.1**
SNR=34
K39A Oelwein 60.66 57 P **P** **16 06 41.9 -1.0**
baz=317,SNR=56
F43A Flat Rock, Esc 60.67 52 P **P** **16 06 42.7 -0.3**
baz=318
I41A Arkdale 60.67 55 P **P** **16 06 42.7 -0.3**
baz=317,SNR=13
I41A Arkdale 60.67 55 *e*P **P** **16 06 42.2 -0.7**
comp=Z,276nm,1.4s
I41A LR LR
comp=Z,10μm,20.0s
E44A Grand Marais A 60.67 51 P **P** **16 06 43.3 +0.4**
baz=318,SNR=9.1
E44A Grand Marais A 60.67 51 *e*P **P** **16 06 42.9 0.0**
comp=Z,747nm,1.4s
E44A LR LR
comp=Z,13μm,18.0s
J40A Soldiers Grove 60.73 56 P **P** **16 06 42.6 -0.7**
baz=317,SNR=43
KBK Karagaybulak 60.76 303 P **P** **16 06 43.8 0.0**
SNR=57
FRU Bishkek 60.80 303⇓ *e*P **P** **16 06 43.0 -0.9**
FRU *e* 16 07 31.0
FRU *e* 16 08 55.0
FRU *e*PPP PPP 16 10 26.0
FRU *e*S **S** **16 15 00.0 0.0**
FRU *e*PS **PnS** **16 15 14.0 -0.4**
FRU *e*SS **SS** **16 19 00.0 +1.8**
FRU pmax pmax
comp=Z,445nm,1.9s
FRU smax smax
comp=N,1μm,4.0s
KSU1 Kansas State U 60.82 63 P **P** **16 06 42.9 -1.1**
baz=317,SNR=8.9
KSU1 Kansas State U 60.82 63 *e*P **P** **16 06 42.8 -1.3**
comp=N,179nm,1.0s
KSU1 LR LR
comp=Z,4μm,18.0s
G43A Wallace 60.85 53 P **P** **16 06 44.0 -0.2**
baz=318,SNR=11
G43A Wallace 60.85 53 *e*P **P** **16 06 43.7 -0.5**
comp=Z,225nm,1.3s
G43A LR LR
comp=Z,9μm,19.0s
N37A Lee Faris, Mou 60.88 60 P **P** **16 06 44.2 -0.3**
baz=317,SNR=56
N37A Lee Faris, Mou 60.88 60 *e*P **P** **16 06 44.0 -0.5**
comp=Z,720nm,1.0s
N37A LR LR
comp=Z,7μm,18.0s
F44A Big Bay de Noc 60.92 51 P **P** **16 06 44.4 -0.2**
baz=318,SNR=7.2
M38A Pleasantville 60.93 59 P **P** **16 06 44.1 -0.6**
baz=317,SNR=36
H42A Shiocton 61.00 54 P **P** **16 06 44.6 -0.6**
baz=318,SNR=9.3
H42A Shiocton 61.00 54 *e*P **P** **16 06 44.5 -0.6**
comp=Z,174nm,1.1s
H42A LR LR
comp=Z,11μm,20.0s
L39A Vinton 61.02 58 P **P** **16 06 44.7 -0.7**
baz=317,SNR=116
KZA Kyzart 61.03 302 P **P** **16 06 46.0 0.0**
SNR=28
K40A Colesburg 61.04 57 P **P** **16 06 44.8 -0.7**
baz=317,SNR=51
AMTX Amarillo 61.09 70 P **P** **16 06 46.2 +0.1**
baz=317
AMTX Amarillo 61.09 70 *e*P **P** **16 06 45.7 -0.4**
comp=Z,203nm,1.0s
AMTX LR LR
comp=Z,3μm,18.0s
J41A Loganville 61.11 55 P **P** **16 06 45.5 -0.5**
baz=317,SNR=50
NRN Naryn 61.12 301 *e*P **P** **16 06 46.5 0.0**
comp=Z,77nm,1.1s
NRN LR LR
comp=Z,8μm,22.0s
NRN Naryn 61.12 301 P **P** **16 06 46.4 0.0**
NRN pmax pmax
comp=Z,77nm,1.1s
MSTX Muleshoe 61.14 71 P **P** **16 06 46.6 +0.2**
baz=317,SNR=98
MSTX Muleshoe 61.14 71 *e*P **P** **16 06 46.2 -0.2**
comp=Z,600nm,1.4s
MSTX LR LR
comp=Z,4μm,21.0s
E45A Wooded Hills, 61.22 50 P **P** **16 06 46.3 -0.3**
baz=318,SNR=5.2
LSA Lhasa 61.26 282 P **P** **16 06 48.4 +0.6**
LSA pP **pP** **16 06 51.8 -2.5**
LSA sP **sP** **16 06 55.4 -1.3**
LSA S **S** **16 15 02.5 -4.5**
LSA pmax pmax
comp=Z,40nm,1.4s
LSA LR LR
comp=Z,3μm,16.1s
LSA LR LR
comp=Z,2μm,14.3s
LSA LR LR
comp=Z,5μm,20.5s
LSA Lhasa 61.26 282 *e*P **P** **16 06 47.8 0.0**
comp=Z,316nm,1.5s
LSA LR LR
comp=Z,6μm,21.0s
LSA Lhasa 61.26 282 P **P** **16 06 48.6 +0.9**
I42A Draeger Farm, 61.27 54 P **P** **16 06 46.5 -0.5**
baz=318,SNR=20
I42A Draeger Farm, 61.27 54 *e*P **P** **16 06 46.2 -0.8**
comp=Z,250nm,1.1s
I42A LR LR
comp=Z,9μm,20.0s
MNTX Cornudas Mount 61.30 75 P **P** **16 06 47.8 +0.4**
baz=317,SNR=226
MNTX Cornudas Mount 61.30 75 *e*P **P** **16 06 47.6 +0.2**
comp=Z,289nm,1.3s
MNTX LR LR
comp=Z,3μm,20.0s
UCH Uchtor 61.30 303 P **P** **16 06 47.8 -0.1**
SNR=34
JAY Jayapura 61.31 216 P **P** **16 06 48.8 +1.2**
comp=Z,25nm,0.9s,baz=234,slow=0.7,SNR=5.3
JFWS Jewell Farm 61.33 56 P **P** **16 06 46.5 -0.9**
baz=318,SNR=32
JFWS Jewell Farm 61.33 56 *e*P **P** **16 06 46.3 -1.1**
comp=Z,210nm,1.0s
JFWS LR LR
comp=Z,10μm,20.0s
JFWS Jewell Farm 61.33 56 *e*P **P** **16 06 46.3 -1.1**
JFWS pmax pmax
comp=Z,210nm,1.0s
JFWS MLR MLR
comp=Z,10μm,20.0s
O37A Wolven Farm, M 61.35 61 P **P** **16 06 47.1 -0.5**
baz=317,SNR=28
EKS2 Erkin-Say 61.35 304 P **P** **16 06 47.8 +0.1**
SNR=58
N38A Joes South For 61.36 59 P **P** **16 06 47.0 -0.7**
baz=317,SNR=28
H43A Windswept, Lux 61.39 53 P **P** **16 06 47.4 -0.4**
baz=318,SNR=12
H43A Windswept, Lux 61.39 53 *e*P **P** **16 06 47.8 0.0**
comp=Z,209nm,1.0s
H43A LR LR
comp=Z,9μm,20.0s
M39A Webster 61.41 58 P **P** **16 06 47.6 -0.4**
baz=317,SNR=91
L40A Anamosa 61.46 57 P **P** **16 06 47.5 -0.8**
baz=318,SNR=51
L40A Anamosa 61.46 57 *e*P **P** **16 06 47.3 -1.1**
comp=Z,302nm,1.0s
L40A LR LR
comp=Z,10μm,18.0s
NSS Namsos 61.49 350 *e*P **P** **16 06 47.5 -0.6**
GDL2 Guadalupe Moun 61.52 74 *e*P **P** **16 06 48.9 -0.2**
K41A Shullsburg 61.52 56 P **P** **16 06 48.2 -0.6**
baz=318,SNR=53
F45A CMU Biological 61.56 51 P **P** **16 06 48.7 -0.2**
baz=318,SNR=5.3
IVI Ivigtut 61.58 21 *e*P **P** **16 06 48.3 -0.4**
comp=Z,96nm,1.0s
J42A Columbus 61.59 55 P **P** **16 06 48.7 -0.5**
baz=318,SNR=29
I43A Langenfeld Bro 61.64 54 P **P** **16 06 49.0 -0.6**
baz=318,SNR=19
P37A Lathrop 61.66 61 P **P** **16 06 48.8 -1.0**
baz=317,SNR=47
N39A Derby Farms, D 61.68 59 P **P** **16 06 49.1 -0.7**
baz=317,SNR=30
N39A Derby Farms, D 61.68 59 *e*P **P** **16 06 48.9 -1.0**
comp=Z,209nm,0.9s
N39A LR LR
comp=Z,15μm,19.0s
O38A Galt 61.73 60 P **P** **16 06 49.5 -0.7**
baz=317,SNR=35
AML Almayashu 61.78 303 P **P** **16 06 51.1 +0.1**
SNR=35
M40A Post Highland 61.80 58 P **P** **16 06 49.9 -0.7**
baz=318,SNR=11
L41A Preston 61.82 57 P **P** **16 06 49.9 -0.8**
baz=318,SNR=65
F46A Macinaw City C 61.84 50 P **P** **16 06 50.7 -0.2**
baz=319,SNR=14
K42A Prairie Point, 61.87 56 P **P** **16 06 50.3 -0.8**
baz=318,SNR=44
J43A Natural Harves 61.88 55 P **P** **16 06 50.3 -0.9**
baz=318,SNR=13
BORG Borgarnes 61.90 6 P **P** **16 06 50.5 -0.4**
comp=Z,64nm,1.1s,baz=353,slow=5.4,SNR=12
BORG LR LR 16 33 14.3
comp=Z,3μm,20.4s,baz=346,slow=36
BORG Borgarnes 61.90 6 *e*P **P** **16 06 51.9 +0.9**
comp=Z,84nm,1.1s
SCHQ Schefferville 61.96 34 P **P** **16 06 51.6 +0.1**
comp=Z,49nm,0.8s,baz=335,slow=7.2,SNR=48
SCHQ PKP2ab 16 36 14.3
comp=Z,6.0nm,0.8s,baz=135,slow=3.4,SNR=4.6
SCHQ LR LR 16 38 44.6
comp=Z,4μm,18.2s,baz=322,slow=41
SCHQ Schefferville 61.96 34 *e*P **P** **16 06 51.1 -0.5**
comp=Z,284nm,1.0s
SCHQ P'P'ab P'P'ab 16 36 14.3 -9.5
P38A Dawn 62.06 61 P **P** **16 06 51.6 -0.8**
baz=318,SNR=49
P38A Dawn 62.06 61 *e*P **P** **16 06 51.4 -1.0**
comp=Z,452nm,1.1s
P38A LR LR
comp=Z,9μm,18.0s
O39A Kirksville 62.12 59 P **P** **16 06 52.0 -0.8**
baz=318,SNR=18
Q37A Longview Farm, 62.13 62 P **P** **16 06 51.3 -1.6**
baz=318,SNR=7.4
N40A Mertquake, Sal 62.15 58 P **P** **16 06 52.3 -0.7**
baz=318,SNR=51
NRS Narsarsuaq 62.18 19 *i* P **P** **16 06 51.9 -1.0**
comp=Z,7μm,20.0s
NRS Narsarsuaq 62.18 19 *i* P **P** **16 06 51.9 -1.0**
NRS MLR MLR
comp=Z,7μm,20.0s
L42A Oliver, Polo 62.29 56 P **P** **16 06 53.0 -0.9**
baz=318,SNR=65
L42A Oliver, Polo 62.29 56 *e*P **P** **16 06 52.8 -1.2**
comp=Z,342nm,1.0s
L42A LR LR
comp=Z,10μm,18.0s
M41A Milan 62.31 57 P **P** **16 06 53.3 -0.8**
baz=318,SNR=20
FIA1 FINESS Array S 62.41 342 *e*P **P** **16 06 53.7 -0.7**
comp=Z,310nm,1.0s
FINES FINESS Array B 62.41 342 P **P** **16 06 54.0 -0.4**
comp=Z,130nm,0.8s,baz=31,slow=7.8,SNR=208
FINES LR LR 16 37 23.1
comp=Z,4μm,20.4s,baz=31,slow=39
FINES FINESS Array B 62.41 342 P **P** **16 06 54.0 -0.4**
K43A Burlington 62.43 55 P **P** **16 06 54.1 -0.7**
baz=318,SNR=19
K43A Burlington 62.43 55 *e*P **P** **16 06 53.8 -1.0**
comp=Z,326nm,1.2s
K43A LR LR
comp=Z,11μm,20.0s
Q38A Cooks Store, C 62.51 61 P **P** **16 06 54.0 -1.4**
baz=318,SNR=49
KSH Kashi 62.54 300⇓ *i*P **P** **16 06 59.3 +3.5**
KSH pP sP 16 07 07.1 +2.3
KSH PP PP 16 09 21.3 +8.3
KSH S **S** **16 15 25.6 +3.3**
KSH sS sS 16 15 36.9 +3.9
KSH ScS **ScS** **16 16 47.3 +0.3**
KSH SS SS 16 19 39.4 +14
KSH pmax pmax
comp=Z,460nm,1.1s
KSH pmax pmax
comp=Z,3μm,3.9s
KSH LR LR
comp=Z,20μm,13.8s
KSH LR LR
comp=Z,16μm,14.1s
KSH LR LR
comp=Z,7μm,14.1s
AKTO Aktyubinsk 62.55 319 P **P** **16 06 55.0 -0.5**
comp=Z,110nm,1.0s,baz=42,slow=6.9,SNR=174
AKTO PKP2bc 16 36 06.4
comp=Z,1.1nm,0.9s,baz=243,slow=9.4,SNR=4.0
AKTO LR LR 16 38 43.0
comp=Z,4μm,18.1s,baz=36,slow=40
O40A La Belle 62.56 59 P **P** **16 06 55.1 -0.7**
baz=318,SNR=124
P39B Salisbury 62.57 60 P **P** **16 06 55.1 -0.7**
baz=318,SNR=166
L43A Garden Prairie 62.62 56 P **P** **16 06 55.1 -0.9**
baz=318,SNR=24
KK31 Karatay Array 62.63 306 *e*P **P** **16 06 55.6 -0.7**
KK31 Karatay Array 62.63 306 *e*P **P** **16 06 55.6 -0.7**
KKAR Karatay Array 62.63 306 *e*P **P** **16 06 55.5 -0.8**
KKAR Karatay Array 62.63 306 *e*P **P** **16 06 55.5 -0.8**
N41A Harden Midland 62.65 58 P **P** **16 06 55.8 -0.5**
baz=318,SNR=106
N41A Harden Midland 62.65 58 *e*P **P** **16 06 55.5 -0.8**
comp=Z,617nm,1.0s
N41A LR LR
comp=Z,15μm,18.0s
M42A Sheffield 62.65 57 P **P** **16 06 55.2 -1.2**
baz=318
ABKAR Akbulak array 62.70 317 *e*P **P** **16 06 55.9 -0.6**
Q39A Willow Grove F 62.78 61 P **P** **16 06 56.3 -1.0**
baz=318,SNR=65
WMOK Wichita Mounta 62.82 68 P **P** **16 06 57.7 +0.1**
baz=318,SNR=121
WMOK Wichita Mounta 62.82 68 *e*P **P** **16 06 57.4 -0.2**
comp=Z,344nm,1.1s
WMOK LR LR
comp=Z,6μm,19.0s
WMOK Wichita Mounta 62.82 68 *e*P **P** **16 06 57.4 -0.2**
WMOK pmax pmax
comp=Z,343nm,1.1s
WMOK MLR MLR
comp=Z,6μm,19.0s
NONG Nongkai 62.85 264 P **P** **16 06 59.7 +1.7**
comp=Z,75nm,1.2s,comp=Z,2μm
P40A Paris 62.91 60 P **P** **16 06 57.3 -0.8**
baz=318,SNR=178
P40A Paris 62.91 60 *e*P **P** **16 06 57.2 -0.9**
comp=Z,522nm,1.0s
P40A LR LR
comp=Z,6μm,18.0s
TBLU Trondheim 62.91 351 *e*P **P** **16 06 55.3 -2.4**
R38A Fenwick Farm, 62.93 62 P **P** **16 06 56.2 -2.1**
baz=318,SNR=21
N42A Yates City 62.98 57 P **P** **16 06 57.7 -0.8**
baz=318,SNR=26
BRLS Borolday 63.02 306 *i* S **S** **16 15 31.0 +3.1**
L44A Lake County Fo 63.03 55 P **P** **16 06 58.2 -0.6**
baz=319,SNR=12
M43A Waltham Townsh 63.06 56 P **P** **16 06 58.5 -0.6**
baz=318,SNR=62
O41A Passleys Farm, 63.07 59 P **P** **16 06 58.6 -0.6**
baz=318,SNR=98
PUL Pulkovo 63.10 339⇑ *e*P **P** **16 06 59.8 +0.8**
PUL pmax pmax
comp=Z,375nm,1.1s
HNR Honiara 63.24 193 P **P** **16 07 01.7 +1.3**
comp=Z,42nm,0.8s,baz=18,slow=7.4,SNR=4.1
HNR LR LR 16 32 08.2
comp=Z,2μm,19.1s,baz=16,slow=34
HNR Honiara 63.24 193 *e*P **P** **16 06 59.9 -0.5**
comp=Z,239nm,1.1s
HNR Honiara 63.24 193 *e*P **P** **16 06 59.9 -0.5**
HNR pmax pmax
comp=Z,239nm,1.1s
Q40A Laux Farm, Aux 63.29 60 P **P** **16 06 59.6 -1.0**
baz=318,SNR=82
R39A Chumby, Stover 63.29 61 P **P** **16 06 58.7 -1.9**
baz=318,SNR=57
P41A Barry, Barry 63.31 59 P **P** **16 06 60.0 -0.8**
baz=318,SNR=49
N43A Stutzman Famil 63.33 57 P **P** **16 07 00.2 -0.6**
baz=319,SNR=48
S38A Stockton 63.34 62 P **P** **16 06 59.2 -1.8**
baz=318,SNR=59
O42A Bath 63.42 58 P **P** **16 07 00.7 -0.8**
baz=318,SNR=14
HDIL Hopedale 63.55 57 P **P** **16 07 01.9 -0.5**
baz=319,SNR=45

HDIL Hopedale 63.55 57 *e*P **P 16 07 01.8 -0.6**
comp=Z,754nm,1.0s
HDIL LR LR
comp=Z,11μm,18.0s
M44A Midewin, Midew 63.56 56 P **P 16 07 01.8 -0.6**
baz=319,SNR=37
M44A Midewin, Midew 63.56 56 *e*P **P 16 07 01.6 -0.7**
comp=Z,316nm,1.1s
M44A LR LR
comp=Z,10μm,20.0s
T38A Diamond 63.57 63 P **P 16 07 01.1 -1.4**
baz=318,SNR=56
IUG Iuzhnay 63.58 306 ||*i*P **P 16 07 02.8 +0.1**
comp=Z,160nm,1.2s
IUG *i* PP **PP 16 09 22.4 +0.3**
IUG *i* S **S 16 15 35.4 +0.2**
TUL1 Leonard 63.60 65 P **P 16 07 01.9 -0.8**
baz=318,SNR=24
TUL1 Leonard 63.60 65 *e*P **P 16 07 01.9 -0.9**
comp=Z,286nm,1.1s
TUL1 LR LR
comp=Z,6μm,19.0s
S39A Bolivar 63.60 62 P **P 16 07 00.8 -2.0**
baz=318,SNR=30
S39A Bolivar 63.60 62 *e*P **P 16 07 00.3 -2.5**
comp=Z,94nm,1.1s
S39A LR LR
comp=Z,10μm,19.0s
UBPT Khong Chiam 63.64 260 P **P 16 07 04.5 +1.3**
comp=Z,116nm,1.5s
CHM Chimkent 63.66 306 *e*P **P 16 07 03.3 +0.2**
comp=Z,323nm,1.6s
CHM *e*S **S 16 15 36.0 0.0**
R40A Maddies Statio 63.71 61 P **P 16 07 02.2 -1.2**
baz=318,SNR=173
R40A Maddies Statio 63.71 61 *e*P **P 16 07 01.8 -1.6**
comp=Z,433nm,1.1s
R40A LR LR
comp=Z,8μm,19.0s
P42A Winchester 63.74 59 P **P 16 07 02.9 -0.8**
baz=319,SNR=49
P42A Winchester 63.74 59 *e*P **P 16 07 02.6 -1.0**
comp=Z,340nm,1.2s
P42A LR LR
comp=Z,14μm,18.0s
O43A Sugar Creek Fa 63.75 57 P **P 16 07 03.1 -0.5**
baz=319,SNR=24
Q41A Truxton 63.76 60 P **P 16 07 03.0 -0.7**
baz=319,SNR=121
MOL Molde 63.83 352 *e*P **P 16 07 03.3 -0.4**
TNTI Ternate 63.83 231 *e*P **P 16 07 09.1 +4.7**
comp=Z,152nm,1.3s
CMAI Chiengmai2 63.87 269 P **P 16 07 07.2 +2.3**
comp=Z,633nm,1.2s,comp=Z,58μm
SHL Shillong 63.90 278 *e*P **P 16 07 03.5 -1.5**
SHL *e*P **P 16 07 04.4 -0.6**
SHL IAmb IAmb 16 07 05.5
comp=Z,189nm,1.6s
SHL *i* x x 16 14 35.0
comp=E,12nm,0.9s
SHL Shillong 63.90 278 *e*P **P 16 07 04.4 -0.6**
comp=E,187nm,1.2s
SHL LR LR
comp=Z,9μm,18.0s
SHL Shillong 63.90 278 *e*P **P 16 07 04.4 -0.6**
SHL pmax pmax
comp=Z,187nm,1.2s
SHL MLR MLR
comp=Z,9μm,18.0s
ABTX Abilene, Hawle 63.90 70 P **P 16 07 04.9 +0.1**
baz=318,SNR=62
ABTX Abilene, Hawle 63.90 70 *e*P **P 16 07 04.6 -0.2**
comp=Z,650nm,1.3s
ABTX LR LR
comp=Z,5μm,21.0s
M45A Boilermakers S 63.95 55 P **P 16 07 04.0 -0.9**
baz=319
N44A Piper City 63.96 56 P **P 16 07 04.5 -0.5**
baz=319,SNR=71
LPIG La Paz 64.03 84 P **P 16 07 06.2 +0.5**
comp=Z,62nm,0.4s,baz=308,slow=0.8,SNR=30
LPIG LR LR 16 31 38.2
comp=Z,2μm,20.2s,baz=312,slow=33
TXAR Lajitas Array 64.03 75 P **P 16 07 06.1 +0.3**
comp=Z,67nm,0.5s,baz=304,slow=5.0,SNR=782
TXAR LR LR 16 35 26.2
comp=Z,4μm,18.1s,baz=0.0,slow=36
TXAR PKPPKP **P'P'df 16 36 04.0 +3.2**
comp=Z,2.1nm,1.1s,baz=144,slow=3.2,SNR=3.6
T39A Clever 64.07 62 P **P 16 07 04.2 -1.6**
baz=318,SNR=44
S40A Lebanon 64.11 61 P **P 16 07 04.5 -1.6**
baz=319,SNR=72
P43A Skaggs, Pawnee 64.12 58 P **P 16 07 05.3 -0.8**
baz=319,SNR=21
Q42A Golden Eagle 64.15 59 P **P 16 07 05.9 -0.4**
baz=319,SNR=62
R41A Rosebud 64.17 60 P **P 16 07 05.4 -1.1**
baz=319,SNR=97
DOMB Dombas 64.21 351 *e*P **P 16 07 05.9 -0.5**
N45A Kentland 64.23 56 P **P 16 07 06.3 -0.5**
baz=319,SNR=45
AKN Aaknes 64.26 352 *e*P **P 16 07 06.9 +0.2**
O44A Mansfield 64.27 57 P **P 16 07 06.5 -0.6**
baz=319,SNR=23
HHAR Hobbs 64.32 63 *e*P **P 16 07 05.9 -1.6**
comp=Z,208nm,1.2s
HHAR LR LR
comp=Z,5μm,21.0s
M46A Old House Fiel 64.38 55 P **P 16 07 06.8 -0.9**
baz=320
M46A Old House Fiel 64.38 55 *e*P **P 16 07 06.3 -1.4**
comp=Z,314nm,1.2s
M46A LR LR
comp=Z,12μm,20.0s
CCM Cathedral Cave 64.42 60 P **P 16 07 06.7 -1.4**
baz=319
CCM Cathedral Cave 64.42 60 *e*P **P 16 07 06.7 -1.4**
comp=Z,250nm,1.2s
CCM LR LR
comp=Z,7μm,20.0s
CCM Cathedral Cave 64.42 60 *e*P **P 16 07 06.7 -1.4**
CCM pmax pmax
comp=Z,250nm,1.2s
CCM MLR MLR
comp=Z,7μm,20.0s
T40A Mansfield 64.43 62 P **P 16 07 06.7 -1.6**
baz=319,SNR=108
R42A Luebbering 64.49 60 P **P 16 07 07.7 -0.8**
baz=319,SNR=56
U39A Green Forest 64.50 63 P **P 16 07 07.4 -1.2**
baz=319,SNR=147
SLM Saint Louis 64.51 59 *e*P **P 16 07 07.2 -1.5**
comp=Z,208nm,1.0s
SLM LR LR
comp=Z,10μm,19.0s
SLM Saint Louis 64.51 59 *e*P **P 16 07 07.2 -1.5**
SLM pmax pmax
comp=Z,208nm,1.0s
SLM MLR MLR
comp=Z,10μm,19.0s
S41A Jillco Farms, 64.51 61 P **P 16 07 07.5 -1.2**
baz=319,SNR=182
Q43A New Douglas 64.56 59 P **P 16 07 08.4 -0.6**
baz=319,SNR=61
SLBS Sierra La Lagu 64.56 84 *e*P **P 16 07 08.7 -0.5**
comp=Z,288nm,1.6s
SLBS LR LR
comp=Z,3μm,18.0s
O45A Potomac 64.57 56 P **P 16 07 08.8 -0.2**
baz=319,SNR=91
N46A Monticello 64.58 55 P **P 16 07 07.7 -1.3**
baz=320,SNR=7.2
HPIG 64.66 78 *e*P **P 16 07 09.7 -0.4**
comp=Z,147nm,1.2s
HPIG LR LR
comp=Z,3μm,18.0s
P44A Sand Creek, Wi 64.71 58 P **P 16 07 09.7 -0.3**
baz=319,SNR=92
NC303 NORSAR Array S 64.78 350 *e*P **P 16 07 09.5 -0.5**
SFIN Lafayette 64.79 56 P **P 16 07 09.8 -0.6**
baz=320,SNR=46
SFIN Lafayette 64.79 56 *e*P **P 16 07 09.4 -1.0**
comp=Z,300nm,1.1s
SFIN LR LR
comp=Z,10μm,20.0s
CHTO Chiang Mai 64.79 268 P **P 16 07 11.7 +0.9**
comp=Z,153nm,1.9s,comp=Z,5μm
CHTO Chiang Mai 64.79 268 *e*P **P 16 07 10.9 +0.2**
comp=Z,52nm,1.0s
CHTO LR LR
comp=Z,3μm,19.0s
NC204 NORSAR Array S 64.79 350 *e*P **P 16 07 09.7 -0.5**
V39A Pettigrew 64.81 63 P **P 16 07 09.6 -1.1**
baz=319,SNR=136
U40A Yellville 64.85 63 P **P 16 07 09.7 -1.3**
baz=319,SNR=121
NC405 NORSAR Array S 64.85 349 *e*P **P 16 07 09.1 -1.5**
S42A Caledonia 64.87 60 P **P 16 07 10.2 -0.9**
baz=319,SNR=112
FVM French Village 64.90 60 *e*P **P 16 07 10.1 -1.2**
comp=Z,268nm,1.3s
FVM LR LR
comp=Z,6μm,19.0s
FVM French Village 64.90 60 *e*P **P 16 07 10.1 -1.2**
FVM pmax pmax
comp=Z,268nm,1.3s
FVM MLR MLR
comp=Z,6μm,19.0s
T41A Mountain View 64.91 61 P **P 16 07 09.9 -1.5**
baz=319,SNR=122
Q44A Meyer Farm, Va 64.94 58 P **P 16 07 10.8 -0.7**
baz=319,SNR=27
R43A Red Bud 64.94 59 P **P 16 07 10.6 -0.9**
baz=319,SNR=26
FAKI Fak Fak 64.95 224 *e*P **P 16 07 12.4 +0.7**
comp=Z,185nm,1.2s
MOS Moscow 64.95 333 *e*P **P 16 07 10.9 -0.3**
MOS *e* 16 07 43.7
MOS *e* 16 09 35.9
MOS *e*PPP PPP 16 11 04.5
MOS *i* S **S 16 15 51.8 +0.4**
MOS *e*SS **SS 16 20 04.0 +1.9**
MOS pmax pmax
comp=Z,900nm,1.6s
MOS pmax pmax
comp=N,400nm,1.6s
MOS pmax pmax
comp=Z,505nm,1.5s
MOS pmax pmax
comp=N,222nm,1.4s
MOS smax smax
comp=N,1μm,2.5s
MOS smax smax
comp=E,1μm,2.4s
MOS MLR MLR
comp=Z,5μm,17.0s
NB201 NORSAR Array S 64.96 350 *e*P **P 16 07 09.6 -1.7**
NB2 NORSAR Subarra 64.98 350 P **P 16 07 10.7 -0.7**
comp=Z,262nm,1.2s,baz=12,slow=6.9
NB2 NORSAR Subarra 64.98 350 P **P 16 07 10.7 -0.7**
baz=12,slow=6.9
NOA NORSAR Array B 64.98 350 LR LR 16 36 58.0
comp=Z,2μm,19.7s,baz=30,slow=37
KKM Kota Kinabalu 64.98 245 *e*P **P 16 07 11.9 -0.1**
comp=Z,212nm,1.5s
AAM Ann Arbor 65.00 52 P **P 16 07 11.2 -0.5**
baz=320
AAM Ann Arbor 65.00 52 *e*P **P 16 07 11.3 -0.5**
comp=Z,134nm,1.0s
AAM LR LR
comp=Z,8μm,20.0s
AAM Ann Arbor 65.00 52 *e*P **P 16 07 11.3 -0.5**
AAM pmax pmax
comp=Z,134nm,1.0s
AAM MLR MLR
comp=Z,8μm,20.0s
NBO00 NORSAR Array S 65.03 350 *e*P **P 16 07 11.2 -0.5**
VSU Vasula 65.05 341 *d i*P **P 16 07 12.0 +0.2**
VSU pmax pmax
comp=Z,613nm,1.0s
CM31 Chiang Mai Arr 65.07 268 *e*P **P 16 07 12.6 0.0**
CMAR Chiang Mai Arr 65.07 268 P **P 16 07 13.2 +0.6**
comp=Z,7.6nm,0.6s,baz=25,slow=7.0,SNR=42
CMAR PKPPKP **P'P'df 16 35 54.2 -2.8**
comp=Z,0.9nm,0.9s,baz=242,slow=1.9,SNR=5.0
CMAR LR LR 16 37 09.9
comp=Z,2μm,20.6s,baz=34,slow=37
CM01 Chiang Mai Arr 65.09 268 *e*P **P 16 07 12.8 +0.1**
P45A Graceland, Par 65.11 57 P **P 16 07 12.0 -0.5**
baz=320,SNR=54
P45A Graceland, Par 65.11 57 *e*P **P 16 07 11.9 -0.7**
comp=Z,289nm,1.0s
P45A LR LR
comp=Z,10μm,18.0s
SADO Sadowa 65.17 48 *e*P **P 16 07 10.8 -2.1**
comp=Z,53nm,0.8s
SADO LR LR
comp=Z,7μm,22.0s
NAO01 NORSAR Array S 65.20 350 *e*P **P 16 07 12.0 -0.9**
W39A Magazine 65.22 64 P **P 16 07 12.7 -0.6**
baz=319,SNR=92
W39A Magazine 65.22 64 *e*P **P 16 07 12.6 -0.7**
comp=Z,1μm,1.8s
W39A LR LR
comp=Z,6μm,18.0s
CHAI Chaiyaphum 65.23 263 P **P 16 07 14.8 +1.2**
comp=Z,19nm,1.1s,comp=Z,183nm
NC602 NORSAR Array S 65.24 349 *e*P **P 16 07 12.1 -0.9**
NC602 NORSAR Array S 65.24 349 *e*P **P 16 07 12.4 -0.6**
T42A Van Buren 65.27 61 P **P 16 07 12.1 -1.5**
baz=319,SNR=70
T42A Van Buren 65.27 61 *e*P **P 16 07 11.9 -1.7**
comp=Z,145nm,1.1s
T42A LR LR
comp=Z,8μm,20.0s
V40A Witts Springs 65.28 63 P **P 16 07 12.8 -1.0**
baz=319,SNR=203
V40A Witts Springs 65.28 63 *e*P **P 16 07 12.3 -1.4**
comp=Z,526nm,1.1s
V40A LR LR
comp=Z,6μm,21.0s
P46A Rosedale 65.31 57 P **P 16 07 13.4 -0.4**
baz=320,SNR=70
HYA Hoyanger 65.33 352 *e*P **P 16 07 13.7 +0.1**
O47A Sheridan 65.35 55 P **P 16 07 12.7 -1.4**
baz=320,SNR=15
U41A Viola 65.35 62 P **P 16 07 12.9 -1.3**
baz=319,SNR=157
Q45A Warren Harvey, 65.38 58 P **P 16 07 13.9 -0.4**
baz=320,SNR=92
S43A Fulton Ridge, 65.40 60 P **P 16 07 13.5 -1.0**
baz=319,SNR=103
R44A Waltonville 65.40 59 P **P 16 07 13.7 -0.7**
baz=320,SNR=78
JCT Junction City 65.41 72 P **P 16 07 14.4 -0.3**
baz=319,SNR=98
JCT Junction City 65.41 72 *e*P **P 16 07 13.9 -0.8**
comp=Z,251nm,0.9s
JCT LR LR
comp=Z,8μm,21.0s
JCT Junction City 65.41 72 *e*P **P 16 07 13.9 -0.8**
JCT pmax pmax
comp=Z,251nm,0.9s
JCT MLR MLR
comp=Z,8μm,21.0s
OLIL Olney 65.53 58 *e*P **P 16 07 14.5 -0.8**
comp=Z,436nm,1.1s
OLIL LR LR
comp=Z,12μm,18.0s
X39A Fountain Ranch 65.56 65 P **P 16 07 15.3 -0.2**
baz=319,SNR=196
HFS Hagfors 65.57 348 P **P 16 07 14.4 -0.8**
comp=Z,37nm,0.5s,baz=37,slow=3.7,SNR=184
ODAN Odare 65.58 283 *e*P **P 16 07 15.7 -0.4**
comp=Z,482nm,1.3s
WHTX Lake Whitney, 65.60 69 P **P 16 07 15.6 -0.2**
baz=319,SNR=12
WHTX Lake Whitney, 65.60 69 *e*P **P 16 07 15.2 -0.7**
comp=Z,227nm,1.2s
WHTX LR LR
comp=Z,7μm,21.0s
W40A Ferguson Farm, 65.61 64 P **P 16 07 15.3 -0.6**
baz=319,SNR=75
W40A Ferguson Farm, 65.61 64 *e*P **P 16 07 15.1 -0.7**
comp=Z,794nm,1.1s
W40A LR LR
comp=Z,6μm,19.0s
V41A Mountainview 65.65 63 P **P 16 07 15.0 -1.2**
baz=319,SNR=229
T43A Greenville 65.66 60 P **P 16 07 15.2 -0.9**
baz=319,SNR=69
GUN Gumba 65.67 284 *e*P **P 16 07 16.5 -0.3**
comp=Z,424nm,1.0s
JIRN Jiri 65.68 284 *e*P **P 16 07 16.5 -0.4**
comp=Z,712nm,1.4s
Q46A CEJHS Indians, 65.69 57 P **P 16 07 15.7 -0.6**
baz=320,SNR=11
U42A Revenden 65.71 61 P **P 16 07 14.9 -1.6**
baz=319,SNR=84
S44A Carbondale 65.73 59 P **P 16 07 15.8 -0.8**
baz=320,SNR=39
SIUC Southern Illin 65.73 59 *e*P **P 16 07 15.7 -0.9**
comp=Z,282nm,1.1s
SIUC LR LR
comp=Z,9μm,18.0s
R45A Skylar, Fairfi 65.78 58 P **P 16 07 16.2 -0.6**
baz=320,SNR=41
OBN Obninsk 65.78 334 *e*P **P 16 07 16.3 -0.3**
comp=Z,772nm,1.3s
OBN LR LR
comp=Z,4μm,19.0s
OBN Obninsk 65.78 334 *de*P **P 16 07 16.3 -0.3**
OBN *e* 16 07 26.2
OBN *e* 16 07 47.3
OBN *e* 16 09 40.9
OBN *e*PPP PPP 16 11 24.8
OBN *i* S **S 16 16 02.2 +0.6**
OBN *e*SS **SS 16 20 18.1 +3.0**
OBN pmax pmax
comp=Z,961nm,1.7s
PMG Port Moresby 65.81 207 P **P 16 07 18.3 +1.1**
comp=Z,33nm,1.0s,baz=277,slow=5.1,SNR=3.6
PMG LR LR 16 33 25.4
comp=Z,2μm,19.2s,baz=15,slow=34
PBMO Poplar Bluff 65.81 61 *e*P **P 16 07 16.0 -1.1**
comp=Z,628nm,1.1s
PBMO LR LR
comp=Z,8μm,19.0s
MIAR Mount Ida 65.82 64 P **P 16 07 16.8 -0.4**
baz=319,SNR=154
MIAR Mount Ida 65.82 64 *e*P **P 16 07 16.5 -0.7**
comp=Z,470nm,1.3s
MIAR LR LR
comp=Z,6μm,18.0s
MIAR Mount Ida 65.82 64 *e*P **P 16 07 16.5 -0.7**
MIAR pmax pmax
comp=Z,470nm,1.3s
MIAR MLR MLR
comp=Z,6μm,18.0s
P47A Martinsville 65.88 56 P **P 16 07 16.7 -0.8**
baz=320,SNR=52
WHAR Wooly Hollow 65.95 63 *e*P **P 16 07 16.8 -1.3**
comp=Z,346nm,1.2s
WHAR LR LR
comp=Z,6μm,22.0s
RAMN Ramite 65.98 283 *e*P **P 16 07 18.5 -0.1**
comp=Z,285nm,0.6s
BLO Bloomington 65.99 56 *e*P **P 16 07 17.4 -0.9**
comp=Z,268nm,1.0s
BLO LR LR
comp=Z,9μm,20.0s
BLO Bloomington 65.99 56 *e*P **P 16 07 17.4 -0.9**
BLO pmax pmax
comp=Z,268nm,1.0s
BLO MLR MLR
comp=Z,9μm,20.0s
TRQ Mont Tremblant 66.00 44 *e*P **P 16 07 16.1 -2.1**
T44A Benton 66.02 60 P **P 16 07 17.7 -0.8**
baz=320,SNR=17
V42A Cord 66.04 62 P **P 16 07 17.1 -1.5**
baz=320,SNR=58
W41B Gary Mavity, V 66.06 63 P **P 16 07 17.8 -0.9**
baz=319,SNR=94
W41B Gary Mavity, V 66.06 63 *e*P **P 16 07 17.5 -1.3**
comp=Z,329nm,1.3s
W41B LR LR
comp=Z,6μm,22.0s
ASK Askoy 66.08 353 *e*P **P 16 07 18.0 -0.4**
S45A Carrier Mills 66.09 59 P **P 16 07 18.3 -0.6**
baz=320,SNR=25
OSL Oslo 66.11 350 *e*P **P 16 07 19.2 +0.5**
KKN Kakani 66.11 285 *e*P **P 16 07 19.2 -0.3**
comp=Z,143nm,0.9s
U43A Rector 66.13 61 P **P 16 07 18.4 -0.8**
baz=320,SNR=9.8
BER Bergen 66.17 353 *e*P **P 16 07 18.9 -0.1**
PKIN Phulchoki 66.21 285 *e*P **P 16 07 19.8 -0.3**
comp=Z,80nm,0.6s
BRDH Bariadhala 66.22 276 LR LR 16 38 14.8
comp=Z,4μm,18.5s,baz=43,slow=38
Q47A Bedord North L 66.22 56 P **P 16 07 19.1 -0.6**
baz=320,SNR=52
R46A Gibon Southern 66.23 58 P **P 16 07 19.1 -0.6**
baz=320,SNR=21
PARMO Parma 66.25 60 *e*P **P 16 07 19.5 -0.5**
comp=Z,488nm,0.9s
X40A Basin Creek Fa 66.27 64 P **P 16 07 19.2 -0.9**
baz=319,SNR=63
X40A Basin Creek Fa 66.27 64 *e*P **P 16 07 18.9 -1.1**
comp=Z,197nm,1.1s
X40A LR LR
comp=Z,6μm,20.0s
UALR University of 66.31 63 *e*P **P 16 07 19.2 -1.2**
comp=Z,104nm,1.1s
UALR LR LR
comp=Z,6μm,21.0s
GKN Gorkha 66.33 285 *e*P **P 16 07 20.3 -0.5**
comp=Z,364nm,1.3s
USIN University of 66.34 58 *e*P **P 16 07 19.4 -1.1**
comp=Z,660nm,1.1s
USIN LR LR
comp=Z,12μm,19.0s
DMN Daman 66.35 285 *e*P **P 16 07 21.0 -0.1**
comp=Z,100nm,0.7s
W42A Bald Knob 66.37 62 P **P 16 07 19.7 -1.0**
baz=320,SNR=5.9
Y40A Okolona 66.38 65 P **P 16 07 20.0 -0.8**
baz=319,SNR=12
U44A Portageville 66.41 60 P **P 16 07 20.6 -0.4**
baz=320,SNR=7.4
X41A Kaden, Bauxite 66.43 64 P **P 16 07 20.3 -0.8**
baz=320,SNR=9.7
435B Jarrell 66.44 70 P **P 16 07 21.3 0.0**
baz=319,SNR=20
435B Jarrell 66.44 70 *e*P **P 16 07 20.9 -0.3**
comp=Z,395nm,1.2s
435B LR LR
comp=Z,6μm,18.0s
PVMO Portageville 66.47 60 PFAKE 16 07 30.0 +8.7
PVMO LR LR
comp=Z,7μm,18.0s
V43A Jonesboro 66.50 61 P **P 16 07 20.9 -0.7**
baz=320
KONO Kongsberg 66.51 350 *e*P **P 16 07 21.3 0.0**
comp=Z,199nm,1.1s
KONO Kongsberg 66.51 350 *d i*P **P 16 07 21.1 -0.1**
KONO pmax pmax
comp=Z,224nm,1.2s
KONO Kongsberg 66.51 350 *e*P **P 16 07 21.1 -0.1**
S46A Don Dixon Farm 66.53 58 P **P 16 07 21.1 -0.6**
baz=320,SNR=24
ODD1 Odda 66.53 352 *e*P **P 16 07 21.7 +0.2**
T45A Paducah 66.56 59 P **P 16 07 21.2 -0.7**
baz=320
T45A Paducah 66.56 59 *e*P **P 16 07 21.6 -0.3**
comp=Z,513nm,1.2s
T45A LR LR
comp=Z,8μm,19.0s
DANN Dangsing 66.57 286 *e*P **P 16 07 22.4 -0.1**
comp=Z,512nm,1.3s
HBAR Harrisburg 66.62 62 *e*P **P 16 07 21.9 -0.4**
comp=Z,618nm,1.3s
HBAR LR LR
comp=Z,6μm,20.0s
GNAR Gosnell 66.64 61 *e*P **P 16 07 22.4 0.0**
comp=Z,669nm,1.3s
GNAR LR LR
comp=Z,6μm,19.0s
R47A Wooly Knot Far 66.66 57 P **P 16 07 21.8 -0.7**
baz=320,SNR=50
O50A Cable 66.67 54 P **P 16 07 21.7 -0.9**
baz=321
SRAK Srakaew 66.67 262 P **P 16 07 22.9 0.0**
comp=Z,187nm,1.2s,comp=Z,2μm
U44B Burton Farm, H 66.71 60 P **P 16 07 22.7 -0.2**
baz=320,SNR=11
WLAR White Oak Lake 66.72 65 *e*P **P 16 07 22.4 -0.6**
comp=Z,440nm,1.0s
GLAT Glass 66.80 60 *e*P **P 16 07 23.2 -0.3**
comp=Z,2μm,1.3s
V44A Blytheville 66.81 61 P **P 16 07 23.3 -0.3**
baz=320

WCI	Wyandotte Cave	66.83	57	P	P	16 07 23.0	-0.7
	baz=320						
WCI	Wyandotte Cave	66.83	57	eP	P	16 07 22.9	-0.7
WCI	comp=Z,376nm,1.1s			LR	LR		
	comp=Z,11µm,18.0s						
WCI	Wyandotte Cave	66.83	57	eP	P	16 07 22.9	-0.7
WCI				pmax	pmax		
	comp=Z,376nm,1.1s						
WCI				MLR	MLR		
	comp=Z,11µm,18.0s						
Y41A	Eaglette Beard	66.84	64	P	P	16 07 23.4	-0.4
	baz=320,SNR=22						
ERPA	Erie	66.86	50	P	P	16 07 23.2	-0.6
	baz=322,SNR=11						
ERPA	Erie	66.86	50	eP	P	16 07 23.5	-0.3
ERPA	comp=Z,316nm,1.1s			LR	LR		
	comp=Z,11µm,20.0s						
X42A	Stuttgart	66.86	63	P	P	16 07 23.2	-0.6
	baz=320,SNR=6.0						
Z40A	Long Farm, Mag	66.89	65	P	P	16 07 24.0	-0.1
	baz=320,SNR=16						
R48A	Northridge Ran	66.91	56	P	P	16 07 23.6	-0.6
	baz=321,SNR=12						
ACSO	Alum Creek Sta	66.92	53	P	P	16 07 23.4	-0.8
	baz=321,SNR=15						
ACSO	Alum Creek Sta	66.92	53	eP	P	16 07 23.3	-0.9
ACSO	comp=Z,130nm,1.0s			LR	LR		
	comp=Z,5µm,20.0s						
T46A	Princeton	66.93	59	P	P	16 07 24.1	-0.2
	baz=320,SNR=152						
W43A	Forest City	66.95	62	P	P	16 07 23.5	-0.9
	baz=320						
UTMT	University of	66.96	60	eP	P	16 07 24.5	+0.1
	comp=Z,1µm,1.0s						
U45A	Rockin P Farm,	67.01	60	P	P	16 07 24.6	-0.2
	baz=320,SNR=18						
BLS5	Blasjo	67.03	352	eP	P	16 07 24.4	-0.2
HALT	Halls	67.04	61	eP	P	16 07 24.7	-0.3
	comp=Z,2µm,1.2s						
KOLN	Koldanda	67.10	286	eP	P	16 07 25.3	-0.5
	comp=Z,93nm,1.0s						
ALLY	Alegheny Colle	67.15	51	eP	P	16 07 24.9	-0.8
ALLY	comp=Z,557nm,1.1s			LR	LR		
	comp=Z,12µm,19.0s						
PYUN	Piuthan	67.20	287	eP	P	16 07 26.0	-0.4
	comp=Z,359nm,1.0s						
140A	Cam and Jess,	67.26	66	P	P	16 07 26.5	0.0
	baz=320,SNR=8.4						
140A	Cam and Jess,	67.26	66	eP	P	16 07 25.9	-0.5
140A	comp=Z,460nm,1.3s			LR	LR		
	comp=Z,7µm,18.0s						
833A	Chaparral WMA,	67.26	73	P	P	16 07 27.0	+0.4
	baz=320,SNR=9.4						
833A	Chaparral WMA,	67.26	73	eP	P	16 07 26.6	+0.1
833A	comp=Z,171nm,1.1s			LR	LR		
	comp=Z,5µm,20.0s						
LONY	Lake Ozonia	67.27	45	P	P	16 07 24.2	-2.2
	baz=324,SNR=16						
LONY	Lake Ozonia	67.27	45	eP	P	16 07 24.1	-2.2
LONY	comp=Z,99nm,1.4s			LR	LR		
	comp=Z,6µm,18.0s						
CCAR	Cane Creek	67.27	64	eP	P	16 07 26.4	-0.1
CCAR	comp=Z,532nm,1.1s			LR	LR		
	comp=Z,6µm,21.0s						
X43A	Marvell	67.29	63	P	P	16 07 26.1	-0.5
	baz=320,SNR=11						
X43A	Marvell	67.29	63	eP	P	16 07 25.8	-0.8
X43A	comp=Z,705nm,1.3s			LR	LR		
	comp=Z,9µm,18.0s						
U46A	Springville	67.30	59	P	P	16 07 25.9	-0.7
	baz=320						
MMNY	Mt. Morris Dam	67.32	48	eP	P	16 07 25.2	-1.4
MMNY	comp=Z,163nm,1.0s			LR	LR		
	comp=Z,7µm,20.0s						
Y42A	Garnett, Star	67.32	64	P	P	16 07 26.6	-0.2
	baz=320,SNR=8.6						
NATX	Nacogdoches	67.33	67	P	P	16 07 27.1	+0.2
	baz=320,SNR=18						
NATX	Nacogdoches	67.33	67	eP	P	16 07 26.6	-0.3
NATX	comp=Z,484nm,1.1s			LR	LR		
	comp=Z,5µm,20.0s						
MET	Memphis--Engin	67.33	61	eP	P	16 07 26.5	-0.3
MET	comp=Z,1µm,1.1s			LR	LR		
	comp=Z,7µm,19.0s						
KMY	Karmoy	67.34	352	eP	P	16 07 27.3	+0.8
V45A	Humboldt	67.37	60	P	P	16 07 26.8	-0.3
	baz=320,SNR=24						
T47A	Sharon Grove	67.37	58	P	P	16 07 27.0	-0.1
	baz=320,SNR=57						
T47A	Sharon Grove	67.37	58	eP	P	16 07 26.6	-0.5
T47A	comp=Z,419nm,1.1s			LR	LR		
	comp=Z,13µm,18.0s						
W44A	Shelby Farms P	67.38	61	P	P	16 07 27.2	0.0
	baz=320						
S48A	Wiedeman Farm,	67.39	57	P	P	16 07 26.7	-0.5
	baz=321,SNR=78						
M54A	Oil Creek Stat	67.48	50	P	P	16 07 27.1	-0.7
	baz=322,SNR=45						
M54A	Oil Creek Stat	67.48	50	eP	P	16 07 25.5	-2.2
M54A	comp=Z,211nm,0.9s			LR	LR		
	comp=Z,11µm,19.0s						
FRNY	Flat Rock	67.52	44	eP	P	16 07 25.3	-2.5
	comp=Z,257nm,1.9s						
FRNY				LR	LR		
	comp=Z,8µm,18.0s						
STAV	Stavanger	67.58	352	eP	P	16 07 27.6	-0.4
LUWI	Luwuk	67.61	234	eP	P	16 07 28.0	-0.8
	comp=Z,210nm,1.0s						
240A	Hunter Patters	67.61	66	P	P	16 07 28.7	0.0
	baz=320,SNR=8.9						
240A	Hunter Patters	67.61	66	eP	P	16 07 28.2	-0.5
240A	comp=Z,425nm,1.3s			LR	LR		
	comp=Z,6µm,20.0s						
T48A	Bowling Green	67.64	58	P	P	16 07 28.3	-0.5
	baz=321,SNR=57						
141A	Papa Simpson,	67.66	65	P	P	16 07 28.8	-0.1
	baz=320,SNR=10						
WVT	Waverly	67.66	59	P	P	16 07 28.5	-0.4
	baz=320						
WVT	Waverly	67.66	59	eP	P	16 07 28.4	-0.5
WVT	comp=Z,288nm,1.1s			LR	LR		
	comp=Z,8µm,19.0s						
WVT	Waverly	67.66	59	eP	P	16 07 28.4	-0.5
WVT				pmax	pmax		
	comp=Z,289nm,1.1s						
WVT				MLR	MLR		
	comp=Z,8µm,19.0s						
Z42A	Norrel Spur, H	67.67	64	P	P	16 07 28.7	-0.2
	baz=320,SNR=11						
IZAR	Zarasai	67.67	340	eP	P	16 07 28.9	+0.3
IZAR				IAmb	IAmb	16 07 30.1	
	comp=Z,106nm,1.1s						
X44A	Crenshaw	67.69	62	P	P	16 07 28.8	-0.4
	baz=320,SNR=12						
U47A	Clarksville	67.70	59	P	P	16 07 28.9	-0.2
	baz=321,SNR=95						
W45A	Hickory Valley	67.70	61	P	P	16 07 28.9	-0.3
	baz=320,SNR=20						
Y43A	Makayla and Ka	67.73	63	P	P	16 07 29.0	-0.4
	baz=320						
V46A	Holladay	67.76	60	P	P	16 07 29.1	-0.5
	baz=320,SNR=94						
N54A	Moraine State	67.76	51	P	P	16 07 28.9	-0.7
	baz=322,SNR=31						
N54A	Moraine State	67.76	51	eP	P	16 07 28.8	-0.7
N54A	comp=Z,272nm,1.0s			LR	LR		
	comp=Z,10µm,18.0s						
DHRM	DHARAMSHALA	67.82	294	eP	P	16 07 28.2	-2.1
DHRM				IAmb	IAmb	16 07 30.2	
	comp=Z,382nm,0.2s						
DHRM				IAMs_20	IAMs_20	16 35 14.8	
	comp=Z,16µm,5.7s						
ISAL	Salakas	67.86	340	eP	P	16 07 30.1	+0.3
ISAL				IAmb	IAmb	16 07 31.5	
	comp=Z,121nm,1.2s						
NCB	Newcomb	67.94	45	eP	P	16 07 28.9	-1.8
	comp=Z,85nm,1.1s						
NCB				LR	LR		
	comp=Z,6µm,18.0s						
IDID	Didziasalis	67.97	339	eP	P	16 07 30.9	+0.3
IDID				IAmb	IAmb	16 07 32.1	
	comp=Z,170nm,1.2s						
HOMB	Homborsund	67.98	350	eP	P	16 07 30.2	-0.3
U48A	Cassie Pea, Po	68.03	58	P	P	16 07 30.9	-0.4
	baz=321,SNR=47						
SNART	Snartemo	68.03	351	eP	P	16 07 31.3	+0.4
IIGN	Ignalina	68.04	340	eP	P	16 07 31.3	+0.3
IIGN				IAmb	IAmb	16 07 33.5	
	comp=Z,66nm,0.7s						
HKT	Hockley	68.05	69	eP	P	16 07 30.5	-0.9
HKT	comp=Z,401nm,1.5s			LR	LR		
	comp=Z,6µm,19.0s						
HKT	Hockley	68.05	69	eP	P	16 07 30.5	-0.9
HKT				pmax	pmax		
	comp=Z,401nm,1.5s						
HKT				MLR	MLR		
	comp=Z,6µm,19.0s						
V47A	Nunnelly	68.05	59	P	P	16 07 30.8	-0.6
	baz=321,SNR=54						
Y44A	Strider, Charl	68.07	62	P	P	16 07 31.2	-0.3
	baz=320,SNR=8.3						
OXF	Oxford	68.08	62	P	P	16 07 31.2	-0.3
	baz=320,SNR=127						
OXF	Oxford	68.08	62	eP	P	16 07 31.1	-0.5
	comp=Z,1µm,1.1s						
OXF				LR	LR		
	comp=Z,8µm,19.0s						
OXF	Oxford	68.08	62	eP	P	16 07 31.1	-0.5
OXF				pmax	pmax		
	comp=Z,1µm,1.1s						
OXF				MLR	MLR		
	comp=Z,8µm,19.0s						
VORR	Voronezh	68.08	330	⇓iP	P	16 07 30.0	-1.3
VORR				pmax	pmax		
	comp=Z,500nm,1.4s						
T49A	Edmonton	68.08	57	P	P	16 07 31.2	-0.4
	baz=321,SNR=25						
241A	Mo Tay, Goldon	68.09	66	P	P	16 07 31.7	0.0
	baz=320,SNR=9.3						
241A	Mo Tay, Goldon	68.09	66	eP	P	16 07 31.7	0.0
	comp=Z,393nm,1.0s						
241A				LR	LR		
	comp=Z,6µm,19.0s						
Z43A	Armstrong Fami	68.09	64	P	P	16 07 31.3	-0.4
	baz=320,SNR=7.9						
W46A	Michie	68.14	60	P	P	16 07 31.2	-0.8
	baz=321,SNR=7.8						
X45A	UM Field Stati	68.15	62	P	P	16 07 31.5	-0.6
	baz=320,SNR=29						
SMLA	Simla	68.20	293	eP	P	16 07 31.3	-1.1
SMLA				IAmb	IAmb	16 07 32.8	
	comp=Z,137nm,1.1s						
142A	Monroe	68.22	65	P	P	16 07 32.2	-0.3
	baz=320,SNR=7.3						
PQI	Presque Isle	68.25	40	eP	P	16 07 30.6	-1.9
	comp=Z,252nm,1.9s						
VT1	Waterbury	68.27	44	eP	P	16 07 31.3	-1.4
	comp=Z,188nm,1.5s						
DDI	Dehra Dun	68.32	292	eP	P	16 07 32.6	-0.6
DDI				IAmb	IAmb	16 07 33.6	
	comp=Z,1µm,2.2s						
NACGM	Naroch	68.34	339	eP	P	16 07 32.0	-0.9
NACGM				eP	P	16 07 32.0	-0.9
NACGM				PM		16 07 33.0	
	comp=Z,0.4nm,0.9s						
NACGM				ePP	PP	16 10 14.0	+11
NACGM				ePPP	PPP	16 11 24.0	
NACGM				eS	S	16 16 31.0	-1.4
NACGM				eSS	SS	16 21 10.0	+15
NACGM				eSSS	SSS	16 24 26.0	
NACGM				eLQ	LQ	16 30 46.0	
NACGM				eLR	LR	16 35 20.0	
NACGM				LRM	MLR	16 40 22.0	
	comp=Z,5.6nm,18.0s						
143A	Socs Landing,	68.39	64	P	P	16 07 33.3	-0.2
	baz=320,SNR=7.1						
143A	Socs Landing,	68.39	64	eP	P	16 07 32.7	-0.8
143A	comp=Z,314nm,1.1s			LR	LR		
	comp=Z,6µm,20.0s						
NIL	Nilore	68.40	297	eP	P	16 07 33.3	-0.4
NIL	comp=Z,280nm,1.1s			LR	LR		
	comp=Z,11µm,22.0s						
NIL	Nilore	68.40	297	eP	P	16 07 33.3	-0.4
NIL				pmax	pmax		
	comp=Z,280nm,1.1s						
NIL				MLR	MLR		
	comp=Z,11µm,22.0s						
AFI	Afiamalu	68.41	163	LR	LR	16 32 01.5	
	comp=Z,2µm,20.7s,baz=349,slow=31						
PLAL	Pickwick Lake	68.41	60	eP	P	16 07 32.8	-0.9
	comp=Z,441nm,1.1s						
PLAL				LR	LR		
	comp=Z,6µm,21.0s						
U49A	Red Boiling Sp	68.41	58	P	P	16 07 33.1	-0.5
	baz=321,SNR=33						
W47A	Westpoint	68.46	60	P	P	16 07 33.5	-0.5
	baz=321,SNR=24						
MICGM	Minsk	68.47	338	⇓iP	P	16 07 34.0	+0.3
MICGM				PM		16 07 35.0	
	comp=Z,1.7nm,1.0s						
MICGM				PM		16 07 36.0	
	comp=N,1.2nm,1.0s						
MICGM				PM		16 07 36.0	
	comp=E,0.5nm,1.0s						
MICGM				ePcP	sP	16 07 44.0	+1.3
MICGM				ePP	PP	16 10 04.0	-0.2
MICGM				ePPP	PPP	16 11 44.0	
MICGM				ePsP		16 13 34.0	
MICGM				eS	S	16 16 34.0	0.0
MICGM				eSS	SS	16 21 10.0	+13
MICGM				eSSS	SSS	16 24 26.0	
MICGM				eLR	LR	16 36 20.0	
MICGM				LRM	MLR	16 41 05.0	
	comp=Z,8.0nm,16.0s						
MNK	Minsk	68.47	338	⇓iP	P	16 07 34.0	+0.3
MNK				e		16 07 44.0	
MNK				e		16 10 04.0	
MNK				e		16 11 44.0	
MNK				eS	S	16 16 34.0	0.0
MNK				pmax	pmax		
	comp=Z,2µm,1.0s						
MNK				pmax	pmax		
	comp=N,1µm,1.0s						
MNK				pmax	pmax		
	comp=E,510nm,1.6s						
MNK				MLR	MLR		
	comp=Z,8µm,16.0s						
X46A	Booneville	68.48	61	P	P	16 07 33.3	-0.8
	baz=321,SNR=24						
Z44A	Pea Ridge, Bel	68.48	63	P	P	16 07 33.5	-0.6
	baz=320,SNR=5.3						
242A	Grayson	68.48	65	P	P	16 07 33.7	-0.4
	baz=320,SNR=5.9						
341A	Kurthwood	68.48	66	P	P	16 07 34.1	0.0
	baz=320						
341A	Kurthwood	68.48	66	eP	P	16 07 33.7	-0.4
	comp=Z,230nm,1.1s						
341A				LR	LR		
	comp=Z,5µm,20.0s						
V48A	Smith Brothers	68.48	59	P	P	16 07 33.6	-0.5
	baz=321,SNR=106						
V48A	Smith Brothers	68.48	59	eP	P	16 07 33.4	-0.7
	comp=Z,373nm,1.1s						
V48A				LR	LR		
	comp=Z,11µm,19.0s						
VSR	Storozhevoye	68.49	330	eP	P	16 07 34.0	+0.1
VSR				eS	S	16 16 31.8	-2.6
VSR				pmax	pmax		
	comp=Z,260nm,1.0s						
VSR				smax	smax		
	comp=N,1µm,3.4s						
VSR				MLR	MLR		
	comp=Z,10µm,20.0s						
T50A	Nancy	68.50	57	P	P	16 07 33.8	-0.4
	baz=321,SNR=50						
Y45A	Yeager Farm, C	68.50	62	P	P	16 07 34.1	-0.1
	baz=321,SNR=29						
BIGH	Upper Bighouse	68.54	357	⇓eP	P	16 07 33.6	-0.4
BIGH				IAmb	IAmb	16 07 35.0	
	comp=Z,257nm,1.0s						
BIGH				IAMs_20	IAMs_20	16 30 52.6	
	comp=Z,7µm,29.2s						
BINY	Binghamton	68.60	48	P	P	16 07 33.6	-1.1
	baz=324,SNR=20						
BINY	Binghamton	68.60	48	eP	P	16 07 33.0	-1.8
	comp=Z,133nm,1.0s						
BINY				LR	LR		
	comp=Z,6µm,22.0s						
S51A	Beattyville	68.64	56	P	P	16 07 34.4	-0.7
	baz=322,SNR=20						
ACCN	Adirondack Com	68.66	45	eP	P	16 07 33.2	-1.8
	comp=Z,152nm,1.3s						
ACCN				LR	LR		
	comp=Z,7µm,18.0s						
VORD	Divnogorie	68.67	330	eP	P	16 07 34.9	-0.1
VORD				pmax	pmax		
	comp=Z,200nm,1.2s						
VORD				MLR	MLR		
	comp=Z,16µm,23.0s						
LBNH	Lisbon	68.69	44	P	P	16 07 34.1	-1.2
	baz=325,SNR=17						
LBNH	Lisbon	68.69	44	eP	P	16 07 33.9	-1.4
	comp=Z,105nm,1.1s						
LBNH				LR	LR		
	comp=Z,8µm,18.0s						
LBNH	Lisbon	68.69	44	eP	P	16 07 33.9	-1.4
LBNH				pmax	pmax		
	comp=Z,105nm,1.1s						
LBNH				MLR	MLR		
	comp=Z,8µm,18.0s						
KVTX	Kingsville	68.71	72	PFAKE		16 07 50.0	+14
KVTX				LR	LR		
	comp=Z,5µm,18.0s						
MLA1	Latheron	68.71	357	⇓eP	P	16 07 34.5	-0.6
BOK	Bokaro	68.79	282	eP	P	16 07 36.4	+0.2
BOK				IAmb	IAmb	16 07 51.2	
	comp=Z,183nm,1.4s						
Z45A	Winona	68.80	63	P	P	16 07 35.9	-0.2
	baz=321,SNR=18						
Z45A	Winona	68.80	63	eP	P	16 07 35.7	-0.4
Z45A	comp=Z,924nm,1.1s			LR	LR		
	comp=Z,5µm,19.0s						
Y46A	Houston	68.85	62	P	P	16 07 35.9	-0.5
	baz=321,SNR=40						
S52A	Salyersville	68.86	55	P	P	16 07 35.9	-0.5
	baz=322,SNR=6.4						
MCWV	Mont Chateau	68.86	52	P	P	16 07 35.9	-0.5
	baz=323,SNR=5.2						
MCWV	Mont Chateau	68.86	52	eP	P	16 07 35.7	-0.7
MCWV	comp=Z,273nm,1.1s			LR	LR		
	comp=Z,6µm,19.0s						
W48A	Pulaski	68.89	59	P	P	16 07 36.2	-0.5
	baz=321,SNR=194						
X47A	Russelville	68.89	60	P	P	16 07 35.7	-1.0
	baz=321,SNR=44						
342A	Flagon Creek P	68.91	66	P	P	16 07 37.0	+0.2
	baz=320,SNR=12						
342A	Flagon Creek P	68.91	66	eP	P	16 07 36.5	-0.3
342A	comp=Z,342nm,1.1s			LR	LR		
	comp=Z,4µm,20.0s						
441A	DeRidder	68.91	67	P	P	16 07 37.4	+0.5
	baz=320,SNR=5.3						
PKME	Peaks-Kenny Pk	68.92	41	P	P	16 07 35.8	-0.9
	baz=326,SNR=11						
PKME	Peaks-Kenny Pk	68.92	41	eP	P	16 07 35.8	-0.9
PKME	comp=Z,357nm,1.8s			LR	LR		
	comp=Z,7µm,19.0s						
V49A	McMinnville	68.93	58	P	P	16 07 36.2	-0.7
	baz=321,SNR=60						
O56A	Blue Knob Stat	68.97	50	P	P	16 07 36.5	-0.7
	baz=323,SNR=25						
O56A	Blue Knob Stat	68.97	50	eP	P	16 07 36.2	-1.0
O56A	comp=Z,483nm,1.6s			LR	LR		
	comp=Z,9µm,19.0s						
144A	Alexander Plac	68.98	64	P	P	16 07 37.0	-0.2
	baz=321,SNR=5.8						
243A	Waterproof	68.98	65	P	P	16 07 37.3	+0.1
	baz=320,SNR=25						
SSPA	Standing Stone	69.00	50	P	P	16 07 36.8	-0.5
	baz=323						
SSPA	Standing Stone	69.00	50	eP	P	16 07 36.5	-0.7
SSPA	comp=Z,673nm,1.8s			LR	LR		
	comp=Z,8µm,18.0s						
TRY	Troy	69.19	46	eP	P	16 07 37.0	-1.3
	comp=Z,220nm,1.8s						
KSPA	Keystone Colle	69.22	48	eP	P	16 07 36.9	-1.7
KSPA	comp=Z,62nm,0.9s			LR	LR		
	comp=Z,8µm,22.0s						
VBMS	Vicksburg	69.25	64	P	P	16 07 38.4	-0.5
	baz=321						
VBMS	Vicksburg	69.25	64	PFAKE		16 07 50.0	+11
VBMS				LR	LR		
	comp=Z,6µm,19.0s						
W49A	Belvidere	69.25	59	P	P	16 07 38.2	-0.7
	baz=321,SNR=80						
145A	Houston Renfro	69.27	63	P	P	16 07 38.5	-0.5
	baz=321						
244A	Avery, Jackson	69.29	64	P	P	16 07 39.1	0.0
	baz=321,SNR=8.8						
Z46A	Louisville	69.34	62	P	P	16 07 39.3	-0.1
	baz=321,SNR=18						
T52A	Hallie	69.35	55	P	P	16 07 39.4	-0.1
	baz=322,SNR=38						
WVL	Waterville	69.35	42	eP	P	16 07 38.0	-1.4
	comp=Z,266nm,1.5s						
442A	Mamou	69.36	66	P	P	16 07 39.8	+0.2
	baz=321						
X48A	Hartselle	69.36	60	P	P	16 07 38.4	-1.2
	baz=321,SNR=57						
X48A	Hartselle	69.36	60	eP	P	16 07 38.1	-1.4
	comp=Z,302nm,1.3s						
X48A				LR	LR		
	comp=Z,6µm,18.0s						
Y47A	UCPARC, Winfie	69.37	61	P	P	16 07 38.7	-0.9
	baz=321,SNR=103						
343A	Vidalia	69.37	65	P	P	16 07 39.6	0.0
	baz=321						
V50A	Pikevile	69.41	58	P	P	16 07 39.1	-0.8
	baz=322,SNR=26						
MCD	Coleburn Disti	69.43	357	⇓eP	P	16 07 39.3	-0.3
FFD	Franklin Falls	69.44	44	eP	P	16 07 39.1	-0.7
	comp=Z,320nm,1.8s						
TZTN	Tazewell	69.51	56	P	P	16 07 40.3	-0.2
	baz=322,SNR=31						
TZTN	Tazewell	69.51	56	eP	P	16 07 40.0	-0.5
TZTN	comp=Z,127nm,1.0s			LR	LR		
	comp=Z,10µm,22.0s						
MDO	Dochfour	69.61	358	eP	P	16 07 39.9	-0.8
ZAIG	Zacatecas	69.64	79	eP	P	16 07 41.4	-0.4
	comp=Z,167nm,1.2s						
ZAIG				LR	LR		
	comp=Z,3µm,20.0s						
W50A	Signal Mountai	69.67	58	P	P	16 07 40.8	-0.7
	baz=322,SNR=59						
W50A	Signal Mountai	69.67	58	eP	P	16 07 41.0	-0.6
	comp=Z,311nm,1.1s						
W50A				LR	LR		
	comp=Z,11µm,19.0s						
443A	Delano Plantat	69.68	66	P	P	16 07 42.2	+0.6
	baz=321,SNR=6.8						
X49A	Woodville	69.69	59	P	P	16 07 41.0	-0.6
	baz=321,SNR=165						
V51A	Loudon	69.69	57	P	P	16 07 41.0	-0.6
	baz=322,SNR=31						
V51A	Loudon	69.69	57	eP	P	16 07 40.6	-1.0
V51A	comp=Z,361nm,1.1s			LR	LR		
	comp=Z,10µm,18.0s						
MME1	Meikle Cairn	69.69	357	eP	P	16 07 40.5	-0.8
MUD	Monsted U'grnd	69.70	350	⇓iP	P	16 07 41.5	+0.3
	comp=Z,186nm,1.1s						
	comp=Z,3µm,14.0s						
MUD	Monsted U'grnd	69.70	350	⇓iP	P	16 07 41.5	+0.3
MUD				pmax	pmax		

comp=Z,190nm,1.1s
MUD MLR MLR
comp=Z,3μm,14.0s
146A Union 69.71 63 P P 16 07 41.8 +0.1
baz=321,SNR=19
146A Union 69.71 63 *e*P **P 16 07 41.6 -0.2**
comp=Z,1μm,1.1s
146A LR LR
comp=Z,6μm,19.0s
Y48A Jasper 69.71 60 P P 16 07 40.6 -1.2
baz=321,SNR=40
344A Westbrook Farm 69.72 65 P P 16 07 42.1 +0.3
baz=321,SNR=10
344A Westbrook Farm 69.72 65 *e*P **P 16 07 41.6 -0.2**
comp=Z,343nm,1.1s
344A LR LR
comp=Z,6μm,18.0s
245A Little AP, Sta 69.72 64 P P 16 07 41.5 -0.3
baz=321,SNR=17
N59A State Game Lan 69.73 48 P P 16 07 40.9 -0.9
baz=324,SNR=25
N59A State Game Lan 69.73 48 *e*P **P 16 07 40.5 -1.3**
comp=Z,85nm,0.9s
N59A LR LR
comp=Z,8μm,22.0s
KPL Plockton 69.73 358⇓*e*P **P 16 07 40.6 -0.8**
KPL IAmb IAmb 16 07 42.3
comp=Z,51nm,1.1s
KPL IAMs_20 IAMs_20 16 30 36.9
comp=Z,5μm,47.7s
542A Morse 69.75 67 P P 16 07 43.2 +1.2
baz=321
Z47A Carrollton 69.80 62 P P 16 07 41.6 -0.6
baz=321,SNR=44
LNIG Linares 69.83 75 *e*P **P 16 07 41.1 -1.5**
comp=Z,157nm,1.6s
LNIG LR LR
comp=Z,4μm,19.0s
PAGS Pennsylvania G 69.85 49 *e*P **P 16 07 41.3 -1.2**
comp=Z,753nm,0.6s
PAGS LR LR
comp=Z,8μm,21.0s
CPCT Cooper Cave 69.88 58 *e*P **P 16 07 41.7 -1.0**
comp=Z,270nm,1.2s
CPCT LR LR
comp=Z,10μm,20.0s
KBL Kabul 69.92 301 *e*P **P 16 07 41.4 -1.9**
comp=Z,151nm,1.0s
KBL Kabul 69.92 301 *e*P **P 16 07 41.4 -1.9**
KBL pmax pmax
comp=Z,151nm,1.0s
KLNR Kaliningrad 69.92 343*c i*P **P 16 07 43.3 +0.7**
KLNR pmax pmax
comp=Z,295nm,1.2s
SUW Suwalki 69.92 341 *e*P **P 16 07 42.3 -0.4**
SUW *i* S **S 16 16 50.3 -0.8**
SUW LMZ LR 16 36 06.8
comp=Z,6μm,26.3s
SUW Suwalki 69.92 341 *e*P **P 16 07 41.9 -0.8**
comp=Z,432nm,1.2s
SUW LR LR
comp=Z,6μm,18.0s
SUW Suwalki 69.92 341⇓*e*P **P 16 07 42.3 -0.4**
SUW *i* S **S 16 16 50.3 -0.8**
SUW MLR MLR
comp=Z,6μm,26.3s
Z48A Northport 69.93 61 P P 16 07 42.1 -1.0
baz=321,SNR=90
V52A Sevierville 70.04 57 P P 16 07 43.1 -0.7
baz=322,SNR=30
V52A Sevierville 70.04 57 *e*P **P 16 07 42.8 -1.0**
comp=Z,181nm,1.1s
V52A LR LR
comp=Z,11μm,18.0s
COP Copenhagen 70.06 348⇓*i*P **P 16 07 43.4 -0.1**
comp=Z,119nm,1.1s
comp=Z,3μm,19.0s
COP Copenhagen 70.06 348⇓*i*P **P 16 07 43.4 -0.1**
COP pmax pmax
comp=Z,120nm,1.1s
COP MLR MLR
comp=Z,3μm,19.0s
X50B Fort Payne 70.08 59 P P 16 07 43.2 -0.8
baz=322,SNR=99
147A Livingston 70.09 62 P P 16 07 43.7 -0.4
baz=321,SNR=41
147A Livingston 70.09 62 *e*P **P 16 07 43.0 -1.1**
comp=Z,834nm,1.3s
147A LR LR
comp=Z,4μm,20.0s
EMMW East Machias 70.10 41 *e*P **P 16 07 42.9 -1.1**
comp=Z,224nm,1.4s
ODNJ Ogdensburg 70.11 47 *e*P **P 16 07 42.5 -1.6**
comp=Z,111nm,1.4s
ODNJ LR LR
comp=Z,6μm,19.0s
QUA2 Belchertown 70.12 45 *e*P **P 16 07 42.1 -2.0**
comp=Z,147nm,1.6s
U53A Fall Branch 70.14 56 P P 16 07 43.8 -0.6
baz=322,SNR=42
SBUM Sibu 70.15 246 *e*P **P 16 07 45.5 +0.9**
comp=Z,54nm,1.1s
SBUM LR LR
comp=Z,2μm,22.0s
246A Jackson Lee, B 70.15 63 P P 16 07 44.6 +0.1
baz=321
Y49A Blount Mountai 70.15 60 P P 16 07 43.4 -1.1
baz=322,SNR=66
Y49A Blount Mountai 70.15 60 *e*P **P 16 07 43.1 -1.4**
comp=Z,344nm,1.2s
Y49A LR LR
comp=Z,7μm,22.0s
543A St. Martinvill 70.16 66 P P 16 07 45.5 +1.0
baz=321
543A St. Martinvill 70.16 66 PFAKE 16 08 00.0 +15
543A LR LR
comp=Z,9μm,20.0s
LUPA Lehigh Univers 70.16 48 *e*P **P 16 07 43.0 -1.4**
comp=Z,9.8nm,1.1s
LUPA LR LR
comp=Z,700nm,19.0s
MVL Millersville 70.21 49 *e*P **P 16 07 43.5 -1.2**
comp=Z,82nm,0.8s
MVL LR LR
comp=Z,7μm,19.0s
345A Thompson Farm, 70.21 64 P P 16 07 44.7 -0.1
baz=321,SNR=15
HRV Adam Dziewonsk 70.27 45 P P 16 07 43.7 -1.3
baz=325
HRV Adam Dziewonsk 70.27 45 *e*P **P 16 07 44.1 -0.9**
comp=Z,231nm,1.6s
HRV LR LR
comp=Z,7μm,22.0s
HRV Adam Dziewonsk 70.27 45 *e*P **P 16 07 44.1 -0.9**
HRV pmax pmax
comp=Z,231nm,1.6s
HRV MLR MLR
comp=Z,7μm,22.0s
444A Pine Grove 70.28 65 P P 16 07 45.1 -0.2
baz=321
BSD Bornholm Skovb 70.28 346⇓*i*P **P 16 07 44.3 -0.6**
comp=Z,37nm,0.8s
comp=Z,4μm,16.0s
BSD Bornholm Skovb 70.28 346⇓*i*P **P 16 07 44.3 -0.6**
BSD pmax pmax
comp=Z,37nm,0.8s
BSD MLR MLR
comp=Z,4μm,16.0s
247A Quitman 70.40 63 P P 16 07 46.2 +0.2
baz=321,SNR=18
X51A Calhoun 70.40 58 P P 16 07 45.3 -0.6
baz=322,SNR=38
X51A Calhoun 70.40 58 *e*P **P 16 07 44.8 -1.2**
comp=Z,290nm,1.1s
X51A LR LR
comp=Z,10μm,19.0s
LLD Lille Linde 70.44 348 *i* P **P 16 07 46.2 +0.4**
comp=Z,199nm,1.1s
LLD Lille Linde 70.44 348 *i* P **P 16 07 46.2 +0.4**
LLD pmax pmax
comp=Z,200nm,1.1s
346A Big Creek Wild 70.45 64 P P 16 07 46.2 -0.1
baz=321,SNR=11
346A Big Creek Wild 70.45 64 *e*P **P 16 07 45.5 -0.8**
comp=Z,468nm,1.1s
346A LR LR
comp=Z,6μm,18.0s
BRNJ Basking Ridge 70.45 48 *e*P **P 16 07 44.6 -1.6**
comp=Z,188nm,1.6s
BRNJ LR LR
comp=Z,6μm,22.0s
SDMD Soldier's Deli 70.46 50 *e*P **P 16 07 45.0 -1.2**
comp=Z,89nm,0.9s
SDMD LR LR
comp=Z,4μm,19.0s
W52A Murphy 70.46 57 P P 16 07 45.8 -0.5
baz=322,SNR=19
W52A Murphy 70.46 57 *e*P **P 16 07 45.5 -0.9**
comp=Z,256nm,1.1s
W52A LR LR
comp=Z,9μm,18.0s
EDU Dundee 70.46 357 *e*P **P 16 07 45.4 -0.6**
WES Weston 70.47 44 *e*P **P 16 07 45.0 -1.2**
comp=Z,358nm,1.8s
WES Weston 70.47 44 *e*P **P 16 07 45.0 -1.2**
WES pmax pmax
comp=Z,359nm,1.8s
Y50A Piedmont 70.48 59 P P 16 07 45.5 -1.0
baz=322,SNR=58
PAL Palisades 70.48 47 P P 16 07 45.1 -1.2
baz=325,SNR=15
PAL Palisades 70.48 47 *e*P **P 16 07 45.1 -1.2**
comp=Z,756nm,2.0s
PAL LR LR
comp=Z,8μm,18.0s
PAL Palisades 70.48 47 *e*P **P 16 07 45.1 -1.2**
PAL pmax pmax
comp=Z,756nm,2.0s
PAL MLR MLR
comp=Z,8μm,18.0s
148A Greensboro 70.49 62 P P 16 07 45.5 -1.0
baz=322,SNR=21
LRAL Lakeview Retre 70.49 61 P P 16 07 45.0 -1.5
baz=322,SNR=25
LRAL Lakeview Retre 70.49 61 *e*P **P 16 07 44.8 -1.7**
comp=Z,134nm,1.0s
LRAL LR LR
comp=Z,6μm,20.0s
445A Amite 70.49 65 P P 16 07 46.8 +0.3
baz=321
544A White Castle 70.52 66 P P 16 07 47.2 +0.5
baz=321
BLA Blacksburg 70.53 54 P P 16 07 46.0 -0.7
baz=323,SNR=24
BLA Blacksburg 70.53 54 *e*P **P 16 07 45.4 -1.3**
comp=Z,149nm,1.0s
BLA LR LR
comp=Z,7μm,20.0s
BLA Blacksburg 70.53 54 *e*P **P 16 07 45.4 -1.3**
BLA pmax pmax
comp=Z,149nm,1.0s
BLA MLR MLR
comp=Z,7μm,20.0s
V53A Saluda 70.57 56 P P 16 07 46.6 -0.4
baz=322,SNR=43
BCX Boston College 70.57 44 *e*P **P 16 07 45.8 -1.1**
comp=Z,111nm,1.3s
Z49A Columbiana 70.61 60 P P 16 07 46.2 -1.0
baz=322,SNR=129
INVG Invergeldie, C 70.61 357⇓*e*P **P 16 07 46.3 -0.6**
INVG IAmb IAmb 16 07 47.5
comp=Z,64nm,1.0s
INVG IAMs_20 IAMs_20 16 47 03.0
comp=Z,3μm,18.1s
CPNY Central Park 70.64 47 *e*P **P 16 07 46.1 -1.2**
comp=Z,132nm,1.0s
CPNY LR LR
comp=Z,7μm,19.0s
YLE Yale 70.65 46 PFAKE 16 08 00.0 +13
YLE LR LR
comp=Z,13μm,18.0s
PSUB Penn St. - Bra 70.67 49 *e*P **P 16 07 45.7 -1.8**
comp=Z,109nm,1.5s
PSUB LR LR
comp=Z,8μm,21.0s
VWCC Virginia Weste 70.71 53 *e*P **P 16 07 46.6 -1.2**
BRYW Bryant College 70.76 45 *e*P **P 16 07 46.4 -1.7**
comp=Z,131nm,1.4s
W53A Cullowhee 70.79 57 P P 16 07 47.9 -0.6
baz=322,SNR=27
Y51A Rockmart 70.82 59 P P 16 07 47.4 -1.2
baz=322,SNR=81
248A Dixon Mills 70.83 62 P P 16 07 48.6 0.0
baz=322,SNR=10
X52A Dahlonega 70.86 58 P P 16 07 48.4 -0.4
baz=322,SNR=46
Z50A Ashland 70.88 60 P P 16 07 48.0 -1.0
baz=322,SNR=88
Z50A Ashland 70.88 60 *e*P **P 16 07 47.6 -1.3**
comp=Z,393nm,1.1s
Z50A LR LR
comp=Z,6μm,18.0s
IP04 Greensprings 70.93 52 *e*P **P 16 07 48.6 -0.5**
comp=Z,179nm,1.1s
149A Jones 70.94 61 P P 16 07 48.4 -0.9
baz=322,SNR=52
347A Saraland 70.94 63 P P 16 07 49.5 +0.2
baz=321,SNR=8.0
545A Edgard 70.94 65 P P 16 07 50.2 +0.9
baz=321
545A Edgard 70.94 65 PFAKE 16 08 00.0 +11
545A LR LR
comp=Z,12μm,18.0s
446A Poplarville 70.97 64 P P 16 07 49.5 0.0
baz=321,SNR=14
IP03 Louisa 71.03 52 *e*P **P 16 07 49.1 -0.6**
comp=Z,179nm,1.1s
BG3 Lake Jocassee 71.04 57 *e*P **P 16 07 49.5 -0.4**
comp=Z,330nm,1.2s
BG3 LR LR
comp=Z,13μm,18.0s
RGN Rugen 71.06 347 *e*P **P 16 07 49.7 +0.2**
comp=Z,302nm,1.1s
RGN LR LR
comp=Z,4μm,20.0s
ESY Stoneypath 71.08 357⇓*e*P **P 16 07 49.4 -0.3**
CVRD Centerville Ro 71.08 51 *e*P **P 16 07 49.4 -0.7**
comp=Z,164nm,1.1s
CVRD LR LR
comp=Z,9μm,18.0s
SPRD Spring Road, M 71.09 51 *e*P **P 16 07 49.3 -0.8**
comp=Z,133nm,1.2s
SPRD LR LR
comp=Z,8μm,18.0s
EDI Edinburgh 71.09 357⇓*e*P **P 16 07 49.2 -0.6**
EDI IAmb IAmb 16 07 50.5
comp=Z,86nm,1.1s
EDI IAMs_20 IAMs_20 16 32 44.8
comp=Z,4μm,31.0s
IP07 Quail 71.10 52 *e*P **P 16 07 49.5 -0.7**
comp=Z,182nm,1.1s
IP06 Yanceyville 71.11 52 *e*P **P 16 07 49.5 -0.8**
comp=Z,125nm,1.1s
IP06 LR LR
comp=Z,9μm,18.0s
IP01 Cuckoo 71.13 51 *e*P **P 16 07 49.5 -0.8**
comp=Z,133nm,1.2s
CBN Corbin Frederi 71.18 51 P P 16 07 50.0 -0.6
baz=324
CBN Corbin Frederi 71.18 51 *e*P **P 16 07 50.0 -0.6**
comp=Z,150nm,1.1s
CBN LR LR
comp=Z,8μm,18.0s
546A Slidell 71.21 65 P P 16 07 50.8 -0.1
baz=321
Z51A Franklin 71.22 59 P P 16 07 49.8 -1.1
baz=322,SNR=24
PGBU Glenifferbraes 71.24 358⇓*e*P **P 16 07 50.4 -0.3**
PGBU IAmb IAmb 16 07 51.7
comp=Z,289nm,1.1s
PGBU IAMs_20 IAMs_20 16 31 20.9
comp=Z,3μm,28.7s
X53A Estanollee 71.24 57 P P 16 07 50.8 -0.3
baz=322,SNR=33
249A Camden 71.25 62 P P 16 07 50.7 -0.4
baz=322,SNR=36
COEN Coen 71.26 209 *e*P **P 16 07 51.8 +0.5**
comp=Z,276nm,1.8s
348A Jackson 71.27 63 P P 16 07 51.4 +0.1
baz=322,SNR=13
348A Jackson 71.27 63 *e*P **P 16 07 51.1 -0.2**
comp=Z,698nm,1.1s
348A LR LR
comp=Z,7μm,19.0s
IP05 Hopewell Churc 71.30 51 *e*P **P 16 07 50.7 -0.6**
comp=Z,152nm,1.1s
IP05 LR LR
comp=Z,9μm,18.0s
150A Eclectic 71.33 60 P P 16 07 50.5 -1.2
baz=322,SNR=45
447A Lucedale 71.35 64 P P 16 07 51.9 +0.2
baz=322
447A Lucedale 71.35 64 PFAKE 16 08 00.0 +8.2
447A LR LR
comp=Z,6μm,19.0s
JSRW J. Sargeant Re 71.35 52 *e*P **P 16 07 50.5 -1.2**
Y52A Lilburn 71.36 58 P P 16 07 51.3 -0.5
baz=322,SNR=47
Y52A Lilburn 71.36 58 *e*P **P 16 07 51.0 -0.8**
comp=Z,330nm,1.1s
Y52A LR LR
comp=Z,11μm,19.0s
Y53A Monroe 71.61 58 P P 16 07 52.7 -0.6
baz=322,SNR=20
URVA University of 71.61 51 *e*P **P 16 07 52.4 -0.8**
646A Port Sulphur 71.66 65 P P 16 07 55.4 +1.8
baz=322
448A Bay Minette 71.67 63 P P 16 07 53.7 0.0
baz=322,SNR=8.8
AKASG Malin Array Be 71.67 336 P P 16 07 53.1 -0.3
comp=Z,26nm,0.5s,baz=26,slow=6.2,SNR=246
AKASG PP **PP 16 10 31.9 +0.1**
comp=Z,44nm,1.2s,baz=21,slow=8.6,SNR=7.2
AKASG S **S 16 17 06.8 -4.8**
comp=Z,0.2nm,0.3s,baz=26,slow=12,SNR=5.0
AKASG PKPPKP **P'P'df 16 35 44.6 -6.3**
comp=Z,0.1nm,0.2s,baz=212,slow=1.9,SNR=4.3
AKASG LR LR 16 42 29.1
comp=Z,7μm,19.5s,baz=15,slow=38
AKBB Malin Array Si 71.67 336 *e*P **P 16 07 52.8 -0.6**
comp=Z,130nm,1.0s
AKBB Malin Array Si 71.67 336 *e*P **P 16 07 52.8 -0.6**
AKBB pmax pmax
comp=Z,130nm,1.0s
EKA Eskdalemuir Ar 71.68 357 P P 16 07 53.4 0.0
comp=Z,92nm,0.9s,baz=7.2,slow=5.3,SNR=111
EKA LR LR 16 35 32.9
comp=Z,1μm,22.0s,baz=355,slow=33
EKA PKPPKP **P'P'df 16 35 48.9 -2.4**
comp=Z,1.0nm,0.8s,baz=191,slow=3.8,SNR=4.2
EKA Eskdalemuir Ar 71.68 357 P **P 16 07 53.4 0.0**
EKA pmax pmax
comp=Z,90nm,0.9s
EKA MLR MLR
comp=Z,1μm,22.0s
KIEV Kiev 71.68 336 *e*P **P 16 07 53.0 -0.5**
comp=Z,126nm,1.0s
KIEV LR LR
comp=Z,8μm,19.0s
KIEV Kiev 71.68 336 *i* P **P 16 07 53.1 -0.3**
SNR=18
KIEV Kiev 71.68 336 *e*P **P 16 07 53.0 -0.5**
KIEV pmax pmax
comp=Z,126nm,1.0s
KIEV MLR MLR
comp=Z,8μm,19.0s
250A Grady 71.70 61 P P 16 07 53.2 -0.7
baz=322,SNR=11
250A Grady 71.70 61 *e*P **P 16 07 52.5 -1.4**
comp=Z,497nm,1.4s
250A LR LR
comp=Z,6μm,20.0s
349A Repton 71.70 62 P P 16 07 53.7 -0.1
baz=322,SNR=16
ESK Eskdalemuir 71.70 357 *e*P **P 16 07 53.5 0.0**
comp=Z,130nm,0.9s
ESK LR LR
comp=Z,2μm,19.0s
ESK Eskdalemuir 71.70 357⇓*e*P **P 16 07 53.3 -0.2**
ESK IAmb IAmb 16 07 54.5
comp=Z,441nm,0.9s
ESK IAMs_20 IAMs_20 16 31 12.1
comp=Z,14μm,34.3s
ESK Eskdalemuir 71.70 357 *e*P **P 16 07 53.5 0.0**
ESK pmax pmax
comp=Z,130nm,0.9s
ESK MLR MLR
comp=Z,2μm,19.0s
GKP Gorka Klasztor 71.70 344 *e*P **P 16 07 53.5 0.0**
GKP *e*S **S 16 17 11.3 -0.6**
GKP LMZ LR 16 37 46.3
comp=Z,4μm,25.5s
GKP Gorka Klasztor 71.70 344⇓*e*P **P 16 07 53.5 0.0**
GKP *e*S **S 16 17 11.3 -0.6**
GKP MLR MLR
comp=Z,4μm,25.5s
Z52A Williamson 71.71 59 P P 16 07 53.0 -0.9
baz=322,SNR=104
AK11 Malin Array Si 71.71 336 *e*P **P 16 07 52.9 -0.7**
KMSC Kings Mountain 71.72 56 P P 16 07 53.0 -0.9
baz=323,SNR=36
KMSC Kings Mountain 71.72 56 *e*P **P 16 07 52.8 -1.2**
comp=Z,255nm,1.2s
KMSC LR LR
comp=Z,10μm,19.0s
GMK Mull of Kintyr 71.73 358⇓*e*P **P 16 07 53.1 -0.6**
PAULI Pauline 71.74 56 *e*P **P 16 07 52.9 -1.2**
comp=Z,156nm,1.3s
PAULI LR LR
comp=Z,12μm,19.0s
151A Opelika 71.76 60 P P 16 07 52.6 -1.6
baz=322,SNR=27
ECK Cauldkaine Hil 71.83 357⇓*e*P **P 16 07 53.9 -0.4**
BRAL Brewton 71.92 62 P P 16 07 55.1 0.0
baz=322,SNR=6.1
BRAL Brewton 71.92 62 *e*P **P 16 07 54.8 -0.4**
comp=Z,326nm,1.0s
BRAL LR LR
comp=Z,5μm,19.0s
BHH Howats Hill 71.92 357⇓*e*P **P 16 07 54.7 -0.2**
152A Waverly Hall 71.96 60 P P 16 07 54.3 -1.2
baz=322,SNR=53
152A Waverly Hall 71.96 60 *e*P **P 16 07 53.9 -1.5**
comp=Z,251nm,1.1s
152A LR LR
comp=Z,9μm,19.0s
HODGE Hodges 71.98 57 *e*P **P 16 07 54.9 -0.7**
comp=Z,196nm,1.1s
KSM Kuching 72.01 247 *e*P **P 16 07 55.7 -0.2**
comp=Z,48nm,1.0s
GOGA Godfrey 72.02 58 P P 16 07 54.8 -0.9
baz=323,SNR=31
GOGA Godfrey 72.02 58 *e*P **P 16 07 54.6 -1.2**
comp=Z,164nm,1.3s
GOGA LR LR
comp=Z,11μm,19.0s
GOGA Godfrey 72.02 58 *e*P **P 16 07 54.6 -1.2**
GOGA pmax pmax
comp=Z,164nm,1.3s
GOGA MLR MLR
comp=Z,11μm,19.0s
IDGL Inch Island, C 72.03 359⇓*e*P **P 16 07 55.2 -0.2**
IDGL IAmb IAmb 16 07 56.3
comp=Z,116nm,1.1s
251A Midway 72.06 60 P P 16 07 55.0 -1.0
baz=322,SNR=34
Y54A Tignall 72.06 57 P P 16 07 55.6 -0.5
baz=323,SNR=33
Z53A Monticello 72.07 58 P P 16 07 55.1 -0.9
baz=323,SNR=56
350A Dozier 72.10 61 P P 16 07 56.0 -0.2
baz=322,SNR=14
449A Pace 72.15 63 P P 16 07 56.7 +0.1
baz=322,SNR=9.3
GAL1 Galloway 72.19 358⇓*e*P **P 16 07 55.9 -0.5**
GAL1 IAmb IAmb 16 07 57.2
comp=Z,62nm,1.0s
GAL1 IAMs_20 IAMs_20 16 33 17.3
comp=Z,2μm,30.3s
BBO1 Bothel 72.28 357 *e*P **P 16 07 56.7 -0.3**
KESW Keswick, Cumbr 72.42 357⇓*e*P **P 16 07 57.6 -0.3**
KESW IAmb IAmb 16 07 59.0
comp=Z,216nm,1.2s
KESW IAMs_20 IAMs_20 16 47 59.5
comp=Z,3μm,20.0s
153A Fort Valley 72.43 59 P P 16 07 57.6 -0.7
baz=323,SNR=9.8
JSC Jenkinsville 72.44 56 *e*P **P 16 07 57.3 -1.0**
comp=Z,173nm,1.2s
JSC LR LR
comp=Z,11μm,20.0s
JSC Jenkinsville 72.44 56 *e*P **P 16 07 57.3 -1.0**
JSC pmax pmax

	comp=Z,173nm,1.2s						
JSC				MLR	MLR		
	comp=Z,11μm,20.0s						
450A	**Crestview**	**72.45**	**62**	P	**P**	**16 07 58.1**	**-0.3**
	baz=322						
BEL	**Belsk**	**72.45**	**341**	*e*P	**P**	**16 07 58.8**	**+0.8**
BEL				*e*S	**S**	**16 17 22.2**	**+1.7**
BEL				LMZ	LR	16 37 05.5	
	comp=Z,5μm,26.8s						
BEL	**Belsk**	**72.45**	**341⇓**	*e*P	**P**	**16 07 58.8**	**+0.8**
BEL				*e*S	**S**	**16 17 22.2**	**+1.7**
BEL				MLR	MLR		
	comp=Z,5μm,26.8s						
Z54A	**Sparta**	**72.48**	**58**	P	**P**	**16 07 57.8**	**-0.7**
	baz=323,SNR=63						
JRQG	**Juriquilla Cam**	**72.48**	**79**	*e*P	**P**	**16 07 58.1**	**-0.9**
	comp=Z,270nm,1.1s						
JRQG				LR	LR		
	comp=Z,6μm,20.0s						
252A	**Lumpkin**	**72.48**	**60**	P	**P**	**16 07 57.5**	**-1.1**
	baz=322,SNR=32						
GEYT	**Alibeck**	**72.54**	**311**	P	**P**	**16 07 59.1**	**+0.3**
	comp=Z,79nm,1.0s,baz=0.0,slow=4.3,SNR=11						
GEYT				LR	LR	16 44 53.0	
	comp=Z,7μm,18.6s,baz=35,slow=40						
GYA0B	**ALIBECK ARRAY**	**72.54**	**311**	*e*P	**P**	**16 07 58.9**	**0.0**
	comp=Z,171nm,1.1s						
351A	**Pinckard**	**72.60**	**61**	P	**P**	**16 07 58.7**	**-0.5**
	baz=322,SNR=17						
253A	**Americus**	**72.75**	**60**	P	**P**	**16 07 59.1**	**-1.1**
	baz=323,SNR=8.2						
253A	**Americus**	**72.75**	**60**	*e*P	**P**	**16 07 59.0**	**-1.1**
	comp=Z,356nm,1.0s						
253A				LR	LR		
	comp=Z,9μm,19.0s						
352A	**Blakely**	**72.79**	**60**	P	**P**	**16 07 59.5**	**-0.9**
	baz=322,SNR=6.3						
352A	**Blakely**	**72.79**	**60**	*e*P	**P**	**16 07 59.3**	**-1.1**
	comp=Z,392nm,1.4s						
352A				LR	LR		
	comp=Z,6μm,21.0s						
MAK	**Makhachkala**	**72.80**	**320**	*e*P	**P**	**16 08 00.3**	**0.0**
MAK				*e*		16 10 40.9	
MAK				*e*PPP	PPP	16 12 26.1	
MAK				*e*S	**S**	**16 17 24.8**	**0.0**
MAK				*e*SS	**SS**	**16 22 04.4**	**+0.7**
MAK				pmax	pmax		
	comp=Z,371nm,1.3s						
MOIG	**Morelia**	**72.83**	**80**	*e*P	**P**	**16 08 01.1**	**0.0**
	comp=Z,254nm,1.2s						
MOIG				LR	LR		
	comp=Z,4μm,20.0s						
154A	**Montrose**	**72.83**	**58**	P	**P**	**16 07 59.9**	**-0.7**
	baz=323,SNR=18						
154A	**Montrose**	**72.83**	**58**	*e*P	**P**	**16 07 59.8**	**-0.9**
	comp=Z,441nm,1.0s						
154A				LR	LR		
	comp=Z,10μm,18.0s						
Z55A	**Blythe**	**72.85**	**57**	P	**P**	**16 08 00.4**	**-0.3**
	baz=323,SNR=14						
HPK	**Haverah Park**	**73.00**	**356⇓**	*e*P	**P**	**16 08 01.0**	**-0.3**
HPK				IAmb	IAmb	16 08 02.4	
	comp=Z,112nm,0.9s						
HPK				IAMs_20	IAMs_20	16 32 09.8	
	comp=Z,5μm,40.4s						
451A	**Vernon**	**73.04**	**62**	P	**P**	**16 08 01.9**	**+0.1**
	baz=322,SNR=9.4						
451A	**Vernon**	**73.04**	**62**	*e*P	**P**	**16 08 01.3**	**-0.6**
	comp=Z,864nm,1.3s						
451A				LR	LR		
	comp=Z,5μm,20.0s						
452A	**Marianna**	**73.15**	**61**	P	**P**	**16 08 02.2**	**-0.4**
	baz=323,SNR=8.6						
155A	**Kite**	**73.16**	**58**	P	**P**	**16 08 02.1**	**-0.4**
	baz=323,SNR=43						
GROC	**Groznyy**	**73.24**	**322**	*e*P	**P**	**16 08 02.9**	**0.0**
GROC				*e*		16 08 18.9	
GROC				*e*S	**S**	**16 17 30.0**	**+0.2**
GROC				pmax	pmax		
	comp=Z,206nm,1.4s						
353A	**Camilla**	**73.27**	**60**	P	**P**	**16 08 02.7**	**-0.5**
	baz=323,SNR=13						
254A	**Abbeville**	**73.27**	**59**	P	**P**	**16 08 02.3**	**-0.9**
	baz=323,SNR=27						
CNNC	**Cliffs of the**	**73.33**	**53**	P	**P**	**16 08 03.1**	**-0.5**
	baz=324,SNR=5.3						
CNNC	**Cliffs of the**	**73.33**	**53**	*e*P	**P**	**16 08 03.0**	**-0.5**
	comp=Z,229nm,1.0s						
CNNC				LR	LR		
	comp=Z,7μm,18.0s						
TIGA	**Tifton**	**73.52**	**60**	P	**P**	**16 08 04.2**	**-0.5**
	baz=323,SNR=16						
TIGA	**Tifton**	**73.52**	**60**	*e*P	**P**	**16 08 03.7**	**-1.0**
	comp=Z,416nm,1.2s						
TIGA				LR	LR		
	comp=Z,8μm,19.0s						
453A	**Whigham**	**73.60**	**60**	P	**P**	**16 08 05.2**	**0.0**
	baz=323,SNR=20						
453A	**Whigham**	**73.60**	**60**	*e*P	**P**	**16 08 04.5**	**-0.7**
	comp=Z,594nm,1.2s						
453A				LR	LR		
	comp=Z,7μm,20.0s						
156A	**Sylvania**	**73.62**	**57**	P	**P**	**16 08 05.5**	**+0.2**
	baz=323,SNR=28						
WME	**Myndd Eilian**	**73.65**	**357⇓**	*e*P	**P**	**16 08 04.4**	**-0.7**
WPS	**Cemaes, Angles**	**73.66**	**358⇓**	*e*P	**P**	**16 08 04.7**	**-0.4**
WPS				IAmb	IAmb	16 08 05.7	
	comp=Z,77nm,1.0s						
WPS				IAMs_20	IAMs_20	16 50 28.5	
	comp=Z,3μm,17.4s						
552A	**Lynn Haven**	**73.66**	**62**	P	**P**	**16 08 05.4**	**-0.2**
	baz=323,SNR=5.9						
IGLA	**Glengowla, Co**	**73.68**	**1⇓**	*e*P	**P**	**16 08 04.9**	**-0.4**
IGLA				IAmb	IAmb	16 08 06.3	
	comp=Z,81nm,0.9s						
LVV	**L'vov**	**73.70**	**339**	*e*P	**P**	**16 08 06.7**	**+1.2**
LVV				*e*		16 10 51.9	
LVV				*e*S	**SKiKP**	**16 17 31.6**	**-1.8**
LVV				MLR	MLR		
	comp=E,3μm,17.0s						
LVV				MLR	MLR		
	comp=N,2μm,16.0s						
LVV				MLR	MLR		
	comp=Z,6μm,18.0s						
255A	**Hazlehurst**	**73.70**	**58**	P	**P**	**16 08 05.5**	**-0.3**
	baz=323,SNR=31						
255A	**Hazlehurst**	**73.70**	**58**	*e*P	**P**	**16 08 05.3**	**-0.5**
	comp=Z,542nm,1.0s						
255A				LR	LR		
	comp=Z,12μm,19.0s						
KIV	**Kislovodsk**	**73.71**	**324**	*e*P	**P**	**16 08 05.7**	**-0.1**
	comp=Z,141nm,1.0s						
KIV				LR	LR		
	comp=Z,8μm,18.0s						
KIV	**Kislovodsk**	**73.71**	**324**	P	**P**	**16 08 06.9**	**+1.1**
	SNR=29						
KIV	**Kislovodsk**	**73.71**	**324**	*i* P	**P**	**16 08 06.4**	**+0.7**
	SNR=27						
KIV	**Kislovodsk**	**73.71**	**324**	*e*P	**P**	**16 08 06.6**	**+0.8**
KIV				*e*		16 10 47.7	
KIV				*e*S	**S**	**16 17 36.2**	**+0.9**
KIV				*e*SS	**SS**	**16 22 20.3**	**+2.6**
KIV				pmax	pmax		
	comp=Z,125nm,1.1s						
KIV				pmax	pmax		
	comp=Z,466nm,5.1s						
KIV				MLR	MLR		
	comp=Z,6μm,18.0s						
WLF1	**Llynfaes**	**73.76**	**357⇓**	*e*P	**P**	**16 08 05.1**	**-0.7**
WLF1				IAmb	IAmb	16 08 06.3	
	comp=Z,135nm,1.1s						
WLF1				IAMs_20	IAMs_20	16 50 31.1	
	comp=Z,6μm,18.2s						
WPM1	**Penmaenmawr**	**73.78**	**357**	*e*P	**P**	**16 08 05.0**	**-0.9**
NCK	**Nalchik**	**73.79**	**323**	*i* P	**P**	**16 08 07.4**	**+1.2**
NCK				*i*		16 08 22.8	
NCK				pmax	pmax		
	comp=Z,116nm,1.1s						
YRC	**Rhoscolyn**	**73.81**	**358⇓**	*e*P	**P**	**16 08 05.2**	**-0.8**
KBZ	**Khabaz**	**73.84**	**324**	P	**P**	**16 08 07.4**	**+1.1**
	comp=Z,103nm,1.0s,baz=26,slow=2.8,SNR=123						
KBZ				LR	LR	16 45 24.8	
	comp=Z,7μm,18.2s,baz=24,slow=40						
DSB	**Dublin**	**73.85**	**359**	*e*P	**P**	**16 08 05.6**	**-0.7**
	comp=Z,118nm,1.0s						
DSB				LR	LR		
	comp=Z,2μm,20.0s						
YLL	**Llanberis**	**73.91**	**357⇓**	*e*P	**P**	**16 08 06.2**	**-0.4**
NHSC	**New Hope**	**73.92**	**56**	P	**P**	**16 08 06.9**	**-0.1**
	baz=324,SNR=15						
NHSC	**New Hope**	**73.92**	**56**	*e*P	**P**	**16 08 06.7**	**-0.4**
	comp=Z,445nm,1.1s						
NHSC				LR	LR		
	comp=Z,10μm,19.0s						
CHLP	**Challavanipeta**	**73.94**	**279**	*e*P	**P**	**16 08 07.5**	**+0.2**
CHLP				IAmb	IAmb	16 08 18.2	
	comp=Z,219nm,1.7s						
CHLP				IVMs_BB	IVMs_BB	16 42 31.5	
	comp=Z,1μm,18.9s						
256A	**Glennville**	**73.96**	**58**	P	**P**	**16 08 06.8**	**-0.5**
	baz=323,SNR=6.0						
355A	**Pearson**	**73.97**	**59**	P	**P**	**16 08 07.1**	**-0.3**
	baz=323,SNR=39						
AKT	**Akhty**	**73.98**	**320⇓**	*i* P	**P**	**16 08 07.8**	**+0.4**
AKT				*e*		16 08 22.2	
AKT				*e*		16 10 53.0	
AKT				*e*S	**S**	**16 17 37.8**	**-0.7**
AKT				*e*		16 18 14.3	
AKT				pmax	pmax		
	comp=Z,351nm,1.4s						
553A	**Crawfordville**	**74.07**	**61**	P	**P**	**16 08 08.0**	**+0.1**
	baz=323,SNR=9.7						
CSU	**Charleston Sou**	**74.07**	**56**	*e*P	**P**	**16 08 07.1**	**-0.8**
454A	**Quitman**	**74.07**	**60**	P	**P**	**16 08 07.9**	**-0.1**
	baz=323,SNR=16						
WACR	**West Acre**	**74.11**	**354⇓**	*e*P	**P**	**16 08 07.6**	**-0.2**
WACR				IAmb	IAmb	16 08 08.7	
	comp=Z,378nm,1.2s						
WACR				IAMs_20	IAMs_20	16 33 53.3	
	comp=Z,4μm,28.1s						
FOEL	**Foel Wylfa**	**74.13**	**357⇓**	*e*P	**P**	**16 08 06.6**	**-1.3**
FOEL				IAmb	IAmb	16 08 08.0	
	comp=Z,212nm,1.3s						
FOEL				IAMs_20	IAMs_20	16 50 50.4	
	comp=Z,3μm,19.9s						
BHPL	**Bhopal**	**74.13**	**288**	*e*P	**P**	**16 08 05.8**	**-2.6**
BHPL				IAmb	IAmb	16 08 07.6	
	comp=Z,514nm,1.9s						
BHPL				IAMs_20	IAMs_20	16 41 29.9	
	comp=Z,18μm,8.7s						
TAOE	**Nuku Hiva Isla**	**74.16**	**130**	*e*S	**S**	**16 17 38.8**	**-2.0**
	comp=Z,5μm,28.8s						
TAOE				*e*LQ	LQ	16 27 11.1	
	comp=Z,12μm,32.6s						
TAOE				*e*LR	LR	16 30 48.2	
	comp=Z,7μm,22.7s,baz=340						
TAOE	**Nuku Hiva Isla**	**74.16**	**130**	PFAKE		16 08 20.0	+11
TAOE				LR	LR		
	comp=Z,6μm,18.0s						
KWP	**Kalwaria Pacla**	**74.16**	**340**	*e*P	**P**	**16 08 09.3**	**+1.1**
KWP				*e*S	**S**	**16 17 42.1**	**+2.1**
KWP				LMZ	LR	16 39 51.0	
	comp=Z,6μm,26.6s						
KWP	**Kalwaria Pacla**	**74.16**	**340**	*e*P	**P**	**16 08 09.0**	**+0.8**
	comp=Z,4μm,1.0s						
KWP				LR	LR		
	comp=Z,38μm,18.0s						
KWP	**Kalwaria Pacla**	**74.16**	**340⇓**	*e*P	**P**	**16 08 09.3**	**+1.1**
KWP				*e*S	**S**	**16 17 42.1**	**+2.1**
KWP				MLR	MLR		
	comp=Z,6μm,26.6s						
OJC	**Ojcow**	**74.18**	**342**	*e*P	**P**	**16 08 08.9**	**+0.6**
OJC				*e*S	**S**	**16 17 40.6**	**+0.4**
OJC				LMZ	LR	16 40 13.8	
	comp=Z,4μm,23.1s						
OJC	**Ojcow**	**74.18**	**342**	*e*P	**P**	**16 08 08.8**	**+0.5**
	comp=Z,284nm,1.2s						
OJC	**Ojcow**	**74.18**	**342⇓**	*e*P	**P**	**16 08 08.9**	**+0.6**
OJC				*e*S	**S**	**16 17 40.6**	**+0.4**
OJC				MLR	MLR		
	comp=Z,4μm,23.1s						
LLW	**Llanuwychllyn**	**74.18**	**357⇓**	*e*P	**P**	**16 08 07.9**	**-0.4**
KSP	**Ksiaz**	**74.20**	**344**	*e*P	**P**	**16 08 08.5**	**+0.1**
KSP				*e*S	**S**	**16 17 40.5**	**+0.1**
KSP				LMZ	LR	16 39 20.0	
	comp=Z,3μm,23.5s						
KSP	**Ksiaz**	**74.20**	**344⇓**	*e*P	**P**	**16 08 08.5**	**+0.1**
KSP				*e*S	**S**	**16 17 40.5**	**+0.1**
CLL	**Collm**	**74.26**	**346**	*i* P	**P**	**16 08 08.1**	**-0.6**
	comp=Z,195nm,1.5s						
CLL				*i*		16 08 17.1	
CLL				*e*PP	**PP**	**16 10 48.0**	**-5.8**
CLL				*e*PPP	PPP	16 12 42.0	
CLL				*e*S	**S**	**16 17 39.0**	**-2.0**
CLL				*e*SKSac	**SKSac**	**16 18 14.0**	**-0.9**
CLL				*e*PPS	PPS	16 18 27.0	
CLL				*e*		16 19 18.0	
CLL				*e*		16 21 22.0	
CLL				*e*SS	**SS**	**16 22 30.0**	**+4.7**
CLL				*e*SSS	SSS	16 26 00.0	
CLL				LmH		16 42 00.0	
	comp=N,4μm,18.2s						
CLL				LmH		16 42 00.0	
	comp=E,5μm,19.1s						
CLL				LmV		16 45 00.0	
	comp=Z,4μm,19.1s						
CLL				Lmax		16 49 00.0	
CLL	**Collm**	**74.26**	**346**	*e*P	**P**	**16 08 08.1**	**-0.6**
	comp=Z,136nm,1.3s						
CLL				LR	LR		
	comp=Z,4μm,19.0s						
CLL	**Collm**	**74.26**	**346⇓**	*i* P	**P**	**16 08 08.1**	**-0.6**
CLL				*i*		16 08 17.1	
CLL				*e*S	**S**	**16 17 39.0**	**-2.0**
CLL				pmax	pmax		
	comp=Z,195nm,1.5s						
CLL				MLR	MLR		
	comp=Z,4μm,19.1s						
SORM	**Soroca**	**74.27**	**335⇓**	*i* P	**P**	**16 08 08.6**	**-0.2**
SORM	**Soroca**	**74.27**	**335**	P	**P**	**16 08 08.5**	**-0.2**
UNM	**Universidad Na**	**74.29**	**79**	PFAKE		16 08 20.0	+10
UNM				LR	LR		
	comp=Z,1μm,18.0s						
ZEI	**Tsey**	**74.30**	**323**	*e*P	**P**	**16 08 05.0**	**-4.4**
ZEI				pmax	pmax		
	comp=Z,173nm,1.2s						
NEY	**Neytrino**	**74.32**	**324**	*d i* P	**P**	**16 08 10.5**	**+1.1**
NEY				pmax	pmax		
	comp=Z,10.0nm,1.1s						
356A	**Blackshear**	**74.36**	**59**	P	**P**	**16 08 09.4**	**-0.2**
	baz=323						
455A	**Stateville**	**74.36**	**60**	P	**P**	**16 08 09.5**	**-0.2**
	baz=323,SNR=8.9						
WTSB	**Winterswijk**	**74.37**	**350**	*e*P	**P**	**16 08 08.9**	**-0.4**
	comp=Z,226nm,1.5s						
MTN	**Manton Dam**	**74.39**	**221**	*e*P	**P**	**16 08 10.1**	**+0.3**
	comp=Z,112nm,0.9s						
257A	**Skidaway Islan**	**74.40**	**57**	P	**P**	**16 08 09.5**	**-0.4**
	baz=324						
257A	**Skidaway Islan**	**74.40**	**57**	*e*P	**P**	**16 08 09.9**	**+0.1**
	comp=Z,305nm,1.1s						
257A				LR	LR		
	comp=Z,8μm,20.0s						
KULM	**Kulim**	**74.43**	**258**	*e*P	**P**	**16 08 10.1**	**-0.2**
	comp=Z,49nm,1.2s						
KULM				LR	LR		
	comp=Z,2μm,20.0s						
HLM1	**Long Mynd**	**74.49**	**357⇓**	*e*P	**P**	**16 08 09.7**	**-0.4**
HLM1				IAmb	IAmb	16 08 11.0	
	comp=Z,95nm,1.2s						
HLM1				IAMs_20	IAMs_20	16 51 24.1	
	comp=Z,2μm,17.5s						
BRG	**Berggiesshubel**	**74.54**	**346**	*e*P	**P**	**16 08 10.1**	**-0.3**
	comp=Z,164nm,1.4s						
BRG				*e*PP	**PP**	**16 10 53.8**	**-2.4**
	comp=Z,32nm,1.2s						
BRG				S	**S**	**16 17 44.0**	**-0.2**
BRG				SS	**SS**	**16 22 26.0**	**-3.7**
BRG				*e*PKPPKP	**P'P'df**	**16 35 40.2**	**-5.8**
	comp=Z,14nm,1.7s						
	comp=N,4μm,16.3s						
	comp=E,5μm,16.1s						
	comp=Z,3μm,14.6s						
BRG	**Berggiesshubel**	**74.54**	**346**	*e*P	**P**	**16 08 10.1**	**-0.3**
BRG				*e*		16 10 53.8	
BRG				S	**S**	**16 17 44.0**	**-0.2**
BRG				SS	**SS**	**16 22 26.0**	**-3.7**
BRG				pmax	pmax		
	comp=Z,164nm,1.4s						
BRG				pmax	pmax		
	comp=Z,32nm,1.2s						
BRG				MLR	MLR		
	comp=N,4μm,16.3s						
BRG				MLR	MLR		
	comp=E,5μm,16.1s						
BRG				MLR	MLR		
	comp=Z,3μm,14.6s						
554A	**Perry**	**74.55**	**60**	P	**P**	**16 08 10.5**	**-0.2**
	baz=323,SNR=6.8						
UPC	**Upice**	**74.57**	**344⇓**	*i* P	**P**	**16 08 10.9**	**+0.3**
UPC				*e*S	**S**	**16 17 44.9**	**+0.3**
UPC				AMS	AMS	16 45 40.0	
	comp=Z,4μm,16.9s						
UPC	**Upice**	**74.57**	**344⇓**	*i* P	**P**	**16 08 10.9**	**+0.3**
UPC				*e*S	**S**	**16 17 44.9**	**+0.3**
UPC				MLR	MLR		
	comp=Z,4μm,16.9s						
357A	**Townsend**	**74.61**	**58**	P	**P**	**16 08 10.6**	**-0.4**
	baz=324						
DPC	**Dobruska-Polom**	**74.67**	**344⇓**	*i* P	**P**	**16 08 11.8**	**+0.6**
DPC				*e*pP	**pP**	**16 08 17.5**	**-0.4**
DPC				*e*PCP	**PcP**	**16 08 22.9**	**-2.5**
DPC				*e*S	**S**	**16 17 44.5**	**-1.3**
DPC				*e*SS	**SS**	**16 22 35.2**	**+3.4**
DPC				AMS	AMS	16 44 40.0	
	comp=Z,4μm,20.0s						
DPC	**Dobruska-Polom**	**74.67**	**344⇓**	*i* P	**P**	**16 08 11.8**	**+0.6**
DPC				*e*		16 08 22.9	
DPC				*e*S	**S**	**16 17 44.5**	**-1.3**
DPC				*e*SS	**SS**	**16 22 35.2**	**+3.4**
DPC				MLR	MLR		
	comp=Z,4μm,20.0s						
IWEX	**Carrickbyrne,**	**74.72**	**359⇓**	*e*P	**P**	**16 08 11.3**	**-0.1**
IWEX				IAmb	IAmb	16 08 12.3	
	comp=Z,118nm,1.1s						
ANN	**Anapa**	**74.73**	**328**	*i* P	**P**	**16 08 09.8**	**-1.7**
ANN				*i*		16 08 24.0	
ANN				*e*		16 10 55.8	
ANN				*e*S	**S**	**16 17 43.7**	**-2.7**
ANN				pmax	pmax		
	comp=Z,193nm,1.8s						
PVCC	**Panska Ves**	**74.78**	**345⇓**	*i* P	**P**	**16 08 11.9**	**+0.1**
PVCC				*e*pP	**pP**	**16 08 17.7**	**-0.7**
PVCC	**Panska Ves**	**74.78**	**345⇓**	*i* P	**P**	**16 08 11.9**	**+0.1**
NGP	**Nagpur**	**74.82**	**285**	*e*P	**P**	**16 08 11.1**	**-1.3**
NGP				IAmb	IAmb	16 08 26.6	
	comp=Z,133nm,1.2s						
NIE	**Niedzica**	**74.85**	**341**	*e*P	**P**	**16 08 13.2**	**+1.0**
NIE				*e*S	**S**	**16 17 50.8**	**+3.0**
NIE				LMZ	LR	16 38 47.1	
	comp=Z,3μm,26.7s						
NIE	**Niedzica**	**74.85**	**341⇓**	*e*P	**P**	**16 08 13.2**	**+1.0**
NIE				*e*S	**S**	**16 17 50.8**	**+3.0**
NIE				MLR	MLR		
	comp=Z,3μm,26.7s						
OKC	**Ostrava-Krasne**	**74.85**	**343⇓**	*i* P	**P**	**16 08 12.8**	**+0.6**
OKC				*e*pP	**pP**	**16 08 18.4**	**-0.4**
OKC				*e*PP	**PP**	**16 10 59.4**	**+0.5**
OKC				*e*S	**S**	**16 17 47.0**	**-0.7**
OKC				*e*SS	**SS**	**16 22 42.1**	**+7.7**
OKC				AMS	AMS	16 45 50.0	
	comp=Z,4μm,15.9s						
OKC	**Ostrava-Krasne**	**74.85**	**343⇓**	*i* P	**P**	**16 08 12.8**	**+0.6**
OKC				*e*		16 10 59.4	
OKC				*e*S	**S**	**16 17 47.0**	**-0.7**
OKC				*e*SS	**SS**	**16 22 42.1**	**+7.7**
OKC				MLR	MLR		
	comp=Z,4μm,15.9s						
IPM	**Ipoh**	**74.86**	**257**	*e*P	**P**	**16 08 10.8**	**-1.9**
	comp=Z,37nm,0.9s						
IPM				LR	LR		
	comp=Z,3μm,18.0s						
555A	**McAlpin**	**74.89**	**60**	P	**P**	**16 08 12.7**	**0.0**
	baz=323,SNR=15						
555A	**McAlpin**	**74.89**	**60**	*e*P	**P**	**16 08 12.4**	**-0.3**
	comp=Z,428nm,1.1s						
555A				LR	LR		
	comp=Z,6μm,19.0s						
456A	**Hilliard**	**74.89**	**59**	P	**P**	**16 08 12.5**	**-0.2**
	baz=324,SNR=7.4						
456A	**Hilliard**	**74.89**	**59**	*e*P	**P**	**16 08 12.5**	**-0.2**
	comp=Z,409nm,1.1s						
456A				LR	LR		
	comp=Z,10μm,19.0s						
SSW	**Stow on the Wo**	**75.00**	**356⇓**	*e*P	**P**	**16 08 12.9**	**-0.1**
MCH1	**Michaelchurch**	**75.01**	**357⇓**	*e*P	**P**	**16 08 12.3**	**-0.7**
MCH1				IAmb	IAmb	16 08 13.9	
	comp=Z,115nm,1.0s						
MCH1				IAMs_20	IAMs_20	16 33 06.3	
	comp=Z,5μm,43.8s						
MORC	**Moravsky Berou**	**75.02**	**343⇓**	*i* P	**P**	**16 08 13.7**	**+0.5**
MORC	**Moravsky Berou**	**75.02**	**343**	*e*P	**P**	**16 08 13.2**	**0.0**
	comp=Z,778nm,1.3s						
MORC				LR	LR		
	comp=Z,12μm,19.0s						
MORC	**Moravsky Berou**	**75.02**	**343**	*e*P	**P**	**16 08 13.2**	**0.0**
MORC				pmax	pmax		
	comp=Z,778nm,1.3s						
MORC				MLR	MLR		
	comp=Z,12μm,19.0s						
MORC	**Moravsky Berou**	**75.02**	**343⇓**	*i* P	**P**	**16 08 13.7**	**+0.5**
MORC				*e*		16 08 21.7	
MORC				*e*S	**S**	**16 17 50.7**	**+1.0**
SOC	**Sochi**	**75.06**	**326**	*d i* P	**P**	**16 08 13.9**	**+0.4**
SOC				*e**SP	**sP**	**16 08 21.3**	**-1.3**
SOC				*e*		16 11 05.8	
SOC				*e*PPP	PPP	16 12 48.3	
SOC				*i* S	**S**	**16 17 51.0**	**+0.8**
SOC				pmax	pmax		
	comp=Z,142nm,1.0s						
SOC				MLR	MLR		
	comp=Z,7μm,20.0s						
MOX	**Moxa**	**75.10**	**347**	P	**P**	**16 08 13.5**	**-0.1**
CRVS	**Cervenica-Dubn**	**75.11**	**340**	*e*P	**P**	**16 08 14.5**	**+0.8**
CRVS				pmax	pmax		
	comp=Z,395nm,2.1s						
CRVS	**Cervenica-Dubn**	**75.11**	**340**	*e*P	**P**	**16 08 14.5**	**+0.8**
CRVS				*e*S	**S**	**16 17 47.3**	**-3.4**
CRVS				*e*SS	**SS**	**16 22 36.8**	**-1.7**
CRVS				*e*L	L	16 39 48.7	
DZM	**Mont Dzumac**	**75.15**	**185**	*e*P	**P**	**16 08 16.0**	**+1.8**
	comp=Z,178nm,1.4s						
DZM				*e*S	**S**	**16 17 49.6**	**-1.9**
	comp=Z,3μm,28.8s						
DZM	**Mont Dzumac**	**75.15**	**185**	*e*LQ	LQ	16 28 13.3	
	comp=Z,9μm,23.5s						
DZM				*e*LR	LR	16 31 19.1	
	comp=Z,9μm,32.5s						
DZM	**Mont Dzumac**	**75.15**	**185**	P	**P**	**16 08 16.0**	**+1.8**
	comp=Z,32nm,1.1s,baz=54,slow=6.4,SNR=11						
DZM				LR	LR	16 40 05.3	
	comp=Z,3μm,18.1s,baz=8.5,slow=35						
DZM	**Mont Dzumac**	**75.15**	**185**	*e*P	**P**	**16 08 15.2**	**+1.1**
	comp=Z,84nm,1.2s						
VAL	**Valentia**	**75.16**	**1**	*e*P	**P**	**16 08 10.7**	**-3.2**
VAL				*i* S	**S**	**16 17 51.9**	**+1.0**
VAL				*i* S	**SS**	**16 22 49.2**	**+10**
VAL	**Valentia**	**75.16**	**1**	*e*P	**P**	**16 08 10.7**	**-3.2**
VAL				*i* S	**S**	**16 17 51.9**	**+1.0**
VAL				*i* S	**SS**	**16 22 49.0**	**+10**
MONM	**Monmouth**	**75.16**	**356⇓**	*e*P	**P**	**16 08 13.7**	**-0.2**
MONM				IAmb	IAmb	16 08 15.0	
	comp=Z,219nm,1.1s						
MONM				IAMs_20	IAMs_20	16 33 10.1	
	comp=Z,6μm,46.8s						
UZH	**Uzhgorod**	**75.20**	**339**	*e*P	**P**	**16 08 12.8**	**-1.4**
UZH				*e*		16 08 20.6	
UZH				*e*		16 08 26.2	
UZH				*e*S	**S**	**16 17 48.9**	**-2.6**
STRD	**Stroud**	**75.20**	**356⇓**	*e*P	**P**	**16 08 14.1**	**0.

KIS LRM MLR 16 44 14.0
comp=Z,4μm,15.0s
KIS Kishinev 75.20 335κ *i*P **P 16 08 13.0 -1.2**
KIS *i* 16 08 24.0
KIS *i* 16 11 06.0
KIS *i* PPP PPP 16 12 56.0
KIS *i* S **S 16 17 52.0 +0.3**
KIS *i* PS PnS 16 18 12.0 -16
KIS *e*SS **SS 16 22 44.0 +4.1**
KIS pmax pmax
comp=Z,600nm,1.8s
KIS pmax pmax
comp=Z,500nm,1.8s
KIS pmax pmax
comp=Z,500nm,5.0s
KIS MLR MLR
comp=N,4μm,15.0s
KIS MLR MLR
comp=E,2μm,15.0s
KIS MLR MLR
comp=Z,6μm,15.0s
KIS MLR MLR
comp=Z,6μm,16.0s
457A Yulee 75.22 59 P **P 16 08 14.6 0.0**
baz=324
655A Horseshoe Beac 75.23 60 P **P 16 08 14.6 -0.1**
baz=323
PRA Prague 75.25 345⇓ *i*P **P 16 08 14.7 +0.2**
PRA *e*pP **pP 16 08 20.4 -0.7**
PRA *e*x x 16 08 25.6
PRA *e*SS SS 16 22 45.7 +5.3
PRA AMS AMS 16 46 20.0
comp=Z,5μm,16.2s
PRA Prague 75.25 345⇓ *i*P **P 16 08 14.7 +0.2**
PRA *e* 16 08 25.6
PRA *e*SS SS 16 22 45.7 +5.3
PRA MLR MLR
comp=Z,5μm,16.2s
LANS Liptovska Anna 75.27 341 *e*P **P 16 08 16.2 +1.5**
LANS Liptovska Anna 75.27 341 *e*P **P 16 08 16.2 +1.5**
556A Lake Butler 75.28 60 P **P 16 08 15.1 +0.1**
baz=324,SNR=24
PRU Pruhonice 75.31 345⇓ *i*P **P 16 08 14.9 +0.1**
PRU *e*pP **pP 16 08 20.6 -0.9**
PRU *e*PCP **PcP 16 08 27.0 -1.1**
PRU *e*PP **PP 16 11 03.2 +0.4**
PRU *e*S **S 16 17 53.0 +0.2**
PRU *e*SS **SS 16 22 42.9 +1.5**
PRU AMS AMS 16 44 30.0
comp=Z,5μm,18.2s
PRU Pruhonice 75.31 345⇓ *i*P **P 16 08 14.9 +0.1**
PRU *e* 16 08 27.0
PRU *e* 16 11 03.2
PRU *e*S **S 16 17 53.0 +0.2**
PRU *e*SS **SS 16 22 42.9 +1.5**
PRU MLR MLR
comp=Z,5μm,18.2s
GOPC GO Pecny, Ondr 75.35 345⇓ *i*P **P 16 08 15.2 +0.1**
GOPC *e*pP **pP 16 08 20.9 -0.8**
GOPC *e*PP **PP 16 11 04.4 +1.3**
GOPC *e*S **S 16 17 52.0 -1.3**
GOPC AMS AMS 16 46 30.0
comp=Z,5μm,18.0s
GOPC GO Pecny, Ondr 75.35 345⇓ *i*P **P 16 08 15.2 +0.1**
GOPC *e* 16 08 20.9
GOPC *e* 16 11 04.4
GOPC *e*S **S 16 17 52.0 -1.3**
GOPC MLR MLR
comp=Z,5μm,18.0s
HGH Gray Hill 75.36 356⇓ *e*P **P 16 08 15.0 -0.1**
NKC Novy Kostel 75.39 346⇓ *i*P **P 16 08 15.4 +0.1**
NKC *e*S **S 16 17 52.1 -1.6**
NKC AMS AMS 16 52 40.0
comp=Z,3μm,15.9s
NKC Novy Kostel 75.39 346⇓ *i*P **P 16 08 15.4 +0.1**
NKC *e*S **S 16 17 52.1 -1.6**
NKC MLR MLR
comp=Z,3μm,15.9s
MYKOM Kota Tinggi 75.40 253 *e*P **P 16 08 15.7 -0.1**
comp=Z,77nm,1.4s
MYKOM LR LR
comp=Z,2μm,20.0s
SWN1 Swindon 75.45 356⇓ *e*P **P 16 08 15.8 +0.2**
SWN1 IAmb IAmb 16 08 16.9
comp=Z,324nm,1.0s
SWN1 IAMs_20 IAMs_20 16 33 14.2
comp=Z,6μm,44.9s
BUR08 Bucovina Ar. S 75.48 337 *e*P **P 16 08 16.2 +0.2**
BUR04 Bucovina Ar. S 75.51 337 *e*P **P 16 08 16.4 +0.3**
BURAR Bucovina Array 75.51 337⇓ *i*P **P 16 08 16.8 +0.6**
BURAR Bucovina Array 75.51 337 P **P 16 08 16.7 +0.6**
BUW Bucklebury Wes 75.53 355 *e*P **P 16 08 15.5 -0.5**
BATH Bath 75.54 356 *e*P **P 16 08 15.7 -0.4**
BATH IAMs_20 IAMs_20 16 33 16.2
comp=Z,6μm,48.0s
LVIG Laguna Verde 75.60 76 *e*P **P 16 08 15.5 -1.4**
comp=Z,143nm,1.3s
LVIG LR LR
comp=Z,2μm,20.0s
SIM Simferopol' 75.61 330 *d i*P **P 16 08 17.2 +0.5**
SIM *e* 16 08 28.0
SIM 16 11 07.0
SIM *e*S **S 16 17 58.0 +1.7**
SIM pmax pmax
comp=Z,74nm,1.2s
557A Orange Park
baz=324,SNR=10.0
TRPA Tarpa 75.62 339⇓ *i*P **P 16 08 17.7 +1.1**
TRPA Tarpa 75.62 339⇓ *e*P **P 16 08 17.7 +1.1**
VRAC Vranov 75.64 343⇓ *i*P **P 16 08 17.5 +0.7**
VRAC Vranov 75.64 343 P **P 16 08 17.5 +0.7**
VRAC Vranov 75.64 343⇓ *i*P **P 16 08 17.4 +0.7**
VRAC *e* 16 08 25.3
VRAC *e*S **S 16 17 57.2 +0.7**
BEBN Eben Emael 75.64 351⇓P **P 16 08 16.6 -0.1**
HGN Heimansgroeve 75.64 351 *e*P **P 16 08 16.3 -0.4**
comp=Z,254nm,1.3s
HGN *e*S SKiKP 16 17 21.8 -15
HGN *e*SS **SS 16 22 55.7 +9.4**
ELSH Elham, Standar 75.65 354⇓ *e*P **P 16 08 16.8 0.0**
ELSH IAmb IAmb 16 08 17.9
comp=Z,260nm,1.2s
ELSH IAMs_20 IAMs_20 16 34 54.2
comp=Z,4μm,27.3s
KECS Kecovo 75.71 341 *e*P **P 16 08 18.0 +0.9**
KECS pmax pmax
comp=Z,54nm,1.1s
KECS Kecovo 75.71 341 *e*P **P 16 08 18.0 +0.9**
KECS *e*PP **PP 16 11 07.1 +1.0**
656A Willston 75.72 60 P **P 16 08 17.7 +0.2**
baz=324,SNR=13
656A Willston 75.72 60 *e*P **P 16 08 17.5 0.0**
comp=Z,403nm,1.1s
656A LR LR
comp=Z,8μm,21.0s
UCC Uccle 75.76 352⇓P **P 16 08 17.2 -0.2**
UCC Uccle 75.76 352 PFAKE 16 08 30.0 +13
UCC LR LR
comp=Z,4μm,18.0s
MEM Membach 75.79 351⇓P **P 16 08 17.6 +0.1**
comp=Z,119nm,1.4s
MEM Membach 75.79 351 P **P 16 08 16.6 -1.0**
LEOM Leova 75.84 335⇑ *i*P **P 16 08 18.4 +0.5**
LEOM Leova 75.84 335 P **P 16 08 18.3 +0.4**
BMR Baia Mare 75.84 338⇑ *i*P **P 16 08 19.8 +1.9**
JAVC Velka Javorina 75.88 343⇓ *i*P **P 16 08 19.9 +1.7**
JAVC *e* 16 08 27.5
JAVC *e*S **S 16 18 02.2 +2.9**
657A Interlachen 75.89 59 P **P 16 08 18.2 -0.3**
baz=324
KRUC Moravsky 75.91 343 P **P 16 08 18.8 +0.5**
KRUC Moravsky 75.91 343⇓ *i*P **P 16 08 18.9 +0.6**
KRUC *e* 16 08 26.9
KRUC *e*S **S 16 18 00.6 +1.2**
VYHS Vyhne 76.02 342 *e*P **P 16 08 19.8 +0.9**
VYHS pmax pmax
comp=Z,123nm,1.4s
VYHS Vyhne 76.02 342 *e*P **P 16 08 19.8 +0.9**
VYHS *e*PP **PP 16 11 11.2 +2.4**
VYHS *e*S **S 16 18 02.1 +1.4**
TLIG Tlapa 76.03 79 *e*P **P 16 08 20.0 +0.4**
comp=Z,300nm,1.3s
TLIG LR LR
comp=Z,2μm,19.0s

BCLA Clavier 76.05 351⇑P **P 16 08 19.4 +0.4**
comp=Z,60nm,1.5s
SNF Seneffe 76.05 352⇑P P 16 08 10.5 -8.5
HTL Hartland 76.06 357⇓ *e*P **P 16 08 18.8 -0.3**
HTL IAmb IAmb 16 08 20.2
comp=Z,63nm,1.0s
HTL IAMs_20 IAMs_20 16 58 44.8
comp=Z,1μm,17.9s
GRF Grafenberg Arr 76.09 347 P **P 16 08 19.9 +0.6**
GRFO Grafenberg 76.09 347 *e*P **P 16 08 19.2 0.0**
comp=Z,202nm,1.4s
GRFO LR LR
comp=Z,3μm,18.0s
GRFO Grafenberg 76.09 347 *e*P **P 16 08 19.3 0.0**
GRFO pmax pmax
comp=Z,202nm,1.4s
GRFO MLR MLR
comp=Z,3μm,18.0s
TESR Tescani 76.20 336⇓ *i*P **P 16 08 19.4 -0.6**
ARCR ARCALIA 76.20 338⇑ *i*P **P 16 08 21.9 +1.9**
SMOL Smolenice 76.26 343 *e*P **P 16 08 22.0 +1.7**
SMOL Smolenice 76.26 343 *e*P **P 16 08 22.0 +1.7**
CTA Charters Tower 76.27 204 P **P 16 08 21.0 +0.4**
comp=Z,40nm,0.8s,baz=20,slow=8.6,SNR=23
CTA LR LR 16 40 22.0
comp=Z,569nm,19.1s,baz=7.0,slow=34
CTA Charters Tower 76.27 204 P **P 16 08 21.0 +0.4**
CTAO Charters Tower 76.27 204 *e*P **P 16 08 20.8 +0.2**
comp=Z,204nm,1.4s
CTAO Charters Tower 76.27 204 *e*P **P 16 08 20.8 +0.2**
CTAO pmax pmax
comp=Z,205nm,1.4s
GNI Garni 76.28 321 P **P 16 08 22.4 +1.7**
comp=Z,83nm,1.1s,baz=320,slow=7.9,SNR=57
GNI LR LR 16 46 42.8
comp=Z,9μm,19.6s,baz=24,slow=40
GNI Garni 76.28 321 *e*P **P 16 08 21.8 +1.1**
comp=Z,686nm,1.6s
GNI Garni 76.28 321 P **P 16 08 22.7 +1.9**
SNR=52
GNI Garni 76.28 321 *i* P **P 16 08 22.4 +1.7**
SNR=19
GNI Garni 76.28 321 *d i*P **P 16 08 22.7 +1.9**
GNI pmax pmax
comp=Z,477nm,1.4s
KHC Kasperske Hory 76.30 345⇓ *i*P **P 16 08 20.9 +0.4**
KHC *e*pP **pP 16 08 26.4 -0.8**
KHC *e*PP **PP 16 11 12.0 +0.9**
KHC *e*S **S 16 18 03.3 -0.5**
KHC *e*SS **SS 16 22 58.8 +2.4**
KHC AMS AMS 16 46 50.0
comp=Z,6μm,16.9s
KHC Kasperske Hory 76.30 345 *e*P **P 16 08 20.7 +0.2**
comp=Z,99nm,1.3s
KHC LR LR
comp=Z,2μm,18.0s
KHC Kasperske Hory 76.30 345⇓ *i*P **P 16 08 20.9 +0.4**
KHC *e* 16 08 26.4
KHC *e* 16 11 12.0
KHC *e*S **S 16 18 03.3 -0.5**
KHC *e*SS **SS 16 22 58.8 +2.4**
KHC MLR MLR
comp=Z,6μm,16.9s
757A Oxford 76.30 60 P **P 16 08 20.7 -0.1**
baz=324,SNR=5.3
658A Bunnell 76.33 59 P **P 16 08 21.1 +0.1**
baz=324
658A Bunnell 76.33 59 PFAKE 16 08 30.0 +9.0
658A LR LR
comp=Z,10μm,19.0s
AKL Akola 76.35 286 *e*x P 16 08 27.9 +6.7
PVM Polavaram 76.36 280 *e*P **P 16 08 21.3 +0.1**
PVM IAmb IAmb 16 08 24.1
comp=Z,164nm,1.7s
PVM IVMs_BB IVMs_BB 16 43 25.2
comp=Z,2μm,15.4s
PSZ Piszkesteto 76.36 341⇓ *i*P **P 16 08 22.4 +1.4**
PSZ Piszkesteto 76.36 341⇓ *e*P **P 16 08 22.1 +1.1**
PSZ Piszkesteto 76.36 341 *e*P **P 16 08 21.9 +0.9**
comp=Z,319nm,1.4s
PSZ LR LR
comp=Z,6μm,19.0s
PMOR Pomariorio Ree 76.36 140 *e*P **P 16 08 22.7 +1.6**
comp=Z,317nm,1.3s
PMOR Pomariorio Ree 76.36 140 *e*T T 17 31 18.8
comp=Z,34nm,0.2s
WET Wettzell 76.39 346 P **P 16 08 21.3 +0.3**
GIVF Givet 76.40 351 *e*P **P 16 08 20.1 -1.0**
GIVF pmax pmax
comp=Z,118nm,1.3s
MODS Modra-Piesok 76.42 343 *e*P **P 16 08 21.5 +0.3**
MODS pmax pmax
comp=Z,319nm,1.3s
MODS Modra-Piesok 76.42 343 *e*P **P 16 08 21.5 +0.3**
MODS *e*PP **PP 16 11 13.8 +1.6**
MODS *e*S **S 16 18 02.8 -2.3**
MODS *e*SS **SS 16 22 56.5 -1.7**
MODS *e*L L 16 40 11.7
LTVH L"tav"rtes, 76.46 339⇓ *e*P **P 16 08 22.9 +1.5**
RPR Rampur 76.47 283 *e*P **P 16 08 21.9 0.0**
RPR IAmb IAmb 16 08 23.8
comp=Z,222nm,1.5s
RPR IVMs_BB IVMs_BB 16 46 03.4
comp=Z,2μm,16.3s
BAIF Baives 76.50 352 *e*P **P 16 08 20.9 -0.7**
BAIF pmax pmax
comp=Z,199nm,1.3s
GEC2 GERESS Array S 76.56 345 *e*P **P 16 08 21.9 -0.2**
comp=Z,150nm,1.3s
GEC2 GERESS Array S 76.56 345 *e*P **P 16 08 21.9 -0.2**
GEC2 pmax pmax
comp=Z,150nm,1.3s
GERES GERESS Array B 76.56 345 P **P 16 08 22.1 0.0**
comp=Z,61nm,1.1s,baz=27,slow=3.6,SNR=154
GERES PKPPKP **P'P'df 16 35 45.7 +3.2**
comp=Z,1.0nm,0.9s,baz=174,slow=1.3,SNR=5.4
GERES LR LR 16 46 11.9
comp=Z,3μm,18.2s,baz=36,slow=39
GEA0 GERESS Array S 76.56 345 *e*P **P 16 08 22.0 -0.1**
ZST Bratislava 76.62 343 *e*P **P 16 08 22.6 +0.3**
ZST pmax pmax
comp=Z,28nm,1.3s
ZST Bratislava 76.62 343 *e*P **P 16 08 22.6 +0.3**
ZST *e*PP **PP 16 11 17.2 +3.4**
ZST *e*S **S 16 18 07.2 -0.1**
ZST *e*SS **SS 16 23 06.9 +5.7**
ZST *e*L L 16 49 52.6
LHMI Lhok Sumawe 76.66 261 *e*P **P 16 08 22.6 -0.4**
comp=Z,420nm,1.0s
VAH Vaihoa 76.68 140 *e*P **P 16 08 24.5 +1.6**
comp=Z,265nm,1.3s
WLF Walferdange 76.71 350⇑P **P 16 08 22.9 +0.1**
comp=Z,59nm,1.6s
WLF Walferdange 76.71 350 *e*P **P 16 08 22.7 -0.1**
comp=Z,109nm,1.3s
WLF LR LR
comp=Z,4μm,18.0s
WLF Walferdange 76.71 350 *e*P **P 16 08 22.7 -0.1**
WLF pmax pmax
comp=Z,109nm,1.3s
WLF MLR MLR
comp=Z,4μm,18.0s
CJR Cluj-Napoca 76.73 338⇓ *i*P **P 16 08 24.6 +1.5**
CJR Cluj-Napoca 76.73 338 P **P 16 08 24.5 +1.5**
758A Lake Helen 76.73 59 P **P 16 08 23.6 +0.3**
baz=324,SNR=8.8
857A Zephyrhills 76.76 60 P **P 16 08 23.3 -0.1**
baz=324,SNR=5.0
VRI Vrincioaia 76.78 336⇓ *i*P **P 16 08 24.1 +0.8**
VRI Vrincioaia 76.78 336 P **P 16 08 24.1 +0.8**
PETR Petresti 76.79 335⇑ *i*P **P 16 08 24.7 +1.4**
PLOR Plostina 76.82 336⇑ *i*P **P 16 08 25.0 +1.5**
KTD Kalmit 76.84 349 P **P 16 08 23.8 +0.2**
BUD Budapest 76.95 341⇓ *e*P **P 16 08 25.4 +1.2**
BUD Budapest 76.95 341 P **P 16 08 25.8 +1.6**
SRSP Sriramsagar 76.97 284 *e*P **P 16 08 24.0 -0.7**
SRSP IAmb IAmb 16 08 25.3
comp=Z,124nm,1.4s
SRSP IVMs_BB IVMs_BB 16 45 14.1
comp=Z,3μm,15.1s
DOPR Dopca 77.02 337⇓ *i*P **P 16 08 26.2 +1.6**
CFR Carcaliu 77.07 334⇓ *i*P **P 16 08 25.1 +0.2**
CONA Conrad Observa 77.09 344 *i* pP **P 16 08 26.2 +1.1**
comp=Z,200nm,1.2s,SNR=124
LANF Langenberg 77.21 349 P **P 16 08 26.0 +0.3**

CSKK Cs"‡kako 77.21 342⇓ *e*P **P 16 08 26.9 +1.2**
SOP Sopron 77.21 343⇓ *e*P **P 16 08 26.9 +1.2**
SOP Sopron 77.21 343 P **P 16 08 27.1 +1.4**
957A Wimauma 77.23 61 P **P 16 08 25.6 -0.5**
baz=324
957A Wimauma 77.23 61 *e*P **P 16 08 25.0 -1.1**
comp=Z,296nm,1.2s
957A LR LR
comp=Z,6μm,21.0s
STU Stuttgart 77.25 348 *e*P **P 16 08 25.7 -0.2**
comp=Z,41nm,1.0s
STU LR LR
comp=Z,3μm,21.0s
STU Stuttgart 77.25 348 *e*P **P 16 08 25.7 -0.2**
STU pmax pmax
comp=Z,41nm,1.0s
STU MLR MLR
comp=Z,3μm,21.0s
858A St. Cloud 77.25 60 P **P 16 08 26.1 -0.1**
baz=324
DWPF Disney Wildern 77.30 60 P **P 16 08 26.2 -0.2**
baz=324
DWPF Disney Wildern 77.30 60 *e*P **P 16 08 26.4 0.0**
comp=Z,228nm,1.1s
DWPF LR LR
comp=Z,6μm,21.0s
MLR Muntele Rosu 77.33 336 P **P 16 08 27.4 +0.8**
comp=Z,11nm,0.9s,baz=40,slow=3.4,SNR=49
MLR PP **PP 16 11 23.4 +3.3**
comp=Z,7.2nm,1.0s,baz=16,slow=5.2,SNR=3.4
MLR LR LR 16 45 31.0
comp=Z,1μm,19.1s,baz=56,slow=38
MLR Muntele Rosu 77.33 336⇓ *i*P **P 16 08 27.6 +1.1**
MLR Muntele Rosu 77.33 336 *e*P **P 16 08 26.1 -0.4**
comp=Z,262nm,1.4s
MLR PP **PP 16 11 23.4 +3.3**
MLR Muntele Rosu 77.33 336 *e*P **P 16 08 26.1 -0.4**
MLR 16 11 23.4
MLR pmax pmax
comp=Z,262nm,1.4s
MOA Molln 77.44 345 *i* P **P 16 08 27.1 +0.1**
comp=Z,91nm,1.3s,SNR=61
PSI Prapat 77.44 258 P **P 16 08 28.2 +0.7**
comp=Z,34nm,1.1s,baz=0.1,slow=5.0,SNR=17
PSI LR LR 16 43 49.0
comp=Z,993nm,20.4s,baz=354,slow=37
PSI Prapat 77.44 258 *e*P **P 16 08 27.4 -0.1**
comp=Z,57nm,1.1s
PSI Prapat 77.44 258 *e*P **P 16 08 27.5 -0.1**
PSI pmax pmax
comp=Z,57nm,1.1s
ISR Istrita 77.53 335⇑ *i*P **P 16 08 28.7 +1.1**
ISR Istrita 77.53 335 P **P 16 08 28.7 +1.1**
958A Wauchula 77.55 61 P **P 16 08 27.6 -0.3**
baz=324
HARR Harsova 77.58 334⇑ *i*P **P 16 08 28.3 +0.5**
HARR Harsova 77.58 334 P **P 16 08 28.2 +0.5**
SIRR Siria 77.58 339⇓ *i*P **P 16 08 29.1 +1.3**
VOIR 77.59 337⇓ *i*P **P 16 08 29.0 +1.0**
VOIR 77.59 337 P **P 16 08 29.0 +1.0**
859A Kempfer Cattle 77.62 60 P **P 16 08 28.3 +0.1**
baz=324
TLB Topalu 77.64 334⇑ *i*P **P 16 08 28.9 +0.8**
TIRR Tirgusor 77.67 334⇓ *i*P **P 16 08 29.0 +0.8**
TIRR Tirgusor 77.67 334 *e*P **P 16 08 28.4 +0.2**
comp=Z,96nm,1.1s
TIRR LR LR
comp=Z,9μm,19.0s
ARR Arges 77.76 337⇑ *i*P **P 16 08 30.7 +1.8**
JQE Queens East 77.77 356 *e*P **P 16 08 28.2 -0.5**
BFO Black Forest 77.79 349 *e*P **P 16 08 28.2 -0.7**
comp=Z,133nm,1.6s
BFO LR LR
comp=Z,3μm,20.0s
BFO Black Forest 77.79 349 *ce*P **P 16 08 28.9 0.0**
ARSA Arzberg 77.81 344 *i* pP **P 16 08 29.9 +0.9**
comp=Z,165nm,1.6s,SNR=75
CDF Champ du Feu 77.83 349 *e*P **P 16 08 28.2 -1.0**
CDF pmax pmax
comp=Z,78nm,1.3s
058A Arcadia 77.95 61 P **P 16 08 30.2 +0.1**
baz=324,SNR=7.3
EFOR EFORIE 77.96 334⇑ *i*P **P 16 08 30.9 +1.0**
HYB Hyderabad 78.03 283 *i* P **P 16 08 30.5 -0.2**
HYB *es*P **pP 16 08 38.0 +0.6**
HYB *e*PcP **PcP 16 08 41.0 +0.6**
HYB *e*S **S 16 18 20.0 -3.5**
HYB Hyderabad 78.03 283 *e*P **P 16 08 29.2 -1.6**
HYB IAmb IAmb 16 08 32.0
comp=Z,214nm,1.4s
HYB IAMs_20 IAMs_20 16 46 56.8
comp=Z,5μm,14.0s
HYBB Hyderabad (bro 78.03 283 *e*P **P 16 08 30.6 -0.1**
HYBB IAmb IAmb 16 08 45.5
comp=Z,849nm,2.2s
HYBB IVMs_BB IVMs_BB 16 44 54.0
comp=Z,2μm,15.2s
ECH Echery 78.04 349 *e*P **P 16 08 29.7 -0.6**
comp=Z,83nm,1.3s
ECH LR LR
comp=Z,2μm,19.0s
ECH Echery 78.04 349 *e*P **P 16 08 29.7 -0.6**
ECH pmax pmax
comp=Z,83nm,1.3s
ECH MLR MLR
comp=Z,2μm,19.0s
959A Okeechobee 78.06 60 P **P 16 08 31.4 +0.7**
baz=324
PPT Papeete 78.08 142 LR LR 16 34 52.4
comp=Z,3μm,21.9s,baz=334,slow=29
PPT2 Papeete2 78.10 142 *e*P **P 16 08 32.7 +1.8**
comp=Z,202nm,1.5s
PPT2 *e*S **S 16 18 22.5 -1.4**
comp=Z,3μm,29.8s
PPT2 *e*SS **SS 16 23 27.2 +1.0**
comp=Z,1μm,26.2s
PPT2 *e*LQ LQ 16 28 41.4
comp=Z,9μm,31.5s
PPT2 *e*LR LR 16 32 42.5
comp=Z,7μm,23.0s,baz=340
ICOR Ion Corvin 78.14 334⇓ *i*P **P 16 08 32.2 +1.3**
TIAR Tiarei 78.15 142 *e*P **P 16 08 32.6 +1.5**
comp=Z,30nm,1.0s
PAE Paea 78.16 142 *e*P **P 16 08 32.6 +1.5**
comp=Z,46nm,1.4s
BKNI Bangkinang 78.20 254 PFAKE 16 08 40.0 +8.4
BKNI LR LR
comp=Z,2μm,18.0s
BZS Buzias 78.20 339⇑ *i*P **P 16 08 31.5 +0.3**
RAR Rarotonga 78.20 153 LR LR 16 36 01.9
comp=Z,2μm,19.8s,baz=334,slow=30
NJS Nagarjunasagar 78.27 282 *e*P **P 16 08 32.6 +0.6**
NJS IAmb IAmb 16 08 47.1
comp=Z,396nm,1.9s
NJS IVMs_BB IVMs_BB 16 49 59.8
comp=Z,2μm,17.0s
LDF La Druitiere 78.28 354 *e*P **P 16 08 30.2 -1.4**
LDF pmax pmax
comp=Z,90nm,1.1s
RETA Reutte 78.31 347 *i* pP **P 16 08 32.0 +0.1**
comp=Z,60nm,1.2s,SNR=31
SLE Schleitheim 78.33 348 P **P 16 08 32.0 +0.1**
HAU Haudompre 78.33 350 *e*P **P 16 08 31.0 -0.9**
HAU pmax pmax
comp=Z,122nm,1.3s
KBA Koelnbreinsper 78.33 345 *i* pP **P 16 08 33.3 +1.2**
comp=Z,303nm,1.0s,SNR=157
KBA Koelnbreinsper 78.33 345 P **P 16 08 33.3 +1.2**
WATA Walderalm 78.34 346 *i* pP **P 16 08 32.9 +0.7**
comp=Z,173nm,1.3s,SNR=26
BEHE Becsehely 78.34 343⇓ *e*P **P 16 08 33.1 +1.1**
059A Moore Haven 78.37 60 P **P 16 08 32.6 +0.2**
baz=324,SNR=6.6
059A Moore Haven 78.37 60 *e*P **P 16 08 32.6 +0.2**
comp=Z,453nm,1.1s
059A LR LR
comp=Z,6μm,22.0s
MOTA Moosalm 78.40 347 *i* P **P 16 08 32.0 -0.5**
comp=Z,147nm,1.3s,SNR=42
WTTA Wattenberg 78.40 346 *i* pP **P 16 08 33.2 +0.7**
comp=Z,150nm,1.3s,SNR=56
SOKA Soboth 78.45 344 *i* pP **P 16 08 33.5 +0.9**
comp=Z,307nm,1.3s,SNR=187
PSN Preselentsi 78.45 334 P **P 16 08 33.4 +0.8**
HINF Hinteralfeld 78.46 350 *e*P **P 16 08 31.4 -1.3**
PERS Pernice 78.47 344 *e*P **P 16 08 33.5 +0.7**

PERS e 16 08 40.7
PERS eS **S** **16 18 27.7 +0.2**
MYIG MØrida 78.48 71 eP **P** **16 08 33.4 +0.4**
comp=Z,1µm,1.1s
MYIG LR LR
comp=Z,2µm,18.0s
BHJ Bhuj 78.49 293 eP **P** **16 08 32.5 -0.7**
BHJ IAMs_20 IAMs_20 16 45 33.4
comp=Z,11µm,32.8s
BANR Banloc 78.53 339 ||i P **P** **16 08 34.4 +1.4**
CMIG Matias Romero 78.56 77 P **P** **16 08 33.7 0.0**
comp=Z,100nm,1.0s,baz=320,slow=4.7,SNR=62
DAVA Damuels 78.62 347 i pP **P** **16 08 34.2 +0.5**
comp=Z,63nm,1.3s,SNR=28
KLRI Killari 78.66 285 eP **P** **16 08 33.9 -0.4**
KLRI IAmb IAmb 16 08 35.7
comp=Z,224nm,1.4s
KLRI IVMs_BB IVMs_BB 16 46 26.6
comp=Z,5µm,20.6s
ROSF Rostrenen 78.68 357 eP **P** **16 08 33.0 -0.8**
ROSF pmax pmax
comp=Z,164nm,1.3s
OBKA Obir 78.69 344 i pP **P** **16 08 34.8 +0.8**
comp=Z,274nm,1.2s,SNR=97
MYKA Terra Mystica 78.72 345 i pP **P** **16 08 34.5 +0.4**
comp=Z,102nm,1.3s,SNR=48
059Z Ave Maria 78.72 61 P **P** **16 08 34.5 +0.1**
baz=324
060A Indiantown 78.72 60 P **P** **16 08 34.1 -0.3**
baz=325
060A Indiantown 78.72 60 PFAKE 16 08 50.0 +16
060A LR LR
comp=Z,8µm,19.0s
HERR Herculane 78.73 338⇑i P **P** **16 08 34.2 +0.1**
SGMF Saint Gilles 78.74 356 eP **P** **16 08 33.2 -0.9**
SGMF pmax pmax
comp=Z,105nm,1.2s
FETA Feichten 78.77 347 i pP **P** **16 08 35.2 +0.6**
comp=Z,106nm,1.1s,SNR=47
ABTA Abfaltersbach 78.78 346 i pP **P** **16 08 34.9 +0.4**
comp=Z,172nm,1.2s,SNR=84
SRLM Srisailam 78.87 282 eP **P** **16 08 34.8 -0.5**
SRLM IAmb IAmb 16 08 36.3
comp=Z,132nm,1.4s
SRLM IVMs_BB IVMs_BB 16 46 31.7
comp=Z,2µm,17.5s
MDVR Moldovita 78.98 339 ||i P **P** **16 08 35.9 +0.3**
QUIF Quistinic 79.10 356 eP **P** **16 08 35.7 -0.4**
QUIF pmax pmax
comp=Z,84nm,1.3s
PRD Provadia 79.10 334 P **P** **16 08 36.7 +0.5**
060Z West Palm Beac 79.13 60 P **P** **16 08 36.9 +0.3**
baz=325
BEO Beograd 79.22 340 eP **P** **16 08 36.1 -0.7**
BEO Beograd 79.22 340 eP **P** **16 08 36.1 -0.7**
FUORN Ofenpass-Fuorn 79.23 347 eP **P** **16 08 37.5 +0.3**
comp=Z,111nm,1.1s
FUORN LR LR
comp=Z,3µm,20.0s
ILGA Ilgaz 79.28 329 eP **P** **16 08 38.9 +1.4**
comp=Z,184nm,1.0s
ILGA LR LR
comp=Z,5µm,22.0s
VISS Visnje 79.33 344 eP **P** **16 08 37.4 0.0**
VISS e 16 08 45.2
VISS eS **S** **16 18 36.6 0.0**
VISS e 16 18 49.7
JAVS Javornik 79.37 344 i P **P** **16 08 37.4 -0.4**
JAVS i 16 08 44.1
JAVS eS **S** **16 18 35.9 -1.3**
JAVS e 16 18 50.0
061Z Ochoppi 79.39 61 P **P** **16 08 38.2 +0.2**
baz=325
OZLJ Ozalj 79.40 343 P **P** **16 08 38.6 +0.8**
SZH Strazhica 79.42 335 P **P** **16 08 38.3 +0.3**
GSI Gunungsitoli 79.44 258 eP **P** **16 08 37.7 -0.7**
comp=Z,244nm,1.6s
TUE Stuetta 79.49 348 eP **P** **16 08 38.8 +0.2**
comp=Z,131nm,1.2s
TUE LR LR
comp=Z,4µm,20.0s
SSF Saint Saulge 79.54 352 eP **P** **16 08 37.6 -0.9**
SSF pmax pmax
comp=Z,105nm,1.3s
BOJS Bojanci 79.55 343 i P **P** **16 08 39.1 +0.5**
BOJS i 16 08 46.0
BOJS eS **S** **16 18 37.6 -1.3**
BOJS e 16 18 45.1
BOJS SS **SS** **16 23 46.6 +1.3**
TRI Trieste 79.60 344 eP **P** **16 08 38.1 -0.7**
comp=Z,36nm,0.9s
TRI Trieste 79.60 344 eP **P** **16 08 38.1 -0.7**
TRI pmax pmax
comp=Z,36nm,0.9s
WRAB Tennant Creek 79.69 215 eP **P** **16 08 39.5 -0.1**
comp=Z,105nm,1.1s
WRAB Tennant Creek 79.69 215c iP **P** **16 08 40.0 +0.4**
WRAB pmax pmax
comp=Z,75nm,1.2s
WRA Warramunga Arr 79.71 215 P **P** **16 08 39.5 -0.1**
comp=Z,30nm,1.0s,baz=29,slow=6.0,SNR=54
WRA PKKPbc **PKKPbc** **16 27 26.6 +1.0**
comp=Z,0.8nm,0.8s,baz=218,slow=1.8,SNR=4.3
WRA PKPPKP P'P'df 16 35 40.6 +15
comp=Z,0.5nm,1.0s,baz=182,slow=11,SNR=4.7
WRA LR LR 16 40 19.3
comp=Z,3µm,22.0s,baz=45,slow=33
CABF La Chapelle 79.74 350 eP **P** **16 08 39.1 -0.6**
CABF pmax pmax
comp=Z,148nm,1.4s
AVF Avril sur Loir 79.82 352 eP **P** **16 08 39.2 -0.9**
AVF pmax pmax
comp=Z,124nm,1.2s
SENIN Lac Senin/Sane 79.85 349 eP **P** **16 08 40.2 -0.3**
comp=Z,47nm,1.0s
SENIN LR LR
comp=Z,4µm,21.0s
MPEP Malo Peshtene 79.87 337 P **P** **16 08 40.3 -0.1**
POO Poona 79.88 287 eP **P** **16 08 40.1 -0.8**
POO IAmb IAmb 16 08 42.6
comp=Z,67nm,0.6s
BLY Banja Luka 79.93 342 ||i P **P** **16 08 41.4 +0.7**
BLY Banja Luka 79.93 342 eP **P** **16 08 40.7 0.0**
comp=Z,44nm,0.8s
DIVS Divibare 80.00 340 eP **P** **16 08 41.4 +0.2**
comp=Z,138nm,1.1s
DIVS LR LR
comp=Z,5µm,18.0s
JMB Yambol 80.00 334 P **P** **16 08 40.6 -0.5**
BGF Bois d'Agland 80.09 352 eP **P** **16 08 40.8 -0.8**
BGF pmax pmax
comp=Z,112nm,1.5s
BOM Bombay 80.19 288 ex P 16 08 51.7 +9.3
BOM eS **S** **16 18 48.4 +2.2**
BOM IAMs_20 IAMs_20 16 44 01.2
comp=Z,7µm,8.8s
062Z Marathon 80.23 62 P **P** **16 08 42.7 +0.1**
baz=325
SKHT Srikalahasti 80.25 280 eP **P** **16 08 43.2 +0.4**
SKHT IAmb IAmb 16 08 58.6
comp=Z,153nm,1.4s
SKHT IVMsBB 16 46 05.6
comp=Z,2µm,15.5s
MFF Saint Martin d 80.26 354 eP **P** **16 08 41.7 -0.8**
MFF pmax pmax
comp=Z,148nm,1.3s
EIDS Eidsvold 80.31 199 eP **P** **16 08 43.6 +0.8**
comp=Z,82nm,1.4s
LEM Lembang 80.37 245 LR LR 16 45 18.7
comp=Z,352nm,21.0s,baz=16,slow=36
UDBI Udbina 80.40 343 P **P** **16 08 43.4 0.0**
TCF Toulx Ste Croi 80.41 353 eP **P** **16 08 42.4 -0.9**
TCF pmax pmax
comp=Z,58nm,1.1s
BR131 Keskin Array S 80.51 328 eP **P** **16 08 44.1 0.0**
BRTR Keskin Array B 80.51 328 P **P** **16 08 44.5 +0.4**
comp=Z,32nm,0.8s,baz=46,slow=3.6,SNR=113
BRTR PP **PP** **16 11 49.2 +2.5**
comp=Z,8.9nm,1.1s,baz=41,slow=3.9,SNR=3.8
BRTR PKKPbc PKKPbc 16 27 30.9 +8.5
comp=Z,1.7nm,1.0s,baz=204,slow=6.0,SNR=4.2
BRTR PKPPKP **P'P'df** **16 35 33.4 -1.5**
comp=Z,1.2nm,1.0s,baz=191,slow=5.0,SNR=4.2
BRTR LR LR 16 47 23.1
comp=Z,3µm,21.6s,baz=20,slow=38
BRTR Keskin Array B 80.51 328 P **P** **16 08 44.5 +0.4**
BRTR 16 11 49.2
BRTR pmax pmax
comp=Z,31nm,0.8s
BRTR pmax pmax
comp=Z,9.0nm,1.1s
BRTR MLR MLR
comp=Z,3µm,21.6s
NVLJ Novalja 80.53 343 P **P** **16 08 44.0 +0.1**
PGB Panagyurishte 80.53 336 P **P** **16 08 44.4 +0.3**
ANTO Ankara 80.64 329 ||i P **P** **16 08 46.1 +1.3**
ANTO Ankara 80.64 329 eP **P** **16 08 45.3 +0.6**
comp=Z,106nm,1.0s
ANTO LR LR
comp=Z,4µm,20.0s
ANTO Ankara 80.64 329 P **P** **16 08 46.0 +1.3**
SNR=34
DIM Dimitrovgrad 80.66 335 P **P** **16 08 45.9 +1.2**
BR231 Keskin MP Arra 80.67 329 eP **P** **16 08 45.7 +0.8**
VTS Vitosha 80.72 337 ||i P **P** **16 08 45.4 +0.2**
VTS Vitosha 80.72 337 eP **P** **16 08 44.3 -0.9**
VTS LR LR
comp=Z,5µm,19.0s
VTS Vitosha 80.72 337 P **P** **16 08 45.4 +0.2**
VTS Vitosha 80.72 337 P **P** **16 08 44.3 -0.9**
VTS Vitosha 80.72 337 eP **P** **16 08 44.3 -0.9**
VTS MLR MLR
comp=Z,5µm,19.0s
URV Uravakonda 80.74 282 eP **P** **16 08 45.1 -0.4**
URV IAmb IAmb 16 09 00.3
comp=Z,183nm,1.6s
URV IVMs_BB IVMs_BB 16 48 58.3
comp=Z,2µm,18.9s
LPL La Plagne 80.75 349 eP **P** **16 08 45.5 +0.1**
LPL pmax pmax
comp=Z,94nm,1.1s
LPG La Plagne 80.76 349 eP **P** **16 08 45.8 +0.2**
LPG pmax pmax
comp=Z,151nm,1.2s
CCIG Comitan 80.80 75 eP **P** **16 08 46.2 +0.2**
comp=Z,195nm,1.2s
CCIG LR LR
comp=Z,2µm,19.0s
PLD Plovdiv 80.82 336 P **P** **16 08 45.7 +0.2**
PLD Plovdiv 80.82 336 eP **P** **16 08 46.3 +0.8**
PLE Pljevlja 80.86 340⇑i P **P** **16 08 46.3 +0.4**
CISI Cisompet, Garu 80.87 244 PFAKE 16 09 00.0 +14
CISI LR LR
comp=Z,1µm,20.0s
KDZ Kurdzhali 81.07 335 P **P** **16 08 47.7 +0.8**
UPM Unac-Piva 81.08 340 eP **P** **16 08 46.9 -0.3**
IVA Berane 81.19 339⇑i P **P** **16 08 48.1 +0.5**
SSB Saint Sauveur 81.21 351 eP **P** **16 08 47.5 -0.1**
comp=Z,99nm,1.2s
SSB LR LR
comp=Z,2µm,18.0s
SSB Saint Sauveur 81.21 351 eP **P** **16 08 47.5 -0.1**
SSB pmax pmax
comp=Z,99nm,1.2s
SSB MLR MLR
comp=Z,2µm,18.0s
BNI Bardonecchia 81.21 349 eP **P** **16 08 48.5 +0.7**
comp=Z,152nm,1.2s
BNI LR LR
comp=Z,5µm,20.0s
BNI Bardonecchia 81.21 349 eP **P** **16 08 48.5 +0.7**
BNI pmax pmax
comp=Z,152nm,1.2s
BNI MLR MLR
comp=Z,5µm,20.0s
KOME Kolasin 81.29 340⇑i P **P** **16 08 47.9 -0.3**
FITZ Fitzroy Crossi 81.35 224 P **P** **16 08 49.0 +0.4**
comp=Z,18nm,0.8s,baz=26,slow=5.5,SNR=25
FITZ LR LR 16 42 53.5
comp=Z,380nm,19.1s,baz=33,slow=34
FITZ Fitzroy Crossi 81.35 224 eP **P** **16 08 48.9 +0.4**
comp=Z,154nm,1.4s
ORIF Oris-en-Rattie 81.43 350 eP **P** **16 08 48.9 0.0**
ORIF pmax pmax
comp=Z,148nm,1.2s
KKB Krupnik 81.44 337 P **P** **16 08 49.5 +0.7**
NKY Niksic 81.44 340 eP **P** **16 08 49.0 0.0**
BRY Bratogost 81.44 340⇑i P **P** **16 08 48.7 -0.3**
PVY Plav 81.44 339⇑i P **P** **16 08 48.6 -0.4**
NKME Niksic 81.49 340 eP **P** **16 08 48.7 -0.5**
RDO Rodhopi 81.51 335 eP **P** **16 08 49.3 +0.1**
RDO Rodhopi 81.51 335 P **P** **16 08 49.3 +0.1**
MMB Musomiste 81.54 336 P **P** **16 08 49.7 +0.3**
ALN Alexandroupoli 81.61 334 P **P** **16 08 49.9 +0.2**
ALN Alexandroupoli 81.61 334 P **P** **16 08 49.9 +0.2**
ALN Alexandroupoli 81.61 334 P **P** **16 08 49.9 +0.2**
VIVF Saint-Julien-l 81.62 351 eP **P** **16 08 49.5 -0.3**
VIVF pmax pmax
comp=Z,115nm,1.6s
VLC Villacollemand 81.62 346 eP **P** **16 08 49.9 +0.1**
comp=Z,346nm,1.7s
VLC LR LR
comp=Z,5µm,19.0s
BCI Bajram Curri 81.64 339 i P **P** **16 08 46.3 -3.7**
STON Ston 81.64 341 P **P** **16 08 48.0 -1.9**
CEME Cevo 81.71 340⇑i P **P** **16 08 50.0 -0.3**
SKO Skopje 81.72 338 eP **P** **16 08 51.0 +0.7**
SKO Skopje 81.72 338 P **P** **16 08 51.0 +0.7**
SKO Skopje 81.72 338 i P **P** **16 08 51.0 +0.7**
BBSR BB Station 81.72 45 eP **P** **16 08 50.2 -0.2**
comp=Z,403nm,1.9s
BBSR LR LR
comp=Z,4µm,19.0s
NVR Nevrokopi 81.74 336 eP **P** **16 08 50.8 +0.3**
NVR Nevrokopi 81.74 336 P **P** **16 08 50.8 +0.3**
PDG Podgorica 81.75 340 ||i P **P** **16 08 50.4 0.0**
PDG Podgorica 81.75 340 P **P** **16 08 50.5 0.0**
TTG Podgorica 81.75 340⇑i P **P** **16 08 50.4 0.0**
TTG Podgorica 81.75 340 P **P** **16 08 50.5 0.0**
TTG Podgorica 81.75 340 P **P** **16 08 50.5 0.0**
CAF Calviac 81.78 353 eP **P** **16 08 50.3 -0.3**
CAF pmax pmax
comp=Z,123nm,1.2s
STIP Stip 81.81 337 i P **P** **16 08 49.8 -1.0**
LFF La Frestale 81.86 353 eP **P** **16 08 50.8 -0.2**
HCY Herceg Novi 81.89 340⇑i P **P** **16 08 50.6 -0.6**
BUM Brajici-Budva 81.95 340⇑i P **P** **16 08 51.4 -0.2**
PUK Puka 81.99 339 i P **P** **16 08 53.1 +1.3**
DRME Dracevica, Mon 82.00 340⇑i P **P** **16 08 52.0 +0.2**
SRS Serrai 82.02 336 eP **P** **16 08 52.0 +0.1**
SRS Serrai 82.02 336 P **P** **16 08 52.0 +0.1**
SRS Serrai 82.02 336 eP **P** **16 08 52.0 +0.1**
VAY Valandovo 82.07 337 eP **P** **16 08 52.5 +0.3**
VAY Valandovo 82.07 337 P **P** **16 08 52.5 +0.3**
VAY Valandovo 82.07 337 i P **P** **16 08 52.9 +0.7**
VAY Valandovo 82.07 337 eP **P** **16 08 52.5 +0.3**
SMTH Samothraki Isl 82.15 335 eP **P** **16 08 52.7 +0.1**
SMTH Samothraki Isl 82.15 335 P **P** **16 08 52.7 +0.1**
KNT Kendrikon 82.15 337 eP **P** **16 08 53.1 +0.5**
KNT Kendrikon 82.15 337 P **P** **16 08 53.1 +0.5**
ULC Ulcinj 82.20 340⇑i P **P** **16 08 52.6 -0.3**
PHP Peshkopia 82.21 339 eP **P** **16 08 53.0 0.0**
PHP Peshkopia 82.21 339 P **P** **16 08 53.0 0.0**
PHP Peshkopia 82.21 339 i P P 16 08 46.3 -6.7
PHP Peshkopia 82.21 339 eP **P** **16 08 53.0 0.0**
SLMH Al Salmeh 82.25 324 eP **P** **16 08 53.5 +0.3**
SBF Sospel 82.30 349 eP **P** **16 08 52.7 -0.7**
SBF pmax pmax
comp=Z,166nm,1.2s
SOH Sokhos 82.36 336 eP **P** **16 08 53.5 -0.3**
SOH Sokhos 82.36 336 P **P** **16 08 53.5 -0.3**
SOH Sokhos 82.36 336 eP **P** **16 08 53.5 -0.3**
GRG Griva 82.46 337 eP **P** **16 08 54.6 +0.3**
GRG Griva 82.46 337 P **P** **16 08 54.6 +0.3**
GRG Griva 82.46 337 eP **P** **16 08 54.6 +0.3**
EZN Ezine 82.54 334 eP **P** **16 08 54.4 -0.2**
EZN Ezine 82.54 334 P **P** **16 08 54.4 -0.2**
EZN Ezine 82.54 334 eP **P** **16 08 54.4 -0.2**
HORT Hortiatis 82.63 336 eP **P** **16 08 54.7 -0.5**
HORT Hortiatis 82.63 336 P **P** **16 08 54.7 -0.5**
THE Thessaloniki 82.63 336 eP **P** **16 08 55.0 -0.1**
THE Thessaloniki 82.63 336 P **P** **16 08 55.0 -0.1**
THE Thessaloniki 82.63 336 eP **P** **16 08 55.0 -0.1**
BIA Bitola 82.65 338 i P **P** **16 08 55.6 +0.3**
TIR Tirane 82.66 339 eP **P** **16 08 55.4 +0.2**
comp=Z,156nm,1.1s
TIR LR LR
comp=Z,6µm,18.0s
OUR Ouranopolis 82.67 336 eP **P** **16 08 55.3 0.0**
OUR Ouranopolis 82.67 336 P **P** **16 08 55.3 0.0**
OUR Ouranopolis 82.67 336 eP **P** **16 08 55.3 0.0**
OHR Ohrid 82.68 338 i P **P** **16 08 55.5 +0.1**
OHR Ohrid 82.68 338 P **P** **16 08 57.0 +1.6**
FRF La Foret Royal 82.69 349 eP **P** **16 08 55.8 +0.4**
FRF pmax pmax
comp=Z,108nm,1.0s
PLG Polygyros 82.76 336 eP **P** **16 08 55.5 -0.4**
PLG Polygyros 82.76 336 P **P** **16 08 55.5 -0.4**
LIA Limnos Island 82.78 335 eP **P** **16 08 55.6 -0.2**
LIA Limnos Island 82.78 335 P **P** **16 08 55.6 -0.2**
FNA Florina 82.86 338 P **P** **16 08 55.4 -1.0**
FNA Florina 82.86 338 P **P** **16 08 55.4 -1.0**
FNA Florina 82.86 338 P **P** **16 08 55.4 -1.0**
AQU L'Aquila 82.92 344 eP **P** **16 08 56.5 -0.2**
comp=Z,200nm,1.0s
AQU LR LR
comp=Z,4µm,18.0s
AQU L'Aquila 82.92 344 eP **P** **16 08 56.5 -0.2**
AQU pmax pmax
comp=Z,200nm,1.0s
AQU MLR MLR
comp=Z,4µm,18.0s
PRK Paraskevi 83.10 334 eP **P** **16 08 56.6 -1.0**
PRK Paraskevi 83.10 334 P **P** **16 08 56.6 -1.0**
PRK Paraskevi 83.10 334 eP **P** **16 08 56.6 -1.0**
PAIG Paliouri 83.13 336 eP **P** **16 08 57.3 -0.4**
PAIG Paliouri 83.13 336 P **P** **16 08 57.3 -0.4**
PAIG Paliouri 83.13 336 eP **P** **16 08 57.3 -0.4**
KBN Korca 83.15 338 i P **P** **16 08 53.9 -4.0**
MANT Manisa 83.17 332 eP **P** **16 08 57.8 -0.4**
comp=Z,467nm,1.4s
ISP Isparta 83.22 330 eP **P** **16 08 57.9 -0.5**
ISP Isparta 83.22 330 P **P** **16 08 57.9 -0.5**
ISP Isparta 83.22 330d iP **P** **16 08 57.9 -0.5**
ISP i *PP **sP** **16 09 06.8 -0.7**
KZN Kozani 83.22 337 eP **P** **16 08 58.1 -0.2**
KZN Kozani 83.22 337 P **P** **16 08 58.1 -0.2**
SIGR SIGRI 83.25 334 eP **P** **16 08 57.5 -0.8**
SIGR SIGRI 83.25 334 P **P** **16 08 57.5 -0.8**
LIT Litokhoron 83.25 337 P **P** **16 08 57.7 -0.7**
LIT Litokhoron 83.25 337 P **P** **16 08 57.7 -0.7**
LIT Litokhoron 83.25 337 P **P** **16 08 57.7 -0.7**
AS01 Alice Springs 83.28 214 eP **P** **16 08 58.9 +0.3**
NEST Nestorio 83.29 338 P **P** **16 08 58.3 -0.4**
SHME Shamm 83.29 305 i P **P** **16 08 57.9 -0.9**
SNR=9.9
AS31 Alice Springs 83.30 214 eP **P** **16 08 58.8 +0.2**
comp=Z,12nm,0.8s
ASAR Alice Springs 83.30 214 P **P** **16 08 59.5 +0.9**
comp=Z,20nm,1.2s,baz=95,slow=7.9,SNR=14
ASAR PKKPbc **PKKPbc** **16 27 21.3 +3.8**
comp=Z,0.6nm,0.8s,baz=201,slow=2.4,SNR=3.7
ASAR PKPPKP P'P'df 16 35 29.4 +11
comp=Z,1.5nm,0.9s,baz=180,slow=2.5,SNR=6.6
ASAR LR LR 16 41 39.0
comp=Z,2µm,21.7s,baz=26,slow=32
BANOM Banah 83.31 305 P **P** **16 08 59.7 +0.7**
SNR=18
BANOM Banah 83.31 305 i P **P** **16 08 58.3 -0.7**
SNR=17
PENT Pentalofos 83.48 338 P **P** **16 08 59.4 -0.2**
KPRO Kipourio 83.65 337 P **P** **16 09 00.0 -0.5**
XOR Xorichti 83.78 336 eP **P** **16 08 57.9 -3.2**
XOR Xorichti 83.78 336 P **P** **16 08 57.9 -3.2**
FYTO Fytoko, Volos 83.80 336 eP **P** **16 09 00.4 -0.8**
FYTO Fytoko, Volos 83.80 336 P **P** **16 09 00.4 -0.8**
NEO Neokhori 83.83 336 eP **P** **16 09 00.6 -0.7**
NEO Neokhori 83.83 336 P **P** **16 09 00.6 -0.7**
MDH Madha 83.84 305 i P **P** **16 08 59.8 -1.7**
SNR=7.8
MSFE Esma-Masafi 83.86 305 i P **P** **16 09 00.8 -0.9**
SNR=6.9
THL Klokotos Trika 83.87 337 P **P** **16 09 00.2 -1.3**
UMQ Umm Al-Quwin 83.96 305 P **P** **16 09 02.4 +0.2**
CHOS Chios island 83.97 333 eP **P** **16 09 02.1 0.0**
CHOS Chios island 83.97 333 P **P** **16 09 02.1 0.0**
MATE Matera 83.98 341 ||i P **P** **16 09 02.6 +0.6**
JAN Janina 84.06 338 eP **P** **16 09 03.0 +0.5**
JAN Janina 84.06 338 P **P** **16 09 03.0 +0.5**
JAN Janina 84.06 338 P **P** **16 09 03.0 +0.5**
UOSS Minazif 84.18 304 eP **P** **16 09 02.1 -1.2**
comp=Z,128nm,1.4s
UOSS LR LR
comp=Z,6µm,22.0s
UOSS Minazif 84.18 304 i P **P** **16 09 02.1 -1.2**
SNR=11
KEK Kerkira 84.24 339 eP **P** **16 09 03.1 -0.3**
KEK Kerkira 84.24 339 P **P** **16 09 03.1 -0.3**
SGD Sagiada 84.24 338 P **P** **16 09 03.0 -0.4**
AGG Agios Georgios 84.31 336 eP **P** **16 09 02.8 -1.1**
AGG LR LR
comp=Z,9µm,19.0s
AGG Agios Georgios 84.31 336 P **P** **16 09 02.2 -1.6**
AGG Agios Georgios 84.31 336 eP **P** **16 09 02.8 -1.1**
AGG MLR MLR
comp=Z,9µm,19.0s
HATD Hatta, Dubai 84.31 304 P **P** **16 09 04.0 0.0**
SNR=18
HATD Hatta, Dubai 84.31 304 i P **P** **16 09 03.2 -0.9**
SNR=14
WSAR Wadi Sarin 84.38 302 LR LR 16 50 42.9
comp=Z,4µm,18.0s,baz=75,slow=38
BIDO Bidbid 84.40 302 P **P** **16 09 06.0 +1.5**
SNR=5.1
NAZ Nazwa, Dubai 84.41 305 P **P** **16 09 05.0 +0.5**
SNR=13
NAZ Nazwa, Dubai 84.41 305 i P **P** **16 09 03.5 -1.0**
SNR=8.8
DSL Palaion Diasel 84.50 337 eP **P** **16 09 02.4 -2.4**
DSL Palaion Diasel 84.50 337 P **P** **16 09 02.4 -2.4**
LKR Lokris 84.50 336 eP **P** **16 09 02.8 -1.9**
LKR Lokris 84.50 336 P **P** **16 09 02.8 -1.9**
EVR Evrytania 84.54 337 eP **P** **16 09 04.0 -1.1**
EVR Evrytania 84.54 337 P **P** **16 09 04.0 -1.1**
SNET Serv Nac Est T 84.55 75 PFAKE 16 09 20.0 +15
SNET LR LR
comp=Z,2µm,19.0s
SOHO SOHO 84.69 304 i P **P** **16 09 04.7 -1.2**
SNR=12
HWQ Hawqa 84.69 324 eP **P** **16 09 05.4 -0.6**
FETY Fethiye 84.75 331 eP **P** **16 09 04.2 -1.9**
FETY Fethiye 84.75 331 P **P** **16 09 04.2 -1.9**
PALK Pallekele 84.77 275 P **P** **16 09 08.7 +2.3**
comp=Z,12nm,0.8s,baz=114,slow=2.7,SNR=6.4
PALK Pallekele 84.77 275 P **P** **16 09 08.7 +2.3**
PALK LR LR
comp=Z,2µm,20.0s
CUC Castrocucco 84.78 342 eP **P** **16 09 05.0 -1.3**
comp=Z,26nm,1.2s
CUC LR LR
comp=Z,2µm,21.0s
MAMC Mammari 84.81 327 P **P** **16 09 06.4 0.0**
ANX Ano Chora 84.82 337 P **P** **16 09 05.1 -1.4**
DSF Desfina 84.85 336 eP **P** **16 09 04.6 -2.0**
DSF Desfina 84.85 336 P **P** **16 09 04.6 -2.0**
ASUD Al Ashush, Dub 84.88 305 P **P** **16 09 08.0 +1.1**
SNR=10
ASUD Al Ashush, Dub 84.88 305 i P **P** **16 09 06.4 -0.4**
SNR=12
PVO Paravola 84.89 337 P **P** **16 09 06.3 -0.4**
LKD2 Lefkada island 84.93 338 eP **P** **16 09 06.3 -0.6**
LKD2 Lefkada island 84.93 338 P **P** **16 09 06.3 -0.6**
SERG Sergoula 84.96 336 P **P** **16 09 06.0 -1.1**
CSS Mathiatis 84.96 327 eP **P** **16 09 06.7 -0.4**
comp=Z,88nm,1.2s
CSS LR LR
comp=Z,1µm,22.0s
CSS Mathiatis 84.96 327 P **P** **16 09 07.6 +0.4**
CSS Mathiatis 84.96 327 P **P** **16 09 07.0 -0.2**
EFP Efpalio 84.98 337 P **P** **16 09 05.6 -1.6**
PDO Prodromos 84.99 337 P **P** **16 09 06.8 -0.4**
TRIZ Trizonia 85.00 336 P **P** **16 09 05.5 -1.7**
ALFC Alefka 85.02 327 P **P** **16 09 07.1 -0.4**
AJN Ajban 85.10 305 i P **P** **16 09 07.0 -1.0**
SNR=11
ARMA Armidale 85.13 197 eP **P** **16 09 08.6 +0.8**
comp=Z,145nm,1.3s
BHL Bhannes 85.14 325 eP **P** **16 09 08.3 +0.1**
LAKA Lakka 85.14 336 eP **P** **16 09 06.3 -1.7**
LAKA Lakka 85.14 336 P **P** **16 09 06.3 -1.7**
ALNE Al Ain 85.15 304 i P **P** **16 09 07.8 -0.5**
SNR=13
PGAV Gavieira, Arco 85.15 360 eP **P** **16 09 07.4 -0.7**

comp=Z,143nm,1.4s
PGAV Gavieira, Arco 85.15 360 *e*P **P 16 09 08.2 +0.1**
comp=Z,143nm,1.4s
PGAV Gavieira, Arco 85.15 360 *e*S **S 16 19 36.4 -0.2**
PGAV *e*SS SS 16 25 30.5 +22
PGAV Gavieira, Arco 85.15 360 *e*LR LR 16 37 11.8
comp=Z,2µm,18.0s
THAL Thalero 85.17 336 P **P 16 09 06.6 -1.5**
AKMC Akamas 85.23 327 P **P 16 09 07.8 -0.7**
QASN Qassioun 85.25 324 *e*P **P 16 09 08.6 -0.1**
FSK Fiskardo 85.27 338 P **P 16 09 07.8 -0.8**
KLV Kalavryta, Ach 85.29 336 *e*P **P 16 09 06.9 -1.9**
KLV Kalavryta, Ach 85.29 336 P **P 16 09 06.9 -1.9**
PBRG Braganca 85.30 359 *e*P **P 16 09 08.4 -0.4**
comp=Z,98nm,1.6s
PBRG Braganca 85.30 359 *e*P **P 16 09 08.9 +0.1**
comp=Z,98nm,1.6s
SZAC Souni 85.30 327 P **P 16 09 09.0 +0.1**
GUR Goura 85.34 336 *e*P **P 16 09 07.7 -1.4**
GUR Goura 85.34 336 P **P 16 09 07.7 -1.4**
DQRL Deir Qamar 85.34 325 *e*P **P 16 09 09.7 +0.5**
PPCY Paphos 85.35 327 P **P 16 09 08.0 -1.1**
TOTH TOTAH 85.35 324 *e*P **P 16 09 09.5 +0.3**
TGUH Tegucigalpa,Un 85.38 73 *e*P **P 16 09 09.5 +0.1**
comp=Z,608nm,1.4s
TGUH LR LR
comp=Z,2µm,19.0s
TIP Timpagrande 85.39 341 || *i*P **P 16 09 09.5 +0.2**
TIP Timpagrande 85.39 341 *e*P **P 16 09 09.0 -0.3**
TIP LR LR
comp=Z,5µm,18.0s
TIP Timpagrande 85.39 341 P **P 16 09 08.1 -1.2**
PCAB Cabril 85.40 360 *e*P **P 16 09 09.2 -0.1**
comp=Z,79nm,2.0s
PCAB Cabril 85.40 360 *e*P **P 16 09 10.2 +0.9**
comp=Z,79nm,2.0s
ARG Arkhangelos 85.42 331 *e*P **P 16 09 08.7 -0.7**
ARG Arkhangelos 85.42 331 P **P 16 09 08.7 -0.7**
ARG Arkhangelos 85.42 331 *e*P **P 16 09 08.7 -0.7**
RLS Riolos of Patr 85.44 337 *e*P **P 16 09 10.1 +0.7**
RLS Riolos of Patr 85.44 337 P **P 16 09 10.1 +0.7**
BRBR Barbar 85.48 324 *e*P **P 16 09 10.3 +0.3**
DRO Drossia 85.48 337 P **P 16 09 09.4 -0.3**
KFL Anninata 85.55 337 P **P 16 09 09.2 -0.8**
SHBL Chebaa 85.61 324 *e*P **P 16 09 10.9 +0.3**
POLO Lamas de Olo 85.74 360 *e*P **P 16 09 07.9 -3.1**
comp=Z,44nm,1.4s
POLO Lamas de Olo 85.74 360 *e*P **P 16 09 10.0 -1.0**
comp=Z,44nm,1.4s
TRIP Tripoli 85.75 336 P **P 16 09 10.8 -0.3**
PVRL Vila Real 85.83 359 *e*P **P 16 09 11.9 +0.5**
comp=Z,162nm,1.5s
VLX Vlachokerasia 85.87 336 *e*P **P 16 09 10.0 -1.8**
VLX Vlachokerasia 85.87 336 P **P 16 09 10.0 -1.8**
AMT Artemida-Makis 85.88 336 P **P 16 09 10.0 -1.7**
MVO Moncorvo 85.94 359 *e*P **P 16 09 11.9 -0.1**
comp=Z,90nm,1.7s
MVO Moncorvo 85.94 359 *e*P **P 16 09 12.1 +0.1**
comp=Z,90nm,1.7s
MVO Moncorvo 85.94 359 *e*S **S 16 19 44.5 +0.2**
MVO *e*SS SS 16 25 40.3 +20
MVO Moncorvo 85.94 359 *e*LR LR 16 37 48.4
comp=Z,2µm,18.0s
SANT Santorini 86.02 333 PFAKE 16 09 20.0 +7.6
SANT LR LR
comp=Z,5µm,21.0s
MMAI Mount Meron Ar 86.03 324 P **P 16 09 12.7 +0.1**
comp=Z,52nm,1.0s,baz=38,slow=7.3,SNR=40
MMAI LR LR 16 50 47.8
comp=Z,3µm,18.3s,baz=25,slow=38
ITM Ithomi 86.16 336 *e*P **P 16 09 12.3 -0.8**
ITM LR LR
comp=Z,3µm,18.0s
ITM Ithomi 86.16 336 P **P 16 09 11.9 -1.2**
KARP Karpathos 86.32 332 *e*P **P 16 09 11.5 -2.4**
comp=Z,44nm,0.8s
KARP LR LR
comp=Z,1µm,19.0s
PVIS Viseu 86.39 360 *e*P **P 16 09 14.7 +0.5**
comp=Z,87nm,1.4s
CEL Celeste 86.45 341 PFAKE
CEL LR LR 16 09 30.0 +15
comp=Z,3µm,19.0s
DYR Agios Nikonas 86.46 336 P **P 16 09 13.3 -1.3**
PYL PYLOS 86.48 336 *e*P **P 16 09 12.8 -1.8**
PYL PYLOS 86.48 336 P **P 16 09 12.8 -1.8**
MBWA Marble Bar 86.60 227 *e*P **P 16 09 14.3 -0.9**
comp=Z,66nm,1.3s
ESTN Estel 86.67 73 *e*P **P 16 09 15.0 -1.0**
comp=Z,178nm,1.3s
ESTN LR LR
comp=Z,3µm,22.0s
MTE Manteigas 86.71 359 *e*P **P 16 09 16.3 +0.5**
comp=Z,80nm,1.8s
MTE Manteigas 86.71 359 *e*S **S 16 19 51.8 0.0**
MTE *e*SS SS 16 25 52.0 +20
MTE Manteigas 86.71 359 *e*LR LR 16 38 37.4
comp=Z,2µm,18.0s
MTE Manteigas 86.71 359 *e*P **P 16 09 14.7 -1.1**
comp=Z,30nm,1.0s
MTE LR LR
comp=Z,2µm,19.0s
ZKR Zakros 86.99 332 *e*P **P 16 09 15.7 -1.5**
ZKR Zakros 86.99 332 P **P 16 09 15.7 -1.5**
PCAS Casmilo, Conde 87.06 0 *e*P **P 16 09 17.7 +0.3**
comp=Z,66nm,1.8s
PCAS Casmilo, Conde 87.06 0 *e*P **P 16 09 18.0 +0.6**
comp=Z,66nm,1.8s
ANKY Antikythira Is 87.06 335 *e*P **P 16 09 15.2 -2.3**
ANKY Antikythira Is 87.06 335 P **P 16 09 15.2 -2.3**
MZR Muzera 87.15 306 *i*P **P 16 09 17.7 -0.4**
SNR=25
LAST Lasithi 87.15 333 *e*P **P 16 09 16.0 -2.1**
LAST Lasithi 87.15 333 P **P 16 09 16.0 -2.1**
IDI Anoyia 87.19 333 P **P 16 09 16.9 -1.3**
comp=Z,13nm,0.8s,baz=22,slow=9.9,SNR=5.1
IDI LR LR 16 52 09.4
comp=Z,2µm,18.6s,baz=25,slow=38
IDI Anoyia 87.19 333 *e*P **P 16 09 16.9 -1.3**
comp=Z,60nm,1.1s
PCBR Castelo Branco 87.27 359 *e*P **P 16 09 18.4 0.0**
comp=Z,30nm,1.4s
IMMV Iera Moni Meta 87.27 334 P **P 16 09 15.0 -3.5**
GTBY Guantanamo Bay 87.28 60 PFAKE 16 09 30.0 +11
GTBY LR LR
comp=Z,7µm,19.0s
ES19 SONSECA Array 87.33 357 *e*P **P 16 09 17.5 -1.3**
ESDC Sonseca Array 87.36 357 P **P 16 09 18.5 -0.4**
comp=Z,13nm,0.9s,baz=357,slow=4.6,SNR=36
ESLA Sonseca Array 87.36 357 *e*P **P 16 09 17.9 -1.0**
comp=Z,37nm,1.2s
MTDJ Mount Denham 87.41 63 *e*P **P 16 09 19.4 -0.1**
comp=Z,219nm,1.1s
MTDJ LR LR
comp=Z,5µm,20.0s
VAE Valguarnera 87.49 342 LR LR 16 52 59.7
comp=Z,3µm,19.4s,baz=30,slow=39
PTOM Tomar 87.49 0 *e*P **P 16 09 20.1 +0.6**
comp=Z,46nm,0.8s
PAB San Pablo 87.50 357 *e*P **P 16 09 19.0 -0.6**
comp=Z,25nm,1.2s
PAB LR LR
comp=Z,2µm,21.0s
PAB San Pablo 87.50 357 *e*P **P 16 09 19.0 -0.6**
PAB pmax pmax
comp=Z,25nm,1.2s
PAB MLR MLR
comp=Z,2µm,21.0s
PMRV Marv??o 87.68 359 *e*P **P 16 09 20.4 0.0**
comp=Z,25nm,1.3s
PMRV Marv??o 87.68 359 *e*S **S 16 20 00.2 -0.9**
PMRV *e*SS SS 16 26 07.8 +22
PMRV Marv??o 87.68 359 *e*LR LR 16 38 48.6
comp=Z,2µm,18.0s
GRTK Grand Turk 87.98 56 PFAKE 16 09 30.0 +7.9
GRTK LR LR
comp=Z,7µm,21.0s
PMTG Montargil 88.04 360 *e*P **P 16 09 21.9 -0.2**
comp=Z,36nm,1.2s
OUZ Omahuta 88.14 178 PFAKE
OUZ LR LR 16 09 30.0 +7.8
comp=Z,3µm,20.0s
PESTR Estremoz 88.24 359 *e*P **P 16 09 21.9 -1.2**
comp=Z,39nm,1.6s
PESTR Estremoz 88.24 359 *e*P **P 16 09 22.7 -0.4**
comp=Z,39nm,1.6s
PESTR Estremoz 88.24 359 *e*P **P 16 09 22.2 -1.0**
comp=Z,16nm,1.1s
PESTR LR LR
comp=Z,2µm,19.0s
LIS Lisbon 88.39 1 *e*P **P 16 09 24.1 +0.3**
LIS AMS AMS 16 56 26.4
comp=N,4µm,13.7s
EVO Evora 88.58 360 *e*P **P 16 09 24.5 -0.2**
comp=N,42nm,1.2s
ESPN Las Esperanzas 88.58 72 PFAKE 16 09 40.0 +15
ESPN LR LR
comp=Z,1µm,20.0s
STKA Stephens Creek 88.72 205 P **P 16 09 25.6 +0.6**
comp=Z,41nm,1.1s,baz=9.1,slow=6.1,SNR=20
STKA LR LR 16 45 17.5
comp=Z,855nm,20.7s,baz=9.7,slow=33
STKA Stephens Creek 88.72 205 *e*P **P 16 09 25.5 +0.4**
comp=Z,19nm,1.3s
STKA Stephens Creek 88.72 205 *e*P **P 16 09 25.5 +0.4**
STKA pmax pmax
comp=Z,19nm,1.3s
PBAR Barrancos 88.92 359 *e*P **P 16 09 25.1 -1.2**
comp=Z,131nm,1.2s
PBAR Barrancos 88.92 359 *e*P **P 16 09 26.5 +0.2**
comp=Z,131nm,1.2s
RKT Rikitea 89.00 132 *e*S **S 16 20 10.9 -2.7**
comp=Z,2µm,41.8s
RKT *e*SS **SS 16 26 00.0 -7.5**
comp=Z,2µm,30.5s
RKT *e*LQ LQ 16 33 48.0
comp=Z,4µm,34.0s
RKT *e*LR LR 16 37 25.2
comp=Z,2µm,35.5s,baz=327
PBEJ Beja 89.08 360 *e*P **P 16 09 27.4 +0.3**
comp=Z,55nm,1.4s
MESJ Messejana 89.27 360 *e*P **P 16 09 27.9 0.0**
MESJ *e*SKS **SKSac 16 19 57.7 +1.0**
MESJ AMS AMS 16 59 06.7
comp=N,3µm,19.1s
CART Cartagena 89.29 354 PFAKE 16 09 40.0 +12
CART LR LR
comp=Z,2µm,20.0s
CMAH Djebel Manchou 89.43 347 P **P 16 09 28.3 -0.5**
PCVE Castro Verde 89.47 360 *e*P **P 16 09 29.2 +0.3**
comp=Z,47nm,1.3s
PVAQ Vaqueiros 89.70 359 *e*P **P 16 09 30.5 +0.5**
comp=Z,60nm,1.6s
PVAQ Vaqueiros 89.70 359 *e*S **S 16 20 17.4 -2.8**
PVAQ *e*SS SS 16 26 28.8 +14
PVAQ Vaqueiros 89.70 359 *e*LR LR 16 39 44.4
comp=Z,3µm,18.0s
DFRA Djebel Bou Aff 89.70 349 P **P 16 09 30.4 +0.2**
CKFL Kef-Lekhel 89.74 348 P **P 16 09 29.9 -0.5**
JTS JuntasAbangare 89.75 73 P **P 16 09 30.8 +0.2**
comp=Z,8.1nm,0.5s,baz=9.7,slow=9.8,SNR=3.6
JTS LR LR 16 54 24.2
comp=Z,1µm,18.2s,baz=14,slow=39
JTS JuntasAbangare 89.75 73 *e*P **P 16 09 28.9 -1.7**
comp=Z,27nm,1.1s
ABSA Djebel Ababsia 89.77 347 P **P 16 09 30.0 -0.5**
MORF Marmelete 89.80 0 *e*P **P 16 09 30.5 -0.1**
MORF *e*SKS **SKSac 16 20 00.8 +0.8**
MORF AMS AMS 16 56 52.1
comp=E,3µm,18.8s
MORF Marmelete 89.80 0 *e*P **P 16 09 30.9 +0.4**
comp=E,116nm,1.5s
PFVI Vila Bisbo 89.97 0 PFAKE 16 09 40.0 +8.7
PFVI LR LR
comp=Z,4µm,18.0s
KEST Kesra 90.04 346 P **P 16 09 31.7 0.0**
comp=Z,20nm,1.0s,baz=332,slow=1.8,SNR=18
KEST PP **PP 16 13 06.8 +2.9**
comp=Z,53nm,1.2s,baz=6.7,slow=1.7,SNR=8.7
KEST LR LR 16 53 17.2
comp=Z,2µm,19.0s,baz=320,slow=38
KEST Kesra 90.04 346 *e*P **P 16 09 31.5 -0.2**
comp=Z,32nm,1.0s
KEST PP **PP 16 13 06.8 +2.9**
CTEI Djebel Teioual 90.11 348 P **P 16 09 32.8 +0.7**
CKHR Kef el Ahmar 90.27 349 P **P 16 09 33.4 +0.6**
RAYN Ar Rayn 90.43 312 *e*P **P 16 09 33.4 -0.3**
comp=Z,62nm,1.0s
RAYN LR LR
comp=Z,6µm,18.0s
RAYN Ar Rayn 90.43 312 *i*P **P 16 09 33.2 -0.5**
SNR=36
RAYN Ar Rayn 90.43 312 P **P 16 09 33.4 -0.3**
HDC Heredia 90.46 73 PFAKE 16 09 50.0 +16
HDC LR LR
comp=Z,3µm,19.0s
SFS San Fernando 90.62 358 PFAKE 16 09 40.0 +5.8
SFS LR LR
comp=Z,2µm,20.0s
BBOO Buckleboo 91.12 209 *e*P **P 16 09 37.1 +0.8**
comp=Z,57nm,1.0s
SDD Santo Domingo 91.17 57 PFAKE 16 09 50.0 +13
SDD LR LR
comp=Z,6µm,19.0s
URZ Urewera 91.28 176 LR LR 16 45 27.0
comp=Z,348nm,21.1s,baz=11,slow=32
HIZ Hauiti 91.45 177 PFAKE 16 09 50.0 +12
HIZ LR LR
comp=Z,2µm,21.0s
FORT Forrest 91.85 216 *e*P **P 16 09 41.0 +1.2**
comp=Z,53nm,0.6s
MPR Mayaguez 92.75 54 PFAKE 16 10 00.0 +16
MPR LR LR
comp=Z,3µm,19.0s
CRPR Cabo Rojo, PR 92.94 55 PFAKE 16 10 00.0 +15
CRPR LR LR
comp=Z,4µm,20.0s
SJG San Juan 93.31 54 P **P 16 09 47.0 0.0**
comp=Z,5.5nm,0.3s,baz=31,slow=15,SNR=3.7
SJG San Juan 93.31 54 *e*P **P 16 09 44.6 -2.4**
SJG LR LR
comp=Z,3µm,20.0s
CBYP Canovanas 93.32 53 PFAKE 16 10 00.0 +13
CBYP LR LR
comp=Z,6µm,21.0s
HUMP Col San Antoni 93.43 53 PFAKE 16 10 00.0 +12
HUMP LR LR
comp=Z,5µm,19.0s
BCIP Isla Barro Col 93.57 70 *e*P **P 16 09 47.2 -1.0**
comp=Z,156nm,2.0s
BCIP LR LR
comp=Z,1µm,19.0s
MTP Monte Pirata 93.62 53 *e*P **P 16 09 47.4 -1.0**
comp=Z,52nm,0.9s
MTP LR LR
comp=Z,6µm,19.0s
ABVI Anegada Island 93.65 52 PFAKE 16 10 00.0 +11
ABVI LR LR
comp=Z,3µm,20.0s
STVI Saint Thomas 93.68 53 PFAKE 16 10 00.0 +11
STVI LR LR
comp=Z,4µm,20.0s
MDT Midelt 94.22 357 P **P 16 09 51.0 -0.1**
comp=Z,9.3nm,1.0s,baz=34,slow=5.9,SNR=11
THZ Tophouse 94.66 179 PFAKE 16 10 00.0 +7.5
THZ LR LR
comp=Z,2µm,19.0s
SMRT St. Maarten 94.83 51 PFAKE 16 10 00.0 +6.0
SMRT LR LR
comp=Z,3µm,20.0s
SABA Saba 95.12 52 PFAKE 16 10 10.0 +15
SABA LR LR
comp=Z,3µm,20.0s
KHZ Kahutara 95.32 179 PFAKE 16 10 10.0 +15
KHZ LR LR
comp=Z,3µm,20.0s
PAYG Puerto Ayora 95.40 84 PFAKE 16 10 10.0 +13
PAYG LR LR
comp=Z,2µm,18.0s
ANWB Willy Bob 95.76 50 PFAKE 16 10 10.0 +12
ANWB LR LR
comp=Z,4µm,21.0s
MOTC Monteria, Cord 96.21 66 *e*P **P 16 10 01.6 +1.3**
OXZ Oxford 96.21 180 PFAKE 16 10 10.0 +11
OXZ LR LR
comp=Z,3µm,19.0s
FOZ Fox Glacier 96.43 181 PFAKE 16 10 10.0 +10
FOZ LR LR
comp=Z,3µm,18.0s
RPZ Rata Peaks 96.60 180 PFAKE 16 10 10.0 +8.8
RPZ LR LR
comp=Z,3µm,18.0s
GDHS Morne Mazeau, 96.99 51 PFAKE 16 10 10.0 +6.1
GDHS LR LR
comp=Z,4µm,20.0s
LBZ Lake Benmore 97.28 181 PFAKE 16 10 20.0 +16
LBZ LR LR
comp=Z,3µm,20.0s
WKZ Wanaka 97.74 182 PFAKE 16 10 20.0 +14
WKZ LR LR
comp=Z,3µm,20.0s
ODZ Otahua Downs 97.93 181 PFAKE 16 10 20.0 +13
ODZ LR LR
comp=Z,2µm,18.0s
NWAO Narrogin (SRO) 97.94 224 LR LR 16 51 26.5
comp=Z,895nm,20.4s,baz=262,slow=34
MLZ Mavora Lakes 98.30 182 PFAKE 16 10 20.0 +11
MLZ LR LR
comp=Z,2µm,21.0s
HELC Santa Helena 98.42 68 PFAKE 16 10 20.0 +9.2
HELC LR LR
comp=Z,6µm,20.0s
FDF Fort de France 98.61 51 PFAKE 16 10 20.0 +8.8
FDF LR LR
comp=Z,4µm,20.0s
DAMY Dhamar 98.73 309 PFAKE 16 10 20.0 +7.9
DAMY LR LR
comp=Z,6µm,19.0s
SDV Santo Domingo 98.85 62 P **P 16 10 12.1 -0.3**
comp=Z,5.7nm,0.3s,baz=313,slow=9.3,SNR=3.5
SDV LR LR 16 56 58.8
comp=Z,3µm,18.6s,baz=340,slow=37
BARC Barichara 99.39 66 *e*P **Pdif 16 10 14.1 -0.8**
GRGC Isla de Gorgon 99.55 72 *e*P **Pdif 16 10 09.4 -5.9**
YOTC Yotoco, Valle 99.78 70 *e*P **Pdif 16 10 15.6 -1.0**
SVB Belmont 99.83 52 PFAKE 16 10 30.0 +13
SVB LR LR
comp=Z,4µm,21.0s
RUSC La Rusia 100.02 66 *e*P **Pdif 16 10 16.8 -1.2**
ROSC El Rosal 100.21 68 PP PP 16 14 25.4 +1.2
comp=Z,3.7nm,0.3s,baz=32,slow=11,SNR=5.8
GRGR Grenville 100.63 53 PFAKE 16 10 30.0 +10
GRGR LR LR
comp=Z,2µm,19.0s
BBGH Gun Hill 100.74 51 PFAKE 16 10 30.0 +9.4
BBGH LR LR
comp=Z,4µm,22.0s
PRAC Prado 100.82 69 PFAKE 16 10 30.0 +9.0
PRAC LR LR
comp=Z,1µm,21.0s
PCRV Puerto La Cruz 100.86 56 PP PP 16 14 29.0 +0.4
comp=Z,13nm,0.9s,baz=344,slow=8.0,SNR=4.5
OTAV Otavalo 101.63 74 PFAKE 16 10 40.0 +15
OTAV LR LR
comp=Z,1µm,18.0s
ATD Arta Tunnel 102.11 309 PFAKE 16 10 40.0 +13
ATD LR LR
comp=Z,4µm,19.0s
TAM Tamanrasset 103.31 347 PFAKE 16 10 40.0 +7.9
TAM LR LR
comp=Z,2µm,21.0s
SACV Santiago Islan 110.80 16 PFAKE 16 15 20.0
SACV LR LR
comp=Z,1µm,19.0s
NNA Nana 112.39 80 PFAKE 16 15 20.0
NNA LR LR
comp=Z,1µm,19.0s
KOWA Kowa 112.41 355 PFAKE 16 15 20.0
KOWA LR LR
comp=Z,2µm,21.0s
PTGA Pitinga 112.55 58 PP PP 16 15 49.5 -5.1
comp=Z,8.6nm,1.0s,baz=319,slow=6.8,SNR=4.8
TOC1 Torodi Ar. Sit 113.27 349 PFAKE 16 15 20.0
TOC1 LR LR
comp=Z,2µm,22.0s
TOC7 Torodi Ar. Sit 113.28 349 PFAKE 16 15 20.0
TOC7 LR LR
comp=Z,2µm,20.0s
TOC2 Torodi Ar. Sit 113.28 349 PFAKE 16 15 20.0
TOC2 LR LR
comp=Z,2µm,20.0s
TOB2 Torodi Ar. Sit 113.28 349 PFAKE 16 15 20.0
TOB2 LR LR
comp=Z,2µm,20.0s
TOA1 Torodi Ar. Sit 113.29 349 PFAKE 16 15 20.0
TOA1 LR LR
comp=Z,2µm,20.0s
TOB5 Torodi Ar. Sit 113.29 349 PFAKE 16 15 20.0
TOB5 LR LR
comp=Z,2µm,20.0s
TOA2 Torodi Ar. Sit 113.29 349 PFAKE 16 15 20.0
TOA2 LR LR
comp=Z,2µm,20.0s
TOA0 Torodi Ar. Sit 113.29 349 PFAKE 16 15 20.0
TOA0 LR LR
comp=Z,2µm,20.0s
TORD Torodi Ar. Bea 113.29 349 Pdiff **Pdif 16 11 19.5 +3.1**
comp=Z,0.7nm,0.9s,baz=5.7,slow=5.8,SNR=2.8
TORD PKiKP **PKiKP 16 15 09.9 +0.1**
comp=Z,1.5nm,1.0s,baz=347,slow=5.6,SNR=3.2
TORD PP **PP 16 15 54.0 -5.1**
comp=Z,6.6nm,1.1s,baz=8.5,slow=5.8,SNR=7.0
TORD PKKPab **PKKPab 16 26 00.7 -4.2**
comp=Z,1.9nm,0.7s,baz=183,slow=2.8,SNR=6.9
TOA3 Torodi Ar. Sit 113.30 349 PFAKE 16 15 20.0
TOA3 LR LR
comp=Z,2µm,20.0s
TOC3 Torodi Ar. Sit 113.30 349 PFAKE 16 15 20.0
TOC3 LR LR
comp=Z,2µm,20.0s
TOB3 Torodi Ar. Sit 113.30 349 PFAKE 16 15 20.0
TOB3 LR LR
comp=Z,2µm,20.0s
TOB4 Torodi Ar. Sit 113.30 349 PFAKE 16 15 20.0
TOB4 LR LR
comp=Z,2µm,20.0s
TOC5 Torodi Ar. Sit 113.31 349 PFAKE 16 15 20.0
TOC5 LR LR
comp=Z,2µm,20.0s
TOC4 Torodi Ar. Sit 113.32 349 PFAKE 16 15 20.0
TOC4 LR LR
comp=Z,2µm,20.0s
SAML Samuel 117.76 66 *e*PKPdf **PKPdf 16 15 17.5 -0.9**
SAML LR LR
comp=Z,3µm,20.0s
MBAR Mbarara 118.31 314 PFAKE 16 15 30.0 +10
MBAR LR LR
comp=Z,800nm,22.0s
DBIC Dimbokro 120.22 356 PKP **PKPdf 16 15 24.0 +0.8**
comp=Z,4.1nm,0.9s,baz=72,slow=3.2,SNR=2.5
LPAZ La Paz 120.91 75 PKP **PKPdf 16 15 26.7 +1.6**
comp=Z,2.0nm,0.7s,baz=3.0,slow=4.8,SNR=5.8
LPAZ PP **PP 16 16 58.4 +4.3**
comp=Z,9.6nm,1.0s,baz=337,slow=4.4,SNR=6.1
MNMC Minye Minye 122.28 79 PFAKE 16 15 40.0 +13
MNMC LR LR
comp=Z,1µm,20.0s
PB04 IPOC Station P 124.42 81 PFAKE 16 15 40.0 +8.8
PB04 LR LR
comp=Z,1µm,20.0s
SIV San Ignacio 124.69 68 PKP **PKPdf 16 15 31.2 -0.4**
comp=Z,5.3nm,0.7s,baz=276,slow=1.2,SNR=22
SIV PP **PP 16 17 16.6 -2.3**
comp=Z,12nm,1.1s,baz=347,slow=8.6,SNR=6.1
PB10 IPOC Station P 125.08 83 PFAKE 16 15 40.0 +7.8
PB10 LR LR
comp=Z,1µm,21.0s
OPO Ambohidratompo 125.11 287 PKP **PKPdf 16 15 32.9 +0.3**
comp=Z,7.7nm,1.0s,baz=20,slow=5.1,SNR=2.8
ABPO Ambohimpanom 125.44 287 PFAKE 16 15 40.0 +6.8
ABPO LR LR
comp=Z,3µm,18.0s
RCBR Riachuelo 127.64 35 PFAKE 16 15 50.0 +13
RCBR LR LR
comp=Z,2µm,19.0s
CASY Casey 127.85 207 *e*PKPdf **PKPdf 16 15 36.4 +0.3**
CASY LR LR
comp=Z,1µm,21.0s
LCO Las Campanas 129.07 87 PFAKE 16 15 50.0 +10
LCO LR LR
comp=Z,1µm,21.0s
VNDA Vanda 130.66 183 PKP **PKPdf 16 15 40.6 -0.5**
comp=Z,0.6nm,0.6s,baz=311,slow=3.9,SNR=4.6
SBA Scott Base 130.88 181 *e*PKPdf **PKPdf 16 15 42.3 +0.7**
SBA LR LR
comp=Z,800nm,20.0s
SBA Scott Base 130.88 181 *e*PKIKP **PKPdf 16 15 42.3 +0.7**

SBA					MLR	MLR		
	comp=Z,800nm,20.0s							
PEL	**Peldehue**	**132.02**	**91**		PFAKE		16 16 00.0	+15
PEL					LR	LR		
	comp=Z,6μm,20.0s							
LSZ	**Lusaka**	**132.44**	**309**	*e*	PKPdf	**PKPdf**	**16 15 43.1**	**-3.4**
LSZ					LR	LR		
	comp=Z,3μm,21.0s							
LSZ	**Lusaka**	**132.44**	**309**	*e*	PKIKP	**PKPdf**	**16 15 43.2**	**-3.4**
LSZ					MLR	MLR		
	comp=Z,3μm,21.0s							
GO05	**HualaæØ**	**132.56**	**94**		PFAKE		16 16 00.0	+14
GO05					LR	LR		
	comp=Z,1μm,20.0s							
CPUP	**Villa Florida**	**134.98**	**73**		PKP	**PKPdf**	**16 15 50.8**	**-0.1**
	comp=Z,2.9nm,0.5s,baz=308,slow=1.7,SNR=7.2							
PLCA	**Paso Flores**	**137.13**	**99**		PKP	**PKPdf**	**16 15 54.5**	**0.0**
	comp=Z,9.4nm,0.9s,baz=328,slow=2.8,SNR=10							
SPB	**Sao Paulo**	**138.27**	**60**		PFAKE		16 16 10.0	+13
SPB					LR	LR		
	comp=Z,3μm,19.0s							
TSUM	**Tsumeb**	**140.51**	**319**		PFAKE		16 16 10.0	+8.6
TSUM					LR	LR		
	comp=Z,2μm,20.0s							
TRQA	**Tornquist**	**140.56**	**89**	*e*	PKPdf	**PKPdf**	**16 16 01.9**	**+1.0**
TRQA					LR	LR		
	comp=Z,2μm,18.0s							
TRQA	**Tornquist**	**140.56**	**89**		PKIKP	**PKPdf**	**16 16 01.8**	**+1.0**
QSPA	**South Pole Qui**	**143.01**	**180**		PKhKP	PKPpre	16 16 00.6	
	comp=Z,13nm,1.0s,baz=341,slow=0.4,SNR=5.6							
QSPA					PKP	**PKPdf**	**16 16 05.3**	**+1.0**
	comp=Z,11nm,0.7s,baz=334,slow=1.8,SNR=6.9							
QSPA	**South Pole Qui**	**143.01**	**180**	*e*	PKPpre	PKPpre	16 15 59.4	
QSPA					PKP	**PKPdf**	**16 16 05.3**	**+1.0**
MAW	**Mawson**	**144.33**	**218**		PKP	PKPbc	16 16 04.9	0.0
	comp=Z,39nm,1.1s,baz=106,slow=3.2,SNR=25							
BOSA	**Boshof**	**145.14**	**302**		PKPbc	**PKPdf**	**16 16 09.2**	**-0.2**
	comp=Z,49nm,1.0s,baz=34,slow=3.1,SNR=35							
PMSA	**Palmer Station**	**150.18**	**135**		PKPbc	**PKPbc**	**16 16 21.9**	**+0.5**
	comp=Z,30nm,0.7s,baz=293,slow=6.9,SNR=3.9							
PMSA	**Palmer Station**	**150.18**	**135**	*e*	PKPbc	**PKPbc**	**16 16 19.9**	**-1.4**
SUR	**Sutherland**	**150.43**	**303**	*e*	PKPbc	**PKPbc**	**16 16 23.3**	**0.0**
SUR					LR	LR		
	comp=Z,4μm,22.0s							
SYO	**Syowa Base**	**152.95**	**216**	‖ *e*	pPKPdf	pPKPdf	16 16 25.0	-2.3
NVL	**N'lazarevskaya**	**160.23**	**200**	*e*	PKIKP	PKPdf	16 16 38.7	+8.9
NVL					pmax	pmax		
	comp=Z,29nm,1.1s							
SNAA	**Sanae**	**161.36**	**186**		P	PKPdf	16 16 49.0	+18
SNAA	**Sanae**	**161.36**	**186**		PKP	**PKPdf**	**16 16 29.9**	**-1.2**
	comp=Z,1.3nm,0.6s,baz=70,slow=4.6,SNR=3.2							
SNAA					PKPab	**PKPab**	**16 17 15.6**	**+0.2**
	comp=Z,36nm,1.4s,baz=189,slow=1.1,SNR=5.3							
VNA3	**Neumayer Olymp**	**161.94**	**179**		P	PKPdf	16 16 44.0	+12
VNA1	**Neumayer--Stat**	**162.55**	**180**		P	**PKPdf**	**16 16 37.4**	**+5.2**

*ISCJB **19** 16:00:43.8±2.2, 29°.00S±0°.04×71°.5W±0°.1, h25km±10km, Error ellipse: s-maj=20.1km s-min=5.8km az=5.7*
*GUC **19** 16:00:43.8±0.5, 29°.06S×71°.21W, h47km±5km, ML3.1*
*SJA **19** 16:00:44.7±0.3, 29°.26S×71°.25W, h10km±1km, ML3.3, MW3.6*

ISC 19 16:00:42.1±2.1, 29°.05S±0°.04×71°.39W±0°.09, h11km±16km, n18, σ1°79/25, 2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°		Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**0.60**	**87**	*i*	P	**Pn**	**16 00 56.8**	**0.0**
LCO				*i*	S	**Sn**	**16 01 05.7**	**-0.9**
LCO	**Las Campanas**	**0.60**	**87**	*e*	P	**Pn**	**16 00 56.6**	**-0.2**
LCO				*e*	S	**Sb**	**16 01 04.6**	**+1.3**
LCO					IAML		16 01 06.6	
	comp=E,3μm,0.3s							
VACH	**Vallenar**	**0.72**	**50**	‖ *i*	P	**Pn**	**16 00 58.0**	**-0.2**
VACH				*i*	S	**Sn**	**16 01 08.0**	**-1.2**
TLL	**Tololo Astrono**	**1.23**	**156**	*e*	P	**Pb**	**16 01 05.7**	**+0.3**
TLL				*i*	S	**Sn**	**16 01 22.3**	**+0.3**
TLL					IAML		16 01 23.2	
	comp=E,530nm,0.3s							
GO04	**Tololo Observa**	**1.23**	**156**	*e*	P	**Pn**	**16 01 05.7**	**+0.2**
GO04				*i*	S	**Sn**	**16 01 22.2**	**0.0**
GO04					IAML		16 01 23.5	
	comp=E,1μm,0.2s							
GO03	**Copiap**	**1.77**	**35**	‖ *i*	P	**Pn**	**16 01 13.2**	**+0.6**
GO03				*i*	S	**Sn**	**16 01 35.0**	**-0.1**
GO03					IAML		16 01 40.0	
	comp=E,252nm,0.2s							
CPCH	**Copiapo**	**1.91**	**29**	*i*	S	**Sn**	**16 01 38.5**	**-0.2**
AROD	**Rodeo**	**2.00**	**124**	*i*	P	**Pb**	**16 01 18.8**	**+0.1**
ACDV	**Cuesta del Vie**	**2.27**	**120**	*i*	P	**Pn**	**16 01 20.9**	**+1.3**
VCA	**Vinchina**	**2.81**	**84**	*i*	P	**Pb**	**16 01 32.6**	**+0.4**
VCA					IAML		16 01 33.2	
	comp=Z,132nm,0.2s							
VCA				*i*	S	**Sb**	**16 02 08.1**	**+1.4**
AMOG	**MOGNA**	**3.14**	**128**	*i*	P	**Pb**	**16 01 35.1**	**-2.8**
RTLS	**Leoncito**	**3.28**	**147**	*i*	P	**Pb**	**16 01 37.8**	**-2.7**
RTLS				*i*	S	**Sb**	**16 02 17.0**	**-3.6**
RTLS					IAML		16 02 36.1	
	comp=Z,67nm,0.7s							
RTLL	**Cerro Villicun**	**3.40**	**133**	*i*	P	**Pb**	**16 01 38.9**	**-3.4**
RTCV	**Cerro Valdivia**	**3.73**	**140**	*i*	P	**Pn**	**16 01 43.5**	**+3.9**
ACLC	**CERRO LA CRUZ**	**3.89**	**97**	*i*	P	**Pn**	**16 01 43.7**	**+1.7**
ROC1	**El Roble**	**3.93**	**175**	*i*	P	**Pg**	**16 01 58.0**	**+0.6**
FCH	**Farellones**	**4.37**	**168**	*i*	S	**Sn**	**16 02 40.8**	**+1.1**
MRA	**San Martin**	**5.92**	**126**	*i*	P	Pn	16 02 14.5	+4.7

MAN 19 16:09:48.7, 16°.73N×119°.86E, h23km, mb4.4, ML3.3, MS3.1, Luzon

Code	Station Name	Δ°	AZ°		Phase ID Op	ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.35**	**172**	*e*	P	Pn	16 09 58.2	-0.1
BOLP				*e*	S	Sn	16 10 05.3	+0.8
ABRA	**Dolores**	**1.23**	**41**	*e*	P	Pn	16 10 10.3	-0.1
ABRA				*e*	S	Sb	16 10 27.3	+0.7
APYP	**Conner**	**1.74**	**49**	*e*	P	Pn	16 10 17.8	+0.4
APYP				*e*	S	Sn	16 10 38.9	-0.1
CAUP	**Cauayan**	**1.89**	**83**	*e*	P	Pb	16 10 22.1	-0.5
BALP	**Baler**	**1.92**	**120**	*e*	P	Pn	16 10 20.6	+0.7
BALP				*e*	S	Sb	16 10 45.0	-1.5

*ISK **19** 16:10:14.4, 38°.64N×43°.18E, h3km, ML2.5/4*
*CSEM **19** 16:10:15.6±0.3, 38°.65N×43°.19E, h10km, ML2.5, Error ellipse: s-maj=7.1km s-min=5.9km az=140.0*
*DDA **19** 16:10:16.2, 38°.63N×43°.21E, h7km, Md2.6*

ISC 19 16:10:15.1±1.4, 38°.67N±0°.03×43°.16E±0°.02, h6km±11km, n20, σ1°48/36, Turkey

Code	Station Name	Δ°	AZ°		Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.19**	**112**	PG		**Pg**	**16 10 19.7**	**+0.7**
VANB	**Van**	**0.19**	**112**	*e*	Pg	**Pg**	**16 10 19.7**	**+0.7**
GEVA	**Gevas**	**0.36**	**193**	*i*	P	**Pb**	**16 10 22.3**	**-1.8**
GEVA				*i*	S	**Sb**	**16 10 29.6**	**-0.5**
GEVA	**Gevas**	**0.36**	**193**	P		**Pb**	**16 10 22.3**	**-1.8**
GEVA				S		**Sb**	**16 10 29.6**	**-0.5**
ADCV	**BITLIS_Adilcev**	**0.37**	**292**	*i*	P	**Pb**	**16 10 23.3**	**-1.0**
ADCV				*i*	S	**Sb**	**16 10 31.9**	**+1.5**
ADCV	**BITLIS_Adilcev**	**0.37**	**292**	P		**Pb**	**16 10 23.3**	**-1.0**
ADCV				S		**Sb**	**16 10 31.9**	**+1.5**
VMUR	**Van-Muradiye**	**0.45**	**45**	*i*	P	**Pb**	**16 10 24.9**	**-0.7**
VMUR				*i*	S	**Sb**	**16 10 33.3**	**+0.6**
VMUR	**Van-Muradiye**	**0.45**	**45**	P		**Pb**	**16 10 24.9**	**-0.7**
VMUR				S		**Sb**	**16 10 33.3**	**+0.6**
CLDR	**Caldiran**	**0.76**	**51**	PG		**Pb**	**16 10 30.1**	**-0.7**
CLDR				SG		**Sb**	**16 10 40.9**	**-0.6**
CLDR	**Caldiran**	**0.76**	**51**	*e*	Pg	**Pb**	**16 10 30.1**	**-0.7**
CLDR				*e*	Sg	**Sb**	**16 10 40.9**	**-0.6**
TUTA	**Tutak**	**0.78**	**340**	*i*	P	**Pn**	**16 10 31.4**	**-1.5**
TUTA				*i*	S	**Sb**	**16 10 43.0**	**+0.7**
TUTA	**Tutak**	**0.78**	**340**	P		**Pn**	**16 10 31.5**	**-1.5**
TUTA				S		**Sb**	**16 10 43.0**	**+0.7**
GURO	**Guroymak-BITLI**	**0.89**	**263**	PG		**Pg**	**16 10 31.9**	**-0.4**
GURO				SG		**Sn**	**16 10 46.0**	**-1.7**
GURO	**Guroymak-BITLI**	**0.89**	**263**	*e*	Pg	**Pg**	**16 10 31.9**	**-0.4**
GURO				*e*	Sg	**Sn**	**16 10 46.0**	**-1.7**
AGRB	**Hanur-Agry**	**0.92**	**352**	PG		**Pb**	**16 10 33.3**	**-0.3**
AGRB	**Hanur-Agry**	**0.92**	**352**	*e*	Pg	**Pb**	**16 10 33.3**	**-0.3**
HAKT	**HAKKARI**	**1.19**	**159**	*i*	P	**Pn**	**16 10 37.4**	**-1.1**
HAKT				*i*	S	**Sn**	**16 10 57.2**	**+2.2**
HAKT	**HAKKARI**	**1.19**	**159**	P		**Pn**	**16 10 37.4**	**-1.1**
HAKT				S		**Sn**	**16 10 57.2**	**+2.2**
SRTM	**Siirt_Merkez**	**1.19**	**236**	*i*	P	**Pg**	**16 10 40.2**	**+2.3**
SRTM				*i*	S	**Sn**	**16 10 57.9**	**+3.0**
SRTM	**Siirt_Merkez**	**1.19**	**236**	P		**Pg**	**16 10 40.2**	**+2.3**
SRTM				S		**Sn**	**16 10 57.9**	**+3.0**

MAN 19 16:10:16.0, 10°.58N×125°.75E, h96km, mb4.1, ML2.9, MS2.6, Leyte

Code	Station Name	Δ°	AZ°		Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.83**	**198**	*e*	P	Pn	16 10 35.9	+1.6
SCPH				*e*	S	Sn	16 10 49.5	+1.5
MSLP	**Maasin**	**0.98**	**243**	*e*	P	Pn	16 10 35.8	-0.1
MSLP				*e*	S	Sn	16 10 49.1	-1.8
MSLP	**Maasin**	**0.98**	**243**	*e*	P	Pn	16 10 35.9	0.0
MSLP				*e*	S	Sn	16 10 49.1	-1.8
BESP	**Borongan**	**1.06**	**343**	*e*	P	Pn	16 10 40.3	+3.4
BESP				*e*	S	Sn	16 11 01.1	+8.6
OCLP	**Ormoc**	**1.22**	**293**	*e*	P	Pn	16 10 39.4	+0.8
OCLP				*e*	S	Sn	16 10 56.5	+0.9
CNP	**Catarman**	**2.20**	**331**	*e*	P	Pn	16 10 53.5	+2.5
CNP				*e*	S	Sn	16 11 22.9	+5.2
PVCP	**Virac**	**3.38**	**333**	*e*	P	Pn	16 11 07.7	+0.9

*CSEM **19** 16:10:59.4, 42°.68N×21°.44E, h0km, ML1.5*

BEO 19 16:10:59.4±0.7, 42°.68N×21°.44E, h0km, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°		Phase ID Op	ISC	Time h m s	Res ISC
BARS	**Barje**	**0.31**	**63**	*e*	Pg	Pg	16 11 03.9	-1.5
BARS				*e*	Sg	Sg	16 11 08.4	-1.1
BARS	**Barje**	**0.31**	**63**	*e*	Pg	Pg	16 11 03.9	-1.5
BARS				*e*	Sg	Sg	16 11 08.4	-1.1
SELS	**Selova**	**0.59**	**337**	*e*	Pg	Pg	16 11 09.6	-1.1
SELS				*e*	Sg	Sg	16 11 18.6	+0.2
ZAPS	**Zavoj**	**1.06**	**55**	*e*	Pg	Pg	16 11 18.9	-0.9
ZAPS				*e*	Sg	Sg	16 11 32.6	-1.0
ZAPS	**Zavoj**	**1.06**	**55**	*e*	Pg	Pg	16 11 18.9	-0.9
ZAPS				*e*	Sg	Sg	16 11 32.6	-1.0
ZAGS	**Zajecar**	**1.28**	**27**	*e*	Pg	Pg	16 11 22.7	-1.2
ZAGS				*e*	Sg	Sg	16 11 40.5	0.0
ZAGS	**Zajecar**	**1.28**	**27**	*e*	Pg	Pg	16 11 22.7	-1.2
ZAGS				*e*	Sg	Sg	16 11 40.5	0.0
IVAS	**Ivanjica**	**1.30**	**314**	*e*	Pg	Pg	16 11 22.6	-1.7
IVAS				*e*	Sg	Sg	16 11 39.9	-1.3
IVAS	**Ivanjica**	**1.30**	**314**	*e*	Pg	Pg	16 11 22.6	-1.7
IVAS				*e*	Sg	Sg	16 11 39.9	-1.3
VTS	**Vitosha**	**1.31**	**93**	*e*	Pg	Pg	16 11 23.3	-1.2
VTS				*e*	Sg	Sg	16 11 41.9	+0.4
VTS	**Vitosha**	**1.31**	**93**	*e*	Pg	Pg	16 11 23.3	-1.2
VTS				*e*	Sg	Sg	16 11 41.9	+0.4
GRUS	**Gruza**	**1.32**	**337**	*e*	Pg	Pg	16 11 23.5	-1.2
GRUS				*e*	Sg	Sg	16 11 41.9	0.0
GRUS	**Gruza**	**1.32**	**337**	*e*	Pg	Pg	16 11 23.5	-1.2
GRUS				*e*	Sg	Sg	16 11 41.9	0.0

*ISN **19** 16:13:41.7±1.2, 37°.22N×42°.62E, h0km±4km, ML3.2*
*DDA **19** 16:13:43.3, 37°.26N×42°.53E, h14km, Ml3.2*
*CSEM **19** 16:13:44.8±0.2, 37°.32N×42°.58E, h2km, ML2.9, Error ellipse: s-maj=5.7km s-min=3.5km az=10.0*
*ISK **19** 16:13:45.8, 37°.39N×42°.37E, h5km, ML2.9/10*

ISC 19 16:13:44.2±1.4, 37°.30N±0°.05×42°.56E±0°.02, h4km±10km, n39, σ0°71/63, Turkey

Code	Station Name	Δ°	AZ°		Phase ID Op	ISC	Time h m s	Res ISC
SIRT	**Sirnak**	**0.22**	**334**	PG		**Pg**	**16 13 48.6**	**0.0**
SIRT				SG		**Sg**	**16 13 51.6**	**+0.1**
SIRT	**Sirnak**	**0.22**	**334**	*e*	Pg	**Pg**	**16 13 48.6**	**0.0**
SIRT				*e*	Sg	**Sg**	**16 13 51.6**	**+0.1**
SIRN	**S¨–rnak**	**0.23**	**329**	*i*	P	**Pg**	**16 13 48.8**	**+0.1**
SIRN				*i*	S	**Sg**	**16 13 52.6**	**+0.9**
SIRN	**S¨–rnak**	**0.23**	**329**	P		**Pg**	**16 13 48.8**	**+0.1**
SIRN				S		**Sg**	**16 13 52.6**	**+0.9**
SRTM	**Siirt_Merkez**	**0.86**	**324**	*i*	P	**Pg**	**16 14 00.5**	**-0.1**
SRTM				*i*	S	**Sb**	**16 14 13.2**	**-0.5**
SRTM	**Siirt_Merkez**	**0.86**	**324**	P		**Pg**	**16 14 00.5**	**-0.1**
SRTM				S		**Sb**	**16 14 13.2**	**-0.5**
HAKT	**HAKKARI**	**0.95**	**74**	*i*	P	**Pg**	**16 14 02.3**	**-0.1**
HAKT				*i*	S	**Sb**	**16 14 16.8**	**+0.4**
HAKT	**HAKKARI**	**0.95**	**74**	P		**Pg**	**16 14 02.3**	**-0.1**
HAKT				S		**Sb**	**16 14 16.8**	**+0.4**
GEVA	**Gevas**	**1.08**	**21**	*i*	P	**Pg**	**16 14 05.1**	**+0.1**
GEVA				*i*	S	**Sb**	**16 14 20.3**	**0.0**
GEVA	**Gevas**	**1.08**	**21**	P		**Pg**	**16 14 05.1**	**+0.1**
GEVA				S		**Sb**	**16 14 20.3**	**0.0**
BTMN	**Batman**	**1.18**	**300**	*i*	P	**Pg**	**16 14 07.0**	**+0.1**
BTMN				*i*	S	**Sn**	**16 14 24.0**	**-0.3**
BTMN	**Batman**	**1.18**	**300**	P		**Pg**	**16 14 07.0**	**+0.1**
BTMN				S		**Sn**	**16 14 24.0**	**-0.3**
GURO	**Guroymak-BITLI**	**1.32**	**342**	PN		**Pn**	**16 14 09.6**	**0.0**
GURO				SN		**Sb**	**16 14 27.1**	**+0.1**
GURO	**Guroymak-BITLI**	**1.32**	**342**	*e*	Pn	**Pn**	**16 14 09.6**	**0.0**
GURO				*e*	Sn	**Sb**	**16 14 27.1**	**+0.1**
SVAN	**Silvan-Diyarba**	**1.38**	**309**	PN		**Pn**	**16 14 09.8**	**-0.5**
SVAN				SN		**Sg**	**16 14 27.5**	**-0.9**
SVAN	**Silvan-Diyarba**	**1.38**	**309**	*i*	P	**Pn**	**16 14 09.7**	**-0.6**
SVAN				*i*	S	**Sn**	**16 14 29.2**	**+0.2**
SVAN	**Silvan-Diyarba**	**1.38**	**309**	P		**Pn**	**16 14 09.7**	**-0.6**
SVAN				*e*	Sn	**Sg**	**16 14 27.5**	**-0.9**
SVAN				S		**Sn**	**16 14 29.2**	**+0.2**
YOVA	**Hakkari_Y¨…kse**	**1.40**	**78**	*i*	P	**Pn**	**16 14 10.7**	**-0.2**
YOVA				*i*	S	**Sn**	**16 14 30.3**	**+0.4**
YOVA	**Hakkari_Y¨…kse**	**1.40**	**78**	P		**Pn**	**16 14 10.6**	**-0.2**
YOVA				S		**Sn**	**16 14 30.3**	**+0.4**
MARD	**Mardin**	**1.42**	**271**	*i*	P	**Pn**	**16 14 09.1**	**-1.9**
MARD				*i*	S	**Sb**	**16 14 29.0**	**-0.9**
MAZI	**Mazidag**	**1.69**	**276**	PN		**Pn**	**16 14 15.0**	**+0.3**
MAZI	**Mazidag**	**1.69**	**276**	*e*	Pn	**Pn**	**16 14 15.0**	**+0.3**
DIY	**Diyarbakir**	**1.95**	**288**	*e*	Pn	**Pb**	**16 14 19.9**	**-0.4**
BNGL	**BINGOL**	**1.99**	**326**	*i*	P	**Pn**	**16 14 18.9**	**0.0**
BNGL				*i*	S	**Sb**	**16 14 47.2**	**+0.8**
DYBB	**Diyarbakir**	**2.03**	**289**	PN		**Pn**	**16 14 19.9**	**+0.6**
DIYA	**Diyarbakir**	**2.04**	**289**	*i*	P	**Pn**	**16 14 19.6**	**+0.2**
DIYA				*i*	S	**Sb**	**16 14 47.9**	**+0.3**
HANI	**Diyarbakir_Han**	**2.04**	**304**	*i*	P	**Pn**	**16 14 20.4**	**+1.0**
HANI				*i*	S	**Sb**	**16 14 47.7**	**0.0**
BNGB	**Bing¨ˆl**	**2.25**	**319**	PN		**Pn**	**16 14 23.1**	**+0.7**
BINT	**Bingol**	**2.27**	**314**	*e*	Pn	**Pn**	**16 14 23.1**	**+0.4**
AGRB	**Hanur-Agry**	**2.30**	**8**	PN		**Pb**	**16 14 25.5**	**-0.9**
AGRB	**Hanur-Agry**	**2.30**	**8**	*e*	Pn	**Pb**	**16 14 25.5**	**-0.9**
SVRC	**Sivrice-ELAZID**	**2.79**	**294**	PN		**Pn**	**16 14 30.9**	**+1.0**
SVRC	**Sivrice-ELAZID**	**2.79**	**294**	*e*	Pn	**Pn**	**16 14 30.9**	**+1.0**
PTK	**Pertek**	**2.96**	**303**	PN		**Pn**	**16 14 33.2**	**+0.9**
PTK	**Pertek**	**2.96**	**303**	*e*	Pn	**Pn**	**16 14 33.2**	**+0.9**
URFA	**Urfa**	**2.98**	**274**	PN		**Pn**	**16 14 34.2**	**+1.8**
URFA	**Urfa**	**2.98**	**274**	*e*	Pn	**Pn**	**16 14 34.2**	**+1.8**
MALT	**Malatya**	**3.43**	**288**	PN		**Pn**	**16 14 40.1**	**+1.5**
MALT	**Malatya**	**3.43**	**288**	*e*	Pn	**Pn**	**16 14 40.1**	**+1.5**

*ISCJB **19** 16:23:53.0±0.6, 38°.66N±0°.03×35°.70E±0°.05, h0km, Error ellipse: s-maj=5.6km s-min=3.6km az=24.5*
*CSEM **19** 16:23:52.8±0.4, 38°.69N×35°.69E, h2km, ML2.4, Error ellipse: s-maj=9.3km s-min=5.6km az=117.0, Suspected Mining explosion.*
*ISK **19** 16:23:52.5, 38°.66N×35°.81E, h4km, ML2.4/7, Suspected Mining explosion.*
*DDA **19** 16:23:53.0, 38°.66N×35°.73E, h7km, Ml2.6*

ISC 19 16:23:52.8±0.8, 38°.66N±0°.02×35°.74E±0°.03, h0km, n29, σ0°78/46, Turkey

Code	Station Name	Δ°	AZ°		Phase ID Op	ISC	Time h m s	Res ISC
BNN	**Bunyan**	**0.21**	**23**	PG		**Pg**	**16 23 56.5**	**-0.3**
BNN				SG		**Sg**	**16 24 00.7**	**+1.2**
BNN	**Bunyan**	**0.21**	**23**	*e*	Pg	**Pg**	**16 23 56.5**	**-0.3**
BNN				*e*	Sg	**Sg**	**16 24 00.7**	**+1.2**
SARI	**SarD1z-Kayseri**	**0.59**	**115**	PG		**Pg**	**16 24 03.6**	**-0.5**
SARI				SG		**Sg**	**16 24 11.7**	**0.0**
YAHY	**KAYSERI_Yahyal**	**0.64**	**208**	*i*	P	**Pg**	**16 24 04.9**	**-0.2**
YAHY				*i*	S	**Sb**	**16 24 15.7**	**-0.7**
YAHY	**KAYSERI_Yahyal**	**0.64**	**208**	P		**Pg**	**16 24 04.9**	**-0.2**
YAHY				S		**Sb**	**16 24 15.7**	**-0.7**
CUSAR	**Sarkisla-SIVAS**	**0.85**	**27**	*i*	P	**Pg**	**16 24 08.1**	**-1.1**
CUSAR				*i*	S	**Sb**	**16 24 22.4**	**-0.3**
CUSAR	**Sarkisla-SIVAS**	**0.85**	**27**	P		**Pg**	**16 24 08.1**	**-1.1**
CUSAR				S		**Sb**	**16 24 22.4**	**-0.3**
ELBS	**KAHRAMANMARAS**	**1.14**	**107**	*i*	P	**Pg**	**16 24 14.7**	**0.0**
ELBS				*i*	S	**Sn**	**16 24 32.2**	**-0.4**
ELBS	**KAHRAMANMARAS**	**1.14**	**107**	P		**Pg**	**16 24 14.7**	**0.0**
ELBS				S		**Sn**	**16 24 32.2**	**-0.4**
ANDN	**Andirin**	**1.18**	**156**	*i*	P	**Pn**	**16 24 18.1**	**+1.4**
ANDN				*i*	S	**Sb**	**16 24 31.6**	**-0.4**
ANDN	**Andirin**	**1.18**	**156**	P		**Pn**	**16 24 18.1**	**+1.4**
ANDN				S		**Sb**	**16 24 31.6**	**-0.4**
KOZT	**Kozan**	**1.18**	**177**	PN		**Pb**	**16 24 15.6**	**-0.5**
KOZT	**Kozan**	**1.18**	**177**	*e*	Pn	**Pb**	**16 24 15.6**	**-0.5**
GULA	**Gulagac**	**1.22**	**256**	PN		**Pn**	**16 24 17.6**	**+0.3**
GULA	**Gulagac**	**1.22**	**256**	*e*	Pn	**Pn**	**16 24 17.6**	**+0.3**
DARE	**Darende-Malaty**	**1.37**	**93**	PN		**Pg**	**16 24 18.5**	**-0.5**
DARE	**Darende-Malaty**	**1.37**	**93**	*e*	Pn	**Pg**	**16 24 18.5**	**-0.5**
KMRS	**Kahramanmaras**	**1.47**	**141**	PN		**Pn**	**16 24 20.1**	**-0.5**
KMRS	**Kahramanmaras**	**1.47**	**141**	*e*	Pn	**Pn**	**16 24 20.1**	**-0.5**
CUKAN	**kangal_SIVAS**	**1.50**	**63**	*i*	P	**Pb**	**16 24 22.1**	**+0.5**
CUKAN				*i*	S	**Sn**	**16 24 43.0**	**+1.6**
CUKAN	**kangal_SIVAS**	**1.50**	**63**	P		**Pb**	**16 24 22.1**	**+0.5**
CUKAN				S		**Sn**	**16 24 43.0**	**+1.6**
SVSK	**Karacayir**	**1.59**	**37**	PN		**Pn**	**16 24 22.2**	**0.0**
SVSK	**Karacayir**	**1.59**	**37**	*e*	Pn	**Pn**	**16 24 22.2**	**0.0**
HEKM	**Malatya_Hekimh**	**1.75**	**82**	*i*	P	**Pb**	**16 24 25.4**	**-0.5**
HEKM	**Malatya_Hekimh**	**1.75**	**82**	P		**Pb**	**16 24 25.4**	**-0.5**
AKCD	**Akcadag**	**1.75**	**101**	*i*	P	**Pg**	**16 24 26.3**	**-0.1**
AKCD				*i*	S	**Sg**	**16 24 50.5**	**+1.5**
AKCD	**Akcadag**	**1.75**	**101**	P		**Pg**	**16 24 26.3**	**-0.1**
AKCD				S		**Sg**	**16 24 50.5**	**+1.5**
KEMA	**Kemaliye**	**2.23**	**73**	*i*	P	**Pn**	**16 24 30.9**	**-0.2**
KEMA				*i*	S	**Sg**	**16 25 03.4**	**-1.1**
KEMA	**Kemaliye**	**2.23**	**73**	P		**Pn**	**16 24 30.9**	**-0.2**
KEMA				S		**Sg**	**16 25 03.4**	**-1.1**

SJA 19 16:37:48.2±0.5, 31°.95S×68°.08W, h115km±3km, ML2.8, MW3.5, San Juan Province

Code	Station Name	Δ°	AZ°		Phase ID Op	ISC	Time h m s	Res ISC
RTCV	**Cerro Valdivia**	**0.40**	**283**	*i*	P	Pn	16 38 05.8	+0.7
RTCV				*i*	S	Sn	16 38 18.4	+0.6
ZON	**Zonda**	**0.65**	**308**	*i*	P	Pn	16 38 07.4	+0.7
RTLL	**Cerro Villicun**	**0.70**	**331**	*i*	P	Pn	16 38 07.9	+0.7
RTLL				*i*	S	Sn	16 38 22.5	+1.0
RTLS	**Leoncito**	**1.04**	**278**	*i*	P	Pn	16 38 11.6	+1.0
RTLS				*i*	S	Sn	16 38 29.4	+1.9
RTLS					IAML		16 38 30.8	
	comp=Z,113nm,0.4s							
AMOG	**MOGNA**	**1.07**	**341**	*i*	P	Pn	16 38 11.5	+0.9
AUSP	**Uspallata**	**1.14**	**256**	*i*	P	Pn	16 38 12.6	+1.0
ARCO	**CERRO ARCO**	**1.14**	**219**	*i*	P	Pn	16 38 12.3	+0.9
ARCO				*i*	S	Sn	16 38 30.5	+1.4
ARCO					IAML		16 38 33.2	
	comp=Z,157nm,0.3s							
AAGR	**Agrelo**	**1.30**	**209**	*i*	P	Pn	16 38 14.0	+0.9
MRA	**San Martin**	**2.06**	**104**	*i*	P	Pn	16 38 23.3	+1.1
AGUA	**GUANDACOL**	**2.48**	**352**	*i*	P	Pn	16 38 28.9	+1.2

**MAN 19 16:39:25.

*NEIC **19** 17:26:45.3±0.6, 1°.25N×126°.91E, h84km±6km, mb4.8/41, Error ellipse: s-maj=7.1km s-min=3.9km az=54.0*
*DJA **19** 17:26:45.4±0.4, 1°N±5°×12°7E±°, h65km±7km, M4.5/7, mB4.6/1, mb4.5/6, MLv4.4/7, Mw(mB)3.8/1*
ISC 19 17:26:47.0±0.3, 1°.26N±0°.05×126°.87E±0°.06, h100km, n111, σ1§47/114, mb4.7/64, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.69**	**134**	*e*Pn	Pn	17 26 59.0	-5.4
LBMI	**Labuha**	**1.99**	**162**	P	**Pn**	**17 27 17.9**	**-1.5**
KMSI	**Cibinong**	**2.97**	**257**	P	**Pn**	**17 27 30.9**	**-1.4**
NLAI	**Namlea**	**4.47**	**177**	P	**Pn**	**17 27 52.9**	**+0.3**
LUWI	**Luwuk**	**4.70**	**241**	P	**Pn**	**17 27 56.4**	**+0.8**
LUWI	**Luwuk**	**4.70**	**241**	*e*Pn	**Pn**	**17 27 55.1**	**-0.5**
LUWI				*e*Sn	**Sn**	**17 28 49.3**	**+0.3**
SIJI	**Sorong**	**4.88**	**116**	LR	LR	17 30 10.4	
	comp=Z,358nm,18.8s,baz=60,slow=43						
MRSI	**Marisa**	**4.99**	**261**	P	**Pn**	**17 28 00.1**	**+0.5**
APSI	**Ampana**	**5.65**	**248**	P	**Pn**	**17 28 08.9**	**+0.3**
FAKI	**Fak Fak**	**6.79**	**128**	*e*Pn	**Pn**	**17 28 24.4**	**+0.3**
MYLDM	**Lahad Datu**	**9.22**	**295**	*e*Pn	**Pn**	**17 28 57.1**	**-0.1**
BAKI	**Biak**	**9.55**	**105**	P	Pn	17 29 05.2	+3.6
SAUI	**Saumlaki**	**10.19**	**154**	*e*Pn	Pn	17 29 04.0	-6.4
KKM	**Kota Kinabalu**	**11.65**	**294**	*e*Pn	**Pn**	**17 29 29.4**	**-0.8**
MTN	**Manton Dam**	**14.64**	**163**	*e*Pn	**Pn**	**17 30 05.3**	**-3.9**
SBUM	**Sibu**	**14.69**	**275**	*e*Pn	**P**	**17 30 11.9**	**-1.5**
KSM	**Kuching**	**16.56**	**271**	*e*Pn	**P**	**17 30 33.1**	**-1.1**
	9.9nm,1.0s						
FITZ	**Fitzroy Crossi**	**19.27**	**184**	P	**Pn**	**17 31 02.9**	**-3.0**
	0.3nm,0.3s,baz=10,slow=6.2,SNR=10						
FITZ	**Fitzroy Crossi**	**19.27**	**184**	*e*P	**Pn**	**17 31 03.5**	**-2.4**
	21nm,1.6s						
GUMO	**Guam**	**21.62**	**55**	*e*P	**P**	**17 31 28.6**	**-0.5**
	159nm,1.4s						
COEN	**Coen**	**22.12**	**134**	*e*P	**P**	**17 31 33.5**	**-1.1**
	44nm,1.5s						
WR1	**Warramunga Arr**	**22.31**	**161**	*e*P	**P**	**17 31 34.6**	**-1.8**
	12nm,0.7s						
WR1				*e*S	**S**	**17 35 39.1**	**+3.8**
WR1				*e*ScP	**ScP**	**17 39 01.2**	**+3.9**
WRA	**Warramunga Arr**	**22.31**	**161**	P	**P**	**17 31 34.6**	**-1.8**
	6.3nm,0.7s,baz=337,slow=11,SNR=42						
WRA				S	**S**	**17 35 39.1**	**+3.8**
	1.7nm,1.1s,baz=344,slow=18,SNR=4.1						
WRA				ScP	**ScP**	**17 39 01.2**	**+3.9**
	0.7nm,0.8s,baz=334,slow=3.1,SNR=3.4						
WB2	**Warramunga Arr**	**22.31**	**161**	*e*P	**P**	**17 31 34.6**	**-1.9**
YULB	**Yu-li**	**22.66**	**347**	*e*P	**P**	**17 31 36.5**	**-3.5**
	90nm,1.8s						
PMG	**Port Moresby**	**22.82**	**118**	*e*P	**P**	**17 31 42.0**	**+0.3**
	30nm,1.0s						
NACB	**Ninganchiao**	**23.34**	**348**	*e*P	**P**	**17 31 43.8**	**-2.8**
	211nm,2.0s						
MBWA	**Marble Bar**	**23.35**	**197**	*e*P	**P**	**17 31 45.0**	**-1.6**
	21nm,1.6s						
YHNB	**Yeheng**	**23.87**	**348**	*e*P	**P**	**17 31 51.4**	**0.0**
	185nm,1.8s						
AS31	**Alice Springs**	**25.70**	**165**	*e*P	**P**	**17 32 08.0**	**0.0**
	3.1nm,0.9s						
ASAR	**Alice Springs**	**25.70**	**165**	P	**P**	**17 32 07.7**	**-0.3**
	2.7nm,0.6s,baz=344,slow=7.6,SNR=44						
ASAR				PcP	**PcP**	**17 35 37.7**	**+1.6**
	0.8nm,1.0s,baz=357,slow=1.8,SNR=3.0						
ASAR				S	**S**	**17 36 33.8**	**+4.1**
	1.0nm,0.8s,baz=348,slow=18,SNR=3.1						
ASAR				ScP	**ScP**	**17 39 11.2**	**+4.6**
	0.7nm,0.7s,baz=344,slow=3.0,SNR=6.5						
AS01	**Alice Springs**	**25.71**	**165**	*e*P	**P**	**17 32 07.6**	**-0.5**
PBKT	**Sadao Pong**	**29.70**	**302**	*e*P	**P**	**17 32 42.2**	**-1.5**
	9.1nm,1.3s						
NANT	**Nan**	**31.02**	**306**	P	**P**	**17 32 55.5**	**+0.1**
	4.6nm,0.7s						
NJ2	**Nanjing**	**31.55**	**347**	*e*P	**P**	**17 33 01.0**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
GYA	**Guiyang**	**31.71**	**324**	*e*P	**P**	**17 33 03.8**	**+2.3**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
FORT	**Forrest**	**31.88**	**178**	*e*P	**P**	**17 33 03.8**	**+1.0**
	50nm,1.1s						
CM01	**Chiang Mai Arr**	**32.26**	**304**	*e*P	**P**	**17 33 07.5**	**+1.1**
CM31	**Chiang Mai Arr**	**32.30**	**304**	*e*P	**P**	**17 33 05.5**	**-1.1**
CMAR	**Chiang Mai Arr**	**32.30**	**304**	P	**P**	**17 33 06.0**	**-0.7**
	1.5nm,0.9s,baz=118,slow=7.1,SNR=6.6						
CHTO	**Chiang Mai**	**32.47**	**304**	*e*P	**P**	**17 33 07.3**	**-0.8**
	3.9nm,0.8s						
KMI	**Kunming**	**33.25**	**317**	P	**P**	**17 33 16.9**	**+1.8**
KMI				pmax	pmax		
	comp=Z,6.0nm,0.5s						
BBOO	**Buckleboo**	**34.98**	**166**	*e*P	**P**	**17 33 29.3**	**-0.4**
	72nm,1.8s						
NWAO	**Narrogin (SRO)**	**35.20**	**194**	*e*P	**P**	**17 33 32.0**	**+0.4**
	140nm,1.9s						
EIDS	**Eidsvold**	**35.35**	**140**	*e*P	**P**	**17 33 33.1**	**+0.1**
	17nm,1.5s						
PBA	**Port Blair**	**35.40**	**288**	*e*P	P	17 33 33.3	-0.3
	231nm,1.1s						
STKA	**Stephens Creek**	**35.79**	**158**	P	**P**	**17 33 37.2**	**+0.5**
	1.3nm,0.4s,baz=345,slow=9.5,SNR=4.2						
STKA	**Stephens Creek**	**35.79**	**158**	*e*P	**P**	**17 33 37.1**	**+0.4**
	8.0nm,1.8s						
CD2	**Chengdu**	**36.73**	**326**	P	**P**	**17 33 44.9**	**+0.1**
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
ARMA	**Armidale**	**39.35**	**145**	*e*P	**P**	**17 34 08.3**	**+1.4**
	32nm,1.5s						
BJT	**Baijiatuau**	**39.79**	**347**	*e*P	**P**	**17 34 10.4**	**+0.2**
	25nm,1.1s						
BJI	**Beijing**	**39.81**	**347**	P	**P**	**17 34 10.5**	**+0.2**
BJI				pmax	pmax		
	comp=Z,16nm,0.8s						
LZH	**Lanzhou**	**40.70**	**331**	*e*P	P	17 34 21.3	+3.2
LZH				pP	pP	17 34 39.0	-2.2
LZH				sP	sP	17 34 47.5	-5.2
LZH				*e*PP	**PnPn**	**17 35 59.6**	**+0.9**
LZH				pmax	pmax		
	comp=Z,22nm,1.2s						
LZH				pmax	pmax		
	comp=Z,97nm,5.4s						
LZH				LR	LR		
	comp=N,380nm,14.0s						
LZH				LR	LR		
	comp=E,400nm,14.2s						
LZH				LR	LR		
	comp=Z,460nm,16.9s						
HHC	**Hu-ho-hao-te**	**41.78**	**343**	*e*P	**P**	**17 34 26.1**	**-0.6**
HHC				pmax	pmax		
	comp=Z,29nm,0.7s						
HHC				pmax	pmax		
	comp=Z,400nm,6.0s						
USRK	**Ussuriysk Ar.**	**43.00**	**5**	P	**P**	**17 34 35.5**	**-0.9**
	4.0nm,1.0s,baz=180,slow=6.6,SNR=5.6						
LSA	**Lhasa**	**44.20**	**313**	*e*P	**P**	**17 34 47.1**	**+0.3**
	3.9nm,0.6s						
KLR	**Kul'dur**	**47.97**	**4**	P	**P**	**17 35 15.0**	**-0.6**
	0.2nm,0.9s,baz=242,slow=5.1,SNR=7.8						
SONA0	**Songino Array**	**49.67**	**342**	*e*P	**P**	**17 35 29.4**	**+0.7**
SONM	**Songino Array**	**49.67**	**342**	P	**P**	**17 35 29.4**	**+0.7**
	5.4nm,0.9s,baz=159,slow=8.3,SNR=21						
SONA1	**Songino Array**	**49.68**	**342**	*e*P	**P**	**17 35 29.1**	**+0.3**
WMQ	**Urumqi**	**54.83**	**326**	P	**P**	**17 36 08.9**	**+2.0**
WMQ				pP	pP	17 36 25.4	-5.8
WMQ				PcP	**PcP**	**17 37 07.0**	**-1.0**
WMQ				pmax	pmax		
	comp=Z,27nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,410nm,5.5s						
WMQ				LR	LR		
	comp=N,260nm,24.1s						
WMQ				LR	LR		
	comp=E,280nm,22.5s						
WMQ				LR	LR		
	comp=Z,240nm,22.5s						
PEA0B	**Petropavlovsk-**	**57.66**	**21**	*e*P	**P**	**17 36 27.6**	**+0.9**
	25nm,1.4s						
PETK	**Petropavlovsk-**	**57.66**	**21**	P	**P**	**17 36 27.1**	**+0.4**
	1.7nm,0.6s,baz=188,slow=4.2,SNR=6.7						
PETK	**Petropavlovsk-**	**57.66**	**21**	*e*P	**P**	**17 36 27.5**	**+0.8**
PEA1	**Petropavlovsk-**	**57.66**	**21**	*e*P	**P**	**17 36 27.1**	**+0.4**
LBZ	**Lake Benmore**	**59.58**	**145**	*e*P	**P**	**17 36 41.0**	**+0.7**
	118nm,2.0s						
MK01	**Makanchi Array**	**59.64**	**326**	*e*P	**P**	**17 36 41.5**	**+0.8**
MK32	**Makanchi Array**	**59.66**	**326**	*e*P	**P**	**17 36 41.8**	**+1.0**
MKAR	**Makanchi Array**	**59.66**	**326**	P	**P**	**17 36 41.8**	**+1.0**
	6.5nm,0.4s,baz=120,slow=7.9,SNR=124						
PRZ	**Przheval'sk**	**59.67**	**320**	*e*P	**P**	**17 36 42.8**	**+1.7**
MAKZ	**Makanchi**	**59.84**	**326**	*e*P	**P**	**17 36 42.7**	**+0.7**
	14nm,1.1s						
KSH	**Kashi**	**59.90**	**316**	P	**P**	**17 36 45.1**	**+2.4**
KSH				pmax	pmax		
	comp=Z,400nm,8.5s						
ODZ	**Obuha Downs**	**60.24**	**146**	*e*P	**P**	**17 36 43.7**	**-1.0**
	118nm,1.8s						
KHZ	**Kahutara**	**60.44**	**142**	*e*P	**P**	**17 36 45.7**	**-0.4**
	56nm,1.3s						
MQZ	**McQueen's Vall**	**60.62**	**143**	*e*P	**P**	**17 36 48.1**	**+0.7**
	145nm,1.7s						
URZ	**Urewera**	**60.66**	**136**	*e*P	**P**	**17 36 47.2**	**-0.6**
	142nm,1.9s						
BKZ	**Black Stump Fm**	**60.67**	**137**	*e*P	**P**	**17 36 47.8**	**-0.1**
	110nm,1.9s						
NRN	**Naryn**	**60.74**	**318**	*e*P	**P**	**17 36 49.5**	**+0.8**
	3.3nm,0.6s						
MA2	**Magadan**	**61.05**	**14**	P	**P**	**17 36 50.7**	**+0.7**
	6.5nm,0.8s,baz=188,slow=17,SNR=3.6						
KZA	**Kyzart**	**61.53**	**318**	P	**P**	**17 36 55.3**	**+1.2**
	SNR=6.5						
TKM2	**Tokmak 2**	**61.69**	**319**	P	**P**	**17 36 55.8**	**+0.8**
	SNR=12						
UCH	**Uchtor**	**62.09**	**318**	P	**P**	**17 36 59.6**	**+1.7**
	SNR=7.7						
USP	**Ospenovka**	**62.56**	**319**	P	**P**	**17 37 01.5**	**+0.9**
	SNR=7.2						
AML	**Almayashu**	**62.59**	**318**	P	**P**	**17 37 02.4**	**+1.2**
	SNR=5.0						
EKS2	**Erkin-Say**	**62.77**	**318**	P	**P**	**17 37 03.6**	**+1.6**
	SNR=6.5						
ZAA0	**Zalesovo Array**	**62.84**	**334**	*e*P	**P**	**17 37 01.1**	**-1.0**
	6.4nm,1.4s						
ZALV	**Zalesovo Beam**	**62.84**	**334**	P	**P**	**17 37 01.1**	**-1.0**
	1.1nm,0.4s,baz=120,slow=5.8,SNR=6.4						
ZALV	**Zalesovo Beam**	**62.84**	**334**	*e*P	**P**	**17 37 01.3**	**-0.8**
ZAA1	**Zalesovo Array**	**62.85**	**334**	*e*P	**P**	**17 37 01.1**	**-1.0**
KBL	**Kabul**	**63.14**	**308**	*e*P	**P**	**17 37 04.0**	**-0.8**
	4.0nm,0.6s						
KURBB	**Kurchatov Arra**	**63.89**	**328**	P	**P**	**17 37 09.8**	**+0.8**
	11nm,0.6s,baz=126,slow=6.0,SNR=106						
KURK	**Kurchatov**	**63.89**	**328**	*e*P	**P**	**17 37 09.5**	**+0.5**
	21nm,0.6s						
KK31	**Karatay Array**	**65.13**	**318**	*e*P	**P**	**17 37 18.1**	**+0.7**
KKAR	**Karatay Array**	**65.13**	**318**	*e*P	**P**	**17 37 18.1**	**+0.7**
BVAR	**Borovoye Array**	**69.46**	**327**	P	**P**	**17 37 44.4**	**0.0**
	4.0nm,0.8s,baz=126,slow=7.3,SNR=12						
BRVK	**Borovoye**	**69.53**	**327**	*e*P	**P**	**17 37 45.5**	**+0.7**
	5.4nm,0.8s						
TIXI	**Tiksi**	**70.29**	**1**	*e*P	**P**	**17 37 49.1**	**-0.1**
	2.0nm,0.8s						
GEYT	**Alibeck**	**72.55**	**309**	P	**P**	**17 38 04.5**	**+1.0**
	5.2nm,0.7s,baz=147,slow=3.4,SNR=2.0						
ABKAR	**Akbulak array**	**74.15**	**321**	*e*P	**P**	**17 38 12.7**	**+0.1**
AKTO	**Aktyubinsk**	**75.68**	**322**	P	**P**	**17 38 21.7**	**+0.4**
	3.4nm,0.6s,baz=103,slow=12,SNR=16						
SDPT	**Sand Point**	**79.15**	**34**	*e*P	**P**	**17 38 39.6**	**-1.0**
	67nm,1.0s						
VNDA	**Vanda**	**80.97**	**173**	P	**P**	**17 38 50.5**	**+0.6**
	0.6nm,0.5s,baz=318,slow=7.5,SNR=5.4						
VNDA	**Vanda**	**80.97**	**173**	*e*P	**P**	**17 38 50.6**	**+0.6**
	14nm,1.9s						
RAYN	**Ar Rayn**	**81.58**	**293**	*e*P	**P**	**17 38 54.9**	**+0.5**
	5.7nm,0.8s						
KBZ	**Khabaz**	**84.77**	**314**	LR	LR	18 22 24.2	
	comp=Z,122nm,20.2s,baz=204,slow=39						
SKT	**Skwentna**	**84.94**	**28**	*e*P	**P**	**17 39 10.8**	**0.0**
	9.8nm,1.5s						
SUA	**Susitna One**	**85.25**	**29**	*e*P	**P**	**17 39 12.9**	**+0.4**
	28nm,1.8s						
KTH	**Kantishna Hill**	**85.40**	**26**	*e*P	**P**	**17 39 13.4**	**+0.3**
	16nm,1.8s						
TRF	**Thorofare Moun**	**85.67**	**27**	*e*P	**P**	**17 39 15.4**	**+0.8**
	16nm,1.6s						
TORD	**Torodi Ar. Bea**	**123.79**	**287**	PKP	**PKPdf**	**17 45 34.6**	**+0.4**
	0.6nm,0.7s,baz=51,slow=3.1,SNR=3.3						
TOA1	**Torodi Ar. Sit**	**123.79**	**287**	*e*PKPdf	**PKPdf**	**17 45 34.6**	**+0.3**

*ISCJB **19** 17:32:01.5±0.4, 33°.78N±0°.03×132°.21E±0°.05, h61km±4km, mb3.6/5, Error ellipse: s-maj=6.3km s-min=5.0km az=165.4*
*JMA **19** 17:32:02.4, 33°.77N×132°.25E, h52km, M3.7 Broadband fault plane solution: P waves. NP1:φs=262.00000°, δ85.00000°, λ135.00000°. NP2:φs=357.00000°, δ45.00000°, λ7.00000°. Principal axes: T Plg34.0000°, Azm209.0000°; N Plg45.0000°, Azm77.0000°; P Plg26.0000°, Azm318.0000°;*
JMA Felt II J1.
*IDC **19** 17:32:03.1±1.8, 33°.76N×132°.20E, h64km±17km, mb3.4/5, mb1 3.5/7, mb1mx3.2/71, mbtmp3.7/7 Error ellipse: s-maj=24.1km s-min=16.2km az=133.0*
ISC 19 17:32:02.4±0.9, 33°.77N±0°.03×132°.22E±0°.04, h51km±7km, n19, σ0§81/31, mb3.4/5, 7C-3D, Shikoku

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNA	**Nagahama**	**0.30**	**135**	⇓P	**Pn**	**17 32 11.4**	**-0.2**
JNA				S	**Sn**	**17 32 18.2**	**0.0**
JKD	**Kudamatsu**	**0.41**	**314**	⇑P	**Pn**	**17 32 13.0**	**+0.3**
JKD				S	**Sn**	**17 32 20.4**	**+0.4**
JHM	**Kurahashi**	**0.45**	**35**	⇑P	**Pn**	**17 32 13.1**	**0.0**
JHM				S	**Sn**	**17 32 20.7**	**0.0**
UWA2	**Uwa jima 2**	**0.65**	**149**	⇓P	**Pn**	**17 32 15.5**	**-0.1**
UWA2				S	**Sn**	**17 32 25.1**	**0.0**
JET	**Tanbara**	**0.69**	**89**	⇑P	**Pn**	**17 32 15.8**	**-0.2**
JET				S	**Sn**	**17 32 26.2**	**+0.3**
JKU	**Kubokawa**	**0.84**	**123**	⇓P	**Pn**	**17 32 17.8**	**-0.2**
JKU				S	**Sn**	**17 32 30.7**	**+1.3**
JHT	**Toyohira**	**0.90**	**10**	⇑P	**Pn**	**17 32 19.1**	**+0.2**
JHT				S	**Sn**	**17 32 31.5**	**+0.5**
JTO	**Tosashimizu**	**1.03**	**152**	⇑P	**Pn**	**17 32 20.5**	**-0.1**
JTO				S	**Sn**	**17 32 36.2**	**+2.2**
JNU	**Nakatsue**	**1.30**	**240**	P	**Pn**	**17 32 24.6**	**+0.4**
	105nm,0.3s,baz=63,slow=5.0,SNR=1696						
JNU				S	**Sn**	**17 32 41.2**	**+0.7**
	61nm,0.3s,baz=330,slow=20,SNR=36						
JGT2	**ShimaneMisato**	**1.31**	**10**	⇑P	**Pn**	**17 32 24.4**	**+0.1**
JGT2				S	**Sn**	**17 32 41.2**	**+0.5**
JHS	**Saijyo**	**1.43**	**31**	⇑P	**Pn**	**17 32 26.1**	**+0.1**
JHS				S	**Sn**	**17 32 44.0**	**+0.4**
KSRS	**Korea Array**	**5.08**	**318**	P	**Pn**	**17 33 16.5**	**+0.6**
	0.7nm,0.3s,baz=137,slow=14,SNR=8.3						
KSRS				S	**Sn**	**17 34 12.9**	**-0.2**
	1.8nm,0.3s,baz=137,slow=24,SNR=7.3						
MAT	**Matsushiro**	**5.63**	**59**	P	**Pn**	**17 33 24.7**	**+1.2**
MJAR	**Matsushiro Arr**	**5.63**	**59**	P	**Pn**	**17 33 24.9**	**+1.4**
	5.0nm,0.3s,baz=244,slow=14,SNR=51						
MKAR	**Makanchi Array**	**39.61**	**304**	P	**P**	**17 39 30.0**	**+1.1**
	0.2nm,0.7s,baz=84,slow=7.4,SNR=2.1						
ILAR	**Eielson Array**	**56.19**	**31**	P	**P**	**17 41 36.5**	**-0.2**
	0.2nm,0.5s,baz=270,slow=5.4,SNR=4.2						
ASAR	**Alice Springs**	**57.14**	**178**	P	**P**	**17 41 43.2**	**-0.7**
	0.4nm,1.0s,baz=8.0,slow=14,SNR=3.8						
FINES	**FINESS Array B**	**68.04**	**330**	P	**P**	**17 42 55.0**	**-1.1**
	1.6nm,0.5s,baz=72,slow=5.0,SNR=8.5						
HFS	**Hagfors**	**73.75**	**333**	P	**P**	**17 43 29.3**	**-1.4**
	0.9nm,0.4s,baz=64,slow=10,SNR=7.1						

JMA 19 17:35:41.8±0.1, 36°.18N×140°.01E, h51km±1km, M3.5, 1C-6D Broadband fault plane solution: P waves. NP1:φs34.00000°, δ77.00000°, λ78.00000°. NP2: φs259.00000°, δ18.00000°, λ133.00000°. Principal axes: T Plg56.0000°, Azm288.0000°; N Plg12.0000°, Azm37.0000°; P Plg31.0000°, Azm134.0000°; Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.16**	**72**	⇑P	Pn	17 35 50.1	+0.1
JYT				S	Sn	17 35 56.0	+0.2
JAG	**Ashikaga**	**0.51**	**299**	⇓P	Pn	17 35 53.4	+0.1
JAG				S	Sn	17 36 01.3	-0.2
JKT	**Katashina**	**0.85**	**314**	⇓P	Pn	17 35 57.4	-0.2
JKT				S	Sn	17 36 09.2	0.0
JRY	**Ryogami san**	**0.91**	**260**	⇓P	Pn	17 35 58.5	+0.1
JRY				S	Sn	17 36 10.5	-0.1
JFY	**Yanaizu**	**1.25**	**349**	⇓P	Pn	17 36 03.1	+0.2
JFY				*e*S	Sn	17 36 19.4	+0.7
JHK	**Hiroka**	**1.33**	**323**	⇓P	Pn	17 36 04.3	+0.3
JFT	**Otama**	**1.36**	**11**	⇓P	Pn	17 36 04.6	+0.1
MAT	**Matsushiro**	**1.50**	**284**	P	Pn	17 36 06.8	+0.5
MAT				S	Sn	17 36 23.8	-1.0

*ISCJB **19** 17:51:38.5±1.3, 33°.20S±0°.09×177°.5W±0°.2, h26km, mb4.1/7 Error ellipse: s-maj=25.0km s-min=9.1km az=24.9*
*IDC **19** 17:51:42.3±3.2, 32°.96S×178°.29W, h0km, mb3.8/3, mb1 3.9/4, mb1mx3.7/45, mbtmp3.8/4, ML3.4/1, Error ellipse: s-maj=65.8km s-min=36.9km az=113.0*
*NEIC **19** 17:51:43.4±2.5, 33°.16S×177°.60W, h45km±22km, mb4.5/5, Error ellipse: s-maj=23.5km s-min=18.4km az=169.0*
ISC 19 17:51:41.0±1.1, 33°.25±0°.1×177°.5W±0°.1, h26km, n19, σ1§11/22, mb4.0/7, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.73**	**219**	Pn	**Pn**	**17 53 19.2**	**+1.1**
	0.8nm,0.3s,baz=252,slow=3.7,SNR=6.4						
URZ				Sn	**Sn**	**17 54 33.3**	**-0.6**
	0.8nm,0.3s,baz=72,slow=20,SNR=3.7						
URZ	**Urewera**	**6.73**	**219**	*e*Sn	**Sn**	**17 54 33.3**	**-0.6**
URZ				*e*Sn	**Sn**	**17 54 34.9**	**+1.0**
OUZ	**Omahuta**	**7.67**	**252**	*e*Pn	**Pn**	**17 53 32.5**	**+1.5**
BKZ	**Black Stump Fm**	**7.73**	**217**	*e*Pn	**Pn**	**17 53 34.1**	**+2.2**
BKZ				*e*Sn	**Sn**	**17 54 58.6**	**0.0**
HIZ	**Hauiti**	**8.20**	**227**	*e*Pn	**Pn**	**17 53 37.2**	**-1.2**
BFZ	**Birch Farm**	**9.04**	**212**	*e*Pn	**Pn**	**17 53 49.2**	**-0.5**
CAN	**Canberra**	**27.72**	**256**	*e*P	**P**	**17 57 26.5**	**-0.9**
	48nm,1.5s						
STKA	**Stephens Creek**	**34.38**	**261**	*e*P	**P**	**17 58 25.7**	**-0.2**
	2.6nm,1.4s						
CTA	**Charters Tower**	**34.75**	**283**	P	**P**	**17 58 29.7**	**+0.4**
	2.1nm,0.9s,baz=142,slow=12,SNR=3.1						
CTAO	**Charters Tower**	**34.75**	**283**	*e*P	**P**	**17 58 28.6**	**-0.7**
	17nm,1.3s						
AS31	**Alice Springs**	**43.46**	**270**	*e*P	**P**	**17 59 41.7**	**-0.4**
	2.1nm,1.4s						
ASAR	**Alice Springs**	**43.47**	**270**	P	**P**	**17 59 41.5**	**-0.6**
	0.3nm,0.4s,baz=107,slow=7.7,SNR=8.6						
WR1	**Warramunga Arr**	**44.70**	**275**	*e*P	**P**	**17 59 51.0**	**-1.1**
	17nm,1.4s						
WRA	**Warramunga Arr**	**44.70**	**275**	P	**P**	**17 59 51.0**	**-1.1**
	0.8nm,0.5s,baz=115,slow=7.8,SNR=17						
PSRC	**Puddingstone R**	**87.26**	**46**	*e*P	**P**	**18 04 24.1**	**-1.1**
JSRW	**J. Sargeant Re**	**116.26**	**61**	*e*PKPdf	**PKPdf**	**18 10 23.9**	**+2.0**
M54A	**Oil Creek Stat**	**116.43**	**56**	*e*PKPdf	**PKPdf**	**18 10 22.5**	**+0.3**
FIA0	**FINESS Array S**	**147.87**	**339**	*e*PKPbc	**PKPab**	**18 11 26.5**	**+1.1**
FINES	**FINESS Array B**	**147.87**	**339**	PKPbc	**PKPab**	**18 11 26.5**	**+1.1**
	7.1nm,1.2s,baz=52,slow=2.3,SNR=3.9						

*ISCJB **19** 18:09:15.7±0.6, 62°.04S±0°.06×164°.4E±0°.2, h10km, mb4.8/12, MS4.2/9, Error ellipse: s-maj=16.2km s-min=7.6km az=11.8*
*IDC **19** 18:09:15.8±1.1, 61°.99S×164°.69E, h0km, mb4.5/6, mb1 4.5/8, mb1mx4.2/39, mbtmp4.4/8, ML3.8/2, MS4.2/11, Ms1 4.2/11, ms1mx3.9/39, Error ellipse: s-maj=39.1km s-min=21.1km az=88.0*
*NEIC **19** 18:09:16.9±0.6, 62°.02S×164°.45E, h10km, mb4.7/24, Error ellipse: s-maj=19.4km s-min=9.1km az=97.0*
ISC 19 18:09:17.2±0.7, 61°.99S±0°.08×164°.3E±0°.2, h10km, n50, σ1§63/38, mb4.7/12, MS4.1/9, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**8.01**	**337**	*e*Pn	**Pn**	**18 11 09.9**	**-3.6**
VNDA	**Vanda**	**15.62**	**182**	Pn	**Pn**	**18 12 55.2**	**-1.8**
	0.2nm,0.3s,baz=5.3,slow=14,SNR=12						
VNDA				LR	LR	18 17 52.0	
	comp=Z,727nm,21.6s,baz=332,slow=33						
VNDA	**Vanda**	**15.62**	**182**	*e*Pn	**Pn**	**18 12 54.3**	**-2.7**
PYZ	**Puysegur Point**	**15.92**	**6**	*e*Pn	**Pn**	**18 12 58.9**	**-2.2**
	135nm,1.4s						
SBA	**Scott Base**	**15.96**	**178**	*e*Pn	**Pn**	**18 13 01.1**	**-0.2**
	66nm,1.5s						
WHZ	**Wether Hill Ro**	**16.27**	**9**	*e*Pn	**Pn**	**18 13 04.0**	**-1.6**
	74nm,1.6s						
DCZ	**Deep Cove**	**16.65**	**7**	*e*Pn	**Pn**	**18 13 10.2**	**-0.2**
	59nm,1.5s						
MLZ	**Mavora Lakes**	**16.81**	**9**	*e*Pn	**Pn**	**18 13 11.8**	**-0.7**
	103nm,1.9s						
ODZ	**Otahua Downs**	**17.39**	**15**	*e*Pn	**P**	**18 13 19.9**	**-1.0**
	42nm,1.3s						
WKZ	**Wanaka**	**17.42**	**11**	*e*Pn	**P**	**18 13 21.2**	**-0.2**
	62nm,1.3s						
LBZ	**Lake Benmore**	**17.98**	**14**	*e*Pn	**P**	**18 13 28.9**	**+1.4**
	80nm,1.6s						
RPZ	**Rata Peaks**	**18.75**	**16**	P	**Pn**	**18 13 35.8**	**-0.5**
	0.6nm,0.3s,baz=197,slow=20,SNR=4.2						
RPZ				LR	LR	18 19 45.5	
	comp=Z,913nm,20.7s,baz=202,slow=34						
FOZ	**Fox Glacier**	**18.78**	**13**	*e*P	**Pn**	**18 13 39.8**	**+3.0**
	158nm,1.7s						
MQZ	**McQueen's Vall**	**18.98**	**19**	*e*P	**Pn**	**18 13 38.8**	**-0.4**
	71nm,1.3s						
OXZ	**Oxford**	**19.26**	**

H08S2 Diego Garcia H 84.13 265 T T 19 55 20.7
baz=151,slow=76,SNR=8.4
H08S1 Diego Garcia H 84.14 265 T T 19 55 18.9
baz=151,slow=76,SNR=16
H08S3 Diego Garcia H 84.15 265 T T 19 55 21.9
baz=151,slow=76,SNR=32
OPO Ambohidratompo 85.68 238 LR LR 18 51 50.4
comp=Z,398nm,21.8s,baz=172,slow=30
ILAR Eielson Array 131.56 26 PKP **PKPdf 18 28 27.4 -0.8**
0.4nm,0.9s,baz=259,slow=3.2,SNR=3.1

*ISCJB **19** 18:20:04.2±0.5, 13°.17N±0°.08×143°.87E±0°.08, h138km, mb3.7/16, Error ellipse: s-maj=12.1km s-min=10.7km az=38.5*
*IDC **19** 18:20:06.0±0.6, 13°.21N×144°.06E, h143km±7km, mb3.6/14, mb1 3.7/14, mb1mx3.5/59, mbtmp4.0/14, Error ellipse: s-maj=20.5km s-min=10.9km az=85.0*
ISC 19 18:20:05.5±0.6, 13°.2N±0°.1×144°.0E±0°.1, h138km, n19, σ0°.90/24, mb3.9/16, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.98**	**65**	P	**Pn**	**18 20 30.0**	**+1.1**
	304nm,0.3s,baz=278,slow=3.2,SNR=108						
GUMO				S	**Sn**	**18 20 47.2**	**+0.4**
	454nm,0.3s,baz=333,slow=24,SNR=44						
JNU	**Nakatsue**	**23.16**	**331**	P	**P**	**18 25 00.4**	**+0.5**
	4.7nm,0.7s,baz=218,slow=2.0,SNR=5.4						
KSRS	**Korea Array**	**28.10**	**332**	P	**P**	**18 25 45.8**	**+1.5**
	1.2nm,0.6s,baz=140,slow=9.4,SNR=6.6						
WRA	**Warramunga Arr**	**34.25**	**196**	P	**P**	**18 26 38.6**	**+0.2**
	3.3nm,0.8s,baz=18,slow=9.4,SNR=31						
WRA				PcP	**PcP**	**18 29 11.0**	**-1.0**
	0.7nm,0.8s,baz=14,slow=3.3,SNR=4.9						
FITZ	**Fitzroy Crossi**	**35.95**	**211**	P	**P**	**18 26 53.8**	**+0.8**
	2.7nm,0.7s,baz=35,slow=11,SNR=18						
KLR	**Kul'dur**	**37.33**	**347**	P	**P**	**18 27 04.3**	**0.0**
	0.1nm,0.8s,baz=153,slow=7.8,SNR=5.4						
ASAR	**Alice Springs**	**37.92**	**195**	P	**P**	**18 27 10.2**	**+0.5**
	0.6nm,0.7s,baz=17,slow=13,SNR=29						
ASAR				PcP	**PcP**	**18 29 22.7**	**-0.3**
	0.4nm,0.8s,baz=19,slow=3.1,SNR=4.0						
CMAR	**Chiang Mai Arr**	**43.54**	**283**	P	**P**	**18 27 56.6**	**+0.7**
	0.3nm,0.5s,baz=78,slow=7.2,SNR=4.0						
CMAR				PcP	**PcP**	**18 29 41.6**	**+0.2**
	1.3nm,0.8s,baz=104,slow=1.9,SNR=7.4						
STKA	**Stephens Creek**	**44.86**	**183**	P	**P**	**18 28 05.5**	**-0.6**
	0.8nm,0.5s,baz=344,slow=7.4,SNR=3.1						
SONM	**Songino Array**	**46.56**	**326**	P	**P**	**18 28 19.7**	**+0.2**
	0.3nm,0.5s,baz=145,slow=5.3,SNR=2.2						
MKAR	**Makanchi Array**	**61.17**	**316**	P	**P**	**18 30 06.0**	**+0.5**
	0.8nm,0.4s,baz=91,slow=8.5,SNR=17						
ZALV	**Zalesovo Beam**	**61.44**	**325**	P	**P**	**18 30 06.9**	**-0.3**
	0.4nm,0.3s,baz=104,slow=6.1,SNR=3.2						
ZALV				PcP	**PcP**	**18 30 46.5**	**-1.4**
	0.6nm,0.5s,baz=136,slow=4.4,SNR=2.7						
KURBB	**Kurchatov Arra**	**64.36**	**320**	P	**P**	**18 30 26.6**	**0.0**
	1.9nm,0.5s,baz=104,slow=5.9,SNR=21						
ILAR	**Eielson Array**	**69.31**	**25**	P	**P**	**18 30 55.7**	**-1.9**
	0.3nm,0.4s,baz=242,slow=5.9,SNR=4.4						
BVAR	**Borovoye Array**	**69.70**	**322**	P	**P**	**18 30 59.9**	**-0.3**
	1.6nm,0.4s,baz=104,slow=6.1,SNR=11						
NVAR	**Mina Array Bea**	**87.87**	**51**	P	**P**	**18 32 40.6**	**+0.6**
	3.8nm,0.9s,baz=264,slow=5.8,SNR=15						
FINES	**FINESS Array B**	**91.16**	**335**	P	**P**	**18 32 52.8**	**-1.8**
	3.7nm,1.0s,baz=79,slow=3.0,SNR=5.3						
TORD	**Torodi Ar. Bea**	**134.36**	**304**	PKP	**PKPdf**	**18 39 08.8**	**+0.7**
	0.5nm,0.7s,baz=318,slow=1.9,SNR=2.9						
LPAZ	**La Paz**	**148.83**	**100**	PKPbc	**PKPbc**	**18 39 39.1**	**+0.5**
	1.2nm,0.7s,baz=270,slow=3.0,SNR=4.7						

*PRU **19** 18:24:18.2, 44°.22N×17°.57E, h0km*
*CSEM **19** 18:24:20.4±0.1, 44°.38N×17°.51E, h2km, ML2.7, Error ellipse: s-maj=3.5km s-min=2.0km az=36.0*
*BEO **19** 18:24:20.9±0.3, 44°.34N×17°.47E, h0km±2km*
ISC 19 18:24:20.3±1.1, 44°.35N±0°.02×17°.50E±0°.02, h4km±9km, n95, σ1°.28/159, 11C-7D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLY	**Banja Luka**	**0.46**	**331**	*e*Pg	**Pg**	**18 24 29.7**	**+0.6**
BLY				*e*Sg	**Sg**	**18 24 36.3**	**+1.2**
BLY	**Banja Luka**	**0.46**	**331**	⇑*i*P	**Pg**	**18 24 29.4**	**+0.3**
BLY				S	**Sg**	**18 24 35.5**	**+0.5**
BLY	**Banja Luka**	**0.46**	**331**	⇑*i*P	**Pg**	**18 24 29.4**	**+0.3**
BLY	**Banja Luka**	**0.46**	**331**	*e*Pg	**Pg**	**18 24 29.7**	**+0.6**
BLY				S	**Sg**	**18 24 35.5**	**+0.5**
DOB	**Doboj**	**0.58**	**48**	*e*Pg	**Pg**	**18 24 30.9**	**-0.5**
DOB				*e*Sg	**Sg**	**18 24 40.1**	**+1.2**
HAPS	**Han Pijesak,BI**	**1.08**	**104**	*e*Pg	**Pg**	**18 24 40.5**	**-0.5**
HAPS				*e*Sg	**Sb**	**18 24 55.7**	**-0.4**
HAPS	**Han Pijesak,BI**	**1.08**	**104**	*e*Pg	**Pg**	**18 24 40.5**	**-0.5**
HAPS				*e*Sg	**Sb**	**18 24 55.7**	**-0.4**
UDBI	**Udbina**	**1.25**	**279**	*e*Pg	**Pg**	**18 24 42.3**	**-2.0**
UDBI				Sg	**Sg**	**18 25 00.3**	**-0.2**
UDBI	**Udbina**	**1.25**	**279**	*e*Pg	**Pg**	**18 24 42.3**	**-2.0**
BBLS	**Lazići**	**1.46**	**109**	*e*Pg	**Pn**	**18 24 48.0**	**+0.5**
BBLS				*e*Sg	**Sn**	**18 25 07.9**	**+0.8**
BBLS	**Lazići**	**1.46**	**109**	*e*Pg	**Pn**	**18 24 48.0**	**+0.5**
BBLS				*e*Sg	**Sn**	**18 25 07.9**	**+0.8**
TEKS	**Tekeris**	**1.47**	**82**	*e*Pg	**Pn**	**18 24 48.0**	**+0.4**
TEKS				*e*Sg	**Sn**	**18 25 08.7**	**+1.4**
TEKS	**Tekeris**	**1.47**	**82**	*e*Pg	**Pn**	**18 24 48.0**	**+0.4**
TEKS				*e*Sg	**Sn**	**18 25 07.9**	**+0.6**
STON	**Ston**	**1.48**	**174**	*e*Pg	**Pn**	**18 24 46.4**	**-1.4**
STON				*e*Sg	**Sn**	**18 25 08.7**	**+1.1**
STON	**Ston**	**1.48**	**174**	*e*Pn	**Pn**	**18 24 46.0**	**-1.7**
STON				Sn	**Sb**	**18 25 07.9**	**+0.2**
STON	**Ston**	**1.48**	**174**	*e*Pg	**Pn**	**18 24 46.4**	**-1.4**
STON	**Ston**	**1.48**	**174**	*e*Pn	**Pn**	**18 24 48.1**	**+0.3**
STON				*e*Sg	**Sn**	**18 25 08.7**	**+1.1**
UPM	**Unac-Piva**	**1.54**	**138**	⇑*i*Pn	**Pn**	**18 24 48.6**	**-0.1**
UPM				*e*Sn	**Sn**	**18 25 10.2**	**+1.0**
BRY	**Bratogost**	**1.63**	**152**	⇑*i*Pn	**Pn**	**18 24 50.7**	**+0.7**
BRY				*e*Sn	**Sg**	**18 25 12.7**	**-0.1**
TREB	**Trebinje**	**1.75**	**159**	⇑*i*Pn	**Pn**	**18 24 52.3**	**+0.9**
TREB				*e*Sn	**Sb**	**18 25 15.6**	**+0.4**
DIVS	**Divibare**	**1.81**	**97**	*e*Pg	**Pb**	**18 24 53.9**	**-0.2**
DIVS				*e*Sg	**Sg**	**18 25 18.1**	**-0.4**
DIVS	**Divibare**	**1.81**	**97**	*e*Pn	**Pn**	**18 24 53.1**	**+0.7**
DIVS	**Divibare**	**1.81**	**97**	*e*Pg	**Pb**	**18 24 53.9**	**-0.2**
DIVS				*e*Sn	**Sn**	**18 25 16.9**	**+1.0**
DIVS				*e*Sg	**Sg**	**18 25 18.1**	**-0.4**
FGSL	**Fruska Gora**	**1.84**	**63**	*e*Pg	**Pb**	**18 24 54.7**	**+0.2**
FGSL				*e*Sg	**Sg**	**18 25 19.9**	**+0.6**
FRGS	**Fruska Gora**	**1.84**	**63**	*e*Pg	**Pb**	**18 24 54.7**	**+0.2**
FRGS				*e*Sg	**Sg**	**18 25 19.9**	**+0.6**
FRGS	**Fruska Gora**	**1.84**	**63**	*e*Pn	**Pn**	**18 24 53.6**	**+0.9**
FRGS				*e*Sn	**Sn**	**18 25 17.2**	**+0.8**
NVLJ	**Novalja**	**1.89**	**277**	*i* Pn	**Pn**	**18 24 54.4**	**+1.0**
NVLJ				Sn	**Sb**	**18 25 20.0**	**+0.6**
NVLJ	**Novalja**	**1.89**	**277**	*i* Pn	**Pn**	**18 24 54.3**	**+1.0**
NVLJ				Sn	**Sb**	**18 25 19.9**	**+0.6**
OZLJ	**Ozalj**	**1.92**	**312**	*e*Pn	**Pn**	**18 24 54.1**	**+0.3**
OZLJ	**Ozalj**	**1.92**	**312**	*e*Pn	**Pn**	**18 24 54.0**	**+0.3**
HCY	**Herceg Novi**	**2.04**	**159**	*e*Pn	**Pb**	**18 24 56.9**	**-1.0**
HCY				*e*Sn	**Sn**	**18 25 22.3**	**+1.1**
CRES	**Cresnjev**	**2.06**	**316**	*e*Pn	**Pn**	**18 24 55.9**	**+0.1**
CRES				*e*Sn	**Sn**	**18 25 21.7**	**-0.3**
IVAS	**Ivanjica**	**2.07**	**111**	*e*Pg	**Pb**	**18 24 58.2**	**-0.3**
IVAS				*e*Sg	**Sg**	**18 25 27.3**	**+0.5**
IVAS	**Ivanjica**	**2.07**	**111**	*e*Pg	**Pb**	**18 24 58.2**	**-0.3**
IVAS				*e*Sg	**Sg**	**18 25 27.3**	**+0.5**
TRUS	**Trudelj**	**2.10**	**92**	*e*Pg	**Pb**	**18 24 58.8**	**-0.1**
TRUS				*e*Sg	**Sg**	**18 25 27.5**	**-0.1**
TRUS	**Trudelj**	**2.10**	**92**	*e*Pg	**Pb**	**18 24 58.8**	**-0.1**
TRUS				*e*Sg	**Sg**	**18 25 27.5**	**-0.1**
SJES	**Sjenica**	**2.10**	**120**	*e*Pg	**Pb**	**18 24 59.6**	**+0.6**
SJES				*e*Sg	**Sg**	**18 25 28.2**	**+0.5**
BEHE	**Becsehely**	**2.18**	**347**	⇓*e*Pn	**Pn**	**18 24 57.9**	**+0.5**
BEHE				*e*Sn	**Sn**	**18 25 25.1**	**+0.3**
BEHE	**Becsehely**	**2.18**	**347**	*e*Pn	**Pn**	**18 24 57.7**	**+0.3**
BEHE				*e*Sn	**Sn**	**18 25 24.8**	**0.0**
PDG	**Podgorica**	**2.31**	**146**	*e*Pg	**Pb**	**18 25 01.1**	**-1.4**
PDG				*e*Sg	**Sg**	**18 25 34.0**	**-0.4**
PDG	**Podgorica**	**2.31**	**146**	⇑*i*P	**Pb**	**18 25 01.2**	**-1.3**
PDG	**Podgorica**	**2.31**	**146**	S	**Sg**	**18 25 34.2**	**-0.2**
PDG	**Podgorica**	**2.31**	**146**	*e*Pn	**Pn**	**18 25 00.8**	**+1.7**
PDG	**Podgorica**	**2.31**	**146**	*e*Pg	**Pb**	**18 25 01.1**	**-1.4**
PDG				*e*Sn	**Sn**	**18 25 29.8**	**+1.9**
PDG				*e*Sg	**Sg**	**18 25 34.0**	**-0.4**
GRUS	**Gruza**	**2.37**	**100**	*e*Pg	**Pg**	**18 25 05.1**	**-0.5**
GRUS				*e*Sg	**Sg**	**18 25 35.7**	**-0.5**
GRUS	**Gruza**	**2.37**	**100**	*e*Pg	**Pg**	**18 25 05.1**	**-0.5**
GRUS				*e*Sg	**Sg**	**18 25 35.7**	**-0.5**
DRME	**Dracevica, Mon**	**2.49**	**150**	*e*Pn	**Pn**	**18 25 03.4**	**+1.8**
DRME				*e*Sn	**Sn**	**18 25 34.4**	**+2.0**
CEY	**Cerknica**	**2.58**	**304**	*e*Pn	**Pn**	**18 25 03.5**	**+0.6**
CEY				*e*Sn	**Sn**	**18 25 34.6**	**-0.1**
SELS	**Selova**	**2.86**	**112**	*e*Pn	**Pn**	**18 25 07.1**	**+0.4**
SELS	**Selova**	**2.86**	**112**	*e*Pn	**Pn**	**18 25 07.1**	**+0.4**
SOKA	**Soboth**	**2.90**	**324**	Pn	**Pn**	**18 25 07.4**	**+0.1**
	1.9nm,0.5s						
SOKA				Sn	**Sn**	**18 25 40.1**	**-2.6**
	2.3nm,0.5s						
SOKA	**Soboth**	**2.90**	**324**	Pn	**Pn**	**18 25 07.4**	**+0.1**
	1.9nm,0.5s						
SOKA				Sn	**Sn**	**18 25 40.1**	**-2.6**
	2.3nm,0.5s						
OBKA	**Obir**	**2.99**	**317**	Pn	**Pn**	**18 25 10.5**	**+1.9**
	0.2nm,0.2s						
OBKA				Pg	**Pg**	**18 25 17.5**	**-0.2**
	2.5nm,0.4s						
OBKA				Sg	**Sg**	**18 25 59.6**	**+3.2**
	12nm,0.5s						
OBKA	**Obir**	**2.99**	**317**	Pn	**Pn**	**18 25 10.5**	**+1.9**
	0.2nm,0.2s						
KUBS	**Kucevo**	**3.00**	**87**	*e*Pn	**Pn**	**18 25 10.8**	**+2.2**
KUBS	**Kucevo**	**3.00**	**87**	*e*Pn	**Pn**	**18 25 10.8**	**+2.2**
MDVR	**Moldovita**	**3.04**	**80**	⇓*i*P	**Pn**	**18 25 08.8**	**-0.5**
MDVR	**Moldovita**	**3.04**	**80**	⇓*i*P	**Pn**	**18 25 08.8**	**-0.5**
BOVS	**Bovan**	**3.12**	**102**	*e*Pn	**Pn**	**18 25 10.6**	**+0.3**
BOVS				*e*Sn	**Sn**	**18 25 49.3**	**+1.3**
BOVS	**Bovan**	**3.12**	**102**	*e*Pn	**Pn**	**18 25 10.6**	**+0.3**
BOVS				*e*Sn	**Sn**	**18 25 49.3**	**+1.3**
BZS	**Buzias**	**3.19**	**65**	*e*Pn	**Pn**	**18 25 12.4**	**+1.2**
BZS	**Buzias**	**3.19**	**65**	⇑*i*P	**Pn**	**18 25 11.7**	**+0.5**
BZS	**Buzias**	**3.19**	**65**	S	**Sn**	**18 25 48.3**	**-1.3**
BZS	**Buzias**	**3.19**	**65**	⇑*i*P	**Pn**	**18 25 11.7**	**+0.5**
BZS	**Buzias**	**3.19**	**65**	*e*Pn	**Pn**	**18 25 12.4**	**+1.2**
ARSA	**Arzberg**	**3.21**	**335**	*i* Pn	**Pn**	**18 25 12.1**	**+0.5**
	4.4nm,0.3s						
ARSA				Sg	**Sg**	**18 26 02.7**	**-0.7**
	1.0nm,0.3s						
ARSA	**Arzberg**	**3.21**	**335**	Pn	**Pn**	**18 25 12.1**	**+0.5**
	4.4nm,0.3s						
ARSA				Sg	**Sg**	**18 26 02.7**	**-0.7**
	1.0nm,0.3s						
SIRR	**Siria**	**3.51**	**55**	⇑*i*P	**Pn**	**18 25 14.7**	**-0.9**
SIRR	**Siria**	**3.51**	**55**	⇑*i*P	**Pn**	**18 25 14.7**	**-0.9**
HERR	**Herculane**	**3.55**	**80**	⇓*i*P	**Pn**	**18 25 16.9**	**+0.7**
HERR	**Herculane**	**3.55**	**80**	⇓*i*P	**Pn**	**18 25 16.9**	**+0.7**
CONA	**Conrad Observa**	**3.75**	**343**	*e*Pn	**Pn**	**18 25 19.4**	**+0.3**
	3.2nm,0.4s						
CONA				*e*Sn	**Sn**	**18 26 07.2**	**+3.5**
	2.0nm,0.3s						
CONA	**Conrad Observa**	**3.75**	**343**	Pn	**Pn**	**18 25 19.4**	**+0.3**
	3.2nm,0.4s						
CONA				Sn	**Sn**	**18 26 07.2**	**+3.5**
	2.0nm,0.3s						
ZST	**Bratislava**	**3.86**	**356**	*e*PN	**Pn**	**18 25 20.0**	**-0.4**
ZST	**Bratislava**	**3.86**	**356**	*e*Pn	**Pn**	**18 25 20.0**	**-0.4**
ZAPS	**Zavoj**	**3.87**	**104**	*e*Pn	**Pn**	**18 25 22.0**	**+1.4**
ZAPS				*e*Sn	**Sn**	**18 26 07.3**	**+0.7**
PSZ	**Piszkesteto**	**3.94**	**24**	⇓*e*Pn	**Pn**	**18 25 21.0**	**-0.6**
PSZ				*e*Sn	**Sn**	**18 26 05.9**	**-2.4**
PSZ	**Piszkesteto**	**3.94**	**24**	⇓*e*Pn	**Pn**	**18 25 21.0**	**-0.6**
PSZ				*e*Sn	**Sn**	**18 26 05.9**	**-2.4**
MODS	**Modra-Piesok**	**4.03**	**358**	*e*PN	**Pn**	**18 25 21.6**	**-1.2**
MODS				*e*SN	**Sn**	**18 26 05.1**	**-5.3**
MODS				*e*LG	Lg	18 26 11.6	
MODS	**Modra-Piesok**	**4.03**	**358**	*e*Pn	**Pn**	**18 25 21.6**	**-1.2**
MOA	**Molln**	**4.16**	**328**	*e*Pn	**Pn**	**18 25 25.8**	**+1.2**
	4.6nm,0.3s						
MOA				*e*Sn	**Sn**	**18 26 12.4**	**-1.2**
MOA	**Molln**	**4.16**	**328**	Pn	**Pn**	**18 25 25.8**	**+1.2**
	4.6nm,0.3s						
MOA				Sn	**Sn**	**18 26 12.4**	**-1.2**
ABTA	**Abfaltersbach**	**4.24**	**306**	Pg	**Pg**	**18 25 40.3**	**-1.3**
	3.1nm,0.6s						
ABTA				Sg	**Sg**	**18 26 41.9**	**+5.4**
	4.2nm,0.7s						
ABTA	**Abfaltersbach**	**4.24**	**306**	Pg	**Pg**	**18 25 40.3**	**-1.3**
	3.1nm,0.6s						
VYHS	**Vyhne**	**4.25**	**12**	*e*PN	**Pn**	**18 25 26.1**	**+0.3**
VYHS				*e*SN	**Sn**	**18 26 14.1**	**-1.7**
VYHS				*e*LG	Lg	18 26 17.6	
VYHS	**Vyhne**	**4.25**	**12**	*e*Pn	**Pn**	**18 25 26.1**	**+0.3**
VYHS				*e*Sn	**Sn**	**18 26 14.2**	**-1.6**
JAVC	**Velka Javorina**	**4.51**	**1**	*e*PN	**Pn**	**18 25 31.8**	**+2.3**
JAVC				*e*SN	**Sn**	**18 26 25.2**	**+2.8**
KRUC	**Moravsky**	**4.77**	**351**	*e*PN	**Pn**	**18 25 33.7**	**+0.7**
KRUC				*e*SN	**Sn**	**18 26 28.3**	**-0.4**
VRAC	**Vranov**	**5.00**	**353**	*e*Sn	**Sn**	**18 26 34.1**	**-0.2**
VRAC	**Vranov**	**5.00**	**353**	*e*SN	**Sn**	**18 26 34.1**	**-0.2**
MORC	**Moravsky Berou**	**5.43**	**0**	*e*Sn	**Sn**	**18 26 45.2**	**+0.2**
MORC	**Moravsky Berou**	**5.43**	**0**	*e*SN	**Sn**	**18 26 45.2**	**+0.2**
KHC	**Kasperske Hory**	**5.49**	**332**	*e*PN	**Pn**	**18 25 42.1**	**-0.7**
KHC				*e*SN	**Sn**	**18 26 44.7**	**-1.7**
KHC	**Kasperske Hory**	**5.49**	**332**	Pn	**Pn**	**18 25 42.1**	**-0.7**
KHC				Sn	**Sn**	**18 26 44.7**	**-1.7**
BURAR	**Bucovina Array**	**6.29**	**56**	⇑*i*P	**Pn**	**18 25 52.5**	**-1.5**

*CSEM **19** 18:28:18.1, 50°.03N×0°.43E, h5km, ML3.2*
STR 19 18:28:18.1±0.3, 50°N±4°×±°, h5km, M3.4/9, mb3.5/2, MLv3.2/9, United Kingdom

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMNX	**Herstmonceux**	**0.84**	**356**	Pg	Pg	18 28 33.8	-0.5
HMNX	**Herstmonceux**	**0.84**	**356**	Pg	Pg	18 28 33.8	-0.5
JSA	**Saint Aubin**	**1.89**	**245**	Pn	Pn	18 28 49.0	-2.0
JSA	**Saint Aubin**	**1.89**	**245**	Pn	Pn	18 28 49.1	-1.9
JSA				Sn	Sn	18 29 15.8	+0.6
DOU	**Dourbes**	**2.68**	**87**	Pn	Pn	18 29 00.8	-1.2
DOU	**Dourbes**	**2.68**	**87**	Pn	Pn	18 29 00.8	-1.2
ROSF	**Rostrenen**	**2.96**	**237**	Pn	Pn	18 29 04.4	-1.4
LOR	**Lormes**	**3.58**	**139**	Pn	Pn	18 29 11.7	-2.5
CCA1	**Carnmenellis**	**3.65**	**275**	Pn	Pn	18 29 13.5	-1.6
CCA1	**Carnmenellis**	**3.65**	**275**	Pn	Pn	18 29 13.5	-1.7
ABH	**Alteburg**	**4.60**	**89**	Pn	Pn	18 29 26.6	-1.7
ABH	**Alteburg**	**4.60**	**89**	Pn	Pn	18 29 26.6	-1.7
PYM	**Petit Puy Mans**	**4.62**	**157**	Pn	Pn	18 29 25.8	-2.8
PYM	**Petit Puy Mans**	**4.62**	**157**	Pn	Pn	18 29 25.8	-2.8
ECH	**Echery**	**4.77**	**110**	Pn	Pn	18 29 28.8	-1.9
ECH	**Echery**	**4.77**	**110**	Pn	Pn	18 29 28.8	-1.9
ORIF	**Oris-en-Rattie**	**6.30**	**142**	Pn	Pn	18 29 49.9	-1.9
LUCF	**Luceram**	**7.74**	**140**	Pn	Pn	18 30 10.0	-1.6
LUCF	**Luceram**	**7.74**	**140**	Pn	Pn	18 30 09.0	-2.6

*NIED **19** 18:35:00, 32°.10N×132°.30E, h26km, Mw4.3 Best double couple: M0=2.71000×10^15 NP1:φ=210.00000°, δ55.00000°, λ=-31.00000°. NP2:φ=319.00000°, δ65.00000°, λ=-141.00000°.*
*ISCJB **19** 18:35:33.3±0.2, 32°.09N±0°.02×132°.26E±0°.03, h39km, mb4.6/35, Error ellipse: s-maj=4.0km s-min=3.5km az=17.1*
*JMA **19** 18:35:34.2±0.1, 32°.15N×132°.30E, h26km±2km, M4.1*
JMA Felt I J1.
*NEIC **19** 18:35:35.6±0.6, 32°.12N×132°.11E, h42km±6km, mb4.8/21, Error ellipse: s-maj=5.8km s-min=4.9km az=67.0*
NEIC Recorded [1 JMA] in Miyazaki.
*IDC **19** 18:35:35.9±0.8, 32°.15N×132°.14E, h40km±6km, mb3.7/12, mb1 3.9/15, mb1mx3.6/69, mbtmp3.9/15, ML3.5/3, MS3.9/2, Ms1 3.9/2, ms1mx3.0/68, Error ellipse: s-maj=19.5km s-min=6.5km az=55.0*
ISC 19 18:35:34.1±0.6, 32°.12N±0°.03×132°.27E±0°.03, h30km±3km, n86, σ1°.36/102, mb4.8/35, 6C-4D, Shikoku

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTSN	**Tsuno**	**0.66**	**281**	⇑P	**Pb**	**18 35 46.9**	**-0.2**
JTSN				S	**Sb**	**18 35 56.1**	**+0.1**
JKIT	**Kitakata**	**0.85**	**306**	⇑P	**Pb**	**18 35 50.2**	**-0.2**
JKIT				S	**Sb**	**18 36 01.3**	**-0.2**
JTO	**Tosashimizu**	**0.86**	**31**	⇑P	**Pb**	**18 35 49.5**	**-1.1**
JTO				*e*S	**Sb**	**18 36 00.2**	**-1.6**
JTZ	**Takazaki**	**1.03**	**258**	⇑P	**Pn**	**18 35 52.7**	**+0.3**
JTZ				*e*S	**Sn**	**18 36 06.8**	**+1.0**
JNAR	**Kushima--Naru**	**1.03**	**235**	⇓P	**Pn**	**18 35 53.4**	**+0.8**
JNAR				*e*S	**Sb**	**18 36 07.7**	**+1.0**
JUS	**Usuki**	**1.04**	**335**	⇓P	**Pb**	**18 35 53.1**	**-0.4**
JUS				*e*S	**Sn**	**18 36 07.5**	**+1.4**
UWA2	**Uwa jima 2**	**1.13**	**15**	⇓P	**Pn**	**18 35 53.8**	**-0.1**
UWA2				S	**Sn**	**18 36 08.0**	**-0.4**
JIU2	**Izumi 2**	**1.30**	**289**	⇑P	**Pn**	**18 35 57.3**	**+1.1**
JKU	**Kubokawa**	**1.36**	**29**	⇑P	**Pn**	**18 35 57.1**	**0.0**
JNA	**Nagahama**	**1.44**	**7**	⇓P	**Pn**	**18 35 58.5**	**+0.3**
JNU	**Nakatsue**	**1.54**	**311**	P	**Pb**	**18 36 01.1**	**-0.9**
	85nm,0.3s,baz=115,slow=1.5,SNR=406						
JNU				S	**Sn**	**18 36 17.4**	**-1.1**
	114nm,0.3s,baz=347,slow=11,SNR=10						
JNU	**Nakatsue**	**1.54**	**311**	*e*Pn	**Pn**	**18 36 00.9**	**+1.4**
JNU				*e*Sn	**Sn**	**18 36 18.0**	**-0.6**
INU	**Inuyama**	**5.10**	**50**	*e*Pn	**Pn**	**18 36 50.2**	**+1.8**
INU				*e*Sn	**Sn**	**18 37 42.4**	**-3.9**
JOW	**Kunigami**	**6.32**	**214**	P	**Pn**	**18 37 05.0**	**-0.2**
	1.9nm,0.3s,baz=82,slow=19,SNR=2.7						
JOW				S	**Sn**	**18 38 11.4**	**-4.9**
	11nm,0.3s,baz=105,slow=27,SNR=8.0						
KSRS	**Korea Array**	**6.41**	**327**	P	**Pn**	**18 37 07.0**	**+0.6**
	0.7nm,0.3s,baz=147,slow=14,SNR=8.7						
KS15	**Wonju Array Si**	**6.42**	**327**	*e*Pn	**Pn**	**18 37 07.2**	**+0.7**
KSAR	**Wonju Array Be**	**6.42**	**327**	P	**Pn**	**18 37 07.0**	**+0.5**
KS01	**Wonju Array Si**	**6.44**	**327**	*e*Pn	**Pn**	**18 37 07.4**	**+0.6**
JHJ2	**Mitsune**	**6.45**	**79**	*e*Pn	**Pn**	**18 37 07.5**	**+0.6**
MAJO	**Matsushiro**	**6.60**	**46**	*e*Pn	**Pn**	**18 37 11.1**	**+2.0**
MAT	**Matsushiro**	**6.60**	**46**	P	**Pn**	**18 37 10.9**	**+1.8**
MJAR	**Matsushiro Arr**	**6.60**	**46**	P	**Pn**	**18 37 11.3**	**+2.2**
	2.4nm,0.3s,baz=243,slow=15,SNR=25						
MJB9	**Matsu-Tunnel**	**6.60**	**46**	*e*Pn	**Pn**	**18 37 11.0**	**+1.9**
KLR	**Kul'dur**	**17.09**	**359**	P	**Pn**	**18 39 31.1**	**+0.4**
	0.0nm,0.3s,baz=155,slow=19,SNR=3.3						
KLR				pP	**pP**	**18 39 40.9**	**+0.7**
	0.1nm,0.3s,baz=168,slow=10.0,SNR=23						
KLR				LR	LR	18 45 03.1	
	comp=Z,12nm,21.0s,baz=208,slow=33						
SONA0	**Songino Array**	**25.12**	**316**	*e*P	**P**	**18 40 56.8**	**+0.4**
SONM	**Songino Array**	**25.12**	**316**	P	**P**	**18 40 56.8**	**+0.4**
	0.6nm,0.7s,baz=126,slow=8.6,SNR=3.8						
SONM				pP	**pP**	**18 41 05.8**	**+0.7**
	3.1nm,0.9s,baz=122,slow=10,SNR=9.3						
SONA1	**Songino Array**	**25.12**	**316**	*e*P	**P**	**18 40 56.4**	**0.0**
PBKT	**Sadao Pong**	**32.30**	**249**	*e*P	**P**	**18 41 59.0**	**-1.5**
CHTO	**Chiang Mai**	**32.73**	**254**	*e*P	**P**	**18 42 03.4**	**-0.9**
	29nm,1.9s						
CM31	**Chiang Mai Arr**	**32.91**	**254**	*e*P	**P**	**18 42 04.9**	**-1.0**
CMAR	**Chiang Mai Arr**	**32.91**	**254**	P	**P**	**18 42 05.5**	**-0.4**

IDC 19 18:36:48.1±999.0, 22°46N×52°03E, h0km, Error ellipse: s-maj=475.6km s-min=187.4km az=64.0, Eastern Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I32KE	**NAIROBI INFRAS**	**27.83**	**214**	*i*		21 29 00.0	
	baz=31,slow=321,SNR=0.3						
I48TN	**KESRA INFRASON**	**39.30**	**300**	*i*		22 37 39.6	
	baz=96,slow=331,SNR=1.3						

*ISCJB **19** 18:38:58.6±0.3, 40°60S±0°06×44°68E±0°07, h10km, mb4.7/52, MS4.3/35, Error ellipse: s-maj=9.1km s-min=6.5km az=41.5*

*IDC **19** 18:38:58.5±0.4, 40°50S×44°72E, h0km, mb4.4/22, mb1 4.5/23, mb1mx4.3/53, mbtmp4.4/23, ML3.6/1, MS4.3/35, Ms1 4.3/35, ms1mx4.2/50, Error ellipse: s-maj=17.2km s-min=12.1km az=43.0*

*BJI **19** 18:39:00.6, 40°70S×44°70E, h10km, mb4.9/13, mB5.5/9, Ms4.9/3, Ms7 4.7/1*

*NEIC **19** 18:39:00.9±0.4, 40°59S×44°72E, h14km±2km, mb4.9/25, Error ellipse: s-maj=7.1km s-min=5.1km az=220.0*

*GCMT **19** 18:39:00.9±0.2, 40°49S×44°54E, h14km±1km, MW5.1/83, Moment Tensor Solution. s33,c40; s83,c125; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-5.47±.35; $M_{\theta\theta}$4.18±.21; $M_{\phi\phi}$1.29±.20; $M_{r\theta}$-0.81±.34; $M_{\phi\theta}$1.43±.12; $M_{r\phi}$/2.24±.59; Best double couple: $M_0$5.52600×10^{16} NP1:ϕ_s230.00000°, δ49.00000°, λ-115.00000°. NP2: ϕ_s85.00000°, δ47.00000°, λ-64.00000°. Principal axes: T 4.7690, Plg1.0000°, Azm337.0000°; N 1.5140, Plg19.0000°, Azm247.0000°; P -6.2830, Plg71.0000°, Azm69.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 19 18:39:00.5±0.3, 40°61S±0°08×44°67E±0°08, h10km, n160, σ1§28/139, mb4.9/52, MS4.4/36, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRZF	**Crozet Islands**	**7.82**	**140**	*e*Pn	**Pn**	**18 40 53.1**	**-1.1**
BOSA	**Boshof**	**19.91**	**301**	P	**P**	**18 43 31.9**	**-0.5**
	0.1nm,0.3s,baz=114,slow=12,SNR=4.3						
BOSA				LR	LR	18 49 49.5	
	comp=Z,1μm,20.9s,baz=136,slow=33						
SUR	**Sutherland**	**20.82**	**286**	P	**P**	**18 43 41.6**	**-0.6**
	0.9nm,1.0s,baz=102,slow=14,SNR=4.6						
SUR				LR	LR	18 50 06.7	
	comp=Z,42nm,21.1s,baz=124,slow=32						
SUR	**Sutherland**	**20.82**	**286**	*e*P	**P**	**18 43 41.0**	**-1.2**
	59nm,1.4s						
ABPO	**Ambohimpanom**	**21.63**	**7**	*e*P	**P**	**18 43 51.7**	**+0.6**
	40nm,1.2s						
OPO	**Ambohidratompo**	**22.07**	**6**	P	**P**	**18 43 52.7**	**-3.1**
	8.0nm,1.1s,baz=186,slow=10,SNR=2.7						
LBTB	**Lobatse**	**22.26**	**309**	P	**P**	**18 43 55.2**	**-2.5**
	9.0nm,0.9s,baz=142,slow=10,SNR=7.5						
LBTB				LR	LR	18 51 22.8	
	comp=Z,902nm,20.7s,baz=134,slow=34						
LBTB	**Lobatse**	**22.26**	**309**	*e*P	**P**	**18 43 57.8**	**0.0**
	83nm,1.6s						
MAW	**Mawson**	**28.83**	**166**	LR	LR	18 53 53.9	
	comp=Z,1μm,19.9s,baz=350,slow=31						
LSZ	**Lusaka**	**29.03**	**326**	P	**P**	**18 44 59.7**	**-1.2**
	0.9nm,0.3s,baz=180,slow=20,SNR=2.1						
LSZ				LR	LR	18 55 38.7	
	comp=Z,2μm,19.6s,baz=131,slow=34						
LSZ	**Lusaka**	**29.03**	**326**	*e*P	**P**	**18 45 03.1**	**+2.2**
	25nm,1.7s						
TSUM	**Tsumeb**	**31.51**	**305**	P	**P**	**18 45 22.8**	**0.0**
	6.3nm,0.7s,baz=133,slow=8.4,SNR=9.5						
TSUM	**Tsumeb**	**31.51**	**305**	*e*P	**P**	**18 45 22.4**	**-0.4**
	14nm,1.0s						
SNAA	**Sanae**	**38.94**	**202**	P	**P**	**18 46 27.2**	**+1.0**
SNAA	**Sanae**	**38.94**	**202**	P	**P**	**18 46 27.1**	**+1.0**
	6.3nm,0.9s,baz=52,slow=5.6,SNR=12						
SNAA				LR	LR	18 59 33.9	
	comp=Z,324nm,20.0s,baz=8.0,slow=32						
SNAA	**Sanae**	**38.94**	**202**	*e*P	**P**	**18 46 25.6**	**-0.5**
	11nm,1.0s						
KMBO	**Kilima Mbogo**	**39.87**	**348**	LR	LR	19 00 46.6	
	comp=Z,468nm,21.2s,baz=119,slow=33						
VNA1	**Neumayer--Stat**	**40.16**	**204**	P	**P**	**18 46 40.2**	**+4.0**
VNA3	**Neumayer Olymp**	**40.79**	**204**	P	**P**	**18 46 42.5**	**+1.0**
QSPA	**South Pole Qui**	**49.59**	**180**	P	**P**	**18 47 51.5**	**-0.1**
	12nm,0.9s,baz=245,slow=6.7,SNR=12						
QSPA				LR	LR	19 07 23.4	
	comp=Z,780nm,18.1s,baz=262,slow=34						
ATD	**Arta Tunnel**	**51.90**	**358**	LR	LR	19 08 00.2	
	comp=Z,383nm,20.4s,baz=156,slow=34						
H01W2	**Cape Leeuwin H**	**53.93**	**108**	T	T	19 46 31.4	
	baz=241,slow=75,SNR=192						
H01W3	**Cape Leeuwin H**	**53.94**	**108**	T	T	19 46 36.4	
	baz=241,slow=75,SNR=202						
H01W1	**Cape Leeuwin H**	**53.95**	**108**	T	T	19 46 32.5	
	baz=241,slow=75,SNR=252						
VNDA	**Vanda**	**56.14**	**167**	P	**P**	**18 48 38.9**	**-0.6**
	1.4nm,0.8s,baz=244,slow=8.2,SNR=7.2						
VNDA	**Vanda**	**56.14**	**167**	*e*P	**P**	**18 48 38.7**	**-0.9**
VNDA				*es*P	**P**	**18 48 39.0**	**-0.6**
SBA	**Scott Base**	**56.77**	**168**	*e*P	**P**	**18 48 45.0**	**+1.0**
	36nm,1.5s						
NWAO	**Narrogin (SRO)**	**57.14**	**107**	LR	LR	19 07 11.1	
	comp=Z,349nm,21.5s,baz=114,slow=30						
PMSA	**Palmer Station**	**61.24**	**208**	LR	LR	19 10 33.4	
	comp=Z,152nm,19.6s,baz=124,slow=31						
RAYN	**Ar Rayn**	**63.81**	**1**	*e*P	**P**	**18 49 33.2**	**+0.4**
	13nm,1.5s						
KIC	**Kosan Boka**	**65.10**	**304**	*e*P	**P**	**18 49 42.3**	**+0.8**
	107nm,1.5s						
LEM	**Lembang**	**65.14**	**77**	P	**P**	**18 49 42.0**	**-0.1**
	6.7nm,0.3s,baz=238,slow=5.2,SNR=4.8						
LEM				LR	LR	19 12 35.5	
	comp=Z,92nm,20.9s,baz=240,slow=31						
LIC	**Lamto**	**65.18**	**303**	*e*P	**P**	**18 49 43.2**	**+1.2**
	85nm,1.5s						
DBIC	**Dimbokro**	**65.41**	**304**	P	**P**	**18 49 43.5**	**+0.1**
	5.1nm,0.7s,baz=112,slow=8.3,SNR=7.6						
DBIC				LR	LR	19 14 49.7	
	comp=Z,416nm,21.8s,baz=116,slow=33						
DBIC	**Dimbokro**	**65.41**	**304**	*e*P	**P**	**18 49 44.4**	**+0.9**
	92nm,1.9s						
MBWA	**Marble Bar**	**65.43**	**97**	*e*P	**P**	**18 49 42.7**	**-0.9**
	39nm,1.4s						
TIC	**Toumodi**	**65.50**	**304**	*e*P	**P**	**18 49 45.6**	**+1.5**
TOA0	**Torodi Ar. Sit**	**66.67**	**314**	*e*P	**P**	**18 49 51.5**	**0.0**
TORD	**Torodi Ar. Bea**	**66.67**	**314**	P	**P**	**18 49 51.8**	**+0.3**
	3.9nm,0.8s,baz=140,slow=6.2,SNR=9.6						
TORD				LR	LR	19 18 29.8	
	comp=Z,214nm,19.6s,baz=140,slow=36						
TOA1	**Torodi Ar. Sit**	**66.67**	**314**	*e*P	**P**	**18 49 51.8**	**+0.3**
IPM	**Ipoh**	**68.27**	**63**	*e*P	**P**	**18 50 02.0**	**+0.2**
	16nm,1.0s						
KULM	**Kulim**	**68.61**	**62**	*e*P	**P**	**18 50 04.1**	**+0.2**
	65nm,1.9s						
BBOO	**Buckleboo**	**70.48**	**117**	*e*P	**P**	**18 50 15.3**	**0.0**
	119nm,1.9s						
KOWA	**Kowa**	**71.00**	**310**	P	**P**	**18 50 18.1**	**-0.4**
	1.6nm,0.6s,baz=140,slow=7.9,SNR=3.1						
KOWA				LR	LR	19 20 10.6	
	comp=Z,308nm,21.8s,baz=155,slow=35						
FITZ	**Fitzroy Crossi**	**71.71**	**98**	P	**P**	**18 50 22.7**	**-0.2**
	10nm,1.1s,baz=262,slow=5.2,SNR=4.7						
FITZ	**Fitzroy Crossi**	**71.71**	**98**	*e*P	**P**	**18 50 22.9**	**0.0**
KSM	**Kuching**	**72.70**	**73**	*e*P	**P**	**18 50 29.0**	**+0.1**
	41nm,1.8s						
ASF	**Jabal al Asfar**	**72.78**	**353**	P	**P**	**18 50 28.4**	**-0.5**
	0.7nm,0.5s,baz=194,slow=1.9,SNR=2.5						
TAM	**Tamanrasset**	**72.83**	**322**	*e*P	**P**	**18 50 30.7**	**+1.1**
	12nm,1.8s						
MMAI	**Mount Meron Ar**	**73.76**	**352**	LR	LR	19 21 18.2	
	comp=Z,196nm,20.3s,baz=170,slow=34						
ASAR	**Alice Springs**	**74.45**	**108**	P	**P**	**18 50 38.9**	**-0.3**
	6.2nm,0.9s,baz=229,slow=5.4,SNR=33						
ASAR				LR	LR	19 18 48.3	
	comp=Z,255nm,18.1s,baz=242,slow=32						
AS31	**Alice Springs**	**74.45**	**108**	*e*P	**P**	**18 50 38.9**	**-0.3**
	1.8nm,0.8s						
AS01	**Alice Springs**	**74.48**	**108**	*e*P	**P**	**18 50 38.5**	**-0.8**
SBUM	**Sibu**	**74.76**	**73**	*e*P	**P**	**18 50 41.0**	**+0.1**
	22nm,1.7s						
STKA	**Stephens Creek**	**74.78**	**119**	P	**P**	**18 50 40.9**	**+0.1**
	6.6nm,0.8s,baz=226,slow=6.2,SNR=6.5						
STKA				LR	LR	19 16 23.1	
	comp=Z,214nm,19.1s,baz=206,slow=30						
STKA	**Stephens Creek**	**74.78**	**119**	*e*P	**P**	**18 50 40.4**	**-0.5**
	2.7nm,1.1s						
BRDH	**Bariadhala**	**76.63**	**44**	LR	LR	19 18 45.3	
	comp=Z,208nm,19.4s,baz=218,slow=31						
KOLN	**Koldanda**	**77.04**	**35**	*e*P	**P**	**18 50 53.2**	**-0.7**
	17nm,1.0s						
WRA	**Warramunga Arr**	**77.06**	**105**	P	**P**	**18 50 54.1**	**0.0**
	7.6nm,0.8s,baz=224,slow=4.9,SNR=39						
WRA				LR	LR	19 20 26.3	
	comp=Z,331nm,18.8s,baz=230,slow=32						
WR1	**Warramunga Arr**	**77.06**	**105**	*e*P	**P**	**18 50 54.1**	**0.0**
	120nm,1.8s						
PYUN	**Piuthan**	**77.07**	**34**	*e*P	**P**	**18 50 53.5**	**-0.5**
	68nm,1.3s						
WB2	**Warramunga Arr**	**77.07**	**105**	*e*P	**P**	**18 50 53.9**	**-0.3**
	148nm,2.0s						
WRAB	**Tennant Creek**	**77.07**	**105**	*e*P	**P**	**18 50 53.3**	**-0.8**
	14nm,1.0s						
WC3	**Warramunga Arr**	**77.08**	**105**	*e*P	**P**	**18 50 54.1**	**-0.1**
	113nm,1.9s						
CAN	**Canberra**	**77.35**	**126**	*e*P	**P**	**18 50 55.1**	**-0.4**
	70nm,1.6s						
CM01	**Chiang Mai Arr**	**77.40**	**52**	*e*P	**P**	**18 50 55.1**	**-0.7**
CM31	**Chiang Mai Arr**	**77.42**	**52**	*e*P	**P**	**18 50 55.3**	**-0.6**
CMAR	**Chiang Mai Arr**	**77.42**	**52**	P	**P**	**18 50 55.5**	**-0.4**
	2.2nm,0.9s,baz=229,slow=7.1,SNR=12						
CMAR				LR	LR	19 20 33.1	
	comp=Z,118nm,18.0s,baz=197,slow=32						
DMN	**Daman**	**77.57**	**36**	*e*P	**P**	**18 50 56.6**	**-0.3**
	26nm,1.2s						
DANN	**Dangsing**	**77.61**	**35**	*e*P	**P**	**18 50 56.4**	**-0.8**
	45nm,1.3s						
PKIN	**Phulchoki**	**77.67**	**36**	*e*P	**P**	**18 50 56.8**	**-0.7**
	37nm,1.5s						
RAMN	**Ramite**	**77.69**	**38**	*e*P	**P**	**18 50 57.6**	**+0.1**
	62nm,1.4s						
GKN	**Gorkha**	**77.70**	**36**	*e*P	**P**	**18 50 57.0**	**-0.5**
	43nm,1.2s						
KKN	**Kakani**	**77.80**	**36**	*e*P	**P**	**18 50 57.8**	**-0.3**
	70nm,1.6s						
ODAN	**Odare**	**77.98**	**38**	*e*P	**P**	**18 50 59.0**	**-0.2**
	80nm,1.5s						
JIRN	**Jiri**	**78.10**	**37**	*e*P	**P**	**18 50 59.4**	**-0.6**
	13nm,0.4s						
GUN	**Gumba**	**78.18**	**37**	*e*P	**P**	**18 51 00.5**	**+0.1**
	96nm,1.3s						
GEYT	**Alibeck**	**79.13**	**11**	P	**P**	**18 51 04.7**	**-0.3**
	25nm,0.8s,baz=204,slow=9.5,SNR=9.7						
GEYT				LR	LR	19 23 23.4	
	comp=Z,169nm,21.9s,baz=55,slow=34						
GYA0B	**ALIBECK ARRAY**	**79.13**	**11**	*e*P	**P**	**18 51 04.6**	**-0.4**
	7.2nm,0.9s						
GNI	**Garni**	**80.38**	**0**	LR	LR	19 28 28.3	
	comp=Z,110nm,18.3s,baz=158,slow=37						
BR101	**Keskin Array S**	**80.59**	**351**	*e*P	**P**	**18 51 12.2**	**-0.8**
BRTR	**Keskin Array B**	**80.59**	**351**	P	**P**	**18 51 12.2**	**-0.8**
	0.8nm,0.8s,baz=184,slow=9.9,SNR=5.5						
CPUP	**Villa Florida**	**81.72**	**243**	LR	LR	19 20 06.6	
	comp=Z,64nm,20.8s,baz=168,slow=30						
LSA	**Lhasa**	**82.16**	**40**	*e*P	**P**	**18 51 22.0**	**+0.1**
	8.9nm,0.9s						
VAE	**Valguarnera**	**82.51**	**336**	LR	LR	19 30 11.7	
	comp=Z,292nm,18.2s,baz=142,slow=37						
KEST	**Kesra**	**82.62**	**332**	LR	LR	19 30 13.5	
	comp=Z,482nm,18.6s,baz=6.0,slow=37						
KEST	**Kesra**	**82.62**	**332**	*e*P	**P**	**18 51 23.8**	**0.0**
	6.5nm,1.1s						
THTN	**Thala**	**82.71**	**331**	*e*P	**P**	**18 51 26.1**	**+1.8**
	19nm,1.4s						
KBZ	**Khabaz**	**83.97**	**359**	LR	LR	19 29 54.8	
	comp=Z,212nm,19.4s,baz=134,slow=36						
KSH	**Kashi**	**84.71**	**24**	P	**P**	**18 51 32.5**	**-1.9**
KSH				pP	sP	18 51 40.8	+1.9
KSH				pmax	pmax		
	comp=Z,230nm,3.6s						
MDT	**Midelt**	**86.07**	**320**	LR	LR	19 30 59.8	
	comp=Z,248nm,18.6s,baz=156,slow=36						
KK31	**Karatay Array**	**86.54**	**19**	*e*P	**P**	**18 51 43.4**	**+0.1**
KKAR	**Karatay Array**	**86.54**	**19**	*e*P	**P**	**18 51 43.6**	**+0.2**
GYA	**Guiyang**	**88.11**	**52**	*e*P	**P**	**18 51 54.0**	**+2.6**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PRZ	**Przheval'sk**	**88.17**	**24**	*e*P	**P**	**18 51 51.7**	**+0.3**
	8.6nm,1.0s						
BUR04	**Bucovina Ar. S**	**89.53**	**347**	*e*P	**P**	**18 51 58.1**	**+0.5**
CD2	**Chengdu**	**89.73**	**48**	P	**P**	**18 51 59.6**	**+0.7**
AKTO	**Aktyubinsk**	**91.42**	**8**	LR	LR	19 34 21.5	
	comp=Z,99nm,19.3s,baz=187,slow=36						
AKASG	**Malin Array Be**	**91.94**	**350**	P	**P**	**18 52 07.0**	**-1.5**
	0.4nm,0.5s,baz=175,slow=4.6,SNR=5.4						
AKASG				LR	LR	19 37 08.5	
	comp=Z,49nm,18.0s,baz=115,slow=38						
AKBB	**Malin Array Si**	**91.94**	**350**	*e*P	**P**	**18 52 07.1**	**-1.4**
	2.4nm,0.6s						
WMQ	**Urumqi**	**92.55**	**30**	P	**P**	**18 52 13.8**	**+2.1**
WMQ				pP	sP	18 52 19.6	+3.4
WMQ				sP	pP	18 52 21.5	+6.5
WMQ				pmax	pmax		
	comp=Z,20nm,1.3s						
WMQ				LR	LR		
	comp=E,220nm,21.7s						
MAKZ	**Makanchi**	**93.17**	**25**	*e*P	**P**	**18 52 14.1**	**-0.3**
	9.7nm,1.5s						
GERES	**CERESS Array B**	**93.18**	**340**	LR	LR	19 36 28.0	
	comp=Z,73nm,20.1s,baz=92,slow=37						
MK01	**Makanchi Array**	**93.24**	**25**	*e*P	**P**	**18 52 12.3**	**-2.5**
MK32	**Makanchi Array**	**93.26**	**25**	*e*P	**P**	**18 52 12.6**	**-2.2**
MKAR	**Makanchi Array**	**93.26**	**25**	P	**P**	**18 52 12.6**	**-2.2**
	0.7nm,0.9s,baz=145,slow=4.4,SNR=6.1						
PMG	**Port Moresby**	**93.28**	**105**	LR	LR	19 29 06.5	
	comp=Z,109nm,19.7s,baz=169,slow=32						
LZH	**Lanzhou**	**93.69**	**44**	*e*P	**P**	**18 52 20.8**	**+3.6**
LZH				pP	sP	18 52 26.3	+4.5
LZH				sP	pP	18 52 28.5	+7.9
LZH				*e*PP	**PP**	**18 56 10.0**	**+7.2**
LZH				pmax	pmax		
	comp=Z,17nm,1.4s						
LZH				pmax	pmax		
	comp=Z,93nm,9.2s						
LZH				LR	LR		
	comp=E,220nm,17.8s						
LZH				LR	LR		
	comp=Z,290nm,19.7s						
GTA	**Gaotai**	**94.19**	**40**	*e*P	**P**	**18 52 18.4**	**-1.0**
GTA				pP	sP	18 52 23.9	0.0
GTA				sP	pP	18 52 26.6	+3.8
GTA				pmax	pmax		
	comp=Z,2.0nm,1.4s						
KURBB	**Kurchatov Arra**	**95.58**	**21**	P	**P**	**18 52 24.3**	**-1.0**
	0.5nm,0.8s,baz=193,slow=4.0,SNR=5.6						
KURK	**Kurchatov**	**95.69**	**21**	*e*P	**P**	**18 52 24.3**	**-1.5**
BVAR	**Borovoye Array**	**95.88**	**15**	P	**P**	**18 52 25.0**	**-1.7**
	0.4nm,0.5s,baz=199,slow=3.1,SNR=2.8						
LPAZ	**La Paz**	**95.89**	**243**	LR	LR	19 30 58.5	
	comp=Z,79nm,20.0s,baz=127,slow=32						
ARU	**Arti**	**97.39**	**8**	LR	LR	19 36 56.8	
	comp=Z,131nm,21.4s,baz=188,slow=36						
DZM	**Mont Dzumac**	**97.45**	**127**	*e*LR	LR	19 24 03.2	
	163nm,22.6s						
DZM	**Mont Dzumac**	**97.45**	**127**	LR	LR	19 30 10.6	
	comp=Z,102nm,18.8s,baz=206,slow=32						
NJ2	**Nanjing**	**99.57**	**56**	*e*P	**Pdif**	**18 52 46.3**	**+2.5**
ZALV	**Zalesovo Beam**	**100.31**	**23**	P	**Pdif**	**18 52 44.8**	**-1.8**
	0.3nm,0.3s,baz=165,slow=6.2,SNR=3.8						
ZALV	**Zalesovo Beam**	**100.31**	**23**	*e*Pdif	**Pdif**	**18 52 44.6**	**-2.0**
ZAA1	**Zalesovo Array**	**100.32**	**23**	*e*Pdif	**Pdif**	**18 52 44.8**	**-1.8**
HHC	**Hu-ho-hao-te**	**101.30**	**45**	*e*P	**Pdif**	**18 52 54.8**	**+3.4**
PPT2	**Papeete2**	**120.60**	**164**	*e*LR	LR	19 34 55.4	
	467nm,26.2s						
TAOE	**Nuku Hiva Isla**	**130.58**	**174**	*e*LR	LR	19 39 34.9	
	190nm,22.5s						
TRQ	**Mont Tremblant**	**136.44**	**298**	*e*PKPpre	PKPpre	18 58 12.4	
FVM	**French Village**	**145.43**	**281**	*e*PKPbc	**PKPdf**	**18 58 38.4**	**-0.1**
T42A	**Van Buren**	**145.62**	**279**	*e*PKPdf	**PKPdf**	**18 58 38.1**	**-0.7**
W41B	**Gary Mavity, V**	**145.82**	**275**	*e*PKPdf	**PKPdf**	**18 58 39.1**	**0.0**
P42A	**Winchester**	**145.85**	**283**	*e*PKPdf	**PKPdf**	**18 58 39.4**	**+0.2**
WHAR	**Wooly Hollow**	**145.90**	**275**	*e*PKPdf	**PKPdf**	**18 58 39.4**	**+0.1**
CCM	**Cathedral Cave**	**146.07**	**280**	*e*PKPdf	**PKPdf**	**18 58 39.4**	**-0.1**
W40A	**Ferguson Farm,**	**146.46**	**275**	*e*PKPdf	**PKPdf**	**18 58 40.6**	**+0.4**
V40A	**Witts Springs**	**146.49**	**276**	*e*PKPdf	**PKPdf**	**18 58 40.4**	**0.0**
MIAR	**Mount Ida**	**146.59**	**273**	*e*PKPdf	**PKPdf**	**18 58 40.1**	**-0.5**
R40A	**Maddies Statio**	**146.91**	**280**	*e*PKPdf	**PKPdf**	**18 58 41.4**	**+0.5**
W39A	**Magazine**	**147.00**	**274**	*e*PKPdf	**PKPdf**	**18 58 42.0**	**+0.8**
S39A	**Bolivar**	**147.51**	**279**	*e*PKPdf	**PKPdf**	**18 58 41.3**	**-0.7**
EYMN	**Ely**	**148.12**	**298**	*e*PKPbc	**PKPbc**	**18 58 45.3**	**-0.6**
FCC	**Fort Churchill**	**148.40**	**319**	*e*PKPbc	**PKPbc**	**18 58 45.6**	**-0.6**
F36A	**Milaca**	**149.35**	**294**	*e*PKPbc	**PKPbc**	**18 58 48.6**	**-0.5**
B35A	**Bob, Littlefor**	**149.63**	**299**	*e*PKPbc	**PKPbc**	**18 58 48.7**	**-1.0**
ULM	**Lac du Bonnet**	**150.98**	**303**	PKPbc	**PKPbc**	**18 58 52.0**	**-0.8**
	5.1nm,0.6s,baz=107,slow=2.6,SNR=11						
ULM	**Lac du Bonnet**	**150.98**	**303**	*e*pPKPdf	pPKPdf	18 58 51.6	+1.0
AGMN	**Agassiz Nation**	**151.05**	**299**	*e*pPKPdf	pPKPdf	18 58 51.7	+0.9
ECSD	**EROS Data Cent**	**151.31**	**289**	*e*PKPbc	**PKPbc**	**18 58 53.4**	**-0.5**
TXAR	**Lajitas Array**	**151.86**	**256**	PKP	**PKPdf**	**18 58 49.0**	**-0.2**
	0.3nm,0.7s,baz=108,slow=2.9,SNR=6.2						
TXAR				PKPbc	**PKPbc**	**18 58 55.6**	**-0.1**
	1.3nm,0.7s,baz=138,slow=5.3,SNR=14						
TX31	**Lajitas Ar. Si**	**151.86**	**256**	*e*PKPdf	**PKPdf**	**18 58 48.7**	**-0.6**
TX31				*e*PKPbc	**PKPbc**	**18 58 55.7**	**0.0**
TX31				*e*PKPab	**sPKPbc**	**18 59 01.7**	**+1.4**
INK	**Inuvik**	**152.23**	**359**	PKPbc	**PKPbc**	**18 58 54.2**	**-0.9**
	2.3nm,0.6s,baz=32,slow=4.7,SNR=6.1						
INK	**Inuvik**	**152.23**	**359**	*e*pPKPdf	pPKPdf	18 58 53.3	+1.4
BPAW	**Bear Paw Mtn.**	**154.75**	**16**	*e*PKPbc	**PKPbc**	**18 58 58.6**	**-2.2**
BPAW				*e*PKPab	**PKPab**	**18 59 15.2**	**-0.7**
ILAR	**Eielson Array**	**154.89**	**12**	PKPbc	**PKPbc**	**18 58 59.9**	**-1.2**
	0.4nm,0.8s,baz=328,slow=3.2,SNR=3.5						
SCRK	**Sand Creek**	**156.05**	**9**	*e*PKPab	**PKPab**	**18 59 21.1**	**-0.5**
SDCO	**Great Sand Dun**	**156.75**	**273**	*e*PKPdf	**PKPdf**	**18 58 56.0**	**-0.1**
SDCO				*e*PKPab	**PKPab**	**18 59 26.1**	**+0.4**
SUA	**Susitna One**	**157.10**	**19**	*e*PKPdf	**PKPdf**	**18 58 56.0**	**+0.4**
SUA				*e*PKPab	**PKPab**	**18 59 26.2**	**+0.1**
PDAR	**Pinedale Array**	**160.65**	**285**	PKP	**PKPdf**	**18 58 59.1**	**-1.4**
	0.2nm,0.4s,baz=110,slow=5.2,SNR=3.3						
MTPU	**Mount Pierson**	**161.91**	**269**	*e*PKPab	**PKPab**	**18 59 48.7**	**+0.4**
LRM	**Limekiln Ridge**	**162.55**	**295**	*e*PKPdf	**PKPdf**	**18 59 01.7**	**-0.7**
HWB	**Hans Werner Br**	**163.47**	**249**	*e*PKPab	**PKPab**	**18 59 55.0**	**+0.2**
CACC	**Caltech Cellar**	**164.88**	**250**	*e*PKPdf	**PKPdf**	**18 59 05.6**	**+1.0**
FURC	**Furnace Creek,**	**164.97**	**260**	*e*PKPdf	**PKPdf**	**18 59 03.6**	**-1.0**
SBI	**Santa Barbara**	**165.17**	**246**	*e*PKPdf	**PKPdf**	**18 59 05.5**	**+0.7**

GUC 19 18:53:53.8±0.5, 35°46S×73°62W, h17km±9km, ML3.6, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO05	**HualaæØ**	**1.45**	**72**	*e*P	Pn	18 54 18.0	-1.3
GO05				*i* S	Sn	18 54 36.7	-1.2
GO05				IAML		18 54 39.0	
	comp=N,1μm,0.3s						
CCHI	**Chillan**	**1.69**	**133**	*e*P	Pn	18 54 22.1	-0.4
CCHI				*i* S	Sn	18 54 43.0	-0.8
CCHI				IAML		18 54 48.7	
	comp=N,1μm,0.4s						
LMEL	**Las Melosas**	**3.24**	**61**	*e*P	Pn	18 54 45.0	+1.0
LMEL				*i* S	Sb	18 55 26.8	-3.5
ROCH	**El Roble**	**3.29**	**42**	*e*P	Pn	18 54 45.3	+0.5
ROCH				*i* S	Sn	18 55 23.5	0.0
ROCH				IAML		18 55 42.5	
	comp=E,116nm,0.5s						
PEL	**Peldehue**	**3.35**	**47**	*e*P	Pn	18 54 46.1	+0.6
PEL				*i* S	Sn	18 55 23.5	-1.3
PEL				IAML		18 55 53.3	
	comp=E,111nm,0.5s						
FCH	**Farellones**	**3.48**	**53**	*e*P	Pn	18 54 48.1	+0.7
FCH				*i* S	Sn	18 55 25.0	-3.4
FCH				IAML		18 55 51.3	
	comp=N,85nm,0.5s						

*ISCJB **19** 18:59:15.7±0.6, 21°07S±0°10×178°7W±0°1, h579km, mb4.0/18, Error ellipse: s-maj=14.7km s-min=11.1km az=41.8*

*IDC **19** 18:59:16.1±1.9, 20°89S×178°71W, h568km±20km, mb3.6/17, mb1 3.8/18, mb1mx3.6/46, mbtmp4.6/18, Error ellipse: s-maj=16.6km s-min=12.9km az=129.0*

ISC 19 18:59:16.4±0.6, 21°1S±0°1×178°7W±0°1, h579km, n46, σ1§34/49, mb4.1/18, 1C-1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**13.87**	**263

VRAC	Vranov	149.33 340	*e*PKP	PKPbc	19 18 00.5	0.0
JAVC	Velka Javorina	149.37 339	*e*PKP	PKPbc	19 18 01.7	+1.0
KRUC	Moravsky	149.61 340	*e*PKP	PKPbc	19 18 01.1	-0.1
KHC	Kasperske Hory	150.37 344	*e*PKP	PKPbc	19 18 03.1	+0.1
KHC			*e*pPKP	PKPab	19 18 11.9	-0.1
GERES	GERESS Array B	150.59 343	PKPbc	PKPbc	19 18 03.2	-0.3
	comp=Z,2.2nm,0.6s,baz=42,slow=2.2,SNR=25					
ESDC	Sonseca Array	160.94 13	PKPab	PKPab	19 18 58.1	+0.3
	comp=Z,0.1nm,0.3s,baz=336,slow=5.2,SNR=4.5					
TORD	Torodi Ar. Bea	172.09 183	PKP	PKPdf	19 18 19.3	-0.9
	comp=Z,0.8nm,0.8s,baz=267,slow=1.1,SNR=4.6					

ISK ***19*** *19:00:30.9,38°.43N×39°.07E, h10km, ML2.4/5*
ISCJB ***19*** *19:00:31.3±0.5, 38°.40N±0°.03×39°.08E±0°.03, h4km±5km, Error ellipse: s-maj=5.8km s-min=3.8km az=17.3*
DDA ***19*** *19:00:31.7, 38°.56N×39°.12E, h7km, Ml3.0*
CSEM ***19*** *19:00:31.2±0.2, 38°.43N×39°.08E, h10km, ML3.0, Error ellipse: s-maj=5.7km s-min=3.8km az=16.0*

ISC 19 19:00:31.5±0.8, 38°.43N±0°.03×39°.09E±0°.02, h14km±5km, n24, σ0§70/40, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	Elazig	0.11	312	*i* P	Pg	19 00 34.8	-0.2
ELZG				*i* S	Sg	19 00 37.0	-0.3
ELZG	Elazig	0.11	312	P	Pg	19 00 34.8	-0.2
ELZG				S	Sg	19 00 37.0	-0.3
SVRC	Sivrice-ELAZID	0.18	105	PG	Pg	19 00 35.4	-0.5
SVRC	Sivrice-ELAZID	0.18	105	*e*Pg	Pg	19 00 35.4	-0.5
PTK	Pertek	0.52	27	PG	Pg	19 00 41.8	-0.1
PTK				SG	Sg	19 00 49.3	+0.3
PTK	Pertek	0.52	27	*e*Pg	Pg	19 00 41.8	-0.1
PTK				*e*Sg	Sg	19 00 49.3	+0.3
MALT	Malatya	0.53	258	PG	Pg	19 00 41.7	-0.3
MALT				SG	Sg	19 00 49.1	0.0
MALT	Malatya	0.53	258	*e*Pg	Pg	19 00 41.7	-0.3
MALT				*e*Sg	Sg	19 00 49.1	0.0
AKCD	Akcadag	0.92	262	*i* P	Pg	19 00 48.7	-0.7
AKCD				*i* S	Sb	19 01 01.8	+0.3
AKCD	Akcadag	0.92	262	P	Pg	19 00 48.7	-0.7
AKCD				S	Sb	19 01 01.8	+0.3
DYBB	Diyarbakir	0.95	119	PG	Pg	19 00 49.6	-0.4
DIYA	Diyarbakir	0.96	121	*i* P	Pn	19 00 50.6	0.0
DIYA				*i* S	Sn	19 01 04.0	0.0
DIYA	Diyarbakir	0.96	121	P	Pn	19 00 50.6	0.0
DIYA				S	Sn	19 01 04.0	0.0
KEMA	Kemaliye	0.96	331	*i* P	Pg	19 00 48.2	-1.9
KEMA				*i* S	Sb	19 01 03.2	+0.6
KEMA	Kemaliye	0.96	331	P	Pg	19 00 48.2	-1.9
KEMA				S	Sb	19 01 03.2	+0.6
HEKM	Malatya_Hekimh	0.99	298	*i* P	Pg	19 00 49.8	-0.9
HEKM				*i* S	Sn	19 01 05.3	+0.3
HEKM	Malatya_Hekimh	0.99	298	P	Pg	19 00 49.8	-0.9
HEKM				S	Sn	19 01 05.3	+0.3
URFA	Urfa	1.00	192	PG	Pb	19 00 50.9	+0.2
URFA	Urfa	1.00	192	*e*Pg	Pb	19 00 50.9	+0.2
HANI	Diyarbakir_Han	1.03	90	*i* P	Pn	19 00 51.7	+0.1
HANI				*i* S	Sn	19 01 06.2	+0.4
HANI	Diyarbakir_Han	1.03	90	P	Pn	19 00 51.7	+0.1
HANI				S	Sn	19 01 06.2	+0.4
DIY	Diyarbakir	1.04	120	*e*Pg	Pg	19 00 49.6	-2.1
MAZI	Mazidag	1.45	131	PN	Pn	19 00 57.8	+0.5
MAZI	Mazidag	1.45	131	*e*Pn	Pn	19 00 57.8	+0.5

IDC ***19*** *19:14:06.8±1.9, 20°.44S×177°.50W, h476km±20km, mb3.5/10, mb1 3.7/12, mb1mx3.4/47, mbtmp4.4/12, Error ellipse: s-maj=26.6km s-min=13.0km az=146.0*
ISCJB ***19*** *19:14:07.4±0.8, 20°.4S±0°.1×177°.5W±0°.1, h500km, mb3.9/10, Error ellipse: s-maj=23.9km s-min=9.2km az=140.1*

ISC 19 19:14:08.2±0.8, 20°.4S±0°.2×177°.5W±0°.1, h500km, n19, σ1§68/22, mb4.0/10, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	8.46	41	P	P	19 16 09.5	0.0
	4.4nm,0.3s,baz=43,slow=19,SNR=4.1						
AFI				S	S	19 17 46.1	-2.9
	5.9nm,0.3s,baz=204,slow=20,SNR=5.4						
URZ	Urewera	18.41	193	P	P	19 17 51.0	-1.1
	0.6nm,0.3s,baz=331,slow=19,SNR=2.9						
CTA	Charters Tower	33.94	264	P	P	19 20 09.7	+0.3
	2.9nm,0.5s,baz=90,slow=12,SNR=5.5						
STKA	Stephens Creek	38.24	244	P	P	19 20 45.2	+0.3
	2.6nm,0.6s,baz=87,slow=12,SNR=8.2						
JAY	Jayapura	44.43	288	P	P	19 21 35.2	+0.9
	6.2nm,0.4s,baz=170,slow=5.3,SNR=7.9						
ASAR	Alice Springs	44.98	257	P	P	19 21 38.5	0.0
	9.0nm,0.5s,baz=91,slow=8.0,SNR=182						
ASAR				PcP	pP	19 23 10.0	-1.5
	0.3nm,0.5s,baz=112,slow=3.2,SNR=3.3						
ASAR				S	S	19 27 36.6	-3.6
	0.6nm,1.1s,baz=94,slow=15,SNR=4.6						
WRA	Warramunga Arr	45.06	262	P	P	19 21 38.7	-0.4
	4.6nm,0.6s,baz=97,slow=7.6,SNR=112						
BATI	Baumata	57.37	271	P	P	19 23 09.9	+1.2
	28nm,0.9s,baz=129,slow=6.5,SNR=4.5						
MJAR	Matsushiro Arr	70.38	323	P	P	19 24 32.0	+0.7
	0.9nm,0.5s,baz=166,slow=6.9,SNR=4.3						
TXAR	Lajitas Array	86.62	57	P	P	19 26 00.8	+2.3
	0.3nm,0.8s,baz=217,slow=4.3,SNR=2.6						
ILAR	Eielson Array	88.10	13	P	P	19 26 03.8	-0.7
	0.2nm,0.4s,baz=217,slow=5.4,SNR=3.6						
CMAR	Chiang Mai Arr	90.49	289	P	P	19 26 19.1	+2.4
	1.2nm,0.9s,baz=121,slow=4.1,SNR=6.0						
MKAR	Makanchi Array	111.44	313	PKiKP	PKiKP	19 31 44.7	-0.4
	0.4nm,0.8s,baz=122,slow=1.9,SNR=3.6						
BVAR	Borovoye Array	119.27	320	PKP	PKPdf	19 32 00.5	+0.6
	0.5nm,0.4s,baz=187,slow=2.2,SNR=4.9						
AKASG	Malin Array Be	143.12	332	PKP	PKPdf	19 32 43.2	-1.5
	0.2nm,0.3s,baz=46,slow=5.5,SNR=8.0						
EKA	Eskdalemuir Ar	144.84	6	PKP	PKPab	19 32 48.4	-0.1
	0.3nm,0.5s,baz=310,slow=2.4,SNR=3.2						
BRTR	Keskin Array B	147.08	313	PKPbc	PKPbc	19 32 55.0	0.0
	0.5nm,0.6s,baz=166,slow=4.8,SNR=3.0						
MMAI	Mount Meron Ar	148.14	300	PKPbc	PKPab	19 32 59.4	-3.1
	0.4nm,0.4s,baz=69,slow=7.9,SNR=4.3						
GERES	GERESS Array B	150.20	345	PKPbc	PKPbc	19 33 03.8	+1.5
	0.4nm,0.6s,baz=288,slow=0.4,SNR=3.6						

IDC 19 19:23:15.1±7.8, 6°.57S×147°.74E, h97km±74km, mb2.7/1, mb1 3.0/3, mb1mx2.7/56, mbtmp3.2/3, ML3.2/1, Error ellipse: s-maj=141.8km s-min=63.7km az=129.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	2.88	191	P	Pn	19 23 59.1	0.0
	2.5nm,0.3s,baz=340,slow=6.4,SNR=7.8						
PMG				S	Sn	19 24 38.1	+5.1
	2.1nm,0.3s,baz=60,slow=20,SNR=3.7						
WRA	Warramunga Arr	18.60	223	P	P	19 27 23.8	-1.1
	0.1nm,0.3s,baz=48,slow=12,SNR=8.4						
ASAR	Alice Springs	21.59	217	P	P	19 27 57.9	+0.7
	0.4nm,0.7s,baz=51,slow=8.2,SNR=9.8						
TORD	Torodi Ar. Bea	145.94	284	PKPbc	PKPdf	19 42 43.6	0.0
	0.4nm,0.6s,baz=61,slow=3.5,SNR=2.5						

IDC 19 19:24:58.2±22.0, 32°.38N×86°.16E, h0km, mb3.2/2, mb1 3.2/4, mb1mx2.9/85, mbtmp3.2/4, ML2.4/2, Error ellipse: s-maj=325.8km s-min=61.1km az=19.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	14.70	349	Pn	Pn	19 28 26.6	-0.7
	0.0nm,0.3s,baz=168,slow=14,SNR=4.2						
KURBB	Kurchatov Arra	19.08	345	P	Pn	19 29 23.1	+0.3
	0.0nm,0.3s,baz=169,slow=9.8,SNR=2.9						
ZALV	Zalesovo Beam	21.58	358	P	P	19 29 48.1	-1.1
	0.4nm,0.4s,baz=178,slow=10,SNR=2.6						
SONM	Songino Array	21.76	39	P	P	19 29 51.7	+0.3
	0.9nm,0.9s,baz=235,slow=10,SNR=4.8						

ISCJB ***19*** *19:28:49.2±0.4, 5°.92N±0°.04×125°.85E±0°.06, h132km±4km, mb4.0/17, Error ellipse: s-maj=10.4km s-min=5.3km az=154.2*
MAN ***19*** *19:28:49.5, 5°.59N×125°.61E, h33km, mb4.7, ML3.6, MS3.6*
NEIC ***19*** *19:28:50.6±0.6, 5°.93N×125°.98E, h127km±6km, mb4.5/10, Error ellipse: s-maj=9.8km s-min=5.4km az=69.0*
IDC ***19*** *19:28:50.9±0.7, 5°.96N×125°.86E, h128km±7km, mb3.5/9, mb1 3.7/11, mb1mx3.3/75, mbtmp4.0/11, MS4.0/1, Ms1 4.0/1, ms1mx2.8/33, Error ellipse: s-maj=31.8km s-min=9.9km az=75.0*

ISC 19 19:28:50.7±0.7, 5°.83N±0°.05×125°.76E±0°.06, h125km±7km, n41, σ1§61/53, mb4.2/17, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	Mati	1.22	24	*e*P	Pn	19 29 14.1	-1.3
MATI				*e*S	Sn	19 29 32.3	-1.9
DAV	Davao City (W)	1.25	352	P	Pn	19 29 15.3	-0.5
	55nm,0.3s,baz=225,slow=1.4,SNR=3.6						
DAV				S	Sn	19 29 33.4	-1.4
	85nm,0.3s,baz=74,slow=7.3,SNR=3.7						
DAV				LR	LR	19 29 36.7	
	comp=Z,78nm,18.4s,baz=250,slow=40						
DAV	Davao City (W)	1.25	352	*e*Pn	Pn	19 29 15.8	+0.1
DAV				*e*Sn	Sn	19 29 32.2	-2.6
DMPH	Davao City--Mi	1.27	349¶	*e*P	Pn	19 29 18.6	+2.6
DMPH				*e*S	Sn	19 29 37.5	+2.3
SKMP	Bagumbayan, Su	1.39	300	*e*P	Pn	19 29 16.7	-0.6
SKMP				*e*S	Sn	19 29 36.0	-1.4
BUKP	Musuan	2.15	341	*e*P	Pn	19 29 27.0	+0.6
BUKP				*e*S	Sn	19 29 58.5	+4.7
BIPH	Bislig	2.42	14¶	*i*P	Pn	19 29 31.7	+2.0
BIPH				*i* S	Sn	19 30 03.3	+3.6
PAGZ	Pagadian	3.10	311	*e*P	Pn	19 29 37.3	-1.1
PAGZ				*e*S	Sn	19 30 13.0	-2.3
TNTI	Ternate	5.27	162	*e*Pn	Pn	19 30 06.5	-1.0
TNTI				*e*Sn	Sn	19 31 06.9	-0.3
MYLDM	Lahad Datu	7.25	265	*e*Pn	Pn	19 30 38.1	+4.0
SIJI	Sorong	8.63	140	P	Pn	19 30 53.8	+1.0
	1.7nm,0.3s,baz=138,slow=21,SNR=5.0						
SIJI				S	Sn	19 32 27.8	-0.7
	0.4nm,0.3s,baz=307,slow=20,SNR=2.1						
FAKI	Fak Fak	10.84	143	*e*Pn	Pn	19 31 20.9	-1.6
SBUM	Sibu	13.91	257	*e*Pn	P	19 32 06.5	-0.1
SOEI	Soe	15.55	185	*e*Pn	P	19 32 24.5	-0.5
	71nm,1.5s						
BATI	Baumata	16.06	187	P	P	19 32 30.6	0.0
	2.7nm,0.3s,baz=307,slow=20,SNR=4.6						
TWG	Pinlang	17.49	345	*e*P	P	19 32 44.4	-1.8
	974nm,2.0s						
CISI	Cisompet, Garu	22.30	234	*e*P	P	19 33 39.7	+1.6
	32nm,0.9s						
FITZ	Fitzroy Crossi	23.77	180	P	P	19 33 53.2	+1.4
	2.8nm,0.5s,baz=14,slow=9.2,SNR=21						
FITZ	Fitzroy Crossi	23.77	180	*e*P	P	19 33 52.9	+1.0
	19nm,1.7s						
WRAB	Tennant Creek	26.96	162	*e*P	P	19 34 21.0	+0.3
	31nm,1.8s						
WRA	Warramunga Arr	26.96	162	P	P	19 34 20.8	0.0
	1.0nm,1.0s,baz=334,slow=11,SNR=13						
WRA				PcP	PcP	19 37 39.9	+0.3
	0.4nm,1.0s,baz=0.1,slow=1.8,SNR=3.4						
WR1	Warramunga Arr	26.96	162	*e*P	P	19 34 20.8	0.0
	32nm,1.9s						
WR1				*e*PcP	PcP	19 37 39.9	+0.4
WB2	Warramunga Arr	26.97	162	*e*P	P	19 34 21.1	+0.3
	14nm,1.4s						
MBWA	Marble Bar	27.46	192	*e*P	P	19 34 25.8	+0.6
	45nm,1.8s						
RABL	Rabaul	28.19	110	*e*P	P	19 34 30.5	-1.2
	21nm,0.6s						
JHJ	Hachijo jima 2	30.13	24	LR	LR	19 45 02.9	
	comp=Z,298nm,21.9s,baz=60,slow=32						
AS31	Alice Springs	30.37	165	*e*P	P	19 34 51.2	+0.2
	2.2nm,1.4s						
ASAR	Alice Springs	30.37	165	P	P	19 34 52.0	+1.0
	0.5nm,0.4s,baz=344,slow=7.4,SNR=11						
ASAR				PcP	PcP	19 37 48.1	0.0
	0.3nm,0.8s,baz=337,slow=2.5,SNR=4.5						
NWAO	Narrogin (SRO)	39.38	191	P	P	19 36 09.2	+1.1
	6.2nm,0.8s,baz=358,slow=9.1,SNR=4.0						
STKA	Stephens Creek	40.42	159	P	P	19 36 18.0	+1.2
	8.1nm,1.2s,baz=343,slow=7.1,SNR=5.5						
STKA	Stephens Creek	40.42	159	*e*P	P	19 36 18.3	+1.6
	5.9nm,1.7s						
KLR	Kul'dur	43.55	6	P	P	19 36 41.1	-0.9
	0.1nm,0.4s,baz=186,slow=10.0,SNR=4.3						
MK01	Makanchi Array	55.27	325	*e*P	P	19 38 10.7	-0.4
MK32	Makanchi Array	55.29	325	*e*P	P	19 38 10.7	-0.5
MKAR	Makanchi Array	55.29	325	P	P	19 38 10.7	-0.5
	0.2nm,0.4s,baz=122,slow=7.2,SNR=5.2						
KURBB	Kurchatov Arra	59.46	327	P	P	19 38 39.2	-1.1
	0.4nm,0.6s,baz=128,slow=6.2,SNR=4.6						
KURK	Kurchatov	59.46	327	*e*P	P	19 38 39.2	-1.1
TIXI	Tiksi	65.78	1	P	P	19 39 19.0	-2.8
	1.6nm,0.3s,baz=203,slow=5.4,SNR=12						
ILAR	Eielson Array	83.64	26	P	P	19 41 05.4	+0.4
	0.3nm,0.8s,baz=244,slow=5.8,SNR=4.4						
TORD	Torodi Ar. Bea	121.33	289	PKP	PKPdf	19 47 29.6	-0.5
	0.1nm,0.3s,baz=56,slow=1.5,SNR=5.4						
TOA1	Torodi Ar. Sit	121.33	289	*e*PKPdf	PKPdf	19 47 29.6	-0.5

ATA ***19*** *20:02:49.0±1.7, 39°.23N×41°.98E, h23km±4km, ML3.7, MW3.3*
ISK ***19*** *20:02:50.6, 39°.21N×41°.97E, h5km, ML2.5/14*
ISCJB ***19*** *20:02:50.9±0.4, 39°.24N±0°.02×41°.95E±0°.02, h7km±4km, Error ellipse: s-maj=3.8km s-min=2.9km az=1.1*
IASPEI ***19*** *20:02:50.4±0.8, 39°.25N±0°.02×41°.95E±0°.02, h18km±4km, Error ellipse: s-maj=3.0km s-min=2.5km az=3.5, GT5 selection from ISC bulletin GT5 identified by Bond¨jr and McLaughlin (2009) selection criteria Bond¨jr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
DDA ***19*** *20:02:50.5, 39°.26N×41°.95E, h7km, Ml3.1*
CSEM ***19*** *20:02:51.0±0.2, 39°.24N×41°.96E, h5km, ML3.1, Error ellipse: s-maj=4.1km s-min=3.2km az=3.0*

ISC 19 20:02:50.4±0.9, 39°.25N±0°.02×41°.97E±0°.02, h18km±2km, n56, σ0§75/88, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKAR	Karacoban	0.08	86	*e*P	Pg	20 02 53.5	-0.8
EKAR				*e*S	Sg	20 02 57.7	+0.8
EKAR				IAML		20 02 59.1	
	comp=Z,2μm,0.3s						
EKAR	Karacoban	0.08	86	*i* P	Pg	20 02 53.6	-0.7
EKAR				*i* S	Sg	20 02 58.0	+1.2
EKAR	Karacoban	0.08	86	P	Pg	20 02 53.6	-0.7
EKAR				S	Sg	20 02 58.0	+1.2
VRTB	Varto-Mus	0.41	257	PG	Pg	20 02 59.0	0.0
VRTB	Varto-Mus	0.41	257	*i* P	Pg	20 02 59.2	+0.2
VRTB				*i* S	Sb	20 03 06.3	+1.1
VRTB	Varto-Mus	0.41	257	*e*Pg	Pg	20 02 59.0	0.0
VRTB	Varto-Mus	0.41	257	P	Pg	20 02 59.2	+0.2
VRTB				S	Sb	20 03 06.3	+1.1
TUTA	Tutak	0.67	77	*e*P	Pb	20 03 03.7	-0.1
TUTA				*e*S	Sg	20 03 13.5	+0.6
TUTA				IAML		20 03 18.7	
	comp=Z,192nm,0.2s						
TUTA	Tutak	0.67	77	*i* P	Pg	20 03 03.8	0.0
TUTA				*i* S	Sn	20 03 14.2	-1.3
TUTA	Tutak	0.67	77	P	Pg	20 03 03.8	0.0
TUTA				S	Sn	20 03 14.1	-1.3
GURO	Guroymak-BITLI	0.70	176	PG	Pb	20 03 03.7	-0.4
GURO				SG	Sb	20 03 13.4	-0.1
GURO	Guroymak-BITLI	0.70	176	*e*Pg	Pb	20 03 03.7	-0.4
GURO				*e*Sg	Sb	20 03 13.4	-0.1
BNGL	BINGOL	0.70	245	*e*P	Pb	20 03 04.0	-0.3
BNGL				*e*S	Sg	20 03 14.1	+0.4
BNGL				IAML		20 03 15.4	
	comp=Z,646nm,0.3s						
BNGL	BINGOL	0.70	245	*i* P	Pb	20 03 03.9	-0.3
BNGL				*i* S	Sg	20 03 14.3	+0.5
EATA	Eleskirt	0.73	33	*e*P	Pb	20 03 04.5	-0.3
EATA				*e*S	Sn	20 03 16.8	-0.3
EATA	Eleskirt	0.73	33	*i* P	Pg	20 03 05.2	+0.2
EATA				*i* S	Sn	20 03 17.2	+0.2
EATA	Eleskirt	0.73	33	P	Pg	20 03 05.2	+0.2
EATA				S	Sn	20 03 17.2	+0.2
ADCV	BITLIS_Adilcev	0.74	127	*i* P	Pb	20 03 04.7	-0.1
ADCV				*i* S	Sn	20 03 16.2	-0.7
ADCV	BITLIS_Adilcev	0.74	127	P	Pb	20 03 04.7	-0.1
ADCV				S	Sn	20 03 16.2	-0.7
HOMI	Horasan	0.80	357	*e*P	Pb	20 03 05.0	-0.9
HOMI				*e*S	Sg	20 03 17.1	+0.4
HOMI				IAML		20 03 22.2	
	comp=Z,148nm,0.4s						
HOMI	Horasan	0.80	357	*i* P	Pb	20 03 04.7	-1.1
HOMI				*i* S	Sg	20 03 17.3	+0.6
ERZM	Erzurum	0.80	325	*e*P	Pb	20 03 04.8	-1.2
ERZM	Erzurum	0.80	325	*i* P	Pb	20 03 05.2	-0.8
ERZM				*i* S	Sb	20 03 16.6	0.0
ERZM	Erzurum	0.80	325	P	Pb	20 03 05.2	-0.8
ERZM				S	Sb	20 03 16.6	0.0
ECAT	Cat-ERZURUM	0.85	295	*e*P	Pb	20 03 06.0	-0.7
ECAT				*i* Pg	Pg	20 03 07.0	0.0
ECAT				*e*S	Sg	20 03 19.1	+0.8
ECAT				IAML		20 03 21.0	
	comp=Z,55nm,0.5s						
ECAT	Cat-ERZURUM	0.85	295	*i* P	Pb	20 03 06.2	-0.5
ECAT				*i* S	Sg	20 03 18.7	+0.4
ECAT	Cat-ERZURUM	0.85	295	P	Pb	20 03 06.2	-0.5
ECAT				S	Sg	20 03 18.7	+0.4
AGRB	Hanur-Agry	0.86	67	PG	Pn	20 03 07.8	0.0
AGRB				SG	Sn	20 03 20.1	+0.2
AGRB	Hanur-Agry	0.86	67	*e*Pg	Pn	20 03 07.8	0.0
AGRB				*e*Sg	Sn	20 03 20.1	+0.2
BNGB	Bing¨¶l	1.03	256	PG	Pn	20 03 10.5	+0.4
BINT	Bingol	1.21	252	*e*Pg	Pn	20 03 10.5	-2.0
SVAN	Silvan-Diyarba	1.25	209	PN	Pb	20 03 14.3	+0.8
SVAN	Silvan-Diyarba	1.25	209	*e*Pn	Pb	20 03 14.3	+0.8
GEVA	Gevas	1.27	137	*e*P	Pb	20 03 13.9	+0.1
GEVA				*e*S	Sn	20 03 30.7	+0.7
VMUR	Van-Muradiye	1.27	101	*i* P	Pg	20 03 14.8	-0.3
VMUR				*i* S	Sg	20 03 33.5	+1.6
VMUR	Van-Muradiye	1.27	101	P	Pg	20 03 14.8	-0.3
VMUR				S	Sg	20 03 33.5	+1.6
VANB	Van	1.29	120	PN	Pg	20 03 16.3	+0.9
VANB	Van	1.29	120	*e*Pn	Pg	20 03 16.3	+0.9
SENK	Senkaya-Erzuru	1.34	13	PN	Pg	20 03 16.8	+0.4
SENK	Senkaya-Erzuru	1.34	13	*e*Pn	Pg	20 03 16.8	+0.4
DYDN	Diyadin	1.37	77	*e*P	Pn	20 03 14.4	-0.4
DYDN				*e*S	Sg	20 03 34.6	-0.2
KOPT	Kop Dagi	1.37	305	*e*P	Pb	20 03 16.3	+0.6
KOPT				*e*S	Sg	20 03 36.8	+1.9
CLDR	Caldiran	1.52	93	PN	Pg	20 03 18.9	-0.9
CLDR	Caldiran	1.52	93	*e*Pn	Pg	20 03 18.9	-0.9
BAYT	Ayd¨–ntepe-Bay	1.81	310	PN	Pb	20 03 23.8	+0.6
BAYT	Ayd¨–ntepe-Bay	1.81	310	*e*Pn	Pb	20 03 23.8	+0.6
DIY	Diyarbakir	1.92	226	*e*Pn	Pb	20 03 24.8	-0.2
DYBB	Diyarbakir	1.93	228	PN	Pb	20 03 24.8	-0.3
PTK	Pertek	2.04	261	PN	Pb	20 03 26.1	-0.9
PTK	Pertek	2.04	261	*e*Pn	Pb	20 03 26.1	-0.9
CHOM	Cayeli-Rize	2.06	334	PN	Pb	20 03 27.5	+0.2
CHOM	Cayeli-Rize	2.06	334	*e*Pn	Pb	20 03 27.5	+0.2
MAZI	Mazidag	2.15	214	PN	Pb	20 03 27.5	-1.4
MAZI	Mazidag	2.15	214	*e*Pn	Pb	20 03 27.5	-1.4
BCA	Borcka	2.21	353	PN	Pb	20 03 29.9	+0.1
BCA	Borcka	2.21	353	*e*Pn	Pb	20 03 29.9	+0.1

CSEM ***19*** *20:05:46.0±0.6, 51°.53N×16°.13E, h1km, ML2.7/5, Error ellipse: s-maj=8.9km s-min=5.5km az=10.0*
PRU ***19*** *20:05:46.5, 51°.53N×16°.14E, h0km*

ISC 19 20:05:46.3±1.7, 51°.52N±0°.08×16°.12E±0°.04, h0km, n23, σ0§55/38, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.69	171	*e*Pg	Pg	20 06 00.4	+0.9
KSP				*e*Sg	Sg	20 06 09.6	+1.2
UPC	Upice	1.02	184	*e*PG	Pb	20 06 06.9	+0.1
UPC				*e*SG	Sg	20 06 19.0	0.0
	comp=Z,9.1nm,0.5s						
UPC	Upice	1.02	184	Pg	Pb	20 06 06.9	+0.1
UPC				Sg	Sg	20 06 19.0	0.0
	9.1nm,0.5s						
DPC	Dobruska-Polom	1.18	174	*e*PG	Pg	20 06 08.9	0.0
DPC				*e*SG	Sg	20 06 24.6	+0.4
	comp=Z,4.0nm,0.4s						
DPC	Dobruska-Polom	1.18	174	Pg	Pg	20 06 08.9	0.0
DPC				Sg	Sg	20 06 24.6	+0.4
	4.0nm,0.4s						
PVCC	Panska Ves	1.40	225	*e*PG	Pb	20 06 13.7	+0.4
PVCC				*e*SG	Sn	20 06 32.3	+0.1
	comp=Z,15nm,0.2s						
PVCC	Panska Ves	1.40	225	Pg	Pb	20 06 13.7	+0.4
PVCC				Sg	Sn	20 06 32.3	+0.1
	15nm,0.2s						
KRLC	Kraliky	1.51	164	*e*PG	Pb	20 06 15.0	-0.2
KRLC				*e*SG	Sg	20 06 34.8	+0.1
KRLC	Kraliky	1.51	164	Pg	Pb	20 06 15.0	-0.2
KRLC				Sg	Sg	20 06 34.8	+0.1
BRG	Berggiesshubel	1.52	245	PG	Pg	20 06 15.7	+0.3
BRG				SG	Sn	20 06 36.5	+1.4
	15nm,0.3s						
GOPC	GO Pecny, Ondr	1.

BHJ IAML 20 14 35.1
comp=E,60μm,0.3s
BOM Bombay 5.18 153 *ep* **Pn 20 15 20.4 +0.1**
BOM *eS* **Sn 20 16 15.4 -4.4**
POO Poona 5.99 146 *eP* **Pn 20 15 31.3 -0.1**
POO IAML 20 17 22.7
comp=N,1μm,0.3s
POO IAML 20 17 22.8
comp=E,2μm,1.2s
BHPL Bhopal 6.55 91 *eP* **Pn 20 15 36.9 -2.2**
BHPL *eS* **Sn 20 16 48.0 -5.5**
BHPL IAML 20 17 36.3
comp=E,2μm,1.0s
BHPL IAML 20 17 37.3
comp=N,3μm,0.5s
KHET Khetri 6.70 47 *eP* **Pn 20 15 38.7 -2.5**
KHET *eS* **Sn 20 16 51.6 -5.6**
KHET IAML 20 17 39.0
comp=N,2μm,1.3s
KHET IAML 20 17 39.7
comp=E,3μm,1.2s
BHGR Bahadurgarh 7.86 48 *eP* **Pn 20 15 55.3 -1.8**
KLRI Killari 8.02 132 *eP* **Pn 20 15 58.6 -0.7**
KLRI *eS* **Sn 20 17 25.8 -3.9**
NDI New Delhi 8.05 49 *eP* **Pn 20 15 58.0 -1.6**
NDI *ex* x 20 17 45.0
NGP Nagpur 8.44 105 *eP* **Pn 20 16 05.7 +0.6**
NGP *eS* **Sn 20 17 35.9 -4.1**
SARP Sargodha 8.60 14 P **Pn 20 16 05.8 -1.4**
GOA Goa 8.67 157 *eP* **Pn 20 16 07.3 -0.9**
GOA IAML 20 18 41.3
comp=E,1μm,0.2s
GOA IAML 20 18 41.6
comp=N,711nm,0.5s
SRSP Sriramsagar 8.79 120 *eP* **Pn 20 16 08.4 -1.4**
SRSP *eS* **Sn 20 17 44.7 -4.0**
THW Thamme Wali 9.30 8 P **Pn 20 16 14.3 -2.5**
RPR Rampur 9.60 117 *eP* **Pn 20 16 20.0 -0.9**
RPR *eS* **Sn 20 18 04.2 -4.2**
DDI Dehra Dun 9.66 44 *eP* **Pn 20 16 20.4 -1.4**
DDI *eS* Sn 20 18 00.7 -9.4
SMLA Simla 9.71 37 *eP* **Pn 20 16 20.1 -2.3**
SMLA *eS* Sn 20 18 00.6 -10
HYBB Hyderabad (bro 9.84 127 *eP* **Pn 20 16 22.6 -1.7**
HYBB *eS* **Sn 20 18 12.3 -2.3**
HYB Hyderabad 9.85 127 *i* P **Pn 20 16 23.0 -1.3**
HYB *eS* **Sn 20 18 16.0 +1.4**
HYB Hyderabad 9.85 127 *eP* **Pn 20 16 22.2 -2.2**
HYB *eS* **Sn 20 18 07.0 -7.6**
JMU Jammu 10.00 23 *eS* Sn 20 18 06.0 -12
DHRM DHARAMSHALA 10.16 30 *eP* **Pn 20 16 26.4 -2.4**
DHRM *eS* Sn 20 18 11.0 -12
NIL Nilore 10.40 14 *ePn* **Pn 20 16 29.3 -2.5**
NIL *eSn* **Sn 20 18 20.1 -7.9**
NIL Nilore 10.40 14 *eP* **Pn 20 16 29.3 -2.5**
CHCP Chirah Chowk 10.41 14 P **Pn 20 16 29.5 -2.5**
WBK Wadi Bani Khal 10.47 267 P **Pn 20 16 32.7 -0.3**
SNR=8.6
WBK S **Sn 20 18 24.3 -5.7**
WSAR Wadi Sarin 10.72 271 Pn **Pn 20 16 34.0 -2.3**
comp=N,11nm,0.3s,baz=117,slow=9.7,SNR=129
WSAR Sn Sn 20 18 26.4 -10
comp=N,4.5nm,0.3s,baz=190,slow=17,SNR=4.1
WSAR LR LR 20 21 42.5
comp=N,2μm,20.2s,baz=71,slow=43
URV Uravakonda 10.78 141 *eP* **Pn 20 16 35.6 -1.6**
JOSI Joshimath 10.80 48 *eP* **Pn 20 16 35.5 -2.1**
JOSI *eS* Sn 20 18 28.9 -9.4
NJS Nagarjunasagar 10.95 128 *eP* **Pn 20 16 36.7 -2.8**
NJS *eS* **Sn 20 18 37.3 -4.3**
SRLM Srisailam 10.96 131 *eP* **Pn 20 16 37.8 -1.9**
SRLM *eS* **Sn 20 18 35.5 -6.5**
KBL Kabul 11.01 355 *ePn* **Pn 20 16 37.8 -2.6**
KBL *eSn* Sn 20 18 33.1 -10
KBL Kabul 11.01 355 *eP* **Pn 20 16 37.8 -2.6**
BIDO Bidbid 11.17 272 P **Pn 20 16 41.0 -1.5**
SNR=19
BIDO S **Sn 20 18 41.3 -5.8**
SMDO Samad 11.27 270 P **Pn 20 16 45.7 +1.7**
SNR=17
SMDO S Sn 20 18 42.3 -7.4
JMDO Jabal Madar 11.30 266 P **Pn 20 16 45.4 +1.1**
SNR=12
JMDO S **Sn 20 18 43.2 -7.1**
HOQ Hoqain 11.92 273 P **Pn 20 16 51.6 -1.1**
SNR=9.0
BSY Bisya 12.08 269 P **Pn 20 16 55.8 +0.8**
SNR=9.9
PYUN Piuthan 12.29 66 *eP* **Pn 20 16 54.4 -3.6**
comp=N,244nm,0.6s
PVM Polavaram 12.32 118 *eP* **Pn 20 16 56.8 -1.4**
PVM *eS* **Sn 20 19 09.9 -5.4**
SOHO SOHO 12.62 275 *i* P **Pn 20 17 00.1 -2.2**
SNR=12
KOLN Koldanda 12.71 68 *eP* **Pn 20 17 00.3 -3.4**
comp=N,134nm,0.5s
MDH Madha 12.88 281 *i* P **Pn 20 17 02.3 -3.5**
SNR=5.8
UOSS Minazif 12.94 279 *ePn* Pn 20 17 02.5 -4.1
UOSS *eSn* Sn 20 19 17.1 -13
UOSS Minazif 12.94 279 *i* P **Pn 20 17 03.8 -2.9**
SNR=16
BANOM Banah 12.94 283 P **Pn 20 17 05.4 -1.3**
BANOM S Sn 20 19 20.6 -10
BANOM Banah 12.94 283 *i* P **Pn 20 17 05.1 -1.6**
SNR=7.7
HATD Hatta, Dubai 13.00 278 P **Pn 20 17 06.6 -0.9**
SNR=5.4
HATD Hatta, Dubai 13.00 278 *i* P **Pn 20 17 06.2 -1.2**
SNR=10
MSFE Esma-Masafi 13.01 281 *i* P **Pn 20 17 06.2 -1.5**
SNR=11
DANN Dangsing 13.02 66 *eP* **Pn 20 17 04.2 -3.8**
comp=N,234nm,0.7s
SHME Shamm 13.10 284 *i* P **Pn 20 17 08.2 -0.7**
SNR=9.0
SKHT Srikalahasti 13.21 136 *eP* **Pn 20 17 08.2 -2.1**
SKHT *eS* **Sn 20 19 34.7 -2.2**
ALNE Al Ain 13.33 275 *i* P **Pn 20 17 11.6 -0.5**
SNR=15
NAZ Nazwa, Dubai 13.43 279 *i* P **Pn 20 17 13.0 -0.4**
SNR=17
VIS Vishakhapatnam 13.50 113 *eP* **Pn 20 17 15.1 +0.8**
VIS *i* x **Sn 20 19 49.6 +5.6**
GKN Gorkha 13.65 68 *eP* Pn 20 17 12.4 -4.1
ASUD Al Ashush, Dub 13.72 278 *i* P **Pn 20 17 16.2 -1.1**
SNR=11
CHLP Challavanipeta 13.79 109 *eP* **Pn 20 17 17.4 -0.8**
CHLP *eS* **Sn 20 19 46.0 -5.0**
DMN Daman 13.96 70 *eP* Pn 20 17 15.8 -5.0
comp=N,242nm,0.7s
AJN Ajban 14.03 277 *i* P **Pn 20 17 20.9 -0.7**
SNR=6.5
MDRS Chennai 14.05 136 *eS* Sn 20 19 46.4 -11
KKN Kakani 14.15 69 *eP* Pn 20 17 18.5 -4.9
comp=N,285nm,0.7s
PKIN Phulchoki 14.20 70 *eP* Pn 20 17 19.7 -4.4
comp=N,140nm,0.5s
BOK Bokaro 14.28 86 *eP* **Pn 20 17 21.3 -3.7**
BOK *eS* Sn 20 19 50.1 -13
GUN Gumba 14.69 70 *eP* Pn 20 17 25.7 -5.3
comp=N,714nm,0.7s
JIRN Jiri 14.91 71 *eP* Pn 20 17 28.0 -5.8
comp=N,260nm,0.7s
RAMN Ramite 15.13 74 *eP* **Pn 20 17 31.2 -5.5**
comp=N,321nm,0.6s
MZR Muzera 15.47 271 *i* P **Pn 20 17 40.3 -0.7**
SNR=9.3
ODAN Odare 15.81 74 *eP* **Pn 20 17 40.2 -5.5**
comp=N,195nm,0.6s
TAPN Taplejung 16.17 73 *eP* **Pn 20 17 45.3 -5.0**
KSH Kashi 16.63 15 P Pn 20 17 48.0 -8.0
KSH S Sn 20 20 39.8 -21
KSH pmax pmax
comp=N,170nm,0.9s
KSH LR LR
comp=N,6μm,7.0s
KSH LR LR
comp=N,12μm,8.4s
KSH LR LR
comp=N,6μm,9.3s
ASHT Ashkhabad 17.61 327 P **P 20 18 10.2 +1.2**
ASHT pmax pmax
comp=Z,86nm,1.2s

GEYT Alibeck 17.73 327 P **Pn 20 18 06.8 -2.8**
comp=Z,1.2nm,0.3s,baz=149,slow=9.8,SNR=17
GEYT S **Sn 20 21 23.1 -3.7**
comp=Z,0.5nm,0.3s,baz=103,slow=12,SNR=3.8
GEYT LR LR 20 25 53.3
comp=Z,2μm,19.4s,baz=150,slow=40
GYA0B ALIBECK ARRAY 17.73 327 *ePn* **Pn 20 18 07.1 -2.5**
comp=Z,152nm,1.3s
TAS Tashkent 17.75 357 P **Pn 20 18 07.7 -2.1**
TAS pmax pmax
comp=Z,126nm,1.1s
NRN Naryn 18.46 14 *eP* **P 20 18 16.2 -2.6**
comp=Z,59nm,0.8s
NRN Naryn 18.46 14 *eP* **P 20 18 16.2 -2.6**
NRN pmax pmax
comp=Z,59nm,0.8s
AML Almayashu 18.75 8 P **P 20 18 17.1 -4.9**
SNR=25
KZA Kyzart 18.94 11 P **P 20 18 22.8 -1.2**
SNR=21
UCH Uchtor 18.96 10 P **P 20 18 24.4 +0.1**
SNR=45
PALK Pallekele 19.01 147 P **P 20 18 23.4 -1.2**
comp=Z,1.5nm,0.3s,baz=294,slow=12,SNR=5.7
PALK S Sn 20 21 46.6 -12
comp=Z,0.7nm,0.3s,baz=116,slow=13,SNR=3.4
PALK LR LR 20 25 37.6
comp=Z,2μm,18.1s,baz=294,slow=37
PALK Pallekele 19.01 147 *eP* **P 20 18 23.4 -1.2**
comp=Z,38nm,0.8s
PALK *eSn* Sn 20 21 46.6 -12
PALK Pallekele 19.01 147 *eP* **P 20 18 23.4 -1.2**
PALK *e* 20 21 46.6
PALK pmax pmax
comp=Z,38nm,0.8s
TARG Taragay, Kyrgy 19.19 17 *eP* **P 20 18 25.3 -1.5**
comp=Z,90nm,1.1s
EKS2 Erkin-Say 19.28 8 P **Pn 20 18 29.3 +0.7**
SNR=48
ULHL Ulahol 19.30 13 P **P 20 18 28.1 +0.3**
SNR=10
KBK Karagaybulak 19.45 10 P **Pn 20 18 31.4 +0.9**
SNR=41
KK31 Karatay Array 19.51 0 *eP* **P 20 18 29.8 0.0**
KK31 Karatay Array 19.51 0 *eP* **P 20 18 29.8 0.0**
KKAR Karatay Array 19.51 0 *eP* **P 20 18 29.8 0.0**
KKAR Karatay Array 19.51 0 *eP* **P 20 18 29.8 0.0**
FRU Bishkek 19.57 10 *eP* **P 20 18 31.0 +0.5**
FRU *eS* **Sn 20 22 05.0 -6.2**
FRU pmax pmax
comp=Z,140nm,1.7s
FRU MLR MLR
comp=E,9μm,15.0s
LSA Lhasa 19.61 67 P **P 20 18 29.8 -1.8**
LSA pmax pmax
comp=E,16nm,1.8s
LSA Lhasa 19.61 67 *eP* **P 20 18 30.8 -0.8**
comp=E,103nm,0.9s
LSA Lhasa 19.61 67 *i* P **P 20 18 32.0 +0.5**
SNR=72
LSA Lhasa 19.61 67 *eP* **P 20 18 30.8 -0.8**
LSA pmax pmax
comp=Z,103nm,0.9s
BRDH Bariadhala 19.65 88 LR LR 20 26 10.1
comp=Z,5μm,18.1s,baz=301,slow=37
SHL Shillong 19.73 80 *eP* **P 20 18 31.0 -1.7**
SHL *eS* S 20 21 50.7 -24
SHL Shillong 19.73 80 *eP* **P 20 18 30.9 -1.7**
comp=Z,92nm,0.9s
SHL Shillong 19.73 80 *eP* **P 20 18 30.9 -1.7**
SHL pmax pmax
comp=Z,92nm,0.9s
CHMS Chumysh 19.75 10 P **P 20 18 33.6 +1.1**
SNR=25
TKM2 Tokmak 2 19.82 12 P **P 20 18 34.4 +0.9**
SNR=44
USP Ospenovka 19.97 9 P **P 20 18 35.4 +0.4**
SNR=26
PRZ Przheval'sk 20.05 18 *eP* **P 20 18 36.6 +0.6**
comp=Z,62nm,0.8s
PRZ Przheval'sk 20.05 18 *eP* **P 20 18 36.6 +0.6**
PRZ pmax pmax
comp=Z,62nm,0.8s
MDOK Medeo 20.35 14 *i* P **P 20 18 40.2 +1.0**
comp=Z,704nm,1.7s
MDOK *eS* **S 20 22 27.8 +1.1**
MDOK LR LR 20 26 38.0
comp=Z,902nm,13.8s
AAA Alma-Ata 20.36 14⇓ *eP* **P 20 18 40.6 +1.3**
comp=Z,172nm,1.2s
AAA *eS* **S 20 22 28.1 +1.3**
AAA LR LR 20 26 44.4
comp=Z,811nm,13.2s
AAA Alma-Ata 20.36 14 *eP* **P 20 18 40.5 +1.3**
AAA *eS* **S 20 22 23.1 -3.7**
AAA pmax pmax
comp=Z,200nm,1.1s
AAA smax smax
comp=N,3μm,11.5s
AAA MLR MLR
comp=Z,1μm,14.0s
SATY Saty 20.59 17⇓ *iP* **P 20 18 41.9 +0.2**
comp=Z,28nm,2.0s
SATY LR LR 20 28 04.4
comp=Z,343nm,9.1s
ZHN Zhinishke 20.70 17 *eP* **P 20 18 43.2 +0.3**
comp=Z,10nm,1.3s
ZHN *eS* **S 20 22 34.1 +0.6**
UZB Uzynbulak 20.84 18⇓ *iP* **P 20 18 44.7 +0.2**
comp=Z,26nm,1.7s
KUU Kurty 20.90 12⇓ *iP* **P 20 18 44.8 -0.2**
comp=Z,69nm,0.9s
KUU *eS* **S 20 22 37.5 +0.2**
SHLS Shalkode 20.98 19 *eP* **P 20 18 48.0 +2.0**
comp=Z,22nm,1.0s
KPKS Kokpek 21.04 17 *eP* **P 20 18 46.5 -0.1**
comp=Z,23nm,1.0s
PDGK Podgornoye 21.14 19 P **P 20 18 47.5 -0.2**
PDGK pmax pmax
comp=Z,45nm,0.7s
BTLS Baital 21.66 7⇓ *iP* **P 20 18 52.7 -0.4**
comp=Z,33nm,2.6s
BTLS *eS* **S 20 22 52.2 -0.2**
RAYN Ar Rayn 22.73 275 *eP* **P 20 19 04.0 -0.9**
comp=Z,81nm,1.0s
RAYN Ar Rayn 22.73 275 *i* P **P 20 19 04.0 -0.9**
SNR=82
RAYN Ar Rayn 22.73 275 P **P 20 19 03.9 -0.9**
RAYN pmax pmax
comp=Z,81nm,1.0s
OTUK Ortayu 24.70 3 P **P 20 19 23.9 +0.2**
OTUK pmax pmax
comp=Z,73nm,0.8s
WMQ Urumqi 24.77 31 P **P 20 19 26.0 +1.6**
WMQ pP pP 20 19 29.3 -0.2
WMQ S **S 20 23 43.3 -2.8**
WMQ PcS **PcS 20 26 44.4 +3.5**
WMQ pmax pmax
comp=Z,83nm,1.9s
WMQ pmax pmax
comp=Z,570nm,3.7s
WMQ LR LR
comp=Z,11μm,13.5s
WMQ LR LR
comp=Z,11μm,12.9s
WMQ LR LR
comp=Z,6μm,14.1s
MAKZ Makanchi 25.04 19 *eP* **P 20 19 26.6 -0.1**
comp=Z,95nm,1.5s
MAKZ Makanchi 25.04 19 *eP* **P 20 19 26.6 -0.1**
MAKZ pmax pmax
comp=Z,95nm,1.5s
MK01 Makanchi Array 25.10 20 *eP* **P 20 19 26.8 -0.6**
MK32 Makanchi Array 25.12 20 *eP* **P 20 19 27.0 -0.5**
MKAR Makanchi Array 25.12 20 P **P 20 19 27.0 -0.5**
comp=Z,15nm,0.9s,baz=208,slow=9.1,SNR=56
MKAR Makanchi Array 25.12 20 *ceP* **P 20 19 27.3 -0.2**
MKAR pmax pmax
comp=Z,15nm,0.9s
AKT Akhty 25.99 319⇓ *iP* **P 20 19 36.8 +1.3**
AKT *e* 20 20 13.1
AKT *eS* **S 20 24 10.1 +4.5**
AKT *eSS* **SnSn 20 25 02.3 -0.7**
AKT pmax pmax
comp=Z,256nm,1.3s
DAMY Dhamar 26.03 255 *eP* **P 20 19 38.8 +2.4**

comp=Z,86nm,1.1s
BRZS Berezniki 26.45 3⇓ *iP* **P 20 19 40.6 +1.1**
comp=Z,46nm,0.8s
ZSN Zaisan 26.55 22 LR LR 20 31 16.6
comp=Z,92nm,11.3s
CMAI Chiengmai2 26.92 92 P **P 20 19 48.6 +4.4**
comp=Z,512nm,1.2s
ABKAR Akbulak array 26.93 345 *eP* **P 20 19 44.6 +0.8**
MAK Makhachkala 27.03 321 *eP* **P 20 19 48.8 +4.1**
MAK *e* 20 20 25.9
MAK *eS* **S 20 24 27.2 +5.6**
MAK pmax pmax
comp=Z,96nm,0.8s
CHTO Chiang Mai 27.09 95 P **P 20 19 47.3 +1.7**
comp=Z,153nm,1.2s
CHTO Chiang Mai 27.09 95 *eP* **P 20 19 46.8 +1.2**
comp=Z,41nm,0.9s
CHTO Chiang Mai 27.09 95 *eP* **P 20 19 46.8 +1.2**
CHTO pmax pmax
comp=Z,41nm,0.9s
GNI Garni 27.16 314 P **P 20 19 46.5 +0.3**
comp=Z,71nm,1.1s,baz=188,slow=4.1,SNR=8.3
GNI S **S 20 24 27.0 +2.7**
comp=Z,3.6nm,0.5s,baz=111,slow=12,SNR=2.7
GNI Garni 27.16 314 *i* P **P 20 19 46.5 +0.3**
SNR=13
GNI Garni 27.16 314⇑ *eP* **P 20 19 46.7 +0.5**
GNI pmax pmax
comp=Z,364nm,1.0s
CM31 Chiang Mai Arr 27.19 95 *eP* **P 20 19 48.1 +1.7**
CMAR Chiang Mai Arr 27.19 95 P **P 20 19 48.0 +1.5**
comp=Z,10.0nm,1.0s,baz=279,slow=10,SNR=23
CMAR LR LR 20 33 44.2
comp=Z,639nm,19.0s,baz=290,slow=44
CMAR Chiang Mai Arr 27.19 95 P **P 20 19 48.0 +1.5**
CM01 Chiang Mai Arr 27.21 95 *eP* **P 20 19 47.8 +1.2**
KURBB Kurchatov Arra 27.78 11 P **P 20 19 51.0 -0.3**
comp=Z,6.9nm,1.0s,baz=206,slow=8.8,SNR=17
KURK Kurchatov 27.88 11 *eP* **P 20 19 51.0 -1.3**
KURK Kurchatov 27.88 11⇑ *iP* **P 20 19 52.7 +0.4**
KURK pmax pmax
comp=Z,16nm,1.2s
SEM Semipalatinsk 27.91 14 *eP* **P 20 19 53.2 +0.3**
comp=Z,6.1nm,1.7s
SEM LR LR 20 31 53.0
comp=Z,433nm,12.7s
GROC Groznyy 28.17 320 *eP* **P 20 19 56.1 +1.2**
GROC *e* 20 20 44.8
GROC *e* 20 23 07.4
GROC *eS* **S 20 24 41.9 +2.2**
GROC *e* 20 30 41.7
GROC pmax pmax
comp=Z,123nm,0.7s
AKTO Aktyubinsk 28.50 343 P **P 20 19 57.5 -0.4**
comp=Z,6.3nm,0.6s,baz=176,slow=8.0,SNR=15
AKTO S **S 20 24 44.2 -0.5**
comp=Z,2.8nm,0.8s,baz=135,slow=14,SNR=2.3
AKTO LR LR 20 33 42.0
comp=Z,607nm,20.3s,baz=152,slow=41
ATD Arta Tunnel 28.71 250 P **P 20 19 59.4 -0.7**
comp=Z,16nm,0.8s,baz=87,slow=5.7,SNR=9.9
ATD LR LR 20 29 47.8
comp=Z,654nm,18.0s,baz=62,slow=33
ZEI Tsey 29.08 318 *eP* **P 20 20 04.2 +0.9**
ZEI pmax pmax
comp=Z,26nm,1.0s
DGZ Jazzator, Alta 29.36 23 *i* P **P 20 20 07.0 +1.3**
DGZ *i* AP **sP 20 20 13.2 +0.4**
DGZ *i* PP **PnPn 20 21 00.3 +1.0**
BVAR Borovoye Array 29.44 0 P **P 20 20 06.3 +0.2**
comp=Z,4.6nm,0.9s,baz=160,slow=9.1,SNR=24
BVAR S **S 20 25 00.8 +1.4**
comp=Z,3.5nm,1.0s,baz=193,slow=24,SNR=2.4
BVAR LR LR 20 34 45.7
comp=Z,1μm,18.4s,baz=184,slow=42
BRVK Borovoye 29.47 360 *eP* **P 20 20 07.0 +0.6**
comp=Z,17nm,0.8s
BRVK Borovoye 29.47 360 P **P 20 20 07.6 +1.2**
SNR=6.2
BRVK Borovoye 29.47 360⇓ *iP* **P 20 20 07.3 +0.9**
BRVK pmax pmax
comp=Z,12nm,1.2s
GTA Gaotai 29.55 51 P **P 20 20 07.9 +0.4**
GTA pP sP 20 20 13.8 -0.8
GTA sP pP 20 20 16.8 +4.2
GTA S **S 20 25 03.6 +1.7**
GTA sS sS 20 25 12.0 +1.8
GTA pmax pmax
comp=Z,10.0nm,1.2s
GTA pmax pmax
comp=Z,160nm,7.1s
GTA LR LR
comp=Z,1μm,11.7s
GTA LR LR
comp=Z,2μm,15.5s
GTA LR LR
comp=Z,3μm,17.2s
KMI Kunming 29.56 80 P **P 20 20 11.6 +3.8**
KMI pP sP 20 20 20.8 +5.8
KMI sP pP 20 20 25.5 +13
KMI PP **PnPn 20 21 04.8 +2.4**
KMI S **S 20 25 03.1 +0.7**
KMI SS **SnSn 20 26 33.0 +2.4**
KMI pmax pmax
comp=Z,8.0nm,0.9s
KMI pmax pmax
comp=Z,350nm,4.7s
KMI LR LR
comp=Z,2μm,18.1s
KMI LR LR
comp=Z,1μm,19.2s
KMI LR LR
comp=Z,880nm,15.1s
NCK Nalchik 29.65 319⇓ *iP* **P 20 20 09.7 +1.5**
NCK pmax pmax
comp=Z,24nm,1.2s
NEY Neytrino 30.05 318 *c iP* **P 20 20 14.1 +2.2**
NEY *i* *PP **sP 20 20 18.9 -0.2**
KBZ Khabaz 30.20 318 P **P 20 20 14.2 +1.3**
comp=Z,15nm,0.9s,baz=114,slow=7.9,SNR=26
KBZ LR LR 20 35 53.3
comp=Z,336nm,19.6s,baz=126,slow=44
KVAR Kislovodsk Arr 30.45 319 P **P 20 20 16.7 +1.4**
comp=Z,60nm,1.1s,baz=264,slow=0.8,SNR=24
KIV Kislovodsk 30.45 319 *eP* **P 20 20 16.8 +1.4**
comp=Z,74nm,1.2s
KIV Kislovodsk 30.45 319 *i* P **P 20 20 15.0 -0.4**
SNR=8.1
KIV Kislovodsk 30.45 319 *eP* **P 20 20 16.9 +1.5**
KIV *eS* **S 20 25 17.5 +1.7**
KIV pmax pmax
comp=Z,62nm,1.1s
KIV pmax pmax
comp=Z,31nm,4.9s
CD2 Chengdu 30.56 69 P **P 20 20 15.9 -0.5**
CD2 pmax pmax
comp=Z,30nm,0.5s
CD2 LR LR
comp=Z,4μm,9.5s
CD2 LR LR
comp=Z,3μm,14.3s
ASF Jabal al Asfar 30.66 294 P **P 20 20 18.6 +1.3**
comp=Z,2.1nm,0.6s,baz=12,slow=5.0,SNR=5.1
LZH Lanzhou 31.51 59 *eP* **P 20 20 27.3 +2.4**
LZH pP sP 20 20 34.0 +2.0
LZH sP pP 20 20 37.1 +7.1
LZH *eS* **S 20 25 32.5 -0.2**
LZH sS sS 20 25 46.0 +4.9
LZH pmax pmax
comp=Z,36nm,1.1s
LZH pmax pmax
comp=Z,220nm,4.8s
LZH LR LR
comp=Z,3μm,13.6s
LZH LR LR
comp=Z,3μm,13.6s
LZH LR LR
comp=Z,4μm,16.8s
MMAI Mount Meron Ar 32.03 295 P **P 20 20 30.7 +1.4**
comp=Z,4.4nm,0.9s,baz=104,slow=11,SNR=7.2
MMAI LR LR 20 36 40.6
comp=Z,901nm,18.9s,baz=100,slow=42
EIL Elat 32.10 289 P **P 20 20 30.4 +0.5**
comp=Z,4.7nm,1.0s,baz=357,slow=10,SNR=2.2
SOC Sochi 32.12 316 *eP* **P 20 20 28.3 -1.5**
SOC *e* 20 21 32.9

SOC eS S 20 25 37.7 -3.9
SOC 20 31 02.9
SOC pmax pmax
comp=Z,20nm,0.8s
SOC MLR MLR
comp=Z,352nm,17.0s
ZAA0 Zalesovo Array 32.27 16 eP **P 20 20 30.3 -0.7**
comp=Z,25nm,1.4s
ZALV Zalesovo Beam 32.27 16 P **P 20 20 30.5 -0.6**
comp=Z,4.1nm,0.5s,baz=216,slow=9.1,SNR=24
ZALV LR LR 20 32 46.2
comp=Z,609nm,20.4s,baz=234,slow=35
ZALV Zalesovo Beam 32.27 16 eP **P 20 20 29.9 -1.1**
ZAA1 Zalesovo Array 32.27 16 eP **P 20 20 30.5 -0.6**
NVS Novosibirsk 32.71 14 eP **P 20 20 32.5 -2.4**
NVS pmax pmax
comp=N,16nm,1.3s
NVS pmax pmax
comp=Z,23nm,1.3s
HVS Khovu-Aksy 32.95 27⇑ eP **P 20 20 38.7 +1.5**
HVS pmax pmax
comp=Z,20nm,0.9s
GYA Guiyang 33.01 77 P **P 20 20 38.8 +0.7**
GYA PP **PP 20 21 51.4 -1.4**
GYA S **S 20 25 57.6 +1.4**
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,120nm,4.9s
GYA LR LR
comp=Z,610nm,17.5s
GYA LR LR
comp=Z,510nm,17.0s
GYA LR LR
comp=Z,560nm,17.3s
ARU Arti 33.96 348 P **P 20 20 46.1 +0.4**
comp=Z,6.5nm,0.7s,baz=162,slow=4.4,SNR=21
ARU Arti 33.96 348 eP **P 20 20 46.2 +0.4**
comp=Z,36nm,1.4s
ARU Arti 33.96 348*d* iP **P 20 20 46.3 +0.5**
ARU 20 21 56.7
ARU PPP PPP 20 22 11.4
ARU 20 23 24.0
ARU eS **S 20 26 10.7 +0.8**
ARU SS **SnSn 20 28 20.5 +4.1**
ARU pmax pmax
comp=Z,28nm,1.2s
ARU MLR MLR
comp=Z,906nm,23.0s
SVE Sverdlovsk 33.99 350 eP **P 20 20 46.7 +0.7**
SVE eS **S 20 26 09.8 -0.5**
SVE pmax pmax
comp=Z,27nm,1.5s
SVE MLR MLR
comp=Z,1μm,17.0s
CSS Mathiatis 34.02 298 eP **P 20 20 46.7 0.0**
comp=Z,5.0nm,1.4s
UBPT Khong Chiam 34.10 97 P **P 20 20 50.1 +2.6**
comp=Z,61nm,1.5s
ANN Anapa 34.14 316 eP **P 20 20 47.3 -0.2**
ANN e*PP **sP 20 20 53.3 -1.3**
ANN eS **S 20 26 13.3 +0.4**
ANN pmax pmax
comp=Z,52nm,1.1s
KNGR Kungurtug, Tuv 34.29 31⇓ iP **P 20 20 50.2 +1.3**
KULM Kulim 34.41 117 eP **P 20 20 53.6 +3.4**
comp=Z,19nm,0.9s
PSI Prapat 34.52 122 P **P 20 20 51.9 +0.6**
comp=Z,4.3nm,0.4s,baz=359,slow=2.8,SNR=5.1
PSI LR LR 20 36 08.4
comp=Z,1μm,19.9s,baz=271,slow=38
PSI Prapat 34.52 122 eP **P 20 20 53.4 +2.2**
comp=Z,21nm,1.2s
BR101 Keskin Array S 34.85 306 eP **P 20 20 53.8 -0.2**
BR131 Keskin Array S 34.85 306 eP **P 20 20 53.1 -0.9**
BRTR Keskin Array B 34.85 306 P **P 20 20 53.8 -0.2**
comp=Z,2.2nm,1.0s,baz=133,slow=10,SNR=7.9
BRTR LR LR 20 37 37.5
comp=Z,526nm,19.5s,baz=114,slow=41
IPM Ipoh 35.18 118 eP **P 20 20 58.6 +1.7**
comp=Z,34nm,1.5s
ILGA Ilgaz 35.20 309 eP **P 20 20 56.3 -0.7**
comp=Z,9.2nm,0.6s
ENH Enshi 35.45 70 eP **P 20 21 00.9 +1.8**
comp=Z,41nm,1.4s
ANTO Ankara 35.52 306 eP **P 20 20 59.1 -0.5**
comp=Z,26nm,0.8s
ANTO Ankara 35.52 306 eP **P 20 20 59.1 -0.5**
ANTO pmax pmax
comp=Z,26nm,0.8s
BR231 Keskin MP Arra 35.53 306 eP **P 20 20 59.4 -0.3**
SIM Simferopol' 36.33 315*d* iP **P 20 21 06.7 +0.3**
SIM 20 22 29.0
SIM eS **S 20 26 46.0 -0.6**
SIM pmax pmax
comp=Z,37nm,1.1s
VORD Divnogorie 36.38 327 eP **P 20 21 06.6 -0.1**
VORD pmax pmax
comp=Z,40nm,1.1s
KRAR Krasnoyarsk 36.43 21⇓ eP **P 20 21 08.0 +0.9**
VSR Storozhevoye 36.60 327 eP **P 20 21 08.2 -0.3**
VSR eS **S 20 26 49.6 -0.9**
VSR pmax pmax
comp=Z,50nm,1.1s
VSR smax smax
comp=E,20nm,1.2s
VSR MLR MLR
comp=Z,940nm,23.0s
MOY Mondy 36.65 32 eP **P 20 21 10.5 +1.3**
MOY pmax pmax
comp=Z,20nm,1.6s
ISP Isparta 36.77 302⇓ iP **P 20 21 12.5 +2.1**
ISP Isparta 36.77 302 eP **P 20 21 10.3 0.0**
comp=Z,48nm,0.9s
ISP Isparta 36.77 302*c* iP **P 20 21 11.4 +1.0**
ISP *i* *PP **sP 20 21 17.9 +0.3**
ISP *i* *SP **pP 20 21 20.5 +5.0**
VORR Voronezh 36.85 328 eP **P 20 21 11.0 +0.3**
QIZ Qiongzhong 37.04 89 P **P 20 21 10.3 -2.4**
QIZ S **S 20 26 57.8 -0.2**
QIZ pmax pmax
comp=Z,620nm,3.2s
QIZ LR LR
comp=Z,2μm,26.5s
ZAK Zakamensk 37.06 35 eP **P 20 21 11.7 -1.0**
ZAK pmax pmax
comp=Z,8.0nm,1.5s
BTO Baotou 37.35 53 eP **P 20 21 14.8 -0.4**
SONA0 Songino Array 37.52 41 eP **P 20 21 17.8 +1.2**
SONM Songino Array 37.52 41 P **P 20 21 17.8 +1.2**
comp=Z,17nm,0.9s,baz=237,slow=8.6,SNR=81
SONM LR LR 20 37 53.3
comp=Z,2μm,19.5s,baz=248,slow=38
SONA1 Songino Array 37.53 41 eP **P 20 21 17.7 +0.9**
ULN Ulaanbaatar 37.93 41 eP **P 20 21 21.2 +1.1**
comp=Z,68nm,1.9s
ULN Ulaanbaatar 37.93 41 P **P 20 21 21.9 +1.8**
SNR=12
ULN Ulaanbaatar 37.93 41⇓ iP **P 20 21 21.4 +1.3**
ULN pmax pmax
comp=Z,29nm,1.7s
TLY Talaya 37.98 34 P **P 20 21 21.7 +1.3**
comp=Z,5.3nm,0.9s,baz=249,slow=5.4,SNR=3.3
TLY Talaya 37.98 34 P **P 20 21 22.8 +2.4**
SNR=6.9
TLY Talaya 37.98 34 eP **P 20 21 22.1 +1.7**
TLY eS S 20 27 04.0 -7.8
TLY pmax pmax
comp=Z,18nm,1.6s
TLY MLR MLR
comp=Z,963nm,14.0s
MANT Manisa 38.41 303 eP **P 20 21 25.3 +0.8**
comp=Z,44nm,0.9s
HHC Hu-ho-hao-te 38.54 53 eP **P 20 21 25.3 -0.1**
HHC sP sP 20 21 35.4 +2.8
HHC S **S 20 27 21.8 +1.1**
HHC sS sS 20 27 30.5 +1.4
HHC pmax pmax
comp=Z,7.0nm,0.9s
HHC pmax pmax
comp=Z,270nm,6.5s
HHC LR LR
comp=Z,1μm,13.8s
HHC LR LR
comp=Z,2μm,15.6s
HHC LR LR
comp=Z,3μm,16.4s
IRK Irkutsk 38.62 33 eP **P 20 21 25.7 -0.1**
IRK pmax pmax
comp=Z,34nm,3.2s
MYKOM Kota Tinggi 39.03 119 eP **P 20 21 32.9 +3.3**
comp=Z,14nm,1.0s
KARP Karpathos 39.11 298 eP **P 20 21 30.9 +0.8**
comp=Z,61nm,1.5s
TIRR Tirgusor 39.96 312⇑ iP **P 20 21 37.5 +0.5**
TIRR Tirgusor 39.96 312 eP **P 20 21 36.7 -0.3**
comp=Z,24nm,1.0s
TIRR Tirgusor 39.96 312 eP **P 20 21 36.7 -0.3**
TIRR pmax pmax
comp=Z,24nm,1.0s
MOS Moscow 40.14 332 eP **P 20 21 38.0 -0.3**
MOS e 20 21 43.9
MOS e 20 23 16.4
MOS pmax pmax
comp=Z,43nm,1.0s
MOS MLR MLR
comp=Z,1μm,18.0s
OBN Obninsk 40.22 330 eP **P 20 21 38.8 -0.2**
comp=Z,98nm,1.1s
OBN Obninsk 40.22 330*c* iP **P 20 21 39.8 +0.9**
OBN e*PP **sP 20 21 46.0 -0.1**
OBN *i* 20 23 10.8
OBN eS **S 20 27 44.6 -0.5**
OBN pmax pmax
comp=Z,166nm,1.7s
TLB Topalu 40.25 312⇓ iP **P 20 21 40.5 +1.1**
ICOR Ion Corvin 40.28 311⇑ iP **P 20 21 39.9 +0.3**
HARR Harsova 40.36 312⇑ iP **P 20 21 40.8 +0.5**
HARR Harsova 40.36 312 P **P 20 21 40.7 +0.5**
CFR Carcaliu 40.37 313⇑ iP **P 20 21 40.4 +0.1**
CFR Carcaliu 40.37 313 P **P 20 21 40.3 0.0**
KMBO Kilima Mbogo 40.42 237 P P 20 21 55.4 +14
comp=Z,3.6nm,0.9s,baz=42,slow=12,SNR=8.0
KMBO LR LR 20 39 05.7
comp=Z,1μm,18.1s,baz=90,slow=37
KIS Kishinev 40.52 316 eP **P 20 21 40.0 -1.6**
KIS eS **S 20 27 54.0 +4.1**
KIS Kishinev 40.52 316 eP **P 20 21 40.0 -1.6**
KIS e 20 21 47.0
KIS e 20 23 20.0
KIS eS **S 20 27 54.0 +4.1**
KIS ePS **PKiKP 20 30 50.0 -3.4**
KIS e 20 31 14.0
KIS MLR MLR
comp=Z,300nm,15.0s
KIS MLR MLR
comp=Z,300nm,16.0s
SANT Santorini 40.56 299⇑ iP **P 20 21 42.4 +0.2**
SANT Santorini 40.56 299 eP **P 20 21 42.1 0.0**
comp=Z,93nm,1.1s
LEOM Leova 40.71 315⇑ iP **P 20 21 43.8 +0.7**
LEOM Leova 40.71 315 P **P 20 21 43.8 +0.7**
IDI Anoyia 40.93 297 P **P 20 21 45.9 +0.6**
comp=Z,15nm,0.7s,baz=4.5,slow=14,SNR=10
IDI LR LR 20 44 43.2
comp=Z,218nm,20.0s,baz=92,slow=45
IDI Anoyia 40.93 297 eP **P 20 21 45.8 +0.5**
comp=Z,116nm,1.8s
SORM Soroca 41.23 317⇑ iP **P 20 21 46.8 -0.6**
SORM Soroca 41.23 317 P **P 20 21 46.7 -0.6**
VRI Vrincioaia 41.52 313⇓ iP **P 20 21 51.2 +1.3**
VRI Vrincioaia 41.52 313 P **P 20 21 51.8 +1.9**
VRI pmax pmax
comp=Z,143nm,1.2s
PLOR Plostina 41.57 313 P **P 20 21 51.5 +1.2**
PRGR Permogore 41.65 343 eP **P 20 21 49.9 -0.7**
PRGR e*PP **sP 20 21 56.0 -1.9**
PRGR pmax pmax
comp=Z,12nm,0.6s
AKASG Malin Array Be 41.71 321 P **P 20 21 50.7 -0.6**
comp=Z,6.2nm,0.8s,baz=113,slow=6.6,SNR=40
AKASG PP **PP 20 23 28.6 +0.9**
comp=Z,3.5nm,0.8s,baz=116,slow=7.2,SNR=4.1
AKASG LR LR 20 43 44.7
comp=Z,690nm,18.5s,baz=110,slow=43
AKBB Malin Array Si 41.71 321 eP **P 20 21 51.0 -0.3**
comp=Z,34nm,1.4s
AKBB ePP **PP 20 23 28.6 +0.9**
AKBB Malin Array Si 41.71 321 eP **P 20 21 51.0 -0.3**
AKBB *e* 20 23 28.7
AKBB pmax pmax
comp=Z,34nm,1.4s
KIEV Kiev 41.72 321 eP **P 20 21 50.9 -0.5**
comp=Z,30nm,1.3s
KIEV Kiev 41.72 321 *i* P **P 20 21 50.9 -0.5**
SNR=11
KIEV Kiev 41.72 321⇑ iP **P 20 21 51.4 0.0**
KIEV pmax pmax
comp=Z,18nm,1.2s
AK11 Malin Array Si 41.74 321 eP **P 20 21 51.0 -0.5**
TESR Tescani 41.77 314⇑ iP **P 20 21 51.6 -0.3**
BJI Beijing 41.83 56 P **P 20 21 53.5 +1.0**
BJI S **S 20 28 09.6 0.0**
BJI pmax pmax
comp=Z,10.0nm,0.7s
BJI LR LR
comp=Z,3μm,15.3s
BJI LR LR
comp=Z,3μm,14.2s
BJI LR LR
comp=Z,3μm,22.3s
MLR Muntele Rosu 41.94 313 P **P 20 21 55.1 +1.6**
comp=Z,12nm,1.1s,baz=79,slow=4.0,SNR=27
MLR Muntele Rosu 41.94 313⇑ iP **P 20 21 54.8 +1.4**
MLR Muntele Rosu 41.94 313 eP **P 20 21 54.9 +1.5**
comp=Z,72nm,1.1s
TIA Tai'an 42.14 62 P **P 20 21 55.5 +0.4**
TIA pmax pmax
comp=Z,13nm,0.9s
PRAR RASCA 42.31 315⇑ iP **P 20 21 56.5 +0.2**
DOPR Dopca 42.44 313⇓ iP **P 20 21 58.4 +1.0**
VOIR 42.53 312⇑ iP **P 20 21 58.8 +0.5**
VOIR 42.53 312 P **P 20 21 58.7 +0.5**
ARR Arges 42.79 312⇓ iP **P 20 22 01.0 +0.7**
KLMR Klimovskoe 42.92 338 eP **P 20 21 58.9 -2.1**
KLMR *e* 20 23 37.7
KLMR pmax pmax
comp=Z,21nm,1.2s
KLMR Klimovskoe 42.92 338 eP **P 20 21 59.0 -2.1**
KLMR AMP 20 22 01.2
comp=Z,21nm,1.2s
KLMR ePP **PP 20 23 37.7 -2.9**
BURAR Bucovina Array 43.04 315⇓ iP **P 20 22 02.8 +0.4**
BURAR Bucovina Array 43.04 315 P **P 20 22 02.7 +0.4**
BUR04 Bucovina Ar. S 43.04 315 eP **P 20 22 02.8 +0.5**
BUR08 Bucovina Ar. S 43.06 315 eP **P 20 22 02.8 +0.3**
VTS Vitosha 43.18 308⇓ iP **P 20 22 04.6 +1.0**
VTS Vitosha 43.18 308 eP **P 20 22 03.6 0.0**
VTS Vitosha 43.18 308 eP **P 20 22 03.6 0.0**
LIT Litokhoron 43.32 304 eP **P 20 22 04.2 -0.4**
comp=Z,11nm,0.9s
LIT Litokhoron 43.32 304 eP **P 20 22 04.2 -0.4**
LIT pmax pmax
comp=Z,11nm,0.9s
VAY Valandovo 43.43 306 *i* P **P 20 22 06.0 +0.5**
ITM Ithomi 43.46 300 eP **P 20 22 05.5 -0.2**
comp=Z,15nm,0.6s
NJ2 Nanjing 43.48 68 eP **P 20 22 06.3 +0.3**
NJ2 pmax pmax
comp=Z,18nm,0.6s
STIP Stip 43.77 306 *i* P **P 20 22 07.5 -0.7**
MICGM Minsk 44.13 326 *e* **P 20 22 10.0 -0.8**
MNK Minsk 44.13 326 eP **P 20 22 10.0 -0.8**
FNA Florina 44.25 305 eP **P 20 22 12.3 +0.2**
comp=Z,24nm,0.9s
FNA Florina 44.25 305 eP **P 20 22 12.3 +0.2**
FNA pmax pmax
comp=Z,24nm,0.9s
BIA Bitola 44.32 305 eP **P 20 22 14.6 +1.9**
SKO Skopje 44.37 307 eP **P 20 22 12.9 -0.1**
DRGR 44.45 314⇑ iP **P 20 22 14.6 +0.9**
DRGR 44.45 314 P **P 20 22 14.6 +0.9**
LVV L'vov 44.48 318 eP **P 20 22 14.4 +0.7**
LVV *e* 20 24 02.8
LVV ePPP PPP 20 24 38.6
LVV eS **S 20 28 44.4 -3.8**
LVV eSS **SS 20 32 07.7 +0.2**
LVV eSSS SSS 20 32 48.4
KSM Kuching 44.53 114 eP **P 20 22 16.4 +1.8**
comp=Z,18nm,0.9s
MDVR Moldovita 44.67 311⇓ iP **P 20 22 14.8 -0.6**
OHR Ohrid 44.72 305 eP P 20 22 10.7 -5.2
NACGM Naroch 44.88 326 *e* **P 20 22 16.0 -0.8**
NACGM eLR LR 20 42 12.0
BZS Buzias 44.91 312⇑ iP **P 20 22 18.1 +0.8**
TRPA Tarpa 44.91 315⇓ iP **P 20 22 17.5 +0.3**
SIRR Siria 45.03 313⇓ iP **P 20 22 19.3 +1.1**
IDID Didziasalis 45.09 326 eP **P 20 22 19.5 +1.0**
IDID IAmb IAmb 20 22 25.7
comp=Z,16nm,1.1s
UZH Uzhgorod 45.21 316 eP **P 20 22 17.4 -2.2**
UZH *e* 20 22 23.0
UZH *e* 20 22 26.4
KWP Kalwaria Pacla 45.23 317 eP **P 20 22 20.5 +0.7**
KWP Kalwaria Pacla 45.23 317 eP **P 20 22 20.7 +0.9**
comp=Z,597nm,1.0s
KWP Kalwaria Pacla 45.23 317 eP **P 20 22 20.7 +0.9**
MBAR Mbarara 45.31 244 P **P 20 22 22.2 +1.2**
comp=Z,3.1nm,0.2s,baz=48,slow=12
MBAR Mbarara 45.31 244 eP **P 20 22 21.5 +0.5**
comp=Z,9.9nm,1.0s
MBAR Mbarara 45.31 244 eP **P 20 22 21.5 +0.5**
MBAR pmax pmax
comp=Z,10.0nm,1.0s
IIGN Ignalina 45.37 326 eP **P 20 22 21.6 +0.9**
IIGN IAmb IAmb 20 22 27.9
comp=Z,22nm,1.3s
TIR Tirane 45.45 305 eP **P 20 22 21.7 +0.1**
comp=Z,30nm,0.4s
TIR Tirane 45.45 305 eP **P 20 22 21.7 +0.1**
TIR pmax pmax
comp=Z,30nm,0.4s
ISAL Salakas 45.51 326 eP **P 20 22 22.4 +0.6**
ISAL IAmb IAmb 20 22 27.2
comp=Z,8.8nm,1.0s
IZAR Zarasai 45.53 327 eP **P 20 22 23.0 +1.0**
IZAR IAmb IAmb 20 22 25.0
comp=Z,18nm,1.0s
SBUM Sibu 45.64 111 eP **P 20 22 25.4 +2.0**
comp=Z,14nm,1.3s
PUL Pulkovo 45.70 333⇓ iP **P 20 22 24.5 +1.2**
PUL pmax pmax
comp=Z,34nm,0.7s
DIVS Divibare 45.76 309 eP **P 20 22 23.8 -0.3**
comp=Z,5.5nm,0.9s
TMCR Tamitsa 45.81 341 eP **P 20 22 24.3 +0.3**
TMCR pmax pmax
comp=Z,19nm,0.6s
CRVS Cervenica-Dubn 45.81 316 eP **P 20 22 25.5 +1.1**
CRVS pmax pmax
comp=Z,27nm,1.3s
CRVS Cervenica-Dubn 45.81 316 eP **P 20 22 25.5 +1.1**
DL2 Dalian 45.90 58 P **P 20 22 29.1 +3.9**
DL2 pmax pmax
comp=Z,13nm,0.5s
DL2 LR LR
comp=Z,2μm,16.1s
DL2 LR LR
comp=Z,2μm,18.8s
TTG Podgorica 46.04 307 eP **P 20 22 25.9 -0.3**
comp=Z,17nm,1.0s
TTG Podgorica 46.04 307 eP **P 20 22 25.9 -0.3**
TTG pmax pmax
comp=Z,17nm,1.0s
SUW Suwalki 46.43 323 eP **P 20 22 29.1 -0.1**
SUW Suwalki 46.43 323 eP **P 20 22 28.9 -0.3**
comp=Z,66nm,1.0s
SUW Suwalki 46.43 323 eP **P 20 22 29.1 -0.1**
TATO Taipei 46.46 77 eP **P 20 22 33.2 +3.4**
comp=Z,606nm,1.7s
PSZ Piszkesteto 46.58 314 eP **P 20 22 31.3 +0.8**
comp=Z,19nm,1.1s
PSZ Piszkesteto 46.58 314 eP **P 20 22 31.3 +0.8**
PSZ pmax pmax
comp=Z,19nm,1.1s
NIE Niedzica 46.68 317 eP **P 20 22 32.3 +1.0**
NIE eS **S 20 29 24.1 +4.0**
NIE Niedzica 46.68 317 eP **P 20 22 32.3 +1.0**
NIE eS **S 20 29 24.1 +4.0**
NRIK Noril'sk 46.97 8 P **P 20 22 34.3 +1.1**
comp=Z,6.7nm,0.6s,baz=201,slow=6.1,SNR=6.1
LANS Liptovska Anna 47.14 316 eP **P 20 22 35.9 +1.0**
LANS Liptovska Anna 47.14 316 eP **P 20 22 35.9 +1.0**
OJC Ojcow 47.20 318 eP **P 20 22 35.6 +0.4**
OJC eS **S 20 29 31.0 +3.6**
OJC Ojcow 47.20 318 eP **P 20 22 35.7 +0.4**
comp=Z,20nm,1.0s
OJC Ojcow 47.20 318 eP **P 20 22 35.7 +0.4**
OJC pmax pmax
comp=Z,20nm,1.0s
LEM Lembang 47.32 125 LR LR 20 43 50.5
comp=Z,433nm,19.7s,baz=304,slow=38
VYHS Vyhne 47.40 315 eP **P 20 22 37.4 +0.6**
VYHS pmax pmax
comp=Z,13nm,1.2s
VYHS Vyhne 47.40 315 eP **P 20 22 37.4 +0.6**
OPO Ambohidratompo 47.55 210 P **P 20 22 38.8 +0.3**
comp=Z,3.9nm,0.7s,baz=2.6,slow=6.4,SNR=5.0
TIP Timpagrande 47.64 302 eP **P 20 22 38.5 -0.4**
comp=Z,15nm,1.3s
BLY Banja Luka 47.84 310⇑ iP **P 20 22 41.3 +1.0**
BLY Banja Luka 47.84 310 eP **P 20 22 40.3 0.0**
comp=Z,24nm,1.3s
OKC Ostrava-Krasne 48.14 317 eP **P 20 22 45.5 +2.9**
OKC eS **S 20 29 39.7 -1.0**
OKC AMS AMS 20 49 00.0
comp=Z,300nm,14.0s
OKC Ostrava-Krasne 48.14 317 eP **P 20 22 45.5 +2.9**
OKC eS **S 20 29 39.7 -1.0**
OKC MLR MLR
comp=Z,300nm,14.0s
JAVC Velka Javorina 48.23 315⇓ iP **P 20 22 44.1 +0.7**
KLNR Kaliningrad 48.27 323⇑ eP **P 20 22 43.9 +0.5**
KLNR pmax pmax
comp=Z,158nm,1.6s
FIA0 FINESS Array S 48.37 333 eP **P 20 22 43.6 -0.5**
FIA0 FINESS Array S 48.37 333 eP **P 20 22 43.6 -0.5**
FIA1 FINESS Array S 48.37 333 eP **P 20 22 43.8 -0.2**
FINES FINESS Array B 48.37 333 P **P 20 22 43.6 -0.5**
comp=Z,9.1nm,1.0s,baz=126,slow=12,SNR=9.8
FINES LR LR 20 46 37.2
comp=Z,1μm,19.3s,baz=117,slow=40
MODS Modra-Piesok 48.39 315 eP **P 20 22 44.1 -0.4**
MODS pmax pmax
comp=Z,33nm,1.5s
MODS Modra-Piesok 48.39 315 eP **P 20 22 44.1 -0.4**
CUC Castrocucco 48.41 303 eP **P 20 22 45.2 +0.4**
comp=Z,12nm,0.9s
MORC Moravsky Berou 48.51 316⇓ iP **P 20 22 46.0 +0.5**
MORC Moravsky Berou 48.51 316 eP **P 20 22 45.1 -0.4**
comp=Z,94nm,1.4s
MORC Moravsky Berou 48.51 316 eP **P 20 22 45.1 -0.4**
MORC pmax pmax
comp=Z,94nm,1.4s
MORC Moravsky Berou 48.51 316⇓ iP **P 20 22 45.7 +0.2**
SOP Sopron 48.73 314⇑ eP **P 20 22 47.6 +0.4**
SOP Sopron 48.73 314 P **P 20 22 48.4 +1.2**
VRAC Vranov 49.02 316 P **P 20 22 49.7 +0.3**
comp=Z,9.1nm,0.9s,baz=114,slow=9.8,SNR=4.6
VRAC Vranov 49.02 316⇑ iP **P 20 22 49.6 +0.3**
VRAC Vranov 49.02 316⇓ iP **P 20 22 49.6 +0.3**
KRUC Moravsky 49.10 315⇓ iP **P 20 22 50.1 +0.2**
CN2 Changchun 49.18 52 eP **P 20 22 50.9 +0.3**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=Z,780nm,14.0s
CN2 LR LR
comp=Z,900nm,14.0s
CN2 LR LR
comp=Z,1μm,18.0s
CONA Conrad Observa 49.24 314 eP **P 20 22 51.5 +0.4**
comp=Z,7.7nm,1.1s
BOJS Bojanci 49.30 311 eP **P 20 22 51.7 +0.2**
ARSA Arzberg 49.36 313 eP **P 20 22 52.8 +0.8**
comp=Z,11nm,1.0s,SNR=7.4
DPC Dobruska-Polom 49.40 317 eP **P 20 22 52.1 -0.2**
DPC AMS AMS 20 51 00.0
comp=Z,400nm,13.9s
DPC Dobruska-Polom 49.40 317 eP **P 20 22 52.1 -0.2**
DPC MLR MLR
comp=Z,400nm,13.9s

VAE Valguarnera 49.45 300 P **P 20 22 52.9 0.0**
comp=Z,3.6nm,0.6s,baz=86,slow=12,SNR=2.7
VAE LR LR 20 47 07.7
comp=Z,158nm,21.6s,baz=138,slow=40
KSP Ksiaz 49.53 318 *eP* **P 20 22 54.0 +0.9**
KSP *eS* **S 20 30 04.5 +4.3**
KSP Ksiaz 49.53 318⇓ *eP* **P 20 22 54.1 +0.9**
KSP *eS* **S 20 30 04.5 +4.3**
PERS Pernice 49.54 312 *eP* **P 20 22 53.8 +0.3**
APA Apatity 49.58 342⇓ *i P* **P 20 22 52.2 -1.1**
APA pmax pmax
comp=Z,16nm,0.9s
APA MLR MLR
comp=Z,900nm,15.0s
SOKA Soboth 49.60 312 *eP* **P 20 22 54.3 +0.4**
comp=Z,7.9nm,0.9s,SNR=14
VISS Visnje 49.62 311 *eP* **P 20 22 54.1 +0.1**
UPC Upice 49.63 317 *eP* **P 20 22 55.0 +1.0**
UPC *ex* x 20 22 58.2
UPC *eS* **S 20 30 02.4 +0.7**
UPC AMS AMS 20 51 10.0
comp=Z,400nm,16.7s
UPC Upice 49.63 317 *eP* **P 20 22 55.0 +1.0**
UPC *e* 20 22 58.2
UPC *eS* **S 20 30 02.4 +0.7**
UPC MLR MLR
comp=Z,400nm,16.7s
OBKA Obir 49.91 312 *eP* **P 20 22 57.2 +0.9**
comp=Z,13nm,1.0s,SNR=9.1
JAVS Javornik 50.17 311 *eP* **P 20 22 57.8 -0.5**
GOPC GO Pecny, Ondr 50.29 316 *eP* **P 20 22 59.8 +0.8**
GOPC *eS* **S 20 30 08.3 -2.6**
GOPC AMS AMS 20 51 30.0
comp=Z,400nm,14.3s
GOPC GO Pecny, Ondr 50.29 316 *eP* **P 20 22 59.8 +0.8**
GOPC *eS* **S 20 30 08.3 -2.6**
GOPC MLR MLR
comp=Z,400nm,14.3s
MOA Molln 50.29 313 *eP* **P 20 22 59.5 +0.4**
comp=Z,14nm,0.9s,SNR=13
AQU L'Aquila 50.35 306 *eP* **P 20 22 59.6 0.0**
comp=Z,57nm,1.5s
TRI Trieste 50.36 311 *eP* **P 20 22 58.6 -1.0**
comp=Z,16nm,1.0s
TRI Trieste 50.36 311 *eP* **P 20 22 58.6 -1.0**
TRI pmax pmax
comp=Z,16nm,1.0s
TJN Taejon 50.41 62⇑ *eP* **P 20 23 00.2 +0.1**
PRU Pruhonice 50.45 316 *eP* **P 20 23 00.9 +0.7**
PRU *ex* x 20 23 04.5
PRU *eS* **S 20 30 13.1 -0.1**
PRU AMS AMS 20 51 40.0
comp=Z,400nm,16.0s
PRU Pruhonice 50.45 316 *eP* **P 20 23 00.9 +0.7**
PRU *e* 20 23 04.5
PRU *eS* **S 20 30 13.1 -0.1**
PRU MLR MLR
comp=Z,400nm,16.0s
MYKA Terra Mystica 50.55 312 *eP* **P 20 23 00.9 -0.2**
comp=Z,8.7nm,0.8s
KS15 Wonju Array Si 50.80 60 *eP* **P 20 23 02.2 -0.8**
KSAR Wonju Array Be 50.80 60 P **P 20 23 02.4 -0.6**
KSAR Wonju Array Be 50.80 60 P **P 20 23 02.4 -0.6**
KBA Koelnbreinsper 50.80 312 *eP* **P 20 23 03.3 +0.1**
comp=Z,37nm,1.2s,SNR=15
KBA Koelnbreinsper 50.80 312 P **P 20 23 03.1 -0.1**
KS01 Wonju Array Si 50.80 60 *eP* **P 20 23 02.0 -1.1**
GEA0 GERESS Array S 50.81 315 *eP* **P 20 23 02.5 -0.5**
GEC2 GERESS Array S 50.81 315 *eP* **P 20 23 03.1 0.0**
comp=Z,29nm,1.2s
GERES GERESS Array B 50.81 315 P **P 20 23 02.9 -0.2**
comp=Z,7.7nm,0.9s,baz=100,slow=6.9,SNR=34
GERES LR LR 20 48 43.9
comp=Z,281nm,20.8s,baz=122,slow=41
KSRS Korea Array 50.83 60 P **P 20 23 02.4 -0.8**
comp=Z,6.3nm,0.8s,baz=262,slow=7.5,SNR=19
KSRS LR LR 20 47 00.0
comp=Z,722nm,20.2s,baz=267,slow=39
KHC Kasperske Hory 50.93 315 *eP* **P 20 23 03.7 -0.2**
KHC *ex* x 20 23 07.2
KHC *eS* **S 20 30 17.3 -2.6**
KHC AMS AMS 20 50 20.0
comp=Z,300nm,16.5s
KHC Kasperske Hory 50.93 315 *eP* **P 20 23 03.9 -0.1**
comp=Z,7.7nm,1.3s
KHC Kasperske Hory 50.93 315 *eP* **P 20 23 03.7 -0.2**
KHC *e* 20 23 07.2
KHC *eS* **S 20 30 17.3 -2.6**
KHC MLR MLR
comp=Z,300nm,16.5s
BRG Berggiesshubel 50.99 317 *i* P **P 20 23 05.4 +1.1**
comp=Z,33nm,1.1s
BRG *i* 20 23 11.8
comp=Z,68nm,1.4s
BRG S **S 20 30 26.0 +5.4**
BRG SS **SS 20 34 03.0 +7.6**
comp=N,391nm,14.5s
comp=E,408nm,15.7s
comp=Z,487nm,15.1s
BRG Berggiesshubel 50.99 317 *i* P **P 20 23 05.4 +1.1**
BRG *i* 20 23 11.8
BRG S **S 20 30 26.0 +5.4**
BRG pmax pmax
comp=Z,33nm,1.1s
BRG MLR MLR
comp=N,391nm,14.5s
BRG MLR MLR
comp=E,408nm,15.7s
BRG MLR MLR
comp=Z,487nm,15.1s
ABTA Abfaltersbach 51.33 312 *eP* **P 20 23 06.5 -0.5**
comp=Z,34nm,1.9s,SNR=15
BSD Bornholm Skovb 51.35 323 *i* P **P 20 23 05.4 -1.4**
comp=Z,28nm,0.9s
BSD Bornholm Skovb 51.35 323 *i* P **P 20 23 05.4 -1.4**
BSD pmax pmax
comp=Z,28nm,0.9s
CLL Collm 51.65 318 *i* P **P 20 23 09.6 +0.4**
comp=Z,31nm,1.7s
CLL *e*pP **sP 20 23 16.0 -0.5**
CLL *e*PP **PP 20 25 08.0 +1.4**
CLL *e*S **S 20 30 31.0 +1.3**
CLL *e*SS **SS 20 34 06.0 +0.2**
CLL *e*(SSS) 20 35 24.0
CLL LmV 20 50 00.0
comp=Z,400nm,18.5s
CLL Collm 51.65 318 *eP* **P 20 23 09.5 +0.4**
comp=Z,11nm,0.9s
CLL Collm 51.65 318 *i* P **P 20 23 09.6 +0.4**
CLL *e* 20 23 16.0
CLL *eS* **S 20 30 31.0 +1.3**
CLL pmax pmax
comp=Z,31nm,1.7s
CLL MLR MLR
comp=Z,400nm,18.5s
NKC Novy Kostel 51.83 316 AMS AMS 20 52 30.0
comp=Z,500nm,14.5s
ZEA Zeya 51.91 39 *eP* **P 20 23 11.9 +0.8**
ZEA pmax pmax
comp=Z,14nm,1.2s
ZEA MLR MLR
comp=E,700nm,16.0s
ZEA MLR MLR
comp=Z,1μm,16.0s
ZEA MLR MLR
comp=N,700nm,14.0s
WTTA Wattenberg 51.98 312 *eP* **P 20 23 11.2 -0.8**
comp=N,17nm,0.8s,SNR=7.7
WATA Walderalm 52.03 312 *eP* **P 20 23 12.6 +0.3**
comp=N,16nm,0.7s,SNR=5.1
MDJ Mudanjiang 52.21 51 P **P 20 23 11.0 -2.5**
MDJ pmax pmax
comp=N,19nm,0.7s
MDJ pmax pmax
comp=N,170nm,5.6s
MDJ Mudanjiang 52.21 51 *eP* **P 20 23 13.2 -0.3**
comp=N,15nm,0.9s
MOTA Moosalm 52.35 312 *eP* **P 20 23 12.6 -2.2**
comp=N,23nm,0.8s,SNR=28
GRF Grafenberg Arr 52.53 315 P **P 20 23 17.0 +1.2**
GRFO Grafenberg 52.53 315 *eP* **P 20 23 16.4 +0.6**
comp=N,53nm,1.3s
GRFO Grafenberg 52.53 315 *eP* **P 20 23 16.4 +0.6**
GRFO pmax pmax
comp=Z,53nm,1.3s

FETA Feichten 52.58 312 *eP* **P 20 23 15.9 -0.5**
comp=Z,50nm,1.4s,SNR=26
RETA Reutte 52.60 313 *eP* **P 20 23 15.5 -0.9**
comp=Z,7.1nm,0.6s,SNR=16
VLC Villacollemand 52.64 308 *eP* **P 20 23 15.7 -1.0**
comp=Z,13nm,0.9s
COP Copenhagen 52.86 323 *i* P **P 20 23 18.1 0.0**
comp=Z,23nm,0.8s
COP Copenhagen 52.86 323 *eP* **P 20 23 18.1 0.0**
COP pmax pmax
comp=Z,23nm,0.8s
FUORN Ofenpass-Fuorn 52.87 311 *eP* **P 20 23 18.6 -0.1**
comp=Z,16nm,0.8s
ARA0 ARCESS Array S 53.07 342 *eP* **P 20 23 19.2 -0.2**
ARCES ARCESS Array B 53.07 342 P **P 20 23 19.2 -0.2**
comp=Z,10nm,0.8s,baz=120,slow=7.2,SNR=16
ARCES LR LR 20 47 12.9
comp=Z,573nm,19.8s,baz=120,slow=38
ARCES ARCESS Array B 53.07 342 *eP* **P 20 23 19.6 +0.1**
ARCES ARCESS Array B 53.07 342 *eP* **P 20 23 19.6 +0.1**
ARE0 ARCESS Array S 53.07 342 *eP* **P 20 23 19.7 +0.3**
comp=Z,132nm,2.0s
DAVA Damuels 53.18 312 *eP* **P 20 23 19.9 -1.0**
comp=Z,37nm,0.8s,SNR=27
HFS Hagfors 53.37 329 P **P 20 23 21.6 -0.2**
comp=Z,12nm,0.8s,baz=123,slow=9.5,SNR=14
HFS LR LR 20 50 38.2
comp=Z,795nm,18.1s,baz=102,slow=41
TUE Stuetta 53.49 311 *eP* **P 20 23 22.2 -1.0**
comp=Z,12nm,0.9s
JNU Nakatsue 53.53 65 P **P 20 23 24.6 +1.1**
comp=Z,6.4nm,0.9s,baz=252,slow=9.6,SNR=2.7
JNU LR LR 20 48 22.7
comp=Z,578nm,18.8s,baz=304,slow=38
JNU Nakatsue 53.53 65 *eP* **P 20 23 24.6 +1.1**
comp=Z,113nm,1.9s
KEST Kesra 53.60 298 P **P 20 23 24.9 +0.8**
comp=Z,7.9nm,0.9s,baz=268,slow=0.8,SNR=10
KEST LR LR 20 49 46.5
comp=Z,130nm,21.1s,baz=306,slow=40
KEST Kesra 53.60 298 *eP* **P 20 23 24.5 +0.5**
comp=Z,16nm,1.0s
PGF Pioggiola 53.61 306 *eP* **P 20 23 22.5 -1.5**
PGF pmax pmax
comp=Z,15nm,1.3s
STU Stuttgart 53.76 314 *eP* **P 20 23 24.2 -0.7**
comp=Z,27nm,0.9s
STU Stuttgart 53.76 314 *eP* **P 20 23 24.2 -0.7**
STU pmax pmax
comp=Z,27nm,0.9s
USRK Ussuriysk Ar. 53.91 52 P **P 20 23 26.4 +0.3**
comp=Z,4.7nm,0.7s,baz=249,slow=5.4,SNR=7.7
USRK LR LR 20 49 50.9
comp=Z,748nm,18.6s,baz=268,slow=40
KLR Kul'dur 54.02 45*c i* P **P 20 23 26.8 0.0**
KLR *i* *PP **sP 20 23 34.9 +0.8**
THTN Thala 54.15 298 *eP* **P 20 23 28.9 +0.9**
comp=Z,19nm,1.0s
SLE Schleitheim 54.15 313 P **P 20 23 29.9 +2.1**
BFO Black Forest 54.30 313 *eP* **P 20 23 27.7 -1.1**
comp=Z,8.3nm,1.0s
BFO Black Forest 54.30 313*c*e*P* **P 20 23 28.9 +0.1**
NC602 NORSAR Array S 54.56 329 *eP* **P 20 23 29.8 -0.7**
NC405 NORSAR Array S 54.58 329 *eP* **P 20 23 29.3 -1.4**
LANF Langenberg 54.69 314 *eP* **P 20 23 32.3 +0.7**
SBF Sospel 54.76 308 *eP* **P 20 23 31.0 -1.3**
SBF pmax pmax
comp=Z,11nm,0.8s
NB2 NORSAR Subarra 54.80 329 P **P 20 23 31.1 -1.2**
comp=Z,9.0nm,1.0s,baz=107,slow=7.4
NOA NORSAR Array B 54.80 329 LR LR 20 51 11.7
comp=Z,731nm,18.7s,baz=115,slow=41
MUD Monsted U'grnd 54.80 323 *i* P **P 20 23 33.1 +0.8**
comp=Z,31nm,1.0s
MUD Monsted U'grnd 54.80 323 *eP* **P 20 23 33.1 +0.8**
MUD pmax pmax
comp=Z,31nm,1.0s
SENIN Lac Senin/Sane 54.90 311 *eP* **P 20 23 32.8 -0.7**
comp=Z,9.6nm,0.8s
CDF Champ du Feu 55.00 314 *eP* **P 20 23 34.8 +0.8**
CDF pmax pmax
comp=Z,9.0nm,0.9s
MOF Molkenrain 55.07 313 *eP* **P 20 23 35.5 +1.0**
ECH Echery 55.07 313 *eP* **P 20 23 33.6 -0.8**
comp=Z,18nm,1.0s
ECH Echery 55.07 313 *eP* **P 20 23 33.6 -0.8**
ECH pmax pmax
comp=Z,18nm,1.0s
YAK Yakutsk 55.20 30 *eP* **P 20 23 35.1 0.0**
comp=Z,23nm,0.6s
YAK Yakutsk 55.20 30 *eP* **P 20 23 37.5 +2.4**
YAK pmax pmax
comp=Z,20nm,1.0s
YAK pmax pmax
comp=N,4.0nm,1.3s
YAK pmax pmax
comp=E,6.0nm,1.1s
KONO Kongsberg 55.23 327⇑ *eP* **P 20 23 36.4 +1.0**
KONO pmax pmax
comp=Z,12nm,0.9s
MBDF Montbardon 55.24 309 *eP* **P 20 23 36.3 +0.4**
HINF Hinteralfeld 55.26 313 *eP* **P 20 23 34.7 -1.1**
HINF pmax pmax
comp=Z,16nm,1.0s
LPG La Plagne 55.26 310 *eP* **P 20 23 36.3 +0.1**
LPG pmax pmax
comp=Z,17nm,1.2s
LPL La Plagne 55.27 310 *eP* **P 20 23 34.9 -1.3**
LPL pmax pmax
comp=Z,17nm,1.1s
BNI Bardonecchia 55.31 309 *eP* **P 20 23 34.2 -2.1**
comp=Z,11nm,1.1s
BNI Bardonecchia 55.31 309 *eP* **P 20 23 34.3 -2.1**
BNI pmax pmax
comp=Z,11nm,1.1s
DAV Davao City (W) 55.43 98 LR LR 20 49 04.2
comp=Z,255nm,20.2s,baz=306,slow=38
HAU Haudompre 55.60 313 *eP* **P 20 23 37.1 -1.2**
HAU pmax pmax
comp=Z,10.0nm,1.0s
WLF Walferdange 55.81 315 ⇑P **P 20 23 41.2 +1.5**
comp=Z,14nm,1.3s
WLF Walferdange 55.81 315 *eP* **P 20 23 40.3 +0.6**
comp=Z,14nm,0.9s
WLF Walferdange 55.81 315 *eP* **P 20 23 40.3 +0.6**
WLF pmax pmax
comp=Z,14nm,0.9s
MEM Membach 55.96 316 ⇑P **P 20 23 41.4 +0.6**
comp=Z,12nm,1.1s
MEM Membach 55.96 316 *eP* **P 20 23 41.8 +1.0**
BCLA Clavier 56.40 316 ⇑P **P 20 23 45.3 +1.4**
comp=Z,19nm,1.2s
LSZ Lusaka 56.42 231 P **P 20 23 45.2 +0.6**
comp=Z,2.1nm,0.5s,baz=50,slow=6.4,SNR=8.6
LSZ Lusaka 56.42 231 *eP* **P 20 23 45.3 +0.6**
comp=Z,35nm,1.6s
LSZ Lusaka 56.42 231 *eP* **P 20 23 45.3 +0.6**
LSZ pmax pmax
comp=Z,35nm,1.6s
GIVF Givet 56.69 315 *eP* **P 20 23 46.9 +0.9**
GIVF pmax pmax
comp=Z,14nm,1.0s
VIVF Saint-Julien-l 56.73 309 *eP* **P 20 23 45.3 -1.1**
VIVF pmax pmax
comp=Z,22nm,1.3s
SSB Saint Sauveur 56.82 310 *eP* **P 20 23 46.0 -1.0**
comp=Z,9.9nm,1.1s
SSB Saint Sauveur 56.82 310 *eP* **P 20 23 46.0 -1.0**
SSB pmax pmax
comp=Z,10.0nm,1.1s
UCC Uccle 57.02 316 *eP* **P 20 23 48.3 +0.1**
comp=Z,8.4nm,0.5s
UCC Uccle 57.02 316 *eP* **P 20 23 48.3 +0.1**
UCC pmax pmax
comp=Z,8.0nm,0.5s
BAIF Baives 57.09 315 *eP* **P 20 23 50.3 +1.5**
BAIF pmax pmax
comp=Z,21nm,1.2s
GRNR Gornyy 57.13 44 *eP* **P 20 23 50.0 +0.9**
AVF Avril sur Loir 57.62 312 *eP* **P 20 23 53.2 +0.6**
AVF pmax pmax
comp=Z,7.0nm,0.9s
TIXI Tiksi 58.10 19 *eP* **P 20 23 54.8 -0.8**
comp=Z,8.7nm,0.9s
TIXI Tiksi 58.10 19⇑ *i P* **P 20 23 55.5 -0.1**
TIXI pmax pmax

comp=Z,18nm,1.7s
MTLF Montolieu 58.56 308 *eP* **P 20 23 58.2 -1.1**
MTLF pmax pmax
comp=Z,10.0nm,1.2s
CAF Calviac 58.58 309 *eP* **P 20 23 57.2 -2.2**
CAF pmax pmax
comp=Z,17nm,1.2s
RJF Les Rejaudoux 58.95 310 *eP* **P 20 24 01.4 -0.6**
RJF pmax pmax
comp=Z,13nm,1.0s
TAM Tamanrasset 59.08 283 *eP* **P 20 24 03.3 -0.1**
comp=Z,16nm,1.3s
TAM Tamanrasset 59.08 283 *eP* **P 20 24 03.3 -0.1**
TAM pmax pmax
comp=Z,17nm,1.3s
MAJO Matsushiro 59.10 60 *eP* **P 20 24 03.4 +0.2**
MAJO Matsushiro 59.10 60 *eP* **P 20 24 03.4 +0.2**
MJAR Matsushiro Arr 59.11 60 P **P 20 24 03.4 +0.2**
comp=Z,3.7nm,1.0s,baz=268,slow=12,SNR=4.1
LDF La Druitiere 59.92 314 *eP* **P 20 24 08.2 -0.4**
LDF pmax pmax
comp=Z,14nm,1.0s
SPA0 Spitsbergen Ar 59.99 349 *eP* **P 20 24 10.2 +1.5**
SPITS Spitsbergen Ar 59.99 349 LR LR 20 55 26.6
comp=Z,410nm,18.1s,baz=355,slow=41
MFF Saint Martin d 60.04 311 *eP* **P 20 24 08.2 -1.2**
MFF pmax pmax
comp=Z,15nm,1.2s
FLN La Foliniere 60.15 314 *eP* **P 20 24 09.2 -1.0**
FLN pmax pmax
comp=Z,14nm,1.0s
ETSF Etsaut 60.63 307 *eP* **P 20 24 14.1 +0.5**
SJPF Ste Jean 61.09 307 *eP* **P 20 24 16.0 -0.7**
EKA Eskdalemuir Ar 61.62 321 P **P 20 24 19.6 -0.4**
comp=Z,4.0nm,0.8s,baz=107,slow=6.3,SNR=10
EKA LR LR 20 57 15.0
comp=Z,438nm,18.8s,baz=60,slow=42
QUIF Quistinic 61.99 313 *eP* **P 20 24 21.6 -1.1**
QUIF pmax pmax
comp=Z,36nm,1.4s
BATI Baumata 62.02 117 LR LR 20 52 52.9
comp=Z,999nm,21.4s,baz=280,slow=38
SOEI Soe 62.27 116 *eP* **P 20 24 25.4 +0.2**
comp=Z,82nm,1.4s
ES19 SONSECA Array 63.55 304 *eP* **P 20 24 32.3 -0.9**
ESDC Sonseca Array 63.60 304 P **P 20 24 32.7 -0.9**
comp=Z,1.5nm,0.6s,baz=61,slow=7.0,SNR=8.8
PAB San Pablo 63.91 304 *eP* **P 20 24 34.5 -1.2**
comp=Z,7.6nm,0.9s
PAB San Pablo 63.91 304 *eP* **P 20 24 34.5 -1.2**
PAB pmax pmax
comp=Z,8.0nm,0.9s
LBTB Lobatse 64.86 225 *eP* **P 20 24 42.1 +0.1**
comp=Z,17nm,0.9s
LBTB Lobatse 64.86 225 *eP* **P 20 24 42.1 +0.1**
LBTB pmax pmax
comp=Z,17nm,0.9s
MA2 Magadan 65.21 34 *eP* **P 20 24 43.9 +0.2**
comp=Z,80nm,1.9s
MA2 Magadan 65.21 34⇑ *i P* **P 20 24 44.5 +0.8**
MA2 pmax pmax
comp=Z,18nm,1.3s
PBRG Braganca 65.31 307 *eP* P 20 24 51.2 +6.4
comp=Z,16nm,1.4s
TOA0 Torodi Ar. Sit 65.43 274 *eP* **P 20 24 45.0 -0.8**
TOA1 Torodi Ar. Sit 65.43 274 *eP* **P 20 24 45.4 -0.5**
TORD Torodi Ar. Bea 65.43 274 P **P 20 24 45.4 -0.5**
comp=Z,9.0nm,0.9s,baz=76,slow=5.4,SNR=38
TORD LR LR 20 55 32.5
comp=Z,628nm,19.8s,baz=65,slow=38
MDT Midelt 65.46 297 P **P 20 24 45.8 -0.2**
comp=Z,3.4nm,0.8s,baz=68,slow=7.4,SNR=5.7
MDT LR LR 20 58 08.1
comp=Z,360nm,20.6s,baz=100,slow=40
MVO Moncorvo 65.64 306 *eP* **P 20 24 46.6 -0.4**
comp=Z,22nm,1.4s
SEY Seymchan 65.73 30 P **P 20 24 47.5 +0.5**
comp=Z,8.7nm,0.7s,baz=273,slow=11,SNR=19
SEY Seymchan 65.73 30⇑ *i P* **P 20 24 47.3 +0.3**
PVRL Vila Real 66.13 306 *eP* **P 20 24 49.9 -0.2**
comp=Z,30nm,1.6s
PCBR Castelo Branco 66.23 305 *eP* **P 20 24 50.4 -0.3**
comp=Z,37nm,1.2s
PBAR Barrancos 66.23 303 *eP* **P 20 24 50.3 -0.4**
comp=Z,55nm,1.4s
PMRV Marv??o 66.25 304 *eP* **P 20 24 49.8 -1.0**
comp=Z,19nm,1.4s
PVIS Viseu 66.37 306 *eP* **P 20 24 51.4 -0.2**
comp=Z,30nm,1.7s
PGAV Gavieira, Arco 66.41 307 *eP* **P 20 24 52.1 +0.2**
comp=Z,34nm,1.7s
PESTR Estremoz 66.52 304 *eP* **P 20 24 51.4 -1.2**
comp=Z,12nm,1.4s
TSUM Tsumeb 66.70 235 *eP* **P 20 24 54.5 +0.4**
comp=Z,64nm,1.8s
PBEJ Beja 66.90 303 *eP* **P 20 24 58.1 +3.1**
comp=Z,15nm,1.9s
EVO Evora 66.91 303 *eP* **P 20 24 54.6 -0.4**
comp=Z,26nm,1.1s
DAG Danmarks Havn 67.02 346 *i* P **P 20 24 55.5 +0.4**
comp=Z,9.3nm,1.0s
DAG Danmarks Havn 67.02 346 *i* P **P 20 24 55.5 +0.4**
DAG pmax pmax
comp=Z,9.0nm,1.0s
BOSA Boshof 67.61 222 P **P 20 24 59.1 -0.6**
comp=Z,6.6nm,0.8s,baz=36,slow=5.3,SNR=9.5
BOSA LR LR 20 53 43.6
comp=Z,244nm,18.6s,baz=42,slow=35
FITZ Fitzroy Crossi 68.05 122 *eP* **P 20 25 04.1 +1.7**
comp=Z,47nm,2.0s
BORG Borgarnes 69.66 333 LR LR 20 59 21.4
comp=Z,654nm,18.5s,baz=73,slow=39
PEA1 Petropavlovsk- 70.00 40 *eP* **P 20 25 13.0 -1.1**
PEA0B Petropavlovsk- 70.00 40 *eP* **P 20 25 15.5 +1.4**
comp=Z,21nm,1.1s
PETK Petropavlovsk- 70.00 40 P **P 20 25 13.0 -1.1**
comp=Z,3.4nm,0.7s,baz=191,slow=1.5,SNR=6.5
PETK Petropavlovsk- 70.00 40 *eP* **P 20 25 13.2 -0.9**
PETK Petropavlovsk- 70.00 40 *eP* **P 20 25 13.2 -0.9**
KOWA Kowa 70.18 278 P **P 20 25 16.1 +0.3**
comp=Z,8.3nm,0.8s,baz=72,slow=6.5,SNR=14
KOWA LR LR 20 57 57.8
comp=Z,515nm,21.9s,baz=70,slow=38
KOWA Kowa 70.18 278 *eP* **P 20 25 15.9 +0.1**
comp=Z,34nm,1.4s
BILL Bilibino 70.60 23*c*e*P* **P 20 25 18.5 +1.0**
BILL *e**PP **sP 20 25 26.3 +1.4**
BILL *e* 20 25 40.1
BILL *i* 20 27 53.2
BILL pmax pmax
comp=Z,4.0nm,1.0s
BILL MLR MLR
comp=Z,694nm,17.0s
NWAO Narrogin (SRO) 71.81 140 LR LR 20 55 37.6
comp=Z,176nm,19.6s,baz=179,slow=35
SUMG Summit 73.15 343 *i* P **P 20 25 35.3 +2.1**
comp=Z,16nm,1.3s
SUMG Summit 73.15 343 *eP* **P 20 25 35.6 +2.3**
comp=Z,13nm,1.2s
SUMG Summit 73.15 343 *eP* **P 20 25 35.3 +2.1**
SUMG pmax pmax
comp=Z,17nm,1.3s
DBIC Dimbokro 73.78 270 P **P 20 25 37.4 0.0**
comp=Z,4.6nm,0.7s,baz=63,slow=5.4,SNR=5.7
DBIC LR LR 21 00 14.6
comp=Z,555nm,18.5s,baz=52,slow=38
DBIC Dimbokro 73.78 270 *eP* **P 20 25 36.1 -1.3**
comp=Z,68nm,1.8s
KIC Kosan Boka 73.79 270 *eP* **P 20 25 37.4 -0.1**
comp=Z,198nm,2.2s
TIC Toumodi 73.94 270 *eP* **P 20 25 38.3 -0.1**
LIC Lamto 74.11 270 *eP* **P 20 25 39.2 -0.2**
comp=Z,40nm,0.9s
WR1 Warramunga Arr 75.92 119 *eP* **P 20 25 49.4 -0.3**
comp=Z,13nm,0.9s
WRA Warramunga Arr 75.92 119 P **P 20 25 49.4 -0.3**
comp=Z,2.1nm,0.7s,baz=314,slow=5.2,SNR=24
WRAB Tennant Creek 75.92 119 *eP* **P 20 25 51.4 +1.7**
comp=Z,32nm,1.4s
WRAB Tennant Creek 75.92 119⇓ *i P* **P 20 25 51.9 +2.2**
WRAB pmax pmax
comp=Z,7.0nm,0.9s
WB2 Warramunga Arr 75.93 119 *eP* **P 20 25 49.5 -0.2**
comp=Z,12nm,0.8s
ASAR Alice Springs 77.55 123 P **P 20 25 58.7 -0.2**
comp=Z,3.7nm,0.8s,baz=306,slow=5.5,SNR=18
ASAR LR LR 21 00 23.5

comp=Z,261nm,21.2s,baz=294,slow=36
AS31 Alice Springs 77.55 123 *e*P **P 20 26 00.1 +1.2**
comp=Z,3.3nm,1.0s
AS01 Alice Springs 77.59 123 *e*P **P 20 25 58.7 -0.3**
NRS Narsarsuaq 81.12 334 *e*P **P 20 26 16.7 -1.0**
comp=Z,12nm,0.8s
NRS Narsarsuaq 81.12 334 *e*P **P 20 26 16.7 -1.0**
NRS pmax pmax
comp=Z,12nm,0.8s
RES Resolute Bay 81.54 356 *e*P **P 20 26 20.2 +0.5**
comp=Z,14nm,1.5s
RES Resolute Bay 81.54 356 *e*P **P 20 26 20.2 +0.5**
RES pmax pmax
comp=Z,14nm,1.5s
COLD Coldfoot 84.59 15 *e*P **P 20 26 35.8 +0.2**
comp=Z,7.6nm,1.0s
MLY Manley 86.22 16 *e*P **P 20 26 44.3 +0.5**
comp=Z,5.2nm,1.0s
INK Inuvik 86.75 9 *e*P **P 20 26 47.2 +0.9**
comp=Z,13nm,1.4s
INK Inuvik 86.75 9 *e*P **P 20 26 47.2 +0.9**
INK pmax pmax
comp=Z,13nm,1.4s
BPAW Bear Paw Mtn. 86.90 17 *e*P **P 20 26 49.2 +2.0**
comp=Z,11nm,1.5s
MDM Murphy Dome 86.91 15 *e*P **P 20 26 47.3 +0.1**
comp=Z,10nm,1.1s
CAST Castle Rocks 87.14 18 *e*P **P 20 26 47.8 -0.6**
comp=Z,14nm,1.1s
IL1 Eielson Array 87.39 15 *e*P **P 20 26 51.8 +2.3**
ILAR Eielson Array 87.39 15 P **P 20 26 51.7 +2.3**
comp=Z,1.0nm,0.9s,baz=337,slow=4.4,SNR=11
ILB Eielson Array 87.39 15 *e*P **P 20 26 51.0 +1.5**
STKA Stephens Creek 87.61 126 LR LR 21 07 21.9
comp=Z,224nm,20.2s,baz=323,slow=36
WAKE Wake Island 88.02 70 *e*P **P 20 26 53.3 0.0**
comp=Z,272nm,1.6s
RND Reindeer 88.03 17 *e*P **P 20 26 53.5 +0.8**
comp=Z,4.8nm,1.0s
RND Reindeer 88.03 17 *e*P **P 20 26 53.5 +0.8**
RND pmax pmax
comp=Z,5.0nm,1.0s
NIKH Nikolski High 88.18 31 *e*P **P 20 26 51.8 -1.7**
comp=Z,29nm,1.1s
SKT Skwentna 88.44 18 *e*P **P 20 26 56.6 +2.0**
comp=Z,6.8nm,1.1s
EGAK Eagle 88.66 13 *e*P **P 20 26 56.0 +0.5**
comp=Z,7.0nm,1.2s
DHY Denali Highway 88.68 16 *e*P **P 20 26 56.9 +1.0**
comp=Z,4.6nm,1.1s
SCRK Sand Creek 88.74 14 *e*P **P 20 26 56.0 0.0**
comp=Z,8.3nm,1.4s
RIDG Independ'e Rid 88.74 15 *e*P **P 20 26 57.8 +1.8**
comp=Z,7.1nm,1.2s
SUA Susitna One 89.08 18 *e*P **P 20 26 57.4 -0.3**
comp=Z,11nm,1.0s
SML Sawmill 89.48 17 *e*P **P 20 26 58.4 -1.1**
comp=Z,15nm,1.1s
SML Sawmill 89.48 17 *e*P **P 20 26 58.4 -1.1**
SML pmax pmax
comp=Z,15nm,1.1s
DAWY Dawson 89.64 13 *e*P **P 20 26 59.6 -0.7**
comp=Z,10.0nm,1.4s
HARP HAARP 89.80 16 *e*P **P 20 27 01.9 +0.9**
comp=Z,49nm,1.6s
CHGN Chignik 90.44 25 *e*P **P 20 27 04.3 +0.3**
comp=Z,60nm,1.0s
MAW Mawson 91.04 183 LR LR 21 02 33.0
comp=Z,172nm,18.4s,baz=47,slow=32
KDAK Kodiak Island 91.42 21 LR LR 21 12 41.3
comp=Z,14μm,18.2s,baz=256,slow=38
SYO Syowa Base 94.95 191⇑ *e*PcP **PcP 20 27 27.6 +3.1**
Z50A Ashland 119.14 337 *e*Pdif **Pdif 20 29 13.0 -0.3**
SNDA J Saunders Pla 122.84 7 *e*PKPdf **PKPdf 20 32 59.4 +0.1**
MNTX Cornudas Mount 124.91 356 *e*PKPdf **PKPdf 20 33 03.9 +0.7**
TX31 Lajitas Ar. Si 127.11 353 *e*PKPdf **PKPdf 20 33 08.1 +0.6**
TXAR Lajitas Array 127.11 353 PKP **PKPdf 20 33 08.2 +0.6**
comp=Z,12nm,1.0s,baz=259,slow=2.6,SNR=5.6
GO02 Mina Guanaco 143.52 259 *e*PKPdf PKPbc 20 33 37.0 +1.4

CSEM ***19*** *20:19:17.4, 39.88N×16.12E, h5km, ML0.7/7*
ROM 19 20:19:17.4±0.0, 39.882N±0.003×16.123E±0.002, h5km, ML0.8/3, 1C, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0715	**Campotenese**	**0.06**	**224**	⇑P	Pg	20 19 19.9	+1.0
T0715				S	Sg	20 19 20.2	+0.2
T0715	**Campotenese**	**0.06**	**224**	P	Pg	20 19 19.9	+1.0
T0715				S	Sg	20 19 20.2	+0.2
T0715				AML	AML		
	comp=E,423μm,1.5s						
T0715				AML	AML		
	comp=N,796μm,0.4s						
T0715				AML	AML		
	comp=E,926μm,0.4s						
T0715				AML	AML		
	comp=N,1425μm,0.4s						
T0715				AML	AML		
	comp=N,796μm,0.4s						
T0715				AML	AML		
	comp=N,1425μm,0.4s						
T0715				AML	AML		
	comp=E,926μm,0.4s						
T0715				AML	AML		
	comp=E,423μm,1.5s						
T0715				END			
MMN	**Mormanno**	**0.10**	**275**	P	Pg	20 19 19.9	+0.4
MMN				S	Sg	20 19 21.8	+0.8
MMN	**Mormanno**	**0.10**	**275**	P	Pg	20 19 19.9	+0.4
MMN				S	Sg	20 19 21.8	+0.8
MMN				AML	AML		
	comp=E,95μm,0.2s						
MMN				AML	AML		
	comp=N,128μm,0.4s						
MMN				AML	AML		
	comp=N,128μm,0.4s						
MMN				AML	AML		
	comp=E,95μm,0.2s						
MMN				END			
T0716	**Rotonda - Cont**	**0.10**	**311**	P	Pg	20 19 19.9	+0.3
T0716				S	Sg	20 19 21.6	+0.5
T0716	**Rotonda - Cont**	**0.10**	**311**	P	Pg	20 19 19.9	+0.3
T0716				S	Sg	20 19 21.6	+0.5
T0716				AML	AML		
	comp=E,76μm,0.7s						
T0716				AML	AML		
	comp=N,84μm,1.2s						
T0716				AML	AML		
	comp=N,84μm,1.2s						
T0716				AML	AML		
	comp=E,76μm,0.7s						
T0716				END			
SALB	**San Lorenzo Be**	**0.17**	**91**	P	Pg	20 19 21.3	+0.5
SALB				S	Sg	20 19 24.3	+1.2
SALB	**San Lorenzo Be**	**0.17**	**91**	P	Pg	20 19 21.3	+0.5
SALB				S	Sg	20 19 24.3	+1.1
SALB				AML	AML		
	comp=E,47μm,0.3s						
SALB				AML	AML		
	comp=N,30μm,1.4s						
SALB				AML	AML		
	comp=N,30μm,1.4s						
SALB				AML	AML		
	comp=E,47μm,0.3s						
SALB				END			

BJI ***19*** *20:56:37.6, 53.72N×172.25E, h16km, mb5.1/65, mB5.4/55, Ms5.6/69, Ms7 5.3/69*
ISCJB ***19*** *20:56:38.7±0.4, 53.29N±0.02×171.73E±0.01, h7km±2km, mb5.7/652, MS5.1/216, Error ellipse: s-maj=3.5km s-min=1.4km az=1.0*
IDC ***19*** *20:56:39.7±0.3, 53.37N×171.67E, h0km, mb5.2/60, mb1 5.2/62, mb1mx5.2/79, mbtmp5.2/62, ML5.1/2, MS4.9/59, Ms1 4.9/59, ms1mx4.8/75, Error ellipse: s-maj=9.6km s-min=7.5km az=156.0*
GCMT ***19*** *20:56:41.4±0.1, 53.29N×171.53E, h21km, MW5.7/138, Moment Tensor Solution. s112,c206; s138,c377; Duration: 1s7 Moment tensor: Scale 10^17 Nm; Mrr=0.26±.04; Mθθ=-3.20±.04; Mφφ=3.46±.04; Mrθ=0.27±.08; Mrφ=-2.09±.04; Mθφ=0.16±.08; Best double couple: M0=3.94500×10^17 NP1:φs=29.00000°, δ=87.00000°, λ=-4.00000°. NP2:φs=119.00000°, δ=86.00000°, λ=-177.00000°. Principal axes: T 4.0630, Plg1.0000°, Azm74.0000°; N -0.2370, Plg85.0000°, Azm176.0000°; P -3.8270, Plg5.0000°, Azm344.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
NEIC ***19*** *20:56:41.4±0.8, 53.35N×171.70E, h12km±5km, mb5.9/298, MS5.2/124, MW5.7, MW5.6, ML5.9(AEIC) Error ellipse: s-maj=2.6km s-min=1.4km az=178.0, Moment Tensor Solution. s38 Moment tensor: Scale 10^17 Nm; Mrr=0.22; Mθθ=-2.94; Mφφ=2.72; Mrθ=-0.71; Mθφ=-2.78; Mφr=0.63; Best double couple: M0=4.10000×10^17 NP1:φs=22.00000°, δ=86.00000°, λ=-12.00000°. NP2:φs=113.00000°, δ=78.00000°, λ=-176.00000°. Principal axes: T 3.8900, Plg5.0000°, Azm68.0000°; N 0.3700, Plg78.0000°, Azm182.0000°; P -4.2600, Plg11.0000°, Azm337.0000°;*
MOS ***19*** *20:56:42.4±0.9, 53.24N×171.59E, h37km, mb5.7/125, MS5.2/60 Error ellipse: s-maj=4.7km s-min=3.6km az=44.9*
NEIC ***19*** *20:56:43.0±0.0, 53.23N×172.03E, h13km, Moment Tensor Solution. s21 Moment tensor: Scale 10^17 Nm; Mrr=0.31; Mθθ=2.27; Mφφ=2.58; Mrθ=1.32; Mθφ=-1.46; Mφr=0.13; Best double couple: M0=3.10000×10^17 NP1:φs=121.00000°, δ=80.00000°, λ=-156.00000°. NP2:φs=27.00000°, δ=67.00000°, λ=-10.00000°. Principal axes: T 3.0600, Plg8.0000°, Azm252.0000°; N 0.1500, Plg64.0000°, Azm143.0000°; P -3.2100, Plg23.0000°, Azm346.0000°;*
KRSC ***19*** *20:56:44.0±2.0, 53.30N×171.08E, h43km±25km, ML5.9*
ISC 19 20:56:43.5±0.3, 53.29N±0.03×171.68E±0.02, h27km±2km, h26km:pP-P, n1901, σ1947/2082, mb5.8/679, MS5.2/217, 38C-101D, Near Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMY	**Shemya**	**1.57**	**110**	P	**Pn**	**20 57 08.0**	**-1.5**
SMY				S	**Sn**	**20 57 28.4**	**-0.6**
SMY	**Shemya**	**1.57**	**110**	P	**Pn**	**20 57 08.0**	**-1.5**
SMY				S	**Sn**	**20 57 28.4**	**-0.6**
BKI	**Bering**	**3.85**	**302**	*i* P	**Pn**	**20 57 39.9**	**-1.0**
BKI				*e*S	**Sn**	**20 58 22.1**	**-3.2**
BKI	**Bering**	**3.85**	**302**	P	**Pn**	**20 57 39.9**	**-1.0**
BKI				S	**Sn**	**20 58 22.1**	**-3.2**
LSNW	**Little Sitkin**	**4.37**	**105**	P	**Pn**	**20 57 47.0**	**-1.1**
LSPA	**Little Sitkin**	**4.41**	**105**	P	**Pn**	**20 57 47.4**	**-1.3**
CETU	**Semis' Tuman**	**4.95**	**102**	P	**Pn**	**20 57 54.9**	**-1.1**
CEAP	**Semis' Anvil P**	**4.98**	**102**	P	**Pn**	**20 57 55.4**	**-1.1**
AMKA	**Amchitka**	**5.05**	**109**	P	**Pn**	**20 57 56.0**	**-1.4**
AMKA				S	**Sn**	**20 58 53.6**	**-1.2**
KBTR	**Krutoberegovo**	**5.90**	**303**	*e*P	**Pn**	**20 58 08.8**	**-0.2**
KBTR				*e*S	**Sn**	**20 59 12.7**	**-3.0**
KBTR	**Krutoberegovo**	**5.90**	**303**	P	**Pn**	**20 58 08.8**	**-0.2**
KBTR				S	**Sn**	**20 59 12.7**	**-3.0**
KBG	**Krutoberegovo**	**5.98**	**303**	*e*P	**Pn**	**20 58 09.7**	**-0.4**
KBG				*e*S	**Sn**	**20 59 14.1**	**-3.5**
KBG	**Krutoberegovo**	**5.98**	**303**	P	**Pn**	**20 58 09.7**	**-0.4**
KBG				S	**Sn**	**20 59 14.1**	**-3.5**
MKZ	**Mys Kozlova**	**6.01**	**286**	*i* P	**Pn**	**20 58 10.0**	**-0.5**
MKZ				*e*S	**Sn**	**20 59 15.1**	**-3.3**
MKZ	**Mys Kozlova**	**6.01**	**286**	P	**Pn**	**20 58 10.0**	**-0.5**
MKZ				S	**Sn**	**20 59 15.1**	**-3.3**
TAPA	**Tanaga Point A**	**6.58**	**99**	P	**Pn**	**20 58 16.9**	**-1.5**
SMKR	**Semkarok**	**6.74**	**303**	*i* P	**Pn**	**20 58 22.5**	**+1.9**
SMKR	**Semkarok**	**6.74**	**303**	P	**Pn**	**20 58 22.5**	**+1.9**
BDR	**Baidarnaya**	**6.87**	**303**	*i* P	**Pn**	**20 58 23.4**	**+1.0**
BDR				*e*S	**Sn**	**20 59 36.0**	**-3.6**
BDR	**Baidarnaya**	**6.87**	**303**	P	**Pn**	**20 58 23.4**	**+1.0**
BDR				S	**Sn**	**20 59 36.0**	**-3.6**
ZLN	**Zelenaya**	**6.87**	**298**	*e*P	**Pn**	**20 58 24.3**	**+1.8**
ZLN	**Zelenaya**	**6.87**	**298**	P	**Pn**	**20 58 24.3**	**+1.8**
TUMD	**Tumrok D**	**6.88**	**291**	*e*P	**Pn**	**20 58 22.5**	**0.0**
TUMD				*e*S	**Sn**	**20 59 35.9**	**-4.0**
KICM	**Kanaga Island**	**6.92**	**97**	P	**Pn**	**20 58 21.6**	**-1.4**
SRKR	**Sorokina**	**6.92**	**303**	*e*P	**Pn**	**20 58 23.8**	**+0.7**
SRKR	**Sorokina**	**6.92**	**303**	P	**Pn**	**20 58 23.8**	**+0.7**
KZV	**Kizimen**	**6.92**	**290**	*e*P	**Pn**	**20 58 23.4**	**+0.2**
KZV	**Kizimen**	**6.92**	**290**	P	**Pn**	**20 58 23.4**	**+0.2**
CIRR	**Tsirk**	**6.93**	**298**	*e*P	**Pn**	**20 58 24.5**	**+1.1**
CIRR	**Tsirk**	**6.93**	**298**	P	**Pn**	**20 58 24.5**	**+1.1**
KIKV	**Kanaga Island**	**6.94**	**97**	P	**Pn**	**20 58 21.5**	**-1.8**
LGNR	**Loginova**	**6.95**	**298**	*e*P	**Pn**	**20 58 25.1**	**+1.3**
LGNR	**Loginova**	**6.95**	**298**	P	**Pn**	**20 58 25.1**	**+1.3**
KIRH	**Kanaga Island**	**6.98**	**97**	P	**Pn**	**20 58 22.0**	**-1.9**
SPN	**Mys Shipunski**	**7.01**	**273**	*i* P	**Pn**	**20 58 23.2**	**-1.0**
SPN				*e*S	**Sn**	**20 59 35.9**	**-7.0**
SPN	**Mys Shipunski**	**7.01**	**273**	P	**Pn**	**20 58 23.2**	**-1.0**
SPN				S	**Sn**	**20 59 35.9**	**-7.0**
BZMR	**Bezymyannaya**	**7.01**	**297**	*e*P	**Pn**	**20 58 25.2**	**+0.7**
BZMR	**Bezymyannaya**	**7.01**	**297**	P	**Pn**	**20 58 25.2**	**+0.7**
BZWR	**Bezymyannyi-We**	**7.02**	**297**	*e*P	**Pn**	**20 58 25.4**	**+0.8**
BZWR	**Bezymyannyi-We**	**7.02**	**297**	P	**Pn**	**20 58 25.4**	**+0.8**
TUMR	**Tumrok**	**7.04**	**291**	*e*P	**Pn**	**20 58 25.5**	**+0.7**
TUMR				*e*S	**Sn**	**20 59 41.2**	**-2.7**
TUMR	**Tumrok**	**7.04**	**291**	P	**Pn**	**20 58 22.5**	**-2.3**
TUMR				S	**Sn**	**20 59 35.9**	**-8.0**
KLY	**Klyuchi**	**7.05**	**300**	*e*P	**Pn**	**20 58 25.0**	**+0.2**
KLY				*e*S	**Sn**	**20 59 38.3**	**-5.7**
KLY	**Klyuchi**	**7.05**	**300**	P	**Pn**	**20 58 25.0**	**+0.2**
KLY				S	**Sn**	**20 59 38.3**	**-5.7**
KRSR	**Krestovskiy**	**7.07**	**299**	*e*P	**Pn**	**20 58 26.1**	**+1.0**
KRSR				*e*S	**Sn**	**20 59 42.0**	**-2.5**
KRSR	**Krestovskiy**	**7.07**	**299**	P	**Pn**	**20 58 26.1**	**+1.0**
KRSR				S	**Sn**	**20 59 42.0**	**-2.5**
KIRR	**Kirishev**	**7.10**	**297**	*e*P	**Pn**	**20 58 26.5**	**+0.9**
KIRR				*e*S	**Sn**	**20 59 42.1**	**-3.3**
KIRR	**Kirishev**	**7.10**	**297**	P	**Pn**	**20 58 26.5**	**+0.9**
KIRR				S	**Sn**	**20 59 42.1**	**-3.3**
KMNR	**Kamenistaya**	**7.10**	**295**	*e*P	**Pn**	**20 58 26.6**	**+1.0**
KMNR				*e*S	**Sn**	**20 59 41.9**	**-3.5**
KMNR	**Kamenistaya**	**7.10**	**295**	P	**Pn**	**20 58 26.6**	**+1.0**
KMNR				S	**Sn**	**20 59 41.9**	**-3.5**
KPT	**Kopyto**	**7.17**	**297**	*e*P	**Pn**	**20 58 27.6**	**+1.1**
KPT				*e*S	**Sn**	**20 59 42.4**	**-4.6**
KPT	**Kopyto**	**7.17**	**297**	P	**Pn**	**20 58 27.6**	**+1.1**
KPT				S	**Sn**	**20 59 42.4**	**-4.6**
ADAG	**Mount Adagdak**	**7.25**	**96**	P	**Pn**	**20 58 25.4**	**-2.2**
KII	**Karymskiy**	**7.30**	**281**	*e*P	**Pn**	**20 58 27.6**	**-0.8**
KII	**Karymskiy**	**7.30**	**281**	P	**Pn**	**20 58 27.6**	**-0.8**
KOZ	**Kozyrevsk**	**7.38**	**297**	*e*P	**Pn**	**20 58 30.7**	**+1.3**
KOZ				*e*S	**Sn**	**20 59 47.9**	**-4.3**
KOZ	**Kozyrevsk**	**7.38**	**297**	P	**Pn**	**20 58 30.7**	**+1.3**
KOZ				S	**Sn**	**20 59 47.9**	**-4.3**
ETKA	**Kagalaska Isla**	**7.40**	**96**	P	**Pn**	**20 58 27.4**	**-2.3**
NLC	**Nalytchevo**	**7.41**	**274**	*e*P	**Pn**	**20 58 28.7**	**-1.0**
NLC				*e*S	**Sn**	**20 59 46.8**	**-5.9**
NLC	**Nalytchevo**	**7.41**	**274**	P	**Pn**	**20 58 28.7**	**-1.0**
NLC				S	**Sn**	**20 59 46.8**	**-5.9**
OSSR	**Ossora**	**7.65**	**325**	*e*P	**Pn**	**20 58 33.9**	**+0.9**
OSSR	**Ossora**	**7.65**	**325**	P	**Pn**	**20 58 33.9**	**+0.9**
SDLR	**Sedlovina**	**7.67**	**275**	*e*P	**Pn**	**20 58 32.8**	**-0.6**
SDLR	**Sedlovina**	**7.67**	**275**	P	**Pn**	**20 58 32.8**	**-0.6**
UGLR	**Uglovaya**	**7.71**	**275**	*e*P	**Pn**	**20 58 33.8**	**-0.2**
UGLR				*e*S	**Sn**	**20 59 56.0**	**-4.5**
UGLR	**Uglovaya**	**7.71**	**275**	P	**Pn**	**20 58 33.8**	**-0.2**
UGLR				S	**Sn**	**20 59 56.0**	**-4.5**
KRER	**Koryakskii**	**7.75**	**275**	*e*P	**Pn**	**20 58 34.3**	**-0.3**
KRER	**Koryakskii**	**7.75**	**275**	P	**Pn**	**20 58 34.3**	**-0.3**
AVH	**Avacha**	**7.76**	**275**	*e*P	**Pn**	**20 58 34.3**	**-0.3**
AVH	**Avacha**	**7.76**	**275**	P	**Pn**	**20 58 34.3**	**-0.3**
DALK	**Dalny**	**7.78**	**273**	*e*P	**Pn**	**20 58 33.8**	**-0.9**
DALK				*e*S	**Sn**	**20 59 55.4**	**-6.4**
DALK	**Dalny**	**7.78**	**273**	P	**Pn**	**20 58 33.8**	**-0.9**
DALK				S	**Sn**	**20 59 55.4**	**-6.4**
TILK	**Tilichiki**	**7.78**	**339**	*i* P	**Pn**	**20 58 37.1**	**+2.3**
TILK	**Tilichiki**	**7.78**	**339**	P	**Pn**	**20 58 37.1**	**+2.3**
KRX	**Arik**	**7.80**	**276**	*e*P	**Pn**	**20 58 34.5**	**-0.8**
KRX	**Arik**	**7.80**	**276**	P	**Pn**	**20 58 34.5**	**-0.8**
KOK	**Koryaka**	**7.82**	**275**	*e*P	**Pn**	**20 58 34.9**	**-0.5**
KOK	**Koryaka**	**7.82**	**275**	P	**Pn**	**20 58 34.9**	**-0.5**
PET	**Petropavlovsk**	**7.84**	**273**	P	**Pn**	**20 58 35.0**	**-0.6**
PET	**Petropavlovsk**	**7.84**	**273**	α *i* P	**Pn**	**20 58 34.8**	**-0.8**
PET				*e*S	**Sn**	**20 59 57.2**	**-6.1**
PET				pmax	pmax		
	comp=Z,800nm,5.4s						
PET				pmax	pmax		
	comp=Z,439nm,1.0s						
PET				smax	smax		
	comp=E,2μm,0.8s						
PET				MLR	MLR		
	comp=Z,12μm,14.0s						
PET				MLR	MLR		
	comp=Z,12μm,15.0s						
ESO	**Esso**	**7.98**	**294**	*e*P	**Pn**	**20 58 38.0**	**+0.4**
ESO	**Esso**	**7.98**	**294**	P	**Pn**	**20 58 38.0**	**+0.4**
RUS	**Russkaya**	**8.02**	**269**	*i* P	**Pn**	**20 58 37.0**	**-1.0**
RUS				*e*S	**Sn**	**21 00 02.0**	**-5.7**
RUS	**Russkaya**	**8.02**	**269**	P	**Pn**	**20 58 37.0**	**-1.0**
RUS				S	**Sn**	**21 00 02.0**	**-5.7**
KRMR	**Karymshinskiy**	**8.18**	**272**	*e*P	**Pn**	**20 58 39.4**	**-0.8**
KRMR				*e*S	**Sn**	**21 00 03.9**	**-7.8**
KRMR	**Karymshinskiy**	**8.18**	**272**	P	**Pn**	**20 58 39.4**	**-0.8**
KRMR				S	**Sn**	**21 00 03.9**	**-7.8**
GNL	**Ganaly**	**8.20**	**278**	*e*P	**Pn**	**20 58 40.8**	**+0.1**
GNL	**Ganaly**	**8.20**	**278**	P	**Pn**	**20 58 40.8**	**+0.1**
MTVR	**Mutnovka**	**8.20**	**270**	*e*P	**Pn**	**20 58 39.9**	**-0.9**
MTVR				*e*S	**Sn**	**21 00 06.5**	**-6.1**
MTVR	**Mutnovka**	**8.20**	**270**	P	**Pn**	**20 58 39.9**	**-0.9**
MTVR				S	**Sn**	**21 00 06.5**	**-6.1**
GRL	**Gorelyy**	**8.26**	**270**	*e*P	**Pn**	**20 58 41.4**	**-0.1**
GRL	**Gorelyy**	**8.26**	**270**	P	**Pn**	**20 58 41.4**	**-0.1**
I44RU	**PETROPAVLOVSK-**	**8.39**	**274**	*i*		21 52 40.0	
	baz=87,slow=316,SNR=0.6						
ASAK	**Asacha**	**8.39**	**269**	*e*P	**Pn**	**20 58 43.0**	**-0.3**
ASAK	**Asacha**	**8.39**	**269**	P	**Pn**	**20 58 43.0**	**-0.3**
PEA0B	**Petropavlovsk-**	**8.40**	**274**	*e*Pn	**Pn**	**20 58 43.2**	**-0.1**
PEA0B				*e*Sn	**Sn**	**21 00 11.8**	**-5.3**
PEA1	**Petropavlovsk-**	**8.40**	**274**	*e*Pn	**Pn**	**20 58 43.4**	**+0.1**
PEA1				*e*Sn	**Sn**	**21 00 11.6**	**-5.5**
PETK	**Petropavlovsk-**	**8.40**	**274**	Pn	**Pn**	**20 58 43.4**	**+0.1**
	comp=Z,44nm,0.3s,baz=79,slow=18,SNR=156						
PETK				Sn	**Sn**	**21 00 11.6**	**-5.5**
	comp=Z,31nm,0.3s,baz=90,slow=32,SNR=6.7						
PETK				LR	LR	21 01 47.5	
	comp=Z,7μm,21.7s,baz=95,slow=37						
PETK	**Petropavlovsk-**	**8.40**	**274**	*e*Pn	**Pn**	**20 58 42.2**	**-1.0**
PETK				*e*Sn	**Sn**	**21 00 10.8**	**-6.4**
PETK	**Petropavlovsk-**	**8.40**	**274**	*e*P	**Pn**	**20 58 42.3**	**-1.0**
PETK				*e*		21 00 10.8	
KDTR	**Khodutka, Kamc**	**8.42**	**265**	*e*P	**Pn**	**20 58 42.2**	**-1.4**
KDTR				*e*S	**Sn**	**21 00 09.7**	**-8.0**
KOWE	**Korovin West**	**8.57**	**91**	P	**Pn**	**20 58 44.6**	**-1.1**
KOKL	**Mount Kliuchef**	**8.62**	**91**	P	**Pn**	**20 58 44.8**	**-1.6**
ATKA	**Atka Island**	**8.64**	**92**	P	**Pn**	**20 58 44.8**	**-1.9**
ATKA				S	**Sn**	**21 00 19.7**	**-3.4**
KOFP	**Korovin Flat P**	**8.69**	**91**	P	**Pn**	**20 58 46.5**	**-0.8**
PALN	**Palana**	**8.73**	**316**	*e*P	**Pn**	**20 58 49.6**	**+1.8**
PALN	**Palana**	**8.73**	**316**	P	**Pn**	**20 58 49.6**	**+1.8**
APC	**Apacha**	**8.74**	**273**	*e*P	**Pn**	**20 58 48.3**	**+0.3**
APC				*e*S	**Sn**	**21 00 19.3**	**-6.3**
APC	**Apacha**	**8.74**	**273**	P	**Pn**	**20 58 48.3**	**+0.3**
APC				S	**Sn**	**21 00 19.3**	**-6.3**
MIPR	**Malaya Ipel'ka**	**9.10**	**270**	*e*P	**Pn**	**20 58 52.1**	**-0.9**
MIPR	**Malaya Ipel'ka**	**9.10**	**270**	P	**Pn**	**20 58 52.1**	**-0.9**
PAU	**Pauzhetka**	**9.28**	**265**	*e*P	**Pn**	**20 58 54.1**	**-1.2**
PAU	**Pauzhetka**	**9.28**	**265**	P	**Pn**	**20 58 54.1**	**-1.2**
KMSK	**Kamenskaya**	**9.64**	**345**	*e*P	**Pn**	**20 59 01.2**	**+0.9**
KMSK	**Kamenskaya**	**9.64**	**345**	P	**Pn**	**20 59 01.2**	**+0.9**
SKR	**Severo-Kuril's**	**9.95**	**261**	*e*P	**Pn**	**20 59 03.2**	**-1.3**
SKR				*e*S	**Sn**	**21 00 48.6**	**-6.6**
SKR	**Severo-Kuril's**	**9.95**	**261**	*e*P	**Pn**	**20 59 03.1**	**-1.4**
SKR				*e*S	**Sn**	**21 00 49.2**	**-6.0**
SKR				pmax	pmax		
	comp=Z,3μm,2.3s						
SKR				pmax	pmax		
	comp=Z,954nm,0.7s						
SKR				MLR	MLR		
	comp=Z,4μm,12.0s						
SKR				MLR	MLR		
	comp=Z,4μm,12.0s						
SPIA	**Saint Paul Isl**	**11.02**	**62**	P	**Pn**	**20 59 18.6**	**-0.5**
NIKH	**Nikolski High**	**11.70**	**84**	*e*Pn	**Pn**	**20 59 27.3**	**-1.2**
UNV	**Unalaska Valle**	**12.98**	**79**	*e*Pn	**Pn**	**20 59 44.9**	**-0.9**
MA2	**Magadan**	**13.13**	**307**	Pn	**Pn**	**20 59 47.3**	**-0.7**
	comp=Z,1.4nm,0.3s,baz=98,slow=8.8,SNR=9.3						
MA2				Sn	**Sn**	**21 02 07.4**	**-5.6**
	comp=Z,0.8nm,0.3s,baz=162,slow=20,SNR=1.6						
MA2	**Magadan**	**13.13**	**307⇑**	*e*P	**Pn**	**20 59 49.8**	**+1.8**
MA2				pmax	pmax		
	comp=Z,70nm,1.7s						
AKUT	**Akutan**	**13.37**	**77**	*e*Pn	**Pn**	**20 59 50.9**	**-0.4**
SEY	**Seymchan**	**13.98**	**321**	Pn	**Pn**	**21 00 00.3**	**+0.8**
	comp=Z,0.7nm,0.3s,baz=130,slow=12,SNR=64						
SEY				LR	LR	21 05 34.9	
	comp=Z,6μm,18.6s,baz=122,slow=38						
SEY	**Seymchan**	**13.98**	**321**	*d* P	**Pn**	**21 00 01.5**	**+2.0**
FALS	**False Pass**	**14.68**	**74**	*e*Pn	**Pn**	**21 00 08.7**	**-0.5**
BILL	**Bilibino**	**15.02**	**352**	*e*Pn	**Pn**	**21 00 15.4**	**+1.9**
BILL	**Bilibino**	**15.02**	**352**	*d* P	**Pn**	**21 00 15.5**	**+1.9**
BILL				*e*S	**Sn**	**21 03 00.5**	**+1.6**
BILL				pmax	pmax		
	comp=Z,886nm,1.7s						
BILL				MLR	MLR		
	comp=Z,10μm,20.0s						
ANM	**Nome**	**16.25**	**37**	*e*Pn	**P**	**21 00 32.1**	**-0.3**
	comp=Z,1μm,1.4s						
ANM	**Nome**	**16.25**	**37**	*e*P	**P**	**21 00 32.1**	**-0.3**
ANM				pmax	pmax		
	comp=Z,1μm,1.4s						
SDPT	**Sand Point**	**16.33**	**72**	*e*Pn	**Pn**	**21 00 29.5**	**-1.1**
	comp=Z,1μm,1.4s						
OKH	**Okha**	**17.09**	**282⇑**	*i* P	**P**	**21 00 41.8**	**+0.1**
OKH				*i* S	**Sn**	**21 03 49.9**	**+0.7**
OKH				pmax	pmax		
	comp=Z,2μm,8.2s						
OKH				MLR	MLR		
	comp=Z,6μm,14.0s						
CHGN	**Chignik**	**17.44**	**68**	*e*Pn	**Pn**	**21 00 43.4**	**-1.1**
	comp=Z,672nm,1.0s						
**KU

UGL	**Uglegorsk**	**18.96 269**	⇑	*i*P	**Pn**	**21 01 05.3 +2.1**
UGL				*e*S	**Sn**	**21 04 34.7 +0.2**
UGL				pmax	pmax	
	comp=Z,342nm,1.0s					
UGL				pmax	pmax	
	comp=Z,7μm,5.2s					
UGL				pmax	pmax	
	comp=E,6μm,5.3s					
UGL				smax	smax	
	comp=E,9μm,8.8s					
UGL				MLR	MLR	
	comp=N,4μm,13.0s					
UGL				MLR	MLR	
	comp=E,3μm,13.0s					
RDOG	**Red Dog Mine**	**19.10 30**		*e*P	**Pn**	**21 01 05.5 +0.7**
	comp=E,417nm,1.3s					
SVW2	**Sparrevohn**	**19.20 53**		*e*P	**Pn**	**21 01 06.2 +0.1**
	comp=E,385nm,1.2s					
YUK	**Yuzh-Kuril'sk**	**19.31 252**		*e*P	**P**	**21 01 06.1 -0.1**
YUK				*e*S	**S**	**21 04 43.2 +0.1**
YUK				pmax	pmax	
	comp=Z,550nm,1.0s					
YUK				pmax	pmax	
	comp=N,160nm,0.5s					
YUK				pmax	pmax	
	comp=E,139nm,0.6s					
YUK				pmax	pmax	
	comp=Z,940nm,4.0s					
LAGR	**Lagunnoye**	**19.34 252**		*e*P	**P**	**21 01 05.2 -1.4**
LAGR				*e*S	**Sn**	**21 04 45.7 +2.0**
LAGR				pmax	pmax	
	comp=Z,475nm,1.3s					
LAGR				pmax	pmax	
	comp=Z,1μm,3.6s					
LAGR				MLR	MLR	
	comp=Z,10μm,16.0s					
GRPR	**Tuman**	**19.39 252**		*e*P	**P**	**21 01 06.8 -0.3**
GRPR				pmax	pmax	
	comp=N,159nm,0.8s					
GRPR				pmax	pmax	
	comp=Z,301nm,0.8s					
GRPR				pmax	pmax	
	comp=E,219nm,0.7s					
GRPR				pmax	pmax	
	comp=Z,736nm,3.9s					
GRPR				MLR	MLR	
	comp=Z,3μm,12.0s					
YSS	**Yuzh-Sakhalins**	**19.51 263**		*e*P	**P**	**21 01 08.9 +0.5**
	comp=Z,380nm,1.5s					
YSS	**Yuzh-Sakhalins**	**19.51 263**	α	*i*P	**Pn**	**21 01 10.3 +0.5**
YSS				*e*S	**S**	**21 04 44.1 -3.0**
YSS				pmax	pmax	
	comp=Z,140nm,1.6s					
YSS				pmax	pmax	
	comp=E,3μm,5.6s					
YSS				pmax	pmax	
	comp=Z,4μm,5.6s					
YSS				pmax	pmax	
	comp=N,2μm,5.8s					
YSS				MLR	MLR	
	comp=E,7μm,16.0s					
GLVR	**Golovnino**	**19.69 252**		*e*P	**P**	**21 01 10.3 -0.1**
GLVR				pmax	pmax	
	comp=Z,937nm,2.0s					
GLVR				pmax	pmax	
	comp=Z,764nm,1.3s					
GLVR				MLR	MLR	
	comp=Z,7μm,14.0s					
OHAK	**Old Harbor**	**20.20 65**		*e*P	**P**	**21 01 14.1 -1.8**
	comp=Z,1μm,1.0s					
OHAK				*e*S	**S**	**21 04 59.3 -1.8**
RSO	**Redoubt South**	**20.50 55**		*e*P	**P**	**21 01 20.3 +0.9**
KDAK	**Kodiak Island**	**20.55 63**		P	**P**	**21 01 19.5 -0.1**
	comp=Z,403nm,1.0s,baz=292,slow=4.8,SNR=51					
KDAK				S	**S**	**21 05 04.4 -3.5**
	comp=Z,13nm,1.1s,baz=17,slow=19,SNR=3.6					
KDAK	**Kodiak Island**	**20.55 63**		*e*P	**P**	**21 01 18.5 -1.1**
	comp=Z,334nm,0.8s					
KDAK				*e*S	**S**	**21 05 05.0 -2.9**
KDAK				LR	LR	
	comp=Z,6μm,20.0s					
KDAK	**Kodiak Island**	**20.55 63**		*i*P	**P**	**21 01 19.1 -0.5**
SPU	**Mount Spurr**	**20.91 53**		*e*P	Pn	21 01 25.7 -0.5
HOM	**Homer**	**21.02 58**		*e*P	**P**	**21 01 25.2 +0.5**
	comp=Z,1μm,0.9s					
PPLA	**Purkeypile**	**21.09 49**		*e*P	**P**	**21 01 26.3 +0.6**
	comp=Z,941nm,1.4s					
ASAJ	**Asahikawa**	**21.14 256**		P	**P**	**21 01 26.4 +0.2**
	comp=Z,42nm,0.7s,baz=89,slow=10,SNR=24					
ASAJ				S	**S**	**21 05 17.9 -2.0**
	comp=Z,3.3nm,0.8s,baz=0.4,slow=13,SNR=1.5					
ASAJ				LR	LR	21 11 22.8
	comp=Z,2μm,18.1s,baz=60,slow=42					
ASAJ	**Asahikawa**	**21.14 256**		*e*P	**P**	**21 01 25.7 -0.5**
	comp=Z,538nm,1.8s					
CNPM	**China Poot**	**21.23 58**		*e*P	**P**	**21 01 26.1 -0.9**
	comp=Z,944nm,1.2s					
CAST	**Castle Rocks**	**21.24 47**		*e*P	**P**	**21 01 28.0 +0.9**
	comp=Z,332nm,1.2s					
SKT	**Skwentna**	**21.25 51**		*e*P	**P**	**21 01 28.2 +0.9**
	comp=Z,868nm,1.4s					
BRLK	**Bradley Lake**	**21.41 57**		*e*P	**P**	**21 01 27.7 -1.2**
	comp=Z,285nm,0.9s					
SUA	**Susitna One**	**21.57 53**		*e*P	**P**	**21 01 30.1 -0.6**
	comp=Z,416nm,1.1s					
GRNR	**Gornyy**	**21.70 278**		*e*P	**P**	**21 01 34.0 +1.9**
GRNR				pmax	pmax	
	comp=Z,37nm,0.8s					
KTH	**Kantishna Hill**	**21.77 47**		*e*P	**P**	**21 01 33.5 +0.6**
	comp=Z,588nm,1.2s					
BPAW	**Bear Paw Mtn.**	**21.86 46**		*e*P	**P**	**21 01 33.5 -0.2**
	comp=Z,391nm,1.3s					
TRF	**Thorofare Moun**	**22.04 48**		*e*P	**P**	**21 01 35.3 -0.5**
	comp=Z,996nm,1.7s					
ERM	**Erimo**	**22.12 251**		*e*P	**P**	**21 01 35.8 -0.9**
	comp=Z,179nm,1.0s					
ERM				LR	LR	
	comp=Z,3μm,20.0s					
ERM	**Erimo**	**22.12 251**	⇑	*i*P	**P**	**21 01 37.8 +1.1**
ERM				pmax	pmax	
	comp=Z,266nm,1.7s					
MLY	**Manley**	**22.17 43**		*e*P	**P**	**21 01 36.4 -0.7**
	comp=Z,419nm,1.3s					
PMR	**Palmer**	**22.35 53**		*e*P	**P**	**21 01 37.7 -1.2**
	comp=Z,136nm,1.0s					
PMR	**Palmer**	**22.35 53**		*e*P	**P**	**21 01 37.7 -1.2**
PMR				pmax	pmax	
	comp=Z,136nm,1.0s					
GHO	**Glory Hole Cre**	**22.46 52**		*e*P	**P**	**21 01 40.8 +0.6**
	comp=Z,579nm,1.2s					
BWN	**Browne**	**22.52 46**		*e*P	**P**	**21 01 41.2 +0.4**
	comp=Z,2μm,1.2s					
RND	**Reindeer**	**22.67 48**		*e*P	**P**	**21 01 41.6 -0.8**
	comp=Z,626nm,1.3s					
MCK	**McKinley**	**22.68 47**		*e*P	**P**	**21 01 41.4 -1.1**
	comp=Z,959nm,1.5s					
MCK	**McKinley**	**22.68 47**		*e*P	**P**	**21 01 41.4 -1.1**
MCK				pmax	pmax	
	comp=Z,959nm,1.5s					
SML	**Sawmill**	**22.74 52**		*e*P	**P**	**21 01 42.3 -0.9**
	comp=Z,927nm,1.3s					
SML	**Sawmill**	**22.74 52**		*e*P	**P**	**21 01 42.3 -0.9**
SML				pmax	pmax	
	comp=Z,927nm,1.3s					
COLD	**Coldfoot**	**23.00 38**		*e*P	**P**	**21 01 44.9 -0.8**
	comp=Z,241nm,1.7s					
WRH	**Wood River Hil**	**23.16 45**		*e*P	**P**	**21 01 46.7 -0.8**
	comp=Z,363nm,1.1s					
MDM	**Murphy Dome**	**23.19 44**		*e*P	**P**	**21 01 47.2 -0.6**
	comp=Z,849nm,1.6s					
SCM	**Sheep Creek Mo**	**23.22 52**		*e*P	**P**	**21 01 47.5 -0.6**
	comp=Z,739nm,1.2s					
SCM	**Sheep Creek Mo**	**23.22 52**		*e*P	**P**	**21 01 47.6 -0.6**
SCM				pmax	pmax	
	comp=Z,739nm,1.2s					
DHY	**Denali Highway**	**23.29 49**		*e*P	**P**	**21 01 47.8 -1.2**
	comp=Z,238nm,1.0s					
CCB	**Clear Creek Bu**	**23.32 45**		*e*P	**P**	**21 01 48.0 -0.9**
	comp=Z,338nm,1.1s					
COLA	**College**	**23.34 44**		*e*P	**P**	**21 01 49.0 -0.2**
	comp=Z,491nm,1.0s					
COLA				LR	LR	
	comp=Z,1.0nm,20.0s					
COLA	**College**	**23.34 44**		*e*P	**P**	**21 01 49.0 -0.2**
COLA				pmax	pmax	
	comp=Z,491nm,1.0s					
TOLK	**Toolik Lake Re**	**23.70 35**		P	**P**	**21 01 52.8 +0.1**
	baz=249					
TOLK	**Toolik Lake Re**	**23.70 35**		*e*P	**P**	**21 01 52.4 -0.4**
	comp=Z,250nm,1.3s					
YAK	**Yakutsk**	**23.70 308**		*e*P	**P**	**21 01 51.0 -1.7**
	comp=Z,390nm,0.7s					
YAK				LR	LR	
	comp=Z,3μm,21.0s					
YAK	**Yakutsk**	**23.70 308**	*d*	*i*P	**P**	**21 01 51.4 -1.3**
YAK				*e**PP	**sP**	**21 02 03.0 -0.6**
YAK				*e*		21 02 22.0
YAK				*e*S	**S**	**21 06 04.2 -1.6**
YAK				*e**SS	**sS**	**21 06 18.2 -0.4**
YAK				*e*SS	**SnSn**	**21 06 44.8 +0.6**
YAK				pmax	pmax	
	comp=Z,120nm,0.6s					
YAK				pmax	pmax	
	comp=E,166nm,1.9s					
YAK				pmax	pmax	
	comp=N,28nm,1.3s					
YAK				pmax	pmax	
	comp=Z,455nm,1.6s					
YAK				pmax	pmax	
	comp=E,814nm,1.7s					
YAK				pmax	pmax	
	comp=N,284nm,1.8s					
YAK				smax	smax	
	comp=N,2μm,2.9s					
YAK				smax	smax	
	comp=E,1μm,3.0s					
YAK				MLR	MLR	
	comp=Z,5μm,16.0s					
YAK				MLR	MLR	
	comp=E,6μm,18.0s					
YAK				MLR	MLR	
	comp=N,18μm,15.0s					
MID	**Middleton Isla**	**23.73 58**		*e*P	**P**	**21 01 52.7 -0.3**
	comp=N,579nm,1.2s					
MID	**Middleton Isla**	**23.73 58**		*e*P	**P**	**21 01 52.7 -0.3**
MID				pmax	pmax	
	comp=Z,579nm,1.2s					
ILAR	**Eielson Array**	**23.73 45**		P	**P**	**21 01 52.5 -0.5**
	comp=Z,93nm,0.9s,baz=246,slow=7.5,SNR=223					
ILAR				S	**S**	**21 06 04.2 -2.0**
	comp=Z,1.8nm,0.9s,baz=281,slow=9.6,SNR=2.4					
ILB	**Eielson Array**	**23.73 45**		*e*P	**P**	**21 01 51.5 -1.5**
IL1	**Eielson Array**	**23.73 45**		*e*P	**P**	**21 01 51.1 -1.9**
KLU	**Klutina**	**23.88 53**		*e*P	**P**	**21 01 53.5 -1.1**
	comp=Z,392nm,1.0s					
DIV	**Divide**	**23.95 54**		*e*P	**P**	**21 01 54.1 -1.1**
	comp=Z,431nm,1.2s					
PAX	**Paxson**	**24.15 49**		*e*P	**P**	**21 01 56.2 -0.9**
	comp=Z,493nm,1.1s					
PAX	**Paxson**	**24.15 49**		*e*P	**P**	**21 01 56.2 -0.9**
PAX				pmax	pmax	
	comp=Z,493nm,1.1s					
TEY	**Ternei**	**24.17 264**		*e*P	P	21 01 50.0 -7.3
TEY				MLR	MLR	
	comp=N,9μm,16.0s					
TEY				MLR	MLR	
	comp=E,2μm,16.0s					
TEY				MLR	MLR	
	comp=Z,3μm,15.0s					
HARP	**HAARP**	**24.27 51**		*e*P	**P**	**21 01 58.0 -0.1**
	comp=Z,534nm,1.3s					
RIDG	**Independ'e Rid**	**24.49 48**		*e*P	**P**	**21 01 58.1 -2.0**
	comp=Z,411nm,1.2s					
RAGM	**Ragged Mountai**	**24.51 56**		*e*P	**P**	**21 01 59.9 -0.4**
	comp=Z,1μm,1.2s					
BMRM	**Bremner River**	**24.52 54**		*e*P	**P**	**21 01 59.7 -0.8**
	comp=Z,523nm,1.0s					
FYU	**Fort Yukon**	**24.72 41**		*e*P	**P**	**21 02 02.3 +0.3**
	comp=Z,515nm,1.3s					
DOT	**Dot Lake**	**24.83 48**		*e*P	**P**	**21 02 02.0 -1.2**
	comp=Z,1μm,1.1s					
SCRK	**Sand Creek**	**24.89 47**		*e*P	**P**	**21 02 02.3 -1.5**
	comp=Z,211nm,1.0s					
KLR	**Kul'dur**	**25.08 277**		P	**P**	**21 02 06.2 +0.7**
	comp=Z,2.2nm,0.7s,baz=64,slow=9.3,SNR=67					
KLR				S	**S**	**21 06 25.3 -2.8**
	comp=Z,0.2nm,0.9s,baz=178,slow=16,SNR=1.3					
KLR				LR	LR	21 13 30.0
	comp=Z,468nm,18.4s,baz=64,slow=40					
CRQM	**Cirque**	**25.25 55**		*e*P	**P**	**21 02 07.1 0.0**
	comp=Z,782nm,1.1s					
TGL	**Tana Glacier**	**25.40 55**		*e*P	**P**	**21 02 07.8 -0.6**
	comp=Z,495nm,1.1s					
BALM	**Baldy**	**25.62 54**		*e*P	**P**	**21 02 09.9 -0.5**
	comp=Z,147nm,0.9s					
BALM	**Baldy**	**25.62 54**		*e*P	**P**	**21 02 09.9 -0.5**
BALM				pmax	pmax	
	comp=Z,147nm,0.9s					
TIXI	**Tiksi**	**26.09 331**		P	**P**	**21 02 14.8 +0.3**
	comp=Z,100nm,0.7s,baz=116,slow=11,SNR=161					
TIXI				S	**S**	**21 06 40.5 -3.2**
	comp=Z,8.1nm,1.0s,baz=144,slow=2.9,SNR=1.9					
TIXI				LR	LR	21 13 38.0
	comp=Z,3μm,18.6s,baz=80,slow=39					
TIXI	**Tiksi**	**26.09 331**		*e*P	**P**	**21 02 14.0 -0.4**
	comp=Z,251nm,1.0s					
TIXI				*e*S	**S**	**21 06 40.5 -3.2**
TIXI				LR	LR	
	comp=Z,4μm,22.0s					
TIXI	**Tiksi**	**26.09 331**	*c*	*e*P	**P**	**21 02 14.5 +0.1**
TIXI				pmax	pmax	
	comp=Z,498nm,1.7s					
ZEA	**Zeya**	**26.10 289**		*e*P	**P**	**21 02 14.9 +0.2**
ZEA				*e*		21 02 58.0
ZEA				*e*PPP	PPP	21 03 12.0
ZEA				*e*S	**S**	**21 06 45.0 +0.8**
ZEA				*e*SS	**SnSn**	**21 07 50.0 +7.0**
ZEA				pmax	pmax	
	comp=E,41nm,1.0s					
ZEA				pmax	pmax	
	comp=N,21nm,0.8s					
ZEA				pmax	pmax	
	comp=Z,44nm,0.8s					
ZEA				pmax	pmax	
	comp=E,600nm,5.0s					
ZEA				pmax	pmax	
	comp=Z,1μm,5.0s					
ZEA				pmax	pmax	
	comp=Z,800nm,7.0s					
ZEA				smax	smax	
	comp=N,2μm,5.0s					
ZEA				MLR	MLR	
	comp=Z,7μm,14.0s					
ZEA				MLR	MLR	
	comp=E,2μm,16.0s					
ZEA				MLR	MLR	
	comp=N,8μm,13.0s					
EGAK	**Eagle**	**26.17 45**		*e*P	**P**	**21 02 14.1 -1.1**
	comp=N,257nm,1.0s					
EGAK				LR	LR	
	comp=Z,4μm,20.0s					
MIDW	**Midway**	**26.33 158**		PFAKE		21 02 30.0 +13
MIDW				LR	LR	
	comp=Z,2μm,20.0s					
CLNS	**Chul'man**	**26.61 297**		*e*P	**P**	**21 02 19.0 -0.3**
CLNS				pmax	pmax	
	comp=Z,33nm,1.0s					
CLNS				pmax	pmax	
	comp=E,34nm,0.9s					
CLNS				pmax	pmax	
	comp=N,21nm,0.9s					
CLNS				MLR	MLR	
	comp=N,16μm,16.0s					
CLNS				MLR	MLR	
	comp=E,3μm,16.0s					
CLNS				MLR	MLR	
	comp=Z,4μm,20.0s					
DAWY	**Dawson**	**26.91 47**		*e*P	**P**	**21 02 21.8 -0.2**
	comp=Z,234nm,1.0s					
USRK	**Ussuriysk Ar.**	**27.39 267**		P	**P**	**21 02 26.2 -0.2**
	comp=Z,8.2nm,0.8s,baz=60,slow=8.6,SNR=11					
USRK				S	**S**	**21 07 03.9 -0.8**
	comp=Z,2.1nm,0.9s,baz=116,slow=6.6,SNR=1.8					
USRK				LR	LR	21 14 21.0
	comp=Z,1μm,18.2s,baz=37,slow=39					
MDJ	**Mudanjiang**	**28.60 270**		P	**P**	**21 02 37.1 -0.1**
MDJ				pP	pP	21 02 41.4 -3.6
MDJ				pmax	pmax	
	comp=Z,11nm,0.8s					
MDJ				pmax	pmax	
	comp=Z,640nm,7.3s					
MDJ				LR	LR	
	comp=Z,4μm,13.5s					
MDJ				LR	LR	
	comp=Z,4μm,17.5s					
MDJ				LR	LR	
	comp=Z,4μm,15.9s					
MDJ	**Mudanjiang**	**28.60 270**		PFAKE		21 02 50.0 +13
MDJ				LR	LR	
	comp=Z,2μm,19.0s					
MJAR	**Matsushiro Arr**	**28.67 248**		P	**P**	**21 02 39.2 +1.3**
	comp=Z,4.5nm,0.7s,baz=42,slow=7.7,SNR=12					
MJAR				S	**S**	**21 07 25.7 +0.6**
	comp=Z,1.1nm,0.7s,baz=92,slow=15,SNR=2.7					
MJB9	**Matsu-Tunnel**	**28.67 248**		*e*P	**P**	**21 02 38.6 +0.7**
	comp=Z,131nm,1.2s					
MAJO	**Matsushiro**	**28.67 248**		*e*P	**P**	**21 02 38.7 +0.8**
	comp=Z,122nm,1.1s					
MAJO				*e*S	**S**	**21 07 25.6 +0.6**
MAJO				LR	LR	
	comp=Z,4μm,22.0s					
MAJO	**Matsushiro**	**28.67 248**	⇑	*e*P	**P**	**21 02 39.1 +1.2**
MAJO				pmax	pmax	
	comp=Z,56nm,1.4s					
MAT	**Matsushiro**	**28.67 248**		P	**P**	**21 02 38.8 +0.9**
MAT				S	**S**	**21 07 30.4 +5.4**
MSHR	**Mys Shultsa**	**28.81 265**	*c*	*i*P	**P**	**21 02 39.9 +0.8**
MSHR				*i **PP	**pP**	**21 02 48.0 +1.1**
SKAG	**Skagway**	**29.29 56**		*e*P	**P**	**21 02 43.8 +0.7**
	comp=Z,136nm,1.4s					
INK	**Inuvik**	**29.41 38**		P	**P**	**21 02 44.7 +0.5**
	comp=Z,20nm,0.6s,baz=260,slow=7.8,SNR=43					
INK				S	**S**	**21 07 35.0 -1.1**
	comp=Z,9.6nm,1.0s,baz=101,slow=19,SNR=7.7					
INK	**Inuvik**	**29.41 38**		*e*P	**P**	**21 02 44.1 0.0**
	comp=Z,120nm,1.3s					
BESE	**Bessie Mountai**	**29.72 58**		*e*P	**P**	**21 02 47.1 0.0**
	comp=Z,113nm,1.3s					
JIS	**Juneau Island**	**30.04 59**		*e*P	**P**	**21 02 50.5 +0.7**
	comp=Z,115nm,1.0s					
JHJ	**Hachijo jima 2**	**30.39 241**		LR	LR	21 11 58.2
	comp=Z,748nm,21.6s,baz=76,slow=30					
CRAG	**Craig**	**31.51 63**		*e*P	**P**	**21 03 04.0 +1.2**
	comp=Z,182nm,1.1s					
CN2	**Changchun**	**31.54 271**		*e*P	**P**	**21 03 03.8 +0.7**
CN2				*e*S	**S**	**21 08 06.9 -2.9**
CN2				pmax	pmax	
	comp=Z,20nm,1.0s					
CN2				pmax	pmax	
	comp=Z,200nm,6.0s					
CN2				LR	LR	
	comp=Z,4μm,15.0s					
CN2				LR	LR	
	comp=Z,5μm,15.0s					
CN2				LR	LR	
	comp=Z,5μm,16.0s					
WRAK	**Wrangell Islan**	**31.62 61**		*e*P	**P**	**21 03 05.0 +1.3**
	comp=Z,152nm,1.0s					
WRAK				LR	LR	
	comp=Z,4μm,20.0s					
BOD	**Bodaibo**	**32.07 302**		*e*P	**P**	**21 03 07.3 -0.4**
BOD				pmax	pmax	
	comp=Z,160nm,1.2s					
HIA	**Hailar**	**32.14 284**		*e*P	**P**	**21 03 07.5 -1.0**
	comp=Z,32nm,1.1s					
HIA				LR	LR	
	comp=Z,5μm,19.0s					
HIA	**Hailar**	**32.14 284**		*e*P	**P**	**21 03 07.5 -1.0**
HIA				pmax	pmax	
	comp=Z,32nm,1.1s					
HIA				MLR	MLR	
	comp=Z,5μm,19.0s					
DLBC	**Dease Lake**	**32.21 57**		*e*P	**P**	**21 03 10.5 +1.5**
	comp=Z,149nm,1.0s					
DIB	**Dawson Inlet,**	**32.69 67**		*e*P	**P**	**21 03 13.6 +0.4**
	comp=Z,139nm,1.1s					
H11N2	**WAKE ISLAND Hy**	**33.70 188**		T	T	21 38 46.5
	baz=5.5,slow=76,SNR=2458					
H11N3	**WAKE ISLAND Hy**	**33.72 188**		T	T	21 38 48.5
	baz=5.5,slow=76					
H11N1	**WAKE ISLAND Hy**	**33.72 188**		T	T	21 38 44.4
	baz=5.5,slow=76,SNR=8025					
SNY	**Shenyang**	**33.80 270**	⇓	P	P	21 03 29.3 +6.4
SNY				S	**S**	**21 08 52.8 +7.8**
SNY				pmax	pmax	
	comp=Z,21nm,2.1s					
SNY				LR	LR	
	comp=Z,4μm,14.2s					
SNY				LR	LR	
	comp=Z,4μm,16.0s					
SNY				LR	LR	
	comp=Z,5μm,17.8s					
KSRS	**Korea Array**	**33.97 260**		P	**P**	**21 03 26.1 +1.7**
	comp=Z,4.1nm,0.8s,baz=49,slow=8.7,SNR=15					
KSRS				S	**S**	**21 08 53.0 +5.3**
	comp=Z,0.4nm,0.3s,baz=72,slow=32,SNR=3.2					
KSRS				LR	LR	21 17 14.4
	comp=Z,1μm,19.4s,baz=45,slow=36					
KS01	**Wonju Array Si**	**33.97 260**		*e*P	**P**	**21 03 25.3 +0.8**
KS15	**Wonju Array Si**	**34.00 260**		*e*P	**P**	**21 03 25.4 +0.6**
KSAR	**Wonju Array Be**	**34.00 260**		P	**P**	**21 03 26.1 +1.4**
KSAR	**Wonju Array Be**	**34.00 260**		P	**P**	**21 03 26.1 +1.4**
WAKE	**Wake Island**	**34.17 188**		PFAKE		21 03 40.0 +14
WAKE				LR	LR	
	comp=Z,2μm,19.0s					
H11S1	**WAKE ISLAND Hy**	**34.93 188**		T	T	21 40 19.0
	baz=5.5,slow=76					
H11S3	**WAKE ISLAND Hy**	**34.95 188**		T	T	21 40 20.1
	baz=5.5,slow=76					
H11S2	**WAKE ISLAND Hy**	**34.95 188**		T	T	21 40 18.5
	baz=5.5,slow=76					
TJN	**Taejon**	**35.02 259**	*c*	*e*P	**P**	**21 03 36.0 +2.4**
JNU	**Nakatsue**	**35.28 252**		P	**P**	**21 03 35.3 -0.6**
	comp=Z,6.1nm,1.0s,baz=68,slow=7.8,SNR=3.2					
BBB	**Bella Bella**	**35.53 67**		*e*P	**P**	**21 03 38.6 +0.8**
	comp=Z,207nm,1.1s					
DL2	**Dalian**	**36.77 268**		P	P	21 03 56.5 +7.9
DL2				PP	PnPn	21 05 23.9 +11
DL2				S	S	21 09 44.6 +14
DL2				pmax	pmax	
	comp=Z,9.0nm,0.6s					
DL2				pmax	pmax	
	comp=Z,260nm,8.1s					
DL2				LR	LR	
	comp=N,2μm,16.2s					
DL2				LR	LR	
	comp=E,2μm,17.1s					
DL2				LR	LR	
	comp=Z,3μm,13.9s					
YKW3	**Yellowknife Ar**	**38.11 46**		*e*P	**P**	**21 03 60.0 +0.3**
	comp=Z,78nm,1.0s					
YKA	**Yellowknife Ar**	**38.14 46**		P	**P**	**21 04 00.4 +0.5**
	comp=Z,47nm,0.8s,baz=290,slow=8.3,SNR=77					
YKA				S	**S**	**21 09 45.4 -5.6**
	comp=Z,0.8nm,0.7s,baz=233,slow=25,SNR=2.7					
YKB5	**Yellowknife Ar**	**38.14 46**		*e*P	**P**	**21 03 59.1 -0.8**
JOHN	**Johnston Islan**	**39.34 151**		PFAKE		21 04 20.0 +10
JOHN				LR	LR	
	comp=Z,153nm,19.0s					
BJT	**Baijiatuau**	**39.35 273**		PFAKE		21 04 20.0 +10
BJT				LR	LR	
	comp=Z,2μm,20.0s					
KIP	**Kipapa**	**39.35 132**		*e*P	**P**	**21 04 11.6 +1.2**
	comp=Z,128nm,0.9s					
KIP				LR	LR	
	comp=Z,5μm,19.0s					
KIP	**Kipapa**	**39.35 132**		*e*P	**P**	**21 04 11.6 +1.2**
KIP				pmax	pmax	
	comp=Z,128nm,0.9s					
KIP				MLR	MLR	
	comp=Z,5μm,19.0s					
IRK	**Irkutsk**	**39.42 297**		*e*P	**P**	**21 04 09.6 -1.1**
IRK				*e*		21 04 22.1
IRK				*e*		21 05 45.1
IRK				*e*S	**S**	**21 10 01.6 -8.9**
IRK				*e*		21 14 11.8
IRK				pmax	pmax	
	comp=Z,57nm,2.0s					
NRIK	**Noril'sk**	**39.69 326**		P	**P**	**21 04 12.9 +0.1**
	comp=Z,19nm,0.7s,baz=84,slow=8.8,SNR=41					
NRIK				S	**S**	**21 10 10.2 -4.0**
	comp=Z,3.6nm,0.5s,baz=63,slow=5.8,SNR=1.8					
NRIK				LR	LR	21 22 03.5
	comp=Z,3μm,19.4s,baz=76,slow=38					
LLLB	**Lillooet**	**39.71 66**		*e*P	**P**	**21 04 14.3 +1.0**
	comp=Z,203nm,0.9s					
PGC	**Sidney**	**39.86 70**		*e*P	**P**	**21 04 14.7 +0.4**
	comp=Z,412nm,1.9s					
TLY	**Talaya**	**40.03 296**		P	**P**	**21 04 16.4 +0.6**
	comp=Z,15nm,0.9s,baz=352,slow=6.8,SNR=7.7					
TLY				S	**S**	**21 10 17.2 -2.6**

comp=Z,4.6nm,0.6s,baz=144,slow=14,SNR=2.2
TLY LR LR 21 20 27.5
comp=Z,6μm,19.5s,baz=47,slow=36
TLY Talaya 40.03 296 *e*P **P 21 04 15.7 -0.2**
comp=Z,19nm,0.9s
TLY Talaya 40.03 296 P **P 21 04 16.6 +0.7**
SNR=8.8
TLY Talaya 40.03 296 *d i*P **P 21 04 16.2 +0.3**
TLY *e*S **S 21 10 17.4 -2.4**
TLY pmax pmax
comp=Z,21nm,0.9s
TLY MLR MLR
comp=Z,6μm,16.0s
ULN Ulaanbaatar 40.13 289 *e*P **P 21 04 16.4 -0.5**
comp=Z,73nm,1.5s
ULN LR LR
comp=Z,4μm,22.0s
ULN Ulaanbaatar 40.13 289 P **P 21 04 18.5 +1.5**
SNR=22
ULN Ulaanbaatar 40.13 289 *d i*P **P 21 04 17.4 +0.5**
ULN pmax pmax
comp=Z,37nm,1.7s
A04D Lummi Island 40.24 69 P **P 21 04 18.6 +1.1**
baz=302,SNR=46
NLWA Neilton Lookou 40.30 71 *e*P **P 21 04 18.8 +0.7**
comp=Z,210nm,1.0s
NLWA LR LR
comp=Z,4μm,20.0s
RES Resolute Bay 40.40 24 *e*P **P 21 04 20.0 +1.4**
comp=Z,71nm,1.3s
RES Resolute Bay 40.40 24 *e*P **P 21 04 20.0 +1.4**
RES pmax pmax
comp=Z,71nm,1.3s
SONA1 Songino Array 40.51 290 *e*P **P 21 04 20.1 0.0**
SONA0 Songino Array 40.52 290 *e*P **P 21 04 20.7 +0.6**
SONA0 *e*ScP **ScP 21 10 10.2 +0.8**
SONM Songino Array 40.52 290 P **P 21 04 20.7 +0.6**
comp=Z,17nm,0.7s,baz=60,slow=9.1,SNR=89
SONM ScP **ScP 21 10 10.2 +0.8**
comp=Z,1.1nm,0.6s,baz=88,slow=2.7,SNR=4.8
SONM LR LR 21 20 58.1
comp=Z,3μm,20.2s,baz=59,slow=36
MBW Mount Baker 40.65 69 *e*P **P 21 04 21.8 +0.6**
B05A Bryant 40.82 69 P **P 21 04 23.2 +0.8**
baz=303,SNR=47
ZAK Zakamensk 40.90 295 *e*P **P 21 04 22.9 -0.2**
ZAK pmax pmax
comp=Z,26nm,1.7s
E03A Lebam 40.94 72 *e*P **P 21 04 24.2 +0.8**
comp=Z,310nm,1.1s
B06A Marblemount 41.03 69 *e*P **P 21 04 24.0 0.0**
comp=Z,135nm,1.1s
TIA Tai'an 41.24 268 P P 21 04 33.9 +7.9
TIA S **S 21 10 40.5 +2.5**
TIA pmax pmax
comp=Z,7.0nm,0.8s
TIA AMB AMB
comp=Z,330nm,4.4s
TIA LR LR
comp=N,930nm,16.3s
TIA LR LR
comp=E,1μm,15.9s
TIA LR LR
comp=Z,980nm,16.4s
F03A Seaside 41.29 73 *e*P **P 21 04 26.9 +0.6**
comp=Z,328nm,1.0s
MHA Mahukona 41.38 130 *e*P **P 21 04 27.5 +0.3**
MHA Mahukona 41.38 130 *e*P **P 21 04 27.5 +0.3**
MOY Mondy 41.46 297 *e*P **P 21 04 27.7 -0.1**
MOY pmax pmax
comp=Z,64nm,2.2s
D05A Enumclaw 41.48 71 *e*P **P 21 04 28.7 +0.9**
comp=Z,240nm,1.0s
JOW Kunigami 41.51 248 LR LR 21 20 57.8
comp=Z,319nm,21.8s,baz=40,slow=35
F04D Rainier, OR 41.52 73 P **P 21 04 28.6 +0.4**
baz=305,SNR=5.5
HHC Hu-ho-hao-te 41.58 278 *e*P **P 21 04 29.1 +0.2**
HHC sP pP 21 04 38.0 +1.2
HHC S **S 21 10 45.3 +2.1**
HHC sS pS 21 10 53.8 +1.4
HHC SS **SS 21 13 44.0 -4.2**
HHC pmax pmax
comp=Z,16nm,0.8s
HHC pmax pmax
comp=Z,380nm,5.0s
HHC LR LR
comp=Z,6μm,16.4s
HHC LR LR
comp=Z,2μm,17.3s
C06D Leavenworth 41.69 69 P **P 21 04 29.9 +0.4**
baz=304
LON Longmire 41.82 71 *e*P **P 21 04 30.6 -0.1**
comp=Z,64nm,1.1s
LON Longmire 41.82 71 *e*P **P 21 04 30.6 -0.1**
LON pmax pmax
comp=Z,64nm,1.1s
G03D McMinnville, O 41.87 74 P **P 21 04 31.5 +0.5**
baz=306,SNR=9.9
POHA Pohakuloa 41.92 130 PFAKE 21 04 40.0 +8.0
POHA LR LR
comp=Z,3μm,20.0s
B202 Windy Ridge, M 41.92 72 *e*P **P 21 04 32.4 +0.8**
LTY Liberty 42.18 70 *e*P **P 21 04 33.5 -0.1**
comp=Z,158nm,1.3s
COR Corvallis 42.21 75 *e*P **P 21 04 34.8 +1.0**
comp=Z,438nm,1.0s
COR Corvallis 42.21 75 *e*P **P 21 04 34.8 +1.0**
COR pmax pmax
comp=Z,438nm,1.0s
B08A Colville Reser 42.31 68 *e*P **P 21 04 34.5 -0.1**
comp=Z,204nm,1.0s
SSE Sheshan 42.38 259 P **P 21 04 37.4 +2.1**
SSE S **S 21 10 56.5 +1.5**
SSE pmax pmax
comp=Z,16nm,0.8s
SSE pmax pmax
comp=Z,560nm,4.8s
SSE LR LR
comp=Z,600nm,13.3s
SSE LR LR
comp=Z,990nm,14.0s
KEBM Edson Butte 42.63 77 *e*P **P 21 04 38.1 +0.7**
comp=Z,498nm,1.0s
BTO Baotou 42.65 278 *e*P **P 21 04 38.8 +1.2**
I03D Drain, OR 42.71 76 P **P 21 04 39.0 +1.1**
baz=307,SNR=30
H04A Detroit Lake 42.80 74 *e*P **P 21 04 38.7 +0.1**
comp=Z,329nm,1.1s
G05D Wamic, OR 42.97 73 P **P 21 04 40.7 +0.6**
baz=306,SNR=20
E07A Sunnyside 43.04 70 *e*P **P 21 04 40.9 +0.3**
comp=Z,302nm,1.3s
NJ2 Nanjing 43.08 262 *e*P **P 21 04 41.3 +0.3**
NJ2 S **S 21 11 08.8 +3.6**
NJ2 sS **sS 21 11 18.6 +0.3**
NJ2 pmax pmax
comp=Z,9.0nm,0.9s
NJ2 LR LR
comp=Z,3μm,13.0s
NJ2 LR LR
comp=Z,3μm,16.8s
NJ2 LR LR
comp=Z,3μm,18.3s
KBO Bosley Butte 43.10 78 *e*P **P 21 04 42.4 +1.3**
comp=Z,459nm,1.2s
IRO Indian Ridge 43.16 75 *e*P **P 21 04 42.3 +0.5**
I04A Tendick Farm, 43.20 75 P **P 21 04 42.5 +0.6**
baz=307,SNR=57
PRLK Prince Lake 43.21 74 *e*P **P 21 04 42.8 +0.7**
C09A Chrisman Ranch 43.22 68 *e*P **P 21 04 41.9 -0.1**
D08A Wollman Farm, 43.28 69 *e*P **P 21 04 42.0 -0.5**
comp=Z,143nm,1.1s
HAWA Hanford 43.32 70 *e*P **P 21 04 43.1 +0.3**
comp=Z,233nm,0.9s
HAWA LR LR
comp=Z,3μm,19.0s
G06A Carlson Farm, 43.37 72 *e*P **P 21 04 43.1 -0.1**
comp=Z,162nm,1.4s
F07A Phinny Hill Vi 43.38 71 *e*P **P 21 04 43.7 +0.4**
comp=Z,201nm,1.0s
I05D Terrebonne, OR 43.49 74 P **P 21 04 44.5 +0.2**
baz=307,SNR=24
L02D Cave Junction, 43.50 78 P **P 21 04 45.3 +1.0**
baz=308,SNR=58
E08A Dider Farm, El 43.53 70 *e*P **P 21 04 43.7 -0.7**
comp=Z,153nm,1.0s

NEW Newport 43.59 67 P **P 21 04 45.1 +0.1**
comp=Z,137nm,0.9s,baz=302,slow=8.4
NEW LR LR 21 21 03.2
comp=Z,884nm,21.6s,baz=297,slow=34
NEW Newport 43.59 67 P **P 21 04 45.1 +0.1**
baz=305,SNR=84
NEW Newport 43.59 67 *e*P **P 21 04 44.7 -0.3**
comp=Z,207nm,1.0s
NEW LR LR
comp=Z,3μm,19.0s
HUMO Hull Mountain 43.60 77 *e*P **P 21 04 45.8 +0.6**
comp=Z,175nm,1.0s
J04D Umpqua Nationa 43.71 75 P **P 21 04 47.0 +0.8**
baz=308,SNR=45
KNGR Kungurtug, Tuv 43.88 298 ⇑ *i*P **P 21 04 48.3 +0.9**
E09A Wood Farm, Sta 44.03 69 *e*P **P 21 04 48.0 -0.5**
comp=Z,280nm,1.2s
PINE Pine Mountain 44.05 74 *e*P **P 21 04 49.1 +0.1**
comp=Z,208nm,1.1s
JCC Jacoby Creek, 44.08 79 *e*P **P 21 04 50.2 +1.3**
comp=Z,348nm,1.0s
J05D Fort Rock, OR 44.19 75 P **P 21 04 51.1 +1.0**
baz=308,SNR=213
KHMM Horse Mountain 44.22 79 *e*P **P 21 04 50.9 +0.6**
comp=Z,406nm,1.0s
YBH Yreka Blue Hor 44.28 78 *e*P **P 21 04 51.4 +0.7**
comp=Z,284nm,0.9s
YBH Yreka Blue Hor 44.28 78 *e*P **P 21 04 51.4 +0.7**
YBH pmax pmax
comp=Z,284nm,0.9s
G08A Pilot Rock 44.29 71 *e*P **P 21 04 50.1 -0.6**
comp=Z,103nm,1.2s
K04D Chiloquin, OR 44.29 76 P **P 21 04 51.4 +0.6**
baz=308,SNR=5.9
M02C Callahan 44.41 78 P **P 21 04 52.9 +1.2**
baz=309,SNR=54
KMRM Mail Ridge 44.65 80 *e*P **P 21 04 54.7 +1.1**
comp=Z,353nm,0.9s
I07A Izee 44.70 73 *e*P **P 21 04 54.0 0.0**
comp=Z,116nm,1.1s
K05A Summer Lake 44.73 75 *e*P **P 21 04 54.8 +0.4**
comp=Z,343nm,1.0s
N02D Trinity Center 44.76 78 P **P 21 04 55.6 +1.1**
baz=309,SNR=44
M04C Macdoel 44.76 77 P **P 21 04 55.4 +0.8**
baz=309,SNR=124
F10A Beach Ranch, E 44.86 69 *e*P **P 21 04 54.8 -0.5**
comp=Z,127nm,1.1s
WALA Waterton Lakes 44.89 64 *e*P **P 21 04 55.6 +0.1**
comp=Z,532nm,0.9s
WALA *e*S **S 21 11 31.8 +0.3**
GUMO Guam 44.95 218 LR LR 21 20 22.7
comp=Z,650nm,20.1s,baz=31,slow=32
KCPM Cahto Peak 45.06 80 *e*P **P 21 04 58.0 +1.0**
comp=Z,260nm,1.0s
WDC Whiskeytown Da 45.11 79 *e*P **P 21 04 57.6 +0.4**
comp=Z,222nm,1.0s
WDC Whiskeytown Da 45.11 79 *e*P **P 21 04 57.6 +0.4**
WDC pmax pmax
comp=Z,222nm,1.0s
BSMT Bassoo Peak 45.11 66 *e*P **P 21 04 57.9 +0.5**
JTMT Jette 45.45 66 *e*P **P 21 05 00.4 +0.4**
comp=Z,234nm,1.2s
BMO Blue Mountains 45.49 71 *e*P **P 21 05 00.1 -0.2**
comp=Z,238nm,1.4s
BMO LR LR
comp=Z,3μm,20.0s
BMO Blue Mountains 45.49 71 *e*P **P 21 05 00.1 -0.2**
BMO pmax pmax
comp=Z,238nm,1.4s
BMO MLR MLR
comp=Z,3μm,20.0s
HVS Khovu-Aksy 45.58 300 ⇓ *e*P **P 21 05 02.0 +1.1**
HVS *i* *SP **sP 21 05 11.2 -1.0**
HVS pmax pmax
comp=Z,84nm,1.8s
MOD Modoc Plateau 45.58 76 *e*P **P 21 05 01.1 -0.1**
comp=Z,278nm,1.0s
O03D Paynes Creek 45.72 78 P **P 21 05 02.2 0.0**
baz=310,SNR=106
J08A Circle Bar Ran 45.74 73 *e*P **P 21 05 02.0 -0.3**
comp=Z,109nm,1.1s
HOPS Hopland Field 45.81 81 *e*P **P 21 05 02.9 +0.2**
comp=Z,387nm,1.0s
LRDM Redding Peak 45.81 78 *e*P **P 21 05 04.0 +1.1**
GDXM Geysers 46.09 81 *e*P **P 21 05 06.0 +0.9**
comp=Z,275nm,1.1s
MGL Magalia 46.18 79 *e*P **P 21 05 05.9 +0.1**
MSO Missoula 46.18 66 P **P 21 05 05.6 -0.1**
baz=307,SNR=85
MSO Missoula 46.18 66 *e*P **P 21 05 05.2 -0.5**
comp=Z,198nm,1.1s
WVOR Wild Horse Val 46.22 74 *e*P **P 21 05 05.9 -0.2**
comp=Z,146nm,1.1s
WVOR LR LR
comp=Z,3μm,21.0s
WVOR Wild Horse Val 46.22 74 *e*P **P 21 05 05.9 -0.2**
WVOR pmax pmax
comp=Z,146nm,1.1s
WVOR MLR MLR
comp=Z,3μm,21.0s
ORV Oroville 46.38 79 *e*P **P 21 05 06.6 -0.6**
comp=Z,162nm,0.9s
ORV Oroville 46.38 79 *e*P **P 21 05 06.6 -0.6**
ORV pmax pmax
comp=Z,162nm,0.9s
MCCM Marconi Confer 46.48 82 *e*P **P 21 05 08.1 +0.1**
comp=Z,170nm,1.0s
TATO Taipei 46.79 253 PFAKE 21 05 20.0 +9.4
TATO LR LR
comp=Z,2μm,19.0s
WHN Wuhan 46.84 265 ⇓ P **P 21 05 11.4 +0.5**
WHN S S 21 12 11.8 +12
WHN LR LR
comp=Z,6μm,15.9s
BEKR Beckworth 46.84 78 *e*P **P 21 05 11.0 -0.1**
comp=Z,165nm,1.0s
AFDM Forest Hills D 47.08 79 *e*P **P 21 05 12.1 -0.7**
comp=Z,147nm,1.1s
MFID Camas Ranch 47.21 71 *e*P **P 21 05 13.4 -0.5**
comp=Z,118nm,1.0s
HRY Holter Researc 47.41 65 *e*P **P 21 05 15.1 -0.2**
KBS Kingsbay 47.48 355 PFAKE 21 05 30.0 +15
KBS LR LR
comp=Z,704nm,21.0s
PAHR Pah Rah Range 47.52 77 *e*P **P 21 05 16.3 -0.1**
comp=Z,273nm,1.0s
PATS Pohnpei 47.58 198 *e*P **P 21 05 19.7 +2.9**
comp=Z,327nm,1.7s
LRM Limekiln Ridge 47.61 67 *e*P **P 21 05 16.3 -0.8**
VCNR Virginia City 47.63 78 *e*P **P 21 05 17.6 +0.3**
comp=Z,266nm,1.0s
XAN Xi'an 47.64 272 P **P 21 05 17.3 +0.1**
XAN pP pP 21 05 23.3 -1.9
XAN sP sP 21 05 26.1 -2.3
XAN PP **PP 21 07 07.8 -0.9**
XAN S **S 21 12 09.9 -1.2**
XAN pmax pmax
comp=Z,10.0nm,1.1s
XAN pmax pmax
comp=Z,650nm,7.3s
XAN LR LR
comp=Z,3μm,13.7s
XAN LR LR
comp=Z,3μm,14.4s
XAN LR LR
comp=Z,3μm,15.8s
FFC Flin Flon 47.65 52 *e*P **P 21 05 16.7 -0.2**
comp=Z,83nm,1.3s
FFC *e*PcP **PcP 21 06 45.9 -0.2**
FFC LR LR
comp=Z,4μm,21.0s
FFC Flin Flon 47.65 52 *e*P **P 21 05 16.7 -0.2**
FFC *e* 21 06 45.9
FFC pmax pmax
comp=Z,83nm,1.3s
FFC MLR MLR
comp=Z,4μm,21.0s
EGMT Eagleton 47.73 63 P **P 21 05 17.6 -0.2**
baz=308,SNR=47
EGMT Eagleton 47.73 63 *e*P **P 21 05 17.4 -0.3**
comp=Z,150nm,0.8s
EGMT *e*PcP **PcP 21 06 45.9 -0.7**
EGMT LR LR
comp=Z,4μm,19.0s
PNTR Pine Nut 47.80 78 *e*P **P 21 05 18.7 +0.2**
comp=Z,391nm,0.9s

DLMT Dillon 47.81 67 *e*P **P 21 05 17.8 -0.8**
comp=Z,60nm,1.1s
HLID Hailey 47.92 70 P **P 21 05 19.5 +0.1**
baz=309,SNR=135
HLID Hailey 47.92 70 *e*P **P 21 05 19.2 -0.3**
comp=Z,116nm,1.0s
HLID LR LR
comp=Z,3μm,19.0s
SPA0 Spitsbergen Ar 47.92 353 *e*P **P 21 05 18.5 -0.3**
SPITS Spitsbergen Ar 47.92 353 P **P 21 05 18.2 -0.6**
comp=Z,80nm,0.8s,baz=55,slow=7.2,SNR=50
SPITS LR LR 21 26 00.1
comp=Z,2μm,18.8s,baz=25,slow=37
MCMT McKenzie Canyo 48.01 68 *e*P **P 21 05 19.5 -0.6**
CMB Columbia Colle 48.03 80 *e*P **P 21 05 19.9 -0.3**
comp=Z,161nm,1.1s
CMB *e*PcP **PcP 21 06 47.7 -0.1**
CMB Columbia Colle 48.03 80 *e*P **P 21 05 19.9 -0.3**
CMB *e* 21 06 47.7
CMB pmax pmax
comp=Z,161nm,1.1s
YULB Yu-li 48.13 252 *e*P **P 21 05 22.1 +1.0**
comp=Z,106nm,1.5s
BOZ Bozeman (W) 48.20 66 P **P 21 05 21.6 0.0**
baz=308,SNR=234
BOZ Bozeman (W) 48.20 66 *e*P **P 21 05 21.0 -0.5**
comp=Z,163nm,0.9s
BOZ LR LR
comp=Z,2μm,20.0s
BOZ Bozeman (W) 48.20 66 P **P 21 05 21.3 -0.2**
SAO San Andreas Ge 48.25 82 *e*P **P 21 05 21.2 -0.6**
comp=Z,70nm,0.9s
WAKR Walker 48.28 79 *e*P **P 21 05 22.9 +0.6**
comp=Z,201nm,0.9s
ZAA1 Zalesovo Array 48.35 308 *e*P **P 21 05 20.8 -1.6**
ZAA0 Zalesovo Array 48.35 308 *e*P **P 21 05 20.9 -1.5**
comp=Z,18nm,0.8s
ZALV Zalesovo Beam 48.35 308 P **P 21 05 20.8 -1.6**
comp=Z,7.8nm,0.6s,baz=49,slow=6.8,SNR=24
ZALV LR LR 21 25 34.6
comp=Z,2μm,19.5s,baz=44,slow=36
ZALV Zalesovo Beam 48.35 308 *e*P **P 21 05 20.9 -1.5**
QZH Quanzhou 48.49 256 *e*P P 21 05 36.8 +13
QZH S S 21 12 38.8 +16
NVS Novosibirsk 48.56 310 *e*P **P 21 05 23.4 -0.5**
NVS *e* 21 07 11.3
NVS *e*S **S 21 12 20.5 -3.0**
NVS pmax pmax
comp=Z,96nm,1.5s
NVS pmax pmax
comp=N,26nm,1.2s
NVS pmax pmax
comp=E,42nm,1.5s
NVS pmax pmax
comp=Z,102nm,1.9s
NVS pmax pmax
comp=N,44nm,2.0s
NVS pmax pmax
comp=E,92nm,1.9s
NVS smax smax
comp=N,74nm,2.2s
NVS smax smax
comp=E,84nm,2.1s
KVN Kaiserville 48.70 77 *e*P **P 21 05 25.7 +0.2**
comp=E,232nm,1.0s
KVN Kaiserville 48.70 77 P **P 21 05 25.8 +0.2**
FCC Fort Churchill 48.74 44 *e*P **P 21 05 25.0 -0.2**
comp=E,93nm,0.9s
FCC Fort Churchill 48.74 44 *e*P **P 21 05 25.0 -0.2**
FCC pmax pmax
comp=Z,93nm,0.9s
QLMT Earthquake Lak 48.79 67 *e*P **P 21 05 26.1 0.0**
QLMT *e*PcP **PcP 21 06 52.5 +1.8**
YHB Horse Butte 48.97 67 *e*P **P 21 05 27.8 +0.2**
comp=Z,326nm,1.0s
NV01 Mina Array Sit 48.99 78 *e*P **P 21 05 27.9 +0.1**
NV01 *e*S **S 21 12 31.8 +1.3**
NVAR Mina Array Bea 48.99 78 P **P 21 05 27.8 0.0**
comp=Z,158nm,0.9s,baz=291,slow=7.7,SNR=317
NVAR S **S 21 12 31.8 +1.3**
comp=Z,0.8nm,0.8s,baz=306,slow=9.9,SNR=3.5
NVAR LR LR 21 24 09.5
comp=Z,507nm,20.5s,baz=65,slow=34
PMPB Monarch Peak 49.00 82 *e*P **P 21 05 27.8 +0.1**
comp=Z,146nm,1.1s
MDPB Devils Postpil 49.07 79 *e*P **P 21 05 28.7 +0.3**
comp=Z,258nm,0.9s
NV11 Mina Array Sit 49.08 78 *e*P **P 21 05 28.6 +0.2**
comp=Z,10nm,0.9s
OMMB Old Mammoth Mi 49.13 79 *e*P **P 21 05 29.3 +0.3**
comp=Z,142nm,1.0s
YMR Madison River 49.15 67 *e*P **P 21 05 29.0 +0.1**
comp=Z,283nm,1.1s
GCMT Greycliff 49.15 65 *e*P **P 21 05 29.2 +0.3**
MLAC Mammoth, Mammo 49.21 79 P **P 21 05 30.3 +0.8**
baz=312
ELK Elko 49.26 74 P **P 21 05 33.0 +3.2**
comp=Z,66nm,0.9s,baz=341,slow=8.4,SNR=202
ELK Elko 49.26 74 P **P 21 05 33.0 +3.2**
ELK pmax pmax
comp=Z,66nm,0.9s
LZH Lanzhou 49.27 278 ⇓ P **P 21 05 31.0 +1.1**
LZH pP pP 21 05 38.3 +0.3
LZH sP sP 21 05 40.5 -0.7
LZH PP **PP 21 07 24.5 +0.9**
LZH S **S 21 12 34.4 +0.1**
LZH sS sS 21 12 46.9 -0.8
LZH SS **SS 21 16 02.8 -2.7**
LZH pmax pmax
comp=Z,130nm,1.2s
LZH pmax pmax
comp=Z,1μm,5.7s
LZH LR LR
comp=Z,8μm,15.2s
LZH LR LR
comp=Z,8μm,17.3s
YNR Norris Junctio 49.28 67 *e*P **P 21 05 30.7 +0.7**
comp=Z,186nm,1.2s
YFT Old Faithful 49.36 67 *e*P **P 21 05 31.7 +1.1**
comp=Z,172nm,0.9s
GTA Gaotai 49.42 284 ⇓ P **P 21 05 31.5 +0.6**
GTA pP pP 21 05 37.3 -1.8
GTA sP sP 21 05 39.9 -2.3
GTA S **S 21 12 37.3 +1.0**
GTA sS sS 21 12 48.5 -1.1
GTA ScS **ScS 21 15 21.5 +0.7**
GTA SS **SS 21 16 05.8 -1.9**
GTA pmax pmax
comp=Z,20nm,0.8s
GTA pmax pmax
comp=Z,150nm,6.8s
GTA LR LR
comp=Z,6μm,18.2s
GTA LR LR
comp=Z,5μm,18.5s
YPP Pitchstone Pla 49.49 67 *e*P **P 21 05 32.6 +0.9**
comp=Z,111nm,1.1s
LKWY Lake 49.53 67 PFAKE 21 05 40.0 +8.1
LKWY LR LR
comp=Z,2μm,20.0s
H17A Grant Village 49.54 67 P **P 21 05 33.5 +1.6**
baz=310,SNR=56
H17A Grant Village 49.54 67 *e*P **P 21 05 33.3 +1.4**
comp=Z,269nm,1.1s
IMW Indian Meadow 49.66 68 *e*P **P 21 05 33.1 +0.2**
comp=Z,145nm,1.0s
PAGB Antelope Grade 49.66 82 *e*P **P 21 05 32.7 +0.1**
comp=Z,111nm,0.9s
DGZ Jazzator, Alta 49.66 302 *i* P **P 21 05 32.8 +0.1**
DGZ *i* AP **sP 21 05 45.3 +1.4**
FXWY Fox Creek 49.77 68 *e*P **P 21 05 33.3 -0.4**
comp=Z,52nm,1.0s
FXWY *e*PcP **PcP 21 06 54.3 +0.1**
RLMT Red Lodge 49.80 66 P **P 21 05 34.5 +0.7**
baz=310,SNR=187
RLMT S **S 21 12 41.0 -0.6**
baz=310
RLMT Red Lodge 49.80 66 *e*P **P 21 05 34.1 +0.3**
comp=Z,252nm,1.0s
RLMT LR LR
comp=Z,2μm,20.0s
MOOW Moose Ponds 49.86 68 *e*P **P 21 05 34.5 +0.2**
comp=Z,69nm,1.0s
TPAW Teton Pass 49.91 68 *e*P **P 21 05 34.9 +0.1**
comp=Z,161nm,1.6s
ENH Enshi 49.95 268 *e*P **P 21 05 35.8 +0.8**

comp=Z,123nm,1.3s
ENH LR LR
TIN Tinemaha, Big 49.96 79 P P 21 05 35.9 +0.8
baz=313,SNR=30
HVU Hansel Valley 49.99 71 eP P 21 05 35.4 +0.1
comp=Z,124nm,1.0s
HVU Hansel Valley 49.99 71 eP P 21 05 35.4 +0.1
HVU pmax pmax
comp=Z,125nm,1.0s
LOHW Long Hollow 50.02 68 eP P 21 05 35.5 -0.1
comp=Z,70nm,1.0s
SNOW Snow King Moun 50.04 68 eP P 21 05 36.3 +0.5
comp=Z,89nm,1.3s
DAG Danmarks Havn 50.04 3⇓iP P 21 05 34.4 -0.6
comp=Z,27nm,0.9s
comp=Z,2µm,17.0s
DAG Danmarks Havn 50.04 3⇓iP P 21 05 34.4 -0.6
DAG pmax pmax
comp=Z,27nm,0.9s
DAG MLR MLR
comp=Z,2µm,17.0s
REDW Red Top Meadow 50.05 68 eP P 21 05 36.1 +0.3
comp=Z,172nm,1.6s
SMMC Simmler 50.09 82 P P 21 05 36.4 +0.4
baz=314
VES Vestal, Richgr 50.27 81 P P 21 05 37.0 -0.3
baz=313,SNR=58
AHID Auburn Hatcher 50.29 69 eP P 21 05 37.3 -0.3
comp=Z,134nm,1.1s
AHID LR LR
comp=Z,3µm,19.0s
DGMT Dagmar 50.37 59 P P 21 05 38.1 +0.1
baz=309,SNR=34
DGMT Dagmar 50.37 59 eP P 21 05 37.5 -0.4
comp=Z,222nm,0.9s
DGMT LR LR
comp=Z,4µm,19.0s
BGU Big Grassy Mou 50.40 72 eP P 21 05 38.2 -0.3
comp=Z,48nm,1.0s
LAO LASA Array 50.44 62 P P 21 05 39.4 +0.8
baz=310,SNR=45
LAO LASA Array 50.44 62 eP P 21 05 39.1 +0.6
comp=Z,320nm,1.0s
LAO LR LR
comp=Z,2µm,19.0s
CWC Cottonwood Cre 50.46 80 P P 21 05 39.1 +0.2
baz=313
SPUT South Promonto 50.48 71 eP P 21 05 39.2 +0.1
comp=Z,108nm,1.1s
PKM Mcpherson Peak 50.49 82 P P 21 05 39.6 +0.4
baz=314,SNR=45
GRAC Grapevine Rang 50.50 79 P P 21 05 39.7 +0.6
baz=313,SNR=25
R11A Troy Canyon, C 50.64 76 P P 21 05 40.5 +0.3
baz=312,SNR=5.6
R11A Troy Canyon, C 50.64 76 eP P 21 05 40.1 -0.1
comp=Z,192nm,0.9s
ISA Isabella, Lake 50.76 81 P P 21 05 40.5 -0.6
baz=314,SNR=62
ISA Isabella, Lake 50.76 81 eP P 21 05 40.2 -0.8
comp=Z,112nm,0.9s
ISA Isabella, Lake 50.76 81 eP P 21 05 40.3 -0.8
ISA pmax pmax
comp=Z,112nm,0.9s
HWUT Hardware Ranch 50.79 70 eP P 21 05 41.2 -0.2
comp=Z,117nm,1.1s
HWUT LR LR
comp=Z,2µm,19.0s
WHFM Hanning Flat 50.81 81 eP P 21 05 40.9 -0.5
DAC Darwin (Calif) 50.86 80 eP P 21 05 41.8 -0.2
comp=Z,102nm,0.9s
DAC Darwin (Calif) 50.86 80 eP P 21 05 41.8 -0.2
DAC pmax pmax
comp=Z,102nm,0.9s
SBC Santa Barbara 50.86 83 P P 21 05 42.2 +0.5
baz=314,SNR=6.8
ARVC Arvin 50.91 82 P P 21 05 41.6 -0.6
baz=314,SNR=6.2
DUG Dugway, Tooele 51.01 73 P P 21 05 43.6 +0.6
baz=312,SNR=61
DUG Dugway, Tooele 51.01 73 eP P 21 05 43.1 +0.1
comp=Z,231nm,1.0s
DUG LR LR
comp=Z,2µm,20.0s
DUG Dugway, Tooele 51.01 73 eP P 21 05 43.1 +0.1
DUG pmax pmax
comp=Z,231nm,1.0s
DUG MLR MLR
comp=Z,2µm,20.0s
MPMC Manual Prospec 51.07 80 P P 21 05 43.7 +0.2
baz=313,SNR=127
BW06 Boulder Array 51.16 68 P P 21 05 44.3 +0.2
baz=311,SNR=110
BW06 Boulder Array 51.16 68 eP P 21 05 44.2 0.0
comp=Z,222nm,1.0s
BW06 LR LR
comp=Z,1µm,19.0s
PD31 Pinedale Array 51.16 68 eP P 21 05 43.9 -0.2
PDAR Pinedale Array 51.16 68 P P 21 05 44.2 +0.1
comp=Z,137nm,0.9s,baz=297,slow=4.6,SNR=521
PDAR Pinedale Array 51.16 68 eP P 21 05 43.9 -0.2
FURC Furnace Creek, 51.16 79 P P 21 05 44.5 +0.6
baz=313,SNR=118
TPNV Topopah Spring 51.19 78 P P 21 05 45.0 +0.5
baz=313,SNR=427
TPNV Topopah Spring 51.19 78 eP P 21 05 44.5 0.0
comp=Z,348nm,0.9s
TPNV eS S 21 13 06.9 +5.8
TPNV Topopah Spring 51.19 78 eP P 21 05 44.5 0.0
TPNV eS S 21 13 06.9 +5.8
TPNV pmax pmax
comp=Z,348nm,0.9s
TCUT Toone Canyon 51.20 71 eP P 21 05 45.0 +0.4
comp=Z,160nm,1.1s
SCZ2 Santa Cruz Isl 51.22 83 P P 21 05 44.5 0.0
baz=314,SNR=17
CTU Camp Tracy 51.29 71 eP P 21 05 45.2 +0.1
comp=Z,113nm,1.0s
OSI Osito Audit: C 51.33 82 P P 21 05 45.3 0.0
baz=314
OSI Osito Audit: C 51.33 82 eP P 21 05 45.8 +0.4
comp=Z,183nm,0.8s
LRMC Laurel Mtn Rad 51.35 80 P P 21 05 45.3 -0.3
baz=314,SNR=31
BLG Laguna Peak, P 51.48 83 P P 21 05 46.2 -0.3
baz=314,SNR=14
JLU Jordanelle 51.52 71 eP P 21 05 47.1 +0.2
comp=Z,149nm,1.1s
PSUT Pine Spring 51.52 75 eP P 21 05 47.0 +0.1
comp=Z,139nm,0.9s
EDW2 Edwards Air Fo 51.58 81 P P 21 05 47.1 -0.1
baz=314,SNR=68
NLU North Lily Min 51.59 72 eP P 21 05 47.9 +0.5
comp=Z,88nm,1.0s
TARA Tarawa 51.77 178 PFAKE 21 06 00.0 +11
TARA LR LR
comp=Z,117nm,21.0s
MPU Maple Canyon 51.80 72 eP P 21 05 49.1 +0.1
comp=Z,133nm,1.1s
SNCC San Nicolas Is 51.80 84 P P 21 05 49.0 +0.1
baz=315,SNR=10
SNCC San Nicolas Is 51.80 84 eP P 21 05 48.7 -0.2
comp=Z,217nm,0.9s
DECC Green Verdugo 51.81 82 P P 21 05 48.9 0.0
baz=314,SNR=17
SHOC Shoshone, Teco 51.89 79 P P 21 05 49.9 +0.4
baz=314,SNR=86
JNH Juniper Hills 51.90 82 eP P 21 05 50.3 +0.5
PASC Pasadena Art C 51.96 82 eP P 21 05 49.5 -0.5
comp=Z,179nm,0.9s
HOLC Holcomb Ridge 51.96 81 eP P 21 05 50.6 +0.5
GSC Goldstone, Bar 51.99 80 P P 21 05 50.5 +0.1
baz=314,SNR=178
GSC Goldstone, Bar 51.99 80 eP P 21 05 50.3 0.0
comp=Z,256nm,0.9s
MWC Mount Wilson 52.00 82 eP P 21 05 50.1 -0.4
comp=Z,237nm,0.9s
SHPR Sheep Range 52.13 78 eP P 21 05 51.6 +0.2
comp=Z,55nm,1.0s
RRX Edison Barstow 52.17 80 P P 21 05 51.7 +0.1
baz=314
VTV Victorville 52.20 81 eP P 21 05 49.8 -2.0
VTV Victorville 52.20 81 eP P 21 05 49.8 -2.0
FMP Fort Macarthur 52.21 82 P P 21 05 51.7 -0.2
baz=315
FMP Fort Macarthur 52.21 82 eP P 21 05 54.7 +2.9
BFSC Mount Baldy Ra 52.22 82 P P 21 05 52.0 -0.1
baz=314,SNR=37
CIS Catalina Islan 52.36 83 P P 21 05 52.5 -0.5
baz=315,SNR=10
ZSN Zaisan 52.41 301⇓iP P 21 05 53.1 -0.1
comp=Z,14nm,1.9s
ZSN eS S 21 13 18.4 +1.2
TUQ Turquoise Moun 52.42 79 P P 21 05 53.7 +0.1
baz=314,SNR=91
CCUT Cedar City 52.47 75 eP P 21 05 54.4 +0.3
comp=Z,104nm,0.9s
MSU Marysvale 52.50 74 eP P 21 05 54.6 +0.3
MSU Marysvale 52.50 74 eP P 21 05 54.6 +0.3
TMUT Trail Mountain 52.53 72 eP P 21 05 54.8 +0.2
comp=Z,254nm,0.9s
SCI2 San Clemente I 52.58 83 P P 21 05 54.4 -0.2
baz=315,SNR=7.3
HEC Hector,Ludlow 52.60 80 P P 21 05 54.9 +0.1
baz=314,SNR=39
SZCU Shurtz Canyon 52.60 75 eP P 21 05 55.2 +0.2
comp=Z,94nm,1.0s
BBRC Big Bear Solar 52.65 81 P P 21 05 55.5 +0.1
baz=314
P17A Butcher Ranch, 52.68 72 eP P 21 05 55.6 +0.1
comp=Z,189nm,1.2s
SUMG Summit 52.68 11⇓iP P 21 05 55.6 +0.3
comp=Z,56nm,0.9s
comp=Z,1µm,17.0s
SUMG Summit 52.68 11 eP P 21 05 55.0 -0.3
comp=Z,65nm,0.8s
SUMG Summit 52.68 11⇓iP P 21 05 55.6 +0.3
SUMG pmax pmax
comp=Z,56nm,0.9s
SUMG MLR MLR
comp=Z,2µm,17.0s
SEM Semipalatinsk 52.77 307⇓iP P 21 05 54.8 -1.2
comp=Z,58nm,2.0s
MTPU Mount Pierson 52.82 74 eP P 21 05 57.3 +0.6
comp=Z,155nm,1.1s
P18A Preston Nutter 52.85 71 eP P 21 05 57.2 +0.2
comp=Z,144nm,1.1s
LCMT Little Creek M 52.91 76 eP P 21 05 57.6 +0.4
comp=Z,221nm,1.0s
K22A Casper 52.91 66 P P 21 05 57.1 0.0
baz=312,SNR=30
K22A Casper 52.91 66 eP P 21 05 56.8 -0.3
comp=Z,159nm,1.0s
CD2 Chengdu 52.93 273 P P 21 05 56.5 -0.8
CD2 sP pP 21 06 06.3 +0.9
CD2 PP **PP 21 07 56.1 -0.7**
CD2 S **S 21 13 24.5 -0.3**
CD2 sS pS 21 13 36.1 +1.6
CD2 SS **SS 21 17 04.8 +1.2**
CD2 pmax pmax
comp=Z,90nm,1.6s
CD2 pmax pmax
comp=Z,880nm,5.3s
CD2 LR LR
comp=Z,4µm,20.2s
CD2 LR LR
comp=Z,4µm,14.9s
MURC Murrieta 52.95 82 P P 21 05 57.1 -0.2
baz=315,SNR=22
GMRC Granite Mounta 53.03 80 P P 21 05 58.1 +0.1
baz=314,SNR=109
SRU San Rafael Swe 53.05 72 eP P 21 05 58.7 +0.5
comp=Z,306nm,1.0s
SRU San Rafael Swe 53.05 72 eP P 21 05 58.7 +0.5
SRU pmax pmax
comp=Z,306nm,1.0s
MDND Maddock 53.12 57 P P 21 05 59.1 +0.6
baz=312,SNR=45
MDND Maddock 53.12 57 eP P 21 05 59.0 +0.6
comp=Z,598nm,0.9s
LDFC Landfair 53.15 79 eP P 21 05 59.0 0.0
comp=Z,278nm,0.8s
PKCU Pink Cliffs 53.15 75 eP P 21 06 00.2 +1.0
comp=Z,99nm,0.9s
RWWY Rawlins 53.17 68 eP P 21 05 58.8 -0.4
comp=Z,161nm,1.0s
RSSD Black Hills 53.28 63 P P 21 06 00.1 +0.2
baz=312
RSSD Black Hills 53.28 63 eP P 21 05 59.5 -0.4
comp=Z,158nm,0.9s
WMQ Urumqi 53.32 296 P P 21 06 00.9 +0.9
WMQ pP pP 21 06 07.6 -0.5
WMQ S **S 21 13 31.4 +1.6**
WMQ ScS **ScS 21 15 46.0 -1.4**
WMQ SS **SKiKP 21 17 12.6 -1.8**
WMQ pmax pmax
comp=Z,100nm,0.9s
WMQ pmax pmax
comp=Z,210nm,3.7s
WMQ LR LR
comp=Z,24µm,21.3s
KURK Kurchatov 53.34 308 eP P 21 05 58.9 -1.1
comp=Z,119nm,1.0s
KURK eS **S 21 13 24.2 -5.6**
KURK LR LR
comp=Z,6µm,19.0s
KURK Kurchatov 53.34 308 P P 21 05 59.9 -0.1
SNR=55
KURK Kurchatov 53.34 308 dP P 21 05 59.4 -0.6
KURK pmax pmax
comp=Z,144nm,1.2s
ULM Lac du Bonnet 53.36 53 P P 21 06 00.2 +0.1
comp=Z,54nm,0.9s,baz=312,slow=8.1,SNR=67
ULM LR LR 21 29 19.0
comp=Z,3µm,20.2s,baz=318,slow=37
ULM Lac du Bonnet 53.36 53 eP P 21 06 00.1 -0.1
comp=Z,90nm,1.0s
PFO Pinyon Flats O 53.37 81 P P 21 06 00.2 -0.4
baz=315,SNR=6.7
PFO Pinyon Flats O 53.37 81 eP P 21 05 59.9 -0.7
comp=Z,58nm,0.9s
PFO LR LR
comp=Z,2µm,20.0s
PFO Pinyon Flats O 53.37 81 eP P 21 05 59.9 -0.7
PFO pmax pmax
comp=Z,58nm,0.9s
PFO MLR MLR
comp=Z,2µm,20.0s
BELC Belle Mtn. Jos 53.37 81 P P 21 06 00.1 -0.5
baz=315,SNR=58
XPFO Piæon Flat 53.38 81 eP P 21 05 59.9 -0.7
comp=Z,49nm,0.9s
KURBB Kurchatov Arra 53.45 308 P P 21 05 59.9 -0.9
comp=Z,40nm,0.7s,baz=51,slow=7.1,SNR=107
KURBB S **S 21 13 24.2 -7.0**
comp=Z,1.4nm,1.0s,baz=51,slow=14,SNR=4.5
109C Camp Elliot, M 53.50 82 P P 21 06 01.4 0.0
baz=315,SNR=5.3
CPE Camp Elliot 53.50 82 eP P 21 06 01.2 -0.1
comp=Z,171nm,1.3s
A31A Linda, St. Vin 53.60 55 P P 21 06 02.0 +0.1
baz=312
O20A White River Ci 53.65 70 P P 21 06 02.9 +0.3
baz=313,SNR=45
O20A White River Ci 53.65 70 eP P 21 06 02.4 -0.2
comp=Z,174nm,1.0s
NEE2 Needles Airpor 53.65 79 P P 21 06 02.5 0.0
baz=314,SNR=19
B31A Greenbush Farm 53.71 56 P P 21 06 03.2 +0.4
baz=312,SNR=9.2
IRM Iron Mountain 53.77 80 P P 21 06 03.5 +0.1
baz=315,SNR=113
W13A Hualapai Mount 53.85 78 eP P 21 06 04.2 -0.1
comp=Z,116nm,0.9s
U15A North Rim 53.86 76 eP P 21 06 04.8 +0.4
comp=Z,205nm,0.9s
MONP2 Monument Peak 53.90 82 P P 21 06 04.5 -0.1
baz=315,SNR=17
BAR Barrett 53.90 82 eP P 21 06 03.9 -0.5
comp=Z,54nm,0.8s
BC3 Big Chuckawall 53.94 80 P P 21 06 04.3 -0.4
baz=315,SNR=37
C31A Landman Farms, 54.09 56 P P 21 06 05.5 -0.1
baz=312,SNR=20
MK32 Makanchi Array 54.16 302 eP P 21 06 04.8 -1.3
MKAR Makanchi Array 54.16 302 P P 21 06 04.8 -1.3
comp=Z,13nm,0.7s,baz=52,slow=7.7,SNR=32
MK01 Makanchi Array 54.17 302 eP P 21 06 05.0 -1.2
SWSC Sam W. Stewart 54.23 81 P P 21 06 06.2 -0.5
baz=315
PV09 Paradox Valley 54.26 72 eP P 21 06 07.2 0.0
IKP In-Ko-Pah, Jac 54.26 82 P P 21 06 06.9 -0.1
baz=315,SNR=15
PDMCI Parker Dam,Lak 54.26 79 P P 21 06 07.0 +0.1
baz=315,SNR=69
FRB Frobisher Bay 54.28 28 P P 21 06 06.1 -0.5
comp=Z,23nm,0.6s,baz=303,slow=10
FRB S **S 21 13 38.8 -3.4**
comp=Z,6.2nm,0.8s,baz=76,slow=21,SNR=7.2
PV21 Cone Mtn., Par 54.30 72 eP P 21 06 07.5 0.0
comp=Z,192nm,1.1s
MAKZ Makanchi 54.31 302 eP P 21 06 05.7 -1.4
comp=Z,32nm,1.0s
MAKZ Makanchi 54.31 302 eP P 21 06 05.7 -1.4
MAKZ pmax pmax
comp=Z,32nm,1.0s
PV23 Carpenter Ridg 54.36 72 eP P 21 06 07.9 0.0
comp=Z,318nm,1.2s
PV10 Paradox Valley 54.40 72 eP P 21 06 08.6 +0.5
comp=Z,319nm,1.0s
PHWY Pilot Hill 54.41 67 eP P 21 06 08.0 -0.3
comp=Z,192nm,1.8s
PV14 Lion Creek, Pa 54.41 72 eP P 21 06 08.3 0.0
comp=Z,136nm,1.0s
N23A Red Feather La 54.41 68 P P 21 06 09.1 +0.8
baz=313,SNR=80
N23A Red Feather La 54.41 68 eP P 21 06 08.8 +0.5
comp=Z,392nm,1.6s
Y12C Blythe 54.42 80 P P 21 06 08.3 +0.2
baz=315,SNR=25
Y12C Blythe 54.42 80 eP P 21 06 08.1 0.0
comp=Z,119nm,0.9s
Y12C ePcP **PcP 21 07 11.9 +0.4**
GYA Guiyang 54.43 267⇑iP P 21 06 08.4 0.0
GYA pP pP 21 06 16.3 -0.2
GYA PP **PP 21 08 13.0 +2.6**
GYA S **S 21 13 48.9 +3.6**
GYA SS **SS 21 17 27.0 -0.4**
GYA pmax pmax
comp=Z,30nm,0.8s
GYA pmax pmax
comp=Z,480nm,5.3s
GYA LR LR
comp=Z,2µm,15.8s
GYA LR LR
comp=Z,1µm,15.0s
GYA LR LR
comp=Z,1µm,16.4s
PV22 Blue Mesa, Par 54.43 71 eP P 21 06 08.4 +0.1
comp=Z,199nm,1.0s
PV04 Paradox Valley 54.46 72 eP P 21 06 09.0 +0.4
comp=Z,290nm,1.1s
PV20 West Nyswonger 54.46 72 eP P 21 06 08.8 +0.2
comp=Z,203nm,1.0s
PV19 Morning Glory 54.47 72 eP P 21 06 08.5 -0.2
comp=Z,170nm,1.0s
A33A Warroad 54.48 54 P P 21 06 08.5 +0.2
baz=313,SNR=44
PV17 East Wray Mesa 54.51 72 eP P 21 06 09.0 +0.1
comp=Z,346nm,1.0s
PV16 Nyswonger Mesa 54.51 72 eP P 21 06 08.8 -0.2
comp=Z,238nm,1.0s
PV11 David Mesa, Pa 54.54 72 eP P 21 06 09.3 +0.1
comp=Z,520nm,1.2s
PV18 Skein Mesa, Pa 54.56 72 eP P 21 06 09.5 +0.2
comp=Z,340nm,1.0s
PV05 Paradox Valley 54.57 72 eP P 21 06 09.8 +0.4
comp=Z,368nm,1.0s
PV12 Saucer Basin, 54.57 72 eP P 21 06 10.0 +0.6
comp=Z,389nm,1.2s
PV07 Paradox Valley 54.58 71 eP P 21 06 09.5 +0.1
comp=Z,201nm,1.1s
PV03 Paradox Valley 54.59 72 eP P 21 06 09.6 +0.1
comp=Z,304nm,1.0s
D31A Mcclaflin, Tow 54.60 57 P P 21 06 09.2 -0.1
baz=313,SNR=27
PV13 Radium Mtn., P 54.67 72 eP P 21 06 10.5 +0.3
comp=Z,525nm,0.9s
C32A Crookston 54.67 56 P P 21 06 09.7 -0.1
baz=313
AGMN Agassiz Nation 54.68 55 P P 21 06 09.9 +0.1
baz=313,SNR=90
AGMN Agassiz Nation 54.68 55 eP P 21 06 09.6 -0.2
comp=Z,173nm,0.9s
AGMN eS **S 21 13 49.2 +1.3**
AGMN LR LR
comp=Z,4µm,20.0s
PV02 Paradox Valley 54.68 72 eP P 21 06 10.4 +0.2
comp=Z,330nm,1.0s
GLA Glamis 54.73 80 P P 21 06 10.8 +0.3
baz=315,SNR=33
GLA Glamis 54.73 80 eP P 21 06 10.3 -0.1
comp=Z,166nm,0.8s
GLA Glamis 54.73 80 eP P 21 06 10.4 -0.1
GLA pmax pmax
comp=Z,166nm,0.8s
PV15 Paradox Valley 54.74 71 eP P 21 06 10.7 0.0
comp=Z,232nm,1.0s
PV01 Paradox Valley 54.83 72 eP P 21 06 11.5 +0.2
comp=Z,240nm,1.3s
E31A Nome 54.85 58 P P 21 06 10.8 -0.2
baz=313,SNR=31
D32A Dogwood Acres, 54.90 57 P P 21 06 11.0 -0.4
baz=313
SMCO Snowmass 55.01 70 eP P 21 06 12.8 0.0
comp=Z,85nm,1.0s
ARA0 ARCESS Array S 55.02 346 eP P 21 06 11.6 -0.4
ARA0 eScP **ScP 21 11 11.1 +1.3**
ARCES ARCESS Array B 55.02 346 P P 21 06 11.6 -0.4
comp=Z,21nm,0.7s,baz=41,slow=7.8,SNR=41
ARCES ScP **ScP 21 11 11.1 +1.3**
comp=Z,9.7nm,0.9s,baz=28,slow=5.5,SNR=8.2
ARCES LR LR 21 31 40.3
comp=Z,1µm,18.5s,baz=17,slow=38
ARCES ARCESS Array B 55.02 346 eP P 21 06 11.3 -0.6
ARCES ARCESS Array B 55.02 346 eP P 21 06 11.3 -0.6
ARE0 ARCESS Array S 55.02 346 eP P 21 06 11.8 -0.2
comp=Z,36nm,0.9s
WUAZ Wupatki 55.03 76 P P 21 06 13.5 +0.8
baz=315,SNR=71
WUAZ Wupatki 55.03 76 eP P 21 06 13.2 +0.5
comp=Z,180nm,1.0s
WUAZ LR LR
comp=Z,2µm,20.0s
C33A Trail 55.09 55 P P 21 06 12.7 0.0
baz=313,SNR=12
B34A Aery, Baudette 55.14 54 P P 21 06 13.1 -0.1
baz=313,SNR=36
Y14A Wickenburg 55.19 78 eP P 21 06 13.7 0.0
comp=Z,112nm,1.0s
ISCO Idaho Springs 55.35 68 P P 21 06 16.2 +1.1
baz=314,SNR=152
ISCO Idaho Springs 55.35 68 eP P 21 06 16.0 +0.9
comp=Z,209nm,1.0s
ISCO LR LR
comp=Z,3µm,19.0s
ISCO Idaho Springs 55.35 68 P P 21 06 16.2 +1.1
D33A AnnSam, Waubun 55.48 56 P P 21 06 15.5 -0.1
baz=313,SNR=11
APA Apatity 55.48 342⇑iP P 21 06 13.6 -1.7
APA i 21 08 28.0
APA iPPP PPP 21 09 34.0
APA iS **S 21 13 52.0 -6.2**
APA iSS **SS 21 17 36.0 -6.2**
APA pmax pmax
comp=Z,24nm,1.1s
BVAR Borovoye Array 55.50 314 P P 21 06 15.4 -0.3
comp=Z,39nm,0.7s,baz=50,slow=8.0,SNR=296
BVAR S **S 21 13 57.2 -1.6**
comp=Z,5.1nm,0.9s,baz=48,slow=6.4,SNR=8.3
BVAR LR LR 21 32 34.9
comp=Z,3µm,18.1s,baz=50,slow=39
BVAR PKP2bc 21 36 35.0
comp=Z,1.2nm,0.9s,baz=215,slow=7.0,SNR=5.2
BVAR Borovoye Array 55.50 314 P P 21 06 15.4 -0.3
BVAR S **S 21 13 57.2 -1.6**
BVAR pmax pmax
comp=Z,40nm,0.7s
BVAR smax smax
comp=N,5.0nm,1.0s
BVAR MLR MLR
comp=Z,3µm,18.1s
MVCO Mesa Verde 55.51 72 P P 21 06 16.6 +0.4
baz=314,SNR=86
MVCO Mesa Verde 55.51 72 eP P 21 06 16.3 0.0
comp=Z,225nm,1.1s
MVCO LR LR
comp=Z,2µm,20.0s
BRVK Borovoye 55.52 314 eP P 21 06 15.2 -0.6
comp=Z,97nm,1.1s
BRVK LR LR

comp=Z,2μm,19.0s
BRVK Borovoye 55.52 314 P P 21 06 15.9 +0.1
SNR=41
BRVK Borovoye 55.52 314 *d iP* P 21 06 15.7 -0.1
BRVK pmax pmax
comp=Z,57nm,0.8s
113A Mohawk Valley, 55.56 80 *eP* P 21 06 15.8 -0.6
comp=Z,80nm,1.0s
C34A RKJ Ranch, Bem 55.59 55 P P 21 06 16.0 -0.3
baz=314,SNR=7.4
G31A Conde 55.60 59 P P 21 06 16.0 -0.4
baz=314
B35A Bob, Littlefor 55.68 54 P P 21 06 16.9 -0.1
baz=314,SNR=76
B35A Bob, Littlefor 55.68 54 *eP* P 21 06 16.8 -0.2
comp=Z,113nm,1.0s
F32A Veblen 55.71 58 P P 21 06 16.5 -0.7
baz=314,SNR=7.2
SUSD Miller 55.75 60 P P 21 06 17.3 -0.3
baz=314
X16A Lo Mia Camp, P 55.76 77 *eP* P 21 06 18.7 +0.7
comp=Z,132nm,0.9s
E33A Westby DABS, E 55.84 57 P P 21 06 18.1 -0.1
baz=314,SNR=18
D34A Park Rapids 55.84 56 P P 21 06 18.2 0.0
baz=314,SNR=9.8
D34A Park Rapids 55.84 56 *eP* P 21 06 18.2 0.0
comp=Z,279nm,0.7s
SFJD Kangerlussuaq 55.88 19 P P 21 06 17.5 -0.6
comp=Z,17nm,0.7s,baz=356,slow=20,SNR=2.8
SFJD LR LR 21 31 32.5
comp=Z,1μm,21.4s,baz=326,slow=38
SFJD Kangerlussuaq 55.88 19 PFAKE 21 06 30.0 +12
SFJD LR LR
comp=Z,2μm,21.0s
SFJD Kangerlussuaq 55.88 19 P P 21 06 17.5 -0.6
SFJD pmax pmax
comp=Z,17nm,0.7s
SFJD MLR MLR
comp=Z,1μm,21.4s
G32A Webster 55.94 58 P P 21 06 18.5 -0.4
baz=314,SNR=6.0
G32A Webster 55.94 58 *eP* P 21 06 18.6 -0.4
comp=Z,165nm,0.9s
C35A Jirik Farms, M 56.01 54 P P 21 06 19.2 -0.2
baz=314,SNR=17
S22A 4UR Ranch, Cre 56.09 71 P P 21 06 21.8 +1.4
baz=314,SNR=306
S22A 4UR Ranch, Cre 56.09 71 *eP* P 21 06 21.4 +1.0
comp=Z,230nm,0.9s
SCO Scoresbysund 56.14 5⇓ *iP* P 21 06 20.3 +0.4
comp=Z,60nm,1.4s
SCO Scoresbysund 56.14 5 *eP* P 21 06 20.0 +0.1
comp=Z,94nm,1.5s
SCO Scoresbysund 56.14 5⇓ *iP* P 21 06 20.3 +0.4
SCO pmax pmax
comp=Z,60nm,1.4s
Q24A Divide 56.19 69 P P 21 06 22.1 +1.0
baz=314
Q24A Divide 56.19 69 *eP* P 21 06 21.8 +0.6
comp=Z,125nm,0.9s
E34A Wadena 56.25 56 P P 21 06 21.2 +0.1
baz=314,SNR=11
W18A Petrified Fore 56.26 75 P P 21 06 22.5 +0.9
baz=315,SNR=8.5
W18A Petrified Fore 56.26 75 *eP* P 21 06 22.4 +0.8
comp=Z,210nm,1.1s
D35A Remer 56.41 55 P P 21 06 22.3 +0.1
baz=314,SNR=28
H32A Carlson Farm, 56.49 59 P P 21 06 22.5 -0.4
baz=314,SNR=25
G33A Ortonville 56.52 58 P P 21 06 22.6 -0.5
baz=314,SNR=16
C36A Pine Crest Far 56.53 54 P P 21 06 23.1 +0.1
baz=314,SNR=34
OGNE Ogallala 56.53 65 P P 21 06 24.3 +1.1
baz=314,SNR=41
OGNE Ogallala 56.53 65 *eP* P 21 06 23.9 +0.6
comp=Z,368nm,0.8s
OGNE LR LR
comp=Z,1μm,21.0s
X18A Snowflake 56.55 76 *eP* P 21 06 24.3 +0.7
comp=Z,107nm,0.9s
E35A Pequot Lakes 56.60 56 P P 21 06 23.9 +0.4
baz=314,SNR=14
BRZS Berezniki 56.62 310⇓ *iP* P 21 06 23.2 -0.5
comp=Z,73nm,1.7s
BRZS *i* S S 21 14 14.6 +0.8
BRZS LR LR 21 33 14.9
comp=Z,770nm,12.8s
SVE Sverdlovsk 56.66 322 *c iP* P 21 06 24.2 +0.4
SVE *e* 21 08 25.9
SVE *e*PPP PPP 21 09 47.1
SVE *e*S S 21 14 14.5 +0.4
SVE *e*SS SS 21 17 56.4 -4.6
SVE pmax pmax
comp=Z,45nm,1.0s
SVE MLR MLR
comp=Z,2μm,16.0s
F34A Alexandria 56.70 57 P P 21 06 24.3 0.0
baz=314,SNR=14
214A Organ Pipe Nat 56.71 80 P P 21 06 25.0 +0.4
baz=316,SNR=111
D36A Goodland 56.77 54 P P 21 06 24.6 -0.3
baz=314,SNR=24
D36A Goodland 56.77 54 *eP* P 21 06 24.3 -0.5
comp=Z,138nm,1.1s
SGF Sodankyl 56.78 345 P P 21 06 24.6 0.0
SDCO Great Sand Dun 56.84 70 P P 21 06 27.0 +1.2
baz=315,SNR=237
SDCO Great Sand Dun 56.84 70 *eP* P 21 06 26.4 +0.7
comp=Z,220nm,1.1s
SDCO LR LR
comp=Z,2μm,20.0s
C37A Embarrass 56.86 53 P P 21 06 25.6 +0.2
baz=315,SNR=34
G34A Benson 56.90 57 P P 21 06 25.6 -0.1
baz=314,SNR=16
F35A Swanville 57.00 56 P P 21 06 26.7 +0.3
baz=315,SNR=6.8
EYMN Ely 57.04 53 P P 21 06 27.0 +0.3
baz=315,SNR=106
EYMN Ely 57.04 53 *eP* P 21 06 26.7 0.0
comp=Z,154nm,0.9s
EYMN LR LR
comp=Z,3μm,20.0s
XMAS Kiritimati 57.10 142 PFAKE 21 06 40.0 +13
XMAS LR LR
comp=Z,2.0nm,21.0s
D37A Cotton 57.15 54 P P 21 06 27.4 -0.1
baz=315,SNR=43
E36A McGregor 57.19 55 P P 21 06 28.2 +0.4
baz=315,SNR=96
C38A Sawbill Land. 57.31 53 P P 21 06 28.7 +0.1
baz=315,SNR=52
ECSD EROS Data Cent 57.45 59 P P 21 06 29.2 -0.5
baz=315,SNR=74
ECSD EROS Data Cent 57.45 59 *eP* P 21 06 28.9 -0.8
comp=Z,116nm,1.0s
ECSD *eS* S 21 14 23.5 -1.4
ECSD LR LR
comp=Z,4μm,22.0s
G35A Watkins 57.49 57 P P 21 06 30.2 +0.2
baz=315,SNR=6.9
G35A Watkins 57.49 57 *eP* P 21 06 29.9 -0.1
comp=Z,122nm,1.1s
TMCR Tamitsa 57.49 338 *eP* P 21 06 28.8 -0.8
TMCR pmax pmax
comp=Z,211nm,0.9s
F36A Milaca 57.52 56 P P 21 06 30.1 0.0
baz=315,SNR=38
F36A Milaca 57.52 56 *eP* P 21 06 29.9 -0.2
comp=Z,74nm,1.0s
KSCO Kaye Shedlock' 57.55 67 P P 21 06 31.8 +1.1
baz=315,SNR=15
KSCO Kaye Shedlock' 57.55 67 *eP* P 21 06 31.3 +0.7
comp=Z,257nm,0.8s
E37A Wrenshall 57.58 54 P P 21 06 30.5 0.0
baz=315
TUC Tucson 57.65 78 P P 21 06 32.1 +0.8
baz=316
TUC Tucson 57.65 78 *eP* P 21 06 31.8 +0.5
comp=Z,124nm,1.0s
TUC LR LR
comp=Z,1μm,20.0s
H35A Sunnyside Ranc 57.69 57 P P 21 06 31.6 +0.3
baz=315,SNR=54
ARU Arti 57.72 323 P P 21 06 31.2 -0.2
comp=Z,37nm,0.6s,baz=40,slow=3.4,SNR=89
ARU S S 21 14 23.6 -4.4
comp=Z,0.5nm,0.3s,baz=90,slow=20,SNR=1.8
ARU Arti 57.72 323 *eP* P 21 06 30.9 -0.4
comp=Z,60nm,0.8s
ARU LR LR
comp=Z,3μm,21.0s
ARU Arti 57.72 323 *d iP* P 21 06 31.1 -0.2
ARU 21 07 20.8
ARU 21 08 35.5
ARU *e*S S 21 14 29.6 +1.6
ARU 21 16 15.5
ARU SSS SSS 21 20 43.6
ARU pmax pmax
comp=Z,61nm,0.8s
ARU MLR MLR
comp=Z,4μm,18.0s
PRGR Permogore 57.72 333⇓ *iP* P 21 06 32.0 +0.7
PRGR *e*S S 21 14 29.7 +1.8
PRGR *e* 21 16 16.2
PRGR pmax pmax
comp=Z,202nm,0.8s
KMI Kunming 57.77 270 P P 21 06 33.8 +1.4
KMI pP pP 21 06 39.9 -0.8
KMI sP sP 21 06 44.3 +0.5
KMI S S 21 14 28.9 -1.1
KMI sS pS 21 14 40.6 +0.7
KMI SS SS 21 18 21.6 +1.2
KMI pmax pmax
comp=Z,9.0nm,0.7s
KMI LR LR
comp=Z,2μm,15.0s
KMI LR LR
comp=Z,2μm,17.7s
KMI LR LR
comp=Z,2μm,20.5s
G36A St. Michael 57.85 56 P P 21 06 32.6 +0.2
baz=315,SNR=16
T25A Trinidad 57.88 70 P P 21 06 34.1 +1.0
baz=315,SNR=79
T25A Trinidad 57.88 70 *eP* P 21 06 33.7 +0.7
comp=Z,210nm,1.0s
E38A The Farm, Brul 57.96 54 P P 21 06 33.1 0.0
baz=315,SNR=29
E38A The Farm, Brul 57.96 54 *eP* P 21 06 32.9 -0.3
comp=Z,172nm,0.9s
PDGK Podgornoye 57.98 301 *i* P P 21 06 32.9 -0.7
PDGK pmax pmax
comp=Z,34nm,1.0s
OTUK Ortayu 58.01 309 *i* P P 21 06 33.5 -0.1
OTUK pmax pmax
comp=Z,52nm,0.8s
F37A Hinrichs Farm, 58.06 55 P P 21 06 34.2 +0.3
baz=315,SNR=25
SHLS Shalkode 58.12 301⇓ *eP* P 21 06 32.8 -1.7
comp=Z,66nm,1.9s
SHLS *e*S S 21 14 32.5 -1.5
C40A Isle Royale Na 58.17 51 P P 21 06 34.7 0.0
baz=316
C40A Isle Royale Na 58.17 51 *eP* P 21 06 34.6 0.0
comp=Z,95nm,1.4s
QIZ Qiongzhong 58.18 259 P P 21 06 35.6 +0.6
QIZ S S 21 14 37.1 +2.2
QIZ LR LR
comp=Z,1μm,11.8s
QIZ LR LR
comp=Z,1μm,14.1s
QIZ Qiongzhong 58.18 259 PFAKE 21 06 50.0 +15
QIZ LR LR
comp=Z,997nm,19.0s
H36A Jessenland, He 58.23 57 P P 21 06 35.9 +0.9
baz=315,SNR=41
F38A Pierce - Schro 58.26 55 P P 21 06 36.1 +0.7
baz=316,SNR=130
LAZ Ladron 58.27 74 *eP* P 21 06 37.0 +1.2
TASM ASL Pad, Albuq 58.27 73 P P 21 06 36.5 +0.7
baz=316,SNR=81
ANMO Albuquerque 58.28 73 P P 21 06 36.3 +0.6
comp=Z,62nm,1.0s,baz=309,slow=9.4,SNR=124
ANMO LR LR 21 30 37.5
comp=Z,1μm,21.0s,baz=328,slow=35
ANMO Albuquerque 58.28 73 P P 21 06 36.5 +0.7
baz=316
ANMO Albuquerque 58.28 73 *eP* P 21 06 36.1 +0.3
comp=Z,92nm,1.0s
ANMO LR LR
comp=Z,1μm,21.0s
ANMO Albuquerque 58.28 73 *c iP* P 21 06 36.4 +0.6
ANMO *i* *PP pP 21 06 43.2 -0.9
ANMO pmax pmax
comp=Z,124nm,1.2s
TASL Snake Pit, Alb 58.28 73 P P 21 06 36.7 +0.8
baz=316
BGNE Belgrade 58.29 62 P P 21 06 35.9 +0.3
baz=315,SNR=23
BGNE Belgrade 58.29 62 *eP* P 21 06 35.8 +0.2
comp=Z,674nm,0.9s
KPKS Kokpek 58.30 301⇓ *iP* P 21 06 35.7 0.0
KPKS *i* S S 21 14 37.8 +1.5
KPKS LR LR 21 32 05.8
comp=Z,647nm,13.8s
SPMN Marine on St. 58.33 56 P P 21 06 36.1 +0.4
baz=316,SNR=26
SPMN Marine on St. 58.33 56 *eP* P 21 06 36.0 +0.2
comp=Z,223nm,1.0s
UZB Uzynbulak 58.36 301⇓ *iP* P 21 06 35.9 -0.3
comp=Z,25nm,1.7s
UZB *e*S S 21 14 37.1 0.0
UZB LR LR 21 32 05.2
comp=Z,395nm,12.0s
LENM Lemitar 58.54 74 *eP* P 21 06 38.4 +0.7
I36A Fitzsimmons Fa 58.58 57 P P 21 06 37.5 -0.1
baz=316,SNR=5.8
E39A Mellen 58.60 53 P P 21 06 37.6 -0.2
baz=316,SNR=45
LPM Los Pinos Moun 58.63 74 *eP* P 21 06 39.0 +0.7
Y22D IRIS PASSCAL I 58.63 74 *eP* P 21 06 39.3 +1.0
comp=Z,282nm,1.0s
Y22E IRIS PASSCAL I 58.63 74 P P 21 06 39.8 +1.5
baz=316
ZHN Zhinishke 58.64 301⇓ *eP* P 21 06 38.1 -0.1
comp=Z,28nm,1.7s
H37A Dierke Farm, C 58.73 56 P P 21 06 39.4 +0.8
baz=316,SNR=22
SATY Saty 58.73 301⇓ *iP* P 21 06 38.8 0.0
comp=Z,71nm,1.9s
SATY LR LR 21 32 19.1
comp=Z,534nm,13.6s
BNM Barren Site 58.75 74 *eP* P 21 06 39.8 +0.6
F39A Loretta 58.76 54 P P 21 06 39.2 +0.4
baz=316,SNR=57
MANU Manus Island 58.77 209 *eP* P 21 06 40.4 +1.2
comp=Z,74nm,1.1s
G38A Ridgeland 58.84 55 P P 21 06 39.3 0.0
baz=316,SNR=61
E40A Wakefield 58.87 53 P P 21 06 40.2 +0.6
baz=316,SNR=115
I37A Lemond, Waseca 58.89 57 P P 21 06 40.5 +0.7
baz=316,SNR=42
I37A Lemond, Waseca 58.89 57 *eP* P 21 06 40.1 +0.4
comp=Z,401nm,0.9s
J36A Seneca 1, Swea 58.91 58 P P 21 06 39.8 0.0
baz=316,SNR=24
J36A Seneca 1, Swea 58.91 58 *eP* P 21 06 39.7 -0.2
comp=Z,237nm,0.9s
H38A Maiden Rock 58.98 56 P P 21 06 40.9 +0.6
baz=316,SNR=66
D41A Chassel 59.06 52 P P 21 06 41.3 +0.5
baz=316,SNR=23
D41A Chassel 59.06 52 *eP* P 21 06 41.1 +0.3
comp=Z,142nm,1.1s
G39A Hoolombe 59.09 55 P P 21 06 41.1 0.0
baz=316,SNR=48
F40A Park Falls 59.15 54 P P 21 06 41.5 0.0
baz=316,SNR=37
PRZ Przheval'sk 59.15 301 *eP* P 21 06 42.1 +0.4
comp=Z,108nm,1.4s
PRZ Przheval'sk 59.15 301 *eP* P 21 06 42.2 +0.4
PRZ pmax pmax
comp=Z,109nm,1.4s
KUU Kurty 59.19 303 *i* P P 21 06 40.8 -1.0
comp=Z,71nm,2.2s
KUU *e*S S 21 14 47.9 +0.3
KUU LR LR 21 34 27.2
comp=Z,624nm,12.2s
319A Douglas 59.21 78 *eP* P 21 06 42.8 +0.5
comp=Z,242nm,1.0s
121A Cookes Peak, D 59.24 76 P P 21 06 43.5 +1.0
baz=317,SNR=47
DAV Davao City (W) 59.27 236 LR LR 21 28 39.2
comp=Z,422nm,19.9s,baz=61,slow=32
DAV Davao City (W) 59.27 236 PFAKE 21 07 00.0 +17
DAV LR LR
comp=Z,540nm,19.0s
CBKS Cedar Bluff 59.28 65 P P 21 06 42.8 +0.2
baz=316,SNR=16
CBKS Cedar Bluff 59.28 65 *eP* P 21 06 42.8 +0.2
comp=Z,282nm,0.9s
CBKS LR LR
comp=Z,1μm,21.0s
CBKS Cedar Bluff 59.28 65 *eP* P 21 06 42.8 +0.2
CBKS pmax pmax
comp=Z,282nm,0.9s
CBKS MLR MLR
comp=Z,1μm,21.0s
E41A Kenton 59.30 52 P P 21 06 42.7 +0.1
baz=317,SNR=32
ANGG Ammassalik, Gr 59.32 14 *eP* P 21 06 40.6 -1.6
comp=Z,68nm,1.2s
J37A Redenius Farm, 59.32 58 P P 21 06 42.8 +0.1
baz=316,SNR=18
K36A Gilmore City 59.35 59 P P 21 06 42.8 -0.1
baz=316,SNR=24
MDOK Medeo 59.35 302 *i* P P 21 06 42.9 -0.3
MDOK *e*S S 21 14 51.1 +1.0
MDOK LR LR 21 32 33.0
comp=Z,1μm,13.3s
AAA Alma-Ata 59.39 302⇓ *eP* P 21 06 43.4 +0.1
AAA LR LR 21 32 46.3
comp=Z,966nm,14.5s
AAA Alma-Ata 59.39 302 *eP* P 21 06 43.1 -0.2
AAA *e*S S 21 14 47.3 -3.0
AAA pmax pmax
comp=Z,200nm,6.3s
AAA smax smax
comp=N,300nm,6.6s
AAA MLR MLR
comp=Z,1μm,14.0s
I38A Scanlan Farm, 59.41 56 P P 21 06 43.6 +0.3
baz=316,SNR=25
H39A Augusta 59.47 55 P P 21 06 43.7 0.0
baz=316,SNR=12
COWI Conover 59.49 53 *eP* P 21 06 43.8 -0.1
comp=Z,90nm,1.0s
COWI LR LR
comp=Z,2μm,20.0s
BTLS Baital 59.50 305⇓ *iP* P 21 06 43.5 -0.4
comp=Z,32nm,1.6s
BTLS *i* S S 21 14 52.5 +0.9
BTLS LR LR 21 34 06.1
comp=Z,237nm,12.9s
G40A Rib Lake 59.58 54 P P 21 06 44.5 0.0
baz=317,SNR=43
G40A Rib Lake 59.58 54 *eP* P 21 06 44.3 -0.2
comp=Z,142nm,1.3s
RABL Rabaul 59.59 203 *eP* P 21 06 46.4 +1.6
comp=Z,146nm,1.2s
L36A Harm Buss Farm 59.62 59 P P 21 06 44.4 -0.3
baz=316,SNR=17
K37A Belmond 59.67 58 P P 21 06 44.9 -0.2
baz=316
F41A Three Lakes 59.77 53 P P 21 06 46.1 +0.3
baz=317,SNR=50
F41A Three Lakes 59.77 53 *eP* P 21 06 45.7 -0.1
comp=Z,114nm,0.9s
E42A Champion 59.83 52 P P 21 06 46.4 +0.2
baz=317,SNR=23
J38A Wedel Dairy, R 59.86 57 P P 21 06 46.6 +0.1
baz=316,SNR=43
HSIG 59.94 81 *eP* P 21 06 47.0 -0.1
comp=Z,164nm,1.0s
I39A Houston 59.95 56 P P 21 06 46.8 -0.3
baz=317,SNR=33
I39A Houston 59.95 56 *eP* P 21 06 46.7 -0.3
comp=Z,204nm,1.0s
H40A Chili 59.95 55 P P 21 06 47.3 +0.2
baz=317,SNR=35
KLMR Klimovskoe 59.99 335 *eP* P 21 06 44.4 -2.5
KLMR *e*S S 21 14 50.9 -6.3
KLMR pmax pmax
comp=Z,181nm,1.3s
KLMR Klimovskoe 59.99 335 *eP* P 21 06 44.5 -2.5
KLMR AMP 21 06 48.6
comp=Z,181nm,1.3s
KLMR *e*S S 21 14 51.0 -6.3
KLMR *e*S S 21 14 51.0 -6.3
KLMR LQ LQ 21 27 21.3
KLMR LQ LQ 21 27 21.3
TARG Taragay, Kyrgy 60.00 300 *eP* P 21 06 48.4 +0.4
comp=Z,131nm,1.9s
M36A Felix, Anita 60.02 60 P P 21 06 47.4 -0.1
baz=316,SNR=6.6
L37A Phoenix Point, 60.07 59 P P 21 06 47.6 -0.3
baz=316,SNR=26
G41A Antigo 60.11 54 P P 21 06 48.1 0.0
baz=317
K38A Parkersburg 60.20 58 P P 21 06 48.6 -0.1
baz=317,SNR=8.7
K38A Parkersburg 60.20 58 *eP* P 21 06 48.3 -0.4
comp=Z,128nm,1.2s
F42A Maple Grove Fa 60.22 53 P P 21 06 49.1 +0.3
baz=317,SNR=6.9
J39A Decorah 60.24 57 P P 21 06 48.6 -0.4
baz=317,SNR=69
TKM2 Tokmak 2 60.27 303 P P 21 06 49.5 0.0
SNR=19
TKM2 Tokmak 2 60.27 303 *i* P P 21 06 49.2 -0.3
TKM2 pmax pmax
comp=Z,20nm,0.8s
E43A Lone Tree Farm 60.30 51 P P 21 06 49.6 +0.2
baz=318,SNR=23
E43A Lone Tree Farm 60.30 51 *eP* P 21 06 49.4 0.0
comp=Z,91nm,0.9s
E43A *e*S S 21 15 02.6 +0.8
H41A Junction City 60.32 54 P P 21 06 49.5 0.0
baz=317,SNR=16
H41A Junction City 60.32 54 *eP* P 21 06 49.4 -0.2
comp=Z,128nm,1.0s
I40A Norwalk 60.37 56 P P 21 06 50.0 0.0
baz=317,SNR=26
N36A Muff Farm, Cla 60.40 61 P P 21 06 50.1 0.0
baz=317
ULHL Ulahol 60.43 302 P P 21 06 50.9 +0.3
SNR=7.8
M37A Trindle Farm, 60.44 60 P P 21 06 50.4 0.0
baz=317,SNR=5.2
G42A Mountain 60.45 53 P P 21 06 50.6 +0.1
baz=317,SNR=21
G42A Mountain 60.45 53 *eP* P 21 06 50.1 -0.3
comp=Z,84nm,0.9s
L38A Oak Wood Farm, 60.47 58 P P 21 06 50.4 -0.2
baz=317,SNR=44
SCIA State Center 60.51 59 P P 21 06 51.1 +0.2
baz=317,SNR=10.0
SCIA State Center 60.51 59 *eP* P 21 06 50.7 -0.2
comp=Z,262nm,0.9s
SCIA LR LR
comp=Z,5μm,19.0s
EPT El Paso 60.54 76 *eP* P 21 06 51.8 +0.4
comp=Z,131nm,1.1s
USP Ospenovka 60.56 304 P P 21 06 51.6 +0.3
SNR=28
K39A Oelwein 60.60 57 P P 21 06 50.8 -0.7
baz=317,SNR=30
F43A Flat Rock, Esc 60.62 52 P P 21 06 51.7 +0.1
baz=318,SNR=7.9
I41A Arkdale 60.62 55 P P 21 06 51.6 0.0
baz=317,SNR=10
I41A Arkdale 60.62 55 *eP* P 21 06 51.6 0.0
comp=Z,115nm,1.2s
E44A Grand Marais A 60.62 51 P P 21 06 52.1 +0.6
baz=318,SNR=8.6
E44A Grand Marais A 60.62 51 *eP* P 21 06 52.0 +0.4
comp=Z,181nm,0.9s
CHMS Chumysh 60.63 303 P P 21 06 52.0 +0.2
SNR=11
J40A Soldiers Grove 60.67 56 P P 21 06 51.6 -0.4
baz=317,SNR=25
KSU1 Kansas State U 60.77 63 P P 21 06 51.7 -1.0
baz=317,SNR=7.4
KSU1 Kansas State U 60.77 63 *eP* P 21 06 51.8 -0.9
comp=Z,101nm,0.9s
KSU1 LR LR
comp=Z,1μm,21.0s

KBK **Karagaybulak** 60.79 303 P P 21 06 53.2 +0.2
SNR=22
G43A **Wallace** 60.80 53 P P 21 06 52.8 0.0
baz=318,SNR=8.3
G43A **Wallace** 60.80 53 eP P 21 06 52.8 0.0
comp=Z,60nm,0.9s
FRU **Bishkek** 60.82 303⇓eP P 21 06 52.0 -1.1
FRU e 21 07 11.0
FRU ePPP PPP 21 10 40.0
FRU eS S 21 15 09.0 +0.4
FRU pmax pmax
comp=Z,130nm,2.0s
N37A **Lee Faris, Mou** 60.83 60 P P 21 06 53.1 0.0
baz=317,SNR=38
N37A **Lee Faris, Mou** 60.83 60 eP P 21 06 52.9 -0.2
comp=Z,484nm,1.0s
F44A **Big Bay de Noc** 60.87 51 P P 21 06 53.4 +0.2
baz=318,SNR=9.2
M38A **Pleasantville** 60.87 59 P P 21 06 53.2 -0.1
baz=317,SNR=20
H42A **Shiocton** 60.94 54 P P 21 06 53.5 -0.3
baz=318,SNR=6.7
H42A **Shiocton** 60.94 54 eP P 21 06 53.6 -0.1
comp=Z,81nm,1.0s
L39A **Vinton** 60.97 58 P P 21 06 53.8 -0.2
baz=317,SNR=74
K40A **Colesburg** 60.98 57 P P 21 06 53.7 -0.4
baz=317,SNR=50
AAK **Ala-Archa** 61.03 303 eP P 21 06 54.2 -0.4
comp=Z,52nm,0.9s
AAK **Ala-Archa** 61.03 303 eP P 21 06 54.2 -0.4
AAK pmax pmax
comp=Z,52nm,0.9s
AMTX **Amarillo** 61.04 70 P P 21 06 55.0 +0.3
baz=317
AMTX **Amarillo** 61.04 70 eP P 21 06 54.8 +0.1
comp=Z,129nm,1.0s
KZA **Kyzart** 61.06 302 P P 21 06 55.5 +0.4
SNR=16
J41A **Loganville** 61.06 56 P P 21 06 54.5 -0.1
baz=317,SNR=49
MSTX **Muleshoe** 61.09 71 P P 21 06 55.4 +0.3
baz=317
MSTX **Muleshoe** 61.09 71 eP P 21 06 55.2 +0.1
comp=Z,297nm,1.4s
NRN **Naryn** 61.14 301 eP P 21 06 55.5 -0.1
comp=Z,27nm,0.9s
NRN **Naryn** 61.14 301 eP P 21 06 55.5 -0.1
NRN pmax pmax
comp=Z,27nm,0.9s
E45A **Wooded Hills,** 61.16 50 P P 21 06 55.3 +0.1
baz=318,SNR=12
I42A **Draeger Farm,** 61.21 54 P P 21 06 55.6 0.0
baz=318,SNR=16
I42A **Draeger Farm,** 61.21 54 eP P 21 06 55.3 -0.3
comp=Z,102nm,0.9s
MNTX **Cornudas Mount** 61.24 75 P P 21 06 56.8 +0.8
baz=317,SNR=112
MNTX **Cornudas Mount** 61.24 75 eP P 21 06 56.5 +0.5
comp=Z,108nm,0.9s
MNTX LR LR
comp=Z,1μm,22.0s
JFWS **Jewell Farm** 61.27 56 P P 21 06 55.5 -0.5
baz=318,SNR=22
JFWS **Jewell Farm** 61.27 56 eP P 21 06 55.5 -0.5
comp=Z,116nm,0.9s
JFWS LR LR
comp=Z,3μm,20.0s
JFWS **Jewell Farm** 61.27 56 eP P 21 06 55.5 -0.5
JFWS pmax pmax
comp=Z,116nm,0.9s
JFWS MLR MLR
comp=Z,3μm,20.0s
O37A **Wolven Farm, M** 61.29 61 P P 21 06 55.9 -0.3
baz=317,SNR=18
LSA **Lhasa** 61.30 282 P P 21 06 58.1 +1.1
LSA pmax pmax
comp=Z,9.0nm,0.8s
LSA **Lhasa** 61.30 282 eP P 21 06 57.9 +0.9
comp=Z,37nm,0.9s
LSA LR LR
comp=Z,2μm,20.0s
LSA **Lhasa** 61.30 282 i P P 21 06 58.2 +1.1
SNR=20
LSA **Lhasa** 61.30 282 eP P 21 06 57.9 +0.9
LSA pmax pmax
comp=Z,37nm,0.9s
LSA MLR MLR
comp=Z,2μm,20.0s
N38A **Joes South For** 61.31 60 P P 21 06 55.9 -0.4
baz=317,SNR=15
UCH **Uchtor** 61.32 303 P P 21 06 57.1 +0.2
SNR=9.8
H43A **Windswept, Lux** 61.34 53 P P 21 06 56.4 -0.1
baz=318,SNR=15
H43A **Windswept, Lux** 61.34 53 eP P 21 06 56.3 -0.1
comp=Z,122nm,0.9s
M39A **Webster** 61.35 58 P P 21 06 56.6 -0.1
baz=317,SNR=33
EKS2 **Erkin-Say** 61.37 304 P P 21 06 57.3 +0.4
SNR=49
L40A **Anamosa** 61.41 57 P P 21 06 56.4 -0.6
baz=317,SNR=47
L40A **Anamosa** 61.41 57 eP P 21 06 56.1 -0.8
comp=Z,169nm,0.9s
GDL2 **Guadalupe Moun** 61.47 74 eP P 21 06 57.8 +0.1
K41A **Shullsburg** 61.47 56 P P 21 06 57.0 -0.4
baz=318,SNR=39
F45A **CMU Biological** 61.51 51 P P 21 06 57.5 0.0
baz=318,SNR=5.9
J42A **Columbus** 61.53 55 P P 21 06 57.6 -0.2
baz=318,SNR=25
IVI **Ivigtut** 61.53 21 eP P 21 06 57.4 0.0
comp=Z,26nm,0.8s
I43A **Langenfeld Bro** 61.59 54 P P 21 06 58.0 -0.2
baz=318,SNR=19
P37A **Lathrop** 61.61 61 P P 21 06 57.7 -0.7
baz=317,SNR=24
N39A **Derby Farms, D** 61.63 59 P P 21 06 58.0 -0.4
baz=317,SNR=35
N39A **Derby Farms, D** 61.63 59 eP P 21 06 57.9 -0.6
comp=Z,145nm,0.9s
O38A **Galt** 61.68 60 P P 21 06 58.4 -0.4
baz=317,SNR=19
M40A **Post Highland** 61.74 58 P P 21 06 58.8 -0.5
baz=318
L41A **Preston** 61.77 57 P P 21 06 58.8 -0.6
baz=318,SNR=52
F46A **Macinaw City C** 61.79 51 P P 21 06 59.6 +0.1
baz=319,SNR=9.9
AML **Almayashu** 61.80 303 P P 21 07 00.3 +0.2
SNR=17
K42A **Prairie Point,** 61.82 56 P P 21 06 59.4 -0.4
baz=318,SNR=37
J43A **Natural Harves** 61.83 55 P P 21 06 59.3 -0.5
baz=318,SNR=7.1
BORG **Borgarnes** 61.86 6 P P 21 07 00.4 +0.8
comp=Z,13nm,1.1s,baz=20,slow=4.8,SNR=3.3
BORG LR LR 21 33 23.1
comp=Z,867nm,20.3s,baz=346,slow=36
BORG **Borgarnes** 61.86 6 eP P 21 06 59.9 +0.3
comp=Z,144nm,1.8s
BORG LR LR
comp=Z,462nm,20.0s
SCHQ **Schefferville** 61.91 34 P P 21 07 00.4 +0.2
comp=Z,35nm,0.8s,baz=337,slow=6.7,SNR=18
SCHQ S S 21 15 21.3 -0.7
comp=Z,5.9nm,0.7s,baz=221,slow=12,SNR=3.6
SCHQ LR LR 21 37 53.7
comp=Z,1μm,19.1s,baz=322,slow=40
SCHQ **Schefferville** 61.91 34 eP P 21 07 00.0 -0.2
comp=Z,182nm,1.3s
SCHQ eS S 21 15 20.4 -1.6
FUNA **Funafuti** 61.91 172 PFAKE 21 07 10.0 +9.5
FUNA LR LR
comp=Z,6μm,19.0s
P38A **Dawn** 62.01 61 P P 21 07 00.4 -0.7
baz=318,SNR=42
P38A **Dawn** 62.01 61 eP P 21 07 00.4 -0.7
comp=Z,177nm,0.9s
O39A **Kirksville** 62.06 60 P P 21 07 00.9 -0.6
baz=318,SNR=11
Q37A **Longview Farm,** 62.08 62 P P 21 07 00.0 -1.5
baz=318,SNR=5.1
N40A **Mertquake, Sal** 62.09 58 P P 21 07 01.0 -0.5
baz=318,SNR=24
MNAS **Manas** 62.13 304 i P P 21 07 02.2 +0.2
MNAS pmax pmax
comp=Z,44nm,1.1s
L42A **Oliver, Polo** 62.23 56 P P 21 07 01.9 -0.6
baz=318,SNR=21
L42A **Oliver, Polo** 62.23 56 eP P 21 07 01.4 -1.1
comp=Z,189nm,0.9s
M41A **Milan** 62.26 57 P P 21 07 02.3 -0.4
baz=318,SNR=5.7
K43A **Burlington** 62.38 55 P P 21 07 02.9 -0.5
baz=318,SNR=16
K43A **Burlington** 62.38 55 eP P 21 07 02.8 -0.7
comp=Z,136nm,1.0s
FIA0 **FINESS Array S** 62.39 342 eP P 21 07 03.2 0.0
FIA0 **FINESS Array S** 62.39 342 eP P 21 07 03.2 0.0
FINES **FINESS Array B** 62.39 342 P P 21 07 03.2 0.0
comp=Z,48nm,0.8s,baz=28,slow=8.6,SNR=105
FINES LR LR 21 37 22.8
comp=Z,972nm,20.8s,baz=30,slow=39
DZA **Taraz** 62.41 305 eP P 21 07 03.7 -0.1
Q38A **Cooks Store, C** 62.45 61 P P 21 07 02.9 -1.1
baz=318,SNR=35
O40A **La Belle** 62.51 59 P P 21 07 04.1 -0.3
baz=318,SNR=114
P39B **Salisbury** 62.52 60 P P 21 07 04.0 -0.5
baz=318,SNR=107
AKTO **Aktyubinsk** 62.56 319 P P 21 07 04.6 -0.1
comp=Z,42nm,0.7s,baz=58,slow=7.6,SNR=178
AKTO LR LR 21 38 52.3
comp=Z,1μm,18.1s,baz=36,slow=40
AKTO **Aktyubinsk** 62.56 319 i P P 21 07 04.5 -0.1
AKTO pmax pmax
comp=Z,54nm,0.7s
L43A **Garden Prairie** 62.56 56 P P 21 07 04.0 -0.7
baz=318,SNR=15
KSH **Kashi** 62.57 300⇓iP P 21 07 08.8 +3.8
KSH pP sP 21 07 15.8 -0.6
KSH PP **PP** 21 09 24.4 +2.1
KSH S **S** 21 15 34.8 +3.8
KSH sS sS 21 15 45.8 +1.2
KSH ScS **ScS** 21 16 59.8 +4.3
KSH SS **SS** 21 19 42.9 +8.3
KSH pmax pmax
comp=Z,100nm,0.9s
KSH LR LR
comp=Z,3μm,14.2s
KSH LR LR
comp=Z,3μm,17.3s
N41A **Harden Midland** 62.59 58 P P 21 07 04.6 -0.4
baz=318,SNR=63
N41A **Harden Midland** 62.59 58 eP P 21 07 04.3 -0.7
comp=Z,337nm,0.9s
M42A **Sheffield** 62.59 57 P P 21 07 04.2 -0.7
baz=318
KK31 **Karatay Array** 62.65 306 eP P 21 07 05.0 -0.3
KK31 **Karatay Array** 62.65 306 i P P 21 07 04.8 -0.5
KK31 pmax pmax
comp=Z,16nm,0.6s
KKAR **Karatay Array** 62.65 306 eP P 21 07 04.9 -0.4
KKAR **Karatay Array** 62.65 306 eP P 21 07 04.9 -0.4
AB31 **Akbulak array** 62.71 317 i P P 21 07 05.1 -0.5
AB31 pmax pmax
comp=Z,18nm,0.6s
ABKAR **Akbulak array** 62.71 317 eP P 21 07 05.2 -0.4
Q39A **Willow Grove F** 62.73 61 P P 21 07 05.2 -0.7
baz=318,SNR=48
WMOK **Wichita Mounta** 62.77 68 P P 21 07 06.5 +0.3
baz=318,SNR=59
WMOK **Wichita Mounta** 62.77 68 eP P 21 07 06.5 +0.3
comp=Z,148nm,0.9s
WMOK LR LR
comp=Z,2μm,22.0s
WMOK **Wichita Mounta** 62.77 68 eP P 21 07 06.5 +0.3
WMOK pmax pmax
comp=Z,148nm,0.9s
WMOK MLR MLR
comp=Z,2μm,22.0s
P40A **Paris** 62.85 60 P P 21 07 06.2 -0.5
baz=318,SNR=98
P40A **Paris** 62.85 60 eP P 21 07 06.1 -0.5
comp=Z,318nm,1.0s
R38A **Fenwick Farm,** 62.87 62 P P 21 07 04.9 -1.9
baz=318,SNR=14
N42A **Yates City** 62.92 57 P P 21 07 06.6 -0.6
baz=318,SNR=19
L44A **Lake County Fo** 62.98 55 P P 21 07 07.0 -0.5
baz=319,SNR=6.0
M43A **Waltham Townsh** 63.01 56 P P 21 07 07.5 -0.3
baz=318,SNR=42
O41A **Passleys Farm,** 63.02 59 P P 21 07 07.5 -0.3
baz=318,SNR=48
BRLS **Boroday** 63.03 306 eS S 21 15 41.1 +4.6
PUL **Pulkovo** 63.09 339⇑iP P 21 07 09.2 +1.3
PUL pmax pmax
comp=Z,121nm,0.8s
Q40A **Laux Farm, Aux** 63.24 60 P P 21 07 08.5 -0.8
baz=318,SNR=37
R39A **Chumby, Stover** 63.24 61 P P 21 07 07.8 -1.4
baz=318,SNR=36
SKNT **Sakolnakorn** 63.25 263 P P 21 07 16.5 +6.9
comp=Z,26nm,1.6s
P41A **Barry, Barry** 63.26 59 P P 21 07 09.0 -0.4
baz=318,SNR=28
N43A **Stutzman Famil** 63.27 57 P P 21 07 09.2 -0.3
baz=319,SNR=32
HNR **Honiara** 63.27 193 LR LR 21 30 49.8
comp=Z,577nm,19.6s,baz=16,slow=32
S38A **Stockton** 63.28 62 P P 21 07 08.0 -1.6
baz=318,SNR=22
O42A **Bath** 63.37 58 P P 21 07 09.7 -0.4
baz=318,SNR=7.8
HDIL **Hopedale** 63.50 57 P P 21 07 10.8 -0.1
baz=319,SNR=36
HDIL **Hopedale** 63.50 57 eP P 21 07 10.8 -0.1
comp=Z,435nm,1.0s
HDIL LR LR
comp=Z,2μm,19.0s
M44A **Midewin, Midew** 63.50 56 P P 21 07 10.6 -0.3
baz=319,SNR=21
M44A **Midewin, Midew** 63.50 56 eP P 21 07 10.4 -0.6
comp=Z,182nm,1.0s
T38A **Diamond** 63.52 63 P P 21 07 10.1 -1.1
baz=318,SNR=34
TUL1 **Leonard** 63.55 65 P P 21 07 10.9 -0.4
baz=318,SNR=15
TUL1 **Leonard** 63.55 65 eP P 21 07 10.5 -0.8
comp=Z,109nm,0.9s
S39A **Bolivar** 63.55 62 P P 21 07 09.6 -1.8
baz=318,SNR=20
S39A **Bolivar** 63.55 62 eP P 21 07 09.1 -2.2
comp=Z,45nm,1.0s
SIJI **Sorong** 63.58 226 P P 21 07 12.4 +0.6
comp=Z,76nm,0.8s,baz=25,slow=7.9,SNR=10
IUG **Iuzhnay** 63.60 306⇓iP P 21 07 12.3 +0.5
IUG i S S 21 15 45.9 +2.1
R40A **Maddies Statio** 63.66 61 P P 21 07 11.1 -0.9
baz=318,SNR=72
R40A **Maddies Statio** 63.66 61 eP P 21 07 10.7 -1.4
comp=Z,200nm,1.0s
R40A eS S 21 15 42.4 -2.0
CHM **Chimkent** 63.68 306⇓eP P 21 07 12.7 +0.5
comp=Z,138nm,2.1s
CHM eS S 21 15 46.7 +2.1
CHM LR LR 21 36 15.5
comp=Z,381nm,13.4s
P42A **Winchester** 63.69 59 P P 21 07 11.7 -0.6
baz=319,SNR=31
P42A **Winchester** 63.69 59 eP P 21 07 11.5 -0.7
comp=Z,143nm,1.0s
O43A **Sugar Creek Fa** 63.69 57 P P 21 07 12.0 -0.2
baz=319,SNR=15
UBPT **Khong Chiam** 63.69 260 P P 21 07 20.0 +7.5
comp=Z,76nm,0.8s
Q41A **Truxton** 63.70 60 P P 21 07 12.0 -0.4
baz=318,SNR=62
ABTX **Abilene, Hawle** 63.85 70 P P 21 07 13.7 +0.3
baz=318,SNR=26
ABTX **Abilene, Hawle** 63.85 70 eP P 21 07 13.6 +0.2
comp=Z,248nm,1.1s
M45A **Boilermakers S** 63.89 55 P P 21 07 13.0 -0.5
baz=319
N44A **Piper City** 63.90 56 P P 21 07 13.4 -0.2
baz=319,SNR=40
CMAI **Chiengmai2** 63.92 269 P P 21 07 23.3 +9.1
comp=Z,667nm,1.1s
SHL **Shillong** 63.94 278 eP P 21 07 12.0 -2.3
comp=Z,3.0nm,0.7s
SHL eS S 21 15 46.0 -2.5
SHL **Shillong** 63.94 278 eP P 21 07 13.7 -0.6
comp=Z,88nm,1.2s
SHL **Shillong** 63.94 278 eP P 21 07 13.7 -0.6
SHL pmax pmax
comp=Z,88nm,1.2s
LPIG **La Paz** 63.98 84 P P 21 07 14.7 +0.4
comp=Z,162nm,1.0s,baz=1.4,slow=1.8,SNR=18
LPIG LR LR 21 33 38.5
comp=Z,642nm,18.1s,baz=306,slow=35
TX31 **Lajitas Ar. Si** 63.98 75 eP P 21 07 13.9 -0.5
TXAR **Lajitas Array** 63.98 75 P P 21 07 14.8 +0.3
comp=Z,66nm,0.6s,baz=303,slow=4.6,SNR=732
TXAR LR LR 21 35 34.4
comp=Z,2μm,18.1s,baz=0.0,slow=36
T39A **Clever** 64.02 62 P P 21 07 13.1 -1.3
baz=318,SNR=32
S40A **Lebanon** 64.05 61 P P 21 07 13.3 -1.4
baz=319,SNR=31
P43A **Skaggs, Pawnee** 64.07 58 P P 21 07 14.4 -0.4
baz=319,SNR=26
Q42A **Golden Eagle** 64.10 59 P P 21 07 14.9 0.0
baz=319,SNR=40
R41A **Rosebud** 64.12 60 P P 21 07 14.3 -0.8
baz=319,SNR=60
N45A **Kentland** 64.17 56 P P 21 07 15.3 -0.1
baz=319,SNR=30
O44A **Mansfield** 64.22 57 P P 21 07 15.4 -0.3
baz=319,SNR=12
HHAR **Hobbs** 64.27 63 eP P 21 07 14.8 -1.3
comp=Z,58nm,0.8s
M46A **Old House Fiel** 64.32 55 P P 21 07 15.9 -0.4
baz=320,SNR=13
M46A **Old House Fiel** 64.32 55 eP P 21 07 15.7 -0.7
comp=Z,130nm,1.0s
CCM **Cathedral Cave** 64.37 60 P P 21 07 15.7 -1.0
baz=319
CCM **Cathedral Cave** 64.37 60 eP P 21 07 15.5 -1.3
comp=Z,81nm,0.9s
CCM **Cathedral Cave** 64.37 60 eP P 21 07 15.5 -1.3
CCM pmax pmax
comp=Z,81nm,0.9s
T40A **Mansfield** 64.38 62 P P 21 07 15.5 -1.3
baz=319,SNR=71
R42A **Luebbering** 64.44 60 P P 21 07 16.6 -0.5
baz=319,SNR=39
U39A **Green Forest** 64.44 63 P P 21 07 16.3 -1.0
baz=319,SNR=103
SLM **Saint Louis** 64.46 59 eP P 21 07 16.6 -0.7
comp=Z,139nm,1.0s
SLM **Saint Louis** 64.46 59 eP P 21 07 16.6 -0.7
SLM pmax pmax
comp=Z,139nm,1.0s
S41A **Jillco Farms,** 64.46 61 P P 21 07 16.4 -0.9
baz=319,SNR=118
Q43A **New Douglas** 64.50 59 P P 21 07 17.4 -0.2
baz=319,SNR=28
SLBS **Sierra La Lagu** 64.51 84 eP P 21 07 18.0 +0.1
comp=Z,68nm,1.0s
O45A **Potomac** 64.52 56 P P 21 07 17.8 +0.1
baz=319,SNR=32
N46A **Monticello** 64.52 55 P P 21 07 17.0 -0.7
baz=320,SNR=10
HPIG 64.61 79 eP P 21 07 17.9 -0.8
comp=Z,67nm,1.0s
P44A **Sand Creek, Wi** 64.66 58 P P 21 07 18.6 0.0
baz=319,SNR=67
SFIN **Lafayette** 64.73 56 P P 21 07 18.8 -0.3
baz=320,SNR=20
SFIN **Lafayette** 64.73 56 eP P 21 07 18.2 -0.8
comp=Z,120nm,0.9s
NC303 **NORSAR Array S** 64.76 350 eP P 21 07 18.6 -0.3
V39A **Pettigrew** 64.76 64 P P 21 07 18.5 -0.9
baz=319,SNR=80
NC204 **NORSAR Array S** 64.77 350 eP P 21 07 18.6 -0.5
U40A **Yellville** 64.80 63 P P 21 07 18.5 -1.0
baz=319,SNR=69
S42A **Caledonia** 64.82 60 P P 21 07 19.0 -0.7
baz=319,SNR=91
NC405 **NORSAR Array S** 64.83 349 eP P 21 07 18.1 -1.3
CHTO **Chiang Mai** 64.84 268 P P 21 07 21.8 +1.8
comp=Z,133nm,1.6s
CHTO **Chiang Mai** 64.84 268 eP P 21 07 20.6 +0.5
comp=Z,18nm,0.9s
CHTO LR LR
comp=Z,884nm,19.0s
FVM **French Village** 64.85 60 eP P 21 07 19.0 -0.9
comp=Z,69nm,0.8s
FVM eS S 21 15 58.4 -0.8
FVM **French Village** 64.85 60 eP P 21 07 19.0 -0.9
FVM eS S 21 15 58.4 -0.8
FVM pmax pmax
comp=Z,69nm,0.8s
T41A **Mountain View** 64.86 61 P P 21 07 18.7 -1.2
baz=319,SNR=28
Q44A **Meyer Farm, Va** 64.88 58 P P 21 07 19.6 -0.4
baz=319,SNR=30
R43A **Red Bud** 64.89 59 P P 21 07 19.5 -0.6
baz=319,SNR=26
NB201 **NORSAR Array S** 64.94 350 eP P 21 07 18.7 -1.4
AAM **Ann Arbor** 64.94 52 P P 21 07 20.6 +0.2
baz=320
AAM **Ann Arbor** 64.94 52 eP P 21 07 20.4 0.0
comp=Z,84nm,1.0s
AAM LR LR
comp=Z,3μm,20.0s
AAM **Ann Arbor** 64.94 52 eP P 21 07 20.4 0.0
AAM pmax pmax
comp=Z,83nm,1.0s
AAM MLR MLR
comp=Z,3μm,20.0s
MOS **Moscow** 64.94 333 eP P 21 07 18.7 -1.4
MOS e 21 07 51.0
MOS eS S 21 15 59.6 -0.1
MOS pmax pmax
comp=Z,72nm,0.7s
MOS MLR MLR
comp=Z,2μm,19.0s
NB2 **NORSAR Subarra** 64.95 350 P P 21 07 19.3 -0.9
comp=Z,88nm,1.2s,baz=12,slow=6.9
NB2 **NORSAR Subarra** 64.95 350 P P 21 07 19.3 -0.9
baz=12,slow=6.9
NB200 **NORSAR Array S** 64.95 350 eP P 21 07 19.9 -0.4
NOA **NORSAR Array B** 64.95 350 P P 21 07 19.9 -0.4
NBO00 **NORSAR Array S** 65.01 350 eP P 21 07 20.3 -0.3
VSU **Vasula** 65.03 341 ceP P 21 07 21.4 +0.7
VSU pmax pmax
comp=Z,186nm,1.1s
P45A **Graceland, Par** 65.06 57 P P 21 07 21.0 -0.1
baz=320,SNR=29
P45A **Graceland, Par** 65.06 57 eP P 21 07 20.9 -0.3
comp=Z,189nm,1.0s
SADO **Sadowa** 65.11 48 eP P 21 07 20.4 -1.1
comp=Z,34nm,0.9s
CM31 **Chiang Mai Arr** 65.11 268 eP P 21 07 21.8 0.0
CMAR **Chiang Mai Arr** 65.11 268 P P 21 07 22.1 +0.3
comp=Z,5.9nm,0.7s,baz=25,slow=7.1,SNR=35
CMAR PKP2ab 21 36 16.4
comp=Z,1.4nm,1.0s,baz=251,slow=4.5,SNR=5.0
CMAR LR LR 21 37 20.0
comp=Z,620nm,20.6s,baz=38,slow=38
CMAR **Chiang Mai Arr** 65.11 268 ceP P 21 07 22.5 +0.7
CMAR pmax pmax
comp=Z,6.0nm,0.7s
CM01 **Chiang Mai Arr** 65.13 268 eP P 21 07 21.9 0.0
W39A **Magazine** 65.17 64 P P 21 07 21.6 -0.3
baz=319,SNR=72
W39A **Magazine** 65.17 64 eP P 21 07 21.2 -0.7
comp=Z,498nm,1.8s
NAO01 **NORSAR Array S** 65.18 350 eP P 21 07 21.1 -0.6
NC602 **NORSAR Array S** 65.22 349 eP P 21 07 21.6 -0.3
T42A **Van Buren** 65.22 61 P P 21 07 21.0 -1.2
baz=319,SNR=35
T42A **Van Buren** 65.22 61 eP P 21 07 20.8 -1.5
comp=Z,70nm,0.9s
T42A eS S 21 16 00.3 -3.4
V40A **Witts Springs** 65.23 63 P P 21 07 21.6 -0.8
baz=319,SNR=100
V40A **Witts Springs** 65.23 63 eP P 21 07 21.4 -1.0
comp=Z,256nm,0.9s
P46A **Rosedale** 65.26 57 P P 21 07 22.2 -0.3
baz=320,SNR=41
O47A **Sheridan** 65.30 55 P P 21 07 21.7 -1.1
baz=320,SNR=11
U41A **Viola** 65.30 62 P P 21 07 21.8 -1.0
baz=319,SNR=79
Q45A **Warren Harvey,** 65.33 58 P P 21 07 22.9 -0.1
baz=320,SNR=57
S43A **Fulton Ridge,** 65.34 60 P P 21 07 22.4 -0.7

	baz=319,SNR=50						
R44A	Waltonville	65.35	59	P	P	21 07 22.7	-0.4
	baz=320,SNR=23						
JCT	Junction City	65.35	72	P	P	21 07 23.3	0.0
	baz=319,SNR=49						
JCT	Junction City	65.35	72	eP	P	21 07 22.9	-0.4
	comp=Z,260nm,1.1s						
JCT				LR	LR		
	comp=Z,2µm,21.0s						
JCT	Junction City	65.35	72	eP	P	21 07 22.9	-0.4
JCT				pmax	pmax		
	comp=Z,260nm,1.1s						
JCT				MLR	MLR		
	comp=Z,2µm,21.0s						
PBKT	Sadao Pong	65.36	265	P	P	21 07 31.6	+8.2
	comp=Z,21nm,1.5s,comp=Z,1µm						
PBKT	Sadao Pong	65.36	265	eP	P	21 07 22.5	-0.9
	comp=Z,66nm,1.8s						
X39A	Fountain Ranch	65.50	65	P	P	21 07 24.2	0.0
	baz=319,SNR=98						
WHTX	Lake Whitney,	65.55	69	P	P	21 07 24.5	0.0
	baz=319						
HFS	Hagfors	65.55	348	P	P	21 07 23.7	-0.4
	comp=Z,22nm,0.5s,baz=46,slow=4.3,SNR=123						
HFS				LR	LR	21 37 22.0	
	comp=Z,804nm,18.3s,baz=20,slow=37						
W40A	Ferguson Farm,	65.55	64	P	P	21 07 24.1	-0.3
	baz=319,SNR=77						
W40A	Ferguson Farm,	65.55	64	eP	P	21 07 23.8	-0.7
	comp=Z,335nm,0.9s						
V41A	Mountainview	65.60	63	P	P	21 07 23.8	-1.0
	baz=319,SNR=105						
T43A	Greenville	65.60	60	P	P	21 07 24.1	-0.7
	baz=319,SNR=8.3						
ODAN	Odare	65.62	283	eP	P	21 07 25.3	0.0
	comp=Z,45nm,0.8s						
Q46A	CEJHS Indians,	65.63	57	P	P	21 07 24.5	-0.4
	baz=320,SNR=6.1						
U42A	Revenden	65.66	62	P	P	21 07 23.8	-1.3
	baz=319,SNR=58						
S44A	Carbondale	65.68	59	P	P	21 07 24.7	-0.5
	baz=320,SNR=18						
SIUC	Southern Illin	65.68	59	eP	P	21 07 24.5	-0.7
	comp=Z,142nm,1.0s						
GUN	Gumba	65.71	284	eP	P	21 07 26.2	+0.2
	comp=Z,110nm,0.8s						
JIRN	Jiri	65.72	284	eP	P	21 07 26.3	+0.2
	comp=Z,85nm,0.6s						
R45A	Skylar, Fairfi	65.72	58	P	P	21 07 25.2	-0.3
	baz=320,SNR=16						
PBMO	Poplar Bluff	65.76	61	eP	P	21 07 25.1	-0.7
	comp=Z,304nm,0.9s						
MIAR	Mount Ida	65.77	64	P	P	21 07 25.7	-0.2
	baz=319,SNR=92						
MIAR	Mount Ida	65.77	64	eP	P	21 07 25.4	-0.4
	comp=Z,156nm,1.0s						
MIAR				eS	S	21 16 09.4	-1.1
MIAR				LR	LR		
	comp=Z,1µm,19.0s						
MIAR	Mount Ida	65.77	64	eP	P	21 07 25.4	-0.4
MIAR				eS	S	21 16 09.4	-1.1
MIAR				pmax	pmax		
	comp=Z,156nm,1.0s						
MIAR				MLR	MLR		
	comp=Z,1µm,19.0s						
OBN	Obninsk	65.78	334	PFAKE		21 07 40.0	+14
OBN				LR	LR		
	comp=Z,1µm,20.0s						
OBN	Obninsk	65.78	334	d iP	P	21 07 25.6	+0.1
OBN				e		21 07 36.6	
OBN				e		21 07 56.5	
OBN				e		21 09 51.4	
OBN				ePPP	PPP	21 11 21.3	
OBN				eS	S	21 16 08.7	-1.2
OBN				eSS	SS	21 20 28.0	+4.5
OBN				pmax	pmax		
	comp=Z,83nm,1.3s						
OBN				MLR	MLR		
	comp=Z,2µm,19.0s						
P47A	Martinsville	65.83	56	P	P	21 07 25.7	-0.5
	baz=320,SNR=30						
PMG	Port Moresby	65.85	207	P	P	21 07 29.1	+2.7
	comp=Z,29nm,1.0s,baz=22,slow=5.4,SNR=3.0						
PMG	Port Moresby	65.85	207	eP	P	21 07 29.1	+2.7
PMG				LR	LR		
	comp=Z,982nm,21.0s						
PMG	Port Moresby	65.85	207	eP	P	21 07 29.2	+2.7
PMG				MLR	MLR		
	comp=Z,982nm,21.0s						
WHAR	Wooly Hollow	65.90	63	eP	P	21 07 25.7	-1.0
	comp=Z,152nm,1.0s						
BLO	Bloomington	65.94	56	eP	P	21 07 26.2	-0.7
	comp=Z,171nm,1.0s						
BLO	Bloomington	65.94	56	eP	P	21 07 26.2	-0.7
BLO				pmax	pmax		
	comp=Z,171nm,1.0s						
TRQ	Mont Tremblant	65.94	44	eP	P	21 07 25.2	-1.7
T44A	Benton	65.96	60	P	P	21 07 26.6	-0.5
	baz=320,SNR=7.5						
V42A	Cord	65.99	62	P	P	21 07 26.0	-1.2
	baz=319,SNR=31						
W41B	Gary Mavity, V	66.01	63	P	P	21 07 26.7	-0.7
	baz=319,SNR=47						
W41B	Gary Mavity, V	66.01	63	eP	P	21 07 26.4	-1.0
	comp=Z,137nm,1.1s						
RAMN	Ramite	66.01	283	eP	P	21 07 27.8	-0.1
	comp=Z,157nm,0.6s						
S45A	Carrier Mills	66.03	59	P	P	21 07 27.2	-0.4
	baz=320,SNR=14						
U43A	Rector	66.08	61	P	P	21 07 27.1	-0.8
	baz=320,SNR=13						
KKN	Kakani	66.15	285	eP	P	21 07 28.9	+0.2
	comp=Z,59nm,0.9s						
Q47A	Bedord North L	66.17	57	P	P	21 07 28.1	-0.3
	baz=320,SNR=39						
R46A	Gibon Southern	66.17	58	P	P	21 07 27.9	-0.5
	baz=320,SNR=14						
PARMO	Parma	66.20	60	eP	P	21 07 28.6	0.0
	comp=Z,359nm,1.0s						
X40A	Basin Creek Fa	66.21	64	P	P	21 07 28.1	-0.6
	baz=319,SNR=28						
X40A	Basin Creek Fa	66.21	64	eP	P	21 07 28.1	-0.6
	comp=Z,99nm,1.1s						
PKIN	Phulchoki	66.24	285	eP	P	21 07 29.2	-0.1
	comp=Z,45nm,0.5s						
UALR	University of	66.26	63	eP	P	21 07 28.2	-0.8
	comp=Z,45nm,1.0s						
BRDH	Bariadhala	66.26	276	LR	LR	21 38 25.4	
	comp=Z,1µm,18.0s,baz=38,slow=38						
USIN	University of	66.28	58	eP	P	21 07 28.7	-0.4
	comp=Z,299nm,1.0s						
W42A	Bald Knob	66.32	63	P	P	21 07 28.8	-0.5
	baz=320						
Y40A	Okolona	66.33	65	P	P	21 07 28.9	-0.5
	baz=319,SNR=11						
U44A	Portageville	66.35	60	P	P	21 07 29.2	-0.4
	baz=320						
GKN	Gorkha	66.36	285	eP	P	21 07 29.8	-0.2
	comp=Z,116nm,1.1s						
X41A	Kaden, Bauxite	66.38	64	P	P	21 07 29.2	-0.5
	baz=320,SNR=5.6						
435B	Jarrell	66.38	70	P	P	21 07 30.1	+0.2
	baz=319,SNR=9.1						
435B	Jarrell	66.38	70	eP	P	21 07 30.1	+0.2
	comp=Z,184nm,1.1s						
DMN	Daman	66.39	285	eP	P	21 07 30.0	-0.3
	comp=Z,53nm,0.7s						
V43A	Jonesboro	66.45	61	P	P	21 07 29.7	-0.5
	baz=320						
S46A	Don Dixon Farm	66.47	58	P	P	21 07 30.0	-0.3
	baz=320,SNR=5.4						
KONO	Kongsberg	66.49	350	eP	P	21 07 29.9	-0.1
	comp=Z,28nm,0.8s						
KONO	Kongsberg	66.49	350	d iP	P	21 07 30.3	+0.2
KONO				i *PP	pP	21 07 38.1	-0.3
KONO				i		21 07 59.7	
KONO				pmax	pmax		
	comp=Z,69nm,1.7s						
T45A	Paducah	66.50	59	P	P	21 07 30.4	-0.1
	baz=320						
T45A	Paducah	66.50	59	eP	P	21 07 30.5	-0.1
	comp=Z,168nm,0.8s						
DANN	Dangsing	66.61	286	eP	P	21 07 31.8	+0.1
	comp=Z,110nm,0.9s						
R47A	Wooly Knot Far	66.61	57	P	P	21 07 30.9	-0.3
	baz=320,SNR=5.7						
O50A	Cable	66.62	54	P	P	21 07 30.9	-0.4
	baz=321,SNR=20						
U44B	Burton Farm, H	66.66	60	P	P	21 07 31.6	+0.1
	baz=320,SNR=7.1						
SRAK	Srakaew	66.72	262	P	P	21 07 38.3	+6.1
	comp=Z,63nm,1.4s						
GLAT	Glass	66.74	60	eP	P	21 07 32.3	+0.3
	comp=Z,753nm,1.2s						
V44A	Blytheville	66.76	61	P	P	21 07 32.1	0.0
	baz=320						
WCI	Wyandotte Cave	66.78	57	P	P	21 07 31.9	-0.3
	baz=320						
Y41A	Eaglette Beard	66.79	64	P	P	21 07 32.3	-0.2
	baz=320,SNR=13						
ERPA	Erie	66.80	50	P	P	21 07 32.3	-0.1
	baz=322,SNR=6.2						
ERPA	Erie	66.80	50	eP	P	21 07 32.2	-0.2
	comp=Z,110nm,0.9s						
X42A	Stuttgart	66.81	63	P	P	21 07 32.1	-0.4
	baz=320						
Z40A	Long Farm, Mag	66.83	65	P	P	21 07 32.8	+0.1
	baz=320						
R48A	Northridge Ran	66.86	57	P	P	21 07 32.7	-0.1
	baz=321,SNR=8.9						
ACSO	Alum Creek Sta	66.86	53	P	P	21 07 32.3	-0.5
	baz=321,SNR=15						
ACSO	Alum Creek Sta	66.86	53	eP	P	21 07 32.6	-0.2
	comp=Z,82nm,1.0s						
ACSO				LR	LR		
	comp=Z,2µm,21.0s						
T46A	Princeton	66.87	59	P	P	21 07 32.8	-0.1
	baz=320,SNR=12						
W43A	Forest City	66.89	62	P	P	21 07 32.5	-0.6
	baz=320						
UTMT	University of	66.91	60	eP	P	21 07 33.1	-0.1
	comp=Z,814nm,1.1s						
U45A	Rockin P Farm,	66.95	60	P	P	21 07 33.5	0.0
	baz=320,SNR=9.5						
HALT	Halls	66.99	61	eP	P	21 07 33.5	-0.2
	comp=Z,1µm,1.3s						
ALLY	Alegheny Colle	67.10	51	eP	P	21 07 34.1	-0.2
	comp=Z,187nm,0.9s						
KOLN	Koldanda	67.14	286	eP	P	21 07 34.7	-0.3
	comp=Z,27nm,0.7s						
140A	Cam and Jess,	67.21	66	P	P	21 07 35.3	+0.3
	baz=320,SNR=5.7						
140A	Cam and Jess,	67.21	66	eP	P	21 07 34.9	-0.1
	comp=Z,233nm,1.2s						
833A	Chaparral WMA,	67.21	73	P	P	21 07 35.6	+0.5
	baz=320,SNR=12						
833A	Chaparral WMA,	67.21	73	eP	P	21 07 35.4	+0.3
	comp=Z,80nm,0.9s						
LONY	Lake Ozonia	67.22	45	P	P	21 07 33.4	-1.6
	baz=324,SNR=14						
LONY	Lake Ozonia	67.22	45	eP	P	21 07 33.2	-1.8
	comp=Z,26nm,0.9s						
LONY				LR	LR		
	comp=Z,2µm,21.0s						
CCAR	Cane Creek	67.22	64	eP	P	21 07 34.5	-0.6
	comp=Z,208nm,1.0s						
X43A	Marvell	67.24	63	P	P	21 07 34.9	-0.3
	baz=320						
X43A	Marvell	67.24	63	eP	P	21 07 35.2	0.0
	comp=Z,272nm,1.0s						
PYUN	Piuthan	67.24	287	eP	P	21 07 35.2	-0.4
	comp=Z,85nm,0.9s						
U46A	Springville	67.25	59	P	P	21 07 35.1	-0.2
	baz=320						
MMNY	Mt. Morris Dam	67.27	48	eP	P	21 07 34.4	-0.9
	comp=Z,88nm,0.9s						
Y42A	Garnett, Star	67.27	64	P	P	21 07 35.5	+0.1
	baz=320,SNR=8.6						
NATX	Nacogdoches	67.28	67	P	P	21 07 35.7	+0.1
	baz=320,SNR=9.3						
NATX	Nacogdoches	67.28	67	eP	P	21 07 35.9	+0.3
	comp=Z,203nm,0.9s						
NATX				LR	LR		
	comp=Z,2µm,20.0s						
V45A	Humboldt	67.32	60	P	P	21 07 35.6	-0.1
	baz=320,SNR=13						
T47A	Sharon Grove	67.32	58	P	P	21 07 35.8	+0.1
	baz=320,SNR=12						
W44A	Shelby Farms P	67.33	61	P	P	21 07 36.0	+0.2
	baz=320						
S48A	Wiedeman Farm,	67.33	57	P	P	21 07 35.6	-0.2
	baz=321						
M54A	Oil Creek Stat	67.43	50	P	P	21 07 36.2	-0.2
	baz=322,SNR=29						
M54A	Oil Creek Stat	67.43	50	eP	P	21 07 36.0	-0.4
	comp=Z,98nm,0.8s						
FRNY	Flat Rock	67.46	44	eP	P	21 07 34.8	-1.7
	comp=Z,98nm,2.0s						
240A	Hunter Patters	67.56	66	P	P	21 07 37.1	-0.2
	baz=320						
240A	Hunter Patters	67.56	66	eP	P	21 07 37.4	0.0
	comp=Z,197nm,1.1s						
T48A	Bowling Green	67.59	58	P	P	21 07 37.3	-0.1
	baz=321,SNR=7.1						
141A	Papa Simpson,	67.60	65	P	P	21 07 37.7	+0.1
	baz=320						
WVT	Waverly	67.61	59	P	P	21 07 37.5	-0.1
	baz=320						
Z42A	Norrel Spur, H	67.61	64	P	P	21 07 37.6	0.0
	baz=320,SNR=8.8						
X44A	Crenshaw	67.64	62	P	P	21 07 37.7	-0.1
	baz=320,SNR=13						
U47A	Clarksville	67.64	59	P	P	21 07 37.9	+0.1
	baz=321,SNR=12						
W45A	Hickory Valley	67.64	61	P	P	21 07 37.9	+0.1
	baz=320,SNR=12						
IZAR	Zarasai	67.65	340	eP	P	21 07 38.4	+0.8
IZAR				IAmb	IAmb	21 07 39.1	
	comp=Z,20nm,0.7s						
Y43A	Makayla and Ka	67.67	63	P	P	21 07 37.8	-0.1
	baz=320						
V46A	Holladay	67.71	60	P	P	21 07 38.0	-0.2
	baz=320,SNR=54						
N54A	Moraine State	67.71	51	P	P	21 07 38.0	-0.2
	baz=322,SNR=43						
N54A	Moraine State	67.71	51	eP	P	21 07 37.5	-0.7
	comp=Z,146nm,0.9s						
ISAL	Salakas	67.84	340	eP	P	21 07 39.6	+0.8
ISAL				IAmb	IAmb	21 07 40.5	
	comp=Z,18nm,0.9s						
NCB	Newcomb	67.89	45	eP	P	21 07 37.8	-1.5
	comp=Z,27nm,1.0s						
IDID	Didziasalis	67.95	339	eP	P	21 07 40.3	+0.9
IDID				IAmb	IAmb	21 07 41.2	
	comp=Z,41nm,1.0s						
U48A	Cassie Pea, Po	67.97	58	P	P	21 07 40.0	+0.1
	baz=321,SNR=7.7						
V47A	Nunnelly	68.00	59	P	P	21 07 39.8	-0.3
	baz=321,SNR=13						
HKT	Hockley	68.00	69	eP	P	21 07 39.8	-0.2
	comp=Z,232nm,1.6s						
HKT	Hockley	68.00	69	eP	P	21 07 39.8	-0.2
HKT				pmax	pmax		
	comp=Z,232nm,1.6s						
Y44A	Strider, Charl	68.02	63	P	P	21 07 40.2	+0.1
	baz=320,SNR=8.4						
OXF	Oxford	68.02	62	P	P	21 07 40.1	-0.1
	baz=320,SNR=27						
OXF	Oxford	68.02	62	eP	P	21 07 39.8	-0.4
	comp=Z,823nm,1.1s						
OXF				eS	S	21 16 37.4	-0.3
OXF	Oxford	68.02	62	eP	P	21 07 39.8	-0.4
OXF				eS	S	21 16 37.4	-0.3
OXF				pmax	pmax		
	comp=Z,823nm,1.1s						
T49A	Edmonton	68.03	57	P	P	21 07 40.2	0.0
	baz=321,SNR=5.6						
IIGN	Ignalina	68.03	340	eP	P	21 07 40.8	+0.9
IIGN				IAmb	IAmb	21 07 41.6	
	comp=Z,30nm,0.6s						
241A	Mo Tay, Goldon	68.04	66	P	P	21 07 40.6	+0.3
	baz=320,SNR=10						
241A	Mo Tay, Goldon	68.04	66	eP	P	21 07 40.6	+0.3
	comp=Z,220nm,1.0s						
Z43A	Armstrong Fami	68.04	64	P	P	21 07 40.1	-0.2
	baz=320						
VORR	Voronezh	68.08	330	eP	P	21 07 40.0	-0.2
VORR				pmax	pmax		
	comp=Z,250nm,1.4s						
W46A	Michie	68.09	60	P	P	21 07 40.0	-0.6
	baz=321,SNR=7.5						
X45A	UM Field Stati	68.10	62	P	P	21 07 40.4	-0.3
	baz=320,SNR=11						
142A	Monroe	68.17	65	P	P	21 07 41.3	+0.2
	baz=320						
PQI	Presque Isle	68.20	40	eP	P	21 07 39.4	-1.7
	comp=Z,24nm,0.9s						
VT1	Waterbury	68.22	44	eP	P	21 07 40.5	-0.9
	comp=Z,32nm,1.0s						
NACGM	Naroch	68.33	339	eP	P	21 07 41.0	-0.8
NACGM				ePP	PP	21 10 22.0	+10
NACGM				eS	S	21 16 40.0	-0.7
NACGM				eScS	SKSac	21 17 36.0	-2.3
NACGM				eSS	SS	21 21 20.0	+17
NACGM				eLR	LR	21 35 32.0	
143A	Socs Landing,	68.34	64	P	P	21 07 42.3	+0.1
	baz=320						
PLAL	Pickwick Lake	68.36	60	eP	P	21 07 41.5	-0.8
	comp=Z,172nm,0.9s						
U49A	Red Boiling Sp	68.36	58	P	P	21 07 42.3	0.0
	baz=321,SNR=8.3						
W47A	Westpoint	68.40	60	P	P	21 07 42.2	-0.4
	baz=321,SNR=47						
X46A	Booneville	68.42	61	P	P	21 07 42.2	-0.5
	baz=321,SNR=20						
NIL	Nilore	68.42	297	eP	P	21 07 43.0	+0.2
	comp=Z,107nm,0.8s						
NIL				LR	LR		
	comp=Z,2µm,22.0s						
NIL	Nilore	68.42	297	eP	P	21 07 43.0	+0.2
NIL				pmax	pmax		
	comp=Z,107nm,0.8s						
NIL				MLR	MLR		
	comp=Z,2µm,22.0s						
AFI	Afiamalu	68.42	163	LR	LR	21 34 33.2	
	comp=Z,250nm,18.4s,baz=346,slow=33						
AFI	Afiamalu	68.42	163	PFAKE		21 08 00.0	+17
AFI				LR	LR		
	comp=Z,2µm,22.0s						
Z44A	Pea Ridge, Bel	68.42	63	P	P	21 07 42.6	-0.1
	baz=320,SNR=5.2						
V48A	Smith Brothers	68.42	59	P	P	21 07 42.5	-0.2
	baz=321,SNR=34						
242A	Grayson	68.43	65	P	P	21 07 42.7	-0.1
	baz=320						
341A	Kurthwood	68.43	66	P	P	21 07 42.9	+0.1
	baz=320,SNR=6.7						
341A	Kurthwood	68.43	66	eP	P	21 07 43.1	+0.3
	comp=Z,153nm,1.1s						
T50A	Nancy	68.44	57	P	P	21 07 42.7	-0.1
	baz=321,SNR=10						
Y45A	Yeager Farm, C	68.45	62	P	P	21 07 43.0	+0.1
	baz=321,SNR=17						
MICGM	Minsk	68.46	338	⇓ iP	P	21 07 43.0	+0.4
MICGM				PM		21 07 44.0	
	comp=Z,0.4nm,1.0s						
MICGM				ePcP	PcP	21 08 04.0	-3.8
MICGM				eS	S	21 16 44.0	+1.7
MICGM				eLR	LR	21 38 46.0	
MNK	Minsk	68.46	338	⇓ iP	P	21 07 43.0	+0.4
MNK				e		21 08 04.0	
MNK				eS	S	21 16 44.0	+1.7
MNK				pmax	pmax		
	comp=Z,400nm,1.0s						
VSR	Storozhevoye	68.49	330	eP	P	21 07 42.6	-0.2
VSR				eS	S	21 16 41.5	-1.2
VSR				pmax	pmax		
	comp=Z,90nm,1.1s						
VSR				smax	smax		
	comp=N,380nm,3.2s						
VSR				MLR	MLR		
	comp=Z,4µm,25.0s						
BINY	Binghamton	68.55	48	P	P	21 07 42.6	-0.8
	baz=324,SNR=13						
BINY	Binghamton	68.55	48	eP	P	21 07 42.5	-0.9
	comp=Z,49nm,0.9s						
BINY				LR	LR		
	comp=Z,2µm,22.0s						
S51A	Beattyville	68.58	56	P	P	21 07 43.4	-0.3
	baz=322						
ACCN	Adirondack Com	68.60	45	eP	P	21 07 42.4	-1.3
	comp=Z,302nm,2.0s						
LBNH	Lisbon	68.64	44	P	P	21 07 43.3	-0.7
	baz=325,SNR=9.8						
LBNH	Lisbon	68.64	44	eP	P	21 07 43.0	-0.9
	comp=Z,40nm,1.0s						
LBNH	Lisbon	68.64	44	eP	P	21 07 43.0	-0.9
LBNH				pmax	pmax		
	comp=Z,40nm,1.0s						
KVTX	Kingsville	68.66	72	PFAKE		21 08 00.0	+16
KVTX				LR	LR		
	comp=Z,1µm,19.0s						
Z45A	Winona	68.75	63	P	P	21 07 44.7	-0.1
	baz=321,SNR=7.5						
Z45A	Winona	68.75	63	eP	P	21 07 44.7	-0.1
	comp=Z,354nm,0.9s						
Y46A	Houston	68.80	62	P	P	21 07 44.9	-0.1
	baz=321,SNR=54						
S52A	Salyersville	68.80	55	P	P	21 07 44.8	-0.3
	baz=322						
MCWV	Mont Chateau	68.81	52	P	P	21 07 45.0	-0.1
	baz=322,SNR=13						
MCWV	Mont Chateau	68.81	52	eP	P	21 07 44.8	-0.2
	comp=Z,94nm,0.8s						
W48A	Pulaski	68.83	59	P	P	21 07 45.1	-0.2
	baz=321,SNR=129						
X47A	Russelville	68.83	61	P	P	21 07 44.7	-0.6
	baz=321,SNR=27						
342A	Flagon Creek P	68.86	66	P	P	21 07 45.8	+0.3
	baz=320,SNR=6.8						
342A	Flagon Creek P	68.86	66	eP	P	21 07 45.9	+0.5
	comp=Z,146nm,1.0s						
441A	DeRidder	68.86	67	P	P	21 07 46.1	+0.6
	baz=320						
PKME	Peaks-Kenny Pk	68.87	41	P	P	21 07 44.8	-0.5
	baz=326,SNR=8.9						
PKME	Peaks-Kenny Pk	68.87	41	eP	P	21 07 44.8	-0.5
	comp=Z,246nm,2.0s						
PKME				LR	LR		
	comp=Z,2µm,20.0s						
V49A	McMinnville	68.88	58	P	P	21 07 45.1	-0.4
	baz=321,SNR=17						
O56A	Blue Knob Stat	68.92	51	P	P	21 07 45.3	-0.5
	baz=323,SNR=34						
O56A	Blue Knob Stat	68.92	51	eP	P	21 07 45.1	-0.7
	comp=Z,170nm,1.4s						
144A	Alexander Plac	68.93	64	P	P	21 07 46.0	+0.1
	baz=321						
243A	Waterproof	68.93	65	P	P	21 07 46.2	+0.3
	baz=320,SNR=14						
TRY	Troy	69.13	46	eP	P	21 07 46.1	-0.9
	comp=Z,24nm,0.9s						
KSPA	Keystone Colle	69.16	48	eP	P	21 07 46.3	-0.9
	comp=Z,38nm,0.9s						
VBMS	Vicksburg	69.19	64	P	P	21 07 47.8	+0.2
	baz=321						
VBMS	Vicksburg	69.19	64	eP	P	21 07 47.7	+0.2
	comp=Z,160nm,0.8s						
W49A	Belvidere	69.19	59	P	P	21 07 47.1	-0.4
	baz=321,SNR=42						
145A	Houston Renfro	69.21	63	P	P	21 07 47.6	0.0
	baz=321						
244A	Avery, Jackson	69.24	64	P	P	21 07 48.0	+0.2
	baz=321,SNR=15						
Z46A	Louisville	69.28	62	P	P	21 07 48.0	0.0
	baz=321,SNR=6.3						
T52A	Hallie	69.30	56	P	P	21 07 48.4	+0.2
	baz=322						
WVL	Waterville	69.30	42	eP	P	21 07 47.4	-0.6
	comp=Z,208nm,2.0s						
X48A	Hartselle	69.31	60	P	P	21 07 47.4	-0.8
	baz=321,SNR=36						
X48A	Hartselle	69.31	60	eP	P	21 07 47.3	-0.9
	comp=Z,217nm,1.4s						
Y47A	UCPARC, Winfie	69.31	61	P	P	21 07 47.7	-0.6
	baz=321,SNR=42						
343A	Vidalia	69.31	65	P	P	21 07 48.9	+0.6
	baz=321						
V50A	Pikeville	69.36	58	P	P	21 07 48.3	-0.3
	baz=322,SNR=27						
FFD	Franklin Falls	69.38	44	eP	P	21 07 47.5	-1.0
	comp=Z,31nm,0.9s						
541A	Lake Charles	69.39	67	P	P	21 07 48.0	-0.7
	baz=320						
TZTN	Tazewell	69.46	56	P	P	21 07 49.3	+0.1
	baz=322						
TZTN	Tazewell	69.46	56	eP	P	21 07 49.3	+0.1
	comp=Z,79nm,1.0s						
TZTN				eS	S	21 16 55.5	+0.8
ZAIG	Zacatecas	69.59	79	eP	P	21 07 50.4	0.0
	comp=Z,88nm,1.1s						
W50A	Signal Mountai	69.62	58	P	P	21 07 50.0	-0.2

baz=322,SNR=32
W50A Signal Mountai 69.62 58 eP P 21 07 49.5 -0.7
comp=Z,104nm,0.8s
X49A Woodville 69.63 59 P P 21 07 49.9 -0.4
baz=321,SNR=72
V51A Loudon 69.64 57 P P 21 07 50.1 -0.1
baz=322,SNR=6.9
146A Union 69.65 63 P P 21 07 50.6 +0.3
baz=321,SNR=11
146A Union 69.65 63 eP P 21 07 50.7 +0.3
comp=Z,374nm,0.8s
Y48A Jasper 69.66 60 P P 21 07 49.4 -1.0
baz=321,SNR=36
344A Westbrook Farm 69.67 65 P P 21 07 50.7 +0.2
baz=321,SNR=6.4
344A Westbrook Farm 69.67 65 eP P 21 07 50.6 +0.2
comp=Z,144nm,0.9s
245A Little AP, Sta 69.67 64 P P 21 07 50.4 -0.1
baz=321,SNR=5.3
N59A State Game Lan 69.68 48 P P 21 07 49.9 -0.6
baz=324,SNR=18
N59A State Game Lan 69.68 48 eP P 21 07 49.2 -1.2
comp=Z,64nm,1.0s
542A Morse 69.69 67 P P 21 07 50.6 0.0
baz=321
Z47A Carrollton 69.74 62 P P 21 07 50.6 -0.3
baz=321,SNR=45
LNIG Linares 69.77 75 eP P 21 07 50.0 -1.2
comp=Z,26nm,1.1s
PAGS Pennsylvania G 69.80 49 eP P 21 07 50.1 -1.1
comp=Z,64nm,1.0s
CPCT Cooper Cave 69.83 58 eP P 21 07 50.9 -0.5
comp=Z,105nm,0.9s
CPCT eS S 21 17 00.8 +1.8
Z48A Northport 69.87 61 P P 21 07 51.0 -0.7
baz=321,SNR=61
SUW Suwalki 69.91 341 eP P 21 07 51.5 -0.1
SUW eS S 21 16 59.5 +0.2
SUW Suwalki 69.91 341 eP P 21 07 51.2 -0.3
comp=Z,152nm,1.3s
SUW Suwalki 69.91 341⇓eP P 21 07 51.5 -0.1
SUW eS S 21 16 59.5 +0.2
KBL Kabul 69.94 301 eP P 21 07 51.1 -1.3
comp=Z,68nm,0.9s
KBL Kabul 69.94 301 eP P 21 07 51.1 -1.3
KBL pmax pmax
comp=Z,68nm,0.9s
V52A Sevierville 69.99 57 P P 21 07 52.2 -0.2
baz=322
X50B Fort Payne 70.02 59 P P 21 07 52.1 -0.5
baz=322,SNR=60
TKL Tuckaleechee C 70.04 57 P P 21 07 52.4 -0.3
comp=Z,85nm,1.1s,baz=324,slow=3.5,SNR=25
TKL LR LR 21 37 58.5
comp=Z,3μm,21.1s,baz=332,slow=35
TKL Tuckaleechee C 70.04 57 eP P 21 07 52.1 -0.7
comp=Z,112nm,1.1s
TKL Tuckaleechee C 70.04 57 P P 21 07 52.4 -0.3
TKL pmax pmax
comp=Z,85nm,1.1s
TKL MLR MLR
comp=Z,3μm,21.1s
147A Livingston 70.04 62 P P 21 07 52.6 -0.2
baz=321,SNR=27
147A Livingston 70.04 62 eP P 21 07 52.1 -0.6
comp=Z,291nm,1.0s
COP Copenhagen 70.05 348⇓iP P 21 07 52.1 -0.3
comp=Z,17nm,0.8s
comp=Z,810nm,19.0s
COP Copenhagen 70.05 348⇓iP P 21 07 52.1 -0.3
COP pmax pmax
comp=Z,17nm,0.8s
COP MLR MLR
comp=Z,820nm,19.0s
EMMW East Machias 70.05 41 eP P 21 07 51.8 -0.8
comp=Z,193nm,1.8s
ODNJ Ogdensburg 70.06 47 eP P 21 07 51.2 -1.6
comp=Z,27nm,1.1s
U53A Fall Branch 70.08 56 P P 21 07 53.1 0.0
baz=322,SNR=8.6
246A Jackson Lee, B 70.10 63 P P 21 07 53.3 +0.2
baz=321
Y49A Blount Mountai 70.10 60 P P 21 07 52.5 -0.6
baz=322,SNR=42
Y49A Blount Mountai 70.10 60 eP P 21 07 52.2 -1.0
comp=Z,102nm,0.8s
543A St. Martinvill 70.11 66 P P 21 07 52.7 -0.5
baz=321
MVL Millersville 70.15 49 eP P 21 07 52.6 -0.8
comp=Z,49nm,1.0s
345A Thompson Farm, 70.16 64 P P 21 07 53.8 +0.3
baz=321,SNR=6.4
SBUM Sibu 70.20 246 eP P 21 07 54.3 +0.4
comp=Z,88nm,1.6s
HRV Adam Dziewonsk 70.21 45 P P 21 07 53.2 -0.4
baz=325
HRV Adam Dziewonsk 70.21 45 eP P 21 07 52.9 -0.8
comp=Z,99nm,1.7s
HRV Adam Dziewonsk 70.21 45 eP P 21 07 52.9 -0.8
HRV pmax pmax
comp=Z,99nm,1.7s
444A Pine Grove 70.23 65 P P 21 07 53.9 0.0
baz=321
BSD Bornholm Skovb 70.26 346 iP P 21 07 51.3 -2.4
comp=Z,17nm,0.6s
comp=Z,1μm,16.0s
BSD Bornholm Skovb 70.26 346 iP P 21 07 51.3 -2.4
BSD pmax pmax
comp=Z,17nm,0.6s
BSD MLR MLR
comp=Z,1μm,16.0s
247A Quitman 70.34 63 P P 21 07 55.2 +0.6
baz=321,SNR=11
X51A Calhoun 70.35 58 P P 21 07 54.3 -0.3
baz=322,SNR=24
X51A Calhoun 70.35 58 eP P 21 07 54.1 -0.5
comp=Z,160nm,1.1s
346A Big Creek Wild 70.40 64 P P 21 07 55.0 0.0
baz=321,SNR=7.7
346A Big Creek Wild 70.40 64 eP P 21 07 55.4 +0.4
comp=Z,190nm,0.9s
BRNJ Basking Ridge 70.40 48 eP P 21 07 54.1 -0.7
comp=Z,37nm,1.1s
SDMD Soldier's Deli 70.40 50 eP P 21 07 54.2 -0.6
comp=Z,72nm,1.1s
W52A Murphy 70.41 57 P P 21 07 54.7 -0.3
baz=322,SNR=11
W52A Murphy 70.41 57 eP P 21 07 54.5 -0.6
comp=Z,102nm,0.9s
W52A eS S 21 17 05.4 -0.5
WES Weston 70.41 44 eP P 21 07 54.0 -0.9
comp=Z,56nm,1.1s
LLD Lille Linde 70.42 348 iP P 21 07 54.5 -0.1
LLD Lille Linde 70.42 348 eP P 21 07 54.5 -0.1
Y50A Piedmont 70.42 60 P P 21 07 54.5 -0.6
baz=322,SNR=39
PAL Palisades 70.43 47 P P 21 07 54.1 -0.9
baz=325,SNR=10
PAL Palisades 70.43 47 eP P 21 07 53.8 -1.2
comp=Z,90nm,1.2s
PAL Palisades 70.43 47 eP P 21 07 53.8 -1.2
PAL pmax pmax
comp=Z,90nm,1.2s
148A Greensboro 70.43 62 P P 21 07 54.5 -0.6
baz=321,SNR=13
LRAL Lakeview Retre 70.43 61 P P 21 07 54.1 -1.1
baz=322,SNR=13
LRAL Lakeview Retre 70.43 61 eP P 21 07 54.1 -1.1
comp=Z,79nm,0.9s
445A Amite 70.44 65 P P 21 07 55.8 +0.6
baz=321
544A White Castle 70.47 66 P P 21 07 56.7 +1.3
baz=321
BLA Blacksburg 70.47 54 P P 21 07 55.2 -0.2
baz=323,SNR=12
BLA Blacksburg 70.47 54 eP P 21 07 54.7 -0.7
comp=Z,82nm,0.9s
BLA LR LR
comp=Z,3μm,21.0s
BLA Blacksburg 70.47 54 eP P 21 07 54.7 -0.7
BLA pmax pmax
comp=Z,82nm,0.9s
BLA MLR MLR
comp=Z,3μm,21.0s
V53A Saluda 70.51 56 P P 21 07 55.7 0.0
baz=322,SNR=5.7
BCX Boston College 70.52 44 eP P 21 07 54.9 -0.6
comp=Z,25nm,1.0s

Z49A Columbiana 70.55 61 P P 21 07 55.2 -0.7
baz=322,SNR=96
CPNY Central Park 70.58 47 eP P 21 07 55.0 -0.9
comp=Z,71nm,1.0s
PSUB Penn St. - Bra 70.62 49 eP P 21 07 55.3 -0.9
comp=Z,27nm,1.1s
VWCC Virginia Weste 70.66 53 eP P 21 07 55.8 -0.7
BRYW Bryant College 70.71 45 eP P 21 07 55.4 -1.3
comp=Z,23nm,0.8s
W53A Cullowhee 70.73 57 P P 21 07 56.9 -0.2
baz=322,SNR=6.1
Y51A Rockmart 70.76 59 P P 21 07 56.4 -0.8
baz=322,SNR=48
248A Dixon Mills 70.77 62 P P 21 07 57.2 0.0
baz=322,SNR=9.6
X52A Dahlonega 70.81 58 P P 21 07 57.3 -0.1
baz=322,SNR=48
Z50A Ashland 70.82 60 P P 21 07 56.8 -0.7
baz=322,SNR=56
Z50A Ashland 70.82 60 eP P 21 07 56.6 -1.0
comp=Z,150nm,0.8s
IP04 Greensprings 70.88 52 eP P 21 07 57.6 -0.2
comp=Z,105nm,1.1s
149A Jones 70.88 61 P P 21 07 57.4 -0.5
baz=322,SNR=42
347A Saraland 70.89 63 P P 21 07 58.3 +0.4
baz=321,SNR=17
446A Poplarville 70.92 64 P P 21 07 58.1 0.0
baz=321,SNR=9.2
IP03 Louisa 70.97 52 eP P 21 07 58.1 -0.2
comp=Z,119nm,1.2s
IP03 eS S 21 17 13.0 +0.7
CVRD Centerville Ro 71.03 51 eP P 21 07 58.2 -0.5
comp=Z,82nm,1.0s
SPRD Spring Road, M 71.03 51 eP P 21 07 58.4 -0.4
comp=Z,88nm,1.2s
RGN Rugen 71.04 347 eP P 21 07 58.0 -0.4
comp=Z,123nm,1.2s
IP07 Quail 71.05 52 eP P 21 07 58.6 -0.2
comp=Z,86nm,0.9s
IP06 Yanceyville 71.06 52 eP P 21 07 58.9 +0.1
comp=Z,53nm,0.9s
IP01 Cuckoo 71.07 52 eP P 21 07 58.5 -0.5
comp=Z,72nm,1.2s
CBN Corbin Frederi 71.13 51 P P 21 07 59.2 -0.1
baz=324
CBN Corbin Frederi 71.13 51 PFAKE 21 08 10.0 +11
CBN LR LR
comp=Z,2μm,21.0s
Z51A Franklin 71.16 59 P P 21 07 58.7 -0.9
baz=322,SNR=16
X53A Estanollee 71.19 57 P P 21 07 59.8 +0.1
baz=322,SNR=25
249A Camden 71.19 62 P P 21 07 59.7 0.0
baz=322,SNR=23
348A Jackson 71.22 63 P P 21 08 00.4 +0.4
baz=322,SNR=6.8
348A Jackson 71.22 63 eP P 21 07 59.8 -0.1
comp=Z,267nm,0.9s
IP05 Hopewell Churc 71.25 52 eP P 21 07 59.8 -0.3
comp=Z,62nm,0.9s
150A Eclectic 71.28 61 P P 21 07 59.5 -0.8
baz=322,SNR=26
447A Lucedale 71.30 64 P P 21 08 00.8 +0.4
baz=322,SNR=5.2
447A Lucedale 71.30 64 eP P 21 08 00.7 +0.2
comp=Z,144nm,0.8s
JSRW J. Sargeant Re 71.30 52 eP P 21 07 59.9 -0.4
Y52A Lilburn 71.30 58 P P 21 08 00.3 -0.1
baz=322,SNR=45
Y52A Lilburn 71.30 58 eP P 21 08 00.3 -0.1
comp=Z,153nm,0.9s
Y52A eS S 21 17 16.4 +0.1
Y53A Monroe 71.56 58 P P 21 08 01.8 -0.2
baz=322,SNR=22
URVA University of 71.56 52 eP P 21 08 01.5 -0.4
448A Bay Minette 71.62 63 P P 21 08 02.9 +0.6
baz=322,SNR=6.0
250A Grady 71.64 61 P P 21 08 02.1 -0.4
baz=322,SNR=12
250A Grady 71.64 61 eP P 21 08 02.1 -0.4
comp=Z,237nm,1.2s
349A Repton 71.64 62 P P 21 08 02.7 +0.2
baz=322,SNR=6.5
Z52A Williamson 71.65 59 P P 21 08 02.1 -0.4
baz=322,SNR=76
EKA Eskdalemuir Ar 71.65 357 P P 21 08 02.3 +0.1
comp=Z,25nm,0.8s,baz=7.2,slow=5.1,SNR=68
EKA LR LR 21 38 26.8
comp=Z,443nm,18.9s,baz=350,slow=35
AKASG Malin Array Be 71.66 336 P P 21 08 02.1 -0.2
comp=Z,21nm,0.5s,baz=27,slow=6.3,SNR=86
AKASG PP PP 21 10 39.5 -1.3
comp=Z,1.0nm,0.5s,baz=22,slow=8.6,SNR=4.7
AKASG S S 21 17 21.4 +1.5
comp=Z,0.2nm,0.3s,baz=15,slow=9.9,SNR=7.5
AKASG PKPPKP P'P'df 21 35 53.7 -5.8
comp=Z,0.2nm,0.2s,baz=225,slow=2.9,SNR=4.2
AKASG LR LR 21 42 38.9
comp=Z,2μm,19.4s,baz=15,slow=38
AKASG Malin Array Be 71.66 336ceP P 21 08 02.4 +0.1
AKASG pmax pmax
comp=Z,21nm,0.5s
AKBB Malin Array Si 71.66 336 eP P 21 08 02.4 +0.1
comp=Z,30nm,0.7s
KMSC Kings Mountain 71.67 56 P P 21 08 02.3 -0.4
baz=323,SNR=27
KMSC Kings Mountain 71.67 56 eP P 21 08 02.1 -0.5
comp=Z,84nm,0.8s
ESK Eskdalemuir 71.67 357 eP P 21 08 02.2 -0.1
comp=Z,33nm,0.8s
ESK LR LR
comp=Z,689nm,21.0s
ESK Eskdalemuir 71.67 357 eP P 21 08 02.2 -0.1
ESK pmax pmax
comp=Z,33nm,0.8s
ESK MLR MLR
comp=Z,689nm,21.0s
KIEV Kiev 71.67 336 eP P 21 08 02.4 0.0
comp=Z,29nm,0.7s
KIEV LR LR
comp=Z,2μm,19.0s
KIEV Kiev 71.67 336 iP P 21 08 02.8 +0.5
SNR=7.8
KIEV Kiev 71.67 336 eP P 21 08 02.4 0.0
KIEV pmax pmax
comp=Z,29nm,0.7s
KIEV MLR MLR
comp=Z,2μm,19.0s
PAULI Pauline 71.68 56 eP P 21 08 02.5 -0.2
comp=Z,43nm,0.8s
PAULI eS S 21 17 19.6 -1.0
GKP Gorka Klasztor 71.69 344 eP P 21 08 02.7 +0.3
GKP Gorka Klasztor 71.69 344 eP P 21 08 02.7 +0.3
AK11 Malin Array Si 71.70 336 eP P 21 08 02.1 -0.4
151A Opelika 71.70 60 P P 21 08 01.6 -1.3
baz=322,SNR=20
BRAL Brewton 71.86 62 P P 21 08 03.9 +0.1
baz=322,SNR=6.0
BRAL Brewton 71.86 62 eP P 21 08 04.0 +0.1
comp=Z,192nm,1.0s
BRAL LR LR
comp=Z,2μm,19.0s
152A Waverly Hall 71.91 60 P P 21 08 03.1 -0.9
baz=322,SNR=34
152A Waverly Hall 71.91 60 eP P 21 08 03.2 -0.9
comp=Z,108nm,0.9s
HODGE Hodges 71.93 57 eP P 21 08 04.0 -0.1
comp=Z,90nm,0.9s
HODGE eS S 21 17 22.5 -1.0
GOGA Godfrey 71.97 58 P P 21 08 03.7 -0.7
baz=323,SNR=18
GOGA Godfrey 71.97 58 eP P 21 08 04.0 -0.4
comp=Z,102nm,1.3s
GOGA LR LR
comp=Z,4μm,19.0s
GOGA Godfrey 71.97 58 eP P 21 08 04.0 -0.4
GOGA pmax pmax
comp=Z,103nm,1.3s
GOGA MLR MLR
comp=Z,4μm,19.0s
251A Midway 72.00 60 P P 21 08 03.8 -0.8
baz=322,SNR=22
Y54A Tignall 72.00 57 P P 21 08 04.6 -0.1
baz=323,SNR=73
Z53A Monticello 72.02 58 P P 21 08 04.1 -0.6
baz=323,SNR=46
350A Dozier 72.04 62 P P 21 08 04.9 0.0

baz=322,SNR=6.0
KSM Kuching 72.06 247 eP P 21 08 05.8 +0.6
comp=Z,28nm,1.1s
449A Pace 72.09 63 P P 21 08 05.9 +0.7
baz=322,SNR=6.1
153A Fort Valley 72.38 59 P P 21 08 06.3 -0.6
baz=323
JSC Jenkinsville 72.39 56 eP P 21 08 06.6 -0.3
comp=Z,55nm,0.9s
JSC Jenkinsville 72.39 56 eP P 21 08 06.6 -0.3
JSC pmax pmax
comp=Z,55nm,0.9s
450A Crestview 72.39 62 P P 21 08 07.3 +0.3
baz=322
Z54A Sparta 72.42 58 P P 21 08 06.8 -0.3
baz=323,SNR=52
252A Lumpkin 72.43 60 P P 21 08 06.4 -0.8
baz=322,SNR=14
BEL Belsk 72.44 342 eP P 21 08 08.1 +1.2
BEL Belsk 72.44 342⇓eP P 21 08 08.1 +1.2
351A Pinckard 72.54 61 P P 21 08 07.5 -0.4
baz=322,SNR=10.0
GEYT Alibeck 72.55 311 P P 21 08 08.3 +0.4
comp=Z,25nm,1.0s,baz=358,slow=4.3,SNR=5.3
GEYT LR LR 21 43 50.5
comp=Z,2μm,18.1s,baz=45,slow=39
GYA0B ALIBECK ARRAY 72.55 311 eP P 21 08 08.6 +0.6
comp=Z,32nm,1.0s
KAPI Kappang 72.58 235 PFAKE 21 08 20.0 +12
KAPI LR LR
comp=Z,570nm,20.0s
GOF Gofitskoye 72.63 325⇓iP P 21 08 09.4 +1.2
GOF eS S 21 17 34.3 +3.1
GOF pmax pmax
comp=Z,210nm,1.3s
253A Americus 72.69 60 P P 21 08 07.9 -0.8
baz=323
352A Blakely 72.74 60 P P 21 08 08.3 -0.7
baz=322
352A Blakely 72.74 60 eP P 21 08 08.9 -0.1
comp=Z,62nm,0.6s
154A Montrose 72.78 58 P P 21 08 08.9 -0.4
baz=323,SNR=17
154A Montrose 72.78 58 eP P 21 08 09.0 -0.4
comp=Z,237nm,0.9s
Z55A Blythe 72.79 57 P P 21 08 09.5 +0.2
baz=323
MAK Makhachkala 72.81 321 eP P 21 08 09.4 +0.1
MAK e 21 10 49.6
MAK eS SKiKP 21 17 37.3 -3.2
MAK eSS SS 21 22 17.2 +5.0
MAK pmax pmax
comp=Z,125nm,1.4s
451A Vernon 72.99 62 P P 21 08 10.7 +0.2
baz=322,SNR=7.0
451A Vernon 72.99 62 eP P 21 08 10.4 -0.1
comp=Z,455nm,1.4s
TRTT Trang 73.01 260 P P 21 08 30.4 +20
452A Marianna 73.10 61 P P 21 08 11.0 -0.2
baz=322,SNR=5.2
155A Kite 73.10 58 P P 21 08 11.2 0.0
baz=323,SNR=35
353A Camilla 73.21 60 P P 21 08 11.4 -0.5
baz=323,SNR=6.1
254A Abbeville 73.22 59 P P 21 08 11.5 -0.4
baz=323,SNR=17
GROC Groznyy 73.24 322 eP P 21 08 10.7 -1.2
GROC e 21 08 29.6
GROC e 21 10 52.9
GROC eS S 21 17 36.4 -1.8
GROC pmax pmax
comp=Z,23nm,0.7s
CNNC Cliffs of the 73.27 53 P P 21 08 12.2 +0.1
baz=324
CNNC Cliffs of the 73.27 53 PFAKE 21 08 20.0 +7.9
CNNC LR LR
comp=Z,2μm,20.0s
TIGA Tifton 73.46 60 P P 21 08 13.2 -0.1
baz=323,SNR=6.2
TIGA Tifton 73.46 60 eP P 21 08 12.9 -0.5
comp=Z,132nm,0.9s
453A Whigham 73.55 60 P P 21 08 14.1 +0.3
baz=323,SNR=16
453A Whigham 73.55 60 eP P 21 08 13.9 +0.1
comp=Z,218nm,0.9s
156A Sylvania 73.57 57 P P 21 08 14.6 +0.6
baz=323,SNR=11
552A Lynn Haven 73.61 62 P P 21 08 14.6 +0.4
baz=323
255A Hazlehurst 73.65 58 P P 21 08 14.5 +0.1
baz=323,SNR=9.7
255A Hazlehurst 73.65 58 eP P 21 08 14.6 +0.2
comp=Z,352nm,1.0s
LVV L'vov 73.69 339 eP P 21 08 16.1 +1.7
LVV e 21 10 59.5
LVV eS S 21 17 43.9 +0.9
LVV MLR MLR
comp=N,600nm,16.0s
LVV MLR MLR
comp=E,1μm,16.0s
LVV MLR MLR
comp=Z,2μm,17.0s
KIV Kislovodsk 73.72 324 eP P 21 08 15.8 +1.0
comp=Z,39nm,0.9s
KIV LR LR
comp=Z,2μm,19.0s
KIV Kislovodsk 73.72 324 P P 21 08 16.3 +1.5
SNR=14
KIV Kislovodsk 73.72 324 iP P 21 08 15.8 +1.0
SNR=10
KIV Kislovodsk 73.72 324 eP P 21 08 15.8 +1.0
KIV e 21 10 57.1
KIV eS S 21 17 46.3 +2.6
KIV eSS SS 21 22 26.5 +0.3
KIV pmax pmax
comp=Z,32nm,1.1s
KIV MLR MLR
comp=Z,2μm,18.0s
NCK Nalchik 73.79 323⇓iP P 21 08 16.1 +1.0
NCK pmax pmax
comp=Z,22nm,0.8s
DSB Dublin 73.82 359 eP P 21 08 15.7 +0.6
comp=Z,52nm,1.1s
KBZ Khabaz 73.84 324 P P 21 08 16.7 +1.4
comp=Z,30nm,0.9s,baz=39,slow=3.3,SNR=61
KBZ LR LR 21 45 35.1
comp=Z,2μm,18.2s,baz=24,slow=40
NHSC New Hope 73.87 56 P P 21 08 15.9 +0.2
baz=324,SNR=14
NHSC New Hope 73.87 56 eP P 21 08 15.3 -0.3
comp=Z,180nm,0.9s
NHSC LR LR
comp=Z,4μm,19.0s
256A Glennville 73.91 58 P P 21 08 16.0 0.0
baz=323,SNR=5.6
355A Pearson 73.92 59 P P 21 08 16.0 0.0
baz=323,SNR=18
CHLP Challavanipeta 73.98 279 eP P 21 08 17.2 +0.7
CHLP IAmb IAmb 21 08 18.4
comp=Z,21nm,1.0s
AKT Akhty 73.99 320⇓iP P 21 08 17.2 +0.8
AKT e 21 08 29.7
AKT e 21 11 04.4
AKT eS S 21 17 47.8 +0.9
AKT e 21 18 25.1
AKT pmax pmax
comp=Z,29nm,0.5s
553A Crawfordville 74.02 61 P P 21 08 16.9 +0.3
baz=323,SNR=7.4
CSU Charleston Sou 74.02 56 eP P 21 08 16.6 0.0
454A Quitman 74.02 60 P P 21 08 16.6 0.0
baz=323,SNR=14
TAOE Nuku Hiva Isla 74.14 130 eLR LR 21 30 39.9
comp=Z,2μm,21.5s,baz=343
KWP Kalwaria Pacla 74.15 340 iP P 21 08 18.5 +1.4
KWP eS S 21 17 51.7 +3.5
KWP Kalwaria Pacla 74.15 340 eP P 21 08 18.3 +1.2
comp=Z,1μm,1.0s
KWP Kalwaria Pacla 74.15 340⇓iP P 21 08 18.5 +1.4
KWP eS S 21 17 51.7 +3.5
OJC Ojcow 74.17 342 eP P 21 08 18.2 +1.0
OJC eS S 21 17 49.9 +1.5
OJC Ojcow 74.17 342 eP P 21 08 17.8 +0.6
comp=Z,55nm,1.0s
OJC Ojcow 74.17 342⇓eP P 21 08 18.2 +1.0
OJC eS S 21 17 49.9 +1.5

KSP	**Ksiaz**	**74.19 344**	*e*P	**P**	**21 08 17.7 +0.4**
KSP			*e*S	**S**	**21 17 50.4 +1.8**
KSP	**Ksiaz**	**74.19 344** ⇓	*e*P	**P**	**21 08 17.7 +0.4**
KSP			*e*S	**S**	**21 17 50.4 +1.8**
CLL	**Collm**	**74.24 346** ⇓	*i*P	**P**	**21 08 17.5 -0.1**
	comp=Z,49nm,1.4s				
CLL			*e*Pmax		21 08 24.0
CLL			*e*		21 08 29.0
CLL			*i* (PcP)	**PcP**	**21 08 34.0 +1.6**
	comp=Z,90nm,1.7s				
CLL			*e*S	**S**	**21 17 52.0 +2.8**
CLL			*e*		21 19 24.0
CLL			*e*SS	**SS**	**21 22 36.0 +2.4**
CLL			*e*SSS	SSS	21 26 12.0
CLL			LmH		21 43 00.0
	comp=N,1μm,18.4s				
CLL			LmH		21 43 00.0
	comp=E,2μm,18.7s				
CLL			LmV		21 45 00.0
	comp=Z,1μm,18.1s				
CLL			Lmax		21 49 00.0
CLL	**Collm**	**74.24 346**	*e*P	**P**	**21 08 17.5 -0.1**
	comp=Z,81nm,1.6s				
CLL	**Collm**	**74.24 346** ⇓	*i*P	**P**	**21 08 17.5 -0.1**
CLL			*e*		21 08 29.0
CLL			*i*		21 08 34.0
CLL			*e*S	**S**	**21 17 52.0 +2.8**
CLL			pmax	pmax	
	comp=Z,49nm,1.4s				
CLL			MLR	MLR	
	comp=Z,1μm,18.1s				
SORM	**Soroca**	**74.26 335** ⇓	*i*P	**P**	**21 08 17.9 +0.2**
SORM	**Soroca**	**74.26 335**	P	**P**	**21 08 17.9 +0.2**
ZEI	**Tsey**	**74.30 323**	*e*P	**P**	**21 08 16.3 -2.0**
ZEI			pmax	pmax	
	comp=Z,46nm,0.9s				
356A	**Blackshear**	**74.31 59**	P	**P**	**21 08 18.4 +0.1**
	baz=323				
NEY	**Neytrino**	**74.32 324** ⇑	*i*P	**P**	**21 08 20.4 +2.0**
WTSB	**Winterswijk**	**74.35 350**	*e*P	**P**	**21 08 18.4 +0.2**
	comp=Z,71nm,1.3s				
WTSB			*e*X		21 08 34.8
257A	**Skidaway Islan**	**74.35 57**	P	**P**	**21 08 18.6 +0.1**
	baz=324				
MTN	**Manton Dam**	**74.44 221**	*e*P	**P**	**21 08 19.9 +0.9**
	comp=Z,103nm,1.2s				
554A	**Perry**	**74.49 60**	P	**P**	**21 08 19.5 +0.1**
	baz=323				
BRG	**Berggiesshubel**	**74.53 346**	*i* P	**P**	**21 08 19.3 +0.1**
	comp=Z,35nm,1.2s				
BRG			*i* PCP	**PcP**	**21 08 34.1 +0.5**
	comp=Z,65nm,1.6s				
BRG			*e*PKPPKP	**P'P'df**	**21 35 54.9 +0.2**
	comp=Z,2.1nm,0.9s				
	comp=N,1μm,14.9s				
	comp=E,637nm,17.9s				
	comp=Z,1μm,16.0s				
BRG	**Berggiesshubel**	**74.53 346**	*i* P	**P**	**21 08 19.3 +0.1**
BRG			*i*		21 08 34.1
BRG			pmax	pmax	
	comp=Z,35nm,1.3s				
357A	**Townsend**	**74.56 58**	P	**P**	**21 08 19.9 +0.2**
	baz=324				
UPC	**Upice**	**74.56 344**	*e*P	**P**	**21 08 20.3 +0.8**
UPC			*e*SS	SS	21 22 46.5 +8.0
UPC			AMS	AMS	21 43 00.0
	comp=Z,1μm,19.3s				
UPC	**Upice**	**74.56 344**	*e*P	**P**	**21 08 20.3 +0.8**
UPC			*e*SS	SS	21 22 46.5 +8.0
UPC			MLR	MLR	
	comp=Z,1μm,19.3s				
DPC	**Dobruska-Polom**	**74.66 344**	*e*P	**P**	**21 08 21.1 +1.0**
DPC			*e*x	x	21 13 00.3
DPC			AMS	AMS	21 44 40.0
	comp=Z,1μm,19.7s				
DPC	**Dobruska-Polom**	**74.66 344**	*e*P	**P**	**21 08 21.1 +1.0**
DPC			*e*		21 13 00.3
DPC			MLR	MLR	
	comp=Z,1μm,19.7s				
ANN	**Anapa**	**74.72 328**	*i* P	**P**	**21 08 20.7 +0.2**
ANN			*i* *PP	**pP**	**21 08 27.6 -1.3**
ANN			*e*		21 11 04.5
ANN			*e*PPP	PPP	21 12 49.1
ANN			*e*S	**S**	**21 17 57.0 +2.3**
ANN			*e*SS	**SS**	**21 22 44.3 +3.1**
ANN			pmax	pmax	
	comp=Z,56nm,1.1s				
PVCC	**Panska Ves**	**74.77 345**	*e*P	**P**	**21 08 21.3 +0.6**
PVCC	**Panska Ves**	**74.77 345**	*e*P	**P**	**21 08 21.3 +0.6**
555A	**McAlpin**	**74.83 60**	P	**P**	**21 08 21.5 +0.1**
	baz=323,SNR=11				
555A	**McAlpin**	**74.83 60**	*e*P	**P**	**21 08 21.6 +0.3**
	comp=Z,173nm,0.8s				
NIE	**Niedzica**	**74.84 341**	*e*P	**P**	**21 08 22.5 +1.4**
NIE			*e*S	**S**	**21 17 59.4 +3.4**
NIE	**Niedzica**	**74.84 341** ⇓	*e*P	**P**	**21 08 22.5 +1.4**
NIE			*e*S	**S**	**21 17 59.4 +3.4**
OKC	**Ostrava-Krasne**	**74.84 343**	*e*P	**P**	**21 08 22.3 +1.2**
OKC			*e*pP	**pP**	**21 08 27.7 -1.8**
OKC			*e*S	**S**	**21 17 56.9 +1.0**
OKC			AMS	AMS	21 44 50.0
	comp=Z,1μm,17.7s				
OKC	**Ostrava-Krasne**	**74.84 343**	*e*P	**P**	**21 08 22.3 +1.2**
OKC			*e*		21 08 27.7
OKC			*e*S	**S**	**21 17 56.9 +1.0**
OKC			MLR	MLR	
	comp=Z,1μm,17.7s				
456A	**Hilliard**	**74.84 59**	P	**P**	**21 08 21.9 +0.5**
	baz=324				
KRLC	**Kraliky**	**74.85 344**	*e*P	**P**	**21 08 21.4 +0.2**
KRLC			*e*pP	**pP**	**21 08 28.1 -1.5**
KRLC	**Kraliky**	**74.85 344**	*e*P	**P**	**21 08 21.4 +0.2**
KRLC			*e*		21 08 28.1
IPM	**Ipoh**	**74.91 257**	*e*P	**P**	**21 08 22.4 +0.4**
	comp=Z,21nm,0.9s				
MORC	**Moravsky Berou**	**75.00 343** ⇓	*i*P	**P**	**21 08 23.2 +1.1**
MORC	**Moravsky Berou**	**75.00 343**	*e*P	**P**	**21 08 22.6 +0.5**
	comp=Z,458nm,1.8s				
MORC	**Moravsky Berou**	**75.00 343**	*e*P	**P**	**21 08 22.6 +0.5**
MORC			pmax	pmax	
	comp=Z,458nm,1.8s				
MORC	**Moravsky Berou**	**75.00 343** ⇓	*i*P	**P**	**21 08 22.9 +0.8**
MORC			*e*S	**S**	**21 17 59.2 +1.3**
SOC	**Sochi**	**75.06 326**	*d*P	**P**	**21 08 23.2 +0.7**
SOC			*e*'SP	**pP**	**21 08 30.6 -0.3**
SOC			*e*		21 11 10.3
SOC			*e*PPP	PPP	21 12 58.7
SOC			*e*S	**S**	**21 18 00.5 +1.9**
SOC			pmax	pmax	
	comp=Z,35nm,0.7s				
SOC			MLR	MLR	
	comp=Z,2μm,20.0s				
CRVS	**Cervenica-Dubn**	**75.10 340**	*e*P	**P**	**21 08 23.9 +1.3**
CRVS			*e*		21 08 39.1
CRVS			*e*S	**S**	**21 18 01.6 +2.7**
CRVS			pmax	pmax	
	comp=Z,34nm,1.0s				
CRVS	**Cervenica-Dubn**	**75.10 340**	*e*P	**P**	**21 08 23.9 +1.3**
CRVS			*e*PCP	**PcP**	**21 08 39.1 +2.9**
CRVS			*e*S	**S**	**21 18 01.6 +2.7**
CRVS			*e*L	L	21 39 21.8
VAL	**Valentia**	**75.13 1**	*i* S	**S**	**21 18 00.9 +1.9**
VAL			*i* S	SS	21 23 00.0 +13
VAL	**Valentia**	**75.13 1**	*i* S	**S**	**21 18 00.9 +1.9**
VAL			*i* S	SS	21 23 00.0 +13
457A	**Yulee**	**75.16 59**	P	**P**	**21 08 23.8 +0.6**
	baz=324				
655A	**Horseshoe Beac**	**75.17 61**	P	**P**	**21 08 23.4 +0.1**
	baz=323				
UZH	**Uzhgorod**	**75.18 340**	*e*P	**P**	**21 08 22.4 -0.7**
UZH			*e*		21 08 29.2
UZH			*e*		21 08 38.4
UZH			*e*S	**S**	**21 17 54.6 -5.2**
UZH			MLR	MLR	
	comp=N,200nm,15.0s				
UZH			MLR	MLR	
	comp=Z,140nm,15.0s				
DZM	**Mont Dzumac**	**75.18 185**	*e*P	**P**	**21 08 24.9 +1.6**
	comp=Z,116nm,1.6s				
DZM			*e*S	**S**	**21 17 57.0 -3.3**
	comp=Z,1μm,31.9s				
DZM	**Mont Dzumac**	**75.18 185**	*e*LQ	LQ	21 28 18.8
	comp=Z,2μm,24.1s				
DZM			*e*LR	LR	21 31 13.9
	comp=Z,2μm,30.1s				
DZM	**Mont Dzumac**	**75.18 185**	P	**P**	**21 08 25.1 +1.8**
	comp=Z,15nm,1.0s,baz=50,slow=8.5,SNR=4.6				
DZM	**Mont Dzumac**	**75.18 185**	*e*P	**P**	**21 08 24.2 +0.9**
	comp=Z,96nm,1.5s				
KIS	**Kishinev**	**75.19 335**	*e*P	**P**	**21 08 22.0 -1.2**
KIS	**Kishinev**	**75.19 335**	*e*PcP	**PcP**	**21 08 38.0 +1.4**
KIS	**Kishinev**	**75.19 335**	*e*PP	PP	21 11 14.0 +3.1
KIS	**Kishinev**	**75.19 335**	*e*P	**P**	**21 08 22.0 -1.2**
KIS			*e*		21 08 38.0
KIS			*e*		21 11 14.0
KIS			*e*S	**S**	**21 18 00.0 +0.1**
KIS			*e*PS	**PnS**	**21 18 42.0 +5.2**
KIS			*e*SS	**SS**	**21 22 50.0 +1.7**
KIS			MLR	MLR	
	comp=Z,2μm,16.0s				
556A	**Lake Butler**	**75.22 60**	P	**P**	**21 08 24.0 +0.4**
	baz=324,SNR=16				
PRA	**Prague**	**75.23 345**	AMS	AMS	21 46 40.0
	comp=Z,2μm,18.4s				
LANS	**Liptovska Anna**	**75.25 342**	*e*P	**P**	**21 08 25.4 +1.9**
LANS	**Liptovska Anna**	**75.25 342**	*e*P	**P**	**21 08 25.4 +1.9**
BATI	**Baumata**	**75.26 229**	P	**P**	**21 08 25.1 +1.2**
	comp=Z,25nm,0.8s,baz=336,slow=20,SNR=2.3				
PRU	**Pruhonice**	**75.30 345**	*e*P	**P**	**21 08 24.2 +0.5**
PRU			*e*pP	**pP**	**21 08 29.5 -2.7**
PRU			*e*x	x	21 13 06.5
PRU			*e*SS	SS	21 22 56.5 +6.9
PRU			AMS	AMS	21 44 50.0
	comp=Z,1μm,18.1s				
PRU	**Pruhonice**	**75.30 345**	*e*P	**P**	**21 08 24.2 +0.5**
PRU			*e*		21 13 06.5
PRU			*e*SS	SS	21 22 56.5 +6.9
PRU			MLR	MLR	
	comp=Z,1μm,18.1s				
GOPC	**GO Pecny, Ondr**	**75.33 345**	*e*P	**P**	**21 08 24.8 +0.9**
GOPC			*e*x	x	21 13 06.4
GOPC			*e*SS	SS	21 22 56.2 +6.0
GOPC			AMS	AMS	21 46 50.0
	comp=Z,1μm,17.1s				
GOPC	**GO Pecny, Ondr**	**75.33 345**	*e*P	**P**	**21 08 24.8 +0.9**
GOPC			*e*		21 13 06.4
GOPC			*e*SS	SS	21 22 56.2 +6.0
GOPC			MLR	MLR	
	comp=Z,1μm,17.1s				
IAS	**Iasi**	**75.33 336** ⇑	*i*P	**P**	**21 08 24.7 +0.8**
NKC	**Novy Kostel**	**75.37 346**	AMS	AMS	21 46 10.0
	comp=Z,1μm,20.7s				
BUR08	**Bucovina Ar. S**	**75.47 337**	*e*P	**P**	**21 08 25.7 +0.8**
BUR04	**Bucovina Ar. S**	**75.50 337**	*e*P	**P**	**21 08 25.7 +0.7**
BURAR	**Bucovina Array**	**75.50 337** ⇓	*i*P	**P**	**21 08 26.0 +0.9**
BURAR	**Bucovina Array**	**75.50 337**	P	**P**	**21 08 26.0 +0.9**
557A	**Orange Park**	**75.56 59**	P	**P**	**21 08 25.9 +0.4**
	baz=324				
TRPA	**Tarpa**	**75.61 339** ⇓	*i*P	**P**	**21 08 27.0 +1.5**
TRPA	**Tarpa**	**75.61 339**	*e*PP	**P**	**21 08 26.8 +1.3**
SIM	**Simferopol'**	**75.61 330**	*d*P	**P**	**21 08 26.5 +0.9**
SIM			*e*		21 08 40.0
SIM			*e*S	**S**	**21 18 09.0 +4.4**
SIM			pmax	pmax	
	comp=Z,22nm,0.9s				
SIM			MLR	MLR	
	comp=Z,2μm,14.5s				
BEBN	**Eben Emael**	**75.61 351** ⇓	P	**P**	**21 08 25.7 +0.2**
VRAC	**Vranov**	**75.62 343** ⇓	*i*P	**P**	**21 08 27.0 +1.4**
VRAC	**Vranov**	**75.62 343** ⇓	*i*P	**P**	**21 08 26.6 +1.0**
VRAC			*e*S	**S**	**21 18 05.8 +1.1**
HGN	**Heimansgroeve**	**75.62 351**	*e*P	**P**	**21 08 25.4 -0.2**
	comp=Z,60nm,1.1s				
HGN			*e*X		21 08 42.2
HGN			*e*S	S	21 18 16.8 +12
HGN			*e*SS	SS	21 23 06.1 +12
656A	**Willston**	**75.66 60**	P	**P**	**21 08 26.5 +0.3**
	baz=324,SNR=8.5				
656A	**Willston**	**75.66 60**	*e*P	**P**	**21 08 26.6 +0.5**
	comp=Z,120nm,0.7s				
KECS	**Kecovo**	**75.69 341**	*e*P	**P**	**21 08 26.2 +0.2**
KECS			pmax	pmax	
	comp=Z,19nm,0.9s				
KECS	**Kecovo**	**75.69 341**	*e*P	**P**	**21 08 26.2 +0.2**
UCC	**Uccle**	**75.73 352** ⇓	P	**P**	**21 08 26.3 +0.1**
MEM	**Membach**	**75.77 351** ⇓	P	**P**	**21 08 26.8 +0.4**
	comp=Z,30nm,1.2s				
MEM	**Membach**	**75.77 351**	P	**P**	**21 08 27.1 +0.7**
LEOM	**Leova**	**75.83 335** ⇑	*i*P	**P**	**21 08 27.8 +1.0**
LEOM	**Leova**	**75.83 335**	P	**P**	**21 08 27.7 +1.0**
BMR	**Baia Mare**	**75.83 338** ⇓	*i*P	**P**	**21 08 28.4 +1.6**
657A	**Interlachen**	**75.83 59**	P	**P**	**21 08 27.3 +0.2**
	baz=324,SNR=6.0				
JAVC	**Velka Javorina**	**75.86 343** ⇓	*i*P	**P**	**21 08 29.2 +2.1**
JAVC			*e*S	**S**	**21 18 11.3 +3.8**
KRUC	**Moravsky**	**75.89 344** ⇓	*i*P	**P**	**21 08 28.0 +0.9**
KRUC			*e*S	**S**	**21 18 10.1 +2.5**
TLIG	**Tlapa**	**75.98 80**	*e*P	**P**	**21 08 28.9 +0.7**
	comp=Z,121nm,1.1s				
VYHS	**Vyhne**	**76.00 342**	*e*P	**P**	**21 08 29.1 +1.3**
VYHS			pmax	pmax	
	comp=Z,21nm,1.1s				
VYHS	**Vyhne**	**76.00 342**	*e*P	**P**	**21 08 29.1 +1.3**
VYHS			*e*PP	**PP**	**21 11 18.6 +0.9**
VYHS			*e*S	**S**	**21 18 09.1 +0.2**
VYHS			*e*SS	**SS**	**21 23 03.9 +3.5**
BCLA	**Clavier**	**76.02 351** ⇓	P	**P**	**21 08 28.1 +0.2**
GRF	**Grafenberg Arr**	**76.07 347**	P	**P**	**21 08 29.5 +1.3**
GRFO	**Grafenberg**	**76.07 347**	*e*P	**P**	**21 08 29.0 +0.8**
	comp=Z,76nm,1.5s				
GRFO	**Grafenberg**	**76.07 347**	*e*P	**P**	**21 08 29.0 +0.8**
GRFO			pmax	pmax	
	comp=Z,76nm,1.5s				
TESR	**Tescani**	**76.19 336** ⇓	*i*P	**P**	**21 08 28.9 0.0**
ARCR	**ARCALIA**	**76.19 338** ⇑	*i*P	**P**	**21 08 30.9 +2.0**
SMOL	**Smolenice**	**76.24 343**	*e*P	**P**	**21 08 30.8 +1.6**
SMOL	**Smolenice**	**76.24 343**	*e*P	**P**	**21 08 30.8 +1.6**
757A	**Oxford**	**76.25 60**	P	**P**	**21 08 29.9 +0.5**
	baz=324				
KHC	**Kasperske Hory**	**76.28 345**	*e*P	**P**	**21 08 30.2 +0.8**
KHC			*e*x	x	21 08 36.9
KHC			*e*x	x	21 12 43.3
KHC			*e*S	**S**	**21 18 11.5 -0.5**
KHC			*e*SS	**SS**	**21 23 07.3 +2.7**
KHC			AMS	AMS	21 47 10.0
	comp=Z,2μm,16.9s				
KHC	**Kasperske Hory**	**76.28 345**	*e*P	**P**	**21 08 30.2 +0.8**
	comp=Z,16nm,1.0s				
KHC	**Kasperske Hory**	**76.28 345**	*e*P	**P**	**21 08 30.2 +0.8**
KHC			*e*		21 08 36.9
KHC			*e*S	**S**	**21 18 11.5 -0.5**
KHC			*e*SS	**SS**	**21 23 07.3 +2.7**
KHC			MLR	MLR	
	comp=Z,2μm,16.9s				
658A	**Bunnell**	**76.28 59**	P	**P**	**21 08 30.4 +0.8**
	baz=324				
GNI	**Garni**	**76.28 321**	P	**P**	**21 08 31.4 +1.7**
	comp=Z,22nm,1.0s,baz=294,slow=2.8,SNR=19				
GNI			LR	LR	21 46 52.9
	comp=Z,3μm,19.4s,baz=24,slow=40				
GNI	**Garni**	**76.28 321**	*e*P	**P**	**21 08 31.0 +1.3**
	comp=Z,74nm,1.0s				
GNI	**Garni**	**76.28 321**	P	**P**	**21 08 32.5 +2.8**
	SNR=15				
GNI	**Garni**	**76.28 321**	*i* P	**P**	**21 08 31.6 +1.9**
	SNR=14				
GNI	**Garni**	**76.28 321**	*c*eP	**P**	**21 08 31.9 +2.2**
GNI			*i* *PP	**pP**	**21 08 39.6 +1.4**
GNI			pmax	pmax	
	comp=Z,247nm,1.7s				
CTA	**Charters Tower**	**76.32 205**	P	**P**	**21 08 30.6 +0.8**
	comp=Z,19nm,0.7s,baz=11,slow=9.9,SNR=17				
CTAO	**Charters Tower**	**76.32 205**	*e*P	**P**	**21 08 30.7 +0.9**
	comp=Z,37nm,0.9s				
CTAO			LR	LR	
	comp=Z,824nm,21.0s				
CTAO	**Charters Tower**	**76.32 205**	*e*P	**P**	**21 08 30.7 +0.9**
CTAO			pmax	pmax	
	comp=Z,37nm,0.9s				
CTAO			MLR	MLR	
	comp=Z,824nm,21.0s				
PSZ	**Piszkesteto**	**76.35 341** ⇓	*i*P	**P**	**21 08 31.6 +1.7**
PSZ	**Piszkesteto**	**76.35 341**	*e*PP	**P**	**21 08 31.3 +1.4**
PSZ	**Piszkesteto**	**76.35 341**	*e*P	**P**	**21 08 31.3 +1.4**
	comp=Z,53nm,1.1s				
PMOR	**Pomariorio Ree**	**76.36 140**	*e*P	**P**	**21 08 29.4 -0.6**
	comp=Z,167nm,1.2s				
PMOR	**Pomariorio Ree**	**76.36 140**	*e*T	T	22 31 26.1
	comp=Z,23nm,0.3s				
GIVF	**Givet**	**76.38 351**	*e*P	**P**	**21 08 29.5 -0.4**
GIVF			pmax	pmax	
	comp=Z,18nm,1.0s				
PVM	**Polavaram**	**76.40 281**	*e*P	**P**	**21 08 31.1 +0.7**
PVM			IAmb	IAmb	21 08 38.5
	comp=Z,33nm,0.9s				
PVM			IVMsBB		21 43 53.0
	comp=Z,591nm,15.2s				
MODS	**Modra-Piesok**	**76.40 343**	*e*P	**P**	**21 08 30.8 +0.7**
MODS			pmax	pmax	
	comp=Z,98nm,1.4s				
MODS	**Modra-Piesok**	**76.40 343**	*e*P	**P**	**21 08 30.8 +0.7**
MODS			*e*PP	**PP**	**21 11 19.1 -2.0**
MODS			*e*S	**S**	**21 18 17.5 +4.2**
MODS			*e*SS	**SS**	**21 23 03.6 -2.9**
MODS			*e*L	L	21 40 20.9
LTVH	**L^tav^rtes,**	**76.45 339**	*e*PP	**P**	**21 08 32.0 +1.7**
BAIF	**Baives**	**76.48 352**	*e*P	**P**	**21 08 30.3 -0.1**
BAIF			pmax	pmax	
	comp=Z,52nm,1.4s				
RPR	**Rampur**	**76.51 283**	*e*P	**P**	**21 08 31.6 +0.5**
RPR			IAmb	IAmb	21 08 37.0
	comp=Z,36nm,1.1s				
RPR			IVMsBB		21 46 22.5
	comp=Z,706nm,7.7s				
GEC2	**GERESS Array S**	**76.54 345**	*e*P	**P**	**21 08 31.3 +0.4**
	comp=Z,31nm,1.1s				
GEC2	**GERESS Array S**	**76.54 345**	*e*P	**P**	**21 08 31.3 +0.4**
GEC2			pmax	pmax	
	comp=Z,31nm,1.1s				
GERES	**GERESS Array B**	**76.54 345**	P	**P**	**21 08 31.5 +0.6**
	comp=Z,6.2nm,0.6s,baz=22,slow=4.3,SNR=89				
GERES			LR	LR	21 46 21.7
	comp=Z,939nm,18.3s,baz=34,slow=39				
GEA0	**GERESS Array S**	**76.55 345**	*e*P	**P**	**21 08 31.2 +0.2**
ZST	**Bratislava**	**76.61 343**	*e*P	**P**	**21 08 31.8 +0.6**
ZST			pmax	pmax	
	comp=Z,11nm,1.5s				
ZST	**Bratislava**	**76.61 343**	*e*P	**P**	**21 08 31.8 +0.6**
ZST			*e*PP	**PP**	**21 11 28.8 +6.1**
758A	**Lake Helen**	**76.68 59**	P	**P**	**21 08 32.8 +0.8**
	baz=324,SNR=5.0				
WLF	**Walferdange**	**76.69 350** ⇑	P	**P**	**21 08 32.4 +0.7**
WLF	**Walferdange**	**76.69 350**	*e*P	**P**	**21 08 32.1 +0.5**
	comp=Z,26nm,1.2s				
WLF	**Walferdange**	**76.69 350**	*e*P	**P**	**21 08 32.1 +0.5**
WLF			pmax	pmax	
	comp=Z,26nm,1.2s				
857A	**Zephyrhills**	**76.70 61**	P	**P**	**21 08 32.6 +0.5**
	baz=324				
LHMI	**Lhok Sumawe**	**76.71 261**	*e*P	**P**	**21 08 34.0 +1.7**
	comp=Z,173nm,1.0s				
CJR	**Cluj-Napoca**	**76.72 338** ⇓	*i*P	**P**	**21 08 33.5 +1.6**
VRI	**Vrincioaia**	**76.78 336** ⇓	*i*P	**P**	**21 08 33.2 +1.0**
VRI	**Vrincioaia**	**76.78 336**	P	**P**	**21 08 33.2 +1.0**
PETR	**Petresti**	**76.78 335** ⇑	*i*P	**P**	**21 08 34.2 +2.0**
PLOR	**Plostina**	**76.81 336** ⇓	*i*P	**P**	**21 08 33.4 +0.9**
DRGR		**76.84 339** ⇓	*i*P	**P**	**21 08 33.8 +1.1**
TLCR		**76.88 334** ⇓	*i*P	**P**	**21 08 33.5 +0.7**
BUD	**Budapest**	**76.94 341**	P	**P**	**21 08 35.2 +2.1**
DOPR	**Dopca**	**77.01 337** ⇑	*i*P	**P**	**21 08 35.2 +1.7**
SRSP	**Sriramsagar**	**77.01 284**	*e*P	**P**	**21 08 34.1 +0.2**
SRSP			IAmb	IAmb	21 08 40.7
	comp=Z,79nm,1.5s				
SRSP			IVMsBB		21 45 48.9
	comp=Z,1μm,16.0s				
CFR	**Carcaliu**	**77.06 334** ⇓	*i*P	**P**	**21 08 34.5 +0.7**
CONA	**Conrad Observa**	**77.08 344**	*e*pP	**P**	**21 08 35.5 +1.5**
	comp=Z,71nm,1.6s,SNR=40				
GRER		**77.17 335** ⇑	*i*P	**P**	**21 08 36.5 +2.1**
957A	**Wimauma**	**77.18 61**	P	**P**	**21 08 35.2 +0.5**
	baz=324				
LANF	**Langenberg**	**77.19 349**	P	**P**	**21 08 35.1 +0.6**
CSKK	**Cs^ˇtkako**	**77.20 342**	*e*PP	**P**	**21 08 36.2 +1.6**
SOP	**Sopron**	**77.20 343**	*e*PP	**P**	**21 08 36.1 +1.6**
858A	**St. Cloud**	**77.20 60**	P	**P**	**21 08 35.5 +0.6**
	baz=324				
DWPF	**Disney Wildern**	**77.24 60**	P	**P**	**21 08 35.6 +0.5**
	baz=324				
DWPF	**Disney Wildern**	**77.24 60**	*e*P	**P**	**21 08 35.6 +0.5**
	comp=Z,99nm,0.8s				
MLR	**Muntele Rosu**	**77.32 336**	P	**P**	**21 08 35.3 -0.1**
	comp=Z,4.5nm,0.8s,baz=8.1,slow=7.1				
MLR			LR	LR	21 45 40.5
	comp=Z,421nm,18.9s,baz=60,slow=38				
MLR	**Muntele Rosu**	**77.32 336** ⇑	*i*P	**P**	**21 08 37.3 +1.9**
MOA	**Molln**	**77.32 345**	*e*pP	**P**	**21 08 36.4 +0.6**
	comp=Z,22nm,1.4s,SNR=20				
PSI	**Prapat**	**77.49 258**	P	**P**	**21 08 37.1 +0.3**
	comp=Z,8.4nm,0.6s,baz=359,slow=4.3,SNR=8.0				
PSI			LR	LR	21 43 59.4
	comp=Z,272nm,20.9s,baz=354,slow=37				
PSI	**Prapat**	**77.49 258**	*e*P	**P**	**21 08 36.9 +0.1**
	comp=Z,53nm,1.2s				
PSI	**Prapat**	**77.49 258**	*e*P	**P**	**21 08 36.9 +0.1**
PSI			pmax	pmax	
	comp=Z,53nm,1.2s				
958A	**Wauchula**	**77.50 61**	P	**P**	**21 08 37.0 +0.5**
	baz=324				
859A	**Kempfer Cattle**	**77.56 60**	P	**P**	**21 08 37.4 +0.5**
	baz=324				
SIRR	**Siria**	**77.56 339** ⇑	*i*P	**P**	**21 08 37.9 +1.2**
HARR	**Harsova**	**77.57 334**	P	**P**	**21 08 37.3 +0.6**
VOIR		**77.58 337** ⇓	*i*P	**P**	**21 08 38.2 +1.3**
VOIR		**77.58 337**	P	**P**	**21 08 38.2 +1.3**
TLB	**Topalu**	**77.64 334** ⇓	*i*P	**P**	**21 08 38.0 +1.0**
TIRR	**Tirgusor**	**77.66 334** ⇓	*i*P	**P**	**21 08 38.0 +0.8**
TIRR	**Tirgusor**	**77.66 334**	*e*P	**P**	**21 08 37.5 +0.4**
	comp=Z,17nm,0.8s				
TIRR	**Tirgusor**	**77.66 334**	*e*P	**P**	**21 08 37.5 +0.4**
TIRR			pmax	pmax	
	comp=Z,17nm,0.8s				
ARR	**Arges**	**77.75 337** ⇓	*i*P	**P**	**21 08 39.4 +1.6**
BFO	**Black Forest**	**77.77 349**	*e*P	**P**	**21 08 37.9 +0.1**
	comp=Z,103nm,2.0s				
BFO			LR	LR	
	comp=Z,739nm,19.0s				
BFO	**Black Forest**	**77.77 349**	*i* P	**P**	**21 08 38.3 +0.5**
ARSA	**Arzberg**	**77.79 344**	*e*pP	**P**	**21 08 39.4 +1.4**
	comp=Z,14nm,0.7s,SNR=19				
058A	**Arcadia**	**77.90 61**	P	**P**	**21 08 39.2 +0.4**
	baz=324,SNR=5.7				
959A	**Okeechobee**	**78.00 60**	P	**P**	**21 08 40.2 +0.9**
	baz=324				
ECH	**Echery**	**78.01 349**	*e*P	**P**	**21 08 39.3 +0.2**
	comp=Z,14nm,1.0s				
ECH	**Echery**	**78.01 349**	*e*P	**P**	**21 08 39.3 +0.2**
ECH			pmax	pmax	
	comp=Z,15nm,1.0s				
HYB	**Hyderabad**	**78.07 283**	*i* P	**P**	**21 08 41.0 +1.1**
HYBB	**Hyderabad (bro**	**78.07 283**	*e*P	**P**	**21 08 40.4 +0.5**
HYBB			IAmb	IAmb	21 08 47.8
	comp=Z,96nm,1.6s				
HYBB			IVMs_BB	IVMs_BB	21 44 42.3
	comp=Z,705nm,5.3s				
PPT	**Papeete**	**78.07 142**	LR	LR	21 39 02.0
	comp=Z,796nm,18.4s,baz=356,slow=32				
PPT2	**Papeete2**	**78.09 142**	*e*P	**P**	**21 08 39.

comp=Z,30nm,1.1s,SNR=5.8
BEHE Becsehely 78.33 343 *e*PP **P 21 08 42.3 +1.4**
MOTA Moosalm 78.38 347 *e*P **P 21 08 41.3 -0.1**
comp=Z,49nm,1.3s,SNR=20
WTTA Wattenberg 78.39 346 *e*pP **P 21 08 42.4 +1.0**
comp=Z,50nm,1.4s,SNR=13
MYIG MÖrida 78.42 71 *e*P **P 21 08 43.1 +1.3**
comp=Z,518nm,0.9s
SOKA Soboth 78.43 344 *e*pP **P 21 08 42.8 +1.2**
comp=Z,40nm,0.8s,SNR=70
PERS Pernice 78.46 344 *i* P **P 21 08 42.8 +1.1**
PERS *e*S **S 21 18 38.0 +2.3**
SGRR Singureni 78.50 336 ⇓*i*P **P 21 08 42.7 +0.9**
DAVA Damuels 78.60 347 *e*pP **P 21 08 43.6 +1.0**
comp=Z,20nm,1.4s,SNR=6.9
059Z Ave Maria 78.67 61 P **P 21 08 43.6 +0.5**
baz=324,SNR=6.1
060A Indiantown 78.67 60 P **P 21 08 43.8 +0.8**
baz=325
OBKA Obir 78.67 344 *e*pP **P 21 08 44.1 +1.2**
comp=Z,49nm,0.7s,SNR=50
KLRI Killari 78.70 285 *e*P **P 21 08 43.4 +0.1**
KLRI IAmb IAmb 21 08 48.3
comp=Z,50nm,1.1s
KLRI IVMsBB 21 46 53.3
comp=Z,2μm,12.2s
MYKA Terra Mystica 78.70 345 *e*pP **P 21 08 43.8 +0.8**
comp=Z,26nm,1.2s,SNR=13
HERR Herculane 78.72 338⇑*i*P **P 21 08 43.7 +0.7**
FETA Feichten 78.75 347 *e*pP **P 21 08 44.4 +1.0**
comp=Z,31nm,1.1s,SNR=14
ABTA Abfaltersbach 78.76 346 *e*pP **P 21 08 44.2 +0.8**
comp=Z,47nm,1.1s,SNR=27
SRLM Srisailam 78.91 282 *e*P **P 21 08 45.3 +0.7**
SRLM IAmb IAmb 21 08 49.5
comp=Z,37nm,1.2s
SRLM IVMs_BB IVMs_BB 21 47 10.3
comp=Z,950nm,4.8s
060Z West Palm Beac 79.08 60 P **P 21 08 46.1 +0.8**
baz=325
PRD Provadia 79.10 334 P **P 21 08 46.1 +1.0**
ZIMR 79.18 336⇑*i*P **P 21 08 46.1 +0.5**
FUORN Ofenpass-Fuorn 79.21 347 *e*P **P 21 08 47.1 +1.1**
comp=Z,24nm,0.8s
ILGA Ilgaz 79.28 329 *e*P **P 21 08 47.6 +1.2**
comp=Z,54nm,0.8s
VISS Visnje 79.31 344 *i* P **P 21 08 46.6 +0.3**
VISS *e*S **S 21 18 46.0 +1.2**
VISS *e* 21 18 59.0
061Z Ochoppi 79.33 61 P **P 21 08 47.5 +0.8**
baz=324
JAVS Javornik 79.35 344 *i* P **P 21 08 46.4 -0.2**
JAVS *e*S **S 21 18 40.9 -4.5**
OZLJ Ozalj 79.39 343 P **P 21 08 47.2 +0.6**
SZH Strazhica 79.41 335 P **P 21 08 47.1 +0.2**
TUE Stuetta 79.47 348 *e*P **P 21 08 48.0 +0.6**
comp=Z,50nm,1.2s
GSI Gunungsitoli 79.49 258 *e*P **P 21 08 48.2 +0.6**
comp=Z,167nm,1.6s
BOJS Bojanci 79.53 343 *i* P **P 21 08 48.4 +0.9**
BOJS *e*S **S 21 18 47.0 0.0**
WRAB Tennant Creek 79.74 215 *e*P **P 21 08 50.2 +1.4**
comp=Z,80nm,1.4s
WRAB LR LR
comp=Z,1μm,22.0s
WRAB Tennant Creek 79.74 215 ⇓*i*P **P 21 08 51.0 +2.2**
WRAB pmax pmax
comp=Z,20nm,0.8s
WB2 Warramunga Arr 79.75 215 *e*P **P 21 08 49.6 +0.8**
comp=Z,28nm,0.8s
WR1 Warramunga Arr 79.76 215 *e*P **P 21 08 48.5 -0.3**
comp=Z,33nm,0.9s
WRA Warramunga Arr 79.76 215 P **P 21 08 48.5 -0.4**
comp=Z,10nm,0.8s,baz=30,slow=6.2,SNR=33
WRA LR LR 21 39 54.7
comp=Z,737nm,22.0s,baz=35,slow=32
SENIN Lac Senin/Sane 79.83 349 *e*P **P 21 08 49.7 +0.3**
comp=Z,11nm,0.8s
MPEP Malo Peshtene 79.86 337 P **P 21 08 49.2 -0.1**
BLY Banja Luka 79.92 342 ⇓*i*P **P 21 08 50.4 +0.8**
BLY Banja Luka 79.92 342 *e*P **P 21 08 50.1 +0.5**
comp=Z,22nm,0.8s
DIVS Divibare 79.99 340 *e*P **P 21 08 50.7 +0.6**
comp=Z,24nm,0.9s
SKHT Srikalahasti 80.28 280 *e*P **P 21 08 51.0 -1.0**
SKHT IAmb IAmb 21 08 57.3
comp=Z,60nm,1.6s
SKHT IVMs_BB IVMs_BB 21 46 26.4
comp=Z,817nm,5.3s
EIDS Eidsvold 80.35 199 *e*P **P 21 08 53.7 +1.7**
comp=Z,20nm,1.0s
UDBI Udbina 80.39 343 P **P 21 08 52.5 +0.3**
BR101 Keskin Array S 80.51 328 *e*P **P 21 08 53.6 +0.5**
BR101 *e*PP **PP 21 11 55.2 -0.5**
BR131 Keskin Array S 80.51 328 *e*P **P 21 08 53.7 +0.7**
NVLJ Novalja 80.51 343 P **P 21 08 52.9 +0.1**
BRTR Keskin Array B 80.51 328 P **P 21 08 53.6 +0.5**
comp=Z,16nm,0.8s,baz=56,slow=3.2,SNR=95
BRTR PP **PP 21 11 55.2 -0.5**
comp=Z,6.8nm,1.1s,baz=27,slow=5.1,SNR=5.2
BRTR LR LR 21 47 33.1
comp=Z,1μm,21.5s,baz=21,slow=38
BRTR Keskin Array B 80.51 328 *ce*P **P 21 08 53.9 +0.8**
BRTR pmax pmax
comp=Z,16nm,0.8s
PGB Panagyurishte 80.52 336 P **P 21 08 53.7 +0.7**
ANTO Ankara 80.64 329 *e*P **P 21 08 55.0 +1.3**
comp=Z,35nm,0.9s
ANTO LR LR
comp=Z,898nm,21.0s
ANTO Ankara 80.64 329 P **P 21 08 55.3 +1.6**
SNR=6.5
VTS Vitosha 80.71 337 ⇓*i*P **P 21 08 54.7 +0.6**
VTS Vitosha 80.71 337 *e*P **P 21 08 54.3 +0.2**
comp=Z,18nm,0.8s
VTS Vitosha 80.71 337 P **P 21 08 54.6 +0.5**
VTS Vitosha 80.71 337 *e*P **P 21 08 54.3 +0.2**
VTS pmax pmax
comp=Z,19nm,0.8s
CCIG Comitan 80.75 75 *e*P **P 21 08 55.5 +0.8**
comp=Z,103nm,1.1s
URV Uravakonda 80.78 282 *e*P **P 21 08 54.6 -0.1**
URV IAmb IAmb 21 09 01.8
comp=Z,37nm,1.1s
URV IVMs_BB IVMs_BB 21 49 01.1
comp=Z,858nm,5.1s
PLE Pljevlja 80.85 340 *e*P **P 21 08 55.8 +1.0**
UPM Unac-Piva 81.07 340 ⇓*i*P **P 21 08 56.2 +0.2**
IVA Berane 81.18 339 ⇓*i*P **P 21 08 57.2 +0.7**
SSB Saint Sauveur 81.19 351 *e*P **P 21 08 57.0 +0.6**
comp=Z,16nm,0.9s
SSB Saint Sauveur 81.19 351 *e*P **P 21 08 57.0 +0.6**
SSB pmax pmax
comp=Z,16nm,0.9s
BNI Bardonecchia 81.19 349 *e*P **P 21 08 57.0 +0.5**
comp=Z,48nm,1.1s
BNI Bardonecchia 81.19 349 *e*P **P 21 08 57.1 +0.5**
BNI pmax pmax
comp=Z,48nm,1.1s
KOME Kolasin 81.28 340 ⇓*i*P **P 21 08 57.5 +0.4**
FITZ Fitzroy Crossi 81.41 224 P **P 21 08 57.9 +0.2**
comp=Z,12nm,0.8s,baz=14,slow=7.0
KKB Krupnik 81.42 337 P **P 21 08 58.8 +1.1**
NKY Niksic 81.42 340 ⇓*i*P **P 21 08 58.2 +0.4**
BRY Bratogost 81.43 340 ⇓*i*P **P 21 08 58.0 +0.1**
PVY Plav 81.43 339 ⇓*i*P **P 21 08 58.2 +0.3**
NKME Niksic 81.48 340 ⇓*i*P **P 21 08 58.0 0.0**
MMB Musomiste 81.53 336 P **P 21 08 59.5 +1.1**
VLC Villacolmand 81.60 347 *e*P **P 21 08 59.3 +0.7**
comp=Z,283nm,2.0s
STON Ston 81.63 341 P **P 21 08 57.5 -1.2**
BCI Bajram Curri 81.63 339 *i* P **P 21 09 01.9 +3.0**
BBSR BB Station 81.67 45 *e*P **P 21 08 58.9 -0.3**
comp=Z,33nm,0.9s
BBSR LR LR
comp=Z,1μm,22.0s
CEME Cevo 81.70 340 ⇓*i*P **P 21 08 59.0 -0.2**
SKO Skopje 81.70 338 *i* P **P 21 09 00.3 +1.1**
PDG Podgorica 81.74 340 ⇓*i*P **P 21 08 59.9 +0.6**
TTG Podgorica 81.74 340 ⇓*i*P **P 21 08 59.8 +0.5**
TTG Podgorica 81.74 340 *e*P **P 21 08 59.6 +0.3**
comp=Z,38nm,0.8s
TTG Podgorica 81.74 340 *e*P **P 21 08 59.6 +0.3**
TTG pmax pmax
comp=Z,38nm,0.8s

STIP Stip 81.80 337 *i* P **P 21 08 59.1 -0.6**
HCY Herceg Novi 81.88 340 ⇓*i*P **P 21 08 59.7 -0.4**
BUM Brajici-Budva 81.94 340 ⇓*i*P **P 21 09 01.1 +0.6**
DRME Dracevica, Mon 81.99 340 ⇓*i*P **P 21 09 01.1 +0.4**
VAY Valandovo 82.06 337 *i* P **P 21 09 02.1 +1.0**
ULC Ulcinj 82.19 340 *e*P **P 21 09 01.8 0.0**
PHP Peshkopia 82.20 339 *i* P **P 21 09 04.4 +2.5**
BIA Bitola 82.64 338 *i* P **P 21 09 05.0 +0.8**
OHR Ohrid 82.67 338 *i* P **P 21 09 04.9 +0.5**
FNA Florina 82.85 338 *e*P **P 21 09 05.4 +0.1**
comp=Z,26nm,0.9s
FNA Florina 82.85 338 *e*P **P 21 09 05.4 +0.1**
FNA pmax pmax
comp=Z,26nm,0.9s
AQU L'Aquila 82.91 344 *e*P **P 21 09 06.5 +1.0**
comp=Z,78nm,1.0s
AQU L'Aquila 82.91 344 *e*P **P 21 09 06.5 +1.0**
AQU pmax pmax
comp=Z,79nm,1.0s
ISP Isparta 83.22 330 *d i*P **P 21 09 07.3 0.0**
ISP *i* *PP **pP 21 09 14.8 -1.0**
ISP pmax pmax
comp=Z,10.0nm,0.9s
LIT Litokhoron 83.24 337 *e*P **P 21 09 07.2 -0.1**
LIT Litokhoron 83.24 337 *e*P **P 21 09 07.2 -0.1**
SHME Shamm 83.31 305 P **P 21 09 07.6 -0.3**
AS01 Alice Springs 83.33 214 *e*P **P 21 09 08.1 +0.3**
BANOM Banah 83.33 305 P **P 21 09 07.8 -0.2**
AS31 Alice Springs 83.35 214 *e*P **P 21 09 08.8 +1.0**
comp=Z,8.2nm,1.1s
ASAR Alice Springs 83.35 214 P **P 21 09 08.4 +0.6**
comp=Z,10nm,0.9s,baz=20,slow=4.9,SNR=41
ASAR LR LR 21 41 37.4
comp=Z,588nm,21.6s,baz=24,slow=32
MATE Matera 83.97 341 ⇓*i*P **P 21 09 11.6 +0.7**
UOSS Minazif 84.20 305 *e*P **P 21 09 11.6 -0.8**
comp=Z,27nm,0.9s
UOSS Minazif 84.20 305 P **P 21 09 11.6 -0.8**
HATD Hatta, Dubai 84.33 305 P **P 21 09 17.0 +3.9**
SNR=6.8
HATD Hatta, Dubai 84.33 305 P **P 21 09 12.6 -0.5**
WSAR Wadi Sarin 84.40 302 P **P 21 09 13.8 +0.4**
comp=Z,7.3nm,0.7s,baz=69,slow=5.3,SNR=5.5
WSAR LR LR 21 49 39.2
comp=Z,1μm,19.9s,baz=75,slow=38
SOHO SOHO 84.71 304 P **P 21 09 14.2 -0.8**
CUC Castrocucco 84.77 342 *e*P **P 21 09 15.0 -0.1**
comp=Z,6.0nm,1.0s
MAMC Mammari 84.81 327 P **P 21 09 15.6 +0.3**
PALK Pallekele 84.81 275 P **P 21 09 16.2 +0.6**
comp=Z,22nm,1.2s,baz=291,slow=2.2,SNR=4.8
PALK LR LR 21 51 25.8
comp=Z,712nm,20.7s,baz=25,slow=39
PALK Pallekele 84.81 275 *e*P **P 21 09 15.6 0.0**
comp=Z,40nm,1.3s
PALK Pallekele 84.81 275 *e*P **P 21 09 15.6 0.0**
PALK pmax pmax
comp=Z,40nm,1.3s
ASUD Al Ashush, Dub 84.90 305 P **P 21 09 15.6 -0.3**
CSS Mathiatis 84.96 327 *e*P **P 21 09 16.5 +0.4**
comp=Z,28nm,1.4s
CSS Mathiatis 84.96 327 P **P 21 09 16.7 +0.6**
ALFC Alefka 85.02 327 P **P 21 09 16.4 0.0**
PGAV Gavieira, Arco 85.12 360 *e*S **S 21 19 47.2 +2.6**
PGAV *e*SS SS 21 25 41.9 +25
PGAV Gavieira, Arco 85.12 360 *e*LR LR 21 38 02.9
comp=Z,697nm,18.0s
ALNE Al Ain 85.17 304 P **P 21 09 17.2 -0.1**
ARMA Armidale 85.17 197 *e*P **P 21 09 18.5 +1.5**
comp=Z,41nm,1.2s
AKMC Akamas 85.23 328 P **P 21 09 17.0 -0.4**
PBRG Braganca 85.27 359 *e*P **P 21 09 18.0 +0.4**
comp=Z,38nm,2.0s
SZAC Souni 85.30 327 P **P 21 09 18.3 +0.5**
TGUH Tegucigalpa,Un 85.33 73 *e*P **P 21 09 18.6 +0.5**
comp=Z,417nm,1.4s
APE Apeiranthos 85.34 333 ⇓*i*P **P 21 09 19.0 +1.0**
APE *i* *SP **sP 21 09 29.9 +0.3**
APE pmax pmax
comp=Z,38nm,1.3s
PPCY Paphos 85.35 327 P **P 21 09 17.9 -0.1**
TIP Timpagrande 85.38 341 ⇓*i*P **P 21 09 18.6 +0.4**
TIP Timpagrande 85.38 341 *e*P **P 21 09 18.1 0.0**
comp=Z,27nm,1.2s
POLO Lamas de Olo 85.71 360 *e*P **P 21 09 20.1 +0.3**
comp=Z,23nm,1.8s
PVRL Vila Real 85.80 360 *e*P **P 21 09 21.4 +1.2**
comp=Z,49nm,1.8s
MVO Moncorvo 85.91 359 *e*P **P 21 09 21.4 +0.6**
comp=Z,52nm,2.3s
MMAI Mount Meron Ar 86.03 324 P **P 21 09 21.8 +0.2**
comp=Z,14nm,0.9s,baz=0.0,slow=7.2,SNR=29
MMAI LR LR 21 50 48.9
comp=Z,558nm,18.1s,baz=25,slow=38
ITM Ithomi 86.15 336 *e*P **P 21 09 21.6 -0.4**
comp=Z,106nm,1.8s
ASF Jabal al Asfar 86.26 323 P **P 21 09 23.0 +0.3**
comp=Z,12nm,0.9s,baz=18,slow=1.7,SNR=20
ASF LR LR 21 51 21.7
comp=Z,894nm,21.0s,baz=348,slow=38
KARP Karpathos 86.31 332 *e*P **P 21 09 22.1 -0.8**
comp=Z,30nm,0.8s
PVIS Viseu 86.36 360 *e*P **P 21 09 22.6 -0.4**
comp=Z,23nm,1.7s
MBWA Marble Bar 86.65 227 PFAKE 21 09 40.0 +16
MBWA LR LR
comp=Z,533nm,19.0s
MTE Manteigas 86.68 359 *e*P **P 21 09 24.9 +0.3**
comp=Z,32nm,1.7s
MTE Manteigas 86.68 359 *e*S **S 21 19 56.4 -3.5**
MTE *e*SS SS 21 26 01.4 +22
MTE Manteigas 86.68 359 *e*LR LR 21 38 45.0
comp=Z,650nm,16.0s
PCAS Casmilo, Conde 87.03 0 *e*P **P 21 09 27.2 +1.0**
comp=Z,28nm,1.3s
MZR Muzera 87.17 306 *i* P **P 21 09 27.2 0.0**
SNR=19
IDI Anoyia 87.19 333 P **P 21 09 25.6 -1.5**
comp=Z,7.0nm,0.6s,baz=22,slow=10,SNR=6.7
IDI LR LR 21 52 19.1
comp=Z,536nm,18.4s,baz=28,slow=38
IDI Anoyia 87.19 333 *e*P **P 21 09 25.6 -1.5**
comp=Z,30nm,1.1s
GTBY Guantanamo Bay 87.23 60 PFAKE 21 09 40.0 +13
GTBY LR LR
comp=Z,2μm,19.0s
PCBR Castelo Branco 87.24 359 *e*P **P 21 09 27.6 +0.4**
comp=Z,15nm,1.9s
ES19 SONSECA Array 87.30 357 *e*P **P 21 09 27.5 -0.1**
ESDC Sonseca Array 87.33 357 P **P 21 09 27.3 -0.5**
comp=Z,2.3nm,0.6s,baz=359,slow=4.4,SNR=22
ESDC PP **PP 21 12 48.2 -3.0**
comp=Z,0.9nm,0.9s,baz=358,slow=7.7,SNR=2.4
ESLA Sonseca Array 87.33 357 *e*P **P 21 09 27.9 +0.2**
comp=Z,10nm,1.0s
MTDJ Mount Denham 87.36 63 *e*P **P 21 09 28.8 +0.5**
comp=Z,146nm,1.1s
MTDJ LR LR
comp=Z,2μm,20.0s
PTOM Tomar 87.46 0 *e*P **P 21 09 28.6 +0.3**
comp=Z,19nm,0.9s
PAB San Pablo 87.47 357 PFAKE 21 09 40.0 +12
PAB LR LR
comp=Z,818nm,20.0s
VAE Valguarnera 87.47 342 LR LR 21 52 59.7
comp=Z,898nm,19.6s,baz=36,slow=39
PMRV Marv??o 87.65 359 *e*S **S 21 20 09.8 +0.6**
PMRV *e*SS SS 21 26 18.1 +24
PMRV Marv??o 87.65 359 *e*LR LR 21 39 19.7
comp=Z,665nm,18.0s
GRTK Grand Turk 87.93 56 PFAKE 21 09 40.0 +9.2
GRTK LR LR
comp=Z,2μm,21.0s
CMLA Cha da Macela 88.09 14 PFAKE 21 09 40.0 +8.6
CMLA LR LR
comp=Z,559nm,20.0s
STKA Stephens Creek 88.76 205 P **P 21 09 35.2 +1.0**
comp=Z,8.4nm,0.8s,baz=331,slow=5.2,SNR=11
STKA LR LR 21 44 43.4
comp=Z,308nm,21.5s,baz=10,slow=32
PBAR Barrancos 88.90 359 *e*P **P 21 09 34.9 -0.2**
comp=Z,35nm,1.2s
RKT Rikitea 88.99 132 *e*S **S 21 20 16.0 -5.8**
comp=Z,415nm,31.0s
RKT Rikitea 88.99 132 *e*LQ LQ 21 33 56.1
comp=Z,1μm,34.2s

RKT *e*LR LR 21 37 35.0
comp=Z,716nm,35.2s,baz=327
PVAQ Vaqueiros 89.67 360 *e*SS SS 21 26 39.0 +16
PVAQ Vaqueiros 89.67 360 *e*LR LR 21 40 11.4
comp=Z,833nm,20.0s
JTS JuntasAbangare 89.69 73 P **P 21 09 38.6 -0.6**
comp=Z,2.8nm,0.4s,baz=8.1,slow=14,SNR=4.2
JTS LR LR 21 54 41.9
comp=Z,366nm,18.2s,baz=14,slow=39
JTS JuntasAbangare 89.69 73 *e*P **P 21 09 38.6 -0.6**
JTS LR LR
comp=Z,577nm,20.0s
JTS JuntasAbangare 89.69 73 *e*P **P 21 09 38.6 -0.6**
JTS MLR MLR
comp=Z,577nm,20.0s
KEST Kesra 90.02 346 P **P 21 09 39.7 -0.9**
comp=Z,4.6nm,0.8s,baz=336,slow=4.3,SNR=5.1
KEST LR LR 21 53 27.1
comp=Z,529nm,18.9s,baz=309,slow=38
THTN Thala 90.28 346 *e*P **P 21 09 42.2 +0.4**
comp=Z,64nm,1.9s
RAYN Ar Rayn 90.45 312 *e*P **P 21 09 42.6 0.0**
comp=Z,19nm,0.9s
RAYN LR LR
comp=Z,1μm,19.0s
RAYN Ar Rayn 90.45 312 *i* P **P 21 09 42.7 0.0**
SNR=12
SJG San Juan 93.26 54 PFAKE 21 10 10.0 +14
SJG LR LR
comp=Z,1μm,20.0s
BCIP Isla Barro Col 93.52 70 PFAKE 21 10 10.0 +13
BCIP LR LR
comp=Z,458nm,19.0s
MTP Monte Pirata 93.56 53 *e*P **P 21 09 56.7 -0.4**
comp=Z,41nm,0.9s
MDT Midelt 94.19 357 P **P 21 09 59.6 -0.3**
comp=Z,1.9nm,0.7s,baz=190,slow=2.7,SNR=3.6
SNZO South Karori 94.27 178 PFAKE 21 10 10.0 +10
SNZO LR LR
comp=Z,813nm,20.0s
PAYG Puerto Ayora 95.35 84 PFAKE 21 10 20.0 +15
PAYG LR LR
comp=Z,836nm,19.0s
ANWB Willy Bob 95.71 50 PFAKE 21 10 20.0 +13
ANWB LR LR
comp=Z,1μm,22.0s
NWAO Narrogin (SRO) 98.00 224 LR LR 21 51 02.8
comp=Z,297nm,20.5s,baz=248,slow=33
SDV Santo Domingo 98.80 62 LR LR 21 57 16.1
comp=Z,961nm,18.5s,baz=340,slow=37
SDV Santo Domingo 98.80 62 PFAKE 21 10 30.0 +8.8
SDV LR LR
comp=Z,1μm,20.0s
GRGR Grenville 100.58 53 PFAKE 21 10 40.0 +11
GRGR LR LR
comp=Z,1μm,20.0s
BBGH Gun Hill 100.69 51 PFAKE 21 10 40.0 +11
BBGH LR LR
comp=Z,2μm,19.0s
OTAV Otavalo 101.58 74 PFAKE 21 10 50.0 +16
OTAV LR LR
comp=Z,376nm,19.0s
SACV Santiago Islan 110.75 16 PFAKE 21 15 30.0
SACV LR LR
comp=Z,376nm,19.0s
NNA Nana 112.34 80 PFAKE 21 15 30.0
NNA LR LR
comp=Z,267nm,19.0s
PTGA Pitinga 112.50 58 PFAKE 21 15 30.0
PTGA LR LR
comp=Z,13μm,21.0s
TOA1 Torodi Ar. Sit 113.27 349 *e*PP PP 21 16 02.0 -5.9
TOA1 *e*PKKPbc **PKKPbc 21 26 03.0 +1.2**
TOA1 *e*PKKPab **PKKPab 21 26 11.1 -2.9**
TORD Torodi Ar. Bea 113.27 349 PP PP 21 16 02.0 -6.0
comp=Z,3.0nm,1.1s,baz=2.6,slow=4.0,SNR=5.3
TORD PKKPbc **PKKPbc 21 26 03.0 +1.2**
comp=Z,1.0nm,0.8s,baz=197,slow=4.4,SNR=3.9
TORD PKKPab **PKKPab 21 26 11.1 -2.9**
comp=Z,2.4nm,0.9s,baz=196,slow=5.1,SNR=6.9
KMBO Kilima Mbogo 115.83 308 PFAKE 21 15 40.0 +16
KMBO LR LR
comp=Z,836nm,20.0s
SAML Samuel 117.71 66 PFAKE 21 15 40.0 +13
SAML LR LR
comp=Z,1μm,20.0s
LPAZ La Paz 120.85 75 PKP **PKPdf 21 15 33.7 -0.2**
comp=Z,1.3nm,0.7s,baz=214,slow=3.6,SNR=6.7
LPAZ La Paz 120.85 75 PKP **PKPdf 21 15 33.7 -0.2**
LPAZ *e*PKPdf **PKiKP 21 15 36.8 +2.8**
ABPO Ambohimpanom 125.47 287 PFAKE 21 15 50.0 +7.8
ABPO LR LR
comp=Z,361nm,21.0s
CASY Casey 127.89 207 PFAKE 21 16 00.0 +15
CASY LR LR
comp=Z,82nm,20.0s
LCO Las Campanas 129.03 87 PFAKE 21 16 00.0 +11
LCO LR LR
comp=Z,656nm,22.0s
SBA Scott Base 130.92 181 PFAKE 21 16 00.0 +9.4
SBA LR LR
comp=Z,251nm,19.0s
LSZ Lusaka 132.46 309 PKP **PKPdf 21 15 55.5 0.0**
comp=Z,0.9nm,0.2s,baz=2.8,slow=1.3,SNR=3.2
LSZ Lusaka 132.46 309 PKP **PKPdf 21 15 55.5 0.0**
LSZ LR LR
comp=Z,919nm,21.0s
LSZ Lusaka 132.46 309 PKIKP **PKPdf 21 15 55.5 0.0**
LSZ MLR MLR
comp=Z,919nm,21.0s
ASCN Ascension 134.50 8 PFAKE 21 16 10.0 +11
ASCN LR LR
comp=Z,840nm,19.0s
CPUP Villa Florida 134.93 73 PKP **PKPdf 21 15 60.0 +0.3**
comp=Z,7.5nm,1.3s,baz=3.0,slow=2.9,SNR=4.5
CPUP Villa Florida 134.93 73 PKP **PKPdf 21 15 60.0 +0.3**
CPUP *e*PKPdf **PKiKP 21 16 00.4 -0.8**
CPUP Villa Florida 134.93 73 PKIKP **PKPdf 21 16 00.0 +0.3**
PLCA Paso Flores 137.09 99 PKP **PKPdf 21 16 03.4 0.0**
comp=Z,8.7nm,1.0s,baz=0.0,slow=1.0,SNR=5.8
TSUM Tsumeb 140.51 320 PFAKE 21 16 20.0 +10
TSUM LR LR
comp=Z,972nm,22.0s
TRQA Tornquist 140.52 89 PFAKE 21 16 20.0 +10
TRQA LR LR
comp=Z,704nm,19.0s
SHEL Horse Pasture 142.69 356 PFAKE 21 16 30.0 +16
SHEL LR LR
comp=Z,242nm,19.0s
QSPA South Pole Qui 143.04 180 PKP **PKPdf 21 16 12.4 -0.9**
comp=Z,12nm,1.0s,baz=17,slow=1.9,SNR=6.9
QSPA South Pole Qui 143.04 180 PFAKE 21 16 30.0 +17
QSPA LR LR
comp=Z,464nm,20.0s
MAW Mawson 144.38 219 PKP **PKPab 21 16 13.8 +0.1**
comp=Z,16nm,0.9s,baz=104,slow=5.0,SNR=18
BOSA Boshof 145.16 302 PKPbc **PKPab 21 16 18.1 +0.2**
comp=Z,18nm,0.6s,baz=29,slow=2.7,SNR=23
BOSA PKKP **PKKPdf 21 25 21.6 -0.6**
comp=Z,2.7nm,1.0s,baz=208,slow=9.3,SNR=3.5
PMSA Palmer Station 150.17 135 PKPbc **PKPbc 21 16 31.0 +0.7**
comp=Z,54nm,1.0s,baz=225,slow=2.9,SNR=12
SUR Sutherland 150.45 303 PFAKE 21 16 40.0 +1.1
SUR LR LR
comp=Z,2μm,20.0s
SYO Syowa Base 153.00 216⇑*e*X PKPpre 21 16 25.0
NVL N'lazarevskaya 160.28 200 *e*PKIKP **PKPdf 21 16 46.0 +7.3**
SNAA Sanae 161.40 185 P **PKPdf 21 16 40.9 +0.9**
SNAA Sanae 161.40 185 PKP **PKPdf 21 16 38.6 -1.4**
comp=Z,0.9nm,0.6s,baz=150,slow=1.7,SNR=2.5
SNAA PKPab **PKPab 21 17 26.0 +1.5**
comp=Z,9.5nm,1.1s,baz=165,slow=4.3,SNR=5.7
SNAA Sanae 161.40 185 PKP **PKPdf 21 16 38.6 -1.4**
SNAA *e*PKPdf **PKPdf 21 16 41.3 +1.3**
SNAA *e*PKPab **PKPab 21 17 24.7 +0.2**
VNA3 Neumayer Olymp 161.97 179 P **PKPdf 21 16 46.1 +5.6**
VNA1 Neumayer--Stat 162.58 180 P **PKPdf 21 16 48.9 +7.7**
HOPE Hope Point 163.37 105 PFAKE 21 16 50.0 +7.7
HOPE LR LR
comp=Z,865nm,20.0s

*IDC **19** 21:13:33.6s 0.7,2°95S 99°71E, h0km, mb4.3/22, mb1 4.4/24, mb1mx4.2/71, mbtmp4.3/24, ML3.8/2, MS3.9/1, Ms1 3.9/1, ms1mx3.3/58, Error ellipse: s-maj=25.4km*

s-min=13.1km az=45.0
*DJA **19** 21:13:34.8±1.0,3˙S±4˙×10˙0E±˙,h13km±5km,M4.6/19, mb4.5/12,mB5.1/6,MLv4.7/19,Mw(mB)4.5/6*
*BJI **19** 21:13:35.1,2˙90S×99˙80E,h12km,mb4.7/40,mB5.1/22, Ms5.1/12,Ms7 5.0/11*
*ISCJB **19** 21:13:36.0±1.2,2˙96S±0˙04×99˙78E±0˙05,h29km±8km, mb4.6/71,Error ellipse: s-maj=10.3km s-min=4.8km az=140.5*
*MOS **19** 21:13:37.5±1.1,2˙79S×99˙89E,h33km,mb5.0/35,Error ellipse: s-maj=12.0km s-min=5.9km az=107.4*
*NEIC **19** 21:13:38.9±0.3,2˙90S×99˙82E,h35km,mb4.7/26,Error ellipse: s-maj=8.7km s-min=5.4km az=48.0*
ISC 19 21:13:36.8±0.5,**2˙99S**±0˙07×**99˙75E**±0˙07,**h21**km±4km, **h22**km:**pP-P,n195,**σ1§**26**/186,**mb4.7**/71,**5C-8D,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.34**	**49**	P	**Pb**	**21 13 45.0**	**+0.8**
SISI	**Saibi**	**1.78**	**338**	P	**Pn**	**21 14 04.8**	**-1.6**
KRJI	**Kerinci**	**1.93**	**62**	P	**Pn**	**21 14 08.3**	**-0.2**
PDSI	**Padang**	**2.18**	**19**	P	**Pn**	**21 14 10.9**	**-1.1**
MASI	**Maura Aman, Be**	**2.49**	**94**	P	**Pn**	**21 14 16.3**	**+0.1**
BKNI	**Bangkinang**	**3.54**	**21**	P	**Pn**	**21 14 30.7**	**+0.1**
BKNI	**Bangkinang**	**3.54**	**21**	*e*Pn	**Pn**	**21 14 30.6**	**+0.1**
MNSI	**Mandailing Nat**	**3.76**	**357**	P	**Pn**	**21 14 32.8**	**-0.9**
MDSI	**Maura Dua**	**4.66**	**109**	P	**Pn**	**21 14 47.1**	**+1.1**
LWLI	**Liwa**	**4.75**	**115**	P	**Pn**	**21 14 47.5**	**+0.2**
GSI	**Gunungsitoli**	**4.79**	**333**	P	**Pn**	**21 14 47.2**	**-0.6**
GSI	**Gunungsitoli**	**4.79**	**333**	*e*Pn	**Pn**	**21 14 45.7**	**-2.1**
KASI	**Kota Agung**	**5.36**	**118**	P	**Pn**	**21 14 55.8**	**+0.1**
	123nm,0.8s,2μm0.6nm						
KLI	**Kotabumi**	**5.42**	**110**	P	**Pn**	**21 14 57.8**	**+1.3**
	152nm,1.0s,2μm0.7nm						
PSI	**Prapat**	**5.81**	**352**	Pn	**Pn**	**21 14 58.8**	**-3.2**
	0.9nm,0.3s,baz=360,slow=6.7,SNR=2.8						
PSI	**Prapat**	**5.81**	**352**	*e*Pn	**Pn**	**21 14 57.8**	**-4.2**
PSI	**Prapat**	**5.81**	**352**	*e*P	**Pn**	**21 14 57.8**	**-4.2**
BLSI	**Bandar Lampung**	**5.97**	**113**	P	**Pn**	**21 15 04.0**	**0.0**
	120nm,1.0s,0.5nm						
TPRI	**Tanjung Pinang**	**6.16**	**51**	P	**Pn**	**21 15 06.9**	**+0.3**
MYKOM	**Kota Tinggi**	**6.27**	**41**	*e*Pn	**Pn**	**21 15 08.1**	**-0.1**
CGJI	**Cibinong**	**6.93**	**122**	P	**Pn**	**21 15 16.0**	**-1.2**
IPM	**Ipoh**	**7.53**	**10**	*e*Pn	**Pn**	**21 15 23.7**	**-1.8**
DBJI	**Dramaga**	**7.82**	**117**	P	**Pn**	**21 15 29.7**	**+0.2**
	68nm,1.1s,3μm0.8nm						
KULM	**Kulim**	**8.27**	**6**	*e*Pn	**Pn**	**21 15 36.4**	**+0.7**
LEM	**Lembang**	**8.72**	**116**	Pn	**Pn**	**21 15 42.1**	**+0.2**
	2.8nm,0.3s,baz=348,slow=8.5,SNR=3.9						
CISI	**Cisompet, Garu**	**9.22**	**120**	*e*Pn	**Pn**	**21 15 46.4**	**-2.3**
SBUM	**Sibu**	**13.59**	**67**	*e*Pn	**Pn**	**21 16 48.9**	**+0.4**
JAGI	**Jajag, Banyuwa**	**15.33**	**111**	*e*Pn	**Pn**	**21 17 08.2**	**-3.9**
	75nm,1.5s						
PBKT	**Sadao Pong**	**19.47**	**4**	*e*P	**P**	**21 17 59.7**	**-2.7**
	27nm,1.7s						
MPSI	**Mapaga**	**20.41**	**81**	P	**P**	**21 18 13.4**	**+0.7**
MYLDM	**Lahad Datu**	**20.41**	**67**	*e*P	Pn	21 18 14.1	-0.9
	22nm,0.9s						
BKSI	**Bulukumba**	**20.45**	**97**	P	**P**	**21 18 13.0**	**-0.2**
CM01	**Chiang Mai Arr**	**21.29**	**358**	*e*P	**P**	**21 18 21.3**	**-0.8**
CM31	**Chiang Mai Arr**	**21.33**	**358**	*e*P	**P**	**21 18 21.9**	**-0.7**
CMAR	**Chiang Mai Arr**	**21.33**	**358**	P	**P**	**21 18 21.8**	**-0.8**
	10nm,0.8s,baz=187,slow=10,SNR=51						
CHTO	**Chiang Mai**	**21.68**	**358**	*e*P	**P**	**21 18 24.9**	**-1.5**
	21nm,1.1s						
CHTO	**Chiang Mai**	**21.68**	**358**	*e*P	**P**	**21 18 24.9**	**-1.5**
CHTO				pmax	pmax		
	comp=Z,21nm,1.1s						
MRSI	**Marisa**	**22.45**	**82**	P	**P**	**21 18 36.0**	**+1.3**
H08S2	**Diego Garcia H**	**27.52**	**259**	T	T	21 48 02.5	
	baz=81,slow=74,SNR=811						
H08S3	**Diego Garcia H**	**27.53**	**259**	T	T	21 48 04.5	
	baz=81,slow=74,SNR=631						
H08S1	**Diego Carcia H**	**27.54**	**259**	T	T	21 48 04.0	
	baz=81,slow=74,SNR=303						
KMI	**Kunming**	**28.10**	**6**	P	**P**	**21 19 28.6**	**+1.1**
KMI				pP	sP	21 19 36.5	-0.1
KMI				sP	pP	21 19 40.6	+6.6
KMI				pmax	pmax		
	comp=Z,11nm,0.9s						
KMI				LR	LR		
	comp=Z,2μm,12.8s						
KMI				LR	LR		
	comp=Z,550nm,14.1s						
KMI				LR	LR		
	comp=Z,2μm,15.4s						
SHL	**Shillong**	**29.39**	**345**	*e*P	P	21 19 45.0	+6.0
SHL	**Shillong**	**29.39**	**345**	*e*P	**P**	**21 19 42.2**	**+3.2**
	comp=Z,17nm,0.8s						
SHL	**Shillong**	**29.39**	**345**	*e*P	**P**	**21 19 42.2**	**+3.2**
SHL				pmax	pmax		
	comp=Z,17nm,0.8s						
GYA	**Guiyang**	**30.03**	**12**	*e*P	**P**	**21 19 46.8**	**+2.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ODAN	**Odare**	**31.99**	**339**	*e*P	P	21 20 08.4	+6.4
	comp=Z,23nm,0.8s						
RAMN	**Ramite**	**32.36**	**338**	*e*P	P	21 20 12.3	+7.0
	comp=Z,22nm,0.9s						
JIRN	**Jiri**	**33.16**	**338**	*e*P	P	21 20 19.1	+6.7
PKIN	**Phulchoki**	**33.39**	**336**	*e*P	P	21 20 21.1	+6.8
	comp=Z,38nm,1.6s						
GUN	**Gumba**	**33.50**	**337**	*e*P	P	21 20 22.3	+7.0
	comp=Z,21nm,0.7s						
LSA	**Lhasa**	**33.53**	**346**	*e*P	**P**	**21 20 13.9**	**-1.8**
	comp=Z,7.0nm,0.9s						
LSA	**Lhasa**	**33.53**	**346**	*e*P	**P**	**21 20 13.9**	**-1.8**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
DMN	**Daman**	**33.54**	**336**	*e*P	P	21 20 23.1	+7.6
	comp=Z,76nm,2.0s						
KKN	**Kakani**	**33.63**	**336**	*e*P	P	21 20 24.1	+7.8
	comp=Z,22nm,1.1s						
CD2	**Chengdu**	**33.93**	**6**	P	**P**	**21 20 19.5**	**+0.8**
CD2				pmax	pmax		
	comp=Z,13nm,0.5s						
GKN	**Gorkha**	**34.08**	**336**	*e*P	P	21 20 28.0	+7.9
	comp=Z,10.0nm,0.7s						
KOLN	**Koldanda**	**34.31**	**334**	*e*P	P	21 20 30.9	+8.7
	comp=Z,20nm,0.9s						
ENH	**Enshi**	**34.36**	**15**	*e*P	**P**	**21 20 21.4**	**-1.0**
	comp=Z,13nm,0.7s						
H01W3	**Cape Leeuwin H**	**34.44**	**159**	T	T	21 56 44.2	
	baz=336,slow=76,SNR=74						
H01W2	**Cape Leeuwin H**	**34.45**	**159**	T	T	21 56 46.3	
	baz=336,slow=76,SNR=54						
H01W1	**Cape Leeuwin H**	**34.45**	**159**	T	T	21 56 44.3	
	baz=336,slow=76,SNR=56						
DANN	**Dangsing**	**34.75**	**335**	*e*P	P	21 20 33.9	+7.8
	comp=Z,48nm,1.3s						
WR1	**Warramunga Arr**	**37.72**	**119**	*e*P	**P**	**21 20 50.9**	**-0.5**
	comp=Z,12nm,1.3s						
WRA	**Warramunga Arr**	**37.72**	**119**	P	**P**	**21 20 50.9**	**-0.5**
	comp=Z,3.4nm,0.8s,baz=310,slow=8.9,SNR=17						
WRA	**Warramunga Arr**	**37.72**	**119**	*e*P	**P**	**21 20 53.2**	**+1.8**
WRA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WRAB	**Tennant Creek**	**37.73**	**119⇑**	*e*P	**P**	**21 20 50.6**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.9s						
WB2	**Warramunga Arr**	**37.73**	**119**	*e*P	**P**	**21 20 50.6**	**-0.9**
XAN	**Xi'an**	**37.83**	**12**	P	**P**	**21 20 51.3**	**-0.8**
XAN				pmax	pmax		
	comp=Z,17nm,0.9s						
XAN				pmax	pmax		
	comp=Z,400nm,5.8s						
ASAR	**Alice Springs**	**38.88**	**125**	P	**P**	**21 21 01.6**	**+0.4**
	comp=Z,4.9nm,0.8s,baz=297,slow=8.1,SNR=26						
AS31	**Alice Springs**	**38.89**	**125**	*e*P	**P**	**21 21 00.9**	**-0.3**
	comp=Z,1.6nm,0.8s						
AS01	**Alice Springs**	**38.92**	**125**	*e*P	**P**	**21 21 01.4**	**0.0**
LZH	**Lanzhou**	**39.06**	**5**	*e*P	**P**	**21 21 03.0**	**+0.4**
LZH				pP	pP	21 21 09.8	+0.7
LZH				sP	sP	21 21 12.8	+1.1
LZH				*e*PP	**PnPn**	**21 22 37.3**	**+2.4**
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
LZH				pmax	pmax		
	comp=Z,90nm,5.0s						
LZH				LR	LR		
	comp=Z,380nm,13.2s						
LZH				LR	LR		
	comp=Z,390nm,13.5s						
LZH				LR	LR		
	comp=Z,470nm,16.8s						
NJ2	**Nanjing**	**39.29**	**26**	*e*P	**P**	**21 21 04.6**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
GTA	**Gaotai**	**42.19**	**0**	P	**P**	**21 21 28.8**	**+0.5**
GTA				pP	pP	21 21 36.1	+1.2
GTA				sP	sP	21 21 39.3	+1.8
GTA				pmax	pmax		
	comp=Z,6.0nm,1.8s						
NIL	**Nilore**	**44.20**	**328**	*e*P	**P**	**21 21 43.6**	**-0.9**
	comp=Z,12nm,0.8s						
NIL	**Nilore**	**44.20**	**328**	*e*P	**P**	**21 21 43.6**	**-0.9**
NIL				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC	**Hu-ho-hao-te**	**44.95**	**13**	*e*P	**P**	**21 21 52.4**	**+1.9**
HHC				pmax	pmax		
	comp=Z,26nm,0.7s						
HHC				pmax	pmax		
	comp=Z,800nm,4.2s						
BJT	**Baijiatuan**	**45.38**	**18**	*e*P	**P**	**21 21 50.7**	**-3.1**
	comp=Z,22nm,1.2s						
BJT	**Baijiatuau**	**45.38**	**18**	*e*P	**P**	**21 21 50.7**	**-3.1**
BJT				pmax	pmax		
	comp=Z,23nm,1.2s						
HTT	**Hallett**	**47.48**	**134**	P	**P**	**21 22 10.7**	**+0.1**
	baz=48						
KSH	**Kashi**	**47.62**	**335**	P	P	21 22 18.5	+7.0
KSH				pmax	pmax		
	comp=Z,300nm,4.9s						
WMQ	**Urumqi**	**47.84**	**348**	P	**P**	**21 22 15.0**	**+1.8**
WMQ				pP	pP	21 22 19.5	-0.3
WMQ				sP	sP	21 22 23.3	+0.9
WMQ				pmax	pmax		
	comp=Z,220nm,3.7s						
WMQ				LR	LR		
	comp=Z,2μm,14.1s						
WMQ				LR	LR		
	comp=Z,2μm,13.3s						
WMQ				LR	LR		
	comp=Z,1μm,15.5s						
KS15	**Wonju Array Si**	**47.97**	**30**	*e*P	**P**	**21 22 14.2**	**+0.1**
KSAR	**Wonju Array Be**	**47.97**	**30**	P	**P**	**21 22 14.2**	**+0.1**
KSAR	**Wonju Array Be**	**47.97**	**30**	P	**P**	**21 22 14.2**	**+0.1**
KSRS	**Korea Array**	**47.99**	**30**	P	**P**	**21 22 14.2**	**-0.1**
	comp=Z,5.6nm,1.1s,baz=220,slow=8.5,SNR=11						
KSRS				LR	LR	21 42 49.1	
	comp=Z,125nm,18.2s,baz=175,slow=37						
KS01	**Wonju Array Si**	**48.00**	**30**	*e*P	**P**	**21 22 13.1**	**-1.2**
QLP	**Quilpie**	**48.62**	**123**	P	**P**	**21 22 18.5**	**-0.9**
	baz=49						
STKA	**Stephens Creek**	**48.69**	**131**	P	**P**	**21 22 21.0**	**+1.1**
	comp=Z,8.9nm,1.0s,baz=319,slow=7.7,SNR=6.7						
STKA	**Stephens Creek**	**48.69**	**131**	P	**P**	**21 22 19.2**	**-0.7**
	baz=49,SNR=5.5						
STKA	**Stephens Creek**	**48.69**	**131**	*e*P	**P**	**21 22 21.0**	**+1.1**
	comp=Z,16nm,2.0s						
STKA	**Stephens Creek**	**48.69**	**131**	*e*P	**P**	**21 22 21.3**	**+1.4**
STKA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
NRN	**Naryn**	**49.22**	**336**	*e*P	**P**	**21 22 24.8**	**+0.7**
	comp=Z,24nm,1.1s						
NRN	**Naryn**	**49.22**	**336**	*e*P	**P**	**21 22 24.8**	**+0.7**
NRN				pmax	pmax		
	comp=Z,24nm,1.1s						
PRZ	**Przheval'sk**	**49.22**	**339**	*e*P	**P**	**21 22 25.6**	**+1.7**
	comp=Z,23nm,0.9s						
PRZ	**Przheval'sk**	**49.22**	**339**	*e*P	**P**	**21 22 25.7**	**+1.7**
PRZ				pmax	pmax		
	comp=Z,23nm,0.9s						
PDGK	**Podgornoye**	**49.59**	**341**	P	**P**	**21 22 28.0**	**+1.3**
PDGK				pmax	pmax		
	comp=Z,33nm,0.9s						
AAK	**Ala-Archa**	**50.84**	**336**	*e*P	**P**	**21 22 35.5**	**-0.7**
	comp=Z,16nm,1.5s						
AAK	**Ala-Archa**	**50.84**	**336**	*e*P	**P**	**21 22 35.5**	**-0.7**
AAK				pmax	pmax		
	comp=Z,16nm,1.5s						
SONA0	**Songino Array**	**50.95**	**6**	*e*P	**P**	**21 22 37.9**	**+1.0**
SONA0				*e*PcP	**PcP**	**21 23 53.5**	**+0.5**
SONM	**Songino Array**	**50.95**	**6**	P	**P**	**21 22 37.9**	**+1.0**
	comp=Z,7.7nm,0.9s,baz=185,slow=8.1,SNR=35						
SONM				PcP	**PcP**	**21 23 53.5**	**+0.5**
	comp=Z,1.8nm,0.8s,baz=184,slow=3.9,SNR=2.5						
SONA1	**Songino Array**	**50.96**	**6**	*e*P	**P**	**21 22 37.1**	**+0.2**
ULN	**Ulaanbaatar**	**51.05**	**6**	*e*P	**P**	**21 22 38.3**	**+0.6**
	comp=Z,8.4nm,1.0s						
ULN	**Ulaanbaatar**	**51.05**	**6‖**	*i*P	**P**	**21 22 38.5**	**+0.8**
ULN				pmax	pmax		
	comp=Z,11nm,1.2s						
MNAS	**Manas**	**51.55**	**334**	P	**P**	**21 22 42.6**	**+1.1**
MNAS				pmax	pmax		
	comp=Z,15nm,1.2s						
MK01	**Makanchi Array**	**51.89**	**345**	*e*P	**P**	**21 22 44.2**	**+0.4**
MK01				*e*pP	**pP**	**21 22 49.9**	**-0.6**
MK32	**Makanchi Array**	**51.91**	**345**	*e*P	**P**	**21 22 44.5**	**+0.5**
MKAR	**Makanchi Array**	**51.91**	**345**	P	**P**	**21 22 44.5**	**+0.5**
	comp=Z,6.4nm,0.8s,baz=151,slow=8.6,SNR=52						
MAKZ	**Makanchi**	**52.01**	**345**	*e*P	**P**	**21 22 45.4**	**+0.7**
	comp=Z,16nm,1.0s						
MAKZ	**Makanchi**	**52.01**	**345**	*e*P	**P**	**21 22 45.4**	**+0.7**
MAKZ				pmax	pmax		
	comp=Z,16nm,1.0s						
MAJO	**Matsushiro**	**53.20**	**39**	*e*P	**P**	**21 22 52.1**	**-1.6**
MAJO	**Matsushiro**	**53.20**	**39**	*e*P	**P**	**21 22 52.1**	**-1.6**
MJAR	**Matsushiro Arr**	**53.20**	**39**	P	**P**	**21 22 52.1**	**-1.6**
	comp=Z,4.2nm,1.1s,baz=237,slow=7.1,SNR=4.1						
ZAK	**Zakamensk**	**53.25**	**3**	*e*P	**P**	**21 22 51.8**	**-2.1**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.8s						
DGZ	**Jazzator, Alta**	**53.55**	**350**	*i* P	**P**	**21 22 57.4**	**+1.2**
DGZ				*i* XP	**sP**	**21 23 06.0**	**+0.5**
DGZ				pmax	pmax		
	comp=Z,11nm,0.9s						
HIA	**Hailar**	**54.86**	**16⇑**	*i*P	**P**	**21 23 06.0**	**+0.4**
HIA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
USRK	**Ussuriysk Ar.**	**55.14**	**28**	P	**P**	**21 23 08.0**	**+0.3**
	comp=Z,6.3nm,0.6s,baz=224,slow=6.1,SNR=16						
GEYT	**Alibeck**	**56.05**	**321**	P	**P**	**21 23 14.3**	**-0.1**
	comp=Z,109nm,0.8s,baz=139,slow=6.8,SNR=1.4						
GYA0B	**ALIBECK ARRAY**	**56.05**	**321**	*e*P	**P**	**21 23 14.5**	**+0.1**
	comp=Z,4.9nm,0.8s						
OTUK	**Ortayu**	**56.35**	**338**	P	**P**	**21 23 16.6**	**+0.2**
OTUK				pmax	pmax		
	comp=Z,20nm,1.0s						
KURBB	**Kurchatov Arra**	**56.42**	**344**	P	**P**	**21 23 17.0**	**+0.2**
	comp=Z,2.9nm,0.9s,baz=162,slow=6.8,SNR=21						
KURK	**Kurchatov**	**56.48**	**344**	*e*P	**P**	**21 23 17.2**	**+0.1**
	comp=Z,12nm,0.9s						
KURK	**Kurchatov**	**56.48**	**344**	*d* iP	**P**	**21 23 17.8**	**+0.6**
KURK				pmax	pmax		
	comp=Z,44nm,1.0s						
ZAA0	**Zalesovo Array**	**58.09**	**350**	*e*P	**P**	**21 23 28.4**	**0.0**
	comp=Z,33nm,0.8s						
ZALV	**Zalesovo Beam**	**58.09**	**350**	P	**P**	**21 23 28.7**	**+0.2**
	comp=Z,18nm,0.8s,baz=184,slow=5.4,SNR=84						
ZALV	**Zalesovo Beam**	**58.09**	**350**	*e*P	**P**	**21 23 28.3**	**-0.2**
ZALV				*e*pP	**pP**	**21 23 34.2**	**-1.0**
ZALV	**Zalesovo Beam**	**58.09**	**350**	*e*P	**P**	**21 23 28.3**	**-0.2**
ZALV				*e**PP	**pP**	**21 23 34.3**	**-1.0**
ZAA1	**Zalesovo Array**	**58.09**	**350**	*e*P	**P**	**21 23 28.7**	**+0.2**
KLR	**Kul'dur**	**58.93**	**24‖**	*i*P	**P**	**21 23 34.8**	**+0.3**
NVS	**Novosibirsk**	**59.23**	**349**	*e*P	**P**	**21 23 36.0**	**-0.4**
NVS				pmax	pmax		
	comp=N,9.0nm,1.1s						
NVS				pmax	pmax		
	comp=E,6.0nm,1.1s						
NVS				pmax	pmax		
	comp=Z,12nm,1.1s						
ZEA	**Zeya**	**61.02**	**18**	*e*P	**P**	**21 23 48.9**	**+0.2**
ZEA				pmax	pmax		
	comp=Z,25nm,1.2s						
BVAR	**Borovoye Array**	**61.02**	**340**	P	**P**	**21 23 48.0**	**-0.7**
	comp=Z,3.0nm,0.7s,baz=116,slow=6.8,SNR=17						
ABKAR	**Akbulak array**	**62.39**	**332**	*e*P	**P**	**21 23 57.4**	**-0.6**
YSS	**Yuzh-Sakhalins**	**62.45**	**32**	*e*P	**P**	**21 23 58.6**	**+0.1**
YSS				pmax	pmax		
	comp=Z,20nm,1.6s						
AKTO	**Aktyubinsk**	**64.10**	**332**	P	**P**	**21 24 08.4**	**-1.0**
	comp=Z,2.9nm,0.9s,baz=129,slow=6.8,SNR=5.0						
KUR	**Kuril'sk**	**64.25**	**36‖**	*e*P	**P**	**21 24 11.2**	**+0.8**
AKT	**Akhty**	**64.69**	**319**	*e*P	**P**	**21 24 12.9**	**-0.6**
AKT				*e*		21 24 45.8	
AKT				pmax	pmax		
	comp=Z,11nm,1.0s						
SVE	**Sverdlovsk**	**67.50**	**338**	*e*P	**P**	**21 24 31.4**	**+0.3**
SVE				pmax	pmax		
	comp=Z,17nm,1.0s						
ZEI	**Tsey**	**67.81**	**319**	*e*P	P	21 24 41.6	+7.9
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ARU	**Arti**	**68.01**	**337**	P	**P**	**21 24 33.8**	**-0.6**
	comp=Z,1.0nm,0.4s,baz=71,slow=0.5,SNR=5.2						
ARU	**Arti**	**68.01**	**337**	*e*P	**P**	**21 24 33.8**	**-0.6**
	comp=Z,5.2nm,0.8s						
ARU	**Arti**	**68.01**	**337**	*d* iP	**P**	**21 24 34.1**	**-0.3**
ARU						21 27 00.7	
ARU				S	**S**	**21 33 34.5**	**+2.1**
ARU				pmax	pmax		
	comp=Z,7.0nm,1.2s						
NCK	**Nalchik**	**68.33**	**319‖**	*i*P	**P**	**21 24 37.3**	**+0.6**
NCK				*i* *SP	**sP**	**21 24 46.0**	**-0.1**
NCK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
YAK	**Yakutsk**	**68.76**	**15⇑**	*i*P	**P**	**21 24 38.9**	**0.0**
YAK				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KBZ	**Khabaz**	**68.89**	**319**	P	**P**	**21 24 40.0**	**-0.1**
	comp=Z,2.7nm,0.9s,baz=137,slow=6.5,SNR=6.2						
KIV	**Kislovodsk**	**69.13**	**320**	*e*P	**P**	**21 24 44.5**	**+2.8**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MMAI	**Mount Meron Ar**	**70.42**	**306**	P	**P**	**21 24 51.1**	**+1.2**
	comp=Z,1.1nm,0.8s,baz=98,slow=10,SNR=3.2						
SKR	**Severo-Kuril's**	**71.83**	**34‖**	*e*P	**P**	**21 24 58.1**	**+0.2**
NRIK	**Noril'sk**	**72.66**	**355**	P	**P**	**21 25 02.1**	**-0.4**
	comp=Z,2.7nm,0.5s,baz=194,slow=4.9,SNR=5.2						
NRIK	**Noril'sk**	**72.66**	**355**	*e*P	**P**	**21 25 02.8**	**+0.2**
NRIK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BR101	**Keskin Array S**	**73.80**	**313**	*e*P	**P**	**21 25 09.2**	**-0.9**
BR131	**Keskin Array S**	**73.80**	**313**	*e*P	**P**	**21 25 09.0**	**-1.1**
BRTR	**Keskin Array B**	**73.80**	**313**	P	**P**	**21 25 09.2**	**-0.9**
	comp=Z,1.2nm,0.7s,baz=131,slow=5.9,SNR=8.9						
BRTR	**Keskin Array B**	**73.80**	**313**	*e*P	**P**	**21 25 09.7**	**-0.4**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
VORD	**Divnogorie**	**74.26**	**325**	*e*P	**P**	**21 25 11.1**	**-1.2**
VORD				pmax	pmax		
	comp=Z,6.0nm,1.1s						
VSR	**Storozhevoye**	**74.44**	**325**	*e*P	**P**	**21 25 12.4**	**-1.0**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PRGR	**Permogore**	**76.47**	**337**	*e*P	**P**	**21 25 24.7**	**-0.1**
PRGR				*e**PP	**pP**	**21 25 32.6**	**+0.8**
PRGR				pmax	pmax		
	comp=Z,17nm,0.5s						
SEY	**Seymchan**	**76.63**	**22⇑**	*i*P	**P**	**21 25 26.6**	**+0.9**
SYO	**Syowa Base**	**76.86**	**199⇑**	*e*P	**P**	**21 25 28.0**	**+1.1**
TIXI	**Tiksi**	**76.87**	**9**	P	**P**	**21 25 25.9**	**-1.0**
	baz=214,slow=4.7,SNR=5.8						
TIXI	**Tiksi**	**76.87**	**9**	*e*P	**P**	**21 25 25.2**	**-1.7**
	comp=Z,8.8nm,1.2s						
TIXI	**Tiksi**	**76.87**	**9‖**	*e*P	**P**	**21 25 26.7**	**-0.2**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
OBN	**Obninsk**	**77.50**	**328**	*e*P	**P**	**21 25 30.8**	**0.0**
	comp=Z,16nm,0.9s						
OBN	**Obninsk**	**77.50**	**328**	*e*P	**P**	**21 25 31.7**	**+1.0**
OBN				pmax	pmax		
	comp=Z,80nm,2.5s						
AKASG	**Malin Array Be**	**80.11**	**323**	P	**P**	**21 25 44.3**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=98,slow=4.1,SNR=2.9						
AKBB	**Malin Array Si**	**80.11**	**323**	*e*P	**P**	**21 25 44.3**	**-0.9**
	comp=Z,10nm,1.8s						
AKBB	**Malin Array Si**	**80.11**	**323**	*e*P	**P**	**21 25 44.3**	**-0.9**
AKBB				pmax	pmax		
	comp=Z,10.0nm,1.8s						
MLR	**Muntele Rosu**	**80.84**	**317**	P	**P**	**21 25 48.4**	**-1.0**
	comp=Z,0.7nm,0.9s,baz=168,slow=6.4,SNR=4.5						
BUR04	**Bucovina Ar. S**	**81.84**	**319**	*e*P	**P**	**21 25 55.6**	**+1.0**
BUR08	**Bucovina Ar. S**	**81.85**	**319**	*e*P	**P**	**21 25 55.6**	**+0.9**
BILL	**Bilibino**	**84.17**	**20**	*e*P	**P**	**21 26 08.3**	**+2.2**
BILL				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SUW	**Suwalki**	**84.54**	**325**	*e*P	**P**	**21 26 08.7**	**+0.4**
	comp=Z,24nm,1.0s						
SUW	**Suwalki**	**84.54**	**325**	*e*P	**P**	**21 26 08.7**	**+0.4**
SUW				pmax	pmax		
	comp=Z,24nm,1.0s						
FIA0	**FINESS Array S**	**84.87**	**332**	*e*P	**P**	**21 26 10.7**	**+0.9**
FIA0	**FINESS Array S**	**84.87**	**332**	*e*P	**P**	**21 26 10.7**	**+0.9**
FINES	**FINESS Array B**	**84.87**	**332**	P	**P**	**21 26 10.7**	**+0.9**
	comp=Z,1.0nm,0.5s,baz=114,slow=4.8,SNR=8.3						
NVL	**N'lazarevskaya**	**86.51**	**199**	*e*P	P	21 26 23.5	+5.7
NVL				*e*S	**S**	**21 36 50.1**	**-2.7**
NVL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GEA0	**GERESS Array S**	**89.62**	**319**	*e*P	**P**	**21 26 33.5**	**+0

CLDR	**Caldiran**	**0.83**	**52**	*i* P	**Pg**	**21 17 25.1**	**-1.6**
CLDR				*i* S	**Sg**	**21 17 37.5**	**-0.1**
CLDR	**Caldiran**	**0.83**	**52**	P	**Pg**	**21 17 25.1**	**-1.6**
CLDR	**Caldiran**	**0.83**	**52**	*e*Pg	**Pg**	**21 17 25.9**	**-0.8**
CLDR				S	**Sg**	**21 17 37.5**	**-0.1**
AGRB	**Hanur-Agry**	**0.94**	**356**	PG	**Pg**	**21 17 28.5**	**-0.4**
AGRB	**Hanur-Agry**	**0.94**	**356**	*e*Pg	**Pg**	**21 17 28.5**	**-0.4**
SRTM	**Siirt_Merkez**	**1.11**	**235**	*i* P	**Pg**	**21 17 32.0**	**-0.1**
SRTM				*i* S	**Sn**	**21 17 48.5**	**+1.1**
SRTM	**Siirt_Merkez**	**1.11**	**235**	P	**Pg**	**21 17 32.0**	**-0.1**
SRTM				S	**Sn**	**21 17 48.5**	**+1.1**
EATA	**Eleskirt**	**1.31**	**340**	*i* P	**Pn**	**21 17 34.7**	**-0.3**
EATA				*i* S	**Sn**	**21 17 54.4**	**+1.9**
EATA	**Eleskirt**	**1.31**	**340**	P	**Pn**	**21 17 34.7**	**-0.3**
EATA				S	**Sn**	**21 17 54.4**	**+1.9**
SVAN	**Silvan-Diyarba**	**1.56**	**253**	PN	**Pn**	**21 17 38.6**	**+0.5**
SVAN	**Silvan-Diyarba**	**1.56**	**253**	*e*Pn	**Pn**	**21 17 38.6**	**+0.5**
BTMN	**Batman**	**1.61**	**243**	*i* P	**Pb**	**21 17 40.4**	**+0.1**
BTMN				*i* S	**Sg**	**21 18 01.9**	**-0.4**
BTMN	**Batman**	**1.61**	**243**	P	**Pb**	**21 17 40.3**	**+0.1**
BTMN				S	**Sg**	**21 18 01.9**	**-0.4**
BNGB	**Bing¯¶l**	**1.91**	**282**	PN	**Pn**	**21 17 43.3**	**+0.3**
GNI	**Garni**	**1.99**	**40**	PN	**Pn**	**21 17 44.5**	**+0.3**
GNI	**Garni**	**1.99**	**40**	*e*Pn	**Pn**	**21 17 44.5**	**+0.3**
BINT	**Bingol**	**2.04**	**278**	*e*Pn	**Pn**	**21 17 43.3**	**-1.6**

IDC ***19*** *21:48:26.8±1.8, 44.°69N×11.°02E, h0km, mb3.5/3, mb1 3.5/4, mb1mx3.2/57, mbtmp3.5/4, ML3.2/1, Error ellipse: s-maj=57.7km s-min=17.8km az=107.0*
ISCJB ***19*** *21:48:28.8±0.2, 44.°98N±0.°01×11.°04E±0.°02, h14km±1km, mb3.5/3, Error ellipse: s-maj=2.1km s-min=1.6km az=142.5*
ROM ***19*** *21:48:28.7±0.0, 44.°881N±0.°001×11.°024E±0.°001, h3km, ML3.5/28*
LDG ***19*** *21:48:29.3±0.1, 44.°89N×11.°16E, h2km, Ml3.4/23, Error ellipse: s-maj=3.1km s-min=2.4km az=71.0*
NEIC ***19*** *21:48:29.0±0.0, 44.°90N×11.°03E, h7km, ML3.5(ROM), After ROM.*
NEIC Felt in the Bologna-Parma-Verona area.
CSEM ***19*** *21:48:29.5±0.1, 44.°93N×11.°05E, h10km, ML3.4/33, Error ellipse: s-maj=2.2km s-min=1.8km az=154.0*
PRU ***19*** *21:48:33.2, 44.°96N×11.°18E, h26km*
STR ***19*** *21:48:35.2±0.7, 45.°N±3.°×1.°1E±.°, h10km, M3.4/6, MLv3.4/6*
ISC 19 21:48:29.9±0.7,**44.°90N**±0.°01×**11.°04E**±0.°01,**h17**km±3km,
n280,σ1°**36**/417,**mb3.4**/3,**16C-18D**,**Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NDIM	**Novi di Modena**	**0.10**	**261**	*e*P	**Pg**	**21 48 31.4**	**-2.1**
NDIM				*e*S	**Sg**	**21 48 34.3**	**-1.6**
NDIM				AML	AML		
	comp=E,43300µm,0.4s						
NDIM				AML	AML		
	comp=N,41150µm,0.3s						
NDIM				AML	AML		
	comp=E,44800µm,0.4s						
NDIM				AML	AML		
	comp=N,40150µm,0.3s						
NDIM				AML	AML		
	comp=N,41150µm,0.3s						
NDIM				AML	AML		
	comp=N,40150µm,0.3s						
NDIM				AML	AML		
	comp=E,43300µm,0.4s						
NDIM				AML	AML		
	comp=E,44800µm,0.4s						
T0802	**SanFelice sul**	**0.10**	**106**	*e*P	**Pg**	**21 48 32.4**	**-1.1**
T0802				*e*S	**Sg**	**21 48 36.1**	**+0.2**
T0802	**SanFelice sul**	**0.10**	**106**	*e*P	**Pg**	**21 48 32.4**	**-1.1**
T0802				*e*S	**Sg**	**21 48 36.1**	**+0.2**
RAVA	**Ravarino**	**0.16**	**160**	*e*Pg	**Pg**	**21 48 31.1**	**-3.0**
RAVA	**Ravarino**	**0.16**	**160**	*e*Pg	**Pg**	**21 48 31.1**	**-3.0**
RAVA	**Ravarino**	**0.16**	**160**	⇓*i* P	**Pg**	**21 48 32.8**	**-1.3**
RAVA				*i* S	**Sg**	**21 48 36.0**	**-1.0**
RAVA	**Ravarino**	**0.16**	**160**	*i* P	**Pg**	**21 48 32.8**	**-1.3**
RAVA				*i* S	**Sg**	**21 48 37.0**	**0.0**
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
T0800	**Massa Finalese**	**0.16**	**110**	⇓*e*P	**Pg**	**21 48 32.9**	**-1.2**
T0800				*e*S	**Sg**	**21 48 37.3**	**+0.3**
T0800	**Massa Finalese**	**0.16**	**110**	*e*P	**Pg**	**21 48 32.9**	**-1.2**
T0800				*e*S	**Sg**	**21 48 37.3**	**+0.3**
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0825	**Gonzaga (MN)**	**0.16**	**297**	⇑*e*P	**Pg**	**21 48 33.7**	**-0.5**
T0825	**Gonzaga (MN)**	**0.16**	**297**	*e*P	**Pg**	**21 48 33.7**	**-0.5**
T0825				*e*S	**Sg**	**21 48 38.8**	**+1.7**
T0825				AML	AML		
	comp=E,95150µm,1.2s						
T0825				AML	AML		
	comp=N,82850µm,0.4s						
T0825				AML	AML		
	comp=E,95100µm,1.2s						
T0825				AML	AML		
	comp=N,82850µm,0.4s						
T0825				AML	AML		
	comp=E,95100µm,1.2s						
T0825				AML	AML		
	comp=N,82850µm,0.4s						
T0825				AML	AML		
	comp=E,95100µm,1.2s						
T0825				AML	AML		
	comp=N,82850µm,0.4s						
SBPO	**S.Benedetto Po**	**0.17**	**330**	⇑*e*P	**Pg**	**21 48 34.1**	**-0.3**
SBPO	**S.Benedetto Po**	**0.17**	**330**	*e*P	**Pg**	**21 48 34.1**	**-0.3**
SBPO				AML	AML		
	comp=E,24750µm,0.5s						
SBPO				AML	AML		
SBPO				AML	AML		
	comp=E,24750µm,0.5s						
SBPO				AML	AML		
SBPO				AML	AML		
	comp=E,24750µm,0.5s						
SBPO				AML	AML		
T0826	**Rio Saliceto (**	**0.18**	**249**	*e*P	**Pg**	**21 48 32.9**	**-1.5**
T0826				*e*S	**Sg**	**21 48 37.1**	**-0.3**
T0826	**Rio Saliceto (**	**0.18**	**249**	*e*P	**Pg**	**21 48 32.9**	**-1.5**
T0826				*e*S	**Sg**	**21 48 37.1**	**-0.3**
T0805	**Bondeno (FE)**	**0.20**	**85**	⇓*e*P	**Pg**	**21 48 33.8**	**-1.0**
T0805				*e*S	**Sg**	**21 48 38.1**	**+0.1**
T0805	**Bondeno (FE)**	**0.20**	**85**	*e*P	**Pg**	**21 48 33.8**	**-1.0**
T0805				*e*S	**Sg**	**21 48 38.1**	**+0.1**
SERM	**Sermide**	**0.21**	**59**	*e*P	**Pg**	**21 48 34.4**	**-0.5**
SERM	**Sermide**	**0.21**	**59**	*e*P	**Pg**	**21 48 34.4**	**-0.5**
SERM				*e*S	**Sg**	**21 48 40.6**	**+2.3**
SERM				AML	AML		
	comp=E,12950µm,1.0s						
SERM				AML	AML		
	comp=N,10165µm,0.4s						
SERM				AML	AML		
	comp=E,16050µm,0.6s						
SERM				AML	AML		
	comp=N,18050µm,0.4s						
SERM				AML	AML		
	comp=E,12900µm,1.0s						
SERM				AML	AML		
	comp=N,10140µm,0.4s						
SERM				AML	AML		
	comp=E,16050µm,0.6s						
SERM				AML	AML		
	comp=N,18050µm,0.4s						
SERM				AML	AML		
	comp=E,12950µm,1.0s						
SERM				AML	AML		
	comp=N,10175µm,0.4s						
SERM				AML	AML		
	comp=E,16050µm,0.6s						
SERM				AML	AML		
	comp=N,18050µm,0.4s						
SERM				AML	AML		
	comp=E,16050µm,0.6s						
SERM				AML	AML		
	comp=N,18050µm,0.4s						
SERM				AML	AML		
	comp=N,10175µm,0.4s						
T0822	**Casumaru (Bond**	**0.23**	**108**	⇓*e*P	**Pg**	**21 48 34.2**	**-1.0**
T0822				*e*S	**Sg**	**21 48 39.6**	**+0.8**
T0822	**Casumaru (Bond**	**0.23**	**108**	*e*P	**Pg**	**21 48 34.2**	**-1.0**
T0822				*e*S	**Sg**	**21 48 39.6**	**+0.8**
T0822				AML	AML		
	comp=E,42350µm,0.6s						
T0822				AML	AML		
	comp=N,50150µm,0.3s						
T0822				AML	AML		
	comp=E,42350µm,0.6s						
T0822				AML	AML		
	comp=N,50100µm,0.3s						
T0822				AML	AML		
	comp=E,42350µm,0.6s						
T0822				AML	AML		
	comp=N,50100µm,0.3s						
NOVE	**Novellara**	**0.26**	**246**	⇓*e*P	**Pg**	**21 48 34.3**	**-1.3**
NOVE				*e*S	**Sg**	**21 48 39.8**	**+0.3**
NOVE	**Novellara**	**0.26**	**246**	*e*P	**Pg**	**21 48 34.3**	**-1.3**
NOVE				*e*S	**Sg**	**21 48 39.8**	**+0.3**
NOVE				AML	AML		
	comp=E,10135µm,0.9s						
NOVE				AML	AML		
	comp=N,12050µm,0.9s						
NOVE				AML	AML		
	comp=E,10130µm,0.9s						
NOVE				AML	AML		
	comp=N,12100µm,0.9s						
NOVE				AML	AML		
	comp=N,12100µm,0.9s						
NOVE				AML	AML		
	comp=E,10130µm,0.9s						
T0803	**Dosso, Cento (**	**0.26**	**122**	⇑*e*P	**Pg**	**21 48 34.7**	**-1.0**
T0803				*e*S	**Sg**	**21 48 39.0**	**-0.6**
T0803	**Dosso, Cento (**	**0.26**	**122**	*e*P	**Pg**	**21 48 34.7**	**-1.0**
T0803				*e*S	**Sb**	**21 48 40.0**	**-0.2**
T0803				AML	AML		
	comp=E,31150µm,0.6s						
T0803				AML	AML		
	comp=N,46350µm,0.5s						
T0803				AML	AML		
	comp=E,31150µm,0.6s						
T0803				AML	AML		
	comp=N,46350µm,0.5s						
T0803				AML	AML		
	comp=N,46350µm,0.5s						
T0803				AML	AML		
	comp=E,31150µm,0.6s						
MODE	**Modena**	**0.28**	**194**	⇓*e*P	**Pg**	**21 48 35.3**	**-0.8**
MODE				*e*S	**Sg**	**21 48 39.7**	**-0.5**
MODE	**Modena**	**0.28**	**194**	*e*P	**Pg**	**21 48 35.3**	**-0.8**
MODE				*e*S	**Sg**	**21 48 39.7**	**-0.5**
MODE				AML	AML		
	comp=E,64500µm,0.4s						
MODE				AML	AML		
	comp=N,49700µm,0.7s						
MODE				AML	AML		
	comp=E,64450µm,0.4s						
MODE				AML	AML		
	comp=N,49700µm,0.7s						
MODE				AML	AML		
	comp=E,64450µm,0.4s						
MODE				AML	AML		
	comp=N,49700µm,0.7s						
T0821	**Loc. Casaglia**	**0.35**	**90**	*e*P	**Pb**	**21 48 38.2**	**+0.5**
T0821	**Loc. Casaglia**	**0.35**	**90**	*e*P	**Pb**	**21 48 38.2**	**+0.5**
T0820	**Chiesuol del F**	**0.39**	**106**	AML	AML		
	comp=N,8060µm,0.9s						
T0820				AML	AML		
	comp=E,8590µm,1.0s						
T0820				AML	AML		
	comp=E,8685µm,0.8s						
T0820				AML	AML		
	comp=N,7960µm,0.9s						
FIU	**Minerbio Fiu**	**0.41**	**129**	*e*Pg	**Pg**	**21 48 37.8**	**-0.6**
FIU	**Minerbio Fiu**	**0.41**	**129**	*e*P	**Pg**	**21 48 37.8**	**-0.6**
FIU	**Minerbio Fiu**	**0.41**	**129**	*e*P	**Pg**	**21 48 37.8**	**-0.6**
FIU				AML	AML		
	comp=E,6695µm,0.3s						
FIU				AML	AML		
	comp=N,7715µm,0.6s						
FIU				AML	AML		
	comp=E,6695µm,0.3s						
FIU				AML	AML		
	comp=N,7710µm,0.6s						
FIU				AML	AML		
	comp=E,6695µm,0.3s						
FIU				AML	AML		
	comp=N,7710µm,0.6s						
ZCCA	**Zocca**	**0.55**	**185**	⇓*e*P	**Pb**	**21 48 41.4**	**+0.2**
ZCCA	**Zocca**	**0.55**	**185**	*e*P	**Pb**	**21 48 41.4**	**+0.2**
ZCCA				*e*S	**Sn**	**21 48 53.8**	**+1.9**
ZCCA				AML	AML		
	comp=E,3025µm,1.6s						
ZCCA				AML	AML		
	comp=N,5065µm,0.7s						
ZCCA				AML	AML		
	comp=E,2870µm,1.6s						
ZCCA				AML	AML		
	comp=N,5455µm,0.7s						
ZCCA				AML	AML		
	comp=E,3025µm,1.6s						
ZCCA				AML	AML		
	comp=N,5065µm,0.7s						
ZCCA				AML	AML		
	comp=E,2870µm,1.6s						
ZCCA				AML	AML		
	comp=N,5455µm,0.7s						
ZCCA				AML	AML		
	comp=E,3025µm,1.6s						
ZCCA				AML	AML		
	comp=E,2870µm,1.6s						
ZCCA				AML	AML		
	comp=N,5455µm,0.7s						
ZCCA				AML	AML		
	comp=N,5065µm,0.7s						
MTRZ	**Monterenzio**	**0.61**	**150**	⇓*e*P	**Pn**	**21 48 43.5**	**-0.3**
MTRZ	**Monterenzio**	**0.61**	**150**	*e*P	**Pn**	**21 48 43.5**	**-0.3**
MTRZ				*e*S	**Sn**	**21 48 53.3**	**+0.1**
CMPO	**Campotto Po**	**0.63**	**120**	*e*P	**Pb**	**21 48 42.6**	**+0.2**
CMPO	**Campotto Po**	**0.63**	**120**	*e*P	**Pb**	**21 48 42.6**	**+0.2**
CMPO				AML	AML		
	comp=E,6090µm,0.5s						
CMPO				AML	AML		
	comp=N,6190µm,0.6s						
CMPO				AML	AML		
	comp=E,6090µm,0.5s						
CMPO				AML	AML		
	comp=N,6190µm,0.6s						
CMPO				AML	AML		
	comp=N,6190µm,0.6s						
CMPO				AML	AML		
	comp=E,6090µm,0.5s						
TEOL	**Teolo**	**0.64**	**44**	⇓*e*Pg	**Pb**	**21 48 42.3**	**-0.3**
TEOL	**Teolo**	**0.64**	**44**	⇓*e*P	**Pb**	**21 48 42.3**	**-0.3**
TEOL				*e*S	**Sb**	**21 48 52.7**	**+1.5**
TEOL	**Teolo**	**0.64**	**44**	*e*P	**Pb**	**21 48 42.3**	**-0.3**
TEOL				*e*S	**Sb**	**21 48 52.7**	**+1.5**
TEOL				AML	AML		
	comp=E,11610µm,0.4s						
TEOL				AML	AML		
	comp=N,8495µm,1.0s						
TEOL				AML	AML		
	comp=E,11610µm,0.4s						
TEOL				AML	AML		
	comp=N,8495µm,1.0s						
TEOL				AML	AML		
	comp=N,8495µm,1.0s						
TEOL				AML	AML		
	comp=E,11610µm,0.4s						
ERBM	**Eremo**	**0.66**	**223**	⇑*e*P	**Pb**	**21 48 43.4**	**+0.4**
ERBM	**Eremo**	**0.66**	**223**	*e*P	**Pb**	**21 48 43.4**	**+0.4**
ERBM				*e*S	**Sn**	**21 48 55.2**	**+0.7**
ERBM				AML	AML		
	comp=E,1515µm,1.1s						
ERBM				AML	AML		
	comp=N,2055µm,1.3s						
ADRI	**Adria, Italy**	**0.70**	**79**	⇑*e*Pg	**Pb**	**21 48 44.2**	**+0.5**
ADRI				*e*Sg	**Sn**	**21 48 55.9**	**+0.4**
ADRI	**Adria, Italy**	**0.70**	**79**	*e*Pg	**Pb**	**21 48 44.2**	**+0.5**
ADRI				*e*Sg	**Sn**	**21 48 55.9**	**+0.4**
FNVD	**Fontana Vidola**	**0.74**	**175**	⇓*e*P	**Pg**	**21 48 43.1**	**-1.3**
FNVD	**Fontana Vidola**	**0.74**	**175**	*e*P	**Pg**	**21 48 43.1**	**-1.3**
ROVR	**Rover¯¤ Verone**	**0.74**	**2**	⇓*e*P	**Pg**	**21 48 44.0**	**-0.5**
ROVR	**Rover¯¤ Verone**	**0.74**	**2**	*e*P	**Pg**	**21 48 44.0**	**-0.5**
ROVR				AML	AML		
	comp=E,2665µm,0.5s						
ROVR				AML	AML		
	comp=N,4225µm,1.4s						
ROVR				AML	AML		
	comp=E,2665µm,0.5s						
ROVR				AML	AML		
	comp=N,4225µm,1.4s						
ROVR				AML	AML		
	comp=E,2665µm,0.5s						
ROVR				AML	AML		
	comp=N,4225µm,1.4s						
MARN	**Marana (Italy)**	**0.74**	**9**	⇓*e*Pg	**Pg**	**21 48 44.0**	**-0.5**
MARN				*e*Sg	**Sn**	**21 48 56.1**	**-0.5**
MARN	**Marana (Italy)**	**0.74**	**9**	*e*Pg	**Pg**	**21 48 44.0**	**-0.5**
MARN				*e*Sg	**Sn**	**21 48 56.1**	**-0.5**
SALO	**Salr**	**0.80**	**333**	⇓*e*P	**Pg**	**21 48 45.3**	**-0.3**
SALO	**Salr**	**0.80**	**333**	*e*P	**Pg**	**21 48 45.3**	**-0.3**
SALO				*e*S	**Sn**	**21 49 00.9**	**+2.8**
SALO				AML	AML		
	comp=E,4795µm,0.6s						
SALO				AML	AML		
	comp=N,5305µm,0.5s						
SALO				AML	AML		
	comp=E,4795µm,0.6s						
SALO				AML	AML		
	comp=N,5305µm,0.5s						
SALO				AML	AML		
	comp=E,4795µm,0.6s						
SALO				AML	AML		
	comp=N,5305µm,0.5s						
VLC	**Villacollemand**	**0.88**	**212**	*e*Pg	**Pg**	**21 48 46.1**	**-0.9**
VLC	**Villacollemand**	**0.88**	**212**	⇓*e*P	**Pg**	**21 48 45.2**	**-1.9**
VLC	**Villacollemand**	**0.88**	**212**	*e*Pg	**Pg**	**21 48 46.1**	**-0.9**
VLC	**Villacollemand**	**0.88**	**212**	*e*P	**Pg**	**21 48 45.1**	**-1.9**
VLC				*e*S	**Sn**	**21 49 00.8**	**+0.9**
POPM	**Popiglio**	**0.88**	**194**	⇓*e*P	**Pg**	**21 48 46.8**	**-0.3**
POPM	**Popiglio**	**0.88**	**194**	*e*P	**Pg**	**21 48 46.8**	**-0.3**
POPM				*e*S	**Sn**	**21 49 04.5**	**+4.6**
BDI	**Bagni Di Lucca**	**0.90**	**201**	⇑*e*P	**Pg**	**21 48 47.4**	**0.0**
BDI	**Bagni Di Lucca**	**0.90**	**201**	*e*P	**Pg**	**21 48 47.4**	**0.0**
BDI				*e*S	**Sn**	**21 49 04.5**	**+4.1**
MAGA	**Magasa**	**0.92**	**342**	⇓*e*P	**Pg**	**21 48 46.7**	**-1.2**
MAGA	**Magasa**	**0.92**	**342**	*e*P	**Pg**	**21 48 46.7**	**-1.2**
MAGA				*e*S	**Sn**	**21 49 02.8**	**+1.7**
MAGA				AML	AML		
	comp=E,11400µm,0.5s						
MAGA				AML	AML		
	comp=N,15400µm,0.5s						
MAGA				AML	AML		
	comp=E,11400µm,0.5s						
MAGA				AML	AML		
	comp=N,15400µm,0.5s						
MAGA				AML	AML		
	comp=N,15400µm,0.5s						
MAGA				AML	AML		
	comp=E,11400µm,0.5s						
CTL8	**Castelleone**	**0.98**	**293**	AML	AML		
	comp=N,478µm,0.9s						
CTL8				AML	AML		
	comp=E,2880µm,0.5s						
CTL8				AML	AML		
	comp=N,2490µm,0.6s						
CTL8				AML	AML		
	comp=E,989µm,0.9s						
DOSS	**Dosso del Somm**	**0.98**	**6**	⇑*e*Pg	**Pg**	**21 48 48.1**	**-1.0**
DOSS				*e*Sg	**Sn**	**21 49 03.8**	**+1.1**
DOSS	**Dosso del Somm**	**0.98**	**6**	*e*Pg	**Pg**	**21 48 48.1**	**-1.0**
DOSS				*e*Sg	**Sn**	**21 49 03.8**	**+1.1**
CGRP	**Cima Grappa**	**1.11**	**28**	⇑*e*Pg	**Pg**	**21 48 50.4**	**-1.1**
CGRP				*e*Sg	**Sn**	**21 49 07.7**	**+1.8**
CGRP	**Cima Grappa**	**1.11**	**28**	⇑*e*P	**Pg**	**21 48 50.5**	**-1.1**
CGRP				*e*Sg	**Sn**	**21 49 07.7**	**+1.8**
CGRP	**Cima Grappa**	**1.11**	**28**	*e*P	**Pg**	**21 48 50.5**	**-1.1**
CGRP				*e*S	**Sn**	**21 49 07.8**	**+1.9**
CGRP				AML	AML		
	comp=E,1460µm,1.0s						
CGRP				AML	AML		
	comp=N,1440µm,1.0s						
CGRP				AML	AML		
	comp=E,1460µm,1.0s						
CGRP				AML	AML		
	comp=N,1440µm,1.0s						
CGRP				AML	AML		
	comp=N,1440µm,1.0s						
CGRP				AML	AML		
	comp=E,1460µm,1.0s						
RNI	**Roncone**	**1.12**	**345**	⇑*e*Pg	**Pg**	**21 48 49.6**	**-2.0**
RNI	**Roncone**	**1.12**	**345**	*e*Pg	**Pg**	**21 48 49.6**	**-2.0**
BOB	**Bobbio (Coli)**	**1.14**	**264**	AML	AML		
	comp=N,1765µm,1.5s						
BOB				AML	AML		
	comp=E,1350µm,0.9s						
BOB				AML	AML		
	comp=E,1505µm,0.7s						
BOB				AML	AML		
	comp=N,1505µm,1.5s						
PANI	**Panarotta**	**1.17**	**10**	*e*Pg	**Pb**	**21 48 50.9**	**-0.8**
PANI				*e*Sg	**Sn**	**21 49 07.9**	**+0.7**
MTLO	**Montello**	**1.18**	**39**	⇑*e*Pg	**Pb**	**21 48 51.7**	**-0.1**
MTLO				*e*Sg	**Sn**	**21 49 09.1**	**+2.0**
MTLO	**Montello**	**1.18**	**39**	*e*Pg	**Pb**	**21 48 51.7**	**-0.1**
MTLO				*e*Sg	**Sn**	**21 49 09.1**	**+2.0**
CTI	**Castel Tesino**	**1.22**	**20**	AML	AML		
	comp=N,2550µm,0.3s						
CTI				AML	AML		
	comp=E,2500µm,1.1s						
CTI				AML	AML		
	comp=N,2550µm,0.3s						
CTI				AML	AML		
	comp=E,2500µm,1.1s						
VARN	**Col Varnada, M**	**1.32**	**34**	⇑*e*Pg	**Pn**	**21 48 53.3**	**-0.4**
VARN	**Col Varnada, M**	**1.32**	**34**	*e*Pg	**Pn**	**21 48 53.3**	**-0.4**
CAE	**Caneva**	**1.48**	**41**	⇓*e*Pg	**Pn**	**21 48 55.6**	**-0.2**
CAE	**Caneva**	**1.48**	**41**	*e*Pg	**Pn**	**21 48 55.6**	**-0.2**
OZOL	**Ozolo**	**1.50**	**0**	*e*Pg	**Pn**	**21 48 56.8**	**+0.6**
OZOL	**Ozolo**	**1.50**	**0**	*e*Pg	**Pn**	**21 48 56.8**	**+0.6**
POLC	**Polcenigo**	**1.52**	**42**	AML	AML		
	comp=E,1255µm,0.6s						
POLC				AML	AML		
	comp=N,2120µm,0.4s						
POLC				AML	AML		
	comp=E,1255µm,0.6s						
POLC				AML	AML		
	comp=N,2120µm,0.4s						
CARE	**Lago del Cares**	**1.54**	**351**	*e*Pg	**Pn**	**21 48 57.2**	**+0.3**
CARE	**Lago del Cares**	**1.54**	**351**	*e*Pg	**Pn**	**21 48 57.2**	**+0.3**
AGOR	**Agordo**	**1.55**	**27**	*e*Pg	**Pn**	**21 48 57.2**	**+0.5**
AGOR	**Agordo**	**1.55**	**27**	AML	AML		
	comp=E,970µm,0.6s						
AGOR				AML	AML		
	comp=N,779µm,1.5s						
AGOR				AML	AML		
	comp=N,779µm,1.5s						
AGOR				AML	AML		
	comp=E,970µm,0.6s						
KOSI	**Kohlern**	**1.58**	**8**	AML	AML		
	comp=E,888µm,0.7s						
KOSI				AML	AML		
	comp=N,934µm,0.5s						
KOSI				AML	AML		
	comp=N,934µm,0.5s						
KOSI				AML	AML		
	comp=E,888µm,0.7s						
BRMO	**Bormio**	**1.64**	**344**	AML	AML		
	comp=N,798µm,0.7s						
BRMO				AML	AML		
	comp=E,484µm,0.6s						
BRMO				AML	AML		
	comp=E,484µm,0.6s						
BRMO				AML	AML		
	comp=N,798µm,0.7s						
MLNI	**Malnisio**	**1.66**	**41**	*e*Pg	**Pn**	**21 48 58.5**	**+0.2**
MLNI	**Malnisio**	**1.66**	**41**	*e*Pg	**Pn**	**21 48 58.5**	**+0.2**
CIMO	**Cimolais**	**1.72**	**34**	⇑*e*Pn	**Pn**	**21 48 58.6**	**-0.3**

CIMO	Cimolais	1.72	34	ePn	Pn	21 48 58.7	-0.3
STAL	STALIGIAL	1.79	40	AML	AML		
	comp=E,1265µm,1.4s						
STAL				AML	AML		
	comp=N,1085µm,0.3s						
STAL				AML	AML		
	comp=E,1305µm,1.4s						
STAL				AML	AML		
	comp=N,940µm,0.2s						
STAL				AML	AML		
	comp=E,1305µm,1.4s						
STAL				AML	AML		
	comp=E,1265µm,1.4s						
STAL				AML	AML		
	comp=N,940µm,0.2s						
STAL				AML	AML		
	comp=N,1085µm,0.3s						
FUORN	Ofenpass-Fuorn	1.80	343	ePn	Pn	21 49 01.6	+1.2
FUORN	Ofenpass-Fuorn	1.80	343	ePn	Pn	21 49 01.6	+1.2
TUE	Stuetta	1.97	323	ePn	Pn	21 49 03.4	+0.8
TUE	Stuetta	1.97	323	ePn	Pn	21 49 03.4	+0.8
TUE	Stuetta	1.97	323	AML	AML		
	comp=N,298µm,0.5s						
TUE				AML	AML		
	comp=E,282µm,0.5s						
TUE				AML	AML		
	comp=N,298µm,0.5s						
TUE				AML	AML		
	comp=E,282µm,0.5s						
VINO	Villanova	2.08	48	AML	AML		
	comp=E,384µm,1.3s						
VINO				AML	AML		
	comp=E,384µm,1.3s						
VINO				AML	AML		
	comp=N,576µm,0.4s						
VINO				AML	AML		
	comp=N,576µm,0.4s						
TRI	Trieste	2.08	66	ePn	Pn	21 49 03.3	-0.7
TRI	Trieste	2.08	66	ePn	Pn	21 49 03.3	-0.7
SABO	M.te Sabotino	2.10	58	AML	AML		
	comp=E,744µm,0.3s						
SABO				AML	AML		
	comp=E,744µm,0.3s						
SABO				AML	AML		
	comp=N,906µm,0.8s						
SABO				AML	AML		
	comp=N,906µm,0.8s						
ABTA	Abfaltersbach	2.11	29	Pn	Pn	21 49 05.4	+0.9
	comp=N,15nm,0.3s,SNR=38						
ABTA	Abfaltersbach	2.11	29	Pn	Pn	21 49 05.4	+0.9
	comp=N,15nm,0.3s,SNR=38						
FETA	Feichten	2.13	354	Pn	Pn	21 49 06.8	+2.0
	comp=N,28nm,0.4s,SNR=55						
FETA				Sg	Sb	21 49 36.1	+1.8
	comp=N,40nm,0.5s						
FETA	Feichten	2.13	354	Pn	Pn	21 49 06.8	+2.0
	comp=N,28nm,0.4s,SNR=55						
FETA				Sg	Sb	21 49 36.1	+1.8
	comp=N,40nm,0.5s						
WTTA	Wattenberg	2.40	10	Pn	Pb	21 49 11.8	-0.9
	comp=N,15nm,0.3s,SNR=22						
WTTA				Sg	Sg	21 49 46.6	-0.4
	comp=N,147nm,0.6s						
WTTA	Wattenberg	2.40	10	Pn	Pb	21 49 11.8	-0.9
	comp=N,15nm,0.3s,SNR=22						
WTTA				Sg	Sg	21 49 46.6	-0.4
	comp=N,147nm,0.6s						
TRAV	Traversella	2.41	286	AML	AML		
	comp=E,222µm,1.1s						
TRAV				AML	AML		
	comp=E,222µm,1.1s						
TRAV				AML	AML		
	comp=N,206µm,0.5s						
TRAV				AML	AML		
	comp=N,206µm,0.5s						
MOTA	Moosalm	2.44	1	ePn	Pn	21 49 10.6	+1.5
	comp=N,20nm,0.5s,SNR=67						
MOTA	Moosalm	2.44	1	Pn	Pn	21 49 10.6	+1.5
	comp=N,20nm,0.5s,SNR=67						
WATA	Walderalm	2.46	8	ePn	Pb	21 49 12.8	-1.0
	comp=N,17nm,0.4s,SNR=20						
WATA	Walderalm	2.46	8	Pn	Pb	21 49 12.8	-1.0
	comp=N,17nm,0.4s,SNR=20						
MYKA	Terra Mystica	2.51	46	Pn	Pn	21 49 10.9	+1.0
	comp=N,2.2nm,0.3s						
MYKA				Pg	Pg	21 49 17.9	-0.1
	comp=N,38nm,0.3s						
MYKA				Sg	Sg	21 49 50.9	+0.4
	comp=N,35nm,0.3s						
MYKA	Terra Mystica	2.51	46	Pn	Pn	21 49 10.9	+1.0
	comp=N,2.2nm,0.3s						
DAVA	Damuels	2.52	342	Pn	Pn	21 49 12.6	+2.4
	comp=N,20nm,0.7s,SNR=14						
DAVA				Sn	Sb	21 49 47.3	+1.8
	comp=N,67nm,0.5s						
DAVA	Damuels	2.52	342	Pn	Pn	21 49 12.6	+2.4
	comp=N,20nm,0.7s,SNR=14						
CEY	Cerknica	2.53	70⇑	iPn	Pn	21 49 09.6	-0.6
RETA	Reutte	2.59	356	Pn	Pn	21 49 13.7	+2.6
	comp=N,16nm,0.5s,SNR=11						
RETA				Sn	Sb	21 49 47.2	-0.3
	comp=N,22nm,0.3s						
RETA	Reutte	2.59	356	Pn	Pn	21 49 13.7	+2.6
	comp=N,16nm,0.5s,SNR=11						
RETA				Sn	Sb	21 49 47.2	-0.3
	comp=N,22nm,0.3s						
SAOF	Saorge	2.66	251	P	Pn	21 49 14.0	+2.0
SAOF	Saorge	2.66	251	P	Pn	21 49 14.0	+2.0
SAOF				S	Sn	21 49 47.2	+3.4
KBA	Koelnbreinsper	2.70	36	Pn	Pn	21 49 14.4	+1.7
KBA				Pg	Pg	21 49 20.8	-1.0
	comp=N,21nm,0.3s						
KBA				Sg	Sg	21 49 56.6	-0.3
	comp=N,27nm,0.3s						
KBA	Koelnbreinsper	2.70	36	Pn	Pn	21 49 14.4	+1.7
LJU	Ljubljana	2.70	64⇑	iPn	Pn	21 49 12.8	+0.2
NVLJ	Novalja	2.75	96	ePn	Pn	21 49 13.1	0.0
NVLJ				Sn	Sn	21 49 45.6	-0.3
NVLJ	Novalja	2.75	96	ePn	Pn	21 49 13.1	0.0
NVLJ				Sn	Sn	21 49 45.6	-0.3
PGF	Pioggiola	2.78	213	ePn	Pn	21 49 14.2	+0.5
	SNR=1.0						
PGF				eSn	Sn	21 49 47.6	+0.7
	comp=N,77nm,0.6s,SNR=1.0						
PGF	Pioggiola	2.78	213	ePn	Pn	21 49 14.2	+0.5
	SNR=1.0						
PGF				eSn	Sn	21 49 47.6	+0.7
	comp=N,39nm,0.6s,SNR=1.0						
SBF	Sospel	2.79	249	ePn	Pn	21 49 15.4	+1.6
	SNR=1.0						
SBF				eSn	Sn	21 49 46.8	-0.2
	comp=N,141nm,0.6s						
SBF	Sospel	2.79	249	ePn	Pn	21 49 15.4	+1.6
	SNR=1.0						
SBF				eSn	Sn	21 49 46.8	-0.2
	comp=N,70nm,0.6s						
LUCF	Luceram	2.83	250	P	Pn	21 49 15.9	+1.4
LUCF	Luceram	2.83	250	P	Pn	21 49 15.9	+1.4
LUCF				S	Sn	21 49 51.1	+2.9
REVF	Revere	2.88	248	P	Pn	21 49 17.4	+2.3
REVF	Revere	2.88	248	P	Pn	21 49 17.4	+2.3
REVF				S	Sn	21 49 52.4	+3.1
OBKA	Obir	2.94	56	ePn	Pn	21 49 16.9	+1.0
	comp=N,1.8nm,0.2s						
OBKA				ePg	Pg	21 49 26.4	+0.2
	comp=N,20nm,0.5s						
OBKA				Sn	Sn	21 49 53.3	+2.6
	comp=N,18nm,0.2s						
OBKA				Sg	Sg	21 50 04.3	0.0
	comp=N,77nm,0.6s						
OBKA	Obir	2.94	56	Pn	Pn	21 49 16.9	+1.0
	comp=N,1.8nm,0.2s						
ISO	Isola	2.94	257	P	Pn	21 49 17.8	+1.9
ISO	Isola	2.94	257	P	Pn	21 49 17.8	+1.9
MVIF	Mont Vial	2.96	252	P	Pn	21 49 18.1	+1.8
MVIF	Mont Vial	2.96	252	P	Pn	21 49 18.1	+1.8
MVIF				S	Sn	21 49 54.4	+2.9
SENIN	Lac Senin/Sane	3.00	300	ePn	Pn	21 49 18.7	+1.8
SENIN	Lac Senin/Sane	3.00	300	ePn	Pn	21 49 18.7	+1.8
MBDF	Montbardon	3.04	268	ePn	Pn	21 49 17.4	0.0
	SNR=1.0						
MBDF				eSn	Sn	21 49 53.7	+0.2
	comp=N,48nm,0.6s						
MBDF	Montbardon	3.04	268	ePn	Pn	21 49 17.4	0.0
	SNR=1.0						
MBDF				eSn	Sn	21 49 53.7	+0.2
	comp=N,24nm,0.6s						
SURF	Saint Ours	3.05	264	P	Pn	21 49 18.5	+1.1
SURF	Saint Ours	3.05	264	P	Pn	21 49 18.5	+1.1
AQU	L'Aquila	3.07	145	ePn	Pn	21 49 18.6	+1.0
AQU	L'Aquila	3.07	145	ePn	Pn	21 49 18.6	+1.0
LPG	La Plagne	3.09	283	ePn	Pn	21 49 20.9	+2.7
	SNR=1.0						
LPG				eSn	Sn	21 49 55.2	+0.4
	comp=N,36nm,0.5s						
LPG				eSg	Sg	21 50 07.5	-1.8
	comp=N,37nm,0.6s,SNR=1.0						
LPG	La Plagne	3.09	283	ePn	Pn	21 49 20.9	+2.7
	SNR=1.0						
LPG				eSn	Sn	21 49 55.2	+0.4
	comp=N,18nm,0.5s						
LPG				eSg	Sg	21 50 07.5	-1.8
	comp=N,18nm,0.6s,SNR=1.0						
BNI	Bardonecchia	3.10	274	ePn	Pn	21 49 21.1	+2.9
BNI	Bardonecchia	3.10	274	ePn	Pn	21 49 21.1	+2.9
LPL	La Plagne	3.11	283	ePn	Pn	21 49 21.1	+2.8
LPL				eSn	Sn	21 49 55.2	+0.1
	comp=N,31nm,0.5s						
LPL	La Plagne	3.11	283	ePn	Pn	21 49 21.1	+2.8
LPL				eSn	Sn	21 49 55.2	+0.1
	comp=N,15nm,0.5s						
CALF	Calern	3.17	250	P	Pn	21 49 20.8	+1.7
CALF	Calern	3.17	250	P	Pn	21 49 20.8	+1.7
CALF				S	Sn	21 49 59.9	+3.3
OZLJ	Ozalj	3.21	76	i Pn	Pn	21 49 19.8	+0.4
OZLJ				Sn	Sn	21 49 56.9	-0.3
OZLJ	Ozalj	3.21	76	i Pn	Pn	21 49 19.8	+0.4
OZLJ				Sn	Sn	21 49 56.8	-0.3
CRES	Cresnjev	3.25	72⇑	iPn	Pn	21 49 20.0	0.0
SOKA	Soboth	3.31	56	ePn	Pn	21 49 21.5	+0.6
	comp=N,3.1nm,0.4s,SNR=9.2						
SOKA				Pg	Pg	21 49 31.5	-1.8
	comp=N,12nm,0.4s						
SOKA				eSn	Sn	21 50 02.0	+2.1
	comp=N,7.9nm,0.3s						
SOKA				Sg	Sg	21 50 14.9	-1.2
	comp=N,20nm,0.5s						
SOKA	Soboth	3.31	56	Pn	Pn	21 49 21.5	+0.6
	comp=N,3.1nm,0.4s,SNR=9.2						
SOKA	Soboth	3.31	56	Pg	Pg	21 49 31.5	-1.8
	comp=N,12nm,0.4s						
SOKA				Sn	Sn	21 50 02.0	+2.1
	comp=N,7.9nm,0.3s						
SOKA				Sg	Sg	21 50 14.9	-1.2
	comp=N,20nm,0.5s						
UDBI	Udbina	3.39	95	ePn	Pn	21 49 22.6	+0.6
UDBI	Udbina	3.39	95	ePn	Pn	21 49 22.6	+0.6
FRF	La Foret Royal	3.43	249	ePn	Pn	21 49 23.0	+0.4
	SNR=1.0						
FRF				eSn	Sn	21 50 01.0	-1.8
	comp=N,55nm,0.7s,SNR=1.0						
FRF	La Foret Royal	3.43	249	ePn	Pn	21 49 23.0	+0.4
	SNR=1.0						
FRF				eSn	Sn	21 50 01.0	-1.8
	comp=N,28nm,0.7s,SNR=1.0						
OG25	Le Caire	3.59	263	P	Pn	21 49 25.6	+0.9
OG25	Le Caire	3.59	263	P	Pn	21 49 25.7	+0.9
LMR	La Mourre	3.62	246	ePn	Pn	21 49 25.5	+0.3
	SNR=1.0						
LMR				eSn	Sn	21 50 06.0	-1.5
	comp=N,26nm,0.4s,SNR=1.0						
LMR	La Mourre	3.62	246	ePn	Pn	21 49 25.5	+0.3
	SNR=1.0						
LMR				eSn	Sn	21 50 06.0	-1.5
	comp=N,13nm,0.4s,SNR=1.0						
ORIF	Oris-en-Rattie	3.67	272	ePn	Pn	21 49 26.9	+1.0
	SNR=1.0						
ORIF				eSn	Sn	21 50 08.5	-0.3
	comp=N,31nm,0.5s						
ORIF	Oris-en-Rattie	3.67	272	P	Pn	21 49 26.9	+1.0
ORIF	Oris-en-Rattie	3.67	272	ePn	Pn	21 49 26.9	+1.0
	SNR=1.0						
ORIF				eSn	Sn	21 50 08.5	-0.3
	comp=N,15nm,0.5s						
MOA	Molln	3.70	36	ePn	Pn	21 49 27.5	+1.3
	comp=N,4.6nm,0.3s,SNR=6.3						
MOA				eSn	Sn	21 50 11.6	+2.3
	comp=N,14nm,0.5s						
MOA	Molln	3.70	36	Pn	Pn	21 49 27.5	+1.3
	comp=N,4.6nm,0.3s,SNR=6.3						
MOA				Sn	Sn	21 50 11.6	+2.3
	comp=N,14nm,0.5s						
KIZ	Kirchzarten	3.74	326	P	Pn	21 49 26.8	0.0
KIZ	Kirchzarten	3.74	326	P	Pn	21 49 26.8	0.0
LOMF	Lomont	3.82	311	P	Pn	21 49 27.9	-0.1
LOMF	Lomont	3.82	311	P	Pn	21 49 27.8	-0.1
LOMF				S	Sn	21 50 11.2	-1.3
CABF	La Chapelle	3.87	298	ePn	Pn	21 49 29.1	+0.5
	SNR=1.0						
CABF				eSn	Sn	21 50 13.5	-0.1
	comp=N,27nm,0.7s,SNR=1.0						
CABF	La Chapelle	3.87	298	ePn	Pn	21 49 29.1	+0.5
	SNR=1.0						
CABF				eSn	Sn	21 50 13.5	-0.1
	comp=N,14nm,0.7s,SNR=1.0						
ARSA	Arzberg	3.90	51	ePn	Pn	21 49 29.1	0.0
	comp=N,7.1nm,0.3s,SNR=7.3						
ARSA	Arzberg	3.90	51	Pn	Pn	21 49 29.1	0.0
	comp=N,7.1nm,0.3s,SNR=7.3						
BFO	Black Forest	3.91	332	ePn	Pn	21 49 29.7	+0.6
BFO	Black Forest	3.91	332	ePn	Pn	21 49 29.7	+0.6
MOF	Molkenrain	4.00	319	P	Pn	21 49 30.7	+0.2
MOF	Molkenrain	4.00	319	P	Pn	21 49 30.7	+0.2
MOF				S	Sn	21 50 16.5	-0.5
SMRF	Simiane la Rot	4.02	259	ePn	Pn	21 49 32.1	+1.4
SMRF				eSn	Sn	21 50 17.9	+0.4
	comp=N,19nm,0.5s						
SMRF				eSg	Sg	21 50 37.9	-1.2
	comp=N,15nm,0.5s,SNR=1.0						
SMRF	Simiane la Rot	4.02	259	ePn	Pn	21 49 32.1	+1.4
SMRF				eSn	Sn	21 50 17.9	+0.4
	comp=N,9.4nm,0.5s						
SMRF				eSg	Sg	21 50 37.9	-1.2
	comp=N,7.5nm,0.5s,SNR=1.0						
STU	Stuttgart	4.07	343	ePn	Pn	21 49 29.1	-2.3
STU	Stuttgart	4.07	343	ePn	Pn	21 49 29.1	-2.3
OCF	Saint Nazaire	4.10	267	P	Pn	21 49 32.7	+0.9
OCF				S	Sn	21 50 20.4	+0.9
OG26	St.-Nazaire-De	4.10	267	P	Pn	21 49 32.7	+0.9
OG26				S	Sn	21 50 20.4	+0.9
HINF	Hinteralfeld	4.11	317	ePn	Pn	21 49 32.0	+0.1
	SNR=1.0						
HINF				eSn	Sn	21 50 18.1	-1.5
	comp=N,27nm,0.5s,SNR=1.0						
HINF	Hinteralfeld	4.11	317	ePn	Pn	21 49 32.0	+0.1
	SNR=1.0						
HINF				eSn	Sn	21 50 18.1	-1.5
	comp=N,14nm,0.5s,SNR=1.0						
ECH	Echery	4.26	322	ePn	Pn	21 49 34.2	+0.2
ECH	Echery	4.26	322	ePn	Pn	21 49 34.2	+0.2
BEHE	Becsehely	4.31	67	ePn	Pn	21 49 38.9	+4.2
GEA0	GERESS Array S	4.34	24	ePn	Pn	21 49 35.1	0.0
GEA0	GERESS Array S	4.34	24	ePn	Pn	21 49 35.1	0.0
GEC2	GERESS Array S	4.34	24	ePn	Pn	21 49 35.6	+0.4
GEC2	GERESS Array S	4.34	24	ePn	Pn	21 49 35.6	+0.4
GERES	GERESS Array B	4.34	24	Pn	Pn	21 49 36.0	+0.8
	comp=N,0.8nm,0.3s,baz=203,slow=14,SNR=19						
GERES				Pg	Pg	21 49 50.4	-2.7
	comp=N,2.1nm,0.3s,baz=205,slow=23,SNR=14						
GERES				Sn	Sn	21 50 22.8	-2.7
	comp=N,2.4nm,0.3s,baz=212,slow=22,SNR=4.6						
GERES				Lg	Lg	21 50 45.4	
	comp=N,3.7nm,0.3s,baz=210,slow=29,SNR=9.4						
CDF	Champ du Feu	4.36	325	ePn	Pn	21 49 35.5	0.0
	SNR=1.0						
CDF				eSn	Sn	21 50 26.1	+0.2
	comp=N,39nm,0.8s,SNR=1.0						
CDF	Champ du Feu	4.36	325	ePn	Pn	21 49 35.5	0.0
	SNR=1.0						
CDF				eSn	Sn	21 50 26.1	+0.2
	comp=N,20nm,0.8s,SNR=1.0						
BLY	Banja Luka	4.37	90	ePn	Pn	21 49 35.1	-0.4
BLY	Banja Luka	4.37	90	ePn	Pn	21 49 35.1	-0.4
HAU	Haudompre	4.49	315	ePn	Pn	21 49 37.2	+0.1
	SNR=1.0						
HAU				eSn	Sn	21 50 27.6	-1.3
	comp=N,32nm,0.4s,SNR=1.0						
HAU	Haudompre	4.49	315	ePn	Pn	21 49 37.2	+0.1
	SNR=1.0						
HAU				eSn	Sn	21 50 27.6	-1.3
	comp=N,16nm,0.4s,SNR=1.0						
CONA	Conrad Observa	4.50	46	ePn	Pn	21 49 38.0	+0.6
	comp=N,16nm,0.8s,SNR=16						
CONA				eSn	Sn	21 50 32.0	+2.7
	comp=N,7.9nm,0.3s						
CONA	Conrad Observa	4.50	46	Pn	Pn	21 49 38.0	+0.6
	comp=N,16nm,0.8s,SNR=16						
CONA				Sn	Sn	21 50 32.0	+2.7
	comp=N,7.9nm,0.3s						
VIVF	Saint-Julien-l	4.53	272	ePn	Pn	21 49 37.7	0.0
	SNR=1.0						
VIVF				eSn	Sn	21 50 29.1	-0.8
	comp=N,5.6nm,0.3s,SNR=1.0						
VIVF	Saint-Julien-l	4.53	272	ePn	Pn	21 49 37.7	0.0
	SNR=1.0						
VIVF				eSn	Sn	21 50 29.1	-0.8
	comp=N,2.8nm,0.3s,SNR=1.0						
KHC	Kasperske Hory	4.57	21	ePN	Pn	21 49 38.5	+0.2
KHC				ePG	Pg	21 49 55.2	-2.2
KHC				eSN	Sn	21 50 30.1	-0.8
KHC				eSG	Sg	21 50 54.1	-2.5
	comp=N,32nm,0.7s						
KHC	Kasperske Hory	4.57	21	ePn	Pn	21 49 38.4	+0.1
KHC	Kasperske Hory	4.57	21	Pn	Pn	21 49 38.5	+0.2
SSB	Saint Sauveur	4.62	277	ePn	Pn	21 49 38.9	0.0
SSB	Saint Sauveur	4.62	277	ePn	Pn	21 49 38.9	0.0
SOP	Sopron	4.73	52	ePn	Pn	21 49 41.5	+1.2
SOP				eSn	Sn	21 50 33.9	-0.8
SOP	Sopron	4.73	52	ePn	Pn	21 49 41.5	+1.2
SOP				eSn	Sn	21 50 33.9	-0.8
GRFO	Grafenberg	4.79	1	ePn	Pn	21 49 40.5	-0.7
GRFO	Grafenberg	4.79	1	ePn	Pn	21 49 40.5	-0.7
THEF	They Montfort	4.82	315	P	Pn	21 49 41.0	-0.6
THEF	They Montfort	4.82	315	P	Pn	21 49 41.0	-0.6
THEF				S	Sn	21 50 36.9	-0.1
PAGF	Fort de Pagny	5.17	317	ePn	Pn	21 49 46.9	+0.5
PAGF				eSn	Sn	21 50 43.9	-1.7
	comp=N,18nm,0.6s						
PAGF	Fort de Pagny	5.17	317	ePn	Pn	21 49 46.9	+0.5
PAGF				eSn	Sn	21 50 43.9	-1.7
	comp=N,9.0nm,0.6s						
LASF	Ste Croix	5.21	263	ePn	Pn	21 49 46.5	-0.5
	SNR=1.0						
LASF				eSn	Sn	21 50 44.6	-2.0
	comp=N,5.8nm,0.5s,SNR=1.0						
LASF	Ste Croix	5.21	263	ePn	Pn	21 49 46.5	-0.5
	SNR=1.0						
LASF				eSn	Sn	21 50 44.6	-2.0
	comp=N,2.9nm,0.5s,SNR=1.0						
STON	Ston	5.22	111	ePn	Pn	21 49 46.8	-0.4
STON				Sn	Sn	21 50 45.1	-1.8
STON	Ston	5.22	111	ePn	Pn	21 49 46.7	-0.4
STON				Sn	Sn	21 50 45.1	-1.8
SFTF	Sexfontaines	5.30	311	ePn	Pn	21 49 48.3	+0.1
SFTF				eSn	Sn	21 50 47.9	-0.9
	comp=N,33nm,1.1s						
SFTF	Sexfontaines	5.30	311	ePn	Pn	21 49 48.3	+0.1
SFTF				eSn	Sn	21 50 47.9	-0.9
	comp=N,16nm,1.1s						
SMF	Signal de Mont	5.33	292	ePn	Pn	21 49 49.2	+0.5
	SNR=1.0						
SMF				eSn	Sn	21 50 50.2	+0.6
	comp=N,15nm,0.7s,SNR=1.0						
SMF	Signal de Mont	5.33	292	ePn	Pn	21 49 49.2	+0.5
	SNR=1.0						
SMF				eSn	Sn	21 50 50.2	+0.6
	comp=N,7.6nm,0.7s,SNR=1.0						
NKC	Novy Kostel	5.42	10	ePN	Pn	21 49 51.9	+2.0
NKC				ePG	Pb	21 50 08.5	+4.5
NKC				eSG	Sg	21 51 23.4	-0.3
	comp=N,15nm,0.6s						
NKC	Novy Kostel	5.42	10	Pn	Pn	21 49 51.9	+2.0
NKC				Sg	Sg	21 51 23.4	-0.3
	comp=N,15nm,0.6s						
MODS	Modra-Piesok	5.52	49	ePN	Pn	21 49 50.3	-1.0
MODS				eSN	Sn	21 50 51.7	-2.6
MODS	Modra-Piesok	5.52	49	ePn	Pn	21 49 50.3	-1.0
LOR	Lormes	5.53	298	ePn	Pn	21 49 51.5	+0.1
	SNR=1.0						
LOR				eSn	Sn	21 50 52.4	-2.1
	comp=N,17nm,0.7s						
LOR	Lormes	5.53	298	ePn	Pn	21 49 51.5	+0.1
	SNR=1.0						
LOR				eSn	Sn	21 50 52.4	-2.1
	comp=N,8.6nm,0.7s						
KRUC	Moravsky	5.54	39	ePN	Pn	21 49 51.4	-0.1
KRUC				ePG	Pg	21 50 13.9	-2.1
KRUC				eSG	Sg	21 51 28.9	+1.2
PRU	Pruhonice	5.61	24	ePN	Pn	21 49 53.9	+1.4
PRU				ePG	Pg	21 50 12.3	-5.0
PRU				eSG	Sg	21 51 28.0	-2.0
	comp=N,6.8nm,0.4s						
PRU	Pruhonice	5.61	24	Pn	Pn	21 49 53.9	+1.4
PRU				Sg	Sg	21 51 28.0	-2.0
	comp=N,6.8nm,0.4s						
GOPC	GO Pecny, Ondr	5.62	26	ePN	Pn	21 49 52.5	-0.1
GOPC				ePG	Pb	21 50 11.9	+4.4
GOPC	GO Pecny, Ondr	5.62	26	Pn	Pn	21 49 52.5	-0.1
SSF	Saint Saulge	5.68	295	ePn	Pn	21 49 53.5	+0.1
SSF				eSn	Sn	21 50 56.4	-1.8
SSF	Saint Saulge	5.68	295	ePn	Pn	21 49 53.5	+0.1
SSF				eSn	Sn	21 50 56.4	-1.8
SMOL	Smolenice	5.69	48	ePN	Pn	21 49 52.6	-0.9
SMOL				eSN	Sn	21 50 57.8	-0.5
SMOL	Smolenice	5.69	48	ePn	Pn	21 49 52.6	-0.9
SMOL				eSn	Sn	21 50 57.8	-0.5
AVF	Avril sur Loir	5.69	292	ePn	Pn	21 49 53.5	-0.1
	SNR=1.0						
AVF				eSn	Sn	21 50 56.7	-1.8
	comp=N,11nm,0.8s						
AVF	Avril sur Loir	5.69	292	ePn	Pn	21 49 53.5	-0.1
	SNR=1.0						
AVF				eSn	Sn	21 50 56.7	-1.8
	comp=N,5.4nm,0.8s						
TREB	Trebinje	5.72	110	ePn	Pn	21 49 55.0	+1.0
BRY	Bratogost	5.77	108	ePn	Pn	21 49 55.9	+1.0
VRAC	Vranov	5.81	39	eSg	Sg	21 51 38.1	+1.8
VRAC	Vranov	5.81	39	eSG	Sg	21 51 38.1	+1.8
UPM	Unac-Piva	5.92	104	ePn	Pn	21 49 58.8	+1.9
HCY	Herceg Novi	5.94	112	ePn	Pn	21 49 57.3	+0.3
BGF	Bois d'Agland	5.97	289	ePn	Pn	21 49 58.3	+0.8
	SNR=1.0						
BGF	Bois d'Agland	5.97	289	ePn	Pn	21 49 58.3	+0.8
	SNR=1.0						
TEKS	Tekeris	6.06	90	ePn	Pn	21 49 57.7	-0.9
BBLS	Lazići	6.08	97	ePn	Pn	21 49 58.1	-0.9
BRG	Berggiesshubel	6.28	17	PN	Pn	21 50 02.0	+0.3
BRG				PG	Pg	21 50 25.9	-4.2

ellipse: s-maj=5.0km s-min=4.4km az=157.0

ISC 19 22:04:07.2±0.9, 38°67'N±0°03×43°19'E±0°03, h24km±7km, **n27**, σ1°**01**/44, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.18**	**116**	PG	**Pb**	**22 04 12.8**	**+0.2**
VANB				SG	**Sb**	**22 04 17.4**	**+1.2**
VANB	**Van**	**0.18**	**116**	*e*Pg	**Pb**	**22 04 12.8**	**+0.2**
VANB				*e*Sg	**Sb**	**22 04 17.4**	**+1.2**
TVAN	**Van**	**0.23**	**130**	*i* P	**Pb**	**22 04 12.6**	**-0.7**
TVAN				*i* S	**Sb**	**22 04 17.8**	**+0.4**
TVAN	**Van**	**0.23**	**130**	P	**Pb**	**22 04 12.6**	**-0.7**
TVAN				S	**Sb**	**22 04 17.8**	**+0.4**
GEVA	**Gevas**	**0.38**	**196**	*e*P	**Pb**	**22 04 14.0**	**-1.4**
GEVA				IAML		22 04 26.7	
	comp=Z,27nm,0.4s						
GEVA	**Gevas**	**0.38**	**196**	*i* P	**Pb**	**22 04 14.5**	**-0.9**
GEVA				*i* S	**Sb**	**22 04 21.9**	**+1.0**
GEVA	**Gevas**	**0.38**	**196**	P	**Pb**	**22 04 14.5**	**-0.9**
GEVA				S	**Sb**	**22 04 22.0**	**+1.0**
ADCV	**BITLIS_Adilcev**	**0.39**	**290**	*i* P	**Pb**	**22 04 15.2**	**-0.4**
ADCV				*i* S	**Sb**	**22 04 21.3**	**0.0**
ADCV	**BITLIS_Adilcev**	**0.39**	**290**	P	**Pb**	**22 04 15.2**	**-0.4**
ADCV				S	**Sb**	**22 04 21.3**	**0.0**
VMUR	**Van-Muradiye**	**0.43**	**44**	*i* P	**Pb**	**22 04 17.0**	**+0.6**
VMUR				*i* S	**Sn**	**22 04 25.1**	**-0.4**
VMUR	**Van-Muradiye**	**0.43**	**44**	P	**Pb**	**22 04 17.0**	**+0.6**
VMUR				S	**Sn**	**22 04 25.1**	**-0.4**
CLDR	**Caldiran**	**0.74**	**50**	PG	**Pn**	**22 04 21.9**	**-0.5**
CLDR				SG	**Sn**	**22 04 33.2**	**+0.1**
CLDR	**Caldiran**	**0.74**	**50**	*i* P	**Pb**	**22 04 21.2**	**-0.4**
CLDR				*i* S	**Sn**	**22 04 33.1**	**+0.1**
CLDR	**Caldiran**	**0.74**	**50**	P	**Pb**	**22 04 21.2**	**-0.4**
CLDR	**Caldiran**	**0.74**	**50**	*e*Pg	**Pn**	**22 04 21.9**	**-0.5**
CLDR				S	**Sn**	**22 04 33.1**	**+0.1**
TUTA	**Tutak**	**0.78**	**338**	*e*P	Pb	22 04 17.2	-5.1
TUTA				*e*S	**Sb**	**22 04 32.6**	**-0.1**
TUTA				IAML		22 04 35.2	
	comp=Z,21nm,0.2s						
TUTA	**Tutak**	**0.78**	**338**	*i* P	**Pb**	**22 04 22.2**	**-0.2**
TUTA				*i* S	**Sb**	**22 04 33.2**	**+0.6**
TUTA	**Tutak**	**0.78**	**338**	P	**Pb**	**22 04 22.2**	**-0.2**
TUTA				S	**Sb**	**22 04 33.2**	**+0.6**
AGRB	**Hanur-Agry**	**0.91**	**351**	PG	**Pb**	**22 04 24.5**	**0.0**
AGRB	**Hanur-Agry**	**0.91**	**351**	*e*Pg	**Pb**	**22 04 24.5**	**0.0**
GURO	**Guroymak-BITLI**	**0.91**	**263**	PG	**Pb**	**22 04 23.7**	**-0.8**
GURO	**Guroymak-BITLI**	**0.91**	**263**	*e*Pg	**Pb**	**22 04 23.7**	**-0.8**
SRTM	**Siirt_Merkez**	**1.21**	**236**	*i* P	**Pb**	**22 04 30.1**	**+0.7**
SRTM				*i* S	**Sb**	**22 04 48.0**	**+3.4**
SRTM	**Siirt_Merkez**	**1.21**	**236**	P	**Pb**	**22 04 30.1**	**+0.7**
EATA	**Eleskirt**	**1.30**	**336**	*e*P	**Pn**	**22 04 27.5**	**-2.7**
EATA				*e*S	**Sb**	**22 04 50.3**	**+2.6**
VRTB	**Varto-Mus**	**1.44**	**290**	PN	**Pn**	**22 04 32.3**	**+0.4**
VRTB	**Varto-Mus**	**1.44**	**290**	*e*Pn	**Pn**	**22 04 32.3**	**+0.4**

CSEM ***19*** *22:05:44.8±0.1, 41°11'N×6°79'W, h15*km*, ML3.5/26, Error ellipse: s-maj=2.1km s-min=1.7km az=124.0*
ISCJB ***19*** *22:05:45.3±0.4, 41°13'N±0°01×6°70'W±0°02, h33*km±4km*, Error ellipse: s-maj=2.5km s-min=2.1km az=147.1*
LDG ***19*** *22:05:45.4±0.1, 41°10'N×6°80'W, h2*km*, Ml3.4/13, Error ellipse: s-maj=1.2km s-min=1.0km az=112.0*
INMG ***19*** *22:05:46.8±2.2, 41°11'N×6°81'W, h24*km±4km*, MD3.2, ML3.4, Error ellipse: s-maj=2.3km s-min=2.3km az=86.0*
IGIL ***19*** *22:05:46.3, 41°12'N×6°84'W, h15*km*, ML2.6*
SFS ***19*** *22:05:46.0, 41°10'N×6°83'W, h0*km*, ML3.3*
MDD ***19*** *22:05:46.8±0.2, 41°11'N×6°83'W, h20*km±1km*, mbLg3.4/51, Error ellipse: s-maj=2.7km s-min=2.3km az=95.0, PRXIMO MDD EMS: III-IV INTENSIDAD MAXIMA-PORTUGAL METEO. EMS: III INTENSIDAD MAXIMA-ESPAA.*

ISC 19 22:05:46.0±0.8, 41°16N±0°02×6°83W±0°02, h24km±6km, **n218**, σ2°**18**/373, **5C-7D, Portugal**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MVO	**Moncorvo**	**0.15**	**274**	⇑*i*Pg	**Pb**	**22 05 51.2**	**+0.1**
MVO				*e*Sg	**Sb**	**22 05 54.6**	**+0.1**
MVO				A	A	22 05 54.9	
	1μm,0.1s						
MVO	**Moncorvo**	**0.15**	**274**	⇑Pg	**Pb**	**22 05 51.2**	**+0.1**
	1μm,0.1s,SNR=18						
MVO				Lg	Lg	22 05 54.2	
	3μm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**0.15**	**274**	Pg	**Pb**	**22 05 51.2**	**+0.1**
	1μm,0.1s,SNR=18						
MVO				Lg	Lg	22 05 54.2	
	3μm,0.1s,SNR=7.9						
MVO				*e*Sg	**Sb**	**22 05 54.6**	**+0.1**
PBRG	**Braganca**	**0.65**	**6**	⇓*i*Pg	**Pn**	**22 05 59.7**	**-0.2**
PBRG				*e*Sg	**Sn**	**22 06 09.3**	**-0.2**
PBRG				A	A	22 06 11.2	
	756nm,0.3s						
PBRG	**Braganca**	**0.65**	**6**	Pg	**Pn**	**22 05 59.7**	**-0.2**
PBRG				Lg	Lg	22 06 09.3	
	378nm,0.3s						
PBRG	**Braganca**	**0.65**	**6**	Pg	**Pn**	**22 05 59.7**	**-0.2**
PBRG				*e*Sg	**Sn**	**22 06 09.3**	**-0.2**
PVRL	**Vila Real**	**0.68**	**281**	⇑*i*Pg	**Pn**	**22 05 59.6**	**-0.6**
PVRL				*e*Sg	**Sb**	**22 06 08.8**	**+0.5**
PVRL				A	A	22 06 09.7	
	2μm,0.5s						
PVRL	**Vila Real**	**0.68**	**281**	Pg	**Pn**	**22 05 59.6**	**-0.6**
PVRL				Lg	Lg	22 06 08.8	
	853nm,0.5s						
PVRL	**Vila Real**	**0.68**	**281**	Pg	**Pn**	**22 05 59.6**	**-0.6**
PVRL				*e*Sg	**Sb**	**22 06 08.8**	**+0.5**
POLO	**Lamas de Olo**	**0.76**	**287**	*e*P	**Pn**	**22 06 01.1**	**-0.3**
POLO				*e*S	**Sb**	**22 06 11.3**	**+0.6**
POLO				A	A	22 06 12.3	
	533nm,0.4s						
POLO	**Lamas de Olo**	**0.76**	**287**	*e*P	**Pn**	**22 06 01.1**	**-0.3**
POLO				*e*S	**Sb**	**22 06 11.3**	**+0.6**
PVIS	**Viseu**	**0.92**	**242**	*e*P	**Pb**	**22 06 03.0**	**-0.3**
PVIS				*e*S	**Sb**	**22 06 14.8**	**-0.4**
PVIS				A	A	22 06 15.4	
	446nm,0.2s						
PVIS	**Viseu**	**0.92**	**242**	P	**Pb**	**22 06 03.0**	**-0.3**
PVIS				S	**Sb**	**22 06 14.8**	**-0.4**
	223nm,0.2s						
PVIS	**Viseu**	**0.92**	**242**	P	**Pb**	**22 06 03.0**	**-0.3**
PVIS				S	**Sb**	**22 06 14.8**	**-0.4**
	223nm,0.2s						
MTE	**Manteigas**	**0.93**	**216**	⇑*i*P	**Pb**	**22 06 03.0**	**-0.5**
MTE				*e*S	**Sb**	**22 06 14.7**	**-0.8**
MTE				A	A	22 06 15.8	
	758nm,0.7s						
MTE	**Manteigas**	**0.93**	**216**	P	**Pb**	**22 06 03.0**	**-0.5**
MTE				S	**Sb**	**22 06 14.7**	**-0.8**
	379nm,0.7s						
MTE	**Manteigas**	**0.93**	**216**	P	**Pb**	**22 06 03.0**	**-0.5**
MTE				S	**Sb**	**22 06 14.7**	**-0.8**
	379nm,0.7s						
PCAB	**Cabril**	**1.06**	**302**	*e*P	**Pb**	**22 06 05.3**	**-0.4**
PCAB				*e*S	**Sb**	**22 06 20.5**	**+1.3**
PCAB				A	A	22 06 21.9	
	808nm,0.2s						
PCAB	**Cabril**	**1.06**	**302**	P	**Pb**	**22 06 05.3**	**-0.4**
PCAB				S	**Sb**	**22 06 20.5**	**+1.3**
	404nm,0.2s						
PCAB	**Cabril**	**1.06**	**302**	P	**Pb**	**22 06 05.3**	**-0.4**
PCAB				S	**Sb**	**22 06 20.5**	**+1.3**
	404nm,0.2s						
ELOB	**Lobios**	**1.17**	**308**	Pn	**Pb**	**22 06 06.9**	**-0.7**
	1.4nm,0.0s,SNR=7.9						
ELOB				Pg	**Pn**	**22 06 08.6**	**+1.6**
	15nm,0.2s,SNR=120						
ELOB				Sn	**Sn**	**22 06 21.4**	**-0.9**
	101nm,0.2s,SNR=7.9						
ELOB				Lg	Lg	22 06 23.8	
	1μm,0.3s,SNR=5.0						
ELOB	**Lobios**	**1.17**	**308**	Pn	**Pb**	**22 06 06.9**	**-0.7**
	1.4nm,0.0s,SNR=7.9						
EPLA	**Plasencia**	**1.23**	**152**	⇓Pg	**Pb**	**22 06 08.0**	**-0.6**
	79nm,0.2s,SNR=18						
EPLA				Lg	Lg	22 06 23.1	
	890nm,0.3s,SNR=5.0						
EPLA	**Plasencia**	**1.23**	**152**	Pg	**Pb**	**22 06 08.0**	**-0.6**
	79nm,0.2s,SNR=18						
EPLA				Lg	Lg	22 06 23.1	
	890nm,0.3s,SNR=5.0						
PTO	**Porto**	**1.34**	**270**	*e*P	**Pb**	**22 06 10.9**	**+0.5**
PTO				*e*S	**Sb**	**22 06 27.5**	**+0.3**
PTO				A	A	22 06 28.4	
	245nm,0.2s						
PTO	**Porto**	**1.34**	**270**	P	**Pb**	**22 06 10.9**	**+0.5**
PTO				S	**Sb**	**22 06 27.5**	**+0.3**
	123nm,0.2s						
PTO	**Porto**	**1.34**	**270**	P	**Pb**	**22 06 10.9**	**+0.5**
PTO				S	**Sb**	**22 06 27.5**	**+0.3**
	123nm,0.2s						
PGAV	**Gavieira, Arco**	**1.35**	**307**	⇓*e*P	**Pn**	**22 06 09.5**	**0.0**
PGAV				*e*S	**Sn**	**22 06 26.2**	**-0.6**
PGAV				A	A	22 06 31.4	
	434nm,0.1s						
PGAV	**Gavieira, Arco**	**1.35**	**307**	⇓*e*P	**Pn**	**22 06 09.5**	**0.0**
PGAV				*e*S	**Sn**	**22 06 26.2**	**-0.6**
PCBR	**Castelo Branco**	**1.40**	**201**	*e*P	**Pb**	**22 06 09.5**	**-2.0**
PCBR				*e*S	**Sb**	**22 06 28.5**	**-0.5**
PCBR				A	A	22 06 34.1	
	300nm,0.3s						
PCBR	**Castelo Branco**	**1.40**	**201**	P	**Pb**	**22 06 09.5**	**-2.0**
PCBR				S	**Sb**	**22 06 28.5**	**-0.5**
	150nm,0.3s						
PCBR	**Castelo Branco**	**1.40**	**201**	P	**Pb**	**22 06 09.5**	**-2.0**
PCBR				S	**Sb**	**22 06 28.5**	**-0.5**
	150nm,0.3s						
COI	**Coimbra**	**1.53**	**232**	P	**Pb**	**22 06 13.4**	**-0.3**
COI				S	**Sb**	**22 06 33.6**	**+0.9**
	202nm,0.7s						
COI	**Coimbra**	**1.53**	**232**	P	**Pb**	**22 06 13.4**	**-0.3**
COI				*e*S	**Sb**	**22 06 33.6**	**+0.9**
PCAS	**Casmilo, Conde**	**1.68**	**230**	*e*Pn	**Pb**	**22 06 13.9**	**-0.1**
PCAS	**Casmilo, Conde**	**1.68**	**230**	*e*Pg	**Pb**	**22 06 16.2**	**-0.1**
PCAS				*e*Sg	**Sb**	**22 06 38.3**	**+1.3**
PCAS				A	A	22 06 44.3	
	181nm,0.5s						
PCAS	**Casmilo, Conde**	**1.68**	**230**	*e*Pn	**Pn**	**22 06 13.9**	**-0.1**
PCAS	**Casmilo, Conde**	**1.68**	**230**	*e*Pg	**Pb**	**22 06 16.2**	**-0.1**
PCAS				*e*Sg	**Sb**	**22 06 38.3**	**+1.3**
PMRV	**Marv??o**	**1.78**	**194**	*e*Pn	**Pn**	**22 06 14.1**	**-1.2**
PMRV	**Marv??o**	**1.78**	**194**	*e*Pg	**Pb**	**22 06 19.7**	**+1.8**
PMRV				*e*Sg	**Sb**	**22 06 41.3**	**+1.5**
PMRV				A	A	22 06 45.3	
	299nm,0.6s						
PMRV	**Marv??o**	**1.78**	**194**	Pn	**Pn**	**22 06 14.1**	**-1.2**
PMRV				Pg	**Pb**	**22 06 19.7**	**+1.8**
PMRV				Lg	Lg	22 06 41.3	
	299nm,0.6s						
PMRV	**Marv??o**	**1.78**	**194**	Pn	**Pn**	**22 06 14.1**	**-1.2**
PMRV	**Marv??o**	**1.78**	**194**	Pg	**Pb**	**22 06 19.7**	**+1.8**
PMRV				*e*Sg	**Sb**	**22 06 41.3**	**+1.5**
EAGO	**Agolada(Pontev**	**1.90**	**331**	Pn	**Pn**	**22 06 17.5**	**+0.6**
	1.5nm,0.1s,SNR=7.9						
EAGO				Pg	**Pb**	**22 06 21.9**	**+2.0**
	6.0nm,0.1s,SNR=7.9						
EAGO				Sn	**Sn**	**22 06 40.6**	**+0.5**
	14nm,0.1s,SNR=7.9						
EAGO				Lg	Lg	22 06 46.7	
	182nm,0.1s,SNR=7.9						
EAGO	**Agolada(Pontev**	**1.90**	**331**	Pn	**Pn**	**22 06 17.5**	**+0.6**
	1.5nm,0.1s,SNR=7.9						
PTOM	**Tomar**	**1.95**	**219**	*e*Pn	**Pn**	**22 06 17.3**	**-0.4**
PTOM	**Tomar**	**1.95**	**219**	*e*Pg	**Pb**	**22 06 22.1**	**+1.2**
PTOM				*e*Sn	**Sn**	**22 06 38.9**	**-2.6**
PTOM				*e*Sg	**Sb**	**22 06 45.1**	**+0.3**
PTOM				A	A	22 06 51.9	
	281nm,0.6s						
PTOM	**Tomar**	**1.95**	**219**	Pn	**Pn**	**22 06 17.3**	**-0.4**
PTOM				Pg	**Pb**	**22 06 22.1**	**+1.2**
PTOM				Sn	**Sn**	**22 06 38.9**	**-2.6**
PTOM				Lg	Lg	22 06 45.1	
	140nm,0.6s						
PTOM	**Tomar**	**1.95**	**219**	Pn	**Pn**	**22 06 17.3**	**-0.4**
PTOM	**Tomar**	**1.95**	**219**	Pg	**Pb**	**22 06 22.1**	**+1.2**
PTOM				Sn	**Sn**	**22 06 38.9**	**-2.6**
PTOM				*e*Sg	**Sb**	**22 06 45.1**	**+0.3**
EPON	**Pontenova**	**2.18**	**354**	Pn	**Pn**	**22 06 21.8**	**+0.9**
	1.4nm,0.2s,SNR=52						
EPON				Pg	**Pb**	**22 06 26.8**	**+1.9**
	9.9nm,0.3s,SNR=7.9						
EPON				Sn	**Sn**	**22 06 48.7**	**+1.5**
	24nm,0.2s,SNR=4.0						
EPON				Lg	Lg	22 06 55.8	
	123nm,0.2s,SNR=9.3						
EPON	**Pontenova**	**2.18**	**354**	Pn	**Pn**	**22 06 21.8**	**+0.9**
	1.4nm,0.2s,SNR=52						
PMTG	**Montargil**	**2.34**	**208**	*e*Pn	**Pn**	**22 06 21.4**	**-1.6**
PMTG	**Montargil**	**2.34**	**208**	*e*Pg	**Pb**	**22 06 29.6**	**+2.1**
PMTG				*e*Sg	**Sb**	**22 06 56.0**	**0.0**
PMTG				A	A	22 06 59.9	
	110nm,0.6s						
PMTG	**Montargil**	**2.34**	**208**	*e*Pn	**Pn**	**22 06 21.4**	**-1.6**
PMTG	**Montargil**	**2.34**	**208**	*e*Pg	**Pb**	**22 06 29.6**	**+2.1**
PMTG				*e*Sg	**Sb**	**22 06 56.0**	**0.0**
PESTR	**Estremoz**	**2.36**	**195**	*e*Pn	**Pn**	**22 06 22.6**	**-0.7**
PESTR	**Estremoz**	**2.36**	**195**	*e*Pg	**Pb**	**22 06 29.6**	**+1.8**
PESTR				*e*Sg	**Sb**	**22 06 58.5**	**+2.0**
PESTR				A	A	22 07 00.3	
	214nm,0.5s						
PESTR	**Estremoz**	**2.36**	**195**	*e*Pn	**Pn**	**22 06 22.6**	**-0.7**
PESTR	**Estremoz**	**2.36**	**195**	*e*Pg	**Pb**	**22 06 29.6**	**+1.8**
PESTR				*e*Sg	**Sb**	**22 06 58.5**	**+2.0**
EBAD	**Badajoz**	**2.40**	**183**	Pn	**Pn**	**22 06 23.5**	**-0.3**
	1.7nm,0.1s,SNR=40						
EBAD				Pg	**Pb**	**22 06 28.1**	**-0.5**
	15nm,0.1s,SNR=7.9						
EBAD				Sn	**Sn**	**22 06 51.3**	**-1.2**
	26nm,0.2s,SNR=5.5						
EBAD				Lg	Lg	22 06 59.1	
	124nm,0.2s,SNR=23						
EBAD	**Badajoz**	**2.40**	**183**	Pn	**Pn**	**22 06 23.5**	**-0.3**
	1.7nm,0.1s,SNR=40						
EMAZ	**Mazaricos**	**2.40**	**319**	Pn	**Pn**	**22 06 24.2**	**+0.3**
	9.9nm,0.2s,SNR=7.9						
EMAZ				Pg	**Pb**	**22 06 30.0**	**+1.4**
	16nm,0.3s,SNR=7.9						
EMAZ				Sn	**Sn**	**22 06 52.2**	**-0.4**
	15nm,0.2s,SNR=7.9						
EMAZ				Lg	Lg	22 07 02.6	
	167nm,0.3s,SNR=7.9						
EMAZ	**Mazaricos**	**2.40**	**319**	Pn	**Pn**	**22 06 24.2**	**+0.3**
	9.9nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	**2.40**	**319**	Pg	**Pb**	**22 06 30.0**	**+1.4**
	16nm,0.3s,SNR=7.9						
EMAZ				Sn	**Sn**	**22 06 52.2**	**-0.4**
	15nm,0.2s,SNR=7.9						
EMAZ				Lg	Lg	22 07 02.6	
	167nm,0.3s,SNR=7.9						
ALMR	**Almeirim**	**2.41**	**214**	*e*P	**Pn**	**22 06 23.2**	**-0.7**
ALMR				*e*S	**Sn**	**22 06 49.9**	**-2.7**
ALMR				AML	AML	22 06 54.1	
	comp=N,58nm,0.3s						
ALMR	**Almeirim**	**2.41**	**214**	*e*Pn	**Pn**	**22 06 23.4**	**-0.5**
ALMR				*e*Sg	**Sb**	**22 07 00.9**	**+3.1**
ALMR	**Almeirim**	**2.41**	**214**	⇓*e*Pn	**Pn**	**22 06 23.4**	**-0.5**
ALMR	**Almeirim**	**2.41**	**214**	*e*Pg	**Pb**	**22 06 31.1**	**+2.5**
ALMR				*e*Sn	**Sn**	**22 06 50.8**	**-1.8**
ALMR				*e*Sg	**Sb**	**22 06 58.5**	**+0.7**
ALMR				A	A	22 07 03.1	
	comp=N,346nm,0.3s						
ALMR	**Almeirim**	**2.41**	**214**	Pn	**Pn**	**22 06 23.4**	**-0.5**
ALMR				Sn	**Sn**	**22 06 50.8**	**-1.8**
ALMR				Lg	Lg	22 06 58.5	
	comp=N,173nm,0.3s						
ALMR	**Almeirim**	**2.41**	**214**	Pn	**Pn**	**22 06 23.4**	**-0.5**
ALMR	**Almeirim**	**2.41**	**214**	*e*Pg	**Pb**	**22 06 31.1**	**+2.5**
ALMR				Sn	**Sn**	**22 06 50.8**	**-1.8**
ALMR				Lg	Lg	22 06 58.5	
	comp=N,173nm,0.3s						
ALMR				*e*Sg	**Sb**	**22 07 00.9**	**+3.1**
EARI	**Arriondas**	**2.46**	**29**	Pn	**Pn**	**22 06 25.6**	**+0.9**
	comp=N,0.5nm,0.2s,SNR=30						
EARI				Pg	**Pb**	**22 06 31.8**	**+2.3**
	comp=N,1.7nm,0.2s,SNR=7.9						
EARI				Sn	**Sn**	**22 06 53.0**	**-1.0**
	comp=N,10nm,0.1s,SNR=7.4						
EARI				Lg	Lg	22 07 04.9	
	comp=N,72nm,0.3s,SNR=7.1						
EARI	**Arriondas**	**2.46**	**29**	Pn	**Pn**	**22 06 25.6**	**+0.9**
	comp=N,0.5nm,0.2s,SNR=30						
PAB	**San Pablo**	**2.48**	**130**	⇑Pn	**Pn**	**22 06 24.6**	**-0.5**
	comp=N,2.6nm,0.2s,SNR=18						
PAB				Pg	**Pb**	**22 06 31.4**	**+1.4**
	comp=N,15nm,0.3s,SNR=7.9						
PAB				Sn	**Sn**	**22 06 52.7**	**-1.9**
	comp=N,12nm,0.2s,SNR=7.9						
PAB				Lg	Lg	22 07 00.1	
	comp=N,75nm,0.2s,SNR=7.9						
PAB	**San Pablo**	**2.48**	**130**	Pn	**Pn**	**22 06 24.6**	**-0.5**
	comp=N,2.6nm,0.2s,SNR=18						
ESDC	**Sonseca Array**	**2.64**	**123**	Pn	**Pn**	**22 06 26.7**	**-0.5**
	comp=N,14nm,0.2s,baz=305,slow=12,SNR=76						
ESDC				Pg	**Pb**	**22 06 33.2**	**+0.6**
	comp=N,6.4nm,0.2s,baz=306,slow=17,SNR=26						
ESDC				Sn	**Sn**	**22 06 56.5**	**-2.0**
	comp=N,14nm,0.2s,baz=303,slow=17,SNR=7.9						
ESDC				Lg	Lg	22 07 08.0	
	comp=N,111nm,0.5s,baz=299,slow=29,SNR=7.9						
ESDC	**Sonseca Array**	**2.64**	**123**	Pn	**Pn**	**22 06 26.7**	**-0.5**
	comp=N,14nm,0.2s,SNR=76						
ESDC	**Sonseca Array**	**2.64**	**123**	Pg	**Pb**	**22 06 33.2**	**+0.6**
	comp=N,6.4nm,0.2s,SNR=26						
ESDC				Sn	**Sn**	**22 06 56.5**	**-2.0**
	comp=N,14nm,0.2s,SNR=7.9						
ESDC				Lg	Lg	22 07 08.0	
	comp=N,111nm,0.5s,SNR=7.9						
EVO	**Evora**	**2.77**	**200**	*e*Pn	**Pn**	**22 06 28.4**	**-0.6**
EVO				*e*Sg	**Sb**	**22 07 11.4**	**+3.0**
EVO				A	A	22 07 13.9	
	comp=N,85nm,0.4s						
EVO	**Evora**	**2.77**	**200**	Pn	**Pn**	**22 06 28.4**	**-0.6**
EVO				Lg	Lg	22 07 11.4	
	comp=N,85nm,0.4s						
EVO	**Evora**	**2.77**	**200**	*e*P	**Pn**	**22 06 27.2**	**-1.8**
EVO	**Evora**	**2.77**	**200**	Pn	**Pn**	**22 06 28.4**	**-0.6**
EVO				*e*Sg	**Sb**	**22 07 11.4**	**+3.0**
UCM	**Universidad Co**	**2.85**	**106**	*i* P	**Pn**	**22 06 30.1**	**0.0**
PMAFR	**Mafra**	**2.89**	**221**	⇓*e*Pn	**Pn**	**22 06 29.9**	**-0.8**
PMAFR				*e*Sg	**Sb**	**22 07 16.8**	**+4.9**
PMAFR				A	A	22 07 30.4	
	comp=N,95nm,0.7s						
PMAFR	**Mafra**	**2.89**	**221**	Pn	**Pn**	**22 06 29.8**	**-0.8**
	comp=N,7.9nm,0.2s,SNR=11						
PMAFR				Pg	**Pb**	**22 06 37.8**	**+0.9**
	comp=N,6.4nm,0.2s,SNR=7.9						
PMAFR				Sn	**Sn**	**22 07 01.6**	**-3.1**
	comp=N,35nm,0.4s,SNR=7.9						
PMAFR				Lg	Lg	22 07 15.5	
	comp=N,186nm,0.5s,SNR=6.2						
PMAFR	**Mafra**	**2.89**	**221**	⇓*e*Pn	**Pn**	**22 06 29.9**	**-0.8**
PMAFR	**Mafra**	**2.89**	**221**	Pg	**Pb**	**22 06 37.8**	**+0.9**
	comp=N,6.4nm,0.2s,SNR=7.9						
PMAFR				Lg	Lg	22 07 15.5	
	comp=N,186nm,0.5s,SNR=6.2						
PMAFR				*e*Sg	**Sb**	**22 07 16.8**	**+4.9**
PBAR	**Barrancos**	**2.98**	**183**	*e*Pn	**Pn**	**22 06 31.6**	**-0.2**
PBAR				*e*Sg	**Sb**	**22 07 17.1**	**+2.7**
PBAR				A	A	22 07 19.7	
	comp=N,187nm,0.8s						
PBAR	**Barrancos**	**2.98**	**183**	Pn	**Pn**	**22 06 31.6**	**-0.2**
PBAR				Lg	Lg	22 07 17.1	
	comp=N,187nm,0.8s						
PBAR	**Barrancos**	**2.98**	**183**	Pn	**Pn**	**22 06 31.6**	**-0.2**
PBAR				*e*Sg	**Sb**	**22 07 17.1**	**+2.7**
PMST	**Lisbon--Monsan**	**3.02**	**218**	*e*Sg	**Sb**	**22 07 21.5**	**+6.0**
PMST	**Lisbon--Monsan**	**3.02**	**218**	*e*Sg	**Sb**	**22 07 21.5**	**+6.0**
PBEJ	**Beja**	**3.23**	**195**	*e*Pn	**Pn**	**22 06 34.5**	**-0.7**
PBEJ				*e*Sg	**Sb**	**22 07 24.0**	**+2.6**
PBEJ				A	A	22 07 30.7	
	comp=N,62nm,0.5s						
PBEJ	**Beja**	**3.23**	**195**	Pn	**Pn**	**22 06 34.5**	**-0.7**
PBEJ				Lg	Lg	22 07 24.0	
	comp=N,31nm,0.5s						
PBEJ	**Beja**	**3.23**	**195**	Pn	**Pn**	**22 06 34.5**	**-0.7**
PBEJ				*e*Sg	**Sb**	**22 07 24.0**	**+2.6**
ECAB	**El Cabril**	**3.26**	**160**	Pn	**Pn**	**22 06 34.8**	**-0.9**
	comp=N,0.5nm,0.2s,SNR=14						
ECAB				Lg	Lg	22 07 24.7	
	comp=N,53nm,0.3s,SNR=19						
ECAB	**El Cabril**	**3.26**	**160**	Pn	**Pn**	**22 06 34.8**	**-0.9**
	comp=N,0.5nm,0.2s,SNR=14						
ECAB				Lg	Lg	22 07 24.7	
	comp=N,53nm,0.3s,SNR=19						
ELAN	**Lanestosa**	**3.27**	**49**	Pn	**Pn**	**22 06 36.0**	**+0.2**
	comp=N,0.1nm,0.1s,SNR=10						
ELAN				Pg	**Pb**	**22 06 46.2**	**+2.9**
	comp=N,1.2nm,0.1s,SNR=7.9						
ELAN				Sn	**Sn**	**22 07 13.3**	**-0.6**
	comp=N,8.8nm,0.2s,SNR=4.5						
ELAN				Lg	Lg	22 07 28.6	
	comp=N,72nm,0.3s,SNR=7.8						
ELAN	**Lanestosa**	**3.27**	**49**	Pn	**Pn**	**22 06 36.0**	**+0.2**
	comp=N,0.1nm,0.1s,SNR=10						
PNCL	**Nicolau / Gran**	**3.31**	**204**	*e*Pn	**P

	comp=N,117nm,0.5s					
PTEO	**Sao Teotonio**	**3.89 203**	Pn	**Pn**	**22 06 43.4**	**-0.9**
PTEO			Lg	Lg	22 07 45.4	
	comp=N,58nm,0.5s					
PTEO	**Sao Teotonio**	**3.89 203**	Pn	**Pn**	**22 06 43.4**	**-0.9**
PTEO			*e*Sg	**Sb**	**22 07 45.4**	**+4.8**
PBDV	**Barranco-do-Ve**	**4.00 193**	*e*Pn	**Pn**	**22 06 45.2**	**-0.6**
PBDV			*e*Sg	**Sb**	**22 07 49.1**	**+5.4**
PBDV			A	A	22 08 01.0	
	comp=N,50nm,0.4s					
PBDV	**Barranco-do-Ve**	**4.00 193**	Pn	**Pn**	**22 06 45.2**	**-0.6**
PBDV			Lg	Lg	22 07 49.1	
	comp=N,50nm,0.4s					
PBDV	**Barranco-do-Ve**	**4.00 193**	Pn	**Pn**	**22 06 45.2**	**-0.6**
PBDV			*e*Sg	**Sb**	**22 07 49.1**	**+5.4**
MORF	**Marmelete**	**4.10 201**	*e*P	**Pn**	**22 06 46.3**	**-0.9**
MORF	**Marmelete**	**4.10 201**	*e*Pn	**Pn**	**22 06 46.3**	**-0.9**
MORF			*e*Sg	**Sb**	**22 07 51.8**	**+5.3**
MORF			A	A	22 07 56.6	
	comp=N,33nm,0.4s					
MORF	**Marmelete**	**4.10 201**	Pn	**Pn**	**22 06 46.3**	**-0.9**
MORF			Lg	Lg	22 07 51.8	
	comp=N,33nm,0.4s					
MORF	**Marmelete**	**4.10 201**	Pn	**Pn**	**22 06 46.3**	**-0.9**
MORF			*e*Sg	**Sb**	**22 07 51.8**	**+5.3**
PFVI	**Vila Bisbo**	**4.31 202**	*e*Sg	**Sb**	**22 07 58.3**	**+5.8**
PFVI			A	A	22 08 04.2	
	comp=N,49nm,0.7s					
PFVI	**Vila Bisbo**	**4.31 202**	Pn	**Pn**	**22 06 50.1**	**0.0**
	comp=N,0.7nm,0.1s,SNR=7.9					
PFVI			Sn	**Sn**	**22 07 35.2**	**-4.3**
	comp=N,3.7nm,0.2s,SNR=7.9					
PFVI			Lg	Lg	22 07 58.2	
	comp=N,104nm,0.6s,SNR=7.9					
PFVI	**Vila Bisbo**	**4.31 202**	Pn	**Pn**	**22 06 50.1**	**0.0**
	comp=N,0.7nm,0.1s,SNR=7.9					
PFVI			Lg	Lg	22 07 58.2	
	comp=N,104nm,0.6s,SNR=7.9					
PFVI			*e*Sg	**Sb**	**22 07 58.3**	**+5.8**
EQES	**Quesada**	**4.43 138**	Pn	**Pn**	**22 06 51.9**	**0.0**
	comp=N,0.3nm,0.2s,SNR=8.0					
EQES			Sn	**Sn**	**22 07 39.3**	**-3.5**
	comp=N,4.7nm,0.3s,SNR=7.9					
EQES			Lg	Lg	22 08 01.9	
	comp=N,123nm,0.9s,SNR=7.1					
EQES	**Quesada**	**4.43 138**	Pn	**Pn**	**22 06 51.9**	**0.0**
	comp=N,0.3nm,0.2s,SNR=8.0					
EQES			Sn	**Sn**	**22 07 39.3**	**-3.5**
	comp=N,4.7nm,0.3s,SNR=7.9					
EQES			Lg	Lg	22 08 01.9	
	comp=N,123nm,0.9s,SNR=7.1					
EALK	**Alkurruntz**	**4.46 61**	Pn	**Pn**	**22 06 52.6**	**+0.4**
	comp=N,1.6nm,0.2s,SNR=9.4					
EALK			Sn	**Sn**	**22 07 42.8**	**-0.6**
	comp=N,8.2nm,0.2s,SNR=7.9					
EALK			Lg	Lg	22 08 02.4	
	comp=N,53nm,0.5s,SNR=5.0					
EALK	**Alkurruntz**	**4.46 61**	Pn	**Pn**	**22 06 52.6**	**+0.4**
	comp=N,1.6nm,0.2s,SNR=9.4					
EALK			Sn	**Sn**	**22 07 42.8**	**-0.6**
	comp=N,8.2nm,0.2s,SNR=7.9					
EALK			Lg	Lg	22 08 02.3	
	comp=N,53nm,0.5s,SNR=5.0					
EORO	**Oroz-Betelu**	**4.46 65**	Pn	**Pn**	**22 06 51.9**	**-0.3**
	comp=N,0.7nm,0.1s,SNR=18					
EORO			Sn	**Sn**	**22 07 41.2**	**-2.2**
	comp=N,5.8nm,0.1s,SNR=7.9					
EORO			Lg	Lg	22 08 04.2	
	comp=N,47nm,0.4s,SNR=5.8					
EORO	**Oroz-Betelu**	**4.46 65**	Pn	**Pn**	**22 06 51.9**	**-0.3**
	comp=N,0.7nm,0.1s,SNR=18					
EORO			Sn	**Sn**	**22 07 41.2**	**-2.2**
	comp=N,5.8nm,0.1s,SNR=7.9					
EORO			Lg	Lg	22 08 04.2	
	comp=N,47nm,0.4s,SNR=5.8					
SESP	**Santiago Espad**	**4.48 131**	Pn	**Pn**	**22 06 52.2**	**-0.4**
	comp=N,1.0nm,0.2s,SNR=7.9					
SESP			Sn	**Sn**	**22 07 40.1**	**-4.0**
	comp=N,4.7nm,0.2s,SNR=7.9					
SESP			Lg	Lg	22 08 04.3	
	comp=N,181nm,0.8s,SNR=7.9					
SESP	**Santiago Espad**	**4.48 131**	Pn	**Pn**	**22 06 52.2**	**-0.4**
	comp=N,1.0nm,0.2s,SNR=7.9					
SESP			Lg	Lg	22 08 04.3	
	comp=N,181nm,0.8s,SNR=7.9					
IELO	**Elcoad**	**4.49 66**	Pn	**Pn**	**22 06 52.7**	**0.0**
	comp=N,2.1nm,0.2s,SNR=7.9					
IELO			Sn	**Sn**	**22 07 43.0**	**-1.2**
	comp=N,15nm,0.3s,SNR=7.9					
IELO			Lg	Lg	22 08 04.8	
	comp=N,32nm,0.4s,SNR=7.9					
IELO	**Elcoad**	**4.49 66**	Pn	**Pn**	**22 06 52.7**	**0.0**
	comp=N,2.1nm,0.2s,SNR=7.9					
IELO			Sn	**Sn**	**22 07 43.0**	**-1.2**
	comp=N,15nm,0.3s,SNR=7.9					
IELO			Lg	Lg	22 08 04.8	
	comp=N,32nm,0.4s,SNR=7.9					
EGOR	**Sierra Gorda,**	**4.56 152**	Pn	**Pn**	**22 06 54.7**	**+1.0**
	comp=N,0.2nm,0.1s,SNR=7.9					
EGOR			Sn	**Sn**	**22 07 44.9**	**-1.0**
	comp=N,2.8nm,0.3s,SNR=7.9					
EGOR			Lg	Lg	22 08 07.1	
	comp=N,19nm,0.4s,SNR=7.9					
EGOR	**Sierra Gorda,**	**4.56 152**	Pn	**Pn**	**22 06 54.7**	**+1.0**
	comp=N,0.2nm,0.1s,SNR=7.9					
EGOR			Sn	**Sn**	**22 07 44.9**	**-1.0**
	comp=N,2.8nm,0.3s,SNR=7.9					
EGOR			Lg	Lg	22 08 07.1	
	comp=N,19nm,0.4s,SNR=7.9					
SJPF	**Ste Jean**	**4.60 63**	*e*Pn	**Pn**	**22 06 54.3**	**+0.2**
	SNR=1.0					
SJPF			*e*Sn	**Sn**	**22 07 45.0**	**-1.8**
SJPF			*e*Sg	Sb	22 08 09.7	+8.7
	comp=N,19nm,0.4s					
SJPF	**Ste Jean**	**4.60 63**	*e*Pn	**Pn**	**22 06 54.3**	**+0.2**
	SNR=1.0					
SJPF			*e*Sn	**Sn**	**22 07 45.0**	**-1.8**
SJPF			*e*Sg	Sb	22 08 09.7	+8.7
	comp=N,9.3nm,0.4s					
GORA	**Gorafe**	**4.70 140**	Sn	**Sn**	**22 07 47.7**	**-1.6**
	comp=N,6.3nm,0.2s,SNR=7.9					
GORA			Lg	Lg	22 08 11.3	
	comp=N,80nm,0.6s,SNR=7.9					
GORA	**Gorafe**	**4.70 140**	Sn	**Sn**	**22 07 47.7**	**-1.6**
	comp=N,6.3nm,0.2s,SNR=7.9					
GORA			Lg	Lg	22 08 11.3	
	comp=N,80nm,0.6s,SNR=7.9					
EQUE	**Quentar**	**4.74 145**	Pn	**Pn**	**22 06 56.7**	**+0.6**
	comp=N,0.3nm,0.1s,SNR=6.3					
EQUE			Sn	**Sn**	**22 07 46.7**	**-3.7**
	comp=N,5.6nm,0.4s,SNR=7.9					
EQUE			Lg	Lg	22 08 14.8	
	comp=N,35nm,0.4s,SNR=5.0					
EQUE	**Quentar**	**4.74 145**	Pn	**Pn**	**22 06 56.7**	**+0.6**
	comp=N,0.3nm,0.1s,SNR=6.3					
EQUE			Sn	**Sn**	**22 07 46.7**	**-3.7**
	comp=N,5.6nm,0.4s,SNR=7.9					
EQUE			Lg	Lg	22 08 14.8	
	comp=N,35nm,0.4s,SNR=5.0					
ETOB	**Tobarra**	**4.77 120**	Pn	**Pn**	**22 06 55.6**	**-0.9**
	comp=N,1.8nm,0.2s,SNR=31					
ETOB			Sn	**Sn**	**22 07 47.2**	**-3.9**
	comp=N,5.0nm,0.3s,SNR=7.9					
ETOB			Lg	Lg	22 08 13.7	
	comp=N,80nm,0.6s,SNR=5.0					
ETOB	**Tobarra**	**4.77 120**	Pn	**Pn**	**22 06 55.6**	**-0.9**
	comp=N,1.8nm,0.2s,SNR=31					
ETOB			Lg	Lg	22 08 13.7	
	comp=N,80nm,0.6s,SNR=5.0					
ESAC	**San Caprasio**	**4.81 81**	Pn	**Pn**	**22 06 57.8**	**+0.7**
	comp=N,20nm,0.3s,SNR=12					
ESAC			Sn	**Sn**	**22 07 49.8**	**-2.3**
	comp=N,48nm,0.3s,SNR=7.9					
ESAC			Lg	Lg	22 08 17.3	
	comp=N,72nm,0.3s,SNR=5.0					
ESAC	**San Caprasio**	**4.81 81**	Pn	**Pn**	**22 06 57.8**	**+0.7**
	comp=N,20nm,0.3s,SNR=12					
ESAC			Sn	**Sn**	**22 07 49.8**	**-2.3**
	comp=N,48nm,0.3s,SNR=7.9					
ESAC			Lg	Lg	22 08 17.3	
	comp=N,72nm,0.3s,SNR=5.0					
EMIJ	**Mijas**	**4.86 160**	Pn	**Pn**	**22 06 58.3**	**+0.7**
	comp=N,0.6nm,0.2s,SNR=6.8					
EMIJ			Sn	**Sn**	**22 07 51.0**	**-2.1**
	comp=N,2.6nm,0.3s,SNR=5.0					
EMIJ	**Mijas**	**4.86 160**	Pn	**Pn**	**22 06 58.3**	**+0.7**
	comp=N,0.6nm,0.2s,SNR=6.8					
EMIJ			Sn	**Sn**	**22 07 51.0**	**-2.1**
	comp=N,2.6nm,0.3s,SNR=5.0					
EMOS	**Mosqueruela**	**4.89 97**	Pn	**Pn**	**22 06 58.7**	**+0.5**
	comp=N,2.7nm,0.3s,SNR=12					
EMOS			Sn	**Sn**	**22 07 51.3**	**-2.9**
	comp=N,4.1nm,0.2s,SNR=7.9					
EMOS	**Mosqueruela**	**4.89 97**	Pn	**Pn**	**22 06 58.7**	**+0.5**
	comp=N,2.7nm,0.3s,SNR=12					
EMOS			Sn	**Sn**	**22 07 51.3**	**-2.9**
	comp=N,4.1nm,0.2s,SNR=7.9					
ATE	**Arette**	**4.95 65**	Pn	**Pn**	**22 06 59.5**	**+0.6**
	comp=N,1.3nm,0.2s,SNR=7.9					
ATE			Sn	**Sn**	**22 07 54.1**	**-1.3**
	comp=N,24nm,0.3s,SNR=7.9					
ATE			Lg	Lg	22 08 20.7	
	comp=N,18nm,0.4s,SNR=7.9					
ATE	**Arette**	**4.95 65**	Pn	**Pn**	**22 06 59.5**	**+0.6**
	comp=N,1.3nm,0.2s,SNR=7.9					
ATE			Sn	**Sn**	**22 07 54.1**	**-1.3**
	comp=N,24nm,0.3s,SNR=7.9					
ATE			Lg	Lg	22 08 20.7	
	comp=N,18nm,0.4s,SNR=7.9					
ELGU	**Los Guajares,**	**4.95 149**	Pn	**Pn**	**22 06 59.5**	**+0.5**
	comp=N,0.2nm,0.2s,SNR=7.9					
ELGU			Sn	**Sn**	**22 07 52.9**	**-2.7**
	comp=N,1.2nm,0.2s,SNR=7.9					
ELGU			Lg	Lg	22 08 21.3	
	comp=N,31nm,0.5s,SNR=7.9					
ELGU	**Los Guajares,**	**4.95 149**	Pn	**Pn**	**22 06 59.5**	**+0.5**
	comp=N,0.2nm,0.2s,SNR=7.9					
ELGU			Sn	**Sn**	**22 07 52.9**	**-2.7**
	comp=N,1.2nm,0.2s,SNR=7.9					
ELGU			Lg	Lg	22 08 21.3	
	comp=N,31nm,0.5s,SNR=7.9					
ETSF	**Etsaut**	**4.98 67**	*e*Pn	**Pn**	**22 06 59.8**	**+0.4**
	SNR=1.0					
ETSF			*e*Sn	**Sn**	**22 07 53.9**	**-2.4**
	SNR=1.0					
ETSF			*e*Sg	Sb	22 08 21.2	+9.2
	comp=N,11nm,0.3s,SNR=1.0					
ETSF	**Etsaut**	**4.98 67**	*e*Pn	**Pn**	**22 06 59.8**	**+0.4**
	SNR=1.0					
ETSF			*e*Sn	**Sn**	**22 07 53.9**	**-2.4**
	SNR=1.0					
ETSF			*e*Sg	Sb	22 08 21.2	+9.2
	comp=N,5.5nm,0.3s,SNR=1.0					
ERTA	**Horta de San J**	**5.42 90**	Pn	**Pn**	**22 07 05.4**	**+0.1**
	comp=N,0.7nm,0.1s,SNR=6.1					
ERTA			Sn	**Sn**	**22 08 04.2**	**-2.7**
	comp=N,6.2nm,0.3s,SNR=7.9					
ERTA	**Horta de San J**	**5.42 90**	Pn	**Pn**	**22 07 05.4**	**+0.1**
	comp=N,0.7nm,0.1s,SNR=6.1					
ERTA			Sn	**Sn**	**22 08 04.2**	**-2.7**
	comp=N,6.2nm,0.3s,SNR=7.9					
AFON	**Font Roja**	**5.43 115**	Lg	Lg	22 08 36.9	
	comp=N,45nm,0.5s,SNR=7.9					
AFON	**Font Roja**	**5.43 115**	Lg	Lg	22 08 36.9	
	comp=N,45nm,0.5s,SNR=7.9					
EMUR	**La Murta**	**5.44 126**	Pn	**Pn**	**22 07 04.9**	**-0.8**
	comp=N,1.6nm,0.2s,SNR=10					
EMUR			Sn	**Sn**	**22 08 02.2**	**-5.3**
	comp=N,5.6nm,0.5s,SNR=7.9					
EMUR			Lg	Lg	22 08 33.9	
	comp=N,19nm,0.4s,SNR=5.0					
EMUR	**La Murta**	**5.44 126**	Pn	**Pn**	**22 07 04.9**	**-0.8**
	comp=N,1.6nm,0.2s,SNR=10					
EMUR			Lg	Lg	22 08 33.9	
	comp=N,19nm,0.4s,SNR=5.0					
ECHI	**Chisagues Biel**	**5.45 72**	Pn	**Pn**	**22 07 06.2**	**+0.3**
	comp=N,0.5nm,0.1s,SNR=7.9					
ECHI			Sn	**Sn**	**22 08 04.2**	**-3.8**
	comp=N,3.9nm,0.2s,SNR=7.9					
ECHI	**Chisagues Biel**	**5.45 72**	Pn	**Pn**	**22 07 06.2**	**+0.3**
	comp=N,0.5nm,0.1s,SNR=7.9					
ENIJ	**Nijar**	**5.51 138**	Pn	**Pn**	**22 07 07.6**	**+1.0**
	comp=N,0.7nm,0.2s,SNR=7.9					
ENIJ			Sn	**Sn**	**22 08 05.4**	**-3.9**
	comp=N,8.2nm,0.6s,SNR=7.9					
ENIJ			Lg	Lg	22 08 37.2	
	comp=N,57nm,0.8s,SNR=7.9					
ENIJ	**Nijar**	**5.51 138**	Pn	**Pn**	**22 07 07.6**	**+1.0**
	comp=N,0.7nm,0.2s,SNR=7.9					
ENIJ			Lg	Lg	22 08 37.2	
	comp=N,57nm,0.8s,SNR=7.9					
EPF	**Esparros**	**5.65 68**	*e*Pn	**Pn**	**22 07 09.4**	**+0.8**
	SNR=1.0					
EPF			*e*Sn	**Sn**	**22 08 09.7**	**-3.0**
	comp=N,10nm,0.2s,SNR=1.0					
EPF	**Esparros**	**5.65 68**	*e*Pn	**Pn**	**22 07 09.4**	**+0.8**
	SNR=1.0					
EBEN2	**Beniarda presa**	**5.67 114**	Pn	**Pn**	**22 07 08.9**	**+0.1**
	SNR=7.9					
EBEN2			Lg	Lg	22 08 44.7	
	comp=N,49nm,0.6s,SNR=7.9					
EPOB	**Poblet**	**5.96 86**	Pn	**Pn**	**22 07 12.3**	**-0.5**
	comp=N,1.4nm,0.2s,SNR=6.1					
EPOB			Sn	**Sn**	**22 08 16.1**	**-4.3**
	comp=N,2.0nm,0.2s,SNR=7.9					
EPOB	**Poblet**	**5.96 86**	Pn	**Pn**	**22 07 12.3**	**-0.5**
	comp=N,1.4nm,0.2s,SNR=6.1					
CSOR	**Sort**	**6.08 76**	Pn	**Pn**	**22 07 15.2**	**+0.7**
	comp=N,0.7nm,0.2s,SNR=7.9					
CSOR			Sn	**Sn**	**22 08 18.9**	**-4.4**
	comp=N,4.5nm,0.4s,SNR=7.9					
CSOR	**Sort**	**6.08 76**	Pn	**Pn**	**22 07 15.2**	**+0.7**
	comp=N,0.7nm,0.2s,SNR=7.9					
EIBI	**Ibiza**	**6.62 106**	Pn	**Pn**	**22 07 21.0**	**-0.8**
	comp=N,2.4nm,0.3s,SNR=7.9					
EIBI			Sn	**Sn**	**22 08 30.8**	**-5.6**
	comp=N,2.8nm,0.3s,SNR=7.9					
EIBI	**Ibiza**	**6.62 106**	Pn	**Pn**	**22 07 21.0**	**-0.8**
	comp=N,2.4nm,0.3s,SNR=7.9					
CLLI	**Llivia**	**6.71 76**	Pn	**Pn**	**22 07 23.8**	**+0.7**
	comp=N,0.5nm,0.2s,SNR=6.6					
CLLI			Sn	**Sn**	**22 08 34.6**	**-4.3**
	comp=N,1.6nm,0.3s,SNR=5.0					
CLLI	**Llivia**	**6.71 76**	Pn	**Pn**	**22 07 23.8**	**+0.7**
	comp=N,0.5nm,0.2s,SNR=6.6					
LFF	**La Frestale**	**6.71 53**	*e*Pn	**Pn**	**22 07 22.9**	**-0.1**
	SNR=1.0					
LFF			*e*Sn	**Sn**	**22 08 35.3**	**-3.4**
	comp=N,4.0nm,0.3s					
LFF	**La Frestale**	**6.71 53**	*e*Pn	**Pn**	**22 07 22.9**	**-0.1**
	SNR=1.0					
CFON	**Fontmartina**	**6.99 82**	Pn	**Pn**	**22 07 26.6**	**-0.3**
	comp=N,2.0nm,0.2s,SNR=9.2					
CFON			Sn	**Sn**	**22 08 42.1**	**-3.5**
	comp=N,9.3nm,0.3s,SNR=5.0					
CFON	**Fontmartina**	**6.99 82**	Pn	**Pn**	**22 07 26.6**	**-0.3**
	comp=N,2.0nm,0.2s,SNR=9.2					
MTLF	**Montolieu**	**7.06 69**	*e*Pn	**Pn**	**22 07 28.0**	**+0.2**
	SNR=1.0					
MTLF			*e*Sn	**Sn**	**22 08 41.2**	**-6.1**
	comp=N,3.6nm,0.5s,SNR=1.0					
MTLF	**Montolieu**	**7.06 69**	*e*Pn	**Pn**	**22 07 28.0**	**+0.2**
	SNR=1.0					
QUIF	**Quistinic**	**7.25 20**	*e*Pn	**Pn**	**22 07 29.9**	**-0.5**
	SNR=1.0					
QUIF			*e*Sn	**Sn**	**22 08 47.2**	**-4.7**
	comp=N,1.3nm,0.2s					
QUIF	**Quistinic**	**7.25 20**	*e*Pn	**Pn**	**22 07 29.9**	**-0.5**
	SNR=1.0					
MFF	**Saint Martin d**	**7.28 39**	*e*Pn	**Pn**	**22 07 30.5**	**-0.3**
	SNR=1.0					
MFF			*e*Sn	**Sn**	**22 08 47.6**	**-5.0**
	comp=N,3.4nm,0.4s,SNR=1.0					
MFF	**Saint Martin d**	**7.28 39**	*e*Pn	**Pn**	**22 07 30.5**	**-0.3**
	SNR=1.0					
RJF	**Les Rejaudoux**	**7.37 53**	*e*Pn	**Pn**	**22 07 31.1**	**-1.0**
	SNR=1.0					
RJF			*e*Sn	**Sn**	**22 08 49.0**	**-5.9**
	comp=N,5.5nm,0.2s,SNR=1.0					
RJF	**Les Rejaudoux**	**7.37 53**	*e*Pn	**Pn**	**22 07 31.1**	**-1.0**
	SNR=1.0					
ETOS	**Mallorca**	**7.48 98**	Pn	**Pn**	**22 07 33.4**	**-0.2**
	comp=N,0.9nm,0.4s,SNR=7.9					
ETOS			Sn	**Sn**	**22 08 50.1**	**-7.7**
	comp=N,1.7nm,0.3s,SNR=7.9					
ETOS	**Mallorca**	**7.48 98**	Pn	**Pn**	**22 07 33.4**	**-0.2**
	comp=N,0.9nm,0.4s,SNR=7.9					
CAF	**Calviac**	**7.52 57**	*e*Pn	**Pn**	**22 07 32.9**	**-1.3**
	SNR=1.0					
CAF			*e*Sn	**Sn**	**22 08 52.8**	**-6.0**
	comp=N,2.9nm,0.3s					
CAF	**Calviac**	**7.52 57**	*e*Pn	**Pn**	**22 07 32.9**	**-1.3**
	SNR=1.0					
ROSF	**Rostrenen**	**7.61 18**	*e*Pn	**Pn**	**22 07 35.5**	**+0.1**
	SNR=1.0					
ROSF			*e*Sn	**Sn**	**22 08 56.2**	**-4.6**
	comp=N,3.0nm,0.3s,SNR=1.0					
ROSF	**Rostrenen**	**7.61 18**	*e*Pn	**Pn**	**22 07 35.5**	**+0.1**
	SNR=1.0					
SGMF	**Saint Gilles**	**7.72 22**	*e*Pn	**Pn**	**22 07 36.2**	**-0.7**
	SNR=1.0					
SGMF	**Saint Gilles**	**7.72 22**	*e*Pn	**Pn**	**22 07 36.2**	**-0.7**
	SNR=1.0					
TCF	**Toulx Ste Croi**	**8.31 49**	*e*Pn	**Pn**	**22 07 43.0**	**-2.1**
	SNR=1.0					
TCF			*e*Sn	**Sn**	**22 09 12.2**	**-6.0**
	comp=N,3.5nm,0.3s,SNR=1.0					
TCF	**Toulx Ste Croi**	**8.31 49**	*e*Pn	**Pn**	**22 07 43.0**	**-2.1**
	SNR=1.0					
LASF	**Ste Croix**	**8.40 66**	*e*Pn	**Pn**	**22 07 45.9**	**-0.4**
LASF	**Ste Croix**	**8.40 66**	*e*Pn	**Pn**	**22 07 45.9**	**-0.4**
LDF	**La Druitiere**	**8.83 30**	*e*Pn	**Pn**	**22 07 52.0**	**0.0**
	SNR=1.0					
LDF			*e*Sn	**Sn**	**22 09 24.2**	**-6.5**
	comp=N,2.6nm,0.5s,SNR=1.0					
LDF	**La Druitiere**	**8.83 30**	*e*Pn	**Pn**	**22 07 52.0**	**0.0**
	SNR=1.0					
BGF	**Bois d'Agland**	**8.83 49**	*e*Sn	**Sn**	**22 09 26.1**	**-4.7**
	comp=N,3.7nm,0.3s					
BGF	**Bois d'Agland**	**8.83 49**	Sn	**Sn**	**22 09 26.1**	**-4.7**
	comp=N,1.9nm,0.3s					
VIVF	**Saint-Julien-l**	**9.20 62**	*e*Pn	**Pn**	**22 07 57.7**	**+0.5**
VIVF	**Saint-Julien-l**	**9.20 62**	Pn	**Pn**	**22 07 57.7**	**+0.5**
VIVF	**Saint-Julien-l**	**9.20 62**	Pn	**Pn**	**22 07 57.7**	**+0.5**
AVF	**Avril sur Loir**	**9.25 49**	*e*Pn	**Pn**	**22 07 56.5**	**-1.3**
	SNR=1.0					
AVF	**Avril sur Loir**	**9.25 49**	Pn	**Pn**	**22 07 56.5**	**-1.3**
AVF	**Avril sur Loir**	**9.25 49**	Pn	**Pn**	**22 07 56.5**	**-1.3**

ISCJB ***19*** *22:24:38.0±0.6,29.°43S±0.°03×67.°80W±0.°04, h128km±6km, Error ellipse: s-maj=5.9km s-min=5.6km az=173.7*
SJA ***19*** *22:24:38.4±0.9,29.°50S×67.°79W, h119km±5km, ML3.2, MW3.4*
GUC ***19*** *22:24:39.7±0.7,29.°38S×67.°94W, h123km±4km, ML3.5*
ISC 19 22:24:38.5±1.4,**29.°45S**±0.°04×**67.°78W**±0.°04,**h126**km±9km,
n26,σ0**°62/37,6D,La Rioja Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGUA	**GUANDACOL**	**0.62**	**266**	*e*P	**Pn**	**22 24 57.7**	**-0.3**
AGUA				*e*S	**Sn**	**22 25 11.7**	**-1.0**
ACLC	**CERRO LA CRUZ**	**0.73**	**89**	*e*P	**Pn**	**22 24 59.1**	**+0.3**
ACLC				*e*S	**Sn**	**22 25 13.9**	**-0.2**
VCA	**Vinchina**	**0.80**	**332**	*e*P	**Pn**	**22 24 60.0**	**+0.5**
VCA				*e*S	**Sn**	**22 25 15.7**	**+0.5**
VCA				IAML		22 25 19.7	
	comp=Z,324nm,0.3s						
VCA	**Vinchina**	**0.80**	**332**	⇓*i*P	**Pn**	**22 24 60.0**	**+0.5**
VCA				*i* S	**Sn**	**22 25 15.8**	**+0.5**
ACDV	**Cuesta del Vie**	**1.37**	**238**	*e*P	**Pn**	**22 25 05.3**	**+0.3**
ACDV				IAML		22 25 05.5	
	comp=Z,313nm,0.5s						
ACDV				*e*S	**Sn**	**22 25 24.6**	**-0.5**
APLL	**PUNTA DE LOS L**	**1.44**	**131**	*e*P	**Pn**	**22 25 05.8**	**+0.1**
APLL				IAML		22 25 06.0	
	comp=Z,197nm,0.2s						
AMOG	**MOGNA**	**1.61**	**202**	*e*P	**Pn**	**22 25 07.4**	**-0.2**
AROD	**Rodeo**	**1.64**	**244**	*e*P	**Pn**	**22 25 08.7**	**+0.5**
RTLL	**Cerro Villicun**	**1.97**	**197**	*e*P	**Pn**	**22 25 12.0**	**0.0**
RTLL				IAML		22 25 12.3	
	comp=Z,321nm,0.3s						
CYA	**Choya**	**2.00**	**61**	*e*P	**Pn**	**22 25 13.0**	**+0.6**
CYA				IAML		22 25 38.7	
	comp=Z,123nm,0.2s						
SJA	**San Juan**	**2.18**	**198**	*e*P	**Pn**	**22 25 15.2**	**+0.6**
ZON	**Zonda**	**2.23**	**200**	*e*P	**Pn**	**22 25 15.2**	**0.0**
ZON				IAML		22 25 43.6	
	comp=Z,80nm,0.7s						
RTCV	**Cerro Valdivia**	**2.50**	**195**	*e*P	**Pn**	**22 25 18.6**	**+0.1**
LCO	**Las Campanas**	**2.59**	**279**	⇓*i*P	**Pn**	**22 25 20.3**	**+0.4**
LCO				*i* S	**Sn**	**22 25 51.0**	**-0.7**
LCO				IAML		22 25 53.9	
	comp=E,226nm,0.2s						
RTLS	**Leoncito**	**2.68**	**209**	*e*P	**Pn**	**22 25 21.5**	**+0.4**
RTLS				IAML		22 25 22.4	
	comp=Z,90nm,0.4s						
GO04	**Tololo Observa**	**2.72**	**254**	⇓*i*P	**Pn**	**22 25 22.1**	**+0.5**
GO04				*i* S	**Sn**	**22 25 55.0**	**+0.3**
TLL	**Tololo Astrono**	**2.72**	**254**	⇓*i*P	**Pn**	**22 25 22.1**	**+0.4**
TLL				*i* S	**Sn**	**22 25 55.0**	**+0.3**
GO03	**Copiap**	**2.84**	**310**	⇓*i*P	**Pn**	**22 25 23.1**	**+0.1**
GO03				*i* S	**Sn**	**22 25 55.5**	**-1.7**
GO03				IAML		22 25 57.3	
	comp=N,156nm,0.3s						
ACAN	**Cantantal**	**2.87**	**170**	*e*P	**Pn**	**22 25 23.7**	**+0.5**
ASAL	**Salagasta**	**3.26**	**196**	*e*P	**Pn**	**22 25 28.9**	**+0.4**
TCA	**Tanti**	**3.34**	**125**	*e*P	**Pn**	**22 25 29.0**	**-0.5**
TCA				IAML		22 26 28.1	
	comp=Z,42nm,0.5s						
AHML	**Horco Molle**	**3.42**	**40**	*e*P	**Pn**	**22 25 31.0**	**+0.4**
AHML				IAML		22 25 31.4	
	comp=Z,26nm,0.3s						
ARCO	**

MAJO Matsushiro 3.08 250 *e*Pn **Pn 22 29 34.6 +1.5**
MAJO *e*Sn **Sn 22 30 08.1 -0.6**
MAJO Matsushiro 3.08 250*d i*P **Pn 22 29 34.7 +1.7**
MAT Matsushiro 3.08 250 P **Pn 22 29 34.7 +1.7**
MAT *e*S **Sn 22 30 14.9 +6.2**
MJB9 Matsu-Tunnel 3.08 250 *e*Pn **Pn 22 29 34.9 +1.9**
INU Inuyama 4.49 241 *e*Pn **Pn 22 29 54.7 +2.3**
ERM Erimo 4.50 13 *e*Pn **Pn 22 29 53.8 +1.4**
ERM Erimo 4.50 13*de*P **Pn 22 29 53.2 +0.8**
JHJ2 Mitsune 4.80 200 *e*Pn **Pn 22 29 56.2 -0.3**
JHJ Hachijo jima 2 4.80 201 P **Pn 22 29 57.6 +1.0**
125nm,0.3s,baz=126,slow=22,SNR=15
JHJ S **Sn 22 30 49.9 -1.1**
316nm,0.3s,baz=73,slow=19,SNR=12
JHJ LR LR 22 31 18.4
comp=Z,692nm,20.0s,baz=58,slow=31
ASAJ Asahikawa 6.50 5 P **Pn 22 30 20.4 +0.5**
6.0nm,0.3s,baz=209,slow=12,SNR=16
ASAJ S **Sn 22 31 28.5 -4.4**
4.2nm,0.3s,baz=15,slow=19,SNR=1.9
ASAJ LR LR 22 33 37.2
comp=Z,395nm,21.1s,baz=186,slow=45
ASAJ Asahikawa 6.50 5 *e*Pn **Pn 22 30 20.1 +0.2**
ASAJ *e*Sn **Sn 22 31 28.5 -4.4**
YUK Yuzh-Kuril'sk 7.09 24 *e*P **Pn 22 30 28.5 +0.5**
YUK *i*S **Sn 22 31 42.7 -4.6**
YUK pmax pmax
comp=N,57nm,0.3s
YUK pmax pmax
comp=Z,213nm,0.3s
YUK MLR MLR
comp=Z,445nm,16.0s
SHO Shikotan 7.30 30 *e*P **Pn 22 30 31.0 +0.1**
SHO *e*S **Sn 22 31 47.8 -4.6**
SHO pmax pmax
comp=Z,43nm,0.3s
SHO MLR MLR
comp=Z,576nm,15.0s
TEY Ternei 8.37 334 *e*P Pn 22 30 50.5 +5.0
TEY pmax pmax
comp=N,50nm,0.7s
TEY pmax pmax
comp=E,20nm,0.7s
TEY pmax pmax
comp=Z,40nm,0.7s
KUR Kuril'sk 8.85 29 *e*P **Pn 22 30 52.0 -0.1**
KUR *i*S **Sn 22 32 25.1 -5.3**
KUR pmax pmax
comp=Z,87nm,0.7s
KUR pmax pmax
comp=N,42nm,0.6s
KUR pmax pmax
comp=E,32nm,0.4s
KUR smax smax
comp=E,165nm,0.5s
KUR smax smax
comp=N,79nm,0.3s
YSS Yuzh-Sakhalins 9.34 4 *e*Pn **Pn 22 31 01.3 +2.5**
YSS Yuzh-Sakhalins 9.34 4 *e*P **Pn 22 31 00.9 +2.1**
YSS *e*S **Sn 22 32 42.6 +0.1**
YSS pmax pmax
comp=Z,40nm,1.1s
YSS MLR MLR
comp=Z,200nm,15.0s
MSHR Mys Shultsa 9.54 304 *e*P **Pn 22 30 59.9 -1.7**
USRK Ussuriysk Ar. 9.91 315 P **Pn 22 31 07.7 +1.0**
comp=Z,4.2nm,0.3s,baz=125,slow=13,SNR=20
USRK S **Sn 22 33 03.0 +6.5**
baz=114,slow=35,SNR=1.4
USRK LR LR 22 34 42.8
comp=Z,1μm,18.4s,baz=117,slow=36
JNU Nakatsue 10.00 246 P **Pn 22 31 10.0 +2.0**
comp=Z,2.2nm,0.3s,baz=49,slow=7.8,SNR=21
JNU LR LR 22 35 24.5
comp=Z,1μm,20.3s,baz=122,slow=40
KSRS Korea Array 11.03 273 P **Pn 22 31 26.1 +4.0**
comp=Z,1.9nm,0.3s,baz=85,slow=14,SNR=73
KSRS LR LR 22 35 19.3
comp=Z,975nm,19.4s,baz=60,slow=36
KS01 Wonju Array Si 11.05 273 *e*Pn **Pn 22 31 26.0 +3.6**
KS15 Wonju Array Si 11.07 273 *e*Pn **Pn 22 31 25.6 +3.1**
KSAR Wonju Array Be 11.07 273 P **Pn 22 31 26.1 +3.6**
KSAR Wonju Array Be 11.07 273 P **Pn 22 31 26.1 +3.6**
MDJ Mudanjiang 11.55 311 P **Pn 22 31 30.9 +1.8**
MDJ pmax pmax
comp=Z,46nm,1.0s
MDJ pmax pmax
comp=Z,380nm,8.0s
MDJ Mudanjiang 11.55 311 *e*Pn **Pn 22 31 32.9 +3.7**
KLR Kul'dur 13.69 331 P **Pn 22 31 59.3 +1.0**
comp=Z,0.1nm,0.3s,baz=152,slow=14,SNR=8.7
KLR Kul'dur 13.69 331⇓*i*P **Pn 22 31 58.2 -0.1**
CN2 Changchun 13.85 302 *e*P **Pn 22 32 01.3 +0.8**
DL2 Dalian 15.91 281 P **Pn 22 32 28.3 +0.4**
DL2 S **Sn 22 35 23.0 0.0**
DL2 pmax pmax
comp=Z,30nm,0.9s
DL2 pmax pmax
comp=Z,200nm,6.3s
DL2 LR LR
comp=Z,480nm,13.4s
DL2 LR LR
comp=Z,750nm,19.6s
ZEA Zeya 18.99 333 *e*P **P 22 33 04.8 -0.2**
ZEA pmax pmax
comp=N,36nm,0.8s
ZEA pmax pmax
comp=Z,41nm,1.0s
PETK Petropavlovsk- 19.01 30 P **P 22 33 05.4 +0.1**
comp=Z,0.3nm,0.3s,baz=208,slow=9.1,SNR=7.5
PETK LR LR 22 41 33.7
comp=Z,139nm,19.1s,baz=222,slow=40
PETK Petropavlovsk- 19.01 30 *e*P **P 22 33 05.6 +0.4**
PETK Petropavlovsk- 19.01 30 *e*P **P 22 33 05.6 +0.4**
PEA1 Petropavlovsk- 19.01 30 *e*P **P 22 33 05.4 +0.1**
NJ2 Nanjing 19.63 260 *e*P **P 22 33 10.3 -1.9**
NJ2 pmax pmax
comp=Z,12nm,0.6s
HIA Hailar 19.72 313 *e*P **P 22 33 12.0 -1.1**
comp=Z,19nm,0.4s
HIA Hailar 19.72 313 *e*P **P 22 33 12.0 -1.1**
HIA pmax pmax
comp=Z,19nm,0.4s
TIA Tai'an 19.78 273 P **P 22 33 12.5 -1.3**
TIA pmax pmax
comp=Z,12nm,0.9s
BJI Beijing 20.10 285 P **P 22 33 15.9 -1.3**
BJI S **S 22 36 59.5 -1.4**
BJI LR LR
comp=Z,650nm,6.1s
BJI LR LR
comp=Z,370nm,10.4s
BJI LR LR
comp=Z,500nm,20.4s
BJT Baijiatuau 20.10 285 *e*P **P 22 33 15.8 -1.5**
comp=Z,63nm,0.7s
BJT Baijiatuau 20.10 285 *e*P **P 22 33 15.8 -1.5**
BJT pmax pmax
comp=Z,63nm,0.7s
SSLB Suanglung 22.56 238 *e*P **P 22 33 40.9 -3.0**
comp=Z,28nm,0.9s
MA2 Magadan 22.70 12 P **P 22 33 45.0 0.0**
comp=Z,5.6nm,0.5s,baz=171,slow=19,SNR=2.6
MA2 Magadan 22.70 12 *e*P **P 22 33 43.6 -1.4**
comp=Z,22nm,0.9s
TPUB Ta-pu 23.11 238 *e*P **P 22 33 45.9 -3.7**
comp=Z,110nm,1.2s
HHC Hu-ho-hao-te 23.59 287 *e*P **P 22 33 51.0 -3.3**
HHC pmax pmax
comp=Z,36nm,1.0s
HHC pmax pmax
comp=Z,210nm,6.9s
GUMO Guam 24.10 173 LR LR 22 43 02.8
comp=Z,49nm,21.1s,baz=32,slow=35
YAK Yakutsk 25.56 347 *e*P **P 22 34 10.7 -1.2**
comp=Z,57nm,0.7s
YAK Yakutsk 25.56 347 *e*P **P 22 34 12.0 +0.1**
YAK *e* 22 34 52.7
YAK *e* 22 37 43.0
YAK *e*S **S 22 38 31.7 -5.1**
YAK *e* 22 45 00.5
YAK pmax pmax
comp=Z,52nm,0.9s
YAK pmax pmax
comp=E,3.0nm,0.9s
YAK pmax pmax
comp=N,8.0nm,0.9s
YAK pmax pmax
comp=Z,168nm,4.4s
YAK pmax pmax
comp=N,111nm,5.0s
YAK pmax pmax
comp=E,94nm,5.2s
YAK smax smax
comp=E,44nm,1.8s
YAK smax smax
comp=N,26nm,1.5s
SEY Seymchan 26.14 11 P **P 22 34 18.9 +1.7**
comp=N,3.8nm,0.6s,baz=188,slow=4.9,SNR=8.4
SEY Seymchan 26.14 11⇑*i*P **P 22 34 18.3 +1.1**
XAN Xi'an 26.83 272 P **P 22 34 22.8 -1.0**
XAN pP pP 22 34 32.1 -2.2
XAN sP sP 22 34 36.3 -2.5
XAN PP **PnPn 22 35 06.8 +0.5**
XAN S **S 22 38 53.4 -4.2**
XAN sS sS 22 39 09.1 -6.0
XAN SS **SnSn 22 40 07.5 +3.7**
XAN pmax pmax
comp=N,26nm,0.9s
XAN pmax pmax
comp=N,290nm,6.5s
XAN LR LR
comp=N,600nm,11.5s
XAN LR LR
comp=N,550nm,12.2s
XAN LR LR
comp=N,470nm,16.5s
ULN Ulaanbaatar 27.29 303 *e*P **P 22 34 27.6 -0.3**
comp=N,11nm,0.9s
ULN Ulaanbaatar 27.29 303*c i*P **P 22 34 28.0 +0.1**
ULN *i* 22 35 10.6
ULN pmax pmax
comp=Z,17nm,1.2s
ENH Enshi 27.71 264 *e*P **P 22 34 30.7 -0.9**
comp=Z,122nm,0.8s
SONA0 Songino Array 27.72 303 *e*P **P 22 34 31.2 -0.5**
SONA0 Songino Array 27.72 303 *e*P **P 22 34 31.6 -0.2**
SONM Songino Array 27.72 303 P **P 22 34 31.6 -0.2**
comp=Z,7.4nm,0.5s,baz=101,slow=9.2,SNR=51
SONM LR LR 22 45 46.9
comp=Z,176nm,20.5s,baz=87,slow=37
H11N2 WAKE ISLAND Hy 28.19 122 T T 23 04 13.6
baz=320
H11N1 WAKE ISLAND Hy 28.20 122 T T 23 04 16.6
baz=320,slow=74
H11N3 WAKE ISLAND Hy 28.21 122 T T 23 04 17.3
baz=320,slow=74
H11S1 WAKE ISLAND Hy 28.92 124 T T 23 05 11.8
baz=316,slow=76,SNR=389
H11S3 WAKE ISLAND Hy 28.93 124 T T 23 05 09.1
baz=316,slow=76,SNR=320
H11S2 WAKE ISLAND Hy 28.94 124 T T 23 05 09.7
baz=316,slow=76,SNR=244
ZAK Zakamensk 30.15 307 *e*P **P 22 34 52.5 -0.8**
ZAK pmax pmax
comp=Z,7.0nm,1.0s
TLY Talaya 30.18 310 *e*P **P 22 34 53.0 -0.4**
TLY pmax pmax
comp=Z,6.0nm,0.6s
TLY MLR MLR
comp=Z,210nm,14.0s
LZH Lanzhou 30.29 279 ⇓P **P 22 34 54.4 -0.3**
LZH pP pP 22 35 04.1 -1.1
LZH sP sP 22 35 07.8 -1.9
LZH PP **PnPn 22 35 51.6 -1.7**
LZH *e*S **S 22 39 48.3 -3.9**
LZH sS sS 22 40 05.6 -4.1
LZH SS **SnSn 22 41 27.1 -1.1**
LZH pmax pmax
comp=Z,65nm,1.0s
LZH pmax pmax
comp=Z,310nm,5.2s
LZH LR LR
comp=Z,860nm,11.4s
LZH LR LR
comp=Z,830nm,13.6s
LZH LR LR
comp=Z,1μm,15.2s
GYA Guiyang 31.64 260⇑*i*P **P 22 35 05.3 -1.3**
GYA pP pP 22 35 16.0 -1.2
GYA PP **PnPn 22 36 11.8 +0.8**
GYA S **S 22 40 12.0 -1.5**
GYA SS **SnSn 22 42 00.6 -0.7**
GYA pmax pmax
comp=Z,50nm,1.0s
GYA pmax pmax
comp=Z,120nm,4.9s
GYA LR LR
comp=Z,580nm,15.8s
GYA LR LR
comp=Z,540nm,15.0s
GYA LR LR
comp=Z,520nm,16.4s
MOY Mondy 31.80 309 *e*P **P 22 35 07.4 -0.4**
CD2 Chengdu 32.00 269 P **P 22 35 08.3 -1.4**
CD2 pmax pmax
comp=Z,10.0nm,0.8s
GTA Gaotai 32.70 286 P **P 22 35 14.6 -1.2**
GTA pP pP 22 35 25.5 -0.9
GTA sP sP 22 35 29.3 -1.6
GTA S **S 22 40 26.0 -3.7**
GTA sS sS 22 40 42.8 -4.5
GTA SS **SnSn 22 42 24.5 -2.2**
GTA pmax pmax
comp=Z,10.0nm,0.8s
GTA pmax pmax
comp=Z,79nm,6.2s
GTA LR LR
comp=Z,230nm,19.6s
GTA LR LR
comp=Z,350nm,17.9s
GTA LR LR
comp=Z,450nm,19.2s
BILL Bilibino 33.36 16 *e*P **P 22 35 23.5 +2.4**
comp=Z,9.5nm,1.1s
BILL Bilibino 33.36 16 *e*P **P 22 35 23.0 +1.9**
BILL *e* 22 36 28.9
BILL pmax pmax
comp=Z,3.0nm,1.0s
BILL MLR MLR
comp=Z,205nm,22.0s
DAV Davao City (W) 33.81 210 LR LR 22 47 09.2
comp=Z,83nm,21.3s,baz=50,slow=32
KNGR Kungurtug, Tuv 33.83 307⇓*e*P **P 22 35 26.0 +0.4**
TIXI Tiksi 34.73 353 P **P 22 35 32.4 -0.5**
comp=Z,2.5nm,0.5s,baz=130,slow=4.5,SNR=5.9
TIXI Tiksi 34.73 353 *e*P **P 22 35 32.6 -0.4**
comp=Z,3.8nm,1.0s
TIXI Tiksi 34.73 353 *e*P **P 22 35 33.3 +0.4**
TIXI pmax pmax
comp=Z,4.0nm,1.0s
KMI Kunming 35.37 261 P **P 22 35 38.8 -0.5**
KMI pP pP 22 35 49.4 -0.5
KMI sP sP 22 35 53.3 -1.1
KMI pmax pmax
comp=Z,45nm,0.9s
KMI LR LR
comp=Z,490nm,9.7s
KMI LR LR
comp=Z,490nm,19.5s
KMI LR LR
comp=Z,360nm,13.6s
MYLDM Lahad Datu 38.68 219 *e*P **P 22 36 08.1 +1.0**
comp=Z,22nm,0.8s
NONG Nongkai 39.01 251 P **P 22 36 13.1 +3.2**
comp=Z,51nm,0.7s
DGZ Jazzator, Alta 40.30 305 *i*P **P 22 36 21.4 +0.9**
DGZ pmax pmax
comp=Z,39nm,0.9s
WMQ Urumqi 40.86 296 P **P 22 36 26.3 +1.2**
WMQ pP pP 22 36 34.9 -1.0
WMQ sP sP 22 36 38.0 -2.3
WMQ pmax pmax
comp=Z,110nm,0.9s
WMQ pmax pmax
comp=Z,140nm,4.9s
WMQ LR LR
comp=Z,310nm,32.3s
WMQ LR LR
comp=Z,260nm,27.5s
WMQ LR LR
comp=Z,410nm,23.5s
CMAI Chiengmai2 41.03 257 P **P 22 36 28.1 +1.2**
comp=Z,90nm,0.8s
PBKT Sadao Pong 41.56 251 *e*P **P 22 36 30.3 -0.7**
comp=Z,7.8nm,0.8s
ZAA0 Zalesovo Array 41.75 312 *e*P **P 22 36 31.8 -0.4**
comp=Z,13nm,0.7s
ZAA1 Zalesovo Array 41.75 312 *e*P **P 22 36 32.0 -0.1**
ZAA1 *e*PcP **PcP 22 38 28.3 +0.4**
ZAA1 *e*ScP **ScP 22 42 13.2 -2.0**
ZALV Zalesovo Beam 41.75 312 P **P 22 36 32.0 -0.1**
comp=Z,13nm,0.7s,baz=91,slow=7.4,SNR=54
ZALV PcP **PcP 22 38 28.3 +0.4**
comp=Z,1.4nm,0.6s,baz=64,slow=3.4,SNR=2.0
ZALV ScP **ScP 22 42 13.2 -2.0**
comp=Z,0.8nm,0.7s,baz=90,slow=2.9,SNR=3.1
ZALV LR LR 22 54 33.0
comp=Z,230nm,18.3s,baz=68,slow=37
ZALV Zalesovo Beam 41.75 312 *e*P **P 22 36 31.5 -0.7**
ZALV PcP **PcP 22 38 28.3 +0.4**
ZALV ScP **ScP 22 42 13.2 -2.0**
CHTO Chiang Mai 41.75 255 P **P 22 36 33.5 +0.9**
comp=Z,71nm,1.6s
CHTO Chiang Mai 41.75 255 *e*P **P 22 36 32.0 -0.6**
comp=Z,10nm,0.6s
CHTO Chiang Mai 41.75 255 *e*P **P 22 36 32.0 -0.6**
CHTO pmax pmax
comp=Z,10.0nm,0.6s
CM31 Chiang Mai Arr 41.96 255 *e*P **P 22 36 34.1 -0.2**
CMAR Chiang Mai Arr 41.96 255 P **P 22 36 34.1 -0.2**
comp=Z,2.0nm,0.4s,baz=43,slow=9.0,SNR=13
CMAR LR LR 22 54 38.1
comp=Z,133nm,18.1s,baz=42,slow=37
CMAR Chiang Mai Arr 41.96 255 *i*P **P 22 36 36.4 +2.1**
CMAR pmax pmax
comp=Z,2.0nm,0.3s
CM01 Chiang Mai Arr 41.97 255 *e*P **P 22 36 33.8 -0.6**
SRAK Srakaew 42.39 247 P **P 22 36 37.2 -0.6**
comp=Z,60nm,0.9s
LSA Lhasa 42.48 275 P **P 22 36 39.3 +0.3**
LSA pmax pmax
comp=Z,6.0nm,1.0s
LSA Lhasa 42.48 275 *e*P **P 22 36 39.0 0.0**
comp=Z,16nm,0.6s
LSA Lhasa 42.48 275 *e*P **P 22 36 39.0 0.0**
LSA pmax pmax
comp=Z,16nm,0.6s
NVS Novosibirsk 42.66 313 *e*P **P 22 36 39.5 -0.1**
NVS pmax pmax
comp=Z,14nm,1.1s
NVS pmax pmax
comp=N,7.0nm,1.3s
NRIK Noril'sk 42.86 335 P **P 22 36 40.6 -0.4**
comp=N,3.9nm,0.4s,baz=123,slow=9.0,SNR=6.9
NRIK LR LR 22 56 00.2
comp=N,202nm,18.2s,baz=82,slow=38
SHL Shillong 43.73 269 *e*P **P 22 36 46.0 -2.9**
SHL Shillong 43.73 269 *e*P **P 22 36 47.7 -1.2**
comp=N,26nm,0.7s
SHL Shillong 43.73 269 *e*P **P 22 36 47.7 -1.2**
SHL pmax pmax
comp=Z,26nm,0.7s
MK01 Makanchi Array 44.07 302 *e*P **P 22 36 50.4 -0.8**
MK32 Makanchi Array 44.07 302 *e*P **P 22 36 50.9 -0.2**
MKAR Makanchi Array 44.07 302 P **P 22 36 50.9 -0.2**
comp=Z,6.9nm,0.6s,baz=87,slow=9.8,SNR=70
MAKZ Makanchi 44.28 302 *e*P **P 22 36 52.5 -0.3**
comp=Z,9.3nm,0.8s
MAKZ Makanchi 44.28 302 *e*P **P 22 36 52.5 -0.3**
MAKZ pmax pmax
comp=Z,9.0nm,0.8s
SBUM Sibu 44.31 225 *e*P **P 22 36 52.5 -0.8**
comp=Z,13nm,1.0s
SVW2 Sparrevohn 44.85 38 *e*P **P 22 36 59.4 +2.3**
comp=Z,6.9nm,0.9s
BRDH Bariadhala 45.35 266 LR LR 22 59 37.0
comp=Z,220nm,18.2s,baz=128,slow=41
KURK Kurchatov 45.82 308 *e*P **P 22 37 04.2 -0.6**
comp=Z,58nm,1.0s
KURK Kurchatov 45.82 308*c i*P **P 22 37 04.6 -0.3**
KURK pmax pmax
comp=Z,38nm,0.7s
KURBB Kurchatov Arra 45.89 308 P **P 22 37 05.0 -0.4**
comp=Z,24nm,0.4s,baz=81,slow=7.8,SNR=133
KSM Kuching 46.20 226 *e*P **P 22 37 09.0 +0.8**
comp=Z,23nm,1.0s
RSO Redoubt South 46.23 39 *e*P **P 22 37 10.0 +1.7**
KDAK Kodiak Island 46.44 42 P **P 22 37 10.7 +1.0**
comp=Z,15nm,0.8s,baz=245,slow=6.5,SNR=12
KDAK Kodiak Island 46.44 42 *e*P **P 22 37 10.9 +1.3**
comp=Z,48nm,1.4s
KDAK Kodiak Island 46.44 42 *i*P **P 22 37 11.0 +1.3**
CAST Castle Rocks 46.55 35 *e*P **P 22 37 12.7 +2.2**
CAST *e*pP **sP 22 37 25.4 -0.5**
ODAN Odare 46.70 273 *e*P **P 22 37 12.3 -0.1**
comp=Z,52nm,0.8s
BPAW Bear Paw Mtn. 47.05 34 *e*P **P 22 37 14.8 +0.4**
comp=Z,30nm,1.9s
PMG Port Moresby 47.06 173 LR LR 22 56 21.6
comp=Z,52nm,21.9s,baz=346,slow=35
KTH Kantishna Hill 47.07 34 *e*P **P 22 37 15.9 +1.2**
KTH *e*pP **sP 22 37 29.5 -0.5**
MLY Manley 47.17 32 *e*P **P 22 37 17.2 +1.8**
comp=Z,6.5nm,0.9s
SUA Susitna One 47.19 37 *e*P **P 22 37 17.5 +1.8**
comp=Z,18nm,1.2s
RAMN Ramite 47.28 274 *e*P **P 22 37 16.5 -0.5**
comp=Z,82nm,0.8s
JIRN Jiri 47.28 275 *e*P **P 22 37 17.3 +0.1**
comp=Z,100nm,0.7s
TRF Thorofare Moun 47.36 34 *e*P **P 22 37 19.1 +2.2**
comp=Z,5.8nm,0.8s
GUN Gumba 47.42 275 *e*P **P 22 37 18.1 -0.1**
comp=Z,70nm,0.4s
COLD Coldfoot 47.47 29 *e*P **P 22 37 19.5 +1.9**
comp=Z,7.4nm,1.4s
KKN Kakani 47.95 275 *e*P **P 22 37 22.0 -0.1**
comp=Z,103nm,0.6s
PKIN Phulchoki 47.95 275 *e*P **P 22 37 21.7 -0.5**
comp=Z,25nm,0.6s
RND Reindeer 48.00 35 *e*P **P 22 37 23.2 +1.3**
RND *e*pP **sP 22 37 36.3 -0.9**
RND Reindeer 48.00 35 *e*P **P 22 37 23.2 +1.3**
RND *e*'PP **sP 22 37 36.3 -0.9**
GHO Glory Hole Cre 48.04 37 *e*P **P 22 37 24.1 +1.8**
comp=Z,18nm,0.7s
MDM Murphy Dome 48.24 32 *e*P **P 22 37 25.8 +2.1**
MDM *e*pP **pP 22 37 34.5 -0.1**
MDM *e*sP **sP 22 37 39.0 0.0**
WRH Wood River Hil 48.31 33 *e*P **P 22 37 25.9 +1.8**
comp=Z,4.8nm,0.8s
SML Sawmill 48.32 37 *e*P **P 22 37 26.1 +1.8**
comp=Z,12nm,0.7s
SML Sawmill 48.32 37 *e*P **P 22 37 26.1 +1.8**
SML pmax pmax
comp=Z,12nm,0.7s
GKN Gorkha 48.36 276 *e*P **P 22 37 25.0 -0.2**
comp=Z,122nm,0.8s
TARG Taragay, Kyrgy 48.42 296 *e*P **P 22 37 26.5 +0.6**
comp=Z,23nm,0.7s
CCB Clear Creek Bu 48.43 33 *e*P **P 22 37 27.9 +2.9**
comp=Z,8.8nm,1.3s
DHY Denali Highway 48.69 35 *e*P **P 22 37 28.8 +1.5**
comp=Z,4.7nm,0.9s
IL1 Eielson Array 48.82 33 *e*P **P 22 37 28.7 +0.6**
IL1 *e*pP **pP 22 37 38.9 -0.1**
IL1 *e*sP **sP 22 37 42.2 -1.2**
ILAR Eielson Array 48.82 33 P **P 22 37 29.4 +1.3**
comp=Z,4.1nm,0.8s,baz=268,slow=6.4,SNR=48
ILB Eielson Array 48.82 33 *e*P **P 22 37 29.3 +1.3**
DANN Dangsing 48.89 277 *e*P **P 22 37 29.7 +0.2**
comp=Z,216nm,0.7s
KOLN Koldanda 49.28 276 *e*P **P 22 37 32.2 -0.2**
comp=Z,32nm,0.6s
KLU Klutina 49.49 37 *e*P **P 22 37 35.6 +2.2**
comp=Z,7.7nm,0.8s
DIV Divide 49.60 37 *e*P **P 22 37 34.8 +0.6**
comp=Z,18nm,1.2s
TKM2 Tokmak 2 49.63 298 P **P 22 37 35.5 +0.6**
SNR=50
IPM Ipoh 49.73 239 *e*P **P 22 37 35.0 -0.6**
comp=Z,14nm,0.9s
RIDG Independ'e Rid 49.77 34 *e*P **P 22 37 36.7 +1.2**
comp=Z,5.1nm,0.8s
HNR Honiara 49.80 156 LR LR 22 58 06.8
comp=Z,95nm,19.9s,baz=334,slow=35
NRN Naryn 49.80 296 *e*P **P 22 37 36.6 +0.3**

NRN Naryn 49.80 296 *e*P **P 22 37 36.6 +0.3**
SCRK Sand Creek 50.13 34 *e*P **P 22 37 39.3 +1.1**
comp=Z,11nm,1.1s
KZA Kyzart 50.13 297 P **P 22 37 39.9 +1.0**
SNR=26
KBK Karagaybulak 50.16 298 P **P 22 37 39.3 +0.4**
SNR=58
BMRM Bremner River 50.19 38 *e*P **P 22 37 39.7 +1.1**
comp=Z,8.1nm,0.7s
CHMS Chumysh 50.20 298 P **P 22 37 39.0 0.0**
SNR=9.0
USP Ospenovka 50.29 299 P **P 22 37 39.2 -0.4**
SNR=14
OTUK Ortayu 50.34 306 P **P 22 37 39.6 -0.3**
FRU Bishkek 50.34 298 *e*P **P 22 37 40.0 0.0**
BVAR Borovoye Array 50.41 312 P **P 22 37 40.4 0.0**
comp=Z,4.3nm,0.6s,baz=70,slow=7.7,SNR=22
BVAR LR LR 22 59 52.2
comp=Z,158nm,18.5s,baz=88,slow=37
KSH Kashi 50.46 294 P **P 22 37 45.0 +4.0**
KSH sP sP 22 37 57.1 +0.7
KSH PP PP 22 39 45.4 +8.7
KSH S **S 22 44 53.8 +1.6**
KSH sS sS 22 45 12.3 +1.9
KSH SS **SS 22 48 27.3 +1.2**
KSH pmax pmax
comp=Z,21nm,0.8s
KSH pmax pmax
comp=Z,320nm,5.5s
KSH LR LR
comp=Z,270nm,6.6s
KSH LR LR
comp=Z,320nm,4.3s
KSH LR LR
comp=Z,700nm,17.3s
BRVK Borovoye 50.46 312 *e*P **P 22 37 40.3 -0.4**
comp=Z,14nm,0.9s
BRVK Borovoye 50.46 312*c i*P **P 22 37 40.4 -0.4**
BRVK pmax pmax
comp=Z,7.0nm,1.0s
AAK Ala-Archa 50.49 298 *e*P **P 22 37 41.1 -0.2**
comp=Z,11nm,0.6s
AAK Ala-Archa 50.49 298 *e*P **P 22 37 41.1 -0.2**
AAK pmax pmax
comp=Z,11nm,0.6s
CRQM Cirque 50.93 38 *e*P **P 22 37 46.5 +2.1**
comp=Z,14nm,0.9s
EKS2 Erkin-Say 50.98 298 P **P 22 37 45.0 0.0**
SNR=15
AML Almayashu 51.21 298 P **P 22 37 47.7 +0.6**
SNR=39
MNAS Manas 51.93 298 P **P 22 37 52.2 +0.1**
MNAS pmax pmax
comp=Z,31nm,0.7s
SFK Sufi-Kurgan 52.07 295 P **P 22 37 53.1 -0.2**
SFK pmax pmax
comp=Z,21nm,0.6s
PSI Prapat 52.38 239 P **P 22 37 55.6 0.0**
comp=Z,6.3nm,0.7s,baz=0.2,slow=5.3,SNR=8.0
PSI LR LR 23 01 01.2
comp=Z,138nm,20.1s,baz=276,slow=37
PSI Prapat 52.38 239 *e*P **P 22 37 55.5 -0.1**
comp=Z,9.2nm,0.9s
KK31 Karatay Array 53.10 300 *e*P **P 22 38 00.6 0.0**
KK31 Karatay Array 53.10 300 *e*P **P 22 38 00.6 0.0**
KKAR Karatay Array 53.10 300 *e*P **P 22 38 00.2 -0.4**
KKAR Karatay Array 53.10 300 *e*P **P 22 38 00.2 -0.4**
INK Inuvik 53.71 27 P **P 22 38 06.2 +1.6**
comp=Z,3.3nm,0.7s,baz=286,slow=11,SNR=9.8
INK Inuvik 53.71 27 *e*P **P 22 38 05.8 +1.2**
comp=Z,4.7nm,0.8s
GSI Gunungsitoli 54.38 239 *e*P **P 22 38 09.9 -0.3**
comp=Z,128nm,1.3s
LEM Lembang 54.53 223 P **P 22 38 13.8 +2.3**
comp=Z,18nm,0.6s,baz=315,slow=19,SNR=3.1
NIL Nilore 54.73 288 *e*P **P 22 38 12.3 -0.4**
comp=Z,30nm,0.6s
NIL Nilore 54.73 288 *e*P **P 22 38 12.3 -0.4**
NIL pmax pmax
comp=Z,30nm,0.6s
SVE Sverdlovsk 54.91 318 *e*P **P 22 38 13.9 +0.4**
SVE pmax pmax
comp=Z,23nm,0.8s
SVE MLR MLR
comp=Z,235nm,17.0s
ARU Arti 56.12 318 *e*P **P 22 38 22.1 -0.2**
comp=Z,20nm,0.8s
ARU Arti 56.12 318*c i*P **P 22 38 21.9 -0.4**
ARU 22 39 18.7
ARU 22 40 25.6
ARU S **S 22 46 09.4 +1.0**
ARU SS **SS 22 49 47.8 -6.7**
ARU pmax pmax
comp=Z,22nm,0.8s
ARU MLR MLR
comp=Z,216nm,17.0s
KBL Kabul 57.50 291 *e*P **P 22 38 31.7 -0.9**
comp=Z,16nm,1.0s
KBL Kabul 57.50 291 *e*P **P 22 38 31.7 -0.9**
KBL pmax pmax
comp=Z,16nm,1.0s
CTA Charters Tower 57.56 175 LR LR 23 05 14.4
comp=Z,77nm,19.9s,baz=152,slow=38
WRAB Tennant Creek 57.69 188 *e*P **P 22 38 35.9 +2.2**
WB2 Warramunga Arr 57.70 188 *e*P **P 22 38 33.5 -0.2**
comp=Z,9.5nm,0.8s
WR1 Warramunga Arr 57.70 188 *e*P **P 22 38 34.1 +0.4**
comp=Z,31nm,1.5s
WR1 *e*PP **PP 22 40 38.3 -3.9**
WRA Warramunga Arr 57.70 188 P **P 22 38 34.1 +0.3**
comp=Z,3.9nm,0.6s,baz=5.0,slow=6.9,SNR=67
WRA PP **PP 22 40 38.3 -3.9**
comp=Z,1.5nm,0.9s,baz=3.0,slow=7.9,SNR=2.6
ABKAR Akbulak array 57.80 310 *e*P **P 22 38 33.7 -0.5**
DLBC Dease Lake 57.96 38 P **P 22 38 37.9 +2.6**
comp=Z,3.2nm,0.7s,baz=305,slow=8.1,SNR=7.2
DLBC Dease Lake 57.96 38 *e*P **P 22 38 37.9 +2.6**
DLBC *e*pP **sP 22 38 52.2 +1.4**
AKTO Aktyubinsk 58.51 312 P **P 22 38 38.6 -0.6**
comp=Z,7.1nm,0.8s,baz=67,slow=11,SNR=20
AKTO LR LR 23 04 59.8
comp=Z,110nm,19.5s,baz=59,slow=37
SPA0 Spitsbergen Ar 60.00 349 *e*P **P 22 38 49.2 +0.2**
SPITS Spitsbergen Ar 60.00 349 P **P 22 38 49.3 +0.2**
comp=Z,2.0nm,0.6s,baz=44,slow=11,SNR=2.9
SPITS LR LR 23 07 22.3
comp=Z,76nm,18.6s,baz=25,slow=39
PRGR Permogore 60.44 327 *e*P **P 22 38 51.5 -0.8**
PRGR *e**PP **pP 22 39 03.7 +0.2**
PRGR pmax pmax
comp=Z,13nm,0.9s
AS01 Alice Springs 61.42 188 *e*P **P 22 39 00.5 +1.1**
AS31 Alice Springs 61.42 188 *e*P **P 22 39 00.2 +0.8**
comp=Z,2.1nm,0.9s
ASAR Alice Springs 61.43 188 P **P 22 39 00.8 +1.3**
comp=Z,2.3nm,0.6s,baz=12,slow=5.3,SNR=18
RES Resolute Bay 61.94 15 P **P 22 39 03.3 +1.0**
comp=Z,3.5nm,0.8s,baz=313,slow=8.7,SNR=11
RES Resolute Bay 61.94 15 *e*P **P 22 39 03.3 +1.0**
comp=Z,12nm,0.9s
RES Resolute Bay 61.94 15 *e*P **P 22 39 03.3 +1.0**
RES pmax pmax
comp=Z,12nm,0.9s
MBWA Marble Bar 62.07 203 *e*P **P 22 39 03.4 -0.3**
comp=Z,18nm,0.8s
YKA Yellowknife Ar 63.13 30 P **P 22 39 10.8 +0.4**
comp=Z,2.6nm,0.7s,baz=302,slow=6.7,SNR=5.0
YKA Yellowknife Ar 63.13 30 *i*P **P 22 39 11.3 +0.9**
YKA pmax pmax
comp=Z,3.0nm,0.7s
YKB5 Yellowknife Ar 63.13 30 *e*P **P 22 39 10.8 +0.4**
KLMR Klimovskoe 63.42 328 *e*P **P 22 39 10.9 -1.4**
KLMR pmax pmax
comp=Z,9.0nm,0.9s
KLMR Klimovskoe 63.42 328 *e*P **P 22 39 10.9 -1.4**
KLMR AMP 22 39 12.6
comp=Z,9.0nm,0.9s
ARA0 ARCESS Array S 63.55 339 *e*P **P 22 39 13.4 +0.3**
ARCES ARCESS Array B 63.55 339 P **P 22 39 13.4 +0.3**
comp=Z,1.5nm,0.6s,baz=49,slow=7.4,SNR=6.3
ARCES LR LR 23 09 22.9
comp=Z,73nm,21.6s,baz=62,slow=38
DZM Mont Dzumac 63.75 154 LR LR 23 04 19.1
comp=Z,117nm,21.4s,baz=170,slow=33
GEYT Alibeck 63.83 299 P **P 22 39 14.4 -1.1**
comp=Z,57nm,0.7s,baz=46,slow=4.2,SNR=1.4
GYA0B ALIBECK ARRAY 63.83 299 *e*P **P 22 39 15.7 +0.3**
comp=Z,9.3nm,0.8s
AFI Afiamalu 67.27 130 LR LR 23 04 01.4
comp=Z,100nm,21.5s,baz=152,slow=31
OBN Obninsk 67.81 323*c i*P **P 22 39 40.2 -0.5**
OBN *e* 22 39 51.2
OBN *e* 22 40 06.1
OBN *e* 22 42 07.3
OBN pmax pmax
comp=Z,64nm,1.7s
FIA1 FINESS Array S 68.43 332 *e*P **P 22 39 44.2 -0.3**
FIA0 FINESS Array S 68.43 332 *e*P **P 22 39 44.4 -0.1**
FIA0 FINESS Array S 68.43 332 *e*P **P 22 39 44.4 -0.1**
FINES FINESS Array B 68.43 332 P **P 22 39 44.4 -0.1**
comp=Z,9.6nm,0.8s,baz=53,slow=7.4,SNR=23
FINES LR LR 23 11 20.3
comp=Z,90nm,18.3s,baz=46,slow=37
VSR Storozhevoye 68.69 319 *e*P **P 22 39 45.6 -0.7**
VSR pmax pmax
comp=Z,20nm,0.9s
AKT Akhty 68.98 307⇓ *e*P **P 22 39 48.1 -0.4**
AKT *e* 22 40 13.0
AKT pmax pmax
comp=Z,20nm,0.8s
PINE Pine Mountain 69.71 50 *e*P **P 22 39 55.3 +2.3**
comp=Z,13nm,0.8s
GOF Gofitskoye 69.93 312 *e*P **P 22 39 54.2 +0.1**
GOF pmax pmax
comp=Z,40nm,1.3s
SUMG Summit 70.09 0 *i*P P 22 40 04.9 +10
SUMG Summit 70.09 0 *e*P **P 22 39 55.4 +0.3**
comp=Z,12nm,0.9s
SUMG Summit 70.09 0 *e*P **P 22 39 55.4 +0.3**
SUMG pmax pmax
comp=Z,12nm,0.9s
VSU Vasula 70.10 330⇑ *e*P **P 22 39 55.9 +1.0**
VSU pmax pmax
comp=Z,23nm,1.0s
K05A Summer Lake 70.32 51 *e*P **P 22 39 58.7 +1.9**
comp=Z,12nm,0.8s
GUDG Gudauri 70.49 309 P **P 22 39 59.2 +1.3**
ZEI Tsey 70.67 309 *e*P **P 22 39 58.0 -0.9**
KBZ Khabaz 70.75 311 P **P 22 39 59.8 +0.7**
comp=Z,7.0nm,0.8s,baz=54,slow=6.1,SNR=17
KBZ LR LR 23 13 44.4
comp=Z,66nm,18.1s,baz=80,slow=38
KIV Kislovodsk 70.75 311 *e*P **P 22 39 59.6 +0.3**
comp=Z,26nm,0.8s
KIV Kislovodsk 70.75 311 *e*P **P 22 39 59.5 +0.2**
KIV pmax pmax
comp=Z,22nm,1.1s
KIV MLR MLR
comp=Z,93nm,18.0s
BMO Blue Mountains 71.29 48 *e*P **P 22 40 04.7 +2.2**
comp=Z,3.3nm,0.8s
J08A Circle Bar Ran 71.44 49 *e*P **P 22 40 05.3 +1.8**
comp=Z,14nm,1.3s
GNI Garni 71.60 307 *e*P **P 22 40 04.2 -0.4**
GNI *e*pP **sP 22 40 19.2 -1.1**
GNI Garni 71.60 307⇑ *e*P **P 22 40 05.1 +0.5**
GNI *i **SP **sP 22 40 20.4 +0.1**
GNI *i* 22 40 24.1
GNI pmax pmax
comp=Z,18nm,1.1s
UOSS Minazif 71.93 288 *e*P **P 22 40 06.2 -0.4**
comp=Z,11nm,0.8s
EPOS Posof 72.11 309 *e*P **P 22 40 07.2 -0.4**
IGDI IGDIR 72.18 307 *e*P **P 22 40 07.6 -0.3**
IGDI *e*S **pP 22 40 21.0 +1.6**
IGDI IAML 22 40 22.9
comp=Z,4.8nm,0.6s
BEKR Beckworth 72.24 53 *e*P **P 22 40 09.3 +0.8**
comp=Z,5.5nm,0.8s
FFC Flin Flon 73.03 33 *e*P **P 22 40 13.6 +1.0**
FFC Flin Flon 73.03 33 *e*P **P 22 40 13.6 +1.0**
EATA Eleskirt 73.19 307 *e*P **P 22 40 11.1 -3.2**
CMB Columbia Colle 73.26 55 *e*P **P 22 40 14.4 0.0**
comp=Z,3.9nm,0.6s
CMB Columbia Colle 73.26 55 *e*P **P 22 40 14.4 0.0**
CMB pmax pmax
comp=Z,4.0nm,0.6s
FCC Fort Churchill 73.32 27 *e*P **P 22 40 14.9 +0.7**
FCC *e*pP **sP 22 40 29.1 -0.9**
FCC Fort Churchill 73.32 27 *e*P **P 22 40 14.9 +0.7**
FCC *e**PP **sP 22 40 29.1 -0.9**
HOMI Horasan 73.45 308 *e*P **P 22 40 16.0 +0.3**
YERR Yerington 73.45 53 *e*P **P 22 40 16.8 +1.1**
comp=Z,6.4nm,0.9s
LRM Limekiln Ridge 73.49 45 *e*P **P 22 40 16.6 +0.7**
NC405 NORSAR Array S 73.55 337 *e*P **P 22 40 14.5 -1.1**
HFS Hagfors 73.67 336 P **P 22 40 16.3 0.0**
comp=Z,1.9nm,0.4s,baz=52,slow=5.8,SNR=27
HFS LR LR 23 15 10.7
comp=Z,172nm,19.1s,baz=40,slow=38
NC204 NORSAR Array S 73.71 338 *e*P **P 22 40 16.5 -0.1**
HLID Hailey 73.73 47 *e*P **P 22 40 18.0 +0.8**
comp=Z,5.8nm,1.3s
NB2 NORSAR Subarra 73.76 337 P **P 22 40 16.7 -0.2**
comp=Z,7.0nm,1.0s,baz=38,slow=6.2
NB200 NORSAR Array S 73.76 337 *e*P **P 22 40 16.6 -0.2**
NOA NORSAR Array B 73.76 337 P **P 22 40 16.6 -0.2**
NOA LR LR 23 15 03.1
comp=Z,124nm,21.8s,baz=40,slow=38
MCMT McKenzie Canyo 73.87 46 *e*P **P 22 40 18.5 +0.4**
AKASG Malin Array Be 74.02 322 P **P 22 40 18.2 -0.3**
comp=Z,4.5nm,0.4s,baz=46,slow=6.2,SNR=35
AKASG LR LR 23 14 50.8
comp=Z,72nm,19.3s,baz=50,slow=37
AKBB Malin Array Si 74.02 322 *e*P **P 22 40 18.2 -0.3**
comp=Z,7.6nm,0.8s
KIEV Kiev 74.03 322 *e*P **P 22 40 18.0 -0.6**
comp=Z,7.1nm,0.7s
KIEV Kiev 74.03 322*c i*P **P 22 40 18.2 -0.4**
KIEV *i **SP **PcP 22 40 33.6 -0.1**
KIEV pmax pmax
comp=Z,8.0nm,1.1s
AK11 Malin Array Si 74.06 322 *e*P **P 22 40 18.4 -0.3**
BOZ Bozeman (W) 74.09 44 *e*P **P 22 40 20.0 +0.7**
comp=Z,4.9nm,0.8s
BOZ Bozeman (W) 74.09 44 P **P 22 40 21.0 +1.8**
BOZ pmax pmax
comp=Z,5.0nm,0.9s
KVN Kaiserville 74.14 53 *e*P **P 22 40 18.8 -0.9**
comp=Z,6.5nm,0.9s
KVN Kaiserville 74.14 53 *e*P **P 22 40 18.8 -0.9**
KVN pmax pmax
comp=Z,7.0nm,0.9s
NV01 Mina Array Sit 74.37 53 *e*P **P 22 40 22.8 +1.7**
NVAR Mina Array Bea 74.37 53 P **P 22 40 23.5 +2.4**
comp=Z,3.0nm,0.7s,baz=286,slow=6.3,SNR=17
SIM Simferopol' 75.12 316 *e*P **P 22 40 25.6 +0.6**
SIM *e* 22 40 40.0
SIM pmax pmax
comp=Z,10.0nm,1.0s
SIM MLR MLR
comp=Z,90nm,15.5s
KONO Kongsberg 75.35 337⇑ *i*P **P 22 40 27.0 +1.0**
KONO *i **SP **sP 22 40 42.0 +0.2**
KONO pmax pmax
comp=Z,7.0nm,1.0s
IMW Indian Meadow 75.52 45 *e*P **P 22 40 29.8 +2.0**
comp=Z,8.2nm,0.8s
FXWY Fox Creek 75.64 46 *e*P **P 22 40 30.7 +2.3**
comp=Z,4.1nm,0.9s
BCW Bitter Crk WRg 75.69 57 *e*P **P 22 40 27.1 -1.5**
FRB Frobisher Bay 76.12 13 P **P 22 40 31.4 +1.1**
comp=Z,2.7nm,0.5s,baz=352,slow=8.2,SNR=4.2
SORM Soroca 76.13 321⇑ *i*P **P 22 40 30.3 -0.4**
SORM Soroca 76.13 321 P **P 22 40 30.3 -0.4**
R11A Troy Canyon, C 76.14 52 *e*P **P 22 40 31.9 +0.6**
comp=Z,4.1nm,0.9s
BGU Big Grassy Mou 76.14 49 *e*P **P 22 40 32.1 +1.0**
comp=Z,6.3nm,1.4s
DGMT Dagmar 76.17 39 *e*P **P 22 40 32.0 +1.0**
comp=Z,7.8nm,0.8s
LAO LASA Array 76.31 41 *e*P **P 22 40 33.0 +1.1**
comp=Z,11nm,0.5s
TPNV Topopah Spring 76.56 54 *e*P **P 22 40 35.8 +2.2**
comp=Z,8.8nm,0.9s
HWUT Hardware Ranch 76.59 48 *e*P **P 22 40 36.1 +2.4**
comp=Z,14nm,1.4s
DUG Dugway, Tooele 76.72 49 *e*P **P 22 40 34.9 +0.5**
comp=Z,3.8nm,0.8s
DUG Dugway, Tooele 76.72 49 *e*P **P 22 40 34.9 +0.5**
DUG pmax pmax
comp=Z,4.0nm,0.8s
CJV Casa Juvan 76.77 57 *e*P **P 22 40 33.9 -0.9**
BW06 Boulder Array 77.02 46 *e*P **P 22 40 37.2 +1.0**
comp=Z,3.7nm,0.7s
PD31 Pinedale Array 77.02 46 *e*P **P 22 40 36.7 +0.5**
PDAR Pinedale Array 77.02 46 P **P 22 40 37.5 +1.3**
comp=Z,2.2nm,0.6s,baz=258,slow=2.3,SNR=23
PDAR Pinedale Array 77.02 46 *e*P **P 22 40 37.3 +1.2**
PSUT Pine Spring 77.11 51 *e*P **P 22 40 38.9 +2.1**
comp=Z,3.5nm,0.9s
FMP Fort Macarthur 77.16 57 *e*P **P 22 40 35.6 -1.2**
SHPR Sheep Range 77.53 54 *e*P **P 22 40 41.5 +2.4**
comp=Z,4.2nm,0.9s
MPU Maple Canyon 77.54 49 *e*P **P 22 40 40.8 +1.7**
comp=Z,6.0nm,1.0s
KWP Kalwaria Pacla 77.83 324 *e*P **P 22 40 39.9 -0.4**
KWP Kalwaria Pacla 77.83 324 *e*P **P 22 40 39.9 -0.4**
CCUT Cedar City 78.02 52 *e*P **P 22 40 42.4 +0.5**
comp=Z,8.5nm,1.5s
BUR08 Bucovina Ar. S 78.03 322 *e*P **P 22 40 42.2 +0.6**
BUR04 Bucovina Ar. S 78.04 322 *e*P **P 22 40 41.8 +0.2**
BURAR Bucovina Array 78.04 322⇑ *i*P **P 22 40 41.8 +0.2**
TESR Tescani 78.08 320⇑ *i*P **P 22 40 41.1 -0.6**
CFR Carcaliu 78.21 319⇑ *i*P **P 22 40 42.2 -0.2**
CFR Carcaliu 78.21 319 *e*P **P 22 40 42.1 -0.3**
P17A Butcher Ranch, 78.42 49 *e*P **P 22 40 43.2 -0.7**
comp=Z,6.4nm,0.9s
MTPU Mount Pierson 78.44 51 *e*P **P 22 40 45.1 +0.8**
comp=Z,4.4nm,0.8s
VRI Vrincioaia 78.48 320⇓ *i*P **P 22 40 43.7 -0.2**
VRI Vrincioaia 78.48 320 P **P 22 40 43.6 -0.3**
EML El Monte Cty P 78.62 57 *e*P **P 22 40 46.1 +1.1**
TLB Topalu 78.66 318⇑ *i*P **P 22 40 45.1 +0.2**
BR101 Keskin Array S 78.69 312 *e*P **P 22 40 45.3 -0.1**
BR131 Keskin Array S 78.69 312 *e*P **P 22 40 45.9 +0.5**
BRTR Keskin Array B 78.69 312 P **P 22 40 45.3 -0.1**
comp=Z,1.6nm,0.6s,baz=80,slow=3.6,SNR=9.2
BRTR Keskin Array B 78.69 312*c e*P **P 22 40 46.4 +1.0**
BRTR pmax pmax
comp=Z,2.0nm,0.6s
OJC Ojcow 78.72 326 *e*P **P 22 40 45.8 +0.6**
OJC Ojcow 78.72 326 *e*P **P 22 40 45.8 +0.6**
comp=Z,6.6nm,0.8s
OJC Ojcow 78.72 326 *e*P **P 22 40 45.8 +0.6**
OJC pmax pmax
comp=Z,7.0nm,0.8s
SRU San Rafael Swe 78.78 49 *e*P **P 22 40 47.4 +1.4**
comp=Z,5.4nm,0.8s
SRU San Rafael Swe 78.78 49 *e*P **P 22 40 47.4 +1.4**
SRU pmax pmax
comp=Z,5.0nm,0.8s
TRPA Tarpa 78.97 323⇑ *i*P **P 22 40 47.2 +0.6**
NIE Niedzica 79.08 325 *e*P **P 22 40 48.1 +0.9**
NIE Niedzica 79.08 325 *e*P **P 22 40 48.1 +0.9**
ISR Istrita 79.08 319⇑ *i*P **P 22 40 47.6 +0.3**
DOPR Dopca 79.09 320⇓ *i*P **P 22 40 47.6 +0.3**
ICOR Ion Corvin 79.10 318⇓ *i*P **P 22 40 47.8 +0.4**
MLR Muntele Rosu 79.13 320 P **P 22 40 48.1 +0.4**
comp=Z,0.3nm,0.5s,baz=287,slow=11,SNR=8.8
MLR LR LR 23 18 22.3
comp=Z,42nm,19.6s,baz=46,slow=38
SWSC Sam W. Stewart 79.28 57 *e*P **P 22 40 49.1 +0.5**
U15A North Rim 79.39 52 *e*P **P 22 40 50.8 +1.3**
comp=Z,7.3nm,1.1s
CJR Cluj-Napoca 79.46 322⇓ *i*P **P 22 40 50.9 +1.5**
CJR Cluj-Napoca 79.46 322 P **P 22 40 50.8 +1.4**
LANS Liptovska Anna 79.65 326 *e*P **P 22 40 51.2 +0.9**
LANS Liptovska Anna 79.65 326 *e*P **P 22 40 51.2 +0.9**
OKC Ostrava-Krasne 79.72 327 AMS AMS 23 19 10.0
comp=Z,100nm,17.7s
ARR Arges 79.89 320⇓ *i*P **P 22 40 52.2 +0.5**
MORC Moravsky Berou 80.03 327⇑ *i*P **P 22 40 53.1 +0.7**
MORC Moravsky Berou 80.03 327 *e*P **P 22 40 52.7 +0.3**
comp=Z,26nm,1.1s
MORC Moravsky Berou 80.03 327 *e*P **P 22 40 52.7 +0.3**
MORC pmax pmax
comp=Z,26nm,1.1s
MORC Moravsky Berou 80.03 327 *e*P **P 22 40 52.7 +0.3**
GOLR 80.09 320⇑ *i*P **P 22 40 50.4 -2.3**
UPC Upice 80.13 328 AMS AMS 23 19 30.0
comp=Z,100nm,22.7s
PV14 Lion Creek, Pa 80.15 49 *e*P **P 22 40 56.2 +2.7**
comp=Z,35nm,1.0s
PV22 Blue Mesa, Par 80.19 49 *e*P **P 22 40 55.3 +1.6**
comp=Z,4.4nm,1.0s
PV17 East Wray Mesa 80.25 49 *e*P **P 22 40 55.1 +1.1**
comp=Z,17nm,1.2s
RAR Rarotonga 80.25 126 LR LR 23 10 09.2
comp=Z,89nm,19.8s,baz=270,slow=31
LOT Lotru 80.26 321⇓ *i*P **P 22 40 53.8 0.0**
N23A Red Feather La 80.28 45 *e*P **P 22 40 55.8 +1.6**
comp=Z,14nm,1.5s
VYHS Vyhne 80.41 326 *e*P **P 22 40 53.9 -0.5**
VYHS Vyhne 80.41 326 *e*P **P 22 40 53.9 -0.5**
Y14A Wickenburg 80.50 54 *e*P **P 22 40 55.9 +0.7**
comp=Z,5.0nm,0.8s
JAVC Velka Javorina 80.66 326 *e*P **P 22 40 57.3 +1.5**
BRG Berggiesshubel 80.70 330 *e*P **P 22 40 56.0 +0.1**
comp=Z,7.4nm,1.4s
BRG *e* 22 41 09.4
comp=Z,5.6nm,1.2s
comp=N,116nm,23.7s
comp=E,104nm,20.1s
comp=Z,204nm,16.4s
BRG Berggiesshubel 80.70 330 *e*P **P 22 40 56.0 +0.1**
BRG *e* 22 41 09.4
BRG pmax pmax
comp=Z,7.0nm,1.4s
BRG MLR MLR
comp=N,116nm,23.7s
BRG MLR MLR
comp=E,104nm,20.1s
BRG MLR MLR
comp=Z,204nm,16.4s
RAYN Ar Rayn 80.72 292 *e*P **P 22 40 55.5 -1.1**
comp=Z,7.0nm,0.8s
RAYN Ar Rayn 80.72 292 P **P 22 40 55.4 -1.1**
RAYN pmax pmax
comp=Z,7.0nm,0.9s
CLL Collm 80.73 330⇑ *i*P **P 22 40 55.8 -0.3**
comp=Z,5.0nm,1.0s
CLL *e*PcP **PcP 22 41 03.0 +0.3**
CLL *e*(pP) **pP 22 41 09.0 +1.4**
CLL Collm 80.73 330 *e*P **P 22 40 56.0 -0.1**
comp=Z,6.9nm,1.1s
CLL Collm 80.73 330 *e*P **P 22 40 56.0 -0.1**
CLL pmax pmax
comp=Z,7.0nm,1.1s
VRAC Vranov 80.79 327⇓ *i*P **P 22 40 57.4 +0.9**
VRAC Vranov 80.79 327 P **P 22 40 57.4 +0.9**
VRAC Vranov 80.79 327 *e*P **P 22 40 57.1 +0.7**
KRUC Moravsky 81.06 327 *e*P **P 22 40 58.2 +0.3**
GOPC GO Pecny, Ondr 81.09 329 *e*P **P 22 40 58.8 +0.7**
GOPC AMS AMS 23 20 00.0
comp=Z,100nm,14.0s
GOPC GO Pecny, Ondr 81.09 329 *e*P **P 22 40 58.8 +0.7**
GOPC MLR MLR
comp=Z,100nm,14.0s
PRU Pruhonice 81.14 329 *e*P **P 22 41 00.0 +1.7**
PRU AMS AMS 23 24 10.0
comp=Z,100nm,21.6s
PRU Pruhonice 81.14 329 *e*P **P 22 41 00.0 +1.7**
PRU MLR MLR
comp=Z,100nm,21.6s
X16A Lo Mia Camp, P 81.20 53 *e*P **P 22 40 59.6 +0.5**
X16A *e*pP **sP 22 41 16.4 +1.4**
BZS Buzias 81.21 322⇑ *i*P **P 22 40 58.7 0.0**
BZS Buzias 81.21 322 P **P 22 40 58.7 0.0**
MDVR Moldovita 81.76 321⇑ *i*P **P 22 41 01.8 +0.1**
MMAI Mount Meron Ar 81.88 305 P **P 22 41 03.2 +0.6**
comp=Z,3.1nm,0.7s,baz=63,slow=6.6,SNR=8.7
MMAI LR LR 23 22 53.8
comp=Z,163nm,18.0s,baz=115,slow=40
CSS Mathiatis 81.94 308 *e*P **P 22 41 01.3 -1.5**
comp=Z,1.9nm,0.7s
KHC Kasperske Hory 82.20 329 *e*P **P 22 41 04.5 +0.6**
KHC *e*PCP **PcP 22 41 09.9 +0.7**
KHC *e*pP **pP 22 41 17.5 +2.0**
KHC AMS AMS 23 23 50.0
comp=Z,100nm,15.6s
KHC Kasperske Hory 82.20 329 *e*P **P 22 41 03.4 -0.5**
comp=Z,2.0nm,1.0s
KHC Kasperske Hory 82.20 329 *e*P **P 22 41 04.5 +0.6**
KHC *e* 22 41 17.5
KHC MLR MLR

comp=Z,100nm,15.6s
GEC2 GERESS Array S 82.37 328 *e*P **P** **22 41 03.9 -1.0**
comp=Z,5.2nm,1.3s
GEC2 GERESS Array S 82.37 328 *e*P **P** **22 41 03.9 -1.0**
GEC2 pmax pmax
comp=Z,5.0nm,1.3s
GERES GERESS Array B 82.37 328 P **P** **22 41 04.9 0.0**
comp=Z,0.8nm,0.4s,baz=41,slow=6.3,SNR=9.9
GERES LR LR 23 20 28.4
comp=Z,71nm,18.7s,baz=62,slow=38
GEA0 GERESS Array S 82.38 328 *e*P **P** **22 41 04.7 -0.2**
VTS Vitosha 82.57 319⇑*i*P **P** **22 41 06.7 +0.6**
VTS Vitosha 82.57 319 *e*P **P** **22 41 06.3 +0.2**
comp=Z,6.0nm,0.8s
VTS Vitosha 82.57 319 *e*P **P** **22 41 06.3 +0.2**
VTS pmax pmax
comp=Z,6.0nm,0.8s
EKA Eskdalemuir Ar 82.67 341 P **P** **22 41 06.8 +0.6**
comp=Z,0.6nm,0.5s,baz=28,slow=5.1,SNR=8.7
EKA LR LR 23 23 21.7
comp=Z,44nm,18.2s,baz=105,slow=40
DIVS Divibare 83.11 322 *e*P **P** **22 41 08.6 -0.2**
comp=Z,5.2nm,1.1s
ECSD EROS Data Cent 83.25 38 *e*P **P** **22 41 09.4 0.0**
ECSD *ep*P **sP** **22 41 23.3 -2.0**
ANMO Albuquerque 83.96 50 P **P** **22 41 14.7 +1.2**
comp=Z,2.4nm,1.0s,baz=292,slow=6.4,SNR=5.5
ANMO Albuquerque 83.96 50 *e*P **P** **22 41 14.7 +1.2**
comp=Z,4.1nm,0.9s
ANMO Albuquerque 83.96 50 *ce*P **P** **22 41 16.4 +2.9**
ANMO *i* *SP **sP** **22 41 31.5 +2.1**
ANMO pmax pmax
comp=Z,5.0nm,1.7s
PMOR Pomariorio Ree 84.13 114 *e*T T 00 13 50.7
comp=Z,13nm,0.2s
PPT Papeete 84.62 117 LR LR 23 10 19.7
comp=Z,76nm,21.8s,baz=196,slow=29
PPT2 Papeete2 84.63 117 *e*LR LR 23 07 59.2
comp=Z,192nm,25.0s
SCHQ Schefferville 84.67 16 LR LR 23 22 45.9
comp=Z,48nm,19.2s,baz=346,slow=38
TTG Podgorica 84.70 321 *e*P **P** **22 41 16.5 -0.3**
TTG *ep*P **pP** **22 41 29.5 +1.0**
TTG Podgorica 84.70 321 *e*P **P** **22 41 16.5 -0.3**
TTG *e**PP **pP** **22 41 29.5 +1.0**
LIT Litokhoron 84.73 318 *e*P **P** **22 41 16.6 -0.5**
comp=Z,15nm,0.9s
LIT Litokhoron 84.73 318 *e*P **P** **22 41 16.6 -0.5**
LIT pmax pmax
comp=Z,15nm,0.9s
GIVF Givet 84.76 334 *e*P **P** **22 41 19.8 +2.8**
GIVF pmax pmax
comp=Z,4.0nm,0.8s
BFO Black Forest 84.94 331 *e*P **P** **22 41 18.0 0.0**
BFO *ep*P **pP** **22 41 30.9 +1.3**
BFO Black Forest 84.94 331 *i* P **P** **22 41 18.7 +0.7**
G40A Rib Lake 85.10 34 *e*P **P** **22 41 18.6 -0.3**
comp=Z,5.4nm,0.8s
ECH Echery 85.48 331 *e*P **P** **22 41 20.2 -0.5**
comp=Z,4.3nm,0.8s
ECH Echery 85.48 331 *e*P **P** **22 41 20.2 -0.5**
ECH pmax pmax
comp=Z,4.0nm,0.8s
FUORN Ofenpass-Fuorn 85.55 329 *e*P **P** **22 41 22.1 +0.7**
comp=Z,7.7nm,0.8s
HAU Haudompre 85.96 332 *e*P **P** **22 41 22.6 -0.5**
HAU pmax pmax
comp=Z,2.0nm,0.6s
TAOE Nuku Hiva Isla 86.01 104 *e*LR LR 23 08 38.0
comp=Z,209nm,24.9s
IDI Anoyia 86.81 313 P **P** **22 41 28.1 +0.5**
comp=Z,6.8nm,0.8s,baz=4.7,slow=13,SNR=6.9
IDI Anoyia 86.81 313 *e*P **P** **22 41 28.1 +0.5**
comp=Z,60nm,1.4s
AMTX Amarillo 86.85 47 *e*P **P** **22 41 28.2 +0.4**
comp=Z,11nm,0.8s
ITM Ithomi 87.14 316 *e*P **P** **22 41 28.4 -0.6**
comp=Z,19nm,0.7s
LDF La Druitiere 87.72 336 *e*P **P** **22 41 32.0 +0.4**
LDF pmax pmax
comp=Z,7.0nm,1.2s
LPL La Plagne 87.87 330 *e*P **P** **22 41 34.6 +1.9**
LPL pmax pmax
comp=Z,6.0nm,0.2s
LPG La Plagne 87.88 330 *e*P **P** **22 41 33.3 +0.5**
LPG pmax pmax
comp=Z,6.0nm,0.2s
AVF Avril sur Loir 88.08 333 *e*P **P** **22 41 34.3 +1.0**
AVF pmax pmax
comp=Z,9.0nm,0.2s
LPIG La Paz 88.61 60 LR LR 23 18 35.8
comp=Z,35nm,18.3s,baz=29,slow=34
P40A Paris 88.66 39 *e*P **P** **22 41 37.0 +0.7**
comp=Z,9.0nm,1.0s
S39A Bolivar 89.42 41 *e*P **P** **22 41 39.8 0.0**
comp=Z,6.0nm,1.0s
R40A Maddies Statio 89.50 40 *e*P **P** **22 41 41.0 +0.9**
comp=Z,8.3nm,1.1s
TX31 Lajitas Ar. Si 89.50 53 *e*P **P** **22 41 41.3 +0.8**
TX31 *ep*P **sP** **22 41 56.2 -0.2**
TXAR Lajitas Array 89.50 53 P **P** **22 41 41.7 +1.2**
comp=Z,1.4nm,0.6s,baz=310,slow=3.2,SNR=15
TXAR LR LR 23 20 09.7
comp=Z,29nm,19.3s,baz=0.0,slow=34
CAF Calviac 90.14 333 *e*P **P** **22 41 47.2 +4.1**
CAF pmax pmax
comp=Z,3.0nm,1.0s
CCM Cathedral Cave 90.19 39 *e*P **P** **22 41 43.7 +0.3**
comp=Z,9.9nm,1.0s
CCM Cathedral Cave 90.19 39 *e*P **P** **22 41 43.7 +0.3**
CCM pmax pmax
comp=Z,10.0nm,1.0s
WHAR Wooly Hollow 91.78 42 *e*P **P** **22 41 51.1 +0.2**
comp=Z,6.6nm,0.8s
ESDC Sonseca Array 96.89 334 LR LR 23 30 52.0
comp=Z,97nm,18.0s,baz=225,slow=38
TOA1 Torodi Ar. Sit 117.13 315 *e*PKPdf **PKPdf** **22 47 27.4 -1.0**
TORD Torodi Ar. Bea 117.13 315 PKP **PKPdf** **22 47 27.4 -1.0**
comp=Z,0.3nm,0.8s,baz=43,slow=2.8,SNR=4.3
LPAZ La Paz 146.11 59 PKPbc **PKPab** **22 48 24.8 0.0**
comp=Z,4.3nm,0.7s,baz=313,slow=2.5,SNR=18

*ISCJB **19** 22:31:34.3±0.5, 56°.8N±0°.1×34°.38W±0°.10, h10km, mb3.9/15, MS3.2/5, Error ellipse: s-maj=17.8km s-min=7.8km az=176.6*
*IDC **19** 22:31:34.7±0.9, 56°.73N×34°.44W, h0km, mb3.8/12, mb1 3.9/14, mb1mx3.7/67, mbtmp3.8/14, ML2.9/2, MS3.2/6, Ms1 3.2/6, ms1mx2.9/64, Error ellipse: s-maj=30.8km s-min=14.7km az=178.0*
*CSEM **19** 22:31:36.2, 56°.83N×34°.42W, h10km, mb4.0/4*
*NEIC **19** 22:31:36.2±0.5, 56°.83N×34°.42W, h10km, mb4.0/4, Error ellipse: s-maj=16.9km s-min=7.6km az=178.0*
ISC 19 22:31:36.2±0.7, **56°.8N**±0°.2×**34°.40W**±0°.08, **h10**km, **n41**, σ1°**09**/37, **mb4.0**/15, **MS3.1**/5, **Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**10.16**	**33**	LR	LR	22 36 39.1	
	comp=Z,45nm,20.9s,baz=231,slow=30						
EKA	**Eskdalemuir Ar**	**17.42**	**82**	P	**P**	**22 35 40.3**	**0.0**
	baz=275,slow=11,SNR=4.0						
SCHQ	**Schefferville**	**18.23**	**277**	P	**P**	**22 35 50.1**	**+0.8**
	0.1nm,0.3s,baz=67,slow=7.9,SNR=4.7						
SCHQ	**Schefferville**	**18.23**	**277**	*e*Pn	**P**	**22 35 49.5**	**+0.2**
	15nm,1.3s						
NOA	**NORSAR Array B**	**23.52**	**61**	LR	LR	22 44 04.3	
	comp=Z,91nm,18.1s,baz=300,slow=32						
HFS	**Hagfors**	**24.91**	**62**	LR	LR	22 46 43.4	
	comp=Z,57nm,19.6s,baz=295,slow=36						
TRQ	**Mont Tremblant**	**26.76**	**264**	*e*P	**P**	**22 37 15.9**	**0.0**
SPA0	**Spitsbergen Ar**	**27.23**	**20**	*e*P	**P**	**22 37 17.0**	**-2.7**
KIEV	**Kiev**	**36.86**	**72**	*e*P	**P**	**22 38 43.1**	**-1.2**
	3.0nm,1.0s						
AKASG	**Malin Array Be**	**36.87**	**72**	P	**P**	**22 38 45.1**	**+0.8**
	0.2nm,0.3s,baz=303,slow=8.4,SNR=4.3						
AKBB	**Malin Array Si**	**36.87**	**72**	*e*P	**P**	**22 38 43.5**	**-0.9**
	2.7nm,0.9s						
MLR	**Muntele Rosu**	**38.27**	**81**	LR	LR	22 54 33.2	
	comp=Z,25nm,18.7s,baz=290,slow=36						
YKA	**Yellowknife Ar**	**38.44**	**313**	LR	LR	22 53 44.8	
	comp=Z,8.1nm,18.3s,baz=348,slow=35						
ECSD	**EROS Data Cent**	**40.43**	**279**	*e*P	**P**	**22 39 14.7**	**+0.4**
	3.8nm,1.1s						
BR101	**Keskin Array S**	**46.34**	**81**	*e*P	**P**	**22 40 04.4**	**+2.1**
BRTR	**Keskin Array B**	**46.34**	**81**	P	**P**	**22 40 04.4**	**+2.1**
	0.9nm,0.8s,baz=288,slow=5.9,SNR=3.4						
PD31	**Pinedale Array**	**48.02**	**287**	*e*P	**P**	**22 40 15.1**	**-0.3**
PDAR	**Pinedale Array**	**48.02**	**287**	P	**P**	**22 40 15.1**	**-0.3**
	0.2nm,0.4s,baz=77,slow=5.1,SNR=3.9						
PDAR	**Pinedale Array**	**48.02**	**287**	*e*P	**P**	**22 40 14.7**	**-0.7**
IL1	**Eielson Array**	**48.34**	**328**	*e*P	**P**	**22 40 17.9**	**+0.6**
ILAR	**Eielson Array**	**48.34**	**328**	P	**P**	**22 40 18.2**	**+0.9**
	1.8nm,1.0s,baz=38,slow=6.3,SNR=11						
ILAR				PcP	**PcP**	**22 41 43.1**	**-0.6**
	0.6nm,0.8s,baz=356,slow=0.9,SNR=4.7						
ILB	**Eielson Array**	**48.34**	**328**	*e*P	**P**	**22 40 15.9**	**-1.4**
ILB				*e*PcP	**PcP**	**22 41 43.1**	**-0.6**
AKTO	**Aktyubinsk**	**51.14**	**55**	P	**P**	**22 40 39.0**	**+0.3**
	2.6nm,0.6s,baz=301,slow=5.9,SNR=2.6						
TOA1	**Torodi Ar. Sit**	**51.57**	**133**	*e*P	**P**	**22 40 41.0**	**-1.4**
TOA1	**Torodi Ar. Sit**	**51.57**	**133**	*e*P	**P**	**22 40 41.0**	**-1.4**
TORD	**Torodi Ar. Bea**	**51.58**	**133**	P	**P**	**22 40 41.0**	**-1.4**
	0.7nm,0.8s,baz=325,slow=4.9,SNR=3.4						
TORD	**Torodi Ar. Bea**	**51.58**	**133**	P	**P**	**22 40 41.0**	**-1.4**
BVAR	**Borovoye Array**	**54.48**	**46**	P	**P**	**22 41 04.4**	**+1.0**
	1.4nm,0.8s,baz=350,slow=7.6,SNR=4.8						
TX31	**Lajitas Ar. Si**	**54.76**	**271**	*e*P	**P**	**22 41 06.1**	**+0.2**
TXAR	**Lajitas Array**	**54.76**	**271**	P	**P**	**22 41 06.2**	**+0.3**
	1.0nm,1.0s,baz=69,slow=3.0,SNR=7.3						
SDV	**Santo Domingo**	**55.51**	**225**	LR	LR	23 02 41.2	
	comp=Z,139nm,21.2s,baz=56,slow=34						
NV01	**Mina Array Sit**	**55.74**	**289**	*e*P	**P**	**22 41 13.3**	**+0.3**
NVAR	**Mina Array Bea**	**55.74**	**289**	P	**P**	**22 41 13.3**	**+0.3**
	0.5nm,0.3s,baz=28,slow=4.1,SNR=3.1						
ZAA1	**Zalesovo Array**	**58.98**	**37**	*e*P	**P**	**22 41 34.7**	**-0.7**
ZALV	**Zalesovo Beam**	**58.99**	**37**	P	**P**	**22 41 34.7**	**-0.7**
	0.3nm,0.4s,baz=336,slow=6.8,SNR=2.4						
KURK	**Kurchatov**	**59.45**	**43**	*e*P	**P**	**22 41 38.6**	**-0.1**
KURBB	**Kurchatov Arra**	**59.49**	**43**	P	**P**	**22 41 38.6**	**-0.4**
	1.1nm,0.7s,baz=322,slow=7.5,SNR=5.1						
MK32	**Makanchi Array**	**64.06**	**43**	*e*P	**P**	**22 42 11.4**	**+1.6**
MKAR	**Makanchi Array**	**64.06**	**43**	P	**P**	**22 42 11.4**	**+1.6**
	0.7nm,0.7s,baz=328,slow=5.1,SNR=3.7						
AS31	**Alice Springs**	**145.78**	**19**	*e*PKPdf	**PKPdf**	**22 51 14.3**	**-0.4**
ASAR	**Alice Springs**	**145.78**	**19**	PKPbc	**PKPdf**	**22 51 14.3**	**-0.4**
	0.7nm,0.8s,baz=21,slow=4.0,SNR=4.3						

MEX 19 22:36:34.2±0.4, **18°.45N**×**103°.91W**, **h17**km±11km, **MD3.6, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.56**	**106**	*i* P	Pg	22 36 43.5	-1.8
MMIG				*e*S	Sg	22 36 50.6	-2.3
R15V		**0.72**	**355**	*e*P	Pg	22 36 45.9	-2.5
R15V				*e*S	Sg	22 36 54.7	-3.4
EZ5V		**1.07**	**16**	*e*P	Pb	22 36 51.1	-3.3
EZ5V				*e*S	Sb	22 37 04.3	-4.0

MEX 19 22:37:58.3±0.3, **17°.30N**×**101°.11W**, **h16**km±11km, **MD3.5, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.46**	**312**	*e*P	Pg	22 38 06.1	-1.5
ZIIG				*e*S	Sg	22 38 12.1	-1.8
CAIG	**El Cayaco**	**0.84**	**107**	*e*P	Pb	22 38 11.4	-3.1
ARIG	**Puente Sto Nin**	**1.22**	**36**	*e*P	Pn	22 38 16.9	-3.8
ARIG				*e*S	Sb	22 38 30.4	-6.1

*ISCJB **19** 22:48:13.7±1.4, 28°.91S±0°.04×71°.3W±0°.2, h45km±25km, Error ellipse: s-maj=24.2km s-min=6.1km az=7.9*
*SJA **19** 22:48:13.4±0.5, 29°.29S×71°.25W, h22km±6km, ML2.9, MW3.6*
*GUC **19** 22:48:14.3±0.6, 29°.03S×70°.52W, h64km±6km, ML3.0*
ISC 19 22:48:13.5±2.7, **28°.92S**±0°.05×**71°.4W**±0°.1, **h32**km±14km, **n11**, σ0°**67**/17, **5C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**0.57**	**99**	*i* P	**Pb**	**22 48 25.1**	**-0.4**
LCO				*i* S	**Sb**	**22 48 33.8**	**+0.1**
LCO	**Las Campanas**	**0.57**	**99**	⇑*i*P	**Pb**	**22 48 25.5**	**0.0**
LCO				*i* S	**Sb**	**22 48 33.7**	**+0.1**
LCO				IAML		22 48 34.8	
	comp=N,848nm,0.2s						
VACH	**Vallenar**	**0.62**	**57**	⇑*i*P	**Pn**	**22 48 26.3**	**+0.1**
VACH				*i* S	**Sn**	**22 48 35.0**	**0.0**
TLL	**Tololo Astrono**	**1.33**	**159**	⇑*i*P	**Pn**	**22 48 36.4**	**+0.2**
TLL				*i* S	**Sn**	**22 48 52.8**	**-0.2**
TLL				IAML		22 49 01.4	
	comp=N,469nm,0.5s						
GO04	**Tololo Observa**	**1.34**	**159**	⇓*i*P	**Pn**	**22 48 36.5**	**+0.2**
GO04				*i* S	**Sn**	**22 48 53.4**	**+0.3**
GO04				IAML		22 48 56.1	
	comp=E,846nm,0.5s						
GO03	**Copiap**	**1.64**	**37**	⇑*i*P	**Pn**	**22 48 40.2**	**-0.1**
GO03				*i* S	**Sn**	**22 48 58.8**	**-1.6**
GO03				IAML		22 49 00.8	
	comp=E,360nm,0.3s						
CPCH	**Copiapo**	**1.79**	**30**	⇑*i*P	**Pn**	**22 48 42.9**	**+0.7**
CPCH				*i* S	**Sn**	**22 49 04.2**	**+0.4**
AROD	**Rodeo**	**2.05**	**128**	*i* P	**Pn**	**22 48 45.5**	**-0.7**
AGUA	**GUANDACOL**	**2.56**	**103**	*i* P	**Pn**	**22 48 54.3**	**+1.4**
VCA	**Vinchina**	**2.76**	**87**	*i* P	Pn	22 48 58.6	+2.9
VCA				IAML		22 49 01.7	
	comp=Z,47nm,0.5s						
AMOG	**MOGNA**	**3.19**	**130**	*i* P	**Pn**	**22 49 01.4**	**-0.2**

IDC 19 23:00:24.8±1.8, **1°.23N**×**126°.71E**, **h0**km, **mb3.7**/4, **mb1 3.8**/4, **mb1mx3.4**/57, **mbtmp3.7**/4, **Error ellipse: s-maj=174.9km s-min=20.9km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.33**	**161**	P	P	23 05 23.9	-0.4
	0.5nm,0.4s,baz=340,slow=11,SNR=14						
ASAR	**Alice Springs**	**25.71**	**165**	P	P	23 05 57.4	+0.4
	0.3nm,0.3s,baz=342,slow=11,SNR=5.7						
MKAR	**Makanchi Array**	**59.60**	**326**	P	P	23 10 30.5	0.0
	0.7nm,0.4s,baz=121,slow=7.6,SNR=18						
KURBB	**Kurchatov Arra**	**63.83**	**328**	P	P	23 10 58.9	0.0
	0.5nm,0.3s,baz=123,slow=6.8,SNR=5.7						

IDC 19 23:05:42.6±0.9, **22°.85N**×**144°.14E**, **h0**km, **mb3.7**/8, **mb1 3.8**/8, **mb1mx3.6**/62, **mbtmp3.7**/8, **MS2.9**/3, **Ms1 2.9**/3, **ms1mx2.6**/60, **Error ellipse: s-maj=37.4km s-min=20.0km az=85.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**9.23**	**176**	LR	LR	23 11 06.5	
	comp=Z,78nm,20.8s,baz=12,slow=35						
ASAJ	**Asahikawa**	**21.25**	**357**	LR	LR	23 20 32.2	
	comp=Z,27nm,19.0s,baz=182,slow=42						
H11N1	**WAKE ISLAND Hy**	**21.42**	**94**	T	T	23 32 47.2	
	baz=283,slow=74,SNR=11						
H11N2	**WAKE ISLAND Hy**	**21.42**	**94**	T	T	23 32 47.7	
	baz=283,slow=74,SNR=14						
H11N3	**WAKE ISLAND Hy**	**21.44**	**94**	T	T	23 32 53.1	
	baz=283,slow=74,SNR=13						
H11S3	**WAKE ISLAND Hy**	**21.53**	**97**	T	T	23 33 05.5	
	baz=283,slow=75,SNR=9.7						
H11S1	**WAKE ISLAND Hy**	**21.54**	**97**	T	T	23 32 58.6	
	baz=283,slow=75,SNR=5.4						
H11S2	**WAKE ISLAND Hy**	**21.55**	**97**	T	T	23 33 04.3	
	baz=283,slow=75,SNR=6.2						
KLR	**Kul'dur**	**28.09**	**343**	P	P	23 11 36.8	+0.8
	0.2nm,0.7s,baz=150,slow=7.1,SNR=11						
PETK	**Petropavlovsk-**	**31.93**	**15**	LR	LR	23 27 27.8	
	comp=Z,27nm,18.3s,baz=212,slow=41						
WRA	**Warramunga Arr**	**43.59**	**193**	P	P	23 13 49.0	+0.2
	0.5nm,0.5s,baz=17,slow=9.0,SNR=6.0						
ASAR	**Alice Springs**	**47.30**	**193**	P	P	23 14 17.2	-0.9
	0.3nm,0.4s,baz=14,slow=7.8,SNR=3.6						
MKAR	**Makanchi Array**	**54.58**	**312**	P	P	23 15 14.1	+1.3
	0.4nm,0.6s,baz=87,slow=9.1,SNR=4.9						
KURBB	**Kurchatov Arra**	**57.30**	**316**	P	P	23 15 32.0	-0.2
	0.3nm,0.3s,baz=94,slow=8.1,SNR=4.1						
ILAR	**Eielson Array**	**60.61**	**27**	P	P	23 15 54.4	-0.6
	0.8nm,0.7s,baz=259,slow=5.9,SNR=10						
BVAR	**Borovoye Array**	**62.38**	**319**	P	P	23 16 06.8	-0.4
	1.2nm,0.5s,baz=96,slow=8.8,SNR=8.9						
FINES	**FINESS Array B**	**82.53**	**335**	P	P	23 18 05.6	-1.5
	1.3nm,0.8s,baz=62,slow=5.2,SNR=7.5						
LPAZ	**La Paz**	**148.94**	**84**	PKPbc	PKPbc	23 25 35.2	+1.1
	1.0nm,0.6s,baz=341,slow=6.4,SNR=5.5						

*ISCJB **19** 23:07:40.4±0.8, 31°.89N±0°.03×114°.95W±0°.08, h19km±9km, Error ellipse: s-maj=11.4km s-min=4.7km az=4.0*
*ECX **19** 23:07:41.5±0.6, 31°.90N×115°.00W, h8km, MD2.8, ML3.0*
*MEX **19** 23:07:42.1±0.4, 31°.88N×114°.86W, h16km±999km, MD3.8*
ISC 19 23:07:39.4±1.4, **31°.89N**±0°.03×**114°.89W**±0°.08, **h24**km±13km, **n14**, σ0°**55**/22, **2C-5D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECBX	**El Chinero**	**0.44**	**199**	⇓*e*P	**Pb**	**23 07 48.5**	**0.0**
ECBX				*e*S	**Sb**	**23 07 54.6**	**-0.1**
ECBX				IAML		23 07 55.5	
	comp=E,1μm,0.3s						
ECBX				⇓*e*		23 07 55.5	
MBIG	**Mexicali**	**0.58**	**333**	*e*P	**Pn**	**23 07 51.9**	**-0.2**
MBIG				*e*S	**Sb**	**23 07 59.8**	**+1.0**
CPBX	**Cerro Prieto**	**0.64**	**326**	*e*P	**Pb**	**23 07 52.0**	**+0.1**
CPBX				*e*S	**Sb**	**23 07 59.8**	**-0.6**
CPBX				IAML		23 08 03.4	
	comp=E,4μm,0.2s						
CPBX				⇑*e*		23 08 03.4	
YMD	**Yuma Desert**	**0.72**	**23**	⇓*i*P	**Pn**	**23 07 54.1**	**0.0**
SPX	**San Pedro Mart**	**0.97**	**211**	*e*P	**Pb**	**23 07 58.4**	**+0.6**
SPX				*e*S	**Sn**	**23 08 11.1**	**+0.1**
SPX				⇓*e*		23 08 12.3	
SPX				IAML		23 08 12.3	
	comp=E,236nm,0.3s						
SPIG	**San Pedro Mart**	**0.97**	**211**	*e*P	**Pb**	**23 07 57.8**	**0.0**
SPIG				*e*S	**Sn**	**23 08 10.7**	**-0.4**
SPIG	**San Pedro Mart**	**0.97**	**211**	*e*P	**Pb**	**23 07 57.8**	**0.0**
SPIG				*e*S	**Sb**	**23 08 09.6**	**-0.8**
YUH	**Yuha Desert**	**1.16**	**311**	*e*P	**Pn**	**23 08 00.1**	**0.0**
ZAX	**El Zacaton**	**1.24**	**253**	*e*S	**Sn**	**23 08 16.9**	**-0.4**
ZAX				⇑*e*		23 08 17.5	
ZAX				IAML		23 08 17.5	
	comp=N,402nm,0.5s						
IKP	**In-Ko-Pah, Jac**	**1.28**	**307**	*e*P	**Pn**	**23 08 02.5**	**+0.6**
CBX	**Cerro Bola**	**1.57**	**286**	*e*P	**Pb**	**23 08 07.2**	**-0.5**
CBX				*e*S	**Sn**	**23 08 26.4**	**+1.0**
CBX				IAML		23 08 28.6	
	comp=N,192nm,0.4s						
CBX				⇓*e*		23 08 28.6	
TJIG	**Tijuana**	**1.61**	**290**	*i* P	**Pn**	**23 08 07.1**	**+0.8**
TJIG				*e*S	**Sn**	**23 08 26.0**	**-0.3**
BAR	**Barrett**	**1.71**	**298**	*e*P	**Pb**	**23 08 09.7**	**-0.4**
SDRC	**San Diego Road**	**1.94**	**296**	*e*P	**Pb**	**23 08 13.3**	**-0.7**

*ISCJB **19** 23:10:50.8±1.2, 44°.74N±0°.06×10°.95E±0°.07, h23km±5km, Error ellipse: s-maj=11.7km s-min=7.4km az=29.8*
*ROM **19** 23:10:52.3±0.1, 44°.872N±0°.003×11°.024E±0°.005, h8km±1km, ML2.0/13*
*CSEM **19** 23:10:52.2±0.3, 44°.86N×11°.00E, h10km, ML2.0, Error ellipse: s-maj=8.6km s-min=6.0km az=73.0*
ISC 19 23:10:52.9±1.1, **44°.86N**±0°.05×**11°.02E**±0°.04, **h18**km±5km, **n39**, σ1°**06**/44, **1C-1D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NDIM	**Novi di Modena**	**0.09**	**288**	*e*P	**Pg**	**23 10 54.9**	**-1.6**
NDIM				*i* S	**Sg**	**23 10 57.5**	**-1.4**
NDIM				AML	AML		
	comp=E,1815μm,0.5s						
NDIM				AML	AML		
	comp=N,1440μm,0.7s						
NDIM				AML	AML		
	comp=E,1870μm,0.5s						
NDIM				AML	AML		
	comp=N,1435μm,0.5s						
NDIM				AML	AML		
	comp=E,2560μm,0.5s						
NDIM				AML	AML		
	comp=N,2170μm,0.2s						
NDIM				AML	AML		
	comp=E,2540μm,0.5s						
NDIM				AML	AML		
	comp=N,2110μm,0.3s						
NDIM				AML	AML		
	comp=E,2560μm,0.5s						
NDIM				AML	AML		
	comp=E,2540μm,0.5s						
NDIM				AML	AML		
	comp=N,2110μm,0.3s						
NDIM				AML	AML		
	comp=N,2170μm,0.2s						
T0802	**SanFelice sul**	**0.11**	**82**	*e*P	**Pg**	**23 10 55.5**	**-1.2**
T0802	**SanFelice sul**	**0.11**	**82**	*e*P	**Pg**	**23 10 55.5**	**-1.2**
RAVA	**Ravarino**	**0.12**	**146**	⇓*i*P	**Pg**	**23 10 56.1**	**-0.6**
RAVA				*i* S	**Sg**	**23 11 00.1**	**+0.7**
RAVA	**Ravarino**	**0.12**	**146**	*i* P	**Pg**	**23 10 56.1**	**-0.6**
RAVA				*i* S	**Sg**	**23 11 00.1**	**+0.7**
RAVA				AML	AML		
	comp=E,1925μm,0.3s						
RAVA				AML	AML		
	comp=N,2370μm,0.4s						
RAVA				AML	AML		
	comp=E,10735μm,0.3s						
RAVA				AML	AML		
	comp=N,6425μm,0.2s						
RAVA				AML	AML		
	comp=N,6425μm,0.2s						
RAVA				AML	AML		
	comp=E,10735μm,0.3s						
T0800	**Massa Finalese**	**0.16**	**94**	*e*P	**Pg**	**23 10 56.3**	**-0.9**
T0800				*i* S	**Sg**	**23 11 00.7**	**+0.5**
T0800	**Massa Finalese**	**0.16**	**94**	*e*P	**Pg**	**23 10 56.3**	**-0.9**
T0800				*i* S	**Sg**	**23 11 00.7**	**+0.5**
T0800				AML	AML		
	comp=E,4315μm,0.2s						
T0800				AML	AML		
	comp=N,2415μm,0.2s						
T0800				AML	AML		
	comp=E,4260μm,0.2s						
T0800				AML	AML		
	comp=N,1565μm,0.5s						
T0800				AML	AML		
	comp=E,15950μm,0.3s						
T0800				AML	AML		
	comp=N,9965μm,0.1s						
T0800				AML	AML		
	comp=E,15000μm,0.3s						
T0800				AML	AML		
	comp=N,11375μm,0.1s						
T0825	**Gonzaga (MN)**	**0.17**	**312**	*e*P	**Pg**	**23 10 57.2**	**-0.2**
T0825				*i* S	**Sg**	**23 11 02.7**	**+2.3**
T0825	**Gonzaga (MN)**	**0.17**	**312**	*e*P	**Pg**	**23 10 57.2**	**-0.2**
T0825				*i* S	**Sg**	**23 11 02.7**	**+2.3**
T0825				AML	AML		
	comp=E,2825μm,0.3s						
T0825				AML	AML		
	comp=N,2720μm,0.6s						
T0825				AML	AML		
	comp=E,3315μm,0.3s						
T0825				AML	AML		
	comp=N,2750μm,0.6s						
T0825				AML	AML		
	comp=N,2750μm,0.6s						
T0825				AML	AML		
	comp=E,3315μm,0.3s						
SBPO	**S.Benedetto Po**	**0.21**	**339**	*e*P	**Pg**	**23 10 57.5**	**-0.4**
SBPO	**S.Benedetto Po**	**0.21**	**339**	*e*

comp=E,397μm,0.7s
NOVE AML AML
comp=E,397μm,0.7s
NOVE AML AML
comp=N,311μm,1.2s
NOVE AML AML
comp=E,397μm,0.7s
NOVE AML AML
comp=N,311μm,1.2s
T0822 Casumaru (Bond 0.23 96 *e*P **Pg 23 10 57.5 -0.7**
T0822 *i* S **Sg 23 11 02.8 +0.8**
T0822 Casumaru (Bond 0.23 96 *e*P **Pg 23 10 57.5 -0.7**
T0822 *i* S **Sg 23 11 02.8 +0.8**
T0822 AML AML
comp=E,12000μm,0.2s
T0822 AML AML
comp=N,2851μm,0.2s
ERBM Eremo 0.62 225 AML AML
comp=E,30μm,0.8s
ERBM AML AML
comp=E,30μm,0.8s
ERBM AML AML
comp=N,48μm,1.4s
ERBM AML AML
comp=N,48μm,1.4s
TEOL Teolo 0.68 42 *e*Pg **Pg 23 11 05.8 -0.5**
TEOL *e*Sg **Sb 23 11 15.8 +0.5**
TEOL Teolo 0.68 42 *e*P **Pb 23 11 06.3 +0.1**
TEOL *e*Sg **Sb 23 11 15.8 +0.5**
TEOL Teolo 0.68 42 *e*P **Pb 23 11 06.3 +0.1**
ROVR Rover¤ Verone 0.79 2 AML AML
comp=E,141μm,0.8s
ROVR AML AML
comp=E,98μm,0.6s
ROVR AML AML
comp=N,235μm,0.5s
ROVR AML AML
comp=E,141μm,0.8s
ROVR AML AML
comp=N,317μm,0.4s
ROVR AML AML
comp=N,317μm,0.4s
MARN Marana (Italy) 0.79 10 *e*Pg **Pb 23 11 08.0 -0.2**
MARN *e*Sg **Sn 23 11 20.4 -0.2**
MARN Marana (Italy) 0.79 10 *e*Pg **Pb 23 11 07.9 -0.2**
MARN *e*Sg **Sn 23 11 20.4 -0.2**
POPM Popiglio 0.84 193 AML AML
comp=N,83μm,0.3s
POPM AML AML
comp=E,56μm,1.3s
POPM AML AML
comp=N,83μm,0.3s
POPM AML AML
comp=E,56μm,1.3s
SALO Salr 0.84 335 AML AML
comp=E,138μm,0.3s
SALO AML AML
comp=N,252μm,0.5s
SALO AML AML
comp=N,252μm,0.5s
SALO AML AML
comp=E,138μm,0.3s
MAGA Magasa 0.96 343 *e*P **Pg 23 11 10.0 -1.6**
MAGA Magasa 0.96 343 *e*P **Pb 23 11 11.0 -0.1**
MAGA AML AML
comp=E,446μm,0.6s
MAGA AML AML
comp=N,382μm,0.4s
MAGA AML AML
comp=N,382μm,0.4s
MAGA AML AML
comp=E,446μm,0.6s
DOSS Dosso del Somm 1.03 6 *e*Pg **Pg 23 11 11.7 -1.2**
DOSS *e*Sg **Sb 23 11 26.6 +1.1**
DOSS Dosso del Somm 1.03 6 *e*Pg **Pg 23 11 11.7 -1.2**
DOSS *e*Sg **Sb 23 11 26.6 +1.1**
RNI Roncone 1.16 346 *e*Pg **Pg 23 11 13.5 -1.8**
RNI Roncone 1.16 346 *e*Pg **Pg 23 11 13.5 -1.8**
CGRP Cima Grappa 1.16 28⇑*e*Pg **Pg 23 11 14.1 -1.3**
CGRP Cima Grappa 1.16 28 *e*Pg **Pg 23 11 14.1 -1.3**
CGRP Cima Grappa 1.16 28 AML AML
comp=N,35μm,0.5s
CGRP AML AML
comp=E,42μm,1.1s
CGRP AML AML
comp=N,35μm,0.5s
CGRP AML AML
comp=E,42μm,1.1s
MSSA Maissana 1.21 244 AML AML
comp=E,24μm,0.3s
MSSA AML AML
comp=E,24μm,0.3s
MSSA AML AML
comp=N,28μm,0.5s
MSSA AML AML
comp=N,28μm,0.5s
MABI Malga Bissina 1.25 344 AML AML
comp=E,24μm,0.4s
MABI AML AML
comp=N,17μm,0.6s
MABI AML AML
comp=N,17μm,0.6s
MABI AML AML
comp=E,24μm,0.4s
CTI Castel Tesino 1.27 20 AML AML
comp=N,92μm,0.7s
CTI AML AML
comp=E,94μm,0.2s
CTI AML AML
comp=N,92μm,0.7s
CTI AML AML
comp=E,94μm,0.2s
ABSI Aberstueckl 1.88 6 AML AML
comp=N,42μm,0.3s
ABSI AML AML
comp=E,55μm,0.4s
ABSI AML AML
comp=N,42μm,0.3s
ABSI AML AML
comp=E,55μm,0.4s

*CSEM **19** 23:11:42.4, 44°.91N×11°.19E, h9km, ML2.4/16*
ROM 19 23:11:42.4±0.1, 44°.908N±0°.004×11°.186E±0°.009, h9km, ML2.4/8, 1C, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0802	**SanFelice sul**	**0.03 186**		*i* P	Pg	23 11 40.1	-3.9
T0802	**SanFelice sul**	**0.03 186**		*i* P	Pg	23 11 40.1	-3.9
T0800	**Massa Finalese**	**0.07 143**		⇑*i*P	Pg	23 11 45.5	+1.1
T0800				*i* S	Sg	23 11 47.6	+1.7
T0800	**Massa Finalese**	**0.07 143**		*i* P	Pg	23 11 45.5	+1.0
T0800				*i* S	Sg	23 11 47.6	+1.7
T0800				AML	AML		
T0800	comp=E,15950μm,0.3s			AML	AML		
T0800	comp=N,9955μm,0.1s			AML	AML		
T0800	comp=E,15000μm,0.3s			AML	AML		
T0800	comp=N,11375μm,0.1s			AML	AML		
T0800	comp=E,15950μm,0.3s			AML	AML		
T0800	comp=N,9965μm,0.1s			AML	AML		
T0800	comp=E,15000μm,0.3s			AML	AML		
T0800	comp=N,11375μm,0.1s			AML	AML		
T0805	**Bondeno (FE)**	**0.10 84**		*i* P	Pg	23 11 46.5	+1.7
T0805	**Bondeno (FE)**	**0.10 84**		*i* P	Pg	23 11 46.5	+1.7
T0822	**Casumaru (Bond**	**0.14 123**		*i* P	Pg	23 11 46.4	+1.0
T0822				*i* S	Sg	23 11 49.4	+2.0
T0822	**Casumaru (Bond**	**0.14 123**		*i* P	Pg	23 11 46.4	+1.0
T0822				*i* S	Sg	23 11 49.4	+2.0
T0822				AML	AML		
T0822	comp=E,11995μm,0.2s			AML	AML		
T0822	comp=N,2855μm,0.2s			AML	AML		
T0822	comp=E,12000μm,0.2s			AML	AML		
T0822	comp=N,2851μm,0.2s			AML	AML		
T0822	comp=N,2850μm,0.2s			AML	AML		
T0822	comp=E,12000μm,0.2s			AML	AML		
RAVA	**Ravarino**	**0.16 198**		*i* P	Pg	23 11 47.1	+1.3
RAVA				*i* S	Sg	23 11 50.9	+2.8
RAVA	**Ravarino**	**0.16 198**		*i* P	Pg	23 11 47.1	+1.3
RAVA				*i* S	Sg	23 11 50.9	+2.8
RAVA				AML	AML		
RAVA	comp=E,10725μm,0.3s			AML	AML		
RAVA	comp=N,6425μm,0.2s			AML	AML		
RAVA	comp=E,10735μm,0.3s			AML	AML		
RAVA	comp=N,6425μm,0.2s			AML	AML		
RAVA	comp=N,6425μm,0.2s			AML	AML		
RAVA	comp=E,10735μm,0.3s			AML	AML		
T0803	**Dosso, Cento (**	**0.18 140**		*i* P	Pg	23 11 46.9	+0.7
T0803	**Dosso, Cento (**	**0.18 140**		*i* P	Pg	23 11 46.9	+0.8
NDIM	**Novi di Modena**	**0.20 264**		AML	AML		
NDIM	comp=E,2555μm,0.5s			AML	AML		
NDIM	comp=E,2555μm,0.5s			AML	AML		
NDIM	comp=N,2175μm,0.2s			AML	AML		
NDIM	comp=E,2540μm,0.5s			AML	AML		
NDIM	comp=N,2110μm,0.3s			AML	AML		
NDIM	comp=E,2555μm,0.5s			AML	AML		
NDIM	comp=N,2175μm,0.2s			AML	AML		
NDIM	comp=E,2545μm,0.5s			AML	AML		
NDIM	comp=N,2110μm,0.3s			AML	AML		
NDIM	comp=E,2545μm,0.5s			AML	AML		
NDIM	comp=N,2175μm,0.2s			AML	AML		
NDIM	comp=N,2110μm,0.3s			AML	AML		
SBPO	**S.Benedetto Po**	**0.24 307**		AML	AML		
SBPO	comp=E,510μm,0.4s			AML	AML		
SBPO	comp=E,509μm,0.4s			AML	AML		
SBPO	comp=N,1725μm,0.6s			AML	AML		
SBPO	comp=N,1725μm,0.6s			AML	AML		
SBPO	comp=E,510μm,0.4s			AML	AML		
SBPO	comp=N,1725μm,0.6s			AML	AML		
T0825	**Gonzaga (MN)**	**0.25 285**		AML	AML		
T0825	comp=N,2750μm,0.6s			AML	AML		
T0825	comp=E,3315μm,0.3s			AML	AML		
T0825	comp=N,2750μm,0.6s			AML	AML		
T0825	comp=E,3315μm,0.3s			AML	AML		
T0825	comp=N,2750μm,0.6s			AML	AML		
T0825	comp=E,3315μm,0.3s			AML	AML		
T0821	**Loc. Casaglia**	**0.25 91**		*i* P	Pb	23 11 48.6	-0.5
T0821	**Loc. Casaglia**	**0.25 91**		*i* P	Pb	23 11 48.6	-0.5
T0820	**Chiesuol del F**	**0.30 113**		AML	AML		
T0820	comp=N,428μm,0.3s			AML	AML		
T0820	comp=E,444μm,1.6s			AML	AML		
T0820	comp=E,444μm,1.6s			AML	AML		
T0820	comp=N,428μm,0.3s			AML	AML		
T0820	comp=E,444μm,1.6s			AML	AML		
T0820	comp=N,428μm,0.3s			AML	AML		
NOVE	**Novellara**	**0.35 252**		AML	AML		
NOVE	comp=N,311μm,1.2s			AML	AML		
NOVE	comp=E,376μm,0.7s			AML	AML		
NOVE	comp=N,310μm,1.2s			AML	AML		
NOVE	comp=E,376μm,0.7s			AML	AML		
NOVE	comp=N,311μm,1.2s			AML	AML		
NOVE	comp=E,376μm,0.7s			AML	AML		
ZCCA	**Zocca**	**0.58 195**		*i* P	Pg	23 11 53.6	0.0
ZCCA	**Zocca**	**0.58 195**		*i* P	Pg	23 11 53.6	+0.1
ROVR	**Rover¤ Verone**	**0.74 354**		*i* P	Pg	23 11 52.4	-4.4
ROVR	**Rover¤ Verone**	**0.74 354**		*i* P	Pg	23 11 52.4	-4.3
SALO	**Salr**	**0.85 327**		AML	AML		
SALO	comp=E,138μm,0.3s			AML	AML		
SALO	comp=N,252μm,0.5s			AML	AML		
SALO	comp=N,252μm,0.5s			AML	AML		
SALO	comp=E,138μm,0.3s			AML	AML		
POPM	**Popiglio**	**0.92 200**		*i* P	Pg	23 11 57.3	-2.7
POPM	**Popiglio**	**0.92 200**		*i* P	Pg	23 11 57.3	-2.7
MAGA	**Magasa**	**0.95 336**		*i* P	Pg	23 11 56.4	-4.3
MAGA	**Magasa**	**0.95 336**		*i* P	Pg	23 11 56.4	-4.3

NNC 19 23:20:11.8±1.4, 37°.83N×71°.52E, h0km, mb4.1, mpv3.7, 4C-1D, Error ellipse: s-maj=10.5km s-min=8.4km az=1.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**2.68**	**35**	⇑P	Pn	23 20 56.2	-0.2
SFK	9.6nm,0.3s			⇑S	Sn	23 21 31.1	+1.5
MNAS	**Manas**	**4.72**	**9**	⇓P	Pn	23 21 24.6	+0.3
MNAS	24nm,0.2s 3.2nm,0.4s			⇑S	Sn	23 22 20.9	+1.1
KK31	**Karatay Array**	**5.33**	**352**	P	Pn	23 21 33.1	+0.5
KK31	11nm,0.4s 9.4nm,0.5s,baz=172,slow=12,SNR=49			⇑S	Sn	23 22 35.7	+1.0
	4.6nm,0.3s						

*IDC **19** 23:25:32.4±3.3, 36°.35N×71°.07E, h189km±29km, mb3.6/13, mb1 3.7/18, mb1mx3.3/71, mbtmp4.2/18, Error ellipse: s-maj=18.1km s-min=15.6km az=5.0*
*ISCJB **19** 23:25:35.0±0.4, 36°.65N±0°.04×70°.87E±0°.05, h200km, mb3.7/13, Error ellipse: s-maj=6.3km s-min=4.7km az=146.9*
*NNC **19** 23:25:41.3±6.4, 37°.22N×70°.67E, h0km, mb4.5, mpv4.2, Error ellipse: s-maj=49.5km s-min=40.1km az=176.0*
ISC 19 23:25:34.7±0.7, 36°.62N±0°.07×70°.95E±0°.07, h200km, n42, σ1§56/41, mb3.9/13, 5C, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.94**	**30**	⇑P	**Pn**	**23 26 37.9**	**+2.0**
SFK	53nm,0.5s			⇑S	**Sn**	**23 27 23.4**	**-0.6**
AML	**Almayashu**	**5.90**	**20**	P	**Pn**	**23 27 02.4**	**+1.4**
MNAS	160nm,0.4s SNR=244 **Manas**	**5.98**	**11**	⇑P	**Pn**	**23 27 03.4**	**+1.6**
MNAS	15nm,0.4s 61nm,0.5s			⇑S	**Sn**	**23 28 07.9**	**-2.8**
UCH	**Uchtor**	**6.24**	**25**	P	**Pn**	**23 27 06.8**	**+1.4**
KZA	SNR=24 **Kyzart**	**6.39**	**30**	P	**Pn**	**23 27 08.2**	**+0.9**
EKS2	SNR=29 **Erkin-Say**	**6.42**	**19**	P	**Pn**	**23 27 08.9**	**+1.5**
KK31	SNR=22 **Karatay Array**	**6.49**	**357**	P	**Pn**	**23 27 09.6**	**+1.4**
KK31	3.3nm,0.3s,baz=175,slow=12,SNR=46 14nm,0.4s,baz=174,slow=24			⇑S	**Sn**	**23 28 18.3**	**-4.0**
KBK	**Karagaybulak**	**6.77**	**26**	P	**Pn**	**23 27 13.5**	**+1.5**
ULHL	SNR=33 **Ulahol**	**6.95**	**34**	P	**Pn**	**23 27 15.3**	**+0.9**
CHMS	SNR=24 **Chumysh**	**7.01**	**23**	P	**Pn**	**23 27 16.7**	**+1.7**
USP	SNR=16 **Ospenovka**	**7.18**	**21**	P	**Pn**	**23 27 18.7**	**+1.5**
TKM2	SNR=17 **Tokmak 2**	**7.24**	**28**	P	**Pn**	**23 27 19.4**	**+1.3**
GEYT	SNR=17 **Alibeck**	**10.31**	**281**	P	**Pn**	**23 27 58.4**	**+0.5**
GEYT	0.7nm,0.3s,baz=114,slow=9.6,SNR=5.5 0.3nm,0.3s,baz=62,slow=14,SNR=3.2			S	**Sn**	**23 29 51.3**	**-1.8**
MKAR	**Makanchi Array**	**13.22**	**36**	P	**Pn**	**23 28 34.2**	**-0.6**
DANN	0.5nm,0.3s,baz=223,slow=17,SNR=19 **Dangsing**	**13.59**	**124**	*e*P	P	23 28 42.6	+0.3
KOLN	7.4nm,0.3s **Koldanda**	**13.87**	**126**	*e*P	**P**	**23 28 43.3**	**-1.9**
GKN	4.3nm,0.3s **Gorkha**	**14.40**	**123**	*e*P	P	23 28 52.2	+1.1
DMN	14nm,0.3s **Daman**	**14.97**	**123**	*e*P	P	23 28 59.3	+1.7
KKN	7.6nm,0.3s **Kakani**	**14.97**	**122**	*e*P	P	23 28 59.7	+2.2
KURBB	15nm,0.5s **Kurchatov Arra**	**15.02**	**19**	P	**Pn**	**23 28 56.4**	**-0.6**
KURBB	0.1nm,0.3s,baz=205,slow=11,SNR=5.5 0.0nm,0.3s,baz=211,slow=19,SNR=2.9			S	**S**	**23 31 41.2**	**-2.4**
PKIN	**Phulchoki**	**15.19**	**122**	*e*P	P	23 29 02.4	+2.4
GUN	12nm,0.6s **Gumba**	**15.31**	**120**	*e*P	P	23 29 04.8	+3.4
JIRN	14nm,0.4s **Jiri**	**15.68**	**120**	*e*P	P	23 29 09.5	+4.0
BVAR	30nm,0.4s **Borovoye Array**	**16.41**	**359**	P	**Pn**	**23 29 14.7**	**+1.0**
RAMN	0.8nm,0.3s,baz=165,slow=12,SNR=16 **Ramite**	**16.41**	**122**	*e*P	**Pn**	**23 29 15.0**	**+0.8**
AKTO	18nm,0.8s **Aktyubinsk**	**16.66**	**330**	P	**Pn**	**23 29 17.8**	**+1.1**
AKTO	1.5nm,0.3s,baz=134,slow=10,SNR=20 0.1nm,0.3s,baz=349,slow=16,SNR=2.3			S	**S**	**23 32 17.5**	**-1.9**
ODAN	**Odare**	**17.01**	**120**	*e*P	**Pn**	**23 29 22.9**	**+1.5**
ZALV	16nm,0.6s **Zalesovo Beam**	**19.82**	**25**	P	**P**	**23 29 50.0**	**+0.1**
ARU	2.6nm,0.3s,baz=218,slow=11,SNR=12 **Arti**	**21.51**	**341**	P	**P**	**23 30 08.9**	**+1.3**
NRIK	2.2nm,0.5s,baz=152,slow=7.1,SNR=5.3 **Noril'sk**	**34.02**	**10**	P	**P**	**23 32 00.5**	**+1.4**
FINES	4.0nm,0.5s,baz=187,slow=5.6,SNR=9.4 **FINESS Array B**	**37.36**	**326**	P	**P**	**23 32 28.9**	**+1.2**
ARCES	1.9nm,0.4s,baz=123,slow=9.6,SNR=20 **ARCESS Array B**	**41.02**	**338**	P	**P**	**23 32 59.2**	**+1.3**
HFS	3.1nm,0.6s,baz=111,slow=8.5,SNR=20 **Hagfors**	**42.95**	**322**	P	**P**	**23 33 14.3**	**+0.8**
NB2	3.3nm,0.5s,baz=98,slow=11,SNR=15 **NORSAR Subarra**	**44.26**	**323**	P	**P**	**23 33 24.5**	**+0.5**
NOA	comp=Z,1.0nm,0.6s,baz=95,slow=7.9 **NORSAR Array B**	**44.26**	**323**	P	**P**	**23 33 24.5**	**+0.5**
SPITS	comp=Z,2.7nm,0.6s,baz=88,slow=11,SNR=4.8 **Spitsbergen Ar**	**47.37**	**347**	P	**P**	**23 33 49.7**	**+1.7**
TORD	comp=Z,0.7nm,0.5s,baz=49,slow=5.9,SNR=24 **Torodi Ar. Bea**	**65.68**	**269**	P	**P**	**23 35 56.9**	**-1.1**
INK	comp=Z,1.7nm,0.5s,baz=345,slow=8.3,SNR=9.1 **Inuvik**	**73.79**	**9**	P	**P**	**23 36 47.0**	**+0.5**
ILAR	comp=Z,0.5nm,0.7s,baz=330,slow=3.6,SNR=6.1 **Eielson Array**	**74.67**	**16**	P	**P**	**23 36 51.1**	**-0.7**
YKA	comp=Z,0.8nm,0.5s,baz=352,slow=5.0,SNR=4.4 **Yellowknife Ar**	**81.13**	**3**	P	**P**	**23 37 27.5**	**+0.2**
WRA	comp=Z,1.1nm,0.7s,baz=324,slow=5.0,SNR=11 **Warramunga Arr**	**82.09**	**122**	P	**P**	**23 37 30.8**	**-2.2**
ASAR	comp=Z,0.9nm,0.6s,baz=305,slow=4.9,SNR=7.3 **Alice Springs**	**84.35**	**125**	P	**P**	**23 37 42.9**	**-1.6**

IDC 19 23:28:14.5±4.8, 16°.37S×174°.04W, h56km±37km, mb3.4/5, mb1 3.8/6, mb1mx3.5/49, mbtmp3.7/6, ML4.3/1, MS3.7/1, Ms1 3.7/1, ms1mx2.7/21, Error ellipse: s-maj=108.8km s-min=19.8km az=150.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.28**	**42**	P	Pn	23 29 03.4	0.0
AFI	33nm,0.3s,baz=209,slow=1.7,SNR=29 57nm,0.3s,baz=49,slow=21,SNR=20			S	Sn	23 29 35.4	-5.8
HNR	**Honiara**	**26.26**	**282**	LR	LR	23 43 47.0	
WRA	comp=Z,141nm,18.9s,baz=204,slow=36 **Warramunga Arr**	**49.03**	**258**	P	P	23 36 56.1	-0.1
WRA	0.6nm,0.7s,baz=90,slow=8.3,SNR=7.9			PcP	PcP	23 38 19.2	-0.4
ASAR	0.4nm,0.8s,baz=92,slow=4.3,SNR=2.6 **Alice Springs**	**49.23**	**253**	P	P	23 36 57.7	-0.1
NVAR	3.6nm,0.7s,baz=86,slow=8.4,SNR=34 **Mina Array Bea**	**75.45**	**42**	P	P	23 39 52.9	-0.1
TXAR	0.3nm,0.4s,baz=228,slow=11,SNR=2.1 **Lajitas Array**	**81.66**	**56**	P	P	23 40 27.2	0.0
ILAR	0.2nm,0.8s,baz=231,slow=5.4,SNR=3.3 **Eielson Array**	**83.51**	**11**	P	P	23 40 36.2	+0.3
	0.3nm,0.6s,baz=225,slow=5.9,SNR=3.2						

*IDC **19** 23:39:17.0±1.5, 8°.97N×126°.47E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.4/62, mbtmp3.7/5, MS2.6/1, Ms1 2.6/1, ms1mx2.3/59, Error ellipse: s-maj=141.0km s-min=20.3km az=69.0*
*ISCJB **19** 23:39:22.3±0.8, 9°.03N±0°.06×126°.53E±0°.06, h54km, mb3.6/5, Error ellipse: s-maj=9.0km s-min=8.2km az=158.2*
*MAN **19** 23:39:26.0, 8°.90N×126°.33E, h30km, mb4.5, ML3.4, MS3.2*
ISC 19 23:39:24.9±1.0, 8°.94N±0°.06×126°.44E±0°.08, h54km, n14, σ1§89/18, mb3.8/5, 2C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.75 186**		⇓*e*P	**Pn**	**23 39 39.7**	**+0.1**
BIPH				*e*S	**Sn**	**23 39 49.7**	**-0.5**
BUTP	**Butuan**	**0.81 272**		*e*P	**Pn**	**23 39 40.0**	**-0.3**
BUTP				*e*S	**Sn**	**23 39 50.7**	**-0.8**
BUKP	**Musuan**	**1.72 232**		*e*P	**Pn**	**23 39 53.5**	**+0.9**
BUKP				*e*S	**Sn**	**23 40 15.1**	**+1.6**
CGP	**Cagayan de Oro**	**1.79 255**		⇑*e*P	**Pn**	**23 39 53.4**	**-0.1**
CGP				*i* S	**Sn**	**23 40 13.8**	**-1.3**
DAV	**Davao City (W)**	**2.04 205**		LR	LR	23 40 43.6	
	comp=Z,118nm,18.3s,baz=324,slow=42						
DMPH	**Davao City--Mi**	**2.06 207**		⇑*e*P	Pn	23 40 08.9	+12
DMPH				*e*S	**Sn**	**23 40 27.2**	**+5.5**
DCPH	**Dipolog City**	**3.07 264**		⇓*e*P	**Pn**	**23 40 12.4**	**+1.4**
PAGZ	**Pagadian**	**3.21 251**		*e*P	**Pn**	**23 40 13.2**	**+0.2**
PAGZ				*e*S	**Sn**	**23 40 51.7**	**+1.6**
CNP	**Catarman**	**3.96 334**		*e*P	**Pn**	**23 40 26.1**	**+2.9**
WRA	**Warramunga Arr**	**29.73 165**		P	**P**	**23 45 25.9**	**-0.4**
	0.2nm,0.5s,baz=345,slow=9.8,SNR=7.8						
ASAR	**Alice Springs**	**33.22 167**		P	**P**	**23 45 55.7**	**-1.3**
	0.2nm,0.3s,baz=349,slow=7.4,SNR=3.1						
MKAR	**Makanchi Array**	**53.19 323**		P	**P**	**23 48 37.4**	**-0.3**
	1.0nm,0.7s,baz=121,slow=8.1,SNR=9.3						
KURBB	**Kurchatov Arra**	**57.26 326**		P	**P**	**23 49 05.7**	**-1.2**
	0.6nm,0.6s,baz=125,slow=6.5,SNR=8.1						
NRIK	**Noril'sk**	**65.34 346**		P	**P**	**23 50 00.5**	**-0.7**
	0.4nm,0.3s,baz=139,slow=7.7,SNR=3.7						

*NIED **19** 23:42:00, 23°.60N×121°.60E, h8km, Mw4.0 Best double couple: M0 1.17000×10^15 NP1:φs 125.00000°, δ16.00000°, λ-156.00000°. NP2:φs 11.00000°, δ84.00000°, λ-76.00000°.*
*JMA **19** 23:42:47.6±0.1, 23°.65N×121°.57E, h0km, M3.6*
*ISCJB **19** 23:42:48.4±0.3, 23°.66N±0°.01×121°.58E±0°.02, h2km±2km, mb3.6/12, MS3.6/3, Error ellipse: s-maj=2.7km s-min=1.7km az=32.6*
*IDC **19** 23:42:48.6±0.8, 23°.62N×121°.70E, h0km, mb3.7/12, mb1 3.9/13, mb1mx3.7/69, mbtmp3.7/13, ML3.4/1, MS3.3/6, Ms1 3.3/6, ms1mx2.8/62, Error ellipse: s-maj=25.5km s-min=18.0km az=66.0*
*TAP **19** 23:42:48.6, 23°.68N×121°.51E, h6km, ML4.2, C*
ISC 19 23:42:49.1±1.0, 23°.67N±0°.01×121°.52E±0°.02, h4km±7km, n121, σ1§11/160, mb3.6/12, MS3.5/3, 11C-17D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	**Guangfu**	**0.09 267**		⇑*i*P	**Pg**	**23 42 50.7**	**-0.2**

	baz=272							
EGFH				S		Sg	23 42 52.5	+0.4
	baz=272							
ESL	**Shilin**	**0.16**	**329**	⇓*i*P		**Pg**	**23 42 52.0**	**-0.3**
	baz=326							
ESL				*i* S		**Sg**	**23 42 54.4**	**-0.1**
	baz=326							
HGSD	**Ruisui**	**0.20**	**207**	⇓P		**Pg**	**23 42 54.0**	**+0.9**
	baz=215							
HGSD				S		**Sg**	**23 42 58.2**	**+2.5**
	baz=215							
ENLB	**Shoufeng**	**0.24**	**18**	⇓P		**Pg**	**23 42 55.3**	**+1.6**
	baz=19							
ENLB				*e*S		**Sg**	**23 43 00.0**	**+3.1**
	baz=19							
EHY	**Hungye**	**0.25**	**228**	⇑P		**Pg**	**23 42 53.7**	**-0.2**
	baz=235							
EHY				S		**Sg**	**23 42 57.9**	**+0.7**
	baz=235							
HWA	**Hwalien**	**0.31**	**14**	*e*P		**Pb**	**23 42 55.9**	**-1.4**
	baz=4.0							
HWA				*e*S		**Sb**	**23 43 01.9**	**-0.8**
	baz=4.0							
YULB	**Yu-li**	**0.35**	**216**	⇑P		**Pg**	**23 42 55.8**	**0.0**
	baz=227							
YULB				*e*S		**Sg**	**23 43 00.7**	**+0.3**
	baz=227							
VWDT	**VWDT**	**0.36**	**283**	⇑P		**Pb**	**23 42 56.2**	**-1.8**
	baz=284							
VWDT				*e*S		**Sb**	**23 43 01.8**	**-2.3**
	baz=284							
TWF1	**Yuli**	**0.38**	**213**	*e*P		**Pg**	**23 42 56.4**	**-0.1**
	baz=218							
TWD	**Chiawan**	**0.41**	**9**	⇓*i*P		**Pg**	**23 42 56.9**	**-0.1**
TWD				S		**Sb**	**23 43 03.9**	**-1.7**
CHGB	**Renai**	**0.50**	**320**	⇓P		**Pg**	**23 42 58.8**	**+0.1**
	baz=331							
CHGB				S		**Sg**	**23 43 04.8**	**-0.5**
	baz=331							
NACB	**Ninganchiao**	**0.50**	**8**	⇓P		**Pg**	**23 42 58.4**	**-0.4**
	baz=355							
NACB				S		**Sb**	**23 43 06.6**	**-1.6**
	baz=355							
FULB	**Fuli**	**0.52**	**204**	*e*P		**Pb**	**23 43 00.1**	**-0.7**
	baz=226							
SSLB	**Suanglung**	**0.53**	**282**	⇑P		**Pg**	**23 42 59.1**	**-0.2**
	baz=284							
SSLB				S		**Sg**	**23 43 05.8**	**-0.5**
	baz=284							
CHKT	**Chengkung**	**0.59**	**194**	*e*P		**Pb**	**23 43 00.9**	**-1.1**
	baz=179							
CHKT				*e*S		**Sb**	**23 43 11.1**	**+0.4**
	baz=179							
SMLT	**Sun Moon Lake**	**0.61**	**290**	⇑P		**Pb**	**23 43 00.7**	**-1.7**
	baz=291							
SMLT				S		**Sg**	**23 43 08.6**	**-0.1**
	baz=291							
TDCB	**Techi**	**0.67**	**330**	⇓P		**Pg**	**23 43 01.8**	**-0.1**
	baz=330							
TDCB				*e*S		**Sg**	**23 43 10.2**	**-0.4**
	baz=330							
ELDTW	**Lidau**	**0.67**	**224**	*e*P		**Pg**	**23 43 01.1**	**-0.9**
	baz=235							
ALS	**Alisham**	**0.68**	**256**	*e*P		**Pb**	**23 43 02.5**	**-1.2**
	baz=256							
WJS	**Zhushan**	**0.74**	**282**	*e*P		**Pn**	**23 43 04.8**	**-1.6**
	baz=282							
NNSB	**Datong**	**0.76**	**350**	⇓P		**Pb**	**23 43 03.6**	**-1.4**
	baz=342							
NNSB				S		**Sg**	**23 43 13.2**	**-0.4**
	baz=342							
NNSH	**Datong**	**0.76**	**350**	P		**Pg**	**23 43 03.4**	**-0.3**
	baz=343							
NNSH				*e*S		**Sg**	**23 43 13.3**	**-0.4**
	baz=343							
NNS	**Nan Shan**	**0.78**	**350**	⇓P		**Pg**	**23 43 03.8**	**-0.2**
	baz=342							
NNS				*e*S		**Sg**	**23 43 13.8**	**-0.3**
	baz=342							
ENA	**Nanau**	**0.78**	**15**	*e*P		**Pg**	**23 43 03.6**	**-0.4**
	baz=7.0							
NANB	**Nanao**	**0.78**	**15**	⇓P		**Pg**	**23 43 03.5**	**-0.5**
	baz=1.0							
NANB				*e*S		**Sb**	**23 43 15.8**	**-0.4**
	baz=1.0							
WNT	**Mingjian**	**0.80**	**285**	*e*P		**Pn**	**23 43 05.7**	**-1.4**
	baz=292							
WNT				*e*S		**Sn**	**23 43 17.7**	**-1.7**
	baz=292							
ENAH	**Nanao**	**0.81**	**19**	*e*P		**Pg**	**23 43 04.3**	**-0.4**
	baz=8.0							
STYT	**Tauyuan**	**0.87**	**234**	*e*P		**Pg**	**23 43 05.4**	**-0.4**
	baz=228							
STYT				*e*S		**Sn**	**23 43 19.0**	**-2.3**
	baz=228							
WGK	**Gukeng**	**0.88**	**271**	⇑P		**Pn**	**23 43 07.3**	**-1.0**
	baz=273							
WGK				*e*S		**Sn**	**23 43 21.0**	**-0.6**
	baz=273							
TPUB	**Ta-pu**	**0.90**	**246**	⇑P		**Pb**	**23 43 06.7**	**-0.6**
	baz=256							
TPUB				*e*S		**Sn**	**23 43 20.5**	**-1.6**
	baz=256							
WDLH	**Douliu**	**0.90**	**271**	*e*P		**Pn**	**23 43 07.8**	**-0.8**
	baz=273							
TCU	**Taichung**	**0.91**	**301**	*e*P		**Pn**	**23 43 07.8**	**-0.9**
	baz=304							
WTP	**Ta-pu**	**0.94**	**243**	⇑P		**Pn**	**23 43 07.5**	**-1.6**
	baz=253							
WTP				*e*S		**Sn**	**23 43 21.4**	**-1.6**
	baz=253							
TWG	**Pinlang**	**0.94**	**206**	*e*P		**Pg**	**23 43 05.9**	**-1.3**
	baz=189							
TWGBT	**Beinan**	**0.94**	**206**	*e*P		**Pg**	**23 43 06.0**	**-1.2**
	baz=220							
TWGBT				*e*S		**Sb**	**23 43 20.6**	**-0.4**
	baz=220							
TWQ1	**Liyutan**	**0.96**	**315**	*e*P		**Pn**	**23 43 08.7**	**-0.7**
	baz=316							
TWH	**Lutao**	**0.96**	**183**	*e*P		**Pb**	**23 43 07.5**	**-0.8**
	baz=166							
ENTT	**Nioudou**	**0.96**	**2**	⇓P		**Pb**	**23 43 07.3**	**-1.1**
	baz=351							
ENTT				*e*S		**Sb**	**23 43 20.7**	**-0.8**
	baz=351							
WCHH	**Zhanghua**	**0.97**	**295**	*e*P		**Pn**	**23 43 08.9**	**-0.6**
	baz=296							
CHN2	**Minshiung**	**0.97**	**262**	*e*P		**Pn**	**23 43 09.4**	**-0.2**
	baz=264							
TWC	**Suao**	**0.98**	**18**	*e*P		**Pg**	**23 43 07.4**	**-0.5**
	baz=8.0							
TWC				*e*S		**Sn**	**23 43 23.2**	**-0.8**
	baz=8.0							
YHNB	**Yeheng**	**1.00**	**352**	⇓P		**Pb**	**23 43 08.3**	**-0.8**
	baz=350							
YHNB				*e*S		**Sb**	**23 43 21.1**	**-1.5**
	baz=350							
NSK	**Sanguang**	**1.01**	**351**	⇓*i*P		**Pb**	**23 43 08.4**	**-0.8**
	baz=350							
NSK				S		**Sg**	**23 43 20.8**	**-0.7**
	baz=350							
CHY	**Chiayi**	**1.02**	**260**	*e*P		**Pn**	**23 43 09.5**	**-0.8**
	baz=263							
CHY				*e*S		**Sn**	**23 43 24.9**	**-0.1**
	baz=263							
EOS1	**EOS1**	**1.03**	**32**	*e*P		**Pn**	**23 43 10.2**	**-0.1**
	baz=47							
TWK	**Hsinying**	**1.03**	**247**	*e*P		**Pn**	**23 43 09.5**	**-1.0**
	baz=249							
TWK				*e*S		**Sn**	**23 43 24.7**	**-0.7**
	baz=249							
CHN1	**Nanshi**	**1.03**	**242**	⇑P		**Pn**	**23 43 09.9**	**-0.6**
	baz=244							
CHN1				*e*S		**Sn**	**23 43 24.4**	**-1.0**
	baz=244							
SGST	**Jiashian**	**1.05**	**236**	*e*P		**Pn**	**23 43 09.6**	**-1.0**
	baz=239							
TWE	**Neicheng**	**1.05**	**7**	⇓P		**Pb**	**23 43 09.0**	**-0.9**
	baz=354							
TWE				*e*S		**Sn**	**23 43 25.3**	**-0.5**
	baz=354							
SLGT	**Liugui**	**1.05**	**230**	*e*P		**Pg**	**23 43 08.6**	**-0.7**
	baz=234							
NSTT	**Nanjuang**	**1.06**	**334**	*e*P		**Pn**	**23 43 09.6**	**-1.2**
	baz=333							
NSTT				*e*S		**Sb**	**23 43 23.3**	**-1.2**
	baz=333							
LIOB	**Emei**	**1.07**	**335**	*e*P		**Pn**	**23 43 10.3**	**-0.7**
	baz=333							
LIOB				*e*S		**Sg**	**23 43 23.0**	**-0.6**
	baz=333							
RLNB	**Erlin**	**1.09**	**282**	*e*P		**Pn**	**23 43 10.8**	**-0.3**
	baz=284							
NMLH	**Miaoli**	**1.09**	**322**	*e*P		**Pn**	**23 43 11.2**	**+0.1**
	baz=335							
NWLT	**Wulai**	**1.10**	**359**	*e*P		**Pg**	**23 43 09.1**	**-1.1**
	baz=359							
ECL	**Taimali**	**1.19**	**206**	*e*P		**Pb**	**23 43 10.4**	**-1.8**
	baz=189							
WSF	**Szhu**	**1.19**	**269**	*e*P		**Pg**	**23 43 11.8**	**-0.2**
	baz=271							
WLTB	**Daxi**	**1.20**	**348**	⇓*e*P		**Pg**	**23 43 12.5**	**+0.3**
	baz=356							
WLTB				*e*S		**Sn**	**23 43 28.6**	**-0.8**
	baz=356							
SBCB	**Hsinchu**	**1.22**	**336**	*e*P		**Pg**	**23 43 12.3**	**-0.2**
	baz=328							
SBCB				*e*S		**Sn**	**23 43 30.9**	**+1.1**
	baz=328							
CHN3	**Shinhua**	**1.22**	**241**	⇑P		**Pg**	**23 43 13.8**	**+1.3**
	baz=242							
CHN3				*e*S		**Sn**	**23 43 32.5**	**+2.6**
	baz=242							
EGS		**1.22**	**18**	*e*P		**Pg**	**23 43 13.2**	**+0.6**
	baz=2.0							
SSD	**Sandimen**	**1.23**	**222**	*e*P		**Pg**	**23 43 12.6**	**-0.2**
	baz=216							
CHN8	**Yiju**	**1.25**	**255**	⇓P		**Pg**	**23 43 13.5**	**+0.5**
	baz=258							
CHN8				*e*S		**Sn**	**23 43 31.9**	**+1.3**
	baz=258							
TATO	**Taipei**	**1.30**	**359**	*e*P		**Pg**	**23 43 13.6**	**-0.4**
	baz=359							
TIPB	**Shuangxi**	**1.32**	**12**	*e*P		**Pn**	**23 43 13.1**	**-1.3**
	baz=6.0							
TIPB				*e*S		**Sg**	**23 43 32.3**	**+0.7**
	baz=6.0							
NCUH	**Zhongli**	**1.32**	**347**	*e*P		**Pg**	**23 43 13.8**	**-0.7**
	baz=3.0							
NCU	**National Centr**	**1.33**	**347**	*e*P		**Pg**	**23 43 15.1**	**+0.5**
	baz=350							
NCU				*e*S		**Sg**	**23 43 35.0**	**+3.3**
	baz=350							
MASBT	**Mashibuluo**	**1.34**	**218**	*e*P		**Pg**	**23 43 14.0**	**-0.7**
	baz=221							
SGLT	**Jiouru**	**1.34**	**225**	*e*P		**Pg**	**23 43 16.0**	**+1.2**
	baz=230							
TAI1	**Yung-k'ang**	**1.35**	**242**	*e*P		**Pg**	**23 43 16.3**	**+1.4**
	baz=246							
NWF	**Wu-fen Shan**	**1.41**	**10**	*e*P		**Pg**	**23 43 16.2**	**0.0**
	baz=7.0							
WFSB	**Wu-fen Shan**	**1.41**	**10**	*e*P		**Pg**	**23 43 16.4**	**+0.2**
	baz=7.0							
TWS1	**Kuangyinshan**	**1.42**	**356**	*e*P		**Pg**	**23 43 16.6**	**+0.2**
	baz=7.0							
TWS1				*e*S		**Sg**	**23 43 36.1**	**+1.2**
	baz=7.0							
EAST	**Anshuo**	**1.43**	**206**	*e*P		**Pn**	**23 43 13.4**	**-2.4**
	baz=190							
YM04	**YM04**	**1.47**	**0**	*e*P		**Pb**	**23 43 16.4**	**-0.7**
	baz=360							
YM10	**YM10**	**1.48**	**1**	*e*P		**Pg**	**23 43 16.5**	**-0.9**
	baz=1.0							
NTST	**Danshui**	**1.48**	**357**	*e*P		**Pb**	**23 43 16.6**	**-0.7**
	baz=13							
YM11	**YM11**	**1.49**	**2**	*e*P		**Pg**	**23 43 17.9**	**+0.3**
YM07	**YM07**	**1.50**	**3**	*e*P		**Pn**	**23 43 15.4**	**-1.4**
	baz=2.0							
YM12	**YM12**	**1.50**	**2**	*e*P		**Pg**	**23 43 17.4**	**-0.5**
YM08	**YM08**	**1.51**	**2**	*e*P		**Pg**	**23 43 17.3**	**-0.7**
	baz=1.0							
SCZT	**Fangliau**	**1.54**	**213**	*e*P		**Pg**	**23 43 18.5**	**-0.1**
	baz=217							
YOJ	**Yonaguni jima**	**1.57**	**60**	*e*P		**Pn**	**23 43 16.8**	**-1.0**
	baz=58							
YOJ				*e*S		**Sb**	**23 43 38.4**	**-0.5**
	baz=58							
YOJ	**Yonaguni jima**	**1.57**	**60**	P		**Pn**	**23 43 17.2**	**-0.6**
YOJ				*e*S		**Sn**	**23 43 37.4**	**-1.2**
TWY	**Chenhua**	**1.60**	**2**	*e*P		**Pg**	**23 43 19.5**	**-0.3**
	baz=1.0							
PNG	**Penghu**	**1.81**	**267**	*e*P		**Pb**	**23 43 21.6**	**-1.2**
	baz=271							
PNG				*e*S		**Sg**	**23 43 46.4**	**-0.8**
	baz=271							
IRIF	**Iriomote-Funau**	**2.12**	**72**	P		**Pn**	**23 43 24.4**	**-1.0**
IRIF				*e*S		**Sn**	**23 43 51.4**	**-0.8**
HATJ	**Hateruma jima**	**2.12**	**79**	P		**Pn**	**23 43 24.0**	**-1.4**
HATJ				*e*S		**Sn**	**23 43 50.5**	**-1.7**
JKRS	**Kuro-shima**	**2.34**	**76**	P		**Pn**	**23 43 27.8**	**-0.6**
JKRS				*e*S		**Sn**	**23 43 57.5**	**-0.1**
JIJ	**Ishigaki jima**	**2.49**	**73**	P		**Pn**	**23 43 28.7**	**-1.8**
JIJ				S		**Sn**	**23 43 59.3**	**-2.0**
JISG	**Ishigakijimahi**	**2.70**	**70**	P		**Pn**	**23 43 31.9**	**-1.5**
JISG				S		**Sn**	**23 44 05.8**	**-0.8**
MATB	**Ma-tsu**	**2.85**	**330**	*e*P		**Pn**	**23 43 35.0**	**-0.5**
	baz=331							
KNM	**Kinmen**	**2.92**	**285**	*e*P		**Pn**	**23 43 37.7**	**+1.4**
	baz=285							
QZH	**Quanzhou**	**2.96**	**296**	⇓*i*Pn		**Pn**	**23 43 36.8**	**-0.1**
QZH				Sn		**Sn**	**23 44 12.6**	**-0.2**
QZH				smax		smax		
	comp=N,220nm,0.7s							
QZH				smax		smax		
	comp=E,240nm,1.0s							
KNMB	**Chin-men Tao**	**2.97**	**286**	*e*P		**Pn**	**23 43 35.9**	**-1.1**
	baz=286							
JTJ	**Tarama**	**3.06**	**71**	*e*S		**Sn**	**23 44 14.4**	**-0.9**
JNU	**Nakatsue**	**12.50**	**39**	LR		LR	23 51 49.8	
	comp=E,68nm,19.2s,baz=125,slow=44							
KSRS	**Korea Array**	**14.79**	**20**	Pn		**Pn**	**23 46 19.2**	**+0.1**
	comp=E,0.2nm,0.3s,baz=201,slow=11,SNR=2.4							
DAV	**Davao City (W)**	**16.96**	**166**	LR		LR	23 52 52.8	
	comp=E,81nm,18.8s,baz=334,slow=36							
MJAR	**Matsushiro Arr**	**19.27**	**44**	LR		LR	23 56 11.6	
	comp=E,98nm,19.3s,baz=200,slow=42							
CMAR	**Chiang Mai Arr**	**21.69**	**260**	P		**P**	**23 47 44.0**	**+2.8**
	comp=E,1.1nm,0.3s,baz=65,slow=8.5,SNR=5.0							
SONM	**Songino Array**	**26.96**	**337**	P		**P**	**23 48 31.7**	**-0.1**
	comp=E,0.4nm,0.6s,baz=148,slow=8.6,SNR=3.1							
MKAR	**Makanchi Array**	**38.92**	**316**	P		**P**	**23 50 16.7**	**+0.7**
	comp=E,1.0nm,0.7s,baz=105,slow=9.2,SNR=5.7							
ZALV	**Zalesovo Beam**	**40.84**	**327**	P		**P**	**23 50 32.9**	**+1.1**
	comp=E,0.8nm,0.5s,baz=126,slow=11,SNR=4.8							
H11N1	**WAKE ISLAND Hy**	**42.21**	**86**	T		T	00 35 40.6	
	baz=283,slow=74,SNR=99							
H11N2	**WAKE ISLAND Hy**	**42.21**	**86**	T		T	00 35 37.4	
	baz=283,slow=74,SNR=98							
H11N3	**WAKE ISLAND Hy**	**42.22**	**86**	T		T	00 35 41.5	
	baz=283,slow=74,SNR=120							
H11S3	**WAKE ISLAND Hy**	**42.32**	**88**	T		T	00 35 49.5	
	baz=284,slow=75,SNR=199							
H11S1	**WAKE ISLAND Hy**	**42.33**	**88**	T		T	00 35 50.2	
	baz=284,slow=75,SNR=99							
H11S2	**WAKE ISLAND Hy**	**42.34**	**88**	T		T	00 35 50.9	
	baz=284,slow=75,SNR=76							
KURBB	**Kurchatov Arra**	**42.70**	**320**	P		**P**	**23 50 47.5**	**+0.5**
	comp=E,0.7nm,0.6s,baz=110,slow=9.7,SNR=6.6							
WRA	**Warramunga Arr**	**45.12**	**163**	P		**P**	**23 51 04.3**	**-2.5**
	comp=E,0.9nm,0.9s,baz=344,slow=8.8,SNR=3.0							
ASAR	**Alice Springs**	**48.57**	**165**	P		**P**	**23 51 34.1**	**+0.2**
	comp=E,0.2nm,0.3s,baz=340,slow=6.7,SNR=3.6							
KBZ	**Khabaz**	**66.04**	**309**	P		**P**	**23 53 39.9**	**+2.8**
	comp=E,1.4nm,0.8s,baz=83,slow=4.0,SNR=4.3							
KDAK	**Kodiak Island**	**68.14**	**35**	P		**P**	**23 53 50.6**	**+0.4**
	comp=E,3.7nm,0.7s,baz=301,slow=12,SNR=3.2							
ILAR	**Eielson Array**	**69.52**	**27**	P		**P**	**23 53 59.0**	**+0.3**
	comp=E,0.2nm,0.5s,baz=277,slow=5.0,SNR=4.8							
FINES	**FINESS Array B**	**72.04**	**330**	LR		LR	00 28 26.0	
	comp=E,28nm,19.2s,baz=56,slow=38							
BRTR	**Keskin Array B**	**73.72**	**307**	P		**P**	**23 54 25.3**	**+0.7**
	comp=E,0.3nm,0.5s,baz=118,slow=4.5,SNR=4.5							
HFS	**Hagfors**	**78.16**	**331**	LR		LR	00 31 49.7	
	comp=E,24nm,19.1s,baz=24,slow=38							
GERES	**GERESS Array B**	**83.43**	**321**	P		**P**	**23 55 19.0**	**+1.0**
	comp=E,0.3nm,0.7s,baz=73,slow=3.4,SNR=3.7							
BORG	**Borgarnes**	**87.29**	**345**	LR		LR	00 38 52.7	
	comp=E,23nm,18.5s,baz=40,slow=38							

IDC 20 00:06:42.0±4.2, 6°.90S×125°.00E, h520km±59km, mb2.7/1, mb1 2.9/4, mb1mx2.6/56, mbtmp3.6/4, Error ellipse: s-maj=148.3km s-min=24.7km az=53.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**3.54**	**202**	P	P	00 07 59.4	+1.0
	5.1nm,0.3s,baz=72,slow=6.4,SNR=4.3						
BATI				S	S	00 09 00.5	0.0
	3.0nm,0.3s,baz=90,slow=6.1,SNR=2.6						
WRA	**Warramunga Arr**	**15.82**	**146**	P	P	00 09 60.0	-0.6
	0.3nm,0.3s,baz=324,slow=10,SNR=18						
ASAR	**Alice Springs**	**18.74**	**154**	P	P	00 10 28.3	+0.1
	0.4nm,0.3s,baz=344,slow=14,SNR=18						
MKAR	**Makanchi Array**	**65.50**	**329**	P	P	00 16 33.6	-0.1
	0.3nm,0.4s,baz=132,slow=6.1,SNR=5.2						

*CSEM **20** 00:38:52.9±0.3, 43°.05N×17°.27E, h2km, ML2.5, Error ellipse: s-maj=7.9km s-min=3.3km az=36.0*
*BEO **20** 00:38:53.2±0.6, 43°.09N×17°.24E, h0km±2km*
*VIE **20** 00:38:57.7±1.2, 43°.34N×17°.41E, h8km, mb2.3/3, ml2.3/4, Error ellipse: s-maj=12.6km s-min=5.5km az=18.0 79 km ESE of Split*

ISC 20 00:38:52.2±1.2, 43°.09N±0°.03×17°.27E±0°.02, h1km±10km, n60, σ1.945/117, 4C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STON	**Ston**	**0.39**	**125**	*e*Pg	**Pg**	**00 38 59.2**	**-0.5**
STON				*e*Sg	**Sg**	**00 39 06.3**	**+1.6**
STON	**Ston**	**0.39**	**125**	*i* Pg	**Pg**	**00 38 59.0**	**-0.6**
STON				Sg	**Sg**	**00 39 05.4**	**+0.8**
STON	**Ston**	**0.39**	**125**	*e*Pg	**Pg**	**00 38 59.2**	**-0.5**
	baz=2.0						
STON				*e*Sg	**Sg**	**00 39 05.1**	**+0.4**
TREB	**Trebinje**	**0.88**	**115**	⇑*i*Pg	**Pg**	**00 39 08.5**	**-0.6**
TREB				*e*Sg	**Sb**	**00 39 21.7**	**-0.9**
BRY	**Bratogost**	**0.95**	**101**	⇑*i*Pg	**Pg**	**00 39 09.7**	**-0.8**
BRY				*e*Sg	**Sb**	**00 39 24.4**	**-0.4**
HCY	**Herceg Novi**	**1.11**	**125**	*e*Pg	**Pb**	**00 39 12.8**	**-1.4**
HCY				*e*Sg	**Sb**	**00 39 28.6**	**-0.6**
UPM	**Unac-Piva**	**1.20**	**84**	*e*Pg	**Pb**	**00 39 14.7**	**-1.3**
UPM				*e*Sg	**Sn**	**00 39 32.8**	**-0.7**
HAPS	**Han Pijesak,Bl**	**1.57**	**50**	*e*Pg	**Pb**	**00 39 22.3**	**0.0**
HAPS				*e*Sn	**Sg**	**00 39 44.7**	**+1.9**
HAPS	**Han Pijesak,Bl**	**1.57**	**50**	*e*Pn	**Pb**	**00 39 22.2**	**0.0**
HAPS				*e*Sn	**Sg**	**00 39 44.3**	**+1.5**
PDG	**Podgorica**	**1.61**	**114**	*e*Pg	**Pb**	**00 39 22.4**	**-0.3**
PDG				*e*Sg	**Sg**	**00 39 44.0**	**+0.1**
PDG	**Podgorica**	**1.61**	**114**	*e*Pn	**Pb**	**00 39 22.1**	**-0.6**
PDG	**Podgorica**	**1.61**	**114**	*e*Pg	**Pb**	**00 39 22.4**	**-0.3**
	baz=1.0						
PDG				*e*Sn	**Sb**	**00 39 43.4**	**-0.1**
PDG				*e*Sg	**Sg**	**00 39 44.0**	**+0.1**
	baz=9.0						
BLY	**Banja Luka**	**1.66**	**358**	*e*Pg	**Pg**	**00 39 24.4**	**+0.4**
BLY				*e*Sg	**Sg**	**00 39 46.8**	**+1.4**
BLY	**Banja Luka**	**1.66**	**358**	⇑*i*Pn	**Pb**	**00 39 24.0**	**+0.4**
BLY	**Banja Luka**	**1.66**	**358**	*e*Pg	**Pg**	**00 39 24.4**	**+0.4**
	baz=7.0						
BLY				*e*Sn	**Sb**	**00 39 45.4**	**+0.5**
BLY				*e*Sg	**Sg**	**00 39 46.8**	**+1.4**
	baz=3.0						
DRME	**Dracevica, Mon**	**1.68**	**122**	*e*Pn	**Pb**	**00 39 23.1**	**-0.9**
DRME				*e*Sn	**Sb**	**00 39 44.5**	**-1.1**
BBLS	**Lazići**	**1.74**	**63**	*e*Pn	**Pg**	**00 39 25.5**	**0.0**
BBLS				*e*Sn	**Sg**	**00 39 48.3**	**+0.3**
BBLS	**Lazići**	**1.74**	**63**	⇑*i*Pn	**Pb**	**00 39 24.8**	**-0.2**
BBLS				*e*Sn	**Sg**	**00 39 48.3**	**+0.3**
	baz=4.0						
DOB	**Doboj**	**1.75**	**20**	*e*Pn	**Pn**	**00 39 23.9**	**+0.2**
DOB				*e*Sn	**Sg**	**00 39 48.5**	**+0.2**
UDBI	**Udbina**	**1.80**	**323**	*e*Pn	**Pb**	**00 39 26.0**	**-0.1**
UDBI				Sn	**Sg**	**00 39 50.7**	**+0.6**
UDBI	**Udbina**	**1.80**	**323**	*e*Pn	**Pb**	**00 39 25.9**	**-0.1**
UDBI				Sn	**Sg**	**00 39 50.7**	**+0.6**
SJES	**Sjenica**	**1.99**	**84**	*e*Pn	**Pb**	**00 39 29.0**	**-0.3**
SJES				*e*Sg	**Sg**	**00 39 57.0**	**+0.9**
IVAS	**Ivanjica**	**2.16**	**76**	*e*Pn	**Pb**	**00 39 30.6**	**-1.6**
IVAS				*e*Sn	**Sb**	**00 39 59.2**	**-0.3**
IVAS	**Ivanjica**	**2.16**	**76**	*e*Pn	**Pb**	**00 39 30.6**	**-1.6**
IVAS				*e*Sn	**Sb**	**00 39 59.2**	**-0.3**
	baz=1.0						
TEKS	**Tekeris**	**2.19**	**48**	*e*Pn	**Pn**	**00 39 30.8**	**+1.0**
TEKS				*e*Sn	**Sb**	**00 39 58.2**	**-2.1**
TEKS	**Tekeris**	**2.19**	**48**	*e*Pn	**Pn**	**00 39 30.8**	**+1.0**
	baz=1.0						
TEKS				*e*Sn	**Sb**	**00 39 58.3**	**-2.1**
DIVS	**Divibare**	**2.22**	**62**	*e*Pn	**Pb**	**00 39 31.6**	**-1.6**
DIVS				*e*Sn	**Sb**	**00 40 00.1**	**-1.1**
DIVS	**Divibare**	**2.22**	**62**	*e*Pn	**Pb**	**00 39 31.4**	**-1.8**
DIVS				*e*Sn	**Sb**	**00 39 59.3**	**-1.9**
NVLJ	**Novalja**	**2.27**	**311**	*e*Pn	**Pb**	**00 39 32.4**	**-1.6**
NVLJ				Sn	**Sb**	**00 40 02.2**	**-0.5**
NVLJ	**Novalja**	**2.27**	**311**	*e*Pn	**Pb**	**00 39 32.4**	**-1.6**
NVLJ				Sn	**Sb**	**00 40 02.1**	**-0.5**
TRUS	**Trudelj**	**2.54**	**63**	*e*Pn	**Pn**	**00 39 35.8**	**+1.2**
TRUS				*e*Sn	**Sn**	**00 40 07.0**	**+0.8**
TRUS	**Trudelj**	**2.54**	**63**	*e*Pn	**Pn**	**00 39 35.8**	**+1.2**
	baz=2.0						
TRUS				*e*Sn	**Sn**	**00 40 07.0**	**+0.8**
	baz=9.0						
GRUS	**Gruza**	**2.63**	**71**	*e*Pn	**Pn**	**00 39 37.1**	**+1.2**
GRUS

CONA Sn **Sn** **00 41 05.5 +0.2**
28nm,0.0s
MOA Molln 5.20 337 *e*Pn **Pn** **00 40 13.7 +2.5**
0.8nm,0.4s
MOA *e*Sn **Sn** **00 41 13.9 +2.0**
1.6nm,0.3s
MOA Molln 5.20 337 Pn **Pn** **00 40 13.7 +2.5**
0.8nm,0.4s
MOA Sn **Sn** **00 41 13.9 +2.0**
1.6nm,0.3s
VYHS Vyhne 5.51 11 *e*PN **Pn** **00 40 17.2 +1.8**
VYHS *e*SN **Sn** **00 41 18.0 -1.4**
VYHS *e*PP 01 00 22.2
VYHS Vyhne 5.51 11 *e*Pn **Pn** **00 40 17.2 +1.8**

BJI ***20*** *00:41:37.8, 1°.18S×133°.64E, h10km, mb5.3/76, mB5.3/49, Ms4.9/62, Ms7 4.6/59*
IDC ***20*** *00:41:42.0±0.3, 0°.73S×133°.29E, h0km, mb5.2/41, mb1 5.1/43, mb1mx5.1/53, mbtmp5.1/43, ML5.4/3, MS4.6/41, Ms1 4.6/41, ms1mx4.5/53, Error ellipse: s-maj=12.0km s-min=7.8km az=73.0*
GCMT ***20*** *00:41:44.4±0.1, 0°.68S×133°.22E, h34km, MW5.4/117, Moment Tensor Solution. s103,c172; s117,c200; Duration: 1s2 Moment tensor: Scale 10^17^Nm; Mrr0.91±.03; Mθθ-1.19±.02; Mφφ0.28±.02; Mrθ-0.64±.03; Mθφ0.23±.01; Mφr0.69±.03; Best double couple: M0 1.45100×10^17^ NP1:φs304.00000°, δ68.00000°, λ116.00000°. NP2:φs72.00000°, δ34.00000°, λ43.00000°. Principal axes: T 1.4300, Plg59.0000°, Azm251.0000°; N 0.0460, Plg24.0000°, Azm113.0000°; P -1.4720, Plg19.0000°, Azm15.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***20*** *00:41:44.4±0.1, 0°.73S×133°.28E, h14km, mb5.5/94, MS4.9/102, MW5.3 Error ellipse: s-maj=3.8km s-min=3.2km az=71.0, Moment Tensor Solution. s24 Moment tensor: Scale 10^17^Nm; Mrr0.73; Mθθ-1.01; Mφφ0.28; Mrθ-0.21; Mθφ0.28; Mφr0.37; Best double couple: M0 1.00000×10^17^ NP1:φs75.00000°, δ43.00000°, λ48.00000°. NP2:φs306.00000°, δ60.00000°, λ122.00000°. Principal axes: T 0.9400, Plg61.0000°, Azm267.0000°; N 0.1700, Plg27.0000°, Azm109.0000°; P -1.1100, Plg9.0000°, Azm14.0000°;*
NEIC Felt [IV] at Manokwari and [III] at Ransiki.
ISCJB ***20*** *00:41:46.9±0.5, 0°.78S±0°.02×133°.27E±0°.02, h46km±4km, mb5.4/178, MS4.8/161 Error ellipse: s-maj=3.7km s-min=3.2km az=42.0*
MOS ***20*** *00:41:46.5±0.9, 0°.74S×133°.24E, h40km, mb5.6/64, MS4.5/27, Error ellipse: s-maj=7.0km s-min=4.6km az=114.7*
DJA ***20*** *00:41:48.9±0.3, 1°S±3°×13°3E±°, h50km±2km, M5.2/19, mb5.4/19, mB5.7/11, Mw(mB)5.2/11*
ISC 20 00:41:46.4±0.4, 0.79S±0°.03×133°.31E±0°.04, h29km±2km, h29km:pP-P, n730, σ1§46/687, mb5.5/187, MS4.8/162, 12C-13D, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**1.13**	**130**	P	**Pb**	**00 42 08.3**	**+1.0**
SIJI	**Sorong**	**2.04**	**268**	Pn	**Pn**	**00 42 19.4**	**+0.6**
	3μm,0.3s,baz=78,slow=12,SNR=1685						
SIJI				Sn	**Sn**	**00 42 45.1**	**+1.7**
	4μm,0.3s,baz=268,slow=23,SNR=15						
SIJI				LR	LR	00 43 27.4	
	comp=Z,24μm,21.0s,baz=108,slow=52						
FAKI	**Fak Fak**	**2.37**	**207**	P	**Pn**	**00 42 24.5**	**+1.2**
FAKI	**Fak Fak**	**2.37**	**207**	*e*Pn	**Pn**	**00 42 24.3**	**+1.0**
BAKI	**Biak**	**2.83**	**98**	P	**Pn**	**00 42 31.2**	**+1.6**
KMPI	**Kaimana, Papua**	**2.88**	**172**	P	**Pn**	**00 42 32.4**	**+2.0**
BNDI	**Bandanaira**	**5.03**	**222**	P	**Pn**	**00 43 01.7**	**+1.7**
MSAI	**Masohi**	**5.06**	**240**	P	**Pn**	**00 43 04.3**	**+3.9**
LBMI	**Labuha**	**5.81**	**271**	P	**Pn**	**00 43 12.7**	**+2.0**
AAI	**Ambon**	**5.87**	**241**	P	**Pn**	**00 43 13.1**	**+1.7**
AAI				S	**Sn**	**00 44 20.2**	**+2.4**
AAI	**Ambon**	**5.87**	**241**	P	**Pn**	**00 43 13.2**	**+1.8**
AAI				pmax	pmax		
	comp=Z,2μm,1.1s						
TNTI	**Ternate**	**6.14**	**285**	*e*Pn	**Pn**	**00 43 16.7**	**+1.5**
NLAI	**Namlea**	**6.67**	**248**	P	**Pn**	**00 43 23.9**	**+1.5**
GENI	**Genyem**	**7.09**	**105**	P	**Pn**	**00 43 30.3**	**+2.1**
SAUI	**Saumlaki**	**7.42**	**196**	P	**Pn**	**00 43 35.2**	**+2.3**
SAUI	**Saumlaki**	**7.42**	**196**	*e*Pn	**Pn**	**00 43 34.3**	**+1.4**
SANI	**Sanana**	**7.42**	**260**	P	**Pn**	**00 43 32.1**	**-0.8**
JAY	**Jayapura**	**7.59**	**103**	Pn	**Pn**	**00 43 37.2**	**+2.1**
	comp=Z,0.8nm,0.3s,baz=264,slow=18,SNR=2.9						
JAY				LR	LR	00 46 53.4	
	comp=Z,9μm,19.5s,baz=309,slow=41						
JAY	**Jayapura**	**7.59**	**103**	P	**Pn**	**00 43 38.5**	**+3.3**
JAY	**Jayapura**	**7.59**	**103**	P	**Pn**	**00 43 37.3**	**+2.1**
JAY				pmax	pmax		
	comp=Z,1.0nm,0.3s						
JAY				MLR	MLR		
	comp=Z,9μm,19.5s						
KMSI	**Cibinong**	**9.43**	**278**	P	**Pn**	**00 44 03.2**	**+2.9**
LUWI	**Luwuk**	**10.54**	**269**	P	**Pn**	**00 44 16.7**	**+1.1**
LUWI	**Luwuk**	**10.54**	**269**	*e*Pn	**Pn**	**00 44 16.1**	**+0.5**
DAV	**Davao City (W)**	**10.97**	**315**	Pn	**Pn**	**00 44 25.9**	**+4.3**
	comp=Z,66nm,0.3s,baz=166,slow=3.6,SNR=8.3						
DAV	**Davao City (W)**	**10.97**	**315‖**	*e*P	**Pn**	**00 44 25.0**	**+3.4**
DAV	**Davao City (W)**	**10.97**	**315**	P	Pn	00 44 26.8	+5.2
	SNR=9.4						
KDI	**Kendari**	**11.13**	**253**	P	**Pn**	**00 44 26.1**	**+2.3**
	comp=Z,169nm,0.9s,comp=Z,2μm						
SKMP	**Bagumbayan, Su**	**11.37**	**310**	*e*P	**Pn**	**00 44 28.8**	**+1.8**
SKMP				*e*S	**Sn**	**00 46 33.1**	**0.0**
MRSI	**Marisa**	**11.44**	**276**	P	**Pn**	**00 44 29.9**	**+2.0**
APSI	**Ampana**	**11.66**	**269**	P	**Pn**	**00 44 32.9**	**+1.9**
KDU	**Kakadu**	**11.85**	**184**	P	**Pn**	**00 44 32.7**	**-0.9**
	baz=12,SNR=154						
BUKP	**Musuan**	**11.90**	**316**	*e*P	**Pn**	**00 44 37.5**	**+3.2**
BUTP	**Butuan**	**12.35**	**322**	*e*P	P	00 44 47.0	-5.2
SOEI	**Soe**	**12.66**	**225**	P	**Pn**	**00 44 47.0**	**+2.2**
SOEI	**Soe**	**12.66**	**225**	*e*Pn	**Pn**	**00 44 45.9**	**+1.2**
PAGZ	**Pagadian**	**13.10**	**311**	*e*P	**Pn**	**00 44 50.1**	**-0.6**
PAGZ				*e*S	P	00 45 05.6	+5.1
BATI	**Baumata**	**13.40**	**225**	Pn	**Pn**	**00 44 56.1**	**+1.3**
	comp=Z,68nm,0.3s,baz=121,slow=0.8,SNR=96						
BATI				Sn	**Sn**	**00 47 26.1**	**+3.3**
	comp=Z,2.9nm,0.3s,baz=106,slow=20,SNR=3.8						
BATI				LR	LR	00 50 30.4	
	comp=Z,4μm,21.6s,baz=72,slow=39						
BATI	**Baumata**	**13.40**	**225**	P	**Pn**	**00 44 56.2**	**+1.4**
MPSI	**Mapaga**	**13.46**	**275**	P	**Pn**	**00 44 57.4**	**+1.9**
PCI	**Palu**	**13.47**	**269**	P	**Pn**	**00 44 57.3**	**+1.6**
	comp=Z,403nm,1.0s,comp=Z,4μm						
PCI	**Palu**	**13.47**	**269**	P	**Pn**	**00 44 56.5**	**+0.8**
PCI				pmax	pmax		
	comp=Z,404nm,1.0s						
MMRI	**Maumere**	**13.50**	**234**	P	**P**	**00 45 01.1**	**-3.9**
TTSI	**Tana Toraja**	**13.67**	**260**	P	**Pn**	**00 45 01.0**	**+2.6**
SPSI	**Sidrap Palu**	**13.89**	**257**	P	**Pn**	**00 45 04.9**	**+3.5**
BKSI	**Bulukumba**	**13.91**	**251**	P	**Pn**	**00 45 04.7**	**+2.9**
EDFI	**Ende, Flores**	**14.02**	**235**	P	**Pn**	**00 45 06.3**	**+3.0**
KNRA	**Kununurra**	**15.46**	**197**	P	**Pn**	**00 45 19.9**	**-2.6**
	baz=15,SNR=195						
WSI	**Waingapu**	**15.66**	**235**	P	P	00 45 38.6	+10
MYLDM	**Lahad Datu**	**15.93**	**292**	*e*Pn	**Pn**	**00 45 29.6**	**+0.9**
	comp=Z,523nm,1.2s						
SMKI	**Samarinda**	**16.10**	**271**	P	**P**	**00 45 38.0**	**+4.0**
RCP	**Roxas**	**16.14**	**320‖**	*e*P	**P**	**00 45 37.5**	**+3.1**
PMG	**Port Moresby**	**16.23**	**122**	Pn	**P**	**00 45 35.3**	**+0.1**
	comp=Z,2.3nm,0.3s,baz=294,slow=8.4,SNR=8.6						
PMG	**Port Moresby**	**16.23**	**122**	*e*Pn	**P**	**00 45 35.4**	**+0.1**
	comp=Z,290nm,1.0s						
PMG	**Port Moresby**	**16.23**	**122**	*e*P	**P**	**00 45 35.4**	**+0.1**
PMG				pmax	pmax		
	comp=Z,290nm,1.0s						
COEN	**Coen**	**16.33**	**144**	P	**Pn**	**00 45 33.7**	**0.0**
	baz=16,SNR=12						
COEN	**Coen**	**16.33**	**144**	*e*Pn	**P**	**00 45 35.4**	**-1.0**
	comp=Z,89nm,0.9s						
WBSI	**Waikabubak, Su**	**16.40**	**237**	P	**Pn**	**00 45 35.4**	**+0.6**
PVCP	**Virac**	**16.93**	**328**	*e*P	**Pn**	**00 45 40.8**	**-0.5**
PLAI	**Plampang**	**17.41**	**242**	P	**P**	**00 45 48.6**	**+0.2**
TWSI	**Taliwang, Sumb**	**18.16**	**244**	P	**P**	**00 45 57.4**	**+0.6**
GUMO	**Guam**	**18.31**	**38**	P	**Pn**	**00 46 03.3**	**+4.9**
	comp=Z,7.5nm,0.3s,baz=185,slow=14,SNR=14						
GUMO				LR	LR	00 52 28.0	
	comp=Z,2μm,18.3s,baz=218,slow=35						
GUMO	**Guam**	**18.31**	**38**	*e*P	**Pn**	**00 45 59.5**	**+1.1**
	comp=Z,179nm,0.8s						
GUMO	**Guam**	**18.31**	**38**	*e*P	**Pn**	**00 45 59.5**	**+1.1**
GUMO				pmax	pmax		
	comp=Z,179nm,0.8s						
KKM	**Kota Kinabalu**	**18.36**	**292**	*e*Pn	**Pn**	**00 46 00.3**	**+1.0**
	comp=Z,248nm,1.1s						
MTKI	**Muara Teweh, K**	**18.41**	**269**	P	**Pn**	**00 46 02.4**	**+2.7**
WRAB	**Tennant Creek**	**19.06**	**177**	*e*P	**P**	**00 46 06.5**	**0.0**
	comp=Z,193nm,0.8s						
WRAB				*e*Sn	**Sn**	**00 49 32.3**	**-7.9**
WRAB	**Tennant Creek**	**19.06**	**177**	*d i*P	**P**	**00 46 06.7**	**+0.2**
WRA	**Warramunga Arr**	**19.06**	**177**	P	**P**	**00 46 06.0**	**-0.6**
	comp=Z,5.5nm,0.3s,baz=358,slow=11,SNR=75						
WRA				S	Sn	00 49 29.4	-11
	comp=Z,3.3nm,0.3s,baz=352,slow=23,SNR=6.0						
WRA				LR	LR	00 54 29.3	
	comp=Z,4μm,18.5s,baz=5.0,slow=40						
WB2	**Warramunga Arr**	**19.07**	**177**	*e*P	**P**	**00 46 06.6**	**0.0**
	comp=Z,210nm,0.8s						
TGY	**Tagytay City**	**19.21**	**321**	P	**Pn**	**00 46 11.1**	**+1.8**
	comp=Z,46nm,0.3s,baz=147,slow=17,SNR=3.7						
SRBI	**Singaraja**	**19.43**	**248**	P	**Pn**	**00 46 12.8**	**+0.8**
MTSU	**Mount Surprise**	**20.35**	**149**	P	Pn	00 46 23.7	+0.8
	baz=20,SNR=18						
JAGI	**Jajag, Banyuwa**	**20.55**	**248**	P	Pn	00 46 24.2	-1.0
JAGI	**Jajag, Banyuwa**	**20.55**	**248**	*e*P	Pn	00 46 24.2	-1.1
	comp=Z,157nm,0.9s						
QIS	**Mount Isa**	**20.59**	**163**	P	**P**	**00 46 24.1**	**+0.8**
	baz=21,SNR=47						
BLJI	**Banyuglugur**	**20.83**	**250**	P	Pn	00 46 27.6	-0.8
GMJI	**Gumukmas**	**21.14**	**249**	P	**P**	**00 46 29.6**	**+0.3**
SBUM	**Sibu**	**21.33**	**279**	*e*P	**P**	**00 46 33.0**	**+1.7**
	comp=Z,154nm,1.2s						
GRJI	**Gresik**	**21.65**	**253**	P	**P**	**00 46 36.4**	**+1.7**
PBKI	**Pangkalan Bun**	**21.71**	**265**	P	**P**	**00 46 36.8**	**+1.4**
STKI	**Sintang**	**21.85**	**272**	P	**P**	**00 46 38.2**	**+1.3**
PWJI	**Pagerwojo**	**22.60**	**251**	P	**P**	**00 46 44.2**	**-0.7**
NGJI	**Ngawi**	**22.74**	**253**	P	**P**	**00 46 49.2**	**+2.8**
AS01	**Alice Springs**	**22.75**	**178**	*e*P	**P**	**00 46 45.7**	**-0.8**
AS31	**Alice Springs**	**22.75**	**179**	*e*P	**P**	**00 46 45.5**	**-1.0**
	comp=Z,77nm,0.6s						
ASAR	**Alice Springs**	**22.75**	**179**	P	**P**	**00 46 46.6**	**+0.1**
	comp=Z,106nm,0.8s,baz=14,slow=12,SNR=164						
ASAR				S	**S**	**00 50 57.7**	**+4.1**
	comp=Z,11nm,0.8s,baz=0.0,slow=11,SNR=5.4						
ASAR				LR	LR	00 56 24.7	
	comp=Z,2μm,19.4s,baz=356,slow=39						
CTA	**Charters Tower**	**22.99**	**147**	P	**P**	**00 46 50.2**	**+1.3**
	comp=Z,57nm,0.8s,baz=328,slow=12,SNR=25						
CTA				LR	LR	00 57 48.5	
	comp=Z,3μm,18.1s,baz=324,slow=42						
CTAO	**Charters Tower**	**22.99**	**147**	*e*P	**P**	**00 46 50.3**	**+1.3**
	comp=Z,101nm,0.8s						
CTAO				LR	LR		
	comp=Z,5μm,21.0s						
CTAO	**Charters Tower**	**22.99**	**147**	*e*P	**P**	**00 46 50.3**	**+1.3**
CTAO				pmax	pmax		
	comp=Z,101nm,0.8s						
CTAO				MLR	MLR		
	comp=Z,5μm,21.0s						
KSM	**Kuching**	**23.11**	**276**	*e*P	**P**	**00 46 50.0**	**-0.2**
	comp=Z,131nm,1.0s						
PCJI	**Pacitan**	**23.24**	**251**	P	**P**	**00 46 51.7**	**+0.1**
WOJI	**Wonogiri, Jawa**	**23.38**	**252**	P	**P**	**00 46 53.0**	**0.0**
SMRI	**Semarang**	**23.64**	**254**	P	**P**	**00 46 56.4**	**+0.9**
SMRI	**Semarang**	**23.64**	**254**	*e*P	**P**	**00 46 56.4**	**+0.9**
	comp=Z,466nm,1.2s						
UGM	**Wanagama**	**23.78**	**252**	P	**P**	**00 46 56.8**	**-0.1**
UGM	**Wanagama**	**23.78**	**252**	*e*P	**P**	**00 46 56.5**	**-0.4**
	comp=Z,709nm,1.5s						
MBWA	**Marble Bar**	**24.20**	**212**	*e*P	**P**	**00 47 01.2**	**+0.5**
	comp=Z,164nm,0.8s						
MBWA				LR	LR		
	comp=Z,1μm,19.0s						
MBWA	**Marble Bar**	**24.20**	**212**	P	**P**	**00 47 02.5**	**+1.9**
	SNR=16						
WRKA	**Warakurna**	**24.59**	**191**	P	**P**	**00 47 04.9**	**+0.7**
	baz=24,SNR=115						
KPJI	**Karang Pucung**	**25.16**	**254**	P	**P**	**00 47 10.2**	**+0.8**
CMJI	**Cimerak**	**25.73**	**254**	P	**P**	**00 47 13.3**	**-1.3**
CISI	**Cisompet, Garu**	**26.29**	**254**	*e*P	**P**	**00 47 17.8**	**-2.0**
	comp=Z,248nm,0.7s						
LEM	**Lembang**	**26.32**	**256**	P	**P**	**00 47 20.8**	**+0.6**
	comp=Z,36nm,0.6s,baz=78,slow=6.8,SNR=7.4						
LEM				LR	LR	00 59 04.0	
	comp=Z,2μm,21.7s,baz=73,slow=40						
LEM	**Lembang**	**26.32**	**256**	P	**P**	**00 47 21.1**	**+1.0**
DBJI	**Dramaga**	**27.11**	**257**	P	**P**	**00 47 27.4**	**+0.3**
SSLB	**Suanglung**	**27.22**	**335**	*e*P	**P**	**00 47 26.7**	**-1.3**
	comp=Z,101nm,1.2s						
QLP	**Quilpie**	**27.72**	**159**	P	**P**	**00 47 33.5**	**+1.1**
	baz=28,SNR=10						
HNR	**Honiara**	**27.86**	**109**	P	**P**	**00 47 34.6**	**+0.7**
	comp=Z,70nm,0.8s,baz=182,slow=7.1,SNR=4.5						
HNR				LR	LR	00 59 33.0	
	comp=Z,1μm,20.1s,baz=274,slow=38						
HNR	**Honiara**	**27.86**	**109**	*e*P	**P**	**00 47 36.3**	**+2.5**
	comp=Z,92nm,0.8s						
HNR	**Honiara**	**27.86**	**109**	P	**P**	**00 47 34.6**	**+0.7**
HNR				pmax	pmax		
	comp=Z,56nm,0.5s						
HNR				MLR	MLR		
	comp=Z,1μm,20.1s						
JOW	**Kunigami**	**27.88**	**350**	LR	LR	00 56 33.3	
	comp=Z,3μm,21.1s,baz=112,slow=32						
CGJI	**Cibinong**	**28.15**	**257**	P	**P**	**00 47 34.8**	**-1.6**
GIRL	**Giralia**	**28.57**	**219**	P	**P**	**00 47 40.8**	**+0.8**
	baz=28,SNR=9.1						
KLI	**Kotabumi**	**28.70**	**261**	P	**P**	**00 47 42.3**	**+1.0**
KLI	**Kotabumi**	**28.70**	**261**	P	**P**	**00 47 42.1**	**+0.8**
KLI				pmax	pmax		
	comp=Z,193nm,0.8s						
KASI	**Kota Agung**	**29.14**	**260**	P	**P**	**00 47 44.5**	**-0.8**
MDSI	**Maura Dua**	**29.32**	**262**	P	**P**	**00 47 47.4**	**+0.5**
MEEK	**Meekatharra**	**29.33**	**208**	P	**P**	**00 47 46.7**	**-0.1**
	baz=29,SNR=5.6						
LWLI	**Liwa**	**29.51**	**261**	P	**P**	**00 47 49.4**	**+0.8**
MYKOM	**Kota Tinggi**	**29.57**	**275**	*e*P	**P**	**00 47 48.5**	**-0.5**
	comp=Z,52nm,0.9s						
EIDS	**Eidsvold**	**29.86**	**146**	*e*P	**P**	**00 47 52.5**	**+1.0**
	comp=Z,34nm,0.9s						
FORT	**Forrest**	**30.24**	**189**	P	**P**	**00 47 55.8**	**+1.0**
	baz=30,SNR=24						
FORT	**Forrest**	**30.24**	**189**	*e*P	**P**	**00 47 54.5**	**-0.3**
	comp=Z,229nm,0.8s						
QIZ	**Qiongzhong**	**30.31**	**312**	P	**P**	**00 47 56.0**	**+0.4**
QIZ				S	**S**	**00 52 57.6**	**+3.5**
QIZ				pmax	pmax		
	comp=Z,85nm,0.9s						
QIZ				LR	LR		
	comp=Z,810nm,14.2s						
QIZ	**Qiongzhong**	**30.31**	**312**	PFAKE		00 48 10.0	+14
QIZ				LR	LR		
	comp=Z,950nm,19.0s						
GZH	**Guangzhou**	**30.67**	**322**	P	**P**	**00 48 01.3**	**+2.7**
MASI	**Maura Aman, Be**	**31.14**	**265**	P	**P**	**00 48 03.7**	**+0.7**
UBPT	**Khong Chiam**	**31.82**	**301**	P	**P**	**00 48 08.9**	**+0.1**
	comp=Z,37nm,2.8s						
KRJI	**Kerinci**	**31.86**	**267**	P	**P**	**00 48 09.9**	**+0.5**
STKA	**Stephens Creek**	**31.90**	**167**	P	**P**	**00 48 09.2**	**-0.2**
	comp=Z,44nm,0.8s,baz=345,slow=9.1,SNR=29						
STKA				LR	LR	01 02 30.7	
	comp=Z,5μm,18.5s,baz=338,slow=39						
STKA	**Stephens Creek**	**31.90**	**167**	P	**P**	**00 48 09.7**	**+0.3**
	baz=32,SNR=19						
STKA	**Stephens Creek**	**31.90**	**167**	*e*P	**P**	**00 48 09.5**	**+0.1**
	comp=Z,9.2nm,0.8s						
STKA	**Stephens Creek**	**31.90**	**167**	*e*P	**P**	**00 48 09.5**	**+0.1**
STKA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BBOO	**Buckleboo**	**31.96**	**176**	P	**P**	**00 48 10.2**	**+0.3**
	baz=32,SNR=20						
BBOO	**Buckleboo**	**31.96**	**176**	*e*P	**P**	**00 48 08.8**	**-1.1**
	comp=Z,60nm,0.8s						
KMBL	**Kambalda**	**32.28**	**198**	P	**P**	**00 48 13.6**	**+0.9**
	baz=32,SNR=39						
BKNI	**Bangkinang**	**32.29**	**272**	*e*P	**P**	**00 48 12.3**	**-0.7**
	comp=Z,106nm,1.1s						
MORW	**Morawa**	**32.60**	**209**	P	**P**	**00 48 16.0**	**+0.5**
	baz=32,SNR=5.5						
IPM	**Ipoh**	**32.68**	**279**	*e*P	**P**	**00 48 16.4**	**-0.1**
	comp=Z,80nm,0.8s						
CMSA	**Cobar Meteorol**	**32.75**	**160**	P	**P**	**00 48 17.4**	**+0.5**
	baz=33,SNR=7.7						
PDSI	**Padang**	**32.84**	**270**	P	**P**	**00 48 17.3**	**-0.7**
HTT	**Hallett**	**32.90**	**171**	P	**P**	**00 48 20.6**	**+2.4**
	baz=33,SNR=5.5						
KULM	**Kulim**	**33.17**	**281**	*e*P	**P**	**00 48 20.5**	**-0.3**
	comp=Z,65nm,0.8s						
PPSI	**Pulau Pagai**	**33.34**	**266**	P	P	00 48 31.1	+8.8
BLDU	**Ballidu**	**33.59**	**206**	P	**P**	**00 48 24.7**	**+0.5**
	baz=34,SNR=80						
SSE	**Sheshan**	**33.73**	**341**	P	**P**	**00 48 26.9**	**+1.5**
SSE				S	**S**	**00 53 48.5**	**+1.3**
SSE				pmax	pmax		
	comp=Z,22nm,0.9s						
SSE				pmax	pmax		
	comp=Z,260nm,6.8s						
SSE				LR	LR		
	comp=Z,260nm,12.6s						
SSE				LR	LR		
	comp=Z,370nm,13.8s						
MNSI	**Mandailing Nat**	**33.76**	**273**	P	**P**	**00 48 25.6**	**-0.4**
JNU	**Nakatsue**	**33.80**	**356**	P	**P**	**00 48 23.8**	**-2.3**
	comp=Z,20nm,1.0s,baz=130,slow=16,SNR=6.4						
JNU				LR	LR	01 00 45.4	
	comp=Z,765nm,19.7s,baz=128,slow=34						
JNU	**Nakatsue**	**33.80**	**356**	*e*P	**P**	**00 48 25.5**	**-0.6**
	comp=Z,40nm,1.0s						
SKNT	**Sakolnakorn**	**33.87**	**303**	P	**P**	**00 48 26.2**	**-0.6**
	comp=Z,28nm,0.8s						
KLBR	**Kellerberrin**	**33.99**	**204**	P	**P**	**00 48 28.3**	**+0.7**
	baz=34,SNR=8.8						
SISI	**Saibi**	**34.22**	**269**	P	**P**	**00 48 28.9**	**-1.0**
ARMA	**Armidale**	**34.22**	**151**	P	**P**	**00 48 31.4**	**+1.5**
	baz=34,SNR=7.6						
ARMA	**Armidale**	**34.22**	**151**	*e*P	**P**	**00 48 31.5**	**+1.7**
	comp=Z,35nm,0.9s						
JHJ	**Hachijo jima 2**	**34.27**	**10**	LR	LR	00 59 24.3	
	comp=Z,2μm,19.4s,baz=26,slow=31						
SRAK	**Srakaew**	**34.28**	**297**	P	**P**	**00 48 29.3**	**-1.1**
	comp=Z,44nm,0.9s						
PSI	**Prapat**	**34.56**	**276**	P	**P**	**00 48 31.9**	**-1.1**
	comp=Z,63nm,0.9s,baz=25,slow=0.1,SNR=50						
PSI				LR	LR	01 02 25.9	
	comp=Z,450nm,18.8s,baz=91,slow=36						
PSI	**Prapat**	**34.56**	**276**	*e*P	**P**	**00 48 32.1**	**-0.9**
	comp=Z,102nm,1.0s						
PSI	**Prapat**	**34.56**	**276**	*e*P	**P**	**00 48 32.1**	**-0.9**
PSI				pmax	pmax		
	comp=Z,102nm,1.0s						
NONG	**Nongkai**	**35.09**	**304**	P	**P**	**00 48 37.2**	**-0.2**
	comp=Z,50nm,0.9s,comp=Z,2μm						
KRAB	**Krabi**	**35.16**	**285**	P	**P**	**00 48 38.7**	**+0.6**
	comp=Z,24μm,1.0s,comp=Z,442μm						
NWAO	**Narrogin (SRO)**	**35.37**	**204**	P	**P**	**00 48 38.6**	**-0.9**
	comp=Z,48nm,0.9s,baz=322,slow=11,SNR=11						
NWAO	**Narrogin (SRO)**	**35.37**	**204**	P	**P**	**00 48 40.3**	**+0.7**
	baz=35,SNR=9.6						
NWAO	**Narrogin (SRO)**	**35.37**	**204**	*e*P	**P**	**00 48 40.1**	**+0.5**
	comp=Z,67nm,1.1s						
NWAO				LR	LR		
	comp=Z,1μm,20.0s						
NWAO	**Narrogin (SRO)**	**35.37**	**204**	*e*P	**P**	**00 48 40.1**	**+0.5**
NWAO				pmax	pmax		
	comp=Z,67nm,1.1s						
NWAO				MLR	MLR		
	comp=Z,1μm,20.0s						
NJ2	**Nanjing**	**35.41**	**339**	*e*P	**P**	**00 48 41.3**	**+1.4**
NJ2				sP	**pP**	**00 48 45.6**	**-2.9**
NJ2				pmax	pmax		
	comp=Z,38nm,1.0s						
KCSI	**Kotacane, Aceh**	**35.77**	**277**	P	**P**	**00 48 42.0**	**-1.4**
GSI	**Gunungsitoli**	**35.79**	**273**	P	**P**	**00 48 41.8**	**-1.7**
GSI	**Gunungsitoli**	**35.79**	**273**	*e*P	**P**	**00 48 40.5**	**-3.0**
	comp=Z,168nm,1.5s						
PKDT	**Phuket**	**35.92**	**285**	P	**P**	**00 48 43.7**	**-0.9**
	comp=Z,48nm,1.0s,comp=Z,842nm						
PBKT	**Sadao Pong**	**36.26**	**300**	P	**P**	**00 48 47.0**	**-0.4**
	comp=Z,32nm,1.1s						
PBKT	**Sadao Pong**	**36.26**	**300**	*e*P	**P**	**00 48 46.6**	**-0.8**
	comp=Z,26nm,1.2s						
TPTI		**36.34**	**277**	P	**P**	**00 48 46.5**	**-1.6**
LHMI	**Lhok Sumawe**	**36.80**	**280**	P	**P**	**00 48 52.3**	**+0.2**
LHMI	**Lhok Sumawe**	**36.80**	**280**	*e*P	**P**	**00 48 51.7**	**-0.4**
	comp=Z,324nm,0.9s						
MLSI	**Meulaboh, Aceh**	**37.22**	**278**	P	**P**	**00 48 54.2**	**-1.5**
GYA	**Guiyang**	**37.33**	**318‖**	*i*P	**P**	**00 48 57.4**	**+0.8**
GYA				pP	pP	00 49 03.0	-2.2
GYA				PP	**PnPn**	**00 50 25.5**	**+2.7**
GYA				S	**S**	**00 54 44.4**	**+1.6**
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,140nm,5.3s						
GYA				LR	LR		
	comp=Z,610nm,17.8s						
GYA				LR	LR		
	comp=Z,580nm,17.0s						
GYA				LR	LR		
	comp=Z,570nm,17.4s						
TJN	**

KMI				S	**S**	**00 55 10.6**	**-1.1**
KMI				SS	**SS**	**00 58 01.8**	**-3.7**
KMI				pmax	pmax		
	comp=Z,43nm,1.2s						
KMI				LR	LR		
	comp=Z,490nm,19.0s						
KMI				LR	LR		
	comp=Z,550nm,21.4s						
KMI				LR	LR		
	comp=Z,770nm,22.6s						
CMAI	**Chiengmai2**	**39.39 303**		P	**P**	**00 49 14.5**	**+0.4**
	comp=Z,146nm,0.8s						
TIA	**Tai'an**	**39.77 339**		P	**P**	**00 49 16.8**	**0.0**
TIA				S	**S**	**00 55 19.0**	**-0.2**
TIA				pmax	pmax		
	comp=Z,14nm,1.2s						
TIA				LR	LR		
	comp=Z,280nm,19.4s						
TIA				LR	LR		
	comp=Z,230nm,15.4s						
TIA				LR	LR		
	comp=Z,380nm,21.6s						
DL2	**Dalian**	**40.93 346**		P	**P**	**00 49 27.1**	**+0.8**
DL2				S	**S**	**00 55 33.8**	**-2.6**
DL2				pmax	pmax		
	comp=Z,54nm,1.0s						
DL2				pmax	pmax		
	comp=Z,270nm,3.9s						
DL2				LR	LR		
	comp=Z,1μm,19.5s						
DL2				LR	LR		
	comp=Z,810nm,19.3s						
DL2				LR	LR		
	comp=Z,2μm,19.7s						
XAN	**Xi'an**	**41.53 329**		P	**P**	**00 49 31.0**	**-0.4**
XAN				pP	pP	00 49 38.4	-1.7
XAN				sP	sP	00 49 41.9	-1.7
XAN				PP	**PP**	**00 51 07.8**	**+0.1**
XAN				pmax	pmax		
	comp=Z,36nm,1.1s						
XAN				pmax	pmax		
	comp=Z,190nm,4.0s						
XAN				LR	LR		
	comp=Z,470nm,16.5s						
XAN				LR	LR		
	comp=Z,480nm,15.5s						
XAN				LR	LR		
	comp=Z,730nm,19.1s						
CD2	**Chengdu**	**42.21 321**		P	**P**	**00 49 36.5**	**-0.6**
CD2				pmax	pmax		
	comp=Z,110nm,1.1s						
CD2				LR	LR		
	comp=Z,1μm,8.3s						
CD2				LR	LR		
	comp=Z,1μm,19.0s						
TIY	**Taiyuan**	**42.89 335**		*e*P	**P**	**00 49 44.3**	**+1.8**
SNY	**Shenyang**	**43.32 349**		⇓P	**P**	**00 49 46.3**	**+0.5**
SNY				PP	**PP**	**00 51 25.0**	**-1.9**
SNY				S	S	00 56 22.5	+11
SNY				pmax	pmax		
	comp=Z,25nm,1.4s						
SNY				LR	LR		
	comp=Z,870nm,22.1s						
SNY				LR	LR		
	comp=Z,700nm,19.6s						
SNY				LR	LR		
	comp=Z,1μm,21.7s						
BJT	**Baijiatuau**	**43.53 341**		*e*P	**P**	**00 49 47.9**	**+0.4**
	comp=Z,131nm,1.0s						
BJT				LR	LR		
	comp=Z,779nm,20.0s						
BJT	**Baijiatuau**	**43.53 341**		*e*P	**P**	**00 49 47.9**	**+0.4**
BJT				pmax	pmax		
	comp=Z,131nm,1.0s						
BJT				MLR	MLR		
	comp=Z,779nm,20.0s						
ERM	**Erimo**	**43.53**	**11**	PFAKE		00 50 00.0	+13
ERM				LR	LR		
	comp=Z,938nm,21.0s						
BJI	**Beijing**	**43.55 341**		P	**P**	**00 49 48.1**	**+0.5**
BJI				S	**S**	**00 56 14.3**	**-0.6**
BJI				SS	**SS**	**00 59 27.4**	**-2.9**
BJI				pmax	pmax		
	comp=Z,120nm,1.0s						
BJI				LR	LR		
	comp=Z,770nm,19.6s						
BJI				LR	LR		
	comp=Z,840nm,24.1s						
USRK	**Ussuriysk Ar.**	**44.80 359**		P	**P**	**00 49 57.5**	**-0.1**
	comp=Z,21nm,1.1s,baz=170,slow=8.2,SNR=14						
USRK				LR	LR	01 05 44.3	
	comp=Z,594nm,21.8s,baz=162,slow=32						
CN2	**Changchun**	**44.95 352**		*e*P	**P**	**00 49 58.6**	**-0.2**
CN2				*e*pP	pP	00 50 04.0	-3.5
CN2				*e*S	**S**	**00 56 36.1**	**+0.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				LR	LR		
	comp=Z,810nm,20.0s						
CN2				LR	LR		
	comp=Z,590nm,20.0s						
CN2				LR	LR		
	comp=Z,790nm,20.0s						
MDJ	**Mudanjiang**	**45.33 356**		P	**P**	**00 49 59.4**	**-2.4**
MDJ				pP	pP	00 50 05.6	-4.9
MDJ				sP	sP	00 50 08.4	-5.6
MDJ				PP	**PP**	**00 51 47.8**	**-0.4**
MDJ				S	**S**	**00 56 45.8**	**+5.1**
MDJ				pmax	pmax		
	comp=Z,24nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,230nm,4.9s						
MDJ				LR	LR		
	comp=Z,540nm,16.7s						
MDJ				LR	LR		
	comp=Z,290nm,7.9s						
MDJ				LR	LR		
	comp=Z,570nm,15.7s						
MDJ	**Mudanjiang**	**45.33 356**		PFAKE		00 50 10.0	+8.2
MDJ				LR	LR		
	comp=Z,429nm,20.0s						
ASAJ	**Asahikawa**	**45.47**	**9**	P	**P**	**00 50 03.5**	**+0.6**
	comp=Z,12nm,0.8s,baz=202,slow=19,SNR=3.4						
ASAJ				LR	LR	01 09 04.0	
	comp=Z,508nm,18.9s,baz=177,slow=36						
LZH	**Lanzhou**	**45.80 326**		*e*P	**P**	**00 50 06.9**	**+1.0**
LZH				pP	pP	00 50 12.9	-1.8
LZH				sP	sP	00 50 15.4	-2.7
LZH				*e*S	**S**	**00 56 49.5**	**+1.4**
LZH				sS	pS	00 56 58.4	0.0
LZH				pmax	pmax		
	comp=Z,130nm,1.2s						
LZH				pmax	pmax		
	comp=Z,770nm,5.2s						
LZH				LR	LR		
	comp=Z,1μm,11.9s						
LZH				LR	LR		
	comp=Z,560nm,10.6s						
LZH				LR	LR		
	comp=Z,2μm,19.0s						
HHC	**Hu-ho-hao-te**	**45.92 337**		*e*P	**P**	**00 50 08.8**	**+2.1**
HHC				PP	**PP**	**00 51 57.0**	**+2.3**
HHC				S	**S**	**00 56 49.8**	**+0.2**
HHC				SS	**ScS**	**01 00 07.0**	**+6.2**
HHC				pmax	pmax		
	comp=Z,94nm,1.1s						
HHC				pmax	pmax		
	comp=Z,220nm,5.4s						
HHC				LR	LR		
	comp=Z,2μm,12.1s						
HHC				LR	LR		
	comp=Z,2μm,13.0s						
HHC				LR	LR		
	comp=Z,3μm,17.3s						
YUK	**Yuzh-Kuril'sk**	**46.01**	**13**	*e*P	**P**	**00 50 07.1**	**-0.1**
YUK						00 51 50.5	
YUK				*e*PPP	PPP	00 52 36.4	
YUK				*e*S	**S**	**00 56 49.0**	**-1.5**
YUK				SSS	SSS	01 01 10.7	
YUK				pmax	pmax		
	comp=Z,296nm,1.1s						
YUK				MLR	MLR		
	comp=Z,198nm,17.0s						
BTO	**Baotou**	**46.34 335**		*e*P	**P**	**00 50 09.6**	**-0.4**
FUNA	**Funafuti**	**46.34 101**		PFAKE		00 50 20.0	+10
FUNA				LR	LR		
	comp=Z,4μm,19.0s						
SHL	**Shillong**	**47.83 306**		⇑*i*P	P	00 50 13.0	-9.0
SHL	**Shillong**	**47.83 306**		*e*P	**P**	**00 50 21.5**	**-0.5**
	comp=Z,45nm,0.7s						
SHL	**Shillong**	**47.83 306**		*e*P	**P**	**00 50 21.5**	**-0.5**
SHL				pmax	pmax		
	comp=Z,45nm,0.7s						
YSS	**Yuzh-Sakhalins**	**48.26**	**9**	*e*P	**P**	**00 50 24.3**	**-0.4**
YSS	**Yuzh-Sakhalins**	**48.26**	**9**	*e*P	**P**	**00 50 24.7**	**0.0**
YSS				*e*		00 50 32.3	
YSS				pmax	pmax		
	comp=Z,30nm,1.2s						
YSS				MLR	MLR		
	comp=Z,400nm,15.0s						
KLR	**Kul'dur**	**49.84 359**		LR	LR	01 09 28.1	
	comp=Z,39nm,20.7s,baz=145,slow=34						
KLR	**Kul'dur**	**49.84 359**	*d*	*i*P	**P**	**00 50 37.4**	**+0.6**
KLR				*i* *SP	**sP**	**00 50 49.1**	**0.0**
LSA	**Lhasa**	**50.34 311**		P	**P**	**00 50 42.3**	**+0.7**
LSA				pmax	pmax		
	comp=Z,48nm,1.0s						
LSA	**Lhasa**	**50.34 311**		*e*P	**P**	**00 50 42.0**	**+0.4**
	comp=Z,130nm,1.4s						
LSA	**Lhasa**	**50.34 311**		P	**P**	**00 50 42.2**	**+0.7**
LSA	**Lhasa**	**50.34 311**		*e*P	**P**	**00 50 42.0**	**+0.4**
LSA				pmax	pmax		
	comp=Z,130nm,1.4s						
GTA	**Gaotai**	**50.40 326**		P	**P**	**00 50 42.3**	**+0.9**
GTA				pP	pP	00 50 46.5	-3.7
GTA				sP	sP	00 50 49.3	-4.4
GTA				PcP	**PcP**	**00 52 00.5**	**+0.9**
GTA				S	**S**	**00 57 52.3**	**-0.9**
GTA				pmax	pmax		
	comp=Z,44nm,1.2s						
GTA				pmax	pmax		
	comp=Z,230nm,7.0s						
GTA				LR	LR		
	comp=Z,270nm,19.9s						
GTA				LR	LR		
	comp=Z,280nm,19.6s						
GTA				LR	LR		
	comp=Z,500nm,17.5s						
HIA	**Hailar**	**51.21 349**		PFAKE		00 51 00.0	+13
HIA				LR	LR		
	comp=Z,719nm,22.0s						
HIA	**Hailar**	**51.21 349**	*d*	*i*P	**P**	**00 50 47.5**	**+0.3**
HIA				pmax	pmax		
	comp=Z,16nm,1.2s						
TAPN	**Taplejung**	**51.97 306**		*e*P	**P**	**00 50 53.2**	**-0.4**
	comp=Z,72nm,1.0s						
ODAN	**Odare**	**52.03 306**		*e*P	**P**	**00 50 53.6**	**-0.4**
	comp=Z,95nm,0.8s						
CHLP	**Challavanipeta**	**52.05 294**		*e*P	**P**	**00 50 53.0**	**-0.9**
CHLP				IAmb	IAmb	00 50 55.3	
	comp=Z,67nm,1.3s						
TYV	**Tymovskoe**	**52.07**	**7**	*e*P	**P**	**00 50 54.1**	**+0.6**
RAMN	**Ramite**	**52.71 305**		*e*P	**P**	**00 50 59.0**	**0.0**
	comp=Z,105nm,0.7s						
PALK	**Pallekele**	**53.08 280**		P	**P**	**00 51 00.5**	**-1.2**
	comp=Z,29nm,0.8s,baz=116,slow=7.2,SNR=8.6						
PALK				LR	LR	01 17 25.0	
	comp=Z,244nm,18.1s,baz=71,slow=40						
PALK	**Pallekele**	**53.08 280**		*e*P	**P**	**00 51 00.2**	**-1.5**
	comp=Z,46nm,1.0s						
PALK	**Pallekele**	**53.08 280**		*i* P	**P**	**00 51 02.2**	**+0.5**
JIRN	**Jiri**	**53.33 306**		*e*P	**P**	**00 51 03.5**	**-0.2**
	comp=Z,122nm,0.7s						
DCZ	**Deep Cove**	**53.55 151**		*e*P	**P**	**00 51 06.8**	**+2.3**
	comp=Z,42nm,1.1s						
ULN	**Ulaanbaatar**	**53.58 338**		*e*P	**P**	**00 51 05.6**	**+0.6**
	comp=Z,89nm,1.3s						
ULN				LR	LR		
	comp=Z,361nm,19.0s						
ULN	**Ulaanbaatar**	**53.58 338**		P	**P**	**00 51 06.2**	**+1.3**
	SNR=37						
ULN	**Ulaanbaatar**	**53.58 338**	*c*	*i*P	**P**	**00 51 05.9**	**+1.0**
ULN				pmax	pmax		
	comp=Z,54nm,1.2s						
GUN	**Gumba**	**53.68 306**		*e*P	**P**	**00 51 06.1**	**-0.2**
	comp=Z,167nm,0.8s						
SONM	**Songino Array**	**53.80 338**		P	**P**	**00 51 06.9**	**+0.4**
	comp=Z,14nm,0.9s,baz=153,slow=7.6,SNR=66						
SONM				PcP	**PcP**	**00 52 12.0**	**-0.1**
	comp=Z,5.4nm,0.9s,baz=166,slow=4.3,SNR=3.5						
SONM				LR	LR	01 14 18.2	
	comp=Z,519nm,19.5s,baz=142,slow=36						
SONA1	**Songino Array**	**53.80 338**		*e*P	**P**	**00 51 06.8**	**+0.2**
PKIN	**Phulchoki**	**53.94 305**		*e*P	**P**	**00 51 07.3**	**-0.8**
	comp=Z,24nm,0.7s						
PVM	**Polavaram**	**53.96 292**		*e*P	**P**	**00 51 07.7**	**-0.4**
PVM				IAmb	IAmb	00 51 08.4	
	comp=Z,37nm,0.9s						
NKL	**Nikolayevsk**	**54.10**	**5**	*e*P	**P**	**00 51 08.0**	**-0.4**
NKL				*e*		00 58 48.0	
NKL				pmax	pmax		
	comp=Z,100nm,1.3s						
KKN	**Kakani**	**54.12 306**		*e*P	**P**	**00 51 08.9**	**-0.5**
	comp=Z,84nm,0.9s						
DMN	**Daman**	**54.19 305**		*e*P	**P**	**00 51 09.6**	**-0.3**
	comp=Z,87nm,0.9s						
LBZ	**Lake Benmore**	**54.34 148**		*e*P	**P**	**00 51 12.2**	**+1.8**
	comp=Z,165nm,1.7s						
RPZ	**Rata Peaks**	**54.36 147**		*e*P	**P**	**00 51 11.9**	**+1.3**
	comp=Z,75nm,1.2s						
LTZ	**Lake Taylor**	**54.44 145**		*e*P	**P**	**00 51 12.3**	**+1.2**
	comp=Z,53nm,1.1s						
ZEA	**Zeya**	**54.57 356**		*e*P	**P**	**00 51 12.9**	**+1.0**
ZEA				pmax	pmax		
	comp=Z,35nm,1.0s						
ZEA				MLR	MLR		
	comp=E,300nm,16.0s						
GKN	**Gorkha**	**54.73 306**		*e*P	**P**	**00 51 13.3**	**-0.4**
	comp=E,96nm,0.9s						
URZ	**Urewera**	**54.79 138**		P	**P**	**00 51 13.6**	**-0.2**
	comp=E,5.1nm,0.3s,baz=275,slow=4.9,SNR=9.9						
BKZ	**Black Stump Fm**	**54.87 139**		*e*P	**P**	**00 51 14.7**	**+0.3**
	comp=E,57nm,1.0s						
KHZ	**Kahutara**	**54.94 144**		*e*P	**P**	**00 51 15.2**	**+0.5**
	comp=E,51nm,1.0s						
SNZO	**South Karori**	**54.97 143**		PFAKE		00 51 30.0	+15
SNZO				LR	LR		
	comp=Z,2μm,20.0s						
SKHT	**Srikalahasti**	**55.01 287**		*e*P	**P**	**00 51 15.1**	**-0.6**
SKHT				IAmb	IAmb	00 51 15.2	
	comp=Z,36nm,0.8s						
MIDW	**Midway**	**55.34**	**54**	PFAKE		00 51 30.0	+12
MIDW				LR	LR		
	comp=Z,615nm,20.0s						
KOLN	**Koldanda**	**55.48 305**		*e*P	**P**	**00 51 19.2**	**0.0**
	comp=Z,157nm,0.7s						
DANN	**Dangsing**	**55.57 306**		*e*P	**P**	**00 51 19.8**	**-0.2**
	comp=Z,178nm,0.8s						
AFI	**Afiamalu**	**55.85 106**		LR	LR	01 14 52.8	
	comp=Z,564nm,18.2s,baz=264,slow=36						
NJS	**Nagarjunasagar**	**55.96 291**		*e*P	**P**	**00 51 21.6**	**-1.0**
NJS				IAmb	IAmb	00 51 22.2	
	comp=Z,42nm,0.9s						
PYUN	**Piuthan**	**56.11 305**		*e*P	**P**	**00 51 23.7**	**0.0**
	comp=Z,299nm,0.8s						
SRLM	**Srisailam**	**56.25 290**		*e*P	**P**	**00 51 23.6**	**-1.1**
SRLM				IAmb	IAmb	00 51 24.2	
	comp=Z,50nm,0.9s						
RPR	**Rampur**	**56.50 293**		*e*P	**P**	**00 51 25.6**	**-0.7**
RPR				IAmb	IAmb	00 51 26.4	
	comp=Z,43nm,0.9s						
HYB	**Hyderabad**	**56.85 291**		*i* P	**P**	**00 51 28.0**	**-0.9**
HYBB	**Hyderabad (bro**	**56.85 291**		*e*P	**P**	**00 51 27.4**	**-1.6**
HYBB				IAmb	IAmb	00 51 28.4	
	comp=Z,69nm,0.9s						
ZAK	**Zakamensk**	**57.06 338**		*e*P	**P**	**00 51 30.2**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,31nm,1.7s						
SRSP	**Sriramsagar**	**57.39 293**		*e*P	**P**	**00 51 32.1**	**-0.6**
SRSP				IAmb	IAmb	00 51 32.3	
	comp=Z,54nm,1.0s						
PEA0B	**Petropavlovsk-**	**57.44**	**17**	*e*P	**P**	**00 51 33.1**	**+0.7**
	comp=Z,54nm,0.9s						
PETK	**Petropavlovsk-**	**57.44**	**17**	P	**P**	**00 51 31.9**	**-0.5**
	comp=Z,14nm,0.8s,baz=182,slow=4.5,SNR=13						
PETK				LR	LR	01 19 33.4	
	comp=Z,164nm,18.1s,baz=199,slow=40						
PETK	**Petropavlovsk-**	**57.44**	**17**	*e*P	**P**	**00 51 32.7**	**+0.2**
PETK	**Petropavlovsk-**	**57.44**	**17**	P	**P**	**00 51 32.0**	**-0.5**
PETK				pmax	pmax		
	comp=Z,14nm,0.8s						
PETK				MLR	MLR		
	comp=Z,164nm,18.1s						
URV	**Uravakonda**	**57.57 288**		IAmb	IAmb	00 51 32.6	
	comp=Z,20nm,0.8s						
URV				*e*P	**P**	**00 51 32.7**	**-1.4**
PET	**Petropavlovsk**	**57.66**	**18**	*e*P	**P**	**00 51 33.5**	**-0.4**
	comp=Z,36nm,1.0s						
PET				LR	LR		
	comp=Z,343nm,20.0s						
PET	**Petropavlovsk**	**57.66**	**18**	*e*P	**P**	**00 51 35.0**	**+1.1**
PET				*e*S	**S**	**00 59 30.2**	**-0.2**
PET				*e*PS	**PnS**	**00 59 50.7**	**+6.7**
PET				*e*SS	**SS**	**01 03 22.2**	**+1.1**
PET				pmax	pmax		
	comp=Z,100nm,11.0s						
CLNS	**Chul'man**	**57.84 355**		*e*P	**P**	**00 51 36.0**	**+0.8**
CLNS				pmax	pmax		
	comp=N,14nm,1.1s						
CLNS				pmax	pmax		
	comp=Z,21nm,1.0s						
CLNS				pmax	pmax		
	comp=E,8.0nm,1.0s						
TLY	**Talaya**	**57.98 339**		LR	LR	01 18 01.0	
	comp=E,354nm,19.3s,baz=138,slow=38						
TLY	**Talaya**	**57.98 339**		*e*P	**P**	**00 51 36.5**	**+0.3**
	comp=E,21nm,1.0s						
TLY	**Talaya**	**57.98 339**		P	**P**	**00 51 37.4**	**+1.1**
	SNR=14						
TLY	**Talaya**	**57.98 339**		*e*P	**P**	**00 51 37.1**	**+0.8**
TLY				*e*		00 53 41.8	
TLY				*e*S	**S**	**00 59 30.0**	**-4.7**
TLY				pmax	pmax		
	comp=Z,27nm,1.1s						
TLY				MLR	MLR		
	comp=Z,350nm,19.0s						
IRK	**Irkutsk**	**58.21 339**		*e*P	**P**	**00 51 39.3**	**+1.4**
IRK				*e*		00 51 57.4	
IRK				pmax	pmax		
	comp=Z,101nm,1.6s						
KLRI	**Killari**	**58.81 292**		*e*P	**P**	**00 51 40.8**	**-1.9**
KLRI				IAmb	IAmb	00 51 41.6	
	comp=Z,50nm,1.0s						
MOY	**Mondy**	**58.96 337**		*e*P	**P**	**00 51 44.2**	**+0.9**
MOY				pmax	pmax		
	comp=Z,111nm,1.7s						
KNGR	**Kungurtug, Tuv**	**59.58 334**	⇓	*i*P	**P**	**00 51 48.7**	**+1.1**
WMQ	**Urumqi**	**60.21 323**		P	**P**	**00 51 53.1**	**+1.1**
WMQ				pP	pP	00 51 56.9	-4.0
WMQ				sP	sP	00 52 01.5	-2.9
WMQ				PP	**PP**	**00 54 05.5**	**+0.5**
WMQ				S	**S**	**01 00 04.3**	**+0.2**
WMQ				SS	**SS**	**01 04 01.8**	**+0.1**
WMQ				pmax	pmax		
	comp=Z,340nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,350nm,3.6s						
WMQ				LR	LR		
	comp=Z,860nm,16.1s						
WMQ				LR	LR		
	comp=Z,600nm,21.1s						
WMQ				LR	LR		
	comp=Z,680nm,21.1s						
BOD	**Bodaibo**	**60.43 348**		*e*P	**P**	**00 51 53.0**	**-0.1**
BOD				pmax	pmax		
	comp=Z,62nm,1.4s						
DGAR	**Diego Garcia**	**61.01 262**	*d*	*i*P	**P**	**00 51 58.0**	**+0.2**
HVS	**Khovu-Aksy**	**61.66 333**	⇑	*i*P	**P**	**00 52 02.6**	**+0.9**
MA2	**Magadan**	**61.73**	**10**	PFAKE		00 52 10.0	+8.2
MA2				LR	LR		
	comp=Z,409nm,20.0s						
YAK	**Yakutsk**	**62.71 358**		*e*P	**P**	**00 52 08.0**	**-0.4**
YAK				LR	LR		
	comp=Z,300nm,20.0s						
YAK	**Yakutsk**	**62.71 358**		*i* P	**P**	**00 52 08.4**	**0.0**
DGZ	**Jazzator, Alta**	**63.79 329**		*i* P	**P**	**00 52 17.0**	**+1.0**
MK01	**Makanchi Array**	**65.00 324**		*e*P	**P**	**00 52 23.5**	**-0.4**
MKAR	**Makanchi Array**	**65.02 324**		P	**P**	**00 52 24.6**	**+0.7**
	comp=Z,72nm,0.7s,baz=115,slow=7.9,SNR=531						
MKAR				PKPPKP	**P'P'df**	**01 21 05.9**	**-2.2**
	comp=Z,1.7nm,1.1s,baz=311,slow=7.8,SNR=4.1						
MKAR	**Makanchi Array**	**65.02 324**		P	**P**	**00 52 24.7**	**+0.7**
MKAR				pmax	pmax		
	comp=Z,73nm,0.7s						
PDGK	**Podgornoye**	**65.08 319**		P	**P**	**00 52 24.9**	**+0.4**
PDGK				pmax	pmax		
	comp=Z,109nm,1.3s						
SEY	**Seymchan**	**65.15**	**9**	⇑*i*P	**P**	**00 52 25.6**	**+1.2**
SEY				*i* *SP	**pP**	**00 52 34.6**	**+1.1**
MAKZ	**Makanchi**	**65.22 324**		P	**P**	**00 52 25.8**	**+0.6**
MAKZ				pmax	pmax		
	comp=Z,154nm,1.1s						
KSH	**Kashi**	**65.87 314**	⇑	*i*P	**P**	**00 52 31.3**	**+1.6**
KSH				pP	pP	00 52 38.8	0.0
KSH				PP	**PP**	**00 55 00.8**	**+5.8**
KSH				S	**S**	**01 01 16.0**	**+0.8**
KSH				sS	sS	01 01 29.5	-0.6
KSH				SS	**SS**	**01 05 32.8**	**+2.3**
KSH				pmax	pmax		
	comp=Z,360nm,1.2s						
KSH				LR	LR		
	comp=Z,490nm,7.5s						
KSH				LR	LR		
	comp=Z,410nm,8.1s						
KSH				LR	LR		
	comp=Z,390nm,8.8s						
NIL	**Nilore**	**65.87 308**		*e*P	**P**	**00 52 29.9**	**+0.1**
	comp=Z,65nm,0.6s						
NIL				LR	LR		
	comp=Z,180nm,20.0s						
NIL	**Nilore**	**65.87 308**		*e*P	**P**	**00 52 29.9**	**+0.1**
NIL				pmax	pmax		
	comp=Z,65nm,0.6s						
NIL				MLR	MLR		
	comp=Z,180nm,20.0s						
NRN	**Naryn**	**66.60 316**		*e*P	**P**	**00 52 35.3**	**+0.6**
	comp=Z,40nm,0.9s						
NRN	**Naryn**	**66.60 316**		*e*P	**P**	**00 52 35.3**	**+0.6**
NRN				pmax	pmax		
	comp=Z,40nm,0.9s						
ULHL	**Ulahol**	**66.77 317**		P	**P**	**00 52 36.3**	**+0.8**
	SNR=21						
CASY	**Casey**	**67.33 190**		*e*P	**P**	**00 52 38.1**	**-0.2**
	comp=Z,35nm,1.1s						
KZA	**Kyzart**	**67.37 317**		P	**P**	**00 52 41.1**	**+1.4**
	SNR=109						
TKM2	**Tokmak 2**	**67.47 318**		P	**P**	**00 52 40.7**	**+0.7**
	SNR=88						
TKM2	**Tokmak 2**	**67.47 318**		P	**P**	**00 52 40.7**	**+0.7**
TKM2				pmax	pmax		
	comp=Z,52nm,0.8s						
ZAA0	**Zalesovo Array**	**67.62 331**		*e*P	**P**	**00 52 40.0**	**-0.5**
	comp=Z,78nm,1.2s						
ZALV	**Zalesovo Beam**	**67.62 331**		P	**P**	**00 52 39.8**	**-0.6**
	comp=Z,56nm,1.0s,baz=108,slow=4.8,SNR=101						
ZALV				PKPPKP	**P'P'df**	**01 21 01.6**	**-1.6**
	comp=Z,1.4nm,0.8s,baz=281,slow=8.7,SNR=2.6						
ZALV				PKP2ab		01 21 06.8	
	comp=Z,1.8nm,0.8s,baz=305,slow=5.2,SNR=6.8						
ZALV				LR	LR	01 24 26.1	
	comp=Z,136nm,19.1s,baz=72,slow=38						
KBK	**Karagaybulak**	**67.81 317**		P	**P**	**00 52 43.0**	**+0.9**
	SNR=21						
SFK	**Sufi-Kurgan**	**67.82 314**		P	**P**	**00 52 43.1**	**+0.8**
SFK				pmax	pmax		
	comp=Z,116nm,1.3s						
UCH	**Uchtor**	**67.94 317**		P	**P**	**00 52 44.5**	**+1.3**
	SNR=88						
CHMS	**Chumysh**	**68.07 318**		P	**P**	**00 52 44.0**	**+0.5**
	SNR=27						
FRU	**Bishkek**	**68.10 317**		*e*P	**P**	**00 52 44.0**	**+0.2**
FRU				*e*		00 53 12.0	
FRU				pmax	pmax		
	comp=Z,50nm,1.6s						
RAR	**Rarotonga**	**68.24 112**		LR	LR	01 20 48.1	
	comp=Z,165nm,20.4s,baz=272,slow=34						
USP	**Ospenovka**	**68.35 318**		P	**P**	**00 52 46.0**	**+0.7**
	SNR=62						
AML	**Almayashu**	**68.46 316**		P	**P**	**00 52 47.6**	**+1.1**
	SNR=100						
EKS2	**Erkin-Say**	**68.61 317**		P	**P**	**00 52 48.1**	**+1.1**
	SNR=62						
NVS	**Novosibirsk**	**68.89 332**	⇓	*i*P	**P**	**00 52 48.4**	**0.0**
NVS				*i*		00 52 58.9	
NVS				*i*		00 56 59.0	
NVS				*i* S	**S**	**01 01 49.2**	**-1.5**
NVS				pmax	pmax		
	comp=Z,72nm,1.1s						

NVS pmax pmax
comp=N,33nm,1.2s
NVS pmax pmax
comp=E,45nm,1.2s
NVS smax smax
comp=N,1.0nm,0.4s
KURK Kurchatov 69.09 326 *e*P **P 00 52 49.9 +0.2**
KURK LR LR
comp=Z,406nm,21.0s
KURK Kurchatov 69.09 326 P **P 00 52 50.1 +0.4**
SNR=79
KURK Kurchatov 69.09 326 *e*P **P 00 52 49.9 +0.2**
KURK MLR MLR
comp=Z,406nm,21.0s
KURBB Kurchatov Arra 69.09 326 P **P 00 52 49.8 +0.1**
comp=Z,100nm,0.9s,baz=120,slow=5.8,SNR=588
MNAS Manas 69.42 316 P **P 00 52 52.9 +0.8**
MNAS pmax pmax
comp=Z,143nm,1.3s
KBL Kabul 69.47 307 *e*P **P 00 52 51.7 -1.0**
comp=Z,44nm,0.9s
KBL Kabul 69.47 307 *e*P **P 00 52 51.7 -1.0**
KBL pmax pmax
comp=Z,44nm,0.9s
KK31 Karatay Array 71.00 316 *e*P **P 00 53 02.0 +0.4**
KK31 Karatay Array 71.00 316 *e*P **P 00 53 02.0 +0.4**
KKAR Karatay Array 71.00 316 *e*P **P 00 53 02.0 +0.4**
KKAR Karatay Array 71.00 316 *e*P **P 00 53 02.0 +0.4**
OTUK Ortayu 71.69 322 P **P 00 53 06.0 +0.3**
OTUK pmax pmax
comp=Z,131nm,1.1s
BILL Bilibino 72.37 12 PFAKE 00 53 20.0 +11
BILL LR LR
comp=Z,309nm,21.0s
BILL Bilibino 72.37 12 *e*P **P 00 53 09.7 +0.4**
BILL *e* 00 53 29.4
BILL *e*PPP PPP 00 57 34.3
BILL pmax pmax
comp=Z,5.0nm,1.2s
TIXI Tiksi 72.37 359 *e*P **P 00 53 08.4 -0.9**
comp=Z,14nm,0.7s
TIXI LR LR
comp=Z,589nm,20.0s
TIXI Tiksi 72.37 359‖ *i*P **P 00 53 08.6 -0.6**
TIXI pmax pmax
comp=Z,21nm,1.2s
BVA0 Borovoye Array 74.69 326 *i* P **P 00 53 23.2 -0.1**
BVA0 pmax pmax
comp=Z,85nm,1.2s
BVAR Borovoye Array 74.69 326 P **P 00 53 23.4 +0.1**
comp=Z,36nm,0.9s,baz=119,slow=5.8,SNR=169
BVAR LR LR 01 30 16.2
comp=Z,200nm,18.2s,baz=108,slow=39
BRVK Borovoye 74.76 326 *e*P **P 00 53 24.0 +0.3**
comp=Z,75nm,1.0s
BRVK LR LR
comp=Z,170nm,20.0s
BRVK Borovoye 74.76 326 P **P 00 53 23.8 +0.2**
SNR=34
BRVK Borovoye 74.76 326*c i*P **P 00 53 23.8 +0.2**
BRVK pmax pmax
comp=Z,95nm,1.2s
WSAR Wadi Sarin 76.25 294 P **P 00 53 33.0 +0.1**
comp=Z,44nm,1.0s,baz=122,slow=7.8,SNR=9.4
WSAR LR LR 01 31 00.1
comp=Z,92nm,19.8s,baz=120,slow=39
NRIK Noril'sk 76.42 345 P **P 00 53 32.9 +0.1**
comp=Z,60nm,1.1s,baz=126,slow=6.2,SNR=64
NRIK LR LR 01 28 26.3
comp=Z,1μm,19.4s,baz=140,slow=37
BIDO Bidbid 76.74 294 P **P 00 53 36.0 +0.4**
SNR=8.7
PPT Papeete 77.48 108 LR LR 01 23 09.4
comp=Z,184nm,21.1s,baz=278,slow=32
PPT2 Papeete2 77.48 108 *e*S **S 01 03 27.8 -1.9**
comp=Z,276nm,23.8s
PPT2 Papeete2 77.48 108 *e*LQ LQ 01 14 08.6
PPT2 *e*LR LR 01 17 19.8
comp=Z,960nm,32.5s
comp=Z,404nm,23.5s
HOQ Hoqain 77.49 294 P **P 00 53 40.6 +0.7**
SNR=7.4
ARQ Araqi 78.19 294 P **P 00 53 44.5 +0.8**
SNR=10
VNDA Vanda 78.21 174 P **P 00 53 43.2 +0.5**
comp=Z,10nm,0.9s,baz=319,slow=6.1,SNR=32
VNDA LR LR 01 28 39.9
comp=Z,1μm,18.1s,baz=352,slow=36
VNDA Vanda 78.21 174 *e*P **P 00 53 43.5 +0.8**
comp=Z,67nm,1.3s
SOHO SOHO 78.26 295 *i*P **P 00 53 44.0 -0.1**
SNR=32
SHAO Shalim 78.53 288 P **P 00 53 45.8 0.0**
UOSS Minazif 78.65 296 *e*P **P 00 53 46.2 0.0**
comp=Z,59nm,1.1s
UOSS Minazif 78.65 296 P **P 00 53 45.7 -0.5**
UOSS Minazif 78.65 296 *i*P **P 00 53 45.8 -0.5**
SNR=10.0
BANOM Banah 78.67 297 P **P 00 53 46.8 +0.4**
SNR=5.8
BANOM Banah 78.67 297 *i*P **P 00 53 47.0 +0.6**
SNR=11
HATD Hatta, Dubai 78.70 295 P **P 00 53 46.7 +0.1**
SNR=8.2
HATD Hatta, Dubai 78.70 295 *i*P **P 00 53 46.7 +0.1**
SNR=16
MSFE Esma-Masafi 78.73 296 *i*P **P 00 53 47.7 +0.9**
SNR=22
SHME Shamm 78.82 297 P **P 00 53 47.3 +0.1**
GEYT Alibeck 78.83 309 P **P 00 53 47.6 +0.6**
comp=Z,16nm,0.7s,baz=144,slow=2.8,SNR=6.8
GEYT LR LR 01 32 42.2
comp=Z,112nm,19.1s,baz=230,slow=39
GYA0B ALIBECK ARRAY 78.83 309 *e*P **P 00 53 47.8 +0.8**
comp=Z,47nm,1.0s
ALNE Al Ain 78.97 295 *i*P **P 00 53 48.3 +0.2**
SNR=28
SBA Scott Base 79.04 173 *e*P **P 00 53 48.2 +0.9**
comp=Z,34nm,1.1s
SBA LR LR
comp=Z,669nm,20.0s
SBA Scott Base 79.04 173 *e*P **P 00 53 48.2 +0.9**
SBA pmax pmax
comp=Z,35nm,1.1s
SBA MLR MLR
comp=Z,669nm,20.0s
NAZ Nazwa, Dubai 79.14 295 P **P 00 53 49.0 0.0**
SNR=7.6
NAZ Nazwa, Dubai 79.14 295 *i*P **P 00 53 48.9 -0.1**
SNR=12
ASUD Al Ashush, Dub 79.41 295 P **P 00 53 50.9 +0.5**
SNR=5.6
ASUD Al Ashush, Dub 79.41 295 *i*P **P 00 53 50.2 -0.2**
SNR=8.7
AJN Ajban 79.71 295 *i*P **P 00 53 51.8 -0.2**
SNR=5.9
AB31 Akbulak array 79.79 320 *i*P **P 00 53 51.7 -0.3**
AB31 pmax pmax
comp=Z,34nm,1.0s
ABKAR Akbulak array 79.79 320 *e*P **P 00 53 51.6 -0.3**
RDOG Red Dog Mine 81.18 20 *e*P **P 00 54 00.9 +1.9**
comp=Z,16nm,0.8s
SVE Sverdlovsk 81.24 328*de*P **P 00 53 59.7 +0.1**
SVE pmax pmax
comp=Z,57nm,1.3s
AKTO Aktyubinsk 81.27 321 P **P 00 53 59.4 -0.5**
comp=Z,19nm,1.0s,baz=96,slow=5.9,SNR=43
SVW2 Sparrevohn 81.64 28 *e*P **P 00 54 02.9 +1.2**
comp=Z,22nm,1.1s
OHAK Old Harbor 81.73 32 *e*P **P 00 54 03.1 +1.0**
comp=Z,42nm,1.1s
MAW Mawson 81.90 201 P **P 00 54 02.5 -0.3**
comp=Z,22nm,0.9s,baz=68,slow=6.9,SNR=27
MAW LR LR 01 28 14.4
comp=Z,435nm,21.0s,baz=62,slow=34
MAW Mawson 81.90 201 P **P 00 54 02.8 0.0**
baz=82,SNR=10
MAW Mawson 81.90 201 *e*P **P 00 54 04.1 +1.3**
comp=Z,6.8nm,0.9s
KDAK Kodiak Island 82.23 31 *e*P **P 00 54 05.0 +0.3**
comp=Z,42nm,1.0s
KDAK LR LR
comp=Z,231nm,20.0s
KDAK Kodiak Island 82.23 31*ce*P **P 00 54 05.6 +0.9**
ARU Arti 82.25 327 P **P 00 54 04.4 -0.5**
comp=Z,19nm,0.9s,baz=100,slow=4.6,SNR=7.4
ARU Arti 82.25 327 *e*P **P 00 54 03.8 -1.1**
comp=Z,32nm,1.0s
ARU LR LR
comp=Z,199nm,19.0s
ARU Arti 82.25 327 *i*P **P 00 54 04.5 -0.5**
ARU pmax pmax
comp=Z,27nm,0.9s
RSO Redoubt South 82.81 29 *e*P **P 00 54 08.3 +0.3**
BRLK Bradley Lake 83.55 30 *e*P **P 00 54 12.2 +0.5**
comp=Z,39nm,1.1s
PPLA Purkeypile 83.67 26 *e*P **P 00 54 12.9 +0.6**
comp=Z,103nm,1.8s
SKT Skwentna 83.75 27 *e*P **P 00 54 12.3 -0.3**
comp=Z,15nm,0.9s
CAST Castle Rocks 83.85 26 *e*P **P 00 54 13.4 +0.3**
comp=Z,44nm,1.6s
SUA Susitna One 84.00 28 *e*P **P 00 54 13.8 -0.2**
comp=Z,27nm,0.9s
BPAW Bear Paw Mtn. 84.48 25 *e*P **P 00 54 16.8 +0.5**
comp=Z,54nm,1.5s
TRF Thorofare Moun 84.64 26 *e*P **P 00 54 16.9 -0.4**
comp=Z,64nm,1.4s
PMR Palmer 84.78 28 *e*P **P 00 54 17.6 -0.1**
comp=Z,36nm,1.4s
PMR Palmer 84.78 28 *e*P **P 00 54 17.6 -0.1**
PMR pmax pmax
comp=Z,36nm,1.4s
MLY Manley 84.80 24 *e*P **P 00 54 18.5 +0.6**
comp=Z,40nm,1.2s
BWN Browne 85.15 25 *e*P **P 00 54 20.4 +0.8**
comp=Z,96nm,1.1s
RND Reindeer 85.26 26 *e*P **P 00 54 19.4 -0.9**
comp=Z,74nm,1.0s
RND Reindeer 85.26 26 *e*P **P 00 54 19.4 -0.9**
RND pmax pmax
comp=Z,74nm,1.0s
MCK McKinley 85.29 26 *e*P **P 00 54 20.1 -0.2**
comp=Z,110nm,1.3s
MCK McKinley 85.29 26 *e*P **P 00 54 20.1 -0.2**
MCK pmax pmax
comp=Z,110nm,1.3s
COLD Coldfoot 85.50 22 *e*P **P 00 54 22.3 +1.0**
comp=Z,19nm,1.2s
SCM Sheep Creek Mo 85.67 28 *e*P **P 00 54 22.9 +0.6**
comp=Z,108nm,1.1s
SCM Sheep Creek Mo 85.67 28 *e*P **P 00 54 22.9 +0.6**
SCM pmax pmax
comp=Z,108nm,1.1s
WRH Wood River Hil 85.80 25 *e*P **P 00 54 22.2 -0.6**
comp=Z,62nm,1.1s
MDM Murphy Dome 85.83 25 *e*P **P 00 54 22.8 -0.2**
comp=Z,12nm,1.0s
DHY Denali Highway 85.86 27 *e*P **P 00 54 23.9 +0.5**
comp=Z,64nm,1.1s
CCB Clear Creek Bu 85.95 25 *e*P **P 00 54 23.0 -0.6**
comp=Z,54nm,1.1s
ABPO Ambohimpanom 86.04 251 *e*P **P 00 54 25.4 +0.2**
comp=Z,24nm,0.8s
OPO Ambohidratompo 86.07 252 P **P 00 54 25.7 +0.3**
comp=Z,40nm,0.8s,baz=82,slow=6.7,SNR=25
OPO LR LR 01 27 13.5
comp=Z,154nm,21.4s,slow=32
KLU Klutina 86.28 28 *e*P **P 00 54 26.4 +1.0**
comp=Z,38nm,1.0s
ILAR Eielson Array 86.36 25 P **P 00 54 24.4 -1.2**
comp=Z,14nm,1.0s,baz=260,slow=5.0,SNR=72
ILAR PKKP **PKKPbc 01 12 23.4 -2.4**
comp=Z,0.6nm,0.9s,baz=6.9,slow=1.1,SNR=6.3
ILAR LR LR 01 27 40.5
comp=Z,109nm,21.5s,baz=256,slow=32
ILB Eielson Array 86.36 25 *e*P **P 00 54 23.8 -1.9**
TAOE Nuku Hiva Isla 86.47 99 *e*LR LR 01 21 31.2
comp=Z,744nm,23.3s
RAGM Ragged Mountai 86.72 30 *e*P **P 00 54 28.8 +1.2**
comp=Z,56nm,1.1s
HARP HAARP 86.76 27 *e*P **P 00 54 28.9 +1.2**
comp=Z,46nm,1.0s
FYU Fort Yukon 87.31 23 *e*P **P 00 54 31.6 +1.4**
comp=Z,42nm,0.6s
TGL Tana Glacier 87.67 29 *e*P **P 00 54 33.0 +0.8**
comp=Z,82nm,1.2s
RAYN Ar Rayn 88.30 293 *e*P **P 00 54 35.5 -0.4**
comp=Z,23nm,0.9s
RAYN LR LR
comp=Z,379nm,22.0s
RAYN Ar Rayn 88.30 293 *i*P **P 00 54 34.9 -1.1**
SNR=24
GROC Groznyy 88.72 313 *e*P **P 00 54 33.4 -4.0**
GROC *e*S **SKSac 01 04 59.3 -5.6**
GROC pmax pmax
comp=Z,45nm,1.5s
EGAK Eagle 88.80 25 PFAKE 00 54 50.0 +13
EGAK LR LR
comp=Z,278nm,20.0s
DAMY Dhamar 89.15 284 *e*P **P 00 54 40.6 +0.2**
comp=Z,22nm,0.9s
QSPA South Pole Qui 89.15 180 P **P 00 54 39.3 +0.2**
comp=Z,30nm,1.0s,baz=328,slow=1.9,SNR=21
GNI Garni 89.40 310 P **P 00 54 40.4 -0.5**
comp=Z,7.6nm,1.1s,baz=347,slow=18,SNR=3.8
GNI Garni 89.40 310 *e*P **P 00 54 39.6 -1.3**
GNI LR LR
comp=Z,149nm,22.0s
GNI Garni 89.40 310 *i*P **P 00 54 39.8 -1.1**
GNI pmax pmax
comp=Z,26nm,1.2s
PRGR Permogore 89.58 332 *e*P **P 00 54 38.6 -2.4**
PRGR *e**SP **pP 00 54 47.8 -2.6**
PRGR *e* 00 58 12.2
PRGR pmax pmax
comp=Z,17nm,0.9s
NCK Nalchik 90.33 313 *i*P **P 00 54 43.8 -1.2**
NCK pmax pmax
comp=Z,4.0nm,0.8s
ATD Arta Tunnel 90.61 281 P **P 00 54 47.2 +0.2**
comp=Z,13nm,0.9s,baz=80,slow=0.3,SNR=8.3
ATD LR LR 01 35 45.9
comp=Z,60nm,19.1s,baz=40,slow=36
SYO Syowa Base 90.61 201‖ *e*P **P 00 54 45.0 -0.7**
KBZ Khabaz 90.84 314 P **P 00 54 48.3 +1.0**
comp=Z,2.2nm,0.8s,baz=323,slow=4.5,SNR=4.9
KVAR Kislovodsk Arr 90.98 314 P **P 00 54 49.3 +1.1**
comp=Z,3.0nm,0.9s,baz=91,slow=7.0,SNR=2.7
KIV Kislovodsk 90.99 314 PFAKE 00 55 00.0 +12
KIV LR LR
comp=Z,159nm,22.0s
KIV Kislovodsk 90.99 314 *e*P **P 00 54 49.7 +1.5**
KIV *e* 01 05 20.1
KIV pmax pmax
comp=Z,7.0nm,1.0s
RKT Rikitea 91.28 113 *e*LR LR 01 23 43.2
comp=Z,634nm,28.2s
BESE Bessie Mountai 91.63 32 *e*P **P 00 54 52.4 +1.7**
INK Inuvik 91.90 22 *e*P **P 00 54 51.0 -0.7**
INK Inuvik 91.90 22 *e*P **P 00 54 51.0 -0.7**
KLMR Klimovskoe 92.54 331 *e*P **P 00 54 51.5 -3.2**
KLMR pmax pmax
comp=Z,44nm,1.4s
KLMR Klimovskoe 92.54 331 *e*P **P 00 54 51.6 -3.2**
KLMR AMP 00 54 54.1
comp=Z,44nm,1.4s
KLMR *e*PP **PP 00 58 29.8 -6.3**
TMCR Tamitsa 93.01 334 *e*P **P 00 54 55.2 -1.7**
TMCR pmax pmax
comp=Z,23nm,0.9s
WRAK Wrangell Islan 93.06 34 *e*P **P 00 54 59.0 +1.8**
comp=Z,15nm,1.1s
WRAK LR LR
comp=Z,212nm,20.0s
VORD Divnogorie 93.14 321 *e*P **P 00 54 55.4 -2.4**
VORD pmax pmax
comp=Z,10.0nm,1.0s
VSR Storozhevoye 93.21 321 *e*P **P 00 54 55.3 -2.8**
VSR pmax pmax
comp=Z,10.0nm,1.5s
DLBC Dease Lake 94.17 32 *e*P **P 00 55 03.7 +1.2**
OBN Obninsk 94.51 325 PFAKE 00 55 20.0 +16
OBN LR LR
comp=Z,158nm,20.0s
ASF Jabal al Asfar 95.85 302 P **P 00 55 10.1 -0.7**
comp=Z,27nm,0.9s,baz=25,slow=4.2,SNR=5.4
KMBO Kilima Mbogo 96.04 269 LR LR 01 38 45.4
comp=Z,124nm,18.5s,baz=91,slow=36
SPITS Spitsbergen Ar 96.13 349 P **P 00 55 10.1 -0.9**
comp=Z,25nm,1.1s,baz=80,slow=19,SNR=5.3
SPITS LR LR 01 41 42.6
comp=Z,242nm,20.1s,baz=60,slow=38
KBS Kingsbay 96.55 350 PFAKE 00 55 20.0 +7.2
KBS LR LR
comp=Z,297nm,20.0s
KBS Kingsbay 96.55 350 *i*P **P 00 55 13.5 +0.7**
KBS pmax pmax
comp=Z,52nm,1.3s
ARCES ARCESS Array B 96.91 340 P **P 00 55 12.8 -1.8**
comp=Z,18nm,0.9s,baz=64,slow=5.5,SNR=23
ARCES LR LR 01 45 16.7
comp=Z,236nm,18.2s,baz=72,slow=39
ARCES ARCESS Array B 96.91 340 *e*P **P 00 55 13.4 -1.2**
ARE0 ARCESS Array S 96.91 340 *e*P **P 00 55 13.9 -0.7**
MMAI Mount Meron Ar 97.06 303 LR LR 01 46 52.0
comp=Z,95nm,19.2s,baz=110,slow=40
BRTR Keskin Array B 97.94 310 P **P 00 55 18.1 -2.1**
comp=Z,0.9nm,0.9s,baz=106,slow=10.0,SNR=5.7
BRTR Keskin Array B 97.94 310*ce*P **P 00 55 19.2 -1.0**
BRTR pmax pmax
comp=Z,1.0nm,0.9s
OUL Oulu 98.00 336 P **P 00 55 19.2 -0.4**
OUL pmax pmax
comp=Z,21nm,1.7s
FINES FINESS Array B 98.88 332 P **P 00 55 22.1 -1.5**
comp=Z,8.5nm,1.0s,baz=111,slow=10,SNR=9.7
FINES LR LR 01 42 52.3
comp=Z,442nm,20.3s,baz=71,slow=37
FINES FINESS Array B 98.88 332*ce*P **P 00 55 22.7 -0.9**
FINES pmax pmax
comp=Z,10.0nm,1.0s
NLWA Neilton Lookou 99.25 42 PFAKE 00 55 40.0 +14
NLWA LR LR
comp=Z,362nm,22.0s
AKASG Malin Array Be 99.51 321 P **Pdif 00 55 24.7 -2.0**
comp=Z,0.3nm,0.2s,baz=66,slow=4.5,SNR=10
AKASG PP PP 00 59 20.1 -10
comp=Z,0.2nm,0.2s,baz=70,slow=7.3,SNR=3.9
KIEV Kiev 99.52 321 PFAKE 00 55 40.0 +13
KIEV LR LR
comp=Z,233nm,21.0s
YKA Yellowknife Ar 100.76 26 P **Pdif 00 55 31.9 -0.1**
comp=Z,1.9nm,0.8s,baz=298,slow=5.3,SNR=3.3
RES Resolute Bay 100.97 12 *e*Pdif **Pdif 00 55 31.9 -0.8**
RES Resolute Bay 100.97 12 *e*P **Pdif 00 55 31.9 -0.8**
VRI Vrincioaia 102.07 317 P **Pdif 00 55 39.4 +1.1**
HAWA Hanford 102.36 43 PFAKE 00 55 50.0 +10
HAWA LR LR
comp=Z,519nm,19.0s
SNAA Sanae 102.43 193 Pdiff **Pdif 00 55 40.4 +1.1**
comp=Z,1.3nm,0.9s,baz=169,slow=19,SNR=3.1
DAG Danmarks Havn 102.50 354 P **Pdif 00 55 39.6 +0.1**
DAG pmax pmax
comp=Z,7.0nm,1.1s
MLR Muntele Rosu 102.69 317 Pdiff **Pdif 00 55 44.9 +3.8**
comp=Z,0.5nm,0.9s,baz=184,slow=15,SNR=3.8
NEW Newport 103.53 40 PFAKE 00 56 00.0 +15
NEW LR LR
comp=Z,306nm,22.0s
WVOR Wild Horse Val 103.80 46 PFAKE 00 56 00.0 +14
WVOR LR LR
comp=Z,553nm,21.0s
BMO Blue Mountains 104.22 44 PFAKE 00 56 00.0 +12
BMO LR LR
comp=Z,455nm,21.0s
LSZ Lusaka 104.37 254 *e*Pdif **Pdif 00 55 48.6 -0.6**
LSZ LR LR
comp=Z,216nm,19.0s
LSZ Lusaka 104.37 254 *e*P **Pdif 00 55 48.6 -0.6**
LSZ MLR MLR
comp=Z,216nm,19.0s
CRVS Cervenica-Dubn 104.82 321 *i*P **Pdif 00 55 50.2 -0.2**
CRVS Cervenica-Dubn 104.82 321 *e*PDIFF **Pdif 00 55 50.1 -0.3**
NV01 Mina Array Sit 104.84 50 *e*Pdif **Pdif 00 55 51.5 +0.5**
NVAR Mina Array Bea 104.84 50 Pdiff **Pdif 00 55 52.0 +0.9**
comp=Z,0.7nm,0.7s,baz=285,slow=7.4,SNR=3.7
HFS Hagfors 105.02 333 Pdiff **Pdif 00 55 50.0 -1.0**
comp=Z,5.2nm,0.9s,baz=70,slow=8.3,SNR=4.7
NB2 NORSAR Subarra105.69 335 PKP **Pdif 00 55 51.6 -2.5**
comp=Z,3.2nm,1.1s,baz=63,slow=4.4
NB2 NORSAR Subarra105.69 335 P **Pdif 00 55 51.6 -2.5**
comp=Z,3.4nm,1.1s,baz=63,slow=4.4
NB2 NORSAR Subarra105.69 335 P **Pdif 00 55 51.6 -2.5**
baz=63,slow=4.4
NOA NORSAR Array B 105.69 335 Pdiff **Pdif 00 55 57.7 +3.7**
HLID Hailey 106.55 45 PFAKE 01 00 20.0
HLID LR LR
comp=Z,526nm,21.0s
OKC Ostrava-Krasne 106.60 322 AMS AMS 01 54 00.0
comp=Z,200nm,20.6s
JAVC Velka Javorina 107.22 321 *e*PKIKP **PP 01 00 30.8 +2.8**
PFO Pinyon Flats O 107.22 55 PFAKE 01 00 20.0
PFO LR LR
comp=Z,638nm,19.0s
DPC Dobruska-Polom 107.53 323 AMS AMS 01 51 40.0
comp=Z,300nm,16.8s
UPC Upice 107.66 323 *e*PP PP 01 00 41.6 +11
UPC AMS AMS 01 46 40.0
comp=Z,200nm,22.3s
BOZ Bozeman (W) 107.88 42 PFAKE 01 00 20.0
BOZ LR LR
comp=Z,268nm,20.0s
EGMT Eagleton 108.31 39 PFAKE 01 00 20.0
EGMT LR LR
comp=Z,273nm,22.0s
DUG Dugway, Tooele 108.59 48 PFAKE 01 00 30.0
DUG LR LR
comp=Z,288nm,19.0s
GOPC GO Pecny, Ondr 108.61 323 AMS AMS 01 48 10.0
comp=Z,200nm,18.9s
PRU Pruhonice 108.72 323 AMS AMS 01 48 10.0
comp=Z,200nm,19.2s
BRG Berggiesshubel 108.74 324 *e*PKP **Pdif 00 56 07.5 -0.3**
comp=Z,7.2nm,1.4s
BRG Berggiesshubel 108.74 324 *e*P **Pdif 00 56 07.5 -0.3**
BRG pmax pmax
comp=Z,7.0nm,1.4s
PRA Prague 108.76 323 AMS AMS 01 51 10.0
comp=Z,200nm,17.0s
LKWY Lake 109.03 43 PFAKE 01 00 30.0
LKWY LR LR
comp=Z,2μm,20.0s
AHID Auburn Hatcher 109.10 45 PFAKE 01 00 30.0
AHID LR LR
comp=Z,429nm,21.0s
CLL Collm 109.11 325 *e*Pdif **Pdif 00 56 09.0 -0.4**
CLL *e* 00 59 49.0
CLL *e*PKiKP **PKiKP 01 00 11.0 -2.5**
CLL *e*PP **PP 01 00 37.0 -4.6**
CLL *e*PPmax 01 00 43.0
CLL *e* 01 04 12.0
CLL *e*Sdif Sdif 01 08 18.0 +0.3
CLL *e*PS **PS 01 10 00.0 -8.6**
CLL *e*PPS PPS 01 11 07.0
CLL *e*SS **SS 01 15 54.0 -5.3**
CLL *e*SSS SSS 01 19 54.0
CLL LmV 01 51 00.0
comp=Z,300nm,19.4s
CLL LmH 01 52 00.0
comp=N,200nm,18.8s
CLL LmH 01 52 00.0
comp=E,200nm,19.6s
CLL Collm 109.11 325 *e*P **Pdif 00 56 09.0 -0.4**
HWUT Hardware Ranch 109.11 46 PFAKE 01 00 30.0
HWUT LR LR
comp=Z,676nm,22.0s
RLMT Red Lodge 109.61 42 PFAKE 01 00 30.0
RLMT LR LR
comp=Z,285nm,21.0s
KHC Kasperske Hory 109.63 323 AMS AMS 01 51 50.0
comp=Z,200nm,20.6s
GERES GERESS Array B 109.67 322 Pdiff **Pdif 00 56 12.3 +0.2**
comp=Z,0.1nm,0.3s,baz=32,slow=5.2,SNR=5.3
GERES PKiKP **PKiKP 01 00 14.8 +0.1**
comp=Z,1.0nm,0.8s,baz=85,slow=1.6,SNR=7.4
FFC Flin Flon 109.96 30 *e*PKP **PKiKP 01 00 14.4 -0.6**
FFC LR LR
comp=Z,346nm,22.0s
BW06 Boulder Array 110.18 44 PFAKE 01 00 30.0
BW06 LR LR
comp=Z,495nm,21.0s
PDAR Pinedale Array 110.19 44 PKiKP **PKiKP 01 00 16.1 0.0**
comp=Z,0.3nm,0.6s,baz=134,slow=3.9,SNR=2.9
PDAR PKKPbc **PKKPbc 01 11 16.8 -2.0**
comp=Z,1.1nm,0.8s,baz=106,slow=5.4,SNR=8.7
PDAR PKKPab **PKKPab 01 11 28.4 -0.5**
comp=Z,1.6nm,0.8s,baz=104,slow=6.3,SNR=9.4
WUAZ Wupatki 110.90 52 PFAKE 01 00 30.0
WUAZ LR LR

comp=Z,468nm,21.0s
LAO LASA Array 111.03 39 PFAKE 01 00 30.0
LAO LR LR
comp=Z,255nm,20.0s
DGMT Dagmar 111.57 37 PFAKE 01 00 30.0
DGMT LR LR
comp=Z,319nm,20.0s
O20A White River Ci 111.96 47 P **PKiKP 01 00 20.8 +1.2**
baz=289
TUC Tucson 112.16 55 PFAKE 01 00 30.0
TUC LR LR
comp=Z,656nm,22.0s
MVCO Mesa Verde 112.67 50 P **PKiKP 01 00 22.5 +1.5**
baz=287
MVCO Mesa Verde 112.67 50 PFAKE 01 00 30.0
MVCO LR LR
comp=Z,445nm,22.0s
BFO Black Forest 113.12 324 PFAKE 01 00 30.0
BFO LR LR
comp=Z,191nm,20.0s
RSSD Black Hills 113.46 41 P **PKiKP 01 00 22.9 +0.6**
baz=294
SFJD Kangerlussuaq 113.87 2 PFAKE 01 00 30.0
SFJD LR LR
comp=Z,170nm,20.0s
TSUM Tsumeb 113.94 249 PFAKE 01 00 40.0
TSUM LR LR
comp=Z,233nm,19.0s
ISCO Idaho Springs 113.97 46 PFAKE 01 00 40.0
ISCO LR LR
comp=Z,434nm,22.0s
SDCO Great Sand Dun 114.76 48 *e*PKP PKPdf 01 00 25.3 +0.2
SDCO LR LR
comp=Z,414nm,19.0s
TASM ASL Pad, Albuq 114.92 52 P PKPdf 01 00 26.3 +1.0
baz=288
ANMO Albuquerque 114.92 52 PKP PKPdf 01 00 26.8 +1.5
comp=Z,0.7nm,0.6s,baz=258,slow=3.4,SNR=3.7
ANMO Albuquerque 114.92 52 P PKPdf 01 00 26.7 +1.4
baz=288
ANMO Albuquerque 114.92 52 PKP PKPdf 01 00 26.8 +1.5
ANMO LR LR
comp=Z,440nm,21.0s
TASL Snake Pit, Alb 114.92 52 P PKPdf 01 00 26.4 +1.1
baz=288
EKA Eskdalemuir Ar 115.18 334 PKP **PKPdf 01 00 24.1 -0.8**
comp=Z,1.5nm,1.0s,baz=13,slow=4.1,SNR=4.2
ESK Eskdalemuir 115.21 334 PFAKE 01 00 40.0 +15
ESK LR LR
comp=Z,379nm,21.0s
ULM Lac du Bonnet 115.47 33 PKP **PKPdf 01 00 24.6 -1.1**
comp=Z,2.1nm,0.8s,baz=228,slow=10,SNR=2.9
C31A Landman Farms, 115.72 36 P **PKPdf 01 00 26.3 +0.1**
baz=300
OGNE Ogallala 116.08 44 PFAKE 01 00 40.0 +13
OGNE LR LR
comp=Z,374nm,20.0s
AGMN Agassiz Nation 116.53 34 PFAKE 01 00 40.0 +12
AGMN LR LR
comp=Z,484nm,22.0s
MNTX Cornudas Mount 116.75 55 P **PKPdf 01 00 29.6 +0.9**
baz=287
MNTX Cornudas Mount 116.75 55 *e*PKPdf **PKPdf 01 00 29.6 +0.9**
MNTX LR LR
comp=Z,418nm,19.0s
KEST Kesra 117.54 310 PKP **PKPdf 01 00 29.6 -0.5**
comp=Z,2.6nm,0.8s,baz=45,slow=2.9,SNR=3.8
ECSD EROS Data Cent 118.43 39 P **PKPdf 01 00 30.9 -0.7**
baz=300
ECSD EROS Data Cent 118.43 39 *e*PKPdf **PKPdf 01 00 31.2 -0.4**
ECSD LR LR
comp=Z,376nm,21.0s
CBKS Cedar Bluff 118.56 45 PFAKE 01 00 40.0 +8.0
CBKS LR LR
comp=Z,482nm,21.0s
AMTX Amarillo 118.65 50 *e*PKPdf **PKPdf 01 00 32.0 -0.4**
TXAR Lajitas Array 118.85 57 PKP **PKPdf 01 00 33.2 +0.3**
comp=Z,1.3nm,0.8s,baz=229,slow=1.4,SNR=15
TXAR PKKPbc **PKKPbc 01 10 48.8 +0.2**
comp=Z,1.2nm,0.7s,baz=130,slow=6.3,SNR=10.0
EYMN Ely 119.15 33 PFAKE 01 00 40.0 +7.2
EYMN LR LR
comp=Z,388nm,21.0s
KSU1 Kansas State U 120.63 44 PFAKE 01 00 50.0 +14
KSU1 LR LR
comp=Z,445nm,21.0s
WMOK Wichita Mounta 120.91 49 PFAKE 01 00 50.0 +13
WMOK LR LR
comp=Z,429nm,22.0s
F40A Park Falls 121.11 34 P **PKPdf 01 00 35.8 -0.8**
baz=307
H39A Augusta 121.17 36 P **PKPdf 01 00 36.4 -0.4**
baz=305
I39A Houston 121.49 37 P **PKPdf 01 00 36.6 -0.9**
baz=304
SCIA State Center 121.51 39 PFAKE 01 00 50.0 +12
SCIA LR LR
comp=Z,332nm,19.0s
COWI Conover 121.55 33 PFAKE 01 00 50.0 +12
COWI LR LR
comp=Z,367nm,21.0s
JCT Junction City 121.67 54 P **PKPdf 01 00 38.6 +0.4**
baz=290
JCT Junction City 121.67 54 *e*PKPdf **PKPdf 01 00 38.8 +0.6**
JCT LR LR
comp=Z,471nm,20.0s
JCT Junction City 121.67 54 *e*PKIKP **PKPdf 01 00 38.8 +0.6**
JCT MLR MLR
comp=Z,471nm,20.0s
H40A Chili 121.72 35 P **PKPdf 01 00 37.4 -0.4**
baz=306
L39A Vinton 122.16 39 P **PKPdf 01 00 38.6 -0.1**
baz=303
P38A Dawn 122.47 42 P **PKPdf 01 00 39.5 +0.1**
baz=300
E43A Lone Tree Farm 122.53 32 P **PKPdf 01 00 39.1 -0.3**
baz=310
J41A Loganville 122.67 36 P **PKPdf 01 00 39.5 -0.2**
baz=306
L40A Anamosa 122.68 38 P **PKPdf 01 00 39.7 -0.1**
baz=304
Q38A Cooks Store, C 122.75 43 P **PKPdf 01 00 39.7 -0.3**
baz=300
F43A Flat Rock, Esc 122.79 33 P **PKPdf 01 00 40.5 +0.6**
baz=310
JFWS Jewell Farm 122.79 37 P **PKPdf 01 00 39.3 -0.6**
baz=305
JFWS Jewell Farm 122.79 37 PFAKE 01 00 50.0 +10
JFWS LR LR
comp=Z,273nm,20.0s
R38A Fenwick Farm, 122.93 44 P **PKPdf 01 00 39.8 -0.6**
baz=299
P39B Salisbury 123.06 42 P **PKPdf 01 00 40.8 +0.2**
baz=301
F44A Big Bay de Noc 123.10 32 P **PKPdf 01 00 41.1 +0.7**
baz=310
Q39A Willow Grove F 123.14 42 P **PKPdf 01 00 40.4 -0.3**
baz=300
S38A Stockton 123.20 44 P **PKPdf 01 00 40.4 -0.5**
baz=299
T38A Diamond 123.21 45 P **PKPdf 01 00 41.0 0.0**
baz=298
O40A La Belle 123.31 41 P **PKPdf 01 00 40.7 -0.3**
baz=302
R39A Chumby, Stover 123.46 43 P **PKPdf 01 00 41.6 +0.2**
baz=300
S39A Bolivar 123.57 44 P **PKPdf 01 00 41.3 -0.4**
baz=299
Q40A Laux Farm, Aux 123.77 42 P **PKPdf 01 00 42.3 +0.3**
baz=301
T39A Clever 123.86 45 P **PKPdf 01 00 42.1 -0.1**
baz=299
O41A Passleys Farm, 123.96 40 P **PKPdf 01 00 41.8 -0.5**
baz=303
R40A Maddies Statio 124.00 43 P **PKPdf 01 00 42.1 -0.3**
baz=301
K43A Burlington 124.06 36 P **PKPdf 01 00 42.8 +0.4**
baz=307
U39A Green Forest 124.09 45 P **PKPdf 01 00 42.4 -0.3**
baz=298
S40A Lebanon 124.19 44 P **PKPdf 01 00 42.5 -0.3**
baz=300
V39A Pettigrew 124.23 46 P **PKPdf 01 00 43.0 -0.1**
baz=298
KVTX Kingsville 124.23 57 PFAKE 01 01 00.0 +17
KVTX LR LR
comp=Z,723nm,20.0s
Q41A Truxton 124.35 41 P **PKPdf 01 00 43.0 0.0**
baz=302
T40A Mansfield 124.40 44 P **PKPdf 01 00 43.1 -0.1**
baz=300
M43A Waltham Townsh 124.43 38 P **PKPdf 01 00 43.0 -0.1**
baz=306
W39A Magazine 124.43 47 P **PKPdf 01 00 43.7 +0.3**
baz=298
X39A Fountain Ranch 124.50 48 P **PKPdf 01 00 44.4 +0.9**
baz=297
U40A Yellville 124.55 45 P **PKPdf 01 00 43.2 -0.4**
baz=299
P42A Winchester 124.59 40 P **PKPdf 01 00 43.7 +0.2**
baz=303
R41A Rosebud 124.59 42 P **PKPdf 01 00 43.5 -0.1**
baz=302
S41A Jillco Farms, 124.71 43 P **PKPdf 01 00 43.7 -0.1**
baz=301
HDIL Hopedale 124.72 39 PFAKE 01 01 00.0 +16
HDIL LR LR
comp=Z,298nm,21.0s
CCM Cathedral Cave 124.81 42 P **PKPdf 01 00 43.8 -0.2**
baz=302
CCM Cathedral Cave 124.81 42 *e*PKPdf **PKPdf 01 00 43.8 -0.2**
CCM Cathedral Cave 124.81 42 *e*PKIKP **PKPdf 01 00 43.8 -0.2**
V40A Witts Springs 124.83 46 P **PKPdf 01 00 43.9 -0.3**
baz=299
MIAR Mount Ida 124.88 47 P **PKPdf 01 00 45.0 +0.8**
baz=297
MIAR Mount Ida 124.88 47 *e*PKPdf **PKPdf 01 00 44.8 +0.6**
MIAR LR LR
comp=Z,506nm,20.0s
MIAR Mount Ida 124.88 47 *e*PKIKP **PKPdf 01 00 44.8 +0.6**
MIAR MLR MLR
comp=Z,506nm,20.0s
T41A Mountain View 124.97 44 P **PKPdf 01 00 44.4 +0.1**
baz=300
M44A Midewin, Midew 125.01 37 P **PKPdf 01 00 44.5 +0.2**
baz=306
ESDC Sonseca Array 125.14 320 PKP **PKPdf 01 00 44.8 +0.1**
comp=Z,1.1nm,0.8s,baz=3.9,slow=2.8,SNR=8.5
ESDC PP **PP 01 02 31.6 -1.9**
comp=Z,3.0nm,1.0s,baz=51,slow=7.1,SNR=6.9
U41A Viola 125.21 45 P **PKPdf 01 00 44.9 +0.1**
baz=300
S42A Caledonia 125.26 42 P **PKPdf 01 00 45.0 +0.1**
baz=302
NATX Nacogdoches 125.27 51 PFAKE 01 01 00.0 +15
NATX LR LR
comp=Z,489nm,20.0s
V41A Mountainview 125.32 45 P **PKPdf 01 00 44.6 -0.5**
baz=299
T42A Van Buren 125.44 43 P **PKPdf 01 00 45.3 +0.1**
baz=301
PAB San Pablo 125.46 320 PFAKE 01 01 00.0 +15
PAB LR LR
comp=Z,205nm,20.0s
U42A Revenden 125.69 44 P **PKPdf 01 00 45.5 -0.2**
baz=300
S43A Fulton Ridge, 125.85 42 P **PKPdf 01 00 46.0 0.0**
baz=302
V42A Cord 125.85 45 P **PKPdf 01 00 46.1 +0.1**
baz=300
Y41A Eaglette Beard 125.89 48 P **PKPdf 01 00 46.8 +0.7**
baz=298
T43A Greenville 125.97 43 P **PKPdf 01 00 46.2 0.0**
baz=302
N46A Monticello 126.10 37 P **PKPdf 01 00 46.7 +0.3**
baz=307
MVO Moncorvo 126.17 323 *e*PKPdf **PKPdf 01 00 45.6 -1.0**
MVO Moncorvo 126.17 323 *e*LR LR 01 54 24.4
comp=Z,213nm,18.0s
P45A Graceland, Par 126.29 39 P **PKPdf 01 00 47.0 +0.3**
baz=306
Q45A Warren Harvey, 126.39 40 P **PKPdf 01 00 47.2 +0.3**
baz=305
PGAV Gavieira, Arco 126.39 325 *e*LR LR 01 56 05.5
comp=Z,221nm,20.0s
POLO Lamas de Olo 126.49 324 *e*PKPdf **PKPdf 01 00 47.9 +0.7**
PVRL Vila Real 126.50 324 *e*PKPdf **PKPdf 01 00 48.2 +1.0**
P46A Rosedale 126.57 39 P **PKPdf 01 00 47.8 +0.5**
baz=306
R45A Skylar, Fairfi 126.65 41 P **PKPdf 01 00 47.7 +0.2**
baz=304
O47A Sheridan 126.84 37 P **PKPdf 01 00 47.2 -0.6**
baz=308
MTE Manteigas 126.94 323 *e*LR LR 01 54 50.0
comp=Z,235nm,18.0s
AAM Ann Arbor 127.00 34 PFAKE 01 01 00.0 +12
AAM LR LR
comp=Z,373nm,22.0s
PCBR Castelo Branco 127.24 322 *e*PKPdf **PKPdf 01 00 49.4 +0.8**
Q47A Bedord North L 127.46 39 P **PKPdf 01 00 50.1 +1.1**
baz=307
T46A Princeton 127.60 42 P **PKPdf 01 00 50.0 +0.7**
baz=304
SADO Sadowa 127.63 29 *e*PKPdf **PKPdf 01 00 48.9 -0.3**
R47A Wooly Knot Far 127.78 40 P **PKPdf 01 00 50.2 +0.6**
baz=306
OXF Oxford 127.90 45 P **PKPdf 01 00 50.5 +0.5**
baz=301
PBAR Barrancos 127.96 320 *e*PKPdf **PKPdf 01 00 50.9 +0.9**
WCI Wyandotte Cave 127.96 40 P **PKPdf 01 00 50.7 +0.7**
baz=306
WCI Wyandotte Cave 127.96 40 *e*PKPdf **PKPdf 01 00 50.4 +0.4**
WCI Wyandotte Cave 127.96 40 *e*PKIKP **PKPdf 01 00 50.4 +0.4**
V46A Holladay 128.13 43 P **PKPdf 01 00 50.4 0.0**
baz=303
WVT Waverly 128.15 43 P **PKPdf 01 00 50.5 +0.1**
baz=303
U47A Clarksville 128.34 42 P **PKPdf 01 00 51.2 +0.4**
baz=304
O50A Cable 128.42 36 P **PKPdf 01 00 51.0 +0.2**
baz=310
S48A Wiedeman Farm, 128.45 40 P **PKPdf 01 00 51.4 +0.5**
baz=306
V47A Nunnelly 128.52 43 P **PKPdf 01 00 50.8 -0.3**
baz=304
T48A Bowling Green 128.55 41 P **PKPdf 01 00 51.7 +0.6**
baz=305
P50A Jamestown 128.66 37 P **PKPdf 01 00 51.6 +0.3**
baz=310
ACSO Alum Creek Sta 128.74 36 PFAKE 01 01 00.0 +8.6
ACSO LR LR
comp=Z,283nm,20.0s
W47A Westpoint 128.78 43 P **PKPdf 01 00 51.8 +0.2**
baz=303
PVAQ Vaqueiros 128.85 320 *e*LR LR 01 55 15.1
comp=Z,85nm,20.0s
PNCL Nicolau / Gran 128.94 321 *e*PKPdf **PKPdf 01 00 53.0 +1.1**
X47A Russelville 129.00 44 P **PKPdf 01 00 52.4 +0.3**
baz=302
V48A Smith Brothers 129.04 42 P **PKPdf 01 00 52.0 -0.1**
baz=304
T49A Edmonton 129.11 40 P **PKPdf 01 00 52.9 +0.6**
baz=306
R50A Paris 129.17 38 P **PKPdf 01 00 52.7 +0.4**
baz=308
MDT Midelt 129.22 313 PKP **PKPdf 01 00 53.0 +0.3**
comp=Z,2.1nm,0.8s,baz=143,slow=3.0,SNR=5.4
U49A Red Boiling Sp 129.30 41 P **PKPdf 01 00 52.9 +0.3**
baz=306
W48A Pulaski 129.30 43 P **PKPdf 01 00 52.7 +0.1**
baz=304
Y47A UCPARC, Winfie 129.32 45 P **PKPdf 01 00 53.2 +0.4**
baz=302
S50A Richmond 129.49 39 P **PKPdf 01 00 53.8 +0.9**
baz=308
X48A Hartselle 129.60 44 P **PKPdf 01 00 53.4 +0.2**
baz=303
T50A Nancy 129.61 40 P **PKPdf 01 00 53.9 +0.7**
baz=307
V49A McMinnville 129.64 42 P **PKPdf 01 00 53.7 +0.4**
baz=305
M54A Oil Creek Stat 129.72 32 P **PKPdf 01 00 54.1 +0.8**
baz=315
Z48A Northport 129.81 45 P **PKPdf 01 00 53.7 +0.1**
baz=302
LONY Lake Ozonia 129.84 26 P **PKPdf 01 00 54.0 +0.6**
baz=323
LONY Lake Ozonia 129.84 26 PFAKE 01 01 10.0 +17
LONY LR LR
comp=Z,269nm,19.0s
N54A Moraine State 129.93 33 P **PKPdf 01 00 53.8 +0.1**
baz=314
U50A Jamestown 129.97 41 P **PKPdf 01 00 54.9 +1.0**
baz=306
S51A Beattyville 130.02 38 P **PKPdf 01 00 54.7 +0.8**
baz=309
X49A Woodville 130.06 43 P **PKPdf 01 00 54.4 +0.3**
baz=304
V50A Pikevile 130.23 41 P **PKPdf 01 00 54.9 +0.5**
baz=306
W50A Signal Mountai 130.36 42 P **PKPdf 01 00 55.6 +0.9**
baz=305
LRAL Lakeview Retre 130.39 46 P **PKPdf 01 00 55.7 +0.9**
baz=302
LRAL Lakeview Retre 130.39 46 *e*PKPdf **PKPdf 01 00 54.8 0.0**
TORD Torodi Ar. Bea 130.54 287 PKP **PKPdf 01 00 54.9 -0.6**
comp=Z,7.1nm,0.9s,baz=51,slow=1.9,SNR=24
TORD PP **PP 01 03 03.0 -7.2**
comp=Z,2.7nm,0.9s,baz=68,slow=5.8,SNR=4.6
Z49A Columbiana 130.63 45 P **PKPdf 01 00 55.6 +0.4**
baz=303
Z50A Ashland 131.03 45 P **PKPdf 01 00 57.0 +1.0**
baz=303
BINY Binghamton 131.08 29 PFAKE 01 01 10.0 +14
BINY LR LR
comp=Z,374nm,21.0s
TKL Tuckaleechee C 131.11 41 PKP **PKPdf 01 00 57.6 +1.5**
comp=Z,7.8nm,0.9s,baz=323,slow=5.1,SNR=7.4
V52A Sevierville 131.12 40 P **PKPdf 01 00 55.7 -0.4**
baz=307
BRAL Brewton 131.31 48 PFAKE 01 01 10.0 +13
BRAL LR LR
comp=Z,563nm,21.0s
PKME Peaks-Kenny Pk 131.42 21 PFAKE 01 01 10.0 +14
PKME LR LR
comp=Z,243nm,20.0s
Z51A Franklin 131.52 44 P **PKPdf 01 00 58.0 +1.1**
baz=304
X52A Dahlonega 131.66 42 P **PKPdf 01 00 58.1 +0.9**
baz=306
W53A Cullowhee 131.80 41 P **PKPdf 01 00 58.2 +0.6**
baz=307
BLA Blacksburg 132.23 37 PFAKE 01 01 10.0 +12
BLA LR LR
comp=Z,287nm,21.0s
GOGA Godfrey 132.64 43 PFAKE 01 01 10.0 +11
GOGA LR LR
comp=Z,358nm,20.0s
CBN Corbin Frederi 133.31 34 PFAKE 01 01 10.0 +10
CBN LR LR
comp=Z,367nm,20.0s
NHSC New Hope 135.02 41 PFAKE 01 01 20.0 +17
NHSC LR LR
comp=Z,334nm,22.0s
CNNC Cliffs of the 135.07 37 PFAKE 01 01 20.0 +16
CNNC LR LR
comp=Z,440nm,20.0s
KOWA Kowa 135.68 290 PKP **PKPdf 01 01 06.3 +1.1**
comp=Z,3.2nm,0.9s,baz=140,slow=6.9,SNR=4.7
PAYG Puerto Ayora 136.38 92 PFAKE 01 01 20.0 +13
PAYG LR LR
comp=Z,450nm,19.0s
TRQA Tornquist 138.85 162 *e*PKPdf **PKPdf 01 01 10.8 +0.3**
TRQA LR LR
comp=Z,740nm,20.0s
JTS JuntasAbangare 140.81 75 PFAKE 01 01 30.0 +15
JTS LR LR
comp=Z,568nm,22.0s
LCO Las Campanas 142.51 144 *e*PKPdf **PKPdf 01 01 17.6 -0.1**
BCIP Isla Barro Col 145.98 75 *e*PKPbc **PKPbc 01 01 24.2 -0.3**
BCIP LR LR
comp=Z,539nm,22.0s
NNA Nana 147.48 114 *e*PKPbc **PKPbc 01 01 27.8 -1.0**
NNA LR LR
comp=Z,277nm,20.0s
NNA Nana 147.48 114 *e*PKP2 **PKPbc 01 01 27.8 -1.0**
NNA MLR MLR
comp=Z,277nm,20.0s
OTAV Otavalo 148.24 91 PFAKE 01 01 40.0 +5.5
OTAV LR LR
comp=Z,309nm,20.0s
CAPC Capurgana 148.49 75 *e*P **PKPab 01 01 38.2 +3.3**
GRTK Grand Turk 148.50 48 PFAKE 01 01 40.0 +5.4
GRTK LR LR
comp=Z,438nm,21.0s
HORQ Saladito 149.97 84 *e*P **PKPdf 01 01 32.5 +1.8**
POPC Popayan, Colom 149.98 86 *e*P **PKPbc 01 01 35.2 -0.4**
MOTC Monteria, Cord 150.08 74 *e*P **PKPdf 01 01 30.8 +0.3**
PCON Cinco Dias 150.27 87 *e*P **PKPbc 01 01 36.9 +0.2**
FLOC Florencia 151.03 88 *e*P **PKPdf 01 01 34.7 +2.7**
CPUP Villa Florida 151.15 160 PKP **PKPdf 01 01 32.2 +0.4**
comp=Z,4.8nm,0.9s,baz=358,slow=0.7,SNR=7.0
CPUP PKPbc **PKiKP 01 01 38.4 +0.2**
comp=Z,20nm,0.9s,baz=218,slow=1.7,SNR=26
CPUP PKPab **pPKPbc 01 01 46.9 -0.4**
comp=Z,27nm,0.8s,baz=211,slow=3.6,SNR=16
PRAC Prado 151.68 84 *e*P **PKPbc 01 01 38.2 -1.1**
ROSC El Rosal 152.12 81 PKP **PKPdf 01 01 35.3 +1.2**
comp=Z,4.3nm,0.5s,baz=336,slow=6.5,SNR=5.4
ROSC PKPbc **PKiKP 01 01 41.8 +0.7**
comp=Z,24nm,0.8s,baz=80,slow=5.2,SNR=12
ROSC PKPab **PKPab 01 01 51.1 +0.7**
comp=Z,12nm,0.6s,baz=73,slow=22,SNR=4.9
ROSC El Rosal 152.12 81 *e*P **PKPdf 01 01 34.7 +0.6**
LPAZ La Paz 152.88 130 PKP **PKPdf 01 01 36.9 +1.4**
comp=Z,6.4nm,0.9s,baz=154,slow=0.6,SNR=22
LPAZ PKPbc **pPKPdf 01 01 44.1 -1.0**
comp=Z,14nm,0.9s,baz=210,slow=2.7,SNR=23
LPAZ PKPab **sPKPbc 01 01 55.1 -0.4**
comp=Z,14nm,0.7s,baz=193,slow=4.0,SNR=16
RUSC La Rusia 153.18 79 *e*P **PKPdf 01 01 35.6 -0.2**
SJG San Juan 154.27 47 *e*PKPdf **PKPdf 01 01 35.5 -1.1**
SJG LR LR
comp=Z,226nm,22.0s
SJG San Juan 154.27 47 *e*PKIKP **PKPdf 01 01 35.5 -1.1**
SJG MLR MLR
comp=Z,226nm,22.0s
SDV Santo Domingo 154.84 71 PFAKE 01 01 50.0 +3.6
SDV LR LR
comp=Z,283nm,20.0s
ANWB Willy Bob 157.60 41 PFAKE 01 01 50.0 +9.0
ANWB LR LR
comp=Z,419nm,20.0s
SAML Samuel 160.94 121 *e*PKPdf **PKPdf 01 01 44.8 -0.2**
SAML *e*PKPab **PKPab 01 02 27.9 +0.2**
GRGR Grenville 161.36 52 PFAKE 01 02 00.0 +15
GRGR LR LR
comp=Z,376nm,19.0s

CSEM ***20*** *00:57:30.9, 39°.52N×29°.83W, h10km, ML2.6*
PDA 20 00:57:30.9±0.5, 39°.52N×29°.83W, h10km, MD3.6, ML2.6,
Error ellipse: s-maj=6.6km s-min=1.2km az=28.0,
Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H07N1	**FLORES T-PHASE**	**1.01**	**280**	*e*P	Pg	00 57 46.5	-3.8
H07N1	**FLORES T-PHASE**	**1.01**	**280**	*e*P	Pg	00 57 46.5	-3.8
H07S1	**FLORES T-PHASE**	**1.07**	**263**	*e*P	Pg	00 57 47.3	-4.2
H07S1				*e*S	Sg	00 57 59.4	-6.0
H07S1	**FLORES T-PHASE**	**1.07**	**263**	*e*P	Pg	00 57 47.3	-4.2
H07S1				*e*S	Sg	00 57 59.4	-6.0
PCED	**Cedros**	**1.25**	**135**	*e*S	Sb	00 58 04.1	-6.7
PCED				A	A	00 58 11.8	
	53nm,0.5s						
PCED	**Cedros**	**1.25**	**135**	*e*S	Sb	00 58 04.1	-6.7
CALA	**Caldeira**	**1.29**	**136**	*e*S	Sb	00 58 04.9	-7.0
CALA	**Caldeira**	**1.29**	**136**	*e*S	Sb	00 58 04.9	-7.0
ROSA	**Rosais**	**1.47**	**122**	*e*S	Sn	00 58 09.0	-7.9
ROSA				A	A	00 58 12.3	
	27nm,0.3s						
ROSA	**Rosais**	**1.47**	**122**	*e*S	Sn	00 58 09.0	-7.9
PCAN	**Candelaria**	**1.49**	**135**	*e*P	Pn	00 57 53.0	-4.7
PCAN				*e*S	Sn	00 58 09.9	-7.3
PCAN				A	A	00 58 14.1	
	58nm,0.3s						
PCAN	**Candelaria**	**1.49**	**135**	*e*P	Pn	00 57 53.0	-4.7
PCAN				*e*S	Sn	00 58 09.9	-7.3
PICO	**Pico**	**1.50**	**132**	*e*P	Pn	00 57 53.3	-4.6
PICO				*e*S	Sn	00 58 09.8	-7.7
PICO				A	A	00 58 13.7	
	47nm,0.3s						
PICO	**Pico**	**1.50**	**132**	*e*P	Pn	00 57 53.3	-4.6
PICO				*e*S	Sn	00 58 09.8	-7.7

NSSP ***20*** *00:59:14.6, 41°.48N×46°.68E, h15km, Ms3.4*

AZER 20 00:59:15.1±0.0, 41.°55N×46.°63E, h11km, ml3.2/27, Error ellipse: s-maj=0.4km s-min=0.4km az=320.0
TIF 20 00:59:15.7, 41.°49N×46.°72E, h12km±1km
CSEM 20 00:59:17.1±0.1, 41.°49N×46.°72E, h2km, ML3.2, Error ellipse: s-maj=2.4km s-min=2.4km az=108.0
MOS 20 00:59:17.7±2.1, 41.°43N×46.°84E, h14km, mb4.1/3, Error ellipse: s-maj=6.6km s-min=4.1km az=98.7
ISC 20 00:59:16.8±0.8, 41.°48N±0.°01×46.°68E±0.°01, h3km±5km, n146, σ1§70/241, mb3.9/3, 68C-63D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKTA	**Zakatala**	**0.16**	**344**	PG	**Pg**	**00 59 20.1**	**+0.1**
ZKTA	**Zakatala**	**0.16**	**344**	Pg	**Pg**	**00 59 20.1**	**+0.1**
ZKTA	**Zakatala**	**0.16**	**344**	⇑P	**Pg**	**00 59 20.1**	**+0.1**
ZKTA				⇓S	**Sg**	**00 59 22.9**	**+0.7**
DDFL	**Dedoflistskaro**	**0.43**	**265**	P	**Pn**	**00 59 27.9**	**-1.9**
DDFL				S	**Sb**	**00 59 34.4**	**+0.5**
DDFL	**Dedoflistskaro**	**0.43**	**265**	P	**Pn**	**00 59 28.0**	**-1.9**
DDFL				S	**Sb**	**00 59 34.4**	**+0.5**
SEKA	**Sheki**	**0.47**	**125**	PG	**Pb**	**00 59 25.6**	**-2.1**
SEKA	**Sheki**	**0.47**	**125**	⇑Pg	**Pb**	**00 59 25.7**	**-2.1**
SEKA				⇑Sg	**Sb**	**00 59 33.8**	**-1.4**
SEKA	**Sheki**	**0.47**	**125**	⇑Pg	**Pb**	**00 59 25.7**	**-2.1**
SEKA				⇑Sg	**Sb**	**00 59 33.8**	**-1.4**
KMKR	**Kumukh**	**0.72**	**25**	⇑*i*PG	**Pb**	**00 59 30.0**	**-2.1**
KMKR				*i* S	**Sb**	**00 59 41.0**	**-1.5**
KMKR				pmax	pmax		
	comp=Z,705nm,0.2s						
KMKR	**Kumukh**	**0.72**	**25**	*i* Pg	**Pb**	**00 59 30.0**	**-2.1**
	comp=Z,705nm,0.2s						
KMKR				*i* Sg	**Sb**	**00 59 41.0**	**-1.5**
MNGR	**Mingechevir, A**	**0.77**	**157**	PG	**Pn**	**00 59 32.7**	**-1.8**
MNGR	**Mingechevir, A**	**0.77**	**157**	Pg	**Pn**	**00 59 32.7**	**-1.8**
MNGR				⇑S	**Sn**	**00 59 45.9**	**-0.7**
MNGR	**Mingechevir, A**	**0.77**	**157**	⇓P	**Pn**	**00 59 32.8**	**-1.8**
MNGR				⇑S	**Sn**	**00 59 45.9**	**-0.7**
AKT	**Akhty**	**0.79**	**90**	⇓*i*PG	**Pb**	**00 59 30.7**	**-2.5**
AKT				*e*		00 59 41.0	
AKT				pmax	pmax		
	comp=Z,442nm,0.2s						
AKT				smax	smax		
	comp=N,1μm,0.7s						
AKT				smax	smax		
	comp=N,1μm,0.4s						
AKT				smax	smax		
	comp=E,794nm,0.5s						
AKT	**Akhty**	**0.79**	**90**	*i* Pg	**Pb**	**00 59 30.7**	**-2.5**
	comp=E,442nm,0.2s						
AKT				*e*Sg	**Sb**	**00 59 41.0**	**-3.3**
	comp=E,1μm,0.4s						
GANJ	**Ganja**	**0.88**	**198**	PG	**Pb**	**00 59 33.7**	**-0.9**
GANJ	**Ganja**	**0.88**	**198**	⇓P	**Pb**	**00 59 33.8**	**-0.9**
GANJ				⇓S	**Sb**	**00 59 46.9**	**+0.1**
GANJ	**Ganja**	**0.88**	**198**	⇓P	**Pb**	**00 59 33.8**	**-0.9**
GANJ				⇓S	**Sb**	**00 59 46.9**	**+0.1**
GNBR	**Gunib**	**0.93**	**13**	*e*PG	**Pb**	**00 59 34.1**	**-1.5**
GNBR				*e*		00 59 48.1	
GNBR				pmax	pmax		
	comp=Z,552nm,0.5s						
GNBR				smax	smax		
	comp=N,1μm,0.6s						
GNBR	**Gunib**	**0.93**	**13**	*e*Pg	**Pb**	**00 59 34.1**	**-1.5**
	comp=N,1μm,0.6s						
GNBR				*e*Sg	**Sn**	**00 59 48.1**	**-2.7**
URKR	**Urkarakh**	**0.98**	**46**	⇑*i*PG	**Pn**	**00 59 35.2**	**-2.5**
URKR				*i*		00 59 49.2	
URKR	**Urkarakh**	**0.98**	**46**	*i* Pg	**Pn**	**00 59 35.2**	**-2.5**
URKR				*i* Sg	**Sn**	**00 59 49.2**	**-3.0**
DGRG	**David-gareji**	**0.99**	**269**	P	**Pb**	**00 59 35.8**	**-0.7**
DGRG				S	**Sn**	**00 59 52.1**	**+0.1**
DGRG	**David-gareji**	**0.99**	**269**	*e*PG	**Pb**	**00 59 35.8**	**-0.7**
DGRG				*e*S	**Sn**	**00 59 52.1**	**+0.1**
DGRG	**David-gareji**	**0.99**	**269**	P	**Pb**	**00 59 35.8**	**-0.7**
DGRG				S	**Sn**	**00 59 52.2**	**+0.1**
QBL	**Gabala**	**1.02**	**121**	⇓P	**Pn**	**00 59 36.1**	**-2.0**
QBL				⇑S	**Sn**	**00 59 53.9**	**+0.9**
QBL	**Gabala**	**1.02**	**121**	⇓P	**Pn**	**00 59 36.1**	**-2.0**
QBL				⇑S	**Sn**	**00 59 53.9**	**+0.9**
GDB	**GEDABAY**	**1.03**	**223**	⇓P	**Pg**	**00 59 36.0**	**-0.6**
GDB				⇓S	**Sb**	**00 59 51.3**	**-0.2**
GDB	**GEDABAY**	**1.03**	**223**	⇓P	**Pg**	**00 59 36.0**	**-0.6**
GDB				⇓S	**Sb**	**00 59 51.3**	**-0.2**
XNZR	**Khunzakh**	**1.06**	**1**	⇑*i*PG	**Pn**	**00 59 36.8**	**-1.9**
XNZR				*i*		00 59 51.9	
XNZR	**Khunzakh**	**1.06**	**1**	*i* Pg	**Pn**	**00 59 36.8**	**-1.9**
XNZR				*i* Sg	**Sn**	**00 59 51.9**	**-2.2**
QZX	**Qazax, Azerbai**	**1.07**	**247**	⇓P	**Pb**	**00 59 37.1**	**-0.9**
QZX				⇑S	**Sn**	**00 59 53.2**	**-1.1**
QZX	**Qazax, Azerbai**	**1.07**	**247**	⇓P	**Pb**	**00 59 37.1**	**-0.9**
QZX				⇑S	**Sn**	**00 59 53.2**	**-1.1**
KSMR	**Kasumkent**	**1.09**	**83**	*i* PG	**Pn**	**00 59 37.5**	**-1.5**
KSMR				*e*S	**Sn**	**00 59 53.0**	**-1.7**
KSMR				pmax	pmax		
	comp=Z,251nm,0.2s						
KSMR	**Kasumkent**	**1.09**	**83**	*i* Pg	**Pn**	**00 59 37.5**	**-1.5**
	comp=Z,251nm,0.2s						
KSMR				*e*Sg	**Sn**	**00 59 53.0**	**-1.7**
XNQ	**Khinaliq**	**1.14**	**105**	⇑P	**Pn**	**00 59 37.8**	**-2.0**
XNQ				⇓S	**Sn**	**00 59 55.1**	**-1.0**
XNQ	**Khinaliq**	**1.14**	**105**	⇑P	**Pn**	**00 59 37.8**	**-2.0**
XNQ				⇓S	**Sn**	**00 59 55.1**	**-1.0**
ARKR	**Arakani**	**1.14**	**12**	⇓*i*PG	**Pn**	**00 59 38.0**	**-1.8**
ARKR				*i* S	**Sn**	**00 59 54.0**	**-2.0**
ARKR				pmax	pmax		
	comp=Z,199nm,0.2s						
ARKR	**Arakani**	**1.14**	**12**	*i* Pg	**Pn**	**00 59 38.0**	**-1.8**
	comp=Z,199nm,0.2s						
ARKR				*i* Sg	**Sn**	**00 59 54.0**	**-2.0**
QSAR	**Qusar**	**1.19**	**88**	⇓P	**Pn**	**00 59 38.9**	**-1.4**
QSAR				⇓S	**Sn**	**00 59 55.3**	**-1.7**
QSAR	**Qusar**	**1.19**	**88**	⇓P	**Pn**	**00 59 38.9**	**-1.4**
QSAR				⇓S	**Sn**	**00 59 55.3**	**-1.7**
SGKR	**Sergokala**	**1.22**	**36**	*e*PG	**Pn**	**00 59 39.0**	**-1.8**
SGKR				*i* S	**Sn**	**00 59 56.0**	**-1.8**
SGKR				pmax	pmax		
	comp=Z,653nm,0.2s						
SGKR	**Sergokala**	**1.22**	**36**	*e*Pg	**Pn**	**00 59 39.0**	**-1.8**
	comp=Z,653nm,0.2s						
SGKR				*i* Sg	**Sn**	**00 59 56.0**	**-1.8**
BTLR	**Botlikh**	**1.23**	**344**	⇑*i*PG	**Pn**	**00 59 39.7**	**-1.3**
BTLR				pmax	pmax		
	comp=Z,77nm,0.5s						
BTLR	**Botlikh**	**1.23**	**344**	*i* Pg	**Pn**	**00 59 39.7**	**-1.3**
	comp=Z,77nm,0.5s						
UNCR	**Uncukul**	**1.23**	**4**	⇓*i*PG	**Pn**	**00 59 39.5**	**-1.5**
UNCR				*i* S	**Sn**	**00 59 57.0**	**-1.2**
UNCR				pmax	pmax		
	comp=Z,479nm,0.3s						
UNCR	**Uncukul**	**1.23**	**4**	*i* Pg	**Pn**	**00 59 39.5**	**-1.5**
	comp=Z,479nm,0.3s						
UNCR				*i* Sg	**Sn**	**00 59 57.0**	**-1.2**
BRDA	**Brd**	**1.27**	**163**	⇑P	**Pb**	**00 59 41.5**	**+0.1**
BRDA				⇑S	**Sn**	**01 00 01.7**	**+2.6**
BRDA	**Brd**	**1.27**	**163**	⇑P	**Pb**	**00 59 41.5**	**+0.1**
BRDA				⇑S	**Sn**	**01 00 01.7**	**+2.6**
IML	**Ismayilli**	**1.32**	**121**	⇓P	**Pb**	**00 59 40.7**	**-1.6**
IML				⇑S	**Sn**	**01 00 04.4**	**+4.0**
IML	**Ismayilli**	**1.32**	**121**	⇓P	**Pb**	**00 59 40.7**	**-1.6**
IML				⇑S	**Sn**	**01 00 04.4**	**+4.0**
DRN	**Derbent**	**1.35**	**65**	⇓*i*PG	**Pb**	**00 59 42.3**	**-0.4**
DRN				*i*		01 00 00.9	
DRN				pmax	pmax		
	comp=Z,211nm,0.5s						
DRN				smax	smax		
	comp=N,681nm,1.0s						
DRN	**Derbent**	**1.35**	**65**	*i* Pg	**Pb**	**00 59 42.3**	**-0.4**
	comp=N,211nm,0.5s						
KRNR	**Karanay**	**1.35**	**7**	⇓*i*PG	**Pb**	**00 59 42.2**	**-0.7**
KRNR				*e*S	**Sn**	**01 00 00.6**	**-0.7**
KRNR				pmax	pmax		
	comp=Z,78nm,0.2s						
KRNR	**Karanay**	**1.35**	**7**	*i* Pg	**Pb**	**00 59 42.2**	**-0.7**
	comp=Z,78nm,0.2s						
QUBA	**Quba, Azerbaij**	**1.37**	**95**	⇓P	**Pg**	**00 59 42.1**	**-0.8**
QUBA				⇑S	**Sn**	**01 00 03.0**	**+1.5**
QUBA	**Quba, Azerbaij**	**1.37**	**95**	⇓P	**Pg**	**00 59 42.1**	**-0.8**
QUBA				⇑S	**Sn**	**01 00 03.0**	**+1.5**
BUJR	**Buynaksk**	**1.38**	**13**	*e*PG	**Pg**	**00 59 42.0**	**-1.2**
BUJR				*e*S	**Sn**	**01 00 00.0**	**-1.8**
BUJR				pmax	pmax		
	comp=Z,136nm,0.2s						
BUJR	**Buynaksk**	**1.38**	**13**	*e*Pg	**Pg**	**00 59 42.0**	**-1.2**
	comp=Z,136nm,0.2s						
ZRD	**Zardab**	**1.42**	**147**	⇑P	**Pg**	**00 59 43.4**	**-0.6**
ZRD				⇑S	**Sg**	**01 00 05.8**	**+3.4**
ZRD	**Zardab**	**1.42**	**147**	⇑P	**Pg**	**00 59 43.4**	**-0.6**
ZRD				⇑S	**Sg**	**01 00 05.8**	**+3.4**
SEAG	**Tbilisi Sea**	**1.44**	**282**	P	**Pg**	**00 59 43.5**	**-0.8**
SEAG				S	**Sg**	**01 00 05.1**	**+2.2**
SEAG	**Tbilisi Sea**	**1.44**	**282**	P	**Pg**	**00 59 43.5**	**-0.8**
SEAG				S	**Sg**	**01 00 05.1**	**+2.2**
TBLG	**Delisi**	**1.48**	**280**	P	**Pb**	**00 59 43.8**	**-1.1**
TBLG				S	**Sg**	**01 00 05.0**	**+0.8**
TBLG	**Delisi**	**1.48**	**280**	*e*PG	**Pb**	**00 59 43.8**	**-1.1**
TBLG	**Delisi**	**1.48**	**280**	P	**Pb**	**00 59 43.8**	**-1.1**
TBLG				S	**Sg**	**01 00 05.1**	**+0.8**
KDMR	**Kurdemir**	**1.58**	**134**	⇑Pn	**Pg**	**00 59 45.5**	**-1.6**
KDMR				⇑Sn	**Sg**	**01 00 08.9**	**+1.2**
KDMR	**Kurdemir**	**1.58**	**134**	⇑Pn	**Pg**	**00 59 45.5**	**-1.6**
KDMR				⇑Sn	**Sg**	**01 00 08.9**	**+1.2**
DLMR	**Dylym**	**1.59**	**359**	*e*PN	**Pg**	**00 59 46.5**	**-0.7**
DLMR				*e*S	**Sg**	**01 00 08.5**	**+0.7**
DLMR				pmax	pmax		
	comp=Z,53nm,0.2s						
DLMR	**Dylym**	**1.59**	**359**	*e*Pn	**Pg**	**00 59 46.5**	**-0.7**
	comp=Z,53nm,0.2s						
PQL	**Pirkuli**	**1.60**	**115**	⇓Pn	**Pg**	**00 59 45.5**	**-1.9**
PQL				⇑Sn	**Sg**	**01 00 11.2**	**+3.1**
PQL	**Pirkuli**	**1.60**	**115**	⇓Pn	**Pg**	**00 59 45.5**	**-1.9**
PQL				⇑Sn	**Sg**	**01 00 11.2**	**+3.1**
MAK	**Makhachkala**	**1.60**	**22**	⇓*i*PG	**Pg**	**00 59 47.8**	**+0.4**
MAK				*e*		01 00 11.2	
MAK				pmax	pmax		
	comp=Z,90nm,0.3s						
MAK				smax	smax		
	comp=N,246nm,0.6s						
MAK				smax	smax		
	comp=E,446nm,0.4s						
MAK				smax	smax		
	comp=E,383nm,0.5s						
MAK	**Makhachkala**	**1.60**	**22**	*i* Pg	**Pg**	**00 59 47.8**	**+0.4**
	comp=E,90nm,0.3s						
DUS	**Dusheti**	**1.60**	**293**	P	**Pb**	**00 59 46.3**	**-0.8**
DUS				S	**Sg**	**01 00 09.4**	**+1.2**
DUS	**Dusheti**	**1.60**	**293**	*e*PN	**Pb**	**00 59 46.3**	**-0.8**
DUS	**Dusheti**	**1.60**	**293**	P	**Pb**	**00 59 46.3**	**-0.8**
DUS				S	**Sg**	**01 00 08.3**	**+0.1**
SIZA	**Siyzn**	**1.72**	**103**	⇑Pn	**Pg**	**00 59 48.7**	**-1.0**
SIZA				⇑Sn	**Sg**	**01 00 18.5**	**+6.6**
SIZA	**Siyzn**	**1.72**	**103**	⇑Pn	**Pg**	**00 59 48.7**	**-1.0**
SIZA				⇑Sn	**Sg**	**01 00 18.5**	**+6.6**
STEZ	**Stepenevan**	**1.79**	**255**	⇓*e*P	**Pn**	**00 59 46.6**	**-2.1**
STEZ				⇓S	**Sn**	**01 00 10.6**	**-1.4**
STE	**Stepanavan**	**1.81**	**255**	⇓P	**Pn**	**00 59 46.6**	**-2.4**
STE				S	**Sn**	**01 00 10.6**	**-1.9**
ATGJ	**Altiaghaj**	**1.81**	**109**	⇓Pn	**Pg**	**00 59 49.8**	**-1.7**
ATGJ				⇑Sn	**Sg**	**01 00 17.3**	**+2.4**
ATGJ	**Altiaghaj**	**1.81**	**109**	⇓Pn	**Pg**	**00 59 49.8**	**-1.7**
ATGJ				⇑Sn	**Sg**	**01 00 17.3**	**+2.4**
GROC	**Groznyy**	**1.84**	**339**	*e*PN	**Pg**	**00 59 51.9**	**-0.2**
GROC				pmax	pmax		
	comp=Z,46nm,0.6s						
GROC	**Groznyy**	**1.84**	**339**	*e*Pn	**Pg**	**00 59 51.9**	**-0.2**
	comp=Z,46nm,0.6s						
GUDG	**Gudauri**	**1.92**	**302**	P	**Pb**	**00 59 51.8**	**-0.7**
GUDG				S	**Sb**	**01 00 16.3**	**-0.6**
GUDG	**Gudauri**	**1.92**	**302**	P	**Pb**	**00 59 51.8**	**-0.7**
GUDG				S	**Sb**	**01 00 16.3**	**-0.6**
GBS	**Qobustan**	**1.95**	**118**	⇓Pn	**Pb**	**00 59 51.6**	**-1.4**
GBS	**Qobustan**	**1.95**	**118**	⇓Pn	**Pb**	**00 59 51.6**	**-1.4**
GNI	**Garni**	**1.99**	**229**	⇑*i*P	**Pb**	**00 59 52.5**	**-1.1**
GNI				⇑*i*S	**Sg**	**01 00 19.9**	**-0.6**
GNI	**Garni**	**1.99**	**229**	*ce*PN	**Pb**	**00 59 52.8**	**-0.8**
GNI				pmax	pmax		
	comp=Z,644nm,0.6s						
GNI	**Garni**	**1.99**	**229**	⇑P	**Pb**	**00 59 52.5**	**-1.1**
GNI	**Garni**	**1.99**	**229**	*e*Pn	**Pb**	**00 59 52.8**	**-0.8**
	comp=Z,644nm,0.6s						
GNI				S	**Sg**	**01 00 19.9**	**-0.6**
GRS	**Goris**	**2.00**	**188**	⇓*i*P	**Pb**	**00 59 53.0**	**-0.8**
GRS				⇑*i*S	**Sg**	**01 00 20.0**	**-0.9**
GRS	**Goris**	**2.00**	**188**	⇓P	**Pb**	**00 59 53.0**	**-0.8**
GRS				S	**Sg**	**01 00 20.0**	**-0.9**
KMGR	**Komgaron**	**2.07**	**320**	⇑*e*PN	**Pg**	**00 59 59.0**	**+2.5**
KMGR	**Komgaron**	**2.07**	**320**	*e*Pn	**Pg**	**00 59 59.0**	**+2.5**
HYR	**Heyderabad**	**2.25**	**219**	⇓Pg	**Pb**	**00 59 56.4**	**-1.6**
HYR				⇓Sg	**Sg**	**01 00 28.5**	**-0.4**
HYR	**Heyderabad**	**2.25**	**219**	⇓Pg	**Pb**	**00 59 56.4**	**-1.6**
HYR				⇓Sg	**Sg**	**01 00 28.5**	**-0.4**
SBZ	**Shahbuz**	**2.25**	**203**	⇓Pg	**Pb**	**00 59 56.3**	**-1.9**
SBZ				⇑Sg	**Sg**	**01 00 29.0**	**-0.2**
SBZ	**Shahbuz**	**2.25**	**203**	⇓Pg	**Pb**	**00 59 56.3**	**-1.9**
SBZ				⇑Sg	**Sg**	**01 00 29.0**	**-0.2**
ALIB	**Äli-Bayra**	**2.33**	**130**	⇓Pn	**Pb**	**00 59 58.1**	**-1.3**
ALIB	**Äli-Bayra**	**2.33**	**130**	⇓Pn	**Pb**	**00 59 58.1**	**-1.3**
BGD	**Bogdanovka**	**2.33**	**266**	P	**Pn**	**00 59 56.5**	**+0.2**
BGD				S	**Sb**	**01 00 27.7**	**-1.2**
BGD	**Bogdanovka**	**2.33**	**266**	P	**Pn**	**00 59 56.5**	**+0.2**
BGD				S	**Sb**	**01 00 27.7**	**-1.2**
AKH	**Akhalkalaki**	**2.40**	**269**	P	**Pb**	**00 59 59.9**	**-0.8**
AKH				S	**Sb**	**01 00 29.9**	**-0.9**
AKH	**Akhalkalaki**	**2.40**	**269**	P	**Pb**	**00 59 59.9**	**-0.8**
AKH				S	**Sn**	**01 00 28.2**	**+1.0**
NAX	**Nakhchivan**	**2.48**	**202**	PN	**Pb**	**00 59 59.8**	**-2.2**
NAX	**Nakhchivan**	**2.48**	**202**	Pn	**Pb**	**00 59 59.8**	**-2.2**
NAX	**Nakhchivan**	**2.48**	**202**	⇑Pg	**Pg**	**01 00 02.3**	**-1.9**
NAX				⇓Sg	**Sg**	**01 00 36.7**	**+0.4**
NAX	**Nakhchivan**	**2.48**	**202**	⇑Pg	**Pg**	**01 00 02.3**	**-1.9**
NAX				⇓Sg	**Sg**	**01 00 36.7**	**+0.4**
GLBA	**Clilabad**	**2.59**	**149**	⇓Pn	**Pb**	**01 00 00.4**	**-3.4**
GLBA				⇑Sn	**Sb**	**01 00 33.4**	**-2.7**
GLBA	**Clilabad**	**2.59**	**149**	⇓Pn	**Pb**	**01 00 00.4**	**-3.4**
GLBA				⇑Sn	**Sb**	**01 00 33.4**	**-2.7**
ORD	**Ordubad**	**2.60**	**192**	⇑Pg	**Pb**	**01 00 02.7**	**-1.5**
ORD				⇓Sg	**Sg**	**01 00 37.9**	**-2.5**
ORD	**Ordubad**	**2.60**	**192**	⇑Pg	**Pb**	**01 00 02.7**	**-1.5**
ORD				⇓Sg	**Sg**	**01 00 37.9**	**-2.5**
ONI	**Oni**	**2.65**	**296**	P	**Pn**	**01 00 01.5**	**+1.0**
ONI				S	**Sb**	**01 00 35.5**	**-2.4**
ONI	**Oni**	**2.65**	**296**	*e*PN	**Pn**	**01 00 01.5**	**+1.0**
ONI				*e*S	**Sb**	**01 00 35.5**	**-2.4**
ONI	**Oni**	**2.65**	**296**	*e*Pn	**Pn**	**01 00 01.5**	**+1.0**
ONI				*e*Sn	**Sb**	**01 00 35.5**	**-2.4**
DIGR	**Digorskoe uzhe**	**2.71**	**303**	⇑*e*PN	**Pb**	**01 00 05.9**	**-0.1**
DIGR	**Digorskoe uzhe**	**2.71**	**303**	*e*Pn	**Pb**	**01 00 05.9**	**-0.1**
LSNR	**Lesken**	**2.78**	**311**	⇑*e*PN	**Pg**	**01 00 07.5**	**-2.5**
LSNR	**Lesken**	**2.78**	**311**	*e*Pn	**Pg**	**01 00 07.5**	**-2.5**
NCK	**Nalchik**	**3.04**	**312**	⇓*e*PN	**Pb**	**01 00 11.8**	**+0.2**
NCK	**Nalchik**	**3.04**	**312**	*e*Pn	**Pb**	**01 00 11.8**	**+0.2**
LRK	**Lerik**	**3.11**	**155**	⇓Pn	**Pn**	**01 00 06.6**	**-0.2**
LRK				⇑Sn	**Sn**	**01 00 45.1**	**+0.5**
LRK	**Lerik**	**3.11**	**155**	⇓Pn	**Pn**	**01 00 06.6**	**-0.2**
LRK				⇑Sn	**Sn**	**01 00 45.1**	**+0.5**
LKRN	**Lenkeran, Azer**	**3.20**	**149**	PN	**Pn**	**01 00 07.6**	**-0.3**
LKRN	**Lenkeran, Azer**	**3.20**	**149**	⇓Pn	**Pn**	**01 00 07.7**	**-0.3**
LKRN				⇑Sn	**Sn**	**01 00 47.9**	**+1.3**
LKRN	**Lenkeran, Azer**	**3.20**	**149**	⇓Pn	**Pn**	**01 00 07.7**	**-0.3**
LKRN				⇑Sn	**Sn**	**01 00 47.9**	**+1.3**
ASTR	**Astara**	**3.34**	**150**	⇓Pn	**Pn**	**01 00 09.6**	**-0.2**
ASTR				⇑Sn	**Sn**	**01 00 50.8**	**+0.8**
ASTR	**Astara**	**3.34**	**150**	⇓Pn	**Pn**	**01 00 09.6**	**-0.2**
ASTR				⇑Sn	**Sn**	**01 00 50.8**	**+0.8**
NEY	**Neytrino**	**3.43**	**302**	⇑*e*PN	**Pb**	**01 00 17.5**	**-0.7**
NEY				*i*		01 00 23.2	
NEY	**Neytrino**	**3.43**	**302**	*e*Pn	**Pb**	**01 00 17.5**	**-0.7**
SHA1	**Shidzhatmaz**	**3.73**	**309**	⇑*e*PN	**Pb**	**01 00 21.8**	**-1.6**
SHA1	**Shidzhatmaz**	**3.73**	**309**	*e*Pn	**Pb**	**01 00 21.8**	**-1.6**
KIV	**Kislovodsk**	**3.84**	**311**	*e*PN	**Pb**	**01 00 22.6**	**-2.7**
KIV				*e*S	**Sb**	**01 01 10.9**	**-1.4**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV	**Kislovodsk**	**3.84**	**311**	*e*Pn	**Pb**	**01 00 22.6**	**-2.7**
	comp=Z,7.0nm,1.1s						
KIV				*e*Sn	**Sb**	**01 01 10.9**	**-1.4**
OBN	**Obninsk**	**15.19**	**337**	*e*P	**P**	**01 02 58.1**	**+0.9**
OBN	**Obninsk**	**15.19**	**337**	*e*P	**P**	**01 02 58.1**	**+0.9**
KIEV	**Kiev**	**15.20**	**313**	⇓*i*P	**P**	**01 02 57.8**	**+0.5**
KIEV				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KIEV	**Kiev**	**15.20**	**313**	*i* P	**P**	**01 02 57.8**	**+0.5**
	comp=Z,2.0nm,1.0s						
BRVK	**Borovoye**	**19.66**	**46**	*e*P	**Pn**	**01 03 48.1**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
VSU	**Vasula**	**21.16**	**330**	⇑*e*P	**P**	**01 04 07.0**	**+4.2**
VSU				pmax	pmax		
	comp=Z,17nm,1.0s						
KURK	**Kurchatov**	**23.83**	**56**	*c i*P	**P**	**01 04 30.9**	**0.0**
KURK				*i* *PP	**sP**	**01 04 32.5**	**+0.4**
ULN	**Ulaanbaatar**	**42.44**	**60**	⇑*e*P	**P**	**01 07 14.0**	**+1.1**
ULN				pmax	pmax		
	comp=Z,2.0nm,1.5s						
TIXI	**Tiksi**	**48.83**	**25**	*i* P	**P**	**01 08 05.8**	**+2.9**
TIXI				*i*		01 09 58.5	
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.9s						

IDC 20 01:02:25.8±1.8, 1.°45S×132.°81E, h0km, mb3.1/2, mb1 3.3/3, mb1mx3.0/57, mbtmp3.2/3, ML2.8/1, Error ellipse: s-maj=38.9km s-min=15.8km az=37.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**1.65**	**291**	Pg	Pn	01 02 54.6	-1.5
	12nm,0.3s,baz=130,slow=24,SNR=36						
SIJI				Lg	Lg	01 03 19.2	
	6.0nm,0.3s,baz=58,slow=18,SNR=3.9						
WRA	**Warramunga Arr**	**18.44**	**175**	P	P	01 06 44.3	+1.3
	0.0nm,0.3s,baz=358,slow=12,SNR=3.4						
ASAR	**Alice Springs**	**22.11**	**177**	P	P	01 07 22.3	-0.7
	0.2nm,0.3s,baz=352,slow=12,SNR=3.2						
MKAR	**Makanchi Array**	**65.27**	**324**	P	P	01 13 09.7	+0.1
	0.4nm,0.8s,baz=138,slow=6.7,SNR=2.5						

TIR 20 01:10:06.8, 41.°13N×20.°47E, h6km, Md2.5/3
SKO 20 01:10:11.6, 41.°24N×20.°79E, h16km, M0.1, ML0.5
ISC 20 01:10:09.2±1.3, 41.°3N±0.°1×20.°7E±0.°2, h33km±8km, n4, σ0§60/8, 2C, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHR	**Ohrid**	**0.16**	**151**	⇑*i*Pg	**Pb**	**01 10 15.4**	**0.0**
OHR				*i* Sg	**Sb**	**01 10 19.6**	**0.0**
OHR				*e*Lg	Lg	01 10 20.8	
	comp=N,19nm,0.3s						
OHR				*e*Lg	Lg	01 10 21.0	
	comp=E,35nm,0.5s						
PHP	**Peshkopia**	**0.48**	**336**	*i* PG	**Pb**	**01 10 19.2**	**-0.2**
PHP				*i* SG	**Sb**	**01 10 26.6**	**+0.1**
BIA	**Bitola**	**0.53**	**116**	⇑*i*Pg	**Pb**	**01 10 20.0**	**-0.2**
BIA				*i* Sg	**Sn**	**01 10 28.8**	**+0.6**
BIA				*e*Lg	Lg	01 10 29.7	
	comp=N,7.8nm,0.2s						
BIA				*e*Lg	Lg	01 10 29.9	
	comp=E,9.1nm,0.3s						
PUK	**Puka**	**1.00**	**323**	*i* PG	**Pn**	**01 10 26.5**	**-0.4**
PUK				*i* SG	**Sb**	**01 10 41.8**	**+0.9**

CSEM 20 01:11:08.0, 39.°53N×29.°74W, h10km, ML2.4
PDA 20 01:11:08.0±0.5, 39.°53N×29.°74W, h10km, MD3.5, ML2.4, Error ellipse: s-maj=13.2km s-min=4.8km az=49.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CALA	**Caldeira**	**1.24**	**139**	*e*P	Pn	01 11 26.7	-4.8
CALA				*e*S	Sb	01 11 41.2	-6.4
CALA	**Caldeira**	**1.24**	**139**	*e*P	Pn	01 11 26.7	-4.8
CALA	

ASAR S S 01 37 58.6 +1.0
0.5nm,0.9s,baz=358,slow=28,SNR=3.0
KSRS Korea Array 38.38 353 LR LR 01 49 53.8
comp=Z,23nm,21.9s,baz=150,slow=33
MKAR Makanchi Array 65.06 324 P P 01 39 25.9 0.0
0.6nm,0.5s,baz=116,slow=7.5,SNR=7.2
KURBB Kurchatov Arra 69.14 326 P P 01 39 51.6 -0.1
0.6nm,0.8s,baz=125,slow=5.6,SNR=5.7

*NIED **20** 01:51:00,36°.60N×140°.80E,h56km,Mw3.7 Best double couple: M0:3.47000×10^14 NP1:φ=158.00000°,δ=34.00000°,λ=40.00000°. NP2:φ=34.00000°,δ=69.00000°,λ=118.00000°.*
*ISCJB **20** 01:51:16.9±0.7,36°.51N±0°.04×140°.92E±0°.07,h54km±6km,mb3.6/3,Error ellipse: s-maj=9.7km s-min=6.0km az=24.2*
*IDC **20** 01:51:16.8±5.3,36°.58N×141°.05E,h44km±44km,mb3.5/3,mb1 3.6/5,mb1mx3.1/69,mbtmp3.7/5,ML3.4/2,Error ellipse: s-maj=47.2km s-min=12.3km az=58.0*
*JMA **20** 01:51:18.3±0.1,36°.53N×140°.79E,h52km±1km,M3.5*
JMA Felt II J1.

ISC 20 01:51:17.7±1.2,36°.52N±0°.04×140°.90E±0°.07,h47km±9km, n21,σ0°84/25,mb3.6/3,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.28**	**289**	P	**Pn**	**01 51 26.9**	**+0.5**
JHO				S	**Sn**	**01 51 32.8**	**+0.2**
ONAJ	**Iwakimizuishiy**	**0.58**	**352**	P	**Pn**	**01 51 30.1**	**+0.2**
ONAJ				S	**Sn**	**01 51 38.4**	**-0.3**
JYT	**Yasato**	**0.64**	**243**	P	**Pn**	**01 51 30.5**	**-0.1**
JYT				S	**Sn**	**01 51 38.9**	**-0.9**
JFK	**Kawauchi**	**0.84**	**359**	P	**Pn**	**01 51 33.3**	**0.0**
JSB	**Shiboa**	**0.90**	**300**	P	**Pn**	**01 51 34.1**	**0.0**
JFT	**Otama**	**1.09**	**336**	P	**Pn**	**01 51 37.4**	**+0.8**
JFT				S	**Sn**	**01 51 50.7**	**+0.1**
JAG	**Ashikaga**	**1.17**	**266**	P	**Pn**	**01 51 37.4**	**-0.3**
JAG				S	**Sn**	**01 51 50.9**	**-1.6**
JMM	**Marumori**	**1.34**	**356**	P	**Pn**	**01 51 40.8**	**+0.7**
JMM				S	**Sn**	**01 51 56.7**	**-0.1**
JKT	**Katashina**	**1.35**	**281**	P	**Pn**	**01 51 40.6**	**+0.4**
JKT				S	**Sn**	**01 51 56.5**	**-0.5**
MJAR	**Matsushiro Arr**	**2.17**	**271**	P	**Pn**	**01 51 51.7**	**+0.3**
	8.1nm,0.3s,baz=98,slow=8.3,SNR=36						
MJAR				S	**Sn**	**01 52 18.9**	**+1.9**
	6.6nm,0.3s,baz=146,slow=10,SNR=7.8						
MAT	**Matsushiro**	**2.17**	**271**	P	**Pn**	**01 51 52.2**	**+0.8**
MAT				S	**Sn**	**01 52 18.6**	**+1.6**
JHJ	**Hachijo jima 2**	**3.52**	**195**	P	**Pn**	**01 52 09.8**	**0.0**
	12nm,0.3s,baz=74,slow=18,SNR=2.1						
JHJ				S	**Sn**	**01 52 51.5**	**+1.3**
	17nm,0.3s,baz=302,slow=14,SNR=3.2						
H11N2	**WAKE ISLAND Hy 28.25 119**			T	T	02 27 10.0	
	baz=312,slow=75,SNR=15						
H11N1	**WAKE ISLAND Hy 28.26 119**			T	T	02 27 09.2	
	baz=312,slow=75,SNR=19						
H11N3	**WAKE ISLAND Hy 28.27 119**			T	T	02 27 09.6	
	baz=312,slow=75,SNR=17						
H11S1	**WAKE ISLAND Hy 28.94 121**			T	T	02 27 57.9	
	baz=314,slow=76,SNR=36						
H11S3	**WAKE ISLAND Hy 28.94 121**			T	T	02 27 56.3	
	baz=314,slow=76,SNR=22						
H11S2	**WAKE ISLAND Hy 28.95 121**			T	T	02 27 58.6	
	baz=314,slow=76,SNR=21						
ZALV	**Zalesovo Beam**	**41.95**	**313**	P	**P**	**01 59 03.1**	**-0.6**
	1.1nm,0.7s,baz=95,slow=7.9,SNR=3.8						
KURBB	**Kurchatov Arra**	**45.99**	**308**	P	**P**	**01 59 35.5**	**-0.7**
	0.2nm,0.3s,baz=84,slow=8.1,SNR=3.0						
WRA	**Warramunga Arr**	**56.50**	**187**	P	**P**	**02 00 55.1**	**+0.1**
	0.2nm,0.3s,baz=3.5,slow=7.5,SNR=4.3						

*IDC **20** 01:55:36.9±1.2,36°.35S×179°.83E,h0km,mb4.1/2,mb1 4.3/3,mb1mx3.9/41,mbtmp4.1/3,ML3.8/1,MS3.2/1,Ms1 3.2/1,ms1mx2.5/40,Error ellipse: s-maj=45.4km s-min=34.7km az=162.0*
*NEIC **20** 01:55:39.1±0.0,36°.45S×179°.92W,h89km,ML4.3(WEL),After WEL.*
*WEL **20** 01:55:43.5±1.1,37°.5±12°.×18°.0E±1°.3,h33km,ML4.1/18*

ISC 20 01:55:41.8±1.1,36°.7S±0°.2×180°.0E±0°.2,h39km±12km,n79, σ1°04/84,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.62**	**236**	Pn	**Pn**	**01 56 07.9**	**+0.1**
MXZ	**Matakaoa Point**	**1.62**	**236**	P	**Pn**	**01 56 08.1**	**+0.4**
WMGZ	**Waiomatatini S**	**1.71**	**227**	Pn	**Pn**	**01 56 09.8**	**+0.8**
WMGZ	**Waiomatatini S**	**1.71**	**227**	P	**Pn**	**01 56 09.9**	**+0.8**
PKGZ	**Pakihiroa**	**1.96**	**231**	P	**Pn**	**01 56 12.9**	**+0.4**
PUZ	**Puketiti**	**1.97**	**224**	Pn	**Pn**	**01 56 13.0**	**+0.3**
PUZ	**Puketiti**	**1.97**	**224**	P	**Pn**	**01 56 13.0**	**+0.3**
PUZ				S	**Sn**	**01 56 37.2**	**+1.0**
HAZ	**Te Kaha**	**2.07**	**238**	P	**Pn**	**01 56 14.4**	**+0.3**
TWGZ	**Tauwhareparae**	**2.20**	**226**	Pn	**Pn**	**01 56 16.5**	**+0.7**
TWGZ	**Tauwhareparae**	**2.20**	**226**	P	**Pn**	**01 56 16.8**	**+1.0**
RUGZ	**Raukumara Rang**	**2.25**	**234**	P	**Pn**	**01 56 17.3**	**+0.7**
CNGZ	**Carnagh Statio**	**2.30**	**217**	Pn	**Pn**	**01 56 18.3**	**+1.0**
MWZ	**Matawai**	**2.57**	**229**	Pn	**Pn**	**01 56 21.3**	**+0.3**
MWZ	**Matawai**	**2.57**	**229**	P	**Pn**	**01 56 21.3**	**+0.3**
MWZ				S	**Sn**	**01 56 50.5**	**-0.5**
RAGZ	**Rawiri**	**2.74**	**227**	P	**Pn**	**01 56 23.6**	**+0.3**
RAGZ				S	**Sn**	**01 56 54.6**	**-0.7**
URZ	**Urewera**	**2.79**	**234**	Pn	**Pn**	**01 56 24.0**	**+0.1**
	14nm,0.3s,baz=266,slow=4.0,SNR=43						
URZ				Sn	**Sn**	**01 56 57.0**	**+0.7**
	20nm,0.3s,baz=175,slow=13,SNR=11						
URZ	**Urewera**	**2.79**	**234**	P	**Pn**	**01 56 23.7**	**-0.2**
URZ				S	**Sn**	**01 56 55.5**	**-0.8**
PRGZ	**Paritu Road**	**2.81**	**216**	Pn	**Pn**	**01 56 24.0**	**-0.2**
PRGZ	**Paritu Road**	**2.81**	**216**	P	**Pn**	**01 56 24.1**	**0.0**
EDRZ	**Edgecumbe**	**2.96**	**240**	P	**Pn**	**01 56 27.2**	**+0.8**
MHGZ	**Mahia Peninsul**	**2.98**	**213**	P	**Pn**	**01 56 27.5**	**+0.9**
SNGZ	**Shannon Statio**	**2.98**	**224**	Pn	**Pn**	**01 56 26.7**	**+0.1**
SNGZ	**Shannon Statio**	**2.98**	**224**	P	**Pn**	**01 56 27.5**	**+1.0**
SNGZ				S	**Sn**	**01 57 01.9**	**+0.8**
OPRZ	**Ohinepanea**	**2.98**	**246**	P	**Pn**	**01 56 26.2**	**-0.3**
KNZ	**Kokohu**	**2.98**	**217**	Pn	**Pn**	**01 56 26.0**	**-0.6**
KNZ	**Kokohu**	**2.98**	**217**	P	**Pn**	**01 56 26.4**	**-0.2**
RTZ	**Ruatahuna**	**3.08**	**230**	P	**Pn**	**01 56 29.3**	**+1.2**
RTZ				S	**Sn**	**01 57 04.5**	**+0.8**
MUGZ	**Murupara**	**3.13**	**234**	P	**Pn**	**01 56 28.8**	**+0.2**
TGRZ	**Tauranga**	**3.16**	**249**	P	**Pn**	**01 56 28.7**	**-0.3**
TARZ	**Mount Tarawera**	**3.19**	**239**	P	**Pn**	**01 56 30.6**	**+1.1**
RAHZ	**Arahi**	**3.22**	**225**	P	**Pn**	**01 56 30.8**	**+0.9**
RRRZ	**Republican Roa**	**3.23**	**238**	P	**Pn**	**01 56 31.4**	**+1.4**
KARZ	**Kaharoa**	**3.28**	**244**	P	**Pn**	**01 56 30.8**	**+0.2**
MTHZ	**Maungataniwha**	**3.32**	**228**	P	**Pn**	**01 56 31.4**	**+0.2**
KUZ	**Kuaotunu**	**3.43**	**267**	Pn	**Pn**	**01 56 31.2**	**-1.5**
NMHZ	**Naumai**	**3.50**	**225**	Pn	**Pn**	**01 56 35.2**	**+1.5**
BKZ	**Black Stump Fm**	**3.73**	**227**	P	**Pn**	**01 56 37.5**	**+0.6**
TOZ	**Tahuroa Road**	**3.74**	**252**	P	**Pn**	**01 56 36.2**	**-0.8**
MCHZ	**McNeill Hill**	**3.80**	**222**	Pn	**Pn**	**01 56 38.6**	**+0.8**
MCHZ	**McNeill Hill**	**3.80**	**222**	P	**Pn**	**01 56 38.9**	**+1.0**
MKAZ	**Moumakai**	**3.90**	**262**	Pn	**Pn**	**01 56 38.5**	**-0.6**
MKAZ	**Moumakai**	**3.90**	**262**	P	**Pn**	**01 56 38.6**	**-0.5**
KWHZ	**Kaweka Forest**	**3.94**	**225**	P	**Pn**	**01 56 39.9**	**+0.1**
KAHZ	**Kahuranaki**	**3.97**	**217**	Pn	**Pn**	**01 56 39.4**	**-0.7**
KAHZ	**Kahuranaki**	**3.97**	**217**	P	**Pn**	**01 56 39.5**	**-0.7**
ETAZ	**East Tamaki Re**	**4.07**	**264**	P	**Pn**	**01 56 41.9**	**+0.3**
KRHZ	**Kereru**	**4.12**	**223**	P	**Pn**	**01 56 42.0**	**-0.2**
ABAZ	**Army Bay**	**4.15**	**269**	P	**Pn**	**01 56 42.8**	**+0.3**
BHHZ	**Black Hill Sta**	**4.19**	**226**	Pn	**Pn**	**01 56 43.2**	**+0.1**
BHHZ	**Black Hill Sta**	**4.19**	**226**	P	**Pn**	**01 56 43.3**	**+0.1**
AWAZ	**Awhitu Peninsu**	**4.30**	**263**	P	**Pn**	**01 56 45.1**	**+0.4**
MOVZ	**Moawhango**	**4.32**	**229**	Pn	**Pn**	**01 56 45.4**	**+0.3**
MOVZ	**Moawhango**	**4.32**	**229**	P	**Pn**	**01 56 45.9**	**+0.9**
TWVZ	**Taurewa**	**4.33**	**235**	P	**Pn**	**01 56 46.9**	**+1.7**
RVAZ	**Riverhead Bore**	**4.35**	**267**	P	**Pn**	**01 56 45.8**	**+0.5**
WTAZ	**Waiatarua**	**4.35**	**265**	P	**Pn**	**01 56 46.1**	**+0.6**
WNVZ	**Wahianoa**	**4.37**	**231**	Pn	**Pn**	**01 56 45.0**	**-0.8**
PNHZ	**Pukenui**	**4.41**	**221**	Pn	**Pn**	**01 56 44.9**	**-1.3**
WCZ	**Waipu Caves**	**4.62**	**277**	P	**Pn**	**01 56 48.7**	**-0.2**
TSZ	**Takapari Road**	**4.64**	**222**	Pn	**Pn**	**01 56 48.0**	**-1.3**
TSZ	**Takapari Road**	**4.64**	**222**	P	**Pn**	**01 56 48.0**	**-1.3**
BFZ	**Birch Farm**	**4.97**	**215**	Pn	**Pn**	**01 56 50.9**	**-3.0**
MRZ	**Mangatainoka R**	**5.28**	**220**	Pn	**Pn**	**01 56 55.8**	**-2.3**
HOWZ	**Holdsworth Sta**	**5.49**	**218**	Pn	**Pn**	**01 56 59.0**	**-1.9**
MTW	**Mount Morrison**	**5.69**	**217**	Pn	**Pn**	**01 57 01.0**	**-2.8**
QRZ	**Quartz Range**	**7.16**	**232**	Pn	**Pn**	**01 57 21.2**	**-2.7**
THZ	**Tophouse**	**7.49**	**225**	Pn	**Pn**	**01 57 26.3**	**-2.2**

CTZ	**Chatham Island**	**7.53**	**161**	Pn	**Pn**	**01 57 30.6**	**+1.7**
RPZ	**Rata Peaks**	**9.81**	**221**	Sn	Sn	01 59 37.8	-11
	0.7nm,0.3s,baz=127,slow=23,SNR=7.0						
DZM	**Mont Dzumac**	**18.70**	**317**	LR	LR	02 06 01.8	
	comp=Z,70nm,19.6s,baz=47,slow=34						
ASAR	**Alice Springs**	**41.53**	**275**	P	**P**	**02 03 24.9**	**-0.6**
	2.4nm,0.6s,baz=119,slow=7.9,SNR=17						
WRA	**Warramunga Arr**	**43.08**	**280**	P	**P**	**02 03 37.1**	**-1.2**
	1.3nm,0.6s,baz=120,slow=7.7,SNR=30						
KURK	**Kurchatov**	**124.03**	**311**	PKP	**PKPdf**	**02 14 35.7**	**+0.4**
KURBB	**Kurchatov Arra**	**124.06**	**311**	PKP	**PKPdf**	**02 14 35.7**	**+0.3**
	0.6nm,0.5s,baz=109,slow=2.0,SNR=7.9						
ARCES	**ARCESS Array B**	**144.27**	**345**	PKP	**PKPdf**	**02 15 11.8**	**-0.7**
	3.5nm,1.0s,baz=27,slow=2.2,SNR=5.4						
FINES	**FINESS Array B**	**150.27**	**335**	PKPbc	**PKPbc**	**02 15 28.0**	**+0.2**
	4.0nm,0.6s,baz=45,slow=4.1,SNR=25						
MMAI	**Mount Meron Ar**	**150.81**	**273**	PKPbc	**PKPbc**	**02 15 31.1**	**+0.9**
	1.3nm,0.5s,baz=102,slow=6.2,SNR=4.3						
BRTR	**Keskin Array B**	**153.47**	**287**	PKPbc	**PKPbc**	**02 15 36.5**	**+0.5**
	0.8nm,0.7s,baz=141,slow=3.1,SNR=5.4						
TORD	**Torodi Ar. Bea**	**156.53**	**184**	PKPab	**PKPab**	**02 16 03.8**	**+2.0**
	0.4nm,0.8s,baz=177,slow=3.9,SNR=2.9						

*ISCJB **20** 02:06:28.4±0.7,38°.63N±0°.05×43°.11E±0°.06,h31km±6km,Error ellipse: s-maj=8.7km s-min=7.3km az=163.3*
*CSEM **20** 02:06:28.8±0.2,38°.68N×43°.08E,h10km,ML2.6,Error ellipse: s-maj=5.4km s-min=4.9km az=24.0*
*ISK **20** 02:06:28.0,38°.68N×43°.09E,h16km±4km,ML1.9/4*
*DDA **20** 02:06:29.1,38°.67N×43°.09E,h7km,Ml2.6*

ISC 20 02:06:28.1±1.3,38°.64N±0°.04×43°.12E±0°.03,h31km±9km, n18,σ0°28/28,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.22**	**101**	PG	**Pb**	**02 06 34.8**	**+0.1**
VANB				SG	**Sb**	**02 06 39.8**	**+0.6**
VANB	**Van**	**0.22**	**101**	*e*Pg	**Pb**	**02 06 34.8**	**+0.1**
VANB				*e*Sg	**Sb**	**02 06 39.8**	**+0.6**
TVAN	**Van**	**0.25**	**116**	*i* P	**Pb**	**02 06 34.8**	**-0.4**
TVAN				*i* S	**Sb**	**02 06 39.8**	**-0.2**
TVAN	**Van**	**0.25**	**116**	P	**Pb**	**02 06 34.8**	**-0.4**
TVAN				S	**Sb**	**02 06 39.8**	**-0.2**
GEVA	**Gevas**	**0.33**	**188**	*i* P	**Pb**	**02 06 36.0**	**-0.2**
GEVA				*i* S	**Sb**	**02 06 42.0**	**+0.4**
GEVA	**Gevas**	**0.33**	**188**	P	**Pb**	**02 06 36.0**	**-0.2**
GEVA				S	**Sb**	**02 06 42.0**	**+0.4**
ADCV	**BITLIS_Adilcev**	**0.35**	**299**	*i* P	**Pb**	**02 06 36.3**	**-0.2**
ADCV				*i* S	**Sb**	**02 06 42.4**	**+0.1**
ADCV	**BITLIS_Adilcev**	**0.35**	**299**	P	**Pb**	**02 06 36.3**	**-0.2**
ADCV				S	**Sb**	**02 06 42.3**	**+0.1**
VMUR	**Van-Muradiye**	**0.50**	**45**	*i* P	**Pb**	**02 06 38.7**	**0.0**
VMUR				*i* S	**Sn**	**02 06 46.8**	**-0.2**
VMUR	**Van-Muradiye**	**0.50**	**45**	P	**Pb**	**02 06 38.7**	**0.0**
VMUR				S	**Sn**	**02 06 46.8**	**-0.2**
TUTA	**Tutak**	**0.80**	**343**	*i* P	**Pb**	**02 06 43.6**	**-0.1**
TUTA	**Tutak**	**0.80**	**343**	P	**Pb**	**02 06 43.6**	**-0.1**
CLDR	**Caldiran**	**0.80**	**51**	PG	**Pb**	**02 06 43.9**	**+0.2**
CLDR	**Caldiran**	**0.80**	**51**	*e*Pg	**Pb**	**02 06 43.9**	**+0.2**
GURO	**Guroymak-BITLI**	**0.85**	**264**	PG	**Pb**	**02 06 44.7**	**+0.2**
GURO	**Guroymak-BITLI**	**0.85**	**264**	*e*Pg	**Pb**	**02 06 44.7**	**+0.2**
AGRB	**Hanur-Agry**	**0.94**	**354**	PG	**Pb**	**02 06 45.8**	**-0.2**
AGRB	**Hanur-Agry**	**0.94**	**354**	*e*Pg	**Pb**	**02 06 45.8**	**-0.2**

GUC 20 02:12:58.8±0.4,37°.68S×73°.91W,h31km±2km,ML4.0, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCSP	**San Pedro de C**	**1.05**	**38**	*e*P	Pn	02 13 16.7	-0.6
CCSP				*e*S	Sn	02 13 30.4	-0.5
TMU	**Temuco**	**1.48**	**136**	*e*P	Pn	02 13 23.5	+0.3
TMU				*e*S	Sn	02 13 42.7	+1.2
CCHI	**Chillan**	**1.81**	**54**	*e*P	Pn	02 13 28.5	+0.6
CCHI				*e*S	Sn	02 13 51.3	+1.4
CCHI				IAML		02 14 05.0	
	comp=N,2μm,1.0s						
GO05	**HualaæØ**	**3.10**	**32**	*e*P	Pn	02 13 46.5	+0.8
GO05				IAML		02 14 46.9	
	comp=E,435nm,0.4s						
FCH	**Farellones**	**5.25**	**35**	*e*P	Pn	02 14 15.6	+0.2
FCH				*e*S	Sn	02 15 14.6	-0.5

*IDC **20** 02:32:44.4±1.8,4°.11S×121°.17E,h0km,mb3.2/3,mb1 3.5/3,mb1mx3.3/54,mbtmp3.3/3,Error ellipse: s-maj=227.0km s-min=27.0km az=58.0*
*ISCJB **20** 02:32:46.0±0.5,4°.99S±0°.03×120°.15E±0°.07,h10km,mb3.5/2,Error ellipse: s-maj=9.6km s-min=4.5km az=1.5*
*DJA **20** 02:32:47.2±0.2,5°.5±2°.×12°.0E±°,h10km,M4.5/16,mb4.9/7,mB5.1/5,MLv4.3/16,Mw(mB)4.5/5*

ISC 20 02:32:46.3±0.9,4°.95S±0°.04×120°.17E±0°.09,h10km,n17, σ1°18/19,Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKSI	**Bulukumba**	**0.37**	**188**	P	**Pg**	**02 32 54.4**	**+0.6**
BKSI				S	**Sb**	**02 32 59.7**	**-1.3**
BNSI	**Bone**	**0.55**	**353**	P	**Pn**	**02 33 00.6**	**+0.4**
SPSI	**Sidrap Palu**	**1.06**	**338**	P	**Pg**	**02 33 06.0**	**-0.7**
SPSI				S	**Sg**	**02 33 21.3**	**+0.9**
TTSI	**Tana Toraja**	**1.92**	**349**	P	**Pn**	**02 33 20.4**	**+1.2**
KDI	**Kendari**	**2.63**	**68**	P	**Pn**	**02 33 30.2**	**+1.3**
MMRI	**Maumere**	**4.20**	**151**	P	**Pn**	**02 33 49.8**	**-0.7**
APSI	**Ampana**	**4.27**	**20**	P	**Pn**	**02 33 53.1**	**+1.6**
PLAI	**Plampang**	**4.53**	**212**	P	**Pn**	**02 33 55.8**	**+0.8**
WBSI	**Waikabubak, Su**	**4.73**	**189**	P	**Pn**	**02 33 58.2**	**+0.4**
TWSI	**Taliwang, Sumb**	**4.99**	**221**	P	**Pn**	**02 34 01.5**	**+0.2**
MPSI	**Mapaga**	**5.26**	**357**	P	**Pn**	**02 34 06.4**	**+1.4**
MRSI	**Marisa**	**5.67**	**18**	P	**Pn**	**02 34 12.5**	**+1.8**
SRBI	**Singaraja**	**5.83**	**237**	P	**Pn**	**02 34 13.1**	**+0.2**
	124nm,0.6s,3μm						
JAGI	**Jajag, Banyuwa**	**6.93**	**239**	P	**Pn**	**02 34 28.5**	**+0.5**
WRA	**Warramunga Arr**	**20.31**	**138**	P	**P**	**02 37 22.2**	**-0.5**
	0.8nm,0.9s,baz=315,slow=12,SNR=3.5						
ASAR	**Alice Springs**	**22.84**	**146**	P	**P**	**02 37 51.1**	**+1.3**
	0.4nm,0.5s,baz=331,slow=12,SNR=3.0						
MKAR	**Makanchi Array**	**61.44**	**331**	P	**P**	**02 43 00.9**	**-2.1**
	0.7nm,0.7s,baz=126,slow=7.3,SNR=4.0						

DJA 20 02:35:00.0±1.0,2°.N±4°.×9°.6E±°,h10km,M3.6/5,MLv3.6/5, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.90**	**107**	P	Pn	02 35 31.5	-1.0
GSI				S	Sb	02 35 57.9	-0.8
TPTI		**1.97**	**46**	P	Pn	02 35 32.0	-1.5
TPTI				S	Sn	02 35 57.6	-0.7
MLSI	**Meulaboh, Aceh**	**2.46**	**15**	P	Pn	02 35 41.0	+0.8
KCSI	**Kotacane, Aceh**	**2.59**	**51**	P	Pn	02 35 43.1	+1.1
KCSI				S	Sn	02 36 15.4	+1.9
MNSI	**Mandailing Nat**	**3.97**	**106**	P	Pn	02 36 00.6	-0.4

IDC 20 03:00:26.3±1.4,8°.79S×157°.47E,h0km,mb3.6/3, mb1 3.9/4,mb1mx3.6/45,mbtmp3.7/4,ML4.0/1,Error ellipse: s-maj=44.9km s-min=22.2km az=170.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.53**	**105**	*e*P	Pn	03 01 07.0	-1.6
HNR				*e*S	Sn	03 01 39.0	-1.2
HNR	**Honiara**	**2.53**	**105**	Pn	Pn	03 01 08.7	+0.1
	33nm,0.3s,baz=302,slow=15,SNR=9.9						
HNR				Sn	Sn	03 01 40.1	-0.1
	74nm,0.3s,baz=260,slow=20,SNR=13						
WRA	**Warramunga Arr**	**24.96**	**241**	P	P	03 05 52.1	+0.4
	2.2nm,0.6s,baz=66,slow=9.5,SNR=19						
ASAR	**Alice Springs**	**26.96**	**234**	P	P	03 06 09.1	-0.7
	0.6nm,1.0s,baz=64,slow=8.5,SNR=5.5						
ILAR	**Eielson Array**	**84.16**	**21**	P	P	03 12 59.4	+0.3
	0.2nm,0.6s,baz=250,slow=5.3,SNR=4.3						

*IDC **20** 03:05:59.7±0.8,35°.11N×26°.61E,h0km,mb4.0/14,mb1 3.9/21,mb1mx3.8/61,mbtmp3.9/21,ML3.5/7,MS3.1/3,Ms1 3.1/3,ms1mx2.5/59,Error ellipse: s-maj=18.6km s-min=10.9km az=172.0*

*ISCJB **20** 03:06:01.0±0.5,34°.86N±0°.02×26°.69E±0°.02,h24km±5km,mb3.9/14,MS3.1/1,Error ellipse: s-maj=3.6km s-min=3.0km az=21.2*
*CSEM **20** 03:06:01.4±0.2,34°.98N×26°.66E,h5km,ML3.9,Error ellipse: s-maj=5.0km s-min=2.7km az=176.0*
*THE **20** 03:06:02.7,35°.09N×26°.56E,h0km±1km,ML3.8/7,Error ellipse: s-maj=3.6km s-min=0.7km az=161.0*
*ISK **20** 03:06:03.1,35°.11N×26°.68E,h13km,ML3.8/12*
*ATH **20** 03:06:03.1,35°.12N×26°.55E,h21km±1km,ML3.9/5,Error ellipse: s-maj=3.8km s-min=1.1km az=158.0*
*HLW **20** 03:06:05.2,34°.75N×26°.92E,h22km±11km,Md4.1,Ml3.9*
*NIC **20** 03:06:05.2±0.3,35°.03N×26°.77E,h36km,mb4.6,ML4.2*
*DDA **20** 03:06:35.2,34°.69N×26°.46E,h70km,Ml4.1*

ISC 20 03:06:01.2±1.2,34°.96N±0°.03×26°.61E±0°.02,h15km±8km, n202,σ1°38/239,mb4.0/14,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.36**	**296**	P	**Pb**	**03 06 08.3**	**-0.9**
ZKR				S	**Sb**	**03 06 14.1**	**-0.6**
ZKR				AML	AML	03 06 15.0	
	comp=N,50805μm,0.4s						
ZKR				AML	AML	03 06 15.5	
	comp=E,73696μm,0.4s						
ZKR	**Zakros**	**0.36**	**296**	P	**Pb**	**03 06 08.9**	**-0.3**
ZKR				S	**Sb**	**03 06 13.8**	**-0.9**
ZKR	**Zakros**	**0.36**	**296**	P	**Pb**	**03 06 08.9**	**-0.3**
ZKR				S	**Sb**	**03 06 13.8**	**-0.9**
KARP	**Karpathos**	**0.74**	**37**	PG	**Pg**	**03 06 14.9**	**-0.7**
KARP	**Karpathos**	**0.74**	**37**	P	**Pb**	**03 06 15.4**	**-0.3**
KARP				S	**Sb**	**03 06 26.9**	**+1.2**
KARP				AML	AML	03 06 27.7	
	comp=N,46768μm,0.5s						
KARP				AML	AML	03 06 29.5	
	comp=E,49070μm,0.4s						
KARP	**Karpathos**	**0.74**	**37**	P	**Pb**	**03 06 15.2**	**-0.6**
KARP				S	**Sb**	**03 06 26.7**	**+1.0**
KARP	**Karpathos**	**0.74**	**37**	*e*Pg	**Pg**	**03 06 14.9**	**-0.7**
KARP	**Karpathos**	**0.74**	**37**	P	**Pb**	**03 06 15.2**	**-0.6**
KARP				S	**Sb**	**03 06 26.1**	**+0.4**
NPS	**Neapolis**	**0.87**	**291**	P	**Pb**	**03 06 18.2**	**+0.2**
NPS				S	**Sb**	**03 06 30.6**	**+1.2**
NPS				AML	AML	03 06 32.9	
	comp=N,19868μm,0.5s						
NPS				AML	AML	03 06 34.8	
	comp=E,29436μm,0.9s						
NPS	**Neapolis**	**0.87**	**291**	P	**Pb**	**03 06 18.2**	**+0.2**
NPS				S	**Sn**	**03 06 30.9**	**-0.4**
NPS	**Neapolis**	**0.87**	**291**	P	**Pb**	**03 06 18.2**	**+0.2**
NPS				S	**Sb**	**03 06 30.0**	**+0.5**
LAST	**Lasithi**	**0.95**	**282**	P	**Pb**	**03 06 19.0**	**-0.4**
LAST				AML	AML	03 06 39.2	
	comp=N,8591μm,0.6s						
LAST				AML	AML	03 06 40.5	
	comp=E,5716μm,0.7s						
LAST	**Lasithi**	**0.95**	**282**	P	**Pb**	**03 06 19.3**	**-0.1**
LAST				S	**Sn**	**03 06 34.4**	**+1.1**
LAST	**Lasithi**	**0.95**	**282**	P	**Pb**	**03 06 19.3**	**-0.1**
LAST				S	**Sn**	**03 06 34.4**	**+1.1**
IACM	**Heraklion**	**1.31**	**286**	P	**Pg**	**03 06 27.6**	**+1.2**
IACM	**Heraklion**	**1.31**	**286**	P	**Pg**	**03 06 27.0**	**+0.6**
IDI	**Anoyia**	**1.45**	**284**	Pn	**Pg**	**03 06 28.7**	**-0.4**
	comp=E,110nm,0.3s,baz=174,slow=7.3,SNR=381						
IDI				Sn	**Sg**	**03 06 47.3**	**-0.6**
	comp=E,183nm,0.3s,baz=350,slow=20,SNR=12						
IDI	**Anoyia**	**1.45**	**284**	PN	**Pg**	**03 06 30.4**	**+1.3**
IDI				SN	**Sg**	**03 06 49.9**	**+2.0**
IDI	**Anoyia**	**1.45**	**284**	*e*Pn	**Pg**	**03 06 30.4**	**+1.3**
IDI				*e*Sn	**Sg**	**03 06 49.9**	**+2.0**
SIVA	**Sivas**	**1.48**	**273**	P	**Pg**	**03 06 28.4**	**-1.3**
SIVA	**Sivas**	**1.48**	**273**	P	**Pg**	**03 06 29.1**	**

TURN	**Turunc**	**2.50**	**40**	PN	**Pn**	**03 06 38.7**	**-2.6**
TURN	**Turunc**	**2.50**	**40**	*i* P	**Pn**	**03 06 38.8**	**-2.5**
TURN				*i* S	**Sn**	**03 07 07.4**	**-4.1**
TURN	**Turunc**	**2.50**	**40**	*e*Pn	**Pn**	**03 06 38.7**	**-2.6**
MLSB	**Milas**	**2.51**	**22**	PN	**Pn**	**03 06 42.6**	**+1.1**
MLSB	**Milas**	**2.51**	**22**	*e*Pn	**Pn**	**03 06 42.6**	**+1.1**
FETY	**Fethiye**	**2.61**	**50**	PN	**Pn**	**03 06 43.3**	**+0.4**
FETY	**Fethiye**	**2.61**	**50**	P	**Pn**	**03 06 42.8**	**-0.1**
FETY	**Fethiye**	**2.61**	**50**	*e*Pn	**Pn**	**03 06 43.3**	**+0.4**
KSL	**Kastellorizon**	**2.70**	**63**	P	**Pn**	**03 06 45.3**	**+1.3**
SMG	**Samos**	**2.75**	**4**	P	**Pn**	**03 06 44.5**	**-0.2**
SMG	**Samos**	**2.75**	**4**	P	**Pn**	**03 06 45.4**	**+0.7**
AKAS	**Kas**	**2.75**	**62**	PN	**Pn**	**03 06 45.2**	**+0.3**
AKAS	**Kas**	**2.75**	**62**	*i* P	**Pn**	**03 06 45.1**	**+0.3**
AKAS				*i* S	**Sn**	**03 07 17.1**	**-0.7**
AKAS	**Kas**	**2.75**	**62**	P	**Pn**	**03 06 45.2**	**+0.3**
AKAS				S	**Sn**	**03 07 17.1**	**-0.7**
GCAM	**G?zelcaml?**	**2.78**	**10**	PN	**Pn**	**03 06 46.9**	**+1.8**
GCAM	**G?zelcaml?**	**2.78**	**10**	*e*Pn	**Pn**	**03 06 46.9**	**+1.8**
ANKY	**Antikythira Is**	**2.85**	**289**	P	**Pb**	**03 06 48.9**	**-2.9**
ANKY	**Antikythira Is**	**2.85**	**289**	P	**Pn**	**03 06 48.5**	**+2.4**
ANKY	**Antikythira Is**	**2.85**	**289**	P	**Pn**	**03 06 48.5**	**+2.4**
AYDN	**Tasoluk**	**2.88**	**20**	*i* P	**Pn**	**03 06 48.6**	**+2.0**
AYDN				*i* S	**Sb**	**03 07 27.8**	**+0.4**
AYDN	**Tasoluk**	**2.88**	**20**	P	**Pn**	**03 06 48.6**	**+2.0**
DGB	**˜zmir**	**3.09**	**4**	*i* P	**Pn**	**03 06 50.1**	**+0.7**
TAVA	**DENIZLI_Tavas**	**3.12**	**36**	*i* P	**Pn**	**03 06 51.4**	**+1.6**
TAVA	**DENIZLI_Tavas**	**3.12**	**36**	P	**Pn**	**03 06 51.4**	**+1.6**
AYDB	**Zeytinkoy-Aydi**	**3.15**	**19**	PN	**Pn**	**03 06 51.7**	**+1.3**
AYDB	**Zeytinkoy-Aydi**	**3.15**	**19**	*e*Pn	**Pn**	**03 06 51.7**	**+1.3**
KYTH	**Kithira**	**3.18**	**295**	P	**Pb**	**03 06 54.2**	**-3.2**
ELL	**Elmali**	**3.22**	**55**	PN	**Pn**	**03 06 52.8**	**+1.5**
ELL	**Elmali**	**3.22**	**55**	*e*Pn	**Pn**	**03 06 52.8**	**+1.5**
GOLH	**Golhisar**	**3.30**	**46**	*i* P	**Pn**	**03 06 53.2**	**+0.9**
GOLH	**Golhisar**	**3.30**	**46**	P	**Pn**	**03 06 53.2**	**+0.9**
URLA	**Izmir**	**3.39**	**360**	PN	**Pn**	**03 06 55.5**	**+1.9**
URLA	**Izmir**	**3.39**	**360**	*e*Pn	**Pn**	**03 06 55.5**	**+1.9**
CHOS	**Chios island**	**3.45**	**353**	PN	**Pn**	**03 06 55.7**	**+1.3**
CHOS	**Chios island**	**3.45**	**353**	*e*Pn	**Pn**	**03 06 55.7**	**+1.3**
VLI	**Veliai**	**3.46**	**302**	P	**Pn**	**03 06 56.0**	**+1.5**
VLI	**Veliai**	**3.46**	**302**	P	**Pn**	**03 06 56.1**	**+1.6**
VLI	**Veliai**	**3.46**	**302**	P	**Pn**	**03 06 56.1**	**+1.6**
SLUM	**Salum**	**3.65**	**199**	P	**Pn**	**03 06 59.4**	**+2.3**
	baz=205						
SLUM				AMP		03 07 00.0	
	baz=205						
SLUM	**Salum**	**3.65**	**199**	P	**Pn**	**03 06 59.4**	**+2.3**
KORT	**Korkueli**	**3.65**	**55**	PN	**Pn**	**03 06 59.4**	**+2.2**
KORT	**Korkueli**	**3.65**	**55**	*e*Pn	**Pn**	**03 06 59.4**	**+2.2**
ANTB	**Antalya**	**3.81**	**58**	PN	**Pn**	**03 07 01.4**	**+2.2**
ANTB	**Antalya**	**3.81**	**58**	*e*Pn	**Pn**	**03 07 01.4**	**+2.2**
KULA	**Kula-Manisa**	**3.91**	**24**	PN	**Pn**	**03 07 02.5**	**+1.8**
KULA	**Kula-Manisa**	**3.91**	**24**	*e*Pn	**Pn**	**03 07 02.5**	**+1.8**
ISP	**Isparta**	**4.26**	**47**	PN	**Pn**	**03 07 07.5**	**+2.0**
ISP	**Isparta**	**4.26**	**47**	*e*Pn	**Pn**	**03 07 07.5**	**+2.0**
SIGR	**SIGRI**	**4.29**	**352**	PN	**Pn**	**03 07 06.5**	**+0.7**
SIGR	**SIGRI**	**4.29**	**352**	*e*Pn	**Pn**	**03 07 06.5**	**+0.7**
SUTC	**Sutluce-Ispart**	**4.35**	**53**	PN	**Pn**	**03 07 09.3**	**+2.5**
SUTC	**Sutluce-Ispart**	**4.35**	**53**	*e*Pn	**Pn**	**03 07 09.3**	**+2.5**
SIMA	**Simav-Kutahya**	**4.53**	**24**	PN	**Pn**	**03 07 11.4**	**+2.1**
SIMA	**Simav-Kutahya**	**4.53**	**24**	*e*Pn	**Pn**	**03 07 11.4**	**+2.1**
AKMC	**Akamas**	**4.70**	**88**	P	**Pn**	**03 07 11.3**	**-0.2**
	baz=271						
AKMC	**Akamas**	**4.70**	**88**	P	**Pn**	**03 07 11.3**	**-0.2**
PPCY	**Paphos**	**4.71**	**89**	P	**Pn**	**03 07 11.8**	**+0.1**
	baz=273						
PPCY	**Paphos**	**4.71**	**89**	P	**Pn**	**03 07 11.8**	**+0.1**
BALB	**Balikesir**	**4.78**	**12**	PN	**Pn**	**03 07 15.3**	**+2.7**
BALB	**Balikesir**	**4.78**	**12**	*e*Pn	**Pn**	**03 07 15.3**	**+2.7**
ALFC	**Alefka**	**4.92**	**86**	P	**Pn**	**03 07 15.1**	**+0.6**
	baz=270						
ALFC				S	**Sn**	**03 08 09.2**	**-1.9**
ALFC	**Alefka**	**4.92**	**86**	P	**Pn**	**03 07 15.1**	**+0.6**
ALFC				S	**Sn**	**03 08 09.2**	**-1.9**
TVSB	**Tavsanli**	**5.03**	**26**	PN	**Pn**	**03 07 18.4**	**+2.3**
TVSB	**Tavsanli**	**5.03**	**26**	*e*Pn	**Pn**	**03 07 18.4**	**+2.3**
SZAC	**Souni**	**5.16**	**90**	P	**Pn**	**03 07 17.8**	**-0.1**
	baz=274						
SZAC				S	**Sn**	**03 08 16.0**	**-1.2**
SZAC	**Souni**	**5.16**	**90**	P	**Pn**	**03 07 17.8**	**-0.1**
SZAC				S	**Sn**	**03 08 16.0**	**-1.2**
CSS	**Mathiatis**	**5.52**	**88**	P	**Pn**	**03 07 23.4**	**+0.6**
	baz=272						
CSS	**Mathiatis**	**5.52**	**88**	P	**Pn**	**03 07 23.4**	**+0.6**
SWA2		**5.78**	**190**	P	**Pn**	**03 07 28.3**	**+1.9**
	baz=194						
SWA2				S	**Sn**	**03 08 29.0**	**-3.4**
	baz=194						
KOT	**Kottamia**	**6.68**	**137**	P	**Pn**	**03 07 37.3**	**-1.5**
	baz=137						
HHAG	**Hagoal**	**6.81**	**136**	S	**Sn**	**03 08 53.0**	**-4.9**
	baz=136						
RSH		**7.18**	**122**	P	**Pn**	**03 07 44.6**	**-1.0**
	baz=121						
BRTR	**Keskin Array B**	**7.34**	**48**	Pn	**Pn**	**03 07 48.2**	**+0.3**
	comp=E,0.2nm,0.3s,baz=218,slow=14,SNR=5.0						
BRTR				Sn	**Sn**	**03 09 10.6**	**-0.5**
	baz=218,slow=24,SNR=2.6						
MMAI	**Mount Meron Ar**	**7.56**	**102**	Pn	**Pn**	**03 07 50.1**	**-0.8**
	comp=E,2.2nm,0.3s,baz=274,slow=11,SNR=12						
MMAI				Sn	**Sn**	**03 09 13.1**	**-3.1**
	comp=E,2.6nm,0.3s,baz=301,slow=25,SNR=2.6						
ZNM	**Zenema**	**7.69**	**135**	P	**Pn**	**03 07 52.6**	**0.0**
	baz=135						
ZNM				AMP		03 09 00.0	
	baz=135						
ZNM	**Zenema**	**7.69**	**135**	P	**Pn**	**03 07 52.6**	**0.0**
SHBL	**Chebaa**	**7.74**	**99**	*e*P	**Pn**	**03 07 52.1**	**-1.3**
HFRF	**Wahat Farafira**	**7.92**	**169**	P	**Pn**	**03 07 56.5**	**+0.8**
	baz=170						
ASUT		**8.65**	**149**	P	**Pn**	**03 08 06.1**	**+0.3**
	baz=150						
EIL	**Elat**	**8.81**	**124**	Pn	**Pn**	**03 08 09.6**	**+1.6**
	comp=E,1.4nm,0.3s,baz=323,slow=3.6,SNR=32						
EIL				Sn	**Sn**	**03 09 43.7**	**-3.3**
	comp=E,1.8nm,0.3s,baz=56,slow=8.0,SNR=4.3						
HBST	**Basata**	**8.96**	**128**	P	**Pn**	**03 08 10.3**	**+0.3**
	baz=127						
ASF	**Jabal al Asfar**	**9.02**	**105**	Pn	**Pn**	**03 08 12.2**	**+1.3**
	comp=E,0.4nm,0.3s,baz=198,slow=3.2,SNR=2.8						
ASF				Sn	**Sn**	**03 09 55.1**	**+2.8**
	comp=E,0.2nm,0.3s,baz=38,slow=12,SNR=2.6						
HDK1	**Dakhla**	**9.69**	**165**	P	**Pn**	**03 08 21.1**	**+1.0**
	baz=166						
AKRG	**Al Kharijah**	**10.01**	**159**	P	**Pn**	**03 08 24.9**	**+0.5**
	baz=160						
VAE	**Valguarnera**	**10.17**	**288**	Pn	**Pn**	**03 08 25.1**	**-1.5**
	comp=E,0.8nm,0.3s,baz=8.8,slow=19,SNR=2.3						
VAE				Sn	**Sn**	**03 10 21.2**	**+0.8**
	comp=E,1.7nm,0.3s,baz=7.1,slow=16,SNR=4.0						
HSFG		**10.46**	**141**	P	**Pn**	**03 08 29.6**	**-1.1**
	baz=141						
MLR	**Muntele Rosu**	**10.53**	**357**	Pn	**Pn**	**03 08 35.2**	**+3.6**
	comp=E,0.0nm,0.3s,baz=222,slow=4.9,SNR=3.0						
KEST	**Kesra**	**14.12**	**278**	Pn	**P**	**03 09 25.2**	**-3.0**
	comp=E,0.0nm,0.3s,baz=63,slow=16,SNR=2.0						
KEST				LR	LR	03 15 40.4	
	comp=E,61nm,20.2s,baz=284,slow=41						
GNI	**Garni**	**15.28**	**65**	LR	LR	03 16 50.6	
	comp=E,66nm,18.2s,baz=274,slow=43						
KBZ	**Khabaz**	**15.32**	**50**	Pn	**P**	**03 09 43.7**	**+2.2**
	comp=E,0.1nm,0.3s,baz=249,slow=12,SNR=3.7						
AKASG	**Malin Array Be**	**15.85**	**6**	Pn	**Pn**	**03 09 42.8**	**-0.8**
	comp=E,0.3nm,0.3s,baz=194,slow=11,SNR=3.1						
GERES	**GERESS Array B**	**16.84**	**329**	Pn	**Pn**	**03 09 54.8**	**-1.5**
	comp=E,0.1nm,0.3s,baz=146,slow=11,SNR=2.4						
ESDC	**Sonseca Array**	**24.70**	**290**	P	**P**	**03 11 21.6**	**-0.1**
	comp=E,0.3nm,0.4s,baz=82,slow=9.6,SNR=8.8						
MDT	**Midelt**	**25.96**	**274**	LR	LR	03 23 41.3	
	comp=E,58nm,19.1s,baz=129,slow=41						
FINES	**FINESS Array B**	**26.50**	**359**	P	**P**	**03 11 36.9**	**-0.8**
	comp=E,1.0nm,0.7s,baz=179,slow=11,SNR=3.4						
HFS	**Hagfors**	**26.55**	**346**	P	**P**	**03 11 38.1**	**0.0**
	comp=E,0.6nm,0.5s,baz=125,slow=13,SNR=4.2						
AKTO	**Aktyubinsk**	**27.52**	**46**	P	**P**	**03 11 47.0**	**0.0**
	comp=E,2.3nm,0.6s,baz=240,slow=8.1,SNR=10.0						
EKA	**Eskdalemuir Ar**	**28.89**	**324**	P	**P**	**03 11 59.3**	**+0.2**
	comp=E,0.3nm,0.4s,baz=125,slow=10,SNR=5.0						
TORD	**Torodi Ar. Bea**	**31.29**	**232**	P	**P**	**03 12 22.1**	**+1.3**
	comp=E,1.5nm,0.6s,baz=32,slow=8.3,SNR=21						
KOWA	**Kowa**	**34.26**	**241**	P	**P**	**03 12 48.4**	**+1.6**
	comp=E,1.5nm,0.7s,baz=45,slow=7.1,SNR=3.0						
ARCES	**ARCESS Array B**	**34.63**	**359**	P	**P**	**03 12 47.4**	**-2.0**
	comp=E,2.2nm,1.0s,baz=186,slow=8.2,SNR=3.2						
BVAR	**Borovoye Array**	**35.63**	**46**	P	**P**	**03 12 58.2**	**0.0**
	comp=E,1.3nm,0.7s,baz=260,slow=8.1,SNR=5.4						
KURBB	**Kurchatov Arra**	**40.32**	**51**	P	**P**	**03 13 38.1**	**+0.4**
	comp=E,5.5nm,0.6s,baz=277,slow=8.8,SNR=40						
MKAR	**Makanchi Array**	**42.89**	**56**	P	**P**	**03 13 59.6**	**+0.7**
	comp=E,2.0nm,0.5s,baz=277,slow=7.2,SNR=14						
ZALV	**Zalesovo Beam**	**44.28**	**46**	P	**P**	**03 14 10.0**	**0.0**
	comp=E,5.6nm,0.4s,baz=266,slow=8.5,SNR=14						
SONM	**Songino Array**	**58.69**	**51**	P	**P**	**03 15 58.9**	**+0.8**
	comp=E,1.1nm,0.5s,baz=287,slow=7.8,SNR=9.1						
YKA	**Yellowknife Ar**	**78.00**	**343**	P	**P**	**03 17 58.8**	**+0.3**
	comp=E,0.4nm,0.5s,baz=28,slow=4.8,SNR=2.8						

CSEM ***20*** *03:12:33.7±0.6, 38°.59N×43°.62E, h21km±3km, ML2.4, Error ellipse: s-maj=13.0km s-min=5.8km az=136.0*
ATA ***20*** *03:12:33.6±1.1, 38°.69N×43°.57E, h2km±16km, ML2.5, MW2.8*
ISCJB ***20*** *03:12:34.7±1.1, 38°.61N±0°.05×43°.60E±0°.08, h22km±7km, Error ellipse: s-maj=11.6km s-min=6.4km az=38.5*
ISK ***20*** *03:12:34.9, 38°.68N×43°.47E, h15km, ML2.2/4*
DDA ***20*** *03:12:35.6, 38°.72N×43°.48E, h7km, Ml2.4*
ISC 20 03:12:35.1±1.1, 38°.65N±0°.04×43°.56E±0°.04, h19km±2km, n22, σ0°90/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.14**	**247**	PG	**Pg**	**03 12 39.5**	**-0.1**
VANB	**Van**	**0.14**	**247**	*e*Pg	**Pg**	**03 12 39.5**	**-0.1**
TVAN	**Van**	**0.17**	**224**	*i* P	**Pg**	**03 12 39.2**	**-0.8**
TVAN				*i* S	**Sg**	**03 12 44.2**	**+1.0**
TVAN	**Van**	**0.17**	**224**	P	**Pg**	**03 12 39.2**	**-0.8**
TVAN				S	**Sg**	**03 12 44.2**	**+1.0**
VMUR	**Van-Muradiye**	**0.34**	**2**	*i* P	**Pg**	**03 12 41.5**	**-1.0**
VMUR				*i* S	**Sb**	**03 12 48.5**	**+0.7**
VMUR	**Van-Muradiye**	**0.34**	**2**	P	**Pg**	**03 12 41.5**	**-1.0**
VMUR				S	**Sb**	**03 12 48.5**	**+0.7**
GEVA	**Gevas**	**0.52**	**229**	*e*P	**Pb**	**03 12 45.4**	**-0.3**
CLDR	**Caldiran**	**0.56**	**30**	PG	**Pb**	**03 12 46.6**	**+0.1**
CLDR				SG	**Sg**	**03 12 55.3**	**+1.1**
CLDR	**Caldiran**	**0.56**	**30**	*i* P	**Pb**	**03 12 45.1**	**-1.4**
CLDR				*i* S	**Sg**	**03 12 55.5**	**+1.3**
CLDR	**Caldiran**	**0.56**	**30**	P	**Pb**	**03 12 45.1**	**-1.4**
CLDR	**Caldiran**	**0.56**	**30**	*e*Pg	**Pb**	**03 12 46.6**	**+0.1**
CLDR				*e*Sg	**Sg**	**03 12 55.3**	**+1.1**
ADCV	**BITLIS_Adilcev**	**0.67**	**284**	*i* P	**Pb**	**03 12 47.9**	**-0.4**
ADCV				*i* S	**Sg**	**03 12 58.1**	**+0.6**
ADCV	**BITLIS_Adilcev**	**0.67**	**284**	P	**Pb**	**03 12 47.9**	**-0.4**
ADCV				S	**Sg**	**03 12 58.1**	**+0.6**
TUTA	**Tutak**	**0.95**	**322**	*e*P	**Pb**	**03 12 51.4**	**-1.8**
TUTA				*e*S	**Sb**	**03 13 06.2**	**+0.8**
TUTA				IAML		03 13 08.6	
	comp=Z,18nm,0.3s						
TUTA	**Tutak**	**0.95**	**322**	*i* P	**Pb**	**03 12 52.0**	**-1.2**
TUTA				*i* S	**Sg**	**03 13 06.6**	**+0.4**
TUTA	**Tutak**	**0.95**	**322**	P	**Pb**	**03 12 52.0**	**-1.2**
TUTA				S	**Sg**	**03 13 06.6**	**+0.4**
AGRB	**Hanur-Agry**	**1.02**	**335**	PG	**Pb**	**03 12 53.9**	**-0.5**
AGRB	**Hanur-Agry**	**1.02**	**335**	*e*Pg	**Pb**	**03 12 53.9**	**-0.5**
GURO	**Guroymak-BITLI**	**1.20**	**266**	PN	**Pn**	**03 12 56.9**	**-0.2**
GURO	**Guroymak-BITLI**	**1.20**	**266**	*e*Pn	**Pn**	**03 12 56.9**	**-0.2**
IGDI	**IGDIR**	**1.28**	**18**	*e*P	**Pn**	**03 12 57.5**	**-0.6**
IGDI				*i* Pg	**Pg**	**03 13 00.2**	**+0.3**
EATA	**Eleskirt**	**1.47**	**326**	*e*P	**Pn**	**03 13 01.3**	**+0.4**
EATA				*e*S	**Sg**	**03 13 24.3**	**+1.7**
EATA				IAML		03 13 26.4	
	comp=Z,1.4nm,0.6s						

IDC 20 03:16:16.4±2.1, 5°.74S×151°.59E, h0km, mb3.4/3, mb1 3.8/3, mb1mx3.3/46, mbtmp3.5/3, Error ellipse: s-maj=134.5km s-min=30.1km az=126.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.92**	**228**	P	P	03 21 11.6	-0.1
	0.6nm,0.6s,baz=54,slow=10,SNR=7.1						
ASAR	**Alice Springs**	**24.65**	**222**	P	P	03 21 39.1	+0.1
	0.7nm,0.6s,baz=56,slow=9.0,SNR=5.6						
ILAR	**Eielson Array**	**83.48**	**22**	P	P	03 28 45.8	0.0
	0.5nm,0.9s,baz=260,slow=5.5,SNR=5.0						
TORD	**Torodi Ar. Bea**	**149.43**	**286**	PKPbc	PKPbc	03 36 08.2	-0.5
	0.5nm,0.7s,baz=78,slow=3.2,SNR=5.5						

MEX 20 03:49:15.3±0.8, 15°.81N×93°.49W, h84km±6km, MD3.7, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.28**	**112**	*e*P	Pn	03 49 26.2	-1.7
PCIG				*e*S	Sn	03 49 36.1	-1.3
TGIG		**1.03**	**20**	*i* P	Pn	03 49 33.9	-1.1
TGIG				*e*S	Sn	03 49 47.6	-2.2
CCIG	**Comitan**	**1.38**	**70**	*e*P	Pn	03 49 38.7	-0.8
CCIG				*e*S	Sn	03 49 55.9	-1.9

ISCJB ***20*** *03:55:51.9±0.8, 38°.65N±0°.04×43°.23E±0°.06, h29km±6km, Error ellipse: s-maj=8.3km s-min=6.9km az=33.5*
ISK ***20*** *03:55:51.0, 38°.68N×43°.22E, h20km, ML2.2/3*
CSEM ***20*** *03:55:52.3±0.3, 38°.68N×43°.19E, h10km, ML2.7, Error ellipse: s-maj=5.7km s-min=5.5km az=49.0*
DDA ***20*** *03:55:52.6, 38°.64N×43°.20E, h7km, Ml2.7*
ISC 20 03:55:51.6±1.0, 38°.65N±0°.04×43°.24E±0°.04, h28km±8km, n18, σ0°48/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.13**	**115**	PG	**Pb**	**03 55 56.9**	**-0.2**
VANB				SG	**Sb**	**03 56 01.1**	**+0.3**
VANB	**Van**	**0.13**	**115**	*e*Pg	**Pb**	**03 55 56.9**	**-0.2**
VANB				*e*Sg	**Sb**	**03 56 01.1**	**+0.3**
TVAN	**Van**	**0.18**	**133**	*i* P	**Pb**	**03 55 57.2**	**-0.4**
TVAN				*i* S	**Sb**	**03 56 01.4**	**-0.4**
TVAN	**Van**	**0.18**	**133**	P	**Pb**	**03 55 57.2**	**-0.4**
TVAN				S	**Sb**	**03 56 01.4**	**-0.4**
GEVA	**Gevas**	**0.37**	**202**	*i* P	**Pb**	**03 55 59.5**	**-0.5**
GEVA				*i* S	**Sb**	**03 56 06.6**	**+0.9**
GEVA	**Gevas**	**0.37**	**202**	P	**Pb**	**03 55 59.5**	**-0.5**
GEVA				S	**Sb**	**03 56 06.6**	**+0.9**
VMUR	**Van-Muradiye**	**0.43**	**38**	*i* P	**Pb**	**03 56 01.4**	**+0.5**
VMUR				*i* S	**Sn**	**03 56 08.7**	**-0.4**
VMUR	**Van-Muradiye**	**0.43**	**38**	P	**Pb**	**03 56 01.5**	**+0.5**
VMUR				S	**Sn**	**03 56 08.7**	**-0.4**
ADCV	**BITLIS_Adilcev**	**0.43**	**291**	*i* P	**Pb**	**03 56 00.6**	**-0.3**
ADCV				*i* S	**Sb**	**03 56 07.7**	**+0.4**
ADCV	**BITLIS_Adilcev**	**0.43**	**291**	P	**Pb**	**03 56 00.6**	**-0.3**
ADCV				S	**Sb**	**03 56 07.7**	**+0.4**
CLDR	**Caldiran**	**0.72**	**47**	PG	**Pb**	**03 56 05.5**	**-0.3**
CLDR	**Caldiran**	**0.72**	**47**	*e*Pg	**Pb**	**03 56 05.5**	**-0.3**
TUTA	**Tutak**	**0.82**	**336**	*i* P	**Pn**	**03 56 07.9**	**+0.4**
TUTA				*i* S	**Sb**	**03 56 17.6**	**-0.6**
TUTA	**Tutak**	**0.82**	**336**	P	**Pn**	**03 56 07.9**	**+0.4**
TUTA				S	**Sb**	**03 56 17.6**	**-0.6**
AGRB	**Hanur-Agry**	**0.94**	**348**	PG	**Pn**	**03 56 09.3**	**+0.2**
AGRB	**Hanur-Agry**	**0.94**	**348**	*e*Pg	**Pn**	**03 56 09.3**	**+0.2**
GURO	**Guroymak-BITLI**	**0.95**	**264**	PG	**Pn**	**03 56 09.5**	**+0.3**
GURO	**Guroymak-BITLI**	**0.95**	**264**	*e*Pg	**Pn**	**03 56 09.5**	**+0.3**

DJA 20 04:06:38.0±0.3, 3°.S±2°.×12°.2E±°, h10km, M4.0/7, mb4.8/1, MLv3.7/7, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDI	**Kendari**	**1.57**	**148**	P	Pn	04 07 05.6	-0.4
KDI				S	Sb	04 07 26.9	-0.3
APSI	**Ampana**	**1.69**	**355**	P	Pn	04 07 07.1	-0.6
APSI				S	Sb	04 07 30.2	-0.5
LUWI	**Luwuk**	**1.84**	**32**	P	Pn	04 07 09.3	-0.4
LUWI				S	Sb	04 07 34.1	-0.8
TTSI	**Tana Toraja**	**2.02**	**258**	P	Pn	04 07 11.7	-0.4
SPSI	**Sidrap Palu**	**2.42**	**236**	P	Pn	04 07 17.7	0.0
MPSI	**Mapaga**	**3.49**	**327**	P	Pn	04 07 32.4	+0.1
LBMI	**Labuha**	**6.04**	**71**	P	Pn	04 08 06.9	-0.5

IDC 20 04:20:10.7±1.4, 3°.13N×128°.40E, h0km, mb3.8/4, mb1 4.0/5, mb1mx3.6/55, mbtmp3.8/5, ML3.8/1, MS2.6/1, Ms1 2.6/1, ms1mx2.2/61, Error ellipse: s-maj=99.8km s-min=19.4km az=65.0, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.89**	**144**	Pn	Pn	04 21 25.4	-0.2
	3.6nm,0.3s,baz=324,slow=19,SNR=9.9						
SIJI				Sn	Sn	04 22 15.6	-7.5
	3.6nm,0.3s,baz=249,slow=22,SNR=8.1						
GUMO	**Guam**	**19.30**	**56**	LR	LR	04 31 16.6	
	comp=Z,19nm,19.6s,baz=310,slow=34						
WRA	**Warramunga Arr**	**23.66**	**166**	P	P	04 25 24.0	0.0
	4.1nm,0.6s,baz=346,slow=11,SNR=32						
ASAR	**Alice Springs**	**27.17**	**169**	P	P	04 25 56.0	-0.1
	0.4nm,0.4s,baz=2.2,slow=8.7,SNR=5.4						
MKAR	**Makanchi Array**	**59.00**	**325**	P	P	04 30 12.6	+0.3
	0.7nm,0.6s,baz=123,slow=7.1,SNR=6.4						
KURBB	**Kurchatov Arra**	**63.15**	**327**	P	P	04 30 40.1	-0.2
	0.7nm,0.6s,baz=129,slow=6.3,SNR=5.7						

IDC ***20*** *04:50:30.2±0.7, 53°.01N×170°.59E, h0km, mb4.1/24, mb1 4.2/26, mb1mx4.1/82, mbtmp4.1/26, ML3.2/2, MS3.4/10, Ms1 3.4/10, ms1mx2.9/75, Error ellipse: s-maj=19.3km s-min=12.4km az=178.0*
NEIC ***20*** *04:50:31.8±3.9, 52°.99N×170°.46E, h9km±24km, mb4.6/62, ML3.8(AEIC), Error ellipse: s-maj=8.8km s-min=6.3km az=181.0*
BJI ***20*** *04:50:32.3, 53°.00N×170°.50E, h25km, mb4.8/17, mB4.9/5, Ms4.5/3, Ms7 4.4/1*
ISCJB ***20*** *04:50:32.1±0.2, 52°.85N±0°.04×170°.48E±0°.02, h28km, mb4.4/94, MS3.2/10, Error ellipse: s-maj=5.5km s-min=2.0km az=5.3*
MOS ***20*** *04:50:33.3±0.8, 52°.92N×170°.44E, h36km, mb4.5/34, Error ellipse: s-maj=7.5km s-min=4.5km az=129.3*
KRSC ***20*** *04:50:35.2±1.5, 52°.94N×170°.19E, h145km±40km, ML4.5*
ISC 20 04:50:33.6±0.5, 52°.80N±0°.07×170°.51E±0°.04, h28km, n258, σ1°.77/286, mb4.5/94, MS3.3/11, 4C-2D, Near Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMY	**Shemya**	**2.18**	**90**	P	**Pn**	**04 51 07.0**	**-1.0**
SMY				S	**Sn**	**04 51 32.6**	**-1.4**
SMY	**Shemya**	**2.18**	**90**	P	**Pn**	**04 51 07.0**	**-1.0**
SMY				S	**Sn**	**04 51 32.6**	**-1.4**
BKI	**Bering**	**3.60**	**314**	*e*P	**Pn**	**04 51 27.9**	**+0.4**
BKI				*e*S	**Sn**	**04 52 08.8**	**-0.2**
BKI	**Bering**	**3.60**	**314**	P	**Pn**	**04 51 27.9**	**+0.4**
BKI				S	**Sn**	**04 52 08.8**	**-0.2**
LSNW	**Little Sitkin**	**4.97**	**96**	P	**Pn**	**04 51 47.1**	**+0.8**
LSNW				S	**Sn**	**04 52 40.7**	**-2.2**
LSSA	**Little Sitkin**	**4.98**	**97**	P	**Pn**	**04 51 47.4**	**+1.0**
LSPA	**Little Sitkin**	**5.01**	**96**	P	**Pn**	**04 51 48.4**	**+1.5**
LSSE	**Little Sitkin**	**5.01**	**97**	P	**Pn**	**04 51 48.2**	**+1.3**
MKZ	**Mys Kozlova**	**5.51**	**292**	*e*P	**Pn**	**04 51 53.2**	**-0.5**
MKZ				*e*S	**Sn**	**04 52 54.0**	**-2.0**
MKZ	**Mys Kozlova**	**5.51**	**292**	P	**Pn**	**04 51 53.2**	**-0.5**
MKZ				S	**Sn**	**04 52 54.0**	**-2.0**
CETU	**Semis' Tuman**	**5.56**	**95**	P	**Pn**	**04 51 55.6**	**+1.1**
CETU				S	**Sn**	**04 52 57.6**	**+0.2**
AMKA	**Amchitka**	**5.60**	**101**	P	**Pn**	**04 51 55.7**	**+0.3**

PEA1 *e*Sn **Sn** **04 53 49.6 -1.6**
PETK Petropavlovsk- 7.75 277 Pn **Pn** **04 52 25.8 +1.4**
1.6nm,0.3s,baz=91,slow=20,SNR=13
PETK Sn **Sn** **04 53 49.6 -1.6**
1.9nm,0.3s,baz=26,slow=17,SNR=7.4
PETK Petropavlovsk- 7.75 277 *e*Pn **Pn** **04 52 26.2 +1.8**
PETK Sn **Sn** **04 53 49.6 -1.6**
ADAG Mount Adagdak 7.93 91 P **Pn** **04 52 26.5 -0.4**
TILK Tilichiki 8.03 344 *e*P **Pn** **04 52 28.3 0.0**
TILK Tilichiki 8.03 344 P **Pn** **04 52 28.3 0.0**
APC Apacha 8.09 276 *e*P **Pn** **04 52 28.6 -0.4**
APC *e*S **Sn** **04 53 54.5 -4.9**
APC Apacha 8.09 276 P **Pn** **04 52 28.6 -0.4**
APC S **Sn** **04 53 54.5 -4.9**
SKR Severo-Kuril's 9.18 262 *e*S **Sn** **04 54 19.4 -6.9**
KOKL Mount Kliuchef 9.33 87 P **Pn** **04 52 45.1 -1.0**
ATKA Atka Island 9.35 88 P **Pn** **04 52 45.4 -0.9**
ATKA S **Sn** **04 54 26.7 -3.7**
KOFP Korovin Flat P 9.40 87 P **Pn** **04 52 46.5 -0.6**
KMSK Kamenskaya 9.96 348 *e*P **Pn** **04 52 54.3 -0.4**
KMSK Kamenskaya 9.96 348 P **Pn** **04 52 54.3 -0.4**
SPIA Saint Paul Isl 11.88 61 P **Pn** **04 53 20.3 -0.6**
SPIA *e*Sn **Sn** **04 55 31.1 -1.2**
MA2 Magadan 12.89 310 LR LR 04 58 37.7
comp=Z,147nm,18.8s,baz=80,slow=38
SEY Seymchan 13.95 324 Pn **Pn** **04 53 46.9 -2.2**
0.1nm,0.3s,baz=113,slow=7.7,SNR=2.7
BILL Bilibino 15.43 354⇑*i*P **Pn** **04 54 09.0 0.0**
BILL *e*S **Sn** **04 57 00.5 +1.8**
BILL pmax pmax
comp=Z,13nm,1.7s
SVW2 Sparrevohn 20.06 52 *e*P **P** **04 55 04.4 +0.1**
comp=Z,4.6nm,0.6s
ASAJ Asahikawa 20.34 256 LR LR 05 04 38.7
comp=Z,45nm,18.4s,baz=181,slow=42
OHAK Old Harbor 21.05 63 *e*P **P** **04 55 12.6 -2.5**
comp=Z,26nm,0.7s
RSO Redoubt South 21.36 54 *e*P **P** **04 55 12.8 -5.8**
KDAK Kodiak Island 21.40 62 P **P** **04 55 16.6 -2.2**
comp=Z,7.4nm,0.3s,baz=297,slow=4.1,SNR=36
KDAK LR LR 05 05 14.7
comp=Z,94nm,18.1s,baz=268,slow=42
KDAK Kodiak Island 21.40 62 *e*P **P** **04 55 17.3 -1.5**
comp=Z,57nm,1.7s
SPU Mount Spurr 21.77 53 *e*P **P** **04 55 23.3 +0.5**
PPLA Purkeypile 21.95 48 *e*P **P** **04 55 24.8 0.0**
comp=Z,7.6nm,0.7s
CNPM China Poot 22.08 57 *e*P **P** **04 55 25.6 -0.6**
comp=Z,18nm,0.6s
CAST Castle Rocks 22.09 47 *e*P **P** **04 55 26.8 +0.6**
comp=Z,10nm,0.8s
SKT Skwentna 22.11 51 *e*P **P** **04 55 28.1 +1.7**
comp=Z,10nm,0.9s
SUA Susitna One 22.43 52 *e*P **P** **04 55 29.8 -0.1**
comp=Z,34nm,1.8s
KTH Kantishna Hill 22.62 47 *e*P **P** **04 55 31.9 -0.1**
comp=Z,13nm,0.9s
BPAW Bear Paw Mtn. 22.70 45 *e*P **P** **04 55 33.4 +0.7**
comp=Z,11nm,0.8s
TRF Thorofare Moun 22.89 47 *e*P **P** **04 55 35.5 +0.7**
comp=Z,9.7nm,0.7s
MLY Manley 23.01 43 *e*P **P** **04 55 36.5 +0.6**
comp=Z,5.0nm,1.0s
GHO Glory Hole Cre 23.32 51 *e*P **P** **04 55 41.0 +1.9**
comp=Z,6.6nm,0.6s
BWN Browne 23.37 45 *e*P **P** **04 55 41.7 +2.2**
comp=Z,29nm,0.6s
RND Reindeer 23.52 47 *e*P **P** **04 55 39.4 -1.7**
comp=Z,10nm,0.6s
RND Reindeer 23.52 47 *e*P **P** **04 55 39.4 -1.7**
RND pmax pmax
comp=Z,10.0nm,0.6s
MCK McKinley 23.53 46 *e*P **P** **04 55 41.0 -0.1**
comp=Z,18nm,0.8s
MCK McKinley 23.53 46 *e*P **P** **04 55 41.0 -0.1**
MCK pmax pmax
comp=Z,18nm,0.8s
SML Sawmill 23.60 51 *e*P **P** **04 55 41.8 0.0**
comp=Z,17nm,0.5s
SML Sawmill 23.60 51 *e*P **P** **04 55 41.8 0.0**
SML pmax pmax
comp=Z,17nm,0.5s
COLD Coldfoot 23.82 38 *e*P **P** **04 55 43.9 +0.1**
comp=Z,5.7nm,0.6s
WRH Wood River Hil 24.01 45 *e*P **P** **04 55 43.9 -1.7**
comp=Z,10nm,0.8s
MDM Murphy Dome 24.04 44 *e*P **P** **04 55 44.2 -1.7**
comp=Z,14nm,0.9s
SCM Sheep Creek Mo 24.08 51 *e*P **P** **04 55 45.8 -0.6**
comp=Z,11nm,0.6s
SCM Sheep Creek Mo 24.08 51 *e*P **P** **04 55 45.8 -0.6**
SCM pmax pmax
comp=Z,11nm,0.6s
DHY Denali Highway 24.15 48 *e*P **P** **04 55 46.0 -1.0**
comp=Z,6.7nm,0.8s
CCB Clear Creek Bu 24.16 44 *e*P **P** **04 55 45.1 -1.9**
comp=Z,11nm,0.6s
COLA College 24.18 44 *e*P **P** **04 55 47.0 -0.1**
comp=Z,26nm,0.8s
COLA *e*S **S** **05 00 05.6 +2.4**
COLA College 24.18 44 *e*P **P** **04 55 47.0 -0.1**
COLA *e*S **S** **05 00 05.6 +2.4**
COLA pmax pmax
comp=Z,26nm,0.8s
KLR Kul'dur 24.44 277 P **P** **04 55 50.9 +1.2**
comp=Z,0.1nm,0.5s,baz=59,slow=10,SNR=5.0
KLR LR LR 05 05 02.9
comp=Z,6.2nm,19.5s,baz=89,slow=36
KLR Kul'dur 24.44 277⇑*e*P **P** **04 55 52.5 +2.8**
HDA Harding Lake 24.49 45 *e*P **P** **04 55 51.5 +1.4**
comp=Z,9.0nm,0.6s
TOLK Toolik Lake Re 24.50 35 *e*P **P** **04 55 48.5 -1.6**
comp=Z,12nm,0.6s
IL1 Eielson Array 24.57 44 *e*P **P** **04 55 49.5 -1.2**
ILAR Eielson Array 24.57 44 P **P** **04 55 48.8 -1.9**
comp=Z,6.8nm,0.6s,baz=254,slow=7.7,SNR=54
ILAR LR LR 05 05 47.4
comp=Z,62nm,18.4s,baz=279,slow=38
ILB Eielson Array 24.57 44 *e*P **P** **04 55 49.6 -1.2**
KLU Klutina 24.74 52 *e*P **P** **04 55 53.3 +0.9**
comp=Z,9.1nm,0.6s
DIV Divide 24.81 53 *e*P **P** **04 55 54.5 +1.5**
comp=Z,8.2nm,0.6s
PAX Paxson 25.00 49 *e*P **P** **04 55 54.4 -0.4**
comp=Z,16nm,0.7s
PAX Paxson 25.00 49 *e*P **P** **04 55 54.4 -0.4**
PAX pmax pmax
comp=Z,16nm,0.7s
RIDG Independ'e Rid 25.34 47 *e*P **P** **04 55 57.7 -0.1**
comp=Z,14nm,0.8s
RAGM Ragged Mountai 25.37 55 *e*P **P** **04 55 59.8 +1.8**
comp=Z,49nm,0.8s
BMRM Bremner River 25.38 53 *e*P **P** **04 56 00.1 +2.0**
comp=Z,18nm,0.7s
FYU Fort Yukon 25.55 40 *e*P **P** **04 56 00.7 +1.1**
comp=Z,19nm,0.8s
DOT Dot Lake 25.68 47 *e*P **P** **04 56 00.2 -0.6**
comp=Z,79nm,0.7s
SCRK Sand Creek 25.74 46 *e*P **P** **04 55 59.9 -1.5**
comp=Z,18nm,0.5s
CRQM Cirque 26.11 54 *e*P **P** **04 56 05.9 +1.0**
comp=Z,28nm,0.6s
TIXI Tiksi 26.18 332 P **P** **04 56 04.6 -0.6**
comp=Z,3.6nm,0.7s,baz=117,slow=12,SNR=11
TIXI Tiksi 26.18 332*ce*P **P** **04 56 06.5 +1.3**
TIXI pmax pmax
comp=Z,16nm,1.7s
TGL Tana Glacier 26.26 54 *e*P **P** **04 56 07.4 +1.2**
comp=Z,12nm,0.8s
EGAK Eagle 27.01 45 *e*P **P** **04 56 12.0 -0.8**
comp=Z,12nm,0.8s
DAWY Dawson 27.76 46 *e*P **P** **04 56 20.5 +0.9**
comp=Z,8.3nm,0.9s
INK Inuvik 30.24 38 P **P** **04 56 40.2 -1.2**
comp=Z,0.8nm,0.3s,baz=250,slow=5.7,SNR=7.1
CN2 Changchun 30.84 271 *e*P P 04 56 52.3 +5.3
DLBC Dease Lake 33.06 56 P **P** **04 57 07.3 +0.8**
comp=Z,4.3nm,0.7s,baz=307,slow=5.7,SNR=10
DLBC Dease Lake 33.06 56 *e*P **P** **04 57 07.7 +1.2**
comp=Z,5.2nm,0.7s
H11N2 WAKE ISLAND Hy 33.12 186 T T 05 32 20.9
baz=4.6,slow=76,SNR=1453
H11N3 WAKE ISLAND Hy 33.14 186 T T 05 32 21.8
baz=4.6,slow=76,SNR=1472
H11N1 WAKE ISLAND Hy 33.14 186 T T 05 32 22.4
baz=4.6,slow=76,SNR=1572
H11S1 WAKE ISLAND Hy 34.35 186 T T 05 33 56.6
baz=4.5,slow=76,SNR=3496
H11S3 WAKE ISLAND Hy 34.37 186 T T 05 33 57.4
baz=4.5,slow=76,SNR=1981
H11S2 WAKE ISLAND Hy 34.37 186 T T 05 33 57.9
baz=4.5,slow=76,SNR=1658
YKA Yellowknife Ar 38.99 45 P **P** **04 57 55.9 -1.0**
comp=Z,1.3nm,0.6s,baz=290,slow=7.6,SNR=7.2
YKA Yellowknife Ar 38.99 45 *i*P **P** **04 57 55.7 -1.3**
YKA pmax pmax
comp=Z,1.0nm,0.6s
YKB5 Yellowknife Ar 38.99 45 *e*P **P** **04 57 55.9 -1.0**
TLY Talaya 39.62 296 LR LR 05 15 14.3
comp=Z,65nm,19.6s,baz=47,slow=38
ULN Ulaanbaatar 39.63 289*de*P **P** **04 58 04.4 +1.7**
ULN pmax pmax
comp=Z,4.0nm,1.7s
NRIK Noril'sk 39.71 327 LR LR 05 13 48.7
comp=Z,43nm,18.4s,baz=142,slow=35
SONA0 Songino Array 40.03 290 *e*P **P** **04 58 07.2 +1.3**
SONM Songino Array 40.03 290 P **P** **04 58 07.2 +1.3**
comp=Z,0.9nm,0.7s,baz=52,slow=9.6,SNR=5.8
SONM LR LR 05 14 09.5
comp=Z,43nm,20.6s,baz=86,slow=36
HHC Hu-ho-hao-te 40.95 277 *e*P **P** **04 58 14.8 +1.2**
HHC pmax pmax
comp=Z,32nm,0.5s
HHC pmax pmax
comp=Z,100nm,5.4s
RES Resolute Bay 41.14 24 P **P** **04 58 14.1 -0.6**
comp=Z,1.4nm,0.8s,baz=310,slow=7.9,SNR=3.0
NJ2 Nanjing 42.31 262 *e*P **P** **04 58 26.6 +1.9**
NJ2 pmax pmax
comp=Z,18nm,0.7s
YBH Yreka Blue Hor 45.08 76 P **P** **04 58 47.9 +0.9**
comp=Z,1.4nm,0.6s,baz=342,slow=6.4,SNR=5.2
WALA Waterton Lakes 45.74 63 *e*P **P** **04 58 52.2 0.0**
comp=Z,9.2nm,0.8s
MOD Modoc Plateau 46.39 75 *e*P **P** **04 58 58.7 +1.2**
comp=Z,20nm,1.8s
SPA0 Spitsbergen Ar 48.33 353 *e*P **P** **04 59 10.7 -1.2**
SPITS Spitsbergen Ar 48.33 353 P **P** **04 59 10.7 -1.2**
comp=Z,1.4nm,0.4s,baz=46,slow=8.3,SNR=8.2
LZH Lanzhou 48.64 278 *e*P **P** **04 59 15.3 +0.3**
LZH pP pP 04 59 24.4 +0.9
LZH sP sP 04 59 28.4 +1.5
LZH pmax pmax
comp=Z,22nm,1.1s
HLID Hailey 48.75 69 *e*P **P** **04 59 16.4 +0.6**
comp=Z,6.2nm,1.8s
MCMT McKenzie Canyo 48.84 67 *e*P **P** **04 59 16.4 -0.2**
GTA Gaotai 48.86 284 *e*P **P** **04 59 18.5 +1.9**
GTA pP sP 04 59 27.8 -0.7
GTA sP pP 04 59 31.8 +6.7
GTA pmax pmax
comp=Z,6.0nm,1.2s
BOZ Bozeman (W) 49.05 65 *e*P **P** **04 59 17.8 -0.2**
comp=Z,2.9nm,0.6s
BOZ Bozeman (W) 49.05 65 *e*P **P** **04 59 17.8 -0.2**
BOZ pmax pmax
comp=Z,3.0nm,0.6s
NV01 Mina Array Sit 49.79 77 *e*P **P** **04 59 24.1 +0.2**
NVAR Mina Array Bea 49.79 77 P **P** **04 59 24.1 +0.2**
comp=Z,0.5nm,0.5s,baz=311,slow=7.4,SNR=3.5
YFT Old Faithful 50.20 66 *e*P **P** **04 59 29.2 +2.2**
comp=Z,6.3nm,0.8s
RLMT Red Lodge 50.64 64 *e*P **P** **04 59 31.3 +1.1**
comp=Z,3.6nm,0.8s
PD31 Pinedale Array 51.99 67 *e*P **P** **04 59 37.9 -2.5**
PDAR Pinedale Array 51.99 67 P **P** **04 59 40.7 +0.3**
comp=Z,2.0nm,0.6s,baz=308,slow=3.2,SNR=18
PDAR Pinedale Array 51.99 67 *e*P **P** **04 59 36.8 -3.6**
CD2 Chengdu 52.26 273 P **P** **04 59 42.4 +0.1**
CD2 pmax pmax
comp=Z,20nm,0.6s
PASC Pasadena Art C 52.73 81 *e*P **P** **04 59 44.9 -0.7**
PASC *ep*P **pP** **04 59 49.3 -4.9**
WMQ Urumqi 52.90 296 P **P** **04 59 49.8 +2.9**
WMQ pP sP 04 59 58.6 -0.2
WMQ pmax pmax
comp=Z,22nm,0.7s
WMQ LR LR
comp=Z,60nm,18.9s
KURK Kurchatov 53.09 307 *e*P **P** **04 59 46.4 -1.6**
comp=Z,10nm,0.8s
KURK Kurchatov 53.09 307*ce*P **P** **04 59 46.2 -1.8**
KURK pmax pmax
comp=Z,7.0nm,0.8s
TMUT Trail Mountain 53.35 71 *e*P **P** **04 59 52.3 +1.7**
comp=Z,2.6nm,0.6s
RSSD Black Hills 54.13 62 *e*P **P** **04 59 56.7 +0.6**
comp=Z,3.7nm,0.6s
RSSD Black Hills 54.13 62 *e*P **P** **04 59 56.7 +0.6**
RSSD pmax pmax
comp=Z,4.0nm,0.6s
ARA0 ARCESS Array S 55.33 346 *e*P **P** **05 00 03.4 -0.7**
ARCES ARCESS Array B 55.33 346 P **P** **05 00 03.4 -0.7**
comp=Z,3.1nm,0.8s,baz=34,slow=8.8,SNR=5.7
BVAR Borovoye Array 55.34 314 P **P** **05 00 04.5 0.0**
comp=Z,1.0nm,0.6s,baz=14,slow=6.7,SNR=5.5
BRVK Borovoye 55.36 314⇓*e*P **P** **05 00 04.8 +0.2**
BRVK pmax pmax
comp=Z,2.0nm,0.7s
PV03 Paradox Valley 55.41 71 *e*P **P** **05 00 06.8 +1.4**
comp=Z,2.3nm,0.8s
PV13 Radium Mtn., P 55.49 71 *e*P **P** **05 00 07.6 +1.5**
comp=Z,5.8nm,0.7s
PV01 Paradox Valley 55.65 71 *e*P **P** **05 00 09.5 +2.3**
comp=Z,1.8nm,0.7s
ISCO Idaho Springs 56.19 67 *e*P **P** **05 00 12.9 +1.8**
comp=Z,5.9nm,1.4s
ISCO Idaho Springs 56.19 67 *e*P **P** **05 00 12.9 +1.8**
ISCO pmax pmax
comp=Z,6.0nm,1.4s
D34A Park Rapids 56.70 55 *e*P **P** **05 00 13.6 -0.7**
comp=Z,10nm,0.4s
S22A 4UR Ranch, Cre 56.92 70 *e*P **P** **05 00 18.6 +2.4**
comp=Z,4.4nm,1.4s
ARU Arti 57.68 322 LR LR 05 27 46.9
comp=Z,45nm,19.0s,baz=148,slow=39
ANMO Albuquerque 59.10 72 LR LR 05 23 52.3
comp=Z,19nm,21.7s,baz=54,slow=34
N37A Lea Faris, Mcu 61.69 59 *e*P **P** **05 00 45.5 -3.3**
comp=Z,55nm,0.3s
AKTO Aktyubinsk 62.46 318 P **P** **05 00 53.8 -0.1**
comp=Z,2.2nm,0.6s,baz=42,slow=12,SNR=6.1
AKTO Aktyubinsk 62.46 318 P **P** **05 00 53.8 -0.1**
AKTO pmax pmax
comp=Z,1.0nm,0.6s
ABKAR Akbulak array 62.58 316 *e*P **P** **05 00 54.8 +0.1**
FIA0 FINESS Array S 62.64 342 *e*P **P** **05 00 54.1 -0.8**
FIA0 FINESS Array S 62.64 342 *e*P **P** **05 00 54.1 -0.8**
FINES FINESS Array B 62.64 342 P **P** **05 00 54.1 -0.8**
comp=Z,1.8nm,0.7s,baz=38,slow=7.0,SNR=3.9
FINES FINESS Array B 62.64 342 *i*P **P** **05 00 54.4 -0.5**
FINES pmax pmax
comp=Z,2.0nm,0.7s
P40A Paris 63.71 59 *e*P **P** **05 01 04.3 +1.9**
comp=Z,5.5nm,1.1s
R40A Maddies Statio 64.52 60 *e*P **P** **05 01 07.2 -0.5**
comp=Z,2.6nm,0.6s
TX31 Lajitas Ar. Si 64.79 74 *e*P **P** **05 01 11.4 +1.7**
TXAR Lajitas Array 64.79 74 P **P** **05 01 09.9 +0.2**
comp=Z,1.7nm,0.9s,baz=302,slow=3.5,SNR=8.8
NB2 NORSAR Subarra 65.31 349 P **P** **05 01 11.8 -0.7**
comp=Z,0.6nm,0.5s,baz=12,slow=6.9
HFS Hagfors 65.89 348 P **P** **05 01 15.2 -1.0**
comp=Z,1.2nm,0.4s,baz=54,slow=7.3,SNR=9.9
V40A Witts Springs 66.08 62 *e*P **P** **05 01 17.9 0.0**
comp=Z,3.8nm,0.7s
AKASG Malin Array Be 71.82 335 P **P** **05 01 52.7 -0.5**
comp=Z,0.9nm,0.5s,baz=25,slow=6.5,SNR=3.5
AKBB Malin Array Si 71.82 335 *e*P **P** **05 01 52.7 -0.5**
comp=Z,5.8nm,1.4s
AKBB Malin Array Si 71.82 335 *e*P **P** **05 01 52.7 -0.5**
AKBB pmax pmax
comp=Z,6.0nm,1.4s
EKA Eskdalemuir Ar 72.11 356 P **P** **05 01 54.4 -0.5**
comp=Z,0.9nm,0.8s,baz=18,slow=7.0,SNR=3.8
GEYT Alibeck 72.33 310 LR LR 05 37 40.5
comp=Z,62nm,18.1s,baz=75,slow=39
KWP Kalwaria Pacla 74.36 339 *e*P **P** **05 02 09.2 +0.9**
comp=Z,96nm,1.2s
KWP Kalwaria Pacla 74.36 339 *e*P **P** **05 02 09.2 +0.9**
KWP pmax pmax
comp=Z,96nm,1.2s
CLL Collm 74.55 346 *e*P **P** **05 02 10.0 +0.7**
CLL Collm 74.55 346 *e*P **P** **05 02 10.0 +0.7**
BUR08 Bucovina Ar. S 75.65 337 *e*P **P** **05 02 16.6 +0.7**
BUR04 Bucovina Ar. S 75.67 337 *e*P **P** **05 02 16.4 +0.3**
GEC2 GERESS Array S 76.83 345 *e*P **P** **05 02 22.8 +0.2**
comp=Z,2.1nm,0.7s
GEC2 GERESS Array S 76.83 345 *e*P **P** **05 02 22.8 +0.2**
GEC2 pmax pmax
comp=Z,2.0nm,0.7s
GERES GERESS Array B 76.83 345 P **P** **05 02 22.8 +0.2**
comp=Z,1.3nm,0.6s,baz=31,slow=5.4,SNR=12
GEA0 GERESS Array S 76.84 345 *e*P **P** **05 02 22.6 0.0**
WR1 Warramunga Arr 78.95 214 *e*P **P** **05 02 35.8 +1.4**
comp=Z,42nm,1.9s
WRA Warramunga Arr 78.95 214 P **P** **05 02 35.8 +1.4**
comp=Z,0.9nm,0.9s,baz=26,slow=6.2,SNR=3.3
BR101 Keskin Array S 80.56 328 *e*P **P** **05 02 43.6 +0.3**
BRTR Keskin Array B 80.56 328 P **P** **05 02 43.6 +0.3**
comp=Z,0.8nm,0.7s,baz=51,slow=4.1,SNR=3.7
BRTR Keskin Array B 80.56 328 *i*P **P** **05 02 45.0 +1.7**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
AS31 Alice Springs 82.54 213 *e*P **P** **05 02 55.9 +2.3**
comp=Z,6.6nm,1.9s
ASAR Alice Springs 82.55 213 P **P** **05 02 55.9 +2.3**
comp=Z,0.9nm,0.8s,baz=14,slow=5.1,SNR=4.8

*SOME **20** 04:55:35.2, 42.92N×80.73E, h20km*
*NNC **20** 04:55:36.3±1.1, 42.97N×80.66E, h0km, mb3.5, mpv3.1,*
Error ellipse: s-maj=9.8km s-min=4.5km az=172.0
ISC 20 04:55:36.8±1.7, 42.98N±0.07×80.59E±0.06, h10km, n26,
σ1§85/50, 15C-11D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**0.84**	**282**	*e*P	**Pg**	**04 55 48.9**	**-4.2**
	432nm,0.1s						
SHLS				*e*S	**Sg**	**04 55 58.3**	**-5.8**
	2μm,0.3s						
PDGK	**Podgornoye**	**0.88**	**294**	⇑P	**Pb**	**04 55 54.2**	**0.0**
	39nm,0.2s						
PDGK				⇓S	**Sn**	**04 56 07.5**	**-0.7**
	59nm,0.1s						
UZB	**Uzynbulak**	**1.16**	**279**	⇓*i*P	**Pg**	**04 55 58.7**	**-0.4**
	160nm,0.2s						
UZB				⇑*i*S	**Sn**	**04 56 15.5**	**+0.2**
	908nm,0.4s						
DJR	**Jarkent**	**1.47**	**337**	⇑*i*P	**Pg**	**04 56 04.3**	**-0.6**
	116nm,0.5s						
DJR				⇓*i*S	**Sg**	**04 56 25.7**	**+1.6**
	472nm,0.4s						
KPKS	**Kokpek**	**1.47**	**290**	*e*P	**Pb**	**04 56 04.2**	**-0.2**
	136nm,0.2s						
KPKS				*e*S	**Sg**	**04 56 25.2**	**+1.0**
	732nm,0.4s						
ZHN	**Zhinishke**	**1.59**	**277**	⇓*e*P	**Pb**	**04 56 06.0**	**-0.3**
	582nm,0.4s						
ZHN				*e*S	**Sg**	**04 56 28.0**	**+0.1**
	2μm,0.3s						
SATY	**Saty**	**1.60**	**273**	⇑*i*P	**Pb**	**04 56 05.8**	**-0.8**
	185nm,0.2s						
SATY				*e*S	**Sg**	**04 56 28.4**	**0.0**
	1μm,0.1s						
KURS	**Kuram**	**1.84**	**287**	⇑*i*P	**Pb**	**04 56 10.2**	**-0.4**
	24nm,0.2s						
KURS				*e*S	**Sg**	**04 56 35.8**	**-0.1**
	114nm,0.6s						
ARXS	**Arharly**	**2.35**	**302**	*e*P	**Pb**	**04 56 18.4**	**-0.9**
	29nm,0.3s						
ARXS				*e*S	**Sb**	**04 56 49.9**	**+1.4**
	162nm,0.4s						
KAPS	**Kapalarasan**	**2.47**	**339**	⇑*i*P	**Pb**	**04 56 19.9**	**-1.3**
	7.5nm,0.1s						
KAPS				*e*S	**Sb**	**04 56 52.0**	**+0.3**
	152nm,0.3s						
TDK	**Taldyqorghan**	**2.56**	**323**	*e*P	**Pb**	**04 56 22.5**	**-0.3**
	55nm,0.3s						
TDK				*e*S	**Sg**	**04 56 56.9**	**-2.1**
	169nm,0.5s						
MDOK	**Medeo**	**2.60**	**275**	⇓Pn	**Pb**	**04 56 21.4**	**-2.2**
	1.6nm,0.2s						
MDOK				⇑Lg	Lg	04 56 57.0	
	43nm,0.4s						
MDOK	**Medeo**	**2.60**	**275**	*e*P	**Pb**	**04 56 23.1**	**-0.5**
	15nm,0.4s						
MDOK				*e*S	**Sb**	**04 56 58.2**	**+2.5**
	119nm,0.4s						
TNSS	**Tian-Shan**	**2.67**	**272**	*e*P	**Pb**	**04 56 24.3**	**-0.7**
	24nm,0.4s						
TNSS				*e*S	**Sb**	**04 56 59.7**	**+1.7**
	104nm,0.5s						
AAA	**Alma-Ata**	**2.70**	**276**	*e*P	**Pb**	**04 56 25.9**	**+0.6**
	56nm,0.3s						
AAA				*e*S	**Sg**	**04 57 02.0**	**-1.6**
	210nm,0.2s						
CHKK	**Chushkaly**	**2.77**	**290**	*e*P	**Pb**	**04 56 26.0**	**-0.3**
	17nm,0.2s						
CHKK				*e*S	**Sb**	**04 57 02.8**	**+2.6**
	148nm,0.2s						
IZV	**Izvestkoviy**	**2.92**	**272**	*e*P	**Pg**	**04 56 30.9**	**-1.8**
	59nm,0.5s						
IZV				*e*S	**Sg**	**04 57 10.3**	**-0.2**
	353nm,0.4s						
KTBS	**Karatobe**	**2.94**	**286**	*e*P	**Pb**	**04 56 30.1**	**+0.8**
	18nm,0.4s						
KTBS				*e*S	**Sg**	**04 57 09.0**	**-2.3**
	123nm,0.3s						
MTBS	**Maitube**	**3.05**	**274**	*e*P	**Pb**	**04 56 32.0**	**+0.8**
	14nm,0.2s						
MTBS				⇓*i*S	**Sg**	**04 57 13.1**	**-1.8**
	126nm,0.5s						
KUU	**Kurty**	**3.23**	**288**	⇑*i*P	**Pb**	**04 56 34.0**	**-0.2**
	13nm,0.2s						
KUU				⇓*i*S	**Sb**	**04 57 16.8**	**+3.3**
	87nm,0.1s						
KST	**Kastek**	**3.39**	**273**	*e*P	**Pb**	**04 56 37.9**	**+0.8**
	24nm,0.3s						
KST				⇓*i*S	**Sg**	**04 57 23.0**	**-2.8**
	107nm,0.5s						
DGS	**Degeres**	**3.54**	**276**	*e*P	**Pb**	**04 56 39.2**	**-0.3**
	40nm,0.4s						
DGS				*e*S	**Sb**	**04 57 25.2**	**+2.7**
	96nm,0.4s						
TKM2	**Tokmak 2**	**3.67**	**271**	⇑Pn	**Pn**	**04 56 35.3**	**+1.6**
	2.0nm,0.4s						
TKM2				⇑Pg	**Pb**	**04 56 43.0**	**+1.2**
	5.3nm,0.5s						
TKM2				⇓Lg	Lg	04 57 30.5	
	54nm,0.6s						
MAKZ	**Makanchi**	**3.95**	**14**	⇓Pn	**Pn**	**04 56 39.1**	**+1.6**
	0.8nm,0.2s						
MAKZ				⇑Sn	**Sn**	**04 57 25.8**	**+1.9**
	3.3nm,0.3s						
MAKZ				⇑Lg	Lg	04 57 38.0	
	6.5nm,0.4s						
MK31	**Makanchi Array**	**4.00**	**17**	⇑Pn	**Pn**	**04 56 39.1**	**+1.0**
	0.1nm,0.1s,baz=203,slow=14,SNR=49						
MK31				⇑Pg	**Pg**	**04 56 49.5**	**-3.8**
	1.8nm,0.3s,baz=194,slow=16,SNR=5.0						
MK31				Sn	**Sn**	**04 57 27.2**	**+2.2**
	3.4nm,0.3s,baz=190,slow=28,SNR=3.6						
MK31				⇓Lg	Lg	04 57 42.3	
	1.2nm,0.2s,baz=200,slow=29,SNR=9.6						
KURBB	**Kurchatov Arra**	**7.77**	**350**	⇑Lg	Lg	04 59 44.4	

IDC 20 04:56:15.3±1.3, 2.11N×127.60E, h0km, mb3.9/6,
mb1 4.0/6, mb1mx3.7/60, mbtmp4.0/6, Error ellipse:
s-maj=114.9km s-min=18.5km az=69.0, Northern
Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.89**	**164**	P	P	05 01 21.1	+0.2
	2.0nm,0.4s,baz=344,slow=10,SNR=66						
ASAR	**Alice Springs**	**26.34**	**167**	P	P	05 01 52.7	-0.5
	0.3nm,0.4s,baz=351,slow=8.0,SNR=8.4						
SONM	**Songino Array**	**49.10**	**341**	P	P	05 05 05.2	+0.5
	0.6nm,0.7s,baz=159,slow=8.5,SNR=2.5						
MKAR	**Makanchi Array**	**59.38**	**325**	P	P	05 06 20.0	+0.4
	1.7nm,0.5s,baz=118,slow=8.7,SNR=15						
KURBB	**Kurchatov Arra**	**63.57**	**327**	P	P	05 06 47.3	-0.4
	3.4nm,0.9s,baz=123,slow=6.3,SNR=9.2						
BVAR	**Borovoye Array**	**69.15**	**327**	P	P	05 07 23.2	-0.3
	0.5nm,0.4s,baz=112,slow=6.9,SNR=2.6						

*ISCJB **20** 04:58:38.6±0.9, 39°.22N±0°.08×67°.71E±0°.08, h10km, mb3.6/3, Error ellipse: s-maj=12.5km s-min=8.3km az=28.3*
*IDC **20** 04:58:38.5±1.3, 38°.81N×67°.85E, h0km, mb3.7/3, mb1 3.7/5, mb1mx3.4/64, mbtmp3.6/5, ML3.3/2, Error ellipse: s-maj=31.0km s-min=19.7km az=145.0*

ISC 20 04:58:39.9±1.1, 39.09N±0°.10×67.76E±0°.08, h10km, n14, σ1§62/15, mb3.8/3, 2C-1D, Southeastern Uzbekistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZET	**Dzherino**	**0.88**	**108**	⇑P	**Pg**	**04 58 56.8**	**0.0**
	64nm,0.8s						
DZET				⇑S	**Sb**	**04 59 10.0**	**+1.0**
	74nm,0.4s						
KK31	**Karatay Array**	**4.52**	**26**	Pg	**Pb**	**04 59 59.9**	**+0.6**
	5.1nm,0.5s,baz=208,slow=16,SNR=7.9						
KK31				⇓Lg	Lg	05 00 57.0	
	18nm,0.6s,baz=213,slow=29,SNR=7.3						
AML	**Almayashu**	**5.44**	**54**	P	**Pn**	**05 00 01.9**	**+0.5**
	SNR=42						
UCH	**Uchtor**	**6.01**	**56**	P	**Pn**	**05 00 10.1**	**+0.8**
	SNR=8.3						
KSH	**Kashi**	**6.38**	**84**	P	**Pn**	**05 00 13.0**	**-1.1**
KSH				pP	Pg	05 01 05.8	+24
KSH				S		05 09 22.8	
KSH				sS		05 09 36.1	
KSH				pmax	pmax		
	comp=Z,31nm,0.6s						
KZA	**Kyzart**	**6.43**	**60**	P	**Pn**	**05 00 16.8**	**+1.8**
	SNR=12						
KBK	**Karagaybulak**	**6.51**	**54**	P	**Pn**	**05 00 17.3**	**+1.5**
	SNR=19						
TKM2	**Tokmak 2**	**7.05**	**55**	P	**Pn**	**05 00 26.9**	**+3.6**
	SNR=5.9						
MKAR	**Makanchi Array**	**13.12**	**49**	Pn	**Pn**	**05 01 44.8**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=234,slow=14,SNR=3.5						
BVAR	**Borovoye Array**	**14.06**	**7**	Pn	**Pn**	**05 01 57.6**	**-1.4**
	comp=Z,0.4nm,0.3s,baz=182,slow=10,SNR=3.4						
ZALV	**Zalesovo Beam**	**18.86**	**32**	P	**P**	**05 02 58.1**	**-1.9**
	comp=Z,0.3nm,0.3s,baz=229,slow=12,SNR=3.8						
BRTR	**Keskin Array B**	**26.29**	**282**	P	**P**	**05 04 17.0**	**+1.4**
	comp=Z,0.7nm,0.7s,baz=96,slow=8.8,SNR=4.3						
TORD	**Torodi Ar. Bea**	**63.29**	**265**	P	**P**	**05 09 09.6**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=49,slow=5.7,SNR=8.2						
WRA	**Warramunga Arr**	**85.52**	**120**	P	**P**	**05 11 17.5**	**-0.7**
	comp=Z,0.5nm,0.8s,baz=326,slow=4.7,SNR=4.3						

GUC 20 05:09:46.8±0.5, 24°.17S×67°.33W, h206km±9km, ML3.6, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB15	**IPOC Station P**	**2.18**	**295**	*e*P	Pn	05 10 28.9	+0.9
PB15				*e*S	S	05 11 01.0	+1.5
GO02	**Mina Guanaco**	**2.29**	**244**	*e*P	Pn	05 10 29.4	+0.3
GO02				*e*S	S	05 11 03.0	+1.5
GO02				IAML		05 11 07.6	
	comp=N,149nm,0.1s						
PB06	**IPOC Station P**	**2.52**	**305**	*e*P	Pn	05 10 32.4	+0.9
PB06				*e*S	S	05 11 07.0	+1.1
PB06				IAML		05 11 08.9	
	comp=E,328nm,0.1s						
PB09	**IPOC Station P**	**2.95**	**323**	*e*P	Pn	05 10 37.4	+1.0
PB09				*e*S	S	05 11 15.9	+1.4
PB09				IAML		05 11 20.5	
	comp=N,64nm,0.1s						
PB10	**IPOC Station P**	**3.02**	**282**	*e*P	Pn	05 10 38.4	+1.3
PB10				*e*S	S	05 11 16.8	+1.0
PB10				IAML		05 11 20.5	
	comp=E,53nm,0.3s						
PB04	**IPOC Station P**	**3.17**	**305**	*e*P	Pn	05 10 39.9	+0.9
PB04				*e*S	S	05 11 20.6	+1.4
PB07	**IPOC Station P**	**3.38**	**315**	*e*P	Pn	05 10 42.0	+0.4
PB07				*e*S	S	05 11 23.8	-0.1

IDC 20 05:10:58.0±2.3, 46°.01N×152°.77E, h0km, mb3.7/4, mb1 3.9/5, mb1mx3.4/73, mbtmp3.7/5, ML2.7/1, MS3.0/7, Ms1 3.0/7, ms1mx2.7/65, Error ellipse: s-maj=69.9km s-min=31.0km az=2.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAJ	**Asahikawa**	**7.45**	**259**	LR	LR	05 16 09.4	
	comp=Z,24nm,19.0s,baz=318,slow=42						
PETK	**Petropavlovsk-**	**7.79**	**22**	Pn	Pn	05 12 53.0	+0.5
	0.5nm,0.3s,baz=166,slow=13,SNR=6.3						
MA2	**Magadan**	**13.64**	**356**	LR	LR	05 19 50.7	
	comp=Z,40nm,19.4s,baz=226,slow=39						
MKAR	**Makanchi Array**	**47.07**	**298**	P	P	05 19 31.9	+0.6
	0.6nm,0.8s,baz=64,slow=8.2,SNR=3.7						
MKAR				LR	LR	05 40 05.6	
	comp=Z,27nm,18.9s,baz=55,slow=37						
AKTO	**Aktyubinsk**	**59.04**	**312**	LR	LR	05 47 14.1	
	comp=Z,10nm,18.7s,baz=95,slow=37						
NVAR	**Mina Array Bea**	**62.99**	**62**	P	P	05 21 27.0	+0.2
	0.5nm,0.8s,baz=309,slow=4.7,SNR=3.7						
NOA	**NORSAR Array B**	**68.85**	**341**	LR	LR	05 55 48.0	
	comp=Z,17nm,19.1s,baz=50,slow=39						
AKASG	**Malin Array Be**	**72.03**	**326**	P	P	05 22 22.8	-0.6
	0.7nm,0.4s,baz=36,slow=6.9,SNR=3.0						
AKASG				LR	LR	05 58 48.6	
	comp=Z,13nm,18.8s,baz=20,slow=40						
TXAR	**Lajitas Array**	**78.06**	**60**	P	P	05 22 58.7	0.0
	0.4nm,0.7s,baz=297,slow=4.0,SNR=3.4						
GERES	**GERESS Array B**	**79.01**	**334**	LR	LR	06 02 55.1	
	comp=Z,12nm,18.8s,baz=301,slow=39						

SJA 20 05:24:34.1±0.7, 31°.22S×68°.79W, h100km±3km, ML2.7, MW3.5, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLL	**Cerro Villicun**	**0.29**	**111**	*i* P	Pn	05 24 49.6	+0.8
RTLL				*i* S	Sn	05 25 00.8	+1.0
ZON	**Zonda**	**0.33**	**164**	*i* P	Pn	05 24 49.0	0.0
ZON				*i* S	Sn	05 25 01.0	+0.9
RTCV	**Cerro Valdivia**	**0.67**	**162**	*i* P	Pn	05 24 51.9	+0.5
RTCV				*i* S	Sn	05 25 05.5	+1.2
RTLS	**Leoncito**	**0.72**	**217**	*i* P	Pn	05 24 53.4	+1.3
RTLS				*i* S	Sn	05 25 07.1	+1.6
RTLS				IAML		05 25 08.2	
	comp=Z,160nm,0.2s						
ACDV	**Cuesta del Vie**	**1.09**	**345**	*i* P	Pn	05 24 56.8	+1.0
ACDV				*i* S	Sn	05 25 13.5	+1.6
AUSP	**Uspallata**	**1.12**	**207**	*i* P	Pn	05 24 57.6	+1.4
ACAN	**Cantantal**	**1.72**	**128**	*i* P	Pn	05 25 04.4	+1.3
AGUA	**GUANDACOL**	**1.75**	**9**	*i* P	Pn	05 25 04.9	+1.3
APLL	**PUNTA DE LOS L**	**2.11**	**68**	*i* P	Pn	05 25 09.0	+0.8

GUC 20 05:30:51.6±0.6, 34°.61S×73°.83W, h36km±13km, ML3.5, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO05	**HualaæØ**	**1.61**	**105**	*e*P	Pn	05 31 18.4	+0.9
GO05				*e*S	Sn	05 31 38.4	+1.4
CCSP	**San Pedro de C**	**2.30**	**166**	*e*S	Sn	05 31 50.9	-3.1
CCSP				IAML		05 31 52.9	
	comp=N,239nm,0.1s						
CCHI	**Chillan**	**2.44**	**145**	*e*P	Pn	05 31 30.0	+1.1
CCHI				*e*S	Sn	05 31 58.6	+1.1
ROCH	**El Roble**	**2.86**	**56**	*e*P	Pn	05 31 35.8	+0.9
ROCH				*e*S	Sn	05 32 09.6	+1.5
ROCH				IAML		05 32 15.3	
	comp=N,151nm,0.4s						
LMEL	**Las Melosas**	**3.10**	**77**	*e*P	Pn	05 31 40.0	+1.9
LMEL				*e*S	Sn	05 32 16.3	+2.4
LMEL				IAML		05 32 24.9	
	comp=N,133nm,0.2s						
FCH	**Farellones**	**3.21**	**67**	*e*P	Pn	05 31 40.9	+1.1
FCH				*e*S	Sn	05 32 18.9	+2.1

*IDC **20** 05:35:54.6±1.4, 19°.16S×167°.94E, h0km, mb4.2/6, mb1 4.5/7, mb1mx4.1/44, mbtmp4.2/7, ML4.5/1, MS3.4/14, Ms1 3.4/14, ms1mx3.2/42, Error ellipse: s-maj=51.0km s-min=22.2km az=137.0*
*NEIC **20** 05:35:55.4±0.6, 19°.36S×168°.16E, h10km, mb4.8/7, Error ellipse: s-maj=25.9km s-min=11.3km az=145.0*
*ISCJB **20** 05:35:56.4±0.5, 19°.34S±0°.09×168°.08E±0°.1, h26km, mb4.5/12, MS3.5/11, Error ellipse: s-maj=17.5km s-min=7.6km az=38.6*

ISC 20 05:35:57.7±0.8, 19.4S±0°.1×168°.2E±0°.2, h26km, n59, σ1§21/48, mb4.5/12, MS3.5/10, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.11**	**211**	Pn	**Pn**	**05 36 45.7**	**+0.6**
	48nm,0.3s,baz=85,slow=12,SNR=323						
DZM				Sn	**Sn**	**05 37 21.3**	**-0.3**
	83nm,0.3s,baz=87,slow=20,SNR=13						
DZM				LR	LR	05 37 25.9	
	comp=Z,383nm,18.7s,baz=38,slow=28						
DZM	**Mont Dzumac**	**3.11**	**211**	*e*Pn	**Pn**	**05 36 45.8**	**+0.6**
	121nm,0.2s						
DZM				*e*Sn	**Sn**	**05 37 21.1**	**-0.5**
	230nm,0.3s						
HNR	**Honiara**	**12.71**	**320**	LR	LR	05 42 58.9	
	comp=Z,59nm,18.6s,baz=156,slow=34						
RAO	**Raoul Island**	**16.02**	**130**	LR	LR	05 44 19.6	
	comp=Z,102nm,19.2s,baz=162,slow=31						
AFI	**Afiamalu**	**19.97**	**77**	LR	LR	05 47 06.3	
	comp=Z,152nm,19.5s,baz=265,slow=33						
CTAO	**Charters Tower**	**20.64**	**264**	*e*P	Pn	05 40 36.2	-1.6
	40nm,1.1s						
PMG	**Port Moresby**	**22.62**	**293**	LR	LR	05 47 48.8	
	comp=Z,69nm,18.8s,baz=89,slow=32						
STKA	**Stephens Creek**	**26.91**	**237**	P	**P**	**05 41 37.8**	**+1.0**
	3.0nm,0.7s,baz=90,slow=14,SNR=2.8						
STKA				LR	LR	05 51 02.6	
	comp=Z,95nm,20.2s,baz=39,slow=34						
RAR	**Rarotonga**	**30.09**	**99**	LR	LR	05 54 10.8	
	comp=Z,41nm,18.1s,baz=273,slow=36						
WB2	**Warramunga Arr**	**31.82**	**263**	*e*P	**P**	**05 42 18.6**	**-2.0**
WR1	**Warramunga Arr**	**31.83**	**263**	*e*P	**P**	**05 42 19.1**	**-1.6**
	6.1nm,1.1s						
WRA	**Warramunga Arr**	**31.83**	**263**	P	**P**	**05 42 19.1**	**-1.6**
	2.8nm,1.2s,baz=82,slow=6.1,SNR=48						
AS01	**Alice Springs**	**32.06**	**256**	*e*P	**P**	**05 42 22.3**	**-0.4**
AS31	**Alice Springs**	**32.11**	**256**	*e*P	**P**	**05 42 22.7**	**-0.4**
	2.3nm,0.3s						
ASAR	**Alice Springs**	**32.11**	**256**	P	**P**	**05 42 22.6**	**-0.5**
	2.4nm,0.4s,baz=82,slow=8.4,SNR=59						
ASAR				LR	LR	05 54 22.5	
	comp=Z,123nm,18.5s,baz=103,slow=35						
PPT2	**Papeete2**	**40.04**	**94**	*e*LR	LR	05 54 44.2	
	125nm,30.5s						
NWAO	**Narrogin (SRO)**	**47.24**	**243**	LR	LR	06 02 51.1	
	comp=Z,107nm,20.0s,baz=280,slow=34						
JNU	**Nakatsue**	**63.21**	**325**	LR	LR	06 12 09.4	
	comp=Z,15nm,18.3s,baz=125,slow=35						
PSI	**Prapat**	**71.45**	**280**	LR	LR	06 21 60.0	
	comp=Z,108nm,18.4s,baz=150,slow=39						
PETK	**Petropavlovsk-**	**72.77**	**353**	LR	LR	06 15 28.2	
	comp=Z,18nm,20.3s,baz=164,slow=33						
SVW2	**Sparrevohn**	**85.34**	**17**	*e*P	**P**	**05 48 33.4**	**+1.2**
	6.9nm,1.0s						
ULN	**Ulaanbaatar**	**86.39**	**324**	*e*P	**P**	**05 48 38.7**	**+0.9**
	9.8nm,1.1s						
SONA0	**Songino Array**	**86.74**	**324**	*e*P	**P**	**05 48 39.7**	**+0.2**
SONM	**Songino Array**	**86.74**	**324**	P	**P**	**05 48 39.7**	**+0.2**
	3.0nm,1.0s,baz=135,slow=4.6,SNR=15						
SONA1	**Songino Array**	**86.75**	**324**	*e*P	**P**	**05 48 39.8**	**+0.2**
SBI	**Santa Barbara**	**87.02**	**53**	*e*P	**P**	**05 48 38.2**	**-2.8**
EML	**El Monte Cty P**	**88.44**	**54**	*e*P	**P**	**05 48 47.9**	**0.0**
WESC	**Westside Schoo**	**89.24**	**55**	*e*P	**P**	**05 48 47.2**	**-4.4**
NV01	**Mina Array Sit**	**89.67**	**49**	*e*P	**P**	**05 48 55.1**	**+1.3**
NVAR	**Mina Array Bea**	**89.67**	**49**	P	**P**	**05 48 55.6**	**+1.8**
	0.6nm,0.7s,baz=230,slow=7.4,SNR=5.9						
BTCC	**Brunts Corner**	**89.74**	**55**	*e*P	**P**	**05 48 53.7**	**-0.2**
LPIG	**La Paz**	**90.40**	**65**	LR	LR	06 22 45.6	
	comp=Z,35nm,18.8s,baz=190,slow=31						
JIS	**Juneau Island**	**90.68**	**26**	*e*P	**P**	**05 48 57.4**	**-0.3**
	9.5nm,0.4s						
ILAR	**Eielson Array**	**90.69**	**18**	P	**P**	**05 48 56.9**	**-0.7**
	0.9nm,0.8s,baz=233,slow=6.5,SNR=11						
ILB	**Eielson Array**	**90.69**	**18**	*e*P	**P**	**05 48 56.9**	**-0.7**
IL1	**Eielson Array**	**90.69**	**18**	*e*P	**P**	**05 48 56.3**	**-1.3**
JLU	**Jordanelle**	**95.39**	**49**	*e*P	**P**	**05 49 16.9**	**-3.3**
	2.5nm,0.4s						
TXAR	**Lajitas Array**	**97.73**	**62**	LR	LR	06 26 59.5	
	comp=Z,19nm,19.0s,baz=0.0,slow=31						
CONA	**Conrad Observa**	**143.75**	**328**	*i* PKPdf	**PKPdf**	**05 55 30.3**	**-0.3**
	3.1nm,1.0s						
GERES	**GERESS Array B**	**144.15**	**331**	PKP	**PKPdf**	**05 55 31.1**	**-0.2**
	0.6nm,0.2s,baz=40,slow=4.4,SNR=7.8						
GEA0	**GERESS Array S**	**144.15**	**331**	*e*PKPdf	**PKPdf**	**05 55 31.1**	**-0.1**
ARSA	**Arzberg**	**144.37**	**327**	*e*PKPdf	**PKPdf**	**05 55 31.7**	**+0.1**
	2.7nm,0.8s						
MOA	**Molln**	**144.59**	**329**	*e*PKPdf	**PKPdf**	**05 55 32.2**	**+0.2**
	7.6nm,1.4s,SNR=5.6						
SOKA	**Soboth**	**145.01**	**327**	*e*PKPdf	**PKPdf**	**05 55 33.0**	**+0.2**
	9.7nm,1.2s,SNR=6.2						
OBKA	**Obir**	**145.37**	**327**	*e*PKPdf	**PKPab**	**05 55 34.0**	**+0.6**
	4.4nm,0.8s						
KBA	**Koelnbreinsper**	**145.57**	**329**	*i* PKPab	**PKPab**	**05 55 34.6**	**+0.3**
	9.1nm,1.0s,SNR=7.1						
MYKA	**Terra Mystica**	**145.74**	**328**	*i* PKPab	**PKPbc**	**05 55 34.3**	**-0.1**
	5.2nm,0.8s						
ABTA	**Abfaltersbach**	**146.21**	**329**	*i* PKPab	**PKPab**	**05 55 36.3**	**-0.3**
	19nm,1.2s,SNR=7.9						
WTTA	**Wattenberg**	**146.25**	**331**	*e*pPKPdf	**PKPab**	**05 55 37.1**	**+0.2**
	7.4nm,0.9s						
MOTA	**Moosalm**	**146.43**	**331**	*e*PKPab	**PKPbc**	**05 55 36.5**	**-0.1**
	12nm,1.0s						
RETA	**Reutte**	**146.48**	**332**	*e*pPKPdf	**PKPab**	**05 55 37.7**	**+0.1**
	5.7nm,1.0s						
FETA	**Feichten**	**146.84**	**331**	*i* pPKPdf	**PKPab**	**05 55 38.7**	**-0.5**
	9.9nm,1.1s						
BFO	**Black Forest**	**146.84**	**335**	*e*PKPdf	**PKPbc**	**05 55 37.9**	**+0.3**
DAVA	**Damuels**	**147.02**	**332**	*es*PKPdf	**PKPab**	**05 55 39.6**	**-0.2**
	12nm,1.3s						
FUORN	**Ofenpass-Fuorn**	**147.35**	**331**	*e*PKPbc	**PKPab**	**05 55 40.5**	**-0.8**
ECH	**Echery**	**147.39**	**336**	*e*PKPbc	**PKPbc**	**05 55 39.3**	**+0.2**
TUE	**Stuetta**	**147.88**	**332**	*e*PKPbc	**PKPbc**	**05 55 41.8**	**+1.0**
TIP	**Timpagrande**	**148.42**	**315**	*e*PKPbc	**PKPbc**	**05 55 43.2**	**+0.9**
BNI	**Bardonecchia**	**150.15**	**333**	*e*PKPbc	**PKPbc**	**05 55 48.1**	**+1.6**

JMA 20 05:41:20.2±0.3, 37°.74N×144°.52E, h36km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**2.60**	**287**	P	Pn	05 42 01.5	+1.8
OFUJ	**Ofunato**	**2.61**	**302**	P	Pn	05 42 01.8	+2.0
MIYJ	**Miyakonagasawa**	**2.80**	**312**	P	Pn	05 42 04.2	+1.8
MIYJ				*e*S	Sn	05 42 36.6	+1.7
JMK	**Ichinoseki**	**2.86**	**296**	P	Pn	05 42 05.2	+1.9
JMK				*e*S	Sn	05 42 39.2	+2.7
JOM	**Ohasama**	**3.06**	**305**	P	Pn	05 42 08.7	+2.7
JOM				*e*S	Sn	05 42 44.7	+3.3
JFT	**Otama**	**3.33**	**267**	S	Sn	05 42 49.2	+1.2
JRY	**Ryogami san**	**4.82**	**251**	*e*S	Sn	05 43 22.1	-2.7
JCH	**Churui**	**4.95**	**350**	P	Pn	05 42 33.3	+1.4
JCH				*e*S	Sn	05 43 29.4	+1.5
NEM2	**Nemuro 2**	**5.70**	**9**	*e*S	Sn	05 43 42.7	-3.5
JTKR	**Abashiri--Toko**	**6.24**	**356**	P	Pn	05 42 50.6	+0.9

*DJA **20** 06:04:04.7±0.7, 7°.5±4°.×11°.8E±°, h161km±10km, M4.0/6, MLv4.0/6*
*ISCJB **20** 06:04:06.5±0.6, 6°.69S±0°.06×118°.23E±0°.07, h33km, mb3.5/2, MS2.9/2, Error ellipse: s-maj=11.6km s-min=7.1km az=39.1*
*IDC **20** 06:04:13.5±2.8, 7°.62S×118°.68E, h0km, mb3.3/2, mb1 3.7/3, mb1mx3.4/60, mbtmp3.5/3, ML3.5/1, MS3.0/3, Ms1 3.0/3, ms1mx2.7/27, Error ellipse: s-maj=267.7km s-min=25.8km az=52.0*

ISC 20 06:04:08.6±1.0, 6°.67S±0°.06×118°.27E±0°.07, h35km, n14, σ1§93/12, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**2.20**	**193**	P	**Pn**	**06 04 42.2**	**-0.5**
PLAI				S	**Sn**	**06 05 12.1**	**+3.4**
BKSI	**Bulukumba**	**2.28**	**54**	P	**Pn**	**06 04 41.2**	**-2.5**
BKSI				S	**Sn**	**06 05 13.1**	**+2.5**
TWSI	**Taliwang, Sumb**	**2.47**	**214**	P	**Pn**	**06 04 45.4**	**-1.1**
SPSI	**Sidrap Palu**	**3.07**	**29**	P	**Pn**	**06 04 54.7**	**0.0**
WBSI	**Waikabubak, Su**	**3.16**	**159**	P	**Pn**	**06 04 54.7**	**-1.2**
SRBI	**Singaraja**	**3.34**	**245**	P	**Pn**	**06 04 56.3**	**-2.1**
TTSI	**Tana Toraja**	**3.92**	**23**	P	**Pn**	**06 05 05.9**	**-0.4**
PPBI	**Pangkal Pinang**	**12.89**	**290**	P	**Pn**	**06 07 10.0**	**+0.5**
DAV	**Davao City (W)**	**15.47**	**28**	LR	LR	06 15 52.5	
	comp=Z,45nm,18.2s,baz=146,slow=43						
WRA	**Warramunga Arr**	**20.43**	**132**	P	**P**	**06 08 41.8**	**-1.3**
	0.1nm,0.3s,baz=306,slow=12,SNR=8.2						
ASAR	**Alice Springs**	**22.62**	**140**	P	**P**	**06 09 06.0**	**-0.5**
	0.6nm,0.6s,baz=312,slow=9.2,SNR=10						
CMAR	**Chiang Mai Arr**	**31.41**	**323**	LR	LR	06 25 28.7	
	comp=Z,17nm,18.8s,baz=165,slow=39						
STKA	**Stephens Creek**	**33.22**	**142**	LR	LR	06 26 09.2	
	comp=Z,34nm,18.6s,baz=12,slow=41						
MKAR	**Makanchi Array**	**62.06**	**333**	P	P	06 14 42.8	+17
	0.4nm,0.7s,baz=134,slow=8.4,SNR=3.1						

GUC 20 06:32:42.5±0.5, 34°.67S×71°.79W, h27km±2km, ML3.9, 1C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO05	**HualaæØ**	**0.36**	**199**	⇑*i*P	Pb	06 32 50.1	-0.5
GO05				*e*S	Sb	06 32 55.9	-0.3
NICH	**Los Niches**	**0.57**	**126**	⇓*i*P	Pb	06 32 52.9	-1.1
NICH				*e*S	Sb	06 33 01.1	-0.7
ANTU	**Antumapu**	**1.46**	**42**	*e*P	Pn	06 33 06.9	-0.2
ANTU				*e*S	Sb	06 33 28.0	+0.8
ANTU				IAML		06 33 29.8	
	comp=N,3μm,0.2s						
LMEL	**Las Melosas**	**1.55**	**59**	*e*P	Pn	06 33 08.3	-0.1
LMEL				*e*S	Sn	06 33 28.5	+0.8
LMEL				IAML		06 33 33.0	
	comp=N,3μm,0.2s						
CLCH	**Cerro Calan**	**1.64**	**40**	*e*P	Pn	06 33 09.9	+0.3
CLCH				*e*S	Sn	06 33 31.0	+1.1
CLCH				IAML		06 33 36.7	
	comp=N,3μm,0.4s						
ROCH	**El Roble**	**1.81**	**21**	*e*P	Pn	06 33 12.6	+0.5
ROCH				IAML		06 33 47.5	
	comp=N,2μm,0.5s						
FCH	**Farellones**	**1.83**	**43**	*e*P	Pn	06 33 12.6	+0.1
FCH				*e*S	Sb	06 33 36.6	-1.4
FCH				IAML		06 33 41.2	
	comp=N,2μm,0.4s						
CCHI	**Chillan**	**1.94**	**187**	*e*P	Pn	06 33 13.2	-0.5
CCHI				*e*S	Sn	06 33 38.7	+1.5
CCHI				IAML		06 33 49.1	
	comp=E,1μm,0.4s						

*GUC **20** 06:33:20.9±0.6, 28°.49S×70°.83W, h95km±3km, ML5.0*
*NEIC **20** 06:33:20.8±0.5, 28°.50S×70°.48W, h71km±4km, mb4.7/10, ML5.0(GUC), Error ellipse: s-maj=9.8km s-min=4.7km az=90.0*
NEIC Felt [IV] at La Higuera and Vallenar; [III] at Alto del Carmen, Copiapo, Huasco and Tierra Amarilla; [II] at Coquimbo, La Serena, Paiguano and Vicuna.
*ISCJB **20** 06:33:21.3±0.3, 28°.53S±0°.03×70°.58W±0°.06, h91km±2km, mb4.6/20, Error ellipse: s-maj=8.8km s-min=4.6km az=179.1*
*IDC **20** 06:33:22.2±0.4, 28°.62S×70°.55W, h83km±3km, mb4.5/10, mb1 4.5/11, mb1mx4.1/32, mbtmp4.8/11, MS3.3/11, Ms1 3.3/11, ms1mx3.1/33, Error ellipse: s-maj=19.8km s-min=13.7km az=76.0*
*SJA **20** 06:33:24.8±0.7, 28°.68S×70°.51W, h67km±7km, ML4.7, MW4.9*

ISC 20 06:33:21.9±0.4, 28°.53S±0°.03×70°.66W±0°.05, h87km±3km, h87km:pP-P, n143, σ1§51/196, mb4.7/20, 2D, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VACH	**Vallenar**	**0.10**	**242**	*e*P	**Pn**	**06 33 34.5**	**+0.2**
VACH				*e*S	**Sn**	**06 33 43.5**	**+0.1**
LCO	**Las Campanas**	**0.48**	**184**	*e*Pn	**Pn**	**06 33 37.0**	**+0.4**
LCO				*e*Sn	**Sn**	**06 33 47.7**	**+0.3**
LCO	**Las Campanas**	**0.48**	**184**	*i* P	**Pn**	**06 33 36.9**	**+0.4**
LCO				*i* S	**Sn**	**06 33 46.6**	**-0.7**
LCO	**Las Campanas**	**0.48**	**184**	*e*P	**Pn**	**06 33 36.8**	**+0.2**
LCO				*e*S	**Sn**	**06 33 47.6**	**+0.3**
LCO				IAML		06 33 48.5	
	comp=N,92μm,0.3s						
GO03	**Copiap**	**1.01**	**22**	*e*Pn	**Pn**	**06 33 41.8**	**+0.3**
GO03				*e*Sn	**Sn**	**06 33 56.6**	**+0.3**
GO03	**Copiap**	**1.01**	**22**	*e*P	**Pn**	**06 33 41.6**	**0.0**
GO03				*e*S	**Sn**	**06 33 56.7**	**+0.4**
GO03				IAML		06 33 57.1	
	comp=N,46μm,0.8s						
CPCH	**Copiapo**	**1.20**	**13**	*e*P	**Pn**	**06 33 43.4**	**-0.4**
CPCH				*e*S	**Sn**	**06 34 00.1**	**-0.1**
TLL	**Tololo Astrono**	**1.64**	**184**	*e*P	**Pn**	**06 33 49.8**	**+0.3**
TLL				*e*S	**Sn**	**06 34 11.2**	**+0.7**
TLL				IAML		06 34 13.4	
	comp=E,15μm,0.4s						
GO04	**Tololo Observa**	**1.64**	**184**	*e*Pn	**Pn**	**06 33 49.9**	**+0.3**
GO04				*e*Sn	**Sn**	**06 34 09.3**	**-1.2**
GO04	**Tololo Observa**	**1.64**	**184**	*e*P	**Pn**	**06 33 49.7**	**+0.1**
GO04				*e*S	**Sn**	**06 34 11.1**	**+0.5**
GO04				IAML		06 34 16.6	
	comp=E,31μm,0.4s						
ACDV	**Cuesta del Vie**	**2.12**	**141**	*i* P	**Pn**	**06 33 57.2**	**+1.4**
AGUA	**GUANDACOL**	**2.13**	**117**	*i* P	**Pn**	**06 33 57.5**	**+1.7**
VCA	**Vinchina**	**2.17**	**96**	*i* P	**Pn**	**06 33 58.8**	**+2.4**
VCA				*i* S	**Sn**	**06 34 23.3**	**+0.6**
VCA				IAML		06 34 28.5	
	comp=Z,5μm,0.5s	

JCT	Junction City	64.93 332	*e*P	P	06 43 52.8	+0.4
JCT			*e*pP	pP	06 44 15.8	+1.3
SWET	Sewanee	65.02 346	*e*P	P	06 43 53.3	+0.5
SWET			*e*pP	pP	06 44 15.2	+0.2
TX31	Lajitas Ar. Si	65.62 329	*e*P	P	06 43 58.8	+1.9
TX31			*e*pP	pP	06 44 20.1	+1.0
TXAR	Lajitas Array	65.62 329	P	P	06 43 58.9	+2.0
	comp=Z,1.9nm,0.7s,baz=151,slow=7.8,SNR=17					
TXAR			pP	pP	06 44 19.2	+0.1
	comp=Z,2.0nm,0.8s,baz=147,slow=5.5,SNR=5.9					
V48A	Smith Brothers	65.72 346	P	P	06 43 58.0	+0.7
	baz=164					
V47A	Nunnelly	65.96 345	P	P	06 43 58.6	-0.2
	baz=164					
WVT	Waverly	66.32 345	P	P	06 44 00.8	-0.2
	baz=163					
U42A	Revenden	67.38 342	P	P	06 44 08.6	+0.8
	baz=160					
U41A	Viola	67.56 342	P	P	06 44 10.1	+1.1
	baz=160					
T43A	Greenville	67.82 343	P	P	06 44 11.4	+0.8
	baz=161					
S44A	Carbondale	68.14 344	P	P	06 44 13.6	+1.1
	baz=162					
T41A	Mountain View	68.17 342	P	P	06 44 13.8	+0.9
	baz=160					
S43A	Fulton Ridge,	68.23 343	P	P	06 44 14.1	+1.0
	baz=162					
TUL1	Leonard	68.33 338	P	P	06 44 15.4	+1.6
	baz=156					
MNTX	Cornudas Mount	68.41 329	P	P	06 44 15.4	+1.0
	baz=147					
MNTX	Cornudas Mount	68.41 329	*e*P	P	06 44 15.7	+1.3
MNTX			*e*pP	pP	06 44 36.7	0.0
S42A	Caledonia	68.60 343	P	P	06 44 16.0	+0.5
	baz=161					
S41A	Jillco Farms,	68.68 342	P	P	06 44 17.3	+1.3
	baz=160					
FVM	French Village	68.71 343	*e*P	P	06 44 17.2	+1.1
	comp=Z,7.7nm,0.6s					
T38A	Diamond	68.89 340	P	P	06 44 18.9	+1.6
	baz=158					
S40A	Lebanon	68.90 342	P	P	06 44 18.8	+1.5
	baz=159					
CCM	Cathedral Cave	68.98 343	P	P	06 44 19.0	+1.2
	baz=161					
CCM	Cathedral Cave	68.98 343	*e*P	P	06 44 18.7	+0.9
CCM			*e*pP	pP	06 44 40.4	+0.2
R42A	Luebbering	69.08 343	P	P	06 44 19.7	+1.3
	baz=161					
MSTX	Muleshoe	69.20 332	P	P	06 44 21.2	+1.8
	baz=150					
MSTX	Muleshoe	69.20 332	*e*P	P	06 44 21.1	+1.8
MSTX			*e*pP	pP	06 44 42.2	+0.5
S39A	Bolivar	69.22 341	P	P	06 44 20.8	+1.5
	baz=159					
S39A	Bolivar	69.22 341	*e*P	P	06 44 20.4	+1.1
S39A			*e*pP	PcP	06 44 42.6	+0.1
R41A	Rosebud	69.25 343	P	P	06 44 20.8	+1.4
	baz=160					
R40A	Maddies Statio	69.48 342	P	P	06 44 22.3	+1.4
	baz=160					
R40A	Maddies Statio	69.48 342	*e*P	P	06 44 21.9	+1.1
R40A			*e*pP	pP	06 44 41.3	-1.9
Q42A	Golden Eagle	69.61 344	P	P	06 44 23.1	+1.4
	baz=161					
VNDA	Vanda	69.68 191	P	P	06 44 22.8	+1.1
	comp=Z,0.2nm,0.4s,baz=146,slow=3.8,SNR=4.2					
319A	Douglas	70.01 325	*e*P	P	06 44 25.9	+1.4
319A			*e*pP	PcP	06 44 48.8	+2.7
Q40A	Laux Farm, Aux	70.09 342	P	P	06 44 26.0	+1.4
	baz=160					
SYO	Syowa Base	70.52 159‖	*e*P	P	06 44 23.6	-3.3
SYO	Syowa Base	70.52 159‖	*e*pP	pP	06 44 48.3	-1.0
P40A	Paris	70.58 343	*e*P	P	06 44 28.9	+1.3
P40A			*e*pP	pP	06 44 50.8	+0.7
TUC	Tucson	71.52 325	*e*P	P	06 44 32.9	-0.6
TUC			*e*pP	pP	06 44 57.7	+1.7
LIC	Lamto	71.96 72	*e*P	P	06 44 36.1	-0.4
	comp=Z,83nm,1.5s					
TIC	Toumodi	72.19 72	*e*P	P	06 44 37.7	-0.2
KIC	Kosan Boka	72.27 72	*e*P	P	06 44 38.4	0.0
	comp=Z,51nm,0.9s					
214A	Organ Pipe Nat	72.28 323	P	P	06 44 41.2	+3.1
	baz=142					
DBIC	Dimbokro	72.34 72	P	P	06 44 39.1	+0.3
	comp=Z,19nm,0.6s,baz=214,slow=6.8,SNR=26					
DBIC			LR	LR	07 13 09.6	
	comp=Z,24nm,21.2s,baz=133,slow=33					
DBIC	Dimbokro	72.34 72	*e*P	P	06 44 39.1	+0.3
	comp=Z,21nm,0.7s					
T25A	Trinidad	72.60 332	P	P	06 44 42.3	+2.2
	baz=149					
T25A	Trinidad	72.60 332	*e*P	P	06 44 42.1	+2.0
T25A			*e*pP	pP	06 45 04.6	+2.0
L40A	Anamosa	72.76 344	*e*P	P	06 44 41.4	+0.8
L40A			*e*pP	pP	06 45 04.3	+1.2
X16A	Lo Mia Camp, P	73.53 326	*e*P	P	06 44 48.1	+2.5
X16A			*e*pP	pP	06 45 10.1	+2.0
SDCO	Great Sand Dun	73.57 332	P	P	06 44 48.6	+2.7
	baz=148					
SDCO	Great Sand Dun	73.57 332	*e*P	P	06 44 46.0	+0.1
SDCO			*e*pP	pP	06 45 09.9	+1.5
Y14A	Wickenburg	73.94 324	*e*P	P	06 44 49.1	+1.3
Y14A			*e*pP	pP	06 45 12.5	+2.1
SMCO	Snowmass	75.39 332	*e*P	P	06 44 57.3	+0.8
SMCO			*e*pP	pP	06 45 21.1	+1.9
ECSD	EROS Data Cent	75.75 341	P	P	06 44 59.3	+1.3
	baz=156					
CCUT	Cedar City	76.96 326	*e*P	P	06 45 07.1	+1.9
	comp=Z,10nm,1.5s					
CCUT			*e*pP	pP	06 45 31.2	+3.2
P18A	Preston Nutter	77.18 330	*e*P	P	06 45 05.1	-1.4
	comp=Z,40nm,0.3s					
KOWA	Kowa	77.31 66	P	P	06 45 07.2	-0.2
	comp=Z,12nm,0.6s,baz=234,slow=7.6,SNR=33					
KOWA	Kowa	77.31 66	*e*P	P	06 45 07.2	-0.2
KOWA			*e*pP	pP	06 45 30.7	+0.6
MAW	Mawson	78.08 164	P	P	06 45 10.5	-0.2
	comp=Z,13nm,0.8s,baz=204,slow=6.2,SNR=29					
MAW			LR	LR	07 22 41.5	
	comp=Z,43nm,18.4s,baz=241,slow=38					
MAW	Mawson	78.08 164	*e*P	P	06 45 11.8	+1.0
	comp=Z,3.6nm,0.9s					
JLU	Jordanelle	78.51 329	*e*P	P	06 45 13.8	0.0
JLU			*e*pP	pP	06 45 38.4	+1.8
HWUT	Hardware Ranch	79.37 330	*e*P	P	06 45 19.2	+0.8
HWUT			*e*pP	pP	06 45 42.1	+0.8
PD31	Pinedale Array	79.47 332	*e*P	P	06 45 19.8	+0.8
PD31			*e*pP	pP	06 45 42.2	+0.4
PDAR	Pinedale Array	79.47 332	P	P	06 45 19.8	+0.8
	comp=Z,0.3nm,0.7s,baz=129,slow=6.1,SNR=4.1					
PDAR			pP	pP	06 45 42.2	+0.4
	comp=Z,0.8nm,0.6s,baz=121,slow=7.4,SNR=6.2					
PDAR	Pinedale Array	79.47 332	*e*P	P	06 45 20.3	+1.3
PDAR			*e*pP	pP	06 45 42.1	+0.3
TSUM	Tsumeb	79.58 106	*e*P	P	06 45 20.2	+0.1
	comp=Z,7.6nm,0.8s					
MDPB	Devils Postpil	79.94 323	*e*P	P	06 45 25.5	+3.9
NV01	Mina Array Sit	80.12 324	*e*P	P	06 45 23.6	+1.0
NV01			*e*pP	pP	06 45 46.0	+0.6
NVAR	Mina Array Bea	80.12 324	P	P	06 45 23.6	+1.0
	comp=Z,0.2nm,0.5s,baz=160,slow=9.1,SNR=3.7					
NVAR			pP	pP	06 45 46.0	+0.6
	comp=Z,1.2nm,0.7s,baz=157,slow=5.4,SNR=7.5					
TOA0	Torodi Ar. Sit	81.23 70	*e*P	P	06 45 28.7	-0.1
TOA0			*e*pP	pP	06 45 51.6	0.0
TOA1	Torodi Ar. Sit	81.23 70	*e*P	P	06 45 28.9	+0.1
TOA1			*e*pP	pP	06 45 51.5	-0.2
TORD	Torodi Ar. Bea	81.23 70	P	P	06 45 28.9	+0.1
	comp=Z,8.1nm,0.6s,baz=267,slow=5.0,SNR=83					
TORD			pP	pP	06 45 51.5	-0.2
	comp=Z,3.3nm,0.7s,baz=266,slow=5.3,SNR=3.9					
TORD			LR	LR	07 21 05.9	
	comp=Z,16nm,19.1s,baz=110,slow=35					
BOSA	Boshof	81.57 118	P	P	06 45 30.4	-0.2
	comp=Z,3.8nm,0.6s,baz=251,slow=4.0,SNR=10					
BOSA			pP	pP	06 45 53.8	+0.2
	comp=Z,4.2nm,0.8s,baz=270,slow=2.8,SNR=3.0					
BOSA			LR	LR	07 16 54.6	
	comp=Z,26nm,19.1s,baz=24,slow=32					
HLID	Hailey	82.20 330	*e*P	P	06 45 33.6	+0.1
HLID			*e*pP	pP	06 45 58.1	+1.7
MCMT	McKenzie Canyo	82.52 331	*e*P	P	06 45 36.2	+1.0
MCMT			*e*pP	pP	06 46 00.2	+2.0
MOD	Modoc Plateau	83.73 325	*e*P	P	06 45 42.6	+1.3
MOD			*e*pP	pP	06 46 06.0	+1.7
J08A	Circle Bar Ran	83.92 327	*e*P	P	06 45 43.6	+1.4
J08A			*e*pP	pP	06 46 06.5	+1.2
MDT	Midelt	87.45 50	P	P	06 46 01.4	+1.4
	comp=Z,2.0nm,0.7s,baz=308,slow=5.9,SNR=4.8					
ASAR	Alice Springs	122.96 207	PKP	PKPdf	06 52 08.8	+0.1
	comp=Z,1.4nm,0.6s,baz=134,slow=1.7,SNR=14					
ASAR			pPKP	pPKPdf	06 52 32.1	-0.9
	comp=Z,0.9nm,0.7s,baz=154,slow=1.9,SNR=5.0					
ASAR			PKKPbc	PKKPbc	07 02 01.1	+0.6
	comp=Z,0.5nm,0.5s,baz=302,slow=2.8,SNR=4.3					
AS31	Alice Springs	122.96 207	*e*PKPdf	PKPdf	06 52 08.8	+0.1
WR1	Warramunga Arr	126.09 209	*e*PKPdf	PKPdf	06 52 15.1	+0.3
WRA	Warramunga Arr	126.09 209	PKP	PKPdf	06 52 15.1	+0.3
	comp=Z,3.1nm,0.5s,baz=153,slow=1.7,SNR=66					
WRA			pPKP	pPKPdf	06 52 38.6	-0.5
	comp=Z,1.4nm,0.6s,baz=152,slow=1.7,SNR=5.7					
H11N3	WAKE ISLAND Hy	127.15 274	T	T	09 12 02.4	
	baz=113,slow=75,SNR=12					
H11N1	WAKE ISLAND Hy	127.16 274	T	T	09 12 04.7	
	baz=113,slow=75,SNR=5.3					
H11N2	WAKE ISLAND Hy	127.16 274	T	T	09 12 02.0	
	baz=113,slow=75,SNR=14					
KURK	Kurchatov	147.96 38	*e*PKPdf	PKPdf	06 52 55.1	+1.5
KURK			*e*PKPbc	PKPbc	06 52 57.9	+1.0
KURBB	Kurchatov Arra	147.96 38	PKP	PKPdf	06 52 55.1	+1.5
	comp=Z,4.2nm,0.6s,baz=304,slow=3.1,SNR=37					
KURBB			PKPbc	PKPbc	06 52 57.9	+1.0
	comp=Z,4.2nm,0.6s,baz=302,slow=3.3,SNR=38					
KURBB			pPKPbc	pPKPbc	06 53 19.5	-1.4
	comp=Z,5.1nm,0.6s,baz=304,slow=3.1,SNR=8.8					
ZAA1	Zalesovo Array	148.92 28	*e*PKPdf	PKPdf	06 52 56.5	+1.3
ZAA1			*e*PKPbc	PKPbc	06 52 59.7	+0.5
ZALV	Zalesovo Beam	148.92 28	PKP	PKPdf	06 52 56.5	+1.3
	comp=Z,11nm,0.6s,baz=302,slow=2.8,SNR=23					
ZALV			PKPbc	PKPbc	06 52 59.7	+0.5
	comp=Z,11nm,0.6s,baz=298,slow=3.6,SNR=32					
ZALV			pPKPbc	pPKPbc	06 53 23.2	-0.1
	comp=Z,14nm,0.5s,baz=304,slow=3.4,SNR=12					
KSH	Kashi	150.41 59	PKPbc	PKPbc	06 53 04.8	+1.2
KSH			pPKP	pPKPbc	06 53 27.8	+0.1
KSH			PP	PP	06 56 36.5	-3.8
KSH			SKS	SKSdf	06 59 51.6	-6.7
MK32	Makanchi Array	152.09 42	*e*PKPbc	PKPbc	06 53 07.0	-0.1
MKAR	Makanchi Array	152.09 42	PKPbc	PKPbc	06 53 07.0	-0.1
	comp=Z,4.5nm,0.5s,baz=315,slow=2.0,SNR=36					
MKAR			pPKPbc	pPKPbc	06 53 30.9	-0.4
	comp=Z,6.7nm,0.7s,baz=293,slow=2.1,SNR=9.6					
PSI	Prapat	152.56 157	PKPbc	PKPbc	06 53 07.8	-1.4
	comp=Z,3.3nm,0.5s,baz=180,slow=15,SNR=3.9					
SONA0	Songino Array	160.59 6	*e*PKPab	PKPab	06 53 54.7	+1.3
SONM	Songino Array	160.59 6	PKPab	PKPab	06 53 54.7	+1.3
	comp=Z,0.5nm,0.6s,baz=5,7,slow=2.9,SNR=3.2					
LZH	Lanzhou	171.15 30	*e*PKP	PKPdf	06 53 21.9	+1.4
LZH			pPKP	pPKPdf	06 53 47.6	+2.7
LZH			sPKP		06 53 58.0	
LZH			PKP	PKPab	06 54 37.5	-2.8
CD2	Chengdu	174.60 63	PKP	PKPdf	06 53 21.0	-0.9

GUC ***20*** *06:49:34.8±0.3,31°.23S×69°.70W,h168km±7km, ML2.9*
ISCJB ***20*** *06:49:35.5±1.0,31°.24S±0°.03×69°.08W±0°.05,h107km±8km, Error ellipse: s-maj=7.6km s-min=5.4km az=174.2*
SJA ***20*** *06:49:35.1±0.5,31°.24S×69°.11W,h100km±2km, ML2.7, MW3.4*
ISC 20 06:49:36.2±1.7,**31°.24S**±0°.04×**69°.11W**±0°.06,
h100km±13km,**n15**,σ0°**69**/26,**San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZON	Zonda	0.48	130	*i* P	Pn	06 49 51.7	-0.3
ZON				*i* S	Sn	06 50 03.6	-0.2
RTLL	Cerro Villicun	0.56	100	*i* P	Pn	06 49 51.9	-0.6
RTLL				*i* S	Sn	06 50 04.6	-0.1
RTLS	Leoncito	0.58	196	*i* P	Pn	06 49 53.0	0.0
RTLS				*i* S	Sn	06 50 05.9	+0.3
RTLS				IAML		06 50 07.5	
	comp=Z,188nm,0.2s						
AMOG	MOGNA	0.61	61	*i* P	Pn	06 49 52.8	-0.2
AMOG				*i* S	Sn	06 50 05.6	0.0
RTCV	Cerro Valdivia	0.79	142	*i* P	Pn	06 49 54.4	-0.2
RTCV				*i* S	Sn	06 50 08.2	-0.1
AUSP	Uspallata	1.01	193	*i* P	Pn	06 49 57.1	-0.1
AUSP				*i* S	Sn	06 50 13.6	+0.8
AROD	Rodeo	1.11	344	*i* P	Pn	06 49 58.5	+0.2
AROD				*i* S	Sn	06 50 15.9	+1.1
ASAL	Salagasta	1.37	170	*i* P	Pn	06 50 01.1	0.0
GO04	Tololo Observa	1.80	306	*e*P	Pn	06 50 05.9	-0.6
GO04				*e*S	Sn	06 50 29.6	+0.1
GO04				IAML		06 50 34.2	
	comp=E,253nm,0.4s						
TLL	Tololo Astrono	1.81	306	*e*P	Pn	06 50 06.2	-0.4
TLL				*e*S	Sn	06 50 29.6	0.0
TLL				IAML		06 50 31.9	
	comp=E,137nm,0.6s						
AGUA	GUANDACOL	1.83	17	*i* P	Pn	06 50 07.0	+0.2
AGUA				*i* S	Sn	06 50 30.0	+0.1
AAGR	Agrelo	1.86	173	*i* P	Pn	06 50 07.0	-0.2
ACAN	Cantantal	1.94	123	*i* P	Pn	06 50 07.7	-0.4
FCH	Farellones	2.31	205	*e*S	Sn	06 50 43.7	+2.3
FCH				IAML		06 50 49.5	
	comp=E,32nm,0.3s						
ROCH	El Roble	2.36	222	*e*P	Pn	06 50 12.7	-1.1
ROCH				*e*S	Sn	06 50 41.8	-0.7
ROCH				IAML		06 50 46.2	
	comp=N,36nm,0.3s						

NIED ***20*** *07:05:00,37°.50N×142°.80E,h8km,Mw3.5 Best double couple: M0 2.07000×10^14 NP1:φs57.00000°,δ31.00000°, λ-77.00000°. NP2:φs222.00000°,δ60.00000°, λ-98.00000°.*
ISCJB ***20*** *07:05:13.7±2.2,37°.51N±0°.07×142°.76E±0°.07,h2km±17km, mb3.5/4, Error ellipse: s-maj=11.8km s-min=8.9km az=150.2*
JMA ***20*** *07:05:13.4±0.3,37°.45N×142°.83E,h13km,M3.6*
IDC ***20*** *07:05:14.1±1.5,37°.24N×143°.19E,h0km,mb3.4/4, mb1 3.6/5,mb1mx3.3/64,mbtmp3.3/5,ML3.2/1, Error ellipse: s-maj=34.3km s-min=31.8km az=109.0*
ISC 20 07:05:13.8±2.8,**37°.45N**±0°.08×**142°.68E**±0°.10,**h4**km±16km,
n14,σ1°**05**/19,**mb3.6**/4,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	Kawauchi	1.44	267	P	Pg	07 05 41.2	-0.7
JFK				*e*S	Sg	07 06 01.6	+1.7
JIO	Ouri	1.45	314	P	Pn	07 05 40.3	-0.5
JIO				*e*S	Sn	07 06 00.0	-0.2
ONAJ	Iwakimizuishiy	1.54	258	P	Pb	07 05 42.7	-0.1
ONAJ				*e*S	Sg	07 06 04.4	+1.3
JMM	Marumori	1.55	286	P	Pn	07 05 42.2	+0.1
JMM				*e*S	Sg	07 06 03.9	+0.3
JOU	Okura	1.84	301	P	Pn	07 05 46.7	+0.6
JOU				*e*S	Sb	07 06 11.3	+0.1
JFT	Otama	1.86	273	P	Pb	07 05 48.1	-0.2
JFT				*e*S	Sg	07 06 13.5	-0.1
JMK	Ichinoseki	1.89	323	P	Pn	07 05 47.7	+0.9
JMK				*e*S	Sn	07 06 11.3	+0.3
JOM	Ohasama	2.29	332	P	Pn	07 05 53.0	+0.6
JYK	Kaneyama	2.34	309	P	Pb	07 05 54.9	-1.6
MJAR	Matsushiro Arr	3.69	257	Pn	Pb	07 06 16.8	-2.7
	1.5nm,0.3s,baz=87,slow=13,SNR=4.7						
MKAR	Makanchi Array	44.75	302	P	P	07 13 33.1	+4.9
	0.2nm,0.6s,baz=90,slow=7.9,SNR=1.9						
KURBB	Kurchatov Arra	46.54	308	P	P	07 13 46.4	+4.2
	0.5nm,0.6s,baz=81,slow=8.2,SNR=5.6						
ILAR	Eielson Array	48.60	33	P	P	07 13 58.6	+0.5
	0.3nm,0.8s,baz=281,slow=6.5,SNR=4.4						
WRA	Warramunga Arr	57.62	189	P	P	07 15 05.0	0.0
	0.6nm,0.7s,baz=7.2,slow=6.9,SNR=4.8						

IDC ***20*** *07:34:25.5±2.1,29°.16N×56°.69E,h0km,mb3.5/4, mb1 3.7/5,mb1mx3.4/59,mbtmp3.6/5,ML3.8/1,MS2.8/1, Ms1 2.8/1,ms1mx2.2/52, Error ellipse: s-maj=47.8km s-min=29.0km az=79.0*
ISCJB ***20*** *07:34:34.6±0.7,28°.96N±0°.03×57°.0E±0°.1,h10km,mb3.4/4, MS2.7/1, Error ellipse: s-maj=13.3km s-min=4.9km az=179.2*
CSEM ***20*** *07:34:35.2±0.3,28°.99N×57°.06E,h10km,ML3.5, Error ellipse: s-maj=14.0km s-min=5.6km az=87.0*
TEH ***20*** *07:34:36.7,28°.96N×57°.07E,h10km,ML2.9*
DSN ***20*** *07:34:36.4±0.8,28°.91N×56°.52E,h10km,ML3.8/5, Error ellipse: s-maj=74.9km s-min=6.3km az=95.0*
ISC 20 07:34:34.2±1.2,**28°.94N**±0°.04×**57°.26E**±0°.08,**h10**km,**n35**,
σ1°**75**/35,**mb3.5**/4,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NGRK	Negar Kerman	0.84	327	*e*Pg	Pn	07 34 54.1	+1.6
NGRK				*e*		07 35 09.9	
	comp=Z,99nm,0.1s						
NGRK	Negar Kerman	0.84	327	*e*Pg	Pn	07 34 54.1	+1.6
NGRK				*e*Sg	Sn	07 35 08.7	+3.6
CHMN	Cheshme madani	0.95	15	*e*Pg	Pn	07 34 54.1	+0.1
CHMN				*e*		07 34 54.3	
	comp=Z,99nm,0.1s						
CHMN	Cheshme madani	0.95	15	*e*Pg	Pn	07 34 54.1	+0.1
TVBK	TV Kerman	1.13	337	*e*Pg	Pn	07 34 56.5	+0.1
TVBK				*e*		07 35 16.3	
	comp=Z,99nm,0.1s						
TVBK	TV Kerman	1.13	337	*e*Pg	Pn	07 34 56.5	+0.1
NIAN	Nian	1.43	195	*e*Pn	Pg	07 35 02.7	+1.1
NIAN				*e*		07 35 27.4	
	comp=Z,99nm,0.1s						
NIAN	Nian	1.43	195	*e*Pg	Pg	07 35 02.8	+1.1
KHGB	Koh Gabri	1.58	335	*e*Pn	Pn	07 35 01.1	-1.5
KHGB	Koh Gabri	1.58	335	*e*Pn	Pn	07 35 01.2	-1.4
GENO	Geno	1.81	212	*e*		07 35 34.2	
	comp=Z,99nm,0.1s						
GENO				*e*Pn	Pb	07 35 07.2	-0.4
KHSK	Kohestak	2.18	185	*e*Pn	Pn	07 35 12.8	+2.2
KHSK				*e*		07 35 43.1	
	comp=Z,99nm,0.1s						
KHSK	Kohestak	2.18	185	*e*Pn	Pn	07 35 12.8	+2.2
SHME	Shamm	3.05	199	P	Pn	07 35 22.8	+0.3
SHME				S	Sn	07 35 58.1	-1.0
BANOM	Banah	3.12	196	P	Pn	07 35 24.0	+0.4
BANOM				S	Sn	07 36 01.0	0.0
BANOM	Banah	3.12	196	P	Pn	07 35 24.0	+0.4
BANOM				S	Sn	07 36 01.0	0.0
MSFE	Esma-Masafi	3.70	196	P	Pn	07 35 32.0	+0.5
MSFE	Esma-Masafi	3.70	196	*e*Pn	Pn	07 35 33.5	+2.0
MDH	Madha	3.73	194	P	Pn	07 35 32.9	+1.0
MDH	Madha	3.73	194	P	Pn	07 35 32.9	+1.0
IPAR	Pars	3.78	285	*e*Pn	Pn	07 35 32.0	-0.9
UOSS	Minazif	4.09	194	P	Pn	07 35 37.4	+0.5
UOSS	Minazif	4.09	194	P	Pn	07 35 37.4	+0.5
HATD	Hatta, Dubai	4.22	194	P	Pn	07 35 38.4	-0.3
HATD	Hatta, Dubai	4.22	194	P	Pn	07 35 38.4	-0.3
HATD	Hatta, Dubai	4.22	194	*e*Pn	Pn	07 35 40.7	+2.0
IKAZ	Kazeroun	4.80	281	*e*Pn	Pn	07 35 45.7	-1.3
IKAZ	Kazeroun	4.80	281	*e*Pn	Pn	07 35 45.9	-1.1
IRAM	Ramesheh	5.09	305	*e*Pn	Pn	07 35 47.7	-3.1
WSAR	Wadi Sarin	5.81	167	Pn	Pn	07 35 58.5	-2.1
	comp=Z,2.0nm,0.3s,baz=170,slow=11,SNR=11						
WSAR				Sn	Sn	07 37 01.5	-5.7
	comp=Z,1.5nm,0.3s,baz=11,slow=10,SNR=16						
AKTO	Aktyubinsk	21.48	1	P	P	07 39 13.2	-10
	comp=Z,2.2nm,0.7s,baz=173,slow=12,SNR=8.6						
BRTR	Keskin Array B	22.21	305	P	P	07 39 19.7	-11
	comp=Z,0.6nm,0.7s,baz=119,slow=12,SNR=3.7						
AKASG	Malin Array Be	30.29	324	LR	LR	07 54 47.7	
	comp=Z,18nm,20.3s,baz=105,slow=41						
GERES	GERESS Array B	38.65	313	P	P	07 41 45.9	-12
	comp=Z,0.2nm,0.3s,baz=119,slow=10,SNR=3.0						
TORD	Torodi Ar. Bea	53.73	265	P	P	07 43 45.6	-11
	comp=Z,0.5nm,0.5s,baz=61,slow=7.4,SNR=9.9						

IDC ***20*** *07:52:35.8±1.0,11°.60N×125°.65E,h0km,mb3.5/6, mb1 3.6/6,mb1mx3.5/62,mbtmp3.5/6,MS2.7/1,Ms1 2.7/1, ms1mx2.2/44, Error ellipse: s-maj=62.0km s-min=19.7km az=70.0*
ISCJB ***20*** *07:52:43.6±0.6,11°.59N±0°.04×125°.40E±0°.06,h70km±5km, mb3.4/6, Error ellipse: s-maj=10.0km s-min=6.7km az=1.7*
MAN ***20*** *07:52:46.2,11°.54N×125°.27E,h37km,mb4.7,ML3.6, MS3.5*
ISC 20 07:52:44.6±0.9,**11°.56N**±0°.04×**125°.36E**±0°.07,**h60**km±7km,
n19,σ2°**10**/24,**mb3.6**/6,**1C-1D**,**Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	Borongan	0.09	63	*e*P	Pn	07 52 53.6	+0.1
BESP				*e*S	Sn	07 53 01.0	+1.0
PLP	Palo	0.54	223	⇑*i*P	Pn	07 52 56.5	-0.5
PLP				*i* S	Sn	07 53 05.8	-0.2
OCLP	Ormoc	0.89	235	*e*P	Pn	07 53 01.1	-0.2
OCLP				*e*S	Sn	07 53 13.8	+0.3
CNP	Catarman	1.16	324	*e*P	Pn	07 53 05.0	+0.2
CNP				*e*S	Sn	07 53 21.5	+1.7
MSLP	Maasin	1.50	199	*e*P	Pn	07 53 11.0	+1.7
MSLP				*e*S	Sn	07 53 30.4	+2.5
LLP	Lapu-Lapu	1.84	228	*e*P	Pn	07 53 14.2	+0.2
LLP				*e*S	Sn	07 53 36.2	0.0
PVCP	Virac	2.34	330	*e*P	Pn	07 53 20.5	-0.2
PVCP				*e*S	Sn	07 53 54.5	+6.2
RCP	Roxas	2.56	270‖	*e*P	Pn	07 53 24.6	+0.8
RCP				*e*S	Sn	07 53 55.3	+1.5
BUKP	Musuan	3.67	185	*e*P	Pn	07 53 41.4	+2.4
BUKP				*e*S	Sn	07 54 24.8	+3.7
GUMO	Guam	19.15	82	LR	LR	08 02 42.0	
	comp=Z,27nm,21.6s,baz=36,slow=32						
WRA	Warramunga Arr	32.53	164	P	P	07 59 07.4	-2.7

AYDN				S		Sg	08 04 59.7	+0.3
AYDB	**Zeytinkoy-Aydi**	**0.90**	**80**	PG		**Pb**	08 04 47.6	-0.1
AYDB	**Zeytinkoy-Aydi**	**0.90**	**80**	*e*Pg		**Pb**	08 04 47.6	-0.1
MLSB	**Milas**	**0.94**	**122**	PG		**Pg**	08 04 48.7	0.0
MLSB	**Milas**	**0.94**	**122**	*e*Pg		**Pg**	08 04 48.7	0.0
APE	**Apeiranthos**	**1.23**	**234**	PN		**Pb**	08 04 53.4	+0.1
APE	**Apeiranthos**	**1.23**	**234**	*e*Pn		**Pb**	08 04 53.4	+0.1
DAT	**Datca**	**1.25**	**149**	PN		**Pb**	08 04 54.1	+0.5
DAT	**Datca**	**1.25**	**149**	*e*Pn		**Pb**	08 04 54.1	+0.5
DKL	**Dikili**	**1.27**	**5**	PN		**Pn**	08 04 53.8	+0.3
DKL	**Dikili**	**1.27**	**5**	*e*Pn		**Pn**	08 04 53.8	+0.3
SIGR	**SIGRI**	**1.58**	**333**	PN		**Pn**	08 04 58.2	+0.4
SIGR	**SIGRI**	**1.58**	**333**	*e*Pn		**Pn**	08 04 58.2	+0.4
TURN	**Turunc**	**1.73**	**122**	PN		**Pn**	08 04 58.8	-0.9
TURN	**Turunc**	**1.73**	**122**	*e*Pn		**Pn**	08 04 58.8	-0.9

IDC 20 08:12:28.9±7.2, 6°47S×147°25E, h64km±69km, mb3.0/1, mb1 3.5/3, mb1mx3.1/48, mbtmp3.6/3, ML3.6/1, MS2.4/1, Ms1 2.4/1, ms1mx2.1/17, Error ellipse: s-maj=76.5km s-min=46.3km az=116.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.92**	**182**	P	Pn	08 13 12.0	-0.9
	13nm,0.3s,baz=7.9,slow=8.4,SNR=25						
PMG				S	Sn	08 13 47.8	+1.0
	19nm,0.3s,baz=31,slow=20,SNR=7.9						
PMG				LR	LR	08 14 24.0	
	comp=Z,64nm,18.4s,baz=87,slow=39						
WRA	**Warramunga Arr**	**18.35**	**222**	P	P	08 16 37.9	-0.5
	0.2nm,0.3s,baz=48,slow=11,SNR=12						
ASAR	**Alice Springs**	**21.38**	**216**	P	P	08 17 11.1	-0.2
	0.8nm,0.4s,baz=53,slow=9.2,SNR=17						
TORD	**Torodi Ar. Bea**	**145.45**	**284**	PKPbc	PKPdf	08 32 00.2	-0.5
	0.9nm,0.5s,baz=75,slow=3.7,SNR=17						

*ISCJB **20** 08:55:21.8±0.3, 24°06N±0°01×121°68E±0°02, h4km±2km, Error ellipse: s-maj=3.0km s-min=1.9km az=22.5*
*TAP **20** 08:55:21.6, 24°05N×121°66E, h8km, ML3.8, B*
*JMA **20** 08:55:21.5±0.1, 24°05N×121°67E, h0km, M3.2*
ISC 20 08:55:21.6±0.8, 24°04N±0°02×121°68E±0°02, h11km±5km, n77, g0°65/112, 1C-13D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.09**	**294**	*i* P		**Pg**	08 55 23.7	-0.4
TWD				*i* S		**Sg**	08 55 25.1	-0.9
	baz=303						
HWA	**Hwalien**	**0.10**	**227**	*e*P		**Pg**	08 55 24.5	+0.3
HWA				*e*S		**Sg**	08 55 26.6	+0.4
	baz=226						
NACB	**Ninganchiao**	**0.15**	**328**	⇓*i*P		**Pg**	08 55 24.8	-0.3
NACB				*i* S		**Sg**	08 55 26.8	-0.7
	baz=333						
ENLB	**Shoufeng**	**0.16**	**208**	⇓*e*P		**Pb**	08 55 27.2	+0.5
ENLB				*e*S		**Sg**	08 55 30.6	+2.9
	baz=206						
ESL	**Shilin**	**0.33**	**225**	*e*P		**Pg**	08 55 27.8	-0.4
ESL				*e*S		**Sg**	08 55 31.8	-0.7
	baz=232						
ENA	**Nanau**	**0.39**	**8**	⇓*i*P		**Pg**	08 55 29.4	+0.1
ENA				S		**Sg**	08 55 34.7	+0.2
	baz=7.0						
NANB	**Nanao**	**0.39**	**9**	⇓*i*P		**Pg**	08 55 29.4	+0.1
NANB				S		**Sg**	08 55 34.8	+0.3
	baz=7.0						
ENAH	**Nanao**	**0.42**	**16**	*e*P		**Pg**	08 55 29.6	-0.3
	baz=3.0						
EGFH	**Guangfu**	**0.44**	**212**	*e*P		**Pg**	08 55 30.3	0.0
	baz=220						
CHGB	**Renai**	**0.47**	**272**	⇓P		**Pg**	08 55 30.8	-0.1
CHGB				S		**Sg**	08 55 36.6	-0.5
	baz=272						
NNSB	**Datong**	**0.47**	**324**	⇓P		**Pg**	08 55 30.9	0.0
NNSB				S		**Sg**	08 55 36.7	-0.5
	baz=324						
NNSH	**Datong**	**0.47**	**324**	P		**Pg**	08 55 30.9	0.0
NNSH				*e*S		**Sg**	08 55 36.7	-0.5
	baz=323						
NNS	**Nan Shan**	**0.49**	**324**	⇓P		**Pg**	08 55 31.1	-0.1
NNS				S		**Sg**	08 55 37.4	-0.2
	baz=324						
TWT	**Tachien**	**0.51**	**294**	P		**Pg**	08 55 31.9	+0.3
TWT				S		**Sg**	08 55 38.5	+0.1
	baz=293						
TDCB	**Techi**	**0.52**	**293**	P		**Pg**	08 55 31.9	0.0
TDCB				S		**Sg**	08 55 38.7	-0.2
	baz=293						
VWDT	**VWDT**	**0.57**	**240**	*e*P		**Pg**	08 55 33.0	+0.1
VWDT				S		**Sg**	08 55 40.0	-0.4
	baz=234						
TWC	**Suao**	**0.58**	**15**	*e*P		**Pg**	08 55 33.2	+0.2
TWC				*e*S		**Sg**	08 55 40.7	0.0
	baz=7.0						
HGSD	**Ruisui**	**0.60**	**204**	*e*P		**Pn**	08 55 35.3	-0.8
	baz=212						
ENTT	**Nioudou**	**0.60**	**350**	⇓P		**Pg**	08 55 33.6	+0.2
ENTT				S		**Sg**	08 55 41.7	+0.4
	baz=349						
EOS1	**EOS1**	**0.65**	**39**	*e*P		**Pn**	08 55 36.4	-0.3
	baz=25						
TWE	**Neicheng**	**0.67**	**359**	⇓P		**Pg**	08 55 35.0	+0.2
TWE				S		**Sg**	08 55 43.8	+0.2
	baz=357						
YHNB	**Yeheng**	**0.68**	**336**	⇓P		**Pg**	08 55 35.3	+0.4
YHNB				S		**Sg**	08 55 43.6	-0.3
	baz=326						
NSK	**Sanguang**	**0.70**	**335**	⇓*i*P		**Pg**	08 55 35.4	+0.2
NSK				S		**Sg**	08 55 43.7	-0.6
	baz=326						
SSLB	**Suanglung**	**0.72**	**249**	⇓P		**Pg**	08 55 35.3	-0.2
SSLB				*e*S		**Sg**	08 55 43.3	-1.6
	baz=260						
SMLT	**Sun Moon Lake**	**0.74**	**258**	⇓*i*P		**Pg**	08 55 35.9	0.0
SMLT				S		**Sg**	08 55 45.1	-0.4
	baz=258						
YULB	**Yu-li**	**0.74**	**209**	*e*P		**Pg**	08 55 35.5	-0.4
YULB				*e*S		**Sg**	08 55 46.4	+0.7
	baz=225						
NWLT	**Wulai**	**0.75**	**347**	*e*P		**Pg**	08 55 36.4	+0.3
NWLT				*e*S		**Sg**	08 55 45.6	-0.3
	baz=345						
TWF1	**Yuli**	**0.78**	**207**	*e*P		**Pg**	08 55 36.5	-0.1
	baz=222						
EGS		**0.83**	**16**	*e*P		**Pn**	08 55 39.9	+0.6
	baz=13						
NSTT	**Nanjuang**	**0.85**	**313**	*e*P		**Pg**	08 55 38.2	+0.1
NSTT				*e*S		**Sg**	08 55 49.1	-0.2
	baz=313						
LIOB	**Emei**	**0.85**	**315**	P		**Pb**	08 55 38.6	+0.1
LIOB				*e*S		**Sb**	08 55 49.9	-0.1
	baz=314						
WLTB	**Daxi**	**0.90**	**334**	*e*P		**Pb**	08 55 39.4	+0.1
	baz=341						
WJS	**Zhushan**	**0.90**	**256**	*e*P		**Pb**	08 55 39.9	+0.6
WJS				*e*S		**Sn**	08 55 53.1	-0.3
	baz=256						
FULB	**Fuli**	**0.92**	**203**	*e*P		**Pg**	08 55 39.3	0.0
	baz=221						
NSY	**Sanyi**	**0.92**	**294**	*e*P		**Pn**	08 55 40.5	-0.1
	baz=305						
NSY				S		**Sb**	08 55 52.5	+0.6
	baz=305						
WNT	**Mingjian**	**0.93**	**260**	*e*P		**Pn**	08 55 40.8	+0.1
	baz=260						
WNT				*e*S		**Sn**	08 55 53.8	-0.2
	baz=260						
TIPB	**Shuangxi**	**0.93**	**8**	*e*P		**Pg**	08 55 38.7	-0.9
	baz=354						
TIPB				*e*S		**Sg**	08 55 49.5	-2.3
	baz=354						
TWA	**Mucha**	**0.94**	**354**	*e*P		**Pb**	08 55 40.2	+0.3
	baz=342						
TWA				*e*S		**Sg**	08 55 51.5	-0.5
	baz=342						
TATO	**Taipei**	**0.94**	**349**	*e*P		**Pb**	08 55 40.4	+0.3
	baz=346						
TATO				*e*S		**Sg**	08 55 51.8	-0.3
	baz=346						
NMLH	**Miaoli**	**0.95**	**301**	*e*P		**Pn**	08 55 41.2	+0.1
	baz=301						
ALS	**Alishan**	**0.96**	**237**	*e*P		**Pb**	08 55 40.8	+0.2
	baz=247						
SBCB	**Hsinchu**	**0.98**	**320**	*e*P		**Pn**	08 55 41.3	-0.1
	baz=319						
TWB1	**Santiao Chiao**	**1.00**	**16**	*e*P		**Pn**	08 55 42.0	+0.3
	baz=4.0						
NCUH	**Zhongli**	**1.03**	**334**	*e*P		**Pn**	08 55 42.0	0.0
	baz=339						
NWF	**Wu-fen Shan**	**1.03**	**5**	*e*P		**Pn**	08 55 43.0	+0.8
WFSB	**Wu-fen Shan**	**1.03**	**5**	*e*P		**Pn**	08 55 42.2	+0.1
NCU	**National Centr**	**1.03**	**334**	*e*P		**Pg**	08 55 41.7	+0.2
	baz=339						
WCHH	**Zhanghua**	**1.03**	**272**	*e*P		**Pg**	08 55 41.7	+0.2
	baz=273						
ELDTW	**Lidau**	**1.05**	**216**	*e*P		**Pg**	08 55 42.3	+0.4
	baz=206						
TWS1	**Kuangyinshan**	**1.08**	**347**	*e*P		**Pn**	08 55 43.8	+1.0
	baz=345						
WDLH	**Douliu**	**1.11**	**252**	*e*P		**Pg**	08 55 43.2	+0.2
	baz=253						
YM10	**YM10**	**1.11**	**354**	*e*P		**Pb**	08 55 42.8	-0.2
YM04	**YM04**	**1.11**	**353**	*e*P		**Pb**	08 55 42.5	-0.5
	baz=349						
YM11	**YM11**	**1.12**	**355**	*e*P		**Pn**	08 55 44.7	+1.3
	baz=1.0						
YM07	**YM07**	**1.13**	**357**	*e*P		**Pb**	08 55 42.0	-1.3
	baz=353						
NTST	**Danshui**	**1.14**	**349**	*e*P		**Pg**	08 55 44.3	+0.8
	baz=346						
YM03	**YM03**	**1.14**	**353**	*e*P		**Pn**	08 55 43.9	+0.3
	baz=349						
YM12	**YM12**	**1.14**	**355**	*e*P		**Pb**	08 55 41.8	-1.6
	baz=1.0						
YM08	**YM08**	**1.14**	**356**	*e*P		**Pb**	08 55 43.4	-0.1
	baz=1.0						
TPUB	**Ta-pu**	**1.22**	**233**	*e*P		**Pn**	08 55 44.2	-0.5
	baz=236						
TWY	**Chenhua**	**1.23**	**356**	*e*P		**Pg**	08 55 45.7	+0.4
	baz=2.0						
WTP	**Ta-pu**	**1.26**	**231**	*e*P		**Pg**	08 55 46.4	+0.5
	baz=235						
CHY	**Chiayi**	**1.28**	**245**	*e*P		**Pg**	08 55 47.0	+0.8
	baz=247						
YOJ	**Yonaguni jima**	**1.28**	**71**	⇑P		**Pb**	08 55 45.9	+0.1
	baz=68						
YOJ	**Yonaguni jima**	**1.28**	**71**	P		**Pb**	08 55 45.9	+0.1
YOJ				S		**Sg**	08 56 03.9	+1.0
TWG	**Pinlang**	**1.34**	**205**	*e*P		**Pn**	08 55 46.0	-0.4
	baz=209						
TWGBT	**Beinan**	**1.34**	**205**	*e*P		**Pn**	08 55 45.4	-1.0
	baz=208						
TWH	**Lutao**	**1.34**	**188**	*e*P		**Pn**	08 55 44.5	-1.8
	baz=192						
TWK	**Hsinying**	**1.34**	**235**	*e*P		**Pg**	08 55 47.5	0.0
	baz=238						
CHN1	**Nanshi**	**1.36**	**231**	*e*P		**Pb**	08 55 47.4	+0.2
	baz=235						
SGST	**Jiashian**	**1.39**	**227**	*e*P		**Pb**	08 55 47.6	-0.1
	baz=231						
MASBT	**Mashibuluo**	**1.72**	**214**	*e*P		**Pg**	08 55 54.7	0.0
	baz=208						
IRIF	**Iriomote-Funau**	**1.89**	**81**	P		**Pb**	08 55 55.6	-0.6
SCZT	**Fangliau**	**1.93**	**211**	*e*P		**Pb**	08 55 57.5	+0.6
	baz=216						
HATJ	**Hateruma jima**	**1.94**	**89**	P		**Pb**	08 55 56.3	-0.7
HATJ				*e*S		**Sg**	08 56 22.7	-1.3
JIJ	**Ishigaki jima**	**2.27**	**81**	P		**Pn**	08 55 59.2	+0.1
JIJ				*e*S		**Sn**	08 56 27.9	+0.8
JISG	**Ishigakijimahi**	**2.46**	**77**	P		**Pn**	08 56 02.1	+0.4
JISG				*e*S		**Sn**	08 56 32.4	+0.7

*INMG **20** 09:02:16.2±1.5, 37°05N×13°14W, h10km, ML2.1, Error ellipse: s-maj=19.7km s-min=14.5km az=162.0*
*CSEM **20** 09:02:17.2±0.6, 37°28N×12°53W, h10km, ML2.6/6, Error ellipse: s-maj=13.3km s-min=10.7km az=170.0*
MDD 20 09:02:14.9±2.4, 37°25N×12°73W, h0km, mb3.6/4, Error ellipse: s-maj=26.1km s-min=20.4km az=173.0, PRXIMO, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.12**	**91**	*e*Pn	Pn	09 03 03.1	-2.2
PFVI				*e*Sn	Sn	09 03 39.3	-4.0
PFVI				A	A	09 03 41.4	
	3.0nm,0.8s						
PFVI	**Vila Bisbo**	**3.12**	**91**	P	Pn	09 03 03.1	-2.2
	0.6nm,0.1s,SNR=7.9						
PFVI				S	Sn	09 03 39.2	-4.1
	0.2nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**3.12**	**91**	P	Pn	09 03 03.1	-2.2
	0.6nm,0.1s,SNR=7.9						
PFVI				*e*Sn	Sn	09 03 39.3	-4.0
PTEO	**Sao Teotonio**	**3.20**	**83**	*e*Sn	Sn	09 03 42.1	-3.3
PTEO				A	A	09 03 49.4	
	2.8nm,0.2s						
PTEO	**Sao Teotonio**	**3.20**	**83**	Sn	Sn	09 03 42.1	-3.3
	1.4nm,0.2s						
PTEO	**Sao Teotonio**	**3.20**	**83**	Sn	Sn	09 03 42.1	-3.3
	1.4nm,0.2s						
PMAFR	**Mafra**	**3.21**	**57**	*e*Pn	Pn	09 03 05.8	-0.8
PMAFR				*e*Sn	Sn	09 03 44.0	-1.5
PMAFR				A	A	09 03 58.0	
	15nm,0.6s						
PMAFR	**Mafra**	**3.21**	**57**	P	Pn	09 03 05.3	-1.3
	3.8nm,0.2s,SNR=4.0						
PMAFR				S	Sn	09 03 42.9	-2.6
	0.2nm,0.0s,SNR=7.9						
PMAFR	**Mafra**	**3.21**	**57**	P	Pn	09 03 05.3	-1.3
	3.8nm,0.2s,SNR=4.0						
PMAFR	**Mafra**	**3.21**	**57**	*e*Pn	Pn	09 03 05.8	-0.8
PMAFR				S	Sn	09 03 42.9	-2.6
	0.2nm,0.0s,SNR=7.9						
PMAFR				*e*Sn	Sb	09 03 44.0	-8.4
MORF	**Marmelete**	**3.25**	**88**	*e*Pn	Pn	09 03 06.8	-0.5
MORF	**Marmelete**	**3.25**	**88**	Pn	Pn	09 03 06.8	-0.5
MORF	**Marmelete**	**3.25**	**88**	Pn	Pn	09 03 06.8	-0.5
PNCL	**Nicolau / Gran**	**3.44**	**74**	*e*Pn	Pn	09 03 09.5	-0.3
PNCL				*e*Sn	Sn	09 03 48.2	-3.1
PNCL				A	A	09 03 54.2	
	1.9nm,0.1s						
PNCL	**Nicolau / Gran**	**3.44**	**74**	*e*Pn	Pn	09 03 09.5	-0.3
PNCL				*e*Sn	Sn	09 03 48.2	-3.1
MESJ	**Messejana**	**3.63**	**79**	*e*Pn	Pn	09 03 11.9	-0.5
MESJ	**Messejana**	**3.63**	**79**	Pn	Pn	09 03 11.9	-0.5
MESJ	**Messejana**	**3.63**	**79**	Pn	Pn	09 03 11.9	-0.5
PCVE	**Castro Verde**	**3.75**	**83**	*e*Pn	Pn	09 03 13.3	-0.8
PCVE				*e*Sn	Sn	09 03 57.0	-2.0
PCVE				A	A	09 04 02.9	
	1.8nm,0.6s						
PCVE	**Castro Verde**	**3.75**	**83**	Pn	Pn	09 03 13.3	-0.8
PCVE				Sn	Sn	09 03 57.0	-2.0
	1.8nm,0.6s						
PCVE	**Castro Verde**	**3.75**	**83**	Pn	Pn	09 03 13.3	-0.8
PCVE				Sn	Sn	09 03 57.0	-2.0
	1.8nm,0.6s						
ALMR	**Almeirim**	**3.79**	**59**	*e*Pn	Pn	09 03 12.3	-2.2
ALMR				*e*Sn	Sn	09 03 56.7	-3.0
ALMR	**Almeirim**	**3.79**	**59**	Pn	Pn	09 03 12.3	-2.2
ALMR				Sn	Sn	09 03 56.7	-3.0
ALMR	**Almeirim**	**3.79**	**59**	Pn	Pn	09 03 12.3	-2.2
ALMR				Sn	Sn	09 03 56.7	-3.0
PBDV	**Barranco-do-Ve**	**3.83**	**89**	*e*Sn	Sn	09 03 59.5	-1.4
PBDV				A	A	09 04 05.0	
	1.9nm,0.7s						
PBDV	**Barranco-do-Ve**	**3.83**	**89**	Sn	Sn	09 03 59.5	-1.4
	1.9nm,0.7s						
PBDV	**Barranco-do-Ve**	**3.83**	**89**	Sn	Sn	09 03 59.5	-1.4
	1.9nm,0.7s						
PMTG	**Montargil**	**3.99**	**62**	*e*Pn	Pn	09 03 15.9	-1.4
PMTG				*e*Sn	Sn	09 04 01.6	-3.1
PMTG	**Montargil**	**3.99**	**62**	*e*Pn	Pn	09 03 15.9	-1.4
PMTG				*e*Sn	Sn	09 04 01.6	-3.1
PVAQ	**Vaqueiros**	**4.00**	**86**	*e*Pn	Pn	09 03 16.5	-0.9
PVAQ				*e*Sn	Sn	09 04 02.0	-3.0
PVAQ				A	A	09 04 05.6	
	1.7nm,0.3s						
PVAQ	**Vaqueiros**	**4.00**	**86**	Pn	Pn	09 03 16.5	-0.9
PVAQ				Sn	Sn	09 04 02.0	-3.0
	1.7nm,0.3s						
PVAQ	**Vaqueiros**	**4.00**	**86**	Pn	Pn	09 03 16.5	-0.9
PVAQ				Sn	Sn	09 04 02.0	-3.0
	1.7nm,0.3s						
EGRO	**El Granado**	**4.19**	**85**	P	Pn	09 03 17.9	-2.2
	0.9nm,0.2s,SNR=5.2						
EGRO				S	Sn	09 04 05.5	-4.1
	0.2nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**4.19**	**85**	P	Pn	09 03 17.9	-2.1
	0.9nm,0.2s,SNR=5.2						
EGRO				S	Sn	09 04 05.5	-4.2
	0.2nm,0.1s,SNR=7.9						
PBAR	**Barrancos**	**4.61**	**77**	*e*Pn	Pn	09 03 24.9	-0.9
PBAR				*e*Sn	Sn	09 04 16.5	-3.5
PBAR				A	A	09 04 20.3	
	1.7nm,0.2s						
PBAR	**Barrancos**	**4.61**	**77**	Pn	Pn	09 03 24.9	-0.9
PBAR				Sn	Sn	09 04 16.5	-3.5
	1.7nm,0.2s						
PBAR	**Barrancos**	**4.61**	**77**	Pn	Pn	09 03 24.9	-0.9
PBAR				Sn	Sn	09 04 16.5	-3.5
	1.7nm,0.2s						
PMRV	**Marv??o**	**4.73**	**61**	*e*Pn	Pn	09 03 27.0	-0.5
PMRV				*e*Sn	Sn	09 04 18.4	-4.6
PMRV				A	A	09 04 23.4	
	1.7nm,0.4s						
PMRV	**Marv??o**	**4.73**	**61**	Pn	Pn	09 03 27.0	-0.5
PMRV				Sn	Sn	09 04 18.4	-4.6
	1.7nm,0.4s						
PMRV	**Marv??o**	**4.73**	**61**	Pn	Pn	09 03 27.0	-0.5
PMRV				Sn	Sn	09 04 18.4	-4.6
	1.7nm,0.4s						
EBAD	**Badajoz**	**4.76**	**70**	S	Sn	09 04 18.8	-4.9
	0.2nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**4.76**	**70**	S	Sn	09 04 18.8	-5.0
	0.2nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.84**	**82**	S	Sn	09 04 19.6	-6.3
	1.8nm,0.3s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.84**	**82**	S	Sn	09 04 19.6	-6.3
	1.8nm,0.3s,SNR=7.9						
ECAB	**El Cabril**	**5.86**	**80**	P	Pn	09 03 41.8	-1.3
	0.3nm,0.1s,SNR=4.0						
ECAB				S	Sn	09 04 44.7	-6.2
	0.6nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**5.86**	**80**	P	Pn	09 03 41.8	-1.2
	0.3nm,0.1s,SNR=4.0						
ECAB				S	Sn	09 04 44.7	-6.2
	0.6nm,0.2s,SNR=7.9						

*CSEM **20** 09:03:36.3, 39°93N×29°21W, h10km, ML2.8*
PDA 20 09:03:36.3±0.8, 39°93N×29°21W, h10km, MD3.7, ML2.8, Error ellipse: s-maj=13.9km s-min=3.1km az=50.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCED	**Cedros**	**1.36**	**163**	*e*S	Sb	09 04 11.8	-7.4
PCED				A	A	09 04 13.0	
	55nm,0.6s						
PCED	**Cedros**	**1.36**	**163**	*e*S	Sb	09 04 11.8	-7.4
CALA	**Caldeira**	**1.40**	**164**	*e*P	Pn	09 03 57.1	-4.9
CALA				*e*S	Sb	09 04 13.0	-7.5
CALA	**Caldeira**	**1.40**	**164**	*e*P	Pn	09 03 57.1	-4.9
CALA				*e*S	Sb	09 04 13.0	-7.5
H07N1	**FLORES T-PHASE**	**1.49**	**261**	*e*P	Pn	09 03 58.9	-4.3
H07N1	**FLORES T-PHASE**	**1.49**	**261**	*e*P	Pn	09 03 58.9	-4.3
PICO	**Pico**	**1.55**	**157**	*e*P	Pn	09 03 59.5	-4.5
PICO				*e*S	Sn	09 04 17.1	-7.1
PICO				A	A	09 04 23.8	
	47nm,0.2s						
PICO	**Pico**	**1.55**	**157**	*e*P	Pn	09 03 59.5	-4.5
PICO				*e*S	Sn	09 04 17.1	-7.1
PCAN	**Candelaria**	**1.57**	**159**	*e*P	Pn	09 03 59.4	-4.8
PCAN				*e*S	Sn	09 04 16.9	-7.7
PCAN				A	A	09 04 21.7	
	48nm,0.2s						
PCAN	**Candelaria**	**1.57**	**159**	*e*P	Pn	09 03 59.4	-4.8
PCAN				*e*S	Sn	09 04 16.9	-7.7
H07S1	**FLORES T-PHASE**	**1.64**	**251**	*e*P	Pn	09 04 00.2	-5.0
H07S1	**FLORES T-PHASE**	**1.64**	**251**	*e*P	Pn	09 04 00.2	-5.0

IDC 20 09:11:07.3±1.8, 1°22N×126°64E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.3/64, mbtmp3.4/4, MS2.9/1, Ms1 2.9/1, ms1mx2.2/37, Error ellipse: s-maj=173.9km s-min=22.5km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.34**	**161**	P	P	09 16 06.4	-0.6
	0.5nm,0.7s,baz=339,slow=11,SNR=15						
ASAR	**Alice Springs**	**25.72**	**165**	P	P	09 16 40.0	+0.4
	0.2nm,0.4s,baz=344,slow=12,SNR=5.5						
ASAJ	**Asahikawa**	**45.01**	**16**	LR	LR	09 41 29.6	
	comp=Z,12nm,19.0s,baz=344,slow=40						
MKAR	**Makanchi Array**	**59.57**	**326**	P	P	09 21 12.8	0.0
	0.3nm,0.4s,baz=113,slow=8.7,SNR=3.2						
KURBB	**Kurchatov Arra**	**63.80**	**328**	P	P	09 21 41.3	0.0
	0.3nm,0.5s,baz=126,slow=6.2,SNR=5.0						

*ISK **20** 09:25:51.9, 37°27N×28°17E, h3km, ML2.5/9*
*ISCJB **20** 09:25:52.7±0.4, 37°26N±0°03×28°19E±0°03, h0km, Error ellipse: s-maj=4.1km s-min=3.0km az=10.9*
*CSEM **20** 09:25:52.7±0.2, 37°25N×28°18E, h2km, ML2.5, Error ellipse: s-maj=4.5km s-min=3.3km az=26.0, Suspected Mining explosion.*
*DDA **20** 09:25:52.5, 37°24N×28°19E, h7km, Ml2.7, Suspected Mining explosion.*
ISC 20 09:25:51.3±0.8, 37°28N±0°03×28°10E±0°03, h0km, n31, g0°75/48, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSB	**Milas**	**0.26**	**274**	PG		**Pb**	09 25 58.9	0.0
MLSB				SG		**Sb**	09 26 04.1	+0.2
MLSB	**Milas**	**0.26**	**274**	*e*Pg		**Pb**	09 25 58.9	0.0
MLSB				*e*Sg		**Sb**	09 26 04.1	+0.2
AYDN	**Tasoluk**	**0.42**	**335**	*i* P		**Pb**	09 26 02.2	+0.5
AYDN				*i* S		**Sb**	09 26 09.4	+0.7
AYDN	**Tasoluk**	**0.42**	**335**	P		**Pb**	09 26 02.2	+0.5
A

DNZL			*i* S	**Sb**	**09 26 21.0**	**-0.3**
DNZL	**Cakiroluk**	**0.86 61**	P	**Pb**	**09 26 08.7**	**-0.5**
DNZL			S	**Sb**	**09 26 21.0**	**-0.3**
FETY	**Fethiye**	**1.02 129**	PG	**Pg**	**09 26 10.8**	**0.0**
FETY	**Fethiye**	**1.02 129**	P	**Pg**	**09 26 09.1**	**-1.7**
FETY	**Fethiye**	**1.02 129**	*e*Pg	**Pg**	**09 26 10.8**	**0.0**
FETY			S	**Sb**	**09 26 25.3**	**-0.4**
ARG	**Arkhangelos**	**1.06 179**	PG	**Pn**	**09 26 13.7**	**+0.3**
ARG	**Arkhangelos**	**1.06 179**	*e*Pg	**Pn**	**09 26 13.7**	**+0.3**
ELL	**Elmali**	**1.54 109**	PN	**Pg**	**09 26 21.2**	**+0.3**
ELL	**Elmali**	**1.54 109**	*e*Pn	**Pg**	**09 26 21.2**	**+0.3**
AKAS	**Kas**	**1.60 130**	PN	**Pn**	**09 26 20.9**	**0.0**
AKAS	**Kas**	**1.60 130**	*i* P	**Pn**	**09 26 21.1**	**+0.2**
AKAS			*i* S	**Sg**	**09 26 45.0**	**+2.4**
AKAS	**Kas**	**1.60 130**	P	**Pn**	**09 26 21.1**	**+0.2**
AKAS			S	**Sg**	**09 26 45.0**	**+2.4**

*JMA **20** 09:27:26.2±0.1, 39°.89N×142°.39E, h37km±1km, M3.4*
*IDC **20** 09:27:32.0±2.7, 39°.82N×142°.28E, h95km±25km, mb3.0/5, mb1 3.2/8, mb1mx3.0/73, mbtmp3.3/8, MS2.7/1, Ms1 2.7/1, ms1mx2.2/9, Error ellipse: s-maj=31.5km s-min=21.6km az=111.0*

ISC 20 09:27:23.4±2.4, 39°.91N±0°.04×142°.49E±0°.06, h17km±14km, n25, σ1°27/27, mb3.5/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.49**	**274**	P	**Pn**	**09 27 35.7**	**+0.1**
JTH				S	**Sb**	**09 27 42.2**	**+1.8**
MIYJ	**Miyakonagasawa**	**0.61**	**238**	P	**Pn**	**09 27 37.2**	**-0.2**
MIYJ				S	**Sb**	**09 27 45.0**	**+0.9**
JANG	**Nango**	**0.88**	**302**	P	**Pn**	**09 27 41.1**	**0.0**
JKZ	**Kuzumaki**	**0.90**	**275**	P	**Pn**	**09 27 41.7**	**+0.3**
JKZ				S	**Sg**	**09 27 52.5**	**-0.2**
JOM	**Ohasama**	**1.02**	**245**	P	**Pn**	**09 27 43.4**	**+0.4**
JOM				S	**Sb**	**09 27 55.7**	**-0.1**
OFUJ	**Ofunato**	**1.04**	**218**	P	**Pn**	**09 27 43.7**	**+0.4**
OFUJ				*e*S	**Sb**	**09 27 56.1**	**-0.3**
JMK	**Ichinoseki**	**1.37**	**226**	P	**Pb**	**09 27 48.5**	**-0.1**
JMK				S	**Sn**	**09 28 04.4**	**-1.2**
JTM	**Tenmabayashi**	**1.40**	**309**	P	**Pb**	**09 27 49.3**	**+0.2**
JTM				S	**Sn**	**09 28 05.9**	**-0.4**
JAH	**Hinai**	**1.45**	**282**	P	**Pb**	**09 27 49.8**	**-0.2**
JAH				*e*S	**Sn**	**09 28 07.4**	**-0.2**
JRG	**Rokugo**	**1.52**	**251**	P	**Pb**	**09 27 50.9**	**-0.3**
JRG				*e*S	**Sb**	**09 28 10.5**	**+0.2**
ASAJ	**Asahikawa**	**4.21**	**1**	P	**Pb**	**09 28 35.7**	**-1.3**
	0.8nm,0.3s,baz=216,slow=8.7,SNR=4.7						
ASAJ				S	**Sn**	**09 29 18.7**	**+3.1**
	0.2nm,0.3s,baz=19,slow=27,SNR=2.4						
MJAR	**Matsushiro Arr**	**4.76**	**226**	P	**Pn**	**09 28 38.3**	**+3.8**
	0.4nm,0.3s,baz=32,slow=14,SNR=5.5						
USRK	**Ussuriysk Ar.**	**8.91**	**302**	P	Pn	09 29 36.7	+5.3
	0.1nm,0.3s,baz=103,slow=15,SNR=4.7						
PETK	**Petropavlovsk-**	**16.80**	**33**	LR	LR	09 38 10.6	
	comp=Z,27nm,18.8s,baz=224,slow=38						
H11N2	**WAKE ISLAND Hy**	**29.04**	**127**	T	T	10 04 00.2	
	baz=319,slow=75,SNR=35						
H11N1	**WAKE ISLAND Hy**	**29.05**	**127**	T	T	10 04 07.1	
	baz=319,slow=75,SNR=29						
H11N3	**WAKE ISLAND Hy**	**29.05**	**127**	T	T	10 04 02.4	
	baz=319,slow=75,SNR=39						
H11S1	**WAKE ISLAND Hy**	**29.85**	**129**	T	T	10 05 06.3	
	baz=320,slow=76,SNR=6.8						
H11S3	**WAKE ISLAND Hy**	**29.85**	**129**	T	T	10 04 54.8	
	baz=320,slow=76,SNR=4.6						
H11S2	**WAKE ISLAND Hy**	**29.86**	**129**	T	T	10 05 08.3	
	baz=320,slow=76,SNR=4.8						
MKAR	**Makanchi Array**	**43.37**	**300**	P	**P**	**09 35 24.5**	**-0.3**
	0.3nm,0.6s,baz=95,slow=9.1,SNR=2.7						
KURBB	**Kurchatov Arra**	**44.96**	**306**	P	**P**	**09 35 35.9**	**-1.5**
	0.4nm,0.5s,baz=80,slow=8.3,SNR=2.2						
ILAR	**Eielson Array**	**46.63**	**34**	P	**P**	**09 35 51.4**	**+1.0**
	0.2nm,0.5s,baz=261,slow=6.8,SNR=4.2						
WRA	**Warramunga Arr**	**60.02**	**189**	P	**P**	**09 37 28.3**	**-0.9**
	0.7nm,1.1s,baz=7.8,slow=7.0,SNR=4.6						
TXAR	**Lajitas Array**	**87.71**	**53**	P	**P**	**09 40 10.9**	**-0.7**
	0.1nm,0.4s,baz=307,slow=3.3,SNR=2.5						

*BJI **20** 09:59:02.5, 4°.90S×103°.20E, h68km, mb5.7/76, mB5.3/43, Ms4.8/59, Ms7 4.7/60*
*DJA **20** 09:59:02.8±0.2, 5°.S±2°×10°.3E±°, h59km±2km, M5.3/56, mb5.7/56, mB5.8/48, MLv5.8/26, Mw(mB)5.3/48, Mwp5.3/2*
*MOS **20** 09:59:03.8±1.0, 4°.77S×103°.27E, h71km, mb5.9/91, MS4.4/25, Error ellipse: s-maj=7.1km s-min=4.0km az=116.5*
*ISCJB **20** 09:59:03.1±0.3, 4°.93S±0°.02×103°.20E±0°.02, h70km±2km, mb5.5/222, Error ellipse: s-maj=4.3km s-min=2.2km az=43.6*
*IDC **20** 09:59:03.7±0.4, 4°.93S×103°.24E, h62km±3km, mb5.2/53, mb1 5.1/54, mb1mx5.1/61, mbtmp5.4/54, MS4.2/44, Ms1 4.2/44, ms1mx4.1/59, Error ellipse: s-maj=8.9km s-min=6.1km az=50.0*
*GCMT **20** 09:59:04.6±0.2, 5°.35S×103°.03E, h56km, MW5.3/103, Moment Tensor Solution. s103,c157; s89,c155; Duration: 1s0 Moment tensor: Scale 10^17^Nm; M_{rr}0.80±.02; $M_{\theta\theta}$-0.61±.02; $M_{\phi\phi}$-0.19±.02; $M_{r\theta}$0.38±.01; $M_{\theta\phi}$0.52±.01; $M_{\phi r}$-0.22±.01; Best double couple: $M_0$0.98400×10^17^ NP1:ϕ_s122.00000°, δ58.00000°, λ87.00000°. NP2:ϕ_s307.00000°, δ32.00000°, λ95.00000°. Principal axes: T 0.9040, Plg76.0000°, Azm23.0000°; N 0.1600, Plg2.0000°, Azm123.0000°; P -1.0640, Plg13.0000°, Azm214.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **20** 09:59:04.6±0.5, 4°.93S×103°.19E, h70km±3km, mb5.6/89, MW5.2 Error ellipse: s-maj=5.1km s-min=2.8km az=223.0, Moment Tensor Solution. s16 Moment tensor: Scale 10^16^Nm; M_{rr}5.85; $M_{\theta\theta}$-1.45; $M_{\phi\phi}$-4.41; $M_{r\theta}$4.74; $M_{\theta\phi}$3.39; $M_{\phi r}$-0.85; Best double couple: $M_0$7.90000×10^16^ NP1: ϕ_s122.00000°, λ64.00000°, λ65.00000°. NP2: ϕ_s349.00000°, δ35.00000°, λ131.00000°. Principal axes: T 8.2400, Plg63.0000°, Azm352.0000°; N -0.6900, Plg22.0000°, Azm134.0000°; P -7.5400, Plg15.0000°, Azm230.0000°;*
NEIC Felt [IV] at Kapahiang and [II] at Liwa. Also felt at Pringsewu.

ISC 20 09:59:03.6±0.3, 4°.93S±0°.03×103°.15E±0°.03, h63km±2km, h63km:pP-P, n1327, σ1°29/1456, mb5.6/257, 61C-41D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.60**	**341**	P	**Pn**	**09 59 17.5**	**+0.6**
MNAI				S	**Sn**	**09 59 30.0**	**+3.4**
MNAI	**Manna**	**0.60**	**341**	*e*Pn	**Pn**	**09 59 17.4**	**+0.5**
MNAI				*e*Sn	**Sn**	**09 59 29.0**	**+2.4**
LWLI	**Liwa**	**0.91**	**95**	P	**Pn**	**09 59 20.5**	**-0.2**
MDSI	**Maura Dua**	**1.11**	**67**	P	**Pn**	**09 59 24.8**	**+1.6**
MDSI				S	**Sn**	**09 59 41.1**	**+3.3**
KASI	**Kota Agung**	**1.46**	**114**	P	**Pn**	**09 59 27.0**	**-0.8**
KASI				S	**Sn**	**09 59 45.2**	**-0.9**
KLI	**Kotabumi**	**1.70**	**88**	P	**Pn**	**09 59 31.9**	**+0.9**
KLI	**Kotabumi**	**1.70**	**88**	P	**Pn**	**09 59 32.0**	**+0.9**
MASI	**Maura Aman, Be**	**2.00**	**333**	P	**Pn**	**09 59 37.1**	**+2.0**
BLSI	**Bandar Lampung**	**2.13**	**102**	P	**Pn**	**09 59 37.0**	**+0.1**
PMBI	**Palembang**	**2.56**	**39**	P	**Pn**	**09 59 45.6**	**+2.8**
CGJI	**Cibinong**	**3.03**	**124**	P	**Pn**	**09 59 48.1**	**-1.0**
SBJI	**Serang**	**3.19**	**112**	P	**Pn**	**09 59 51.9**	**+0.6**
KRJI	**Kerinci**	**3.29**	**329**	P	**Pn**	**09 59 56.2**	**+3.4**
TNG	**Tangerang**	**3.69**	**110**	P	**Pn**	**09 59 59.2**	**+1.1**
TNG				P	**Pn**	**09 59 59.0**	**+0.9**
PPSI	**Pulau Pagai**	**3.81**	**304**	P	**Pn**	**10 00 00.6**	**+0.8**
DBJI	**Dramaga**	**3.92**	**114**	P	**Pn**	**10 00 02.8**	**+1.4**
SKJI	**Sukabumi**	**3.96**	**121**	P	**Pn**	**10 00 01.9**	**0.0**
PPBI	**Pangkal Pinang**	**4.05**	**47**	P	**Pn**	**10 00 05.9**	**+2.7**
RGRI	**Rengat**	**4.62**	**350**	P	**Pn**	**10 00 15.1**	**+4.1**
DSRI	**Dabo**	**4.65**	**18**	P	**Pn**	**10 00 14.9**	**+3.6**
PDSI	**Padang**	**4.81**	**326**	P	**Pn**	**10 00 14.8**	**+1.2**
LEM	**Lembang**	**4.82**	**113**	P	**Pn**	**10 00 16.6**	**+2.7**
	87nm,0.3s,baz=181,slow=11,SNR=69						
LEM				S	**Sn**	**10 01 15.2**	**+6.7**
	22nm,0.3s,baz=184,slow=16,SNR=2.3						
LEM				LR	LR	10 02 31.0	
	comp=Z,5μm,18.2s,baz=287,slow=44						
CISI	**Cisompet, Garu**	**5.32**	**120**	P	**Pn**	**10 00 20.0**	**-0.5**
JCJI	**Jatiwangi**	**5.32**	**107**	P	**Pn**	**10 00 21.7**	**+1.2**
	973nm,0.7s,14μm6.9nm						
SISI	**Saibi**	**5.41**	**311**	P	**Pn**	**10 00 22.2**	**+0.4**
	2μm,0.9s,13μm8.8nm						
BKNI	**Bangkinang**	**5.63**	**338**	P	**Pn**	**10 00 27.6**	**+2.8**
	1μm,1.1s,13μm8μm8.5nm						
BKNI	**Bangkinang**	**5.63**	**338**	*e*Pn	**Pn**	**10 00 26.9**	**+2.1**
TPRI	**Tanjung Pinang**	**5.97**	**13**	P	**Pn**	**10 00 34.1**	**+4.7**
	613nm,0.6s,15μm3.3nm						
CMJI	**Cimerak**	**5.98**	**119**	P	**Pn**	**10 00 28.9**	**-0.6**
	611nm,0.6s,11μm2.8nm						
KPJI	**Karang Pucung**	**6.22**	**113**	P	**Pn**	**10 00 34.4**	**+1.6**
	344nm,0.7s,5μm2.1nm						
MYKOM	**Kota Tinggi**	**6.71**	**6**	*e*Pn	**Pn**	**10 00 43.8**	**+4.2**
MNSI	**Mandailing Nat**	**6.72**	**328**	P	**Pn**	**10 00 39.6**	**0.0**
	304nm,0.9s						
SMRI	**Semarang**	**7.55**	**107**	P	**Pn**	**10 00 51.8**	**+0.8**
	397nm,0.9s,7μm2.7nm						
SMRI	**Semarang**	**7.55**	**107**	*e*Pn	**Pn**	**10 00 53.3**	**+2.3**
UGM	**Wanagama**	**7.90**	**112**	P	**Pn**	**10 00 56.3**	**+0.4**
	949nm,1.0s,9μm3.0nm						
UGM	**Wanagama**	**7.90**	**112**	*e*Pn	**Pn**	**10 00 56.2**	**+0.4**
WOJI	**Wonogiri, Jawa**	**8.24**	**111**	P	**Pn**	**10 01 01.2**	**+0.7**
	82nm,0.6s,3μm						
GSI	**Gunungsitoli**	**8.33**	**318**	P	**Pn**	**10 01 01.0**	**-0.8**
	309nm,0.6s						
GSI	**Gunungsitoli**	**8.33**	**318**	*e*Pn	**Pn**	**10 01 00.8**	**-1.0**
PCJI	**Pacitan**	**8.61**	**113**	P	**Pn**	**10 01 05.0**	**-0.5**
	295nm,0.9s,4μm						
NGJI	**Ngawi**	**8.61**	**107**	P	**Pn**	**10 01 09.9**	**+4.4**
PSI	**Prapat**	**8.77**	**331**	P	**Pn**	**10 01 07.5**	**-0.3**
	5.7nm,0.3s,baz=180,slow=13,SNR=7.8						
PSI				S	**Sn**	**10 02 43.1**	**-2.2**
	0.7nm,0.3s,baz=180,slow=11,SNR=1.4						
PSI				Lg	Lg	10 03 13.8	
	0.7nm,0.3s,baz=180,slow=11,SNR=1.4						
PSI				LR	LR	10 04 54.2	
	comp=Z,3μm,22.0s,baz=91,slow=40						
PSI	**Prapat**	**8.77**	**331**	*e*Pn	**Pn**	**10 01 06.5**	**-1.4**
PSI				S	**Sn**	**10 02 43.1**	**-2.2**
PSI				Lg	Lg	10 03 13.8	
PBKI	**Pangkalan Bun**	**8.78**	**76**	P	**Pn**	**10 01 11.1**	**+3.2**
	277nm,0.8s,18μm5μm						
PWJI	**Pagerwojo**	**9.13**	**110**	P	**Pn**	**10 01 13.6**	**+1.0**
	284nm,0.9s,4μm						
GRJI	**Gresik**	**9.48**	**102**	P	**Pn**	**10 01 21.0**	**+3.5**
COCO	**West Island**	**9.54**	**220**	*e*Pn	Pn	10 01 12.4	-5.9
COCO	**West Island**	**9.54**	**220**	P	Pn	10 01 13.2	-5.1
	SNR=24						
COCO	**West Island**	**9.54**	**220**	*e*P	Pn	10 01 12.4	-5.9
KSM	**Kuching**	**9.57**	**49**	*e*Pn	**Pn**	**10 01 21.4**	**+2.6**
IPM	**Ipoh**	**9.59**	**347**	*e*Pn	**Pn**	**10 01 21.7**	**+2.8**
STKI	**Sintang**	**9.68**	**59**	P	**Pn**	**10 01 23.7**	**+3.4**
	238nm,0.8s,18μm						
KCSI	**Kotacane, Aceh**	**9.97**	**327**	P	**Pn**	**10 01 22.5**	**-1.7**
TPTI		**10.09**	**324**	P	**Pn**	**10 01 23.9**	**-1.9**
KULM	**Kulim**	**10.46**	**346**	*e*Pn	**Pn**	**10 01 31.4**	**+0.5**
BLJI	**Banyuglugur**	**10.75**	**106**	P	**Pn**	**10 01 35.7**	**+0.9**
	333nm,0.6s,6μm						
GMJI	**Gumukmas**	**10.75**	**109**	P	**Pn**	**10 01 35.5**	**+0.7**
	216nm,0.8s,4μm						
MLSI	**Meulaboh, Aceh**	**11.36**	**323**	P	**Pn**	**10 01 40.9**	**-2.2**
JAGI	**Jajag, Banyuwa**	**11.47**	**108**	P	**Pn**	**10 01 44.1**	**-0.6**
	598nm,0.6s,7μm						
JAGI	**Jajag, Banyuwa**	**11.47**	**108**	*e*Pn	**Pn**	**10 01 44.3**	**-0.4**
SBUM	**Sibu**	**11.65**	**51**	*e*Pn	**Pn**	**10 01 51.8**	**+4.6**
LHMI	**Lhok Sumawe**	**11.84**	**328**	*e*Pn	**Pn**	**10 01 49.2**	**-0.6**
MTKI	**Muara Teweh, K**	**12.38**	**72**	P	**Pn**	**10 02 01.7**	**+4.6**
SRBI	**Singaraja**	**12.38**	**105**	P	**Pn**	**10 01 57.6**	**+0.4**
	224nm,0.7s,3μm						
IGBI	**Denpasar**	**12.52**	**109**	P	**Pn**	**10 01 57.1**	**-1.8**
	225nm,1.1s,5μm						
DNP	**Denpasar**	**12.54**	**108**	P	**Pn**	**10 01 59.3**	**+0.1**
	868nm,0.6s						
DNP	**Denpasar**	**12.54**	**108**	P	**Pn**	**10 02 01.7**	**+2.5**
DNP				pmax	pmax		
	comp=Z,829nm,0.6s						
TRTT	**Trang**	**13.14**	**345**	P	**Pn**	**10 02 06.3**	**-1.2**
	comp=Z,57nm,1.0s						
TWSI	**Taliwang, Sumb**	**14.14**	**106**	P	**Pn**	**10 02 16.9**	**-4.0**
BKB	**Balikpapan**	**14.20**	**76**	P	**P**	**10 02 31.1**	**+3.9**
SMKI	**Samarinda**	**14.73**	**73**	P	**P**	**10 02 32.4**	**-0.7**
	comp=Z,124nm,1.2s						
PLAI	**Plampang**	**15.02**	**106**	P	**Pn**	**10 02 29.2**	**-3.2**
SPSI	**Sidrap Palu**	**16.59**	**87**	P	**P**	**10 02 53.4**	**-0.4**
	comp=Z,222nm,1.0s,comp=Z,2μm						
TTSI	**Tana Toraja**	**16.73**	**84**	P	**P**	**10 02 57.1**	**+1.8**
	comp=Z,483nm,1.0s,comp=Z,5μm						
WBSI	**Waikabubak, Su**	**16.77**	**107**	P	**Pn**	**10 02 49.6**	**-4.9**
BKSI	**Bulukumba**	**16.91**	**92**	P	**P**	**10 02 56.9**	**-0.4**
	comp=Z,206nm,1.0s,comp=Z,2μm						
KKM	**Kota Kinabalu**	**17.00**	**50**	*e*Pn	**P**	**10 02 59.8**	**+1.4**
	comp=Z,149nm,1.1s						
PCI	**Palu**	**17.13**	**77**	P	**P**	**10 03 02.5**	**+2.7**
	comp=Z,656nm,1.0s,comp=Z,7μm						
PCI	**Palu**	**17.13**	**77**	P	**P**	**10 03 04.2**	**+4.4**
PCI				pmax	pmax		
	comp=Z,656nm,1.0s						
MPSI	**Mapaga**	**17.52**	**73**	P	**P**	**10 03 07.4**	**+3.3**
	comp=Z,166nm,0.8s,comp=Z,2μm						
BASI	**Baing, Sumba**	**18.05**	**108**	P	**P**	**10 03 06.6**	**-3.3**
PHET	**Kaeng Krachan**	**18.07**	**349**	P	**Pn**	**10 03 10.8**	**+0.4**
	comp=Z,34nm,0.8s,comp=Z,251nm						
MYLDM	**Lahad Datu**	**18.32**	**57**	*e*P	**Pn**	**10 03 17.4**	**+3.8**
	comp=Z,378nm,1.0s						
EDFI	**Ende, Flores**	**18.79**	**103**	P	**P**	**10 03 18.0**	**-0.2**
SRAK	**Srakaew**	**18.85**	**357**	P	**Pn**	**10 03 20.0**	**+0.1**
	comp=Z,448nm,1.1s,comp=Z,4μm						
APSI	**Ampana**	**18.89**	**78**	P	**Pn**	**10 03 21.7**	**+1.3**
	comp=Z,569nm,1.0s,comp=Z,4μm						
MMRI	**Maumere**	**19.30**	**102**	P	**P**	**10 03 23.7**	**0.0**
MMRI	**Maumere**	**19.30**	**102**	*e*P	**P**	**10 03 22.0**	**-1.7**
	comp=Z,375nm,1.0s						
PBA	**Port Blair**	**19.46**	**328**	*e*P	P	10 03 25.1	-0.3
MRSI	**Marisa**	**19.52**	**75**	P	**Pn**	**10 03 27.4**	**-0.4**
	comp=Z,212nm,1.0s,comp=Z,2μm						
SRDT	**SRDT**	**19.57**	**348**	P	**P**	**10 03 27.0**	**+0.5**
	comp=Z,131nm,1.1s						
LUWI	**Luwuk**	**19.97**	**79**	P	**Pn**	**10 03 33.7**	**+0.6**
	comp=Z,1μm,1.0s,comp=Z,8μm						
LUWI	**Luwuk**	**19.97**	**79**	*e*P	**Pn**	**10 03 32.8**	**-0.3**
	comp=Z,742nm,0.8s						
UBPT	**Khong Chiam**	**20.21**	**6**	P	**P**	**10 03 33.0**	**-0.5**
	comp=Z,327nm,0.9s,comp=Z,4μm						
CHAI	**Chaiyaphum**	**20.73**	**357**	P	**P**	**10 03 40.4**	**+1.3**
	comp=Z,87nm,0.9s,comp=Z,624nm						
BATI	**Baumata**	**20.99**	**106**	P	**P**	**10 03 41.7**	**-0.3**
	comp=Z,263nm,0.5s,baz=302,slow=1.1,SNR=36						
BATI				S	**S**	**10 07 25.1**	**-7.5**
	comp=Z,60nm,0.6s,baz=273,slow=2.8,SNR=3.3						
BATI	**Baumata**	**20.99**	**106**	P	**P**	**10 03 42.5**	**+0.5**
PBKT	**Sadao Pong**	**21.47**	**354**	*e*P	**P**	**10 03 47.0**	**-0.1**
	comp=Z,130nm,0.9s						
PBKT				*e*S	Sn	10 07 48.8	-4.5
SOEI	**Soe**	**21.48**	**104**	P	**P**	**10 03 46.9**	**-0.4**
SOEI	**Soe**	**21.48**	**104**	*e*P	**P**	**10 03 45.5**	**-1.8**
	comp=Z,393nm,0.8s						
KMSI	**Cibinong**	**21.51**	**76**	P	P	10 03 56.1	+8.5
SKNT	**Sakolnakorn**	**21.78**	**2**	P	**P**	**10 03 51.0**	**+0.6**
	comp=Z,36nm,1.4s,comp=Z,2μm						
PHIT	**Phitsanulok**	**22.15**	**353**	P	**P**	**10 03 55.4**	**+1.1**
	comp=Z,525nm,0.8s						
MBWA	**Marble Bar**	**22.78**	**137**	*e*P	**P**	**10 04 00.5**	**-0.6**
	comp=Z,57nm,0.9s						
ENPP	**El Nido**	**22.79**	**45**	*e*P	**P**	**10 04 01.5**	**+0.3**
SANI	**Sanana**	**22.97**	**84**	P	**P**	**10 04 03.3**	**+0.2**
CM01	**Chiang Mai Arr**	**23.57**	**350**	*e*P	**P**	**10 04 08.3**	**-0.4**
CM01				*e*PcP	**PcP**	**10 07 53.2**	**+0.7**
CM31	**Chiang Mai Arr**	**23.61**	**350**	*e*P	**P**	**10 04 09.1**	**0.0**
CMAR	**Chiang Mai Arr**	**23.61**	**350**	P	**P**	**10 04 08.9**	**-0.1**
	comp=Z,88nm,0.7s,baz=182,slow=8.8,SNR=367						
CMAR				PcP	**PcP**	**10 07 52.5**	**0.0**
	comp=Z,13nm,0.8s,baz=204,slow=3.3,SNR=13						
CMAR				ScP	**ScP**	**10 11 25.6**	**0.0**
	comp=Z,1.5nm,0.4s,baz=207,slow=3.3,SNR=8.8						
CMAR				LR	LR	10 13 39.2	
	comp=Z,919nm,19.8s,baz=174,slow=37						
CMAR	**Chiang Mai Arr**	**23.61**	**350**	P	**P**	**10 04 09.0**	**-0.1**
CMAR						10 07 52.6	
CMAR				pmax	pmax		
	comp=Z,103nm,0.7s						
CMAR				MLR	MLR		
	comp=Z,919nm,19.8s						
CUYO	**Cuyo Island**	**23.71**	**49**	*e*P	**P**	**10 04 10.8**	**+0.7**
BUSP	**Coron**	**23.88**	**45**	*e*P	**P**	**10 04 13.0**	**+1.4**
NLAI	**Namlea**	**23.94**	**87**	P	**P**	**10 04 14.5**	**+2.3**
CHTO	**Chiang Mai**	**23.96**	**350**	P	**P**	**10 04 12.0**	**-0.2**
	comp=Z,758nm,0.8s,comp=Z,6μm						
CHTO	**Chiang Mai**	**23.96**	**350**	*e*P	**P**	**10 04 11.8**	**-0.4**
	comp=Z,123nm,0.8s						
CHTO				*e*PcP	**PcP**	**10 07 54.9**	**+1.6**
CHTO	**Chiang Mai**	**23.96**	**350**	P	**P**	**10 04 11.8**	**-0.4**
	SNR=18						
CHTO	**Chiang Mai**	**23.96**	**350**	*e*P	**P**	**10 04 11.8**	**-0.4**
CHTO				*e*		10 07 54.9	
CHTO				pmax	pmax		
	comp=Z,123nm,0.8s						
LBMI	**Labuha**	**24.68**	**81**	P	**P**	**10 04 20.3**	**+1.3**
QIZ	**Qiongzhong**	**24.70**	**15**	P	**P**	**10 04 22.0**	**+3.0**
QIZ				pmax	pmax		
	comp=Z,69nm,1.2s						
QIZ				LR	LR		
	comp=Z,920nm,24.0s						
QIZ				LR	LR		
	comp=Z,610nm,15.7s						
QIZ				LR	LR		
	comp=Z,960nm,29.4s						
QIZ	**Qiongzhong**	**24.70**	**15**	*e*P	**P**	**10 04 20.5**	**+1.4**
	comp=Z,96nm,1.0s						
TNTI	**Ternate**	**24.84**	**77**	*e*P	**P**	**10 04 19.2**	**-1.2**
	comp=Z,195nm,1.3s						
SJMP	**San Jose**	**24.85**	**46**	*e*P	**P**	**10 04 21.9**	**+1.5**
CMAI	**Chiengmai2**	**25.04**	**351**	P	**P**	**10 04 22.4**	**+0.2**
	comp=Z,795nm,1.1s,comp=Z,11μm						
BUKP	**Musuan**	**25.29**	**60**	*e*P	**P**	**10 04 25.7**	**+1.2**
RCP	**Roxas**	**25.46**	**50⇑**	*e*P	**P**	**10 04 28.0**	**+2.0**
PALK	**Pallekele**	**25.47**	**298**	P	**P**	**10 04 26.1**	**0.0**
	comp=Z,16nm,1.1s,baz=116,slow=9.3,SNR=2.9						
PALK				LR	LR	10 13 37.9	
	comp=Z,652nm,21.0s,baz=105,slow=34						
FITZ	**Fitzroy Crossi**	**25.58**	**123**	P	**P**	**10 04 26.5**	**-0.5**
	baz=26,SNR=74						
FITZ	**Fitzroy Crossi**	**25.58**	**123**	*e*P	**P**	**10 04 26.5**	**-0.5**
	comp=Z,132nm,1.0s						
TGY	**Tagaytay City**	**25.86**	**43**	P	**P**	**10 04 29.2**	**-0.5**
	comp=Z,243nm,0.3s,baz=228,slow=3.5,SNR=5.9						
MEEK	**Meekatharra**	**26.16**	**147**	P	**P**	**10 04 31.8**	**-0.4**
	baz=26,SNR=15						
MORW	**Morawa**	**26.93**	**154**	P	**P**	**10 04 40.3**	**+1.2**
	baz=27,SNR=4.1						
KNRA	**Kununurra**	**27.33**	**115**	P	**P**	**10 04 41.7**	**-1.1**
	baz=27,SNR=73						
SIJI	**Sorong**	**28.36**	**83**	P	**P**	**10 04 51.5**	**-0.6**
	comp=Z,21nm,0.3s,baz=309,slow=24,SNR=19						
SIJI				LR	LR	10 17 08.3	
	comp=Z,451nm,20.6s,baz=242,slow=38						
BLDU	**Ballidu**	**28.56**	**155**	P	**P**	**10 04 54.2**	**+0.6**
	baz=29,SNR=6.5						
MTN	**Manton Dam**	**28.71**	**108**	P	**P**	**10 04 54.5**	**-0.7**
	baz=29,SNR=17						
MTN	**Manton Dam**	**28.71**	**108**	*e*P	**P**	**10 04 54.0**	**-1.2**
	comp=Z,59nm,0.7s						
SAIH	**SAIHA**	**29.01**	**340**	*e*P	**P**	**10 04 56.6**	**-1.2**
SAIH				IAmb	IAmb	10 04 59.0	
	comp=Z,220nm,0.2s						
FAKI	**Fak Fak**	**29.09**	**87**	P	**P**	**10 04 58.0**	**-0.6**
	comp=Z,150nm,0.8s						
FAKI	**Fak Fak**	**29.09**	**87**	*e*P	**P**	**10 04 57.8**	**-0.8**
	comp=Z,109nm,0.7s						
MUN	**Mundaring**	**29.56**	**157**	P	**P**	**10 05 02.3**	**-0.2**
	baz=30,SNR=5.3						
BRDH	**Bariadhala**	**29.66**	**338**	LR	LR	10 19 23.7	
	comp=Z,1μm,21.2s,baz=171,slow=41						
SKHT	**Srikalahasti**	**29.76**	**309**	*e*P	**P**	**10 05 06.0**	**+1.6**
SKHT				IAmb	IAmb	10 05 07.6	
	comp=Z,171nm,0.8s						
KLBR	**Kellerberrin**	**29.85**	**154**	P	**P**	**10 05 04.8**	**-0.3**

LKP	**Lekhapani**	**32.84**	**348**	*e*P	**P**	**10 05 30.8**	**-0.6**
GUWA	**GUWAHATI**	**32.88**	**341**	*e*P	**P**	**10 05 30.7**	**-1.0**
GUWA				IAmb	IAmb	10 05 32.0	
comp=Z,255nm,1.6s							
HYB	**Hyderabad**	**32.91**	**313**	*i* P	**P**	**10 05 32.0**	**-0.2**
HYB	**Hyderabad**	**32.91**	**313**	*e*P	**P**	**10 05 30.3**	**-1.9**
HYB				IAmb	IAmb	10 05 33.6	
comp=Z,76nm,1.5s							
TEZP	**TEZPUR**	**32.93**	**343**	*e*P	**P**	**10 05 30.9**	**-1.2**
BOK	**Bokaro**	**33.15**	**330**	*e*P	**P**	**10 05 35.6**	**+1.4**
ITAN	**ITANAGAR**	**33.17**	**345**	*e*P	**P**	**10 05 34.0**	**-0.3**
YULB	**Yu-li**	**33.26**	**31**	*e*P	**P**	**10 05 35.7**	**+0.6**
comp=Z,74nm,1.2s							
DHUB	**DHUBRI**	**33.31**	**338**	*e*P	**P**	**10 05 35.8**	**+0.3**
RPR	**Rampur**	**33.34**	**316**	*e*P	**P**	**10 05 36.9**	**+1.1**
RPR				IAmb	IAmb	10 05 37.9	
comp=Z,67nm,0.9s							
SSLB	**Suanglung**	**33.41**	**31**	*e*P	**P**	**10 05 37.9**	**+1.5**
comp=Z,272nm,1.8s							
ZIRO	**ZIRO**	**33.50**	**345**	*e*P	**P**	**10 05 36.6**	**-0.7**
WRA	**Warramunga Arr**	**33.82**	**119**	P	**P**	**10 05 39.7**	**-0.4**
comp=Z,105nm,0.7s,baz=299,slow=8.9,SNR=708							
WRA				pP	**pP**	**10 05 54.9**	**-0.6**
comp=Z,33nm,0.5s,baz=299,slow=9.2,SNR=5.9							
WRA				PcP	**PcP**	**10 08 17.7**	**-0.4**
comp=Z,11nm,0.7s,baz=302,slow=2.6,SNR=4.9							
WRA				S	**S**	**10 10 58.5**	**-1.4**
comp=Z,5.4nm,0.9s,baz=294,slow=16,SNR=4.7							
WRA				ScP	**ScP**	**10 11 56.3**	**-1.3**
comp=Z,3.9nm,0.8s,baz=292,slow=3.1,SNR=3.7							
WRA				P3KPbc		10 36 48.7	
comp=Z,1.6nm,0.6s,baz=108,slow=4.3,SNR=20							
WRA	**Warramunga Arr**	**33.82**	**119**	P	**P**	**10 05 39.7**	**-0.4**
WRA				*PP	**pP**	**10 05 54.9**	**-0.6**
WRA						10 08 17.7	
WRA				S	**S**	**10 10 58.5**	**-1.4**
WRA				pmax	pmax		
comp=Z,106nm,0.7s							
WRA				smax	smax		
comp=N,5.0nm,0.9s							
WRAB	**Tennant Creek**	**33.82**	**119**	*e*P	**P**	**10 05 39.7**	**-0.5**
comp=N,145nm,0.8s							
WRAB	**Tennant Creek**	**33.82**	**119***c*	*i*P	**P**	**10 05 39.4**	**-0.7**
WRAB				pmax	pmax		
comp=Z,143nm,0.7s							
WRAB				MLR	MLR		
comp=Z,448nm,19.0s							
WB2	**Warramunga Arr**	**33.83**	**119**	*e*P	**P**	**10 05 39.5**	**-0.7**
comp=Z,130nm,0.8s							
WB2				*e*PcP	**PcP**	**10 08 18.8**	**+0.7**
WB2				*e*S	**S**	**10 10 59.5**	**-0.6**
SRSP	**Sriramsagar**	**34.05**	**315**	*e*P	**P**	**10 05 43.0**	**+1.0**
SRSP				IAmb	IAmb	10 05 44.0	
comp=Z,84nm,0.9s							
NACB	**Ninganchiao**	**34.06**	**31**	*e*P	**P**	**10 05 42.0**	**0.0**
comp=Z,81nm,1.0s							
KLRI	**Killari**	**34.77**	**312**	*e*P	**P**	**10 05 48.9**	**+0.5**
KLRI				IAmb	IAmb	10 05 50.2	
comp=Z,76nm,1.0s							
FORT	**Forrest**	**34.79**	**141**	*e*P	**P**	**10 05 47.4**	**-0.9**
comp=Z,64nm,0.8s							
ASAR	**Alice Springs**	**35.00**	**125**	P	**P**	**10 05 50.0**	**-0.2**
comp=Z,74nm,0.8s,baz=295,slow=7.7,SNR=541							
ASAR				pP	**pP**	**10 06 05.6**	**-0.2**
comp=Z,55nm,0.7s,baz=302,slow=8.3,SNR=9.9							
ASAR				PcP	**PcP**	**10 08 22.3**	**+0.8**
comp=Z,17nm,0.9s,baz=306,slow=2.0,SNR=11							
ASAR				S	**S**	**10 11 15.7**	**-2.4**
comp=Z,18nm,1.1s,baz=297,slow=17,SNR=14							
ASAR				ScP	**ScP**	**10 12 02.8**	**+0.9**
comp=Z,8.1nm,0.8s,baz=293,slow=3.5,SNR=7.3							
ASAR				LR	LR	10 21 24.9	
comp=Z,472nm,20.2s,baz=300,slow=38							
ASAR				P3KPbc		10 36 42.9	
comp=Z,0.7nm,0.7s,baz=122,slow=4.0,SNR=15							
AS31	**Alice Springs**	**35.00**	**125**	*e*P	**P**	**10 05 50.5**	**+0.2**
comp=Z,47nm,1.2s							
GTK	**Tadong**	**35.01**	**337**	*e*P	**P**	**10 05 51.3**	**+0.9**
GTK				IAmb	IAmb	10 05 53.4	
AS01	**Alice Springs**	**35.03**	**125**	*e*P	**P**	**10 05 50.5**	**-0.1**
NGP	**Nagpur**	**35.08**	**318**	*e*P	**P**	**10 05 52.0**	**+1.1**
NGP				IAmb	IAmb	10 05 53.7	
comp=Z,111nm,1.0s							
ODAN	**Odare**	**35.09**	**335**	*e*P	**P**	**10 05 51.7**	**+0.5**
comp=Z,247nm,0.6s							
TAPN	**Taplejung**	**35.39**	**336**	*e*P	**P**	**10 05 54.9**	**+1.0**
comp=Z,54nm,0.3s							
RAMN	**Ramite**	**35.51**	**334**	*e*P	**P**	**10 05 55.7**	**+0.9**
comp=Z,94nm,0.6s							
ENH	**Enshi**	**35.53**	**9**	*e*P	**P**	**10 05 54.5**	**-0.2**
comp=Z,72nm,1.1s							
ENH				*e*PcP	**PcP**	**10 08 22.8**	**0.0**
CD2	**Chengdu**	**35.64**	**1**	P	**P**	**10 05 55.3**	**-0.4**
CD2				pP	pP	10 06 12.0	+0.7
CD2				sP	sP	10 06 20.5	+1.9
CD2				PP	**PP**	**10 07 18.3**	**+0.5**
CD2				PcP	**PcP**	**10 08 21.3**	**-1.9**
CD2				S	**S**	**10 11 29.0**	**+1.3**
CD2				sS	sS	10 11 58.1	+3.9
CD2				pmax	pmax		
comp=Z,220nm,0.8s							
CD2				pmax	pmax		
comp=Z,140nm,5.5s							
CD2				LR	LR		
comp=Z,3μm,14.4s							
CD2				LR	LR		
comp=Z,2μm,17.8s							
JIRN	**Jiri**	**36.31**	**334**	*e*P	**P**	**10 06 02.7**	**+0.9**
LSA	**Lhasa**	**36.31**	**342**	P	**P**	**10 06 02.3**	**+0.4**
LSA				pmax	pmax		
comp=Z,50nm,1.2s							
LSA	**Lhasa**	**36.31**	**342**	*e*P	**P**	**10 06 02.6**	**+0.7**
comp=Z,126nm,0.9s							
LSA				*e*PcP	**PcP**	**10 08 27.2**	**+1.4**
LSA	**Lhasa**	**36.31**	**342**	P	**P**	**10 06 02.2**	**+0.3**
LSA	**Lhasa**	**36.31**	**342**	*e*P	**P**	**10 06 02.6**	**+0.7**
LSA				*e*		10 08 27.2	
LSA				pmax	pmax		
comp=Z,126nm,0.9s							
PKIN	**Phulchoki**	**36.59**	**333**	*e*P	**P**	**10 06 04.1**	**0.0**
comp=Z,115nm,0.7s							
GUN	**Gumba**	**36.66**	**334**	*e*P	**P**	**10 06 05.3**	**+0.5**
comp=Z,633nm,0.6s							
DMN	**Daman**	**36.75**	**333**	*e*P	**P**	**10 06 06.0**	**+0.6**
comp=Z,309nm,1.0s							
KKN	**Kakani**	**36.82**	**333**	*e*P	**P**	**10 06 06.3**	**+0.3**
comp=Z,347nm,0.7s							
WHN	**Wuhan**	**36.87**	**16**	⇓P	**P**	**10 06 07.3**	**+1.3**
WHN				pmax	pmax		
comp=Z,120nm,1.0s							
WHN				LR	LR		
comp=Z,4μm,24.6s							
GENI	**Genyem**	**37.00**	**88**	P	**P**	**10 06 07.3**	**-0.2**
comp=Z,82nm,0.7s							
POO	**Poona**	**37.12**	**310**	*e*P	**P**	**10 06 08.9**	**+0.5**
GKN	**Gorkha**	**37.30**	**332**	*e*P	**P**	**10 06 10.3**	**+0.3**
comp=Z,594nm,1.0s							
JAY	**Jayapura**	**37.54**	**88**	P	**P**	**10 06 08.7**	**-3.4**
comp=Z,22nm,0.6s,baz=255,slow=22,SNR=13							
JAY	**Jayapura**	**37.54**	**88**	P	**P**	**10 06 16.3**	**+4.2**
KOLN	**Koldanda**	**37.59**	**331**	*e*P	**P**	**10 06 13.2**	**+0.7**
comp=Z,512nm,0.7s							
BHPL	**Bhopal**	**37.62**	**319**	*e*P	**P**	**10 06 12.7**	**+0.1**
BHPL				IAmb	IAmb	10 06 14.1	
comp=Z,86nm,0.6s							
DANN	**Dangsing**	**38.00**	**332**	*e*P	**P**	**10 06 16.9**	**+0.8**
PYUN	**Piuthan**	**38.16**	**330**	*e*P	**P**	**10 06 17.8**	**+0.5**
comp=Z,517nm,0.9s							
QIS	**Mount Isa**	**38.66**	**117**	P	**P**	**10 06 21.1**	**-0.3**
baz=39,SNR=31							
XAN	**Xi'an**	**39.14**	**8**	P	**P**	**10 06 25.0**	**-0.2**
XAN				pP	pP	10 06 41.4	+0.4
XAN				sP	sP	10 06 49.8	+1.5
XAN				PP	**PnPn**	**10 07 59.5**	**+0.2**
XAN				S	**S**	**10 12 20.3**	**-0.4**
XAN				sS	sS	10 12 46.5	-1.0
XAN				SS	**SS**	**10 15 08.4**	**-7.4**
XAN				pmax	pmax		
comp=Z,160nm,0.8s							
XAN				pmax	pmax		
comp=Z,440nm,4.2s							
XAN				LR	LR		
comp=Z,700nm,21.6s							
XAN				LR	LR		
comp=Z,680nm,21.6s							
XAN				LR	LR		
comp=Z,470nm,23.0s							
NJ2	**Nanjing**	**39.70**	**21**	*e*P	**P**	**10 06 31.4**	**+1.6**
NJ2				pmax	pmax		
comp=Z,78nm,0.7s							
JOW	**Kunigami**	**39.85**	**36**	P	**P**	**10 06 32.6**	**+1.4**
comp=Z,63nm,0.7s,baz=277,slow=14,SNR=7.7							
JOW				LR	LR	10 23 51.0	
comp=Z,184nm,19.4s,baz=167,slow=37							
JOW	**Kunigami**	**39.85**	**36**	*e*P	**P**	**10 06 32.8**	**+1.6**
comp=Z,91nm,1.0s							
COEN	**Coen**	**40.43**	**106**	P	**P**	**10 06 34.9**	**-1.3**
baz=40,SNR=33							
COEN	**Coen**	**40.43**	**106**	*e*P	**P**	**10 06 35.1**	**-1.1**
comp=Z,38nm,0.7s							
LZH	**Lanzhou**	**40.81**	**1**	*e*P	**P**	**10 06 39.9**	**+0.7**
LZH				pP	pP	10 06 55.5	+0.5
LZH				sP	sP	10 07 01.4	-0.9
LZH				PcP	**PcP**	**10 08 40.6**	**+1.3**
LZH				pmax	pmax		
comp=Z,230nm,1.2s							
LZH				pmax	pmax		
comp=Z,360nm,5.2s							
LZH				LR	LR		
comp=Z,1μm,12.7s							
LZH				LR	LR		
comp=Z,1μm,15.7s							
LZH				LR	LR		
comp=Z,1μm,15.7s							
BBOO	**Buckleboo**	**41.37**	**136**	P	**P**	**10 06 43.0**	**-0.7**
baz=42,SNR=16							
BBOO	**Buckleboo**	**41.37**	**136**	*e*P	**P**	**10 06 43.0**	**-0.7**
comp=Z,41nm,0.8s							
MTSU	**Mount Surprise**	**42.29**	**112**	P	**P**	**10 06 51.5**	**0.0**
baz=42,SNR=180							
DDI	**Dehra Dun**	**42.50**	**327**	*e*P	**P**	**10 06 53.3**	**+0.4**
TIA	**Tai'an**	**42.97**	**17**	P	**P**	**10 06 56.9**	**+0.3**
TIA				pmax	pmax		
comp=Z,29nm,0.8s							
TIA				LR	LR		
comp=Z,300nm,28.2s							
TIA				LR	LR		
comp=Z,410nm,22.3s							
BHJ	**Bhuj**	**43.06**	**312**	*e*P	**P**	**10 06 58.1**	**+0.5**
BHJ				IAmb	IAmb	10 07 01.2	
comp=Z,120nm,0.9s							
TIY	**Taiyuan**	**43.30**	**11**	*e*P	**P**	**10 07 00.4**	**+1.1**
TIY				pmax	pmax		
comp=Z,120nm,0.9s							
TIY				LR	LR		
comp=Z,950nm,15.8s							
TIY				LR	LR		
comp=Z,1μm,20.3s							
SMLA	**Simla**	**43.61**	**327**	*e*P	**P**	**10 07 01.6**	**-0.2**
SMLA				IAmb	IAmb	10 07 03.2	
comp=Z,127nm,0.5s							
HTT	**Hallett**	**43.71**	**135**	P	**P**	**10 07 03.2**	**+0.4**
baz=44,SNR=8.0							
PMG	**Port Moresby**	**43.86**	**98**	LR	LR	10 28 16.7	
comp=Z,273nm,20.9s,baz=300,slow=40							
PMG	**Port Moresby**	**43.86**	**98**	*e*P	**P**	**10 07 03.6**	**-0.6**
comp=Z,96nm,0.8s							
PMG	**Port Moresby**	**43.86**	**98**	*e*P	**P**	**10 07 03.6**	**-0.6**
PMG				pmax	pmax		
comp=Z,96nm,0.8s							
MANU	**Manus Island**	**44.22**	**88**	*e*P	**P**	**10 07 06.7**	**-0.4**
comp=Z,62nm,0.6s							
GTA	**Gaotai**	**44.23**	**356**	⇑P	**P**	**10 07 07.8**	**+1.0**
GTA				pP	pP	10 07 23.4	+0.6
GTA				sP	sP	10 07 30.3	+0.2
GTA				PcP	**PP**	**10 08 51.8**	**+0.7**
GTA				ScP	**ScP**	**10 12 38.3**	**+1.0**
GTA				S	**S**	**10 13 37.6**	**+1.6**
GTA				sS	sS	10 14 06.6	+3.5
GTA				SS	**SS**	**10 16 50.5**	**-5.8**
GTA				pmax	pmax		
comp=Z,90nm,0.8s							
GTA				pmax	pmax		
comp=Z,310nm,6.2s							
GTA				LR	LR		
comp=Z,1μm,18.5s							
GTA				LR	LR		
comp=Z,520nm,19.2s							
GTA				LR	LR		
comp=Z,2μm,17.5s							
CTA	**Charters Tower**	**44.53**	**114**	P	**P**	**10 07 09.7**	**+0.3**
comp=Z,70nm,0.7s,baz=283,slow=11,SNR=78							
CTAO	**Charters Tower**	**44.53**	**114**	*e*P	**P**	**10 07 10.1**	**+0.6**
comp=Z,306nm,1.4s							
CTAO	**Charters Tower**	**44.53**	**114**	*e*P	**P**	**10 07 10.1**	**+0.6**
CTAO				pmax	pmax		
comp=Z,306nm,1.4s							
QLP	**Quilpie**	**44.72**	**123**	P	**P**	**10 07 10.1**	**-0.8**
baz=45,SNR=5.4							
STKA	**Stephens Creek**	**44.86**	**131**	P	**P**	**10 07 12.3**	**+0.3**
comp=Z,59nm,0.6s,baz=305,slow=8.0,SNR=119							
STKA				pP	**pP**	**10 07 28.1**	**+0.1**
comp=Z,68nm,0.5s,baz=300,slow=9.4,SNR=9.8							
STKA				LR	LR	10 28 18.8	
comp=Z,209nm,20.0s,baz=301,slow=39							
STKA	**Stephens Creek**	**44.86**	**131**	P	**P**	**10 07 12.1**	**+0.1**
baz=45,SNR=94							
STKA	**Stephens Creek**	**44.86**	**131**	*e*P	**P**	**10 07 12.2**	**+0.3**
comp=Z,54nm,1.3s							
STKA				pP	**pP**	**10 07 28.1**	**+0.1**
DHRM	**DHARAMSHALA**	**44.94**	**327**	*e*P	**P**	**10 07 11.6**	**-1.1**
DHRM				IAmb	IAmb	10 07 13.4	
comp=Z,303nm,1.2s							
GUMO	**Guam**	**45.31**	**66**	P	**P**	**10 07 13.3**	**-2.4**
comp=Z,84nm,0.5s,baz=273,slow=1.6,SNR=8.7							
GUMO				LR	LR	10 28 45.2	
comp=Z,53nm,19.3s,baz=243,slow=39							
GUMO	**Guam**	**45.31**	**66**	*e*P	**P**	**10 07 13.8**	**-1.9**
GUMO	**Guam**	**45.31**	**66**	*e*P	**P**	**10 07 13.8**	**-1.9**
BTO	**Baotou**	**45.75**	**7**	*e*P	**P**	**10 07 18.9**	**0.0**
JNU	**Nakatsue**	**46.08**	**33**	P	**P**	**10 07 21.8**	**+0.3**
comp=Z,122nm,0.8s,baz=206,slow=3.0,SNR=52							
JNU				LR	LR	10 27 01.2	
comp=Z,169nm,21.1s,baz=194,slow=36							
JNU	**Nakatsue**	**46.08**	**33**	*e*P	**P**	**10 07 22.2**	**+0.7**
comp=Z,119nm,0.8s							
HHC	**Hu-ho-hao-te**	**46.21**	**9**	*e*P	**P**	**10 07 24.5**	**+2.0**
HHC				PP	**PP**	**10 09 14.5**	**+2.5**
HHC				S	**S**	**10 14 08.1**	**+3.7**
HHC				pmax	pmax		
comp=Z,120nm,0.7s							
HHC				pmax	pmax		
comp=Z,260nm,7.3s							
HHC				LR	LR		
comp=Z,3μm,17.3s							
HHC				LR	LR		
comp=Z,3μm,15.6s							
HHC				LR	LR		
comp=Z,3μm,17.3s							
BJT	**Baijiatuau**	**46.31**	**14**	*e*P	**P**	**10 07 24.0**	**+0.9**
comp=Z,123nm,0.8s							
BJT	**Baijiatuau**	**46.31**	**14**	*e*P	**P**	**10 07 24.0**	**+0.9**
BJT				pmax	pmax		
comp=Z,123nm,0.8s							
BJI	**Beijing**	**46.33**	**14**	P	**P**	**10 07 24.0**	**+0.7**
BJI				S	**S**	**10 14 07.6**	**+1.7**
BJI				pmax	pmax		
comp=Z,120nm,0.7s							
BJI				LR	LR		
comp=Z,990nm,25.0s							
BJI				LR	LR		
comp=Z,870nm,18.6s							
BJI				LR	LR		
comp=Z,2μm,32.2s							
DL2	**Dalian**	**46.85**	**20**	P	**P**	**10 07 27.8**	**+0.4**
DL2				PcP	**PcP**	**10 09 00.0**	**+0.5**
DL2				S	**S**	**10 14 14.6**	**+1.2**
DL2				pmax	pmax		
comp=Z,31nm,0.7s							
DL2				LR	LR		
comp=Z,390nm,22.3s							
DL2				LR	LR		
comp=Z,350nm,22.3s							
DL2				LR	LR		
comp=Z,630nm,25.5s							
TJN	**Taejon**	**46.93**	**27***ce*P	**P**	**10 07 28.7**	**+0.7**
ARPS	**Mount Arapiles**	**47.52**	**137**	P	**P**	**10 07 34.1**	**+1.4**
baz=48,SNR=9.9							
NIL	**Nilore**	**47.67**	**326**	*e*P	**P**	**10 07 33.7**	**-0.2**
comp=Z,442nm,0.8s							
NIL	**Nilore**	**47.67**	**326**	*e*P	**P**	**10 07 33.7**	**-0.2**
NIL				pmax	pmax		
comp=Z,442nm,0.8s							
CMSA	**Cobar Meteorol**	**47.83**	**129**	P	**P**	**10 07 36.0**	**+0.7**
baz=48,SNR=83							
KS15	**Wonju Array Si**	**48.04**	**27**	*e*P	**P**	**10 07 38.0**	**+1.3**
KSAR	**Wonju Array Be**	**48.04**	**27**	P	**P**	**10 07 37.6**	**+1.0**
KSAR				PcP	**PcP**	**10 09 04.5**	**+0.7**
KSAR				ScP	**ScP**	**10 12 52.7**	**-0.3**
KSAR	**Wonju Array Be**	**48.04**	**27**	P	**P**	**10 07 37.7**	**+1.0**
KSAR						10 09 04.5	
KSRS	**Korea Array**	**48.07**	**27**	P	**P**	**10 07 37.6**	**+0.8**
comp=Z,61nm,0.7s,baz=226,slow=7.5,SNR=203							
KSRS				PcP	**PcP**	**10 09 04.5**	**+0.7**
comp=Z,21nm,0.9s,baz=214,slow=3.2,SNR=14							
KSRS				ScP	**ScP**	**10 12 52.7**	**-0.5**
comp=Z,2.8nm,1.0s,baz=203,slow=3.0,SNR=5.8							
CBIJ	**Chichi jima**	**49.36**	**48**	*e*P	**P**	**10 07 45.8**	**-1.2**
comp=Z,239nm,0.7s							
JCJ	**Chichijima**	**49.36**	**48**	P	**P**	**10 07 45.5**	**-1.4**
comp=Z,205nm,0.6s,baz=285,slow=14,SNR=9.0							
SNY	**Shenyang**	**50.13**	**20**	⇑P	**P**	**10 07 51.0**	**-1.5**
SNY				S	**S**	**10 14 58.6**	**-0.9**
SNY				pmax	pmax		
comp=Z,27nm,1.0s							
SNY				LR	LR		
comp=Z,570nm,23.5s							
SNY				LR	LR		
comp=Z,310nm,22.8s							
SNY				LR	LR		
comp=Z,780nm,26.0s							
EIDS	**Eidsvold**	**50.18**	**119**	P	**P**	**10 07 53.6**	**+0.3**
baz=50,SNR=9.5							
EIDS	**Eidsvold**	**50.18**	**119**	*e*P	**P**	**10 07 53.9**	**+0.6**
comp=Z,108nm,1.5s							
TOO	**Toolangi**	**50.43**	**136**	P	**P**	**10 07 57.1**	**+2.0**
baz=50,SNR=7.0							
WMQ	**Urumqi**	**50.49**	**346**	P	**P**	**10 07 56.8**	**+1.4**
WMQ				pP	pP	10 08 11.8	+0.1
WMQ				sP	sP	10 08 20.8	+2.0
WMQ				PcP	**PcP**	**10 09 13.1**	**+0.4**
WMQ				S	**S**	**10 15 02.8**	**-2.0**
WMQ				pmax	pmax		
comp=Z,500nm,0.9s							
WMQ				pmax	pmax		
comp=Z,810nm,3.6s							
WMQ				LR	LR		
comp=Z,650nm,15.5s							
WMQ				LR	LR		
comp=Z,630nm,15.5s							
WMQ				LR	LR		
comp=Z,730nm,24.9s							
KBL	**Kabul**	**50.74**	**323**	*e*P	**P**	**10 07 57.3**	**-0.3**
comp=Z,58nm,0.9s							
KBL	**Kabul**	**50.74**	**323**	*e*P	**P**	**10 07 57.3**	**-0.3**
KBL				pmax	pmax		
comp=Z,58nm,0.9s							
KSH	**Kashi**	**50.84**	**333**	⇑*i*P	**P**	**10 07 57.1**	**-1.0**
KSH				pP	pP	10 08 15.5	+1.1
KSH				sP	sP	10 08 28.3	+6.7
KSH				S	**S**	**10 15 06.3**	**-3.5**
KSH				sS	sS	10 15 41.1	+3.7
KSH				pmax	pmax		
comp=Z,240nm,0.9s							
KSH				LR	LR		
comp=Z,3μm,13.3s							
KSH				LR	LR		
comp=Z,1μm,9.2s							
KSH				LR	LR		
comp=Z,310nm,6.9s							
YNG	**Young**	**51.05**	**131**	P	**P**	**10 08 00.9**	**+1.2**
baz=51,SNR=14							
INU	**Inuyama**	**51.16**	**36**	*e*P	**P**	**10 08 00.2**	**-0.2**
comp=Z,48nm,0.9s							
WSAR	**Wadi Sarin**	**51.69**	**305**	P	**P**	**10 08 05.8**	**+1.1**
comp=Z,30nm,1.1s,baz=119,slow=9.0,SNR=5.8							
WSAR				LR	LR	10 28 51.4	
comp=Z,274nm,18.8s,baz=132,slow=34							
WSAR	**Wadi Sarin**	**51.69**	**305**	P	**P**	**10 08 06.4**	**+1.7**
CAN	**Canberra**	**51.92**	**132**	*e*P	**P**	**10 08 05.2**	**-1.1**
comp=Z,70nm,1.1s							
CAN	**Canberra**	**51.92**	**132**	*e*P	**P**	**10 08 05.2**	**-1.1**
CAN				pmax	pmax		
comp=Z,70nm,1.1s							
ARMA	**Armidale**	**52.15**	**125**	P	**P**	**10 08 09.7**	**+1.6**
baz=52,SNR=13							
ARMA	**Armidale**	**52.15**	**125**	*e*P	**P**	**10 08 08.5**	**+0.4**
comp=Z,106nm,1.2s							
CNB	**Canberra Magne**	**52.19**	**132**	P	**P**	**10 08 09.0**	**+0.7**
baz=52,SNR=5.3							
BIDO	**Bidbid**	**52.23**	**305**	P	**P**	**10 08 10.5**	**+1.9**
SNR=7.9							
PRZ	**Przheval'sk**	**52.28**	**337**	*e*P	**P**	**10 08 10.7**	**+1.8**
comp=Z,84nm,0.6s							
PRZ	**Przheval'sk**	**52.28**	**337**	P	**P**	**10 08 10.7**	**+1.8**
PRZ				pmax	pmax		
comp=Z,84nm,0.6s							
SFK	**Sufi-Kurgan**	**52.39**	**331**	P	**P**	**10 08 10.4**	**+0.6**
SFK				pmax	pmax		
comp=Z,223nm,1.1s							
NRN	**Naryn**	**52.39**	**334**	*e*P	**P**	**10 08 09.8**	**-0.1**
comp=Z,114nm,1.0s							
NRN	**Naryn**	**52.39**	**334**	*e*P	**P**	**10 08 09.8**	**-0.1**
NRN				pmax	pmax		
comp=Z,114nm,1.0s							
SHLS	**Shalkode**	**52.45**	**338**	*i* P	**P**	**10 08 09.9**	**-0.2**
comp=Z,75nm,0.5s							
SHLS				*e*S	**S**	**10 15 30.6**	**-1.2**
CN2	**Changchun**	**52.51**	**20**	*e*P	**P**	**10 08 09.8**	**-0.6**
CN2				*e*pP	pP	10 08 27.8	+1.1
CN2				*e*S	**S**	**10 15 31.5**	**-0.9**
CN2				pmax	pmax		
comp=Z,130nm,1.0s							
CN2				LR	LR		
comp=Z,480nm,20.0s							
CN2				LR	LR		
comp=Z,230nm,20.0s							
CN2				LR	LR		
comp=Z,480nm,20.0s							
PDGK	**Podgornoye**	**52.59**	**338**	P	**P**	**10 08 11.7**	**+0.6**
PDGK				pmax	pmax		
comp=Z,201nm,1.0s							
UZB	**Uzynbulak**	**52.61**	**338**	*i* P	**P**	**10 08 11.7**	**+0.4**
comp=Z,52nm,0.6s							
UZB				*i* S	**S**	**10 15 34.6**	**+0.6**
SONM	**Songino Array**	**52.62**	**3**	P	**P**	**10 08 12.4**	**+1.1**
comp=Z,131nm,0.9s,baz=182,slow=8.5,SNR=398							
SONM				pP	**pP**	**10 08 27.9**	**+0.3**
comp=Z,20nm,0.6s,baz=184,slow=8.8,SNR=4.4							
SONM				PcP	**PcP**	**10 09 20.8**	**+0.2**
comp=Z,18nm,0.5s,baz=184,slow=4.4,SNR=12							
SONM				ScP	**ScP**	**10 13 12.8**	**+0.2**
comp=Z,0.6nm,0.4s,baz=176,slow=3.1,SNR=4.3							
SONA1	**Songino Array**	**52.63**	**3**	*e*P	**P**	**10 08 12.2**	**+0.9**
MAJO	**Matsushiro**	**52.68**	**36**	*e*P	**P**	**10 08 11.2**	**-0.6**
comp=Z,44nm,0.9s							
MAJO	**Matsushiro**	**52.68**	**36***c*	*i*P	**P**	**10 08 10.8**	**-1.0**
MAJO				pmax	pmax		
comp=Z,57nm,1.2s							
MAT	**Matsushiro**	**52.68**	**36**	P	**P**	**10 08 10.7**	**-1.1**
MJAR

KZA **Kyzart** 53.24 334 P P 10 08 16.6 +0.4
SNR=64
MDOK **Medeo** 53.38 336 *e*P P 10 08 17.0 0.0
comp=Z,1μm,1.6s
MDOK *e*S S 10 15 44.1 -0.6
MDOK LR LR 10 33 39.8
comp=Z,74nm,16.3s
AAA **Alma-Ata** 53.48 336 *e*P P 10 08 18.1 +0.6
comp=Z,29nm,0.5s
UCH **Uchtor** 53.68 334 P P 10 08 19.8 +0.2
SNR=59
MSHR **Mys Shultsa** 53.69 25*ce*P P 10 08 19.4 +0.4
TKM2 **Tokmak 2** 53.78 335 P P 10 08 20.1 +0.1
SNR=145
TKM2 **Tokmak 2** 53.78 335 P P 10 08 20.1 +0.1
TKM2 pmax pmax
comp=Z,135nm,0.6s
SOHO **SOHO** 53.81 305 P P 10 08 21.1 +0.9
KBK **Karagaybulak** 53.84 334 P P 10 08 21.0 +0.6
SNR=68
AML **Almayashu** 53.97 333 P P 10 08 21.7 +0.1
SNR=38
AAK **Ala-Archa** 54.02 334 *e*P P 10 08 22.4 +0.7
comp=Z,51nm,0.9s
AAK **Ala-Archa** 54.02 334 *i* P P 10 08 20.2 -1.5
SNR=14
AAK **Ala-Archa** 54.02 334*c i*P P 10 08 20.0 -1.7
AAK pmax pmax
comp=Z,38nm,1.2s
FRU **Bishkek** 54.12 334 *i* P P 10 08 23.0 +0.7
FRU pmax pmax
comp=Z,150nm,1.6s
CHMS **Chumysh** 54.20 335 P P 10 08 23.0 +0.2
SNR=18
KUU **Kurty** 54.28 336 *e*P P 10 08 22.9 -0.4
comp=Z,137nm,0.7s
KUU *e*S S 10 15 55.5 -1.0
EKS2 **Erkin-Say** 54.35 334 P P 10 08 24.6 +0.5
SNR=101
ALNE **Al Ain** 54.42 304 *i* P P 10 08 26.4 +1.6
SNR=21
UOSS **Minazif** 54.44 305 P P 10 08 25.0 +0.2
UOSS **Minazif** 54.44 305 P P 10 08 25.4 +0.5
HATD **Hatta, Dubai** 54.44 305 P P 10 08 26.3 +1.4
HATD **Hatta, Dubai** 54.44 305 P P 10 08 26.5 +1.6
USP **Ospenovka** 54.53 335 P P 10 08 25.1 -0.1
SNR=30
ZSN **Zaisan** 54.60 345 *e*P P 10 08 26.3 +0.7
comp=Z,22nm,0.8s
ZSN *e*S S 10 16 01.2 +0.7
MSFE **Esma-Masafi** 54.66 306 P P 10 08 28.3 +1.8
MK01 **Makanchi Array** 54.69 343 *e*P P 10 08 25.1 -1.3
MK31 **Makanchi Array** 54.72 343 *e*P P 10 08 26.3 -0.2
MK31 **Makanchi Array** 54.72 343 *i* P P 10 08 26.5 0.0
MK31 pmax pmax
comp=Z,90nm,0.9s
MKAR **Makanchi Array** 54.72 343 P P 10 08 26.8 +0.3
comp=Z,81nm,0.9s,baz=147,slow=8.3,SNR=368
MKAR LR LR 10 36 04.1
comp=Z,279nm,21.1s,baz=146,slow=41
MKAR **Makanchi Array** 54.72 343 *e*P P 10 08 26.3 -0.2
comp=Z,453nm,0.9s
MKAR **Makanchi Array** 54.72 343 *i* P P 10 08 26.7 +0.3
MKAR pmax pmax
comp=Z,82nm,0.9s
MDJ **Mudanjiang** 54.73 23 P P 10 08 24.6 -2.0
MDJ pmax pmax
comp=Z,77nm,0.8s
MDJ pmax pmax
comp=Z,170nm,5.4s
MDJ **Mudanjiang** 54.73 23 *e*P P 10 08 27.2 +0.6
comp=Z,57nm,1.0s
MNAS **Manas** 54.79 333 P P 10 08 27.7 +0.4
MNAS pmax pmax
comp=Z,177nm,0.8s
BANOM **Banah** 54.80 306 P P 10 08 28.7 +1.2
BANOM **Banah** 54.80 306 P P 10 08 29.0 +1.5
MAKZ **Makanchi** 54.82 342 *e*P P 10 08 27.4 +0.2
comp=Z,63nm,1.1s
MAKZ **Makanchi** 54.82 342 *e*P P 10 08 27.4 +0.2
MAKZ pmax pmax
comp=Z,63nm,1.1s
NAZ **Nazwa, Dubai** 54.90 305 *i* P P 10 08 29.5 +1.3
SNR=6.6
ASUD **Al Ashush, Dub** 55.01 305 P P 10 08 30.7 +1.8
SNR=5.7
ASUD **Al Ashush, Dub** 55.01 305 *i* P P 10 08 30.9 +2.0
SNR=9.3
ZAK **Zakamensk** 55.09 0 *e*P P 10 08 29.8 +0.6
ZAK *e* 10 09 28.9
ZAK pmax pmax
comp=Z,33nm,1.0s
AJN **Ajban** 55.26 304 P P 10 08 31.6 +0.8
USRK **Ussuriysk Ar.** 55.36 25 P P 10 08 31.5 +0.4
comp=Z,151nm,0.7s,baz=217,slow=5.9,SNR=178
USRK LR LR 10 33 25.7
comp=Z,273nm,20.0s,baz=208,slow=37
KNGR **Kungurtug, Tuv** 55.53 356 *e*P P 10 08 33.6 +1.2
DZA **Taraz** 55.65 332 *e*P P 10 08 32.9 -0.4
comp=Z,28nm,0.7s
IUG **Iuzhnay** 55.70 331 *e*P P 10 08 33.6 -0.2
comp=Z,80nm,1.2s
IUG *e*S S 10 16 14.8 -0.9
HIA **Hailar** 55.88 13 *e*P P 10 08 34.6 -0.1
comp=Z,78nm,1.0s
HIA **Hailar** 55.88 13 *e*P P 10 08 34.7 -0.1
HIA pmax pmax
comp=Z,78nm,1.0s
MZR **Muzera** 55.88 302 *i* P P 10 08 37.4 +2.1
SNR=8.9
DGZ **Jazzator, Alta** 56.10 348 *i* P P 10 08 37.2 +0.7
DGZ pmax pmax
comp=Z,134nm,0.9s
BTLS **Baital** 56.16 335 *i* P P 10 08 35.9 -0.9
comp=Z,17nm,0.6s
KK31 **Karatay Array** 56.20 332 *e*P P 10 08 37.1 -0.1
KK31 **Karatay Array** 56.20 332 *e*P P 10 08 37.1 -0.1
KKAR **Karatay Array** 56.20 332 *e*P P 10 08 37.1 -0.1
KKAR **Karatay Array** 56.20 332 *e*P P 10 08 37.1 -0.1
OPO **Ambohidratompo** 56.22 251 P P 10 08 38.5 +0.5
comp=Z,4.9nm,0.9s,baz=90,slow=6.4,SNR=5.3
OPO LR LR 10 27 26.0
comp=Z,478nm,21.6s,baz=90,slow=30
TLY **Talaya** 56.39 0 *e*P P 10 08 39.5 +1.1
comp=Z,71nm,0.8s
TLY **Talaya** 56.39 0⇑*e*P P 10 08 39.7 +1.3
TLY pmax pmax
comp=Z,81nm,0.9s
TLY MLR MLR
comp=Z,417nm,20.0s
MOY **Mondy** 56.41 358 *e*P P 10 08 39.9 +1.3
MOY pmax pmax
comp=Z,75nm,2.2s
HVS **Khovu-Aksy** 56.44 353⇓*e*P P 10 08 39.4 +0.6
HVS pmax pmax
comp=Z,40nm,1.0s
HNR **Honiara** 56.48 98 *e*P P 10 08 38.0 -1.7
HNR **Honiara** 56.48 98 P P 10 08 38.3 -1.4
comp=Z,121nm,0.7s,baz=247,slow=1.3,SNR=13
HNR LR LR 10 34 49.9
comp=Z,76nm,21.8s,baz=263,slow=38
HNR **Honiara** 56.48 98 *e*P P 10 08 38.6 -1.1
comp=Z,148nm,0.8s
HNR **Honiara** 56.48 98 *e*P P 10 08 38.6 -1.1
HNR pmax pmax
comp=Z,148nm,0.8s
IRK **Irkutsk** 56.96 1 *e*P P 10 08 43.9 +1.5
IRK pmax pmax
comp=Z,104nm,1.3s
TEY **Ternei** 58.05 27 *e*P P 10 08 50.2 +0.1
TEY *e* 10 09 42.2
TEY pmax pmax
comp=Z,129nm,1.0s
SEM **Semipalatinsk** 58.56 343 *e*P P 10 08 55.7 +1.7
comp=Z,40nm,0.6s
ERM **Erimo** 59.22 34*ce*P P 10 08 59.3 +1.0
ERM pmax pmax
comp=Z,111nm,1.7s
KURBB **Kurchatov Arra** 59.26 342 P P 10 08 58.6 +0.1
comp=Z,55nm,0.8s,baz=160,slow=6.5,SNR=160
KURBB PcP PcP 10 09 46.4 +0.3
KURK **Kurchatov** 59.32 342 *e*P P 10 08 58.6 -0.3
comp=Z,101nm,0.8s
KURK PcP PcP 10 09 46.4 +0.1
KURK **Kurchatov** 59.32 342 P P 10 08 58.7 -0.2
SNR=46
KURK **Kurchatov** 59.32 342*ce*P P 10 08 58.5 -0.3
KURK pmax pmax
comp=Z,178nm,1.2s
KLR **Kul'dur** 59.41 21 P P 10 08 59.6 +0.1
comp=Z,7.1nm,0.7s,baz=226,slow=5.2,SNR=172
KLR **Kul'dur** 59.41 21*c i*P P 10 08 59.4 -0.1
OTUK **Ortayu** 59.44 337 P P 10 08 59.1 -0.7
OTUK pmax pmax
comp=Z,119nm,0.9s
GEYT **Alibeck** 59.70 320 P P 10 09 02.1 +0.2
comp=Z,87nm,0.5s,baz=126,slow=6.5,SNR=8.3
GEYT LR LR 10 36 52.9
comp=Z,104nm,21.6s,baz=105,slow=38
GYA0B **ALIBECK ARRAY** 59.70 320 *e*P P 10 09 02.5 +0.6
comp=Z,114nm,0.9s
ASAJ **Asahikawa** 60.33 32 P P 10 09 06.5 +0.4
comp=Z,75nm,0.7s,baz=238,slow=8.5,SNR=64
ASAJ LR LR 10 35 55.9
comp=Z,207nm,20.7s,baz=178,slow=37
ASAJ **Asahikawa** 60.33 32 *e*P P 10 09 06.4 +0.4
comp=Z,69nm,0.7s
ZALV **Zalesovo Beam** 60.65 348 P P 10 09 07.8 -0.1
comp=Z,112nm,0.4s,baz=166,slow=4.3,SNR=265
ZALV pP pP 10 09 24.7 +0.1
comp=Z,46nm,0.7s,baz=151,slow=5.3,SNR=3.5
ZALV PKP2bc 10 38 35.5
comp=Z,0.7nm,0.3s,baz=303,slow=6.2,SNR=4.1
ZALV **Zalesovo Beam** 60.65 348 *e*P P 10 09 06.3 -1.6
ZALV pP pP 10 09 24.8 +0.1
ZALV ⇑*e* 10 38 35.5
BRZS **Berezniki** 60.72 338 *e*P P 10 09 08.1 -0.4
comp=Z,59nm,1.1s
DAMY **Dhamar** 61.38 289 *e*P P 10 09 16.9 +2.9
comp=Z,55nm,1.0s
NVS **Novosibirsk** 61.82 347⇑*i*P P 10 09 16.0 +0.2
NVS *e*S S 10 17 36.5 +2.1
NVS pmax pmax
comp=Z,77nm,1.1s
NVS pmax pmax
comp=N,35nm,0.9s
NVS pmax pmax
comp=E,33nm,1.2s
NVS smax smax
comp=N,3.0nm,0.4s
NVS smax smax
comp=E,12nm,0.9s
ZEA **Zeya** 61.86 16 *e*P P 10 09 17.0 +0.9
ZEA pmax pmax
comp=N,200nm,2.0s
ZEA pmax pmax
comp=E,200nm,2.0s
ZEA pmax pmax
comp=Z,200nm,2.0s
ZEA pmax pmax
comp=E,53nm,1.0s
ZEA pmax pmax
comp=N,110nm,1.2s
ZEA pmax pmax
comp=Z,170nm,1.2s
ZEA MLR MLR
comp=E,300nm,15.0s
ZEA MLR MLR
comp=Z,400nm,15.0s
ZEA MLR MLR
comp=N,300nm,16.0s
ATD **Arta Tunnel** 62.18 286 LR LR 10 33 15.2
comp=N,97nm,18.0s,baz=354,slow=33
YSS **Yuzh-Sakhalins** 62.38 30 *e*P P 10 09 19.5 -0.2
comp=N,86nm,0.8s
YSS **Yuzh-Sakhalins** 62.38 30*α i*P P 10 09 19.8 +0.1
YSS pmax pmax
comp=Z,80nm,0.6s
YSS pmax pmax
comp=N,40nm,0.7s
YSS pmax pmax
comp=E,30nm,0.7s
YSS pmax pmax
comp=Z,200nm,4.0s
YSS MLR MLR
comp=Z,200nm,15.0s
RAYN **Ar Rayn** 62.91 299 *e*P P 10 09 24.6 +0.8
comp=Z,33nm,1.0s
RAYN **Ar Rayn** 62.91 299 *i* P P 10 09 24.7 +0.9
SNR=7.7
BOD **Bodaibo** 63.16 6 *e*P P 10 09 24.1 -0.6
BOD pmax pmax
comp=Z,121nm,1.1s
DZM **Mont Dzumac** 63.43 112 P P 10 09 27.7 +0.4
comp=Z,17nm,0.6s,baz=251,slow=12,SNR=20
DZM LR LR 10 39 05.1
comp=Z,151nm,18.6s,baz=275,slow=38
DZM **Mont Dzumac** 63.43 112 *e*P P 10 09 27.0 -0.4
comp=Z,83nm,1.4s
DZM *e*S S 10 18 00.3 +4.3
comp=Z,93nm,24.8s
DZM **Mont Dzumac** 63.43 112 *e*LR LR 10 28 33.4
comp=Z,531nm,25.2s
DZM **Mont Dzumac** 63.43 112 *e*P P 10 09 27.8 +0.4
comp=Z,124nm,1.8s
BVA0 **Borovoye Array** 64.02 339 P P 10 09 30.0 -0.5
BVA0 pmax pmax
comp=Z,104nm,0.9s
BVAR **Borovoye Array** 64.02 339 P P 10 09 30.2 -0.4
comp=Z,73nm,0.5s,baz=138,slow=8.8,SNR=271
BVAR LR LR 10 42 20.3
comp=Z,268nm,19.1s,baz=134,slow=40
CLNS **Chul'man** 64.07 13 *e*P P 10 09 31.1 +0.3
CLNS pmax pmax
comp=Z,54nm,0.9s
CLNS pmax pmax
comp=E,24nm,1.0s
CLNS pmax pmax
comp=N,29nm,0.9s
BRVK **Borovoye** 64.09 339 *e*P P 10 09 30.4 -0.5
comp=N,98nm,0.9s
BRVK **Borovoye** 64.09 339 P P 10 09 30.3 -0.5
SNR=30
BRVK **Borovoye** 64.09 339*c i*P P 10 09 30.2 -0.7
BRVK pmax pmax
comp=Z,56nm,0.6s
BRVK MLR MLR
comp=Z,231nm,19.0s
TYV **Tymovskoe** 65.09 26 *e*P P 10 09 37.3 -0.2
TYV *e* 10 18 16.4
TYV pmax pmax
comp=Z,17nm,1.3s
AB31 **Akbulak array** 65.72 331 P P 10 09 41.5 -0.1
AB31 pmax pmax
comp=Z,134nm,0.8s
ABKAR **Akbulak array** 65.72 331 *e*P P 10 09 41.2 -0.4
KMBO **Kilima Mbogo** 65.89 271 P P 10 09 57.1 +13
comp=Z,5.9nm,0.8s,baz=65,slow=10,SNR=12
KMBO LR LR 10 33 16.1
comp=Z,210nm,21.5s,baz=98,slow=31
NKL **Nikolayevsk** 65.94 24 *e*P P 10 09 40.0 -2.9
NKL pmax pmax
comp=Z,43nm,1.0s
NKL MLR MLR
comp=Z,450nm,14.0s
WAKE **Wake Island** 66.93 67 *e*P P 10 09 49.2 -0.7
comp=Z,98nm,0.9s
H11N1 **WAKE ISLAND Hy** 67.25 66 P P 10 09 51.3 -0.4
baz=248,slow=6.3,SNR=18
H11N2 **WAKE ISLAND Hy** 67.26 66 P P 10 09 51.4 -0.4
baz=248,slow=6.3,SNR=11
H11N3 **WAKE ISLAND Hy** 67.27 66 P P 10 09 51.4 -0.4
baz=248,slow=6.3,SNR=21
AKTO **Aktyubinsk** 67.43 331 P P 10 09 52.3 -0.2
comp=Z,39nm,0.9s,baz=113,slow=11,SNR=71
MAW **Mawson** 68.28 195 P P 10 09 58.0 +0.5
comp=Z,5.2nm,0.7s,baz=54,slow=6.9,SNR=14
MAW pP pP 10 10 14.7 +0.2
comp=Z,23nm,0.9s,baz=39,slow=9.4,SNR=13
MAW LR LR 10 33 32.5
comp=Z,934nm,21.7s,baz=54,slow=30
MAW **Mawson** 68.28 195 P P 10 09 58.5 +1.0
baz=68,SNR=8.2
MAW **Mawson** 68.28 195 *e*P P 10 09 58.5 +1.0
comp=Z,7.1nm,0.9s
MAW pP pP 10 10 14.7 +0.2
MAW **Mawson** 68.28 195 *e*P P 10 09 58.5 +1.0
MAW *PP pP 10 10 14.7 +0.2
MAW pmax pmax
comp=Z,7.0nm,0.9s
AKT **Akhty** 68.38 318 *e*P P 10 09 59.4 +0.6
AKT *e* 10 10 21.7
AKT pmax pmax
comp=Z,89nm,0.8s
GNI **Garni** 69.81 316 P P 10 10 07.4 -0.4
comp=Z,21nm,0.9s,baz=90,slow=1.0,SNR=16
GNI LR LR 10 42 29.8
comp=Z,56nm,21.6s,baz=102,slow=37
GNI **Garni** 69.81 316 *e*P P 10 10 09.0 +1.3
comp=Z,44nm,1.0s
GNI **Garni** 69.81 316 P P 10 10 08.4 +0.7
SNR=11
GNI **Garni** 69.81 316 *i* P P 10 10 07.9 +0.2
SNR=5.2
GNI **Garni** 69.81 316*c i*P P 10 10 08.1 +0.3
GNI pmax pmax
comp=Z,124nm,1.0s
YAK **Yakutsk** 69.82 13 *e*P P 10 10 05.9 -1.2
comp=Z,170nm,0.8s
YAK **Yakutsk** 69.82 13 *e*P P 10 10 05.6 -1.5
YAK *e* 10 10 27.9
YAK *e* 10 12 46.2
YAK *e*S S 10 19 12.1 +0.6
YAK *e*SS pS 10 19 33.7 +1.6
YAK *e* 10 20 05.6
YAK *e*SS SS 10 23 39.3 -2.2
YAK pmax pmax
comp=Z,97nm,0.8s
YAK pmax pmax
comp=E,18nm,1.0s
YAK pmax pmax
comp=N,24nm,1.3s
YAK pmax pmax
comp=Z,170nm,4.9s
YAK pmax pmax
comp=N,92nm,4.9s
YAK pmax pmax
comp=E,116nm,5.3s
YAK smax smax
comp=E,81nm,4.6s
YAK smax smax
comp=N,63nm,4.1s
YAK MLR MLR
comp=Z,426nm,16.0s
YAK MLR MLR
comp=N,249nm,17.0s
YAK MLR MLR
comp=E,88nm,19.0s
TARA **Tarawa** 69.97 87 *e*P P 10 10 10.3 +1.2
comp=E,124nm,0.8s
LBZ **Lake Benmore** 70.23 135 *e*P P 10 10 10.3 +0.2
comp=E,32nm,0.8s
GROC **Groznyy** 70.44 319 *e*P P 10 10 09.1 -2.3
GROC *e*PP pP 10 10 25.7 -2.7
GROC *e* 10 10 30.2
GROC *e* 10 12 48.1
GROC *e*SS sS 10 19 44.0 -4.5
GROC *e* 10 20 05.0
GROC pmax pmax
comp=Z,170nm,1.0s
SVE **Sverdlovsk** 70.59 337*de*P P 10 10 12.2 +0.3
SVE pmax pmax
comp=Z,228nm,1.0s
RPZ **Rata Peaks** 70.69 135 P P 10 10 12.8 -0.2
comp=Z,30nm,0.5s,baz=273,slow=4.6,SNR=38
RPZ **Rata Peaks** 70.69 135 *e*P P 10 10 13.4 +0.5
comp=Z,154nm,1.6s
ARU **Arti** 71.15 336 *e*P P 10 10 15.3 -0.1
ARU **Arti** 71.15 336*c i*P P 10 10 15.1 -0.2
ARU *PP pP 10 10 30.2 -2.2
ARU 10 12 50.7
ARU S S 10 19 28.3 +1.1
ARU 10 20 11.8
ARU SS SS 10 24 00.4 -1.7
ARU pmax pmax
comp=Z,213nm,1.0s
ARU MLR MLR
comp=Z,320nm,27.0s
OXZ **Oxford** 71.32 134 *e*P P 10 10 16.5 -0.2
comp=Z,46nm,1.0s
LTZ **Lake Taylor** 71.38 133 *e*P P 10 10 17.5 +0.3
comp=Z,89nm,1.4s
ZEI **Tsey** 71.51 318 *e*P P 10 10 16.1 -2.0
ZEI *e*S S 10 19 35.1 +2.7
ZEI pmax pmax
comp=Z,38nm,0.6s
SKR **Severo-Kuril's** 71.59 32 *e*P P 10 10 23.2 +5.1
SKR *e*S S 10 19 36.1 +3.6
SKR MLR MLR
comp=Z,200nm,20.0s
THZ **Tophouse** 71.66 132 *e*P P 10 10 19.3 +0.4
comp=Z,88nm,0.8s
NCK **Nalchik** 72.01 319⇓*e*P P 10 10 22.0 +1.1
NCK pmax pmax
comp=Z,60nm,0.8s
KHZ **Kahutara** 72.24 133 *e*P P 10 10 22.4 +0.1
comp=Z,48nm,0.8s
MBAR **Mbarara** 72.43 271 *e*P P 10 10 25.9 +1.8
comp=Z,25nm,1.0s
NEY **Neytrino** 72.49 318*de*P P 10 10 25.6 +1.7
NEY pmax pmax
comp=Z,15nm,0.9s
KBZ **Khabaz** 72.57 319 P P 10 10 24.6 +0.5
comp=Z,60nm,0.9s,baz=119,slow=4.9,SNR=96
KIV **Kislovodsk** 72.81 319 *e*P P 10 10 26.6 +0.9
comp=Z,48nm,0.9s
KIV **Kislovodsk** 72.81 319 P P 10 10 26.0 +0.3
SNR=12
KIV **Kislovodsk** 72.81 319 *i* P P 10 10 26.1 +0.3
SNR=8.3
KIV **Kislovodsk** 72.81 319 *e*P P 10 10 26.0 +0.3
KIV *e*S S 10 19 48.0 +1.0
KIV pmax pmax
comp=Z,56nm,1.0s
KIV pmax pmax
comp=Z,48nm,3.1s
WAZ **Wanganui** 72.91 130 P P 10 10 27.4 +1.1
KIW **Kapiti Island** 73.01 131 P P 10 10 26.0 -0.9
GOF **Gofitskoye** 73.04 320⇑*i*P P 10 10 27.3 +0.3
GOF *e*S S 10 19 49.5 +0.1
GOF pmax pmax
comp=Z,90nm,1.3s
GOF smax smax
comp=E,30nm,0.6s
BHW **Baring Head** 73.06 132 P P 10 10 26.7 -0.5
CAW **Cannon Point** 73.16 131 P P 10 10 27.3 -0.5
OGWZ **Otaki Gorge** 73.20 131 P P 10 10 28.1 +0.1
COVZ **Chateau Observ** 73.26 129 P P 10 10 29.2 +0.7
FWVZ **Far West T-bar** 73.28 129 P P 10 10 29.4 +0.6
TRVZ **Turoa** 73.28 129 P P 10 10 29.1 +0.3
WTVZ **West Tongariro** 73.29 129 P P 10 10 29.5 +0.8
WHVZ **Whangaehu Hut** 73.31 129 P P 10 10 29.5 +0.5
KRVZ **Karewarewa** 73.33 129 P P 10 10 30.0 +1.0
PLWZ **Palliser** 73.37 132 P P 10 10 28.8 -0.2
MOVZ **Moawhango** 73.45 130 P P 10 10 29.6 0.0
HOWZ **Holdsworth Sta** 73.47 131 P P 10 10 29.5 -0.2
PAWZ **Paruwai Farm** 73.47 132 P P 10 10 30.2 +0.5
MRZ **Mangatainoka R** 73.48 131 P P 10 10 30.0 +0.3
MTW **Mount Morrison** 73.49 131 P P 10 10 30.1 +0.4
PEA0B **Petropavlovsk-** 73.72 31 *e*P P 10 10 30.4 -0.4
comp=E,22nm,0.7s
PETK **Petropavlovsk-** 73.72 31 P P 10 10 30.0 -0.8
comp=E,27nm,0.7s,baz=204,slow=3.6,SNR=38
PETK LR LR 10 43 20.3
comp=E,84nm,21.1s,baz=253,slow=36
PETK **Petropavlovsk-** 73.72 31 *e*P P 10 10 30.0 -0.8
PETK **Petropavlovsk-** 73.72 31 P P 10 10 30.0 -0.8
PETK pmax pmax
comp=Z,27nm,0.7s
PETK MLR MLR
comp=Z,84nm,21.1s
TMWZ **Te Maipa** 73.78 131 P P 10 10 32.0 +0.5
BFZ **Birch Farm** 73.99 131 *e*P P 10 10 33.4 +0.7
comp=Z,127nm,0.8s
BKZ **Black Stump Fm** 73.99 129 *e*P P 10 10 32.8 +0.1
comp=Z,169nm,0.6s
BKZ **Black Stump Fm** 73.99 129 P P 10 10 32.6 -0.1
PET **Petropavlovsk** 74.17 31 *e*P P 10 10 32.5 -0.8
comp=Z,86nm,0.6s
PET **Petropavlovsk** 74.17 31 *e*P P 10 10 32.6 -0.8
PET *e*PP pP 10 10 49.4 -1.1
PET *e*S S 10 20 00.5 -1.2
PET *e*SS SS 10 24 48.3 -0.1
PET pmax pmax
comp=Z,200nm,6.7s
PET pmax pmax
comp=Z,136nm,0.7s

PET pmax pmax
comp=Z,100nm,15.5s
PET MLR MLR
comp=Z,100nm,18.0s
MTHZ Maungataniwha 74.22 129 P **P 10 10 34.3 +0.1**
LSZ Lusaka 74.23 256 *e*P **P 10 10 35.5 +0.9**
comp=Z,44nm,1.1s
PRHZ Porangahau 74.23 130 P **P 10 10 34.8 +0.7**
MMAI Mount Meron Ar 74.30 306 P **P 10 10 36.8 +2.2**
comp=Z,40nm,0.6s,baz=94,slow=7.8,SNR=68
MMAI LR LR 10 45 40.4
comp=Z,188nm,18.0s,baz=155,slow=38
URZ Urewera 74.37 128 LR LR 10 46 05.2
comp=Z,361nm,19.0s,baz=300,slow=38
URZ Urewera 74.37 128 *e*P **P 10 10 35.1 +0.2**
comp=Z,37nm,1.0s
PXZ Pawanui 74.38 130 P **P 10 10 35.6 +0.7**
MA2 Magadan 74.44 23 P **P 10 10 34.6 -0.2**
comp=Z,35nm,0.7s,baz=216,slow=5.8,SNR=17
MA2 Magadan 74.44 23 *e*P **P 10 10 34.6 -0.2**
comp=Z,42nm,0.9s
MA2 Magadan 74.44 23 *i*P **P 10 10 35.0 +0.2**
MA2 pmax pmax
comp=Z,83nm,1.7s
SOC Sochi 74.63 318*c i*P **P 10 10 35.8 -0.4**
SOC *e*PPP PPP 10 15 11.0
SOC *e*S **S 10 20 08.7 +1.4**
SOC *e*SS **SS 10 24 57.6 +1.8**
SOC pmax pmax
comp=Z,56nm,0.7s
NRIK Noril'sk 74.89 354 P **P 10 10 36.8 -0.4**
comp=Z,54nm,0.8s,baz=161,slow=5.6,SNR=53
NRIK LR LR 10 46 14.1
comp=Z,354nm,20.9s,baz=179,slow=38
ANDN Andirin 74.94 311 *i*P **P 10 10 39.6 +1.3**
GULE Gulek 76.03 310 *i*P **P 10 10 45.5 +0.8**
SYO Syowa Base 76.14 199⇑*e*P **P 10 10 47.2 +2.8**
SYO Syowa Base 76.14 199⇓*e*PcP **PcP 10 10 54.4 -1.9**
CSS Mathiatis 76.49 308 *e*P **P 10 10 48.5 +1.3**
comp=Z,30nm,0.9s
CSS Mathiatis 76.49 308 P **P 10 10 48.6 +1.4**
KERG Konya-Eregli 76.57 310 *i*P **P 10 10 47.9 +0.2**
ANN Anapa 76.60 318 *e*P **P 10 10 46.2 -1.3**
ANN pmax pmax
comp=Z,42nm,1.3s
GULN MERSIN_Gulnar 76.67 309 *i*P **P 10 10 49.0 +1.0**
SZAC Souni 76.79 307 P **P 10 10 50.2 +1.3**
BOSA Boshof 77.03 242 P **P 10 10 51.0 +0.5**
comp=Z,6.3nm,1.1s,baz=96,slow=5.0,SNR=5.5
BOSA LR LR 10 38 31.2
comp=Z,466nm,20.8s,baz=50,slow=31
BOSA Boshof 77.03 242 P **P 10 10 51.0 +0.5**
BOSA pmax pmax
comp=Z,6.0nm,1.1s
SEY Seymchan 77.19 21 P **P 10 10 50.5 +0.1**
comp=Z,23nm,0.7s,baz=225,slow=4.1,SNR=95
PPCY Paphos 77.25 307 P P 10 10 43.5 -7.9
AKMC Akamas 77.30 307 P **P 10 10 52.6 +0.9**
BR131 Keskin Array S 77.61 312 *e*P **P 10 10 53.4 -0.1**
BRTR Keskin Array B 77.61 312 P **P 10 10 53.5 0.0**
comp=Z,31nm,0.7s,baz=135,slow=7.2,SNR=162
BRTR LR LR 10 48 32.8
comp=Z,93nm,18.4s,baz=96,slow=38
BRTR Keskin Array B 77.61 312 *i*P **P 10 10 53.5 0.0**
BRTR pmax pmax
comp=Z,32nm,0.7s
VORD Divnogorie 77.80 324 *e*P **P 10 10 53.7 -0.3**
VORD *e*S **S 10 20 37.9 -3.8**
VORD pmax pmax
comp=Z,60nm,1.1s
VORD smax smax
comp=E,100nm,1.5s
ILGA Ilgaz 77.95 314 *e*P **P 10 10 56.3 +0.9**
comp=E,88nm,1.4s
VSR Storozhevoye 77.97 325 *e*P **P 10 10 54.4 -0.6**
VSR *e*S **S 10 20 39.8 -3.8**
VSR pmax pmax
comp=Z,160nm,0.9s
VSR smax smax
comp=N,140nm,1.4s
KKUL Konya-Kulu 77.98 312 *i*P **P 10 10 56.2 +0.7**
KMER Konya-Meram 78.01 310 *i*P **P 10 10 56.6 +0.9**
VORR Voronezh 78.13 325 P **P 10 10 56.0 +0.1**
VORR pmax pmax
comp=Z,400nm,1.2s
TIXI Tiksi 78.27 8 P **P 10 10 55.0 -1.3**
baz=60,slow=11
TIXI Tiksi 78.27 8 *e*P **P 10 10 54.9 -1.3**
comp=Z,24nm,0.7s
TIXI Tiksi 78.27 8*c i*P **P 10 10 54.5 -1.7**
TIXI pmax pmax
comp=Z,24nm,0.9s
TIXI MLR MLR
comp=Z,361nm,17.0s
ANTO Ankara 78.28 312⇑*i*P **P 10 10 57.0 -0.1**
ANTO Ankara 78.28 312 *e*P **P 10 10 57.7 +0.6**
comp=Z,48nm,1.0s
ANTO Ankara 78.28 312 P **P 10 10 57.2 +0.1**
SNR=10
ANTO Ankara 78.28 312 *e*P **P 10 10 57.7 +0.6**
ANTO pmax pmax
comp=Z,48nm,1.0s
DOGA KONYA_Doganhis 78.63 310 *i*P **P 10 10 59.5 +0.4**
VNDA Vanda 78.70 169 P **P 10 10 58.8 +0.2**
comp=Z,4.9nm,0.6s,baz=309,slow=6.2,SNR=27
VNDA pP **pP 10 11 16.1 +0.1**
comp=Z,29nm,1.1s,baz=294,slow=3.9,SNR=12
VNDA LR LR 10 40 59.3
comp=Z,331nm,21.4s,baz=310,slow=32
VNDA Vanda 78.70 169 *e*P **P 10 10 58.2 -0.5**
comp=Z,48nm,1.3s
VNDA pP **pP 10 11 16.1 +0.1**
SIM Simferopol' 78.87 317 *e*P **P 10 11 00.9 +0.7**
SIM pmax pmax
comp=Z,55nm,0.9s
ISP Isparta 79.43 310*c i*P **P 10 11 03.0 -0.5**
ISP pmax pmax
comp=Z,15nm,1.0s
PRGR Permogore 79.61 336⇑*i*P **P 10 11 04.0 +0.3**
PRGR *e**PP **pP 10 11 20.4 -0.7**
PRGR *e*S **S 10 21 00.2 -0.4**
PRGR pmax pmax
comp=Z,420nm,0.7s
SBA Scott Base 79.79 169 *e*P **P 10 11 05.8 +1.3**
comp=Z,66nm,1.4s
SBA Scott Base 79.79 169 *e*P **P 10 11 05.8 +1.3**
SBA pmax pmax
comp=Z,66nm,1.4s
MOS Moscow 80.62 329 *e*P **P 10 11 08.5 -0.8**
MOS *e* 10 11 24.4
MOS *e*S **S 10 21 09.2 -2.3**
MOS pmax pmax
comp=Z,400nm,0.9s
MOS pmax pmax
comp=Z,341nm,0.9s
MOS pmax pmax
comp=Z,147nm,1.2s
OBN Obninsk 80.93 328 *e*P **P 10 11 12.0 +1.0**
comp=Z,411nm,0.8s
OBN Obninsk 80.93 328*c i*P **P 10 11 11.2 +0.2**
OBN *i* *PP **pP 10 11 29.0 +0.6**
OBN *e* 10 14 17.8
OBN *i*S **S 10 21 13.6 -1.2**
OBN pmax pmax
comp=Z,220nm,0.9s
MANT Manisa 81.10 310 *e*P **P 10 11 13.8 +1.1**
comp=Z,149nm,1.1s
KARP Karpathos 81.53 307 *e*P **P 10 11 14.9 +0.2**
comp=Z,108nm,0.9s
KLMR Klimovskoe 81.83 334 *e*P **P 10 11 13.6 -2.0**
KLMR *e* 10 14 21.3
KLMR pmax pmax
comp=Z,284nm,1.3s
KLMR Klimovskoe 81.83 334 *e*P **P 10 11 13.6 -2.0**
KLMR AMP 10 11 16.9
comp=Z,284nm,1.3s
KLMR *e*PP **PP 10 14 21.3 -2.3**
SMY Shemya 82.53 35 *e*P **P 10 11 18.7 -0.8**
SMY Shemya 82.53 35 *e*P **P 10 11 18.7 -0.8**
PSN Preselentsi 82.61 315 P **P 10 11 21.0 +0.9**
TLB Topalu 82.92 316⇑*i*P **P 10 11 22.0 +0.3**
TLB Topalu 82.92 316⇑P **P 10 11 22.0 +0.3**
CFR Carcaliu 83.00 316⇓*i*P **P 10 11 23.1 +1.0**
CFR Carcaliu 83.00 316⇓P **P 10 11 23.1 +1.0**
HARR Harsova 83.03 316⇓*i*P **P 10 11 23.4 +1.1**
HARR Harsova 83.03 316⇓P **P 10 11 23.4 +1.1**
PRD Provadia 83.05 314 P **P 10 11 23.1 +0.7**
LEOM Leova 83.25 318⇑*i*P **P 10 11 25.1 +1.8**
LEOM Leova 83.25 318⇑P **P 10 11 25.1 +1.8**
IDI Anoyia 83.30 306 P **P 10 11 25.2 +1.2**
comp=Z,37nm,0.6s,baz=86,slow=7.2,SNR=22
IDI LR LR 10 50 14.7
comp=Z,74nm,21.1s,baz=88,slow=37
IDI Anoyia 83.30 306 *e*P **P 10 11 25.5 +1.5**
SORM Soroca 83.59 319⇑*i*P **P 10 11 25.6 +0.5**
SORM Soroca 83.59 319⇑P **P 10 11 25.6 +0.5**
AKASG Malin Array Be 83.71 322 P **P 10 11 25.4 -0.3**
comp=Z,19nm,0.7s,baz=84,slow=5.0,SNR=77
AKASG PP **PP 10 14 32.8 -6.5**
comp=Z,0.7nm,0.5s,baz=88,slow=6.9,SNR=3.1
AKASG Malin Array Be 83.71 322 *i*P **P 10 11 25.7 0.0**
AKASG pmax pmax
comp=Z,19nm,0.7s
AKBB Malin Array Si 83.71 322 *e*P **P 10 11 25.9 +0.2**
AKBB Malin Array Si 83.71 322 *e*P **P 10 11 25.9 +0.2**
KIEV Kiev 83.72 322 *e*P **P 10 11 25.4 -0.3**
KIEV Kiev 83.72 322 *i*P **P 10 11 25.6 0.0**
SNR=8.6
KIEV Kiev 83.72 322*c i*P **P 10 11 25.5 -0.2**
KIEV pmax pmax
comp=Z,32nm,1.1s
AK11 Malin Array Si 83.74 322 *e*P **P 10 11 25.8 0.0**
TMCR Tamitsa 83.86 336 *e*P **P 10 11 25.4 -0.7**
TMCR pmax pmax
comp=Z,156nm,0.6s
AFI Afiamalu 84.06 103 LR LR 10 48 51.8
comp=Z,19nm,20.9s,baz=356,slow=36
AFI Afiamalu 84.06 103 *e*P **P 10 11 30.4 +2.1**
AFI Afiamalu 84.06 103 *e*P **P 10 11 30.4 +2.1**
VRI Vrincioaia 84.13 317⇓*i*P **P 10 11 29.6 +1.7**
VRI Vrincioaia 84.13 317⇓P **P 10 11 29.6 +1.7**
KDZ Kurdzhali 84.14 313 P **P 10 11 28.5 +0.4**
PLOR Plostina 84.18 317⇑*i*P **P 10 11 30.1 +1.9**
PLOR Plostina 84.18 317⇑P **P 10 11 30.1 +1.9**
TSUM Tsumeb 84.22 251 *e*P **P 10 11 30.2 +1.0**
TESR Tescani 84.33 318⇑*i*P **P 10 11 29.0 +0.1**
MLR Muntele Rosu 84.58 316 P **P 10 11 31.4 +1.0**
comp=Z,9.5nm,0.9s,baz=80,slow=1.3,SNR=41
MLR Muntele Rosu 84.58 316⇓*i*P **P 10 11 31.2 +0.8**
MLR Muntele Rosu 84.58 316 *e*P **P 10 11 31.2 +0.8**
RZN Rozhen 84.66 313 P **P 10 11 31.5 +0.5**
PRAR RASCA 84.80 318⇓*i*P **P 10 11 32.9 +1.6**
BILL Bilibino 84.82 20 *e*P **P 10 11 30.6 -0.3**
BILL Bilibino 84.82 20*c i*P **P 10 11 30.3 -0.6**
BILL *i* 10 11 54.4
BILL pmax pmax
comp=Z,27nm,1.2s
QSPA South Pole Qui 85.05 180 P **P 10 11 31.1 -1.2**
comp=Z,4.6nm,0.6s,baz=308,slow=3.9,SNR=5.2
QSPA LR LR 10 45 14.0
comp=Z,331nm,19.9s,baz=284,slow=33
QSPA South Pole Qui 85.05 180 *e*P **P 10 11 32.5 +0.2**
DOPR Dopca 85.06 317⇓*i*P **P 10 11 33.5 +0.8**
PGB Panagyurishte 85.23 313 P **P 10 11 34.1 +0.5**
ARR Arges 85.46 316⇓*i*P **P 10 11 34.8 +0.1**
MICGM Minsk 85.50 326⇑*e*P **P 10 11 34.0 -0.6**
MICGM PM 10 11 35.0
comp=Z,0.3nm,1.4s
MNK Minsk 85.50 326⇑*e*P **P 10 11 34.0 -0.6**
MNK pmax pmax
comp=Z,280nm,1.4s
BURAR Bucovina Array 85.53 318⇓*i*P **P 10 11 36.5 +1.5**
BUR04 Bucovina Ar. S 85.53 318 *e*P **P 10 11 34.9 -0.1**
BUR08 Bucovina Ar. S 85.54 318 *e*P **P 10 11 36.6 +1.5**
MPEP Malo Peshtene 85.69 314 P **P 10 11 36.9 +1.1**
NVL N'lazarevskaya 85.81 199⇓*i*P P 10 11 51.3 +15
NVL *e*S **S 10 22 10.7 +7.0**
NVL pmax pmax
comp=Z,13nm,0.9s
KKB Krupnik 85.90 312 P **P 10 11 36.9 0.0**
VTS Vitosha 85.94 313⇓*i*P **P 10 11 37.6 +0.4**
VTS Vitosha 85.94 313 *e*P **P 10 11 37.8 +0.5**
VTS Vitosha 85.94 313 P **P 10 11 36.7 -0.5**
VTS Vitosha 85.94 313 P **P 10 11 38.9 +1.7**
ITM Ithomi 85.99 308 *e*P **P 10 11 38.2 +0.7**
LIT Litokhoron 86.03 311 *e*P **P 10 11 37.9 +0.3**
LIT Litokhoron 86.03 311 *e*P **P 10 11 37.9 +0.3**
LOT Lotru 86.07 316⇓*i*P **P 10 11 39.0 +1.2**
VAY Valandovo 86.18 312 *i*P **P 10 11 38.3 0.0**
NACGM Naroch 86.22 326 *e* **P 10 11 38.0 -0.1**
IDID Didziasalis 86.35 326 *e*P **P 10 11 40.1 +1.4**
IDID IAmb IAmb 10 11 41.3
comp=Z,47nm,1.0s
CJR Cluj-Napoca 86.43 317⇓*i*P **P 10 11 41.4 +2.0**
CJR Cluj-Napoca 86.43 317⇓P **P 10 11 41.4 +2.0**
STIP Stip 86.53 312 *i*P **P 10 11 39.1 -0.9**
IIGN Ignalina 86.64 326 *e*P **P 10 11 41.5 +1.3**
IIGN IAmb IAmb 10 11 42.6
comp=Z,44nm,0.8s
BMR Baia Mare 86.68 318⇓*i*P **P 10 11 43.0 +2.4**
BMR Baia Mare 86.68 318⇓P **P 10 11 43.0 +2.4**
IZAR Zarasai 86.72 327 *e*P **P 10 11 41.9 +1.3**
IZAR IAmb IAmb 10 11 43.1
comp=Z,22nm,0.8s
ISAL Salakas 86.75 326 *e*P **P 10 11 41.9 +1.2**
ISAL IAmb IAmb 10 11 43.1
comp=Z,27nm,0.9s
LVV L'vov 86.75 320 *e*P **P 10 11 40.9 0.0**
HERR Herculane 86.91 315⇓*i*P **P 10 11 42.1 +0.4**
APA Apatity 86.93 339⇓*i*P **P 10 11 40.1 -1.3**
APA *i*S **S 10 22 06.0 -8.6**
APA *i*SS SS 10 23 38.0 -260
APA pmax pmax
comp=Z,40nm,1.1s
FNA Florina 86.98 311 *e*P **P 10 11 42.3 0.0**
FNA Florina 86.98 311 *e*P **P 10 11 42.3 0.0**
DRGR 87.04 317⇓*i*P **P 10 11 43.9 +1.4**
DRGR 87.04 317⇓P **P 10 11 43.9 +1.4**
VSU Vasula 87.11 329*c i*P **P 10 11 42.9 +0.5**
VSU pmax pmax
comp=Z,249nm,0.8s
SKO Skopje 87.12 312 *i*P **P 10 11 42.5 -0.4**
MDVR Moldovita 87.38 315⇑*i*P **P 10 11 45.4 +1.3**
TRPA Tarpa 87.39 319⇓*i*P **P 10 11 46.0 +2.0**
OHR Ohrid 87.47 311 *i*P **P 10 11 44.5 -0.1**
KWP Kalwaria Pacla 87.56 320 *e*P **P 10 11 45.7 +0.9**
KWP Kalwaria Pacla 87.56 320 *e*P **P 10 11 45.5 +0.7**
KWP Kalwaria Pacla 87.56 320 *e*P **P 10 11 45.7 +0.9**
BZS Buzias 87.59 316⇓*i*P **P 10 11 45.8 +0.8**
BZS Buzias 87.59 316⇓P **P 10 11 45.8 +0.8**
UZH Uzhgorod 87.64 319 *e*P **P 10 11 45.6 +0.4**
UZH *e* 10 12 01.6
SIRR Siria 87.67 317⇓*i*P **P 10 11 46.9 +1.5**
SUW Suwalki 88.08 324 *e*P **P 10 11 47.7 +0.5**
SUW Suwalki 88.08 324 *e*P **P 10 11 47.6 +0.4**
SUW Suwalki 88.08 324 *e*P **P 10 11 47.7 +0.5**
FIA1 FINESS Array S 88.16 332 *e*P **P 10 11 47.5 +0.2**
FINES FINESS Array B 88.16 332 P **P 10 11 47.7 +0.4**
comp=Z,34nm,0.6s,baz=108,slow=5.4,SNR=45
FINES pP **pP 10 12 04.8 -0.1**
comp=Z,16nm,0.9s,baz=101,slow=4.4,SNR=3.3
FINES PKKP **PKKPbc 10 29 32.0 -2.4**
comp=Z,3.2nm,1.1s,baz=232,slow=4.6,SNR=3.4
FINES LR LR 10 55 15.7
comp=Z,126nm,21.7s,baz=114,slow=38
CRVS Cervenica-Dubn 88.23 319 *e*P **P 10 11 49.0 +1.0**
CRVS pmax pmax
comp=Z,66nm,2.2s
CRVS Cervenica-Dubn 88.23 319 *e*P **P 10 11 49.0 +1.0**
CRVS *e*PP **PP 10 15 16.4 +0.4**
PVY Plav 88.30 313 *e*P **P 10 11 48.8 +0.1**
IVA Berane 88.39 313⇑*i*P **P 10 11 49.5 +0.5**
DIVS Divibare 88.50 314 *e*P **P 10 11 50.3 +0.8**
KOME Kolasin 88.66 313⇑*i*P **P 10 11 50.8 +0.5**
ULC Ulcinj 88.74 312⇑*i*P **P 10 11 51.0 +0.4**
PDG Podgorica 88.80 313⇓*i*P **P 10 11 51.4 +0.6**
TTG Podgorica 88.80 313⇑*i*P **P 10 11 51.3 +0.5**
TTG Podgorica 88.80 313 *e*P **P 10 11 51.2 +0.4**
TTG Podgorica 88.80 313 *e*P **P 10 11 51.2 +0.4**
DRME Dracevica, Mon 88.82 312⇑*i*P **P 10 11 51.3 +0.4**
PLE Pljevlja 88.82 313 *e*P **P 10 11 51.4 +0.3**
NKY Niksic 89.04 313⇑*i*P **P 10 11 52.5 +0.4**
BUM Brajici-Budva 89.05 312⇑*i*P **P 10 11 52.8 +0.7**
CEME Cevo 89.06 313⇑*i*P **P 10 11 52.4 +0.3**
NKME Niksic 89.06 313⇑*i*P **P 10 11 52.8 +0.7**
NIE Niedzica 89.07 320 *e*P **P 10 11 53.4 +1.4**
NIE *e* 10 15 24.2
PSZ Piszkesteto 89.11 318⇓*i*P **P 10 11 53.5 +1.2**
PSZ Piszkesteto 89.11 318⇑*e*P **P 10 11 53.2 +0.9**
PSZ Piszkesteto 89.11 318 *e*P **P 10 11 53.4 +1.1**
PSZ Piszkesteto 89.11 318⇓P **P 10 11 53.5 +1.2**
BEL Belsk 89.13 322 *e*P **P 10 11 53.5 +1.4**
BEL Belsk 89.13 322 *e*P **P 10 11 53.5 +1.4**
UPM Unac-Piva 89.15 313⇑*i*P **P 10 11 52.8 +0.1**
HCY Herceg Novi 89.36 313⇑*i*P **P 10 11 53.9 +0.4**
BRY Bratogost 89.38 313⇑*i*P **P 10 11 53.9 +0.2**
OJC Ojcow 89.51 320 *e*P **P 10 11 54.5 +0.6**
OJC *e*PP **PP 10 15 26.6 +0.5**
OJC Ojcow 89.51 320 *e*P **P 10 11 54.6 +0.6**
OJC Ojcow 89.51 320 *e*P **P 10 11 54.6 +0.6**
KEV Kevo 89.83 340 *e*P **P 10 11 55.2 +0.2**
KEV Kevo 89.83 340 *e*P **P 10 11 55.2 +0.2**
VYHS Vyhne 89.89 319 *e*P **P 10 11 56.7 +0.9**
VYHS pmax pmax
comp=Z,23nm,1.4s
VYHS Vyhne 89.89 319 *e*P **P 10 11 56.6 +0.8**
KLNR Kaliningrad 89.90 325*de*P **P 10 11 56.8 +1.2**
KLNR pmax pmax
comp=Z,71nm,0.3s
CSKK Cs´ákako 90.13 317⇓*e*P **P 10 11 58.3 +1.3**
ARCES ARCESS Array B 90.28 340 P **P 10 11 57.2 0.0**
comp=Z,29nm,0.8s,baz=98,slow=5.3,SNR=40
ARCES pP **pP 10 12 14.6 -0.3**
comp=Z,9.0nm,0.8s,baz=117,slow=3.1,SNR=3.2
ARCES LR LR 10 57 48.3
comp=Z,244nm,21.9s,baz=80,slow=39
ARE0 ARCESS Array S 90.28 340 *e*P **P 10 11 57.8 +0.6**
TIP Timpagrande 90.29 309⇓*i*P **P 10 11 59.8 +1.8**
TIP Timpagrande 90.29 309 *e*P **P 10 11 59.8 +1.8**
SNAA Sanae 90.33 198 P **P 10 11 55.1 -2.5**
SNAA Sanae 90.33 198 P **P 10 11 58.4 +0.9**
comp=Z,5.2nm,1.0s,baz=340,slow=5.0,SNR=8.9
SNAA LR LR 10 46 28.6
comp=Z,331nm,21.9s,baz=42,slow=32
SNAA Sanae 90.33 198 *e*P **P 10 11 59.0 +1.5**
SNAA Sanae 90.33 198*de*P **P 10 11 58.7 +1.2**
MATE Matera 90.48 311⇑*i*P **P 10 12 00.2 +1.5**
OKC Ostrava-Krasne 90.51 320 *e*S **S 10 22 44.3 -4.7**
OKC AMS AMS 10 57 00.0
comp=Z,200nm,19.1s
BLY Banja Luka 90.57 315⇓*i*P **P 10 12 00.1 +1.0**
BLY Banja Luka 90.57 315 *e*P **P 10 11 59.7 +0.7**
JAVC Velka Javorina 90.70 319 *e*P **P 10 12 01.3 +1.6**
CEL Celeste 90.87 308 *e*P **P 10 12 02.7 +2.0**
CEL *e*pP **pP 10 12 19.6 +1.2**
MORC Moravsky Berou 90.89 320⇓*i*P **P 10 12 01.5 +1.0**
MORC Moravsky Berou 90.89 320 *e*P **P 10 12 01.7 +1.2**
MORC Moravsky Berou 90.89 320 *e*P **P 10 12 01.7 +1.2**
MORC Moravsky Berou 90.89 320 *e*P **P 10 12 01.5 +1.0**
MORC *e*PP **PP 10 15 36.8 -0.4**
MODS Modra-Piesok 90.91 318 *e*P **P 10 12 00.5 -0.1**
MODS pmax pmax
comp=Z,55nm,1.4s
MODS Modra-Piesok 90.91 318 *e*P **P 10 12 00.5 -0.1**
ZST Bratislava 91.01 318 *e*P **P 10 12 00.9 -0.1**
ZST pmax pmax
comp=Z,7.0nm,1.7s
ZST Bratislava 91.01 318 *e*P **P 10 12 00.9 -0.1**
BEHE Becsehely 91.04 316⇑*e*P **P 10 12 02.3 +1.1**
CUC Castrocucco 91.09 310 *e*P **P 10 12 02.3 +0.6**
KOGS Kog 91.40 316 *e*P **P 10 12 03.8 +0.9**
KRLC Kraliky 91.41 320 *e*P **P 10 12 04.2 +1.3**
KRLC *ex* x 10 12 08.4
KRLC Kraliky 91.41 320 *e*P **P 10 12 04.2 +1.3**
VRAC Vranov 91.46 319 *e*P **P 10 12 04.8 +1.7**
VRAC *e* 10 12 20.0
KRUC Moravsky 91.56 319 *e*P **P 10 12 04.7 +1.1**
KRUC *e* 10 12 21.0
DPC Dobruska-Polom 91.74 320 *e*P **P 10 12 06.0 +1.6**
DPC *ex* x 10 12 12.5
DPC *e*S **S 10 23 00.8 +0.6**
DPC AMS AMS 11 01 40.0
comp=Z,200nm,22.3s
DPC Dobruska-Polom 91.74 320 *e*P **P 10 12 06.0 +1.6**
DPC *e* 10 23 00.8
DPC MLR MLR
comp=Z,200nm,22.3s
GOLS Golise 91.79 316 *e*P **P 10 12 05.8 +1.0**
KSP Ksiaz 91.80 321 *e*P **P 10 12 05.7 +1.1**
KSP Ksiaz 91.80 321⇑*e*P **P 10 12 05.7 +1.1**
CONA Conrad Observa 91.81 318 *e*PcP **P 10 12 05.8 +0.9**
comp=Z,4.9nm,1.0s,SNR=5.1
UPC Upice 91.95 320 *e*P **P 10 12 06.3 +1.0**
UPC *e*S **S 10 23 00.0 -2.0**
UPC AMS AMS 11 02 10.0
comp=Z,200nm,20.0s
UPC Upice 91.95 320 *e*P **P 10 12 06.3 +1.0**
UPC *e* 10 23 00.0
UPC MLR MLR
comp=Z,200nm,20.0s
VAE Valguarnera 91.97 307 P **P 10 12 06.1 +0.3**
comp=Z,7.2nm,0.3s,baz=341,slow=8.6,SNR=4.2
ARSA Arzberg 91.97 317 *e*PcP **P 10 12 07.0 +1.5**
comp=Z,10nm,0.9s,SNR=9.1
BOJS Bojanci 92.01 315 *e*P **P 10 12 06.5 +0.7**
BOJS *i* 10 12 23.8
PERS Pernice 92.20 316 *e*P **P 10 12 07.1 +0.5**
PERS *e* 10 12 24.9
PDKS Podkum 92.23 316 *e*P **P 10 12 07.7 +0.9**
SOKA Soboth 92.26 316 *e*PcP **P 10 12 08.1 +1.1**
comp=Z,25nm,1.1s,SNR=18
VISS Visnje 92.32 316 *e*P **P 10 12 07.2 0.0**
VISS *e* 10 12 25.1
VNA3 Neumayer Olymp 92.53 197 P **P 10 12 08.0 +0.3**
OBKA Obir 92.58 316 *e*PcP **P 10 12 09.5 +1.0**
comp=Z,14nm,1.4s,SNR=6.9
GOPC GO Pecny, Ondr 92.68 320 *e*P **P 10 12 10.3 +1.5**
GOPC AMS AMS 11 02 20.0
comp=Z,200nm,19.1s
GOPC GO Pecny, Ondr 92.68 320 *e*P **P 10 12 10.3 +1.5**
GOPC MLR MLR
comp=Z,200nm,19.1s
NIKH Nikolski High 92.69 37 *e*P **P 10 12 08.0 -0.7**
PRU Pruhonice 92.85 320 *e*P **P 10 12 10.8 +1.3**
PRU *e*S **S 10 23 14.8 +4.8**
PRU AMS AMS 11 01 40.0
comp=Z,100nm,17.0s
PRU Pruhonice 92.85 320 *e*P **P 10 12 10.8 +1.3**
PRU *e* 10 23 14.8
PRU MLR MLR
comp=Z,100nm,17.0s
PVCC Panska Ves 92.87 320 *e*P **P 10 12 10.7 +1.1**
PVCC Panska Ves 92.87 320 *e*P **P 10 12 10.7 +1.1**
JAVS Javornik 92.87 316 *e*P **P 10 12 09.8 0.0**
JAVS *i* 10 12 25.8
MOA Molln 92.87 318 *e*PcP **P 10 12 10.1 +0.4**
comp=Z,4.7nm,0.8s,SNR=5.3
PRA Prague 92.92 320 *e*P **P 10 12 12.9 +3.1**
PRA Prague 92.92 320 *e*P **P 10 12 12.9 +3.1**
MYKA Terra Mystica 93.21 316 *e*PcP **P 10 12 11.8 +0.5**
comp=Z,2.4nm,0.4s
BRG Berggiesshubel 93.29 321 *i*P **P 10 12 12.5 +1.0**
comp=Z,13nm,0.8s
BRG pP **pP 10 12 29.7 +0.5**
comp=Z,12nm,1.3s
BRG *e*PP **PP 10 15 55.6 -0.4**
comp=Z,22nm,1.6s
comp=N,90nm,18.6s
comp=E,75nm,14.4s
comp=Z,140nm,19.3s
BRG Berggiesshubel 93.29 321 *i*P **P 10 12 12.5 +1.0**
BRG *PP **pP 10 12 29.7 +0.5**
BRG *e* 10 15 55.6
BRG pmax pmax
comp=Z,13nm,0.8s
BRG pmax pmax
comp=Z,22nm,1.6s
BRG MLR MLR
comp=N,90nm,18.6s
BRG MLR MLR
comp=E,75nm,14.4s
BRG MLR MLR
comp=Z,140nm,19.3s
GEA0 GERESS Array S 93.31 319 *e*P **P 10 12 12.2 +0.5**
GEC2 GERESS Array S 93.31 319 *e*P **P 10 12 13.0 +1.2**
GERES GERESS Array B 93.31 319 P **P 10 12 12.9 +1.1**
comp=Z,3.9nm,0.7s,baz=86,slow=4.4,SNR=38
GERES PP **PP 10 15 57.3 +0.9**

comp=Z,1.0nm,0.7s,baz=85,slow=8.2,SNR=3.8
KHC Kasperske Hory 93.41 319 *e*P **P 10 12 12.3 +0.1**
KHC *ex* x 10 12 17.7
KHC *e*S **S 10 23 15.2 0.0**
KHC AMS AMS 11 03 00.0
comp=Z,200nm,13.0s
KHC Kasperske Hory 93.41 319 *e*P **P 10 12 12.5 +0.3**
KHC Kasperske Hory 93.41 319 *e*P **P 10 12 12.5 +0.3**
KBA Koelnbreinsper 93.44 317 *e*PcP **P 10 12 12.6 +0.1**
comp=Z,9.2nm,1.4s
CLL Collm 93.91 321 *e*P **P 10 12 15.0 +0.7**
comp=Z,8.0nm,0.9s
CLL *e*PP **PP 10 16 00.0 -0.8**
CLL *e*S **S 10 23 13.0 -6.3**
CLL *e*PS **PS 10 24 39.0 -2.6**
CLL Collm 93.91 321 *e*P **P 10 12 15.0 +0.7**
CLL *e*S **S 10 23 13.0 -6.3**
CLL pmax pmax
comp=Z,8.0nm,0.9s
HFS Hagfors 93.97 330 P **P 10 12 14.4 0.0**
comp=Z,13nm,0.7s,baz=199,slow=3.1,SNR=25
HFS PP **PP 10 16 00.4 -0.6**
comp=Z,9.0nm,0.8s,baz=82,slow=10,SNR=5.4
HFS LR LR 10 59 50.9
comp=Z,121nm,19.3s,baz=74,slow=39
ABTA Abfaltersbach 94.00 316 *e*PcP **P 10 12 15.1 +0.1**
comp=Z,5.7nm,1.0s
SPA0 Spitsbergen Ar 94.13 348 *e*P **P 10 12 14.5 -0.3**
SPITS Spitsbergen Ar 94.13 348 P **P 10 12 13.8 -1.1**
comp=Z,15nm,0.7s,baz=112,slow=9.5,SNR=18
SPITS LR LR 11 00 20.4
comp=Z,408nm,21.9s,baz=40,slow=39
WTTA Wattenberg 94.62 317 *e*PcP **P 10 12 17.8 -0.2**
comp=Z,8.0nm,1.1s
WATA Walderalm 94.66 317 *e*PcP **P 10 12 18.7 +0.6**
comp=Z,2.2nm,0.4s
RAR Rarotonga 94.81 112 LR LR 10 55 32.4
comp=Z,46nm,20.5s,baz=270,slow=36
MOTA Moosalm 94.98 317 *e*P **P 10 12 18.7 -0.9**
comp=Z,2.7nm,0.6s
KBS Kingsbay 95.04 349 *e*P **P 10 12 19.0 0.0**
KBS pmax pmax
comp=Z,87nm,1.0s
RETA Reutte 95.22 317 *e*P **P 10 12 20.0 -0.5**
comp=Z,8.1nm,0.9s,SNR=6.5
NB2 NORSAR Subarra 95.22 331 P **P 10 12 19.8 -0.4**
comp=Z,7.4nm,0.9s,baz=92,slow=4.4
NB2 NORSAR Subarra 95.22 331 P **P 10 12 19.8 -0.4**
baz=92,slow=4.4
NOA NORSAR Array B 95.22 331 P **P 10 12 20.8 +0.6**
NOA LR LR 10 59 26.7
comp=Z,64nm,21.6s,baz=90,slow=38
FETA Feichten 95.23 317 *e*PcP **P 10 12 20.6 -0.1**
comp=Z,7.9nm,1.3s
DAVA Damuels 95.81 317 *e*PcP **P 10 12 23.8 +0.4**
comp=Z,7.1nm,0.8s
KEST Kesra 95.94 305 P **P 10 12 24.4 +0.3**
comp=Z,8.6nm,0.9s,baz=320,slow=0.4,SNR=8.9
KEST Kesra 95.94 305 *e*P **P 10 12 26.3 +2.2**
KONO Kongsberg 96.02 329 *e*P **P 10 12 24.4 +0.6**
KONO Kongsberg 96.02 329 *e*P **P 10 12 23.9 +0.1**
KONO pmax pmax
comp=Z,28nm,1.8s
TOLK Toolik Lake Re 100.83 21 P **Pdif 10 12 45.4 +0.2**
baz=284
MLY Manley 101.22 25 *e*Pdif **Pdif 10 12 47.8 +0.7**
KDAK Kodiak Island 101.75 32 P **Pdif 10 12 49.2 -0.2**
comp=Z,3.6nm,0.5s,baz=283,slow=3.9,SNR=10.0
KDAK Kodiak Island 101.75 32 *i* P **Pdif 10 12 49.7 +0.2**
TORD Torodi Ar. Bea 102.25 282 P **Pdif 10 12 51.2 -1.4**
comp=Z,1.7nm,1.1s,baz=105,slow=4.7,SNR=4.3
TORD PKiKP **PKiKP 10 17 13.8 -0.8**
comp=Z,1.1nm,0.8s,baz=101,slow=1.4,SNR=5.8
TORD PKKPbc **PKKPbc 10 28 52.9 -2.1**
comp=Z,0.7nm,0.6s,baz=300,slow=3.4,SNR=7.1
MCK McKinley 102.29 26 *e*Pdif **Pdif 10 12 52.0 +0.2**
MCK McKinley 102.29 26 *e*P **Pdif 10 12 52.0 +0.2**
ILAR Eielson Array 102.88 24 P **Pdif 10 12 52.8 -1.6**
comp=Z,0.9nm,0.6s,baz=288,slow=4.4,SNR=10
ILAR PKiKP **PKiKP 10 17 13.2 -1.2**
comp=Z,0.9nm,0.8s,baz=272,slow=3.0,SNR=6.7
ILAR PKKPbc **PKKPbc 10 28 47.0 -7.7**
comp=Z,0.2nm,0.8s,baz=139,slow=2.5,SNR=3.1
ILAR Eielson Array 102.88 24 P **Pdif 10 12 52.8 -1.6**
ILAR *i* 10 17 13.2
ILAR pmax pmax
comp=Z,1.0nm,0.6s
ILAR pmax pmax
comp=Z,1.0nm,0.8s
EKA Eskdalemuir Ar 103.30 326 Pdiff **Pdif 10 12 55.9 -0.6**
comp=Z,0.1nm,0.3s,baz=81,slow=6.6,SNR=2.6
RIDG Independ'e Rid 104.04 25 *e*Pdif **Pdif 10 12 59.8 +0.1**
PPT2 Papeete2 104.86 110 *e*LR LR 10 47 51.0
comp=Z,302nm,23.2s
BMRM Bremner River 104.98 28 *e*Pdif **Pdif 10 13 04.9 +1.0**
EGAK Eagle 105.20 24 *e*PKPdf **PKiKP 10 17 18.1 -0.5**
EGAK *e*PP **PP 10 17 25.8 -0.3**
INK Inuvik 106.43 19 Pdiff **Pdif 10 13 09.9 -0.2**
comp=Z,3.0nm,1.1s,baz=333,slow=8.9,SNR=4.3
INK PKiKP **PKiKP 10 17 20.3 -0.5**
comp=Z,2.1nm,0.7s,baz=9.6,slow=3.9,SNR=8.5
KOWA Kowa 107.83 284 PKiKP **PKiKP 10 17 24.2 -0.7**
comp=Z,0.8nm,0.4s,baz=348,slow=2.0,SNR=3.6
SUMG Summit 108.46 349 *i* P **PP 10 17 48.4 -1.8**
SUMG *e* 10 20 18.9
ILULI Ilulissat 113.59 350 *i* PP 10 18 10.0 -16
ILULI *i* 10 18 11.3
SFJD Kangerlussuaq 115.45 349 *i* PP 10 18 47.9 +8.3
SFJD *i* 10 18 54.5
SFJD Kangerlussuaq 115.45 349 *e*PKPdf **PKPdf 10 17 40.6 +2.7**
YKA Yellowknife Ar 116.19 18 PKP **PKPdf 10 17 39.0 -0.4**
comp=Z,3.8nm,0.7s,baz=329,slow=2.0,SNR=32
YKA PKKPbc **PKKPbc 10 28 10.7 -1.1**
comp=Z,0.3nm,0.8s,baz=125,slow=3.2,SNR=3.8
YKA PKKP **PKKPdf 10 28 29.5 -7.5**
comp=Z,0.8nm,0.8s,baz=128,slow=4.5,SNR=6.4
A04D Lummi Island 121.57 34 P **PKPdf 10 17 50.6 +0.4**
baz=303
B05A Bryant 122.16 34 P **PKPdf 10 17 52.1 +0.8**
baz=303
F04D Rainier, OR 122.79 37 P **PKPdf 10 17 53.7 +1.1**
baz=301
G03D McMinnville, O 123.09 38 P **PKPdf 10 17 54.0 +0.8**
baz=301
I03D Drain, OR 123.80 39 P **PKPdf 10 17 55.6 +0.9**
baz=300,SNR=11
G05D Wamic, OR 124.25 37 P **PKPdf 10 17 56.4 +0.9**
baz=302
I04A Tendick Farm, 124.33 39 P **PKPdf 10 17 56.0 +0.3**
baz=301,SNR=14
L02D Cave Junction, 124.38 41 P **PKPdf 10 17 56.7 +0.8**
baz=298
HUMO Hull Mountain 124.58 40 *e*PKPdf **PKPdf 10 17 57.6 +1.3**
HUMO *ep*PKPdf **pPKPdf 10 18 14.2 -0.3**
HAWA Hanford 124.65 35 *e*PKPdf **PKPdf 10 17 57.3 +1.1**
HAWA *ep*PKPdf **pPKPdf 10 18 15.1 +0.5**
FCC Fort Churchill 124.67 11 *e*PKPdf **PKPdf 10 17 55.6 -0.2**
FCC Fort Churchill 124.67 11 *e*PKIKP **PKPdf 10 17 55.6 -0.2**
I05D Terrebonne, OR 124.71 38 P **PKPdf 10 17 57.0 +0.5**
baz=302
J04D Umpqua Nationa 124.81 39 P **PKPdf 10 17 57.2 +0.3**
baz=300,SNR=19
NEW Newport 124.85 32 P **PKPdf 10 17 57.1 +0.5**
baz=308
YBH Yreka Blue Hor 125.17 41 PKP **PKPdf 10 17 57.8 +0.3**
comp=Z,3.4nm,0.7s,baz=304,slow=3.6,SNR=12
M02C Callahan 125.24 42 P **PKPdf 10 17 58.3 +0.6**
baz=299,SNR=9.3
J05D Fort Rock, OR 125.33 39 P **PKPdf 10 17 58.9 +1.0**
baz=301,SNR=9.2
N02D Trinity Center 125.53 42 P **PKPdf 10 17 58.8 +0.6**
baz=299
M04C Macdoel 125.71 41 P **PKPdf 10 17 59.2 +0.6**
baz=300,SNR=11
WALA Waterton Lakes 125.97 29 *e*PKPdf **PKPdf 10 17 59.0 +0.2**
FFC Flin Flon 126.36 18 *e*PKPdf **PKPdf 10 17 59.3 +0.1**
FFC Flin Flon 126.36 18 *e*PKIKP **PKPdf 10 17 59.3 +0.1**
O03D Paynes Creek 126.46 42 P **PKPdf 10 18 00.5 +0.5**
baz=299
MOD Modoc Plateau 126.64 40 *e*PKPdf **PKPdf 10 18 01.4 +1.0**
MOD *ep*PKPdf **pPKPdf 10 18 19.1 +0.3**
BMO Blue Mountains 126.82 35 *e*PKPdf **PKPdf 10 18 00.3 -0.3**
BMO Blue Mountains 126.82 35 *e*PKIKP **PKPdf 10 18 00.3 -0.3**
WVOR Wild Horse Val 127.40 38 *e*PKPdf **PKPdf 10 18 03.1 +1.3**
WVOR *ep*PKPdf **pPKPdf 10 18 20.1 0.0**
WVOR Wild Horse Val 127.40 38 *e*PKIKP **PKPdf 10 18 03.1 +1.3**
WVOR *e* 10 18 20.1
MSO Missoula 127.43 31 P **PKPdf 10 18 01.8 +0.1**
baz=311
CMB Columbia Colle 128.51 44 *e*PKPdf **PKPdf 10 18 04.8 +0.8**
CMB Columbia Colle 128.51 44 *e*PKIKP **PKPdf 10 18 04.8 +0.8**
MFID Camas Ranch 128.53 36 *e*PKPdf **PKPdf 10 18 05.1 +1.2**
EGMT Eagleton 128.67 28 P **PKPdf 10 18 04.6 +0.6**
baz=316
EGMT Eagleton 128.67 28 *e*PKPdf **PKPdf 10 18 04.6 +0.6**
HLID Hailey 129.25 35 P **PKPdf 10 18 06.3 +1.0**
baz=308
HLID Hailey 129.25 35 *e*PKPdf **PKPdf 10 18 06.1 +0.8**
BMN Battle Mountai 129.39 40 *e*PKPdf **PKPdf 10 18 07.2 +1.6**
BOZ Bozeman (W) 129.45 31 P **PKPdf 10 18 06.2 +0.6**
baz=313
BOZ Bozeman (W) 129.45 31 *e*PKPdf **PKPdf 10 18 06.2 +0.6**
BOZ *ep*PKPdf **pPKPdf 10 18 23.6 -0.4**
BOZ Bozeman (W) 129.45 31 *e*PKIKP **PKPdf 10 18 06.2 +0.6**
BOZ *e* 10 18 23.6
SCHQ Schefferville 129.59 352 PKP **PKPdf 10 18 05.4 -0.1**
comp=Z,15nm,0.7s,baz=11,slow=1.8,SNR=21
SCHQ PP **PP 10 20 13.4 -1.8**
comp=Z,12nm,1.1s,baz=25,slow=6.0,SNR=3.6
NVAR Mina Array Bea 129.74 43 PKhKP PKPpre 10 17 56.5
comp=Z,0.5nm,0.6s,baz=258,slow=2.0,SNR=5.6
NVAR PKP **PKiKP 10 18 07.6 +0.4**
comp=Z,6.0nm,0.6s,baz=283,slow=2.6,SNR=40
NVAR pPKP pPKPdf 10 18 24.4 -0.4
comp=Z,3.9nm,0.9s,baz=283,slow=2.6,SNR=3.2
NVAR SKPbc SKPbc 10 21 24.4 +0.9
comp=Z,5.9nm,0.7s,baz=275,slow=4.4,SNR=22
PKM Mcpherson Peak 130.39 47 P **PKPdf 10 18 09.1 +1.3**
baz=297
DGMT Dagmar 130.75 24 P **PKPdf 10 18 08.8 +1.0**
baz=323
DGMT Dagmar 130.75 24 *e*PKPdf **PKPdf 10 18 07.5 -0.4**
DGMT *ep*PKPdf **pPKPdf 10 18 26.2 +0.1**
H17A Grant Village 130.81 32 P **PKPdf 10 18 09.9 +1.5**
baz=313
CWC Cottonwood Cre 130.90 45 P **PKPdf 10 18 09.8 +1.1**
baz=300
RLMT Red Lodge 130.98 30 P **PKPdf 10 18 09.8 +1.2**
baz=315
RLMT Red Lodge 130.98 30 *e*PKPdf **PKPdf 10 18 07.2 -1.5**
RLMT *ep*PKPdf **pPKPdf 10 18 26.8 -0.1**
ARVC Arvin 131.00 47 P **PKPdf 10 18 09.9 +1.3**
baz=298
ISA Isabella, Lake 131.00 46 P **PKPdf 10 18 09.7 +0.9**
baz=299
GRAC Grapevine Rang 131.11 44 P **PKPdf 10 18 10.5 +1.5**
baz=301
LAO LASA Array 131.27 27 P **PKPdf 10 18 10.5 +1.6**
baz=320
LAO LASA Array 131.27 27 *e*PKPdf **PKPdf 10 18 10.2 +1.3**
BLG Laguna Peak, P 131.29 48 P **PKPdf 10 18 10.5 +1.2**
baz=297
MPMC Manual Prospec 131.50 45 P **PKPdf 10 18 11.3 +1.4**
baz=300
R11A Troy Canyon, C 131.59 41 P **PKPdf 10 18 11.8 +1.8**
baz=304
EDW2 Edwards Air Fo 131.72 46 P **PKPdf 10 18 11.8 +1.7**
baz=299
FURC Furnace Creek, 131.73 44 P **PKPdf 10 18 11.7 +1.7**
baz=301
TPNV Topopah Spring 131.90 43 P **PKPdf 10 18 11.9 +1.3**
baz=302
ULM Lac du Bonnet 132.08 16 PKP **PKPdf 10 18 09.1 -1.1**
comp=Z,17nm,0.6s,baz=330,slow=2.5,SNR=22
ULM SKPbc **SKPbc 10 21 30.0 -1.3**
comp=Z,6.3nm,0.7s,baz=355,slow=3.3,SNR=8.0
HWUT Hardware Ranch 132.12 35 *e*PKPdf **PKPdf 10 18 11.6 +0.7**
BFSC Mount Baldy Ra 132.26 47 P **PKPdf 10 18 12.7 +1.4**
baz=298
DUG Dugway, Tooele 132.27 37 P **PKPdf 10 18 12.5 +1.4**
baz=308
DUG Dugway, Tooele 132.27 37 *e*PKPdf **PKPdf 10 18 11.6 +0.4**
DUG *e*SKPbc **SKPab 10 21 34.0 +0.4**
DUG Dugway, Tooele 132.27 37 *e*PKIKP **PKPdf 10 18 11.6 +0.4**
GSC Goldstone, Bar 132.36 45 P **PKPdf 10 18 12.3 +0.9**
baz=300
BW06 Boulder Array 132.46 33 P **PKPdf 10 18 12.3 +0.7**
baz=313
BW06 Boulder Array 132.46 33 *e*PKPdf **PKPdf 10 18 11.7 +0.1**
PDAR Pinedale Array 132.46 33 PKhKP PKPpre 10 17 55.9
comp=Z,0.6nm,0.7s,baz=248,slow=0.8,SNR=5.0
PDAR PKP **PKPdf 10 18 10.1 -1.5**
comp=Z,1.7nm,0.5s,baz=202,slow=1.0,SNR=4.7
PDAR SKPbc **SKPab 10 21 33.9 -0.6**
comp=Z,3.5nm,0.9s,baz=318,slow=2.0,SNR=11
BBRC Big Bear Solar 132.79 47 P **PKPdf 10 18 13.4 +1.0**
baz=299
MURC Murrita 132.91 48 P **PKPdf 10 18 13.5 +1.1**
baz=298
TUQ Turquoise Moun 132.91 45 P **PKPdf 10 18 14.0 +1.5**
baz=301
MDND Maddock 133.00 21 P **PKPdf 10 18 13.1 +1.0**
baz=328
B31A Greenbush Farm 133.16 19 P **PKPdf 10 18 12.9 +0.6**
baz=331
A33A Warroad 133.40 17 P **PKPdf 10 18 13.6 +0.8**
baz=334
GMRC Granite Mounta 133.43 45 P **PKPdf 10 18 14.8 +1.3**
baz=301
PFO Pinyon Flats O 133.44 47 P **PKPdf 10 18 14.9 +1.5**
baz=299
PFO Pinyon Flats O 133.44 47 *e*PKPdf **PKPdf 10 18 15.0 +1.5**
BELC Belle Mtn. Jos 133.59 46 P **PKPdf 10 18 15.5 +1.7**
baz=300
C31A Landman Farms, 133.69 19 P **PKPdf 10 18 14.2 +0.8**
baz=331
MONP2 Monument Peak 133.81 48 P **PKPdf 10 18 15.7 +1.4**
baz=298
AGMN Agassiz Nation 133.83 18 P **PKPdf 10 18 14.2 +0.6**
baz=333
AGMN Agassiz Nation 133.83 18 *e*PKPdf **PKPdf 10 18 13.2 -0.4**
B34A Aery, Baudette 134.02 16 P **PKPdf 10 18 14.7 +0.8**
baz=335
IRM Iron Mountain 134.12 46 P **PKPdf 10 18 16.9 +2.2**
baz=301
K22A Casper 134.13 31 P **PKPdf 10 18 15.4 +0.8**
baz=317
BC3 Big Chuckawall 134.15 46 P **PKPdf 10 18 16.9 +2.1**
baz=300
PLCA Paso Flores 134.19 187 PKP **PKPdf 10 18 14.5 -0.2**
comp=Z,3.9nm,1.0s,baz=45,slow=1.4,SNR=2.9
PLCA SKPbc **SKPbc 10 21 38.4 -0.6**
comp=Z,5.4nm,0.9s,baz=219,slow=3.1,SNR=4.4
RSSD Black Hills 134.23 27 P **PKPdf 10 18 15.9 +1.1**
baz=321
D31A Mcclaflin, Tow 134.34 20 P **PKPdf 10 18 15.6 +1.0**
baz=330
C33A Trail 134.34 18 P **PKPdf 10 18 15.0 +0.4**
baz=333
B35A Bob, Littlefor 134.39 16 P **PKPdf 10 18 15.6 +0.9**
baz=336
C34A RKJ Ranch, Bem 134.70 17 P **PKPdf 10 18 16.0 +0.7**
baz=334
E31A Nome 134.71 20 P **PKPdf 10 18 16.2 +0.8**
baz=330
D33A AnnSam, Waubun 134.87 18 P **PKPdf 10 18 16.5 +0.9**
baz=333
GLA Glamis 134.91 47 P **PKPdf 10 18 17.3 +1.1**
baz=300
C35A Jirik Farms, M 134.92 16 P **PKPdf 10 18 16.3 +0.6**
baz=336
O20A White River Ci 134.98 34 P **PKPdf 10 18 17.2 +0.9**
baz=313
O20A White River Ci 134.98 34 *e*PKPdf **PKPdf 10 18 16.6 +0.3**
D34A Park Rapids 135.12 18 P **PKPdf 10 18 17.0 +0.9**
baz=334
EYMN Ely 135.34 14 P **PKPdf 10 18 17.5 +1.0**
baz=339
EYMN Ely 135.34 14 *e*PKPdf **PKPdf 10 18 16.3 -0.2**
C37A Embarrass 135.37 15 P **PKPdf 10 18 17.6 +1.1**
baz=338
E33A Westby DABS, E 135.39 19 P **PKPdf 10 18 17.4 +0.8**
baz=332
D35A Remer 135.46 17 P **PKPdf 10 18 17.4 +0.6**
baz=335
F32A Veblen 135.57 20 P **PKPdf 10 18 17.7 +0.7**
baz=330
D36A Goodland 135.62 16 P **PKPdf 10 18 17.9 +0.8**
baz=336
E34A Wadena 135.64 18 P **PKPdf 10 18 18.1 +1.0**
baz=333
N23A Red Feather La 135.70 32 P **PKPdf 10 18 18.4 +0.7**
baz=316
C39A Grand Marais 135.78 13 P **PKPdf 10 18 18.1 +0.8**
baz=341
E35A Pequot Lakes 135.83 17 P **PKPdf 10 18 18.5 +1.1**
baz=334
D37A Cotton 135.84 15 P **PKPdf 10 18 18.5 +1.0**
baz=337
C40A Isle Royale Na 135.89 12 P **PKPdf 10 18 18.9 +1.4**
baz=342
G32A Webster 135.97 21 P **PKPdf 10 18 19.1 +1.3**
baz=330
WUAZ Wupatki 135.97 42 *e*PKPdf **PKPdf 10 18 19.9 +1.7**
SUSD Miller 136.12 23 P **PKPdf 10 18 19.2 +1.1**
baz=327
E36A McGregor 136.20 16 P **PKPdf 10 18 19.4 +1.2**
baz=336
E37A Wrenshall 136.39 16 P **PKPdf 10 18 19.9 +1.4**
baz=337
F35A Swanville 136.41 18 P **PKPdf 10 18 19.9 +1.4**
baz=334
E38A The Farm, Brul 136.57 15 P **PKPdf 10 18 20.1 +1.3**
baz=338
G34A Benson 136.62 19 P **PKPdf 10 18 20.1 +1.2**
baz=332
ISCO Idaho Springs 136.66 33 *e*PKPdf **PKPdf 10 18 20.0 +0.4**
F36A Milaca 136.72 17 P **PKPdf 10 18 20.5 +1.4**
baz=335
MVCO Mesa Verde 136.77 38 *e*PKPdf **PKPdf 10 18 20.8 +1.1**
D41A Chassel 136.83 12 P **PKPdf 10 18 21.0 +1.8**
baz=343
G35A Watkins 137.01 18 P **PKPdf 10 18 21.5 +1.8**
baz=334
E39A Mellen 137.03 14 P **PKPdf 10 18 21.3 +1.7**
baz=340
F37A Hinrichs Farm, 137.10 16 P **PKPdf 10 18 21.4 +1.6**
baz=337
E40A Wakefield 137.13 13 P **PKPdf 10 18 21.6 +1.8**
baz=341
G36A St. Michael 137.22 18 P **PKPdf 10 18 21.8 +1.7**
baz=335
W18A Petrified Fore 137.29 41 P **PKPdf 10 18 21.8 +1.1**
baz=307
E41A Kenton 137.31 12 P **PKPdf 10 18 21.6 +1.4**
baz=342
H35A Sunnyside Ranc 137.37 19 P **PKPdf 10 18 22.0 +1.7**
baz=333
F39A Loretta 137.38 15 P **PKPdf 10 18 21.8 +1.5**
baz=339
S22A 4UR Ranch, Cre 137.41 36 P **PKPdf 10 18 22.2 +1.2**
baz=313
E42A Champion 137.56 11 P **PKPdf 10 18 22.3 +1.6**
baz=344
F40A Park Falls 137.57 14 P **PKPdf 10 18 22.2 +1.5**
baz=340
ECSD EROS Data Cent 137.60 21 P **PKPdf 10 18 22.6 +1.8**
baz=330
ECSD EROS Data Cent 137.60 21 *e*PKPdf **PKPdf 10 18 21.2 +0.4**
COWI Conover 137.62 13 *e*PKPdf **PKPdf 10 18 21.1 +0.3**
H36A Jessenland, He 137.76 18 P **PKPdf 10 18 23.2 +2.1**
baz=334
E43A Lone Tree Farm 137.79 10 P **PKPdf 10 18 22.9 +1.8**
baz=345
G40A Rib Lake 138.16 14 P **PKPdf 10 18 23.4 +1.6**
baz=340
H38A Maiden Rock 138.16 17 P **PKPdf 10 18 23.4 +1.6**
baz=337
SDCO Great Sand Dun 138.17 35 P **PKPdf 10 18 23.7 +1.3**
baz=314
SDCO Great Sand Dun 138.17 35 *e*PKPdf **PKPdf 10 18 22.9 +0.5**
SDCO *e*SKPbc **SKPbc 10 21 52.3 +0.9**
TUC Tucson 138.19 45 *e*PKPdf **PKPdf 10 18 24.0 +1.7**
TUC *ep*PKPdf **pPKPdf 10 18 41.4 +0.7**
F43A Flat Rock, Esc 138.28 11 P **PKPdf 10 18 23.5 +1.5**
baz=344
I37A Lemond, Waseca 138.43 18 P **PKPdf 10 18 24.1 +1.8**
baz=335
G42A Mountain 138.59 12 P **PKPdf 10 18 24.2 +1.7**
baz=342
F45A CMU Biological 138.71 9 P **PKPdf 10 18 24.5 +1.8**
baz=347
H40A Chili 138.72 15 P **PKPdf 10 18 24.7 +1.8**
baz=339
I38A Scanlan Farm, 138.73 17 P **PKPdf 10 18 24.4 +1.5**
baz=336
G43A Wallace 138.73 12 P **PKPdf 10 18 24.4 +1.6**
baz=344
F46A Macinaw City C 138.74 8 P **PKPdf 10 18 24.4 +1.6**
baz=348
J36A Seneca 1, Swea 138.75 19 P **PKPdf 10 18 24.7 +1.8**
baz=333
H41A Junction City 138.91 14 P **PKPdf 10 18 24.8 +1.7**
baz=340
BGNE Belgrade 138.98 25 P **PKPdf 10 18 25.0 +1.6**
baz=327
I39A Houston 139.13 16 P PKPpre 10 18 17.4
baz=337
P **PKiKP 10 18 25.2 -0.7**
I39A
baz=337
T25A Trinidad 139.22 34 P PKPpre 10 18 17.8
baz=315
PKME Peaks-Kenny Pk 139.29 352 P **PKPdf 10 18 25.7 +1.9**
baz=12
K36A Gilmore City 139.32 20 P **PKPdf 10 18 25.8 +1.8**
baz=332
I40A Norwalk 139.34 15 P **PKPdf 10 18 25.6 +1.6**
baz=339
J38A Wedel Dairy, R 139.35 18 P **PKPdf 10 18 25.3 +1.3**
baz=336
I41A Arkdale 139.38 14 P **PKPdf 10 18 25.3 +1.2**
baz=340
H43A Windswept, Lux 139.47 12 P **PKPdf 10 18 25.9 +1.7**
baz=343
K37A Belmond 139.48 19 P **PKPdf 10 18 25.8 +1.5**
baz=334
TASM ASL Pad, Albuq 139.49 39 P PKPpre 10 18 18.0
baz=311
P **PKiKP 10 18 26.2 -1.0**
TASM
baz=311
ANMO Albuquerque 139.49 39 PKhKP PKPpre 10 18 16.5
comp=Z,1.7nm,0.5s,baz=237,slow=1.5,SNR=8.1
ANMO PKP **PKPdf 10 18 25.2 +0.4**
comp=Z,10.0nm,0.9s,baz=226,slow=1.3,SNR=17
ANMO SKPbc **SKPbc 10 21 56.1 +1.0**
comp=Z,5.6nm,1.0s,baz=281,slow=3.4,SNR=9.2
ANMO Albuquerque 139.49 39 P PKPpre 10 18 18.2
baz=311
ANMO P **PKiKP 10 18 26.3 -0.8**
baz=311
ANMO Albuquerque 139.49 39 PKPpre PKPpre 10 18 16.5
ANMO *e*PKPdf **PKPdf 10 18 25.4 +0.6**
ANMO SKPbc **SKPbc 10 21 56.1 +1.0**
ANMO *e*SKPab **SKPab 10 22 04.0 -1.5**
TASL Snake Pit, Alb 139.49 39 P PKPpre 10 18 18.2
baz=311
P **PKiKP 10 18 26.3 -0.8**
TASL
baz=311
J39A Decorah 139.56 17 P PKPpre 10 18 14.5
baz=337
P **PKiKP 10 18 25.7 -1.1**
J39A
baz=337
L36A Harm Buss Farm 139.72 21 P **PKPdf 10 18 26.3 +1.5**
baz=332
I42A Draeger Farm, 139.77 14 P **PKPdf 10 18 26.3 +1.5**
baz=341
J40A Soldiers Grove 139.77 16 P **PKPdf 10 18 26.0 +1.2**
baz=338
K38A Parkersburg 139.87 18 P **PKPdf 10 18 26.5 +1.5**
baz=335
I43A Langenfeld Bro 139.95 13 P **PKPdf 10 18 26.7 +1.6**
baz=342
J41A Loganville 139.99 15 P **PKPdf 10 18 26.6 +1.5**
baz=339
K39A Oelwein 140.08 17 P **PKPdf 10 18 27.3 +1.9**
baz=336
121A Cookes Peak, D 140.14 43 P **PKPdf 10 18 27.7 +1.7**
baz=307
J42A Columbus 140.26 14 P PKPpre 10 18 17.8
baz=341
P **PKiKP 10 18 27.3 -0.9**
J42A
baz=341
SADO Sadowa 140.27 3 *e*PKPdf **PKPdf 10 18 24.8 -0.8**
K40A Colesburg 140.31 17 P PKPpre 10 18 18.3
baz=337
P **PKiKP 10 18 27.5 -0.8**
K40A
baz=337
JFWS Jewell Farm 140.35 15 P PKPpre 10 18 17.9
baz=339
P **PKiKP 10 18 27.5 -0.9**
JFWS
baz=339

JFWS	Jewell Farm	140.35	15	*e*PKPdf	PKPdf	10 18 24.1	-1.8
JFWS				*ep*PKPdf	pPKPdf	10 18 44.0	-0.1
JFWS				*e*PP	PP	10 21 22.7	-0.6
JFWS	Jewell Farm	140.35	15	*e*PKIKP	PKPdf	10 18 24.1	-1.8
JFWS				*e*		10 18 44.1	
JFWS				*e*		10 21 22.7	
J43A	Natural Harves	140.37	13	P	PKPdf	10 18 27.5	+1.7
	baz=342						
SCIA	State Center	140.39	19	P	PKPpre	10 18 19.1	
	baz=334						
SCIA				P	PKiKP	10 18 28.2	-0.3
	baz=334						
SCIA	State Center	140.39	19	*e*PKPdf	PKPpre	10 18 18.8	
SCIA				*ep*PKPdf	pPKPdf	10 18 44.5	+0.2
SCIA				*e*SKPbc	SKPbc	10 21 57.7	+0.8
LONY	Lake Ozonia	140.42	357	*e*PKPdf	PKPdf	10 18 25.7	-0.2
M37A	Trindle Farm,	140.56	21	P	PKPpre	10 18 19.8	
	baz=332						
M37A				P	PKiKP	10 18 28.6	-0.3
	baz=332						
L39A	Vinton	140.58	18	P	PKPpre	10 18 19.3	
	baz=336						
L39A				P	PKiKP	10 18 27.9	-0.9
	baz=336						
K41A	Shullsburg	140.62	16	P	PKPpre	10 18 17.8	
	baz=339						
K41A				P	PKiKP	10 18 28.0	-1.0
	baz=339						
K42A	Prairie Point,	140.71	15	P	PKPpre	10 18 19.9	
	baz=340						
K42A				P	PKiKP	10 18 28.1	-1.1
	baz=340						
N36A	Muff Farm, Cla	140.75	22	P	PKPpre	10 18 19.9	
	baz=331						
N36A				P	PKiKP	10 18 29.1	-0.2
	baz=331						
M38A	Pleasantville	140.84	20	P	PKPpre	10 18 19.5	
	baz=334						
M38A				P	PKiKP	10 18 29.0	-0.4
	baz=334						
K43A	Burlington	141.03	13	P	PKPpre	10 18 20.8	
	baz=342						
K43A				P	PKiKP	10 18 29.0	-0.7
	baz=342						
L41A	Preston	141.06	16	P	PKPdf	10 18 28.9	+1.8
	baz=338						
N37A	Lee Faris, Mou	141.07	21	P	PKPdf	10 18 29.1	+1.9
	baz=332						
M39A	Webster	141.11	18	P	PKPdf	10 18 29.3	+2.0
	baz=335						
L42A	Oliver, Polo	141.35	15	P	PKPpre	10 18 21.0	
	baz=339						
L42A				P	PKiKP	10 18 29.7	-0.8
	baz=339						
N38A	Joes South For	141.38	20	P	PKPpre	10 18 22.2	
	baz=333						
M40A	Post Highland	141.38	18	P	PKPpre	10 18 20.9	
	baz=336						
M40A				P	PKiKP	10 18 29.8	-0.7
	baz=336						
L43A	Garden Prairie	141.42	14	P	PKPpre	10 18 22.7	
	baz=341						
L43A				P	PKiKP	10 18 29.4	-1.2
	baz=341						
N39A	Derby Farms, D	141.55	19	P	PKPpre	10 18 22.5	
	baz=334						
N39A				P	PKiKP	10 18 29.7	-1.2
	baz=334						
KSU1	Kansas State U	141.56	25	P	PKPdf	10 18 30.1	+1.9
	baz=327						
O37A	Wolven Farm, M	141.61	22	P	PKPpre	10 18 22.8	
	baz=332						
O37A				P	PKiKP	10 18 29.8	-1.2
	baz=332						
L44A	Lake County Fo	141.62	13	P	PKPdf	10 18 30.2	+2.1
	baz=342						
M41A	Milan	141.70	17	P	PKPpre	10 18 23.7	
	baz=338						
N40A	Mertquake, Sal	141.84	18	P	PKPpre	10 18 23.2	
	baz=336						
O38A	Galt	141.90	21	P	PKPdf	10 18 31.0	+2.3
	baz=332						
P37A	Lathrop	142.04	22	P	PKPpre	10 18 24.6	
	baz=331						
P37A				P	PKiKP	10 18 31.4	-0.5
	baz=331						
M43A	Waltham Townsh	142.07	15	P	PKPpre	10 18 23.5	
	baz=340						
M43A				P	PKiKP	10 18 31.3	-0.6
	baz=340						
O39A	Kirksville	142.10	20	P	PKPpre	10 18 24.3	
	baz=334						
N41A	Harden Midland	142.22	17	P	PKPpre	10 18 23.6	
	baz=337						
N41A				P	PKiKP	10 18 31.4	-0.9
	baz=337						
MNTX	Cornudas Mount	142.26	42	P	PKPpre	10 18 25.3	
	baz=309						
MNTX	Cornudas Mount	142.26	42	*e*PKPdf	PKPdf	10 18 29.3	-0.3
P38A	Dawn	142.31	21	P	PKPpre	10 18 24.7	
	baz=332						
M44A	Midewin, Midew	142.34	14	P	PKPpre	10 18 24.6	
	baz=342						
AMTX	Amarillo	142.37	34	P	PKPpre	10 18 26.6	
	baz=317						
AMTX	Amarillo	142.37	34	*e*PKPdf	PKPdf	10 18 27.1	-2.8
MSTX	Muleshoe	142.39	37	P	PKPdf	10 18 27.5	-2.4
	baz=314						
O40A	La Belle	142.44	19	P	PKPpre	10 18 24.9	
	baz=335						
Q37A	Longview Farm,	142.62	23	P	PKPpre	10 18 25.6	
	baz=330						
M46A	Old House Fiel	142.70	12	P	PKPpre	10 18 26.3	
	baz=344						
P39B	Salisbury	142.71	20	P	PKPpre	10 18 25.8	
	baz=333						
P39B				P	PKiKP	10 18 32.6	-0.7
	baz=333						
O41A	Passleys Farm,	142.76	18	P	PKPpre	10 18 25.4	
	baz=336						
HDIL	Hopedale	142.81	16	P	PKPpre	10 18 25.9	
	baz=339						
HDIL	Hopedale	142.81	16	*e*PKPdf	PKPpre	10 18 25.2	
Q38A	Cooks Store, C	142.87	22	P	PKPpre	10 18 26.1	
	baz=332						
Q38A				P	PKiKP	10 18 33.0	-0.7
	baz=332						
ERPA	Erie	142.87	4	P	PKPdf	10 18 28.5	-1.8
	baz=355						
ERPA				P	PKiKP	10 18 32.9	-0.7
	baz=355						
N44A	Piper City	142.88	14	P	PKPpre	10 18 27.0	
	baz=341						
BINY	Binghamton	142.88	359	P	PKPdf	10 18 33.2	+2.7
	baz=1.4						
BINY	Binghamton	142.88	359	*e*PKPdf	PKPdf	10 18 27.9	-2.6
BINY				*ep*PKPdf	pPKPdf	10 18 50.0	+1.2
P40A	Paris	142.91	20	P	PKPpre	10 18 26.4	
	baz=334						
P40A				P	PKiKP	10 18 32.9	-0.8
	baz=334						
N45A	Kentland	142.98	13	P	PKPpre	10 18 26.5	
	baz=342						
Q39A	Willow Grove F	143.03	21	P	PKPpre	10 18 27.2	
	baz=333						
Q39A				P	PKiKP	10 18 33.6	-0.3
	baz=333						
P41A	Barry, Barry	143.10	18	P	PKPab	10 18 26.9	+0.6
	baz=336						
Q40A	Laux Farm, Aux	143.39	20	P	PKPab	10 18 27.7	+0.2
	baz=334						
O44A	Mansfield	143.40	15	P	PKPab	10 18 27.7	+0.2
	baz=340						
P42A	Winchester	143.41	18	P	PKPab	10 18 27.6	+0.1
	baz=337						
R38A	Fenwick Farm,	143.43	23	P	PKPab	10 18 27.1	-0.6
	baz=331						
M54A	Oil Creek Stat	143.50	4	P	PKPab	10 18 27.9	0.0
	baz=355						
M54A				P	PKiKP	10 18 34.1	-0.8
	baz=355						
O45A	Potomac	143.50	14	P	PKPbc	10 18 28.8	-0.1
	baz=342						
SFIN	Lafayette	143.52	13	P	PKPbc	10 18 28.5	-0.5
	baz=343						
P43A	Skaggs, Pawnee	143.60	17	P	PKPab	10 18 28.5	+0.2
	baz=338						
P43A				P	PKiKP	10 18 34.7	-0.5
	baz=338						
CPUP	Villa Florida	143.62	210	PKP	PKPbc	10 18 30.2	+0.6
	comp=Z,7.9nm,0.9s,baz=108,slow=4.9,SNR=8.3						
R39A	Chumby, Stover	143.65	22	P	PKPab	10 18 28.5	-0.1
	baz=332						
R39A				P	PKiKP	10 18 34.8	-0.5
	baz=332						
Q41A	Truxton	143.71	19	P	PKPab	10 18 28.9	+0.2
	baz=335						
O47A	Sheridan	143.86	12	P	PKPab	10 18 29.2	-0.1
	baz=344						
S38A	Stockton	143.92	23	P	PKPab	10 18 28.9	-0.7
	baz=330						
R40A	Maddies Statio	143.95	21	P	PKPab	10 18 29.3	-0.3
	baz=333						
Q42A	Golden Eagle	143.97	18	P	PKPab	10 18 29.5	-0.2
	baz=336						
PAL	Palisades	143.99	356	P	PKPab	10 18 29.6	-0.1
	baz=4.9						
P44A	Sand Creek, Wi	144.01	16	P	PKPab	10 18 30.1	+0.3
	baz=340						
N54A	Moraine State	144.02	4	P	PKPab	10 18 29.7	-0.1
	baz=355						
WMOK	Wichita Mounta	144.06	32	P	PKPab	10 18 30.4	+0.2
	baz=321						
WMOK	Wichita Mounta	144.06	32	*e*PKPdf	PKPbc	10 18 30.7	-0.1
WMOK	Wichita Mounta	144.06	32	*e*PKIKP	PKPbc	10 18 30.7	-0.1
S39A	Bolivar	144.09	23	P	PKPab	10 18 29.5	-0.8
	baz=331						
N59A	State Game Lan	144.16	359	P	PKPab	10 18 30.5	0.0
	baz=1.8						
P45A	Graceland, Par	144.18	14	P	PKPab	10 18 30.5	0.0
	baz=341						
Q43A	New Douglas	144.19	17	P	PKPab	10 18 30.6	0.0
	baz=338						
P46A	Rosedale	144.22	14	P	PKPbc	10 18 30.9	-0.2
	baz=342						
R41A	Rosebud	144.25	20	P	PKPab	10 18 30.2	-0.6
	baz=335						
T38A	Diamond	144.27	24	P	PKPab	10 18 30.5	-0.5
	baz=329						
O50A	Cable	144.41	9	P	PKPab	10 18 31.0	-0.4
	baz=348						
ACSO	Alum Creek Sta	144.42	8	P	PKPab	10 18 30.9	-0.5
	baz=349						
ACSO	Alum Creek Sta	144.42	8	*e*PKPdf	PKPab	10 18 30.9	-0.5
ACSO				*e*SKPbc	SKiKP	10 22 07.6	-0.2
Q44A	Meyer Farm, Va	144.43	16	P	PKPab	10 18 31.0	-0.4
	baz=339						
SSPA	Standing Stone	144.44	1	*e*PKPdf	PKPdf	10 18 32.9	-0.2
R42A	Luebbering	144.46	19	P	PKPab	10 18 31.3	-0.3
	baz=336						
S40A	Lebanon	144.48	22	P	PKPab	10 18 31.1	-0.6
	baz=332						
CCM	Cathedral Cave	144.51	20	P	PKPab	10 18 31.1	-0.8
	baz=335						
CCM	Cathedral Cave	144.51	20	*e*PKPdf	PKPab	10 18 31.0	-0.8
CCM	Cathedral Cave	144.51	20	*e*PKIKP	PKPab	10 18 31.0	-0.8
P47A	Martinsville	144.56	13	P	PKPab	10 18 31.3	-0.6
	baz=344						
TUL1	Leonard	144.58	27	P	PKPab	10 18 31.9	-0.2
	baz=326						
T39A	Clever	144.65	23	P	PKPab	10 18 31.9	-0.4
	baz=331						
Q45A	Warren Harvey,	144.67	15	P	PKPab	10 18 32.0	-0.3
	baz=340						
R43A	Red Bud	144.74	18	P	PKPab	10 18 32.1	-0.6
	baz=337						
Q46A	CEJHS Indians,	144.75	14	P	PKPab	10 18 32.1	-0.5
	baz=342						
S41A	Jillco Farms,	144.76	21	P	PKPab	10 18 32.3	-0.4
	baz=334						
O56A	Blue Knob Stat	144.79	2	P	PKPab	10 18 32.5	-0.4
	baz=357						
T40A	Mansfield	144.87	22	P	PKPab	10 18 32.4	-0.8
	baz=332						
TXAR	Lajitas Array	144.89	43	PKP	PKPdf	10 18 34.6	+0.2
	comp=Z,78nm,0.7s,baz=283,slow=1.4,SNR=828						
TXAR				SKPbc	SKPbc	10 22 08.6	0.0
	comp=Z,4.0nm,0.8s,baz=302,slow=2.4,SNR=4.8						
S42A	Caledonia	144.92	19	P	PKPab	10 18 32.7	-0.6
	baz=335						
R44A	Waltonville	145.02	17	P	PKPbc	10 18 33.2	-0.4
	baz=338						
Q47A	Bedford North L	145.05	13	P	PKPbc	10 18 33.2	-0.5
	baz=343						
U39A	Green Forest	145.17	24	P	PKPbc	10 18 33.6	-0.6
	baz=330						
ABTX	Abilene, Hawle	145.18	35	P	PKPbc	10 18 34.4	0.0
	baz=318						
R45A	Skylar, Fairfi	145.20	16	P	PKPbc	10 18 34.1	-0.1
	baz=340						
T41A	Mountain View	145.24	21	P	PKPbc	10 18 34.1	-0.4
	baz=333						
MCWV	Mont Chateau	145.32	4	P	PKPbc	10 18 34.5	-0.1
	baz=355						
S43A	Fulton Ridge,	145.34	19	P	PKPbc	10 18 33.7	-1.0
	baz=336						
U40A	Yellville	145.44	23	P	PKPdf	10 18 34.8	-0.3
	baz=331						
R46A	Gibon Southern	145.48	15	P	PKPdf	10 18 34.7	-0.4
	baz=341						
S44A	Carbondale	145.48	18	P	PKPdf	10 18 34.9	-0.1
	baz=338						
T42A	Van Buren	145.49	20	P	PKPdf	10 18 35.0	-0.1
	baz=334						
V39A	Pettigrew	145.57	25	P	PKPdf	10 18 34.9	-0.5
	baz=329						
R47A	Wooly Knot Far	145.64	14	P	PKPdf	10 18 35.2	-0.1
	baz=343						
R48A	Northridge Ran	145.69	13	P	PKPdf	10 18 35.4	+0.1
	baz=344						
S45A	Carrier Mills	145.69	17	P	PKPdf	10 18 35.5	+0.1
	baz=339						
T43A	Greenville	145.71	19	P	PKPdf	10 18 35.1	-0.4
	baz=336						
LCO	Las Campanas	145.74	190	*e*PKPdf	PKPbc	10 18 36.7	+0.1
WCI	Wyandotte Cave	145.76	13	P	PKPbc	10 18 35.8	-0.2
	baz=343						
WCI	Wyandotte Cave	145.76	13	*e*PKPdf	PKPdf	10 18 35.6	+0.1
WCI				*ep*PKPdf	pPKPdf	10 18 53.7	-0.2
WCI	Wyandotte Cave	145.76	13	*e*PKP2	PKPdf	10 18 35.6	+0.1
U41A	Viola	145.81	22	P	PKPdf	10 18 35.6	-0.1
	baz=333						
S46A	Don Dixon Farm	145.92	15	P	PKPdf	10 18 35.9	+0.1
	baz=340						
V40A	Witts Springs	145.93	24	P	PKPdf	10 18 35.9	0.0
	baz=331						
T44A	Benton	145.94	18	P	PKPdf	10 18 35.9	0.0
	baz=337						
R49A	Shelbyville	145.94	12	P	PKPbc	10 18 36.3	-0.3
	baz=345						
U42A	Revenden	146.05	21	P	PKPbc	10 18 36.6	-0.3
	baz=334						
W39A	Magazine	146.06	25	P	PKPdf	10 18 36.4	+0.3
	baz=329						
R50A	Paris	146.11	11	P	PKPdf	10 18 36.5	+0.3
	baz=346						
V41A	Mountainview	146.21	23	P	PKPdf	10 18 36.7	+0.3
	baz=332						
S47A	Hartford	146.22	14	P	PKPdf	10 18 36.7	+0.4
	baz=342						
T45A	Paducah	146.28	17	P	PKPbc	10 18 37.3	-0.4
	baz=338						
U43A	Rector	146.32	20	P	PKPbc	10 18 37.2	-0.5
	baz=335						
S48A	Wiedeman Farm,	146.36	13	P	PKPbc	10 18 37.2	-0.6
	baz=343						
W40A	Ferguson Farm,	146.36	24	P	PKPbc	10 18 37.4	-0.5
	baz=330						
S49A	Springfield	146.40	12	P	PKPbc	10 18 37.3	-0.6
	baz=345						
U44A	Portageville	146.44	19	P	PKPbc	10 18 37.8	-0.3
	baz=336						
T46A	Princeton	146.48	16	P	PKPbc	10 18 37.8	-0.4
	baz=340						
V42A	Cord	146.48	22	P	PKPbc	10 18 37.7	-0.6
	baz=333						
X39A	Fountain Ranch	146.50	26	P	PKPbc	10 18 38.4	+0.1
	baz=328						
JCT	Junction City	146.63	38	P	PKPbc	10 18 38.8	-0.1
	baz=315						
JCT	Junction City	146.63	38	*e*PKPdf	PKPbc	10 18 38.3	-0.6
JCT				*e*PKPbc	PKPab	10 18 39.6	-0.4
S50A	Richmond	146.68	11	P	PKPbc	10 18 38.1	-0.7
	baz=346						
U44B	Burton Farm, H	146.70	19	P	PKPbc	10 18 38.9	0.0
	baz=337						
MIAR	Mount Ida	146.70	26	P	PKPbc	10 18 38.8	-0.1
	baz=329						
MIAR	Mount Ida	146.70	26	*e*PKPdf	PKPdf	10 18 37.6	+0.4
MIAR				*ep*PKPdf	pPKPab	10 18 57.6	-0.5
MIAR	Mount Ida	146.70	26	*e*PKP2	PKPdf	10 18 37.6	+0.4
W41B	Gary Mavity, V	146.71	23	P	PKPbc	10 18 38.2	-0.7
	baz=331						
T47A	Sharon Grove	146.74	15	P	PKPbc	10 18 38.6	-0.4
	baz=341						
T48A	Bowling Green	146.80	14	P	PKPbc	10 18 38.8	-0.3
	baz=342						
S51A	Beattyville	146.87	10	P	PKPbc	10 18 38.6	-0.7
	baz=348						
U45A	Rockin P Farm,	146.87	18	P	PKPbc	10 18 39.1	-0.3
	baz=338						
WHTX	Lake Whitney,	146.87	33	P	PKPbc	10 18 39.4	-0.1
	baz=320						
CBN	Corbin Frederi	146.88	1	*e*PKPdf	PKPdf	10 18 38.1	+0.7
W42A	Bald Knob	146.90	22	P	PKPbc	10 18 39.0	-0.4
	baz=332						
V44A	Blytheville	146.99	20	P	PKPbc	10 18 39.4	-0.3
	baz=336						
T49A	Edmonton	147.00	13	P	PKPbc	10 18 39.0	-0.8
	baz=344						
U46A	Springville	147.03	17	P	PKPbc	10 18 39.7	-0.1
	baz=339						
X40A	Basin Creek Fa	147.07	25	P	PKPbc	10 18 39.5	-0.5
	baz=330						
X41A	Kaden, Bauxite	147.19	24	P	PKPbc	10 18 39.9	-0.4
	baz=330						
U47A	Clarksville	147.21	16	P	PKPbc	10 18 39.9	-0.4
	baz=340						
T50A	Nancy	147.23	12	P	PKPbc	10 18 39.3	-1.0
	baz=345						
Y40A	Okolona	147.28	26	P	PKPbc	10 18 40.3	-0.3
	baz=329						
U48A	Cassie Pea, Po	147.34	15	P	PKPbc	10 18 40.1	-0.6
	baz=342						
WVT	Waverly	147.35	17	P	PKPbc	10 18 40.3	-0.4
	baz=339						
V45A	Humboldt	147.37	18	P	PKPbc	10 18 40.1	-0.6
	baz=337						
W43A	Forest City	147.37	21	P	PKPbc	10 18 40.2	-0.6
	baz=334						
T51A	Gray	147.46	11	P	PKPbc	10 18 40.3	-0.6
	baz=347						
T52A	Hallie	147.49	9	P	PKPbc	10 18 40.3	-0.8
	baz=348						
X42A	Stuttgart	147.50	23	P	PKPbc	10 18 40.4	-0.7
	baz=332						
U49A	Red Boiling Sp	147.52	13	P	PKPbc	10 18 40.4	-0.8
	baz=343						
V46A	Holladay	147.57	17	P	PKPbc	10 18 40.9	-0.5
	baz=339						
Y41A	Eaglette Beard	147.68	25	P	PKPbc	10 18 41.3	-0.4
	baz=330						
BLA	Blacksburg	147.71	5	P	PKPbc	10 18 40.9	-0.8
	baz=353						
BLA	Blacksburg	147.71	5	*e*PKPdf	PKPdf	10 18 39.0	+0.1
BLA				*e*PKPbc	PKPbc	10 18 41.4	-0.3
BLA				*e*PKPab	PKPab	10 18 44.2	+0.2
BLA	Blacksburg	147.71	5	*e*PKIKP	PKPdf	10 18 39.0	+0.1
BLA				*e*		10 18 41.4	
435B	Jarrell	147.72	35	P	PKPbc	10 18 42.1	+0.2
	baz=319						
V47A	Nunnelly	147.72	16	P	PKPbc	10 18 41.1	-0.6
	baz=340						
X43A	Marvell	147.81	22	P	PKPbc	10 18 41.7	-0.2
	baz=333						
U50A	Jamestown	147.82	12	P	PKPbc	10 18 41.5	-0.5
	baz=345						
W45A	Hickory Valley	147.83	19	P	PKPbc	10 18 41.5	-0.6
	baz=336						
Z40A	Long Farm, Mag	147.87	27	P	PKPbc	10 18 42.3	+0.1
	baz=328						
TZTN	Tazewell	147.94	10	P	PKPbc	10 18 41.7	-0.6
	baz=347						
TZTN	Tazewell	147.94	10	*e*PKPdf	PKPdf	10 18 39.6	+0.4
TZTN				*e*PKPbc	PKPbc	10 18 42.6	+0.3
TZTN				*e*PKPab	PKPab	10 18 45.6	+0.6
TZTN				*ep*PKPdf	pPKPdf	10 18 58.6	+1.0
V48A	Smith Brothers	147.99	15	P	PKPbc	10 18 41.6	-0.8
	baz=341						
U51A	La Follette	148.02	11	P	PKPbc	10 18 41.8	-0.8
	baz=346						
Y42A	Garnett, Star	148.06	24	P	PKPbc	10 18 42.5	-0.2
	baz=331						
X44A	Crenshaw	148.10	21	P	PKPbc	10 18 42.4	-0.3
	baz=334						
W46A	Michie	148.11	18	P	PKPbc	10 18 41.8	-1.0
	baz=338						
U52A	Thorn Hill	148.12	10	P	PKPbc	10 18 42.1	-0.7
	baz=348						
V49A	McMinnville	148.20	14	P	PKPbc	10 18 42.1	-0.9
	baz=343						
W47A	Westpoint	148.24	17	P	PKPbc	10 18 42.5	-0.7
	baz=339						
U53A	Fall Branch	148.28	9	P	PKPbc	10 18 42.4	-0.8
	baz=349						
140A	Cam and Jess,	148.31	28	P	PKPbc	10 18 43.5	+0.2
	baz=327						
Y43A	Makayla and Ka	148.33	23	P	PKPbc	10 18 43.6	+0.2
	baz=332						
OXF	Oxford	148.35	20	P	PKPbc	10 18 42.8	-0.6
	baz=336						
OXF	Oxford	148.35	20	*e*PKPdf	PKPdf	10 18 40.1	+0.2
OXF				*e*PKPbc	PKPbc	10 18 43.4	0.0
OXF				*e*PKPab	PKPab	10 18 46.9	+0.3
OXF	Oxford	148.35	20	*e*PKIKP	PKPdf	10 18 40.1	+0.2
OXF				*e*		10 18 43.4	
833A	Chaparral WMA,	148.38	40	P	PKPbc	10 18 43.9	+0.2
	baz=313						
X45A	UM Field Stati	148.43	20	P	PKPbc	10 18 43.0	-0.6
	baz=336						
V50A	Pikevile	148.48	13	P	PKPbc	10 18 42.8	-0.9
	baz=344						
Z42A	Norrel Spur, H	148.48	25	P	PKPbc	10 18 43.8	0.0
	baz=330						
V51A	Loudon	148.51	12	P	PKPbc	10 18 43.1	-0.7
	baz=346						
NATX	Nacogdoches	148.51	30	P	PKPbc	10 18 44.2	+0.3
	baz=324						
NATX	Nacogdoches	148.51	30	*e*PKPdf	PKPdf	10 18 40.8	+0.5
NATX				*e*PKPbc	PKPbc	10 18 44.7	+0.7
W48A	Pulaski	148.53	16	P	PKPbc	10 18 43.2	-0.7
	baz=340						
Y44A	Strider, Charl	148.56	22	P	PKPbc	10 18 44.0	0.0
	baz=334						
X46A	Booneville	148.58	19	P	PKPbc	10 18 43.3	-0.7
	baz=337						
V52A	Sevierville	148.62	11	P	PKPbc	10 18 43.7	-0.4
	baz=347						
141A	Papa Simpson,	148.64	27	P	PKPbc	10 18 44.5	+0.3
	baz=328						
240A	Hunter Patters	148.72	28	P	PKPbc	10 18 44.9	+0.4
	baz=326						
W49A	Belvidere	148.72	15	P	PKPbc	10 18 43.6	-0.8
	baz=342						
TKL	Tuckaleechee C	148.76	11	PKPbc	PKPbc	10 18 44.0	-0.4
	comp=Z,106nm,0.7s,baz=341,slow=2.3,SNR=142						
Z43A	Armstrong Fami	148.83	24	P	PKPbc	10 18 44.4	-0.3
	baz=331						
X47A	Russelville	148.84	18	P	PKPbc	10 18 43.7	-0.9
	baz=338						
W50A	Signal Mountai	148.88	13	P	PKPbc	10 18 44.2	-0.7
	baz=344						
Y45A	Yeager Farm, C	148.88	21	P	PKPbc	10 18 44.7	-0.1
	baz=335						
V53A	Saluda	148.92	9	P	PKPbc	10 18 44.5	-0.4
	baz=348						
W51A	Cleveland	149.04	13	P	PKPbc	10 18 44.9	-0.3
	baz=344						
Z44A	Pea Ridge, Bel	149.09	23	P	PKPbc	10 18 45.5	+0.1
	baz=333						
Y46A	Houston	149.10	20	P	PKPbc	10 18 45.2	-0.2
	baz=336						
142A	Monroe	149.11	25	P	PKPbc	10 18 45.6	+0.2
	baz=330						
241A	Mo Tay, Goldon	149.13	27	P	PKPbc	10 18 45.9	+0.4
	baz=328						
X48A	Hartselle	149.14	17	P	PKPbc	10 18 44.7	-0.7
	baz=340						
143A	Socs Landing,	149.20	24	P	PKPbc	10 18 45.7	+0.1
	baz=331						
Z45A	Winona	149.28

	baz=346						
X49A	Woodville	149.28	15	P	PKPbc	10 18 45.3	-0.5
	baz=341						
HKT	Hockley	149.33	34	*e*PKPdf	PKPdf	10 18 41.7	+0.1
HKT				*e*PKPbc	PKiKP	10 18 47.4	+0.3
HKT				*e*PKPab	PKPab	10 18 52.0	+1.3
HKT	Hockley	149.33	34	*e*PKIKP	PKPdf	10 18 41.7	+0.1
HKT				*e*		10 18 47.4	
W53A	Cullowhee	149.35	10	P	PKPbc	10 18 46.0	-0.1
	baz=348						
Y47A	UCPARC, Winfie	149.41	18	P	PKPbc	10 18 45.4	-0.7
	baz=338						
242A	Grayson	149.44	26	P	PKPbc	10 18 46.1	-0.2
	baz=329						
X50B	Fort Payne	149.50	14	P	PKPbc	10 18 45.5	-0.9
	baz=342						
341A	Kurthwood	149.59	28	P	PKPbc	10 18 46.8	+0.1
	baz=326						
X51A	Calhoun	149.59	13	P	PKPbc	10 18 46.1	-0.4
	baz=344						
Y48A	Jasper	149.61	17	P	PKPbc	10 18 45.7	-0.9
	baz=339						
KMSC	Kings Mountain	149.65	7	P	PKPbc	10 18 46.2	-0.6
	baz=351						
144A	Alexander Plac	149.66	23	P	PKPbc	10 18 46.9	+0.1
	baz=332						
Z46A	Louisville	149.70	20	P	PKPbc	10 18 47.1	+0.2
	baz=336						
X52A	Dahlonega	149.76	12	P	PKPbc	10 18 46.9	-0.2
	baz=346						
CNNC	Cliffs of the	149.83	2	P	PKPbc	10 18 47.0	-0.1
	baz=358						
CNNC	Cliffs of the	149.83	2	*e*PKPbc	PKPbc	10 18 47.5	+0.4
CNNC				*e*PKPab	PKPab	10 18 53.4	+0.9
145A	Houston Renfro	149.88	22	P	PKPbc	10 18 47.7	+0.4
	baz=333						
KVTX	Kingsville	149.88	39	*e*PKPbc	PKPbc	10 18 49.5	+2.1
Y49A	Blount Mountai	149.88	16	P	PKPbc	10 18 46.7	-0.6
	baz=341						
243A	Waterproof	149.88	25	P	PKPbc	10 18 47.5	+0.2
	baz=330						
342A	Flagon Creek P	149.94	27	P	PKPbc	10 18 47.6	+0.1
	baz=328						
X53A	Estanollee	149.97	11	P	PKPbc	10 18 47.4	-0.1
	baz=347						
VBMS	Vicksburg	149.99	24	P	PKPbc	10 18 47.8	+0.2
	baz=332						
Z47A	Carrollton	149.99	19	P	PKPbc	10 18 47.2	-0.4
	baz=337						
Z48A	Northport	149.99	18	P	PKPbc	10 18 46.6	-1.0
	baz=338						
Y50A	Piedmont	150.02	15	P	PKPbc	10 18 46.9	-0.7
	baz=342						
441A	DeRidder	150.06	29	P	PKPbc	10 18 48.4	+0.6
	baz=326						
244A	Avery, Jackson	150.07	24	P	PKPbc	10 18 48.1	+0.3
	baz=332						
146A	Union	150.17	21	P	PKPbc	10 18 48.4	+0.4
	baz=335						
Y51A	Rockmart	150.18	14	P	PKPbc	10 18 47.7	-0.3
	baz=343						
343A	Vidalia	150.34	26	P	PKPbc	10 18 49.2	+0.7
	baz=329						
245A	Little AP, Sta	150.40	23	P	PKPbc	10 18 49.0	+0.5
	baz=333						
147A	Livingston	150.41	20	P	PKPbc	10 18 48.5	-0.1
	baz=336						
BBSR	BB Station	150.43	339	*e*PKPbc	PKPbc	10 18 49.2	+0.6
Y52A	Lilburn	150.44	12	P	PKPbc	10 18 48.9	+0.2
	baz=345						
Z49A	Columbiana	150.47	17	P	PKPbc	10 18 48.4	-0.3
	baz=340						
LRAL	Lakeview Retre	150.48	17	P	PKPbc	10 18 48.3	-0.4
	baz=339						
LRAL	Lakeview Retre	150.48	17	*e*PKPdf	PKPdf	10 18 43.6	+0.2
LRAL				*e*PKPbc	PKPbc	10 18 48.5	-0.3
LRAL				*e*PKPab	PKPab	10 18 55.3	0.0
Y53A	Monroe	150.55	11	P	PKPbc	10 18 48.8	-0.1
	baz=346						
344A	Westbrook Farm	150.57	25	P	PKPbc	10 18 49.5	+0.5
	baz=331						
Z50A	Ashland	150.58	16	P	PKPbc	10 18 48.7	-0.3
	baz=341						
148A	Greensboro	150.66	19	P	PKPbc	10 18 49.2	0.0
	baz=338						
246A	Jackson Lee, B	150.70	22	P	PKPbc	10 18 49.7	+0.4
	baz=334						
Y54A	Tignall	150.71	10	P	PKPbc	10 18 49.1	-0.2
	baz=348						
443A	Delano Plantat	150.71	27	P	PKPbc	10 18 50.2	+0.8
	baz=328						
Z51A	Franklin	150.71	14	P	PKPbc	10 18 49.1	-0.2
	baz=343						
247A	Quitman	150.85	21	P	PKPbc	10 18 50.1	+0.4
	baz=335						
149A	Jones	150.95	17	P	PKPbc	10 18 49.7	-0.2
	baz=339						
345A	Thompson Farm,	150.98	24	P	PKPbc	10 18 50.4	+0.4
	baz=332						
GOGA	Godfrey	151.00	11	P	PKPbc	10 18 50.0	0.0
	baz=346						
GOGA	Godfrey	151.00	11	*e*PKPdf	PKPdf	10 18 44.3	+0.1
GOGA				*e*PKPbc	PKPbc	10 18 49.9	0.0
GOGA				*e*PKPab	PKPab	10 18 57.2	-0.2
GOGA	Godfrey	151.00	11	*e*PKIKP	PKPdf	10 18 44.3	+0.1
GOGA				*e*		10 18 57.3	
Z52A	Williamson	151.01	13	P	PKPbc	10 18 50.0	0.0
	baz=344						
Z53A	Monticello	151.11	12	P	PKPbc	10 18 50.1	-0.2
	baz=346						
248A	Dixon Mills	151.12	19	P	PKPbc	10 18 50.5	+0.2
	baz=337						
346A	Big Creek Wild	151.14	23	P	PKPbc	10 18 50.6	+0.3
	baz=333						
150A	Eclectic	151.16	16	P	PKPbc	10 18 50.1	-0.3
	baz=341						
444A	Pine Grove	151.21	25	P	PKPbc	10 18 50.9	+0.4
	baz=330						
Z54A	Sparta	151.29	10	P	PKPbc	10 18 50.7	+0.1
	baz=348						
445A	Amite	151.37	25	P	PKPbc	10 18 51.2	+0.3
	baz=331						
151A	Opelika	151.42	15	P	PKPbc	10 18 50.7	-0.3
	baz=342						
249A	Camden	151.43	18	P	PKPbc	10 18 51.1	+0.1
	baz=338						
Z55A	Blythe	151.43	9	P	PKPbc	10 18 51.1	+0.1
	baz=349						
152A	Waverly Hall	151.44	14	P	PKPbc	10 18 51.0	0.0
	baz=343						
347A	Saraland	151.47	21	P	PKPbc	10 18 51.4	+0.3
	baz=335						
153A	Fort Valley	151.66	12	P	PKPbc	10 18 51.4	-0.2
	baz=345						
250A	Grady	151.68	17	P	PKPbc	10 18 51.5	-0.1
	baz=340						
348A	Jackson	151.68	20	P	PKPbc	10 18 52.1	+0.5
	baz=336						
446A	Poplarville	151.71	23	P	PKPbc	10 18 51.8	+0.1
	baz=333						
NHSC	New Hope	151.80	6	P	PKPbc	10 18 51.9	+0.1
	baz=353						
NHSC	New Hope	151.80	6	*e*PKPdf	PKPdf	10 18 46.1	+0.7
NHSC				*e*PKPbc	PKiKP	10 18 52.2	0.0
NHSC				*e*PKPab	PKPab	10 19 00.9	+0.2
251A	Midway	151.81	16	P	PKPbc	10 18 52.0	+0.2
	baz=342						
154A	Montrose	151.85	11	P	PKPbc	10 18 52.0	0.0
	baz=347						
155A	Kite	151.96	10	P	PKPbc	10 18 52.3	+0.1
	baz=348						
447A	Lucedale	151.97	22	P	PKPbc	10 18 52.9	+0.6
	baz=334						
349A	Repton	151.98	19	P	PKPbc	10 18 52.7	+0.5
	baz=338						
156A	Sylvania	152.08	8	P	PKPbc	10 18 52.7	+0.2
	baz=350						
252A	Lumpkin	152.08	14	P	PKPbc	10 18 52.8	+0.3
	baz=343						
448A	Bay Minette	152.14	21	P	PKPbc	10 18 52.9	+0.3
	baz=336						
253A	Americus	152.16	13	P	PKPbc	10 18 52.6	0.0
	baz=344						
350A	Dozier	152.18	18	P	PKPbc	10 18 53.1	+0.3
	baz=339						
BRAL	Brewton	152.19	19	P	PKPbc	10 18 53.2	+0.4
	baz=338						
BRAL	Brewton	152.19	19	*e*PKPbc	PKPbc	10 18 53.5	+0.7
BRAL				*e*PKPab	PKPab	10 19 03.4	+0.9
254A	Abbeville	152.46	12	P	PKPbc	10 18 53.2	-0.1
	baz=346						
449A	Pace	152.51	20	P	PKPbc	10 18 53.5	0.0
	baz=337						
352A	Blakely	152.52	15	P	PKPbc	10 18 53.7	+0.2
	baz=342						
351A	Pinckard	152.53	16	P	PKPbc	10 18 53.9	+0.4
	baz=341						
255A	Hazlehurst	152.63	10	P	PKPbc	10 18 53.8	+0.1
	baz=348						
450A	Crestview	152.68	18	P	PKPbc	10 18 54.1	+0.2
	baz=338						
256A	Glennville	152.68	9	P	PKPbc	10 18 54.0	+0.2
	baz=349						
257A	Skidaway Islan	152.81	8	P	PKPbc	10 18 54.2	+0.1
	baz=351						
353A	Camilla	152.82	14	P	PKPbc	10 18 54.5	+0.4
	baz=344						
TIGA	Tifton	152.88	13	P	PKPbc	10 18 54.7	+0.4
	baz=345						
452A	Marianna	153.05	16	P	PKPbc	10 18 55.2	+0.5
	baz=341						
451A	Vernon	153.11	17	P	PKPbc	10 18 55.2	+0.4
	baz=340						
355A	Pearson	153.13	11	P	PKPbc	10 18 55.2	+0.3
	baz=347						
453A	Whigham	153.27	14	P	PKPbc	10 18 55.4	+0.3
	baz=343						
356A	Blackshear	153.28	10	P	PKPbc	10 18 55.0	-0.1
	baz=348						
357A	Townsend	153.29	9	P	PKPbc	10 18 55.3	+0.1
	baz=350						
454A	Quitman	153.57	13	P	PKPbc	10 18 55.7	-0.2
	baz=345						
552A	Lynn Haven	153.69	17	P	PKPbc	10 18 55.7	-0.4
	baz=341						
553A	Crawfordville	153.88	15	P	PKPbc	10 18 57.3	+0.8
	baz=343						
456A	Hilliard	153.88	10	P	PKPbc	10 18 57.1	+0.6
	baz=348						
SIV	San Ignacio	154.00	217	PKP	PKPdf	10 18 49.6	+0.4
	comp=Z,5.5nm,0.7s,baz=131,slow=2.8,SNR=34						
SIV				PKPbc	PKiKP	10 18 57.4	+0.1
	comp=Z,3.9nm,0.8s,baz=154,slow=2.9,SNR=9.0						
555A	McAlpin	154.29	12	P	PKPbc	10 18 57.8	+0.5
	baz=346						
556A	Lake Butler	154.52	11	P	PKPbc	10 18 57.8	-0.1
	baz=347						
557A	Orange Park	154.63	10	P	PKPbc	10 18 58.0	-0.1
	baz=349						
LPAZ	La Paz	157.22	202	PKP	PKPdf	10 18 54.8	+0.6
	comp=Z,4.7nm,0.9s,baz=92,slow=2.7,SNR=15						
LPAZ				PKPab	PKPab	10 19 25.6	+0.7
	comp=Z,4.6nm,0.8s,baz=88,slow=4.1,SNR=5.4						
CMIG	Matias Romero	158.59	54	PKP	PKPdf	10 18 55.3	+0.2
	comp=Z,5.9nm,0.9s,baz=10,slow=4.8,SNR=4.1						
CMIG				PKPab	PKPab	10 19 30.4	+0.1
	comp=Z,7.5nm,0.7s,baz=348,slow=3.8,SNR=7.5						
SAML	Samuel	160.62	225	*e*PKPdf	PKPdf	10 18 58.1	+0.7
PTGA	Pitinga	162.22	252	PKP	PKPdf	10 18 59.4	+0.2
	comp=Z,1.8nm,0.4s,baz=339,slow=8.6,SNR=8.3						
PTGA				PKPab	PKPab	10 19 46.0	-0.4
	comp=Z,1.3nm,0.3s,baz=104,slow=8.0,SNR=3.5						
JTS	JuntasAbangare	170.36	56	PKPab	PKPab	10 20 20.9	-1.3
	comp=Z,7.3nm,0.9s,baz=296,slow=4.8,SNR=5.4						
JTS	JuntasAbangare	170.36	56	*e*PKPab	PKPab	10 20 21.9	-0.2
JTS	JuntasAbangare	170.36	56	*e*PKP2	PKPab	10 20 22.0	-0.2
SJCC	San Jacinto, C	174.80	342	*e*P	PKPab	10 20 42.0	+0.5
OTAV	Otavalo	175.07	161	*e*PKPdf	PKPdf	10 19 08.4	+0.3
OTAV				*e*PKPab	PKPab	10 20 44.3	+1.0
MOTC	Monteria, Cord	176.00	343	*e*P	PKPab	10 20 45.5	-1.3
ZARC	Zaragoza, Cauc	176.78	322	*e*P	PKPab	10 20 48.7	-1.8
PTBC	PUERTO BERRIO	177.13	304	*e*P	PKPab	10 20 50.7	-1.5
SOTA	Rioblanco	177.21	185	*e*P	PKPab	10 21 16.4	+24

NNC 20 10:13:19.3±8.4, 37°.05N×71°.06E, h0km, mb3.6, mpv3.2, 2C-4D, Error ellipse: s-maj=70.6km s-min=29.8km az=171.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZET	Dzherino	2.49	315	⇓Pn	Pn	10 14 01.0	-0.2
	4.9nm,0.2s						
DZET				Sn	Sb	10 14 35.1	-1.1
	50nm,0.4s						
SFK	Sufi-Kurgan	3.52	32	⇓Pn	Pn	10 14 15.2	-0.3
	3.0nm,0.2s						
SFK				⇓Sn	Sn	10 15 01.7	+3.7
	16nm,0.3s						
MNAS	Manas	5.54	11	⇑Pn	Pn	10 14 40.3	-2.9
	2.0nm,0.6s						
MNAS				⇓Sn	Sn	10 15 46.6	-1.0
	7.5nm,0.4s						
KK31	Karatay Array	6.06	356	⇑Pn	Pn	10 14 48.9	-1.3
	0.3nm,0.2s,baz=173,slow=11,SNR=6.4						
KK31				Sn	Sn	10 15 56.6	-3.6
	1.7nm,0.4s,baz=184,slow=23,SNR=10						

IDC 20 10:39:01.7±26.0, 17°.90S×178°.20W, h560km±246km, mb2.8/3, mb1 3.1/3, mb1mx2.7/46, mbtmp3.8/3, Error ellipse: s-maj=290.1km s-min=48.8km az=131.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	44.83	259	P	P	10 46 26.5	-0.2
	0.6nm,0.5s,baz=95,slow=7.4,SNR=29						
ASAR	Alice Springs	44.99	254	P	P	10 46 27.9	0.0
	1.8nm,0.6s,baz=87,slow=8.9,SNR=34						
ASAR				PcP	PcP	10 47 56.3	-0.7
	0.2nm,0.4s,baz=101,slow=4.8,SNR=3.0						
ILAR	Eielson Array	85.84	13	P	P	10 50 41.9	0.0
	0.1nm,0.4s,baz=205,slow=4.0,SNR=3.6						

DDA **20** *10:51:42.0, 38°.02N×35°.63E, h6km, Ml2.5*
ISK **20** *10:51:41.4, 38°.02N×35°.69E, h5km, ML2.4/9*
CSEM **20** *10:51:42.4±0.3, 38°.04N×35°.66E, h2km, ML2.5, Error ellipse: s-maj=9.3km s-min=5.7km az=2.0*
ISC 20 10:51:41.8±1.0, 38°.01N±0°.04×35°.65E±0°.02, h12km±10km, n25, σ0s76/33, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YAHY	KAYSERI_Yahyal	0.24	290	*i* P	Pg	10 51 46.6	-0.3
YAHY				*i* S	Sg	10 51 50.5	0.0
YAHY	KAYSERI_Yahyal	0.24	290	P	Pg	10 51 46.7	-0.3
YAHY				S	Sg	10 51 50.5	0.0
SAIM	ADANA	0.34	95	*i* P	Pg	10 51 49.2	+0.5
SAIM				*i* S	Sb	10 51 55.0	-0.3
SAIM	ADANA	0.34	95	P	Pg	10 51 49.2	+0.5
SAIM				S	Sb	10 51 55.0	-0.3
KOZT	Kozan	0.55	165	PG	Pg	10 51 52.3	-0.1
KOZT	Kozan	0.55	165	*e*Pg	Pg	10 51 52.3	-0.1
ANDN	Andirin	0.70	128	*i* P	Pb	10 51 55.8	-0.1
ANDN	Andirin	0.70	128	P	Pb	10 51 55.8	-0.1
SARI	SarD1z-Kayseri	0.72	56	PG	Pg	10 51 55.6	-0.2
SARI				SG	Sb	10 52 06.5	+0.2
CEYT	Ceyhan	1.00	176	PG	Pb	10 52 01.8	+0.8
CEYT	Ceyhan	1.00	176	*e*Pg	Pb	10 52 01.8	+0.8
GULE	Gulek	1.00	224	*i* P	Pg	10 51 58.9	-2.3
GULE				*i* S	Sb	10 52 15.7	+1.3
GULA	Gulagac	1.17	287	PN	Pg	10 52 04.6	+0.4
GULA	Gulagac	1.17	287	*e*Pn	Pg	10 52 04.6	+0.4
KERG	Konya-Eregli	1.35	244	*i* P	Pb	10 52 08.0	+0.8
KERG				*i* S	Sg	10 52 26.1	+0.8
KERG	Konya-Eregli	1.35	244	P	Pb	10 52 07.9	+0.8
KERG				S	Sg	10 52 26.1	+0.8
KIZK	Mersin	1.94	219	PN	Pb	10 52 16.9	-0.2
KEBE	Keben-Mersin	2.20	225	PN	Pb	10 52 21.3	-0.2
KEBE	Keben-Mersin	2.20	225	*e*Pn	Pb	10 52 21.3	-0.2
MALT	Malatya	2.21	81	PN	Pb	10 52 20.9	-0.8
MALT	Malatya	2.21	81	*e*Pn	Pb	10 52 20.9	-0.8
IKL	Isikli	2.37	222	PN	Pb	10 52 23.9	-0.4
IKL	Isikli	2.37	222	*e*Pn	Pb	10 52 23.9	-0.4
BERE	Bereket-Mersin	2.55	230	PN	Pb	10 52 26.4	-1.2
BERE	Bereket-Mersin	2.55	230	*e*Pn	Pb	10 52 26.4	-1.2

ISCJB **20** *10:57:06.9±0.6, 38°.45N±0°.05×39°.60E±0°.04, h10km±6km, Error ellipse: s-maj=8.0km s-min=5.2km az=1.2*
ISK **20** *10:57:06.7, 38°.45N×39°.57E, h18km, ML2.2/7*
CSEM **20** *10:57:06.8±0.2, 38°.43N×39°.59E, h15km, ML2.2, Error ellipse: s-maj=5.4km s-min=3.5km az=14.0*
DDA **20** *10:57:06.1, 38°.32N×39°.57E, h7km, Ml2.9*
ISC 20 10:57:06.7±1.0, 38°.43N±0°.03×39°.58E±0°.02, h15km±9km, n25, σ0s52/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVRC	Sivrice-ELAZID	0.23	256	PG	Pg	10 57 12.1	+0.3
SVRC				SG	Sb	10 57 16.3	-0.3
SVRC	Sivrice-ELAZID	0.23	256	*e*Pg	Pg	10 57 12.1	+0.3
SVRC				*e*Sg	Sb	10 57 16.3	-0.3
ELZG	Elazig	0.47	278	*i* P	Pb	10 57 17.1	+0.2
ELZG	Elazig	0.47	278	P	Pb	10 57 17.1	+0.2
PTK	Pertek	0.48	342	PG	Pg	10 57 16.5	+0.1
PTK	Pertek	0.48	342	*e*Pg	Pg	10 57 16.5	+0.1
HANI	Diyarbakir_Han	0.64	91	*i* P	Pg	10 57 19.2	-0.1
HANI				*i* S	Sb	10 57 29.6	+1.1
HANI	Diyarbakir_Han	0.64	91	P	Pg	10 57 19.2	-0.1
HANI				S	Sb	10 57 29.6	+1.1
DYBB	Diyarbakir	0.65	137	PG	Pb	10 57 20.2	+0.4
TNCL	Tunceli-Merkez	0.68	357	*i* P	Pb	10 57 20.3	-0.1
TNCL	Tunceli-Merkez	0.68	357	P	Pb	10 57 20.3	-0.1
DIY	Diyarbakir	0.74	136	*e*Pg	Pg	10 57 20.2	-0.9
MALT	Malatya	0.92	263	PG	Pn	10 57 25.0	-0.2
MALT	Malatya	0.92	263	*e*Pg	Pn	10 57 25.0	-0.2
URFA	Urfa	1.16	212	PN	Pg	10 57 28.7	-0.4
URFA	Urfa	1.16	212	*e*Pn	Pg	10 57 28.7	-0.4
MAZI	Mazidag	1.19	145	PN	Pb	10 57 29.1	+0.1
MAZI	Mazidag	1.19	145	*e*Pn	Pb	10 57 29.1	+0.1
SVAN	Silvan-Diyarba	1.30	102	PN	Pb	10 57 30.9	0.0
SVAN	Silvan-Diyarba	1.30	102	*e*Pn	Pb	10 57 30.9	0.0
BTMN	Batman	1.44	112	*i* P	Pn	10 57 32.2	-0.1
BTMN				*i* S	Sg	10 57 52.9	-0.1
BTMN	Batman	1.44	112	P	Pn	10 57 32.2	-0.1
BTMN				S	Sg	10 57 52.9	-0.1
MARD	Mardin	1.46	139	*i* P	Pn	10 57 32.2	-0.6
MARD				*i* S	Sn	10 57 51.6	-0.1
SURC	SANLIURFA_SURC	1.73	207	*i* P	Pg	10 57 41.2	+1.3
SURC				*i* S	Sg	10 58 02.0	-0.5
SURC	SANLIURFA_SURC	1.73	207	P	Pg	10 57 41.2	+1.3
SURC				S	Sg	10 58 02.0	-0.5

ISCJB **20** *11:06:09.8±0.6, 50°.15N±0°.04×19°.06E±0°.03, h0km, Error ellipse: s-maj=5.9km s-min=2.7km az=10.1*
CSEM **20** *11:06:10.5±0.3, 50°.17N×19°.12E, h2km, ML2.8/10, Error ellipse: s-maj=7.3km s-min=3.1km az=8.0*
IPEC **20** *11:06:11.3±0.2, 50°.16N×19°.14E, h1km±1km, ML1.9/3, Error ellipse: s-maj=2.6km s-min=1.1km az=166.0*
PRU **20** *11:06:11.0, 50°.16N×19°.11E, h0km*
WAR **20** *11:06:11.9, 50°.10N×19°.20E, h1km, Mw2.3*
ISC 20 11:06:11.2±0.8, 50°.09N±0°.03×19°.13E±0°.02, h0km, n38, σ0s64/65, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	Ojcow	0.45	73	*e*Pg	Pg	11 06 19.5	-0.2
OJC				*e*Sg	Sg	11 06 25.4	-0.2
OJC	Ojcow	0.45	73	*e*Pg	Pg	11 06 19.5	-0.2
OJC				*e*Sg	Sg	11 06 25.4	-0.2
OJC	Ojcow	0.45	73	*e*Pg	Pg	11 06 19.5	-0.2
OJC				*e*Sg	Sg	11 06 25.4	-0.2
OKC	Ostrava-Krasne	0.68	249	*e*PG	Pb	11 06 25.5	-0.5
OKC				*e*SG	Sb	11 06 35.3	-0.7
	comp=Z,19nm,0.3s						
OKC	Ostrava-Krasne	0.68	249	Pg	Pb	11 06 25.5	-0.5
OKC				Sg	Sb	11 06 35.3	-0.7
	19nm,0.3s						
LANS	Liptovska Anna	0.96	167	*e*PG	Pg	11 06 30.3	+0.7
LANS				*e*SG	Sb	11 06 43.8	-0.3
LANS	Liptovska Anna	0.96	167	*e*Pg	Pg	11 06 30.3	+0.7
LANS				*e*Sg	Sb	11 06 43.8	-0.3
NIE	Niedzica	1.01	131	*e*Pg	Pg	11 06 30.7	+0.2
NIE				*e*Sg	Sb	11 06 45.9	+0.5
NIE	Niedzica	1.01	131	*e*Pg	Pg	11 06 30.7	+0.2
NIE				*e*Sg	Sb	11 06 45.9	+0.5
NIE	Niedzica	1.01	131	*e*Pg	Pg	11 06 30.7	+0.2
NIE				*e*Sg	Sb	11 06 45.9	+0.5
MORC	Moravsky Berou	1.07	254	*e*Pg	Pb	11 06 32.6	-0.1
MORC				*e*Sg	Sg	11 06 45.7	+0.1
	24nm,0.4s,baz=69						
MORC	Moravsky Berou	1.07	254	*e*PG	Pb	11 06 32.6	-0.1
MORC				*e*SG	Sg	11 06 45.8	+0.1
MORC	Moravsky Berou	1.07	254	*e*Pg	Pb	11 06 32.6	-0.1
	baz=69						
MORC				*e*Sg	Sg	11 06 45.7	+0.1
	24nm,0.4s,baz=69						
KRLC	Kraliky	1.51	270	*e*PG	Pn	11 06 39.2	-0.4
KRLC				*e*SG	Sg	11 06 59.3	-0.5
	comp=Z,6.5nm,0.8s						
KRLC	Kraliky	1.51	270	Pg	Pn	11 06 39.2	-0.4
KRLC				Sg	Sg	11 06 59.3	-0.5
	6.5nm,0.8s						
JAVC	Velka Javorina	1.56	218	*e*Pn	Pg	11 06 41.1	+0.1
	baz=36						
JAVC	Velka Javorina	1.56	218	*e*PN	Pg	11 06 41.2	+0.2
JAVC	Velka Javorina	1.56	218	*e*Pn	Pg	11 06 41.1	+0.1
	baz=36						
VYHS	Vyhne	1.61	187	*e*PG	Pn	11 06 40.4	-0.4
VYHS				*e*SN	Sn	11 07 02.1	-0.2
VYHS				*e*LG	Lg	11 07 04.5	
VYHS	Vyhne	1.61	187	*e*Pg	Pn	11 06 40.4	-0.4
VYHS				*e*Sn	Sn	11 07 02.1	-0.2
DPC	Dobruska-Polom	1.82	279	*e*PG	Pn	11 06 44.2	+0.3
DPC				*e*SG	Sn	11 07 07.7	0.0
	comp=Z,19nm,0.4s						
DPC	Dobruska-Polom	1.82	279	Pg	Pn	11 06 44.2	+0.3
DPC				Sg	Sn	11 07 07.7	0.0
	19nm,0.4s						
VRAC	Vranov	1.82	246	*e*Pn	Pn	11 06 44.0	+0.2
	baz=62						
VRAC				*e*Sg	Sg	11 07 09.6	-0.2
	9.0nm,0.3s,baz=62						
VRAC	Vranov	1.82	246	*e*PN	Pn	11 06 44.0	+0.2
VRAC				*e*SG	Sg	11 07 09.6	-0.2
VRAC	Vranov	1.82	246	*e*Pn	Pn	11 06 44.0	+0.2
	baz=62						
VRAC				*e*Sg	Sg	11 07 09.6	-0.2
	9.0nm,0.3s,baz=62						
CRVS	C

s-min=17.4km az=48.0
ISCJB ***20*** *11:12:20.6±0.6, 1°.29N×0°.07×97°.01E±0°.05, h28km, mb4.5/24, MS4.3/2, Error ellipse: s-maj=11.0km s-min=6.5km az=27.5*
NEIC ***20*** *11:12:23.0±1.0, 1°.29N×97°.03E, h32km±6km, mb4.5/5, Error ellipse: s-maj=7.6km s-min=4.6km az=219.0*

ISC 20 11:12:22.9±0.7, 1°.39N±0°.07×97°.06E±0°.06, h28km, n59, σ1§41/53, mb4.6/24, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.52**	**99**	P	**Pb**	**11 12 29.7**	**-3.8**
GSI				S	**Sn**	**11 12 43.4**	**+1.1**
GSI	**Gunungsitoli**	**0.52**	**99**	*e*Pg	**Pn**	**11 12 34.2**	**-0.2**
TPTI		**1.86**	**4**	P	**Pn**	**11 12 51.9**	**-1.1**
KCSI	**Kotacane, Aceh**	**2.24**	**18**	P	**Pn**	**11 12 54.2**	**-3.9**
PSI	**Prapat**	**2.33**	**53**	Pn	**Pn**	**11 12 59.6**	**+0.1**
	4.0nm,0.3s,baz=180,slow=3.3,SNR=18						
PSI				Sn	**Sb**	**11 13 33.2**	**+0.5**
	4.5nm,0.3s,baz=180,slow=14,SNR=3.9						
PSI				LR	LR	11 13 36.5	
	comp=Z,373nm,19.8s,baz=273,slow=32						
MLSI	**Meulaboh, Aceh**	**2.94**	**347**	P	**Pn**	**11 13 07.8**	**+0.1**
BKNI	**Bangkinang**	**4.11**	**105**	*e*Pn	**Pn**	**11 13 24.2**	**+0.3**
IPM	**Ipoh**	**5.01**	**52**	*e*Pn	**Pn**	**11 13 37.2**	**+1.0**
KULM	**Kulim**	**5.28**	**43**	*e*Pn	**Pn**	**11 13 40.7**	**+0.8**
MYKOM	**Kota Tinggi**	**6.79**	**87**	*e*Pn	**Pn**	**11 14 01.3**	**+0.6**
SBUM	**Sibu**	**15.18**	**86**	*e*Pn	**Pn**	**11 15 55.6**	**+0.1**
	4.9nm,0.9s						
CM01	**Chiang Mai Arr**	**17.03**	**6**	*e*Pn	**Pn**	**11 16 19.8**	**+0.6**
CM31	**Chiang Mai Arr**	**17.07**	**6**	*e*Pn	**Pn**	**11 16 17.0**	**-2.6**
CMAR	**Chiang Mai Arr**	**17.07**	**6**	P	**P**	**11 16 20.9**	**-0.3**
	0.1nm,0.3s,baz=203,slow=11,SNR=9.8						
CMAR				LR	LR	11 23 03.8	
	comp=Z,85nm,19.4s,baz=200,slow=38						
PALK	**Pallekele**	**17.32**	**290**	*e*P	**Pn**	**11 16 22.4**	**-0.5**
	91nm,1.5s						
CHTO	**Chiang Mai**	**17.42**	**6**	*e*Pn	**Pn**	**11 16 24.4**	**+0.4**
	18nm,1.6s						
KMI	**Kunming**	**24.23**	**13**	P	**P**	**11 17 39.8**	**+2.1**
KMI				pmax	pmax		
	comp=Z,18nm,1.1s						
SHL	**Shillong**	**24.55**	**349**	*e*P	**P**	**11 17 37.0**	**-3.6**
SHL	**Shillong**	**24.55**	**349**	*e*P	**P**	**11 17 40.4**	**-0.2**
	21nm,0.7s						
H08S2	**Diego Garcia H**	**26.10**	**250**	T	T	11 44 49.2	
	baz=70,slow=75,SNR=7.6						
H08S3	**Diego Garcia H**	**26.10**	**250**	T	T	11 44 49.5	
	baz=70,slow=75,SNR=1689						
H08S1	**Diego Carcia H**	**26.12**	**250**	T	T	11 44 50.6	
	baz=70,slow=75,SNR=436						
SOEI	**Soe**	**29.26**	**113**	*e*P	**P**	**11 18 21.8**	**-1.3**
	18nm,0.6s						
CD2	**Chengdu**	**30.04**	**12**	P	**P**	**11 18 29.9**	**+0.2**
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
XAN	**Xi'an**	**34.33**	**18**	P	**P**	**11 19 06.4**	**-0.8**
XAN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,290nm,4.6s						
LZH	**Lanzhou**	**35.10**	**10**	*e*P	P	11 19 19.1	+5.1
LZH				pP	pP	11 19 23.3	+1.0
LZH				sP	sP	11 19 25.3	-0.4
LZH				pmax	pmax		
	comp=Z,28nm,1.0s						
NJ2	**Nanjing**	**36.78**	**32**	*e*P	**P**	**11 19 30.3**	**+2.1**
NJ2				pmax	pmax		
	comp=Z,41nm,0.7s						
GTA	**Gaotai**	**37.93**	**3**	*e*P	**P**	**11 19 39.1**	**+1.0**
GTA				pP	pP	11 19 43.5	-2.9
GTA				sP	sP	11 19 46.1	-3.7
GTA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
H01W3	**Cape Leeuwin H**	**39.47**	**158**	T	T	12 01 43.5	
	baz=334,slow=76,SNR=16						
H01W2	**Cape Leeuwin H**	**39.48**	**158**	T	T	12 01 44.8	
	baz=334,slow=76,SNR=17						
H01W1	**Cape Leeuwin H**	**39.48**	**158**	T	T	12 01 43.8	
	baz=334,slow=76,SNR=15						
HHC	**Hu-ho-hao-te**	**41.42**	**17**	*e*P	**P**	**11 20 10.8**	**+3.7**
HHC				pmax	pmax		
	comp=Z,19nm,0.7s						
HHC				pmax	pmax		
	comp=Z,140nm,6.5s						
WRA	**Warramunga Arr**	**42.25**	**122**	P	**P**	**11 20 13.1**	**-0.9**
	1.2nm,0.6s,baz=301,slow=9.1,SNR=15						
KSH	**Kashi**	**42.55**	**336**	P	**P**	**11 20 17.1**	**+0.8**
KSH				pP	pP	11 20 22.5	-2.3
KSH				pmax	pmax		
	comp=Z,200nm,4.5s						
WMQ	**Urumqi**	**43.07**	**350**	P	**P**	**11 20 22.0**	**+1.6**
WMQ				pmax	pmax		
	comp=Z,17nm,0.6s						
ASAR	**Alice Springs**	**43.61**	**127**	P	**P**	**11 20 24.5**	**-0.6**
	0.8nm,0.7s,baz=298,slow=8.0,SNR=11						
KSAR	**Wonju Array Be**	**45.74**	**35**	P	**P**	**11 20 42.1**	**+0.3**
KSRS	**Korea Array**	**45.77**	**35**	P	**P**	**11 20 42.1**	**0.0**
	3.8nm,0.8s,baz=221,slow=9.2,SNR=14						
SONM	**Songino Array**	**46.97**	**9**	P	**P**	**11 20 52.0**	**+0.6**
	2.9nm,0.7s,baz=191,slow=9.2,SNR=13						
SONM				PcP	**PcP**	**11 22 24.6**	**+0.9**
	0.3nm,0.4s,baz=215,slow=1.8,SNR=2.3						
SONA1	**Songino Array**	**46.98**	**9**	*e*P	**P**	**11 20 51.4**	**-0.2**
MK01	**Makanchi Array**	**47.01**	**346**	*e*P	**P**	**11 20 52.1**	**+0.4**
MK31	**Makanchi Array**	**47.03**	**346**	*e*P	**P**	**11 20 52.1**	**+0.3**
MKAR	**Makanchi Array**	**47.03**	**346**	P	**P**	**11 20 52.6**	**+0.8**
	1.6nm,0.4s,baz=158,slow=9.0,SNR=30						
MKAR	**Makanchi Array**	**47.03**	**346**	*e*P	**P**	**11 20 52.1**	**+0.3**
	18nm,0.5s						
CN2	**Changchun**	**49.20**	**27**	*e*P	**P**	**11 21 11.3**	**+2.7**
KURBB	**Kurchatov Arra**	**51.52**	**345**	P	**P**	**11 21 27.0**	**+1.0**
	2.3nm,0.2s,baz=161,slow=5.9,SNR=5.3						
KURK	**Kurchatov**	**51.58**	**345**	P	**P**	**11 21 27.0**	**+0.5**
USRK	**Ussuriysk Ar.**	**52.68**	**31**	P	**P**	**11 21 35.8**	**+1.0**
	10nm,0.9s,baz=224,slow=4.0,SNR=5.9						
ZALV	**Zalesovo Beam**	**53.35**	**351**	P	**P**	**11 21 40.0**	**+0.4**
	4.6nm,0.5s,baz=182,slow=6.8,SNR=22						
ZALV	**Zalesovo Beam**	**53.35**	**351**	*e*P	**P**	**11 21 39.9**	**+0.3**
BVAR	**Borovoye Array**	**56.03**	**341**	P	**P**	**11 21 59.0**	**-0.1**
	2.2nm,0.8s,baz=140,slow=9.4,SNR=9.6						
KLR	**Kul'dur**	**56.15**	**27**	P	**P**	**11 22 00.6**	**+0.6**
	0.5nm,0.8s,baz=247,slow=7.9,SNR=17						
ABKAR	**Akbulak array**	**57.29**	**332**	*e*P	**P**	**11 22 07.7**	**-0.4**
AKTO	**Aktyubinsk**	**59.01**	**332**	P	**P**	**11 22 19.8**	**-0.3**
	0.7nm,0.5s,baz=144,slow=12,SNR=4.2						
KBZ	**Khabaz**	**63.84**	**319**	P	**P**	**11 22 54.0**	**+1.1**
	0.5nm,0.5s,baz=281,slow=4.4,SNR=3.6						
TIXI	**Tiksi**	**73.03**	**10**	LR	LR	11 56 43.9	
	comp=Z,891nm,19.2s,baz=183,slow=36						
FINES	**FINESS Array B**	**79.77**	**333**	P	**P**	**11 24 27.9**	**-0.3**
	1.3nm,0.7s,baz=123,slow=27,SNR=4.7						
ARCES	**ARCESS Array B**	**82.32**	**340**	P	**P**	**11 24 41.6**	**0.0**
	2.2nm,0.9s,baz=106,slow=4.0,SNR=3.9						
ILAR	**Eielson Array**	**99.58**	**23**	LR	LR	12 15 33.1	
	comp=Z,16nm,20.6s,baz=106,slow=38						

IDC 20 11:17:41.4±1.6, 19°.01S×174°.53W, h0km, mb4.1/5, mb1 4.2/6, mb1mx3.8/51, mbtmp4.1/6, ML3.1/1, Error ellipse: s-maj=55.0km s-min=25.6km az=131.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.72**	**28**	Pn	Pn	11 19 07.0	-0.8
	0.5nm,0.3s,baz=229,slow=9.3,SNR=1.7						
AFI				Sn	Sn	11 20 05.5	-8.7
	4.9nm,0.3s,baz=74,slow=18,SNR=6.0						
RAR	**Rarotonga**	**14.03**	**101**	Pn	Pn	11 20 55.5	-6.1
	2.0nm,0.3s,baz=279,slow=11,SNR=3.7						
URZ	**Urewera**	**20.51**	**199**	P	P	11 22 21.2	0.0
	8.1nm,0.8s,baz=8.1,slow=7.1,SNR=5.4						
CTA	**Charters Tower**	**36.92**	**262**	P	P	11 24 53.5	+1.1
	2.4nm,0.5s,baz=104,slow=10,SNR=6.5						
ASAR	**Alice Springs**	**48.05**	**255**	P	P	11 26 22.5	-0.4
	1.5nm,0.5s,baz=92,slow=8.7,SNR=34						
ASAR				PcP	PcP	11 27 50.2	-0.8
	0.3nm,0.6s,baz=105,slow=3.9,SNR=3.9						
WRA	**Warramunga Arr**	**48.06**	**260**	P	P	11 26 22.4	-0.7
	1.1nm,0.4s,baz=96,slow=7.4,SNR=59						
WRA				PcP	PcP	11 27 50.7	-0.4
	0.2nm,0.5s,baz=92,slow=4.1,SNR=2.6						
ILAR	**Eielson Array**	**86.18**	**11**	P	P	11 30 24.7	+0.6
	0.3nm,0.5s,baz=230,slow=6.1,SNR=5.0						

NIED ***20*** *11:20:00.34°.80N×140°.10E, h59km, Mw4.3 Best double couple: M0 3.22000×10^15 NP1:φ=278.00000°, δ=49.00000°, λ=-152.00000°. NP2:φ=169.00000°, δ=69.00000°, λ=-44.00000°.*
JMA ***20*** *11:20:08.7±0.2, 34°.83N×140°.11E, h65km±2km, M3.9*
JMA Felt II J1.
ISCJB ***20*** *11:20:09.2±0.4, 34°.80N±0°.04×140°.08E±0°.04, h60km±3km, mb3.9/13, Error ellipse: s-maj=7.0km s-min=5.7km az=35.5*
IDC ***20*** *11:20:10.4±1.4, 34°.79N×140°.05E, h55km±14km, mb3.7/13, mb1 3.9/15, mb1mx3.6/71, mbtmp3.9/15, MS3.2/9, Ms1 3.2/9, ms1mx2.9/67, Error ellipse: s-maj=21.3km s-min=5.4km az=74.0*

ISC 20 11:20:10.1±0.8, 34°.83N±0°.04×140°.11E±0°.04, h55km±7km, n40, σ1§29/40, mb3.8/13, MS3.1/5, 5C-4D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO4	**Boso 4**	**0.25**	**49**	⇑P	**Pn**	**11 20 19.4**	**+0.2**
BSO4				X		11 20 27.5	
TATJ	**Tateyama 2**	**0.27**	**319**	⇓P	**Pn**	**11 20 19.9**	**+0.4**
TATJ				*e*S	**Sn**	**11 20 28.0**	**+1.7**
BSO3	**Boso 3**	**0.33**	**94**	⇑P	**Pn**	**11 20 19.8**	**+0.1**
BSO3				X		11 20 27.9	
KTR	**Katsuura**	**0.36**	**28**	⇑P	**Pn**	**11 20 20.0**	**-0.3**
KTR				S	**Sn**	**11 20 27.6**	**0.0**
JIM2	**Oshima 3**	**0.57**	**259**	⇓P	**Pn**	**11 20 21.9**	**-0.7**
JIM2				S	**Sn**	**11 20 30.8**	**-0.8**
BSO1	**Boso 1**	**0.73**	**103**	⇑P	**Pn**	**11 20 23.6**	**-0.4**
BSO1				X		11 20 34.3	
JOD2	**Odawara 2**	**0.95**	**298**	⇓P	**Pn**	**11 20 26.2**	**-1.1**
JOD2				S	**Sn**	**11 20 38.5**	**-1.5**
JIZS	**Izushimoda**	**1.02**	**264**	⇑P	**Pn**	**11 20 27.7**	**-0.5**
JIZS				S	**Sn**	**11 20 40.7**	**-0.9**
JYN	**Shimob**	**1.45**	**298**	⇓P	**Pn**	**11 20 33.5**	**-0.6**
JYN				*e*S	**Sn**	**11 20 51.2**	**-0.8**
JHJ	**Hachijo jima 2**	**1.72**	**189**	P	**Pn**	**11 20 38.0**	**+0.3**
	526nm,0.3s,baz=72,slow=3.9,SNR=72						
JHJ				S	**Sn**	**11 20 58.2**	**-0.5**
	1μm,0.3s,baz=140,slow=22,SNR=35						
MJAR	**Matsushiro Arr**	**2.31**	**318**	P	**Pn**	**11 20 45.4**	**-0.3**
	65nm,0.3s,baz=174,slow=15,SNR=434						
MJAR				S	**Sn**	**11 21 12.6**	**-0.4**
	45nm,0.3s,baz=137,slow=48,SNR=11						
MJAR				LR	LR	11 22 01.0	
	comp=Z,306nm,20.2s,baz=140,slow=49						
MAT	**Matsushiro**	**2.31**	**318**	P	**Pn**	**11 20 45.7**	**-0.1**
MAT				S	**Sn**	**11 21 13.1**	**+0.1**
JNU	**Nakatsue**	**7.86**	**260**	P	**Pn**	**11 22 02.3**	**+0.6**
	0.7nm,0.3s,baz=68,slow=6.4,SNR=8.5						
JNU				LR	LR	11 25 31.0	
	comp=Z,284nm,18.2s,baz=124,slow=41						
JCJ	**Chichijima**	**7.91**	**166**	S	**Sn**	**11 23 27.9**	**-2.7**
	12nm,0.3s,baz=270,slow=22,SNR=2.7						
ASAJ	**Asahikawa**	**9.47**	**11**	P	**Pn**	**11 22 20.6**	**-3.2**
	1.5nm,0.3s,baz=243,slow=11,SNR=14						
ASAJ				S	**Sn**	**11 24 05.9**	**-2.9**
	0.4nm,0.3s,baz=125,slow=30,SNR=3.6						
ASAJ				LR	LR	11 26 26.2	
	comp=Z,47nm,18.5s,baz=1.0,slow=40						
KSRS	**Korea Array**	**10.20**	**288**	P	**Pn**	**11 22 37.4**	**+3.6**
	0.2nm,0.3s,baz=107,slow=14,SNR=7.5						
KSRS				LR	LR	11 26 13.4	
	comp=Z,116nm,21.3s,baz=104,slow=36						
PETK	**Petropavlovsk-**	**22.13**	**29**	LR	LR	11 35 18.9	
	comp=Z,26nm,18.2s,baz=228,slow=41						
H11N2	**WAKE ISLAND Hy**	**28.04**	**115**	T	T	11 55 32.7	
	baz=308,slow=75,SNR=110						
H11N1	**WAKE ISLAND Hy**	**28.05**	**115**	T	T	11 55 33.5	
	baz=308,slow=75,SNR=158						
H11N3	**WAKE ISLAND Hy**	**28.06**	**115**	T	T	11 55 34.1	
	baz=308,slow=75,SNR=157						
SONM	**Songino Array**	**28.22**	**308**	LR	LR	11 38 02.3	
	comp=Z,44nm,21.0s,baz=106,slow=38						
H11S3	**WAKE ISLAND Hy**	**28.66**	**118**	T	T	11 56 24.4	
	baz=310,slow=75,SNR=113						
H11S1	**WAKE ISLAND Hy**	**28.66**	**118**	T	T	11 56 19.5	
	baz=310,slow=75,SNR=95						
H11S2	**WAKE ISLAND Hy**	**28.68**	**118**	T	T	11 56 23.9	
	baz=310,slow=75,SNR=110						
CMAR	**Chiang Mai Arr**	**39.94**	**257**	LR	LR	11 45 00.2	
	comp=Z,80nm,18.6s,baz=129,slow=37						
ZALV	**Zalesovo Beam**	**42.66**	**314**	P	**P**	**11 28 01.6**	**+0.6**
	0.7nm,0.5s,baz=74,slow=6.2,SNR=3.0						
MKAR	**Makanchi Array**	**44.43**	**304**	P	**P**	**11 28 15.5**	**+0.1**
	0.7nm,0.8s,baz=85,slow=10,SNR=6.7						
MKAR				LR	LR	11 45 55.0	
	comp=Z,47nm,19.5s,baz=76,slow=35						
KURBB	**Kurchatov Arra**	**46.56**	**310**	P	**P**	**11 28 32.7**	**+0.5**
	1.4nm,0.6s,baz=83,slow=7.6,SNR=7.6						
HNR	**Honiara**	**47.86**	**153**	LR	LR	11 47 53.8	
	comp=Z,24nm,20.6s,baz=4.0,slow=35						
BVAR	**Borovoye Array**	**51.30**	**313**	P	**P**	**11 29 09.9**	**+1.5**
	0.6nm,0.6s,baz=92,slow=4.6,SNR=3.7						
ILAR	**Eielson Array**	**51.92**	**31**	P	**P**	**11 29 12.3**	**-0.6**
	0.6nm,0.8s,baz=268,slow=6.4,SNR=9.4						
WRA	**Warramunga Arr**	**54.74**	**187**	P	**P**	**11 29 32.9**	**-1.1**
	5.1nm,0.6s,baz=0.7,slow=7.5,SNR=86						
CTA	**Charters Tower**	**54.92**	**173**	P	**P**	**11 29 35.2**	**-0.2**
	2.0nm,0.8s,baz=326,slow=8.9,SNR=2.2						
INK	**Inuvik**	**56.83**	**26**	P	**P**	**11 29 49.3**	**+0.8**
	0.4nm,1.0s,baz=238,slow=3.4,SNR=3.6						
ASAR	**Alice Springs**	**58.47**	**187**	P	**P**	**11 29 59.5**	**-0.9**
	1.8nm,0.7s,baz=10,slow=8.6,SNR=17						
NVAR	**Mina Array Bea**	**77.17**	**52**	P	**P**	**11 31 59.8**	**+1.5**
	0.9nm,0.7s,baz=290,slow=5.7,SNR=9.7						
PDAR	**Pinedale Array**	**79.97**	**45**	P	**P**	**11 32 14.2**	**+0.5**
	0.4nm,0.7s,baz=298,slow=3.2,SNR=4.4						
URZ	**Urewera**	**80.41**	**151**	P	**P**	**11 32 15.9**	**+0.5**
	12nm,1.0s,baz=297,slow=2.3,SNR=4.8						
TXAR	**Lajitas Array**	**92.31**	**52**	P	**P**	**11 33 15.7**	**+1.0**
	0.3nm,0.7s,baz=297,slow=4.0,SNR=3.2						
LPAZ	**La Paz**	**148.70**	**61**	PKPbc	**PKPbc**	**11 39 53.1**	**+0.7**
	0.8nm,0.5s,baz=349,slow=1.5,SNR=4.1						

JMA 20 11:45:58.4±0.3, 37°.63N×145°.10E, h61km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**3.06**	**299**	P	Pn	11 46 45.4	+1.1
JIO	**Ouri**	**3.07**	**287**	P	Pn	11 46 45.7	+1.2
JIO				*e*S	Sn	11 47 21.4	+1.4
JMK	**Ichinoseki**	**3.33**	**295**	P	Pn	11 46 49.5	+1.6
JFK	**Kawauchi**	**3.37**	**267**	P	Pn	11 46 49.8	+1.2
JFK				*e*S	Sn	11 47 27.9	+0.5
JCH	**Churui**	**5.15**	**346**	P	Pn	11 47 11.8	-1.1
JCH				*e*S	Sn	11 48 07.1	-3.9
JKB	**Kayabe**	**5.28**	**325**	P	Pn	11 47 16.0	+1.3
NEM2	**Nemuro 2**	**5.75**	**5**	P	Pn	11 47 18.0	-3.1
NEM2				*e*S	Sn	11 48 17.1	-8.5
JTKR	**Abashiri--Toko**	**6.40**	**352**	P	Pn	11 47 28.3	-1.7
JTKR				*e*S	Sn	11 48 36.4	-5.1

CNRM ***20*** *12:01:56.8, 35°.95N×7°.52W, h30km, ML2.9*
MDD ***20*** *12:01:58.9±0.5, 36°.11N×7°.33W, h48km±26km, mb4.1/17, Error ellipse: s-maj=5.7km s-min=3.7km az=45.0, PRXIMO*
CSEM ***20*** *12:01:58.4±0.1, 36°.14N×7°.31W, h40km, mb4.1, Error ellipse: s-maj=3.4km s-min=1.9km az=45.0*
IGIL ***20*** *12:01:58.5, 36°.22N×7°.43W, h1km, ML2.6*
SFS ***20*** *12:01:59.0, 36°.17N×7°.33W, h6km, ML3.8*
INMG ***20*** *12:01:59.4±1.6, 36°.10N×7°.33W, h31km±10km, ML2.6, Error ellipse: s-maj=5.3km s-min=4.1km az=29.0*

ISC 20 12:01:56.4±1.2, 36°.16N±0°.03×7°.27W±0°.02, h21km±4km, n109, σ1§37/202, 12D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBDV	**Barranco-do-Ve**	**1.20**	**334**	⇓*i*P	**Pb**	**12 02 18.9**	**+0.4**
PBDV				*e*S	**Sb**	**12 02 33.5**	**-0.1**
PBDV				A	A	12 02 37.8	
	80nm,0.3s						
PBDV	**Barranco-do-Ve**	**1.20**	**334**	P	**Pb**	**12 02 18.9**	**+0.4**
PBDV				S	**Sb**	**12 02 33.5**	**-0.1**
	80nm,0.3s						
PBDV	**Barranco-do-Ve**	**1.20**	**334**	P	**Pb**	**12 02 18.9**	**+0.4**
PBDV				S	**Sb**	**12 02 33.5**	**-0.1**
	80nm,0.3s						
PVAQ	**Vaqueiros**	**1.29**	**344**	⇓*i*P	**Pb**	**12 02 20.2**	**+0.2**
PVAQ				*e*S	**Sn**	**12 02 35.7**	**-0.2**
PVAQ				A	A	12 02 36.9	
	83nm,0.2s						
PVAQ	**Vaqueiros**	**1.29**	**344**	P	**Pb**	**12 02 20.4**	**+0.5**
PVAQ				S	**Sn**	**12 02 35.7**	**-0.2**
	83nm,0.2s						
PVAQ	**Vaqueiros**	**1.29**	**344**	⇓*i*P	**Pb**	**12 02 20.2**	**+0.2**
PVAQ				S	**Sb**	**12 02 37.2**	**+1.1**
EGRO	**El Granado**	**1.38**	**353**	⇓P	**Pb**	**12 02 21.6**	**+0.1**
	12nm,0.1s,SNR=18						
EGRO				S	**Sb**	**12 02 38.3**	**-0.4**
	38nm,0.1s,SNR=25						
EGRO	**El Granado**	**1.38**	**353**	P	**Pb**	**12 02 21.6**	**+0.1**
	12nm,0.1s,SNR=18						
EGRO				S	**Sb**	**12 02 38.3**	**-0.4**
	38nm,0.1s,SNR=25						
EJIF	**Jimena Fronter**	**1.48**	**78**	P	**Pb**	**12 02 23.5**	**+0.3**
	2.5nm,0.2s,SNR=7.9						
EJIF				S	**Sb**	**12 02 42.6**	**+1.1**
	7.6nm,0.3s,SNR=7.9						
EJIF	**Jimena Fronter**	**1.48**	**78**	P	**Pb**	**12 02 23.5**	**+0.3**
	2.5nm,0.2s,SNR=7.9						
EJIF				S	**Sb**	**12 02 42.6**	**+1.1**
	7.6nm,0.3s,SNR=7.9						
ECEU	**Ceuta**	**1.55**	**99**	P	**Pb**	**12 02 24.5**	**0.0**
	3.3nm,0.1s,SNR=5.9						
ECEU				S	**Sn**	**12 02 42.5**	**+0.1**
	6.4nm,0.1s,SNR=4.8						
ECEU	**Ceuta**	**1.55**	**99**	P	**Pb**	**12 02 24.5**	**0.0**
	3.3nm,0.1s,SNR=5.9						
ECEU				S	**Sn**	**12 02 42.5**	**+0.1**
	6.4nm,0.1s,SNR=4.8						
PFVI	**Vila Bisbo**	**1.58**	**308**	⇓*i*P	**Pn**	**12 02 23.8**	**+0.5**
PFVI				*e*S	**Sn**	**12 02 42.6**	**-0.6**
PFVI				A	A	12 02 47.0	
	68nm,0.5s						
PFVI	**Vila Bisbo**	**1.58**	**308**	⇓P	**Pn**	**12 02 23.8**	**+0.5**
	31nm,0.2s,SNR=18						
PFVI				S	**Sn**	**12 02 42.6**	**-0.6**
	88nm,0.2s,SNR=9.6						
PFVI	**Vila Bisbo**	**1.58**	**308**	P	**Pn**	**12 02 23.8**	**+0.5**
	31nm,0.2s,SNR=18						
PFVI				S	**Sn**	**12 02 42.6**	**-0.6**
	88nm,0.2s,SNR=9.6						
PCVE	**Castro Verde**	**1.59**	**337**	*e*Pn	**Pb**	**12 02 24.4**	**-0.7**
PCVE				*e*Sn	**Sn**	**12 02 43.5**	**+0.2**
PCVE				A	A	12 02 45.5	
	36nm,0.3s						
PCVE	**Castro Verde**	**1.59**	**337**	Pn	**Pb**	**12 02 24.4**	**-0.7**
PCVE				S	**Sn**	**12 02 43.5**	**+0.2**
	36nm,0.3s						
PCVE	**Castro Verde**	**1.59**	**337**	Pn	**Pb**	**12 02 24.4**	**-0.7**
PCVE				S	**Sn**	**12 02 43.5**	**+0.2**
	36nm,0.3s						
MORF	**Marmelete**	**1.59**	**316**	*e*P	**Pn**	**12 02 24.0**	**+0.5**
MORF				*e*S	**Sn**	**12 02 42.9**	**-0.6**
MORF				AML	AML	12 02 44.8	
	comp=N,106nm,0.3s						
MORF	**Marmelete**	**1.59**	**316**	*e*Pn	**Pn**	**12 02 23.9**	**+0.5**
MORF				*e*Sn	**Sn**	**12 02 43.1**	**-0.4**
MORF				A	A	12 02 49.8	
	comp=N,79nm,0.2s						
MORF	**Marmelete**	**1.59**	**316**	P	**Pn**	**12 02 24.0**	**+0.5**
MORF				S	**Sn**	**12 02 42.9**	**-0.6**
	comp=N,106nm,0.3s						
MORF	**Marmelete**	**1.59**	**316**	P	**Pn**	**12 02 24.0**	**+0.5**
MORF				*e*Sn	**Sn**	**12 02 43.1**	**-0.4**
EMIN	**Mina Concepcio**	**1.67**	**16**	⇓P	**Pb**	**12 02 25.4**	**-1.0**
	comp=N,4.0nm,0.2s,SNR=18						
EMIN				S	**Sn**	**12 02 45.1**	**-0.2**
	comp=N,7.4nm,0.1s,SNR=12						
EMIN	**Mina Concepcio**	**1.67**	**16**	P	**Pb**	**12 02 25.4**	**-1.0**
	comp=N,4.0nm,0.2s,SNR=18						
EMIN				S	**Sn**	**12 02 45.1**	**-0.2**
	comp=N,7.4nm,0.1s,SNR=12						
RSA	**Sarsar**	**1.74**	**137**	P	**Pn**	**12 02 26.0**	**+0.6**
RSA				S	**Sn**	**12 02 46.7**	**-0.3**
RSA	**Sarsar**	**1.74**	**137**	P	**Pn**	**12 02 26.0**	**+0.6**
RSA				S	**Sn**	**12 02 46.7**	**-0.3**
PTEO	**Sao Teotonio**	**1.81**	**320**	⇓*i*Pn	**Pn**	**12 02 27.1**	**+0.8**
PTEO				*e*Sn	**Sn**	**12 02 48.8**	**+0.1**
PTEO				A	A	12 02 55.6	
	comp=N,40nm,0.4s						
PTEO	**Sao Teotonio**	**1.81**	**320**	P	**Pn**	**12 02 27.1**	**+0.8**
PTEO				S	**Sn**	**12 02 48.8**	**+0.1**
	comp=N,20nm,0.4s						
PTEO	**Sao Teotonio**	**1.81**	**320**	P	**Pn**	**12 02 27.1**	**+0.8**
PTEO				*e*Sn	**Sn**	**12 02 48.8**	**+0.1**
MESJ	**Messejana**

PMTG eSn Sn 12 03 18.3 +0.3
PMTG A A 12 03 22.6
comp=N,8.8nm,0.2s
PMTG Montargil 3.00 346 ⇓iPn Pn 12 02 43.9 +1.2
PMTG eSn Sn 12 03 18.3 +0.3
ELGU Los Guajares, 3.02 75 P Pn 12 02 44.7 +1.7
comp=N,1.0nm,0.1s,SNR=7.9
ELGU S Sn 12 03 18.2 -0.4
comp=N,3.2nm,0.3s,SNR=7.9
ELGU Los Guajares, 3.02 75 P Pn 12 02 44.7 +1.7
comp=N,1.0nm,0.1s,SNR=7.9
ELGU S Sn 12 03 18.2 -0.4
comp=N,3.2nm,0.3s,SNR=7.9
ALMR Almeirim 3.16 341 eP Pn 12 02 46.3 +1.3
ALMR eS Sn 12 03 21.2 -0.9
ALMR AML AML 12 03 23.8
comp=N,19nm,0.2s
ALMR Almeirim 3.16 341 ePn Pn 12 02 46.3 +1.3
ALMR eSn Sn 12 03 22.5 +0.4
ALMR A A 12 03 29.5
comp=N,14nm,0.7s
ALMR Almeirim 3.16 341 P Pn 12 02 46.3 +1.3
ALMR S Sn 12 03 21.2 -0.9
comp=N,9.4nm,0.2s
ALMR Almeirim 3.16 341 P Pn 12 02 46.3 +1.3
ALMR S Sn 12 03 21.2 -0.9
comp=N,9.4nm,0.2s
ALMR eSn Sn 12 03 22.5 +0.4
PMAFR Mafra 3.21 331 ePn Pn 12 02 47.0 +1.3
PMAFR eSn Sn 12 03 23.7 +0.3
PMAFR A A 12 03 25.2
comp=N,49nm,0.2s
PMAFR Mafra 3.21 331 P Pn 12 02 47.0 +1.3
comp=N,12nm,0.1s,SNR=12
PMAFR S Sn 12 03 23.6 +0.2
comp=N,54nm,0.2s,SNR=13
PMAFR Mafra 3.21 331 P Pn 12 02 47.0 +1.3
comp=N,12nm,0.1s,SNR=12
PMAFR eSn Sn 12 03 23.7 +0.3
EQUE Quentar 3.25 70 P Pn 12 02 48.2 +2.0
comp=N,1.3nm,0.2s,SNR=7.9
EQUE S Sn 12 03 24.3 0.0
comp=N,1.8nm,0.2s,SNR=5.2
EQUE Quentar 3.25 70 P Pn 12 02 48.2 +2.0
comp=N,1.3nm,0.2s,SNR=7.9
EQUE S Sn 12 03 24.3 0.0
comp=N,1.8nm,0.2s,SNR=5.2
PMRV Marv??o 3.26 358 ePn Pn 12 02 47.5 +1.1
PMRV eSn Sn 12 03 24.0 -0.6
PMRV A A 12 03 27.1
comp=N,12nm,0.3s
PMRV Marv??o 3.26 358 P Pn 12 02 47.5 +1.1
PMRV S Sn 12 03 24.0 -0.6
comp=N,12nm,0.3s
PMRV Marv??o 3.26 358 P Pn 12 02 47.5 +1.1
PMRV S Sn 12 03 24.0 -0.6
comp=N,12nm,0.3s
CZD Col de Zad 3.62 149 P Pn 12 02 51.8 +0.2
CZD S Sn 12 03 31.5 -2.3
CZD Col de Zad 3.62 149 P Pn 12 02 51.8 +0.2
CZD S Sn 12 03 31.5 -2.3
PCBR Castelo Branco 3.67 357 ePn Pn 12 02 53.2 +1.2
PCBR eSn Sn 12 03 34.0 -0.7
PCBR A A 12 03 34.7
comp=N,8.0nm,0.3s
PCBR Castelo Branco 3.67 357 P Pn 12 02 53.2 +1.2
PCBR S Sn 12 03 34.0 -0.7
comp=N,4.0nm,0.3s
PCBR Castelo Branco 3.67 357 P Pn 12 02 53.2 +1.2
PCBR S Sn 12 03 34.0 -0.7
comp=N,4.0nm,0.3s
EQES Quesada 3.74 63 P Pn 12 02 54.6 +1.6
comp=N,0.8nm,0.2s,SNR=7.9
EQES S Sn 12 03 34.9 -1.5
comp=N,1.4nm,0.1s,SNR=7.9
EQES Quesada 3.74 63 P Pn 12 02 54.6 +1.6
comp=N,0.8nm,0.2s,SNR=7.9
EPLA Plasencia 4.01 13 P Pn 12 02 57.6 +1.0
comp=N,11nm,0.2s,SNR=18
EPLA S Sn 12 03 41.6 -1.4
comp=N,22nm,0.2s,SNR=13
EPLA Plasencia 4.01 13 P Pn 12 02 57.6 +1.0
comp=N,11nm,0.2s,SNR=18
PAB San Pablo 4.09 33 P Pn 12 02 59.0 +1.2
comp=N,1.4nm,0.2s,SNR=7.9
PAB S Sn 12 03 41.5 -3.6
comp=N,0.7nm,0.1s,SNR=7.9
PAB San Pablo 4.09 33 P Pn 12 02 59.0 +1.2
comp=N,1.4nm,0.2s,SNR=7.9
MTE Manteigas 4.24 357 ePn Pn 12 03 01.2 +1.4
MTE eSn Sn 12 03 45.8 -2.9
MTE A A 12 03 51.4
comp=N,12nm,0.3s
MTE Manteigas 4.24 357 P Pn 12 03 01.2 +1.4
MTE S Sn 12 03 45.8 -2.9
comp=N,6.1nm,0.3s
MTE Manteigas 4.24 357 P Pn 12 03 01.2 +1.4
MTE eSn Sn 12 03 45.8 -2.9
SESP Santiago Espad 4.25 61 S Sn 12 03 47.8 -1.3
comp=N,4.6nm,0.2s,SNR=7.9
ESDC Sonseca Array 4.37 36 P Pn 12 03 03.3 +1.7
comp=N,6.5nm,0.2s,baz=222,slow=13,SNR=15
ESDC S Sn 12 03 48.7 -3.3
comp=N,2.3nm,0.3s,baz=220,slow=23,SNR=9.9
ESDC Sonseca Array 4.37 36 P Pn 12 03 03.3 +1.7
comp=N,6.5nm,0.2s,SNR=15
OUK Oukaimeden 4.97 186 P Pn 12 03 09.7 -0.5
OUK S Sn 12 04 01.7 -5.4
OUK Oukaimeden 4.97 186 P Pn 12 03 09.6 -0.5
OUK S Sn 12 04 01.7 -5.4
MVO Moncorvo 5.00 2 ePn Pn 12 03 11.4 +1.1
MVO eSn Sn 12 04 05.7 -1.7
MVO A A 12 04 10.8
comp=N,8.3nm,0.6s
MVO Moncorvo 5.00 2 P Pn 12 03 11.4 +1.1
comp=N,6.3nm,0.2s,SNR=16
MVO S Sn 12 04 05.1 -2.3
comp=N,4.3nm,0.2s,SNR=7.9
MVO Moncorvo 5.00 2 P Pn 12 03 11.4 +1.1
comp=N,6.3nm,0.2s,SNR=16
MVO eSn Sn 12 04 05.7 -1.7
ETOB Tobarra 5.18 60 P Pn 12 03 13.4 +0.6
comp=N,2.2nm,0.1s,SNR=7.9
ETOB S Sn 12 04 09.4 -2.6
comp=N,1.4nm,0.1s,SNR=7.9
POLO Lamas de Olo 5.22 356 ePn Pn 12 03 14.2 +0.9
POLO eSn Sn 12 04 09.7 -3.2
POLO A A 12 04 13.5
comp=N,2.6nm,0.4s
POLO Lamas de Olo 5.22 356 ePn Pn 12 03 14.2 +0.9
POLO eSn Sn 12 04 09.7 -3.2
PCAB Cabril 5.57 354 ePn Pn 12 03 19.7 +1.6
PCAB Cabril 5.57 354 P Pn 12 03 19.7 +1.6
PCAB Cabril 5.57 354 P Pn 12 03 19.7 +1.6
PBRG Braganca 5.65 4 ePn Pn 12 03 21.0 +1.8
PBRG eSn Sn 12 04 21.7 -1.7
PBRG A A 12 04 24.6
comp=N,2.8nm,0.3s
PBRG Braganca 5.65 4 P Pn 12 03 21.0 +1.8
PBRG S Sn 12 04 21.7 -1.7
comp=N,1.4nm,0.3s
PBRG Braganca 5.65 4 P Pn 12 03 21.0 +1.8
ELOB Lobios 5.73 354 P Pn 12 03 20.1 -0.2
comp=N,2.0nm,0.2s,SNR=7.5
ELOB S Sn 12 04 22.0 -3.5
comp=N,2.1nm,0.1s,SNR=6.2
ELOB Lobios 5.73 354 P Pn 12 03 20.1 -0.2
comp=N,2.0nm,0.2s,SNR=7.5
PGAV Gavieira, Arco 5.85 353 ePn Pn 12 03 23.5 +1.6
PGAV eSn Sn 12 04 28.0 -0.4
PGAV A A 12 04 30.3
comp=N,4.0nm,0.5s
EAGO Agolada(Pontev 6.66 355 P Pn 12 03 33.4 +0.3
comp=N,0.5nm,0.2s,SNR=7.9
EAGO Agolada(Pontev 6.66 355 P Pn 12 03 33.4 +0.3
comp=N,0.5nm,0.2s,SNR=7.9
EMOS Mosqueruela 6.79 50 S Sn 12 04 47.8 -4.0
comp=N,1.2nm,0.2s,SNR=7.9
EARI Arriondas 7.30 12 P Pn 12 03 42.8 +0.9
comp=N,0.4nm,0.2s,SNR=7.9
EARI S Sn 12 04 59.7 -4.4
comp=N,0.4nm,0.3s,SNR=7.9
EARI Arriondas 7.30 12 P Pn 12 03 42.8 +0.9
comp=N,0.4nm,0.2s,SNR=7.9

*ISCJB **20** 12:09:31.3±1.2, 38°.72N±0°.06×43°.6E±0°.1, h12km±11km, Error ellipse: s-maj=14.1km s-min=9.6km az=7.6*
*CSEM **20** 12:09:31.2, 38°.72N×43°.60E, h7km, ML2.5*
*DDA **20** 12:09:31.2, 38°.72N×43°.60E, h7km, Ml2.5*
*ATA **20** 12:09:33.5±1.9, 38°.71N×42°.82E, h54km±47km, ML2.9, MW3.0*
ISC 20 12:09:30.8±1.4, **38°.75N**±0°.05×**43°.60E**±0°.04, **h15**km±10km, **n16**, σ0°.77/30, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VMUR	**Van-Muradiye**	**0.24**	**354**	*i* P	**Pg**	**12 09 36.2**	**-0.1**
VMUR				*i* S	**Sb**	**12 09 41.9**	**+0.6**
VMUR	**Van-Muradiye**	**0.24**	**354**	P	**Pg**	**12 09 36.2**	**-0.1**
VMUR				S	**Sb**	**12 09 41.9**	**+0.6**
CLDR	**Caldiran**	**0.47**	**32**	*i* P	**Pg**	**12 09 39.9**	**-0.3**
CLDR				*i* S	**Sb**	**12 09 48.9**	**+1.2**
CLDR	**Caldiran**	**0.47**	**32**	P	**Pg**	**12 09 39.9**	**-0.3**
CLDR				S	**Sb**	**12 09 48.9**	**+1.2**
GEVA	**Gevas**	**0.61**	**225**	*e*P	**Pn**	**12 09 44.6**	**-0.6**
GEVA				*e*S	**Sn**	**12 09 55.5**	**+0.7**
GEVA	**Gevas**	**0.61**	**225**	*i* P	**Pn**	**12 09 43.6**	**-1.5**
GEVA				*i* S	**Sn**	**12 09 55.7**	**+0.9**
GEVA	**Gevas**	**0.61**	**225**	P	**Pn**	**12 09 43.6**	**-1.5**
GEVA				S	**Sn**	**12 09 55.7**	**+0.9**
ADCV	**BITLIS_Adilcev**	**0.69**	**275**	*i* P	**Pb**	**12 09 44.8**	**+0.1**
ADCV				*i* S	**Sb**	**12 09 54.7**	**+0.6**
ADCV	**BITLIS_Adilcev**	**0.69**	**275**	P	**Pb**	**12 09 44.8**	**+0.1**
ADCV				S	**Sb**	**12 09 54.7**	**+0.6**
TUTA	**Tutak**	**0.90**	**317**	*e*P	**Pg**	**12 09 48.0**	**-0.3**
TUTA				*e*S	**Sb**	**12 10 00.7**	**+0.6**
TUTA				IAML		12 10 04.6	
	comp=Z,65nm,0.5s						
TUTA	**Tutak**	**0.90**	**317**	*i* P	**Pg**	**12 09 47.9**	**-0.3**
TUTA				*i* S	**Sb**	**12 10 00.5**	**+0.4**
TUTA	**Tutak**	**0.90**	**317**	P	**Pg**	**12 09 47.9**	**-0.3**
TUTA				S	**Sb**	**12 10 00.5**	**+0.4**
EATA	**Eleskirt**	**1.41**	**323**	*e*P	**Pb**	**12 09 57.1**	**+0.1**
EATA				*e*S	**Sn**	**12 10 13.3**	**-1.4**
EATA				IAML		12 10 20.0	
	comp=Z,3.9nm,0.6s						
EATA	**Eleskirt**	**1.41**	**323**	*i* P	**Pg**	**12 09 58.3**	**+0.3**
EATA				*i* S	**Sg**	**12 10 16.9**	**+0.5**
EATA	**Eleskirt**	**1.41**	**323**	P	**Pg**	**12 09 58.3**	**+0.3**
EATA				S	**Sg**	**12 10 16.9**	**+0.5**
BNGL	**BINGOL**	**1.93**	**277**	*e*P	Pn	12 09 57.4	-5.9

IDC 20 12:28:23.6±999.0, **47°.44N**×**47°.33E**, **h0**km, **Error ellipse: s-maj=483.0km s-min=196.6km az=132.0, Ukraine-Moldova-Southwestern Russia region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASONI**	**1.17**	**330**	*i*		13 35 50.0	
	baz=142,slow=322,SNR=0.7						
I26DE	**FREYUNG INFRAS**	**22.37**	**286**	*i*		14 46 20.0	
	baz=82,slow=318,SNR=0.7						
I48TN	**KESRA INFRASON**	**30.40**	**261**	*i*		15 34 10.0	
	baz=55,slow=292,SNR=0.3						

*ISCJB **20** 12:31:28.4±0.2, 2°.34N±0°.02×76°.40W±0°.02, h163km±1km, mb4.6/220, Error ellipse: s-maj=3.5km s-min=3.1km az=36.0*
*RSNC **20** 12:31:29.8±0.9, 2°.36N×76°.48W, h155km±4km, ML4.2, Mw4.4*
*NEIC **20** 12:31:29.4±0.4, 2°.25N×76°.35W, h158km±4km, mb4.7/180, Error ellipse: s-maj=4.1km s-min=3.2km az=53.0*
NEIC Felt at Armenia.
*IDC **20** 12:31:30.7±1.2, 2°.29N×76°.30W, h171km±10km, mb4.2/37, mb1 4.2/44, mb1mx4.2/64, mbtmp4.7/44, MS3.0/5, Ms1 3.1/5, ms1mx2.7/45, Error ellipse: s-maj=10.8km s-min=7.7km az=50.0*
ISC 20 12:31:29.1±0.5, **2°.32N**±0°.03×**76°.43W**±0°.04, **h156**km±4km, **n712**, σ1°.04/746, **mb4.7**/220, **5C-7D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOTA	**Rioblanco**	**0.25**	**224**	⇓*i*P	**Pn**	**12 31 51.0**	**+0.1**
SOTA				*i*		12 31 53.2	
	comp=Z,15μm,0.9s						
SOTA				*e*S	**Sn**	**12 32 07.5**	**0.0**
POPC	**Popayan, Colom**	**0.33**	**312**	⇓*i*P	**Pn**	**12 31 50.6**	**-0.2**
POPC				*e*S	**Sn**	**12 32 07.4**	**+0.1**
POPC				*i*		12 32 09.4	
	comp=Z,3μm,0.5s						
MARP	**Paez Belalcaza**	**0.71**	**42**	*i* P	**Pn**	**12 31 53.1**	**+0.4**
MARP				*i*		12 31 53.8	
	comp=Z,1μm,0.5s						
MARP				*e*S	**Sn**	**12 32 11.0**	**+0.3**
CRUC	**La Cruz**	**0.91**	**215**	*i* P	**Pn**	**12 31 55.0**	**+0.8**
BETC	**Betania**	**1.05**	**70**	*i* P	**Pn**	**12 31 55.6**	**+0.6**
BETC				*e*S	**Sn**	**12 32 14.7**	**-0.1**
FLOC	**Florencia**	**1.07**	**133**	⇓*i*P	**Pn**	**12 31 54.5**	**-0.6**
FLOC				*i*		12 31 55.4	
	comp=Z,3μm,0.2s						
HORQ	**Saladito**	**1.17**	**351**	*i* P	**Pn**	**12 31 55.9**	**-0.5**
HORQ				*i*		12 31 56.6	
	comp=Z,2μm,0.5s						
HORQ				*e*S	**Sn**	**12 32 16.3**	**-0.9**
CPAS2	**Pasto**	**1.36**	**217**	*e*P	**Pn**	**12 31 58.3**	**+0.1**
CPAS2				*e*S	**Sn**	**12 32 21.0**	**+0.6**
GCUF	**Volcan Galeras**	**1.42**	**220**	⇓*i*P	**Pn**	**12 31 58.8**	**-0.1**
GCUF				*i*		12 31 59.7	
	comp=Z,2μm,0.5s						
GCUF				*e*S	**Sn**	**12 32 21.7**	**0.0**
YOTC	**Yotoco, Valle**	**1.66**	**3**	⇑*i*P	**Pn**	**12 32 00.4**	**-0.6**
YOTC				*i*		12 32 01.4	
	comp=Z,2μm,0.3s						
YOTC				*e*S	**Sn**	**12 32 24.2**	**-1.3**
GRGC	**Isla de Gorgon**	**1.86**	**291**	*e*P	**Pn**	**12 32 02.0**	**-1.1**
GRGC				*e*S	**Sn**	**12 32 27.9**	**-1.3**
CMBC	**Cumbal**	**1.95**	**226**	*e*P	**Pn**	**12 32 05.6**	**+1.1**
PRAC	**Prado**	**2.08**	**48**	*e*Pn	**Pn**	**12 32 06.5**	**+1.0**
PRAC	**Prado**	**2.08**	**48**	⇑*i*P	**Pn**	**12 32 06.4**	**+0.8**
ANIL	**Santa Ana**	**2.39**	**25**	*e*P	**Pn**	**12 32 09.3**	**-0.2**
ANIL				*e*S	**Sn**	**12 32 40.7**	**0.0**
ANIL				*i*		12 32 47.7	
	comp=Z,5μm,0.4s						
PLMC	**San Jos´´ del**	**2.58**	**3**	*e*P	**Pn**	**12 32 11.6**	**0.0**
PLMC				*e*S	**Sn**	**12 32 43.6**	**-0.8**
OTAV	**Otavalo**	**2.89**	**224**	*e*Pn	**Pn**	**12 32 15.9**	**+0.1**
OTAV	**Otavalo**	**2.89**	**224**	⇓*i*P	**Pn**	**12 32 15.7**	**-0.2**
OTAV				*e*S	**Sn**	**12 32 52.9**	**+1.0**
OTAV				*i*		12 32 59.9	
	comp=Z,331nm,0.4s						
GUYC	**Guyana, Colomb**	**3.07**	**20**	*e*P	**Pn**	**12 32 18.4**	**+0.3**
GUYC				*e*S	**Sn**	**12 32 55.9**	**-0.1**
GUYC				*i*		12 33 03.9	
	comp=Z,734nm,0.5s						
ROSC	**El Rosal**	**3.27**	**40**	P	**Pn**	**12 32 22.4**	**+1.8**
	comp=Z,38nm,0.3s,baz=114,slow=2.0,SNR=41						
ROSC				S	**Sn**	**12 33 02.3**	**+1.8**
	comp=Z,5.1nm,0.3s,baz=342,slow=20,SNR=3.7						
ROSC	**El Rosal**	**3.27**	**40**	*e*P	**Pn**	**12 32 21.8**	**+1.2**
ROSC				*i*		12 32 24.3	
	comp=Z,169nm,0.3s						
CHIC	**Chingaza**	**3.54**	**49**	*e*P	**Pn**	**12 32 25.2**	**+1.2**
CHIC				*e*S	**Sn**	**12 33 07.1**	**+0.5**
NORC	**Norcasia**	**3.58**	**26**	*i* P	**Pn**	**12 32 25.0**	**+0.7**
NORC				*e*S	**Sn**	**12 33 06.7**	**-0.3**
HELC	**Santa Helena**	**3.95**	**13**	*e*Pn	**Pn**	**12 32 29.6**	**+0.3**
HELC				*e*Sn	**Sn**	**12 33 15.4**	**-0.7**
HELC	**Santa Helena**	**3.95**	**13**	⇑*i*P	**Pn**	**12 32 28.9**	**-0.5**
HELC				*e*S	**Sn**	**12 33 15.8**	**-0.3**
HELC				*i*		12 33 21.3	
	comp=Z,355nm,0.4s						
PTBC	**PUERTO BERRIO,**	**4.63**	**25**	⇑*i*P	**Pn**	**12 32 37.5**	**-0.3**
PTBC				*e*S	**Sn**	**12 33 30.2**	**-1.3**
PTBC				*i*		12 33 50.6	
	comp=Z,85nm,0.7s						
RUSC	**La Rusia**	**4.88**	**43**	*e*Pn	**Pn**	**12 32 43.8**	**+2.3**
ZARC	**Zaragoza, Cauc**	**5.37**	**17**	⇑*i*P	**Pn**	**12 32 46.8**	**-0.8**
ZARC				*e*S	**Sn**	**12 33 47.8**	**-1.3**
ZARC				*i*		12 33 50.3	
	comp=Z,294nm,0.4s						
BCIP	**Isla Barro Col**	**7.60**	**334**	*e*Pn	**Pn**	**12 33 17.8**	**+0.5**
SDV	**Santo Domingo**	**8.71**	**41**	P	**Pn**	**12 33 31.5**	**-0.7**
	comp=Z,10nm,0.3s,baz=257,slow=13,SNR=38						
SDV				S	**Sn**	**12 35 07.7**	**-1.5**
	comp=Z,4.1nm,0.3s,baz=44,slow=14,SNR=6.6						
SDV	**Santo Domingo**	**8.71**	**41**	*e*Pn	**Pn**	**12 33 29.7**	**-2.5**
SDV				S	**Sn**	**12 35 07.7**	**-1.5**
JTS	**JuntasAbangare**	**11.59**	**313**	P	**Pn**	**12 34 12.9**	**+2.8**
	comp=Z,1.8nm,0.3s,baz=171,slow=5.8,SNR=8.6						
JTS				LR	LR	12 38 12.6	
	comp=Z,70nm,20.0s,baz=191,slow=34						
JTS	**JuntasAbangare**	**11.59**	**313**	*e*Pn	**Pn**	**12 34 09.3**	**-0.7**
	comp=Z,13nm,0.8s						
ESPN	**Las Esperanzas**	**12.53**	**322**	*e*Pn	**Pn**	**12 34 22.3**	**+0.1**
PCRV	**Puerto La Cruz**	**14.08**	**56**	P	**Pn**	**12 34 43.1**	**+1.2**
	comp=Z,5.3nm,0.3s,baz=295,slow=2.4,SNR=11						
NNA	**Nana**	**14.22**	**182**	P	**P**	**12 34 46.2**	**-0.2**
	comp=Z,5.0nm,0.3s,baz=14,slow=13,SNR=6.9						
NNA				LR	LR	12 41 59.1	
	comp=Z,36nm,20.6s,baz=345,slow=44						
NNA	**Nana**	**14.22**	**182**	*e*Pn	**Pn**	**12 34 42.0**	**-1.7**
ESTN	**Estel**	**14.54**	**318**	*e*Pn	**Pn**	**12 34 48.4**	**+0.5**
PTGA	**Pitinga**	**16.74**	**100**	P	**Pn**	**12 35 15.2**	**+0.6**
	comp=Z,1.7nm,0.3s,baz=271,slow=12,SNR=16						
PTGA				LR	LR	12 42 53.6	
	comp=Z,49nm,20.9s,baz=2.0,slow=41						
PTGA	**Pitinga**	**16.74**	**100**	*e*P	**P**	**12 35 13.9**	**-0.4**
	comp=Z,8.8nm,0.8s						
BANI	**BANI**	**17.05**	**20**	*e*P	**P**	**12 35 18.0**	**+0.3**
TRN	**Trinidad (W)**	**17.06**	**60**	*e*	**Pn**	**12 35 19.5**	**+0.9**
SAML	**Samuel**	**17.31**	**130**	*e*P	**P**	**12 35 19.5**	**-1.0**
	comp=Z,52nm,0.5s						
GRHS	**Sauteurs**	**17.65**	**55**	*e*	**Pn**	**12 35 29.1**	**+3.5**
CRPR	**Cabo Rojo, PR**	**18.08**	**30**	*e*P	**P**	**12 35 29.0**	**+0.1**
	comp=Z,81nm,0.8s						
TOSP	**Speyside**	**18.12**	**60**	*e*	**P**	**12 35 29.1**	**-0.3**
MPR	**Mayaguez**	**18.24**	**29**	*e*P	**P**	**12 35 31.1**	**+0.5**
	comp=Z,52nm,0.6s						
ICMP	**Isla Caja de M**	**18.27**	**31**	*e*P	**Pn**	**12 35 36.3**	**+3.4**
OBIP	**Obispado Ponce**	**18.36**	**31**	*e*P	**P**	**12 35 32.8**	**+0.8**
	comp=Z,60nm,0.6s						
AOPR	**Arecibo Observ**	**18.54**	**30**	*e*P	**P**	**12 35 34.8**	**+0.8**
	comp=Z,134nm,0.6s						
SVB	**Belmont**	**18.55**	**53**	*e*	**Pn**	**12 35 36.0**	**-0.2**
SJG	**San Juan**	**18.66**	**32**	P	**P**	**12 35 35.8**	**+0.5**
	comp=Z,15nm,0.3s,baz=202,slow=10,SNR=16						
SJG	**San Juan**	**18.66**	**32**	*e*P	**Pn**	**12 35 36.4**	**-1.0**
	comp=Z,162nm,0.6s						
HUMP	**Col San Antoni**	**18.84**	**33**	*e*P	**P**	**12 35 38.0**	**+0.8**
	comp=Z,97nm,0.6s						
CBYP	**Canovanas**	**18.95**	**32**	*e*P	**Pn**	**12 35 39.7**	**-1.2**
	comp=Z,419nm,0.6s						
MTP	**Monte Pirata**	**18.97**	**34**	*e*P	**P**	**12 35 38.5**	**-0.1**
	comp=Z,88nm,0.8s						
CDVI	**St. Croix**	**19.14**	**36**	*e*P	**P**	**12 35 40.9**	**+0.4**
	comp=Z,191nm,0.8s						
TRMF	**Trois Ilets**	**19.44**	**51**	*e*P	**P**	**12 35 43.1**	**-0.7**
ZAM	**Aeronautique**	**19.48**	**50**	*e*P	**Pn**	**12 35 46.7**	**-0.4**
FDF	**Fort de France**	**19.48**	**50**	*e*P	**P**	**12 35 43.8**	**-0.5**
	comp=Z,113nm,1.1s						
FDF	**Fort de France**	**19.48**	**50**	*e*P	**Pn**	**12 35 46.4**	**-0.8**
PCM	**Pelee Case Pet**	**19.49**	**50**	*e*P	**Pn**	**12 35 46.6**	**-0.6**
STVI	**Saint Thomas**	**19.51**	**34**	*e*P	**P**	**12 35 43.6**	**-0.9**
	comp=Z,86nm,0.6s						
GBMF	**Grand Be**	**19.51**	**50**	*e*P	**Pn**	**12 35 46.5**	**-1.1**
LPMF	**Morne Lapointe**	**19.53**	**51**	*e*P	**P**	**12 35 45.2**	**+0.5**
BAMF	**Morne Balai**	**19.54**	**50**	*e*P	**P**	**12 35 44.4**	**-0.5**
MVM	**Montagne Vaucl**	**19.57**	**51**	*e*P	**P**	**12 35 45.1**	**-0.1**
GRTK	**Grand Turk**	**19.76**	**15**	*e*P	**P**	**12 35 47.9**	**+0.8**
ABVI	**Anegada Island**	**20.16**	**35**	*e*P	**P**	**12 35 51.9**	**+0.4**
	comp=Z,1μm,2.0s						
LPAZ	**La Paz**	**20.22**	**156**	P	**P**	**12 35 51.1**	**-1.8**
	comp=Z,13nm,0.5s,baz=330,slow=8.3,SNR=54						
LPAZ				LR	LR	12 45 01.2	
	comp=Z,57nm,20.3s,baz=320,slow=40						
LPAZ	**La Paz**	**20.22**	**156**	*e*P	**P**	**12 35 50.8**	**-2.0**
	comp=Z,18nm,0.8s						
SMRT	**St. Maarten**	**20.40**	**39**	*e*P	**P**	**12 35 54.9**	**+0.8**
	comp=Z,44nm,0.4s						
ANWB	**Willy Bob**	**20.96**	**42**	*e*P	**P**	**12 35 58.9**	**-1.1**
	comp=Z,68nm,0.8s						
ANWB	**Willy Bob**	**20.96**	**42**	*e*P	**P**	**12 35 58.5**	**-1.6**
MNMC	**Minye Minye**	**22.35**	**163**	*e*P	**P**	**12 36 13.5**	**-1.2**
	comp=Z,58nm,0.7s						
CMIG	**Matias Romero**	**23.33**	**310**	P	**P**	**12 36 24.6**	**+1.0**
	comp=Z,1.9nm,0.4s,baz=135,slow=5.7,SNR=3.5						
SIV	**San Ignacio**	**23.70**	**141**	P	**P**	**12 36 25.7**	**-1.2**
	comp=Z,9.5nm,0.4s,baz=333,slow=9.9,SNR=76						
PB01	**IPOC Station P**	**24.19**	**164**	*e*P	**P**	**12 36 31.1**	**-0.3**
	comp=Z,38nm,0.8s						
PB04	**IPOC Station P**	**25.26**	**166**	*e*P	**P**	**12 36 41.3**	**+0.2**
	comp=Z,109nm,1.1s						
GO02	**Mina Guanaco**	**28.11**	**167**	*e*P	**P**	**12 37 07.6**	**+0.8**
	comp=Z,10.0nm,0.8s						
453A	**Whigham**	**29.35**	**346**	P	**P**	**12 37 19.1**	**+1.8**
	baz=164						
356A	**Blackshear**	**29.35**	**350**	P	**P**	**12 37 18.9**	**+1.5**
	baz=168						
452A	**Marianna**	**29.56**	**345**	P	**P**	**12 37 21.1**	**+1.9**
	baz=162						
353A	**Camilla**	**29.80**	**347**	P	**P**	**12 37 22.6**	**+1.3**
	baz=164						
255A	**Hazlehurst**	**30.00**	**350**	*e*P	**P**	**12 37 23.9**	**+0.8**
	comp=Z,56nm,0.5s						
351A	**Pinckard**	**30.08**	**344**	P	**P**	**12 37 25.6**	**+1.8**
	baz=161						
254A	**Abbeville**	**30.17**	**348**	P	**P**	**12 37 26.3**	**+1.7**
	baz=166						
252A	**Lumpkin**	**30.54**	**346**	P	**P**	**12 37 29.3**	**+1.5**
	baz=164						
156A	**Sylvania**	**30.55**	**352**	P	**P**	**12 37 29.9**	**+1.9**
	baz=170						
349A	**Repton**	**30.61**	**342**	P	**P**	**12 37 30.4**	**+1.9**
	baz=158						
154A	**Montrose**	**30.78**	**349**	P	**P**	**12 37 31.6**	**+1.6**
	baz=167						
251A	**Midway**	**30.80**	**345**	P	**P**	**12 37 31.6**	**+1.4**
	baz=162,SNR=7.1						
250A	**Grady**	**30.93**	**344**	P	**P**	**12 37 32.6**	**+1.4**
	baz=161						
249A	**Camden**	**31.17**	**342**	P	**P**	**12 37 34.8**	**+1.4**
	baz=159						
152A	**Waverly Hall**	**31.18**	**346**	P	**P**	**12 37 35.0**	**+1.4**
	baz=164						
152A	**Waverly Hall**	**31.18**	**346**	*e*P	**P**	**12 37 35.0**	**+1.4**
	comp=Z,28nm,1.1s						
151A	**Opelika**	**31.19**	**345**	P	**P**	**12 37 34.9**	**+1.3**
	baz=163,SNR=5.4						
Z54A	**Sparta**	**31.34**	**350**	P	**P**	**12 37 36.1**	**+1.2**
	baz=168						
150A	**Eclectic**	**31.45**	**344**	P	**P**	**12 37 37.1**	**+1.2**
	baz=161,SNR=5.0						
248A	**Dixon Mills**	**31.48**	**341**	P	**P**	**12 37 37.9**	**+1.8**
	baz=158						
Z53A	**Monticello**	**31.52**	**349**	P	**P**	**12 37 37.9**	**+1.4**
	baz=166,SNR=5.8						
Z52A	**Williamson**	**31.61**	**347**	P	**P**	**12 37 38.9**	**+1.6**
	baz=165,SNR=9.2						
GOGA	**Godfrey**	**31.63**	**349**	P	**P**	**12 37 38.7**	**+1.3**
	baz=166						
GOGA	**Godfrey**	**31.63**	**349**	*e*P	**P**	**12 37 38.8**	**+1.3**
	comp=Z,14nm,0.8s						
149A	**Jones**	**31.66**	**343**	P	**P**	**12 37 38.6**	**+1.0**
	baz=160						
Z51A	**Fran

244A	Avery, Jackson baz=153	32.47 337	P	P	12 37 45.6 +0.8
Y50A	Piedmont baz=162	32.59 346	P	P	12 37 46.9 +1.0
Z47A	Carrollton baz=158	32.60 342	P	P	12 37 46.5 +0.6
Z48A	Northport baz=159	32.61 343	P	P	12 37 46.7 +0.7
X53A	Estanollee baz=167	32.66 349	P	P	12 37 48.0 +1.6
145A	Houston Renfro baz=154	32.69 339	P	P	12 37 47.2 +0.5
Y49A	Blount Mountai baz=161,SNR=5.9	32.74 345	P	P	12 37 47.8 +0.7
Y49A	Blount Mountai comp=Z,14nm,0.8s	32.74 345	eP	P	12 37 48.1 +1.0
CNNC	Cliffs of the baz=177	32.78 358	P	P	12 37 48.2 +0.7
X52A	Dahlonega baz=166,SNR=7.3	32.87 349	P	P	12 37 49.4 +1.1
Z46A	Louisville baz=156	32.88 340	P	P	12 37 49.4 +1.0
Y48A	Jasper baz=160	33.00 343	P	P	12 37 49.7 +0.3
X51A	Calhoun baz=164	33.03 347	P	P	12 37 50.7 +1.0
BG3	Lake Jocassee comp=Z,15nm,0.5s	33.07 350	eP	P	12 37 52.3 +2.3
X50B	Fort Payne baz=163,SNR=6.1	33.12 346	P	P	12 37 51.4 +1.0
Y47A	UCPARC, Winfie baz=159,SNR=7.1	33.19 342	P	P	12 37 51.8 +0.8
W53A	Cullowhee baz=168,SNR=9.0	33.28 350	P	P	12 37 53.4 +1.5
X49A	Woodville baz=162,SNR=6.9	33.33 345	P	P	12 37 53.2 +0.9
W52A	Murphy baz=166	33.35 349	P	P	12 37 53.7 +1.3
W52A	Murphy comp=Z,16nm,0.6s	33.35 349	eP	P	12 37 54.4 +2.0
X48A	Hartselle baz=160,SNR=7.9	33.47 344	P	P	12 37 54.0 +0.5
X48A	Hartselle comp=Z,14nm,0.6s	33.47 344	eP	P	12 37 54.2 +0.8
Z44A	Pea Ridge, Bel baz=154	33.48 338	P	P	12 37 54.3 +0.7
Y46A	Houston baz=157,SNR=11	33.48 341	P	P	12 37 54.3 +0.7
Y45A	Yeager Farm, C baz=156	33.70 340	P	P	12 37 56.6 +1.2
V53A	Saluda baz=168	33.71 351	P	P	12 37 56.8 +1.2
W50A	Signal Mountai baz=164,SNR=7.1	33.74 347	P	P	12 37 57.2 +1.3
W50A	Signal Mountai comp=Z,26nm,1.0s	33.74 347	eP	P	12 37 57.3 +1.4
X47A	Russelville baz=159	33.76 343	P	P	12 37 56.4 +0.4
CPCT	Cooper Cave comp=Z,13nm,0.6s	33.81 348	eP	P	12 37 58.0 +1.6
141A	Papa Simpson, baz=150	33.87 335	P	P	12 37 57.5 +0.6
W49A	Belvidere baz=162	33.89 345	P	P	12 37 57.8 +0.6
SWET	Sewanee comp=Z,12nm,0.8s	33.90 346	eP	P	12 37 58.4 +1.1
CPUP	Villa Florida comp=Z,1.2nm,0.6s,baz=0.0,slow=7.1,SNR=3.0	33.94 148	P	P	12 37 56.7 -1.0
NATX	Nacogdoches baz=146	33.96 332	P	P	12 37 58.5 +0.8
V52A	Sevierville baz=167	34.01 350	P	P	12 37 59.1 +0.9
Y44A	Strider, Charl baz=155	34.01 339	P	P	12 37 58.8 +0.6
X46A	Booneville baz=158	34.02 342	P	P	12 37 58.5 +0.3
W48A	Pulaski baz=161,SNR=9.9	34.09 345	P	P	12 37 59.6 +0.8
V51A	Loudon baz=166	34.12 348	P	P	12 38 00.4 +1.3
V50A	Pikeville baz=164,SNR=14	34.15 347	P	P	12 38 00.4 +1.1
140A	Cam and Jess, baz=148	34.19 334	P	P	12 38 00.5 +0.8
OXF	Oxford baz=156	34.24 341	P	P	12 38 00.6 +0.5
OXF	Oxford comp=Z,19nm,0.7s	34.24 341	eP	P	12 38 01.0 +0.9
PLAL	Pickwick Lake comp=Z,13nm,0.6s	34.26 343	eP	P	12 38 00.8 +0.5
U53A	Fall Branch baz=169	34.35 351	P	P	12 38 02.2 +1.1
W47A	Westpoint baz=160,SNR=8.6	34.37 344	P	P	12 38 01.6 +0.3
V49A	McMinnville baz=163,SNR=7.7	34.42 346	P	P	12 38 02.4 +0.7
W46A	Michie baz=159	34.49 343	P	P	12 38 02.3 0.0
V48A	Smith Brothers baz=162,SNR=27	34.62 345	P	P	12 38 04.4 +1.0
V48A	Smith Brothers comp=Z,53nm,0.5s	34.62 345	eP	P	12 38 04.5 +1.1
Z40A	Long Farm, Mag baz=149	34.65 335	P	P	12 38 04.2 +0.6
TZTN	Tazewell baz=167	34.69 350	P	P	12 38 05.1 +1.1
W45A	Hickory Valley baz=157	34.76 342	P	P	12 38 04.4 -0.2
V47A	Nunnelly baz=160,SNR=6.4	34.89 344	P	P	12 38 05.8 +0.1
BLA	Blacksburg comp=Z,16nm,0.8s	34.92 354	eP	P	12 38 03.6 -2.4
V46A	Holladay baz=159	35.03 343	P	P	12 38 06.1 -0.9
X42A	Stuttgart baz=153	35.06 338	P	P	12 38 07.3 +0.2
U49A	Red Boiling Sp baz=164	35.11 347	P	P	12 38 08.1 +0.5
T52A	Hallie baz=168	35.14 351	P	P	12 38 09.0 +1.1
JSRW	J. Sargeant Re	35.23 358	eP	P	12 38 10.0 +1.5
Y40A	Okolona baz=150	35.24 335	P	P	12 38 09.1 +0.4
WVT	Waverly baz=160	35.26 344	P	P	12 38 08.4 -0.5
WVT	Waverly comp=Z,13nm,0.7s	35.26 344	eP	P	12 38 08.7 -0.1
U48A	Cassie Pea, Po baz=162,SNR=8.8	35.28 346	P	P	12 38 09.3 +0.2
X41A	Kaden, Bauxite baz=151	35.35 337	P	P	12 38 09.8 +0.2
T50A	Nancy baz=165	35.39 348	P	P	12 38 10.3 +0.3
U47A	Clarksville baz=161,SNR=6.2	35.41 345	P	P	12 38 09.9 -0.2
IP07	Quail comp=Z,14nm,0.7s	35.46 358	eP	P	12 38 12.3 +1.8
X40A	Basin Creek Fa baz=151,SNR=5.5	35.47 336	P	P	12 38 10.6 -0.1
X40A	Basin Creek Fa comp=Z,7.8nm,0.7s	35.47 336	eP	P	12 38 10.9 +0.2
ROC1	El Roble comp=Z,14nm,0.7s	35.47 172	eP	P	12 38 11.6 +0.6
UALR	University of comp=Z,17nm,0.8s	35.53 337	eP	P	12 38 11.4 +0.2
SPRD	Spring Road, M comp=Z,8.9nm,0.9s	35.56 358	eP	P	12 38 13.2 +1.9
IP03	Louisa comp=Z,14nm,0.9s	35.56 358	eP	P	12 38 13.3 +1.9
CVRD	Centerville Ro comp=Z,9.0nm,0.8s	35.60 358	eP	P	12 38 13.7 +2.0
T49A	Edmonton baz=164	35.62 347	P	P	12 38 12.4 +0.5
IP04	Greensprings comp=Z,12nm,0.9s	35.64 358	eP	P	12 38 13.8 +1.8
U45A	Rockin P Farm, baz=159	35.73 343	P	P	12 38 12.4 -0.5
S51A	Beattyville baz=168	35.76 350	P	P	12 38 14.0 +0.9
T48A	Bowling Green baz=163,SNR=8.2	35.82 346	P	P	12 38 13.8 +0.2
MIAR	Mount Ida baz=150	35.83 335	P	P	12 38 13.3 -0.4
MIAR	Mount Ida comp=Z,4.2nm,0.8s	35.83 335	eP	P	12 38 13.7 0.0
W41B	Gary Mavity, V baz=152	35.84 338	P	P	12 38 13.6 -0.2
W41B	Gary Mavity, V	35.84 338	eP	P	12 38 14.0 +0.2
	comp=Z,6.9nm,0.9s				
T47A	Sharon Grove baz=162,SNR=7.6	35.88 345	P	P	12 38 14.3 +0.2
T47A	Sharon Grove comp=Z,24nm,0.7s	35.88 345	eP	P	12 38 14.4 +0.3
U44B	Burton Farm, H baz=158	35.90 342	P	P	12 38 14.3 0.0
WHAR	Woody Hollow comp=Z,12nm,0.8s	35.96 338	eP	P	12 38 15.1 +0.2
X39A	Fountain Ranch baz=149,SNR=14	36.02 335	P	P	12 38 15.3 -0.1
V42A	Cord baz=154,SNR=10	36.09 339	P	P	12 38 15.5 -0.4
T46A	Princeton baz=160,SNR=8.8	36.13 344	P	P	12 38 16.3 0.0
W40A	Ferguson Farm, baz=151	36.18 337	P	P	12 38 16.6 -0.1
W40A	Ferguson Farm, comp=Z,14nm,0.8s	36.18 337	eP	P	12 38 17.4 +0.7
U43A	Rector baz=156	36.26 341	P	P	12 38 17.5 +0.1
S48A	Wiedeman Farm, baz=164	36.27 347	P	P	12 38 17.3 -0.1
V41A	Mountainview baz=153,SNR=9.8	36.35 338	P	P	12 38 17.7 -0.5
W39A	Magazine baz=150,SNR=7.5	36.47 336	P	P	12 38 19.5 +0.3
W39A	Magazine comp=Z,11nm,0.6s	36.47 336	eP	P	12 38 19.5 +0.3
U42A	Revenden baz=155,SNR=9.0	36.53 340	P	P	12 38 19.2 -0.4
V40A	Witts Springs baz=152,SNR=17	36.62 337	P	P	12 38 20.3 -0.2
V40A	Witts Springs comp=Z,27nm,0.8s	36.62 337	eP	P	12 38 20.6 0.0
S46A	Don Dixon Farm baz=161	36.69 345	P	P	12 38 20.6 -0.4
U41A	Viola baz=154,SNR=6.9	36.76 339	P	P	12 38 21.0 -0.6
WCI	Wyandotte Cave baz=163	36.87 347	P	P	12 38 22.5 0.0
WCI	Wyandotte Cave comp=Z,20nm,1.1s	36.87 347	eP	P	12 38 19.4 -3.1
T43A	Greenville baz=156,SNR=14	36.88 341	P	P	12 38 22.3 -0.3
S45A	Carrier Mills baz=160	36.92 344	P	P	12 38 22.4 -0.5
R48A	Northridge Ran baz=164	36.94 348	P	P	12 38 23.1 0.0
V39A	Pettigrew baz=151,SNR=7.1	36.97 336	P	P	12 38 23.3 -0.2
R47A	Wooly Knot Far baz=163	36.98 347	P	P	12 38 23.0 -0.5
T42A	Van Buren baz=155	37.09 340	P	P	12 38 23.7 -0.7
U40A	Yellville baz=152,SNR=13	37.12 338	P	P	12 38 24.4 -0.3
S44A	Carbondale baz=158	37.12 343	P	P	12 38 24.4 -0.3
SIUC	Southern Illin comp=Z,24nm,0.6s	37.13 343	eP	P	12 38 24.9 +0.1
R46A	Gibon Southern baz=161	37.14 345	P	P	12 38 24.0 -0.8
ABTX	Abilene, Hawle baz=139	37.20 327	P	P	12 38 25.5 0.0
S43A	Fulton Ridge, baz=157,SNR=5.3	37.26 342	P	P	12 38 25.3 -0.6
MCWV	Mont Chateau baz=174	37.30 356	P	P	12 38 27.7 +1.6
TXAR	Lajitas Array comp=Z,3.2nm,0.7s,baz=137,slow=8.3,SNR=54	37.31 319	P	P	12 38 28.1 +1.5
TXAR			PcP	PcP	12 40 43.6 +1.0
	comp=Z,3.0nm,0.8s,baz=144,slow=6.1,SNR=15				
TX31	Lajitas Ar. Si	37.31 319	eP	P	12 38 28.0 +1.4
TX31			ePcP	PcP	12 40 43.1 +0.5
TX31			ePcP	PcP	12 40 43.5 +0.9
T41A	Mountain View baz=154,SNR=10	37.33 340	P	P	12 38 25.8 -0.7
U39A	Green Forest baz=151,SNR=9.2	37.38 337	P	P	12 38 26.3 -0.6
R45A	Skylar, Fairfi baz=160	37.41 345	P	P	12 38 26.9 -0.2
HHAR	Hobbs comp=Z,28nm,1.1s	37.48 336	eP	P	12 38 27.4 -0.3
HHAR			ePcP	PcP	12 40 43.2 +0.4
MVL	Millersville comp=Z,16nm,0.8s	37.51 0	eP	P	12 38 30.0 +2.2
Q47A	Bedord North L baz=163,SNR=8.8	37.57 347	P	P	12 38 28.3 -0.1
R44A	Waltonville baz=159	37.59 344	P	P	12 38 28.1 -0.5
S42A	Caledonia baz=156	37.67 341	P	P	12 38 28.0 -1.2
T40A	Mansfield baz=153,SNR=18	37.70 339	P	P	12 38 29.4 -0.1
PAGS	Pennsylvania G comp=Z,13nm,0.8s	37.74 360	eP	P	12 38 31.8 +2.0
FVM	French Village comp=Z,28nm,0.9s	37.75 342	eP	P	12 38 29.7 -0.2
S41A	Jillco Farms, baz=154,SNR=6.2	37.82 340	P	P	12 38 29.8 -0.7
BLO	Blomington comp=Z,38nm,0.6s	37.82 347	eP	P	12 38 31.1 +0.6
O56A	Blue Knob Stat baz=176,SNR=6.3	37.83 357	P	P	12 38 32.5 +1.9
O56A	Blue Knob Stat comp=Z,15nm,0.8s	37.83 357	eP	P	12 38 32.5 +1.9
R43A	Red Bud baz=158,SNR=5.9	37.86 343	P	P	12 38 30.6 -0.3
T39A	Clever baz=152,SNR=5.5	37.91 338	P	P	12 38 30.7 -0.6
TUL1	Leonard baz=147,SNR=8.7	37.93 334	P	P	12 38 31.5 0.0
TUL1	Leonard comp=Z,39nm,0.8s	37.93 334	eP	P	12 38 31.8 +0.2
Q45A	Warren Harvey, baz=161	37.95 345	P	P	12 38 31.1 -0.5
P47A	Martinsville baz=164,SNR=6.2	38.07 348	P	P	12 38 32.6 0.0
CCM	Cathedral Cave baz=156	38.07 341	P	P	12 38 31.8 -0.8
CCM	Cathedral Cave comp=Z,17nm,0.8s	38.07 341	eP	P	12 38 31.9 -0.8
S40A	Lebanon baz=153,SNR=17	38.09 339	P	P	12 38 32.5 -0.4
LUPA	Lehigh Univers comp=Z,2.7nm,1.3s	38.12 1	eP	P	12 38 35.3 +2.3
R42A	Luebbering baz=156,SNR=5.3	38.13 342	P	P	12 38 32.6 -0.5
Q44A	Meyer Farm, Va baz=159	38.19 344	P	P	12 38 32.8 -0.8
ACSO	Alum Creek Sta baz=169	38.20 352	P	P	12 38 34.9 +1.2
O50A	Cable baz=168	38.22 351	P	P	12 38 34.3 +0.5
T38A	Diamond baz=150,SNR=8.7	38.27 337	P	P	12 38 33.7 -0.6
R41A	Rosebud baz=156,SNR=6.9	38.34 341	P	P	12 38 34.1 -0.7
WMOK	Wichita Mounta baz=142	38.38 330	P	P	12 38 34.8 -0.5
WMOK	Wichita Mounta comp=Z,6.3nm,0.7s	38.38 330	eP	P	12 38 35.5 +0.1
P46A	Rosedale baz=162	38.40 347	P	P	12 38 34.7 -0.7
Q43A	New Douglas baz=158	38.41 343	P	P	12 38 34.7 -0.8
N59A	State Game Lan baz=181,SNR=5.4	38.43 1	P	P	12 38 37.4 +1.9
N59A	State Game Lan comp=Z,15nm,0.9s	38.43 1	eP	P	12 38 37.5 +1.9
P45A	Graceland, Par baz=162	38.44 346	P	P	12 38 34.7 -1.0
S39A	Bolivar baz=152,SNR=13	38.47 338	P	P	12 38 35.3 -0.7
S39A	Bolivar comp=Z,15nm,0.8s	38.47 338	eP	P	12 38 35.5 -0.6
S39A			ePcP	PcP	12 40 46.0 +0.1
PAL	Palisades baz=184	38.58 3	P	P	12 38 37.6 +0.8
N54A	Moraine State baz=174,SNR=7.1	38.60 356	P	P	12 38 38.6 +1.6
N54A	Moraine State comp=Z,25nm,0.6s	38.60 356	eP	P	12 38 38.5 +1.4
P44A	Sand Creek, Wi baz=160	38.61 345	P	P	12 38 36.3 -0.8
R40A	Maddies Statio baz=154,SNR=15	38.63 340	P	P	12 38 36.4 -0.9
R40A	Maddies Statio comp=Z,14nm,0.6s	38.63 340	eP	P	12 38 36.6 -0.7
Q42A	Golden Eagle baz=157	38.63 342	P	P	12 38 36.7 -0.6
S38A	Stockton baz=151,SNR=7.3	38.64 338	P	P	12 38 37.2 -0.2
O47A	Sheridan baz=164,SNR=6.1	38.77 348	P	P	12 38 38.1 -0.3
Q41A	Truxton baz=156,SNR=9.6	38.89 342	P	P	12 38 38.9 -0.5
R39A	Chumby, Stover baz=153,SNR=11	38.92 339	P	P	12 38 39.0 -0.8
P43A	Skaggs, Pawnee baz=159	39.01 344	P	P	12 38 39.8 -0.7
KSPA	Keystone Colle comp=Z,16nm,0.6s	39.07 1	eP	P	12 38 42.9 +2.0
SFIN	Lafayette baz=163,SNR=5.2	39.10 347	P	P	12 38 40.4 -0.8
O45A	Potomac baz=162	39.12 346	P	P	12 38 40.1 -1.3
M54A	Oil Creek Stat baz=175,SNR=10	39.12 356	P	P	12 38 42.6 +1.3
M54A	Oil Creek Stat comp=Z,24nm,0.6s	39.12 356	eP	P	12 38 42.8 +1.4
R38A	Fenwick Farm, baz=152,SNR=9.0	39.12 338	P	P	12 38 40.9 -0.5
P42A	Winchester baz=158,SNR=8.0	39.20 343	P	P	12 38 41.2 -0.8
P42A	Winchester comp=Z,22nm,0.6s	39.20 343	eP	P	12 38 41.4 -0.6
Q40A	Laux Farm, Aux baz=155	39.20 341	P	P	12 38 41.1 -0.9
O44A	Mansfield baz=161	39.21 345	P	P	12 38 41.1 -1.0
ALLY	Alegheny Colle comp=Z,36nm,0.8s	39.30 356	eP	P	12 38 44.5 +1.7
P41A	Barry, Barry baz=157,SNR=7.7	39.49 342	P	P	12 38 43.5 -1.0
Q39A	Willow Grove F baz=154,SNR=11	39.55 340	P	P	12 38 44.0 -1.0
N45A	Kentland baz=162	39.64 347	P	P	12 38 44.5 -1.2
P40A	Paris baz=155	39.67 341	P	P	12 38 44.9 -1.0
P40A	Paris comp=Z,13nm,1.1s	39.67 341	eP	P	12 38 45.3 -0.6
P40A			ePcP	PcP	12 40 49.9 +0.2
Q38A	Cooks Store, C baz=152,SNR=7.0	39.70 339	P	P	12 38 45.5 -0.7
BINY	Binghamton comp=Z,16nm,0.6s	39.71 1	eP	P	12 38 48.3 +2.1
N44A	Piper City baz=162	39.74 346	P	P	12 38 45.7 -0.8
ERPA	Erie baz=174	39.75 356	P	P	12 38 47.4 +0.8
ERPA	Erie comp=Z,24nm,0.7s	39.75 356	eP	P	12 38 48.1 +1.6
HDIL	Hopedale baz=160	39.81 345	P	P	12 38 45.9 -1.1
O41A	Passleys Farm, baz=157	39.84 343	P	P	12 38 46.4 -0.9
P39B	Salisbury baz=154,SNR=6.4	39.87 340	P	P	12 38 46.5 -1.0
QUA2	Belchertown comp=Z,15nm,0.6s	39.95 5	eP	P	12 38 49.6 +1.4
MSTX	Muleshoe baz=136,SNR=8.1	39.96 325	P	P	12 38 49.0 +0.4
MSTX	Muleshoe comp=Z,17nm,0.8s	39.96 325	eP	P	12 38 49.2 +0.6
MNTX	Cornudas Mount baz=131,SNR=9.5	39.98 320	P	P	12 38 49.7 +1.1
MNTX	Cornudas Mount comp=Z,18nm,1.4s	39.98 320	eP	P	12 38 49.8 +1.1
AMTX	Amarillo baz=139	40.02 327	P	P	12 38 49.4 +0.4
AMTX	Amarillo comp=Z,7.8nm,0.6s	40.02 327	eP	P	12 38 49.6 +0.6
N43A	Stutzman Famil baz=160	40.13 345	P	P	12 38 48.7 -1.0
WES	Weston comp=Z,13nm,0.7s	40.15 6	eP	P	12 38 52.2 +2.4
O40A	La Belle baz=156,SNR=8.7	40.15 342	P	P	12 38 48.8 -1.1
MMNY	Mt. Morris Dam comp=Z,32nm,1.1s	40.26 358	eP	P	12 38 52.3 +1.6
N42A	Yates City baz=159,SNR=9.1	40.26 344	P	P	12 38 49.8 -0.9
P38A	Dawn baz=153	40.26 339	P	P	12 38 49.4 -1.3
P38A	Dawn comp=Z,18nm,1.1s	40.26 339	eP	P	12 38 50.3 -0.5
M44A	Midewin, Midew baz=162	40.28 346	P	P	12 38 50.0 -0.9
N41A	Harden Midland baz=157	40.38 343	P	P	12 38 50.4 -1.3
N41A	Harden Midland comp=Z,18nm,0.5s	40.38 343	eP	P	12 38 51.0 -0.8
O39A	Kirksville baz=155	40.49 341	P	P	12 38 51.6 -1.0
P37A	Lathrop baz=152,SNR=5.5	40.52 339	P	P	12 38 51.7 -1.2
M43A	Waltham Townsh baz=160	40.55 345	P	P	12 38 51.8 -1.3
O38A	Galt baz=153,SNR=5.8	40.68 340	P	P	12 38 53.4 -0.9
N40A	Mertquake, Sal baz=156	40.76 342	P	P	12 38 53.8 -1.0
KSU1	Kansas State U baz=148	40.98 336	P	P	12 38 56.1 -0.6
N39A	Derby Farms, D baz=155,SNR=7.2	41.04 341	P	P	12 38 56.0 -1.2
N39A	Derby Farms, D comp=Z,21nm,0.6s	41.04 341	eP	P	12 38 56.4 -0.8
L43A	Garden Prairie baz=161	41.20 346	P	P	12 38 56.9 -1.5
N38A	Joes South For baz=154	41.20 341	P	P	12 38 57.3 -1.2
M40A	Post Highland baz=157	41.22 343	P	P	12 38 57.6 -1.0
M39A	Webster baz=156	41.48 342	P	P	12 38 59.8 -0.9
N37A	Lee Faris, Mou baz=153	41.51 340	P	P	12 38 59.8 -1.2
NCB	Newcomb comp=Z,12nm,0.5s	41.52 2	eP	P	12 39 02.4 +1.3
L41A	Preston baz=158,SNR=5.8	41.55 344	P	P	12 38 60.0 -1.3
K43A	Burlington baz=162	41.60 347	P	P	12 39 00.3 -1.4
L40A	Anamosa baz=158,SNR=5.2	41.74 343	P	P	12 39 01.6 -1.2
L40A	Anamosa comp=Z,16nm,0.8s	41.74 343	eP	P	12 39 01.9 -0.9
M38A	Pleasantville baz=154	41.75 341	P	P	12 39 02.0 -0.9
N36A	Muff Farm, Cla baz=152	41.82 339	P	P	12 39 02.3 -1.3
K42A	Prairie Point, baz=160	41.91 346	P	P	12 39 03.1 -1.1
LBNH	Lisbon baz=187	41.94 5	P	P	12 39 05.5 +1.1
LBNH	Lisbon comp=Z,15nm,0.8s	41.94 5	eP	P	12 39 06.2 +1.8
121A	Cookes Peak, D baz=129,SNR=9.8	42.07 319	P	P	12 39 08.1 +2.2
CBKS	Cedar Bluff baz=144	42.10 333	P	P	12 39 06.3 +0.4
LONY	Lake Ozonia baz=183,SNR=5.5	42.16 2	P	P	12 39 07.1 +0.9
LONY	Lake Ozonia comp=Z,9.4nm,0.6s	42.16 2	eP	P	12 39 07.3 +1.1
J43A	Natural Harves baz=162	42.26 347	P	P	12 39 05.8 -1.2
JFWS	Jewell Farm baz=159,SNR=7.9	42.26 345	P	P	12 39 06.3 -0.8
JFWS	Jewell Farm comp=Z,28nm,0.7s	42.26 345	eP	P	12 39 06.3 -0.8
K40A	Colesburg baz=158,SNR=9.8	42.30 344	P	P	12 39 06.1 -1.2
M36A	Felix, Anita baz=152	42.33 339	P	P	12 39 06.6 -1.1
L38A	Oak Wood Farm, baz=155	42.33 342	P	P	12 39 06.2 -1.4
TRQA	Tornquist comp=Z,6.1nm,1.0s	42.34 163	eP	P	12 39 07.8 0.0
SADO	Sadowa comp=Z,16nm,0.5s,baz=198,slow=9.2,SNR=22	42.34 357	P	P	12 39 08.5 +0.8
SADO	Sadowa	42.34 357	eP	P	12 39 08.4 +0.8

comp=Z,35nm,1.0s
J42A **Columbus** 42.36 346 P P 12 39 06.7 -1.1
baz=161
FRNY **Flat Rock** 42.41 3 eP P 12 39 09.6 +1.4
comp=Z,32nm,1.4s
K39A **Oelwein** 42.52 343 P P 12 39 07.6 -1.5
baz=157
PLVO **Plevna** 42.55 359 eP P 12 39 10.5 +1.2
comp=Z,21nm,0.8s
L37A **Phoenix Point,** 42.57 341 P P 12 39 07.9 -1.7
baz=154
J41A **Loganville** 42.62 345 P P 12 39 09.0 -1.0
baz=160,SNR=6.0
I43A **Langenfeld Bro** 42.68 347 P P 12 39 09.6 -0.8
baz=163,SNR=6.0
K38A **Parkersburg** 42.73 342 P P 12 39 09.8 -1.0
baz=156
TASL **Snake Pit, Alb** 42.81 323 P P 12 39 13.5 +1.6
baz=133,SNR=22
ANMO **Albuquerque** 42.81 323 P P 12 39 13.5 +1.6
comp=Z,11nm,0.6s,baz=123,slow=8.9,SNR=49
ANMO **Albuquerque** 42.81 323 eP P 12 39 13.5 +1.6
comp=Z,12nm,0.6s
TASM **ASL Pad, Albuq** 42.81 323 P P 12 39 13.5 +1.6
baz=133,SNR=22
J40A **Soldiers Grove** 42.84 345 P P 12 39 10.8 -0.9
baz=159,SNR=10
I42A **Draeger Farm,** 42.85 347 P P 12 39 11.3 -0.5
baz=162,SNR=8.8
I42A **Draeger Farm,** 42.85 347 eP P 12 39 11.4 -0.4
comp=Z,34nm,0.6s
L36A **Harm Buss Farm** 42.85 340 P P 12 39 11.1 -0.8
baz=153,SNR=6.1
J39A **Decorah** 43.05 344 P P 12 39 12.2 -1.2
baz=157,SNR=24
H43A **Windswept, Lux** 43.16 348 P P 12 39 13.2 -1.0
baz=163
T25A **Trinidad** 43.17 327 P P 12 39 16.6 +1.8
baz=137,SNR=12
T25A **Trinidad** 43.17 327 eP P 12 39 16.7 +1.9
comp=Z,14nm,0.9s
PLCA **Paso Flores** 43.18 173 P P 12 39 14.7 +0.2
comp=Z,5.9nm,0.8s,baz=20,slow=9.2,SNR=11
PKME **Peaks-Kenny Pk** 43.23 7 P P 12 39 15.7 +0.9
baz=190
I41A **Arkdale** 43.24 346 P P 12 39 14.1 -0.8
baz=160
I41A **Arkdale** 43.24 346 eP P 12 39 14.4 -0.5
comp=Z,35nm,1.1s
J38A **Wedel Dairy, R** 43.26 343 P P 12 39 13.9 -1.2
baz=156
K36A **Gilmore City** 43.26 341 P P 12 39 14.6 -0.5
baz=153
I40A **Norwalk** 43.27 345 P P 12 39 14.0 -1.1
baz=159
H42A **Shiocton** 43.36 347 P P 12 39 15.0 -0.8
baz=162
H42A **Shiocton** 43.36 347 eP P 12 39 15.8 0.0
comp=Z,29nm,0.6s
I39A **Houston** 43.48 344 P P 12 39 15.8 -1.1
baz=158,SNR=7.4
I39A **Houston** 43.48 344 eP P 12 39 15.9 -0.9
comp=Z,22nm,0.6s
BGNE **Belgrade** 43.55 336 P P 12 39 16.8 -0.8
baz=148
H41A **Junction City** 43.71 346 P P 12 39 18.1 -0.7
baz=161,SNR=6.1
H41A **Junction City** 43.71 346 eP P 12 39 18.3 -0.4
comp=Z,28nm,1.0s
J36A **Seneca 1, Swea** 43.84 341 eP P 12 39 18.8 -0.9
comp=Z,22nm,0.6s
I38A **Scanlan Farm,** 43.88 343 P P 12 39 19.1 -0.9
baz=157,SNR=15
G43A **Wallace** 43.90 349 P P 12 39 19.2 -0.9
baz=164
H40A **Chili** 43.90 346 P P 12 39 19.5 -0.7
baz=160,SNR=8.3
F45A **CMU Biological** 43.92 351 P P 12 39 20.0 -0.3
baz=167
TUC **Tucson** 43.95 316 P P 12 39 22.5 +1.5
baz=126
TUC **Tucson** 43.95 316 eP P 12 39 22.4 +1.5
comp=Z,4.9nm,0.9s
G42A **Mountain** 44.03 348 P P 12 39 20.7 -0.5
baz=163,SNR=6.3
G42A **Mountain** 44.03 348 eP P 12 39 20.8 -0.5
comp=Z,27nm,0.8s
I37A **Lemond, Waseca** 44.16 342 P P 12 39 21.0 -1.4
baz=155
I37A **Lemond, Waseca** 44.16 342 eP P 12 39 21.2 -1.1
comp=Z,22nm,0.6s
G41A **Antigo** 44.17 347 P P 12 39 21.7 -0.7
baz=162
H39A **Augusta** 44.18 345 P P 12 39 21.7 -0.8
baz=158,SNR=7.1
SDCO **Great Sand Dun** 44.21 326 P P 12 39 25.0 +1.8
baz=136,SNR=49
SDCO **Great Sand Dun** 44.21 326 eP P 12 39 24.9 +1.8
comp=Z,17nm,0.7s
F43A **Flat Rock, Esc** 44.35 349 P P 12 39 22.9 -0.8
baz=164
F44A **Big Bay de Noc** 44.35 350 P P 12 39 23.1 -0.6
baz=166
H38A **Maiden Rock** 44.45 344 P P 12 39 23.5 -1.1
baz=157
G40A **Rib Lake** 44.46 346 P P 12 39 24.2 -0.5
baz=160,SNR=6.4
G40A **Rib Lake** 44.46 346 eP P 12 39 24.1 -0.5
comp=Z,19nm,0.8s
F42A **Maple Grove Fa** 44.47 348 P P 12 39 23.8 -0.8
baz=163
H37A **Dierke Farm, C** 44.54 343 P P 12 39 24.6 -0.7
baz=156
F41A **Three Lakes** 44.65 347 P P 12 39 25.7 -0.5
baz=162,SNR=7.1
F41A **Three Lakes** 44.65 347 eP P 12 39 25.9 -0.3
comp=Z,21nm,0.8s
G39A **Holcombe** 44.72 345 P P 12 39 26.0 -0.7
baz=159,SNR=23
X18A **Snowflake** 44.73 320 eP P 12 39 29.4 +2.1
comp=Z,3.8nm,0.8s
G38A **Ridgeland** 44.78 345 P P 12 39 26.3 -1.0
baz=158,SNR=5.5
H36A **Jessenland, He** 44.84 342 P P 12 39 27.0 -0.7
baz=155
E43A **Lone Tree Farm** 44.84 350 P P 12 39 27.0 -0.6
baz=165
OGNE **Ogallala** 44.86 332 P P 12 39 28.9 +0.9
baz=142
OGNE **Ogallala** 44.86 332 eP P 12 39 29.2 +1.1
comp=Z,30nm,0.6s
Q24A **Divide** 44.90 328 P P 12 39 29.6 +0.9
baz=137
S22A **4UR Ranch, Cre** 44.95 325 P P 12 39 30.6 +1.6
baz=134,SNR=13
S22A **4UR Ranch, Cre** 44.95 325 eP P 12 39 30.8 +1.7
comp=Z,8.8nm,1.0s
ECSD **EROS Data Cent** 44.97 339 P P 12 39 27.3 -1.5
baz=151,SNR=5.4
ECSD **EROS Data Cent** 44.97 339 eP P 12 39 27.7 -1.0
comp=Z,6.0nm,0.9s
COWI **Conover** 45.00 348 eP P 12 39 28.9 0.0
comp=Z,13nm,0.6s
F40A **Park Falls** 45.05 346 P P 12 39 28.6 -0.8
baz=160,SNR=9.4
E42A **Champion** 45.07 349 P P 12 39 28.8 -0.7
baz=164
SPMN **Marine on St.** 45.10 344 P P 12 39 28.5 -1.2
baz=157,SNR=5.4
SPMN **Marine on St.** 45.10 344 eP P 12 39 28.8 -0.9
comp=Z,38nm,1.3s
214A **Organ Pipe Nat** 45.17 315 P P 12 39 32.1 +1.5
baz=123,SNR=5.7
H35A **Sunnyside Ranc** 45.23 342 P P 12 39 29.2 -1.5
baz=154
F39A **Loretta** 45.24 346 P P 12 39 30.1 -0.7
baz=159,SNR=6.8
E41A **Kenton** 45.31 348 P P 12 39 31.0 -0.4
baz=162
G36A **St. Michael** 45.38 343 P P 12 39 30.8 -1.1
baz=155
E40A **Wakefield** 45.50 347 P P 12 39 32.7 -0.1
baz=161,SNR=6.1
MVCO **Mesa Verde** 45.56 324 P P 12 39 34.5 +0.8
baz=132
E39A **Mellen** 45.59 346 P P 12 39 33.1 -0.4
baz=160
X16A **Lo Mia Camp, P** 45.64 318 eP P 12 39 36.3 +1.9
comp=Z,5.3nm,0.7s

ISCO **Idaho Springs** 45.76 328 P P 12 39 36.7 +1.3
baz=137,SNR=12
ISCO **Idaho Springs** 45.76 328 eP P 12 39 36.8 +1.3
comp=Z,7.0nm,0.8s
D41A **Chassel** 45.80 348 P P 12 39 36.1 +0.9
baz=163
F36A **Milaca** 45.88 343 P P 12 39 34.6 -1.2
baz=156,SNR=7.6
F36A **Milaca** 45.88 343 eP P 12 39 35.0 -0.9
comp=Z,12nm,0.7s
SMCO **Snowmass** 46.04 327 eP P 12 39 39.2 +1.5
comp=Z,6.5nm,0.7s
E38A **The Farm, Brul** 46.04 346 P P 12 39 36.4 -0.7
baz=159
F35A **Swanville** 46.19 342 P P 12 39 36.6 -1.7
baz=154,SNR=9.4
PV01 **Paradox Valley** 46.22 324 eP P 12 39 40.8 +1.8
comp=Z,5.4nm,0.8s
WUAZ **Wupatki** 46.26 320 P P 12 39 40.6 +1.4
baz=128,SNR=6.7
WUAZ **Wupatki** 46.26 320 eP P 12 39 41.2 +2.0
comp=Z,7.1nm,1.0s
PV15 **Paradox Valley** 46.31 325 eP P 12 39 41.6 +1.9
comp=Z,8.7nm,0.9s
PV15 ePcP PcP 12 41 14.0 +1.6
F34A **Alexandria** 46.34 342 P P 12 39 38.0 -1.4
baz=154
E36A **McGregor** 46.41 344 P P 12 39 39.3 -0.6
baz=156,SNR=6.9
PV03 **Paradox Valley** 46.46 324 eP P 12 39 42.3 +1.5
comp=Z,5.9nm,0.7s
N23A **Red Feather La** 46.73 329 P P 12 39 43.7 +0.8
baz=138,SNR=5.4
N23A **Red Feather La** 46.73 329 eP P 12 39 44.5 +1.6
comp=Z,13nm,1.3s
E35A **Pequot Lakes** 46.77 343 P P 12 39 41.6 -1.2
baz=155
D37A **Cotton** 46.78 345 P P 12 39 42.1 -0.7
baz=158
PHWY **Pilot Hill** 46.79 330 eP P 12 39 44.7 +1.4
comp=Z,12nm,1.3s
G31A **Conde** 46.83 339 P P 12 39 42.1 -1.1
baz=150
C39A **Grand Marais** 46.85 347 P P 12 39 41.9 -1.5
baz=161
E34A **Wadena** 46.96 342 P P 12 39 42.8 -1.4
baz=154
D36A **Goodland** 46.99 344 P P 12 39 43.5 -1.0
baz=157,SNR=5.3
D36A **Goodland** 46.99 344 eP P 12 39 43.9 -0.6
comp=Z,22nm,0.6s
D35A **Remer** 47.15 344 P P 12 39 44.4 -1.3
baz=156,SNR=9.7
C37A **Embarrass** 47.24 346 P P 12 39 45.4 -1.0
baz=158
EYMN **Ely** 47.28 346 P P 12 39 45.5 -1.2
baz=159
Y12C **Blythe** 47.36 316 P P 12 39 47.6 +0.1
baz=123
PDMCI **Parker Dam,Lak** 47.40 317 P P 12 39 48.2 +0.4
baz=124
U15A **North Rim** 47.40 320 eP P 12 39 49.9 +1.7
comp=Z,4.7nm,1.3s
O20A **White River Ci** 47.41 327 P P 12 39 49.0 +0.9
baz=134
O20A **White River Ci** 47.41 327 eP P 12 39 49.6 +1.6
comp=Z,6.3nm,0.8s
C36A **Pine Crest Far** 47.44 345 P P 12 39 47.3 -0.6
baz=157,SNR=5.5
D34A **Park Rapids** 47.48 343 P P 12 39 46.9 -1.4
baz=154,SNR=6.6
D34A **Park Rapids** 47.48 343 eP P 12 39 47.1 -1.1
comp=Z,15nm,0.5s
W13A **Hualapai Mount** 47.67 318 eP P 12 39 52.0 +1.8
comp=Z,2.6nm,0.6s
C35A **Jirik Farms, M** 47.69 344 P P 12 39 48.9 -1.0
baz=156
D33A **AnnSam, Waubun** 47.73 342 P P 12 39 49.0 -1.2
baz=153,SNR=5.5
E31A **Nome** 47.87 340 P P 12 39 49.9 -1.4
baz=150
C34A **RKJ Ranch, Bem** 47.91 343 P P 12 39 50.3 -1.2
baz=155,SNR=7.0
RWWY **Rawlins** 47.97 329 eP P 12 39 54.0 +1.6
comp=Z,10nm,0.9s
SRU **San Rafael Swe** 48.01 324 eP P 12 39 54.0 +1.3
comp=Z,11nm,1.2s
KNB **Kanab** 48.10 320 eP P 12 39 55.4 +2.0
comp=Z,9.7nm,1.3s
P18A **Preston Nutter** 48.19 325 eP P 12 39 55.7 +1.4
P18A ePcP PcP 12 41 20.2 +1.0
B35A **Bob, Littlefor** 48.23 345 P P 12 39 53.0 -1.0
baz=156,SNR=7.1
B35A **Bob, Littlefor** 48.23 345 eP P 12 39 53.0 -1.0
comp=Z,15nm,0.6s
RSSD **Black Hills** 48.27 333 P P 12 39 55.6 +0.9
baz=142
RSSD **Black Hills** 48.27 333 eP P 12 39 55.0 +0.3
comp=Z,22nm,0.8s
K22A **Casper** 48.32 330 P P 12 39 55.4 +0.4
baz=138
K22A **Casper** 48.32 330 eP P 12 39 56.4 +1.3
comp=Z,9.5nm,0.8s
MTPU **Mount Pierson** 48.33 322 eP P 12 39 56.9 +1.5
comp=Z,2.6nm,0.7s
LCMT **Little Creek M** 48.36 320 eP P 12 39 57.4 +2.0
comp=Z,1.8nm,0.7s
BORC **Borrego Spring** 48.45 314 eP P 12 39 57.7 +1.8
BELC **Belle Mtn. Jos** 48.53 315 P P 12 39 57.3 +0.5
baz=122
B34A **Aery, Baudette** 48.59 344 P P 12 39 55.8 -1.0
baz=155,SNR=12
MSU **Marysvale** 48.62 322 eP P 12 39 59.0 +1.6
SZCU **Shurtz Canyon** 48.62 321 eP P 12 39 59.0 +1.6
comp=Z,3.3nm,0.7s
PFO **Pinyon Flats O** 48.65 314 P P 12 39 58.6 +0.9
comp=Z,0.8nm,0.3s,baz=0.0,slow=10,SNR=2.4
AGMN **Agassiz Nation** 48.77 343 P P 12 39 57.2 -0.9
baz=154,SNR=16
AGMN **Agassiz Nation** 48.77 343 eP P 12 39 56.8 -1.3
comp=Z,27nm,0.6s
C31A **Landman Farms,** 48.90 341 P P 12 39 58.2 -0.9
baz=151
A33A **Warroad** 49.21 344 P P 12 40 00.7 -0.7
baz=155,SNR=9.9
B31A **Greenbush Farm** 49.43 341 P P 12 40 02.2 -0.9
baz=152
JLU **Jordanelle** 49.53 325 eP P 12 40 05.7 +1.3
comp=Z,6.9nm,1.1s
SHOC **Shoshone, Teco** 49.73 317 P P 12 40 06.5 +0.8
baz=123
GSC **Goldstone, Bar** 49.78 316 P P 12 40 06.8 +0.6
baz=122
TCUT **Toone Canyon** 49.84 325 eP P 12 40 07.6 +0.9
comp=Z,13nm,0.7s
BW06 **Boulder Array** 49.96 328 P P 12 40 07.8 +0.2
baz=135
PD31 **Pinedale Array** 49.96 328 eP P 12 40 08.2 +0.6
PDAR **Pinedale Array** 49.96 328 P P 12 40 07.7 +0.2
comp=Z,1.5nm,0.6s,baz=122,slow=10,SNR=16
PDAR PcP PcP 12 41 25.0 -0.4
comp=Z,1.0nm,0.7s,baz=134,slow=4.7,SNR=4.4
PDAR **Pinedale Array** 49.96 328 eP P 12 40 06.9 -0.6
PDAR PcP PcP 12 41 25.0 -0.4
DUG **Dugway, Tooele** 50.06 324 P P 12 40 09.2 +0.9
baz=130
HWUT **Hardware Ranch** 50.26 326 eP P 12 40 10.5 +0.8
comp=Z,9.9nm,0.4s
TPNV **Topopah Spring** 50.29 318 P P 12 40 11.2 +1.1
baz=124
TPNV **Topopah Spring** 50.29 318 eP P 12 40 12.2 +2.1
comp=Z,4.1nm,0.9s
EDW2 **Edwards Air Fo** 50.39 315 P P 12 40 11.8 +1.1
baz=121
FURC **Furnace Creek,** 50.44 317 P P 12 40 11.8 +0.8
baz=123
ULM **Lac du Bonnet** 50.53 344 P P 12 40 10.2 -1.2
comp=Z,10nm,0.5s,baz=151,slow=7.3,SNR=16
ULM PcP PcP 12 41 26.8 -0.3
comp=Z,3.4nm,0.4s,baz=184,slow=1.8,SNR=4.9
ULM **Lac du Bonnet** 50.53 344 eP P 12 40 10.2 -1.2
comp=Z,16nm,0.9s
ULM ePcP PcP 12 41 26.8 -0.3
MPMC **Manual Prospec** 50.65 317 P P 12 40 13.2 +0.4
baz=122
R11A **Troy Canyon, C** 50.65 320 P P 12 40 14.2 +1.4
baz=125,SNR=7.3
R11A **Troy Canyon, C** 50.65 320 eP P 12 40 14.3 +1.5

comp=Z,5.3nm,1.3s
SNCC **San Nicolas Is** 50.70 312 P P 12 40 13.1 +0.1
baz=118
REDW **Red Top Meadow** 51.05 328 eP P 12 40 16.5 +0.8
comp=Z,11nm,0.8s
SNOW **Snow King Moun** 51.07 328 eP P 12 40 16.8 +0.9
comp=Z,15nm,1.2s
LOHW **Long Hollow** 51.09 328 eP P 12 40 17.0 +1.0
comp=Z,9.8nm,1.1s
ISA **Isabella, Lake** 51.13 316 P P 12 40 17.5 +1.3
baz=121
SCZ2 **Santa Cruz Isl** 51.14 313 P P 12 40 17.7 +1.4
baz=119
TPAW **Teton Pass** 51.19 328 eP P 12 40 17.8 +1.0
comp=Z,3.7nm,0.6s
CWC **Cottonwood Cre** 51.26 317 P P 12 40 18.3 +1.0
baz=122
MOOW **Moose Ponds** 51.26 328 eP P 12 40 17.9 +0.7
comp=Z,5.8nm,0.8s
FXWY **Fox Creek** 51.33 328 eP P 12 40 18.4 +0.6
comp=Z,2.6nm,0.8s
IMW **Indian Meadow** 51.47 328 eP P 12 40 19.6 +0.7
comp=Z,9.6nm,0.6s
RLMT **Red Lodge** 51.48 331 P P 12 40 19.3 +0.4
baz=136,SNR=12
RLMT **Red Lodge** 51.48 331 eP P 12 40 19.7 +0.8
comp=Z,9.3nm,0.9s
YPP **Pitchstone Pla** 51.66 329 eP P 12 40 25.6 +5.3
comp=Z,2.2nm,0.8s
ELK **Elko** 51.85 323 P P 12 40 23.2 +1.4
comp=Z,0.9nm,0.7s,baz=90,slow=20,SNR=5.9
YMR **Madison River** 52.01 329 eP P 12 40 24.7 +1.9
comp=Z,9.8nm,0.6s
GCMT **Greycliff** 52.16 331 eP P 12 40 24.6 +0.8
YHB **Horse Butte** 52.19 329 eP P 12 40 26.4 +2.3
comp=Z,21nm,1.5s
QLMT **Earthquake Lak** 52.37 329 eP P 12 40 27.6 +2.2
NV11 **Mina Array Sit** 52.37 319 eP P 12 40 27.2 +1.7
comp=Z,0.2nm,0.8s
NV01 **Mina Array Sit** 52.47 319 eP P 12 40 27.1 +0.8
NVAR **Mina Array Bea** 52.47 319 P P 12 40 27.7 +1.4
comp=Z,3.1nm,0.6s,baz=131,slow=6.5,SNR=31
NVAR PcP PcP 12 41 35.6 +0.7
comp=Z,1.4nm,0.6s,baz=134,slow=5.0,SNR=7.0
KVN **Kaiserville** 52.67 319 eP P 12 40 29.0 +1.2
comp=Z,2.3nm,0.9s
BMN **Battle Mountai** 52.89 321 eP P 12 40 30.6 +1.3
comp=Z,9.5nm,1.1s
SCHQ **Schefferville** 52.93 7 P P 12 40 29.4 +0.2
comp=Z,14nm,0.7s,baz=197,slow=6.9,SNR=8.0
SCHQ **Schefferville** 52.93 7 eP P 12 40 29.5 +0.4
comp=Z,16nm,0.8s
BOZ **Bozeman (W)** 53.00 330 P P 12 40 30.7 +0.8
baz=134,SNR=25
BOZ **Bozeman (W)** 53.00 330 eP P 12 40 30.9 +1.0
comp=Z,12nm,0.8s
MCMT **McKenzie Canyo** 53.10 328 eP P 12 40 32.5 +1.6
HLID **Hailey** 53.12 326 P P 12 40 31.5 +0.5
baz=130,SNR=8.9
HLID **Hailey** 53.12 326 eP P 12 40 31.9 +0.9
comp=Z,4.0nm,0.8s
LRM **Limekiln Ridge** 53.57 329 eP P 12 40 35.0 +0.7
SLD **San Luis Dam** 53.75 316 eP P 12 40 39.1 +3.6
EGMT **Eagleton** 53.83 333 P P 12 40 36.1 +0.3
baz=137
EGMT **Eagleton** 53.83 333 eP P 12 40 36.5 +0.6
comp=Z,15nm,1.0s
MFID **Camas Ranch** 53.83 325 eP P 12 40 37.1 +1.0
comp=Z,11nm,1.1s
HRY **Holter Researc** 53.87 330 eP P 12 40 37.3 +1.0
WVOR **Wild Horse Val** 54.91 323 eP P 12 40 43.8 -0.1
comp=Z,9.2nm,1.1s
MSO **Missoula** 55.01 329 P P 12 40 45.2 +0.7
baz=132
MSO **Missoula** 55.01 329 eP P 12 40 45.5 +1.0
comp=Z,8.6nm,1.4s
J08A **Circle Bar Ran** 55.34 324 eP P 12 40 48.1 +1.2
comp=Z,5.8nm,1.0s
O03D **Paynes Creek** 55.75 319 P P 12 40 49.9 0.0
baz=121
F10A **Beach Ranch, E** 56.20 327 eP P 12 40 54.2 +1.2
comp=Z,16nm,1.8s
FFC **Flin Flon** 56.24 342 eP P 12 40 52.6 -0.4
comp=Z,18nm,1.0s
M04C **Macdoel** 56.54 320 P P 12 40 56.1 +0.6
baz=122
G08A **Pilot Rock** 56.75 325 eP P 12 40 58.0 +1.1
comp=Z,7.6nm,1.0s
J05D **Fort Rock, OR** 56.97 322 P P 12 40 59.0 +0.5
baz=123,SNR=6.9
PINE **Pine Mountain** 57.06 323 eP P 12 41 01.0 +1.7
comp=Z,8.8nm,0.8s
YBH **Yreka Blue Hor** 57.08 320 P P 12 40 58.6 -0.7
comp=Z,2.2nm,0.7s,baz=102,slow=8.5,SNR=5.0
J04D **Umpqua Nationa** 57.48 322 P P 12 41 02.6 +0.4
baz=122
NEW **Newport** 57.58 329 P P 12 41 02.8 +0.2
comp=Z,4.1nm,0.7s,baz=120,slow=14,SNR=4.8
NEW **Newport** 57.58 329 P P 12 41 02.4 -0.2
baz=130
I05D **Terrebonne, OR** 57.60 323 P P 12 41 04.1 +1.2
baz=123
L02D **Cave Junction,** 57.87 320 P P 12 41 05.1 +0.5
baz=120
I04A **Tendick Farm,** 57.96 322 P P 12 41 05.6 +0.2
baz=122
FCC **Fort Churchill** 57.96 349 eP P 12 41 03.7 -1.3
comp=Z,14nm,0.8s
G05D **Wamic, OR** 58.09 324 P P 12 41 07.8 +1.6
baz=124
I03D **Drain, OR** 58.49 322 P P 12 41 09.5 +0.6
baz=121
B08A **Colville Reser** 58.80 328 eP P 12 41 11.9 +0.9
comp=Z,10nm,1.1s
LON **Longmire** 59.22 325 eP P 12 41 15.1 +1.1
comp=Z,6.3nm,0.9s
B05A **Bryant** 60.23 327 P P 12 41 20.6 -0.1
baz=125
A04D **Lummi Island** 60.83 327 P P 12 41 25.2 +0.5
baz=124,SNR=7.9
LLLB **Lillooet** 61.47 329 eP P 12 41 30.4 +1.2
comp=Z,12nm,1.0s
FRB **Frobisher Bay** 61.57 4 P P 12 41 28.4 -1.1
comp=Z,8.5nm,0.6s,baz=183,slow=6.3,SNR=8.4
MACI **Morro de la Ar** 62.57 59 eP P 12 41 35.7 -1.4
comp=Z,75nm,0.7s
BBB **Bella Bella** 65.60 328 P P 12 41 57.4 +1.2
comp=Z,9.4nm,0.7s,baz=96,slow=8.4,SNR=12
YKA **Yellowknife Ar** 66.40 342 P P 12 42 00.4 -0.7
comp=Z,9.9nm,0.7s,baz=136,slow=6.0,SNR=144
YKA PcP PcP 12 42 29.3 -0.3
comp=Z,2.3nm,0.7s,baz=131,slow=4.5,SNR=8.4
DLBC **Dease Lake** 69.75 333 P P 12 42 23.4 +1.2
comp=Z,11nm,0.8s,baz=125,slow=5.0,SNR=26
PFVI **Vila Bisbo** 70.83 51 eP P 12 42 29.3 +0.2
comp=Z,23nm,1.0s
PTEO **Sao Teotonio** 71.00 51 eP P 12 42 30.3 +0.2
comp=Z,25nm,1.1s
MORF **Marmelete** 71.00 51 eP P 12 42 29.6 -0.6
MORF AMb AMB 12 42 33.4
comp=Z,30nm,2.1s
MORF **Marmelete** 71.00 51 eP P 12 42 30.8 +0.6
comp=Z,28nm,1.0s
PNCL **Nicolau / Gran** 71.27 51 eP P 12 42 30.9 -0.8
comp=Z,18nm,1.5s
LIC **Lamto** 71.27 84 eP P 12 42 30.8 -1.4
comp=Z,33nm,0.8s
TIC **Toumodi** 71.28 84 eP P 12 42 30.7 -1.5
DBIC **Dimbokro** 71.44 84 P P 12 42 32.3 -0.9
comp=Z,3.8nm,0.3s,baz=258,slow=8.2,SNR=14
MESJ **Messejana** 71.45 51 eP P 12 42 32.3 -0.5
MESJ AMb AMB 12 42 35.0
comp=Z,18nm,1.6s
MESJ **Messejana** 71.45 51 eP P 12 42 33.5 +0.7
comp=Z,16nm,0.8s
PCVE **Castro Verde** 71.55 51 eP P 12 42 33.4 0.0
comp=Z,15nm,0.8s
PBDV **Barranco-do-Ve** 71.55 52 eP P 12 42 34.3 +0.8
comp=Z,27nm,1.3s
KIC **Kosan Boka** 71.55 84 eP P 12 42 32.6 -1.3
comp=Z,33nm,1.0s
JIS **Juneau Island** 71.68 332 eP P 12 42 35.2 +1.5
comp=Z,13nm,0.9s
PMTG **Montargil** 71.70 50 eP P 12 42 34.0 -0.3
comp=Z,23nm,1.7s
PCAS **Casmilo, Conde** 71.71 49 eP P 12 42 34.3 0.0
comp=Z,28nm,1.1s
EVO **Evora** 71.75 50 eP P 12 42 34.6 0.0

comp=Z,13nm,1.8s
BESE Bessie Mountai 72.04 332 *e*P **P 12 42 37.4 +1.4**
PESTR Estremoz 72.14 50 *e*P **P 12 42 36.9 0.0**
comp=Z,21nm,1.0s
PESTR Estremoz 72.14 50 *e*P **P 12 42 36.9 0.0**
comp=Z,9.9nm,0.8s
PVIS Viseu 72.30 48 *e*P **P 12 42 37.6 -0.3**
comp=Z,16nm,0.8s
PGAV Gavieira, Arco 72.31 47 *e*P **P 12 42 38.0 0.0**
comp=Z,17nm,1.4s
KOWA Kowa 72.40 76 P **P 12 42 38.1 -0.7**
comp=Z,9.9nm,0.7s,baz=262,slow=6.7,SNR=22
KOWA Kowa 72.40 76 *e*P **P 12 42 38.3 -0.6**
comp=Z,9.7nm,0.6s
PCBR Castelo Branco 72.43 49 *e*P **P 12 42 38.6 0.0**
comp=Z,18nm,1.5s
PBAR Barrancos 72.43 51 *e*P **P 12 42 38.1 -0.5**
comp=Z,26nm,1.6s
MTE Manteigas 72.50 48 *e*P **P 12 42 38.8 -0.3**
comp=Z,18nm,1.7s
POLO Lamas de Olo 72.52 47 *e*P **P 12 42 38.4 -0.8**
comp=Z,7.0nm,1.1s
SKAG Skagway 72.66 333 *e*P **P 12 42 40.9 +1.4**
comp=Z,21nm,1.4s
MVO Moncorvo 73.04 48 *e*P **P 12 42 42.0 -0.3**
comp=Z,17nm,1.1s
RES Resolute Bay 73.11 355 P **P 12 42 41.1 -0.8**
comp=Z,3.0nm,0.7s,baz=201,slow=12,SNR=7.3
PBRG Braganca 73.38 47 *e*P **P 12 42 43.8 -0.5**
comp=Z,13nm,1.5s
MDT Midelt 73.49 57 P **P 12 42 45.3 +0.2**
comp=Z,6.5nm,0.7s,baz=273,slow=5.9,SNR=20
BORG Borgarnes 73.65 22 P **P 12 42 45.9 +0.7**
comp=Z,12nm,1.0s,baz=55,slow=12,SNR=3.2
SUMG Summit 74.00 11 ⇓*i*P **P 12 42 47.5 -0.1**
comp=Z,14nm,0.8s
SUMG Summit 74.00 11 *e*P **P 12 42 47.6 -0.1**
comp=Z,14nm,0.8s
PAB San Pablo 74.74 50 *e*P **P 12 42 52.4 +0.2**
comp=Z,8.1nm,0.8s
ESDC Sonseca Array 75.06 50 P **P 12 42 54.0 0.0**
comp=Z,3.8nm,0.6s,baz=264,slow=5.9,SNR=32
ESLA Sonseca Array 75.06 50 *e*P **P 12 42 53.9 -0.1**
ES19 SONSECA Array 75.11 50 *e*P **P 12 42 54.0 -0.3**
INK Inuvik 76.17 341 P **P 12 42 59.9 +0.3**
comp=Z,11nm,0.6s,baz=120,slow=4.7,SNR=32
INK Inuvik 76.17 341 *e*P **P 12 42 59.8 +0.2**
DAWY Dawson 76.36 336 *e*P **P 12 43 01.2 +0.3**
TGL Tana Glacier 76.62 332 *e*P **P 12 43 03.8 +1.3**
EGAK Eagle 77.34 337 *e*P **P 12 43 06.9 +0.6**
RAGM Ragged Mountai 77.36 332 *e*P **P 12 43 08.1 +1.5**
BMRM Bremner River 77.51 332 *e*P **P 12 43 08.6 +1.2**
TORD Torodi Ar. Bea 77.92 77 P **P 12 43 08.9 -1.5**
comp=Z,5.7nm,0.5s,baz=282,slow=6.3,SNR=63
DOT Dot Lake 78.13 335 *e*P **P 12 43 11.8 +1.1**
SCRK Sand Creek 78.21 335 *e*P **P 12 43 11.9 +0.6**
KLU Klutina 78.28 333 *e*P **P 12 43 12.5 +0.8**
RIDG Independ'e Rid 78.49 335 *e*P **P 12 43 13.4 +0.7**
EKA Eskdalemuir Ar 78.62 34 P **P 12 43 13.0 -0.6**
comp=Z,2.5nm,0.6s,baz=254,slow=4.0,SNR=9.6
SCM Sheep Creek Mo 79.02 333 *e*P **P 12 43 16.1 +0.4**
FYU Fort Yukon 79.55 338 *e*P **P 12 43 19.1 +0.7**
HDA Harding Lake 79.58 335 *e*P **P 12 43 18.7 +0.1**
ILAR Eielson Array 79.66 336 P **P 12 43 18.9 -0.1**
comp=Z,5.2nm,0.5s,baz=121,slow=3.9,SNR=85
ILAR PP **PP 12 46 21.7 -0.2**
comp=Z,0.6nm,0.8s,baz=108,slow=6.4,SNR=6.0
CCB Clear Creek Bu 80.00 336 *e*P **P 12 43 20.6 -0.2**
WRH Wood River Hil 80.07 335 *e*P **P 12 43 21.1 -0.1**
COLA College 80.08 336 *e*P **P 12 43 22.1 +0.9**
RND Reindeer 80.11 334 *e*P **P 12 43 22.1 +0.5**
BRLK Bradley Lake 80.20 330 *e*P **P 12 43 22.5 +0.5**
MDM Murphy Dome 80.26 336 *e*P **P 12 43 22.3 +0.1**
KDAK Kodiak Island 80.67 328 P **P 12 43 24.5 0.0**
comp=Z,4.5nm,0.8s,baz=269,slow=0.9,SNR=4.1
DAG Danmarks Havn 80.69 11 *i*P **P 12 43 23.6 -0.7**
comp=Z,4.8nm,0.9s
TRF Thorofare Moun 80.75 334 *e*P **P 12 43 25.4 +0.3**
BPAW Bear Paw Mtn. 81.20 335 *e*P **P 12 43 27.4 +0.1**
MLY Manley 81.31 336 *e*P **P 12 43 27.7 -0.1**
CAST Castle Rocks 81.53 334 *e*P **P 12 43 29.0 0.0**
COLD Coldfoot 81.62 338 *e*P **P 12 43 30.4 +1.0**
TAM Tamanrasset 81.69 67 *e*P **P 12 43 31.2 +0.3**
TOLK Toolik Lake Re 81.75 339 P **P 12 43 30.9 +0.8**
baz=105
ECH Echery 84.00 42 *e*P **P 12 43 41.5 -0.6**
KEST Kesra 85.23 55 P **P 12 43 49.4 +0.8**
comp=Z,1.4nm,0.5s,baz=213,slow=10,SNR=4.8
TUE Stuetta 85.42 44 *e*P **P 12 43 49.7 +0.2**
NB2 NORSAR Subarra 86.84 29 P **P 12 43 55.9 0.0**
comp=Z,6.2nm,0.8s,baz=268,slow=4.8
NOA NORSAR Array B 86.84 29 P **P 12 43 56.5 +0.6**
CLL Collm 87.85 39 ⇓*i*P **P 12 44 01.0 +0.1**
comp=Z,5.0nm,0.7s
HFS Hagfors 88.07 30 P **P 12 44 01.3 -0.4**
comp=Z,4.7nm,0.7s,baz=235,slow=5.1,SNR=13
KHC Kasperske Hory 88.27 41 *e*P **P 12 44 02.9 -0.1**
SPITS Spitsbergen Ar 88.33 12 P **P 12 44 02.6 0.0**
comp=Z,3.3nm,0.5s,baz=318,slow=1.9,SNR=9.5
GEA0 GERESS Array S 88.36 41 *e*P **P 12 44 03.0 -0.4**
GERES GERESS Array B 88.36 41 P **P 12 44 02.9 -0.5**
comp=Z,1.5nm,0.7s,baz=287,slow=4.9,SNR=9.4
BRG Berggiesshubel 88.46 39 *e*P **P 12 44 04.2 +0.4**
comp=Z,4.2nm,0.9s
ARCES ARCESS Array B 92.01 20 P **P 12 44 19.2 -0.7**
comp=Z,1.7nm,0.7s,baz=283,slow=4.2,SNR=9.0
FINES FINESS Array B 93.94 28 P **P 12 44 28.4 -0.6**
comp=Z,2.5nm,0.7s,baz=256,slow=5.6,SNR=7.4
TSUM Tsumeb 94.55 109 LR LR 13 25 16.2
comp=Z,15nm,19.2s,baz=322,slow=34
BVAR Borovoye Array 118.24 22 PKP **PKPdf 12 49 57.4 -0.4**
comp=Z,0.5nm,0.5s,baz=299,slow=3.0,SNR=2.9
ZALV Zalesovo Beam 121.80 13 PKP **PKPdf 12 50 03.9 -0.7**
comp=Z,2.4nm,0.5s,baz=227,slow=4.1,SNR=8.6
KURK Kurchatov 123.02 19 PKP **PKPdf 12 50 06.9 -0.1**
KURBB Kurchatov Arra 123.07 19 PKP **PKPdf 12 50 06.9 -0.3**
comp=Z,1.9nm,0.6s,baz=318,slow=2.5,SNR=16
KLR Kul'dur 123.16 338 PKP **PKPdf 12 50 06.2 -1.2**
comp=Z,0.1nm,0.5s,baz=0.0,slow=10,SNR=5.6
MKAR Makanchi Array 127.63 18 PKP **PKPdf 12 50 15.6 -0.5**
comp=Z,1.2nm,0.5s,baz=301,slow=2.5,SNR=13
MJAR Matsushiro Arr 129.66 324 PKP **PKPdf 12 50 19.7 -0.5**
comp=Z,1.4nm,0.7s,baz=8.0,slow=0.7,SNR=3.0
SONM Songino Array 129.99 358 PKP **PKPdf 12 50 20.1 -0.6**
comp=Z,0.6nm,0.4s,baz=243,slow=1.5,SNR=5.1
KSH Kashi 131.26 28 PKP **PKPdf 12 50 23.9 +0.6**
KSH AMB AMB
comp=Z,180nm,4.2s
WMQ Urumqi 131.91 15 *e*PKP **PKPdf 12 50 23.5 -0.9**
KSRS Korea Array 134.43 333 PKP **PKPdf 12 50 29.1 -0.1**
comp=Z,2.0nm,0.8s,baz=34,slow=1.9,SNR=9.0
KSAR Wonju Array Be 134.46 333 PKP **PKPdf 12 50 29.1 -0.1**
HHC Hu-ho-hao-te 136.42 351 *e*PKP **PKPdf 12 50 32.8 -0.2**
LZH Lanzhou 141.79 360 *e*PKP **PKPdf 12 50 42.8 -0.2**
LZH sPKP 12 51 41.0
NJ2 Nanjing 142.87 338 *e*PKP **PKPdf 12 50 44.3 -0.4**
ASAR Alice Springs 143.78 232 PKP PKPab 12 50 43.5 -0.4
comp=Z,7.5nm,0.5s,baz=119,slow=3.7,SNR=126
WRA Warramunga Arr 145.22 238 PKPbc **PKPbc 12 50 48.4 -0.7**
comp=Z,5.9nm,0.5s,baz=112,slow=2.9,SNR=73
LSA Lhasa 146.02 20 *e*PKPbc **PKPab 12 50 52.4 -0.3**
CD2 Chengdu 146.96 360 PKPbc **PKPdf 12 50 49.8 -2.1**
NWAO Narrogin (SRO) 146.96 201 PKPbc **PKPdf 12 50 52.8 +1.0**
comp=Z,14nm,1.0s,baz=38,slow=12,SNR=2.5
ENH Enshi 147.10 351 *e*PKPbc **PKPbc 12 50 54.4 -0.1**
CMAR Chiang Mai Arr 158.86 12 PKPab **PKPab 12 51 45.0 -0.8**
comp=Z,2.4nm,0.8s,baz=330,slow=4.9,SNR=5.8

IDC 20 12:36:37.1±1.7, 10°.43S×161°.81E, h0km, mb3.9/4, mb1 4.1/5, mb1mx3.7/61, mbtmp4.0/5, ML4.3/1, MS2.9/4, Ms1 2.9/4, ms1mx2.6/47, Error ellipse: s-maj=36.2km s-min=28.9km az=143.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.09**	**298**	*e*P	Pb	12 37 15.0	-0.9
HNR				*e*S	Sn	12 37 38.0	-2.1
HNR	**Honiara**	**2.09**	**298**	Pn	Pb	12 37 15.2	-0.7
	111nm,0.3s,baz=159,slow=7.1,SNR=29						
HNR				Sn	Sn	12 37 39.1	-1.0
	472nm,0.3s,baz=6.2,slow=22,SNR=33						
HNR				LR	LR	12 38 07.5	
	comp=Z,149nm,21.7s,baz=170,slow=43						
DZM	**Mont Dzumac**	**12.40**	**160**	LR	LR	12 43 11.8	
	comp=Z,30nm,18.8s,baz=20,slow=32						
PMG	**Port Moresby**	**14.47**	**273**	LR	LR	12 44 55.4	
	comp=Z,83nm,19.4s,baz=122,slow=34						
WRA	**Warramunga Arr**	**28.11**	**247**	P	P	12 42 31.1	+0.1
	2.0nm,0.5s,baz=74,slow=9.1,SNR=24						
STKA	**Stephens Creek**	**28.37**	**218**	LR	LR	12 53 58.2	
	comp=Z,59nm,18.1s,baz=26,slow=37						
H11S2	**WAKE ISLAND Hy**	**29.14**	**10**	T	T	13 12 06.9	
	baz=194,slow=75,SNR=25						
H11S3	**WAKE ISLAND Hy**	**29.14**	**10**	T	T	13 12 07.7	
	baz=194,slow=75,SNR=20						
H11S1	**WAKE ISLAND Hy**	**29.16**	**10**	T	T	13 12 08.4	
	baz=194,slow=75,SNR=14						
ASAR	**Alice Springs**	**29.68**	**240**	P	P	12 42 44.6	-0.3
	0.5nm,0.5s,baz=68,slow=10,SNR=11						
H11N1	**WAKE ISLAND Hy**	**30.37**	**9**	T	T	13 13 30.5	
	baz=193,slow=76,SNR=16						
H11N3	**WAKE ISLAND Hy**	**30.38**	**10**	T	T	13 13 41.0	
	baz=193,slow=76,SNR=17						
H11N2	**WAKE ISLAND Hy**	**30.39**	**10**	T	T	13 13 40.4	
	baz=193,slow=76,SNR=17						
SONM	**Songino Array**	**75.92**	**325**	P	P	12 48 25.2	-0.6
	1.0nm,0.5s,baz=140,slow=5.4,SNR=4.8						
ILAR	**Eielson Array**	**84.20**	**20**	P	P	12 49 10.4	+0.3
	0.3nm,0.5s,baz=236,slow=6.2,SNR=5.8						

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*SOME **20** 12:43:11.7, 41°.28N×71°.03E, h5km*
*ISCJB **20** 12:43:13.1±1.8, 41°.32N±0°.04×70°.96E±0°.05, h5km±13km, Error ellipse: s-maj=7.0km s-min=5.6km az=154.1*
*KRNET **20** 12:43:13.5±0.1, 41°.39N×70°.70E, mb2.5*
ISC 20 12:43:12.2±1.7, 41°.27N±0°.04×70°.96E±0°.05, h5km±14km, n10, σ0°81/20, 9C-4D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**1.12**	**322**	*e*P	**Pg**	**12 43 33.7**	**0.0**
	8.6nm,0.5s						
IUG				*e*S	**Sb**	**12 43 49.0**	**0.0**
	10nm,0.5s						
BTK	**Batken**	**1.22**	**185**	⇑*i*P	**Pn**	**12 43 36.7**	**+0.7**
	baz=76						
BTK				⇑*i*S	**Sn**	**12 43 53.5**	**+0.6**
	baz=76						
MNAS	**Manas**	**1.67**	**43**	⇑*i*P	**Pn**	**12 43 42.3**	**0.0**
	baz=50						
MNAS				⇑*i*S	**Sn**	**12 44 03.5**	**-0.7**
	baz=50						
KK31	**Karatay Array**	**1.86**	**350**	⇑Pn	**Pn**	**12 43 45.5**	**+0.8**
	2.8nm,0.3s,baz=164,slow=14,SNR=53						
KK31				Sn	**Sg**	**12 44 12.9**	**+1.0**
	7.7nm,0.5s,baz=158,slow=26,SNR=18						
BRLS	**Borolday**	**1.95**	**335**	*e*P	**Pn**	**12 43 45.9**	**0.0**
	0.8nm,0.4s						
BRLS				*e*S	**Sn**	**12 44 10.0**	**-0.8**
	12nm,0.3s						
AML	**Almayashu**	**2.22**	**66**	⇓*i*P	**Pn**	**12 43 50.5**	**+0.5**
	baz=71						
AML				⇓*i*S	**Sn**	**12 44 18.7**	**+0.7**
	baz=71						
MRKS	**Merke**	**2.24**	**48**	*e*P	**Pb**	**12 43 52.3**	**-0.9**
	3.9nm,0.3s						
MRKS				*e*S	**Sb**	**12 44 20.9**	**-0.3**
	6.2nm,0.3s						
SFK	**Sufi-Kurgan**	**2.31**	**122**	⇓*e*P	**Pb**	**12 43 53.2**	**-1.2**
	baz=22						
SFK				⇓*i*S	**Sb**	**12 44 22.6**	**-0.7**
	baz=22						
EKS2	**Erkin-Say**	**2.52**	**56**	⇑*i*P	**Pn**	**12 43 55.2**	**+1.3**
	baz=60						
EKS2				⇑*i*S	**Sn**	**12 44 25.8**	**+0.8**
	baz=60						
UCH	**Uchtor**	**2.82**	**69**	⇑*i*P	**Pn**	**12 43 59.3**	**+0.9**
	baz=72						
UCH				⇑*i*S	**Sn**	**12 44 33.2**	**+0.2**
	baz=72						

IDC 20 12:50:27.6±999.0, 46°.35N×48°.41E, h0km, Error ellipse: s-maj=533.9km s-min=212.8km az=132.0, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASONI**	**2.48**	**330**	*i*		14 05 40.0	
	baz=142,slow=325,SNR=0.7						
I26DE	**FREYUNG INFRAS**	**23.41**	**289**	*i*		15 15 30.0	
	baz=83,slow=314,SNR=0.8						
I48TN	**KESRA INFRASON**	**31.00**	**264**	*i*		15 58 50.0	
	baz=58,slow=301,SNR=0.3						

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*SOME **20** 13:06:56.2, 44°.32N×81°.13E, h20km*
*NNC **20** 13:06:57.8±1.1, 44°.41N×80°.86E, h0km, mb3.5, mpv3.3, Error ellipse: s-maj=22.0km s-min=5.1km az=123.0*
ISC 20 13:06:53.9±1.8, 44°.27N±0°.04×81°.23E±0°.07, h5km±13km, n27, σ1°44/45, 6C-8D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.04**	**274**	⇓*i*P	**Pg**	**13 07 13.5**	**-0.3**
	167nm,0.4s						
DJR				*e*S	**Sg**	**13 07 24.8**	**-2.5**
	110nm,0.4s						
PDGK	**Podgornoye**	**1.57**	**234**	⇑P	**Pg**	**13 07 24.5**	**+0.5**
	19nm,0.3s						
PDGK				⇓S	**Sg**	**13 07 45.1**	**+0.7**
	38nm,0.6s						
KAPS	**Kapalarasan**	**1.68**	**308**	*e*P	**Pg**	**13 07 27.2**	**+1.1**
	54nm,0.2s						
KAPS				*e*S	**Sg**	**13 07 49.6**	**+1.7**
	207nm,0.4s						
SHLS	**Shalkode**	**1.70**	**230**	*e*P	**Pn**	**13 07 23.8**	**-0.6**
	98nm,0.2s						
SHLS				*e*S	**Sn**	**13 07 43.3**	**-3.3**
	238nm,0.5s						
UZB	**Uzynbulak**	**1.95**	**236**	*e*P	**Pg**	**13 07 31.3**	**-0.1**
	95nm,0.2s						
UZB				*e*S	**Sg**	**13 07 56.6**	**-0.1**
	72nm,0.3s						
KPKS	**Kokpek**	**2.01**	**247**	*e*P	**Pb**	**13 07 31.8**	**+0.7**
	116nm,0.2s						
KPKS				*e*S	**Sb**	**13 07 57.1**	**+0.7**
	453nm,0.5s						
TDK	**Taldyqorghan**	**2.15**	**291**	*e*P	**Pb**	**13 07 33.3**	**-0.1**
	76nm,0.2s						
TDK				*e*S	**Sb**	**13 08 00.0**	**-0.3**
	189nm,0.7s						
ZHN	**Zhinishke**	**2.31**	**243**	*e*P	**Pb**	**13 07 36.1**	**0.0**
	50nm,0.6s						
ZHN				*e*S	**Sb**	**13 08 05.4**	**+0.4**
	164nm,0.5s						
KURS	**Kuram**	**2.35**	**252**	⇓*i*P	**Pb**	**13 07 36.9**	**+0.1**
	19nm,0.5s						
KURS				*e*S	**Sb**	**13 08 06.6**	**+0.5**
	87nm,0.6s						
SATY	**Saty**	**2.38**	**241**	*e*P	**Pb**	**13 07 37.9**	**+0.5**
	101nm,0.2s						
SATY				*e*S	**Sb**	**13 08 08.3**	**+1.2**
	198nm,0.2s						
ARXS	**Arharly**	**2.45**	**270**	*e*P	**Pb**	**13 07 37.9**	**-0.6**
	42nm,0.4s						
ARXS				*e*S	**Sb**	**13 08 08.1**	**-0.9**
	152nm,0.5s						
MAKZ	**Makanchi**	**2.60**	**11**	⇓Pn	**Pb**	**13 07 40.2**	**-0.8**
	2.5nm,0.5s						
MAKZ				⇑Lg	Lg	13 08 16.6	
	12nm,0.5s						
MK31	**Makanchi Array**	**2.63**	**16**	⇑Pn	**Pb**	**13 07 41.6**	**-0.1**
	1.5nm,0.2s,baz=201,slow=12,SNR=110						
MK31				⇑Lg	Lg	13 08 16.5	
	34nm,0.7s,baz=196,slow=28,SNR=5.7						
CHKK	**Chushkaly**	**3.09**	**264**	*e*P	**Pb**	**13 07 48.7**	**-0.6**
	25nm,0.4s						
CHKK				*e*S	**Sb**	**13 08 26.9**	**-0.5**
	57nm,0.2s						
KOTS	**Kotyrbulak**	**3.16**	**252**	*e*P	**Pb**	**13 07 51.6**	**+1.0**
	18nm,0.3s						
KOTS				*e*S	**Sb**	**13 08 31.4**	**+1.8**
	49nm,0.5s						
MDOK	**Medeo**	**3.23**	**251**	⇑Pn	**Pn**	**13 07 48.2**	**+2.7**
	24nm,0.6s						
MDOK				⇓Lg	Lg	13 08 32.9	
	24nm,0.6s						
MDOK	**Medeo**	**3.23**	**251**	*e*P	**Pb**	**13 07 51.1**	**-0.7**
	33nm,0.7s						
MDOK				*e*S	**Sb**	**13 08 30.3**	**-1.3**
	38nm,0.6s						
KTBS	**Karatobe**	**3.33**	**262**	*e*P	**Pb**	**13 07 53.6**	**0.0**
	7.5nm,0.5s						
KTBS				*e*S	**Sb**	**13 08 34.9**	**+0.5**
	70nm,0.6s						
TNSS	**Tian-Shan**	**3.34**	**250**	*e*P	**Pb**	**13 07 54.9**	**+0.9**
	14nm,0.3s						
TNSS				*e*S	**Sb**	**13 08 36.6**	**+1.5**
	37nm,0.6s						
KUU	**Kurty**	**3.55**	**266**	*e*P	**Pb**	**13 07 57.3**	**+0.1**
	5.3nm,0.3s						
KUU				*e*S	**Sb**	**13 08 41.3**	**+0.8**
	38nm,0.5s						
IZV	**Izvestkoviy**	**3.57**	**251**	*e*P	**Pb**	**13 07 58.6**	**+0.9**
	19nm,0.3s						
IZV				*e*S	**Sb**	**13 08 43.6**	**+2.2**
	68nm,0.7s						
MTBS	**Maitube**	**3.66**	**254**	*e*P	**Pb**	**13 08 00.3**	**+1.0**
	30nm,0.2s						
MTBS				*e*S	**Sb**	**13 08 45.4**	**+1.4**
	42nm,0.5s						
KST	**Kastek**	**4.01**	**254**	⇓*i*P	**Pg**	**13 08 08.6**	**-2.3**
	15nm,0.2s						
KST				*e*S	**Sg**	**13 09 00.3**	**-2.5**
	37nm,0.7s						
DGS	**Degeres**	**4.09**	**257**	*e*P	**Pb**	**13 08 08.4**	**+2.0**
	20nm,0.5s						
DGS				*e*S	**Sb**	**13 09 00.1**	**+3.9**
	54nm,0.6s						
KURBB	**Kurchatov Arra**	**6.62**	**345**	⇑Lg	Lg	13 10 25.7	
	7.7nm,0.8s						
KURK	**Kurchatov**	**6.69**	**346**	⇓Lg	Lg	13 10 25.5	
	8.6nm,0.8s						
OTUK	**Ortayu**	**7.34**	**306**	⇓Lg	Lg	13 10 37.9	
	8.4nm,0.7s						

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*IDC **20** 13:09:01.2±3.2, 7°.17S×108°.80E, h0km, mb3.7/3, mb1 3.8/3, mb1mx3.4/65, mbtmp3.7/3, Error ellipse: s-maj=195.0km s-min=11.8km az=22.0*
*ISCJB **20** 13:09:03.5±1.0, 8°.0S±0°.1×107°.64E±0°.06, h67km±14km, mb3.4/3, Error ellipse: s-maj=22.6km s-min=6.6km az=19.4*
*DJA **20** 13:09:04.7±0.4, 8°.S±3°.×10°.8E±°, h38km±6km, M4.3/14, mB5.6/1, mb4.7/2, MLv4.1/14, Mw(mB)5.1/1*
ISC 20 13:09:04.2±1.4, 8°.0S±0°.1×107°.63E±0°.06, h68km±14km, n20, σ0°90/20, mb3.1/3, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CISI	**Cisompet, Garu**	**0.47**	**23**	P	**Pn**	**13 09 16.3**	**-0.3**
CISI				S	**Sn**	**13 09 25.4**	**-0.3**
CMJI	**Cimerak**	**0.83**	**76**	P	**Pn**	**13 09 20.7**	**+0.1**
CMJI				S	**Sn**	**13 09 32.6**	**-0.1**
LEM	**Lembang**	**1.16**	**359**	Pg	**Pn**	**13 09 24.3**	**-0.5**
	103nm,0.3s,baz=171,slow=8.9,SNR=78						
LEM				Lg	Lg	13 09 41.5	
	61nm,0.3s,baz=346,slow=22,SNR=18						
LEM				LR	LR	13 09 49.1	
	comp=Z,70nm,18.1s,baz=148,slow=39						
LEM	**Lembang**	**1.16**	**359**	P	**Pn**	**13 09 24.2**	**-0.6**
LEM				S	**Sn**	**13 09 41.6**	**+1.5**
KPJI	**Karang Pucung**	**1.45**	**63**	P	**Pn**	**13 09 28.5**	**+0.1**
KPJI				S	**Sn**	**13 09 46.3**	**-0.3**
SKJI	**Sukabumi**	**1.45**	**312**	P	**Pn**	**13 09 28.7**	**+0.3**
SKJI				S	**Sn**	**13 09 48.2**	**+1.5**
CGJI	**Cibinong**	**2.36**	**305**	P	**Pn**	**13 09 40.0**	**-0.7**
UGM	**Wanagama**	**2.87**	**89**	P	**Pn**	**13 09 47.7**	**+0.1**
SMRI	**Semarang**	**2.94**	**72**	P	**Pn**	**13 09 49.2**	**+0.6**
WOJI	**Wonogiri, Jawa**	**3.27**	**88**	P	**Pn**	**13 09 52.8**	**-0.2**
PCJI	**Pacitan**	**3.52**	**94**	P	**Pn**	**13 09 57.1**	**+0.6**
KASI	**Kota Agung**	**3.96**	**308**	P	**Pn**	**13 10 03.6**	**+1.0**
PWJI	**Pagerwojo**	**4.13**	**91**	P	**Pn**	**13 10 05.6**	**+0.7**
JAGI	**Jajag, Banyuwa**	**6.47**	**95**	P	**Pn**	**13 10 38.8**	**+1.9**
WRA	**Warramunga Arr**	**28.46**	**117**	P	**P**	**13 14 52.1**	**-1.0**
	0.4nm,0.9s,baz=291,slow=11,SNR=5.0						
ASAR	**Alice Springs**	**29.61**	**125**	P	P	13 15 04.8	+1.5
	0.4nm,0.8s,baz=293,slow=11,SNR=4.2						
H08S2	**Diego Garcia H**	**34.81**	**268**	T	T	13 52 49.7	
	baz=92,slow=75,SNR=6.7						
H08S3	**Diego Garcia H**	**34.82**	**268**	T	T	13 52 46.1	
	baz=92,slow=75,SNR=13						
H08S1	**Diego Carcia H**	**34.83**	**268**	T	T	13 52 46.5	
	baz=92,slow=75,SNR=4.3						
STKA	**Stephens Creek**	**39.52**	**132**	P	P	13 16 31.6	+3.0
	1.8nm,0.5s,baz=312,slow=7.8,SNR=4.5						

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*ISCJB **20** 13:17:38.5±0.5, 49°.84N±0°.04×18°.50E±0°.03, h0km, Error ellipse: s-maj=5.2km s-min=2.7km az=11.3*
*IPEC **20** 13:17:39.4±0.2, 49°.83N×18°.58E, h0km, ML2.0/3, Error ellipse: s-maj=1.8km s-min=1.1km az=163.0*
*CSEM **20** 13:17:39.1±0.2, 49°.83N×18°.51E, h1km, ML2.7/8, Error ellipse: s-maj=5.8km s-min=3.1km az=11.0*
*PRU **20** 13:17:40.1, 49°.82N×18°.50E, h0km*
ISC 20 13:17:38.5±0.8, 49°.82N±0°.04×18°.56E±0°.02, h0km, n33, σ0°81/60, 3D, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.27**	**275**	⇓*i*PG	**Pb**	**13 17 45.3**	**-0.8**
OKC				*e*SG	**Sg**	**13 17 48.7**	**+1.7**
	comp=Z,79nm,0.4s						
OKC	**Ostrava-Krasne**	**0.27**	**275**	Pg	**Pb**	**13 17 45.3**	**-0.8**
OKC				Sg	**Sg**	**13 17 48.7**	**+1.7**
	79nm,0.4s						
MORC	**Moravsky Berou**	**0.66**	**267**	*e*Pg	**Pb**	**13 17 52.4**	**-0.5**
MORC				*e*Sg	**Sg**	**13 18 00.5**	**+0.9**
	23nm,0.2s,baz=85						
MORC	**Moravsky Berou**	**0.66**	**267**	*e*Pg	**Pb**	**13 17 52.4**	**-0.5**
MORC				*e*SG	**Sg**	**13 18 00.5**	**+0.9**
MORC	**Moravsky Berou**	**0.66**	**267**	*e*Pg	**Pb**	**13 17 52.4**	**-0.5**
	baz=85						
MORC				*e*Sg	**Sg**	**13 18 00.5**	**+0.9**
	23nm,0.2s,baz=85						
LANS	**Liptovska Anna**	**0.89**	**138**	*e*PG	**Pb**	**13 17 56.6**	**-0.2**
LANS				*e*SG	**Sn**	**13 18 11.3**	**-0.6**
LANS	**Liptovska Anna**	**0.89**	**138**	*e*Pg	**Pb**	**13 17 56.6**	**-0.2**
LANS				*e*Sg	**Sn**	**13 18 11.3**	**-0.6**
OJC	**Ojcow**	**0.90**	**63**	*e*Pg	**Pb**	**13 17 56.3**	**-0.6**
OJC				*e*Sg	**Sb**	**13 18 09.4**	**0.0**
OJC	**Ojcow**	**0.90**	**63**	*e*Pg	**Pb**	**13 17 56.3**	**-0.6**
OJC				*e*Sg	**Sb**	**13 18 09.4**	**0.0**
JAVC	**Velka Javorina**	**1.12**	**212**	*e*Pg	**Pn**	**13 18 01.6**	**+0.2**
	baz=31						
JAVC	**Velka Javorina**	**1.12**	**212**	*e*PG	**Pn**	**13 18 01.6**	**+0.2**
JAVC	**Velka Javorina**	**1.12**	**212**	*e*Pg	**Pn**	**13 18 01.6**	**+0.2**
	baz=31						
KRLC	**Kraliky**	**1.18**	**283**	*e*PG	**Pg**	**13 18 00

KRUC	**Moravsky**	**1.60 243**	*e*PG	**Pb**	**13 18 08.8**	**-0.1**
KRUC			*e*SG	**Sg**	**13 18 30.2**	**+0.4**
KRUC	**Moravsky**	**1.60 243**	*e*Pg	**Pb**	**13 18 08.7**	**-0.1**
	baz=61					
KRUC			*e*Sg	**Sg**	**13 18 30.2**	**+0.4**
	16nm,0.2s,baz=61					
UPC	**Upice**	**1.78 294**⇓	*e*PG	**Pb**	**13 18 11.8**	**-0.1**
UPC			*e*SG	**Sg**	**13 18 36.0**	**+0.5**
UPC	**Upice**	**1.78 294**	Pg	**Pb**	**13 18 11.8**	**-0.1**
UPC			Sg	**Sg**	**13 18 36.0**	**+0.5**
PRU	**Pruhonice**	**2.60 275**⇓	*e*SG	**Sb**	**13 19 00.0**	**+1.6**
	comp=Z,4.4nm,0.3s					
PRU	**Pruhonice**	**2.60 275**	Sg	**Sb**	**13 19 00.0**	**+1.6**
	4.4nm,0.3s					
KHC	**Kasperske Hory**	**3.32 260**	*e*PG	**Pg**	**13 18 40.5**	**-1.5**
KHC			*e*SG	**Sg**	**13 19 22.8**	**-2.2**
	comp=Z,5.6nm,0.4s					
KHC	**Kasperske Hory**	**3.32 260**	Pg	**Pg**	**13 18 40.5**	**-1.5**
KHC			Sg	**Sg**	**13 19 22.8**	**-2.2**
	5.6nm,0.4s					
CLL	**Collm**	**3.84 295**	*e*Sg	**Sg**	**13 19 41.0**	**-0.9**
	comp=Z,4.0nm,0.6s					

DDA ***20*** *13:28:26.5,37.°78N×26.°73E,h7km,Ml2.8*
ISK ***20*** *13:28:26.1,37.°73N×26.°72E,h2km,ML2.8/8*
CSEM ***20*** *13:28:27.1±0.2,37.°73N×26.°72E,h2km,ML2.8,Error ellipse: s-maj=5.2km s-min=4.2km az=45.0*
ATH ***20*** *13:28:27.3,37.°74N×26.°76E,h12km±5km,ML2.6/5,Error ellipse: s-maj=6.0km s-min=1.1km az=101.0*

ISC 20 13:28:27.3±0.9,**37.°75N**±0.°02×**26.°73E**±0.°02,**h10**km±6km, **n42**,σ1§**82**/68,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.10**	**113**	P	**Pg**	**13 28 30.2**	**+0.3**
SMG				S	**Sg**	**13 28 31.5**	**-0.2**
SMG				AML	AML	13 28 32.1	
	comp=N,19090μm,0.3s						
SMG				AML	AML	13 28 32.3	
	comp=E,15797μm,0.2s						
SMG	**Samos**	**0.10**	**113**	P	**Pg**	**13 28 30.0**	**+0.1**
SMG				S	**Sg**	**13 28 31.7**	**0.0**
DGB	**˜zmir**	**0.33**	**22**	*i* P	**Pg**	**13 28 32.9**	**-1.0**
DGB				*i* S	**Sg**	**13 28 36.9**	**-1.4**
GCAM	**G?zelcaml?**	**0.41**	**96**	PG	**Pg**	**13 28 35.2**	**-0.1**
GCAM				SG	**Sb**	**13 28 41.8**	**-1.0**
GCAM	**G?zelcaml?**	**0.41**	**96**	*i* P	**Pg**	**13 28 35.0**	**-0.2**
GCAM				*i* S	**Sg**	**13 28 41.5**	**+0.8**
GCAM	**G?zelcaml?**	**0.41**	**96**	P	**Pg**	**13 28 35.0**	**-0.2**
GCAM				S	**Sg**	**13 28 41.5**	**+0.8**
ZEY	**˜zmir**	**0.52**	**340**	*i* P	**Pg**	**13 28 36.8**	**-0.6**
ZEY				*i* S	**Sg**	**13 28 44.2**	**-0.2**
URLA	**Izmir**	**0.62**	**351**	PG	**Pg**	**13 28 38.6**	**-0.8**
URLA	**Izmir**	**0.62**	**351**	*i* P	**Pg**	**13 28 37.3**	**-2.1**
URLA				*i* S	**Sg**	**13 28 45.9**	**-1.7**
URLA	**Izmir**	**0.62**	**351**	P	**Pg**	**13 28 37.3**	**-2.1**
URLA	**Izmir**	**0.62**	**351**	*e*Pg	**Pg**	**13 28 38.6**	**-0.8**
URLA				S	**Sg**	**13 28 45.9**	**-1.7**
BODT	**Bodrum**	**0.83**	**146**	PG	**Pg**	**13 28 42.7**	**-0.5**
BODT	**Bodrum**	**0.83**	**146**	*e*Pg	**Pg**	**13 28 42.7**	**-0.5**
CHOS	**Chios island**	**0.83**	**321**	PG	**Pg**	**13 28 43.5**	**+0.2**
CHOS				SG	**Sb**	**13 28 55.3**	**+0.1**
CHOS	**Chios island**	**0.83**	**321**	P	**Pb**	**13 28 44.5**	**+0.6**
CHOS				S	**Sb**	**13 28 55.2**	**+0.1**
CHOS				AML	AML	13 28 56.2	
	comp=N,554μm,0.4s						
CHOS				AML	AML	13 28 56.2	
	comp=E,825μm,0.3s						
CHOS	**Chios island**	**0.83**	**321**	*e*Pg	**Pg**	**13 28 43.5**	**+0.2**
CHOS	**Chios island**	**0.83**	**321**	P	**Pb**	**13 28 44.0**	**+0.1**
CHOS				*e*Sg	**Sb**	**13 28 55.3**	**+0.1**
AYDN	**Tasoluk**	**0.92**	**95**	*i* P	**Pg**	**13 28 44.0**	**-1.0**
AYDN				*i* S	**Sg**	**13 28 56.2**	**-0.8**
AYDN	**Tasoluk**	**0.92**	**95**	P	**Pg**	**13 28 44.0**	**-1.0**
AYDN				S	**Sg**	**13 28 56.2**	**-0.8**
AYDB	**Zeytinkoy-Aydi**	**0.94**	**77**	PG	**Pg**	**13 28 44.9**	**-0.6**
AYDB	**Zeytinkoy-Aydi**	**0.94**	**77**	*e*Pg	**Pg**	**13 28 44.9**	**-0.6**
MLSB	**Milas**	**0.95**	**118**	PG	**Pg**	**13 28 45.1**	**-0.5**
MLSB	**Milas**	**0.95**	**118**	*e*Pg	**Pg**	**13 28 45.1**	**-0.5**
AMGA	**Amorgos Island**	**1.13**	**216**	P	**Pg**	**13 28 48.4**	**-0.6**
AMGA				S	**Sn**	**13 29 05.7**	**+1.0**
AMGA				AML	AML	13 29 08.2	
	comp=E,481μm,0.3s						
AMGA				AML	AML	13 29 09.1	
	comp=N,655μm,0.3s						
AMGA	**Amorgos Island**	**1.13**	**216**	P	**Pg**	**13 28 48.6**	**-0.4**
AMGA				S	**Sn**	**13 29 05.2**	**+0.5**
APE	**Apeiranthos**	**1.17**	**235**	PN	**Pg**	**13 28 49.3**	**-0.5**
APE	**Apeiranthos**	**1.17**	**235**	P	**Pg**	**13 28 49.2**	**-0.5**
APE				S	**Sb**	**13 29 05.5**	**+0.7**
APE				AML	AML	13 29 09.4	
	comp=N,234μm,0.2s						
APE				AML	AML	13 29 10.3	
	comp=E,199μm,0.2s						
APE	**Apeiranthos**	**1.17**	**235**	*e*Pn	**Pg**	**13 28 49.3**	**-0.5**
APE				S	**Sn**	**13 29 05.8**	**+0.1**
DAT	**Datca**	**1.22**	**146**	PN	**Pg**	**13 28 49.9**	**-0.9**
DAT	**Datca**	**1.22**	**146**	*i* P	**Pg**	**13 28 49.1**	**-1.7**
DAT	**Datca**	**1.22**	**146**	P	**Pg**	**13 28 49.1**	**-1.7**
DAT	**Datca**	**1.22**	**146**	*e*Pn	**Pg**	**13 28 49.9**	**-0.9**
DKL	**Dikili**	**1.33**	**6**	PN	**Pg**	**13 28 53.0**	**+0.1**
DKL	**Dikili**	**1.33**	**6**	*e*Pn	**Pg**	**13 28 53.0**	**+0.1**
AKHS	**Akhisar**	**1.42**	**37**	*i* P	**Pg**	**13 28 55.6**	**+1.1**
AKHS				*i* S	**Sn**	**13 29 12.4**	**+0.5**
AKHS	**Akhisar**	**1.42**	**37**	P	**Pg**	**13 28 55.6**	**+1.1**
AKHS				S	**Sn**	**13 29 12.4**	**+0.5**
PRK	**Paraskevi**	**1.54**	**347**	P	**Pb**	**13 28 55.8**	**-0.1**
PRK				S	**Sg**	**13 29 17.7**	**+0.9**
PRK				AML	AML	13 29 20.6	
	comp=N,306μm,0.3s						
PRK				AML	AML	13 29 21.6	
	comp=E,316μm,0.8s						
PRK	**Paraskevi**	**1.54**	**347**	P	**Pb**	**13 28 56.1**	**+0.2**
PRK				S	**Sg**	**13 29 17.7**	**+0.9**
MANT	**Manisa**	**1.62**	**62**	*i* P	**Pg**	**13 28 58.0**	**-0.5**
MANT				*i* S	**Sb**	**13 29 18.5**	**+0.3**
MANT	**Manisa**	**1.62**	**62**	P	**Pg**	**13 28 58.0**	**-0.5**
MANT				S	**Sb**	**13 29 18.5**	**+0.3**
TAVA	**DENIZLI_Tavas**	**1.76**	**98**	*i* P	**Pg**	**13 29 01.0**	**0.0**
TAVA				*i* S	**Sg**	**13 29 23.5**	**-0.4**
TAVA	**DENIZLI_Tavas**	**1.76**	**98**	P	**Pg**	**13 29 01.0**	**0.0**
TAVA				S	**Sg**	**13 29 23.5**	**-0.4**

IDC ***20*** *13:46:32.4±2.9,36.°26N×71.°09E,h134km±24km,mb3.6/15, mb1 3.7/19,mb1mx3.4/70,mbtmp4.1/19,Error ellipse: s-maj=20.6km s-min=14.4km az=11.0*
ISCJB ***20*** *13:46:33.2±0.3,36.°48N±0.°03×71.°10E±0.°04,h150km, mb3.9/20,Error ellipse: s-maj=4.5km s-min=3.4km az=156.3*
BJI ***20*** *13:46:33.9,36.°67N×71.°01E,h146km,mb4.5/14,mB4.6/2*
NEIC ***20*** *13:46:34.6±0.6,36.°56N×71.°05E,h153km±13km,mb4.2/2, Error ellipse: s-maj=11.1km s-min=8.2km az=144.0*
NNC ***20*** *13:46:39.3±4.1,36.°92N×70.°73E,h128km±67km,mb3.9, mpv4.6,Error ellipse: s-maj=38.2km s-min=31.9km az=153.0*

ISC 20 13:46:34.4±0.5,**36.°50N**±0.°05×**71.°09E**±0.°05,**h150**km,**n77**, σ1§**90**/88,**mb3.8**/20,**4C-4D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.57**	**221**	*e*Pn	**Pn**	**13 47 17.5**	**+0.9**
NIL	**Nilore**	**3.35**	**147**	*e*Pn	**Pn**	**13 47 27.6**	**+1.4**
SFK	**Sufi-Kurgan**	**3.99**	**28**	⇓P	**Pn**	**13 47 36.4**	**+1.7**
	23nm,0.3s						
SFK				⇑S	**Sn**	**13 48 20.8**	**-0.8**
	238nm,0.3s						
KSH	**Kashi**	**4.89**	**50**	P	**Pn**	**13 47 42.8**	**-3.6**
KSH				S	Sn	13 48 30.8	-12
KSH				smax	smax		
	comp=N,3μm,1.0s						
KSH				smax	smax		
	comp=E,4μm,1.1s						
AML	**Almayashu**	**5.98**	**19**	P	**Pn**	**13 48 01.4**	**+0.3**
	SNR=50						
DHRM	**DHARAMSHALA**	**6.04**	**133**	*e*P	**Pn**	**13 48 01.0**	**-0.8**
DHRM				*e*S	**Sn**	**13 49 06.1**	**-4.1**
DHRM				IAML		13 49 09.6	
	comp=N,553nm,0.9s						
DHRM				IAML		13 49 10.0	
	comp=E,234nm,0.9s						
MNAS	**Manas**	**6.08**	**10**	P	**Pn**	**13 48 02.6**	**+0.4**
MNAS				S	**Sn**	**13 49 07.6**	**-3.4**
NRN	**Naryn**	**6.24**	**36**	*e*Pn	**Pn**	**13 48 03.5**	**-1.0**
UCH	**Uchtor**	**6.31**	**24**	P	**Pn**	**13 48 07.7**	**+2.1**
	SNR=25						
KZA	**Kyzart**	**6.44**	**29**	P	**Pn**	**13 48 08.4**	**+1.2**
	SNR=18						
EKS2	**Erkin-Say**	**6.50**	**18**	P	**Pn**	**13 48 10.7**	**+3.0**
	SNR=16						
KK31	**Karatay Array**	**6.61**	**356**	P	**Pn**	**13 48 09.4**	**+0.2**
	comp=E,28nm,0.4s,baz=179,slow=13,SNR=280						
KK31				⇓S	**Sn**	**13 49 20.7**	**-2.8**
	comp=E,15nm,0.3s,baz=184,slow=22,SNR=5.8						
KK31	**Karatay Array**	**6.61**	**356**	*e*Pn	**Pn**	**13 48 09.7**	**+0.5**
KKAR	**Karatay Array**	**6.61**	**356**	*e*Pn	**Pn**	**13 48 09.7**	**+0.5**
AAK	**Ala-Archa**	**6.67**	**22**	P	**Pn**	**13 48 11.7**	**+1.6**
	comp=E,9.8nm,0.3s,baz=205,slow=6.5,SNR=41						
AAK				S	**Sn**	**13 49 23.3**	**-1.8**
	comp=E,7.0nm,0.3s,baz=339,slow=14,SNR=13						
AAK	**Ala-Archa**	**6.67**	**22**	*e*Pn	**Pn**	**13 48 09.7**	**-0.4**
KBK	**Karagaybulak**	**6.83**	**25**	P	**Pn**	**13 48 15.1**	**+2.8**
	SNR=8.7						
ULHL	**Ulahol**	**6.99**	**33**	P	**Pn**	**13 48 15.6**	**+1.2**
	SNR=9.5						
CHMS	**Chumysh**	**7.08**	**22**	P	**Pn**	**13 48 17.2**	**+1.8**
	SNR=8.0						
USP	**Ospenovka**	**7.25**	**20**	P	**Pn**	**13 48 16.9**	**-0.8**
	SNR=12						
TKM2	**Tokmak 2**	**7.29**	**27**	⇑P	**Pn**	**13 48 20.6**	**+2.1**
	comp=E,35nm,0.5s						
TKM2				⇑S	**Sn**	**13 49 38.8**	**-1.3**
	comp=E,31nm,0.8s						
TKM2	**Tokmak 2**	**7.29**	**27**	P	**Pn**	**13 48 21.1**	**+2.7**
	SNR=58						
SMLA	**Simla**	**7.36**	**135**	*e*P	**Pn**	**13 48 18.7**	**-0.5**
SMLA				*e*S	**Sn**	**13 49 37.5**	**-4.0**
SMLA				IAML		13 49 39.8	
	comp=N,82nm,0.1s						
SMLA				IAML		13 49 40.1	
	comp=E,82nm,0.4s						
TARG	**Taragay, Kyrgy**	**7.38**	**43**	*e*Pn	**Pn**	**13 48 19.9**	**+0.1**
MDOK	**Medeo**	**8.08**	**33**	⇑P	**Pn**	**13 48 30.1**	**+1.2**
	comp=E,16nm,0.6s						
MDOK				S	**Sn**	**13 49 59.0**	**+0.1**
	comp=E,7.1nm,0.9s						
PRZ	**Przheval'sk**	**8.22**	**41**	*e*Pn	**Pn**	**13 48 31.1**	**+0.2**
GEYT	**Alibeck**	**10.45**	**282**	P	**Pn**	**13 48 59.5**	**-0.8**
	comp=E,1.1nm,0.3s,baz=104,slow=12,SNR=4.7						
GEYT				S	**Sn**	**13 50 53.6**	**-2.3**
	comp=E,1.6nm,0.3s,baz=123,slow=16,SNR=2.9						
GYA0B	**ALIBECK ARRAY**	**10.45**	**282**	*e*Pn	**Pn**	**13 48 59.0**	**-1.2**
PYUN	**Piuthan**	**13.08**	**126**	*e*P	**Pn**	**13 49 32.2**	**-2.6**
	comp=E,47nm,0.4s						
PYUN				*e*S	Sn	13 51 47.7	-12
MAKZ	**Makanchi**	**13.12**	**35**	*e*Pn	**Pn**	**13 49 34.4**	**-0.5**
MK01	**Makanchi Array**	**13.24**	**36**	*e*Pn	**Pn**	**13 49 36.2**	**-0.3**
MK31	**Makanchi Array**	**13.25**	**36**	*e*Pn	**Pn**	**13 49 35.2**	**-1.4**
MKAR	**Makanchi Array**	**13.25**	**36**	P	**Pn**	**13 49 36.7**	**+0.1**
	comp=E,1.2nm,0.3s,baz=217,slow=13,SNR=13						
MKAR	**Makanchi Array**	**13.25**	**36**	*e*Pn	**Pn**	**13 49 36.5**	**-0.1**
DANN	**Dangsing**	**13.42**	**124**	*e*P	**Pn**	**13 49 38.1**	**-1.2**
	comp=E,26nm,0.4s						
KOLN	**Koldanda**	**13.70**	**126**	*e*P	**Pn**	**13 49 40.6**	**-2.1**
	comp=E,12nm,0.3s						
GKN	**Gorkha**	**14.24**	**123**	*e*P	**Pn**	**13 49 48.4**	**-1.0**
WMQ	**Urumqi**	**14.64**	**55**	P	**Pn**	**13 49 54.3**	**+0.1**
WMQ				sP	sP	13 50 36.1	
WMQ				pmax	pmax		
	comp=E,20nm,0.7s						
DMN	**Daman**	**14.81**	**123**	*e*P	**Pn**	**13 49 55.9**	**-0.8**
KKN	**Kakani**	**14.81**	**122**	*e*P	**Pn**	**13 49 54.9**	**-1.8**
	comp=E,24nm,0.6s						
PKIN	**Phulchoki**	**15.03**	**122**	*e*P	**Pn**	**13 49 58.1**	**-1.3**
	comp=E,18nm,0.4s						
KURBB	**Kurchatov Arra**	**15.10**	**18**	P	**Pn**	**13 49 58.7**	**-1.1**
	comp=E,0.1nm,0.3s,baz=208,slow=10,SNR=8.3						
AB31	**Akbulak array**	**15.12**	**331**	⇓P	**Pn**	**13 49 58.9**	**-1.2**
	comp=E,4.1nm,0.5s,baz=144,slow=12,SNR=72						
ABKAR	**Akbulak array**	**15.12**	**331**	*e*Pn	**Pn**	**13 49 58.7**	**-1.4**
GUN	**Gumba**	**15.15**	**120**	*e*P	**Pn**	**13 50 00.4**	**-0.6**
	comp=E,26nm,0.4s						
KURK	**Kurchatov**	**15.21**	**19**	*e*Pn	**Pn**	**13 49 59.2**	**-2.0**
	comp=E,9.2nm,0.8s						
JIRN	**Jiri**	**15.52**	**120**	*e*P	**Pn**	**13 50 05.3**	**-0.3**
	comp=E,58nm,0.3s						
RAMN	**Ramite**	**16.25**	**121**	*e*P	**Pn**	**13 50 13.3**	**-1.1**
	comp=E,13nm,0.3s						
BVAR	**Borovoye Array**	**16.54**	**359**	P	**Pn**	**13 50 17.0**	**-0.4**
	comp=E,0.7nm,0.3s,baz=170,slow=12,SNR=12						
BVAR				S	**S**	**13 53 13.8**	**-7.1**
	comp=E,0.3nm,0.3s,baz=176,slow=30,SNR=5.9						
BRVK	**Borovoye**	**16.57**	**358**	*e*P	**P**	**13 50 17.1**	**-0.6**
	comp=E,5.7nm,0.5s						
AKTO	**Aktyubinsk**	**16.82**	**330**	P	**Pn**	**13 50 21.9**	**+1.0**
	comp=E,0.8nm,0.3s,baz=130,slow=12,SNR=31						
AKTO				S	**S**	**13 53 21.8**	**-5.9**
	comp=E,0.2nm,0.3s,baz=43,slow=20,SNR=6.1						
AKTO	**Aktyubinsk**	**16.82**	**330**	⇓P	**Pn**	**13 50 21.4**	**+0.5**
	comp=E,7.8nm,0.6s						
ODAN	**Odare**	**16.85**	**120**	*e*P	**P**	**13 50 21.7**	**+0.4**
	comp=E,54nm,1.1s						
ZAA0	**Zalesovo Array**	**19.89**	**24**	*e*P	**P**	**13 50 54.5**	**+0.7**
	comp=E,38μm,1.0s						
ZALV	**Zalesovo Beam**	**19.89**	**24**	P	**P**	**13 50 54.5**	**+0.7**
	comp=E,20nm,0.6s,baz=225,slow=11,SNR=59						
ZALV	**Zalesovo Beam**	**19.89**	**24**	*e*P	**P**	**13 50 54.7**	**+0.9**
ARU	**Arti**	**21.66**	**341**	P	**P**	**13 51 14.8**	**+2.0**
	comp=E,1.4nm,0.4s,baz=107,slow=15,SNR=3.8						
GTA	**Gaotai**	**22.79**	**74**	*e*P	**P**	**13 51 26.8**	**+2.5**
GTA				pmax	pmax		
	comp=E,5.0nm,1.0s						
LZH	**Lanzhou**	**26.34**	**81**	*e*P	**P**	**13 52 00.5**	**+4.0**
LZH				pmax	pmax		
	comp=E,22nm,1.0s						
SONM	**Songino Array**	**28.28**	**55**	P	**P**	**13 52 15.4**	**+1.8**
	comp=E,0.6nm,0.5s,baz=267,slow=11,SNR=3.1						
KMI	**Kunming**	**29.32**	**104**	P	**P**	**13 52 24.8**	**+1.6**
KMI				pmax	pmax		
	comp=E,10.0nm,0.6s						
HHC	**Hu-ho-hao-te**	**31.69**	**70**	*e*P	**P**	**13 52 43.8**	**0.0**
HHC				pmax	pmax		
	comp=E,8.0nm,0.6s						
AKASG	**Malin Array Be**	**33.01**	**309**	P	**P**	**13 52 56.2**	**+1.2**
	comp=E,0.5nm,0.4s,baz=80,slow=8.1,SNR=3.2						
FINES	**FINESS Array B**	**37.53**	**326**	P	**P**	**13 53 35.1**	**+1.6**
	comp=E,2.2nm,0.9s,baz=121,slow=10,SNR=3.7						
ARCES	**ARCESS Array B**	**41.18**	**338**	P	**P**	**13 54 05.1**	**+1.5**
	comp=E,1.3nm,0.6s,baz=107,slow=8.1,SNR=5.8						
CN2	**Changchun**	**41.54**	**63**	*e*P	**P**	**13 54 08.6**	**+1.7**
HFS	**Hagfors**	**43.12**	**322**	P	**P**	**13 54 20.9**	**+1.5**
	comp=E,0.8nm,0.3s,baz=96,slow=10,SNR=7.8						
CLL	**Collm**	**43.25**	**309**	*e*P	**P**	**13 54 23.0**	**+2.4**
	comp=Z,4.0nm,0.4s						
NB2	**NORSAR Subarra**	**44.43**	**323**	P	**P**	**13 54 30.9**	**+1.0**
	comp=Z,0.6nm,0.5s,baz=95,slow=7.4						
KSRS	**Korea Array**	**44.81**	**71**	P	**P**	**13 54 33.3**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=279,slow=7.3,SNR=2.8						
TORD	**Torodi Ar. Bea**	**65.79**	**269**	P	**P**	**13 57 03.0**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=44,slow=5.0,SNR=4.9						
INK	**Inuvik**	**73.90**	**9**	P	**P**	**13 57 53.6**	**+1.3**
	comp=Z,1.7nm,0.6s,baz=360,slow=8.8,SNR=6.4						
ILAR	**Eielson Array**	**74.76**	**16**	P	**P**	**13 57 57.7**	**+0.3**
	comp=Z,0.5nm,1.0s,baz=313,slow=5.6,SNR=4.4						
YKA	**Yellowknife Ar**	**81.25**	**3**	P	**P**	**13 58 34.2**	**+1.0**
	comp=Z,1.0nm,0.7s,baz=349,slow=5.3,SNR=13						
WRA	**Warramunga Arr**	**81.92**	**122**	P	**P**	**13 58 36.3**	**-1.1**
	comp=Z,1.4nm,0.8s,baz=325,slow=4.9,SNR=17						
ASAR	**Alice Springs**	**84.19**	**125**	P	**P**	**13 58 48.5**	**-0.5**
	comp=Z,1.7nm,0.7s,baz=310,slow=5.0,SNR=24						
ULM	**Lac du Bonnet**	**92.86**	**352**	P	**P**	**13 59 29.4**	**-0.5**
	comp=Z,1.7nm,0.6s,baz=4.2,slow=2.5,SNR=3.1						

SKHL ***20*** *13:55:00.4±0.8,44.°34N×148.°34E,h64km±1km,mb4.7/8*
ISCJB ***20*** *13:55:00.9±0.7,44.°42N±0.°04×148.°11E±0.°07,h65km±6km, mb3.8/19,Error ellipse: s-maj=8.9km s-min=5.1km az=29.9*
MOS ***20*** *13:55:00.5±0.8,44.°51N×148.°12E,h61km,mb4.1/10,Error ellipse: s-maj=10.8km s-min=8.4km az=53.4*
NIED ***20*** *13:55:00,44.°00N×147.°90E,h47km,Mw3.8 Best double couple: M0:9.97000×10^14 NP1:φ=248.00000°,δ23.00000°, λ155.00000°. NP2:φ=1.00000°,δ81.00000°,λ69.00000°.*
JMA ***20*** *13:55:01.0±0.3,44.°03N×147.°93E,h0km,M4.8*
IDC ***20*** *13:55:02.9±2.6,44.°50N×148.°10E,h66km±24km,mb3.5/17, mb1 3.7/21,mb1mx3.5/67,mbtmp3.8/21,MS2.7/7, Ms1 2.7/7,ms1mx2.5/56,Error ellipse: s-maj=19.6km s-min=16.0km az=141.0*

ISC 20 13:55:00.8±1.4,**44.°37N**±0.°05×**148.°22E**±0.°08,**h50**km±12km, **n86**,σ1§**23**/100,**mb3.8**/19,**4C-4D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.90**	**344**	*i* P	**Pn**	**13 55 17.2**	**0.0**
KUR				AMB	AMB	13 55 17.9	
	294nm,0.4s						
KUR				AMB	AMB	13 55 17.9	
	150nm,0.4s						
KUR				AMB	AMB	13 55 17.9	
	1μm,0.4s						
KUR				*i* S	**Sn**	**13 55 29.0**	**-0.3**
KUR				A	A	13 55 29.0	
	2μm,0.4s						
KUR				A	A	13 55 29.0	
	650nm,0.4s						
KUR	**Kuril'sk**	**0.90**	**344**	*d* PN	**Pn**	**13 55 17.1**	**-0.1**
KUR				*i* S	**Sn**	**13 55 28.6**	**-0.7**
KUR				pmax	pmax		
	comp=N,294nm,0.4s						
KUR				pmax	pmax		
	comp=E,146nm,0.4s						
KUR				pmax	pmax		
	comp=Z,1μm,0.4s						
KUR				smax	smax		
	comp=E,4μm,0.4s						
KUR				smax	smax		
	comp=N,1μm,0.3s						
SHO	**Shikotan**	**1.11**	**244**	*i* P	**Pn**	**13 55 19.0**	**-1.0**
SHO				AMB	AMB	13 55 20.0	
	comp=N,234nm,0.5s						
SHO				*i* S	**Sn**	**13 55 32.9**	**-1.4**
SHO				A	A	13 55 33.6	
	comp=N,4μm,0.3s						
SHO				A	A	13 55 33.6	
	comp=N,1μm,0.3s						
SHO	**Shikotan**	**1.11**	**244**	*d* PN	**Pn**	**13 55 19.6**	**-0.4**
SHO				*i* S	**Sn**	**13 55 32.4**	**-1.9**
SHO				pmax	pmax		
	comp=Z,234nm,0.5s						
SHO				pmax	pmax		
	comp=N,113nm,0.3s						
SHO				pmax	pmax		
	comp=E,135nm,0.3s						
SHO				smax	smax		
	comp=N,2μm,0.5s						
SHO				smax	smax		
	comp=E,2μm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.73**	**260**	*i* P	**Pn**	**13 55 28.0**	**-0.4**
YUK				AMB	AMB	13 55 31.0	
	comp=E,348nm,0.4s						
YUK				AMB	AMB	13 55 31.0	
	comp=E,412nm,0.4s						
YUK				AMB	AMB	13 55 31.0	
	comp=E,88nm,0.4s						
YUK				*i* S	**Sn**	**13 55 48.0**	**-1.2**
YUK				A	A	13 55 53.0	
	comp=E,257nm,0.3s						
YUK				A	A	13 55 53.0	
	comp=E,2μm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.73**	**260**	*d* PN	**Pn**	**13 55 28.6**	**+0.2**
YUK				*i* S	**Sn**	**13 55 48.7**	**-0.5**
YUK				pmax	pmax		
	comp=Z,878nm,0.4s						
YUK				pmax	pmax		
	comp=E,412nm,0.3s						
YUK				pmax	pmax		
	comp=N,348nm,0.2s						
YUK				smax	smax		
	comp=N,3μm,0.3s						
YUK				smax	smax		
	comp=E,2μm,0.3s						
LAGR	**Lagunnoye**	**1.77**	**261**	*e*P	**Pn**	**13 55 29.0**	**0.0**
LAGR				AMB	AMB	13 55 35.0	
	comp=E,306nm,0.3s						
LAGR				AMB	AMB	13 55 35.0	
	comp=E,478nm,0.3s						
LAGR				*e*S	**Sn**	**13 55 49.0**	**-1.4**
LAGR				A	A	13 55 55.0	
	comp=E,450nm,0.3s						
LAGR				A	A	13 55 55.0	
	comp=E,203nm,0.3s						
LAGR	**Lagunnoye**	**1.77**	**261**	*e*PN	**Pn**	**13 55 29.4**	**+0.4**
LAGR				*e*S	**Sn**	**13 55 49.7**	**-0.7**
LAGR				pmax	pmax		
	comp=E,306nm,0.3s						
LAGR				pmax	pmax		
	comp=Z,478nm,0.3s						
LAGR				pmax	pmax		
	comp=N,306nm,0.2s						
LAGR				smax	smax		
	comp=E,2μm,0.5s						
LAGR				smax	smax		
	comp=N,4μm,0.3s						
GRPR	**Tuman**	**1.80**	**259**	*e*P	**Pn**	**13 55 29.0**	**-0.4**
GRPR				AMB	AMB	13 55 32.0	
	comp=N,792nm,0.3s						
GRPR				*i* S	**Sn**	**13 55 50.0**	**-0.9**
GRPR				A	A	13 55 53.0	
	comp=N,1μm,0.3s						
GRPR				A	A	13 55 53.0	
	comp=N,229nm,0.3s						
GRPR	**Tuman**	**1.80**	**259**	*e*PN	**Pn**	**13 55 29.7**	**+0.

comp=E,30nm,0.6s
YSS *e*rx rx 13 56 14.9
YSS *e*S **Sn** **13 57 01.4 +1.0**
YSS Yuzh-Sakhalins 4.62 306‖*e*PN **Pn** **13 56 09.2 +1.2**
YSS *e*S **Sn** **13 57 01.4 +1.0**
YSS pmax pmax
comp=Z,30nm,0.6s
YSS smax smax
comp=N,20nm,0.6s
YSS smax smax
comp=E,20nm,0.4s
UGL Uglegorsk 6.33 320 *e*P **Pn** **13 56 33.0 +1.5**
UGL AMB AMB 13 56 34.8
comp=E,28nm,0.8s
UGL *e*S **Sn** **13 57 41.5 -0.9**
UGL A A 13 57 47.0
comp=E,26nm,0.8s
UGL A A 13 57 47.0
comp=E,32nm,0.8s
UGL Uglegorsk 6.33 320 PN **Pn** **13 56 29.5 -2.0**
UGL *e* 13 57 45.8
UGL pmax pmax
comp=Z,30nm,0.9s
TYV Tymovskoe 7.51 332 *e*P **Pn** **13 56 50.1 +2.5**
PETK Petropavlovsk- 10.75 32 P Pn 13 57 38.7 +6.8
comp=Z,0.3nm,0.3s,baz=176,slow=12,SNR=4.3
PETK LR LR 14 02 12.0
comp=Z,17nm,20.5s,baz=241,slow=40
MJA0 Matsu Arr-Jizo 10.89 228 *e*PN **Pn** **13 57 36.5 +2.5**
MJAR Matsushiro Arr 10.91 228 P **Pn** **13 57 35.2 +1.0**
comp=Z,0.3nm,0.3s,baz=20,slow=17,SNR=4.2
MJAR Matsushiro Arr 10.91 228 *e*P **Pn** **13 57 36.5 +2.3**
USRK Ussuriysk Ar. 11.64 275 P **Pn** **13 57 44.7 +0.6**
comp=Z,0.2nm,0.3s,baz=79,slow=15,SNR=2.6
USRK LR LR 14 02 08.6
comp=Z,88nm,20.8s,baz=99,slow=37
KLR Kul'dur 12.28 299 P **Pn** **13 57 54.1 +1.3**
comp=Z,0.0nm,0.3s,baz=131,slow=19,SNR=2.4
KLR LR LR 14 02 40.4
comp=Z,5.3nm,21.8s,baz=108,slow=38
KLR Kul'dur 12.28 299‖*e*PN **Pn** **13 57 56.0 +3.1**
EKMR Ekimchan 13.30 316 *e*P **Pn** **13 58 07.0 +0.3**
KSRS Korea Array 16.80 253 P **P** **13 58 53.9 0.0**
comp=Z,0.1nm,0.3s,baz=66,slow=10,SNR=3.7
KSRS LR LR 14 04 02.4
comp=Z,19nm,19.4s,baz=220,slow=32
YAK Yakutsk 20.75 335 *e*P **P** **13 59 36.2 -0.8**
YAK Yakutsk 20.75 335‖*e*P **P** **13 59 36.2 -0.8**
YAK pmax pmax
comp=Z,3.0nm,0.6s
BILL Biiibino 25.56 16 *e*P **P** **14 00 22.9 -1.6**
BILL Biiibino 25.56 16‖*e*P **P** **14 00 22.9 -1.6**
BILL pmax pmax
comp=Z,2.0nm,1.3s
SONM Songino Array 28.95 292 P **P** **14 00 54.9 -0.4**
comp=Z,0.4nm,0.4s,baz=79,slow=7.5,SNR=3.0
SONM LR LR 14 13 51.9
comp=Z,23nm,18.9s,baz=86,slow=39
H11N2 WAKE ISLAND Hy 29.08 142 T T 14 31 56.2
baz=332,slow=76,SNR=84
H11N1 WAKE ISLAND Hy 29.10 142 T T 14 31 51.3
baz=332,slow=76,SNR=78
H11N3 WAKE ISLAND Hy 29.10 142 T T 14 31 54.0
baz=332,slow=76,SNR=105
H11S1 WAKE ISLAND Hy 30.08 143 T T 14 33 17.7
baz=333,slow=76,SNR=156
H11S3 WAKE ISLAND Hy 30.08 143 T T 14 33 02.3
baz=333,slow=76,SNR=113
H11S2 WAKE ISLAND Hy 30.09 143 T T 14 33 03.2
baz=333,slow=76,SNR=114
ILAR Eielson Array 40.54 37 P **P** **14 02 33.7 -0.9**
comp=Z,0.3nm,0.5s,baz=278,slow=5.2,SNR=5.9
ILAR Eielson Array 40.54 37 *e*P **P** **14 02 34.9 +0.2**
ILAR Eielson Array 40.54 37 *e*P **P** **14 02 34.9 +0.2**
ZALV Zalesovo Beam 41.24 307 PcP **PcP** **14 04 37.4 -1.1**
comp=Z,1.5nm,0.4s,baz=62,slow=3.5,SNR=4.4
MKAR Makanchi Array 44.98 297 P **P** **14 03 10.6 -0.3**
comp=Z,0.9nm,0.6s,baz=77,slow=8.8,SNR=11
MKAR PcP **PcP** **14 04 51.1 -0.2**
comp=Z,0.5nm,0.5s,baz=54,slow=3.7,SNR=4.5
MKAR Makanchi Array 44.98 297 *e*P **P** **14 03 10.2 -0.7**
MKAR Makanchi Array 44.98 297 *e*P **P** **14 03 10.2 -0.7**
MKAR pmax pmax
comp=Z,1.0nm,0.6s
INK Inuvik 45.48 31 P **P** **14 03 14.6 +0.1**
comp=Z,0.6nm,0.5s,baz=312,slow=8.8,SNR=6.4
KURK Kurchatov 45.83 304 *e*P **P** **14 03 17.0 -0.5**
KURK Kurchatov 45.83 304 P **P** **14 03 17.0 -0.5**
KURK 14 04 54.2
KURK pmax pmax
comp=Z,1.0nm,0.4s
KURBB Kurchatov Arra 45.91 304 P **P** **14 03 17.0 -1.1**
comp=Z,0.5nm,0.4s,baz=70,slow=8.4,SNR=4.7
KURBB PcP **PcP** **14 04 54.2 -0.2**
comp=Z,0.8nm,0.6s,baz=84,slow=2.9,SNR=8.7
YKA Yellowknife Ar 54.86 34 P **P** **14 04 25.7 +0.2**
comp=Z,0.8nm,0.6s,baz=301,slow=7.2,SNR=7.8
YKA Yellowknife Ar 54.86 34 *e*P **P** **14 04 26.0 +0.5**
YKA Yellowknife Ar 54.86 34 *e*P **P** **14 04 26.0 +0.5**
YKA pmax pmax
comp=Z,1.0nm,0.6s
AKTO Aktyubinsk 57.72 311 LR LR 14 32 41.2
comp=Z,18nm,19.6s,baz=116,slow=39
ARCES ARCESS Array B 58.94 340 P **P** **14 04 53.6 -0.7**
comp=Z,1.6nm,0.7s,baz=54,slow=7.9,SNR=3.0
FINES FINESS Array B 64.67 333 P **P** **14 05 31.9 -1.0**
comp=Z,0.8nm,0.5s,baz=55,slow=7.2,SNR=4.1
FINES FINESS Array B 64.67 333 *e*P **P** **14 05 32.7 -0.2**
FINES FINESS Array B 64.67 333 *i*P **P** **14 05 32.7 -0.2**
FINES pmax pmax
comp=Z,1.0nm,0.6s
FFC Flin Flon 64.75 37 *e*P **P** **14 05 34.6 +1.0**
WRA Warramunga Arr 65.24 194 P **P** **14 05 38.2 +1.1**
comp=Z,0.3nm,0.6s,baz=17,slow=6.9,SNR=4.6
WRA Warramunga Arr 65.24 194 *e*P **P** **14 05 38.7 +1.6**
WRA Warramunga Arr 65.24 194 *i*P **P** **14 05 38.7 +1.6**
NVAR Mina Array Bea 66.60 59 P **P** **14 05 47.1 +1.0**
comp=Z,0.2nm,0.5s,baz=300,slow=7.2,SNR=3.2
PDAR Pinedale Array 68.93 50 P **P** **14 06 00.8 +0.2**
comp=Z,0.2nm,0.5s,baz=146,slow=2.0,SNR=2.8
ASAR Alice Springs 68.96 194 P **P** **14 06 01.5 +0.9**
comp=Z,0.5nm,0.7s,baz=13,slow=5.5,SNR=7.0
ASAR Alice Springs 68.96 194 *e*P **P** **14 06 01.8 +1.2**
ASAR Alice Springs 68.96 194 *e*P **P** **14 06 01.8 +1.2**
ASAR pmax pmax
comp=Z,1.0nm,0.8s
HFS Hagfors 69.42 338 P **P** **14 06 01.4 -1.6**
comp=Z,0.8nm,0.5s,baz=9.5,slow=4.4,SNR=6.1
BRTR Keskin Array B 77.67 314 P **P** **14 06 51.8 -0.3**
comp=Z,0.7nm,0.6s,baz=47,slow=5.4,SNR=3.6
BRTR Keskin Array B 77.67 314 *e*P **P** **14 06 52.1 0.0**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
TXAR Lajitas Array 81.67 57 P **P** **14 07 14.6 +0.7**
comp=Z,0.3nm,0.5s,baz=275,slow=4.3,SNR=4.8
MMAI Mount Meron Ar 81.71 308 P **P** **14 07 14.4 +0.4**
comp=Z,1.3nm,0.5s,baz=46,slow=8.3,SNR=3.6
IDI Anoyia 85.50 317 P **P** **14 07 31.9 -1.5**
comp=Z,5.8nm,0.8s,baz=72,slow=20,SNR=4.0

PRE 20 14:06:42.4±2.0, 26°.45S×27°.33E, h2km, ML3.7, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLOF	**Kloof**	**0.27**	**69**	*e*P	Pg	14 06 48.5	+1.0
KLOF				*e*S	Sg	14 06 51.8	+0.8
KLOF				AML	AML	14 06 52.7	
comp=Z,1μm,0.2s							
PRYS	**Parys**	**0.48**	**177**	*e*P	Pb	14 06 53.2	-0.5
PRYS				*e*S	Sg	14 06 58.5	+0.7
PRYS				AML	AML	14 07 00.2	
comp=Z,1μm,0.2s							
ERPM	**east rand prop**	**0.82**	**83**	*e*P	Pg	14 06 57.7	-0.4
ERPM				*e*S	Sb	14 07 10.7	-0.4
ERPM				AML	AML	14 07 16.4	
comp=Z,120nm,0.7s							
SLR	**Silverton**	**1.11**	**50**	*e*P	Pg	14 07 02.6	-1.1
SLR				*e*S	Sg	14 07 17.8	-0.2
SLR				AML	AML	14 07 22.4	
comp=Z,554nm,0.5s							
SWZ	**Schweizer**	**1.93**	**247**	*e*P	Pb	14 07 18.3	-0.2
SWZ				*e*S	Sb	14 07 42.4	-0.7
SWZ				AML	AML	14 07 44.1	
comp=Z,1μm,0.2s							
LBTB	**Lobatse**	**2.12**	**312**	*e*P	Pb	14 07 20.8	-0.8
LBTB				*e*S	Sb	14 07 47.6	-0.8
LBTB				AML	AML	14 07 50.4	
comp=Z,685nm,0.7s							
BOSA	**Boshof**	**2.84**	**220**	*e*P	Pn	14 07 29.4	+0.5
BOSA				*e*S	Sn	14 08 03.8	0.0
BOSA				AML	AML	14 08 10.8	
comp=Z,152nm,0.3s							
UPI	**Upington**	**5.73**	**249**	*e*P	Pn	14 08 09.0	+0.4
UPI				*e*S	Sn	14 09 12.6	-2.5
UPI				AML	AML	14 09 45.5	
comp=Z,58nm,0.4s							
KEIM	**Keimoes**	**6.08**	**247**	*e*P	Pn	14 08 14.8	+1.4
KEIM				*e*S	Sn	14 09 21.8	-1.9
KEIM				AML	AML	14 09 58.6	
comp=Z,15nm,0.4s							
ARMS	**Ukamas**	**6.94**	**255**	*e*P	Pn	14 08 25.2	-0.1
ARMS				*e*S	Sn	14 09 40.8	-4.1
ARMS				AML	AML	14 10 23.2	
comp=Z,16nm,0.9s							
SUR	**Sutherland**	**8.20**	**222**	*e*P	Pn	14 08 42.9	+0.3
SUR				AML	AML	14 11 07.7	
comp=Z,72nm,0.7s							
CVNA	**Calvinia**	**8.31**	**231**	*e*P	Pn	14 08 44.9	+0.7
CVNA				*e*S	Sn	14 10 13.7	-5.1
CVNA				AML	AML	14 11 12.4	
comp=Z,45nm,0.5s							
KOMG	**Komaggas**	**9.31**	**247**	*e*P	Pn	14 08 58.7	+0.9
KOMG				*e*S	Sn	14 10 37.9	-5.2
KOMG				AML	AML	14 11 49.3	
comp=Z,21nm,0.5s							

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*NEIC **20** 14:10:26.2±0.0, 16°.18N×95°.97W, h10km, MD4.0(MEX), After MEX.*
MEX 20 14:10:26.3±0.8, 16°.18N×95°.96W, h10km, MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**1.15**	**320**	*e*P	Pb	14 10 44.3	-4.2
VHO				*e*S	Sg	14 10 59.1	-4.4
VHO	**Vista Hermosa**	**1.15**	**320**	*e*P	Pb	14 10 44.3	-4.2
VHO				*e*S	Sg	14 10 59.1	-4.4
TUIG	**Tuzandepetl**	**2.36**	**38**	*e*P	Pn	14 11 04.3	-0.8
TUIG	**Tuzandepetl**	**2.36**	**38**	*e*P	Pn	14 11 04.3	-0.8
PCIG		**2.68**	**100**	*e*P	Pn	14 11 08.2	-1.3
PCIG		**2.68**	**100**	*e*P	Pn	14 11 08.2	-1.3
TGIG		**2.79**	**77**	*e*P	Pn	14 11 09.2	-1.9
TGIG		**2.79**	**77**	*e*P	Pn	14 11 09.2	-1.9
TLIG	**Tlapa**	**2.85**	**299**	*e*P	Pn	14 11 09.4	-2.6
TLIG				*e*S	Sn	14 11 42.6	-3.8
TLIG	**Tlapa**	**2.85**	**299**	*e*P	Pn	14 11 09.4	-2.6
TLIG				*e*S	Sn	14 11 42.6	-3.8

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*GUC **20** 14:20:51.7±0.5, 34°.04S×70°.09W, h18km±2km, ML3.0*
*SJA **20** 14:20:51.2±0.3, 34°.17S×70°.18W, h5km±5km, ML2.7, MW3.4*
ISC 20 14:20:51.8±1.4, 34°.11S±0°.05×70°.16W±0°.04, h13km±11km, n14, σ0°.58/22, 1C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMEL	**Las Melosas**	**0.26**	**351**	‖*i*P	**Pg**	**14 20 57.4**	**-0.1**
LMEL				*i* S	**Sg**	**14 21 01.5**	**+0.2**
LMEL				IAML		14 21 01.9	
comp=N,6μm,0.4s							
ANTU	**Antumapu**	**0.67**	**323**	*e*P	**Pb**	**14 21 05.3**	**0.0**
ANTU				*e*S	**Sb**	**14 21 15.1**	**+0.5**
ANTU				IAML		14 21 15.4	
comp=E,2μm,0.4s							
CLCH	**Cerro Calan**	**0.78**	**336**	↑*i*P	**Pb**	**14 21 07.2**	**0.0**
CLCH				*i* S	**Sb**	**14 21 18.4**	**+0.7**
CLCH				IAML		14 21 23.4	
comp=E,963nm,0.9s							
FCH	**Farellones**	**0.79**	**352**	‖*i*P	**Pg**	**14 21 06.9**	**-0.3**
FCH				*e*S	**Sb**	**14 21 18.6**	**+0.3**
FCH				IAML		14 21 20.3	
comp=E,659nm,0.2s							
PEL	**Peldehue**	**1.06**	**335**	*e*P	**Pb**	**14 21 11.1**	**-0.9**
PEL				*i* S	**Sb**	**14 21 25.9**	**+0.1**
PEL				IAML		14 21 27.8	
comp=N,422nm,0.3s							
ROC1	**El Roble**	**1.34**	**327**	*i* P	**Pg**	**14 21 18.0**	**+0.3**
ROCH	**El Roble**	**1.34**	**328**	*e*P	**Pg**	**14 21 17.7**	**0.0**
ROCH				*i* S	**Sg**	**14 21 35.5**	**+0.4**
ROCH				IAML		14 21 37.6	
comp=E,448nm,0.5s							
AVIZ	**Vizcacheras**	**1.51**	**66**	*i* P	**Pg**	**14 21 20.9**	**+0.2**
AAGR	**Agrelo**	**1.51**	**48**	*i* P	**Pg**	**14 21 21.2**	**+0.4**
ARCO	**CERRO ARCO**	**1.63**	**39**	*i* P	**Pg**	**14 21 23.4**	**+0.4**
ARCO				IAML		14 21 57.8	
comp=Z,80nm,0.3s							
GO05	**HualaæØ**	**1.72**	**238**	*e*P	**Pg**	**14 21 24.1**	**-0.7**
GO05				*i* S	**Sg**	**14 21 48.0**	**+0.8**
GO05				IAML		14 21 48.8	
comp=N,562nm,0.4s							
ASAL	**Salagasta**	**1.88**	**36**	*i* P	**Pg**	**14 21 27.1**	**-0.7**
AUSP	**Uspallata**	**1.99**	**19**	*i* P	**Pg**	**14 21 29.6**	**-0.4**
RTLS	**Leoncito**	**2.42**	**18**	*i* P	**Pb**	**14 21 35.5**	**+0.2**
RTLS				IAML		14 21 38.6	
comp=Z,40nm,0.6s							
RTLS				*i* S	**Sg**	**14 22 08.2**	**-1.3**

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*IDC **20** 14:36:09.3±5.4, 27°.43N×111°.72W, h0km, mb3.7/1, mb1 3.9/5, mb1mx3.5/67, mbtmp3.5/5, ML3.5/4, MS3.0/8, Ms1 3.0/8, ms1mx2.7/55, Error ellipse: s-maj=71.4km s-min=19.0km az=18.0*
*ISCJB **20** 14:36:10.2±0.9, 27°.68N±0°.08×111°.61W±0°.09, h10km, MS2.9/3, Error ellipse: s-maj=15.6km s-min=5.8km az=135.2*
*NEIC **20** 14:36:11.7±1.4, 27°.47N×111°.59W, h10km, MD4.1(MEX), Error ellipse: s-maj=21.3km s-min=11.8km az=162.0*
*MEX **20** 14:36:12.3±0.9, 27°.76N×111°.80W, h3km±18km, MD4.1*
ISC 20 14:36:11.6±1.1, 27°.71N±0°.09×111°.7W±0°.1, h10km, n19, σ2°.17/16, MS3.0/3, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRIG	**Santa Rosalia**	**0.62**	**232**	*e*P	**Pg**	**14 36 23.0**	**-0.5**
SRIG				*i* S	**Sb**	**14 36 32.0**	**-1.2**
SRIG	**Santa Rosalia**	**0.62**	**232**	*e*P	**Pg**	**14 36 23.0**	**-0.5**
SRIG				*i* S	**Sb**	**14 36 32.0**	**-1.2**
HSIG		**1.46**	**27**	*e*P	**Pn**	**14 36 36.6**	**-1.5**
HSIG				*e*S	**Sn**	**14 36 53.8**	**-3.5**
HSIG		**1.46**	**27**	*e*P	**Pn**	**14 36 36.6**	**-1.5**
HSIG				*e*S	**Sn**	**14 36 53.8**	**-3.5**
LPIG	**La Paz**	**3.80**	**161**	LR	LR	14 38 34.5	
comp=Z,134nm,21.2s,baz=238,slow=41							
TUC	**Tucson**	**4.65**	**10**	*e*Pn	**Pn**	**14 37 21.1**	**-1.0**
TUC	**Tucson**	**4.65**	**10**	*e*P	**Pn**	**14 37 21.1**	**-1.0**
MNTX	**Cornudas Mount**	**6.78**	**53**	*e*Pn	**Pn**	**14 37 51.5**	**+0.3**
6.9nm,0.8s							
TXAR	**Lajitas Array**	**7.25**	**75**	Pn	**Pn**	**14 37 58.4**	**+0.8**
0.2nm,0.3s,baz=250,slow=13,SNR=6.6							
TXAR				Lg	Lg	14 40 01.1	
0.4nm,0.3s,baz=257,slow=32,SNR=4.8							
TXAR				LR	LR	14 40 58.0	
comp=Z,174nm,20.7s,baz=0.0,slow=39							
ANMO	**Albuquerque**	**8.49**	**31**	Lg	Lg	14 40 40.2	
0.2nm,0.3s,baz=66,slow=23,SNR=8.8							
NVAR	**Mina Array Bea**	**12.04**	**334**	Pn	**Pn**	**14 39 07.5**	**+4.0**
baz=151,slow=13,SNR=4.3							
NVAR				LR	LR	14 43 01.8	
comp=Z,50nm,21.1s,baz=258,slow=34							
ELK	**Elko**	**13.33**	**348**	Pn	Pn	14 39 26.6	+5.6
0.1nm,0.3s,baz=215,slow=9.0,SNR=5.7							
HWUT	**Hardware Ranch**	**13.87**	**0**	P	**Pn**	**14 39 30.4**	**+2.0**
4.8nm,1.2s							
PDAR	**Pinedale Array**	**15.13**	**6**	Pn	**P**	**14 39 52.7**	**+1.9**
0.1nm,0.3s,baz=174,slow=9.6,SNR=12							
PDAR				LR	LR	14 45 44.9	
comp=Z,85nm,19.1s,baz=192,slow=37							
YBH	**Yreka Blue Hor**	**16.64**	**330**	LR	LR	14 46 16.2	
comp=Z,54nm,18.0s,baz=205,slow=36							
NEW	**Newport**	**20.95**	**350**	P	**P**	**14 40 56.3**	**+1.6**
3.0nm,0.8s,baz=155,slow=11,SNR=3.2							
TKL	**Tuckaleechee C**	**24.99**	**65**	LR	LR	14 52 05.8	
comp=Z,77nm,18.8s,baz=356,slow=38							
BBB	**Bella Bella**	**27.37**	**338**	LR	LR	14 53 07.0	
comp=Z,46nm,19.8s,baz=75,slow=37							
YKA	**Yellowknife Ar**	**34.84**	**358**	LR	LR	14 58 17.5	
comp=Z,6.0nm,18.4s,baz=198,slow=38							

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*BJI **20** 14:46:46.3, 49°.24N×156°.32E, h58km, mb4.5/22, mB4.8/15, Ms4.1/4, Ms7 3.9/4*
*MOS **20** 14:46:49.8±1.1, 49°.26N×155°.78E, h58km, mb4.2/20, Error ellipse: s-maj=9.9km s-min=3.1km az=73.6*
*ISCJB **20** 14:46:49.9±0.2, 49°.31N±0°.03×155°.73E±0°.05, h54km, mb4.3/60, MS3.4/21, Error ellipse: s-maj=6.0km s-min=2.1km az=42.0*
*KRSC **20** 14:46:49.7±1.6, 49°.34N×155°.80E, h94km±22km, ML5.0*
*NEIC **20** 14:46:52.1±0.8, 49°.26N×155°.72E, h58km±7km, mb4.5/32, Error ellipse: s-maj=12.6km s-min=4.6km az=142.0*
*IDC **20** 14:46:54.5±1.9, 49°.42N×155°.43E, h78km±17km, mb3.7/21, mb1 3.9/27, mb1mx3.7/83, mbtmp4.1/27, MS3.3/26, Ms1 3.3/26, ms1mx3.1/74, Error ellipse: s-maj=17.0km s-min=9.4km az=136.0*
ISC 20 14:46:51.4±0.5, 49°.27N±0°.06×155°.85E±0°.05, h54km, n218, σ1°.40/237, mb4.4/60, MS3.4/21, 12C-7D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.42**	**7**	*e*P	**Pn**	**14 47 14.2**	**-0.6**
SKR				*e*S	**Sn**	**14 47 31.9**	**-0.6**
SKR	**Severo-Kuril's**	**1.42**	**7**	↑*i*PN	**Pn**	**14 47 14.3**	**-0.6**
SKR				*e*S	**Sn**	**14 47 31.5**	**-1.0**
SKR				pmax	pmax		
comp=Z,900nm,0.7s							
SKR				pmax	pmax		
comp=Z,1μm,0.6s							
SKR				smax	smax		
comp=N,12μm,0.4s							
SKR				smax	smax		
comp=E,9μm,0.6s							
PAU	**Pauzhetka**	**2.28**	**15**	*e*P	**Pn**	**14 47 26.7**	**+0.2**
PAU				*e*S	**Sn**	**14 47 53.8**	**+0.4**
PAU	**Pauzhetka**	**2.28**	**15**	PN	**Pn**	**14 47 26.7**	**+0.2**
PAU				S	**Sn**	**14 47 53.8**	**+0.4**
KDTR	**Khodutka, Kamc**	**2.91**	**28**	*e*P	**Pn**	**14 47 34.6**	**-0.5**
KDTR				*e*S	**Sn**	**14 48 08.0**	**-0.8**
MIPR	**Malaya Ipel'ka**	**3.06**	**10**	*e*P	**Pn**	**14 47 37.9**	**+0.7**
MIPR	**Malaya Ipel'ka**	**3.06**	**10**	PN	**Pn**	**14 47 37.9**	**+0.7**
ASAK	**Asacha**	**3.38**	**22**	*e*P	**Pn**	**14 47 42.5**	**+0.9**
ASAK	**Asacha**	**3.38**	**22**	PN	**Pn**	**14 47 42.5**	**+0.9**
MTVR	**Mutnovka**	**3.54**	**24**	*e*P	**Pn**	**14 47 44.9**	**+1.0**
MTVR				*e*S	**Sn**	**14 48 25.1**	**+0.6**
MTVR	**Mutnovka**	**3.54**	**24**	PN	**Pn**	**14 47 44.9**	**+1.0**
MTVR				S	**Sn**	**14 48 25.1**	**+0.6**
RUS	**Russkaya**	**3.59**	**27**	*e*P	**Pn**	**14 47 44.6**	**+0.2**
RUS				*e*S	**Sn**	**14 48 25.3**	**-0.1**
RUS	**Russkaya**	**3.59**	**27**	PN	**Pn**	**14 47 44.6**	**+0.2**
RUS				S	**Sn**	**14 48 25.3**	**-0.1**
APC	**Apacha**	**3.75**	**12**	*e*P	**Pn**	**14 47 48.5**	**+1.9**
APC				*e*S	**Sn**	**14 48 29.3**	**-0.1**
APC	**Apacha**	**3.75**	**12**	PN	**Pn**	**14 47 48.5**	**+1.9**
APC				S	**Sn**	**14 48 29.3**	**-0.1**
KRMR	**Karymshinskiy**	**3.84**	**21**	*e*P	**Pn**	**14 47 49.5**	**+1.6**
KRMR				*e*S	**Sn**	**14 48 32.0**	**+0.3**
KRMR	**Karymshinskiy**	**3.84**	**21**	PN	**Pn**	**14 47 49.5**	**+1.6**
KRMR				S	**Sn**	**14 48 32.0**	**+0.3**
PEA0B	**Petropavlovsk-**	**4.01**	**16**	*e*Pn	**Pn**	**14 47 51.9**	**+1.7**
PETK	**Petropavlovsk-**	**4.01**	**16**	P	**Pn**	**14 47 52.5**	**+2.2**
comp=E,17nm,0.3s,baz=196,slow=12,SNR=258							
PETK				S	**Sn**	**14 48 39.3**	**+3.4**
comp=E,6.2nm,0.3s,baz=172,slow=12,SNR=4.5							
PETK				LR	LR	14 49 38.7	
comp=E,536nm,21.9s,baz=202,slow=41							
PETK	**Petropavlovsk-**	**4.01**	**16**	*e*Pn	**Pn**	**14 47 51.7**	**+1.4**
PET	**Petropavlovsk**	**4.15**	**24**	*e*Pn	**Pn**	**14 47 53.1**	**+1.0**
PET	**Petropavlovsk**	**4.15**	**24**	‖*i*PN	**Pn**	**14 47 53.3**	**+1.2**
PET				*e*S	**Sn**	**14 48 39.8**	**+0.5**
PET				pmax	pmax		
comp=Z,157nm,0.6s							
PET				smax	smax		
comp=E,300nm,7.5s							
PET				smax	smax		
comp=N,500nm,2.1s							
PET				smax	smax		
comp=E,800nm,1.8s							
PET				smax	smax		
comp=N,556nm,0.6s							
PET				smax	smax		
comp=E,766nm,0.7s							
UGLR	**Uglovaya**	**4.36**	**24**	*e*P	**Pn**	**14 47 56.6**	**+1.5**
UGLR				*e*S	**Sn**	**14 48 44.3**	**-0.4**
UGLR	**Uglovaya**	**4.36**	**24**	PN	**Pn**	**14 47 56.6**	**+1.5**
UGLR				S	**Sn**	**14 48 44.3**	**-0.4**
KOK	**Koryaka**	**4.39**	**22**	*e*P	**Pn**	**14 47 57.6**	**+2.1**
KOK	**Koryaka**	**4.39**	**22**	PN	**Pn**	**14 47 57.6**	**+2.1**
AVH	**Avacha**	**4.39**	**23**	*e*P	**Pn**	**14 47 57.2**	**+1.7**
AVH	**Avacha**	**4.39**	**23**	PN	**Pn**	**14 47 57.2**	**+1.7**
KRER	**Koryakskii**	**4.43**	**23**	*e*P	**Pn**	**14 47 57.8**	**+1.7**
KRER				*e*S	**Sn**	**14 48 45.7**	**-0.7**
KRER	**Koryakskii**	**4.43**	**23**	PN	**Pn**	**14 47 57.8**	**+1.7**
KRER				S	**Sn**	**14 48 45.7**	**-0.7**
SDLR	**Sedlovina**	**4.44**	**24**	*e*P	**Pn**	**14 47 57.3**	**+1.1**
SDLR				*e*S	**Sn**	**14 48 46.2**	**-0.4**
SDLR	**Sedlovina**	**4.44**	**24**	PN	**Pn**	**14 47 57.3**	**+1.1**
SDLR				S	**Sn**	**14 48 46.2**	**-0.4**
KRX	**Arik**	**4.45**	**22**	*e*P	**Pn**	**14 47 57.6**	**+1.2**
KRX	**Arik**	**4.45**	**22**	PN	**Pn**	**14 47 57.6**	**+1.2**
NLC	**Nalytchevo**	**4.48**	**28**	*e*P	**Pn**	**14 47 55.9**	**-0.7**
NLC				*e*S	**Sn**	**14 48 46.2**	**-1.1**
NLC	**Nalytchevo**	**4.48**	**28**	PN	**Pn**	**14 47 55.9**	**-0.7**
NLC				S	**Sn**	**14 48 46.2**	**-1.1**
GNL	**Ganaly**	**4.62**	**16**	*e*P	**Pn**	**14 48 00.0**	**+1.4**
GNL				*e*S	**Sn**	**14 48 49.7**	**-1.3**
GNL	**Ganaly**	**4.62**	**16**	PN	**Pn**	**14 48 00.0**	**+1.4**
GNL				S	**Sn**	**14 48 49.7**	**-1.3**
SPN	**Mys Shipunski**	**4.64**	**33**	*e*P	**Pn**	**14 47 58.9**	**0.0**
SPN				*e*S	**Sn**	**14 48 51.3**	**-0.1**
SPN	**Mys Shipunski**	**4.64**	**33**	PN	**Pn**	**14 47 58.9**	**0.0**
SPN				S	**Sn**	**14 48 51.3**	**-0.1**
KII	**Karymskiy**	**5.27**	**24**	*e*P	**Pn**	**14 48 08.4**	**+0.9**
KII	**Karymskiy**	**5.27**	**24**	PN	**Pn**	**14 48 08.4**	**+0.9**
MKZ	**Mys Kozlova**	**6.42**	**32**	*e*P	**Pn**	**14 48 22.3**	**-0.9**
MKZ				*e*S	**Sn**	**14 49 33.3**	**-1.7**
MKZ	**Mys Kozlova**	**6.42**	**32**	PN	**Pn**	**14 48 22.3**	**-0.9**
KZV	**Kizimen**	**6.46**	**23**	*e*P	**Pn**	**14 48 24.8**	**+1.0**
KZV	**Kizimen**	**6.46**	**23**	PN	**Pn**	**14 48 24.8**	**+1.0**
TUMD	**Tumrok D**	**6.56**	**23**	*e*P	**Pn**	**14 48 26.2**	**+1.0**
TUMD				*e*S	**Sn**	**14 49 36.0**	**-2.6**
TUMR	**Tumrok**	**6.57**	**22**	*e*P	**Pn**	**14 48 25.8**	**+0.4**
TUMR				*e*S	**Sn**	**14 49 37.5**	**-1.4**
TUMR	**Tumrok**	**6.57**	**22**	PN	**Pn**	**14 48 25.8**	**+0.4**
KUR	**Kuril'sk**	**6.77**	**236**	*d*iPN	**Pn**	**14 48 29.6**	**+1.6**
KUR				S	**Sn**	**

LGNR Loginova 7.43 21 *eP* **Pn 14 48 37.3 +0.1**
LGNR Loginova 7.43 21 PN **Pn 14 48 37.3 +0.1**
CIRR Tsirk 7.47 22 *eP* **Pn 14 48 39.7 +2.0**
CIRR Tsirk 7.47 22 PN **Pn 14 48 39.7 +2.0**
KRSR Krestovskiy 7.52 21 *eP* **Pn 14 48 37.1 -1.2**
KRSR Krestovskiy 7.52 21 PN **Pn 14 48 37.1 -1.2**
KLY Klyuchi 7.63 21 *eP* **Pn 14 48 41.0 +1.3**
KLY Klyuchi 7.63 21 PN **Pn 14 48 41.0 +1.3**
SRKR Sorokina 8.06 21 *eP* **Pn 14 48 46.6 +0.9**
SRKR Sorokina 8.06 21 PN **Pn 14 48 46.6 +0.9**
SMKR Semkarok 8.07 23 *eP* **Pn 14 48 45.1 -0.7**
SMKR Semkarok 8.07 23 PN **Pn 14 48 45.1 -0.7**
KBTR Krutoberegovo 8.13 29 *eP* **Pn 14 48 46.1 -0.5**
KBTR *eS* **Sn 14 50 14.1 -2.8**
KBTR Krutoberegovo 8.13 29 PN **Pn 14 48 46.1 -0.5**
SHO Shikotan 8.23 232⇑*i*PN **Pn 14 48 46.6 -1.4**
SHO pmax pmax
comp=Z,38nm,0.5s
SHO pmax pmax
comp=E,25nm,0.8s
SHO pmax pmax
comp=N,30nm,0.3s
BKI Bering 8.59 42 *eP* **Pn 14 48 51.6 -1.2**
BKI Bering 8.59 42 PN **Pn 14 48 51.6 -1.2**
YUK Yuzh-Kuril'sk 8.64 236*c i*PN **Pn 14 48 53.4 -0.2**
YUK pmax pmax
comp=N,113nm,0.5s
YUK pmax pmax
comp=Z,265nm,0.5s
YUK pmax pmax
comp=E,73nm,0.4s
YUK MLR MLR
comp=Z,491nm,14.0s
YUK MLR MLR
comp=E,723nm,12.0s
UGL Uglegorsk 9.04 274 *e*PN **Pn 14 48 58.1 -0.9**
UGL S **Sn 14 50 41.2 +2.0**
UGL pmax pmax
comp=Z,70nm,1.1s
UGL smax smax
comp=E,39nm,0.9s
UGL smax smax
comp=N,49nm,1.1s
YSS Yuzh-Sakhalins 9.07 260 *e*Pn **Pn 14 49 01.5 +2.1**
YSS Yuzh-Sakhalins 9.07 260 *e*PN **Pn 14 49 01.7 +2.3**
YSS pmax pmax
comp=N,30nm,0.9s
YSS pmax pmax
comp=E,40nm,0.9s
YSS pmax pmax
comp=Z,30nm,0.9s
YSS MLR MLR
comp=Z,400nm,15.0s
ASAJ Asahikawa 10.46 245 P **Pn 14 49 19.4 +0.9**
comp=Z,1.8nm,0.3s,baz=71,slow=13,SNR=16
ASAJ LR LR 14 52 49.2
comp=Z,226nm,20.1s,baz=353,slow=34
ASAJ Asahikawa 10.46 245 *e*Pn **Pn 14 49 20.1 +1.5**
MA2 Magadan 10.74 346 P **Pn 14 49 21.0 -1.2**
comp=Z,0.9nm,0.3s,baz=165,slow=9.5,SNR=5.3
MA2 S **Sn 14 51 14.7 -6.0**
comp=Z,0.5nm,0.3s,baz=233,slow=20,SNR=3.0
MA2 LR LR 14 53 45.5
comp=Z,116nm,19.7s,baz=172,slow=39
MA2 Magadan 10.74 346 *e*Pn **Pn 14 49 23.2 +1.0**
MA2 Magadan 10.74 346⇑*e*PN **Pn 14 49 23.2 +1.0**
ERM Erimo 11.46 236 *e*Pn **Pn 14 49 30.1 -2.1**
ERM Erimo 11.46 236⇑*e*PN **Pn 14 49 33.0 +0.8**
SMY Shemya 12.00 66 *e*Pn **Pn 14 49 39.0 -0.4**
SMY Shemya 12.00 66 *e*PN **Pn 14 49 39.0 -0.4**
SEY Seymchan 13.83 353 P **Pn 14 50 05.7 +1.4**
comp=Z,0.2nm,0.3s,baz=173,slow=10,SNR=5.7
SEY Seymchan 13.83 353⇑*e*P **Pn 14 50 05.9 +1.6**
KLR Kul'dur 15.73 279 P **P 14 50 31.0 -1.3**
comp=Z,0.0nm,0.3s,baz=68,slow=11,SNR=13
KLR LR LR 14 57 06.7
comp=Z,20nm,18.1s,baz=91,slow=40
KLR Kul'dur 15.73 279⇑*i*P **P 14 50 31.2 -1.1**
USRK Ussuriysk Ar. 17.10 262 P **Pn 14 50 46.3 -0.2**
comp=Z,0.2nm,0.3s,baz=44,slow=14,SNR=5.3
USRK LR LR 14 57 00.0
comp=Z,129nm,18.6s,baz=42,slow=36
MJB9 Matsu-Tunnel 18.08 232 *e*P **P 14 50 56.1 -2.3**
comp=Z,67nm,1.7s
MAJO Matsushiro 18.08 232 *e*P **P 14 50 56.1 -2.2**
comp=Z,74nm,1.8s
MAJO Matsushiro 18.08 232⇓*e*P **P 14 50 55.7 -2.7**
MAT Matsushiro 18.08 232 P **P 14 50 55.7 -2.7**
MJAR Matsushiro Arr 18.08 232 P **P 14 50 56.5 -1.8**
comp=Z,0.5nm,0.3s,baz=27,slow=13,SNR=7.8
MJAR LR LR 14 58 18.0
comp=Z,146nm,19.5s,baz=50,slow=38
MSHR Mys Shultsa 18.39 258⇓*e*P **P 14 51 01.6 -0.1**
MDJ Mudanjiang 18.48 265 P Pn 14 51 11.9 +8.5
MDJ pmax pmax
comp=Z,29nm,1.1s
MDJ pmax pmax
comp=Z,280nm,3.8s
ATKA Atka Island 19.12 70 *e*P **Pn 14 51 11.4 +0.5**
comp=Z,26nm,1.3s
YAK Yakutsk 19.35 321 *e*P **P 14 51 12.5 +0.5**
YAK *e*S **Sn 14 54 49.3 -0.2**
YAK pmax pmax
comp=E,6.0nm,1.3s
YAK pmax pmax
comp=Z,11nm,1.1s
YAK smax smax
comp=E,19nm,2.5s
YAK smax smax
comp=N,41nm,2.1s
BILL Bilibino 19.53 12 *e*P **P 14 51 12.8 -1.2**
comp=N,8.8nm,1.1s
BILL Bilibino 19.53 12⇑*e*P **P 14 51 13.5 -0.5**
BILL *e*S **Sn 14 54 53.8 -0.1**
BILL pmax pmax
comp=Z,2.0nm,0.3s
BILL MLR MLR
comp=Z,147nm,19.0s
INU Inuyama 19.61 232 *e*P **P 14 51 14.7 -0.4**
comp=Z,52nm,1.4s
CN2 Changchun 21.53 267 *e*P **P 14 51 37.5 +1.7**
KSRS Korea Array 23.35 250 P **P 14 51 52.8 -2.0**
comp=Z,7.1nm,1.0s,baz=50,slow=9.7,SNR=17
KSRS LR LR 15 00 11.3
comp=Z,129nm,19.6s,baz=44,slow=34
TJN Taejon 24.38 249⇑*e*P **P 14 52 04.4 +0.1**
JNU Nakatsue 24.60 238 P **P 14 52 06.9 +0.5**
comp=Z,20nm,1.1s,baz=54,slow=7.0,SNR=7.4
JNU LR LR 15 02 33.8
comp=Z,63nm,18.1s,baz=126,slow=38
JNU Nakatsue 24.60 238 *e*P **P 14 52 07.3 +0.9**
comp=Z,22nm,1.1s
TIXI Tiksi 25.63 341 P **P 14 52 17.9 +2.6**
comp=Z,1.7nm,0.6s,baz=124,slow=14,SNR=5.6
TIXI Tiksi 25.63 341 *e*P **P 14 52 14.6 -0.7**
comp=Z,13nm,1.7s
TIXI Tiksi 25.63 341⇓*e*P **P 14 52 17.4 +2.1**
TIXI pmax pmax
comp=Z,1.0nm,0.6s
H11N2 WAKE ISLAND Hy 30.78 159 T T 15 25 48.1
baz=341
H11N1 WAKE ISLAND Hy 30.79 159 T T 15 25 52.8
baz=341
H11N3 WAKE ISLAND Hy 30.79 159 T T 15 25 51.8
baz=341
CAST Castle Rocks 31.13 43 *e*P **P 14 53 06.3 +1.8**
comp=Z,5.1nm,1.2s
BPAW Bear Paw Mtn. 31.64 42 *e*P **P 14 53 10.7 +1.7**
comp=Z,5.7nm,0.9s
MLY Manley 31.80 40 *e*P **P 14 53 11.8 +1.5**
comp=Z,3.2nm,0.9s
H11S1 WAKE ISLAND Hy 31.91 160 T T 15 27 20.0
baz=346,slow=76,SNR=1088
H11S3 WAKE ISLAND Hy 31.92 160 T T 15 27 24.2
baz=346,slow=76,SNR=2019
H11S2 WAKE ISLAND Hy 31.93 160 T T 15 27 16.1
baz=346,slow=76,SNR=1052
TRF Thorofare Moun 31.94 43 *e*P **P 14 53 13.1 +1.4**
comp=Z,5.2nm,0.9s
HHC Hu-ho-hao-te 32.00 272 *e*P **P 14 53 13.0 +0.5**
HHC pmax pmax
comp=Z,17nm,0.6s
HHC pmax pmax
comp=Z,120nm,6.7s
COLD Coldfoot 32.21 36 *e*P **P 14 53 15.1 +1.2**
comp=Z,6.2nm,0.9s

SONM Songino Array 32.30 287 LR LR 15 07 23.8
comp=Z,103nm,18.8s,baz=6.0,slow=38
NJ2 Nanjing 32.51 252 *e*P **P 14 53 17.0 +0.2**
NJ2 pmax pmax
comp=Z,10.0nm,1.0s
MCK McKinley 32.54 43 *e*P **P 14 53 17.9 +1.1**
comp=Z,13nm,1.2s
MCK McKinley 32.54 43 *e*P **P 14 53 18.0 +1.1**
MCK pmax pmax
comp=Z,13nm,1.2s
RND Reindeer 32.58 43 *e*P **P 14 53 17.9 +0.7**
comp=Z,8.8nm,1.0s
RND Reindeer 32.58 43 *e*P **P 14 53 18.0 +0.7**
RND pmax pmax
comp=Z,9.0nm,1.0s
TOLK Toolik Lake Re 32.63 34 *e*P **P 14 53 18.6 +1.1**
comp=Z,17nm,1.8s
TLY Talaya 32.73 295⇑*e*P **P 14 53 20.2 +1.6**
TLY pmax pmax
comp=Z,2.0nm,0.8s
MDM Murphy Dome 32.86 41 *e*P **P 14 53 20.9 +1.3**
comp=Z,6.6nm,0.9s
WRH Wood River Hil 32.91 41 *e*P **P 14 53 21.4 +1.4**
comp=Z,12nm,1.1s
COLA College 33.02 41 *e*P **P 14 53 22.7 +1.8**
comp=Z,24nm,1.1s
COLA College 33.02 41 *e*P **P 14 53 22.7 +1.8**
COLA pmax pmax
comp=Z,24nm,1.1s
CCB Clear Creek Bu 33.04 41 *e*P **P 14 53 22.4 +1.3**
comp=Z,5.7nm,0.9s
DHY Denali Highway 33.26 44 *e*P **P 14 53 24.0 +0.8**
comp=Z,5.4nm,1.0s
HDA Harding Lake 33.41 42 *e*P **P 14 53 24.8 +0.4**
comp=Z,7.3nm,0.7s
IL1 Eielson Array 33.43 41 *e*P **P 14 53 25.3 +0.8**
ILAR Eielson Array 33.43 41 P **P 14 53 25.6 +1.1**
comp=Z,2.6nm,0.8s,baz=255,slow=7.1,SNR=40
ILAR LR LR 15 08 20.0
comp=Z,42nm,19.6s,baz=295,slow=38
ILB Eielson Array 33.43 41 *e*P **P 14 53 25.2 +0.7**
SCRK Sand Creek 34.72 42 *e*P **P 14 53 36.4 +0.5**
comp=Z,8.1nm,1.0s
BMRM Bremner River 34.76 48 *e*P **P 14 53 37.5 +1.4**
comp=Z,8.4nm,0.9s
EGAK Eagle 35.88 41 *e*P **P 14 53 46.5 +0.8**
comp=Z,12nm,0.8s
GUMO Guam 36.71 198 LR LR 15 05 59.5
comp=Z,42nm,21.4s,baz=266,slow=31
DAWY Dawson 36.73 42 *e*P **P 14 53 54.1 +1.2**
comp=Z,4.4nm,1.0s
NRIK Noril'sk 37.59 327 LR LR 15 09 02.7
comp=Z,48nm,18.6s,baz=75,slow=36
INK Inuvik 38.53 34 P **P 14 54 09.4 +1.4**
comp=Z,1.0nm,0.6s,baz=284,slow=6.0,SNR=7.2
INK Inuvik 38.53 34 *e*P **P 14 54 09.2 +1.2**
comp=Z,7.1nm,1.0s
LZH Lanzhou 39.67 271 *e*P **P 14 54 16.0 -2.2**
LZH pP pP 14 54 33.0 +0.9
LZH sP sP 14 54 40.3 +1.9
LZH pmax pmax
comp=Z,24nm,1.0s
GTA Gaotai 40.42 278 P **P 14 54 23.8 -0.5**
GTA pP pP 14 54 38.4 +0.1
GTA sP sP 14 54 46.0 +1.4
GTA S **S 15 00 26.8 -2.0**
GTA pmax pmax
comp=Z,2.0nm,1.0s
GTA pmax pmax
comp=Z,69nm,5.8s
GTA LR LR
comp=Z,120nm,14.4s
GTA LR LR
comp=Z,170nm,16.1s
GTA LR LR
comp=Z,190nm,16.8s
CD2 Chengdu 42.94 265 P **P 14 54 43.4 -1.4**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
WMQ Urumqi 45.75 290 P **P 14 55 09.0 +1.8**
MKAR Makanchi Array 47.44 297 P **P 14 55 17.7 -2.7**
comp=Z,0.5nm,0.8s,baz=54,slow=7.3,SNR=4.5
MKAR LR LR 15 14 46.2
comp=Z,92nm,19.1s,baz=50,slow=36
KMI Kunming 47.51 259 P **P 14 55 20.3 -1.1**
KMI pmax pmax
comp=Z,3.0nm,0.6s
KURK Kurchatov 47.52 303⇑*e*P **P 14 55 19.5 -1.3**
KURK pmax pmax
comp=Z,5.0nm,2.5s
KURBB Kurchatov Arra 47.62 303 P **P 14 55 19.9 -1.7**
comp=Z,0.7nm,0.4s,baz=66,slow=8.4,SNR=5.7
YKA Yellowknife Ar 47.80 39 P **P 14 55 23.1 +0.2**
comp=Z,0.4nm,0.6s,baz=297,slow=7.3,SNR=4.1
SPITS Spitsbergen Ar 50.45 350 LR LR 15 18 41.4
comp=Z,44nm,19.4s,baz=245,slow=38
BVAR Borovoye Array 50.69 309 P **P 14 55 43.3 -1.7**
comp=Z,0.9nm,0.5s,baz=76,slow=8.0,SNR=7.0
BRVK Borovoye 50.73 309⇑*e*P **P 14 55 44.6 -0.7**
BRVK pmax pmax
comp=Z,1.0nm,0.8s
NEW Newport 54.20 55 LR LR 15 16 38.4
comp=Z,26nm,20.8s,baz=286,slow=33
AAK Ala-Archa 54.37 296⇓*e*P **P 14 56 13.2 +0.6**
AAK pmax pmax
comp=Z,1.0nm,0.9s
ARU Arti 54.40 317*d i*P **P 14 56 10.6 -1.8**
ARU *PP **pP 14 56 24.4 -2.5**
ARU 14 58 15.4
ARU S **S 15 03 48.4 +2.0**
ARU pmax pmax
comp=Z,4.0nm,0.8s
CHTO Chiang Mai 54.48 257 *e*P **P 14 56 13.4 -0.1**
comp=Z,20nm,0.9s
CHTO Chiang Mai 54.48 257 *e*P **P 14 56 13.4 -0.1**
CHTO pmax pmax
comp=Z,20nm,0.9s
CM31 Chiang Mai Arr 54.74 257 *e*P **P 14 56 15.6 +0.2**
CMAR Chiang Mai Arr 54.74 257 P **P 14 56 16.0 +0.6**
comp=Z,10nm,0.8s,baz=32,slow=7.2,SNR=48
CM01 Chiang Mai Arr 54.76 257 *e*P **P 14 56 15.6 +0.1**
YBH Yreka Blue Hor 54.96 65 LR LR 15 16 17.2
comp=Z,19nm,21.5s,baz=314,slow=32
KSH Kashi 55.40 292 P **P 14 56 24.5 +4.5**
KSH pmax pmax
comp=Z,230nm,6.4s
ABKAR Akbulak array 58.22 310 *e*P **P 14 56 38.3 -1.4**
HNR Honiara 58.56 175 LR LR 15 23 05.5
comp=Z,20nm,18.2s,baz=262,slow=37
BOZ Bozeman (W) 58.81 55 *e*P **P 14 56 46.1 +2.0**
comp=Z,13nm,1.9s
BOZ Bozeman (W) 58.81 55 *e*P **P 14 56 46.1 +2.0**
BOZ pmax pmax
comp=Z,13nm,1.9s
NVAR Mina Array Bea 59.67 65 P **P 14 56 52.2 +2.0**
comp=Z,0.6nm,0.6s,baz=294,slow=7.0,SNR=5.6
NVAR LR LR 15 19 18.4
comp=Z,20nm,21.8s,baz=84,slow=32
PDAR Pinedale Array 61.79 56 P **P 14 57 06.7 +2.1**
comp=Z,0.5nm,0.7s,baz=288,slow=1.4,SNR=3.8
FINES FINESS Array B 62.53 335 P **P 14 57 07.7 -1.2**
comp=Z,1.6nm,0.9s,baz=26,slow=6.7,SNR=9.7
FINES LR LR 15 27 54.4
comp=Z,35nm,18.1s,baz=138,slow=40
ULM Lac du Bonnet 63.41 43 LR LR 15 25 05.9
comp=Z,22nm,21.2s,baz=24,slow=36
SRU San Rafael Swe 63.73 60 *e*P **P 14 57 19.4 +1.9**
comp=Z,3.7nm,0.9s
SRU San Rafael Swe 63.73 60 *e*P **P 14 57 19.4 +1.9**
SRU pmax pmax
comp=Z,4.0nm,0.9s
NOA NORSAR Array B 66.41 342 LR LR 15 31 04.5
comp=Z,26nm,18.7s,baz=230,slow=40
HFS Hagfors 66.72 340 P **P 14 57 34.9 -1.3**
comp=Z,0.4nm,0.4s,baz=104,slow=4.6,SNR=4.5
HFS LR LR 15 29 21.6
comp=Z,31nm,18.9s,baz=0.0,slow=38
HFS Hagfors 66.72 340 P **P 14 57 34.9 -1.3**
HFS pmax pmax
comp=Z,1.0nm,0.4s
HFS MLR MLR
comp=Z,31nm,19.0s
PSI Prapat 66.82 246 P **P 14 57 37.8 +0.2**
comp=Z,3.2nm,0.4s,baz=180,slow=8.9,SNR=3.4
GEYT Alibeck 66.87 302 P **P 14 57 35.3 -2.3**
comp=Z,41nm,0.9s,baz=224,slow=12,SNR=4.5
ANMO Albuquerque 68.97 61 LR LR 15 28 18.6
comp=Z,11nm,18.3s,baz=299,slow=36
KVAR Kislovodsk Arr 70.33 315 LR LR 15 31 08.5
comp=Z,22nm,20.5s,baz=329,slow=38
AKASG Malin Array Be 70.45 327 P **P 14 57 57.1 -2.5**
comp=Z,0.5nm,0.4s,baz=32,slow=6.6,SNR=3.0
WRA Warramunga Arr 71.52 201 P **P 14 58 05.8 -0.5**
comp=Z,1.4nm,0.9s,baz=19,slow=6.7,SNR=7.4
GNI Garni 72.27 311 LR LR 15 33 21.6
comp=Z,30nm,18.1s,baz=51,slow=39
EKA Eskdalemuir Ar 74.29 348 P **P 14 58 21.4 -1.0**
comp=Z,0.4nm,0.4s,baz=15,slow=5.9,SNR=3.9
BUR08 Bucovina Ar. S 74.45 328 *e*P **P 14 58 22.5 -1.1**
ABTX Abilene, Hawle 74.51 58 *e*P **P 14 58 25.3 +1.2**
comp=Z,19nm,1.0s
TX31 Lajitas Ar. Si 74.68 63 *e*P **P 14 58 25.8 +0.6**
TXAR Lajitas Array 74.68 63 P **P 14 58 27.0 +1.8**
comp=Z,1.4nm,0.8s,baz=294,slow=4.4,SNR=14
TXAR Lajitas Array 74.68 63 P **P 14 58 27.0 +1.8**
TXAR pmax pmax
comp=Z,1.0nm,0.8s
CLL Collm 74.90 337 *e*P **P 14 58 25.0 -1.0**
CLL Collm 74.90 337 *e*P **P 14 58 25.0 -1.0**
CLL pmax pmax
comp=Z,2.0nm,0.5s
BRG Berggiesshubel 75.05 336 *e*P **P 14 58 24.6 -2.3**
comp=Z,2.0nm,0.9s
BRG Berggiesshubel 75.05 336 *e*P **P 14 58 24.6 -2.3**
BRG pmax pmax
comp=Z,2.0nm,0.9s
ASAR Alice Springs 75.20 201 P **P 14 58 28.8 +0.8**
comp=Z,1.2nm,0.8s,baz=13,slow=5.3,SNR=15
GERES GERESS Array B 76.96 335 P **P 14 58 37.5 -0.4**
comp=Z,0.4nm,0.4s,baz=34,slow=5.5,SNR=4.4
DIVS Divibare 79.32 329 *e*P **P 14 58 50.5 -0.6**
comp=Z,3.0nm,0.6s
STKA Stephens Creek 81.78 192 LR LR 15 37 36.3
comp=Z,15nm,18.1s,baz=25,slow=37
MMAI Mount Meron Ar 82.48 313 P **P 14 59 08.0 -0.1**
comp=Z,3.7nm,0.6s,baz=46,slow=6.2,SNR=9.3
RAYN Ar Rayn 84.79 300 *e*P **P 14 59 19.4 -0.6**
comp=Z,14nm,1.4s
RAYN Ar Rayn 84.79 300 *e*P **P 14 59 19.4 -0.6**

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*ISCJB **20** 15:05:50.1±0.3, 34°.88N±0°.03×73°.64E±0°.04, h21km, mb4.2/33, Error ellipse: s-maj=5.8km s-min=2.8km az=151.8*
*BJI **20** 15:05:52.7, 34°.76N×74°.00E, h15km, mb4.4/17, mB4.5/9, ML3.8/3, Ms3.7/2*
*MOS **20** 15:05:53.5±1.3, 34°.97N×73°.66E, h45km, mb4.5/6, Error ellipse: s-maj=10.7km s-min=5.0km az=91.3*
*NEIC **20** 15:05:54.7±0.7, 34°.94N×73°.62E, h41km±6km, mb4.3/12, Error ellipse: s-maj=7.0km s-min=6.4km az=130.0*
*NDI **20** 15:05:54.3±2.0, 34°.82N×73°.24E, h41km, ML4.3, mb4.3(NEIC)*
*IDC **20** 15:05:55.3±2.8, 34°.91N×73°.55E, h44km±25km, mb3.9/20, mb1 4.0/24, mb1mx3.8/69, mbtmp4.2/24, ML4.3/5, MS3.3/4, Ms1 3.3/4, ms1mx2.6/72, Error ellipse: s-maj=18.3km s-min=13.1km az=18.0*
*NNC **20** 15:05:58.2±4.9, 34°.98N×73°.47E, h103km±44km, mb3.8, mpv4.5, Error ellipse: s-maj=56.0km s-min=35.6km az=79.0*

ISC 20 15:05:52.0±0.4, 34°.86N±0°.04×73°.62E±0°.05, h21km, n128, σ1§70/141, mb4.3/33, 9C-3D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIL	**Nilore**	**1.24**	**194**	*e*Pn	**Pb**	**15 06 15.2**	**+0.5**
NIL	**Nilore**	**1.24**	**194**	*e*P	**Pb**	**15 06 15.2**	**+0.5**
JMU	**Jammu**	**2.38**	**153**	*e*P	**Pb**	**15 06 33.5**	**-0.7**
JMU				*e*S	**Sn**	**15 07 00.0**	**+1.6**
THN	**Thein Dam**	**2.98**	**143**	*e*P	**Pb**	**15 06 45.2**	**+0.8**
THN				*e*S	**Sb**	**15 07 20.2**	**-0.2**
DHRM	**DHARAMSHALA**	**3.43**	**138**	*e*P	**Pn**	**15 06 47.0**	**+2.5**
DHRM				*e*S	**Sn**	**15 07 26.3**	**+1.8**
DHRM				IAML		15 07 46.2	
	comp=N,17μm,1.2s						
DHRM				IAML		15 07 48.3	
	comp=E,993nm,0.3s						
KBL	**Kabul**	**3.78**	**267**	*e*Pn	**Pn**	**15 06 53.1**	**+3.8**
KBL	**Kabul**	**3.78**	**267**	*e*P	**Pn**	**15 06 53.1**	**+3.8**
SMLA	**Simla**	**4.76**	**140**	*e*P	**Pn**	**15 07 05.5**	**+2.9**
SMLA				*e*S	**Sn**	**15 07 57.1**	**0.0**
SMLA				IAML		15 08 01.3	
	comp=E,290nm,0.5s						
SMLA				IAML		15 08 02.0	
	comp=N,294nm,0.3s						
KSH	**Kashi**	**5.02**	**21**	Pn	**Pn**	**15 07 04.8**	**-1.4**
KSH				Sn	**Sn**	**15 07 59.8**	**-3.8**
KSH				smax	smax		
	comp=N,160nm,0.6s						
KSH				smax	smax		
	comp=N,150nm,0.4s						
SFK	**Sufi-Kurgan**	**5.15**	**359**	⇑P	**Pn**	**15 07 12.3**	**+4.2**
	comp=N,35nm,0.4s						
SFK				⇓S	**Sn**	**15 08 11.4**	**+4.4**
	comp=N,50nm,0.4s						
SFK	**Sufi-Kurgan**	**5.15**	**359**	P	**Pn**	**15 07 12.3**	**+4.2**
SFK				S	**Sn**	**15 08 11.4**	**+4.4**
SFK				pmax	pmax		
	comp=Z,35nm,0.4s						
SFK				smax	smax		
	comp=N,50nm,0.4s						
DDI	**Dehra Dun**	**5.87**	**139**	*e*P	**Pn**	**15 07 20.4**	**+2.6**
DDI				*e*S	**Sn**	**15 08 22.2**	**-2.3**
DDI				IAML		15 08 29.1	
	comp=E,150nm,0.3s						
DDI				IAML		15 08 29.8	
	comp=N,199nm,0.4s						
JOSI	**Joshimath**	**6.59**	**129**	*e*P	**Pn**	**15 07 32.4**	**+4.5**
JOSI				*e*S	**Sn**	**15 08 43.3**	**+0.8**
JOSI				IAML		15 08 49.3	
	comp=E,343nm,0.4s						
JOSI				IAML		15 08 49.5	
	comp=N,2352μm,2.5s						
NRN	**Naryn**	**6.83**	**15**	*e*Pn	**Pn**	**15 07 32.7**	**+1.5**
NRN	**Naryn**	**6.83**	**15**	*e*P	**Pn**	**15 07 32.7**	**+1.5**
KHET	**Khetri**	**7.01**	**164**	*e*P	**Pn**	**15 07 33.8**	**+0.3**
KHET				*e*S	**Sn**	**15 08 49.0**	**-3.6**
KHET				IAML		15 09 02.8	
	comp=E,26nm,0.4s						
KHET				IAML		15 09 03.0	
	comp=N,22nm,0.4s						
SONA	**Sohna**	**7.22**	**155**	*e*P	**Pn**	**15 07 38.0**	**+1.8**
SONA				*e*S	**Sn**	**15 08 53.9**	**-3.7**
SONA				IAML		15 09 00.2	
	comp=N,30nm,1.1s						
SONA				IAML		15 09 00.8	
	comp=E,56nm,0.5s						
AML	**Almayashu**	**7.26**	**0**	P	**Pn**	**15 07 39.7**	**+2.4**
	SNR=34						
KZA	**Kyzart**	**7.32**	**10**	P	**Pn**	**15 07 40.5**	**+2.4**
	SNR=20						
UCH	**Uchtor**	**7.39**	**5**	P	**Pn**	**15 07 41.5**	**+2.4**
	SNR=26						
TARG	**Taragay, Kyrgy**	**7.61**	**24**	*e*Pn	**Pn**	**15 07 44.2**	**+2.2**
MNAS	**Manas**	**7.67**	**354**	⇓P	**Pn**	**15 07 44.4**	**+1.8**
	comp=E,13nm,0.6s						
MNAS				⇓S	**Sn**	**15 09 06.9**	**-2.0**
	comp=E,9.1nm,0.4s						
MNAS	**Manas**	**7.67**	**354**	P	**Pn**	**15 07 44.4**	**+1.8**
MNAS				S	**Sn**	**15 09 06.9**	**-2.0**
MNAS				pmax	pmax		
	comp=Z,13nm,0.6s						
MNAS				smax	smax		
	comp=N,9.0nm,0.4s						
EKS2	**Erkin-Say**	**7.80**	**1**	P	**Pn**	**15 07 47.2**	**+2.9**
	SNR=35						
AAK	**Ala-Archa**	**7.80**	**5**	P	**Pn**	**15 07 46.6**	**+2.2**
	comp=N,3.1nm,0.3s,baz=166,slow=13,SNR=9.2						
AAK				S	**Sn**	**15 09 12.2**	**0.0**
	comp=N,0.3nm,0.3s,baz=247,slow=17,SNR=2.2						
AAK	**Ala-Archa**	**7.80**	**5**	*e*Pn	**Pn**	**15 07 44.8**	**+0.4**
AAK				S	**Sn**	**15 09 12.2**	**0.0**
CHMS	**Chumysh**	**8.18**	**6**	P	**Pn**	**15 07 52.1**	**+2.6**
	SNR=8.2						
TKM2	**Tokmak 2**	**8.20**	**10**	P	**Pn**	**15 07 52.5**	**+2.6**
	SNR=9.0						
PRZ	**Przheval'sk**	**8.48**	**25**	*e*Pn	**Pn**	**15 07 54.0**	**+0.2**
PRZ	**Przheval'sk**	**8.48**	**25**	*e*P	**Pn**	**15 07 54.0**	**+0.2**
KK31	**Karatay Array**	**8.58**	**345**	P	**Pn**	**15 07 56.3**	**+1.3**
	comp=N,7.6nm,0.3s,baz=165,slow=12,SNR=101						
KK31				⇑S	**Sn**	**15 09 29.8**	**-1.4**

comp=N,11nm,0.4s,baz=161,slow=23,SNR=7.5
KK31 Karatay Array 8.58 345 *e*Pn **Pn 15 07 55.8 +0.8**
KK31 Karatay Array 8.58 345 *e*P **Pn 15 07 55.8 +0.8**
KKAR Karatay Array 8.58 345 *e*Pn **Pn 15 07 55.7 +0.7**
KKAR Karatay Array 8.58 345 *e*P **Pn 15 07 55.7 +0.7**
PYUN Piuthan 10.45 128 *e*P **Pn 15 08 19.9 -1.0**
comp=N,36nm,0.4s
DANN Dangsing 10.80 124 *e*P **Pn 15 08 25.5 -0.2**
comp=N,38nm,0.3s
KOLN Koldanda 11.07 127 *e*P **Pn 15 08 29.1 -0.3**
comp=N,14nm,0.3s
GKN Gorkha 11.62 123 *e*P **Pn 15 08 37.2 +0.4**
comp=N,36nm,0.3s
BHPL Bhopal 12.04 163 *e*S Sn 15 10 45.2 -11
DMN Daman 12.19 123 *e*P **Pn 15 08 44.3 -0.4**
comp=N,31nm,0.4s
KKN Kakani 12.20 122 *e*P **Pn 15 08 44.6 -0.2**
comp=N,17nm,0.3s
PKIN Phulchoki 12.41 123 *e*P **Pn 15 08 47.1 -0.6**
comp=N,27nm,0.4s
GUN Gumba 12.55 120 *e*P **Pn 15 08 49.8 +0.1**
comp=N,39nm,0.4s
GEYT Alibeck 12.86 288 P **Pn 15 08 54.8 +1.2**
comp=N,2.2nm,0.3s,baz=120,slow=10,SNR=6.7
GEYT S **Sn 15 11 12.0 -4.1**
comp=N,1.0nm,0.3s,baz=196,slow=26,SNR=5.6
JIRN Jiri 12.92 120 *e*P **Pn 15 08 54.3 -0.5**
comp=N,83nm,0.3s
MAKZ Makanchi 13.50 25 *e*Pn **Pn 15 09 01.8 -0.5**
MAKZ Makanchi 13.50 25 *e*P **Pn 15 09 01.8 -0.5**
MK01 Makanchi Array 13.59 26 *e*Pn **Pn 15 09 03.3 -0.1**
MK31 Makanchi Array 13.60 26 ⇑P **Pn 15 09 04.0 +0.4**
comp=N,1.3nm,0.5s,baz=205,slow=12,SNR=18
MK31 Makanchi Array 13.60 26 *e*Pn **Pn 15 09 03.5 -0.1**
MK31 Makanchi Array 13.60 26 *e*P **Pn 15 09 03.5 -0.1**
MKAR Makanchi Array 13.60 26 P **Pn 15 09 04.8 +1.2**
comp=N,0.2nm,0.3s,baz=199,slow=15,SNR=7.5
MKAR Makanchi Array 13.60 26 *e*Pn **Pn 15 09 03.5 -0.1**
RAMN Ramite 13.64 122 *e*P **Pn 15 09 04.1 -0.4**
comp=N,20nm,0.3s
WMQ Urumqi 14.09 46 P **Pn 15 09 11.3 +1.0**
WMQ pP P 15 09 20.5 +2.6
WMQ pmax pmax
comp=N,21nm,0.7s
TAPN Taplejung 14.19 118 *e*P **Pn 15 09 11.2 -0.9**
comp=N,3.5nm,0.2s
ODAN Odare 14.25 120 *e*P **Pn 15 09 12.0 -0.8**
comp=N,18nm,0.4s
LSA Lhasa 15.69 104 *e*Pn **Pn 15 09 32.1 -0.1**
comp=N,5.0nm,0.7s
LSA Lhasa 15.69 104 *e*P **Pn 15 09 32.1 -0.1**
LSA pmax pmax
comp=Z,5.0nm,0.7s
KURBB Kurchatov Arra 16.16 11 P **Pn 15 09 34.8 -2.9**
comp=Z,0.3nm,0.3s,baz=197,slow=11,SNR=19
KURBB Kurchatov Arra 16.16 11 ⇑P **Pn 15 09 36.7 -1.0**
comp=Z,4.9nm,0.7s
KURK Kurchatov 16.26 11 ⇑P **Pn 15 09 36.7 -2.3**
comp=Z,7.3nm,0.8s
KURK Kurchatov 16.26 11 *e*Pn **Pn 15 09 38.4 -0.6**
comp=Z,13nm,1.1s
KURK Kurchatov 16.26 11 *e*P **Pn 15 09 38.4 -0.6**
KURK pmax pmax
comp=Z,13nm,1.1s
AB31 Akbulak array 17.57 329 ⇑P **Pn 15 09 53.3 -2.2**
comp=Z,2.2nm,0.5s,baz=137,slow=12,SNR=49
AB31 Akbulak array 17.57 329 P **Pn 15 09 53.3 -2.2**
AB31 pmax pmax
comp=Z,2.0nm,0.5s
ABKAR Akbulak array 17.57 329 *e*Pn **Pn 15 09 52.5 -3.0**
BVA0 Borovoye Array 18.31 354 ⇑P **Pn 15 10 03.8 -0.7**
comp=Z,3.9nm,0.4s,baz=169,slow=14,SNR=41
BVA0 Borovoye Array 18.31 354 P **Pn 15 10 02.7 -1.8**
BVA0 pmax pmax
comp=Z,4.0nm,0.4s
BVAR Borovoye Array 18.31 354 P **Pn 15 10 03.6 -0.9**
comp=Z,2.1nm,0.3s,baz=159,slow=12,SNR=37
BRVK Borovoye 18.35 354 ⇑P **P 15 10 02.7 -2.3**
comp=Z,6.2nm,0.6s
BRVK Borovoye 18.35 354 *e*P **P 15 10 03.4 -1.6**
comp=Z,8.0nm,0.6s
BRVK Borovoye 18.35 354 *e*P **P 15 10 03.4 -1.6**
BRVK pmax pmax
comp=Z,8.0nm,0.6s
AKTO Aktyubinsk 19.28 329 P **P 15 10 15.0 -0.2**
comp=Z,3.6nm,0.3s,baz=149,slow=9.0,SNR=35
AKTO LR LR 15 17 57.5
comp=Z,32nm,18.1s,baz=66,slow=38
AKTO Aktyubinsk 19.28 329 ⇑P **P 15 10 15.1 -0.2**
comp=Z,5.0nm,0.3s
ZALV Zalesovo Beam 20.65 19 P **P 15 10 29.4 -0.6**
comp=Z,14nm,0.5s,baz=216,slow=11,SNR=53
ZALV Zalesovo Beam 20.65 19 *e*P **P 15 10 28.9 -1.2**
NVS Novosibirsk 21.08 16 *e*P **P 15 10 33.7 -1.0**
GTA Gaotai 21.34 70 P **P 15 10 38.8 +0.9**
GTA pP sP 15 10 50.4 +3.8
GTA pmax pmax
comp=Z,10.0nm,1.0s
ARU Arti 23.90 339 P **P 15 11 04.2 +0.1**
comp=Z,4.0nm,0.4s,baz=128,slow=7.5,SNR=7.2
ARU Arti 23.90 339 *e*P **P 15 11 02.6 -1.5**
comp=Z,5.9nm,0.6s
ZAK Zakamensk 26.55 45 *e*P **P 15 11 27.9 -0.5**
ZAK pmax pmax
comp=Z,3.0nm,1.1s
KMI Kunming 26.94 103 P **P 15 11 31.8 -0.5**
KMI pmax pmax
comp=Z,9.0nm,0.5s
SONM Songino Array 27.59 52 P **P 15 11 38.6 +0.8**
comp=Z,0.9nm,0.6s,baz=256,slow=9.4,SNR=4.5
CMAR Chiang Mai Arr 27.79 119 P **P 15 11 42.7 +3.1**
comp=Z,0.5nm,0.5s,baz=304,slow=13,SNR=3.7
HHC Hu-ho-hao-te 30.38 67 *e*P **P 15 12 02.3 -0.3**
HHC pmax pmax
comp=Z,13nm,0.6s
HHC pmax pmax
comp=Z,100nm,5.2s
BRTR Keskin Array B 31.99 291 P **P 15 12 17.9 +1.1**
comp=Z,0.8nm,0.7s,baz=98,slow=9.0,SNR=4.3
NRIK Noril'sk 35.40 8 P **P 15 12 46.0 +0.1**
comp=Z,1.4nm,0.2s,baz=237,slow=5.9,SNR=4.7
NRIK Noril'sk 35.40 8 P **P 15 12 46.0 +0.1**
NRIK pmax pmax
comp=Z,1.0nm,0.3s
AKASG Malin Array Be 35.63 310 P **P 15 12 47.7 -0.5**
comp=Z,0.4nm,0.4s,baz=82,slow=7.2,SNR=4.7
MLR Muntele Rosu 37.45 301 P **P 15 13 04.4 +0.5**
comp=Z,0.6nm,0.7s,baz=116,slow=10,SNR=4.8
PSI Prapat 39.63 138 LR LR 15 30 03.8
comp=Z,88nm,18.1s,baz=89,slow=36
FINES FINESS Array B 40.03 327 P **P 15 13 24.9 -0.2**
comp=Z,2.2nm,0.4s,baz=121,slow=11,SNR=25
FINES FINESS Array B 40.03 327 P **P 15 13 25.0 -0.2**
CN2 Changchun 40.50 61 *e*P **P 15 13 30.0 +0.7**
ARCES ARCESS Array B 43.47 338 P **P 15 13 53.8 +0.5**
comp=Z,4.6nm,0.5s,baz=111,slow=8.4,SNR=31
USRK Ussuriysk Ar. 45.13 60 LR LR 15 33 27.4
comp=Z,46nm,18.2s,baz=125,slow=37
HFS Hagfors 45.67 323 P **P 15 14 10.7 -0.2**
comp=Z,4.9nm,0.6s,baz=98,slow=10,SNR=18
CLL Collm 45.88 310 *e*(P) **P 15 14 15.0 +2.3**
CLL Collm 45.88 310 *e*P **P 15 14 15.0 +2.3**
TIXI Tiksi 46.52 21 *e*P **P 15 14 16.8 -0.6**
comp=Z,4.0nm,0.8s
TIXI Tiksi 46.52 21 *e*P **P 15 14 16.8 -0.6**
TIXI pmax pmax
comp=Z,4.0nm,0.8s
NB2 NORSAR Subarra 46.97 324 P **P 15 14 20.3 -0.8**
comp=Z,1.8nm,0.8s,baz=97,slow=7.9
NOA NORSAR Array B 46.97 324 P **P 15 14 20.7 -0.5**
SPITS Spitsbergen Ar 49.58 347 P **P 15 14 41.9 +0.9**
comp=Z,3.4nm,0.6s,baz=102,slow=13,SNR=14
EKA Eskdalemuir Ar 54.94 317 P **P 15 15 20.2 -1.0**
comp=Z,0.5nm,0.5s,baz=88,slow=8.9,SNR=3.6
PETK Petropavlovsk- 59.67 44 LR LR 15 43 40.8
comp=Z,20nm,21.9s,baz=13,slow=38
ESDC Sonseca Array 60.12 300 P **P 15 15 57.8 -0.2**
comp=Z,1.2nm,0.7s,baz=64,slow=7.4,SNR=6.9
TOA0 Torodi Ar. Sit 67.84 271 *e*P **P 15 16 48.2 -0.8**
TORD Torodi Ar. Bea 67.84 271 P **P 15 16 48.3 -0.7**
comp=Z,3.9nm,0.8s,baz=49,slow=5.9,SNR=20
KOWA Kowa 71.81 275 P **P 15 17 13.2 -0.3**
comp=Z,1.9nm,0.5s,baz=48,slow=11,SNR=4.9
TOLK Toolik Lake Re 71.96 15 *e*P **P 15 17 13.8 +0.2**
comp=Z,6.7nm,1.0s
COLD Coldfoot 72.96 16 *e*P **P 15 17 19.6 +0.1**
comp=Z,2.9nm,0.8s
MDM Murphy Dome 75.28 17 *e*P **P 15 17 33.3 +0.2**
comp=Z,2.2nm,0.8s
BPAW Bear Paw Mtn. 75.29 19 *e*P **P 15 17 33.1 0.0**
comp=Z,2.3nm,0.8s
IL1 Eielson Array 75.76 17 *e*P **P 15 17 35.3 -0.5**
ILAR Eielson Array 75.76 17 P **P 15 17 35.3 -0.5**
comp=Z,1.1nm,0.7s,baz=311,slow=5.2,SNR=24
ILB Eielson Array 75.76 17 *e*P **P 15 17 34.3 -1.5**
RND Reindeer 76.41 18 *e*P **P 15 17 38.4 -1.2**
comp=Z,4.1nm,0.8s
RND Reindeer 76.41 18 *e*P **P 15 17 38.4 -1.2**
RND pmax pmax
comp=Z,4.0nm,0.8s
DHY Denali Highway 77.06 18 *e*P **P 15 17 42.9 -0.4**
comp=Z,3.0nm,0.7s
DAWY Dawson 78.01 14 *e*P **P 15 17 48.2 -0.4**
comp=Z,2.3nm,0.8s
CHGN Chignik 79.03 27 *e*P **P 15 17 54.5 +0.3**
comp=Z,55nm,0.8s
WRA Warramunga Arr 79.31 123 P **P 15 17 56.1 -0.2**
comp=Z,1.3nm,0.7s,baz=325,slow=5.4,SNR=16
ASAR Alice Springs 81.57 126 P **P 15 18 08.6 +0.3**
comp=Z,0.8nm,0.6s,baz=306,slow=5.4,SNR=17
YKA Yellowknife Ar 82.76 4 P **P 15 18 13.9 -0.1**
comp=Z,0.7nm,0.4s,baz=347,slow=5.3,SNR=14
DLBC Dease Lake 84.97 12 *e*P **P 15 18 24.4 -1.1**

*DJA **20** 15:54:15.3±0.3, 1°.N±3°.×12°.7E±°, h10km, M4.2/5, mb4.3/2, MLv4.2/5*
*ISCJB **20** 15:54:17.7±0.3, 1°.28N±0°.04×127°.05E±0°.06, h100km, mb4.1/21, Error ellipse: s-maj=9.2km s-min=5.0km az=155.9*
*NEIC **20** 15:54:17.5±0.7, 1°.32N×127°.16E, h82km±6km, mb4.3/8, Error ellipse: s-maj=9.4km s-min=4.9km az=59.0*
*IDC **20** 15:54:19.3±2.7, 1°.23N×126°.98E, h98km±23km, mb3.8/13, mb1 3.9/14, mb1mx3.7/61, mbtmp4.1/14, MS2.7/2, Ms1 2.7/2, ms1mx2.3/57, Error ellipse: s-maj=33.1km s-min=9.2km az=70.0*
ISC 20 15:54:19.5±0.5, 1°.20N±0°.06×126°.94E±0°.07, h100km, n48, σ1°18/50, mb4.1/21, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.60**	**135**	*e*Pn	**Pn**	**15 54 31.9**	**-4.2**
LBMI	**Labuha**	**1.91**	**163**	P	**Pn**	**15 54 50.0**	**-0.9**
LBMI				S	**Sn**	**15 55 15.0**	**+0.1**
KMSI	**Cibinong**	**3.02**	**258**	P	**Pn**	**15 55 03.5**	**-2.0**
KMSI				S	**Sn**	**15 55 38.0**	**-3.1**
LUWI	**Luwuk**	**4.72**	**242**	*e*Pn	**Pn**	**15 55 29.8**	**+1.3**
SIJI	**Sorong**	**4.79**	**115**	P	**Pn**	**15 55 28.6**	**-0.8**
	0.8nm,0.3s,baz=266,slow=13,SNR=6.2						
MYLDM	**Lahad Datu**	**9.31**	**295**	*e*Pn	**Pn**	**15 56 30.7**	**-0.2**
KKM	**Kota Kinabalu**	**11.73**	**294**	*e*Pn	**Pn**	**15 57 03.8**	**0.0**
MTN	**Manton Dam**	**14.56**	**164**	*e*Pn	**Pn**	**15 57 39.9**	**-0.8**
SBUM	**Sibu**	**14.76**	**275**	*e*Pn	**P**	**15 57 46.6**	**-0.1**
	3.7nm,0.9s						
JAGI	**Jajag, Banyuwa**	**15.96**	**233**	*e*Pn	**P**	**15 58 02.0**	**+2.0**
	69nm,1.4s						
KSM	**Kuching**	**16.63**	**271**	*e*Pn	**P**	**15 58 07.8**	**+0.4**
	25nm,1.9s						
FITZ	**Fitzroy Crossi**	**19.22**	**184**	*e*P	**Pn**	**15 58 35.8**	**-2.0**
	16nm,1.6s						
GUMO	**Guam**	**21.60**	**54**	LR	LR	16 06 16.3	
	comp=Z,14nm,21.4s,baz=126,slow=33						
WRAB	**Tennant Creek**	**22.22**	**161**	*e*P	**P**	**15 59 07.6**	**-0.5**
	16nm,1.2s						
WRA	**Warramunga Arr**	**22.23**	**161**	P	**P**	**15 59 07.7**	**-0.5**
	2.5nm,0.4s,baz=340,slow=11,SNR=135						
WRA				S	**S**	**16 03 06.7**	**+0.2**
	0.5nm,1.0s,baz=325,slow=18,SNR=2.8						
WB2	**Warramunga Arr**	**22.23**	**161**	*e*P	**P**	**15 59 07.9**	**-0.2**
AS31	**Alice Springs**	**25.63**	**165**	*e*P	**P**	**15 59 39.9**	**0.0**
	1.2nm,0.6s						
ASAR	**Alice Springs**	**25.63**	**165**	P	**P**	**15 59 40.9**	**+1.0**
	2.2nm,0.7s,baz=346,slow=11,SNR=18						
ASAR				PcP	**PcP**	**16 03 09.2**	**+0.8**
	0.3nm,0.5s,baz=345,slow=2.2,SNR=4.8						
ASAR				S	**S**	**16 04 02.1**	**+1.2**
	0.3nm,1.0s,baz=344,slow=19,SNR=3.5						
AS01	**Alice Springs**	**25.64**	**165**	*e*P	**P**	**15 59 41.2**	**+1.2**
KMI	**Kunming**	**33.34**	**317**	P	**P**	**16 00 50.4**	**+2.0**
KMI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
HNR	**Honiara**	**34.53**	**109**	LR	LR	16 15 24.8	
	comp=Z,17nm,19.2s,baz=178,slow=37						
KSAR	**Wonju Array Be**	**36.08**	**1**	P	**P**	**16 01 11.3**	**-0.2**
KSRS	**Korea Array**	**36.09**	**1**	P	**P**	**16 01 11.4**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=178,slow=9.5,SNR=5.2						
MJAR	**Matsushiro Arr**	**36.68**	**15**	P	**P**	**16 01 14.7**	**-2.1**
	comp=Z,0.9nm,0.5s,baz=190,slow=9.1,SNR=5.8						
HHC	**Hu-ho-hao-te**	**41.86**	**342**	*e*P	**P**	**16 02 01.0**	**+1.2**
HHC				pmax	pmax		
	comp=Z,13nm,0.6s						
HHC				pmax	pmax		
	comp=Z,120nm,5.4s						
CN2	**Changchun**	**42.44**	**358**	*e*P	P	16 02 08.0	+3.6
GTA	**Gaotai**	**45.37**	**330**	*e*P	**P**	**16 02 28.6**	**+0.5**
GTA				pP	pP	16 02 46.8	-4.9
GTA				sP	sP	16 02 55.8	-7.2
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	**Songino Array**	**49.75**	**342**	P	**P**	**16 03 01.9**	**0.0**
	comp=Z,2.0nm,0.8s,baz=160,slow=9.1,SNR=9.6						
SONA1	**Songino Array**	**49.76**	**342**	*e*P	**P**	**16 03 01.4**	**-0.6**
WMQ	**Urumqi**	**54.92**	**326**	P	**P**	**16 03 41.8**	**+1.7**
PETK	**Petropavlovsk-**	**57.69**	**21**	P	**P**	**16 03 59.8**	**+0.3**
	comp=Z,1.8nm,0.6s,baz=202,slow=3.1,SNR=7.9						
MK01	**Makanchi Array**	**59.73**	**326**	*e*P	**P**	**16 04 14.1**	**+0.2**
MK31	**Makanchi Array**	**59.75**	**326**	*e*P	**P**	**16 04 13.8**	**-0.2**
MKAR	**Makanchi Array**	**59.75**	**326**	P	**P**	**16 04 14.1**	**+0.2**
	comp=Z,3.6nm,0.5s,baz=119,slow=8.2,SNR=43						
MKAR	**Makanchi Array**	**59.75**	**326**	*e*P	**P**	**16 04 13.7**	**-0.3**
	comp=Z,29nm,0.7s						
MAKZ	**Makanchi**	**59.93**	**326**	*e*P	**P**	**16 04 15.1**	**-0.1**
	comp=Z,7.1nm,1.0s						
ZALV	**Zalesovo Beam**	**62.93**	**334**	P	**P**	**16 04 34.3**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=120,slow=5.2,SNR=3.6						
KURBB	**Kurchatov Arra**	**63.98**	**328**	P	**P**	**16 04 42.2**	**+0.1**
	comp=Z,5.1nm,0.7s,baz=128,slow=6.1,SNR=28						
KURK	**Kurchatov**	**63.98**	**328**	*e*P	**P**	**16 04 42.0**	**-0.2**
	comp=Z,9.4nm,0.8s						
KK31	**Karatay Array**	**65.22**	**318**	*e*P	**P**	**16 04 50.8**	**+0.3**
KKAR	**Karatay Array**	**65.22**	**318**	*e*P	**P**	**16 04 50.8**	**+0.3**
BVAR	**Borovoye Array**	**69.55**	**327**	P	**P**	**16 05 17.0**	**-0.5**
	comp=Z,1.6nm,0.8s,baz=126,slow=7.3,SNR=8.0						
NRIK	**Noril'sk**	**72.92**	**346**	P	**P**	**16 05 37.0**	**-0.5**
	comp=Z,1.6nm,0.6s,baz=112,slow=5.9,SNR=6.7						
AKTO	**Aktyubinsk**	**75.77**	**322**	P	**P**	**16 05 54.1**	**-0.3**
	comp=Z,1.4nm,0.5s,baz=94,slow=12,SNR=4.7						
VNDA	**Vanda**	**80.91**	**173**	P	**P**	**16 06 22.2**	**0.0**
	comp=Z,1.0nm,0.8s,baz=306,slow=5.7,SNR=5.9						
RAYN	**Ar Rayn**	**81.67**	**293**	*e*P	**P**	**16 06 27.8**	**+0.4**
	comp=Z,2.9nm,0.9s						
TXAR	**Lajitas Array**	**122.95**	**54**	PKP	**PKPdf**	**16 13 06.0**	**+1.1**
	comp=Z,0.4nm,0.7s,baz=267,slow=1.8,SNR=4.6						
TORD	**Torodi Ar. Bea**	**123.87**	**287**	PKP	**PKPdf**	**16 13 06.4**	**-0.5**
	comp=Z,0.9nm,0.8s,baz=76,slow=2.2,SNR=3.9						

*ISCJB **20** 16:02:50.7±0.5, 50°.08N±0°.03×19°.07E±0°.03, h0km, Error ellipse: s-maj=4.4km s-min=3.1km az=7.4*
*IPEC **20** 16:02:50.7±0.2, 50°.18N×19°.14E, h0km, ML1.7/3, Error ellipse: s-maj=2.6km s-min=1.0km az=167.0*
*CSEM **20** 16:02:50.4±0.4, 50°.14N×19°.11E, h2km, ML2.5/6, Error ellipse: s-maj=9.1km s-min=4.6km az=5.0*
*PRU **20** 16:02:51.0, 50°.15N×19°.11E, h0km*
*WAR **20** 16:02:51.3, 50°.10N×19°.21E, h1km, Mw2.3*
ISC 20 16:02:50.9±0.8, 50°.05N±0°.03×19°.18E±0°.02, h0km, n35, σ0°79/60, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHZP	**Chorzow**	**0.27**	**333**	*e*Pg	**Pg**	**16 02 56.8**	**+0.7**
CHZP				*e*Sg	**Sg**	**16 02 60.0**	**+0.4**
CHZP	**Chorzow**	**0.27**	**333**	*e*Pg	**Pg**	**16 02 56.8**	**+0.7**
CHZP				*e*Sg	**Sg**	**16 02 60.0**	**+0.4**
OJC	**Ojcow**	**0.43**	**66**	*e*Pg	**Pg**	**16 02 58.8**	**-0.4**
OJC				*e*Sg	**Sg**	**16 03 04.7**	**0.0**
OJC	**Ojcow**	**0.43**	**66**	*e*Pg	**Pg**	**16 02 58.8**	**-0.4**
OJC				*e*Sg	**Sg**	**16 03 04.7**	**0.0**
OJC	**Ojcow**	**0.43**	**66**	*e*Pg	**Pg**	**16 02 58.8**	**-0.4**
OJC				*e*Sg	**Sg**	**16 03 04.7**	**0.0**
OKC	**Ostrava-Krasne**	**0.70**	**253**	*e*PG	**Pg**	**16 03 04.9**	**+0.6**
OKC				*e*SG	**Sg**	**16 03 13.7**	**+0.3**
	comp=Z,16nm,0.4s						
OKC	**Ostrava-Krasne**	**0.70**	**253**	Pg	**Pg**	**16 03 04.9**	**+0.6**
OKC				Sg	**Sg**	**16 03 13.7**	**+0.3**
	16nm,0.4s						
LANS	**Liptovska Anna**	**0.92**	**168**	*e*PG	**Pb**	**16 03 09.8**	**+0.1**
LANS				*e*SG	**Sb**	**16 03 23.5**	**+1.1**
LANS	**Liptovska Anna**	**0.92**	**168**	*e*Pg	**Pb**	**16 03 09.8**	**+0.1**
LANS				*e*Sg	**Sb**	**16 03 23.5**	**+1.1**
NIE	**Niedzica**	**0.96**	**131**	*e*Pg	**Pn**	**16 03 11.4**	**-0.3**
NIE				*e*Sg	**Sn**	**16 03 25.8**	**-0.3**
NIE	**Niedzica**	**0.96**	**131**	*e*Pg	**Pn**	**16 03 11.4**	**-0.3**
NIE				*e*Sg	**Sn**	**16 03 25.8**	**-0.3**
NIE	**Niedzica**	**0.96**	**131**	*e*Pg	**Pn**	**16 03 11.4**	**-0.3**
NIE				*e*Sg	**Sn**	**16 03 25.8**	**-0.3**
MORC	**Moravsky Berou**	**1.09**	**256**	*e*Pg	**Pg**	**16 03 12.0**	**+0.2**
MORC				*e*SG	**Sg**	**16 03 25.4**	**-0.6**
	8.1nm,0.2s						
MORC	**Moravsky Berou**	**1.09**	**256**	*e*PG	**Pg**	**16 03 12.0**	**+0.2**
MORC				*e*SG	**Sg**	**16 03 25.5**	**-0.6**
MORC	**Moravsky Berou**	**1.09**	**256**	*e*Pg	**Pg**	**16 03 12.0**	**+0.2**
	baz=68						
MORC				*e*Sg	**Sg**	**16 03 25.4**	**-0.6**
	8.1nm,0.2s,baz=68						
JAVC	**Velka Javorina**	**1.54**	**220**	*e*Pn	**Pg**	**16 03 20.9**	**+0.4**
JAVC	**Velka Javorina**	**1.54**	**220**	*e*PN	**Pg**	**16 03 20.9**	**+0.4**
JAVC	**Velka Javorina**	**1.54**	**220**	*e*Pn	**Pg**	**16 03 20.9**	**+0.4**
	baz=35						
KRLC	**Kraliky**	**1.55**	**272**	*e*SG	**Sg**	**16 03 38.8**	**-1.7**
	comp=Z,2.7nm,0.4s						
KRLC	**Kraliky**	**1.55**	**272**	Sg	**Sg**	**16 03 38.8**	**-1.7**
	2.7nm,0.4s						
VYHS	**Vyhne**	**1.57**	**188**	*e*PN	**Pn**	**16 03 20.0**	**0.0**
VYHS				*e*SN	**Sn**	**16 03 41.0**	**-0.1**
VYHS				eLG	Lg	16 03 42.2	
VYHS	**Vyhne**	**1.57**	**188**	*e*Pg	**Pn**	**16 03 20.0**	**0.0**
VYHS				*e*Sn	**Sn**	**16 03 41.0**	**-0.1**
VRAC	**Vranov**	**1.84**	**247**	*e*Pn	**Pn**	**16 03 24.1**	**+0.4**
VRAC				*e*Sg	**Sb**	**16 03 49.1**	**+0.2**
	5.5nm,0.4s						
VRAC	**Vranov**	**1.84**	**247**	*e*PN	**Pn**	**16 03 24.1**	**+0.4**
VRAC				*e*SG	**Sb**	**16 03 49.2**	**+0.3**
VRAC	**Vranov**	**1.84**	**247**	*e*Pn	**Pn**	**16 03 24.1**	**+0.4**
	baz=61						
VRAC				*e*Sg	**Sb**	**16 03 49.1**	**+0.2**
	5.5nm,0.4s,baz=61						
DPC	**Dobruska-Polom**	**1.86**	**280**	*e*PG	**Pn**	**16 03 23.4**	**-0.7**
DPC				*e*SG	**Sn**	**16 03 48.1**	**-0.2**
	comp=Z,9.4nm,0.5s						
DPC	**Dobruska-Polom**	**1.86**	**280**	Pg	**Pn**	**16 03 23.4**	**-0.7**
DPC				Sg	**Sn**	**16 03 48.1**	**-0.2**
	9.4nm,0.5s						
KRUC	**Moravsky**	**2.07**	**243**	*e*Pn	**Pn**	**16 03 27.1**	**+0.3**
KRUC				*e*Sg	**Sg**	**16 03 56.7**	**-0.5**
	4.1nm,0.4s						
KRUC	**Moravsky**	**2.07**	**243**	*e*PN	**Pn**	**16 03 27.1**	**+0.3**
KRUC				*e*SG	**Sg**	**16 03 56.7**	**-0.5**
KRUC	**Moravsky**	**2.07**	**243**	*e*Pn	**Pn**	**16 03 27.1**	**+0.3**
	baz=57						
KRUC				*e*Sg	**Sg**	**16 03 56.7**	**-0.5**
	4.1nm,0.4s,baz=57						
PRU	**Pruhonice**	**2.99**	**271**	*e*SG	**Sb**	**16 04 23.4**	**+1.3**
PRU	**Pruhonice**	**2.99**	**271**	Sg	**Sb**	**16 04 23.4**	**+1.3**
BRG	**Berggiesshubel**	**3.45**	**286**	SG	**Sg**	**16 04 39.3**	**-2.3**
	3.3nm,0.7s						
KHC	**Kasperske Hory**	**3.76**	**258**	*e*SG	**Sg**	**16 04 49.2**	**-2.4**
KHC	**Kasperske Hory**	**3.76**	**258**	Sg	**Sg**	**16 04 49.2**	**-2.4**

TAP 20 16:11:40.9, 24°.96N×122°.30E, h15km±1km, ML2.4, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.28**	**281**	P	Pb	16 11 47.5	-0.3
TWB1				*e*S	Sb	16 11 52.1	-0.2
	baz=281						
TIPB	**Shuangxi**	**0.43**	**272**	*e*P	Pg	16 11 49.4	-0.1
TIPB				S	Sg	16 11 55.8	+0.4
	baz=272						
EOS1	**EOS1**	**0.43**	**201**	*e*P	Pb	16 11 50.5	+0.3
EOS1				*e*S	Sb	16 11 57.0	+0.6
	baz=214						
NWF	**Wu-fen Shan**	**0.48**	**284**	*e*P	Pb	16 11 51.5	+0.4
NWF				*e*S	Sb	16 11 58.8	+0.8
	baz=284						
WFSB	**Wu-fen Shan**	**0.48**	**284**	*e*P	Pb	16 11 51.5	+0.4
WFSB				*e*S	Sb	16 11 58.9	+0.9
	baz=284						
TWC	**Suao**	**0.53**	**230**	P	Pg	16 11 51.3	-0.1
TWC				S	Sg	16 11 58.6	+0.1
	baz=223						
YM07	**YM07**	**0.65**	**290**	*e*P	Pg	16 11 53.7	0.0
YM07				*e*S	Sb	16 12 03.1	+0.1
	baz=289						
YM08	**YM08**	**0.68**	**290**	*e*P	Pb	16 11 55.1	+0.6
YM08				*e*S	Sb	16 12 04.1	+0.3
	baz=290						
YM11	**YM11**	**0.69**	**288**	*e*P	Pn	16 11 56.5	+0.3
YM11				*e*S	Sn	16 12 06.9	+0.2
	baz=287						
YM12	**YM12**	**0.70**	**289**	*e*P	Pb	16 11 55.4	+0.7
YM12				*e*S	Sn	16 12 06.4	-0.4
	baz=277						
NANB	**Nanao**	**0.72**	**224**	*e*P	Pg	16 11 54.8	-0.2
NANB				S	Sg	16 12 04.1	-0.5
	baz=216						
ENA	**Nanau**	**0.73**	**224**	*e*P	Pg	16 11 55.1	0.0
	baz=216						
ENTT	**Nioudou**	**0.73**	**245**	*e*P	Pb	16 11 55.8	+0.4
	baz=257						
ENTT				*e*S	Sn	16 12 06.6	-1.1
	baz=257						

*NIED **20** 16:47:00, 35°.80N×140°.90E, h11km, Mw4.0 Best double couple: M0 1.07000×10^15 NP1:φs 157.00000°, δ41.00000°, λ-73.00000°. NP2:φs 316.00000°, δ51.00000°, λ-104.00000°.*
*IDC **20** 16:47:04.7±0.8, 35°.61N×140°.93E, h0km, mb3.7/11, mb1 3.8/16, mb1mx3.7/73, mbtmp3.7/16, ML3.4/4, MS3.0/11, Ms1 3.1/11, ms1mx2.8/66, Error ellipse: s-maj=18.5km s-min=14.5km az=81.0*
*ISCJB **20** 16:47:05.4±0.8, 35°.70N±0°.03×141°.01E±0°.07, h17km±4km, mb3.7/11, M

19nm,0.3s,baz=82,slow=23,SNR=3.8
ASAJ Asahikawa 8.50 8 Pn **Pn 16 49 08.2 -1.1**
1.4nm,0.3s,baz=215,slow=9.1,SNR=13
ASAJ Sn **Sn 16 50 47.6 +2.3**
0.2nm,0.3s,baz=114,slow=30,SNR=1.6
ASAJ LR LR 16 52 54.4
comp=Z,91nm,18.3s,baz=208,slow=41
JNU Nakatsue 8.72 256 LR LR 16 52 30.2
comp=Z,131nm,18.8s,baz=124,slow=38
KSRS Korea Array 10.63 283 Pn **Pn 16 49 40.5 +2.0**
0.1nm,0.3s,baz=93,slow=14,SNR=2.7
KSRS LR LR 16 53 22.9
comp=Z,65nm,18.2s,baz=120,slow=36
USRK Ussuriysk Ar. 10.92 324 Pn **Pn 16 49 42.8 +0.2**
0.2nm,0.3s,baz=130,slow=15,SNR=2.7
USRK LR LR 16 53 27.9
comp=Z,56nm,21.7s,baz=174,slow=35
KLR Kul'dur 15.12 336 LR LR 16 56 01.7
comp=Z,12nm,20.8s,baz=8.0,slow=35
H11N2 WAKE ISLAND Hy 27.82 118 T T 17 21 52.9
baz=311,slow=75,SNR=409
H11N1 WAKE ISLAND Hy 27.82 118 T T 17 21 53.8
baz=311,slow=75,SNR=358
H11N3 WAKE ISLAND Hy 27.83 118 T T 17 21 54.6
baz=311,slow=75,SNR=587
SONM Songino Array 28.25 306 P **P 16 53 00.3 +0.8**
0.9nm,0.9s,baz=112,slow=11,SNR=3.3
SONM LR LR 17 04 34.0
comp=Z,41nm,19.2s,baz=80,slow=37
H11S3 WAKE ISLAND Hy 28.48 120 T T 17 22 39.4
baz=312,slow=76,SNR=448
H11S1 WAKE ISLAND Hy 28.48 120 T T 17 22 43.5
baz=312,slow=76,SNR=481
H11S2 WAKE ISLAND Hy 28.49 120 T T 17 22 40.5
baz=312,slow=76,SNR=426
TIXI Tiksi 36.57 354 LR LR 17 11 00.1
comp=Z,25nm,18.7s,baz=181,slow=39
CMAR Chiang Mai Arr 40.81 256 LR LR 17 11 59.0
comp=Z,20nm,18.4s,baz=220,slow=37
ZALV Zalesovo Beam 42.55 313 P **P 16 55 02.2 +0.3**
0.5nm,0.3s,baz=99,slow=7.6,SNR=3.2
MKAR Makanchi Array 44.53 303 P **P 16 55 17.7 -0.2**
1.4nm,0.9s,baz=88,slow=9.8,SNR=9.5
KURBB **Kurchatov Arra 46.54 309** P **P 16 55 33.8 0.0**
0.6nm,0.3s,baz=84,slow=8.3,SNR=4.4
ILAR Eielson Array 50.82 32 P **P 16 56 06.5 0.0**
0.5nm,0.8s,baz=284,slow=5.5,SNR=4.8
BVAR Borovoye Array 51.20 313 P **P 16 56 09.8 +0.2**
0.8nm,0.7s,baz=79,slow=10,SNR=4.5
WRA Warramunga Arr 55.69 188 P **P 16 56 41.8 -1.0**
0.7nm,0.6s,baz=4.4,slow=7.5,SNR=12
INK Inuvik 55.74 27 P **P 16 56 43.7 +1.1**
1.0nm,0.6s,baz=276,slow=11,SNR=3.4
ASAR Alice Springs 59.42 188 P **P 16 57 08.2 -0.8**
0.3nm,0.9s,baz=8.2,slow=7.8,SNR=4.0
FINES FINESS Array B 69.82 332 P **P 16 58 17.9 +1.4**
1.7nm,0.8s,baz=149,slow=19,SNR=2.5
GNI Garni 72.21 307 LR LR 17 32 51.0
comp=Z,19nm,18.2s,baz=96,slow=38
HFS Hagfors 75.15 336 LR LR 17 35 44.1
comp=Z,17nm,18.4s,baz=30,slow=39
NOA NORSAR Array B 75.27 337 LR LR 17 35 11.7
comp=Z,15nm,18.2s,baz=210,slow=38
TXAR Lajitas Array 91.23 52 P **P 17 00 12.5 +0.4**
0.4nm,1.0s,baz=328,slow=3.2,SNR=2.4
LPAZ La Paz 147.67 61 PKPbc **PKPbc 17 06 52.5 +0.2**
1.0nm,0.9s,baz=29,slow=16,SNR=3.6

*IDC **20** 16:57:33.4±0.9, 54°.36N×168°.79E, h0km, mb3.5/8, mb1 3.8/9, mb1mx3.4/77, mbtmp3.6/9, ML3.2/1, MS2.5/1, Ms1 2.5/1, ms1mx2.1/61, Error ellipse: s-maj=31.4km s-min=19.5km az=169.0*
*KRSC **20** 16:57:34.2±1.7, 53°.94N×168°.39E, h17km±33km, ML4.0*
*ISCJB **20** 16:57:36.5±0.7, 53°.97N±0°.05×168°.52E±0°.07, h30km, mb3.5/8, Error ellipse: s-maj=7.2km s-min=5.9km az=4.0*
ISC 20 16:57:37.5±0.9, 54°.06N±0°.07×168°.70E±0°.08, h30km, n49, σ1°36/56, mb3.6/8, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**1.96**	**307**	*eP*	**Pn**	**16 58 05.8**	**-2.8**
BKI				*eS*	**Sn**	**16 58 30.9**	**-1.2**
KBTR	**Krutoberegovo**	**4.01**	**305**	*eP*	**Pn**	**16 58 36.4**	**-0.3**
KBTR				*eS*	**Sn**	**16 59 23.6**	**+1.0**
MKZ	**Mys Kozlova**	**4.12**	**280**	*eP*	**Pn**	**16 58 38.0**	**-0.2**
MKZ				*eS*	**Sn**	**16 59 24.2**	**-1.1**
SMKR	**Semkarok**	**4.84**	**304**	*eP*	**Pn**	**16 58 48.5**	**+0.2**
KZV	**Kizimen**	**5.00**	**286**	*eP*	**Pn**	**16 58 50.6**	**0.0**
KZV				*eS*	**Sn**	**16 59 47.8**	**+0.4**
CIRR	**Tsirk**	**5.01**	**297**	P	**Pn**	**16 58 52.1**	**+1.4**
SRKR	**Sorokina**	**5.02**	**304**	*eP*	**Pn**	**16 58 50.4**	**-0.4**
BZMR	**Bezymyannaya**	**5.09**	**295**	*eP*	**Pn**	**16 58 53.8**	**+2.0**
BZWR	**Bezymyannyi-We**	**5.09**	**295**	*eP*	**Pn**	**16 58 53.5**	**+1.6**
TUMR	**Tumrok**	**5.12**	**287**	*eP*	**Pn**	**16 58 53.3**	**+1.2**
KLY	**Klyuchi**	**5.14**	**299**	*eP*	**Pn**	**16 58 51.7**	**-0.5**
KLY				*eS*	**Sn**	**16 59 48.9**	**-1.5**
KRSR	**Krestovskiy**	**5.14**	**298**	*eP*	**Pn**	**16 58 54.2**	**+1.7**
KMNR	**Kamenistaya**	**5.17**	**293**	*eP*	**Pn**	**16 58 54.6**	**+1.7**
KMNR				*eS*	**Sn**	**16 59 52.5**	**+1.0**
KPT	**Kopyto**	**5.24**	**295**	*eP*	**Pn**	**16 58 54.6**	**+0.8**
SPN	**Mys Shipunski**	**5.26**	**263**	*eP*	**Pn**	**16 58 53.5**	**-0.5**
SPN				*eS*	**Sn**	**16 59 52.5**	**-1.0**
KII	**Karymskiy**	**5.45**	**273**	*eP*	**Pn**	**16 58 57.1**	**+0.4**
KOZ	**Kozyrevsk**	**5.46**	**295**	*eP*	**Pn**	**16 58 58.7**	**+2.0**
KOZ				*eS*	**Sn**	**16 59 59.8**	**+1.4**
NLC	**Nalytchevo**	**5.64**	**265**	*eP*	**Pn**	**16 58 58.5**	**-0.7**
NLC				*eS*	**Sn**	**17 00 00.7**	**-2.2**
SDLR	**Sedlovina**	**5.89**	**266**	*eP*	**Pn**	**16 59 02.8**	**+0.1**
SDLR				*eS*	**Sn**	**17 00 07.3**	**-1.9**
UGLR	**Uglovaya**	**5.94**	**266**	*eP*	**Pn**	**16 59 03.4**	**0.0**
KRER	**Koryakskii**	**5.96**	**267**	*eP*	**Pn**	**16 59 04.4**	**+0.6**
AVH	**Avacha**	**5.98**	**266**	*eP*	**Pn**	**16 59 04.4**	**+0.5**
KRX	**Arik**	**6.01**	**267**	*eP*	**Pn**	**16 59 04.6**	**+0.2**
KOK	**Koryaka**	**6.03**	**267**	*eP*	**Pn**	**16 59 05.4**	**+0.7**
ESO	**Esso**	**6.05**	**292**	*eP*	**Pn**	**16 59 04.0**	**-0.9**
PET	**Petropavlovsk**	**6.08**	**264**	*eP*	**Pn**	**16 59 04.2**	**-1.0**
RUS	**Russkaya**	**6.33**	**259**	*eP*	**Pn**	**16 59 08.9**	**+0.3**
GNL	**Ganaly**	**6.38**	**271**	*eP*	**Pn**	**16 59 10.5**	**+1.1**
KRMR	**Karymshinskiy**	**6.44**	**263**	*eP*	**Pn**	**16 59 09.2**	**-0.9**
KRMR				*eS*	**Sn**	**17 00 21.4**	**-1.1**
MTVR	**Mutnovka**	**6.51**	**260**	*eP*	**Pn**	**16 59 11.3**	**+0.1**
MTVR				*eS*	**Sn**	**17 00 21.6**	**-2.8**
PETK	**Petropavlovsk-**	**6.62**	**266**	Pn	**Pn**	**16 59 13.8**	**+1.1**
	2.5nm,0.3s,baz=77,slow=19,SNR=103						
PETK				Sn	**Sn**	**17 00 30.2**	**+3.1**
	0.3nm,0.3s,baz=80,slow=40,SNR=3.1						
ASAK	**Asacha**	**6.70**	**260**	*eP*	**Pn**	**16 59 13.3**	**-0.5**
KDTR	**Khodutka, Kamc**	**6.81**	**255**	*eP*	**Pn**	**16 59 15.5**	**+0.3**
KDTR				*eS*	**Sn**	**17 00 29.3**	**-2.3**
APC	**Apacha**	**6.98**	**265**	*eP*	**Pn**	**16 59 16.6**	**-1.0**
ASAJ	**Asahikawa**	**19.67**	**250**	LR	LR	17 09 19.1	
	comp=Z,14nm,19.5s,baz=268,slow=36						
ILAR	**Eielson Array**	**24.45**	**46**	P	**P**	**17 02 51.4**	**-1.9**
	0.4nm,0.7s,baz=250,slow=7.5,SNR=4.2						
H11N2	**WAKE ISLAND Hy 34.30 183**			T	T	17 40 44.0	
	baz=2.3,slow=76,SNR=145						
H11N3	**WAKE ISLAND Hy 34.31 183**			T	T	17 40 44.9	
	baz=2.3,slow=76,SNR=88						
H11N1	**WAKE ISLAND Hy 34.31 183**			T	T	17 40 46.2	
	baz=2.3,slow=76,SNR=98						
H11S1	**WAKE ISLAND Hy 35.52 183**			T	T	17 42 25.0	
	baz=2.1,slow=76,SNR=46						
H11S3	**WAKE ISLAND Hy 35.53 183**			T	T	17 42 25.8	
	baz=2.1,slow=76,SNR=27						
H11S2	**WAKE ISLAND Hy 35.53 183**			T	T	17 42 26.2	
	baz=2.1,slow=76,SNR=62						
SONM	**Songino Array**	**38.60**	**287**	P	**P**	**17 04 58.3**	**+0.6**
	0.7nm,0.6s,baz=73,slow=8.3,SNR=4.4						
MKAR	**Makanchi Array**	**52.25**	**300**	P	**P**	**17 06 44.3**	**-1.2**
	0.3nm,0.6s,baz=48,slow=7.8,SNR=3.5						
BVAR	**Borovoye Array**	**53.69**	**312**	P	**P**	**17 06 55.0**	**-1.0**
	0.7nm,0.4s,baz=52,slow=9.5,SNR=7.5						
CMAR	**Chiang Mai Arr**	**63.40**	**265**	P	**P**	**17 08 05.6**	**+1.5**
	0.5nm,0.6s,baz=32,slow=7.1,SNR=4.0						
TXAR	**Lajitas Array**	**65.48**	**74**	P	**P**	**17 08 17.6**	**-0.2**
	0.1nm,0.4s,baz=310,slow=5.6,SNR=3.2						
WRA	**Warramunga Arr**	**79.40**	**213**	P	**P**	**17 09 42.0**	**+1.5**
	0.7nm,0.9s,baz=26,slow=6.3,SNR=3.6						
ASAR	**Alice Springs**	**83.02**	**212**	P	**P**	**17 10 02.2**	**+2.6**
	0.8nm,1.0s,baz=26,slow=4.5,SNR=3.7						

TAP 20 16:58:23.2, 24°.92N×122°.27E, h16km±1km, ML2.7, D,

Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.27**	**288**	P	Pg	16 58 29.4	+0.2
	baz=288						
TWB1				S	Sb	16 58 34.5	+0.4
	baz=288						
TIPB	**Shuangxi**	**0.41**	**277**	*eP*	Pg	16 58 31.3	-0.3
	baz=276						
TIPB				S	Sb	16 58 38.1	+0.1
	baz=276						
NWF	**Wu-fen Shan**	**0.47**	**288**	*eS*	Sb	16 58 40.7	+0.8
	baz=288						
TWC	**Suao**	**0.50**	**231**	P	Pg	16 58 33.2	+0.1
	baz=230						
TWC				*eS*	Sb	16 58 40.6	0.0
	baz=230						
TWE	**Neicheng**	**0.59**	**250**	P	Pb	16 58 35.1	+0.1
	baz=249						
TWE				*eS*	Sb	16 58 43.9	+0.8
	baz=249						
ENAH	**Nanao**	**0.63**	**222**	*eP*	Pg	16 58 35.2	-0.4
	baz=221						
ENAH				*eS*	Sb	16 58 45.2	+0.8
	baz=221						
YM07	**YM07**	**0.64**	**293**	*eP*	Pg	16 58 35.8	-0.1
	baz=292						
YM08	**YM08**	**0.67**	**293**	P	Pb	16 58 36.9	+0.4
	baz=292						
YM08				*eS*	Sn	16 58 47.3	-1.0
	baz=292						
NANB	**Nanao**	**0.69**	**224**	P	Pb	16 58 37.0	+0.2
	baz=223						
NANB				*eS*	Sb	16 58 47.1	+1.1
	baz=223						
ENA	**Nanau**	**0.69**	**225**	P	Pb	16 58 37.1	+0.2
	baz=223						
ENA				*eS*	Sb	16 58 47.1	+1.0
	baz=223						
ENTT	**Nioudou**	**0.70**	**246**	P	Pn	16 58 37.8	-0.7
	baz=245						
TWS1	**Kuangyinshan**	**0.80**	**283**	*eP*	Pn	16 58 40.5	+0.8
	baz=282						
NSK	**Sanguang**	**0.87**	**254**	*eP*	Pn	16 58 41.2	+0.4
	baz=253						
NSK				*eS*	Sn	16 58 54.5	+1.4
	baz=253						
NNS	**Nan Shan**	**0.95**	**240**	*eP*	Pg	16 58 41.8	+0.1
	baz=239						
NNS				*eS*	Sn	16 58 55.9	+0.6
	baz=239						

JMA 20 16:58:55.8±0.2, 25°.22N×123°.34E, h174km±4km, M3.5, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.81**	**202**	*eS*	Sn	16 59 42.2	+0.8
IRIF	**Iriomote-Funau**	**0.95**	**158**	P	Pn	16 59 22.8	+0.3
IRIF				S	Sn	16 59 43.9	+0.8
JISG	**Ishigakijimahi**	**1.08**	**125**	P	Pn	16 59 23.6	+0.1
JISG				S	Sn	16 59 45.3	+0.4
JIJ	**Ishigaki jima**	**1.12**	**139**	P	Pn	16 59 24.1	+0.2
JIJ				S	Sn	16 59 45.5	0.0
JKRS	**Kuro-shima**	**1.15**	**148**	P	Pn	16 59 24.8	+0.7
JKRS				S	Sn	16 59 47.0	+1.1
JTJ	**Tarama**	**1.36**	**115**	P	Pn	16 59 26.5	+0.5
JTJ				S	Sn	16 59 49.6	+0.4
JIRB	**Irabujima**	**1.71**	**103**	P	Pn	16 59 29.3	0.0
JIRB				S	Sn	16 59 54.4	-0.8
JIKM	**Ikemajima**	**1.75**	**99**	P	Pn	16 59 30.2	+0.4
JIKM				*eS*	Sn	16 59 55.5	-0.6
JMJ	**Miyako jima 2**	**1.82**	**102**	P	Pn	16 59 30.5	0.0
JMJ				*eS*	Sn	16 59 57.3	0.0

*ISCJB **20** 17:01:50.3±0.5, 67°.03N±0°.03×20°.85E±0°.10, h0km, Error ellipse: s-maj=5.7km s-min=3.5km az=161.5*
*CSEM **20** 17:01:51.2±0.2, 67°.05N×20°.84E, h2km, ML2.1, Error ellipse: s-maj=7.7km s-min=4.2km az=61.0, Mining explosion.*
*UPP **20** 17:01:51.0±0.1, 67°.05N×20°.93E, h0km, ML2.1*
*HEL **20** 17:01:52.0±0.1, 67°.07N×20°.94E, h0km, ML2.2, ML2.1(UPP), Suspected explosion*
*IDC **20** 17:01:52.0±1.0, 67°.04N×20°.99E, h0km, mb1 2.9/2, mb1mx2.7/65, mbtmp2.8/2, ML2.0/2, Error ellipse: s-maj=15.5km s-min=8.4km az=108.0*
ISC 20 17:01:50.8±0.8, 67°.05N±0°.03×20°.93E±0°.04, h0km, n44, σ0°99/59, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERTU	**Ertsjaerv**	**0.70**	**134**	P	**Pg**	**17 02 04.5**	**+0.3**
ERTU	**Ertsjaerv**	**0.70**	**134**	*i P*	**Pg**	**17 02 04.5**	**+0.3**
ERTU	**Ertsjaerv**	**0.70**	**134**	P	**Pg**	**17 02 04.5**	**+0.3**
HARU	**Harads**	**0.89**	**179**	P	**Pg**	**17 02 07.1**	**-0.7**
HARU	**Harads**	**0.89**	**179**	*i P*	**Pg**	**17 02 07.1**	**-0.7**
HARU	**Harads**	**0.89**	**179**	P	**Pg**	**17 02 07.1**	**-0.7**
RATU	**Laukkuluspa**	**0.93**	**327**	P	**Pg**	**17 02 08.5**	**-0.1**
RATU	**Laukkuluspa**	**0.93**	**327**	*eP*	**Pg**	**17 02 08.5**	**-0.1**
RATU	**Laukkuluspa**	**0.93**	**327**	P	**Pg**	**17 02 08.5**	**-0.1**
KUA	**Kurravaara**	**0.94**	**346**	P	**Pg**	**17 02 08.3**	**-0.4**
KUA	**Kurravaara**	**0.94**	**346**	*eP*	**Pg**	**17 02 08.3**	**-0.4**
KUA	**Kurravaara**	**0.94**	**346**	P	**Pg**	**17 02 08.3**	**-0.4**
SALU	**Saltoluokta**	**1.00**	**290**	P	**Pg**	**17 02 10.2**	**+0.2**
SALU	**Saltoluokta**	**1.00**	**290**	*eP*	**Pg**	**17 02 10.2**	**+0.2**
SALU	**Saltoluokta**	**1.00**	**290**	P	**Pg**	**17 02 10.2**	**+0.2**
LANU	**Lannavaara**	**1.08**	**21**	P	**Pg**	**17 02 10.8**	**-0.7**
LANU	**Lannavaara**	**1.08**	**21**	*eP*	**Pg**	**17 02 10.8**	**-0.7**
LANU	**Lannavaara**	**1.08**	**21**	P	**Pg**	**17 02 10.8**	**-0.7**
NIKU	**Nikkaluokta**	**1.10**	**319**	P	**Pg**	**17 02 11.5**	**-0.3**
NIKU	**Nikkaluokta**	**1.10**	**319**	*eP*	**Pg**	**17 02 11.5**	**-0.3**
NIKU	**Nikkaluokta**	**1.10**	**319**	P	**Pg**	**17 02 11.5**	**-0.3**
KALU	**Kalix**	**1.54**	**140**	P	**Pn**	**17 02 19.5**	**+0.1**
KALU	**Kalix**	**1.54**	**140**	*eP*	**Pn**	**17 02 19.5**	**+0.1**
KALU	**Kalix**	**1.54**	**140**	P	**Pn**	**17 02 19.5**	**+0.1**
SJUU	**Sjulsmark**	**1.57**	**170**	P	**Pn**	**17 02 20.1**	**+0.3**
SJUU	**Sjulsmark**	**1.57**	**170**	*eP*	**Pn**	**17 02 20.1**	**+0.3**
SJUU	**Sjulsmark**	**1.57**	**170**	P	**Pn**	**17 02 20.1**	**+0.3**
TOF	**Tornio**	**1.67**	**124**	*eP*	**Pn**	**17 02 21.7**	**+0.5**
TOF				*eS*	**Sn**	**17 02 43.8**	**+0.5**
TOF	**Tornio**	**1.67**	**124**	*eP*	**Pn**	**17 02 21.7**	**+0.5**
TOF				*eS*	**Sn**	**17 02 43.8**	**+0.5**
HEF	**Hetta**	**1.71**	**36**	*eP*	**Pn**	**17 02 22.0**	**+0.1**
HEF				*eS*	**Sn**	**17 02 44.1**	**-0.4**
HEF				MSG		17 02 50.2	
	comp=Z,19nm,0.1s						
HEF	**Hetta**	**1.71**	**36**	*eP*	**Pn**	**17 02 22.0**	**+0.1**
HEF				*eS*	**Sn**	**17 02 44.1**	**-0.4**
HEF	**Hetta**	**1.71**	**36**	*eP*	**Pn**	**17 02 22.0**	**+0.1**
KIF	**Kilpisjarvi**	**1.96**	**359**	*eP*	**Pb**	**17 02 27.1**	**-0.2**
KIF				*eS*	**Sg**	**17 02 53.1**	**-0.7**
KIF				MSG		17 02 57.7	
	comp=Z,19nm,0.1s						
KIF	**Kilpisjarvi**	**1.96**	**359**	*eP*	**Pb**	**17 02 27.1**	**-0.2**
KIF				*eS*	**Sg**	**17 02 53.1**	**-0.7**
KIF	**Kilpisjarvi**	**1.96**	**359**	*eP*	**Pb**	**17 02 27.1**	**-0.2**
SGF	**Sodankyl**	**2.21**	**77**	*eP*	**Pb**	**17 02 30.1**	**-1.4**
SGF				*eS*	**Sn**	**17 02 57.8**	**+1.2**
SGF	**Sodankyl**	**2.21**	**77**	*eP*	**Pb**	**17 02 30.1**	**-1.4**
SGF				*eS*	**Sn**	**17 02 57.8**	**+1.2**
OUL	**Oulu**	**2.83**	**132**	*eP*	**Pn**	**17 02 39.0**	**+1.9**
OUL				*eS*	**Sn**	**17 03 12.7**	**+0.9**
OUL	**Oulu**	**2.83**	**132**	*eP*	**Pn**	**17 02 39.0**	**+1.9**
OUL				*eS*	**Sn**	**17 03 12.7**	**+0.9**
ARCES	**ARCESS Array B**	**3.02**	**32**	Pn	**Pn**	**17 02 40.7**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=220,slow=13,SNR=21						
ARCES				Sn	**Sn**	**17 03 18.7**	**+2.1**
	comp=Z,0.6nm,0.3s,baz=216,slow=24,SNR=5.0						
OUF	**Merijarvi**	**3.12**	**148**	*eP*	**Pn**	**17 02 42.8**	**+1.7**
OUF				*eS*	**Sn**	**17 03 19.1**	**+0.1**
OUF	**Merijarvi**	**3.12**	**148**	*eP*	**Pn**	**17 02 42.8**	**+1.7**
OUF				*eS*	**Sn**	**17 03 19.1**	**+0.1**
FINES	**FINESS Array B**	**6.06**	**156**	Pn	**Pn**	**17 03 22.8**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=350,slow=13,SNR=8.3						
FINES				Sn	**Sn**	**17 04 33.4**	**+2.1**
	comp=Z,0.3nm,0.3s,baz=340,slow=22,SNR=5.6						
FINES				Lg	Lg	17 04 59.5	
	comp=Z,0.2nm,0.3s,baz=339,slow=30,SNR=2.5						
NOA	**NORSAR Array B**	**7.38**	**220**	Pn	**Pn**	**17 03 40.5**	**+0.9**
NOA				Sn	**Sn**	**17 05 00.2**	**-3.8**

*IDC **20** 17:05:13.8±7.0, 30°.47S×178°.27W, h0km, mb3.3/2, mb1 3.5/2, mb1mx3.3/40, mbtmp3.3/2, Error ellipse: s-maj=285.8km s-min=57.4km az=155.0*
*ISCJB **20** 17:05:57.4±0.9, 30°.36S±0°.06×179°.7W±0°.2, h350km, mb2.6/2, Error ellipse: s-maj=22.7km s-min=7.6km az=7.8*
*WEL **20** 17:06:00.9±0.8, 31°.S±21°×18°.0W±5°.9, h31km±30km*
ISC 20 17:05:57.7±1.1, 30°.42S±0°.09×179°.7W±0°.2, h350km, n28, σ1°57/36, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**1.90**	**53**	P	**Pn**	**17 06 47.6**	**-0.7**
WMGZ	**Waiomatatini S**	**7.55**	**192**	P	**Pn**	**17 07 50.2**	**+3.7**
WMGZ				S	**S**	**17 09 15.0**	**0.0**
HAZ	**Te Kaha**	**7.62**	**195**	P	**Pn**	**17 07 49.7**	**+2.5**
HAZ				S	**S**	**17 09 15.4**	**-1.0**
PKGZ	**Pakihiroa**	**7.68**	**194**	P	**Pn**	**17 07 51.0**	**+2.9**
PKGZ				S	**S**	**17 09 16.4**	**-1.5**
PUZ	**Puketiti**	**7.82**	**192**	P	**Pn**	**17 07 50.5**	**+0.8**
PUZ				S	**S**	**17 09 19.0**	**-2.0**
TWGZ	**Tauwhareparae**	**7.98**	**194**	P	**Pn**	**17 07 55.6**	**+4.1**
TWGZ				S	**S**	**17 09 23.1**	**-1.2**
MWZ	**Matawai**	**8.23**	**196**	P	**Pn**	**17 07 55.6**	**+1.1**
MWZ				S	**S**	**17 09 28.5**	**-1.2**
CNGZ	**Carnagh Statio**	**8.23**	**192**	P	**Pn**	**17 07 55.8**	**+1.4**
TKGZ	**Te Karaka**	**8.26**	**194**	P	**Pn**	**17 07 53.1**	**-1.7**
TKGZ				S	**S**	**17 09 28.6**	**-1.7**
URZ	**Urewera**	**8.26**	**198**	P	**Pn**	**17 07 56.5**	**+1.6**
URZ				S	**S**	**17 09 30.8**	**+0.4**
RIGZ	**Rimuhau**	**8.53**	**194**	P	**P**	**17 08 01.0**	**+0.2**
MUGZ	**Murupara**	**8.56**	**199**	P	**P**	**17 08 00.8**	**-0.2**
RTZ	**Ruatahuna**	**8.63**	**198**	P	**Pn**	**17 08 00.3**	**+1.0**
SNGZ	**Shannon Statio**	**8.70**	**196**	P	**Pn**	**17 08 00.6**	**+0.6**
RAHZ	**Arahi**	**8.89**	**197**	P	**Pn**	**17 08 04.3**	**+2.0**
MRHZ	**Matea Rd**	**8.99**	**200**	P	**Pn**	**17 08 04.9**	**+1.3**
NMHZ	**Naumai**	**9.13**	**198**	P	**P**	**17 08 07.5**	**+0.1**
ARHZ	**Aropaoanui**	**9.24**	**196**	P	**Pn**	**17 08 08.3**	**+1.8**
BKZ	**Black Stump Fm**	**9.28**	**199**	P	**Pn**	**17 08 07.2**	**+0.2**
KWHZ	**Kaweka Forest**	**9.54**	**199**	P	**Pn**	**17 08 10.3**	**+0.2**
BHHZ	**Black Hill Sta**	**9.70**	**200**	P	**Pn**	**17 08 11.9**	**-0.2**
KRHZ	**Kereru**	**9.76**	**198**	P	**Pn**	**17 08 12.7**	**0.0**
KAHZ	**Kahuranaki**	**9.77**	**196**	P	**Pn**	**17 08 12.7**	**-0.1**
PXZ	**Pawanui**	**10.00**	**196**	P	**Pn**	**17 08 16.3**	**+0.8**
PNHZ	**Pukenui**	**10.06**	**199**	P	**Pn**	**17 08 15.7**	**-0.6**
ASAR	**Alice Springs**	**41.68**	**268**	P	**P**	**17 13 13.7**	**+0.2**
	0.4nm,0.9s,baz=102,slow=7.7,SNR=3.6						
WRA	**Warramunga Arr**	**42.67**	**273**	P	**P**	**17 13 22.0**	**+0.5**
	0.2nm,0.4s,baz=112,slow=6.5,SNR=9.0						
FINES	**FINESS Array B**	**144.66**	**339**	PKPbc	**PKPab**	**17 24 51.5**	**-0.7**
	0.9nm,0.5s,baz=68,slow=3.7,SNR=6.3						

IDC 20 17:22:40.9±1.4, 1°.25N×126°.76E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.5/56, mbtmp3.6/5, Error ellipse: s-maj=144.6km s-min=19.2km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.34**	**161**	P	P	17 27 39.7	-0.7
	1.2nm,0.8s,baz=340,slow=11,SNR=21						
ASAR	**Alice Springs**	**25.72**	**165**	P	P	17 28 13.8	+0.6
	0.7nm,0.6s,baz=344,slow=11,SNR=13						
SONM	**Songino Array**	**49.65**	**342**	P	P	17 31 34.6	+0.2
	0.2nm,0.4s,baz=141,slow=9.3,SNR=3.8						
MKAR	**Makanchi Array**	**59.61**	**326**	P	P	17 32 46.4	-0.3
	0.5nm,0.4s,baz=121,slow=7.1,SNR=10.0						
KURBB	**Kurchatov Arra**	**63.84**	**328**	P	P	17 33 15.1	0.0
	1.0nm,0.8s,baz=127,slow=5.9,SNR=9.3						

IDC 20 17:24:08.0±6.9, 30°.63S×179°.08W, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.6/42, mbtmp3.6/2, MS3.2/2, Ms1 3.2/2, ms1mx2.6/37, Error ellipse: s-maj=272.0km s-min=65.2km az=156.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**15.52**	**300**	LR	LR	17 32 52.3	
	comp=Z,124nm,18.2s,baz=173,slow=34						
PPT	**Papeete**	**29.80**	**71**	LR	LR	17 38 48.1	
	comp=Z,27nm,21.8s,baz=312,slow=30						
ASAR	**Alice Springs**	**42.17**	**268**	P	P	17 32 01.2	-1.3
	0.6nm,0.8s,baz=100,slow=6.7,SNR=2.3						
WRA	**Warramunga Arr**	**43.18**	**273**	P	P	17 32 11.5	+0.7
	1.1nm,0.8s,baz=113,slow=7.6,SNR=6.1						
FINES	**FINESS Array B**	**145.04**	**339**	PKPbc	PKPbc	17 43 45.1	-0.8
	2.1nm,0.9s,baz=50,slow=2.2,SNR=1.4						

*ISCJB **20** 17:32:07.1±0.9, 31°.24S±0°.03×69°.14W±0°.06, h110km±8km, Error ellipse: s-maj=8.1km s-min=5.3km az=177.7*
*GUC **20** 17:32:07.1±0.6, 31°.21S×69°.24W, h135

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PTBC	PUERTO BERRIO,	0.35	265	⇑iP			Pn	17 38 38.5	-0.2
PTBC				eS			Sn	17 38 44.5	-0.8
PTBC				i				17 38 45.0	
comp=Z,50μm,0.2s									
BRRC	Barranca, Sant	0.66	36	⇓iP			Pn	17 38 43.9	+0.9
BRRC				eS			Sn	17 38 54.1	+1.9
BRRC				i				17 38 55.8	
comp=Z,16μm,0.4s									
BARC	Barichara	0.92	89	iP			Pn	17 38 47.8	+1.2
BARC				eS			Sn	17 39 00.0	+1.3
BARC				i				17 39 01.3	
comp=Z,27μm,0.2s									
ZARC	Zaragoza, Cauc	1.18	321	⇓iP			Pn	17 38 50.7	+0.5
ZARC				eS			Sn	17 39 06.5	+1.5
ZARC				i				17 39 11.5	
comp=Z,4μm,0.4s									
RUSC	La Rusia	1.22	123	⇑iP			Pn	17 38 52.4	+1.4
RUSC				eS			Sn	17 39 08.2	+1.7
RUSC				i				17 39 09.9	
comp=Z,16μm,0.3s									
NORC	Norcasia	1.26	217	eP			Pn	17 38 51.3	+0.1
NORC				eS			Sn	17 39 08.0	+1.1
HELC	Santa Helena	1.47	255	iP			Pn	17 38 55.2	+0.9
HELC				eS			Sn	17 39 13.3	+0.8
HELC				i				17 39 15.0	
comp=Z,4μm,0.2s									
PAMC	Pamplona, Colo	1.59	61	eP			Pn	17 38 58.4	+2.2
PAMC				eS			Sn	17 39 18.3	+2.6
ROSC	El Rosal	1.73	187	Pn			Pn	17 38 59.6	+1.5
comp=Z,29nm,0.3s,baz=213,slow=22,SNR=22									
ROSC				Sn			Sn	17 39 20.0	+1.0
comp=Z,272nm,0.3s,baz=206,slow=23,SNR=10									
ROSC				LR			LR	17 39 50.4	
comp=Z,411nm,21.6s,baz=322,slow=50									
ROSC	El Rosal	1.73	187	eP			Pn	17 38 59.5	+1.5
ROSC				i				17 39 29.5	
comp=Z,1μm,0.4s									
OCAC	Ocana	1.83	25	eP			Pn	17 39 00.5	+1.3
OCAC				i				17 39 36.5	
comp=Z,5μm,0.5s									
GUYC	Guyana, Colomb	1.85	224	eP			Pn	17 39 01.4	+1.7
GUYC				eS			Sn	17 39 24.3	+2.2
GUYC				i				17 39 25.5	
comp=Z,3μm,0.4s									
CHIC	Chingaza	1.96	169	⇑iP			Pn	17 39 02.6	+1.4
CHIC				i				17 39 15.6	
comp=Z,951nm,0.4s									
YOPC	Yopal, Colombi	2.06	126	eP			Pn	17 39 04.4	+2.1
TOLC	Tolima	2.31	212	eP			Pn	17 39 07.7	+1.7
ANIL	Santa Ana	2.44	212	eP			Pn	17 39 09.8	+2.2
ANIL				eS			Sn	17 39 38.5	+2.2
VILC	Villavicencio,	2.48	170	eP			Pn	17 39 09.9	+1.9
VILC				i				17 39 46.4	
comp=Z,874nm,0.5s									
PRAC	Prado	2.94	195	eP			Pn	17 39 15.9	+1.6
YOTC	Yotoco, Valle	3.40	221	eP			Pn	17 39 22.5	+1.7
YOTC				i				17 40 29.0	
comp=Z,570nm,0.9s									
CODC	Agust˘›n Codaz	3.41	11	eP			Pn	17 39 21.2	+0.5
CODC				eS			Sn	17 40 01.3	+1.4
SDV	Santo Domingo	4.14	56	Pn			Pn	17 39 32.4	+1.5
comp=Z,77nm,0.3s,baz=220,slow=9.8,SNR=35									
SDV				Sn			Sn	17 40 21.0	+2.8
comp=Z,188nm,0.3s,baz=280,slow=18,SNR=9.7									
SDV				Lg			Lg	17 40 38.4	
comp=Z,142nm,0.3s,baz=262,slow=22,SNR=5.8									
OTAV	Otavalo	7.64	215	eP			Pn	17 40 21.1	+1.8
comp=Z,15nm,0.9s									
PCRV	Puerto La Cruz	10.03	68	Pn			Pn	17 40 53.0	+1.3
comp=Z,3.5nm,0.3s,baz=321,slow=2.0,SNR=19									
JTS	JuntasAbangare	11.35	290	Pn			Pn	17 41 11.7	+1.9
comp=Z,1.0nm,0.3s,baz=187,slow=13,SNR=3.7									
JTS				LR			LR	17 45 50.8	
comp=Z,242nm,18.3s,baz=207,slow=38									
SJG	San Juan	13.85	33	Pn			Pn	17 41 40.9	-2.9
comp=Z,1.6nm,0.3s,baz=230,slow=9.5,SNR=3.5									
SJG				LR			LR	17 47 31.8	
comp=Z,47nm,21.3s,baz=269,slow=39									
PTGA	Pitinga	15.86	117	Pn			Pn	17 42 06.4	-4.3
comp=Z,1.2nm,0.3s,baz=301,slow=14,SNR=8.5									
PTGA				LR			LR	17 48 39.0	
comp=Z,239nm,20.9s,baz=330,slow=39									
NNA	Nana	18.64	188	LR			LR	17 51 21.6	
comp=Z,160nm,18.4s,baz=358,slow=42									
SAML	Samuel	18.87	145	eP			Pn	17 42 45.5	-2.5
comp=Z,8.1nm,0.5s									
CMIG	Matias Romero	22.84	299	LR			LR	17 53 45.3	
comp=Z,98nm,19.2s,baz=130,slow=40									
LPAZ	La Paz	23.47	165	P			P	17 43 36.4	-0.6
comp=Z,7.2nm,0.4s,baz=343,slow=7.7,SNR=40									
LPAZ				LR			LR	17 53 38.2	
comp=Z,117nm,19.5s,baz=21,slow=39									
SIV	San Ignacio	25.86	150	P			P	17 43 57.1	-1.2
comp=Z,5.4nm,0.6s,baz=338,slow=9.1,SNR=25									
SIV				LR			LR	17 54 57.6	
comp=Z,114nm,18.9s,baz=305,slow=38									
TXAR	Lajitas Array	35.91	313	P			P	17 45 27.9	+1.0
comp=Z,0.2nm,0.4s,baz=130,slow=9.1,SNR=6.1									
TXAR				PcP			PcP	17 47 54.6	+1.1
comp=Z,0.8nm,0.6s,baz=129,slow=6.3,SNR=8.3									
TXAR				LR			LR	18 01 60.0	
comp=Z,7.9nm,20.8s,baz=0.0,slow=39									
CPUP	Villa Florida	36.53	154	LR			LR	18 01 47.9	
comp=Z,71nm,18.0s,baz=331,slow=38									
LPIG	La Paz	38.85	301	LR			LR	18 03 03.2	
comp=Z,40nm,19.1s,baz=208,slow=38									
SDCO	Great Sand Dun	42.14	322	eP			P	17 46 21.1	+1.9
comp=Z,2.3nm,0.8s									
AGMN	Agassiz Nation	45.51	340	eP			P	17 46 46.2	+0.5
comp=Z,3.4nm,0.3s									
PLCA	Paso Flores	47.18	176	P			P	17 46 57.5	-1.4
comp=Z,2.8nm,1.0s,baz=6.8,slow=12,SNR=4.6									
PLCA				PcP			PcP	17 48 29.5	-0.6
comp=Z,2.6nm,1.0s,baz=83,slow=3.9,SNR=3.2									
ULM	Lac du Bonnet	47.20	341	P			P	17 46 58.9	0.0
comp=Z,2.9nm,0.4s,baz=143,slow=10.0,SNR=5.6									
ULM				LR			LR	18 07 26.5	
comp=Z,44nm,19.4s,baz=136,slow=37									
PDAR	Pinedale Array	47.71	325	P			P	17 47 05.0	+1.7
comp=Z,0.2nm,0.3s,baz=102,slow=8.4,SNR=3.5									
PDAR				PcP			PcP	17 48 31.8	-0.5
comp=Z,0.3nm,0.5s,baz=123,slow=6.6,SNR=2.2									
PDAR				pPcP				17 48 43.2	
comp=Z,0.7nm,0.5s,baz=118,slow=6.5,SNR=4.3									
SCHQ	Schefferville	48.48	6	P			P	17 47 09.5	+0.7
comp=Z,9.3nm,0.6s,baz=173,slow=5.1,SNR=5.4									
NVAR	Mina Array Bea	50.97	315	P			P	17 47 29.3	+1.0
comp=Z,0.5nm,0.6s,baz=126,slow=6.5,SNR=4.7									
NVAR				PcP			PcP	17 48 45.0	+0.9
comp=Z,0.5nm,0.4s,baz=126,slow=4.6,SNR=5.5									
NVAR				LR			LR	18 15 08.7	
comp=Z,17nm,18.9s,baz=239,slow=43									
YBH	Yreka Blue Hor	55.45	317	LR			LR	18 17 38.4	
comp=Z,30nm,18.3s,baz=170,slow=42									
FRB	Frobisher Bay	57.21	3	P			P	17 48 13.4	+0.4
comp=Z,4.6nm,0.6s,baz=202,slow=12,SNR=4.5									
YKA	Yellowknife Ar	63.17	340	P			P	17 48 54.1	+0.3
comp=Z,2.6nm,0.4s,baz=133,slow=6.5,SNR=32									
TIC	Toumodi	68.57	85	eP			P	17 49 25.9	-3.7
LIC	Lamto	68.59	86	eP			P	17 49 28.1	-1.6
comp=Z,100nm,1.7s									
DBIC	Dimbokro	68.73	85	P			P	17 49 28.6	-1.9
comp=Z,2.8nm,0.4s,baz=275,slow=7.9,SNR=8.3									
KIC	Kosan Boka	68.86	86	eP			P	17 49 29.8	-1.6
comp=Z,60nm,1.5s									
KOWA	Kowa	69.14	77	P			P	17 49 31.8	-1.3
comp=Z,3.4nm,0.7s,baz=293,slow=11,SNR=7.8									
MDT	Midelt	69.24	58	P			P	17 49 33.3	-0.2
comp=Z,0.9nm,0.6s,baz=270,slow=3.9,SNR=3.7									
ESDC	Sonseca Array	70.56	50	P			P	17 49 41.4	-0.1
comp=Z,0.4nm,0.4s,baz=271,slow=5.2,SNR=6.3									
INK	Inuvik	72.94	340	P			P	17 49 55.5	+0.4
comp=Z,1.5nm,0.6s,baz=98,slow=4.7,SNR=4.7									
EKA	Eskdalemuir Ar	73.82	34	P			P	17 50 01.1	+0.6
comp=Z,4.7nm,0.8s,baz=248,slow=3.8,SNR=13									
TORD	Torodi Ar. Bea	74.74	78	P			P	17 50 04.7	-2.0
comp=Z,0.4nm,0.3s,baz=285,slow=6.6,SNR=14									
TORD				LR			LR	18 20 14.7	
comp=Z,22nm,20.8s,baz=190,slow=34									
ILAR	Eielson Array	76.78	335	P			P	17 50 17.6	+0.2
comp=Z,1.6nm,0.8s,baz=105,slow=4.4,SNR=13									
ILAR				pP			PcP	17 50 28.7	+0.2
comp=Z,2.2nm,0.7s,baz=110,slow=4.4,SNR=14									
NB2	NORSAR Subarra	82.03	29	P			P	17 50 47.8	+1.7
comp=Z,4.8nm,0.7s,baz=268,slow=5.3									
CLL	Collm	83.11	39	eP			P	17 50 53.0	+1.2
CLL				epP			pP	17 51 05.0	+1.2
HFS	Hagfors	83.25	30	P			P	17 50 53.5	+1.1
comp=Z,2.3nm,0.4s,baz=264,slow=1.4,SNR=17									
KHC	Kasperske Hory	83.56	41	eP			P	17 50 55.0	+0.7
GERES	GERESS Array B	83.66	42	P			P	17 50 55.2	+0.4
comp=Z,3.4nm,0.8s,baz=259,slow=3.4,SNR=21									
GERES				pP			pP	17 51 06.7	-0.1
comp=Z,0.9nm,0.7s,baz=272,slow=3.6,SNR=3.5									
BRG	Berggiesshubel	83.72	40	eP			P	17 50 55.8	+0.8
comp=Z,4.4nm,1.0s									
ARCES	ARCESS Array B	87.25	20	P			P	17 51 12.8	+0.6
comp=Z,3.1nm,0.7s,baz=281,slow=4.1,SNR=11									
FINES	FINESS Array B	89.12	28	P			P	17 51 21.6	+0.4
comp=Z,3.5nm,0.7s,baz=291,slow=3.8,SNR=17									
FINES				pP			pP	17 51 33.4	+0.1
comp=Z,2.3nm,0.7s,baz=90,slow=2.3,SNR=3.0									
ZALV	Zalesovo Beam	117.15	14	PKP			PKPdf	17 57 10.8	-0.3
comp=Z,0.5nm,0.3s,baz=80,slow=1.4,SNR=2.6									
KURK	Kurchatov	118.27	19	PKP			PKPdf	17 57 13.3	+0.1
KURBB	Kurchatov Arra	118.32	19	PKP			PKPdf	17 57 13.3	0.0
comp=Z,0.4nm,0.5s,baz=316,slow=2.6,SNR=4.6									
MKAR	Makanchi Array	122.88	19	PKP			PKPdf	17 57 21.8	-0.5
comp=Z,0.6nm,0.5s,baz=301,slow=2.6,SNR=11									
MKAR				pPKP			pPKPdf	17 57 33.4	-1.4
comp=Z,0.5nm,0.4s,baz=304,slow=2.4,SNR=4.6									
ASAR	Alice Springs	148.17	235	PKP			PKPdf	17 58 08.8	-0.6
comp=Z,2.3nm,0.6s,baz=116,slow=3.3,SNR=30									
ASAR				PKPbc			PKPbc	17 58 11.3	-1.4
comp=Z,2.3nm,0.6s,baz=120,slow=3.2,SNR=31									
WRA	Warramunga Arr	149.36	242	PKP			PKPdf	17 58 11.0	-0.5
comp=Z,1.6nm,0.5s,baz=108,slow=2.6,SNR=19									
WRA				PKPbc			PKPbc	17 58 14.4	-1.4
comp=Z,2.5nm,0.5s,baz=108,slow=2.6,SNR=33									
CMAR	Chiang Mai Arr	154.20	15	PKPbc			PKPbc	17 58 26.8	-0.1
comp=Z,0.6nm,0.6s,baz=327,slow=3.9,SNR=8.2									
CMAR				pPKPbc			pPKPbc	17 58 38.8	-0.6
comp=Z,1.1nm,0.6s,baz=327,slow=3.9,SNR=5.7									

IDC 20 17:53:37.2±2.4, 5°.56S×129°.97E, h0km, mb3.1/1, mb1 3.2/3, mb1mx3.1/52, mbtmp3.0/3, ML3.2/2, Error ellipse: s-maj=152.8km s-min=31.1km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.92	164	Pn			Pn	17 57 07.7	-1.9
0.1nm,0.3s,baz=347,slow=13,SNR=18									
ASAR	Alice Springs	18.40	169	P			P	17 57 54.8	+0.8
0.0nm,0.3s,baz=348,slow=12,SNR=4.3									
MKAR	Makanchi Array	67.01	327	P			P	18 04 32.1	0.0
0.1nm,0.5s,baz=115,slow=7.5,SNR=3.0									

UCR 20 17:54:16.9±1.4, 11°.79N×86°.51W, h101km±7km, MD3.9, ML3.4, 1C-9D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
COPN	Copaltepe	0.40	348	⇓iP			Pn	17 54 31.9	-0.3
XAVN	Gruta Xavier	0.40	26	eP			Pn	17 54 32.4	+0.2
MGAN	Managua	0.44	35	eP			Pn	17 54 32.0	-0.3
MGAN				eS			Sn	17 54 44.7	+0.7
APYN	Apoyeque	0.47	19	eP			Pn	17 54 32.8	+0.1
MOMN	Momotombo	0.62	357	⇓iP			Pn	17 54 33.3	-0.5
MOMN				eS			Sn	17 54 46.8	+0.4
MOMN				IAML				17 54 49.6	
comp=Z,458nm,0.3s									
CNGN	Cerro Negro	0.73	345	eP			Pn	17 54 34.9	+0.1
CNGN				eS			Sn	17 54 48.5	+0.2
CNGN				IAML				17 54 51.9	
comp=N,1μm,0.3s									
CONN	Concepcion	0.89	104	⇑iP			Pn	17 54 36.3	0.0
BRAN	Las Pilas	0.94	9	eP			Pn	17 54 33.1	-3.7
CRIN	San Cristobal	1.05	330	eP			Pn	17 54 38.0	0.0
CRIN				eS			Sn	17 54 54.5	+0.5
CRIN				IAML				17 55 02.9	
comp=N,4μm,0.4s									
BOAB	BOACO BROADBAN	.05	51	⇓iP			Pn	17 54 38.0	0.0
MATN	Matagalpa	1.27	26	⇓iP			Pn	17 54 40.5	0.0
MATN				eS			Sn	17 54 59.1	+0.6
ESTN	Estel	1.31	6	iP			Pn	17 54 41.1	0.0
ESTN				eS			Sn	17 55 00.1	+0.7
ESTN				IAML				17 55 00.7	
comp=N,140nm,0.6s									
BUEV	Buena Vista	1.46	132	eP			Pn	17 54 43.4	+0.6
LAPC	Finca la Perla	1.46	134	eP			Pn	17 54 42.8	0.0
NY14	Universidad de	1.48	140	eP			Pn	17 54 44.0	+1.1
GPS1	Guardaparques	1.52	131	eP			Pn	17 54 44.3	+0.8
GPS3	Bodega del ICE	1.52	132	eP			Pn	17 54 44.4	+0.9
GPS2	Hotel Rinc˘‡n	1.53	132	eP			Pn	17 54 44.5	+0.8
LIM1	Limonal	1.64	131	⇓eP			Pn	17 54 45.3	+0.3
GUAB	Guayabo de Bag	1.65	130	eP			Pn	17 54 45.7	+0.6
MESS	Mesas	1.65	129	⇓iP			Pn	17 54 45.3	+0.1
MESS				eS			Sn	17 55 07.9	+1.2
HORNC	Hornillas	1.68	129	eP			Pn	17 54 45.8	+0.2
RCON	San Juan de Ri	1.72	11	⇓iP			Pn	17 54 46.3	+0.1
CUI	Cuipilapa	1.73	130	⇓eP			Pn	17 54 46.4	+0.3
CUI				eS			Sn	17 55 08.5	+0.1
ACAL	Aguas Claras	1.84	128	eP			Pn	17 54 48.4	+0.8
VCR	Vista de Mar	1.86	152	⇓iP			Pn	17 54 48.3	+0.5
AMAS	Alto Masis	1.89	128	eP			Pn	17 54 48.6	+0.4
JTS	JuntasAbangare	2.13	134	eP			Pn	17 54 51.6	+0.3
ESPN	Las Esperanzas	2.20	79	eP			Pn	17 54 52.1	+0.1
TGUH	Tegucigalpa,Un	2.38	342	iP			Pn	17 54 55.0	+0.6
CGA2	Cerro Gallo 2	2.67	131	eP			Pn	17 54 58.7	+0.3
CGA2				eS			Sn	17 55 31.5	+1.2
LCR2	La Lucha 2	3.19	129	eP			Pn	17 55 06.5	+1.1
LCR2				eS			Sn	17 55 43.6	+0.8
QCR1	Quepos	3.28	135	eP			Pn	17 55 05.1	-1.4
URSC	Urasca	3.31	126	eP			Pn	17 55 07.1	+0.1
BUS	Buena Vista	3.49	129	eP			Pn	17 55 11.1	+1.4
BUS				eS			Sn	17 55 53.2	+2.7

MAN 20 17:56:42.8, 9°.90N×123°.12E, h23km, mb4.7, ML3.6, MS3.5, 1C, Negros

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SNPH	Sibulan	0.56	168	⇑iP			Pn	17 56 55.2	-0.3
SNPH				iS			Sn	17 57 04.8	+0.7
GUIM	Jordan	0.89	324	eP			Pb	17 56 58.8	-0.8
GUIM				eS			Sn	17 57 12.9	+0.7
MSLP	Maasin	1.73	82	eP			Pn	17 57 10.9	-0.5
MSLP				eS			Sn	17 57 33.7	+1.0

MAN 20 18:05:50.6, 9°.95N×123°.26E, h33km, mb3.7, ML2.4, MS1.9, 1D, Negros

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SNPH	Sibulan	0.60	182	⇓iP			Pb	18 06 03.7	+0.9
SNPH				iS			Sn	18 06 12.5	+1.0
TBP	Tagbilaran	0.65	113	eP			Pb	18 06 04.2	+0.6
LLP	Lapu-Lapu	0.79	62	eP			Pn	18 06 05.4	+0.1
LLP				eS			Sb	18 06 16.8	+0.6
GUIM	Jordan	0.94	316	eP			Pn	18 06 07.4	-0.1
GUIM				eS			Sb	18 06 20.3	-0.4

ISCJB ***20*** *18:13:59.6±0.3, 44°.11N±0°.02×78°.70E±0°.03, h10km, Error ellipse: s-maj=3.3km s-min=2.7km az=136.0*
SOME ***20*** *18:13:59.4, 44°.12N×78°.58E, h10km, MS2.2*
NNC ***20*** *18:13:59.5±0.7, 44°.06N×78°.67E, h0km, mb3.9, mpv3.6, Error ellipse: s-maj=6.1km s-min=3.6km az=12.0*
ISC 20 18:14:00.4±0.7, 44°.10N±0°.02×78°.60E±0°.02, h10km, n43, σ1§69/69, 22C-13D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ARXS	Arharly	0.57	282	eP			Pg	18 14 10.7	-0.7
330nm,0.2s									
ARXS				eS			Sg	18 14 18.6	-0.2
764nm,0.2s									
KPKS	Kokpek	0.64	174	⇑eP			Pg	18 14 11.6	-1.2
3μm,0.1s									
KPKS				eS			Sg	18 14 20.0	-1.1
3μm,0.5s									
KURS	Kuram	0.69	207	⇑iP			Pg	18 14 13.2	-0.5
435nm,0.2s									
KURS				⇑iS			Sb	18 14 23.3	-0.7
512nm,0.2s									
DJR	Jarkent	0.89	74	⇓iP			Pg	18 14 15.1	-2.3
246nm,0.3s									
DJR				⇓iS			Sg	18 14 26.1	-2.9
623nm,0.6s									
TDK	Taldyqorghan	0.91	351	eP			Pg	18 14 16.0	-1.9
377nm,0.3s									
TDK				eS			Sg	18 14 27.9	-1.9
536nm,0.5s									
ZHN	Zhinishke	0.94	187	⇓eP			Pg	18 14 17.2	-1.2
822nm,0.4s									
ZHN				eS			Sg	18 14 29.5	-1.2
1μm,0.3s									
UZB	Uzynbulak	1.00	162	eP			Pg	18 14 17.9	-1.7
81nm,0.4s									
UZB				eS			Sg	18 14 31.1	-1.6
228nm,0.3s									
PDGK	Podgornoye	1.01	140	⇓P			Pg	18 14 17.8	-1.9
16nm,0.3s									
PDGK				⇓S			Sg	18 14 30.7	-2.1
202nm,0.2s									
SATY	Saty	1.05	188	⇑iP			Pg	18 14 19.2	-1.4
471nm,0.2s									
SATY				eS			Sg	18 14 32.9	-1.3
1μm,0.2s									
SHLS	Shalkode	1.13	146	⇑iP			Pn	18 14 23.6	+1.2
173nm,0.4s									
SHLS				⇑iS			Sn	18 14 41.4	+3.3
2μm,0.5s									
CHKK	Chushkaly	1.19	259	eP			Pb	18 14 21.7	-1.3
215nm,0.1s									
CHKK				eS			Sg	18 14 38.0	-0.6
1μm,0.3s									
KAPS	Kapalarasan	1.30	24	eP			Pn	18 14 22.6	-2.1
145nm,0.2s									
KAPS				eS			Sb	18 14 39.1	-2.7
278nm,0.3s									
KTBS	Karatobe	1.44	255	eP			Pb	18 14 26.3	-1.0
476nm,0.2s									
KTBS				eS			Sg	18 14 45.6	-1.0
605nm,0.5s									
MDOK	Medeo	1.47	231	⇓P			Pb	18 14 26.9	-0.9
26nm,0.2s									
MDOK				⇑S			Sg	18 14 46.4	-1.1
318nm,0.4s									
MDOK	Medeo	1.47	231	eP			Pb	18 14 27.0	-0.9
168nm,0.3s									
MDOK				eS			Sg	18 14 47.1	-0.4
572nm,0.4s									
AAA	Alma-Ata	1.51	234	eP			Pb	18 14 27.9	-0.6
132nm,0.1s									
AAA				eS			Sg	18 14 48.9	-0.1
1μm,0.2s									
TNSS	Tian-Shan	1.60	229	eP			Pb	18 14 29.3	-1.0
117nm,0.6s									
TNSS				⇑iS			Sg	18 14 51.6	-0.4
623nm,0.6s									
KUU	Kurty	1.64	264	⇑iP			Pb	18 14 29.4	-1.3
154nm,0.2s									
KUU				⇓iS			Sb	18 14 51.5	-0.1
870nm,0.1s									
IZV	Izvestkoviy	1.79	234	eP			Pb	18 14 33.1	-0.2
48nm,0.2s									
IZV				eS			Sg	18 14 57.1	-0.9
401nm,0.7s									
MTBS	Maitube	1.85	239	⇑iP			Pb	18 14 33.3	-1.0
119nm,0.2s									
MTBS				⇓iS			Sg	18 14 58.5	-1.3
1μm,0.2s									
KST	Kastek	2.19	242	eP			Pb	18 14 38.8	-1.3
58nm,0.2s									
KST				eS			Sb	18 15 07.9	+0.6
729nm,0.4s									
DGS	Degeres	2.22	248	eP			Pb	18 14 39.2	-1.5
93nm,0.3s									
DGS				eS			Sb	18 15 07.4	-0.9
517nm,0.6s									
TKM2	Tokmak 2	2.48	243	⇑Pn			Pb	18 14 43.4	-1.8
16nm,0.4s									
TKM2				⇑Sn			Sb	18 15 16.2	+0.4
88nm,0.2s									
TKM2	Tokmak 2	2.48	243	P			Pb	18 14 43.4	-1.8
SNR=52									
ULHL	Ulahol	2.53	224	P			Pg	18 14 47.0	-1.9
SNR=40									
CHMS	Chumysh	3.01	250	P			Pn	18 14 49.2	+1.1
SNR=16									
KBK	Karagaybulak	3.03	243	P			Pn	18 14 50.2	+1.7
SNR=11									
USP	Ospenovka	3.09	256	P			Pn	18 14 50.4	+1.2
SNR=30									
KZA	Kyzart	3.18	232	P			Pb	18 14 55.0	-2.1
SNR=16									
BTLS	Baital	3.39	288	eP			Pb	18 14 59.3	-1.1

LLI				AML	AML	
	comp=E,892µm,0.5s					
LLI				AML	AML	
	comp=N,1150µm,0.4s					
LLI				AML	AML	
	comp=E,892µm,0.5s					
LLI				AML	AML	
	comp=N,1150µm,0.4s					
LLI				AML	AML	
	comp=E,892µm,0.5s					
LLI				AML	AML	
	comp=N,1150µm,0.4s					
LLI				AML	AML	
	comp=E,892µm,0.5s					
LLI				AML	AML	
	comp=N,1150µm,0.4s					
VPL	**Vulcano Piano**	**0.41 160**	P	**Pn**	**18 17 37.0 -0.6**	
VPL	**Vulcano Piano**	**0.41 160**	P	**Pn**	**18 17 38.0 +0.4**	
VPL				AML	AML	
	comp=E,1075µm,0.3s					
VPL				AML	AML	
	comp=N,911µm,1.4s					
VPL				AML	AML	
	comp=E,1075µm,0.3s					
VPL				AML	AML	
	comp=N,911µm,1.4s					
VPL				AML	AML	
	comp=N,911µm,1.4s					
VPL				AML	AML	
	comp=E,1075µm,0.3s					
IACL	**Alicudi**	**0.42 237**	⇓*i*P	**Pn**	**18 17 38.2 +0.7**	
IACL	**Alicudi**	**0.42 237**	*i* P	**Pn**	**18 17 38.2 +0.7**	
MILZ	**Milazzo**	**0.60 146**	P	**Pn**	**18 17 37.9 0.0**	
MILZ			S	**S**	**18 18 07.7 -0.3**	
MILZ	**Milazzo**	**0.60 146**	P	**Pn**	**18 17 37.9 0.0**	
MILZ			S	**S**	**18 18 07.7 -0.3**	
MILZ				AML	AML	
	comp=E,140µm,0.4s					
MILZ				AML	AML	
	comp=N,188µm,0.3s					
MILZ				AML	AML	
	comp=E,270µm,0.4s					
MILZ				AML	AML	
	comp=N,246µm,1.3s					
MILZ				AML	AML	
	comp=E,270µm,0.4s					
MILZ				AML	AML	
	comp=N,246µm,1.3s					
MILZ				AML	AML	
	comp=E,270µm,0.4s					
MILZ				AML	AML	
	comp=N,246µm,1.3s					
MSRU	**Castanea**	**0.74 132**	⇓P	**Pn**	**18 17 38.5 0.0**	
MSRU	**Castanea**	**0.74 132**	P	**Pn**	**18 17 38.5 0.0**	
MSRU			S	**S**	**18 18 07.7 -1.2**	
MSRU				AML	AML	
	comp=E,408µm,0.4s					
MSRU				AML	AML	
	comp=N,367µm,1.4s					
MSRU				AML	AML	
	comp=N,367µm,1.4s					
MSRU				AML	AML	
	comp=E,408µm,0.4s					
MSFR	**San Fratello**	**0.75 193**	⇑P	**Pn**	**18 17 39.5 +0.9**	
MSFR	**San Fratello**	**0.75 193**	P	**Pn**	**18 17 39.5 +0.9**	
MSFR				AML	AML	
	comp=E,51µm,0.2s					
MSFR				AML	AML	
	comp=N,38µm,1.3s					
MSFR				AML	AML	
	comp=E,51µm,0.2s					
MSFR				AML	AML	
	comp=N,38µm,1.3s					
MSFR				AML	AML	
	comp=E,51µm,0.2s					
MSFR				AML	AML	
	comp=N,38µm,1.3s					
MPNC	**Port Mandanici**	**0.75 145**	P	**Pn**	**18 17 38.0 -0.5**	
MPNC			S	**S**	**18 18 08.3 -0.7**	
MPNC	**Port Mandanici**	**0.75 145**	P	**Pn**	**18 17 39.0 +0.4**	
MPNC			S	**S**	**18 18 08.3 -0.7**	
NOV	**Novara**	**0.78 161**	P	**Pn**	**18 17 39.7 +1.0**	
NOV				AML	AML	
	comp=E,317µm,0.8s					
NOV				AML	AML	
	comp=N,218µm,0.2s					
NOV				AML	AML	
	comp=E,317µm,0.8s					
NOV				AML	AML	
	comp=N,218µm,0.2s					
NOV				AML	AML	
	comp=N,218µm,0.2s					
NOV				AML	AML	
	comp=E,317µm,0.8s					
MCSR	**Castroreale**	**0.78 154**	P	**Pn**	**18 17 39.2 +0.4**	
MCSR	**Castroreale**	**0.78 154**	P	**Pn**	**18 17 39.2 +0.4**	
MCSR				AML	AML	
	comp=E,692µm,0.4s					
MCSR				AML	AML	
	comp=N,836µm,0.3s					
MCSR				AML	AML	
	comp=E,692µm,0.4s					
MCSR				AML	AML	
	comp=N,836µm,0.3s					
MCSR				AML	AML	
	comp=N,836µm,0.3s					
MCSR				AML	AML	
	comp=E,692µm,0.4s					
JOPP	**Joppolo**	**0.86 100**	⇓*i*P	**Pn**	**18 17 39.1 +0.2**	
JOPP	**Joppolo**	**0.86 100**	*i* P	**Pn**	**18 17 39.1 +0.2**	
JOPP			S	**S**	**18 18 08.4 -1.3**	
JOPP				AML	AML	
	comp=E,103µm,0.4s					
JOPP				AML	AML	
	comp=N,124µm,0.5s					
JOPP				AML	AML	
	comp=E,302µm,0.4s					
JOPP				AML	AML	
	comp=N,269µm,0.7s					
JOPP				AML	AML	
	comp=E,302µm,0.4s					
JOPP				AML	AML	
	comp=N,269µm,0.7s					
JOPP				AML	AML	
	comp=E,302µm,0.4s					
JOPP				AML	AML	
	comp=N,269µm,0.7s					
PLLN	**Pollina**	**0.93 214**	P	**Pn**	**18 17 39.0 -0.3**	
PLLN	**Pollina**	**0.93 214**	P	**Pn**	**18 17 40.0 +0.6**	
MSCL	**Scilla**	**0.94 124**	P	**Pn**	**18 17 39.5 +0.1**	
MSCL	**Scilla**	**0.94 124**	P	**Pn**	**18 17 39.5 +0.1**	
MSCL				AML	AML	
	comp=E,728µm,0.9s					
MSCL				AML	AML	
	comp=N,682µm,0.7s					
MSCL				AML	AML	
	comp=E,728µm,0.9s					
MSCL				AML	AML	
	comp=N,682µm,0.7s					
MSCL				AML	AML	
	comp=N,682µm,0.7s					
MSCL				AML	AML	
	comp=E,728µm,0.9s					
GIB	**Gibilmanna**	**0.99 219**	P	**Pn**	**18 17 39.0 -0.6**	
GIB	**Gibilmanna**	**0.99 219**	P	**Pn**	**18 17 40.0 +0.3**	
CEL	**Celeste**	**0.99 120**	P	**Pn**	**18 17 39.6 +0.1**	
CEL	**Celeste**	**0.99 120**	P	**Pn**	**18 17 39.6 +0.1**	
CEL			S	**S**	**18 18 09.5 -1.3**	
CEL				AML	AML	
	comp=E,298µm,0.4s					
CEL				AML	AML	
	comp=N,344µm,0.5s					
CEL				AML	AML	
	comp=E,298µm,0.4s					
CEL				AML	AML	
	comp=N,344µm,0.5s					
CEL				AML	AML	
	comp=N,344µm,0.5s					
CEL				AML	AML	
	comp=E,298µm,0.4s					
MTTG	**Motta San Giov**	**1.03 137**	P	**Pn**	**18 17 40.5 +0.7**	
MTTG	**Motta San Giov**	**1.03 137**	P	**Pn**	**18 17 40.5 +0.7**	
MTTG				AML	AML	
	comp=E,195µm,0.5s					
MTTG				AML	AML	
	comp=N,202µm,0.9s					
MTTG				AML	AML	
	comp=E,195µm,0.5s					
MTTG				AML	AML	
	comp=N,202µm,0.9s					
MTTG				AML	AML	
	comp=E,195µm,0.5s					
MTTG				AML	AML	
	comp=N,202µm,0.9s					
GALF	**Gagliano Caste**	**1.07 190**	P	**Pn**	**18 17 41.4 +1.4**	
GALF	**Gagliano Caste**	**1.07 190**	P	**Pn**	**18 17 41.4 +1.4**	
GALF				AML	AML	
	comp=E,74µm,1.5s					
GALF				AML	AML	
	comp=N,101µm,0.9s					
GALF				AML	AML	
	comp=E,74µm,1.5s					
GALF				AML	AML	
	comp=N,101µm,0.9s					
GALF				AML	AML	
	comp=N,101µm,0.9s					
GALF				AML	AML	
	comp=E,74µm,1.5s					
CAGR	**Agira**	**1.17 192**	⇓P	**Pn**	**18 17 42.1 +1.6**	
CAGR	**Agira**	**1.17 192**	P	**Pn**	**18 17 42.1 +1.6**	
CAGR				AML	AML	
	comp=E,116µm,1.3s					
CAGR				AML	AML	
	comp=N,162µm,1.6s					
CAGR				AML	AML	
	comp=N,162µm,1.6s					
CAGR				AML	AML	
	comp=E,116µm,1.3s					
ECNV	**Catenanuova**	**1.17 184**	P	**Pn**	**18 17 41.8 +1.3**	
ECNV	**Catenanuova**	**1.17 184**	P	**Pn**	**18 17 41.9 +1.3**	
ECNV				AML	AML	
	comp=E,108µm,0.8s					
ECNV				AML	AML	
	comp=N,139µm,1.3s					
ECNV				AML	AML	
	comp=N,139µm,1.3s					
ECNV				AML	AML	
	comp=E,108µm,0.8s					
SOI	**Samo**	**1.20 125**	⇓P	**Pn**	**18 17 41.1 +0.5**	
SOI			S	**S**	**18 18 11.8 -0.9**	
SOI	**Samo**	**1.20 125**	P	**Pn**	**18 17 41.1 +0.5**	
SOI			S	**S**	**18 18 11.8 -0.9**	
SOI				AML	AML	
	comp=E,218µm,0.6s					
SOI				AML	AML	
	comp=N,206µm,0.5s					
SOLUN	**Solunto**	**1.21 236**	⇓P	**Pn**	**18 17 41.0 +0.4**	
SOLUN			S	**S**	**18 18 11.8 -0.9**	
SOLUN	**Solunto**	**1.21 236**	P	**Pn**	**18 17 41.0 +0.4**	
SOLUN			S	**S**	**18 18 11.8 -0.9**	
SOLUN				AML	AML	
	comp=E,75µm,1.6s					
SOLUN				AML	AML	
	comp=N,64µm,1.4s					
SOLUN				AML	AML	
	comp=E,75µm,1.6s					
SOLUN				AML	AML	
	comp=N,64µm,1.4s					
SOLUN				AML	AML	
	comp=N,64µm,1.4s					
SOLUN				AML	AML	
	comp=E,75µm,1.6s					
MPAZ	**Palizzi**	**1.24 130**	P	**Pn**	**18 17 41.3 +0.5**	
MPAZ	**Palizzi**	**1.24 130**	P	**Pn**	**18 17 41.4 +0.5**	
MPAZ				AML	AML	
	comp=E,268µm,1.4s					
MPAZ				AML	AML	
	comp=N,428µm,0.3s					
MPAZ				AML	AML	
	comp=E,268µm,1.4s					
MPAZ				AML	AML	
	comp=N,428µm,0.3s					
MPAZ				AML	AML	
	comp=N,428µm,0.3s					
MPAZ				AML	AML	
	comp=E,268µm,1.4s					
RESU	**Resuttano**	**1.27 208**	P	**Pn**	**18 17 42.0 +0.9**	
RESU	**Resuttano**	**1.27 208**	P	**Pn**	**18 17 43.0 +1.9**	
RESU				AML	AML	
	comp=E,87µm,0.4s					
RESU				AML	AML	
	comp=N,123µm,0.6s					
RESU				AML	AML	
	comp=E,87µm,0.4s					
RESU				AML	AML	
	comp=N,122µm,0.6s					
RESU				AML	AML	
	comp=E,87µm,0.4s					
RESU				AML	AML	
	comp=N,122µm,0.6s					
ALJA	**Alia**	**1.31 220**	⇓P	**Pn**	**18 17 42.5 +1.2**	
ALJA	**Alia**	**1.31 220**	P	**Pn**	**18 17 42.5 +1.2**	
ALJA				AML	AML	
	comp=E,285µm,0.9s					
ALJA				AML	AML	
	comp=N,228µm,0.8s					
ALJA				AML	AML	
	comp=E,285µm,0.9s					
ALJA				AML	AML	
	comp=N,228µm,0.8s					
ALJA				AML	AML	
	comp=E,285µm,0.9s					
ALJA				AML	AML	
	comp=N,228µm,0.8s					
PLAC	**Placanica**	**1.32 103**	⇓P	**Pn**	**18 17 41.8 +0.5**	
PLAC	**Placanica**	**1.32 103**	P	**Pn**	**18 17 41.8 +0.5**	
PLAC			S	**S**	**18 18 12.3 -1.6**	
PLAC				AML	AML	
	comp=E,298µm,0.7s					
PLAC				AML	AML	
	comp=N,293µm,0.6s					
PLAC				AML	AML	
	comp=E,298µm,0.7s					
PLAC				AML	AML	
	comp=N,293µm,0.6s					
PLAC				AML	AML	
	comp=E,298µm,0.7s					
PLAC				AML	AML	
	comp=N,293µm,0.6s					
PLAC				AML	AML	
	comp=E,298µm,0.7s					
PLAC				AML	AML	
	comp=N,293µm,0.6s					
VAE	**Valguarnera**	**1.32 194**	P	**Pn**	**18 17 43.6 +2.2**	
	comp=N,2.5nm,0.3s,baz=27,slow=2.3,SNR=4.2					
HLNI	**Lentini**	**1.42 178**	⇓P	**Pn**	**18 17 42.3 +0.4**	
HLNI	**Lentini**	**1.42 178**	P	**Pn**	**18 17 42.3 +0.4**	
HLNI				AML	AML	
	comp=E,91µm,0.3s					
HLNI				AML	AML	
	comp=N,82µm,0.4s					
HLNI				AML	AML	
	comp=N,82µm,0.4s					
HLNI				AML	AML	
	comp=E,91µm,0.3s					
CORL	**Corleone**	**1.47 234**	P	**Pn**	**18 17 42.9 +0.6**	
CORL	**Corleone**	**1.47 234**	P	**Pn**	**18 17 42.9 +0.6**	
CORL				AML	AML	
	comp=E,262µm,0.9s					
CORL				AML	AML	
	comp=N,247µm,1.5s					
CORL				AML	AML	
	comp=N,247µm,1.5s					
CORL				AML	AML	
	comp=E,262µm,0.9s					
HCRL	**Carlentini**	**1.49 173**	⇓P	**Pn**	**18 17 43.1 +0.7**	
HCRL	**Carlentini**	**1.49 173**	P	**Pn**	**18 17 43.1 +0.7**	
HCRL				AML	AML	
	comp=E,230µm,0.5s					
HCRL				AML	AML	
	comp=N,193µm,1.2s					
HCRL				AML	AML	
	comp=E,230µm,0.5s					
HCRL				AML	AML	
	comp=N,193µm,1.2s					
HCRL				AML	AML	
	comp=E,230µm,0.5s					
HCRL				AML	AML	
	comp=N,193µm,1.2s					
SERS	**Sersale**	**1.49 79**	⇓P	**Pn**	**18 17 43.2 +0.8**	
SERS	**Sersale**	**1.49 79**	P	**Pn**	**18 17 43.2 +0.8**	
SERS			S	**S**	**18 18 14.4 -1.6**	
SERS				AML	AML	
	comp=E,256µm,0.6s					
SERS				AML	AML	
	comp=N,304µm,0.3s					
SERS				AML	AML	
	comp=N,304µm,0.3s					
SERS				AML	AML	
	comp=E,256µm,0.6s					
AGST	**Augusta-Monte**	**1.54 167**	P	**Pn**	**18 17 43.3 +0.6**	
AGST	**Augusta-Monte**	**1.54 167**	P	**Pn**	**18 17 43.3 +0.6**	
TIP	**Timpagrande**	**1.57 74**	⇓P	**Pn**	**18 17 43.8 +0.9**	
TIP	**Timpagrande**	**1.57 74**	P	**Pn**	**18 17 43.8 +0.9**	
TIP			S	**S**	**18 18 15.2 -1.7**	
TIP				AML	AML	
	comp=E,158µm,0.6s					
TIP				AML	AML	
	comp=N,160µm,1.0s					
TIP				AML	AML	
	comp=E,158µm,0.6s					
TIP				AML	AML	
	comp=N,160µm,1.0s					
TIP				AML	AML	
	comp=N,160µm,1.0s					
TIP				AML	AML	
	comp=E,158µm,0.6s					
SALB	**San Lorenzo Be**	**1.63 47**	P	**Pn**	**18 17 44.6 +1.3**	
SALB	**San Lorenzo Be**	**1.63 47**	P	**Pn**	**18 17 44.6 +1.3**	
SALB				AML	AML	
	comp=E,100µm,0.3s					
SALB				AML	AML	
	comp=N,67µm,0.4s					
SALB				AML	AML	
	comp=E,101µm,0.3s					
SALB				AML	AML	
	comp=N,67µm,0.4s					
SALB				AML	AML	
	comp=E,101µm,0.3s					
SALB				AML	AML	
	comp=N,67µm,0.4s					
CRJA	**Costa Raja**	**1.71 236**	P	**Pn**	**18 17 44.8 +0.9**	
CRJA	**Costa Raja**	**1.71 236**	P	**Pn**	**18 17 44.9 +0.9**	
PIPA	**Pietrapaola**	**1.72 65**	⇑P	**Pn**	**18 17 45.4 +1.5**	
PIPA	**Pietrapaola**	**1.72 65**	P	**Pn**	**18 17 45.4 +1.5**	
PIPA				AML	AML	
	comp=E,228µm,0.3s					
PIPA				AML	AML	
	comp=N,190µm,0.4s					
PIPA				AML	AML	
	comp=E,228µm,0.3s					
PIPA				AML	AML	
	comp=N,190µm,0.4s					
PIPA				AML	AML	
	comp=N,190µm,0.4s					
PIPA				AML	AML	
	comp=E,228µm,0.3s					
FAVR	**Favara**	**1.75 211**	⇓P	**Pn**	**18 17 46.2 +2.0**	
FAVR	**Favara**	**1.75 211**	P	**Pn**	**18 17 46.2 +2.0**	
FAVR				AML	AML	
	comp=E,100µm,0.9s					
FAVR				AML	AML	
	comp=N,122µm,0.6s					
FAVR				AML	AML	
	comp=E,100µm,0.9s					
FAVR				AML	AML	
	comp=N,122µm,0.6s					
LADO	**San Nicola del**	**1.77 72**	P	**Pn**	**18 17 44.9 +0.7**	
LADO	**San Nicola del**	**1.77 72**	P	**Pn**	**18 17 44.9 +0.7**	
LADO				AML	AML	
	comp=E,208µm,0.5s					
LADO				AML	AML	
	comp=N,83µm,0.5s					
LADO				AML	AML	
	comp=E,208µm,0.5s					
LADO				AML	AML	
	comp=N,83µm,0.5s					
LADO				AML	AML	
	comp=N,83µm,0.5s					
LADO				AML	AML	
	comp=E,208µm,0.5s					
MFNL	**Monte Finestre**	**1.77 237**	P	**Pn**	**18 17 45.7 +1.3**	
MFNL	**Monte Finestre**	**1.77 237**	P	**Pn**	**18 17 45.7 +1.3**	
MMGO	**Monte Magaggia**	**1.82 233**	P	**Pn**	**18 17 45.2 +0.5**	
MMGO	**Monte Magaggia**	**1.82 233**	P	**Pn**	**18 17 45.1 +0.5**	
HAVL	**Avola**	**1.82 172**	⇓P	**Pn**	**18 17 45.7 +0.9**	
HAVL	**Avola**	**1.82 172**	P	**Pn**	**18 17 45.7 +0.9**	
HAVL				AML	AML	
	comp=E,105µm,0.3s					
HAVL				AML	AML	
	comp=N,218µm,0.3s					
HAVL				AML	AML	
	comp=N,218µm,0.3s					
HAVL				AML	AML	
	comp=E,105µm,0.3s					
MTGR	**Montagna Grand**	**1.83 242**	P	**Pn**	**18 17 45.4 +0.6**	
MTGR	**Montagna Grand**	**1.83 242**	P	**Pn**	**18 17 45.4 +0.6**	
KEST	**Kesra**	**5.31 237**	P	**Pn**	**18 18 22.5 +1.5**	
	comp=E,0.3nm,0.3s,baz=302,slow=3.7,SNR=4.5					
PGF	**Pioggiola**	**5.81 312**	*e*P	**Pn**	**18 18 27.6 +0.7**	
PGF	**Pioggiola**	**5.81 312**	*e*P	**Pn**	**18 18 27.6 +0.7**	
SBF	**Sospel**	**7.53 315**	*e*P	**Pn**	**18 18 49.4 +1.6**	
SBF	**Sospel**	**7.53 315**	*e*P	**Pn**	**18 18 49.4 +1.6**	
OBKA	**Obir**	**7.74 359**	*i* Pn	**Pn**	**18 18 50.9 +0.5**	
	comp=E,2.3nm,0.5s					
OBKA	**Obir**	**7.74 359**	P	**Pn**	**18 18 50.9 +0.5**	
	comp=E,2.3nm,0.5s					
LMR	**La Mourre**	**7.75 309**	*e*P	**Pn**	**18 18 50.7 +0.2**	
LMR	**La Mourre**	**7.75 309**	*e*P	**Pn**	**18 18 50.7 +0.2**	
FRF	**La Foret Royal**	**7.80 310**	*e*P	**Pn**	**18 18 50.9 -0.1**	
FRF	**La Foret Royal**	**7.80 310**	*e*P	**Pn**	**18 18 50.9 -0.1**	
SOKA	**Soboth**	**7.91 1**	*i* Pn	**Pn**	**18 18 53.4 +1.0**	
	comp=E,1.2nm,0.5s					
SOKA	**Soboth**	**7.91 1**	P	**Pn**	**18 18 53.4 +1.0**	
	comp=E,1.2nm,0.5s					
ABTA	**Abfaltersbach**	**8.15 349**	*i* Pn	**Pn**	**18 18 56.4 +0.9**	
	comp=E,7.7nm,0.7s					
ABTA	**Abfaltersbach**	**8.15 349**	P	**Pn**	**18 18 56.4 +0.9**	
	comp=E,7.7nm,0.7s					
KBA	**Koelnbreinsper**	**8.38 353**	Pn	**Pn**	**18 19 00.3 +2.0**	
	comp=E,3.4nm,0.7s					
KBA	**Koelnbreinsper**	**8.38 353**	P	**Pn**	**18 19 00.3 +2.0**	
	comp=E,3.4nm,0.7s					
MBDF	**Montbardon**	**8.46 317**	*e*P	**Pn**	**18 19 00.5 +1.2**	
MBDF	**Montbardon**	**8.46 317**	*e*P	**Pn**	**18 19 00.5 +1.2**	
SMRF	**Simiane la Rot**	**8.67 310**	*e*P	**Pn**	**18 19 02.7 +0.8**	
SMRF	**Simiane la Rot**	**8.67 310**	*e*P	**Pn**	**18 19 02.7 +0.8**	
FETA	**Feichten**	**8.77 341**	*i* Pn	**P**	**18 19 05.9 -2.7**	
	comp=E,19nm,0.6s					
FETA	**Feichten**	**8.77 341**	P	**P**	**18 19 05.9 -2.7**	
	comp=E,19nm,0.6s					
IDI	**Anoyia**	**8.78 110**	P	**P**	**18 19 07.2 -1.6**	
	comp=E,0.6nm,0.3s,baz=323,slow=10,SNR=4.8					
IDI			S	S	18 20 53.4 +10	
	comp=E,0.5nm,0.3s,baz=168,slow=21,SNR=4.8					
WATA	**Walderalm**	**8.88 346**	*i* Pn	**Pn**	**18 19 07.0 +2.5**	
	comp=E,11nm,0.6s					
WATA	**Walderalm**	**8.88 346**	P	**Pn**	**18 19 07.0 +2.5**	
	comp=E,11nm,0.6s					
MOTA	**Moosalm**	**8.99 344**	*i* Pn	**Pn**	**18 19 06.6 +0.8**	
	comp=E,7.2nm,0.7s					
MOTA	**Moosalm**	**8.99 344**	P	**Pn**	**18 19 06.6 +0.8**	
	comp=E,7.2nm,0.7s					
LPG	**La Plagne**	**9.00 321**	*e*P	**Pn**	**18 19 07.4 +1.3**	
LPG	**La Plagne**	**9.00 321**	*e*P	**Pn**	**18 19 07.4 +1.3**	
LPL	**La Plagne**	**9.02 321**	*e*P	**Pn**	**18 19 07.6 +1.3**	
LPL	**La Plagne**	**9.02 321**	*e*P	**Pn**	**18 19 07.6 +1.3**	
ORIF	**Oris-en-Rattie**	**9.06 316**	*e*P	**Pn**	**18 19 07.9 +1.2**	
ORIF	**Oris-en-Rattie**	**9.06 316**	*e*P	**Pn**	**18 19 07.9 +1.2**	
MOA	**Molln**	**9.09 358**	*i* Pn	**Pn**	**18 19 08.3 +1.4**	
	comp=E,3.5nm,0.5s					
MOA	**Molln**	**9.09 358**	P	**Pn**	**18 19 08.3 +1.4**	
	comp=E,3.5nm,0.5s					
RETA	**Reutte**	**9.20 343**	*i* Pn	**Pn**	**18 19 09.5 +1.1**	
	comp=E,5.5nm,0.6s					
RETA	**Reutte**	**9.20 343**	P	**Pn**	**18 19 09.5 +1.1**	
	comp=E,5.5nm,0.6s					
DAVA	**Damuels**	**9.25 339**	*i* Pn	**Pn**	**18 19 10.3 +1.3**	
	comp=E,5.2nm,0.5s					
DAVA	**Damuels**	**9.25 339**	P	**Pn**	**18 19 10.3 +1.3**	
	comp=E,5.2nm,0.5s					
VIVF	**Saint-Julien-I**	**9.71 312**	*e*P	**Pn**	**18 19 15.0 +0.4**	
VIVF	**Saint-Julien-I**	**9.71 312**	*e*P	**Pn**	**18 19 15.0 +0.4**	
GERES	**GERESS Array B**	**10.11 356**	P	**Pn**	**18 19 18.6 -0.9**	
	comp=E,0.3nm,0.3s,baz=169,slow=15,SNR=11					
CABF	**La Chapelle**	**10.13 324**	*e*P	**Pn**	**18 19 19.7 -0.1**	
KHC	**Kasperske Hory**	**10.40 356**	*e*P	**Pn**	**18 19 23.3 +0.2**	
HINF	**Hinteralfeld**	**10.74 330**	*e*P	**Pn**	**18 19 26.4 -0.9**	
CDF	**Champ du Feu**	**11.07 333**	*e*P	**Pn**	**18 19 32.4 +1.0**	

CDF	Champ du Feu	11.07	333	eP	Pn	18 19 32.4	+1.0
HAU	Haudompre	11.09	329	eP	Pn	18 19 30.4	-1.2
SMF	Signal de Mont	11.27	318	eP	Pn	18 19 32.9	-0.8
KRLC	Kraliky	11.39	6	eP	P	18 19 39.3	+1.7
KRLC	Kraliky	11.39	6	P	P	18 19 39.3	+1.7
AVF	Avril sur Loir	11.62	317	eP	Pn	18 19 37.9	-0.1
AVF	Avril sur Loir	11.62	317	eP	Pn	18 19 37.9	-0.1
DPC	Dobruska-Polom	11.63	5	eP	P	18 19 41.6	+1.3
DPC	Dobruska-Polom	11.63	5	P	P	18 19 41.6	+1.3
LOR	Lormes	11.67	320	eP	Pn	18 19 38.5	-0.2
	baz=124						
SSF	Saint Saulge	11.71	319	eP	P	18 19 40.3	-0.8
SSF	Saint Saulge	11.71	319	eP	P	18 19 40.3	-0.8
BGF	Bois d'Agland	11.74	315	eP	P	18 19 40.6	-0.9
BGF	Bois d'Agland	11.74	315	eP	P	18 19 40.6	-0.9
UPC	Upice	11.77	4	eP	P	18 19 43.4	+1.6
UPC	Upice	11.77	4	P	P	18 19 43.4	+1.6
PAGF	Fort de Pagny	11.78	329	eP	Pn	18 19 39.5	-0.5
	baz=152						
SFTF	Sexfontaines	11.79	326	eP	Pn	18 19 40.4	+0.2
SFTF	Sexfontaines	11.79	326	eP	Pn	18 19 40.4	+0.2
RJF	Les Rejaudoux	11.84	308	eP	P	18 19 42.1	-0.5
RJF	Les Rejaudoux	11.84	308	eP	P	18 19 42.1	-0.5
MEZF	Maizieres J'vi	12.02	327	eP	P	18 19 44.1	-0.4
MEZF	Maizieres J'vi	12.02	327	eP	P	18 19 44.1	-0.4
BRG	Berggiesshubel	12.12	357	eP	P	18 19 44.9	-0.8
	comp=E,2.7nm,0.8s						
ETSF	Etsaut	12.35	294	eP	P	18 19 48.1	-0.3
ETSF	Etsaut	12.35	294	eP	P	18 19 48.1	-0.3
SJPF	Ste Jean	12.87	295	eP	P	18 19 54.2	+0.1
SJPF	Ste Jean	12.87	295	eP	P	18 19 54.2	+0.1
BAIF	Baives	13.58	330	eP	P	18 20 00.9	-0.9
BAIF	Baives	13.58	330	eP	P	18 20 00.9	-0.9
LDF	La Druitiere	14.57	317	eP	P	18 20 12.9	+0.1
LDF	La Druitiere	14.57	317	eP	P	18 20 12.9	+0.1
BRTR	Keskin Array B	14.63	80	P	Pn	18 20 18.3	+3.8
	comp=E,0.1nm,0.3s,baz=264,slow=10,SNR=4.9						
FLN	La Foliniere	14.87	317	eP	P	18 20 16.1	+0.1
AKASG	Malin Array Be	15.69	36	P	Pn	18 20 25.3	-1.5
	comp=E,1.6nm,0.3s,baz=233,slow=9.6,SNR=6.9						
SGMF	Saint Gilles	15.74	313	eP	P	18 20 25.8	+0.2
SGMF	Saint Gilles	15.74	313	eP	P	18 20 25.8	+0.2
MMAI	Mount Meron Ar	17.63	103	P	Pn	18 20 50.1	+0.3
	comp=E,0.5nm,0.3s,baz=294,slow=11,SNR=2.9						
EKA	Eskdalemuir Ar	20.50	330	P	P	18 21 14.5	-2.0
	comp=E,0.3nm,0.3s,baz=142,slow=11,SNR=7.2						
HFS	Hagfors	21.40	358	P	P	18 21 23.2	-1.9
	comp=E,1.4nm,0.5s,baz=185,slow=12,SNR=10						
NB2	NORSAR Subarra	22.41	355	P	P	18 21 33.3	-1.0
	comp=Z,0.3nm,0.5s,baz=172,slow=11						
FINES	FINESS Array B	23.75	13	P	P	18 21 46.1	-0.3
	comp=Z,1.7nm,0.3s,baz=190,slow=9.7,SNR=23						
ARCES	ARCESS Array B	31.36	7	P	P	18 22 52.6	-1.2
	comp=Z,1.0nm,0.6s,baz=194,slow=8.7,SNR=5.5						
MKAR	Makanchi Array	48.79	58	P	P	18 25 17.5	+1.3
	comp=Z,0.2nm,0.5s,baz=285,slow=6.6,SNR=5.0						

NIED ***20*** *18:40:00.38˚80N×142˚.10E, h62km, Mw3.8 Best double couple: M0=6.51000×10^14 NP1:φs=147.00000°, δ17.00000°, λ39.00000°. NP2:φs=19.00000°, δ79.00000°, λ104.00000°.*
ISCJB ***20*** *18:40:32.6±0.9, 38˚83N±0˚.04×142˚.16E±0˚.10, h50km±6km, mb3.8/12, Error ellipse: s-maj=13.2km s-min=5.8km az=20.0*
JMA ***20*** *18:40:33.5±0.1, 38˚84N×142˚.10E, h44km±1km, M3.8*
JMA Felt I J1.
IDC ***20*** *18:40:35.4±2.3, 38˚.83N×142˚.14E, h62km±19km, mb3.5/12, mb1 3.6/16, mb1mx3.4/78, mbtmp3.8/16, MS2.3/1, Ms1 2.3/1, ms1mx1.9/66, Error ellipse: s-maj=20.6km s-min=13.4km az=107.0*

ISC 20 18:40:33.8±1.5, 38˚.82N±0˚.06×142˚.14E±0˚.10, h44km±12km, n34, σ1§17/35, mb3.8/12, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.45	306	P	Pn	18 40 43.5	-0.6
OFUJ				S	Sn	18 40 50.3	-1.1
JIO	Ouri	0.71	240	P	Pn	18 40 46.9	-0.6
JIO				S	Sn	18 40 56.0	-1.4
JMK	Ichinoseki	0.73	281	P	Pn	18 40 47.0	-0.7
JMK				S	Sn	18 40 56.5	-1.2
JOM	Ohasama	0.93	315	P	Pn	18 40 49.8	-0.6
JOM				S	Sn	18 41 01.4	-1.2
JTH	Tanohata	1.14	349	P	Pn	18 40 53.0	-0.3
JTH				eS	Sn	18 41 06.6	-1.2
JOU	Okura	1.24	249	P	Pn	18 40 54.3	-0.3
JRG	Rokugo	1.30	297	P	Pn	18 40 55.1	-0.4
JYK	Kaneyama	1.39	275	P	Pn	18 40 56.3	-0.4
JYK				eS	Sn	18 41 14.3	+0.4
JMM	Marumori	1.42	228	P	Pn	18 40 56.6	-0.5
JANG	Nango	1.63	343	P	Pn	18 40 59.4	-0.6
JANG				eS	Sn	18 41 19.4	-0.3
MAT	Matsushiro	3.85	235	P	Pn	18 41 32.2	+1.6
MJAR	Matsushiro Arr	3.85	235	P	Pn	18 41 32.4	+1.9
	2.0nm,0.3s,baz=36,slow=12,SNR=26						
ASAJ	Asahikawa	5.31	4	P	Pn	18 41 50.9	+0.4
	1.2nm,0.3s,baz=216,slow=14,SNR=16						
ASAJ				S	Sn	18 42 50.5	+0.2
	0.7nm,0.3s,baz=297,slow=31,SNR=1.8						
USRK	Ussuriysk Ar.	9.32	308	P	Pn	18 42 48.1	+2.7
	0.2nm,0.3s,baz=138,slow=15,SNR=5.5						
JNU	Nakatsue	10.74	242	LR	LR	18 47 53.6	
	comp=Z,15nm,19.5s,baz=302,slow=41						
KSRS	Korea Array	11.28	268	P	Pn	18 43 15.9	+3.7
	0.2nm,0.3s,baz=85,slow=14,SNR=5.4						
SEY	Seymchan	24.93	11	P	P	18 45 53.9	+1.5
	2.7nm,1.0s,baz=158,slow=19,SNR=2.9						
H11N2	WAKE ISLAND Hy	28.63	125	T	T	19 16 50.9	
	baz=317,slow=75,SNR=853						
H11N1	WAKE ISLAND Hy	28.64	125	T	T	19 16 51.6	
	baz=317,slow=75,SNR=580						
H11N3	WAKE ISLAND Hy	28.64	125	T	T	19 16 52.4	
	baz=317,slow=75,SNR=662						
H11S1	WAKE ISLAND Hy	29.40	127	T	T	19 17 48.7	
	baz=319,slow=76,SNR=108						
H11S3	WAKE ISLAND Hy	29.41	127	T	T	19 17 48.9	
	baz=319,slow=76,SNR=176						
H11S2	WAKE ISLAND Hy	29.42	127	T	T	19 17 49.8	
	baz=319,slow=76,SNR=136						
ZALV	Zalesovo Beam	41.16	311	P	P	18 48 13.0	-0.5
	1.3nm,0.5s,baz=87,slow=8.0,SNR=6.2						
MKAR	Makanchi Array	43.68	301	P	P	18 48 33.7	-0.4
	1.3nm,0.6s,baz=81,slow=9.9,SNR=16						
KURBB	Kurchatov Arra	45.38	307	P	P	18 48 46.9	-0.6
	3.6nm,0.4s,baz=81,slow=8.2,SNR=27						
ILAR	Eielson Array	47.69	33	P	P	18 49 05.7	+0.3
	0.3nm,0.7s,baz=262,slow=6.3,SNR=3.5						
BVAR	Borovoye Array	49.81	311	P	P	18 49 21.6	-0.4
	1.3nm,0.4s,baz=70,slow=7.4,SNR=16						
WRA	Warramunga Arr	58.90	189	P	P	18 50 27.4	-0.9
	0.4nm,0.5s,baz=6.8,slow=7.1,SNR=8.9						
ASAR	Alice Springs	62.63	189	P	P	18 50 53.4	-0.2
	0.3nm,0.8s,baz=358,slow=5.0,SNR=3.6						
FINES	FINESS Array B	67.51	332	P	P	18 51 24.4	-0.4
	0.7nm,0.6s,baz=22,slow=7.9,SNR=3.7						
AKASG	Malin Array Be	73.24	322	P	P	18 51 59.4	-0.6
	0.6nm,0.5s,baz=48,slow=5.7,SNR=4.0						
PDAR	Pinedale Array	76.02	46	P	P	18 52 16.1	-0.4
	0.2nm,0.3s,baz=328,slow=3.2,SNR=2.4						
BRTR	Keskin Array B	78.10	312	P	P	18 52 27.8	-0.4
	0.2nm,0.4s,baz=354,slow=8.7,SNR=3.3						

ISCJB ***20*** *18:40:47.0±0.6, 24˚.79N±0˚.03×122˚.40E±0˚.02, h108km±5km, Error ellipse: s-maj=5.2km s-min=3.5km az=172.5*
JMA ***20*** *18:40:46.5±0.1, 24˚.69N×122˚.36E, h117km±2km, M2.4*
TAP ***20*** *18:40:46.8, 24˚.86N×122˚.38E, h110km±1km, ML3.2, D*

ISC 20 18:40:47.2±1.7, 24˚.78N±0˚.05×122˚.39E±0˚.03, h109km±10km, n52, σ0§77/95, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.34	226	P	Pn	18 41 03.4	+0.4
	baz=217						
EOS1				S	Sn	18 41 16.0	+1.2
	baz=217						
TWC	Suao	0.53	251	i P	Pn	18 41 03.9	-0.2
	baz=242						
TWC				S	Sn	18 41 16.4	-0.4
	baz=242						
TIPB	Shuangxi	0.55	290	i P	Pn	18 41 03.3	-1.1
	baz=283						
TIPB				i S	Sn	18 41 16.0	-1.1
	baz=283						
ENAH	Nanao	0.63	238	eP	Pn	18 41 05.0	+0.2
	baz=232						
ENAH				eS	Sn	18 41 18.7	+0.6
	baz=232						
NWF	Wu-fen Shan	0.63	297	eS	Sn	18 41 17.3	-1.0
	baz=291						
WFSB	Wu-fen Shan	0.63	297	eS	Sn	18 41 17.2	-1.0
	baz=291						
YOJ	Yonaguni jima	0.65	119	P	Pn	18 41 05.3	+0.2
	baz=124						
YOJ				eS	Sn	18 41 19.4	+1.1
	baz=124						
YOJ	Yonaguni jima	0.65	119	P	Pn	18 41 05.2	+0.2
YOJ				eS	Sn	18 41 19.1	+0.7
TWE	Neicheng	0.66	265	P	Pn	18 41 05.0	-0.2
	baz=257						
TWE				S	Sn	18 41 18.4	-0.2
	baz=257						
ENA	Nanau	0.69	239	P	Pn	18 41 05.4	0.0
	baz=233						
ENA				S	Sn	18 41 19.5	+0.5
	baz=233						
TWA	Mucha	0.76	285	P	Pn	18 41 05.7	-0.3
	baz=279						
TWA				S	Sn	18 41 19.7	-0.5
	baz=279						
ENTT	Nioudou	0.77	260	i P	Pn	18 41 06.6	+0.5
	baz=253						
ENTT				eS	Sn	18 41 21.4	+1.1
	baz=253						
YM07	YM07	0.80	299	P	Pn	18 41 05.4	-1.1
	baz=294						
YM07				eS	Sn	18 41 19.8	-1.1
	baz=294						
YM08	YM08	0.83	299	eP	Pn	18 41 07.8	+1.1
	baz=294						
YM08				S	Sn	18 41 20.2	-1.2
	baz=294						
YM11	YM11	0.84	297	eP	Pn	18 41 07.7	+0.9
	baz=292						
YM11				eS	Sn	18 41 22.0	+0.5
	baz=292						
YM10	YM10	0.84	296	i P	Pn	18 41 06.7	-0.2
	baz=291						
YM10				eS	Sn	18 41 21.2	-0.4
	baz=291						
TATO	Taipei	0.84	283	eP	Pn	18 41 08.8	+2.1
	baz=278						
TATO				eS	Sn	18 41 21.9	+0.4
	baz=278						
YM04	YM04	0.86	296	P	Pn	18 41 06.7	-0.3
	baz=291						
YM04				S	Sn	18 41 21.1	-0.8
	baz=291						
YM03	YM03	0.87	297	eP	Pn	18 41 07.2	+0.1
	baz=292						
YHNB	Yeheng	0.93	263	P	Pn	18 41 07.7	-0.1
	baz=258						
YHNB				S	Sn	18 41 23.3	+0.1
	baz=258						
TWS1	Kuangyinshan	0.94	290	eP	Pn	18 41 08.9	+1.2
	baz=285						
TWS1				eS	Sn	18 41 22.5	-0.7
	baz=285						
NACB	Ninganchiao	0.95	230	P	Pn	18 41 07.4	-0.4
	baz=226						
NACB				S	Sn	18 41 23.0	-0.3
	baz=226						
NSK	Sanguang	0.95	264	i P	Pn	18 41 07.8	-0.1
	baz=258						
NSK				S	Sn	18 41 23.3	-0.1
	baz=258						
NNSB	Datong	0.99	249	P	Pn	18 41 08.4	+0.1
	baz=244						
NNSB				S	Sn	18 41 24.5	+0.3
	baz=244						
NNSH	Datong	0.99	249	i P	Pn	18 41 08.3	0.0
	baz=244						
NNSH				i S	Sn	18 41 23.9	-0.3
	baz=244						
NNS	Nan Shan	0.99	250	P	Pn	18 41 08.5	+0.1
	baz=245						
NNS				eS	Sn	18 41 24.3	0.0
	baz=245						
TWD	Chiawan	1.01	226	eP	Pn	18 41 07.7	-0.7
	baz=222						
TWD				i S	Sn	18 41 24.1	-0.3
	baz=222						
TWT	Tachien	1.23	245	eS	Sn	18 41 30.0	+1.0
	baz=241						
TDCB	Techi	1.24	245	eP	Pn	18 41 11.7	+0.6
	baz=241						
TDCB				S	Sn	18 41 29.2	0.0
	baz=241						
NSTT	Nanjuang	1.28	264	eS	Sn	18 41 29.3	-0.3
	baz=259						
IRIF	Iriomote-Funau	1.30	110	P	Pn	18 41 11.6	+0.1
IRIF				eS	Sn	18 41 29.8	-0.2
ESL	Shilin	1.30	222	eP	Pn	18 41 10.5	-1.2
	baz=219						
CHGB	Renai	1.32	237	P	Pn	18 41 12.3	+0.2
	baz=234						
CHGB				eS	Sn	18 41 30.8	-0.2
	baz=234						
NMLH	Miaoli	1.48	261	P	Pn	18 41 13.8	+0.1
	baz=257						
NMLH				S	Sn	18 41 33.8	0.0
	baz=257						
VWDT	VWDT	1.54	228	eP	Pn	18 41 15.3	+0.9
	baz=225						
VWDT				eS	Sn	18 41 34.4	-0.6
	baz=225						
HGSD	Ruisui	1.56	215	eP	Pn	18 41 13.7	-1.0
	baz=212						
HGSD				eS	Sn	18 41 35.7	+0.1
	baz=212						
JKRS	Kuro-shima	1.57	110	P	Pn	18 41 15.1	+0.3
JKRS				eS	Sn	18 41 36.1	+0.4
EHY	Hungye	1.60	218	eP	Pn	18 41 15.3	+0.1
	baz=215						
EHY				eS	Sn	18 41 34.8	-1.8
	baz=215						
SMLT	Sun Moon Lake	1.63	237	i P	Pn	18 41 16.7	+1.0
	baz=234						
SMLT				eS	Sn	18 41 38.9	+1.6
	baz=234						
SSLB	Suanglung	1.65	233	eP	Pn	18 41 16.5	+0.7
	baz=230						
SSLB				S	Sn	18 41 38.8	+1.3
	baz=230						
JIJ	Ishigaki jima	1.65	104	P	Pn	18 41 15.7	0.0
JIJ				S	Sn	18 41 37.1	-0.3
TCU	Taichung	1.69	248	eP	Pn	18 41 15.8	-0.4
	baz=245						
TCU				eS	Sn	18 41 38.3	-0.1
	baz=245						
YULB	Yu-li	1.71	216	eP	Pn	18 41 15.4	-1.1
	baz=214						
YULB				eS	Sn	18 41 37.8	-1.0
	baz=214						
TWF1	Yuli	1.74	215	eP	Pn	18 41 15.9	-1.1
	baz=213						
TWF1				eS	Sn	18 41 37.8	-1.7
	baz=213						
JISG	Ishigakijimahi	1.75	96	P	Pn	18 41 16.9	-0.2
JISG				eS	Sn	18 41 39.6	-0.2
WJS	Zhushan	1.80	238	eS	Sn	18 41 42.9	+2.1
	baz=235						
WNT	Mingjian	1.80	240	eP	Pn	18 41 18.1	+0.5
	baz=237						
WNT				S	Sn	18 41 41.5	+0.6
	baz=237						
FULB	Fuli	1.87	213	eP	Pn	18 41 17.8	-0.8
	baz=211						
FULB				S	Sn	18 41 42.2	-0.3
	baz=211						
ALS	Alishan	1.93	229	eP	Pn	18 41 20.1	+0.6
	baz=226						
ALS				eS	Sn	18 41 45.3	+1.1
	baz=226						
WGK	Gukeng	2.00	237	eS	Sn	18 41 45.8	+0.6
	baz=234						
RLNB	Erlin	2.06	245	eP	Pn	18 41 20.7	-0.2
	baz=242						
RLNB				eS	Sn	18 41 46.6	0.0
	baz=242						
WSF	Szhu	2.29	241	eS	Sn	18 41 51.9	0.0
	baz=238						

GUC 20 19:14:34.4±0.5, 35˚.81S×72˚.53W, h20km±4km, ML3.7, 1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO05	HualaæØ	0.94	32	‖ i P	Pn	19 14 53.7	+1.3
GO05				i S	Sb	19 15 02.8	-1.1
GO05				IAML		19 15 04.6	
	comp=N,5μm,0.2s						
CHCH	Chadas Angostu	2.43	40	eP	Pn	19 15 14.4	+1.5
ANTU	Antumapu	2.73	36	IAML		19 15 51.4	
	comp=N,411nm,0.9s						
LMEL	Las Melosas	2.74	45	eP	Pn	19 15 18.1	+0.7
LMEL				i S	Sn	19 15 51.3	+1.4
LMEL				IAML		19 15 53.4	
	comp=N,452nm,0.2s						
CLCH	Cerro Calan	2.92	35	eP	Pn	19 15 20.6	+0.9
CLCH				i S	Sn	19 15 55.0	+0.9
FCH	Farellones	3.09	37	eP	Pn	19 15 21.3	-1.0
FCH				i S	Sn	19 16 00.6	+1.8
FCH				IAML		19 16 01.6	
	comp=N,130nm,0.3s						
ROCH	El Roble	3.10	24	eP	Pn	19 15 17.7	-4.6
ROCH				i S	Sn	19 15 55.1	-3.7
ROCH				IAML		19 16 06.7	
	comp=E,217nm,0.6s						

BJI ***20*** *19:18:16.1, 3˚.74N×126˚.80E, h18km, mb4.7/27, mB5.0/17*
ISCJB ***20*** *19:18:28.8±0.2, 4˚.31N±0˚.02×126˚.70E±0˚.03, h85km, mb4.5/85, Error ellipse: s-maj=4.2km s-min=2.7km az=169.7*
IDC ***20*** *19:18:28.9±1.5, 4˚.31N×126˚.60E, h72km±13km, mb4.2/30, mb1 4.2/32, mb1mx4.1/63, mbtmp4.5/32, MS3.2/18, Ms1 3.2/18, ms1mx3.0/57, Error ellipse: s-maj=15.5km s-min=6.7km az=70.0*
MOS ***20*** *19:18:29.3±0.8, 4˚.31N×126˚.63E, h90km, mb4.8/20, Error ellipse: s-maj=11.1km s-min=6.0km az=111.6*
MAN ***20*** *19:18:29.3, 4˚.24N×126˚.53E, h47km, mb5.5, ML4.5, MS4.8*
NEIC ***20*** *19:18:31.1±0.7, 4˚.27N×126˚.69E, h92km±7km, mb4.7/43, Error ellipse: s-maj=6.8km s-min=4.4km az=65.0*
DJA ***20*** *19:18:33.9±0.4, 4˚.N±4˚×12˚.7E±˚, h69km±7km, M4.8/29, mb5.1/29, mB5.3/18, MLv5.2/12, Mw(mB)4.7/18*

ISC 20 19:18:30.6±0.3, 4˚.29N±0˚.04×126˚.68E±0˚.05, h85km, n243, σ1§63/250, mb4.6/84, 14C-10D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	Mati	2.67	351	eP	Pn	19 19 11.2	-0.5
MATI				eS	Sn	19 19 43.3	+0.1
DAV	Davao City (W)	2.97	338	P	Pn	19 19 18.5	+2.8
	54nm,0.3s,baz=92,slow=6.1,SNR=4.3						
DAV				S	Sn	19 20 00.0	+10
	154nm,0.3s,baz=270,slow=20,SNR=7.8						
DAV				LR	LR	19 20 34.0	
	comp=Z,479nm,20.0s,baz=43,slow=43						
DAV	Davao City (W)	2.97	338	ePn	Pn	19 19 16.8	+1.2
DAV				S	Sn	19 20 00.0	+10
DMPH	Davao City--Mi	3.01	337	‖ eP	Pn	19 19 22.2	+6.0
DMPH				eS	Sn	19 19 58.3	+7.0
SKMP	Bagumbayan, Su	3.07	316	eP	Pn	19 19 17.7	+0.7
SKMP				eS	Sn	19 19 54.7	+2.0
TNTI	Ternate	3.56	169	ePn	Pn	19 19 22.7	-1.1
BIPH	Bislig	3.88	355	‖ i P	Pn	19 19 27.3	-0.7
BIPH				i S	Sn	19 20 05.8	-6.6
BUKP	Musuan	3.91	336	eP	Pn	19 19 29.4	+0.9
BUKP				eS	Sn	19 20 17.6	+4.4
KMSI	Cibinong	4.57	216	P	Pn	19 19 38.0	+0.6
BUTP	Butuan	4.76	347	eP	Pn	19 19 41.3	+1.2
BUTP				eS	Sn	19 20 38.8	+4.8
PAGZ	Pagadian	4.82	317	eP	Pn	19 19 38.8	-1.9
PAGZ				eS	Sn	19 20 35.2	-0.2
LBMI	Labuha	4.96	170	P	Pn	19 19 43.0	+0.2
MRSI	Marisa	6.06	231	P	Pn	19 19 58.2	+0.5
	847nm,0.6s,8μm3.2nm						
MSLP	Maasin	6.08	343	eP	Pn	19 19 59.0	+1.0
SANI	Sanana	6.34	186	P	Pn	19 19 58.4	-3.1
	246nm,0.7s,8μm1.2nm						
LUWI	Luwuk	6.58	216	P	Pn	19 20 05.3	+0.5
LUWI	Luwuk	6.58	216	ePn	Pn	19 20 06.9	+2.1
SIJI	Sorong	6.88	138	P	Pn	19 20 08.5	-0.4
	14nm,0.3s,baz=332,slow=13,SNR=39						
SIJI				S	Sn	19 21 24.1	-1.6
	11nm,0.3s,baz=172,slow=22,SNR=15						
OCLP	Ormoc	7.02	343	eP	Pn	19 20 11.8	+1.0
APSI	Ampana	7.21	224	P	Pn	19 20 15.2	+1.8
NLAI	Namlea	7.49	177	P	Pn	19 20 15.3	-2.0
	233nm,0.7s,7μm1.4nm						
MPSI	Mapaga	7.83	240	P	Pn	19 20 21.7	-0.1
MSAI	Masohi	7.91	163	P	Pn	19 20 35.8	+13
MYLDM	Lahad Datu	8.20	277	ePn	Pn	19 20 29.8	+3.0
RCP	Roxas	8.20	332	‖ eP	Pn	19 20 30.3	+3.3
PCI	Palu	8.56	233	P	Pn	19 20 32.3	+0.4
PCI	Palu	8.56	233	P	Pn	19 20 32.3	+0.4
FAKI	Fak Fak	9.07	142	ePn	Pn	19 20 39.0	+0.2
KDI	Kendari	9.14	206	P	Pn	19 20 38.2	-1.6
	136nm,0.7s,1μm0.5nm						
RKPI	Ransiki, Papua	9.46	127	P	Pn	19 20 47.1	+3.0
TTSI	Tana Toraja	10.00	223	P	Pn	19 20 52.0	+0.5
SPSI	Sidrap Palu	10.72	220	P	Pn	19 21 01.5	+0.2
	32nm,0.8s,346nm						
BAKI	Biak	10.88	120	P	Pn	19 21 05.7	+2.1
TGY	Tagaytay City	11.27	330	LR	LR	19 25 44.6	
	comp=Z,239nm,20.5s,baz=117,slow=39						
SRPI	Serui, Papua	11.35	122	P	Pn	19 21 15.0	+5.1
BKSI	Bulukumba	11.58	214	P	Pn	19 21 12.6	-0.3
MTKI	Muara Teweh, K	12.87	246	P	Pn	19 21 32.7	+2.3
	47nm,0.6s						
MMRI	Maumere	13.58	199	P	P	19 21 53.2	+7.4
MMRI	Maumere	13.58	199	ePn	Pn	19 21 37.4	-2.4
EDFI	Ende, Flores	13.88	201	P	Pn	19 21 45.2	+1.5
	57nm,0.8s						
SOEI	Soe	14.16	190	P	Pn	19 21 47.2	-0.2
SOEI	Soe	14.16	190	eP	Pn	19 21 48.0	+0.6
SBUM	Sibu	14.54	263	ePn	P	19 21 54.8	-1.7
BATI	Baumata	14.71	192	P	Pn	19 21 54.7	+0.2
	14nm,0.3s,baz=347,slow=1.3,SNR=29						
BATI	Baumata	14.71	192	P	P	19 21 57.5	-0.9
GENI	Genyem	15.12	117	P	Pn	19 22 02.2	+2.5
	70nm,0.9s						
JAY	Jayapura	15.56	115	P	Pn	19 22 05.2	-0.2
	0.3nm,0.3s,baz=287,slow=2.9,SNR=3.3						
WBSI	Waikabubak, Su	15.63	208	P	Pn	19 22 05.9	-0.3
	224nm,0.8s,2μm						
STKI	Sintang	15.75	255	P	P	19 22 10.4	+0.4
PLAI	Plampang	15.77	214	P	Pn	19 22 08.1	+0.3
	131nm,1.0s						
TWSI	Taliwang, Sumb	16.21	217	P	P	19 22 14.7	-0.3
	62nm,0.8s,1μm						
PBKI	Pangkalan Bun	16.53	245	P	P	19 22 20.8	+2.3
	103nm,0.9s			

UBPT	**Khong Chiam**	**23.55 299**	P		**P**	**19 23 32.2**	**-1.4**
	40nm,1.1s						
COEN	**Coen**	**24.43 138**	*e*P		**P**	**19 23 39.2**	**-2.3**
	24nm,1.1s						
PMG	**Port Moresby**	**24.53 124**	LR		LR	19 34 09.7	
	comp=Z,52nm,18.5s,baz=334,slow=38						
WRAB	**Tennant Creek**	**25.23 163**	*e*P		**P**	**19 23 48.4**	**-0.4**
	88nm,0.9s						
WRAB	**Tennant Creek**	**25.23 163**	*ce*P		**P**	**19 23 48.1**	**-0.7**
WRAB			pmax		pmax		
	comp=Z,138nm,1.2s						
WRA	**Warramunga Arr**	**25.23 163**	P		**P**	**19 23 48.1**	**-0.7**
	comp=Z,66nm,0.9s,baz=343,slow=10,SNR=213						
WRA			S		**S**	**19 28 11.7**	**+3.3**
	comp=Z,1.6nm,0.8s,baz=333,slow=19,SNR=4.0						
WB2	**Warramunga Arr**	**25.24 163**	*e*P		**P**	**19 23 46.8**	**-2.1**
MASI	**Maura Aman, Be**	**25.51 254**	P		P	19 24 05.1	+14
MBWA	**Marble Bar**	**26.19 195**	*e*P		**P**	**19 23 57.2**	**-0.2**
	comp=Z,52nm,0.8s						
CHAI	**Chaiyaphum**	**26.86 297**	P		**P**	**19 24 03.2**	**-0.4**
PSI	**Prapat**	**27.74 268**	LR		LR	19 35 55.9	
	comp=Z,76nm,20.7s,baz=90,slow=38						
PBKT	**Sadao Pong**	**28.02 298**	*e*P		**P**	**19 24 12.6**	**-1.4**
	comp=Z,12nm,1.2s						
AS31	**Alice Springs**	**28.67 166**	*e*P		**P**	**19 24 19.5**	**-0.1**
	comp=Z,3.5nm,0.6s						
ASAR	**Alice Springs**	**28.67 166**	P		**P**	**19 24 19.2**	**-0.4**
	comp=Z,2.0nm,0.6s,baz=344,slow=6.8,SNR=42						
ASAR			S		**S**	**19 29 03.1**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=346,slow=20,SNR=2.9						
ASAR			ScP		**ScP**	**19 31 03.8**	**+1.3**
	comp=Z,1.4nm,1.0s,baz=347,slow=3.8,SNR=4.8						
AS01	**Alice Springs**	**28.68 166**	*e*P		**P**	**19 24 19.1**	**-0.6**
JNU	**Nakatsue**	**28.95 7**	P		**P**	**19 24 20.6**	**-1.4**
	comp=Z,4.9nm,0.7s,baz=198,slow=3.2,SNR=3.9						
JNU			LR		LR	19 34 54.3	
	comp=Z,47nm,21.9s,baz=125,slow=34						
JNU	**Nakatsue**	**28.95 7**	*e*P		**P**	**19 24 20.9**	**-1.2**
	comp=Z,25nm,1.2s						
GSI	**Gunungsitoli**	**29.21 265**	*e*P		**P**	**19 24 23.1**	**-1.5**
	comp=Z,17nm,0.8s						
CM01	**Chiang Mai Arr**	**30.52 300**	*e*P		**P**	**19 24 36.3**	**+0.3**
CMAR	**Chiang Mai Arr**	**30.55 300**	P		**P**	**19 24 36.8**	**+0.5**
	comp=Z,4.1nm,0.8s,baz=110,slow=6.8,SNR=22						
CMAR			ScP		**ScP**	**19 31 09.0**	**+0.4**
	comp=Z,1.9nm,1.1s,baz=153,slow=0.8,SNR=4.8						
CMAR			LR		LR	19 37 30.2	
	comp=Z,30nm,19.2s,baz=129,slow=38						
CHTO	**Chiang Mai**	**30.69 300**	*e*P		**P**	**19 24 37.8**	**+0.2**
	comp=Z,11nm,1.1s						
CHTO			*ep*P		**pP**	**19 24 50.0**	**-7.2**
CHTO	**Chiang Mai**	**30.69 300**	*e*P		**P**	**19 24 37.8**	**+0.2**
CHTO			pmax		pmax		
	comp=Z,11nm,1.1s						
CTA	**Charters Tower**	**30.94 142**	P		**P**	**19 24 41.2**	**+1.5**
	comp=Z,3.7nm,0.7s,baz=306,slow=8.7,SNR=4.3						
KSAR	**Wonju Array Be**	**33.01 2**	P		**P**	**19 24 57.8**	**+0.1**
KSAR	**Wonju Array Be**	**33.01 2**	P		**P**	**19 24 57.8**	**+0.1**
KSRS	**Korea Array**	**33.02 2**	P		**P**	**19 24 57.8**	**0.0**
	comp=Z,1.0nm,0.3s,baz=181,slow=10,SNR=9.2						
KSRS			LR		LR	19 37 12.8	
	comp=Z,38nm,21.9s,baz=177,slow=34						
MJAR	**Matsushiro Arr**	**33.80 17**	P		**P**	**19 25 03.2**	**-1.5**
	comp=Z,0.8nm,0.5s,baz=190,slow=11,SNR=3.5						
MJAR			LR		LR	19 37 34.5	
	comp=Z,28nm,21.8s,baz=195,slow=34						
XAN	**Xi'an**	**33.89 333**	P		**P**	**19 25 04.3**	**-1.2**
XAN			pmax		pmax		
	comp=Z,15nm,0.8s						
XAN			pmax		pmax		
	comp=Z,99nm,3.6s						
HNR	**Honiara**	**35.85 112**	LR		LR	19 39 47.8	
	comp=Z,7.9nm,18.2s,baz=100,slow=36						
BJT	**Baijiatuau**	**36.81 346**	*e*P		**P**	**19 25 31.1**	**+0.7**
	comp=Z,24nm,0.7s						
BJT	**Baijiatuau**	**36.81 346**	*e*P		**P**	**19 25 31.1**	**+0.7**
BJT			pmax		pmax		
	comp=Z,24nm,0.7s						
EIDS	**Eidsvold**	**37.83 142**	*e*P		**P**	**19 25 40.5**	**+1.4**
	comp=Z,9.2nm,0.9s						
LZH	**Lanzhou**	**37.99 329**	*e*P		**P**	**19 25 40.8**	**+0.1**
LZH			pP		pP	19 25 49.5	-11
LZH			sP		sP	19 25 54.4	-16
LZH			pmax		pmax		
	comp=Z,21nm,1.0s						
NWAO	**Narrogin (SRO)**	**38.08 193**	P		**P**	**19 25 41.2**	**0.0**
	comp=Z,15nm,0.6s,baz=252,slow=7.7,SNR=15						
STKA	**Stephens Creek**	**38.67 159**	P		**P**	**19 25 45.8**	**-0.3**
	comp=Z,11nm,0.7s,baz=335,slow=7.9,SNR=20						
STKA			S		**S**	**19 31 38.8**	**+2.0**
	comp=Z,2.6nm,1.0s,baz=156,slow=3.0,SNR=2.9						
STKA	**Stephens Creek**	**38.67 159**	*e*P		**P**	**19 25 47.1**	**+1.0**
	comp=Z,3.7nm,0.8s						
STKA			S		**S**	**19 31 38.8**	**+2.0**
STKA	**Stephens Creek**	**38.67 159**	*e*P		**P**	**19 25 47.2**	**+1.0**
STKA			S		**S**	**19 31 38.8**	**+2.0**
STKA			pmax		pmax		
	comp=Z,4.0nm,0.8s						
SHL	**Shillong**	**39.50 306**	*e*P		**P**	**19 25 50.0**	**-3.5**
USRK	**Ussuriysk Ar.**	**40.02 6**	P		**P**	**19 25 57.0**	**-0.2**
	comp=Z,1.5nm,0.6s,baz=133,slow=6.6,SNR=5.0						
USRK			LR		LR	19 43 32.2	
	comp=Z,29nm,20.4s,baz=171,slow=38						
H11S3	**WAKE ISLAND Hy 41.56 67**		T		T	20 09 49.4	
	baz=253,slow=74,SNR=9.4						
H11S1	**WAKE ISLAND Hy 41.58 67**		T		T	20 09 52.7	
	baz=253,slow=74,SNR=5.4						
H11S2	**WAKE ISLAND Hy 41.58 67**		T		T	20 09 53.9	
	baz=253,slow=74,SNR=8.2						
LSA	**Lhasa**	**42.03 311**	*e*P		**P**	**19 26 14.9**	**+0.4**
	comp=Z,3.9nm,0.6s						
LSA	**Lhasa**	**42.03 311**	*e*P		**P**	**19 26 14.9**	**+0.4**
LSA			pmax		pmax		
	comp=Z,4.0nm,0.6s						
ASAJ	**Asahikawa**	**42.08 17**	P		**P**	**19 26 14.3**	**+0.2**
	comp=Z,3.6nm,0.4s,baz=215,slow=12,SNR=7.8						
ASAJ			LR		LR	19 45 36.7	
	comp=Z,28nm,19.0s,baz=162,slow=39						
GTA	**Gaotai**	**42.59 329**	P		**P**	**19 26 17.3**	**-1.2**
GTA			pP		pP	19 26 25.3	-14
GTA			sP		sP	19 26 29.3	-19
GTA			pmax		pmax		
	comp=Z,3.0nm,1.3s						
ODAN	**Odare**	**43.70 305**	*e*P		**P**	**19 26 27.1**	**-0.7**
	comp=Z,24nm,0.7s						
RAMN	**Ramite**	**44.38 305**	*e*P		**P**	**19 26 32.5**	**-0.8**
	comp=Z,14nm,0.8s						
KLR	**Kul'dur**	**44.98 5**	*de*P		**P**	**19 26 37.0**	**-0.4**
JIRN	**Jiri**	**45.00 305**	*e*P		**P**	**19 26 37.7**	**-0.6**
	comp=Z,13nm,0.3s						
GUN	**Gumba**	**45.35 306**	*e*P		**P**	**19 26 40.3**	**-0.8**
	comp=Z,19nm,0.5s						
PKIN	**Phulchoki**	**45.62 305**	*e*P		**P**	**19 26 41.9**	**-1.2**
	comp=Z,2.6nm,0.4s						
KKN	**Kakani**	**45.79 305**	*e*P		**P**	**19 26 43.2**	**-1.2**
	comp=Z,5.3nm,0.4s						
DMN	**Daman**	**45.87 305**	*e*P		**P**	**19 26 44.2**	**-0.8**
GKN	**Gorkha**	**46.40 305**	*e*P		**P**	**19 26 47.8**	**-1.3**
	comp=Z,3.2nm,0.3s						
ULN	**Ulaanbaatar**	**46.57 342**	*e*P		**P**	**19 26 50.4**	**+0.3**
	comp=Z,5.8nm,0.9s						
ULN	**Ulaanbaatar**	**46.57 342**	*de*P		**P**	**19 26 50.0**	**-0.1**
ULN			pmax		pmax		
	comp=Z,4.0nm,1.0s						
SONM	**Songino Array**	**46.75 341**	P		**P**	**19 26 51.7**	**+0.3**
	comp=Z,1.6nm,0.4s,baz=163,slow=8.2,SNR=18						
SONM			PcP		**PcP**	**19 28 23.7**	**+0.1**
	comp=Z,1.8nm,0.8s,baz=166,slow=3.8,SNR=3.7						
SONM			LR		LR	19 46 43.9	
	comp=Z,44nm,18.8s,baz=144,slow=36						
SONA1	**Songino Array**	**46.76 341**	*e*P		**P**	**19 26 51.1**	**-0.5**
DZM	**Mont Dzumac**	**46.90 126**	P		**P**	**19 26 53.3**	**+0.3**
	comp=Z,25nm,1.0s,baz=117,slow=11,SNR=7.3						
DZM			LR		LR	19 45 53.3	
	comp=Z,29nm,18.3s,baz=118,slow=35						
KOLN	**Koldanda**	**47.16 304**	*e*P		**P**	**19 26 54.5**	**-0.6**
	comp=Z,19nm,0.4s						
DANN	**Dangsing**	**47.25 305**	*e*P		**P**	**19 26 55.0**	**-0.9**
	comp=Z,48nm,0.7s						
PYUN	**Piuthan**	**47.78 305**	*e*P		**P**	**19 26 59.4**	**-0.5**
	comp=Z,174nm,1.2s						
ZEA	**Zeya**	**49.29 0**	*e*P		**P**	**19 27 10.7**	**-0.1**
ZEA			pmax		pmax		
	comp=Z,12nm,1.0s						
TLY	**Talaya**	**50.98 342**	*e*P		**P**	**19 27 24.8**	**+1.1**
	comp=Z,5.9nm,0.8s						
TLY	**Talaya**	**50.98 342**	*e*P		**P**	**19 27 24.7**	**+1.1**
TLY			pmax		pmax		
	comp=Z,7.0nm,1.7s						
MOY	**Mondy**	**51.84 340**	*e*P		**P**	**19 27 31.3**	**+1.1**
HVS	**Khovu-Aksy**	**54.21 335⇑**	*e*P		**P**	**19 27 48.3**	**+0.7**
HVS			pmax		pmax		
	comp=Z,10.0nm,0.9s						
PETK	**Petropavlovsk-**	**54.93 22**	P		**P**	**19 27 52.9**	**+0.3**
	comp=Z,5.8nm,0.7s,baz=192,slow=3.8,SNR=17						
PETK			LR		LR	19 51 52.7	
	comp=Z,9.7nm,19.9s,baz=243,slow=36						
PETK	**Petropavlovsk-**	**54.93 22**	*e*P		**P**	**19 27 53.0**	**+0.3**
PETK	**Petropavlovsk-**	**54.93 22**	*e*P		**P**	**19 27 53.0**	**+0.3**
DGZ	**Jazzator, Alta**	**56.08 330**	*e*P		**P**	**19 28 01.1**	**-0.1**
DGZ			pmax		pmax		
	comp=Z,1.0nm,0.9s						
MK01	**Makanchi Array**	**57.05 325**	*e*P		**P**	**19 28 07.1**	**-0.8**
MK31	**Makanchi Array**	**57.07 325**	*e*P		**P**	**19 28 07.3**	**-0.7**
MK31	**Makanchi Array**	**57.07 325**	*e*P		**P**	**19 28 07.4**	**-0.7**
MKAR	**Makanchi Array**	**57.07 325**	P		**P**	**19 28 07.3**	**-0.7**
	comp=Z,3.8nm,0.5s,baz=119,slow=7.7,SNR=88						
MKAR			ScP		**ScP**	**19 32 58.8**	**+4.5**
	comp=Z,0.7nm,0.7s,baz=106,slow=5.8,SNR=4.3						
MKAR	**Makanchi Array**	**57.07 325**	*e*P		**P**	**19 28 07.3**	**-0.7**
	comp=Z,49nm,1.1s						
MKAR			ScP		**ScP**	**19 32 58.8**	**+4.5**
MKAR	**Makanchi Array**	**57.07 325**	*e*P		**P**	**19 28 07.4**	**-0.7**
MKAR			pmax		pmax		
	comp=Z,49nm,1.1s						
MAKZ	**Makanchi**	**57.25 325**	*e*P		**P**	**19 28 08.8**	**-0.6**
	comp=Z,12nm,1.1s						
MAKZ	**Makanchi**	**57.25 325**	*e*P		**P**	**19 28 08.8**	**-0.6**
MAKZ			pmax		pmax		
	comp=Z,12nm,1.1s						
YAK	**Yakutsk**	**57.65 2**	*e*P		**P**	**19 28 11.2**	**-0.6**
	comp=Z,43nm,0.7s						
YAK	**Yakutsk**	**57.65 2**	*d i*P		**P**	**19 28 11.6**	**-0.2**
YAK			*e**PP		**pP**	**19 28 34.7**	**+1.6**
YAK			*e*			19 28 59.0	
YAK			*e*			19 30 16.4	
YAK			*e*S		**S**	**19 36 09.6**	**+6.1**
YAK			*e*			19 37 53.1	
YAK			pmax		pmax		
	comp=Z,34nm,0.9s						
YAK			pmax		pmax		
	comp=N,10.0nm,1.1s						
YAK			pmax		pmax		
	comp=E,2.0nm,1.1s						
YAK			pmax		pmax		
	comp=Z,90nm,3.7s						
YAK			pmax		pmax		
	comp=N,42nm,3.8s						
YAK			pmax		pmax		
	comp=E,51nm,3.8s						
YAK			smax		smax		
	comp=E,49nm,3.4s						
YAK			smax		smax		
	comp=N,31nm,3.3s						
MA2	**Magadan**	**58.18 14**	LR		LR	19 50 05.4	
	comp=N,22nm,21.9s,baz=211,slow=33						
AAK	**Ala-Archa**	**59.91 318⇑**	*e*P		**P**	**19 28 27.3**	**-0.8**
AAK			pmax		pmax		
	comp=Z,2.0nm,1.1s						
ZAA0	**Zalesovo Array**	**60.07 333**	*e*P		**P**	**19 28 27.5**	**-1.2**
	comp=Z,4.1nm,1.0s						
ZALV	**Zalesovo Beam**	**60.07 333**	P		**P**	**19 28 27.3**	**-1.4**
	comp=Z,1.4nm,0.3s,baz=121,slow=6.6,SNR=9.7						
ZALV	**Zalesovo Beam**	**60.07 333**	*e*P		**P**	**19 28 27.1**	**-1.6**
ZALV	**Zalesovo Beam**	**60.07 333**	*e*P		**P**	**19 28 27.1**	**-1.6**
KURBB	**Kurchatov Arra**	**61.24 327**	P		**P**	**19 28 36.0**	**-0.7**
	comp=Z,6.1nm,0.5s,baz=128,slow=6.0,SNR=83						
KURK	**Kurchatov**	**61.24 327**	*e*P		**P**	**19 28 36.0**	**-0.7**
	comp=Z,13nm,0.6s						
KURK	**Kurchatov**	**61.24 327**	P		**P**	**19 28 35.8**	**-0.9**
KURK			pmax		pmax		
	comp=Z,12nm,0.8s						
NVS	**Novosibirsk**	**61.35 333**	*e*P		**P**	**19 28 36.9**	**-0.5**
SEY	**Seymchan**	**61.50 13⇑**	*e*P		**P**	**19 28 39.5**	**+1.3**
KK31	**Karatay Array**	**62.79 317**	*e*P		**P**	**19 28 47.1**	**-0.1**
KK31	**Karatay Array**	**62.79 317**	*e*P		**P**	**19 28 47.2**	**-0.1**
KKAR	**Karatay Array**	**62.79 317**	*e*P		**P**	**19 28 47.1**	**-0.1**
KKAR	**Karatay Array**	**62.79 317**	*e*P		**P**	**19 28 47.2**	**-0.1**
BVA0	**Borovoye Array**	**66.82 327**	*i* P		**P**	**19 29 13.0**	**-0.3**
BVA0			pmax		pmax		
	comp=Z,5.0nm,0.8s						
BVAR	**Borovoye Array**	**66.82 327**	P		**P**	**19 29 13.0**	**-0.3**
	comp=Z,5.0nm,0.6s,baz=138,slow=9.1,SNR=24						
BVAR	**Borovoye Array**	**66.82 327**	P		**P**	**19 29 13.0**	**-0.3**
BRVK	**Borovoye**	**66.89 327**	*d i*P		**P**	**19 29 13.2**	**-0.5**
BRVK			pmax		pmax		
	comp=Z,12nm,1.0s						
BRVK			MLR		MLR		
	comp=Z,24nm,17.0s						
TIXI	**Tiksi**	**67.28 1**	*e*P		**P**	**19 29 15.2**	**-0.7**
	comp=Z,11nm,1.0s						
TIXI	**Tiksi**	**67.28 1**	*d i*P		**P**	**19 29 15.3**	**-0.5**
TIXI			pmax		pmax		
	comp=Z,5.0nm,1.2s						
BILL	**Bilibino**	**69.03 15⇓**	*e*P		**P**	**19 29 27.1**	**+0.3**
BILL			pmax		pmax		
	comp=Z,2.0nm,1.2s						
NRIK	**Noril'sk**	**69.88 346**	P		**P**	**19 29 31.9**	**-0.1**
	comp=Z,5.1nm,0.5s,baz=128,slow=4.5,SNR=5.2						
NRIK			LR		LR	20 02 32.0	
	comp=Z,32nm,18.7s,baz=142,slow=38						
AB31	**Akbulak array**	**71.68 321**	*i* P		**P**	**19 29 42.1**	**-1.3**
AB31			pmax		pmax		
	comp=Z,3.0nm,0.6s						
AKTO	**Aktyubinsk**	**73.19 322**	P		**P**	**19 29 50.9**	**-1.4**
	comp=Z,3.2nm,0.4s,baz=100,slow=8.7,SNR=12						
AKTO	**Aktyubinsk**	**73.19 322**	P		**P**	**19 29 51.4**	**-0.9**
AKTO			pmax		pmax		
	comp=Z,3.0nm,0.5s						
SVE	**Sverdlovsk**	**73.46 328**	*e*P		**P**	**19 29 52.6**	**-1.1**
SVE			pmax		pmax		
	comp=Z,12nm,1.1s						
ARU	**Arti**	**74.44 328**	P		**P**	**19 29 57.6**	**-1.9**
	comp=Z,3.0nm,0.3s,baz=69,slow=1.7,SNR=12						
ARU	**Arti**	**74.44 328**	*e*P		**P**	**19 29 58.9**	**-0.6**
	comp=Z,7.4nm,0.8s						
ARU	**Arti**	**74.44 328**	*d i*P		**P**	**19 29 58.0**	**-1.5**
ARU						19 32 45.8	
ARU			S		**S**	**19 39 31.4**	**+4.0**
ARU			SS		**SS**	**19 44 14.6**	**-0.7**
ARU			pmax		pmax		
	comp=Z,10.0nm,1.0s						
SVW2	**Sparrevohn**	**80.34 29**	*e*P		**P**	**19 30 32.5**	**+0.1**
	comp=Z,8.8nm,1.0s						
OPO	**Ambohidratompo**	**81.43 251**	LR		LR	20 03 49.2	
	comp=Z,278nm,18.8s,baz=342,slow=33						
KDAK	**Kodiak Island**	**81.45 32**	*ce*P		**P**	**19 30 38.5**	**+0.3**
PRGR	**Permogore**	**81.99 332**	*e*P		**P**	**19 30 40.0**	**-1.0**
PRGR			pmax		pmax		
	comp=Z,15nm,0.6s						
CAST	**Castle Rocks**	**82.26 27**	*e*P		**P**	**19 30 43.3**	**+0.8**
	comp=Z,9.7nm,1.0s						
KIV	**Kislovodsk**	**82.71 314**	*e*P		**P**	**19 30 44.8**	**-0.6**
KIV			pmax		pmax		
	comp=Z,4.0nm,1.0s						
BPAW	**Bear Paw Mtn.**	**82.81 26**	*e*P		**P**	**19 30 46.1**	**+0.8**
	comp=Z,12nm,1.0s						
MLY	**Manley**	**83.00 25**	*e*P		**P**	**19 30 43.8**	**-2.5**
	comp=Z,10nm,1.0s						
TRF	**Thorofare Moun**	**83.07 27**	*e*P		**P**	**19 30 47.0**	**+0.2**
	comp=Z,8.9nm,1.0s						
MCK	**McKinley**	**83.69 26**	*e*P		**P**	**19 30 50.2**	**+0.3**
	comp=Z,18nm,1.2s						
RND	**Reindeer**	**83.71 27**	*e*P		**P**	**19 30 49.9**	**-0.1**
	comp=Z,8.2nm,1.0s						
RND	**Reindeer**	**83.71 27**	*e*P		**P**	**19 30 49.9**	**-0.1**
RND			pmax		pmax		
	comp=Z,8.0nm,1.0s						
TOLK	**Toolik Lake Re**	**83.75 21**	*e*P		**P**	**19 30 50.9**	**+0.8**
	comp=Z,12nm,1.0s						
VNDA	**Vanda**	**83.99 173**	P		**P**	**19 30 49.9**	**-1.1**
	comp=Z,1.0nm,1.0s,baz=336,slow=6.7,SNR=4.8						
MDM	**Murphy Dome**	**84.06 25**	*e*P		**P**	**19 30 51.8**	**0.0**
	comp=Z,3.8nm,1.0s						
WRH	**Wood River Hil**	**84.09 26**	*e*P		**P**	**19 30 51.8**	**-0.1**
	comp=Z,6.9nm,1.1s						
CCB	**Clear Creek Bu**	**84.22 26**	*e*P		**P**	**19 30 52.3**	**-0.2**
	comp=Z,6.6nm,1.1s						
SCM	**Sheep Creek Mo**	**84.35 28**	*e*P		**P**	**19 30 54.0**	**+0.7**
	comp=Z,22nm,1.3s						
SCM	**Sheep Creek Mo**	**84.35 28**	*e*P		**P**	**19 30 54.0**	**+0.7**
SCM			pmax		pmax		
	comp=Z,22nm,1.3s						
IL1	**Eielson Array**	**84.62 25**	*e*P		**P**	**19 30 53.1**	**-1.5**
IL1			*ep*P		PcP	19 31 07.8	+10
ILAR	**Eielson Array**	**84.62 25**	P		**P**	**19 30 54.1**	**-0.4**
	comp=Z,1.7nm,0.8s,baz=246,slow=5.8,SNR=16						
KLMR	**Klimovskoe**	**84.89 331**	*e*P		**P**	**19 30 53.5**	**-2.4**
KLMR			pmax		pmax		
	comp=Z,21nm,0.8s						
KLMR	**Klimovskoe**	**84.89 331**	*e*P		**P**	**19 30 53.6**	**-2.4**
KLMR			AMP			19 30 56.1	
	comp=Z,21nm,0.8s						
VORD	**Divnogorie**	**85.04 321**	*e*P		**P**	**19 30 56.0**	**-0.9**
VORD			pmax		pmax		
	comp=Z,4.0nm,0.5s						
DIV	**Divide**	**85.09 29**	*e*P		**P**	**19 30 58.2**	**+1.2**
	comp=Z,15nm,1.0s						
VSR	**Storozhevoye**	**85.12 321**	*e*P		**P**	**19 30 56.0**	**-1.3**
VSR			pmax		pmax		
	comp=Z,7.0nm,0.5s						
RIDG	**Independ'e Rid**	**85.51 26**	*e*P		**P**	**19 30 60.0**	**+0.9**
	comp=Z,6.1nm,1.1s						
BMRM	**Bremner River**	**85.66 29**	*e*P		**P**	**19 31 01.0**	**+1.1**
	comp=Z,8.2nm,1.0s						
OBN	**Obninsk**	**86.57 325⇓**	*e*P		**P**	**19 31 04.1**	**-0.3**
OBN			pmax		pmax		
	comp=Z,42nm,1.7s						
BRTR	**Keskin Array B**	**89.62 310**	P		**P**	**19 31 18.7**	**-0.8**
	comp=Z,0.8nm,0.9s,baz=100,slow=3.7,SNR=4.1						
INK	**Inuvik**	**89.66 21**	*e*P		**P**	**19 31 18.5**	**-0.3**
	comp=Z,4.7nm,1.2s						
INK	**Inuvik**	**89.66 21**	*e*P		**P**	**19 31 18.5**	**-0.3**
INK			pmax		pmax		
	comp=Z,5.0nm,1.2s						
ARCES	**ARCESS Array B**	**89.91 340**	P		**P**	**19 31 19.2**	**-0.8**
	comp=Z,2.0nm,0.6s,baz=74,slow=6.7,SNR=4.5						
SPITS	**Spitsbergen Ar**	**89.92 349**	P		**P**	**19 31 18.7**	**-1.2**
	comp=Z,1.5nm,0.7s,baz=99,slow=8.9,SNR=3.8						
FINES	**FINESS Array B**	**91.31 332**	P		**P**	**19 31 25.8**	**-0.8**
	comp=Z,0.5nm,0.4s,baz=97,slow=4.8,SNR=7.8						
AKASG	**Malin Array Be**	**91.42 321**	P		**P**	**19 31 26.1**	**-1.3**
	comp=Z,1.5nm,0.6s,baz=68,slow=5.0,SNR=8.2						
TESR	**Tescani**	**93.79 317⇑**	*i*P		**P**	**19 31 36.9**	**-1.5**
VRI	**Vrincioaia**	**93.85 316⇑**	*i*P		**P**	**19 31 38.7**	**0.0**
VRI	**Vrincioaia**	**93.85 316⇑**	P		**P**	**19 31 38.7**	**0.0**
PLOR	**Plostina**	**93.91 316⇑**	*i*P		**P**	**19 31 38.8**	**-0.2**
PLOR	**Plostina**	**93.91 316⇑**	P		**P**	**19 31 38.8**	**-0.2**
MLR	**Muntele Rosu**	**94.46 316**	P		**P**	**19 31 41.2**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=258,slow=2.7,SNR=9.2						
MLR	**Muntele Rosu**	**94.46 316⇑**	*i*P		**P**	**19 31 41.2**	**-0.5**
BURAR	**Bucovina Array**	**94.55 318⇓**	*i*P		**P**	**19 31 41.9**	**-0.1**
BURAR	**Bucovina Array**	**94.55 318**	⇓P		**P**	**19 31 41.9**	**-0.1**
BUR04	**Bucovina Ar. S**	**94.55 318**	*e*P		**P**	**19 31 41.5**	**-0.5**
BUR08	**Bucovina Ar. S**	**94.55 318**	*e*P		**P**	**19 31 41.9**	**-0.1**
CRVS	**Cervenica-Dubn**	**96.71 320**	*e*P		**P**	**19 31 52.1**	**+0.4**
CRVS			pmax		pmax		
	comp=Z,5.0nm,1.2s						
CRVS	**Cervenica-Dubn**	**96.71 320**	*e*P		**P**	**19 31 52.1**	**+0.4**
NB2	**NORSAR Subarra**	**98.26 334**	P		**P**	**19 31 56.6**	**-1.9**
	comp=Z,0.3nm,0.6s,baz=68,slow=5.1						
NOA	**NORSAR Array B**	**98.26 334**	P		**P**	**19 31 57.5**	**-0.9**
YKA	**Yellowknife Ar**	**99.01 24**	P		**Pdif**	**19 32 00.6**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=308,slow=5.2,SNR=2.8						
CLL	**Collm**	**101.16 324**	*e*PP		PP	19 36 21.0	+0.2
CLL			*e*PKiKP		**PKiKP**	**19 36 35.0**	**-1.0**
GERES	**GERESS Array B**	**101.61 322**	P		**Pdif**	**19 32 13.3**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=36,slow=5.1,SNR=2.3						
MNTX	**Cornudas Mount**	**118.93 50**	*e*PKPdf		**PKPdf**	**19 37 11.6**	**+1.5**
TXAR	**Lajitas Array**	**121.30 52**	PKP		**PKPdf**	**19 37 15.7**	**+0.9**
	comp=Z,0.7nm,0.7s,baz=246,slow=2.2,SNR=10						
TOA0	**Torodi Ar. Sit**	**122.69 288**	*e*PKPdf		**PKPdf**	**19 37 17.6**	**0.0**
TORD	**Torodi Ar. Bea**	**122.69 288**	PKP		**PKPdf**	**19 37 17.4**	**-0.3**
	comp=Z,1.2nm,0.6s,baz=27,slow=2.3,SNR=7.6						
JCT	**Junction City**	**123.73 49**	*e*PKPdf		**PKPdf**	**19 37 20.5**	**+1.2**
JCT	**Junction City**	**123.73 49**	*e*PKIKP		**PKPdf**	**19 37 20.5**	**+1.2**
S39A	**Bolivar**	**124.11 38**	*e*PKPdf		**PKPdf**	**19 37 20.2**	**+0.4**
R40A	**Maddies Statio**	**124.36 37**	*e*PKPdf		**PKPdf**	**19 37 20.8**	**+0.5**
V40A	**Witts Springs**	**125.61 39**	*e*PKPdf		**PKPdf**	**19 37 23.6**	**+0.8**
JTS	**JuntasAbangare**	**145.33 65**	PKPbc		**PKPab**	**19 38 00.9**	**+0.9**
	comp=Z,11nm,0.8s,baz=339,slow=8.6,SNR=8.8						

IDC ***20*** *19:22:32.4±1.2, 36°.34N×30°.64E, h0km, mb3.6/5, mb1 3.6/10, mb1mx3.4/62, mbtmp3.5/10, ML3.3/4, MS2.4/1, Ms1 2.4/1, ms1mx1.8/57, Error ellipse: s-maj=24.8km s-min=18.8km az=22.0*

DDA ***20*** *19:22:35.5, 36°.07N×30°.52E, h43km, Ml4.0*

GII ***20

ISP			S	Sb	19 23 28.2	-0.7
TURN	**Turunc**	**1.73 297**	PN	**Pb**	19 23 08.7	+1.1
TURN	**Turunc**	**1.73 297**	*i* P	**Pb**	19 23 09.2	+1.6
TURN			*i* S	**Sb**	19 23 32.1	+3.1
TURN	**Turunc**	**1.73 297**	*e*Pn	**Pb**	19 23 08.7	+1.1
TURN	**Turunc**	**1.73 297**	P	**Pb**	19 23 09.2	+1.6
AKMC	**Akamas**	**1.81 125**	P	**Pb**	19 23 07.9	-1.1
baz=317						
AKMC	**Akamas**	**1.81 125**	P	**Pb**	**19 23 07.9**	**-1.1**
TAVA	**DENIZLI_Tavas**	**1.89 317**	⇓*i*P	**Pn**	**19 23 07.9**	**+1.5**
TAVA			*i* S	**Sn**	19 23 30.6	+1.5
TAVA	**DENIZLI_Tavas**	**1.89 317**	P	**Pn**	**19 23 07.9**	**+1.5**
TAVA			S	**Sn**	19 23 30.6	+1.5
BAGO	**Egridir - ISPA**	**1.91 6**	*i* P	**Pn**	**19 23 08.7**	**+2.0**
BAGO			*i* S	**Sn**	19 23 32.0	+2.4
PPCY	**Paphos**	**1.91 129**	P	**Pb**	**19 23 09.7**	**-0.9**
baz=320						
PPCY	**Paphos**	**1.91 129**	P	**Pb**	**19 23 09.7**	**-0.9**
ALFC	**Alefka**	**1.93 118**	P	**Pn**	**19 23 08.4**	**+1.5**
baz=309						
ALFC			S	**Sn**	**19 23 32.5**	**+2.4**
ALFC	**Alefka**	**1.93 118**	P	**Pn**	19 23 08.4	+1.5
ALFC			S	**Sn**	**19 23 32.5**	**+2.4**
ARG	**Arkhangelos**	**1.95 274**	PN	**Pn**	19 23 09.3	+2.2
ARG	**Arkhangelos**	**1.95 274**	P	**Pn**	19 23 08.8	+1.6
ARG			S	**Sn**	19 23 29.8	-0.6
ARG			AML	AML	19 23 33.2	
comp=N,594μm,0.3s						
ARG			AML	AML	19 23 33.4	
comp=E,1192μm,0.3s						
ARG	**Arkhangelos**	**1.95 274**	P	**Pn**	**19 23 08.5**	**+1.4**
ARG			S	**Sn**	**19 23 31.9**	**+1.5**
ARG	**Arkhangelos**	**1.95 274**	P	**Pn**	19 23 08.5	+1.4
ARG	**Arkhangelos**	**1.95 274**	*e*Pn	**Pn**	19 23 09.3	+2.2
ARG			S	**Sn**	19 23 31.9	+1.5
MRSB	**Marmaris-Mugla**	**1.98 289**	PN	**Pn**	19 23 08.8	+1.2
MRSB	**Marmaris-Mugla**	**1.98 289**	*e*Pn	**Pn**	19 23 08.8	+1.2
BOZY	**Bozyazi-Mersin**	**1.98 89**	PN	**Pb**	19 23 10.4	-1.4
BOZY	**Bozyazi-Mersin**	**1.98 89**	*e*Pn	**Pb**	19 23 10.4	-1.4
DNZL	**Cakiroluk**	**1.99 324**	⇓*i*P	**Pn**	19 23 09.1	+1.2
DNZL			*i* S	**Sb**	19 23 35.4	-1.1
DNZL	**Cakiroluk**	**1.99 324**	P	**Pn**	19 23 09.1	+1.2
DNZL			S	**Sb**	19 23 35.4	-1.1
ERMK	**Ermenek**	**2.00 73**	*i* P	**Pn**	19 23 10.6	+2.5
ERMK			*i* S	**Sb**	19 23 35.6	-1.3
ERMK	**Ermenek**	**2.00 73**	P	**Pn**	19 23 10.6	+2.5
ERMK			S	**Sb**	19 23 35.6	-1.3
DENT	**Denizli**	**2.04 325**	PN	**Pn**	19 23 09.5	+1.0
DENT	**Denizli**	**2.04 325**	*e*Pn	**Pn**	19 23 09.5	+1.0
TEKE	**Tekeli-Mersin**	**2.10 88**	PN	**Pn**	19 23 11.7	+2.5
TEKE	**Tekeli-Mersin**	**2.10 88**	*e*Pn	**Pn**	19 23 11.7	+2.5
LEF	**Lefka**	**2.16 116**	PN	**Pn**	19 23 11.9	+1.9
LEF	**Lefka**	**2.16 116**	P	**Pn**	19 23 11.2	+1.2
LEF	**Lefka**	**2.16 116**	*e*Pn	**Pn**	19 23 11.9	+1.9
LEF			S	**Sn**	19 23 36.3	+0.7
KZIL	**AFYON_Kizioren**	**2.18 352**	*i* P	**Pn**	19 23 10.9	+0.4
KZIL	**AFYON_Kizioren**	**2.18 352**	P	**Pn**	19 23 10.9	+0.4
BERE	**Bereket-Mersin**	**2.19 83**	PN	**Pn**	19 23 12.9	+2.2
BERE	**Bereket-Mersin**	**2.19 83**	*e*Pn	**Pn**	19 23 12.9	+2.2
DOGA	**KONYA_Doganhis**	**2.21 24**	⇑*i*P	**Pn**	19 23 13.0	+2.1
DOGA			*i* S	**Sn**	19 23 38.8	+1.7
DOGA	**KONYA_Doganhis**	**2.21 24**	P	**Pn**	19 23 13.0	+2.1
DOGA			S	**Sn**	19 23 38.8	+1.7
KMER	**Konya-Meram**	**2.23 41**	*i* P	**Pn**	19 23 13.6	+2.4
KMER			*i* S	**Sn**	19 23 40.6	+3.0
KMER	**Konya-Meram**	**2.23 41**	P	**Pn**	19 23 13.6	+2.4
KMER			S	**Sn**	19 23 40.6	+3.0
SZAC	**Souni**	**2.34 124**	P	**Pn**	19 23 15.1	+2.5
baz=313						
SZAC			S	**Sn**	19 23 42.1	+1.9
SZAC	**Souni**	**2.34 124**	P	**Pn**	19 23 15.1	+2.5
SZAC			S	**Sn**	19 23 42.1	+1.9
KONT	**Konya--Tatoy**	**2.36 38**	PN	**Pn**	19 23 14.3	+1.4
KONT	**Konya--Tatoy**	**2.36 38**	*e*Pn	**Pn**	19 23 14.3	+1.4
KHL	**Karahalli**	**2.37 340**	PN	**Pn**	19 23 13.4	+0.4
KHL	**Karahalli**	**2.37 340**	*e*Pn	**Pn**	19 23 13.4	+0.4
OREN	**Orenkoy-Mersin**	**2.38 86**	PN	**Pn**	19 23 16.2	+3.2
OREN	**Orenkoy-Mersin**	**2.38 86**	*e*Pn	**Pn**	19 23 16.2	+3.2
MAMC	**Mammari**	**2.38 112**	P	**Pn**	19 23 15.0	+1.9
baz=301						
MAMC	**Mammari**	**2.38 112**	P	**Pn**	**19 23 15.0**	**+1.9**
TEVE	**Tevekalti-Mers**	**2.38 81**	PN	**Pn**	19 23 15.4	+2.2
TEVE	**Tevekalti-Mers**	**2.38 81**	*e*Pn	**Pn**	19 23 15.4	+2.2
DATC	**Datca-Mugla**	**2.41 287**	PN	**Pn**	19 23 14.8	+1.4
DATC	**Datca-Mugla**	**2.41 287**	*e*Pn	**Pn**	19 23 14.8	+1.4
AKK1	**Akkuyu-Mersin**	**2.44 88**	PN	**Pn**	19 23 16.7	+2.8
AKK1	**Akkuyu-Mersin**	**2.44 88**	*e*Pn	**Pn**	19 23 16.7	+2.8
AKK2	**Akkuyu-Mersin**	**2.45 88**	PN	**Pn**	19 23 16.5	+2.5
AKK2	**Akkuyu-Mersin**	**2.45 88**	*e*Pn	**Pn**	19 23 16.5	+2.5
AKKU	**Akkuyu-Mersin**	**2.45 88**	PN	**Pn**	19 23 16.9	+2.9
AKKU	**Akkuyu-Mersin**	**2.45 88**	*e*Pn	**Pn**	19 23 16.9	+2.9
DAT	**Datca**	**2.46 286**	PN	**Pn**	19 23 16.1	+1.8
DAT	**Datca**	**2.46 286**	*i* P	**Pn**	19 23 15.8	+1.5
DAT			*i* S	**Sn**	19 23 42.2	-1.1
DAT	**Datca**	**2.46 286**	P	**Pn**	19 23 15.8	+1.5
DAT	**Datca**	**2.46 286**	*e*Pn	**Pn**	19 23 16.1	+1.8
DAT			S	**Sn**	19 23 42.2	-1.1
MLSB	**Milas**	**2.52 299**	PN	**Pn**	19 23 17.3	+2.3
MLSB	**Milas**	**2.52 299**	*e*Pn	**Pn**	19 23 17.3	+2.3
YESI	**Yesilovacik-Me**	**2.52 87**	PN	**Pn**	19 23 17.8	+2.8
YESI	**Yesilovacik-Me**	**2.52 87**	*e*Pn	**Pn**	19 23 17.8	+2.8
CSS	**Mathiatis**	**2.55 115**	P	**Pn**	19 23 16.7	+1.2
baz=304						
CSS			S	**Sn**	19 23 46.6	+1.2
CSS	**Mathiatis**	**2.55 115**	P	**Pn**	19 23 16.5	+1.0
CSS			S	**Sn**	19 23 47.6	+2.2
CSS	**Mathiatis**	**2.55 115**	Pn	**Pn**	19 23 16.4	+1.0
CSS	**Mathiatis**	**2.55 115**	P	**Pn**	19 23 16.7	+1.2
CSS			S	**Sn**	19 23 47.6	+2.2
IKL	**Isikli**	**2.56 86**	PN	**Pn**	19 23 18.4	+2.8
IKL	**Isikli**	**2.56 86**	*e*Pn	**Pn**	19 23 18.4	+2.8
LADK	**Ladik-KONYA**	**2.56 34**	PN	**Pn**	19 23 17.3	+1.5
LADK	**Ladik-KONYA**	**2.56 34**	*e*Pn	**Pn**	19 23 17.3	+1.5
KEBE	**Keben-Mersin**	**2.60 81**	PN	**Pn**	19 23 19.1	+2.9
KEBE	**Keben-Mersin**	**2.60 81**	*e*Pn	**Pn**	19 23 19.1	+2.9
AYDN	**Tasoluk**	**2.64 307**	*i* P	**Pn**	19 23 17.9	+1.2
AYDN	**Tasoluk**	**2.64 307**	P	**Pn**	19 23 17.9	+1.2
BODT	**Bodrum**	**2.76 291**	PN	**Pn**	19 23 19.1	+0.7
BODT	**Bodrum**	**2.76 291**	P	**Pn**	19 23 19.0	+0.7
BODT			S	**Sn**	19 23 49.5	-1.1
BODT	**Bodrum**	**2.76 291**	*e*Pn	**Pn**	19 23 19.1	+0.7
BODT			S	**Sn**	19 23 49.5	-1.1
KARP	**Karpathos**	**2.79 260**	PN	**Pn**	19 23 21.8	+3.0
KARP	**Karpathos**	**2.79 260**	P	**Pn**	19 23 21.5	+2.8
KARP			S	**Sn**	19 23 52.3	+1.0
KARP			AML	AML	19 23 55.3	
comp=N,1418μm,0.2s						
KARP			AML	AML	19 23 56.0	
comp=E,1278μm,0.2s						
KARP	**Karpathos**	**2.79 260**	P	**Pn**	19 23 21.0	+2.2
KARP			S	**Sn**	19 23 51.9	+0.7
KARP	**Karpathos**	**2.79 260**	P	**Pn**	19 23 21.0	+2.2
KARP	**Karpathos**	**2.79 260**	*e*Pn	**Pn**	19 23 21.8	+3.0
KARP			S	**Sn**	19 23 52.0	+0.7
AYDB	**Zeytinkoy-Aydi**	**2.81 312**	PN	**Pn**	19 23 20.4	+1.3
AYDB	**Zeytinkoy-Aydi**	**2.81 312**	*e*Pn	**Pn**	19 23 20.4	+1.3
KULA	**Kula-Manisa**	**2.84 329**	PN	**Pn**	19 23 19.9	+0.4
KULA	**Kula-Manisa**	**2.84 329**	*e*Pn	**Pn**	19 23 19.9	+0.4
MANT	**Manisa**	**2.86 327**	*i* P	**Pn**	19 23 20.1	+0.2
MANT			*i* S	**Sn**	19 23 55.7	+2.3
MANT	**Manisa**	**2.86 327**	P	**Pn**	19 23 20.1	+0.2
MANT			S	**Sn**	19 23 55.7	+2.3
DIDI	**Didim-Aydin**	**2.94 297**	PN	**Pn**	19 23 21.9	+1.2
DIDI	**Didim-Aydin**	**2.94 297**	*e*Pn	**Pn**	19 23 21.9	+1.2
KIZT	**Kizilcal**	**2.98 21**	PN	**Pn**	19 23 22.8	+1.3
KIZT	**Kizilcal**	**2.98 21**	*e*Pn	**Pn**	19 23 22.8	+1.3
GCAM	**G?zelcaml?**	**3.09 302**	PN	**Pn**	19 23 24.1	+1.3
GCAM	**G?zelcaml?**	**3.09 302**	*i* P	**Pn**	19 23 23.7	+0.9
GCAM			*i* S	**Sn**	19 23 56.9	-1.7
GCAM	**G?zelcaml?**	**3.09 302**	P	**Pn**	19 23 23.7	+0.9
GCAM	**G?zelcaml?**	**3.09 302**	*e*Pn	**Pn**	19 23 24.1	+1.3
GCAM			S	**Sn**	19 23 56.9	-1.7
SHAP	**Saphane-Kutahy**	**3.10 341**	PN	**Pn**	19 23 24.3	+1.2
SHAP	**Saphane-Kutahy**	**3.10 341**	*e*Pn	**Pn**	19 23 24.3	+1.2
SIMA	**Simav-Kutahya**	**3.23 338**	PN	**Pn**	19 23 25.9	+1.1
SIMA	**Simav-Kutahya**	**3.23 338**	*e*Pn	**Pn**	19 23 25.9	+1.1
DEMI	**Demirci**	**3.28 334**	*i* P	**Pn**	19 23 26.1	+0.6
DEMI			*i* S	**Sn**	19 24 03.5	+0.1
DEMI	**Demirci**	**3.28 334**	P	**Pn**	19 23 26.1	+0.6
DEMI			S	**Sn**	19 24 03.5	+0.1
KUTH	**Kutahya**	**3.32 353**	PN	**Pn**	**19 23 27.7**	**+1.5**
KUTH	**Kutahya**	**3.32 353**	*e*Pn	**Pn**	**19 23 27.7**	**+1.5**
SMG	**Samos**	**3.37 300**	P	**Pn**	**19 23 27.3**	**+0.6**
SMG			S	**Sn**	**19 24 03.4**	**-2.1**
SMG			AML	AML	19 24 07.5	
comp=E,864μm,0.4s						
SMG			AML	AML	19 24 08.7	
comp=N,615μm,0.3s						
SMG	**Samos**	**3.37 300**	P	**Pn**	**19 23 27.3**	**+0.6**
SMG			S	**Sn**	**19 24 04.9**	**-0.6**
SMG	**Samos**	**3.37 300**	P	**Pn**	19 23 27.3	+0.6
SMG			S	**Sn**	**19 24 04.9**	**-0.6**
AUSIV	**SIVRIHISAR**	**3.44 13**	PN	**Pn**	**19 23 28.6**	**+0.9**
AUSIV	**SIVRIHISAR**	**3.44 13**	*e*Pn	**Pn**	**19 23 28.6**	**+0.9**
TVSB	**Tavsanli**	**3.46 346**	PN	**Pn**	**19 23 28.6**	**+0.6**
TVSB	**Tavsanli**	**3.46 346**	*e*Pn	**Pn**	**19 23 28.6**	**+0.6**
ZKR	**Zakros**	**3.65 256**	P	**Pn**	**19 23 33.1**	**+2.6**
ZKR			S	**Sn**	**19 24 12.9**	**+0.5**
ZKR			AML	AML	19 24 17.5	
comp=E,520μm,0.5s						
ZKR			AML	AML	19 24 17.8	
comp=N,318μm,0.3s						
ZKR	**Zakros**	**3.65 256**	P	**Pn**	**19 23 32.8**	**+2.3**
ZKR			S	**Sn**	**19 24 13.7**	**+1.3**
ZKR	**Zakros**	**3.65 256**	P	**Pn**	**19 23 32.8**	**+2.3**
ZKR			S	**Sn**	**19 24 13.7**	**+1.3**
AMGA	**Amorgos Island**	**3.81 283**	P	**Pn**	**19 23 33.4**	**+0.7**
AMGA	**Amorgos Island**	**3.81 283**	P	**Pn**	**19 23 33.7**	**+1.0**
URLA	**Izmir**	**3.87 307**	PN	**Pn**	**19 23 33.2**	**-0.4**
URLA	**Izmir**	**3.87 307**	*e*Pn	**Pn**	**19 23 33.2**	**-0.4**
NPS	**Neapolis**	**4.09 260**	P	**Pn**	**19 23 38.6**	**+2.0**
NPS			S	**Sn**	**19 24 22.9**	**-0.4**
NPS			AML	AML	19 24 24.6	
comp=E,1064μm,0.3s						
NPS			AML	AML	19 24 25.0	
comp=N,1136μm,0.3s						
NPS	**Neapolis**	**4.09 260**	P	**Pn**	**19 23 38.5**	**+2.0**
NPS	**Neapolis**	**4.09 260**	P	**Pn**	**19 23 38.7**	**+2.1**
NPS			S	**Sn**	**19 24 23.1**	**-0.2**
APE	**Apeiranthos**	**4.14 285**	P	**Pn**	**19 23 38.2**	**+0.9**
APE	**Apeiranthos**	**4.14 285**	P	**Pn**	**19 23 38.4**	**+1.1**
THR3	**Thira Island,**	**4.16 276**	P	**Pn**	**19 23 39.0**	**+1.5**
THR3	**Thira Island,**	**4.16 276**	P	**Pn**	**19 23 39.0**	**+1.5**
THR6	**Thira Island,**	**4.16 275**	P	**Pn**	**19 23 38.9**	**+1.4**
THR6	**Thira Island,**	**4.16 275**	P	**Pn**	**19 23 38.9**	**+1.4**
LAST	**Lasithi**	**4.22 259**	P	**Pn**	**19 23 40.9**	**+2.5**
LAST			S	**Sn**	**19 24 26.5**	**-0.1**
LAST			AML	AML	19 24 30.3	
comp=N,352μm,0.5s						
LAST			AML	AML	19 24 32.0	
comp=E,257μm,0.8s						
LAST	**Lasithi**	**4.22 259**	P	**Pn**	**19 23 40.6**	**+2.2**
LAST	**Lasithi**	**4.22 259**	P	**Pn**	**19 23 40.6**	**+2.2**
LAST			S	**Sn**	**19 24 26.5**	**-0.1**
CHOS	**Chios island**	**4.24 304**	P	**Pn**	**19 23 39.8**	**+1.1**
CHOS	**Chios island**	**4.24 304**	P	**Pn**	**19 23 39.6**	**+0.9**
BRTR	**Keskin Array B**	**4.38 33**	Pn	**Pn**	**19 23 41.8**	**+1.0**
comp=E,2.5nm,0.3s,baz=213,slow=15,SNR=76						
BRTR			Sn	**Sn**	**19 24 30.0**	**-0.7**
comp=E,3.2nm,0.3s,baz=198,slow=28,SNR=15						
IDI	**Anoyia**	**4.66 262**	Pn	**Pn**	**19 23 45.8**	**+1.3**
comp=E,8.3nm,0.3s,baz=8.5,slow=10.0,SNR=48						
IDI			Sn	**Sn**	**19 24 34.6**	**-2.9**
comp=E,16nm,0.3s,baz=326,slow=23,SNR=12						
SIVA	**Sivas**	**4.78 259**	P	**Pn**	**19 23 48.0**	**+1.9**
SIVA	**Sivas**	**4.78 259**	P	**Pn**	**19 23 48.3**	**+2.2**
HWQ	**Hawqa**	**4.79 111**	*e*P	**Pn**	**19 23 48.6**	**+2.2**
HNTI	**Hanita**	**4.87 127**	Pn	**Pn**	**19 23 49.6**	**+2.3**
MMA0B	**Mount Meron ar**	**5.06 126**	Pn	**Pn**	**19 23 51.6**	**+1.6**
MMAI	**Mount Meron Ar**	**5.06 126**	Pn	**Pn**	**19 23 51.5**	**+1.5**
comp=E,4.7nm,0.3s,baz=309,slow=12,SNR=52						
MMAI			Sn	**Sn**	**19 24 46.1**	**-1.2**
comp=E,16nm,0.3s,baz=304,slow=21,SNR=9.0						
SHBL	**Chebaa**	**5.09 121**	*e*P	**Pn**	**19 23 49.8**	**-0.7**
KSDI	**Kefar Szold**	**5.12 123**	Pn	**Pn**	**19 23 51.3**	**+0.5**
VAM	**Vamos**	**5.19 264**	P	**Pn**	**19 23 53.4**	**+1.6**
VAM	**Vamos**	**5.19 264**	P	**Pn**	**19 23 53.8**	**+2.0**
KSHT	**Keshet**	**5.35 124**	Pn	**Pn**	**19 23 56.8**	**+2.8**
IMMV	**Iera Moni Meta**	**5.36 265**	P	**Pn**	**19 23 56.5**	**+2.5**
IMMV	**Iera Moni Meta**	**5.36 265**	P	**Pn**	**19 23 56.6**	**+2.5**
IMMV	**Iera Moni Meta**	**5.36 265**	P	**Pn**	**19 23 56.5**	**+2.5**
SLTI	**Sal'it**	**5.36 134**	Pn	**Pn**	**19 23 55.6**	**+1.5**
GVDS	**Gavdos**	**5.40 259**	P	**Pn**	**19 23 57.1**	**+2.5**
GVDS	**Gavdos**	**5.40 259**	P	**Pn**	**19 23 57.1**	**+2.5**
GVD	**Gavdhos**	**5.40 258**	P	**Pn**	**19 23 57.1**	**+2.4**
GVD	**Gavdhos**	**5.40 258**	P	**Pn**	**19 23 56.4**	**+1.8**
GVD	**Gavdhos**	**5.40 258**	P	**Pn**	**19 23 56.4**	**+1.8**
MMLI	**Mount Malkishu**	**5.45 131**	Pn	**Pn**	**19 23 57.1**	**+1.7**
HMDT	**Nahal Hemdat**	**5.64 131**	Pn	**Pn**	**19 24 00.3**	**+2.4**
RSH		**5.77 152**	P	**Pn**	**19 24 01.7**	**+1.9**
baz=146						
AMAZ	**Amatzia**	**5.83 140**	Pn	**Pn**	**19 24 02.9**	**+2.3**
ANKY	**Antikythira Is**	**5.86 270**	P	**Pn**	**19 24 03.6**	**+2.6**
ANKY	**Antikythira Is**	**5.86 270**	P	**Pn**	**19 24 03.5**	**+2.6**
KZIT	**Kziot**	**6.10 147**	Pn	**Pn**	**19 24 06.1**	**+1.9**
VLI	**Veliai**	**6.15 278**	P	**Pn**	**19 24 06.5**	**+1.6**
VLI	**Veliai**	**6.15 278**	P	**Pn**	**19 24 06.7**	**+1.7**
MZDA	**Masada**	**6.24 138**	Pn	**Pn**	**19 24 08.6**	**+2.4**
KOT	**Kottamia**	**6.25 170**	P	**Pn**	**19 24 09.0**	**+2.7**
baz=165						
KOT			S	**Sn**	**19 25 11.8**	**-4.7**
baz=165						
SLUM	**Salum**	**6.37 225**	P	**Pn**	**19 24 09.2**	**+1.2**
baz=227						
SLUM			AMP		19 25 00.0	
baz=227						
SLUM			S	Sn	19 25 11.6	-8.0
baz=227						
HSAF	**As Saff**	**6.51 172**	AMP		19 25 00.0	
baz=168						
GLL	**Jalalah**	**6.57 171**	P	**Pn**	**19 24 13.3**	**+2.5**
baz=167						
GLL	**Jalalah**	**6.57 171**	P	**Pn**	**19 24 13.3**	**+2.5**
HNKL	**Nakhl**	**6.80 154**	P	**Pn**	**19 24 15.4**	**+1.5**
baz=149						
PRNI	**Paran**	**6.84 146**	Pn	**Pn**	**19 24 15.6**	**+1.1**
HRFI	**Mount Harif**	**7.13 147**	Pn	**Pn**	**19 24 19.9**	**+1.5**
MBRI	**Mt Berech**	**7.28 148**	Pn	**Pn**	**19 24 22.1**	**+1.5**
EIL	**Elat**	**7.41 149**	Pn	**Pn**	**19 24 24.9**	**+2.7**
comp=E,1.7nm,0.3s,baz=352,slow=20,SNR=16						
EIL			Sn	**Sn**	**19 25 43.7**	**-1.4**
comp=E,1.5nm,0.3s,baz=310,slow=23,SNR=6.4						
EIL	**Elat**	**7.41 149**	Pn	**Pn**	**19 24 23.6**	**+1.4**
NBNS	**Bani Suef**	**7.48 175**	P	**Pn**	**19 24 26.0**	**+2.8**
baz=171						
NBNS			AMP		19 25 00.0	
baz=171						
SWA2		**8.06 213**	P	**Pn**	**19 24 31.6**	**+0.5**
baz=214						
HFRF	**Wahat Farafira**	**9.12 193**	P	**Pn**	**19 24 46.7**	**+1.1**
baz=192						
MLR	**Muntele Rosu**	**10.01 341**	Pn	**Pn**	**19 24 57.2**	**-0.7**
comp=E,0.0nm,0.3s,baz=135,slow=14,SNR=2.1						
GNI	**Garni**	**11.90 66**	LR	LR	19 30 11.5	
comp=E,20nm,21.5s,baz=224,slow=39						
GERES	**GERESS Array B**	**17.74 321**	P	**Pn**	**19 26 40.9**	**+0.2**
baz=127,slow=11,SNR=3.5						
AKTO	**Aktyubinsk**	**24.44 46**	P	**P**	**19 27 50.6**	**-1.3**
comp=E,1.0nm,0.5s,baz=264,slow=10,SNR=3.6						
FINES	**FINESS Array B**	**25.53 355**	P	**P**	**19 27 59.7**	**-2.0**
comp=E,0.7nm,0.6s,baz=154,slow=14,SNR=3.9						
ESDC	**Sonseca Array**	**27.36 288**	P	**P**	**19 28 18.6**	**+0.1**
comp=E,0.1nm,0.3s,baz=78,slow=9.7,SNR=4.0						
MKAR	**Makanchi Array**	**39.59 58**	P	**P**	**19 30 03.3**	**-1.2**
comp=E,0.4nm,0.6s,baz=258,slow=2.8,SNR=2.0						
ZALV	**Zalesovo Beam**	**41.19 47**	P	**P**	**19 30 15.9**	**-1.8**
comp=E,0.7nm,0.4s,baz=258,slow=8.6,SNR=3.1						

IDC 20 19:28:23.0±1.8, 1°25N×126°72E, h0km, mb3.9/4, mb1 4.0/4, mb1mx3.6/53, mbtmp3.9/4, Error ellipse: s-maj=183.2km s-min=19.9km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.34**	**161**	P	P	19 33 22.2	-0.5
1.5nm,0.6s,baz=339,slow=11,SNR=27							
ASAR	**Alice Springs**	**25.73**	**165**	P	P	19 33 55.8	+0.4
0.7nm,0.4s,baz=345,slow=12,SNR=14							
MKAR	**Makanchi Array**	**59.59**	**326**	P	P	19 38 28.8	0.0
0.7nm,0.4s,baz=120,slow=7.9,SNR=20							
KURBB	**Kurchatov Arra**	**63.82**	**328**	P	P	19 38 57.0	-0.1
1.4nm,0.6s,baz=127,slow=6.0,SNR=13							

NIED ***20*** *19:46:00, 39°20N×143°00E, h14km, Mw3.7 Best double couple: M̃3.50000×10^14 NP1:φ=251.00000°, δ=32.00000°, λ=-125.00000°. NP2:φ=110.00000°, δ=64.00000°, λ=-70.00000°.*

JMA ***20*** *19:46:36.4±0.2, 39°.19N×143°.01E, h22km±2km, M3.9*

IDC ***20*** *19:46:40.3±2.4, 39°.16N×142°.99E, h45km±24km, mb3.4/9, mb1 3.6/12, mb1mx3.4/74, mbtmp3.7/12, ML3.5/3, MS2.7/2, Ms1 2.7/2, ms1mx2.2/40, Error ellipse: s-maj=25.0km s-min=18.5km az=103.0*

ISC 20 19:46:35.8±2.1, 39°20N±0°.04×142°97E±0°.07, h13km±12km, n33, σ1°80/35, mb3.6/9, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**0.97 293**		P	**Pb**	**19 46 54.5**	**0.0**
MIYJ				*e*S	**Sn**	**19 47 07.8**	**-1.0**
OFUJ	**Ofunato**	**1.02 264**		P	**Pb**	**19 46 55.5**	**+0.1**
OFUJ				*e*S	**Sb**	**19 47 09.4**	**+0.7**
JTH	**Tanohata**	**1.14 311**		P	**Pg**	**19 46 57.1**	**-0.6**
JOM	**Ohasama**	**1.33 283**		P	**Pb**	**19 47 00.5**	**-0.2**
JOM				*e*S	**Sg**	**19 47 18.0**	**-0.8**
JMK	**Ichinoseki**	**1.39 260**		P	**Pn**	**19 47 01.4**	**+0.6**
JMK				*e*S	**Sb**	**19 47 19.7**	**+0.5**
JIO	**Ouri**	**1.47 240**		P	**Pn**	**19 47 02.2**	**+0.2**
JIO				*e*S	**Sn**	**19 47 20.6**	**-0.4**
JANG	**Nango**	**1.63 317**		P	**Pn**	**19 47 04.5**	**+0.3**
JANG				*e*S	**Sb**	**19 47 25.2**	**-0.9**
JRG	**Rokugo**	**1.83 277**		P	**Pb**	**19 47 09.3**	**+0.2**
JOU	**Okura**	**1.99 246**		P	**Pn**	**19 47 10.7**	**+1.6**
JYK	**Kaneyama**	**2.06 263**		P	**Pb**	**19 47 12.2**	**-0.8**
JAH	**Hinai**	**2.06 300**		P	**Pb**	**19 47 12.0**	**-1.0**
JAH				*e*S	**Sb**	**19 47 38.2**	**-0.3**
JTM	**Tenmabayashi**	**2.16 318**		P	**Pn**	**19 47 12.6**	**+1.1**
MJAR	**Matsushiro Arr**	**4.61 236**		P	**Pn**	**19 47 48.4**	**+3.2**
2.6nm,0.3s,baz=37,slow=13,SNR=40							
MJAR				S	**Sb**	**19 48 53.3**	**+1.4**
baz=58,slow=16,SNR=2.0							
MAT	**Matsushiro**	**4.61 236**		P	**Pn**	**19 47 48.8**	**+3.6**
ASAJ	**Asahikawa**	**4.93 357**		P	**Pn**	**19 47 52.0**	**+2.5**
0.7nm,0.3s,baz=210,slow=14,SNR=6.7							
ASAJ				S	**Sn**	**19 48 45.1**	**-1.2**
0.9nm,0.3s,baz=248,slow=16,SNR=2.4							
JHJ	**Hachijo jima 2**	**6.59 204**		P	**Pn**	**19 48 12.8**	**+0.4**
19nm,0.3s,baz=60,slow=20,SNR=5.9							
JHJ				S	**Sn**	**19 49 20.0**	**-7.3**
3.3nm,0.3s,baz=234,slow=19,SNR=2.3							
KSRS	**Korea Array**	**11.95 266**		LR	LR	19 54 08.9	
comp=Z,16nm,20.6s,baz=185,slow=37							
SEY	**Seymchan**	**24.44 10**		P	**P**	**19 51 53.9**	**-0.1**
1.0nm,0.6s,baz=173,slow=19,SNR=4.3							
SONM	**Songino Array**	**27.68 300**		P	**P**	**19 52

KOWA Kowa 46.01 136 P **P 20 15 32.0 +0.9**
2.4nm,0.7s,baz=330,slow=13,SNR=4.5
KOWA LR LR 20 32 27.2
comp=Z,102nm,18.7s,baz=30,slow=33
BRTR Keskin Array B 47.48 78 P **P 20 15 43.5 +0.9**
1.3nm,0.9s,baz=329,slow=6.2,SNR=5.8
BRTR LR LR 20 37 11.3
comp=Z,66nm,18.0s,baz=273,slow=38
PDAR Pinedale Array 48.57 289 P **P 20 15 50.2 -0.9**
1.2nm,0.6s,baz=51,slow=8.4,SNR=11
PDAR LR LR 20 35 16.4
comp=Z,111nm,18.5s,baz=44,slow=35
DLBC Dease Lake 49.03 316 LR LR 20 35 24.7
comp=Z,106nm,19.5s,baz=125,slow=35
NEW Newport 49.23 299 LR LR 20 35 11.4
comp=Z,110nm,19.5s,baz=32,slow=34
TORD Torodi Ar. Bea 49.72 130 P **P 20 15 59.9 0.0**
3.5nm,0.7s,baz=331,slow=7.7,SNR=22
TORD LR LR 20 33 30.2
comp=Z,64nm,21.7s,baz=295,slow=32
KBZ Khabaz 50.16 68 LR LR 20 37 48.2
comp=Z,68nm,18.4s,baz=318,slow=37
HWUT Hardware Ranch 50.46 289 *eP* **P 20 16 05.4 0.0**
6.1nm,0.8s
ILAR Eielson Array 50.97 329 P **P 20 16 09.2 +0.4**
0.4nm,0.8s,baz=30,slow=5.2,SNR=5.4
ILAR LR LR 20 35 05.4
comp=Z,31nm,20.9s,baz=54,slow=33
ANMO Albuquerque 52.00 279 LR LR 20 37 43.1
comp=Z,338nm,18.6s,baz=52,slow=35
DBIC Dimbokro 52.79 141 LR LR 20 36 07.4
comp=Z,127nm,19.8s,baz=346,slow=33
MMAI Mount Meron Ar 53.09 83 LR LR 20 39 39.6
comp=Z,44nm,19.0s,baz=100,slow=37
GNI Garni 53.57 70 LR LR 20 39 33.6
comp=Z,59nm,20.4s,baz=324,slow=36
AKTO Aktyubinsk 53.57 53 LR LR 20 37 56.8
comp=Z,41nm,20.7s,baz=308,slow=35
TXAR Lajitas Array 54.33 272 PcP **PcP 20 17 37.9 -0.2**
0.5nm,0.8s,baz=60,slow=4.6,SNR=4.8
TXAR LR LR 20 39 15.5
comp=Z,116nm,18.2s,baz=0.0,slow=36
NVAR Mina Array Bea 56.41 291 P **P 20 16 48.8 -0.4**
0.3nm,0.5s,baz=72,slow=5.9,SNR=2.8
NVAR LR LR 20 40 06.9
comp=Z,117nm,18.4s,baz=279,slow=35
YBH Yreka Blue Hor 56.52 296 LR LR 20 39 56.7
comp=Z,123nm,19.2s,baz=30,slow=35
ROSC El Rosal 57.97 228 LR LR 20 42 53.4
comp=Z,15nm,18.5s,baz=294,slow=37
JTS JuntasAbangare 58.44 242 LR LR 20 39 03.3
comp=Z,61nm,20.8s,baz=66,slow=33
LPIG La Paz 62.17 273 LR LR 20 44 15.9
comp=Z,89nm,19.5s,baz=140,slow=36
KURK Kurchatov 62.34 41 P **P 20 17 29.3 -0.4**
KURBB Kurchatov Arra 62.37 41 P **P 20 17 29.3 -0.6**
0.6nm,0.8s,baz=315,slow=8.9,SNR=5.7
GEYT Alibeck 62.47 63 LR LR 20 47 20.5
comp=Z,38nm,18.4s,baz=215,slow=39
MKAR Makanchi Array 66.93 41 P **P 20 17 59.9 0.0**
0.3nm,0.7s,baz=324,slow=7.1,SNR=3.3
MKAR LR LR 20 46 47.3
comp=Z,26nm,18.0s,baz=45,slow=36
MA2 Magadan 67.23 357 LR LR 20 46 24.7
comp=Z,27nm,18.9s,baz=310,slow=35
SONM Songino Array 73.99 26 P **P 20 18 42.4 -0.6**
1.1nm,0.9s,baz=338,slow=5.7,SNR=5.2
KMBO Kilima Mbogo 80.58 105 LR LR 20 57 05.9
comp=Z,37nm,18.2s,baz=91,slow=37
BOSA Boshof 97.08 130 LR LR 21 02 23.7
comp=Z,41nm,20.4s,baz=5.5,slow=34
CMAR Chiang Mai Arr 98.28 43 LR LR 21 06 16.3
comp=Z,30nm,18.0s,baz=233,slow=36
WRA Warramunga Arr 145.62 17 PKPbc **PKPdf 20 26 45.2 -0.8**
0.7nm,0.7s,baz=344,slow=3.5,SNR=5.5
ASAR Alice Springs 149.17 20 PKPbc **PKPbc 20 26 55.4 -0.6**
0.8nm,0.6s,baz=337,slow=2.2,SNR=13

*ISK **20** 20:09:34.3,38°.73N×43°.15E, h13km±3km, ML1.9/3*
*CSEM **20** 20:09:35.4±0.3,38°.76N×43°.15E, h10km, ML2.5, Error ellipse: s-maj=6.6km s-min=5.8km az=81.0*
*DDA **20** 20:09:35.74,38°.74N×43°.21E, h7km, Ml2.5*
ISC 20 20:09:35.6±1.0,38°.75N±0°.03×43°.15E±0°.05, h17km±12km, n14, σ0°.83/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.24**	**129**	PG	**Pg**	**20 09 40.9**	**-0.2**
VANB				SG	**Sg**	**20 09 45.7**	**+0.8**
VANB	**Van**	**0.24**	**129**	*e*Pg	**Pg**	**20 09 40.9**	**-0.2**
VANB				*e*Sg	**Sg**	**20 09 45.7**	**+0.8**
ADCV	**BITLIS_Adilcev**	**0.34**	**281**	*i* P	**Pb**	**20 09 43.5**	**+0.2**
ADCV				*i* S	**Sb**	**20 09 49.8**	**+1.3**
ADCV	**BITLIS_Adilcev**	**0.34**	**281**	P	**Pb**	**20 09 43.5**	**+0.2**
ADCV				S	**Sb**	**20 09 49.8**	**+1.3**
VMUR	**Van-Muradiye**	**0.41**	**53**	*i* P	**Pg**	**20 09 43.0**	**-1.0**
VMUR				*i* S	**Sg**	**20 09 49.6**	**-0.2**
VMUR	**Van-Muradiye**	**0.41**	**53**	P	**Pg**	**20 09 43.0**	**-1.0**
VMUR				S	**Sg**	**20 09 49.6**	**-0.2**
GEVA	**Gevas**	**0.44**	**190**	*i* P	**Pg**	**20 09 43.6**	**-1.0**
GEVA				*i* S	**Sb**	**20 09 51.4**	**0.0**
GEVA	**Gevas**	**0.44**	**190**	P	**Pg**	**20 09 43.6**	**-1.0**
GEVA				S	**Sb**	**20 09 51.4**	**0.0**
TUTA	**Tutak**	**0.70**	**338**	*i* P	**Pg**	**20 09 48.9**	**-0.6**
TUTA	**Tutak**	**0.70**	**338**	P	**Pg**	**20 09 48.9**	**-0.6**
AGRB	**Hanur-Agry**	**0.84**	**352**	PG	**Pg**	**20 09 51.2**	**-0.8**
AGRB				SG	**Sb**	**20 10 03.5**	**+0.6**
AGRB	**Hanur-Agry**	**0.84**	**352**	*e*Pg	**Pg**	**20 09 51.2**	**-0.8**
AGRB				*e*Sg	**Sb**	**20 10 03.5**	**+0.6**
GURO	**Guroymak-BITLI**	**0.90**	**258**	PG	**Pg**	**20 09 52.0**	**-1.1**
GURO	**Guroymak-BITLI**	**0.90**	**258**	*e*Pg	**Pg**	**20 09 52.0**	**-1.1**

*CSEM **20** 20:12:02.2,36°.87N×24°.34W, h15km, ML3.2*
PDA 20 20:12:02.2±0.9,36°.87N×24°.34W, h15km, MD3.8, ML3.2, Error ellipse: s-maj=6.1km s-min=5.1km az=79.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSMN	**Pico do Norte,**	**0.59**	**283**	*e*P	Pg	20 12 11.6	-2.3
PSMN				*e*S	Sg	20 12 18.8	-3.0
PSMN				A	A	20 12 19.2	
	341nm,0.2s						
PSMN	**Pico do Norte,**	**0.59**	**283**	*e*P	Pg	20 12 11.6	-2.3
PSMN				*e*S	Sg	20 12 18.8	-3.0
PSMA	**Santa Maria**	**0.64**	**281**	*e*P	Pg	20 12 12.4	-2.4
PSMA				*e*S	Sg	20 12 20.0	-3.3
PSMA				A	A	20 12 20.9	
	255nm,0.3s						
BART	**Pico Bartolome**	**1.12**	**324**	*e*P	Pb	20 12 18.9	-4.4
BART				*e*S	Sb	20 12 31.4	-6.3
BART				A	A	20 12 33.6	
	115nm,0.4s						
BART	**Pico Bartolome**	**1.12**	**324**	*e*P	Pb	20 12 18.9	-4.4
BART				*e*S	Sb	20 12 31.4	-6.3
CMLA	**Cha da Macela**	**1.29**	**314**	*e*P	Pn	20 12 21.8	-4.0
CMLA				*e*S	Sb	20 12 36.0	-6.7
CMLA				A	A	20 12 39.9	
	343nm,0.4s						
CMLA	**Cha da Macela**	**1.29**	**314**	*e*P	Pn	20 12 21.8	-4.0
CMLA				*e*S	Sb	20 12 36.0	-6.7
PDA	**Ponta Delgada**	**1.37**	**310**	*e*P	Pn	20 12 22.0	-4.7
PDA				*e*S	Sn	20 12 37.2	-7.4
PDA				A	A	20 12 42.7	
	58nm,0.1s						
PDA	**Ponta Delgada**	**1.37**	**310**	*e*P	Pn	20 12 22.0	-4.7
PDA				*e*S	Sn	20 12 37.2	-7.4
PSET	**Sete Cidades**	**1.45**	**311**	*e*P	Pn	20 12 23.9	-4.0
PSET				*e*S	Sn	20 12 40.2	-6.5
PSET				A	A	20 12 43.0	
	72nm,0.6s						
PSET	**Sete Cidades**	**1.45**	**311**	*e*P	Pn	20 12 23.9	-4.0
PSET				*e*S	Sn	20 12 40.2	-6.5
PSCM	**Serra do Cume**	**2.86**	**311**	*e*P	Pn	20 12 43.2	-4.0
PSCM				*e*S	Sn	20 13 14.3	-7.1
PSCM				A	A	20 13 18.8	
	26nm,0.2s						
PSCM	**Serra do Cume**	**2.86**	**311**	*e*P	Pn	20 12 43.2	-4.0
PSCM				*e*S	Sn	20 13 14.3	-7.1
PMAN	**Manadas**	**3.45**	**302**	*e*P	Pn	20 12 52.8	-2.6
PMAN	**Manadas**	**3.45**	**302**	*e*P	Pn	20 12 52.8	-2.6
ROSA	**Rosais**	**3.60**	**302**	*e*P	Pn	20 12 54.2	-3.2
ROSA				*e*S	Sn	20 13 31.9	-7.7
ROSA				A	A	20 13 35.0	
	6.2nm,0.1s						
ROSA	**Rosais**	**3.60**	**302**	*e*P	Pn	20 12 54.2	-3.2
ROSA				*e*S	Sn	20 13 31.9	-7.7
PICO	**Pico**	**3.62**	**298**	*e*P	Pn	20 12 54.8	-3.0
PICO				*e*S	Sn	20 13 32.6	-7.8
PICO				A	A	20 13 35.3	
	20nm,0.2s						
PICO	**Pico**	**3.62**	**298**	*e*P	Pn	20 12 54.8	-3.0
PICO				*e*S	Sn	20 13 32.6	-7.8
PCAN	**Candelaria**	**3.65**	**297**	*e*P	Pn	20 12 54.9	-3.3
PCAN				*e*S	Sn	20 13 33.1	-7.9
PCAN				A	A	20 13 39.2	
	13nm,0.2s						
PCAN	**Candelaria**	**3.65**	**297**	*e*P	Pn	20 12 54.9	-3.3
PCAN				*e*S	Sn	20 13 33.1	-7.9

MAN 20 20:36:36.2,10°.19N×123°.28E, h15km, mb4.2, ML3.1, MS2.8, 1C, Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.69**	**80**	*e*P	Pg	20 36 48.6	-1.1
LLP				*i* S	Sn	20 37 02.8	+0.9
GUIM	**Jordan**	**0.80**	**303**	*e*P	Pg	20 36 51.7	-0.1
GUIM				*e*S	Sn	20 37 04.9	+0.2
SNPH	**Sibulan**	**0.84**	**183**	*i* P	Pb	20 36 51.8	-0.8
SNPH				*i* S	Sg	20 37 02.4	-1.4
MSLP	**Maasin**	**1.56**	**92**	*e*P	Pb	20 37 04.8	+0.1
MSLP				*e*S	Sg	20 37 27.8	+1.3

MAN 20 21:16:55.1,9°.65N×125°.06E, h32km, mb3.7, ML2.4, MS1.9, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**0.52**	**338**	*e*P	Pn	21 17 06.5	+0.2
MSLP				*e*S	Sn	21 17 14.7	+0.6
TBP	**Tagbilaran**	**1.18**	**272**	*e*P	Pn	21 17 15.3	0.0
TBP				*i* S	Sn	21 17 30.3	-0.1
LLP	**Lapu-Lapu**	**1.26**	**302**	*i* P	Pn	21 17 16.8	+0.2
LLP				*e*S	Sn	21 17 32.8	+0.3

*IDC **20** 21:29:14.2±0.7, 3°.77S×101°.80E, h0km, mb4.1/19, mb1 4.2/19, mb1mx4.0/59, mbtmp4.1/19, MS3.0/3, Ms1 3.0/3, ms1mx2.5/71, Error ellipse: s-maj=30.0km s-min=14.4km az=50.0*
*NEIC **20** 21:29:19.7±0.5, 3°.73S×101°.84E, h35km, mb4.3/3, Error ellipse: s-maj=18.7km s-min=8.0km az=49.0*
*DJA **20** 21:29:21.0±0.4, 4°.5±4°×10°.2E±°, h10km, M4.4/13, mB4.5/1, mb4.5/4, MLv4.3/13, Mw(mB)3.7/1*
ISC 20 21:29:15.7±0.6, 3°.77S±0°.08×101°.85E±0°.07, h10km, n47, σ1°.05/36, mb4.2/22, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MASI	**Maura Aman, Be**	**0.74**	**32**	P	Pn	21 29 36.9	+4.7
KRJI	**Kerinci**	**1.71**	**347**	P	**Pg**	**21 29 50.9**	**+2.3**
PPSI	**Pulau Pagai**	**2.09**	**299**	P	**Pg**	**21 29 56.5**	**+0.6**
MDSI	**Maura Dua**	**2.43**	**107**	P	**Pg**	**21 30 01.1**	**-1.1**
LWLI	**Liwa**	**2.52**	**119**	P	**Pg**	**21 30 04.5**	**+0.4**
PMBI	**Palembang**	**3.04**	**74**	P	Pg	21 30 19.2	+5.3
KASI	**Kota Agung**	**3.16**	**123**	P	**Pb**	**21 30 10.7**	**-1.2**
PDSI	**Padang**	**3.16**	**334**	P	**Pb**	**21 30 11.0**	**-1.0**
SISI	**Saibi**	**3.68**	**311**	P	**Pb**	**21 30 17.5**	**-3.3**
BKNI	**Bangkinang**	**4.15**	**349**	P	**Pg**	**21 30 33.8**	**-1.5**
MNSI	**Mandailing Nat**	**5.07**	**333**	P	Pb	21 30 37.2	-7.4
TPRI	**Tanjung Pinang**	**5.37**	**30**	P	Pn	21 30 41.7	+5.7
GSI	**Gunungsitoli**	**6.61**	**320**	P	Pn	21 30 57.2	+4.2
PSI	**Prapat**	**7.16**	**336**	LR	LR	21 34 06.1	
	comp=Z,132nm,19.2s,baz=93,slow=42						
CMAR	**Chiang Mai Arr**	**22.27**	**353**	P	**P**	**21 34 13.8**	**+0.6**
	1.2nm,0.4s,baz=183,slow=8.8,SNR=15						
CMAR				LR	LR	21 43 01.7	
	comp=Z,8.5nm,18.6s,baz=230,slow=37						
BATI	**Baumata**	**22.56**	**108**	LR	LR	21 44 03.7	
	comp=Z,140nm,18.3s,baz=210,slow=39						
H08S2	**Diego Garcia H**	**29.46**	**261**	T	T	22 05 26.6	
	baz=84,slow=75,SNR=42						
H08S3	**Diego Garcia H**	**29.46**	**261**	T	T	22 05 27.1	
	baz=84,slow=75,SNR=46						
H08S1	**Diego Garcia H**	**29.48**	**261**	T	T	22 05 28.0	
	baz=84,slow=75,SNR=20						
H01W3	**Cape Leeuwin H**	**32.99**	**161**	T	T	22 10 35.3	
	baz=339						
H01W2	**Cape Leeuwin H**	**33.00**	**161**	T	T	22 10 30.2	
	baz=339						
H01W1	**Cape Leeuwin H**	**33.00**	**161**	T	T	22 10 39.0	
	baz=339						
WRA	**Warramunga Arr**	**35.51**	**120**	P	**P**	**21 36 12.9**	**-0.2**
	0.4nm,0.5s,baz=299,slow=11,SNR=13						
WRA				PcP	**PcP**	**21 38 41.7**	**-0.8**
	0.2nm,0.5s,baz=308,slow=2.2,SNR=3.5						
WRAB	**Tennant Creek**	**35.52**	**120**	*e*P	**P**	**21 36 14.0**	**+0.9**
	1.4nm,0.5s						
ASAR	**Alice Springs**	**36.72**	**126**	P	**P**	**21 36 24.1**	**+0.7**
	0.7nm,0.4s,baz=292,slow=7.9,SNR=9.1						
ASAR				PcP	**PcP**	**21 38 46.3**	**+0.3**
	0.3nm,0.6s,baz=279,slow=1.8,SNR=3.2						
NIL	**Nilore**	**45.99**	**326**	*e*P	**P**	**21 37 38.8**	**-0.6**
	10.0nm,0.7s						
STKA	**Stephens Creek**	**46.60**	**132**	P	**P**	**21 37 45.6**	**+1.4**
	2.4nm,0.7s,baz=292,slow=8.6,SNR=3.2						
KSAR	**Wonju Array Be**	**47.62**	**28**	P	**P**	**21 37 51.6**	**-0.4**
KSRS	**Korea Array**	**47.65**	**28**	P	**P**	**21 37 51.6**	**-0.6**
	1.0nm,0.7s,baz=224,slow=5.9,SNR=4.6						
SONM	**Songino Array**	**51.55**	**4**	P	**P**	**21 38 23.0**	**+1.0**
	3.5nm,0.7s,baz=181,slow=9.7,SNR=24						
ULN	**Ulaanbaatar**	**51.62**	**4**	*e*P	**P**	**21 38 22.8**	**+0.2**
	1.8nm,0.8s						
MKAR	**Makanchi Array**	**53.23**	**343**	P	**P**	**21 38 34.4**	**0.0**
	3.3nm,0.5s,baz=154,slow=8.8,SNR=53						
USRK	**Ussuriysk Ar.**	**54.88**	**26**	P	**P**	**21 38 46.5**	**+0.1**
	3.9nm,0.5s,baz=209,slow=4.5,SNR=8.4						
KURBB	**Kurchatov Arra**	**57.77**	**343**	P	**P**	**21 39 06.7**	**-0.2**
	2.6nm,0.9s,baz=160,slow=7.0,SNR=15						
KURK	**Kurchatov**	**57.83**	**343**	P	**P**	**21 39 06.7**	**-0.6**
ZALV	**Zalesovo Beam**	**59.25**	**348**	P	**P**	**21 39 16.8**	**-0.4**
	6.4nm,0.4s,baz=174,slow=5.5,SNR=36						
BVAR	**Borovoye Array**	**62.48**	**339**	P	**P**	**21 39 38.6**	**-0.6**
	0.8nm,0.3s,baz=141,slow=9.3,SNR=5.0						
KBZ	**Khabaz**	**70.85**	**319**	P	**P**	**21 40 33.6**	**+0.8**
	1.4nm,0.6s,baz=101,slow=3.6,SNR=5.7						
ASF	**Jabal al Asfar**	**71.12**	**306**	P	**P**	**21 40 33.2**	**-1.6**
	1.7nm,0.7s,baz=63,slow=2.3,SNR=2.7						
MMAI	**Mount Meron Ar**	**72.57**	**306**	P	**P**	**21 40 43.9**	**+0.4**
	1.3nm,0.7s,baz=125,slow=7.2,SNR=3.4						
PETK	**Petropavlovsk-**	**73.41**	**31**	P	**P**	**21 40 47.8**	**-0.2**
	1.2nm,0.6s,baz=237,slow=5.0,SNR=2.3						
BRTR	**Keskin Array B**	**75.88**	**312**	P	**P**	**21 41 02.5**	**-0.2**
	1.0nm,0.5s,baz=133,slow=6.1,SNR=7.3						
FINES	**FINESS Array B**	**86.53**	**332**	P	**P**	**21 41 59.1**	**+0.4**
	1.4nm,0.8s,baz=84,slow=5.9,SNR=4.9						
ARCES	**ARCESS Array B**	**88.76**	**340**	P	**P**	**21 42 09.7**	**+0.4**
	1.7nm,0.8s,baz=93,slow=5.4,SNR=2.9						
GERES	**GERESS Array B**	**91.59**	**319**	P	**P**	**21 42 24.3**	**+1.2**
	0.1nm,0.3s,baz=67,slow=7.6,SNR=4.1						
PDAR	**Pinedale Array**	**132.17**	**31**	PKP	**PKPdf**	**21 48 31.4**	**+0.8**
	0.2nm,0.4s,baz=24,slow=2.5,SNR=1.8						
TXAR	**Lajitas Array**	**144.90**	**41**	PKP	**PKPdf**	**21 48 53.0**	**-1.0**
	2.2nm,0.7s,baz=264,slow=1.0,SNR=28						

*ISK **20** 21:35:34.9,39°.78N×26°.11E, h5km, ML2.6/10*
*ISCJB **20** 21:35:35.0±0.3,39°.76N±0°.02×26°.09E±0°.03, h8km±3km, Error ellipse: s-maj=3.7km s-min=3.1km az=155.5*
*IASPEI **20** 21:35:35.0±0.8,39°.77N±0°.02×26°.11E±0°.02, h12km±5km, Error ellipse: s-maj=3.0km s-min=2.7km az=66.2, GT5 selection from ISC bulletin GT5 identified by Bond˜jr and McLaughlin (2009) selection criteria Bond˜jr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
*ATH **20** 21:35:34.8,39°.77N×26°.11E, h26km±1km, ML1.8/4, Error ellipse: s-maj=2.9km s-min=1.1km az=270.0*
*DDA **20** 21:35:35.0,39°.77N×26°.17E, h2km, Ml2.6*
*CSEM **20** 21:35:35.2±0.1,39°.77N×26°.11E, h8km, ML2.6, Error ellipse: s-maj=3.5km s-min=2.6km az=80.0*
ISC 20 21:35:35.1±0.8,39°.77N±0°.02×26°.11E±0°.02, h12km±5km, n69, σ0°.58/96, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOZC	**Bozcaada**	**0.08**	**330**	*i* P	**Pg**	**21 35 38.0**	**+0.2**
BOZC				*i* S	**Sg**	**21 35 39.7**	**0.0**
EZN	**Ezine**	**0.18**	**71**	PG	**Pg**	**21 35 38.9**	**-0.1**
EZN				SG	**Sg**	**21 35 41.6**	**-0.2**
EZN	**Ezine**	**0.18**	**71**	*e*Pg	**Pg**	**21 35 38.9**	**-0.1**
EZN				*e*Sg	**Sg**	**21 35 41.6**	**-0.2**
GPNR	**Gulpinar-Canak**	**0.31**	**176**	PG	**Pg**	**21 35 41.1**	**-0.3**
GPNR	**Gulpinar-Canak**	**0.31**	**176**	*e*Pg	**Pg**	**21 35 41.1**	**-0.3**
BAYC	**CANAKKALE_Bayr**	**0.34**	**95**	*i* P	**Pg**	**21 35 42.0**	**+0.1**
BAYC				*i* S	**Sg**	**21 35 46.7**	**+0.2**
BAYC	**CANAKKALE_Bayr**	**0.34**	**95**	P	**Pg**	**21 35 42.0**	**+0.1**
BAYC				S	**Sg**	**21 35 46.7**	**+0.2**
GADA	**Gvkgeada**	**0.45**	**339**	PG	**Pg**	**21 35 43.9**	**-0.1**
GADA	**Gvkgeada**	**0.45**	**339**	*e*Pg	**Pg**	**21 35 43.9**	**-0.1**
PRK	**Paraskevi**	**0.54**	**166**	P	**Pg**	**21 35 45.8**	**+0.2**
PRK				AML	AML	21 35 58.7	
	comp=E,200μm,0.2s						
PRK				AML	AML	21 35 59.1	
	comp=N,124μm,0.2s						
PRK	**Paraskevi**	**0.54**	**166**	P	**Pg**	**21 35 45.8**	**+0.2**
SIGR	**SIGRI**	**0.59**	**199**	PG	**Pb**	**21 35 47.3**	**-0.1**
SIGR	**SIGRI**	**0.59**	**199**	P	**Pb**	**21 35 47.2**	**-0.1**
SIGR				S	**Sg**	**21 35 54.2**	**-0.2**
SIGR				AML	AML	21 35 56.2	
	comp=E,485μm,0.4s						
SIGR				AML	AML	21 35 56.6	
	comp=N,758μm,0.3s						
SIGR	**SIGRI**	**0.59**	**199**	P	**Pg**	**21 35 46.9**	**+0.3**
SIGR	**SIGRI**	**0.59**	**199**	*e*Pg	**Pb**	**21 35 47.3**	**-0.1**
SIGR				S	**Sg**	**21 35 54.8**	**+0.4**
AYVA	**Ayvalik**	**0.64**	**135**	*i* P	**Pg**	**21 35 47.6**	**0.0**
AYVA				*i* S	**Sb**	**21 35 57.0**	**-0.2**
AYVA	**Ayvalik**	**0.64**	**135**	P	**Pg**	**21 35 47.6**	**0.0**
AYVA				S	**Sb**	**21 35 57.0**	**-0.2**
GELI	**Tayfur-Gelibol**	**0.69**	**24**	PG	**Pb**	**21 35 48.8**	**-0.2**
GELI	**Tayfur-Gelibol**	**0.69**	**24**	*e*Pg	**Pb**	**21 35 48.8**	**-0.2**
LIA	**Limnos Island**	**0.72**	**281**	P	**Pb**	**21 35 49.9**	**+0.3**
LIA				S	**Sg**	**21 35 57.9**	**-0.7**
LIA	**Limnos Island**	**0.72**	**281**	P	**Pb**	**21 35 49.5**	**-0.1**
LIA				S	**Sg**	**21 35 58.7**	**+0.1**
LPK	**Lapseki**	**0.78**	**39**	PG	**Pb**	**21 35 50.5**	**-0.1**
LPK	**Lapseki**	**0.78**	**39**	*e*Pg	**Pb**	**21 35 50.5**	**-0.1**
SMTH	**Samothraki Isl**	**0.83**	**328**	P	**Pb**	**21 35 51.6**	**+0.2**
SMTH				S	**Sg**	**21 36 01.0**	**-1.0**
SMTH				AML	AML	21 36 05.2	
	comp=N,148μm,0.3s						
SMTH				AML	AML	21 36 05.6	
	comp=E,102μm,0.1s						
SMTH	**Samothraki Isl**	**0.83**	**328**	P	**Pb**	**21 35 51.3**	**-0.1**
SMTH				S	**Sg**	**21 36 01.9**	**-0.1**
DKL	**Dikili**	**0.93**	**138**	PG	**Pb**	**21 35 53.8**	**+0.7**
DKL	**Dikili**	**0.93**	**138**	*e*Pg	**Pb**	**21 35 53.8**	**+0.7**
ERIK	**Erikli-Kesan**	**0.95**	**19**	PG	**Pg**	**21 35 52.9**	**-0.6**
ERIK	**Erikli-Kesan**	**0.95**	**19**	*e*Pg	**Pg**	**21 35 52.9**	**-0.6**
ENEZ	**Enez**	**0.97**	**2**	PG	**Pg**	**21 35 53.5**	**-0.2**
ENEZ	**Enez**	**0.97**	**2**	*e*Pg	**Pg**	**21 35 53.5**	**-0.2**
ALN	**Alexandroupoli**	**1.13**	**358**	PN	**Pg**	**21 35 56.0**	**-0.8**
ALN	**Alexandroupoli**	**1.13**	**358**	P	**Pg**	**21 35 56.4**	**-0.4**
ALN				S	**Sb**	**21 36 11.6**	**+0.5**
ALN				AML	AML	21 36 12.7	
	comp=E,51μm,0.5s						
ALN				AML	AML	21 36 13.6	
	comp=N,49μm,0.4s						
ALN	**Alexandroupoli**	**1.13**	**358**	*e*Pn	**Pg**	**21 35 56.0**	**-0.8**
ALN	**Alexandroupoli**	**1.13**	**358**	P	**Pg**	**21 35 56.4**	**-0.4**
ALN				S	**Sb**	**21 36 11.8**	**+0.7**
KESN	**Edirne-Kesan**	**1.14**	**22**	*i* P	**Pg**	**21 35 56.9**	**-0.2**
KESN				*i* S	**Sn**	**21 36 13.2**	**+0.2**
KESN	**Edirne-Kesan**	**1.14**	**22**	P	**Pg**	**21 35 56.9**	**-0.2**
KESN				S	**Sn**	**21 36 13.2**	**+0.2**
BALY	**Balya**	**1.17**	**91**	*i* P	**Pg**	**21 35 55.7**	**-1.8**
BALY				*i* S	**Sg**	**21 36 11.8**	**-0.9**
BALY	**Balya**	**1.17**	**91**	P	**Pg**	**21 35 55.7**	**-1.8**
BALY				S	**Sg**	**21 36 11.8**	**-0.9**
KNL	**Bal¨–kesir**	**1.20**	**65**	*i* P	**Pb**	**21 35 57.7**	**0.0**
KNL				*i* S	**Sb**	**21 36 13.9**	**+0.8**
RKY	**Sarkoy-Tekirda**	**1.23**	**41**	PN	**Pg**	**21 35 59.3**	**+0.6**
RKY	**Sarkoy-Tekirda**	**1.23**	**41**	*e*Pn	**Pg**	**21 35 59.3**	**+0.6**
GONE	**Gonen-Balikesi**	**1.25**	**77**	PN	**Pg**	**21 35 59.3**	**+0.3**
GONE	**Gonen-Balikesi**	**1.25**	**77**	*e*Pn	**Pg**	**21 35 59.3**	**+0.3**
STEP	**BALIKESIR_Sava**	**1.30**	**107**	*i* P	**Pg**	**21 36 00.5**	**+0.4**
STEP				*i* S	**Sn**	**21 36 17.7**	**+1.2**
STEP	**BALIKESIR_Sava**	**1.30**	**107**	P	**Pg**	**21 36 00.5**	**+0.4**
STEP				S	**Sn**	**21 36 17.7**	**+1.2**
BALB	**Balikesir**	**1.37**	**95**	PN	**Pg**	**21 36 01.5**	**+0.1**
BALB	**Balikesir**	**1.37**	**95**	*e*Pn	**Pg**	**21 36 01.5**	**+0.1**
CHOS	**Chios island**	**1.38**	**182**	PN	**Pg**	**21 36 01.9**	**+0.3**
CHOS	**Chios island**	**1.38**	**182**	P	**Pn**	**21 35 59.4**	**-0.9**
CHOS				S	**Sg**	**21 36 19.7**	**+0.2**
CHOS	**Chios island**	**1.38**	**182**	P	**Pn**	**21 35 59.9**	**-0.3**
CHOS	**Chios island**	**1.38**	**182**	*e*Pn	**Pg**	**21 36 01.9**	**+0.3**
CHOS				S	**Sg**	**21 36 19.4**	**-0.2**
RDO	**Rodhopi**	**1.44**	**343**	PN	**Pb**	**21 36 02.1**	**+0.2**
RDO	**Rodhopi**	**1.44**	**343**	P	**Pb**	**21 36 01.9**	**0.0**
RDO	**Rodhopi**	**1.44**	**343**	P	**

BALY				S	Sg	21 38 39.7	-1.8
RKY	**Sarkoy-Tekirda**	**1.22**	**42**	PN	**Pg**	**21 38 26.9**	**-0.5**
RKY	**Sarkoy-Tekirda**	**1.22**	**42**	*e*Pn	**Pg**	**21 38 26.9**	**-0.5**
GONE	**Gonen-Balikesi**	**1.24**	**77**	PN	**Pg**	**21 38 27.4**	**-0.4**
GONE	**Gonen-Balikesi**	**1.24**	**77**	*e*Pn	**Pg**	**21 38 27.4**	**-0.4**
STEP	**BALIKESIR_Sava**	**1.31**	**108**	*i* P	**Pb**	**21 38 29.0**	**+0.5**
STEP				*i* S	**Sb**	**21 38 46.0**	**+0.8**
STEP	**BALIKESIR_Sava**	**1.31**	**108**	P	**Pb**	**21 38 29.0**	**+0.5**
STEP				S	**Sb**	**21 38 46.0**	**+0.8**
BALB	**Balikesir**	**1.37**	**96**	PN	**Pn**	**21 38 29.3**	**+0.4**
BALB	**Balikesir**	**1.37**	**96**	*e*Pn	**Pn**	**21 38 29.3**	**+0.4**
CHOS	**Chios island**	**1.40**	**182**	PN	**Pn**	**21 38 30.0**	**+0.6**
CHOS	**Chios island**	**1.40**	**182**	*e*Pn	**Pn**	**21 38 30.0**	**+0.6**
RDO	**Rodhopi**	**1.43**	**342**	PN	**Pg**	**21 38 31.1**	**-0.3**
RDO	**Rodhopi**	**1.43**	**342**	*e*Pn	**Pg**	**21 38 31.1**	**-0.3**
ZEY	**˙zmir**	**1.57**	**169**	*i* P	**Pn**	**21 38 30.6**	**-1.1**
AKHS	**Akhisar**	**1.60**	**124**	*i* P	**Pg**	**21 38 36.5**	**+1.8**
AKHS				*i* S	**Sg**	**21 38 55.0**	**-0.5**
AKHS	**Akhisar**	**1.60**	**124**	P	**Pg**	**21 38 36.5**	**+1.8**
AKHS				S	**Sg**	**21 38 55.0**	**-0.5**
DURS	**Dursunbey**	**1.83**	**95**	*i* P	**Pn**	**21 38 35.5**	**+0.1**
DURS				*i* S	**Sn**	**21 38 58.8**	**+0.3**
DURS	**Dursunbey**	**1.83**	**95**	P	**Pn**	**21 38 35.5**	**+0.1**
DURS				S	**Sn**	**21 38 58.8**	**+0.3**
DEMI	**Demirci**	**2.15**	**109**	*i* P	**Pg**	**21 38 44.9**	**-0.3**
DEMI				*i* S	**Sg**	**21 39 12.2**	**-0.9**
DEMI	**Demirci**	**2.15**	**109**	P	**Pg**	**21 38 44.9**	**-0.3**

*ISCJB **20** 21:44:49.9±1.3, 1.˚4N±0.˚2×91.˚1E±0.˚1, h10km, mb3.7/7, MS3.8/3, Error ellipse: s-maj=33.6km s-min=14.4km az=21.4*
*IDC **20** 21:44:50.5±1.6, 1.˚40N×91.˚12E, h0km, mb3.7/7, mb1 3.9/9, mb1mx3.6/73, mbtmp3.8/9, ML3.7/1, MS3.5/4, Ms1 3.5/4, ms1mx2.8/66, Error ellipse: s-maj=47.1km s-min=23.2km az=36.0*

ISC 20 21:44:51.8±1.4, 1.˚4N±0.˚3×91.˚1E±0.˚1, h10km, n16, σ0.981/10, mb3.7/7, MS3.8/3, North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**7.90**	**80**	**Pn**	**Pn**	**21 46 46.0**	**-0.9**
	baz=180,slow=17,SNR=3.1						
PSI				LR	LR	21 49 59.1	
	comp=Z,51nm,19.8s,baz=270,slow=39						
PALK	**Pallekele**	**11.93**	**300**	Pn	**Pn**	**21 47 41.2**	**-1.0**
	0.5nm,0.3s,baz=114,slow=13,SNR=5.6						
PALK				Sn	Sn	21 49 42.4	-13
	0.9nm,0.3s,baz=116,slow=18,SNR=4.5						
H08S2	**Diego Garcia H**	**20.66**	**244**	T	T	22 10 40.4	
	baz=61						
H08S3	**Diego Garcia H**	**20.66**	**244**	T	T	22 10 43.7	
	baz=61						
H08S1	**Diego Carcia H**	**20.68**	**244**	T	T	22 10 42.7	
	baz=61						
MKAR	**Makanchi Array**	**45.87**	**352**	P	**P**	**21 53 14.4**	**+0.1**
	0.6nm,0.8s,baz=169,slow=10,SNR=4.9						
WRA	**Warramunga Arr**	**47.36**	**119**	P	**P**	**21 53 26.7**	**+0.3**
	0.6nm,0.7s,baz=295,slow=8.7,SNR=3.5						
SONM	**Songino Array**	**48.11**	**14**	P	**P**	**21 53 33.1**	**+1.2**
	1.1nm,0.7s,baz=187,slow=7.7,SNR=6.6						
KURBB	**Kurchatov Arra**	**50.20**	**350**	P	**P**	**21 53 47.7**	**0.0**
	0.4nm,0.5s,baz=183,slow=8.4,SNR=4.0						
ZALV	**Zalesovo Beam**	**52.64**	**355**	P	**P**	**21 54 05.6**	**-0.3**
	0.6nm,0.6s,baz=191,slow=6.9,SNR=4.0						
MJAR	**Matsushiro Arr**	**55.75**	**46**	LR	LR	22 19 13.8	
	comp=Z,55nm,20.4s,baz=115,slow=37						
USRK	**Ussuriysk Ar.**	**55.89**	**35**	LR	LR	22 20 11.3	
	comp=Z,112nm,18.8s,baz=185,slow=38						
FINES	**FINESS Array B**	**77.07**	**333**	P	**P**	**21 56 44.7**	**-0.3**
	1.0nm,0.7s,baz=114,slow=3.4,SNR=3.2						
GERES	**GERESS Array B**	**80.69**	**319**	P	**P**	**21 57 06.4**	**+1.1**
	0.4nm,0.6s,baz=104,slow=6.2,SNR=4.4						
AFI	**Afiamalu**	**97.20**	**104**	LR	LR	22 40 07.1	
	comp=Z,30nm,20.7s,baz=92,slow=34						
TXAR	**Lajitas Array**	**146.32**	**24**	PKPbc	**PKPab**	**22 04 34.0**	**-0.4**
	0.2nm,0.5s,baz=358,slow=2.6,SNR=4.4						

*ISCJB **20** 21:44:56.3±0.7, 15.˚75N±0.˚08×145.˚9E±0.˚2, h100km, mb3.9/11, Error ellipse: s-maj=24.6km s-min=8.5km az=17.0*
*IDC **20** 21:44:58.7±2.0, 15.˚61N×145.˚92E, h111km±20km, mb3.6/11, mb1 3.8/11, mb1mx3.5/66, mbtmp4.0/11, MS3.6/1, Ms1 3.6/1, ms1mx2.4/50, Error ellipse: s-maj=24.9km s-min=16.9km az=89.0*

ISC 20 21:44:58.0±0.8, 15.˚7N±0.˚1×146.˚0E±0.˚2, h100km, n18, σ0.994/13, mb3.9/11, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.34**	**208**	P	**Pn**	**21 45 36.1**	**+1.1**
	315nm,0.3s,baz=117,slow=2.7,SNR=122						
GUMO				S	**Sn**	**21 46 03.2**	**-0.2**
	318nm,0.3s,baz=166,slow=24,SNR=13						
H11S3	**WAKE ISLAND Hy 19.98**	**79**		T	T	22 10 23.0	
	baz=265,slow=75,SNR=17						
H11S1	**WAKE ISLAND Hy 19.99**	**79**		T	T	22 10 24.2	
	baz=265,slow=75,SNR=20						
H11S2	**WAKE ISLAND Hy 19.99**	**79**		T	T	22 10 24.2	
	baz=265,slow=75,SNR=29						
H11N1	**WAKE ISLAND Hy 20.30**	**76**		T	T	22 10 42.3	
	baz=263,slow=75,SNR=22						
H11N2	**WAKE ISLAND Hy 20.31**	**75**		T	T	22 10 41.6	
	baz=263,slow=75,SNR=22						
H11N3	**WAKE ISLAND Hy 20.32**	**76**		T	T	22 10 43.7	
	baz=263,slow=75,SNR=24						
KSRS	**Korea Array**	**26.96**	**327**	P	**P**	**21 50 30.5**	**+0.3**
	1.5nm,0.6s,baz=156,slow=7.9,SNR=8.4						
WRA	**Warramunga Arr**	**37.20**	**198**	P	**P**	**21 51 58.5**	**-1.2**
	2.5nm,0.7s,baz=22,slow=9.7,SNR=18						
WRA				LR	LR	22 08 11.1	
	comp=Z,86nm,19.2s,baz=320,slow=38						
ASAR	**Alice Springs**	**40.84**	**197**	P	**P**	**21 52 29.1**	**-1.1**
	0.4nm,0.7s,baz=22,slow=9.4,SNR=6.3						
ZALV	**Zalesovo Beam**	**60.59**	**324**	P	**P**	**21 54 56.4**	**-1.6**
	0.6nm,0.4s,baz=108,slow=8.2,SNR=3.5						
MKAR	**Makanchi Array**	**60.78**	**315**	P	**P**	**21 54 59.8**	**+0.3**
	0.7nm,0.5s,baz=90,slow=8.3,SNR=12						
KURBB	**Kurchatov Arra**	**63.77**	**319**	P	**P**	**21 55 18.9**	**-0.4**
	6.1nm,0.7s,baz=98,slow=6.8,SNR=50						
ILAR	**Eielson Array**	**66.23**	**26**	P	**P**	**21 55 34.3**	**-0.7**
	0.6nm,0.5s,baz=252,slow=5.7,SNR=9.7						
BVAR	**Borovoye Array**	**68.99**	**321**	P	**P**	**21 55 52.2**	**-0.3**
	1.1nm,0.4s,baz=110,slow=8.1,SNR=8.6						
INK	**Inuvik**	**72.04**	**23**	P	**P**	**21 56 10.3**	**-0.4**
	1.5nm,0.8s,baz=292,slow=6.6,SNR=6.0						
YKA	**Yellowknife Ar**	**80.52**	**28**	P	**P**	**21 56 59.2**	**+0.3**
	0.6nm,0.5s,baz=290,slow=5.2,SNR=3.3						
NVAR	**Mina Array Bea**	**84.78**	**52**	P	**P**	**21 57 22.8**	**+1.0**
	0.3nm,0.6s,baz=262,slow=5.4,SNR=3.4						

IDC 20 21:46:34.4±3.2, 20.˚74S×176.˚36W, h0km, mb3.9/2, mb1 4.1/2, mb1mx3.5/52, mbtmp3.9/2, MS3.9/1, Ms1 3.9/1, ms1mx2.7/48, Error ellipse: s-maj=204.8km s-min=47.2km az=154.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**36.89**	**282**	LR	LR	22 06 58.3	
	comp=Z,187nm,19.1s,baz=94,slow=33						
ASAR	**Alice Springs**	**45.96**	**257**	P	P	21 55 00.0	+0.4
	1.3nm,0.5s,baz=96,slow=8.0,SNR=17						
ASAR				PcP	PcP	21 56 34.2	-2.4
	0.3nm,0.5s,baz=106,slow=3.7,SNR=4.5						
WRA	**Warramunga Arr**	**46.09**	**262**	P	P	21 55 00.4	-0.2
	0.4nm,0.3s,baz=96,slow=7.6,SNR=15						
BVAR	**Borovoye Array**	**120.25**	**320**	PKP	PKPdf	22 05 27.9	+0.6
	0.2nm,0.3s,baz=125,slow=0.5,SNR=2.4						
HFS	**Hagfors**	**140.00**	**352**	PKhKP	PKPpre	22 06 00.9	
	0.4nm,0.4s,baz=58,slow=3.6,SNR=1.8						
AKASG	**Malin Array Be**	**143.95**	**332**	PKP	PKPdf	22 06 10.9	-0.8
	0.5nm,0.4s,baz=43,slow=4.6,SNR=12						
BRTR	**Keskin Array B**	**148.13**	**313**	PKPbc	PKPbc	22 06 22.5	-0.1
	0.6nm,0.6s,baz=116,slow=7.0,SNR=4.8						

*BJI **20** 21:55:52.6, 0.˚10N×123.˚40E, h139km, mb5.4/73, mB5.2/36*
*IDC **20** 21:55:53.5±0.9, 0.˚11N×123.˚35E, h142km±7km, mb5.0/57, mb1 5.0/60, mb1mx4.9/67, mbtmp5.3/60, MS3.6/15, Ms1 3.6/15, ms1mx3.3/61, Error ellipse: s-maj=8.4km s-min=6.0km az=72.0*

*GCMT **20** 21:55:53.8±0.2, 0.˚09N×123.˚52E, h143km±1km, MW5.1/112, Moment Tensor Solution. s56,c78; s112,c175; Duration: 0 Moment tensor: Scale 1016Nm; Mrr4.21±.12; Mθθ-3.31±.16; Mφφ-0.89±.18; Mrθ3.51±.10; Mrφ-1.67±.13; Mθφ0.98±.12; Best double couple: M0:5.55000×1016 NP1:φ=70.00000°, δ66.00000°, λ96.00000°. NP2:φ=236.00000°, δ25.00000°, λ77.00000°. Principal axes: T 5.6080, Plg69.0000°, Azm352.0000°; N -0.1090, Plg6.0000°, Azm248.0000°; P -5.4910, Plg20.0000°, Azm156.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **20** 21:55:53.8±0.4, 0.˚10N×123.˚43E, h142km±3km, mb5.4/125 Error ellipse: s-maj=3.7km s-min=2.9km az=58.0*
*MOS **20** 21:55:54.9±0.9, 0.˚12N×123.˚41E, h171km, mb5.4/59, Error ellipse: s-maj=7.2km s-min=4.3km az=114.3*
*DJA **20** 21:55:54.8±0.2, 0.˚N±2.˚×12.˚4E±.˚, h143km±2km, M5.0/78, mb5.4/78, mB5.5/48, MLv5.6/18, Mw(mB)4.9/48*
*ISCJB **20** 21:55:54.2±0.3, 0.˚06N±0.˚02×123.˚48E±0.˚02, h164km±2km, mb5.3/231, Error ellipse: s-maj=2.9km s-min=2.7km az=164.9*

ISC 20 21:55:54.8±0.4, 0.˚01N±0.˚03×123.˚42E±0.˚04, h152km±3km, n1130, σ1.929/1255, mb5.4/232, 46C-29D, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.79**	**45**	P	**Pn**	**21 56 16.9**	**-1.3**
LUWI	**Luwuk**	**1.23**	**212**	P	**Pn**	**21 56 20.2**	**-1.7**
LUWI	**Luwuk**	**1.23**	**212**	*e*Pn	**Pn**	**21 56 19.5**	**-2.5**
MRSI	**Marisa**	**1.55**	**287**	P	**Pn**	**21 56 23.9**	**-1.2**
APSI	**Ampana**	**2.00**	**243**	P	**Pn**	**21 56 29.7**	**-0.4**
SANI	**Sanana**	**3.28**	**129**	P	**Pn**	**21 56 42.1**	**-3.8**
MPSI	**Mapaga**	**3.54**	**275**	P	**Pn**	**21 56 49.6**	**+0.4**
PCI	**Palu**	**3.70**	**256**	P	**Pn**	**21 56 52.1**	**+0.8**
PCI	**Palu**	**3.70**	**256**	P	**Pn**	**21 56 52.1**	**+0.8**
TNTI	**Ternate**	**4.01**	**79**	*e*Pn	**Pn**	**21 56 52.8**	**-2.5**
KDI	**Kendari**	**4.02**	**192**	P	**Pn**	**21 56 54.0**	**-1.5**
LBMI	**Labuha**	**4.13**	**99**	P	**Pn**	**21 56 53.9**	**-2.9**
TTSI	**Tana Toraja**	**4.71**	**230**	P	**Pn**	**21 57 05.2**	**+0.7**
NLAI	**Namlea**	**4.89**	**131**	P	**Pn**	**21 57 05.5**	**-1.4**
SPSI	**Sidrap Palu**	**5.38**	**223**	P	**Pn**	**21 57 13.5**	**+0.2**
SMKI	**Samarinda**	**6.23**	**266**	P	**Pn**	**21 57 26.3**	**+1.6**
BKSI	**Bulukumba**	**6.24**	**212**	P	**Pn**	**21 57 25.1**	**+0.3**
MSAI	**Masohi**	**6.43**	**121**	P	**Pn**	**21 57 26.6**	**-0.8**
SKMP	**Bagumbayan, Su**	**6.56**	**10**	*e*P	**Pn**	**21 57 29.0**	**0.0**
SKMP				*e*S	**Sn**	**21 58 42.0**	**-0.9**
BKB	**Balikpapan**	**6.65**	**259**	P	**Pn**	**21 57 31.9**	**+1.7**
MYLDM	**Lahad Datu**	**7.11**	**316**	*e*Pn	**Pn**	**21 57 38.2**	**+1.8**
DAV	**Davao City (W)**	**7.33**	**17**	P	Pn	21 57 43.1	+3.7
	69nm,0.3s,baz=144,slow=0.6,SNR=33						
DAV				S	**Sn**	**21 59 08.1**	**+6.6**
	19nm,0.3s,baz=356,slow=15,SNR=1.5						
DAV	**Davao City (W)**	**7.33**	**17**	*e*Pn	**Pn**	**21 57 37.7**	**-1.7**
DAV				S	**Sn**	**21 59 08.1**	**+6.6**
DAV	**Davao City (W)**	**7.33**	**17**	P	**Pn**	**21 57 43.0**	**+3.6**
	SNR=35						
MATI	**Mati**	**7.45**	**22**	*e*P	**Pn**	**21 57 39.7**	**-1.1**
MATI				*e*S	**Sn**	**21 59 06.3**	**+2.1**
PAGZ	**Pagadian**	**7.79**	**360**	*e*P	**Pn**	**21 57 45.7**	**+0.3**
BNDI	**Bandanaira**	**7.89**	**125**	P	**Pn**	**21 57 45.3**	**-1.4**
SIJI	**Sorong**	**7.89**	**96**	P	**Pn**	**21 57 45.4**	**-1.5**
	18nm,0.3s,baz=312,slow=9.3,SNR=43						
SIJI				S	**Sn**	**21 59 12.1**	**-2.9**
	7.5nm,0.3s,baz=64,slow=20,SNR=3.6						
BUKP	**Musuan**	**7.98**	**12**	*e*P	**Pn**	**21 57 49.4**	**+1.3**
MTKI	**Muara Teweh, K**	**8.58**	**264**	P	**Pn**	**21 57 57.9**	**+1.9**
MMRI	**Maumere**	**8.67**	**188**	P	**Pn**	**21 57 56.7**	**-0.5**
MMRI	**Maumere**	**8.67**	**188**	*e*Pn	**Pn**	**21 57 56.9**	**-0.3**
EDFI	**Ende, Flores**	**8.87**	**191**	P	**Pn**	**21 57 59.5**	**-0.5**
FAKI	**Fak Fak**	**9.29**	**108**	P	**Pn**	**21 58 02.8**	**-2.7**
FAKI	**Fak Fak**	**9.29**	**108**	*e*Pn	**Pn**	**21 58 02.6**	**-2.9**
SOEI	**Soe**	**9.74**	**175**	P	**Pn**	**21 58 13.5**	**+2.0**
SOEI	**Soe**	**9.74**	**175**	*e*Pn	**Pn**	**21 58 13.5**	**+2.0**
BATI	**Baumata**	**10.15**	**179**	P	**Pn**	**21 58 19.1**	**+2.2**
	13nm,0.3s,baz=35,slow=1.3,SNR=42						
BATI				LR	LR	22 02 18.4	
	comp=Z,685nm,18.1s,baz=344,slow=38						
BATI	**Baumata**	**10.15**	**179**	P	**Pn**	**21 58 18.6**	**+1.7**
MSLP	**Maasin**	**10.16**	**8**	*e*P	**Pn**	**21 58 19.2**	**+2.3**
LLP	**Lapu-Lapu**	**10.25**	**3[illegible]**	*e*P	**Pn**	**21 58 20.5**	**+2.3**
LLP				*e*S	Sn	22 00 01.9	-10
BATP	**Bataraza**	**10.37**	**327**	*e*P	**Pn**	**21 58 20.7**	**+0.9**
BATP				*e*S	**Sn**	**22 00 17.8**	**+3.2**
WBSI	**Waikabubak, Su**	**10.40**	**203**	P	**Pn**	**21 58 21.0**	**+0.9**
PLAI	**Plampang**	**10.43**	**213**	P	**Pn**	**21 58 22.1**	**+1.6**
GUIM	**Jordan**	**10.58**	**356**	*e*P	**Pn**	**21 58 24.6**	**+2.2**
JAP	**San Jose, Anti**	**10.77**	**352[illegible]**	*e*P	Pn	21 58 30.7	+5.7
PPR	**Puerto Princes**	**10.77**	**334[illegible]**	*e*P	Pn	21 58 29.1	+4.1
RKPI	**Ransiki, Papua**	**10.86**	**98**	P	**Pn**	**21 58 29.6**	**+3.4**
	141nm,0.8s,2μm						
TWSI	**Taliwang, Sumb**	**10.86**	**217**	P	**Pn**	**21 58 27.8**	**+1.5**
SAUI	**Saumlaki**	**11.17**	**136**	P	**Pn**	**21 58 30.3**	**+0.1**
SAUI	**Saumlaki**	**11.17**	**136**	*e*Pn	**Pn**	**21 58 28.1**	**-2.1**
SBUM	**Sibu**	**11.46**	**282**	*e*Pn	**Pn**	**21 58 35.0**	**+0.9**
SRBI	**Singaraja**	**11.47**	**225**	P	**Pn**	**21 58 36.4**	**+2.1**
RCP	**Roxas**	**11.49**	**357[illegible]**	*e*P	**P**	**21 58 38.9**	**-3.1**
STKI	**Sintang**	**11.95**	**270**	P	**Pn**	**21 58 43.7**	**+3.3**
	162nm,1.0s,18μm						
PBKI	**Pangkalan Bun**	**12.06**	**257**	P	**Pn**	**21 58 41.6**	**-0.3**
BUSP	**Coron**	**12.34**	**345**	*e*P	**P**	**21 58 50.3**	**-1.1**
OTRP	**Odiongan**	**12.35**	**354**	*e*P	**Pn**	**21 58 46.6**	**+0.9**
BLJI	**Banyuglugur**	**12.47**	**232**	P	**P**	**21 58 56.9**	**+4.1**
JAGI	**Jajag, Banyuwa**	**12.50**	**227**	P	**Pn**	**21 58 50.1**	**+2.4**
JAGI	**Jajag, Banyuwa**	**12.50**	**227**	*e*Pn	**Pn**	**21 58 47.8**	**+0.2**
SJMP	**San Jose**	**12.58**	**350**	*e*P	**P**	**21 58 54.9**	**+0.8**
BAKI	**Biak**	**12.74**	**95**	P	**Pn**	**21 58 48.4**	**-2.3**
GMJI	**Gumukmas**	**12.91**	**230**	P	**P**	**21 58 59.7**	**+2.0**
KSM	**Kuching**	**13.19**	**276**	*e*Pn	**Pn**	**21 58 57.3**	**+0.7**
PALU	**Palau**	**13.21**	**56**	P	**Pn**	**21 58 54.9**	**-1.8**
	baz=13,SNR=11						
BOAC	**Boac**	**13.45**	**353**	*e*P	**P**	**21 59 02.8**	**-0.9**
PVCP	**Virac**	**13.52**	**3**	*e*P	**P**	**21 59 02.3**	**-2.2**
NGJI	**Ngawi**	**14.00**	**238**	P	**P**	**21 59 13.9**	**+4.0**
PWJI	**Pagerwojo**	**14.07**	**235**	P	**P**	**21 59 10.3**	**-0.3**
LQP	**Lukban**	**14.13**	**352**	*e*P	**Pn**	**21 59 07.4**	**-1.2**
TGY	**Tagaytay City**	**14.21**	**350**	P	**P**	**21 59 12.5**	**+0.2**
	74nm,0.3s,baz=178,slow=5.4,SNR=17						
PCJI	**Pacitan**	**14.68**	**236**	P	**P**	**21 59 18.6**	**+1.2**
WOJI	**Wonogiri, Jawa**	**14.70**	**238**	P	**P**	**21 59 18.5**	**+0.9**
SMRI	**Semarang**	**14.73**	**241**	P	**P**	**21 59 20.4**	**+2.4**
SMRI	**Semarang**	**14.73**	**241**	*e*Pn	**P**	**21 59 19.7**	**+1.7**
MTN	**Manton Dam**	**14.88**	**149**	P	**Pn**	**21 59 17.1**	**-0.7**
	baz=15,SNR=30						
MTN	**Manton Dam**	**14.88**	**149**	*e*Pn	**Pn**	**21 59 16.8**	**-1.0**
KDU	**Kakadu**	**15.48**	**145**	P	**Pn**	**21 59 23.8**	**-1.4**
	baz=16,SNR=96						
BALP	**Baler**	**15.74**	**353**	*e*P	**P**	**21 59 30.1**	**+1.0**
SCZP	**Santa Cruz**	**16.04**	**348**	*e*P	**P**	**21 59 32.2**	**-0.3**
KPJI	**Karang Pucung**	**16.19**	**243**	P	**P**	**21 59 35.8**	**+1.6**
JCJI	**Jatiwangi**	**16.44**	**247**	P	**P**	**21 59 40.8**	**+3.9**
	326nm,0.5s						
KNRA	**Kununurra**	**16.46**	**162**	P	**Pn**	**21 59 37.6**	**+0.5**
	baz=17,SNR=98						
BOLP	**Bolinao**	**16.63**	**348**	*e*P	**P**	**21 59 37.6**	**-1.3**
CMJI	**Cimerak**	**16.82**	**242**	P	**Pn**	**21 59 43.3**	**+1.8**
GENI	**Genyem**	**16.94**	**99**	P	**Pn**	**21 59 43.9**	**+0.9**
	87nm,1.2s,2μm						
LEM	**Lembang**	**17.17**	**246**	P	**Pn**	**21 59 47.2**	**+1.3**
	9.4nm,0.3s,baz=36,slow=8.1,SNR=30						
CISI	**Cisompet, Garu**	**17.28**	**244**	P	**P**	**21 59 46.0**	**-0.3**
CISI	**Cisompet, Garu**	**17.28**	**244**	*e*P	**P**	**21 59 46.3**	**0.0**
	217nm,0.7s						
PPBI	**Pangkal Pinang**	**17.42**	**263**	P	**Pn**	**21 59 50.2**	**+1.5**
	0.5nm,0.7s						
JAY	**Jayapura**	**17.46**	**98**	P	**Pn**	**21 59 48.4**	**-0.9**
	1.6nm,0.3s,baz=301,slow=12,SNR=7.6						
JAY	**Jayapura**	**17.46**	**98**	P	**Pn**	**21 59 51.4**	**+2.2**
ABRA	**Dolores**	**17.73**	**351**	*e*P	**P**	**21 59 49.5**	**-1.5**
APYP	**Conner**	**17.87**	**353**	*e*P	**Pn**	**21 59 54.0**	**+0.1**
DBJI	**Dramaga**	**17.87**	**248**	P	**Pn**	**21 59 54.1**	**0.0**
	269nm,1.2s						
FITZ	**Fitzroy Crossi**	**18.13**	**173**	P	**P**	**21 59 56.1**	**+0.7**
	baz=18,SNR=156						
FITZ	**Fitzroy Crossi**	**18.13**	**173**	*e*P	**P**	**21 59 56.1**	**+0.7**
	280nm,1.1s						
SKJI	**Sukabumi**	**18.21**	**247**	P	**Pn**	**21 59 57.5**	**-0.7**
SBJI	**Serang**	**18.30**	**250**	P	**Pn**	**21 59 59.4**	**+0.2**
PMBI	**Palembang**	**18.87**	**261**	P	**Pn**	**22 00 06.4**	**+0.5**
CGJI	**Cibinong**	**18.88**	**249**	P	**Pn**	**22 00 05.8**	**-0.1**
	246nm,0.8s,3μm						
TPRI	**Tanjung Pinang**	**18.92**	**273**	P	**Pn**	**22 00 05.9**	**-0.5**
	294nm,0.7s,4μm						
BLSI	**Bandar Lampung**	**18.92**	**253**	P	**Pn**	**22 00 08.9**	**+2.4**
	267nm,0.5s						
KLI	**Kotabumi**	**19.17**	**255**	P	**Pn**	**22 00 11.0**	**+1.7**
MYKOM	**Kota Tinggi**	**19.65**	**275**	*e*P	**Pn**	**22 00 14.1**	**-0.9**
	213nm,1.3s						
KASI	**Kota Agung**	**19.68**	**253**	P	**P**	**22 00 13.3**	**+1.0**
MDSI	**Maura Dua**	**19.74**	**257**	P	**P**	**22 00 13.0**	**0.0**
LWLI	**Liwa**	**19.98**	**255**	P	Pn	22 00 18.8	-0.2
	157nm,0.7s,3μm						
MBWA	**Marble Bar**	**21.35**	**190**	*e*P	**P**	**22 00 30.0**	**-0.1**
	51nm,0.9s						
MASI	**Maura Aman, Be**	**21.40**	**261**	P	**P**	**22 00 30.8**	**-0.1**
KRJI	**Kerinci**	**22.06**	**264**	P	**P**	**22 00 39.4**	**+1.7**
	566nm,1.0s,5μm						
WRAB	**Tennant Creek**	**22.53**	**152**	*e*P	**P**	**22 00 41.2**	**-0.9**
	111nm,0.6s						
WRAB				*e*PcP	**PcP**	**22 04 31.1**	**+0.5**
WRAB				*e*ScP	**ScP**	**22 07 55.0**	**+0.9**
WRAB	**Tennant Creek**	**22.53**	**152**	*e*P	**P**	**22 00 41.2**	**-0.9**
WRAB				*e* pmax	pmax	22 04 31.1	
	comp=Z,111nm,0.6s						
WRA	**Warramunga Arr**	**22.53**	**152**	P	**P**	**22 00 41.2**	**-1.0**
	comp=Z,77nm,0.5s,baz=333,slow=10.0,SNR=772						
WRA				PcP	**PcP**	**22 04 30.9**	**+0.3**
	comp=Z,8.6nm,0.5s,baz=325,slow=2.2,SNR=8.4						
WRA				ScP	**ScP**	**22 07 54.5**	**+0.3**
	comp=Z,14nm,0.8s,baz=334,slow=3.1,SNR=17						
WRA				PKiKP	**PKiKP**	**22 12 14.8**	**-1.2**
	comp=Z,0.8nm,0.6s,baz=313,slow=1.3,SNR=6.1						
WRA				P3KPbc		22 34 04.5	
	comp=Z,0.2nm,0.6s,baz=152,slow=3.4,SNR=4.6						
WB2	**Warramunga Arr**	**22.54**	**152**	*e*P	**P**	**22 00 41.2**	**-1.0**
	comp=Z,123nm,0.6s						
WB2				*e*PcP	**PcP**	**22 04 31.2**	**+0.6**
TWG	**Pinlang**	**22.79**	**354**	*e*P	**P**	**22 00 44.0**	**-0.5**
	comp=Z,347nm,0.7s						
IPM	**Ipoh**	**22.81**	**282**	*e*P	**P**	**22 00 45.6**	**+0.7**
	comp=Z,378nm,0.8s						
PDSI	**Padang**	**22.98**	**268**	P	**P**	**22 00 47.5**	**+1.1**
	comp=Z,154nm,1.1s,comp=Z,65μm						
QIZ	**Qiongzhong**	**23.13**	**326**	P	**P**	**22 00 49.5**	**+1.8**
QIZ				S	**S**	**22 04 51.3**	**+3.7**
QIZ				pmax	pmax		
	comp=Z,250nm,0.9s						
QIZ	**Qiongzhong**	**23.13**	**326**	*e*P	**P**	**22 00 48.3**	**+0.7**
	comp=Z,228nm,0.9s						
TPUB	**Ta-pu**	**23.31**	**353**	*e*P	**P**	**22 00 49.5**	**+0.2**
	comp=Z,312nm,0.9s						
YULB	**Yu-li**	**23.33**	**355**	*e*P	**P**	**22 00 48.7**	**-0.8**
	comp=Z,84nm,0.7s						
KULM	**Kulim**	**23.34**	**283**	*e*P	**P**	**22 00 50.4**	**+0.7**
	comp=Z,338nm,1.5s						
UBPT	**Khong Chiam**	**23.34**	**311**	P	**P**	**22 00 50.2**	**+0.5**
	comp=Z,151nm,1.1s,comp=Z,2μm						
PPSI	**Pulau Pagai**	**23.57**	**263**	P	**P**	**22 00 53.8**	**+2.0**
**SSL

SNR=21
CHTO Chiang Mai 30.44 309 *e*P **P 22 01 53.5 +0.2**
CHTO *e* 22 04 49.4
CHTO pmax pmax
comp=Z,146nm,0.9s
GYA Guiyang 30.86 330⇑ *i*P **P 22 01 59.1 +2.2**
GYA pP pP 22 02 26.8 -2.4
GYA sP sP 22 02 39.9 -6.9
GYA PP **PnPn 22 03 05.8 +1.4**
GYA PcP **PcP 22 04 50.3 0.0**
GYA S **S 22 06 53.0 +3.3**
GYA sS sS 22 07 44.5 -2.0
GYA pmax pmax
comp=Z,110nm,0.9s
GYA pmax pmax
comp=Z,140nm,4.9s
FORT Forrest 30.94 172 P **P 22 01 57.6 +0.2**
baz=31,SNR=92
FORT Forrest 30.94 172 *e*P **P 22 01 57.8 +0.4**
comp=Z,247nm,0.6s
CMAI Chiengmai2 31.02 311 P **P 22 01 59.3 +0.8**
comp=Z,433nm,0.7s
BLDU Ballidu 31.12 191 P **P 22 01 58.8 -0.3**
baz=31,SNR=43
KMBL Kambalda 31.24 183 P **P 22 02 00.1 0.0**
baz=32,SNR=30
KLBR Kellerberrin 31.89 189 P **P 22 02 05.6 -0.1**
baz=32,SNR=52
KMI Kunming 31.99 323 P **P 22 02 08.5 +1.5**
KMI pP pP 22 02 39.1 -0.3
KMI sP sP 22 02 57.3 +0.4
KMI pmax pmax
comp=Z,45nm,0.8s
KMI LR LR
comp=Z,220nm,5.5s
KMI LR LR
comp=Z,320nm,4.2s
KMI LR LR
comp=Z,260nm,11.2s
NJ2 Nanjing 32.16 353 *e*P **P 22 02 08.8 +0.7**
NJ2 pmax pmax
comp=Z,84nm,0.7s
CBIJ Chichi jima 32.41 32 P **P 22 02 09.3 -1.1**
JCJ Chichijima 32.41 32 P **P 22 02 09.3 -1.1**
comp=Z,494nm,0.4s,baz=274,slow=3.4,SNR=41
MUN Mundaring 32.54 191 P **P 22 02 11.5 0.0**
baz=33,SNR=4.7
ENH Enshi 32.89 337 *e*P **P 22 02 15.7 +1.2**
ENH *e*PcP **PcP 22 04 55.7 +0.1**
QLP Quilpie 33.18 144 P **P 22 02 18.0 +0.9**
baz=33,SNR=7.2
NWAO Narrogin (SRO) 33.28 190 P **P 22 02 18.2 +0.3**
comp=Z,18nm,0.5s,baz=253,slow=8.7,SNR=30
NWAO Narrogin (SRO) 33.28 190 P **P 22 02 18.1 +0.3**
baz=34,SNR=19
NWAO Narrogin (SRO) 33.28 190 *e*P **P 22 02 18.4 +0.5**
comp=Z,102nm,1.4s
NWAO Narrogin (SRO) 33.28 190 *e*P **P 22 02 18.4 +0.5**
NWAO pmax pmax
comp=Z,102nm,1.4s
JNU Nakatsue 33.67 11 P **P 22 02 19.2 -2.1**
comp=Z,21nm,0.8s,baz=216,slow=2.7,SNR=10
JNU LR LR 22 16 17.9
comp=Z,97nm,21.6s,baz=117,slow=36
JNU Nakatsue 33.67 11 *e*P **P 22 02 19.5 -1.8**
comp=Z,24nm,0.8s
BBOO Buckleboo 34.75 161 P **P 22 02 30.8 +0.3**
baz=35,SNR=24
BBOO Buckleboo 34.75 161 *e*P **P 22 02 30.9 +0.3**
comp=Z,40nm,1.0s
PATS Pohnpei 35.46 78 *e*P **P 22 02 37.5 +0.6**
comp=Z,248nm,1.6s
RMQ Roma 35.91 139 P **P 22 02 41.4 +0.8**
baz=36,SNR=7.1
CD2 Chengdu 35.96 330 P **P 22 02 40.8 -0.2**
CD2 pP pP 22 03 11.0 -2.8
CD2 sP sP 22 03 27.3 -4.0
CD2 PP **PP 22 04 05.4 -0.6**
CD2 PcP **PcP 22 05 03.8 -0.7**
CD2 S **S 22 08 09.9 +1.6**
CD2 sS sS 22 09 03.5 -2.3
CD2 pmax pmax
comp=Z,330nm,1.0s
CD2 pmax pmax
comp=Z,470nm,3.8s
STKA Stephens Creek 36.08 153 P **P 22 02 42.3 +0.4**
comp=Z,74nm,0.7s,baz=326,slow=8.9,SNR=98
STKA PcP **PcP 22 05 05.1 +0.3**
comp=Z,17nm,0.6s,baz=260,slow=2.5,SNR=4.0
STKA ScP **ScP 22 08 37.8 +0.8**
comp=Z,14nm,0.7s,baz=319,slow=5.6,SNR=8.0
STKA Stephens Creek 36.08 153 P **P 22 02 42.7 +0.8**
baz=36,SNR=45
STKA Stephens Creek 36.08 153 *e*P **P 22 02 42.7 +0.8**
comp=Z,17nm,0.8s
STKA PcP **PcP 22 05 05.1 +0.3**
STKA ScP **ScP 22 08 37.8 +0.8**
STKA Stephens Creek 36.08 153 *e*P **P 22 02 42.7 +0.8**
STKA 22 05 05.1
STKA pmax pmax
comp=Z,17nm,0.8s
HTT Hallett 36.32 158 P **P 22 02 45.0 +0.9**
baz=36,SNR=42
JHJ Hachijo jima 2 36.36 23 P **P 22 02 44.0 -0.2**
comp=Z,105nm,0.7s,baz=73,slow=19,SNR=5.0
TJN Taejon 36.37 5⇓ *e*P **P 22 02 44.7 +0.4**
XAN Xi'an 36.48 340 P **P 22 02 45.3 -0.1**
XAN pP pP 22 03 16.3 -2.0
XAN sP sP 22 03 32.4 -3.3
XAN PcP **PcP 22 05 06.1 +0.1**
XAN S **S 22 08 16.8 +0.6**
XAN sS sS 22 09 09.3 -4.5
XAN ScS **ScS 22 12 44.3 -1.1**
XAN pmax pmax
comp=Z,140nm,0.8s
TIA Tai'an 36.49 351 P **P 22 02 44.8 -0.6**
TIA pmax pmax
comp=Z,35nm,0.9s
EIDS Eidsvold 36.75 135 *e*P **P 22 02 47.7 -0.1**
comp=Z,9.2nm,0.9s
KS15 Wonju Array Si 37.47 6 *e*P **P 22 02 53.5 -0.1**
KSAR Wonju Array Be 37.47 6 P **P 22 02 53.1 -0.4**
KSAR PcP **PcP 22 05 09.3 +0.4**
KSAR ScP **ScP 22 08 42.4 +0.3**
KSAR Wonju Array Be 37.47 6 P **P 22 02 53.2 -0.4**
KSAR 22 05 09.3
KSRS Korea Array 37.49 6 P **P 22 02 53.1 -0.6**
comp=Z,17nm,0.9s,baz=183,slow=9.8,SNR=52
KSRS PcP **PcP 22 05 09.3 +0.4**
comp=Z,8.1nm,0.7s,baz=190,slow=3.2,SNR=11
KSRS ScP **ScP 22 08 42.4 +0.3**
comp=Z,3.1nm,0.7s,baz=201,slow=3.6,SNR=9.3
KSRS LR LR 22 17 44.5
comp=Z,87nm,21.3s,baz=188,slow=35
KS01 Wonju Array Si 37.51 6 *e*P **P 22 02 53.1 -0.8**
HNR Honiara 37.55 106 P **P 22 02 54.3 -0.3**
comp=Z,57nm,0.3s,baz=32,slow=5.3,SNR=4.3
CMSA Cobar Meteorol 37.81 148 P **P 22 02 57.9 +1.3**
baz=38,SNR=43
BRDH Bariadhala 38.26 308 P **P 22 02 57.7 -2.8**
comp=Z,67nm,0.3s,baz=276,slow=19,SNR=2.6
BRDH LR LR 22 20 20.7
comp=Z,113nm,21.9s,baz=38,slow=38
DL2 Dalian 38.74 358 P **P 22 03 03.3 -0.9**
DL2 pmax pmax
comp=Z,120nm,0.8s
MJAR Matsushiro Arr 38.85 19 P **P 22 03 03.6 -1.6**
comp=Z,68nm,0.7s,baz=197,slow=9.7,SNR=136
MJAR PcP **PcP 22 05 13.5 +0.3**
comp=Z,9.7nm,0.8s,baz=207,slow=4.2,SNR=5.0
MJAR ScP **ScP 22 08 47.1 -0.3**
comp=Z,1.9nm,0.6s,baz=183,slow=5.3,SNR=4.4
MAJO Matsushiro 38.85 19 *e*P **P 22 03 03.7 -1.5**
comp=Z,86nm,0.8s
MAJO *e*PcP **PcP 22 05 12.9 -0.3**
MAJO Matsushiro 38.85 19*c i*P **P 22 03 03.4 -1.8**
MAJO pmax pmax
comp=Z,79nm,0.9s
MAT Matsushiro 38.85 19 P **P 22 03 03.6 -1.6**
MJB9 Matsu-Tunnel 38.85 19 *e*P **P 22 03 03.7 -1.6**
comp=Z,87nm,0.8s
TIY Taiyuan 38.86 346 *e*P **P 22 03 05.5 +0.1**
TIY pmax pmax
comp=Z,170nm,0.8s
SHL Shillong 39.66 312 *e*P **P 22 03 10.0 -2.3**
SHL Shillong 39.66 312 *e*P **P 22 03 13.1 +0.8**
comp=Z,148nm,1.1s
SHL Shillong 39.66 312 *e*P **P 22 03 13.1 +0.8**
SHL pmax pmax
comp=Z,148nm,1.1s
LZH Lanzhou 40.25 335 *e*P **P 22 03 18.4 +1.4**
LZH pP pP 22 03 50.0 -0.4
LZH sP sP 22 04 07.8 +0.1
LZH PcP **PcP 22 05 18.3 +0.4**
LZH PcS **PcS 22 09 08.8 +0.1**
LZH pmax pmax
comp=Z,270nm,1.0s
LZH pmax pmax
comp=Z,450nm,4.0s
BJT Baijiatuau 40.37 351 *e*P **P 22 03 16.6 -1.0**
BJT Baijiatuau 40.37 351 *e*P **P 22 03 16.6 -1.0**
ARPS Mount Arapiles 40.38 157 P **P 22 03 19.0 +1.2**
baz=41,SNR=30
BJI Beijing 40.38 351 P **P 22 03 16.1 -1.7**
BJI pmax pmax
comp=Z,69nm,1.1s
ARMA Armidale 40.43 141 P **P 22 03 20.1 +1.6**
baz=40,SNR=42
ARMA Armidale 40.43 141 *e*P **P 22 03 20.3 +1.8**
comp=Z,49nm,0.6s
YNG Young 41.38 148 P **P 22 03 27.9 +1.9**
baz=42,SNR=28
HHC Hu-ho-hao-te 42.05 347 *e*P **P 22 03 32.5 +0.9**
HHC PP **PP 22 05 15.3 +3.2**
HHC S **S 22 09 41.6 +2.2**
HHC SS **SS 22 12 48.1 -4.9**
HHC pmax pmax
comp=Z,43nm,0.6s
HHC pmax pmax
comp=Z,74nm,5.5s
HHC LR LR
comp=Z,2μm,10.4s
HHC LR LR
comp=Z,2μm,7.8s
HHC LR LR
comp=Z,2μm,13.8s
MGCD Mangrove Creek 42.08 144 P **P 22 03 31.7 -0.1**
baz=42,SNR=7.3
TOO Toolangi 42.59 154 P **P 22 03 38.0 +2.1**
baz=43,SNR=7.0
LSA Lhasa 42.63 317 P **P 22 03 38.8 +1.9**
LSA pmax pmax
comp=Z,46nm,1.0s
LSA Lhasa 42.63 317 *e*P **P 22 03 37.8 +0.9**
comp=Z,51nm,0.6s
LSA *e*PcP **PcP 22 05 25.7 -0.5**
LSA Lhasa 42.63 317 *i*P **P 22 03 38.3 +1.5**
SNR=54
LSA Lhasa 42.63 317 *e*P **P 22 03 37.8 +0.9**
LSA *e* 22 05 25.7
LSA pmax pmax
comp=Z,51nm,0.6s
CNB Canberra Magne 42.67 148 P **P 22 03 38.5 +2.0**
baz=43,SNR=16
MSHR Mys Shultsa 42.95 8⇓ *e*P **P 22 03 38.3 -0.3**
PALK Pallekele 43.21 281 P **P 22 03 41.0 -0.2**
comp=Z,8.6nm,0.9s,baz=112,slow=5.2,SNR=5.2
PALK PcP **PcP 22 05 28.6 +0.6**
comp=Z,20nm,0.8s,baz=160,slow=0.5,SNR=8.0
ODAN Odare 43.74 311 *e*P **P 22 03 46.6 +1.1**
comp=Z,255nm,0.8s
TAPN Taplejung 43.76 311 *e*P **P 22 03 46.9 +1.2**
comp=Z,135nm,0.9s
RAMN Ramite 44.39 310 *e*P **P 22 03 51.0 +0.3**
comp=Z,542nm,0.9s
USRK Ussuriysk Ar. 44.65 9 P **P 22 03 51.5 -0.7**
comp=Z,45nm,0.6s,baz=189,slow=7.2,SNR=61
MDJ Mudanjiang 44.75 6 P **P 22 03 49.3 -3.7**
MDJ pmax pmax
comp=Z,52nm,0.9s
MDJ pmax pmax
comp=Z,100nm,3.7s
MDJ Mudanjiang 44.75 6 *e*P **P 22 03 52.0 -0.9**
comp=Z,66nm,0.8s
GTA Gaotai 44.77 334 ⇓P **P 22 03 54.3 +0.9**
GTA pP pP 22 04 26.3 -1.1
GTA sP sP 22 04 42.5 -2.0
GTA PcP **PcP 22 05 33.6 +0.7**
GTA ScP **ScP 22 09 10.4 -0.7**
GTA PcS **PcS 22 09 24.6 -2.2**
GTA S **S 22 10 23.5 +4.5**
GTA SS **SS 22 13 40.1 -3.7**
GTA pmax pmax
comp=Z,180nm,0.9s
GTA pmax pmax
comp=Z,290nm,4.2s
GTA LR LR
comp=Z,170nm,17.2s
GTA LR LR
comp=Z,170nm,15.8s
GTA LR LR
comp=Z,150nm,19.9s
JIRN Jiri 45.07 311 *e*P **P 22 03 56.2 0.0**
comp=Z,436nm,0.8s
GUN Gumba 45.43 311 *e*P **P 22 03 59.0 -0.1**
comp=Z,460nm,0.8s
ERM Erimo 45.45 21⇓ *e*P **P 22 03 58.1 -0.4**
ERM pmax pmax
comp=Z,65nm,1.0s
PKIN Phulchoki 45.63 310 *e*P **P 22 04 01.0 +0.5**
comp=Z,58nm,0.5s
KKN Kakani 45.83 310 *e*P **P 22 04 02.7 +0.7**
comp=Z,180nm,0.8s
DMN Daman 45.87 310 *e*P **P 22 04 02.2 -0.2**
comp=Z,370nm,0.9s
TEY Ternei 46.33 13 *e*P **P 22 04 04.8 -0.5**
TEY pmax pmax
comp=N,60nm,0.6s
TEY pmax pmax
comp=Z,90nm,0.6s
GKN Gorkha 46.42 310 *e*P **P 22 04 06.2 -0.4**
comp=Z,350nm,0.9s
KOLN Koldanda 47.11 309 *e*P **P 22 04 12.0 0.0**
comp=Z,566nm,0.7s
ASAJ Asahikawa 47.12 19 P **P 22 04 11.6 0.0**
comp=Z,114nm,0.8s,baz=230,slow=11,SNR=48
ASAJ Asahikawa 47.12 19 *e*P **P 22 04 11.6 0.0**
comp=Z,147nm,0.9s
DANN Dangsing 47.27 310 *e*P **P 22 04 13.1 -0.2**
comp=Z,622nm,0.7s
DZM Mont Dzumac 47.30 121 P **P 22 04 13.7 +0.2**
comp=Z,15nm,0.9s,baz=286,slow=14,SNR=4.7
HYB Hyderabad 47.42 294 *i*P **P 22 04 13.0 -1.3**
HYB *e*pP **pP 22 04 49.0 +0.3**
HYB *e*sP **sP 22 05 08.0 +2.3**
PYUN Piuthan 47.74 309 *e*P **P 22 04 17.0 +0.1**
comp=Z,1μm,0.8s
HIA Hailar 49.17 357 *e*P **P 22 04 26.4 -0.8**
comp=Z,73nm,0.8s
HIA *e*PcP **PcP 22 05 48.4 +0.2**
HIA Hailar 49.17 357 *e*P **P 22 04 26.4 -0.8**
HIA *e* 22 05 48.4
HIA pmax pmax
comp=Z,73nm,0.8s
KLR Kul'dur 49.55 7 P **P 22 04 28.8 -1.3**
comp=Z,2.5nm,0.9s,baz=194,slow=8.4,SNR=55
KLR LR LR 22 25 53.4
comp=Z,6.9nm,21.5s,slow=36
YSS Yuzh-Sakhalins 49.72 17 *e*P **P 22 04 30.8 -0.6**
comp=Z,75nm,0.8s
YSS Yuzh-Sakhalins 49.72 17*α i*P **P 22 04 30.7 -0.6**
YSS pmax pmax
comp=Z,80nm,1.0s
YSS pmax pmax
comp=N,50nm,0.6s
YSS pmax pmax
comp=E,40nm,0.6s
YSS pmax pmax
comp=Z,300nm,5.2s
YSS MLR MLR
comp=Z,500nm,15.0s
ULN Ulaanbaatar 49.74 346 *e*P **P 22 04 31.2 -0.6**
comp=Z,57nm,0.8s
ULN *e*PcP **PcP 22 05 50.0 -0.5**
ULN Ulaanbaatar 49.74 346 P **P 22 04 31.4 -0.4**
SNR=29
ULN Ulaanbaatar 49.74 346*c i*P **P 22 04 31.1 -0.6**
ULN pmax pmax
comp=Z,52nm,0.7s
SONM Songino Array 49.88 345 P **P 22 04 32.1 -0.7**
comp=Z,67nm,0.7s,baz=159,slow=7.9,SNR=248
SONM PcP **PcP 22 05 50.3 -0.6**
comp=Z,16nm,0.7s,baz=165,slow=4.4,SNR=6.9
SONM ScP **ScP 22 09 31.0 -1.4**
comp=Z,1.4nm,0.7s,baz=170,slow=5.0,SNR=4.7
SONA1 Songino Array 49.89 345 *e*P **P 22 04 31.6 -1.3**
GRNR Gornyy 51.77 10 *e*P **P 22 04 47.8 +1.1**
GRNR pmax pmax
comp=N,160nm,1.0s
GRNR pmax pmax
comp=Z,290nm,1.0s
ZAK Zakamensk 53.04 344 *e*P **P 22 04 55.3 -0.9**
ZAK pmax pmax
comp=Z,18nm,0.8s
TYV Tymovskoe 53.24 15 *e*P **P 22 04 57.6 +0.2**
TYV pmax pmax
comp=Z,300nm,3.1s
TYV pmax pmax
comp=Z,59nm,0.8s
ZEA Zeya 53.64 3 *e*P **P 22 04 59.2 -1.1**
ZEA pmax pmax
comp=Z,52nm,1.0s
WMQ Urumqi 54.00 329 P **P 22 05 04.0 +0.7**
WMQ pP pP 22 05 36.6 -1.9
WMQ sP sP 22 05 52.1 -3.2
WMQ PcP **PcP 22 06 05.9 -0.6**
WMQ S **S 22 12 34.5 +7.0**
WMQ pmax pmax
comp=Z,160nm,1.3s
WMQ pmax pmax
comp=Z,420nm,3.6s
WMQ LR LR
comp=Z,190nm,21.9s
WMQ LR LR
comp=Z,220nm,24.3s
WMQ LR LR
comp=Z,200nm,19.3s
TLY Talaya 54.12 345 *e*P **P 22 05 04.2 +0.2**
comp=Z,41nm,0.8s
TLY Talaya 54.12 345 P **P 22 05 03.7 -0.2**
SNR=20
TLY Talaya 54.12 345 *e*P **P 22 05 03.4 -0.5**
TLY pmax pmax
comp=Z,29nm,0.6s
TLY MLR MLR
comp=Z,79nm,17.0s
IRK Irkutsk 54.48 346 *e*P **P 22 05 06.3 -0.2**
IRK pmax pmax
comp=Z,29nm,1.1s
MOY Mondy 54.84 343 *e*P **P 22 05 09.2 0.0**
MOY pmax pmax
comp=Z,48nm,1.7s
NKL Nikolayevsk 54.88 13 *i*P **P 22 05 09.0 -0.2**
NKL pmax pmax
comp=N,7.0nm,0.9s
NKL pmax pmax
comp=Z,160nm,0.9s
KNGR Kungurtug, Tuv 55.02 340⇑ *e*P **P 22 05 10.1 -0.4**
CLNS Chul'man 56.66 1 *e*P **P 22 05 21.6 -0.4**
CLNS pmax pmax
comp=Z,66nm,0.7s
CLNS pmax pmax
comp=N,41nm,0.9s
CLNS pmax pmax
comp=E,22nm,0.9s
HVS Khovu-Aksy 56.82 338*ce*P **P 22 05 23.0 -0.3**
HVS pmax pmax
comp=Z,111nm,0.8s
NIL Nilore 57.70 311 *e*P **P 22 05 29.1 -0.6**
comp=Z,59nm,0.9s
NIL Nilore 57.70 311 *e*P **P 22 05 29.1 -0.6**
NIL pmax pmax
comp=Z,59nm,0.9s
BOD Bodaibo 58.12 354 *e*P **P 22 05 31.1 -1.0**
BOD *e* 22 06 21.3
BOD pmax pmax
comp=Z,82nm,1.1s
DGZ Jazzator, Alta 58.30 333 *i*P **P 22 05 33.1 -0.7**
DGZ pmax pmax
comp=Z,60nm,0.8s
KSH Kashi 58.45 318 P **P 22 05 35.4 +0.4**
KSH PcP **PcP 22 06 24.5 +0.5**
KSH PP **PP 22 07 51.0 +4.9**
KSH S **S 22 13 22.3 -4.2**
KSH sS sS 22 14 23.8 -4.5
KSH SS **SS 22 17 25.9 +4.4**
KSH pmax pmax
comp=Z,39nm,0.9s
KSH pmax pmax
comp=Z,280nm,4.1s
KSH LR LR
comp=Z,310nm,8.7s
KSH LR LR
comp=Z,190nm,5.5s
KSH LR LR
comp=Z,290nm,6.2s
PRZ Przheval'sk 58.47 322 *e*P **P 22 05 36.5 +1.4**
comp=Z,68nm,0.6s
PRZ Przheval'sk 58.47 322 *e*P **P 22 05 36.5 +1.4**
PRZ pmax pmax
comp=Z,68nm,0.6s
MK01 Makanchi Array 58.81 328 *e*P **P 22 05 35.8 -1.4**
MK31 Makanchi Array 58.83 328 *e*P **P 22 05 36.9 -0.4**
MK31 Makanchi Array 58.83 328 *e*P **P 22 05 36.9 -0.4**
MKAR Makanchi Array 58.83 328 P **P 22 05 36.8 -0.5**
comp=Z,38nm,0.6s,baz=122,slow=8.5,SNR=271
MKAR PcP **PcP 22 06 24.3 -0.9**
comp=Z,13nm,0.4s,baz=161,slow=3.0,SNR=11
MKAR ScP **ScP 22 10 10.2 -1.3**
comp=Z,1.4nm,0.8s,baz=138,slow=4.4,SNR=4.1
MKAR LR LR 22 31 43.7
comp=Z,62nm,21.6s,baz=176,slow=37
MKAR PKPPKP **P'P'df 22 35 09.3 -1.7**
comp=Z,0.3nm,0.6s,baz=304,slow=0.6,SNR=2.3
MKAR PKP2bc 22 35 21.7
comp=Z,0.7nm,0.7s,baz=291,slow=2.4,SNR=5.1
MAKZ Makanchi 59.00 328 *e*P **P 22 05 37.9 -0.6**
comp=Z,24nm,0.6s
MAKZ Makanchi 59.00 328 *e*P **P 22 05 37.9 -0.6**
MAKZ pmax pmax
comp=Z,25nm,0.6s
NRN Naryn 59.41 320 *e*P **P 22 05 41.5 -0.3**
comp=Z,19nm,0.6s
NRN Naryn 59.41 320 *e*P **P 22 05 41.5 -0.3**
NRN pmax pmax
comp=Z,19nm,0.6s
ULHL Ulahol 59.68 321 P **P 22 05 43.5 -0.1**
SNR=8.4
MLZ Mavora Lakes 59.94 145 *e*P **P 22 05 46.6 +1.7**
comp=Z,35nm,1.2s
PEA0B Petropavlovsk- 60.11 23 *e*P **P 22 05 46.5 +0.6**
comp=Z,200nm,1.4s
PETK Petropavlovsk- 60.11 23 P **P 22 05 46.4 +0.4**
comp=Z,53nm,0.7s,baz=197,slow=3.8,SNR=66
PETK PcP **PcP 22 06 29.8 -0.3**
comp=Z,12nm,0.7s,baz=343,slow=1.5,SNR=3.0
KZA Kyzart 60.23 320 P **P 22 05 47.7 +0.2**
SNR=30
PET Petropavlovsk 60.42 24 *e*P **P 22 05 48.3 +0.3**
comp=Z,266nm,1.4s
PET Petropavlovsk 60.42 24 *i*P **P 22 05 48.2 +0.2**
PET pmax pmax
comp=Z,204nm,1.4s
TKM2 Tokmak 2 60.44 321 P **P 22 05 48.2 -0.4**
SNR=56
LBZ Lake Benmore 60.59 143 *e*P **P 22 05 51.3 +1.9**
comp=Z,88nm,1.6s
KBK Karagaybulak 60.71 321 P **P 22 05 50.7 +0.2**
SNR=26
RPZ Rata Peaks 60.76 142 P **P 22 05 51.9 +1.4**
comp=Z,47nm,0.8s,baz=294,slow=3.1,SNR=16
RPZ Rata Peaks 60.76 142 *e*P **P 22 05 52.3 +1.7**
comp=Z,62nm,1.0s
UCH Uchtor 60.77 320 P **P 22 05 51.5 +0.2**
SNR=29
AAK Ala-Archa 60.99 320 P **P 22 05 52.6 +0.3**
comp=Z,18nm,0.8s,baz=127,slow=4.9,SNR=22
AAK Ala-Archa 60.99 320 *e*P **P 22 05 50.0 -2.4**
comp=Z,19nm,0.8s
AAK Ala-Archa 60.99 320 P **P 22 05 50.7 -1.7**
SNR=12
AAK Ala-Archa 60.99 320 *i*P **P 22 05 50.5 -1.8**
SNR=10
AAK Ala-Archa 60.99 320*c i*P **P 22 05 50.4 -2.0**
AAK pmax pmax
comp=Z,17nm,0.9s
CHMS Chumysh 61.01 321 P **P 22 05 51.8 -0.5**
SNR=17

FRU	Bishkek	61.01	321	eP		P		22 05 54.0 +1.7
OXZ	Oxford	61.16	141	eP		P		22 05 54.8 +1.5
	comp=Z,85nm,1.7s							
AML	Almayashu	61.25	320	P		P		22 05 54.4 0.0
	SNR=47							
KBL	Kabul	61.26	310	eP		P		22 05 53.6 -0.7
	comp=Z,80nm,0.8s							
KBL	Kabul	61.26	310	eP		P		22 05 53.6 -0.7
KBL				pmax		pmax		
	comp=Z,80nm,0.8s							
USP	Ospenovka	61.31	321	P		P		22 05 54.0 -0.3
	SNR=30							
EKS2	Erkin-Say	61.46	320	P		P		22 05 55.7 +0.2
	SNR=36							
KHZ	Kahutara	61.66	140	eP		P		22 05 57.7 +1.1
	comp=Z,25nm,0.9s							
YAK	Yakutsk	62.04	3	eP		P		22 05 58.1 -0.7
YAK	Yakutsk	62.04	3	c iP		P		22 05 57.9 -0.8
YAK				e				22 06 35.4
YAK				eS		S		22 14 15.0 +3.9
YAK				e				22 15 35.4
YAK				pmax		pmax		
	comp=Z,305nm,0.9s							
YAK				pmax		pmax		
	comp=N,61nm,1.0s							
YAK				pmax		pmax		
	comp=E,18nm,1.0s							
YAK				smax		smax		
	comp=N,32nm,3.3s							
YAK				smax		smax		
	comp=E,29nm,3.2s							
BKZ	Black Stump Fm	62.16	135	eP		P		22 06 01.2 +1.1
	comp=E,226nm,1.9s							
URZ	Urewera	62.22	134	P		P		22 06 00.8 +0.4
	comp=E,14nm,0.6s,baz=266,slow=6.3,SNR=8.5							
ZAA0	Zalesovo Array	62.48	335	eP		P		22 06 00.1 -1.8
	comp=E,72nm,0.9s							
ZALV	Zalesovo Beam	62.48	335	P		P		22 05 60.0 -1.9
	comp=E,53nm,0.6s,baz=124,slow=6.1,SNR=145							
ZALV				LR		LR		22 33 40.5
	comp=E,63nm,20.7s,baz=70,slow=36							
ZALV				PKP2bc				22 35 11.6
	comp=E,2.8nm,0.9s,baz=298,slow=3.1,SNR=9.0							
MA2	Magadan	63.11	15	P		P		22 06 06.5 +0.6
	comp=E,194nm,0.9s,baz=193,slow=7.6,SNR=43							
MA2	Magadan	63.11	15	eP		P		22 06 06.5 +0.6
	comp=E,175nm,0.9s							
MA2	Magadan	63.11	15	i P		P		22 06 06.4 +0.5
MA2				i AP		PcP		22 06 42.3 +0.1
MA2				pmax		pmax		
	comp=Z,169nm,0.8s							
KURBB	Kurchatov Arra	63.17	330	P		P		22 06 05.3 -1.1
	comp=Z,45nm,0.6s,baz=131,slow=6.3,SNR=242							
KURBB				PcP		pP		22 06 41.3 -1.4
	comp=Z,21nm,0.9s,baz=131,slow=5.1,SNR=5.2							
KURBB				PKPPKP		P'P'df		22 34 59.6 -4.3
	comp=Z,0.3nm,0.4s,baz=288,slow=3.7,SNR=4.6							
KURBB				PKP2bc				22 35 08.7
	comp=Z,0.7nm,0.6s,baz=304,slow=3.4,SNR=8.5							
KURK	Kurchatov	63.18	330	eP		P		22 06 05.6 -0.9
KURK				PcP		pP		22 06 41.3 -1.5
KURK				P'P'				22 34 59.6
KURK				⇑e				22 35 08.7
KURK	Kurchatov	63.18	330	P		P		22 06 05.7 -0.8
	SNR=40							
KURK	Kurchatov	63.18	330	c iP		P		22 06 05.4 -1.1
KURK				pmax		pmax		
	comp=Z,111nm,0.6s							
NVS	Novosibirsk	63.77	335	⇓iP		P		22 06 08.8 -1.5
NVS				i				22 06 43.2
NVS				pmax		pmax		
	comp=Z,106nm,0.8s							
NVS				pmax		pmax		
	comp=N,58nm,0.7s							
NVS				pmax		pmax		
	comp=E,38nm,0.6s							
KK31	Karatay Array	63.78	319	eP		P		22 06 09.6 -1.1
KK31	Karatay Array	63.78	319	eP		P		22 06 09.6 -1.1
KKAR	Karatay Array	63.78	319	eP		P		22 06 09.6 -1.1
KKAR	Karatay Array	63.78	319	eP		P		22 06 09.6 -1.1
KNTN	Kanton	64.89	93	eP		P		22 06 19.8 +1.4
	comp=E,309nm,1.9s							
SEY	Seymchan	66.39	14	P		P		22 06 27.2 +0.1
	comp=E,63nm,1.0s,baz=206,slow=6.1,SNR=62							
SEY	Seymchan	66.39	14	c iP		P		22 06 27.5 +0.4
WSAR	Wadi Sarin	66.93	295	P		P		22 06 30.8 -0.5
	comp=E,21nm,0.6s,baz=142,slow=5.1,SNR=20							
WSAR				LR		LR		22 39 23.5
	comp=E,32nm,18.1s,baz=106,slow=39							
WSAR	Wadi Sarin	66.93	295	P		P		22 06 30.8 -0.5
SMY	Shemya	67.32	31	eP		P		22 06 33.1 0.0
	comp=E,133nm,0.8s							
SMY	Shemya	67.32	31	eP		P		22 06 33.1 0.0
SMY				pmax		pmax		
	comp=Z,133nm,0.8s							
BVAR	Borovoye Array	68.69	329	P		P		22 06 40.5 -1.3
	comp=Z,14nm,0.8s,baz=127,slow=9.6,SNR=70							
BRVK	Borovoye	68.76	329	eP		P		22 06 41.0 -1.3
	comp=Z,21nm,0.8s							
BRVK	Borovoye	68.76	329	P		P		22 06 40.9 -1.3
	SNR=13							
BRVK	Borovoye	68.76	329	c iP		P		22 06 40.9 -1.3
BRVK				i *PP		pP		22 07 17.3 -1.7
BRVK				pmax		pmax		
	comp=Z,21nm,0.8s							
SOHO	SOHO	68.98	296	i P		P		22 06 43.1 -1.0
	SNR=6.9							
UOSS	Minazif	69.42	297	eP		P		22 06 46.4 -0.4
	comp=Z,18nm,0.8s							
UOSS	Minazif	69.42	297	P		P		22 06 46.2 -0.6
HATD	Hatta, Dubai	69.46	296	i P		P		22 06 47.0 -0.1
	SNR=6.0							
BANOM	Banah	69.50	298	P		P		22 06 47.1 -0.3
SHME	Shamm	69.67	298	P		P		22 06 49.3 +1.0
ALNE	Al Ain	69.67	296	i P		P		22 06 48.5 +0.1
	SNR=26							
ASUD	Al Ashush, Dub	70.15	296	P		P		22 06 50.8 -0.4
	SNR=5.9							
ASUD	Al Ashush, Dub	70.15	296	i P		P		22 06 51.7 +0.5
	SNR=12							
AJN	Ajban	70.44	296	i P		P		22 06 53.1 0.0
	SNR=16							
GEYT	Alibeck	70.70	310	P		P		22 06 53.6 -0.8
	comp=Z,16nm,1.0s,baz=123,slow=5.3,SNR=6.9							
GEYT				LR		LR		22 42 36.0
	comp=Z,35nm,18.4s,baz=285,slow=40							
GYA0B	ALIBECK ARRAY	70.70	310	eP		P		22 06 54.0 -0.4
	comp=Z,9.8nm,0.8s							
MZR	Muzera	71.58	294	i P		P		22 06 59.9 -0.1
	SNR=19							
TIXI	Tiksi	71.61	2	P		P		22 06 57.8 -1.3
	baz=201,slow=2.3							
TIXI	Tiksi	71.61	2	eP		P		22 06 57.4 -1.8
TIXI	Tiksi	71.61	2	c iP		P		22 06 57.3 -1.8
TIXI				pmax		pmax		
	comp=Z,154nm,0.9s							
ABKAR	Akbulak array	72.98	322	eP		P		22 07 06.5 -1.3
NRIK	Noril'sk	73.27	347	P		P		22 07 08.1 -0.9
	comp=Z,55nm,0.8s,baz=132,slow=6.1,SNR=55							
ATKA	Atka Island	73.41	35	eP		P		22 07 09.5 -0.7
	comp=Z,276nm,0.7s							
BILL	Bilibino	73.98	15	eP		P		22 07 12.3 -0.9
	comp=Z,30nm,1.1s							
BILL	Bilibino	73.98	15	c iP		P		22 07 12.0 -1.2
BILL				e				22 07 27.3
BILL				pmax		pmax		
	comp=Z,34nm,1.2s							
AKTO	Aktyubinsk	74.56	323	P		P		22 07 15.7 -1.2
	comp=Z,15nm,0.7s,baz=93,slow=7.1,SNR=54							
AKTO				LR		LR		22 44 37.0
	comp=Z,26nm,19.8s,baz=119,slow=39							
SVE	Sverdlovsk	75.43	330	d iP		P		22 07 20.4 -1.3
SVE				pmax		pmax		
	comp=Z,74nm,0.9s							
ARU	Arti	76.34	329	eP		P		22 07 25.0 -2.0
ARU	Arti	76.34	329	c iP		P		22 07 24.8 -2.1
ARU								22 10 15.0
ARU				S		S		22 16 59.5 +0.3
ARU				pmax		pmax		
	comp=Z,57nm,1.0s							
NIKH	Nikolski High	76.74	35	eP		P		22 07 29.3 0.0
	comp=Z,88nm,0.8s							
ABPO	Ambohimpanom	76.96	251	eP		P		22 07 31.7 +0.3
	comp=Z,113nm,1.8s							
ABPO	Ambohimpanom	76.96	251	eP		P		22 07 31.7 +0.3
ABPO				pmax		pmax		
	comp=Z,113nm,1.8s							
OPO	Ambohidratompo	76.96	251	P		P		22 07 30.7 -0.7
	comp=Z,15nm,0.7s,baz=74,slow=3.0,SNR=13							
SPIA	Saint Paul Isl	77.36	31	eP		P		22 07 33.5 +0.9
	comp=Z,281nm,1.4s							
UNV	Unalaska Valle	78.34	35	eP		P		22 07 38.2 +0.2
	comp=Z,87nm,0.8s							
AKUT	Akutan	78.83	35	eP		P		22 07 41.1 +0.3
	comp=Z,275nm,0.7s							
RAYN	Ar Rayn	78.92	294	eP		P		22 07 40.0 -2.0
	comp=Z,41nm,0.9s							
RAYN	Ar Rayn	78.92	294	i P		P		22 07 40.3 -1.8
	SNR=55							
RAYN	Ar Rayn	78.92	294	P		P		22 07 40.2 -1.8
RAYN				pmax		pmax		
	comp=Z,41nm,1.0s							
MAW	Mawson	79.15	200	P		P		22 07 43.0 +0.8
	comp=Z,21nm,0.9s,baz=94,slow=6.0,SNR=24							
MAW				LR		LR		22 36 51.9
	comp=Z,54nm,21.7s,baz=59,slow=31							
MAW	Mawson	79.15	200	P		P		22 07 43.4 +1.2
	baz=79,SNR=18							
MAW	Mawson	79.15	200	eP		P		22 07 43.4 +1.2
	comp=Z,8.1nm,1.1s							
MAW	Mawson	79.15	200	eP		P		22 07 43.4 +1.2
MAW				pmax		pmax		
	comp=Z,8.0nm,1.1s							
VNDA	Vanda	80.20	172	P		P		22 07 48.6 +0.8
	comp=Z,9.4nm,0.7s,baz=315,slow=6.1,SNR=73							
VNDA				LR		LR		22 44 11.6
	comp=Z,65nm,18.1s,baz=308,slow=36							
VNDA	Vanda	80.20	172	eP		P		22 07 48.6 +0.8
	comp=Z,13nm,0.8s							
VNDA	Vanda	80.20	172	eP		P		22 07 48.6 +0.8
VNDA				pmax		pmax		
	comp=Z,13nm,0.8s							
FALS	False Pass	80.35	34	eP		P		22 07 49.4 +0.4
	comp=Z,436nm,0.7s							
DDFL	Dedoflistskaro	80.48	312	P		P		22 07 51.2 +1.1
ATD	Arta Tunnel	80.76	282	P		P		22 07 51.7 -0.4
	comp=Z,6.2nm,0.7s,baz=357,slow=6.8,SNR=6.5							
GROC	Groznyy	80.98	314	eP		P		22 07 49.6 -3.0
GROC				eS		S		22 17 44.4 -4.7
GROC				pmax		pmax		
	comp=Z,38nm,1.1s							
SBA	Scott Base	81.15	172	eP		P		22 07 54.6 +1.8
	comp=Z,40nm,1.5s							
GNI	Garni	81.34	311	P		P		22 07 53.7 -1.0
	comp=Z,12nm,1.1s,baz=101,slow=10,SNR=3.3							
GNI				LR		LR		22 50 39.1
	comp=Z,16nm,20.0s,baz=93,slow=40							
GNI	Garni	81.34	311	eP		P		22 07 53.8 -1.0
	comp=Z,17nm,0.8s							
GNI	Garni	81.34	311	P		P		22 07 53.6 -1.2
GNI	Garni	81.34	311	⇓eP		P		22 07 54.7 -0.1
GNI				pmax		pmax		
	comp=Z,35nm,0.7s							
TBLG	Delisi	81.55	312	P		P		22 07 55.1 -0.6
TBLG	Delisi	81.55	312	eP		P		22 07 55.1 -0.6
DUS	Dusheti	81.62	312	P		P		22 07 56.1 0.0
DUS	Dusheti	81.62	312	eP		P		22 07 56.1 0.0
MLH	Mauna Loa	81.69	70	eP		P		22 07 59.5 +2.4
	comp=Z,199nm,1.0s							
MLH	Mauna Loa	81.69	70	eP		P		22 07 59.5 +2.4
MLH				pmax		pmax		
	comp=Z,199nm,1.0s							
SDPT	Sand Point	82.10	34	eP		P		22 07 58.3 +0.1
	comp=Z,384nm,0.7s							
ZEI	Tsey	82.30	313	eP		P		22 07 56.9 -2.9
ZEI				pmax		pmax		
	comp=Z,22nm,0.6s							
BGD	Bogdanovka	82.34	312	P		P		22 07 59.1 -1.0
AKH	Akhalkalaki	82.44	312	P		P		22 08 00.7 +0.2
AKH	Akhalkalaki	82.44	312	eP		P		22 08 00.7 +0.2
ONI	Oni	82.60	313	P		P		22 08 00.9 -0.3
ONI	Oni	82.60	313	eP		P		22 08 00.9 -0.3
NCK	Nalchik	82.61	314	⇓eP		P		22 08 00.4 -0.8
NCK				pmax		pmax		
	comp=Z,12nm,0.9s							
KBZ	Khabaz	83.14	314	P		P		22 08 02.7 -1.1
	comp=Z,14nm,1.0s,baz=102,slow=3.1,SNR=19							
GOF	Gofitskoye	83.19	315	eP		P		22 08 02.8 -1.3
GOF				pmax		pmax		
	comp=Z,30nm,1.2s							
NEY	Neytrino	83.21	313	⇑eP		P		22 08 04.2 -0.3
NEY				pmax		pmax		
	comp=Z,1.0nm,0.5s							
KIV	Kislovodsk	83.32	314	eP		P		22 08 04.0 -0.8
	comp=Z,8.6nm,0.8s							
KIV	Kislovodsk	83.32	314	P		P		22 08 03.6 -1.3
KIV	Kislovodsk	83.32	314	eP		P		22 08 03.4 -1.5
KIV				pmax		pmax		
	comp=Z,10.0nm,0.9s							
KIV				MLR		MLR		
	comp=Z,34nm,19.0s							
CHVG	Ch'k'valeri	83.62	313	P		P		22 08 05.8 -0.5
RDOG	Red Dog Mine	83.92	21	eP		P		22 08 08.4 +1.1
	comp=Z,93nm,0.8s							
PRGR	Permogore	84.20	332	⇑iP		P		22 08 07.2 -1.6
PRGR				pmax		pmax		
	comp=Z,97nm,0.8s							
HANI	Diyarbakir_Han	84.52	308	i P		P		22 08 10.0 -1.1
TNCL	Tunceli-Merkez	85.24	309	i P		P		22 08 13.5 -1.3
SOC	Sochi	85.42	314	eP		P		22 08 12.6 -2.8
SOC				e				22 11 29.9
SOC				ePPP		PPP		22 13 27.5
SOC				eS		S		22 18 23.3 -11
SOC				pmax		pmax		
	comp=Z,28nm,1.0s							
SVW2	Sparrevohn	85.63	29	eP		P		22 08 16.6 +0.6
	comp=Z,25nm,0.8s							
ELZG	Elazig	85.63	308	i P		P		22 08 16.4 -0.3
KEMA	Kemaliye	86.06	309	i P		P		22 08 18.2 -0.6
ATAB	Bozova	86.12	307	i P		P		22 08 18.1 -0.9
OHAK	Old Harbor	86.34	33	eP		P		22 08 19.9 +0.4
	comp=Z,106nm,1.0s							
VSR	Storozhevoye	86.38	321	eP		P		22 08 18.0 -1.9
VSR				pmax		pmax		
	comp=Z,100nm,1.0s							
AKCD	Akcadag	86.45	308	i P		P		22 08 20.1 -0.7
HEKM	Malatya_Hekimh	86.45	309	i P		P		22 08 20.7 -0.1
KDAK	Kodiak Island	86.78	32	P		P		22 08 22.0 +0.3
	comp=Z,39nm,0.6s,baz=235,slow=6.2,SNR=60							
KDAK	Kodiak Island	86.78	32	eP		P		22 08 21.9 +0.2
KDAK	Kodiak Island	86.78	32	i P		P		22 08 21.6 0.0
RSO	Redoubt South	86.93	30	eP		P		22 08 21.9 -0.7
KLMR	Klimovskoe	87.01	331	eP		P		22 08 19.6 -3.1
KLMR				e				22 11 44.5
KLMR				pmax		pmax		
	comp=Z,74nm,0.9s							
KLMR	Klimovskoe	87.01	331	eP		P		22 08 19.6 -3.1
KLMR				AMP				22 08 22.8
	comp=Z,74nm,0.9s							
KLMR				ePP		PP		22 11 44.6 -3.4
ASF	Jabal al Asfar	87.05	302	P		P		22 08 23.8 +0.1
	comp=Z,26nm,1.1s,baz=66,slow=5.9,SNR=22							
ANN	Anapa	87.14	315	eP		P		22 08 21.5 -2.2
ANN				pmax		pmax		
	comp=Z,88nm,1.0s							
PPLA	Purkeypile	87.42	27	eP		P		22 08 24.3 -0.6
	comp=Z,62nm,1.6s							
CAST	Castle Rocks	87.52	27	eP		P		22 08 24.9 -0.2
	comp=Z,21nm,0.7s							
CNPM	China Poot	87.62	31	eP		P		22 08 25.3 -0.4
	comp=Z,49nm,0.8s							
SKT	Skwentna	87.65	28	eP		P		22 08 24.4 -1.4
	comp=Z,42nm,1.3s							
ANDN	Andirin	87.67	307	i P		P		22 08 25.9 -0.7
SYO	Syowa Base	87.79	201	⇓eP		P		22 08 25.7 -0.6
SYO	Syowa Base	87.79	201	⇓iPcP		PcP		22 08 27.6 -0.4
BRLK	Bradley Lake	87.81	30	eP		P		22 08 25.7 -1.0
	comp=Z,79nm,1.0s							
TMCR	Tamitsa	87.97	334	eP		P		22 08 25.4 -1.8
TMCR				pmax		pmax		
	comp=Z,62nm,0.8s							
SUA	Susitna One	87.99	29	eP		P		22 08 26.8 -0.8
	comp=Z,44nm,0.8s							
BPAW	Bear Paw Mtn.	88.06	26	eP		P		22 08 27.0 -0.7
	comp=Z,24nm,0.7s							
OBN	Obninsk	88.19	325	ceP		P		22 08 26.5 -1.9
OBN				pmax		pmax		
	comp=Z,22nm,0.5s							
MLY	Manley	88.22	25	eP		P		22 08 28.4 -0.1
	comp=Z,38nm,0.9s							
TRF	Thorofare Moun	88.32	27	eP		P		22 08 28.1 -1.1
	comp=Z,24nm,1.0s							
MMAI	Mount Meron Ar	88.33	303	P		P		22 08 29.1 -0.7
	comp=Z,7.0nm,0.5s,baz=86,slow=7.4,SNR=22							
RC01	Rabbit Creek A	88.45	29	eP		P		22 08 29.0 -0.6
	comp=Z,32nm,0.8s							
COLD	Coldfoot	88.58	23	eP		P		22 08 30.5 +0.5
	comp=Z,40nm,0.8s							
COLD				eS		S		22 19 09.0 +5.8
BWN	Browne	88.72	26	eP		P		22 08 30.8 0.0
	comp=Z,60nm,0.9s							
PMR	Palmer	88.77	29	eP		P		22 08 30.2 -0.8
	comp=Z,36nm,1.3s							
PMR	Palmer	88.77	29	eP		P		22 08 30.2 -0.8
PMR				pmax		pmax		
	comp=Z,36nm,1.3s							
GHO	Glory Hole Cre	88.87	28	eP		P		22 08 30.9 -0.8
	comp=Z,12nm,0.8s							
TOLK	Toolik Lake Re	88.89	21	P		P		22 08 31.8 +0.3
	baz=267							
TOLK	Toolik Lake Re	88.89	21	eP		P		22 08 31.9 +0.4
	comp=Z,16nm,0.7s							
MCK	McKinley	88.94	26	eP		P		22 08 30.9 -1.0
	comp=Z,45nm,0.8s							
RND	Reindeer	88.97	27	eP		P		22 08 30.8 -1.3
	comp=Z,48nm,0.8s							
RND	Reindeer	88.97	27	eP		P		22 08 30.8 -1.3
RND				pmax		pmax		
	comp=Z,48nm,0.8s							
MDM	Murphy Dome	89.29	25	eP		P		22 08 32.6 -0.9
	comp=Z,11nm,0.8s							
WRH	Wood River Hil	89.33	26	eP		P		22 08 32.6 -1.1
	comp=Z,26nm,0.8s							
CCB	Clear Creek Bu	89.46	25	eP		P		22 08 32.8 -1.4
	comp=Z,25nm,0.8s							
SIM	Simferopol'	89.50	315	eP		P		22 08 33.0 -1.9
SIM				pmax		pmax		
	comp=Z,14nm,1.0s							
DHY	Denali Highway	89.63	27	eP		P		22 08 34.9 -0.4
	comp=Z,28nm,0.7s							
SCM	Sheep Creek Mo	89.63	28	eP		P		22 08 34.9 -0.3
	comp=Z,35nm,0.9s							
BR131	Keskin Array S	89.83	310	eP		P		22 08 34.7 -2.0
BRTR	Keskin Array B	89.83	310	P		P		22 08 34.6 -2.1
	comp=Z,6.9nm,1.0s,baz=116,slow=5.6,SNR=24							
BRTR				PP		PP		22 12 09.2 -2.1
	comp=Z,3.3nm,0.8s,baz=113,slow=6.9,SNR=7.7							
BRTR				LR		LR		22 55 40.1
	comp=Z,16nm,19.1s,baz=84,slow=40							
ILAR	Eielson Array	89.86	25	P		P		22 08 34.0 -2.1
	comp=Z,7.0nm,0.6s,baz=243,slow=5.2,SNR=84							
ILAR				PKKPbc		PKKPdf		22 26 07.9 +2.3
	comp=Z,1.1nm,0.7s,baz=83,slow=1.8,SNR=11							
ILB	Eielson Array	89.86	25	eP		P		22 08 34.1 -2.1
QSPA	South Pole Qui	89.94	180	P		P		22 08 35.7 -0.9
	comp=Z,9.0nm,0.8s,baz=320,slow=2.1,SNR=8.5							
QSPA	South Pole Qui	89.94	180	eP		P		22 08 36.5 -0.1
	comp=Z,57nm,0.9s							
CSS	Mathiatis	90.07	305	eP		P		22 08 36.4 -1.4
	comp=Z,4.7nm,1.0s							
KLU	Klutina	90.31	29	eP		P		22 08 38.3 -0.1
	comp=Z,26nm,0.8s							
DIV	Divide	90.38	29	eP		P		22 08 38.8 +0.1
	comp=Z,43nm,1.0s							
HARP	HAARP	90.65	28	eP		P		22 08 40.2 +0.4
	comp=Z,44nm,0.7s							
RIDG	Independ'e Rid	90.76	26	eP		P		22 08 39.8 -0.7
	comp=Z,40nm,0.8s							
RAGM	Ragged Mountai	90.93	30	eP		P		22 08 41.4 +0.1
	comp=Z,50nm,1.4s							
BMRM	Bremner River	90.95	29	eP		P		22 08 41.3 0.0
	comp=Z,32nm,0.8s							
DOT	Dot Lake	91.11	26	eP		P		22 08 41.6 -0.4
	comp=Z,42nm,0.8s							
SCRK	Sand Creek	91.13	26	eP		P		22 08 42.1 -0.2
	comp=Z,75nm,2.0s							
TGL	Tana Glacier	91.83	29	eP		P		22 08 45.7 +0.2
	comp=Z,40nm,0.8s							
EGAK	Eagle	92.31	25	eP		P		22 08 47.3 -0.2
AKASG	Malin Array Be	92.66	321	P		P		22 08 47.0 -2.4
	comp=Z,4.0nm,0.5s,baz=73,slow=4.6,SNR=27							
AKASG				PP		PP		22 12 32.2 -0.9
	comp=Z,2.0nm,0.9s,baz=73,slow=7.2,SNR=4.1							
AKASG	Malin Array Be	92.66	321	P		P		22 08 47.0 -2.4
AKASG								22 12 32.2
AKASG				pmax		pmax		
	comp=Z,8.0nm,0.8s							
AKBB	Malin Array Si	92.66	321	eP		P		22 08 47.4 -2.0
	comp=Z,9.3nm,0.9s							
KIEV	Kiev	92.67	321	eP		P		22 08 46.9 -2.5
	comp=Z,9.1nm,0.9s							
KIEV	Kiev	92.67	321	P		P		22 08 47.2 -2.2
KIEV	Kiev	92.67	321	c iP		P		22 08 46.7 -2.7
KIEV				pmax		pmax		
	comp=Z,8.0nm,0.9s							
MBAR	Mbarara	92.69	269	P		P		22 08 49.5 -1.1
	comp=Z,4.1nm,0.2s,baz=22,slow=5.4,SNR=3.8							
AK11	Malin Array Si	92.70	321	eP		P		22 08 47.5 -2.1
ARCES	ARCESS Array B	92.77	340	P		P		22 08 47.5 -2.0
	comp=Z,17nm,0.7s,baz=80,slow=5.9,SNR=32							
ARCES				PKKP		PKKPdf		22 26 00.6 +0.1
	comp=Z,2.2nm,0.7s,baz=203,slow=2.5,SNR=6.4							
ARE0	ARCESS Array S	92.77	340	eP		P		22 08 47.7 -1.8
	comp=Z,22nm,0.8s							
ARE0	ARCESS Array S	92.77	340	eP		P		22 08 47.5 -2.0
DAWY	Dawson	93.14	26	eP		P		22 08 51.5 +0.1
HAMF	Hammerfest	93.22	341	eP		P		22 08 49.3 -2.2
SORM	Soroca	93.39	318	⇑iP		P		22 08 50.3 -2.5
SORM	Soroca	93.39	318	⇑P		P		22 08 50.4 -2.4
SPA0	Spitsbergen Ar	93.46	349	eP		P		22 08 51.4 -1.2
SPA0	Spitsbergen Ar	93.46	349	eP		P		22 08 51.1 -1.4
SPITS	Spitsbergen Ar	93.46	349	P		P		22 08 50.9 -1.6
	comp=Z,81nm,0.7s,baz=106,slow=11,SNR=114							
SPITS	Spitsbergen Ar	93.46	349	P		P		22 08 50.9 -1.6
SPITS				pmax		pmax		
	comp=Z,80nm,0.7s							
VSU	Vasula	93.50	328	d iP		P		22 08 51.1 -1.9
VSU				pmax		pmax		
	comp

comp=Z,59nm,0.8s
MLR Muntele Rosu 95.25 316 P P 22 09 00.0 -1.6
comp=Z,1.4nm,0.6s,baz=69,slow=5.7,SNR=18
MLR Muntele Rosu 95.25 316⇑ i P P 22 08 59.8 -1.8
MLR Muntele Rosu 95.25 316 e P P 22 08 59.9 -1.6
comp=Z,12nm,1.0s
BURAR Bucovina Array 95.53 318⇑ i P P 22 09 01.5 -1.3
BURAR Bucovina Array 95.53 318 ⇑P P 22 09 01.5 -1.3
BUR04 Bucovina Ar. S 95.54 318 e P P 22 09 01.3 -1.5
BUR08 Bucovina Ar. S 95.54 318 e P P 22 09 01.6 -1.2
DOPR Dopca 95.59 316⇓ i P P 22 09 01.4 -1.6
SKAG Skagway 95.71 30 e P P 22 09 04.0 +0.9
comp=Z,62nm,0.9s
VOIR 95.88 316⇑ i P P 22 09 03.3 -1.1
VOIR 95.88 316 ⇑P P 22 09 03.3 -1.1
SUW Suwalki 96.02 324 e P P 22 09 02.9 -1.8
SUW Suwalki 96.02 324 e P P 22 09 02.9 -1.8
LVV L'vov 96.06 320 e P P 22 09 04.1 -0.9
BESE Bessie Mountai 96.10 31 e P P 22 09 05.8 +0.8
comp=Z,40nm,0.9s
ARR Arges 96.18 316⇓ i P P 22 09 03.7 -2.0
JIS Juneau Island 96.40 31 e P P 22 09 07.0 +0.7
comp=Z,29nm,0.8s
BMR Baia Mare 96.68 318⇑ i P P 22 09 06.6 -1.3
BMR Baia Mare 96.68 318 ⇑P P 22 09 06.6 -1.3
CJR Cluj-Napoca 96.73 317⇑ i P P 22 09 07.2 -1.0
CJR Cluj-Napoca 96.73 317 ⇑P P 22 09 07.2 -1.0
STEI Steigen 96.76 339 e P P 22 09 05.1 -2.6
LOT Lotru 96.77 316⇓ i P P 22 09 07.2 -1.3
KWP Kalwaria Pacla 96.94 320 e P P 22 09 07.6 -1.4
KWP Kalwaria Pacla 96.94 320 e P P 22 09 07.6 -1.4
IDI Anoyia 96.97 305 P P 22 09 07.5 -2.1
comp=Z,11nm,0.8s,baz=66,slow=10.0,SNR=5.0
LBTB Lobatse 97.10 245 P P 22 09 10.0 -0.4
comp=Z,3.0nm,0.6s,baz=124,slow=4.9,SNR=5.7
BOSA Boshof 97.18 241 P P 22 09 09.8 -0.9
comp=Z,4.3nm,0.8s,baz=107,slow=3.2,SNR=8.1
TRPA Tarpa 97.26 318⇑ i P P 22 09 08.6 -1.8
DRGR 97.33 317⇑ i P P 22 09 09.3 -1.6
DRGR 97.33 317 ⇑P P 22 09 09.3 -1.6
UZH Uzhgorod 97.35 319 e P P 22 09 09.8 -1.0
VTS Vitosha 97.52 313⇑ i P P 22 09 09.4 -2.6
VTS Vitosha 97.52 313 e P P 22 09 09.8 -2.1
comp=Z,14nm,1.6s
VTS Vitosha 97.52 313 e P P 22 09 09.8 -2.1
VTS pmax pmax
comp=Z,14nm,1.6s
MOR8 Moi Rana 97.58 337 e P P 22 09 07.3 -4.2
HERR Herculane 97.79 315⇑ i P P 22 09 11.2 -1.7
WRAK Wrangell Islan 97.84 33 e P Pdif 22 09 13.5 +0.7
CRVS Cervenica-Dubn 97.85 319 i P P 22 09 12.1 -1.0
CRVS Cervenica-Dubn 97.85 319 e PDIFF P 22 09 12.1 -1.0
BZS Buzias 98.25 316⇓ i P P 22 09 13.1 -1.9
BZS Buzias 98.25 316 ⇓P P 22 09 13.1 -1.9
MDVR Moldovita 98.30 315⇓ i P P 22 09 13.1 -2.2
DIB Dawson Inlet, 98.42 36 e P Pdif 22 09 15.7 +0.2
comp=Z,21nm,1.0s
NIE Niedzica 98.52 320 e P P 22 09 15.1 -1.0
NIE Niedzica 98.52 320 e P P 22 09 15.1 -1.0
DLBC Dease Lake 98.61 31 P Pdif 22 09 17.3 +1.0
comp=Z,6.2nm,0.5s,baz=279,slow=6.2,SNR=11
DLBC Dease Lake 98.61 31 e P Pdif 22 09 17.5 +1.1
comp=Z,14nm,1.0s
OJC Ojcow 98.69 321 e P P 22 09 15.2 -1.7
OJC Ojcow 98.69 321 e P P 22 09 15.8 -1.1
comp=Z,7.6nm,0.9s
OJC Ojcow 98.69 321 e P P 22 09 15.8 -1.1
OJC pmax pmax
comp=Z,8.0nm,0.9s
LANS Liptovska Anna 99.10 320 i P Pdif 22 09 18.0 -0.8
LANS Liptovska Anna 99.10 320 e PDIFF Pdif 22 09 18.0 -0.8
VYHS Vyhne 99.64 319 i P Pdif 22 09 19.5 -1.6
VYHS Vyhne 99.64 319 e PDIFF Pdif 22 09 19.5 -1.6
HFS Hagfors 99.72 331 P Pdif 22 09 18.9 -2.2
comp=Z,2.8nm,0.4s,baz=94,slow=4.3,SNR=25
MORC Moravsky Berou 100.21 321 e Pdif Pdif 22 09 22.9 -0.8
MORC Moravsky Berou 100.21 321 e P Pdif 22 09 22.9 -0.8
MORC Moravsky Berou 100.21 321 e P Pdif 22 09 22.1 -1.6
JAVC Velka Javorina 100.32 320 e P Pdif 22 09 23.6 -0.6
DAG Danmarks Havn 100.46 352⇑ i P Pdif 22 09 22.2 -1.9
comp=Z,21nm,0.9s
DAG Danmarks Havn 100.46 352⇑ i P Pdif 22 09 22.2 -1.9
DAG pmax pmax
comp=Z,21nm,0.9s
BSD Bornholm Skovb 100.50 326⇑ i P Pdif 22 09 23.3 -1.4
comp=Z,29nm,1.2s
BSD Bornholm Skovb 100.50 326⇑ i P Pdif 22 09 23.3 -1.4
BSD pmax pmax
comp=Z,29nm,1.2s
NB2 NORSAR Subarra 100.59 333 P Pdif 22 09 22.1 -3.0
comp=Z,2.8nm,0.8s,baz=74,slow=4.4
NB2 NORSAR Subarra 100.59 333 P Pdif 22 09 22.1 -3.0
baz=74,slow=4.4
NB2 P Pdif 22 09 22.1 -3.0
baz=74,slow=4.4
NOA NORSAR Array B 100.59 333 P Pdif 22 09 23.0 -2.1
NOA NORSAR Array B 100.59 333 P Pdif 22 09 23.0 -2.1
SUR Sutherland 100.65 237 P Pdif 22 09 27.2 +1.0
comp=Z,0.4nm,0.9s,baz=97,slow=8.1,SNR=4.7
KSP Ksiaz 100.75 322 e P Pdif 22 09 25.0 -1.0
KSP Ksiaz 100.75 322 e P Pdif 22 09 25.0 -1.0
VRAC Vranov 100.92 320 e P Pdif 22 09 26.1 -0.7
KRUC Moravsky 101.10 320 e P Pdif 22 09 26.3 -1.3
CONA Conrad Observa 101.70 319 i Pdiff Pdif 22 09 30.0 -0.4
comp=Z,2.1nm,1.0s
CONA i PP PP 22 13 44.7 +2.2
comp=Z,4.3nm,1.0s
RES Resolute Bay 102.02 10 P Pdif 22 09 31.0 -0.1
comp=Z,3.4nm,0.7s,baz=260,slow=6.5,SNR=11
RES Resolute Bay 102.02 10 e Pdif Pdif 22 09 31.0 -0.1
BRG Berggiesshubel 102.19 322 e P Pdif 22 09 31.2 -1.2
comp=Z,5.1nm,0.9s
BRG Berggiesshubel 102.19 322 e P Pdif 22 09 31.2 -1.2
BRG pmax pmax
comp=Z,5.0nm,0.9s
SOKA Soboth 102.54 318 i Pdiff Pdif 22 09 32.6 -1.5
comp=Z,1.4nm,1.0s
SOKA i PP PP 22 13 50.2 +1.3
comp=Z,4.9nm,1.2s
JMIC Jan Mayen 102.64 346 Pdiff Pdif 22 09 33.0 -0.9
comp=Z,9.6nm,0.7s,baz=111,slow=8.6,SNR=5.1
CLL Collm 102.64 323 e Pdif Pdif 22 09 33.0 -1.4
comp=Z,6.0nm,1.4s
CLL e 22 13 34.0
CLL e PP PP 22 13 44.0 -5.3
CLL e PKiKP PKiKP 22 13 54.0 -0.6
CLL e PS PS 22 22 54.0 -6.1
CLL e SSS SSS 22 32 06.0
CLL Collm 102.64 323 e P Pdif 22 09 33.0 -1.4
CLL pmax pmax
comp=Z,6.0nm,1.4s
BOJS Bojanci 102.66 317 i P Pdif 22 09 33.2 -1.4
MOA Molln 102.76 319 i Pdiff Pdif 22 09 35.1 +0.1
comp=Z,2.3nm,0.8s
GERES GERESS Array B 102.87 320 Pdiff Pdif 22 09 34.1 -1.5
comp=Z,1.3nm,0.9s,baz=56,slow=2.4,SNR=8.4
GERES PKiKP PKiKP 22 13 54.8 -0.4
comp=Z,2.7nm,1.1s,baz=81,slow=6.1,SNR=4.4
GERES PKKPbc PKKPbc 22 25 33.5 -1.3
comp=Z,0.7nm,0.7s,baz=242,slow=2.1,SNR=3.5
GEA0 GERESS Array S 102.87 320 e Pdif Pdif 22 09 34.1 -1.5
VISS Visnje 102.87 317 i P Pdif 22 09 34.0 -1.6
OBKA Obir 102.90 318 i PKiKP PKiKP 22 13 53.0 -2.3
comp=Z,9.0nm,1.3s
JAVS Javornik 103.38 317 e P Pdif 22 09 34.0 -3.9
ABTA Abfaltersbach 104.20 319 i PKiKP PKiKP 22 13 57.6 -0.1
comp=Z,6.0nm,1.4s
YKA Yellowknife Ar 104.22 24 Pdiff Pdif 22 09 40.6 -0.5
comp=Z,1.9nm,0.7s,baz=300,slow=5.2,SNR=7.4
YKA PKiKP PKiKP 22 13 56.7 -0.4
comp=Z,0.9nm,0.4s,baz=303,slow=1.6,SNR=12
YKA PKKPbc PKKPbc 22 25 27.8 -3.3
comp=Z,1.8nm,0.6s,baz=112,slow=2.4,SNR=6.7
TSUM Tsumeb 104.95 250 Pdif Pdif 22 09 45.2 -0.3
comp=Z,1.8nm,0.8s,baz=199,slow=6.4,SNR=3.7
MOTA Moosalm 104.96 319 i Pdiff Pdif 22 09 42.2 -2.8
comp=Z,4.6nm,1.1s
MOTA i PP PP 22 14 05.0 -1.9
comp=Z,6.7nm,1.0s
FETA Feichten 105.30 319 i Pdiff Pdif 22 09 46.7 +0.2
comp=Z,4.7nm,1.3s
B08A Colville Reser 107.77 39 e Pdif Pdif 22 09 58.0 +0.6
J05D Fort Rock, OR 108.20 44 P PKiKP 22 14 06.3 +1.0
baz=288
O03D Paynes Creek 108.69 47 P PKiKP 22 14 07.0 +0.8
baz=287
NEW Newport 109.17 38 Pdiff Pdif 22 10 04.4 +0.9
comp=Z,3.9nm,0.9s,baz=282,slow=9.3,SNR=3.8
MSO Missoula 111.72 38 P PKiKP 22 14 11.6 -0.1
baz=295
NVAR Mina Array Bea 111.83 48 Pdiff Pdif 22 10 16.5 +0.7
comp=Z,0.5nm,0.8s,baz=276,slow=6.7,SNR=4.3
NVAR PKiKP PKiKP 22 14 12.9 +0.6
comp=Z,2.7nm,0.8s,baz=242,slow=2.1,SNR=17
NVAR PKKPbc PKKPbc 22 25 02.0 -4.7
comp=Z,0.8nm,0.7s,baz=132,slow=6.4,SNR=3.1
NVAR PKKPab PKKPab 22 25 15.4 -0.1
comp=Z,0.7nm,0.7s,baz=121,slow=4.3,SNR=4.5
MFID Camas Ranch 111.86 42 e PKP PKiKP 22 14 11.7 -0.5
HLID Hailey 112.76 42 P PKiKP 22 14 15.2 +1.2
baz=294
HLID Hailey 112.76 42 e PKP PKiKP 22 14 14.7 +0.7
EDW2 Edwards Air Fo 113.15 52 P PKiKP 22 14 16.0 +1.2
baz=287
MPMC Manual Prospec 113.19 50 P PKiKP 22 14 16.1 +1.1
baz=288
BOZ Bozeman (W) 113.70 39 P PKiKP 22 14 16.2 +0.6
baz=297
BOZ Bozeman (W) 113.70 39 e PKP PKiKP 22 14 15.8 +0.1
EGMT Eagleton 113.71 36 P PKiKP 22 14 15.5 -0.1
baz=299
EGMT Eagleton 113.71 36 e PKP PKiKP 22 14 15.4 -0.1
TPNV Topopah Spring 113.85 49 P PKiKP 22 14 17.0 +0.8
baz=290
R11A Troy Canyon, C 113.87 47 P PKiKP 22 14 17.3 +1.1
baz=290
FFC Flin Flon 114.03 27 e PKP PKiKP 22 14 15.3 -0.5
FFC Flin Flon 114.03 27 e PKIKP PKiKP 22 14 15.3 -0.5
FCC Fort Churchill 114.41 20 e PKP PKPdf 22 14 15.4 -0.9
FCC Fort Churchill 114.41 20 e PKIKP PKPdf 22 14 15.4 -0.9
PFO Pinyon Flats O 114.75 53 P PKPdf 22 14 18.8 +0.8
baz=288
PFO Pinyon Flats O 114.75 53 i PKIKP PKPdf 22 14 19.9 +1.9
BELC Belle Mtn. Jos 114.99 52 P PKPdf 22 14 19.7 +1.2
baz=288
MONP2 Monument Peak 114.99 53 P PKPdf 22 14 19.6 +1.0
baz=288
DUG Dugway, Tooele 115.19 45 P PKPdf 22 14 19.4 +0.7
baz=293
DUG Dugway, Tooele 115.19 45 e PKPdf PKPdf 22 14 18.9 +0.2
DUG Dugway, Tooele 115.19 45 e PKIKP PKPdf 22 14 18.9 +0.2
REDW Red Top Meadow 115.19 41 e PKPdf PKPdf 22 14 19.9 +1.2
SNOW Snow King Moun 115.21 41 e PKPdf PKPdf 22 14 20.2 +1.5
LOHW Long Hollow 115.25 41 e PKPdf PKPdf 22 14 19.9 +1.1
HWUT Hardware Ranch 115.47 43 e PKPdf PKPdf 22 14 19.8 +0.5
IRM Iron Mountain 115.61 52 P PKPdf 22 14 21.1 +1.6
baz=289
TCUT Toone Canyon 115.79 43 e PKPdf PKPdf 22 14 20.9 +1.0
CCUT Cedar City 115.80 48 e PKPdf PKPdf 22 14 21.1 +1.0
JLU Jordanelle 115.97 44 e PKPdf PKPdf 22 14 21.2 +0.9
SZCU Shurtz Canyon 115.99 47 e PKPdf PKPdf 22 14 20.6 +0.2
MPU Maple Canyon 116.09 45 e PKPdf PKPdf 22 14 21.6 +1.2
MSU Marysvale 116.30 46 e PKPdf PKPdf 22 14 22.4 +1.5
MSU Marysvale 116.30 46 e PKIKP PKPdf 22 14 22.5 +1.5
BW06 Boulder Array 116.31 41 P PKPdf 22 14 20.9 0.0
baz=297
BW06 Boulder Array 116.31 41 e PKPdf PKPdf 22 14 20.2 -0.6
PD31 Pinedale Array 116.31 41 e PKPdf PKPdf 22 14 21.4 +0.6
PDAR Pinedale Array 116.31 41 PKP PKPdf 22 14 21.1 +0.2
comp=Z,2.8nm,0.8s,baz=214,slow=0.5,SNR=19
PDAR PKKPbc PKKPbc 22 24 49.0 -2.7
comp=Z,0.9nm,0.7s,baz=121,slow=4.3,SNR=7.2
PDAR PKKPab PKKPab 22 24 54.7 -1.0
comp=Z,3.4nm,0.6s,baz=113,slow=6.0,SNR=28
PDAR Pinedale Array 116.31 41 e PKPdf PKPdf 22 14 20.3 -0.6
PDAR PKKPbc PKKPbc 22 24 49.0 -2.7
PDAR PKKPab PKKPab 22 24 54.7 -1.0
LAO LASA Array 116.46 36 P PKPdf 22 14 21.7 +0.9
baz=302
MTPU Mount Pierson 116.48 47 e PKPdf PKPdf 22 14 23.3 +1.8
DGMT Dagmar 116.64 33 e PKPdf PKPdf 22 14 21.6 +0.6
TMUT Trail Mountain 116.68 45 e PKPdf PKPdf 22 14 23.1 +1.3
P17A Butcher Ranch, 116.94 45 e PKPdf PKPdf 22 14 23.2 +1.1
U15A North Rim 117.01 48 e PKPdf PKPdf 22 14 24.4 +1.9
P18A Preston Nutter 117.22 44 e PKPdf PKPdf 22 14 23.9 +1.1
SRU San Rafael Swe 117.24 45 e PKPdf PKPdf 22 14 23.5 +0.8
SRU San Rafael Swe 117.24 45 e PKIKP PKPdf 22 14 23.5 +0.8
ES19 SONSECA Array 117.88 316 e PKPdf PKPdf 22 14 23.9 +0.2
ESDC Sonseca Array 117.94 316 PKP PKPdf 22 14 22.9 -0.9
comp=Z,1.6nm,0.9s,baz=338,slow=4.3,SNR=6.1
WUAZ Wupatki 118.04 49 e PKPdf PKPdf 22 14 23.2 -1.1
PAB San Pablo 118.26 316 e PKPdf PKPdf 22 14 25.3 +0.8
PAB San Pablo 118.26 316 e PKIKP PKPdf 22 14 25.3 +0.8
K22A Casper 118.33 40 P PKPdf 22 14 24.2 -0.4
baz=300
K22A Casper 118.33 40 e PKPdf PKPdf 22 14 24.8 +0.1
RWWY Rawlins 118.35 41 e PKPdf PKPdf 22 14 24.9 +0.1
O20A White River Ci 118.39 43 P PKPdf 22 14 25.5 +0.7
baz=297
O20A White River Ci 118.39 43 e PKPdf PKPdf 22 14 25.6 +0.7
PV09 Paradox Valley 118.48 45 e PKPdf PKPdf 22 14 26.6 +1.4
PV10 Paradox Valley 118.60 45 e PKPdf PKPdf 22 14 26.8 +1.4
PV05 Paradox Valley 118.69 46 e PKPdf PKPdf 22 14 26.9 +1.3
PV04 Paradox Valley 118.69 45 e PKPdf PKPdf 22 14 26.9 +1.4
PV07 Paradox Valley 118.86 45 e PKPdf PKPdf 22 14 27.1 +1.2
PV02 Paradox Valley 118.89 45 e PKPdf PKPdf 22 14 27.3 +1.3
PV15 Paradox Valley 119.01 45 e PKPdf PKPdf 22 14 27.5 +1.3
PV01 Paradox Valley 119.04 45 e PKPdf PKPdf 22 14 27.5 +1.2
RSSD Black Hills 119.13 37 P PKPdf 22 14 25.8 -0.4
baz=303
RSSD Black Hills 119.13 37 e PKPdf PKPdf 22 14 26.0 -0.2
RSSD Black Hills 119.13 37 e PKIKP PKPdf 22 14 26.0 -0.2
W18A Petrified Fore 119.43 49 P PKPdf 22 14 28.3 +1.3
baz=293
W18A Petrified Fore 119.43 49 e PKPdf PKPdf 22 14 27.7 +0.7
MDND Maddock 119.49 32 P PKPdf 22 14 26.5 0.0
baz=308
MDND Maddock 119.49 32 e PKPdf PKPdf 22 14 26.8 +0.2
MVCO Mesa Verde 119.49 46 P PKPdf 22 14 28.1 +1.0
baz=295
MVCO Mesa Verde 119.49 46 e PKPdf PKPdf 22 14 27.8 +0.7
N23A Red Feather La 119.57 41 P PKPdf 22 14 27.6 +0.4
baz=299
N23A Red Feather La 119.57 41 e PKPdf PKPdf 22 14 27.6 +0.4
TUC Tucson 119.68 52 P PKPdf 22 14 28.7 +1.2
baz=291
TUC Tucson 119.68 52 e PKPdf PKPdf 22 14 27.2 -0.2
SMCO Snowmass 119.69 44 e PKPdf PKPdf 22 14 28.2 +0.5
POLO Lamas de Olo 119.72 319 e PKPdf PKPdf 22 14 27.7 +0.4
ULM Lac du Bonnet 119.78 28 PKP PKPdf 22 14 26.2 -0.8
comp=Z,15nm,0.5s,baz=324,slow=1.9,SNR=28
ULM SKP 22 17 47.8
comp=Z,1.7nm,0.6s,baz=292,slow=5.4,SNR=3.1
ULM PKKPbc PKKPbc 22 24 37.3 -2.0
comp=Z,1.4nm,0.5s,baz=135,slow=6.0,SNR=2.9
MTE Manteigas 120.04 318 e PKPdf PKPdf 22 14 28.1 +0.2
B31A Greenbush Farm 120.13 30 P PKPdf 22 14 27.0 -0.8
baz=311
ISCO Idaho Springs 120.33 42 P PKPdf 22 14 29.2 +0.4
baz=299
ISCO Idaho Springs 120.33 42 e PKPdf PKPdf 22 14 29.2 +0.4
ISCO Idaho Springs 120.33 42 e PKIKP PKPdf 22 14 29.2 +0.4
C31A Landman Farms, 120.50 31 P PKPdf 22 14 28.2 -0.3
baz=310
TOA0 Torodi Ar. Sit 120.81 285 e PKPdf PKPdf 22 14 29.4 -0.6
TORD Torodi Ar. Bea 120.81 285 PKP PKPdf 22 14 29.3 -0.6
comp=Z,6.4nm,0.4s,baz=95,slow=1.9,SNR=101
TORD SKP 22 17 52.2
comp=Z,1.5nm,0.8s,baz=90,slow=2.1,SNR=3.7
TORD PKKPab PKKPab 22 24 36.0 +0.1
comp=Z,5.4nm,0.8s,baz=287,slow=4.1,SNR=22
A33A Warroad 120.91 29 P PKPdf 22 14 28.4 -0.8
baz=313
D31A Mcclaflin, Tow 120.98 32 P PKPdf 22 14 29.0 -0.4
baz=310
AGMN Agassiz Nation 121.11 30 P PKPdf 22 14 28.8 -0.8
baz=312
AGMN Agassiz Nation 121.11 30 e PKPdf PKPdf 22 14 28.9 -0.8
319A Douglas 121.21 53 e PKPdf PKPdf 22 14 31.8 +1.3
E31A Nome 121.21 32 P PKPdf 22 14 29.4 -0.5
baz=310
MDT Midelt 121.25 309 PKP PKPdf 22 14 30.7 +0.2
comp=Z,1.8nm,0.4s,baz=52,slow=2.6,SNR=7.8
EVO Evora 121.26 317 e PKPdf PKPdf 22 14 30.6 +0.4
D32A Dogwood Acres, 121.30 31 P PKPdf 22 14 29.2 -0.7
baz=311
SDCO Great Sand Dun 121.38 44 P PKPdf 22 14 31.6 +0.7
baz=298
SDCO Great Sand Dun 121.38 44 e PKPdf PKPdf 22 14 31.9 +1.1
PBEJ Beja 121.40 316 e PKPdf PKPdf 22 14 28.8 -1.7
B34A Aery, Baudette 121.57 29 P PKPdf 22 14 29.7 -0.8
baz=314
PCVE Castro Verde 121.71 316 e PKPdf PKPdf 22 14 31.7 +0.6
PBDV Barranco-do-Ve 121.81 315 e PKPdf PKPdf 22 14 32.1 +0.8
D33A AnnSam, Waubum 121.89 31 P PKPdf 22 14 30.5 -0.7
baz=312
SUSD Miller 121.94 35 P PKPdf 22 14 31.0 -0.3
baz=308
121A Cookes Peak, D 121.94 51 P PKPdf 22 14 33.1 +1.1
baz=294
TASM ASL Pad, Albuq 121.95 48 P PKPdf 22 14 32.8 +0.9
baz=296
ANMO Albuquerque 121.95 48 PKP PKPdf 22 14 33.0 +1.1
comp=Z,12nm,0.9s,baz=219,slow=2.8,SNR=26
ANMO Albuquerque 121.95 48 P PKPdf 22 14 32.8 +0.8
baz=296
ANMO Albuquerque 121.95 48 e PKPdf PKPdf 22 14 32.9 +1.1
ANMO Albuquerque 121.95 48 c i PKIKP PKPdf 22 14 32.7 +0.8
ANMO pmax pmax
comp=Z,22nm,1.2s
TASL Snake Pit, Alb 121.95 48 P PKPdf 22 14 33.0 +1.1
baz=296
C34A RKJ Ranch, Bem 122.02 30 P PKPdf 22 14 30.4 -1.0
baz=313
E33A Westby DABS, E 122.23 31 P PKPdf 22 14 31.3 -0.5
baz=312
G32A Webster 122.25 33 P PKPdf 22 14 31.6 -0.4
baz=309
G32A Webster 122.25 33 e PKPdf PKPdf 22 14 32.0 0.0
D34A Park Rapids 122.26 30 P PKPdf 22 14 31.4 -0.5
baz=313
D34A Park Rapids 122.26 30 e PKPdf PKPdf 22 14 31.0 -0.9
MORF Marmelete 122.29 316 e PKPdf PKPdf 22 14 33.1 +0.8
T25A Trinidad 122.43 45 P PKPdf 22 14 33.5 +0.7
baz=299
T25A Trinidad 122.43 45 e PKPdf PKPdf 22 14 34.0 +1.2
PFVI Vila Bisbo 122.50 315 e PKPdf PKPdf 22 14 32.3 -0.3
E34A Wadena 122.66 31 P PKPdf 22 14 32.1 -0.5
baz=312
H32A Carlson Farm, 122.75 34 P PKPdf 22 14 32.8 -0.2
baz=309
D35A Remer 122.83 30 P PKPdf 22 14 32.0 -1.0
baz=314
C36A Pine Crest Far 122.95 28 P PKPdf 22 14 32.5 -0.7
baz=315
E35A Pequot Lakes 123.02 30 P PKPdf 22 14 32.8 -0.5
baz=313
F34A Alexandria 123.09 31 P PKPdf 22 14 32.7 -0.8
baz=312
G34A Benson 123.26 32 P PKPdf 22 14 33.5 -0.4
baz=311
F35A Swanville 123.41 31 P PKPdf 22 14 33.7 -0.4
baz=313
EYMN Ely 123.44 27 P PKPdf 22 14 33.6 -0.5
baz=317
EYMN Ely 123.44 27 e PKPdf PKPdf 22 14 34.2 +0.1
D37A Cotton 123.57 29 P PKPdf 22 14 33.6 -0.8
baz=316
E36A McGregor 123.62 30 P PKPdf 22 14 34.1 -0.4
baz=314
ECSD EROS Data Cent 123.70 34 P PKPdf 22 14 34.3 -0.4
baz=310
ECSD EROS Data Cent 123.70 34 e PKPdf PKPdf 22 14 34.5 -0.2
C38A Sawbill Land. 123.71 28 P PKPdf 22 14 33.7 -1.0
baz=317
G35A Watkins 123.88 32 P PKPdf 22 14 35.0 0.0
baz=312
F36A Milaca 123.94 30 P PKPdf 22 14 34.7 -0.5
baz=314
F36A Milaca 123.94 30 e PKPdf PKPdf 22 14 34.9 -0.2
H35A Sunnyside Ranc 124.05 32 P PKPdf 22 14 35.3 -0.1
baz=312
MNTX Cornudas Mount 124.14 51 P PKPdf 22 14 36.8 +0.8
baz=295
MNTX Cornudas Mount 124.14 51 e PKPdf PKPdf 22 14 36.9 +0.8
C39A Grand Marais 124.16 27 P PKPdf 22 14 34.7 -0.8
baz=318
BGNE Belgrade 124.24 37 P PKPdf 22 14 35.2 -0.6
baz=307
BGNE Belgrade 124.24 37 e PKPdf PKPdf 22 14 35.8 -0.1
G36A St. Michael 124.25 31 P PKPdf 22 14 35.6 -0.1
baz=313
E38A The Farm, Brul 124.39 29 P PKPdf 22 14 35.6 -0.4
baz=316
F37A Hinrichs Farm, 124.49 30 P PKPdf 22 14 36.0 -0.2
baz=315
C40A Isle Royale Na 124.52 26 P PKPdf 22 14 36.0 -0.1
baz=319
C40A Isle Royale Na 124.52 26 e PKPdf PKPdf 22 14 36.4 +0.2
H36A Jessenland, He 124.61 32 P PKPdf 22 14 36.8 +0.4
baz=313
SCHQ Schefferville 124.69 7 PKP PKPdf 22 14 36.6 +0.3
comp=Z,29nm,0.7s,baz=10,slow=2.4,SNR=32
SCHQ Schefferville 124.69 7 e PKPdf PKPdf 22 14 36.3 0.0
F38A Pierce - Schro 124.69 29 P PKPdf 22 14 36.6 +0.1
baz=316
I36A Fitzsimmons Fa 124.94 32 P PKPdf 22 14 37.1 0.0
baz=312
E39A Mellen 125.03 28 P PKPdf 22 14 36.8 -0.4
baz=317
MSTX Muleshoe 125.11 47 P PKPdf 22 14 38.0 +0.1
baz=298
MSTX Muleshoe 125.11 47 e PKPdf PKPdf 22 14 38.6 +0.7
H37A Dierke Farm, C 125.13 31 P PKPdf 22 14 37.4 0.0
baz=314
F39A Loretta 125.19 29 P PKPdf 22 14 37.4 -0.1
baz=316
G38A Ridgeland 125.26 30 P PKPdf 22 14 37.4 -0.3
baz=315
I37A Lemond, Waseca 125.27 32 P PKPdf 22 14 38.2 +0.4
baz=313
E40A Wakefield 125.28 28 P PKPdf 22 14 38.0 +0.3
baz=318
D41A Chassel 125.43 26 P PKPdf 22 14 38.0 +0.1
baz=320
G39A Holcombe 125.52 30 P PKPdf 22 14 38.2 0.0
baz=316
F40A Park Falls 125.57 28 P PKPdf 22 14 38.1 -0.2
baz=317
K36A Gilmore City 125.61 34 P PKPdf 22 14 38.3 -0.2
baz=311
J37A Redenius Farm, 125.66 33 P PKPdf 22 14 38.5 -0.1
baz=312
E41A Kenton 125.70 27 P PKPdf 22 14 38.2 -0.3
baz=319
I38A Scanlan Farm, 125.81 31 P PKPdf 22 14 37.9 -0.8
baz=314
L36A Harm Buss Farm 125.84 34 P PKPdf 22 14 38.4 -0.5
baz=311
COWI Conover 125.89 28 e PKPdf PKPdf 22 14 38.2 -0.7
H39A Augusta 125.90 30 P PKPdf 22 14 38.8 -0.1
baz=316
K37A Belmond 125.98 33 P PKPdf 22 14 38.4 -0.8
baz=312
G40A Rib Lake 126.01 29 P PKPdf 22 14 38.9 -0.2
baz=317
G40A Rib Lake 126.01 29 e PKPdf PKPdf 22 14 39.2 +0.1
KOWA Kowa 126.07 288 PKP PKPdf 22 14 40.3 +0.2
comp=Z,3.4nm,0.3s,baz=90,slow=3.1,SNR=22
KOWA Kowa 126.07 288 e PKPdf PKPdf 22 14 40.0 0.0
F41A Three Lakes 126.18 28 P PKPdf 22 14 39.7 +0.2
baz=318
F41A Three Lakes 126.18 28 e PKPdf PKPdf 22 14 39.7 +0.2
E42A Champion 126.20 26 P PKPdf 22 14 39.4 -0.1
baz=320
J38A Wedel Dairy, R 126.23 32 P PKPdf 22 14 39.4 -0.2
baz=314
I39A Houston 126.36 31 P PKPdf 22 14 39.3 -0.5
baz=315
I39A Houston 126.36 31 e PKPdf PKPdf 22 14 39.2 -0.6
H40A Chili 126.38 30 P PKPdf 22 14 39.6 -0.3
baz=316
TX31 Lajitas Ar. Si 126.47 53 e PKPdf PKPdf 22 14 39.2 -1.4
TX31 e PKPdf PKiKP 22 14 41.5 +0.5
TXAR Lajitas Array 126.47 53 PKP PKPdf 22 14 39.6 -1.0
comp=Z,4.1nm,0.9s,baz=259,slow=1.3,SNR=26
TXAR SKPbc SKPbc 22 17 45.6
comp=Z,1.2nm,0.8s,baz=269,slow=2.1,SNR=5.6
TXAR PKKPbc PKKPab 22 24 11.7 +0.1
comp=Z,0.2nm,0.7s,baz=54,slow=9.2,SNR=3.4
TXAR PKKPab PKKPbc 22 24 17.4 +4.2
comp=Z,0.3nm,0.7s,baz=117,slow=4.2,SNR=3.9
K38A Parkersburg 126.53 33 P PKPdf 22 14 39.8 -0.4
baz=313
K38A Parkersburg 126.53 33 e PKPdf PKPdf 22 14 39.8 -0.4
KSU1 Kansas State U 126.56 39 P PKPdf 22 14 40.4 +0.1
baz=307

KSU1	Kansas State U	126.56	39	ePKPdf	PKPdf	22 14 40.5	+0.1		
F42A	Maple Grove Fa	126.61	27	P	PKPdf	22 14 40.2	0.0		
	baz=319								
J39A	Decorah	126.63	32	P	PKPdf	22 14 39.6	-0.8		
	baz=314								
M37A	Trindle Farm,	126.64	35	P	PKPdf	22 14 40.8	+0.3		
	baz=311								
E43A	Lone Tree Farm	126.65	26	P	PKPdf	22 14 40.1	-0.2		
	baz=321								
H41A	Junction City	126.75	29	P	PKPdf	22 14 40.1	-0.4		
	baz=317								
H41A	Junction City	126.75	29	ePKPdf	PKPdf	22 14 40.3	-0.3		
L38A	Oak Wood Farm,	126.77	33	P	PKPdf	22 14 40.6	-0.1		
	baz=312								
SCIA	State Center	126.79	34	ePKPdf	PKPdf	22 14 41.1	+0.4		
I40A	Norwalk	126.79	30	P	PKPdf	22 14 40.0	-0.7		
	baz=316								
G42A	Mountain	126.87	28	P	PKPdf	22 14 40.5	-0.2		
	baz=319								
G42A	Mountain	126.87	28	ePKPdf	PKPdf	22 14 40.9	+0.1		
E44A	Grand Marais A	126.92	25	P	PKPdf	22 14 41.5	+0.7		
	baz=322								
F43A	Flat Rock, Esc	126.99	26	P	PKPdf	22 14 41.3	+0.3		
	baz=321								
J40A	Soldiers Grove	127.08	31	P	PKPdf	22 14 40.6	-0.6		
	baz=315								
M38A	Pleasantville	127.12	34	P	PKPdf	22 14 41.5	+0.1		
	baz=312								
G43A	Wallace	127.20	27	P	PKPdf	22 14 41.7	+0.3		
	baz=320								
G43A	Wallace	127.20	27	ePKPdf	PKPdf	22 14 42.0	+0.6		
F44A	Big Bay de Noc	127.21	26	P	PKPdf	22 14 41.3	0.0		
	baz=322								
L39A	Vinton	127.31	33	P	PKPdf	22 14 41.5	-0.2		
	baz=313								
K40A	Colesburg	127.37	32	P	PKPdf	22 14 42.1	+0.3		
	baz=315								
O37A	Wolven Farm, M	127.39	36	P	PKPdf	22 14 42.2	+0.3		
	baz=310								
E45A	Wooded Hills,	127.44	25	P	PKPdf	22 14 42.8	+1.0		
	baz=323								
J41A	Loganville	127.48	30	P	PKPdf	22 14 41.7	-0.3		
	baz=316								
N38A	Joes South For	127.51	35	P	PKPdf	22 14 42.3	+0.2		
	baz=311								
WMOK	Wichita Mounta	127.58	44	P	PKPdf	22 14 43.2	+0.7		
	baz=302								
WMOK	Wichita Mounta	127.58	44	ePKPdf	PKPdf	22 14 43.2	+0.7		
P37A	Lathrop	127.64	37	P	PKPdf	22 14 42.4	0.0		
	baz=310								
I42A	Draeger Farm,	127.64	29	P	PKPdf	22 14 42.2	0.0		
	baz=318								
JFWS	Jewell Farm	127.68	31	P	PKPdf	22 14 41.9	-0.5		
	baz=316								
JFWS	Jewell Farm	127.68	31	ePKPdf	PKPdf	22 14 41.8	-0.5		
JFWS	Jewell Farm	127.68	31	ePKIKP	PKPdf	22 14 41.8	-0.5		
L40A	Anamosa	127.77	32	P	PKPdf	22 14 42.5	0.0		
	baz=314								
L40A	Anamosa	127.77	32	ePKPdf	PKPdf	22 14 40.9	-1.7		
K41A	Shullsburg	127.87	31	P	PKPdf	22 14 42.8	+0.1		
	baz=316								
N39A	Derby Farms, D	127.87	34	P	PKPdf	22 14 42.7	-0.1		
	baz=312								
N39A	Derby Farms, D	127.87	34	ePKPdf	PKPdf	22 14 42.7	-0.1		
KIC	Kosan Boka	127.89	278	ePKIKP	PKPdf	22 14 43.8	+0.2		
	comp=Z,24nm,0.9s								
J42A	Columbus	127.96	30	P	PKPdf	22 14 42.3	-0.6		
	baz=317								
DBIC	Dimbokro	127.98	278	PKP	PKPdf	22 14 43.7	0.0		
	comp=Z,10nm,0.8s,baz=125,slow=1.4,SNR=8.9								
ABTX	Abilene, Hawle	128.05	47	P	PKPdf	22 14 44.2	+0.8		
	baz=300								
F46A	Macinaw City C	128.08	25	P	PKPdf	22 14 43.5	+0.5		
	baz=323								
P38A	Dawn	128.10	36	P	PKPdf	22 14 42.9	-0.3		
	baz=310								
P38A	Dawn	128.10	36	ePKPdf	PKPdf	22 14 43.4	+0.1		
TIC	Toumodi	128.14	278	ePKIKP	PKPdf	22 14 44.1	0.0		
LIC	Lamto	128.19	278	ePKIKP	PKPdf	22 14 44.2	+0.1		
	comp=Z,27nm,0.8s								
J43A	Natural Harves	128.26	29	P	PKPdf	22 14 43.3	-0.2		
	baz=318								
O39A	Kirksville	128.26	35	P	PKPdf	22 14 43.2	-0.4		
	baz=312								
N40A	Mertquake, Sal	128.38	34	P	PKPdf	22 14 43.5	-0.2		
	baz=313								
Q38A	Cooks Store, C	128.47	37	P	PKPdf	22 14 43.7	-0.3		
	baz=310								
M41A	Milan	128.61	33	P	PKPdf	22 14 43.8	-0.4		
	baz=314								
L42A	Oliver, Polo	128.63	31	P	PKPdf	22 14 44.1	-0.1		
	baz=316								
L42A	Oliver, Polo	128.63	31	ePKPdf	PKPdf	22 14 43.7	-0.5		
P39B	Salisbury	128.65	36	P	PKPdf	22 14 44.6	+0.3		
	baz=311								
O40A	La Belle	128.73	35	P	PKPdf	22 14 44.4	0.0		
	baz=312								
R38A	Fenwick Farm,	128.79	38	P	PKPdf	22 14 44.1	-0.5		
	baz=309								
Q39A	Willow Grove F	128.80	36	P	PKPdf	22 14 44.4	-0.2		
	baz=311								
N41A	Harden Midland	128.91	33	P	PKPdf	22 14 44.4	-0.4		
	baz=314								
N41A	Harden Midland	128.91	33	ePKPdf	PKPdf	22 14 45.0	+0.2		
TUL1	Leonard	128.97	41	P	PKPdf	22 14 45.4	+0.4		
	baz=306								
TUL1	Leonard	128.97	41	ePKPdf	PKPdf	22 14 45.9	+0.8		
JCT	Junction City	128.97	50	P	PKPdf	22 14 45.4	+0.1		
	baz=298								
JCT	Junction City	128.97	50	ePKPdf	PKPdf	22 14 46.0	+0.7		
JCT	Junction City	128.97	50	ePKIKP	PKPdf	22 14 46.0	+0.7		
L43A	Garden Prairie	128.98	31	P	PKPdf	22 14 44.7	-0.2		
	baz=317								
P40A	Paris	129.03	35	P	PKPdf	22 14 44.7	-0.4		
	baz=312								
P40A	Paris	129.03	35	ePKPdf	PKPdf	22 14 45.1	0.0		
S38A	Stockton	129.14	38	P	PKPdf	22 14 44.6	-0.7		
	baz=309								
R39A	Chumby, Stover	129.24	37	P	PKPdf	22 14 44.9	-0.6		
	baz=310								
T38A	Diamond	129.26	39	P	PKPdf	22 14 45.1	-0.4		
	baz=308								
N42A	Yates City	129.27	33	P	PKPdf	22 14 45.3	-0.2		
	baz=315								
O41A	Passleys Farm,	129.30	34	P	PKPdf	22 14 45.2	-0.3		
	baz=313								
Q40A	Laux Farm, Aux	129.37	36	P	PKPdf	22 14 45.9	+0.2		
	baz=312								
M43A	Waltham Townsh	129.41	31	P	PKPdf	22 14 45.7	0.0		
	baz=316								
S39A	Bolivar	129.46	38	P	PKPdf	22 14 45.6	-0.4		
	baz=309								
S39A	Bolivar	129.46	38	ePKPdf	PKPdf	22 14 45.5	-0.4		
P41A	Barry, Barry	129.50	34	P	PKPdf	22 14 45.2	-0.7		
	baz=313								
R40A	Maddies Statio	129.71	37	P	PKPdf	22 14 46.1	-0.3		
	baz=311								
R40A	Maddies Statio	129.71	37	ePKPdf	PKPdf	22 14 46.1	-0.3		
T39A	Clever	129.84	39	P	PKPdf	22 14 46.4	-0.3		
	baz=309								
HDIL	Hopedale	129.86	32	P	PKPdf	22 14 46.6	0.0		
	baz=315								
HDIL	Hopedale	129.86	32	ePKPdf	PKPdf	22 14 45.7	-0.9		
Q41A	Truxton	129.88	35	P	PKPdf	22 14 46.6	-0.1		
	baz=312								
M44A	Midewin, Midew	129.92	31	P	PKPdf	22 14 47.0	+0.3		
	baz=317								
M44A	Midewin, Midew	129.92	31	ePKPdf	PKPdf	22 14 47.0	+0.3		
P42A	Winchester	129.96	34	P	PKPdf	22 14 46.1	-0.7		
	baz=314								
P42A	Winchester	129.96	34	ePKPdf	PKPdf	22 14 46.7	-0.1		
S40A	Lebanon	130.02	37	P	PKPdf	22 14 46.3	-0.7		
	baz=310								
U39A	Green Forest	130.18	39	P	PKPdf	22 14 46.6	-0.7		
	baz=308								
R41A	Rosebud	130.24	36	P	PKPdf	22 14 47.2	-0.2		
	baz=312								
T40A	Mansfield	130.30	38	P	PKPdf	22 14 47.0	-0.6		
	baz=310								
P43A	Skaggs, Pawnee	130.38	33	P	PKPdf	22 14 47.3	-0.3		
	baz=315								
V39A	Pettigrew	130.41	40	P	PKPdf	22 14 47.3	-0.6		
	baz=308								
CCM	Cathedral Cave	130.48	36	P	PKPdf	22 14 47.5	-0.4		
	baz=312								
CCM	Cathedral Cave	130.48	36	ePKPdf	PKPdf	22 14 47.0	-0.9		
CCM				eSKPbc	SKPab	22 17 56.4	-1.0		
S41A	Jillco Farms,	130.49	37	P	PKPdf	22 14 47.4	-0.5		
	baz=311								
U40A	Yellville	130.59	39	P	PKPdf	22 14 47.6	-0.5		
	baz=309								
W39A	Magazine	130.71	41	P	PKPdf	22 14 48.0	-0.3		
	baz=307								
W39A	Magazine	130.71	41	ePKPdf	PKPdf	22 14 48.2	-0.1		
Q43A	New Douglas	130.77	34	P	PKPdf	22 14 48.2	-0.2		
	baz=314								
T41A	Mountain View	130.83	38	P	PKPdf	22 14 48.1	-0.5		
	baz=311								
X39A	Fountain Ranch	130.90	42	P	PKPdf	22 14 49.1	+0.4		
	baz=306								
O45A	Potomac	130.91	32	P	PKPdf	22 14 49.1	+0.5		
	baz=317								
S42A	Caledonia	130.93	36	P	PKPdf	22 14 48.5	-0.2		
	baz=312								
V40A	Witts Springs	130.95	40	P	PKPdf	22 14 48.3	-0.5		
	baz=309								
V40A	Witts Springs	130.95	40	ePKPdf	PKPdf	22 14 48.7	-0.2		
P44A	Sand Creek, Wi	131.00	33	P	PKPdf	22 14 48.5	-0.2		
	baz=316								
FVM	French Village	131.00	36	ePKPdf	PKPdf	22 14 49.2	+0.4		
SADO	Sadowa	131.12	21	ePKPdf	PKPdf	22 14 48.5	-0.3		
W40A	Ferguson Farm,	131.17	40	ePKPdf	PKPdf	22 14 50.6	+1.4		
U41A	Viola	131.18	38	P	PKPdf	22 14 48.9	-0.4		
	baz=310								
MIAR	Mount Ida	131.23	41	P	PKPdf	22 14 50.2	+0.8		
	baz=307								
MIAR	Mount Ida	131.23	41	ePKPdf	PKPdf	22 14 50.4	+1.0		
MIAR				eSKPbc	SKPbc	22 18 00.3	+0.1		
T42A	Van Buren	131.24	37	P	PKPdf	22 14 49.4	+0.1		
	baz=311								
T42A	Van Buren	131.24	37	ePKPdf	PKPdf	22 14 49.4	+0.1		
TRQ	Mont Tremblant	131.32	17	ePKPdf	PKPdf	22 14 49.5	+0.2		
V41A	Mountainview	131.39	39	P	PKPdf	22 14 49.6	-0.1		
	baz=309								
P45A	Graceland, Par	131.43	32	P	PKPdf	22 14 50.2	+0.7		
	baz=316								
P45A	Graceland, Par	131.43	32	ePKPdf	PKPdf	22 14 49.9	+0.3		
S43A	Fulton Ridge,	131.49	36	P	PKPdf	22 14 49.1	-0.6		
	baz=313								
R44A	Waltonville	131.60	34	P	PKPdf	22 14 50.4	+0.5		
	baz=314								
U42A	Revenden	131.60	38	P	PKPdf	22 14 49.6	-0.4		
	baz=311								
PLVO	Plevna	131.60	19	ePKPdf	PKPdf	22 14 49.8	0.0		
P46A	Rosedale	131.65	32	P	PKPdf	22 14 50.4	+0.4		
	baz=317								
Q45A	Warren Harvey,	131.66	33	P	PKPdf	22 14 50.2	+0.2		
	baz=316								
T43A	Greenville	131.69	36	P	PKPdf	22 14 50.3	+0.2		
	baz=312								
W41B	Gary Mavity, V	131.71	40	ePKPdf	PKPdf	22 14 51.4	+1.1		
O47A	Sheridan	131.72	30	P	PKPdf	22 14 50.7	+0.6		
	baz=319								
Y40A	Okolona	131.75	42	P	PKPdf	22 14 51.1	+0.7		
	baz=307								
OLIL	Olney	131.80	33	ePKPdf	PKPdf	22 14 50.7	+0.4		
PBMO	Poplar Bluff	131.81	37	ePKPdf	PKPdf	22 14 50.6	+0.3		
V42A	Cord	131.85	39	P	PKPdf	22 14 50.6	+0.1		
	baz=310								
R45A	Skylar, Fairfi	132.01	34	P	PKPdf	22 14 51.8	+1.0		
	baz=315								
WLAR	White Oak Lake	132.05	42	ePKPdf	PKPdf	22 14 52.3	+1.4		
T44A	Benton	132.10	36	P	PKPdf	22 14 51.4	+0.4		
	baz=313								
PQI	Presque Isle	132.44	11	ePKPdf	PKPdf	22 14 51.1	-0.2		
LONY	Lake Ozonia	132.77	18	P	PKPdf	22 14 51.8	-0.2		
	baz=335								
LONY	Lake Ozonia	132.77	18	ePKPdf	PKPdf	22 14 52.0	0.0		
LONY				eSKPbc	SKPbc	22 18 04.5	-0.9		
N50A	Nevada	132.78	28	P	PKPdf	22 14 52.3	+0.2		
	baz=323								
FRNY	Flat Rock	132.86	16	ePKPdf	PKPdf	22 14 52.2	+0.1		
R47A	Wooly Knot Far	132.97	32	P	PKPdf	22 14 53.3	+0.7		
	baz=317								
O50A	Cable	133.05	28	P	PKPdf	22 14 53.0	+0.4		
	baz=322								
T46A	Princeton	133.11	35	P	PKPdf	22 14 53.9	+1.0		
	baz=315								
WCI	Wyandotte Cave	133.15	32	P	PKPdf	22 14 53.8	+0.9		
	baz=317								
WCI	Wyandotte Cave	133.15	32	ePKPdf	PKPdf	22 14 54.1	+1.2		
WCI				ePP	PP	22 17 21.4	+1.2		
WCI				eSKPbc	SKPbc	22 18 06.4	-0.5		
R48A	Northridge Ran	133.24	32	P	PKPdf	22 14 53.9	+0.8		
	baz=318								
ACSO	Alum Creek Sta	133.28	28	P	PKPdf	22 14 53.2	+0.2		
	baz=322								
ACSO	Alum Creek Sta	133.28	28	ePKPdf	PKPdf	22 14 53.0	-0.1		
ACSO				eSKPbc	SKPbc	22 18 07.1	-0.2		
MMNY	Mt. Morris Dam	133.33	22	ePKPdf	PKPdf	22 14 53.0	-0.1		
P50A	Jamestown	133.38	29	P	PKPdf	22 14 52.5	-0.8		
	baz=321								
341A	Kurthwood	133.39	45	P	PKPdf	22 14 54.9	+1.4		
	baz=305								
341A	Kurthwood	133.39	45	ePKPdf	PKPdf	22 14 55.1	+1.6		
U46A	Springville	133.42	36	P	PKPdf	22 14 54.6	+1.2		
	baz=314								
NCB	Newcomb	133.46	18	ePKPdf	PKPdf	22 14 53.6	+0.2		
PKME	Peaks-Kenny Pk	133.53	12	P	PKPdf	22 14 53.9	+0.5		
	baz=342								
T47A	Sharon Grove	133.60	34	P	PKPdf	22 14 55.1	+1.4		
	baz=316								
M54A	Oil Creek Stat	133.69	24	P	PKPdf	22 14 53.4	-0.4		
	baz=327								
M54A	Oil Creek Stat	133.69	24	ePKPdf	PKPdf	22 14 53.8	0.0		
S48A	Wiedeman Farm,	133.69	33	P	PKPdf	22 14 53.7	-0.2		
	baz=317								
R49A	Shelbyville	133.69	31	P	PKPdf	22 14 54.6	+0.7		
	baz=319								
WVT	Waverly	133.78	36	P	PKPdf	22 14 54.3	+0.1		
	baz=314								
WVT	Waverly	133.78	36	ePKPdf	PKPdf	22 14 54.2	+0.1		
V46A	Holladay	133.84	36	P	PKPdf	22 14 54.1	-0.1		
	baz=314								
LBNH	Lisbon	133.87	15	P	PKPdf	22 14 54.3	+0.2		
	baz=339								
LBNH	Lisbon	133.87	15	ePKPdf	PKPdf	22 14 54.7	+0.7		
U47A	Clarksville	133.88	35	P	PKPdf	22 14 54.6	+0.3		
	baz=315								
T48A	Bowling Green	133.91	33	P	PKPdf	22 14 54.8	+0.5		
	baz=317								
OXF	Oxford	133.93	38	P	PKPdf	22 14 55.1	+0.7		
	baz=311								
OXF	Oxford	133.93	38	ePKPdf	PKPdf	22 14 54.9	+0.5		
OXF				eSKPbc	SKPbc	22 18 08.5	-1.0		
S49A	Springfield	134.01	32	P	PKPdf	22 14 54.9	+0.4		
	baz=318								
N54A	Moraine State	134.01	25	P	PKPdf	22 14 54.5	+0.1		
	baz=327								
N54A	Moraine State	134.01	25	ePKPdf	PKPdf	22 14 54.4	0.0		
R50A	Paris	134.13	31	P	PKPdf	22 14 54.3	-0.4		
	baz=320								
U48A	Cassie Pea, Po	134.25	34	P	PKPdf	22 14 55.4	+0.4		
	baz=316								
T49A	Edmonton	134.38	33	P	PKPdf	22 14 55.8	+0.5		
	baz=318								
PLAL	Pickwick Lake	134.43	37	ePKPdf	PKPdf	22 14 54.8	-0.6		
BINY	Binghamton	134.48	20	P	PKPdf	22 14 55.5	+0.2		
	baz=332								
BINY	Binghamton	134.48	20	ePKPdf	PKPdf	22 14 55.2	-0.1		
BINY				eSKPbc	SKPbc	22 18 10.4	-0.8		
W47A	Westpoint	134.53	36	P	PKPdf	22 14 55.8	+0.2		
	baz=314								
S50A	Richmond	134.55	31	P	PKPdf	22 14 56.0	+0.5		
	baz=319								
V48A	Smith Brothers	134.64	35	P	PKPdf	22 14 56.2	+0.4		
	baz=315								
V48A	Smith Brothers	134.64	35	ePKPdf	PKPdf	22 14 56.5	+0.8		
TRY	Troy	134.76	18	ePKPdf	PKPdf	22 14 56.2	+0.4		
T50A	Nancy	134.82	32	P	PKPdf	22 14 56.9	+0.8		
	baz=318								
S51A	Beattyville	135.00	31	P	PKPdf	22 14 56.5	+0.1		
	baz=320								
KSPA	Keystone Colle	135.13	20	ePKPdf	PKPdf	22 14 56.8	+0.3		
SSPA	Standing Stone	135.14	23	P	PKPdf	22 14 56.6	+0.1		
	baz=329								
SSPA	Standing Stone	135.14	23	ePKPdf	PKPdf	22 14 56.8	+0.2		
SSPA				eSKPbc	SKPbc	22 18 12.7	-0.6		
O56A	Blue Knob Stat	135.18	24	P	PKPdf	22 14 57.0	+0.3		
	baz=328								
O56A	Blue Knob Stat	135.18	24	ePKPdf	PKPdf	22 14 57.0	+0.3		
U50A	Jamestown	135.26	33	P	PKPdf	22 14 57.4	+0.5		
	baz=318								
T51A	Gray	135.33	32	P	PKPdf	22 14 58.1	+1.1		
	baz=319								
W49A	Belvidere	135.40	35	P	PKPdf	22 14 58.0	+0.8		
	baz=315								
HRV	Adam Dziewonsk	135.58	16	P	PKPdf	22 14 57.7	+0.4		
	baz=338								
HRV	Adam Dziewonsk	135.58	16	ePKPdf	PKPdf	22 14 58.7	+1.4		
N59A	State Game Lan	135.69	21	P	PKPdf	22 14 57.8	+0.3		
	baz=332								
N59A	State Game Lan	135.69	21	ePKPdf	PKPdf	22 14 57.9	+0.3		
WES	Weston	135.75	16	ePKPdf	PKPdf	22 14 59.1	+1.5		
X49A	Woodville	135.79	36	P	PKPdf	22 14 58.0	+0.1		
	baz=315								
Z48A	Northport	135.83	38	P	PKPdf	22 14 58.3	+0.3		
	baz=313								
TZTN	Tazewell	135.86	32	P	PKPdf	22 14 58.6	+0.6		
	baz=320								
TZTN	Tazewell	135.86	32	ePKPdf	PKPdf	22 14 58.9	+0.9		
W50A	Signal Mountai	135.89	34	ePKPdf	PKPdf	22 14 58.2	0.0		
ODNJ	Ogdensburg	135.95	20	ePKPdf	PKPdf	22 14 58.2	+0.2		
V51A	Loudon	135.98	33	ePKPdf	PKPdf	22 14 59.2	+0.9		
U52A	Thorn Hill	136.07	32	P	PKPdf	22 14 59.4	+0.9		
	baz=320								
CPCT	Cooper Cave	136.15	34	ePKPdf	PKPdf	22 14 57.5	-1.0		
X50B	Fort Payne	136.22	35	P	PKPdf	22 14 58.6	-0.1		
	baz=316								
PAL	Palisades	136.25	19	P	PKPdf	22 14 59.1	+0.5		
	baz=335								
PAL	Palisades	136.25	19	ePKPdf	PKPdf	22 14 59.1	+0.5		
MVL	Millersville	136.28	22	ePKPdf	PKPdf	22 14 59.1	+0.4		
BRNJ	Basking Ridge	136.32	20	ePKPdf	PKPdf	22 14 59.7	+1.0		
V52A	Sevierville	136.36	32	P	PKPdf	22 15 00.1	+1.1		
	baz=319								
V52A	Sevierville	136.36	32	ePKPdf	PKPdf	22 15 00.3	+1.3		
TKL	Tuckaleechee C	136.40	33	PKhKP	PKPpre	22 14 46.4			
	comp=Z,5.2nm,0.5s,baz=287,slow=11,SNR=6.7								
TKL				PKP	PKPdf	22 14 59.2	+0.1		
	comp=Z,33nm,0.9s,baz=316,slow=3.9,SNR=14								
TKL	Tuckaleechee C	136.40	33	PKPpre	PKPpre	22 14 46.4			
TKL				ePKPdf	PKPdf	22 14 59.5	+0.5		
LRAL	Lakeview Retre	136.41	38	ePKPdf	PKPdf	22 14 58.3	-0.8		
LRAL				eSKPbc	SKPbc	22 18 16.7	-0.7		
U53A	Fall Branch	136.50	31	P	PKPdf	22 14 59.6	+0.4		
	baz=321								
Z49A	Columbiana	136.58	38	P	PKPdf	22 14 59.5	0.0		
	baz=314								
SDMD	Soldier's Deli	136.60	23	ePKPdf	PKPdf	22 14 59.9	+0.6		
PSUB	Penn St. - Bra	136.68	21	ePKPdf	PKPdf	22 14 59.4	0.0		
W52A	Murphy	136.74	33	ePKPdf	PKPdf	22 15 00.3	+0.5		
149A	Jones	136.83	38	P	PKPdf	22 14 59.9	0.0		
	baz=313								
BLA	Blacksburg	136.90	28	ePKPdf	PKPdf	22 14 59.3	-0.6		
Z50A	Ashland	136.91	37	ePKPdf	PKPdf	22 14 60.0	-0.1		
249A	Camden	137.04	39	P	PKPdf	22 15 00.9	+0.6		
	baz=312								
X52A	Dahlonega	137.12	34	P	PKPdf	22 15 01.1	+0.7		
	baz=318								
IP04	Greensprings	137.22	25	ePKPdf	PKPdf	22 15 00.7	+0.3		
150A	Eclectic	137.30	38	P	PKPdf	22 15 01.1	+0.4		
	baz=314								
Z51A	Franklin	137.31	36	P	PKPdf	22 15 01.2	+0.4		
	baz=315								
SPRD	Spring Road, M	137.36	25	ePKPdf	PKPdf	22 15 01.2	+0.5		
IP01	Cuckoo	137.41	25	ePKPdf	PKPdf	22 15 01.0	+0.2		
PLCA	Paso Flores	137.52	164	PKhKP	PKPpre	22 14 50.6			
	comp=Z,2.5nm,0.8s,baz=141,slow=3.5,SNR=3.3								
PLCA				PKP	PKPdf	22 15 01.9	+0.8		
	comp=Z,4.7nm,0.8s,baz=23,slow=0.9,SNR=11								
PLCA				SKPbc	SKPbc	22 18 21.5	+0.9		
	comp=Z,2.7nm,0.8s,baz=251,slow=3.5,SNR=4.9								
Y52A	Lilburn	137.57	35	ePKPdf	PKPdf	22 15 02.1	+0.8		
JSRW	J. Sargeant Re	137.64	25	ePKPpre	PKPpre	22 14 50.3			
JSRW				ePKPdf	PKPdf	22 15 01.9	+0.7		
Z52A	Williamson	137.85	36	P	PKPdf	22 15 02.5	+0.7		
	baz=316								
URVA	University of	137.89	25	ePKPdf	PKPdf	22 15 02.1	+0.4		
Z53A	Monticello	138.27	35	P	PKPdf	22 15 03.0	+0.4		
	baz=317								
252A	Lumpkin	138.50	37	P	PKPdf	22 15 03.8	+0.8		
	baz=315								
CMIG	Matias Romero	138.63	64	PKhKP	PKPpre	22 14 54.4			
	comp=Z,2.1nm,0.5s,baz=0.0,slow=4.0,SNR=4.9								
CMIG				PKP	PKPdf	22 15 04.3	+0.7		
	comp=Z,8.6nm,0.9s,baz=309,slow=1.3,SNR=6.2								
CMIG				SKPbc	SKPbc	22 18 25.0	+0.7		
	baz=289,slow=3.6						

SIV				PKPab	PKPab	22 16 30.6	-1.7
	comp=Z,4.7nm,0.7s,baz=212,slow=6.0,SNR=9.9						
PCRV	Puerto La Cruz	167.09	38	PKPab	PKPab	22 16 47.5	-0.8
	comp=Z,13nm,0.7s,baz=288,slow=3.2,SNR=4.1						
SAML	Samuel	168.95	144	*e*PKPdf	PKPdf	22 15 44.9	+0.1
SAML				*e*PKPab	PKPab	22 16 56.8	+0.3
PTGA	Pitinga	176.53	102	PKP	PKPdf	22 15 46.9	-1.1
	comp=Z,2.9nm,0.5s,baz=291,slow=8.6,SNR=9.7						
PTGA	Pitinga	176.53	102	*e*PKPdf	PKPdf	22 15 47.5	-0.5

*ISCJB **20** 21:57:49.7±0.5, 36°.37N±0°.03×29°.16E±0°.03, h10km±4km, Error ellipse: s-maj=4.8km s-min=3.6km az=4.0*
*CSEM **20** 21:57:49.6±0.2, 36°.38N×29°.18E, h10km, ML3.0, Error ellipse: s-maj=3.9km s-min=3.0km az=3.0*
*ATH **20** 21:57:49.0, 36°.36N×29°.24E, h38km±3km, ML2.4/2, Error ellipse: s-maj=5.1km s-min=1.4km az=166.0*
*DDA **20** 21:57:49.5, 36°.42N×29°.20E, h22km, Ml3.0*
*ISK **20** 21:57:49.1, 36°.39N×29°.19E, h10km, ML3.0/14*

ISC 20 21:57:49.1±1.0, 36°.40N±0°.03×29°.26E±0°.02, h11km±8km, n66, σ1§03/88, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	Fethiye	0.28	329	PG	Pg	21 57 54.9	+0.1
FETY				SG	Sg	21 57 59.2	+0.5
FETY	Fethiye	0.28	329	P	Pg	21 57 54.9	+0.1
FETY				*e*Sg	Sg	21 57 59.2	+0.5
FETY				S	Sb	21 58 00.1	-0.8
AKAS	Kas	0.32	120	PG	Pb	21 57 57.1	+0.2
AKAS	Kas	0.32	120	*i* P	Pb	21 57 57.0	+0.1
AKAS	Kas	0.32	120	*e*Pg	Pb	21 57 57.1	+0.2
KSL	Kastellorizon	0.36	133	P	Pb	21 57 57.9	+0.5
KSL				S	Sb	21 58 05.5	+2.5
KSL				AML	AML	21 58 06.9	
	comp=E,1358μm,0.3s						
KSL				AML	AML	21 58 08.0	
	comp=N,629μm,0.5s						
ELL	Elmali	0.63	56	PG	Pn	21 58 02.5	-1.5
ELL	Elmali	0.63	56	*e*Pg	Pn	21 58 02.5	-1.5
DALY	Dalyan (Mu¨la	0.65	311	PG	Pb	21 58 02.2	-0.1
DALY	Dalyan (Mu¨la	0.65	311	*i* P	Pg	21 58 01.6	0.0
DALY				*i* S	Sb	21 58 11.5	+0.2
DALY	Dalyan (Mu¨la	0.65	311	P	Pg	21 58 01.6	0.0
DALY	Dalyan (Mu¨la	0.65	311	*e*Pg	Pb	21 58 02.2	-0.1
DALY				S	Sb	21 58 11.5	+0.2
TURN	Turunc	0.71	312	PG	Pn	21 58 06.1	+1.1
TURN	Turunc	0.71	312	*i* S	Sn	21 58 18.6	+2.6
TURN	Turunc	0.71	312	*e*Pg	Pn	21 58 06.1	+1.1
GOLH	Golhisar	0.87	16	*i* P	Pb	21 58 05.7	-0.6
GOLH				*i* S	Sn	21 58 18.6	-1.6
GOLH	Golhisar	0.87	16	P	Pb	21 58 05.7	-0.6
GOLH				S	Sn	21 58 18.6	-1.6
MRSB	Marmaris-Mugla	0.92	291	PG	Pg	21 58 05.7	-1.0
MRSB	Marmaris-Mugla	0.92	291	*e*Pg	Pg	21 58 05.7	-1.0
ARG	Arkhangelos	0.93	259	PG	Pg	21 58 06.4	-0.7
ARG	Arkhangelos	0.93	259	P	Pg	21 58 06.6	-0.5
ARG				S	Sg	21 58 19.6	+0.4
ARG				AML	AML	21 58 22.2	
	comp=N,525μm,0.4s						
ARG				AML	AML	21 58 22.5	
	comp=E,574μm,0.3s						
ARG	Arkhangelos	0.93	259	*e*Pg	Pg	21 58 06.4	-0.7
ARG				S	Sg	21 58 19.6	+0.4
KORT	Korkueli	1.06	55	PN	Pn	21 58 11.2	+1.2
KORT	Korkueli	1.06	55	*i* P	Pn	21 58 11.3	+1.2
KORT				*i* S	Sn	21 58 28.7	+3.8
KORT	Korkueli	1.06	55	P	Pn	21 58 11.3	+1.2
TAVA	DENIZLI_Tavas	1.10	345	*i* P	Pn	21 58 10.4	-0.1
TAVA				*i* S	Sb	21 58 24.8	+0.1
TAVA	DENIZLI_Tavas	1.10	345	P	Pn	21 58 10.4	-0.1
TAVA				S	Sb	21 58 24.8	+0.1
DNZL	Cakiroluk	1.30	352	*i* P	Pg	21 58 13.7	-0.4
DNZL				*i* S	Sn	21 58 31.7	+0.8
DNZL	Cakiroluk	1.30	352	P	Pg	21 58 13.7	-0.4
DNZL				S	Sn	21 58 31.7	+0.8
DATC	Datca-Mugla	1.34	286	PN	Pn	21 58 13.7	0.0
DATC	Datca-Mugla	1.34	286	*e*Pn	Pn	21 58 13.7	0.0
DENT	Denizli	1.37	352	PN	Pg	21 58 14.7	-0.7
DENT	Denizli	1.37	352	*e*Pn	Pg	21 58 14.7	-0.7
DAT	Datca	1.40	284	PN	Pn	21 58 14.7	+0.1
DAT	Datca	1.40	284	*i* P	Pb	21 58 15.2	0.0
DAT	Datca	1.40	284	*e*Pn	Pn	21 58 14.7	+0.1
DAT	Datca	1.40	284	P	Pb	21 58 15.2	0.0
BRDR	BURDUR-Merkez	1.45	26	*i* P	Pg	21 58 16.5	-0.4
BRDR				*i* S	Sg	21 58 36.7	+1.0
BRDR	BURDUR-Merkez	1.45	26	P	Pg	21 58 16.5	-0.4
BRDR				S	Sg	21 58 36.7	+1.0
MLSB	Milas	1.49	307	PN	Pn	21 58 15.9	+0.1
MLSB	Milas	1.49	307	*e*Pn	Pn	21 58 15.9	+0.1
BDRM	Kayabasi	1.61	295	*i* S	Sn	21 58 39.2	+1.1
BDRM	Kayabasi	1.61	295	S	Sn	21 58 39.2	+1.1
AYDN	Tasoluk	1.68	319	*i* P	Pb	21 58 19.7	-0.3
AYDN				*i* S	Sn	21 58 40.9	+0.9
AYDN	Tasoluk	1.68	319	P	Pb	21 58 19.7	-0.3
AYDN				S	Sn	21 58 40.9	+0.9
BODT	Bodrum	1.70	294	PN	Pn	21 58 18.9	+0.2
BODT	Bodrum	1.70	294	*e*Pn	Pn	21 58 18.9	+0.2
SUTC	Sutluce-Ispart	1.76	52	PN	Pg	21 58 21.3	-1.6
SUTC	Sutluce-Ispart	1.76	52	*e*Pn	Pg	21 58 21.3	-1.6
AYDB	Zeytinkoy-Aydi	1.90	325	PN	Pn	21 58 22.2	+0.7
AYDB	Zeytinkoy-Aydi	1.90	325	*e*Pn	Pn	21 58 22.2	+0.7
KARP	Karpathos	1.90	244	P	Pn	21 58 21.1	-0.3
KARP	Karpathos	1.90	244	P	Pn	21 58 20.7	-0.8
KEPZ	Antalya-Kepez	1.95	74	*i* P	Pg	21 58 25.4	-1.1
KEPZ				*i* S	Sg	21 58 51.3	-0.4
KEPZ	Antalya-Kepez	1.95	74	P	Pg	21 58 25.4	-1.1
GCAM	G?zelcaml?	2.08	309	PN	Pn	21 58 24.5	+0.6
GCAM	G?zelcaml?	2.08	309	*i* P	Pn	21 58 24.3	+0.4
GCAM	G?zelcaml?	2.08	309	P	Pn	21 58 24.3	+0.4
SMG	Samos	2.34	305	P	Pn	21 58 26.7	-0.8
SMG				S	Sn	21 58 56.2	0.0
SMG	Samos	2.34	305	P	Pn	21 58 26.9	-0.6
SMG				S	Sn	21 58 55.5	-0.7
DGB	¯zmir	2.52	312	*i* P	Pn	21 58 29.6	-0.3
DEMI	Demirci	2.68	351	*i* P	Pn	21 58 30.3	-1.9
NPS	Neapolis	3.17	250	P	Pn	21 58 36.5	-2.4
NPS	Neapolis	3.17	250	P	Pn	21 58 37.4	-1.5
LAST	Lasithi	3.31	249	P	Pn	21 58 38.7	-2.2
LAST	Lasithi	3.31	249	P	Pn	21 58 39.5	-1.4

LJU 20 22:07:38.6, 46°.13N×13°.61E, h15km, ML0.4, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CADS	Cadrg	0.14	41	*i* Pg	Pg	22 07 42.5	+0.1
CADS				*i* Sg	Sg	22 07 45.3	+0.4
	comp=Z,4.0nm,0.1s						
ROBS	Robic	0.14	330	*i* Pg	Pg	22 07 42.5	+0.1
ROBS				*i* Sg	Sg	22 07 45.1	+0.3
	comp=Z,3.0nm,0.1s						
VOJS	Vojsko	0.21	116	*i* Pg	Pg	22 07 43.6	0.0

*JMA **20** 22:08:37.9±0.1, 24°.97N×122°.40E, h44km±3km, M3.0*
*ISCJB **20** 22:08:38.3±0.5, 24°.92N±0°.03×122°.36E±0°.02, h5km±3km, mb3.7/3, Error ellipse: s-maj=5.0km s-min=3.1km az=22.8*
*TAP **20** 22:08:39.4, 24°.92N×122°.25E, h7km, ML3.5, D*
*IDC **20** 22:08:43.3±5.3, 24°.89N×122°.00E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.3/61, mbtmp3.6/3, Error ellipse: s-maj=356.1km s-min=28.2km az=59.0*

ISC 20 22:08:38.6±1.2, 24°.89N±0°.03×122°.35E±0°.03, h4km±9km, n40, σ0§83/75, mb3.4/3, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.34	290	P	Pg	22 08 45.2	-0.1
TWB1				S	Sg	22 08 49.7	-0.1
	baz=290						
EGS		0.38	264	P	Pg	22 08 46.2	+0.3
EGS				S	Sg	22 08 51.0	+0.2
	baz=253						
EOS1	EOS1	0.39	210	P	Pb	22 08 48.0	0.0
EOS1				S	Sb	22 08 54.8	+0.5
	baz=196						
NTC	Toucheng	0.47	266	P	Pg	22 08 48.2	+0.6
NTC				*e*S	Sg	22 08 54.4	+0.7
	baz=259						
TWC	Suao	0.53	238	*e*P	Pg	22 08 48.8	0.0
TWC				*e*S	Sb	22 08 56.8	-1.5
	baz=228						
NWF	Wu-fen Shan	0.54	290	*i* P	Pg	22 08 49.1	+0.1
NWF				*i* S	Sg	22 08 56.4	+0.3
	baz=289						
WFSB	Wu-fen Shan	0.54	290	P	Pg	22 08 49.1	+0.1
WFSB				S	Sg	22 08 56.2	+0.1
	baz=289						
ILA	Ilan	0.56	257	*e*P	Pg	22 08 49.9	+0.6
ILA				*e*S	Sb	22 08 57.7	-1.4
	baz=250						
TWE	Neicheng	0.64	255	*e*P	Pg	22 08 50.9	0.0
TWE				S	Sb	22 09 00.2	-1.3
	baz=248						
ENAH	Nanao	0.65	228	*e*P	Pb	22 08 52.2	-0.3
ENAH				*e*S	Sb	22 09 00.9	-1.1
	baz=220						
JYNG	Yonagunijimaku	0.70	128	P	Pg	22 08 51.5	-0.5
JYNG				S	Sg	22 09 01.7	+0.6
ENA	Nanau	0.71	230	P	Pg	22 08 52.8	+0.5
ENA				*e*S	Sb	22 09 03.3	-0.5
	baz=222						
YOJ	Yonaguni jima	0.74	125	P	Pg	22 08 52.1	-0.7
YOJ				S	Sg	22 09 02.5	+0.1
ENTT	Nioudou	0.75	251	*e*P	Pb	22 08 53.9	-0.3
ENTT				*e*S	Sb	22 09 04.2	-0.6
	baz=245						
TAP1	Taipei	0.76	282	*i* P	Pb	22 08 54.0	-0.4
TAP1				*e*S	Sg	22 09 03.4	+0.3
	baz=279						
TATO	Taipei	0.78	277	*e*P	Pg	22 08 53.6	0.0
TATO				S	Sb	22 09 04.5	-1.2
	baz=274						
TWS1	Kuangyinshan	0.87	284	P	Pb	22 08 55.9	-0.3
TWS1				*e*S	Sb	22 09 07.1	-1.1
	baz=283						
YHNB	Yeheng	0.91	256	P	Pg	22 08 56.0	-0.1
YHNB				S	Sb	22 09 08.3	-1.0
	baz=252						
NSK	Sanguang	0.92	257	*e*P	Pg	22 08 56.0	-0.2
NSK				S	Sb	22 09 09.4	-0.3
	baz=252						
NACB	Ninganchiao	0.99	224	P	Pg	22 08 57.5	0.0
NACB				*e*S	Sb	22 09 10.7	-0.8
	baz=218						
NNSB	Datong	0.99	243	*e*P	Pg	22 08 57.6	0.0
NNSB				S	Sb	22 09 11.0	-0.7
	baz=237						
NNSH	Datong	0.99	243	*e*P	Pn	22 08 58.5	-0.8
NNSH				*e*S	Sb	22 09 10.5	-1.2
	baz=237						
NNS	Nan Shan	0.99	243	*e*P	Pg	22 08 57.4	-0.3
NNS				S	Sb	22 09 11.3	-0.5
	baz=238						
NCU	National Centr	1.05	275	*e*P	Pg	22 08 58.8	0.0
NCU				*e*S	Sg	22 09 12.4	-0.1
	baz=272						
TWT	Tachien	1.24	240	*e*P	Pg	22 09 03.1	+0.8
TWT				*e*S	Sn	22 09 18.9	-1.1
	baz=235						
SBCB	Hsinchu	1.24	266	*e*P	Pn	22 09 01.7	-0.9
SBCB				*e*S	Sg	22 09 18.1	-0.3
	baz=263						
NSTT	Nanjuang	1.25	258	*e*P	Pg	22 09 02.7	+0.2
NSTT				*e*S	Sn	22 09 18.7	-1.3
	baz=255						
TDCB	Techi	1.25	240	*e*P	Pg	22 09 03.3	+0.7
TDCB				*e*S	Sn	22 09 19.7	-0.6
	baz=236						
CHGB	Renai	1.35	233	P	Pg	22 09 04.6	+0.1
CHGB				*e*S	Sg	22 09 23.2	+1.2
	baz=228						
ESL	Shilin	1.35	218	*e*P	Pn	22 09 03.3	-0.9
ESL				*e*S	Sg	22 09 23.6	+1.5
	baz=213						
VWDT	VWDT	1.57	224	*e*P	Pb	22 09 07.9	-0.3
VWDT				*e*S	Sg	22 09 28.8	-0.5
	baz=220						
HGSD	Ruisui	1.62	211	*e*P	Pb	22 09 08.9	-0.2
HGSD				*e*S	Sb	22 09 28.9	-1.0
	baz=207						
SMLT	Sun Moon Lake	1.65	233	*e*P	Pb	22 09 09.4	-0.3
SMLT				*e*S	Sb	22 09 30.1	-0.8
	baz=229						
TYC	Yuchr	1.67	234	*e*P	Pb	22 09 09.1	-0.8
TYC				*e*S	Sb	22 09 30.5	-0.8
	baz=231						
SSLB	Suanglung	1.68	229	*e*P	Pb	22 09 09.7	-0.3
SSLB				*e*S	Sb	22 09 30.2	-1.2
	baz=226						
YULB	Yu-li	1.77	213	*e*P	Pn	22 09 10.3	+0.4
YULB				*e*S	Sb	22 09 33.0	-1.2
	baz=209						
TWF1	Yuli	1.80	212	*e*P	Pb	22 09 11.3	-0.8
TWF1				*e*S	Sb	22 09 33.9	-1.2
	baz=208						
MKAR	Makanchi Array	38.58	315	P	P	22 16 05.9	+3.4
	0.7nm,0.8s,baz=106,slow=9.0,SNR=4.6						
WRA	Warramunga Arr	46.06	164	P		22 17 08.4	+4.7
	2.2nm,0.9s,baz=345,slow=8.6,SNR=6.6						
ASAR	Alice Springs	49.55	166	P		22 17 37.7	+7.0
	0.2nm,0.4s,baz=347,slow=7.6,SNR=3.8						
WRA	Warramunga Arr	46.30	121	P	P	22 21 22.0	+2.7
	0.5nm,0.9s,baz=300,slow=8.7,SNR=4.7						
KURBB	Kurchatov Array	49.53	348	P	P	22 21 43.2	-0.7
	0.2nm,0.3s,baz=173,slow=6.9,SNR=3.9						
ZALV	Zalesovo Beam	51.77	354	P	P	22 22 00.2	-0.5
	0.7nm,0.4s,baz=182,slow=7.0,SNR=3.9						
BVAR	Borovoye Array	53.77	343	P	P	22 22 15.1	-0.5
	0.4nm,0.7s,baz=142,slow=8.5,SNR=3.3						
TXAR	Lajitas Array	144.61	26	PKP	PKPab	22 32 29.1	-0.1
	0.1nm,0.6s,baz=349,slow=0.9,SNR=2.3						

*DJA **20** 22:12:47.0±3.7, 2°.N±12°.×9°.3E±3°.1, h10km, M4.7/7, mb4.7/6, mB5.4/3, MLv4.6/7, Mw(mB)4.8/3*
*ISCJB **20** 22:12:50.9±1.5, 2°.3N±0°.2×92°.9E±0°.1, h21km, mb3.6/5, MS3.0/1, Error ellipse: s-maj=24.9km s-min=11.4km az=29.0*
*IDC **20** 22:12:51.0±2.4, 2°.37N×92°.48E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.4/66, mbtmp3.6/6, ML4.4/1, MS3.0/1, Ms1 3.0/1, ms1mx2.4/59, Error ellipse: s-maj=90.4km s-min=28.5km az=57.0*

ISC 20 22:12:54.7±1.5, 2°.5N±0°.1×93°.0E±0°.2, h21km, n15, σ1§38/13, mb3.6/5, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	Banda Aceh	3.82	37	P	Pn	22 13 51.1	-1.3
MLSI	Meulaboh, Aceh	3.88	62	P	Pn	22 13 53.0	-0.2
TPTI		4.29	79	P	Pn	22 13 57.7	-1.1
GSI	Gunungsitoli	4.75	104	P	Pn	22 14 03.1	-2.0
KCSI	Kotacane, Aceh	4.92	77	P	Pn	22 14 08.0	+0.5
	186nm,0.9s,6μm1.1nm						
MNSI	Mandailing Nat	6.81	104	P	Pn	22 14 31.7	-1.8
KRJI	Kerinci	9.62	118	P	Pn	22 15 20.8	+8.7
CMAR	Chiang Mai Arr	16.96	20	P	P	22 16 53.0	+0.3
	0.5nm,0.3s,baz=217,slow=14.4,SNR=4.0						
DAV	Davao City (W)	32.82	81	LR	LR	22 35 32.9	
	comp=Z,25nm,18.6s,baz=5.0,slow=41						
MKAR	Makanchi Array	45.14	350	P	P	22 21 09.3	-0.5
	0.7nm,0.7s,baz=160,slow=7.9,SNR=6.3						

GUC 20 22:17:55.1±0.5, 30°.84S×71°.70W, h50km±6km, ML3.8, 2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO04	Tololo Observa	1.02	50	⇓*i* P	Pn	22 18 15.1	+1.8
GO04				*i* S	Sn	22 18 30.3	+3.5
GO04				IAML		22 18 32.4	
	comp=N,6μm,0.4s						
TLL	Tololo Astrono	1.02	49	⇓*i* P	Pn	22 18 15.1	+1.7
TLL				*i* S	Sn	22 18 29.7	+2.9
TLL				IAML		22 18 33.8	
	comp=N,3μm,0.4s						
LCO	Las Campanas	2.02	26	*e*P	Pn	22 18 29.3	+2.3
LCO				*e*S	Sn	22 18 55.4	+4.3
LCO				IAML		22 19 04.8	
	comp=E,475nm,0.6s						
ROCH	El Roble	2.21	165	*e*P	Pn	22 18 31.6	+2.1
ROCH				*i* S	Sn	22 19 00.1	+4.4
ROCH				IAML		22 19 09.0	
	comp=N,739nm,0.5s						
CLCH	Cerro Calan	2.73	159	*e*P	Pn	22 18 38.6	+2.0
CLCH				*e*S	Sn	22 19 16.1	+7.6
CLCH				IAML		22 19 23.6	
	comp=E,862nm,0.8s						
FCH	Farellones	2.76	155	*e*P	Pn	22 18 40.0	+2.9
FCH				*i* S	Sn	22 19 12.3	+2.9
FCH				IAML		22 19 25.1	
	comp=E,341nm,0.4s						

MEX 20 22:19:12.8±0.6, 17°.28N×100°.62W, h16km±7km, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.40	124	*i* P	Pg	22 19 19.4	-1.6
CAIG				*i* S	Sg	22 19 25.7	-0.9
ACP2	Acapulco	0.80	120	*e*P	Pb	22 19 25.6	-2.8
ACP2				*e*S	Sb	22 19 35.9	-3.2
ACX	Acapulco	0.83	119	*e*P	Pb	22 19 25.5	-3.3
ACX				*e*S	Sb	22 19 35.5	-4.3
ZIIG	Zihuatanejo	0.88	292	*e*P	Pb	22 19 26.9	-2.7
ZIIG				*e*S	Sb	22 19 37.0	-4.1
ARIG	Puente Sto Nin	1.03	14	*e*P	Pb	22 19 29.1	-3.2
ARIG				*e*S	Sb	22 19 41.1	-4.5
PLIG	Platanillo	1.54	44	*e*P	Pn	22 19 36.6	-3.0
TLIG	Tlapa	1.98	81	*e*P	Pn	22 19 42.3	-3.4

*NNC **20** 22:36:32.4±11.0, 38°.65N×72°.04E, h0km, mb3.7, mpv3.1, Error ellipse: s-maj=88.1km s-min=52.9km az=176.0*

ISC 20 22:36:29.8±3.8, 38°.4N±0°.2×72°.4E±0°.1, h10km, n8, σ1§50/11, 3C-3D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	1.83	29	⇑P	Pn	22 37 02.5	+0.9
	1.2nm,0.2s						
SFK				⇑S	Sg	22 37 30.8	+2.0
	21nm,0.3s						
AML	Almayashu	3.85	15	P	Pn	22 37 29.8	+0.2
	SNR=22						
MNAS	Manas	4.07	2	⇓P	Pn	22 37 33.0	+0.7
	4.1nm,0.3s						
MNAS				⇑S	Sn	22 38 17.4	-2.7
	6.0nm,0.5s						
UCH	Uchtor	4.15	23	P	Pn	22 37 33.3	-0.4
	SNR=10						
KZA	Kyzart	4.28	30	P	Pn	22 37 34.4	-1.0
	SNR=9.4						
EKS2	Erkin-Say	4.38	14	P	Pn	22 37 37.2	+0.7
	SNR=11						
KK31	Karatay Array	4.89	344	⇓P	Pn	22 37 44.6	+1.1
	0.7nm,0.2s,baz=155,slow=12,SNR=24						
KK31				⇓S	Sn	22 38 38.7	-1.4
	3.4nm,0.5s,baz=158,slow=24,SNR=14						
CHMS	Chumysh	4.93	21	P	Pn	22 37 44.3	+0.3
	SNR=12						

*ISCJB **20** 23:02:58.5±0.9, 31°.21S±0°.03×70°.05W±0°.06, h119km±10km, Error ellipse: s-maj=8.7km s-min=4.5km az=164.2*
*GUC **20** 23:02:58.2±0.7, 31°.20S×70°.20W, h116km±10km, ML3.5*
*SJA **20** 23:02:58.6±0.7, 31°.23S×70°.04W, h110km±9km, ML3.5, MW4.0*

ISC 20 23:02:59.2±1.9, 31°.22S±0°.04×70°.07W±0°.06, h114km±18km, n16, σ0§55/26, 1C-4D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUSP	Uspallata	1.16	150	*i* P	Pn	23 03 22.9	+0.2
AUSP				*i* S	Sn	23 03 40.6	+0.1
AROD	Rodeo	1.17	26	*i* P	Pn	23 03 23.6	+0.8
AROD				*i* S	Sn	23 03 41.4	+0.7
GO04	Tololo Observa	1.22	329	⇓*i* P	Pn	23 03 23.1	-0.1
GO04				*i* S	Sn	23 03 41.2	-0.3
TLL	Tololo Astrono	1.22	329	⇓*i* P	Pn	23 03 23.2	-0.2
TLL				*i* S	Sn	23 03 41.5	-0.1
RTLL	Cerro Villicun	1.37	95	*i* P	Pn	23 03 24.0	-0.8
RTLL				*i* S	Sn	23 03 43.9	-0.3
AMOG	MOGNA	1.38	79	*i* P	Pn	23 03 24.6	-0.4
RTCV	Cerro Valdivia	1.46	117	*i* P	Pn	23 03 25.6	-0.2
RTCV				*i* S	Sn	23 03 45.9	0.0
ASAL	Salagasta	1.73	143	*i* P	Pn	23 03 29.3	+0.3
ASAL				*i* S	Sn	23 03 51.2	-0.6
ARCO	CERRO ARCO	1.89	149	*i* P	Pn	23 03 31.1	0.0
ARCO				*i* S	Sn	23 03 55.0	-0.5
ARCO				IAML		23 03 59.4	
	comp=Z,321nm,0.3s						
ROCH	El Roble	1.92	204	IAML		23 03 58.5	
	comp=E,331nm,0.3s						
FCH	Farellones	2.11	185	⇓*i* P	Pn	23 03 34.7	+0.6
FCH				*i* S	Sn	23 04 02.1	+1.3
FCH				IAML		23 04 04.0	
	comp=E,215nm,0.2s						
CLCH	Cerro Calan	2.21	190	*e*P	Pn	23 03 34.2	-0.8
CLCH				*e*S	Sn	23 04 02.6	+0.1
CLCH				IAML		23 04 07.1	
	comp=E,180nm,0.3s						
LCO	Las Campanas	2.27	346	⇑*i* P	Pn	23 03 35.7	-0.3
LCO				*i* S	Sn	23 04 03.9	-0.2
LCO				IAML		23 04 04.9	
	comp=E,330nm,0.2s						
LMEL	Las Melosas	2.63	182	*e*P	Pn	23 03 40.6	+0.1
LMEL				IAML		23 04 18.1	
	comp=E,150nm,0.2s						
VCA	Vinchina	2.95	34	⇓*i* P	Pn	23 03 45.7	+0.9
VCA				IAML		23 04 24.2	
	comp=N,197nm,0.5s						
GO03	Copiap	3.61	358	*e*P	Pn	23 03 53.1	-0.4

*IDC **20** 23:20:54.2±0.4, 8°.65S×157°.04E, h0km, mb4.9/30, mb1 5.0/32, mb1mx4.9/52, mbtmp4.9/32, ML3.9/2, MS4.7/43, Ms1 4.7/43, ms1mx4.7/48, Error ellipse: s-maj=16.6km s-min=11.3km az=96.0*
*NEIC **20** 23:20:56.0±0.2, 8°.70S×157°.00E, h10km, mb5.2/137, MS5.0/113, Error ellipse: s-maj=5.9km s-min=4.6km az=129.0*
*ISCJB **20** 23:20:56.6±0.1, 8°.71S±0°.03×156°.99E±0°.03, h22km, mb5.2/194, MS5.0/174, Error ellipse: s-maj=4.2km s-min=3.5km az=142.6*
*GCMT **20** 23:20:56.0±0.1, 8°.73S×157°.07E, h12km, MW5.4/116, Moment Tensor Solution. s101,c171; s116,c227; Duration: 1§2 Moment tensor: Scale 10^{17}Nm; M_{rr}0.14±.02; $M_{\theta\theta}$-0.75±.02; $M_{\phi\phi}$0.61±.02; $M_{r\theta}$-0.13±.04; $M_{\theta\phi}$1.42±.02; $M_{\phi r}$-0.06±.04; Best double couple:*

M₀1.58200×10¹⁷ NP1:φ₀:257.00000°, δ88.00000°, λ5.00000°. NP2:φ₀:167.00000°, δ85.00000°, λ178.00000°. Principal axes: T 1.5170, Plg5.0000°, Azm122.0000°; N 0.1310, Plg85.0000°, Azm275.0000°; P -1.6480, Plg3.0000°, Azm32.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.

MOS **20** *23:20:57.0±1.4, 8.66S×156.90E, h22km, mb5.4/46, MS4.9/18 Error ellipse: s-maj=9.3km s-min=7.1km az=87.5*

BJI **20** *23:20:58.1, 8.07S×156.72E, h10km, mb5.1/56, mB5.7/48, Ms5.2/52, Ms7 4.9/52*

DJA **20** *23:20:59.5±0.5, 9.5S×15.7E±, h10km, M5.1/18, mb5.0/18, mB5.7/13, Mw(mB)5.2/13*

ISC 20 23:20:58.3±0.2, **8.78S**±0.04×**157.07E**±0.04, **h22**km, **n561**, σ**1**§**73**/485, **mb5.2**/188, **MS5.0**/175, **24C-18D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.92**	**103**	Pn	**Pn**	**23 21 39.4**	**-4.0**
	408nm,0.3s,baz=219,slow=2.9,SNR=47						
HNR				Pg	**Pb**	**23 21 51.7**	**+2.1**
	759nm,0.3s,baz=296,slow=3.5,SNR=33						
HNR				Lg	Lg	23 22 25.6	
	1μm,0.3s,baz=47,slow=23,SNR=7.4						
HNR				LR	LR	23 22 47.5	
	comp=Z,27μm,21.2s,baz=305,slow=38						
HNR	**Honiara**	**2.92**	**103**	*e*Pn	**Pn**	**23 21 39.4**	**-4.0**
HNR				*e*Pg	**Pb**	**23 21 51.9**	**+2.3**
HNR				*e*Sn	**Sn**	**23 22 19.6**	**+1.8**
HNR				*e*Sg	**Sb**	**23 22 30.3**	**+5.5**
HNR	**Honiara**	**2.92**	**103**	*e*P	**Pn**	**23 21 39.4**	**-4.0**
HNR				*e*		23 22 19.6	
PMG	**Port Moresby**	**9.81**	**266**	LR	LR	23 26 51.2	
	comp=Z,14μm,18.2s,baz=73,slow=36						
COEN	**Coen**	**14.56**	**248**	P	**Pn**	**23 24 25.6**	**+2.5**
	baz=15,SNR=8.1						
CTA	**Charters Tower**	**15.36**	**222**	Pn	**Pn**	**23 24 32.5**	**-1.4**
	0.2nm,0.3s,baz=46,slow=16,SNR=6.4						
CTA				LR	LR	23 29 50.1	
	comp=Z,4μm,20.8s,baz=34,slow=35						
CTAO	**Charters Tower**	**15.36**	**222**	*e*Pn	**Pn**	**23 24 32.4**	**-1.4**
	129nm,1.5s						
CTAO	**Charters Tower**	**15.36**	**222**	*e*P	**Pn**	**23 24 32.4**	**-1.4**
CTAO				pmax	pmax		
	comp=Z,129nm,1.5s						
MTSU	**Mount Surprise**	**15.49**	**232**	P	**Pn**	**23 24 37.3**	**+1.7**
	baz=16,SNR=7.5						
PATS	**Pohnpei**	**15.56**	**5**	P	**Pn**	**23 24 34.4**	**-2.0**
	baz=16,SNR=5.0						
PATS	**Pohnpei**	**15.56**	**5**	*e*Pn	**Pn**	**23 24 33.7**	**-2.7**
	comp=Z,509nm,1.2s						
DZM	**Mont Dzumac**	**16.00**	**147**	Pn	**Pn**	**23 24 42.5**	**+0.3**
	comp=Z,0.7nm,0.3s,baz=11,slow=12,SNR=24						
DZM				LR	LR	23 29 42.2	
	comp=Z,7μm,18.9s,baz=324,slow=33						
DZM	**Mont Dzumac**	**16.00**	**147**	*e*P	**Pn**	**23 24 42.5**	**+0.3**
	comp=Z,404nm,1.2s						
DZM				*e*LR	LR	23 28 21.0	
	comp=Z,8μm,30.2s						
JAY	**Jayapura**	**17.43**	**290**	P	**P**	**23 25 01.9**	**+0.6**
	comp=Z,1.7nm,0.3s,baz=101,slow=10.0,SNR=7.9						
JAY				LR	LR	23 32 04.4	
	comp=Z,3μm,18.0s,baz=97,slow=39						
JAY	**Jayapura**	**17.43**	**290**	P	**Pn**	**23 24 57.5**	**-2.7**
EIDS	**Eidsvold**	**17.46**	**198**	P	**P**	**23 25 01.7**	**+0.1**
	baz=18,SNR=9.0						
EIDS	**Eidsvold**	**17.46**	**198**	*e*Pn	**P**	**23 25 02.1**	**+0.5**
	comp=Z,63nm,1.0s						
GENI	**Genyem**	**17.90**	**289**	P	**P**	**23 25 06.8**	**+0.3**
TARA	**Tarawa**	**18.73**	**58**	*e*P	**P**	**23 25 14.5**	**-1.2**
	comp=Z,6.2nm,0.8s						
RMQ	**Roma**	**19.30**	**203**	P	**Pn**	**23 25 23.4**	**+0.5**
	baz=20,SNR=19						
QIS	**Mount Isa**	**20.53**	**233**	P	**P**	**23 25 36.0**	**+0.7**
	baz=21,SNR=24						
QLP	**Quilpie**	**21.49**	**213**	P	**P**	**23 25 46.6**	**+1.0**
	baz=22,SNR=20						
FUNA	**Funafuti**	**21.88**	**91**	*e*P	**P**	**23 25 47.4**	**-2.5**
	comp=Z,149nm,0.8s						
ARMA	**Armidale**	**22.12**	**193**	P	**P**	**23 25 52.6**	**+0.1**
	baz=22,SNR=4.5						
ARMA	**Armidale**	**22.12**	**193**	*e*P	**P**	**23 25 53.0**	**+0.5**
	comp=Z,179nm,1.8s						
BAKI	**Biak**	**22.19**	**289**	P	**P**	**23 25 54.1**	**+0.9**
RKPI	**Ransiki, Papua**	**23.90**	**286**	P	**P**	**23 26 13.9**	**+3.2**
KDU	**Kakadu**	**24.47**	**259**	P	**P**	**23 26 15.9**	**-0.1**
	baz=25,SNR=3.5						
WRAB	**Tennant Creek**	**24.61**	**241**	*e*P	**P**	**23 26 16.3**	**-1.0**
	comp=Z,78nm,1.2s						
WRAB				LR	LR		
	comp=Z,5μm,20.0s						
WRAB	**Tennant Creek**	**24.61**	**241**	*de*P	**P**	**23 26 16.2**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,63nm,2.5s						
WB2	**Warramunga Arr**	**24.61**	**241**	*e*P	**P**	**23 26 16.4**	**-0.9**
	comp=Z,61nm,1.0s						
WRA	**Warramunga Arr**	**24.62**	**241**	P	**P**	**23 26 15.9**	**-1.4**
	comp=Z,7.9nm,0.5s,baz=63,slow=9.6,SNR=48						
WRA				PcP	**PcP**	**23 29 56.1**	**+1.2**
	comp=Z,10nm,0.9s,baz=66,slow=2.7,SNR=8.5						
WRA				LR	LR	23 35 19.5	
	comp=Z,5μm,20.7s,baz=55,slow=35						
CMSA	**Cobar Meteorol**	**25.00**	**203**	P	**P**	**23 26 20.4**	**-0.2**
	baz=25,SNR=26						
GUMO	**Guam**	**25.31**	**331**	LR	LR	23 35 00.8	
	comp=Z,1μm,21.4s,baz=145,slow=34						
AS01	**Alice Springs**	**26.62**	**233**	*e*P	**P**	**23 26 33.7**	**-1.7**
YNG	**Young**	**26.62**	**196**	P	**P**	**23 26 36.3**	**+1.0**
	baz=27,SNR=5.3						
AS31	**Alice Springs**	**26.65**	**234**	*e*P	**P**	**23 26 35.1**	**-0.6**
	comp=Z,6.9nm,0.8s						
ASAR	**Alice Springs**	**26.66**	**234**	P	**P**	**23 26 34.1**	**-1.6**
	comp=Z,6.3nm,1.0s,baz=61,slow=9.5,SNR=27						
ASAR				PcP	**PcP**	**23 29 58.3**	**-1.2**
	comp=Z,2.8nm,1.0s,baz=64,slow=2.2,SNR=2.8						
ASAR				LR	LR	23 36 43.7	
	comp=Z,3μm,18.8s,baz=60,slow=36						
SIJI	**Sorong**	**26.86**	**286**	P	**P**	**23 26 36.5**	**-1.2**
	comp=Z,24nm,0.8s,baz=48,slow=6.9,SNR=6.6						
SIJI				LR	LR	23 38 11.8	
	comp=Z,3μm,21.0s,baz=78,slow=39						
STKA	**Stephens Creek**	**27.11**	**210**	P	**P**	**23 26 41.2**	**+1.5**
	comp=Z,15nm,0.7s,baz=40,slow=12,SNR=11						
STKA				LR	LR	23 36 58.2	
	comp=Z,3μm,21.0s,baz=30,slow=35						
STKA	**Stephens Creek**	**27.11**	**210**	P	**P**	**23 26 41.3**	**+1.5**
	baz=27,SNR=8.9						
STKA	**Stephens Creek**	**27.11**	**210**	*e*P	**P**	**23 26 40.5**	**+0.8**
	comp=Z,9.9nm,0.8s						
STKA	**Stephens Creek**	**27.11**	**210**	*e*P	**P**	**23 26 40.6**	**+0.8**
STKA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CNB	**Canberra Magne**	**27.34**	**194**	P	**P**	**23 26 43.3**	**+1.5**
	baz=28,SNR=6.0						
KNRA	**Kununurra**	**28.48**	**253**	P	**P**	**23 26 53.7**	**+1.6**
	baz=29,SNR=4.2						
WAKE	**Wake Island**	**29.44**	**19**	PFAKE		23 27 10.0	+9.5
WAKE				LR	LR		
	comp=Z,3μm,19.0s						
TOO	**Toolangi**	**30.52**	**198**	P	**P**	**23 27 10.9**	**+0.9**
	baz=31,SNR=3.9						
BBOO	**Buckleboo**	**30.82**	**216**	*e*P	**P**	**23 27 11.1**	**-1.6**
	comp=Z,38nm,1.1s						
AFI	**Afiamalu**	**30.95**	**102**	LR	LR	23 37 46.5	
	comp=Z,3μm,18.7s,baz=290,slow=33						
RAO	**Raoul Island**	**31.08**	**134**	PFAKE		23 27 30.0	+15
RAO				LR	LR		
	comp=Z,3μm,20.0s						
SANI	**Sanana**	**31.64**	**280**	P	**P**	**23 27 22.1**	**+2.0**
WRKA	**Warakurna**	**31.82**	**236**	P	**P**	**23 27 19.8**	**-1.9**
	baz=32,SNR=7.5						
FITZ	**Fitzroy Crossi**	**31.89**	**250**	*e*P	**P**	**23 27 24.0**	**+1.7**
	comp=Z,16nm,1.1s						
BATI	**Baumata**	**32.97**	**265**	LR	LR	23 43 07.0	
	comp=Z,4μm,18.5s,baz=109,slow=40						
MMRI	**Maumere**	**34.42**	**268**	*e*P	**P**	**23 27 45.5**	**+1.0**
	comp=Z,127nm,1.3s						
DAV	**Davao City (W)**	**35.11**	**296**	LR	LR	23 42 31.3	
	comp=Z,2μm,18.2s,baz=116,slow=37						
THZ	**Tophouse**	**35.71**	**160**	*e*P	**P**	**23 27 54.6**	**-0.7**
	comp=Z,168nm,1.8s						
SNZO	**South Karori**	**35.97**	**157**	PFAKE		23 28 10.0	+13
SNZO				LR	LR		
	comp=Z,2μm,19.0s						
FOZ	**Fox Glacier**	**36.37**	**164**	*e*P	**P**	**23 28 01.4**	**+0.6**
	comp=Z,29nm,0.8s						
OXZ	**Oxford**	**36.83**	**162**	*e*P	**P**	**23 28 03.5**	**-1.2**
	comp=Z,94nm,1.7s						
RPZ	**Rata Peaks**	**36.88**	**163**	P	**P**	**23 28 06.9**	**+1.7**
	comp=Z,18nm,1.0s,baz=45,slow=4.3,SNR=6.4						
RPZ	**Rata Peaks**	**36.88**	**163**	*e*P	**P**	**23 28 05.1**	**-0.2**
	comp=Z,82nm,1.6s						
KAPI	**Kappang**	**37.22**	**273**	PFAKE		23 28 20.0	+12
KAPI				LR	LR		
	comp=Z,1μm,20.0s						
DCZ	**Deep Cove**	**37.58**	**168**	*e*P	**P**	**23 28 10.4**	**-0.6**
	comp=Z,30nm,1.1s						
MLZ	**Mavora Lakes**	**37.68**	**167**	*e*P	**P**	**23 28 12.1**	**0.0**
	comp=Z,47nm,1.3s						
MBWA	**Marble Bar**	**38.01**	**247**	*e*P	**P**	**23 28 13.4**	**-1.7**
	comp=Z,25nm,1.1s						
MBWA				LR	LR		
	comp=Z,3μm,19.0s						
JCJ	**Chichijima**	**38.47**	**338**	LR	LR	23 43 26.8	
	comp=Z,1μm,20.2s,baz=280,slow=35						
KMBL	**Kambalda**	**39.69**	**231**	P	**P**	**23 28 28.2**	**-0.8**
	baz=40,SNR=7.0						
MEEK	**Meekatharra**	**40.50**	**239**	P	**P**	**23 28 35.7**	**-0.2**
	baz=41,SNR=12						
MYLDM	**Lahad Datu**	**40.88**	**288**	*e*P	**P**	**23 28 38.5**	**-0.5**
	comp=Z,25nm,1.0s						
TGY	**Tagaytay City**	**42.45**	**302**	LR	LR	23 44 06.2	
	comp=Z,923nm,21.9s,baz=116,slow=33						
KLBR	**Kellerberrin**	**42.98**	**232**	P	**P**	**23 28 55.9**	**-0.2**
	baz=43,SNR=4.6						
RAR	**Rarotonga**	**43.34**	**112**	LR	LR	23 43 38.0	
	comp=Z,1μm,21.9s,baz=278,slow=31						
BLDU	**Ballidu**	**43.44**	**234**	P	**P**	**23 29 01.0**	**+1.2**
	baz=44,SNR=5.6						
MORW	**Morawa**	**43.45**	**237**	P	**P**	**23 29 01.7**	**+1.8**
	baz=44,SNR=4.2						
NWAO	**Narrogin (SRO)**	**43.92**	**231**	P	**P**	**23 29 02.6**	**-1.0**
	comp=Z,8.5nm,0.8s,baz=267,slow=8.3,SNR=4.7						
NWAO				LR	LR	23 48 53.7	
	comp=Z,2μm,18.4s,baz=311,slow=38						
NWAO	**Narrogin (SRO)**	**43.92**	**231**	P	**P**	**23 29 04.7**	**+1.1**
	baz=44,SNR=3.6						
NWAO	**Narrogin (SRO)**	**43.92**	**231**	*e*P	**P**	**23 29 03.1**	**-0.5**
	comp=Z,82nm,0.8s						
NWAO	**Narrogin (SRO)**	**43.92**	**231**	*e*P	**P**	**23 29 03.1**	**-0.5**
NWAO				pmax	pmax		
	comp=Z,82nm,0.8s						
MIDW	**Midway**	**44.30**	**33**	PFAKE		23 29 20.0	+13
MIDW				LR	LR		
	comp=Z,3μm,19.0s						
JOW	**Kunigami**	**45.09**	**323**	LR	LR	23 47 49.5	
	comp=Z,853nm,19.0s,baz=144,slow=36						
SBUM	**Sibu**	**46.08**	**282**	*e*P	**P**	**23 29 21.1**	**0.0**
	comp=Z,16nm,1.2s						
KSM	**Kuching**	**47.70**	**280**	*e*P	**P**	**23 29 33.3**	**-0.5**
	comp=Z,21nm,0.9s						
TATO	**Taipei**	**48.24**	**315**	PFAKE		23 29 50.0	+12
TATO				LR	LR		
	comp=Z,3μm,21.0s						
MJAR	**Matsushiro Arr**	**48.44**	**340**	P	**P**	**23 29 36.8**	**-2.3**
	comp=Z,6.1nm,0.9s,baz=171,slow=8.2,SNR=9.8						
MJAR				LR	LR	23 49 11.0	
	comp=Z,298nm,20.6s,baz=170,slow=35						
MAJO	**Matsushiro**	**48.44**	**340**	*e*P	**P**	**23 29 37.4**	**-1.7**
	comp=Z,15nm,0.8s						
MAJO				LR	LR		
	comp=Z,785nm,22.0s						
MAJO	**Matsushiro**	**48.44**	**340**	⇑*e*P	**P**	**23 29 37.2**	**-1.9**
MAJO				pmax	pmax		
	comp=Z,13nm,0.9s						
MAT	**Matsushiro**	**48.44**	**340**	P	**P**	**23 29 37.2**	**-1.9**
JNU	**Nakatsue**	**48.55**	**330**	P	**P**	**23 29 37.8**	**-2.3**
	comp=Z,36nm,0.9s,baz=126,slow=4.3,SNR=12						
JNU				LR	LR	23 46 52.2	
	comp=Z,457nm,21.9s,baz=124,slow=32						
JNU	**Nakatsue**	**48.55**	**330**	*e*P	**P**	**23 29 39.0**	**-1.0**
	comp=Z,37nm,0.9s						
LEM	**Lembang**	**49.01**	**269**	P	**P**	**23 29 43.7**	**-0.3**
	comp=Z,24nm,0.7s,baz=128,slow=19,SNR=7.3						
LEM				LR	LR	23 52 18.8	
	comp=Z,676nm,20.3s,baz=95,slow=38						
ERM	**Erimo**	**52.13**	**347**	PFAKE		23 30 20.0	+13
ERM				LR	LR		
	comp=Z,1μm,19.0s						
PPT	**Papeete**	**52.54**	**105**	LR	LR	23 47 35.7	
	comp=Z,1μm,21.2s,baz=270,slow=30						
PPT2	**Papeete2**	**52.54**	**105**	*e*S	**S**	**23 37 35.7**	**-0.9**
	comp=Z,434nm,27.8s						
PPT2				*e*LQ	LQ	23 43 05.5	
	comp=Z,2μm,27.0s						
PPT2				*e*LR	LR	23 45 20.8	
	comp=Z,3μm,23.5s,baz=270						
TVO	**Taravao**	**52.85**	**106**	*e*P	**P**	**23 30 12.5**	**-0.4**
	comp=Z,29nm,1.1s						
TJN	**Taejon**	**52.89**	**330**	*d*iP	**P**	**23 30 11.5**	**-1.1**
TBI	**Tubuai**	**53.10**	**113**	*e*S	**S**	**23 37 43.8**	**-0.1**
	comp=Z,762nm,33.5s						
TBI				*e*LQ	LQ	23 43 21.5	
	comp=Z,4μm,31.0s						
TBI				*e*LR	LR	23 45 35.7	
	comp=Z,3μm,29.8s,baz=287						
KSRS	**Korea Array**	**53.47**	**331**	P	**P**	**23 30 15.7**	**-1.2**
	comp=Z,13nm,0.9s,baz=151,slow=8.7,SNR=43						
KSRS				LR	LR	23 51 39.1	
	comp=Z,661nm,19.7s,baz=129,slow=35						
KS15	**Wonju Array Si**	**53.48**	**331**	*e*P	**P**	**23 30 16.3**	**-0.7**
KSAR	**Wonju Array Be**	**53.48**	**331**	P	**P**	**23 30 15.7**	**-1.3**
KSAR	**Wonju Array Be**	**53.48**	**331**	P	**P**	**23 30 15.7**	**-1.3**
KS01	**Wonju Array Si**	**53.50**	**331**	*e*P	**P**	**23 30 15.3**	**-1.9**
PMOR	**Pomariorio Ree**	**54.10**	**102**	*e*P	**P**	**23 30 22.0**	**+0.1**
	comp=Z,216nm,1.2s						
QIZ	**Qiongzhong**	**54.13**	**301**	P	**P**	**23 30 22.4**	**+0.3**
QIZ				S	**S**	**23 37 59.3**	**+1.3**
QIZ				pmax	pmax		
	comp=Z,16nm,1.0s						
QIZ				LR	LR		
	comp=Z,480nm,17.2s						
QIZ				LR	LR		
	comp=Z,960nm,23.0s						
QIZ				LR	LR		
	comp=Z,2μm,24.0s						
QIZ	**Qiongzhong**	**54.13**	**301**	PFAKE		23 30 30.0	+7.9
QIZ				LR	LR		
	comp=Z,1μm,21.0s						
NJ2	**Nanjing**	**54.59**	**320**	*e*P	**P**	**23 30 26.3**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,18nm,0.6s						
POHA	**Pohakuloa**	**54.60**	**58**	PFAKE		23 30 40.0	+14
POHA				LR	LR		
	comp=Z,1μm,20.0s						
MSHR	**Mys Shultsa**	**56.33**	**337**	⇑*e*P	**P**	**23 30 32.9**	**-4.6**
UBPT	**Khong Chiam**	**56.44**	**295**	P	**P**	**23 30 38.6**	**-0.2**
	comp=Z,33nm,1.1s,comp=Z,1μm						
WHN	**Wuhan**	**56.64**	**316**	⇓P	**P**	**23 30 41.0**	**+1.0**
WHN				S	**S**	**23 38 33.1**	**+1.9**
WHN				LR	LR		
	comp=Z,4μm,23.3s						
YSS	**Yuzh-Sakhalins**	**56.93**	**348**	*e*P	**P**	**23 30 40.9**	**-0.8**
YSS				LR	LR		
	comp=Z,444nm,21.0s						
YSS	**Yuzh-Sakhalins**	**56.93**	**348**	*e*P	**P**	**23 30 41.2**	**-0.5**
YSS				*e*		23 30 46.2	
YSS				*e*S	**S**	**23 38 33.2**	**-1.2**
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
USRK	**Ussuriysk Ar.**	**57.41**	**339**	P	**P**	**23 30 44.4**	**-0.8**
	comp=Z,27nm,1.0s,baz=151,slow=6.1,SNR=12						
USRK				LR	LR	23 54 01.6	
	comp=Z,376nm,20.1s,baz=135,slow=35						
DL2	**Dalian**	**57.76**	**328**	P	**P**	**23 30 46.3**	**-1.4**
DL2				PP	**PP**	**23 32 56.3**	**+0.3**
DL2				S	**S**	**23 38 45.8**	**+0.2**
DL2				pmax	pmax		
	comp=Z,39nm,0.9s						
DL2				pmax	pmax		
	comp=Z,320nm,5.3s						
DL2				LR	LR		
	comp=Z,500nm,15.1s						
DL2				LR	LR		
	comp=Z,590nm,16.5s						
DL2				LR	LR		
	comp=Z,720nm,15.8s						
SKNT	**Sakolnakorn**	**58.39**	**296**	P	**P**	**23 30 51.5**	**-1.1**
	comp=Z,34nm,0.8s						
TIA	**Tai'an**	**58.42**	**322**	P	P	23 30 57.9	+5.5
TIA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
MDJ	**Mudanjiang**	**58.65**	**337**	P	**P**	**23 30 53.0**	**-0.9**
MDJ				S	**S**	**23 38 57.4**	**+0.3**
MDJ				pmax	pmax		
	comp=Z,32nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,420nm,4.4s						
MDJ				LR	LR		
	comp=Z,790nm,12.7s						
MDJ				LR	LR		
	comp=Z,430nm,12.7s						
MDJ				LR	LR		
	comp=Z,850nm,15.1s						
MDJ	**Mudanjiang**	**58.65**	**337**	*e*P	**P**	**23 30 51.9**	**-1.9**
	comp=Z,56nm,1.3s						
MDJ				LR	LR		
	comp=Z,663nm,20.0s						
SNY	**Shenyang**	**58.98**	**331**	⇓P	**P**	**23 31 00.9**	**+4.8**
SNY				S	**S**	**23 39 02.3**	**+0.9**
SNY				pmax	pmax		
	comp=Z,250nm,5.0s						
SNY				LR	LR		
	comp=N,700nm,15.3s						
SNY				LR	LR		
	comp=E,670nm,16.0s						
SNY				LR	LR		
	comp=Z,1μm,15.3s						
COCO	**West Island**	**59.23**	**261**	PFAKE		23 31 10.0	+12
COCO				LR	LR		
	comp=Z,941nm,19.0s						
NONG	**Nongkai**	**59.53**	**297**	P	**P**	**23 31 00.1**	**-0.4**
	comp=Z,91nm,0.9s						
CHAI	**Chaiyaphum**	**59.79**	**294**	P	**P**	**23 31 02.2**	**-0.1**
	comp=Z,8.8nm,0.8s						
ENH	**Enshi**	**59.95**	**312**	*e*P	**P**	**23 31 02.1**	**-1.1**
	comp=Z,22nm,0.8s						
ENH				LR	LR		
	comp=Z,1μm,20.0s						
GSI	**Gunungsitoli**	**60.12**	**277**	*e*P	**P**	**23 31 03.7**	**-0.9**
	comp=Z,33nm,0.9s						
GYA	**Guiyang**	**60.16**	**307**	*e*P	**P**	**23 31 07.0**	**+2.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TYV	**Tymovskoe**	**60.70**	**350**	*e*P	**P**	**23 31 12.0**	**+4.2**
TYV				pmax	pmax		
	comp=Z,400nm,6.1s						
TYV				pmax	pmax		
	comp=Z,21nm,1.7s						
PBKT	**Sadao Pong**	**60.94**	**294**	P	**P**	**23 31 09.8**	**-0.3**
	comp=Z,21nm,1.5s,comp=Z,1μm						
PBKT	**Sadao Pong**	**60.94**	**294**	*e*P	**P**	**23 31 09.8**	**-0.3**
	comp=Z,13nm,0.9s						
BJT	**Baijiatuau**	**61.53**	**325**	PFAKE		23 31 20.0	+6.3
BJT				LR	LR		
	comp=Z,712nm,22.0s						
BJI	**Beijing**	**61.54**	**325**	P	P	23 31 18.6	+4.8
BJI				PP	**PP**	**23 33 31.9**	**+2.4**
BJI				S	**S**	**23 39 37.8**	**+3.4**
BJI				pmax	pmax		
	comp=Z,29nm,2.2s						
BJI				LR	LR		
	comp=N,1μm,15.2s						
BJI				LR	LR		
	comp=E,840nm,14.7s						
BJI				LR	LR		
	comp=Z,980nm,32.4s						
PET	**Petropavlovsk**	**61.57**	**1**	PFAKE		23 31 30.0	+16
PET				LR	LR		
	comp=Z,1μm,20.0s						
PET	**Petropavlovsk**	**61.57**	**1**	*e*P	**P**	**23 31 16.6**	**+2.9**
PET				*e*S	**S**	**23 39 35.6**	**+1.4**
PET				*e*PS	**PnS**	**23 39 54.8**	**+4.6**
PET				*e*SS	**SS**	**23 43 31.6**	**-4.4**
PET				pmax	pmax		
	comp=Z,200nm,13.4s						
PET				pmax	pmax		
	comp=Z,200nm,5.9s						
PEA0B	**Petropavlovsk-**	**61.64**	**0**	*e*P	**P**	**23 31 13.6**	**-0.6**
	comp=Z,58nm,1.2s						
PETK	**Petropavlovsk-**	**61.64**	**0**	P	**P**	**23 31 12.7**	**-1.5**
	comp=Z,13nm,0.8s,baz=152,slow=7.9,SNR=10						
PETK				LR	LR	23 55 13.0	
	comp=Z,395nm,21.9s,baz=174,slow=34						
PHIT	**Phitsanulok**	**61.65**	**295**	P	**P**	**23 31 17.5**	**+2.6**
	comp=Z,24nm,0.9s						
UTTA	**Uttaradit**	**61.72**	**295**	P	**P**	**23 31 15.8**	**+0.4**
	comp=Z,8.1nm,0.8s,comp=Z,61nm						
KLR	**Kul'dur**	**61.88**	**341**	P	**P**	**23 31 14.8**	**-1.1**
	comp=Z,0.6nm,0.8s,baz=138,slow=3.1,SNR=17						
NANT	**Nan**	**61.96**	**297**	P	**P**	**23 31 17.2**	**+0.2**
	comp=Z,16nm,1.0s,comp=Z,260nm						
TAOE	**Nuku Hiva Isla**	**61.97**	**95**	*e*LR	LR	23 49 42.8	
	comp=Z,865nm,21.6s						
XAN	**Xi'an**	**62.41**	**316**	P	**P**	**23 31 17.8**	**-2.0**
XAN				pP	pP	23 31 21.8	-5.0
XAN				sP	sP	23 31 24.8	-4.7
XAN				PP	**PP**	**23 33 34.8**	**-2.6**
XAN				ScS	**ScS**	**23 41 10.3**	**-0.8**
XAN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,170nm,4.9s						
XAN				LR	LR		
	comp=Z,860nm,24.4s						
XAN				LR	LR		
	comp=Z,770nm,23.7s						
XAN				LR	LR		
	comp=Z,1μm,22.3s						
KMI	**Kunming**	**62.71**	**304**	P	**P**	**23 31 22.3**	**+0.1**
KMI				pP	pP	23 31 29.0	-0.3
KMI				S	**S**	**23 39 53.0**	**+2.8**
KMI				SKS	**SKSac**	**23 41 11.8**	**-2.4**
KMI				pmax	pmax		
	comp=Z,25nm,1.0s						
KMI				pmax	pmax		
	comp=Z,210nm,4.1s						
KMI				LR	LR		
	comp=Z,420nm,13.2s						
KMI				LR	LR		
	comp=Z,670nm,14.5s						
KMI				LR	LR		
	comp=Z,1μm,27.7s						
LAMP	**Lampang**	**62.81**	**296**	P	**P**	**23 31 23.4**	**+0.7**
	comp=Z,15nm,0.8s,comp=Z,137nm						
NKL	**Nikolayevsk**	**63.25**	**349**	*e*P	**P**	**23 31 28.0**	**+3.1**
NKL				*e*		23 39 48.0	
NKL				pmax	pmax		
	comp=Z,500nm,5.0s						
CM01	**Chiang Mai Arr**	**63.37**	**296**	*e*P	**P**	**23 31 25.8**	**-0.7**
CMAR	**Chiang Mai Arr**	**63.40**	**296**	P	**P**	**23 31 26.6**	**-0.1**
	comp=Z,19nm,0.8s,baz=121,slow=5.1,SNR=71						
C

CASY Casey 65.56 199 PFAKE 23 31 50.0 +10
CASY LR LR
comp=Z,317nm,20.0s
RKT Rikitea 66.38 111 *e*LR LR 23 51 44.6
comp=Z,2µm,32.2s
HIA Hailar 66.40 334 PFAKE 23 32 00.0 +14
HIA LR LR
comp=Z,494nm,20.0s
HIA Hailar 66.40 334⇑ *e*P **P** **23 31 44.8 -0.8**
HIA pmax pmax
comp=Z,13nm,0.9s
LZH Lanzhou 67.02 315 *e*P **P** **23 31 50.3 +0.3**
LZH pP pP 23 31 53.8 -3.3
LZH sP sP 23 31 55.5 -4.2
LZH *e*S **S** **23 40 41.1 -1.6**
LZH sS pS 23 40 52.0 +0.5
LZH SS **SS** **23 44 56.6 -5.4**
LZH pmax pmax
comp=Z,40nm,1.2s
LZH pmax pmax
comp=Z,190nm,4.6s
LZH LR LR
comp=Z,960nm,16.3s
LZH LR LR
comp=Z,1µm,16.5s
LZH LR LR
comp=Z,2µm,17.1s
ZEA Zeya 67.20 341 *e*P **P** **23 31 50.2 -0.3**
ZEA *e* 23 40 48.0
ZEA pmax pmax
comp=Z,58nm,1.0s
ZEA pmax pmax
comp=Z,400nm,5.0s
MA2 Magadan 68.31 357 PFAKE 23 32 10.0 +13
MA2 LR LR
comp=Z,907nm,19.0s
VNDA Vanda 68.76 179 P **P** **23 32 00.1 +0.1**
comp=Z,4.0nm,1.0s,baz=342,slow=6.1,SNR=14
VNDA LR LR 23 56 28.3
comp=Z,892nm,20.7s,baz=3.5,slow=31
VNDA Vanda 68.76 179 *e*P **P** **23 32 00.2 +0.1**
comp=Z,24nm,1.1s
VNDA Vanda 68.76 179 *e*P **P** **23 32 00.2 +0.1**
VNDA pmax pmax
comp=Z,24nm,1.1s
SBA Scott Base 69.24 178 *e*P **P** **23 32 04.2 +1.2**
comp=Z,18nm,1.1s
SBA LR LR
comp=Z,922nm,20.0s
SBA Scott Base 69.24 178 *e*P **P** **23 32 04.2 +1.2**
SBA pmax pmax
comp=Z,18nm,1.1s
SBA MLR MLR
comp=Z,922nm,20.0s
BRDH Bariadhala 71.24 297 LR LR 00 06 36.1
comp=Z,118nm,18.0s,baz=148,slow=38
GTA Gaotai 71.44 317 ⇓P **P** **23 32 17.6 +0.3**
GTA pP pP 23 32 21.9 -2.5
GTA sP sP 23 32 24.4 -2.7
GTA S **S** **23 41 36.3 +1.5**
GTA pmax pmax
comp=Z,15nm,1.0s
GTA pmax pmax
comp=Z,430nm,5.6s
GTA LR LR
comp=Z,370nm,19.6s
GTA LR LR
comp=Z,550nm,21.6s
GTA LR LR
comp=Z,680nm,21.0s
SEY Seymchan 71.59 358 P **P** **23 32 16.2 -1.3**
comp=Z,14nm,1.1s,baz=149,slow=6.7,SNR=9.3
SEY Seymchan 71.59 358⇓ *e*P **P** **23 32 15.1 -2.4**
ULN Ulaanbaatar 71.60 327 *e*P **P** **23 32 18.1 0.0**
comp=Z,32nm,1.2s
ULN LR LR
comp=Z,456nm,21.0s
ULN Ulaanbaatar 71.60 327 *d i*P **P** **23 32 18.5 +0.4**
ULN pmax pmax
comp=Z,13nm,1.0s
SONM Songino Array 71.94 327 P **P** **23 32 20.5 +0.4**
comp=Z,9.4nm,0.9s,baz=133,slow=5.5,SNR=37
SONM LR LR 00 02 34.2
comp=Z,359nm,21.8s,baz=122,slow=35
SONA1 Songino Array 71.94 327 *e*P **P** **23 32 19.4 -0.8**
SHL Shillong 71.96 300 *e*P **P** **23 32 18.0 -2.8**
SHL Shillong 71.96 300 *e*P **P** **23 32 20.3 -0.5**
comp=Z,60nm,1.0s
SHL Shillong 71.96 300 *e*P **P** **23 32 20.3 -0.5**
SHL pmax pmax
comp=Z,60nm,1.0s
YAK Yakutsk 73.73 347 PFAKE 23 32 40.0 +10
YAK LR LR
comp=Z,513nm,22.0s
YAK Yakutsk 73.73 347 *e*P **P** **23 32 32.7 +2.4**
YAK *e**PP **PcP** **23 32 46.1 +0.3**
YAK *e* 23 35 14.2
YAK *e*S **S** **23 42 02.8 +3.1**
YAK *e* 23 42 39.0
YAK pmax pmax
comp=Z,50nm,0.9s
YAK pmax pmax
comp=N,8.0nm,1.0s
YAK pmax pmax
comp=Z,70nm,3.4s
YAK pmax pmax
comp=N,52nm,3.2s
YAK pmax pmax
comp=E,84nm,3.5s
YAK smax smax
comp=E,116nm,4.1s
YAK smax smax
comp=N,129nm,3.7s
YAK MLR MLR
comp=Z,375nm,19.0s
YAK MLR MLR
comp=N,368nm,19.0s
YAK MLR MLR
comp=E,168nm,17.0s
LSA Lhasa 73.97 304 *e*P **P** **23 32 33.2 +0.2**
comp=E,19nm,0.9s
LSA LR LR
comp=Z,809nm,22.0s
LSA Lhasa 73.97 304 *e*P **P** **23 32 33.2 +0.2**
LSA pmax pmax
comp=Z,19nm,0.9s
LSA MLR MLR
comp=Z,809nm,22.0s
ZAK Zakamensk 75.08 328 *e*P **P** **23 32 37.7 -0.8**
ZAK pmax pmax
comp=Z,8.0nm,1.3s
TLY Talaya 75.64 329 P P 23 32 46.9 +5.3
comp=Z,12nm,0.9s,baz=273,slow=2.9,SNR=8.4
TLY Talaya 75.64 329 *e*P **P** **23 32 39.4 -2.2**
comp=Z,13nm,0.9s
TLY LR LR
comp=Z,375nm,21.0s
TLY Talaya 75.64 329 *c i*P **P** **23 32 43.8 +2.2**
TLY *e* 23 32 59.6
TLY *e*S **S** **23 42 22.3 +0.8**
TLY *e* 23 42 58.1
TLY pmax pmax
comp=Z,10.0nm,0.9s
TLY MLR MLR
comp=Z,299nm,19.0s
ODAN Odare 76.20 300 *e*P **P** **23 32 47.5 +1.9**
comp=Z,80nm,1.0s
RAMN Ramite 76.90 300 *e*P **P** **23 32 51.9 +2.3**
comp=Z,63nm,1.3s
BILL Bilibino 76.90 4 *e*P **P** **23 32 47.2 -1.2**
comp=Z,32nm,1.0s
BILL LR LR
comp=Z,655nm,19.0s
BILL Bilibino 76.90 4⇑ *e*P **P** **23 32 47.0 -1.4**
BILL *i* S **S** **23 42 37.0 +2.2**
BILL *e*SS **SS** **23 47 40.1 +8.3**
BILL pmax pmax
comp=Z,30nm,1.2s
BILL MLR MLR
comp=Z,647nm,19.0s
MOY Mondy 77.00 328 *e*P **P** **23 32 49.4 0.0**
MOY pmax pmax
comp=Z,79nm,3.5s
OHAK Old Harbor 77.23 25 *e*P **P** **23 32 49.0 -1.4**
comp=Z,31nm,1.0s
JIRN Jiri 77.45 301 *e*P **P** **23 32 52.9 0.0**

GUN Gumba 77.79 301 *e*P **P** **23 32 53.9 -0.8**
comp=Z,84nm,1.1s
KDAK Kodiak Island 77.88 25 *e*P **P** **23 32 53.1 -1.0**
comp=Z,17nm,0.9s
KDAK LR LR
comp=Z,346nm,22.0s
KDAK Kodiak Island 77.88 25 *i* P **P** **23 32 55.0 +0.9**
PKIN Phulchoki 78.11 301 *e*P **P** **23 32 56.0 -0.4**
comp=Z,34nm,1.0s
KKN Kanai 78.27 301 *e*P **P** **23 32 57.0 -0.2**
comp=Z,29nm,0.8s
DMN Daman 78.36 301 *e*P **P** **23 32 57.2 -0.6**
comp=Z,79nm,1.0s
GKN Gorkha 78.87 301 *e*P **P** **23 32 59.1 -1.3**
comp=Z,104nm,1.2s
SVW2 Sparrevohn 78.88 21 *e*P **P** **23 32 59.1 -0.5**
comp=Z,62nm,1.1s
RSO Redoubt South 79.51 23 *e*P **P** **23 33 03.1 -0.2**
CNPM China Poot 79.52 24 *e*P **P** **23 33 02.0 -1.1**
comp=Z,66nm,1.0s
KOLN Koldanda 79.69 300 *e*P **P** **23 33 03.6 -1.4**
comp=Z,51nm,0.9s
DANN Dangsing 79.71 301 *e*P **P** **23 33 03.7 -1.5**
comp=Z,87nm,1.1s
BRLK Bradley Lake 79.81 24 *e*P **P** **23 33 04.1 -0.5**
comp=Z,49nm,1.0s
PYUN Piuthan 80.30 300 *e*P **P** **23 33 07.5 -0.8**
comp=Z,117nm,1.1s
HVS Khovu-Aksy 80.71 325⇓ *e*P **P** **23 33 09.9 +0.1**
HVS pmax pmax
comp=Z,8.0nm,0.9s
SUA Susitna One 80.91 23 *e*P **P** **23 33 09.1 -1.5**
comp=Z,25nm,0.9s
SKT Skwentna 80.93 22 *e*P **P** **23 33 08.0 -2.7**
comp=Z,10nm,0.8s
RC01 Rabbit Creek A 81.07 23 *e*P **P** **23 33 09.9 -1.4**
comp=Z,38nm,1.0s
QSPA South Pole Qui 81.21 180 P **P** **23 33 11.5 -0.9**
comp=Z,9.9nm,0.9s,baz=358,slow=5.1,SNR=8.1
QSPA LR LR 00 04 33.0
comp=Z,621nm,20.1s,baz=12,slow=32
QSPA South Pole Qui 81.21 180 *e*P **P** **23 33 10.8 -1.5**
PPLA Purkeypile 81.27 21 *e*P **P** **23 33 11.2 -1.4**
comp=Z,57nm,1.4s
WMQ Urumqi 81.52 317 P **P** **23 33 14.1 -0.2**
WMQ pP PcP 23 33 20.1 -0.1
WMQ sP pP 23 33 21.3 -0.2
WMQ S **S** **23 43 23.0 -2.0**
WMQ SKS **SKSac** **23 43 29.0 -3.8**
WMQ pmax pmax
comp=Z,69nm,2.1s
WMQ pmax pmax
comp=Z,830nm,3.8s
WMQ LR LR
comp=Z,840nm,16.5s
WMQ LR LR
comp=Z,1µm,18.9s
WMQ LR LR
comp=Z,1µm,24.9s
PMR Palmer 81.60 23 *e*P **P** **23 33 12.4 -1.7**
comp=Z,59nm,1.0s
PMR Palmer 81.60 23 *e*P **P** **23 33 12.4 -1.7**
PMR pmax pmax
comp=Z,59nm,1.0s
CAST Castle Rocks 81.64 21 *e*P **P** **23 33 12.2 -2.2**
comp=Z,48nm,0.9s
RDOG Red Dog Mine 81.72 14 *e*P **P** **23 33 14.0 -0.7**
comp=Z,43nm,1.1s
GHO Glory Hole Cre 81.79 23 *e*P **P** **23 33 14.1 -1.2**
comp=Z,64nm,0.9s
HYB Hyderabad 81.79 289 *i* P **P** **23 33 14.0 -2.2**
TRF Thorofare Moun 82.29 21 *e*P **P** **23 33 15.7 -2.4**
comp=Z,36nm,0.9s
TIXI Tiksi 82.41 351 P **P** **23 33 20.4 +2.2**
comp=Z,2.9nm,0.6s,baz=146,slow=7.6,SNR=9.5
TIXI Tiksi 82.41 351 *e*P **P** **23 33 17.7 -0.5**
comp=Z,15nm,1.2s
TIXI LR LR
comp=Z,452nm,19.0s
TIXI Tiksi 82.41 351⇑ *e*P **P** **23 33 17.9 -0.3**
TIXI pmax pmax
comp=Z,41nm,2.8s
SCM Sheep Creek Mo 82.44 23 *e*P **P** **23 33 17.8 -0.9**
comp=Z,62nm,1.0s
SCM Sheep Creek Mo 82.44 23 *e*P **P** **23 33 17.8 -0.9**
SCM pmax pmax
comp=Z,62nm,1.0s
BPAW Bear Paw Mtn. 82.45 20 *e*P **P** **23 33 16.0 -2.6**
comp=Z,14nm,1.0s
DIV Divide 82.67 24 *e*P **P** **23 33 19.0 -0.9**
comp=Z,42nm,1.1s
RAGM Ragged Mountai 82.72 25 *e*P **P** **23 33 19.7 -0.4**
comp=Z,32nm,1.1s
RND Reindeer 82.78 22 *e*P **P** **23 33 18.7 -1.8**
comp=Z,32nm,0.9s
RND Reindeer 82.78 22 *e*P **P** **23 33 18.7 -1.8**
RND pmax pmax
comp=Z,32nm,0.9s
KLU Klutina 82.81 24 *e*P **P** **23 33 19.9 -0.7**
comp=Z,106nm,1.1s
MCK McKinley 82.95 21 *e*P **P** **23 33 19.4 -1.8**
comp=Z,120nm,1.0s
MCK McKinley 82.95 21 *e*P **P** **23 33 19.4 -1.8**
MCK pmax pmax
comp=Z,120nm,1.0s
BWN Browne 83.02 21 *e*P **P** **23 33 20.9 -0.7**
comp=Z,84nm,1.2s
BMRM Bremner River 83.06 25 *e*P **P** **23 33 20.9 -1.0**
comp=Z,84nm,1.3s
MLY Manley 83.11 20 *e*P **P** **23 33 20.6 -1.5**
comp=Z,22nm,1.1s
DHY Denali Highway 83.14 22 *e*P **P** **23 33 21.1 -1.3**
comp=Z,25nm,0.9s
MAW Mawson 83.55 203 P **P** **23 33 24.9 +0.6**
comp=Z,5.1nm,0.9s,baz=76,slow=2.9,SNR=7.1
MAW LR LR 00 07 22.4
comp=Z,313nm,19.8s,baz=76,slow=33
MAW Mawson 83.55 203 P **P** **23 33 25.1 +0.8**
baz=84,SNR=10.0
MAW Mawson 83.55 203 *e*P **P** **23 33 25.5 +1.1**
comp=Z,3.8nm,0.8s
HARP HAARP 83.61 23 *e*P **P** **23 33 24.8 +0.1**
comp=Z,70nm,0.9s
WRH Wood River Hil 83.68 21 *e*P **P** **23 33 22.9 -2.0**
comp=Z,38nm,1.1s
TGL Tana Glacier 83.69 25 *e*P **P** **23 33 24.5 -0.8**
comp=Z,52nm,1.1s
DGZ Jazzator, Alta 83.80 322 *i* P **P** **23 33 24.8 -1.3**
CCB Clear Creek Bu 83.88 21 *e*P **P** **23 33 23.8 -2.2**
comp=Z,28nm,1.0s
MDM Murphy Dome 83.92 20 *e*P **P** **23 33 23.9 -2.3**
comp=Z,44nm,1.2s
COLA College 84.00 21 *e*P **P** **23 33 25.0 -1.6**
comp=Z,48nm,0.8s
COLA College 84.00 21 *e*P **P** **23 33 25.0 -1.6**
COLA pmax pmax
comp=Z,48nm,0.8s
IL1 Eielson Array 84.28 21 *e*P **P** **23 33 24.7 -3.3**
ILAR Eielson Array 84.28 21 P **P** **23 33 25.6 -2.4**
comp=Z,25nm,1.1s,baz=258,slow=4.9,SNR=64
ILAR LR LR 00 09 50.4
comp=Z,497nm,18.9s,baz=246,slow=35
ILB Eielson Array 84.28 21 *e*P **P** **23 33 25.6 -2.4**
RIDG Independ'e Rid 84.45 22 *e*P **P** **23 33 27.9 -1.1**
comp=Z,74nm,1.2s
TOLK Toolik Lake Re 85.69 17 P **P** **23 33 34.3 -0.8**
baz=233
TOLK Toolik Lake Re 85.69 17 *e*P **P** **23 33 34.3 -0.8**
comp=Z,12nm,0.8s
MK01 Makanchi Array 86.08 318 *e*P **P** **23 33 36.2 -1.3**
MK31 Makanchi Array 86.09 318 *e*P **P** **23 33 36.7 -0.8**
MK31 Makanchi Array 86.09 318 *c e*P **P** **23 33 36.5 -1.0**
MK31 pmax pmax
comp=Z,41nm,0.9s
MKAR Makanchi Array 86.09 318 P **P** **23 33 36.7 -0.8**
comp=Z,16nm,0.9s,baz=101,slow=5.6,SNR=77
MKAR LR LR 00 10 25.6
comp=Z,337nm,21.4s,baz=90,slow=35
MAKZ Makanchi 86.30 318 *e*P **P** **23 33 37.7 -0.8**
comp=Z,55nm,1.1s
MAKZ Makanchi 86.30 318 *i* P **P** **23 33 37.8 -0.8**
MAKZ pmax pmax
comp=Z,64nm,1.2s
BESE Bessie Mountai 86.32 29 *e*P **P** **23 33 38.2 -0.2**
comp=Z,50nm,1.1s
EGAK Eagle 86.37 22 *e*P **P** **23 33 37.9 -0.5**
comp=Z,52nm,1.1s

EGAK LR LR
comp=Z,744nm,20.0s
JIS Juneau Island 86.43 30 *e*P **P** **23 33 38.6 -0.2**
comp=Z,47nm,1.2s
SKAG Skagway 86.44 28 *e*P **P** **23 33 38.8 -0.1**
comp=Z,94nm,1.4s
DAWY Dawson 86.70 23 *e*P **P** **23 33 39.9 -0.3**
comp=Z,55nm,1.1s
WRAK Wrangell Islan 86.76 32 *e*P **P** **23 33 40.3 -0.2**
comp=Z,14nm,1.0s
WRAK LR LR
comp=Z,1µm,20.0s
ZALV Zalesovo Beam 86.80 326 P **P** **23 33 38.5 -2.3**
comp=Z,9.5nm,0.9s,baz=117,slow=5.4,SNR=15
ZALV LR LR 00 11 57.5
comp=Z,196nm,20.4s,baz=70,slow=35
PDGK Podgornoye 87.05 314 *i* P **P** **23 33 40.1 -2.4**
PDGK pmax pmax
comp=Z,17nm,1.1s
NVS Novosibirsk 87.96 326 *e*P **P** **23 33 45.4 -1.0**
NVS pmax pmax
comp=Z,32nm,1.7s
NVS pmax pmax
comp=N,2.0nm,0.4s
NVS pmax pmax
comp=E,2.0nm,0.4s
N02D Trinity Center 88.39 48 P **P** **23 33 49.8 +0.9**
baz=257
YBH Yreka Blue Hor 88.56 48 P **P** **23 33 49.5 -0.2**
comp=E,4.5nm,1.1s,baz=217,slow=4.7,SNR=4.2
YBH LR LR 00 07 41.4
comp=E,483nm,20.9s,baz=257,slow=32
HUMO Hull Mountain 88.58 47 *e*P **P** **23 33 49.1 -0.6**
comp=E,16nm,1.3s
DLBC Dease Lake 88.63 30 *e*P **P** **23 33 49.8 +0.2**
comp=E,14nm,1.1s
KSH Kashi 88.72 310 P **P** **23 33 55.3 +4.8**
KSH pP pP 23 33 58.8 +1.0
KSH PP **PP** **23 37 23.8 +4.2**
KSH S **S** **23 44 42.1 +5.5**
KSH sS sS 23 44 47.5 -1.2
KSH pmax pmax
comp=E,33nm,1.1s
KSH pmax pmax
comp=E,920nm,6.1s
KSH LR LR
comp=E,360nm,7.5s
KSH LR LR
comp=E,390nm,11.0s
KSH LR LR
comp=E,280nm,7.0s
O03D Paynes Creek 88.92 49 P **P** **23 33 51.7 +0.3**
baz=258
NLWA Neilton Lookou 89.07 42 PFAKE 23 34 00.0 +8.1
NLWA LR LR
comp=Z,1µm,20.0s
E03A Lebam 89.07 43 *e*P **P** **23 33 52.6 +0.8**
comp=Z,36nm,1.0s
RPN Rapa Nui 89.23 117 LR LR 00 05 07.8
comp=Z,358nm,21.9s,baz=247,slow=30
AFDM Forest Hills D 89.26 51 *e*P **P** **23 33 54.1 +1.2**
comp=Z,10.0nm,1.2s
J04D Umpqua Nationa 89.33 46 P **P** **23 33 53.0 -0.4**
baz=257
KURK Kurchatov 89.49 321 *e*P **P** **23 33 52.6 -1.1**
comp=Z,44nm,1.5s
KURK LR LR
comp=Z,742nm,20.0s
KURK Kurchatov 89.49 321⇓ *e*P **P** **23 33 51.9 -1.8**
KURK pmax pmax
comp=Z,8.0nm,1.2s
CMB Columbia Colle 89.53 52 *e*P **P** **23 33 56.1 +1.9**
comp=Z,14nm,1.4s
KURBB Kurchatov Arra 89.53 321 P **P** **23 33 51.7 -2.1**
comp=Z,3.7nm,0.9s,baz=108,slow=2.9,SNR=18
NIL Nilore 89.70 304 *e*P **P** **23 33 53.6 -1.5**
comp=Z,32nm,1.0s
NIL LR LR
comp=Z,239nm,21.0s
NIL Nilore 89.70 304 *e*P **P** **23 33 53.6 -1.5**
NIL pmax pmax
comp=Z,32nm,1.0s
NIL MLR MLR
comp=Z,239nm,21.0s
TKM2 Tokmak 2 89.72 313 *i* P **P** **23 33 53.7 -1.6**
TKM2 pmax pmax
comp=Z,36nm,2.6s
BEKR Beckworth 89.91 50 *e*P **P** **23 33 57.9 +1.7**
comp=Z,15nm,1.4s
J05D Fort Rock, OR 89.96 46 P **P** **23 33 56.2 -0.1**
baz=258
K05A Summer Lake 90.09 47 *e*P **P** **23 33 57.3 +0.3**
comp=Z,18nm,1.1s
PINE Pine Mountain 90.27 46 *e*P **P** **23 33 59.0 +1.2**
comp=Z,21nm,1.2s
WAKR Walker 90.35 51 *e*P **P** **23 34 01.0 +2.7**
comp=Z,19nm,1.5s
MOD Modoc Plateau 90.35 48 *e*P **P** **23 33 58.0 -0.2**
comp=Z,14nm,1.3s
FRU Bishkek 90.41 313 *e*P **P** **23 34 00.0 +1.7**
FRU *e* 23 34 08.0
AAK Ala-Archa 90.46 313 P **P** **23 33 56.7 -2.0**
comp=Z,2.4nm,0.5s,baz=78,slow=3.5,SNR=4.9
AAK Ala-Archa 90.46 313 *e*P **P** **23 33 56.6 -2.1**
comp=Z,12nm,1.2s
AAK Ala-Archa 90.46 313⇑ *i*P **P** **23 33 56.9 -1.8**
AAK pmax pmax
comp=Z,4.0nm,0.9s
MDPB Devils Postpil 90.47 52 *e*P **P** **23 34 01.0 +2.1**
comp=Z,19nm,1.2s
OMMB Old Mammoth Mi 90.52 52 *e*P **P** **23 34 00.4 +1.1**
comp=Z,8.2nm,1.1s
PAHR Pah Rah Range 90.62 50 *e*P **P** **23 34 01.3 +1.8**
comp=Z,18nm,1.5s
INK Inuvik 90.66 20 *e*P **P** **23 33 57.6 -1.1**
comp=Z,25nm,1.3s
INK Inuvik 90.66 20 *e*P **P** **23 33 57.6 -1.1**
INK pmax pmax
comp=Z,25nm,1.3s
MWC Mount Wilson 90.67 56 *e*P **P** **23 34 01.1 +1.3**
comp=Z,19nm,0.9s
MWC Mount Wilson 90.67 56 *e*P **P** **23 34 01.1 +1.3**
MWC pmax pmax
comp=Z,19nm,0.9s
SFK Sufi-Kurgan 90.69 310 *i* P **P** **23 33 59.6 -0.3**
SFK pmax pmax
comp=Z,39nm,1.3s
EDW2 Edwards Air Fo 90.83 55 P **P** **23 34 01.6 +1.1**
baz=260
BFSC Mount Baldy Ra 91.00 56 P **P** **23 34 02.2 +0.9**
baz=260
RYN Ryan 91.08 51 *e*P **P** **23 34 02.8 +1.2**
comp=Z,12nm,1.2s
NRIK Noril'sk 91.08 341 P **P** **23 33 59.9 -0.8**
comp=Z,1.2nm,0.3s,baz=126,slow=5.1,SNR=7.8
NRIK LR LR 00 12 22.2
comp=Z,344nm,21.8s,baz=108,slow=34
LTY Liberty 91.16 42 *e*P **P** **23 34 01.8 +0.1**
comp=Z,9.2nm,1.3s
LRMC Laurel Mtn Rad 91.19 54 P **P** **23 34 02.5 +0.3**
baz=260
NV01 Mina Array Sit 91.21 51 *e*P **P** **23 34 02.1 -0.2**
NVAR Mina Array Bea 91.21 51 P **P** **23 34 02.0 -0.3**
comp=Z,11nm,1.0s,baz=246,slow=6.2,SNR=33
NVAR LR LR 00 09 15.2
comp=Z,694nm,20.4s,baz=94,slow=32
NVAR Mina Array Bea 91.21 51 P **P** **23 34 02.0 -0.3**
NV11 Mina Array Sit 91.33 51 *e*P **P** **23 34 03.1 +0.3**
comp=Z,1.2nm,1.0s
I07A Izee 91.35 46 *e*P **P** **23 34 03.3 +0.6**
comp=Z,17nm,1.5s
DAC Darwin (Calif) 91.40 54 *e*P **P** **23 34 03.5 +0.3**
comp=Z,13nm,1.0s
DAC Darwin (Calif) 91.40 54 *e*P **P** **23 34 03.5 +0.3**
DAC pmax pmax
comp=Z,13nm,1.0s
MPMC Manual Prospec 91.44 54 P **P** **23 34 03.6 +0.2**
baz=260
KVN Kaiserville 91.48 51 *e*P **P** **23 34 04.0 +0.5**
comp=Z,11nm,1.0s
KVN Kaiserville 91.48 51 *e*P **P** **23 34 04.0 +0.5**
KVN pmax pmax
comp=Z,11nm,1.0s
WVOR Wild Horse Val 91.67 47 *e*P **P** **23 34 04.3 0.0**
comp=Z,16nm,1.0s
WVOR LR LR
comp=Z,601nm,22.0s

WVOR	Wild Horse Val	91.67	47	eP	P		23 34 04.3	0.0
WVOR				pmax	pmax			
	comp=Z,16nm,1.0s							
WVOR				MLR	MLR			
	comp=Z,601nm,22.0s							
HAWA	Hanford	91.76	43	PFAKE			23 34 20.0	+16
HAWA				LR	LR			
	comp=Z,899nm,19.0s							
MNAS	Manas	91.88	313	i P	P		23 34 05.5	+0.3
MNAS				pmax	pmax			
	comp=Z,38nm,1.9s							
PFO	Pinyon Flats O	91.88	56	PFAKE			23 34 20.0	+15
PFO				LR	LR			
	comp=Z,1μm,22.0s							
J08A	Circle Bar Ran	91.95	47	eP	P		23 34 05.2	-0.3
	comp=Z,14nm,1.0s							
G08A	Pilot Rock	91.95	45	eP	P		23 34 06.2	+0.8
	comp=Z,6.1nm,0.9s							
FURC	Furnace Creek,	92.01	54	P	P		23 34 06.0	+0.3
	baz=261							
B08A	Colville Reser	92.26	42	eP	P		23 34 06.1	-0.6
	comp=Z,7.1nm,1.1s							
D08A	Wollman Farm,	92.30	43	eP	P		23 34 06.8	0.0
	comp=Z,6.9nm,0.9s							
BMN	Battle Mountai	92.38	50	eP	P		23 34 08.0	+0.4
	comp=Z,8.3nm,1.3s							
BMN	Battle Mountai	92.38	50	eP	P		23 34 08.0	+0.4
BMN				pmax	pmax			
	comp=Z,8.0nm,1.3s							
TPNV	Topopah Spring	92.57	53	P	P		23 34 08.5	-0.1
	baz=261							
TPNV	Topopah Spring	92.57	53	eP	P		23 34 08.5	-0.1
	comp=Z,15nm,1.1s							
TPNV	Topopah Spring	92.57	53	eP	P		23 34 08.5	-0.1
TPNV				pmax	pmax			
	comp=Z,15nm,1.1s							
TUQ	Turquoise Moun	92.60	55	P	P		23 34 09.3	+0.6
	baz=261							
E09A	Wood Farm, Sta	92.73	44	eP	P		23 34 09.5	+0.7
	comp=Z,15nm,1.1s							
BMO	Blue Mountains	93.03	45	eP	P		23 34 09.5	-0.9
	comp=Z,6.7nm,1.2s							
BMO				LR	LR			
	comp=Z,970nm,20.0s							
BMO	Blue Mountains	93.03	45	eP	P		23 34 09.5	-0.9
BMO				pmax	pmax			
	comp=Z,7.0nm,1.2s							
BMO				MLR	MLR			
	comp=Z,970nm,20.0s							
LDFC	Landfair	93.20	55	eP	P		23 34 13.8	+2.4
	comp=Z,21nm,1.1s							
F10A	Beach Ranch, E	93.27	44	eP	P		23 34 11.0	-0.5
	comp=Z,9.3nm,1.1s							
R11A	Troy Canyon, C	93.31	52	P	P		23 34 12.2	+0.3
	baz=262							
R11A	Troy Canyon, C	93.31	52	eP	P		23 34 12.5	+0.6
	comp=Z,7.0nm,1.1s							
SHPR	Sheep Range	93.37	54	eP	P		23 34 13.9	+1.6
	comp=Z,11nm,1.3s							
KK31	Karatay Array	93.42	313	eP	P		23 34 12.9	+0.8
KKAR	Karatay Array	93.42	313	eP	P		23 34 12.9	+0.8
NEW	Newport	93.70	42	P	P		23 34 11.7	-1.7
	comp=Z,5.5nm,1.0s,baz=295,slow=3.3,SNR=4.3							
NEW	Newport	93.70	42	eP	P		23 34 09.8	-3.5
	comp=Z,5.8nm,1.0s							
NEW				LR	LR			
	comp=Z,901nm,20.0s							
NEW	Newport	93.70	42	eP	P		23 34 09.9	-3.5
NEW				pmax	pmax			
	comp=Z,6.0nm,1.0s							
NEW				MLR	MLR			
	comp=Z,901nm,20.0s							
MFID	Camas Ranch	93.86	47	eP	P		23 34 15.6	+1.2
	comp=Z,7.1nm,1.0s							
PSUT	Pine Spring	94.68	52	eP	P		23 34 20.0	+1.7
	comp=Z,7.1nm,1.0s							
HLID	Hailey	94.90	47	P	P		23 34 19.7	+0.5
	baz=263							
HLID	Hailey	94.90	47	eP	P		23 34 18.9	-0.3
	comp=Z,8.2nm,1.2s							
HLID				LR	LR			
	comp=Z,707nm,21.0s							
CCUT	Cedar City	94.94	53	eP	P		23 34 21.8	+2.3
	comp=Z,11nm,1.5s							
BVAR	Borovoye Array	94.95	323	P	P		23 34 16.6	-2.3
	comp=Z,6.0nm,0.8s,baz=113,slow=4.4,SNR=24							
BVAR				LR	LR		00 17 07.3	
	comp=Z,401nm,20.6s,baz=88,slow=36							
LCMT	Little Creek M	94.96	53	eP	P		23 34 21.7	+2.1
	comp=Z,5.6nm,1.2s							
BRVK	Borovoye	95.01	323	eP	P		23 34 16.5	-2.7
	comp=Z,13nm,1.0s							
BRVK				LR	LR			
	comp=Z,285nm,20.0s							
BRVK	Borovoye	95.01	323⇓	eP	P		23 34 16.9	-2.3
BRVK				pmax	pmax			
	comp=Z,9.0nm,1.2s							
KNB	Kanab	95.30	53	eP	P		23 34 23.4	+2.3
	comp=Z,20nm,1.6s							
DUG	Dugway, Tooele	95.68	50	eP	P		23 34 22.0	-0.8
	comp=Z,6.1nm,1.4s							
DUG				LR	LR			
	comp=Z,304nm,20.0s							
DUG	Dugway, Tooele	95.68	50	eP	P		23 34 22.0	-0.8
DUG				pmax	pmax			
	comp=Z,6.0nm,1.4s							
DUG				MLR	MLR			
	comp=Z,304nm,20.0s							
LPIG	La Paz	95.91	67	LR	LR		00 09 17.7	
	comp=Z,322nm,21.2s,baz=240,slow=30							
SPUT	South Promonto	96.08	49	eP	P		23 34 25.0	+0.4
	comp=Z,14nm,1.9s							
MCMT	McKenzie Canyo	96.17	46	eP	P		23 34 26.2	+1.2
WUAZ	Wupatki	96.29	55	PFAKE			23 34 40.0	+14
WUAZ				LR	LR			
	comp=Z,501nm,22.0s							
TUC	Tucson	96.43	58	PFAKE			23 34 40.0	+14
TUC				LR	LR			
	comp=Z,1μm,22.0s							
JLU	Jordanelle	96.76	50	eP	P		23 34 28.7	+0.9
	comp=Z,5.2nm,1.2s							
HWUT	Hardware Ranch	96.77	49	PFAKE			23 34 40.0	+12
HWUT				LR	LR			
	comp=Z,343nm,19.0s							
YKA	Yellowknife Ar	96.94	28	P	P		23 34 27.2	-0.5
	comp=Z,13nm,0.9s,baz=264,slow=4.7,SNR=36							
YKA				LR	LR		00 12 01.1	
	comp=Z,67nm,21.6s,baz=278,slow=32							
BOZ	Bozeman (W)	97.11	45	P	P		23 34 28.3	-0.8
	baz=265							
BOZ	Bozeman (W)	97.11	45	eP	P		23 34 28.7	-0.4
	comp=Z,3.5nm,1.1s							
BOZ				LR	LR			
	comp=Z,521nm,20.0s							
BOZ	Bozeman (W)	97.11	45	eP	P		23 34 28.7	-0.4
BOZ				pmax	pmax			
	comp=Z,4.0nm,1.1s							
BOZ				MLR	MLR			
	comp=Z,521nm,20.0s							
AHID	Auburn Hatcher	97.23	48	PFAKE			23 34 40.0	+10
AHID				LR	LR			
	comp=Z,549nm,22.0s							
YHB	Horse Butte	97.34	46	eP	Pdif		23 34 32.7	+2.4
	comp=Z,7.8nm,1.3s							
FXWY	Fox Creek	97.36	47	eP	Pdif		23 34 31.3	+0.8
	comp=Z,3.3nm,1.0s							
TPAW	Teton Pass	97.40	47	eP	Pdif		23 34 31.8	+1.1
	comp=Z,3.3nm,1.0s							
IMW	Indian Meadow	97.44	47	eP	Pdif		23 34 33.1	+2.1
	comp=Z,5.9nm,1.3s							
REDW	Red Top Meadow	97.46	47	eP	Pdif		23 34 33.0	+2.0
	comp=Z,6.6nm,1.2s							
MOOW	Moose Ponds	97.57	47	eP	Pdif		23 34 32.8	+1.4
	comp=Z,3.0nm,1.1s							
LKWY	Lake	97.89	46	PFAKE			23 34 40.0	+7.1
LKWY				LR	LR			
	comp=Z,2μm,19.0s							
BW06	Boulder Array	98.36	48	eP	P		23 34 34.7	-0.3
	comp=Z,5.7nm,1.3s							
BW06				LR	LR			
	comp=Z,548nm,21.0s							
PD31	Pinedale Array	98.36	48	eP	P		23 34 34.7	-0.3
PDAR	Pinedale Array	98.36	48	P	P		23 34 33.7	-1.3
	comp=Z,1.6nm,0.9s,baz=242,slow=3.2,SNR=10							
PDAR				LR	LR		00 12 52.2	
	comp=Z,501nm,21.7s,baz=285,slow=32							
PDAR	Pinedale Array	98.36	48	eP	P		23 34 33.8	-1.1
EGMT	Eagleton	98.58	43	PFAKE			23 34 50.0	+14
EGMT				LR	LR			
	comp=Z,511nm,20.0s							
SNAA	Sanae	98.62	186	LR	LR		00 18 53.2	
	comp=Z,412nm,18.0s,baz=182,slow=35							
RLMT	Red Lodge	98.73	46	eP	P		23 34 35.6	-0.9
	comp=Z,6.0nm,1.3s							
RLMT				LR	LR			
	comp=Z,575nm,21.0s							
MVCO	Mesa Verde	98.76	54	PFAKE			23 34 50.0	+13
MVCO				LR	LR			
	comp=Z,496nm,20.0s							
ANMO	Albuquerque	100.25	56	PFAKE			23 34 50.0	+6.5
ANMO				LR	LR			
	comp=Z,703nm,22.0s							
MSEY	Mahe Island	100.70	264	PFAKE			23 35 00.0	+14
MSEY				LR	LR			
	comp=Z,595nm,21.0s							
LAO	LASA Array	100.92	44	PFAKE			23 35 00.0	+14
LAO				LR	LR			
	comp=Z,741nm,20.0s							
MNTX	Cornudas Mount	100.95	59	PFAKE			23 35 00.0	+14
MNTX				LR	LR			
	comp=Z,723nm,20.0s							
ISCO	Idaho Springs	101.17	51	PFAKE			23 35 00.0	+12
ISCO				LR	LR			
	comp=Z,524nm,19.0s							
SDCO	Great Sand Dun	101.17	53	PFAKE			23 35 00.0	+12
SDCO				LR	LR			
	comp=Z,609nm,21.0s							
ABKAR	Akbulak array	101.23	318	ePdif	Pdif		23 34 47.3	0.0
ARU	Arti	101.96	326	ePdif	Pdif		23 34 49.9	-0.4
	comp=Z,8.4nm,1.3s							
ARU				LR	LR			
	comp=Z,357nm,20.0s							
ARU	Arti	101.96	326	P	Pdif		23 34 50.6	+0.3
ARU							23 39 03.6	
ARU				S	SKSac		23 45 29.7	+1.2
ARU				SS	SS		23 53 40.6	+5.2
ARU				MLR	MLR			
	comp=Z,393nm,18.0s							
DGMT	Dagmar	102.30	42	PFAKE			23 35 00.0	+7.9
DGMT				LR	LR			
	comp=Z,542nm,21.0s							
AKTO	Aktyubinsk	102.47	320	P	Pdif		23 34 51.9	-0.8
	comp=Z,1.1nm,0.6s,baz=146,slow=2.7,SNR=3.8							
FFC	Flin Flon	103.44	36	PFAKE			23 35 10.0	+13
FFC				LR	LR			
	comp=Z,566nm,21.0s							
OGNE	Ogallala	103.92	50	PFAKE			23 35 10.0	+10
OGNE				LR	LR			
	comp=Z,541nm,20.0s							
JCT	Junction City	105.68	61	PFAKE			23 39 30.0	
JCT				LR	LR			
	comp=Z,799nm,20.0s							
CBKS	Cedar Bluff	105.72	52	PFAKE			23 39 30.0	
CBKS				LR	LR			
	comp=Z,612nm,20.0s							
WMOK	Wichita Mounta	106.56	56	PFAKE			23 39 30.0	
WMOK				LR	LR			
	comp=Z,669nm,21.0s							
FCC	Fort Churchill	107.20	31	ePKP	PKiKP		23 39 21.9	-0.7
KBS	Kingsbay	107.79	353	PFAKE			23 39 30.0	
KBS				LR	LR			
	comp=Z,435nm,21.0s							
ECSD	EROS Data Cent	107.80	47	PFAKE			23 39 40.0	
ECSD				LR	LR			
	comp=Z,569nm,20.0s							
AGMN	Agassiz Nation	107.85	42	PFAKE			23 39 40.0	
AGMN				LR	LR			
	comp=Z,617nm,20.0s							
KSU1	Kansas State U	108.14	52	PFAKE			23 39 40.0	
KSU1				LR	LR			
	comp=Z,465nm,19.0s							
NATX	Nacogdoches	110.08	59	PFAKE			23 39 40.0	
NATX				LR	LR			
	comp=Z,920nm,20.0s							
MAK	Makhachkala	110.24	313	i P	Pdif		23 35 25.3	-2.1
MAK				i			23 39 24.1	
MAK				e			23 40 00.8	
MAK				e			23 46 08.2	
MAK				ePS	PS		23 49 31.8	-1.3
MAK				pmax	pmax			
	comp=Z,10.0nm,0.3s							
SCIA	State Center	110.47	49	PFAKE			23 39 40.0	
SCIA				LR	LR			
	comp=Z,587nm,20.0s							
EYMN	Ely	110.80	42	PFAKE			23 39 40.0	
EYMN				LR	LR			
	comp=Z,501nm,20.0s							
MIAR	Mount Ida	110.85	56	PFAKE			23 39 40.0	
MIAR				LR	LR			
	comp=Z,874nm,22.0s							
KEV	Kevo	111.32	343	PFAKE			23 39 40.0	
KEV				LR	LR			
	comp=Z,721nm,19.0s							
JFWS	Jewell Farm	112.51	47	PFAKE			23 39 40.0	
JFWS				LR	LR			
	comp=Z,442nm,19.0s							
GNI	Garni	112.65	310	PFAKE			23 39 40.0	
GNI				LR	LR			
	comp=Z,288nm,21.0s							
COWI	Conover	112.73	44	PFAKE			23 39 40.0	
COWI				LR	LR			
	comp=Z,462nm,21.0s							
RAYN	Ar Rayn	113.18	292	ePKP	PKiKP		23 39 34.4	-0.5
RAYN				LR	LR			
	comp=Z,280nm,19.0s							
KIV	Kislovodsk	113.55	314	PFAKE			23 39 50.0	
KIV				LR	LR			
	comp=Z,251nm,20.0s							
HDIL	Hopedale	113.59	50	PFAKE			23 39 50.0	
HDIL				LR	LR			
	comp=Z,577nm,20.0s							
OBN	Obninsk	114.35	327	PFAKE			23 39 50.0	+14
OBN				LR	LR			
	comp=Z,213nm,19.0s							
BRAL	Brewton	116.61	60	PFAKE			23 39 50.0	+8.7
BRAL				LR	LR			
	comp=Z,724nm,22.0s							
AAM	Ann Arbor	117.40	47	PFAKE			23 39 50.0	+7.5
AAM				LR	LR			
	comp=Z,596nm,22.0s							
ACSO	Alum Creek Sta	118.38	49	PFAKE			23 40 00.0	+16
ACSO				LR	LR			
	comp=Z,425nm,20.0s							
JTS	JuntasAbangare	118.90	83	PFAKE			23 40 00.0	+14
JTS				LR	LR			
	comp=Z,454nm,20.0s							
SFJD	Kangerlussuaq	118.91	12	PFAKE			23 40 00.0	+15
SFJD				LR	LR			
	comp=Z,314nm,20.0s							
KMBO	Kilima Mbogo	119.24	264	PFAKE			23 40 00.0	+13
KMBO				LR	LR			
	comp=Z,410nm,20.0s							
GOGA	Godfrey	119.32	57	PFAKE			23 40 00.0	+14
GOGA				LR	LR			
	comp=Z,855nm,22.0s							
AKASG	Malin Array Be	120.17	324	PKP	PKPdf		23 39 46.4	-1.1
	comp=Z,2.3nm,0.7s,baz=58,slow=2.5,SNR=11							
KIEV	Kiev	120.19	324	ePKPdf	PKPdf		23 39 48.1	+0.5
KIEV				LR	LR			
	comp=Z,515nm,20.0s							
KIEV	Kiev	120.19	324	ePKIKP	PKPdf		23 39 48.1	+0.5
KIEV				MLR	MLR			
	comp=Z,515nm,20.0s							
LCO	Las Campanas	120.58	131	ePKPdf	PKPdf		23 39 49.3	-0.1
BLA	Blacksburg	121.02	52	PFAKE			23 40 00.0	+10
BLA				LR	LR			
	comp=Z,746nm,22.0s							
BRTR	Keskin Array B	121.09	311	PKP	PKPdf		23 39 49.1	-0.8
	comp=Z,1.4nm,0.8s,baz=151,slow=3.3,SNR=6.8							
ANTO	Ankara	121.68	312	PFAKE			23 40 00.0	+9.1
ANTO				LR	LR			
	comp=Z,153nm,21.0s							
SORM	Soroca	121.78	322⇑	iP	PKPdf		23 39 51.3	+0.6
SORM	Soroca	121.78	322	⇑PKIKP	PKPdf		23 39 51.3	+0.6
HFS	Hagfors	121.89	339	PKP	PKPdf		23 39 51.4	+0.9
	comp=Z,2.0nm,0.8s,baz=62,slow=3.4,SNR=4.2							
NB2	NORSAR Subarra	122.04	341	PKPdf	PKPdf		23 39 49.1	-1.8
	comp=Z,0.9nm,0.8s,baz=39,slow=1.9							
NHSC	New Hope	122.09	56	PFAKE			23 40 00.0	+8.3
NHSC				LR	LR			
	comp=Z,648nm,20.0s							
BINY	Binghamton	122.88	45	PFAKE			23 40 00.0	+6.9
BINY				LR	LR			
	comp=Z,618nm,21.0s							
LONY	Lake Ozonia	122.96	42	PFAKE			23 40 00.0	+6.9
LONY				LR	LR			
	comp=Z,379nm,20.0s							
CBN	Corbin Frederi	123.11	50	PFAKE			23 40 00.0	+6.5
CBN				LR	LR			
	comp=Z,692nm,19.0s							
CFR	Carcaliu	123.12	319⇑	iP	PKPdf		23 39 50.7	-2.7
CFR	Carcaliu	123.12	319	⇑PKIKP	PKPdf		23 39 50.7	-2.7
CNNC	Cliffs of the	123.48	53	PFAKE			23 40 10.0	+16
CNNC				LR	LR			
	comp=Z,815nm,20.0s							
VRI	Vrincioaia	123.75	320⇓	iP	PKPdf		23 39 55.2	+0.6
VRI	Vrincioaia	123.75	320	⇓PKIKP	PKPdf		23 39 55.2	+0.6
BCIP	Isla Barro Col	123.84	85	PFAKE			23 40 10.0	+14
BCIP				LR	LR			
	comp=Z,304nm,19.0s							
BURAR	Bucovina Array	123.91	323⇓	iP	PKPdf		23 39 57.4	+2.4
BURAR	Bucovina Array	123.91	323	⇓PKIKP	PKPdf		23 39 57.4	+2.4
LSZ	Lusaka	124.00	245	ePKPdf	PKPdf		23 39 56.0	-0.1
LSZ				LR	LR			
	comp=Z,533nm,19.0s							
OTAV	Otavalo	124.07	96	PFAKE			23 40 10.0	+13
OTAV				LR	LR			
	comp=Z,338nm,21.0s							
BORG	Borgarnes	124.11	359	PFAKE			23 40 10.0	+15
BORG				LR	LR			
	comp=Z,125nm,20.0s							
KWP	Kalwaria Pacla	124.37	326	ePKP	PKPdf		23 39 57.4	+1.7
KWP	Kalwaria Pacla	124.37	326	ePKIKP	PKPdf		23 39 57.4	+1.7
MLR	Muntele Rosu	124.40	320	PKP	PKPdf		23 39 55.3	-0.7
	comp=Z,0.6nm,0.9s,baz=90,slow=4.0							
MLR	Muntele Rosu	124.40	320⇓	iP	PKPdf		23 39 54.6	-1.4
MLR	Muntele Rosu	124.40	320	⇓PKIKP	PKPdf		23 39 54.6	-1.4
TRPA	Tarpa	125.23	324⇑	iP	PKPdf		23 39 56.8	-0.5
ARR	Arges	125.29	320⇑	iP	PKPdf		23 39 59.7	+2.1
HUMR	Humele	125.44	319⇑	iP	PKPdf		23 39 59.6	+1.8
OJC	Ojcow	125.63	328	ePKP	PKPdf		23 40 05.1	+7.0
OJC	Ojcow	125.63	328	ePKIKP	PKPdf		23 40 05.1	+7.0
MBAR	Mbarara	125.73	263	PFAKE			23 40 10.0	+10
MBAR				LR	LR			
	comp=Z,683nm,22.0s							
DRGR		125.80	323⇓	iP	PKPdf		23 39 59.9	+1.3
DRGR		125.80	323	⇓PKIKP	PKPdf		23 39 59.9	+1.3
NIE	Niedzica	125.81	327	ePKP	PKPdf		23 40 00.9	+2.4
NIE	Niedzica	125.81	327	ePKIKP	PKPdf		23 40 00.9	+2.4
PKME	Peaks-Kenny Pk	126.09	39	PFAKE			23 40 10.0	+11
PKME				LR	LR			
	comp=Z,728nm,21.0s							
OKC	Ostrava-Krasne	126.72	328	AMS	AMS		00 39 10.0	
	comp=Z,300nm,18.6s							
BZS	Buzias	127.04	322⇑	iP	PKPdf		23 40 02.4	+1.5
BZS	Buzias	127.04	322	⇑PKIKP	PKPdf		23 40 02.4	+1.5
MORC	Moravsky Berou	127.08	328⇑	iP	PKPdf		23 40 01.9	+1.0
MORC	Moravsky Berou	127.08	328	⇑PKIKP	PKPdf		23 40 01.9	+1.0
MORC	Moravsky Berou	127.08	328	ePKP	PKPdf		23 40 02.3	+1.4
VYHS	Vyhne	127.13	326	ePKIKP	PKPdf		23 40 03.2	+2.2
VYHS	Vyhne	127.13	326	ePKP	PKPdf		23 40 03.2	+2.2
KRLC	Kraliky	127.29	329	ePKP	PKPdf		23 40 06.5	+5.2
KRLC	Kraliky	127.29	329	ePKIKP	PKPdf		23 40 06.5	+5.2
DPC	Dobruska-Polom	127.35	329	AMS	AMS		00 35 00.0	
	comp=Z,400nm,15.9s							
UPC	Upice	127.41	330	AMS	AMS		00 33 10.0	
	comp=Z,400nm,21.1s							
VTS	Vitosha	127.44	318⇑	iP	PKPdf		23 40 04.0	+2.0
VTS	Vitosha	127.44	318	⇑PKIKP	PKPdf		23 40 04.0	+2.0
JAVC	Velka Javorina	127.55	327	ePKP	PKPdf		23 40 04.1	+2.3
VRAC	Vranov	127.85	328	ePKP	PKPdf		23 40 02.1	-0.2
KRUC	Moravsky	128.10	328	ePKP	PKPdf		23 40 03.7	+0.9
PVCC	Panska Ves	128.11	330	ePKP	PKPdf		23 40 05.8	+3.0
PVCC	Panska Ves	128.11	330	ePKIKP	PKPdf		23 40 05.8	+3.0
BRG	Berggiesshubel	128.19	331	ePKP	PKPdf		23 40 04.7	+1.8
	comp=Z,7.5nm,1.1s							
BRG				e			23 42 11.7	
	comp=Z,22nm,1.9s							
	comp=N,196nm,17.1s							
	comp=E,155nm,19.1s							
	comp=Z,379nm,19.1s							
BRG	Berggiesshubel	128.19	331	ePKIKP	PKPdf		23 40 04.7	+1.8
BRG				e			23 42 11.6	
BRG				pmax	pmax			
	comp=Z,8.0nm,1.1s							
BRG				pmax	pmax			
	comp=Z,22nm,1.9s							
BRG				MLR	MLR			
	comp=N,196nm,17.1s							
BRG				MLR	MLR			
	comp=E,155nm,19.1s							
BRG				MLR	MLR			
	comp=Z,379nm,19.1s							
CLL	Collm	128.34	332	ePKPdf	PKPdf		23 40 03.0	-0.2
	comp=Z,6.0nm,1.0s							
CLL				ePPS	PPS		23 53 30.0	
CLL				eSS	SS		23 59 12.0	-9.0
CLL				eSSS	SSS		00 04 00.0	
CLL				LmH			00 34 00.0	
	comp=N,300nm,18.3s							
CLL				LmH			00 34 00.0	
	comp=E,300nm,19.1s							
CLL				LmV			00 38 00.0	
	comp=Z,400nm,18.9s							
CLL	Collm	128.34	332	ePKIKP	PKPdf		23 40 03.0	-0.2
CLL				pmax	pmax			
	comp=Z,6.0nm,1.0s							
CLL				MLR	MLR			
	comp=Z,400nm,18.9s							
GOPC	GO Pecny, Ondr	128.40	330	AMS	AMS		00 40 10.0	
	comp=Z,400nm,18.6s							
PRU	Pruhonice	128.47	330	AMS	AMS		00 40 20.0	
	comp=Z,400nm,17.3s							
PRA	Prague	128.47	330	AMS	AMS		00 35 10.0	
	comp=Z,400nm,19.6s							
LPAZ	La Paz	128.80	119	PKP	PKPdf		23 40 05.3	-0.6
	comp=Z,7.6nm,1.0s,baz=313,slow=2.3,SNR=18							
NKC	Novy Kostel	129.33	331	AMS	AMS		00 36 00.0	
	comp=Z,400nm,18.6s							
KHC	Kasperske Hory	129.50	330	ePKP	PKPdf		23 40 07.5	+2.0
KHC				epPKP	pPKPdf		23 40 10.3	-2.7
KHC				AMS	AMS		00 38 50.0	
	comp=Z,300nm,20.7s							
KHC	Kasperske Hory	129.50	330	ePKIKP	PKPdf		23 40 07.5	+2.0
KHC				e			23 40 10.3	
KHC				MLR	MLR			
	comp=Z,300nm,20.7s							
GERES	GERESS Array B	129.63	329	PKP	PKPdf		23 40 03.9	-2.0
	comp=Z,1.3nm,0.8s,baz=94,slow=1.9,SNR=9.9							
PERS	Pernice	130.26	326	ePKPdf	PKPdf		23 40 08.8	+1.7
SOKA	Soboth	130.28	326	i PKiKP	PKPdf		23 40 06.9	-0.2
	comp=Z,5.2nm,1.3s							
OBKA	Obir	130.65	326	i PKPdf	PKPdf		23 40 07.0	-0.9
	comp=Z,4.5nm,1.2s							
VISS	Visnje	130.91	325	i PKPdf	PKPdf		23 40 10.6	+2.3
KBA	Koelnbreinsper	130.94	328	i pPKPdf	PKPdf		23 40 10.3	+1.8
	comp=Z,1.4nm,0.5s							
ESK	Eskdalemuir	131.01	345	PFAKE			23 40 20.0	+12
ESK				LR	LR			
	comp=Z,323nm,20.0s							
JAVS	Javornik	131.29	326	i PKPdf	PKPdf		23 40 10.

BBSR				LR	LR				
	comp=Z,592nm,21.0s								
SAML	**Samuel**	**136.21**	**113**	*e*PKPdf	**PKPdf**	**23**	**40**	**18.1**	**-1.0**
SAML				LR	LR				
	comp=Z,310nm,21.0s								
SJG	**San Juan**	**137.05**	**73**	PFAKE		23	40	30.0	+10
SJG				LR	LR				
	comp=Z,251nm,22.0s								
ANWB	**Willy Bob**	**141.22**	**73**	PFAKE		23	40	40.0	+12
ANWB				LR	LR				
	comp=Z,334nm,22.0s								
EMHD	**Djebel Mahouad**	**143.94**	**323**	P	**PKPdf**	**23**	**40**	**36.7**	**+4.0**
PGAV	**Gavieira, Arco**	**144.50**	**341**	*e*LR	LR	00	32	01.4	
	comp=Z,329nm,20.0s								
EBNR	**Beni Rached**	**144.71**	**325**	P	**PKPdf**	**23**	**40**	**35.1**	**+1.2**
MVO	**Moncorvo**	**144.80**	**339**	*e*PKP	**PKPdf**	**23**	**40**	**33.9**	**-0.1**
MVO	**Moncorvo**	**144.80**	**339**	*e*LR	LR	00	38	44.9	
	comp=Z,216nm,18.0s								
ESDC	**Sonseca Array**	**144.87**	**334**	PKP	**PKPab**	**23**	**40**	**32.7**	**-0.4**
	comp=Z,6.1nm,0.9s,baz=35,slow=3.1,SNR=18								
POLO	**Lamas de Olo**	**144.88**	**340**	*e*PKP	**PKPdf**	**23**	**40**	**35.0**	**+0.9**
ECHA	**Ech Chlef**	**144.90**	**325**	P	**PKPab**	**23**	**40**	**33.0**	**-0.2**
PAB	**San Pablo**	**145.14**	**334**	*e*PKPdf	**PKPbc**	**23**	**40**	**33.7**	**-0.4**
PAB				LR	LR				
	comp=Z,366nm,21.0s								
PAB	**San Pablo**	**145.14**	**334**	*e*PKIKP	**PKPbc**	**23**	**40**	**33.7**	**-0.4**
PAB				MLR	MLR				
	comp=Z,366nm,21.0s								
PVIS	**Viseu**	**145.50**	**340**	*e*PKP	**PKPab**	**23**	**40**	**35.3**	**-0.1**
MTE	**Manteigas**	**145.66**	**339**	*e*PKP	**PKPab**	**23**	**40**	**36.2**	**+0.2**
MTE	**Manteigas**	**145.66**	**339**	*e*LR	LR	00	35	23.4	
	comp=Z,190nm,18.0s								
PCBR	**Castelo Branco**	**146.12**	**338**	*e*PKP	**PKPdf**	**23**	**40**	**35.9**	**-0.3**
PMRV	**Marv??o**	**146.46**	**338**	*e*PKP	**PKPab**	**23**	**40**	**40.0**	**+1.0**
PTOM	**Tomar**	**146.65**	**339**	*e*PKP	**PKPbc**	**23**	**40**	**39.0**	**+0.4**
PMTG	**Montargil**	**147.08**	**339**	*e*PKP	**PKPab**	**23**	**40**	**41.4**	**0.0**
ALMR	**Almeirim**	**147.12**	**339**	*e*PKP	**PKPdf**	**23**	**40**	**37.8**	**-0.1**
ALMR	**Almeirim**	**147.12**	**339**	*e*PKP	**PKPab**	**23**	**40**	**41.0**	**-0.5**
ALMR	**Almeirim**	**147.12**	**339**	*e*PKIKP	**PKPdf**	**23**	**40**	**37.7**	**-0.1**
PBAR	**Barrancos**	**147.41**	**336**	*e*PKP	**PKPbc**	**23**	**40**	**40.8**	**0.0**
EVO	**Evora**	**147.47**	**338**	*e*PKP	**PKPbc**	**23**	**40**	**41.2**	**+0.2**
PBEJ	**Beja**	**147.86**	**337**	*e*PKP	**PKPbc**	**23**	**40**	**42.4**	**+0.3**
PNCL	**Nicolau / Gran**	**148.03**	**338**	*e*PKP	**PKPab**	**23**	**40**	**44.6**	**-0.6**
MESJ	**Messejana**	**148.16**	**338**	*e*PKP	**PKPdf**	**23**	**40**	**39.8**	**+0.1**
MESJ				AMS	AMS	00	55	37.7	
	comp=Z,227nm,20.3s								
MESJ	**Messejana**	**148.16**	**338**	*e*PKP	**PKPab**	**23**	**40**	**45.1**	**-0.6**
MESJ	**Messejana**	**148.16**	**338**	*e*PKIKP	**PKPdf**	**23**	**40**	**39.7**	**+0.1**
PCVE	**Castro Verde**	**148.27**	**337**	*e*PKP	**PKPbc**	**23**	**40**	**42.9**	**-0.3**
PVAQ	**Vaqueiros**	**148.34**	**337**	*e*PKP	**PKPbc**	**23**	**40**	**43.1**	**-0.3**
PVAQ	**Vaqueiros**	**148.34**	**337**	*e*LR	LR	00	35	06.5	
	comp=Z,250nm,20.0s								
PBDV	**Barranco-do-Ve**	**148.57**	**337**	*e*PKP	**PKPab**	**23**	**40**	**46.7**	**-0.7**
PTEO	**Sao Teotonio**	**148.61**	**338**	*e*PKP	**PKPab**	**23**	**40**	**46.0**	**-1.5**
MORF	**Marmelete**	**148.79**	**338**	*e*PKP	**PKPdf**	**23**	**40**	**40.3**	**-0.4**
MORF				AMS	AMS	00	43	53.7	
	comp=Z,257nm,21.0s								
MORF	**Marmelete**	**148.79**	**338**	*e*PKIKP	**PKPdf**	**23**	**40**	**40.3**	**-0.4**
TORD	**Torodi Ar. Bea**	**155.44**	**282**	PKP	**PKPdf**	**23**	**40**	**49.4**	**-1.8**
	comp=Z,1.6nm,1.1s,baz=66,slow=0.2,SNR=3.6								
TORD				PKPbc	**pPKPdf**	**23**	**40**	**59.3**	**+0.6**
	comp=Z,6.1nm,1.1s,baz=42,slow=2.0,SNR=9.8								
SACV	**Santiago Islan**	**173.81**	**6**	PFAKE		23	41	20.0	+13
SACV				LR	LR				
	comp=Z,323nm,19.0s								

KRSC 20 23:29:27.5±1.5, 50°.25N×157°.14E, h49km±20km, ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.79**	**304**	*e*P	Pn	23 29 42.3	0.0
SKR				*e*S	Sn	23 29 52.5	-0.5
PAU	**Pauzhetka**	**1.24**	**351**	*e*P	Pn	23 29 50.2	+1.8
PAU				*e*S	Sn	23 30 06.4	+2.4
KDTR	**Khodutka, Kamc**	**1.67**	**20**	*e*P	Pn	23 29 56.3	+2.0
KDTR				*e*S	Sn	23 30 17.0	+2.4
ASAK	**Asacha**	**2.19**	**12**	*e*P	Pn	23 30 04.2	+2.7
MTVR	**Mutnovka**	**2.33**	**16**	*e*P	Pn	23 30 06.4	+2.9
MTVR				*e*S	Sn	23 30 34.0	+3.0
RUS	**Russkaya**	**2.35**	**21**	*e*P	Pn	23 30 05.8	+2.2
RUS				*e*S	Sn	23 30 33.5	+2.2
KRMR	**Karymshinskiy**	**2.66**	**13**	*e*P	Pn	23 30 12.1	+4.3
KRMR				*e*S	Sn	23 30 42.8	+4.0
UGLR	**Uglovaya**	**3.15**	**19**	*e*P	Pn	23 30 18.3	+3.7
AVH	**Avacha**	**3.18**	**18**	*e*P	Pn	23 30 18.9	+3.8
KOK	**Koryaka**	**3.19**	**16**	*e*P	Pn	23 30 19.0	+3.8
KRER	**Koryakskii**	**3.22**	**17**	*e*P	Pn	23 30 19.6	+3.9
SDLR	**Sedlovina**	**3.23**	**19**	*e*P	Pn	23 30 20.2	+4.5
KRX	**Arik**	**3.26**	**16**	*e*P	Pn	23 30 20.0	+3.9
SPN	**Mys Shipunski**	**3.37**	**31**	*e*P	Pn	23 30 22.0	+4.4
SPN				*e*S	Sn	23 31 00.9	+4.6
GNL	**Ganaly**	**3.49**	**8**	*e*P	Pn	23 30 23.2	+3.9
GNL				*e*S	Sn	23 31 03.3	+3.9
MKZ	**Mys Kozlova**	**5.15**	**31**	*e*P	Pn	23 30 43.7	+1.8
KBTR	**Krutoberegovo**	**6.88**	**28**	*e*P	Pn	23 31 09.5	+3.9

*ATA **20** 23:34:00.2±1.1, 39°.13N×42°.25E, h20km±8km, ML2.8, MW2.5*
*ISK **20** 23:34:01.4, 39°.20N×42°.21E, h4km, ML1.7/4*
*ISCJB **20** 23:34:02.6±0.5, 39°.16N±0°.03×42°.26E±0°.04, h12km±5km, Error ellipse: s-maj=5.5km s-min=5.2km az=174.8*
*CSEM **20** 23:34:02.2±0.2, 39°.19N×42°.24E, h10km, ML2.4, Error ellipse: s-maj=4.8km s-min=4.6km az=162.0*
*DDA **20** 23:34:02.7, 39°.18N×42°.26E, h7km, Ml2.4*
ISC 20 23:34:02.7±1.0, 39°.17N±0°.03×42°.22E±0°.03, h13km±7km, n21, σ0°94/33, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKAR	**Karacoban**	**0.15**	**304**	*e*P	**Pg**	**23**	**34**	**06.1**	**-0.5**
EKAR				*e*S	**Sg**	**23**	**34**	**10.4**	**+1.0**
EKAR				IAML		23	34	11.7	
	comp=Z,55nm,0.2s								
EKAR	**Karacoban**	**0.15**	**304**	*i* P	**Pg**	**23**	**34**	**06.2**	**-0.5**
EKAR	**Karacoban**	**0.15**	**304**	P	**Pg**	**23**	**34**	**06.2**	**-0.5**
TUTA	**Tutak**	**0.51**	**63**	*e*P	**Pg**	**23**	**34**	**11.8**	**-1.0**
TUTA				*e*S	**Sg**	**23**	**34**	**19.3**	**-0.4**
TUTA				IAML		23	34	20.6	
	comp=Z,77nm,0.2s								
TUTA	**Tutak**	**0.51**	**63**	*i* P	**Pg**	**23**	**34**	**11.9**	**-1.0**
TUTA				*i* S	**Sg**	**23**	**34**	**19.4**	**-0.4**
TUTA	**Tutak**	**0.51**	**63**	P	**Pg**	**23**	**34**	**11.9**	**-1.0**
TUTA				S	**Sg**	**23**	**34**	**19.4**	**-0.4**
ADCV	**BITLIS_Adilcev**	**0.53**	**133**	*i* P	**Pg**	**23**	**34**	**12.9**	**-0.4**
ADCV				*i* S	**Sb**	**23**	**34**	**21.0**	**-0.7**
ADCV	**BITLIS_Adilcev**	**0.53**	**133**	P	**Pg**	**23**	**34**	**12.9**	**-0.4**
ADCV				S	**Sb**	**23**	**34**	**21.0**	**-0.7**
GURO	**Guroymak-BITLI**	**0.64**	**194**	PG	**Pg**	**23**	**34**	**15.0**	**-0.2**
GURO				SG	**Sb**	**23**	**34**	**24.9**	**+0.3**
GURO	**Guroymak-BITLI**	**0.64**	**194**	*e*Pg	**Pg**	**23**	**34**	**15.0**	**-0.2**
GURO				*e*Sg	**Sb**	**23**	**34**	**24.9**	**+0.3**
AGRB	**Hanur-Agry**	**0.72**	**56**	PG	**Pg**	**23**	**34**	**15.8**	**-1.0**
AGRB	**Hanur-Agry**	**0.72**	**56**	*e*Pg	**Pg**	**23**	**34**	**15.8**	**-1.0**
EATA	**Eleskirt**	**0.72**	**17**	*e*P	**Pg**	**23**	**34**	**16.2**	**-0.6**
EATA				*e*S	**Sb**	**23**	**34**	**27.4**	**+0.2**
EATA	**Eleskirt**	**0.72**	**17**	*i* P	**Pn**	**23**	**34**	**21.3**	**+2.4**
EATA				*i* S	**Sb**	**23**	**34**	**27.2**	**0.0**
BNGL	**BINGOL**	**0.86**	**256**	*e*P	**Pg**	**23**	**34**	**17.0**	**-2.5**
ECAT	**Cat-ERZURUM**	**1.06**	**295**	*i* P	**Pg**	**23**	**34**	**22.1**	**-1.1**
ECAT				*i* S	**Sn**	**23**	**34**	**39.1**	**+1.0**
ECAT	**Cat-ERZURUM**	**1.06**	**295**	P	**Pg**	**23**	**34**	**22.1**	**-1.1**
ECAT				S	**Sn**	**23**	**34**	**39.1**	**+1.0**
YEDI	**Yedisu-Bingol**	**1.33**	**282**	PN	**Pn**	**23**	**34**	**27.2**	**+0.1**
YEDI	**Yedisu-Bingol**	**1.33**	**282**	*e*Pn	**Pn**	**23**	**34**	**27.2**	**+0.1**
SENK	**Senkaya-Erzuru**	**1.39**	**4**	PN	**Pn**	**23**	**34**	**27.9**	**-0.1**
SENK	**Senkaya-Erzuru**	**1.39**	**4**	*e*Pn	**Pn**	**23**	**34**	**27.9**	**-0.1**

*DDA **20** 23:37:20.0, 37°.20N×42°.49E, h8km, Ml2.6*
*ISK **20** 23:37:19.5, 37°.24N×42°.43E, h5km, ML2.2/5*
*CSEM **20** 23:37:20.0±0.2, 37°.21N×42°.53E, h5km, ML2.2, Error ellipse: s-maj=8.2km s-min=3.5km az=57.0*
*ISN **20** 23:37:22.5±0.3, 37°.10N×42°.73E, h0km, ML1.9*
ISC 20 23:37:19.4±2.7, 37°.18N±0°.09×42°.53E±0°.10, h4km±11km, n21, σ0°31/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRT	**Sirnak**	**0.33**	**347**	PG	**Pg**	**23**	**37**	**25.8**	**0.0**
SIRT				SG	**Sg**	**23**	**37**	**30.4**	**+0.2**
SIRT	**Sirnak**	**0.33**	**347**	*e*Pg	**Pg**	**23**	**37**	**25.8**	**0.0**
SIRT				*e*Sg	**Sg**	**23**	**37**	**30.4**	**+0.2**
SIRN	**S¨–rnak**	**0.33**	**344**	*i* P	**Pg**	**23**	**37**	**25.7**	**-0.1**
SIRN				*i* S	**Sg**	**23**	**37**	**30.0**	**-0.2**
SIRN	**S¨–rnak**	**0.33**	**344**	P	**Pg**	**23**	**37**	**25.7**	**-0.1**
SIRN				S	**Sg**	**23**	**37**	**30.0**	**-0.2**
SRTM	**Siirt_Merkez**	**0.94**	**329**	*i* P	**Pb**	**23**	**37**	**38.2**	**-0.2**
SRTM				*i* S	**Sb**	**23**	**37**	**51.4**	**0.0**
SRTM	**Siirt_Merkez**	**0.94**	**329**	P	**Pb**	**23**	**37**	**38.2**	**-0.2**
SRTM				S	**Sb**	**23**	**37**	**51.4**	**0.0**
BTMN	**Batman**	**1.23**	**306**	*i* P	**Pg**	**23**	**37**	**42.9**	**-0.1**
BTMN				*i* S	**Sb**	**23**	**37**	**59.3**	**-0.2**
BTMN	**Batman**	**1.23**	**306**	P	**Pg**	**23**	**37**	**42.9**	**-0.1**
BTMN				S	**Sb**	**23**	**37**	**59.3**	**-0.2**
MARD	**Mardin**	**1.40**	**276**	*i* P	**Pn**	**23**	**37**	**45.2**	**-0.8**
MARD				*i* S	**Sg**	**23**	**38**	**04.4**	**-0.1**
GURO	**Guroymak-BITLI**	**1.43**	**344**	PN	**Pn**	**23**	**37**	**46.3**	**0.0**
GURO	**Guroymak-BITLI**	**1.43**	**344**	*e*Pn	**Pn**	**23**	**37**	**46.3**	**0.0**
SVAN	**Silvan-Diyarba**	**1.44**	**313**	PN	**Pn**	**23**	**37**	**45.9**	**-0.4**
SVAN	**Silvan-Diyarba**	**1.44**	**313**	*i* P	**Pn**	**23**	**37**	**46.4**	**0.0**
SVAN				*i* S	**Sn**	**23**	**38**	**05.6**	**0.0**
SVAN	**Silvan-Diyarba**	**1.44**	**313**	*e*Pn	**Pn**	**23**	**37**	**45.9**	**-0.4**
SVAN	**Silvan-Diyarba**	**1.44**	**313**	P	**Pn**	**23**	**37**	**46.3**	**0.0**
SVAN				S	**Sn**	**23**	**38**	**05.6**	**0.0**
MAZI	**Mazidag**	**1.68**	**280**	PN	**Pn**	**23**	**37**	**49.8**	**0.0**
MAZI	**Mazidag**	**1.68**	**280**	*e*Pn	**Pn**	**23**	**37**	**49.8**	**0.0**
HANI	**Diyarbakir_Han**	**2.09**	**307**	*i* P	**Pb**	**23**	**37**	**58.7**	**+0.7**
HANI				*i* S	**Sb**	**23**	**38**	**24.1**	**-0.2**
HANI	**Diyarbakir_Han**	**2.09**	**307**	P	**Pb**	**23**	**37**	**58.7**	**+0.7**
HANI				S	**Sb**	**23**	**38**	**24.1**	**-0.2**
SVRC	**Sivrice-ELAZID**	**2.82**	**296**	PN	**Pn**	**23**	**38**	**05.9**	**+0.4**
SVRC	**Sivrice-ELAZID**	**2.82**	**296**	*e*Pn	**Pn**	**23**	**38**	**05.9**	**+0.4**

*NIED **20** 23:56:00, 36°.90N×141°.20E, h50km, Mw4.5 Best double couple: M0:6.02000×10^15 NP1:φ0=193.00000°, δ=25.00000°, λ=53.00000°. NP2:φ0=53.00000°, δ=70.00000°, λ=106.00000°.*
*MOS **20** 23:56:31.5±1.1, 36°.96N×141°.05E, h46km, mb4.6/42, Error ellipse: s-maj=9.2km s-min=5.3km az=92.1*
*JMA **20** 23:56:32.2±0.1, 36°.86N×141°.16E, h49km±1km, M4.4*
JMA Felt III J1.
*BJI **20** 23:56:32.1, 36°.80N×140°.87E, h41km, mb4.6/31, mB5.0/12, Ms4.5/9, Ms7 4.2/4*
*IDC **20** 23:56:33.8±1.9, 36°.92N×141°.02E, h55km±16km, mb4.1/27, mb1 4.3/31, mb1mx4.1/67, mbtmp4.4/31, ML4.4/3, MS3.6/9, Ms1 3.6/9, ms1mx3.3/67, Error ellipse: s-maj=13.9km s-min=11.1km az=118.0*
*NEIC **20** 23:56:34.0±0.5, 36°.99N×140°.97E, h52km±4km, mb4.5/83, Error ellipse: s-maj=5.0km s-min=3.5km az=154.0*
NEIC Recorded [3 JMA] in Fukushima.
ISC 20 23:56:31.3±0.7, 36°.82N±0°.04×141°.32E±0°.05, h40km±6km, n297, σ1°69/304, mb4.5/133, MS3.7/8, 17C-12D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.50**	**304**	P	**Pn**	**23**	**56**	**41.9**	**-0.3**
ONAJ				S	**Sn**	**23**	**56**	**48.5**	**-1.3**
JHO	**Hitachi**	**0.64**	**251**	P	**Pn**	**23**	**56**	**43.7**	**-0.2**
JHO				S	**Sn**	**23**	**56**	**51.7**	**-1.2**
JFK	**Kawauchi**	**0.65**	**327**	P	**Pn**	**23**	**56**	**43.8**	**-0.4**
JFK				S	**Sn**	**23**	**56**	**51.7**	**-1.6**
JFT	**Otama**	**1.05**	**312**	P	**Pn**	**23**	**56**	**50.0**	**+0.4**
JFT				S	**Sn**	**23**	**57**	**02.3**	**-0.7**
JYT	**Yasato**	**1.08**	**237**	P	**Pn**	**23**	**56**	**49.9**	**-0.1**
JYT				S	**Sn**	**23**	**57**	**02.8**	**-1.0**
JMM	**Marumori**	**1.12**	**338**	P	**Pn**	**23**	**56**	**50.3**	**-0.3**
JMM				S	**Sn**	**23**	**57**	**03.5**	**-1.3**
JSB	**Shiboa**	**1.13**	**278**	P	**Pn**	**23**	**56**	**50.9**	**+0.2**
JSB				S	**Sn**	**23**	**57**	**04.4**	**-0.6**
JFY	**Yanaizu**	**1.42**	**295**	P	**Pn**	**23**	**56**	**54.4**	**-0.2**
JAG	**Ashikaga**	**1.55**	**256**	P	**Pn**	**23**	**56**	**56.4**	**-0.1**
JAG				S	**Sn**	**23**	**57**	**14.1**	**-1.3**
MJAR	**Matsushiro Arr**	**2.51**	**265**	P	**Pn**	**23**	**57**	**10.5**	**+0.8**
	54nm,0.3s,baz=100,slow=30,SNR=191								
MJAR				S	**Sn**	**23**	**57**	**41.1**	**+2.0**
	61nm,0.3s,baz=180,slow=26,SNR=9.4								
MAJO	**Matsushiro**	**2.52**	**265**	*e*Pn	**Pn**	**23**	**57**	**10.5**	**+0.7**
MAJO	**Matsushiro**	**2.52**	**265**	*d i* P	**Pn**	**23**	**57**	**10.9**	**+1.2**
MAT	**Matsushiro**	**2.52**	**265**	P	**Pn**	**23**	**57**	**10.9**	**+1.2**
MAT				S	**Sn**	**23**	**57**	**41.2**	**+2.0**
MJB9	**Matsu-Tunnel**	**2.52**	**265**	*e*Pn	**Pn**	**23**	**57**	**11.1**	**+1.3**
JHJ2	**Mitsune**	**3.90**	**199**	*e*Pn	**Pn**	**23**	**57**	**30.9**	**+2.1**
JHJ	**Hachijo jima 2**	**3.90**	**199**	P	**Pn**	**23**	**57**	**31.3**	**+2.5**
	96nm,0.3s,baz=90,slow=19,SNR=17								
JHJ				S	**Sn**	**23**	**58**	**14.2**	**+0.8**
	94nm,0.3s,baz=73,slow=20,SNR=5.6								
ERM	**Erimo**	**5.38**	**15**	*e*Pn	**Pn**	**23**	**57**	**49.1**	**+0.1**
ERM				*e*Sn	**Sn**	**23**	**58**	**46.7**	**-2.9**
ERM	**Erimo**	**5.38**	**15**	*c i* P	**Pn**	**23**	**57**	**49.8**	**+0.8**
ASAJ	**Asahikawa**	**7.35**	**7**	P	**Pn**	**23**	**58**	**16.3**	**+0.2**
	6.3nm,0.3s,baz=209,slow=15,SNR=14								
ASAJ				S	**Sn**	**23**	**59**	**38.8**	**+0.7**
	2.4nm,0.3s,baz=252,slow=20,SNR=2.5								
ASAJ	**Asahikawa**	**7.35**	**7**	*e*Pn	**Pn**	**23**	**58**	**15.2**	**-0.9**
ASAJ				S	**Sn**	**23**	**59**	**38.8**	**+0.7**
YUK	**Yuzh-Kuril'sk**	**7.99**	**24**	*e*P	**Pn**	**23**	**58**	**25.6**	**+0.7**
YUK				*e*S	**Sn**	**23**	**59**	**50.0**	**-3.9**
YUK				pmax	pmax				
	comp=N,143nm,0.5s								
YUK				pmax	pmax				
	comp=E,147nm,0.5s								
YUK				pmax	pmax				
	comp=Z,147nm,0.5s								
SHO	**Shikotan**	**8.20**	**29**	*e*P	**Pn**	**23**	**58**	**26.6**	**-1.1**
SHO				pmax	pmax				
	comp=E,18nm,0.6s								
SHO				pmax	pmax				
	comp=Z,25nm,0.6s								
SHO				pmax	pmax				
	comp=N,18nm,0.2s								
TEY	**Ternei**	**8.95**	**338**	*e*P	**Pn**	**23**	**58**	**41.0**	**+3.1**
JNU	**Nakatsue**	**9.33**	**250**	P	**Pn**	**23**	**58**	**46.8**	**+3.5**
	comp=N,0.7nm,0.3s,baz=100,slow=6.4,SNR=5.0								
MSHR	**Mys Shultsa**	**9.71**	**309**	*e*P	**Pn**	**23**	**58**	**45.6**	**-2.8**
CBIJ	**Chichi jima**	**9.73**	**175**	P	**Pn**	**23**	**58**	**47.4**	**-1.3**
CBIJ				S	**Sn**	**00**	**00**	**30.1**	**-6.6**
JCJ	**Chichijima**	**9.73**	**175**	P	**Pn**	**23**	**58**	**47.4**	**-1.3**
	comp=N,17nm,0.3s,baz=266,slow=20,SNR=4.6								
JCJ				S	**Sn**	**00**	**00**	**30.1**	**-6.6**
	baz=273,slow=18								
KUR	**Kuril'sk**	**9.75**	**28**	P	**Pn**	**23**	**58**	**49.5**	**+0.6**
KUR				*i* S	**Sn**	**00**	**00**	**31.8**	**-5.2**
KUR				pmax	pmax				
	comp=Z,48nm,0.5s								
KUR				smax	smax				
	comp=E,86nm,0.6s								
KUR				smax	smax				
	comp=N,55nm,0.4s								
YSS	**Yuzh-Sakhalins**	**10.18**	**6**	*e*Pn	**Pn**	**23**	**58**	**54.1**	**-0.7**
	comp=N,20nm,0.6s								
YSS	**Yuzh-Sakhalins**	**10.18**	**6**	*e*P	**Pn**	**23**	**58**	**55.8**	**+1.0**
YSS				*e*S	**Sn**	**00**	**00**	**43.0**	**-4.6**
YSS				pmax	pmax				
	comp=Z,30nm,0.5s								
YSS				pmax	pmax				
	comp=N,30nm,0.4s								
YSS				smax	smax				
	comp=N,20nm,0.3s								
YSS				smax	smax				
	comp=E,20nm,0.2s								
USRK	**Ussuriysk Ar.**	**10.23**	**319**	P	Pn	23	58	59.9	+4.4
	comp=E,1.6nm,0.3s,baz=133,slow=13,SNR=19								
USRK				LR	LR	00	02	36.1	
	comp=E,522nm,19.6s,baz=121,slow=36								
KSRS	**Korea Array**	**10.71**	**277**	P	Pn	23	59	07.1	+4.9
	comp=E,0.3nm,0.3s,baz=90,slow=14,SNR=11								
KSRS				LR	LR	00	02	30.0	
	comp=E,416nm,19.2s,baz=114,slow=34								
KSAR	**Wonju Array Be**	**10.74**	**277**	P	Pn	23	59	07.1	+4.5
KSAR	**Wonju Array Be**	**10.74**	**277**	P	Pn	23	59	07.1	+4.5
TJN	**Taejon**	**11.23**	**272**	*e*P	**Pn**	**23**	**59**	**05.9**	**-3.3**
MDJ	**Mudanjiang**	**11.81**	**315**	P	**Pn**	**23**	**59**	**19.5**	**+2.3**
MDJ				pmax	pmax				
	comp=E,22nm,0.7s								
MDJ				pmax	pmax				
	comp=E,310nm,5.1s								
TYV	**Tymovskoe**	**14.07**	**3**	*e*P	**Pn**	**23**	**59**	**49.6**	**+1.7**
TYV				pmax	pmax				
	comp=Z,34nm,0.7s								
KLR	**Kul'dur**	**14.22**	**334**	P	**Pn**	**23**	**59**	**50.5**	**+0.5**
	comp=Z,0.0nm,0.3s,baz=164,slow=12,SNR=4.1								
KLR	**Kul'dur**	**14.22**	**334**	*e*P	**Pn**	**23**	**59**	**49.2**	**-0.8**
NJ2	**Nanjing**	**19.12**	**262**	*e*P	**Pn**	**00**	**00**	**51.1**	**-0.8**
NJ2				pmax	pmax				
	comp=Z,10.0nm,0.5s								
PETK	**Petropavlovsk-**	**19.91**	**30**	P	**Pn**	**00**	**01**	**01.5**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=197,slow=8.4,SNR=3.2								
GUMO	**Guam**	**23.35**	**171**	LR	LR	00	13	11.5	
	comp=Z,77nm,18.4s,baz=36,slow=42								
HHC	**Hu-ho-hao-te**	**23.47**	**289**	*e*P	**P**	**00**	**01**	**36.8**	**-0.5**
HHC				PP	**PnPn**	**00**	**02**	**07.8**	**+3.0**
HHC				S	**S**	**00**	**05**	**42.3**	**-5.7**
HHC				pmax	pmax				
	comp=Z,14nm,0.7s								
HHC				pmax	pmax				
	comp=E,160nm,5.4s								
HHC				LR	LR				
	comp=Z,830nm,13.8s								
HHC				LR	LR				
	comp=Z,650nm,9.5s								
HHC				LR	LR				
	comp=Z,920nm,15.6s								
MA2	**Magadan**	**23.58**	**12**	P	**P**	**00**	**01**	**37.7**	**-0.3**
	comp=Z,15nm,0.8s,baz=211,slow=7.4,SNR=7.3								
MA2	**Magadan**	**23.58**	**12**	*e*P	**P**	**00**	**01**	**38.3**	**+0.3**
MA2				pmax	pmax				
	comp=Z,43nm,2.5s								
YAK	**Yakutsk**	**26.26**	**348**	*e*P	**P**	**00**	**02**	**01.9**	**-0.5**
YAK	**Yakutsk**	**26.26**	**348**	*i* P	**P**	**00**	**02**	**02.0**	**-0.5**
YAK				pmax	pmax				
	comp=Z,76nm,1.0s								
SEY	**Seymchan**	**27.01**	**11**	P	**P**	**00**	**02**	**10.3**	**+1.0**
	comp=Z,18nm,0.9s,baz=197,slow=8.4,SNR=24								
ENH	**Enshi**	**27.24**	**265**	*e*P	**P**	**00**	**02**	**10.5**	**-1.2**
	comp=Z,8.4nm,0.6s								
ULN	**Ulaanbaatar**	**27.41**	**305**	*e*P	**P**	**00**	**02**	**10.7**	**-2.4**
	comp=Z,4.3nm,0.9s								
SONA1	**Songino Array**	**27.84**	**304**	*e*P	**P**	**00**	**02**	**16.0**	**-1.0**
SONM	**Songino Array**	**27.84**	**304**	P	**P**	**00**	**02**	**14.8**	**-2.2**
	comp=Z,2.5nm,0.7s,baz=110,slow=7.5,SNR=9.5								
H11N2	**WAKE ISLAND Hy**	**28.11**	**120**	T	T	00	31	55.3	
	baz=313,slow=75,SNR=404								
H11N1	**WAKE ISLAND Hy**	**28.11**	**120**	T	T	00	32	03.2	
	baz=313,slow=75,SNR=452								
H11N3	**WAKE ISLAND Hy**	**28.12**	**120**	T	T	00	32	03.1	
	baz=313,slow=75,SNR=380								
H11S1	**WAKE ISLAND Hy**	**28.81**	**122**	T	T	00	33	19.6	
	baz=314,slow=76,SNR=253								
H11S3	**WAKE ISLAND Hy**	**28.81**	**122**	T	T	00	33	01.1	
	baz=314,slow=76,SNR=445								
H11S2	**WAKE ISLAND Hy**	**28.83**	**122**	T	T	00	33	11.7	
	baz=314,slow=76,SNR=220						

ARU	Arti	56.47	319	*i* P		P	00 06 08.1	-0.8
ARU				pmax	pmax			
comp=Z,14nm,0.8s								
WRAB	Tennant Creek	56.83	188	*e*P		P	00 06 14.4	+2.6
comp=Z,3.4nm,0.6s								
WRAB	Tennant Creek	56.83	188⇑	*e*P		P	00 06 12.2	+0.4
WRAB				pmax	pmax			
comp=Z,2.0nm,0.8s								
WB2	Warramunga Arr	56.84	188	*e*P		P	00 06 14.8	+2.9
WRA	Warramunga Arr	56.84	188	P		P	00 06 12.4	+0.5
comp=Z,1.3nm,0.6s,baz=3.6,slow=7.4,SNR=27								
KBL	Kabul	57.42	291	*e*P		P	00 06 15.6	-0.7
comp=Z,8.2nm,1.0s								
KBL	Kabul	57.42	291	P		P	00 06 15.5	-0.7
KBL				pmax	pmax			
comp=Z,8.0nm,1.0s								
ABKAR	Akbulak array	58.02	310	*e*P		P	00 06 19.0	-0.9
AKTO	Aktyubinsk	58.76	312	P		P	00 06 24.2	-0.9
comp=Z,3.2nm,0.6s,baz=74,slow=7.4,SNR=7.6								
AS01	Alice Springs	60.56	188	*e*P		P	00 06 38.2	+0.5
ASAR	Alice Springs	60.57	188	P		P	00 06 38.5	+0.7
comp=Z,0.9nm,0.8s,baz=14,slow=7.3,SNR=7.0								
RES	Resolute Bay	62.82	14	*e*P		P	00 06 52.9	+0.5
comp=Z,8.4nm,1.0s								
RES	Resolute Bay	62.82	14	P		P	00 06 52.8	+0.5
DZM	Mont Dzumac	63.20	154	LR		LR	00 33 39.5	
comp=Z,96nm,18.9s,baz=9.5,slow=35								
YKA	Yellowknife Ar	64.03	30	P		P	00 07 01.5	+1.0
comp=Z,2.0nm,0.7s,baz=306,slow=6.7,SNR=7.3								
ARCES	ARCESS Array B	64.17	339	P		P	00 07 00.5	-0.8
comp=Z,3.1nm,0.8s,baz=46,slow=12,SNR=4.7								
FIA1	FINESS Array S	68.96	332	*e*P		P	00 07 31.6	-0.4
FINES	FINESS Array B	68.97	332	P		P	00 07 31.3	-0.7
comp=Z,5.2nm,0.8s,baz=63,slow=8.8,SNR=14								
SUMG	Summit	70.90	360	*e*P		P	00 07 45.0	+0.8
comp=Z,7.8nm,1.0s								
SUMG	Summit	70.90	360	P		P	00 07 45.0	+0.8
SUMG				pmax	pmax			
comp=Z,8.0nm,1.0s								
KBZ	Khabaz	70.98	311	P		P	00 07 44.0	-0.6
comp=Z,4.9nm,0.9s,baz=68,slow=2.9,SNR=11								
KIV	Kislovodsk	70.99	311	*e*P		P	00 07 45.4	+0.5
KIV	Kislovodsk	70.99	311	*i* P		P	00 07 45.6	+0.7
KIV				pmax	pmax			
comp=Z,9.0nm,1.0s								
K05A	Summer Lake	71.14	50	*e*P		P	00 07 48.9	+3.0
comp=Z,10nm,1.0s								
BMO	Blue Mountains	72.13	47	*e*P		P	00 07 53.2	+1.4
comp=Z,3.0nm,0.9s								
BMO	Blue Mountains	72.13	47	P		P	00 07 54.0	+2.3
BMO				pmax	pmax			
comp=Z,3.0nm,0.9s								
WVOR	Wild Horse Val	72.69	50	*e*P		P	00 07 56.5	+1.3
comp=Z,3.2nm,0.4s								
WVOR	Wild Horse Val	72.69	50	P		P	00 07 56.4	+1.3
WVOR				pmax	pmax			
comp=Z,3.0nm,0.5s								
BEKR	Beckworth	73.05	53	*e*P		P	00 07 59.6	+2.2
comp=Z,3.9nm,0.9s								
PAHR	Pah Rah Range	73.76	52	*e*P		P	00 08 03.9	+2.4
comp=Z,2.9nm,0.9s								
FFC	Flin Flon	73.92	33	*e*P		P	00 08 02.2	+0.2
comp=Z,2.8nm,0.6s								
FFC	Flin Flon	73.92	33	*i* P		P	00 08 03.8	+1.8
CMB	Columbia Colle	74.06	54	*e*P		P	00 08 05.5	+2.4
comp=Z,7.5nm,1.4s								
HRY	Holter Researc	74.16	43	*e*P		P	00 08 06.0	+2.2
FCC	Fort Churchill	74.22	26	*e*P		P	00 08 03.2	-0.5
comp=Z,5.1nm,0.8s								
FCC	Fort Churchill	74.22	26	P		P	00 08 04.5	+0.8
FCC				pmax	pmax			
comp=Z,5.0nm,0.9s								
HFS	Hagfors	74.25	336	P		P	00 08 03.6	-0.3
comp=Z,2.6nm,0.8s,baz=23,slow=7.8,SNR=7.1								
YERR	Yerington	74.26	53	*e*P		P	00 08 07.4	+2.8
comp=Z,4.5nm,0.8s								
NB2	NORSAR Subarra	74.35	337	P		P	00 08 03.7	-0.8
comp=Z,3.5nm,0.8s,baz=39,slow=6.2								
NOA	NORSAR Array B	74.35	337	P		P	00 08 03.9	-0.5
LRM	Limekiln Ridge	74.35	44	*e*P		P	00 08 07.2	+2.1
AKASG	Malin Array Be	74.42	322	P		P	00 08 03.9	-1.0
comp=Z,2.5nm,0.3s,baz=46,slow=6.1,SNR=27								
KIEV	Kiev	74.43	322	*e*P		P	00 08 03.8	-1.2
comp=Z,2.1nm,0.6s								
KIEV	Kiev	74.43	322	*e*P		P	00 08 04.1	-0.9
KIEV				pmax	pmax			
comp=Z,4.0nm,0.9s								
AK11	Malin Array Si	74.46	322	*e*P		P	00 08 04.6	-0.6
EGMT	Eagleton	74.48	41	*e*P		P	00 08 07.3	+1.8
comp=Z,6.0nm,0.8s								
DLMT	Dillon	74.55	45	*e*P		P	00 08 08.4	+2.4
comp=Z,7.6nm,0.8s								
HLID	Hailey	74.57	47	*e*P		P	00 08 07.0	+0.7
comp=Z,1.4nm,0.7s								
BMN	Battle Mountai	74.70	51	*e*P		P	00 08 09.6	+2.5
comp=Z,3.7nm,1.0s								
RYN	Ryan	74.92	53	*e*P		P	00 08 10.9	+2.6
comp=Z,2.5nm,0.8s								
BOZ	Bozeman (W)	74.95	44	*e*P		P	00 08 10.5	+2.1
comp=Z,5.7nm,0.9s								
BOZ	Bozeman (W)	74.95	44	P		P	00 08 10.4	+2.1
KVN	Kaiserville	74.95	52	*e*P		P	00 08 11.1	+2.5
comp=Z,5.2nm,0.8s								
KVN	Kaiserville	74.95	52	P		P	00 08 11.0	+2.5
KVN				pmax	pmax			
comp=Z,5.0nm,0.8s								
NV01	Mina Array Sit	75.18	53	*e*P		P	00 08 12.0	+2.1
NVAR	Mina Array Bea	75.18	53	P		P	00 08 12.2	+2.3
comp=Z,3.4nm,0.7s,baz=285,slow=5.7,SNR=31								
YHB	Horse Butte	75.71	45	*e*P		P	00 08 15.7	+2.9
comp=Z,5.5nm,0.7s								
YPP	Pitchstone Pla	76.22	45	*e*P		P	00 08 19.7	+3.8
comp=Z,2.4nm,0.9s								
IMW	Indian Meadow	76.38	45	*e*P		P	00 08 19.8	+3.0
comp=Z,5.1nm,0.8s								
FXWY	Fox Creek	76.49	45	*e*P		P	00 08 20.1	+2.8
comp=Z,3.6nm,0.8s								
SORM	Soroca	76.50	321	⇓*i*P		P	00 08 15.9	-1.1
RLMT	Red Lodge	76.55	43	*e*P		P	00 08 20.0	+2.4
comp=Z,2.7nm,0.8s								
HVU	Hansel Valley	76.61	48	*e*P		P	00 08 20.5	+2.6
comp=Z,3.2nm,0.7s								
HVU	Hansel Valley	76.61	48	P		P	00 08 20.5	+2.6
HVU				pmax	pmax			
comp=Z,3.0nm,0.7s								
TPAW	Teton Pass	76.62	45	*e*P		P	00 08 21.0	+2.8
comp=Z,3.1nm,0.8s								
REDW	Red Top Meadow	76.76	46	*e*P		P	00 08 21.8	+3.0
comp=Z,3.2nm,1.0s								
R11A	Troy Canyon, C	76.95	52	*e*P		P	00 08 22.1	+2.1
comp=Z,4.2nm,1.0s								
BGU	Big Grassy Mou	76.97	48	*e*P		P	00 08 22.5	+2.5
comp=Z,1.4nm,0.8s								
TPNV	Topopah Spring	77.36	53	*e*P		P	00 08 24.2	+2.0
comp=Z,5.4nm,0.9s								
HWUT	Hardware Ranch	77.43	47	*e*P		P	00 08 23.9	+1.4
comp=Z,3.6nm,0.9s								
DUG	Dugway, Tooele	77.55	49	*e*P		P	00 08 24.8	+1.6
comp=Z,4.2nm,0.8s								
DUG	Dugway, Tooele	77.55	49	P		P	00 08 25.8	+2.6
BW06	Boulder Array	77.87	45	*e*P		P	00 08 26.7	+1.6
comp=Z,2.1nm,0.6s								
PD31	Pinedale Array	77.87	45	*e*P		P	00 08 26.6	+1.5
PDAR	Pinedale Array	77.87	45	P		P	00 08 26.6	+1.5
comp=Z,2.1nm,0.7s,baz=260,slow=3.0,SNR=18								
PDAR	Pinedale Array	77.87	45	*e*P		P	00 08 25.4	+0.4
PSUT	Pine Spring	77.93	51	*e*P		P	00 08 27.7	+2.3
comp=Z,3.1nm,0.8s								
KWP	Kalwaria Pacla	78.26	324	P		P	00 08 26.9	+0.1
SHPR	Sheep Range	78.33	53	*e*P		P	00 08 30.2	+2.6
comp=Z,3.6nm,0.9s								
BUR08	Bucovina Ar. S	78.42	322	*e*P		P	00 08 28.1	+0.2
BUR04	Bucovina Ar. S	78.43	322	*e*P		P	00 08 27.7	-0.2
BURAR	Bucovina Array	78.43	322	⇑*i*P		P	00 08 27.8	-0.1
TESR	Tescani	78.45	320	⇑*i*P		P	00 08 26.7	-1.2
CFR	Carcaliu	78.55	318	⇓*i*P		P	00 08 27.9	-0.6
VRI	Vrincioaia	78.84	320	⇑*i*P		P	00 08 30.3	+0.2
BR131	Keskin Array S	78.93	312	*e*P		P	00 08 30.8	-0.1
BRTR	Keskin Array B	78.93	312	P		P	00 08 30.3	-0.6
comp=Z,1.7nm,0.9s,baz=70,slow=4.1,SNR=7.5								
MSU	Marysvale	78.98	50	*e*P		P	00 08 34.1	+2.9
HARR	Harsova	78.98	318	⇓*i*P		P	00 08 30.7	-0.1
TLB	Topalu	78.99	318	⇓*i*P		P	00 08 30.5	-0.4
P17A	Butcher Ranch,	79.25	49	*e*P		P	00 08 35.2	+2.6
comp=Z,6.8nm,0.8s								
MTPU	Mount Pierson	79.26	50	*e*P		P	00 08 36.0	+3.0
comp=Z,3.7nm,0.7s								
TRPA	Tarpa	79.38	323	⇑*i*P		P	00 08 33.1	+0.2
ICOR	Ion Corvin	79.43	318	⇑*i*P		P	00 08 33.8	+0.5
P18A	Preston Nutter	79.45	48	*e*P		P	00 08 37.0	+3.1
comp=Z,4.0nm,0.7s								
DOPR	Dopca	79.46	320	⇓*i*P		P	00 08 34.4	+0.9
MLR	Muntele Rosu	79.50	320	⇓*i*P		P	00 08 32.7	-1.1
KNB	Kanab	79.50	52	*e*P		P	00 08 37.4	+3.3
comp=Z,5.7nm,1.2s								
KNB	Kanab	79.50	52	P		P	00 08 37.3	+3.3
KNB				pmax	pmax			
comp=Z,6.0nm,1.2s								
SRU	San Rafael Swe	79.61	49	*e*P		P	00 08 36.9	+2.2
comp=Z,8.2nm,0.9s								
SRU	San Rafael Swe	79.61	49	P		P	00 08 36.8	+2.2
LANS	Liptovska Anna	80.09	326	*e*P		P	00 08 38.4	+1.5
RAR	Rarotonga	80.10	126	LR		LR	00 37 45.1	
comp=Z,49nm,20.4s,baz=315,slow=31								
U15A	North Rim	80.20	52	*e*P		P	00 08 40.4	+2.4
comp=Z,3.0nm,0.8s								
DRGR		80.23	322	⇑*i*P		P	00 08 37.5	-0.2
ARR	Arges	80.26	320	⇑*i*P		P	00 08 38.5	+0.6
O20A	White River Ci	80.31	47	*e*P		P	00 08 40.2	+1.8
comp=Z,4.9nm,0.8s								
MORC	Moravsky Berou	80.49	327	⇓*i*P		P	00 08 37.0	-2.0
MORC	Moravsky Berou	80.49	327	*e*P		P	00 08 39.0	0.0
comp=Z,11nm,0.9s								
MORC	Moravsky Berou	80.49	327	P		P	00 08 39.0	0.0
MORC				pmax	pmax			
comp=Z,11nm,0.9s								
MORC	Moravsky Berou	80.49	327	*e*P		P	00 08 38.8	-0.2
DPC	Dobruska-Polom	80.59	328	*e*P		P	00 08 39.8	+0.2
LOT	Lotru	80.64	321	⇓*i*P		P	00 08 40.3	+0.3
RAYN	Ar Rayn	80.66	292	*e*P		P	00 08 37.9	-2.5
comp=Z,4.4nm,0.9s								
RAYN	Ar Rayn	80.66	292	P		P	00 08 39.0	-1.4
RAYN				pmax	pmax			
comp=Z,4.0nm,0.9s								
PV09	Paradox Valley	80.84	49	*e*P		P	00 08 43.8	+2.4
VYHS	Vyhne	80.86	325	*e*P		P	00 08 40.7	-0.2
VYHS				pmax	pmax			
comp=Z,2.0nm,0.9s								
PV04	Paradox Valley	81.04	48	*e*P		P	00 08 45.2	+2.9
comp=Z,6.8nm,0.8s								
JAVC	Velka Javorina	81.11	326	*e*P		P	00 08 43.3	+0.9
N23A	Red Feather La	81.14	45	*e*P		P	00 08 45.3	+2.4
comp=Z,4.1nm,0.8s								
PV03	Paradox Valley	81.17	49	*e*P		P	00 08 45.8	+2.7
comp=Z,6.0nm,0.9s								
BRG	Berggiesshubel	81.19	329	*e*P		P	00 08 42.6	-0.1
comp=Z,3.2nm,0.8s								
PVCC	Panska Ves	81.20	329	*e*P		P	00 08 42.5	-0.2
CLL	Collm	81.24	330	*i* P		P	00 08 42.5	-0.4
comp=Z,7.0nm,0.9s								
CLL				*i* pP		pP	00 08 58.7	+3.6
CLL	Collm	81.24	330	*e*P		P	00 08 42.5	-0.4
comp=Z,5.9nm,0.9s								
CLL	Collm	81.24	330	P		P	00 08 42.5	-0.4
CLL				pmax	pmax			
comp=Z,6.0nm,0.9s								
VRAC	Vranov	81.26	327	⇑*i*P		P	00 08 43.4	+0.3
VRAC	Vranov	81.26	327	*e*P		P	00 08 42.8	-0.3
PV02	Paradox Valley	81.26	49	*e*P		P	00 08 47.0	+3.4
comp=Z,5.5nm,0.8s								
PV15	Paradox Valley	81.33	48	*e*P		P	00 08 46.5	+2.6
comp=Z,3.4nm,0.7s								
WUAZ	Wupatki	81.35	52	*e*P		P	00 08 46.5	+2.5
comp=Z,4.5nm,0.8s								
PV01	Paradox Valley	81.41	48	*e*P		P	00 08 46.7	+2.3
comp=Z,4.8nm,0.9s								
KRUC	Moravsky	81.53	327	*e*P		P	00 08 44.2	-0.3
GOPC	GO Pecny, Ondr	81.58	328	*e*P		P	00 08 45.4	+0.7
BZS	Buzias	81.60	322	⇑*i*P		P	00 08 44.0	-0.9
PRU	Pruhonice	81.62	328	*e*P		P	00 08 45.4	+0.5
SMCO	Snowmass	81.68	47	*e*P		P	00 08 48.1	+2.2
comp=Z,3.5nm,0.9s								
MMAI	Mount Meron Ar	82.02	305	P		P	00 08 47.4	-0.1
comp=Z,2.6nm,0.7s,baz=37,slow=7.6,SNR=6.7								
MVCO	Mesa Verde	82.05	49	*e*P		P	00 08 49.5	+1.7
comp=Z,3.8nm,0.8s								
ISCO	Idaho Springs	82.05	46	*e*P		P	00 08 49.4	+1.6
comp=Z,2.6nm,0.8s								
ISCO	Idaho Springs	82.05	46	P		P	00 08 50.1	+2.3
ISCO				pmax	pmax			
comp=Z,3.0nm,0.8s								
MDVR	Moldovita	82.15	321	⇓*i*P		P	00 08 47.5	-0.4
CONA	Conrad Observa	82.61	326	*e*P		P	00 08 50.8	+0.5
comp=Z,3.0nm,0.8s								
KHC	Kasperske Hory	82.68	328	*e*P		P	00 08 50.9	+0.3
KHC				*ex*		x	00 08 59.0	
KHC	Kasperske Hory	82.68	328	*e*P		P	00 08 50.6	-0.1
comp=Z,1.6nm,0.8s								
KHC	Kasperske Hory	82.68	328	P		P	00 08 50.5	-0.1
KHC				pmax	pmax			
comp=Z,2.0nm,0.8s								
S22A	4UR Ranch, Cre	82.70	48	*e*P		P	00 08 53.9	+2.6
comp=Z,6.1nm,1.0s								
GEC2	GERESS Array S	82.85	328	*e*P		P	00 08 51.5	-0.1
comp=Z,2.2nm,0.7s								
GERES	GERESS Array B	82.85	328	P		P	00 08 51.0	-0.5
comp=Z,2.2nm,0.8s,baz=37,slow=5.2,SNR=13								
GEA0	GERESS Array S	82.86	328	*e*P		P	00 08 50.9	-0.6
VTS	Vitosha	82.92	319	⇓*i*P		P	00 08 51.8	-0.3
VTS	Vitosha	82.92	319	*e*P		P	00 08 52.6	+0.4
comp=Z,3.0nm,0.7s								
VTS	Vitosha	82.92	319	P		P	00 08 52.5	+0.4
GRFO	Grafenberg	83.22	330	*e*P		P	00 08 53.7	+0.4
comp=Z,6.5nm,0.8s								
ARSA	Arzberg	83.27	326	*e*P		P	00 08 54.0	+0.3
comp=Z,1.0nm,0.5s								
EKA	Eskdalemuir Ar	83.31	340	P		P	00 08 53.4	-0.2
comp=Z,1.7nm,0.8s,baz=30,slow=4.9,SNR=4.6								
MOA	Molln	83.37	327	*e*PcP		P	00 08 55.5	+1.4
comp=Z,2.3nm,0.8s								
SOKA	Soboth	83.93	326	*e*P		P	00 08 56.4	-0.7
comp=Z,8.1nm,1.1s								
ECSD	EROS Data Cent	84.13	38	*e*P		P	00 08 58.4	+0.3
comp=Z,3.1nm,0.8s								
OBKA	Obir	84.27	326	*e*P		P	00 08 58.4	-0.4
comp=Z,3.6nm,1.5s								
KBA	Koelnbreinsper	84.36	327	*e*PcP		P	00 09 00.6	+1.1
comp=Z,2.3nm,0.6s								
MYKA	Terra Mystica	84.58	327	*e*P		P	00 08 59.8	-0.6
comp=Z,1.3nm,0.4s								
PPT	Papeete	84.61	116	LR		LR	00 39 47.7	
comp=Z,50nm,21.4s,baz=347,slow=31								
ANMO	Albuquerque	84.78	50	*e*P		P	00 09 03.3	+1.5
comp=Z,2.6nm,0.8s								
ANMO	Albuquerque	84.78	50	*e*P		P	00 09 04.1	+2.3
ANMO				pmax	pmax			
comp=Z,3.0nm,1.0s								
WTTA	Wattenberg	84.95	328	*e*PcP		P	00 09 02.4	0.0
comp=Z,1.8nm,0.4s								
LIT	Litokhoron	85.06	318	P		P	00 09 02.7	-0.2
LIT				pmax	pmax			
comp=Z,11nm,0.9s								
PDG	Podgorica	85.08	321	⇑*i*P		P	00 09 02.2	-0.7
MOTA	Moosalm	85.11	329	*e*P		P	00 09 01.9	-1.3
comp=Z,1.4nm,0.7s								
RETA	Reutte	85.14	329	*e*P		P	00 09 03.2	0.0
comp=Z,3.9nm,0.8s								
RETA	Reutte	85.14	329	P		P	00 09 03.2	0.0
comp=Z,1.6nm,0.6s								
BFO	Black Forest	85.45	331	*i* P		P	00 09 05.0	+0.3
FETA	Feichten	85.52	329	*e*P		P	00 09 04.8	-0.4
comp=Z,4.3nm,1.1s								
DAVA	Damuels	85.67	329	*e*P		P	00 09 05.1	-0.9
comp=Z,6.9nm,0.9s								
MATE	Matera	87.68	321	⇑*i*P		P	00 09 14.8	-0.9
S39A	Bolivar	90.29	40	*e*P		P	00 09 28.5	+0.5
comp=Z,3.8nm,0.9s								
TX31	Lajitas Ar. Si	90.31	52	*e*P		P	00 09 30.0	+1.6
TXAR	Lajitas Array	90.31	52	P		P	00 09 30.0	+1.6
comp=Z,1.8nm,0.8s,baz=282,slow=3.5,SNR=13								
TXAR	Lajitas Array	90.31	52	P		P	00 09 30.0	+1.6
TXAR				pmax	pmax			
comp=Z,2.0nm,0.8s								
MIAR	Mount Ida	92.53	43	*e*P		P	00 09 40.0	+1.6
comp=Z,4.2nm,0.8s								
MIAR	Mount Ida	92.53	43	P		P	00 09 40.0	+1.6
MIAR				pmax	pmax			
comp=Z,4.0nm,0.8s								
TORD	Torodi Ar. Bea	117.42	315	PKP		PKPdf	00 15 12.3	-0.8
comp=Z,0.3nm,0.5s,baz=347,slow=2.2,SNR=6.3								
SAML	Samuel	144.45	45	*e*PKPdf		PKPdf	00 16 05.7	+1.9
LPAZ	La Paz	146.87	60	PKPbc		PKPab	00 16 11.3	-0.5
comp=Z,4.8nm,0.7s,baz=308,slow=5.0,SNR=21								
LCO	Las Campanas	152.11	83	*e*PKPbc		PKPbc	00 16 24.3	+1.4
LCO	Las Campanas	152.11	83	*e*PKIKP		PKPbc	00 16 24.3	+1.4

MAN 21 00:07:05.5, 10°.27N×123°.31E, h2km, mb3.6, ML2.3, MS1.7, 1D, Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	Lapu-Lapu	0.64	86	*e*P	Pg	00 07 17.5	-0.3
LLP				*e*S	Sn	00 07 32.8	+0.3
GUIM	Jordan	0.79	296	*e*P	Pg	00 07 21.1	+0.3
GUIM				*e*S	Sg	00 07 30.7	-0.4
SNPH	Sibulan	0.93	185	⇓*i*P	Pn	00 07 25.3	-0.3
SNPH				*i* S	Sn	00 07 38.8	-0.8
MSLP	Maasin	1.53	95	*e*P	Pg	00 07 37.1	+2.3
MSLP				*e*S	Sg	00 07 59.4	+4.7

CSEM 21 00:07:29.7, 45°.97N×15°.46E, h0km, ML-0.6

LJU 21 00:07:29.7, 45°.97N×15°.46E, h0km, 1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CESS	Cesta pri Krsk	0.00	303	⇓*i*Pg	Pg	00 07 29.4	-0.3
CESS				*i* Sg	Sg	00 07 29.6	-0.1
comp=Z,80nm,0.1s							
CESS	Cesta pri Krsk	0.00	303	Pg	Pg	00 07 29.4	-0.3
CESS				*i* Sg	Sg	00 07 29.6	-0.1
comp=Z,80nm,0.1s							
LEGS	Legarje	0.10	257	*i* Sg	Sg	00 07 34.0	+1.0
LEGS	Legarje	0.10	257	*i* Sg	Sg	00 07 34.0	+1.0
GOLS	Golise	0.12	71	*i* Pg	Pg	00 07 32.1	+0.1
GOLS				*i* Sg	Sg	00 07 34.0	+0.6
GOLS	Golise	0.12	71	*i* Pg	Pg	00 07 32.1	+0.1
GOLS				*i* Sg	Sg	00 07 34.0	+0.5
comp=Z,1.0nm,0.2s							
CRES	Cresnjev	0.15	182	*i* Sg	Sg	00 07 35.1	+0.7
CRES	Cresnjev	0.15	182	*i* Sg	Sg	00 07 35.1	+0.7

IDC 21 00:22:12.9±1.4, 1°.69N×126°.12E, h0km, mb4.0/5, mb1 4.1/5, mb1mx3.6/56, mbtmp4.0/5, Error ellipse: s-maj=162.1km s-min=18.9km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.96	160	P	P	00 27 19.1	0.0
2.9nm,0.3s,baz=338,slow=10,SNR=51							
ASAR	Alice Springs	26.32	164	P	P	00 27 50.5	-0.1
0.5nm,0.3s,baz=337,slow=7.6,SNR=11							
MKAR	Makanchi Array	58.89	326	P	P	00 32 13.9	+0.1
0.6nm,0.4s,baz=116,slow=7.7,SNR=14							
ZALV	Zalesovo Beam	62.13	334	P	P	00 32 35.4	-0.4
0.4nm,0.3s,baz=120,slow=8.1,SNR=2.3							
KURBB	Kurchatov Arra	63.13	328	P	P	00 32 42.7	+0.2
0.7nm,0.4s,baz=126,slow=6.1,SNR=5.8							

MEX 21 00:42:27.1±1.1, 19°.80N×104°.45W, h7km±5km, MD3.9, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CJM	Chamela	0.63	242	*e*P	Pg	00 42 38.2	-1.1
CJM				*e*S	Sg	00 42 47.1	-0.4
R15V		0.76	145	*i* P	Pg	00 42 39.7	-2.1
R15V				*i* S	Sg	00 42 50.0	-1.7
EZ5V		0.86	111	*i* P	Pg	00 42 41.6	-2.1
EZ5V				*i* S	Sg	00 42 53.6	-1.2
PUVA	Puert Vallarta	1.10	319	*e*P	Pg	00 42 46.1	-2.1
PUVA				*e*S	Sg	00 42 59.8	-2.7
ANIG	Ahuacatlan	1.25	357	*e*P	Pg	00 42 48.4	-2.8
ANIG				*e*S	Sg	00 43 04.0	-3.4
MMIG	Aquila	1.83	145	*e*P	Pn	00 42 57.1	-1.9
MMIG				*e*S	Sn	00 43 19.4	-3.0
MOIG	Morelia	3.07	92	*e*P	Pb	00 43 20.8	-1.5
ARIG	Puente Sto Nin	4.16	111	*e*P	Pn	00 43 34.8	+3.7
ARIG				*e*S	Sn	00 44 21.0	+0.8

ISN 21 01:03:18.6±1.1, 32°.52N×46°.94E, h0km±3km, ML3.2
CSEM 21 01:03:20.1±0.2, 32°.50N×47°.01E, h2km, ML3.2, Error ellipse: s-maj=5.8km s-min=4.3km az=7.0

**TEH 21 01:03:21.2, 32°.54N×46°.99E, h10km, ML3.2, Iran-

IRAZ *e* 01 05 29.0
comp=E,1μm,0.5s
IRAZ *e* 01 05 33.1
comp=Z,444nm,0.3s
IRAZ *e* 01 05 55.3
comp=N,265nm,0.4s
IKLH Kolahrood 3.94 77 *e*Pn Pn 01 04 21.6 -0.3
IKLH *e* 01 05 35.7
comp=Z,863nm,0.6s
IKLH *e* 01 05 40.0
comp=N,1μm,0.4s
IKLH *e* 01 05 40.6
comp=E,2μm,0.4s
GHVR GHOM 4.08 61 *e*Pn Pn 01 04 23.8 0.0
IZEF Zefreh 4.51 84 *e*Pn Pn 01 04 29.1 -0.8
IZEF *e* 01 05 45.5
comp=Z,251nm,0.3s
IZEF *e* 01 05 50.8
comp=E,407nm,0.3s
IZEF *e* 01 05 52.0
comp=N,369nm,0.3s
IRAM Ramesheh 4.63 98 *e*Pn Pn 01 04 30.6 -0.8
IRAM *e* 01 06 01.0
comp=N,444nm,0.3s
IRAM *e* 01 06 01.0
comp=E,442nm,0.4s
IRAM *e* 01 06 14.6
comp=Z,302nm,0.5s
IVRN Varamin 4.64 57 *e*Pn Pn 01 04 31.2 -0.3
IVRN *e* 01 05 57.7
comp=Z,378nm,0.4s
IVRN *e* 01 06 23.3
comp=E,159nm,0.3s
IDMV Damavand 5.16 53 *e* 01 06 21.1
comp=Z,268nm,0.4s
RTB Rutbah 5.65 277 *e*Pn Pn 01 04 45.0 -0.3
SNR=4.0
RTB *e*Sn Sn 01 05 50.0 -0.2
SNR=4.0
IFIR Firoozkooh 5.69 56 *e*Pn Pn 01 04 44.6 -1.5
IFIR *e* 01 06 39.8
comp=E,80nm,0.1s
ANAR Anarak 5.71 82 *e*Pn Pn 01 04 44.5 -1.7

*DSN **21** 01:07:51.4±6.3,30°.42N×58°.53E,h34km,mb4.9/1, ML4.4/10,Error ellipse: s-maj=70.4km s-min=16.6km az=41.0*
*ISCJB **21** 01:08:17.8±0.3,28°.50N±0°.02×57°.15E±0°.06,h10km, mb3.9/24,MS3.2/2,Error ellipse: s-maj=7.1km s-min=3.0km az=1.2*
*TEH **21** 01:08:19.0,28°.52N×57°.11E,h8km,ML3.7*
*THR **21** 01:08:21.2±1.9,28°.53N×57°.05E,h15km,ML3.6*
*CSEM **21** 01:08:22.4±0.2,28°.41N×57°.06E,h20km,ML3.9,Error ellipse: s-maj=9.8km s-min=4.1km az=92.0*
*OMAN **21** 01:08:22.2±99.0,28°.35N×57°.32E,h21km±999km,Error ellipse: s-maj=473.5km s-min=47.3km az=6.0*
*IDC **21** 01:08:23.3±2.0,28°.32N×57°.14E,h62km±20km,mb3.6/23, mb1 3.7/27,mb1mx3.5/87,mbtmp3.9/27,MS3.2/4, Ms1 3.2/4,ms1mx2.7/64,Error ellipse: s-maj=13.1km s-min=11.6km az=74.0*
ISC 21 01:08:18.2±0.4,28°.49N±0°.02×57°.00E±0°.04,h10km,n110, σ2§48/102,mb3.9/24,1D,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NIAN	**Nian**	**0.94**	**189**	*e*Pg		**Pg**		**01 08 38.5**	**+2.3**
NIAN				*e*Sg		**Sb**		**01 08 53.3**	**+4.3**
NIAN				*e*				01 08 54.6	
	comp=N,99nm,0.1s								
NIAN				*e*				01 08 54.7	
	comp=E,99nm,0.1s								
NIAN				*e*				01 08 56.1	
	comp=Z,99nm,0.1s								
NIAN	**Nian**	**0.94**	**189**	*e*Pg		**Pg**		**01 08 38.5**	**+2.3**
NIAN				*e*Sg		**Sb**		**01 08 53.3**	**+4.3**
IBND	**Bandar-abas**	**1.11**	**202**	*e*Pg		**Pb**		**01 08 43.0**	**+3.5**
IBND				*e*				01 08 43.9	
	comp=Z,58μm,0.2s								
IBND	**Bandar-abas**	**1.11**	**202**	*e*Pg		**Pb**		**01 08 43.0**	**+3.5**
NGRK	**Negar Kerman**	**1.18**	**349**	*e*Pg		**Pg**		**01 08 42.6**	**+1.7**
NGRK				*e*Sg		**Sn**		**01 09 00.2**	**+2.8**
NGRK				*e*				01 09 01.7	
	comp=E,99nm,0.1s								
NGRK				*e*				01 09 07.3	
	comp=Z,99nm,0.1s								
NGRK				*e*				01 09 08.6	
	comp=N,99nm,0.1s								
CHMN	**Cheshme madani**	**1.45**	**19**	*e*Pg		**Pn**		**01 08 46.2**	**+1.4**
CHMN				*e*				01 08 50.9	
	comp=Z,99nm,0.2s								
CHMN				*e*				01 09 07.7	
	comp=N,99nm,0.3s								
CHMN				*e*				01 09 09.7	
	comp=E,99nm,0.1s								
KRBR	**Kerman**	**1.50**	**352**	*e*Pg		**Pn**		**01 08 48.1**	**+2.6**
KRBR				*e*Sg		**Sb**		**01 09 08.0**	**+2.3**
KRBR				AML		AML		01 09 17.3	
	comp=E,1μm,0.4s								
KRBR				AML		AML		01 09 17.7	
	comp=N,719nm,0.2s								
KRBR	**Kerman**	**1.50**	**352**	*e*Pg		**Pn**		**01 08 48.1**	**+2.6**
KRBR	**Kerman**	**1.50**	**352**	*e*Pg		**Pn**		**01 08 48.1**	**+2.6**
KRBR				*e*Sg		**Sb**		**01 09 08.0**	**+2.3**
TVBK	**TV Kerman**	**1.51**	**352**	*e*Pn		**Pn**		**01 08 48.3**	**+2.7**
TVBK				*e*				01 09 18.4	
	comp=Z,99nm,0.1s								
TVBK				*e*				01 09 18.8	
	comp=N,99nm,0.1s								
TVBK				*e*				01 09 22.0	
	comp=E,99nm,0.2s								
TVBK	**TV Kerman**	**1.51**	**352**	*e*Pn		**Pn**		**01 08 48.3**	**+2.7**
KHSK	**Kohestak**	**1.73**	**178**	*e*Pn		**Pn**		**01 08 50.9**	**+2.6**
KHSK				*e*				01 09 21.4	
	comp=E,99nm,0.2s								
KHSK	**Kohestak**	**1.73**	**178**	*e*Pn		**Pn**		**01 08 50.9**	**+2.6**
KHGB	**Koh Gabri**	**1.94**	**346**	*e*Pn		**Pb**		**01 08 55.1**	**+1.4**
KHGB				*e*				01 08 59.3	
	comp=Z,99nm,0.2s								
KHGB				*e*				01 09 28.5	
	comp=E,99nm,0.3s								
KHGB				*e*				01 09 29.4	
	comp=N,99nm,0.1s								
KHGB	**Koh Gabri**	**1.94**	**346**	*e*Pn		**Pb**		**01 08 55.1**	**+1.4**
SHME	**Shamm**	**2.55**	**198**	*i* P		**Pn**		**01 09 01.2**	**+1.6**
	SNR=22								
SHME	**Shamm**	**2.55**	**198**	P		**Pn**		**01 09 01.5**	**+1.9**
	SNR=22								
BANOM	**Banah**	**2.63**	**194**	P		**Pn**		**01 09 02.4**	**+1.6**
	SNR=22								
BANOM	**Banah**	**2.63**	**194**	*i* P		**Pn**		**01 09 02.2**	**+1.4**
	SNR=22								
BANOM	**Banah**	**2.63**	**194**	P		**Pn**		**01 09 02.4**	**+1.6**
	SNR=22								
UMQ	**Umm Al-Quwin**	**3.18**	**202**	P		**Pn**		**01 09 11.4**	**+3.1**
MSFE	**Esma-Masafi**	**3.21**	**194**	P		**Pn**		**01 09 11.1**	**+2.4**
MSFE	**Esma-Masafi**	**3.21**	**194**	*e*Pn		**Pn**		**01 09 11.1**	**+2.4**
MSFE	**Esma-Masafi**	**3.21**	**194**	P		**Pn**		**01 09 12.3**	**+3.6**
MDH	**Madha**	**3.24**	**191**	P		**Pn**		**01 09 09.7**	**+0.6**
MDH	**Madha**	**3.24**	**191**	P		**Pn**		**01 09 09.7**	**+0.6**
ZHSF	**Zahedan**	**3.49**	**70**	*e*P		**Pn**		**01 09 15.9**	**+3.2**
ZHSF	**Zahedan**	**3.49**	**70**	*e*Pn		**Pn**		**01 09 16.0**	**+3.2**
ZHSF	**Zahedan**	**3.49**	**70**	*e*P		**Pn**		**01 09 15.9**	**+3.2**
GHIR	**Ghir-Karzin**	**3.54**	**268**	*e*P		Pn		01 09 18.2	+4.8
GHIR				AML		AML		01 10 32.6	
	comp=N,96nm,0.4s								
GHIR				AML		AML		01 10 34.1	
	comp=E,113nm,0.5s								
GHIR	**Ghir-Karzin**	**3.54**	**268**	*e*Pn		Pn		01 09 18.2	+4.8
GHIR	**Ghir-Karzin**	**3.54**	**268**	*e*P		Pn		01 09 18.2	+4.8
IMEH	**Mehriz**	**3.56**	**325**	*e*Pn		Pn		01 09 18.6	+4.9
IMEH				*e*				01 10 29.9	
	comp=Z,1μm,0.4s								
IMEH				*e*				01 10 35.1	
	comp=N,1μm,0.3s								
IMEH	**Mehriz**	**3.56**	**325**	*e*Pn		Pn		01 09 18.6	+4.9
UOSS	**Minazif**	**3.60**	**192**	P		**Pn**		**01 09 16.4**	**+2.3**
UOSS	**Minazif**	**3.60**	**192**	P		**Pn**		**01 09 16.4**	**+2.3**
NAZ	**Nazwa, Dubai**	**3.69**	**199**	P		**Pn**		**01 09 17.7**	**+2.5**
	SNR=8.1								
NAZ	**Nazwa, Dubai**	**3.69**	**199**	*i* P		**Pn**		**01 09 17.5**	**+2.2**
	SNR=8.1								
NAZ	**Nazwa, Dubai**	**3.69**	**199**	P		**Pn**		**01 09 17.7**	**+2.5**
	SNR=8.1								
NAZ	**Nazwa, Dubai**	**3.69**	**199**	*e*Pn		**Pn**		**01 09 18.1**	**+2.8**
HATD	**Hatta, Dubai**	**3.73**	**192**	P		**Pn**		**01 09 19.4**	**+3.5**
HATD	**Hatta, Dubai**	**3.73**	**192**	P		**Pn**		**01 09 18.2**	**+2.4**
HATD	**Hatta, Dubai**	**3.73**	**192**	*e*Pn		**Pn**		**01 09 19.0**	**+3.1**
HATD	**Hatta, Dubai**	**3.73**	**192**	P		**Pn**		**01 09 19.4**	**+3.5**
ASUD	**Al Ashush, Dub**	**4.13**	**202**	P		**Pn**		**01 09 23.9**	**+2.6**
	SNR=55								
ASUD	**Al Ashush, Dub**	**4.13**	**202**	*i* P		**Pn**		**01 09 23.7**	**+2.4**
	SNR=55								
ASUD	**Al Ashush, Dub**	**4.13**	**202**	P		**Pn**		**01 09 23.9**	**+2.6**
	SNR=55								
IKOO	**Kooshah**	**4.29**	**23**	*e*Pn		**Pn**		**01 09 28.0**	**+4.2**
IKOO				*e*				01 09 48.3	
	comp=Z,2μm,0.2s								
IKOO				*e*				01 10 42.7	
	comp=N,2μm,0.2s								
IKOO				*e*				01 10 45.8	
	comp=E,3μm,0.2s								
IKOO	**Kooshah**	**4.29**	**23**	*e*Pn		**Pn**		**01 09 28.0**	**+4.2**
AJN	**Ajban**	**4.30**	**205**	*i* P		**Pn**		**01 09 26.0**	**+2.3**
	SNR=6.2								
SOHO	**SOHO**	**4.36**	**186**	P		**Pn**		**01 09 24.7**	**+0.2**
SOHO	**SOHO**	**4.36**	**186**	P		**Pn**		**01 09 24.7**	**+0.2**
ICHK	**Chekchek**	**4.36**	**330**	*e*Pn		Pn		01 09 29.5	+4.7
ICHK				*e*				01 10 51.1	
	comp=E,928nm,0.3s								
ICHK				*e*				01 10 55.8	
	comp=N,607nm,0.2s								
ICHK				*e*				01 11 00.0	
	comp=Z,942nm,0.3s								
ICHK	**Chekchek**	**4.36**	**330**	*e*Pn		Pn		01 09 29.5	+4.7
ALNE	**Al Ain**	**4.55**	**195**	*e*Pn		**Pn**		**01 09 29.8**	**+2.6**
ITEG	**Tejag**	**4.64**	**18**	*e*Pn		Pn		01 09 33.1	+4.5
ITEG				*e*				01 09 54.4	
	comp=Z,1μm,0.3s								
ITEG				*e*				01 09 54.7	
	comp=E,1μm,0.2s								
ITEG				*e*				01 10 59.3	
	comp=N,2μm,0.3s								
ITEG	**Tejag**	**4.64**	**18**	*e*Pn		Pn		01 09 33.1	+4.5
IKAZ	**Kazeroun**	**4.69**	**287**	*e*		**Sb**		**01 10 35.0**	**-2.6**
	comp=Z,3μm,0.1s								
IDAH	**Dahanechah**	**4.91**	**30**	*e*Pn		Pn		01 09 38.0	+5.7
IDAH				*e*				01 10 03.3	
	comp=Z,776nm,0.3s								
IDAH				*e*				01 11 11.2	
	comp=E,1μm,0.3s								
IDAH				*e*				01 11 11.2	
	comp=N,1μm,0.4s								
IDAH	**Dahanechah**	**4.91**	**30**	*e*Pn		Pn		01 09 38.0	+5.7
BIDO	**Bidbid**	**5.05**	**168**	P		**Pn**		**01 09 34.0**	**0.0**
	SNR=5.7								
BIDO	**Bidbid**	**5.05**	**168**	P		**Pn**		**01 09 34.0**	**0.0**
	SNR=5.7								
TABS	**Tabas**	**5.14**	**1**	*e*Pn		Pn		01 09 41.2	+5.8
IRAM	**Ramesheh**	**5.19**	**311**	*e*Pn		**Pn**		**01 09 40.2**	**+4.1**
IRAM				*e*				01 10 44.6	
	comp=E,316nm,0.2s								
IRAM				*e*				01 10 45.6	
	comp=Z,230nm,0.2s								
IRAM				*e*				01 10 55.4	
	comp=N,377nm,0.3s								
IRAM	**Ramesheh**	**5.19**	**311**	*e*Pn		**Pn**		**01 09 40.2**	**+4.1**
IMON	**Monand**	**5.22**	**25**	*e*Pn		Pn		01 09 41.6	+5.0
IMON				*e*				01 10 08.7	
	comp=Z,529nm,0.2s								
IMON				*e*				01 11 09.9	
	comp=E,2μm,0.3s								
IMON	**Monand**	**5.22**	**25**	*e*Pn		Pn		01 09 41.6	+5.0
WSAR	**Wadi Sarin**	**5.43**	**164**	P		**Pn**		**01 09 39.5**	**+0.3**
	comp=E,9.5nm,0.3s,baz=335,slow=3,9,SNR=165								
WSAR				S		**Sn**		**01 10 37.5**	**-4.4**
	comp=E,9.6nm,0.3s,baz=70,slow=21,SNR=11								
WSAR	**Wadi Sarin**	**5.43**	**164**	P		**Pn**		**01 09 39.7**	**+0.4**
	SNR=6.6								
WSAR	**Wadi Sarin**	**5.43**	**164**	P		**Pn**		**01 09 39.7**	**+0.4**
	SNR=6.6								
ANAR	**Anarak**	**5.46**	**330**	*e*Pn		**Pn**		**01 09 44.5**	**+4.7**
ANAR				*e*				01 11 24.3	
	comp=N,99nm,0.3s								
ANAR				*e*				01 11 26.7	
	comp=E,99nm,0.4s								
ANAR				*e*				01 11 34.4	
	comp=Z,99nm,0.5s								
ANAR	**Anarak**	**5.46**	**330**	*e*Pn		**Pn**		**01 09 44.5**	**+4.7**
IZEF	**Zefreh**	**5.96**	**319**	*e*Pn		**Pn**		**01 09 50.6**	**+3.9**
IZEF				*e*				01 10 33.2	
	comp=E,84nm,0.3s								
IZEF				*e*				01 11 54.8	
	comp=Z,126nm,0.4s								
IZEF				*e*				01 11 59.4	
	comp=N,115nm,0.3s								
IZEF	**Zefreh**	**5.96**	**319**	*e*Pn		**Pn**		**01 09 50.6**	**+3.9**
IKLH	**Kolahrood**	**6.70**	**317**	*e*				01 12 13.3	
	comp=Z,122nm,0.3s								
IKLH				*e*				01 12 20.2	
	comp=N,119nm,0.2s								
IKLH				*e*				01 12 31.5	
	comp=E,151nm,0.3s								
SLWS		**6.77**	**239**	P		**Pn**		**01 09 59.1**	**+1.5**
SLWS				S		**Sn**		**01 11 13.9**	**-0.9**
BTHS		**7.08**	**233**	P		**Pn**		**01 10 03.2**	**+1.4**
BTHS				S		**Sn**		**01 11 19.2**	**-3.1**
BOQSS		**7.27**	**251**	P		**Pn**		**01 10 06.6**	**+2.0**
BOQSS				S		**Sn**		**01 11 26.0**	**-1.3**
MHTO	**MHTO**	**7.52**	**173**	P		**Pn**		**01 10 08.8**	**+0.8**
	SNR=9.6								
GEYT	**Alibeck**	**9.46**	**5**	P		Pn		01 10 40.8	+6.2
	comp=E,0.8nm,0.3s,baz=189,slow=15,SNR=3.6								
GEYT				LR		LR		01 14 44.1	
	comp=E,104nm,19.5s,baz=65,slow=40								
RAYN	**Ar Rayn**	**11.46**	**247**	*i* P		Pn		01 11 00.4	-1.7
	SNR=10								
ASF	**Jabal al Asfar**	**17.74**	**287**	P		**P**		**01 12 29.6**	**+3.4**
	comp=E,0.2nm,0.3s,baz=58,slow=16,SNR=3.1								
ASF				S		**Sn**		**01 15 37.3**	**-5.8**
	comp=E,0.2nm,0.3s,baz=297,slow=15,SNR=4.0								
MMAI	**Mount Meron Ar**	**19.09**	**289**	P		**P**		**01 12 44.2**	**+3.1**
	comp=E,0.3nm,0.3s,baz=88,slow=15,SNR=4.8								
KVAR	**Kislovodsk Arr**	**19.23**	**327**	P		**P**		**01 12 43.6**	**+1.0**
	baz=143,slow=20,SNR=2.6								
AAK	**Ala-Archa**	**19.99**	**40**	LR		LR		01 21 26.6	
	comp=E,46nm,18.1s,baz=292,slow=39								
AKTO	**Aktyubinsk**	**21.93**	**2**	P		**P**		**01 13 13.5**	**+1.8**
	comp=E,3.0nm,0.6s,baz=174,slow=11,SNR=10								
AKTO				LR		LR		01 23 01.3	
	comp=E,65nm,18.2s,baz=243,slow=40								
BRTR	**Keskin Array B**	**22.29**	**306**	P		**P**		**01 13 17.9**	**+2.1**
	comp=E,4.2nm,0.9s,baz=129,slow=9.5,SNR=28								
BVAR	**Borovoye Array**	**26.44**	**18**	P		**P**		**01 13 55.6**	**+0.5**
	comp=E,2.0nm,0.7s,baz=198,slow=9.3,SNR=15								
BVAR				LR		LR		01 25 50.2	
	comp=E,81nm,18.5s,baz=270,slow=39								
MKAR	**Makanchi Array**	**26.93**	**40**	P		**P**		**01 13 59.3**	**-0.3**
	comp=E,0.7nm,0.6s,baz=224,slow=7.8,SNR=8.0								
KURBB	**Kurchatov Arra**	**27.46**	**30**	P		**P**		**01 14 04.3**	**+0.1**
	comp=E,0.2nm,0.5s,baz=224,slow=7.8,SNR=3.5								
AKASG	**Malin Array Be**	**30.52**	**324**	P		**P**		**01 14 31.4**	**0.0**
	comp=E,0.4nm,0.4s,baz=127,slow=8.9,SNR=2.9								
ZALV	**Zalesovo Beam**	**32.55**	**31**	P		**P**		**01 14 48.6**	**-0.7**
	comp=E,0.9nm,0.3s,baz=232,slow=8.9,SNR=5.8								
ZALV				PcP		**PcP**		**01 17 33.5**	**-2.2**
	comp=E,0.5nm,0.4s,baz=235,slow=4.6,SNR=2.5								
GERES	**GERESS Array B**	**38.79**	**314**	P		**P**		**01 15 43.0**	**-0.1**
	comp=E,1.1nm,0.7s,baz=108,slow=9.4,SNR=7.1								
GERES				PcP		**PcP**		**01 17 53.2**	**-1.1**
	comp=E,0.5nm,0.7s,baz=158,slow=2.9,SNR=2.9								
FINES	**FINESS Array B**	**38.83**	**337**	P		**P**		**01 15 43.4**	**+0.3**
	comp=E,2.2nm,0.9s,baz=120,slow=11,SNR=6.5								
KHC	**Kasperske Hory**	**38.95**	**314**	*e*P		**P**		**01 15 44.5**	**+0.2**
BSD	**Bornholm Skovb**	**40.21**	**323**	*i* P		**P**		**01 15 53.6**	**-1.0**
	comp=E,7.3nm,0.5s								
SONM	**Songino Array**	**42.55**	**49**	P		**P**		**01 16 13.9**	**-0.4**
	comp=E,0.5nm,0.6s,baz=261,slow=8.6,SNR=3.2								
HFS	**Hagfors**	**43.00**	**330**	P		**P**		**01 16 17.8**	**+0.4**
	comp=E,0.5nm,0.4s,baz=112,slow=11,SNR=3.4								
NRIK	**Noril'sk**	**44.55**	**15**	P		**P**		**01 16 30.5**	**+0.7**
	comp=E,1.6nm,0.5s,baz=172,slow=9.3,SNR=3.4								
EKA	**Eskdalemuir Ar**	**50.23**	**320**	P		**P**		**01 17 14.2**	**0.0**
	comp=E,0.6nm,0.6s,baz=99,slow=8.7,SNR=3.4								
ESDC	**Sonseca Array**	**50.84**	**300**	P		**P**		**01 17 19.6**	**+0.5**
	comp=E,0.5nm,0.5s,baz=73,slow=7.7,SNR=5.1								
SPITS	**Spitsbergen Ar**	**52.98**	**350**	P		**P**		**01 17 33.4**	**-1.2**
	comp=E,4.8nm,0.9s,baz=188,slow=8.7,SNR=2.2								
TORD	**Torodi Ar. Bea**	**53.46**	**265**	P		**P**		**01 17 37.9**	**-1.0**
	comp=E,1.2nm,0.6s,baz=62,slow=7.1,SNR=21								
KOWA	**Kowa**	**57.92**	**270**	P		**P**		**01 18 10.3**	**-0.6**
	comp=E,1.5nm,0.6s,baz=52,slow=2.8,SNR=2.3								
KSRS	**Korea Array**	**58.92**	**61**	P		P		01 18 13.9	-3.7
	comp=E,0.6nm,0.4s,baz=262,slow=8.5,SNR=3.6								
LBTB	**Lobatse**	**61.18**	**213**	P		P		01 18 31.8	-1.4
	comp=E,2.8nm,0.9s,baz=31,slow=5.9,SNR=2.3								
SEY	**Seymchan**	**67.41**	**30**	P		**P**		**01 19 12.0**	**-1.6**
	comp=E,1.3nm,0.5s,baz=190,slow=8.8,SNR=4.3								
ILAR	**Eielson Array**	**85.19**	**10**	P		**P**		**01 20 52.5**	**-2.0**
	comp=E,0.4nm,0.6s,baz=320,slow=4.8,SNR=8.7								
WRA	**Warramunga Arr**	**88.82**	**113**	P		**P**		**01 21 11.9**	**-0.9**
	comp=E,0.4nm,0.8s,baz=314,slow=4.4,SNR=2.9								
ASAR	**Alice Springs**	**90.37**	**117**	P		**P**		**01 21 18.2**	**-1.9**
	comp=E,0.3nm,0.6s,baz=308,slow=4.6,SNR=3.9								

*SKO **21** 01:11:38.8,41°.33N×19°.83E,h17km*
*TIR **21** 01:11:39.9,41°.43N×19°.95E,h3km,Md2.8/6*
*CSEM **21** 01:11:39.7±0.2,41°.38N×19°.90E,h2km,ML2.7,Error ellipse: s-maj=3.9km s-min=2.6km az=41.0*
*BEO **21** 01:11:39.9±0.5,41°.31N×19°.93E,h5km±2km*
*ISCJB **21** 01:11:39.2±0.3,41°.40N±0°.02×19°.90E±0°.02,h1km±2km, Error ellipse: s-maj=3.4km s-min=2.0km az=139.6*
*THE **21** 01:11:40.0,41°.42N×19°.96E,h0km±3km,ML2.5/5,Error ellipse: s-maj=3.4km s-min=1.1km az=325.0*
*PDG **21** 01:11:40.4±0.4,41°.44N×19°.87E,h3km,ML2.9/11,Error ellipse: s-maj=0.5km s-min=0.8km az=0.0*
ISC 21 01:11:40.2±0.8,41°.42N±0°.02×19°.92E±0°.02,h6km±6km, n157,σ1§17/244,26C-22D,Albania

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.08**	**213**	⇑*i*Pg		**Pg**		**01 11 41.9**	**-0.2**
TIR				*e*Sg		**Sg**		**01 11 43.9**	**+0.5**
TIR	**Tirane**	**0.08**	**213**	⇑*i*P		**Pg**		**01 11 41.3**	**-0.8**
TIR				S		**Sg**		**01 11 43.9**	**+0.5**
TIR	**Tirane**	**0.08**	**213**	P		**Pg**		**01 11 41.7**	**-0.4**
TIR				S		**Sg**		**01 11 43.8**	**+0.4**
TIR	**Tirane**	**0.08**	**213**	*i* PG		**Pg**		**01 11 41.9**	**-0.2**
TIR				*i* SG		**Sg**		**01 11 43.9**	**+0.5**
TIR	**Tirane**	**0.08**	**213**	P		**Pg**		**01 11 41.7**	**-0.4**
TIR				S		**Sg**		**01 11 43.8**	**+0.4**
PHP	**Peshkopia**	**0.47**	**55**	P		**Pg**		**01 11 48.6**	**-0.8**
PHP				S		**Sg**		**01 11 56.0**	**+0.5**
PHP	**Peshkopia**	**0.47**	**55**	*i* PG		**Pg**		**01 11 49.0**	**-0.3**
PHP				*i* SG		**Sg**		**01 11 56.3**	**+0.8**
PHP	**Peshkopia**	**0.47**	**55**	P		**Pg**		**01 11 48.6**	**-0.8**
PHP	**Peshkopia**	**0.47**	**55**	*i* Pg		**Pg**		**01 11 49.0**	**-0.3**
PHP				S		**Sg**		**01 11 56.0**	**+0.5**
PUK	**Puka**	**0.63**	**358**	*i* PG		**Pg**		**01 11 52.5**	**+0.2**
PUK				*i* SG		**Sb**		**01 12 03.2**	**+0.5**
PUK	**Puka**	**0.63**	**358**	*i* Pg		**Pg**		**01 11 52.5**	**+0.2**
PUK				*i* Sg		**Sb**		**01 12 03.2**	**+0.5**
OHR	**Ohrid**	**0.73**	**114**	*i* Pg		**Pg**		**01 11 52.7**	**-1.5**
OHR				*i* Sg		**Sb**		**01 12 04.4**	**-1.0**
ULC	**Ulcinj**	**0.75**	**317**	⇓*i*Pg		**Pg**		**01 11 53.4**	**-1.2**
ULC				*e*Sg		**Sg**		**01 12 04.7**	**+0.4**
ULC	**Ulcinj**	**0.75**	**317**	⇓*i*Pg		**Pg**		**01 11 53.4**	**-1.2**
ULC				*e*Sg		**Sg**		**01 12 04.7**	**+0.4**
DRME	**Dracevica, Mon**	**0.95**	**325**	*e*Pg		**Pg**		**01 11 57.0**	**-1.4**
DRME				*e*Sg		**Sb**		**01 12 11.4**	**-0.4**
DRME	**Dracevica, Mon**	**0.95**	**325**	*e*Pn		**Pg**		**01 11 57.0**	**-1.4**
DRME				*e*Sg		**Sb**		**01 12 11.4**	**-0.4**
BCI	**Bajram Curri**	**0.96**	**6**	*i* SG		**Sn**		**01 12 13.3**	**-0.8**
BCI				*i* PG		**Pg**		**01 11 57.9**	**-0.7**
BCI	**Bajram Curri**	**0.96**	**6**	*i* Pg		**Pg**		**01 11 57.9**	**-0.7**
BCI				*i* Sg		**Sn**		**01 12 13.3**	**-0.8**
KBN	**Korca**	**1.03**	**140**	*i* PG		**Pn**		**01 12 03.2**	**+2.1**
KBN				*i* SG		**Sn**		**01 12 18.3**	**+2.5**
KBN	**Korca**	**1.03**	**140**	*i* Pg		**Pn**		**01 12 03.2**	**+2.1**
BIA	**Bitola**	**1.13**	**110**	P		**Pg**		**01 12 00.7**	**-1.1**
BIA				S		**Sg**		**01 12 16.2**	**-0.3**
BIA	**Bitola**	**1.13**	**110**	*i* Pg		**Pg**		**01 12 00.5**	**-1.4**
BIA				*i* Sg		**Sn**		**01 12 18.5**	**+0.1**
BIA	**Bitola**	**1.13**	**110**	P		**Pg**		**01 12 00.7**	**-1.1**
BIA				S		**Sg**		**01 12 16.2**	**-0.3**
PDG	**Podgorica**	**1.13**	**334**	*e*Pg		**Pg**		**01 12 01.0**	**-0.9**
PDG				*e*Sg		**Sn**		**01 12 18.7**	**+0.4**
PDG	**Podgorica**	**1.13**	**334**	⇓*i*P		**Pg**		**01 12 00.4**	**-1.5**
PDG	**Podgorica**	**1.13**	**334**	S		**Sn**		**01 12 18.3**	**0.0**
PDG	**Podgorica**	**1.13**	**334**	P		**Pg**		**01 12 00.4**	**-1.5**
PDG	**Podgorica**	**1.13**	**334**	*e*Pn		**Pg**		**01 12 00.1**	**-1.8**
PDG	**Podgorica**	**1.13**	**334**	P		**Pg**		**01 12 00.4**	**-1.5**
PDG	**Podg

UPM	**Unac-Piva**	**1.94**	**337**	⇑*i*Pn	**Pb**	**01 12 15.0**	**-1.0**
UPM				*e*Sn	**Sg**	**01 12 42.8**	**+0.3**
UPM	**Unac-Piva**	**1.94**	**337**	⇑*i*Pn	**Pb**	**01 12 15.0**	**-1.0**
UPM				*e*Sn	**Sg**	**01 12 42.8**	**+0.3**
PLE	**Pljevlja**	**1.95**	**348**	⇓*i*Pn	**Pb**	**01 12 15.6**	**-0.6**
PLE				*e*Sn	**Sg**	**01 12 43.1**	**+0.1**
PLE	**Pljevlja**	**1.95**	**348**	⇓*i*Pn	**Pb**	**01 12 15.6**	**-0.6**
PLE				*e*Sn	**Sg**	**01 12 43.1**	**+0.1**
BARS	**Barje**	**1.99**	**45**	*e*Pn	**Pb**	**01 12 16.0**	**-0.7**
BARS				*e*Sn	**Sn**	**01 12 40.3**	**+0.8**
BARS	**Barje**	**1.99**	**45**	*e*Pn	**Pb**	**01 12 16.0**	**-0.7**
BARS				*e*Sn	**Sn**	**01 12 40.3**	**+0.8**
VAY	**Valandovo**	**2.00**	**92**	*e*Pn	**Pn**	**01 12 13.8**	**-0.6**
VAY				*e*Sg	**Sg**	**01 12 43.1**	**-1.2**
VAY	**Valandovo**	**2.00**	**92**	*i* Pn	**Pb**	**01 12 15.8**	**-1.0**
VAY				*i* Sn	**Sg**	**01 12 43.5**	**-0.7**
VAY	**Valandovo**	**2.00**	**92**	*e*Pn	**Pn**	**01 12 13.8**	**-0.6**
VAY				*e*Sg	**Sg**	**01 12 43.1**	**-1.2**
SELS	**Selova**	**2.01**	**26**	*e*Pn	**Pn**	**01 12 15.2**	**+0.6**
SELS				*e*Sn	**Sb**	**01 12 41.7**	**-0.7**
STON	**Ston**	**2.20**	**312**	*e*Pn	**Pn**	**01 12 17.3**	**+0.1**
STON				*e*Sg	**Sg**	**01 12 51.6**	**+0.7**
STON	**Ston**	**2.20**	**312**	*e*Pn	**Pn**	**01 12 16.8**	**-0.4**
STON	**Ston**	**2.20**	**312**	*e*Pn	**Pn**	**01 12 17.3**	**+0.1**
STON				*e*Sg	**Sg**	**01 12 51.6**	**+0.7**
BBLS	**Lazići**	**2.48**	**351**	*e*Pn	**Pn**	**01 12 22.8**	**+1.7**
BBLS				*e*Sn	**Sb**	**01 12 55.3**	**-0.6**
BBLS	**Lazići**	**2.48**	**351**	*e*Pn	**Pn**	**01 12 22.8**	**+1.7**
BBLS				*e*Sn	**Sb**	**01 12 55.3**	**-0.6**
GRUS	**Gruza**	**2.54**	**13**	*e*Pn	**Pn**	**01 12 23.8**	**+1.9**
GRUS				*e*Sn	**Sb**	**01 12 56.3**	**-1.3**
GRUS	**Gruza**	**2.54**	**13**	*e*Pn	**Pn**	**01 12 23.8**	**+1.9**
GRUS				*e*Sn	**Sb**	**01 12 56.3**	**-1.3**
MATE	**Matera**	**2.55**	**254**	⇑*i*P	Pn	01 12 14.3	-7.7
BOVS	**Bovan**	**2.58**	**30**	*e*Pn	**Pn**	**01 12 24.1**	**+1.7**
BOVS				*e*Sn	**Sn**	**01 12 56.1**	**+2.0**
BOVS	**Bovan**	**2.58**	**30**	*e*Pn	**Pn**	**01 12 24.1**	**+1.7**
BOVS				*e*Sn	**Sn**	**01 12 56.1**	**+2.0**
DIVS	**Divibare**	**2.68**	**1**	*e*Pn	**Pn**	**01 12 25.2**	**+1.3**
DIVS				*e*Sn	**Sb**	**01 12 59.6**	**-2.2**
DIVS	**Divibare**	**2.68**	**1**	*e*Pn	**Pn**	**01 12 25.2**	**+1.3**
DIVS				*e*Sn	**Sb**	**01 12 59.6**	**-2.2**
VTS	**Vitosha**	**2.72**	**63**	⇓*i*P	**Pn**	**01 12 24.9**	**+0.4**
VTS	**Vitosha**	**2.72**	**63**	⇓*i*P	**Pn**	**01 12 24.9**	**+0.4**
ZAPS	**Zavoj**	**2.74**	**46**	*e*Pn	**Pn**	**01 12 26.2**	**+1.6**
ZAPS				*e*Sn	**Sn**	**01 12 59.1**	**+1.1**
ZAPS	**Zavoj**	**2.74**	**46**	*e*Pn	**Pn**	**01 12 26.2**	**+1.6**
ZAPS				*e*Sn	**Sn**	**01 12 59.1**	**+1.1**
HAPS	**Han Pijesak,BI**	**2.76**	**345**	*e*Pn	**Pn**	**01 12 25.4**	**+0.3**
HAPS				*e*Sn	**Sb**	**01 13 01.8**	**-2.4**
HAPS	**Han Pijesak,BI**	**2.76**	**345**	*e*Pn	**Pn**	**01 12 25.4**	**+0.3**
HAPS				*e*Sn	**Sb**	**01 13 01.8**	**-2.4**
TRUS	**Trudelj**	**2.83**	**7**	*e*Pn	**Pn**	**01 12 27.4**	**+1.5**
TRUS	**Trudelj**	**2.83**	**7**	*e*Pn	**Pn**	**01 12 27.4**	**+1.5**
ZAGS	**Zajecar**	**2.94**	**35**	*e*Pn	**Pn**	**01 12 28.5**	**+1.1**
ZAGS				*e*Sn	**Sn**	**01 13 05.3**	**+2.3**
ZAGS	**Zajecar**	**2.94**	**35**	*e*Pn	**Pn**	**01 12 28.5**	**+1.1**
ZAGS				*e*Sn	**Sn**	**01 13 05.3**	**+2.3**
SVIS	**Svilajnac**	**3.00**	**18**	*e*Sn	**Sn**	**01 13 06.7**	**+2.2**
TEKS	**Tekeris**	**3.15**	**355**	*e*Pn	**Pn**	**01 12 31.4**	**+1.1**
TEKS	**Tekeris**	**3.15**	**355**	*e*Pn	**Pn**	**01 12 31.4**	**+1.1**
KUBS	**Kucevo**	**3.26**	**23**	*e*Pn	**Pn**	**01 12 31.8**	**0.0**
KUBS				*e*Sn	**Sn**	**01 13 11.2**	**+0.3**
KUBS	**Kucevo**	**3.26**	**23**	*e*Pn	**Pn**	**01 12 31.8**	**0.0**
KUBS				*e*Sn	**Sn**	**01 13 11.2**	**+0.3**
TIP	**Timpagrande**	**3.29**	**228**	⇓*i*P	**Pn**	**01 12 31.9**	**-0.4**
TIP	**Timpagrande**	**3.29**	**228**	⇓*i*P	**Pn**	**01 12 31.9**	**-0.4**
MDVR	**Moldovita**	**3.61**	**21**	⇑*i*P	**Pn**	**01 12 37.3**	**+0.6**
MDVR	**Moldovita**	**3.61**	**21**	S	**Sn**	**01 13 20.8**	**+1.2**
MDVR	**Moldovita**	**3.61**	**21**	⇑*i*P	**Pn**	**01 12 37.3**	**+0.6**
MDVR				S	**Sn**	**01 13 20.8**	**+1.2**
FGSL	**Fruska Gora**	**3.74**	**359**	*e*Pn	**Pn**	**01 12 39.0**	**+0.6**
FRGS	**Fruska Gora**	**3.74**	**359**	*e*Pn	**Pn**	**01 12 39.0**	**+0.6**
BLY	**Banja Luka**	**3.89**	**330**	*e*Pn	**Pn**	**01 12 41.9**	**+1.5**
BLY	**Banja Luka**	**3.89**	**330**	⇑*i*P	**Pn**	**01 12 40.9**	**+0.5**
BLY	**Banja Luka**	**3.89**	**330**	⇑*i*P	**Pn**	**01 12 40.9**	**+0.5**
BLY	**Banja Luka**	**3.89**	**330**	*e*Pn	**Pn**	**01 12 41.9**	**+1.5**
HERR	**Herculane**	**3.92**	**27**	⇓*i*P	**Pn**	**01 12 42.0**	**+1.2**
HERR	**Herculane**	**3.92**	**27**	S	**Sn**	**01 13 28.4**	**+1.4**
HERR	**Herculane**	**3.92**	**27**	⇓*i*P	**Pn**	**01 12 42.0**	**+1.2**
HERR				S	**Sn**	**01 13 28.4**	**+1.4**
UDBI	**Udbina**	**4.36**	**317**	*i* Pn	**Pn**	**01 12 48.7**	**+1.8**
UDBI	**Udbina**	**4.36**	**317**	*i* Pn	**Pn**	**01 12 48.7**	**+1.8**
BZS	**Buzias**	**4.38**	**16**	*e*Pn	**Pn**	**01 12 47.8**	**+0.7**
BZS	**Buzias**	**4.38**	**16**	⇑*i*P	**Pn**	**01 12 47.8**	**+0.7**
BZS	**Buzias**	**4.38**	**16**	S	**Sn**	**01 13 38.5**	**+0.1**
BZS	**Buzias**	**4.38**	**16**	⇑*i*P	**Pn**	**01 12 47.8**	**+0.7**
BZS				S	**Sn**	**01 13 38.5**	**+0.1**
NVLJ	**Novalja**	**4.86**	**312**	*e*Pn	**Pn**	**01 12 54.1**	**+0.4**
NVLJ	**Novalja**	**4.86**	**312**	*e*Pn	**Pn**	**01 12 54.1**	**+0.4**
CRES	**Cresnjev**	**5.47**	**325**	*e*Pn	**Pn**	**01 13 02.5**	**+0.3**
VOIR		**5.49**	**41**	⇓*i*P	**Pn**	**01 13 02.8**	**+0.4**
VOIR		**5.49**	**41**	⇓*i*P	**Pn**	**01 13 02.8**	**+0.4**
DRGR		**5.74**	**20**	*e*Pn	**Pn**	**01 13 06.8**	**+0.9**
DRGR		**5.74**	**20**	⇑*i*P	**Pn**	**01 13 07.1**	**+1.2**
DRGR		**5.74**	**20**	S	**Sn**	**01 14 09.8**	**-2.2**
DRGR		**5.74**	**20**	*e*Pn	**Pn**	**01 13 06.8**	**+0.9**
DRGR		**5.74**	**20**	⇑*i*P	**Pn**	**01 13 07.1**	**+1.2**
CEY	**Cerknica**	**5.88**	**319**	*e*Pn	**Pn**	**01 13 08.5**	**+0.7**
MLR	**Muntele Rosu**	**5.98**	**45**	⇓*i*P	**Pn**	**01 13 10.2**	**+0.9**
MLR	**Muntele Rosu**	**5.98**	**45**	⇓*i*P	**Pn**	**01 13 10.2**	**+0.9**
OBKA	**Obir**	**6.40**	**325**	Pn	**Pn**	**01 13 16.9**	**+1.9**
	1.1nm,0.5s						
OBKA	**Obir**	**6.40**	**325**	Pn	**Pn**	**01 13 16.9**	**+1.9**
	1.1nm,0.5s						
ARSA	**Arzberg**	**6.63**	**333**	*e*Pn	**Pn**	**01 13 19.0**	**+0.9**
	1.6nm,0.6s						
ARSA	**Arzberg**	**6.63**	**333**	Pn	**Pn**	**01 13 19.0**	**+0.9**
	1.6nm,0.6s						
TRPA	**Tarpa**	**6.97**	**15**	⇓*i*P	**Pn**	**01 13 23.0**	**+0.3**
TRPA	**Tarpa**	**6.97**	**15**	⇓*i*P	**Pn**	**01 13 23.0**	**+0.3**
KECS	**Kecovo**	**7.08**	**3**	*e*SN	**Sn**	**01 14 45.0**	**0.0**
KECS	**Kecovo**	**7.08**	**3**	*e*Sn	**Sn**	**01 14 45.0**	**0.0**
VYHS	**Vyhne**	**7.12**	**354**	*e*SN	**Sn**	**01 14 48.5**	**+2.5**
VYHS	**Vyhne**	**7.12**	**354**	*e*Sn	**Sn**	**01 14 48.5**	**+2.5**
KBA	**Koelnbreinsper**	**7.37**	**322**	Pn	**Pn**	**01 13 29.9**	**+1.5**
	1.9nm,0.6s						
KBA	**Koelnbreinsper**	**7.37**	**322**	Pn	**Pn**	**01 13 29.9**	**+1.5**
	1.9nm,0.6s						
ABTA	**Abfaltersbach**	**7.54**	**317**	*e*Pn	**Pn**	**01 13 30.5**	**-0.2**
	0.7nm,0.6s						
ABTA	**Abfaltersbach**	**7.54**	**317**	Pn	**Pn**	**01 13 30.5**	**-0.2**
	0.7nm,0.6s						
FETA	**Feichten**	**8.66**	**313**	*e*Pn	**Pn**	**01 13 44.7**	**-1.3**
	2.9nm,1.0s						
MOTA	**Moosalm**	**8.66**	**316**	Pn	**Pn**	**01 13 45.7**	**-0.4**
	0.8nm,0.5s						
MOTA	**Moosalm**	**8.66**	**316**	Pn	**Pn**	**01 13 45.7**	**-0.4**
	0.8nm,0.5s						

*IDC **21** 01:13:51.8±1.5,27˚.71N×56˚.50E, h0km, mb3.6/6, mb1 3.5/7, mb1mx3.2/83, mbtmp3.6/7, ML3.1/1, Error ellipse: s-maj=31.5km s-min=28.5km az=137.0*
*TEH **21** 01:13:53.6,27˚.65N×56˚.58E, h10km, ML3.0*
*ISCJB **21** 01:13:54.3±0.6,27˚.49N±0˚.05×56˚.64E±0˚.07, h30km±5km, mb3.4/6, Error ellipse: s-maj=10.6km s-min=8.1km az=171.2*
*OMAN **21** 01:14:20.7±0.3,25˚.90N×56˚.07E, h9km, Error ellipse: s-maj=9.3km s-min=2.0km az=282.0*
ISC 21 01:13:54.3±1.3,27˚.62N±0˚.04×56˚.64E±0˚.06, h20km±6km, n17,σ1§26/19, mb3.5/6, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIAN	**Nian**	**0.18**	**110**	*e*Pg	**Pg**	**01 13 58.3**	**-0.9**
NIAN				*e*		01 14 04.1	
	comp=E,99nm,0.1s						
NIAN				*e*		01 14 04.2	
	comp=N,99nm,0.1s						
NIAN				*e*		01 14 04.4	
	comp=Z,99nm,0.1s						
IBND	**Bandar-abas**	**0.20**	**208**	*e*Pg	**Pg**	**01 13 59.2**	**-0.1**
IBND				*e*		01 14 01.6	
	comp=Z,32μm,0.1s						
GENO	**Geno**	**0.47**	**242**	*e*Sg	**Sb**	**01 14 10.3**	**-0.4**
GENO				*e*Pg	**Pb**	**01 14 03.2**	**-0.9**
GENO				*e*		01 14 13.6	
	comp=N,99nm,0.1s						
GENO				*e*		01 14 13.8	
	comp=Z,99nm,0.1s						

2012 JUN

GENO				*e*		01 14 16.5	
	comp=E,99nm,0.1s						
KHSK	**Kohestak**	**0.94**	**157**	*e*Pg	**Pn**	**01 14 14.1**	**+1.8**
KHSK				*e*		01 14 31.6	
	comp=E,99nm,0.1s						
KHSK				*e*		01 14 31.8	
	comp=N,99nm,0.1s						
KHSK				*e*		01 14 32.5	
	comp=Z,99nm,0.1s						
BANOM	**Banah**	**1.72**	**190**	P	**Pb**	**01 14 25.3**	**+0.1**
	SNR=18						
NGRK	**Negar Kerman**	**2.02**	**2**	*e*Pn	**Pb**	**01 14 31.0**	**+0.5**
NGRK				*e*		01 14 32.8	
	comp=Z,99nm,0.1s						
NGRK				*e*		01 15 00.3	
	comp=N,99nm,0.1s						
NGRK				*e*		01 15 02.4	
	comp=E,99nm,0.1s						
TVBK	**TV Kerman**	**2.36**	**2**	*e*Pn	**Pb**	**01 14 35.6**	**-0.7**
TVBK				*e*		01 14 38.1	
	comp=Z,99nm,0.1s						
TVBK				*e*		01 15 12.0	
	comp=N,99nm,0.1s						
CHMN	**Cheshme madani**	**2.37**	**19**	*e*Pn	**Pb**	**01 14 36.1**	**-0.4**
CHMN				*e*		01 14 39.7	
	comp=N,99nm,0.2s						
CHMN				*e*		01 14 39.9	
	comp=Z,99nm,0.1s						
CHMN				*e*		01 15 10.0	
	comp=E,99nm,0.1s						
KHGB	**Koh Gabri**	**2.75**	**357**	*e*Pn	**Pb**	**01 14 40.9**	**-2.0**
KHGB				*e*		01 14 48.4	
	comp=N,99nm,0.2s						
KHGB				*e*		01 14 48.4	
	comp=Z,99nm,0.2s						
KHGB				*e*		01 15 21.6	
	comp=E,99nm,0.2s						
IMEH	**Mehriz**	**4.15**	**335**	*e*Pn	**Pn**	**01 14 59.5**	**+2.7**
IMEH				*e*		01 15 02.2	
	comp=Z,170nm,0.1s						
WSAR	**Wadi Sarin**	**4.72**	**157**	Pn	**Pn**	**01 15 06.1**	**+1.7**
	comp=Z,0.7nm,0.3s,baz=354,slow=8.2,SNR=7.4						
WSAR				Sn	**Sn**	**01 15 57.4**	**-1.2**
	comp=Z,1.0nm,0.3s,baz=73,slow=19,SNR=11						
MKAR	**Makanchi Array**	**27.79**	**40**	P	**P**	**01 19 42.1**	**+0.2**
	comp=Z,0.1nm,0.4s,baz=225,slow=21,SNR=3.0						
KURBB	**Kurchatov Arra**	**28.36**	**30**	P	**P**	**01 19 47.9**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=268,slow=4.8,SNR=3.3						
AKASG	**Malin Array Be**	**31.04**	**325**	P	**P**	**01 20 09.6**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=132,slow=8.4,SNR=4.4						
ZALV	**Zalesovo Beam**	**33.45**	**30**	P	**P**	**01 20 31.9**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=246,slow=10,SNR=5.1						
HFS	**Hagfors**	**43.59**	**330**	P	**P**	**01 21 56.4**	**-0.3**
	comp=Z,1.1nm,0.9s,baz=134,slow=8.3,SNR=3.0						
TORD	**Torodi Ar. Bea**	**53.08**	**266**	P	**P**	**01 23 10.3**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=49,slow=6.5,SNR=2.8						

*ISK **21** 01:29:40.5,39˚.24N×41˚.93E, h10km, ML2.0/4*
*ATA **21** 01:29:40.8±1.2,39˚.26N×41˚.94E, h18km±6km, ML2.9, MW2.8*
*IASPEI **21** 01:29:41.1±1.0,39˚.23N±0˚.03×41˚.98E±0˚.03, h19km±1km, Error ellipse: s-maj=4.5km s-min=3.9km az=133.3, GT5 selection from ISC bulletin GT5 identified by Bond˜jr and McLaughlin (2009) selection criteria Bond˜jr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
*DDA **21** 01:29:41.6,39˚.26N×41˚.96E, h7km, Ml2.4*
*CSEM **21** 01:29:41.0±0.2,39˚.24N×41˚.97E, h15km, ML2.4, Error ellipse: s-maj=4.8km s-min=4.4km az=116.0*
*ISCJB **21** 01:29:41.5±0.5,39˚.21N±0˚.03×41˚.94E±0˚.04, h12km±5km, Error ellipse: s-maj=6.1km s-min=4.5km az=140.2*
ISC 21 01:29:41.2±0.9,39˚.24N±0˚.03×41˚.96E±0˚.03, h20km±4km, n32,σ0§72/42, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKAR	**Karacoban**	**0.09**	**76**	*e*P	**Pg**	**01 29 44.6**	**-0.7**
EKAR				*e*S	**Sg**	**01 29 48.7**	**+0.7**
EKAR				IAML		01 29 50.1	
	comp=Z,473nm,0.3s						
EKAR	**Karacoban**	**0.09**	**76**	*i* P	**Pg**	**01 29 44.6**	**-0.7**
EKAR				*i* S	**Sg**	**01 29 49.1**	**+1.1**
EKAR	**Karacoban**	**0.09**	**76**	P	**Pg**	**01 29 44.6**	**-0.7**
EKAR				S	**Sg**	**01 29 49.1**	**+1.1**
TUTA	**Tutak**	**0.69**	**76**	*e*P	**Pn**	**01 29 55.6**	**-0.3**
TUTA				*e*S	**Sg**	**01 30 05.0**	**+1.0**
TUTA	**Tutak**	**0.69**	**76**	*i* P	**Pb**	**01 29 53.6**	**-0.9**
TUTA	**Tutak**	**0.69**	**76**	P	**Pb**	**01 29 53.6**	**-0.9**
GURO	**Guroymak-BITLI**	**0.69**	**175**	PG	**Pb**	**01 29 54.1**	**-0.4**
GURO				SG	**Sg**	**01 30 04.4**	**+0.4**
GURO	**Guroymak-BITLI**	**0.69**	**175**	*e*Pg	**Pb**	**01 29 54.1**	**-0.4**
GURO				*e*Sg	**Sg**	**01 30 04.4**	**+0.4**
BNGL	**BINGOL**	**0.69**	**246**	*e*P	**Pg**	**01 29 54.9**	**0.0**
BNGL				*e*S	**Sn**	**01 30 05.6**	**-0.7**
BNGL	**BINGOL**	**0.69**	**246**	*i* P	**Pg**	**01 29 55.0**	**+0.2**
ADCV	**BITLIS_Adilcev**	**0.73**	**125**	*i* P	**Pg**	**01 29 56.2**	**+0.5**
ADCV	**BITLIS_Adilcev**	**0.73**	**125**	P	**Pg**	**01 29 56.2**	**+0.5**
EATA	**Eleskirt**	**0.75**	**33**	*e*P	**Pg**	**01 29 56.2**	**+0.2**
EATA				*e*S	**Sn**	**01 30 08.1**	**+0.1**
EATA	**Eleskirt**	**0.75**	**33**	*i* P	**Pg**	**01 29 56.1**	**+0.1**
EATA	**Eleskirt**	**0.75**	**33**	P	**Pg**	**01 29 56.1**	**+0.1**
ERZM	**Erzurum**	**0.81**	**326**	*i* P	**Pg**	**01 29 57.3**	**+0.2**
ERZM	**Erzurum**	**0.81**	**326**	P	**Pg**	**01 29 57.3**	**+0.2**
HOMI	**Horasan**	**0.81**	**357**	*e*P	**Pb**	**01 29 56.0**	**-0.7**
HOMI				*e*S	**Sn**	**01 30 08.7**	**-0.6**
HOMI				IAML		01 30 13.1	
	comp=Z,27nm,0.5s						
HOMI	**Horasan**	**0.81**	**357**	*i* P	**Pb**	**01 29 56.3**	**-0.5**
ECAT	**Cat-ERZURUM**	**0.85**	**296**	*e*P	**Pb**	**01 29 57.1**	**-0.3**
ECAT				*e*S	**Sn**	**01 30 10.3**	**+0.1**
ECAT				IAML		01 30 13.9	
	comp=Z,14nm,0.3s						
AGRB	**Hanur-Agry**	**0.87**	**67**	PG	**Pb**	**01 29 58.1**	**+0.4**
AGRB	**Hanur-Agry**	**0.87**	**67**	*e*Pg	**Pb**	**01 29 58.1**	**+0.4**
BNGB	**Bing˜¶ll**	**1.02**	**257**	PG	**Pb**	**01 30 00.2**	**-0.1**
YEDI	**Yedisu-Bingol**	**1.11**	**281**	PN	**Pb**	**01 30 01.9**	**0.0**
YEDI	**Yedisu-Bingol**	**1.11**	**281**	*e*Pn	**Pb**	**01 30 01.9**	**0.0**
BINT	**Bingol**	**1.20**	**253**	*e*Pg	**Pn**	**01 30 00.2**	**-2.7**
SVAN	**Silvan-Diyarba**	**1.23**	**209**	PN	**Pb**	**01 30 04.2**	**+0.4**
SVAN	**Silvan-Diyarba**	**1.23**	**209**	*e*Pn	**Pb**	**01 30 04.2**	**+0.4**
SENK	**Senkaya-Erzuru**	**1.36**	**13**	PN	**Pb**	**01 30 06.2**	**+0.1**
SENK	**Senkaya-Erzuru**	**1.36**	**13**	*e*Pn	**Pb**	**01 30 06.2**	**+0.1**
PTK	**Pertek**	**2.03**	**261**	PN	**Pn**	**01 30 15.3**	**+0.9**
PTK	**Pertek**	**2.03**	**261**	*e*Pn	**Pn**	**01 30 15.3**	**+0.9**

*NIED **21** 01:44:00,39˚.60N×143˚.70E, h17km, Mw3.6 Best double couple: M0=3.22000×10^14 NP1:φs=171.00000°, δ39.00000°, λ47.00000°. NP2:φs=42.00000°, δ63.00000°, λ119.00000°.*
*ISCJB **21** 01:44:47.9±0.7,39˚.59N±0˚.04×143˚.74E±0˚.07, h11km, mb3.6/7, Error ellipse: s-maj=8.0km s-min=5.3km az=31.8*
*JMA **21** 01:44:48.6±0.2,39˚.63N×143˚.74E, h22km, M3.9*
*IDC **21** 01:44:53.5±3.1,39˚.52N×143˚.69E, h40km±27km, mb3.4/7, mb1 3.6/11, mb1mx3.3/70, mbtmp3.7/11, ML3.5/3, Error ellipse: s-maj=32.8km s-min=22.0km az=91.0*
ISC 21 01:44:49.5±1.1,39˚.60N±0˚.07×143˚.69E±0˚.09, h11km, n23, σ1§02/28, mb3.7/7, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**1.44**	**270**	P	**Pn**	**01 45 14.6**	**-1.0**
MIYJ				*e*S	**Sn**	**01 45 33.8**	**-0.7**
JTH	**Tanohata**	**1.45**	**284**	P	**Pn**	**01 45 14.5**	**-1.1**
JTH				*e*S	**Sn**	**01 45 34.1**	**-0.5**
OFUJ	**Ofunato**	**1.65**	**252**	P	**Pn**	**01 45 17.5**	**-0.9**
JANG	**Nango**	**1.84**	**296**	P	**Pn**	**01 45 19.7**	**-1.4**
JOM	**Ohasama**	**1.86**	**267**	P	**Pn**	**01 45 20.9**	**-0.4**
JOM				*e*S	**Sn**	**01 45 44.5**	**-0.2**
JMK	**Ichinoseki**	**2.02**	**252**	P	**Pn**	**01 45 23.2**	**-0.3**
JIO	**Ouri**	**2.15**	**239**	P	**Pn**	**01 45 24.6**	**-0.7**
JYK	**Kaneyama**	**2.67**	**256**	P	**Pn**	**01 45 32.7**	**+0.2**
JNBK	**Urakawa-nobuka**	**2.77**	**346**	P	**Pn**	**01 45 35.1**	**+1.2**
JCH	**Churui**	**3.03**	**355**	P	**Pn**	**01 45 37.5**	**+0.1**
JCH				*e*S	**Sn**	**01 46 11.5**	**-2.1**
JFT	**Otama**	**3.35**	**233**	P	**Pn**	**01 45 41.7**	**-0.1**
ASAJ	**Asahikawa**	**4.59**	**350**	P	**Pn**	**01 46 00.0**	**+1.2**
	1.5nm,0.3s,baz=180,slow=13,SNR=3.8						
ASAJ				S	**Sn**	**01 46 52.3**	**+0.2**
	1.1nm,0.3s,baz=126,slow=17,SNR=2.8						
MAT	**Matsushiro**	**5.29**	**237**	P	**Pn**	**01 46 09.5**	**+1.0**
MJAR	**Matsushiro Arr**	**5.29**	**237**	P	**Pn**	**01 46 09.7**	**+1.2**
	1.0nm,0.3s,baz=41,slow=11,SNR=14						
JHJ	**Hachijo jima 2**	**7.19**	**207**	P	**Pn**	**01 46 35.2**	**+0.7**
	8.9nm,0.3s,baz=42,slow=17,SNR=2.4						
JHJ				S	Sn	01 47 46.9	-9.3
	5.8nm,0.3s,baz=38,slow=14,SNR=2.2						
USRK	**Ussuriysk Ar.**	**9.86**	**302**	P	**Pn**	**01 47 13.6**	**+2.4**
	0.2nm,0.3s,baz=78,slow=21,SNR=2.9						
SONM	**Songino Array**	**27.96**	**299**	P	**P**	**01 50 40.6**	**+0.5**
	0.5nm,0.6s,baz=90,slow=8.5,SNR=3.7						
ZALV	**Zalesovo Beam**	**41.57**	**310**	P	**P**	**01 52 37.6**	**+0.6**
	1.0nm,0.3s,baz=82,slow=5.4,SNR=3.4						
MKAR	**Makanchi Array**	**44.32**	**300**	P	**P**	**01 52 59.7**	**+0.2**
	0.9nm,0.8s,baz=80,slow=6.7,SNR=4.1						
KURBB	**Kurchatov Arra**	**45.88**	**306**	P	**P**	**01 53 11.6**	**-0.1**
	1.9nm,0.9s,baz=82,slow=8.4,SNR=8.6						
ILAR	**Eielson Array**	**46.38**	**34**	P	**P**	**01 53 16.4**	**+0.9**
	0.1nm,0.6s,baz=262,slow=6.3,SNR=3.0						
BVAR	**Borovoye Array**	**50.20**	**311**	P	**P**	**01 53 45.2**	**0.0**
	0.7nm,0.5s,baz=60,slow=8.5,SNR=4.5						
WRA	**Warramunga Arr**	**59.87**	**190**	P	**P**	**01 54 54.0**	**-1.3**
	0.3nm,0.8s,baz=7.5,slow=6.7,SNR=2.9						

*NIED **21** 01:59:00,39˚.20N×143˚.70E, h11km, Mw4.6 Best double couple: M0=7.52000×10^15 NP1:φs=198.00000°, δ31.00000°, λ87.00000°. NP2:φs=22.00000°, δ59.00000°, λ92.00000°.*
*IDC **21** 01:59:56.6±0.6,39˚.25N×143˚.57E, h0km, mb4.3/28, mb1 4.4/35, mb1mx4.2/75, mbtmp4.3/35, ML3.6/7, MS3.8/20, Ms1 3.8/20, ms1mx3.4/66, Error ellipse: s-maj=15.6km s-min=12.4km az=137.0*
*JMA **21** 01:59:57.2±0.1,39˚.24N×143˚.74E, h28km, M4.5*
*ISCJB **21** 01:59:58.4±1.0,39˚.42N±0˚.03×143˚.39E±0˚.03, h10km±6km, mb4.6/115, MS4.2/34, Error ellipse: s-maj=5.4km s-min=3.4km az=139.6*
*BJI **21** 02:00:01.3,39˚.36N×143˚.12E, h23km, mb4.7/55, mB5.1/30, Ms4.5/37, Ms7 4.3/37*
*MOS **21** 02:00:02.2±1.1,39˚.47N×143˚.26E, h33km, mb4.7/48, MS4.1/17, Error ellipse: s-maj=6.9km s-min=4.4km az=107.0*
*NEIC **21** 02:00:02.5±1.6,39˚.34N×143˚.33E, h30km±11km, mb4.7/57, Error ellipse: s-maj=6.9km s-min=4.3km az=145.0*
ISC 21 02:00:03.1±0.5,39˚.43N±0˚.05×143˚.49E±0˚.05, h36km±1km, n321,σ1§56/338, mb4.6/119, MS4.2/34, 30C-17D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**1.30**	**277**	P	**Pn**	**02 00 23.3**	**-1.4**
MIYJ				*e*S	**Sn**	**02 00 42.4**	**+1.5**
JTH	**Tanohata**	**1.35**	**293**	P	**Pn**	**02 00 24.6**	**-0.9**
JTH				*e*S	**Sn**	**02 00 44.1**	**+1.9**
OFUJ	**Ofunato**	**1.45**	**257**	P	**Pn**	**02 00 24.6**	**-2.2**
OFUJ				*e*S	**Sn**	**02 00 44.8**	**+0.2**
JOM	**Ohasama**	**1.70**	**272**	P	**Pn**	**02 00 29.2**	**-1.1**
JOM				*e*S	**Sn**	**02 00 52.2**	**+1.4

MDJ LR LR
comp=Z,2µm,14.3s
JNU Nakatsue 11.96 242 Pn **Pn 02 02 48.0 -3.0**
comp=Z,0.3nm,0.3s,baz=38,slow=12,SNR=6.1
JNU LR LR 02 07 54.3
comp=Z,638nm,19.2s,baz=100,slow=40
JNU Nakatsue 11.96 242 *e*Pn **Pn 02 02 48.8 -2.3**
KSRS Korea Array 12.36 266 Pn **Pn 02 02 56.1 -0.4**
comp=Z,0.3nm,0.3s,baz=84,slow=13,SNR=9.3
KSRS LR LR 02 07 32.3
comp=Z,364nm,18.3s,baz=88,slow=37
KS01 Wonju Array Si 12.38 266 *e*Pn **Pn 02 02 56.0 -0.8**
GRNR Gornyy 12.38 339 *e*P **Pn 02 02 57.9 +1.1**
GRNR pmax pmax
comp=Z,42nm,1.0s
KS15 Wonju Array Si 12.40 266 *e*Pn **Pn 02 02 56.1 -0.9**
KSAR Wonju Array Be 12.40 266 Pn **Pn 02 02 56.1 -0.9**
KSAR Wonju Array Be 12.40 266 P **Pn 02 02 56.1 -0.9**
KLR Kul'dur 12.89 323 Pn **Pn 02 03 03.5 -0.3**
comp=Z,0.0nm,0.3s,baz=159,slow=13,SNR=7.3
KLR LR LR 02 08 22.7
comp=Z,60nm,18.8s,baz=119,slow=39
KLR Kul'dur 12.89 323 *ce*P **Pn 02 03 02.9 -0.8**
TJN Taejon 13.09 262⇓ *e*P **Pn 02 03 05.3 -1.2**
OKH Okha 14.13 359 *e*P P 02 03 33.4 +5.7
OKH *e*S S 02 06 06.2 -10
OKH smax smax
comp=Z,900nm,16.0s
CN2 Changchun 14.18 294 *e*P **Pn 02 03 20.6 -0.7**
CN2 *e*S **Sn 02 05 57.5 +0.2**
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,400nm,15.0s
CN2 LR LR
comp=Z,600nm,15.0s
CN2 LR LR
comp=Z,700nm,13.0s
PETK Petropavlovsk- 16.80 31 Pn **Pn 02 03 55.0 -0.5**
comp=Z,0.3nm,0.3s,baz=198,slow=9.1,SNR=3.2
PETK LR LR 02 11 47.8
comp=Z,114nm,18.4s,baz=209,slow=42
PETK Petropavlovsk- 16.80 31 *e*Pn **P 02 03 56.6 -0.7**
PETK Petropavlovsk- 16.80 31 *e*P **P 02 03 56.6 -0.7**
PEA1 Petropavlovsk- 16.80 31 *e*Pn **Pn 02 03 55.0 -0.5**
PET Petropavlovsk 17.13 32⇑ *e*P **Pn 02 03 59.9 +0.4**
ZEA Zeya 18.09 328 *e*P **Pn 02 04 09.6 -1.7**
ZEA pmax pmax
comp=N,59nm,1.0s
ZEA pmax pmax
comp=E,35nm,1.0s
ZEA pmax pmax
comp=Z,64nm,1.2s
ZEA MLR MLR
comp=Z,800nm,16.0s
ZEA MLR MLR
comp=N,400nm,15.0s
ZEA MLR MLR
comp=E,400nm,15.0s
HIA Hailar 19.55 308 *e*P **P 02 04 25.6 -2.1**
comp=E,29nm,1.0s
HIA Hailar 19.55 308 *d i*P **P 02 04 26.1 -1.5**
HIA pmax pmax
comp=Z,23nm,1.0s
MA2 Magadan 20.69 11 P **P 02 04 40.4 +0.6**
comp=Z,9.0nm,0.8s,baz=182,slow=8.4,SNR=5.8
MA2 LR LR 02 14 14.0
comp=Z,203nm,18.4s,baz=177,slow=41
MA2 Magadan 20.69 11 *e*P **P 02 04 40.2 +0.4**
comp=Z,19nm,0.8s
MA2 Magadan 20.69 11 *e*P **P 02 04 40.6 +0.7**
MA2 pmax pmax
comp=Z,49nm,2.5s
BJI Beijing 20.99 280 P **P 02 04 40.8 -2.4**
BJI pmax pmax
comp=Z,39nm,1.3s
BJI LR LR
comp=Z,390nm,13.3s
BJI LR LR
comp=Z,840nm,15.2s
BJI LR LR
comp=Z,480nm,16.5s
BJT Baijiatuau 21.00 280 *e*P **P 02 04 40.8 -2.5**
comp=Z,31nm,1.0s
BJT Baijiatuau 21.00 280 *e*P **P 02 04 40.8 -2.5**
BJT pmax pmax
comp=Z,31nm,1.0s
TIA Tai'an 21.05 270 P **P 02 04 41.1 -2.8**
TIA pmax pmax
comp=Z,5.0nm,0.8s
NJ2 Nanjing 21.27 257 *e*P **P 02 04 46.3 0.0**
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
SEY Seymchan 24.14 10 P **P 02 05 15.6 +0.2**
comp=Z,7.9nm,0.8s,baz=189,slow=9.6,SNR=17
SEY Seymchan 24.14 10⇑ *e*P **P 02 05 17.1 +1.6**
YAK Yakutsk 24.16 344 *e*P **P 02 05 16.0 +0.4**
comp=Z,85nm,1.1s
YAK Yakutsk 24.16 344 *e*P **P 02 05 15.2 -0.4**
YAK *e**PP **pP 02 05 21.2 -4.6**
YAK *e* 02 06 02.4
YAK *e*S **S 02 09 31.0 +0.1**
YAK *e**SS **sS 02 09 44.5 -3.1**
YAK pmax pmax
comp=Z,54nm,0.9s
YAK pmax pmax
comp=E,5.0nm,0.9s
YAK pmax pmax
comp=N,19nm,1.1s
YAK smax smax
comp=E,77nm,2.8s
YAK MLR MLR
comp=Z,373nm,12.0s
YAK MLR MLR
comp=E,112nm,12.0s
YAK MLR MLR
comp=N,290nm,12.0s
HHC Hu-ho-hao-te 24.38 284 *e*P **P 02 05 16.4 -1.6**
HHC S S 02 09 23.3 -12
HHC SS **SnSn 02 10 23.6 +3.4**
HHC pmax pmax
comp=N,22nm,1.0s
HHC pmax pmax
comp=N,130nm,4.3s
HHC LR LR
comp=N,260nm,11.3s
HHC LR LR
comp=N,630nm,11.1s
HHC LR LR
comp=N,810nm,12.2s
YULB Yu-li 24.68 236 *e*P **P 02 05 18.9 -1.8**
comp=N,176nm,1.9s
SMY Shemya 24.84 47 *e*P **P 02 05 22.9 +1.1**
comp=N,40nm,1.0s
SMY Shemya 24.84 47 *e*P **P 02 05 22.9 +1.1**
SMY pmax pmax
comp=Z,41nm,1.0s
WHN Wuhan 25.38 259⇓ P **P 02 05 26.3 -0.6**
WHN pmax pmax
comp=Z,150nm,1.0s
WHN LR LR
comp=Z,2µm,13.9s
WHN LR LR
comp=Z,2µm,14.2s
QZH Quanzhou 25.43 243 *e*P **P 02 05 28.6 +1.1**
QZH S **S 02 09 49.1 -2.9**
BOD Bodaibo 26.47 324 *e*P **P 02 05 38.3 +1.7**
BOD pmax pmax
comp=Z,30nm,1.0s
ULN Ulaanbaatar 27.47 300 *e*P **P 02 05 46.3 +0.4**
comp=Z,12nm,1.0s
ULN Ulaanbaatar 27.47 300 *ce*P **P 02 05 46.1 +0.2**
ULN pmax pmax
comp=Z,16nm,1.2s
SONA1 Songino Array 27.91 300 *e*P **P 02 05 49.7 -0.1**
SONA0 Songino Array 27.91 300 *e*P **P 02 05 49.7 -0.2**
SONM Songino Array 27.91 300 P **P 02 05 49.7 -0.2**
comp=Z,4.8nm,0.8s,baz=94,slow=8.9,SNR=22
SONM LR LR 02 17 34.6
comp=Z,305nm,19.2s,baz=86,slow=38
XAN Xi'an 28.11 270 P **P 02 05 50.8 -0.8**
XAN pP pP 02 06 00.3 -1.5
XAN sP sP 02 06 04.1 -2.0
XAN pmax pmax
comp=Z,15nm,0.9s
XAN LR LR
comp=Z,370nm,4.9s
XAN LR LR
comp=Z,420nm,6.4s
XAN LR LR
comp=Z,520nm,6.7s
H11N2 WAKE ISLAND Hy 28.14 127 T T 02 35 05.7
baz=319,slow=74,SNR=38
H11N1 WAKE ISLAND Hy 28.14 128 T T 02 35 00.8
baz=319,slow=74,SNR=30
H11N3 WAKE ISLAND Hy 28.15 127 T T 02 35 01.2
baz=319,slow=74,SNR=31
H11S1 WAKE ISLAND Hy 28.95 129 T T 02 36 04.6
baz=321,slow=76,SNR=5.9
H11S3 WAKE ISLAND Hy 28.95 129 T T 02 36 14.7
baz=321,slow=76,SNR=3.9
H11S2 WAKE ISLAND Hy 28.96 129 T T 02 36 06.7
baz=321,slow=76,SNR=4.2
ENH Enshi 29.22 262 *e*P **P 02 06 01.7 +0.2**
comp=Z,55nm,1.4s
TLY Talaya 30.09 307 *e*P **P 02 06 09.8 +0.8**
comp=Z,9.6nm,1.1s
TLY Talaya 30.09 307 *e*P **P 02 06 10.0 +1.0**
TLY pmax pmax
comp=Z,9.0nm,1.0s
TLY MLR MLR
comp=Z,256nm,11.0s
ZAK Zakamensk 30.16 305 *e*P **P 02 06 09.7 0.0**
ZAK pmax pmax
comp=Z,8.0nm,1.1s
BILL Bilibino 31.28 16 *i*P **P 02 06 19.0 -0.2**
BILL pmax pmax
comp=Z,3.0nm,1.0s
BILL MLR MLR
comp=Z,564nm,21.0s
LZH Lanzhou 31.35 277 *e*P **P 02 06 24.8 +4.4**
LZH *e*S **S 02 11 27.8 +2.5**
LZH pmax pmax
comp=Z,31nm,1.2s
LZH pmax pmax
comp=Z,190nm,5.2s
LZH LR LR
comp=Z,730nm,12.9s
LZH LR LR
comp=Z,1µm,14.6s
LZH LR LR
comp=Z,1µm,14.9s
ATKA Atka Island 31.68 52 *e*P **P 02 06 25.2 +2.3**
comp=Z,19nm,1.0s
TIXI Tiksi 33.14 352 P **P 02 06 35.0 -0.5**
comp=Z,0.8nm,0.2s,baz=76,slow=4.2,SNR=2.6
TIXI Tiksi 33.14 352⇓ *e*P **P 02 06 35.5 0.0**
TIXI pmax pmax
comp=Z,2.0nm,1.0s
GYA Guiyang 33.27 258 *e*P **P 02 06 38.4 +1.1**
GYA pmax pmax
comp=Z,10.0nm,0.8s
CD2 Chengdu 33.35 268 P **P 02 06 35.9 -2.0**
CD2 pmax pmax
comp=Z,31nm,0.7s
GTA Gaotai 33.49 284⇓ P **P 02 06 40.0 +0.9**
GTA pP pP 02 06 48.1 -1.3
GTA sP sP 02 06 52.5 -1.2
GTA S **S 02 12 02.8 +4.2**
GTA pmax pmax
comp=Z,23nm,1.1s
GTA pmax pmax
comp=Z,110nm,5.6s
GTA LR LR
comp=Z,320nm,18.9s
GTA LR LR
comp=Z,560nm,17.5s
GTA LR LR
comp=Z,690nm,16.5s
KNGR Kungurtug, Tuv 33.85 305⇓ *e*P **P 02 06 42.7 +0.6**
KMI Kunming 36.97 260 P **P 02 07 09.4 +0.1**
KMI pP pP 02 07 17.3 -2.3
KMI sP sP 02 07 22.5 -1.4
KMI pmax pmax
comp=Z,13nm,1.0s
KMI pmax pmax
comp=Z,140nm,5.8s
KMI LR LR
comp=Z,590nm,14.8s
KMI LR LR
comp=Z,410nm,15.1s
KMI LR LR
comp=Z,340nm,17.3s
DGZ Jazzator, Alta 40.37 304⇓ *e*P **P 02 07 38.4 +0.9**
WMQ Urumqi 41.27 295 P **P 02 07 46.3 +1.4**
WMQ pP pP 02 07 55.4 +0.1
WMQ sP sP 02 08 00.0 +0.4
WMQ pmax pmax
comp=Z,37nm,0.9s
WMQ pmax pmax
comp=Z,190nm,4.7s
WMQ LR LR
comp=Z,140nm,22.1s
WMQ LR LR
comp=Z,150nm,18.9s
WMQ LR LR
comp=Z,190nm,19.9s
ZAA0 Zalesovo Array 41.56 310 *e*P **P 02 07 47.4 +0.4**
comp=Z,10nm,0.7s
ZAA1 Zalesovo Array 41.56 310 *e*P **P 02 07 46.5 -0.4**
ZALV Zalesovo Beam 41.56 310 P **P 02 07 46.5 -0.4**
comp=Z,6.5nm,0.7s,baz=90,slow=8.3,SNR=15
ZALV Zalesovo Beam 41.56 310 *e*P **P 02 07 46.9 -0.1**
ZALV Zalesovo Beam 41.56 310 *e*P **P 02 07 46.9 -0.1**
NRIK Noril'sk 41.81 334 P **P 02 07 48.8 -0.1**
comp=Z,2.2nm,0.3s,baz=100,slow=3.7,SNR=4.8
NRIK LR LR 02 26 57.9
comp=Z,215nm,18.9s,baz=108,slow=39
NVS Novosibirsk 42.42 312 *e*P **P 02 07 53.1 -0.9**
CHTO Chiang Mai 43.48 255 *e*P **P 02 08 01.7 -1.3**
comp=Z,35nm,1.9s
CHTO Chiang Mai 43.48 255 *e*P **P 02 08 01.7 -1.3**
CHTO pmax pmax
comp=Z,35nm,1.9s
LSA Lhasa 43.65 274 *e*P **P 02 08 05.4 +0.5**
comp=Z,6.8nm,0.8s
CM31 Chiang Mai Arr 43.70 255 *e*P **P 02 08 03.0 -1.8**
CMAR Chiang Mai Arr 43.70 255 P **P 02 08 03.0 -1.8**
comp=Z,1.3nm,0.4s,baz=42,slow=5.7,SNR=4.5
KDAK Kodiak Island 44.24 44 P **P 02 08 07.4 -1.2**
comp=Z,3.6nm,1.0s,baz=322,slow=12,SNR=2.4
KDAK Kodiak Island 44.24 44 *e*P **P 02 08 07.4 -1.2**
comp=Z,36nm,1.8s
MK01 Makanchi Array 44.27 300 *e*P **P 02 08 09.0 -0.2**
MK31 Makanchi Array 44.28 300 *e*P **P 02 08 09.5 +0.3**
MK32 Makanchi Array 44.28 300 *e*P **P 02 08 09.1 0.0**
MKAR Makanchi Array 44.28 300 P **P 02 08 09.1 0.0**
comp=Z,7.9nm,1.0s,baz=78,slow=11,SNR=11
MKAR Makanchi Array 44.28 300 *e*P **P 02 08 09.5 +0.3**
comp=Z,41nm,0.8s
CAST Castle Rocks 44.33 35 *e*P **P 02 08 11.0 +1.7**
comp=Z,6.9nm,1.1s
MAKZ Makanchi 44.48 301 *e*P **P 02 08 11.2 +0.4**
comp=Z,8.8nm,0.9s
MAKZ *ep*P **pP 02 08 19.3 -2.0**
MAKZ Makanchi 44.48 301 *e*P **P 02 08 11.2 +0.4**
MAKZ *e**PP **pP 02 08 19.3 -2.0**
MAKZ pmax pmax
comp=Z,9.0nm,0.9s
SKT Skwentna 44.58 38 *e*P **P 02 08 12.7 +1.4**
comp=Z,4.3nm,1.0s
CNPM China Poot 44.82 41 *e*P **P 02 08 15.8 +2.5**
comp=Z,9.4nm,1.0s
BPAW Bear Paw Mtn. 44.83 35 *e*P **P 02 08 16.1 +2.7**
comp=Z,2.7nm,1.0s
KTH Kantishna Hill 44.85 35 *e*P **P 02 08 15.9 +2.4**
comp=Z,8.9nm,1.0s
BWN Browne 45.50 34 *e*P **P 02 08 21.3 +2.7**
comp=Z,33nm,1.0s
KURK Kurchatov 45.78 307 *e*P **P 02 08 20.8 -0.2**
comp=Z,19nm,0.7s
KURK Kurchatov 45.78 307 *c i*P **P 02 08 20.6 -0.4**
KURK pmax pmax
comp=Z,31nm,1.2s
RND Reindeer 45.79 36 *e*P **P 02 08 21.4 +0.4**
comp=Z,12nm,1.5s
RND Reindeer 45.79 36 *e*P **P 02 08 21.4 +0.4**
RND pmax pmax
comp=Z,12nm,1.5s
KURBB Kurchatov Arra 45.86 306 P **P 02 08 21.4 -0.2**
comp=Z,13nm,0.8s,baz=81,slow=8.2,SNR=45
MDM Murphy Dome 46.02 33 *e*P **P 02 08 24.4 +1.7**
comp=Z,6.1nm,1.0s
SCM Sheep Creek Mo 46.58 38 *e*P **P 02 08 29.2 +2.0**
comp=Z,9.1nm,1.0s
IL1 Eielson Array 46.60 34 *e*P **P 02 08 27.7 +0.5**
ILAR Eielson Array 46.60 34 P **P 02 08 26.8 -0.5**
comp=Z,1.4nm,0.7s,baz=262,slow=7.0,SNR=16
ILB Eielson Array 46.60 34 *e*P **P 02 08 27.9 +0.6**
KLU Klutina 47.28 38 *e*P **P 02 08 36.8 +4.1**
comp=Z,5.5nm,0.9s
PAX Paxson 47.34 36 *e*P **P 02 08 34.3 +1.1**
comp=Z,5.7nm,0.9s
PAX Paxson 47.34 36 *e*P **P 02 08 34.3 +1.1**
PAX pmax pmax
comp=Z,6.0nm,0.9s
BVAR Borovoye Array 50.20 311 P **P 02 08 55.2 0.0**
comp=Z,5.8nm,0.9s,baz=79,slow=8.0,SNR=8.9
BRVK Borovoye 50.25 311 *e*P **P 02 08 56.3 +0.8**
comp=Z,11nm,1.0s
BRVK Borovoye 50.25 311 *de*P **P 02 08 56.1 +0.6**
BRVK pmax pmax
comp=Z,10.0nm,1.2s
KSH Kashi 50.95 293 P **P 02 09 03.8 +2.6**
KSH pmax pmax
comp=Z,320nm,4.8s
INK Inuvik 51.52 28 P **P 02 09 04.8 0.0**
comp=Z,1.5nm,0.5s,baz=304,slow=6.1,SNR=13
INK Inuvik 51.52 28 *e*P **P 02 09 05.7 +1.0**
comp=Z,3.4nm,0.7s
INK Inuvik 51.52 28 *e*P **P 02 09 05.7 +1.0**
INK pmax pmax
comp=Z,3.0nm,0.7s
MNAS Manas 52.24 298 P **P 02 09 13.0 +2.2**
MNAS pmax pmax
comp=Z,7.0nm,1.1s
KK31 Karatay Array 53.36 299 *e*P **P 02 09 18.9 0.0**
KK31 Karatay Array 53.36 299 *e*P **P 02 09 18.9 0.0**
KKAR Karatay Array 53.36 299 *e*P **P 02 09 18.9 0.0**
KKAR Karatay Array 53.36 299 *e*P **P 02 09 18.9 0.0**
SVE Sverdlovsk 54.45 318⇓ *e*P **P 02 09 27.2 +0.6**
SVE pmax pmax
comp=Z,20nm,0.9s
SVE MLR MLR
comp=Z,542nm,14.0s
ARU Arti 55.67 318 *e*P **P 02 09 35.7 +0.3**
comp=Z,17nm,0.9s
ARU Arti 55.67 318 *c i*P **P 02 09 35.5 +0.1**
ARU 02 10 40.1
ARU 02 11 40.2
ARU PPP PPP 02 12 52.2
ARU S **S 02 17 16.4 -2.5**
ARU SS **SS 02 21 00.8 -3.0**
ARU pmax pmax
comp=Z,28nm,1.2s
ARU MLR MLR
comp=Z,413nm,15.0s
DLBC Dease Lake 55.74 39 *e*P **P 02 09 38.6 +2.6**
comp=Z,4.2nm,0.9s
ABKAR Akbulak array 57.66 310 *e*P **P 02 09 49.6 0.0**
KBL Kabul 58.10 290 *e*P **P 02 09 52.8 -0.4**
comp=Z,22nm,1.1s
KBL Kabul 58.10 290 *e*P **P 02 09 52.8 -0.4**
KBL pmax pmax
comp=Z,22nm,1.1s
AKTO Aktyubinsk 58.30 311 P **P 02 09 53.4 -0.8**
comp=Z,3.7nm,0.7s,baz=70,slow=12,SNR=8.7
PRGR Permogore 59.66 327 *e*P **P 02 10 03.6 +0.3**
PRGR pmax pmax
comp=Z,7.0nm,1.0s
WB2 Warramunga Arr 59.67 190 *e*P **P 02 10 05.2 +1.4**
WR1 Warramunga Arr 59.67 190 *e*P **P 02 10 00.8 -3.0**
comp=Z,38nm,1.9s
WRA Warramunga Arr 59.67 190 P **P 02 10 00.8 -3.0**
comp=Z,1.6nm,0.6s,baz=10,slow=7.0,SNR=11
RES Resolute Bay 59.88 15 *e*P **P 02 10 05.5 +0.9**
comp=Z,5.9nm,0.8s
RES Resolute Bay 59.88 15 *e*P **P 02 10 05.5 +0.9**
RES pmax pmax
comp=Z,6.0nm,0.8s
YKA Yellowknife Ar 60.92 31 P **P 02 10 11.0 -1.0**
comp=Z,0.6nm,0.6s,baz=300,slow=5.8,SNR=3.3
YKA Yellowknife Ar 60.92 31 P **P 02 10 11.0 -1.0**
YKA pmax pmax
comp=Z,1.0nm,0.6s
KLMR Klimovskoe 62.61 328 *e*P **P 02 10 20.6 -2.7**
KLMR pmax pmax
comp=Z,9.0nm,1.2s
KLMR Klimovskoe 62.61 328 *e*P **P 02 10 20.7 -2.6**
KLMR AMP 02 10 23.6
comp=Z,9.0nm,1.2s
AS01 Alice Springs 63.39 190 *e*P **P 02 10 28.2 -0.8**
AS31 Alice Springs 63.40 190 *e*P **P 02 10 26.7 -2.3**
comp=Z,2.2nm,1.3s
ASAR Alice Springs 63.40 190 P **P 02 10 26.7 -2.3**
comp=Z,0.7nm,0.8s,baz=14,slow=5.8,SNR=5.1
GEYT Alibeck 64.11 299 LR LR 02 41 45.7
comp=Z,66nm,21.2s,baz=145,slow=39
GYA0B ALIBECK ARRAY 64.11 299 *e*P **P 02 10 32.8 -0.9**
comp=Z,7.7nm,1.1s
OBN Obninsk 67.16 323 *i*P **P 02 10 51.7 -1.3**
OBN *i* 02 10 59.7
OBN *i*S **S 02 19 46.8 +2.3**
OBN pmax pmax
comp=Z,6.0nm,1.1s
OBN MLR MLR
comp=Z,222nm,15.0s
FIA1 FINESS Array S 67.45 332 *e*P **P 02 10 54.0 -0.8**
FIA0 FINESS Array S 67.46 332 *e*P **P 02 10 54.5 -0.3**
FIA0 FINESS Array S 67.46 332 *e*P **P 02 10 54.5 -0.3**
FINES FINESS Array B 67.46 332 P **P 02 10 54.5 -0.3**
comp=Z,4.9nm,0.7s,baz=60,slow=9.2,SNR=11
FINES LR LR 02 43 27.3
comp=Z,254nm,18.3s,baz=37,slow=39
VSR Storozhevoye 68.21 319 *e*P **P 02 10 59.2 -0.5**
VSR pmax pmax
comp=Z,9.0nm,1.0s
SUMG Summit 68.29 1 *e*P **P 02 11 01.5 +1.1**
comp=Z,6.2nm,0.9s
SUMG Summit 68.29 1 *e*P **P 02 11 01.5 +1.1**
SUMG pmax pmax
comp=Z,6.0nm,0.9s
VORD Divnogorie 68.29 319 *e*P **P 02 11 00.3 +0.1**
VORD pmax pmax
comp=Z,5.0nm,0.6s
O03D Paynes Creek 68.97 55 *e*P **P 02 11 05.0 +0.2**
VSU Vasula 69.22 330⇑ *e*P **P 02 11 06.9 +1.1**
VSU pmax pmax
comp=Z,58nm,2.5s
ZEI Tsey 70.54 310 *e*P **P 02 11 11.6 -2.9**
ZEI pmax pmax
comp=Z,9.0nm,1.0s
KVAR Kislovodsk Arr 70.56 311 P **P 02 11 15.4 +0.8**
comp=Z,25nm,1.1s,baz=133,slow=19,SNR=13
KIV Kislovodsk 70.57 311 *e*P **P 02 11 15.8 +1.2**
comp=Z,30nm,0.9s
KIV Kislovodsk 70.57 311 *e*P **P 02 11 15.2 +0.6**
KIV pmax pmax
comp=Z,39nm,1.1s
KBZ Khabaz 70.58 311 P **P 02 11 15.3 +0.8**
comp=Z,9.4nm,0.8s,baz=42,slow=4.8,SNR=18
FFC Flin Flon 70.81 34 *i*P **P 02 11 19.1 +3.4**
LRM Limekiln Ridge 71.30 46 *e*P **P 02 11 21.7 +2.5**
DLMT Dillon 71.50 46 *e*P **P 02 11 22.1 +1.8**
comp=Z,4.4nm,1.0s
GNI Garni 71.58 307 LR LR 02 46 56.3
comp=Z,77nm,18.4s,baz=46,slow=39
GNI Garni 71.58 307⇑ *e*P **P 02 11 21.5 +0.6**
GNI pmax pmax
comp=Z,23nm,1.1s
WSAR Wadi Sarin 71.82 285 LR LR 02 47 36.5
comp=Z,62nm,18.4s,baz=352,slow=40
BOZ Bozeman (W) 71.90 46 *e*P **P 02 11 24.8 +2.2**
comp=Z,9.5nm,1.7s
BOZ Bozeman (W) 71.90 46 *e*P **P 02 11 24.8 +2.2**
BOZ pmax pmax
comp=Z,9.0nm,1.7s
KVN Kaiserville 72.02 54 *e*P **P 02 11 27.3 +3.8**
comp=Z,6.0nm,1.4s
KVN Kaiserville 72.02 54 P **P 02 11 27.3 +3.8**
KVN pmax pmax
comp=Z,6.0nm,1.4s
NV01 Mina Array Sit 72.26 55 *e*P **P 02 11 28.3 +3.3**
NVAR Mina Array Bea 72.26 55 P **P 02 11 25.3 +0.3**
comp=Z,0.3nm,0.7s,baz=246,slow=2.9,SNR=3.7
NC405 NORSAR Array S 72.40 338 *e*P **P 02 11 24.7 -0.5**
NC204 NORSAR Array S 72.55 338 *e*P **P 02 11 26.7 +0.6**
HFS Hagfors 72.57 336 P **P 02 11 25.8 -0.4**
comp=Z,4.4nm,0.8s,baz=53,slow=7.4,SNR=8.1

HFS LR LR 02 46 54.9
comp=Z,124nm,19.6s,baz=46,slow=39
NB201 NORSAR Array S 72.57 338 *e*P **P 02 11 25.7 -0.6**
NB2 NORSAR Subarra 72.60 338 P **P 02 11 26.3 -0.1**
comp=Z,4.1nm,0.8s,baz=38,slow=6.2
NB200 NORSAR Array S 72.60 338 *e*P **P 02 11 25.6 -0.8**
NOA NORSAR Array B 72.60 338 P **P 02 11 25.6 -0.8**
NOA LR LR 02 47 35.5
comp=Z,89nm,19.2s,baz=30,slow=39
AKASG Malin Array Be 73.40 323 P **P 02 11 31.1 -0.2**
comp=Z,2.5nm,0.6s,baz=45,slow=6.1,SNR=18
AKASG LR LR 02 47 58.2
comp=Z,76nm,19.4s,baz=100,slow=39
KIEV Kiev 73.41 323 *e*P **P 02 11 31.1 -0.1**
comp=Z,6.3nm,0.8s
KIEV Kiev 73.41 323 *de*P **P 02 11 31.2 -0.1**
KIEV pmax pmax
comp=Z,5.0nm,0.9s
PD31 Pinedale Array 74.83 47 *e*P **P 02 11 40.0 -0.2**
PDAR Pinedale Array 74.83 47 P **P 02 11 40.0 -0.2**
comp=Z,0.6nm,0.5s,baz=281,slow=2.4,SNR=7.7
PDAR Pinedale Array 74.83 47 *e*P **P 02 11 41.1 +1.0**
PASC Pasadena Art C 74.89 58 *e*P **P 02 11 41.9 +1.5**
BBRC Big Bear Solar 75.67 57 *e*P P 02 11 50.1 +5.0
CRY Cary Ranch 76.22 58 *e*P **P 02 11 52.0 +4.0**
FRD Ford Ranch, An 76.35 58 *e*P **P 02 11 52.7 +3.9**
LVV L'vov 76.40 325 *e*P **P 02 11 49.8 +1.2**
EML El Monte Cty P 76.56 59 *e*P P 02 11 54.9 +5.1
SRU San Rafael Swe 76.62 50 *e*P **P 02 11 52.7 +2.4**
comp=Z,2.9nm,0.7s
SRU San Rafael Swe 76.62 50 *e*P **P 02 11 52.7 +2.4**
SRU pmax pmax
comp=Z,3.0nm,0.7s
KWP Kalwaria Pacla 77.12 325 *e*P **P 02 11 54.0 +1.2**
KWP Kalwaria Pacla 77.12 325 *e*P **P 02 11 53.9 +1.2**
comp=Z,234nm,1.2s
KWP Kalwaria Pacla 77.12 325 *e*P **P 02 11 54.0 +1.2**
BUR08 Bucovina Ar. S 77.42 322 *e*P **P 02 11 55.5 +0.9**
BUR04 Bucovina Ar. S 77.43 322 *e*P **P 02 11 54.9 +0.2**
BURAR Bucovina Array 77.43 322 ⇑*i*P **P 02 11 55.3 +0.7**
BURAR Bucovina Array 77.43 322 ⇑P **P 02 11 55.3 +0.7**
CFR Carcaliu 77.73 319 ⇑*i*P **P 02 11 56.5 +0.4**
CFR Carcaliu 77.73 319 ⇑P **P 02 11 56.5 +0.4**
VRI Vrincioaia 77.95 320 ⇑*i*P **P 02 11 59.2 +1.8**
VRI Vrincioaia 77.95 320 ⇑P **P 02 11 59.2 +1.8**
OJC Ojcow 77.95 327 *e*P **P 02 11 58.1 +0.8**
OJC Ojcow 77.95 327 *e*P **P 02 11 58.1 +0.8**
comp=Z,66nm,1.0s
OJC Ojcow 77.95 327 *e*P **P 02 11 58.2 +0.9**
OJC pmax pmax
comp=Z,66nm,1.0s
UZH Uzhgorod 78.04 325 *e*P **P 02 11 57.3 -0.5**
UZH *e* 02 12 11.5
TRPA Tarpa 78.30 324 ⇓*i*P **P 02 12 00.6 +1.3**
NIE Niedzica 78.34 326 *e*P **P 02 12 00.5 +1.0**
NIE Niedzica 78.34 326 *e*P **P 02 12 00.5 +1.0**
BR101 Keskin Array S 78.47 312 *e*P **P 02 12 00.7 +0.1**
BRTR Keskin Array B 78.47 312 P **P 02 12 00.7 +0.1**
comp=Z,1.4nm,0.8s,baz=70,slow=4.2,SNR=6.6
BRTR LR LR 02 51 38.9
comp=Z,42nm,18.3s,baz=47,slow=40
DOPR Dopca 78.53 321 ⇑*i*P **P 02 12 02.3 +1.7**
MLR Muntele Rosu 78.60 320 ⇑*i*P **P 02 12 02.7 +1.5**
MLR Muntele Rosu 78.60 320 ⇑P **P 02 12 02.7 +1.5**
KSP Ksiaz 78.91 329 *e*P **P 02 12 03.4 +0.8**
KSP Ksiaz 78.91 329 *e*P **P 02 12 03.4 +0.8**
OKC Ostrava-Krasne 78.93 327 AMS AMS 02 50 00.0
comp=Z,200nm,12.2s
DRGR 79.21 323 ⇑*i*P **P 02 12 04.9 +0.5**
DRGR 79.21 323 ⇑P **P 02 12 04.9 +0.5**
MORC Moravsky Berou 79.23 328 ⇑*i*P **P 02 12 04.5 0.0**
MORC Moravsky Berou 79.23 328 *e*P **P 02 12 04.4 0.0**
comp=Z,24nm,0.9s
MORC Moravsky Berou 79.23 328 ⇑P **P 02 12 04.5 0.0**
MORC Moravsky Berou 79.23 328 *e*P **P 02 12 04.8 +0.4**
DPC Dobruska-Polom 79.28 329 *e*P **P 02 12 06.3 +1.6**
DPC AMS AMS 02 50 40.0
comp=Z,100nm,16.5s
DPC Dobruska-Polom 79.28 329 *e*P **P 02 12 06.3 +1.6**
DPC MLR MLR
comp=Z,100nm,16.5s
UPC Upice 79.29 329 *e*P **P 02 12 06.1 +1.4**
UPC *e*pP **PcP 02 12 14.3 +1.5**
UPC AMS AMS 02 50 10.0
comp=Z,100nm,17.6s
UPC Upice 79.29 329 *e*P **P 02 12 06.1 +1.4**
UPC *e* 02 12 14.3
UPC MLR MLR
comp=Z,100nm,17.6s
ARR Arges 79.33 321 ⇓*i*P **P 02 12 06.7 +1.6**
PSZ Piszkesteto 79.64 325 *e*P **P 02 12 08.0 +1.3**
comp=Z,8.4nm,0.9s
VYHS Vyhne 79.67 326 *e*P **P 02 12 05.8 -1.0**
VYHS pmax pmax
comp=Z,3.0nm,1.0s
VYHS Vyhne 79.67 326 *e*P **P 02 12 05.8 -1.0**
CLL Collm 79.82 331 ⇑*i*P **P 02 12 07.4 -0.1**
comp=Z,5.0nm,0.8s
CLL *i* 02 12 10.8
CLL *i*pP **PcP 02 12 16.5 +1.4**
CLL *e*PP **PP 02 15 07.0 -1.3**
CLL LmV 02 50 00.0
comp=Z,100nm,19.3s
CLL LmV 04 43 00.0
comp=Z,100nm,19.3s
CLL Collm 79.82 331 *e*P **P 02 12 07.8 +0.3**
comp=Z,5.7nm,0.9s
CLL Collm 79.82 331 *e*P **P 02 12 07.9 +0.3**
CLL pmax pmax
comp=Z,6.0nm,0.9s
PVCC Panska Ves 79.84 330 *e*P **P 02 12 09.1 +1.4**
PVCC Panska Ves 79.84 330 *e*P **P 02 12 09.1 +1.4**
JAVC Velka Javorina 79.89 327 *e*P **P 02 12 09.4 +1.4**
JAVC *e* 02 12 18.5
VRAC Vranov 79.99 328 ⇑*i*P **P 02 12 09.4 +0.9**
VRAC Vranov 79.99 328 ⇑P **P 02 12 09.5 +0.9**
VRAC Vranov 79.99 328 *e*P **P 02 12 09.2 +0.7**
VRAC *e* 02 12 17.7
GOPC GO Pecny, Ondr 80.24 329 *e*P **P 02 12 11.2 +1.3**
GOPC *e*pP **PcP 02 12 18.6 +1.6**
GOPC AMS AMS 02 50 50.0
comp=Z,200nm,15.6s
GOPC GO Pecny, Ondr 80.24 329 *e*P **P 02 12 11.2 +1.3**
GOPC *e* 02 12 18.6
GOPC MLR MLR
comp=Z,200nm,15.6s
KRUC Moravsky 80.26 328 *e*P **P 02 12 10.4 +0.4**
PRU Pruhonice 80.28 329 AMS AMS 02 51 00.0
comp=Z,100nm,13.6s
BZS Buzias 80.59 323 ⇑*i*P **P 02 12 11.9 +0.1**
BZS Buzias 80.59 323 ⇑P **P 02 12 11.9 +0.1**
NKC Novy Kostel 80.89 331 AMS AMS 02 54 00.0
comp=Z,200nm,16.9s
MDVR Moldovita 81.17 322 ⇓*i*P **P 02 12 15.3 +0.3**
RAYN Ar Rayn 81.24 293 *e*P **P 02 12 15.8 0.0**
comp=Z,6.0nm,1.0s
RAYN Ar Rayn 81.24 293 P **P 02 12 15.7 0.0**
SOP Sopron 81.27 327 P **P 02 12 17.1 +1.7**
SOP pmax pmax
comp=Z,12nm,1.1s
KHC Kasperske Hory 81.34 329 *e*P **P 02 12 16.7 +0.9**
KHC *e*pP **pP 02 12 25.6 -1.4**
KHC AMS AMS 02 51 50.0
comp=Z,200nm,15.8s
KHC Kasperske Hory 81.34 329 *e*P **P 02 12 16.7 +0.9**
comp=Z,1.9nm,0.9s
KHC Kasperske Hory 81.34 329 *e*P **P 02 12 16.7 +0.9**
KHC *e* 02 12 25.6
KHC MLR MLR
comp=Z,200nm,15.8s
CONA Conrad Observa 81.37 327 *e*P **P 02 12 17.0 +1.0**
comp=Z,10.0nm,1.4s
EKA Eskdalemuir Ar 81.41 341 P **P 02 12 16.0 0.0**
comp=Z,2.1nm,0.8s,baz=8.0,slow=6.1,SNR=4.5
EKA Eskdalemuir Ar 81.41 341 P **P 02 12 16.0 0.0**
EKA pmax pmax
comp=Z,2.0nm,0.8s
GEC2 GERESS Array S 81.52 329 *e*P **P 02 12 17.1 +0.3**
comp=Z,2.3nm,0.8s
GEC2 GERESS Array S 81.52 329 *e*P **P 02 12 17.2 +0.3**
GEC2 pmax pmax
comp=Z,2.0nm,0.8s
GERES GERESS Array B 81.52 329 P **P 02 12 17.1 +0.3**
comp=Z,1.2nm,0.7s,baz=31,slow=6.2,SNR=10
GERES LR LR 02 52 11.0
comp=Z,109nm,18.4s,baz=20,slow=38
GEA0 GERESS Array S 81.53 329 *e*P **P 02 12 16.7 -0.2**
WET Wettzell 81.61 330 P **P 02 12 18.8 +1.6**
WET pmax pmax
comp=Z,6.0nm,1.3s
MMAI Mount Meron Ar 81.89 306 P **P 02 12 19.1 0.0**
comp=Z,5.2nm,0.8s,baz=68,slow=9.1,SNR=7.3
MMAI LR LR 02 53 02.7
comp=Z,66nm,18.4s,baz=115,slow=39
ARSA Arzberg 82.04 327 *e*P **P 02 12 20.0 +0.4**
comp=Z,2.3nm,0.8s
VTS Vitosha 82.06 320 ⇑*i*P **P 02 12 20.8 +0.9**
VTS Vitosha 82.06 320 *e*P **P 02 12 20.0 +0.2**
comp=Z,5.5nm,0.8s
VTS Vitosha 82.06 320 ⇑P **P 02 12 20.8 +0.9**
MOA Molln 82.09 328 *e*P **P 02 12 19.7 0.0**
comp=Z,2.5nm,1.2s
DIVS Divibare 82.49 323 *e*P **P 02 12 21.9 -0.1**
comp=Z,5.1nm,1.2s
SOKA Soboth 82.70 327 *e*P **P 02 12 23.7 +0.6**
comp=Z,7.6nm,0.7s
OBKA Obir 83.04 327 *e*P **P 02 12 25.1 +0.2**
comp=Z,2.6nm,0.7s
KBA Koelnbreinsper 83.08 328 *e*PcP **P 02 12 26.5 +1.3**
comp=Z,6.9nm,1.0s,SNR=5.3
KBA Koelnbreinsper 83.08 328 P **P 02 12 26.4 +1.3**
MYKA Terra Mystica 83.32 328 *e*P **P 02 12 26.3 +0.1**
comp=Z,5.4nm,0.8s
WTTA Wattenberg 83.62 329 *e*PcP **P 02 12 32.2 +4.3**
comp=Z,3.9nm,0.7s
ABTA Abfaltersbach 83.69 329 *e*P **P 02 12 25.9 -2.3**
comp=Z,4.3nm,0.8s
MOTA Moosalm 83.76 330 *e*P **P 02 12 27.6 -0.9**
comp=Z,7.3nm,0.9s
RETA Reutte 83.78 330 *e*P **P 02 12 27.7 -0.9**
comp=Z,11nm,1.0s,SNR=7.2
BFO Black Forest 84.00 332 *i*P **P 02 12 31.4 +1.8**
PDG Podgorica 84.11 322 ⇓*i*P **P 02 12 30.1 -0.2**
TTG Podgorica 84.11 322 *e*P **P 02 12 30.0 -0.2**
comp=Z,12nm,0.8s
TTG Podgorica 84.11 322 *e*P **P 02 12 30.0 -0.2**
TTG pmax pmax
comp=Z,13nm,0.8s
FETA Feichten 84.17 330 *e*PcP **P 02 12 31.3 +0.6**
comp=Z,7.9nm,1.0s,SNR=5.3
PPT Papeete 84.28 118 LR LR 02 45 33.2
comp=Z,63nm,21.5s,baz=347,slow=32
DAVA Damuels 84.28 330 *e*P **P 02 12 31.2 -0.1**
comp=Z,13nm,0.9s
FNA Florina 84.32 320 *e*P **P 02 12 31.4 -0.1**
comp=Z,6.1nm,1.0s
FNA Florina 84.32 320 *e*P **P 02 12 31.4 -0.1**
FNA pmax pmax
comp=Z,6.0nm,1.0s
FUORN Ofenpass-Fuorn 84.68 330 *e*P **P 02 12 34.2 +0.8**
comp=Z,14nm,0.8s
TUE Stuetta 85.16 330 *e*P **P 02 12 36.2 +0.5**
comp=Z,7.0nm,1.0s
TXAR Lajitas Array 87.38 54 P **P 02 12 46.7 -0.1**
comp=Z,0.2nm,0.5s,baz=270,slow=3.6,SNR=3.5
TORD Torodi Ar. Bea 116.74 318 PP PP 02 19 50.9 -0.5
comp=Z,1.1nm,1.1s,baz=23,slow=8.0,SNR=3.6

SJA 21 02:00:09.6±0.7, 32°.63S×70°.13W, h118km±7km, ML2.8, MW3.5, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AUSP	**Uspallata**	**0.74**	**58**	*i* P	Pn		02 00 30.1	+0.6
ROC1	**El Roble**	**0.82**	**245**	*i* P	Pn		02 00 30.8	+0.7
ROC1				*i* S	Sn		02 00 46.6	+1.1
ARCO	**CERRO ARCO**	**1.03**	**102**	*i* P	Pn		02 00 32.9	+1.0
ARCO				*i* S	Sn		02 00 49.6	+0.8
ARCO				IAML			02 00 51.3	
comp=Z,183nm,0.6s								
RTLS	**Leoncito**	**1.08**	**41**	*i* P	Pn		02 00 34.1	+1.4
RTLS				*i* S	Sn		02 00 51.7	+1.7
RTLS				IAML			02 00 52.9	
comp=Z,76nm,0.3s								
ASAL	**Salagasta**	**1.09**	**89**	*i* P	Pn		02 00 33.6	+1.1
ASAL				*i* S	Sn		02 00 50.9	+1.2
RTCV	**Cerro Valdivia**	**1.55**	**61**	*i* P	Pn		02 00 38.0	+0.5
RTCV				*i* S	Sn		02 00 59.9	+1.3

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*IDC **21** 02:00:20.7±0.6, 26°.65N×66°.06E, h0km, mb4.1/32, mb1 4.2/34, mb1mx4.1/73, mbtmp4.1/34, ML4.2/2, MS3.7/30, Ms1 3.7/30, ms1mx3.5/65, Error ellipse: s-maj=15.8km s-min=11.3km az=180.0*
*ISCJB **21** 02:00:23.2±0.2, 26°.58N±0°.03×66°.16E±0°.02, h33km, mb4.4/103, MS3.7/33, Error ellipse: s-maj=4.7km s-min=3.0km az=0.4*
*MOS **21** 02:00:25.5±1.4, 26°.77N×66°.18E, h44km, mb4.6/52, Error ellipse: s-maj=7.5km s-min=4.7km az=103.2*
*BJI **21** 02:00:26.2, 26°.41N×67°.14E, h23km, mb4.7/25, mB5.0/16, Ms4.4/13, Ms7 4.1/13*
*NEIC **21** 02:00:26.9±2.0, 26°.67N×66°.13E, h42km±18km, mb4.4/30, Error ellipse: s-maj=9.9km s-min=5.8km az=178.0*
ISC 21 02:00:25.2±0.4, 26°.62N±0°.05×66°.23E±0°.04, h35km, n267, σ2.9 22/263, mb4.4/104, MS3.8/33, 13C-11B, Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BHJ	**Bhuj**	**4.58**	**136**	*e*P	**Pn**		**02 01 35.2**	**+3.3**
BHJ				*e*S	**Sn**		**02 02 25.1**	**+1.3**
BHJ				IAML			02 02 59.4	
comp=E,171nm,0.6s								
BHJ				IAML			02 02 59.6	
comp=N,137nm,0.5s								
AJM	**Ajmer**	**7.54**	**89**	*e*P	**Pn**		**02 02 15.0**	**+2.4**
AJM				*e*x	**Sn**		**02 03 41.0**	**+4.1**
WSAR	**Wadi Sarin**	**7.67**	**246**	Pn	**Pn**		**02 02 11.0**	**-3.5**
comp=N,4.5nm,0.3s,baz=115,slow=8.2,SNR=24								
WSAR				Sn	Sn		02 03 29.6	-11
comp=N,8.8nm,0.3s,baz=272,slow=12,SNR=5.4								
WSAR				LR	LR		02 06 06.1	
comp=N,243nm,18.9s,baz=82,slow=46								
WSAR	**Wadi Sarin**	**7.67**	**246**	P	**Pn**		**02 02 11.0**	**-3.5**
WSAR				S	Sn		02 03 29.3	-11
SARP	**Sargodha**	**7.71**	**45**	P	**Pn**		**02 02 14.8**	**-0.2**
THW	**Thamme Wali**	**7.80**	**37**	P	**Pn**		**02 02 15.2**	**-1.0**
BIDO	**Bidbid**	**7.97**	**249**	P	**Pn**		**02 02 17.0**	**-1.5**
KBL	**Kabul**	**8.26**	**16**	*e*Pn	**Pn**		**02 02 24.1**	**+1.5**
KBL				*e*Sn	**Sn**		**02 03 53.6**	**-1.1**
KBL	**Kabul**	**8.26**	**16**	*e*P	**Pn**		**02 02 24.1**	**+1.5**
KBL				*e*			02 03 53.6	
JMDO	**Jabal Madar**	**8.53**	**242**	P	**Pn**		**02 02 25.3**	**-0.9**
BANOM	**Banah**	**8.94**	**268**	P	**Pn**		**02 02 28.9**	**-2.9**
MDH	**Madha**	**9.03**	**264**	*i* P	**Pn**		**02 02 28.9**	**-4.2**
SNR=6.2								
SHME	**Shamm**	**9.07**	**269**	*i* P	**Pn**		**02 02 31.1**	**-2.5**
SNR=6.5								
BSY	**Bisya**	**9.07**	**247**	P	**Pn**		**02 02 32.6**	**-1.1**
SOHO	**SOHO**	**9.11**	**256**	P	**Pn**		**02 02 30.2**	**-4.0**
MSFE	**Esma-Masafi**	**9.15**	**264**	P	**Pn**		**02 02 30.6**	**-4.1**
UOSS	**Minazif**	**9.19**	**262**	*e*Pn	**Pn**		**02 02 30.7**	**-4.6**
UOSS				*e*Sn	Sn		02 04 07.3	-10
UOSS	**Minazif**	**9.19**	**262**	P	**Pn**		**02 02 30.9**	**-4.4**
SNR=5.2								
UOSS	**Minazif**	**9.19**	**262**	P	Pn		02 02 30.6	-4.6
NIL	**Nilore**	**9.27**	**39**	*e*Pn	**Pn**		**02 02 36.0**	**-0.4**
NIL				*e*Sn	**Sn**		**02 04 18.7**	**-0.8**
NIL	**Nilore**	**9.27**	**39**	*e*P	**Pn**		**02 02 36.0**	**-0.4**
NIL				*e*			02 04 18.7	
HATD	**Hatta, Dubai**	**9.28**	**261**	P	**Pn**		**02 02 32.6**	**-3.9**
HATD	**Hatta, Dubai**	**9.28**	**261**	P	**Pn**		**02 02 32.4**	**-4.2**
CHCP	**Chirah Chowk**	**9.28**	**39**	P	**Pn**		**02 02 34.5**	**-2.1**
NAZ	**Nazwa, Dubai**	**9.66**	**263**	P	**Pn**		**02 02 41.3**	**-0.4**
NAZ	**Nazwa, Dubai**	**9.66**	**263**	P	**Pn**		**02 02 39.3**	**-2.4**
ALNE	**Al Ain**	**9.82**	**257**	P	**Pn**		**02 02 41.5**	**-2.4**
ASUD	**Al Ashush, Dub**	**10.04**	**261**	P	**Pn**		**02 02 46.1**	**-0.8**
ASUD	**Al Ashush, Dub**	**10.04**	**261**	P	**Pn**		**02 02 44.6**	**-2.2**
DHRM	**DHARAMSHALA**	**10.41**	**55**	*e*P	**Pn**		**02 02 51.2**	**-1.1**
DHRM				*e*S	**Sn**		**02 04 39.9**	**-7.9**
DHRM				IAML			02 04 53.5	
comp=E,281nm,0.7s								
DHRM				IAML			02 04 58.9	
comp=N,232nm,0.7s								
SMLA	**Simla**	**10.58**	**62**	*e*P	**Pn**		**02 02 54.5**	**+0.1**
SMLA				*e*S	**Sn**		**02 04 46.5**	**-5.1**
SMLA				IAML			02 04 57.5	
comp=N,172nm,0.4s								
SMLA				IAML			02 04 58.9	
comp=E,128nm,0.2s								
POO	**Poona**	**10.70**	**137**	*e*S	**Sn**		**02 04 52.3**	**-2.3**
BHPL	**Bhopal**	**10.70**	**106**	*e*x	**Pn**		**02 02 55.3**	**-0.8**
BHPL				*e*S	**Sn**		**02 04 52.7**	**-2.1**
BHPL				IAML			02 05 30.9	
comp=E,20nm,0.6s								
BHPL				IAML			02 05 33.3	
comp=N,112nm,0.9s								
DDI	**Dehra Dun**	**11.04**	**68**	*e*S	**Sn**		**02 04 57.6**	**-5.3**
DDI				IAML			02 07 29.5	
comp=E,166nm,0.2s								
DDI				IAML			02 07 29.7	
comp=N,139nm,0.3s								
NGP	**Nagpur**	**12.93**	**112**	*e*P	**Pn**		**02 03 28.2**	**+1.7**
NGP				*e*x	**Sn**		**02 05 44.8**	**-4.4**
GEYT	**Alibeck**	**13.19**	**331**	LR	LR		02 08 54.9	
comp=N,228nm,19.7s,baz=210,slow=39								
GYA0B	**ALIBECK ARRAY**	**13.19**	**331**	*e*Pn	**Pn**		**02 03 33.1**	**+3.2**
HYB	**Hyderabad**	**14.64**	**126**	*i* P	**P**		**02 03 55.0**	**-0.7**
HYB				*e*S	**Sn**		**02 06 36.5**	**+5.6**
HYB	**Hyderabad**	**14.64**	**126**	*e*S	**Sn**		**02 06 39.7**	**+8.8**
SFK	**Sufi-Kurgan**	**14.66**	**23**	P	**Pn**		**02 03 47.9**	**-2.4**
SFK				pmax	pmax			
comp=Z,19nm,0.7s								
PYUN	**Piuthan**	**14.97**	**81**	*e*P	**Pn**		**02 03 52.8**	**-1.6**
comp=Z,86nm,0.7s								
KSH	**Kashi**	**15.22**	**30**	P	**Pn**		**02 03 50.4**	**-7.1**
KSH				pP	P		02 04 01.1	-1.0
KSH				PP	**PnPn**		**02 04 06.3**	**+0.4**
KSH				sS	Sn		02 06 47.5	+2.5
KSH				pmax	pmax			
comp=Z,48nm,0.7s								
KSH				LR	LR			
comp=Z,2μm,13.4s								
KSH				LR	LR			
comp=Z,2μm,8.7s								
KSH				LR	LR			
comp=Z,2μm,11.6s								
KOLN	**Koldanda**	**15.50**	**82**	*e*P	**Pn**		**02 03 59.8**	**-1.6**
comp=Z,46nm,0.6s								
DANN	**Dangsing**	**15.66**	**80**	*e*P	**Pn**		**02 04 02.1**	**-1.4**
comp=Z,80nm,0.7s								
GKN	**Gorkha**	**16.42**	**81**	*e*P	**Pn**		**02 04 12.4**	**-0.7**
MNAS	**Manas**	**16.64**	**16**	P	**Pn**		**02 04 13.2**	**-2.6**
MNAS				pmax	pmax			
comp=Z,12nm,1.3s								
KK31	**Karatay Array**	**16.81**	**11**	*e*Pn	**P**		**02 04 19.0**	**-0.6**
KKAR	**Karatay Array**	**16.81**	**11**	*e*Pn	**P**		**02 04 19.0**	**-0.6**
NRN	**Naryn**	**16.83**	**26**	*e*Pn	**Pn**		**02 04 18.9**	**+0.6**
comp=Z,12nm,0.7s								
NRN				*e*Sn	**Sn**		**02 07 23.6**	**-0.7**
NRN	**Naryn**	**16.83**	**26**	*e*P	**Pn**		**02 04 19.0**	**+0.6**
NRN				*e*			02 07 23.6	
NRN				pmax	pmax			
comp=Z,12nm,0.7s								
KKN	**Kakani**	**16.99**	**82**	*e*P	**Pn**		**02 04 19.9**	**-0.5**
comp=Z,31nm,0.6s								
PKIN	**Phulchoki**	**17.10**	**82**	*e*P	**Pn**		**02 04 20.5**	**-1.3**
comp=Z,15nm,0.5s								
AAK	**Ala-Archa**	**17.35**	**21**	P	**Pn**		**02 04 24.5**	**-0.2**
comp=Z,0.7nm,0.3s,baz=211,slow=8.7,SNR=5.5								
AAK				LR	LR		02 12 23.8	
comp=Z,416nm,19.8s,baz=200,slow=42								
AAK	**Ala-Archa**	**17.35**	**21**	*e*Pn	**P**		**02 04 26.8**	**+1.1**
AAK	**Ala-Archa**	**17.35**	**21**	⇓*e*P	**Pn**		**02 04 24.0**	**-0.7**
GUN	**Gumba**	**17.52**	**81**	*e*P	**Pn**		**02 04 26.7**	**-0.4**
comp=Z,139nm,0.8s								
FRU	**Bishkek**	**17.56**	**21**	*e*P	**P**		**02 04 30.0**	**+2.0**
FRU				*e*			02 07 36.5	
JIRN	**Jiri**	**17.80**	**82**	*e*P	**P**		**02 04 31.8**	**+0.7**
comp=Z,102nm,0.7s								
TARG	**Taragay, Kyrgy**	**17.83**	**29**	*e*Pn	**P**		**02 04 33.1**	**+1.8**
comp=Z,24nm,1.4s								
TKM2	**Tokmak 2**	**17.97**	**23**	P	**Pn**		**02 04 31.7**	**-0.7**
TKM2				pmax	pmax			
comp=Z,14nm,1.0s								
BOK	**Bokaro**	**18.01**	**95**	*e*P	**P**		**02 04 34.9**	**+1.9**
BOK				*e*x	**Sn**		**02 07 48.0**	**-4.8**
RAMN	**Ramite**	**18.19**	**84**	*e*P	**Pn**		**02 04 34.9**	**-0.4**
comp=Z,70nm,0.7s								
ODAN	**Odare**	**18.90**	**85**	*e*P	**Pn**		**02 04 46.1**	**+2.2**
comp=Z,47nm,0.7s								
RAYN	**Ar Rayn**	**19.02**	**265**	*e*P	**P**		**02 04 42.5**	**-1.8**
comp=Z,11nm,1.1s								
RAYN				*e*Sn	Sn		02 08 02.9	-14
RAYN	**Ar Rayn**	**19.02**	**265**	*i* P	**P**		**02 04 41.9**	**-2.4**
SNR=8.3								
PDGK	**Podgornoye**	**19.85**	**30**	P	**P**		**02 04 52.9**	**-0.3**
PDGK				pmax	pmax			
comp=Z,17nm,1.0s								
HMDM	**Hanimaadhoo**	**20.82**	**160**	*e*P	**P**		**02 04 57.1**	**-6.7**
comp=Z,133nm,1.0s								
OTUK	**Ortayu**	**22.11**	**11**	P	**P**		**02 05 16.9**	**-0.5**
OTUK				pmax	pmax			
comp=Z,10.0nm,0.7s								
MAK	**Makhachkala**	**22.33**	**322**	*e*P	**P**		**02 05 15.9**	**-3.8**
MAK				*e*S	**S**		**02 09 19.5**	**-3.6**
MAK				pmax	pmax			
comp=Z,30nm,0.6s								
MAK				MLR	MLR			
comp=Z,141nm,19.0s								
GNI	**Garni**	**22.37**	**312**	P	**P**		**02 05 20.1**	**-0.4**
comp=Z,5.5nm,0.4s,baz=332,slow=15,SNR=4.1								
GNI				LR	LR		02 14 58.9	
comp=Z,116nm,19.0s,baz=123,slow=40								
GNI	**Garni**	**22.37**	**312**	*e*P	**P**		**02 05 21.9**	**+1.4**
GNI	**Garni**	**22.37**	**312**	⇑*e*P	**P**		**02 05 19.0**	**-1.5**
GNI				pmax	pmax			
comp=Z,32nm,0.9s								
SHL	**Shillong**	**23.06**	**87**	*e*P	**P**		**02 05 29.4**	**+1.6**
SHL				*e*S	**S**		**02 09 40.3**	**+3.8**
AB31	**Akbulak array**	**23.11**	**349**	*i* P	**P**		**02 05 27.5**	**-0.4**
AB31				pmax	pmax			
comp=Z,4.0nm,0.6s								
ABKAR	**Akbulak array**	**23.11**	**349**	*e*P	**P**		**02 05 27.3**	**-0.6**
DAMY	**Dhamar**	**23.65**	**244**	*e*P	**P**		**02 05 34.7**	**+0.9**
comp=Z,33nm,1.2s								
MAKZ	**Makanchi**	**23.69**	**28**	*e*P	**P**		**02 05 33.8**	**+0.2**
comp=Z,9.3nm,0.8s								
MAKZ	**Makanchi**	**23.69**	**28**	P	**P**		**02 05 33.8**	**+0.2**
MAKZ				pmax	pmax			
comp=Z,17nm,1.1s								
MK01	**Makanchi Array**	**23.80**	**28**	*e*P	**P**		**02 05 34.7**	**+0.1**
MK31	**Makanchi Array**	**23.81**	**28**	*e*P	**P**		**02 05 35.2**	**+0.5**
MK31	**Makanchi Array**	**23.81**	**28**	*i* P	**P**		**02 05 34.4**	**-0.4**
MK31				pmax	pmax			
comp=Z,12nm,0.8s								
MK32	**Makanchi Array**	**23.81**	**28**	*e*P	**P**		**02 05 35.1**	**+0.4**
MKAR	**Makanchi Array**	**23.81**	**28**	P	**P**		**02 05 35.1**	**+0.4**
comp=Z,10nm,0.8s,baz=213,slow=9.4,SNR=52								
MKAR				LR	LR		02 16 12.1	
comp=Z,147nm,20.4s,baz=216,slow=40								
MKAR	**Makanchi Array**	**23.81**	**28**	*e*P	**P**		**02 05 35.2**	**+0.4**
comp=Z,69nm,0.8s								
ZEI	**Tsey**	**24.32**	**317**	*e*P	**P**		**02 05 38.8**	**-1.0**
ZEI				pmax	pmax			
comp=Z,5.0nm,0.4s								
WMQ	**Urumqi**	**24.42**	**40**	P	**P**		**02 05 41.8**	**+1.3**
WMQ				pP	pP		02 05 45.1	-5.4
WMQ				sP	sP		02 05 52.9	-1.9
WMQ				pmax	pmax			
comp=Z,93nm,1.1s								
WMQ				pmax	pmax			
comp=Z,250nm,3.8s								
WMQ				LR	LR			
comp=Z,2μm,22.7s								
WM

comp=Z,13nm,0.9s
KIV Kislovodsk 25.71 318 *e*P **P 02 05 53.6 +1.4**
KIV *e*S **S 02 10 23.1 +4.4**
KIV pmax pmax
comp=Z,15nm,0.9s
KURBB Kurchatov Arra 25.75 18 P **P 02 05 52.4 0.0**
comp=Z,3.6nm,0.7s,baz=210,slow=8.9,SNR=13
KURK Kurchatov 25.86 18 *e*P **P 02 05 53.6 +0.3**
KURK Kurchatov 25.86 18⇓ *e*P **P 02 05 53.9 +0.6**
KURK pmax pmax
comp=Z,10.0nm,1.2s
BVA0 Borovoye Array 26.55 6 *i* P **P 02 05 59.5 -0.1**
BVA0 pmax pmax
comp=Z,9.0nm,1.0s
BVAR Borovoye Array 26.55 6 P **P 02 05 59.8 +0.2**
comp=Z,1.0nm,0.4s,baz=170,slow=9.9,SNR=9.2
BVAR LR LR 02 18 27.7
comp=Z,243nm,19.9s,baz=197,slow=41
BRVK Borovoye 26.58 5 *e*P **P 02 06 01.4 +1.6**
comp=Z,11nm,0.9s
BRVK Borovoye 26.58 5 *e*P **P 02 06 01.4 +1.6**
BRVK pmax pmax
comp=Z,11nm,0.9s
ATD Arta Tunnel 26.64 240 LR LR 02 18 13.6
comp=Z,46nm,18.5s,baz=80,slow=40
MMAI Mount Meron Ar 27.43 291 LR LR 02 19 17.8
comp=Z,229nm,19.0s,baz=85,slow=42
EIL Elat 27.70 284 LR LR 02 19 51.3
comp=Z,122nm,20.9s,baz=104,slow=42
CSS Mathiatis 29.36 294 *e*P **P 02 06 26.7 +1.9**
comp=Z,17nm,0.6s
BR101 Keskin Array S 30.07 304 *e*P **P 02 06 30.0 -1.3**
BRTR Keskin Array B 30.07 304 P **P 02 06 30.0 -1.3**
comp=Z,0.4nm,0.6s,baz=48,slow=12,SNR=2.7
ZAA0 Zalesovo Array 30.57 22 *e*P **P 02 06 35.2 -0.1**
comp=Z,3.6nm,0.6s
ZALV Zalesovo Beam 30.57 22 P **P 02 06 34.8 -0.5**
comp=Z,2.0nm,0.5s,baz=229,slow=12,SNR=10.0
ZALV LR LR 02 20 59.9
comp=Z,197nm,21.3s,baz=243,slow=40
ZAA1 Zalesovo Array 30.57 22 *e*P **P 02 06 34.8 -0.6**
CM31 Chiang Mai Arr 31.22 98 *e*P **P 02 06 43.8 +2.3**
CMAR Chiang Mai Arr 31.22 98 P **P 02 06 43.8 +2.3**
comp=Z,1.4nm,0.3s,baz=285,slow=11,SNR=2.9
KMI Kunming 32.82 84 P **P 02 06 54.3 -1.4**
KMI pmax pmax
comp=Z,11nm,0.5s
KMI pmax pmax
comp=Z,100nm,4.3s
CD2 Chengdu 33.07 74 P **P 02 06 53.8 -3.9**
CD2 pmax pmax
comp=Z,30nm,0.7s
LZH Lanzhou 33.31 64 *e*P P 02 07 05.6 +5.8
LZH pP pP 02 07 09.8 -0.1
LZH sP sP 02 07 11.9 -2.3
LZH pmax pmax
comp=Z,28nm,1.1s
LZH pmax pmax
comp=Z,140nm,5.2s
LZH LR LR
comp=N,730nm,11.9s
LZH LR LR
comp=E,1μm,14.6s
LZH LR LR
comp=Z,1μm,14.9s
OBN Obninsk 35.73 331 *i* P **P 02 07 21.6 +1.3**
OBN *i* S **S 02 12 52.5 -2.3**
OBN pmax pmax
comp=Z,3.0nm,1.0s
GYA Guiyang 36.07 81 *e*P **P 02 07 22.0 -1.8**
GYA pmax pmax
comp=Z,10.0nm,0.8s
IDI Anoyia 36.27 294 LR LR 02 26 49.8
comp=Z,22nm,18.5s,baz=90,slow=44
SORM Soroca 36.46 316⇓ *i*P **P 02 07 24.8 -1.9**
SORM Soroca 36.46 316 ⇓P **P 02 07 24.8 -1.9**
VRI Vrincioaia 36.73 312⇑ *i*P P 02 07 43.5 +14
VRI Vrincioaia 36.73 312 ⇑P P 02 07 43.5 +14
PLOR Plostina 36.77 312⇓ *i*P **P 02 07 28.2 -1.2**
PLOR Plostina 36.77 312 ⇓P **P 02 07 28.2 -1.2**
TESR Tescani 36.98 313⇑ *i*P **P 02 07 29.6 -1.5**
AKASG Malin Array Be 37.00 321 P **P 02 07 30.1 -1.1**
comp=Z,0.7nm,0.5s,baz=115,slow=7.5,SNR=5.9
AKBB Malin Array Si 37.00 321 *e*P **P 02 07 30.1 -1.1**
comp=Z,4.4nm,0.9s
AKBB pmax pmax
comp=Z,4.0nm,0.9s
KIEV Kiev 37.01 320⇑ *e*P **P 02 07 30.7 -0.6**
KIEV pmax pmax
comp=Z,3.0nm,0.8s
MLR Muntele Rosu 37.14 311 P **P 02 07 33.9 +1.2**
comp=Z,1.1nm,0.9s,baz=288,slow=20,SNR=4.5
MLR Muntele Rosu 37.14 311⇑ *i*P **P 02 07 36.1 +3.4**
MLR Muntele Rosu 37.14 311 ⇑P **P 02 07 36.1 +3.4**
DOPR Dopca 37.65 312⇑ *i*P **P 02 07 33.3 -3.5**
PRGR Permogore 37.65 344 *e*P **P 02 07 36.4 -0.1**
PRGR pmax pmax
comp=Z,8.0nm,0.8s
TLY Talaya 37.68 38 LR LR 02 25 56.5
comp=Z,179nm,19.1s,baz=236,slow=41
SONA0 Songino Array 37.79 45 *e*P **P 02 07 39.8 +1.7**
SONM Songino Array 37.79 45 P **P 02 07 39.8 +1.7**
comp=Z,2.4nm,0.8s,baz=248,slow=8.3,SNR=6.1
SONA1 Songino Array 37.80 45 *e*P **P 02 07 37.8 -0.4**
ARR Arges 37.99 311⇑ *i*P **P 02 07 40.9 +1.1**
BURAR Bucovina Array 38.26 314⇓ *i*P **P 02 07 38.8 -3.3**
BURAR Bucovina Array 38.26 314 ⇓P **P 02 07 38.8 -3.3**
BUR04 Bucovina Ar. S 38.26 314 *e*P **P 02 07 41.8 -0.3**
BUR08 Bucovina Ar. S 38.28 314 *e*P **P 02 07 42.6 +0.4**
KLMR Klimovskoe 38.73 339 *e*P **P 02 07 41.7 -4.0**
KLMR pmax pmax
comp=Z,13nm,0.9s
KLMR Klimovskoe 38.73 339 *e*P **P 02 07 41.7 -4.0**
KLMR AMP 02 07 47.7
comp=Z,13nm,0.9s
KLMR *e*PP **PP 02 09 08.9 -5.7**
KMBO Kilima Mbogo 39.26 230 LR LR 02 23 55.5
comp=Z,109nm,19.7s,baz=300,slow=36
DRGR 39.66 312⇓ *i*P **P 02 07 53.9 +0.2**
DRGR 39.66 312 ⇓P **P 02 07 53.9 +0.2**
BZS Buzias 40.11 310⇑ *i*P **P 02 07 53.3 -4.2**
BZS Buzias 40.11 310 ⇑P **P 02 07 53.4 -4.1**
QIZ Qiongzhong 40.75 91 P **P 02 07 59.9 -3.1**
QIZ S **S 02 14 07.8 -3.7**
QIZ LR LR
comp=Z,280nm,9.8s
QIZ LR LR
comp=Z,440nm,11.8s
QIZ LR LR
comp=Z,400nm,10.8s
CRVS Cervenica-Dubn 41.04 315 *e*P **P 02 08 07.7 +2.6**
CRVS pmax pmax
comp=Z,8.0nm,1.5s
CRVS Cervenica-Dubn 41.04 315 *e*P **P 02 08 07.7 +2.6**
PSZ Piszkesteto 41.79 313 *e*P **P 02 08 12.5 +1.2**
comp=Z,2.8nm,0.9s
PSZ Piszkesteto 41.79 313 *e*P **P 02 08 12.5 +1.2**
PSZ pmax pmax
comp=Z,3.0nm,0.9s
VSU Vasula 42.07 330 *de*P **P 02 08 13.7 +0.4**
VSU pmax pmax
comp=Z,20nm,0.9s
OJC Ojcow 42.44 316 *e*P **P 02 08 17.4 +0.9**
comp=Z,4.4nm,0.9s
OJC Ojcow 42.44 316 *e*P **P 02 08 17.4 +0.9**
OJC pmax pmax
comp=Z,4.0nm,0.9s
VYHS Vyhne 42.61 314 *e*P **P 02 08 20.6 +2.6**
VYHS pmax pmax
comp=Z,2.0nm,0.8s
VYHS Vyhne 42.61 314 *e*P **P 02 08 20.6 +2.6**
TIP Timpagrande 42.90 300 *e*P **P 02 08 19.0 -1.5**
comp=Z,6.1nm,1.4s
CUC Castrocucco 43.65 301 *e*P **P 02 08 27.2 +0.7**
comp=Z,12nm,0.7s
MORC Moravsky Berou 43.74 315 *e*P **P 02 08 28.1 +1.0**
comp=Z,2.6nm,0.8s
MORC Moravsky Berou 43.74 315 *e*P **P 02 08 28.8 +1.7**
FIA0 FINESS Array S 43.97 333 *e*P **P 02 08 26.9 -1.8**
FIA0 FINESS Array S 43.97 333 *e*P **P 02 08 26.9 -1.8**
FIA1 FINESS Array S 43.97 333 *e*P **P 02 08 29.9 +1.3**
FINES FINESS Array B 43.97 333 P **P 02 08 26.9 -1.8**
comp=Z,3.1nm,0.7s,baz=125,slow=9.6,SNR=9.4
CONA Conrad Observa 44.45 312 P **P 02 08 33.3 +0.5**
comp=Z,2.2nm,1.1s
ARSA Arzberg 44.56 311 P **P 02 08 31.5 -2.2**
comp=Z,3.9nm,0.9s
DPC Dobruska-Polom 44.63 316 *e*P **P 02 08 35.6 +1.4**
DPC *e*x x 02 08 49.9
DPC Dobruska-Polom 44.63 316 *e*P **P 02 08 35.6 +1.4**
DPC *e* 02 08 49.9
VAE Valguarnera 44.74 297 LR LR 02 30 24.2
comp=Z,58nm,19.1s,baz=126,slow=40
SOKA Soboth 44.81 310 *e*pP P 02 08 43.0 +7.3
comp=Z,1.4nm,0.4s
UPC Upice 44.86 316 AMS AMS 02 33 10.0
comp=Z,100nm,11.1s
OBKA Obir 45.11 310 *e*P **P 02 08 39.4 +1.2**
comp=Z,1.9nm,0.6s
MOA Molln 45.49 312 P **P 02 08 42.1 +1.0**
comp=Z,4.1nm,1.0s
TRI Trieste 45.56 309 *e*P **P 02 08 43.1 +1.5**
comp=Z,4.9nm,0.8s
TRI Trieste 45.56 309 *e*P **P 02 08 43.1 +1.5**
TRI pmax pmax
comp=Z,5.0nm,0.8s
PRU Pruhonice 45.68 315 AMS AMS 02 33 00.0
comp=Z,100nm,18.1s
NJ2 Nanjing 45.83 70 *e*P **P 02 08 40.8 -3.1**
NJ2 pmax pmax
comp=Z,17nm,0.5s
KBA Koelnbreinsper 46.01 311 P **P 02 08 45.5 +0.2**
comp=Z,4.4nm,0.8s
GEA0 GERESS Array S 46.02 313 *e*P **P 02 08 44.6 -0.6**
GEC2 GERESS Array S 46.02 313 *e*P **P 02 08 47.2 +1.9**
comp=Z,4.3nm,1.1s
GERES GERESS Array B 46.02 313 P **P 02 08 44.7 -0.6**
comp=Z,1.2nm,0.7s,baz=90,slow=9.3,SNR=8.5
GERES LR LR 02 32 18.9
comp=Z,59nm,18.1s,baz=93,slow=42
KHC Kasperske Hory 46.15 314 *e*P **P 02 08 48.3 +2.1**
KHC Kasperske Hory 46.15 314 *e*P **P 02 08 46.9 +0.7**
comp=Z,1.0nm,1.2s
KHC Kasperske Hory 46.15 314 *e*P **P 02 08 48.3 +2.1**
BRG Berggiesshubel 46.23 316 *e*PKP **P 02 08 48.2 +1.4**
comp=Z,2.7nm,0.8s
BRG Berggiesshubel 46.23 316 *i* PKP **P 02 08 49.9 +3.1**
comp=Z,6.2nm,0.8s
BRG *e* 02 12 07.8
comp=Z,9.3nm,1.4s
BRG Berggiesshubel 46.23 316 *e*P **P 02 08 48.2 +1.4**
BRG pmax pmax
comp=Z,3.0nm,0.8s
ABTA Abfaltersbach 46.53 310 P **P 02 08 49.5 +0.1**
comp=Z,4.7nm,1.1s
CLL Collm 46.89 316 *e*(P) **P 02 08 55.0 +3.0**
comp=Z,3.0nm,0.9s
CLL *i* pP **pP 02 09 04.4 +2.0**
CLL Collm 46.89 316 *e*P **P 02 08 54.9 +2.9**
comp=Z,3.5nm,0.9s
CLL Collm 46.89 316 *e*P **P 02 08 54.9 +3.0**
CLL pmax pmax
comp=Z,4.0nm,0.9s
WTTA Wattenberg 47.19 311 *e*P **P 02 08 55.9 +1.4**
comp=Z,7.4nm,1.3s
RGN Rugen 47.41 321 *e*P **P 02 08 56.7 +0.9**
comp=Z,59nm,1.1s
MOTA Moosalm 47.55 311 *e*P **P 02 08 55.8 -1.6**
comp=Z,2.2nm,0.6s
FETA Feichten 47.78 310 P **P 02 08 58.6 -0.5**
comp=Z,5.3nm,1.0s
RETA Reutte 47.80 311 *e*P **P 02 08 58.6 -0.6**
comp=Z,2.9nm,0.7s
FUORN Ofenpass-Fuorn 48.07 310 *e*P **P 02 09 02.1 +0.6**
comp=Z,3.7nm,0.8s
DAVA Damuels 48.38 311 *e*P **P 02 09 02.0 -1.8**
comp=Z,4.9nm,0.7s
TUE Stuetta 48.69 310 *e*P **P 02 09 07.2 +1.0**
comp=Z,4.1nm,0.8s
HFS Hagfors 48.82 328 P **P 02 09 06.5 -0.3**
comp=Z,2.5nm,0.6s,baz=64,slow=3.4,SNR=9.7
KEST Kesra 48.92 295 P **P 02 09 08.8 +0.8**
comp=Z,1.8nm,0.6s,baz=90,slow=1.7,SNR=6.9
KEST LR LR 02 33 38.9
comp=Z,60nm,18.2s,baz=208,slow=41
KEST Kesra 48.92 295 *e*P **P 02 09 08.8 +0.8**
comp=Z,3.9nm,0.9s
ARA0 ARCESS Array S 49.02 342 *e*P **P 02 09 08.6 +0.5**
ARCES ARCESS Array B 49.02 342 P **P 02 09 08.6 +0.5**
comp=Z,2.3nm,0.8s,baz=129,slow=9.6,SNR=3.6
ARCES ARCESS Array B 49.02 342 *e*P **P 02 09 09.5 +1.4**
ARCES ARCESS Array B 49.02 342 *e*P **P 02 09 09.5 +1.4**
NC602 NORSAR Array S 50.02 328 *e*P **P 02 09 16.8 +0.9**
NC405 NORSAR Array S 50.06 329 *e*P **P 02 09 17.7 +1.4**
NB201 NORSAR Array S 50.23 329 *e*P **P 02 09 16.6 -1.0**
NB2 NORSAR Subarra 50.27 329 P **P 02 09 18.0 +0.2**
comp=Z,0.8nm,0.6s,baz=107,slow=7.4
NOA NORSAR Array B 50.27 329 LR LR 02 34 30.0
comp=Z,41nm,19.1s,baz=65,slow=41
ECH Echery 50.27 312 *e*P **P 02 09 19.6 +1.5**
comp=Z,4.3nm,0.9s
ECH Echery 50.27 312 *e*P **P 02 09 19.6 +1.5**
ECH pmax pmax
comp=Z,4.0nm,0.9s
MBDF Montbardon 50.44 307 *e*P **P 02 09 22.5 +3.0**
MBDF pmax pmax
comp=Z,5.0nm,0.8s
HINF Hinteralfeld 50.46 311 *e*P **P 02 09 20.6 +1.1**
HINF pmax pmax
comp=Z,1.0nm,0.4s
NBO00 NORSAR Array S 50.47 329 *e*P **P 02 09 20.9 +1.6**
LPL La Plagne 50.47 308 *e*P **P 02 09 20.5 +0.6**
LPL pmax pmax
comp=Z,15nm,1.6s
BNI Bardonecchia 50.51 308 *e*P **P 02 09 20.0 0.0**
comp=Z,4.1nm,0.9s
BNI Bardonecchia 50.51 308 *e*P **P 02 09 20.0 0.0**
BNI pmax pmax
comp=Z,4.0nm,0.9s
HAU Haudompre 50.81 311 *e*P **P 02 09 21.1 -1.0**
CABF La Chapelle 50.94 310 *e*P **P 02 09 26.9 +3.7**
CABF pmax pmax
comp=Z,19nm,1.4s
SMF Signal de Mont 52.49 310 *e*P **P 02 09 34.4 -0.3**
SMF pmax pmax
comp=Z,6.0nm,0.8s
KSAR Wonju Array Be 52.55 62 P **P 02 09 37.4 +2.2**
KSAR Wonju Array Be 52.55 62 P **P 02 09 37.4 +2.2**
KSRS Korea Array 52.58 62 P **P 02 09 37.4 +2.0**
comp=Z,5.4nm,0.3s,baz=272,slow=7.5,SNR=8.6
KSRS LR LR 02 34 04.3
comp=Z,80nm,18.8s,baz=275,slow=38
KSRS Korea Array 52.58 62 P **P 02 09 37.4 +2.0**
KSRS pmax pmax
comp=Z,3.0nm,0.7s
KSRS MLR MLR
comp=Z,80nm,18.8s
SSF Saint Saulge 52.72 310 *e*P **P 02 09 36.0 -0.3**
SSF pmax pmax
comp=Z,22nm,1.0s
AVF Avril sur Loir 52.82 310 *e*P **P 02 09 36.6 -0.5**
AVF pmax pmax
comp=Z,4.0nm,1.0s
BGF Bois d'Agland 53.17 310 *e*P **P 02 09 41.2 +1.5**
BGF pmax pmax
comp=Z,4.0nm,0.6s
TCF Toulx Ste Croi 53.62 309 *e*P **P 02 09 42.9 -0.2**
TCF pmax pmax
comp=Z,9.0nm,1.5s
CAF Calviac 53.78 308 *e*P **P 02 09 45.5 +1.2**
CAF pmax pmax
comp=Z,13nm,1.2s
KLR Kul'dur 54.57 47 P **P 02 09 51.1 +1.3**
comp=Z,0.4nm,0.8s,baz=279,slow=9.6,SNR=9.6
KLR Kul'dur 54.57 47⇑ *e*P **P 02 09 51.4 +1.6**
LFF La Frestale 54.72 308 *e*P **P 02 09 51.1 +0.1**
LFF pmax pmax
comp=Z,7.0nm,0.8s
USRK Ussuriysk Ar. 54.97 53 LR LR 02 34 16.8
comp=Z,112nm,18.2s,baz=290,slow=37
JNU Nakatsue 55.66 67 P **P 02 10 01.4 +3.3**
comp=Z,11nm,0.9s,baz=161,slow=1.4,SNR=4.0
JNU Nakatsue 55.66 67 *e*P **P 02 10 01.4 +3.3**
comp=Z,30nm,1.2s
ETSF Etsaut 55.83 305 *e*P **P 02 09 58.5 -0.7**
ETSF pmax pmax
comp=Z,11nm,1.0s
SJPF Ste Jean 56.30 306 *e*P **P 02 10 04.3 +1.9**
SJPF pmax pmax
comp=Z,7.0nm,1.0s
EKA Eskdalemuir Ar 56.92 320 P **P 02 10 05.2 -1.3**
comp=Z,0.4nm,0.4s,baz=100,slow=8.0,SNR=4.9
ROSF Rostrenen 57.24 312 *e*P **P 02 10 10.4 +1.4**
ROSF pmax pmax
comp=Z,101nm,1.9s
ESDC Sonseca Array 58.83 302 P **P 02 10 18.9 -1.5**
comp=Z,0.8nm,0.7s,baz=67,slow=7.8,SNR=4.6
MDT Midelt 60.80 294 P **P 02 10 35.5 +1.3**
comp=Z,1.6nm,0.7s,baz=92,slow=9.6,SNR=4.7
MDT LR LR 02 41 01.5
comp=Z,56nm,19.7s,baz=88,slow=40
MJAR Matsushiro Arr 60.84 61 LR LR 02 39 11.9
comp=Z,62nm,18.2s,baz=180,slow=38
TOA0 Torodi Ar. Sit 61.60 271 *e*P **P 02 10 39.5 0.0**
TOA1 Torodi Ar. Sit 61.60 271 *e*P **P 02 10 39.1 -0.4**
TORD Torodi Ar. Bea 61.60 271 P **P 02 10 39.1 -0.4**
comp=Z,5.5nm,0.8s,baz=64,slow=6.3,SNR=36
TORD LR LR 02 40 35.1
comp=Z,60nm,18.6s,baz=80,slow=39
YSS Yuzh-Sakhalins 62.12 49 *e*P P 02 10 37.2 -5.4
YSS pmax pmax
comp=Z,20nm,1.2s
ASAJ Asahikawa 62.54 52 LR LR 02 41 15.4
comp=Z,142nm,18.4s,baz=194,slow=39
SEY Seymchan 64.92 30 P **P 02 11 04.0 +3.2**
comp=Z,1.9nm,0.6s,baz=358,slow=24,SNR=5.4
SEY Seymchan 64.92 30 P **P 02 11 04.0 +3.2**
SEY pmax pmax
comp=Z,2.0nm,0.6s
BORG Borgarnes 65.23 332 LR LR 02 41 39.5
comp=Z,117nm,18.6s,baz=70,slow=38
KOWA Kowa 66.18 275 P **P 02 11 10.1 +0.4**
comp=Z,4.4nm,0.8s,baz=58,slow=12,SNR=8.2
KOWA LR LR 02 43 43.9
comp=Z,114nm,19.1s,baz=42,slow=39
BOSA Boshof 67.55 219 P **P 02 11 18.0 -0.2**
comp=Z,3.2nm,1.0s,baz=85,slow=4.3,SNR=5.1
BOSA LR LR 02 39 45.8
comp=Z,77nm,19.6s,baz=18,slow=35
DBIC Dimbokro 70.14 268 LR LR 02 43 13.5
comp=Z,51nm,19.8s,baz=40,slow=37
WR1 Warramunga Arr 80.63 118 *e*P **P 02 12 36.0 +1.3**
comp=Z,10nm,1.4s
WRA Warramunga Arr 80.63 118 P **P 02 12 36.0 +1.3**
comp=Z,1.0nm,0.8s,baz=313,slow=4.8,SNR=5.5
WRA Warramunga Arr 80.63 118 P **P 02 12 36.0 +1.3**
WRA pmax pmax
comp=Z,1.0nm,0.8s
AS31 Alice Springs 82.31 121 *e*P **P 02 12 44.9 +1.3**
comp=Z,1.8nm,1.3s
ASAR Alice Springs 82.31 121 P **P 02 12 44.9 +1.3**
comp=Z,1.4nm,0.7s,baz=306,slow=5.0,SNR=7.8
INK Inuvik 84.23 7 P **P 02 12 52.5 -0.2**
comp=Z,1.0nm,0.7s,baz=38,slow=5.2,SNR=4.5
INK Inuvik 84.23 7 *e*P **P 02 12 52.5 -0.2**
comp=Z,1.7nm,0.8s
ILAR Eielson Array 85.33 14 P **P 02 12 58.8 +0.5**
comp=Z,0.3nm,0.5s,baz=301,slow=5.8,SNR=4.1
ILB Eielson Array 85.33 14 *e*P **P 02 12 58.8 +0.5**
MAW Mawson 93.97 181 LR LR 02 50 06.9
comp=Z,57nm,18.4s,baz=348,slow=32

ISCJB ***21*** *02:02:41.6±0.4, 8°.60S±0°.06×119°.20E±0°.04, h156km, mb3.9/4, Error ellipse: s-maj=8.9km s-min=5.0km az=19.6*
IDC ***21*** *02:02:41.1±9.4, 8°.57S×119°.04E, h133km±85km, mb3.6/5, mb1 3.6/7, mb1mx3.2/59, mbtmp4.0/7, MS3.2/1, Ms1 3.2/1, ms1mx2.5/48, Error ellipse: s-maj=143.8km s-min=23.6km az=63.0*
DJA ***21*** *02:02:44.1±0.4, 9°S±4°×11°9E±°, h125km±5km, M4.1/11, mB4.9/1, mb4.5/1, MLv3.9/11, Mw(mB)4.2/1*
ISC 21 02:02:42.5±0.8, 8°.65S±0°.07×119°.24E±0°.05, h156km, n20, σ1°36/25, mb3.9/4, Flores region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**1.00**	**171**	P		**P**	**Pn**	**02 03 07.5**	**-0.4**
WBSI				S		**S**	**Sn**	**02 03 25.6**	**-1.9**
PLAI	**Plampang**	**1.45**	**263**	P		**P**	**Pn**	**02 03 12.0**	**-0.1**
PLAI				S		**S**	**Sn**	**02 03 33.3**	**-1.4**
BASI	**Baing, Sumba**	**2.05**	**140**	P		**P**	**Pn**	**02 03 19.4**	**+0.8**
BASI				S		**S**	**Sn**	**02 03 46.4**	**0.0**
TWSI	**Taliwang, Sumb**	**2.33**	**268**	P		**P**	**Pn**	**02 03 22.1**	**+0.2**
EDFI	**Ende, Flores**	**2.43**	**93**	P		**P**	**Pn**	**02 03 23.3**	**+0.1**
EDFI				S		**S**	**Sn**	**02 03 53.6**	**-1.0**
MMRI	**Maumere**	**2.97**	**90**	P		**P**	**Pn**	**02 03 30.0**	**+0.2**
BKSI	**Bulukumba**	**3.42**	**15**	P		**P**	**Pn**	**02 03 35.1**	**-0.4**
SRBI	**Singaraja**	**4.02**	**278**	P		**P**	**Pn**	**02 03 44.1**	**+0.9**
IGBI	**Denpasar**	**4.05**	**267**	P		**P**	**Pn**	**02 03 42.9**	**-0.6**
BATI	**Baumata**	**4.64**	**110**	P		**P**	**Pn**	**02 03 52.2**	**+0.9**
	8.3nm,0.3s,baz=282,slow=2.9,SNR=7.8								
BATI				S			**Sn**	**02 04 41.0**	**-3.9**
	22nm,0.3s,baz=320,slow=22,SNR=9.1								
JAGI	**Jajag, Banyuwa**	**5.03**	**272**	P		**P**	**Pn**	**02 03 55.0**	**-1.5**
SOEI	**Soe**	**5.09**	**103**	P		**P**	**Pn**	**02 03 58.6**	**+1.2**
LEM	**Lembang**	**11.65**	**278**	LR		LR		02 10 35.0	
	comp=Z,105nm,19.7s,baz=300,slow=41								
WRA	**Warramunga Arr**	**18.43**	**129**	P		**P**	**Pn**	**02 06 47.9**	**-0.2**
	0.5nm,0.3s,baz=306,slow=12,SNR=28								
WRA				S		**S**	**S**	**02 10 06.5**	**-2.1**
	0.5nm,0.3s,baz=302,slow=24,SNR=8.9								
ASAR	**Alice Springs**	**20.50**	**138**	P		**P**	**P**	**02 07 11.1**	**+2.5**
	0.7nm,0.3s,baz=316,slow=8.8,SNR=11								
SONM	**Songino Array**	**57.37**	**350**	P		**P**	**P**	**02 12 15.4**	**+0.8**
	0.6nm,0.5s,baz=166,slow=8.2,SNR=4.0								
MKAR	**Makanchi Array**	**64.25**	**333**	P		**P**	**P**	**02 13 01.2**	**+0.3**
	1.9nm,0.6s,baz=144,slow=7.9,SNR=12								
KURBB	**Kurchatov Arra**	**68.76**	**334**	P		**P**	**P**	**02 13 29.2**	**-0.2**
	0.8nm,0.6s,baz=142,slow=5.6,SNR=8.6								
ZALV	**Zalesovo Beam**	**68.80**	**339**	P		**P**	**P**	**02 13 29.1**	**-0.5**
	1.8nm,0.5s,baz=149,slow=5.0,SNR=6.8								
TORD	**Torodi Ar. Bea**	**118.63**	**280**	PKP		**PKPdf**		**02 21 13.9**	**+0.9**
	0.5nm,1.0s,baz=91,slow=2.0,SNR=3.0								

GUC 21 02:08:33.9±0.5, 19°.96S×69°.14W, h96km±3km, ML3.7, 7D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**0.18**	**183⇓**	*i*P			Pn	02 08 48.4	+0.3
PB08				*e*S			Sn	02 08 59.5	+1.0
PB08				IAML				02 09 01.9	
	comp=E,3μm,0.1s								
MNMC	**Minye Minye**	**0.93**	**333⇓**	*i*P			Pn	02 08 54.1	+0.5
MNMC				*e*S			Sn	02 09 09.2	+1.0
MNMC				IAML				02 09 09.7	
	comp=N,6μm,0.8s								
PSGC	**Pisagua**	**0.99**	**291⇓**	*i*P			Pn	02 08 53.9	-0.1
PSGC				*e*S			Sn	02 09 08.9	-0.1
PB01	**IPOC Station P**	**1.13**	**197⇓**	*i*P			Pn	02 08 55.9	+0.3
PB01				*e*S			Sn	02 09 12.6	+0.8
PB01				IAML				02 09 13.1	
	comp=E,2μm,0.3s								
PB02	**IPOC Station P**	**1.53**	**207⇓**	*e*P			Pn	02 09 00.5	+0.2
PB02				*e*S			Sn	02 09 21.2	+0.8
PB02				IAML				02 09 27.6	
	comp=N,2μm,0.3s								
PB16	**IPOC Station P**	**1.65**	**348⇓**	*e*P			Pn	02 09 03.2	+0.8
PB16				*e*S			Sn	02 09 25.9	+2.0
PB12	**IPOC Station P**	**1.74**	**320⇓**	*e*P			Pn	02 09 02.6	-0.5
PB12				*e*S			Sn	02 09 25.1	-0.2
PB12				IAML				02 09 33.2	
	comp=E,806nm,0.2s								

KRSC ***21*** *02:27:08.7±1.7, 50°.91N×157°.92E, h48km±22km, ML4.2*
ISCJB ***21*** *02:27:10.4±0.7, 50°.93N±0°.05×157°.71E±0°.08, h65km±6km, mb3.6/13, Error ellipse: s-maj=11.3km s-min=4.7km az=44.1*
MOS ***21*** *02:27:10.3±0.9, 50°.91N×157°.68E, h62km, mb4.0/8, Error ellipse: s-maj=14.9km s-min=4.2km az=80.9*
IDC ***21*** *02:27:15.3±2.2, 51°.27N×157°.49E, h96km±19km, mb3.5/12, mb1 3.7/13, mb1mx3.4/74, mbtmp3.9/13, MS3.1/4, Ms1 3.1/4, ms1mx2.7/51, Error ellipse: s-maj=23.3km s-min=14.2km az=135.0*
ISC 21 02:27:11.2±1.1, 50°.92N±0°.07×157°.76E±0°.06, h58km±10km, n86, σ1°48/108, mb3.7/13, MS3.4/3, 3C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**0.81**	**313**	*e*P			**Pn**	**02 27 26.0**	**-0.7**
PAU				*e*S			**Sn**	**02 27 36.7**	**-1.3**
PAU	**Pauzhetka**	**0.81**	**313**	PN			**Pn**	**02 27 26.0**	**-0.7**

PAU				S	Sn	02 27 36.7	-1.3
KDTR	**Khodutka, Kamc**	**0.91**	**12**	*e*P	**Pn**	02 27 27.1	-0.9
KDTR				*e*S	**Sn**	02 27 38.5	-1.9
SKR	**Severo-Kuril's**	**1.07**	**258**	*e*P	**Pn**	02 27 28.9	-1.1
SKR				*e*S	**Sn**	02 27 42.3	-1.7
SKR	**Severo-Kuril's**	**1.07**	**258**	‖ *i*PN	**Pn**	02 27 29.1	-0.9
SKR				*i* S	**Sn**	02 27 42.6	-1.4
SKR				pmax	pmax		
	comp=Z,905nm,0.4s						
SKR				smax	smax		
	comp=E,4μm,0.4s						
SKR				smax	smax		
	comp=N,7μm,0.6s						
ASAK	**Asacha**	**1.47**	**3**	*e*P	**Pn**	02 27 35.4	-0.1
ASAK				*e*S	**Sn**	02 27 53.3	-0.4
ASAK	**Asacha**	**1.47**	**3**	PN	**Pn**	02 27 35.4	-0.1
ASAK				S	**Sn**	02 27 53.3	-0.4
MIPR	**Malaya Ipel'ka**	**1.50**	**336**	*e*P	**Pn**	02 27 35.6	-0.2
MIPR	**Malaya Ipel'ka**	**1.50**	**336**	PN	**Pn**	02 27 35.6	-0.2
RUS	**Russkaya**	**1.59**	**17**	*e*P	**Pn**	02 27 36.0	-1.0
RUS				*e*S	**Sn**	02 27 55.1	-1.3
RUS	**Russkaya**	**1.59**	**17**	PN	**Pn**	02 27 36.0	-1.0
RUS				S	**Sn**	02 27 55.1	-1.3
MTVR	**Mutnovka**	**1.59**	**9**	*e*P	**Pn**	02 27 37.1	0.0
MTVR				*e*S	**Sn**	02 27 55.9	-0.8
MTVR	**Mutnovka**	**1.59**	**9**	PN	**Pn**	02 27 37.1	0.0
MTVR				S	**Sn**	02 27 55.9	-0.8
GRL	**Gorelyy**	**1.65**	**7**	*e*P	**Pn**	02 27 38.3	+0.4
GRL				*e*S	**Sn**	02 27 58.1	0.0
GRL	**Gorelyy**	**1.65**	**7**	PN	**Pn**	02 27 38.3	+0.4
GRL				S	**Sn**	02 27 58.1	0.0
KRMR	**Karymshinskiy**	**1.93**	**7**	*e*P	**Pn**	02 27 42.3	+0.7
KRMR				*e*S	**Sn**	02 28 05.5	+0.8
KRMR	**Karymshinskiy**	**1.93**	**7**	PN	**Pn**	02 27 42.3	+0.7
KRMR				S	**Sn**	02 28 05.5	+0.8
APC	**Apacha**	**2.04**	**350**	*e*P	**Pn**	02 27 43.5	+0.3
APC				*e*S	**Sn**	02 28 07.1	-0.4
APC	**Apacha**	**2.04**	**350**	PN	**Pn**	02 27 43.5	+0.3
APC				S	**Sn**	02 28 07.1	-0.4
PET	**Petropavlovsk**	**2.18**	**14**	*e*P	**Pn**	02 27 45.1	+0.1
PET				*e*S	**Sn**	02 28 10.5	-0.3
PET	**Petropavlovsk**	**2.18**	**14**	*e*PN	**Pn**	02 27 45.3	+0.3
PET				*e*S	**Sn**	02 28 10.9	+0.1
PET				pmax	pmax		
	comp=Z,58nm,0.4s						
PET				smax	smax		
	comp=E,350nm,0.7s						
PET				smax	smax		
	comp=N,316nm,0.6s						
PETK	**Petropavlovsk-**	**2.19**	**359**	P	**Pn**	02 27 45.5	+0.3
	comp=N,7.3nm,0.3s,baz=151,slow=16,SNR=75						
PETK				S	**Sn**	02 28 12.4	+1.2
	comp=N,6.8nm,0.3s,baz=118,slow=18,SNR=7.2						
PETK				LR	LR	02 28 30.5	
	comp=N,139nm,18.3s,baz=182,slow=41						
DALK	**Dalny**	**2.20**	**16**	*e*P	**Pn**	02 27 45.4	+0.1
DALK				*e*S	**Sn**	02 28 11.1	-0.3
DALK	**Dalny**	**2.20**	**16**	PN	**Pn**	02 27 45.4	+0.1
DALK				S	**Sn**	02 28 11.1	-0.3
UGLR	**Uglovaya**	**2.39**	**16**	*e*P	**Pn**	02 27 48.7	+0.7
UGLR	**Uglovaya**	**2.39**	**16**	PN	**Pn**	02 27 48.7	+0.7
AVH	**Avacha**	**2.43**	**14**	*e*P	**Pn**	02 27 49.8	+1.3
AVH	**Avacha**	**2.43**	**14**	PN	**Pn**	02 27 49.8	+1.3
KOK	**Koryaka**	**2.44**	**12**	*e*P	**Pn**	02 27 50.4	+1.8
KOK	**Koryaka**	**2.44**	**12**	PN	**Pn**	02 27 50.4	+1.8
NLC	**Nalytchevo**	**2.46**	**23**	*e*P	**Pn**	02 27 48.6	-0.2
NLC				*e*S	**Sn**	02 28 14.8	-2.8
NLC	**Nalytchevo**	**2.46**	**23**	PN	**Pn**	02 27 48.6	-0.2
NLC				S	**Sn**	02 28 14.8	-2.8
SDLR	**Sedlovina**	**2.46**	**16**	*e*P	**Pn**	02 27 49.3	+0.3
SDLR	**Sedlovina**	**2.46**	**16**	PN	**Pn**	02 27 49.3	+0.3
KRER	**Koryakskii**	**2.47**	**14**	*e*P	**Pn**	02 27 50.3	+1.2
KRER				*e*S	**Sn**	02 28 19.7	+1.5
KRER	**Koryakskii**	**2.47**	**14**	PN	**Pn**	02 27 50.3	+1.2
KRER				S	**Sn**	02 28 19.7	+1.5
KRX	**Arik**	**2.50**	**12**	*e*P	**Pn**	02 27 50.8	+1.2
KRX	**Arik**	**2.50**	**12**	PN	**Pn**	02 27 50.8	+1.2
SPN	**Mys Shipunski**	**2.59**	**32**	*e*P	**Pn**	02 27 50.9	+0.3
SPN				*e*S	**Sn**	02 28 20.1	-0.8
SPN	**Mys Shipunski**	**2.59**	**32**	PN	**Pn**	02 27 50.9	+0.3
SPN				S	**Sn**	02 28 20.1	-0.8
GNL	**Ganaly**	**2.78**	**2**	*e*P	**Pn**	02 27 54.7	+1.3
GNL	**Ganaly**	**2.78**	**2**	PN	**Pn**	02 27 54.7	+1.3
MKZ	**Mys Kozlova**	**4.37**	**32**	*e*P	**Pn**	02 28 15.1	+0.2
MKZ				*e*S	**Sn**	02 29 02.7	-1.8
MKZ	**Mys Kozlova**	**4.37**	**32**	PN	**Pn**	02 28 15.1	+0.2
MKZ				S	**Sn**	02 29 02.7	-1.8
KZV	**Kizimen**	**4.47**	**19**	*e*P	**Pn**	02 28 18.9	+2.4
KZV				*e*S	**Sn**	02 29 08.9	+1.6
KZV	**Kizimen**	**4.47**	**19**	PN	**Pn**	02 28 18.9	+2.4
KZV				S	**Sn**	02 29 08.9	+1.6
TUMR	**Tumrok**	**4.60**	**17**	*e*P	**Pn**	02 28 21.1	+2.8
TUMR	**Tumrok**	**4.60**	**17**	PN	**Pn**	02 28 21.1	+2.8
BZWR	**Bezymyannyi-We**	**5.31**	**17**	*e*P	**Pn**	02 28 31.4	+3.4
BZWR	**Bezymyannyi-We**	**5.31**	**17**	PN	**Pn**	02 28 31.4	+3.4
KBTR	**Krutoberegovo**	**6.09**	**28**	*e*P	**Pn**	02 28 39.7	+1.1
KBTR	**Krutoberegovo**	**6.09**	**28**	PN	**Pn**	02 28 39.7	+1.1
BKI	**Bering**	**6.55**	**46**	*e*P	**Pn**	02 28 44.2	-0.6
BKI	**Bering**	**6.55**	**46**	PN	**Pn**	02 28 44.2	-0.6
MA2	**Magadan**	**9.54**	**338**	LR	LR	02 33 12.3	
	comp=N,39nm,20.2s,baz=230,slow=39						
MA2	**Magadan**	**9.54**	**338**	‖ *e*PN	**Pn**	02 29 25.5	-0.2
ASAJ	**Asahikawa**	**12.29**	**242**	P	**Pn**	02 30 07.8	+4.5
	comp=N,1.6nm,0.3s,baz=129,slow=31,SNR=3.9						
KLR	**Kul'dur**	**16.76**	**274**	P	**Pn**	02 31 03.3	+1.5
	comp=N,0.0nm,0.3s,baz=132,slow=15,SNR=2.8						
KLR	**Kul'dur**	**16.76**	**274**	‖ *e*P	**Pn**	02 31 02.2	+0.4
BILL	**Bilibino**	**17.68**	**11**	*i* P	**P**	02 31 14.9	+1.7
BILL				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MJA0	**Matsu Arr-Jizo**	**20.04**	**232**	*e*P	Pn	02 31 44.6	+3.0
MJA0				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MJAR	**Matsushiro Arr**	**20.06**	**232**	P	**P**	02 31 41.5	+2.0
	comp=Z,1.5nm,0.3s,baz=27,slow=8.8,SNR=5.4						
KSRS	**Korea Array**	**25.07**	**249**	P	**P**	02 32 30.5	+0.4
	comp=Z,0.8nm,0.3s,baz=48,slow=9.8,SNR=6.3						
ILAR	**Eielson Array**	**31.38**	**43**	P	**P**	02 33 24.6	-1.5
	comp=Z,0.5nm,0.8s,baz=262,slow=7.9,SNR=8.1						
ILAR	**Eielson Array**	**31.38**	**43**	*e*P	**P**	02 33 25.7	-0.4
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**31.95**	**164**	T	T	03 07 20.0	
	baz=349,slow=76,SNR=197						
H11N3	**WAKE ISLAND Hy**	**31.96**	**164**	T	T	03 07 21.3	
	baz=349,slow=76,SNR=251						
H11N1	**WAKE ISLAND Hy**	**31.97**	**164**	T	T	03 07 22.1	
	baz=349,slow=76,SNR=136						
ULN	**Ulaanbaatar**	**32.62**	**285**	⇑ *i* P	**P**	02 33 35.9	-1.4
ULN				pmax	pmax		
	comp=Z,1.0nm,1.0s						
H11S1	**WAKE ISLAND Hy**	**33.11**	**164**	T	T	03 08 45.5	
	baz=349,slow=76,SNR=300						
H11S3	**WAKE ISLAND Hy**	**33.12**	**164**	T	T	03 08 47.0	
	baz=349,slow=76,SNR=175						
H11S2	**WAKE ISLAND Hy**	**33.13**	**164**	T	T	03 08 46.6	
	baz=349,slow=76,SNR=164						
NRIK	**Noril'sk**	**36.88**	**326**	LR	LR	02 50 55.6	
	comp=Z,16nm,20.3s,baz=178,slow=39						
TGY	**Tagaytay City**	**47.23**	**232**	LR	LR	02 56 03.3	
	comp=Z,64nm,21.8s,baz=66,slow=36						
KURK	**Kurchatov**	**47.67**	**302**	*de*P	**P**	02 35 38.7	-2.7
KURK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KURBB	**Kurchatov Arra**	**47.77**	**302**	P	**P**	02 35 39.4	-2.8
	comp=Z,0.5nm,0.4s,baz=61,slow=7.5,SNR=4.4						
MKAR	**Makanchi Array**	**47.81**	**296**	P	**P**	02 35 39.0	-3.6
	comp=Z,0.4nm,0.6s,baz=60,slow=13,SNR=3.6						
MKAR	**Makanchi Array**	**47.81**	**296**	*e*P	**P**	02 35 42.7	+0.1
BVAR	**Borovoye Array**	**50.62**	**309**	P	**P**	02 36 00.2	-3.7
	comp=Z,0.5nm,0.5s,baz=103,slow=4.6,SNR=3.2						
BVAR				LR	LR	02 58 29.4	
	comp=Z,39nm,19.5s,baz=12,slow=37						
CMAR	**Chiang Mai Arr**	**56.31**	**257**	P	**P**	02 36 46.8	+0.7
	comp=Z,4.5nm,0.8s,baz=28,slow=7.1,SNR=14						
TXAR	**Lajitas Array**	**72.85**	**65**	P	**P**	02 38 34.5	+0.6
	comp=Z,0.6nm,0.7s,baz=290,slow=2.8,SNR=6.7						
EKA	**Eskdalemuir Ar**	**72.93**	**349**	P	**P**	02 38 32.4	-1.4
	comp=Z,0.3nm,0.3s,baz=25,slow=5.5,SNR=5.9						
WRA	**Warramunga Arr**	**73.50**	**203**	P	**P**	02 38 37.9	+0.4
	comp=Z,0.7nm,0.6s,baz=19,slow=6.3,SNR=7.9						
ASAR	**Alice Springs**	**77.19**	**202**	P	**P**	02 38 59.6	+1.0
	comp=Z,0.1nm,0.4s,baz=0.0,slow=7.6,SNR=4.4						
ASAR	**Alice Springs**	**77.19**	**202**	*e*P	**P**	02 39 01.1	+2.5
ESDC	**Sonseca Array**	**88.37**	**346**	P	**P**	02 39 54.2	-2.4
	comp=Z,0.7nm,0.7s,baz=11,slow=4.9,SNR=4.6						

SJA 21 02:30:39.6±0.6, 31°20S×64°98W, h8km±5km, ML2.6, MW3.5, Cordoba Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TCA	**Tanti**	**0.36**	**113**	*i* P	Pb	02 30 48.0	-0.3
TCA				*i* S	Sb	02 30 53.3	-0.9
TCA				IAML		02 30 53.3	
	comp=Z,275nm,0.2s						
MRA	**San Martin**	**1.37**	**207**	*i* P	Pb	02 31 05.7	+0.2
MRA				*i* S	Sg	02 31 25.1	+1.4
MRA				IAML		02 31 25.7	
	comp=Z,274nm,0.5s						
APLL	**PUNTA DE LOS L**	**1.55**	**301**	*i* P	Pb	02 31 08.7	+0.1
APLL				IAML		02 31 30.7	
	comp=Z,105nm,0.3s						
APLL				*i* S	Sg	02 31 31.0	+1.4
ACAN	**Cantantal**	**2.17**	**240**	*i* P	Pb	02 31 18.3	-0.8
ACLC	**CERRO LA CRUZ**	**2.45**	**316**	*i* P	Pb	02 31 22.4	-1.7
CYA	**Choya**	**2.84**	**345**	IAML		02 32 10.7	
	comp=Z,18nm,0.3s						

MAN 21 02:44:08.9, 11°09N×125°42E, h22km, mb3.9, ML2.6, MS2.2, 1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLP	**Palo**	**0.44**	**280**	‖ *i*P	Pn	02 44 19.1	-0.9
PLP				*i* S	Sn	02 44 28.3	+1.1
BESP	**Borongan**	**0.51**	**2**	*e*P	Pb	02 44 19.9	+0.6
BESP				*e*S	Sn	02 44 29.9	+0.8
MSLP	**Maasin**	**1.09**	**210**	*e*P	Pn	02 44 28.4	-0.6
MSLP				*e*S	Sn	02 44 44.7	+1.2
CNP	**Catarman**	**1.60**	**333**	*e*P	Pn	02 44 36.5	+0.6
CNP				*e*S	Sb	02 44 59.7	+2.2

*ISCJB **21** 03:25:53.6±0.2, 38°.17S±0°.02×176°.31E±0°.04, h172km±2km, mb4.7/14, Error ellipse: s-maj=4.8km s-min=3.5km az=10.2*
*BJI **21** 03:25:53.3, 38°.30S×176°.46E, h174km, mb4.9/7*
*IDC **21** 03:25:53.5±0.5, 38°.32S×176°.38E, h154km±7km, mb3.9/3, mb1 4.0/5, mb1mx3.7/48, mbtmp4.4/5, Error ellipse: s-maj=24.0km s-min=17.3km az=129.0*
*WEL **21** 03:25:54.9, 38°S±2°×17°E±°, h161km±2km*
*NEIC **21** 03:25:54.5±0.0, 38°.03S×176°.38E, h164km, mb4.5/8, After WEL.*
NEIC Felt at Hamilton and Rotorua.

ISC 21 03:25:54.8±0.6, 38°26S±0°.04×176°29E±0°.04, h170km±4km, n197, σ1°82/229, mb4.8/14, 1C, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HLRZ	**Highlands Stat**	**0.05**	**77**	P	**Pn**	**03 26 16.8**	**-0.6**
HSRZ	**Hossack Road**	**0.06**	**214**	P	**Pn**	**03 26 16.9**	**-0.5**
UTU	**Utuhina**	**0.11**	**320**	P	**Pn**	**03 26 16.8**	**-0.6**
HRRZ	**Handcock Road**	**0.13**	**181**	P	**Pn**	**03 26 17.0**	**-0.4**
GRRZ	**Galatos Road**	**0.16**	**238**	P	**Pn**	**03 26 17.2**	**-0.3**
OMRZ	**Omania**	**0.17**	**23**	P	**Pn**	**03 26 16.3**	**-1.3**
TARZ	**Mount Tarawera**	**0.18**	**81**	P	**Pn**	**03 26 16.7**	**-0.9**
NGRZ	**Ngongotaha**	**0.18**	**334**	P	**Pn**	**03 26 16.7**	**-0.9**
MKRZ	**Makatiti**	**0.19**	**49**	P	**Pn**	**03 26 17.1**	**-0.6**
RRRZ	**Republican Roa**	**0.20**	**113**	P	**Pn**	**03 26 16.7**	**-0.9**
KARZ	**Kaharoa**	**0.25**	**352**	P	**Pn**	**03 26 16.3**	**-1.4**
PRRZ	**Plateau Road**	**0.25**	**160**	P	**Pn**	**03 26 17.2**	**-0.4**
LIRZ	**Lichensteins R**	**0.27**	**17**	P	**Pn**	**03 26 16.3**	**-1.4**
WPRZ	**Whakapapatarin**	**0.27**	**201**	P	**Pn**	**03 26 17.7**	**0.0**
ALRZ	**Allen Road**	**0.30**	**171**	P	**Pn**	**03 26 17.6**	**-0.2**
EDRZ	**Edgecumbe**	**0.39**	**66**	P	**Pn**	**03 26 16.5**	**-1.6**
MARZ	**Manawahe**	**0.41**	**48**	P	**Pn**	**03 26 16.5**	**-1.6**
KUTZ	**Kaahu Road**	**0.43**	**238**	P	**Pn**	**03 26 18.4**	**+0.2**
MUGZ	**Murupara**	**0.44**	**119**	P	**Pn**	**03 26 17.2**	**-1.0**
MUGZ				S	**Sn**	**03 26 33.7**	**-2.4**
OPRZ	**Ohinepanea**	**0.47**	**27**	P	**Pn**	**03 26 16.2**	**-2.1**
OPRZ				S	**Sn**	**03 26 32.4**	**-3.9**
WHTZ	**Whakaora**	**0.48**	**213**	P	**Pn**	**03 26 19.0**	**+0.6**
KMRZ	**Kaimai**	**0.50**	**327**	P	**Pn**	**03 26 17.2**	**-1.4**
KMRZ				S	**Sn**	**03 26 34.3**	**-2.4**
TGRZ	**Tauranga**	**0.54**	**358**	P	**Pn**	**03 26 16.7**	**-2.0**
MRHZ	**Matea Rd**	**0.58**	**170**	P	**Pn**	**03 26 19.1**	**+0.3**
MRHZ				S	**Sn**	**03 26 36.9**	**-0.6**
TLZ	**Tolley Road**	**0.59**	**263**	P	**Pn**	**03 26 19.0**	**+0.1**
TLZ				S	**Sn**	**03 26 37.4**	**0.0**
WATZ	**Wairara**	**0.62**	**224**	P	**Pn**	**03 26 19.8**	**+0.8**
HATZ	**Hinemaiaia**	**0.64**	**194**	P	**Pn**	**03 26 19.8**	**+0.6**
HATZ				S	**Sn**	**03 26 38.2**	**+0.2**
RTZ	**Ruatahuna**	**0.65**	**123**	P	**Pn**	**03 26 18.7**	**-0.5**
RTZ				S	**Sn**	**03 26 36.3**	**-1.8**
URZ	**Urewera**	**0.65**	**90**	P	**Pn**	**03 26 17.4**	**-1.7**
	370nm,0.3s,baz=255,slow=5.5,SNR=1566						
URZ				S	**Sn**	**03 26 33.6**	**-4.2**
	442nm,0.3s,baz=11,slow=23,SNR=79						
URZ	**Urewera**	**0.65**	**90**	P	**Pn**	**03 26 17.4**	**-1.7**
URZ				S	**Sn**	**03 26 34.1**	**-3.7**
WHRZ	**Whale Island**	**0.68**	**53**	P	**Pn**	**03 26 18.6**	**-0.8**
RATZ	**Rangitukua**	**0.72**	**214**	P	**Pn**	**03 26 20.5**	**+0.8**
MTHZ	**Maungataniwha**	**0.73**	**144**	P	**Pn**	**03 26 19.8**	**+0.1**
MTHZ				S	**Sn**	**03 26 38.3**	**-0.6**
RITZ	**Rihia Road**	**0.79**	**205**	P	**Pn**	**03 26 21.3**	**+1.3**
TOZ	**Tahuroa Road**	**0.82**	**310**	P	**Pn**	**03 26 19.1**	**-1.1**
TOZ				S	**Sn**	**03 26 37.3**	**-2.3**
KATZ	**Kakaramea**	**0.85**	**213**	P	**Pn**	**03 26 21.5**	**+1.0**
RAHZ	**Arahi**	**0.90**	**136**	P	**Pn**	**03 26 21.3**	**+0.5**
BKZ	**Black Stump Fm**	**0.92**	**170**	*e*Pn	**Pn**	**03 26 21.5**	**+0.6**
BKZ				*e*Sn	**Sn**	**03 26 38.6**	**-2.6**
BKZ	**Black Stump Fm**	**0.92**	**170**	P	**Pn**	**03 26 21.6**	**+0.6**
RAGZ	**Rawiri**	**0.92**	**105**	P	**Pn**	**03 26 20.3**	**-0.7**
RAGZ				S	**Sn**	**03 26 38.9**	**-2.2**
NMHZ	**Naumai**	**0.93**	**154**	P	**Pn**	**03 26 22.4**	**+1.4**
KRVZ	**Karewarewa**	**0.97**	**211**	P	**Pn**	**03 26 22.5**	**+1.1**
SNGZ	**Shannon Statio**	**0.97**	**122**	P	**Pn**	**03 26 21.5**	**+0.1**
MWZ	**Matawai**	**0.98**	**94**	P	**Pn**	**03 26 20.0**	**-1.4**
MWZ				S	**Sn**	**03 26 38.6**	**-3.2**
WTVZ	**West Tongariro**	**1.01**	**212**	P	**Pn**	**03 26 22.9**	**+1.2**
TWVZ	**Taurewa**	**1.04**	**219**	P	**Pn**	**03 26 23.2**	**+1.2**
NGZ	**Ngauruhoe**	**1.06**	**210**	P	**Pn**	**03 26 23.3**	**+1.2**
WHHZ	**Waihua**	**1.10**	**138**	P	**Pn**	**03 26 23.0**	**+0.7**
COVZ	**Chateau Observ**	**1.10**	**212**	P	**Pn**	**03 26 23.5**	**+1.1**
TUVZ	**Tukino**	**1.12**	**206**	P	**Pn**	**03 26 24.1**	**+1.5**
RUGZ	**Raukumara Rang**	**1.14**	**75**	P	**Pn**	**03 26 19.8**	**-3.0**
ARHZ	**Aropaoanui**	**1.14**	**151**	P	**Pn**	**03 26 23.8**	**+1.2**
FWVZ	**Far West T-bar**	**1.14**	**210**	P	**Pn**	**03 26 24.0**	**+1.1**
HIZ	**Hauiti**	**1.15**	**257**	*e*Pn	**Pn**	**03 26 23.7**	**+1.0**
HIZ				*e*Sn	**Sn**	**03 26 42.9**	**-1.3**
HIZ	**Hauiti**	**1.15**	**257**	P	**Pn**	**03 26 23.6**	**+1.0**
WHVZ	**Whangaehu Hut**	**1.15**	**208**	P	**Pn**	**03 26 24.2**	**+1.2**
DRZ	**Dome Shelter**	**1.16**	**209**	P	**Pn**	**03 26 24.8**	**+1.6**
DRZ				P	**Pn**	**03 26 24.8**	**+1.6**
KWHZ	**Kaweka Forest**	**1.16**	**175**	P	**Pn**	**03 26 24.2**	**+1.3**
TRVZ	**Turoa**	**1.18**	**209**	P	**Pn**	**03 26 24.6**	**+1.3**
MOVZ	**Moawhango**	**1.21**	**200**	P	**Pn**	**03 26 24.4**	**+1.0**
MCHZ	**McNeill Hill**	**1.22**	**165**	P	**Pn**	**03 26 25.0**	**+1.7**
BHHZ	**Black Hill Sta**	**1.24**	**188**	P	**Pn**	**03 26 24.7**	**+1.2**
RIGZ	**Rimuhau**	**1.24**	**111**	P	**Pn**	**03 26 23.3**	**-0.2**
TKGZ	**Te Karaka**	**1.24**	**99**	P	**Pn**	**03 26 22.7**	**-0.8**
PKVZ	**Pokaka**	**1.26**	**215**	P	**Pn**	**03 26 25.2**	**+1.5**
HAZ	**Te Kaha**	**1.29**	**67**	P	**Pn**	**03 26 20.9**	**-3.0**
MTVZ	**Mangateitei**	**1.29**	**209**	P	**Pn**	**03 26 25.7**	**+1.7**
KNZ	**Kokohu**	**1.32**	**125**	P	**Pn**	**03 26 24.3**	**+0.1**
TWGZ	**Tauwhareparae**	**1.34**	**87**	P	**Pn**	**03 26 23.3**	**-1.2**
KRHZ	**Kereru**	**1.38**	**177**	P	**Pn**	**03 26 26.0**	**+1.3**
PRGZ	**Paritu Road**	**1.41**	**118**	P	**Pn**	**03 26 25.1**	**-0.1**
MKAZ	**Moumakai**	**1.46**	**322**	P	**Pn**	**03 26 24.0**	**-1.6**
PKGZ	**Pakihiroa**	**1.46**	**76**	P	**Pn**	**03 26 23.7**	**-1.9**
VRZ	**Vera Road**	**1.47**	**234**	P	**Pn**	**03 26 27.5**	**+1.9**
CKHZ	**Cape Kidnapper**	**1.52**	**156**	P	**Pn**	**03 26 27.6**	**+1.5**
CNGZ	**Carnagh Statio**	**1.53**	**99**	P	**Pn**	**03 26 25.9**	**-0.2**
MHGZ	**Mahia Peninsul**	**1.55**	**125**	P	**Pn**	**03 26 26.9**	**+0.5**
PUZ	**Puketiti**	**1.57**	**84**	P	**Pn**	**03 26 24.6**	**-2.0**
KUZ	**Kuaotunu**	**1.58**	**343**	P	**Pn**	**03 26 24.1**	**-2.7**
KAHZ	**Kahuranaki**	**1.60**	**163**	P	**Pn**	**03 26 28.5**	**+1.6**
PNHZ	**Pukenui**	**1.65**	**182**	P	**Pn**	**03 26 28.6**	**+1.2**
ETAZ	**East Tamaki Re**	**1.70**	**320**	P	**Pn**	**03 26 26.4**	**-1.5**
WIAZ	**Waiheke Island**	**1.73**	**328**	P	**Pn**	**03 26 26.5**	**-1.8**
MHEZ	**Mangahewa**	**1.74**	**242**	P	**Pn**	**03 26 30.8**	**+2.5**
WMGZ	**Waiomatatini S**	**1.74**	**76**	P	**Pn**	**03 26 26.3**	**-2.0**
MXZ	**Matakaoa Point**	**1.75**	**67**	*e*Pn	**Pn**	**03 26 26.6**	**-1.8**
MXZ				*e*Sn	**Sn**	**03 26 46.3**	**-8.0**
MXZ	**Matakaoa Point**	**1.75**	**67**	P	**Pn**	**03 26 26.3**	**-2.1**
AWAZ	**Awhitu Peninsu**	**1.77**	**312**	P	**Pn**	**03 26 27.3**	**-1.4**
WAZ	**Wanganui**	**1.80**	**214**	P	**Pn**	**03 26 30.8**	**+1.8**
WPHZ	**Waipukurau**	**1.80**	**176**	P	**Pn**	**03 26 30.3**	**+1.3**
TSZ	**Takapari Road**	**1.81**	**188**	P	**Pn**	**03 26 30.4**	**+1.3**
PXZ	**Pawanui**	**1.82**	**166**	P	**Pn**	**03 26 30.6**	**+1.4**
EPAZ	**Eden Park BICE**	**1.85**	**318**	P	**Pn**	**03 26 28.2**	**-1.4**
DREZ	**Durham Road**	**1.87**	**240**	P	**Pn**	**03 26 32.2**	**+2.5**
HBAZ	**Herne Bay Bore**	**1.88**	**318**	P	**Pn**	**03 26 28.3**	**-1.5**
LREZ	**Lake Rotokare**	**1.89**	**230**	P	**Pn**	**03 26 32.3**	**+2.3**
WTAZ	**Waiatarua**	**1.90**	**314**	P	**Pn**	**03 26 28.9**	**-1.3**
PREZ	**Palmer Road**	**1.98**	**236**	P	**Pn**	**03 26 33.6**	**+2.6**
PRHZ	**Porangahau**	**2.02**	**172**	P	**Pn**	**03 26 32.7**	**+1.4**
ABAZ	**Army Bay**	**2.02**	**325**	P	**Pn**	**03 26 30.1**	**-1.4**
PKE	**Pukeiti**	**2.02**	**242**	P	**Pn**	**03 26 33.7**	**+2.2**
DVHZ	**Dannevirke**	**2.03**	**183**	P	**Pn**	**03 26 32.6**	**+1.1**
KHEZ	**Kahui Hut**	**2.05**	**239**	P	**Pn**	**03 26 34.1**	**+2.3**
OHWZ	**Ohakea**	**2.08**	**201**	P	**Pn**	**03 26 33.9**	**+1.9**
GRZ	**Great Barrier**	**2.12**	**342**	P	**Pn**	**03 26 29.9**	**-2.6**
POWZ	**Post Office Ro**	**2.16**	**191**	P	**Pn**	**03 26 34.1**	**+1.1**
ANWZ	**Angora Road**	**2.20**	**176**	P	**Pn**	**03 26 35.0**	**+1.6**
NMEZ	**Namu Road**	**2.20**	**238**	P	**Pn**	**03 26 35.7**	**+2.3**
PRWZ	**Pori Road**	**2.30**	**186**	P	**Pn**	**03 26 36.0**	**+1.4**
BFZ	**Birch Farm**	**2.42**	**181**	*e*Pn	**Pn**	**03 26 36.4**	**+0.5**
BFZ				*e*Sn	**Sn**	**03 27 05.6**	**-2.3**
BFZ	**Birch Farm**	**2.42**	**181**	P	**Pn**	**03 26 36.9**	**+1.0**
MRZ	**Mangatainoka R**	**2.46**	**193**	P	**Pn**	**03 26 37.3**	**+0.9**
TIWZ	**Tintock**	**2.53**	**187**	P	**Pn**	**03 26 38.3**	**+1.1**
CPWZ	**Castlepoint**	**2.64**	**181**	P	**Pn**	**03 26 40.2**	**+1.6**
OGWZ	**Otaki Gorge**	**2.69**	**198**	P	**Pn**	**03 26 40.1**	**+0.9**
HOWZ	**Holdsworth Sta**	**2.70**	**193**	P	**Pn**	**03 26 39.9**	**+0.6**
WCZ	**Waipu Caves**	**2.79**	**326**	P	**Pn**	**03 26 38.7**	**-1.8**
KIW	**Kapiti Island**	**2.80**	**202**	P	**Pn**	**03 26 41.0**	**+0.4**
TMWZ	**Te Maipa**	**2.85**	**186**	P	**Pn**	**03 26 41.8**	**+0.6**
MTW

TORD				PKPab	**PKPab**	**03 45 51.5**	**+0.7**
	0.2nm,0.3s,baz=164,slow=3.3,SNR=8.1						
TOA1	**Torodi Ar. Sit**	**154.53**	**192**	*e*PKPbc	**PKPbc**	**03 45 37.2**	**+1.5**
TOA1				*e*PKPab	**PKPab**	**03 45 51.5**	**+0.7**

*IDC **21** 03:32:06.2±0.6, 12°.59N×144°.00E, h0km, mb4.3/21, mb1 4.5/21, mb1mx4.2/78, mbtmp4.3/21, MS4.0/3, Ms1 4.0/3, ms1mx3.3/52, Error ellipse: s-maj=16.5km s-min=14.0km az=104.0*
*ISCJB **21** 03:32:10.8±0.2, 12°.54N±0°.05×143°.78E±0°.04, h33km, mb4.7/86, MS4.3/7, Error ellipse: s-maj=6.6km s-min=5.7km az=2.4*
*NEIC **21** 03:32:12.2±0.2, 12°.56N×143°.82E, h35km, mb4.9/63, Error ellipse: s-maj=7.1km s-min=6.3km az=135.0*
*GCMT **21** 03:32:12.2±0.4, 12°.38N×143°.91E, h21km±1km, MW4.8/74, Moment Tensor Solution. s8, c9; s74, c96; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-1.34±.17; Mθθ 1.00±.11; Mφφ 0.33±.12; Mrθ-0.10±.17; Mφθ-2.03±.10; Mφr 0.13±.17; Best double couple: M0 2.07000×10^16 NP1:φs 171.00000°, δ72.00000°, λ-23.00000°. NP2: φs 269.00000°, δ68.00000°, λ-160.00000°. Principal axes: T 2.7320, Plg2.0000°, Azm220.0000°; N -1.3280, Plg61.0000°, Azm315.0000°; P -1.4070, Plg29.0000°, Azm129.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 21 03:32:10.8±0.5, 12°.61N±0°.07×144°.02E±0°.06, h27km, n142, σ1°.78/149, mb4.8/86, MS4.3/8, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.28**	**40**	Pn	**Pn**	**03 32 33.1**	**+0.1**
	248nm,0.3s,baz=203,slow=10.0,SNR=74						
GUMO				Sn	**Sb**	**03 32 51.1**	**+0.7**
	476nm,0.3s,baz=288,slow=20,SNR=24						
CBIJ	**Chichi jima**	**14.52**	**353**	*e*Pn	**Pn**	**03 35 34.2**	**-0.3**
PATS	**Pohnpei**	**15.21**	**111**	*e*Pn	**Pn**	**03 35 40.9**	**-3.0**
	38nm,1.0s						
JAY	**Jayapura**	**15.38**	**193**	LR	LR	03 40 33.4	
	comp=Z,844nm,21.2s,baz=6.5,slow=33						
SIJI	**Sorong**	**18.42**	**224**	LR	LR	03 41 46.4	
	comp=Z,785nm,21.8s,baz=222,slow=32						
DAV	**Davao City (W)**	**18.98**	**255**	LR	LR	03 42 38.7	
	comp=Z,173nm,21.3s,baz=148,slow=33						
H11N1	**WAKE ISLAND Hy**	**23.06**	**69**	T	T	04 01 39.9	
	baz=255,slow=75,SNR=56						
H11N2	**WAKE ISLAND Hy**	**23.07**	**69**	T	T	04 01 40.4	
	baz=255,slow=75,SNR=48						
H11N3	**WAKE ISLAND Hy**	**23.08**	**69**	T	T	04 01 41.9	
	baz=255,slow=75,SNR=41						
JNU	**Nakatsue**	**23.69**	**332**	P	**P**	**03 37 19.8**	**-0.8**
	14nm,1.0s,baz=61,slow=12,SNR=3.0						
JNU	**Nakatsue**	**23.69**	**332**	*e*P	**P**	**03 37 19.8**	**-0.8**
	69nm,1.4s						
MJAR	**Matsushiro Arr**	**24.40**	**349**	P	**P**	**03 37 25.7**	**-1.3**
	5.3nm,1.0s,baz=167,slow=9.0,SNR=7.0						
MAJO	**Matsushiro**	**24.40**	**349**	*e*P	**P**	**03 37 25.7**	**-1.3**
MAT	**Matsushiro**	**24.40**	**349**	P	**P**	**03 37 29.2**	**+2.2**
KSRS	**Korea Array**	**28.63**	**333**	P	**P**	**03 38 05.4**	**+0.3**
	3.0nm,0.9s,baz=140,slow=9.9,SNR=9.0						
KS15	**Wonju Array Si**	**28.64**	**333**	*e*P	**P**	**03 38 05.4**	**+0.2**
KSAR	**Wonju Array Be**	**28.64**	**333**	P	**P**	**03 38 05.4**	**+0.2**
NJ2	**Nanjing**	**30.14**	**314**	*e*P	**P**	**03 38 20.3**	**+1.7**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
QIZ	**Qiongzhong**	**33.45**	**285**	P	**P**	**03 38 47.5**	**-0.4**
QIZ				S	**S**	**03 44 10.0**	**+1.9**
QIZ				pmax	pmax		
	comp=Z,150nm,3.5s						
QIZ				LR	LR		
	comp=Z,470nm,16.7s						
WRAB	**Tennant Creek**	**33.71**	**197**	*e*P	**P**	**03 38 49.5**	**-0.5**
	12nm,0.6s						
WB2	**Warramunga Arr**	**33.72**	**197**	*e*P	**P**	**03 38 49.2**	**-0.9**
	9.7nm,0.6s						
WR1	**Warramunga Arr**	**33.72**	**197**	*e*P	**P**	**03 38 49.2**	**-0.9**
WR1				*e*pP	**sP**	**03 39 06.5**	**+5.1**
WRA	**Warramunga Arr**	**33.72**	**197**	P	**P**	**03 38 49.2**	**-0.9**
	1.9nm,0.7s,baz=20,slow=9.8,SNR=24						
BJI	**Beijing**	**36.71**	**323**	*e*P	**P**	**03 39 16.5**	**+0.8**
BJI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BJI				LR	LR		
	comp=N,320nm,22.7s						
BJI				LR	LR		
	comp=E,280nm,18.0s						
BJI				LR	LR		
	comp=Z,700nm,43.6s						
AS01	**Alice Springs**	**37.37**	**195**	*e*P	**P**	**03 39 20.8**	**-0.6**
AS31	**Alice Springs**	**37.38**	**195**	*e*P	**P**	**03 39 20.6**	**-1.0**
	2.0nm,1.2s						
ASAR	**Alice Springs**	**37.38**	**195**	P	**P**	**03 39 20.6**	**-1.0**
	1.7nm,1.0s,baz=13,slow=9.5,SNR=8.4						
GYA	**Guiyang**	**37.65**	**297**	*e*P	**P**	**03 39 24.4**	**+0.4**
GYA				pP	sP	03 39 35.0	-0.4
GYA				PP	**PnPn**	**03 40 54.3**	**+3.0**
GYA				S	**S**	**03 45 11.0**	**-1.6**
GYA				sS	ScP	03 45 28.3	+1.2
GYA				SS	**SnSn**	**03 47 45.8**	**-7.0**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,5.4s						
GYA				LR	LR		
	comp=N,420nm,17.8s						
GYA				LR	LR		
	comp=E,450nm,18.0s						
GYA				LR	LR		
	comp=Z,480nm,17.6s						
HHC	**Hu-ho-hao-te**	**39.99**	**321**	*e*P	**P**	**03 39 44.8**	**+1.4**
HHC				PP	**PnPn**	**03 41 19.0**	**-0.1**
HHC				S	**S**	**03 45 46.6**	**-0.8**
HHC				pmax	pmax		
	comp=Z,28nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,5.4s						
HHC				LR	LR		
	comp=N,290nm,14.5s						
HHC				LR	LR		
	comp=E,340nm,13.9s						
HHC				LR	LR		
	comp=Z,330nm,14.4s						
KMI	**Kunming**	**40.83**	**294**	P	**P**	**03 39 51.6**	**+0.8**
KMI				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,130nm,3.9s						
DZM	**Mont Dzumac**	**40.89**	**147**	P	**P**	**03 39 50.0**	**-1.0**
	8.9nm,0.9s,baz=8.2,slow=9.6,SNR=4.4						
DZM	**Mont Dzumac**	**40.89**	**147**	*e*P	**P**	**03 39 50.0**	**-1.0**
	12nm,1.0s						
PETK	**Petropavlovsk-**	**41.85**	**12**	PcP	**PcP**	**03 41 53.1**	**-0.9**
	4.0nm,0.8s,baz=177,slow=5.1,SNR=3.7						
LZH	**Lanzhou**	**43.00**	**310**	*e*P	P	03 40 13.0	+4.7
LZH				pP	sP	03 40 21.0	+1.3
LZH				sP	pP	03 40 24.5	+8.1
LZH				PP	**PP**	**03 41 48.1**	**-0.2**
LZH				*e*S	**S**	**03 46 36.5**	**+4.2**
LZH				sS	sS	03 46 50.9	+5.1
LZH				SS	**SS**	**03 49 38.4**	**-6.4**
LZH				pmax	pmax		
	comp=Z,24nm,1.1s						
LZH				pmax	pmax		
	comp=Z,100nm,4.9s						
LZH				LR	LR		
	comp=N,360nm,13.9s						
LZH				LR	LR		
	comp=E,470nm,14.9s						
LZH				LR	LR		
	comp=Z,530nm,15.7s						
CM01	**Chiang Mai Arr**	**43.72**	**283**	*e*P	**P**	**03 40 13.8**	**-0.2**
CM31	**Chiang Mai Arr**	**43.73**	**284**	*e*P	**P**	**03 40 14.3**	**+0.1**
CMAR	**Chiang Mai Arr**	**43.73**	**284**	P	**P**	**03 40 14.3**	**+0.1**
	6.7nm,0.9s,baz=82,slow=6.1,SNR=15						
SONA0	**Songino Array**	**47.06**	**326**	*e*P	**P**	**03 40 40.7**	**+0.4**
SONM	**Songino Array**	**47.06**	**326**	P	**P**	**03 40 40.7**	**+0.4**
	1.2nm,0.6s,baz=143,slow=7.7,SNR=4.8						
GTA	**Gaotai**	**47.21**	**313**	P	**P**	**03 40 41.4**	**-0.3**
GTA				pP	pP	03 40 51.3	+1.4
GTA				sP	sP	03 40 55.4	+2.3
GTA				S	**S**	**03 47 31.6**	**-1.6**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,66nm,5.6s						
GTA				LR	LR		
	comp=N,130nm,17.5s						
GTA				LR	LR		
	comp=E,190nm,17.2s						
GTA				LR	LR		
	comp=Z,310nm,19.9s						
SHL	**Shillong**	**50.63**	**293**	*e*P	**P**	**03 41 06.0**	**-2.2**
WMQ	**Urumqi**	**57.22**	**314**	P	**P**	**03 41 58.3**	**+2.4**
WMQ				sP	sP	03 42 13.0	+5.5
WMQ				pmax	pmax		
	comp=Z,33nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,190nm,3.7s						
WMQ				LR	LR		
	comp=N,310nm,21.7s						
WMQ				LR	LR		
	comp=E,280nm,21.7s						
WMQ				LR	LR		
	comp=Z,170nm,20.7s						
MK01	**Makanchi Array**	**61.61**	**317**	*e*P	**P**	**03 42 26.2**	**+0.1**
MK31	**Makanchi Array**	**61.62**	**317**	*e*P	**P**	**03 42 26.0**	**-0.2**
MK32	**Makanchi Array**	**61.62**	**317**	*e*P	**P**	**03 42 25.4**	**-0.8**
MKAR	**Makanchi Array**	**61.62**	**317**	P	**P**	**03 42 25.4**	**-0.8**
	1.1nm,0.7s,baz=89,slow=9.0,SNR=8.7						
MKAR	**Makanchi Array**	**61.62**	**317**	*e*P	**P**	**03 42 26.0**	**-0.2**
	8.8nm,0.6s						
ZALV	**Zalesovo Beam**	**61.94**	**325**	P	**P**	**03 42 27.7**	**-0.4**
	1.4nm,0.5s,baz=75,slow=11,SNR=4.1						
ZAA1	**Zalesovo Array**	**61.94**	**325**	*e*P	**P**	**03 42 27.7**	**-0.5**
KURK	**Kurchatov**	**64.80**	**320**	*e*P	**P**	**03 42 47.2**	**0.0**
	6.3nm,0.8s						
KURBB	**Kurchatov Arra**	**64.84**	**320**	P	**P**	**03 42 46.8**	**-0.6**
	3.8nm,0.9s,baz=102,slow=6.6,SNR=30						
KSH	**Kashi**	**65.18**	**308**	P	P	03 42 59.0	+9.0
KSH				PP	PP	03 45 22.6	+9.1
KSH				S	**S**	**03 51 39.6**	**+7.9**
KSH				pmax	pmax		
	comp=Z,190nm,5.5s						
KSH				LR	LR		
	comp=N,890nm,7.6s						
KSH				LR	LR		
	comp=E,770nm,10.1s						
NIL	**Nilore**	**67.18**	**301**	*e*P	**P**	**03 43 02.6**	**-0.3**
	comp=E,14nm,1.0s						
HDA	**Harding Lake**	**69.69**	**26**	*e*P	**P**	**03 43 17.0**	**-1.0**
	comp=E,22nm,1.4s						
ILAR	**Eielson Array**	**69.80**	**25**	P	**P**	**03 43 17.1**	**-1.5**
	comp=E,1.0nm,0.7s,baz=248,slow=5.4,SNR=12						
ILB	**Eielson Array**	**69.80**	**25**	*e*P	**P**	**03 43 17.1**	**-1.5**
BVAR	**Borovoye Array**	**70.18**	**322**	P	**P**	**03 43 19.8**	**-1.4**
	comp=E,1.6nm,0.5s,baz=98,slow=6.0,SNR=7.1						
BRVK	**Borovoye**	**70.25**	**322**	*e*P	**P**	**03 43 21.1**	**-0.5**
	comp=E,10nm,0.8s						
INK	**Inuvik**	**75.58**	**22**	P	**P**	**03 43 52.0**	**-0.8**
	comp=E,3.6nm,1.0s,baz=252,slow=4.5,SNR=9.2						
INK	**Inuvik**	**75.58**	**22**	*e*P	**P**	**03 43 53.7**	**+0.9**
	comp=E,3.4nm,0.9s						
ABKAR	**Akbulak array**	**76.71**	**318**	*e*P	**P**	**03 43 59.0**	**-0.6**
YKA	**Yellowknife Ar**	**84.11**	**27**	P	**P**	**03 44 39.1**	**0.0**
	comp=E,0.8nm,0.7s,baz=291,slow=5.3,SNR=4.6						
YKA	**Yellowknife Ar**	**84.11**	**27**	P	**P**	**03 44 39.1**	**0.0**
YBH	**Yreka Blue Hor**	**84.14**	**49**	P	**P**	**03 44 39.7**	**-0.1**
	comp=E,4.3nm,0.8s,baz=247,slow=4.7,SNR=8.9						
YBH	**Yreka Blue Hor**	**84.14**	**49**	*e*P	**P**	**03 44 40.6**	**+0.8**
	comp=E,6.7nm,1.0s						
WDC	**Whiskeytown Da**	**84.50**	**50**	*e*P	**P**	**03 44 43.1**	**+1.5**
	comp=E,7.4nm,1.1s						
PINE	**Pine Mountain**	**84.98**	**46**	*e*P	**P**	**03 44 45.2**	**+0.9**
	comp=E,14nm,1.1s						
B08A	**Colville Reser**	**85.06**	**42**	*e*P	**P**	**03 44 45.4**	**+1.1**
	comp=E,8.5nm,1.0s						
K05A	**Summer Lake**	**85.25**	**47**	*e*P	**P**	**03 44 46.9**	**+1.3**
	comp=E,12nm,1.1s						
RES	**Resolute Bay**	**85.69**	**13**	P	**P**	**03 44 47.1**	**+0.2**
	comp=E,3.6nm,0.7s,baz=267,slow=5.3,SNR=7.7						
MOD	**Modoc Plateau**	**85.86**	**48**	*e*P	**P**	**03 44 49.6**	**+1.0**
	comp=E,4.7nm,1.0s						
BEKR	**Beckworth**	**86.28**	**50**	*e*P	**P**	**03 44 51.9**	**+1.2**
	comp=E,8.2nm,1.1s						
NEW	**Newport**	**86.51**	**41**	P	**P**	**03 44 51.6**	**+0.1**
	comp=E,9.2nm,0.8s,baz=261,slow=4.3,SNR=11						
NEW	**Newport**	**86.51**	**41**	*e*P	**P**	**03 44 52.5**	**+0.9**
	comp=E,12nm,0.9s						
CMB	**Columbia Colle**	**86.68**	**52**	*e*P	**P**	**03 44 54.2**	**+1.6**
	comp=E,15nm,1.5s						
J08A	**Circle Bar Ran**	**86.83**	**46**	*e*P	**P**	**03 44 54.5**	**+1.2**
WVOR	**Wild Horse Val**	**86.94**	**47**	*e*P	**P**	**03 44 54.9**	**+1.0**
	comp=E,4.6nm,1.1s						
VCNR	**Virginia City**	**86.95**	**51**	*e*P	**P**	**03 44 55.9**	**+1.9**
	comp=E,3.0nm,0.7s						
F10A	**Beach Ranch, E**	**87.03**	**44**	*e*P	**P**	**03 44 55.5**	**+1.3**
PNTR	**Pine Nut**	**87.03**	**51**	*e*P	**P**	**03 44 56.5**	**+2.0**
	comp=E,7.2nm,1.0s						
PAHR	**Pah Rah Range**	**87.05**	**50**	*e*P	**P**	**03 44 56.0**	**+1.5**
	comp=E,7.6nm,1.1s						
BMO	**Blue Mountains**	**87.27**	**45**	*e*P	**P**	**03 44 55.6**	**+0.3**
	comp=E,10nm,1.0s						
WAKR	**Walker**	**87.30**	**51**	*e*P	**P**	**03 44 57.5**	**+1.8**
	comp=E,14nm,1.4s						
YERR	**Yerington**	**87.33**	**51**	*e*P	**P**	**03 44 57.7**	**+1.7**
	comp=E,8.2nm,1.1s						
RYN	**Ryan**	**87.96**	**51**	*e*P	**P**	**03 45 00.5**	**+1.6**
	comp=E,8.8nm,1.1s						
KVN	**Kaiserville**	**88.17**	**51**	*e*P	**P**	**03 45 01.2**	**+1.3**
	comp=E,9.9nm,1.0s						
NV01	**Mina Array Sit**	**88.18**	**51**	*e*P	**P**	**03 45 00.8**	**+0.8**
NVAR	**Mina Array Bea**	**88.18**	**51**	P	**P**	**03 45 00.8**	**+0.7**
	comp=E,10nm,0.9s,baz=264,slow=5.8,SNR=48						
NV11	**Mina Array Sit**	**88.29**	**51**	*e*P	**P**	**03 45 01.9**	**+1.5**
	comp=E,0.7nm,1.0s						
BMN	**Battle Mountai**	**88.47**	**49**	*e*P	**P**	**03 45 03.2**	**+1.9**
	comp=E,4.6nm,0.9s						
MFID	**Camas Ranch**	**88.68**	**46**	*e*P	**P**	**03 45 03.3**	**+1.2**
	comp=E,13nm,0.9s						
SBI	**Santa Barbara**	**88.84**	**56**	*e*P	**P**	**03 45 06.4**	**+3.5**
KBZ	**Khabaz**	**89.26**	**315**	P	**P**	**03 45 06.2**	**+1.5**
	comp=E,2.9nm,1.1s,baz=231,slow=2.5,SNR=4.0						
DAC	**Darwin (Calif)**	**89.27**	**53**	*e*P	**P**	**03 45 05.9**	**+0.7**
	comp=E,4.7nm,0.9s						
PASC	**Pasadena Art C**	**89.34**	**55**	*e*P	**P**	**03 45 08.7**	**+3.4**
CHFC	**Chilao Flat St**	**89.43**	**55**	*e*P	**P**	**03 45 07.1**	**+1.1**
HLID	**Hailey**	**89.62**	**45**	*e*P	**P**	**03 45 07.8**	**+1.1**
	comp=E,6.5nm,0.9s						
TPNV	**Topopah Spring**	**90.14**	**52**	*e*P	**P**	**03 45 10.2**	**+1.0**
	comp=E,6.3nm,0.8s						
GSC	**Goldstone, Bar**	**90.15**	**54**	*e*P	**P**	**03 45 10.6**	**+1.5**
	comp=E,6.8nm,0.8s						
R11A	**Troy Canyon, C**	**90.26**	**51**	*e*P	**P**	**03 45 11.2**	**+1.5**
	comp=E,6.3nm,1.4s						
LRM	**Limekiln Ridge**	**90.27**	**43**	*e*P	**P**	**03 45 10.5**	**+0.8**
DLMT	**Dillon**	**90.32**	**43**	*e*P	**P**	**03 45 10.5**	**+0.7**
	comp=E,6.1nm,1.4s						
EML	**El Monte Cty P**	**90.76**	**56**	*e*P	**P**	**03 45 09.1**	**-2.8**
EML				*e*pP	**PcP**	**03 45 14.9**	**+1.9**
SHPR	**Sheep Range**	**91.10**	**52**	*e*P	**P**	**03 45 15.6**	**+1.9**
	comp=E,4.3nm,1.0s						
HVU	**Hansel Valley**	**91.31**	**47**	*e*P	**P**	**03 45 16.0**	**+1.4**
YHB	**Horse Butte**	**91.45**	**44**	*e*P	**P**	**03 45 17.4**	**+2.2**
	comp=E,8.8nm,1.0s						
PSUT	**Pine Spring**	**91.51**	**50**	*e*P	**P**	**03 45 16.9**	**+1.4**
	comp=E,4.4nm,0.9s						
LDFC	**Landfair**	**91.54**	**54**	*e*P	**P**	**03 45 17.4**	**+1.7**
	comp=E,21nm,1.0s						
SPUT	**South Promonto**	**91.69**	**47**	*e*P	**P**	**03 45 17.5**	**+1.2**
	comp=E,4.6nm,1.1s						
FIA0	**FINESS Array S**	**91.69**	**335**	*e*P	**P**	**03 45 14.1**	**-1.6**
FINES	**FINESS Array B**	**91.69**	**335**	P	**P**	**03 45 14.1**	**-1.6**
	comp=E,4.0nm,1.0s,baz=90,slow=5.7,SNR=6.1						
FINES	**FINESS Array B**	**91.69**	**335**	P	**P**	**03 45 14.1**	**-1.6**
DUG	**Dugway, Tooele**	**91.77**	**48**	*e*P	**P**	**03 45 17.8**	**+1.1**
	comp=E,3.6nm,0.9s						
YFT	**Old Faithful**	**91.80**	**44**	*e*P	**P**	**03 45 20.3**	**+3.5**
	comp=E,8.2nm,0.9s						
IMW	**Indian Meadow**	**91.91**	**44**	*e*P	**P**	**03 45 19.0**	**+1.6**
	comp=E,4.6nm,0.9s						
FXWY	**Fox Creek**	**91.94**	**45**	*e*P	**P**	**03 45 18.8**	**+1.3**
	comp=E,2.9nm,0.9s						
H17A	**Grant Village**	**91.99**	**44**	*e*P	**P**	**03 45 20.6**	**+2.8**
	comp=E,7.5nm,0.9s						
MOOW	**Moose Ponds**	**92.09**	**44**	*e*P	**P**	**03 45 19.4**	**+1.2**
	comp=E,3.3nm,0.9s						
CCUT	**Cedar City**	**92.17**	**51**	*e*P	**P**	**03 45 20.8**	**+2.1**
	comp=E,3.3nm,1.1s						
HWUT	**Hardware Ranch**	**92.22**	**47**	*e*P	**P**	**03 45 19.7**	**+0.9**
	comp=E,6.8nm,1.1s						
Y12C	**Blythe**	**92.39**	**55**	*e*P	**P**	**03 45 21.3**	**+1.8**
	comp=E,6.2nm,0.8s						
LCMT	**Little Creek M**	**92.42**	**51**	*e*P	**P**	**03 45 21.5**	**+1.7**
	comp=E,3.9nm,1.2s						
W13A	**Hualapai Mount**	**92.50**	**53**	*e*P	**P**	**03 45 21.5**	**+1.3**
	comp=E,3.3nm,0.9s						
RLMT	**Red Lodge**	**92.61**	**43**	*e*P	**P**	**03 45 22.5**	**+1.9**
	comp=E,5.2nm,0.6s						
KNB	**Kanab**	**92.75**	**51**	*e*P	**P**	**03 45 23.6**	**+2.3**
	comp=E,6.3nm,1.1s						
PD31	**Pinedale Array**	**93.24**	**45**	*e*P	**P**	**03 45 22.6**	**-1.0**
PDAR	**Pinedale Array**	**93.24**	**45**	P	**P**	**03 45 22.6**	**-1.0**
	comp=E,0.6nm,0.7s,baz=256,slow=3.1,SNR=6.0						
PDAR	**Pinedale Array**	**93.24**	**45**	*e*P	**P**	**03 45 23.7**	**+0.2**
U15A	**North Rim**	**93.33**	**52**	*e*P	**P**	**03 45 25.9**	**+1.7**
	comp=E,3.8nm,1.0s						
Y14A	**Wickenburg**	**93.54**	**54**	*e*P	**P**	**03 45 25.1**	**+0.2**
	comp=E,6.8nm,1.0s						
SRU	**San Rafael Swe**	**93.79**	**49**	*e*P	**P**	**03 45 27.2**	**+1.1**
	comp=E,2.6nm,0.9s						
LAO	**LASA Array**	**94.01**	**41**	*e*P	**P**	**03 45 27.7**	**+1.0**
	comp=E,16nm,0.9s						
PV23	**Carpenter Ridg**	**95.13**	**49**	*e*P	**P**	**03 45 33.5**	**+1.1**
	comp=E,5.3nm,0.9s						
PV14	**Lion Creek, Pa**	**95.15**	**49**	*e*P	**P**	**03 45 33.4**	**+1.0**
	comp=E,13nm,1.4s						
G43A	**Wallace**	**105.89**	**35**	*e*Pdif	**Pdif**	**03 46 22.7**	**+2.7**
TOA1	**Torodi Ar. Sit**	**134.72**	**303**	*e*PKPdf	**PKPdf**	**03 51 26.6**	**-1.4**
TORD	**Torodi Ar. Bea**	**134.72**	**303**	PKP	**PKPdf**	**03 51 26.6**	**-1.4**
	comp=E,0.6nm,0.7s,baz=44,slow=2.5,SNR=8.7						
KOWA	**Kowa**	**138.43**	**309**	PKP	**PKPdf**	**03 51 34.8**	**-0.1**
	comp=E,2.0nm,0.7s,baz=6.3,slow=9.2,SNR=8.8						
PLCA	**Paso Flores**	**138.75**	**139**	PKP	**PKPdf**	**03 51 34.4**	**-0.5**
	comp=E,2.8nm,0.8s,baz=276,slow=4.5,SNR=3.5						
DBIC	**Dimbokro**	**143.62**	**300**	PKP	**PKPdf**	**03 51 44.9**	**+0.6**
	comp=E,5.1nm,0.9s,baz=138,slow=6.0,SNR=3.8						
LPAZ	**La Paz**	**148.67**	**101**	PKPbc	**PKPbc**	**03 51 57.2**	**-0.1**
	comp=E,2.4nm,0.8s,baz=55,slow=6.1,SNR=10						
LPAZ	**La Paz**	**148.67**	**101**	*e*PKPdf	**PKPdf**	**03 51 51.2**	**-2.4**
LPAZ				*e*PKPbc	**PKiKP**	**03 51 58.9**	**+0.1**

*IDC **21** 03:32:24.4±1.0, 12°.46N×144°.06E, h0km, mb4.4/8, mb1 4.6/8, mb1mx4.1/78, mbtmp4.4/8, MS3.7/1, Ms1 3.7/1, ms1mx3.1/51, Error ellipse: s-maj=41.9km s-min=21.0km az=89.0*
*ISCJB **21** 03:32:26.9±0.8, 12°.4N±0°.1×144°.0E±0°.2, h27km, mb4.4/8, MS3.7/1, Error ellipse: s-maj=25.1km s-min=10.5km az=32.8*

ISC 21 03:32:28.5±0.9, 12°.4N±0°.1×144°.1E±0°.2, h27km, n11, σ0°.83/10, mb4.5/8, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.37**	**33**	Sn	**Sn**	**03 33 08.8**	**-0.3**
	530nm,0.3s,baz=360,slow=22,SNR=11						
WRA	**Warramunga Arr**	**33.58**	**197**	P	**P**	**03 39 06.5**	**0.0**
	7.2nm,0.6s,baz=20,slow=9.7,SNR=17						
ASAR	**Alice Springs**	**37.24**	**196**	P	**P**	**03 39 38.2**	**+0.1**
	3.3nm,0.8s,baz=19,slow=7.8,SNR=6.8						
SONM	**Songino Array**	**47.25**	**326**	P	**P**	**03 41 00.8**	**+1.3**
	2.4nm,0.8s,baz=150,slow=8.9,SNR=5.5						
AFI	**Afiamalu**	**50.96**	**120**	LR	LR	03 59 12.3	
	comp=Z,74nm,20.9s,baz=44,slow=32						
MKAR	**Makanchi Array**	**61.81**	**317**	P	**P**	**03 42 44.0**	**-1.1**
	1.4nm,0.6s,baz=91,slow=8.8,SNR=6.2						
KURBB	**Kurchatov Arra**	**65.03**	**320**	P	**P**	**03 43 05.4**	**-0.9**
	4.4nm,0.7s,baz=101,slow=6.7,SNR=8.7						
YKA	**Yellowknife Ar**	**84.22**	**27**	P	**P**	**03 44 57.6**	**+0.3**
	0.9nm,0.4s,baz=286,slow=5.2,SNR=3.6						
NVAR	**Mina Array Bea**	**88.22**	**51**	P	**P**	**03 45 18.1**	**+0.2**
	3.8nm,0.7s,baz=262,slow=6.2,SNR=5.6						
FINES	**FINESS Array B**	**91.89**	**335**	P	**P**	**03 45 34.4**	**+0.2**
	1.0nm,0.4s,baz=78,slow=6.8,SNR=6.4						
TORD	**Torodi Ar. Bea**	**134.88**	**303**	PKP	**PKPdf**	**03 51 45.1**	**-0.9**
	0.5nm,0.7s,baz=28,slow=2.6,SNR=2.5						

*NEIC **21** 03:34:45.0±0.0, 37°.70S×73°.87W, h29km, ML4.1(GUC), After GUC.*
NEIC Felt [III] at Canete, Lebu and Tirua and [II] at Concepcion, Hualpen and Talcahuano.

GUC 21 03:34:45.6±0.5, 37°.70S×73°.87W, h29km±6km, ML4.1, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCSP	**San Pedro de C**	**1.05**	**36**	*e*P	Pn	03 35 03.2	-1.1
CCSP				*e*S	Sn	03 35 17.2	-0.7
CCSP				IAML		03 35 20.7	
	comp=N,5μm,0.7s						
TMU	**Temuco**	**1.44**	**136**	*e*P	Pn	03 35 09.9	+0.3
TMU				*e*S	Sn	03 35 28.2	+0.6
CCHI	**Chillan**	**1.80**	**53**	*e*P	Pn	03 35 15.5	+0.8
CCHI				*e*S	Sn	03 35 37.9	+1.2
CCHI				IAML		03 35 52.2	
	comp=N,3μm,1.1s					

BJI ***21*** *03:42:59.8, 12°.18N×144°.11E, h33km, mb4.6/26, mB5.1/15, Ms4.4/8, Ms7 4.2/8*
ISCJB ***21*** *03:43:01.5±0.2, 12°.51N±0°.04×143°.81E±0°.04, h27km, mb4.8/120, MS4.0/19, Error ellipse: s-maj=6.5km s-min=5.0km az=23.2*
MOS ***21*** *03:43:02.2±0.9, 12°.52N×143°.77E, h33km, mb5.1/25, Error ellipse: s-maj=11.8km s-min=7.6km az=95.3*
IDC ***21*** *03:43:03.4±3.8, 12°.62N×143°.94E, h34km±29km, mb4.0/21, mb1 4.2/21, mb1mx4.0/58, mbtmp4.2/21, MS3.9/16, Ms1 3.9/16, ms1mx3.5/59, Error ellipse: s-maj=16.5km s-min=12.8km az=82.0*
NEIC ***21*** *03:43:04.1±0.2, 12°.56N×143°.87E, h35km, mb4.9/83, Error ellipse: s-maj=6.0km s-min=5.2km az=202.0*
NEIC Felt at Barrigada and Santa Rita.
ISC 21 03:43:02.9±0.4, 12°.57N±0°.06×144°.00E±0°.06, h27km, n226, σ1°.25/215, mb4.9/120, MS4.0/19, 4C-6D, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.32**	**40**	Pn	**Pn**	**03 43 25.2**	**-0.5**
	220nm,0.3s,baz=246,slow=2.0,SNR=37						
GUMO				Sn	**Sn**	**03 43 42.1**	**-0.3**
	660nm,0.3s,baz=196,slow=20,SNR=24						
GUMO	**Guam**	**1.32**	**40**	*e*Pn	**Pn**	**03 43 24.8**	**-0.8**
GUMO				*e*Sn	**Sn**	**03 43 40.4**	**-2.0**
GUMO	**Guam**	**1.32**	**40**	*e*P	**Pn**	**03 43 24.8**	**-0.8**
GUMO				*e*		03 43 40.4	
CBIJ	**Chichi jima**	**14.55**	**354**	*e*Pn	**Pn**	**03 46 27.4**	**+0.2**
PATS	**Pohnpei**	**15.21**	**111**	*e*Pn	**Pn**	**03 46 35.5**	**-0.5**
	42nm,0.9s						
JAY	**Jayapura**	**15.34**	**193**	LR	LR	03 51 55.5	
	comp=Z,574nm,18.6s,baz=0.5,slow=35						
DAV	**Davao City (W)**	**18.95**	**255**	LR	LR	03 53 32.8	
	comp=Z,228nm,20.7s,baz=138,slow=33						
JOW	**Kunigami**	**20.47**	**316**	*e*P	**P**	**03 47 39.4**	**+0.6**
	157nm,1.4s						
TGY	**Tagaytay City**	**22.49**	**277**	LR	LR	03 57 51.2	
	comp=Z,223nm,18.5s,baz=50,slow=40						
H11S3	**WAKE ISLAND Hy**	**22.63**	**72**	T	T	04 11 39.1	
	baz=269,slow=78,SNR=29						
H11S1	**WAKE ISLAND Hy**	**22.64**	**72**	T	T	04 11 38.7	
	baz=269,slow=78,SNR=35						
H11S2	**WAKE ISLAND Hy**	**22.64**	**72**	T	T	04 11 37.5	
	baz=269,slow=78,SNR=26						
H11N1	**WAKE ISLAND Hy**	**23.09**	**69**	T	T	04 12 05.8	
	baz=255,slow=75,SNR=41						
H11N2	**WAKE ISLAND Hy**	**23.10**	**69**	T	T	04 12 08.7	
	baz=255,slow=75,SNR=43						
H11N3	**WAKE ISLAND Hy**	**23.11**	**69**	T	T	04 12 05.9	
	baz=255,slow=75,SNR=35						
JNU	**Nakatsue**	**23.72**	**332**	P	**P**	**03 48 11.9**	**-1.0**
	12nm,1.0s,baz=136,slow=17,SNR=3.5						
JNU	**Nakatsue**	**23.72**	**332**	*e*P	**P**	**03 48 11.9**	**-1.0**
	43nm,1.3s						
MJAR	**Matsushiro Arr**	**24.43**	**349**	P	**P**	**03 48 18.9**	**-0.5**
	4.2nm,0.9s,baz=170,slow=9.8,SNR=6.7						
MJAR				LR	LR	03 57 09.6	
	comp=Z,298nm,18.5s,baz=160,slow=35						
MAJO	**Matsushiro**	**24.43**	**349**	*e*P	**P**	**03 48 19.6**	**+0.1**
	10nm,1.0s						
MAJO	**Matsushiro**	**24.43**	**349**	*d i*P	**P**	**03 48 19.5**	**+0.1**
MAJO				pmax	pmax		
	comp=Z,12nm,1.2s						
MAT	**Matsushiro**	**24.43**	**349**	P	**P**	**03 48 19.3**	**-0.2**
MJB9	**Matsu-Tunnel**	**24.44**	**349**	*e*P	**P**	**03 48 19.3**	**-0.2**
	comp=Z,10nm,1.0s						
LUWI	**Luwuk**	**25.04**	**239**	*e*P	**P**	**03 48 23.6**	**-1.5**
	comp=Z,96nm,1.0s						
TJN	**Taejon**	**28.04**	**331⇓**	*e*P	**P**	**03 48 52.4**	**+0.5**
KSRS	**Korea Array**	**28.65**	**333**	P	**P**	**03 48 57.0**	**-0.5**
	comp=Z,2.6nm,0.9s,baz=135,slow=11,SNR=7.1						
KS15	**Wonju Array Si**	**28.66**	**333**	*e*P	**P**	**03 48 57.0**	**-0.5**
KSAR	**Wonju Array Be**	**28.66**	**333**	P	**P**	**03 48 57.0**	**-0.5**
KSAR	**Wonju Array Be**	**28.66**	**333**	P	**P**	**03 48 57.0**	**-0.5**
KS01	**Wonju Array Si**	**28.69**	**333**	*e*P	**P**	**03 48 58.9**	**+1.2**
NJ2	**Nanjing**	**30.15**	**314**	*e*P	**P**	**03 49 11.8**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**31.40**	**3⇑**	*e*P	**P**	**03 49 23.3**	**+1.7**
ASAJ	**Asahikawa**	**31.46**	**358**	LR	LR	04 04 26.1	
	comp=Z,124nm,18.6s,baz=170,slow=41						
WRAB	**Tennant Creek**	**33.67**	**197**	*e*P	**P**	**03 49 40.6**	**-1.1**
	comp=Z,8.0nm,0.7s						
WRAB	**Tennant Creek**	**33.67**	**197**	*de*P	**P**	**03 49 40.4**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,15nm,1.7s						
WB2	**Warramunga Arr**	**33.67**	**197**	*e*P	**P**	**03 49 41.1**	**-0.7**
WR1	**Warramunga Arr**	**33.68**	**197**	*e*P	**P**	**03 49 41.1**	**-0.8**
	comp=Z,10nm,0.8s						
WRA	**Warramunga Arr**	**33.68**	**197**	P	**P**	**03 49 41.1**	**-0.8**
	comp=Z,3.9nm,0.6s,baz=20,slow=9.8,SNR=78						
WRA				LR	LR	04 03 44.6	
	comp=Z,206nm,20.7s,baz=15,slow=37						
CN2	**Changchun**	**34.98**	**336**	*e*P	**P**	**03 49 56.8**	**+3.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.3s						
BJI	**Beijing**	**36.73**	**323**	P	**P**	**03 50 08.5**	**+0.5**
AS01	**Alice Springs**	**37.33**	**195**	*e*P	**P**	**03 50 12.2**	**-1.0**
ASAR	**Alice Springs**	**37.34**	**195**	P	**P**	**03 50 12.8**	**-0.6**
	comp=Z,2.9nm,0.8s,baz=17,slow=11,SNR=16						
ASAR				LR	LR	04 05 13.2	
	comp=Z,282nm,21.7s,baz=5.0,slow=36						
GYA	**Guiyang**	**37.65**	**297**	*e*P	**P**	**03 50 16.4**	**+0.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KLR	**Kul'dur**	**37.93**	**347**	P	**P**	**03 50 17.7**	**-0.3**
	comp=Z,0.1nm,0.7s,baz=158,slow=8.8,SNR=5.0						
KLR	**Kul'dur**	**37.93**	**347⇓**	*e*P	**P**	**03 50 19.0**	**+1.0**
HHC	**Hu-ho-hao-te**	**40.01**	**321**	*e*P	**P**	**03 50 36.8**	**+1.1**
HHC				S	**S**	**03 56 38.8**	**-1.0**
HHC				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC				pmax	pmax		
	comp=Z,150nm,5.2s						
HHC				LR	LR		
	comp=Z,180nm,14.3s						
HHC				LR	LR		
	comp=Z,240nm,13.0s						
HHC				LR	LR		
	comp=Z,180nm,14.3s						
KMI	**Kunming**	**40.83**	**294**	P	**P**	**03 50 44.1**	**+1.2**
KMI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KMI				pmax	pmax		
	comp=Z,170nm,4.7s						
DZM	**Mont Dzumac**	**40.86**	**147**	P	**P**	**03 50 43.3**	**+0.4**
	comp=Z,7.3nm,1.0s,baz=49,slow=20,SNR=3.1						
DZM	**Mont Dzumac**	**40.86**	**147**	*e*LR	LR	03 51 13.2	
	comp=Z,136nm,22.9s						
DZM	**Mont Dzumac**	**40.86**	**147**	*e*P	**P**	**03 50 43.3**	**+0.4**
	comp=Z,13nm,1.1s						
LEM	**Lembang**	**40.98**	**244**	LR	LR	04 09 04.2	
	comp=Z,87nm,20.1s,baz=129,slow=38						
CD2	**Chengdu**	**41.32**	**303**	P	**P**	**03 50 45.6**	**-1.0**
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
PETK	**Petropavlovsk-**	**41.89**	**12**	PcP	**PcP**	**03 52 45.6**	**-0.6**
	comp=Z,2.4nm,0.7s,baz=142,slow=7.5,SNR=3.7						
PETK				LR	LR	04 09 06.2	
	comp=Z,172nm,18.4s,baz=191,slow=37						
LZH	**Lanzhou**	**43.01**	**310**	*e*P	**P**	**03 51 03.5**	**+3.0**
LZH				pP	sP	03 51 10.8	-1.1
LZH				sP	pP	03 51 13.9	+5.3
LZH				PP	**PP**	**03 52 44.4**	**+3.8**
LZH				*e*S	**S**	**03 57 21.5**	**-3.1**
LZH				pmax	pmax		
	comp=Z,22nm,1.4s						
LZH				pmax	pmax		
	comp=Z,130nm,5.2s						
LZH				LR	LR		
	comp=Z,440nm,13.7s						
LZH				LR	LR		
	comp=Z,360nm,13.3s						
LZH				LR	LR		
	comp=Z,470nm,15.3s						
CM01	**Chiang Mai Arr**	**43.71**	**284**	*e*P	**P**	**03 51 05.3**	**-0.8**
CM31	**Chiang Mai Arr**	**43.72**	**284**	*e*P	**P**	**03 51 05.5**	**-0.7**
CMAR	**Chiang Mai Arr**	**43.72**	**284**	P	**P**	**03 51 05.5**	**-0.7**
	comp=Z,4.3nm,0.9s,baz=90,slow=5.9,SNR=12						
ULN	**Ulaanbaatar**	**46.74**	**326**	*e*P	**P**	**03 51 29.7**	**-0.3**
	comp=Z,7.6nm,1.5s						
ULN	**Ulaanbaatar**	**46.74**	**326⇓**	*e*P	**P**	**03 51 29.9**	**-0.1**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.7s						
SONA0	**Songino Array**	**47.08**	**326**	*e*P	**P**	**03 51 31.3**	**-1.3**
SONM	**Songino Array**	**47.08**	**326**	P	**P**	**03 51 31.3**	**-1.3**
	comp=Z,0.8nm,0.5s,baz=151,slow=7.8,SNR=5.6						
SONA1	**Songino Array**	**47.09**	**326**	*e*P	**P**	**03 51 33.5**	**+0.9**
GTA	**Gaotai**	**47.23**	**313**	*e*P	**P**	**03 51 33.3**	**-0.6**
GTA				pP	pP	03 51 43.3	+1.2
GTA				sP	sP	03 51 47.3	+1.9
GTA				S	**S**	**03 58 23.0**	**-2.5**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,100nm,5.4s						
GTA				LR	LR		
	comp=Z,100nm,17.2s						
GTA				LR	LR		
	comp=Z,140nm,16.1s						
GTA				LR	LR		
	comp=Z,140nm,16.8s						
ZAK	**Zakamensk**	**50.22**	**327**	*e*P	**P**	**03 51 57.0**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.6s						
TLY	**Talaya**	**50.77**	**329**	*e*P	**P**	**03 52 01.2**	**+0.6**
	comp=Z,7.5nm,1.5s						
TLY	**Talaya**	**50.77**	**329**	*e*P	**P**	**03 52 02.5**	**+1.8**
TLY				pmax	pmax		
	comp=Z,6.0nm,1.7s						
WMQ	**Urumqi**	**57.23**	**314**	P	**P**	**03 52 50.6**	**+2.5**
WMQ				pP	sP	03 53 00.0	+0.3
WMQ				sP	pP	03 53 03.8	+7.3
WMQ				pmax	pmax		
	comp=Z,49nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,180nm,4.7s						
WMQ				LR	LR		
	comp=Z,210nm,18.1s						
WMQ				LR	LR		
	comp=Z,200nm,21.1s						
WMQ				LR	LR		
	comp=Z,190nm,21.1s						
BILL	**Bilibino**	**57.30**	**10**	*i* P	**P**	**03 52 50.9**	**+2.8**
BILL				*i*		03 54 58.2	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.2s						
OBL	**Observatory Le**	**58.52**	**75**	*e*P	**P**	**03 52 57.4**	**-0.2**
	comp=Z,658nm,1.1s						
UWB	**Uwekahuna B**	**58.53**	**75**	*e*P	**P**	**03 52 57.4**	**-0.2**
	comp=Z,596nm,1.3s						
RIM	**Rim**	**58.53**	**75**	*e*P	**P**	**03 52 57.4**	**-0.2**
	comp=Z,539nm,1.2s						
SBLHI	**Steaming Bluff**	**58.53**	**75**	*e*P	**P**	**03 52 57.8**	**+0.1**
	comp=Z,212nm,0.8s						
HATHI	**Halema'uma'u T**	**58.54**	**75**	*e*P	**P**	**03 52 57.6**	**-0.1**
	comp=Z,720nm,1.2s						
BYL	**Byron's Ledge**	**58.54**	**75**	*e*P	**P**	**03 52 57.6**	**-0.1**
	comp=Z,549nm,1.3s						
DGZ	**Jazzator, Alta**	**59.09**	**321**	*e*P	**P**	**03 53 01.7**	**+0.6**
MK01	**Makanchi Array**	**61.63**	**317**	*e*P	**P**	**03 53 17.8**	**-0.6**
MK31	**Makanchi Array**	**61.64**	**317**	*e*P	**P**	**03 53 18.9**	**+0.6**
MK31	**Makanchi Array**	**61.64**	**317**	*e*P	**P**	**03 53 19.0**	**+0.6**
MK32	**Makanchi Array**	**61.64**	**317**	*e*P	**P**	**03 53 16.9**	**-1.5**
MKAR	**Makanchi Array**	**61.64**	**317**	P	**P**	**03 53 16.9**	**-1.5**
	comp=Z,0.9nm,0.7s,baz=92,slow=7.5,SNR=8.3						
MKAR	**Makanchi Array**	**61.64**	**317**	*e*P	**P**	**03 53 18.9**	**+0.6**
	comp=Z,16nm,1.1s						
MKAR	**Makanchi Array**	**61.64**	**317**	*e*P	**P**	**03 53 19.0**	**+0.6**
MKAR				pmax	pmax		
	comp=Z,16nm,1.1s						
MAKZ	**Makanchi**	**61.85**	**317**	*e*P	**P**	**03 53 20.4**	**+0.6**
	comp=Z,6.6nm,1.3s						
ZALV	**Zalesovo Beam**	**61.96**	**325**	P	**P**	**03 53 19.9**	**-0.5**
	comp=Z,1.0nm,0.5s,baz=122,slow=5.6,SNR=3.8						
ZALV	**Zalesovo Beam**	**61.96**	**325**	*e*P	**P**	**03 53 20.4**	**0.0**
ZALV	**Zalesovo Beam**	**61.96**	**325**	*e*P	**P**	**03 53 20.4**	**0.0**
ZAA1	**Zalesovo Array**	**61.96**	**325**	*e*P	**P**	**03 53 19.9**	**-0.5**
KURK	**Kurchatov**	**64.82**	**320**	*e*P	**P**	**03 53 38.3**	**-1.0**
KURK	**Kurchatov**	**64.82**	**320**	*ce*P	**P**	**03 53 38.9**	**-0.5**
KURK				pmax	pmax		
	comp=Z,14nm,1.7s						
KURBB	**Kurchatov Arra**	**64.86**	**320**	P	**P**	**03 53 37.9**	**-1.7**
	comp=Z,2.3nm,0.6s,baz=103,slow=6.9,SNR=26						
KSH	**Kashi**	**65.19**	**308**	P	**P**	**03 53 44.5**	**+2.3**
KSH				pmax	pmax		
	comp=Z,150nm,4.2s						
CAST	**Castle Rocks**	**67.28**	**26**	*e*P	**P**	**03 53 55.6**	**+0.6**
	comp=Z,2.4nm,0.9s						
SCM	**Sheep Creek Mo**	**68.97**	**28**	*e*P	**P**	**03 54 06.9**	**+1.2**
	comp=Z,13nm,1.2s						
SCM	**Sheep Creek Mo**	**68.97**	**28**	*e*P	**P**	**03 54 06.9**	**+1.2**
SCM				pmax	pmax		
	comp=Z,13nm,1.2s						
IL1	**Eielson Array**	**69.85**	**25**	*e*P	**P**	**03 54 10.1**	**-0.8**
ILAR	**Eielson Array**	**69.85**	**25**	P	**P**	**03 54 09.1**	**-1.9**
	comp=Z,0.8nm,0.5s,baz=257,slow=5.9,SNR=14						
ILB	**Eielson Array**	**69.85**	**25**	*e*P	**P**	**03 54 09.5**	**-1.5**
BVAR	**Borovoye Array**	**70.20**	**322**	P	**P**	**03 54 12.0**	**-1.4**
	comp=Z,1.5nm,0.3s,baz=118,slow=8.8,SNR=13						
BVAR	**Borovoye Array**	**70.20**	**322**	P	**P**	**03 54 12.0**	**-1.4**
BRVK	**Borovoye**	**70.27**	**322**	*e*P	**P**	**03 54 12.9**	**-0.9**
	comp=Z,5.4nm,0.5s						
BRVK	**Borovoye**	**70.27**	**322⇑**	*e*P	**P**	**03 54 13.4**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.7s						
PPT2	**Papeete2**	**72.09**	**113**	*e*LR	LR	04 05 43.7	
	comp=Z,119nm,23.8s						
INK	**Inuvik**	**75.63**	**22**	*e*P	**P**	**03 54 45.1**	**-0.1**
	comp=Z,4.7nm,0.9s						
INK	**Inuvik**	**75.63**	**22**	*e*P	**P**	**03 54 45.1**	**-0.1**
INK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ABKAR	**Akbulak array**	**76.73**	**318**	*e*P	**P**	**03 54 51.3**	**-0.6**
ARU	**Arti**	**77.12**	**325**	*d i*P	**P**	**03 54 53.2**	**-0.7**
ARU						03 57 42.7	
ARU				S	**S**	**04 04 42.1**	**+0.9**
ARU				SS	**SS**	**04 09 36.5**	**-2.0**
ARU				pmax	pmax		
	comp=Z,9.0nm,1.7s						
AKTO	**Aktyubinsk**	**77.88**	**319**	P	**P**	**03 54 56.9**	**-1.4**
	comp=Z,0.5nm,0.4s,baz=13,slow=4.3,SNR=3.9						
PRGR	**Permogore**	**82.99**	**332**	*e*P	**P**	**03 55 21.0**	**-4.5**
PRGR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
YKA	**Yellowknife Ar**	**84.15**	**27**	P	**P**	**03 55 30.4**	**-1.0**
	comp=Z,2.2nm,0.8s,baz=286,slow=5.3,SNR=7.3						
YBH	**Yreka Blue Hor**	**84.18**	**49**	P	**P**	**03 55 31.1**	**-1.1**
	comp=Z,5.9nm,1.0s,baz=317,slow=2.1,SNR=8.7						
YBH				LR	LR	04 25 20.9	
	comp=Z,117nm,21.7s,baz=299,slow=30						
YBH	**Yreka Blue Hor**	**84.18**	**49**	*e*P	**P**	**03 55 33.2**	**+1.0**
	comp=Z,16nm,1.4s						
YBH	**Yreka Blue Hor**	**84.18**	**49**	*e*P	**P**	**03 55 33.2**	**+1.0**
YBH				pmax	pmax		
	comp=Z,16nm,1.4s						
LTY	**Liberty**	**84.46**	**43**	*e*P	**P**	**03 55 37.0**	**+3.5**
	comp=Z,3.4nm,0.8s						
SPITS	**Spitsbergen Ar**	**84.91**	**351**	LR	LR	04 34 01.9	
	comp=Z,58nm,18.8s,baz=255,slow=36						
PINE	**Pine Mountain**	**85.02**	**46**	*e*P	**P**	**03 55 37.1**	**+0.6**
	comp=Z,17nm,1.1s						
B08A	**Colville Reser**	**85.09**	**42**	*e*P	**P**	**03 55 37.4**	**+0.8**
	comp=Z,11nm,1.0s						
K05A	**Summer Lake**	**85.29**	**47**	*e*P	**P**	**03 55 38.6**	**+0.8**
	comp=Z,16nm,1.1s						
RES	**Resolute Bay**	**85.73**	**13**	*e*P	**P**	**03 55 39.2**	**+0.1**
	comp=Z,12nm,1.4s						
RES	**Resolute Bay**	**85.73**	**13**	*e*P	**P**	**03 55 39.3**	**+0.1**
RES				pmax	pmax		
	comp=Z,12nm,1.4s						
MOD	**Modoc Plateau**	**85.90**	**48**	*e*P	**P**	**03 55 41.4**	**+0.5**
	comp=Z,7.2nm,1.2s						
AFDM	**Forest Hills D**	**86.06**	**51**	*e*P	**P**	**03 55 42.4**	**+0.8**
	comp=Z,8.7nm,1.3s						
BEKR	**Beckworth**	**86.32**	**50**	*e*P	**P**	**03 55 43.7**	**+0.6**
	comp=Z,7.0nm,1.0s						
NEW	**Newport**	**86.55**	**41**	*e*P	**P**	**03 55 44.1**	**+0.3**
	comp=Z,11nm,0.8s						
NEW	**Newport**	**86.55**	**41**	*e*P	**P**	**03 55 44.1**	**+0.3**
NEW				pmax	pmax		
	comp=Z,11nm,0.8s						
CMB	**Columbia Colle**	**86.72**	**52**	*e*P	**P**	**03 55 45.7**	**+0.8**
	comp=Z,13nm,1.4s						
CMB	**Columbia Colle**	**86.72**	**52**	*e*P	**P**	**03 55 45.7**	**+0.8**
CMB				pmax	pmax		
	comp=Z,13nm,1.4s						
J08A	**Circle Bar Ran**	**86.87**	**46**	*e*P	**P**	**03 55 46.2**	**+0.6**
	comp=Z,11nm,1.2s						
WVOR	**Wild Horse Val**	**86.98**	**47**	*e*P	**P**	**03 55 46.9**	**+0.7**
	comp=Z,16nm,1.4s						
WVOR	**Wild Horse Val**	**86.98**	**47**	*e*P	**P**	**03 55 46.9**	**+0.7**
WVOR				pmax	pmax		
	comp=Z,16nm,1.4s						
VCNR	**Virginia City**	**86.98**	**51**	*e*P	**P**	**03 55 47.8**	**+1.5**
	comp=Z,7.4nm,1.1s						
F10A	**Beach Ranch, E**	**87.07**	**44**	*e*P	**P**	**03 55 46.8**	**+0.3**
	comp=Z,4.6nm,0.8s						
PNTR	**Pine Nut**	**87.07**	**51**	*e*P	**P**	**03 55 48.4**	**+1.6**
	comp=Z,11nm,1.2s						
PAHR	**Pah Rah Range**	**87.09**	**50**	*e*P	**P**	**03 55 47.6**	**+0.8**
	comp=Z,9.3nm,1.2s						
BMO	**Blue Mountains**	**87.31**	**45**	*e*P	**P**	**03 55 48.0**	**+0.3**
	comp=Z,16nm,1.1s						
BMO	**Blue Mountains**	**87.31**	**45**	*e*P	**P**	**03 55 48.0**	**+0.3**
BMO				pmax	pmax		
	comp=Z,16nm,1.1s						
WAKR	**Walker**	**87.33**	**51**	*e*P	**P**	**03 55 49.9**	**+1.8**
	comp=Z,12nm,1.4s						
YERR	**Yerington**	**87.37**	**51**	*e*P	**P**	**03 55 49.2**	**+1.0**
	comp=Z,12nm,1.3s						
CARC	**Carrizo Plain**	**87.78**	**54**	*e*P	**P**	**03 55 49.5**	**-0.5**
ARA0	**ARCESS Array S**	**87.79**	**342**	*e*P	**P**	**03 55 48.4**	**-0.9**
ARCES	**ARCESS Array B**	**87.79**	**342**	P	**P**	**03 55 48.4**	**-0.9**
	comp=Z,2.2nm,0.8s,baz=67,slow=9.9,SNR=2.9						
MDPB	**Devils Postpil**	**87.82**	**52**	*e*P	**P**	**03 55 51.9**	**+1.4**
	comp=Z,5.2nm,1.1s						
OMMB	**Old Mammoth Mi**	**87.88**	**52**	*e*P	**P**	**03 55 52.4**	**+1.5**
	comp=Z,7.1nm,1.3s						
RYN	**Ryan**	**88.00**	**51**	*e*P	**P**	**03 55 52.3**	**+1.1**
	comp=Z,8.8nm,1.0s						
KVN	**Kaiserville**	**88.21**	**51**	*e*P	**P**	**03 55 53.1**	**+0.9**
	comp=Z,10nm,1.0s						
KVN	**Kaiserville**	**88.21**	**51**	*e*P	**P**	**03 55 53.1**	**+0.9**
KVN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NV01	**Mina Array Sit**	**88.22**	**51**	*e*P	**P**	**03 55 52.7**	**+0.4**
NVAR	**Mina Array Bea**	**88.22**	**51**	P	**P**	**03 55 52.2**	**-0.1**
	comp=Z,7.6nm,0.8s,baz=265,slow=5.8,SNR=40						
NVAR				LR	LR	04 27 42.7	
	comp=Z,30nm,20.8s,baz=87,slow=30						
NV11	**Mina Array Sit**	**88.33**	**51**	*e*P	**P**	**03 55 53.8**	**+1.1**
	comp=Z,0.9nm,1.1s						
BMN	**Battle Mountai**	**88.51**	**49**	*e*P	**P**	**03 55 54.6**	**+1.0**
	comp=Z,7.4nm,1.0s						
BMN	**Battle Mountai**	**88.51**	**49**	*e*P	**P**	**03 55 54.6**	**+1.0**
BMN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MFID	**Camas Ranch**	**88.71**	**46**	*e*P	**P**	**03 55 55.2**	**+0.8**
	comp=Z,19nm,1.1s						
DAC	**Darwin (Calif)**	**89.31**	**53**	*e*P	**P**	**03 55 58.5**	**+1.1**
	comp=Z,9.9nm,1.3s						
DAC	**Darwin (Calif)**	**89.31**	**53**	*e*P	**P**	**03 55 58.5**	**+1.1**
DAC				pmax	pmax		
	comp=Z,10.0nm,1.3s						
PASC	**Pasadena Art C**	**89.38**	**55**	*e*P	**P**	**03 55 55.9**	**-1.7**
OBN	**Obninsk**	**89.49**	**327**	*i* P	**P**	**03 55 54.9**	**-2.7**
OBN				*i*		03 56 00.7	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,72nm,19.0s						
HLID	**Hailey**	**89.66**	**45**	*e*P	**P**	**03 55 59.7**	**+0.8**
	comp=Z,7.2nm,1.0s						
TPNV	**Topopah Spring**	**90.17**	**52**	*e*P	**P**	**03 56 02.5**	**+1.0**
	comp=Z,12nm,0.9s						
TPNV	**Topopah Spring**	**90.17**	**52**	*e*P	**P**	**03 56 02.5**	**+1.0**
TPNV				pmax	pmax		
	comp=Z,12nm,0.9s						
GSC	**Goldstone, Bar**	**90.18**	**54**	*e*P	**P**	**03 56 02.5**	**+1.1**
	comp=Z,18nm,1.3s						
GSC	**Goldstone, Bar**	**90.18**	**54**	*e*P	**P**	**03 56 02.5**	**+1.1**
GSC				pmax	pmax		
	comp=Z,18nm,1.3s						
R11A	**Troy Canyon, C**	**90.30**	**51**	*e*P	**P**	**03 56 02.9**	**+0.9**
	comp=Z,12nm,1.5s						
LRM	**Limekiln Ridge**	**90.31**	**43**	*e*P	**P**	**03 56 02.2**	**+0.2**
MCMT	**McKenzie Canyo**	**90.35**	**44**	*e*P	**P**	**03 56 02.9**	**+0.6**
VNDA	**Vanda**	**90.51**	**176**	P	**P**	**03 56 00.8**	**-1.0**
	comp=Z,2.0nm,1.0s,baz=322,slow=4.5,SNR=6.2						
VNDA	**Vanda**	**90.51**	**176**	*e*P	**P**	**03 56 04.3**	**+2.5**
	comp=Z,4.4nm,1.2s						
VNDA	**Vanda**	**90.51**	**176**	*e*P	**P**	**03 56 04.3**	**+2.5**
VNDA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
SNDA	**J Saunders Pla**	**90.80**	**55**	*e*P	**P**	**03 56 06.8**	**+2.4**
BOZ	**Bozeman (W)**	**90.93**	**43**	*e*P	**P**	**03 56 05.2**	**+0.5**
	comp=Z,6.8nm,1.4s						
BOZ	**Bozeman (W)**	**90.93**	**43**	*e*P	**P**	**03 56 05.3**	**+0.5**
BOZ				pmax	pmax		
	comp=Z,7.0nm,1.4s						
SHPR	**Sheep Range**	**91.14**	**52**	*e*P	**P**	**03 56 07.5**	**+1.5**
	comp=Z,9.9nm,1.2s						
QLMT	**Earthquake Lak**	**91.31**	**44**	*e*P	**P**	**03 56 07.8**	**+1.2**
HVU	**Hansel Valley**	**91.35**	**47**	*e*P	**P**	**03 56 07.

comp=Z,6.4nm,1.1s
PV23 Carpenter Ridg 95.17 49 *e*P **P 03 56 25.0 +0.4**
comp=Z,5.7nm,0.9s
PV14 Lion Creek, Pa 95.19 49 *e*P **P 03 56 25.4 +0.7**
comp=Z,7.7nm,1.2s
PV11 David Mesa, Pa 95.32 49 *e*P **P 03 56 25.6 +0.3**
comp=Z,7.7nm,0.9s
PV12 Saucer Basin, 95.37 49 *e*P P 03 56 30.3 +4.8
comp=Z,4.1nm,0.9s
SMCO Snowmass 96.39 48 *e*P **P 03 56 29.7 -0.6**
comp=Z,4.1nm,1.2s
BR101 Keskin Array S 97.14 313 *e*P **P 03 56 31.5 -1.9**
BRTR Keskin Array B 97.14 313 P **P 03 56 31.5 -1.9**
comp=Z,0.4nm,0.7s,baz=81,slow=6.0,SNR=3.3
HFS Hagfors 97.41 337 LR LR 04 41 28.2
comp=Z,47nm,21.6s,baz=27,slow=36
MAW Mawson 98.17 202 LR LR 04 39 45.2
comp=Z,56nm,19.5s,baz=58,slow=35
ANMO Albuquerque 98.34 51⇑ *e*P **P 03 56 39.0 +0.1**
ANMO pmax pmax
comp=Z,6.0nm,2.8s
LPIG La Paz 98.83 63 LR LR 04 34 10.8
comp=Z,76nm,19.8s,baz=236,slow=31
TOA1 Torodi Ar. Sit 134.72 303 *e*PKPdf **PKPdf 04 02 20.3 +0.1**
TORD Torodi Ar. Bea 134.72 303 PKP **PKPdf 04 02 20.3 +0.1**
comp=Z,0.5nm,0.5s,baz=29,slow=2.4,SNR=12
KOWA Kowa 138.44 309 PKP **PKPdf 04 02 27.1 0.0**
comp=Z,1.0nm,0.5s,baz=63,slow=6.4,SNR=9.0
PLCA Paso Flores 138.73 139 PKP **PKPdf 04 02 27.3 +0.3**
comp=Z,6.7nm,1.2s,baz=192,slow=12,SNR=3.1
DBIC Dimbokro 143.62 300 PKP PKPbc 04 02 33.6 -0.2
comp=Z,3.5nm,0.9s,baz=356,slow=2.8,SNR=5.0
MNMC Minye Minye 147.07 106 *e*PKPdf **PKPab 04 02 45.6 -0.6**
LPAZ La Paz 148.68 101 PKPbc **PKPbc 04 02 49.5 0.0**
comp=Z,4.4nm,0.9s,baz=356,slow=4.1,SNR=12
LPAZ La Paz 148.68 101 *e*PKPdf **PKPdf 04 02 47.6 +1.9**
LPAZ La Paz 148.68 101 *e*PKP2 **PKPdf 04 02 47.6 +1.9**

*IDC **21** 04:34:02.7±1.0, 31°.73N×104°.24E, h0km, mb3.4/6, mb1 3.7/8, mb1mx3.4/77, mbtmp3.5/8, ML3.8/2, MS3.0/4, Ms1 3.0/4, ms1mx2.5/54, Error ellipse: s-maj=35.7km s-min=18.2km az=58.0*
*BJI **21** 04:34:06.2, 31°.73N×104°.19E, h20km, mB3.7/1, ML3.6/16, Ms3.4/5, Ms7 3.4/4*
ISC 21 04:34:04.2±0.7, 31°.83N±0°.03×103°.96E±0°.06, h15km, n17, σ2s77/22, mb3.7/5, MS3.0/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.93**	**191**	Pg	**Pb**	**04 34 21.3**	**-0.8**
CD2				Sg	**Sb**	**04 34 34.8**	**+0.6**
CD2				smax	smax		
	comp=N,6μm,0.9s						
CD2				smax	smax		
	comp=E,5μm,0.5s						
LZH	**Lanzhou**	**4.25**	**359**	*e*Pn	**Pb**	**04 35 16.8**	**-2.0**
LZH				Pg	**Pg**	**04 35 25.3**	**-0.3**
LZH				Sn	**Sb**	**04 36 07.5**	**-2.5**
LZH				Sg	**Sg**	**04 36 21.8**	**+1.1**
LZH				smax	smax		
	comp=N,91nm,1.0s						
LZH				smax	smax		
	comp=E,130nm,0.9s						
LZH				LR	LR		
	comp=N,2μm,5.1s						
LZH				LR	LR		
	comp=E,810nm,5.2s						
LZH				LR	LR		
	comp=Z,1μm,6.1s						
XAN	**Xi'an**	**4.72**	**61**	Pn	**Pn**	**04 35 11.6**	**-3.3**
XAN				Pg	**Pb**	**04 35 28.9**	**+2.2**
XAN				Sn	**Sn**	**04 36 04.8**	**-4.6**
XAN				Sg	**Sb**	**04 36 27.6**	**+4.3**
XAN				smax	smax		
	comp=N,110nm,0.5s						
XAN				smax	smax		
	comp=E,89nm,0.4s						
GYA	**Guiyang**	**5.85**	**155**	Pn	**Pn**	**04 35 28.6**	**-1.9**
GYA				Sn	**Sn**	**04 36 32.9**	**-4.5**
GYA				Sg	**Sb**	**04 36 59.8**	**+3.9**
GYA				smax	smax		
	comp=N,140nm,0.8s						
GYA				smax	smax		
	comp=E,150nm,0.9s						
GTA	**Gaotai**	**8.29**	**337**	*e*P	Pn	04 36 13.0	+9.1
GTA				pP	Pb	04 36 16.3	-11
GTA				sP		04 36 19.1	
GTA				S	Sb	04 37 53.5	-12
GTA				sS	Sn	04 37 57.9	+21
GTA				pmax	pmax		
	comp=Z,14nm,4.1s						
GTA				LR	LR		
	comp=E,170nm,10.3s						
GTA				LR	LR		
	comp=Z,290nm,12.4s						
CMAR	**Chiang Mai Arr**	**14.06**	**200**	Pn	**Pn**	**04 37 24.1**	**+1.1**
	0.4nm,0.3s,baz=10,slow=8.9,SNR=2.6						
SONM	**Songino Array**	**16.10**	**6**	Pn	**P**	**04 37 54.1**	**+0.8**
	0.1nm,0.3s,baz=182,slow=9.9,SNR=4.3						
WMQ	**Urumqi**	**17.53**	**318**	*e*P	**P**	**04 38 10.1**	**+1.0**
TLY	**Talaya**	**19.84**	**359**	LR	LR	04 47 16.4	
	comp=Z,34nm,19.0s,baz=154,slow=40						
KSRS	**Korea Array**	**20.48**	**68**	P	**P**	**04 38 40.4**	**-1.0**
	0.8nm,0.6s,baz=260,slow=6.8,SNR=2.6						
MKAR	**Makanchi Array**	**22.36**	**318**	P	**P**	**04 39 05.8**	**+4.2**
	0.2nm,0.6s,baz=120,slow=13,SNR=3.0						
MKAR				LR	LR	04 48 46.7	
	comp=Z,49nm,18.5s,baz=226,slow=39						
ZALV	**Zalesovo Beam**	**26.02**	**334**	LR	LR	04 50 35.1	
	comp=Z,26nm,21.9s,baz=246,slow=38						
KURBB	**Kurchatov Arra**	**26.59**	**322**	P	**P**	**04 39 44.6**	**+3.0**
	0.1nm,0.3s,baz=130,slow=8.5,SNR=2.9						
DAV	**Davao City (W)**	**31.83**	**136**	LR	LR	04 52 45.1	
	comp=Z,38nm,19.9s,baz=334,slow=36						
FINES	**FINESS Array B**	**56.90**	**326**	P	**P**	**04 43 50.8**	**+2.5**
	2.1nm,1.0s,baz=113,slow=11,SNR=4.7						
WRA	**Warramunga Arr**	**59.14**	**146**	P	**P**	**04 44 02.5**	**-1.9**
	1.0nm,0.8s,baz=339,slow=7.9,SNR=25						
ASAR	**Alice Springs**	**62.17**	**149**	P	**P**	**04 44 24.6**	**-0.5**
	0.3nm,0.6s,baz=334,slow=6.2,SNR=4.4						

*ISK **21** 04:38:43.3, 35°.18N×27°.06E, h10km, ML3.1/12*
*DDA **21** 04:38:44.0, 35°.34N×26°.98E, h15km, Ml3.2*
*CSEM **21** 04:38:45.8±0.3, 35°.27N×27°.17E, h10km, ML2.9, Error ellipse: s-maj=9.4km s-min=3.5km az=154.0*
*ATH **21** 04:38:45.5, 35°.29N×27°.14E, h23km±1km, ML2.9/5, Error ellipse: s-maj=4.0km s-min=0.9km az=325.0*
*THE **21** 04:38:46.2, 35°.29N×27°.09E, h2km±2km, ML2.8/5, Error ellipse: s-maj=4.3km s-min=1.0km az=141.0*
*ISCJB **21** 04:38:46.5±1.0, 35°.28N±0°.07×27°.16E±0°.05, h20km±7km, Error ellipse: s-maj=13.2km s-min=4.0km az=151.7*
ISC 21 04:38:45.0±1.3, 35°.24N±0°.05×27°.15E±0°.04, h9km±9km, n72, σ0s89/92, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.30**	**2**	PG	**Pg**	**04 38 51.2**	**+0.1**
KARP				SG	**Sb**	**04 38 56.9**	**-0.9**
KARP	**Karpathos**	**0.30**	**2**	P	**Pg**	**04 38 51.3**	**+0.2**
KARP				S	**Sb**	**04 38 57.1**	**-0.7**
KARP				AML	AML	04 38 59.0	
	comp=E,5304μm,0.4s						
KARP				AML	AML	04 38 59.5	
	comp=N,4444μm,0.2s						
KARP	**Karpathos**	**0.30**	**2**	P	**Pg**	**04 38 51.6**	**+0.4**
KARP				S	**Sb**	**04 38 56.5**	**-1.3**
KARP	**Karpathos**	**0.30**	**2**	*e*Pg	**Pg**	**04 38 51.2**	**+0.1**
KARP	**Karpathos**	**0.30**	**2**	P	**Pg**	**04 38 51.5**	**+0.4**
KARP				S	**Sb**	**04 38 56.5**	**-1.3**
ZKR	**Zakros**	**0.77**	**261**	P	**Pg**	**04 38 59.6**	**-0.3**
ZKR				S	**Sb**	**04 39 11.8**	**+0.5**
ZKR				AML	AML	04 39 15.7	
	comp=N,1607μm,0.7s						
ZKR				AML	AML	04 39 19.3	
	comp=E,2086μm,0.4s						
ZKR	**Zakros**	**0.77**	**261**	P	**Pb**	**04 39 00.1**	**-0.5**
ZKR				S	**Sn**	**04 39 12.2**	**-1.6**
ZKR	**Zakros**	**0.77**	**261**	P	**Pb**	**04 39 00.1**	**-0.5**
ZKR				S	**Sb**	**04 39 11.7**	**+0.5**
ARG	**Arkhangelos**	**1.26**	**39**	PN	**Pn**	**04 39 08.9**	**+0.2**
ARG				SN	**Sn**	**04 39 27.3**	**+1.6**
ARG	**Arkhangelos**	**1.26**	**39**	P	**Pb**	**04 39 09.2**	**+0.4**
ARG				S	**Sb**	**04 39 25.2**	**+0.1**
ARG				AML	AML	04 39 35.2	
	comp=N,871μm,0.6s						
ARG				AML	AML	04 39 35.4	
	comp=E,1100μm,0.7s						
ARG	**Arkhangelos**	**1.26**	**39**	P	**Pn**	**04 39 08.9**	**+0.2**
ARG				S	**Sn**	**04 39 26.5**	**+0.8**
ARG	**Arkhangelos**	**1.26**	**39**	P	**Pn**	**04 39 08.9**	**+0.2**
ARG				S	**Sb**	**04 39 25.3**	**+0.2**
ARG				*e*Sn	**Sn**	**04 39 27.3**	**+1.6**
NPS	**Neapolis**	**1.26**	**271**	P	**Pg**	**04 39 09.2**	**+0.1**
NPS				S	**Sn**	**04 39 27.6**	**+1.8**
NPS				AML	AML	04 39 36.4	
	comp=N,1290μm,0.6s						
NPS				AML	AML	04 39 38.8	
	comp=E,1036μm,1.0s						
NPS	**Neapolis**	**1.26**	**271**	P	**Pg**	**04 39 09.1**	**-0.1**
NPS				S	**Sn**	**04 39 24.9**	**-0.9**
NPS	**Neapolis**	**1.26**	**271**	P	**Pg**	**04 39 09.3**	**+0.1**
NPS				S	**Sn**	**04 39 24.9**	**-0.9**
LAST	**Lasithi**	**1.37**	**267**	P	**Pg**	**04 39 10.9**	**-0.5**
LAST				S	**Sg**	**04 39 30.6**	**+1.5**
LAST				AML	AML	04 39 43.8	
	comp=E,446μm,0.8s						
LAST				AML	AML	04 39 44.3	
	comp=N,633μm,0.8s						
LAST	**Lasithi**	**1.37**	**267**	P	**Pg**	**04 39 11.1**	**-0.3**
LAST				S	**Sg**	**04 39 29.7**	**+0.6**
LAST	**Lasithi**	**1.37**	**267**	P	**Pg**	**04 39 11.0**	**-0.3**
LAST				S	**Sg**	**04 39 29.7**	**+0.6**
DAT	**Datca**	**1.52**	**13**	PN	**Pn**	**04 39 12.3**	**-0.2**
DAT	**Datca**	**1.52**	**13**	*i* P	**Pn**	**04 39 12.5**	**0.0**
DAT	**Datca**	**1.52**	**13**	P	**Pn**	**04 39 12.5**	**0.0**
DATC	**Datca-Mugla**	**1.57**	**15**	PN	**Pn**	**04 39 13.0**	**0.0**
DATC	**Datca-Mugla**	**1.57**	**15**	*e*Pn	**Pn**	**04 39 13.0**	**0.0**
MRSB	**Marmaris-Mugla**	**1.70**	**30**	PN	**Pn**	**04 39 15.0**	**+0.2**
MRSB	**Marmaris-Mugla**	**1.70**	**30**	*e*Pn	**Pn**	**04 39 15.0**	**+0.2**
SANT	**Santorini**	**1.78**	**310**	PN	**Pn**	**04 39 14.7**	**-1.2**
SANT	**Santorini**	**1.78**	**310**	*e*Pn	**Pn**	**04 39 14.7**	**-1.2**
BODT	**Bodrum**	**1.82**	**4**	PN	**Pn**	**04 39 16.4**	**-0.1**
BODT	**Bodrum**	**1.82**	**4**	*e*Pn	**Pn**	**04 39 16.4**	**-0.1**
AMGA	**Amorgos Island**	**1.88**	**328**	P	**Pn**	**04 39 17.2**	**-0.2**
AMGA	**Amorgos Island**	**1.88**	**328**	P	**Pn**	**04 39 17.5**	**+0.1**
SIVA	**Sivas**	**1.93**	**264**	P	**Pg**	**04 39 21.5**	**-0.5**
SIVA	**Sivas**	**1.93**	**264**	P	**Pb**	**04 39 20.3**	**0.0**
DALY	**Dalyan (Mu¨la**	**1.99**	**37**	PN	**Pn**	**04 39 19.2**	**+0.4**
DALY	**Dalyan (Mu¨la**	**1.99**	**37**	*i* P	**Pn**	**04 39 20.2**	**+1.4**
DALY				*i* S	**Sg**	**04 39 47.9**	**-1.1**
DALY	**Dalyan (Mu¨la**	**1.99**	**37**	*e*Pn	**Pn**	**04 39 19.2**	**+0.4**
DALY	**Dalyan (Mu¨la**	**1.99**	**37**	P	**Pn**	**04 39 20.2**	**+1.4**
DALY				S	**Sg**	**04 39 47.9**	**-1.1**
MLSB	**Milas**	**2.11**	**14**	PN	**Pn**	**04 39 20.8**	**+0.3**
MLSB	**Milas**	**2.11**	**14**	*e*Pn	**Pn**	**04 39 20.8**	**+0.3**
AKAS	**Kas**	**2.23**	**63**	*i* P	**Pn**	**04 39 20.6**	**-1.6**
AKAS	**Kas**	**2.23**	**63**	P	**Pn**	**04 39 20.6**	**-1.6**
APE	**Apeiranthos**	**2.25**	**325**	PN	**Pn**	**04 39 21.7**	**-0.7**
APE	**Apeiranthos**	**2.25**	**325**	P	**Pn**	**04 39 22.3**	**-0.1**
APE	**Apeiranthos**	**2.25**	**325**	*e*Pn	**Pn**	**04 39 21.7**	**-0.7**
APE	**Apeiranthos**	**2.25**	**325**	P	**Pn**	**04 39 22.6**	**+0.2**
GCAM	**G?zelcaml?**	**2.45**	**2**	PN	**Pn**	**04 39 25.6**	**+0.4**
GCAM	**G?zelcaml?**	**2.45**	**2**	*e*Pn	**Pn**	**04 39 25.6**	**+0.4**
AYDN	**Tasoluk**	**2.48**	**13**	*i* P	**Pn**	**04 39 26.7**	**+1.0**
AYDN	**Tasoluk**	**2.48**	**13**	P	**Pn**	**04 39 26.7**	**+1.0**
GVD	**Gavdhos**	**2.54**	**262**	P	**Pb**	**04 39 29.9**	**-0.9**
GVD	**Gavdhos**	**2.54**	**262**	P	**Pb**	**04 39 28.9**	**-1.9**
TAVA	**DENIZLI_Tavas**	**2.64**	**32**	*i* P	**Pn**	**04 39 27.7**	**-0.1**
TAVA	**DENIZLI_Tavas**	**2.64**	**32**	P	**Pn**	**04 39 27.7**	**-0.1**
ELL	**Elmali**	**2.70**	**55**	PN	**Pn**	**04 39 29.3**	**+0.7**
ELL	**Elmali**	**2.70**	**55**	*e*Pn	**Pn**	**04 39 29.3**	**+0.7**
AYDB	**Zeytinkoy-Aydi**	**2.77**	**12**	PN	**Pn**	**04 39 29.9**	**+0.3**
AYDB	**Zeytinkoy-Aydi**	**2.77**	**12**	*e*Pn	**Pn**	**04 39 29.9**	**+0.3**
GOLH	**Golhisar**	**2.79**	**44**	*i* P	**Pn**	**04 39 29.0**	**-0.9**
GOLH	**Golhisar**	**2.79**	**44**	P	**Pn**	**04 39 29.0**	**-0.9**
KORT	**Korkueli**	**3.13**	**55**	PN	**Pn**	**04 39 35.5**	**+0.9**
KORT	**Korkueli**	**3.13**	**55**	*e*Pn	**Pn**	**04 39 35.5**	**+0.9**
ANKY	**Antikythira Is**	**3.20**	**282**	P	**Pn**	**04 39 37.1**	**+1.7**
ANKY	**Antikythira Is**	**3.20**	**282**	P	**Pn**	**04 39 36.9**	**+1.5**
CHOS	**Chios island**	**3.26**	**345**	PN	**Pn**	**04 39 36.6**	**+0.3**
CHOS	**Chios island**	**3.26**	**345**	P	**Pn**	**04 39 36.5**	**+0.1**
CHOS	**Chios island**	**3.26**	**345**	P	**Pn**	**04 39 36.8**	**+0.5**
KULA	**Kula-Manisa**	**3.48**	**20**	PN	**Pn**	**04 39 40.3**	**+0.9**
KULA	**Kula-Manisa**	**3.48**	**20**	*e*Pn	**Pn**	**04 39 40.3**	**+0.9**
VLI	**Veliai**	**3.72**	**295**	P	**Pn**	**04 39 43.1**	**+0.5**
VLI	**Veliai**	**3.72**	**295**	P	**Pn**	**04 39 43.5**	**+0.9**
DYR	**Agios Nikonas**	**4.19**	**293**	P	**Pn**	**04 39 51.7**	**+2.7**
DYR	**Agios Nikonas**	**4.19**	**293**	P	**Pn**	**04 39 51.2**	**+2.1**

*VIE **21** 04:50:04.9±1.0, 45°.38N×14°.57E, h7km±7km, mb1.6/3, ml2.2/6, Error ellipse: s-maj=7.8km s-min=3.0km az=16.0*
13 km ENE of Rijeka
*ISCJB **21** 04:50:05.2±0.5, 45°.39N±0°.02×14°.60E±0°.04, h8km±4km, Error ellipse: s-maj=4.7km s-min=3.4km az=144.0*
*CSEM **21** 04:50:05.5±0.2, 45°.40N×14°.60E, h10km, ML2.5/12, Error ellipse: s-maj=3.3km s-min=2.4km az=49.0*
*LJU **21** 04:50:05.0, 45°.39N×14°.61E, h16km, ML1.8*
ISC 21 04:50:05.8±0.9, 45°.41N±0°.02×14°.59E±0°.02, h14km±6km, n32, σ0s65/63, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDS	**Knezji Dol**	**0.19**	**309**	*i* Pg	**Pg**	**04 50 09.8**	**-0.5**
KNDS				*i* Sg	**Sg**	**04 50 14.0**	**+0.7**
	comp=Z,19nm,0.1s						
KNDS	**Knezji Dol**	**0.19**	**309**	*i* Pg	**Pg**	**04 50 09.8**	**-0.5**
KNDS				*i* Sg	**Sg**	**04 50 14.0**	**+0.7**
	comp=Z,19nm,0.1s						
GBRS	**Gornja Briga**	**0.20**	**51**	*i* Pg	**Pg**	**04 50 10.1**	**-0.2**
GBRS				*i* Sg	**Sg**	**04 50 13.7**	**+0.3**
	comp=Z,130nm,0.1s						
GBRS	**Gornja Briga**	**0.20**	**51**	*i* Pg	**Pg**	**04 50 10.1**	**-0.2**
GBRS				*i* Sg	**Sg**	**04 50 13.7**	**+0.3**
	comp=Z,130nm,0.1s						
CEY	**Cerknica**	**0.35**	**341**	*i* Pg	**Pg**	**04 50 12.6**	**-0.4**
CEY				*i* Sg	**Sb**	**04 50 18.7**	**-0.6**
	comp=Z,13nm,0.1s						
CEY	**Cerknica**	**0.35**	**341**	*i* Pg	**Pg**	**04 50 12.6**	**-0.4**
CEY				*i* Sg	**Sb**	**04 50 18.7**	**-0.6**
	comp=Z,13nm,0.1s						
SKDS	**Skadanscina**	**0.43**	**289**	*i* Pg	**Pg**	**04 50 14.0**	**-0.4**
SKDS				*i* Sg	**Sb**	**04 50 20.9**	**-0.6**
	comp=Z,22nm,0.1s						
SKDS	**Skadanscina**	**0.43**	**289**	*i* Pg	**Pg**	**04 50 14.0**	**-0.4**
SKDS				*i* Sg	**Sb**	**04 50 20.9**	**-0.6**
	comp=Z,22nm,0.1s						
VISS	**Visnje**	**0.43**	**24**	*i* Pg	**Pg**	**04 50 14.0**	**-0.4**
VISS				*i* Sg	**Sg**	**04 50 20.6**	**+0.3**
	comp=Z,34nm,0.1s						
VISS	**Visnje**	**0.43**	**24**	*i* Pg	**Pg**	**04 50 14.0**	**-0.4**
VISS				*i* Sg	**Sg**	**04 50 20.6**	**+0.3**
	comp=Z,34nm,0.1s						
GBAS	**Gorenja Brezov**	**0.54**	**349**	*i* Pg	**Pb**	**04 50 16.4**	**-0.6**
GBAS				*i* Sg	**Sb**	**04 50 24.4**	**-0.3**
	comp=Z,19nm,0.1s						
GBAS	**Gorenja Brezov**	**0.54**	**349**	*i* Pg	**Pb**	**04 50 16.5**	**-0.6**
GBAS				*i* Sg	**Sb**	**04 50 24.4**	**-0.3**
	comp=Z,19nm,0.1s						
JAVS	**Javornik**	**0.61**	**323**	*i* Pg	**Pg**	**04 50 17.0**	**-0.8**
JAVS	**Javornik**	**0.61**	**323**	*i* Pg	**Pg**	**04 50 17.0**	**-0.8**
OZLJ	**Ozalj**	**0.65**	**71**	*i* Pg	**Pg**	**04 50 17.8**	**-0.8**
OZLJ				Sg	**Sg**	**04 50 26.6**	**-0.6**
OZLJ	**Ozalj**	**0.65**	**71**	*i* Pg	**Pg**	**04 50 17.7**	**-0.8**
OZLJ				Sg	**Sg**	**04 50 26.5**	**-0.6**
NVLJ	**Novalja**	**0.87**	**167**	*e*Pg	**Pg**	**04 50 21.4**	**-1.2**
NVLJ				Sg	**Sb**	**04 50 34.1**	**0.0**
NVLJ	**Novalja**	**0.87**	**167**	*e*Pg	**Pg**	**04 50 21.4**	**-1.2**
NVLJ				Sg	**Sb**	**04 50 34.0**	**0.0**
OBKA	**Obir**	**1.10**	**358**	*e*Sg	**Sn**	**04 50 42.6**	**+0.6**
	comp=Z,5.5nm,0.1s						
OBKA	**Obir**	**1.10**	**358**	Sg	**Sn**	**04 50 42.6**	**+0.6**
	comp=Z,5.5nm,0.1s						
UDBI	**Udbina**	**1.21**	**136**	*i* Pg	**Pg**	**04 50 29.8**	**+0.6**
UDBI				Sg	**Sn**	**04 50 45.4**	**+0.8**
UDBI	**Udbina**	**1.21**	**136**	*i* Pg	**Pg**	**04 50 29.7**	**+0.6**
UDBI				Sg	**Sn**	**04 50 45.4**	**+0.8**
SOKA	**Soboth**	**1.31**	**13**	*e*Pg	**Pg**	**04 50 30.3**	**-0.7**
	comp=Z,1.3nm,0.2s						
SOKA				*e*Sg	**Sg**	**04 50 47.7**	**-0.3**
	comp=Z,3.4nm,0.2s						
SOKA	**Soboth**	**1.31**	**13**	Pg	**Pg**	**04 50 30.3**	**-0.7**
	comp=Z,1.3nm,0.2s						
SOKA				Sg	**Sg**	**04 50 47.7**	**-0.3**
	comp=Z,3.4nm,0.2s						
MYKA	**Terra Mystica**	**1.39**	**332**	*e*Pg	**Pg**	**04 50 32.0**	**-0.5**
	comp=Z,2.3nm,0.2s						
MYKA				*e*Sg	**Sg**	**04 50 51.8**	**+1.2**
	comp=Z,7.4nm,0.3s						
MYKA				*i* Sg	**Sg**	**04 50 51.9**	**+1.2**
	comp=Z,3.4nm,0.2s						
MYKA	**Terra Mystica**	**1.39**	**332**	Pg	**Pg**	**04 50 32.0**	**-0.5**
	comp=Z,2.3nm,0.2s						
MYKA				Sg	**Sg**	**04 50 51.8**	**+1.2**
	comp=Z,7.4nm,0.3s						
KBA	**Koelnbreinsper**	**1.88**	**333**	*e*Pn	**Pn**	**04 50 37.8**	**+0.1**
	comp=Z,0.2nm,0.1s						
KBA				Sn	**Sn**	**04 51 02.1**	**+0.8**
	comp=Z,1.5nm,0.2s						
KBA	**Koelnbreinsper**	**1.88**	**333**	Pn	**Pn**	**04 50 37.8**	**+0.1**
	comp=Z,0.2nm,0.1s						
KBA				Sn	**Sn**	**04 51 02.1**	**+0.8**
	comp=Z,1.5nm,0.2s						
ARSA	**Arzberg**	**1.95**	**19**	*e*Pn	**Pn**	**04 50 38.3**	**-0.2**
	comp=Z,1.0nm,0.2s						
ARSA				Sn	**Sb**	**04 51 06.4**	**+1.0**
	comp=Z,0.8nm,0.1s						
ARSA	**Arzberg**	**1.95**	**19**	Pn	**Pn**	**04 50 38.3**	**-0.2**
	comp=Z,1.0nm,0.2s						
ARSA				Sn	**Sb**	**04 51 06.4**	**+1.0**
	comp=Z,0.8nm,0.1s						
ABTA	**Abfaltersbach**	**1.97**	**314**	*e*Pn	**Pn**	**04 50 39.6**	**+0.7**
	comp=Z,0.3nm,0.1s						
ABTA				*e*Sn	**Sb**	**04 51 06.2**	**+0.2**
	comp=Z,1.2nm,0.2s						
ABTA				*i* Sg	**Sg**	**04 51 08.6**	**-0.6**
	comp=Z,3.3nm,0.2s						
ABTA	**Abfaltersbach**	**1.97**	**314**	Pn	**Pn**	**04 50 39.6**	**+0.7**
	comp=Z,0.3nm,0.1s						
ABTA				Sn	**Sb**	**04 51 06.2**	**+0.2**
	comp=Z,1.2nm,0.2s						
ABTA				Sg	**Sg**	**04 51 08.6**	**-0.6**
	comp=Z,3.3nm,0.2s						

*CNRM **21** 04:50:40.0, 36°.08N×9°.76W, h20km, ML3.2*
*SFS **21** 04:50:41.0, 36°.58N×9°.95W, h30km, ML2.7*
*MDD **21** 04:50:41.4±1.9, 36°.51N×10°.00W, h46km±54km, mb4.4/13, Error ellipse: s-maj=18.0km s-min=9.9km az=49.0, PRXIMO*
*IGIL **21** 04:50:42.3, 36°.58N×9°.86W, h14km, ML2.5*
*CSEM **21** 04:50:42.3±0.3, 36°.69N×9°.83W, h20km, ML3.2, Error ellipse: s-maj=5.0km s-min=3.8km az=41.0*
*INMG **21** 04:50:42.0±1.4, 36°.47N×9°.94W, h31km±9km, ML2.4, Error ellipse: s-maj=5.7km s-min=4.1km az=79.0*
ISC 21 04:50:39.7±2.3, 36°.54N±0°.07×9°.92W±0°.07, h31km±12km, n113, σ1s49/212, 13D, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**1.06**	**56**	⇓*i*P	**Pb**	**04 51 00.2**	**+0.7**
PFVI				*e*S	**Sn**	**04 51 13.4**	**+1.3**
PFVI				A	A	04 51 14.0	
	78nm,0.1s						
PFVI	**Vila Bisbo**	**1.06**	**56**	⇓P	**Pb**	**04 51 00.2**	**+0.7**
	20nm,0.1s,SNR=18						
PFVI				S	**Sn**	**04 51 13.1**	**+1.1**
	70nm,0.1s,SNR=8.3						
PFVI	**Vila Bisbo**	**1.06**	**56**	P	**Pb**	**04 51 00.0**	**+0.5**
PFVI				*e*S	**Sn**	**04 51 13.4**	**+1.3**
MORF	**Marmelete**	**1.27**	**53**	*e*P	**Pb**	**04 51 03.2**	**0.0**
MORF				*e*S	**Sb**	**04 51 18.4**	**-0.8**
MORF				AML	AML	04 51 19.3	
	comp=N,117nm,0.2s						
MORF	**Marmelete**	**1.27**	**53**	⇓*i*P	**Pb**	**04 51 03.2**	**0.0**
MORF				*e*S	**Sb**	**04 51 18.8**	**-0.4**
MORF				A	A	04 51 18.8	
	comp=N,78nm,0.2s						
MORF	**Marmelete**	**1.27**	**53**	P	**Pb**	**04 51 03.2**	**0.0**
MORF				S	**Sb**	**04 51 18.8**	**-0.4**
	comp=N,78nm,0.2s						
MORF	**Marmelete**	**1.27**	**53**	⇓*i*P	**Pb**	**04 51 03.2**	**0.0**
MORF				S	**Sb**	**04 51 18.8**	**-0.4**
	comp=N,78nm,0.2s						
PTEO	**Sao Teotonio**	**1.39**	**43**	⇓*i*P	**Pb**	**04 51 04.6**	**-0.4**
PTEO				*e*S	**Sb**	**04 51 21.7**	**-0.7**
PTEO				A	A	04 51 22.1	
	comp=N,30nm,0.5s						
PTEO	**Sao Teotonio**	**1.39**	**43**	P	**Pb**	**04 51 04.6**	**-0.4**
PTEO				S	**Sb**	**04 51 21.7**	**-0.7**
	comp=N,15nm,0.5s						
PTEO	**Sao Teotonio**	**1.39**	**43**	⇓*i*P	**Pb**	**04 51 04.6**	**-0.4**
PTEO				S	**Sb**	**04 51 21.7**	**-0.7**
	comp=N,15nm,0.5s						
PBDV	**Barranco-do-Ve**	**1.74**	**66**	⇓*i*Pn	**Pn**	**04 51 09.7**	**+1.9**
PBDV				*e*Sn	**Sn**	**04 51 29.6**	**+0.6**
PBDV				A	A	04 51 33.3	
	comp=N,19nm,0.3s						
PBDV	**Barranco-do-Ve**	**1.74**	**66**	Pn	**Pn**	**04 51 09.7**	**+1.9**
PBDV				S	**

PMAFR eSn Sn 04 51 46.1 -0.7
PMAFR A A 04 51 51.7
comp=N,18nm,0.7s
PMAFR Mafra 2.46 12 P Pn 04 51 18.9 +1.3
comp=N,13nm,0.1s,SNR=15
PMAFR S Sn 04 51 47.2 +0.5
comp=N,13nm,0.1s
PMAFR Mafra 2.46 12 ePn Pn 04 51 19.0 +1.3
PMAFR eSn Sn 04 51 46.1 -0.7
PMAFR S Sn 04 51 47.2 +0.5
comp=N,13nm,0.1s
EVO Evora 2.50 37 ePn Pn 04 51 19.7 +1.5
EVO eSn Sn 04 51 47.8 +0.1
EVO A A 04 51 48.8
comp=N,19nm,0.2s
EVO Evora 2.50 37 P Pn 04 51 19.3 +1.1
EVO S Sn 04 51 47.6 0.0
EVO Evora 2.50 37 P Pn 04 51 19.3 +1.1
EVO Evora 2.50 37 ePn Pn 04 51 19.7 +1.5
EVO eSn Sn 04 51 47.8 +0.1
PBAR Barrancos 2.82 54 ePn Pn 04 51 24.2 +1.6
PBAR eSn Sn 04 51 55.8 +0.3
PBAR A A 04 51 56.9
comp=N,26nm,0.6s
PBAR Barrancos 2.82 54 P Pn 04 51 24.2 +1.6
PBAR S Sn 04 51 55.8 +0.3
comp=N,26nm,0.6s
PBAR Barrancos 2.82 54 P Pn 04 51 24.2 +1.6
PBAR S Sn 04 51 55.8 +0.3
comp=N,26nm,0.6s
ALMR Almeirim 2.82 22 eP Pn 04 51 24.5 +1.9
ALMR eS Sn 04 51 55.4 -0.1
ALMR AML AML 04 51 57.7
comp=N,12nm,0.3s
ALMR Almeirim 2.82 22 ePn Pn 04 51 25.1 +2.5
ALMR eSn Sn 04 51 56.5 +1.0
ALMR A A 04 51 58.5
comp=N,12nm,0.5s
ALMR Almeirim 2.82 22 P Pn 04 51 24.5 +1.9
ALMR S Sn 04 51 55.4 -0.1
comp=N,5.8nm,0.3s
ALMR Almeirim 2.82 22 P Pn 04 51 24.5 +1.9
ALMR Almeirim 2.82 22 ePn Pn 04 51 25.1 +2.5
ALMR S Sn 04 51 55.4 -0.1
comp=N,5.8nm,0.3s
ALMR eSn Sn 04 51 56.5 +1.0
PMTG Montargil 2.86 28 ePn Pn 04 51 24.7 +1.6
PMTG eSn Sn 04 51 56.7 +0.2
PMTG A A 04 51 57.9
comp=N,7.6nm,0.4s
PMTG Montargil 2.86 28 ePn Pn 04 51 24.7 +1.6
PMTG eSn Sn 04 51 56.7 +0.2
EMIN Mina Concepcio 2.87 64 P Pn 04 51 24.6 +1.3
comp=N,4.7nm,0.3s,SNR=26
EMIN S Sn 04 51 55.6 -1.1
comp=N,1.9nm,0.1s
EMIN Mina Concepcio 2.87 64 P Pn 04 51 24.6 +1.3
comp=N,4.7nm,0.3s,SNR=26
EMIN S Sn 04 51 55.6 -1.1
comp=N,1.9nm,0.1s
PESTR Estremoz 2.97 38 ePn Pn 04 51 25.8 +1.1
PESTR eSn Sn 04 51 59.5 +0.3
PESTR A A 04 52 01.7
comp=N,5.9nm,0.3s
PESTR Estremoz 2.97 38 ePn Pn 04 51 25.8 +1.1
PESTR eSn Sn 04 51 59.5 +0.3
EBAD Badajoz 3.20 45 ⇓P Pn 04 51 28.9 +1.1
comp=N,6.7nm,0.1s,SNR=18
EBAD S Sn 04 52 04.3 -0.5
comp=N,21nm,0.2s
EBAD Badajoz 3.20 45 P Pn 04 51 28.9 +1.1
comp=N,6.7nm,0.1s,SNR=18
EBAD S Sn 04 52 04.3 -0.5
comp=N,21nm,0.2s
PTOM Tomar 3.30 21 ePn Pn 04 51 30.9 +1.8
PTOM eSn Sn 04 52 08.1 +0.8
PTOM A A 04 52 14.3
comp=N,4.9nm,0.2s
PTOM Tomar 3.30 21 P Pn 04 51 30.9 +1.8
PTOM S Sn 04 52 08.1 +0.8
comp=N,2.5nm,0.2s
PTOM Tomar 3.30 21 P Pn 04 51 30.9 +1.8
PTOM S Sn 04 52 08.1 +0.8
comp=N,2.5nm,0.2s
PMRV Marv??o 3.51 34 ePn Pn 04 51 33.8 +1.7
PMRV eSn Sn 04 52 12.1 -0.4
PMRV A A 04 52 13.8
comp=N,6.7nm,0.3s
PMRV Marv??o 3.51 34 P Pn 04 51 33.8 +1.7
PMRV S Sn 04 52 12.1 -0.4
comp=N,6.7nm,0.3s
PMRV Marv??o 3.51 34 P Pn 04 51 33.8 +1.7
PMRV S Sn 04 52 12.1 -0.4
comp=N,6.7nm,0.3s
PCAS Casmilo, Conde 3.68 17 ePn Pn 04 51 36.2 +1.8
PCAS eSn Sn 04 52 16.1 -0.7
PCAS A A 04 52 24.7
comp=N,4.0nm,0.5s
PCAS Casmilo, Conde 3.68 17 ePn Pn 04 51 36.2 +1.8
PCAS eSn Sn 04 52 16.1 -0.7
PCBR Castelo Branco 3.82 30 ePn Pn 04 51 37.9 +1.6
PCBR eSn Sn 04 52 19.5 -0.6
PCBR A A 04 52 22.6
comp=N,3.0nm,0.5s
PCBR Castelo Branco 3.82 30 P Pn 04 51 37.9 +1.6
PCBR S Sn 04 52 19.5 -0.6
comp=N,1.5nm,0.5s
PCBR Castelo Branco 3.82 30 P Pn 04 51 37.9 +1.6
PCBR S Sn 04 52 19.5 -0.6
comp=N,1.5nm,0.5s
COI Coimbra 3.85 17 P Pn 04 51 38.5 +1.8
COI Coimbra 3.85 17 P Pn 04 51 38.5 +1.8
ECAB El Cabril 3.90 66 P Pn 04 51 38.8 +1.3
comp=N,1.2nm,0.1s,SNR=20
ECAB S Sn 04 52 20.8 -1.5
comp=N,1.7nm,0.1s
ECAB El Cabril 3.90 66 P Pn 04 51 38.8 +1.3
comp=N,1.2nm,0.1s,SNR=20
ECAB S Sn 04 52 20.8 -1.5
comp=N,1.7nm,0.1s
HORN Hornachuelos 3.95 69 P Pn 04 51 39.5 +1.4
MTE Manteigas 4.28 25 ePn Pn 04 51 44.2 +1.5
MTE eSn Sn 04 52 30.9 -0.8
MTE A A 04 52 34.0
comp=N,5.5nm,0.4s
MTE Manteigas 4.28 25 P Pn 04 51 44.2 +1.5
MTE S Sn 04 52 30.9 -0.8
comp=N,2.8nm,0.4s
MTE Manteigas 4.28 25 P Pn 04 51 44.2 +1.5
MTE S Sn 04 52 30.9 -0.8
comp=N,2.8nm,0.4s
PVIS Viseu 4.46 20 ePn Pn 04 51 46.3 +1.1
PVIS eSn Sn 04 52 35.1 -1.0
PVIS A A 04 52 37.5
comp=N,2.4nm,0.2s
PVIS Viseu 4.46 20 P Pn 04 51 46.3 +1.1
PVIS S Sn 04 52 35.1 -1.0
comp=N,1.2nm,0.2s
PVIS Viseu 4.46 20 P Pn 04 51 46.3 +1.1
PVIS S Sn 04 52 35.1 -1.0
comp=N,1.2nm,0.2s
EADA Adamuz 4.56 68 P Pn 04 51 48.5 +2.0
comp=N,1.1nm,0.1s,SNR=7.9
EADA S Sn 04 52 36.1 -2.3
comp=N,1.4nm,0.1s,SNR=7.9
EADA Adamuz 4.56 68 P Pn 04 51 48.5 +2.0
comp=N,1.1nm,0.1s,SNR=7.9
EADA S Sn 04 52 36.1 -2.3
comp=N,1.4nm,0.1s,SNR=7.9
EPLA Plasencia 4.64 39 P Pn 04 51 49.1 +1.5
comp=N,1.6nm,0.1s,SNR=11
EPLA S Sn 04 52 39.2 -1.2
comp=N,4.0nm,0.1s
EPLA Plasencia 4.64 39 P Pn 04 51 49.1 +1.5
comp=N,1.6nm,0.1s,SNR=11
EPLA S Sn 04 52 39.2 -1.2
comp=N,4.0nm,0.1s
POLO Lamas de Olo 5.10 18 ePn Pn 04 51 55.1 +1.0
POLO eSn Sn 04 52 50.7 -1.3
POLO Lamas de Olo 5.10 18 ePn Pn 04 51 55.1 +1.0
POLO eSn Sn 04 52 50.7 -1.3
MVO Moncorvo 5.14 25 ePn Pn 04 51 55.6 +1.1
MVO eSn Sn 04 52 51.7 -1.1
MVO A A 04 52 55.0
comp=N,2.9nm,0.4s
MVO Moncorvo 5.14 25 P Pn 04 51 55.7 +1.1
comp=N,10nm,0.2s,SNR=15
MVO S Sn 04 52 49.9 -2.9
comp=N,0.3nm,0.0s,SNR=7.9
MVO Moncorvo 5.14 25 P Pn 04 51 55.7 +1.1
comp=N,10nm,0.2s,SNR=15
MVO S Sn 04 52 49.9 -2.9
comp=N,0.3nm,0.0s,SNR=7.9
MVO eSn Sn 04 52 51.7 -1.1
EQUE Quentar 5.24 81 S Sn 04 52 54.9 -0.4
comp=N,2.1nm,0.5s,SNR=7.9
EQUE Quentar 5.24 81 S Sn 04 52 54.9 -0.4
comp=N,2.1nm,0.5s,SNR=7.9
CZD Col de Zad 5.33 130 S Sn 04 52 51.8 -5.9
PAB San Pablo 5.33 54 P Pn 04 51 57.9 +0.8
comp=N,1.7nm,0.1s,SNR=7.9
PAB S Sn 04 52 54.7 -2.7
comp=N,1.2nm,0.1s,SNR=7.9
PAB San Pablo 5.33 54 P Pn 04 51 57.9 +0.8
comp=N,1.7nm,0.1s,SNR=7.9
PAB S Sn 04 52 54.7 -2.7
comp=N,1.2nm,0.1s,SNR=7.9
PCAB Cabril 5.37 15 ePn Pn 04 51 59.0 +1.4
PCAB eSn Sn 04 52 58.0 -0.4
PCAB Cabril 5.37 15 P Pn 04 51 59.0 +1.4
PCAB S Sn 04 52 58.0 -0.4
PCAB Cabril 5.37 15 P Pn 04 51 59.0 +1.4
PCAB S Sn 04 52 58.0 -0.4
ELOB Lobios 5.51 15 P Pn 04 52 00.4 +0.7
comp=N,2.2nm,0.2s,SNR=8.7
ELOB S Sn 04 52 58.3 -3.7
comp=N,0.2nm,0.1s
ELOB Lobios 5.51 15 P Pn 04 52 00.4 +0.7
comp=N,2.2nm,0.2s,SNR=8.7
ELOB S Sn 04 52 58.3 -3.7
comp=N,0.2nm,0.1s
OUK Oukaimeden 5.58 162 P Pn 04 51 58.2 -2.7
OUK S Sn 04 52 54.1 -10
EQES Quesada 5.62 75 P Pn 04 52 03.8 +2.7
comp=N,0.3nm,0.2s,SNR=7.9
EQES S Sn 04 53 02.8 -1.8
comp=N,0.5nm,0.1s,SNR=7.9
EQES Quesada 5.62 75 P Pn 04 52 03.8 +2.7
comp=N,0.3nm,0.2s,SNR=7.9
EQES S Sn 04 53 02.8 -1.8
comp=N,0.5nm,0.1s,SNR=7.9
ESDC Sonseca Array 5.65 55 P Pn 04 52 02.9 +1.4
comp=N,8.9nm,0.2s,baz=240,slow=13,SNR=41
ESDC S Sn 04 53 01.3 -4.0
comp=N,0.5nm,0.1s,baz=22,slow=9.0,SNR=18
ESDC Sonseca Array 5.65 55 P Pn 04 52 02.9 +1.4
comp=N,8.9nm,0.2s,SNR=41
PBRG Braganca 5.81 24 ePn Pn 04 52 04.9 +1.2
PBRG eSn Sn 04 53 08.6 -0.7
PBRG Braganca 5.81 24 P Pn 04 52 04.9 +1.2
PBRG S Sn 04 53 08.6 -0.7
PBRG Braganca 5.81 24 P Pn 04 52 04.9 +1.2
PBRG S Sn 04 53 08.6 -0.7
EAGO Agolada(Pontev 6.41 12 P Pn 04 52 12.8 +0.9
comp=N,4.2nm,0.2s,SNR=7.9
EAGO Agolada(Pontev 6.41 12 P Pn 04 52 12.8 +0.9
comp=N,4.2nm,0.2s,SNR=7.9
EMAZ Maricos 6.44 6 P Pn 04 52 12.6 +0.2
comp=N,4.5nm,0.1s,SNR=7.9
EMAZ S Sn 04 53 20.1 -4.7
comp=N,0.2nm,0.1s,SNR=4.0
EMAZ Mazaricos 6.44 6 P Pn 04 52 12.6 +0.2
comp=N,4.5nm,0.1s,SNR=7.9
EPON Pontenova 7.11 17 P Pn 04 52 22.3 +0.8
comp=N,0.6nm,0.2s,SNR=7.9
EPON Pontenova 7.11 17 P Pn 04 52 22.3 +0.8
comp=N,0.6nm,0.2s,SNR=7.9
EMOS Mosqueruela 8.34 60 P Pn 04 52 40.6 +2.0
comp=N,0.4nm,0.2s,SNR=7.9
EMOS S Sn 04 54 09.8 -1.9
comp=N,0.1nm,0.1s,SNR=7.9
EMOS Mosqueruela 8.34 60 P Pn 04 52 40.6 +2.0
comp=N,0.4nm,0.2s,SNR=7.9
EMOS S Sn 04 54 09.8 -1.9
comp=N,0.1nm,0.1s,SNR=7.9

*ISCJB **21** 05:16:05.3±0.3, 0°.24N±0°.05×121°.83E±0°.04, h200km, mb4.0/12, Error ellipse: s-maj=7.7km s-min=5.3km az=36.1*
*DJA **21** 05:16:05.9±0.4, 0°N±4°×12°2E±°, h192km±3km, M4.4/11, mb4.5/5, mB4.9/4, MLv4.3/11, Mw(mB)4.2/4*
*IDC **21** 05:16:14.5±5.8, 0°.21N×122°.01E, h289km±63km, mb3.6/12, mb1 3.6/12, mb1mx3.4/60, mbtmp4.2/12, Error ellipse: s-maj=33.7km s-min=11.7km az=70.0*
ISC 21 05:16:06.3±0.6, 0°.22N±0°.07×121°.82E±0°.05, h200km, n40, σ0°92/42, mb4.0/12, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.28**	**26**	P	**Pn**	**05 16 31.7**	**-1.1**
MRSI				S	**Sn**	**05 16 52.2**	**-1.2**
APSI	**Ampana**	**1.14**	**188**	P	**Pn**	**05 16 37.8**	**+0.7**
APSI				S	**Sn**	**05 17 01.1**	**0.0**
LUWI	**Luwuk**	**1.58**	**143**	P	**Pn**	**05 16 41.3**	**+0.6**
LUWI				S	**Sn**	**05 17 07.0**	**-0.5**
MPSI	**Mapaga**	**1.92**	**273**	P	**Pn**	**05 16 43.2**	**-0.8**
KMSI	**Cibinong**	**2.19**	**81**	P	**Pn**	**05 16 47.7**	**+0.8**
KMSI				S	**Sn**	**05 17 18.4**	**0.0**
PCI	**Palu**	**2.27**	**240**	P	**Pn**	**05 16 46.9**	**-0.9**
TTSI	**Tana Toraja**	**3.81**	**212**	P	**Pn**	**05 17 06.0**	**+0.2**
SGKI	**Sangatta, Kali**	**4.28**	**260**	P	**Pn**	**05 17 10.8**	**-0.8**
SANI	**Sanana**	**4.74**	**118**	P	**Pn**	**05 17 16.0**	**-1.5**
LBMI	**Labuha**	**5.75**	**99**	P	**Pn**	**05 17 29.8**	**-0.6**
	77nm,0.8s,2μm1.1nm						
NLAI	**Namlea**	**6.30**	**123**	P	**Pn**	**05 17 38.2**	**+0.7**
	27nm,0.6s,0.7nm						
BLJI	**Banyuglugur**	**11.39**	**226**	P	Pn	05 18 37.3	-6.3
MDSI	**Maura Dua**	**18.23**	**255**	P	**Pn**	**05 20 06.1**	**-1.1**
MASI	**Maura Aman, Be**	**19.85**	**260**	P	**Pn**	**05 20 28.0**	**+1.5**
WRA	**Warramunga Arr**	**23.50**	**149**	P	**P**	**05 20 57.7**	**-0.7**
	12nm,0.6s,baz=326,slow=11,SNR=135						
ASAR	**Alice Springs**	**26.49**	**155**	P	**P**	**05 21 25.3**	**-0.1**
	2.2nm,0.5s,baz=344,slow=14,SNR=35						
CMAR	**Chiang Mai Arr**	**28.86**	**310**	P	**P**	**05 21 48.3**	**+1.8**
	0.8nm,0.4s,baz=128,slow=7.7,SNR=4.5						
STKA	**Stephens Creek**	**37.01**	**151**	P	**P**	**05 22 57.0**	**+0.2**
	1.9nm,0.5s,baz=337,slow=11,SNR=3.4						
KSRS	**Korea Array**	**37.47**	**8**	P	**P**	**05 23 00.5**	**-0.1**
	0.9nm,0.6s,baz=185,slow=8.6,SNR=4.4						
ODAN	**Odane**	**42.39**	**311**	eP	**P**	**05 23 42.6**	**+1.0**
RAMN	**Ramite**	**43.03**	**311**	eP	**P**	**05 23 48.1**	**+1.3**
CNB	**Canberra Magne**	**43.71**	**147**	P	**P**	**05 23 51.1**	**-0.8**
	baz=28,SNR=20						
JIRN	**Jiri**	**43.72**	**312**	eP	**P**	**05 23 53.3**	**+0.9**
	26nm,0.4s						
GUN	**Gumba**	**44.08**	**312**	eP	**P**	**05 23 56.1**	**+0.8**
	25nm,0.4s						
PKIN	**Phulchoki**	**44.27**	**311**	eP	**P**	**05 23 57.0**	**+0.3**
	7.0nm,0.5s						
KKN	**Kakani**	**44.47**	**311**	eP	**P**	**05 23 58.7**	**+0.5**
	13nm,0.6s						
DMN	**Daman**	**44.51**	**311**	eP	**P**	**05 23 59.2**	**+0.7**
USRK	**Ussuriysk Ar.**	**44.71**	**10**	P	**P**	**05 23 59.2**	**-0.3**
	1.5nm,0.5s,baz=228,slow=6.7,SNR=3.2						
GKN	**Gorkha**	**45.06**	**311**	eP	**P**	**05 24 03.5**	**+0.7**
	20nm,0.6s						
KOLN	**Koldanda**	**45.73**	**310**	eP	**P**	**05 24 08.9**	**+0.8**
	20nm,0.5s						
DANN	**Dangsing**	**45.91**	**311**	eP	**P**	**05 24 10.1**	**+0.5**
	31nm,0.4s						
PYUN	**Piuthan**	**46.37**	**310**	eP	**P**	**05 24 14.1**	**+1.0**
	27nm,0.5s						
DZM	**Mont Dzumac**	**48.80**	**120**	eLR	LR	05 23 49.3	
	617nm,25.1s						
SONM	**Songino Array**	**49.28**	**346**	P	**P**	**05 24 35.5**	**+0.5**
	4.4nm,0.6s,baz=166,slow=8.8,SNR=30						
MKAR	**Makanchi Array**	**57.81**	**329**	P	**P**	**05 25 37.2**	**+0.4**
	5.8nm,0.4s,baz=124,slow=11,SNR=25						
AAK	**Ala-Archa**	**59.81**	**321**	P	**P**	**05 25 51.9**	**+1.0**
	2.2nm,0.3s,baz=108,slow=3.2						
ZALV	**Zalesovo Beam**	**61.63**	**336**	P	**P**	**05 26 01.3**	**-1.4**
	2.0nm,0.6s,baz=118,slow=6.6,SNR=11						
KURBB	**Kurchatov Arra**	**62.18**	**330**	P	**P**	**05 26 05.9**	**-0.5**
	0.9nm,0.4s,baz=116,slow=5.9,SNR=15						
BVAR	**Borovoye Array**	**67.68**	**329**	P	**P**	**05 26 40.8**	**-1.0**
	0.6nm,0.4s,baz=124,slow=7.7,SNR=5.1						
TORD	**Torodi Ar. Bea**	**119.21**	**285**	PKP	**PKPdf**	**05 34 30.8**	**-1.8**
	0.5nm,0.3s,baz=69,slow=1.6,SNR=15						

*SJA **21** 05:18:14.1±0.5, 25°.44S×69°.79W, h16km±12km, ML3.3, MW3.4*
*ISCJB **21** 05:18:17.4±0.3, 25°.43S±0°.03×69°.83W±0°.06, h89km±4km, mb4.1/8, Error ellipse: s-maj=9.1km s-min=4.4km az=172.7*
*GUC **21** 05:18:17.1±0.7, 25°.44S×69°.76W, h74km±4km, ML4.4*
*IDC **21** 05:18:17.6±3.4, 25°.40S×69°.72W, h70km±28km, mb3.5/4, mb1 3.9/8, mb1mx3.6/43, mbtmp3.9/8, MS3.0/1, Ms1 3.0/1, ms1mx2.5/19, Error ellipse: s-maj=33.6km s-min=24.2km az=50.0*
*NEIC **21** 05:18:18.0±0.0, 25°.44S×69°.77W, h73km, mb4.2/5, ML4.4(GUC), After GUC.*
ISC 21 05:18:18.1±0.6, 25°.41S±0°.04×69°.85W±0°.06, h79km±5km, n51, σ1°19/53, mb4.1/8, 1C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO02	**Mina Guanaco**	**0.34**	**44**	ePn	**Pn**	**05 18 31.0**	**0.0**
GO02				eSn	**Sn**	**05 18 40.4**	**0.0**
GO02	**Mina Guanaco**	**0.34**	**44**	eP	**Pn**	**05 18 30.8**	**-0.2**
GO02				eS	**Sn**	**05 18 40.4**	**0.0**
GO02				IAML		05 18 40.8	
	comp=E,67μm,0.1s						
PB14	**IPOC Station P**	**0.93**	**327**	⇑iP	**Pn**	**05 18 37.9**	**+1.4**
PB14				eS	**Sn**	**05 18 52.7**	**+2.5**
PB14				IAML		05 18 53.9	
	comp=E,30μm,0.6s						
PB10	**IPOC Station P**	**1.99**	**341**	ePn	**Pn**	**05 18 50.4**	**+0.6**
PB10				eSn	**Sn**	**05 19 09.5**	**-4.5**
PB10	**IPOC Station P**	**1.99**	**341**	iP	**Pn**	**05 18 50.2**	**+0.3**
PB10	**IPOC Station P**	**1.99**	**341**	⇓iP	**Pn**	**05 18 50.4**	**+0.6**
PB10				IAML		05 19 23.4	
	comp=N,2μm,0.5s						
GO03	**Copiap**	**2.21**	**189**	ePn	**Pn**	**05 18 53.0**	**+0.2**
GO03	**Copiap**	**2.21**	**189**	eP	**Pn**	**05 18 52.8**	**0.0**
GO03				eS	**Sn**	**05 19 19.6**	**+0.4**
GO03				IAML		05 19 32.1	
	comp=E,1μm,0.2s						
PB15	**IPOC Station P**	**2.22**	**9**	eP	**Pn**	**05 18 53.9**	**+0.9**
PB15				iS	**Sn**	**05 19 21.7**	**+1.9**
PB04	**IPOC Station P**	**3.07**	**355**	ePn	**Pn**	**05 19 04.3**	**-0.3**
VCA	**Vinchina**	**3.63**	**156**	iP	**Pn**	**05 19 12.0**	**-0.1**
LCO	**Las Campanas**	**3.67**	**192**	ePn	**Pn**	**05 19 12.1**	**-0.7**
AGUA	**GUANDACOL**	**4.24**	**164**	iP	**Pn**	**05 19 20.8**	**+0.4**
AHML	**Horco Molle**	**4.29**	**110**	iP	**Pn**	**05 19 21.5**	**+0.6**
AHML				IAML		05 19 27.2	
	comp=Z,32nm,0.5s						
PB01	**IPOC Station P**	**4.36**	**4**	ePn	**Pn**	**05 19 21.4**	**-0.6**
CYA	**Choya**	**4.71**	**131**	iP	**Pn**	**05 19 27.4**	**+0.7**
CYA				IAML		05 19 29.4	
	comp=Z,25nm,0.5s						
CYA				iS	**Sn**	**05 20 21.5**	**+1.4**
ACLC	**CERRO LA CRUZ**	**4.76**	**148**	iP	**Pn**	**05 19 28.4**	**+0.8**
GO04	**Tololo Observa**	**4.82**	**190**	ePn	**Pn**	**05 19 28.0**	**-0.4**
YJA	**Yavi**	**5.11**	**52**	iP	**Pn**	**05 19 34.0**	**+1.5**
MNMC	**Minye Minye**	**6.25**	**2**	ePn	**Pn**	**05 19 45.9**	**-2.2**
ROC1	**El Roble**	**7.61**	**187**	ePn	**Pn**	**05 20 06.0**	**-0.4**
LPAZ	**La Paz**	**9.21**	**10**	P	**Pn**	**05 20 28.6**	**-0.2**
	comp=Z,1.6nm,0.3s,baz=214,slow=5.6,SNR=48						
LPAZ	**La Paz**	**9.21**	**10**	ePn	**Pn**	**05 20 28.5**	**-0.3**
GO05	**HualaæØ**	**9.74**	**190**	ePn	**Pn**	**05 20 35.3**	**0.0**
CPUP	**Villa Florida**	**11.31**	**97**	P	**Pn**	**05 20 54.9**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=271,slow=12,SNR=3.3						
CPUP				LR	LR	05 25 52.3	
	comp=Z,72nm,19.8s,baz=300,slow=41						
CPUP	**Villa Florida**	**11.31**	**97**	ePn	**Pn**	**05 20 57.3**	**+0.5**
SIV	**San Ignacio**	**12.45**	**43**	P	**Pn**	**05 21 09.3**	**-3.1**
	comp=Z,1.3nm,0.3s,baz=256,slow=6.8,SNR=34						
TRQA	**Tornquist**	**14.27**	**154**	ePn	**Pn**	**05 21 36.0**	**-0.2**
PLCA	**Paso Flores**	**15.29**	**182**	P	**P**	**05 21 51.2**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=22,slow=9.7,SNR=3.7						
PLCA	**Paso Flores**	**15.29**	**182**	ePn	**Pn**	**05 21 48.0**	**-1.5**
	comp=Z,54nm,1.8s						
SAML	**Samuel**	**17.56**	**22**	ePn	**P**	**05 22 18.4**	**+0.8**
	comp=Z,2.8nm,0.6s						
PTGA	**Pitinga**	**26.32**	**23**	eP	**P**	**05 23 47.3**	**+0.6**
	comp=Z,12nm,1.6s						
OTAV	**Otavalo**	**26.82**	**341**	eP	**P**	**05 23 50.8**	**-0.8**
	comp=Z,9.9nm,1.6s						
EFI	**East Falkland**	**27.73**	**164**	eP	**P**	**05 23 59.5**	**+0.7**
	comp=Z,305nm,1.6s						
HELC	**Santa Helena**	**31.89**	**349**	eP	**P**	**05 24 36.9**	**+0.4**
	comp=Z,8.4nm,0.6s						
TXAR	**Lajitas Array**	**63.38**	**327**	P	**P**	**05 28 39.9**	**+0.6**
	comp=Z,0.2nm,0.6s,baz=150,slow=7.3,SNR=2.8						
TXAR				sP	**sP**	**05 29 08.0**	**-0.5**
	comp=Z,0.1nm,0.5s,baz=144,slow=7.8,SNR=3.7						
TBI	**Tubuai**	**71.45**	**252**	eLR	LR	05 30 32.6	
	comp=Z,248nm,29.2s						
PFO	**Pinyon Flats O**	**73.54**	**321**	P	**P**	**05 29 43.6**	**+1.0**
	comp=Z,2.0nm,0.4s,baz=126,slow=3.9,SNR=4.8						
PDAR	**Pinedale Array**	**77.08**	**331**	P	**P**	**05 30 03.9**	**+1.0**
	comp=Z,0.2nm,0.5s,baz=134,slow=5.2,SNR=3.1						
TORD	**Torodi Ar. Bea**	**79.49**	**70**	P	**P**	**05 30 16.4**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=264,slow=5.0,SNR=15						
TORD				pP	**pP**	**05 30 38.6**	**+1.1**
	comp=Z,1.5nm,0.6s,baz=265,slow=5.5,SNR=6.7						
ASAR	**Alice Springs**	**126.06**	**207**	PKP	**PKPdf**	**05 37 11.2**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=148,slow=2.0,SNR=4.3						
H11S2	**WAKE ISLAND Hyl**	**27.41**	**274**	T	T	07 57 15.8	
	baz=105						
H11S1	**WAKE ISLAND Hyl**	**27.42**	**274**	T	T	07 57 19.8	
	baz=105						
H11S3	**WAKE ISLAND Hyl**	**27.43**	**274**	T	T	07 57 18.2	
	baz=105						
H11N3	**WAKE ISLAND Hyl**	**27.60**	**276**	T	T	07 57 29.5	
	baz=114,slow=74,SNR=4.3						
H11N1	**WAKE ISLAND Hyl**	**27.61**	**276**	T	T	07 57 33.6	
	baz=114,slow=74,SNR=4.5						
H11N2	**WAKE ISLAND Hyl**	**27.61**	**276**	T	T	07 57 34.1	
	baz=114						
WRA	**Warramunga Arr**	**129.16**	**210**	PKP	**PKPdf**	**05 37 17.7**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=154,slow=1.8,SNR=7.3						
ZALV	**Zalesovo Beam**	**145.83**	**27**	PKPbc	**PKPab**	**05 37 48.5**	**+0.1**
	comp=Z,1.9nm,0.6s,baz=316,slow=3.9,SNR=7.4						
MKAR	**Makanchi Array**	**149.25**	**39**	PKPbc	**PKPbc**	**05 37 57.9**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=338,slow=2.7,SNR=5.4						
CD2	**Chengdu**	**172.14**	**44**	PKP	**PKPdf**	**05 38 17.8**	**-0.3**

*IDC **21** 05:18:39.2±0.7, 25°.75S×179°.83E, h474km±7km, mb4.2/26, mb1 4.3/32, mb1mx4.1/50, mbtmp5.0/32, Error ellipse: s-maj=10.4km s-min=9.3km az=153.0*
*ISCJB **21** 05:18:40.7±0.4, 25°.74S±0°.03×179°.65E±0°.04, h496km±5km, mb4.6/100, Error ellipse: s-maj=5.3km s-min=4.2km az=24.5*
*NEIC **21** 05:18:40.9±0.6, 25°.83S×179°.73E, h495km±6km, mb4.7/70, Error ellipse: s-maj=5.6km s-min=4.6km az=170.0*
*WEL **21** 05:18:40.0, 25°.83S×179°.73W, h495km*
ISC 21 05:18:41.1±0.4, 25°.76S±0°.05×179°.74E±0°.05, h495km±4km, h496km:pP-P, n336, σ1°66/406, mb4.7/100, 2C-3D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**4.04**	**150**	P	**P**	**05 20 00.8**	**+1.4**
RIZ				S	**S**	**05 21 07.4**	**+4.0**
RAO	**Raoul Island**	**4.06**	**150**	P	P	05 19 54.9	-4.6
	34nm,0.3s,baz=291,slow=22,SNR=3.5						
RAO	**Raoul Island**	**4.06**	**150**	eP	**P**	**05 19 59.0**	**-0.6**
RAO				eS	**S**	**05 21 04.1**	**+0.5**
GLKZ	**Green Lake**	**4.06**	**150**	P	**P**	**05 19 59.1**	**-0.5**
GLKZ				S	**S**	**05 21 04.3**	**+0.6**
OUZ	**Omahuta**	**10.81**	**208**	P	**P**	**05 21 09.1**	**+2.1**
KUZ	**Kuaotunu**	**11.48**	**196**	P	**P**	**05 21 15.6**	**+1.6**
NIUE	**Niue**	**11.64**	**57**	P	**P**	**05 21 13.8**	**-2.2**
	baz=11,SNR=4.6						
WIAZ	**Waiheke Island**	**11.68**	**199**	P	**P**	**05 21 18.0**	**+1.9**
MXZ	**Matakaoa Point**	**11.83**	**186**	eP	**P**	**05 21 18.5**	**+0.7**
MXZ				eS	**S**	**05 23 29.6**	**+2.8**
MXZ	**Matakaoa Point**	**11.83**	**186**	P	**P**	**05 21 19.5**	**+1.8**
MXZ				S	**S**	**05 23 25.3**	**-1.5**
MKAZ	**Moumakai**	**11.97**	**198**	P	**P**	**05 21 20.8**	**+1.7**
HAZ	**Te Kaha**	**12.08**	**187**	P	**P**	**05 21 22.4**	**+2.1**
HAZ				P	**S**	**05 23 31.0**	**-0.6**
WMGZ	**Waiomatatini S**	**12.08**	**185**	P	**P**	**05 21 21.1**	**+0.8**
WMGZ				P	**S**	**05 23 30.5**	**-1.1**
PKGZ	**Pakihiroa**	**12.18**	**186**	P	**P**	**05 21 22

PUZ **Puketiti** 12.34 185 P **P** 05 21 23.7 +0.5
PUZ P **S** 05 23 33.6 -3.2
TWGZ Tauwhareparae 12.47 186 P **P** 05 21 24.8 +0.2
TWGZ P **S** 05 23 37.5 -1.9
TWGZ Tauwhareparae 12.47 186 P **S** 05 23 37.5 -1.9
URZ Urewera 12.66 189 P **P** 05 21 24.4 -2.2
5.6nm,0.3s,baz=358,slow=3.0,SNR=17
URZ S **S** 05 23 41.3 -1.7
6.6nm,0.3s,baz=352,slow=23,SNR=12
URZ Urewera 12.66 189 *eP* **P** 05 21 26.1 -0.4
URZ S **S** 05 23 41.3 -1.7
URZ Urewera 12.66 189 P **P** 05 21 26.6 +0.1
URZ P **S** 05 23 45.8 +2.8
MWZ Matawai 12.68 188 P **P** 05 21 26.8 0.0
MWZ P **S** 05 23 44.5 +1.1
MWZ Matawai 12.68 188 P **S** 05 23 44.5 +1.1
DZM Mont Dzumac 12.70 284 P **P** 05 21 26.0 -1.3
1.5nm,0.3s,baz=95,slow=13,SNR=22
DZM ScP **ScP** 05 29 10.8 +2.8
0.8nm,0.3s,baz=180,slow=14,SNR=8.8
TKGZ Te Karaka 12.75 187 P **P** 05 21 29.4 +2.0
TKGZ Te Karaka 12.75 187 P **S** 05 23 44.4 -0.2
CNGZ Carnagh Statio 12.76 185 P **S** 05 23 45.9 +1.1
RAGZ Rawiri 12.85 188 P **P** 05 21 28.5 -0.1
RAGZ S **S** 05 23 48.1 +1.3
RAGZ Rawiri 12.85 188 P **S** 05 23 50.6 +3.8
RIGZ Rimuhau 13.02 187 P **P** 05 21 30.1 -0.2
RIGZ S **S** 05 23 46.2 -3.8
RIGZ Rimuhau 13.02 187 P **S** 05 23 49.9 0.0
RTZ Ruatahuna 13.03 190 P **P** 05 21 31.2 +0.6
RTZ Ruatahuna 13.03 190 P **S** 05 23 53.0 +2.7
RTZ P **S** 05 23 52.8 +2.5
SNGZ Shannon Statio 13.14 188 P **S** 05 23 53.8 +1.4
PRGZ Paritu Road 13.22 186 P **P** 05 21 33.9 +1.4
PRGZ S **S** 05 23 50.4 -3.5
PRGZ Paritu Road 13.22 186 P **S** 05 23 53.7 -0.2
MTHZ Maungataniwha 13.29 190 P **P** 05 21 33.2 0.0
MTHZ S **S** 05 23 53.9 -1.3
MTHZ Maungataniwha 13.29 190 P **S** 05 23 56.6 +1.5
RAHZ Arahi 13.31 189 P **S** 05 23 59.0 +3.4
KNZ Kokohu 13.34 187 P **P** 05 21 34.8 +1.1
KNZ Kokohu 13.34 187 P **S** 05 23 56.3 +0.2
HIZ Hauiti 13.37 197 P **P** 05 21 38.6 +4.5
MHGZ Mahia Peninsul 13.45 186 P **P** 05 21 36.2 +1.3
MHGZ Mahia Peninsul 13.45 186 P **S** 05 23 56.3 -1.9
WHHZ Waihua 13.45 188 P **S** 05 23 58.6 +0.4
RATZ Rangitukua 13.49 193 P **P** 05 21 35.5 +0.1
NMHZ Naumai 13.53 190 P **S** 05 24 04.5 +4.6
BKZ Black Stump Fm 13.65 191 *eP* **P** 05 21 34.9 -2.2
BKZ Black Stump Fm 13.65 191 P **P** 05 21 35.8 -1.3
BKZ Black Stump Fm 13.65 191 P **S** 05 24 06.2 +4.1
BKZ P **S** 05 24 06.2 +4.1
MCHZ McNeill Hill 13.89 190 P **S** 05 24 06.7 0.0
TUVZ Tukino 13.90 193 P **P** 05 21 39.2 -0.6
TUVZ Tukino 13.90 193 P **S** 05 24 12.9 +5.6
KWHZ Kaweka Forest 13.91 191 P **S** 05 24 08.2 +1.0
MOVZ Moawhango 14.02 193 P **S** 05 24 10.6 +1.3
BHHZ Black Hill Sta 14.04 192 P **P** 05 21 38.6 -2.5
BHHZ Black Hill Sta 14.04 192 P **S** 05 24 08.5 -1.2
BHHZ P **S** 05 24 08.4 -1.3
KRHZ Kereru 14.13 191 P **S** 05 24 10.2 -1.2
AFI Afiamalu 14.23 36 P **P** 05 21 39.5 -4.0
4.7nm,0.3s,baz=142,slow=5.2,SNR=4.7
AFI S S 05 24 02.8 -11
5.7nm,0.3s,baz=79,slow=7.4,SNR=5.6
PNHZ Pukenui 14.43 191 P **S** 05 24 13.6 -3.5
PXZ Pawanui 14.44 189 P **S** 05 24 17.6 +0.5
TSZ Takapari Road 14.61 192 P **S** 05 24 18.0 -2.6
TSZ P **S** 05 24 18.0 -2.6
DVHZ Dannevirke 14.81 191 P **S** 05 24 22.6 -1.7
DVHZ P **S** 05 24 24.3 0.0
BFZ Birch Farm 15.17 190 *eP* **P** 05 21 51.1 -1.9
76nm,1.4s
BFZ Birch Farm 15.17 190 P **S** 05 24 27.2 -4.0
MRZ Mangatainoka R 15.26 192 P **S** 05 24 32.3 -0.8
TIWZ Tintock 15.32 191 P **S** 05 24 28.7 -5.5
OGWZ Otaki Gorge 15.49 193 P **S** 05 24 34.3 -3.2
HOWZ Holdsworth Sta 15.50 192 P **S** 05 24 35.7 -2.1
KIW Kapiti Island 15.59 194 P **S** 05 24 34.9 -4.5
TMWZ Te Maipa 15.64 191 P **S** 05 24 36.3 -4.1
TMWZ P **S** 05 24 36.3 -4.1
MTW Mount Morrison 15.76 192 P **S** 05 24 38.5 -4.1
DUWZ D'Urville Isla 15.77 196 P **S** 05 24 40.1 -2.7
CAW Cannon Point 15.79 193 P **S** 05 24 40.4 -2.9
MSWZ Moikau Station 16.06 192 P **S** 05 24 43.2 -5.0
SNZO South Karori 16.07 194 *eP* **P** 05 22 00.5 -1.8
190nm,1.6s
TCW Tory Channel 16.07 195 P **S** 05 24 45.2 -3.2
NNZ Nelson 16.30 197 P **S** 05 24 50.4 -2.2
TUWZ Tuamarina 16.35 196 P **S** 05 24 50.1 -3.5
THZ Tophouse 16.93 198 *eP* **P** 05 22 10.2 -1.3
19nm,0.6s
KHZ Kahutara 17.38 196 *eP* **P** 05 22 13.4 -2.4
32nm,1.1s
KHZ *eS* **S** 05 25 09.1 -2.3
LTZ Lake Taylor 18.06 198 *eP* **P** 05 22 21.7 -0.4
26nm,0.6s
LTZ *eS* **S** 05 25 22.8 +0.3
OXZ Oxford 18.62 198 *eP* **P** 05 22 26.4 -0.9
40nm,0.6s
MQZ McQueen's Vall 18.82 196 *eP* **P** 05 22 28.0 -1.0
25nm,1.3s
LHI Lord Howe Isla 19.02 248 P **P** 05 22 33.3 +2.2
baz=19,SNR=13
LHI Lord Howe Isla 19.02 248 *eP* **P** 05 22 33.9 +2.8
311nm,0.6s
RPZ Rata Peaks 19.26 199 P **P** 05 22 32.9 -0.1
3.1nm,0.3s,baz=37,slow=0.4,SNR=19
RPZ S **S** 05 25 39.0 -3.1
1.1nm,0.3s,baz=57,slow=17,SNR=4.7
RPZ Rata Peaks 19.26 199 *eP* **P** 05 22 33.0 -0.1
23nm,0.7s
RPZ *eS* **S** 05 25 43.4 +1.3
RAR Rarotonga 19.32 81 P **P** 05 22 32.3 -1.7
1.8nm,0.3s,baz=78,slow=9.3,SNR=3.2
RAR Rarotonga 19.32 81 *eP* **P** 05 22 33.1 -0.9
98nm,1.4s
FOZ Fox Glacier 19.50 202 *eP* **P** 05 22 33.5 -1.7
67nm,1.4s
LBZ Lake Benmore 20.14 200 *eP* **P** 05 22 38.7 -2.4
46nm,1.6s
ODZ Otahua Downs 20.60 199 *eP* **P** 05 22 44.9 -0.3
44nm,1.7s
WKZ Wanaka 20.91 202 *eP* **P** 05 22 47.3 -0.8
53nm,1.4s
DCZ Deep Cove 22.12 204 *eP* **P** 05 22 59.0 +0.1
44nm,1.4s
HNR Honiara 24.83 307 *eP* **P** 05 23 23.3 -0.3
167nm,0.9s
ARMA Armidale 25.20 253 P **P** 05 23 28.5 +1.7
baz=25,SNR=32
ARMA Armidale 25.20 253 *eP* **P** 05 23 28.8 +2.0
49nm,0.7s
EIDS Eidsvold 25.84 265 P **P** 05 23 33.4 +1.0
baz=26,SNR=30
EIDS Eidsvold 25.84 265 *eP* **P** 05 23 33.7 +1.3
155nm,0.6s
MGCD Mangrove Creek 25.95 247 P **P** 05 23 35.1 +1.8
baz=26,SNR=29
RIV Riverview 26.02 245 P **P** 05 23 35.9 +2.0
baz=26,SNR=5.0
TARA Tarawa 27.75 345 *eP* **P** 05 23 48.9 -0.4
75nm,0.8s
RMQ Roma 27.80 262 P **P** 05 23 51.4 +1.8
baz=28,SNR=52
YNG Young 28.35 245 P **P** 05 23 56.1 +1.7
baz=29,SNR=9.6
CMSA Cobar Meteorol 30.35 251 P **P** 05 24 12.5 +0.7
baz=30,SNR=23
TOO Toolangi 31.27 239 P **P** 05 24 20.7 +0.9
baz=32,SNR=7.9
CTA Charters Tower 31.30 273 P **P** 05 24 21.2 +1.1
54nm,0.4s,baz=98,slow=11,SNR=93
CTA ScP **ScP** 05 29 58.4 +2.9
10nm,1.0s,baz=54,slow=5.3,SNR=5.5
CTAO Charters Tower 31.30 273 *eP* **P** 05 24 21.2 +1.1
124nm,0.9s
QLP Quilpie 31.82 261 P **P** 05 24 25.0 +0.5
baz=32,SNR=23
MTSU Mount Surprise 33.64 276 P **P** 05 24 41.2 +1.1
baz=34,SNR=68
STKA Stephens Creek 33.85 251 P **P** 05 24 42.4 +0.6
17nm,0.8s,baz=93,slow=11,SNR=23
STKA PcP **PcP** 05 27 07.3 +0.7
10nm,0.8s,baz=106,slow=3.2,SNR=6.1
STKA Stephens Creek 33.85 251 P **P** 05 24 42.4 +0.6
baz=34,SNR=11
STKA Stephens Creek 33.85 251 *eP* **P** 05 24 42.0 +0.3
4.5nm,0.8s
STKA PcP **PcP** 05 27 07.3 +0.7
ARPS Mount Arapiles 34.01 242 P **P** 05 24 43.8 +0.8
baz=34,SNR=6.2
PMG Port Moresby 34.92 292 P **P** 05 24 51.6 +0.7
53nm,0.9s,baz=181,slow=6.3,SNR=5.1
PMG Port Moresby 34.92 292 *eP* **P** 05 24 51.1 +0.2
83nm,1.1s
HTT Hallett 36.13 248 P **P** 05 25 01.1 +0.3
baz=36,SNR=21
COEN Coen 36.22 282 P **P** 05 25 02.7 +1.0
baz=36,SNR=82
COEN Coen 36.22 282 *eP* **P** 05 25 02.2 +0.4
82nm,1.1s
QIS Mount Isa 37.16 270 P **P** 05 25 09.6 +0.1
baz=37,SNR=17
BBOO Buckleboo 38.53 249 P **P** 05 25 19.9 -0.6
baz=39,SNR=24
MANU Manus Island 39.06 302 *eP* **P** 05 25 25.1 +0.1
80nm,0.9s
AS01 Alice Springs 41.49 263 *eP* **P** 05 25 44.2 -0.3
AS31 Alice Springs 41.53 263 *eP* **P** 05 25 44.6 -0.2
59nm,1.5s
ASAR Alice Springs 41.53 263 P **P** 05 25 44.9 0.0
31nm,0.4s,baz=91,slow=7.3,SNR=503
ASAR pP **pP** 05 27 12.9 -2.3
5.0nm,1.1s,baz=96,slow=9.4,SNR=1.8
ASAR PcP **PcP** 05 27 31.2 +0.3
5.4nm,1.0s,baz=107,slow=4.6,SNR=5.0
ASAR ScP **ScP** 05 30 35.9 +2.3
3.1nm,0.9s,baz=99,slow=3.5,SNR=7.6
ASAR S **S** 05 31 18.4 -6.0
1.9nm,0.8s,baz=110,slow=14,SNR=4.2
WB2 Warramunga Arr 42.07 268 *eP* **P** 05 25 48.3 -0.8
WB2 *ep*P **pP** 05 27 18.9 -0.8
WB2 *eP*P **PcP** 05 27 25.4 -7.3
WB2 *e*S **S** 05 31 30.6 -1.6
WB2 *e*S **S** 05 31 32.1 -0.2
WRAB Tennant Creek 42.07 268 *eP* **P** 05 25 48.1 -1.0
81nm,1.0s
WRAB *e*S **S** 05 31 32.0 -0.3
WRA Warramunga Arr 42.08 268 P **P** 05 25 48.7 -0.4
49nm,0.6s,baz=103,slow=8.2,SNR=179
WRA pP **pP** 05 27 16.4 -3.5
3.3nm,0.8s,baz=104,slow=8.5,SNR=1.9
WRA PcP **PcP** 05 27 33.2 +0.5
1.0nm,0.4s,baz=122,slow=2.7,SNR=4.9
WRA ScP **ScP** 05 30 38.4 +2.6
7.0nm,1.2s,baz=109,slow=4.0,SNR=6.6
WRA S **S** 05 31 29.9 -2.5
14nm,0.8s,baz=100,slow=14,SNR=20
JAY Jayapura 44.06 295 P **P** 05 26 04.3 -0.4
22nm,0.8s,baz=144,slow=8.2,SNR=7.6
JAY Jayapura 44.06 295 P **P** 05 26 04.6 -0.1
GENI Genyem 44.45 295 P **P** 05 26 07.7 0.0
FORT Forrest 45.47 251 P **P** 05 26 14.5 -0.9
baz=46,SNR=28
FORT Forrest 45.47 251 *eP* **P** 05 26 14.3 -1.1
91nm,0.7s
WRKA Warakurna 46.23 259 P **P** 05 26 20.8 -0.5
baz=46,SNR=96
KDU Kakadu 46.25 277 P **P** 05 26 20.9 -0.6
baz=46,SNR=10
MTN Manton Dam 47.39 276 P **P** 05 26 29.7 -0.4
baz=48,SNR=6.5
MTN Manton Dam 47.39 276 *eP* **P** 05 26 29.0 -1.2
26nm,0.9s
KNRA Kununurra 48.47 272 P **P** 05 26 38.5 +0.2
baz=49,SNR=46
FITZ Fitzroy Crossi 50.48 267 P **P** 05 26 53.2 +0.1
baz=51,SNR=43
FITZ Fitzroy Crossi 50.48 267 *eP* **P** 05 26 53.2 +0.1
KMBL Kambalda 50.63 250 P **P** 05 26 53.8 -0.3
baz=51,SNR=5.2
VNDA Vanda 52.52 185 P **P** 05 27 07.4 +0.4
0.4nm,0.5s,baz=0.3,slow=6.0,SNR=6.3
KLBR Kellerberrin 54.07 248 P **P** 05 27 18.1 -0.7
baz=54,SNR=27
NWAO Narrogin (SRO) 54.27 247 P **P** 05 27 19.4 -0.8
10.0nm,0.7s,baz=330,slow=10,SNR=7.0
NWAO Narrogin (SRO) 54.27 247 P **P** 05 27 20.0 -0.2
baz=54,SNR=6.2
SOEI Soe 54.79 276 P **P** 05 27 25.3 +1.1
79nm,0.8s
SOEI Soe 54.79 276 *eP* **P** 05 27 24.6 +0.3
54nm,0.8s
BLDU Ballidu 55.14 249 P **P** 05 27 25.5 -0.8
baz=55,SNR=40
BATI Baumata 55.15 276 P **P** 05 27 26.5 -0.1
60nm,0.6s,baz=203,slow=2.6,SNR=6.5
NLAI Namlea 55.21 285 P **P** 05 27 27.1 +0.1
76nm,0.9s
MUN Mundaring 55.29 248 P **P** 05 27 26.9 -0.5
baz=55,SNR=4.3
MORW Morawa 56.03 251 P **P** 05 27 31.8 -0.8
baz=56,SNR=20
LBMI Labuha 56.15 288 P **P** 05 27 33.7 +0.1
73nm,1.0s
EDFI Ende, Flores 57.52 276 P **P** 05 27 43.0 -0.1
63nm,1.0s,931nm
BASI Baing, Sumba 57.91 274 P **P** 05 27 46.0 +0.3
193nm,0.9s
CASY Casey 58.35 206 *eP* **P** 05 27 47.2 -0.6
21nm,0.8s
GIRL Giralia 59.28 258 P **P** 05 27 55.6 +0.8
baz=59,SNR=3.9
BKSI Bulukumba 60.40 279 P **P** 05 28 01.7 -0.7
PLAI Plampang 61.00 274 P **P** 05 28 06.3 -0.1
APSI Ampana 61.09 284 P **P** 05 28 04.1 -2.9
SPSI Sidrap Palu 61.32 280 P **P** 05 28 07.4 -1.1
MRSI Marisa 61.51 286 P **P** 05 28 08.2 -1.5
13nm,0.5s
TWSI Taliwang, Sumb 61.84 274 P **P** 05 28 11.4 -0.5
49nm,1.0s
PCI Palu 62.68 283 P **P** 05 28 17.9 +0.5
41nm,0.8s
MPSI Mapaga 63.22 284 P **P** 05 28 20.3 -0.6
IGBI Denpasar 63.37 273 P **P** 05 28 21.9 +0.1
240nm,0.9s
GRJI Gresik 66.56 274 P **P** 05 28 41.5 -0.5
PWJI Pagerwojo 66.71 272 P **P** 05 28 42.3 -0.6
KKM Kota Kinabalu 69.23 288 *eP* **P** 05 28 58.2 -0.2
42nm,1.2s
CISI Cisompet, Garu 70.50 271 *eP* **P** 05 29 05.0 -0.9
62nm,0.6s
SBUM Sibu 70.96 282 *eP* **P** 05 29 08.8 +0.1
28nm,1.2s
LEM Lembang 70.98 272 P **P** 05 29 09.1 +0.2
88nm,0.7s,baz=83,slow=5.8,SNR=15
LEM Lembang 70.98 272 P **P** 05 29 08.5 -0.4
SKJI Sukabumi 71.86 271 P **P** 05 29 13.3 -0.6
JOW Kunigami 72.06 313 P **P** 05 29 14.4 -0.4
31nm,0.4s,baz=61,slow=29,SNR=3.8
KSM Kuching 72.20 281 *eP* **P** 05 29 15.8 -0.1
51nm,0.9s
CGJI Cibinong 72.80 271 P **P** 05 29 18.3 -1.1
MJAR Matsushiro Arr 73.29 326 P **P** 05 29 21.6 0.0
21nm,0.8s,baz=166,slow=5.8,SNR=36
MAJO Matsushiro 73.30 326 *eP* **P** 05 29 21.9 +0.2
38nm,0.9s
MAT Matsushiro 73.30 326 P **P** 05 29 21.3 -0.4
MJB9 Matsu-Tunnel 73.30 326 *eP* **P** 05 29 22.0 +0.3
38nm,0.9s
JNU Natatsue 74.76 319 P **P** 05 29 30.1 0.0
11nm,0.6s,baz=213,slow=1.7,SNR=10
MDSI Maura Dua 75.06 272 P **P** 05 29 30.9 -1.3
SSLB Suanglung 75.24 306 *eP* **P** 05 29 31.5 -1.5
54nm,1.5s
SSLB *ep*P **pP** 05 31 17.3 -1.6
MAW Mawson 75.94 201 P **P** 05 29 35.7 -0.4
5.4nm,0.8s,baz=126,slow=5.4,SNR=18
MAW Mawson 75.94 201 P **P** 05 29 36.3 +0.2
baz=76,SNR=6.6
MAW Mawson 75.94 201 *eP* **P** 05 29 33.8 -2.2
2.6nm,1.2s
ASAJ Asahikawa 77.41 334 P **P** 05 29 44.9 +0.5
11nm,0.6s,baz=244,slow=14,SNR=4.3
MYKOM Kota Tinggi 78.09 278 *eP* **P** 05 29 48.7 -0.2
34nm,0.9s
NIKH Nikolski High 79.02 7 *eP* **P** 05 29 52.6 -0.3
30nm,0.8s
NIKH *ep*P **pP** 05 31 39.2 -0.9
KSRS Korea Array 79.52 320 P **P** 05 29 56.8 +0.9
15nm,0.7s,baz=136,slow=5.7,SNR=66
KS15 Wonju Array Si 79.53 320 *eP* **P** 05 29 56.4 +0.4
KSAR Wonju Array Be 79.53 320 P **P** 05 29 56.8 +0.8
KS01 Wonju Array Si 79.55 320 *eP* **P** 05 29 56.5 +0.4
PEA0B Petropavlovsk- 80.84 347 *eP* **P** 05 30 02.8 +0.4
24nm,0.9s
PETK Petropavlovsk- 80.84 347 P **P** 05 30 02.4 -0.1
19nm,0.8s,baz=130,slow=6.8,SNR=14
PETK Petropavlovsk- 80.84 347 *eP* **P** 05 30 02.6 +0.1
NJ2 Nanjing 81.70 311 *eP* **P** 05 30 09.0 +1.6
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
IPM Ipoh 81.81 279 *eP* **P** 05 30 07.2 -1.2
19nm,0.8s
USRK Ussuriysk Ar. 82.19 327 P **P** 05 30 10.3 +0.7
15nm,1.0s,baz=166,slow=1.6,SNR=13
PSI Prapat 82.95 277 P **P** 05 30 13.3 -1.0
9.6nm,0.6s,baz=179,slow=2.0,SNR=10
PSI Prapat 82.95 277 *eP* **P** 05 30 12.8 -1.5
15nm,0.8s
GSI Gunungsitoli 83.50 275 *eP* **P** 05 30 17.6 +0.6
123nm,1.6s
WHN Wuhan 83.95 308 ⇑P **P** 05 30 19.4 +0.7
ISA Isabella, Lake 84.47 46 *eP* **P** 05 30 20.8 -0.6
7.3nm,0.9s
SKNT Sakolnakorn 85.01 291 P **P** 05 30 24.1 -0.2
22nm,0.9s
CN2 Changchun 85.24 324 *eP* **P** 05 30 25.3 +0.5
CN2 pmax pmax
comp=Z,30nm,1.0s
TIA Tai'an 85.34 314 P **P** 05 30 26.4 +0.9
TIA pmax pmax
comp=Z,21nm,0.9s
GSC Goldstone, Bar 85.35 47 *eP* **P** 05 30 26.3 +0.6
6.1nm,1.1s
YBH Yreka Blue Hor 85.67 39 P **P** 05 30 28.3 +1.3
1.4nm,0.6s,baz=192,slow=4.5,SNR=5.6
PNTR Pine Nut 85.84 43 *eP* **P** 05 30 27.4 -0.7
5.2nm,0.8s
HSIG 85.96 55 *eP* **P** 05 30 27.2 -1.5
11nm,0.9s
KLR Kul'dur 86.03 331 P **P** 05 30 28.9 +0.4
0.4nm,0.7s,baz=60,slow=14,SNR=7.3
CHAI Chaiyaphum 86.19 290 P **P** 05 30 31.0 +1.0
6.5nm,0.8s
NV01 Mina Array Sit 86.25 44 *eP* **P** 05 30 29.1 -1.0
NVAR Mina Array Bea 86.25 44 P **P** 05 30 30.6 +0.5
2.1nm,0.7s,baz=221,slow=8.0,SNR=20
NV11 Mina Array Sit 86.34 44 *eP* **P** 05 30 29.5 -0.9
0.3nm,1.0s
TPNV Topopah Spring 86.68 46 *eP* **P** 05 30 32.6 +0.5
4.7nm,0.9s
KVN Kaiserville 86.75 44 *eP* **P** 05 30 32.6 +0.3
7.7nm,1.4s
PHET Kaeng Krachan 86.84 286 P **P** 05 30 35.6 +2.5
SHPR Sheep Range 87.14 47 *eP* **P** 05 30 35.3 +1.1
4.4nm,1.4s
PLCA Paso Flores 87.14 134 P **P** 05 30 35.3 +1.0
3.1nm,0.7s,baz=262,slow=5.8,SNR=12
GYA Guiyang 87.49 301 *eP* **P** 05 30 37.3 +1.2
GYA pP pP 05 32 28.0 +2.0
GYA sP sP 05 33 17.3 +0.9
GYA PP **PP** 05 34 13.8 +3.7
GYA SKS **SKSac** 05 40 16.0 -0.6
GYA S **S** 05 40 35.8 +0.2
GYA pmax pmax
comp=Z,10.0nm,1.0s
TUC Tucson 87.83 53 *eP* **P** 05 30 39.0 +1.5
7.6nm,1.0s
PINE Pine Mountain 87.98 39 *eP* **P** 05 30 37.8 -0.3
8.8nm,0.8s
BJI Beijing 88.21 317 ⇓*iP* **P** 05 30 39.6 +0.7
BJI pmax pmax
comp=Z,34nm,0.9s
319A Douglas 88.43 54 *eP* **P** 05 30 42.0 +1.7
25nm,1.2s
X16A Lo Mia Camp, P 88.50 50 *eP* **P** 05 30 42.1 +1.4
3.9nm,0.8s
LCMT Little Creek M 88.69 47 *eP* **P** 05 30 42.2 +0.7
4.4nm,1.1s
CCUT Cedar City 88.92 47 *eP* **P** 05 30 43.8 +1.1
5.1nm,1.3s
KNB Kanab 88.98 48 *eP* **P** 05 30 43.9 +1.1
7.3nm,1.2s
U15A North Rim 89.01 48 *eP* **P** 05 30 43.8 +0.7
3.9nm,0.8s
SZCU Shurtz Canyon 89.12 47 *eP* **P** 05 30 44.2 +0.6
5.7nm,1.3s
J08A Circle Bar Ran 89.12 40 *eP* **P** 05 30 43.2 -0.1
11nm,1.4s
TIY Taiyuan 89.27 313 *eP* **P** 05 30 45.5 +1.4
X18A Snowflake 89.60 51 *eP* **P** 05 30 45.4 -0.4
3.7nm,0.8s
CM01 Chiang Mai Arr 89.92 290 *eP* **P** 05 30 48.4 +1.0
CMAR Chiang Mai Arr 89.95 290 P **P** 05 30 49.4 +1.9
6.6nm,1.0s,baz=140,slow=3.4,SNR=24
CMAR PP **PP** 05 34 30.2 +0.8
1.0nm,0.5s,baz=115,slow=4.5,SNR=4.6
MTPU Mount Pierson 89.96 47 *eP* **P** 05 30 49.0 +1.4
5.3nm,0.8s
CHTO Chiang Mai 90.11 291 *eP* **P** 05 30 49.7 +1.4
15nm,0.8s
MSU Marysvale 90.23 47 *eP* **P** 05 30 49.9 +1.3
MFID Camas Ranch 90.71 41 *eP* **P** 05 30 51.5 +0.8
3.8nm,1.1s
GHO Glory Hole Cre 90.80 14 *eP* **P** 05 30 50.4 -0.2
4.7nm,0.8s
MNTX Cornudas Mount 91.46 55 *eP* **P** 05 30 55.4 +1.2
MNTX *ep*P **pP** 05 32 47.5 +2.7
HHC Hu-ho-hao-te 91.56 315 *eP* **P** 05 30 55.6 +1.0
HHC pmax pmax
comp=Z,30nm,1.4s
HHC pmax pmax
comp=Z,140nm,7.7s
TX31 Lajitas Ar. Si 91.61 58 *eP* **P** 05 30 55.6 +0.5
TXAR Lajitas Array 91.61 58 P **P** 05 30 56.0 +0.9
2.5nm,0.8s,baz=212,slow=6.8,SNR=28
TXAR pP **pP** 05 32 44.8 -0.9
0.6nm,1.0s,baz=212,slow=6.4,SNR=3.7
TXAR PP **PP** 05 34 45.0 +2.6
1.2nm,1.1s,baz=205,slow=5.5,SNR=4.2
CAST Castle Rocks 91.63 12 *eP* **P** 05 30 53.0 -1.2
4.7nm,1.1s
SRU San Rafael Swe 91.64 47 *eP* **P** 05 30 55.0 -0.1
3.4nm,0.8s
HVU Hansel Valley 91.64 44 *eP* **P** 05 30 55.5 +0.4
2.6nm,0.7s
TRF Thorofare Moun 92.01 13 *eP* **P** 05 30 55.5 -0.7
3.9nm,0.8s
RND Reindeer 92.27 14 *eP* **P** 05 30 57.0 -0.2
5.2nm,0.8s
WRH Wood River Hil 93.37 13 *eP* **P** 05 31 01.6 -0.6
2.6nm,0.9s
ILAR Eielson Array 93.88 14 P **P** 05 31 03.9 -0.7
0.5nm,0.7s,baz=226,slow=5.3,SNR=5.7
PDAR Pinedale Array 94.18 44 P **P** 05 31 06.5 -0.3
0.3nm,0.6s,baz=184,slow=2.7,SNR=3.2
LZH Lanzhou 94.33 308 *eP* **P** 05 31 09.3 +1.8
LZH pP pP 05 33 03.8 +5.5
LZH pmax pmax
comp=Z,20nm,1.1s
SONM Songino Array 98.35 319 P **P** 05 31 25.7 +0.4
1.1nm,0.8s,baz=141,slow=5.2,SNR=5.2
GTA Gaotai 98.69 310 *eP* **P** 05 31 27.9 +0.9
GTA pmax pmax
comp=Z,3.0nm,1.2s
MKAR Makanchi Array 113.22 312 PKiKP **PKiKP** 05 36 20.8 -1.1
0.4nm,0.5s,baz=124,slow=0.5,SNR=4.2
MKAR PP **PP** 05 37 20.5 -1.2
0.8nm,1.0s,baz=98,slow=8.7,SNR=3.8
KSH Kashi 116.10 303 PKP **PKPdf** 05 36 29.1 +1.3
KSH PP **PP** 05 37 47.4 +5.4
KURK Kurchatov 116.37 316 *e*PKPdf **PKPdf** 05 36 26.9 -0.8
KURK PP **PP** 05 37 40.8 -2.5
KURBB Kurchatov Arra 116.41 316 PKP **PKPdf** 05 36 26.2 -1.6
2.4nm,0.8s,baz=103,slow=2.1,SNR=17
KURBB PP **PP** 05 37 40.8 -2.8
0.9nm,0.8s,baz=96,slow=5.8,SNR=6.6
BVAR Borovoye Array 121.66 318 PKP **PKPdf** 05 36 37.4 -0.5
2.3nm,0.4s,baz=96,slow=1.5,SNR=18
ARU Arti 128.22 323 PKP **PKPdf** 05 36 49.4 -0.9
3.3nm,0.4s,baz=90,slow=8.1,SNR=5.1
AKTO Aktyubinsk 129.46 315 PKP **PKPdf** 05 36 52.6 -0.2
2.8nm,0.6s,baz=107,slow=3.2,SNR=10
AKTO SKPbc SKPbc 05 39 28.8 +0.7
1.7nm,0.5s,baz=153,slow=0.6,SNR=6.4
ARCES ARCESS Array B 133.65 348 PKhKP PKPpre 05 36 53.2

2.5nm,0.8s,baz=22,slow=1.0,SNR=3.6
ARCES SKPbc **SKPab 05 39 43.9 -1.5**
12nm,0.9s,baz=36,slow=4.0,SNR=11
FINES FINESS Array B 140.12 341 PKhKP PKPpre 05 37 05.0
2.9nm,0.7s,baz=51,slow=3.4,SNR=10
FINES SKPbc **SKiKP 05 40 03.0 -0.8**
6.5nm,0.7s,baz=79,slow=4.1,SNR=13
NC303 NORSAR Array S 143.67 351 *e*PKPbc PKPab 05 37 17.0 -0.3
NC204 NORSAR Array S 143.71 351 *e*PKPbc PKPab 05 37 17.1 -0.4
NB201 NORSAR Array S 143.85 350 *e*PKPbc PKPbc 05 37 16.4 -1.6
NB2 NORSAR Subarra143.87 351 PKP PKPbc 05 37 16.7 -1.4
comp=Z,31nm,0.9s,baz=19,slow=3.4
NOA NORSAR Array B 143.87 351 PKP PKPbc 05 37 16.6 -1.5
NBO00 NORSAR Array S 143.94 351 *e*PKPbc PKPbc 05 37 18.1 -0.2
NAO01 NORSAR Array S 144.10 351 *e*PKPbc PKPbc 05 37 18.6 -0.2
NC602 NORSAR Array S 144.11 350 *e*PKPbc PKPbc 05 37 17.9 -0.8
HFS Hagfors 144.31 348 PKP PKPbc 05 37 18.3 -1.1
comp=Z,17nm,0.5s,baz=61,slow=2.9,SNR=73
KONO Kongsberg 145.44 351 *e*PKPdf **PKPdf 05 37 22.0 +0.3**
AKASG Malin Array Be 146.38 326 PKPbc **PKPdf 05 37 24.6 +1.0**
comp=Z,5.9nm,0.5s,baz=45,slow=4.2,SNR=51
AKASG pPKPbc pPKPab 05 39 17.2 -4.2
comp=Z,0.5nm,0.5s,baz=40,slow=4.4,SNR=2.4
AKASG SKPbc **SKiKP 05 40 17.8 +0.8**
comp=Z,1.3nm,0.5s,baz=52,slow=3.0,SNR=8.6
AKBB Malin Array Si 146.38 326 *e*PKPdf **PKPdf 05 37 24.6 +1.0**
KIEV Kiev 146.39 326 *e*PKPdf **PKPdf 05 37 23.9 +0.3**
AK11 Malin Array Si 146.42 326 *e*PKPdf **PKPdf 05 37 22.3 -1.4**
AK11 *e*PKPbc **PKPbc 05 37 25.4 -0.5**
SUW Suwalki 146.84 335 *e*PKPbc **PKPbc 05 37 26.7 -0.3**
ASF Jabal al Asfar 146.98 290 PKPbc **PKPbc 05 37 28.8 +0.5**
comp=Z,19nm,0.9s,baz=90,slow=1.0,SNR=17
ILGA Ilgaz 148.03 307 *e*PKPbc **PKPbc 05 37 31.4 +0.5**
ILGA *e*PKPab **PKPab 05 37 36.4 +1.0**
MMAI Mount Meron Ar 148.21 292 PKPbc **PKPbc 05 37 31.9 +0.6**
comp=Z,19nm,0.5s,baz=108,slow=4.7,SNR=28
BR131 Keskin Array S 148.47 305 *e*PKPbc **PKPbc 05 37 31.9 0.0**
BR131 *e*PKPab **PKPab 05 37 37.8 +0.7**
BRTR Keskin Array B 148.47 305 PKPbc **PKPbc 05 37 31.6 -0.3**
comp=Z,5.2nm,0.7s,baz=142,slow=3.7,SNR=19
BRTR PKPab **PKPab 05 37 37.0 -0.2**
comp=Z,11nm,0.8s,baz=89,slow=0.6,SNR=26
ANTO Ankara 149.05 305 *e*PKPbc **PKPbc 05 37 33.4 +0.2**
ANTO *e*PKPab **PKPab 05 37 40.1 +0.6**
BUR08 Bucovina Ar. S 150.34 324 *e*PKPbc **PKPbc 05 37 36.4 +0.3**
BUR04 Bucovina Ar. S 150.35 324 *e*PKPbc **PKPbc 05 37 36.7 +0.6**
BUR04 *e*PKPab **PKPab 05 37 42.1 -2.5**
EKA Eskdalemuir Ar 150.38 3 PKPbc **PKPbc 05 37 34.4 -1.3**
comp=Z,1.7nm,0.5s,baz=298,slow=1.5,SNR=12
OJC Ojcow 151.09 333 *e*PKPdf **PKPbc 05 37 37.7 +0.1**
OJC Ojcow 151.09 333 *e*PKPbc **PKPbc 05 37 37.7 +0.1**
MLR Muntele Rosu 151.20 320 *e*PKPbc **PKPbc 05 37 38.0 -0.2**
MLR *e*PKPab **PKPab 05 37 48.2 -0.1**
CRVS Cervenica-Dubn 151.35 329 *e*PKP **PKPbc 05 37 38.8 +0.6**
CRVS *e* 05 37 48.7
NIE Niedzica 151.49 331 *e*PKP **PKPbc 05 37 39.1 +0.6**
KSP Ksiaz 151.91 337 *e*PKP **PKPbc 05 37 39.8 +0.4**
DPC Dobruska-Polom 152.32 337 *e*PKP **PKPbc 05 37 41.0 +0.6**
DPC *e*PKPab **PKPab 05 37 53.4 +0.7**
MORC Moravsky Berou 152.34 335 *e*PKPbc **PKPbc 05 37 40.5 +0.1**
MORC Moravsky Berou 152.34 335 *e*PKP **PKPbc 05 37 40.7 +0.3**
MORC *e* 05 37 54.3
CLL Collm 152.55 342 *e*PKPdf **PKPdf 05 37 34.0 +0.7**
CLL ⇓*i*PKPbc **PKPbc 05 37 40.5 -0.2**
comp=Z,11nm,0.9s
CLL ⇓*i*PKPab **PKPab 05 37 53.2 -0.4**
comp=Z,14nm,0.9s
CLL *e*pPKPbc **pPKPbc 05 39 35.0 -2.7**
CLL *e* 05 40 03.0
CLL Collm 152.55 342 *e*PKPbc **PKPbc 05 37 41.0 +0.3**
CLL *e*PKPab **PKPab 05 37 53.4 -0.2**
BRG Berggiesshubel 152.66 340 *i* PKP **PKPbc 05 37 41.1 +0.1**
comp=Z,6.6nm,0.7s
BRG Berggiesshubel 152.66 340 *i* PKP **PKPab 05 37 54.3 +0.3**
comp=Z,12nm,0.8s
BRG *e*pPKP **pPKPab 05 39 54.8 +8.5**
comp=Z,6.3nm,1.3s
VYHS Vyhne 152.82 332 *e*PKP **PKPbc 05 37 40.9 -0.6**
VYHS *e* 05 37 55.3
JAVC Velka Javorina 153.02 333 *e*PKP **PKPbc 05 37 43.3 +1.4**
JAVC *e* 05 37 57.1
KRUC Moravsky 153.35 335 *e*PKP **PKPbc 05 37 42.6 0.0**
KRUC *e* 05 37 57.2
MODS Modra-Piesok 153.56 333 *e*PKP **PKPab 05 37 58.0 0.0**
KHC Kasperske Hory 154.29 339 *e*PKPAB **PKPab 05 38 01.3 +0.1**
KHC Kasperske Hory 154.29 339 *e*PKPdf **PKPdf 05 37 35.4 -0.6**
KHC *e*PKPab **PKPab 05 38 01.5 +0.3**
VTS Vitosha 154.46 317 *e*PKPab **PKPab 05 38 03.5 +1.2**
CONA Conrad Observa 154.49 334 *e*PKPab **PKPab 05 38 01.4 -0.7**
comp=Z,3.1nm,0.7s
GERES GERESS Array B 154.50 338 PKPbc **PKPbc 05 37 43.7 -1.5**
comp=Z,0.4nm,0.2s,baz=44,slow=4.1,SNR=6.0
GERES PKPab **PKPab 05 38 01.8 -0.4**
comp=Z,1.0nm,0.4s,baz=35,slow=4.9,SNR=8.4
GEA0 GERESS Array S 154.51 338 *e*PKPdf **PKPdf 05 37 36.0 -0.2**
GEA0 *e*PKPbc **PKiKP 05 37 44.9 -0.2**
GEA0 *e*PKPab **PKPab 05 38 02.3 +0.2**
MOA Molln 155.15 336 *e*PKPab **PKPab 05 38 05.2 +0.4**
comp=Z,5.0nm,1.5s
DIVS Divibare 155.40 323 *e*PKPdf **PKPdf 05 37 35.8 -1.9**
DIVS *e*PKPab **PKPab 05 38 06.2 0.0**
SOKA Soboth 155.83 334 *e*PKPab **PKPab 05 38 07.6 -0.3**
comp=Z,4.5nm,1.1s
KBA Koelnbreinsper 156.14 337 *e*PKPab **PKPab 05 38 10.0 +0.7**
comp=Z,1.8nm,0.6s
OBKA Obir 156.16 334 *e*PKPab **PKPab 05 38 09.5 +0.1**
comp=Z,2.3nm,0.5s
LIT Litokhoron 156.23 313 *e*PKPab **PKPab 05 38 09.7 -0.1**
MYKA Terra Mystica 156.41 336 *e*PKPab **PKPab 05 38 10.1 -0.3**
comp=Z,2.0nm,0.5s
WTTA Wattenberg 156.56 339 *e*PKPab **PKPab 05 38 10.3 -0.8**
comp=Z,5.7nm,0.8s
FNA Florina 156.60 315 *e*PKPab **PKPab 05 38 11.6 +0.2**
RETA Reutte 156.62 341 *e*PKPab **PKPab 05 38 11.8 +0.5**
comp=Z,9.1nm,0.7s
MOTA Moosalm 156.65 340 *e*PKPab **PKPab 05 38 10.1 -1.4**
comp=Z,8.7nm,0.9s
ABTA Abfaltersbach 156.72 337 *e*PKPab **PKPab 05 38 11.1 -0.6**
comp=Z,5.5nm,0.8s
TTG Podgorica 156.90 321 *e*PKPab **PKPab 05 38 13.1 +0.5**
FETA Feichten 157.05 340 *e*PKPab **PKPab 05 38 13.4 +0.1**
comp=Z,7.4nm,1.3s
DAVA Damuels 157.06 342 *e*PKPab **PKPab 05 38 12.7 -0.5**
comp=Z,14nm,1.1s
FUORN Ofenpass-Fuorn 157.55 341 *e*PKPab **PKPab 05 38 16.2 +0.6**
TUE Stuetta 157.95 342 *e*PKPab **PKPab 05 38 17.7 +0.5**
ES19 SONSECA Array 165.76 11 *e*PKPab **PKPab 05 38 51.5 +0.1**
ESDC Sonseca Array 165.78 12 PKPab **PKPab 05 38 50.9 -0.7**
comp=Z,0.1nm,0.3s,baz=1.8,slow=4.7,SNR=6.1
TOA0 Torodi Ar. Sit 167.32 189 *e*PKPdf **PKPdf 05 37 49.5 -1.2**
TOA0 *e* 05 38 58.4
TOA0 *e*PKPab **PKPab 05 38 58.5 -0.3**
TORD Torodi Ar. Bea 167.32 189 PKP **PKPdf 05 37 49.4 -1.3**
comp=Z,1.0nm,0.7s,baz=313,slow=1.1,SNR=6.3
TORD PKPab **PKPab 05 38 57.5 -1.2**
comp=Z,1.6nm,0.6s,baz=162,slow=4.3,SNR=12

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*IDC **21** 05:20:40.9±1.5, 1°.29N×127°.07E, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.7/63, mbtmp4.1/4, MS2.4/1, Ms1 2.4/1, ms1mx2.1/53, Error ellipse: s-maj=130.9km s-min=25.3km az=68.0*
*ISCJB **21** 05:20:48.7±0.9, 1°.24N±0°.06×126°.9E±0°.1, h72km, mb4.0/4, Error ellipse: s-maj=14.6km s-min=8.5km az=167.9*
*DJA **21** 05:20:51.7±1.0, 1°.N±7°×12°.7E±°, h106km±18km, M3.9/7, mb3.9/2, MLv3.9/7*
ISC 21 05:20:50.4±1.1, 1°.19N±0°.09×126°.89E±0°.10, h72km, n13, σ1°20/12, mb4.1/4, Northern Moluccca Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**1.92**	**161**	P		**Pn**	**05 21 22.0**	**+1.0**
LBMI				S		**Sn**	**05 21 46.7**	**+2.5**
KMSI	**Cibinong**	**2.97**	**258**	P		**Pn**	**05 21 36.6**	**+1.4**
SANI	**Sanana**	**3.34**	**196**	P		**Pn**	**05 21 39.8**	**-0.5**
SANI				S		**Sn**	**05 22 18.2**	**-0.6**
NLAI	**Namlea**	**4.40**	**177**	P		**Pn**	**05 21 55.0**	**+0.2**
LUWI	**Luwuk**	**4.67**	**242**	P		Pn	05 22 09.5	+11
SIJI	**Sorong**	**4.83**	**115**	LR		LR	05 23 32.8	
	comp=Z,42nm,18.4s,baz=334,slow=36							
APSI	**Ampana**	**5.64**	**248**	P		**Pn**	**05 22 12.2**	**+0.5**
BKSI	**Bulukumba**	**9.35**	**226**	P		**Pn**	**05 23 02.9**	**+0.4**
WRA	**Warramunga Arr**	**22.24**	**161**	P		**P**	**05 25 39.8**	**-1.6**
	0.9nm,0.3s,baz=342,slow=11,SNR=40							
SONM	**Songino Array**	**49.74**	**342**	P		**P**	**05 29 35.5**	**-0.1**
	0.7nm,0.7s,baz=170,slow=9.0,SNR=4.3							
MKAR	**Makanchi Array**	**59.73**	**326**	P		**P**	**05 30 47.3**	**-0.4**
	1.4nm,0.4s,baz=120,slow=8.0,SNR=19							
RAO	**Raoul Island**	**60.75**	**125**	LR		LR	05 55 34.9	
	comp=Z,2μm,21.1s,baz=301,slow=34							
KURBB	**Kurchatov Arra**	**63.96**	**328**	P		**P**	**05 31 15.7**	**-0.3**
	3.5nm,0.8s,baz=126,slow=6.2,SNR=28							

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*ISCJB **21** 05:26:57.9±0.5, 37°.04N±0°.03×28°.29E±0°.04, h1km±17km, Error ellipse: s-maj=5.8km s-min=4.9km az=28.6*
*DDA **21** 05:26:57.7, 37°.05N×28°.28E, h7km, Ml2.5*
*CSEM **21** 05:26:58.2±0.2, 37°.02N×28°.29E, h5km, ML2.0, Error ellipse: s-maj=3.8km s-min=2.9km az=24.0*
*ISK **21** 05:26:58.3, 36°.99N×28°.25E, h9km, ML2.0/7*
ISC 21 05:26:57.8±1.0, 37°.03N±0°.03×28°.30E±0°.02, h8km±11km, n28, σ0°40/38, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TURN	**Turunc**	**0.29**	**122**	PG		**Pg**	**05 27 03.2**	**-0.3**
TURN				SG		**Sg**	**05 27 06.9**	**-0.4**
TURN	**Turunc**	**0.29**	**122**	*i* P		**Pg**	**05 27 03.1**	**-0.4**
TURN				*i* S		**Sg**	**05 27 07.8**	**+0.5**
TURN	**Turunc**	**0.29**	**122**	*e*Pg		**Pg**	**05 27 03.2**	**-0.3**
TURN				*e*Sg		**Sg**	**05 27 06.9**	**-0.4**
TURN				S		**Sg**	**05 27 07.8**	**+0.5**
MRSB	**Marmaris-Mugla**	**0.32**	**195**	PG		**Pg**	**05 27 04.4**	**+0.3**
MRSB				SG		**Sg**	**05 27 08.8**	**+0.4**
MRSB	**Marmaris-Mugla**	**0.32**	**195**	*e*Pg		**Pg**	**05 27 04.4**	**+0.3**
MRSB				*e*Sg		**Sg**	**05 27 08.8**	**+0.4**
DALY	**Dalyan (Mu¨la**	**0.35**	**126**	PG		**Pb**	**05 27 06.0**	**-0.3**
DALY				SG		**Sb**	**05 27 11.7**	**-0.3**
DALY	**Dalyan (Mu¨la**	**0.35**	**126**	*i* P		**Pb**	**05 27 05.8**	**-0.5**
DALY	**Dalyan (Mu¨la**	**0.35**	**126**	P		**Pb**	**05 27 05.8**	**-0.5**
DALY				*e*Sg		**Sb**	**05 27 11.7**	**-0.3**
MLSB	**Milas**	**0.50**	**303**	PG		**Pb**	**05 27 08.3**	**-0.5**
MLSB	**Milas**	**0.50**	**303**	*e*Pg		**Pb**	**05 27 08.3**	**-0.5**
DAT	**Datca**	**0.65**	**243**	PG		**Pg**	**05 27 10.4**	**0.0**
DAT	**Datca**	**0.65**	**243**	*i* P		**Pg**	**05 27 09.8**	**-0.6**
DAT	**Datca**	**0.65**	**243**	P		**Pg**	**05 27 09.8**	**-0.6**
DAT	**Datca**	**0.65**	**243**	*e*Pg		**Pg**	**05 27 10.4**	**0.0**
TAVA	**DENIZLI_Tavas**	**0.66**	**48**	*i* P		**Pg**	**05 27 11.1**	**+0.6**
TAVA				*i* S		**Sg**	**05 27 19.2**	**+0.1**
TAVA	**DENIZLI_Tavas**	**0.66**	**48**	P		**Pg**	**05 27 11.1**	**+0.6**
TAVA				S		**Sg**	**05 27 19.2**	**+0.1**
BDRM	**Kayabasi**	**0.69**	**273**	*i* P		**Pb**	**05 27 12.2**	**+0.2**
BDRM	**Kayabasi**	**0.69**	**273**	P		**Pb**	**05 27 12.2**	**+0.2**
AYDN	**Tasoluk**	**0.72**	**332**	*i* P		**Pg**	**05 27 11.5**	**-0.1**
AYDN	**Tasoluk**	**0.72**	**332**	P		**Pg**	**05 27 11.5**	**-0.1**
BODT	**Bodrum**	**0.79**	**273**	PG		**Pg**	**05 27 13.2**	**+0.1**
BODT	**Bodrum**	**0.79**	**273**	*e*Pg		**Pg**	**05 27 13.2**	**+0.1**
ARG	**Arkhangelos**	**0.82**	**190**	PG		**Pg**	**05 27 13.9**	**+0.3**
ARG	**Arkhangelos**	**0.82**	**190**	*e*Pg		**Pg**	**05 27 13.9**	**+0.3**
GCAM	**G?zelcaml?**	**1.08**	**309**	PG		**Pn**	**05 27 19.5**	**+0.2**
GCAM	**G?zelcaml?**	**1.08**	**309**	*e*Pg		**Pn**	**05 27 19.5**	**+0.2**
AKAS	**Kas**	**1.31**	**127**	PN		**Pg**	**05 27 23.6**	**+0.6**
AKAS	**Kas**	**1.31**	**127**	*e*Pn		**Pg**	**05 27 23.6**	**+0.6**

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*ISCJB **21** 05:40:45.0±0.6, 24°.92N±0°.03×122°.33E±0°.02, h9km±4km, Error ellipse: s-maj=5.0km s-min=3.4km az=12.7*
*JMA **21** 05:40:45.2±0.1, 24°.82N×122°.35E, h0km, M2.5*
*TAP **21** 05:40:45.3, 24°.94N×122°.29E, h14km, ML2.8, C*
ISC 21 05:40:45.1±1.1, 24°.89N±0°.04×122°.33E±0°.02, h7km±11km, n29, σ0°53/51, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.34**	**291**	*i* P		**Pg**	**05 40 51.8**	**+0.1**
	baz=278							
TWB1				S		**Sg**	**05 40 56.2**	**+0.1**
	baz=278							
EOS1	**EOS1**	**0.38**	**209**	*e*P		**Pb**	**05 40 54.4**	**+0.3**
	baz=214							
EOS1				*e*S		**Sb**	**05 41 01.0**	**+0.7**
	baz=214							
TIPB	**Shuangxi**	**0.47**	**281**	*e*P		**Pg**	**05 40 53.5**	**-0.7**
	baz=274							
TIPB				*e*S		**Sg**	**05 40 59.8**	**-0.6**
	baz=274							
TWC	**Suao**	**0.52**	**238**	P		**Pg**	**05 40 55.5**	**+0.4**
	baz=223							
TWC				*e*S		**Sg**	**05 41 02.6**	**+0.7**
	baz=223							
NWF	**Wu-fen Shan**	**0.54**	**290**	*e*P		**Pg**	**05 40 55.7**	**+0.3**
	baz=285							
NWF				*e*S		**Sg**	**05 41 02.3**	**-0.1**
	baz=285							
WFSB	**Wu-fen Shan**	**0.54**	**290**	*e*P		**Pg**	**05 40 55.7**	**+0.3**
	baz=285							
WFSB				*e*S		**Sg**	**05 41 02.8**	**+0.4**
	baz=285							
TWE	**Neicheng**	**0.63**	**255**	*e*P		**Pg**	**05 40 57.7**	**+0.5**
	baz=239							
TWE				*e*S		**Sb**	**05 41 06.2**	**-1.1**
	baz=239							
ENAH	**Nanao**	**0.64**	**228**	*e*P		**Pb**	**05 40 58.2**	**-0.4**
	baz=214							
ENAH				*e*S		**Sb**	**05 41 07.2**	**-0.6**
	baz=214							
NANB	**Nanao**	**0.70**	**230**	*e*P		**Pb**	**05 40 59.1**	**-0.5**
	baz=216							
NANB				*e*S		**Sb**	**05 41 08.6**	**-0.8**
	baz=216							
JYNG	**Yonagunijimaku**	**0.70**	**128**	P		**Pg**	**05 40 58.5**	**-0.1**
JYNG				S		**Sg**	**05 41 07.9**	**+0.1**
ENA	**Nanau**	**0.71**	**230**	P		**Pg**	**05 40 59.1**	**+0.4**
	baz=216							
ENA				S		**Sg**	**05 41 08.6**	**+0.7**
	baz=216							
YM07	**YM07**	**0.71**	**294**	*e*P		**Pg**	**05 40 58.1**	**-0.6**
	baz=300							
ENTT	**Nioudou**	**0.74**	**251**	P		**Pb**	**05 41 00.1**	**-0.2**
	baz=237							
ENTT				S		**Sb**	**05 41 10.3**	**-0.3**
	baz=237							
YM08	**YM08**	**0.74**	**294**	*e*P		**Pg**	**05 40 59.5**	**+0.2**
	baz=291							
YM11	**YM11**	**0.74**	**292**	*e*P		**Pb**	**05 40 60.0**	**-0.4**
	baz=289							
YOJ	**Yonaguni jima**	**0.75**	**124**	*e*P		**Pg**	**05 40 58.7**	**-0.7**
	baz=115							
YOJ				*e*S		**Sg**	**05 41 08.9**	**-0.2**
	baz=115							
YOJ	**Yonaguni jima**	**0.75**	**124**	P		**Pg**	**05 40 58.8**	**-0.7**
YOJ				S		**Sg**	**05 41 08.9**	**-0.2**
YM10	**YM10**	**0.75**	**291**	*e*P		**Pg**	**05 40 59.8**	**+0.3**
	baz=288							
YM12	**YM12**	**0.75**	**293**	*e*P		**Pg**	**05 40 59.8**	**+0.2**
	baz=290							
YM04	**YM04**	**0.77**	**290**	*e*P		**Pg**	**05 40 59.9**	**0.0**
	baz=287							
TWS1	**Kuangyinshan**	**0.86**	**285**	*e*P		**Pb**	**05 41 02.6**	**+0.3**
	baz=281							
TWS1				*e*S		**Sg**	**05 41 12.6**	**-0.1**
	baz=281							
YHNB	**Yeheng**	**0.90**	**256**	*e*P		**Pb**	**05 41 02.5**	**+0.2**
	baz=253							
YHNB				*e*S		**Sg**	**05 41 13.7**	**-0.3**
	baz=253							
NSK	**Sanguang**	**0.91**	**257**	*e*P		**Pg**	**05 41 02.8**	**+0.2**
	baz=253							
NSK				*e*S		**Sg**	**05 41 14.6**	**+0.2**
	baz=253							
NACB	**Ninganchiao**	**0.98**	**224**	*e*P		**Pg**	**05 41 03.9**	**0.0**
	baz=221							
NACB				*e*S		**Sg**	**05 41 16.4**	**-0.1**
	baz=221							
NNSB	**Datong**	**0.98**	**242**	*e*P		**Pg**	**05 41 03.9**	**+0.1**
	baz=230							
NNSB				*e*S		**Sb**	**05 41 17.6**	**+0.1**
	baz=230							
NNS	**Nan Shan**	**0.98**	**243**	*e*P		**Pb**	**05 41 04.6**	**+0.2**
	baz=231							
NNS				*e*S		**Sb**	**05 41 17.0**	**-0.6**
	baz=231							
TWD	**Chiawan**	**1.05**	**220**	*e*P		**Pg**	**05 41 03.6**	**-1.6**
	baz=217							
TWD				*e*S		**Sb**	**05 41 19.7**	**+0.3**
	baz=217							
IRIF	**Iriomote-Funau**	**1.38**	**113**	P		**Pg**	**05 41 11.8**	**+0.2**
IRIF				*e*S		**Sg**	**05 41 30.8**	**+1.2**
JIJ	**Ishigaki jima**	**1.73**	**107**	S		**Sn**	**05 41 38.5**	**+0.7**

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*IDC **21** 05:55:05.6±0.9, 8°.61S×157°.30E, h0km, mb3.9/7, mb1 4.1/8, mb1mx3.8/47, mbtmp3.9/8, ML4.1/1, MS3.1/9, Ms1 3.2/9, ms1mx2.8/45, Error ellipse: s-maj=28.2km s-min=20.8km az=156.0*
*ISCJB **21** 05:55:06.8±0.7, 8°.6S±0°.1×157°.23E±0°.07, h16km, mb3.8/7, MS3.1/6, Error ellipse: s-maj=19.3km s-min=9.3km az=8.4*
ISC 21 05:55:08.0±0.8, 8°.7S±0°.2×157°.38E±0°.09, h16km, n17, σ1°37/10, mb3.9/7, MS3.2/6, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.64**	**107**	*e*P		**Pn**	**05 55 51.0**	**+1.0**
HNR	**Honiara**	**2.64**	**107**	Pn		**Pn**	**05 55 49.6**	**-0.4**
	30nm,0.3s,baz=232,slow=10,SNR=2.9							
HNR				Sn		**Sb**	**05 56 26.3**	**-0.9**
	36nm,0.3s,baz=139,slow=20,SNR=4.7							
PMG	**Port Moresby**	**10.12**	**265**	LR		LR	06 01 02.6	
	comp=Z,172nm,19.1s,baz=168,slow=36							
DZM	**Mont Dzumac**	**15.91**	**148**	LR		LR	06 03 53.2	
	comp=Z,120nm,18.2s,baz=249,slow=33							
JAY	**Jayapura**	**17.68**	**289**	LR		LR	06 05 07.5	
	comp=Z,24nm,21.6s,baz=348,slow=34							
WRA	**Warramunga Arr**	**24.94**	**241**	P		**P**	**06 00 28.7**	**-2.1**
	1.6nm,0.6s,baz=64,slow=9.7,SNR=5.5							
ASAR	**Alice Springs**	**26.96**	**234**	P		**P**	**06 00 49.9**	**+0.8**
	1.1nm,0.7s,baz=72,slow=9.9,SNR=8.9							
STKA	**Stephens Creek**	**27.35**	**210**	P		**P**	**06 00 53.1**	**+0.7**
	2.5nm,0.7s,baz=35,slow=14,SNR=3.5							
STKA				LR		LR	06 11 08.4	
	comp=Z,65nm,19.0s,baz=25,slow=35							
AFI	**Afiamalu**	**30.67**	**103**	LR		LR	06 12 38.3	
	comp=Z,45nm,19.1s,baz=84,slow=34							
DAV	**Davao City (W)**	**35.35**	**295**	LR		LR	06 16 41.9	
	comp=Z,18nm,18.5s,baz=170,slow=37							
LEM	**Lembang**	**49.31**	**268**	LR		LR	06 26 26.3	
	comp=Z,56nm,19.1s,baz=144,slow=38							
PETK	**Petropavlovsk-**	**61.55**	**0**	LR		LR	06 29 00.1	
	comp=Z,19nm,21.8s,baz=141,slow=33							
CMAR	**Chiang Mai Arr**	**63.64**	**295**	LR		LR	06 34 43.3	
	comp=Z,5.8nm,18.2s,baz=130,slow=37							
SONM	**Songino Array**	**72.03**	**327**	P		**P**	**06 06 31.5**	**+0.2**
	0.7nm,1.0s,baz=149,slow=6.4,SNR=4.0							
ILAR	**Eielson Array**	**84.08**	**21**	P		**P**	**06 07 36.5**	**-1.3**
	1.1nm,1.1s,baz=253,slow=4.8,SNR=6.9							
MKAR	**Makanchi Array**	**86.22**	**318**	P		**P**	**06 07 48.5**	**-0.4**
	1.4nm,0.9s,baz=120,slow=4.3,SNR=4.6							
NVAR	**Mina Array Bea**	**90.91**	**51**	P		**P**	**06 08 13.6**	**+1.9**
	0.2nm,0.6s,baz=238,slow=5.2,SNR=2.8							

KRSC 21 05:59:07.3±1.2, 48°.19N×156°.21E, h39km±24km, ML4.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.50**	**359**	P		Pn	05 59 47.4	+2.0
SKR				S		Sn	06 00 17.0	+2.5
PAU	**Pauzhetka**	**3.30**	**7**	S		Sn	06 00 39.5	+5.0
KDTR	**Khodutka, Kamc**	**3.82**	**18**	P		Pn	06 00 08.0	+4.5
KDTR				S		Sn	06 00 52.7	+5.6
ASAK	**Asacha**	**4.34**	**14**	*e*P		Pn	06 00 15.9	+5.2
MTVR	**Mutnovka**	**4.48**	**16**	P		Pn	06 00 17.7	+4.9
MTVR				S		Sn	06 01 09.5	+5.8
RUS	**Russkaya**	**4.50**	**18**	*e*P		Pn	06 00 17.1	+4.2
RUS				S		Sn	06 01 08.4	+4.6
APC	**Apacha**	**4.78**	**7**	*e*P		Pn	06 00 21.6	+4.9
GNL	**Ganaly**	**5.62**	**11**	P		Pn	06 00 32.3	+3.9
MKZ	**Mys Kozlova**	**7.25**	**26**	*e*P		Pn	06 00 55.1	+4.5
BKI	**Bering**	**9.27**	**37**	S		Sn	06 03 04.0	+2.9

IDC 21 06:14:58.9±3.2, 29°.90S×138°.99E, h0km, mb1 2.9/3, mb1mx2.9/43, mbtmp2.7/3, ML2.5/3, Error ellipse: s-maj=144.0km s-min=17.3km az=48.0, South Australia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**2.99**	**132**	Pn		Pn	06 15 45.9	-1.6
	0.3nm,0.3s,baz=311,slow=9.3,SNR=2.2							
STKA				Pg		Pg	06 15 54.6	-1.5
	0.8nm,0.3s,baz=304,slow=16,SNR=4.7							
STKA				Lg		Lg	06 16 34.1	
	1.1nm,0.3s,baz=359,slow=23,SNR=3.8							
ASAR	**Alice Springs**	**7.69**	**323**	Pn		Pn	06 16 53.0	+0.7
	0.1nm,0.3s,baz=151,slow=13,SNR=3.5							
WRA	**Warramunga Arr**	**10.77**	**336**	Pn		Pn	06 17 34.0	-0.4
	0.1nm,0.3s,baz=151,slow=12,SNR=6.3							

IDC 21 06:38:27.1±2.1, 17°.55S×179°.51E, h0km, mb3.7/6, mb1 4.1/6, mb1mx3.8/45, mbtmp3.7/6, Error ellipse: s-maj=142.8km s-min=22.9km az=154.0, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**42.75**	**259**	P		P	06 46 25.9	-0.8
	0.3nm,0.6s,baz=95,slow=8.0,SNR=10							
ASAR	**Alice Springs**	**42.98**	**254**	P		P	06 46 28.9	+0.4
	2.3nm,0.6s,baz=88,slow=8.3,SNR=29							
NVAR	**Mina Array Bea**	**80.55**	**45**	P		P	06 50 41.4	-0.4
	0.2nm,0.6s,baz=229,slow=8.2,SNR=3.3							
ILAR	**Eielson Array**	**86.00**	**14**	P	

SRTM			S		Sn	06 44 12.8	+1.6
BTMN	**Batman**	**1.52 212**	*i* P		**Pb**	06 43 58.9	-0.4
BTMN			*i* S		**Sg**	06 44 20.6	+0.9
BTMN	**Batman**	**1.52 212**	P		**Pb**	06 43 58.9	-0.4
BTMN			S		**Sg**	06 44 20.6	+0.9
KOPT	**Kop Dagi**	**1.61 302**	*e*P		**Pg**	06 44 01.7	-0.1
KELT	**Kelkit**	**2.52 293**	*e*P		**Pb**	06 44 15.1	-1.4

IDC 21 06:49:43.3±6.3, 9°39N×94°22E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.5/68, mbtmp3.6/4, Error ellipse: s-maj=352.4km s-min=22.5km az=58.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**38.64**	**347**	P	P	06 57 07.1	-1.3
	0.5nm,0.8s,baz=152,slow=7.6,SNR=3.9						
KURBB	**Kurchatov Arra**	**43.11**	**345**	P	P	06 57 46.1	+0.9
	0.1nm,0.4s,baz=163,slow=6.6,SNR=3.2						
WRA	**Warramunga Arr**	**49.09**	**127**	P	P	06 58 33.0	+0.2
	1.1nm,0.4s,baz=307,slow=8.2,SNR=64						
ASAR	**Alice Springs**	**50.83**	**131**	P	P	06 58 45.6	-0.5
	0.7nm,0.5s,baz=307,slow=6.7,SNR=9.8						

*IDC **21** 06:57:08.0±0.7, 12°58N×143°99E, h0km, mb4.0/15, mb1 4.2/15, mb1mx4.0/63, mbtmp4.0/15, MS3.4/22, Ms1 3.5/22, ms1mx3.2/58, Error ellipse: s-maj=19.7km s-min=15.0km az=119.0*

*ISCJB **21** 06:57:10.6±0.5, 12°56N±0°07×143°89E±0°08, h27km, mb4.1/22, MS3.5/21, Error ellipse: s-maj=13.3km s-min=8.2km az=40.2*

*NEIC **21** 06:57:13.4±0.4, 12°58N×143°97E, h35km, mb4.7/4, Error ellipse: s-maj=12.5km s-min=9.3km az=109.0*

ISC 21 06:57:12.2±0.8, 12°6N±0°1×144°0E±0°1, h27km, n49, σ0°84/30, mb4.1/22, MS3.5/21, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.30**	**39**	Pn	**Pn**	06 57 34.5	-0.1
	98nm,0.3s,baz=316,slow=3.7,SNR=31						
GUMO				Sn	**Sb**	06 57 51.9	-0.4
	333nm,0.3s,baz=168,slow=23,SNR=35						
GUMO	**Guam**	**1.30**	**39**	Pn	**Pn**	06 57 34.5	-0.1
GUMO				*e*Sn	**Sn**	06 57 51.8	+0.6
GUMO				Sn	**Sb**	06 57 51.9	-0.4
JAY	**Jayapura**	**15.35**	**193**	LR	LR	07 05 27.0	
	comp=Z,266nm,21.1s,baz=338,slow=32						
DAV	**Davao City (W)**	**18.98**	**255**	LR	LR	07 09 31.6	
	comp=Z,38nm,19.6s,baz=186,slow=39						
JOW	**Kunigami**	**20.49**	**316**	LR	LR	07 10 29.0	
	comp=Z,129nm,18.1s,baz=154,slow=39						
JHJ	**Hachijo jima 2**	**20.82**	**350**	LR	LR	07 08 38.7	
	comp=Z,135nm,19.1s,baz=65,slow=33						
PMG	**Port Moresby**	**22.05**	**172**	LR	LR	07 09 28.6	
	comp=Z,44nm,20.7s,baz=48,slow=34						
H11S3	**WAKE ISLAND Hy**	**22.60**	**72**	T	T	07 25 48.4	
	baz=248,slow=74,SNR=35						
H11S1	**WAKE ISLAND Hy**	**22.62**	**72**	T	T	07 25 48.2	
	baz=248,slow=74,SNR=22						
H11S2	**WAKE ISLAND Hy**	**22.62**	**72**	T	T	07 25 46.2	
	baz=248,slow=74,SNR=22						
H11N1	**WAKE ISLAND Hy**	**23.07**	**69**	T	T	07 26 18.1	
	baz=255,slow=75,SNR=32						
H11N2	**WAKE ISLAND Hy**	**23.07**	**69**	T	T	07 26 14.4	
	baz=255,slow=75,SNR=35						
H11N3	**WAKE ISLAND Hy**	**23.08**	**69**	T	T	07 26 21.2	
	baz=255,slow=75,SNR=24						
MJAR	**Matsushiro Ar**	**24.44**	**349**	P	**P**	**07 02 28.3**	**-0.4**
	0.7nm,0.4s,baz=177,slow=9.0,SNR=4.1						
MJAR				LR	LR	07 11 01.6	
	comp=Z,87nm,18.0s,baz=165,slow=34						
KSRS	**Korea Array**	**28.67**	**333**	P	**P**	**07 03 07.6**	**+0.9**
	0.6nm,0.3s,baz=125,slow=8.9,SNR=4.2						
KSAR	**Wonju Array Be**	**28.67**	**333**	P	**P**	**07 03 07.6**	**+0.8**
WRAB	**Tennant Creek**	**33.67**	**197**	*e*P	**P**	**07 03 51.0**	**0.0**
	14nm,1.3s						
WRA	**Warramunga Arr**	**33.69**	**197**	P	**P**	**07 03 50.4**	**-0.7**
	1.5nm,0.7s,baz=20,slow=9.7,SNR=19						
ASAR	**Alice Springs**	**37.35**	**195**	P	**P**	**07 04 22.9**	**+0.3**
	1.6nm,0.9s,baz=18,slow=7.9,SNR=7.6						
ASAR				LR	LR	07 20 27.7	
	comp=Z,111nm,18.5s,baz=11,slow=38						
KLR	**Kul'dur**	**37.94**	**347**	P	**P**	**07 04 27.7**	**+0.4**
	0.1nm,0.6s,baz=126,slow=8.3,SNR=3.8						
PETK	**Petropavlovsk-**	**41.89**	**12**	LR	LR	07 20 05.6	
	comp=Z,96nm,20.6s,baz=202,slow=33						
CMAR	**Chiang Mai Arr**	**43.75**	**284**	P	**P**	**07 05 15.3**	**-0.3**
	2.9nm,0.7s,baz=83,slow=6.5,SNR=9.7						
CMAR				LR	LR	07 23 55.6	
	comp=Z,49nm,20.2s,baz=97,slow=37						
STKA	**Stephens Creek**	**44.25**	**183**	LR	LR	07 26 24.8	
	comp=Z,46nm,18.0s,baz=24,slow=40						
SONM	**Songino Array**	**47.10**	**326**	P	**P**	**07 05 43.4**	**+1.5**
	0.4nm,0.5s,baz=141,slow=8.9,SNR=2.6						
NWAO	**Narrogin (SRO)**	**51.98**	**209**	LR	LR	07 28 57.8	
	comp=Z,66nm,21.8s,baz=104,slow=37						
MKAR	**Makanchi Array**	**61.66**	**317**	P	**P**	**07 07 26.8**	**-1.0**
	0.6nm,0.7s,baz=91,slow=8.6,SNR=7.1						
KURK	**Kurchatov**	**64.84**	**320**	P	**P**	**07 07 48.5**	**-0.3**
	1.6nm,1.1s						
KURBB	**Kurchatov Arra**	**64.87**	**320**	P	**P**	**07 07 48.4**	**-0.5**
	1.5nm,0.6s,baz=105,slow=6.8,SNR=17						
ILAR	**Eielson Array**	**69.83**	**25**	P	**P**	**07 08 18.9**	**-1.3**
	0.3nm,0.6s,baz=252,slow=5.4,SNR=4.5						
ILAR				LR	LR	07 36 44.8	
	comp=Z,27nm,20.8s,baz=280,slow=34						
BVAR	**Borovoye Array**	**70.22**	**322**	P	**P**	**07 08 21.6**	**-1.1**
	1.2nm,0.3s,baz=117,slow=7.4,SNR=5.7						
AKTO	**Aktyubinsk**	**77.90**	**319**	LR	LR	07 47 03.3	
	comp=Z,12nm,18.4s,baz=77,slow=38						
GEYT	**Alibeck**	**79.20**	**307**	LR	LR	07 46 59.3	
	comp=Z,32nm,21.0s,baz=120,slow=38						
WSAR	**Wadi Sarin**	**80.97**	**292**	LR	LR	07 48 44.7	
	comp=Z,22nm,18.6s,baz=102,slow=38						
YKA	**Yellowknife Ar**	**84.14**	**27**	P	**P**	**07 09 40.6**	**0.0**
	0.7nm,0.8s,baz=272,slow=3.8,SNR=3.1						
YBH	**Yreka Blue Hor**	**84.16**	**49**	P	**P**	**07 09 41.8**	**+0.5**
	1.3nm,0.8s,baz=0.0,slow=4.0,SNR=2.3						
YBH				LR	LR	07 39 17.3	
	comp=Z,44nm,20.5s,baz=302,slow=30						
SPITS	**Spitsbergen Ar**	**84.92**	**351**	LR	LR	07 49 10.3	
	comp=Z,27nm,18.2s,baz=25,slow=37						
BMO	**Blue Mountains**	**87.28**	**45**	*e*P	**P**	**07 09 57.7**	**+0.9**
	6.0nm,1.2s						
NVAR	**Mina Array Bea**	**88.19**	**51**	P	**P**	**07 10 02.5**	**+1.0**
	3.3nm,0.9s,baz=264,slow=5.8,SNR=19						
MFID	**Camas Ranch**	**88.69**	**46**	*e*P	**P**	**07 10 04.7**	**+1.1**
	6.3nm,1.1s						
HLID	**Hailey**	**89.64**	**45**	*e*P	**P**	**07 10 09.0**	**+1.0**
	6.9nm,1.4s						
FINES	**FINESS Array B**	**91.73**	**335**	P	**P**	**07 10 15.4**	**-1.7**
	1.3nm,0.9s,baz=35,slow=3.4,SNR=4.2						
FINES				LR	LR	07 54 42.8	
	comp=Z,20nm,19.2s,baz=105,slow=38						
PDAR	**Pinedale Array**	**93.26**	**45**	P	**P**	**07 10 24.4**	**-0.6**
	0.2nm,0.6s,baz=251,slow=5.6,SNR=2.6						
PDAR				LR	LR	07 45 32.4	
	comp=Z,21nm,21.4s,baz=300,slow=31						
LAO	**LASA Array**	**94.03**	**41**	*e*P	**P**	**07 10 28.9**	**+0.7**
	6.7nm,1.0s						
AKASG	**Malin Array Be**	**95.37**	**325**	LR	LR	07 55 55.4	
	comp=Z,26nm,20.1s,baz=0.0,slow=37						
HFS	**Hagfors**	**97.42**	**337**	LR	LR	07 57 31.8	
	comp=Z,9.3nm,18.2s,baz=26,slow=37						
ASF	**Jabal al Asfar**	**97.43**	**305**	LR	LR	07 59 43.1	
	comp=Z,502nm,20.9s,baz=316,slow=39						
SFJD	**Kangerlussuaq**	**99.93**	**6**	LR	LR	07 56 57.6	
	comp=Z,9.5nm,19.8s,baz=329,slow=36						
TORD	**Torodi Ar. Bea**	**134.75**	**303**	PKP	**PKPdf**	**07 16 29.8**	**+0.3**
	0.4nm,0.8s,baz=43,slow=2.8,SNR=3.0						
LPAZ	**La Paz**	**148.66**	**101**	PKPbc	**PKPbc**	**07 16 59.7**	**+1.1**
	1.3nm,0.8s,baz=332,slow=1.7,SNR=5.2						

*IDC **21** 07:10:27.8±0.9, 30°31S×178°56W, h221km±9km, mb3.1/2, mb1 3.4/3, mb1mx3.1/40, mbtmp3.7/3, Error ellipse: s-maj=32.1km s-min=19.1km az=114.0*

*ISCJB **21** 07:10:28.2±0.9, 30°2S±0°1×179°1W±0°2, h200km, mb3.2/2, Error ellipse: s-maj=22.8km s-min=9.3km az=32.6*

ISC 21 07:10:27.9±0.9, 30°2S±0°1×179°1W±0°2, h200km, n7, σ2°12/10, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.36**	**46**	P	**Pn**	**07 11 01.3**	**+0.9**
	413nm,0.3s,baz=127,slow=6.2,SNR=14						
RAO				S	**Sn**	07 11 27.1	+1.5
	172nm,0.3s,baz=83,slow=22,SNR=2.4						
URZ	**Urewera**	**8.64**	**201**	P	**Pn**	**07 12 31.1**	**+1.7**
	0.6nm,0.3s,baz=296,slow=4.4,SNR=3.2						
URZ				S	**Sn**	07 14 06.3	-0.2
	1.2nm,0.3s,baz=204,slow=23,SNR=10.0						
ASAR	**Alice Springs**	**42.22**	**267**	P	**P**	**07 18 02.8**	**+1.3**
	0.5nm,0.6s,baz=104,slow=6.4,SNR=7.4						
ASAR				PcP	**PcP**	07 19 51.2	-0.5
	0.2nm,0.3s,baz=123,slow=3.6,SNR=3.7						
WRA	**Warramunga Arr**	**43.19**	**273**	P	**P**	**07 18 10.2**	**+1.0**
	0.8nm,0.6s,baz=111,slow=8.2,SNR=16						
WRA				PcP	**PcP**	07 19 54.3	-0.7
	0.5nm,0.8s,baz=122,slow=3.3,SNR=3.0						
KURBB	**Kurchatov Arra**	**120.30**	**314**	PKP	**PKPdf**	**07 28 51.3**	**-3.5**
	0.1nm,0.2s,baz=79,slow=1.8,SNR=2.5						
FINES	**FINESS Array B**	**144.64**	**339**	PKP	PKPbc	07 29 36.9	-2.3
	0.8nm,0.3s,baz=29,slow=3.2,SNR=7.5						
TORD	**Torodi Ar. Bea**	**163.02**	**182**	PKPab	**PKPab**	**07 30 54.1**	**-3.2**
	0.4nm,0.6s,baz=169,slow=5.7,SNR=4.0						

IDC 21 07:33:16.1±1.5, 31°43N×94°56E, h0km, mb3.4/3, mb1 3.5/5, mb1mx3.2/90, mbtmp3.4/5, ML3.6/2, MS2.9/2, Ms1 2.9/2, ms1mx2.4/54, Error ellipse: s-maj=71.3km s-min=22.7km az=63.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.52**	**162**	LR	LR	07 41 50.4	
	comp=Z,25nm,19.2s,baz=352,slow=38						
MKAR	**Makanchi Array**	**18.02**	**332**	P	P	07 37 28.8	+0.4
	0.1nm,0.3s,baz=141,slow=12,SNR=5.1						
SONM	**Songino Array**	**18.71**	**26**	P	P	07 37 36.0	-0.2
	0.3nm,0.3s,baz=206,slow=9.6,SNR=4.3						
AAK	**Ala-Archa**	**19.48**	**311**	LR	LR	07 46 50.1	
	comp=Z,61nm,21.2s,baz=139,slow=42						
KURBB	**Kurchatov Arra**	**22.57**	**333**	P	P	07 38 17.3	-0.5
	0.8nm,0.6s,baz=139,slow=11,SNR=8.0						
WRA	**Warramunga Arr**	**63.77**	**138**	P	P	07 43 49.7	-0.3
	0.4nm,0.8s,baz=326,slow=7.8,SNR=4.2						
ASAR	**Alice Springs**	**66.49**	**141**	P	P	07 44 08.1	+0.5
	0.3nm,0.5s,baz=327,slow=7.1,SNR=4.0						

*NIED **21** 07:38:00, 37°40N×141°70E, h5km, Mw3.6 Best double couple: M0=2.62000×10^14 NP1:φs=26.00000°, δ=46.00000°, λ=-121.00000°. NP2:φs=247.00000°, δ=52.00000°, λ=-62.00000°.*

*JMA **21** 07:38:49.1±0.1, 37°45N×141°71E, h24km±2km, M3.6*

*IDC **21** 07:38:54.2±2.8, 37°37N×141°73E, h51km±28km, mb3.3/7, mb1 3.5/10, mb1mx3.3/88, mbtmp3.6/10, ML3.1/3, MS2.4/2, Ms1 2.4/2, ms1mx2.1/29, Error ellipse: s-maj=24.7km s-min=16.3km az=86.0*

ISC 21 07:38:47.9±1.9, 37°46N±0°04×141°69E±0°06, h2km±12km, n28, σ1°21/30, mb3.5/7, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.65**	**262**	P	**Pb**	**07 39 02.0**	**-0.1**
JFK				*e*S	**Sb**	07 39 11.2	-0.5
ONAJ	**Iwakimizuishiy**	**0.80**	**243**	P	**Pb**	**07 39 04.0**	**-0.5**
JMM	**Marumori**	**0.82**	**300**	P	**Pb**	**07 39 04.6**	**-0.3**
JMM				S	**Sb**	07 39 15.8	-0.5
JIO	**Ouri**	**1.03**	**345**	P	**Pb**	**07 39 07.9**	**-0.5**
JFT	**Otama**	**1.08**	**273**	P	**Pb**	**07 39 09.2**	**-0.1**
JFT				S	**Sb**	07 39 23.7	-0.1
JOU	**Okura**	**1.21**	**318**	P	**Pn**	**07 39 11.7**	**-0.3**
JOU				S	**Sb**	07 39 28.0	+0.2
JHO	**Hitachi**	**1.23**	**227**	P	**Pg**	**07 39 11.0**	**-0.6**
JHO				S	**Sg**	07 39 26.7	-0.9
JMK	**Ichinoseki**	**1.53**	**346**	P	**Pb**	**07 39 16.0**	**-1.1**
JMK				*e*S	**Sn**	07 39 35.7	-1.1
JFY	**Yanaizu**	**1.58**	**269**	P	**Pb**	**07 39 17.3**	**-0.6**
JFY				S	**Sn**	07 39 37.5	-0.5
MJAR	**Matsushiro Arr**	**2.93**	**253**	P	**Pb**	**07 39 39.3**	**-1.7**
	5.5nm,0.3s,baz=75,slow=18,SNR=17						
MJAR				S	**Sg**	07 40 22.4	+0.2
	3.3nm,0.3s,baz=105,slow=7.4,SNR=5.2						
MAT	**Matsushiro**	**2.93**	**253**	P	**Pn**	**07 39 36.7**	**+1.1**
MAT				S	**Sb**	07 40 16.7	-0.6
JHJ	**Hachijo jima 2**	**4.61**	**200**	P	**Pn**	**07 40 01.7**	**+3.1**
	11nm,0.3s,baz=72,slow=20,SNR=3.1						
JHJ				S	**Sn**	07 40 50.3	-2.4
	7.9nm,0.3s,baz=241,slow=22,SNR=0.9						
ASAJ	**Asahikawa**	**6.68**	**6**	LR	LR	07 43 13.6	
	comp=Z,17nm,18.3s,baz=48,slow=38						
USRK	**Ussuriysk Ar.**	**9.96**	**316**	P	**Pn**	**07 41 15.3**	**+3.3**
	0.2nm,0.3s,baz=138,slow=14,SNR=2.9						
KSRS	**Korea Array**	**10.94**	**274**	LR	LR	07 45 14.5	
	comp=Z,28nm,20.2s,baz=80,slow=34						
SONM	**Songino Array**	**27.73**	**303**	P	**P**	**07 44 38.3**	**+0.5**
	0.3nm,0.4s,baz=115,slow=10,SNR=2.4						
H11N2	**WAKE ISLAND Hy**	**28.18**	**122**	T	T	08 14 09.0	
	baz=315,slow=75,SNR=593						
H11N1	**WAKE ISLAND Hy**	**28.19**	**122**	T	T	08 14 09.6	
	baz=315,slow=75,SNR=343						
H11N3	**WAKE ISLAND Hy**	**28.20**	**122**	T	T	08 14 11.2	
	baz=315,slow=75,SNR=371						
H11S1	**WAKE ISLAND Hy**	**28.91**	**124**	T	T	08 15 05.0	
	baz=316,slow=75,SNR=363						
H11S3	**WAKE ISLAND Hy**	**28.91**	**124**	T	T	08 15 05.1	
	baz=316,slow=75,SNR=365						
H11S2	**WAKE ISLAND Hy**	**28.93**	**124**	T	T	08 15 06.0	
	baz=316,slow=75,SNR=220						
MKAR	**Makanchi Array**	**44.08**	**302**	P	**P**	**07 46 57.2**	**-0.2**
	0.4nm,0.6s,baz=90,slow=6.7,SNR=4.0						
KURBB	**Kurchatov Arra**	**45.91**	**308**	P	**P**	**07 47 12.0**	**+0.2**
	0.6nm,0.5s,baz=81,slow=7.8,SNR=6.4						
KDAK	**Kodiak Island**	**46.63**	**42**	P	**P**	**07 47 16.7**	**-0.7**
	2.0nm,0.7s,baz=281,slow=10,SNR=4.4						
ILAR	**Eielson Array**	**49.02**	**33**	P	**P**	**07 47 36.2**	**+0.4**
	0.2nm,0.7s,baz=271,slow=7.2,SNR=5.1						
WRA	**Warramunga Arr**	**57.52**	**188**	P	**P**	**07 48 38.2**	**-0.6**
	0.2nm,0.3s,baz=6.3,slow=7.1,SNR=12						
TXAR	**Lajitas Array**	**89.69**	**53**	P	**P**	**07 51 47.0**	**-1.0**
	0.2nm,0.7s,baz=282,slow=4.5,SNR=2.8						

*IDC **21** 08:09:48.5±1.2, 58°73S×25°00W, h0km, mb4.2/3, mb1 4.4/4, mb1mx3.8/34, mbtmp4.3/4, ML4.6/1, Error ellipse: s-maj=45.7km s-min=30.5km az=13.0*

*ISCJB **21** 08:09:50.5±0.5, 58°77S±0°08×24°9W±0°2, h28km, mb4.4/11, Error ellipse: s-maj=15.9km s-min=8.3km az=142.5*

*NEIC **21** 08:09:54.1±0.3, 58°69S×24°93W, h35km, mb4.7/12, Error ellipse: s-maj=13.8km s-min=9.6km az=30.0*

ISC 21 08:09:52.8±0.6, 58°7S±0°1×24°9W±0°1, h28km, n35, σ0°90/34, mb4.6/11, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.86**	**157**	P	**Pn**	**08 13 06.3**	**-0.7**
VNA3	**Neumayer Olymp**	**14.07**	**160**	P	**Pn**	**08 13 08.5**	**-1.4**
VNA3				S	Sn	08 15 30.6	-14
VNA2	**Neumayer--Watz**	**14.26**	**156**	P	**Pn**	**08 13 11.5**	**-1.0**
	baz=319,slow=15						
SNAA	**Sanae**	**15.81**	**154**	P	**Pn**	**08 13 32.3**	**-0.8**
SNAA	**Sanae**	**15.81**	**154**	Pn	**Pn**	**08 13 32.3**	**-0.8**
	2.2nm,0.3s,baz=308,slow=17,SNR=23						
SNAA	**Sanae**	**15.81**	**154**	*e*Pn	**Pn**	**08 13 32.3**	**-0.8**
	8.0nm,0.7s						
EFI	**East Falkland**	**20.05**	**276**	*e*P	**P**	**08 14 21.6**	**-1.7**
	39nm,0.9s						
PLCA	**Paso Flores**	**33.74**	**282**	P	**P**	**08 16 31.2**	**-0.4**
	3.0nm,0.9s,baz=142,slow=7.3,SNR=6.8						
PLCA	**Paso Flores**	**33.74**	**282**	*e*P	**P**	**08 16 31.6**	**-0.1**
	12nm,1.3s						
GO05	**HualaæØ**	**38.82**	**287**	*e*P	**P**	**08 17 14.9**	**-0.1**
	28nm,1.3s						
GO04	**Tololo Observa**	**42.18**	**292**	*e*P	**P**	**08 17 44.0**	**+1.0**
	25nm,1.1s						
VNDA	**Vanda**	**43.97**	**182**	*e*P	**P**	**08 17 59.0**	**+2.2**
	2.4nm,1.5s						
LBTB	**Lobatse**	**48.69**	**69**	*e*P	**P**	**08 18 33.4**	**-1.1**
	10nm,1.5s						
PB01	**IPOC Station P**	**49.34**	**300**	*e*P	**P**	**08 18 39.1**	**-0.4**
	9.4nm,1.2s						
MNMC	**Minye Minye**	**51.05**	**301**	*e*P	**P**	**08 18 52.7**	**0.0**
	6.0nm,0.8s						
LPAZ	**La Paz**	**52.92**	**304**	P	**P**	**08 19 06.5**	**-0.5**
	1.8nm,0.3s,baz=166,slow=4.2,SNR=22						
LPAZ	**La Paz**	**52.92**	**304**	*e*P	**P**	**08 19 06.9**	**-0.1**
	2.7nm,0.4s						
SAML	**Samuel**	**57.55**	**313**	*e*P	**P**	**08 19 39.0**	**-0.7**
	4.6nm,0.6s						
PTGA	**Pitinga**	**64.03**	**320**	*e*P	**P**	**08 20 23.4**	**-0.3**
	4.0nm,1.2s						
TOA0	**Torodi Ar. Sit**	**74.80**	**27**	*e*P	**P**	**08 21 30.7**	**+0.5**
TORD	**Torodi Ar. Bea**	**74.80**	**27**	P	**P**	**08 21 30.9**	**+0.7**
	0.4nm,0.3s,baz=199,slow=6.1,SNR=14						
TOA1	**Torodi Ar. Sit**	**74.81**	**27**	*e*P	**P**	**08 21 30.9**	**+0.6**
DZM	**Mont Dzumac**	**98.99**	**191**	*e*LR	LR	08 23 45.2	
	178nm,26.9s						
YKA	**Yellowknife Ar**	**138.96**	**315**	PKP	**PKPdf**	**08 29 15.0**	**+0.1**
	0.5nm,0.6s,baz=125,slow=2.9,SNR=2.3						
YKB5	**Yellowknife Ar**	**138.96**	**315**	*e*PKPdf	**PKPdf**	**08 29 14.9**	**+0.1**
INK	**Inuvik**	**148.63**	**317**	*e*PKPbc	**PKPbc**	**08 29 35.8**	**+0.5**
DAWY	**Dawson**	**149.46**	**308**	*e*PKPbc	**PKPbc**	**08 29 38.5**	**+0.8**
SONA0	**Songino Array**	**149.57**	**89**	*e*PKPbc	**PKPbc**	**08 29 38.5**	**0.0**
SONM	**Songino Array**	**149.57**	**89**	PKPbc	**PKPbc**	**08 29 38.5**	**0.0**
	0.5nm,0.4s,baz=232,slow=1.6,SNR=4.2						
RIDG	**Independ'e Rid**	**151.63**	**306**	*e*PKPbc	**PKPbc**	**08 29 44.0**	**+1.2**
HDA	**Harding Lake**	**152.71**	**307**	*e*PKPbc	**PKPbc**	**08 29 46.9**	**+1.8**
IL1	**Eielson Array**	**152.77**	**307**	*e*PKPbc	**PKPbc**	**08 29 45.7**	**+0.4**
ILAR	**Eielson Array**	**152.77**	**307**	PKPbc	**PKPbc**	**08 29 45.3**	**0.0**
	0.7nm,0.4s,baz=132,slow=1.2,SNR=17						
ILB	**Eielson Array**	**152.77**	**307**	*e*PKPbc	**PKPbc**	**08 29 46.3**	**+1.0**
TOLK	**Toolik Lake Re**	**154.49**	**316**	*e*PKPbc	**PKPbc**	**08 29 49.8**	**+0.8**

*ISCJB **21** 08:43:44.2±0.6, 38°06N±0°03×42°57E±0°04, h4km±7km, Error ellipse: s-maj=5.2km s-min=4.5km az=22.3*

*CSEM **21** 08:43:44.1±0.2, 38°06N×42°60E, h10km, ML2.7, Error ellipse: s-maj=3.9km s-min=3.5km az=133.0*

*DDA **21** 08:43:44.5, 38°09N×42°60E, h7km, Ml2.7*

*ISK **21** 08:43:44.2, 38°06N×42°52E, h10km, ML2.5/5*

ISC 21 08:43:43.9±1.2, 38°05N±0°02×42°62E±0°03, h6km±10km, n22, σ0°86/37, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEVA	**Gevas**	**0.43**	**52**	*i* P	**Pg**	**08 43 52.4**	**0.0**
GEVA				*i* S	**Sb**	08 44 00.0	-1.0
GEVA	**Gevas**	**0.43**	**52**	P	**Pg**	**08 43 52.4**	**0.0**
GEVA				S	**Sb**	08 44 00.0	-1.0
SRTM	**Siirt_Merkez**	**0.56**	**265**	*i* P	**Pg**	**08 43 55.1**	**+0.4**
SRTM				*i* S	**Sg**	08 44 02.6	+0.7
SRTM	**Siirt_Merkez**	**0.56**	**265**	P	**Pg**	**08 43 55.1**	**+0.4**
SRTM				S	**Sg**	08 44 02.6	+0.7
SIRT	**Sirnak**	**0.56**	**195**	PG	**Pg**	**08 43 55.5**	**+0.7**
SIRT				SG	**Sb**	08 44 03.8	-0.8
SIRT	**Sirnak**	**0.56**	**195**	*e*Pg	**Pg**	**08 43 55.5**	**+0.7**
SIRT				*e*Sg	**Sb**	08 44 03.8	-0.8
GURO	**Guroymak-BITLI**	**0.69**	**317**	PG	**Pg**	**08 43 56.8**	**-0.3**
GURO				SG	**Sg**	08 44 05.9	-0.2
GURO	**Guroymak-BITLI**	**0.69**	**317**	*e*Pg	**Pg**	**08 43 56.8**	**-0.3**
GURO				*e*Sg	**Sg**	08 44 05.9	-0.2
ADCV	**BITLIS_Adilcev**	**0.77**	**6**	*i* P	**Pg**	**08 43 58.9**	**+0.3**
ADCV				*i* S	**Sb**	08 44 10.1	-0.5
ADCV	**BITLIS_Adilcev**	**0.77**	**6**	P	**Pg**	**08 43 58.9**	**+0.3**
ADCV				S	**Sb**	08 44 10.1	-0.5
HAKT	**HAKKARI**	**0.99**	**119**	*i* P	**Pg**	**08 44 02.9**	**+0.1**
HAKT				*i* S	**Sn**	08 44 19.3	+0.3
HAKT	**HAKKARI**	**0.99**	**119**	P	**Pg**	**08 44 02.9**	**+0.1**
HAKT				S	**Sn**	08 44 19.3	+0.3
SVAN	**Silvan-Diyarba**	**1.13**	**276**	PG	**Pg**	**08 44 04.7**	**-0.9**
SVAN	**Silvan-Diyarba**	**1.13**	**276**	*e*Pg	**Pg**	**08 44 04.7**	**-0.9**
EKAR	**Karacoban**	**1.29**	**340**	*i* P	**Pb**	**08 44 08.4**	**-0.3**
EKAR				*i* S	**Sn**	08 44 30.1	+3.7
EKAR	**Karacoban**	**1.29**	**340**	P	**Pb**	**08 44 08.4**	**-0.3**
TUTA	**Tutak**	**1.36**	**6**	*i* P	**Pn**	**08 44 09.5**	**-0.3**
TUTA				*i* S	**Sg**	08 44 28.4	+0.6
TUTA	**Tutak**	**1.36**	**6**	P	**Pn**	**08 44 09.5**	**-0.3**
TUTA				S	**Sg**	08 44 28.4	+0.6
MAZI	**Mazidag**	**1.82**	**252**	PN	**Pn**	**08 44 15.4**	**-0.6**

ASAR Alice Springs 29.38 125 P P 08 53 49.6 +0.9
0.4nm,0.8s,baz=303,slow=8.6,SNR=4.4
ASAR PcP **PcP 08 56 53.5 -0.5**
0.2nm,0.4s,baz=296,slow=1.8,SNR=4.3
H08S2 Diego Garcia H 34.97 268 T T 09 31 50.1
baz=92,slow=75,SNR=65
H08S3 Diego Garcia H 34.98 268 T T 09 31 54.1
baz=92,slow=75,SNR=251
H08S1 Diego Garcia H 34.99 268 T T 09 31 54.7
baz=92,slow=75,SNR=30
STKA Stephens Creek 39.28 132 P **P 08 55 16.0 +1.8**
1.9nm,0.4s,baz=308,slow=7.4,SNR=9.6
STKA Stephens Creek 39.28 132 *e*P **P 08 55 15.8 +1.7**
2.2nm,1.5s
SONA0 Songino Array 55.75 359 *e*P **P 08 57 21.1 -0.7**
SONA0 *e*PcP **PcP 08 58 19.7 -0.6**
SONM Songino Array 55.75 359 P **P 08 57 21.0 -0.7**
0.4nm,0.5s,baz=189,slow=8.3,SNR=3.4
SONM PcP **PcP 08 58 19.7 -0.6**
1.2nm,0.5s,baz=178,slow=3.7,SNR=6.6
SONA1 Songino Array 55.77 359 *e*P **P 08 57 19.3 -2.5**
MK01 Makanchi Array 59.21 340 *e*P **P 08 57 43.9 -2.0**
MK32 Makanchi Array 59.23 340 *e*P **P 08 57 43.9 -2.2**
MKAR Makanchi Array 59.23 340 P **P 08 57 43.9 -2.2**
0.7nm,0.5s,baz=156,slow=8.5,SNR=4.8
KURBB Kurchatov Arra 63.80 340 P **P 08 58 15.7 -1.0**
0.4nm,0.5s,baz=150,slow=6.1,SNR=4.1
KURK Kurchatov 63.85 340 *e*P **P 08 58 15.7 -1.3**
BVAR Borovoye Array 68.73 337 P **P 08 58 47.1 -1.2**
0.6nm,0.5s,baz=123,slow=5.3,SNR=3.2
ABKAR Abkulak array 70.80 329 *e*P **P 08 59 00.3 -0.8**
TXAR Lajitas Array 143.70 50 PKP PKPbc 09 07 18.5 +0.7
0.2nm,0.4s,baz=218,slow=1.4,SNR=8.7
TKL Tuckaleechee C 150.64 19 PKPbc **PKPbc 09 07 36.6 -0.3**
2.0nm,0.5s,baz=0.0,slow=1.0,SNR=7.0
TKL Tuckaleechee C 150.64 19 *e*PKPbc **PKPbc 09 07 35.8 -1.1**

*ISCJB **21** 08:51:36.8±0.8,24.°01S±0.°09×180.°0E±0.°2,h518km, mb4.0/8,Error ellipse: s-maj=18.4km s-min=12.4km az=179.9*
*IDC **21** 08:51:36.2±2.6,24.°08S×179.°93W,h499km±28km,mb3.6/9, mb1 3.7/10,mb1mx3.3/54,mbtmp4.4/10,Error ellipse: s-maj=21.4km s-min=18.6km az=23.0*
ISC 21 08:51:37.8±0.9,24.°1S±0.°1×180.°0W±0.°1,h518km,n13, σ1§06/15,mb4.1/8,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.29**	**189**	P	**P**	**08 54 41.2**	**+1.1**
	1.8nm,0.3s,baz=299,slow=3.5,SNR=10						
URZ				S	**S**	**08 57 09.1**	**-1.5**
	0.7nm,0.3s,baz=264,slow=21,SNR=8.8						
RPZ	**Rata Peaks**	**20.87**	**199**	P	**P**	**08 55 43.2**	**0.0**
	7.5nm,0.6s,baz=37,slow=0.5,SNR=10						
CTA	**Charters Tower**	**31.52**	**271**	P	**P**	**08 57 17.6**	**+0.3**
	14nm,0.4s,baz=94,slow=13,SNR=28						
STKA	**Stephens Creek**	**34.67**	**248**	P	**P**	**08 57 44.1**	**+0.3**
	1.8nm,0.3s,baz=91,slow=8.8,SNR=6.3						
ASAR	**Alice Springs**	**42.03**	**261**	P	**P**	**08 58 43.6**	**-0.3**
	2.4nm,0.3s,baz=98,slow=7.1,SNR=54						
ASAR				ScP	**ScP**	**09 03 29.1**	**+1.1**
	0.7nm,0.7s,baz=109,slow=4.2,SNR=6.2						
WRA	**Warramunga Arr**	**42.43**	**266**	P	**P**	**08 58 46.2**	**-0.8**
	7.7nm,0.5s,baz=97,slow=8.4,SNR=211						
JAY	**Jayapura**	**43.65**	**293**	P	**P**	**08 58 55.5**	**-1.1**
	7.0nm,0.6s,baz=114,slow=20,SNR=4.9						
MAW	**Mawson**	**77.54**	**200**	P	**P**	**09 02 40.0**	**+0.6**
	1.5nm,0.8s,baz=121,slow=5.9,SNR=3.6						
NVAR	**Mina Array Bea**	**84.90**	**44**	P	**P**	**09 03 17.3**	**-0.8**
	0.2nm,0.5s,baz=220,slow=4.1,SNR=2.9						
TXAR	**Lajitas Array**	**90.53**	**58**	P	**P**	**09 03 44.3**	**-0.4**
	0.6nm,0.7s,baz=219,slow=6.2,SNR=9.3						
KURBB	**Kurchatov Arra**	**115.44**	**316**	PKP	**PKPdf**	**09 09 21.3**	**+1.0**
	0.1nm,0.4s,baz=111,slow=2.1,SNR=3.5						
BRTR	**Keskin Array B**	**147.75**	**307**	PKPbc	**PKPbc**	**09 10 26.3**	**+1.9**
	0.7nm,0.6s,baz=85,slow=2.3,SNR=3.8						
TORD	**Torodi Ar. Bea**	**168.95**	**188**	PKPab	**PKPab**	**09 11 59.4**	**-1.1**
	0.5nm,0.9s,baz=186,slow=4.0,SNR=2.8						

*NNC **21** 08:51:55.4±2.9,53.°47N×87.°54E,h0km,mb3.9,mpv3.6, Error ellipse: s-maj=23.5km s-min=10.0km az=64.0*
IDC 21 08:51:56.6±2.4,53.°43N×87.°48E,h0km,mb1 3.6/3, mb1mx3.2/80,mbtmp3.6/3,ML3.4/3,7C-6D,Error ellipse: s-maj=21.6km s-min=12.1km az=62.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.66**	**289**	*i*		09 02 40.0	
	baz=105,slow=328,SNR=3.0						
ZAA0	**Zalesovo Array**	**1.66**	**289**	⇓Pg	Pn	08 52 25.1	-1.8
	24nm,0.6s						
ZAA0				⇑Lg	Lg	08 52 51.3	
	22nm,0.5s						
ZALV	**Zalesovo Beam**	**1.66**	**289**	Pg	Pn	08 52 25.3	-1.7
	12nm,0.3s,baz=107,slow=15,SNR=84						
ZALV				Lg	Lg	08 52 48.4	
	7.8nm,0.3s,baz=108,slow=32,SNR=5.2						
KURK	**Kurchatov**	**6.10**	**247**	⇑Pn	Pn	08 53 28.2	+0.3
	4.9nm,0.7s						
KURK				⇓Lg	Lg	08 55 09.7	
	10nm,0.7s						
KURBB	**Kurchatov Arra**	**6.20**	**247**	Pn	Pn	08 53 29.6	+0.4
	0.4nm,0.3s,baz=62,slow=14,SNR=53						
KURBB				Sn	Sn	08 54 40.4	-0.3
	0.1nm,0.3s,baz=64,slow=2.2,SNR=4.5						
KURBB				Lg	Lg	08 55 12.2	
	0.1nm,0.3s,baz=60,slow=29,SNR=9.5						
KURBB	**Kurchatov Arra**	**6.20**	**247**	⇑Pn	Pn	08 53 29.6	+0.4
	6.2nm,0.5s						
KURBB				⇑Sn	Sn	08 54 40.3	-0.4
	8.5nm,0.5s						
KURBB				⇓Lg	Lg	08 55 11.6	
	26nm,0.7s						
MK31	**Makanchi Array**	**7.43**	**209**	⇑Pn	Pn	08 53 47.0	+0.7
	0.4nm,0.2s,baz=28,slow=13,SNR=61						
MK31				⇓Sn	Sn	08 55 12.3	+1.1
	2.4nm,0.7s,baz=30,slow=26,SNR=4.8						
MK31				⇓Lg	Lg	08 55 53.9	
	3.3nm,0.6s,baz=34,slow=29,SNR=5.7						
MKAR	**Makanchi Array**	**7.43**	**209**	Pn	Pn	08 53 47.3	+1.0
	0.7nm,0.3s,baz=29,slow=13,SNR=56						
MKAR				Sn	Sn	08 55 11.5	+0.3
	0.5nm,0.3s,baz=30,slow=27,SNR=9.7						
MKAR				Lg	Lg	08 55 50.4	
	0.3nm,0.3s,baz=27,slow=29,SNR=6.9						
MAKZ	**Makanchi**	**7.51**	**210**	⇑Pn	Pn	08 53 47.9	+0.5
	1.1nm,0.4s						
MAKZ				⇓Sn	Sn	08 55 14.2	+1.0
	2.2nm,0.7s						
MAKZ				⇑Lg	Lg	08 55 56.0	
	7.0nm,0.9s						
BVAR	**Borovoye Array**	**10.26**	**275**	Pn	Pn	08 54 24.4	-0.5
	0.5nm,0.3s,baz=87,slow=13,SNR=13						
BVAR				Sn	Sn	08 56 16.2	-4.2
	0.6nm,0.3s,baz=76,slow=24,SNR=9.7						

*ISCJB **21** 09:04:04.5±0.2,62.°32N±0.°02×149.°58W±0.°04,h72km±3km, mb3.5/7,Error ellipse: s-maj=3.3km s-min=3.0km az=14.3*
*IDC **21** 09:04:05.1±2.4,62.°36N×149.°95W,h59km±23km,mb3.3/7, mb1 3.6/11,mb1mx3.3/80,mbtmp3.6/11,ML3.3/4,MS2.7/5, Ms1 2.8/5,ms1mx2.4/45,Error ellipse: s-maj=25.0km s-min=16.2km az=47.0*
*NEIC **21** 09:04:06.4±0.0,62.°30N×149.°61W,h54km,ML3.5(AEIC), After AEIC.*
ISC 21 09:04:05.6±0.8,62.°31N±0.°03×149.°63W±0.°03,h61km±7km, n111,σ0§80/121,mb3.7/7,Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRAP	**Trapper Creek**	**0.29**	**275**	P	**Pn**	**09 04 15.3**	**-0.3**
TRAP				S	**Sn**	**09 04 23.3**	**+0.4**
GHO	**Glory Hole Cre**	**0.64**	**148**	P	**Pn**	**09 04 18.8**	**-0.4**
GHO				S	**Sn**	**09 04 28.7**	**-0.5**
PMR	**Palmer**	**0.76**	**162**	P	**Pn**	**09 04 20.0**	**-0.6**
SML	**Sawmill**	**0.79**	**129**	P	**Pn**	**09 04 20.4**	**-0.7**
SML				S	**Sn**	**09 04 32.2**	**-0.2**
SKT	**Skwentna**	**0.95**	**250**	P	**Pn**	**09 04 23.1**	**0.0**
SUA	**Susitna One**	**1.00**	**212**	P	**Pn**	**09 04 23.8**	**0.0**
SUA				S	**Sn**	**09 04 37.6**	**+0.4**
KNK	**Knik Glacier**	**1.06**	**148**	P	**Pn**	**09 04 24.4**	**0.0**
KNK				S	**Sn**	**09 04 39.0**	**+0.5**
RND	**Reindeer**	**1.16**	**18**	P	**Pn**	**09 04 25.7**	**-0.1**
FIB	**Fire Island**	**1.18**	**193**	P	**Pn**	**09 04 26.6**	**+0.7**
TRF	**Thorofare Moun**	**1.18**	**346**	P	**Pn**	**09 04 26.3**	**+0.1**
SCM	**Sheep Creek Mo**	**1.19**	**113**	P	**Pn**	**09 04 26.0**	**-0.2**
RC01	**Rabbit Creek A**	**1.23**	**182**	P	**Pn**	**09 04 26.5**	**-0.2**
RC01				S	**Sn**	**09 04 43.0**	**+0.6**
DHY	**Denali Highway**	**1.29**	**53**	P	**Pn**	**09 04 27.2**	**-0.5**
PPLA	**Purkeypile**	**1.32**	**298**	P	**Pn**	**09 04 28.0**	**0.0**
KTH	**Kantishna Hill**	**1.38**	**335**	P	**Pn**	**09 04 29.1**	**+0.4**
KTH				S	**Sn**	**09 04 46.5**	**+0.5**
MCK	**McKinley**	**1.46**	**12**	P	**Pn**	**09 04 30.2**	**+0.4**
SPCG	**Spurr Capps Gl**	**1.53**	**229**	P	**Pn**	**09 04 30.8**	**0.0**
CAST	**Castle Rocks**	**1.58**	**316**	P	**Pn**	**09 04 31.5**	**+0.1**
SPCP	**Crater Peak Br**	**1.59**	**230**	P	**Pn**	**09 04 31.9**	**+0.3**
CKT	**Bend**	**1.66**	**229**	P	**Pn**	**09 04 33.2**	**+0.8**
CKL	**Chakachamna La**	**1.71**	**230**	P	**Pn**	**09 04 33.8**	**+0.6**
SPWE	**Spurr West**	**1.74**	**234**	P	**Pn**	**09 04 34.6**	**+1.0**
SLKM	**Skilak Lake**	**1.83**	**189**	P	**Pn**	**09 04 35.3**	**+0.5**
BWN	**Browne**	**1.87**	**2**	P	**Pn**	**09 04 35.7**	**+0.4**
BPAW	**Bear Paw Mtn.**	**1.90**	**342**	P	**Pn**	**09 04 35.6**	**0.0**
KLU	**Klutina**	**1.94**	**113**	P	**Pn**	**09 04 36.2**	**-0.1**
PS11	**TAPS Pump St11**	**1.96**	**95**	P	**Pn**	**09 04 37.6**	**+1.1**
VMT	**TAPS Tl Valdez**	**1.98**	**127**	P	**Pn**	**09 04 37.1**	**+0.3**
CHUM	**Lake Minchumin**	**1.99**	**323**	P	**Pn**	**09 04 37.2**	**+0.3**
PAX	**Paxson**	**2.03**	**69**	P	**Pn**	**09 04 38.5**	**+0.9**
HARP	**HAARP**	**2.09**	**85**	P	**Pn**	**09 04 39.3**	**+1.0**
DIV	**Divide**	**2.19**	**121**	P	**Pn**	**09 04 39.0**	**-0.7**
DFR	**Drift River**	**2.27**	**222**	P	**Pn**	**09 04 41.6**	**+0.9**
WRH	**Wood River Hil**	**2.28**	**17**	P	**Pn**	**09 04 40.7**	**0.0**
PS12	**TAPS Pump St12**	**2.29**	**110**	P	**Pn**	**09 04 40.7**	**-0.3**
NEA	**Nenana**	**2.29**	**6**	P	**Pn**	**09 04 41.0**	**+0.1**
RDJH	**Redoubt Jeurge**	**2.30**	**223**	P	**Pn**	**09 04 41.8**	**+0.6**
NCT	**North Crescent**	**2.37**	**224**	P	**Pn**	**09 04 42.8**	**+0.7**
RDWB	**Redoubt West**	**2.39**	**222**	P	**Pn**	**09 04 43.1**	**+0.5**
HDA	**Harding Lake**	**2.43**	**29**	P	**Pn**	**09 04 42.8**	**-0.1**
CCB	**Clear Creek Bu**	**2.48**	**18**	P	**Pn**	**09 04 43.5**	**-0.1**
PS08	**TAPS Pump Stn8**	**2.57**	**28**	P	**Pn**	**09 04 44.8**	**0.0**
EYAK	**Cordova Ski Ar**	**2.57**	**132**	P	**Pn**	**09 04 44.6**	**-0.1**
BRLK	**Bradley Lake**	**2.63**	**194**	P	**Pn**	**09 04 46.1**	**+0.5**
COLA	**College**	**2.69**	**16**	P	**Pn**	**09 04 46.6**	**+0.2**
MDM	**Murphy Dome**	**2.73**	**13**	P	**Pn**	**09 04 47.2**	**+0.2**
BMRM	**Bremner River**	**2.75**	**117**	P	**Pn**	**09 04 46.8**	**-0.5**
ILAR	**Eielson Array**	**2.76**	**25**	P	**Pn**	**09 04 47.3**	**-0.1**
	10.0nm,0.3s,baz=206,slow=14,SNR=436						
ILAR				S	**Sn**	**09 05 18.2**	**-1.2**
	23nm,0.3s,baz=212,slow=22,SNR=23						
ILAR				LR	LR	09 06 00.7	
	comp=Z,96nm,19.3s,baz=210,slow=42						
ILB	**Eielson Array**	**2.76**	**25**	P	**Pn**	**09 04 47.2**	**-0.1**
MLY	**Manley**	**2.77**	**350**	P	**Pn**	**09 04 47.6**	**0.0**
HOM	**Homer**	**2.84**	**201**	P	**Pn**	**09 04 49.4**	**+0.9**
GLM	**Gilmore Dome**	**2.87**	**19**	P	**Pn**	**09 04 49.3**	**+0.5**
CNPM	**China Poot**	**2.90**	**196**	P	**Pn**	**09 04 50.1**	**+0.7**
GOAT	**Goat Mountain**	**2.93**	**124**	P	**Pn**	**09 04 49.3**	**-0.4**
TT01	**Tatalina**	**3.01**	**284**	P	**Pn**	**09 04 50.5**	**-0.3**
SCRK	**Sand Creek**	**3.06**	**54**	P	**Pn**	**09 04 52.0**	**+0.4**
RAGM	**Ragged Mountai**	**3.07**	**127**	P	**Pn**	**09 04 52.1**	**+0.5**
SVW2	**Sparrevohn**	**3.08**	**249**	P	**Pn**	**09 04 51.9**	**+0.1**
VRDI	**Verde Repeater**	**3.13**	**108**	P	**Pn**	**09 04 52.2**	**-0.4**
MCARA	**McCarthy VSAT**	**3.27**	**104**	P	**Pn**	**09 04 54.3**	**-0.1**
MID	**Middleton Isla**	**3.31**	**149**	P	**Pn**	**09 04 55.0**	**+0.1**
NICHA	**Nichawak Mount**	**3.44**	**125**	P	**Pn**	**09 04 56.1**	**-0.6**
BERG	**Berg Lake**	**3.44**	**121**	P	**Pn**	**09 04 56.6**	**-0.1**
KAIM	**Kayak Island**	**3.48**	**131**	P	**Pn**	**09 04 56.5**	**-0.7**
AUNW	**Augustine NWes**	**3.49**	**214**	P	**Pn**	**09 04 58.8**	**+1.5**
AUW	**Augustine West**	**3.50**	**214**	P	**Pn**	**09 04 58.9**	**+1.5**
PS06	**TAPS Pump Stn6**	**3.56**	**359**	P	**Pn**	**09 04 58.8**	**+0.5**
KHIT	**Khitrov Hills**	**3.60**	**119**	P	**Pn**	**09 04 58.9**	**-0.1**
GRIN	**Grindle Hills**	**3.66**	**121**	P	**Pn**	**09 05 00.4**	**+0.6**
BCA3	**Beaver Creek A**	**3.69**	**75**	P	**Pn**	**09 05 00.3**	**+0.1**
PRP	**Porcupine Dome**	**3.69**	**28**	P	**Pn**	**09 05 00.5**	**+0.3**
KIAG	**Kiagna River**	**3.74**	**109**	P	**Pn**	**09 05 00.6**	**-0.3**
WAX	**Waxell Ridge**	**3.76**	**117**	P	**Pn**	**09 05 00.8**	**-0.3**
ISLE	**Juniper Island**	**3.90**	**113**	P	**Pn**	**09 05 02.5**	**-0.5**
KULT	**Kultieth River**	**3.93**	**119**	P	**Pn**	**09 05 03.6**	**+0.3**
CDD	**Cape Douglas**	**3.93**	**212**	P	**Pn**	**09 05 03.7**	**+0.3**
BARK	**Barkley Ridge**	**3.94**	**116**	P	**Pn**	**09 05 03.5**	**0.0**
BARN	**Barnard Glacie**	**4.00**	**105**	P	**Pn**	**09 05 04.5**	**0.0**
BAGL	**Bagley Icefiel**	**4.06**	**113**	P	**Pn**	**09 05 04.5**	**-0.6**
FONW	**Fourpeaked Sta**	**4.08**	**213**	P	**Pn**	**09 05 06.2**	**+0.8**
GRNC	**Granite Creek**	**4.09**	**109**	P	**Pn**	**09 05 05.7**	**-0.1**
IM02	**Indian Mountai**	**4.13**	**336**	P	**Pn**	**09 05 06.5**	**+0.5**
CTGM	**Chitina Glacie**	**4.18**	**105**	P	**Pn**	**09 05 07.1**	**+0.2**
MESA	**MESA**	**4.28**	**117**	P	**Pn**	**09 05 08.0**	**-0.3**
LOGN	**Logan Glacier**	**4.39**	**106**	P	**Pn**	**09 05 09.4**	**-0.4**
EGAK	**Eagle**	**4.53**	**53**	P	**Pn**	**09 05 11.7**	**+0.3**
KAHC	**Katmai Hardscr**	**4.54**	**218**	P	**Pn**	**09 05 12.5**	**+0.7**
KDAK	**Kodiak Island**	**4.78**	**199**	P	**Pn**	**09 05 13.8**	**-1.1**
	0.9nm,0.3s,baz=59,slow=6.9,SNR=29						
KDAK				S	**Sn**	**09 06 04.5**	**-4.4**
	3.8nm,0.3s,baz=251,slow=19,SNR=15						
KDAK				LR	LR	09 07 22.7	
	comp=Z,83nm,18.9s,baz=61,slow=41						
KDAK	**Kodiak Island**	**4.78**	**199**	P	**Pn**	**09 05 14.2**	**-0.8**
KAKN	**Katmai Knife C**	**4.85**	**216**	P	**Pn**	**09 05 16.4**	**+0.4**
KABU	**Katmai Buttres**	**4.93**	**217**	P	**Pn**	**09 05 17.9**	**+0.8**
COLD	**Coldfoot**	**4.94**	**357**	P	**Pn**	**09 05 17.7**	**+0.5**
DAWY	**Dawson**	**4.96**	**65**	*e*Pn	**Pn**	**09 05 17.7**	**+0.2**
DAWY				*e*Sn	**Sn**	**09 06 16.5**	**+3.0**
OHAK	**Old Harbor**	**5.43**	**202**	P	**Pn**	**09 05 22.4**	**-1.4**
BM3	**Burnt Mountain**	**5.56**	**20**	P	**Pn**	**09 05 25.9**	**+0.2**
PNL	**Peninsula**	**5.64**	**113**	P	**Pn**	**09 05 26.2**	**-0.6**
YUK5	**Granite Creek**	**5.72**	**97**	P	**Pn**	**09 05 27.7**	**-0.3**
HYT	**Haines Junctio**	**5.98**	**99**	P	**Pn**	**09 05 31.0**	**-0.6**
INK	**Inuvik**	**9.01**	**41**	P	**Pn**	**09 06 12.8**	**+0.1**
	0.4nm,0.3s,baz=243,slow=14,SNR=14						
INK				S	**Sn**	**09 07 52.1**	**-0.3**
	0.4nm,0.3s,baz=297,slow=5.0,SNR=4.2						
INK				LR	LR	09 10 02.8	
	comp=Z,44nm,20.0s,baz=118,slow=39						
INK	**Inuvik**	**9.01**	**41**	P	**Pn**	**09 06 12.8**	**+0.1**
INK				*e*Pn	Pn	09 06 12.9	+0.2
INK				S	**Sn**	**09 07 52.1**	**-0.3**
BBB	**Bella Bella**	**15.36**	**121**	LR	LR	09 14 03.7	
	comp=Z,25nm,18.3s,baz=236,slow=39						
YKA	**Yellowknife Ar**	**16.11**	**74**	P	**P**	**09 07 50.2**	**0.0**
	0.1nm,0.3s,baz=284,slow=11,SNR=3.2						
PDAR	**Pinedale Array**	**30.52**	**111**	P	**P**	**09 10 13.7**	**+0.7**
	0.1nm,0.3s,baz=323,slow=0.5,SNR=2.7						
NVAR	**Mina Array Bea**	**30.61**	**127**	P	**P**	**09 10 15.2**	**+1.4**
	0.6nm,0.8s,baz=316,slow=8.8,SNR=5.5						
TXAR	**Lajitas Array**	**44.40**	**116**	P	**P**	**09 12 10.9**	**+0.8**
	0.3nm,0.6s,baz=311,slow=5.4,SNR=5.6						
SONM	**Songino Array**	**54.73**	**307**	P	**P**	**09 13 28.7**	**+0.2**
	0.3nm,0.4s,baz=23,slow=5.2,SNR=2.7						
BVAR	**Borovoye Array**	**60.75**	**334**	P	**P**	**09 14 09.2**	**-1.2**
	0.3nm,0.4s,baz=46,slow=6.2,SNR=2.2						
KURK	**Kurchatov**	**61.00**	**327**	P	**P**	**09 14 11.0**	**-1.1**
KURBB	**Kurchatov Arra**	**61.11**	**327**	P	**P**	**09 14 11.0**	**-1.9**
	0.4nm,0.2s,baz=28,slow=6.4,SNR=3.4						
MKAR	**Makanchi Array**	**63.61**	**323**	P	**P**	**09 14 27.3**	**-2.4**
	0.4nm,0.5s,baz=26,slow=7.2,SNR=4.1						
AKASG	**Malin Array Be**	**67.33**	**1**	LR	LR	09 45 31.0	
	comp=Z,12nm,20.4s,baz=255,slow=37						

*ISK **21** 09:07:54.9,38.°76N×43.°45E,h5km,ML3.0/10*
*ATA **21** 09:07:55.2±1.7,38.°81N×43.°43E,h5km±23km,ML3.6, MW3.6*
*CSEM **21** 09:07:56.8±0.2,38.°80N×43.°44E,h10km,ML3.0,Error ellipse: s-maj=5.3km s-min=4.3km az=114.0*
*DDA **21** 09:07:56.5,38.°77N×43.°41E,h21km,Ml3.2*
ISC 21 09:07:57.2±0.8,38.°78N±0.°02×43.°44E±0.°02,h16km±6km, n61,σ1§23/95,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.19**	**191**	PG	**Pg**	**09 08 01.2**	**-0.7**
VANB	**Van**	**0.19**	**191**	*e*Pg	**Pg**	**09 08 01.2**	**-0.7**
VMUR	**Van-Muradiye**	**0.23**	**27**	*i* P	**Pg**	**09 08 02.7**	**+0.2**
VMUR				*i* S	**Sg**	**09 08 07.9**	**+1.8**
VMUR	**Van-Muradiye**	**0.23**	**27**	P	**Pg**	**09 08 02.7**	**+0.2**
VMUR				S	**Sg**	**09 08 07.9**	**+1.8**
ERCV	**ERCIS-VAN**	**0.25**	**342**	PG	**Pg**	**09 08 01.8**	**-1.0**
ERCV				SG	**Sg**	**09 08 06.7**	**+0.1**
ERCV	**ERCIS-VAN**	**0.25**	**342**	*e*Pg	**Pg**	**09 08 01.8**	**-1.0**
ERCV				*e*Sg	**Sg**	**09 08 06.7**	**+0.1**
CLDR	**Caldiran**	**0.52**	**46**	PG	**Pg**	**09 08 06.4**	**-1.2**
CLDR				SG	**Sb**	**09 08 14.9**	**-0.6**
CLDR	**Caldiran**	**0.52**	**46**	*i* P	**Pg**	**09 08 06.2**	**-1.4**
CLDR				*i* S	**Sb**	**09 08 15.1**	**-0.4**
CLDR	**Caldiran**	**0.52**	**46**	P	**Pg**	**09 08 06.2**	**-1.4**
CLDR	**Caldiran**	**0.52**	**46**	*e*Pg	**Pg**	**09 08 06.4**	**-1.2**
CLDR				*e*Sg	**Sb**	**09 08 14.9**	**-0.6**
GEVA	**Gevas**	**0.56**	**212**	*e*P	**Pg**	**09 08 06.8**	**-1.4**
GEVA				*e*S	**Sb**	**09 08 16.4**	**-0.1**
GEVA				IAML		09 08 19.6	
	comp=Z,239nm,0.6s						
GEVA	**Gevas**	**0.56**	**212**	*i* P	**Pg**	**09 08 06.9**	**-1.4**
GEVA				*i* S	**Sg**	**09 08 15.4**	**-0.3**
ADCV	**BITLIS_Adilcev**	**0.56**	**273**	*i* P	**Pg**	**09 08 07.7**	**-0.6**
ADCV				*i* S	**Sb**	**09 08 16.4**	**-0.1**
ADCV	**BITLIS_Adilcev**	**0.56**	**273**	P	**Pg**	**09 08 07.7**	**-0.6**
ADCV				S	**Sb**	**09 08 16.4**	**-0.1**
DYDN	**Diyadin**	**0.78**	**14**	*e*P	**Pg**	**09 08 10.5**	**-2.0**
DYDN				*e*S	**Sb**	**09 08 22.9**	**-0.3**
DYDN				IAML		09 08 26.1	
	comp=Z,68nm,0.3s						
DYDN	**Diyadin**	**0.78**	**14**	*i* P	**Pb**	**09 08 11.9**	**-0.7**
DYDN				*i* S	**Sb**	**09 08 23.8**	**+0.6**
TUTA	**Tutak**	**0.79**	**322**	*e*P	**Pg**	**09 08 11.4**	**-1.1**
TUTA				*e*S	**Sb**	**09 08 22.7**	**-0.4**
TUTA				IAML		09 08 24.0	
	comp=Z,482nm,0.2s						
TUTA	**Tutak**	**0.79**	**322**	*i* P	**Pg**	**09 08 11.6**	**-0.9**
TUTA				*i* S	**Sb**	**09 08 22.4**	**-0.8**
TUTA	**Tutak**	**0.79**	**322**	P	**Pg**	**09 08 11.6**	**-0.9**
TUTA				S	**Sb**	**09 08 22.4**	**-0.8**
AGRB	**Hanur-Agry**	**0.86**	**337**	PG	**Pg**	**09 08 13.1**	**-0.9**
AGRB	**Hanur-Agry**	**0.86**	**337**	*e*Pg	**Pg**	**09 08 13.1**	**-0.9**
GURO	**Guroymak-BITLI**	**1.12**	**259**	PN	**Pb**	**09 08 16.8**	**-1.5**
GURO	**Guroymak-BITLI**	**1.12**	**259**	*e*Pn	**Pb**	**09 08 16.8**	**-1.5**
EKAR	**Karacoban**	**1.17**	**294**	*e*P	**Pb**	**09 08 17.2**	**-1.9**
EKAR				*e*S	**Sn**	**09 08 35.3**	**+0.4**
EKAR	**Karacoban**	**1.17**	**294**	*i* P	**Pb**	**09 08 17.7**	**-1.4**
EKAR				*i* S	**Sn**	**09 08 36.7**	**+1.8**
EKAR	**Karacoban**	**1.17**	**294**	P	**Pb**	**09 08 17.7**	**-1.4**
EKAR				S	**Sn**	**09 08 36.7**	**+1.8**
IGDI	**IGDIR**	**1.19**	**24**	*e*P	**Pb**	**09 08 16.4**	**-3.1**
IGDI	**IGDIR**	**1.19**	**24**	*i* P	**Pg**	**09 08 19.9**	**-0.3**
IGDI				*i* S	**Sn**	**09 08 37.3**	**+2.1**
HAKT	**HAKKARI**	**1.24**	**170**	*i* P	**Pn**	**09 08 19.4**	**-0.8**
HAKT				*i* S	**Sn**	**09 08 38.7**	**+2.0**
HAKT	**HAKKARI**	**1.24**	**170**	P	**Pn**	**09 08 19.4**	**-0.8**
HAKT				S	**Sn**	**09 08 38.7**	**+2.0**
EATA	**Eleskirt**	**1.30**	**326**	*e*P	**Pn**	**09 08 20.8**	**-0.2**
EATA				*e*S	**Sg**	**09 08 38.3**	**-1.1**
EATA	**Eleskirt**	**1.30**	**326**	*i* P	**Pn**	**09 08 21.1**	**0.0**
EATA				*i* S	**Sn**	**09 08 40.3**	**+2.0**
EATA	**Eleskirt**	**1.30**	**326**	P	**Pn**	**09 08 21.0**	**0.0**
EATA				S	**Sn**	**09 08 40.3**	**+2.0**
YOVA	**Hakkari_Y`…kse**	**1.37**	**150**	*i* P	**Pn**	**09 08 21.7**	**-0.2**
YOVA				*i* S	**Sg**	**09 08 42.5**	**+1.0**
SRTM	**Siirt_Merkez**	**1.43**	**237**	*i* P	**Pn**	**09 08 22.9**	**+0.3**
SRTM				*i* S	**Sg**	**09 08 42.5**	**-0.8**
SRTM	**Siirt_Merkez**	**1.43**	**237**	P	**Pn**	**09 08 22.9**	**+0.3**
SRTM				S

σ1⁹38/51, **mb3.6/9, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIAN	**Nian**	**0.89**	**229**	*e*Pg	**Pn**	**09 23 55.9**	**-1.8**
NIAN				*e*		09 24 24.2	
	comp=Z,99nm,0.1s						
NIAN	**Nian**	**0.89**	**229**	*e*Pg	**Pn**	**09 23 55.9**	**-1.8**
IBND	**Bandar-abas**	**1.16**	**233**	*e*		09 24 04.7	
	comp=Z,30μm,0.1s						
IBND				*e*Pg	**Pb**	**09 24 03.0**	**+0.3**
GENO	**Geno**	**1.46**	**240**	*e*		09 24 32.3	
	comp=E,99nm,0.1s						
GENO				*e*Pg	**Pb**	**09 24 06.8**	**-1.0**
GENO				*e*		09 24 33.1	
	comp=N,99nm,0.2s						
GENO				*e*		09 24 35.5	
	comp=Z,99nm,0.1s						
KHSK	**Kohestak**	**1.47**	**199**	*e*		09 24 37.8	
	comp=Z,99nm,0.1s						
KHSK				*e*Pn	**Pn**	**09 24 06.9**	**+1.3**
KHSK				*e*		09 24 37.9	
	comp=E,99nm,0.2s						
KHSK				*e*		09 24 39.7	
	comp=N,99nm,0.2s						
NGRK	**Negar Kerman**	**1.67**	**333**	*e*		09 24 31.0	
	comp=Z,99nm,0.1s						
NGRK				*e*Pn	**Pn**	**09 24 06.3**	**-2.4**
CHMN	**Cheshme madani**	**1.70**	**359**	*e*Sg	**Sn**	**09 24 29.2**	**-0.9**
CHMN				*e*Pn	**Pn**	**09 24 07.3**	**-1.9**
CHMN				*e*		09 24 31.8	
	comp=E,99nm,0.1s						
CHMN				*e*		09 24 32.4	
	comp=Z,99nm,0.1s						
CHMN				*e*		09 24 32.7	
	comp=N,99nm,0.1s						
KRBR	**Kerman**	**1.96**	**338**	*e*Pn	**Pn**	**09 24 11.4**	**-1.2**
KRBR				*e*Sg	**Sn**	**09 24 36.6**	**+0.1**
KRBR				AML	AML	09 24 39.6	
	comp=N,439nm,0.2s						
KRBR				AML	AML	09 24 40.3	
	comp=E,560nm,0.2s						
KRBR	**Kerman**	**1.96**	**338**	*e*Pn	**Pn**	**09 24 11.5**	**-1.2**
KRBR	**Kerman**	**1.96**	**338**	*e*Pn	**Pn**	**09 24 11.5**	**-1.2**
KRBR				*e*Sg	**Sn**	**09 24 36.6**	**+0.1**
TVBK	**TV Kerman**	**1.97**	**339**	*e*Pn	**Pn**	**09 24 11.8**	**-1.0**
TVBK				*e*		09 24 12.9	
	comp=Z,99nm,0.1s						
TVBK				*e*		09 24 40.0	
	comp=N,99nm,0.2s						
TVBK				*e*		09 27 57.3	
	comp=E,99nm,0.0s						
TVBK	**TV Kerman**	**1.97**	**339**	*e*Pn	**Pn**	**09 24 11.8**	**-1.0**
KHGB	**Koh Gabri**	**2.42**	**337**	*e*Pn	**Pn**	**09 24 19.0**	**+0.1**
KHGB				*e*		09 24 20.4	
	comp=Z,99nm,0.1s						
KHGB				*e*Sg	**Sb**	**09 24 51.4**	**-2.3**
KHGB				*e*		09 24 53.1	
	comp=N,99nm,0.1s						
KHGB				*e*		09 25 03.8	
	comp=E,99nm,0.4s						
KHGB	**Koh Gabri**	**2.42**	**337**	*e*Pn	**Pn**	**09 24 19.0**	**+0.1**
KHGB				*e*Sg	**Sb**	**09 24 51.4**	**-2.3**
SHME	**Shamm**	**2.46**	**212**	P	**Pn**	**09 24 20.0**	**+0.7**
	SNR=12						
BANOM	**Banah**	**2.50**	**208**	P	**Pn**	**09 24 20.6**	**+0.8**
	SNR=46						
BANOM	**Banah**	**2.50**	**208**	P	**Pn**	**09 24 20.6**	**+0.8**
	SNR=46						
MSFE	**Esma-Masafi**	**3.06**	**205**	*e*Pn	**Pn**	**09 24 29.1**	**+1.5**
MDH	**Madha**	**3.07**	**202**	P	**Pn**	**09 24 26.5**	**-1.1**
ZHSF	**Zahedan**	**3.15**	**62**	*e*Pn	**Pn**	**09 24 28.8**	**-0.1**
ZHSF				*e*Sg	**Sb**	**09 25 14.5**	**-0.1**
ZHSF	**Zahedan**	**3.15**	**62**	*e*Pn	**Pn**	**09 24 28.8**	**-0.1**
ZHSF	**Zahedan**	**3.15**	**62**	*e*Pn	**Pn**	**09 24 28.8**	**-0.1**
ZHSF				*e*Sg	**Sb**	**09 25 14.5**	**-0.1**
HATD	**Hatta, Dubai**	**3.56**	**202**	*e*Pn	**Pn**	**09 24 34.4**	**0.0**
IBAF	**Bafgh**	**3.85**	**333**	*e*	**Pb**	**09 24 50.1**	**+1.6**
	comp=Z,729nm,0.1s						
IBAF				*e*		09 25 00.5	
	comp=N,975nm,0.2s						
IBAF				*e*		09 25 50.4	
	comp=E,973nm,0.2s						
ASUD	**Al Ashush, Dub**	**4.05**	**211**	*e*Pn	**Pn**	**09 24 42.9**	**+1.7**
GHIR	**Ghir-Karzin**	**4.06**	**273**	*e*Pn	**Pn**	**09 24 43.1**	**+1.7**
GHIR	**Ghir-Karzin**	**4.06**	**273**	*e*Pn	**Pn**	**09 24 43.1**	**+1.7**
GHIR	**Ghir-Karzin**	**4.06**	**273**	*e*Pn	**Pn**	**09 24 43.1**	**+1.7**
IMEH	**Mehriz**	**4.14**	**322**	*e*	Pb	09 25 01.3	+7.9
	comp=Z,460nm,0.0s						
IMEH				*e*		09 26 09.8	
	comp=N,663nm,0.3s						
IKOO	**Kooshah**	**4.43**	**16**	*e*		09 26 02.7	
	comp=Z,1μm,0.2s						
IKOO				*e*		09 26 05.8	
	comp=E,2μm,0.2s						
IKOO				*e*		09 26 05.9	
	comp=N,2μm,0.2s						
ITEG	**Tejag**	**4.83**	**12**	*e*		09 26 21.7	
	comp=E,2μm,0.2s						
ITEG				*e*		09 26 22.8	
	comp=Z,1μm,0.3s						
ITEG				*e*		09 26 23.1	
	comp=N,1μm,0.2s						
IDAH	**Dahanechah**	**4.98**	**23**	*e*		09 26 29.2	
	comp=E,1μm,0.3s						
IDAH				*e*		09 26 31.2	
	comp=N,904nm,0.3s						
WSAR	**Wadi Sarin**	**4.98**	**169**	Pn	**Pn**	**09 24 52.4**	**-1.6**
	comp=N,3.7nm,0.3s,baz=15,slow=7.2,SNR=22						
WSAR				Sn	**Sn**	**09 25 48.3**	**-2.2**
	comp=N,8.7nm,0.3s,baz=117,slow=6.9,SNR=7.7						
IMON	**Monand**	**5.33**	**19**	*e*		09 26 39.5	
	comp=E,2μm,0.3s						
IRAM	**Ramesheh**	**5.80**	**310**	*e*Pn	**Pn**	**09 25 07.3**	**+1.9**
IRAM				*e*		09 26 21.7	
	comp=N,180nm,0.2s						
IRAM				*e*		09 26 24.7	
	comp=Z,220nm,0.4s						
IRAM				*e*		09 26 29.0	
	comp=E,262nm,0.2s						
IRAM	**Ramesheh**	**5.80**	**310**	*e*Pn	**Pn**	**09 25 07.3**	**+1.9**
ANAR	**Anarak**	**6.02**	**327**	*e*Pn	**Pn**	**09 25 11.0**	**+2.7**
ANAR				*e*		09 26 57.0	
	comp=E,99nm,0.3s						
ANAR				*e*		09 27 07.3	
	comp=Z,99nm,0.5s						
ANAR				*e*		09 27 29.6	
	comp=N,99nm,0.4s						
ANAR	**Anarak**	**6.02**	**327**	*e*Pn	**Pn**	**09 25 11.0**	**+2.7**
IZEF	**Zefreh**	**6.55**	**317**	*e*	Pn	09 25 23.2	+7.5
	comp=Z,46nm,0.1s						
IZEF				*e*		09 27 25.2	
	comp=N,61nm,0.2s						
GEYT	**Alibeck**	**9.76**	**2**	LR	LR	09 30 31.7	
	comp=N,22nm,18.3s,baz=140,slow=42						
EIL	**Elat**	**19.88**	**280**	P	**P**	**09 28 09.3**	**-0.7**
	comp=N,0.2nm,0.3s,baz=90,slow=6.1,SNR=1.8						
AKTO	**Aktyubinsk**	**22.26**	**1**	P	**P**	**09 28 37.2**	**+1.7**
	comp=N,1.1nm,0.5s,baz=178,slow=7.3,SNR=4.6						
BRTR	**Keskin Array B**	**22.91**	**306**	P	**P**	**09 28 43.2**	**+0.5**
	comp=N,1.5nm,0.8s,baz=125,slow=11,SNR=7.7						
BVAR	**Borovoye Array**	**26.60**	**17**	P	**P**	**09 29 16.9**	**+0.3**
	comp=N,0.9nm,0.6s,baz=201,slow=7.7,SNR=6.6						
MKAR	**Makanchi Array**	**26.85**	**39**	P	**P**	**09 29 19.9**	**+0.9**
	comp=N,0.6nm,0.8s,baz=232,slow=8.2,SNR=3.2						
ZALV	**Zalesovo Beam**	**32.58**	**30**	P	**P**	**09 30 10.6**	**+1.0**
	comp=N,0.7nm,0.3s,baz=232,slow=7.1,SNR=3.3						
FINES	**FINESS Array B**	**39.35**	**337**	P	**P**	**09 31 07.5**	**0.0**
	comp=N,0.6nm,0.5s,baz=128,slow=16,SNR=5.3						
HFS	**Hagfors**	**43.55**	**330**	P	**P**	**09 31 41.8**	**-0.2**
	comp=N,0.4nm,0.4s,baz=153,slow=9.7,SNR=3.6						
TORD	**Torodi Ar. Bea**	**53.96**	**266**	P	**P**	**09 33 01.5**	**-1.1**
	comp=N,0.8nm,0.4s,baz=64,slow=6.8,SNR=13						
WRA	**Warramunga Arr**	**88.21**	**114**	P	**P**	**09 36 29.9**	**+0.1**
	comp=N,0.5nm,0.8s,baz=317,slow=4.1,SNR=6.3						

*ISCJB **21** 09:24:21.7±0.7, 35°.59S±0°.03×72°.09W±0°.07, h23km±5km, mb4.2/16, MS3.5/5, Error ellipse: s-maj=10.5km s-min=3.9km az=17.8*
*GUC **21** 09:24:22.6±0.5, 35°.52S×72°.22W, h28km±2km, ML4.9*
*NEIC **21** 09:24:22.0±0.0, 35°.52S×72°.22W, h28km, mb4.5/11, ML4.9(GUC), After GUC.*
NEIC Felt [V] at Constitucion, Longavi, Maule, Parral, Pencahue and San Javier; [IV] at Cauquenes, Chanco, Linares, Molina, Pelluhue, Retiro, San Clemente, Talca and Villa Alegre; [III] at Chepica, Curico and Romeral; [II] at Iloca and Rancagua.
*IDC **21** 09:24:26.8±3.0, 35°.70S×72°.02W, h50km±28km, mb3.7/8, mb1 3.9/11, mb1mx3.7/45, mbtmp3.9/11, ML4.3/3, MS3.5/6, Ms1 3.5/6, ms1mx3.1/37, Error ellipse: s-maj=30.0km s-min=18.8km az=79.0*

ISC 21 09:24:20.4±1.3, 35°.64S±0°.03×72°.08W±0°.07, h3km±8km, n54, σ1⁹19/64, mb4.3/16, MS3.4/5, 2C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO05	**HualaæØ**	**0.64**	**11**	*e*Pg	**Pb**	**09 24 33.6**	**-0.6**
GO05				*e*Sg	**Sg**	**09 24 41.4**	**+0.5**
GO05	**HualaæØ**	**0.64**	**11**	⇓*e*P	**Pg**	**09 24 33.3**	**+0.7**
GO05				*e*S	**Sg**	**09 24 41.0**	**+0.2**
NICH	**Los Niches**	**0.94**	**48**	⇑*i*P	**Pg**	**09 24 37.9**	**-0.5**
NICH				*e*S	**Sg**	**09 24 49.1**	**-1.5**
CCHI	**Chillan**	**0.96**	**180**	⇑*i*P	**Pn**	**09 24 41.3**	**+0.4**
CCHI				*e*S	**Sn**	**09 24 55.0**	**-0.2**
CCHI				IAML		09 24 56.4	
	comp=N,61μm,0.3s						
CCSP	**San Pedro de C**	**1.47**	**214**	*e*P	**Pn**	**09 24 47.3**	**-0.5**
CCSP				*e*S	**Sg**	**09 25 06.7**	**-0.9**
CCSP				IAML		09 25 13.2	
	comp=N,25μm,0.5s						
ANTU	**Antumapu**	**2.38**	**30**	*e*P	**Pn**	**09 25 00.2**	**-0.3**
ANTU				*e*S	**Sn**	**09 25 28.8**	**-1.4**
ANTU				IAML		09 25 36.5	
	comp=E,13μm,0.8s						
CLCH	**Cerro Calan**	**2.57**	**30**	*e*P	**Pn**	**09 25 02.4**	**-0.7**
CLCH				*e*S	**Sn**	**09 25 33.3**	**-1.6**
PEL	**Peldehue**	**2.74**	**25**	*e*Pn	**Pn**	**09 25 05.6**	**+0.2**
PEL				*e*Sn	**Sn**	**09 25 39.0**	**-0.1**
PEL	**Peldehue**	**2.74**	**25**	*e*P	**Pn**	**09 25 05.1**	**-0.3**
PEL				IAML		09 25 50.2	
	comp=E,5μm,0.6s						
ROC1	**El Roble**	**2.80**	**19**	*e*Pn	**Pn**	**09 25 07.4**	**+1.1**
ROC1				*e*Sn	**Sn**	**09 25 42.5**	**+1.8**
ROCH	**El Roble**	**2.80**	**19**	*e*P	**Pn**	**09 25 07.0**	**+0.6**
ROCH				*e*S	**Sn**	**09 25 39.9**	**-0.9**
ROCH				IAML		09 25 53.7	
	comp=N,6μm,0.5s						
PLCA	**Paso Flores**	**5.23**	**167**	P	**Pn**	**09 25 41.8**	**+2.2**
	comp=N,4.7nm,0.3s,baz=358,slow=13,SNR=66						
PLCA				S	**Sb**	**09 26 54.5**	**-1.3**
	comp=N,3.9nm,0.3s,baz=35,slow=17,SNR=1.8						
PLCA				LR	LR	09 27 49.4	
	comp=N,454nm,18.1s,baz=16,slow=39						
GO04	**Tololo Observa**	**5.55**	**12**	*e*Pn	**Pn**	**09 25 44.2**	**0.0**
LCO	**Las Campanas**	**6.71**	**10**	*e*Pn	**Pn**	**09 25 59.0**	**-1.2**
LCO				*e*Sn	**Sn**	**09 27 14.3**	**-2.9**
GO03	**Copiap**	**8.17**	**12**	*e*Pn	**Pn**	**09 26 18.2**	**-1.8**
TRQA	**Tornquist**	**8.45**	**110**	*e*Pn	**Pn**	**09 26 25.3**	**+1.5**
GO02	**Mina Guanaco**	**10.66**	**12**	*e*Pn	**Pn**	**09 26 55.7**	**+1.3**
CHRN	**Cochrane**	**11.61**	**182**	*e*Pn	**Pn**	**09 27 08.3**	**+1.3**
PB01	**IPOC Station P**	**14.72**	**10**	*e*Pn	**Pn**	**09 27 49.0**	**-0.7**
CPUP	**Villa Florida**	**15.67**	**58**	P	**Pn**	**09 28 03.8**	**+1.6**
	comp=N,0.1nm,0.3s,baz=233,slow=18,SNR=1.9						
CPUP	**Villa Florida**	**15.67**	**58**	*e*Pn	**Pn**	**09 28 03.0**	**+0.8**
	comp=N,1.4nm,0.9s						
MNMC	**Minye Minye**	**16.59**	**8**	*e*Pn	**Pn**	**09 28 13.9**	**-0.4**
	comp=N,47nm,0.8s						
LPAZ	**La Paz**	**19.59**	**11**	P	**Pn**	**09 28 51.5**	**-0.1**
	comp=N,0.3nm,0.3s,baz=184,slow=8.7,SNR=13						
LPAZ	**La Paz**	**19.59**	**11**	*e*P	**Pn**	**09 28 51.2**	**-0.5**
	comp=N,8.6nm,0.8s						
SIV	**San Ignacio**	**21.90**	**29**	P	**P**	**09 29 16.6**	**+1.8**
	comp=N,8.5nm,0.8s,baz=232,slow=10,SNR=33						
SIV				LR	LR	09 39 33.6	
	comp=N,70nm,18.7s,baz=306,slow=41						
NNA	**Nana**	**23.94**	**348**	LR	LR	09 36 57.0	
	comp=N,71nm,19.9s,baz=177,slow=31						
SNAA	**Sanae**	**50.09**	**157**	LR	LR	09 53 41.9	
	comp=N,38nm,18.7s,baz=222,slow=35						
TX31	**Lajitas Ar. Si**	**71.15**	**331**	*e*P	**P**	**09 35 40.4**	**-0.1**
TX31				*e*P	**P**	**09 35 40.5**	**0.0**
TXAR	**Lajitas Array**	**71.15**	**331**	P	**P**	**09 35 40.8**	**+0.3**
	comp=N,0.5nm,0.6s,baz=158,slow=8.5,SNR=12						
MAW	**Mawson**	**71.62**	**163**	P	**P**	**09 35 42.3**	**-0.4**
	comp=N,1.5nm,0.8s,baz=209,slow=18,SNR=6.1						
MAW	**Mawson**	**71.62**	**163**	*e*P	**P**	**09 35 42.3**	**-0.4**
	comp=N,0.7nm,1.0s						
V48A	**Smith Brothers**	**72.33**	**347**	*e*P	**P**	**09 35 47.0**	**-0.3**
	comp=N,16nm,0.9s						
WVT	**Waverly**	**72.89**	**347**	*e*P	**P**	**09 35 50.4**	**-0.2**
	comp=N,9.4nm,0.8s						
W39A	**Magazine**	**73.32**	**342**	*e*P	**P**	**09 35 53.5**	**+0.2**
	comp=N,5.8nm,0.8s						
MNTX	**Cornudas Mount**	**73.92**	**331**	*e*P	**P**	**09 35 56.1**	**-0.7**
	comp=N,2.2nm,0.8s						
CCM	**Cathedral Cave**	**75.44**	**344**	*e*P	**P**	**09 36 05.1**	**-0.4**
	comp=N,7.3nm,0.8s						
ANMO	**Albuquerque**	**77.20**	**332**	LR	LR	10 05 16.0	
	comp=N,45nm,19.2s,baz=56,slow=32						
ANMO	**Albuquerque**	**77.20**	**332**	*e*P	**P**	**09 36 13.8**	**-2.0**
	comp=N,2.7nm,1.0s						
T25A	**Trinidad**	**78.39**	**334**	*e*P	**P**	**09 36 22.7**	**+0.3**
	comp=N,5.2nm,0.9s						
BOSA	**Boshof**	**79.34**	**117**	P	**P**	**09 36 26.5**	**-1.5**
	comp=N,2.5nm,0.7s,baz=330,slow=1.4,SNR=4.8						
KOWA	**Kowa**	**81.34**	**65**	P	**P**	**09 36 39.8**	**+1.1**
	comp=N,0.9nm,0.4s,baz=241,slow=10,SNR=2.6						
ECSD	**EROS Data Cent**	**82.09**	**342**	*e*P	**P**	**09 36 40.9**	**-1.1**
	comp=N,4.1nm,1.0s						
TOA0	**Torodi Ar. Sit**	**84.80**	**70**	*e*P	**P**	**09 36 56.9**	**+0.3**
TORD	**Torodi Ar. Bea**	**84.80**	**70**	P	**P**	**09 36 54.8**	**-1.8**
	comp=N,0.8nm,0.9s,baz=224,slow=5.8,SNR=3.4						
TOA1	**Torodi Ar. Sit**	**84.80**	**70**	*e*P	**P**	**09 36 54.8**	**-1.8**
PDAR	**Pinedale Array**	**85.21**	**333**	P	**P**	**09 36 57.5**	**-0.8**
	comp=N,0.1nm,0.4s,baz=123,slow=6.6,SNR=2.4						
NVAR	**Mina Array Bea**	**85.21**	**325**	P	**P**	**09 36 59.0**	**+0.6**
	comp=N,0.3nm,0.7s,baz=118,slow=7.3,SNR=2.7						
LSZ	**Lusaka**	**89.33**	**108**	LR	LR	10 13 02.5	
	comp=N,36nm,18.9s,baz=221,slow=33						
BVAR	**Borovoye Array**	**148.48**	**45**	PKPbc	**PKPbc**	**09 44 07.5**	**-0.5**
	comp=N,0.6nm,0.5s,baz=303,slow=4.5,SNR=3.6						
KURBB	**Kurchatov Arra**	**154.06**	**46**	PKPbc	**PKPbc**	**09 44 20.5**	**-0.6**
	comp=N,0.4nm,0.5s,baz=299,slow=3.0,SNR=3.6						
KURK	**Kurchatov**	**154.07**	**45**	*e*PKPbc	**PKPbc**	**09 44 20.5**	**-0.6**
KSH	**Kashi**	**154.46**	**72**	PKPbc	**PKPdf**	**09 44 14.8**	**+0.7**
KSH				PP	**PP**	**09 48 16.8**	**+4.1**
KSH				AMB	AMB		
	comp=Z,160nm,4.7s						
NJ2	**Nanjing**	**170.23**	**252**	*e*P	**PKPdf**	**09 44 30.8**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
HHC	**Hu-ho-hao-te**	**174.06**	**332**	*e*P	**PKPdf**	**09 44 31.4**	**-0.1**

*ISCJB **21** 09:32:15.7±0.6, 24°.95N±0°.03×122°.34E±0°.02, h12km±3km, Error ellipse: s-maj=4.9km s-min=2.9km az=14.8*
*JMA **21** 09:32:15.7±0.1, 24°.87N×122°.35E, h0km, M2.7*
*TAP **21** 09:32:15.5, 24°.97N×122°.33E, h18km, ML3.1, C*

ISC 21 09:32:15.8±1.0, 24°.92N±0°.03×122°.33E±0°.02, h13km±9km, n52, σ0⁸62/75, 3D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.32**	**285**	*i*P	**Pg**	**09 32 22.6**	**+0.3**
	baz=277						
TWB1				*i*S	**Sg**	**09 32 27.3**	**+0.5**
	baz=277						
EOS1	**EOS1**	**0.42**	**206**	⇓P	**Pb**	**09 32 25.4**	**+0.4**
	baz=217						
EOS1				S	**Sb**	**09 32 32.3**	**+1.1**
	baz=217						
NTC	**Toucheng**	**0.46**	**261**	*e*P	**Pg**	**09 32 25.1**	**+0.2**
	baz=256						
TIPB	**Shuangxi**	**0.46**	**276**	P	**Pg**	**09 32 24.3**	**-0.6**
	baz=270						
TIPB				S	**Sg**	**09 32 30.8**	**-0.3**
	baz=270						
NWF	**Wu-fen Shan**	**0.52**	**286**	⇓P	**Pg**	**09 32 26.5**	**+0.5**
	baz=281						
NWF				S	**Sg**	**09 32 33.9**	**+0.9**
	baz=281						
WFSB	**Wu-fen Shan**	**0.52**	**286**	⇓P	**Pb**	**09 32 26.5**	**-0.2**
	baz=281						
WFSB				S	**Sb**	**09 32 34.0**	**-0.2**
	baz=281						
TWC	**Suao**	**0.54**	**235**	P	**Pg**	**09 32 26.4**	**+0.1**
	baz=231						
TWC				*e*S	**Sg**	**09 32 33.9**	**+0.4**
	baz=231						
ILA	**Ilan**	**0.55**	**254**	*e*P	**Pg**	**09 32 26.5**	**-0.1**
	baz=249						
TWE	**Neicheng**	**0.64**	**252**	P	**Pg**	**09 32 28.2**	**0.0**
	baz=248						
TWE				S	**Sb**	**09 32 37.7**	**+0.2**
	baz=248						
ENAH	**Nanao**	**0.67**	**225**	P	**Pb**	**09 32 29.3**	**0.0**
	baz=224						
ENAH				*e*S	**Sb**	**09 32 38.2**	**-0.3**
	baz=224						
TWA	**Mucha**	**0.68**	**275**	*e*P	**Pb**	**09 32 29.4**	**-0.1**
	baz=262						
YM07	**YM07**	**0.69**	**291**	P	**Pg**	**09 32 28.8**	**-0.5**
	baz=287						
YM07				*e*S	**Sg**	**09 32 38.0**	**-0.4**
	baz=287						
YM08	**YM08**	**0.72**	**292**	*e*P	**Pg**	**09 32 29.8**	**0.0**
	baz=287						
YM08				*e*S	**Sg**	**09 32 39.4**	**+0.1**
	baz=287						
NANB	**Nanao**	**0.72**	**227**	P	**Pg**	**09 32 30.0**	**+0.2**
	baz=220						
NANB				*e*S	**Sg**	**09 32 39.5**	**+0.2**
	baz=220						
YM11	**YM11**	**0.73**	**289**	*e*P	**Pg**	**09 32 29.1**	**-0.8**
	baz=286						
ENA	**Nanau**	**0.73**	**228**	P	**Pg**	**09 32 30.0**	**0.0**
	baz=220						
ENA				*e*S	**Sg**	**09 32 39.6**	**+0.1**
	baz=220						
JYNG	**Yonagunijimaku**	**0.73**	**130**	P	**Pg**	**09 32 29.4**	**-0.5**
JYNG				S	**Sg**	**09 32 39.5**	**0.0**
YM10	**YM10**	**0.74**	**288**	*e*P	**Pg**	**09 32 29.3**	**-0.8**
	baz=285						
YM12	**YM12**	**0.74**	**291**	*e*P	**Pg**	**09 32 30.3**	**+0.2**
	baz=286						
YM12				*e*S	**Sg**	**09 32 40.2**	**+0.4**
	baz=286						
ENTT	**Nioudou**	**0.75**	**248**	*e*P	**Pg**	**09 32 30.0**	**-0.4**
	baz=245						
YM04	**YM04**	**0.76**	**288**	*e*P	**Pg**	**09 32 30.3**	**-0.2**
	baz=284						
NWLT	**Wulai**	**0.77**	**259**	*e*P	**Pg**	**09 32 30.2**	**-0.4**
	baz=256						
TATO	**Taipei**	**0.77**	**274**	*e*P	**Pg**	**09 32 29.9**	**-0.7**
	baz=270						
YOJ	**Yonaguni jima**	**0.77**	**127**	P	**Pg**	**09 32 29.8**	**-0.9**
	baz=120						
YOJ				S	**Sg**	**09 32 40.2**	**-0.6**
	baz=120						
YOJ	**Yonaguni jima**	**0.77**	**127**	P	**Pg**	**09 32 29.9**	**-0.9**
YOJ				*e*S	**Sg**	**09 32 40.4**	**-0.4**
TWS1	**Kuangyinshan**	**0.85**	**282**	*e*P	**Pb**	**09 32 32.6**	**+0.3**
	baz=279						
YHNB	**Yeheng**	**0.90**	**254**	*e*P	**Pb**	**09 32 33.5**	**+0.1**
	baz=260						
NSK	**Sanguang**	**0.92**	**255**	*e*P	**Pg**	**09 32 32.4**	**-1.1**
	baz=260						
NNSB	**Datong**	**0.99**	**240**	*e*P	**Pg**	**09 32 34.9**	**-0.1**
	baz=231						
NNSB				*e*S	**Sb**	**09 32 48.5**	**+0.5**
	baz=231						
NNSH	**Datong**	**0.99**	**240**	*e*P	**Pb**	**09 32 35.1**	**+0.2**
	baz=240						
NNS	**Nan Shan**	**1.00**	**241**	*e*P	**Pb**	**09 32 35.1**	**+0.1**
	baz=231						
NNS				*e*S	**Sb**	**09 32 48.7**	**+0.6**
	baz=231						
NACB	**Ninganchiao**	**1.00**	**222**	*e*P	**Pg**	**09 32 34.9**	**-0.2**
	baz=222						
NACB				*e*S	**Sg**	**09 32 47.7**	**-0.6**
	baz=222						
TWD	**Chiawan**	**1.07**	**219**	*e*P	**Pg**	**09 32 35.8**	**-0.7**
	baz=219						
LIOB	**Emei**	**1.23**	**257**	*e*P	**Pn**	**09 32 37.9**	**-0.8**
	baz=256						
TWT	**Tachien**	**1.25**	**238**	*e*P	**Pg**	**09 32 40.4**	**+0.6**
	baz=224						
TDCB	**Techi**	**1.26**	**238**	*e*P	**Pn**	**09 32 38.9**	**-0.3**
	baz=224						
CHGB	**Renai**	**1.36**	**231**	*e*P	**Pb**	**09 32 41.2**	**0.0**
	baz=231						
CHGB				*e*S	**Sg**	**09 32 59.5**	**-0.2**
	baz=231						
ESL	**Shilin**	**1.38**	**217**	*e*P	**Pn**	**09 32 39.5**	**-1.2**
	baz=217						
IRIF	**Iriomote-Funau**	**1.40**	**114**	P	**Pg**	**09 32 43.0**	**+0.3**
IRIF				*e*S	**Sg**	**09 33 03.2**	**+2.3**
VWDT	**VWDT**	**1.59**	**223**	*e*P	**Pb**	**09 32 45.0**	**0.0**
	baz=223						
HATJ	**Hateruma jima**	**1.60**	**122**	P	**Pn**	**09 32 44.4**	**+0.7**
HATJ				*e*S	**Sb**	**09 33 05.1**	**-0.1**
HGSD	**Ruisui**	**1.65**	**210**	*e*P	**Pn**	**09 32 44.8**	**+0.4**
	baz=193						
SMLT	**Sun Moon Lake**	**1.67**	**232**	*e*P	**Pg**	**09 32 47.3**	**-0.5**
	baz=232						
JKRS	**Kuro-shima**	**1.67**	**114**	S	**Sg**	**09 33 08.5**	**-1.1**
TYC	**Yuchr**	**1.68**	**233**	*e*P	**Pb**	**09 32 47.3**	**+0.7**
	baz=233						
EHY	**Hungye**	**1.69**	**213**	*e*P	**Pn**	**09 32 44.7**	**-0.2**
	baz=213						
SSLB	**Suanglung**	**1.69**	**228**	*e*P	**Pb**	**09 32 47.0**	**+0.3**
	baz=226						
JIJ	**Ishigaki jima**	**1.74**	**108**	P	**Pn**	**09 32 46.4**	**+0.7**
JIJ				S	**Sn**	**09 33 08.5**	**+0.7**
YULB	**Yu-li**	**1.79**	**212**	*e*P	**Pn**	**09 32 46.4**	**0.0**
	baz=213		

MAN 21 09:37:52.0, 10°.45N×123°.33E, h9km, mb4.0, ML2.7, MS2.3, 1D, Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.65**	**102**	*e*P	Pg	09 38 04.2	-0.3
LLP				*e*S	Sb	09 38 15.1	+0.6
GUIM	**Jordan**	**0.74**	**283**	*e*P	Pb	09 38 07.0	-0.1
GUIM				*e*S	Sn	09 38 19.9	-0.3
RCP	**Roxas**	**1.24**	**333**	⇓*e*P	Pg	09 38 20.7	+4.8
MSLP	**Maasin**	**1.54**	**102**	*e*P	Pn	09 38 19.1	-0.6
MSLP				*e*S	Sg	09 38 41.8	+0.1

*ISCJB **21** 09:39:32.9±0.4, 24°.77N±0°.02×121°.74E±0°.02, h85km±3km, Error ellipse: s-maj=3.9km s-min=2.6km az=158.7*
*JMA **21** 09:39:32.8±0.4, 24°.75N×121°.73E, h84km±4km, M2.8*
*TAP **21** 09:39:33.6, 24°.75N×121°.74E, h79km, ML3.6, B*
ISC 21 09:39:33.0±1.3, 24°.78N±0°.03×121°.73E±0°.02, h86km±6km, n92, σ0°62/157, 2C-6D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILA	**Ilan** baz=18	**0.02**	**133**	P	**Pn**	**09 39 45.6**	**+0.5**
ILA	baz=18			*e*S	**Sn**	**09 39 55.2**	**+1.1**
TWE	**Neicheng** baz=260	**0.08**	**227**	P	**Pn**	**09 39 45.5**	**+0.3**
TWE	baz=260			S	**Sn**	**09 39 54.2**	**0.0**
NTC	**Toucheng** baz=26	**0.12**	**49**	P	**Pn**	**09 39 45.5**	**+0.2**
NTC	baz=26			*e*S	**Sn**	**09 39 54.4**	**0.0**
TWC	**Suao** baz=143	**0.20**	**148**	P	**Pn**	**09 39 46.0**	**+0.5**
TWC	baz=143			S	**Sn**	**09 39 55.7**	**+0.9**
ENTT	**Nioudou** baz=245	**0.20**	**228**	⇑P	**Pn**	**09 39 45.7**	**+0.1**
ENTT	baz=245			S	**Sn**	**09 39 54.0**	**-0.8**
NWLT	**Wulai** baz=278	**0.21**	**270**	*e*P	**Pn**	**09 39 45.3**	**-0.3**
NWLT	baz=278			*e*S	**Sn**	**09 39 53.5**	**-1.4**
TIPB	**Shuangxi** baz=7.0	**0.21**	**23**	⇑*i*P	**Pn**	**09 39 45.1**	**-0.6**
TIPB	baz=7.0			S	**Sn**	**09 39 53.9**	**-1.0**
TWA	**Mucha** baz=323	**0.24**	**326**	P	**Pn**	**09 39 45.8**	**+0.1**
TWA	baz=323			S	**Sn**	**09 39 54.8**	**-0.4**
NWF	**Wu-fen Shan** baz=358	**0.29**	**8**	*e*P	**Pn**	**09 39 46.3**	**+0.2**
NWF	baz=358			S	**Sn**	**09 39 56.2**	**+0.5**
WFSB	**Wu-fen Shan** baz=358	**0.29**	**8**	P	**Pn**	**09 39 46.5**	**+0.5**
WFSB	baz=358			S	**Sn**	**09 39 56.2**	**+0.7**
TATO	**Taipei** baz=310	**0.30**	**311**	*e*P	**Pn**	**09 39 46.0**	**0.0**
TATO	baz=310			S	**Sn**	**09 39 54.3**	**-1.2**
TAP1	**Taipei** baz=318	**0.32**	**324**	*e*P	**Pn**	**09 39 45.7**	**-0.4**
TAP1	baz=318			*e*S	**Sn**	**09 39 55.6**	**-0.2**
TWB1	**Santiao Chiao** baz=49	**0.33**	**45**	*i* P	**Pn**	**09 39 46.6**	**+0.4**
TWB1	baz=49			*i* S	**Sn**	**09 39 55.8**	**0.0**
TAP	**Taipei** baz=318	**0.33**	**322**	*e*P	**Pn**	**09 39 46.5**	**+0.4**
TAP	baz=318			*e*S	**Sn**	**09 39 56.1**	**+0.2**
ENAH	**Nanao** baz=174	**0.33**	**168**	*e*P	**Pn**	**09 39 46.5**	**+0.3**
ENAH	baz=174			*e*S	**Sn**	**09 39 56.3**	**+0.4**
YHNB	**Yeheng** baz=257	**0.34**	**252**	P	**Pn**	**09 39 46.1**	**-0.2**
YHNB	baz=257			S	**Sn**	**09 39 54.7**	**-1.5**
ENA	**Nanau** baz=189	**0.35**	**179**	P	**Pn**	**09 39 46.5**	**+0.3**
NANB	**Nanao** baz=189	**0.35**	**178**	P	**Pn**	**09 39 45.9**	**-0.4**
NANB	baz=189			S	**Sn**	**09 39 56.1**	**0.0**
NSK	**Sanguang** baz=251	**0.36**	**254**	⇓P	**Pn**	**09 39 46.1**	**-0.3**
NSK	baz=251			S	**Sn**	**09 39 54.7**	**-1.7**
YM10	**YM10** baz=329	**0.41**	**337**	P	**Pn**	**09 39 47.0**	**+0.3**
YM10	baz=329			*e*S	**Sn**	**09 39 56.7**	**-0.2**
YM07	**YM07** baz=348	**0.41**	**345**	⇓P	**Pn**	**09 39 46.1**	**-0.7**
YM07	baz=348			S	**Sn**	**09 39 55.8**	**-1.1**
YM11	**YM11** baz=331	**0.41**	**339**	*e*P	**Pn**	**09 39 48.1**	**+1.3**
YM11	baz=331			*e*S	**Sn**	**09 39 57.4**	**+0.4**
YM04	**YM04** baz=328	**0.41**	**334**	⇓*i*P	**Pn**	**09 39 47.1**	**+0.3**
YM04	baz=328			S	**Sn**	**09 39 56.6**	**-0.4**
EOS1	**EOS1** baz=114	**0.42**	**122**	P	**Pn**	**09 39 47.2**	**+0.5**
EOS1	baz=114			S	**Sn**	**09 39 57.9**	**+1.0**
YM12	**YM12** baz=332	**0.43**	**340**	P	**Pn**	**09 39 47.2**	**+0.3**
YM12	baz=332			S	**Sn**	**09 39 57.0**	**-0.1**
YM08	**YM08** baz=334	**0.43**	**342**	*e*P	**Pn**	**09 39 47.1**	**+0.2**
YM08	baz=334			S	**Sn**	**09 39 56.7**	**-0.4**
TWS1	**Kuangyinshan** baz=309	**0.43**	**318**	⇓*i*P	**Pn**	**09 39 47.4**	**+0.6**
TWS1	baz=309			S	**Sn**	**09 39 57.5**	**+0.4**
WLTB	**Daxi** baz=283	**0.44**	**280**	*e*P	**Pn**	**09 39 47.4**	**+0.5**
WLTB	baz=283			*e*S	**Sn**	**09 39 57.1**	**-0.1**
NTST	**Danshui** baz=331	**0.46**	**326**	P	**Pn**	**09 39 47.6**	**+0.6**
NTST	baz=331			*e*S	**Sn**	**09 39 58.2**	**+0.7**
NNS	**Nan Shan** baz=229	**0.47**	**224**	P	**Pn**	**09 39 47.2**	**-0.1**
NNS	baz=229			*e*S	**Sn**	**09 39 57.1**	**-0.8**
NNSB	**Datong** baz=228	**0.47**	**223**	P	**Pn**	**09 39 47.4**	**+0.1**
NNSB	baz=228			S	**Sn**	**09 39 56.9**	**-0.9**
NNSH	**Datong** baz=229	**0.47**	**223**	*e*P	**Pn**	**09 39 47.3**	**0.0**
NNSH	baz=229			*e*S	**Sn**	**09 39 57.0**	**-0.9**
NCU	**National Centr** baz=286	**0.53**	**291**	P	**Pn**	**09 39 48.1**	**+0.5**
NCU	baz=286			S	**Sn**	**09 39 58.9**	**+0.4**
NCUH	**Zhongli** baz=286	**0.53**	**291**	P	**Pn**	**09 39 48.1**	**+0.5**
NCUH	baz=286			*e*S	**Sn**	**09 39 58.7**	**+0.2**
NACB	**Ninganchiao** baz=202	**0.61**	**192**	*e*P	**Pn**	**09 39 48.3**	**0.0**
LIOB	**Emei** baz=262	**0.67**	**259**	⇓*i*P	**Pn**	**09 39 49.2**	**+0.3**
LIOB	baz=262			S	**Sn**	**09 40 00.2**	**-0.5**
SBCB	**Hsinchu** baz=273	**0.68**	**271**	P	**Pn**	**09 39 49.4**	**+0.5**
SBCB	baz=273			S	**Sn**	**09 40 00.7**	**-0.2**
NSTT	**Nanjuang** baz=260	**0.68**	**258**	P	**Pn**	**09 39 49.2**	**+0.2**
NSTT	baz=260			S	**Sn**	**09 40 00.3**	**-0.6**
HSN	**Hsinchu** baz=276	**0.69**	**272**	P	**Pn**	**09 39 49.3**	**+0.2**
HSN	baz=276			S	**Sn**	**09 40 00.4**	**-0.7**
TWD	**Chiawan** baz=198	**0.71**	**190**	*e*P	**Pn**	**09 39 49.4**	**+0.1**
TWT	**Tachien** baz=224	**0.73**	**224**	*e*P	**Pn**	**09 39 50.2**	**+0.5**
TWT	baz=224			S	**Sn**	**09 40 02.2**	**+0.1**
TDCB	**Techi** baz=224	**0.74**	**225**	P	**Pn**	**09 39 50.4**	**+0.7**
TDCB	baz=224			*e*S	**Sn**	**09 40 01.6**	**-0.6**
CHGB	**Renai** baz=214	**0.88**	**216**	⇓P	**Pn**	**09 39 51.9**	**+0.6**
CHGB	baz=214			*e*S	**Sn**	**09 40 04.6**	**-0.4**
ENLB	**Shoufeng** baz=198	**0.88**	**188**	*e*P	**Pn**	**09 39 52.7**	**+1.6**
NMLH	**Miaoli** baz=257	**0.89**	**255**	P	**Pn**	**09 39 51.7**	**+0.5**
NMLH	baz=257			*e*S	**Sn**	**09 40 05.2**	**+0.4**
NSY	**Sanyi** baz=258	**0.96**	**248**	P	**Pn**	**09 39 52.7**	**+0.8**
NSY	baz=258			S	**Sn**	**09 40 06.5**	**+0.4**
PTSB	**Yuanli** baz=259	**0.99**	**251**	P	**Pn**	**09 39 52.8**	**+0.5**
PTSB	baz=259			*e*S	**Sn**	**09 40 06.4**	**-0.5**
ESL	**Shilin** baz=192	**1.00**	**196**	*e*P	**Pn**	**09 39 52.4**	**-0.1**
DPDB	**Guoxing** baz=236	**1.04**	**225**	*e*P	**Pn**	**09 39 53.8**	**+0.8**
DPDB	baz=236			S	**Sn**	**09 40 08.2**	**+0.1**
EGFH	**Guangfu** baz=197	**1.14**	**194**	*e*P	**Pn**	**09 39 54.6**	**+0.6**
JYNG	**Yonagunijimaku**	**1.15**	**106**	P	**Pn**	**09 39 54.1**	**-0.1**
JYNG				*e*S	**Sn**	**09 40 09.2**	**-0.9**
VWDT	**VWDT** baz=220	**1.15**	**208**	*e*P	**Pn**	**09 39 54.8**	**+0.5**
VWDT	baz=220			*e*S	**Sn**	**09 40 10.5**	**+0.3**
SMLT	**Sun Moon Lake** baz=224	**1.17**	**221**	P	**Pn**	**09 39 55.3**	**+0.7**
SMLT	baz=224			*e*S	**Sn**	**09 40 10.5**	**-0.3**
TYC	**Yuchr** baz=226	**1.18**	**223**	P	**Pn**	**09 39 55.3**	**+0.7**
TYC	baz=226			S	**Sn**	**09 40 10.9**	**+0.1**
YOJ	**Yonaguni jima** baz=104	**1.20**	**105**	P	**Pn**	**09 39 54.9**	**0.0**
YOJ	baz=104			*e*S	**Sn**	**09 40 10.0**	**-1.3**
YOJ	**Yonaguni jima**	**1.20**	**105**	P	**Pn**	**09 39 54.6**	**-0.2**
YOJ				S	**Sn**	**09 40 10.0**	**-1.3**
SSLB	**Suanglung** baz=230	**1.22**	**216**	*e*P	**Pn**	**09 39 55.2**	**+0.2**
SSLB	baz=230			*e*S	**Sn**	**09 40 11.4**	**-0.2**
WCHH	**Zhanghua** baz=240	**1.28**	**237**	*e*P	**Pn**	**09 39 55.9**	**+0.1**
WCHH	baz=240			*e*S	**Sn**	**09 40 13.1**	**+0.2**
HGSD	**Ruisui** baz=202	**1.31**	**193**	*e*P	**Pn**	**09 39 56.5**	**+0.2**
WNT	**Mingjian** baz=239	**1.31**	**227**	*e*P	**Pn**	**09 39 56.2**	**0.0**
WNT	baz=239			*e*S	**Sn**	**09 40 13.9**	**+0.2**
EHY	**Hungye** baz=192	**1.32**	**197**	*e*P	**Pn**	**09 39 55.3**	**-1.1**
WJS	**Zhushan** baz=237	**1.32**	**224**	*e*P	**Pn**	**09 39 56.9**	**+0.5**
WJS	baz=237			*e*S	**Sn**	**09 40 14.2**	**+0.3**
YULB	**Yu-li** baz=191	**1.44**	**196**	*e*P	**Pn**	**09 39 57.0**	**-0.8**
TWF1	**Yuli** baz=198	**1.47**	**196**	*e*P	**Pn**	**09 39 57.5**	**-0.8**
WGK	**Gukeng** baz=237	**1.52**	**225**	S	**Sn**	**09 40 19.3**	**+0.8**
RLNB	**Erlin** baz=238	**1.53**	**235**	*e*P	**Pn**	**09 39 59.2**	**+0.2**
RLNB	baz=238			*e*S	**Sn**	**09 40 18.6**	**-0.1**
WDLH	**Douliu** baz=228	**1.54**	**225**	*e*P	**Pn**	**09 39 59.5**	**+0.4**
FULB	**Fuli** baz=200	**1.62**	**194**	*e*P	**Pn**	**09 40 00.4**	**+0.2**
FULB	baz=200			S	**Sn**	**09 40 20.9**	**+0.1**
CHKT	**Chengkung** baz=201	**1.71**	**191**	*e*P	**Pn**	**09 40 01.8**	**+0.6**
CHKT	baz=201			*e*S	**Sn**	**09 40 22.4**	**-0.2**
ELDTW	**Lidau** baz=200	**1.71**	**203**	*e*P	**Pn**	**09 40 02.0**	**+0.6**
CHY	**Chiayi** baz=226	**1.75**	**223**	*e*P	**Pn**	**09 40 02.0**	**+0.3**
TPUB	**Ta-pu** baz=218	**1.78**	**215**	*e*P	**Pn**	**09 40 03.2**	**+0.9**
WTP	**Ta-pu** baz=215	**1.84**	**214**	*e*P	**Pn**	**09 40 03.7**	**+0.7**
IRIF	**Iriomote-Funau**	**1.87**	**103**	P	**Pn**	**09 40 03.1**	**-0.2**
IRIF				*e*S	**Sn**	**09 40 25.5**	**-1.0**
TWK	**Hsinying** baz=220	**1.89**	**217**	*e*P	**Pn**	**09 40 04.4**	**+0.7**
CHN1	**Nanshi** baz=221	**1.93**	**215**	*e*P	**Pn**	**09 40 04.4**	**+0.2**
CHN1	baz=221			*e*S	**Sn**	**09 40 28.8**	**+0.9**
HATJ	**Hateruma jima**	**2.02**	**110**	P	**Pn**	**09 40 05.7**	**+0.4**
HATJ				*e*S	**Sn**	**09 40 30.1**	**+0.1**
SLGT	**Liugui** baz=213	**2.04**	**209**	*e*P	**Pn**	**09 40 06.6**	**+1.0**
TWG	**Pinlang** baz=192	**2.04**	**197**	*e*P	**Pn**	**09 40 05.5**	**-0.2**
TWGBT	**Beinan** baz=192	**2.04**	**197**	*e*P	**Pn**	**09 40 05.4**	**-0.3**
TWH	**Lutao** baz=182	**2.07**	**187**	*e*P	**Pn**	**09 40 05.8**	**-0.2**
VWUC	**VWUC** baz=276	**2.09**	**276**	*e*P	**Pn**	**09 40 06.1**	**-0.1**
MATB	**Ma-tsu** baz=309	**2.12**	**311**	*e*P	**Pn**	**09 40 06.6**	**0.0**
JKRS	**Kuro-shima**	**2.14**	**104**	P	**Pn**	**09 40 07.6**	**+0.7**
JKRS				*e*S	**Sn**	**09 40 32.3**	**-0.6**
JIJ	**Ishigaki jima**	**2.23**	**100**	P	**Pn**	**09 40 08.3**	**+0.2**
JIJ				*e*S	**Sn**	**09 40 34.1**	**-0.9**
SSD	**Sandimen** baz=219	**2.26**	**207**	*e*P	**Pn**	**09 40 09.0**	**+0.5**
PNG	**Penghu** baz=240	**2.33**	**239**	*e*P	**Pn**	**09 40 08.8**	**-0.6**
PNG	baz=240			*e*S	**Sn**	**09 40 35.8**	**-1.5**
PHUB	**P'eng-hu** baz=239	**2.34**	**238**	*e*P	**Pn**	**09 40 08.0**	**-1.6**
JISG	**Ishigakijimahi**	**2.35**	**94**	P	**Pn**	**09 40 10.2**	**+0.5**
JISG				S	**Sn**	**09 40 38.0**	**+0.1**
MASBT	**Mashibuluo** baz=220	**2.38**	**205**	*e*P	**Pn**	**09 40 10.7**	**+0.6**
EAST	**Anshuo** baz=194	**2.52**	**199**	*e*P	**Pn**	**09 40 12.0**	**0.0**
JTJ	**Tarama**	**2.70**	**92**	P	**Pn**	**09 40 15.2**	**+0.8**
JTJ				*e*S	**Sn**	**09 40 47.4**	**+1.1**

*ISCJB **21** 09:41:14.6±0.5, 24°.94N±0°.03×122°.35E±0°.02, h8km±3km, Error ellipse: s-maj=4.3km s-min=2.9km az=15.5*
*JMA **21** 09:41:14.5±0.1, 24°.89N×122°.35E, h0km, M2.8*
*TAP **21** 09:41:14.6, 24°.97N×122°.34E, h19km, ML3.4, C*
ISC 21 09:41:14.6±1.0, 24°.94N±0°.03×122°.35E±0°.02, h13km±10km, n57, σ0°46/86, 1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao** baz=277	**0.34**	**282**	P	**Pg**	**09 41 21.9**	**+0.4**
TWB1				*i* S	**Sg**	**09 41 26.7**	**+0.7**
EOS1	**EOS1** baz=215	**0.44**	**208**	*i* P	**Pb**	**09 41 24.6**	**+0.5**
EOS1	baz=215			S	**Sb**	**09 41 31.3**	**+0.8**
TIPB	**Shuangxi** baz=271	**0.48**	**274**	*i* P	**Pg**	**09 41 23.6**	**-0.4**
TIPB	baz=271			*i* S	**Sg**	**09 41 30.3**	**-0.2**
NTC	**Toucheng** baz=257	**0.48**	**260**	P	**Pb**	**09 41 24.5**	**-0.3**
NWF	**Wu-fen Shan** baz=281	**0.53**	**284**	*i* P	**Pb**	**09 41 25.8**	**0.0**
NWF	baz=281			*i* S	**Sb**	**09 41 33.3**	**-0.1**
WFSB	**Wu-fen Shan** baz=281	**0.53**	**284**	P	**Pb**	**09 41 25.8**	**+0.1**
WFSB	baz=281			S	**Sb**	**09 41 33.3**	**-0.1**
TWC	**Suao** baz=230	**0.56**	**234**	P	**Pg**	**09 41 25.8**	**+0.2**
TWC	baz=230			S	**Sg**	**09 41 33.2**	**+0.1**
ILA	**Ilan** baz=249	**0.57**	**253**	*e*P	**Pg**	**09 41 24.4**	**-1.5**
TWE	**Neicheng** baz=248	**0.66**	**251**	*e*P	**Pg**	**09 41 27.5**	**+0.1**
TWE	baz=248			*e*S	**Sg**	**09 41 36.3**	**+0.2**
ENAH	**Nanao** baz=223	**0.69**	**225**	*e*P	**Pg**	**09 41 28.1**	**+0.1**
ENAH	baz=223			*e*S	**Sb**	**09 41 37.4**	**-0.5**
TWA	**Mucha** baz=271	**0.70**	**274**	*e*P	**Pb**	**09 41 28.4**	**-0.1**
TWA	baz=271			S	**Sb**	**09 41 37.8**	**-0.3**
YM07	**YM07** baz=287	**0.70**	**290**	⇓P	**Pg**	**09 41 28.1**	**-0.2**
YM07	baz=287			*e*S	**Sg**	**09 41 37.5**	**-0.1**
JYNG	**Yonagunijimaku**	**0.73**	**132**	P	**Pg**	**09 41 28.4**	**-0.3**
JYNG				*e*S	**Sb**	**09 41 38.8**	**-0.1**
YM08	**YM08** baz=287	**0.73**	**290**	P	**Pb**	**09 41 29.3**	**+0.1**
YM08	baz=287			S	**Sb**	**09 41 39.3**	**+0.1**
YM11	**YM11** baz=286	**0.74**	**288**	*e*P	**Pb**	**09 41 30.2**	**+0.9**
NANB	**Nanao** baz=210	**0.75**	**227**	P	**Pb**	**09 41 29.4**	**0.0**
NANB	baz=210			*e*S	**Sg**	**09 41 38.5**	**-0.4**
YM10	**YM10** baz=285	**0.75**	**287**	*e*P	**Pg**	**09 41 29.0**	**-0.2**
YM12	**YM12** baz=286	**0.75**	**289**	*e*P	**Pg**	**09 41 29.3**	**+0.1**
YM12	baz=286			S	**Sb**	**09 41 39.8**	**+0.2**
ENA	**Nanau** baz=210	**0.75**	**228**	P	**Pb**	**09 41 29.3**	**-0.2**
ENA	baz=210			*e*S	**Sg**	**09 41 38.9**	**-0.2**
TAP1	**Taipei** baz=275	**0.76**	**278**	*e*P	**Pb**	**09 41 29.5**	**-0.1**
YOJ	**Yonaguni jima** baz=120	**0.77**	**128**	P	**Pg**	**09 41 28.9**	**-0.5**
YOJ	baz=120			S	**Sg**	**09 41 39.5**	**0.0**
YOJ	**Yonaguni jima**	**0.77**	**128**	P	**Pg**	**09 41 29.0**	**-0.4**
YOJ				*e*S	**Sg**	**09 41 39.8**	**+0.3**
YM04	**YM04** baz=284	**0.77**	**286**	*e*P	**Pg**	**09 41 29.3**	**-0.2**
ENTT	**Nioudou** baz=256	**0.77**	**248**	*e*P	**Pb**	**09 41 30.1**	**+0.3**
ENTT	baz=256			*e*S	**Sb**	**09 41 41.1**	**+0.9**
TAP	**Taipei** baz=275	**0.77**	**278**	*e*P	**Pg**	**09 41 29.5**	**-0.1**
TATO	**Taipei** baz=256	**0.78**	**273**	P	**Pb**	**09 41 30.2**	**+0.1**
TATO	baz=256			S	**Sb**	**09 41 40.7**	**+0.1**
TWS1	**Kuangyinshan** baz=279	**0.86**	**281**	*e*P	**Pb**	**09 41 32.1**	**+0.8**
YHNB	**Yeheng** baz=261	**0.93**	**253**	*e*P	**Pg**	**09 41 32.3**	**-0.2**
NSK	**Sanguang** baz=260	**0.94**	**254**	*e*P	**Pg**	**09 41 32.5**	**-0.2**
WLTB	**Daxi** baz=264	**1.00**	**265**	*e*P	**Pg**	**09 41 32.9**	**-1.1**
NNSB	**Datong** baz=230	**1.02**	**240**	P	**Pg**	**09 41 34.1**	**-0.1**
NNSB	baz=230			S	**Sb**	**09 41 47.8**	**+0.5**
NNSH	**Datong** baz=225	**1.02**	**240**	*e*P	**Pb**	**09 41 34.4**	**+0.3**
NNSH	baz=225			*e*S	**Sb**	**09 41 47.5**	**+0.2**
NNS	**Nan Shan** baz=224	**1.02**	**241**	*e*P	**Pg**	**09 41 34.0**	**-0.2**
NNS	baz=224			*e*S	**Sb**	**09 41 47.7**	**+0.3**
NACB	**Ninganchiao** baz=220	**1.03**	**222**	P	**Pg**	**09 41 34.1**	**-0.3**
NACB	baz=220			S	**Sg**	**09 41 47.3**	**-0.5**
TWD	**Chiawan** baz=217	**1.10**	**219**	*e*P	**Pn**	**09 41 35.7**	**+0.1**
TWD	baz=217			*e*S	**Sb**	**09 41 50.2**	**+0.7**
ENLB	**Shoufeng** baz=211	**1.24**	**214**	*e*P	**Pg**	**09 41 39.3**	**+0.9**
LIOB	**Emei** baz=255	**1.25**	**257**	*e*P	**Pn**	**09 41 36.9**	**-0.8**
NSTT	**Nanjuang** baz=255	**1.27**	**256**	*e*P	**Pg**	**09 41 39.7**	**+0.8**
TWT	**Tachien** baz=230	**1.27**	**238**	*e*P	**Pn**	**09 41 38.4**	**+0.3**
TDCB	**Techi** baz=231	**1.28**	**238**	*e*P	**Pn**	**09 41 38.6**	**+0.3**
TDCB	baz=231			*e*S	**Sb**	**09 41 54.9**	**-0.2**
CHGB	**Renai** baz=229	**1.38**	**231**	P	**Pg**	**09 41 41.0**	**-0.2**
CHGB	baz=229			*e*S	**Sg**	**09 41 59.4**	**+0.2**
IRIF	**Iriomote-Funau**	**1.39**	**115**	P	**Pg**	**09 41 41.7**	**+0.4**
ESL	**Shilin** baz=214	**1.40**	**217**	*e*P	**Pn**	**09 41 39.5**	**-0.2**
NMLH	**Miaoli** baz=253	**1.47**	**255**	*e*P	**Pb**	**09 41 41.8**	**0.0**
DPDB	**Guoxing** baz=222	**1.58**	**236**	*e*P	**Pb**	**09 41 43.7**	**0.0**
HATJ	**Hateruma jima**	**1.59**	**123**	*e*S	**Sb**	**09 42 04.3**	**+0.6**
VWDT	**VWDT** baz=222	**1.61**	**223**	*e*P	**Pb**	**09 41 44.1**	**-0.1**
VWDT	baz=222			*e*S	**Sg**	**09 42 06.0**	**-0.6**
JKRS	**Kuro-shima**	**1.66**	**114**	S	**Sg**	**09 42 07.8**	**-0.3**
HGSD	**Ruisui** baz=193	**1.67**	**211**	*e*P	**Pn**	**09 41 44.0**	**+0.6**
SMLT	**Sun Moon Lake** baz=230	**1.69**	**232**	*e*P	**Pb**	**09 41 45.5**	**0.0**
TYC	**Yuchr** baz=233	**1.71**	**233**	*e*P	**Pn**	**09 41 44.3**	**+0.3**
EHY	**Hungye** baz=211	**1.71**	**214**	*e*P	**Pn**	**09 41 44.5**	**+0.5**
SSLB	**Suanglung** baz=234	**1.71**	**228**	*e*P	**Pb**	**09 41 46.1**	**+0.2**
SSLB	baz=234			*e*S	**Sg**	**09 42 08.5**	**-1.3**
JIJ	**Ishigaki jima**	**1.73**	**109**	P	**Pb**	**09 41 45.9**	**-0.2**
JIJ				*e*S	**Sb**	**09 42 07.8**	**+0.1**
YULB	**Yu-li** baz=210	**1.81**	**212**	*e*P	**Pn**	**09 41 45.1**	**-0.4**
TWF1	**Yuli** baz=209	**1.85**	**212**	*e*P	**Pn**	**09 41 45.1**	**-0.9**
FULB	**Fuli** baz=192	**1.98**	**209**	*e*P	**Pn**	**09 41 47.5**	**-0.3**

NNC 21 09:49:13.4±3.4, 36°.90N×70°.41E, h0km, mb3.7, mpv3.3, 3C-3D, Error ellipse: s-maj=26.4km s-min=24.0km az=163.0, Hindu Kush region

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

SFK	Sufi-Kurgan	3.94	37	⇑Pn	Pn	09 50 15.0	-0.4
	5.3nm,0.3s						
SFK				⇓Sn	Sn	09 51 04.1	+1.6
	6.0nm,0.3s						
MNAS	Manas	5.81	15	⇓Pn	Pn	09 50 41.2	+0.3
	2.2nm,0.8s						
MNAS				⇑Sn	Sn	09 51 48.7	+0.4
	2.8nm,0.5s						
KK31	Karatay Array	6.20	1	⇑Pn	Pn	09 50 46.9	+0.7
	0.5nm,0.2s,baz=191,slow=16,SNR=18						
KK31				⇓Sn	Sn	09 51 59.3	+1.6
	1.0nm,0.5s,baz=194,slow=26,SNR=5.8						

*IDC **21** 09:57:56.8±1.6, 15°.16N×92°.81W, h0km, mb3.7/5, mb1 3.8/8, mb1mx3.6/48, mbtmp3.6/8, ML3.3/3, MS2.9/7, Ms1 2.9/7, ms1mx2.7/46, Error ellipse: s-maj=93.2km s-min=16.4km az=44.0*

ISC 21 09:58:01.4±1.6, 14°.8N±0°.5×93°.2W±0°.6, h35km, n14, σ1§24/8, mb3.6/5, MS3.0/6, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	2.77	324	Pn	Pn	09 58 42.2	-1.1
	3.4nm,0.3s,baz=148,slow=9.5,SNR=79						
CMIG				LR	LR	09 59 14.0	
	comp=Z,39nm,20.9s,baz=172,slow=28						
CMIG				Sn	Sn	09 59 17.7	+2.1
	4.9nm,0.3s,baz=151,slow=10,SNR=8.0						
JTS	JuntasAbangare	9.22	118	Pn	Pn	10 00 07.2	-4.8
	0.5nm,0.3s,baz=187,slow=21,SNR=6.2						
JTS				Sn	Sn	10 01 49.7	-4.9
	0.3nm,0.3s,baz=22,slow=19,SNR=2.5						
JTS				Lg	Lg	10 02 44.7	
	0.2nm,0.3s,baz=343,slow=14,SNR=2.0						
TXAR	Lajitas Array	17.37	328	P	Pn	10 02 01.7	+0.4
	0.0nm,0.3s,baz=144,slow=14,SNR=4.3						
TKL	Tuckaleechee C	22.38	20	LR	LR	10 12 48.0	
	comp=Z,23nm,19.6s,baz=335,slow=41						
NNA	Nana	31.18	148	LR	LR	10 15 45.0	
	comp=Z,29nm,21.9s,baz=266,slow=34						
NVAR	Mina Array Bea	32.30	321	P	P	10 04 27.3	-0.1
	0.6nm,0.8s,baz=135,slow=9.0,SNR=5.2						
YBH	Yreka Blue Hor	37.00	322	LR	LR	10 21 00.9	
	comp=Z,32nm,19.5s,baz=123,slow=37						
SIV	San Ignacio	44.10	133	P	P	10 06 07.5	+0.9
	0.5nm,0.6s,baz=297,slow=9.0,SNR=4.1						
YKA	Yellowknife Ar	49.95	347	P	P	10 06 51.6	0.0
	0.6nm,0.7s,baz=150,slow=7.6,SNR=3.5						
ILAR	Eielson Array	61.62	337	P	P	10 08 14.2	-1.1
	0.3nm,0.8s,baz=143,slow=4.9,SNR=4.2						
BORG	Borgarnes	68.95	26	LR	LR	10 37 59.3	
	comp=Z,17nm,18.5s,baz=267,slow=35						
SPITS	Spitsbergen Ar	79.49	11	LR	LR	10 46 25.0	
	comp=Z,17nm,19.7s,baz=285,slow=37						
NOA	NORSAR Array B	83.95	28	LR	LR	10 46 38.2	
	comp=Z,6.1nm,20.1s,baz=310,slow=35						
PETK	Petropavlovsk-	89.31	325	P	P	10 10 54.1	+0.1
	1.3nm,0.6s,baz=80,slow=3.5,SNR=4.4						

*ISCJB **21** 09:59:59.0±0.2, 3°.15S±0°.04×102°.99E±0°.04, h200km, mb4.0/27, Error ellipse: s-maj=7.2km s-min=3.1km az=140.7*

*DJA **21** 09:59:59.8±0.2, 3°S±3°×10°3E±°, h208km±3km, M4.6/24, mb4.6/18, mB5.0/6, MLv4.7/24, Mw(mB)4.4/6*

*NEIC **21** 10:00:00.2±0.4, 3°.14S×103°.00E, h202km±4km, mb4.2/6, Error ellipse: s-maj=9.1km s-min=4.5km az=54.0*

*IDC **21** 10:00:00.2±1.4, 3°.09S×103°.01E, h198km±13km, mb3.8/21, mb1 3.9/23, mb1mx3.7/64, mbtmp4.3/23, Error ellipse: s-maj=14.5km s-min=7.8km az=57.0*

ISC 21 10:00:00.1±0.4, 3°.15S±0°.05×103°.01E±0°.06, h200km, n91, σ1§41/108, mb4.1/27, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MASI	Maura Aman, Be	0.77	270	P	Pn	10 00 29.9	+1.4
MASI				S	Sn	10 00 52.5	+2.1
MNAI	Manna	1.21	183	P	Pn	10 00 32.2	+0.8
MNAI				S	Sn	10 00 55.8	0.0
MNAI	Manna	1.21	183	ePn	Pn	10 00 32.0	+0.6
MNAI				eSn	Sn	10 00 56.1	+0.2
MDSI	Maura Dua	1.77	139	P	Pn	10 00 37.0	+0.7
MDSI				S	Sn	10 01 04.4	-0.1
PMBI	Palembang	1.77	83	P	Pn	10 00 36.3	0.0
PMBI				S	Pn	10 00 36.4	+0.1
KRJI	Kerinci	1.87	304	P	Pn	10 00 38.9	+1.5
KRJI				S	Pn	10 00 39.2	+1.8
LWLI	Liwa	2.13	151	P	Pn	10 00 40.0	-0.1
LWLI				S	Pn	10 00 40.8	+0.7
KLI	Kotabumi	2.51	133	P	Pn	10 00 31.6	-13
KASI	Kota Agung	2.79	148	P	Pn	10 00 47.2	0.0
KASI				S	Pn	10 00 47.3	0.0
DSRI	Dabo	3.08	31	P	Pn	10 00 51.4	+0.7
BLSI	Bandar Lampung	3.13	135	P	Pn	10 00 52.1	+0.7
PPBI	Pangkal Pinang	3.27	73	P	Pn	10 00 53.7	+0.7
PDSI	Padang	3.38	311	P	Pn	10 00 55.1	+0.8
PPI	Padang Panjang	3.74	316	P	Pn	10 00 58.9	+0.2
BKNI	Bangkinang	3.97	330	P	Pn	10 01 02.7	+1.1
BKNI	Bangkinang	3.97	330	ePn	Pn	10 01 02.1	+0.5
SBJI	Serang	4.29	134	P	Pn	10 01 06.0	+0.5
SISI	Saibi	4.32	295	P	Pn	10 01 06.0	+0.1
CGJI	Cibinong	4.36	142	P	Pn	10 01 04.8	-1.6
MYKOM	Kota Tinggi	4.97	10	ePn	Pn	10 01 15.2	+0.9
DBJI	Dramaga	5.03	132	P	Pn	10 01 15.5	+0.5
SKJI	Sukabumi	5.21	137	P	Pn	10 01 16.4	-0.9
	241nm,0.6s,5μm1.2nm						
LEM	Lembang	5.87	129	P	Pn	10 01 26.6	+0.7
	8.2nm,0.3s,baz=318,slow=15,SNR=5.8						
LEM				S	Sn	10 02 34.5	+0.8
	5.2nm,0.3s,baz=323,slow=20,SNR=2.2						
CISI	Cisompet, Garu	6.49	133	P	Pn	10 01 32.1	-1.7
	116nm,0.7s,3μm1.1nm						
CISI	Cisompet, Garu	6.49	133	ePn	Pn	10 01 32.4	-1.4
CISI				eSn	Sn	10 02 44.2	-3.7
GSI	Gunungsitoli	7.00	309	P	Pn	10 01 40.2	-0.3
	204nm,0.6s,0.9nm						
GSI	Gunungsitoli	7.00	309	ePn	Pn	10 01 39.5	-1.0
GSI				eSn	Sn	10 02 53.3	-6.9
CMJI	Cimerak	7.11	131	P	Pn	10 01 40.1	-1.7
	99nm,1.2s,0.5nm						
PSI	Prapat	7.18	325	P	Pn	10 01 41.0	-1.9
	2.7nm,0.3s,baz=180,slow=11,SNR=22						
PSI	Prapat	7.18	325	ePn	Pn	10 01 41.3	-1.6
KPJI	Karang Pucung	7.21	125	P	Pn	10 01 44.1	+0.9
IPM	Ipoh	7.83	345	ePn	Pn	10 01 52.9	+1.6
KCSI	Kotacane, Aceh	8.44	322	P	Pn	10 01 58.0	-1.2
	45nm,0.6s,2μm						
TPTI		8.63	317	P	Pn	10 02 00.3	-1.3
KULM	Kulim	8.71	344	ePn	Pn	10 02 02.9	+0.2
UGM	Wanagama	8.85	123	P	Pn	10 02 05.2	+0.7
	90nm,1.8s						
UGM	Wanagama	8.85	123	ePn	Pn	10 02 04.6	+0.1
PCJI	Pacitan	9.55	122	P	Pn	10 02 13.0	-0.5
MLSI	Meulaboh, Aceh	9.89	318	P	Pn	10 02 16.6	-1.4
	163nm,0.5s,3μm						
SBUM	Sibu	10.75	59	ePn	Pn	10 02 30.5	+1.4
BSI	Banda Aceh	11.54	318	P	Pn	10 02 37.8	-1.4
	29nm,0.8s						
PLAI	Plampang	15.73	112	P	P	10 03 31.3	+0.1
SRAK	Srakaew	17.07	357	P	Pn	10 03 49.3	+1.9
	226nm,0.9s,2μm						
UBPT	Khong Chiam	18.47	8	P	P	10 04 01.3	+0.2
CMAR	Chiang Mai Arr	21.84	350	P	P	10 04 36.9	0.0
	4.1nm,0.5s,baz=181,slow=8.4,SNR=10						
CHTO	Chiang Mai	22.19	350	eP	P	10 04 40.1	-0.1
	3.6nm,0.8s						
CD2	Chengdu	33.87	1	P	P	10 06 25.3	+1.3
CD2				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WR1	Warramunga Arr	34.83	121	eP	P	10 06 31.7	-0.7
	comp=Z,3.7nm,0.7s						
WR1				ePcP	PcP	10 09 01.6	+0.5
WR1				eS	S	10 11 45.3	-3.1
WRA	Warramunga Arr	34.83	121	P	P	10 06 31.7	-0.7
	comp=Z,1.5nm,0.2s,baz=319,slow=10,SNR=82						
WRA				PcP	PcP	10 09 01.6	+0.5
	comp=Z,0.7nm,0.5s,baz=310,slow=2.2,SNR=6.6						
WRA				S	S	10 11 45.3	-3.1
	comp=Z,0.5nm,0.9s,baz=294,slow=16,SNR=3.1						
WRA				ScP	ScP	10 12 26.2	-1.4
	comp=Z,0.3nm,0.7s,baz=304,slow=2.9,SNR=4.3						
WB2	Warramunga Arr	34.84	121	eP	P	10 06 32.3	-0.1
ASAR	Alice Springs	36.16	127	P	P	10 06 44.2	+0.5
	comp=Z,3.6nm,0.3s,baz=299,slow=7.7,SNR=82						
ASAR				PcP	PcP	10 09 06.0	+1.1
	comp=Z,1.0nm,0.4s,baz=323,slow=2.6,SNR=7.7						
ASAR				S	S	10 12 03.8	-4.9
	comp=Z,0.5nm,0.5s,baz=295,slow=15,SNR=5.3						
ASAR				ScP	ScP	10 12 32.0	-0.4
	comp=Z,0.7nm,0.8s,baz=274,slow=2.6,SNR=4.8						
AS31	Alice Springs	36.16	127	eP	P	10 06 44.3	+0.6
	comp=Z,3.2nm,0.4s						
AS01	Alice Springs	36.19	127	eP	P	10 06 44.1	+0.2
HHC	Hu-ho-hao-te	44.48	9	eP	P	10 07 54.6	+2.9
HHC				pmax	pmax		
	comp=Z,31nm,1.0s						
HHC				pmax	pmax		
	comp=Z,86nm,5.2s						
CTA	Charters Tower	45.39	115	P	P	10 07 59.8	+0.7
	comp=Z,2.6nm,0.7s,baz=249,slow=8.6,SNR=2.7						
STKA	Stephens Creek	46.16	133	P	P	10 08 05.6	+0.8
	comp=Z,4.6nm,0.4s,baz=314,slow=7.4,SNR=20						
STKA	Stephens Creek	46.16	133	eP	P	10 08 05.7	+0.8
	comp=Z,2.1nm,1.0s						
KSAR	Wonju Array Be	46.53	27	P	P	10 08 08.4	+0.8
KSRS	Korea Array	46.55	27	P	P	10 08 08.4	+0.6
	comp=Z,0.7nm,0.7s,baz=227,slow=5.6,SNR=3.2						
WMQ	Urumqi	48.74	345	P	P	10 08 26.3	+1.6
SONA0	Songino Array	50.86	3	eP	P	10 08 41.7	+1.1
SONM	Songino Array	50.86	3	P	P	10 08 41.7	+1.1
	comp=Z,6.1nm,0.7s,baz=181,slow=9.4,SNR=29						
SONA1	Songino Array	50.87	3	eP	P	10 08 42.0	+1.4
MK01	Makanchi Array	52.96	342	eP	P	10 08 55.5	-0.5
MK31	Makanchi Array	52.98	342	eP	P	10 08 56.0	-0.2
MK32	Makanchi Array	52.98	342	eP	P	10 08 56.1	0.0
MKAR	Makanchi Array	52.98	342	P	P	10 08 56.1	-0.1
	comp=Z,1.6nm,0.4s,baz=152,slow=9.2,SNR=25						
MKAR	Makanchi Array	52.98	342	eP	P	10 08 55.8	-0.3
	comp=Z,17nm,0.4s						
KURBB	Kurchatov Arra	57.53	342	P	P	10 09 27.8	-0.8
	comp=Z,1.3nm,0.7s,baz=158,slow=6.4,SNR=7.6						
KURK	Kurchatov	57.59	342	eP	P	10 09 27.8	-1.1
ZAA0	Zalesovo Array	58.89	348	eP	P	10 09 37.7	-0.1
	comp=Z,6.3nm,0.6s						
ZALV	Zalesovo Beam	58.89	348	P	P	10 09 37.2	-0.7
	comp=Z,5.0nm,0.4s,baz=164,slow=5.7,SNR=23						
ZAA1	Zalesovo Array	58.89	348	eP	P	10 09 37.2	-0.7
BVAR	Borovoye Array	62.32	338	P	P	10 10 00.2	-0.9
	comp=Z,3.2nm,0.6s,baz=144,slow=8.0,SNR=8.4						
ABKAR	Akbulak array	64.10	330	eP	P	10 10 12.3	-0.6
MAW	Mawson	69.95	195	P	P	10 10 49.5	+0.2
	comp=Z,2.0nm,0.7s,baz=40,slow=7.9,SNR=3.8						
MMAI	Mount Meron Ar	73.14	306	P	P	10 11 09.6	+0.4
	comp=Z,0.4nm,0.3s,baz=88,slow=3.3,SNR=2.4						
LSZ	Lusaka	74.54	255	P	P	10 11 18.8	+1.1
	comp=Z,1.8nm,0.5s,baz=45,slow=5.7,SNR=2.4						
BR101	Keskin Array S	76.31	312	eP	P	10 11 25.8	-1.6
BRTR	Keskin Array B	76.31	312	P	P	10 11 25.8	-1.6
	comp=Z,0.9nm,0.7s,baz=122,slow=7.9,SNR=4.6						
LBTB	Lobatse	77.27	245	P	P	10 11 34.0	+1.0
	comp=Z,1.1nm,0.3s,baz=132,slow=3.2,SNR=3.2						
BOSA	Boshof	77.75	242	P	P	10 11 35.9	+0.3
	comp=Z,3.5nm,0.6s,baz=104,slow=3.9,SNR=7.6						
VNDA	Vanda	80.47	169	P	P	10 11 49.8	+0.6
	comp=Z,1.0nm,0.5s,baz=297,slow=6.8,SNR=4.3						
KIWB	Kanaga Island	86.19	38	eP	P	10 12 16.2	-2.6
FIA0	FINESS Array S	86.52	332	eP	P	10 12 19.8	-0.4
FINES	FINESS Array B	86.52	332	P	P	10 12 19.8	-0.4
	comp=Z,0.4nm,0.4s,baz=110,slow=6.5,SNR=3.6						
ARA0	ARCESS Array S	88.57	340	eP	P	10 12 29.5	-0.3
ARCES	ARCESS Array B	88.57	340	P	P	10 12 29.5	-0.3
	comp=Z,3.6nm,0.9s,baz=92,slow=5.4,SNR=3.2						
HFS	Hagfors	92.36	330	P	P	10 12 48.0	+0.4
	comp=Z,0.5nm,0.4s,baz=126,slow=7.3,SNR=2.3						
TXAR	Lajitas Array	143.67	41	PKP	PKPbc	10 19 10.8	+0.7
	comp=Z,0.2nm,0.4s,baz=231,slow=1.2,SNR=5.7						
CPUP	Villa Florida	145.06	212	PKPbc	PKPdf	10 19 16.3	+1.9
	comp=Z,3.8nm,0.6s,baz=123,slow=2.3,SNR=8.1						

*ISCJB **21** 10:02:34.5±0.9, 9°.9S±0°.2×104°.3W±0°.2, h10km, mb4.0/11, Error ellipse: s-maj=25.5km s-min=17.8km az=43.1*

*IDC **21** 10:02:34.8±1.0, 9°.91S×104°.30W, h0km, mb3.8/9, mb1 4.0/9, mb1mx3.8/34, mbtmp3.8/9, Error ellipse: s-maj=27.5km s-min=22.8km az=50.0*

ISC 21 10:02:36.3±1.0, 9°.9S±0°.2×104°.3W±0°.2, h10km, n18, σ0§79/12, mb3.8/11, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	La Paz	34.31	350	P	P	10 09 21.5	-1.5
	23nm,0.4s,baz=175,slow=11,SNR=4.6						
LPAZ	La Paz	35.76	104	P	P	10 09 36.1	-0.4
	1.0nm,0.6s,baz=256,slow=5.9,SNR=4.7						
TXAR	Lajitas Array	39.02	1	P	P	10 10 04.2	+0.8
	0.3nm,0.8s,baz=184,slow=11,SNR=3.2						
SIV	San Ignacio	42.51	103	P	P	10 10 32.5	+0.2
	0.4nm,0.5s,baz=263,slow=9.7,SNR=4.3						
NVAR	Mina Array Bea	49.83	346	P	P	10 11 30.9	+1.0
	0.6nm,0.8s,baz=181,slow=9.7,SNR=4.9						
PDAR	Pinedale Array	52.64	355	P	P	10 11 51.0	+0.1
	0.4nm,0.6s,baz=165,slow=6.2,SNR=5.8						
RAR	Rarotonga	54.36	251	P	P	10 12 03.5	-0.2
	18nm,0.7s,baz=121,slow=5.9,SNR=3.2						
ULM	Lac du Bonnet	60.36	6	P	P	10 12 44.9	-0.5
	2.6nm,0.7s,baz=157,slow=7.7,SNR=3.1						
SCHQ	Schefferville	71.76	22	P	P	10 13 58.5	-0.2
	1.6nm,0.5s,baz=251,slow=8.1,SNR=2.6						
INK	Inuvik	80.73	349	P	P	10 14 50.3	+0.9
	0.9nm,0.9s,baz=180,slow=5.1,SNR=3.0						
ILAR	Eielson Array	81.00	343	P	P	10 14 50.8	-0.1
	0.2nm,0.5s,baz=144,slow=6.3,SNR=3.9						
H11S2	WAKE ISLAND Hy	92.14	288	T	T	11 57 54.2	
	baz=100,slow=75						
H11S1	WAKE ISLAND Hy	92.15	288	T	T	11 57 54.7	
	baz=100						
H11N3	WAKE ISLAND Hy	92.16	290	T	T	11 58 01.2	
	baz=100						
H11S3	WAKE ISLAND Hy	92.16	288	T	T	11 57 55.4	
	baz=100,slow=75						
H11N2	WAKE ISLAND Hy	92.17	290	T	T	11 58 00.5	
	baz=100						
H11N1	WAKE ISLAND Hy	92.17	290	T	T	11 58 01.7	
	baz=100						
WRA	Warramunga Arr	115.11	243	PKP	PKPdf	10 21 19.3	+0.5
	0.3nm,0.8s,baz=98,slow=2.3,SNR=5.9						

IDC 21 10:22:07.9±4.7, 15°.64S×74°.26W, h92km±34km, mb3.4/1, mb1 3.5/3, mb1mx3.1/42, mbtmp3.9/3, MS2.6/1, Ms1 2.7/1, ms1mx2.4/24, Error ellipse: s-maj=104.7km s-min=29.8km az=27.0, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	Nana	4.41	325	P	Pn	10 23 12.6	0.0
	6.1nm,0.3s,baz=150,slow=13,SNR=14						
NNA				S	Sn	10 24 09.2	+6.3
	22nm,0.3s,baz=250,slow=14,SNR=5.9						
LPAZ	La Paz	5.94	97	P	Pn	10 23 33.9	0.0
	1.3nm,0.3s,baz=267,slow=14,SNR=21						
LPAZ				S	Sn	10 24 55.3	+14
	0.8nm,0.3s,baz=254,slow=13,SNR=3.7						
LPAZ				LR	LR	10 26 02.1	
	comp=Z,50nm,18.1s,baz=290,slow=40						
TORD	Torodi Ar. Bea	80.38	73	P	P	10 34 09.9	0.0
	0.5nm,0.6s,baz=254,slow=6.1,SNR=4.2						
WRA	Warramunga Arr	134.82	219	PKP	PKPdf	10 41 16.7	-0.3
	0.5nm,1.1s,baz=131,slow=2.1,SNR=3.4						

*JMA **21** 10:27:38.4±0.2, 21°.33N×121°.68E, h8km, M3.7*

*TAP **21** 10:27:40.4, 21°.43N×121°.46E, h99km, ML3.1, C*

ISC 21 10:27:42.5±2.7, 21°.4N±0°.1×121°.48E±0°.06, h81km±15km, n29, σ0§79/45, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	Lan-yu	0.61	6	P	Pn	10 27 57.1	-0.2
	baz=15						
LAY				S	Sn	10 28 09.1	+0.7
	baz=15						
TSEB	Hengchuen, Pin	0.71	311	eP	Pn	10 27 58.3	0.0
	baz=305						
TSEB				S	Sn	10 28 12.2	+2.1
	baz=305						
TWKBT	Hengchun	0.80	309	P	Pn	10 27 59.0	-0.3
	baz=307						
TWKBT				eS	Sn	10 28 11.8	0.0
	baz=307						
TWK1	Hengchun	0.81	309	P	Pn	10 27 58.9	-0.5
	baz=307						
TWK1				eS	Sn	10 28 11.2	-0.7
	baz=307						
HEN	Hengchun	0.90	310	P	Pn	10 28 00.2	-0.1
	baz=303						
HEN				eS	Sn	10 28 14.2	+0.5
	baz=303						
EAST	Anshuo	1.12	328	P	Pn	10 28 02.3	-0.7
	baz=336						
EAST				S	Sn	10 28 18.3	0.0
	baz=336						
SCZT	Fangliau	1.23	320	P	Pn	10 28 03.9	-0.5
	baz=328						
SCZT				S	Sn	10 28 20.8	-0.1
	baz=328						
TWH	Lutao	1.28	360	P	Pn	10 28 03.1	-1.9
	baz=5.0						
TWH				S	Sn	10 28 20.6	-1.2
	baz=5.0						
MASBT	Mashibuluo	1.42	326	eP	Pn	10 28 06.3	-0.4
	baz=331						
MASBT				eS	Sn	10 28 25.4	+0.4
	baz=331						
TWGBT	Beinan	1.43	345	eP	Pn	10 28 05.9	-1.0
	baz=338						
TWG	Pinlang	1.44	345	eP	Pn	10 28 06.3	-0.7
	baz=340						
TWG				eS	Sn	10 28 26.3	+0.8
	baz=340						
CHKT	Chengkung	1.67	356	eP	Pn	10 28 08.8	-1.2
	baz=4.0						
FULB	Fuli	1.77	354	eP	Pn	10 28 10.7	-0.7
	baz=347						
TWF1	Yuli	1.92	355	eP	Pn	10 28 13.4	+0.1
	baz=350						
CHN1	Nanshi	1.96	333	eP	Pn	10 28 12.9	-0.9
	baz=334						
YULB	Yu-li	1.96	355	eP	Pn	10 28 14.1	+0.2
	baz=350						
HGSD	Ruisui	2.05	359	eP	Pn	10 28 14.9	-0.1
	baz=5.0						
EHY	Hungye	2.07	356	eP	Pn	10 28 15.0	-0.4
	baz=351						
ALS	Alishan	2.16	343	eP	Pn	10 28 17.2	+0.3
	baz=344						
VWDT	VWDT	2.33	352	eP	Pn	10 28 19.5	+0.6
	baz=342						
ESL	Shilin	2.38	359	eP	Pn	10 28 19.4	0.0
	baz=354						
JYNG	Yonagunijimaku	3.30	24	P	Pn	10 28 32.7	+0.9
JYNG				S	Sn	10 29 11.6	+1.6
YOJ	Yonaguni jima	3.33	25	P	Pn	10 28 32.7	+0.4
YOJ				S	Sn	10 29 12.2	+1.4
IRIF	Iriomote-Funau	3.56	35	P	Pn	10 28 35.6	+0.2
JKRS	Kuro-shima	3.64	39	P	Pn	10 28 36.6	+0.1
JKRS				eS	Sn	10 29 18.6	+0.3
JIJ	Ishigaki jima	3.82	40	P	Pn	10 28 38.2	-0.7
JIJ				S	Sn	10 29 21.8	-0.8
JISG	Ishigakijimahi	4.08	39	P	Pn	10 28 41.8	-0.7
JISG				S	Sn	10 29 28.6	-0.5
JTJ	Tarama	4.36	42	P	Pn	10 28 46.3	0.0
JTJ				S	Sn	10 29 35.9	0.0
JIRB	Irabujima	4.80	44	P	Pn	10 28 51.9	-0.3

*IDC **21** 10:29:06.0±1.7, 20°.72S×167°.91E, h0km, mb3.8/4, mb1 4.1/4, mb1mx3.6/49, mbtmp3.8/4, MS3.5/9, Ms1 3.5/9, ms1mx3.0/48, Error ellipse: s-maj=63.0km s-min=22.5km az=138.0*

ISC 21 10:29:11.0±1.6, 20°.7S±0°.3×167°.9E±0°.3, h35km, n17, σ1§80/9, mb3.8/4, MS3.5/9, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	1.94	226	Pn	Pn	10 29 39.6	-2.0
	30nm,0.3s,baz=126,slow=12,SNR=13						
DZM				LR	LR	10 30 06.5	
	comp=Z,409nm,19.9s,baz=148,slow=32						
DZM				Sn	Sn	10 30 07.6	+2.8
	67nm,0.3s,baz=201,slow=22,SNR=18						
DZM	Mont Dzumac	1.94	226	ePn	Pn	10 29 39.7	-1.9
	132nm,0.3s						
DZM				eSn	Sn	10 30 06.1	+1.3
	338nm,0.3s						
PMG	Port Moresby	22.97	296	LR	LR	10 42 13.7	
	comp=Z,93nm,18.7s,baz=106,slow=34						
STKA	Stephens Creek	26.04	239	LR	LR	10 44 11.5	
	comp=Z,104nm,19.1s,baz=29,slow=35						
RAR	Rarotonga	30.13	97	LR	LR	10 46 55.1	
	comp=Z,31nm,19.2s,baz=256,slow=36						
WRA	Warramunga Arr	31.49	265	P	P	10 35 29.4	-0.3
	0.5nm,0.6s,baz=96,slow=8.5,SNR=6.3						
ASAR	Alice Springs	31.61	258	P	P	10 35 30.4	-0.5
	1.5nm,0.9s,baz=85,slow=9.6,SNR=7.5						
JAY	Jayapura	32.13	301	LR	LR	10 48 06.6	
	comp=Z,45nm,21.6s,baz=92,slow=36						
PPT2	Papeete2	40.17	93	eLR	LR	10 47 23.2	
	59nm,23.5s						
PPT	Papeete	40.18	93	LR	LR	10 49 06.9	
	comp=Z,75nm,20.2s,baz=212,slow=30						
BATI	Baumata	43.81	277	LR	LR	10 54 56.4	
	comp=Z,123nm,19.3s,baz=160,slow=35						
PSI	Prapat	71.47	280	LR	LR	11 17 16.5	
	comp=Z,39nm,18.5s,baz=90,slow=40						
SONM	Songino Array	87.67	324	P	P	10 41 56.9	+1.0
	0.6nm,0.6s,baz=106,slow=3.1,SNR=3.1						
YBH	Yreka Blue Hor	89.20	44	LR	LR	11 14 46.1	
	comp=Z,22nm

TECA	Tecapa	1.36	347⇑	iP		Pn	10 51 56.2 -1.6
CNGN	Cerro Negro	1.50	77	eP		Pn	10 51 57.5 -2.2
CNGN					IAML		10 52 25.8
	comp=N,352nm,0.4s						
COPN	Copaltepe	1.57	89	eP		Pn	10 51 58.2 -2.4
CAHU	Cacacuatique	1.60	360	eP		Pn	10 52 00.3 -0.8
MOMN	Momotombo	1.64	81	eP		Pn	10 51 59.1 -2.4
LFRS	El Faro	1.68	330⇑	eP		Pn	10 52 00.2 -1.9
LBRS	Las Brisas	1.77	332	eP		Pn	10 52 01.8 -1.5
LFU	La Fuente	1.81	331	eP		Pn	10 52 02.3 -1.7
SNET	Serv Nac Est T	1.82	326	ePn		Pn	10 52 02.4 -1.6
SNET	Serv Nac Est T	1.82	326	eP		Pn	10 52 02.2 -1.8
SNET				eS		Sn	10 52 25.3 -0.6
SNET					IAML		10 52 29.1
	comp=Z,455nm,0.2s						
XAVN	Gruta Xavier	1.83	90	eP		Pn	10 52 01.9 -2.2
UEES	San Salvador	1.86	327	eP		Pn	10 52 02.3 -2.3
UEES					IAML		10 52 37.5
	comp=Z,518nm,0.3s						
BOQS	Boqueron	1.89	326	eP		Pn	10 52 03.2 -1.9
BRAN	Las Pilas	1.89	73	eP		Pn	10 51 59.7 -5.2
MGAN	Managua	1.91	90	eP		Pn	10 52 02.8 -2.3
MGAN					IAML		10 52 34.0
	comp=N,125nm,1.1s						
ESTN	Estel	2.02	62	ePn		Pn	10 52 04.8 -1.9
ESTN	Estel	2.02	62	eP		Pn	10 52 05.0 -1.7
ESTN					IAML		10 53 02.6
	comp=N,213nm,1.0s						
TGUH	Tegucigalpa,Un	2.09	25	ePn		Pn	10 52 07.2 -0.4
SBLS	San Blas	2.17	320	eP		Pn	10 52 07.1 -1.8
RTR	El Retiro	2.23	321	eP		Pn	10 52 08.3 -1.4
MATN	Matagalpa	2.35	71	eP		Pn	10 52 09.2 -2.0
RCON	San Juan de Ri	2.39	56	eP		Pn	10 52 10.6 -1.3
MTO3	Montecristo	2.49	333	eP		Pn	10 52 12.3 -1.1
MTO3					IAML		10 52 53.2
	comp=Z,73nm,0.6s						
JTS	JuntasAbangare	3.69	120	Pn		Pn	10 52 28.0 -1.7
	comp=Z,1.1nm,0.3s,baz=352,slow=23,SNR=12						
JTS				Sn		Sn	10 53 07.5 -4.4
	comp=Z,3.1nm,0.3s,baz=258,slow=11,SNR=4.2						
JTS				Lg		Lg	10 53 21.7
	comp=Z,1.6nm,0.3s,baz=37,slow=20,SNR=2.3						
JTS				LR		LR	10 54 07.7
	comp=Z,143nm,21.5s,baz=0.0,slow=44						
JTS	JuntasAbangare	3.69	120	eP		Pn	10 52 28.1 -1.5
ESPN	Las Esperanzas	3.81	89	ePn		Pn	10 52 32.2 +0.9
HDC	Heredia	4.55	118	ePn		Pn	10 52 45.1 +3.5
CMIG	Matias Romero	8.12	308	Pn		Pn	10 53 30.0 -0.3
	comp=Z,0.6nm,0.3s,baz=138,slow=12,SNR=15						
CMIG				Sn		Sn	10 54 57.1 -3.7
	comp=Z,0.0nm,0.3s,baz=255,slow=22,SNR=1.8						
LNIG	Linares	16.56	321	ePn		P	10 55 26.8 +0.9
	comp=Z,15nm,0.9s						
833A	Chaparral WMA,	19.18	329	P		P	10 55 55.5 +0.7
	baz=144,SNR=11						
833A	Chaparral WMA,	19.18	329	eP		Pn	10 55 55.9 -0.2
	comp=Z,50nm,0.8s						
353A	Camilla	19.44	10	P		P	10 55 57.6 0.0
	baz=191						
352A	Blakely	19.46	8	P		P	10 55 57.5 -0.3
	baz=189						
250A	Grady	19.80	5	P		P	10 56 01.2 -0.3
	baz=185						
244A	Avery, Jackson	19.92	354	P		P	10 56 02.3 -0.4
	baz=172						
252A	Lumpkin	20.00	9	P		P	10 56 03.7 +0.1
	baz=190						
251A	Midway	20.00	7	P		P	10 56 04.1 +0.4
	baz=188						
VBMS	Vicksburg	20.07	354	P		Pn	10 56 06.0 -0.6
	baz=173						
VBMS	Vicksburg	20.07	354	eP		P	10 56 05.6 +1.1
	comp=Z,31nm,0.8s						
254A	Abbeville	20.20	12	P		P	10 56 06.3 +0.5
	baz=194						
241A	Mo Tay, Goldon	20.24	348	P		P	10 56 07.1 +0.9
	baz=166						
149A	Jones	20.38	3	P		P	10 56 08.3 +0.5
	baz=184						
148A	Greensboro	20.40	2	P		P	10 56 08.5 +0.6
	baz=181						
151A	Opelika	20.44	7	P		P	10 56 09.1 +0.6
	baz=188						
150A	Eclectic	20.45	5	P		P	10 56 09.0 +0.4
	baz=186						
152A	Waverly Hall	20.66	8	P		P	10 56 10.8 0.0
	baz=189						
152A	Waverly Hall	20.66	8	eP		P	10 56 11.2 +0.4
	comp=Z,12nm,1.0s						
LRAL	Lakeview Retre	20.80	3	P		P	10 56 12.9 +0.5
	baz=183						
140A	Cam and Jess,	20.97	347	P		P	10 56 15.3 +1.2
	baz=165						
Z49A	Columbiana	20.99	4	P		P	10 56 15.1 +0.7
	baz=184						
155A	Kite	21.03	14	P		P	10 56 14.8 -0.1
	baz=196						
Z50A	Ashland	21.10	5	P		P	10 56 15.1 -0.5
	baz=186						
JCT	Junction City	21.16	331	P		P	10 56 16.3 0.0
	baz=147						
JCT	Junction City	21.16	331	eP		P	10 56 16.2 0.0
	comp=Z,9.9nm,0.8s						
Z52A	Williamson	21.21	9	P		P	10 56 16.4 -0.4
	baz=190						
Z53A	Monticello	21.44	11	P		P	10 56 19.4 +0.2
	baz=192						
WHTX	Lake Whitney,	21.50	338	P		P	10 56 20.5 +0.6
	baz=154						
Z40A	Long Farm, Mag	21.53	348	P		P	10 56 20.5 +0.3
	baz=166						
Z54A	Sparta	21.54	12	P		P	10 56 20.1 -0.2
	baz=194						
GOGA	Godfrey	21.59	11	P		P	10 56 20.2 -0.6
	baz=192						
Y46A	Houston	21.63	359	P		P	10 56 20.6 -0.6
	baz=178						
Y45A	Yeager Farm, C	21.64	357	P		P	10 56 21.4 +0.1
	baz=176						
Y49A	Blount Mountai	21.66	4	P		P	10 56 20.6 -0.9
	baz=184						
Y49A	Blount Mountai	21.66	4	eP		P	10 56 20.9 -0.7
	comp=Z,5.2nm,0.8s						
Y48A	Jasper	21.67	2	P		P	10 56 20.4 -1.3
	baz=182						
Y50A	Piedmont	21.75	6	P		P	10 56 21.5 -0.9
	baz=186						
Y51A	Rockmart	21.83	7	P		P	10 56 22.2 -1.2
	baz=188						
Y52A	Lilburn	21.93	9	P		P	10 56 24.3 -0.2
	baz=191						
Y54A	Tignall	22.18	12	P		P	10 56 27.2 +0.1
	baz=194						
Y40A	Okolona	22.24	349	P		P	10 56 27.5 -0.2
	baz=166						
X47A	Russelville	22.26	1	P		P	10 56 27.4 -0.6
	baz=180						
X46A	Booneville	22.30	359	P		P	10 56 28.4 0.0
	baz=179						
X50B	Fort Payne	22.32	6	P		P	10 56 27.7 -1.0
	baz=186						
TXAR	Lajitas Array	22.34	322	P		P	10 56 29.6 +0.6
	comp=Z,3.3nm,0.8s,baz=143,slow=11,SNR=25						
TXAR				PcP		PcP	11 00 26.8 +3.6
	comp=Z,0.4nm,0.8s,baz=123,slow=4.4,SNR=3.8						
TX31	Lajitas Ar. Si	22.34	322	eP		P	10 56 29.9 +0.8
X52A	Dahlonega	22.68	9	P		P	10 56 31.0 -1.5
	baz=191						
X53A	Estanollee	22.68	11	P		P	10 56 31.6 -0.9
	baz=192						
MIAR	Mount Ida	22.81	348	P		P	10 56 33.3 -0.5
	baz=166,SNR=14						
MIAR	Mount Ida	22.81	348	eP		P	10 56 33.8 -0.1
	comp=Z,18nm,0.8s						
UALR	University of	22.82	351	eP		P	10 56 33.4 -0.5
	comp=Z,10nm,0.6s						
X39A	Fountain Ranch	22.89	347	P		P	10 56 34.3 -0.4
	baz=165						
W48A	Pulaski	22.90	3	P		P	10 56 33.3 -1.5
	baz=183						
ABTX	Abilene, Hawle	22.91	335	P		P	10 56 33.5 -1.5
	baz=150						
ABTX	Abilene, Hawle	22.91	335	eP		P	10 56 34.5 -0.4
	comp=Z,13nm,0.9s						
W49A	Belvidere	22.92	4	P		P	10 56 33.8 -1.2
	baz=184						
W47A	Westpoint	22.99	1	P		P	10 56 34.1 -1.6
	baz=181						
W41B	Gary Mavity, V	23.20	352	P		P	10 56 37.1 -0.6
	baz=170						
W41B	Gary Mavity, V	23.20	352	eP		P	10 56 37.7 -0.1
	comp=Z,8.8nm,0.9s						
WHAR	Wooly Hollow	23.32	352	eP		P	10 56 38.8 -0.2
	comp=Z,8.4nm,0.8s						
W40A	Ferguson Farm,	23.35	350	P		P	10 56 38.3 -0.9
	baz=168,SNR=5.0						
W40A	Ferguson Farm,	23.35	350	eP		P	10 56 39.1 -0.1
	comp=Z,14nm,0.8s						
W39A	Magazine	23.48	348	P		P	10 56 40.3 -0.1
	baz=166,SNR=8.0						
W39A	Magazine	23.48	348	eP		P	10 56 40.7 +0.2
	comp=Z,11nm,1.0s						
V48A	Smith Brothers	23.51	3	P		P	10 56 39.9 -0.8
	baz=183						
V49A	McMinnville	23.59	5	P		P	10 56 41.0 -0.5
	baz=185						
KMSC	Kings Mountain	23.71	14	P		P	10 56 41.6 -1.0
	baz=197						
TKL	Tuckaleechee C	23.73	9	P		P	10 56 41.4 -1.5
	comp=Z,7.0nm,0.8s,baz=179,slow=9.7,SNR=8.0						
TKL				LR		LR	11 06 43.8
	comp=Z,37nm,18.2s,baz=192,slow=39						
TKL	Tuckaleechee C	23.73	9	eP		P	10 56 42.5 -0.3
	comp=Z,9.9nm,1.0s						
V41A	Mountainview	23.79	352	P		P	10 56 42.5 -0.8
	baz=170,SNR=5.4						
V53A	Saluda	23.91	11	P		P	10 56 43.6 -0.9
	baz=193						
V40A	Witts Springs	23.91	351	P		P	10 56 44.0 -0.5
	baz=168,SNR=8.0						
V40A	Witts Springs	23.91	351	eP		P	10 56 44.3 -0.2
	comp=Z,10nm,0.8s						
V52A	Sevierville	23.94	9	P		P	10 56 44.0 -0.7
	baz=191						
V39A	Pettigrew	24.08	349	P		P	10 56 45.7 -0.4
	baz=166,SNR=5.6						
U46A	Springville	24.09	0	P		P	10 56 45.1 -1.0
	baz=180						
U47A	Clarksville	24.19	2	P		P	10 56 45.6 -1.4
	baz=182						
U42A	Revenden	24.24	354	P		P	10 56 46.0 -1.4
	baz=172						
U44A	Portageville	24.27	357	P		P	10 56 45.9 -1.8
	baz=176						
U49A	Red Boiling Sp	24.34	5	P		P	10 56 46.9 -1.5
	baz=185						
WMOK	Wichita Mounta	24.45	339	P		P	10 56 48.6 -0.8
	baz=154,SNR=8.6						
WMOK	Wichita Mounta	24.45	339	eP		P	10 56 48.9 -0.5
	comp=Z,8.1nm,1.1s						
U40A	Yellville	24.45	351	P		P	10 56 48.5 -0.9
	baz=169,SNR=8.7						
U39A	Green Forest	24.58	350	P		P	10 56 49.5 -1.1
	baz=167						
PBMO	Poplar Bluff	24.59	356	eP		P	10 56 49.4 -1.3
	comp=Z,5.7nm,0.9s						
TUL1	Leonard	24.62	345	P		P	10 56 49.9 -1.1
	baz=162						
TUL1	Leonard	24.62	345	eP		P	10 56 50.1 -0.9
	comp=Z,8.8nm,0.8s						
U53A	Fall Branch	24.62	11	P		P	10 56 49.3 -1.7
	baz=193						
TZTN	Tazewell	24.64	9	P		P	10 56 49.3 -1.8
	baz=191						
T47A	Sharon Grove	24.74	2	P		P	10 56 50.0 -2.0
	baz=182						
T47A	Sharon Grove	24.74	2	eP		P	10 56 50.4 -1.6
	comp=Z,5.5nm,0.7s						
T43A	Greenville	24.89	356	P		P	10 56 52.0 -1.3
	baz=175						
T42A	Van Buren	24.90	354	P		P	10 56 52.0 -1.5
	baz=173						
T42A	Van Buren	24.90	354	eP		P	10 56 52.2 -1.2
	comp=Z,2.5nm,0.8s						
T49A	Edmonton	24.95	5	P		P	10 56 52.2 -1.8
	baz=186						
T41A	Mountain View	24.98	353	P		P	10 56 53.0 -1.2
	baz=171						
MNTX	Cornudas Mount	25.07	324	P		P	10 56 55.0 -0.1
	baz=137,SNR=5.8						
MNTX	Cornudas Mount	25.07	324	eP		P	10 56 55.8 +0.6
	comp=Z,2.6nm,0.9s						
T40A	Mansfield	25.18	352	P		P	10 56 55.4 -0.7
	baz=170,SNR=5.2						
T39A	Clever	25.19	350	P		P	10 56 55.0 -1.1
	baz=168						
T52A	Hallie	25.28	10	P		P	10 56 55.3 -1.6
	baz=192						
S43A	Fulton Ridge,	25.36	357	P		P	10 56 56.3 -1.3
	baz=175						
T38A	Diamond	25.36	349	P		P	10 56 56.4 -1.3
	baz=166						
S44A	Carbondale	25.44	358	P		P	10 56 56.8 -1.6
	baz=177						
MSTX	Muleshoe	25.45	331	P		P	10 56 58.0 -0.7
	baz=145,SNR=7.7						
MSTX	Muleshoe	25.45	331	eP		P	10 56 58.7 0.0
	comp=Z,14nm,0.9s						
S41A	Jillco Farms,	25.52	353	P		P	10 56 57.9 -1.1
	baz=172						
S42A	Caledonia	25.61	355	P		P	10 56 59.6 -0.3
	baz=174						
S40A	Lebanon	25.62	352	P		P	10 56 58.7 -1.3
	baz=170,SNR=6.6						
AMTX	Amarillo	25.72	334	P		P	10 57 00.3 -0.7
	baz=148						
AMTX	Amarillo	25.72	334	eP		P	10 57 01.0 0.0
	comp=Z,15nm,1.0s						
S39A	Bolivar	25.83	351	P		P	10 57 00.6 -1.4
	baz=168,SNR=20						
S39A	Bolivar	25.83	351	eP		P	10 57 00.4 -1.5
	comp=Z,21nm,0.7s						
CCM	Cathedral Cave	25.93	354	P		P	10 57 01.0 -1.7
	baz=173						
CCM	Cathedral Cave	25.93	354	eP		P	10 57 01.6 -1.1
	comp=Z,4.8nm,0.6s						
R45A	Skylar, Fairfi	26.02	360	P		P	10 57 02.2 -1.4
	baz=180						
R41A	Rosebud	26.18	354	P		P	10 57 03.8 -1.3
	baz=173						
R40A	Maddies Statio	26.27	353	P		P	10 57 03.9 -2.0
	baz=171						
R40A	Maddies Statio	26.27	353	eP		P	10 57 05.5 -0.4
	comp=Z,3.3nm,0.9s						
R39A	Chumby, Stover	26.40	351	P		P	10 57 05.7 -1.3
	baz=169,SNR=9.6						
R38A	Fenwick Farm,	26.41	350	P		P	10 57 05.5 -1.6
	baz=167,SNR=5.8						
NNA	Nana	26.51	154	LR		LR	11 06 11.9
	comp=Z,23nm,21.8s,baz=292,slow=33						
Q47A	Bedord North L	26.71	3	P		P	10 57 08.1 -1.8
	baz=184						
Q41A	Truxton	26.82	355	P		P	10 57 10.1 -0.7
	baz=173						
Q40A	Laux Farm, Aux	26.94	353	P		P	10 57 11.2 -0.7
	baz=171						
Q39A	Willow Grove F	27.11	352	P		P	10 57 11.8 -1.6
	baz=169,SNR=6.9						
Q38A	Cooks Store, C	27.12	351	P		P	10 57 12.4 -1.1
	baz=168,SNR=5.3						
P40A	Paris	27.47	354	P		P	10 57 15.1 -1.6
	baz=172						
P40A	Paris	27.47	354	eP		P	10 57 15.8 -0.8
	comp=Z,4.9nm,0.7s						
P39B	Salisbury	27.51	352	P		P	10 57 15.4 -1.6
	baz=170						
P38A	Dawn	27.76	351	P		P	10 57 17.5 -1.7
	baz=168						
P38A	Dawn	27.76	351	eP		P	10 57 17.8 -1.4
	comp=Z,12nm,0.8s						
KSU1	Kansas State U	27.85	346	P		P	10 57 19.2 -0.9
	baz=162						
P37A	Lathrop	27.85	350	P		P	10 57 18.7 -1.4
	baz=167						
O44A	Mansfield	27.88	360	P		P	10 57 19.0 -1.3
	baz=179						
TASL	Snake Pit, Alb	28.09	327	P		P	10 57 20.9 -1.6
	baz=139						
O50A	Cable	28.16	7	P		P	10 57 21.0 -1.9
	baz=189						
O38A	Galt	28.23	351	P		P	10 57 22.1 -1.4
	baz=169						
N40A	Mertquake, Sal	28.76	355	P		P	10 57 27.0 -1.1
	baz=173						
T25A	Trinidad	28.81	332	eP		P	10 57 31.0 +2.0
	comp=Z,4.1nm,1.0s						
N39A	Derby Farms, D	28.85	353	P		P	10 57 27.5 -1.4
	baz=171						
N39A	Derby Farms, D	28.85	353	eP		P	10 57 27.8 -1.2
	comp=Z,8.7nm,0.7s						
M36A	Felix, Anita	29.75	350	P		P	10 57 35.2 -1.7
	baz=167						
L42A	Oliver, Polo	29.76	358	P		P	10 57 35.3 -1.7
	baz=177						
L40A	Anamosa	29.90	355	P		P	10 57 37.1 -1.1
	baz=174						
L39A	Vinton	30.03	354	P		P	10 57 38.2 -1.2
	baz=172						
L38A	Oak Wood Farm,	30.15	353	P		P	10 57 39.1 -1.4
	baz=170						
M54A	Oil Creek Stat	30.17	13	P		P	10 57 39.3 -1.4
	baz=196						
K43A	Burlington	30.43	360	P		P	10 57 41.3 -1.6
	baz=180						
K39A	Oelwein	30.60	355	P		P	10 57 43.1 -1.3
	baz=173						
K38A	Parkersburg	30.63	353	P		P	10 57 43.4 -1.3
	baz=171						
K37A	Belmond	30.86	352	P		P	10 57 45.1 -1.6
	baz=169,SNR=13						
J37A	Redenius Farm,	31.38	352	P		P	10 57 49.7 -1.6
	baz=170,SNR=7.3						
J36A	Seneca 1, Swea	31.50	351	P		P	10 57 50.8 -1.6
	baz=168,SNR=5.1						
J36A	Seneca 1, Swea	31.50	351	eP		P	10 57 51.2 -1.2
	comp=Z,18nm,0.7s						
ISCO	Idaho Springs	31.54	334	eP		P	10 57 54.0 +0.8
	comp=Z,1.9nm,0.8s						
SMCO	Snowmass	31.64	332	eP		P	10 57 55.3 +1.2
	comp=Z,2.2nm,0.9s						
I37A	Lemond, Waseca	32.05	353	P		P	10 57 55.7 -1.5
	baz=170						
I36A	Fitzsimmons Fa	32.14	352	P		P	10 57 56.2 -1.7
	baz=169						
ECSD	EROS Data Cent	32.29	349	P		P	10 57 57.6 -1.6
	baz=164						
ECSD	EROS Data Cent	32.29	349	eP		P	10 57 57.8 -1.5
	comp=Z,3.2nm,0.8s						
N23A	Red Feather La	32.59	335	P		P	10 58 01.0 -1.3
	baz=146						
H36A	Jessenland, He	32.67	352	P		P	10 58 00.8 -1.8
	baz=169						
H35A	Sunnyside Ranc	32.92	351	P		P	10 58 03.0 -1.7
	baz=168,SNR=8.8						
O20A	White River Ci	33.00	331	eP		P	10 58 08.6 +2.8
	comp=Z,5.0nm,0.9s						
G40A	Rib Lake	33.04	357	P		P	10 58 03.9 -1.9
	baz=176						
CTCC	Cactus City	33.17	315	epP		pP	10 58 28.3 +8.4
SPMN	Marine on St.	33.18	354	P		P	10 58 05.3 -1.7
	baz=172						
SPMN	Marine on St.	33.18	354	eP		P	10 58 05.4 -1.7
	comp=Z,14nm,0.8s						
H32A	Carlson Farm,	33.19	348	P		P	10 58 05.3 -1.8
	baz=163						
G36A	St. Michael	33.30	353	P		P	10 58 06.6 -1.5
	baz=170						
EML	El Monte Cty P	33.37	313	ePcP		PcP	11 00 48.2 -1.6
SADO	Sadowa	33.41	12	P		P	10 58 07.1 -1.9
	comp=Z,2.7nm,0.6s,baz=204,slow=8.5,SNR=3.7						
SADO	Sadowa	33.41	12	eP		P	10 58 06.7 -2.3
	comp=Z,3.4nm,0.8s						
PFO	Pinyon Flats O	33.48	314	ePcP		PcP	11 00 50.0 -0.3
G33A	Ortonville	33.66	349	P		P	10 58 09.7 -1.6
	baz=165						
F40A	Park Falls	33.68	358	P		P	10 58 09.8 -1.6
	baz=176						
F38A	Pierce - Schro	33.83	355	P		P	10 58 10.8 -1.9
	baz=173						
F36A	Milaca	33.89	353	P		P	10 58 11.4 -1.9
	baz=170						
F36A	Milaca	33.89	353	eP		P	10 58 11.3 -1.9
	comp=Z,5.2nm,0.8s						
G32A	Webster	33.92	348	P		P	10 58 11.5 -2.0
	baz=163						
F35A	Swanville	34.02	352	P		P	10 58 12.6 -1.7
	baz=169						
G31A	Conde	34.04	347	P		P	10 58 12.6 -1.9
	baz=162						
F34A	Alexandria	34.05	351	P		P	10 58 12.7 -2.0
	baz=167						
E45A	Wooded Hills,	34.18	4	P		P	10 58 13.4 -2.3
	baz=185						
LONY	Lake Ozonia	34.39	17	P		P	10 58 16.1 -1.5
	baz=204						
E38A	The Farm, Brul	34.45	356	P		P	10 58 16.3 -1.7
	baz=174						
E36A	McGregor	34.51	354	P		P	10 58 16.4 -2.1
	baz=171						
LPAZ	La Paz	34.54	144	P		P	10 58 21.3 +1.5
	comp=Z,0.7nm,0.5s,baz=331,slow=10,SNR=5.8						
LPAZ				PcP		PcP	11 00 54.3 +0.2
	comp=Z,1.0nm,0.5s,baz=180,slow=2.0,SNR=3.2						
CHNC	Chino	34.54	314	eP		P	10 58 17.2 -1.9
RSSD	Black Hills	34.64	340	eP		P	10 58 20.0 0.0
	comp=Z,3.4nm,0.7s						
BREC	Barre Substati	34.66	313	eP		P	10 58 24.8 +4.8
E35A	Pequot Lakes	34.68	352	P		P	10 58 19.0 -1.1
	baz=169						
E34A	Wadena	34.74	352	P		P	10 58 19.0 -1.6
	baz=168						
E33A	Westby DABS, E	34.86	351	P		P	10 58 19.4 -2.2
	baz=166						
MWC	Mount Wilson	34.93	314	epP		pP	10 58 41.8 +6.5
MWC				eS		S	11 03 55.0 +3.9
D37A	Cotton	35.06	355	P		P	10 58 21.4 -1.9
	baz=173						
D36A	Goodland	35.15	354	P		P	10 58 22.3 -1.8
	baz=171						
D36A	Goodland	35.15	354	eP		P	10 58 22.4 -1.7
	comp=Z,7.1nm,0.6s						
D35A	Remer	35.15	353	P		P	10 58 21.6 -2.5
	baz=170						
E31A	Nome	35.25	348	P		P	10 58 22.5 -2.4
	baz=163						
FOXC	Fox Airport	35.33	315	epP		pP	10 58 41.4 +2.8
D33A	AnnSam, Waubun	35.45	351	P		P	10 58 24.4 -2.3
	baz=167,SNR=5.3						
PD31	Pinedale Array	35.68	333	eP		P	10 58 28.3 -0.7
PDAR	Pinedale Array	35.68	333	P		P	10 58 28.3 -0.7
	comp=Z,0.9nm,0.9s,baz=126,slow=9.3,SNR=7.1						
PDAR				PcP		PcP	11 00 57.1 +0.5
	comp=Z,0.6nm,0.8s,baz=108,slow=4.8,SNR=4.6						
PDAR	Pinedale Array	35.68	333	eP		P	10 58 29.7 +0.6
PDAR				PcP		PcP	11 00 57.1 +0.5
HWUT	Hardware Ranch	35.74	329	eP		P	10 58 30.2 +0.7
	comp=Z,2.2nm,0.8s						
C35A	Jirik Farms, M	35.76	353	P		P	10 58 27.2 -2.1
	baz=170,SNR=6.1						
C34A	RKJ Ranch, Bem	35.82	352	P		P	10 58 27.6 -2.2
	baz=168						
B35A	Bob, Littlefor	36.38	354	P		P	10 58 32.7 -1.9
	baz=171						
C31A	Landman Farms,	36.41	349	P		P	10 58 32.7 -2.1
	baz=164						
AGMN	Agassiz Nation	36.59	351	P		P	10 58 34.4 -2.0
	baz=167,SNR=9.0						
AGMN	Agassiz Nation	36.59	351	eP		P	10 58 34.7 -1.7
	comp=Z,8.5nm,0.8s						
B34A	Aery, Baudette	36.61	353	P		P	10 58 34.6 -2.0
	baz=169,SNR=7.0						
REDW	Red Top Meadow	36.74	332	eP		P	10 58 38.4 +0.4
	comp=Z,5.2nm,0.8s						
CARC	Carrizo Plain	36.75	314	eP		P	10 58 38.6 +0.6
CARC				epP		sP	10 58 55.4 -1.1
SNOW	Snow King Moun	36.77	332	eP		P	10 58 39.0 +0.6
	comp=Z,12nm,1.1s						
LOHW	Long Hollow	36.82	332	eP		P	10 58 39.6 +

NV01 *e*PcP **PcP** **11 01 03.2 +1.2**
NVAR Mina Array Bea 37.44 320 P **P** **10 58 43.2 -0.8**
comp=Z,0.8nm,0.8s,baz=143,slow=9.1,SNR=6.2
NVAR PcP **PcP** **11 01 03.2 +1.2**
comp=Z,1.0nm,0.8s,baz=125,slow=3.5,SNR=7.1
RLMT Red Lodge 37.45 335 P **P** **10 58 42.9 -1.2**
baz=144
RLMT Red Lodge 37.45 335 *e*P **P** **10 58 43.6 -0.5**
comp=Z,3.0nm,0.9s
LAO LASA Array 37.63 340 P **P** **10 58 45.3 0.0**
baz=150
YMR Madison River 37.81 333 *e*P **P** **10 58 46.7 -0.4**
comp=Z,5.7nm,0.8s
ULM Lac du Bonnet 38.50 352 P **P** **10 58 50.1 -2.4**
comp=Z,11nm,0.7s,baz=160,slow=8.3,SNR=15
ULM LR LR 11 18 37.0
comp=Z,21nm,18.6s,baz=270,slow=43
ULM Lac du Bonnet 38.50 352 *e*P **P** **10 58 50.2 -2.4**
comp=Z,9.8nm,0.8s
DGMT Dagmar 38.57 343 P **P** **10 58 53.1 -0.1**
baz=154
HLID Hailey 38.60 329 *e*P **P** **10 58 55.5 +1.8**
MCMT McKenzie Canyo 38.78 332 *e*P **P** **10 58 56.5 +1.2**
BOZ Bozeman (W) 38.83 334 P **P** **10 58 55.9 +0.3**
baz=142
BOZ Bozeman (W) 38.83 334 *e*P **P** **10 58 56.1 +0.5**
comp=Z,3.0nm,0.8s
DLMT Dillon 39.08 332 *e*P **P** **10 58 59.1 +1.5**
comp=Z,3.2nm,0.9s
LRM Limekiln Ridge 39.37 333 *e*P **P** **10 59 00.9 +0.7**
EGMT Eagleton 40.03 337 P **P** **10 59 05.3 -0.2**
baz=146
EGMT Eagleton 40.03 337 *e*P **P** **10 59 05.5 +0.1**
comp=Z,6.6nm,1.0s
MSO Missoula 40.80 333 *e*P **P** **10 59 15.5 +3.6**
comp=Z,4.1nm,1.0s
NEW Newport 43.31 332 LR LR 11 21 09.5
comp=Z,22nm,19.4s,baz=128,slow=41
FCC Fort Churchill 46.72 356 *e*P **P** **10 59 57.3 -1.8**
comp=Z,5.7nm,0.8s
FRB Frobisher Bay 53.34 11 LR LR 11 24 26.7
comp=Z,59nm,18.2s,baz=264,slow=37
YKA Yellowknife Ar 53.70 345 P **P** **11 00 49.6 -2.1**
comp=Z,1.6nm,0.7s,baz=139,slow=7.7,SNR=9.2
YKA LR LR 11 24 25.9
comp=Z,4.5nm,19.1s,baz=208,slow=37
IL1 Eielson Array 65.99 336 *e*P **P** **11 02 14.9 -1.3**
ILAR Eielson Array 65.99 336 P **P** **11 02 15.2 -1.0**
comp=Z,0.7nm,0.9s,baz=115,slow=5.0,SNR=6.7
RND Reindeer 66.26 335 *e*P **P** **11 02 17.9 -0.2**
comp=Z,3.5nm,0.9s
TOLK Toolik Lake Re 68.51 340 P **P** **11 02 31.8 -0.3**
baz=112
DBIC Dimbokro 82.14 85 LR LR 11 40 53.3
comp=Z,13nm,18.5s,baz=99,slow=36
CD2 Chengdu 135.66 345 PKP **PKPdf** **11 10 51.4 +0.5**
ASAR Alice Springs 138.48 248 PKP **PKPdf** **11 10 58.3 +2.1**
comp=Z,0.6nm,0.8s,baz=111,slow=2.1,SNR=2.9
WR1 Warramunga Arr 138.49 254 *e*PKPdf **PKPdf** **11 10 59.3 +3.0**
WRA Warramunga Arr 138.49 254 PKP **PKPdf** **11 10 59.3 +3.0**
comp=Z,0.5nm,0.9s,baz=88,slow=1.7,SNR=6.5
CMAR Chiang Mai Arr 148.77 347 PKPbc **PKPdf** **11 11 16.0 +1.7**
comp=Z,1.4nm,0.6s,baz=339,slow=3.2,SNR=5.8

*ISK **21** 10:59:42.5, 38°.36N×42°.07E, h5km, ML2.4/3*
*CSEM **21** 10:59:42.4±0.4, 36°.59N×42°.14E, h5km, ML2.7, Error ellipse: s-maj=8.6km s-min=4.8km az=37.0*
*DDA **21** 10:59:42.6, 36°.66N×42°.20E, h7km, Ml2.7*
*ISN **21** 10:59:44.0±0.3, 37°.03N×42°.77E, h0km, ML2.5*
ISC 21 10:59:43.1±2.4,**36°.6N**±0°.1×**42°.20E**±0°.05,**h9**km±13km,**n10,**
σ**1**º**08**/18,**Iraq**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRT	**Sirnak**	**0.91**	**12**	PG	**Pg**	**11 00 00.4**	**-0.2**
SIRT				SG	**Sb**	**11 00 13.4**	**-0.1**
SIRT	**Sirnak**	**0.91**	**12**	*e*Pg	**Pg**	**11 00 00.4**	**-0.2**
SIRT				*e*Sg	**Sb**	**11 00 13.4**	**-0.1**
MARD	**Mardin**	**1.34**	**302**	*i* P	**Pb**	**11 00 07.1**	**-1.4**
MARD				*i* S	**Sb**	**11 00 26.4**	**+0.5**
SRTM	**Siirt_Merkez**	**1.40**	**351**	*i* P	**Pb**	**11 00 08.1**	**-1.4**
SRTM				*i* S	**Sn**	**11 00 28.0**	**+0.4**
SRTM	**Siirt_Merkez**	**1.40**	**351**	P	**Pb**	**11 00 08.1**	**-1.4**
SRTM				S	**Sn**	**11 00 28.0**	**+0.4**
BTMN	**Batman**	**1.48**	**330**	*i* P	**Pg**	**11 00 14.1**	**+2.6**
BTMN				*i* S	**Sn**	**11 00 30.3**	**+0.7**
HAKT	**HAKKARI**	**1.53**	**51**	*i* P	**Pn**	**11 00 11.3**	**+0.4**
HAKT				*i* S	**Sn**	**11 00 31.9**	**+0.8**
HAKT	**HAKKARI**	**1.53**	**51**	P	**Pn**	**11 00 11.3**	**+0.4**
HAKT				S	**Sn**	**11 00 31.9**	**+0.8**
MAZI	**Mazidag**	**1.64**	**302**	PN	**Pn**	**11 00 11.6**	**-0.7**
MAZI	**Mazidag**	**1.64**	**302**	*e*Pn	**Pn**	**11 00 11.6**	**-0.7**

*IDC **21** 11:11:08.9±1.5, 66°.57N×18°.16W, h0km, mb3.3/2, mb1 3.7/6, mb1mx3.3/76, mbtmp3.6/6, ML3.3/4, MS3.1/13, Ms1 3.1/13, ms1mx2.9/40, Error ellipse: s-maj=33.6km s-min=21.8km az=138.0*
*REY **21** 11:11:09.1, 66°.92N×18°.31W, h12km*
ISC 21 11:11:08.0±1.6,**66°.80N**±0°.05×**18°.20W**±0°.03,**h1**km±10km,
n40,σ**1**º**01**/48,**MS3.2**/8,**Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGRI	**Grimsey**	**0.27**	**164**	P	**Pb**	**11 11 16.5**	**+0.8**
IGRI				S	**Sb**	**11 11 22.0**	**+1.2**
IBRE	**Brettingsstaoi**	**0.69**	**170**	P	**Pb**	**11 11 23.0**	**+0.1**
IBRE				S	**Sb**	**11 11 33.5**	**+0.6**
ISIG	**Siglufjorour**	**0.73**	**203**	P	**Pb**	**11 11 23.4**	**-0.2**
ISIG				S	**Sb**	**11 11 34.6**	**+0.6**
ILEI	**Leirhofn**	**0.79**	**119**	S	**Sb**	**11 11 35.8**	**+0.1**
ILEI				P	**Pb**	**11 11 24.3**	**-0.2**
IHED	**Heoinshofoi**	**0.81**	**153**	P	**Pg**	**11 11 24.1**	**+0.6**
IHED				S	**Sb**	**11 11 37.0**	**+0.7**
IHLA	**Hella**	**0.86**	**185**	P	**Pb**	**11 11 25.6**	**-0.2**
IHLA				S	**Sb**	**11 11 38.0**	**+0.1**
IDIM	**Dimmadals^¡s**	**0.99**	**148**	P	**Pg**	**11 11 27.3**	**+0.4**
IDIM				S	**Sn**	**11 11 42.6**	**-1.0**
IHRN	**Hraun**	**1.04**	**229**	P	**Pg**	**11 11 27.3**	**-0.6**
IHRN				S	**Sg**	**11 11 41.0**	**-0.3**
IGIL	**Gilhagi**	**1.04**	**134**	P	**Pb**	**11 11 28.7**	**-0.1**
IGIL				S	**Sn**	**11 11 43.8**	**-1.1**
ISKI	**Skildingah^‡ls**	**1.05**	**153**	P	**Pg**	**11 11 28.3**	**+0.2**
ISKI				S	**Sb**	**11 11 44.0**	**+0.8**
IGHA	**Grjothals**	**1.15**	**146**	S	**Sn**	**11 11 46.9**	**-0.7**
IGHA				P	**Pg**	**11 11 29.8**	**-0.2**
IKVO	**Krokottuvotn**	**1.22**	**153**	P	**Pg**	**11 11 30.9**	**-0.4**
IREN	**Reynihlio**	**1.27**	**155**	P	**Pn**	**11 11 31.8**	**-1.1**
IREN				S	**Sg**	**11 11 49.4**	**+0.6**
IMEL	**Melhnausar**	**1.39**	**152**	P	**Pn**	**11 11 33.6**	**-1.0**
ISVA	**Svartarkot**	**1.52**	**165**	P	**Pn**	**11 11 36.0**	**-0.4**
ISVA				S	**Sn**	**11 11 56.2**	**-0.6**
IASK	**Askja**	**1.87**	**159**	P	**Pn**	**11 11 41.2**	**0.0**
IHVE	**Hveravellir**	**2.02**	**197**	P	**Pn**	**11 11 43.9**	**+0.7**
IHVE				S	**Sn**	**11 12 10.0**	**+0.8**

baz=195
IADA Aoalbol 2.09 148 P **Pn** **11 11 44.4 +0.2**
baz=148
IKRE Kreppuhraun 2.16 159 P **Pn** **11 11 45.3 +0.1**
baz=159
ISKR Skrokkalda 2.25 182 P **Pn** **11 11 47.1 +0.6**
baz=181
ISKR S **Sb** **11 12 16.6 -1.2**
baz=181
IASB `sbjarnarst 2.43 213 P **Pn** **11 11 48.9 0.0**
baz=211
BORG Borgarnes 2.43 213 Pn **Pn** **11 11 48.5 -0.4**
14nm,0.3s,baz=24,slow=6.8,SNR=60
BORG LR LR 11 12 15.0
comp=Z,38nm,20.8s,baz=11,slow=29
BORG Sn **Sn** **11 12 16.7 -2.5**
12nm,0.3s,baz=252,slow=20,SNR=8.4
IJOK Jokulheimar 2.50 180 P **Pn** **11 11 50.9 +1.1**
baz=179
IJOK S **Sb** **11 12 23.2 -1.7**
baz=179
IVOT Vottur 2.58 170 P **Pn** **11 11 51.7 +0.8**
baz=170
IVAT Vatnsfell 2.64 187 P **Pn** **11 11 52.8 +1.0**
baz=186
NOA NOSAR Array B 14.06 100 LR LR 11 19 43.1
comp=Z,19nm,16.5s,baz=300,slow=37
SPITS Spitsbergen Ar 15.05 27 Pn **P** **11 14 45.6 -1.4**
baz=240,slow=12,SNR=4.8
SPITS LR LR 11 18 52.2
comp=Z,30nm,19.8s,baz=190,slow=30
HFS Hagfors 15.58 100 Pn **P** **11 14 53.3 +0.3**
0.1nm,0.3s,baz=339,slow=7.7,SNR=3.6
HFS LR LR 11 19 57.5
comp=Z,31nm,21.7s,baz=306,slow=34
ARCES ARCESS Array B 16.21 61 Pn **P** **11 14 58.2 -1.8**
0.2nm,0.3s,baz=293,slow=10,SNR=5.8
ARCES LR LR 11 20 15.8
comp=Z,96nm,20.5s,baz=342,slow=34
FINES FINESS Array B 19.69 85 P **Pn** **11 15 38.5 -1.1**
0.1nm,0.3s,baz=301,slow=11,SNR=3.3
FINES LR LR 11 22 55.0
comp=Z,69nm,18.9s,baz=2.0,slow=36
DAVOX Davos/Dischmat 24.88 130 LR LR 11 27 24.7
comp=Z,43nm,18.2s,baz=263,slow=40
NRIK Noril'sk 34.89 37 LR LR 11 35 53.1
comp=Z,14nm,18.4s,baz=71,slow=42
AKTO Aktyubinsk 39.98 75 LR LR 11 34 28.9
comp=Z,22nm,20.6s,baz=306,slow=35
ULM Lac du Bonnet 40.69 286 LR LR 11 35 12.5
comp=Z,50nm,18.5s,baz=290,slow=35
GNI Garni 43.30 96 LR LR 11 36 57.8
comp=Z,26nm,21.6s,baz=13,slow=36
ILAR Eielson Array 43.66 331 P **P** **11 19 17.1 +3.5**
0.2nm,0.6s,baz=27,slow=8.1,SNR=3.6
TKL Tuckaleechee C 48.22 264 LR LR 11 39 12.6
comp=Z,41nm,20.6s,baz=354,slow=35
GEYT Alibeck 50.49 85 LR LR 11 43 15.1
comp=Z,43nm,18.0s,baz=85,slow=38
PDAR Pinedale Array 52.10 291 P **P** **11 20 19.5 -0.1**
0.4nm,0.7s,baz=62,slow=6.9,SNR=4.1
TXAR Lajitas Array 61.65 278 LR LR 11 47 42.0
comp=Z,53nm,18.4s,baz=0.0,slow=36

IGQ 21 11:38:32.1±1.3,**4°S**±10°×**8°0W**±1°4,**h12**km,**MLv4.2**/7,
Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MILO	**Milagro-Astudi**	**1.98**	**28**	P	Pn	11 39 05.3	-0.1
MILO				S	Sb	11 39 32.9	+0.3
COHC	**Cochancay**	**1.99**	**39**	P	Pn	11 39 04.7	-0.9
RIOE1	**Riobamba**	**2.94**	**40**	P	Pn	11 39 17.8	-1.1
QUEV	**Quevedo**	**3.20**	**22**	P	Pn	11 39 20.7	-1.6
BMAS	**Trigal station**	**3.22**	**39**	P	Pn	11 39 22.2	-0.7
ARRY	**Arrayan**	**3.23**	**39**	P	Pn	11 39 22.4	-0.7
BPAT	**Tungurahua Vol**	**3.25**	**39**	P	Pn	11 39 22.4	-0.9
POND	**Pondoa**	**3.30**	**38**	P	Pn	11 39 23.3	-0.7
BULB	**Ulba Tungurahu**	**3.31**	**39**	P	Pn	11 39 24.1	-0.1
RUN5	**Runtun**	**3.32**	**39**	P	Pn	11 39 24.0	-0.2
BRUN	**Tungurahua Vol**	**3.32**	**39**	P	Pn	11 39 24.0	-0.3
PISA	**Pisayambo**	**3.63**	**36**	P	Pn	11 39 28.7	0.0
PAST	**Pastocalle**	**3.79**	**29**	P	Pn	11 39 31.7	+0.8
BMOR	**Cotopaxi Volca**	**3.86**	**32**	P	Pn	11 39 32.0	+0.1
CAMI	**Rancho Maria**	**3.88**	**31**	P	Pn	11 39 32.4	+0.4
BNAS	**Cotopaxi Volca**	**3.90**	**31**	P	Pn	11 39 32.3	0.0
BREF	**Cotopaxi Volca**	**3.92**	**32**	P	Pn	11 39 32.0	-0.7
NAS2	**Nasa**	**3.92**	**31**	P	Pn	11 39 32.9	+0.2
BTAM	**Cotopaxi Volca**	**3.94**	**32**	P	Pn	11 39 32.6	-0.3
BVC2	**Cotopaxi Volca**	**3.94**	**32**	P	Pn	11 39 31.3	-1.7
COV1	**Cotopaxi Volc**	**3.98**	**33**	P	Pn	11 39 34.8	+1.2
MAG1	**Magdalena**	**4.00**	**10**	P	Pn	11 39 32.5	-0.7
PITA	**Cotopaxi Volc**	**4.02**	**31**	P	Pn	11 39 33.8	-0.2
ANTG	**Antisana-Guama**	**4.16**	**33**	P	Pn	11 39 35.8	-0.2
ANTS	**Antisana-Sarah**	**4.21**	**34**	P	Pn	11 39 36.0	-0.7
GGPC	**Guagua Pichinc**	**4.27**	**26**	P	Pn	11 39 37.9	+0.4
YANA	**Yana**	**4.33**	**26**	P	Pn	11 39 38.3	-0.1
OTAV	**Otavalo**	**4.71**	**26**	P	Pn	11 39 43.2	-0.2
CUIC	**Cuicocha-Domo**	**4.80**	**26**	P	Pn	11 39 44.1	-0.7
URCU	**Urcuqui**	**4.97**	**27**	P	Pn	11 39 47.1	0.0

*BJI **21** 11:40:28.9, 2°.26N×128°.72E, h114km, mb4.8/52, mB5.0/36*
*ISCJB **21** 11:40:32.9±0.3, 2°.75N±0°.02×128°.29E±0°.02, h109km±3km, mb4.8/132, Error ellipse: s-maj=4.0km s-min=2.8km az=161.6*
*IDC **21** 11:40:33.1±0.5, 2°.73N×128°.27E, h104km±4km, mb4.3/33, mb1 4.4/36, mb1mx4.3/56, mbtmp4.7/36, MS3.5/39, Ms1 3.6/39, ms1mx3.4/64, Error ellipse: s-maj=12.4km s-min=7.3km az=74.0*
*MOS **21** 11:40:34.5±0.9, 2°.71N×128°.22E, h127km, mb4.8/28, Error ellipse: s-maj=8.9km s-min=5.3km az=112.1*
*DJA **21** 11:40:34.4±0.3, 3°N±2°×12°8E±°, h103km±3km, M5.3/78, mb5.4/78, mB5.7/54, MLv5.8/14, Mw(mB)5.2/54, Mwp5.6/1*
*GCMT **21** 11:40:34.8±0.2, 2°.83N×128°.27E, h92km±2km, MW5.1/94, Moment Tensor Solution. s50,c64; s94,c138; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.68±.12; Mθθ2.67±.12; Mφφ-1.99±.14; Mrθ-0.40±.08; Mrφ3.59±.11; Mθφ-2.37±.09; Best double couple: M₀4.94100×10¹⁶ NP1:φs19.00000°, δ83.0000°, λ-150.00000°. NP2: φs285.00000°, δ60.00000°, λ-8.00000°. Principal axes: T 5.0330, Plg16.0000°, Azm148.0000°; N -0.1820, Plg59.0000°, Azm30.0000°; P -4.8490, Plg26.0000°, Azm246.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **21** 11:40:34.8±0.5, 2°.70N×128°.28E, h116km±5km, mb5.0/62 Error ellipse: s-maj=4.5km s-min=3.3km az=63.0*
NEIC Felt [III] at Morotai.
ISC 21 11:40:33.4±0.3,**2°.67N**±0°.03×**128°.31E**±0°.04,**h104**km±2km,
h105km:**pP-P,n356,**σ**1**º**56**/406,**mb4.8**/131,**13C-4D,**
Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.10**	**207**	*e*Pn	**Pn**	**11 41 09.0**	**+1.5**
LBMI	**Labuha**	**3.38**	**194**	P	**Pn**	**11 41 26.6**	**+2.2**
LBMI				S	**Sn**	**11 42 08.9**	**+5.2**
SIJI	**Sorong**	**4.59**	**140**	P	**Pn**	**11 41 42.1**	**+1.5**
369nm,0.3s,baz=337,slow=14,SNR=312							
SIJI				S	**Sn**	**11 42 33.9**	**+1.0**
213nm,0.3s,baz=179,slow=21,SNR=21							
SIJI				LR	LR	11 43 09.8	
comp=Z,788nm,20.6s,baz=69,slow=34							
MATI	**Mati**	**4.72**	**334**	*e*P	**Pn**	**11 41 42.8**	**+0.4**
GSPH	**General Santos**	**4.78**	**315**	*i* P	**Pn**	**11 41 42.3**	**-1.0**
KMSI	**Cibinong**	**4.80**	**244**	P	**Pn**	**11 41 44.7**	**+1.2**
DAV	**Davao City (W)**	**5.15**	**328**	P	**Pn**	**11 41 47.9**	**-0.3**
110nm,0.3s,baz=135,slow=8.6,SNR=22							
DAV				S	**Sn**	**11 42 54.7**	**+8.1**
60nm,0.3s,baz=291,slow=2.6,SNR=4.4							
DAV				LR	LR	11 43 09.4	
comp=Z,599nm,21.4s,baz=133,slow=31							
DAV	**Davao City (W)**	**5.15**	**328**	*e*Pn	**Pn**	**11 41 48.5**	**+0.2**
DAV				*e*		11 41 49.0	
DAV				*e*Sn	**Sn**	**11 42 46.8**	**+0.2**
DAV				S	**Sn**	**11 42 54.7**	**+8.1**
DMPH	**Davao City--Mi**	**5.20**	**328**	*e*P	**Pn**	**11 41 53.3**	**+4.4**
DMPH				*e*S	**Sn**	**11 42 55.3**	**+7.5**
SANI	**Sanana**	**5.23**	**206**	P	**Pn**	**11 41 49.6**	**+0.3**
SKMP	**Bagumbayan, Su**	**5.36**	**316**	*e*P	**Pn**	**11 41 51.0**	**-0.1**

SKMP *e*S **Sn** **11 42 50.3 -1.4**
NLAI Namlea 5.99 192 P **Pn** **11 42 01.9 +2.3**
MSAI Masohi 6.00 174 P **Pn** **11 42 03.6 +3.8**
CTBH Cotabato--PC H 6.07 318 *e*P **Pn** **11 41 58.7 -2.0**
CTBH *i* S Sn 11 42 44.8 -24
BUKP Musuan 6.11 328 *e*P **Pn** **11 42 00.8 -0.5**
BUKP *e*S **Sn** **11 43 07.9 -1.9**
AAI Ambon 6.31 181 P **Pn** **11 42 06.7 +2.8**
AAI Ambon 6.31 181 P **Pn** **11 42 06.8 +2.8**
AAI pmax pmax
comp=Z,649nm,0.8s
LUWI Luwuk 6.65 236 P **Pn** **11 42 10.0 +1.4**
LUWI Luwuk 6.65 236 *e*Pn **Pn** **11 42 09.6 +1.0**
MRSI Marisa 6.73 251 P **Pn** **11 42 10.7 +1.0**
CGP Cagayan de Oro 6.79 328 *e*P **Pn** **11 42 13.0 +2.6**
FAKI Fak Fak 6.80 145 P **Pn** **11 42 12.3 +1.7**
FAKI Fak Fak 6.80 145 *e*Pn **Pn** **11 42 12.4 +1.7**
BUTP Butuan 6.81 337 *e*P **Pn** **11 42 11.9 +1.2**
BUTP *e*S **Sn** **11 43 30.6 +3.8**
PAGZ Pagadian 7.11 317 *e*P **Pn** **11 42 13.4 -1.5**
RKPI Ransiki, Papua 7.18 125 P **Pn** **11 42 20.0 +4.2**
BNDI Bandanaira 7.32 167 P **Pn** **11 42 20.3 +2.7**
ZCP Zamboanga City 7.52 305 *i* P **Pn** **11 42 18.6 -1.9**
ZCP *i* S **Sn** **11 43 41.6 -2.6**
APSI Ampana 7.55 242 P **Pn** **11 42 21.3 +0.5**
MSLP Maasin 8.17 335 *e*P **Pn** **11 42 30.0 +0.7**
BAKI Biak 8.68 116 P **Pn** **11 42 40.7 +4.5**
KDI Kendari 8.70 221 P **Pn** **11 42 36.1 -0.3**
MPSI Mapaga 8.72 255 P **Pn** **11 42 37.2 +0.4**
PCI Palu 9.19 247 P **Pn** **11 42 42.8 -0.3**
PCI Palu 9.19 247 P **Pn** **11 42 43.2 +0.1**
PCI pmax pmax
comp=Z,712nm,1.1s
MYLDM Lahad Datu 10.10 285 *e*Pn **Pn** **11 42 57.7 +2.2**
TTSI Tana Toraja 10.21 236 P **Pn** **11 42 56.1 -0.9**
RCP Roxas 10.42 328 *e*P **Pn** **11 42 59.2 -0.6**
SPSI Sidrap Palu 10.78 232 P **Pn** **11 43 03.9 -0.9**
CUYO Cuyo Island 10.89 319 *e*P **Pn** **11 43 03.6 -2.5**
SAUI Saumlaki 10.99 164 P **Pn** **11 43 08.7 +1.1**
SAUI Saumlaki 10.99 164 *e*Pn **Pn** **11 43 08.6 +1.1**
BKSI Bulukumba 11.40 226 P **Pn** **11 43 12.3 -0.7**
SMKI Samarinda 11.52 255 P **Pn** **11 43 16.3 +1.6**
BKB Balikpapan 12.06 251 P **Pn** **11 43 21.7 -0.2**
KKM Kota Kinabalu 12.52 286 *e*Pn **Pn** **11 43 27.8 -0.3**
MMRI Maumere 12.76 208 P **P** **11 43 35.5 -2.5**
MMRI Maumere 12.76 208 *e*Pn **Pn** **11 43 33.2 +2.2**
GENI Genyem 12.95 114 P **P** **11 43 38.1 -2.1**
SOEI Soe 12.98 198 P **Pn** **11 43 36.7 +2.6**
comp=Z,123nm,1.0s,comp=Z,2μm
SOEI Soe 12.98 198 *e*Pn **Pn** **11 43 37.2 +3.1**
EDFI Ende, Flores 13.12 210 P **Pn** **11 43 36.8 +0.9**
JAY Jayapura 13.41 112 P **Pn** **11 43 42.2 +2.5**
comp=Z,0.5nm,0.3s,baz=297,slow=17,SNR=3.5
JAY LR LR 11 47 56.8
comp=Z,311nm,20.3s,baz=306,slow=33
JAY Jayapura 13.41 112 P **Pn** **11 43 39.3 -0.4**
TGY Tagaytay City 13.50 328 P **Pn** **11 43 40.4 -0.4**
comp=Z,34nm,0.3s,baz=151,slow=10,SNR=5.4
TGY LR LR 11 49 14.6
comp=Z,333nm,20.0s,baz=182,slow=39
KBKI Kotabaru 13.51 244 P **Pn** **11 43 40.4 -0.5**
BATI Baumata 13.60 200 P **Pn** **11 43 44.1 +2.0**
comp=Z,22nm,0.3s,baz=0.0,slow=17,SNR=12
BATI S **S** **11 46 24.7 -3.0**
comp=Z,0.9nm,0.3s,baz=114,slow=20,SNR=3.0
BATI Baumata 13.60 200 P **Pn** **11 43 44.2 +2.1**
WSI Waingapu 14.62 213 P **P** 11 44 10.4 +12
WBSI Waikabubak, Su 15.12 216 P **P** **11 44 03.6 -0.7**
PLAI Plampang 15.51 223 P **P** **11 44 08.9 +0.3**
MTN Manton Dam 15.66 170 *e*Pn **Pn** **11 44 07.7 -0.6**
comp=Z,269nm,1.3s
TWSI Taliwang, Sumb 16.07 225 P **P** **11 44 15.8 +1.0**
SBUM Sibu 16.08 270 *e*Pn **Pn** **11 44 13.7 +0.1**
comp=Z,142nm,1.1s
SRBI Singaraja 16.88 231 P **P** **11 44 25.9 +2.2**
STKI Sintang 17.03 262 P **P** **11 44 25.9 +0.5**
DNP Denpasar 17.25 229 P **Pn** **11 44 32.0 +4.1**
PBKI Pangkalan Bun 17.47 252 P **P** **11 44 29.9 -0.4**
JAGI Jajag, Banyuwa 17.94 232 P **Pn** **11 44 37.8 +1.5**
JAGI Jajag, Banyuwa 17.94 232 *e*P **Pn** **11 44 37.7 +1.4**
comp=Z,619nm,1.1s
BLJI Banyuglugur 17.96 235 P **Pn** **11 44 38.2 +1.7**
KSM Kuching 18.03 267 *e*P **Pn** **11 44 37.8 +0.4**
comp=Z,163nm,1.1s
GMJI Gumukmas 18.38 234 P **Pn** **11 44 42.2 +0.6**
GRJI Gresik 18.45 239 P **Pn** **11 44 44.5 +2.1**
TBJI Tambak Boyo 18.94 240 P **Pn** **11 44 49.7 +1.5**
NGJI Ngawi 19.55 239 P **Pn** **11 44 55.7 +0.4**
PWJI Pagerwojo 19.59 237 P **Pn** **11 44 55.1 -0.7**
MANU Manus Island 19.61 104 *e*P **Pn** **11 44 56.3 +0.2**
comp=Z,50nm,1.0s
MANU *e*pP **pP** **11 45 11.9 -1.4**
GUMO Guam 19.64 56 LR LR 11 51 22.8
comp=Z,192nm,21.0s,baz=240,slow=33
PCJI Pacitan 20.21 238 P **P** **11 45 01.6 +1.4**
WOJI Wonogiri, Jawa 20.24 239 P **P** **11 45 01.5 +1.0**
SMRI Semarang 20.28 241 P **P** **11 45 02.3 +1.3**
SMRI Semarang 20.28 241 *e*P **P** **11 45 02.1 +1.1**
comp=Z,387nm,1.1s
UGM Wanagama 20.62 239 P **P** **11 45 06.5 +1.8**
UGM Wanagama 20.62 239 *e*P **P** **11 45 06.2 +1.5**
comp=Z,619nm,1.5s
TWG Pinlang 21.23 341 *e*P **P** **11 45 12.6 +1.5**
comp=Z,145nm,0.7s
KPJI Karang Pucung 21.74 243 P **P** **11 45 16.7 +0.1**
COEN Coen 22.14 139 *e*P **P** **11 45 20.9 +0.1**
comp=Z,31nm,0.8s
SSLB Suanglung 22.17 342 *e*P **P** **11 45 23.8 +2.7**
comp=Z,63nm,1.1s
PMG Port Moresby 22.28 123 P **P** **11 45 23.8 +1.6**
comp=Z,10nm,0.8s,baz=286,slow=7.4,SNR=3.0
PMG LR LR 11 55 49.1
comp=Z,209nm,18.2s,baz=322,slow=41
NACB Ninganchiao 22.35 344 *e*P **P** **11 45 24.3 +1.4**
comp=Z,28nm,0.8s
CMJI Cimerak 22.37 242 P **P** **11 45 22.9 -0.3**
LEM Lembang 22.71 245 P **P** **11 45 26.2 -0.6**
comp=Z,108nm,0.9s,baz=72,slow=8.6,SNR=23
LEM LR LR 11 56 51.5
comp=Z,89nm,18.0s,baz=10.0,slow=43
CISI Cisompet, Garu 22.83 243 P **P** **11 45 28.6 +0.6**
CISI Cisompet, Garu 22.83 243 *e*P **P** **11 45 27.6 -0.3**
comp=Z,87nm,0.9s
WRAB Tennant Creek 23.23 165 *e*P **P** **11 45 31.7 0.0**
comp=Z,102nm,0.6s
WRAB Tennant Creek 23.23 165 *ce*P **P** **11 45 31.6 0.0**
WRAB pmax pmax
comp=Z,100nm,1.2s
WRA Warramunga Arr 23.23 166 P **P** **11 45 31.6 -0.1**
comp=Z,76nm,0.9s,baz=345,slow=11,SNR=773
WRA S **S** **11 49 33.9 -1.9**
comp=Z,7.6nm,1.1s,baz=349,slow=16,SNR=5.7
WRA ScP **ScP** **11 52 43.6 -1.7**
comp=Z,2.2nm,1.0s,baz=326,slow=2.9,SNR=2.6
WR1 Warramunga Arr 23.23 165 *e*P **P** **11 45 31.6 -0.1**
comp=Z,130nm,0.8s
WR1 *e*S **S** **11 49 33.9 -1.9**
WR1 *e*ScP **ScP** **11 52 43.5 -1.7**
WB2 Warramunga Arr 23.24 165 *e*P **P** **11 45 31.6 -0.1**
comp=Z,114nm,0.8s
WB2 *e*P **P** **11 45 32.7 +1.0**
CBJI Citeko 23.25 247 P **P** **11 45 31.7 -0.2**
DBJI Dramaga 23.39 247 P **P** **11 45 32.7 -0.5**
SKJI Sukabumi 23.75 246 P **P** **11 45 36.6 +0.2**
TPRI Tanjung Pinang 23.84 266 P **P** **11 45 38.3 +1.1**
JOW Kunigami 24.03 360 LR LR 11 55 28.0
comp=Z,137nm,19.4s,baz=125,slow=37
JOW Kunigami 24.03 360 *e*P **P** **11 45 40.0 +1.3**
comp=Z,289nm,0.7s
CGJI Cibinong 24.39 248 P **P** **11 45 42.3 +0.1**
MYKOM Kota Tinggi 24.46 268 *e*P **P** **11 45 43.8 +0.9**
comp=Z,142nm,1.1s
KLI Kotabumi 24.60 252 P **P** **11 45 44.1 0.0**
KLI pmax pmax
comp=Z,124nm,0.6s
MBWA Marble Bar 25.12 199 *e*P **P** **11 45 49.5 +0.7**
comp=Z,27nm,0.9s
MDSI Maura Dua 25.14 254 P **P** **11 45 50.3 +1.3**
KASI Kota Agung 25.14 251 P **P** **11 45 50.7 +1.7**
LWLI Liwa 25.40 253 P **P** **11 45 52.2 +0.6**
UBPT Khong Chiam 25.77 300 P **P** **11 45 54.6 -0.1**
comp=Z,46nm,0.8s
MASI Maura Aman, Be 26.69 258 P **P** **11 46 04.9 +1.8**

AS31	**Alice Springs**	**26.73 169**	*e*P	**P**	**11 46 03.5**	**+0.1**
	comp=Z,17nm,0.8s					
AS31			*e*S	**S**	**11 50 30.3**	**-1.2**
AS31			*e*ScP	**ScP**	**11 52 54.6**	**-0.5**
ASAR	**Alice Springs**	**26.73 169**	P	**P**	**11 46 03.5**	**+0.1**
	comp=Z,5.5nm,0.4s,baz=350,slow=7.5,SNR=200					
ASAR			S	**S**	**11 50 30.3**	**-1.2**
	comp=Z,1.2nm,0.8s,baz=341,slow=14,SNR=2.7					
ASAR			ScP	**ScP**	**11 52 54.6**	**-0.5**
	comp=Z,3.3nm,0.9s,baz=7.9,slow=2.8,SNR=6.1					
AS01	**Alice Springs**	**26.74 168**	*e*P	**P**	**11 46 03.4**	**0.0**
IPM	**Ipoh**	**27.29 275**	*e*P	**P**	**11 46 09.0**	**+0.5**
	comp=Z,34nm,1.0s					
BKNI	**Bangkinang**	**27.36 266**	*e*P	**P**	**11 46 09.8**	**+0.7**
	comp=Z,138nm,1.3s					
CBIJ	**Chichi jima**	**27.69 27**	*e*P	**P**	**11 46 13.1**	**+1.3**
	comp=Z,150nm,1.0s					
JCJ	**Chichijima**	**27.69 27**	LR	LR	11 56 14.7	
	comp=Z,64nm,20.9s,baz=285,slow=34					
KULM	**Kulim**	**27.72 276**	*e*P	**P**	**11 46 13.3**	**+1.1**
	comp=Z,45nm,1.6s					
SKNT	**Sakolnakorn**	**27.82 302**	P	**P**	**11 46 12.8**	**-0.3**
	comp=Z,21nm,0.9s,comp=Z,906nm					
CTA	**Charters Tower**	**28.66 143**	P	**P**	**11 46 21.4**	**+0.9**
	comp=Z,2.9nm,0.6s,baz=342,slow=6.4,SNR=4.1					
NONG	**Nongkai**	**29.03 304**	P	**P**	**11 46 24.7**	**+0.8**
	comp=Z,17nm,1.0s,comp=Z,1μm					
CHAI	**Chaiyaphum**	**29.06 299**	P	**P**	**11 46 24.7**	**+0.5**
	comp=Z,13nm,0.9s					
PSI	**Prapat**	**29.36 271**	P	**P**	**11 46 26.2**	**-0.7**
	comp=Z,10nm,0.9s,baz=357,slow=0.3,SNR=10					
PSI	**Prapat**	**29.36 271**	*e*P	**P**	**11 46 26.9**	**-0.1**
	comp=Z,54nm,1.5s					
PSI	**Prapat**	**29.36 271**	*e*P	**P**	**11 46 26.9**	**-0.1**
PSI			pmax	pmax		
	comp=Z,55nm,1.5s					
PBKT	**Sadao Pong**	**30.23 299**	P	**P**	**11 46 34.8**	**+0.3**
	comp=Z,20nm,1.1s					
PBKT	**Sadao Pong**	**30.23 299**	*e*P	**P**	**11 46 34.7**	**+0.3**
PBKT			*e*pP	**pP**	**11 46 51.6**	**-6.0**
KCSI	**Kotacane, Aceh**	**30.51 272**	P	**P**	**11 46 36.5**	**-0.5**
NJ2	**Nanjing**	**30.56 344**	*e*P	**P**	**11 46 38.5**	**+1.4**
NJ2			pmax	pmax		
	comp=Z,10.0nm,0.5s					
GSI	**Gunungsitoli**	**30.75 268**	P	**P**	**11 46 38.4**	**-0.7**
GSI	**Gunungsitoli**	**30.75 268**	*e*P	**P**	**11 46 38.8**	**-0.3**
	comp=Z,32nm,1.0s					
PHIT	**Phitsanulok**	**30.96 300**	P	**P**	**11 46 43.2**	**+2.3**
	comp=Z,30nm,0.8s					
UTTA	**Uttaradit**	**31.08 301**	P	**P**	**11 46 43.7**	**+1.7**
	comp=Z,4.3nm,1.1s,comp=Z,76nm					
NANT	**Nan**	**31.43 303**	P	**P**	**11 46 47.0**	**+2.0**
	comp=Z,4.1nm,1.0s					
GYA	**Guiyang**	**31.48 321**	P	**P**	**11 46 47.3**	**+1.8**
GYA			pmax	pmax		
	comp=Z,10.0nm,0.8s					
LAMP	**Lampang**	**32.21 301**	P	**P**	**11 46 54.2**	**+2.3**
	comp=Z,5.5nm,1.0s					
CM01	**Chiang Mai Arr**	**32.74 301**	*e*P	**P**	**11 46 55.1**	**-1.4**
ENH	**Enshi**	**32.74 329**	*e*P	**P**	**11 46 56.8**	**+0.4**
	comp=Z,49nm,1.1s					
CM31	**Chiang Mai Arr**	**32.77 301**	*e*P	**P**	**11 46 57.4**	**+0.6**
CMAR	**Chiang Mai Arr**	**32.77 301**	P	**P**	**11 46 57.4**	**+0.6**
	comp=Z,6.3nm,0.8s,baz=117,slow=7.1,SNR=23					
CMAR			LR	LR	11 59 45.3	
	comp=Z,61nm,21.7s,baz=112,slow=35					
CHTO	**Chiang Mai**	**32.92 301**	P	**P**	**11 46 59.5**	**+1.4**
	comp=Z,70nm,1.3s					
CHTO	**Chiang Mai**	**32.92 301**	*e*P	**P**	**11 46 58.9**	**+0.8**
	comp=Z,58nm,1.6s					
CHTO	**Chiang Mai**	**32.92 301**	*e*P	**P**	**11 46 58.9**	**+0.8**
CHTO			pmax	pmax		
	comp=Z,59nm,1.6s					
KMI	**Kunming**	**33.25 314**	P	**P**	**11 47 03.9**	**+2.8**
KMI			pmax	pmax		
	comp=Z,8.0nm,0.6s					
KMI			pmax	pmax		
	comp=Z,140nm,4.4s					
KMI			LR	LR		
	comp=Z,220nm,5.2s					
KMI			LR	LR		
	comp=Z,210nm,4.8s					
KMI			LR	LR		
	comp=Z,130nm,5.4s					
CMAI	**Chiengmai2**	**33.33 303**	P	**P**	**11 47 03.4**	**+1.5**
	comp=Z,111nm,1.1s,comp=Z,10μm					
TJN	**Taejon**	**33.56 359**	*ce*P	**P**	**11 47 05.1**	**+1.8**
HNR	**Honiara**	**33.73 111**	LR	LR	12 00 45.6	
	comp=Z,161nm,21.7s,baz=188,slow=36					
KS15	**Wonju Array Si**	**34.61 359**	*e*P	**P**	**11 47 11.5**	**-1.0**
KS15			*e*pP	**pP**	**11 47 34.0**	**-2.0**
KS15			*e*ScP	**ScP**	**11 53 21.1**	**+0.4**
KSAR	**Wonju Array Be**	**34.61 359**	P	**P**	**11 47 11.5**	**-1.0**
KSAR			pP	**pP**	**11 47 34.0**	**-2.0**
KSAR			ScP	**ScP**	**11 53 21.1**	**+0.4**
KSAR	**Wonju Array Be**	**34.61 359**	P	**P**	**11 47 11.5**	**-1.0**
KSRS	**Korea Array**	**34.62 359**	P	**P**	**11 47 11.5**	**-1.1**
	comp=Z,4.9nm,0.8s,baz=175,slow=10,SNR=18					
KSRS			pP	**pP**	**11 47 34.0**	**-2.0**
	comp=Z,7.7nm,0.7s,baz=179,slow=10,SNR=7.8					
KSRS			ScP	**ScP**	**11 53 21.1**	**+0.4**
	comp=Z,1.3nm,0.8s,baz=183,slow=4.4,SNR=3.9					
KSRS			LR	LR	12 01 57.8	
	comp=Z,66nm,20.0s,baz=192,slow=37					
KS01	**Wonju Array Si**	**34.65 359**	*e*P	**P**	**11 47 11.9**	**-0.8**
KS01			*e*pP	**pP**	**11 47 36.6**	**+0.4**
MAJO	**Matsushiro**	**34.93 14**	*e*P	**P**	**11 47 13.1**	**-2.2**
MAJO			*e*pP	**pP**	**11 47 38.7**	**-0.1**
MAJO	**Matsushiro**	**34.93 14**	*i*P	**P**	**11 47 14.9**	**-0.3**
MAJO			pmax	pmax		
	comp=Z,6.0nm,0.9s					
MAT	**Matsushiro**	**34.93 14**	P	**P**	**11 47 13.9**	**-1.3**
MJAR	**Matsushiro Arr**	**34.93 14**	P	**P**	**11 47 13.1**	**-2.2**
	comp=Z,4.9nm,0.7s,baz=187,slow=9.9,SNR=14					
MJAR			pP	**pP**	**11 47 38.7**	**-0.1**
	comp=Z,5.5nm,0.7s,baz=189,slow=9.9,SNR=4.2					
TIA	**Tai'an**	**34.95 344**	P	**P**	**11 47 14.8**	**-0.6**
TIA			pmax	pmax		
	comp=Z,2.0nm,0.9s					
EIDS	**Eidsvold**	**35.55 143**	*e*P	**P**	**11 47 20.7**	**-0.1**
EIDS			*e*pP	**pP**	**11 47 44.1**	**-0.1**
BBOO	**Buckleboo**	**36.04 169**	*e*P	**P**	**11 47 25.1**	**+0.3**
	comp=Z,79nm,1.1s					
XAN	**Xi'an**	**36.08 332**	P	**P**	**11 47 25.1**	**-0.1**
XAN			pmax	pmax		
	comp=Z,20nm,0.7s					
XAN			pmax	pmax		
	comp=Z,110nm,5.1s					
CD2	**Chengdu**	**36.43 323**	P	**P**	**11 47 29.0**	**+0.7**
CD2			pP	pP	11 47 54.8	+2.9
CD2			sP	sP	11 48 08.1	+4.2
CD2			PP	**PnPn**	**11 48 54.5**	**+0.4**
CD2			S	**S**	**11 53 03.6**	**+1.1**
CD2			sS	sS	11 53 49.0	+5.6
CD2			SS	**SS**	**11 55 45.8**	**+0.2**
CD2			pmax	pmax		
	comp=Z,40nm,0.8s					
CD2			pmax	pmax		
	comp=Z,160nm,4.9s					
CD2			LR	LR		
	comp=Z,600nm,4.6s					
CD2			LR	LR		
	comp=Z,290nm,6.5s					
STKA	**Stephens Creek**	**36.60 161**	P	**P**	**11 47 29.5**	**0.0**
	comp=Z,11nm,0.3s,baz=334,slow=8.5,SNR=88					
STKA			LR	LR	12 04 11.1	
	comp=Z,118nm,18.0s,baz=353,slow=39					
STKA	**Stephens Creek**	**36.60 161**	*e*P	**P**	**11 47 30.1**	**+0.6**
	comp=Z,5.0nm,0.8s					
STKA	**Stephens Creek**	**36.60 161**	*e*P	**P**	**11 47 30.2**	**+0.6**
STKA			pmax	pmax		
	comp=Z,5.0nm,0.8s					
NWAO	**Narrogin (SRO)**	**36.92 196**	P	**P**	**11 47 32.1**	**-0.2**
	comp=Z,6.9nm,0.5s,baz=252,slow=7.8,SNR=12					
BJT	**Baijiatuau**	**38.78 345**	*e*P	**P**	**11 47 47.4**	**-0.4**
BJT			*e*pP	**pP**	**11 48 10.8**	**-0.9**
BJT	**Baijiatuau**	**38.78 345**	*e*P	**P**	**11 47 47.4**	**-0.4**
BJI	**Beijing**	**38.80 345**⇑	*i*P	**P**	**11 47 47.3**	**-0.6**
BJI			pP	**pP**	**11 48 12.1**	**+0.3**
BJI			sP	**sP**	**11 48 24.0**	**+0.3**
BJI			pmax	pmax		
	comp=Z,27nm,0.7s					
ARMA	**Armidale**	**39.72 148**	*e*P	**P**	**11 47 56.2**	**+0.3**
	comp=Z,20nm,0.9s					
MSHR	**Mys Shultsa**	**39.82 3**	*i*P	**P**	**11 47 58.1**	**+1.7**
LZH	**Lanzhou**	**40.22 329**	*e*P	**P**	**11 48 01.3**	**+1.2**
LZH			pP	pP	11 48 26.0	+2.0
LZH			sP	sP	11 48 39.8	+3.9
LZH			PcP	**PcP**	**11 49 59.1**	**-3.1**
LZH			*e*S	**S**	**11 53 58.4**	**-1.2**
LZH			SS	**SS**	**11 57 02.0**	**+0.1**
LZH			pmax	pmax		
	comp=Z,68nm,1.2s					
LZH			pmax	pmax		
	comp=Z,220nm,4.1s					
LZH			LR	LR		
	comp=Z,2μm,14.9s					
LZH			LR	LR		
	comp=Z,1μm,14.1s					
LZH			LR	LR		
	comp=Z,1μm,22.8s					
H11S3	**WAKE ISLAND Hy**	**40.73 65**	T	T	12 31 39.8	
	baz=251,slow=75					
BRDH	**Bariadhala**	**40.73 302**	LR	LR	12 05 02.2	
	comp=Z,104nm,21.6s,baz=119,slow=36					
H11S2	**WAKE ISLAND Hy**	**40.75 65**	T	T	12 31 35.8	
	baz=251,slow=75					
H11S1	**WAKE ISLAND Hy**	**40.75 65**	T	T	12 31 41.0	
	baz=251,slow=75					
HHC	**Hu-ho-hao-te**	**40.91 340**	*e*P	**P**	**11 48 06.3**	**+0.7**
HHC			pP	pP	11 48 31.3	+1.7
HHC			sP	sP	11 48 41.8	+0.3
HHC			S	**S**	**11 54 11.5**	**+1.9**
HHC			pmax	pmax		
	comp=Z,17nm,0.9s					
HHC			pmax	pmax		
	comp=Z,63nm,5.2s					
CN2	**Changchun**	**41.04 357**	*e*P	**P**	**11 48 10.3**	**+3.8**
CN2			pmax	pmax		
	comp=Z,10.0nm,1.0s					
H11N1	**WAKE ISLAND Hy**	**41.31 63**	T	T	12 32 18.7	
	baz=250,slow=75					
H11N2	**WAKE ISLAND Hy**	**41.32 63**	T	T	12 32 19.6	
	baz=250,slow=75					
H11N3	**WAKE ISLAND Hy**	**41.32 63**	T	T	12 32 20.0	
	baz=250,slow=75					
USRK	**Ussuriysk Ar.**	**41.49 4**	P	**P**	**11 48 09.5**	**-0.6**
	comp=Z,6.1nm,0.8s,baz=177,slow=8.5,SNR=8.7					
SHL	**Shillong**	**41.77 306**⇓	*i*P	**P**	**11 48 13.0**	**0.0**
SHL	**Shillong**	**41.77 306**	*e*P	**P**	**11 48 13.3**	**+0.3**
	comp=Z,63nm,0.7s					
SHL			*e*pP	**pP**	**11 48 36.9**	**-0.2**
SHL	**Shillong**	**41.77 306**	*e*P	**P**	**11 48 13.3**	**+0.3**
SHL			pmax	pmax		
	comp=Z,63nm,0.7s					
MDJ	**Mudanjiang**	**41.79 1**	P	**P**	**11 48 09.9**	**-2.7**
MDJ			pP	pP	11 48 33.6	-3.1
MDJ			pmax	pmax		
	comp=Z,12nm,0.7s					
MDJ			pmax	pmax		
	comp=Z,79nm,4.2s					
CAN	**Canberra**	**42.47 155**	P	**P**	**11 48 19.6**	**+1.3**
CAN			pmax	pmax		
	comp=Z,17nm,1.5s					
TOO	**Toolangi**	**43.09 160**	P	**P**	**11 48 24.6**	**+1.3**
TOO			pmax	pmax		
	comp=Z,17nm,1.2s					
ASAJ	**Asahikawa**	**43.17 15**	P	**P**	**11 48 23.2**	**-0.6**
	comp=Z,8.7nm,1.0s,baz=225,slow=10.0,SNR=3.2					
ASAJ			LR	LR	12 05 36.8	
	comp=Z,108nm,19.4s,baz=197,slow=35					
LSA	**Lhasa**	**44.32 311**	P	**P**	**11 48 36.1**	**+2.3**
LSA			pmax	pmax		
	comp=Z,11nm,0.6s					
LSA	**Lhasa**	**44.32 311**	*e*P	**P**	**11 48 34.6**	**+0.7**
	comp=Z,13nm,0.6s					
LSA	**Lhasa**	**44.32 311**	*e*P	**P**	**11 48 34.6**	**+0.7**
LSA			pmax	pmax		
	comp=Z,13nm,0.6s					
DZM	**Mont Dzumac**	**44.63 125**	P	**P**	**11 48 35.9**	**-0.1**
	comp=Z,9.4nm,1.0s,baz=115,slow=13,SNR=3.9					
DZM	**Mont Dzumac**	**44.63 125**	*e*LR	LR	12 01 16.7	
	comp=Z,188nm,25.7s					
GTA	**Gaotai**	**44.82 328**	P	**P**	**11 48 38.0**	**+0.8**
GTA			pP	pP	11 49 04.6	+3.0
GTA			sP	sP	11 49 17.5	+4.1
GTA			S	**S**	**11 55 08.3**	**+1.3**
GTA			sS	sS	11 55 52.8	+3.8
GTA			SS	**ScS**	**11 58 23.3**	**-1.1**
GTA			pmax	pmax		
	comp=Z,8.0nm,0.8s					
GTA			pmax	pmax		
	comp=Z,84nm,4.7s					
GTA			LR	LR		
	comp=Z,200nm,18.2s					
GTA			LR	LR		
	comp=Z,130nm,18.5s					
GTA			LR	LR		
	comp=Z,200nm,20.3s					
YSS	**Yuzh-Sakhalins**	**45.87 14**	*e*P	**P**	**11 48 45.2**	**+0.1**
YSS			*e*		11 49 15.3	
ODAN	**Odare**	**45.97 306**	*e*P	**P**	**11 48 47.7**	**+1.1**
	comp=Z,54nm,0.6s					
KLR	**Kul'dur**	**46.48 3**	P	**P**	**11 48 49.0**	**-1.0**
	comp=Z,0.4nm,0.7s,baz=209,slow=8.7,SNR=15					
KLR			pP	**pP**	**11 49 12.1**	**-2.4**
	comp=Z,0.6nm,0.8s,baz=214,slow=2.5,SNR=6.1					
KLR	**Kul'dur**	**46.48 3**	*i*P	**P**	**11 48 49.7**	**-0.3**
RAMN	**Ramite**	**46.65 305**	*e*P	**P**	**11 48 53.0**	**+1.0**
	comp=Z,75nm,0.7s					
JIRN	**Jiri**	**47.27 306**	*e*P	**P**	**11 48 58.0**	**+1.1**
GUN	**Gumba**	**47.62 306**	*e*P	**P**	**11 49 00.4**	**+0.7**
	comp=Z,76nm,0.6s					
PALK	**Pallekele**	**47.63 277**	P	**P**	**11 48 59.2**	**-0.4**
	comp=Z,23nm,0.9s,baz=116,slow=7.6,SNR=6.2					
PALK	**Pallekele**	**47.63 277**	*i*P	**P**	**11 49 01.6**	**+2.1**
PKIN	**Phulchoki**	**47.88 305**	*e*P	**P**	**11 49 01.9**	**+0.3**
	comp=Z,14nm,0.4s					
KKN	**Kakani**	**48.06 306**	*e*P	**P**	**11 49 03.4**	**+0.5**
	comp=Z,27nm,0.7s					
DMN	**Daman**	**48.13 305**	*e*P	**P**	**11 49 04.1**	**+0.6**
	comp=Z,59nm,0.9s					
GRNR	**Gornyy**	**48.42 7**	*e*P	**P**	**11 49 05.8**	**+0.8**
GRNR			pmax	pmax		
	comp=Z,26nm,1.0s					
ULN	**Ulaanbaatar**	**48.62 341**	*e*P	**P**	**11 49 07.0**	**+0.3**
	comp=Z,23nm,1.1s					
ULN	**Ulaanbaatar**	**48.62 341**	*ce*P	**P**	**11 49 06.8**	**0.0**
ULN			pmax	pmax		
	comp=Z,9.0nm,0.8s					
GKN	**Gorkha**	**48.67 306**	*e*P	**P**	**11 49 07.9**	**+0.4**
	comp=Z,30nm,0.8s					
SONA0	**Songino Array**	**48.81 340**	*e*P	**P**	**11 49 07.8**	**-0.4**
SONA0			*e*pP	**pP**	**11 49 31.5**	**-1.4**
SONA0			*e*ScP	**ScP**	**11 54 17.2**	**+0.2**
SONM	**Songino Array**	**48.81 340**	P	**P**	**11 49 07.8**	**-0.4**
	comp=Z,4.7nm,0.7s,baz=151,slow=8.9,SNR=18					
SONM			pP	**pP**	**11 49 31.5**	**-1.4**
	comp=Z,4.7nm,0.6s,baz=153,slow=8.1,SNR=5.6					
SONM			ScP	**ScP**	**11 54 17.2**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=145,slow=5.3,SNR=3.2					
SONM			LR	LR	12 10 48.5	
	comp=Z,78nm,20.0s,baz=153,slow=37					
SONA1	**Songino Array**	**48.82 340**	*e*P	**P**	**11 49 07.8**	**-0.4**
KOLN	**Koldanda**	**49.42 305**	*e*P	**P**	**11 49 14.2**	**+0.9**
	comp=Z,97nm,0.6s					
DANN	**Dangsing**	**49.52 306**	*e*P	**P**	**11 49 14.7**	**+0.6**
	comp=Z,118nm,0.5s					
PYUN	**Piuthan**	**50.05 305**	*e*P	**P**	**11 49 19.0**	**+1.0**
	comp=Z,108nm,0.7s					
HYB	**Hyderabad**	**50.96 290**	*i*P	**P**	**11 49 26.0**	**+1.2**
TLY	**Talaya**	**53.03 341**	*e*P	**P**	**11 49 41.4**	**+1.8**
TLY			pmax	pmax		
	comp=Z,16nm,1.3s					
KNGR	**Kungurtug, Tuv**	**54.38 336**	*i*P	**P**	**11 49 50.1**	**+0.5**
WMQ	**Urumqi**	**54.50 325**	P	**P**	**11 49 51.6**	**+1.1**
WMQ			pP	pP	11 50 18.6	+2.9
WMQ			sP	sP	11 50 30.0	+2.7
WMQ			S	**S**	**11 57 21.3**	**-0.4**
WMQ			pmax	pmax		
	comp=Z,53nm,1.1s					
WMQ			pmax	pmax		
	comp=Z,270nm,4.1s					
WMQ			LR	LR		
	comp=Z,680nm,21.7s					
WMQ			LR	LR		
	comp=Z,370nm,17.3s					
WMQ			LR	LR		
	comp=Z,290nm,26.3s					
PEA0B	**Petropavlovsk-**	**55.83 21**	*e*P	**P**	**11 50 00.3**	**+0.5**
	comp=Z,15nm,0.8s					
PETK	**Petropavlovsk-**	**55.83 21**	P	**P**	**11 49 59.5**	**-0.3**
	comp=Z,12nm,0.7s,baz=214,slow=4.9,SNR=18					
PETK			LR	LR	12 12 42.0	
	comp=Z,26nm,21.8s,baz=196,slow=35					
PETK	**Petropavlovsk-**	**55.83 21**	*e*P	**P**	**11 50 00.4**	**+0.6**
PETK	**Petropavlovsk-**	**55.83 21**	*e*P	**P**	**11 50 00.4**	**+0.6**
PEA1	**Petropavlovsk-**	**55.84 21**	*e*P	**P**	**11 49 59.5**	**-0.3**
PET	**Petropavlovsk**	**56.11 22**⇑	*e*P	**P**	**11 50 01.8**	**0.0**
PET			pmax	pmax		
	comp=Z,17nm,1.0s					
HVS	**Khovu-Aksy**	**56.37 335**	*i*P	**P**	**11 50 04.3**	**+0.5**
HVS			pmax	pmax		
	comp=Z,16nm,1.1s					
DGZ	**Jazzator, Alta**	**58.30 330**	*i*P	**P**	**11 50 17.9**	**+0.5**
DGZ			pmax	pmax		
	comp=Z,3.0nm,1.2s					
YAK	**Yakutsk**	**59.23 1**	*e*P	**P**	**11 50 23.3**	**-0.2**
	comp=Z,62nm,0.7s					
YAK	**Yakutsk**	**59.23 1**	*e*P	**P**	**11 50 19.9**	**-3.6**
YAK			*e*		11 51 05.9	
YAK			*e*S	**S**	**11 58 20.1**	**-3.0**
YAK			*e*		12 00 00.4	
YAK			*e*SS	**SS**	**12 02 17.8**	**-1.5**
YAK			*e*SSS	SSS	12 04 55.1	
YAK			pmax	pmax		
	comp=Z,44nm,0.9s					
YAK			pmax	pmax		
	comp=N,9.0nm,1.0s					
YAK			pmax	pmax		
	comp=E,2.0nm,0.9s					
YAK			pmax	pmax		
	comp=Z,50nm,3.4s					
YAK			pmax	pmax		
	comp=N,46nm,3.3s					
YAK			pmax	pmax		
	comp=E,37nm,3.4s					
YAK			smax	smax		
	comp=E,36nm,1.7s					
YAK			smax	smax		
	comp=N,21nm,1.5s					
PDGK	**Podgornoye**	**59.23 320**	P	**P**	**11 50 24.4**	**+0.3**
PDGK			pmax	pmax		
	comp=Z,28nm,0.8s					
MK32	**Makanchi Array**	**59.33 325**	*e*P	**P**	**11 50 21.7**	**-2.8**
MK32			*e*pP	**pP**	**11 50 48.9**	**-1.1**
MK32			*e*ScP	**ScP**	**11 55 01.6**	**-1.2**
MKAR	**Makanchi Array**	**59.33 325**	P	**P**	**11 50 21.7**	**-2.8**
	comp=Z,2.6nm,0.3s,baz=120,slow=8.7,SNR=127					
MKAR			pP	**pP**	**11 50 48.9**	**-1.1**
	comp=Z,16nm,0.8s,baz=120,slow=7.7,SNR=6.0					
MKAR			ScP	**ScP**	**11 55 01.6**	**-1.2**
	comp=Z,0.5nm,0.4s,baz=149,slow=5.9,SNR=2.6					
MKAR			LR	LR	12 17 20.0	
	comp=Z,69nm,18.8s,baz=122,slow=37					
MA2	**Magadan**	**59.36 13**	*i*P	**P**	**11 50 25.1**	**+0.7**
MA2			pmax	pmax		
	comp=Z,20nm,0.9s					
MAKZ	**Makanchi**	**59.52 325**	*e*P	**P**	**11 50 25.1**	**-0.7**
	comp=Z,39nm,1.0s					
MAKZ	**Makanchi**	**59.52 325**	*e*P	**P**	**11 50 25.1**	**-0.7**
MAKZ			pmax	pmax		
	comp=Z,39nm,1.0s					
PRZ	**Przheval'sk**	**59.54 319**	*e*P	**P**	**11 50 26.0**	**-0.2**
PRZ			*e*pP	**pP**	**11 50 51.2**	**-0.6**
PRZ	**Przheval'sk**	**59.54 319**	*e*P	**P**	**11 50 26.0**	**-0.2**
KSH	**Kashi**	**59.91 315**	P	**P**	**11 50 30.5**	**+1.8**
KSH			pP	pP	11 50 57.9	+3.6
KSH			PP	**PP**	**11 52 47.4**	**+5.3**
KSH			S	**S**	**11 58 32.8**	**-0.1**
KSH			SS	**SS**	**12 02 34.0**	**+2.9**
KSH			pmax	pmax		
	comp=Z,140nm,5.2s					
KSH			LR	LR		
	comp=Z,570nm,8.9s					
KSH			LR	LR		
	comp=Z,520nm,8.4s					
KSH			LR	LR		
	comp=Z,250nm,8.2s					
AFI	**Afiamalu**	**61.62 107**	LR	LR	12 13 57.3	
	comp=Z,33nm,20.3s,baz=288,slow=32					
SFK	**Sufi-Kurgan**	**61.85 315**	P	**P**	**11 50 42.3**	**+0.2**
SFK			pmax	pmax		
	comp=Z,18nm,1.2s					
AAK	**Ala-Archa**	**62.20 318**	LR	LR	12 21 16.0	
	comp=Z,45nm,18.6s,baz=92,slow=39					
AAK	**Ala-Archa**	**62.20 318**	*e*P	**P**	**11 50 44.1**	**-0.2**
AAK			*e*pP	**pP**	**11 51 09.7**	**-0.3**
AAK	**Ala-Archa**	**62.20 318**	*i*P	**P**	**11 50 43.1**	**-1.2**
AAK			pmax	pmax		
	comp=Z,3.0nm,1.2s					
ZAA0	**Zalesovo Array**	**62.25 333**	*e*P	**P**	**11 50 43.5**	**-0.6**
	comp=Z,14nm,1.0s					
ZALV	**Zalesovo Beam**	**62.25 333**	P	**P**	**11 50 43.3**	**-0.8**
	comp=Z,1.4nm,0.5s,baz=124,slow=6.8,SNR=8.1					
ZALV			pP	**pP**	**11 51 08.5**	**-1.3**
	comp=Z,2.9nm,0.6s,baz=125,slow=7.6,SNR=2.4					
ZALV			LR	LR	12 19 35.4	
	comp=Z,36nm,18.1s,baz=70,slow=38					
ZAA1	**Zalesovo Array**	**62.25 333**	*e*P	**P**	**11 50 43.3**	**-0.8**
ZAA1			*e*pP	**pP**	**11 51 08.5**	**-1.4**
SEY	**Seymchan**	**62.72 12**	*ce*P	**P**	**11 50 48.4**	**+1.3**
KURBB	**Kurchatov Arra**	**63.48 327**	P	**P**	**11 50 52.2**	**-0.1**
	comp=Z,7.5nm,0.8s,baz=124,slow=6.0,SNR=68					
KURBB			pP	**pP**	**11 51 18.2**	**0.0**
	comp=Z,20nm,0.9s,baz=127,slow=6.1,SNR=9.6					
KURK	**Kurchatov**	**63.48 327**	*e*P	**P**	**11 50 52.2**	**-0.1**
KURK			*e*P	**P**	**11 50 52.3**	**0.0**
KURK			*e*pP	**pP**	**11 51 18.2**	**0.0**
KURK	**Kurchatov**	**63.48 327**	*ce*P	**P**	**11 50 52.1**	**-0.2**
KURK			pmax	pmax		
	comp=Z,11nm,0.8s					
MNAS	**Manas**	**63.49 317**	P	**P**	**11 50 53.4**	**+0.6**
NVS	**Novosibirsk**	**63.53 333**	*e*P	P	11 50 46.2	-6.4
NVS			*e*		11 51 16.1	
NVS			pmax	pmax		
	comp=Z,6.0nm,0.8s					
NVS			pmax	pmax		
	comp=N,4.0nm,0.7s					
KK31	**Karatay Array**	**65.08 317**	*e*P	**P**	**11 51 02.8**	**-0.2**
KK31	**Karatay Array**	**65.08 317**	*e*P	**P**	**11 51 02.8**	**-0.2**
KKAR	**Karatay Array**	**65.08 317**	*e*P	**P**	**11 51 03.1**	**+0.2**
KKAR	**Karatay Array**	**65.08 317**	*e*P	**P**	**11 51 03.2**	**+0.2**
OTUK	**Ortayu**	**65.92 323**	P	**P**	**11 51 08.3**	**0.0**
OTUK			pmax	pmax		
	comp=Z,16nm,1.0s					
TIXI	**Tiksi**	**68.89 0**	*e*P	**P**	**11 51 25.6**	**-0.8**
	comp=Z,8.4nm,0.7s					
TIXI	**Tiksi**	**68.89 0**	*ce*P	**P**	**11 51 25.9**	**-0.6**
TIXI			pmax	pmax		
	comp=Z,11nm,1.2s					
BVAR	**Borovoye Array**	**69.07 327**

comp=Z,8.0nm,1.2s
OHAK Old Harbor 81.49 33 *e*P **P 11 52 39.5 +0.4**
comp=Z,8.0nm,0.8s
KDAK Kodiak Island 81.94 32 *e*P **P 11 52 42.6 +1.2**
comp=Z,12nm,0.8s
KDAK Kodiak Island 81.94 32 *ce*P **P 11 52 42.2 +0.8**
VNDA Vanda 82.18 173 P **P 11 52 42.6 +0.3**
comp=Z,11nm,0.8s,baz=314,slow=5.9,SNR=36
VNDA LR LR 12 30 29.5
comp=Z,41nm,18.0s,baz=328,slow=36
VNDA Vanda 82.18 173 *e*P **P 11 52 43.1 +0.8**
comp=Z,12nm,0.8s
VNDA Vanda 82.18 173 *e*P **P 11 52 43.1 +0.8**
VNDA pmax pmax
comp=Z,12nm,0.8s
RAYN Ar Rayn 82.35 293 *e*P **P 11 52 44.3 0.0**
comp=Z,15nm,0.9s
OPO Ambohidratompo 82.44 251 P **P 11 52 45.4 +0.4**
comp=Z,9.5nm,1.0s,baz=71,slow=4.4,SNR=5.2
PPLA Purkeypile 82.85 27 *e*P **P 11 52 47.1 +0.8**
PPLA *ep*P **pP 11 53 12.0 -1.2**
CNPM China Poot 82.86 30 *e*P **P 11 52 46.7 +0.4**
comp=Z,11nm,0.9s
CAST Castle Rocks 82.97 26 *e*P **P 11 52 47.7 +1.0**
comp=Z,7.7nm,0.8s
SKT Skwentna 83.03 28 *e*P **P 11 52 47.3 +0.2**
comp=Z,12nm,1.1s
SBA Scott Base 83.07 172 *e*P **P 11 52 48.5 +1.6**
comp=Z,7.8nm,0.9s
SBA Scott Base 83.07 172 P **P 11 52 48.0 +1.1**
SBA pmax pmax
comp=Z,11nm,1.3s
PPT Papeete 83.28 108 LR LR 12 26 02.7
comp=Z,22nm,21.4s,baz=282,slow=33
PPT2 Papeete2 83.29 108 *e*LR LR 12 19 13.2
comp=Z,146nm,29.8s
MAW Mawson 83.31 201 P **P 11 52 48.4 +0.1**
comp=Z,1.4nm,0.8s,baz=48,slow=7.3,SNR=4.8
MAW Mawson 83.31 201 *e*P **P 11 52 48.4 +0.1**
comp=Z,2.9nm,1.4s
MAW Mawson 83.31 201 *e*P **P 11 52 48.4 +0.1**
MAW pmax pmax
comp=Z,3.0nm,1.4s
SUA Susitna One 83.34 29 *e*P **P 11 52 48.8 +0.1**
comp=Z,14nm,0.9s
GNI Garni 83.37 310 LR LR 12 35 22.0
comp=Z,17nm,20.5s,baz=98,slow=40
BPAW Bear Paw Mtn. 83.55 26 *e*P **P 11 52 50.5 +0.9**
comp=Z,16nm,1.0s
MLY Manley 83.77 25 *e*P **P 11 52 52.0 +1.2**
comp=Z,32nm,1.3s
TRF Thorofare Moun 83.78 27 *e*P **P 11 52 51.4 +0.3**
comp=Z,28nm,1.3s
RC01 Rabbit Creek A 83.78 29 *e*P **P 11 52 51.3 +0.5**
comp=Z,10nm,0.9s
ZEI Tsey 84.09 313 *e*P **P 11 52 51.6 -1.5**
PMR Palmer 84.12 28 *e*P **P 11 52 52.9 +0.3**
PMR Palmer 84.12 28 *e*P **P 11 52 52.9 +0.3**
PRGR Permogore 84.19 332 *e*P **P 11 52 51.6 -1.3**
PRGR pmax pmax
comp=Z,24nm,0.9s
GHO Glory Hole Cre 84.23 28 *e*P **P 11 52 53.5 +0.3**
comp=Z,13nm,0.9s
NCK Nalchik 84.34 313 *i*P **P 11 52 54.5 +0.4**
MCK McKinley 84.41 26 *e*P **P 11 52 54.4 +0.4**
MCK *ep*P **pP 11 53 19.3 -1.8**
MCK McKinley 84.41 26 *e*P **P 11 52 54.4 +0.4**
RND Reindeer 84.42 27 *e*P **P 11 52 54.4 +0.3**
comp=Z,17nm,1.0s
RND Reindeer 84.42 27 *e*P **P 11 52 54.4 +0.3**
RND pmax pmax
comp=Z,17nm,1.0s
TOLK Toolik Lake Re 84.65 21 *e*P **P 11 52 56.6 +1.4**
comp=Z,18nm,1.0s
WRH Wood River Hil 84.84 26 *e*P **P 11 52 56.6 +0.4**
WRH *ep*P **pP 11 53 20.6 -2.7**
KBZ Khabaz 84.85 313 P **P 11 52 56.2 -0.4**
comp=Z,2.4nm,0.9s,baz=70,slow=7.3,SNR=5.0
NEY Neytrino 84.97 313 *i*P **P 11 52 57.4 -0.1**
NEY pmax pmax
comp=Z,1.0nm,1.0s
CCB Clear Creek Bu 84.98 25 *e*P **P 11 52 57.3 +0.5**
comp=Z,19nm,1.4s
SCM Sheep Creek Mo 85.00 28 *e*P **P 11 52 58.2 +1.1**
comp=Z,86nm,1.6s
SCM Sheep Creek Mo 85.00 28 *e*P **P 11 52 58.2 +1.1**
SCM pmax pmax
comp=Z,87nm,1.6s
KVAR Kislovodsk Arr 85.00 314 LR LR 12 37 35.2
comp=Z,21nm,18.4s,slow=40
KIV Kislovodsk 85.01 314 *e*P **P 11 52 57.4 -0.2**
KIV pmax pmax
comp=Z,5.0nm,0.9s
KIV MLR MLR
comp=Z,25nm,19.0s
DHY Denali Highway 85.06 27 *e*P **P 11 52 58.2 +0.8**
comp=Z,7.7nm,1.0s
ILAR Eielson Array 85.38 25 P **P 11 52 58.5 -0.4**
comp=Z,0.6nm,0.8s,baz=235,slow=7.7,SNR=6.9
ILB Eielson Array 85.38 25 *e*P **P 11 52 58.5 -0.4**
ILB *ep*P **pP 11 53 30.6 +4.6**
DIV Divide 85.70 29 *e*P **P 11 53 02.0 +1.4**
comp=Z,27nm,1.0s
BMRM Bremner River 86.27 29 *e*P **P 11 53 04.4 +1.1**
BMRM *ep*P **pP 11 53 30.1 -0.5**
KLMR Klimovskoe 87.10 331 *e*P **P 11 53 04.2 -3.1**
KLMR pmax pmax
comp=Z,8.0nm,1.1s
KLMR Klimovskoe 87.10 331 *e*P **P 11 53 04.2 -3.1**
KLMR AMP 11 53 06.2
comp=Z,8.0nm,1.1s
EGAK Eagle 87.83 25 *e*P **P 11 53 11.0 +0.2**
comp=Z,2.6nm,0.8s
DAWY Dawson 88.63 26 *e*P **P 11 53 15.3 +0.6**
comp=Z,6.9nm,1.3s
OBN Obninsk 88.83 325 *i*P **P 11 53 13.4 -2.3**
OBN pmax pmax
comp=Z,6.0nm,0.7s
OBN MLR MLR
comp=Z,52nm,19.0s
MMAI Mount Meron Ar 91.01 303 LR LR 12 40 59.4
comp=Z,16nm,18.2s,baz=340,slow=40
KMBO Kilima Mbogo 91.11 269 LR LR 12 31 25.0
comp=Z,28nm,19.3s,baz=97,slow=34
SPITS Spitsbergen Ar 91.82 349 P **P 11 53 27.5 -1.7**
comp=Z,8.3nm,1.0s,baz=48,slow=6.4,SNR=2.9
SPITS LR LR 12 39 34.6
comp=Z,14nm,22.0s,baz=50,slow=39
BRTR Keskin Array B 91.91 310 LR LR 12 40 18.6
comp=Z,10nm,20.1s,baz=90,slow=39
ARA0 ARCESS Array S 91.98 340 *e*P **P 11 53 28.1 -2.0**
ARCES ARCESS Array B 91.98 340 P **P 11 53 28.1 -2.0**
comp=Z,5.0nm,0.8s,baz=52,slow=8.0,SNR=5.9
ARCES LR LR 12 38 03.5
comp=Z,46nm,21.1s,baz=80,slow=38
FIA0 FINESS Array S 93.51 332 *e*P **P 11 53 36.2 -1.0**
FIA0 FINESS Array S 93.51 332 *e*P **P 11 53 36.2 -1.0**
FINES FINESS Array B 93.51 332 P **P 11 53 36.2 -1.0**
comp=Z,1.6nm,0.9s,baz=105,slow=4.9,SNR=2.5
FINES LR LR 12 37 52.3
comp=Z,46nm,21.4s,baz=55,slow=37
AKASG Malin Array Be 93.71 321 P **P 11 53 36.6 -1.8**
comp=Z,0.3nm,0.2s,baz=64,slow=4.6,SNR=2.4
AKASG LR LR 12 38 15.2
comp=Z,32nm,20.2s,baz=65,slow=37
MLR Muntele Rosu 96.76 316 LR LR 12 43 58.7
comp=Z,10nm,18.4s,baz=28,slow=39
BUR04 Bucovina Ar. S 96.84 318 *e*P **P 11 53 52.5 -0.5**
DAG Danmarks Havn 98.51 353 P **P 11 53 58.8 -0.8**
DAG pmax pmax
comp=Z,15nm,1.5s
UZH Uzhgorod 98.53 320 *e*P Pdif 11 54 16.9 +17
HFS Hagfors 99.69 333 P **Pdif 11 54 04.2 -1.0**
comp=Z,1.8nm,0.5s,baz=252,slow=14,SNR=12
HFS LR LR 12 42 00.1
comp=Z,42nm,18.6s,baz=54,slow=37
CLL Collm 103.42 324 *e*PS PS 12 07 54.0 +3.5
CLL *e*PPS PPS 12 08 42.0
CLL *e*SSS SSS 12 17 12.0
CLL LmV 12 43 00.0
comp=Z,100nm,20.7s
TXAR Lajitas Array 120.98 53 PKP **PKPdf 11 59 15.3 +0.8**
comp=Z,0.3nm,0.8s,baz=222,slow=1.7,SNR=4.4
S39A Bolivar 124.34 40 *e*PKPdf **PKPdf 11 59 20.7 +0.1**
TOA0 Torodi Ar. Sit 124.75 288 *e*PKPdf **PKPdf 11 59 21.9 -0.1**
TORD Torodi Ar. Bea 124.75 288 PKP **PKPdf 11 59 21.6 -0.4**
comp=Z,2.4nm,0.9s,baz=53,slow=1.3,SNR=11
TORD pPKP **pPKPdf 11 59 51.4 +0.9**
comp=Z,1.8nm,0.8s,baz=66,slow=1.1,SNR=4.8
TOA1 Torodi Ar. Sit 124.75 288 *e*PKPdf **PKPdf 11 59 21.6 -0.4**
PLCA Paso Flores 138.45 158 PKP **PKPdf 11 59 48.8 +1.6**
comp=Z,1.1nm,0.5s,baz=161,slow=4.4,SNR=1.6
JTS JuntasAbangare 144.47 68 PKP **PKPdf 11 59 59.8 +1.2**
comp=Z,3.4nm,0.8s,baz=0.0,slow=5.1,SNR=3.1
SDV Santo Domingo 157.90 59 PKPab **PKPab 12 00 53.1 +0.5**
comp=Z,2.0nm,0.5s,baz=314,slow=5.5,SNR=4.4
LPAZ La Paz 158.91 131 PKPab **PKPab 12 00 59.0 +1.7**
comp=Z,3.0nm,0.8s,baz=94,slow=3.8,SNR=3.8

*ISCJB **21** 11:52:25.6±0.3,2°.97S±0°.03×129°.88E±0°.04, h25km, mb4.2/20, Error ellipse: s-maj=5.4km s-min=4.6km az=162.4*
*DJA **21** 11:52:27.9±1.1,3°S±3°×13°0E±°, h12km±9km, M4.6/12, mb4.7/8, mB5.1/3, MLv4.5/12, Mw(mB)4.4/3*
*IDC **21** 11:52:29.6±1.8,2°.98S±130°.05E, h48km±18km, mb4.0/16, mb1 4.1/19, mb1mx3.9/55, mbtmp4.3/19, ML4.2/3, Error ellipse: s-maj=20.4km s-min=9.0km az=83.0*
*NEIC **21** 11:52:29.2±0.7,2°.98S×129°.94E, h43km±7km, mb4.1/10, Error ellipse: s-maj=8.8km s-min=5.1km az=61.0*
ISC 21 11:52:26.6±0.4,2°.97S±0°.04×129°.96E±0°.04, h25km, n66, σ2§19/70, mb4.2/20, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.09**	**250**	P	**Pb**	**11 52 47.9**	**+1.0**
MSAI				S	**Sn**	**11 53 03.2**	**+2.4**
BNDI	**Bandanaira**	**1.55**	**182**	P	**Pb**	**11 52 57.3**	**+2.6**
BNDI				S	Sb	11 53 21.8	+7.9
AAI	**Ambon**	**1.90**	**248**	P	**Pb**	**11 52 59.7**	**-1.0**
FAKI	**Fak Fak**	**2.29**	**89**	P	**Pb**	**11 53 06.4**	**-0.9**
FAKI	**Fak Fak**	**2.29**	**89**	*e*Pn	**Pn**	**11 53 06.3**	**+3.4**
SIJI	**Sorong**	**2.46**	**32**	P	**Pn**	**11 53 06.8**	**+1.5**
	48nm,0.3s,baz=329,slow=1.4,SNR=116						
SIJI				S	**Sn**	**11 53 35.8**	**+1.3**
	42nm,0.3s,baz=131,slow=3.9,SNR=7.8						
NLAI	**Namlea**	**2.87**	**264**	P	**Pn**	**11 53 11.9**	**+1.1**
LBMI	**Labuha**	**3.37**	**313**	P	**Pn**	**11 53 17.4**	**-0.4**
SANI	**Sanana**	**4.07**	**283**	P	**Pn**	**11 53 25.7**	**-1.6**
RKPI	**Ransiki, Papua**	**4.46**	**71**	P	**Pn**	**11 53 36.0**	**+3.3**
TNTI	**Ternate**	**4.53**	**325**	*e*Pn	**Pn**	**11 53 35.6**	**+2.0**
BAKI	**Biak**	**6.39**	**74**	P	**Pn**	**11 54 03.4**	**+4.1**
	117nm,1.1s,0.4nm						
LUWI	**Luwuk**	**7.43**	**285**	P	**Pn**	**11 54 11.9**	**-1.7**
	70nm,0.7s,2μm0.4nm						
LUWI	**Luwuk**	**7.43**	**285**	*e*Pn	**Pn**	**11 54 12.1**	**-1.5**
APSI	**Ampana**	**8.55**	**284**	P	**Pn**	**11 54 28.4**	**-0.5**
	73nm,0.9s,974nm						
MRSI	**Marisa**	**8.71**	**293**	P	**Pn**	**11 54 30.1**	**-1.1**
SOEI	**Soe**	**8.80**	**220**	P	Pn	11 54 37.9	+5.4
	46nm,1.1s						
SOEI	**Soe**	**8.80**	**220**	*e*Pn	**Pn**	**11 54 33.5**	**+1.0**
BATI	**Baumata**	**9.53**	**221**	P	Pn	11 54 46.4	+3.9
	2.9nm,0.3s,baz=50,slow=17,SNR=3.3						
MTN	**Manton Dam**	**9.88**	**173**	*e*Pn	**Pn**	**11 54 49.5**	**+2.2**
BKSI	**Bulukumba**	**10.08**	**256**	P	**Pn**	**11 54 52.8**	**+2.8**
SPSI	**Sidrap Palu**	**10.22**	**264**	P	**Pn**	**11 54 53.0**	**+1.2**
WRAB	**Tennant Creek**	**17.40**	**166**	*e*Pn	**Pn**	**11 56 27.3**	**-0.6**
	9.4nm,0.6s						
WRAB				*e*S	**S**	**11 59 49.1**	**+0.1**
WR1	**Warramunga Arr**	**17.41**	**166**	*e*Pn	**Pn**	**11 56 27.1**	**-0.9**
	12nm,0.9s						
WR1				*e*Sn	**Sn**	**11 59 33.6**	**-7.5**
WRA	**Warramunga Arr**	**17.41**	**166**	P	**Pn**	**11 56 27.1**	**-0.9**
	0.7nm,0.3s,baz=346,slow=12,SNR=25						
WRA				S	**Sn**	**11 59 33.6**	**-7.5**
	0.2nm,0.3s,baz=347,slow=23,SNR=4.9						
WB2	**Warramunga Arr**	**17.41**	**166**	*e*Pn	**Pn**	**11 56 27.5**	**-0.5**
	9.2nm,0.8s						
WB2				*e*Pn	**P**	**11 56 28.7**	**-0.5**
SBUM	**Sibu**	**18.53**	**287**	*e*P	**Pn**	**11 56 42.7**	**+0.9**
	4.6nm,0.8s						
KSM	**Kuching**	**20.13**	**282**	*e*P	Pn	11 56 59.5	-1.5
	11nm,1.0s						
AS31	**Alice Springs**	**20.93**	**170**	*e*P	Pn	11 57 09.2	-1.1
	13nm,0.7s						
AS31				*e*S	**S**	**12 00 58.1**	**-1.9**
ASAR	**Alice Springs**	**20.93**	**170**	P	Pn	11 57 09.1	-1.2
	36nm,0.6s,baz=353,slow=11,SNR=372						
ASAR				S	**S**	**12 00 57.8**	**-2.2**
	5.3nm,1.0s,baz=352,slow=24,SNR=9.9						
AS01	**Alice Springs**	**20.94**	**170**	*e*P	Pn	11 57 09.1	-1.3
CTA	**Charters Tower**	**23.29**	**138**	P	**P**	**11 57 33.4**	**+0.6**
	5.0nm,0.7s,baz=319,slow=12,SNR=3.8						
STKA	**Stephens Creek**	**30.77**	**160**	P	**P**	**11 58 41.1**	**+0.8**
	1.9nm,0.5s,baz=336,slow=7.3,SNR=3.6						
CM01	**Chiang Mai Arr**	**37.19**	**306**	*e*P	**P**	**11 59 36.4**	**+0.2**
CM31	**Chiang Mai Arr**	**37.23**	**306**	*e*P	**P**	**11 59 37.1**	**+0.7**
CM31				*ep*P	**pP**	**11 59 45.3**	**+1.3**
CMAR	**Chiang Mai Arr**	**37.23**	**306**	P	**P**	**11 59 37.1**	**+0.7**
	1.5nm,0.7s,baz=135,slow=7.7,SNR=8.7						
CHTO	**Chiang Mai**	**37.41**	**307**	*e*P	**P**	**11 59 39.1**	**+1.1**
	6.6nm,0.8s						
MJAR	**Matsushiro Arr**	**40.05**	**10**	P	**P**	**11 59 59.5**	**-0.4**
	1.3nm,0.7s,baz=182,slow=8.7,SNR=4.6						
MAJO	**Matsushiro**	**40.05**	**10**	*e*P	**P**	**11 59 59.5**	**-0.4**
LZH	**Lanzhou**	**45.87**	**330**	*e*P	**P**	**12 00 42.9**	**-4.4**
LZH				pP	pP	12 00 51.9	-3.1
LZH				sP	sP	12 00 55.4	-2.6
LZH				pmax	pmax		
	comp=Z,21nm,1.2s						
HHC	**Hu-ho-hao-te**	**46.73**	**341**	*e*P	**P**	**12 00 57.8**	**+3.9**
HHC				pmax	pmax		
	comp=Z,22nm,1.1s						
HHC				pmax	pmax		
	comp=Z,120nm,5.9s						
SONA0	**Songino Array**	**54.63**	**341**	*e*P	**P**	**12 01 54.0**	**+0.6**
SONM	**Songino Array**	**54.63**	**341**	P	**P**	**12 01 54.0**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=152,slow=9.8,SNR=4.6						
SONA1	**Songino Array**	**54.64**	**341**	*e*P	**P**	**12 01 53.3**	**-0.2**
WMQ	**Urumqi**	**60.03**	**326**	P	**P**	**12 02 34.8**	**+3.3**
MK01	**Makanchi Array**	**64.85**	**326**	*e*P	**P**	**12 03 04.3**	**+0.7**
MK32	**Makanchi Array**	**64.86**	**326**	*e*P	**P**	**12 03 03.6**	**-0.2**
MKAR	**Makanchi Array**	**64.86**	**326**	P	**P**	**12 03 03.6**	**-0.2**
	comp=Z,1.3nm,0.8s,baz=128,slow=7.8,SNR=9.5						
ZALV	**Zalesovo Beam**	**67.98**	**333**	P	**P**	**12 03 23.6**	**+0.1**
	comp=Z,5.0nm,0.3s,baz=110,slow=6.3,SNR=3.4						
ZAA1	**Zalesovo Array**	**67.98**	**330**	*e*P	**P**	**12 03 23.6**	**+0.1**
KURBB	**Kurchatov Arra**	**69.08**	**328**	P	**P**	**12 03 31.1**	**+0.7**
	comp=Z,3.2nm,0.7s,baz=128,slow=5.7,SNR=30						
KURK	**Kurchatov**	**69.09**	**328**	*e*P	**P**	**12 03 31.1**	**+0.7**
KURK				*e*P	**pP**	**12 03 31.5**	**-6.9**
BVAR	**Borovoye Array**	**74.66**	**327**	P	**P**	**12 04 04.3**	**+0.4**
	comp=Z,1.4nm,0.7s,baz=131,slow=8.6,SNR=8.7						
BRVK	**Borovoye**	**74.73**	**327**	*e*P	**P**	**12 04 04.5**	**+0.2**
	comp=Z,2.5nm,0.7s						
VNDA	**Vanda**	**76.43**	**173**	P	**P**	**12 04 13.5**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=320,slow=5.8,SNR=3.4						
NRIK	**Noril'sk**	**77.66**	**346**	P	**P**	**12 04 22.1**	**+1.5**
	comp=Z,4.8nm,0.6s,baz=146,slow=5.6,SNR=4.7						
MAW	**Mawson**	**78.67**	**201**	P	**P**	**12 04 27.0**	**+0.8**
	comp=Z,2.1nm,0.9s,baz=67,slow=7.7,SNR=3.9						
MAW	**Mawson**	**78.67**	**201**	*e*P	**P**	**12 04 27.0**	**+0.8**
	comp=Z,0.6nm,1.0s						
ABKAR	**Abkulak array**	**79.35**	**321**	*e*P	**P**	**12 04 30.9**	**+0.6**
AKTO	**Aktyubinsk**	**80.88**	**322**	P	**P**	**12 04 38.3**	**-0.4**
	comp=Z,1.0nm,0.4s,baz=93,slow=8.2,SNR=6.7						
OPO	**Ambohidratompo**	**82.21**	**252**	P	**P**	**12 04 46.1**	**-0.4**
	comp=Z,3.1nm,0.7s,baz=9.5,slow=6.1,SNR=3.9						
RAYN	**Ar Rayn**	**86.09**	**294**	*e*P	**P**	**12 05 07.0**	**+0.9**
	comp=Z,5.2nm,1.1s						
ILAR	**Eielson Array**	**89.74**	**25**	P	**P**	**12 05 22.9**	**+0.4**
	comp=Z,0.3nm,0.8s,baz=256,slow=3.6,SNR=2.8						
ILB	**Eielson Array**	**89.74**	**25**	*e*P	**P**	**12 05 22.9**	**+0.4**
DBIC	**Dimbokro**	**134.84**	**276**	PKP	**PKPdf**	**12 11 43.2**	**-1.3**
	comp=Z,8.0nm,1.0s,baz=162,slow=3.2,SNR=3.7						
CPUP	**Villa Florida**	**150.04**	**167**	PKPbc	**PKPbc**	**12 12 16.6**	**+0.7**
	comp=Z,1.1nm,0.5s,baz=153,slow=2.3,SNR=3.2						

IDC 21 12:01:44.9±5.4, 8°.38S×73°.25W, h368km±83km, mb3.1/3, mb1 3.3/4, mb1mx2.9/47, mbtmp3.7/4, Error ellipse: s-maj=144.6km s-min=61.0km az=54.0, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**9.32**	**148**	P	Pn	12 03 55.5	0.0
	0.2nm,0.3s,baz=350,slow=11,SNR=3.9						
LPAZ				S	S	12 05 29.6	-13
	0.0nm,0.3s,baz=175,slow=16,SNR=2.8						
TXAR	**Lajitas Array**	**47.58**	**323**	P	P	12 09 45.2	-0.1
	0.3nm,0.8s,baz=133,slow=5.3,SNR=3.5						
ULM	**Lac du Bonnet**	**61.62**	**344**	P	P	12 11 24.5	-0.1
	1.8nm,0.3s,baz=172,slow=4.6,SNR=4.1						
YKA	**Yellowknife Ar**	**77.49**	**342**	P	P	12 13 00.3	0.0
	0.5nm,0.6s,baz=137,slow=5.3,SNR=5.7						
WRA	**Warramunga Arr**	**140.89**	**224**	PKP	PKPdf	12 20 32.1	-0.5
	0.3nm,1.0s,baz=130,slow=1.8,SNR=6.3						

*BJI **21** 12:22:11.3,2°.02N×123°.50E, h461km, mb4.8/55, mB4.7/32*
*ISCJB **21** 12:22:17.5±0.2,2°.84N±0°.02×123°.12E±0°.03, h450km, mb4.5/103, Error ellipse: s-maj=4.4km s-min=2.7km az=4.1*
*MOS **21** 12:22:18.9±0.8,2°.75N×122°.99E, h478km, mb4.7/34, Error ellipse: s-maj=11.7km s-min=5.5km az=107.0*
*NEIC **21** 12:22:19.2±0.3,2°.71N×123°.06E, h468km±3km, mb4.7/35, Error ellipse: s-maj=4.8km s-min=3.2km az=80.0*
*DJA **21** 12:22:19.5±0.2,3°N±3°×12°3E±°, h447km±3km, M4.4/42, mb4.7/42, mB4.9/21, MLv4.9/14, Mw(mB)4.2/21*
*IDC **21** 12:22:20.4±0.7,2°.74N×123°.01E, h478km±8km, mb4.0/41, mb1 4.0/45, mb1mx3.9/76, mbtmp4.8/45, Error ellipse: s-maj=10.1km s-min=6.3km az=83.0*
ISC 21 12:22:18.4±0.3, 2°.71N±0°.03×122°.97E±0°.05, h450km, n255, σ1§78/286, mb4.6/104, 13C-3D, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**2.35**	**155**	P	**P**	**12 23 23.7**	**+2.6**
MRSI	**Marisa**	**2.45**	**205**	P	**P**	**12 23 23.8**	**+2.1**
MRSI				S	**S**	**12 24 15.9**	**+3.0**
LUWI	**Luwuk**	**3.73**	**183**	P	**P**	**12 23 31.9**	**+0.6**
LUWI				S	**S**	**12 24 31.0**	**+0.4**
LUWI	**Luwuk**	**3.73**	**183**	*e*P	**P**	**12 23 32.2**	**+0.9**
APSI	**Ampana**	**3.83**	**200**	P	**P**	**12 23 34.0**	**+1.8**
MPSI	**Mapaga**	**3.87**	**233**	P	**P**	**12 23 34.4**	**+1.9**
MPSI				S	**S**	**12 24 34.0**	**+1.3**
GSPH	**General Santos**	**3.89**	**30**	*i*P	P	12 23 37.7	+4.9
PCI	**Palu**	**4.77**	**221**	P	**P**	**12 23 41.8**	**+1.2**
PCI	**Palu**	**4.77**	**221**	P	**P**	**12 23 42.4**	**+1.8**
TNTI	**Ternate**	**4.80**	**114**	*e*P	**P**	**12 23 41.3**	**+0.4**
DMPH	**Davao City--Mi**	**5.02**	**30⇑**	*e*P	P	12 23 51.0	+7.9
DMPH				*e*S	**S**	**12 24 55.8**	**+3.7**
DAV	**Davao City (W)**	**5.05**	**31**	P	P	12 23 48.0	+4.7
	158nm,0.3s,baz=147,slow=2.6,SNR=7.6						
DAV				S	**S**	**12 24 57.8**	**+5.4**
	198nm,0.3s,baz=82,slow=23,SNR=9.2						
DAV	**Davao City (W)**	**5.05**	**31**	*e*P	**P**	**12 23 43.7**	**+0.4**
DAV				*e*S	**S**	**12 24 55.4**	**+3.0**
DAV	**Davao City (W)**	**5.05**	**31**	P	**P**	**12 23 46.9**	**+3.6**
	SNR=6.4						
MYLDM	**Lahad Datu**	**5.09**	**299**	*e*P	**P**	**12 23 46.5**	**+2.8**
SANI	**Sanana**	**5.61**	**147**	P	**P**	**12 23 48.1**	**-0.7**
	461nm,0.7s,10μm2.3nm						
LBMI	**Labuha**	**5.62**	**126**	P	**P**	**12 23 49.8**	**+0.8**
	138nm,0.8s,3μm5.7nm						
CGP	**Cagayan de Oro**	**5.96**	**17⇓**	*e*P	**P**	**12 23 55.1**	**+2.8**
TTSI	**Tana Toraja**	**6.53**	**209**	P	**P**	**12 24 01.5**	**+3.2**
	131nm,1.1s,1μm0.6nm						
KDI	**Kendari**	**6.63**	**183**	P	**P**	**12 24 01.3**	**+1.9**
	378nm,1.1s,4μm1.2nm						
NLAI	**Namlea**	**7.21**	**145**	P	**P**	**12 24 07.8**	**+2.4**
	195nm,1.1s,2μm0.6nm						
SPSI	**Sidrap Palu**	**7.36**	**206**	P	**P**	**12 24 09.1**	**+2.0**
	121nm,0.8s,1μm0.4nm						
KKM	**Kota Kinabalu**	**7.50**	**296**	*e*P	**P**	**12 24 10.3**	**+1.6**
BNSI	**Bone**	**7.62**	**202**	P	P	12 24 15.5	+5.6
GUIM	**Jordan**	**7.87**	**357**	*e*S	**S**	**12 25 45.8**	**-0.2**
AAI	**Ambon**	**8.23**	**141**	P	**P**	**12 24 18.9**	**+2.5**
	117nm,0.8s,2μm						
AAI	**Ambon**	**8.23**	**141**	P	**P**	**12 24 20.5**	**+4.1**
AAI				pmax	pmax		
	comp=Z,113nm,0.8s						
MSAI	**Masohi**	**8.47**	**135**	P	**P**	**12 24 21.8**	**+2.8**
	comp=Z,36nm,0.5s,comp=Z,628nm						
BKSI	**Bulukumba**	**8.47**	**200**	P	**P**	**12 24 21.8**	**+2.8**
	comp=Z,42nm,0.8s,comp=Z,370nm						
RCP	**Roxas**	**8.79**	**359⇓**	*e*P	**P**	**12 24 23.2**	**+0.7**
SIJI	**Sorong**	**9.02**	**113**	P	**P**	**12 24 26.6**	**+1.6**
	comp=Z,4.8nm,0.3s,baz=141,slow=23,SNR=10						
KBKI	**Kotabaru**	**9.05**	**229**	P	**P**	**12 24 29.2**	**+3.9**
	comp=Z,24nm,0.7s,comp=Z,1μm						
CNP	**Catarman**	**9.88**	**10**	*e*P	P	12 24 40.5	+6.3
CNP				*e*S	**S**	**12 26 30.1**	**+4.1**
SBUM	**Sibu**	**10.74**	**269**	*e*P	**P**	**12 24 46.7**	**+3.0**
FAKI	**Fak Fak**	**10.83**	**121**	P	**P**	**12 24 46.6**	**+1.9**
	comp=Z,45nm,0.8s						
PVCP	**Virac**	**10.88**	**6**	*e*P	**P**	**12 24 45.5**	**+0.4**
PVCP				*e*S	**S**	**12 26 44.4**	**-1.7**
LUBP	**Lubang**	**11.28**	**346**	*e*P	**P**	**12 24 51.3**	**+1.9**
MMRI	**Maumere**	**11.30**	**184**	*e*P	**P**	**12 24 49.9**	**+0.1**
TGY	**Tagaytay City**	**11.49**	**350**	P	**P**	**12 24 54.1**	**+2.2**
	comp=Z,110nm,0.3s,baz=185,slow=2.3,SNR=21						
TGY				S	**S**	**12 27 00.2**	**+1.7**
	comp=Z,29nm,0.3s,baz=192,slow=19,SNR=4.9						
STKI	**Sintang**	**11.79**	**257**	P	**P**	**12 24 57.8**	**+2.7**
	comp=Z,73nm,0.8s						
SOEI	**Soe**	**12.45**	**174**	P	**P**	**12 25 04.8**	**+2.4**
	comp=Z,47nm,0.9s						
SOEI	**Soe**	**12.45**	**174**	*e*P	**P**	**12 25 03.1**	**+0.7**
PLAI	**Plampang**	**12.58**	**204**	P	**P**	**12 25 06.2**	**+2.5**
	comp=Z,53nm,0.8s						
KSM	**Kuching**	**12.71**	**265**	*e*P	**P**	**12 25 07.4**	**+2.2**
WBSI	**Waikabubak, Su**	**12.78**	**196**	P	**P**	**12 25 06.7**	**+0.8**
	comp=Z,46nm,1.3s						
BATI	**Baumata**	**12.85**	**177**	P	**P**	**12 25 08.1**	**+1.4**
	comp=Z,13nm,0.3s,baz=18,slow=2.6,SNR=11						
BATI				S	**S**	**12 27 27.1**	**+1.6**
	comp=Z,4.4nm,0.3s,baz=205,slow=23,SNR=9.8						
BATI	**Baumata**	**12.85**	**177**	P	**P**	**12 25 08.0**	**+1.4**
	comp=Z,45nm,0.8s						
TWSI	**Taliwang, Sumb**	**12.89**	**208**	P	**P**	**12 25 09.6**	**+2.5**
SRBI	**Singaraja**	**13.23**	**216**	P	P	12

comp=Z,671nm,0.3s
YOJ Yonaguni jima 21.62 0 *e*P **P 12 26 35.5 +0.9**
YHNB Yeheng 21.88 356 *e*P **P 12 26 36.3 -0.8**
comp=Z,61nm,0.7s
PSI Prapat 24.02 271 P **P 12 26 57.1 +0.6**
comp=Z,2.6nm,0.4s,baz=177,slow=1.4,SNR=3.6
PSI ScP **ScP 12 33 16.1 -3.2**
comp=Z,4.9nm,0.8s,baz=180,slow=3.2,SNR=4.3
JOW Kunigami 24.52 11 P **P 12 27 01.1 +0.6**
comp=Z,46nm,0.6s,baz=122,slow=3.9,SNR=7.3
JOW Kunigami 24.52 11 *e*P **P 12 27 00.8 +0.2**
comp=Z,134nm,1.3s
WRAB Tennant Creek 25.13 154 *e*P **P 12 27 05.2 -0.9**
comp=Z,12nm,0.6s
WRAB Tennant Creek 25.13 154 *i*P **P 12 27 05.7 -0.4**
WRAB pmax pmax
comp=Z,11nm,0.8s
WRA Warramunga Arr 25.13 154 P **P 12 27 05.3 -0.9**
comp=Z,12nm,0.8s,baz=325,slow=12,SNR=133
WRA S **S 12 30 55.0 -3.2**
comp=Z,1.3nm,0.8s,baz=342,slow=14,SNR=2.6
WRA ScP **ScP 12 33 18.9 -3.1**
comp=Z,3.3nm,0.9s,baz=340,slow=3.3,SNR=12
WR1 Warramunga Arr 25.13 154 *e*P **P 12 27 05.3 -0.9**
comp=Z,15nm,0.7s
WR1 *e*S **S 12 30 55.0 -3.2**
WB2 Warramunga Arr 25.14 154 *e*P **P 12 27 04.9 -1.3**
WB2 *e*P P 12 27 05.3 -0.9
GSI Gunungsitoli 25.42 267 P **P 12 27 10.1 +1.3**
comp=Z,21nm,0.6s
CM01 Chiang Mai Arr 28.23 305 *e*P **P 12 27 33.8 +0.2**
CMAR Chiang Mai Arr 28.26 305 P **P 12 27 34.5 +0.7**
comp=Z,0.8nm,0.4s,baz=131,slow=8.2,SNR=7.4
CMAR ScP **ScP 12 33 29.6 -2.0**
comp=Z,2.0nm,0.8s,baz=172,slow=2.2,SNR=11
ASAR Alice Springs 28.30 158 P **P 12 27 34.1 0.0**
comp=Z,2.1nm,0.5s,baz=345,slow=13,SNR=58
ASAR S **S 12 31 43.9 -3.9**
comp=Z,3.3nm,0.9s,baz=352,slow=23,SNR=6.8
ASAR ScP **ScP 12 33 28.6 -3.0**
comp=Z,2.5nm,0.8s,baz=348,slow=3.1,SNR=11
AS01 Alice Springs 28.32 158 *e*P **P 12 27 34.0 -0.3**
GYA Guiyang 28.33 328 P **P 12 27 35.0 +0.6**
GYA PP **pP 12 28 56.0 +2.8**
GYA S **S 12 31 51.4 +3.1**
GYA pmax pmax
comp=Z,10.0nm,0.7s
WHN Wuhan 28.86 344 ⇓P **P 12 27 41.1 +2.2**
NJ2 Nanjing 29.44 353 *e*P **P 12 27 45.3 +1.4**
NJ2 pmax pmax
comp=Z,50nm,1.0s
KMI Kunming 29.60 321 P **P 12 27 47.9 +2.1**
KMI pP PP 12 29 09.0 +3.1
KMI sP sP 12 30 02.3 +4.8
KMI pmax pmax
comp=Z,14nm,0.5s
KMI pmax pmax
comp=Z,160nm,5.1s
ENH Enshi 30.24 336 *e*P **P 12 27 51.6 +0.6**
comp=Z,54nm,0.8s
CBIJ Chichi jima 30.44 35 *e*P **P 12 27 51.3 -1.4**
comp=Z,280nm,0.6s
JCJ Chichijima 30.44 35 P **P 12 27 51.3 -1.4**
comp=Z,267nm,0.5s,baz=257,slow=4.3,SNR=18
JNU Nakatsue 31.15 13 P **P 12 27 57.6 -1.2**
comp=Z,19nm,0.8s,baz=187,slow=13,SNR=6.6
CD2 Chengdu 33.41 329 P **P 12 28 18.1 -0.2**
CD2 pmax pmax
comp=Z,50nm,0.9s
TIA Tai'an 33.77 351 P **P 12 28 20.6 -0.6**
TIA pmax pmax
comp=Z,13nm,0.9s
XAN Xi'an 33.81 339 P **P 12 28 21.6 0.0**
XAN pmax pmax
comp=Z,44nm,0.9s
XAN pmax pmax
comp=Z,63nm,3.6s
KS15 Wonju Array Si 34.86 7 *e*P **P 12 28 30.4 +0.1**
KSAR Wonju Array Be 34.86 7 P **P 12 28 30.8 +0.5**
KSAR Wonju Array Be 34.86 7 P **P 12 28 30.8 +0.5**
KSRS Korea Array 34.87 7 P **P 12 28 30.8 +0.4**
comp=Z,11nm,0.8s,baz=185,slow=9.7,SNR=48
KSRS ScP **ScP 12 33 51.2 -2.4**
comp=Z,2.0nm,0.7s,baz=175,slow=3.2,SNR=8.0
KS01 Wonju Array Si 34.89 7 *e*P **P 12 28 30.4 -0.2**
NWAO Narrogin (SRO) 35.86 188 P **P 12 28 39.0 +0.2**
comp=Z,22nm,0.8s,baz=250,slow=9.8,SNR=8.9
MAJO Matsushiro 36.48 21*ce*P **P 12 28 42.8 -1.2**
MAJO pmax pmax
comp=Z,7.0nm,0.8s
MAT Matsushiro 36.48 21 P **P 12 28 42.1 -1.9**
MAT S **S 12 33 56.3 +3.5**
MJAR Matsushiro Arr 36.48 21 P **P 12 28 42.6 -1.4**
comp=Z,10nm,0.7s,baz=198,slow=9.3,SNR=28
MJAR ScP **S 12 33 56.9 +4.1**
comp=Z,4.5nm,0.9s,baz=213,slow=6.7,SNR=10
MJB9 Matsu-Tunnel 36.48 21 *e*P **P 12 28 42.7 -1.3**
comp=Z,50nm,1.6s
LZH Lanzhou 37.63 334 *e*P **P 12 28 55.3 +1.7**
LZH pP pP 12 30 19.8 +3.7
LZH sP sP 12 31 13.4 +5.7
LZH *e*S **S 12 34 08.8 -1.4**
LZH sS sS 12 36 49.0 +7.9
LZH pmax pmax
comp=Z,66nm,1.0s
LZH pmax pmax
comp=Z,240nm,4.9s
BJT Baijiatuau 37.64 351 *e*P **P 12 28 53.5 0.0**
comp=Z,49nm,0.7s
BJT Baijiatuau 37.64 351 *e*P **P 12 28 53.5 0.0**
BJT pmax pmax
comp=Z,49nm,0.7s
BJI Beijing 37.66 351 ⇑*i*P **P 12 28 53.0 -0.6**
BJI pmax pmax
comp=Z,86nm,0.6s
STKA Stephens Creek 38.68 154 P **P 12 29 02.8 +0.7**
comp=Z,15nm,0.7s,baz=333,slow=8.8,SNR=13
STKA Stephens Creek 38.68 154 *e*P **P 12 29 02.8 +0.7**
comp=Z,3.8nm,0.8s
STKA Stephens Creek 38.68 154 *e*P **P 12 29 02.8 +0.7**
STKA pmax pmax
comp=Z,4.0nm,0.8s
HHC Hu-ho-hao-te 39.34 346 *e*P **P 12 29 07.9 +0.4**
HHC pP pP 12 30 33.3 +2.5
HHC S **S 12 34 35.8 +0.5**
HHC SS **SS 12 37 49.6 -3.0**
HHC pmax pmax
comp=Z,39nm,0.9s
HHC pmax pmax
comp=Z,77nm,4.4s
MSHR Mys Shultsa 40.36 9*c i*P **P 12 29 15.1 -0.4**
LSA Lhasa 40.39 315 *e*P **P 12 29 17.2 +0.6**
comp=Z,9.1nm,0.7s
LSA Lhasa 40.39 315 *e*P **P 12 29 17.2 +0.6**
LSA pmax pmax
comp=Z,9.0nm,0.7s
CN2 Changchun 40.97 3 *e*P **P 12 29 19.1 -1.3**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
USRK Ussuriysk Ar. 42.08 10 P **P 12 29 28.5 -0.7**
comp=Z,13nm,0.6s,baz=198,slow=6.2,SNR=21
MDJ Mudanjiang 42.14 7 P **P 12 29 26.3 -3.4**
MDJ pmax pmax
comp=Z,57nm,1.1s
MDJ pmax pmax
comp=Z,210nm,4.6s
MDJ Mudanjiang 42.14 7 *e*P **P 12 29 29.5 -0.2**
comp=Z,50nm,1.0s
GTA Gaotai 42.16 333 P **P 12 29 30.9 +0.7**
GTA pP pP 12 30 59.0 +4.1
GTA sP sP 12 31 51.9 +6.0
GTA S **S 12 35 20.3 +3.7**
GTA sS sS 12 38 00.9 +10
GTA SS **ScS 12 38 40.8 -0.8**
GTA pmax pmax
comp=Z,17nm,1.2s
GTA pmax pmax
comp=Z,120nm,5.0s
ASAJ Asahikawa 44.74 20 P **P 12 29 50.1 0.0**
comp=Z,25nm,0.7s,baz=220,slow=9.5,SNR=28
CAN Canberra 45.01 150 P **P 12 29 53.3 +0.8**
CAN pmax pmax
comp=Z,26nm,0.8s
HIA Hailar 46.46 357 *e*P **P 12 30 03.4 0.0**
comp=Z,59nm,0.8s
HIA Hailar 46.46 357 *e*P **P 12 30 03.4 0.0**
HIA pmax pmax
comp=Z,59nm,0.8s
KLR Kul'dur 46.95 8 P **P 12 30 06.3 -0.7**
comp=Z,0.4nm,0.5s,baz=198,slow=6.6,SNR=9.1
KLR Kul'dur 46.95 8*ce*P **P 12 30 06.2 -0.8**
ULN Ulaanbaatar 47.03 345 *e*P **P 12 30 07.8 -0.1**
comp=Z,44nm,0.7s
ULN Ulaanbaatar 47.03 345 P **P 12 30 08.2 +0.3**
SNR=18
ULN Ulaanbaatar 47.03 345*ce*P **P 12 30 07.7 -0.2**
ULN pmax pmax
comp=Z,40nm,0.9s
SONA0 Songino Array 47.17 345 *e*P **P 12 30 09.2 +0.3**
SONM Songino Array 47.17 345 P **P 12 30 09.2 +0.3**
comp=Z,38nm,0.7s,baz=159,slow=8.8,SNR=160
SONM ScP **ScP 12 34 39.2 -3.2**
comp=Z,2.2nm,0.9s,baz=169,slow=4.8,SNR=5.9
SONA1 Songino Array 47.18 345 *e*P **P 12 30 08.3 -0.7**
YSS Yuzh-Sakhalins 47.30 18 P **P 12 30 09.2 -0.5**
ZAK Zakamensk 50.34 344 *e*P **P 12 30 31.5 -1.0**
ZAK pmax pmax
comp=Z,15nm,1.1s
ZEA Zeya 50.98 3 *e*P **P 12 30 36.0 -1.0**
ZEA pmax pmax
comp=Z,28nm,1.4s
TLY Talaya 51.42 345 P **P 12 30 40.9 +0.6**
comp=Z,20nm,0.7s,baz=162,slow=5.5,SNR=13
TLY Talaya 51.42 345 P **P 12 30 40.8 +0.6**
SNR=11
TLY Talaya 51.42 345*c i*P **P 12 30 40.4 +0.2**
TLY pmax pmax
comp=Z,50nm,1.3s
WMQ Urumqi 51.49 328 P **P 12 30 41.8 +0.8**
WMQ pP pP 12 32 13.8 +3.7
WMQ sP sP 12 33 03.6 +3.8
WMQ pmax pmax
comp=Z,63nm,1.1s
WMQ pmax pmax
comp=Z,670nm,5.5s
KNGR Kungurtug, Tuv 52.34 340 *i*P **P 12 30 47.1 0.0**
HVS Khovu-Aksy 54.16 338 *i*P **P 12 31 00.1 0.0**
HVS pmax pmax
comp=Z,57nm,1.0s
BOD Bodaibo 55.41 354 *e*P **P 12 31 08.4 -0.2**
BOD pmax pmax
comp=Z,69nm,1.2s
NIL Nilore 55.62 310 *e*P **P 12 31 10.8 +0.2**
comp=Z,17nm,1.0s
NIL Nilore 55.62 310 *e*P **P 12 31 10.8 +0.2**
NIL pmax pmax
comp=Z,17nm,1.0s
DGZ Jazzator, Alta 55.70 333 *i*P **P 12 31 11.0 0.0**
DGZ pmax pmax
comp=Z,14nm,1.0s
PRZ Przheval'sk 56.08 321 *e*P **P 12 31 14.0 +0.1**
comp=Z,29nm,0.7s
PRZ Przheval'sk 56.08 321 *e*P **P 12 31 14.0 +0.1**
PRZ pmax pmax
comp=Z,29nm,0.7s
KSH Kashi 56.17 317 P **P 12 31 15.8 +1.4**
KSH pP pP 12 32 51.1 +5.5
KSH PP **PP 12 33 29.8 +3.9**
KSH S **S 12 38 28.6 -0.2**
KSH pmax pmax
comp=Z,21nm,0.6s
KSH pmax pmax
comp=Z,210nm,4.3s
MK01 Makanchi Array 56.30 327 *e*P **P 12 31 14.7 -0.4**
MK31 Makanchi Array 56.31 327 *e*P **P 12 31 15.2 +0.1**
MK31 Makanchi Array 56.31 327 *e*P **P 12 31 15.3 +0.1**
MK32 Makanchi Array 56.31 327 *e*P **P 12 31 15.5 +0.3**
MKAR Makanchi Array 56.31 327 P **P 12 31 15.5 +0.3**
comp=Z,20nm,0.6s,baz=121,slow=8.8,SNR=246
MKAR Makanchi Array 56.31 327 *e*P **P 12 31 15.2 +0.1**
comp=Z,158nm,0.6s
MKAR Makanchi Array 56.31 327 *e*P **P 12 31 15.3 +0.1**
MKAR pmax pmax
comp=Z,158nm,0.6s
MAKZ Makanchi 56.49 327 *e*P **P 12 31 16.3 -0.1**
comp=Z,21nm,0.6s
MAKZ Makanchi 56.49 327 *e*P **P 12 31 16.3 -0.1**
MAKZ pmax pmax
comp=Z,21nm,0.6s
PETK Petropavlovsk- 57.83 24 P **P 12 31 25.6 +0.2**
comp=Z,11nm,0.6s,baz=197,slow=2.8,SNR=22
PETK Petropavlovsk- 57.83 24 *e*P **P 12 31 25.4 -0.1**
PETK Petropavlovsk- 57.83 24 *e*P **P 12 31 25.4 -0.1**
PEA1 Petropavlovsk- 57.83 24 *e*P **P 12 31 25.6 +0.2**
PET Petropavlovsk 58.16 25 *e*P **P 12 31 27.4 -0.3**
comp=Z,14nm,0.8s
PET Petropavlovsk 58.16 25 *e*P **P 12 31 27.4 -0.3**
PET pmax pmax
comp=Z,21nm,1.4s
AAK Ala-Archa 58.64 320 P **P 12 31 32.4 +1.0**
comp=Z,11nm,0.9s,baz=120,slow=5.4,SNR=13
AAK Ala-Archa 58.64 320 *e*P **P 12 31 31.4 -0.1**
comp=Z,17nm,1.1s
AAK *e*P **P 12 31 32.4 +1.0**
AAK Ala-Archa 58.64 320 P **P 12 31 30.9 -0.6**
SNR=5.7
AAK Ala-Archa 58.64 320*c i*P **P 12 31 30.0 -1.4**
AAK pmax pmax
comp=Z,13nm,1.0s
KBL Kabul 59.20 309 *e*P **P 12 31 35.0 -0.4**
comp=Z,18nm,0.8s
KBL Kabul 59.20 309 *e*P **P 12 31 35.0 -0.4**
KBL pmax pmax
comp=Z,18nm,0.8s
YAK Yakutsk 59.39 4 P **P 12 31 35.4 -0.4**
comp=Z,59nm,0.8s,baz=201,slow=1.1,SNR=12
YAK Yakutsk 59.39 4 *e*P **P 12 31 35.5 -0.4**
comp=Z,63nm,0.8s
YAK Yakutsk 59.39 4 *e*P **P 12 31 34.5 -1.3**
YAK pmax pmax
comp=Z,52nm,0.9s
YAK pmax pmax
comp=N,14nm,1.1s
YAK pmax pmax
comp=E,5.0nm,0.9s
ZAA0 Zalesovo Array 59.85 335 *e*P **P 12 31 37.9 -1.3**
comp=E,23nm,1.0s
ZAA0 *e*S **S 12 39 10.5 -4.6**
ZALV Zalesovo Beam 59.85 335 P **P 12 31 37.9 -1.2**
comp=E,8.6nm,0.6s,baz=130,slow=5.3,SNR=50
ZALV Zalesovo Beam 59.85 335 *e*P **P 12 31 37.6 -1.5**
ZALV Zalesovo Beam 59.85 335 *e*P **P 12 31 37.6 -1.5**
ZAA1 Zalesovo Array 59.85 335 *e*P **P 12 31 37.9 -1.2**
KURBB Kurchatov Arra 60.62 329 P **P 12 31 44.0 -0.3**
comp=E,20nm,0.6s,baz=131,slow=6.1,SNR=70
KURK Kurchatov 60.63 329 *e*P **P 12 31 43.8 -0.5**
comp=E,60nm,0.6s
KURK *e*P **P 12 31 44.0 -0.4**
KURK Kurchatov 60.63 329 P **P 12 31 44.1 -0.3**
SNR=18
KURK Kurchatov 60.63 329*ce*P **P 12 31 43.9 -0.5**
KURK pmax pmax
comp=Z,49nm,0.9s
MA2 Magadan 60.65 16 P **P 12 31 44.6 +0.3**
comp=Z,32nm,0.8s,baz=199,slow=7.9,SNR=14
MA2 Magadan 60.65 16 *i*P **P 12 31 44.3 0.0**
MA2 pmax pmax
comp=Z,29nm,0.9s
NVS Novosibirsk 61.14 335 *e*P **P 12 31 46.3 -1.3**
NVS *e*S **S 12 39 25.9 -5.2**
NVS pmax pmax
comp=Z,29nm,0.9s
NVS pmax pmax
comp=N,14nm,0.7s
NVS pmax pmax
comp=E,12nm,0.5s
NVS smax smax
comp=E,22nm,1.8s
KK31 Karatay Array 61.46 319 *e*P **P 12 31 50.1 0.0**
KK31 Karatay Array 61.46 319 *e*P **P 12 31 50.1 0.0**
KKAR Karatay Array 61.46 319 *e*P **P 12 31 50.1 0.0**
KKAR Karatay Array 61.46 319 *e*P **P 12 31 50.1 0.0**
RPZ Rata Peaks 63.16 143 P **P 12 32 01.7 +0.6**
comp=E,4.2nm,0.7s,baz=333,slow=6.8,SNR=3.6
SEY Seymchan 63.91 14 P **P 12 32 05.6 +0.1**
comp=E,7.5nm,0.9s,baz=213,slow=8.5,SNR=12
WSAR Wadi Sarin 65.40 294 P **P 12 32 15.2 -0.6**
comp=E,4.5nm,0.7s,baz=104,slow=12,SNR=2.7
BVAR Borovoye Array 66.17 328 P **P 12 32 19.6 -0.5**
comp=E,12nm,0.8s,baz=140,slow=7.8,SNR=51
BRVK Borovoye 66.24 328 *e*P **P 12 32 19.7 -0.9**
comp=E,28nm,1.0s
BRVK Borovoye 66.24 328 P **P 12 32 19.6 -0.9**
SNR=12
BRVK Borovoye 66.24 328*ce*P **P 12 32 19.6 -0.9**
BRVK pmax pmax
comp=Z,21nm,1.0s
GEYT Alibeck 68.63 310 P **P 12 32 34.9 -0.7**
comp=Z,102nm,0.8s,baz=132,slow=4.3,SNR=7.1
TIXI Tiksi 68.94 2 P **P 12 32 35.0 -1.7**
comp=Z,14nm,0.8s,baz=173,slow=3.5,SNR=37
TIXI Tiksi 68.94 2*ce*P **P 12 32 34.9 -1.8**
TIXI pmax pmax
comp=Z,26nm,1.0s
NRIK Noril'sk 70.56 347 P **P 12 32 45.8 -0.7**
comp=Z,22nm,0.7s,baz=122,slow=6.2,SNR=19
ABKAR Akbulak array 70.59 322 *e*P **P 12 32 46.0 -1.1**
BILL Bilibino 71.52 16 *i*P **P 12 32 51.3 -0.9**
BILL *i* 12 33 04.9
BILL pmax pmax
comp=Z,3.0nm,1.0s
AKTO Aktyubinsk 72.15 323 P **P 12 32 55.1 -1.2**
comp=Z,20nm,0.8s,baz=102,slow=7.5,SNR=64
SVE Sverdlovsk 72.89 329 *e*P **P 12 32 59.5 -0.9**
SVE pmax pmax
comp=Z,44nm,1.0s
ARU Arti 73.81 329 P **P 12 33 04.5 -1.2**
comp=Z,9.7nm,0.6s,baz=92,slow=2.3,SNR=21
ARU Arti 73.81 329 *e*P **P 12 33 04.2 -1.5**
comp=Z,18nm,0.8s
ARU Arti 73.81 329*c i*P **P 12 33 04.0 -1.7**
ARU *PP **pP 12 34 43.0 -0.3**
ARU 12 35 52.1
ARU S **S 12 41 58.1 -1.8**
ARU SS **SS 12 46 49.0 -6.3**
ARU pmax pmax
comp=Z,25nm,1.0s
RAYN Ar Rayn 77.43 293 *e*P **P 12 33 25.9 -0.8**
comp=Z,4.0nm,0.8s
RAYN Ar Rayn 77.43 293 *e*P **P 12 33 25.9 -0.8**
RAYN pmax pmax
comp=Z,4.0nm,0.8s
GNI Garni 79.26 310*ce*P P 12 33 32.0 -4.4
GNI pmax pmax
comp=Z,21nm,0.8s
ZEI Tsey 80.14 313 *e*P **P 12 33 40.0 -1.0**
ZEI pmax pmax
comp=Z,8.0nm,0.4s
KBZ Khabaz 80.95 314 P **P 12 33 44.2 -0.7**
comp=Z,2.4nm,0.8s,baz=70,slow=4.9,SNR=6.7
NEY Neytrino 81.04 313 *i*P **P 12 33 46.0 +0.3**
NEY pmax pmax
comp=Z,2.0nm,1.0s
KIV Kislovodsk 81.13 314 *e*P **P 12 33 45.8 -0.2**
KIV pmax pmax
comp=Z,6.0nm,0.9s
MAW Mawson 81.53 200 P **P 12 33 47.3 -0.1**
comp=Z,3.2nm,1.0s,baz=73,slow=10,SNR=3.5
PRGR Permogore 81.61 332 *e*P **P 12 33 46.0 -2.0**
PRGR pmax pmax
comp=Z,15nm,0.6s
VNDA Vanda 82.92 172 P **P 12 33 53.5 -0.8**
comp=Z,1.7nm,0.8s,baz=312,slow=5.1,SNR=7.7
KLMR Klimovskoe 84.45 331 *e*P **P 12 33 59.4 -2.9**
KLMR pmax pmax
comp=Z,39nm,1.5s
KLMR Klimovskoe 84.45 331 *e*P **P 12 33 59.4 -2.9**
KLMR AMP 12 34 02.1
comp=Z,39nm,1.5s
KDAK Kodiak Island 84.75 32 P **P 12 34 03.2 -0.6**
comp=Z,3.3nm,0.6s,baz=256,slow=4.2,SNR=13
KDAK Kodiak Island 84.75 32 *e*P **P 12 34 03.2 -0.6**
comp=Z,36nm,1.8s
KDAK Kodiak Island 84.75 32 *i*P **P 12 34 04.2 +0.4**
ASF Jabal al Asfar 85.24 302 P **P 12 34 07.3 +0.3**
comp=Z,4.7nm,0.9s,baz=209,slow=1.6,SNR=5.1
CAST Castle Rocks 85.32 27 *e*P **P 12 34 06.2 -0.4**
comp=Z,6.9nm,1.2s
OBN Obninsk 85.73 325 P **P 12 34 07.9 -0.8**
comp=Z,62nm,0.3s,baz=90,slow=11,SNR=4.6
OBN Obninsk 85.73 325 *e*P **P 12 34 07.1 -1.5**
OBN pmax pmax
comp=Z,7.0nm,0.7s
MLY Manley 85.99 25 *e*P **P 12 34 09.3 -0.5**
comp=Z,5.7nm,1.0s
TOLK Toolik Lake Re 86.56 22 *e*P **P 12 34 11.6 -0.9**
comp=Z,14nm,1.4s
MCK McKinley 86.74 26 *e*P **P 12 34 12.1 -1.3**
comp=Z,6.8nm,0.8s
RND Reindeer 86.77 27 *e*P **P 12 34 11.9 -1.7**
comp=Z,6.0nm,0.9s
RND Reindeer 86.77 27 *e*P **P 12 34 11.9 -1.7**
RND pmax pmax
comp=Z,6.0nm,0.9s
ILAR Eielson Array 87.63 25 P **P 12 34 15.1 -2.5**
comp=Z,0.4nm,0.6s,baz=238,slow=5.8,SNR=9.7
BR101 Keskin Array S 87.77 309 *e*P **P 12 34 18.2 -0.7**
BRTR Keskin Array B 87.77 309 P **P 12 34 18.2 -0.7**
comp=Z,0.8nm,0.8s,baz=91,slow=5.8,SNR=3.5
ARA0 ARCESS Array S 90.09 340 *e*P **P 12 34 27.4 -1.6**
ARCES ARCESS Array B 90.09 340 P **P 12 34 27.4 -1.6**
comp=Z,3.4nm,1.0s,baz=76,slow=7.5,SNR=4.7
AKASG Malin Array Be 90.30 321 P **P 12 34 28.9 -1.4**
comp=Z,0.2nm,0.3s,baz=72,slow=3.9,SNR=3.5
KIEV Kiev 90.31 321 *i*P **P 12 34 28.2 -2.1**
KIEV pmax pmax
comp=Z,2.0nm,1.0s
SPITS Spitsbergen Ar 90.74 349 P **P 12 34 30.2 -1.5**
comp=Z,6.2nm,0.8s,baz=72,slow=5.5,SNR=7.8
FIA0 FINESS Array S 90.94 332 *e*P **P 12 34 31.6 -1.4**
FIA0 FINESS Array S 90.94 332 *e*P **P 12 34 31.6 -1.4**
FINES FINESS Array B 90.94 332 P **P 12 34 31.6 -1.4**
comp=Z,1.2nm,0.6s,baz=84,slow=7.9,SNR=5.7
VSU Vasula 90.98 328 *i*P **P 12 34 31.1 -2.1**
VSU pmax pmax
comp=Z,16nm,1.1s
INK Inuvik 92.47 21 P **P 12 34 38.5 -1.3**
comp=Z,1.0nm,0.7s,baz=295,slow=3.7,SNR=3.9
BUR04 Bucovina Ar. S 93.25 318 *e*P **P 12 34 43.4 -0.7**
TORD Torodi Ar. Bea 119.64 287 PKP **PKPdf 12 40 15.1 -2.2**
comp=Z,0.2nm,0.4s,baz=132,slow=2.1,SNR=2.7
TOA1 Torodi Ar. Sit 119.64 287 *e*PKPdf **PKPdf 12 40 15.1 -2.2**
TXAR Lajitas Array 125.17 51 PKP **PKPdf 12 40 27.8 +0.1**
comp=Z,0.3nm,0.7s,baz=233,slow=0.9,SNR=4.3
S39A Bolivar 127.59 36 *e*PKPdf **PKPdf 12 40 31.3 -0.7**

SOME ***21*** *12:30:02.9, 40°.90N×77°.73E, h5km*
KRNET ***21*** *12:30:03.9±0.1, 40°.92N×77°.71E, h12km, mb2.7*
ISC 21 12:30:06.7±1.4, 41°.07N±0°.05×77°.64E±0°.03, h14km±11km, n33, σ1s42/57, 13C-9D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**0.67**	**11**	⇓*i*P	**Pg**	**12 30 19.4**	**-0.5**
TARG	baz=5.0			⇓*i*S	**Sb**	**12 30 31.2**	**+1.3**
	baz=5.0						
NRN	**Naryn**	**1.29**	**287**	⇑*i*P	**Pg**	**12 30 30.9**	**-0.7**
NRN	baz=91			⇑*i*S	**Sn**	**12 30 50.1**	**+2.2**
	baz=91						
ULHL	**Ulahol**	**1.57**	**319**	P	**Pg**	**12 30 36.5**	**-0.5**
	SNR=18						
ULHL	**Ulahol**	**1.57**	**319**	⇑*i*P	**Pg**	**12 30 36.3**	**-0.7**
ULHL	baz=21			⇑*i*S	**Sg**	**12 30 59.9**	**+2.4**
	baz=21						
BOOM	**Boomskoye usch**	**1.91**	**319**	⇓*i*P	**Pg**	**12 30 42.1**	**-1.2**
BOOM	baz=20			⇓*i*S	**Sg**	**12 31 09.7**	**+1.6**
	baz=20						
KSH	**Kashi**	**2.01**	**220**	Pn	**Pg**	**12 30 45.5**	**+0.3**
KSH				Sn	Sg	12 31 21.0	+10
KSH	comp=N,44nm,0.5s			smax	smax		
KSH	comp=E,47nm,0.8s			smax	smax		
TNSS	**Tian-Shan**	**2.03**	**346**	*e*P	**Pb**	**12 30 44.2**	**+0.5**
TNSS	comp=E,34nm,0.6s			*e*S	**Sg**	**12 31 13.6**	**+1.4**
	comp=E,13nm,0.4s						
KZA	**Kyzart**	**2.06**	**300**	P	**Pb**	**12 30 44.5**	**+0.3**
	SNR=10						
KZA	**Kyzart**	**2.06**	**300**	⇑*i*P	**Pb**	**12 30 44.2**	**+0.1**
KZA	baz=3.0			⇑*i*S	**Sg**	**12 31 13.1**	**+0.2**
	baz=3.0						

baz=3.0
SATY Saty 2.07 16 *e*P Pb 12 30 44.5 +0.3
comp=E,25nm,0.3s
SATY *e*S Sg 12 31 14.6 +1.2
comp=E,28nm,0.7s
MDOK Medeo 2.14 348 *e*P Pb 12 30 46.0 +0.6
comp=E,12nm,0.3s
MDOK *e*S Sg 12 31 16.9 +1.4
comp=E,12nm,0.5s
ZHN Zhinishke 2.18 15 *e*P Pb 12 30 44.7 -1.3
comp=E,15nm,0.3s
ZHN *e*S Sb 12 31 14.6 +1.6
comp=E,57nm,0.2s
KOTS Kotyrbulak 2.20 350 *e*P Pb 12 30 47.2 +0.8
comp=E,5.5nm,0.3s
KOTS *e*S Sg 12 31 18.8 +1.3
comp=E,11nm,0.3s
MTBS Maitube 2.25 337⇑*i*P Pb 12 30 48.1 +0.9
comp=E,12nm,0.5s
MTBS ⇓*i*S Sg 12 31 20.8 +1.7
comp=E,15nm,0.2s
UZB Uzynbulak 2.32 26 *e*P Pb 12 30 47.8 -0.6
comp=E,4.6nm,0.6s
UZB *e*S Sg 12 31 20.5 -0.7
comp=E,11nm,0.9s
KST Kastek 2.33 328 *e*P Pg 12 30 50.0 -1.5
comp=E,10nm,0.4s
KST *e*S Sg 12 31 23.9 +2.1
comp=E,17nm,0.7s
TKM2 Tokmak 2 2.40 321 P Pg 12 30 51.2 -1.5
SNR=5.5
TKM2 Tokmak 2 2.40 321⇑*i*P Pb 12 30 49.0 -0.8
baz=22
TKM2 ⇑*i*S Sb 12 31 21.5 +2.2
baz=22
SHLS Shalkode 2.49 32 *e*P Pg 12 30 54.1 -0.3
comp=E,5.1nm,0.1s
SHLS *e*S Sg 12 31 30.9 +4.2
comp=E,37nm,0.5s
KPKS Kokpek 2.52 18 *e*P Pb 12 30 51.5 -0.3
comp=E,14nm,0.3s
KPKS *e*S Sg 12 31 26.3 -1.4
comp=E,16nm,0.6s
KBK Karagaybulak 2.56 309⇓*i*P Pb 12 30 50.9 -1.7
baz=11
KBK ⇓*i*S Sb 12 31 25.1 +1.1
baz=11
DGS Degeres 2.58 328 *e*P Pb 12 30 52.3 -0.5
comp=E,3.9nm,0.3s
DGS *e*S Sg 12 31 27.9 -1.7
comp=E,12nm,0.4s
UCH Uchtor 2.61 297 P Sg 12 31 31.7 +0.9
SNR=8.4
UCH Uchtor 2.61 297⇓*i*P Pb 12 30 51.7 -1.9
baz=0.0
UCH ⇓*i*S Sb 12 31 26.3 +0.5
baz=0.0
PDGK Podgornoye 2.65 31⇑*i*P Pb 12 30 51.6 -2.4
baz=28
PDGK ⇑*i*S Sb 12 31 25.9 -0.5
baz=28
KTBS Karatobe 2.74 345 *e*P Pb 12 30 56.1 +0.6
comp=E,4.5nm,0.3s
KTBS *e*S Sg 12 31 34.7 +0.1
comp=E,14nm,0.6s
AAK Ala-Archa 2.83 305 P Pb 12 30 57.2 +0.2
SNR=10.0
CHKK Chushkaly 2.83 350 *e*P Pb 12 30 57.5 +0.5
comp=E,3.7nm,0.2s
CHKK *e*S Sg 12 31 36.7 -0.8
comp=E,14nm,0.3s
CHMS Chumysh 2.89 313⇑*i*P Pb 12 30 55.6 -2.5
baz=14
CHMS ⇑*i*S Sb 12 31 32.9 -0.4
baz=14
AML Almayashu 3.14 291 P Pg 12 31 05.2 -1.8
SNR=6.8
USP Ospenovka 3.21 314 P Sn 12 31 33.9 -0.9
SNR=7.9
EKS2 Erkin-Say 3.29 300 P Sn 12 31 35.6 -1.5
SNR=6.7
DJR Jarkent 3.63 25 *e*P Pb 12 31 11.5 +0.8
comp=E,9.1nm,0.8s
DJR *e*S Sg 12 32 00.9 -2.2
comp=E,7.1nm,0.5s

*ATA **21** 12:35:39.5±1.6, 37°.88N×42°.69E, h20km±31km, ML3.8, MW3.9*
*ISK **21** 12:35:41.8, 38°.07N×42°.64E, h8km, ML2.8/5*
*ISCJB **21** 12:35:42.7±0.5, 38°.05N±0°.02×42°.62E±0°.03, h6km±4km, Error ellipse: s-maj=4.3km s-min=3.8km az=31.3*
*CSEM **21** 12:35:42.8±0.2, 38°.04N×42°.63E, h8km, ML2.9, Error ellipse: s-maj=4.5km s-min=4.0km az=151.0*
*DDA **21** 12:35:42.4, 38°.00N×42°.64E, h7km, Ml2.9*
ISC 21 12:35:42.6±1.1, 38°.03N±0°.02×42°.64E±0°.02, h8km±9km, n37, σ1°.03/64, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEVA	**Gevas**	**0.44**	**49**	*e*P	**Pg**	**12 35 50.8**	**-0.3**
GEVA				*e*S	**Sb**	**12 35 58.6**	**-0.7**
GEVA				IAML		12 36 00.5	
	comp=Z,493nm,0.4s						
GEVA	**Gevas**	**0.44**	**49**	*i* P	**Pg**	**12 35 51.0**	**-0.1**
GEVA				*i* S	**Sb**	**12 35 58.1**	**-1.3**
GEVA	**Gevas**	**0.44**	**49**	P	**Pg**	**12 35 51.0**	**-0.1**
GEVA				S	**Sb**	**12 35 58.1**	**-1.3**
SIRT	**Sirnak**	**0.55**	**197**	PG	**Pg**	**12 35 53.8**	**+0.6**
SIRT				SG	**Sb**	**12 36 02.3**	**-0.3**
SIRN	**S¨–rnak**	**0.56**	**199**	*i* P	**Pg**	**12 35 54.1**	**+0.7**
SIRN				*i* S	**Sb**	**12 36 02.2**	**-0.7**
SIRN	**S¨–rnak**	**0.56**	**199**	P	**Pg**	**12 35 54.1**	**+0.7**
SIRN				S	**Sb**	**12 36 02.2**	**-0.7**
SRTM	**Siirt_Merkez**	**0.57**	**266**	*i* P	**Pg**	**12 35 53.5**	**-0.1**
SRTM				*i* S	**Sg**	**12 36 01.3**	**+0.3**
SRTM	**Siirt_Merkez**	**0.57**	**266**	P	**Pg**	**12 35 53.5**	**-0.1**
SRTM				S	**Sg**	**12 36 01.3**	**+0.3**
GURO	**Guroymak-BITLI**	**0.71**	**318**	PG	**Pg**	**12 35 55.3**	**-0.9**
GURO				SG	**Sg**	**12 36 05.3**	**-0.1**
GURO	**Guroymak-BITLI**	**0.71**	**318**	*e*Pg	**Pg**	**12 35 55.3**	**-0.9**
GURO				*e*Sg	**Sg**	**12 36 05.3**	**-0.1**
ADCV	**BITLIS_Adilcev**	**0.78**	**5**	*i* P	**Pg**	**12 35 57.6**	**-0.1**
ADCV				*i* S	**Sb**	**12 36 08.6**	**-0.7**
ADCV	**BITLIS_Adilcev**	**0.78**	**5**	P	**Pg**	**12 35 57.6**	**-0.1**
ADCV				S	**Sb**	**12 36 08.6**	**-0.7**
HAKT	**HAKKARI**	**0.97**	**119**	*i* P	**Pb**	**12 36 01.6**	**-0.1**
HAKT				*i* S	**Sb**	**12 36 14.4**	**-0.4**
HAKT	**HAKKARI**	**0.97**	**119**	P	**Pb**	**12 36 01.6**	**-0.1**
HAKT				S	**Sb**	**12 36 14.4**	**-0.4**
BTMN	**Batman**	**1.09**	**263**	*i* P	**Pg**	**12 36 03.4**	**-0.1**
BTMN				*i* S	**Sn**	**12 36 19.1**	**-0.4**
BTMN	**Batman**	**1.09**	**263**	P	**Pg**	**12 36 03.4**	**-0.1**
BTMN				S	**Sn**	**12 36 19.1**	**-0.4**
SVAN	**Silvan-Diyarba**	**1.14**	**277**	PN	**Pg**	**12 36 04.1**	**-0.4**
SVAN				SN	**Sn**	**12 36 20.3**	**-0.4**
SVAN	**Silvan-Diyarba**	**1.14**	**277**	*i* P	**Pb**	**12 36 04.4**	**-0.2**
SVAN				*i* S	**Sn**	**12 36 20.1**	**-0.6**
SVAN	**Silvan-Diyarba**	**1.14**	**277**	*e*Pn	**Pg**	**12 36 04.1**	**-0.4**
SVAN	**Silvan-Diyarba**	**1.14**	**277**	P	**Pb**	**12 36 04.4**	**-0.2**
SVAN				*e*Sn	**Sn**	**12 36 20.3**	**-0.4**
EKAR	**Karacoban**	**1.30**	**340**	*e*P	**Pn**	**12 36 06.3**	**-1.0**
EKAR				*e*S	**Sn**	**12 36 30.1**	**+5.1**
EKAR				IAML		12 36 33.5	
	comp=Z,27nm,0.5s						
EKAR	**Karacoban**	**1.30**	**340**	*i* P	**Pg**	**12 36 09.1**	**+1.5**
EKAR				*i* S	**Sn**	**12 36 28.0**	**+3.0**
EKAR	**Karacoban**	**1.30**	**340**	P	**Pg**	**12 36 09.1**	**+1.5**
TUTA	**Tutak**	**1.38**	**6**	*e*P	**Pb**	**12 36 08.3**	**-0.4**
TUTA				IAML		12 36 34.5	
	comp=Z,41nm,0.4s						
TUTA	**Tutak**	**1.38**	**6**	*i* P	**Pb**	**12 36 08.3**	**-0.4**
TUTA	**Tutak**	**1.38**	**6**	P	**Pb**	**12 36 08.3**	**-0.4**
BNGL	**BINGOL**	**1.49**	**309**	*e*P	**Pg**	**12 36 11.3**	**+0.1**
BNGL				*e*S	**Sg**	**12 36 32.7**	**+2.3**
BNGL				IAML		12 36 42.1	
	comp=Z,186nm,0.6s						
MARD	**Mardin**	**1.64**	**245**	*i* P	**Pn**	**12 36 11.2**	**-0.5**
MARD				*i* S	**Sb**	**12 36 33.7**	**-0.3**
HANI	**Diyarbakir_Han**	**1.81**	**283**	*i* P	**Pn**	**12 36 14.6**	**+0.6**
HANI				*i* S	**Sb**	**12 36 38.9**	**+0.2**
HANI	**Diyarbakir_Han**	**1.81**	**283**	P	**Pn**	**12 36 14.6**	**+0.6**
HANI				S	**Sb**	**12 36 38.9**	**+0.2**
BNGB	**Bing¨¶l**	**1.81**	**303**	PN	**Pn**	**12 36 13.9**	**-0.3**
BNGB				SN	**Sn**	**12 36 37.3**	**-0.1**
BGOL	**Bingol**	**1.82**	**302**	*i* P	**Pb**	**12 36 15.8**	**-0.3**
BGOL	**Bingol**	**1.82**	**302**	P	**Pb**	**12 36 15.8**	**-0.3**
EATA	**Eleskirt**	**1.83**	**356**	*e*P	**Pb**	**12 36 16.2**	**-0.3**
BINT	**Bingol**	**1.89**	**297**	*e*Pn	**Pn**	**12 36 13.9**	**-1.3**
BINT				*e*Sn	**Sn**	**12 36 37.3**	**-1.9**
DIY	**Diyarbakir**	**1.91**	**267**	*e*Pn	**Pn**	**12 36 16.3**	**+0.8**
DYBB	**Diyarbakir**	**1.98**	**269**	PN	**Pn**	**12 36 16.3**	**-0.1**

NNC 21 12:39:57.3±13.0, 36°.83N×70°.87E, h0km, mb3.7, mpv3.3, 5C, Error ellipse: s-maj=106.7km s-min=90.2km az=161.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.79**	**32**	⇑Pn	Pn	12 40 57.1	0.0
	7.1nm,0.3s						
SFK				⇑Sn	Sn	12 41 45.7	+3.1
	2.9nm,0.2s						
MNAS	**Manas**	**5.79**	**12**	⇑Pn	Pn	12 41 24.1	-0.4
	1.0nm,0.5s						
MNAS				⇑Sn	Sn	12 42 31.8	+0.1
	2.3nm,0.4s						
KK31	**Karatay Array**	**6.27**	**358**	Pn	Pn	12 41 29.8	-1.3
	0.6nm,0.3s,baz=175,slow=13,SNR=8.0						
KK31				⇑Sn	Sn	12 42 42.9	-0.5
	1.6nm,0.5s,baz=166,slow=24						

NNC 21 13:00:36.3±6.5, 37°.01N×70°.50E, h0km, mb3.5, mpv3.1, 3C-3D, Error ellipse: s-maj=49.6km s-min=41.4km az=174.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.81**	**37**	⇓Pn	Pn	13 01 35.8	-0.7
	2.5nm,0.3s						
SFK				⇑Sn	Sn	13 02 23.3	+1.2
	6.1nm,0.4s						
MNAS	**Manas**	**5.68**	**15**	⇓Pn	Pn	13 02 02.5	+0.4
	1.0nm,0.6s						
MNAS				⇓Sn	Sn	13 03 08.1	0.0
	4.0nm,0.5s						
KK31	**Karatay Array**	**6.08**	**0**	⇑Pn	Pn	13 02 09.2	+1.7
	0.5nm,0.2s,baz=179,slow=13,SNR=13						
KK31				⇑Sn	Sn	13 03 20.0	+2.2
	1.9nm,0.5s,baz=185,slow=22,SNR=6.6						

*ISCJB **21** 13:11:54.4±0.4, 24°.96N±0°.02×122°.39E±0°.02, h16km±4km, Error ellipse: s-maj=4.0km s-min=2.9km az=18.2*
*JMA **21** 13:11:54.3±0.1, 25°.01N×122°.40E, h35km±3km, M2.2*
*TAP **21** 13:11:54.9, 24°.96N×122°.31E, h16km, ML2.9, C*
ISC 21 13:11:53.9±1.0, 24°.97N±0°.03×122°.39E±0°.02, h14km±8km, n64, σ0°.63/113, 2C-1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.36**	**275**	P	**Pg**	**13 12 01.6**	**+0.3**
TWB1	baz=279			S	**Sg**	**13 12 06.4**	**+0.1**
EGS		**0.43**	**253**	P	**Pb**	**13 12 03.0**	**-0.2**
EGS	baz=244			*e*S	**Sg**	**13 12 07.0**	**-1.4**
EOS1	**EOS1**	**0.48**	**209**	P	**Pb**	**13 12 04.3**	**+0.2**
EOS1	baz=215			*e*S	**Sb**	**13 12 11.0**	**0.0**
TIPB	**Shuangxi**	**0.51**	**270**	⇑P	**Pg**	**13 12 03.5**	**-0.4**
TIPB	baz=272			S	**Sg**	**13 12 10.0**	**-0.8**
NTC	**Toucheng**	**0.52**	**257**	*e*P	**Pg**	**13 12 04.3**	**+0.1**
NTC	baz=268			*e*S	**Sg**	**13 12 10.7**	**-0.4**
NWF	**Wu-fen Shan**	**0.56**	**280**	⇑P	**Pb**	**13 12 05.8**	**+0.3**
NWF	baz=283			S	**Sb**	**13 12 12.8**	**-0.5**
WFSB	**Wu-fen Shan**	**0.56**	**280**	P	**Pb**	**13 12 05.8**	**+0.3**
WFSB	baz=283			S	**Sb**	**13 12 12.8**	**-0.4**
TWC	**Suao**	**0.61**	**234**	P	**Pg**	**13 12 05.5**	**-0.4**
TWC	baz=232			S	**Sg**	**13 12 12.8**	**-1.2**
TWE	**Neicheng**	**0.70**	**249**	*e*P	**Pb**	**13 12 07.4**	**-0.4**
TWE	baz=239			*e*S	**Sg**	**13 12 15.5**	**-1.3**
SLBB	**Yuanshan**	**0.72**	**252**	*e*P	**Pg**	**13 12 08.2**	**+0.3**
SLBB	baz=252			*e*S	**Sg**	**13 12 17.6**	**+0.2**
YM07	**YM07**	**0.72**	**286**	P	**Pb**	**13 12 07.9**	**-0.3**
YM07	baz=288			S	**Sg**	**13 12 17.4**	**-0.1**
JYNG	**Yonagunijimaku**	**0.73**	**136**	P	**Pb**	**13 12 08.4**	**+0.1**
JYNG				S	**Sg**	**13 12 18.5**	**+0.9**
TWA	**Mucha**	**0.73**	**271**	*e*P	**Pg**	**13 12 08.4**	**+0.3**
TWA	baz=272			S	**Sb**	**13 12 17.7**	**-0.5**
ENAH	**Nanao**	**0.74**	**225**	*e*P	**Pb**	**13 12 08.1**	**-0.4**
ENAH	baz=215			*e*S	**Sb**	**13 12 17.0**	**-1.5**
YM08	**YM08**	**0.75**	**287**	P	**Pg**	**13 12 09.1**	**+0.6**
YM08	baz=289			S	**Sg**	**13 12 19.3**	**+0.8**
YM11	**YM11**	**0.76**	**285**	*e*P	**Pn**	**13 12 10.5**	**+0.2**
YM11	baz=287			*e*S	**Sg**	**13 12 19.8**	**+1.0**
YOJ	**Yonaguni jima**	**0.76**	**132**	⇓*e*P	**Pb**	**13 12 08.8**	**-0.1**
YOJ	baz=117			*e*S	**Sg**	**13 12 19.5**	**+0.7**
YOJ	**Yonaguni jima**	**0.76**	**132**	P	**Pb**	**13 12 08.8**	**-0.1**
YOJ				S	**Sg**	**13 12 19.5**	**+0.7**
YM12	**YM12**	**0.77**	**286**	*e*P	**Pg**	**13 12 09.2**	**+0.3**
YM12	baz=276			*e*S	**Sg**	**13 12 19.1**	**+0.1**
YM10	**YM10**	**0.77**	**284**	*e*P	**Pg**	**13 12 09.5**	**+0.6**
YM10	baz=286			*e*S	**Sg**	**13 12 19.6**	**+0.6**
YM04	**YM04**	**0.79**	**283**	*e*P	**Pg**	**13 12 09.8**	**+0.5**
YM04	baz=274			*e*S	**Sg**	**13 12 20.2**	**+0.4**
NANB	**Nanao**	**0.80**	**227**	P	**Pb**	**13 12 08.7**	**-0.7**
NANB	baz=217			S	**Sb**	**13 12 18.9**	**-1.2**
YM03	**YM03**	**0.80**	**285**	P	**Pn**	**13 12 10.0**	**-0.7**
YM03	baz=276			*e*S	**Sg**	**13 12 20.3**	**+0.4**
ENA	**Nanau**	**0.80**	**227**	*e*P	**Pb**	**13 12 08.9**	**-0.7**
ENA	baz=217			*e*S	**Sb**	**13 12 19.1**	**-1.1**
TATO	**Taipei**	**0.82**	**270**	P	**Pb**	**13 12 09.6**	**-0.2**
TATO	baz=272			S	**Sb**	**13 12 19.9**	**-0.7**
ENTT	**Nioudou**	**0.82**	**246**	*e*P	**Pb**	**13 12 09.6**	**-0.3**
ENTT	baz=257			*e*S	**Sb**	**13 12 20.3**	**-0.4**
NWLT	**Wulai**	**0.83**	**256**	*e*P	**Pb**	**13 12 10.0**	**-0.1**
NWLT	baz=257			*e*S	**Sb**	**13 12 20.6**	**-0.5**
NTST	**Danshui**	**0.87**	**283**	*e*P	**Pn**	**13 12 11.5**	**-0.2**
TWS1	**Kuangyinshan**	**0.89**	**278**	*e*P	**Pn**	**13 12 12.2**	**+0.3**
TWS1	baz=280			*e*S	**Sn**	**13 12 23.5**	**-1.1**
YHNB	**Yeheng**	**0.97**	**252**	P	**Pb**	**13 12 12.4**	**0.0**
YHNB	baz=252			*e*S	**Sb**	**13 12 24.8**	**-0.4**
NSK	**Sanguang**	**0.98**	**253**	*e*P	**Pb**	**13 12 12.6**	**0.0**
NSK	baz=253			*e*S	**Sb**	**13 12 25.0**	**-0.5**
WLTB	**Daxi**	**1.04**	**264**	*e*P	**Pb**	**13 12 13.4**	**-0.2**
WLTB	baz=264			*e*S	**Sb**	**13 12 27.1**	**+0.1**
NNSB	**Datong**	**1.06**	**239**	P	**Pb**	**13 12 14.2**	**+0.1**
NNSB	baz=231			*e*S	**Sb**	**13 12 27.4**	**-0.5**
NNSH	**Datong**	**1.06**	**239**	*e*P	**Pb**	**13 12 14.1**	**0.0**
NNSH	baz=231			S	**Sb**	**13 12 27.6**	**-0.3**
NNS	**Nan Shan**	**1.06**	**240**	P	**Pb**	**13 12 14.0**	**-0.1**
NNS	baz=231			S	**Sb**	**13 12 27.4**	**-0.6**
NACB	**Ninganchiao**	**1.07**	**222**	P	**Pb**	**13 12 14.0**	**-0.3**
NACB	baz=222			S	**Sb**	**13 12 27.1**	**-1.0**
TWD	**Chiawan**	**1.15**	**219**	P	**Pn**	**13 12 15.1**	**-0.3**
TWD	baz=219			S	**Sb**	**13 12 30.1**	**0.0**
LIOB	**Emei**	**1.29**	**256**	*e*P	**Pb**	**13 12 17.6**	**-0.3**
LIOB	baz=257			*e*S	**Sn**	**13 12 34.5**	**0.0**
NSTT	**Nanjuang**	**1.31**	**255**	*e*P	**Pb**	**13 12 18.4**	**+0.3**
NSTT	baz=256			*e*S	**Sb**	**13 12 34.7**	**0.0**
TWT	**Tachien**	**1.32**	**237**	*e*P	**Pb**	**13 12 18.6**	**+0.1**
TWT	baz=231			*e*S	**Sb**	**13 12 35.3**	**+0.1**
TDCB	**Techi**	**1.33**	**238**	*e*P	**Pb**	**13 12 18.8**	**+0.1**
TDCB	baz=231			*e*S	**Sn**	**13 12 35.0**	**-0.7**
IRIF	**Iriomote-Funau**	**1.38**	**117**	P	**Pn**	**13 12 17.6**	**-1.0**
CHGB	**Renai**	**1.43**	**231**	P	**Pb**	**13 12 21.0**	**+0.6**
CHGB	baz=232			*e*S	**Sn**	**13 12 38.3**	**0.0**
ESL	**Shilin**	**1.45**	**217**	*e*P	**Pn**	**13 12 19.9**	**+0.3**
ESL	baz=219			*e*S	**Sb**	**13 12 39.1**	**+0.3**
EGFH	**Guangfu**	**1.57**	**214**	*e*P	**Pn**	**13 12 21.8**	**+0.5**
EGFH	baz=232			*e*S	**Sb**	**13 12 41.9**	**-0.4**
DPDB	**Guoxing**	**1.63**	**235**	*e*P	**Pb**	**13 12 23.8**	**+0.1**
JKRS	**Kuro-shima**	**1.65**	**116**	P	**Pn**	**13 12 22.7**	**+0.4**
JKRS				S	**Sn**	**13 12 42.8**	**-0.5**
VWDT	**VWDT**	**1.66**	**223**	*e*P	**Pb**	**13 12 23.8**	**-0.5**
VWDT	baz=231			*e*S	**Sn**	**13 12 44.3**	**+0.6**
JIJ	**Ishigaki jima**	**1.71**	**110**	P	**Pn**	**13 12 22.3**	**-0.9**
JIJ				S	**Sn**	**13 12 44.2**	**-0.6**
HGSD	**Ruisui**	**1.72**	**211**	*e*P	**Pn**	**13 12 23.2**	**-0.1**
SMLT	**Sun Moon Lake**	**1.74**	**232**	*e*P	**Pb**	**13 12 26.0**	**+0.4**
EHY	**Hungye**	**1.76**	**214**	*e*P	**Pn**	**13 12 23.5**	**-0.4**
TYC	**Yuchr**	**1.76**	**233**	*e*P	**Pb**	**13 12 25.3**	**-0.5**
SSLB	**Suanglung**	**1.76**	**228**	*e*P	**Pb**	**13 12 25.3**	**-0.6**
SSLB	baz=230			*e*S	**Sn**	**13 12 47.0**	**+0.8**
YULB	**Yu-li**	**1.86**	**213**	P	**Pn**	**13 12 24.9**	**-0.4**
TWF1	**Yuli**	**1.90**	**212**	*e*P	**Pn**	**13 12 26.9**	**+1.1**
FULB	**Fuli**	**2.03**	**210**	*e*P	**Pn**	**13 12 27.6**	**0.0**
RLNB	**Erlin**	**2.14**	**240**	*e*P	**Pn**	**13 12 30.0**	**+0.9**
RLNB	baz=258			*e*S	**Sn**	**13 12 56.1**	**+0.7**
ELDTW	**Lidau**	**2.17**	**215**	*e*P	**Pn**	**13 12 30.5**	**+0.8**
WTP	**Ta-pu**	**2.36**	**224**	*e*P	**Pn**	**13 12 34.0**	**+1.7**
CHN1	**Nanshi**	**2.46**	**224**	*e*P	**Pn**	**13 12 34.2**	**+0.7**
CHN1	baz=211			*e*S	**Sn**	**13 13 04.5**	**+1.1**
MATB	**Ma-tsu**	**2.50**	**299**	*e*P	**Pn**	**13 12 33.9**	**-0.1**
MASBT	**Mashibuluo**	**2.85**	**215**	*e*P	**Pn**	**13 12 40.5**	**+1.6**
EAST	**Anshuo**	**2.94**	**209**	*e*P	**Pn**	**13 12 41.8**	**+1.7**

*NIED **21** 13:18:00, 36°.80N×141°.70E, h23km, Mw3.7 Best double couple: M0=4.25000×10^14 NP1:φ=208.00000°, δ=18.00000°, λ=94.00000°. NP2:φ=23.00000°, δ=72.00000°, λ=89.00000°.*
*IDC **21** 13:18:39.5±1.5, 36°.76N×141°.98E, h0km, mb3.7/6, mb1 3.8/9, mb1mx3.5/78, mbtmp3.8/9, ML3.6/3, MS2.7/6, Ms1 2.8/6, ms1mx2.4/70, Error ellipse: s-maj=34.5km s-min=19.5km az=74.0*
*ISCJB **21** 13:18:40.9±1.4, 36°.75N±0°.05×141°.97E±0°.08, h19km±9km, mb3.6/6, MS2.9/2, Error ellipse: s-maj=10.4km s-min=7.7km az=12.5*
*JMA **21** 13:18:44.6±0.2, 36°.77N×141°.66E, h54km±3km, M3.7*
ISC 21 13:18:41.4±2.2, 36°.75N±0°.05×141°.87E±0°.08, h14km±12km, n25, σ1°.57/28, mb3.6/6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.93**	**293**	P	**Pg**	**13 18 59.3**	**0.0**
ONAJ				S	**Sb**	**13 19 10.0**	**-1.5**
JFK	**Kawauchi**	**1.01**	**308**	P	**Pg**	**13 19 00.5**	**-0.3**
JHO	**Hitachi**	**1.05**	**263**	P	**Pg**	**13 19 00.9**	**-0.8**
JMM	**Marumori**	**1.41**	**323**	P	**Pn**	**13 19 06.7**	**+0.1**
JFT	**Otama**	**1.45**	**303**	P	**Pn**	**13 19 07.3**	**+0.2**
JIO	**Ouri**	**1.75**	**347**	P	**Pn**	**13 19 12.0**	**+0.7**
JIO				S	**Sn**	**13 19 32.2**	**-1.2**
JFY	**Yanaizu**	**1.85**	**291**	P	**Pn**	**13 19 14.1**	**+1.4**
JOU	**Okura**	**1.88**	**330**	P	**Pn**	**13 19 14.8**	**+1.7**
JOU				S	**Sn**	**13 19 36.4**	**-0.2**
JAG	**Ashikaga**	**1.97**	**261**	P	**Pn**	**13 19 14.5**	**+0.2**
JYS	**Shirataka**	**2.05**	**316**	P	**Pn**	**13 19 17.0**	**+1.5**
JKT	**Katashina**	**2.10**	**271**	P	**Pn**	**13 19 17.2**	**+0.9**
MJAR	**Matsushiro Arr**	**2.95**	**267**	Pn	**Pn**	**13 19 29.2**	**+1.4**
	15nm,0.3s,baz=90,slow=15,SNR=82						
MJAR				Sn	**Sb**	**13 20 05.8**	**-3.9**
	3.4nm,0.3s,baz=86,slow=34,SNR=5.7						
MJAR				LR	LR	13 20 51.4	
	comp=Z,129nm,18.2s,baz=85,slow=44						
MAT	**Matsushiro**	**2.95**	**267**	P	**Pn**	**13 19 29.7**	**+1.8**
MAT				S	**Sn**	**13 20 04.8**	**+1.7**
JHJ	**Hachijo jima 2**	**4.01**	**206**	Pn	**Pn**	**13 19 44.3**	**+2.0**
	13nm,0.3s,baz=0.0,slow=15,SNR=11						
JHJ				Sn	**Sn**	**13 20 26.1**	**-2.9**
	20nm,0.3s,baz=73,slow=19,SNR=4.8						
ASAJ	**Asahikawa**	**7.38**	**4**	Pn	**Pn**	**13 20 29.8**	**+1.2**
	0.6nm,0.3s,baz=190,slow=18,SNR=7.2						
ASAJ				Sn	**Sn**	**13 21 49.5**	**-2.7**
	0.3nm,0.3s,baz=65,slow=17,SNR=2.5						
ASAJ				LR	LR	13 23 00.3	
	comp=Z,16nm,18.5s,baz=124,slow=35						
JNU	**Nakatsue**	**9.72**	**251**	LR	LR	13 24 59.1	
	comp=Z,32nm,19.2s,baz=303,slow=39						
USRK	**Ussuriysk Ar.**	**10.58**	**318**	Pn	Pn	13 21 19.0	+6.5
	0.1nm,0.3s,baz=136,slow=12,SNR=3.6						
KSRS	**Korea Array**	**11.16**	**278**	Pn	Pn	13 21 25.9	+5.4

0.1nm,0.3s,baz=92,slow=14,SNR=2.7
KSRS LR LR 13 25 11.2
comp=Z,47nm,20.6s,baz=103,slow=35
SONM Songino Array 28.25 304 P **P 13 24 34.6 +0.6**
1.1nm,0.5s,baz=107,slow=9.9,SNR=3.9
SONM LR LR 13 36 12.4
comp=Z,27nm,18.6s,baz=112,slow=37
CMAR Chiang Mai Arr 41.78 256 LR LR 13 43 54.9
comp=Z,18nm,18.9s,baz=245,slow=36
ZALV Zalesovo Beam 42.38 313 P **P 13 26 35.8 +0.8**
0.8nm,0.5s,baz=104,slow=4.9,SNR=3.2
MKAR Makanchi Array 44.58 302 P **P 13 26 53.3 +0.4**
0.7nm,0.8s,baz=83,slow=10.0,SNR=5.5
KURBB Kurchatov Arra 46.47 308 P **P 13 27 08.2 +0.5**
0.7nm,0.5s,baz=82,slow=7.7,SNR=4.4
WRA Warramunga Arr 56.83 188 P **P 13 28 25.8 +0.4**
0.4nm,0.9s,baz=6.0,slow=7.1,SNR=4.6
ASAR Alice Springs 60.56 188 P **P 13 28 51.5 +0.2**
0.2nm,0.7s,baz=17,slow=6.8,SNR=3.4

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*ISCJB **21** 13:20:43.6±0.3,44°.50N±0°.01×6°.70E±0°.02,h10km, Error ellipse: s-maj=2.5km s-min=1.8km az=152.8*
*ROM **21** 13:20:44.1±0.1,44°.502N±0°.006×6°.719E±0°.009, h12km±1km,ML1.9/11*
*GEN **21** 13:20:44.4,44°.49N×6°.70E,h6km,ML1.8*
*LDG **21** 13:20:44.5±0.1,44°.51N×6°.71E,h2km,Md2.6/1,Ml2.6/8, Error ellipse: s-maj=1.3km s-min=1.0km az=67.0*
*CSEM **21** 13:20:44.0±0.1,44°.51N×6°.72E,h15km,ML2.5/11,Error ellipse: s-maj=1.3km s-min=0.9km az=67.0*
*STR **21** 13:20:44.5±0.3,45°.N±2°×±°,h5km,M2.2/7,MLv2.2/7*
ISC 21 13:20:43.7±0.7,44°.51N±0°.01×6°.74E±0°.02,h10km,n58, σ0s89/110,France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OGAG	**Argentiere**	**0.15**	**249**	Pg	**Pg**	**13 20 50.6**	**+3.4**
OGAG				Sg	**Sg**	**13 20 55.0**	**+5.3**
MBDF	**Montbardon**	**0.22**	**6**	*e*Pg	**Pg**	**13 20 49.2**	**+0.9**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**13 20 52.2**	**+0.8**
	59nm,0.2s						
MBDF	**Montbardon**	**0.22**	**6**	*e*Pg	**Pg**	**13 20 49.2**	**+0.9**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**13 20 52.2**	**+0.8**
	30nm,0.2s						
PZZ	**Stroppo**	**0.27**	**91**	P	**Pb**	**13 20 50.5**	**-0.3**
PZZ				S	**Sb**	**13 20 54.6**	**-0.8**
PZZ	**Stroppo**	**0.27**	**91**	P	**Pb**	**13 20 50.5**	**-0.3**
PZZ				S	**Sb**	**13 20 54.6**	**-0.8**
PZZ				AML	AML		
	comp=E,1038μm,0.1s						
PZZ				AML	AML		
	comp=N,862μm,0.3s						
PZZ				AML	AML		
	comp=E,1038μm,0.1s						
PZZ				AML	AML		
	comp=N,862μm,0.3s						
PZZ				AML	AML		
	comp=N,862μm,0.3s						
PZZ				AML	AML		
	comp=E,1038μm,0.1s						
PZZ				END			
PZZ				END			
ISO	**Isola**	**0.40**	**146**	Pg	**Pg**	**13 20 52.3**	**+0.8**
ISO	**Isola**	**0.40**	**146**	Pg	**Pg**	**13 20 52.3**	**+0.8**
ISO				Sg	**Sg**	**13 20 57.0**	**+0.2**
RRL	**Rocca Remolon**	**0.41**	**5**	P	**Pg**	**13 20 52.8**	**+0.9**
RRL				S	**Sg**	**13 20 58.5**	**+1.1**
RRL	**Rocca Remolon**	**0.41**	**5**	P	**Pg**	**13 20 52.7**	**+0.9**
RRL				S	**Sb**	**13 20 59.0**	**-0.7**
RRL				AML	AML		
	comp=E,152μm,0.4s						
RRL				AML	AML		
	comp=N,218μm,0.5s						
RRL				AML	AML		
	comp=E,152μm,0.4s						
RRL				AML	AML		
	comp=N,219μm,0.5s						
RRL				AML	AML		
	comp=N,219μm,0.5s						
RRL				AML	AML		
	comp=E,152μm,0.4s						
RRL				END			
RRL				END			
STV	**Sant Anna di V**	**0.50**	**122**	P	**Pb**	**13 20 54.3**	**-0.3**
STV				S	**Sg**	**13 21 00.9**	**+0.9**
STV	**Sant Anna di V**	**0.50**	**122**	P	**Pb**	**13 20 54.2**	**-0.3**
STV				S	**Sg**	**13 21 00.9**	**+0.9**
STV				AML	AML		
	comp=E,218μm,0.3s						
STV				AML	AML		
	comp=N,337μm,0.4s						
STV				AML	AML		
	comp=E,218μm,0.3s						
STV				AML	AML		
	comp=N,337μm,0.4s						
STV				AML	AML		
	comp=E,218μm,0.3s						
STV				AML	AML		
	comp=N,337μm,0.4s						
STV				END			
STV				END			
BHB	**Bricherasio**	**0.50**	**48**	P	**Pb**	**13 20 54.6**	**0.0**
BHB				S	**Sg**	**13 21 01.2**	**+1.2**
BHB	**Bricherasio**	**0.50**	**48**	P	**Pb**	**13 20 54.6**	**0.0**
BHB				S	**Sg**	**13 21 01.2**	**+1.2**
BHB				AML	AML		
	comp=E,118μm,0.4s						
BHB				AML	AML		
	comp=N,136μm,1.1s						
BHB				AML	AML		
	comp=E,118μm,0.4s						
BHB				AML	AML		
	comp=N,136μm,1.1s						
BHB				AML	AML		
	comp=E,118μm,0.4s						
BHB				AML	AML		
	comp=N,136μm,1.1s						
BHB				END			
BHB				END			
OGDI	**Digne**	**0.51**	**218**	Pg	**Pb**	**13 20 54.8**	**0.0**
OGDI				Sg	**Sb**	**13 21 02.5**	**+0.3**
BNI	**Bardonecchia**	**0.54**	**355**	P	**Pb**	**13 20 55.4**	**0.0**
BNI				S	**Sg**	**13 21 02.6**	**+1.1**
BNI	**Bardonecchia**	**0.54**	**355**	P	**Pb**	**13 20 55.4**	**0.0**
BNI				S	**Sg**	**13 21 02.6**	**+1.1**
BNI				AML	AML		
	comp=E,36μm,1.0s						
BNI				AML	AML		
	comp=N,36μm,0.3s						
BNI				AML	AML		
	comp=E,36μm,1.0s						
BNI				AML	AML		
	comp=N,36μm,0.3s						
BNI				AML	AML		
	comp=N,36μm,0.3s						
BNI				AML	AML		
	comp=E,36μm,1.0s						
BNI				END			
BNI				END			
ENR	**Entracque**	**0.56**	**120**	P	**Pb**	**13 20 55.5**	**-0.3**
ENR				S	**Sg**	**13 21 02.6**	**+0.5**
ENR	**Entracque**	**0.56**	**120**	P	**Pb**	**13 20 55.4**	**-0.3**
ENR				S	**Sg**	**13 21 02.6**	**+0.5**
ENR				AML	AML		
	comp=E,229μm,0.2s						
ENR				AML	AML		
	comp=N,216μm,0.3s						
ENR				AML	AML		
	comp=E,229μm,0.2s						
ENR				AML	AML		
	comp=N,216μm,0.3s						
ENR				AML	AML		
	comp=N,216μm,0.3s						
ENR				AML	AML		
	comp=E,229μm,0.2s						
ENR				END			
ENR				END			
MVIF	**Mont Vial**	**0.68**	**154**	Pg	**Pg**	**13 20 57.1**	**+0.2**
MVIF	**Mont Vial**	**0.68**	**154**	Pg	**Pg**	**13 20 57.1**	**+0.2**
MVIF				Sg	**Sb**	**13 21 07.3**	**0.0**
ORIF	**Oris-en-Rattie**	**0.74**	**304**	*e*Pg	**Pg**	**13 20 57.6**	**-0.3**
	SNR=1.0						
ORIF				*e*Sg	**Sg**	**13 21 06.3**	**-1.3**
	comp=E,32nm,0.2s						
ORIF	**Oris-en-Rattie**	**0.74**	**304**	Pg	**Pg**	**13 20 57.7**	**-0.3**
ORIF	**Oris-en-Rattie**	**0.74**	**304**	*e*Pg	**Pg**	**13 20 57.6**	**-0.3**
	SNR=1.0						
ORIF				*e*Sg	**Sg**	**13 21 06.3**	**-1.3**
	comp=E,16nm,0.2s						
ORIF	**Oris-en-Rattie**	**0.74**	**304**	P	**Pg**	**13 20 57.5**	**-0.3**
ORIF				S	**Sg**	**13 21 07.7**	**+0.1**
ORIF				AML	AML		
	comp=E,77μm,0.5s						
ORIF				AML	AML		
	comp=N,72μm,0.5s						
ORIF				AML	AML		
	comp=E,77μm,0.5s						
ORIF				AML	AML		
	comp=N,72μm,0.5s						
ORIF				END			
ORIF				END			
RSP	**Reno Superiore**	**0.74**	**30**	P	**Pb**	**13 20 58.8**	**+0.1**
RSP				S	**Sb**	**13 21 09.1**	**+0.1**
RSP	**Reno Superiore**	**0.74**	**30**	P	**Pb**	**13 20 58.8**	**+0.1**
RSP				S	**Sb**	**13 21 09.1**	**+0.1**
RSP				AML	AML		
	comp=E,99μm,0.3s						
RSP				AML	AML		
	comp=N,90μm,0.5s						
RSP				AML	AML		
	comp=E,99μm,0.3s						
RSP				AML	AML		
	comp=N,90μm,0.5s						
RSP				AML	AML		
	comp=E,99μm,0.3s						
RSP				AML	AML		
	comp=N,90μm,0.5s						
RSP				END			
RSP				END			
LUCF	**Luceram**	**0.76**	**145**	Pg	**Pb**	**13 20 59.1**	**+0.1**
LUCF	**Luceram**	**0.76**	**145**	Pg	**Pb**	**13 20 59.1**	**+0.1**
LUCF				Sg	**Sg**	**13 21 09.0**	**+0.8**
CALF	**Calern**	**0.77**	**170**	Pg	**Pb**	**13 20 59.4**	**+0.1**
CALF	**Calern**	**0.77**	**170**	Pg	**Pb**	**13 20 59.4**	**+0.1**
CALF				Sg	**Sb**	**13 21 09.5**	**-0.3**
SAOF	**Saorge**	**0.79**	**132**	P	**Pb**	**13 20 59.5**	**0.0**
SAOF				S	**Sg**	**13 21 09.5**	**+0.4**
SAOF	**Saorge**	**0.79**	**132**	P	**Pb**	**13 20 59.5**	**0.0**
SAOF				S	**Sg**	**13 21 09.5**	**+0.4**
SAOF				AML	AML		
	comp=E,90μm,1.0s						
SAOF				AML	AML		
	comp=N,91μm,1.6s						
SAOF				AML	AML		
	comp=E,90μm,1.0s						
SAOF				AML	AML		
	comp=N,91μm,1.6s						
SAOF				AML	AML		
	comp=N,91μm,1.6s						
SAOF				AML	AML		
	comp=E,90μm,1.0s						
SAOF				END			
SAOF				END			
SBF	**Sospel**	**0.82**	**142**	*e*Pg	**Pb**	**13 21 00.0**	**-0.1**
	SNR=1.0						
SBF				*e*Sg	**Sg**	**13 21 10.6**	**+0.5**
	comp=E,44nm,0.4s,SNR=1.0						
SBF	**Sospel**	**0.82**	**142**	*e*Pg	**Pb**	**13 21 00.0**	**-0.1**
	SNR=1.0						
SBF				*e*Sg	**Sg**	**13 21 10.6**	**+0.5**
	comp=E,22nm,0.4s,SNR=1.0						
GBOS	**Grotte di Boss**	**0.83**	**108**	P	**Pb**	**13 21 00.5**	**+0.2**
GBOS				S	**Sg**	**13 21 11.2**	**+0.6**
FRF	**La Foret Royal**	**0.95**	**184**	*e*Pg	**Pb**	**13 21 02.6**	**+0.3**
	SNR=1.0						
FRF				*e*Sg	**Sg**	**13 21 14.5**	**+0.1**
	comp=E,56nm,0.2s,SNR=1.0						
FRF	**La Foret Royal**	**0.95**	**184**	*e*Pg	**Pb**	**13 21 02.6**	**+0.3**
	SNR=1.0						
FRF				*e*Sg	**Sg**	**13 21 14.5**	**+0.1**
	comp=E,28nm,0.2s,SNR=1.0						
NEGI	**Seborga**	**0.96**	**133**	P	**Pb**	**13 21 02.6**	**+0.2**
NEGI				S	**Sg**	**13 21 14.9**	**+0.3**
NEGI	**Seborga**	**0.96**	**133**	P	**Pb**	**13 21 02.6**	**+0.2**
NEGI				S	**Sg**	**13 21 15.1**	**+0.5**
NEGI				AML	AML		
	comp=E,120μm,0.2s						
NEGI				AML	AML		
	comp=N,134μm,0.9s						
NEGI				AML	AML		
	comp=E,120μm,0.2s						
NEGI				AML	AML		
	comp=N,134μm,0.9s						
LPG	**La Plagne**	**0.99**	**0**	*e*Pg	**Pb**	**13 21 03.3**	**+0.2**
	SNR=1.0						
LPG				*e*Sn	**Sg**	**13 21 16.0**	**+0.4**
	comp=N,7.7nm,0.2s,SNR=1.0						
LPG	**La Plagne**	**0.99**	**0**	*e*Pg	**Pb**	**13 21 03.3**	**+0.2**
	SNR=1.0						
LPG				*e*Sn	**Sg**	**13 21 16.0**	**+0.4**
	comp=N,3.8nm,0.2s,SNR=1.0						
SMRF	**Simiane la Rot**	**0.99**	**238**	*e*Pg	**Pb**	**13 21 03.1**	**+0.1**
	SNR=1.0						
SMRF				*e*Sg	**Sg**	**13 21 15.6**	**-0.1**
	comp=N,13nm,0.3s						
SMRF	**Simiane la Rot**	**0.99**	**238**	*e*Pg	**Pb**	**13 21 03.1**	**+0.1**
	SNR=1.0						
SMRF				*e*Sg	**Sg**	**13 21 15.6**	**-0.1**
	comp=N,6.6nm,0.3s						
LPL	**La Plagne**	**1.00**	**360**	*e*Pg	**Pb**	**13 21 03.9**	**+0.5**
	SNR=1.0						
LPL				*e*Sg	**Sb**	**13 21 16.8**	**+0.1**
	comp=N,16nm,0.3s,SNR=1.0						
LPL	**La Plagne**	**1.00**	**360**	*e*Pg	**Pb**	**13 21 03.9**	**+0.5**
	SNR=1.0						
LPL				*e*Sg	**Sb**	**13 21 16.8**	**+0.1**
	comp=N,7.8nm,0.3s,SNR=1.0						
IMI	**Imperia**	**1.02**	**126**	P	**Pb**	**13 21 03.7**	**+0.2**
IMI				S	**Sg**	**13 21 17.0**	**+0.3**
IMI	**Imperia**	**1.02**	**126**	P	**Pb**	**13 21 03.8**	**+0.2**
IMI				S	**Sg**	**13 21 17.0**	**+0.3**
RORO	**Rocca Rossa**	**1.03**	**112**	P	**Pb**	**13 21 03.9**	**+0.2**
RORO				S	**Sg**	**13 21 17.2**	**+0.2**
RORO	**Rocca Rossa**	**1.03**	**112**	P	**Pb**	**13 21 03.9**	**+0.2**
RORO				S	**Sg**	**13 21 17.2**	**+0.2**
RORO				AML	AML		
	comp=E,82μm,0.1s						
RORO				AML	AML		
	comp=N,96μm,0.2s						
RORO				AML	AML		
	comp=N,96μm,0.2s						
RORO				AML	AML		
	comp=E,82μm,0.1s						
LMR	**La Mourre**	**1.19**	**188**	*e*Pg	**Pg**	**13 21 06.6**	**+0.1**
	SNR=1.0						
LMR				*e*Sn	**Sb**	**13 21 21.8**	**+0.1**
	comp=E,23nm,0.2s,SNR=1.0						
LMR	**La Mourre**	**1.19**	**188**	*e*Pg	**Pg**	**13 21 06.6**	**+0.1**
	SNR=1.0						
LMR				*e*Sn	**Sb**	**13 21 21.8**	**+0.1**
	comp=E,11nm,0.2s,SNR=1.0						
VIVF	**Saint-Julien-l**	**1.52**	**284**	*e*Pn	**Pn**	**13 21 11.0**	**+0.1**
	SNR=1.0						
VIVF				*e*Sn	**Sn**	**13 21 29.9**	**-0.8**
	comp=E,11nm,0.3s,SNR=1.0						
VIVF	**Saint-Julien-l**	**1.52**	**284**	*e*Pn	**Pn**	**13 21 11.0**	**+0.1**
	SNR=1.0						
VIVF				*e*Sn	**Sn**	**13 21 29.9**	**-0.8**
	comp=E,5.7nm,0.3s,SNR=1.0						
LASF	**Ste Croix**	**2.12**	**259**	*e*Pn	**Pn**	**13 21 19.2**	**0.0**
	SNR=1.0						
LASF				*e*Sn	**Sn**	**13 21 42.6**	**-2.9**
	comp=E,2.3nm,0.2s,SNR=1.0						
LASF	**Ste Croix**	**2.12**	**259**	*e*Pn	**Pn**	**13 21 19.2**	**0.0**
	SNR=1.0						
LASF				*e*Sn	**Sn**	**13 21 42.6**	**-2.9**
	comp=E,1.1nm,0.2s,SNR=1.0						
PGF	**Pioggiola**	**2.56**	**139**	*e*Pn	**Pn**	**13 21 25.5**	**+0.2**
PGF				*e*Sn	**Sn**	**13 21 55.5**	**-1.1**
	comp=E,2.2nm,0.2s						
PGF	**Pioggiola**	**2.56**	**139**	*e*Pn	**Pn**	**13 21 25.5**	**+0.2**
PGF				*e*Sn	**Sn**	**13 21 55.5**	**-1.1**
	comp=E,1.1nm,0.2s						
PGF	**Pioggiola**	**2.56**	**139**	S	**Sn**	**13 21 57.0**	**+0.4**

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*CSEM **21** 13:49:16.6,39°.19N×42°.26E,h7km,MD2.4*
*DDA **21** 13:49:16.6,39°.19N×42°.26E,h7km,Md2.4*
*ATA **21** 13:49:16.6±1.2,39°.23N×42°.21E,h17km±4km,ML3.3, MW3.0*
*ISCJB **21** 13:49:17.4±0.6,39°.21N±0°.03×42°.28E±0°.04,h7km±6km, Error ellipse: s-maj=6.3km s-min=4.8km az=138.3*
ISC 21 13:49:17.1±1.0,39°.21N±0°.03×42°.26E±0°.03,h11km±9km, n16,σ0s97/29,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKAR	**Karacoban**	**0.16**	**285**	*e*P	**Pg**	**13 49 20.3**	**-0.6**
EKAR				*i* Pg	Pg	13 49 21.8	+0.9
EKAR				*e*S	**Sg**	**13 49 24.7**	**+1.2**
EKAR				IAML		13 49 27.2	
	comp=Z,348nm,0.3s						
ADCV	**BITLIS_Adilcev**	**0.54**	**138**	*i* P	**Pg**	**13 49 27.1**	**-0.7**
ADCV				*i* S	**Sg**	**13 49 35.1**	**+0.2**
ADCV	**BITLIS_Adilcev**	**0.54**	**138**	P	**Pg**	**13 49 27.0**	**-0.7**
ADCV				S	**Sg**	**13 49 35.1**	**+0.2**
EATA	**Eleskirt**	**0.67**	**15**	*e*P	**Pg**	**13 49 30.0**	**-0.3**
EATA				*e*S	**Sb**	**13 49 41.1**	**+0.6**
EATA				IAML		13 49 43.4	
	comp=Z,36nm,0.3s						
BNGL	**BINGOL**	**0.91**	**254**	*e*P	**Pg**	**13 49 33.8**	**-0.8**
BNGL				*e*S	**Sg**	**13 49 46.9**	**+0.4**
BNGL				IAML		13 49 48.4	
	comp=Z,174nm,0.4s						
BNGL	**BINGOL**	**0.91**	**254**	*i* P	**Pn**	**13 49 37.6**	**+1.6**
BNGL				*i* S	**Sg**	**13 49 47.0**	**+0.6**
ERZM	**Erzurum**	**0.98**	**315**	*e*P	**Pb**	**13 49 34.4**	**-1.9**
ECAT	**Cat-ERZURUM**	**1.07**	**292**	*e*P	**Pb**	**13 49 37.1**	**-0.8**
ECAT				*e*S	**Sg**	**13 49 52.7**	**+1.0**
ECAT	**Cat-ERZURUM**	**1.07**	**292**	*i* P	**Pb**	**13 49 36.8**	**-1.1**
ECAT				*i* S	**Sg**	**13 49 52.8**	**+1.0**
ECAT	**Cat-ERZURUM**	**1.07**	**292**	P	**Pb**	**13 49 36.8**	**-1.1**
ECAT				S	**Sg**	**13 49 52.8**	**+1.0**
GEVA	**Gevas**	**1.09**	**145**	*e*P	**Pb**	**13 49 38.6**	**+0.4**
SRTM	**Siirt_Merkez**	**1.25**	**192**	*i* P	**Pn**	**13 49 39.6**	**-1.1**
SRTM				*i* S	**Sb**	**13 49 57.2**	**+0.2**
SRTM	**Siirt_Merkez**	**1.25**	**192**	P	**Pn**	**13 49 39.6**	**-1.1**
SRTM				S	**Sb**	**13 49 57.2**	**+0.2**
BTMN	**Batman**	**1.53**	**211**	*i* P	**Pn**	**13 49 45.6**	**+1.0**
BTMN				*i* S	**Sg**	**13 50 07.6**	**+1.1**
BTMN	**Batman**	**1.53**	**211**	P	**Pn**	**13 49 45.6**	**+1.0**
BTMN				S	**Sg**	**13 50 07.6**	**+1.1**
IGDI	**IGDIR**	**1.55**	**64**	*e*P	**Pg**	**13 49 46.9**	**0.0**

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*MOS **21** 14:15:40.2±0.9,53°.32N×154°.09E,h497km,mb4.0/2,Error ellipse: s-maj=23.6km s-min=13.9km az=53.5*
*KRSC **21** 14:15:40.6±2.3,53°.11N×154°.60E,h504km±26km,ML4.0*
*IDC **21** 14:15:41.2±1.5,53°.25N×154°.24E,h491km±17km,mb2.8/6, mb1 2.9/8,mb1mx2.6/81,mbtmp3.6/8,Error ellipse: s-maj=46.5km s-min=15.3km az=121.0*
ISC 21 14:15:41.7±1.1,53°.35N±0°.10×154°.3E±0°.1,h471km,n45, σ2s47/56,mb3.1/6,Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APC	**Apacha**	**1.75**	**103**	*e*P	**P**	**14 16 44.8**	**+2.0**
APC				*e*S	**S**	**14 17 36.5**	**+4.0**
APC	**Apacha**	**1.75**	**103**	PN	**P**	**14 16 44.8**	**+2.0**
APC				S	**S**	**14 17 36.5**	**+4.0**
PETK	**Petropavlovsk-**	**2.03**	**95**	P	**P**	**14 16 46.3**	**+2.1**
	1.5nm,0.3s,baz=260,slow=10,SNR=48						
GNL	**Ganaly**	**2.18**	**79**	*e*P	**P**	**14 16 47.6**	**+2.5**
GNL	**Ganaly**	**2.18**	**79**	PN	**P**	**14 16 47.6**	**+2.5**
ASAK	**Asacha**	**2.37**	**113**	*e*P	**P**	**14 16 48.4**	**+2.2**
ASAK	**Asacha**	**2.37**	**113**	PN	**P**	**14 16 48.4**	**+2.2**
KOK	**Koryaka**	**2.58**	**90**	*e*P	**P**	**14 16 49.9**	**+2.4**
KOK	**Koryaka**	**2.58**	**90**	PN	**P**	**14 16 49.9**	**+2.4**
PET	**Petropavlovsk**	**2.62**	**95**	*e*P	**P**	**14 16 49.7**	**+2.1**
PET	**Petropavlovsk**	**2.62**	**95**	PN	**P**	**14 16 49.7**	**+2.1**
AVH	**Avacha**	**2.64**	**90**	*e*P	**P**	**14 16 50.2**	**+2.3**
AVH	**Avacha**	**2.64**	**90**	PN	**P**	**14 16 50.2**	**+2.3**
KRER	**Koryakskii**	**2.65**	**89**	*e*P	**P**	**14 16 50.7**	**+2.6**
KRER	**Koryakskii**	**2.65**	**89**	PN	**P**	**14 16 50.7**	**+2.6**
RUS	**Russkaya**	**2.69**	**108**	*e*P	**P**	**14 16 49.4**	**+1.3**
RUS				*e*S	**S**	**14 17 44.5**	**+2.3**
RUS	**Russkaya**	**2.69**	**108**	PN	**P**	**14 16 49.4**	**+1.3**
RUS				S	**S**	**14 17 44.5**	**+2.3**
UGLR	**Uglovaya**	**2.70**	**91**	*e*P	**P**	**14 16 51.1**	**+2.8**
UGLR	**Uglovaya**	**2.70**	**91**	PN	**P**	**14 16 51.1**	**+2.8**
SDLR	**Sedlovína**	**2.73**	**90**	*e*P	**P**	**14 16 51.8**	**+3.3**
SDLR	**Sedlovina**	**2.73**	**90**	PN	**P**	**14 16 51.8**	**+3.3**
KDTR	**Khodutka, Kamc**	**2.75**	**123**	*e*S	**S**	**14 17 42.7**	**-0.3**
SPN	**Mys Shipunski**	**3.43**	**92**	*e*P	**P**	**14 16 54.3**	**+0.9**
SPN				*e*S	**S**	**14 17 50.9**	**-1.0**
SPN	**Mys Shipunski**	**3.43**	**92**	PN	**P**	**14 16 54.3**	**+0.9**
SPN				S	**S**	**14 17 50.9**	**-1.0**
ESO	**Esso**	**3.62**	**43**	*e*P	**P**	**14 16 57.1**	**+2.3**
ESO	**Esso**	**3.62**	**43**	PN	**P**	**14 16 57.1**	**+2.3**
TUMR	**Tumrok**	**3.91**	**58**	*e*P	**P**	**14 17 01.9**	**+4.5**
TUMR	**Tumrok**	**3.91**	**58**	PN	**P**	**14 17 01.9**	**+4.5**
KZV	**Kizimen**	**3.92**	**61**	*e*P	**P**	**14 17 01.1**	**+3.6**
KZV				*e*S	**S**	**14 18 03.5**	**+4.1**
KZV	**Kizimen**	**3.92**	**61**	PN	**P**	**14 17 01.1**	**+3.6**
KZV				S	**S**	**14 18 03.5**	**+4.1**
TUMD	**Tumrok D**	**4.01**	**60**	*e*P	**P**	**14 17 01.9**	**+3.8**
MKZ	**Mys Kozlova**	**4.53**	**72**	*e*P	**P**	**14 17 04.5**	**+1.9**
MKZ				*e*S	**S**	**14 18 08.3**	**-0.4**
MKZ	**Mys Kozlova**	**4.53**	**72**	PN	**P**	**14 17 04.5**	**+1.9**
MKZ				S	**S**	**14 18 08.3**	**-0.4**
SMKR	**Semkarok**	**5.23**	**49**	*e*P	**P**	**14 17 11.7**	**+2.5**
KBTR	**Krutoberegovo**	**5.68**	**56**	*e*P	**P**	**14 17 14.1**	**+0.7**
KBTR				*e*S	**S**	**14 18 27.3**	**-1.2**
KBTR	**Krutoberegovo**	**5.68**	**56**	PN	**P**	**14 17 14.1**	**+0.7**
KBTR				S	**S**	**14 18 27.3**	**-1.2**
BKI	**Bering**	**7.06**	**70**	*e*S	**S**	**14 18 55.5**	**+1.4**
SEY	**Seymchan**	**9.67**	**355**	P	**P**	**14 17 54.4**	**-0.4**
	0.2nm,0.3s,baz=146,slow=12,SNR=4.8						
KDAK	**Kodiak Island**	**29.68**	**60**	P	**P**	**14 21 06.1**	**-1.5**
	2.5nm,0.9s,baz=300,slow=16,SNR=4.5						
ILAR	**Eielson Array**	**31.09**	**45**	P	**P**	**14 21 19.2**	**-0.5**
	0.3nm,0.6s,baz=278,slow=9.4,SNR=7.7						
INK	**Inuvik**	**35.77**	**37**	P	**P**	**14 21 58.5**	**-0.7**
	0.5nm,0.3s,baz=298,slow=9.1,SNR=5.2						
YKA	**Yellowknife Ar**	**45.27**	**41**	P	**P**	**14 23 14.4**	**-1.0**
	0.4nm,0.6s,baz=303,slow=7.6,SNR=2.6						
WRA	**Warramunga Arr**	**75.01**	**199**	P	P	14 26 30.5	-3.4
	0.2nm,0.6s,baz=16,slow=6.0,SNR=3.6						
ASAR	**Alice Springs**	**78.72**	**199**	P	**P**	**14 26 52.0**	**-2.2**
	0.4nm,0.5s,baz=9.8,slow=5.0,SNR=7.7						
ASAR	**Alice Springs**	**78.72**	**199**	P	**P**	**14 26 52.0**	**-2.2**

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*CSEM **21** 14:17:38.3,38°.76N×43°.36E,h30km,ML2.5*
*ATA **21** 14:17:38.8±1.0,38°.76N×43°.15E,h34km±49km,ML2.7, MW2.8*
ISK 21 14:17:38.3,38°.76N×43°.36E,h30km,ML2.5/5,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.16**	**171**	PG	Pn	14 17 45.7	+0.8
VANB				SG	Sb	14 17 50.9	+2.6
VANB	**Van**	**0.16**	**171**	*e*Pg	Pn	14 17 45.7	+0.8
VANB				*e*Sg	Sb	14 17 50.9	+2.6
ERCV	**ERCIS-VAN**	**0.26**	**357**	PG	Pb	14 17 45.9	+0.4
ERCV				SG	Sn	14 17 51.2	-0.3
ERCV	**ERCIS-VAN**	**0.26**	**357**	*e*Pg	Pb	14 17 45.9	+0.4
ERCV				*e*Sg	Sn	14 17 51.2	-0.3
GEVA	**Gevas**	**0.50**	**208**	*e*P	Pb	14 17 48.9	+0.1
GEVA				*i* Pg	Pn	14 17 49.1	-0.5
GEVA				*e*S	Sn	14 17 57.9	+0.6
GEVA				IAML		14 18 00.7	
	comp=Z,49nm,0.4s						
CLDR	**Caldiran**	**0.58**	**48**	PG	Pn	14 17 50.7	-0.1
CLDR

*IDC **21** 14:25:28.6±1.8, 1°.22N×126°.64E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/54, mbtmp3.5/4, Error ellipse: s-maj=175.9km s-min=21.4km az=66.0*
*ISCJB **21** 14:25:31.4±1.2, 1°.59N±0°.09×127°.1E±0°.2, h35km, mb3.6/4, Error ellipse: s-maj=24.5km s-min=10.4km az=162.1*
*DJA **21** 14:25:35.3±0.6, 1°.N±4°×12°.7E±°, h10km, M3.6/6, MLv3.6/6*
ISC 21 14:25:34.0±1.4, 1°.5N±0°.1×127°.0E±0°.2, h35km, n8, σ1.9 79/9, mb3.7/4, Northern Moluccan Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	Labuha	2.20	166	P	Pn	14 26 10.0	+2.0
LBMI				S	Sn	14 26 34.3	+0.3
SANI	Sanana	3.66	195	P	Pn	14 26 28.5	+0.3
NLAI	Namlea	4.71	178	P	Pn	14 26 43.9	+1.2
LUWI	Luwuk	4.89	239	P	Pn	14 26 46.1	+1.0
WRA	Warramunga Arr	22.51	162	P	P	14 30 27.8	-3.1
	0.4nm,0.3s,baz=339,slow=11,SNR=19						
ASAR	Alice Springs	25.92	165	P	P	14 31 01.5	-1.6
	0.5nm,0.3s,baz=344,slow=12,SNR=8.0						
MKAR	Makanchi Array	59.51	326	P	P	14 35 33.7	-0.1
	0.4nm,0.5s,baz=123,slow=8.0,SNR=4.4						
KURBB	Kurchatov Arra	63.73	328	P	P	14 36 02.9	+0.7
	0.8nm,0.7s,baz=130,slow=6.2,SNR=8.1						

IDC 21 14:29:12.6±418.0, 47°.52N×47°.12E, h0km, Error ellipse: s-maj=158.3km s-min=135.6km az=15.0, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	7.75	64	*i*		15 20 00.0	
	baz=252,slow=379,SNR=2.3						
I43RU	DUBNA INFRASONI	1.03	330	*i*		15 34 50.0	
	baz=141,slow=379,SNR=2.6						
I26DE	FREYUNG INFRAS	22.21	286	*i*		16 45 20.0	
	baz=82,slow=314,SNR=1.2						

IDC 21 14:44:24.2±414.0, 47°.65N×47°.20E, h0km, Error ellipse: s-maj=157.5km s-min=136.1km az=25.0, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	7.64	65	*i*		15 33 11.5	
	baz=253,slow=385,SNR=2.6						
I43RU	DUBNA INFRASONI	0.95	330	*i*		15 48 30.0	
	baz=142,slow=320,SNR=1.0						
I26DE	FREYUNG INFRAS	22.23	286	*i*		17 01 40.0	
	baz=82,slow=321,SNR=1.9						

JMA 21 14:48:53.9±0.3, 32°.29N×138°.16E, h358km, M3.5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO3	Boso 3	3.18	37	P	Pn	14 49 55.5	+0.4
BSO1	Boso 1	3.33	44	P	Pn	14 49 56.9	+0.7
JHU	Hanno	3.67	14	P	Pn	14 50 00.7	+0.7
JHU				*e*S	S	14 50 53.0	-0.4
JWT	Wachi	3.77	323	P	Pn	14 50 00.6	-0.3
JYT	Yasato	4.27	23	S	S	14 51 02.1	-2.3
JHO	Hitachi	4.75	24	S	S	14 51 11.7	-1.8
JFK	Kawauchi	5.53	23	S	S	14 51 26.5	-2.7

IDC 21 14:55:03.2±1.2, 37°.46N×92°.12E, h0km, mb3.8/3, mb1 3.7/7, mb1mx3.3/94, mbtmp3.6/7, ML3.1/4, Error ellipse: s-maj=49.1km s-min=20.5km az=55.0, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	11.83	325	Pn	Pn	14 57 51.5	-1.7
	0.7nm,0.3s,baz=135,slow=13,SNR=18						
MKAR				Sn	Sn	14 59 58.8	-7.2
	0.2nm,0.3s,baz=137,slow=25,SNR=3.7						
MKAR				Lg	Lg	15 01 20.6	
	0.0nm,0.3s,baz=127,slow=31,SNR=2.1						
SONM	Songino Array	14.73	41	Pn	Pn	14 58 33.1	+0.1
	0.2nm,0.3s,baz=217,slow=16,SNR=2.4						
SONM				Lg	Lg	15 02 41.9	
	0.2nm,0.3s,baz=229,slow=28,SNR=3.8						
KURBB	Kurchatov Arra	16.35	328	Pn	Pn	14 58 51.7	-2.3
	0.0nm,0.3s,baz=139,slow=11,SNR=3.0						
ZALV	Zalesovo Beam	17.24	345	Pn	Pn	14 59 04.7	-0.6
	0.1nm,0.3s,baz=170,slow=10,SNR=3.3						
FINES	FINESS Array B	46.65	323	P	P	15 03 31.3	-1.8
	1.8nm,0.8s,baz=98,slow=5.8,SNR=5.0						
ASAR	Alice Springs	72.41	140	P	P	15 06 31.7	+0.4
	0.4nm,0.6s,baz=329,slow=6.5,SNR=7.3						
TORD	Torodi Ar. Bea	82.46	281	P	P	15 07 28.1	+0.2
	0.6nm,1.0s,baz=54,slow=2.5,SNR=2.3						

IDC 21 14:55:43.3±410.0, 47°.15N×48°.01E, h0km, Error ellipse: s-maj=162.7km s-min=133.2km az=28.0, Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	7.38	60	*i*		15 43 19.1	
	baz=247,slow=382,SNR=1.5						
I43RU	DUBNA INFRASONI	1.65	329	*i*		16 04 10.0	
	baz=141,slow=324,SNR=3.1						
I26DE	FREYUNG INFRAS	22.90	287	*i*		17 16 40.0	
	baz=81,slow=324,SNR=0.8						

*ISCJB **21** 15:25:40.3±0.7, 20°.0S±0°.2×178°.4W±0°.1, h500km, mb3.8/13, Error ellipse: s-maj=27.6km s-min=9.4km az=149.0*
*IDC **21** 15:25:42.0±2.2, 19°.99S×178°.34W, h515km±24km, mb3.4/13, mb1 3.7/14, mb1mx3.3/54, mbtmp4.3/14, Error ellipse: s-maj=27.3km s-min=13.1km az=152.0*
ISC 21 15:25:41.2±0.8, 19°.9S±0°.2×178°.4W±0°.1, h500km, n20, σ1.9 24/22, mb3.9/13, 2D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	8.69	47	P	P	15 27 45.5	+0.5
	1.9nm,0.3s,baz=22,slow=16,SNR=3.8						
AFI				S	S	15 29 26.0	-0.6
	1.6nm,0.3s,baz=53,slow=20,SNR=3.1						
CTA	Charters Tower	33.21	264	P	P	15 31 36.9	+0.6
	9.1nm,0.4s,baz=89,slow=10,SNR=36						
STKA	Stephens Creek	37.73	243	P	P	15 32 13.2	-0.5
	3.2nm,0.5s,baz=100,slow=9.7,SNR=6.9						
ASAR	Alice Springs	44.32	256	P	P	15 33 05.8	-0.6
	16nm,0.7s,baz=96,slow=7.6,SNR=198						
ASAR				PcP	pP	15 34 38.2	-0.9
	2.0nm,0.5s,baz=106,slow=3.5,SNR=9.3						
WRA	Warramunga Arr	44.34	262	P	P	15 33 05.8	-0.9
	6.8nm,0.6s,baz=97,slow=7.9,SNR=182						
MJAR	Matsushiro Arr	69.55	324	P	P	15 35 59.8	+0.4
	1.0nm,0.5s,baz=150,slow=5.3,SNR=3.2						
PETK	Petropavlovsk-	75.64	345	P	P	15 36 34.8	+0.6
	1.8nm,0.7s,baz=125,slow=8.9,SNR=3.8						
NVAR	Mina Array Bea	80.85	44	P	P	15 37 02.8	-0.1
	0.8nm,0.8s,baz=218,slow=7.9,SNR=4.2						
SEY	Seymchan	85.75	347	P	P	15 37 26.9	+0.4
	2.4nm,0.7s,baz=171,slow=13,SNR=7.7						
TXAR	Lajitas Array	87.04	57	P	P	15 37 33.4	-0.2
	0.5nm,0.9s,baz=204,slow=6.5,SNR=3.5						
ILAR	Eielson Array	87.84	13	P	P	15 37 35.2	-1.2
	0.6nm,0.5s,baz=217,slow=5.3,SNR=6.0						
PDAR	Pinedale Array	88.78	43	P	P	15 37 39.9	-1.7
	0.4nm,0.7s,baz=215,slow=1.8,SNR=4.3						
CMAR	Chiang Mai Arr	89.60	290	P	P	15 37 46.3	+0.7
	1.2nm,0.6s,baz=118,slow=2.9,SNR=7.0						
PLCA	Paso Flores	89.91	134	P	P	15 37 47.4	+0.6
	1.2nm,0.8s,baz=255,slow=16,SNR=2.4						
BVAR	Borovoye Array	118.42	320	PKP	PKPdf	15 43 29.2	-2.1
	1.0nm,0.4s,baz=111,slow=3.6,SNR=3.8						
AKASG	Malin Array Be	142.35	331	PKhKP	PKPpre	15 44 11.4	
	4.3nm,0.5s,baz=43,slow=4.4,SNR=10						
BRTR	Keskin Array B	146.20	313	PKPbc	PKPdf	15 44 23.7	+0.1
	2.1nm,0.6s,baz=131,slow=4.9,SNR=13						
MMAI	Mount Meron Ar	147.23	300	PKPbc	PKPdf	15 44 27.9	+2.5
	4.3nm,0.5s,baz=77,slow=6.0,SNR=14						
CLL	Colln	147.43	347	⇓*i*PKPbc	PKPdf	15 44 27.2	+2.2
	comp=Z,9.0nm,0.9s						
CLL				⇓*i*PKPab	PKiKP	15 44 31.6	+1.6
GERES	GERESS Array B	149.56	344	PKPbc	PKPbc	15 44 32.5	-1.4
	comp=Z,1.3nm,0.8s,baz=49,slow=2.6,SNR=9.7						

*IDC **21** 15:30:56.1±0.8, 3°.94S×136°.50E, h0km, mb4.2/7, mb1 4.5/12, mb1mx4.0/57, mbtmp4.4/12, ML4.3/3, MS3.4/11, Ms1 3.4/11, ms1mx3.0/50, Error ellipse: s-maj=25.7km s-min=16.2km az=53.0*
*ISCJB **21** 15:30:57.7±0.3, 4°.12S±0°.03×136°.46E±0°.04, h27km, mb4.5/16, Error ellipse: s-maj=6.1km s-min=4.0km az=165.8*
*NEIC **21** 15:30:57.5±2.1, 3°.97S×136°.50E, h8km±14km, mb4.7/17, Error ellipse: s-maj=6.2km s-min=4.7km az=214.0*
*DJA **21** 15:30:59.9±0.4, 3°.S±6°×13°.7E±°, h197km±7km, M4.5/6, mB4.2/1, mb4.2/6, MLv4.7/6, Mw(mB)3.2/1*
ISC 21 15:30:59.5±0.5, 4°.18S±0°.05×136°.49E±0°.06, h27km, n66, σ2.9 55/66, mb4.6/16, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRPI	Serui, Papua	2.31	354	P	Pn	15 31 33.3	-2.5
SRPI				S	Sn	15 32 02.1	-1.2
KMPI	Kaimana, Papua	2.83	280	P	Pb	15 31 53.0	+3.6
BAKI	Biak	2.99	353	P	Pn	15 31 43.3	-1.9
RKPI	Ransiki, Papua	3.52	319	P	Pn	15 31 52.6	+0.1
GENI	Geneyem	3.99	67	P	Pn	15 31 52.9	-6.1
FAKI	Fak Fak	4.42	286	P	Pn	15 32 05.7	+0.8
FAKI	Fak Fak	4.42	286	*e*Pn	Pn	15 32 04.9	0.0
JAY	Jayapura	4.52	69	Pn	Pn	15 32 04.8	-1.4
	0.4nm,0.3s,baz=155,slow=14,SNR=2.9						
JAY				LR	LR	15 34 19.9	
	comp=Z,452nm,19.2s,baz=139,slow=46						
JAY	Jayapura	4.52	69	P	Pn	15 32 01.6	-4.6
SIJI	Sorong	6.17	302	Pn	Pn	15 32 27.7	-1.3
	4.5nm,0.3s,baz=92,slow=8.9,SNR=20						
SIJI				Sn	Sn	15 33 36.1	-2.7
	2.6nm,0.3s,baz=61,slow=19,SNR=4.1						
SIJI				LR	LR	15 35 15.7	
	comp=Z,532nm,18.7s,baz=32,slow=43						
SAUI	Saumlaki	6.40	234	*e*Pn	Pn	15 32 33.6	+1.5
MTN	Manton Dam	10.11	211	*e*Pn	Pn	15 33 26.0	+3.0
MTN				*e*Sn	Sn	15 35 14.1	-1.5
TNTI	Ternate	10.36	298	*e*Pn	Pn	15 33 25.6	-0.9
SANI	Sanana	10.70	281	P	Pn	15 33 29.9	-1.3
	28nm,0.8s						
MANU	Manus Island	11.06	79	*e*Pn	Pn	15 33 36.3	+0.2
COEN	Coen	11.74	146	*e*Pn	Pn	15 33 46.5	+1.1
PMG	Port Moresby	11.79	117	Pn	Pn	15 33 47.3	+1.2
	0.3nm,0.3s,baz=127,slow=20,SNR=1.6						
PMG				LR	LR	15 39 29.9	
	comp=Z,169nm,20.6s,baz=334,slow=43						
SOEI	Soe	13.34	245	P	Pn	15 34 10.0	+2.7
	57nm,0.9s						
SOEI	Soe	13.34	245	*e*Pn	Pn	15 34 07.4	0.0
LUWI	Luwuk	14.06	282	*e*Pn	Pn	15 34 16.6	-0.4
BATI	Baumata	14.06	244	Pn	Pn	15 34 19.5	+2.3
	3.8nm,0.3s,baz=74,slow=5.1,SNR=5.0						
BATI	Baumata	14.06	244	P	Pn	15 34 19.8	+2.6
DAV	Davao City (W)	15.61	316	*e*Pn	Pn	15 34 34.9	-3.0
	173nm,0.4s						
WRAB	Tennant Creek	15.80	187	*e*Pn	Pn	15 34 39.7	-0.6
	19nm,0.7s						
WRAB				*e*Sn	Sn	15 37 29.6	-5.1
WB2	Warramunga Arr	15.81	187	*e*Pn	Pn	15 34 37.7	-2.7
WB2				*e*Sn	Sn	15 37 25.9	-9.0
WR1	Warramunga Arr	15.81	187	*e*Pn	Pn	15 34 38.2	-2.2
	22nm,0.7s						
WR1				*e*Sn	Sn	15 37 26.8	-8.2
WRA	Warramunga Arr	15.81	187	Pn	Pn	15 34 38.2	-2.3
	0.7nm,0.3s,baz=16,slow=13,SNR=19						
WRA				Sn	Sn	15 37 26.8	-8.2
	0.3nm,0.3s,baz=11,slow=22,SNR=5.9						
CTA	Charters Tower	18.45	150	P	Pn	15 35 15.7	+2.2
	0.7nm,0.3s,baz=326,slow=12,SNR=16						
CTAO	Charters Tower	18.45	150	*e*P	Pn	15 35 18.6	+5.1
	19nm,0.8s						
AS01	Alice Springs	19.53	187	*e*P	Pn	15 35 27.9	+1.4
AS31	Alice Springs	19.53	187	*e*P	Pn	15 35 28.1	+1.6
	15nm,0.9s						
AS31				*e*S	S	15 38 58.9	-5.6
ASAR	Alice Springs	19.54	187	P	Pn	15 35 28.4	+1.8
	1.1nm,0.3s,baz=9.6,slow=11,SNR=40						
ASAR				S	S	15 39 01.0	-3.5
	0.3nm,0.3s,baz=6.1,slow=13,SNR=5.1						
ASAR				LR	LR	15 43 43.1	
	comp=Z,159nm,19.2s,baz=14,slow=39						
MYLDM	Lahad Datu	20.23	297	*e*P	Pn	15 35 36.9	+2.0
	32nm,1.3s						
STKA	Stephens Creek	27.97	171	P	P	15 36 50.0	+2.1
	3.1nm,0.9s,baz=333,slow=6.8,SNR=2.3						
STKA				LR	LR	15 48 43.0	
	comp=Z,61nm,19.3s,baz=18,slow=38						
STKA	Stephens Creek	27.97	171	*e*P	P	15 36 50.4	+2.4
	2.5nm,1.0s						
BBOO	Buckleboo	28.49	181	*e*P	P	15 36 53.9	+1.2
	143nm,1.9s						
JOW	Kunigami	31.84	346	LR	LR	15 49 09.7	
	comp=Z,48nm,19.4s,baz=247,slow=35						
DZM	Mont Dzumac	34.04	124	LR	LR	15 51 15.9	
	comp=Z,143nm,18.0s,baz=250,slow=36						
JNU	Nakatsue	37.48	352	LR	LR	15 51 04.7	
	comp=Z,20nm,20.8s,baz=124,slow=32						
KSRS	Korea Array	42.18	350	LR	LR	15 55 02.4	
	comp=Z,18nm,18.8s,baz=156,slow=34						
CM01	Chiang Mai Arr	43.27	302	*e*P	P	15 38 58.3	-0.8
CMAR	Chiang Mai Arr	43.30	302	P	P	15 38 58.6	-0.8
	1.0nm,0.7s,baz=119,slow=7.3,SNR=3.6						
CHTO	Chiang Mai	43.46	303	*e*P	P	15 39 02.5	+1.7
	22nm,1.9s						
RPZ	Rata Peaks	49.80	147	LR	LR	15 59 14.5	
	comp=Z,82nm,18.3s,baz=264,slow=34						
OXZ	Oxford	50.08	146	*e*P	P	15 39 53.7	+1.5
	34nm,1.7s						
BKZ	Black Stump Fm	50.25	139	*e*P	P	15 39 57.0	+3.4
	60nm,1.7s						
KHZ	Kahutara	50.35	145	*e*P	P	15 39 56.8	+2.6
	72nm,1.7s						
SONM	Songino Array	58.14	337	LR	LR	16 04 59.0	
	comp=Z,36nm,21.1s,baz=90,slow=35						
PETK	Petropavlovsk-	59.81	15	*e*P	P	15 41 02.3	0.0
MK01	Makanchi Array	69.60	324	*e*P	P	15 42 06.0	-0.4
MK31	Makanchi Array	69.62	324	*e*P	P	15 42 06.1	-0.4
MK32	Makanchi Array	69.62	324	*e*P	P	15 42 06.3	-0.2
MKAR	Makanchi Array	69.62	324	P	P	15 42 06.3	-0.2
	1.1nm,0.6s,baz=112,slow=8.4,SNR=9.5						
MKAR	Makanchi Array	69.62	324	*e*P	P	15 42 06.7	+0.2
	9.7nm,0.7s						
MAKZ	Makanchi	69.81	323	*e*P	P	15 42 07.3	-0.4
	2.2nm,0.6s						
ZALV	Zalesovo Beam	72.11	331	P	P	15 42 21.2	-0.2
	0.3nm,0.3s,baz=134,slow=4.2,SNR=3.2						
ZAA1	Zalesovo Array	72.11	331	*e*P	P	15 42 21.2	-0.2
KURK	Kurchatov	73.66	326	*e*P	P	15 42 29.7	-1.0
KURBB	Kurchatov Arra	73.67	326	P	P	15 42 29.7	-1.0
	0.4nm,0.2s,baz=126,slow=4.7,SNR=2.8						
BVAR	Borovoye Array	79.26	326	P	P	15 43 02.8	+0.4
	3.1nm,1.0s,baz=134,slow=8.4,SNR=5.1						
RND	Reindeer	86.89	26	*e*P	P	15 43 40.1	-1.6
	25nm,2.0s						
WRH	Wood River Hil	87.50	25	*e*P	P	15 43 44.5	-0.1
	6.3nm,1.2s						
CCB	Clear Creek Bu	87.67	25	*e*P	P	15 43 47.1	+1.8
	5.2nm,1.2s						
IL1	Eielson Array	88.08	25	*e*P	P	15 43 47.2	-0.2
ILAR	Eielson Array	88.08	25	P	P	15 43 47.2	-0.2
	1.3nm,0.8s,baz=265,slow=4.6,SNR=11						
ILB	Eielson Array	88.08	25	*e*P	P	15 43 45.9	-1.4

IDC 21 15:32:19.4±430.0, 47°.46N×47°.72E, h0km, Error ellipse: s-maj=182.9km s-min=143.3km az=178.0, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	7.41	63	*i*		16 18 55.0	
	baz=250,slow=307,SNR=5.1						
I43RU	DUBNA INFRASONI	1.29	329	*i*		16 38 30.0	
	baz=142,slow=324,SNR=2.7						
I26DE	FREYUNG INFRAS	22.62	286	*i*		17 52 16.1	
	baz=82,slow=352,SNR=1.3						

*ISK **21** 15:34:23.6, 38°.24N×28°.79E, h10km, ML2.3/4*
*ISCJB **21** 15:34:25.8±0.9, 38°.37N±0°.05×28°.58E±0°.07, h14km±4km, Error ellipse: s-maj=11.1km s-min=5.5km az=41.2*
*CSEM **21** 15:34:25.7±0.4, 38°.41N×28°.56E, h10km, ML2.6, Error ellipse: s-maj=9.6km s-min=5.8km az=132.0*
*DDA **21** 15:34:26.9, 38°.47N×28°.49E, h7km, Ml2.6*
ISC 21 15:34:26.3±0.9, 38°.43N±0°.04×28°.50E±0°.04, h13km±6km, n16, σ0.9 97/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANT	Manisa	0.08	34	*i* P	Pg	15 34 28.7	-0.6
MANT				*i* S	Sg	15 34 30.7	-0.7
MANT	Manisa	0.08	34	P	Pg	15 34 28.7	-0.6
MANT				S	Sg	15 34 30.7	-0.7
KULA	Kula-Manisa	0.15	55	PG	Pg	15 34 29.9	-0.1
KULA				SG	Sg	15 34 34.6	+1.9
KULA	Kula-Manisa	0.15	55	*e*Pg	Pg	15 34 29.9	-0.1
KULA				*e*Sg	Sg	15 34 34.6	+1.9
DEMI	Demirci	0.64	15	*i* P	Pg	15 34 38.2	-0.6
DEMI				*i* S	Sg	15 34 47.4	+0.2
DEMI	Demirci	0.64	15	P	Pg	15 34 38.2	-0.6
DEMI				S	Sg	15 34 47.4	+0.2
AYDB	Zeytinkoy-Aydi	0.68	225	PG	Pg	15 34 38.8	-0.7
AYDB				SG	Sb	15 34 49.8	+0.3
AYDB	Zeytinkoy-Aydi	0.68	225	*e*Pg	Pg	15 34 38.8	-0.7
AYDB				*e*Sg	Sb	15 34 49.8	+0.3
AKHS	Akhisar	0.70	310	*i* P	Pg	15 34 38.8	-1.2
AKHS				*i* S	Sg	15 34 50.5	+1.3
AKHS	Akhisar	0.70	310	P	Pg	15 34 38.8	-1.2
AKHS				S	Sg	15 34 50.5	+1.3
STEP	BALIKESIR_Sava	1.13	327	*i* P	Pb	15 34 47.9	+0.2
STEP				*i* S	Sn	15 35 04.8	+1.5
STEP	BALIKESIR_Sava	1.13	327	P	Pb	15 34 47.9	+0.2
STEP				S	Sn	15 35 04.8	+1.5
TVSB	Tavsanli	1.27	36	PN	Pn	15 34 48.7	-1.1
TVSB				SN	Sn	15 35 06.9	+0.1
TVSB	Tavsanli	1.27	36	*e*Pn	Pn	15 34 48.7	-1.1
TVSB				*e*Sn	Sn	15 35 06.9	+0.1
URLA	Izmir	1.50	268	PN	Pb	15 34 54.5	+0.5
URLA	Izmir	1.50	268	*e*Pn	Pb	15 34 54.5	+0.5

*ISK **21** 15:48:07.8, 39°.16N×42°.25E, h5km, ML2.4/3*
*ISCJB **21** 15:48:09.0±0.6, 39°.15N±0°.03×42°.26E±0°.04, h15km±6km, Error ellipse: s-maj=5.8km s-min=4.9km az=163.2*
*CSEM **21** 15:48:08.8±0.2, 39°.17N×42°.24E, h10km, ML2.9, Error ellipse: s-maj=4.7km s-min=3.1km az=139.0*
*ATA **21** 15:48:08.5±0.6, 39°.19N×42°.28E, h14km±7km, ML2.9, MW2.7*
*DDA **21** 15:48:09.5, 39°.19N×42°.25E, h7km, Ml2.9*
ISC 21 15:48:09.0±1.0, 39°.17N±0°.03×42°.25E±0°.03, h16km±8km, n18, σ0.9 49/31, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKAR	Karacoban	0.17	302	*e*P	Pg	15 48 13.0	-0.6
EKAR				*e*S	Sg	15 48 17.4	+0.8
EKAR				IAML		15 48 22.7	
	comp=Z,164nm,0.5s						
EKAR	Karacoban	0.17	302	*i* P	Pg	15 48 13.1	-0.5
EKAR	Karacoban	0.17	302	P	Pg	15 48 13.1	-0.5
TUTA	Tutak	0.50	61	*e*P	Pg	15 48 18.5	-0.5
TUTA				*e*S	Sb	15 48 26.1	-0.5
TUTA				IAML		15 48 27.8	
	comp=Z,149nm,0.2s						
TUTA	Tutak	0.50	61	*i* P	Pg	15 48 18.7	-0.3
TUTA				*i* S	Sb	15 48 26.6	0.0
TUTA	Tutak	0.50	61	P	Pg	15 48 18.7	-0.3
TUTA				S	Sb	15 48 26.6	0.0
ADCV	BITLIS_Adilcev	0.51	134	*i* S	Sg	15 48 26.6	+0.4
ADCV	BITLIS_Adilcev	0.51	134	S	Sg	15 48 26.6	+0.4
VRTB	Varto-Mus	0.62	270	PG	Pg	15 48 20.8	-0.5
VRTB				SG	Sb	15 48 30.3	+0.3
VRTB	Varto-Mus	0.62	270	*e*Pg	Pg	15 48 20.8	-0.5
VRTB				*e*Sg	Sb	15 48 30.3	+0.3
GURO	Guroymak-BITLI	0.64	196	PG	Pg	15 48 21.0	-0.6
GURO				SG	Sg	15 48 30.8	+0.7
GURO	Guroymak-BITLI	0.64	196	*e*Pg	Pg	15 48 21.0	-0.6
GURO				*e*Sg	Sg	15 48 30.8	+0.7
AGRB	Hanur-Agry	0.70	54	PG	Pg	15 48 22.4	-0.5
AGRB				SG	Sb	15 48 33.1	+0.5
AGRB	Hanur-Agry	0.70	54	*e*Pg	Pg	15 48 22.4	-0.5
AGRB				*e*Sg	Sb	15 48 33.1	+0.5
EATA	Eleskirt	0.72	15	*e*P	Pg	15 48 22.7	-0.5
EATA				*e*S	Sb	15 48 33.4	+0.3
EATA				IAML		15 48 36.0	
	comp=Z,14nm,0.4s						
EATA	Eleskirt	0.72	15	*i* P	Pb	15 48 23.3	-0.1
EATA				*i* S	Sb	15 48 33.4	+0.3
EATA	Eleskirt	0.72	15	P	Pb	15 48 23.3	-0.1
EATA				S	Sb	15 48 33.4	+0.3
HOMI	Horasan	0.92	343	*e*P	Pb	15 48 26.4	-0.3

*KRNET **21** 15:48:50.6±0.1, 43°.22N×77°.13E, h21km, mb2.5*
*ISCJB **21** 15:48:51.3±0.5, 43°.24N±0°.03×77°.09E±0°.04, h11km±4km, Error ellipse: s-maj=5.1km s-min=4.0km az=31.6*
*SOME **21** 15:48:51.3, 43°.23N×77°.12E, h10km*
ISC 21 15:48:50.7±0.9, 43°.23N±0°.03×77°.11E±0°.03, h14km±5km, n18, σ0.9 30/36, 6C, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOTS	Kotyrbulak	0.01	2	*e*P	Pg	15 48 53.7	+0.2
	43nm,0.1s						
KOTS				*e*S	Sg	15 48 55.3	-0.1
	63nm,0.1s						
MDOK	Medeo	0.08	217	*e*P	Pg	15 48 53.9	+0.1
	baz=28						
MDOK				*e*S	Sg	15 48 55.8	-0.1
	baz=28						
MDOK	Medeo	0.08	217	*e*P	Pg	15 48 53.9	+0.1
	24nm,0.1s						
MDOK				*e*S	Sg	15 48 55.9	-0.1
	59nm,0.2s						
TNSS	Tian-Shan	0.22	213	*e*P	Pg	15 48 56.2	+0.3
	baz=17						
TNSS				*e*S	Sg	15 48 59.9	+0.

TKM2	**Tokmak 2**	**1.15**	**255**	⇑*iP*	**Pn**	**15 49 12.4**	**-0.1**
	baz=56						
TKM2				⇑*iS*	**Sb**	**15 49 27.7**	**+0.4**
	baz=56						
TARG	**Taragay, Kyrgy**	**1.58**	**161**	⇑*iP*	**Pb**	**15 49 19.5**	**-0.4**
	baz=61						
TARG				⇑*iS*	**Sb**	**15 49 39.5**	**-0.4**
	baz=61						
PDGK	**Podgornoye**	**1.74**	**86**	⇑*iP*	**Pb**	**15 49 22.1**	**-0.4**
	baz=86						
PDGK				⇑*iS*	**Sb**	**15 49 44.8**	**+0.6**
	baz=86						

NNC 21 15:50:16.1±2.4, 38°.14N×71°.76E, h0km, mb3.9, mpv3.1, 4C-2D, Error ellipse: s-maj=18.6km s-min=13.1km az=178.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**2.31**	**35**	⇓Pn	Pn	15 50 55.3	-0.4
	0.5nm,0.2s						
SFK				⇑Sn	Sn	15 51 26.4	+1.4
	14nm,0.3s						
MNAS	**Manas**	**4.38**	**7**	⇑Pn	Pn	15 51 24.1	+0.1
	1.6nm,0.3s						
MNAS				⇑Sn	Sn	15 52 16.8	+0.9
	2.5nm,0.4s						
KK31	**Karatay Array**	**5.05**	**350**	⇓Pn	Pn	15 51 33.8	+0.7
	2.3nm,0.2s,baz=166,slow=12,SNR=50						
KK31				⇑Sn	Sn	15 52 32.9	+0.8
	2.6nm,0.6s,baz=166,slow=22,SNR=11						

DJA 21 16:17:26.6±1.7, 4°S±5°×14°1E±°, h31km±20km, M4.3/3, mB4.6/1, mb4.1/2, MLv4.4/3, Mw(mB)3.8/1, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**1.07**	**3**	P	Pn	16 17 45.5	0.0
JAY				S	Sn	16 17 59.6	+0.2
GENI	**Genyem**	**1.10**	**335**	P	Pn	16 17 45.7	-0.2
GENI				S	Sb	16 18 00.9	-0.1
WAMI	**Wamena**	**1.95**	**261**	P	Pn	16 17 55.3	-2.2
WAMI				S	Sn	16 18 16.4	-4.5

IDC 21 16:19:40.6±3.6, 16°.25S×176°.45W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.6/46, mbtmp4.0/3, Error ellipse: s-maj=176.6km s-min=76.0km az=154.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.07**	**240**	P	P	16 27 26.6	+0.3
	1.8nm,0.6s,baz=76,slow=9.5,SNR=3.8						
WRA	**Warramunga Arr**	**46.80**	**258**	P	P	16 28 12.0	-0.4
	0.6nm,0.8s,baz=94,slow=7.8,SNR=4.6						
WRA				PcP	PcP	16 29 45.5	-0.3
	0.4nm,0.8s,baz=102,slow=3.0,SNR=2.4						
ASAR	**Alice Springs**	**47.06**	**253**	P	P	16 28 14.4	-0.1
	4.6nm,0.7s,baz=88,slow=8.0,SNR=36						
ASAR				PcP	PcP	16 29 46.2	-0.5
	0.2nm,0.4s,baz=109,slow=3.8,SNR=4.1						

*ISCJB **21** 16:22:45.2±0.3, 20°.45S±0°.02×69°.05W±0°.04, h99km±2km, mb4.5/65, Error ellipse: s-maj=6.5km s-min=3.8km az=172.6*
*GUC **21** 16:22:46.8±0.5, 20°.47S×69°.29W, h95km±2km, ML4.6*
*NEIC **21** 16:22:46.0±0.0, 20°.47S×69°.06W, h95km, mb4.6/57, ML4.6(GUC), After GUC.*
NEIC Felt [V] at Pica, [IV] at Quillagua and [III] at Alto Hospicio, Huara, Iquique and Pozo Almonte.
*IDC **21** 16:22:47.7±0.6, 20°.40S×69°.01W, h99km±4km, mb4.0/12, mb1 4.2/14, mb1mx4.0/44, mbtmp4.3/14, MS3.4/4, Ms1 3.4/4, ms1mx2.9/40, Error ellipse: s-maj=15.4km s-min=13.9km az=42.0*

ISC 21 16:22:47.0±0.4, 20°.51S±0°.03×69°.16W±0°.06, h97km±3km, h97km:pP-P, n280, σ1°11/326, mb4.5/65, 5C-6D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**0.37**	**1**	⇓*iP*	**Pn**	**16 23 02.1**	**+0.1**
PB08				*i* S	**Sn**	**16 23 13.6**	**+0.4**
PB08				IAML		16 23 13.8	
	comp=E,37μm,0.9s						
PB01	**IPOC Station P**	**0.61**	**210**	*e*Pn	**Pn**	**16 23 02.8**	**-0.7**
PB01				*e*Sn	**Sn**	**16 23 15.7**	**-0.1**
PB01	**IPOC Station P**	**0.61**	**210**	⇓*iP*	**Pn**	**16 23 03.4**	**-0.1**
PB01				*i* S	**Sn**	**16 23 15.7**	**-0.1**
PB01				IAML		16 23 17.0	
	comp=N,62μm,0.2s						
PB02	**IPOC Station P**	**1.06**	**220**	⇑*iP*	**Pn**	**16 23 07.7**	**-0.2**
PB02				*i* S	**Sn**	**16 23 23.1**	**-0.6**
PB02				IAML		16 23 24.1	
	comp=N,31μm,0.7s						
PSGC	**Pisagua**	**1.28**	**315**	⇑*iP*	**Pn**	**16 23 09.6**	**-0.9**
PSGC				*i* S	**Sn**	**16 23 26.5**	**-1.8**
PSGC				IAML		16 23 29.0	
	comp=N,16μm,0.6s						
PB09	**IPOC Station P**	**1.28**	**183**	⇓*iP*	**Pn**	**16 23 11.3**	**+0.6**
PB09				*i* S	**Sn**	**16 23 29.9**	**+1.5**
PB09				IAML		16 23 30.8	
	comp=N,14μm,0.3s						
PB07	**IPOC Station P**	**1.39**	**209**	⇓*iP*	**Pn**	**16 23 11.5**	**-0.4**
PB07				*i* S	**Sn**	**16 23 30.3**	**-0.4**
PB07				IAML		16 23 30.9	
	comp=N,8μm,0.2s						
MNMC	**Minye Minye**	**1.43**	**343**	*e*Pn	**Pn**	**16 23 12.8**	**+0.3**
MNMC				*e*Sn	**Sn**	**16 23 31.8**	**0.0**
MNMC	**Minye Minye**	**1.43**	**343**	⇑*iP*	**Pn**	**16 23 12.8**	**+0.3**
MNMC				*i* S	**Sn**	**16 23 32.1**	**+0.3**
PB04	**IPOC Station P**	**2.04**	**207**	*e*Pn	**Pn**	**16 23 19.7**	**-0.4**
PB04				*e*Sn	**Sn**	**16 23 41.2**	**-4.1**
PB04	**IPOC Station P**	**2.04**	**207**	⇓*iP*	**Pn**	**16 23 19.2**	**-0.9**
PB04				IAML		16 23 58.9	
	comp=N,4μm,0.8s						
PB12	**IPOC Station P**	**2.18**	**330**	⇑*iP*	**Pn**	**16 23 20.9**	**-1.0**
PB12				IAML		16 23 55.4	
	comp=E,7μm,0.3s						
PB16	**IPOC Station P**	**2.19**	**351**	IAML		16 23 56.9	
	comp=N,4μm,0.7s						
PB06	**IPOC Station P**	**2.22**	**190**	⇓*iP*	**Pn**	**16 23 22.1**	**-0.4**
PB06				*i* S	**Sn**	**16 23 48.6**	**-0.9**
PB06				IAML		16 23 55.8	
	comp=E,3μm,0.2s						
ARCH	**Arica**	**2.27**	**332**	*e*P	**Pn**	**16 23 22.4**	**-0.6**
ARCH				*i* S	**Sn**	**16 23 49.4**	**-1.3**
LPAZ	**La Paz**	**4.31**	**13**	P	**Pn**	**16 23 53.5**	**+2.6**
	comp=E,5.2nm,0.3s,baz=181,slow=8.6,SNR=61						
LPAZ				LR	LR	16 25 59.7	
	comp=E,406nm,18.7s,baz=209,slow=46						
LPAZ	**La Paz**	**4.31**	**13**	*e*Pn	**Pn**	**16 23 53.1**	**+2.1**
GO02	**Mina Guanaco**	**4.65**	**185**	*e*Pn	**Pn**	**16 23 54.5**	**-0.7**
GO02				*e*Sn	**Sn**	**16 24 44.9**	**-3.3**
GO03	**Copiap**	**7.12**	**188**	*e*Pn	**Pn**	**16 24 25.1**	**-3.5**
GO03				*e*Sn	**Sn**	**16 25 42.5**	**-5.5**
LCO	**Las Campanas**	**8.58**	**189**	*e*Pn	Pn	16 24 43.7	-5.0
LCO				*e*Sn	Sn	16 26 13.8	-10
SIV	**San Ignacio**	**8.90**	**61**	P	**Pn**	**16 24 50.7**	**-2.2**
	comp=E,6.9nm,0.3s,baz=259,slow=11,SNR=86						
SIV				S	**Sn**	**16 26 28.1**	**-3.4**
	baz=307,slow=20,SNR=3.9						
GO04	**Tololo Observa**	**9.74**	**188**	*e*Pn	Pn	16 24 59.8	-4.5
GO04				*e*Sn	Sn	16 26 43.0	-9.0
NNA	**Nana**	**11.23**	**318**	P	**Pn**	**16 25 23.0**	**-1.6**
	comp=E,1.3nm,0.3s,baz=138,slow=15,SNR=2.6						
CPUP	**Villa Florida**	**12.31**	**120**	P	**Pn**	**16 25 37.1**	**-1.8**
	comp=E,0.8nm,0.3s,baz=305,slow=12,SNR=10						
CPUP				LR	LR	16 31 39.6	
	comp=E,108nm,21.9s,baz=269,slow=44						
CPUP	**Villa Florida**	**12.31**	**120**	*e*Pn	**Pn**	**16 25 37.4**	**-1.5**
ROC1	**El Roble**	**12.53**	**187**	*e*Pn	**Pn**	**16 25 42.7**	**+0.7**
PEL	**Peldehue**	**12.66**	**186**	*e*Pn	**Pn**	**16 25 41.8**	**-1.8**
SAML	**Samuel**	**12.86**	**28**	*e*Pn	**Pn**	**16 25 45.7**	**-0.6**
GO05	**HualaæØ**	**14.65**	**189**	*e*Pn	**Pn**	**16 26 08.7**	**-0.8**
TRQA	**Tornquist**	**18.56**	**162**	*e*P	**P**	**16 26 55.5**	**-0.8**
	comp=E,22nm,0.9s						
PLCA	**Paso Flores**	**20.20**	**183**	P	**P**	**16 27 14.8**	**+0.8**
	comp=E,28nm,1.0s,baz=30,slow=13,SNR=22						
PLCA	**Paso Flores**	**20.20**	**183**	*e*P	**P**	**16 27 14.9**	**+0.8**
	comp=E,45nm,1.0s						
SPB	**Sao Paulo**	**20.37**	**103**	*e*P	**P**	**16 27 15.8**	**-0.3**
	comp=E,114nm,1.8s						
PTGA	**Pitinga**	**21.61**	**26**	P	**P**	**16 27 27.4**	**-2.0**
	comp=E,2.5nm,0.3s,baz=213,slow=17,SNR=7.2						
PTGA	**Pitinga**	**21.61**	**26**	*e*P	**P**	**16 27 27.4**	**-2.0**
	comp=E,5.8nm,0.8s						
RUSC	**La Rusia**	**26.52**	**351**	*e*P	**P**	**16 28 16.1**	**-0.1**
	comp=E,15nm,1.1s						
CHRN	**Cochrane**	**26.82**	**185**	*e*P	**P**	**16 28 17.2**	**-0.9**
	comp=E,8.8nm,0.7s						
HELC	**Santa Helena**	**27.26**	**346**	*e*P	**P**	**16 28 21.2**	**-1.6**
	comp=E,16nm,0.6s						
EFI	**East Falkland**	**32.30**	**167**	*e*P	**P**	**16 29 07.2**	**+0.7**
	comp=E,127nm,1.4s						
BBGH	**Gun Hill**	**34.75**	**17**	*e*P	**P**	**16 29 28.0**	**-0.1**
	comp=E,547nm,1.4s						
RCBR	**Riachuelo**	**35.42**	**70**	*e*P	**P**	**16 29 34.0**	**0.0**
	comp=E,13nm,1.0s						
RPN	**Rapa Nui**	**37.22**	**252**	LR	LR	16 41 12.0	
	comp=E,35nm,19.4s,baz=46,slow=30						
Z50A	**Ashland**	**55.80**	**343**	P	**P**	**16 32 13.1**	**-1.1**
	baz=161						
Z50A	**Ashland**	**55.80**	**343**	*e*P	**P**	**16 32 13.7**	**-0.5**
	comp=E,6.8nm,0.8s						
Z49A	**Columbiana**	**55.92**	**342**	P	**P**	**16 32 13.8**	**-1.1**
	baz=160						
Y50A	**Piedmont**	**56.35**	**343**	P	**P**	**16 32 17.1**	**-1.0**
	baz=161						
Z48A	**Northport**	**56.39**	**342**	P	**P**	**16 32 17.2**	**-1.0**
	baz=159						
Y49A	**Blount Mountai**	**56.51**	**343**	P	**P**	**16 32 18.0**	**-1.2**
	baz=160						
NATX	**Nacogdoches**	**57.43**	**334**	*e*P	**P**	**16 32 25.1**	**-0.6**
	comp=E,20nm,0.6s						
TKL	**Tuckaleechee C**	**57.55**	**346**	*e*P	**P**	**16 32 26.3**	**-0.2**
	comp=E,9.4nm,1.1s						
SWET	**Senee**	**57.66**	**344**	*e*P	**P**	**16 32 26.4**	**-0.9**
	comp=E,4.6nm,0.7s						
V52A	**Sevierville**	**57.69**	**346**	P	**P**	**16 32 26.8**	**-0.6**
	baz=164						
V52A	**Sevierville**	**57.69**	**346**	*e*P	**P**	**16 32 26.8**	**-0.6**
	comp=E,15nm,1.1s						
W48A	**Pulaski**	**57.86**	**343**	P	**P**	**16 32 27.7**	**-0.9**
	baz=160						
V50A	**Pikeville**	**57.88**	**345**	P	**P**	**16 32 28.1**	**-0.7**
	baz=162						
U53A	**Fall Branch**	**57.97**	**347**	P	**P**	**16 32 28.7**	**-0.7**
	baz=165						
W47A	**Westpoint**	**58.15**	**342**	P	**P**	**16 32 29.5**	**-1.2**
	baz=160						
V49A	**McMinnville**	**58.17**	**344**	P	**P**	**16 32 29.7**	**-1.2**
	baz=161						
VWCC	**Virginia Weste**	**58.34**	**350**	*e*P	**P**	**16 32 32.2**	**+0.3**
V48A	**Smith Brothers**	**58.39**	**343**	P	**P**	**16 32 31.4**	**-0.9**
	baz=160						
V48A	**Smith Brothers**	**58.39**	**343**	*e*P	**P**	**16 32 31.9**	**-0.4**
	comp=E,8.9nm,1.0s						
JCT	**Junction City**	**58.63**	**329**	*e*P	**P**	**16 32 33.7**	**-0.5**
	comp=E,5.2nm,0.9s						
IP07	**Quail**	**58.71**	**352**	*e*P	**P**	**16 32 34.7**	**+0.2**
	comp=E,17nm,1.5s						
IP04	**Greensprings**	**58.89**	**352**	*e*P	**P**	**16 32 36.3**	**+0.6**
	comp=E,5.9nm,1.0s						
WVT	**Waverly**	**59.04**	**342**	P	**P**	**16 32 35.4**	**-1.4**
	baz=160						
WVT	**Waverly**	**59.04**	**342**	*e*P	**P**	**16 32 35.3**	**-1.5**
WVT				*e*pP	**pP**	**16 32 59.2**	**-1.5**
T49A	**Edmonton**	**59.35**	**345**	P	**P**	**16 32 38.1**	**-0.8**
	baz=162						
MIAR	**Mount Ida**	**59.47**	**337**	P	**P**	**16 32 39.2**	**-0.7**
	baz=153						
MIAR	**Mount Ida**	**59.47**	**337**	*e*P	**P**	**16 32 39.5**	**-0.3**
MIAR				*e*pP	**pP**	**16 33 02.0**	**-1.7**
T48A	**Bowling Green**	**59.57**	**344**	P	**P**	**16 32 39.2**	**-1.2**
	baz=161						
T47A	**Sharon Grove**	**59.64**	**343**	P	**P**	**16 32 40.1**	**-0.9**
	baz=160						
T47A	**Sharon Grove**	**59.64**	**343**	*e*P	**P**	**16 32 40.1**	**-0.9**
T47A				*e*pP	**pP**	**16 33 04.1**	**-0.8**
X39A	**Fountain Ranch**	**59.64**	**336**	P	**P**	**16 32 40.3**	**-0.7**
	baz=153						
TXAR	**Lajitas Array**	**59.68**	**325**	P	**P**	**16 32 41.5**	**0.0**
	comp=E,0.8nm,0.8s,baz=151,slow=8.5,SNR=7.5						
TXAR				pP	**pP**	**16 33 05.2**	**-0.3**
	comp=E,0.8nm,0.9s,baz=144,slow=7.4,SNR=3.5						
TX31	**Lajitas Ar. Si**	**59.69**	**325**	*e*P	**P**	**16 32 41.2**	**-0.4**
T46A	**Princeton**	**59.91**	**343**	P	**P**	**16 32 41.7**	**-1.0**
	baz=160						
S48A	**Wiedeman Farm,**	**60.00**	**345**	P	**P**	**16 32 42.1**	**-1.4**
	baz=162						
V41A	**Mountainview**	**60.08**	**339**	P	**P**	**16 32 43.0**	**-1.0**
	baz=155						
W39A	**Magazine**	**60.13**	**337**	P	**P**	**16 32 43.8**	**-0.5**
	baz=153						
U42A	**Revenden**	**60.28**	**340**	P	**P**	**16 32 44.0**	**-1.3**
	baz=156						
U41A	**Viola**	**60.50**	**339**	P	**P**	**16 32 45.6**	**-1.2**
	baz=155						
T43A	**Greenville**	**60.65**	**341**	P	**P**	**16 32 46.9**	**-0.9**
	baz=157						
R47A	**Wooly Knot Far**	**60.72**	**344**	P	**P**	**16 32 47.7**	**-0.6**
	baz=161						
U40A	**Yellville**	**60.83**	**338**	P	**P**	**16 32 48.3**	**-0.9**
	baz=154						
T42A	**Van Buren**	**60.85**	**340**	P	**P**	**16 32 47.9**	**-1.3**
	baz=156						
S44A	**Carbondale**	**60.90**	**342**	P	**P**	**16 32 48.3**	**-1.2**
	baz=158						
S43A	**Fulton Ridge,**	**61.03**	**341**	P	**P**	**16 32 49.2**	**-1.3**
	baz=158						
U39A	**Green Forest**	**61.08**	**338**	P	**P**	**16 32 49.6**	**-1.2**
	baz=154						
T41A	**Mountain View**	**61.09**	**339**	P	**P**	**16 32 50.2**	**-0.6**
	baz=156						
VNA3	**Neumayer Olymp**	**61.09**	**161**	P	P	16 32 59.9	+9.4
O56A	**Blue Knob Stat**	**61.09**	**352**	P	**P**	**16 32 50.9**	**+0.1**
	baz=170						
R45A	**Skylar, Fairfi**	**61.18**	**343**	P	**P**	**16 32 50.3**	**-1.2**
	baz=159						
T40A	**Mansfield**	**61.43**	**339**	P	**P**	**16 32 52.2**	**-1.0**
	baz=155						
S42A	**Caledonia**	**61.44**	**341**	P	**P**	**16 32 51.7**	**-1.4**
	baz=157						
T39A	**Clever**	**61.62**	**338**	P	**P**	**16 32 54.3**	**-0.1**
	baz=154						
VNA2	**Neumayer--Watz**	**61.66**	**161**	P	**P**	**16 32 55.7**	**+1.4**
	baz=293,slow=7.5						
Q45A	**Warren Harvey,**	**61.71**	**343**	P	**P**	**16 32 53.3**	**-1.7**
	baz=160						
S40A	**Lebanon**	**61.83**	**339**	P	**P**	**16 32 54.7**	**-1.1**
	baz=155						
CCM	**Cathedral Cave**	**61.84**	**340**	P	**P**	**16 32 54.6**	**-1.2**
	baz=156						
R42A	**Luebbering**	**61.91**	**341**	P	**P**	**16 32 55.5**	**-0.8**
	baz=157						
T38A	**Diamond**	**61.95**	**337**	P	**P**	**16 32 55.9**	**-0.8**
	baz=153						
N54A	**Moraine State**	**61.98**	**351**	P	**P**	**16 32 56.5**	**-0.2**
	baz=168						
R41A	**Rosebud**	**62.10**	**340**	P	**P**	**16 32 56.5**	**-1.1**
	baz=156						
BRYW	**Bryant College**	**62.15**	**358**	*e*P	**P**	**16 32 57.1**	**-0.8**
	comp=E,11nm,0.8s						
S39A	**Bolivar**	**62.20**	**338**	P	**P**	**16 32 57.4**	**-0.9**
	baz=154						
S39A	**Bolivar**	**62.20**	**338**	*e*P	**P**	**16 32 57.2**	**-1.1**
	comp=E,5.1nm,0.6s						
S39A				*e*pP	**pP**	**16 33 22.1**	**-0.3**
P45A	**Graceland, Par**	**62.20**	**344**	P	**P**	**16 32 57.4**	**-0.8**
	baz=160						
P45A	**Graceland, Par**	**62.20**	**344**	*e*P	**P**	**16 32 57.0**	**-1.3**
P45A				*e*pP	**pP**	**16 33 21.4**	**-0.9**
S38A	**Stockton**	**62.34**	**338**	P	**P**	**16 32 58.4**	**-0.8**
	baz=154						
P44A	**Sand Creek, Wi**	**62.38**	**343**	P	**P**	**16 32 58.9**	**-0.5**
	baz=159						
R40A	**Maddies Statio**	**62.38**	**340**	P	**P**	**16 32 58.4**	**-1.1**
	baz=155						
R40A	**Maddies Statio**	**62.38**	**340**	*e*P	**P**	**16 32 58.6**	**-0.9**
	comp=E,9.7nm,1.0s						
Q42A	**Golden Eagle**	**62.41**	**341**	P	**P**	**16 32 58.8**	**-0.9**
	baz=157						
M54A	**Oil Creek Stat**	**62.46**	**351**	P	**P**	**16 32 59.6**	**-0.4**
	baz=169						
M54A	**Oil Creek Stat**	**62.46**	**351**	*e*P	**P**	**16 32 59.9**	**-0.1**
	comp=E,9.8nm,0.9s						
M54A				*e*pP	**pP**	**16 33 24.5**	**+0.4**
O47A	**Sheridan**	**62.48**	**345**	P	**P**	**16 32 58.7**	**-1.4**
	baz=162						
Q41A	**Truxton**	**62.66**	**341**	P	**P**	**16 33 00.2**	**-1.1**
	baz=157						
R39A	**Chumby, Stover**	**62.66**	**339**	P	**P**	**16 33 00.7**	**-0.7**
	baz=155						
SFIN	**Lafayette**	**62.84**	**345**	P	**P**	**16 33 01.4**	**-1.0**
	baz=161						
R38A	**Fenwick Farm,**	**62.84**	**338**	P	**P**	**16 33 01.7**	**-0.8**
	baz=154						
O45A	**Potomac**	**62.87**	**344**	P	**P**	**16 33 00.9**	**-1.7**
	baz=160						
MSTX	**Muleshoe**	**62.93**	**329**	P	**P**	**16 33 02.7**	**-0.7**
	baz=144						
MSTX	**Muleshoe**	**62.93**	**329**	*e*P	**P**	**16 33 03.0**	**-0.3**
MSTX				*e*pP	**pP**	**16 33 27.0**	**-0.5**
MSTX				*e*PcP	**sP**	**16 33 38.0**	**-0.1**
Q40A	**Laux Farm, Aux**	**62.96**	**340**	P	**P**	**16 33 02.4**	**-0.9**
	baz=156						
P42A	**Winchester**	**62.97**	**342**	P	**P**	**16 33 02.1**	**-1.3**
	baz=158						
ERPA	**Erie**	**63.11**	**351**	P	**P**	**16 33 04.0**	**-0.3**
	baz=168						
AMTX	**Amarillo**	**63.16**	**330**	P	**P**	**16 33 03.4**	**-1.5**
	baz=146						
P41A	**Barry, Barry**	**63.27**	**341**	P	**P**	**16 33 04.3**	**-1.0**
	baz=157						
SNAA	**Sanae**	**63.29**	**161**	P	**P**	**16 33 06.2**	**+1.0**
	comp=E,3.3nm,0.7s,baz=249,slow=8.6,SNR=9.2						
Q39A	**Willow Grove F**	**63.30**	**339**	P	**P**	**16 33 04.7**	**-0.8**
	baz=155						
Q38A	**Cooks Store, C**	**63.44**	**339**	P	**P**	**16 33 06.0**	**-0.4**
	baz=154						
P40A	**Paris**	**63.44**	**340**	P	**P**	**16 33 05.8**	**-0.6**
	baz=156						
HDIL	**Hopedale**	**63.58**	**343**	P	**P**	**16 33 06.5**	**-0.8**
	baz=159						
O41A	**Passleys Farm,**	**63.62**	**342**	P	**P**	**16 33 06.2**	**-1.4**
	baz=157						
P39B	**Salisbury**	**63.63**	**340**	P	**P**	**16 33 06.8**	**-0.9**
	baz=155						
N43A	**Stutzman Famil**	**63.90**	**343**	P	**P**	**16 33 08.1**	**-1.4**
	baz=159						
M44A	**Midewin, Midew**	**64.03**	**344**	P	**P**	**16 33 09.1**	**-1.1**
	baz=160						
N42A	**Yates City**	**64.04**	**342**	P	**P**	**16 33 09.1**	**-1.3**
	baz=158						
P37A	**Lathrop**	**64.25**	**339**	P	**P**	**16 33 10.8**	**-1.0**
	baz=154						
K42A	**Prairie Point,**	**65.66**	**344**	P	**P**	**16 33 20.1**	**-0.8**
	baz=159						
L38A	**Oak Wood Farm,**	**66.10**	**341**	P	**P**	**16 33 22.9**	**-0.8**
	baz=156						
J41A	**Loganville**	**66.39**	**344**	P	**P**	**16 33 24.6**	**-0.9**
	baz=159						
J40A	**Soldiers Grove**	**66.61**	**343**	P	**P**	**16 33 26.0**	**-1.0**
	baz=158						
J39A	**Decorah**	**66.83**	**342**	P	**P**	**16 33 27.3**	**-1.0**
	baz=157						
SDCO	**Great Sand Dun**	**67.28**	**329**	*e*P	**P**	**16 33 32.1**	**+0.4**
SDCO				*e*pP	**pP**	**16 33 56.0**	**-0.1**
SDCO				*e*sP	**sP**	**16 34 07.7**	**+1.0**
I38A	**Scanlan Farm,**	**67.65**	**342**	P	**P**	**16 33 32.7**	**-0.8**
	baz=156						
H40A	**Chili**	**67.66**	**344**	P	**P**	**16 33 33.0**	**-0.6**
	baz=158						
G42A	**Mountain**	**67.75**	**345**	P	**P**	**16 33 34.4**	**+0.3**
	baz=160						
I37A	**Lemond, Waseca**	**67.94**	**341**	P	**P**	**16 33 34.7**	**-0.6**
	baz=155						
G39A	**Holcombe**	**68.48**	**343**	P	**P**	**16 33 38.4**	**-0.3**
	baz=158						
DBIC	**Dimbokro**	**68.68**	**74**	P	**P**	**16 33 39.9**	**-0.7**
	comp=E,5.9nm,0.7s,baz=237,slow=4.4,SNR=5.5						
DBIC				pP	**PcP**	**16 34 05.2**	**+0.3**
	comp=E,5.5nm,0.9s,baz=286,slow=5.0,SNR=2.4						
DBIC	**Dimbokro**	**68.68**	**74**	*e*P	**P**	**16 33 39.6**	**-1.0**
	comp=E,73nm,1.8s						
DBIC				*e*pP	**PcP**	**16 34 05.2**	**+0.3**
F40A	**Park Falls**	**68.80**	**344**	P	**P**	**16 33 40.1**	**-0.5**
	baz=159						
E40A	**Wakefield**	**69.23**	**345**	P	**P**	**16 33 42.8**	**-0.6**
	baz=159						
F36A	**Milaca**	**69.66**	**342**	P	**P**	**16 33 45.9**	**-0.1**
	baz=156						
U15A	**North Rim**	**69.77**	**324**	*e*P	**P**	**16 33 48.5**	**+1.3**
	comp=E,4.3nm,0.8s						
IRM	**Iron Mountain**	**69.79**	**321**	P	**P**	**16 33 47.8**	**+0.8**
	baz=134						
N23A	**Red Feather La**	**70.00**	**331**	P	**P**	**16 33 48.8**	**+0.3**
	baz=143						
DPP	**Dos Picos Cty**	**70.09**	**319**	*e*P	**P**	**16 33 49.2**	**+0.3**
HWB	**Hans Werner Br**	**70.12**	**319**	*e*P	**P**	**16 33 47.4**	**-1.7**
E36A	**McGregor**	**70.18**	**343**	P	**P**	**16 33 49.1**	**0.0**
	baz=156						
BELC	**Belle Mtn. Jos**	**70.19**	**320**	P	**P**	**16 33 50.1**	**+0.4**
	baz=133						
PFO	**Pinyon Flats O**	**70.21**	**319**	P	**P**	**16 33 50.0**	**+0.2**
	baz=133						
KNB	**Kanab**	**70.49**	**324**	*e*P	**P**	**16 33 53.0**	**+1.5**
	comp=E,17nm,1.1s						
GMRC	**Granite Mounta**	**70.53**	**321**	P	**P**	**16 33 53.2**	**+1.6**
	baz=134						
LCMT	**Little Creek M**	**70.72**	**324**	*e*P	**P**	**16 33 54.2**	**+1.4**
	comp=E,4.6nm,0.9s						
D36A	**Goodland**	**70.76**	**343**	*e*P	**P**	**16 33 53.6**	**+1.0**
	comp=E,6.0nm,1.0s						
SRU	**San Rafael Swe**	**70.82**	**327**	*e*P	**P**	**16 33 54.4**	**+1.0**
	comp=E,6.9nm,0.8s						
MTPU	**Mount Pierson**	**70.89**	**325**	*e*P	**P**	**16 33 54.3**	**+0.2**
	comp=E,2.7nm,0.7s						
HEC	**Hector,Ludlow**	**70.96**	**320**	P	**P**	**16 33 54.9**	**+0.6**
	baz=133						
C37A	**Embarrass**	**71.00**	**344**	P	**P**	**16 33 54.6**	**+0.5**
	baz=157						
SZCU	**Shurtz Canyon**	**71.05**	**324**	*e*P	**P**	**16 33 56.4**	**+1.5**

KOWA pP **pP** **16 34 31.3 +0.8**
comp=E,8.3nm,0.9s,baz=276,slow=4.0,SNR=7.0
R11A Troy Canyon, C 72.97 323 P **P** **16 34 07.3 +1.0**
baz=135,SNR=6.7
R11A Troy Canyon, C 72.97 323 *e*P **P** **16 34 07.8 +1.4**
R11A *e*pP **pP** **16 34 32.4 +1.3**
A33A Warroad 72.98 342 P **P** **16 34 06.6 +0.7**
baz=154
CWC Cottonwood Cre 73.10 321 P **P** **16 34 06.9 -0.2**
baz=132
PKM Mcpherson Peak 73.12 318 P **P** **16 34 07.6 +0.3**
baz=131
PD31 Pinedale Array 73.14 330 *e*P **P** **16 34 07.0 -0.2**
PDAR Pinedale Array 73.14 330 P **P** **16 34 08.0 +0.7**
comp=E,0.7nm,0.7s,baz=123,slow=5.5,SNR=5.5
HWUT Hardware Ranch 73.22 328 *e*P **P** **16 34 08.1 +0.4**
comp=E,5.8nm,0.7s
HVU Hansel Valley 73.95 328 *e*P **P** **16 34 12.3 +0.3**
comp=E,5.8nm,1.1s
ULM Lac du Bonnet 74.31 343 P **P** **16 34 13.2 -0.4**
comp=E,3.2nm,0.6s,baz=168,slow=6.6,SNR=4.4
OMMB Old Mammoth Mi 74.43 321 *e*P **P** **16 34 15.9 +0.8**
comp=E,6.3nm,0.9s
NV11 Mina Array Sit 74.49 322 *e*P **P** **16 34 15.9 +0.8**
comp=E,0.3nm,0.9s
FXWY Fox Creek 74.49 330 *e*P **P** **16 34 15.8 +0.7**
comp=E,3.3nm,1.0s
FXWY *e*pP **pP** **16 34 40.4 +0.3**
NV01 Mina Array Sit 74.57 322 *e*P **P** **16 34 16.6 +0.9**
NV01 *e*pP **pP** **16 34 40.6 0.0**
NVAR Mina Array Bea 74.57 322 P **P** **16 34 17.3 +1.6**
comp=E,2.6nm,0.8s,baz=157,slow=7.0,SNR=13
NVAR pP **pP** **16 34 41.2 +0.6**
comp=E,1.5nm,0.9s,baz=158,slow=7.8,SNR=3.6
IMW Indian Meadow 74.65 330 *e*P **P** **16 34 17.0 +0.9**
comp=E,6.8nm,1.2s
LAO LASA Array 74.79 335 P **P** **16 34 16.6 0.0**
baz=144
RLMT Red Lodge 74.83 332 P **P** **16 34 17.3 +0.2**
baz=141
RLMT Red Lodge 74.83 332 *e*P **P** **16 34 17.8 +0.7**
comp=E,5.5nm,1.0s
KVN Kaiserville 74.88 323 *e*P **P** **16 34 18.0 +0.6**
comp=E,5.8nm,0.9s
KVN *e*pP **pP** **16 34 42.7 +0.4**
YHB Horse Butte 75.42 330 *e*P **P** **16 34 21.7 +1.2**
YHB *e*pP **pP** **16 34 46.4 +1.0**
GCMT Greycliff 75.53 332 *e*P **P** **16 34 21.8 +0.8**
GCMT *e*pP **pP** **16 34 46.7 +0.9**
PAHR Pah Rah Range 76.05 322 *e*P **P** **16 34 25.6 +1.5**
comp=E,11nm,0.8s
PAHR *e*pP **pP** **16 34 50.2 +1.2**
HLID Hailey 76.08 328 P **P** **16 34 25.3 +1.1**
baz=137
HLID Hailey 76.08 328 *e*P **P** **16 34 25.9 +1.7**
comp=E,5.7nm,0.9s
HLID *e*pP **pP** **16 34 50.0 +0.9**
MCMT McKenzie Canyo 76.25 330 *e*P **P** **16 34 26.7 +1.5**
MCMT *e*pP **pP** **16 34 51.0 +0.8**
BOZ Bozeman (W) 76.26 331 P **P** **16 34 26.0 +0.9**
baz=139
BOZ Bozeman (W) 76.26 331 *e*P **P** **16 34 26.0 +0.9**
BOZ *e*pP **pP** **16 34 50.5 +0.4**
MFID Camas Ranch 76.69 327 *e*P **P** **16 34 28.8 +1.2**
comp=E,24nm,1.9s
MFID *e*pP **pP** **16 34 53.3 +0.8**
SBA Scott Base 76.75 190 *e*P **P** **16 34 29.4 +2.1**
comp=E,14nm,1.4s
TOA0 Torodi Ar. Sit 77.25 71 *e*P **P** **16 34 31.2 +0.1**
TOA0 *e*pP **pP** **16 34 57.1 +1.0**
TOA0 *e*pP sP 16 34 57.4 -9.2
TOA1 Torodi Ar. Sit 77.25 71 *e*P **P** **16 34 30.5 -0.7**
TOA1 *e*pP **pP** **16 34 57.1 +1.0**
TORD Torodi Ar. Bea 77.25 71 P **P** **16 34 30.5 -0.6**
comp=E,2.3nm,0.5s,baz=255,slow=5.4,SNR=24
TORD pP **pP** **16 34 57.1 +1.0**
comp=E,15nm,0.9s,baz=250,slow=5.3,SNR=18
EGMT Eagleton 77.31 333 P **P** **16 34 31.0 +0.1**
baz=141
SYO Syowa Base 77.51 160⇑*e*X P 16 34 25.3 -6.4
VNDA Vanda 77.78 190 P **P** **16 34 34.6 +1.5**
comp=E,1.4nm,0.9s,baz=148,slow=2.6,SNR=7.3
VNDA Vanda 77.78 190 *e*P **P** **16 34 34.9 +1.8**
O03D Paynes Creek 77.83 322 P **P** **16 34 33.5 -0.5**
baz=130
MSO Missoula 78.25 330 P **P** **16 34 36.9 +0.7**
baz=138
MSO Missoula 78.25 330 *e*P **P** **16 34 37.6 +1.4**
comp=E,3.3nm,0.8s
BMO Blue Mountains 78.46 327 *e*P **P** **16 34 38.3 +1.0**
comp=E,4.4nm,0.9s
BMO *e*pP **pP** **16 35 02.7 +0.3**
N02D Trinity Center 78.80 322 P **P** **16 34 39.3 +0.1**
baz=130
M02C Callahan 79.15 322 P **P** **16 34 41.6 +0.4**
baz=130
F10A Beach Ranch, E 79.21 328 *e*P **P** **16 34 42.2 +0.8**
comp=E,3.0nm,0.8s
J05D Fort Rock, OR 79.47 324 P **P** **16 34 43.9 +1.0**
baz=131
PINE Pine Mountain 79.64 325 *e*P **P** **16 34 45.5 +1.5**
comp=E,9.8nm,1.0s
WALA Waterton Lakes 79.89 332 *e*P **P** **16 34 45.8 +0.8**
comp=E,6.0nm,1.0s
WALA *e*pP **pP** **16 35 10.3 +0.2**
J04D Umpqua Nationa 79.92 324 P **P** **16 34 46.1 +0.7**
baz=131
I04A Tendick Farm, 80.45 324 P **P** **16 34 48.4 +0.3**
baz=130
H04A Detroit Lake 80.90 325 *e*P **P** **16 34 51.0 +0.5**
comp=E,5.7nm,0.8s
I03D Drain, OR 80.90 323 P **P** **16 34 51.5 +1.0**
baz=130
FCC Fort Churchill 81.62 347 *e*P **P** **16 34 54.0 +0.1**
comp=E,6.1nm,0.7s
BOSA Boshof 84.12 118 LR LR 17 10 39.3
comp=E,38nm,19.1s,baz=146,slow=34
YKA Yellowknife Ar 90.18 341 P **P** **16 35 36.3 +0.3**
comp=E,4.3nm,0.9s,baz=135,slow=4.8,SNR=44
YKA pP **pP** **16 36 01.8 +0.3**
comp=E,6.0nm,0.9s,baz=134,slow=4.7,SNR=13
YKB5 Yellowknife Ar 90.18 341 *e*P **P** **16 35 36.2 +0.2**
YKB5 *e*pP **pP** **16 36 01.2 -0.4**
YKW3 Yellowknife Ar 90.23 341 *e*P **P** **16 35 35.8 -0.5**
YKW3 *e*pP **pP** **16 36 04.5 +2.6**
H11S2 WAKE ISLAND Hyl 27.51 278 T T 19 01 26.5
baz=102,slow=74,SNR=146
H11S1 WAKE ISLAND Hyl 27.52 278 T T 19 01 29.6
baz=102,slow=74,SNR=199
H11S3 WAKE ISLAND Hyl 27.53 278 T T 19 01 32.5
baz=102,slow=74,SNR=193
H11N3 WAKE ISLAND Hyl 27.57 280 T T 19 01 32.9
baz=102,slow=74,SNR=88
H11N2 WAKE ISLAND Hyl 27.58 280 T T 19 01 36.0
baz=102,slow=74,SNR=59
H11N1 WAKE ISLAND Hyl 27.58 280 T T 19 01 38.1
baz=102,slow=74,SNR=52
ASAR Alice Springs 130.67 208 PKP **PKPdf** **16 41 47.5 -0.1**
comp=E,1.6nm,0.9s,baz=130,slow=1.7,SNR=14
WR1 Warramunga Arr 133.68 211 *e*PKPdf **PKPdf** **16 41 53.2 0.0**
WRA Warramunga Arr 133.68 211 PKP **PKPdf** **16 41 53.2 0.0**
comp=E,1.2nm,0.7s,baz=159,slow=1.6,SNR=26
KURK Kurchatov 140.62 32 *e*PKPdf **PKPdf** **16 42 06.3 +1.3**
KURBB Kurchatov Arra 140.64 32 PKP **PKPdf** **16 42 06.3 +1.2**
comp=E,0.8nm,0.7s,baz=312,slow=2.6,SNR=8.2
ZAA1 Zalesovo Array 141.15 24 *e*PKPdf **PKPdf** **16 42 05.7 -0.2**
ZAA1 *e*pPKPdf **pPKPdf** **16 42 32.9 +0.3**
ZALV Zalesovo Beam 141.16 24 PKP **PKPdf** **16 42 05.7 -0.2**
comp=E,1.8nm,0.6s,baz=295,slow=2.9,SNR=10
ZALV pPKP **pPKPdf** **16 42 32.9 +0.3**
comp=E,1.6nm,0.7s,baz=308,slow=3.4,SNR=3.2
ASAJ Asahikawa 144.65 319 PKP **PKPab** **16 42 11.3 +0.1**
comp=E,7.8nm,0.8s,baz=30,slow=8.1,SNR=3.6
ASAJ Asahikawa 144.65 319 *e*PKPdf PKPbc 16 42 11.9 +0.5
KSH Kashi 144.66 50 PKP **PKPdf** **16 42 12.8 +0.1**
KSH pPKP pPKPdf 16 42 38.3 -1.2
KSH PP **PP** **16 45 31.6 +1.3**
MK32 Makanchi Array 144.97 35 *e*PKPbc **PKPab** **16 42 12.1 -0.3**
MKAR Makanchi Array 144.97 35 PKP **PKPab** **16 42 12.1 -0.3**
comp=E,3.0nm,0.8s,baz=336,slow=2.7,SNR=24
USRK Ussuriysk Ar. 150.55 328 PKPbc **PKPbc** **16 42 28.4 +0.8**
comp=E,8.6nm,1.0s,baz=89,slow=2.4,SNR=6.8
MJAR Matsushiro Arr 151.27 310 PKPbc **PKPbc** **16 42 29.8 +0.2**
comp=E,4.7nm,0.8s,baz=96,slow=0.9,SNR=12
MAJO Matsushiro 151.27 310 *e*PKPbc **PKPbc** **16 42 29.9 +0.3**
MAT Matsushiro 151.27 310 PKP **PKPbc** **16 42 29.8 +0.2**

SONA0 Songino Array 152.50 6 *e*PKPbc **PKPbc** **16 42 32.4 +0.3**
SONM Songino Array 152.50 6 PKPbc **PKPbc** **16 42 32.4 +0.3**
comp=E,2.2nm,0.6s,baz=326,slow=1.9,SNR=7.8
KSRS Korea Array 157.51 322 PKP **PKPdf** **16 42 32.0 -0.1**
comp=E,1.5nm,1.0s,baz=31,slow=2.9,SNR=4.6
KS15 Wonju Array Si 157.54 322 *e*PKPdf **PKPdf** **16 42 31.7 -0.5**
KSAR Wonju Array Be 157.54 322 PKP **PKPdf** **16 42 32.0 -0.1**
LZH Lanzhou 163.31 20 *e*PKP **PKPdf** **16 42 39.9 +1.1**
LZH pPKP pPKPdf 16 43 05.1 -0.5
LZH sPKP 16 43 16.8
LZH PKP **PKPab** **16 43 34.4 +4.6**
CD2 Chengdu 167.84 30 PKP **PKPdf** **16 42 41.6 -0.9**

IDC 21 16:34:52.0±28.0, 18°.59S×177°.76W, h538km±242km,
mb3.1/3, mb1 3.3/3, mb1mx2.8/56, mbtmp4.1/3, Error
ellipse: s-maj=257.9km s-min=71.8km az=118.0, Fiji
Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**33.95**	**261**	P	P	16 40 51.2	+0.2
	1.2nm,0.4s,baz=92,slow=10,SNR=4.7						
WRA	**Warramunga Arr**	**45.12**	**260**	P	P	16 42 20.4	-0.4
	0.7nm,0.4s,baz=97,slow=6.9,SNR=5.6						
WRA				PcP	PcP	16 43 49.9	-0.1
	0.9nm,1.2s,baz=95,slow=3.6,SNR=4.0						
ASAR	**Alice Springs**	**45.21**	**255**	P	P	16 42 21.1	-0.3
	2.4nm,0.6s,baz=88,slow=8.7,SNR=49						
ASAR				PcP	PcP	16 43 50.1	-0.2
	0.5nm,0.6s,baz=105,slow=3.7,SNR=7.8						
BRTR	**Keskin Array B**	**145.70**	**315**	PKPbc	PKPdf	16 53 30.2	+0.5
	0.6nm,0.7s,baz=114,slow=3.6,SNR=2.9						
GERES	**GERESS Array B**	**148.43**	**345**	PKPbc	PKPbc	16 53 37.7	-0.4
	0.1nm,0.3s,baz=14,slow=2.8,SNR=4.0						

*IDC **21** 16:39:45.8±2.8, 36°.44S×179°.61E, h0km, mb3.9/2,*
mb1 4.1/4, mb1mx3.7/48, mbtmp3.9/4, ML3.6/2, Error
ellipse: s-maj=65.8km s-min=29.9km az=123.0
*WEL **21** 16:39:48.9, 37°.S±9°.×18°.0E±1°.3, h105km±33km*
ISC 21 16:39:46.7±3.8, 36°.7S±0°.1×179°.8W±0°.2, h49km±31km, n63,
σ1§26/79, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PKGZ	**Pakihiroa**	**2.11**	**234**	P	**Pn**	**16 40 20.5**	**+0.8**
PKGZ				S	**Sn**	**16 40 43.8**	**-0.9**
PUZ	**Puketiti**	**2.11**	**228**	P	**Pn**	**16 40 20.8**	**+1.2**
TWGZ	**Tauwhareparae**	**2.35**	**229**	P	**Pn**	**16 40 24.3**	**+1.5**
TWGZ				S	**Sn**	**16 40 50.6**	**+0.1**
RUGZ	**Raukumara Rang**	**2.42**	**237**	P	**Pn**	**16 40 25.1**	**+1.2**
RUGZ				S	**Sn**	**16 40 52.0**	**-0.4**
CNGZ	**Carnagh Statio**	**2.43**	**221**	P	**Pn**	**16 40 26.0**	**+2.1**
TKGZ	**Te Karaka**	**2.60**	**226**	P	**Pn**	**16 40 27.1**	**+0.9**
TKGZ				S	**Sn**	**16 40 56.1**	**-0.4**
MWZ	**Matawai**	**2.72**	**231**	P	**Pn**	**16 40 28.8**	**+0.8**
MWZ				S	**Sn**	**16 40 58.1**	**-1.6**
RIGZ	**Rimuhau**	**2.83**	**223**	P	**Pn**	**16 40 30.6**	**+1.1**
RIGZ				S	**Sn**	**16 41 00.7**	**-1.6**
RAGZ	**Rawiri**	**2.89**	**230**	P	**Pn**	**16 40 31.8**	**+1.5**
RAGZ				S	**Sn**	**16 41 02.3**	**-1.6**
PRGZ	**Paritu Road**	**2.92**	**219**	P	**Pn**	**16 40 31.8**	**+1.1**
PRGZ				S	**Sn**	**16 41 04.7**	**+0.1**
URZ	**Urewera**	**2.95**	**236**	Pn	**Pn**	**16 40 31.6**	**+0.5**
	13nm,0.3s,baz=291,slow=1.0,SNR=31						
URZ				Sn	**Sn**	**16 41 03.5**	**-1.7**
	14nm,0.3s,baz=269,slow=4.7,SNR=11						
URZ	**Urewera**	**2.95**	**236**	P	**Pn**	**16 40 31.5**	**+0.4**
URZ				S	**Sn**	**16 41 03.2**	**-2.1**
MHGZ	**Mahia Peninsul**	**3.09**	**216**	P	**Pn**	**16 40 34.9**	**+1.9**
KNZ	**Kokohu**	**3.11**	**220**	P	**Pn**	**16 40 33.9**	**+0.7**
KNZ				S	**Sn**	**16 41 07.6**	**-1.5**
SNGZ	**Shannon Statio**	**3.12**	**227**	P	**Pn**	**16 40 34.4**	**+1.0**
SNGZ				S	**Sn**	**16 41 08.6**	**-0.9**
MARZ	**Manawahe**	**3.13**	**244**	P	**Pn**	**16 40 34.8**	**+1.2**
EDRZ	**Edgecumbe**	**3.13**	**242**	P	**Pn**	**16 40 35.1**	**+1.4**
OPRZ	**Ohinepanea**	**3.16**	**247**	P	**Pn**	**16 40 34.1**	**+0.1**
RTZ	**Ruatahuna**	**3.24**	**232**	P	**Pn**	**16 40 36.0**	**+1.0**
RTZ				S	**Sn**	**16 41 11.7**	**-0.7**
MUGZ	**Murupara**	**3.29**	**236**	P	**Pn**	**16 40 36.6**	**+0.8**
TGRZ	**Tauranga**	**3.35**	**250**	P	**Pn**	**16 40 36.1**	**-0.4**
TARZ	**Mount Tarawera**	**3.36**	**241**	P	**Pn**	**16 40 38.4**	**+1.6**
RAHZ	**Arahi**	**3.36**	**227**	P	**Pn**	**16 40 38.4**	**+1.7**
RAHZ				S	**Sn**	**16 41 14.6**	**-0.7**
WHHZ	**Waihua**	**3.38**	**224**	P	**Pn**	**16 40 38.3**	**+1.3**
WHHZ				S	**Sn**	**16 41 14.8**	**-1.0**
RRRZ	**Republican Roa**	**3.40**	**239**	P	**Pn**	**16 40 37.4**	**+0.2**
KARZ	**Kaharoa**	**3.46**	**246**	P	**Pn**	**16 40 38.5**	**+0.4**
MTHZ	**Maungataniwha**	**3.46**	**230**	P	**Pn**	**16 40 39.3**	**+1.1**
MTHZ				S	**Sn**	**16 41 16.8**	**-1.2**
HLRZ	**Highlands Stat**	**3.47**	**242**	P	**Pn**	**16 40 40.0**	**+1.7**
PRRZ	**Plateau Road**	**3.56**	**238**	P	**Pn**	**16 40 41.1**	**+1.7**
HSRZ	**Hossack Road**	**3.58**	**241**	P	**Pn**	**16 40 40.7**	**+1.0**
KMRZ	**Kaimai**	**3.62**	**250**	P	**Pn**	**16 40 40.5**	**+0.2**
ALRZ	**Allen Road**	**3.62**	**237**	P	**Pn**	**16 40 41.8**	**+1.4**
NMHZ	**Naumai**	**3.64**	**227**	P	**Pn**	**16 40 41.8**	**+1.2**
ARHZ	**Aropaoanui**	**3.65**	**224**	P	**Pn**	**16 40 41.4**	**+0.8**
MRHZ	**Matea Rd**	**3.72**	**233**	P	**Pn**	**16 40 43.2**	**+1.5**
BKZ	**Black Stump Fm**	**3.87**	**229**	P	**Pn**	**16 40 44.4**	**+0.6**
CKHZ	**Cape Kidnapper**	**3.89**	**219**	P	**Pn**	**16 40 44.1**	**+0.1**
MCHZ	**McNeill Hill**	**3.94**	**224**	P	**Pn**	**16 40 45.0**	**+0.4**
KUTZ	**Kaahu Road**	**3.95**	**241**	P	**Pn**	**16 40 46.3**	**+1.5**
KWHZ	**Kaweka Forest**	**4.08**	**226**	P	**Pn**	**16 40 47.6**	**+1.0**
TLZ	**Tolley Road**	**4.09**	**245**	P	**Pn**	**16 40 48.1**	**+1.4**
KAHZ	**Kahuranaki**	**4.09**	**219**	P	**Pn**	**16 40 47.0**	**+0.2**
RATZ	**Rangitukua**	**4.16**	**237**	P	**Pn**	**16 40 49.5**	**+1.7**
RITZ	**Rihia Road**	**4.16**	**235**	P	**Pn**	**16 40 49.9**	**+2.2**
KRHZ	**Kereru**	**4.26**	**225**	P	**Pn**	**16 40 49.7**	**+0.7**
PXZ	**Pawanui**	**4.28**	**217**	P	**Pn**	**16 40 48.4**	**-0.8**
BHHZ	**Black Hill Sta**	**4.33**	**228**	P	**Pn**	**16 40 50.6**	**+0.4**
KRVZ	**Karewarewa**	**4.37**	**235**	P	**Pn**	**16 40 52.9**	**+2.3**
NGZ	**Ngauruhoe**	**4.44**	**234**	P	**Pn**	**16 40 53.1**	**+1.5**
MOVZ	**Moawhango**	**4.47**	**231**	P	**Pn**	**16 40 53.5**	**+1.5**
COVZ	**Chateau Observ**	**4.49**	**234**	P	**Pn**	**16 40 53.4**	**+1.1**
TWVZ	**Taurewa**	**4.49**	**236**	P	**Pn**	**16 40 54.1**	**+1.8**
FWVZ	**Far West T-bar**	**4.51**	**234**	P	**Pn**	**16 40 54.4**	**+1.7**
WTAZ	**Waiatarua**	**4.55**	**265**	P	**Pn**	**16 40 53.2**	**+0.1**
HIZ	**Hauiti**	**4.66**	**245**	P	**Pn**	**16 40 56.1**	**+1.6**
TSZ	**Takapari Road**	**4.77**	**223**	P	**Pn**	**16 40 55.6**	**-0.5**
WCZ	**Waipu Caves**	**4.81**	**277**	P	**Pn**	**16 40 56.1**	**-0.5**
VRZ	**Vera Road**	**4.98**	**239**	P	**Pn**	**16 41 00.9**	**+2.0**
BFZ	**Birch Farm**	**5.08**	**217**	P	**Pn**	**16 40 58.8**	**-1.5**
RPZ	**Rata Peaks**	**9.94**	**222**	Pn	**Pn**	**16 42 05.8**	**-1.1**
	0.4nm,0.3s,baz=60,slow=1.7,SNR=5.2						
RPZ				Sn	Sn	16 43 44.0	-13
	0.9nm,0.3s,baz=152,slow=20,SNR=9.8						
ASAR	**Alice Springs**	**41.73**	**275**	P	**P**	**16 47 32.6**	**+1.5**
	1.3nm,0.5s,baz=118,slow=7.9,SNR=21						
WRA	**Warramunga Arr**	**43.28**	**280**	P	**P**	**16 47 44.8**	**+1.0**
	0.8nm,0.5s,baz=120,slow=7.8,SNR=16						
FINES	**FINESS Array B**	**150.36**	**335**	PKPbc	**PKPab**	**16 59 36.7**	**-1.5**
	1.7nm,0.6s,baz=74,slow=5.1,SNR=8.8						

*ISCJB **21** 16:46:11.2±0.3, 24°.39N±0°.01×121°.88E±0°.02, h9km±2km,*
Error ellipse: s-maj=2.5km s-min=1.8km az=30.8
*JMA **21** 16:46:11.4±0.1, 24°.37N×121°.83E, h16km*
*TAP **21** 16:46:11.3, 24°.40N×121°.85E, h12km, ML2.9, B*
ISC 21 16:46:11.1±0.8, 24°.39N±0°.02×121°.86E±0°.02, h13km±5km,
n74, σ0§48/125, 11C-6D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENAH	**Nanao**	**0.08**	**324**	⇑P	**Pg**	**16 46 13.8**	**0.0**
	baz=321						
ENAH				S	**Sg**	**16 46 15.3**	**-0.4**
	baz=321						
NANB	**Nanao**	**0.11**	**293**	⇑P	**Pg**	**16 46 14.3**	**+0.2**
	baz=288						
NANB				S	**Sg**	**16 46 16.1**	**-0.3**
	baz=288						
ENA	**Nanau**	**0.12**	**291**	⇑*i*P	**Pg**	**16 46 14.3**	**+0.1**
	baz=286						
ENA				*i*S	**Sg**	**16 46 16.2**	**-0.3**
	baz=286						
TWC	**Suao**	**0.22**	**357**	⇓*i*P	**Pg**	**16 46 16.1**	**+0.2**
	baz=10.0						
TWC				S	**Sg**	**16 46 19.1**	**-0.1**
	baz=10.0						
EOS1	**EOS1**	**0.29**	**56**	⇓P	**Pg**	**16 46 18.0**	**+0.9**
	baz=50						
EOS1				S	**Sb**	**16 46 23.2**	**+0.1**
	baz=50						
NACB	**Ninganchiao**	**0.32**	**229**	⇓P	**Pg**	**16 46 17.7**	**0.0**
	baz=226						
NACB				S	**Sg**	**16 46 22.2**	**+0.2**
	baz=226						
ENTT	**Nioudou**	**0.37**	**313**	⇑P	**Pg**	**16 46 19.0**	**+0.4**
	baz=314						
ENTT				S	**Sg**	**16 46 23.9**	**+0.3**
	baz=314						
TWE	**Neicheng**	**0.38**	**332**	⇑*i*P	**Pg**	**16 46 19.1**	**+0.4**
	baz=335						
TWE				S	**Sg**	**16 46 23.6**	**-0.1**
	baz=335						
TWD	**Chiawan**	**0.39**	**219**	⇓P	**Pg**	**16 46 19.0**	**+0.1**
	baz=215						
TWD				S	**Sg**	**16 46 24.5**	**+0.4**
	baz=215						
ILA	**Ilan**	**0.39**	**345**	*e*P	**Pg**	**16 46 19.1**	**+0.1**
	baz=347						
ILA				*e*S	**Sg**	**16 46 24.8**	**+0.6**
	baz=347						
NNSB	**Datong**	**0.44**	**276**	⇑P	**Pg**	**16 46 20.1**	**+0.3**
	baz=274						
NNSB				S	**Sg**	**16 46 25.8**	**+0.1**
	baz=274						
NNSH	**Datong**	**0.44**	**276**	P	**Pg**	**16 46 20.1**	**+0.3**
	baz=274						
NNSH				*e*S	**Sg**	**16 46 25.8**	**+0.1**
	baz=274						
NNS	**Nan Shan**	**0.45**	**277**	⇑*i*P	**Pg**	**16 46 20.3**	**+0.3**
	baz=275						
NNS				*e*S	**Sg**	**16 46 26.1**	**+0.1**
	baz=275						
EGS		**0.46**	**8**	*e*P	**Pg**	**16 46 20.6**	**+0.3**
	baz=17						
EGS				*e*S	**Sg**	**16 46 26.6**	**+0.2**
	baz=17						
NTC	**Toucheng**	**0.47**	**357**	*e*P	**Pg**	**16 46 20.6**	**+0.3**
	baz=358						
NTC				*e*S	**Sg**	**16 46 26.8**	**+0.1**
	baz=358						
HWA	**Hwalien**	**0.47**	**210**	*e*P	**Pb**	**16 46 21.3**	**+0.1**
	baz=216						
HWA				*e*S	**Sb**	**16 46 28.5**	**+0.4**
	baz=216						
NWLT	**Wulai**	**0.51**	**320**	*e*P	**Pg**	**16 46 21.5**	**+0.4**
	baz=314						
NWLT				*e*S	**Sg**	**16 46 27.8**	**-0.1**
	baz=314						
YHNB	**Yeheng**	**0.53**	**303**	⇑P	**Pb**	**16 46 22.1**	**-0.2**
	baz=302						
YHNB				S	**Sg**	**16 46 28.7**	**+0.2**
	baz=302						
ENLB	**Shoufeng**	**0.54**	**206**	*e*P	**Pb**	**16 46 23.3**	**+0.9**
	baz=211						
NSK	**Sanguang**	**0.54**	**302**	⇑*i*P	**Pb**	**16 46 22.2**	**-0.3**
	baz=302						
NSK				*e*S	**Sg**	**16 46 29.2**	**+0.3**
	baz=302						
TIPB	**Shuangxi**	**0.58**	**357**	P	**Pg**	**16 46 21.9**	**-0.6**
	baz=358						
TIPB				*e*S	**Sg**	**16 46 29.0**	**-1.3**
	baz=358						
TWB1	**Santiao Chiao**	**0.63**	**11**	*e*P	**Pg**	**16 46 23.4**	**0.0**
	baz=13						
TWB1				*e*S	**Sg**	**16 46 31.6**	**-0.1**
	baz=13						
TDCB	**Techi**	**0.65**	**259**	*e*P	**Pb**	**16 46 24.3**	**-0.2**
	baz=250						
TDCB				*e*S	**Sb**	**16 46 32.9**	**-0.7**
	baz=250						
TATO	**Taipei**	**0.68**	**330**	P	**Pb**	**16 46 25.1**	**+0.3**
	baz=330						
TATO				S	**Sg**	**16 46 33.5**	**+0.3**
	baz=330						
NWF	**Wu-fen Shan**	**0.69**	**354**	*e*P	**Pb**	**16 46 25.2**	**+0.1**
	baz=346						
NWF				*e*S	**Sg**	**16 46 34.0**	**+0.5**
	baz=346						
WFSB	**Wu-fen Shan**	**0.69**	**354**	*e*P	**Pb**	**16 46 25.2**	**+0.2**
	baz=346						
WFSB				S	**Sg**	**16 46 33.6**	**+0.1**
	baz=346						
ESL	**Shilin**	**0.69**	**215**	*e*P	**Pg**	**16 46 24.3**	**-0.2**
	baz=221						
CHGB	**Renai**	**0.71**	**243**	⇑P	**Pb**	**16 46 25.2**	**-0.2**
	baz=242						
CHGB				S	**Sb**	**16 46 34.7**	**-0.5**
	baz=242						
WLTB	**Daxi**	**0.72**	**310**	⇓*e*P	**Pn**	**16 46 26.6**	**-0.5**
	baz=301						
WLTB				*e*S	**Sb**	**16 46 36.0**	**+0.6**
	baz=301						
LIOB	**Emei**	**0.81**	**289**	*e*P	**Pn**	**16 46 27.8**	**-0.6**
	baz=277						
LIOB				*e*S	**Sb**	**16 46 38.0**	**0.0**
	baz=277						
YM10	**YM10**	**0.81**	**340**	*e*P	**Pb**	**16 46 27.8**	**+0.6**
	baz=341						
YM10				*e*S	**Sb**	**16 46 38.6**	**+0.5**
	baz=341						
EGFH	**Guangfu**	**0.82**	**209**	*e*P	**Pb**	**16 46 27.3**	**+0.1**
	baz=223						
EGFH				*e*S	**Sb**	**16 46 38.6**	**+0.5**
	baz=223						
YM07	**YM07**	**0.82**	**345**	⇓P	**Pg**	**16 46 27.0**	**+0.1**
	baz=336						
YM07				*e*S	**Sg**	**16 46 36.8**	**-0.9**
	baz=336						
YM04	**YM04**	**0.82**	**339**	*e*P	**Pb**	**16 46 27.8**	**+0.5**
	baz=339						
YM04				*e*S	**Sb**	**16 46 38.9**	**+0.6**
	baz=339						
YM11	**YM11**	**0.82**	**342**	*e*P	**Pn**	**16 46 29.0**	**+0.5**
	baz=332						
YM11				*e*S	**Sn**	**16 46 40.2**	**-0.3**
	baz=332						
NSTT	**Nanjuang**	**0.82**	**288**	*e*P	**Pb**	**16 46 27.7**	**+0.4**
	baz=276						
NSTT				*e*S	**Sb**	**16 46 38.0**	**-0.3**
	baz=276						
YM08	**YM08**	**0.84**	**343**	*e*P	**Pb**	**16 46 27.7**	**+0.1**
	baz=334						
YM08				*e*S	**Sg**	**16 46 37.8**	**-0.5**
	baz=334						
NCUH	**Zhongli**	**0.84**	**313**	*e*P	**Pn**	**16 46 28.4**	**-0.4**
	baz=313						
NTST	**Danshui**	**0.86**	**334**	*e*P	**Pn**	**16 46 28.6**	**-0.4**
	baz=335						
SBCB	**Hsinchu**	**0.89**	**297**	*e*P	**Pn**	**16 46 30.0**	**+0.6**
	baz=296						
VWDT	**VWDT**	**0.91**	**226**	*e*P	**Pg**	**16 46 28.9**	**+0.3**
	baz=226						
VWDT				*e*S	**Sb**	**16 46 41.1**	**+0.3**
	baz=226						
DPDB	**Guoxing**	**0.92**	**248**	P	**Pn**	**16 46 29.5**	**-0.4**
	baz=247					

YOJ	**Yonaguni jima**	**1.05**	**86**	P	**Pb**	**16 46 31.1**	**-0.1**
YOJ				*e*S	**Sb**	**16 46 45.2**	**+0.3**
PTSB	**Yuanli**	**1.06**	**274**	*e*P	**Pn**	**16 46 32.1**	**+0.5**
	baz=272						
TCU	**Taichung**	**1.11**	**258**	*e*P	**Pg**	**16 46 32.8**	**+0.4**
	baz=256						
YULB	**Yu-li**	**1.11**	**208**	*e*P	**Pb**	**16 46 32.1**	**-0.2**
	baz=218						
YULB				*e*S	**Sn**	**16 46 48.3**	**+0.6**
	baz=218						
TWF1	**Yuli**	**1.15**	**207**	*e*P	**Pb**	**16 46 32.9**	**0.0**
	baz=217						
TWF1				*e*S	**Sn**	**16 46 49.0**	**+0.4**
	baz=217						
WJS	**Zhushan**	**1.18**	**242**	*e*P	**Pg**	**16 46 34.0**	**+0.3**
	baz=232						
WNT	**Mingjian**	**1.19**	**245**	*e*P	**Pg**	**16 46 34.0**	**+0.1**
	baz=259						
FULB	**Fuli**	**1.29**	**204**	*e*P	**Pb**	**16 46 35.4**	**+0.1**
	baz=216						
ELDTW	**Lidau**	**1.42**	**213**	*e*P	**Pn**	**16 46 36.9**	**+0.2**
	baz=225						
ELDTW				*e*S	**Sb**	**16 46 55.6**	**0.0**
	baz=225						
RLNB	**Erlin**	**1.46**	**251**	*e*P	**Pg**	**16 46 38.8**	**-0.3**
	baz=249						
WTP	**Ta-pu**	**1.61**	**225**	*e*P	**Pb**	**16 46 40.5**	**-0.2**
	baz=211						
WSF	**Szhu**	**1.67**	**244**	*e*P	**Pn**	**16 46 40.6**	**+0.5**
	baz=242						
IRIF	**Iriomote-Funau**	**1.71**	**91**	P	**Pn**	**16 46 40.4**	**-0.2**
IRIF				S	**Sn**	**16 47 01.7**	**-0.6**
CHN1	**Nanshi**	**1.71**	**226**	*e*P	**Pb**	**16 46 43.1**	**+0.7**
	baz=225						
TWG	**Pinlang**	**1.72**	**205**	*e*P	**Pn**	**16 46 40.4**	**-0.3**
	baz=189						
TWGBT	**Beinan**	**1.72**	**205**	*e*P	**Pn**	**16 46 40.6**	**-0.2**
	baz=189						
SLGT	**Liugui**	**1.78**	**219**	*e*P	**Pn**	**16 46 42.4**	**+0.8**
	baz=218						
JKRS	**Kuro-shima**	**1.97**	**94**	P	**Pn**	**16 46 44.5**	**+0.4**
JKRS				*e*S	**Sn**	**16 47 08.5**	**-0.2**
SSD	**Sandimen**	**1.98**	**215**	*e*P	**Pb**	**16 46 46.0**	**-1.1**
	baz=214						
JIJ	**Ishigaki jima**	**2.08**	**90**	P	**Pn**	**16 46 46.0**	**+0.3**
JIJ				S	**Sn**	**16 47 10.0**	**-1.6**
MASBT	**Mashibuluo**	**2.09**	**213**	*e*P	**Pb**	**16 46 47.9**	**-1.1**
	baz=213						
EAST	**Anshuo**	**2.20**	**205**	*e*P	**Pn**	**16 46 48.7**	**+1.3**
	baz=193						
JISG	**Ishigakijimahi**	**2.24**	**84**	P	**Pn**	**16 46 47.7**	**-0.2**
JISG				*e*S	**Sn**	**16 47 14.3**	**-1.2**

JMA 21 16:51:39.4±0.5, 44°.94N×147°.28E, h187km, M3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.92**	**216**	P	Pn	16 52 16.3	+0.2
NEM2				*e*S	Sn	16 52 44.8	+0.2
JAK	**Akkeshi**	**2.69**	**225**	P	Pn	16 52 25.0	+0.3
JAK				*e*S	Sn	16 53 00.2	+0.2
JAR	**Ashorobuto**	**3.02**	**238**	P	Pn	16 52 29.4	+0.9
JKK2	**Kamakawa 2**	**3.42**	**253**	P	Pn	16 52 33.1	-0.3
JCH	**Churui**	**3.67**	**232**	P	Pn	16 52 36.5	0.0
JCH				*e*S	Sn	16 53 20.2	-1.0
JFR	**Furan**	**3.82**	**244**	P	Pn	16 52 38.8	+0.4
JNBK	**Urakawa-nobuka**	**4.23**	**233**	P	Pn	16 52 42.5	-1.1
JKB	**Kayabe**	**5.48**	**238**	P	Pn	16 52 58.1	-1.5
JKB				*e*S	Sn	16 53 58.0	-4.8
JOT	**Ohata**	**5.78**	**234**	P	Pn	16 53 01.6	-2.0
JANG	**Nango**	**6.24**	**225**	P	Pn	16 53 07.3	-2.2
JANG				*e*S	Sn	16 54 15.4	-5.3
JOSM	**Okushiri--Mats**	**6.35**	**246**	P	Pn	16 53 09.7	-1.3
JOM	**Ohasama**	**7.04**	**221**	P	Pn	16 53 19.1	-1.0
JOM				*e*S	Sn	16 54 36.1	-3.6

IDC 21 17:07:44.1±3.0, 22°.49S×170°.97E, h0km, mb3.7/4, mb1 3.9/5, mb1mx3.6/46, mbtmp3.8/5, ML3.9/1, MS3.2/1, Ms1 3.2/1, ms1mx2.5/43, Error ellipse: s-maj=118.0km s-min=34.5km az=157.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.21**	**275**	Pn	Pn	17 08 49.5	-0.2
	7.4nm,0.3s,baz=120,slow=23,SNR=102						
DZM				Sn	Sn	17 09 33.3	-6.3
	5.7nm,0.3s,baz=168,slow=22,SNR=10						
URZ	**Urewera**	**16.58**	**163**	LR	LR	17 16 26.2	
	comp=Z,68nm,18.2s,baz=34,slow=32						
ASAR	**Alice Springs**	**34.05**	**261**	P	P	17 14 30.0	-0.4
	0.6nm,0.6s,baz=87,slow=9.6,SNR=11						
WRA	**Warramunga Arr**	**34.19**	**267**	P	P	17 14 31.1	-0.5
	0.2nm,0.6s,baz=100,slow=8.4,SNR=3.2						
CMAR	**Chiang Mai Arr**	**81.30**	**294**	P	P	17 20 04.2	+1.3
	0.6nm,0.6s,baz=122,slow=4.1,SNR=5.0						
SONM	**Songino Array**	**90.78**	**323**	P	P	17 20 49.1	-0.1
	0.5nm,0.5s,baz=106,slow=4.3,SNR=3.4						
EKA	**Eskdalemuir Ar**	**146.91**	**354**	PKPbc	PKPdf	17 27 26.4	0.0
	1.2nm,0.5s,baz=356,slow=2.6,SNR=8.0						
GERES	**GERESS Array B**	**148.11**	**331**	PKPbc	PKPbc	17 27 31.9	0.0
	0.4nm,0.5s,baz=46,slow=3.9,SNR=3.8						

*ISCJB **21** 17:13:27.4±0.7, 25°.43S±0°.08×179°.6W±0°.1, h450km, mb4.4/6, Error ellipse: s-maj=15.5km s-min=9.6km az=24.7*
*NEIC **21** 17:13:30.4±1.4, 25°.34S×179°.70W, h459km±18km, mb4.5/1, Error ellipse: s-maj=20.2km s-min=14.9km az=148.0*
*IDC **21** 17:13:34.6±2.1, 25°.62S×179°.86W, h503km±23km, mb3.8/5, mb1 4.0/7, mb1mx3.4/44, mbtmp4.7/7, Error ellipse: s-maj=35.8km s-min=14.8km az=166.0*

ISC 21 17:13:29.0±0.7, 25°.35S±0°.09×179°.67W±0°.10, h450km, n16, σ2§81/18, mb4.5/6, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**13.14**	**282**	P	**P**	**17 16 23.3**	**+3.0**
	0.8nm,0.3s,baz=82,slow=16,SNR=5.7						
URZ	**Urewera**	**13.16**	**191**	P	**P**	**17 16 20.4**	**+0.2**
	3.1nm,0.3s,baz=273,slow=3.2,SNR=23						
URZ				S	**S**	**17 18 36.8**	**-4.8**
	0.4nm,0.3s,baz=162,slow=20,SNR=3.9						
AFI	**Afiamalu**	**13.59**	**35**	P	**P**	**17 16 25.6**	**+0.4**
	1.8nm,0.3s,baz=270,slow=20,SNR=3.9						
AFI				S	**S**	**17 18 45.3**	**-5.4**
	1.6nm,0.3s,baz=30,slow=20,SNR=3.1						
CTA	**Charters Tower**	**31.81**	**272**	P	**P**	**17 19 16.8**	**+1.5**
	9.1nm,0.3s,baz=91,slow=11,SNR=13						
CTAO	**Charters Tower**	**31.81**	**272**	*e*P	**P**	**17 19 16.3**	**+1.0**
STKA	**Stephens Creek**	**34.49**	**250**	P	**P**	**17 19 38.5**	**+0.6**
	5.3nm,0.4s,baz=97,slow=9.9,SNR=8.3						
ASAR	**Alice Springs**	**42.12**	**262**	P	**P**	**17 20 40.6**	**+0.1**
	7.7nm,0.4s,baz=90,slow=7.4,SNR=311						
ASAR				S	**S**	**17 26 23.9**	**-2.9**
	0.3nm,0.7s,baz=95,slow=16,SNR=3.7						
WRAB	**Tennant Creek**	**42.62**	**268**	*e*P	**P**	**17 20 44.1**	**-0.4**
	9.5nm,0.4s						
WRA	**Warramunga Arr**	**42.63**	**268**	P	**P**	**17 20 44.4**	**-0.2**
	7.0nm,0.3s,baz=99,slow=6.8,SNR=276						
WRA				S	**S**	**17 26 28.6**	**-5.6**
	0.6nm,0.9s,baz=107,slow=14,SNR=3.0						
SBA	**Scott Base**	**52.95**	**184**	*e*P	**P**	**17 22 04.1**	**+2.7**
MBWA	**Marble Bar**	**55.43**	**261**	*e*P	**P**	**17 22 18.7**	**-1.2**
TXAR	**Lajitas Array**	**90.94**	**58**	P	**P**	**17 25 46.3**	**+2.2**
	0.7nm,0.7s,baz=199,slow=4.7,SNR=8.1						
NB2	**NORSAR Subarra**	**143.56**	**351**	PKP	PKPab	17 32 09.5	+0.3
	comp=Z,0.8nm,0.6s,baz=16,slow=3.2						
HFS	**Hagfors**	**144.02**	**349**	PKP	PKPbc	17 32 11.4	+0.5
	comp=Z,2.7nm,0.4s,baz=56,slow=3.6,SNR=26						
BRTR	**Keskin Array B**	**148.68**	**305**	PKPbc	**PKPbc**	**17 32 24.3**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=56,slow=3.6,SNR=2.7						
EKA	**Eskdalemuir Ar**	**149.94**	**4**	PKPbc	**PKPbc**	**17 32 27.7**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=354,slow=3.6,SNR=5.1						

*ISCJB **21** 17:20:24.1±0.7, 29°.80N±0°.08×69°.87E±0°.08, h12km, mb3.4/6, MS3.0/4, Error ellipse: s-maj=12.9km s-min=9.2km az=27.6*
*IDC **21** 17:20:25.0±1.3, 29°.88N×69°.78E, h0km, mb3.5/6, mb1 3.7/9, mb1mx3.4/70, mbtmp3.6/9, ML3.7/3, MS3.1/5, Ms1 3.1/5, ms1mx2.6/60, Error ellipse: s-maj=36.7km s-min=20.6km az=83.0*

ISC 21 17:20:26.0±1.0, 29°.8N±0°.1×70°.04E±0°.07, h12km, n21, σ2§28/20, mb3.5/6, MS3.0/4, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NDI	**New Delhi**	**6.37**	**98**	*e*P	**Sb**	**17 23 33.0**	**0.0**
PYUN	**Piuthan**	**11.47**	**95**	*e*Pn	**Pn**	**17 23 12.7**	**+2.8**
PYUN				*e*Sn	**Sn**	**17 25 15.8**	**-2.2**
	57nm,0.7s						
DANN	**Dangsing**	**12.09**	**93**	*e*Pn	**Pn**	**17 23 20.8**	**+2.4**
WSAR	**Wadi Sarin**	**12.12**	**240**	Pn	**Pn**	**17 23 16.4**	**-2.2**
	0.4nm,0.3s,baz=102,slow=7.1,SNR=6.4						
WSAR				Sn	Sn	17 25 19.1	-15
	0.1nm,0.3s,baz=234,slow=14,SNR=2.9						
GEYT	**Alibeck**	**12.80**	**312**	LR	LR	17 28 59.9	
	comp=Z,70nm,18.1s,baz=185,slow=41						
GKN	**Gorkha**	**12.91**	**94**	*e*Pn	**Pn**	**17 23 31.2**	**+1.6**
GKN				*e*Sn	**Sn**	**17 25 49.2**	**-4.2**
	19nm,0.5s						
AAK	**Ala-Archa**	**13.31**	**14**	Pn	**Pn**	**17 23 34.3**	**-0.7**
	0.6nm,0.3s,baz=214,slow=8.8,SNR=2.0						
KKN	**Kakani**	**13.51**	**95**	*e*Pn	**Pn**	**17 23 40.3**	**+2.5**
PKIN	**Phulchoki**	**13.66**	**96**	*e*Pn	**Pn**	**17 23 42.2**	**+2.3**
PKIN				*e*Sn	**Sn**	**17 26 07.5**	**-4.3**
GUN	**Gumba**	**14.01**	**94**	*e*Pn	**Pn**	**17 23 46.1**	**+1.4**
JIRN	**Jiri**	**14.33**	**95**	*e*Pn	**Pn**	**17 23 50.3**	**+1.2**
MKAR	**Makanchi Array**	**19.47**	**26**	P	**Pn**	**17 24 54.0**	**+0.1**
	0.1nm,0.3s,baz=202,slow=14,SNR=6.1						
KURBB	**Kurchatov Arra**	**21.77**	**15**	P	**P**	**17 25 17.6**	**+0.2**
	1.6nm,0.8s,baz=207,slow=9.6,SNR=5.9						
AKTO	**Aktyubinsk**	**22.52**	**340**	P	**P**	**17 25 24.8**	**-0.8**
	0.9nm,0.6s,baz=166,slow=12,SNR=1.8						
AKTO				LR	LR	17 35 41.5	
	comp=Z,35nm,18.5s,baz=337,slow=41						
BVAR	**Borovoye Array**	**23.22**	**1**	P	**P**	**17 25 32.8**	**0.0**
	1.5nm,0.7s,baz=170,slow=9.0,SNR=11						
KVAR	**Kislovodsk Arr**	**25.90**	**311**	LR	LR	17 37 09.0	
	comp=Z,37nm,19.9s,baz=277,slow=39						
ZALV	**Zalesovo Beam**	**26.42**	**20**	P	**P**	**17 26 03.0**	**+0.6**
	0.8nm,0.4s,baz=226,slow=9.9,SNR=4.1						
FINES	**FINESS Array B**	**42.76**	**331**	LR	LR	17 48 59.6	
	comp=Z,28nm,19.7s,baz=200,slow=40						
NOA	**NORSAR Array B**	**49.40**	**327**	LR	LR	17 53 34.6	
	comp=Z,18nm,18.6s,baz=190,slow=40						
WRA	**Warramunga Arr**	**79.22**	**120**	P	**P**	**17 32 34.0**	**+2.7**
	0.3nm,0.8s,baz=322,slow=5.1,SNR=4.4						
ASAR	**Alice Springs**	**81.15**	**124**	P	**P**	**17 32 43.6**	**+1.9**
	0.2nm,0.5s,baz=305,slow=5.8,SNR=7.5						

IDC 21 17:30:58.2±4.9, 13°.35S×167°.52E, h0km, mb3.8/3, mb1 4.1/3, mb1mx3.6/50, mbtmp3.8/3, Error ellipse: s-maj=234.2km s-min=34.3km az=141.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**32.42**	**254**	P	P	17 37 30.1	-0.2
	0.7nm,0.6s,baz=85,slow=8.8,SNR=9.2						
ASAR	**Alice Springs**	**33.41**	**247**	P	P	17 37 38.9	0.0
	1.0nm,0.5s,baz=76,slow=8.8,SNR=39						
ILAR	**Eielson Array**	**85.15**	**18**	P	P	17 43 35.9	0.0
	0.3nm,0.5s,baz=237,slow=3.9,SNR=4.9						

*IDC **21** 17:32:16.8±2.7, 14°.52N×92°.60W, h0km, mb4.0/6, mb1 4.3/9, mb1mx3.9/48, mbtmp4.0/9, ML3.7/3, MS3.4/18, Ms1 3.4/18, ms1mx3.2/42, Error ellipse: s-maj=96.9km s-min=23.2km az=36.0*
*MEX **21** 17:32:17.4±1.4, 13°.95N×93°.22W, h17km±999km, MD4.3*
*NEIC **21** 17:32:17.4±0.0, 13°.95N×93°.22W, h17km, mb4.3/11, MD4.3(MEX), After MEX.*
*ISCJB **21** 17:32:18.8±0.9, 14°.11N±0°.07×93°.13W±0°.07, h37km, mb4.2/16, MS3.4/16, Error ellipse: s-maj=11.5km s-min=8.0km az=147.4*

ISC 21 17:32:19.7±1.0, 14°.06N±0°.09×93°.13W±0°.06, h37km, n44, σ1§73/38, mb4.2/16, MS3.5/16, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.19**	**45**	*i* P	**Pn**	**17 32 38.3**	**-1.4**
THIG				*i* S	**Sn**	**17 32 52.8**	**-1.8**
THIG		**1.19**	**45**	*i* P	**Pn**	**17 32 38.3**	**-1.4**
THIG				*i* S	**Sn**	**17 32 52.8**	**-1.8**
PCIG		**1.64**	**357**	*i* P	**Pn**	**17 32 42.6**	**-3.3**
PCIG		**1.64**	**357**	*i* P	**Pn**	**17 32 42.6**	**-3.3**
CCIG	**Comitan**	**2.41**	**23**	*e*P	**Pn**	**17 32 56.8**	**+0.1**
CCIG				*e*S	**Sn**	**17 33 25.8**	**+0.8**
CCIG	**Comitan**	**2.41**	**23**	*e*P	**Pn**	**17 32 56.8**	**+0.1**
CCIG				*e*S	**Sn**	**17 33 25.8**	**+0.8**
TGIG		**2.70**	**0**	*e*P	**Pn**	**17 32 59.5**	**-1.2**
TGIG				*i* S	**Sn**	**17 33 31.6**	**-0.5**
TGIG		**2.70**	**0**	*e*P	**Pn**	**17 32 59.5**	**-1.2**
TGIG				*i* S	**Sn**	**17 33 31.6**	**-0.5**
CMIG	**Matias Romero**	**3.46**	**331**	Pn	**Pn**	**17 33 09.8**	**-1.2**
	12nm,0.3s,baz=149,slow=12,SNR=82						
CMIG				Sn	**Sn**	**17 33 48.3**	**-2.4**
	43nm,0.3s,baz=109,slow=21,SNR=9.1						
CMIG				LR	LR	17 34 33.0	
	comp=Z,320nm,18.3s,baz=277,slow=40						
VHO	**Vista Hermosa**	**4.59**	**311**	*e*P	**Pn**	**17 33 24.2**	**-2.5**
VHO	**Vista Hermosa**	**4.59**	**311**	*e*P	**Pn**	**17 33 24.2**	**-2.5**
JTS	**JuntasAbangare**	**8.82**	**114**	Pn	**Pn**	**17 34 22.1**	**-2.7**
	1.0nm,0.3s,baz=18,slow=21,SNR=2.3						
JTS				Lg	Lg	17 36 33.4	
	0.4nm,0.3s,baz=140,slow=22,SNR=3.0						
TXAR	**Lajitas Array**	**18.06**	**329**	P	**Pn**	**17 36 29.1**	**+1.2**
	0.0nm,0.3s,baz=156,slow=9.6,SNR=19						
TXAR				LR	LR	17 43 34.8	
	comp=Z,40nm,19.8s,baz=0.0,slow=38						
ROSC	**El Rosal**	**20.67**	**114**	LR	LR	17 44 43.0	
	comp=Z,45nm,18.2s,baz=203,slow=37						
MNTX	**Cornudas Mount**	**20.84**	**329**	*e*P	**P**	**17 37 00.2**	**+1.9**
	5.7nm,0.8s						
GOGA	**Godfrey**	**21.17**	**23**	*e*P	**P**	**17 36 58.9**	**-3.0**
	17nm,1.0s						
AMTX	**Amarillo**	**22.12**	**341**	*e*P	**P**	**17 37 13.5**	**+1.3**
	8.8nm,0.5s						
TKL	**Tuckaleechee C**	**23.09**	**20**	LR	LR	17 48 08.8	
	comp=Z,94nm,18.5s,baz=170,slow=42						
CCM	**Cathedral Cave**	**23.96**	**4**	*e*P	**P**	**17 37 27.9**	**-2.6**
	21nm,0.7s						
TZTN	**Tazewell**	**23.98**	**19**	*e*P	**P**	**17 37 31.1**	**+0.4**
	5.6nm,0.9s						
ANMO	**Albuquerque**	**24.02**	**332**	P	**P**	**17 37 32.1**	**+0.7**
	2.6nm,0.8s,baz=149,slow=12,SNR=7.7						
ANMO				LR	LR	17 47 43.6	
	comp=Z,34nm,18.1s,baz=60,slow=39						
TUC	**Tucson**	**24.30**	**321**	*e*P	**P**	**17 37 35.5**	**+1.6**
	6.4nm,0.9s						
SDCO	**Great Sand Dun**	**26.03**	**337**	*e*P	**P**	**17 37 51.4**	**+1.6**
	6.3nm,1.1s						
MVCO	**Mesa Verde**	**26.82**	**332**	*e*P	**P**	**17 37 56.3**	**-0.6**
	13nm,1.4s						
PDAR	**Pinedale Array**	**31.92**	**337**	P	**P**	**17 38 41.9**	**-0.2**
	0.6nm,0.7s,baz=137,slow=9.3,SNR=5.5						
PDAR				LR	LR	17 54 36.7	
	comp=Z,36nm,19.0s,baz=176,slow=42						
NVAR	**Mina Array Bea**	**32.95**	**322**	P	**P**	**17 38 53.2**	**+2.2**
	2.4nm,0.7s,baz=133,slow=8.5,SNR=14						
NVAR				LR	LR	17 53 53.0	
	comp=Z,65nm,21.0s,baz=136,slow=40						
BOZ	**Bozeman (W)**	**35.11**	**337**	*e*P	**P**	**17 39 11.2**	**+1.5**
	1.3nm,0.7s						
ULM	**Lac du Bonnet**	**36.16**	**357**	LR	LR	17 57 58.9	
	comp=Z,47nm,18.2s,baz=271,slow=43						
LPAZ	**La Paz**	**38.98**	**140**	LR	LR	17 55 33.4	
	comp=Z,28nm,18.7s,baz=269,slow=36						
SCHQ	**Schefferville**	**45.55**	**21**	LR	LR	18 01 28.9	
	comp=Z,125nm,18.9s,baz=252,slow=39						
YKA	**Yellowknife Ar**	**50.72**	**347**	P	**P**	**17 41 15.8**	**+0.3**
	4.8nm,0.7s,baz=152,slow=7.3,SNR=51						
SFJD	**Kangerlussuaq**	**59.79**	**18**	LR	LR	18 09 50.4	
	comp=Z,107nm,18.1s,baz=215,slow=38						
INK	**Inuvik**	**60.07**	**344**	*e*P	**P**	**17 42 23.2**	**+0.6**
	5.9nm,0.9s						
ILAR	**Eielson Array**	**62.35**	**337**	P	**P**	**17 42 39.5**	**+1.2**
	2.0nm,1.0s,baz=136,slow=4.9,SNR=16						
BORG	**Borgarnes**	**69.63**	**26**	LR	LR	18 13 22.3	
	comp=Z,25nm,18.1s,baz=235,slow=36						
SPITS	**Spitsbergen Ar**	**80.24**	**11**	LR	LR	18 21 05.2	
	comp=Z,39nm,21.1s,baz=80,slow=37						
ESDC	**Sonseca Array**	**80.53**	**51**	P	**P**	**17 44 27.5**	**-1.0**
	0.2nm,0.4s,baz=296,slow=7.9,SNR=3.4						
NOA	**NORSAR Array B**	**84.61**	**28**	LR	LR	18 20 23.9	
	comp=Z,25nm,21.7s,baz=285,slow=34						
HFS	**Hagfors**	**86.08**	**29**	LR	LR	18 23 08.9	
	comp=Z,26nm,18.4s,baz=273,slow=36						
TIXI	**Tiksi**	**89.97**	**348**	*e*P	**P**	**17 45 15.1**	**+0.3**
	2.4nm,0.7s						
GERES	**GERESS Array B**	**90.25**	**39**	LR	LR	18 21 28.1	
	comp=Z,17nm,21.4s,baz=280,slow=33						
FINES	**FINESS Array B**	**90.90**	**25**	LR	LR	18 25 08.7	
	comp=Z,21nm,20.7s,baz=306,slow=35						
AKASG	**Malin Array Be**	**98.27**	**33**	LR	LR	18 32 19.6	
	comp=Z,17nm,18.4s,baz=265,slow=37						
CMAR	**Chiang Mai Arr**	**145.57**	**339**	PKPbc	**PKPdf**	**17 51 56.5**	**+1.5**
	2.0nm,0.7s,baz=334,slow=3.3,SNR=13						

*IDC **21** 17:42:10.7±7.2, 36°.21N×70°.29E, h89km±58km, mb3.6/1, mb1 3.4/6, mb1mx3.0/71, mbtmp3.7/6, ML3.2/5, MS3.5/1, Ms1 3.5/1, ms1mx2.2/64, Error ellipse: s-maj=99.1km s-min=26.6km az=146.0*
*NNC **21** 17:42:12.4±2.7, 36°.57N×70°.27E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=22.8km s-min=19.6km az=132.0*

ISC 21 17:42:11.0±2.2, 36°.2N±0°.2×70°.3E±0°.1, h100km, n11, σ0§70/15, 4C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**4.58**	**33**	⇑Pn	**Pn**	**17 43 19.7**	**+1.4**
	4.9nm,0.3s						
SFK				⇓Sn	**Sn**	**17 44 11.5**	**+0.9**
	28nm,0.3s						
MNAS	**Manas**	**6.51**	**15**	⇑Pn	**Pn**	**17 43 44.8**	**+0.5**
	2.4nm,0.5s						
MNAS				⇑Sn	**Sn**	**17 44 56.9**	**-0.3**
	9.6nm,0.7s						
KK31	**Karatay Array**	**6.89**	**2**	⇓Pn	**Pn**	**17 43 49.8**	**+0.4**
	1.7nm,0.3s,baz=191,slow=14,SNR=36						
KK31				⇑Sn	**Sn**	**17 45 06.6**	**+0.4**
	3.9nm,0.5s,baz=186,slow=21,SNR=7.4						
AAK	**Ala-Archa**	**7.21**	**26**	P	**Pn**	**17 43 53.1**	**-0.7**
	1.1nm,0.3s,baz=202,slow=9.4,SNR=5.4						
AAK				S	**Sn**	**17 45 14.1**	**-0.2**
	1.6nm,0.3s,baz=318,slow=22,SNR=10						
TKM2	**Tokmak 2**	**7.87**	**30**	⇓Pn	**Pn**	**17 44 02.5**	**-0.4**
	2.6nm,0.6s						
TKM2				⇓Sn	**Sn**	**17 45 30.1**	**-0.3**
	3.0nm,0.7s						
GEYT	**Alibeck**	**9.85**	**284**	P	**Pn**	**17 44 29.8**	**+0.2**
	0.4nm,0.3s,baz=120,slow=8.7,SNR=6.4						
MKAR	**Makanchi Array**	**13.89**	**37**	P	**Pn**	**17 45 23.3**	**0.0**
	0.0nm,0.3s,baz=224,slow=12,SNR=3.5						
KURBB	**Kurchatov Arra**	**15.60**	**20**	P	**P**	**17 45 46.1**	**-1.1**
	0.0nm,0.3s,baz=206,slow=11,SNR=6.2						
BVAR	**Borovoye Array**	**16.82**	**0**	P	**P**	**17 46 00.1**	**-0.5**
	0.3nm,0.3s,baz=172,slow=11,SNR=5.6						
ZALV	**Zalesovo Beam**	**20.43**	**25**	P	**P**	**17 46 40.4**	**+0.2**
	2.5nm,0.4s,baz=224,slow=11,SNR=12						
JOW	**Kunigami**	**49.71**	**84**	LR	LR	18 15 10.0	
	comp=Z,49nm,18.2s,baz=322,slow=40						

*ISCJB **21** 17:42:56.5±0.4, 6°.80S±0°.05×127°.66E±0°.06, h408km, mb3.7/4, Error ellipse: s-maj=8.8km s-min=6.6km az=12.2*
*DJA **21** 17:42:57.9±0.5, 7°.5±4°.×12°.8E±°., h396km±10km, M4.5/12, mb4.5/6, mB4.9/5, MLv4.7/12, Mw(mB)4.2/5*
*IDC **21** 17:42:57.5±1.4, 6°.76S×127°.70E, h398km±15km, mb3.4/4, mb1 3.7/8, mb1mx3.2/54, mbtmp4.4/8, Error ellipse: s-maj=27.9km s-min=11.8km az=75.0*

ISC 21 17:42:57.3±0.7, 6.75S±0°.06×127°.65E±0°.09, h408km, n20, σ2§09/27, mb3.6/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**3.09**	**10**	P	**P**	**17 44 02.0**	**+0.2**
BNDI	**Bandanaira**	**3.15**	**46**	P	**P**	**17 44 01.7**	**-0.6**
NLAI	**Namlea**	**3.53**	**351**	P	**P**	**17 44 06.5**	**+1.0**
NLAI				S	**S**	**17 45 00.9**	**-0.1**
SAUI	**Saumlaki**	**3.82**	**109**	P	**P**	**17 44 08.0**	**-0.1**
SOEI	**Soe**	**4.49**	**228**	P	**P**	**17 44 14.5**	**0.0**
SANI	**Sanana**	**4.95**	**340**	P	**P**	**17 44 18.0**	**-1.1**
BATI	**Baumata**	**5.23**	**229**	P	**P**	**17 44 22.6**	**+0.7**
	43nm,0.3s,baz=69,slow=2.0,SNR=94						
BATI				S	**S**	**17 45 25.9**	**-5.2**
	94nm,0.3s,baz=141,slow=4.4,SNR=23						
BATI	**Baumata**	**5.23**	**229**	P	**P**	**17 44 22.4**	**+0.5**
	74nm,0.5s,959nm						
MMRI	**Maumere**	**5.68**	**250**	P	**P**	**17 44 27.0**	**+0.4**
FAKI	**Fak Fak**	**5.96**	**51**	P	**P**	**17 44 28.4**	**-1.1**
	355nm,0.8s,6μm						
KMPI	**Kaimana, Papua**	**6.76**	**63**	P	**

SVAN			*e*Sg	**Sg**	**17 44 15.3**	**-0.7**
EKAR	**Karacoban**	**1.26 341**	*e*P	Pn	17 43 58.7	-5.7
EKAR			*e*		17 44 12.6	
EKAR			IAML		17 44 31.2	
	comp=Z,7.3nm,0.5s					
BNGL	**BINGOL**	**1.44 309**	*e*P	**Pb**	**17 44 07.7**	**+0.2**
BNGL			*e*S	**Sg**	**17 44 29.6**	**+2.8**
BNGL			IAML		17 44 33.3	
	comp=Z,58nm,0.5s					
BNGL	**BINGOL**	**1.44 309**	*i* P	**Pn**	**17 44 06.8**	**0.0**
BNGL			*i* S	**Sg**	**17 44 27.6**	**+0.8**
MARD	**Mardin**	**1.62 243**	*i* P	**Pn**	**17 44 09.4**	**+0.1**
MARD			*i* S	**Sn**	**17 44 30.2**	**-0.2**
BNGB	**Bing¨¶l**	**1.77 302**	PN	**Pn**	**17 44 11.4**	**+0.1**
MAZI	**Mazidag**	**1.81 251**	PN	**Pn**	**17 44 11.7**	**-0.1**
MAZI	**Mazidag**	**1.81 251**	*e*Pn	**Pn**	**17 44 11.7**	**-0.1**
BINT	**Bingol**	**1.84 297**	*e*Pn	**Pn**	**17 44 11.4**	**-0.9**
DIY	**Diyarbakir**	**1.88 266**	*e*Pn	**Pn**	**17 44 13.5**	**+0.7**
DYBB	**Diyarbakir**	**1.94 268**	PN	**Pn**	**17 44 13.5**	**-0.1**
PTK	**Pertek**	**2.65 289**	PN	**Pn**	**17 44 23.9**	**+0.5**
PTK	**Pertek**	**2.65 289**	*e*Pn	**Pn**	**17 44 23.9**	**+0.5**

*IDC **21** 17:56:19.9±2.8, 33°.32S×178°.94W, h0km, mb3.7/2, mb1 3.9/3, mb1mx3.6/43, mbtmp3.7/3, ML3.7/1, Error ellipse: s-maj=65.1km s-min=35.1km az=116.0*
*ISCJB **21** 17:56:22.7±0.8, 33°.35S±0°.07×178°.7W±0°.2, h48km, mb3.5/2, Error ellipse: s-maj=26.0km s-min=4.6km az=18.8*
*WEL **21** 17:56:24.7±0.7, 33°.S±8°.×17°.9W±2°.1, h33km, ML4.7/24*
ISC 21 17:56:23.6±1.5,**33°.37S**±0°.09×**178°.5W**±0°.2,**h48**km,**n34,**
σ1**9**29/46,**South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.12**	**7**	P	**Pn**	**17 57 22.9**	**-1.1**
GLKZ				S	**Sn**	**17 58 12.1**	**+1.2**
MXZ	**Matakaoa Point**	**4.94**	**211**	P	**Pn**	**17 57 37.3**	**+2.1**
MXZ				S	**Sn**	**17 58 31.1**	**0.0**
WMGZ	**Waiomatatini S**	**5.11**	**209**	P	**Pn**	**17 57 39.4**	**+1.8**
WMGZ				S	**Sn**	**17 58 37.5**	**+2.2**
PKGZ	**Pakihiroa**	**5.31**	**211**	P	**Pn**	**17 57 40.6**	**+0.2**
PKGZ				S	**Sn**	**17 58 39.4**	**-0.9**
HAZ	**Te Kaha**	**5.34**	**214**	P	**Pn**	**17 57 41.5**	**+0.9**
HAZ				S	**Sn**	**17 58 40.7**	**0.0**
PUZ	**Puketiti**	**5.39**	**209**	P	**Pn**	**17 57 42.5**	**+1.0**
PUZ				S	**Sn**	**17 58 41.8**	**-0.5**
RUGZ	**Raukumara Rang**	**5.55**	**213**	P	**Pn**	**17 57 44.7**	**+1.0**
RUGZ				S	**Sn**	**17 58 47.8**	**+1.4**
TWGZ	**Tauwhareparae**	**5.60**	**210**	P	**Pn**	**17 57 44.5**	**+0.2**
TWGZ				S	**Sn**	**17 58 47.7**	**+0.4**
CNGZ	**Carnagh Statio**	**5.77**	**207**	P	**Pn**	**17 57 47.3**	**+0.7**
CNGZ				S	**Sn**	**17 58 50.8**	**-0.6**
KUZ	**Kuaotunu**	**5.83**	**233**	P	**Pn**	**17 57 48.8**	**+1.4**
TKGZ	**Te Karaka**	**5.87**	**209**	P	**Pn**	**17 57 49.4**	**+1.4**
MWZ	**Matawai**	**5.92**	**212**	P	**Pn**	**17 57 48.6**	**-0.2**
MWZ				S	**Sn**	**17 58 54.0**	**-1.3**
URZ	**Urewera**	**6.06**	**215**	Pn	**Pn**	**17 57 47.9**	**-2.6**
	1.9nm,0.3s,baz=272,slow=5.9,SNR=27					
URZ				Sn	**Sn**	**17 58 56.5**	**-2.0**
	3.4nm,0.3s,baz=184,slow=16,SNR=8.8					
URZ	**Urewera**	**6.06**	**215**	P	**Pn**	**17 57 50.9**	**+0.4**
URZ				S	**Sn**	**17 58 56.5**	**-2.0**
RAGZ	**Rawiri**	**6.11**	**212**	P	**Pn**	**17 57 53.3**	**+2.0**
RIGZ	**Rimuhau**	**6.14**	**209**	P	**Pn**	**17 57 53.6**	**+1.9**
PRGZ	**Paritu Road**	**6.28**	**207**	P	**Pn**	**17 57 55.6**	**+2.1**
SNGZ	**Shannon Statio**	**6.38**	**211**	P	**Pn**	**17 57 55.8**	**+0.9**
MUGZ	**Murupara**	**6.39**	**216**	P	**Pn**	**17 57 56.7**	**+1.6**
RTZ	**Ruatahuna**	**6.40**	**214**	P	**Pn**	**17 57 54.3**	**-1.0**
MHGZ	**Mahia Peninsul**	**6.47**	**206**	P	**Pn**	**17 57 56.1**	**-0.1**
RAHZ	**Arahi**	**6.60**	**212**	P	**Pn**	**17 57 59.7**	**+1.8**
MTHZ	**Maungataniwha**	**6.66**	**213**	P	**Pn**	**17 57 59.3**	**+0.5**
MRHZ	**Matea Rd**	**6.84**	**216**	P	**Pn**	**17 58 01.4**	**+0.1**
NMHZ	**Naumai**	**6.87**	**212**	P	**Pn**	**17 58 02.9**	**+1.1**
ARHZ	**Aropaoanui**	**6.92**	**211**	P	**Pn**	**17 58 03.3**	**+0.9**
BKZ	**Black Stump Fm**	**7.07**	**214**	P	**Pn**	**17 58 03.5**	**-1.0**
MCHZ	**McNeill Hill**	**7.21**	**211**	P	**Pn**	**17 58 06.7**	**+0.4**
KAHZ	**Kahuranaki**	**7.42**	**209**	P	**Pn**	**17 58 08.2**	**-1.1**
HIZ	**Hauiti**	**7.46**	**225**	P	**Pn**	**17 58 11.6**	**+1.9**
KRHZ	**Kereru**	**7.51**	**212**	P	**Pn**	**17 58 09.4**	**-1.1**
ASAR	**Alice Springs**	**42.63**	**270**	P	**P**	**18 04 15.2**	**-0.3**
	0.4nm,0.4s,baz=109,slow=7.5,SNR=28					
WRA	**Warramunga Arr**	**43.89**	**275**	P	**P**	**18 04 25.1**	**-0.5**
	0.4nm,0.3s,baz=116,slow=8.2,SNR=23					
FINES	**FINESS Array B**	**147.76**	**338**	PKPbc	**PKPab**	**18 16 04.5**	**-0.2**
	0.6nm,0.4s,baz=34,slow=4.3,SNR=9.7					

*IDC **21** 18:23:49.9±0.7, 13°.12N×146°.89E, h0km, mb4.1/16, mb1 4.3/17, mb1mx4.0/64, mbtmp4.1/17, ML4.9/1, MS2.9/8, Ms1 2.9/8, ms1mx2.6/56, Error ellipse: s-maj=19.8km s-min=16.4km az=101.0*
*ISCJB **21** 18:23:53.0±0.6, 13°.10N±0°.09×146°.86E±0°.07, h33km, mb4.2/19, Error ellipse: s-maj=12.3km s-min=9.9km az=9.0*
*NEIC **21** 18:23:56.0±2.1, 13°.10N×146°.80E, h44km±18km, mb4.8/3, Error ellipse: s-maj=16.7km s-min=10.0km az=91.0*
ISC 21 18:23:55.2±0.8,**13°.1N**±0°.1×**146°.83E**±0°.10,**h35**km,**n35,**
σ0**8**72/25,**mb4.2**/19,**South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.97 284**		Pn	**Pn**	**18 24 26.5**	**+0.4**
	391nm,0.3s,baz=170,slow=23,SNR=482						
GUMO				Sn	**Sn**	**18 24 49.0**	**-0.5**
	522nm,0.3s,baz=251,slow=23,SNR=28						
H11S3	**WAKE ISLAND Hy 19.84**	**72**		T	T	18 48 23.5	
	baz=254,slow=74						
H11S1	**WAKE ISLAND Hy 19.86**	**72**		T	T	18 48 23.0	
	baz=254,slow=74						
H11S2	**WAKE ISLAND Hy 19.86**	**72**		T	T	18 48 12.5	
	baz=254						
H11N1	**WAKE ISLAND Hy 20.33**	**68**		T	T	18 49 11.1	
	baz=256,slow=75						
H11N2	**WAKE ISLAND Hy 20.34**	**68**		T	T	18 49 21.4	
	baz=256						
H11N3	**WAKE ISLAND Hy 20.35**	**68**		T	T	18 49 11.7	
	baz=256,slow=75						
JOW	**Kunigami**	**22.11 311**		LR	LR	18 37 02.4	
	comp=Z,56nm,18.4s,baz=11,slow=36						
MJAR	**Matsuhiro Arr**	**24.59 343**		P	**P**	**18 29 11.2**	**-1.0**
	1.1nm,0.6s,baz=168,slow=9.0,SNR=3.5						
MJAR				LR	LR	18 38 37.1	
	comp=Z,38nm,20.7s,baz=185,slow=36						
JNU	**Nakatsue**	**24.68 326**		LR	LR	18 37 03.2	
	comp=Z,15nm,21.9s,baz=127,slow=32						
HNR	**Honiara**	**25.90 149**		LR	LR	18 39 05.4	
	comp=Z,63nm,19.4s,baz=85,slow=35						
KSRS	**Korea Array**	**29.55 328**		P	**P**	**18 29 56.7**	**+0.1**
	0.8nm,0.6s,baz=137,slow=9.9,SNR=4.7						
KSAR	**Wonju Array Be**	**29.56 328**		P	**P**	**18 29 56.7**	**0.0**
ASAJ	**Asahikawa**	**31.12 354**		LR	LR	18 44 01.5	
	comp=Z,5.7nm,19.7s,baz=178,slow=39						
USRK	**Ussuriysk Ar.**	**33.50 341**		LR	LR	18 43 58.0	
	comp=Z,34nm,20.5s,baz=64,slow=36						
WRAB	**Tennant Creek**	**35.05 201**		*e*P	**P**	**18 30 44.6**	**-0.4**
	3.9nm,0.7s						
WRA	**Warramunga Arr**	**35.06 201**		P	**P**	**18 30 44.8**	**-0.3**
	5.6nm,0.8s,baz=24,slow=9.5,SNR=51						
WRA				PcP	**PcP**	**18 33 16.9**	**+0.3**
	0.4nm,0.9s,baz=15,slow=3.4,SNR=4.5						
ASAR	**Alice Springs**	**38.67 199**		P	**P**	**18 31 15.6**	**-0.1**
	2.1nm,0.5s,baz=24,slow=7.0,SNR=76						
CMAR	**Chiang Mai Arr**	**46.28 283**		P	**P**	**18 32 18.9**	**+1.1**
	1.3nm,0.8s,baz=77,slow=5.9,SNR=7.2						
CMAR				LR	LR	18 51 06.0	
	comp=Z,8.0nm,20.8s,baz=220,slow=35						
MA2	**Magadan**	**46.48**	**3**	LR	LR	18 55 42.8	
	comp=Z,8.8nm,18.1s,baz=170,slow=41						
SONM	**Songino Array**	**48.23 324**		P	**P**	**18 32 33.4**	**+0.6**
	1.1nm,0.6s,baz=141,slow=8.6,SNR=5.7						
ZALV	**Zalesovo Beam**	**63.13 324**		P	**P**	**18 34 19.4**	**0.0**
	1.0nm,0.5s,baz=120,slow=9.5,SNR=5.9						
MKAR	**Makanchi Array**	**63.16 316**		P	**P**	**18 34 20.4**	**+0.6**
	0.8nm,0.5s,baz=90,slow=8.5,SNR=17						
KDAK	**Kodiak Island**	**63.48**	**31**	P	**P**	**18 34 21.4**	**-0.1**
	2.6nm,0.8s,baz=336,slow=10.0,SNR=3.2						
KURK	**Kurchatov**	**66.18 320**		*e*P	**P**	**18 34 38.7**	**-0.6**
	53nm,0.9s						
KURBB	**Kurchatov Arra**	**66.22 320**		P	**P**	**18 34 39.4**	**-0.2**
	6.1nm,0.9s,baz=101,slow=7.0,SNR=46						
ILAR	**Eielson Array**	**68.20**	**25**	P	**P**	**18 34 51.2**	**-0.6**
	1.4nm,0.6s,baz=249,slow=5.6,SNR=17						
BVAR	**Borovoye Array**	**71.49 322**		P	**P**	**18 35 12.4**	**+0.1**
	3.8nm,0.6s,baz=104,slow=8.3,SNR=33						
BRVK	**Borovoye**	**71.55 322**		*e*P	**P**	**18 35 12.1**	**-0.6**
	10nm,0.9s						
INK	**Inuvik**	**74.09**	**22**	P	**P**	**18 35 27.6**	**+0.2**
	0.8nm,0.5s,baz=264,slow=7.9,SNR=4.3						
YKA	**Yellowknife Ar**	**82.41**	**28**	P	**P**	**18 36 14.0**	**+0.5**
	1.0nm,0.8s,baz=286,slow=5.2,SNR=9.3						
NVAR	**Mina Array Bea**	**85.73**	**52**	P	**P**	**18 36 32.6**	**+1.3**
	0.4nm,0.5s,baz=254,slow=6.5,SNR=3.9						
FINES	**FINESS Array B**	**92.40 336**		P	**P**	**18 37 00.3**	**-1.7**
	0.6nm,0.5s,baz=90,slow=5.7,SNR=6.6						
DBIC	**Dimbokro**	**145.69 303**		PKPbc	**PKPdf**	**18 43 29.8**	**-1.3**
	2.4nm,0.6s,baz=39,slow=5.2,SNR=4.1						
LPAZ	**La Paz**	**146.06 100**		PKPbc	**PKPbc**	**18 43 33.4**	**+0.1**
	1.4nm,0.5s,baz=307,slow=0.7,SNR=7.1						

*ATA **21** 18:40:10.7±1.1, 39°.15N×42°.27E, h7km±31km, ML2.7, MW2.8*
*ISK **21** 18:40:11.3, 39°.15N×42°.30E, h4km, ML1.9/4*
*ISCJB **21** 18:40:12.3±0.5, 39°.16N±0°.03×42°.27E±0°.04, h6km±7km, Error ellipse: s-maj=5.3km s-min=4.4km az=42.7*
*CSEM **21** 18:40:12.0±0.2, 39°.17N×42°.25E, h5km, ML2.6, Error ellipse: s-maj=5.3km s-min=4.0km az=115.0*
*DDA **21** 18:40:12.0, 39°.19N×42°.24E, h7km, Ml2.6*
ISC 21 18:40:12.2±0.9,**39°.17N**±0°.02×**42°.27E**±0°.03,**h11**km±9km,
n23,σ0**57**/39,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKAR	**Karacoban**	**0.18 298**		*e*P	**Pg**	**18 40 15.4**	**-0.8**
EKAR				IAML		18 40 26.8	
	comp=Z,93nm,0.5s						
EKAR	**Karacoban**	**0.18 298**		*i* P	**Pg**	**18 40 15.3**	**-0.9**
EKAR				*i* S	**Sg**	**18 40 20.1**	**+1.0**
EKAR	**Karacoban**	**0.18 298**		P	**Pg**	**18 40 15.3**	**-0.9**
EKAR				S	**Sg**	**18 40 20.1**	**+1.0**
TUTA	**Tutak**	**0.48**	**62**	*e*P	**Pg**	**18 40 20.8**	**-1.0**
TUTA				*e*S	**Sg**	**18 40 28.6**	**+0.4**
TUTA	**Tutak**	**0.48**	**62**	*i* P	**Pg**	**18 40 21.5**	**-0.3**
TUTA				*i* S	**Sb**	**18 40 29.4**	**-0.7**
TUTA	**Tutak**	**0.48**	**62**	P	**Pg**	**18 40 21.5**	**-0.3**
TUTA				S	**Sb**	**18 40 29.4**	**-0.7**
ADCV	**BITLIS_Adilcev**	**0.51 135**		*i* P	**Pg**	**18 40 22.2**	**0.0**
ADCV				*i* S	**Sb**	**18 40 30.8**	**0.0**
ADCV	**BITLIS_Adilcev**	**0.51 135**		P	**Pg**	**18 40 22.2**	**0.0**
ADCV				S	**Sb**	**18 40 30.8**	**0.0**
GURO	**Guroymak-BITLI**	**0.65 196**		PG	**Pg**	**18 40 24.2**	**-0.6**
GURO				SG	**Sg**	**18 40 33.5**	**+0.2**
GURO	**Guroymak-BITLI**	**0.65 196**		*e*Pg	**Pg**	**18 40 24.2**	**-0.6**
GURO				*e*Sg	**Sg**	**18 40 33.5**	**+0.2**
AGRB	**Hanur-Agry**	**0.69**	**54**	PG	**Pg**	**18 40 25.1**	**-0.6**
AGRB				SG	**Sb**	**18 40 35.4**	**-0.7**
AGRB	**Hanur-Agry**	**0.69**	**54**	*e*Pg	**Pg**	**18 40 25.1**	**-0.6**
AGRB				*e*Sg	**Sb**	**18 40 35.4**	**-0.7**
EATA	**Eleskirt**	**0.71**	**14**	*e*P	**Pg**	**18 40 26.0**	**0.0**
EATA				*e*S	**Sb**	**18 40 36.6**	**-0.2**
EATA				IAML		18 40 38.8	
	comp=Z,10nm,0.2s						
EATA	**Eleskirt**	**0.71**	**14**	*i* P	**Pg**	**18 40 25.8**	**-0.3**
EATA				*i* S	**Sb**	**18 40 37.0**	**+0.2**
EATA	**Eleskirt**	**0.71**	**14**	P	**Pg**	**18 40 25.8**	**-0.3**
EATA				S	**Sb**	**18 40 37.0**	**+0.2**
BNGL	**BINGOL**	**0.90 256**		*e*P	**Pg**	**18 40 28.5**	**-1.0**
BNGL				*e*S	**Sg**	**18 40 41.8**	**+0.6**
BNGL				IAML		18 40 45.7	
	comp=Z,43nm,0.3s						
BNGL	**BINGOL**	**0.90 256**		*i* P	**Pb**	**18 40 30.3**	**+0.4**
BNGL				*i* S	**Sb**	**18 40 41.9**	**0.0**
ERZM	**Erzurum**	**1.01 317**		*e*P	**Pg**	**18 40 31.5**	**-0.1**
YEDI	**Yedisu-Bingol**	**1.36 282**		PN	**Pb**	**18 40 38.1**	**+0.3**
YEDI	**Yedisu-Bingol**	**1.36 282**		*e*Pn	**Pb**	**18 40 38.1**	**+0.3**
SENK	**Senkaya-Erzuru**	**1.39**	**3**	PN	**Pb**	**18 40 38.5**	**+0.2**
SENK	**Senkaya-Erzuru**	**1.39**	**3**	*e*Pn	**Pb**	**18 40 38.5**	**+0.2**
DIGO	**Kars**	**1.51**	**34**	*e*P	**Pg**	**18 40 40.7**	**-0.5**

*ISCJB **21** 19:01:07.6±0.5, 6°.27N±0°.04×126°.72E±0°.07, h143km±5km, mb4.0/18, Error ellipse: s-maj=12.2km s-min=5.7km az=157.8*
*MAN **21** 19:01:07.1, 6°.23N×126°.64E, h166km, mb4.8, ML3.8, MS3.7*
*IDC **21** 19:01:08.2±1.2, 6°.33N×126°.84E, h133km±9km, mb3.8/16, mb1 3.9/19, mb1mx3.6/57, mbtmp4.2/19, Error ellipse: s-maj=28.2km s-min=8.7km az=61.0*
*NEIC **21** 19:01:08.1±1.0, 6°.38N×126°.84E, h130km±9km, mb4.6/2, Error ellipse: s-maj=17.6km s-min=6.9km az=62.0*
*DJA **21** 19:01:10.9±1.2, 6°N±10°×12°7E±1°1, h78km±17km, M4.5/6, mB4.5/1, mb4.5/6, MLv4.5/5, Mw(mB)3.7/1*
ISC 21 19:01:08.2±0.8,**6°.24N**±0°.06×**126°.79E**±0°.09,**h134**km±8km,
n37,σ1**9**47/48,**mb4.1**/18,**1C-1D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.46 305**		P	**Pn**	**19 01 35.0**	**-1.1**
	370nm,0.3s,baz=126,slow=0.7,SNR=33						
DAV				S	**Sn**	**19 01 57.2**	**-0.2**
	252nm,0.3s,baz=257,slow=22,SNR=13						
DMPH	**Davao City--Mi**	**1.52 303**		*e*P	**Pn**	**19 01 40.5**	**+3.7**
DMPH				*e*S	**Sn**	**19 02 01.4**	**+2.7**
SKMP	**Bagumbayan, Su**	**2.25 277**		*e*P	**Pn**	**19 01 44.8**	**-0.7**
SKMP				*e*S	**Sn**	**19 02 12.5**	**-1.6**
BUKP	**Musuan**	**2.36 314**		*e*P	**Pn**	**19 01 45.8**	**-1.1**
BUKP				*e*S	**Sn**	**19 02 14.9**	**-1.8**
CTBH	**Cotabato--PC H**	**2.71 291**		*e*P	**Pn**	**19 01 50.1**	**-1.1**
CTBH				*e*S	Sn	19 02 15.3	-9.0
BUTP	**Butuan**	**2.95 337**		*e*P	**Pn**	**19 01 54.0**	**-0.3**
BUTP				*e*S	**Sn**	**19 02 31.0**	**+1.1**
CGP	**Cagayan de Oro**	**3.02 317**		*e*P	**Pn**	**19 01 55.4**	**0.0**
CGP				*e*S	**Sn**	**19 02 32.3**	**+0.6**
PAGZ	**Pagadian**	**3.74 295**		*e*P	**Pn**	**19 02 04.2**	**-0.5**
PAGZ				*e*S	**Sn**	**19 02 46.9**	**-1.4**
MSLP	**Maasin**	**4.31 334**		*e*P	**Pn**	**19 02 11.1**	**-1.2**
OCLP	**Ormoc**	**5.24 336**		*e*P	**Pn**	**19 02 25.3**	**+0.6**
KMSI	**Cibinong**	**6.29 207**		P	**Pn**	**19 02 39.6**	**+0.9**
LBMI	**Labuha**	**6.87 174**		P	**Pn**	**19 02 46.9**	**+0.3**
	26nm,0.6s,0.2nm						
MRSI	**Marisa**	**7.50 220**		P	**Pn**	**19 02 56.5**	**+1.6**
SIJI	**Sorong**	**8.36 148**		P	**Pn**	**19 03 07.4**	**+0.8**
	3.1nm,0.3s,baz=153,slow=21,SNR=8.1						
SIJI				S	**Sn**	**19 04 34.5**	**-5.0**
	1.2nm,0.3s,baz=336,slow=20,SNR=4.7						
NLAI	**Namlea**	**9.42 178**		P	**Pn**	**19 03 19.4**	**-1.4**
JAY	**Jayapura**	**16.39 122**		P	**P**	**19 04 51.3**	**+0.2**
	0.4nm,0.3s,baz=149,slow=4.0,SNR=4.1						
BATI	**Baumata**	**16.63 191**		P	**P**	**19 04 56.4**	**+2.6**
	5.1nm,0.3s,baz=56,slow=3.1,SNR=9.0						
WRAB	**Tennant Creek**	**27.05 164**		*e*P	**P**	**19 06 41.7**	**+3.4**
	3.6nm,0.4s						
WRA	**Warramunga Arr**	**27.06 164**		P	**P**	**19 06 38.5**	**+0.2**
	1.5nm,0.4s,baz=345,slow=11,SNR=40						
CMAR	**Chiang Mai Arr**	**29.73 297**		P	**P**	**19 07 02.4**	**+0.3**
	0.5nm,0.6s,baz=98,slow=6.4,SNR=6.8						
ASAR	**Alice Springs**	**30.53 167**		P	**P**	**19 07 09.2**	**+0.1**
	0.6nm,0.3s,baz=341,slow=7.2,SNR=34						
CTA	**Charters Tower**	**32.42 144**		P	**P**	**19 07 26.2**	**+0.5**
	2.6nm,0.8s,baz=349,slow=17,SNR=2.4						
NWAO	**Narrogin (SRO)**	**40.00 193**		P	**P**	**19 08 30.9**	**+1.0**
	2.7nm,0.5s,baz=180,slow=4.0,SNR=3.8						
STKA	**Stephens Creek**	**40.45 160**		P	**P**	**19 08 34.6**	**+1.0**
	2.2nm,0.4s,baz=338,slow=12,SNR=6.4						
SONM	**Songino Array**	**44.96 341**		P	**P**	**19 09 10.7**	**+0.7**
	0.9nm,0.7s,baz=157,slow=8.8,SNR=4.5						
MKAR	**Makanchi Array**	**55.55 324**		P	**P**	**19 10 30.0**	**+0.3**
	3.6nm,0.6s,baz=116,slow=7.8,SNR=41						
MKAR				PcP	**PcP**	**19 11 27.0**	**-0.9**
	1.1nm,0.9s,baz=119,slow=3.8,SNR=4.1						
ZALV	**Zalesovo Beam**	**58.40 332**		P	**P**	**19 10 48.8**	**-0.8**
	0.9nm,0.3s,baz=128,slow=6.2,SNR=6.1						
KURK	**Kurchatov**	**59.68 327**		P	**P**	**19 10 58.5**	**+0.1**
KURK				PcP	**PcP**	**19 11 43.6**	**-0.5**
KURBB	**Kurchatov Arra**	**59.68 327**		P	**P**	**19 10 58.5**	**0.0**
	3.7nm,0.5s,baz=129,slow=6.8,SNR=45						
KURBB				PcP	**PcP**	**19 11 43.6**	**-0.5**
	0.3nm,0.4s,baz=126,slow=4.7,SNR=2.6						
BVAR	**Borovoye Array**	**65.27 326**		P	**P**	**19 11 35.3**	**-0.3**
	2.8nm,0.5s,baz=105,slow=5.0,SNR=31						
BRVK	**Borovoye**	**65.34 326**		*e*P	**P**	**19 11 35.6**	**-0.4**
	14nm,0.8s						
AKTO	**Aktyubinsk**	**71.75 321**		P	**P**	**19 12 15.7**	**-0.2**
	1.2nm,0.5s,baz=88,slow=14,SNR=5.2						
ILAR	**Eielson Array**	**82.83**	**26**	P	**P**	**19 13 17.2**	**-0.1**
	0.4nm,0.6s,baz=243,slow=5.5,SNR=5.4						
ARCES	**ARCESS Array B**	**88.13 340**		P	**P**	**19 13 42.2**	**-1.2**
	0.9nm,0.4s,baz=86,slow=5.8,SNR=7.0						
BRTR	**Keskin Array B**	**88.47 310**		P	**P**	**19 13 45.3**	**-0.7**
	0.4nm,0.6s,baz=50,slow=2.3,SNR=3.4						
FINES	**FINESS Array B**	**89.66 332**		P	**P**	**19 13 49.5**	**-1.3**
	0.7nm,0.5s,baz=46,slow=4.4,SNR=6.8						
TORD	**Torodi Ar. Bea**	**122.16 290**		PKP	**PKPdf**	**19 19 48.7**	**+0.5**
	0.2nm,0.6s,baz=54,slow=1.5,SNR=4.5						

*ISCJB **21** 19:17:50.6±0.9, 32°.2N±0°.1×105°.1E±0°.3, h14km, mb3.5/7, Error ellipse: s-maj=34.2km s-min=13.8km az=161.5*
*IDC **21** 19:17:50.6±1.0, 32°.19N×105°.02E, h0km, mb3.5/7, mb1 3.6/8, mb1mx3.4/72, mbtmp3.5/8, ML4.2/1, Error ellipse: s-maj=72.2km s-min=17.0km az=59.0*
ISC 21 19:17:52.8±1.2,**32°.2N**±0°.1×**105°.0E**±0°.3,**h14**km,**n8,**
σ0**70**/8,**mb3.6**/7,**Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.72 203**		Pn	**Pn**	**19 21 20.9**	**+0.2**
	0.3nm,0.3s,baz=6.2,slow=8.5,SNR=16						
MKAR	**Makanchi Array**	**22.68 317**		P	**P**	**19 22 53.2**	**-0.5**
	0.3nm,0.6s,baz=119,slow=12,SNR=3.8						
ZALV	**Zalesovo Beam**	**26.09 332**		P	**P**	**19 23 26.9**	**+1.0**
	0.4nm,0.3s,baz=129,slow=11,SNR=2.6						
KURBB	**Kurchatov Arra**	**26.84 321**		P	**P**	**19 23 33.4**	**+0.7**
	0.1nm,0.3s,baz=133,slow=8.9,SNR=3.2						
FINES	**FINESS Array B**	**57.09 326**		P	**P**	**19 27 38.2**	**-0.1**
	0.8nm,0.6s,baz=88,slow=7.1,SNR=5.5						
WRA	**Warramunga Arr**	**58.97 147**		P	**P**	**19 27 52.2**	**+0.1**
	0.3nm,0.5s,baz=329,slow=9.1,SNR=9.8						
ASAR	**Alice Springs**	**62.04 150**		P	**P**	**19 28 12.6**	**-0.4**
	0.2nm,0.5s,baz=336,slow=6.7,SNR=8.7						
HFS	**Hagfors**	**63.29 326**		P	**P**	**19 28 20.3**	**-0.6**
	1.9nm,1.1s,baz=96,slow=9.1,SNR=3.3						

*ISK **21** 19:25:26.9, 34°.17N×26°.21E, h7km, MD3.9/2*
*ATH **21** 19:25:28.4, 34°.14N×26°.21E, h13km±2km, ML3.0/4, Error ellipse: s-maj=4.4km s-min=1.7km az=328.0*
*CSEM **21** 19:25:29.6±0.4, 34°.22N×26°.25E, h10km, ML3.0, Error ellipse: s-maj=9.9km s-min=4.5km az=178.0*
*THE **21** 19:25:31.1, 34°.30N×26°.18E, h0km±2km, ML3.0/4, Error ellipse: s-maj=4.2km s-min=1.2km az=166.0*
*IDC **21** 19:25:35.8±1.9, 34°.42N×26°.06E, h64km±18km, mb3.5/9, mb1 3.5/13, mb1mx3.3/69, mbtmp3.7/13, MS2.6/4, Ms1 2.7/4, ms1mx2.2/49, Error ellipse: s-maj=22.2km s-min=15.5km az=177.0*
*DDA **21** 19:25:49.7, 38°.33N×27°.12E, h9km, Ml2.9*
ISC 21 19:25:29.3±1.6,**34°.19N**±0°.06×**26°.22E**±0°.03,**h16**km±9km,
n91,σ1**9**38/114,**mb3.8**/9,**Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.93 360**		P	**Pb**	**19 25 46.4**	**-0.6**
ZKR				S	**Sn**	**19 26 00.2**	**-0.4**
ZKR				AML	AML	19 26 08.8	
	comp=E,2422μm,0.5s						
ZKR				AML	AML	19 26 16.4	
	comp=N,1017μm,0.5s						
ZKR	**Zakros**	**0.93 360**		P	**Pb**	**19 25 46.6**	**-0.4**
ZKR				S	**Sn**	**19 26 00.3**	**-0.4**
ZKR	**Zakros**	**0.93 360**		P	**Pb**	**19 25 46.6**	**-0.4**
ZKR				S	**Sn**	**19

AYDB	**Zeytinkoy-Aydi**	**3.99**	**19**	*e*Pn		**Pn**	**19 26 30.8**	**+0.9**
GOLH	**Golhisar**	**4.08**	**41**	*i* P		**Pn**	**19 26 32.0**	**+0.9**
GOLH				*i* S		**Sn**	**19 27 16.3**	**-2.3**
GOLH	**Golhisar**	**4.08**	**41**	P		**Pn**	**19 26 32.0**	**+0.9**
GOLH				S		**Sn**	**19 27 16.3**	**-2.3**
KORT	**Korkueli**	**4.38**	**49**	PN		**Pn**	**19 26 36.3**	**+1.0**
KORT	**Korkueli**	**4.38**	**49**	*i* P		**Pn**	**19 26 39.1**	**+3.8**
KORT	**Korkueli**	**4.38**	**49**	*e*Pn		**Pn**	**19 26 36.3**	**+1.0**
KORT	**Korkueli**	**4.38**	**49**	P		**Pn**	**19 26 39.1**	**+3.8**
ITM	**Ithomi**	**4.60**	**312**	PN		**Pn**	**19 26 39.2**	**+1.0**
ITM	**Ithomi**	**4.60**	**312**	*e*Pn		**Pn**	**19 26 39.2**	**+1.0**
AGG	**Agios Georgios**	**5.75**	**328**	PN		**Pn**	**19 26 55.6**	**+1.6**
AGG	**Agios Georgios**	**5.75**	**328**	*e*Pn		**Pn**	**19 26 55.6**	**+1.6**
MMAI	**Mount Meron Ar**	**7.75**	**96**	P		**Pn**	**19 27 22.9**	**+1.5**
	comp=E,1.0nm,0.3s,baz=271,slow=12,SNR=5.6							
MMAI				S		**Sn**	**19 28 46.4**	**-2.5**
	comp=E,1.6nm,0.3s,baz=278,slow=32,SNR=5.8							
BRTR	**Keskin Array B**	**8.11**	**45**	P		**Pn**	**19 27 28.9**	**+2.5**
	comp=E,0.1nm,0.3s,baz=222,slow=11,SNR=3.8							
EIL	**Elat**	**8.68**	**119**	P		Pn	19 27 41.2	+7.1
	comp=E,0.2nm,0.3s,baz=267,slow=17,SNR=4.5							
EIL				S		**Sn**	**19 29 11.3**	**-0.3**
	comp=E,0.5nm,0.3s,baz=282,slow=19,SNR=3.4							
EIL				LR		LR	19 32 56.1	
	comp=E,29nm,18.8s,baz=48,slow=49							
ASF	**Jabal al Asfar**	**9.17**	**100**	LR		LR	19 32 13.5	
	comp=E,106nm,19.6s,baz=102,slow=42							
AKASG	**Malin Array Be**	**16.65**	**7**	P		**Pn**	**19 29 23.2**	**+1.4**
	comp=E,1.0nm,0.3s,baz=199,slow=11,SNR=2.6							
GERES	**GERESS Array B**	**17.36**	**331**	P		**Pn**	**19 29 30.7**	**-0.1**
	comp=E,0.1nm,0.3s,baz=140,slow=14,SNR=2.8							
DAVOX	**Davos/Dischmat**	**17.64**	**320**	LR		LR	19 37 36.2	
	comp=E,19nm,18.6s,baz=83,slow=42							
ESDC	**Sonseca Array**	**24.68**	**292**	P		**P**	**19 30 49.5**	**+0.1**
	comp=E,0.7nm,0.5s,baz=80,slow=8.7,SNR=6.0							
HFS	**Hagfors**	**27.22**	**346**	P		**P**	**19 31 09.3**	**-2.9**
	comp=E,0.5nm,0.5s,baz=127,slow=11,SNR=5.4							
FINES	**FINESS Array B**	**27.27**	**360**	P		**P**	**19 31 10.3**	**-2.3**
	comp=E,1.6nm,0.8s,baz=180,slow=9.6,SNR=5.7							
NOA	**NORSAR Array B**	**28.57**	**345**	LR		LR	19 43 52.7	
	comp=E,7.4nm,20.1s,baz=245,slow=39							
EKA	**Eskdalemuir Ar**	**29.34**	**325**	P		**P**	**19 31 30.7**	**-0.4**
	comp=E,2.1nm,0.9s,baz=116,slow=11,SNR=3.2							
TORD	**Torodi Ar. Bea**	**30.57**	**233**	P		**P**	**19 31 43.1**	**+0.8**
	comp=E,0.5nm,0.7s,baz=28,slow=8.8,SNR=4.6							
KURBB	**Kurchatov Arra**	**41.06**	**50**	P		**P**	**19 33 12.8**	**+0.9**
	comp=E,1.9nm,0.7s,baz=276,slow=8.8,SNR=19							
MKAR	**Makanchi Array**	**43.59**	**56**	P		**P**	**19 33 33.6**	**+1.0**
	comp=E,1.6nm,0.6s,baz=278,slow=6.7,SNR=23							
ZALV	**Zalesovo Beam**	**45.05**	**45**	P		**P**	**19 33 44.1**	**0.0**
	comp=E,1.1nm,0.5s,baz=269,slow=9.6,SNR=5.4							
SONM	**Songino Array**	**59.43**	**50**	P		**P**	**19 35 32.5**	**+1.3**
	comp=E,0.2nm,0.3s,baz=302,slow=8.3,SNR=2.3							

*ATA **21** 19:35:18.7±1.4,38°.91N×43°.45E,h24km±13km,ML2.7, MW2.8*
*ISCJB **21** 19:35:19.2±0.8,38°.90N±0°.04×43°.55E±0°.06,h10km±5km, Error ellipse: s-maj=9.6km s-min=5.2km az=41.1*
*CSEM **21** 19:35:19.9,39°.04N×43°.50E,h8km,ML2.7*
*DDA **21** 19:35:19.9,39°.04N×43°.50E,h8km,Ml2.7*

ISC 21 19:35:19.5±0.9,38°.97N±0°.04×43°.49E±0°.03,h10km±6km, n19,σ0°.88/31,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VMUR	**Van-Muradiye**	**0.07**	**72**	*i* P	**Pg**	**19 35 21.4**	**-0.6**
VMUR				*i* S	**Sg**	**19 35 24.4**	**+0.7**
VMUR	**Van-Muradiye**	**0.07**	**72**	P	**Pg**	**19 35 21.4**	**-0.6**
VMUR				S	**Sg**	**19 35 24.4**	**+0.7**
CLDR	**Caldiran**	**0.37**	**62**	*i* P	Pg	19 35 20.3	-6.7
CLDR				*i* S	**Sg**	**19 35 31.8**	**-0.2**
CLDR	**Caldiran**	**0.37**	**62**	P	Pg	19 35 20.3	-6.7
CLDR				S	**Sg**	**19 35 31.8**	**-0.2**
DYDN	**Diyadin**	**0.59**	**15**	*e*P	**Pb**	**19 35 32.7**	**+0.6**
DYDN	**Diyadin**	**0.59**	**15**	*i* S	**Sb**	**19 35 39.8**	**-0.9**
DYDN	**Diyadin**	**0.59**	**15**	S	**Sb**	**19 35 39.8**	**-0.9**
ADCV	**BITLIS_Adilcev**	**0.62**	**255**	*i* P	**Pg**	**19 35 32.0**	**+0.4**
ADCV				*i* S	**Sb**	**19 35 42.4**	**+1.0**
ADCV	**BITLIS_Adilcev**	**0.62**	**255**	P	**Pg**	**19 35 32.0**	**+0.4**
ADCV				S	**Sb**	**19 35 42.4**	**+1.0**
TUTA	**Tutak**	**0.68**	**310**	*e*P	**Pg**	**19 35 32.4**	**-0.4**
TUTA				*e*S	**Sb**	**19 35 44.3**	**+1.1**
TUTA				IAML		19 35 48.5	
	comp=Z,38nm,0.2s						
TUTA	**Tutak**	**0.68**	**310**	*i* P	**Pb**	**19 35 33.3**	**-0.3**
TUTA				*i* S	**Sg**	**19 35 41.1**	**-0.7**
TUTA	**Tutak**	**0.68**	**310**	P	**Pb**	**19 35 33.3**	**-0.3**
TUTA				S	**Sg**	**19 35 41.1**	**-0.7**
GEVA	**Gevas**	**0.74**	**207**	*e*P	**Pg**	**19 35 32.0**	**-1.8**
GEVA				*e*S	**Sg**	**19 35 43.2**	**-0.3**
GEVA				IAML		19 35 47.8	
	comp=Z,11nm,0.4s						
IGDI	**IGDIR**	**1.01**	**27**	*e*P	**Pn**	**19 35 39.8**	**0.0**
IGDI				*i* Pg	**Pb**	**19 35 40.2**	**+1.1**
IGDI				*e*S	**Sn**	**19 35 55.2**	**+1.2**
IGDI	**IGDIR**	**1.01**	**27**	*i* P	**Pb**	**19 35 38.5**	**-0.6**
IGDI				*i* S	**Sn**	**19 35 54.0**	**0.0**
EKAR	**Karacoban**	**1.15**	**285**	*e*P	**Pg**	**19 35 39.7**	**-1.9**
EKAR				*e*S	**Sn**	**19 35 58.7**	**+1.0**
EKAR				IAML		19 36 04.3	
	comp=Z,9.0nm,0.5s						
EATA	**Eleskirt**	**1.18**	**319**	*e*P	**Pg**	**19 35 41.6**	**-0.6**
DIGO	**Kars**	**1.45**	**356**	*e*P	**Pg**	**19 35 47.0**	**-0.4**
HOMI	**Horasan**	**1.63**	**312**	*e*P	**Pg**	**19 35 50.1**	**-0.8**

*IDC **21** 19:38:09.7±3.4,36°.24S×179°.43E,h0km,mb3.4/2, mb1 3.6/3,mb1mx3.5/44,mbtmp3.4/3,ML3.1/1,MS2.2/1, Ms1 2.2/1,ms1mx2.0/20, Error ellipse: s-maj=77.1km s-min=45.0km az=122.0*
*WEL **21** 19:38:15.2±0.9,37°.5±6°.×18°.0E±°.,h33km,ML3.6/15*

ISC 21 19:38:09.3±2.4,36°.55S±0°.07×179°.7E±0°.1,h4km±12km, n23,σ1°.32/41,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.50**	**227**	P	**Pn**	**19 38 37.1**	**0.0**
WMGZ	**Waiomatatini S**	**1.62**	**218**	P	**Pg**	**19 38 40.5**	**0.0**
PKGZ	**Pakihiroa**	**1.85**	**244**	P	**Pb**	**19 38 43.3**	**-0.5**
PKGZ				S	**Sn**	**19 39 05.5**	**-0.5**
PUZ	**Puketiti**	**1.90**	**217**	P	**Pn**	**19 38 44.2**	**+1.6**
PUZ				P	**Pb**	**19 38 44.0**	**-0.6**
PUZ				S	**Sn**	**19 39 06.6**	**-0.5**
HAZ	**Te Kaha**	**1.94**	**231**	P	**Pg**	**19 38 45.9**	**-0.6**
HAZ				S	**Sb**	**19 39 09.8**	**-0.1**
TWGZ	**Tauwhareparae**	**2.12**	**220**	P	**Pb**	**19 38 48.0**	**-0.4**
TWGZ				P	**Pb**	**19 38 48.0**	**-0.4**
TWGZ				S	**Sn**	**19 39 13.5**	**+1.1**
RUGZ	**Raukumara Rang**	**2.14**	**228**	P	**Pb**	**19 38 48.0**	**-0.7**
RUGZ				S	**Sn**	**19 39 14.6**	**+1.6**
CNGZ	**Carnagh Statio**	**2.26**	**211**	P	**Pn**	**19 38 49.1**	**+1.5**
CNGZ				S	**Sn**	**19 39 16.6**	**+0.6**
MWZ	**Matawai**	**2.48**	**223**	P	**Pn**	**19 38 51.8**	**+1.3**
MWZ				S	**Sn**	**19 39 21.0**	**-0.3**
RAGZ	**Rawiri**	**2.65**	**222**	P	**Pn**	**19 38 54.9**	**+1.9**
RAGZ				S	**Sn**	**19 39 25.4**	**-0.3**
URZ	**Urewera**	**2.67**	**230**	Pn	**Pn**	**19 38 54.4**	**+1.3**
	2.8nm,0.3s,baz=233,slow=1.7,SNR=13						
URZ				Sn	**Sn**	**19 39 25.8**	**-0.1**
	5.0nm,0.3s,baz=218,slow=2.3,SNR=12						
URZ				LR	LR	19 40 00.8	
	comp=Z,41nm,20.1s,baz=14,slow=41						
URZ	**Urewera**	**2.67**	**230**	P	**Pn**	**19 38 54.5**	**+1.3**
URZ				S	**Sn**	**19 39 25.8**	**-0.1**
SNGZ	**Shannon Statio**	**2.90**	**219**	P	**Pn**	**19 38 59.2**	**+2.7**
SNGZ				S	**Sn**	**19 39 31.0**	**-0.9**
RTZ	**Ruatahuna**	**2.98**	**225**	P	**Pn**	**19 38 59.2**	**+1.7**
RTZ				S	**Sn**	**19 39 33.6**	**-0.1**
MUGZ	**Murupara**	**3.01**	**229**	P	**Pn**	**19 38 59.8**	**+1.9**
MUGZ				S	**Sn**	**19 39 33.9**	**-0.6**
RAHZ	**Arahi**	**3.14**	**220**	P	**Pn**	**19 39 02.1**	**+2.5**
RAHZ				S	**Sn**	**19 39 37.4**	**-0.1**
KUZ	**Kuaotunu**	**3.20**	**265**	P	**Pn**	**19 39 02.0**	**+1.6**
KUZ				S	**Sn**	**19 39 38.0**	**-1.0**
MTHZ	**Maungataniwha**	**3.22**	**224**	P	**Pn**	**19 39 02.2**	**+1.4**
MTHZ				S	**Sn**	**19 39 39.6**	**-0.1**
MKAZ	**Moumakai**	**3.67**	**260**	P	**Pn**	**19 39 09.5**	**+2.5**
WCZ	**Waipu Caves**	**4.36**	**276**	P	**Pn**	**19 39 19.0**	**+2.6**
ASAR	**Alice Springs**	**41.28**	**275**	P	**P**	**19 45 55.5**	**-0.5**
	0.4nm,0.6s,baz=120,slow=8.0,SNR=4.5						
WRA	**Warramunga Arr**	**42.83**	**280**	P	**P**	**19 46 06.9**	**-1.8**
	0.2nm,0.5s,baz=120,slow=8.2,SNR=2.6						
FINES	**FINESS Array B**	**150.07**	**335**	PKPbc	**PKPbc**	**19 58 00.1**	**-0.4**
	1.5nm,0.8s,baz=111,slow=4.3,SNR=3.3						

*ISCJB **21** 19:43:18.8±0.5,50°.24N±0°.03×18°.70E±0°.03,h0km, Error ellipse: s-maj=4.6km s-min=2.4km az=6.5*
*IPEC **21** 19:43:19.9±0.2,50°.19N×18°.80E,h2km±2km,ML1.7/3, Error ellipse: s-maj=2.5km s-min=1.1km az=166.0*
*CSEM **21** 19:43:19.5±0.3,50°.24N×18°.73E,h1km,ML2.7/9, Error ellipse: s-maj=6.4km s-min=3.0km az=16.0*
*PRU **21** 19:43:20.4,50°.23N×18°.71E,h0km*
*WAR **21** 19:43:20.3,50°.21N×18°.73E,h1km,Mw2.5*

ISC 21 19:43:19.9±0.8,50°.20N±0°.03×18°.77E±0°.02,h0km,n41, σ0°.66/67,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHZP	**Chorzow**	**0.17**	**58**	*e*Pg	**Pg**	**19 43 23.2**	**+0.1**
CHZP				*e*Sg	**Sg**	**19 43 25.5**	**+0.1**
CHZP	**Chorzow**	**0.17**	**58**	*e*Pg	**Pg**	**19 43 23.2**	**+0.1**
CHZP				*e*Sg	**Sg**	**19 43 25.5**	**+0.1**
OKC	**Ostrava-Krasne**	**0.54**	**228**	*e*PG	**Pg**	**19 43 31.0**	**+0.8**
OKC				*e*SG	**Sg**	**19 43 37.0**	**-0.1**
	comp=Z,20nm,0.5s						
OKC	**Ostrava-Krasne**	**0.54**	**228**	Pg	**Pg**	**19 43 31.0**	**+0.8**
OKC				Sg	**Sg**	**19 43 37.0**	**-0.1**
	20nm,0.5s						
OJC	**Ojcow**	**0.66**	**88**	*e*Pg	**Pg**	**19 43 32.2**	**-0.4**
OJC				*e*Sg	**Sg**	**19 43 41.4**	**+0.2**
OJC	**Ojcow**	**0.66**	**88**	*e*Pg	**Pg**	**19 43 32.2**	**-0.4**
OJC				*e*Sg	**Sg**	**19 43 41.4**	**+0.2**
OJC	**Ojcow**	**0.66**	**88**	*e*Pg	**Pg**	**19 43 32.2**	**-0.4**
MORC	**Moravsky Berou**	**0.90**	**242**	*e*Pg	**Pg**	**19 43 37.3**	**+0.3**
MORC				*e*Sg	**Sg**	**19 43 48.5**	**-0.1**
	13nm,0.3s,baz=62						
MORC	**Moravsky Berou**	**0.90**	**242**	*e*PG	**Pg**	**19 43 37.4**	**+0.4**
MORC				*e*SG	**Sg**	**19 43 48.6**	**-0.1**
MORC	**Moravsky Berou**	**0.90**	**242**	*e*Pg	**Pg**	**19 43 37.4**	**+0.4**
	baz=62						
MORC				*e*Sg	**Sg**	**19 43 48.5**	**-0.1**
	13nm,0.3s,baz=62						
LANS	**Liptovska Anna**	**1.14**	**156**	*e*PG	**Pb**	**19 43 42.5**	**0.0**
LANS				*e*SG	**Sn**	**19 44 00.7**	**+1.1**
LANS	**Liptovska Anna**	**1.14**	**156**	*e*Pg	**Pb**	**19 43 42.5**	**0.0**
LANS				*e*Sg	**Sn**	**19 44 00.7**	**+1.1**
NIE	**Niedzica**	**1.27**	**128**	*e*Pg	**Pg**	**19 43 44.1**	**0.0**
NIE				*e*Sg	**Sn**	**19 44 02.7**	**+0.2**
NIE	**Niedzica**	**1.27**	**128**	*e*Pg	**Pg**	**19 43 44.1**	**0.0**
NIE				*e*Sg	**Sn**	**19 44 02.7**	**+0.2**
NIE	**Niedzica**	**1.27**	**128**	*e*Pg	**Pg**	**19 43 44.1**	**0.0**
NIE				*e*Sg	**Sn**	**19 44 02.8**	**+0.2**
KRLC	**Kraliky**	**1.28**	**265**	*e*SG	**Sg**	**19 43 59.7**	**-1.3**
KRLC	**Kraliky**	**1.28**	**265**	Sg	**Sg**	**19 43 59.7**	**-1.3**
DPC	**Dobruska-Polom**	**1.57**	**276**	*e*PG	**Pn**	**19 43 48.8**	**-0.3**
DPC				*e*SG	**Sn**	**19 44 10.0**	**-0.2**
	comp=Z,16nm,0.6s						
DPC	**Dobruska-Polom**	**1.57**	**276**	Pg	**Pn**	**19 43 48.8**	**-0.3**
DPC				Sg	**Sn**	**19 44 10.0**	**-0.2**
	16nm,0.6s						
VRAC	**Vranov**	**1.67**	**238**	*e*Pn	**Pn**	**19 43 50.3**	**0.0**
VRAC				*e*Sg	**Sn**	**19 44 12.7**	**+0.3**
	6.7nm,0.3s,baz=57						
VRAC	**Vranov**	**1.67**	**238**	*e*PN	**Pn**	**19 43 50.5**	**+0.1**
VRAC				*e*SG	**Sn**	**19 44 12.7**	**+0.3**
VRAC	**Vranov**	**1.67**	**238**	*e*Pn	**Pn**	**19 43 50.4**	**+0.1**
	baz=57						
VRAC				*e*Sg	**Sn**	**19 44 12.7**	**+0.3**
	6.7nm,0.3s,baz=57						
KSP	**Ksiaz**	**1.70**	**293**	*e*Pg	**Pb**	**19 43 52.1**	**0.0**
KSP				*e*Sg	**Sg**	**19 44 14.5**	**-0.1**
KSP	**Ksiaz**	**1.70**	**293**	*e*Pg	**Pb**	**19 43 52.1**	**0.0**
KSP				*e*Sg	**Sg**	**19 44 14.5**	**-0.1**
KSP	**Ksiaz**	**1.70**	**293**	*e*Pg	**Pb**	**19 43 52.1**	**0.0**
KSP				*e*Sg	**Sg**	**19 44 14.5**	**-0.1**
VYHS	**Vyhne**	**1.71**	**178**	*e*PN	**Pn**	**19 43 50.3**	**-0.6**
VYHS				*e*SN	**Sn**	**19 44 12.8**	**-0.6**
VYHS				*e*LG	Lg	19 44 17.1	
VYHS	**Vyhne**	**1.71**	**178**	*e*Pn	**Pn**	**19 43 50.3**	**-0.6**
VYHS				*e*Sn	**Sn**	**19 44 12.8**	**-0.6**
UPC	**Upice**	**1.79**	**281**	*e*SG	**Sg**	**19 44 17.1**	**-0.3**
	comp=Z,8.6nm,0.5s						
UPC	**Upice**	**1.79**	**281**	Sg	**Sg**	**19 44 17.1**	**-0.3**
	8.6nm,0.5s						
KRUC	**Moravsky**	**1.92**	**234**	*e*Pn	**Pn**	**19 43 53.8**	**+0.1**
	baz=53						
KRUC	**Moravsky**	**1.92**	**234**	*e*PN	**Pn**	**19 43 53.9**	**+0.2**
KRUC				*e*SG	**Sb**	**19 44 20.3**	**+0.2**
KRUC	**Moravsky**	**1.92**	**234**	*e*Pn	**Pn**	**19 43 53.8**	**+0.1**
	baz=53						
KRUC				*e*Sg	**Sb**	**19 44 20.3**	**+0.2**
	3.7nm,0.3s,baz=53						
GOPC	**GO Pecny, Ondr**	**2.58**	**265**	*e*SG	**Sb**	**19 44 39.8**	**+0.6**
	comp=Z,7.6nm,0.8s						
GOPC	**GO Pecny, Ondr**	**2.58**	**265**	Sg	**Sb**	**19 44 39.8**	**+0.6**
	7.6nm,0.8s						
PVCC	**Panska Ves**	**2.71**	**279**	*e*SG	**Sg**	**19 44 46.5**	**-0.3**
	comp=Z,7.8nm,0.3s						
PVCC	**Panska Ves**	**2.71**	**279**	Sg	**Sg**	**19 44 46.5**	**-0.3**
	7.8nm,0.3s						
PRU	**Pruhonice**	**2.73**	**267**	*e*SG	**Sb**	**19 44 44.4**	**+0.9**
	comp=Z,5.0nm,0.8s						
PRU	**Pruhonice**	**2.73**	**267**	Sg	**Sb**	**19 44 44.4**	**+0.9**
	5.0nm,0.8s						
BRG	**Berggiesshubel**	**3.15**	**284**	SG	**Sg**	**19 45 01.0**	**0.0**
	2.9nm,0.6s						
KHC	**Kasperske Hory**	**3.54**	**254**	*e*SG	**Sg**	**19 45 10.7**	**-2.7**
	comp=Z,5.2nm,0.5s						
KHC	**Kasperske Hory**	**3.54**	**254**	Sg	**Sg**	**19 45 10.7**	**-2.7**
	5.2nm,0.5s						

IDC 21 19:43:21.3±14.0,23°.83S×68°.40E,h0km,mb3.9/5, mb1 4.0/5,mb1mx3.5/70,mbtmp3.9/5,MS3.5/10, Ms1 3.5/10,ms1mx3.0/63, Error ellipse: s-maj=471.6km s-min=30.9km az=51.0,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08N3	**Diego Garcia H**	**17.56**	**9**	T	T	20 06 41.5	
	baz=200,slow=76,SNR=68						
H08N1	**Diego Garcia H**	**17.57**	**9**	T	T	20 06 44.6	
	baz=200,slow=76,SNR=71						
H08N2	**Diego Garcia H**	**17.58**	**9**	T	T	20 06 45.3	
	baz=200,slow=76,SNR=77						
OPO	**Ambohidratompo**	**20.45**	**281**	LR	LR	19 54 18.2	
	comp=Z,168nm,19.4s,baz=18,slow=32						
KMBO	**Kilima Mbogo**	**37.68**	**302**	LR	LR	20 03 35.4	
	comp=Z,112nm,19.3s,baz=96,slow=32						
BOSA	**Boshof**	**38.84**	**253**	LR	LR	20 04 10.9	
	comp=Z,55nm,19.0s,baz=140,slow=32						
H01W2	**Cape Leeuwin H**	**41.05**	**116**	T	T	20 34 32.9	
	baz=274,slow=75,SNR=11						
H01W3	**Cape Leeuwin H**	**41.05**	**116**	T	T	20 34 27.1	
	baz=274,slow=75,SNR=10						
H01W1	**Cape Leeuwin H**	**41.06**	**116**	T	T	20 34 25.1	
	baz=274,slow=75,SNR=10						
MAW	**Mawson**	**43.91**	**183**	LR	LR	20 05 28.5	
	comp=Z,38nm,20.5s,baz=98,slow=30						
CMAR	**Chiang Mai Arr**	**51.53**	**38**	LR	LR	20 11 19.5	
	comp=Z,8.3nm,19.5s,baz=250,slow=33						
BATI	**Baumata**	**54.24**	**85**	LR	LR	20 14 22.9	
	comp=Z,49nm,19.0s,baz=245,slow=34						
ASAR	**Alice Springs**	**59.44**	**104**	P	P	19 53 26.8	+0.5
	1.2nm,0.9s,baz=248,slow=7.8,SNR=5.4						
ASAR				LR	LR	20 15 02.4	
	comp=Z,82nm,21.9s,baz=266,slow=32						
WRA	**Warramunga Arr**	**60.83**	**100**	P	P	19 53 35.4	-0.5
	1.6nm,1.0s,baz=254,slow=6.7,SNR=4.4						
STKA	**Stephens Creek**	**64.13**	**115**	LR	LR	20 19 22.5	
	comp=Z,48nm,18.3s,baz=205,slow=34						
MKAR	**Makanchi Array**	**71.41**	**10**	P	P	19 54 42.8	-0.4
	0.8nm,0.7s,baz=185,slow=5.6,SNR=6.5						
KURBB	**Kurchatov Arra**	**74.66**	**7**	P	P	19 55 02.8	+0.5
	0.7nm,1.0s,baz=201,slow=6.7,SNR=3.6						
TORD	**Torodi Ar. Bea**	**74.81**	**292**	LR	LR	20 26 15.2	
	comp=Z,31nm,20.1s,baz=195,slow=34						
ZALV	**Zalesovo Beam**	**78.75**	**10**	P	P	19 55 25.2	0.0
	0.5nm,0.4s,baz=180,slow=6.7,SNR=5.0						
KOWA	**Kowa**	**80.33**	**291**	LR	LR	20 29 18.9	
	comp=Z,26nm,18.7s,baz=213,slow=34						

IDC 21 19:44:15.5±3.1,32°.85S×178°.31W,h0km,mb3.8/2, mb1 4.0/3,mb1mx3.7/43,mbtmp3.8/3,ML3.7/1,Error ellipse: s-maj=71.7km s-min=36.7km az=116.0,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.56**	**213**	Pn	Pn	19 45 54.3	+1.0
	1.4nm,0.3s,baz=258,slow=2.9,SNR=6.4						
URZ				Sn	Sn	19 47 07.2	-1.6
	1.9nm,0.3s,baz=106,slow=19,SNR=5.9						
ASAR	**Alice Springs**	**42.77**	**270**	P	P	19 52 14.9	-0.1
	0.6nm,0.5s,baz=106,slow=7.4,SNR=10						
WRA	**Warramunga Arr**	**43.98**	**275**	P	P	19 52 24.7	-0.1
	1.2nm,0.6s,baz=116,slow=7.6,SNR=14						
FINES	**FINESS Array B**	**147.33**	**338**	PKPbc	PKPbc	20 03 59.3	-1.0
	1.9nm,0.8s,baz=73,slow=6.4,SNR=5.4						

*IDC **21** 19:53:04.5±1.2,32°.78S×178°.27W,h0km,mb4.3/3, mb1 4.4/4,mb1mx3.9/42,mbtmp4.3/4,ML4.1/1,MS3.7/1, Ms1 3.7/1,ms1mx2.6/42, Error ellipse: s-maj=53.0km s-min=30.2km az=159.0*
*NEIC **21** 19:53:05.9±0.7,32°.81S×178°.26W,h10km,mb4.8/2, Error ellipse: s-maj=20.5km s-min=14.5km az=134.0*

ISC 21 19:53:11.4±1.1,32°.0S±0°.3×178°.9W±0°.2,h10km,n22, σ2°.80/18,mb4.3/4,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.05**	**206**	Pn	Pn	19 54 43.2	-11
	3.7nm,0.3s,baz=326,slow=1.9,SNR=11						
URZ				Sn	Sn	19 55 56.3	-18
	6.7nm,0.3s,baz=82,slow=22,SNR=6.2						
DZM	**Mont Dzumac**	**16.34**	**304**	LR	LR	20 02 39.9	
	comp=Z,219nm,18.1s,baz=174,slow=33						
RAR	**Rarotonga**	**20.18**	**63**	LR	LR	20 06 28.3	
	comp=Z,14nm,18.4s,baz=234,slow=40						
CTA	**Charters Tower**	**33.31**	**282**	P	**P**	**19 59 50.8**	**+1.2**
	2.6nm,0.5s,baz=128,slow=9.9,SNR=9.3						
CTAO	**Charters Tower**	**33.31**	**282**	*e*P	**P**	**19 59 51.1**	**+1.6**
	22nm,0.6s						
ASAR	**Alice Springs**	**42.26**	**269**	P	**P**	**20 01 04.1**	**-1.1**
	1.3nm,0.5s,baz=112,slow=7.8,SNR=30						
WRAB	**Tennant Creek**	**43.38**	**274**	*e*P	**P**	**20 01 13.0**	**-1.4**
	3.5nm,0.7s						
WRA	**Warramunga Arr**	**43.39**	**274**	P	**P**	**20 01 13.6**	**-0.8**
	3.3nm,0.5s,baz=115,slow=7.6,SNR=54						
VNA3	**Neumayer Olymp**	**76.78**	**176**	P	**P**	**20 05 01.6**	**-1.2**
VNA2	**Neumayer--Watz**	**77.20**	**177**	P	**P**	**20 05 05.8**	**+0.7**
	slow=3.7						
VNA1	**Neumayer--Stat**	**77.44**	**177**	P	**P**	**20 05 06.7**	**+0.3**
ASAJ	**Asahikawa**	**83.49**	**333**	LR	LR	20 36 39.5	
	comp=Z,2μm,21.1s,baz=68,slow=31						
MKAR	**Makanchi Array**	**118.17**	**310**	PKP	**PKPdf**	**20 11 54.9**	**-3.6**
	0.2nm,0.5s,baz=45,slow=2.2,SNR=3.3						
KURK	**Kurchatov**	**121.56**	**313**	PKP	**PKPdf**	**20 12 00.3**	**-4.5**
KURBB	**Kurchatov Arra**	**121.59**	**313**	PKP	**PKPdf**	**20 12 00.3**	**-4.6**
	0.4nm,0.6s,baz=106,slow=2.0,SNR=5.8						
BVAR	**Borovoye Array**	**126.97**	**315**	PKP	**PKPdf**	**20 12 11.6**	**-3.6**
	0.4nm,0.6s,baz=117,slow=1.9,SNR=3.6						
FINES	**FINESS Array B**	**146.34**	**338**	PKPbc	**PKPdf**	**20 12 48.5**	**-2.0**
	1.9nm,0.5s,baz=53,slow=4.7,SNR=18						
NB2	**NORSAR Subarra**	**150.19**	**350**	PKP	**PKPdf**	**20 12 58.0**	**+1.1**
	comp=Z,1.0nm,0.9s,baz=3.7,slow=3.7						
HFS	**Hagfors**	**150.62**	**347**	PKPbc	**PKPdf**	**20 12 59.6**	**+2.1**
	comp=Z,1.0nm,0.7s,baz=9.5,slow=4.4,SNR=4.

KRUC	**Moravsky**	**1.61 242**	*e*Pg	**Pb**	**20 02 14.0**	**-0.1**
	baz=61					
KRUC			*e*Sg	**Sg**	**20 02 35.3**	**+0.2**
	9.6nm,0.3s,baz=61					
KRUC	**Moravsky**	**1.61 242**	*e*PG	**Pb**	**20 02 14.1**	**-0.1**
KRUC			*e*SG	**Sg**	**20 02 35.3**	**+0.2**
KRUC	**Moravsky**	**1.61 242**	*e*Pg	**Pb**	**20 02 14.0**	**-0.1**
	baz=61					
KRUC			*e*Sg	**Sg**	**20 02 35.3**	**+0.2**
	9.6nm,0.3s,baz=61					
UPC	**Upice**	**1.77 293**	*e*PG	**Pg**	**20 02 17.3**	**-0.1**
UPC			*e*SG	**Sg**	**20 02 41.0**	**+0.7**
UPC	**Upice**	**1.77 293**	Pg	**Pg**	**20 02 17.3**	**-0.1**
UPC			Sg	**Sg**	**20 02 41.0**	**+0.7**
PRU	**Pruhonice**	**2.60 275**	*e*SG	**Sg**	**20 03 06.0**	**-1.0**
	comp=Z,2.5nm,0.4s					
PRU	**Pruhonice**	**2.60 275**	Sg	**Sg**	**20 03 06.0**	**-1.0**
	2.5nm,0.4s					
PVCC	**Panska Ves**	**2.65 287**	*e*SG	**Sg**	**20 03 08.9**	**+0.1**
	comp=Z,6.7nm,0.2s					
PVCC	**Panska Ves**	**2.65 287**	Sg	**Sg**	**20 03 08.9**	**+0.1**
	6.7nm,0.2s					
BRG	**Berggiesshubel**	**3.13 291**	SG	**Sb**	**20 03 20.2**	**+1.5**
	2.3nm,0.6s					
KHC	**Kasperske Hory**	**3.32 260**	*e*PG	**Pg**	**20 02 47.5**	**+0.3**
KHC			*e*SG	**Sg**	**20 03 28.6**	**-1.6**
	comp=Z,3.5nm,0.3s					
KHC	**Kasperske Hory**	**3.32 260**	Pg	**Pg**	**20 02 47.5**	**+0.3**
KHC			Sg	**Sg**	**20 03 28.6**	**-1.6**
	3.5nm,0.3s					

CSEM ***21*** *20:09:01.4±0.3, 39°.14N×42°.28E, h15km, ML2.7, Error ellipse: s-maj=7.6km s-min=6.0km az=136.0*
ISK ***21*** *20:09:01.7, 39°.10N×42°.38E, h20km, ML2.0/3*
ATA ***21*** *20:09:01.2±0.9, 39°.16N×42°.28E, h9km±7km, ML2.6, MW2.6*
ISCJB ***21*** *20:09:02.0±0.5, 39°.14N±0°.03×42°.30E±0°.04, h12km±5km, Error ellipse: s-maj=5.4km s-min=4.2km az=145.8*
DDA ***21*** *20:09:02.3, 39°.13N×42°.30E, h7km, Ml2.7*
ISC 21 20:09:01.5±0.9, 39°.15N±0°.03×42°.29E±0°.03, h15km±7km, n27, σ0.62/41, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKAR	**Karacoban**	**0.21**	**302**	*e*P		**Pg 20 09 05.8**	**-0.6**
EKAR				*e*S		**Sg 20 09 09.9**	**+0.1**
EKAR				IAML		20 09 10.6	
	comp=Z,89nm,0.4s						
EKAR	**Karacoban**	**0.21**	**302**	*i* P		**Pg 20 09 05.7**	**-0.7**
EKAR				*i* S		**Sg 20 09 10.7**	**+0.9**
EKAR	**Karacoban**	**0.21**	**302**	P		**Pg 20 09 05.7**	**-0.7**
EKAR				S		**Sg 20 09 10.7**	**+0.9**
ADCV	**BITLIS_Adilcev**	**0.48**	**135**	*i* P		**Pg 20 09 11.2**	**0.0**
ADCV				*i* S		**Sb 20 09 18.9**	**+0.3**
ADCV	**BITLIS_Adilcev**	**0.48**	**135**	P		**Pg 20 09 11.1**	**0.0**
ADCV				S		**Sb 20 09 18.9**	**+0.3**
TUTA	**Tutak**	**0.48**	**58**	*e*P		**Pg 20 09 11.4**	**+0.3**
TUTA				*e*S		**Sb 20 09 19.1**	**+0.3**
TUTA				IAML		20 09 21.3	
	comp=Z,61nm,0.2s						
TUTA	**Tutak**	**0.48**	**58**	*i* P		**Pg 20 09 11.7**	**+0.4**
TUTA				*i* S		**Sb 20 09 19.3**	**+0.5**
TUTA	**Tutak**	**0.48**	**58**	P		**Pg 20 09 11.6**	**+0.4**
TUTA				S		**Sb 20 09 19.3**	**+0.5**
GURO	**Guroymak-BITLI**	**0.63**	**199**	PG		**Pb 20 09 14.4**	**+0.2**
GURO				SG		**Sb 20 09 23.6**	**+0.7**
GURO	**Guroymak-BITLI**	**0.63**	**199**	*e*Pg		**Pb 20 09 14.4**	**+0.2**
GURO				*e*Sg		**Sb 20 09 23.6**	**+0.7**
AGRB	**Hanur-Agry**	**0.69**	**52**	PG		**Pg 20 09 15.4**	**+0.3**
AGRB				SG		**Sb 20 09 25.3**	**+0.4**
AGRB	**Hanur-Agry**	**0.69**	**52**	*e*Pg		**Pg 20 09 15.4**	**+0.3**
AGRB				*e*Sg		**Sb 20 09 25.3**	**+0.4**
EATA	**Eleskirt**	**0.73**	**12**	*e*P		**Pb 20 09 16.3**	**+0.1**
EATA				*e*S		**Sb 20 09 26.8**	**+0.6**
EATA				IAML		20 09 29.1	
	comp=Z,8.9nm,0.2s						
EATA	**Eleskirt**	**0.73**	**12**	*i* S		**Sb 20 09 27.2**	**+1.0**
EATA	**Eleskirt**	**0.73**	**12**	S		**Sb 20 09 27.2**	**+1.0**
BNGL	**BINGOL**	**0.91**	**258**	*e*P		**Pg 20 09 19.5**	**+0.3**
BNGL				*e*S		**Sn 20 09 32.8**	**-0.1**
ERZM	**Erzurum**	**1.04**	**317**	*e*P		**Pb 20 09 21.6**	**+0.2**
DYDN	**Diyadin**	**1.16**	**69**	*e*P		**Pb 20 09 23.0**	**-0.3**
BNGB	**Bing¶ll**	**1.26**	**264**	PN		**Pb 20 09 25.6**	**+0.5**
CLDR	**Caldiran**	**1.27**	**90**	PN		**Pn 20 09 23.8**	**-1.1**
CLDR	**Caldiran**	**1.27**	**90**	*e*Pn		**Pn 20 09 23.8**	**-1.1**
YEDI	**Yedisu-Bingol**	**1.38**	**283**	PN		**Pb 20 09 27.8**	**+0.6**
YEDI	**Yedisu-Bingol**	**1.38**	**283**	*e*Pn		**Pb 20 09 27.8**	**+0.6**
SENK	**Senkaya-Erzuru**	**1.42**	**2**	PN		**Pb 20 09 27.7**	**0.0**
SENK	**Senkaya-Erzuru**	**1.42**	**2**	*e*Pn		**Pb 20 09 27.7**	**0.0**
BINT	**Bingol**	**1.43**	**260**	*e*Pn		**Pn 20 09 25.6**	**-1.4**
DIGO	**Kars**	**1.52**	**33**	*e*P		**Pg 20 09 30.5**	**-0.2**

IDC 21 20:19:38.5±3.0, 32°.70S×178°.41W, h0km, mb3.3/2, mb1 3.6/3, mb1mx3.3/44, mbtmp3.4/3, ML3.4/1, Error ellipse: s-maj=73.1km s-min=45.3km az=124.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.64**	**212**	Pn		20 21 17.1	-0.2
	0.7nm,0.3s,baz=235,slow=3.9,SNR=3.4						
URZ				Sn	Sn	20 22 30.5	-3.2
	0.3nm,0.3s,baz=343,slow=19,SNR=4.3						
ASAR	**Alice Springs**	**42.69**	**270**	P		20 27 37.1	-0.2
	0.1nm,0.3s,baz=112,slow=7.8,SNR=3.7						
WRA	**Warrumunga Arr**	**43.88**	**275**	P		20 27 46.9	0.0
	0.3nm,0.4s,baz=115,slow=7.6,SNR=5.3						
FINES	**FINESS Array B**	**147.16**	**338**	PKPbc	PKPbc	20 39 22.0	-0.8
	1.0nm,0.8s,baz=8.7,slow=1.8,SNR=3.0						

NIED ***21*** *20:32:00, 39°.40N×143°.80E, h17km, Mw5.1 Best double couple: M0:5.23000×10^16 NP1:φs185.00000°, δ31.00000°, λ80.00000°. NP2:φs17.00000°, δ60.00000°, λ96.00000°.*
JMA ***21*** *20:32:43.7±0.1, 39°.38N×143°.76E, h22km, M5.3*
JMA Felt II J1.
ISCJB ***21*** *20:32:45.8±0.6, 39°.44N±0°.02×143°.44E±0°.02, h15km±3km, mb5.1/338, MS5.0/107, Error ellipse: s-maj=3.3km s-min=2.0km az=152.4*
NEIC ***21*** *20:32:46.6±0.1, 39°.38N×143°.36E, h10km, mb5.2/221, MW5.2, Error ellipse: s-maj=3.8km s-min=2.3km az=150.0, Moment Tensor Solution. s17 Moment tensor: Scale 10^16Nm; Mrr4.51; Mθθ0.38; Mφφ-4.89; Mrθ0.88; Mφθ-0.38; Mφr6.43; Best double couple: M0:8.00000×10^16 NP1: φs180.00000°, δ18.00000°, λ84.00000°. NP2:φs7.00000°, δ72.00000°, λ92.00000°. Principal axes: T 7.8300, Plg63.0000°, Azm280.0000°; N 0.3900, Plg2.0000°, Azm186.0000°; P -8.2200, Plg27.0000°, Azm95.0000°;*
NEIC Recorded [2 JMA] in Iwate and Miyagi.
GCMT ***21*** *20:32:46.6±0.2, 39°.40N×143°.83E, h32km±1km, MW5.1/99, Moment Tensor Solution. s50,c70; s99,c161; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr3.34±.18; Mθθ-0.08±.11; Mφφ-3.26±.11; Mrθ1.40±.15; Mφθ-0.85±.07; Mφr3.87±.18; Best double couple: M0:5.34200×10^16 NP1:φs19.00000°, δ70.00000°, λ93.00000°. NP2: φs189.00000°, δ20.00000°, λ81.00000°. Principal axes: T 5.2880, Plg65.0000°, Azm294.0000°; N 0.1130, Plg3.0000°, Azm198.0000°; P -5.3970, Plg25.0000°, Azm106.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
MOS ***21*** *20:32:47.5±0.9, 39°.57N×143°.36E, h22km, mb5.3/114, MS5.1/47 Error ellipse: s-maj=5.7km s-min=3.4km az=104.3*
IDC ***21*** *20:32:49.0±0.5, 39°.35N×143°.44E, h28km±2km, mb4.7/46, mb1 4.8/52, mb1mx4.7/79, mbtmp4.9/52, ML4.3/5, MS4.6/60, Ms1 4.6/60, ms1mx4.5/80, Error ellipse: s-maj=10.6km s-min=8.7km az=120.0*
BJI ***21*** *20:32:49.3, 39°.46N×143°.07E, h33km, mb5.2/81, mB5.3/66, Ms5.3/92, Ms7 5.2/84*
ISC 21 20:32:48.8±0.3, 39°.40N±0°.03×143°.47E±0°.03, h30km±2km, h30km:pP-P, n1075, σ1.58/1172, mb5.1/345, MS5.0/109, 77C-23D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**1.29**	**278**	⇑P		**Pn 20 33 10.0**	**-0.7**
MIYJ				*e*S		**Sb 20 33 29.3**	**+0.8**
JTH	**Tanohata**	**1.35**	**294**	⇑P		**Pn 20 33 10.7**	**-0.9**
JTH				*e*S		**Sb 20 33 30.7**	**+0.4**
OFUJ	**Ofunato**	**1.43**	**258**	⇑P		**Pn 20 33 12.1**	**-0.6**
JOM	**Ohasama**	**1.69**	**273**	⇑P		**Pn 20 33 16.2**	**0.0**
JOM				*e*S		**Sb 20 33 38.9**	**-1.0**
JKZ	**Kuzumaki**	**1.75**	**290**	⇑P		**Pn 20 33 16.9**	**-0.2**
JANG	**Nango**	**1.79**	**303**	⇑P		**Pn 20 33 16.3**	**-1.3**
JMK	**Ichinoseki**	**1.80**	**256**	⇑P		**Pn 20 33 17.6**	**-0.2**
JMK				*e*S		**Sn 20 33 41.0**	**+1.3**
JIO	**Ouri**	**1.90**	**241**	⇑P		**Pn 20 33 18.3**	**-0.9**
JIO				*e*S		**Sn 20 33 42.9**	**+0.7**
JRG	**Rokugo**	**2.19**	**271**	⇑P		**Pn 20 33 23.4**	**+0.2**
JTM	**Tenmabayashi**	**2.30**	**308**	⇑P		**Pn 20 33 24.0**	**-0.7**
JAH	**Hinai**	**2.32**	**291**	⇑P		**Pn 20 33 25.2**	**+0.3**
JYK	**Kaneyama**	**2.46**	**260**	⇑P		**Pn 20 33 27.3**	**+0.4**
JMM	**Marumori**	**2.60**	**235**	⇑P		**Pn 20 33 27.7**	**-1.0**
ERM	**Erimo**	**2.62**	**355**	*e*Pn		**Pn 20 33 27.8**	**-1.3**
ERM	**Erimo**	**2.62**	**355**	*ce*P		**Pn 20 33 28.1**	**-1.0**
ERM				pmax	pmax		
	comp=Z,224nm,1.0s						
JOT	**Ohata**	**2.71**	**318**	P		**Pn 20 33 30.0**	**-0.2**
JOT				S		**Sn 20 34 04.8**	**+2.8**
JFK	**Kawauchi**	**2.88**	**226**	⇑P		**Pn 20 33 31.2**	**-1.4**
JNBK	**Urakawa-nobuka**	**2.93**	**350**	⇑P		**Pn 20 33 32.6**	**-0.7**
JNBK				S		**Sn 20 34 07.8**	**+0.4**
JFT	**Otama**	**3.09**	**234**	⇑P		**Pn 20 33 35.5**	**-0.1**
JKB	**Kayabe**	**3.10**	**324**	⇑P		**Pn 20 33 35.6**	**0.0**
JCH	**Churui**	**3.21**	**359**	P		**Pn 20 33 35.8**	**-1.4**
JCH				*e*S		**Sn 20 34 11.4**	**-3.0**
JAW	**Awa shima**	**3.42**	**255**	⇑P		**Pn 20 33 41.0**	**+0.9**
JHO	**Hitachi**	**3.61**	**220**	⇑P		**Pn 20 33 40.6**	**-2.0**
JNS	**Sasagawa**	**3.62**	**245**	P		**Pn 20 33 43.1**	**+0.4**
JAK	**Akkeshi**	**3.71**	**14**	⇓P		**Pn 20 33 41.6**	**-2.4**
JAK				S		**Sn 20 34 23.6**	**-3.1**
JHK	**Hiroka**	**4.11**	**240**	⇑P		**Pn 20 33 50.0**	**+0.5**
JKT	**Katashina**	**4.24**	**233**	⇑P		**Pn 20 33 52.1**	**+0.6**
JSD	**Sado**	**4.29**	**253**	⇑P		**Pn 20 33 52.4**	**+0.3**
JAG	**Ashikaga**	**4.35**	**228**	⇑P		**Pn 20 33 52.5**	**-0.3**
GLVR	**Golovnino**	**4.60**	**19**	⇓*i*P		**Pn 20 33 54.4**	**-1.8**
GLVR				*i* S		**Sn 20 34 44.1**	**-4.5**
GLVR				pmax	pmax		
	comp=Z,265nm,0.3s						
GLVR				pmax	pmax		
	comp=N,691nm,0.5s						
GLVR				smax	smax		
	comp=N,4μm,0.4s						
GLVR				smax	smax		
	comp=E,3μm,0.3s						
ASAJ	**Asahikawa**	**4.76**	**352**	Pn		**Pn 20 33 58.2**	**-0.2**
	comp=E,14nm,0.3s,baz=196,slow=14,SNR=100						
ASAJ				Sn		**Sn 20 34 50.9**	**-1.7**
	comp=E,36nm,0.3s,baz=181,slow=18,SNR=6.2						
JJN	**Nakama**	**4.76**	**243**	⇑P		**Pn 20 33 59.9**	**+1.4**
GRPR	**Tuman**	**4.90**	**20**	⇑*i*P		**Pn 20 33 57.7**	**-2.7**
GRPR				*i* S		**Sn 20 34 50.6**	**-5.5**
GRPR				pmax	pmax		
	comp=Z,90nm,0.2s						
GRPR				pmax	pmax		
	comp=N,567nm,0.3s						
GRPR				smax	smax		
	comp=E,4μm,0.5s						
GRPR				smax	smax		
	comp=N,4μm,0.4s						
JRY	**Ryogami san**	**4.95**	**228**	P		**Pn 20 34 00.8**	**-0.4**
LAGR	**Lagunnoye**	**4.96**	**20**	⇑*i*P		**Pn 20 33 59.0**	**-2.2**
LAGR				*e*S		**Sn 20 34 53.1**	**-4.5**
LAGR				pmax	pmax		
	comp=Z,263nm,0.2s						
LAGR				pmax	pmax		
	comp=E,449nm,0.5s						
LAGR				pmax	pmax		
	comp=N,858nm,0.4s						
LAGR				smax	smax		
	comp=N,7μm,0.8s						
LAGR				smax	smax		
	comp=E,4μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**4.96**	**20**	*d*iP		**Pn 20 33 58.1**	**-3.1**
YUK				*i* S		**Sn 20 34 51.6**	**-6.0**
YUK				pmax	pmax		
	comp=Z,935nm,0.3s						
YUK				pmax	pmax		
	comp=N,775nm,0.6s						
YUK				smax	smax		
	comp=N,2μm,0.8s						
YUK				smax	smax		
	comp=E,5μm,0.7s						
MAJO	**Matsushiro**	**5.04**	**237**	*e*Pn		**Pn 20 34 03.7**	**+1.3**
MAJO	**Matsushiro**	**5.04**	**237**	*c iP*		**Pn 20 34 03.5**	**+1.1**
MAT	**Matsushiro**	**5.04**	**237**	P		**Pn 20 34 03.5**	**+1.1**
MAT	**Matsushiro**	**5.04**	**237**	P		**Pn 20 34 03.8**	**+1.4**
MAT				*e*S		**Sn 20 35 02.4**	**+2.8**
MJAR	**Matsushiro Arr**	**5.04**	**237**	Pn		**Pn 20 34 02.6**	**+0.3**
	comp=E,62nm,0.3s,baz=34,slow=14,SNR=1072						
MJAR				Sn		**Sn 20 35 01.8**	**+2.2**
	baz=56,slow=46,SNR=2.2						
MJAR				LR	LR	20 35 54.0	
	comp=E,3μm,19.1s,baz=65,slow=37						
MJB9	**Matsu-Tunnel**	**5.04**	**237**	*e*Pn		**Pn 20 34 03.7**	**+1.3**
SHO	**Shikotan**	**5.13**	**28**	*e*P		**Pn 20 33 59.8**	**-3.7**
SHO				*i* S		**Sn 20 34 53.9**	**-7.7**
SHO				pmax	pmax		
	comp=E,156nm,0.3s						
SHO				pmax	pmax		
	comp=Z,264nm,0.3s						
SHO				pmax	pmax		
	comp=N,110nm,0.2s						
SHO				smax	smax		
	comp=N,2μm,0.4s						
SHO				smax	smax		
	comp=E,1μm,0.3s						
BSO3	**Boso 3**	**5.16**	**208**	⇓P		**Pn 20 34 01.7**	**-2.1**
JNG	**Nsakai**	**5.19**	**237**	P		**Pn 20 34 05.6**	**+1.1**
JHG	**Hegura jima**	**5.36**	**255**	P		**Pn 20 34 07.5**	**+0.8**
AJI	**Ajiro2**	**5.58**	**220**	P		**Pn 20 34 08.4**	**-1.3**
JTT	**Ttatey**	**5.59**	**242**	P		**Pn 20 34 11.7**	**+1.8**
JGN	**Niukaw**	**5.81**	**239**	P		**Pn 20 34 14.4**	**+1.4**
JJH	**Hakui**	**5.82**	**247**	P		**Pn 20 34 14.0**	**+1.0**
JNY	**Yasuok**	**6.02**	**230**	P		**Pn 20 34 16.3**	**+0.5**
JGF	**Kuroka**	**6.16**	**234**	P		**Pn 20 34 18.9**	**+1.1**
JYZW	**Yoshizawa**	**6.35**	**228**	P		**Pn 20 34 20.6**	**+0.3**
JAO	**Obara**	**6.44**	**232**	P		**Pn 20 34 22.4**	**+0.8**
INU	**Inuyama**	**6.54**	**234**	*e*Pn		**Pn 20 34 22.8**	**-0.1**
KUR	**Kuril'sk**	**6.68**	**28**	*c iP*		**Pn 20 34 22.6**	**-2.1**
KUR				*i* S		**Sn 20 35 34.2**	**-5.6**
KUR				pmax	pmax		
	comp=Z,305nm,0.7s						
KUR				pmax	pmax		
	comp=N,91nm,0.2s						
KUR				pmax	pmax		
	comp=E,132nm,0.5s						
KUR				smax	smax		
	comp=E,4μm,1.3s						
KUR				smax	smax		
	comp=N,2μm,1.8s						
KUR				smax	smax		
	comp=N,396nm,0.6s						
KUR				smax	smax		
	comp=E,1μm,0.6s						
KUR				MLR	MLR		
	comp=Z,5μm,11.0s						
KUR				MLR	MLR		
	comp=E,3μm,9.0s						
JHJ2	**Mitsune**	**6.93**	**206**	*e*Pn		**Pn 20 34 27.2**	**-1.1**
JHJ	**Hachijo jima 2**	**6.94**	**207**	Pn		**Pn 20 34 25.3**	**-3.1**
	comp=E,55nm,0.3s,baz=14,slow=7.4,SNR=12						
JHJ				Sn		**Sn 20 35 38.6**	**-7.7**
	comp=E,103nm,0.3s,baz=73,slow=23,SNR=6.7						
JHJ				LR	LR	20 37 35.3	
	comp=E,4μm,19.1s,baz=76,slow=42						
JFM	**Mihama**	**7.10**	**239**	P		**Pn 20 34 32.6**	**+2.0**
YSS	**Yuzh-Sakhalins**	**7.57**	**356**	*e*Pn		**Pn 20 34 36.6**	**-0.4**
YSS	**Yuzh-Sakhalins**	**7.57**	**356**	*e*P		**Pn 20 34 37.2**	**+0.2**
YSS				*e*S		**Sn 20 36 00.6**	**-1.1**
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS				smax	smax		
	comp=E,220nm,1.4s						
YSS				MLR	MLR		
	comp=N,9μm,14.0s						
YSS				MLR	MLR		
	comp=Z,10μm,14.0s						
YSS				MLR	MLR		
	comp=E,4μm,13.0s						
TEY	**Ternei**	**7.59**	**320**	*e*P		**Pn 20 34 39.2**	**+1.9**
TEY				pmax	pmax		
	comp=E,60nm,0.7s						
TEY				pmax	pmax		
	comp=N,50nm,0.5s						
TEY				pmax	pmax		
	comp=Z,100nm,0.5s						
TEY				MLR	MLR		
	comp=E,8μm,13.0s						
TEY				MLR	MLR		
	comp=N,8μm,16.0s						
TEY				MLR	MLR		
	comp=Z,15μm,14.0s						
JKS	**Kasai**	**8.17**	**240**	P		**Pn 20 34 46.7**	**+1.4**
JAD	**Aida**	**8.65**	**242**	P		**Pn 20 34 53.6**	**+1.7**
UGL	**Uglegorsk**	**9.73**	**355**	*e*P		**Pn 20 35 04.3**	**-2.2**
UGL				*e*S		**Sn 20 36 54.5**	**-0.2**
UGL				pmax	pmax		
	comp=Z,96nm,1.0s						
UGL				smax	smax		
	comp=E,177nm,1.3s						
UGL				MLR	MLR		
	comp=N,7μm,14.0s						
UGL				MLR	MLR		
	comp=Z,6μm,14.0s						
JGT2	**ShimaneMisato**	**9.75**	**247**	P		**Pn 20 35 09.1**	**+2.1**
USRK	**Ussuriysk Ar.**	**9.82**	**303**	Pn		**Pn 20 35 08.4**	**+0.6**
	comp=Z,4.4nm,0.3s,baz=108,slow=15,SNR=64						
MSHR	**Mys Shultsa**	**9.83**	**293**	*c*eP		**Pn 20 35 09.1**	**+1.0**
TYV	**Tymovskoe**	**11.48**	**357**	*e*P		**Pn 20 35 27.8**	**-2.7**
TYV				*e*S		Sn 20 37 27.6	-10
TYV				pmax	pmax		
	comp=Z,27nm,0.8s						
TYV				smax	smax		
	comp=E,16nm,1.3s						
TYV				MLR	MLR		
	comp=Z,7μm,16.0s						
TYV				MLR	MLR		
	comp=N,5μm,16.0s						
MDJ	**Mudanjiang**	**11.56**	**301**	P		**Pn 20 35 30.3**	**-1.4**
MDJ				pP		20 35 37.4	
MDJ				sP		20 35 42.3	
MDJ				S		**Sn 20 37 37.3**	**-2.4**
MDJ				sS		20 37 48.4	
MDJ				pmax	pmax		
	comp=N,39nm,0.8s						
MDJ				pmax	pmax		
	comp=N,2μm,7.7s						
MDJ				LR	LR		
	comp=N,6μm,11.7s						
MDJ				LR	LR		
	comp=N,10μm,13.8s						
MDJ				LR	LR		
	comp=N,17μm,14.2s						
MDJ	**Mudanjiang**	**11.56**	**301**	*e*Pn		**Pn 20 35 33.6**	**+1.9**
JNU	**Nakatsue**	**11.93**	**242**	Pn		**Pn 20 35 36.6**	**-0.3**
	comp=N,1.7nm,0.3s,baz=50,slow=4.6,SNR=21						
JNU				LR	LR	20 40 43.7	
	comp=N,8μm,18.3s,baz=63,slow=40						
JNU	**Nakatsue**	**11.93**	**242**	*e*Pn		**Pn 20 35 37.1**	**+0.3**
CBIJ	**Chichi jima**	**12.32**	**185**	Pn		**Pn 20 35 40.1**	**-2.0**
CBIJ				Sn	Sn	20 37 43.6	-15
CBIJ				*e*Sn	Sn	20 37 49.4	-9.1
JCJ	**Chichijima**	**12.32**	**185**	Pn		**Pn 20 35 40.1**	**-2.0**
	comp=N,20nm,0.3s,baz=285,slow=20,SNR=4.2						
JCJ				Sn	Sn	20 37 43.6	-15
	comp=N,3.9nm,0.3s,baz=90,slow=20,SNR=2.6						
KSRS	**Korea Array**	**12.35**	**266**	Pn		**Pn 20 35 42.9**	**+0.4**
	comp=N,0.9nm,0.3s,baz=83,slow=13,SNR=62						
KSRS				LR	LR	20 40 11.4	
	comp=N,4μm,18.8s,baz=88,slow=36						
KS01	**Wonju Array Si**	**12.36**	**266**	*e*Pn		**Pn 20 35 44.9**	**+2.2**
KS15	**Wonju Array Si**	**12.38**	**266**	*e*Pn		**Pn 20 35 44.4**	**+1.5**
KSAR	**Wonju Array Be**	**12.38**	**266**	Pn		**Pn 20 35 42.9**	**0.0**
KSAR	**Wonju Array Be**	**12.38**	**266**	P		**Pn 20 35 42.9**	**0.0**
GRNR	**Gornyy**	**12.40**	**339**	*e*P		**Pn 20 35 43.2**	**0.0**
GRNR				*e*		20 38 05.0	
GRNR				pmax	pmax		
	comp=N,46nm,0.7s						
GRNR				pmax	pmax		
	comp=E,28nm,0.7s						
GRNR				pmax	pmax		
	comp=Z,42nm,0.7s						
KLR	**Kul'dur**	**12.90**	**323**	Pn		**Pn 20 35 49.6**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=128,slow=13,SNR=36						
KLR	**Kul'dur**	**12.90**	**323**	*c iP*		**Pn 20 35 48.9**	**-1.1**
TJN	**Taejon**	**13.07**	**262**	*ce*P		**Pn 20 35 53.9**	**+1.5**
NKL	**Nikolayevsk**	**13.88**	**353**	*e*P		**Pn 20 36 02.0**	**-1.3**
NKL				*e*S		**Sn 20 38 32.0**	**-4.3**
NKL				pmax	pmax		
	comp=Z,500nm,8.0s						
NKL				pmax	pmax		
	comp=Z,43nm,1.0s						
NKL				smax	smax		
	comp=E,600nm,14.0s						
NKL				MLR	MLR		
	comp=N,2μm,15.0s						
NKL				MLR	MLR		
	comp=E,3μm,15.0s						
NKL				MLR	MLR		
	comp=Z,6μm,16.0s						
OKH	**Okha**	**14.16**	**359**	*e*P		Pn 20 36 01.4	-5.7
CN2	**Changchun**	**14.18**	**294**	*e*P		**Pn 20 36 06.9**	**-0.5**
CN2				*e*S		**Sn 20 38 43.8**	**+0.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,800nm,10.0s						
CN2				LR	LR		
	comp=Z,5μm,14.0s						
CN2				LR	LR		
	comp=Z,5μm,14.0s						
CN2				LR	LR		
	comp=Z,6μm,16.0s						
SKR	**Severo-Kuril's**	**14.37**	**34**	*e*P		Pn 20 35 58.1	-12
SKR				pmax	pmax		
	comp=Z,136nm,1.1s						
SKR				MLR	MLR		
	comp=Z,3μm,12.0s						
SKR				MLR	MLR		
	comp=Z,3μm,13.0s						
SNY	**Shenyang**	**15.30**	**285**	⇓P		**Pn 20 36 22.1**	**-0.4**
SNY				pmax	pmax		
	comp=Z,14nm,1.0s						
SNY				pmax	pmax		
	comp=Z,810nm,8.2s						
SNY				LR	LR		
	comp=Z,3μm,7.1s						
SNY				LR	LR		
	comp=Z,7μm,17.1s						
SNY				LR	LR		
	comp=Z,10μm,17.3s						
PEA0B	**Petropavlovsk-**	**16.83**	**31**	*e*Pn		**P 20 36 44.6**	**+0.7**
	comp=Z,152nm,1.2s						
PETK	**Petropavlovsk-**	**16.83**	**31**	Pn		**Pn 20 36 40.6**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=210,slow=5.

ZEA	**Zeya**	**18.10 328**	*e*P	**Pn**	**20 36 54.2**	**-3.6**
ZEA			*e*S	**Sn**	**20 40 21.0**	**+2.3**
ZEA			pmax	pmax		
	comp=N,140nm,1.2s					
ZEA			pmax	pmax		
	comp=E,86nm,1.2s					
ZEA			pmax	pmax		
	comp=Z,220nm,1.2s					
ZEA			pmax	pmax		
	comp=Z,600nm,8.0s					
ZEA			smax	smax		
	comp=N,300nm,10.0s					
ZEA			MLR	MLR		
	comp=N,4μm,15.0s					
ZEA			MLR	MLR		
	comp=Z,7μm,15.0s					
ZEA			MLR	MLR		
	comp=E,5μm,16.0s					
HIA	**Hailar**	**19.55 308**	*e*P	**P**	**20 37 12.2**	**-1.8**
	comp=E,58nm,0.7s					
HIA	**Hailar**	**19.55 308**	*e*P	**P**	**20 37 12.2**	**-1.8**
HIA			pmax	pmax		
	comp=Z,57nm,0.7s					
SSE	**Sheshan**	**19.96 252**	P	**P**	**20 37 18.1**	**-0.4**
SSE			pmax	pmax		
	comp=Z,56nm,0.9s					
SSE			pmax	pmax		
	comp=Z,420nm,8.4s					
SSE			LR	LR		
	comp=Z,1μm,13.8s					
SSE			LR	LR		
	comp=Z,2μm,13.3s					
MA2	**Magadan**	**20.72 11**	P	**P**	**20 37 26.7**	**+0.2**
	comp=Z,36nm,0.8s,baz=185,slow=7.6,SNR=14					
MA2			LR	LR	20 47 06.9	
	comp=Z,2μm,18.3s,baz=204,slow=41					
MA2	**Magadan**	**20.72 11**	*e*P	**P**	**20 37 27.1**	**+0.6**
	comp=Z,79nm,1.0s					
MA2	**Magadan**	**20.72 11**	*e*P	**P**	**20 37 27.1**	**+0.6**
MA2			pmax	pmax		
	comp=Z,80nm,1.7s					
BJI	**Beijing**	**20.98 280**⇑	*i*P	**P**	**20 37 27.3**	**-2.1**
BJI			pmax	pmax		
	comp=Z,130nm,1.0s					
BJI			LR	LR		
	comp=Z,3μm,15.3s					
BJI			LR	LR		
	comp=Z,9μm,15.1s					
BJI			LR	LR		
	comp=Z,4μm,16.7s					
BJT	**Baijiatuan**	**20.98 280**	*e*P	**P**	**20 37 26.8**	**-2.8**
	comp=Z,82nm,0.8s					
BJT	**Baijiatuan**	**20.98 280**	*e*P	**P**	**20 37 26.8**	**-2.8**
BJT			pmax	pmax		
	comp=Z,82nm,0.8s					
TIA	**Tai'an**	**21.03 270**	P	**P**	**20 37 28.1**	**-2.0**
TIA			S	**S**	**20 41 14.0**	**-8.7**
TIA			pmax	pmax		
	comp=Z,18nm,1.0s					
TIA			LR	LR		
	comp=Z,800nm,13.0s					
TIA			LR	LR		
	comp=Z,3μm,12.5s					
TIA			LR	LR		
	comp=Z,6μm,13.5s					
NJ2	**Nanjing**	**21.25 257**	*e*P	**P**	**20 37 30.9**	**-1.5**
NJ2			sP	**sP**	**20 37 42.8**	**-1.3**
NJ2			S	**S**	**20 41 20.4**	**-6.6**
NJ2			sS	Sn	20 41 36.3	+1.5
NJ2			pmax	pmax		
	comp=Z,34nm,0.8s					
NJ2			pmax	pmax		
	comp=Z,380nm,3.6s					
NJ2			LR	LR		
	comp=Z,2μm,14.1s					
NJ2			LR	LR		
	comp=Z,3μm,15.7s					
NJ2			LR	LR		
	comp=Z,4μm,15.7s					
CLNS	**Chul'man**	**21.28 331**	*e*P	**P**	**20 37 31.6**	**-1.0**
CLNS			pmax	pmax		
	comp=Z,22nm,0.9s					
CLNS			pmax	pmax		
	comp=N,19nm,1.1s					
CLNS			pmax	pmax		
	comp=E,20nm,0.9s					
CLNS			MLR	MLR		
	comp=E,4μm,17.0s					
CLNS			MLR	MLR		
	comp=Z,5μm,15.0s					
CLNS			MLR	MLR		
	comp=N,4μm,15.0s					
TATO	**Taipei**	**23.43 239**	*e*P	**P**	**20 37 54.8**	**-0.7**
	comp=N,108nm,0.9s					
YHNB	**Yeheng**	**23.71 238**	*e*P	**P**	**20 37 56.4**	**-1.9**
	comp=N,357nm,1.7s					
NACB	**Ninganchiao**	**23.91 237**	*e*P	**P**	**20 37 57.4**	**-2.7**
	comp=N,47nm,0.9s					
SEY	**Seymchan**	**24.17 10**	P	**P**	**20 38 02.4**	**+0.2**
	comp=N,27nm,0.9s,baz=190,slow=7.2,SNR=43					
SEY	**Seymchan**	**24.17 10**	*e*P	**P**	**20 38 03.2**	**+1.1**
YAK	**Yakutsk**	**24.18 344**	P	**P**	**20 38 00.3**	**-1.8**
	comp=N,56nm,0.5s,baz=222,slow=2.3,SNR=18					
YAK			S	**S**	**20 42 13.4**	**-4.7**
	comp=N,11nm,0.4s,baz=246,slow=1.4,SNR=3.0					
YAK			LR	LR	20 48 00.3	
	comp=N,995nm,18.6s,baz=31,slow=38					
YAK	**Yakutsk**	**24.18 344**	*e*P	**P**	**20 38 01.1**	**-1.1**
	comp=N,95nm,0.8s					
YAK			S	**S**	**20 42 13.4**	**-4.7**
YAK	**Yakutsk**	**24.18 344**	*c i*P	**P**	**20 38 00.5**	**-1.6**
YAK			*e**PP	**pP**	**20 38 05.1**	**-5.7**
YAK			*e*PPP	PPP	20 38 38.1	
YAK			*e*S	**S**	**20 42 18.7**	**+0.5**
YAK			*e*SS	**SnSn**	**20 42 59.1**	**-2.0**
YAK			*e*SSS	SSS	20 43 18.0	
YAK			pmax	pmax		
	comp=Z,76nm,1.0s					
YAK			pmax	pmax		
	comp=N,40nm,1.1s					
YAK			pmax	pmax		
	comp=E,13nm,1.0s					
YAK			pmax	pmax		
	comp=Z,119nm,0.9s					
YAK			pmax	pmax		
	comp=N,94nm,1.1s					
YAK			pmax	pmax		
	comp=E,70nm,1.3s					
YAK			smax	smax		
	comp=N,673nm,3.0s					
YAK			smax	smax		
	comp=E,590nm,3.2s					
YAK			MLR	MLR		
	comp=Z,3μm,13.0s					
YAK			MLR	MLR		
	comp=N,3μm,13.0s					
YAK			MLR	MLR		
	comp=E,1μm,13.0s					
CIT	**Chita**	**24.21 311**	*e*P	**P**	**20 38 01.4**	**-1.3**
CIT			*e*		20 38 12.1	
CIT			*e*		20 38 33.8	
CIT			pmax	pmax		
	comp=Z,242nm,1.0s					
TIY	**Taiyuan**	**24.27 276**	*e*P	**P**	**20 38 03.3**	**-0.1**
TIY			pmax	pmax		
	comp=Z,34nm,0.6s					
TIY			pmax	pmax		
	comp=Z,410nm,8.6s					
TIY			LR	LR		
	comp=Z,2μm,13.1s					
TIY			LR	LR		
	comp=Z,3μm,16.7s					
TIY			LR	LR		
	comp=Z,4μm,16.6s					
HHC	**Hu-ho-hao-te**	**24.37 284**	*e*P	**P**	**20 38 02.0**	**-2.3**
HHC			sP	sP	20 38 15.3	-1.3
HHC			PP	**PnPn**	**20 38 36.3**	**+1.2**
HHC			S	**S**	**20 42 19.6**	**-2.4**
HHC			SS	**SnSn**	**20 43 08.9**	**+2.5**
HHC			pmax	pmax		
	comp=Z,31nm,0.9s					
HHC			pmax	pmax		
	comp=Z,540nm,4.3s					
HHC			LR	LR		
	comp=Z,2μm,12.9s					
HHC			LR	LR		
	comp=Z,6μm,11.5s					
HHC			LR	LR		
	comp=Z,7μm,12.9s					
SSLB	**Suanglung**	**24.60 237**	*e*P	**P**	**20 38 03.4**	**-3.1**
	comp=Z,74nm,0.9s					
YULB	**Yu-li**	**24.66 236**	*e*P	**P**	**20 38 04.0**	**-2.9**
	comp=Z,39nm,0.8s					
TPUB	**Ta-pu**	**25.15 237**	*e*P	**P**	**20 38 09.7**	**-1.8**
	comp=Z,76nm,0.9s					
TWG	**Pinlang**	**25.21 236**	*e*P	**P**	**20 38 10.5**	**-1.5**
	comp=Z,269nm,0.9s					
WHN	**Wuhan**	**25.36 259**	⇑P	**P**	**20 38 13.5**	**+0.3**
WHN			S	**S**	**20 42 29.1**	**-8.6**
WHN			LR	LR		
	comp=Z,5μm,12.2s					
WHN			LR	LR		
	comp=Z,5μm,11.7s					
WHN			LR	LR		
	comp=Z,10μm,14.1s					
QZH	**Quanzhou**	**25.41 243**⇑	*i*P	**P**	**20 38 12.4**	**-1.3**
QZH			S	**S**	**20 42 39.6**	**+1.0**
QZH			pmax	pmax		
	comp=Z,610nm,3.5s					
QZH			LR	LR		
	comp=Z,3μm,14.3s					
QZH			LR	LR		
	comp=Z,2μm,13.1s					
QZH			LR	LR		
	comp=Z,4μm,14.2s					
BTO	**Baotou**	**25.57 283**	*e*P	**P**	**20 38 13.8**	**-1.4**
GUMO	**Guam**	**25.74 177**	LR	LR	20 47 07.4	
	comp=Z,586nm,21.1s,baz=5.0,slow=33					
BOD	**Bodaibo**	**26.48 324**	*e*P	**P**	**20 38 22.9**	**-0.2**
BOD			pmax	pmax		
	comp=Z,75nm,1.6s					
ULN	**Ulaanbaatar**	**27.47 300**	*e*P	**P**	**20 38 33.2**	**+0.9**
	comp=Z,53nm,0.9s					
ULN	**Ulaanbaatar**	**27.47 300**	P	**P**	**20 38 33.1**	**+0.7**
	SNR=43					
ULN	**Ulaanbaatar**	**27.47 300**	*c e*P	**P**	**20 38 33.0**	**+0.7**
ULN			pmax	pmax		
	comp=Z,87nm,1.2s					
SONA1	**Songino Array**	**27.91 300**	*e*P	**P**	**20 38 36.1**	**-0.1**
SONM	**Songino Array**	**27.91 300**	P	**P**	**20 38 37.2**	**+1.0**
	comp=Z,15nm,0.6s,baz=95,slow=8.9,SNR=98					
SONM			LR	LR	20 50 20.3	
	comp=Z,4μm,19.6s,baz=86,slow=38					
XAN	**Xi'an**	**28.09 270**	P	**P**	**20 38 37.1**	**-0.8**
XAN			pP	pP	20 38 47.1	+0.6
XAN			sP	sP	20 38 51.8	+1.7
XAN			S	**S**	**20 43 15.0**	**-6.0**
XAN			sS	sS	20 43 36.6	+1.4
XAN			pmax	pmax		
	comp=Z,44nm,1.0s					
XAN			pmax	pmax		
	comp=Z,600nm,9.4s					
XAN			LR	LR		
	comp=Z,3μm,11.8s					
XAN			LR	LR		
	comp=Z,3μm,12.8s					
XAN			LR	LR		
	comp=Z,4μm,9.8s					
H11N2	**WAKE ISLAND Hy**	**28.13 127**	T	T	21 08 03.3	
	baz=315,slow=75,SNR=197					
H11N1	**WAKE ISLAND Hy**	**28.14 127**	T	T	21 08 05.0	
	baz=315,slow=75,SNR=289					
H11N3	**WAKE ISLAND Hy**	**28.15 127**	T	T	21 08 02.2	
	baz=315,slow=75,SNR=522					
H11S1	**WAKE ISLAND Hy**	**28.95 129**	T	T	21 09 09.9	
	baz=314,slow=74,SNR=75					
H11S3	**WAKE ISLAND Hy**	**28.95 129**	T	T	21 09 04.8	
	baz=314,slow=74,SNR=50					
H11S2	**WAKE ISLAND Hy**	**28.96 129**	T	T	21 09 10.5	
	baz=314,SNR=61					
ENH	**Enshi**	**29.20 262**	*e*P	**P**	**20 38 47.6**	**-0.1**
	comp=Z,100nm,0.8s					
IRK	**Irkutsk**	**29.80 309**	*e*P	**P**	**20 38 52.6**	**-0.2**
IRK			pmax	pmax		
	comp=Z,67nm,2.3s					
TLY	**Talaya**	**30.09 307**	P	**P**	**20 38 56.2**	**+0.7**
	comp=Z,13nm,0.7s,baz=118,slow=7.5,SNR=25					
TLY			LR	LR	20 51 43.2	
	comp=Z,884nm,21.6s,baz=94,slow=38					
TLY	**Talaya**	**30.09 307**	*e*P	**P**	**20 38 55.3**	**-0.2**
	comp=Z,94nm,1.6s					
TLY	**Talaya**	**30.09 307**	P	**P**	**20 38 56.1**	**+0.7**
	SNR=24					
TLY	**Talaya**	**30.09 307**	*c i*P	**P**	**20 38 55.9**	**+0.5**
TLY			*e*		20 40 03.6	
TLY			*e*SS	**S**	**20 43 56.9**	**+4.9**
TLY			*e*SSS	SSS	20 45 22.8	
TLY			pmax	pmax		
	comp=Z,42nm,1.3s					
TLY			MLR	MLR		
	comp=Z,3μm,17.0s					
ZAK	**Zakamensk**	**30.16 305**	*e*P	**P**	**20 38 56.2**	**0.0**
ZAK			pmax	pmax		
	comp=Z,36nm,1.4s					
BILL	**Bilibino**	**31.30 16**	*e*P	**P**	**20 39 06.0**	**+0.1**
	comp=Z,25nm,1.0s					
BILL	**Bilibino**	**31.30 16**	*d i*P	**P**	**20 39 05.8**	**-0.1**
BILL			*i*		20 40 05.4	
BILL			*i*		20 41 59.9	
BILL			pmax	pmax		
	comp=Z,17nm,1.1s					
LZH	**Lanzhou**	**31.33 277**	*e*P	**P**	**20 39 06.5**	**-0.2**
LZH			pP	pP	20 39 14.1	-1.3
LZH			sP	sP	20 39 17.1	-1.9
LZH			PP	**PnPn**	**20 40 12.6**	**+3.1**
LZH			PcP	**PcP**	**20 42 02.4**	**+2.2**
LZH			*e*S	**S**	**20 44 10.1**	**-2.0**
LZH			sS	pS	20 44 21.8	+0.2
LZH			SS	**SnSn**	**20 45 51.4**	**-5.0**
LZH			pmax	pmax		
	comp=Z,140nm,1.2s					
LZH			pmax	pmax		
	comp=Z,730nm,5.4s					
LZH			LR	LR		
	comp=Z,5μm,13.0s					
LZH			LR	LR		
	comp=Z,12μm,13.6s					
LZH			LR	LR		
	comp=Z,12μm,13.8s					
MOY	**Mondy**	**31.73 307**	*e*P	**P**	**20 39 10.6**	**+0.6**
MOY			pmax	pmax		
	comp=Z,56nm,1.5s					
TIXI	**Tiksi**	**33.16 352**	P	**P**	**20 39 21.4**	**-0.7**
	comp=Z,3.1nm,0.5s,baz=143,slow=6.7,SNR=16					
TIXI	**Tiksi**	**33.16 352**	*e*P	**P**	**20 39 21.6**	**-0.5**
	comp=Z,8.2nm,0.8s					
TIXI	**Tiksi**	**33.16 352**	*c e*P	**P**	**20 39 21.5**	**-0.5**
TIXI			pmax	pmax		
	comp=Z,3.0nm,0.7s					
GYA	**Guiyang**	**33.25 258**⇑	*i*P	**P**	**20 39 23.3**	**-0.2**
GYA			pP	pP	20 39 34.0	+1.8
GYA			PP	**PnPn**	**20 40 36.3**	**+2.1**
GYA			S	**S**	**20 44 42.0**	**+0.1**
GYA			sS	sS	20 44 57.0	+0.8
GYA			SS	**SnSn**	**20 46 41.6**	**-1.5**
GYA			pmax	pmax		
	comp=Z,60nm,0.8s					
GYA			pmax	pmax		
	comp=Z,250nm,8.4s					
GYA			LR	LR		
	comp=Z,2μm,13.1s					
GYA			LR	LR		
	comp=Z,2μm,15.8s					
GYA			LR	LR		
	comp=Z,2μm,19.6s					
CD2	**Chengdu**	**33.34 268**	⇑P	**P**	**20 39 23.5**	**-0.7**
CD2			sP	sP	20 39 37.6	+1.1
CD2			PP	**PP**	**20 40 39.3**	**-0.5**
CD2			PcP	**PcP**	**20 42 06.0**	**+0.4**
CD2			S	**S**	**20 44 44.0**	**+0.9**
CD2			sS	sS	20 44 58.4	+1.0
CD2			pmax	pmax		
	comp=Z,120nm,0.7s					
CD2			pmax	pmax		
	comp=Z,360nm,8.4s					
CD2			LR	LR		
	comp=Z,5μm,13.1s					
CD2			LR	LR		
	comp=Z,7μm,13.9s					
GTA	**Gaotai**	**33.48 284**	⇑P	**P**	**20 39 26.3**	**+0.8**
GTA			pP	pP	20 39 35.5	+1.3
GTA			sP	sP	20 39 39.3	+1.5
GTA			PP	**PP**	**20 40 39.8**	**-1.6**
GTA			PcP	**PcP**	**20 42 07.0**	**+1.0**
GTA			S	**S**	**20 44 45.8**	**+0.4**
GTA			sS	sS	20 45 00.8	+1.1
GTA			PcS	**PcS**	**20 45 52.8**	**+0.9**
GTA			pmax	pmax		
	comp=Z,96nm,0.9s					
GTA			pmax	pmax		
	comp=Z,430nm,6.6s					
GTA			LR	LR		
	comp=Z,2μm,17.5s					
GTA			LR	LR		
	comp=Z,6μm,16.8s					
GTA			LR	LR		
	comp=Z,8μm,16.8s					
KNGR	**Kungurtug, Tuv**	**33.85 305**	*i* P	**P**	**20 39 29.0**	**+0.5**
QIZ	**Qiongzhong**	**35.39 245**	P	**P**	**20 39 42.1**	**+0.1**
QIZ			S	**S**	**20 45 16.6**	**+1.8**
QIZ			sS	**sS**	**20 45 31.8**	**+2.6**
QIZ			LR	LR		
	comp=Z,2μm,13.7s					
QIZ			LR	LR		
	comp=Z,2μm,15.7s					
QIZ			LR	LR		
	comp=Z,3μm,15.3s					
DAV	**Davao City (W)**	**35.99 211**	LR	LR	20 54 47.4	
	comp=Z,664nm,19.0s,baz=59,slow=37					
HVS	**Khovu-Aksy**	**36.27 306**	*d i*P	**P**	**20 39 50.0**	**+0.7**
HVS			pmax	pmax		
	comp=Z,13nm,0.9s					
KMI	**Kunming**	**36.95 260**	P	**P**	**20 39 55.9**	**+0.4**
KMI			pP	pP	20 40 05.0	+0.7
KMI			sP	sP	20 40 08.0	+0.1
KMI			PP	**PP**	**20 41 19.4**	**-0.5**
KMI			S	**S**	**20 45 36.5**	**-2.5**
KMI			sS	pS	20 45 51.1	+2.1
KMI			SS	**SnSn**	**20 48 01.8**	**-11**
KMI			pmax	pmax		
	comp=Z,34nm,1.0s					
KMI			pmax	pmax		
	comp=Z,380nm,5.3s					
KMI			LR	LR		
	comp=Z,1μm,15.6s					
KMI			LR	LR		
	comp=Z,2μm,16.6s					
KMI			LR	LR		
	comp=Z,2μm,15.6s					
DGZ	**Jazzator, Alta**	**40.37 304**	*i* P	**P**	**20 40 25.1**	**+1.2**
DGZ			pmax	pmax		
	comp=Z,25nm,0.8s					
RDOG	**Red Dog Mine**	**40.66 28**	*e*P	**P**	**20 40 28.0**	**+2.1**
	comp=Z,51nm,1.4s					
NONG	**Nongkai**	**40.82 250**	P	**P**	**20 40 28.8**	**+1.1**
	comp=Z,78nm,1.0s					
MYLDM	**Lahad Datu**	**40.86 220**	*e*P	**P**	**20 40 30.0**	**+1.9**
	comp=Z,52nm,1.1s					
SKNT	**Sakolnakorn**	**40.91 248**	P	**P**	**20 40 28.3**	**-0.3**
	comp=Z,13nm,1.2s					
WMQ	**Urumqi**	**41.27 295**	P	**P**	**20 40 32.5**	**+1.2**
WMQ			pP	sP	20 40 41.9	-1.8
WMQ			PcP	**PcP**	**20 42 34.5**	**+4.9**
WMQ			S	**S**	**20 46 44.3**	**+1.0**
WMQ			sS	sS	20 47 00.5	+2.6
WMQ			SS	**SS**	**20 49 43.3**	**-3.7**
WMQ			pmax	pmax		
	comp=Z,300nm,1.5s					
WMQ			pmax	pmax		
	comp=Z,1μm,4.9s					
WMQ			LR	LR		
	comp=Z,3μm,14.3s					
WMQ			LR	LR		
	comp=Z,3μm,13.9s					
WMQ			LR	LR		
	comp=Z,1μm,16.3s					
ZAA0	**Zalesovo Array**	**41.56 310**	*e*P	**P**	**20 40 33.6**	**+0.1**
	comp=Z,40nm,0.6s					
ZALV	**Zalesovo Beam**	**41.56 310**	P	**P**	**20 40 33.6**	**+0.2**
	comp=Z,39nm,0.5s,baz=94,slow=7.7,SNR=205					
ZALV			PcP	**PcP**	**20 42 30.8**	**+0.5**
	comp=Z,9.4nm,0.7s,baz=97,slow=2.8,SNR=3.7					
ZALV			pPcP		20 42 40.4	
	comp=Z,22nm,0.6s,baz=96,slow=2.9,SNR=7.6					
ZALV			LR	LR	20 58 36.8	
	comp=Z,1μm,18.9s,baz=72,slow=37					
ZALV	**Zalesovo Beam**	**41.56 310**	*e*P	**P**	**20 40 32.7**	**-0.8**
ZALV			PcP	**PcP**	**20 42 30.8**	**+0.5**
ZALV			pPcP		20 42 40.4	
ZALV	**Zalesovo Beam**	**41.56 310**	*e*P	**P**	**20 40 32.7**	**-0.8**
ZALV					20 42 30.8	
ZALV					20 42 40.4	
JAY	**Jayapura**	**41.79 184**	P	**P**	**20 40 36.0**	**+0.3**
	comp=Z,9.7nm,0.8s,baz=310,slow=4.9,SNR=5.7					
NRIK	**Noril'sk**	**41.83 334**	P	**P**	**20 40 35.5**	**+0.1**
	comp=Z,2.4nm,0.3s,baz=109,slow=9.6,SNR=11					
NRIK			LR	LR	20 59 07.3	
	comp=Z,2μm,18.7s,baz=101,slow=38					
NVS	**Novosibirsk**	**42.42 312**	*e*P	**P**	**20 40 41.3**	**+0.9**
NVS			*e*		20 42 38.3	
NVS			*e*S	**S**	**20 46 59.3**	**-0.6**
NVS			pmax	pmax		
	comp=E,18nm,0.6s					
NVS			pmax	pmax		
	comp=Z,25nm,0.6s					
NVS			smax	smax		
	comp=E,17nm,1.4s					
SVW2	**Sparrevohn**	**42.66 39**	*e*P	**P**	**20 40 43.4**	**+1.0**
	comp=E,25nm,1.0s					
CMAI	**Chiengmai2**	**42.70 256**	P	**P**	**20 40 44.9**	**+1.5**
	comp=E,608nm,0.8s,comp=E,86μm					
UTTA	**Uttaradit**	**42.92 252**	P	**P**	**20 40 45.8**	**+0.9**
	comp=E,8.9nm,1.1s,comp=E,66nm					
CHAI	**Chaiyaphum**	**43.06 249**	P	**P**	**20 40 46.5**	**+0.5**
	comp=E,15nm,1.0s,comp=E,152nm					
CHTO	**Chiang Mai**	**43.45 255**	P	**P**	**20 40 50.1**	**+0.8**
	comp=E,135nm,0.7s					
CHTO	**Chiang Mai**	**43.45 255**	*e*P	**P**	**20 40 50.0**	**+0.7**
	comp=E,27nm,0.8s					
CHTO	**Chiang Mai**	**43.45 255**	*e*P	**P**	**20 40 50.0**	**+0.7**
CHTO			pmax	pmax		
	comp=Z,27nm,0.8s					
LSA	**Lhasa**	**43.64 274**	P	**P**	**20 40 52.1**	**+0.9**
LSA			pP	**pP**	**20 41 01.1**	**+1.1**
LSA			S	S	20 47 08.1	-11
LSA			pmax	pmax		
	comp=Z,10.0nm,1.1s					
LSA			pmax	pmax		
	comp=Z,330nm,10.1s					
LSA			LR	LR		
	comp=Z,640nm,17.2s					
LSA			LR	LR		
	comp=Z,1μm,17.2s					
LSA			LR	LR		
	comp=Z,4μm,17.2s					
LSA	**Lhasa**	**43.64 274**	*e*P	**P**	**20 40 52.8**	**+1.6**
	comp=Z,28nm,0.9s					
LSA	**Lhasa**	**43.64 274**	P	**P**	**20 40 52.9**	**+1.8**
CM31	**Chiang Mai Arr**	**43.67 255**	*e*P	**P**	**20 40 52.2**	**+1.2**
CMAR	**Chiang Mai Arr**	**43.67 255**	P	**P**	**20 40 51.8**	**+0.7**
	comp=Z,7.0nm,0.7s,baz=45,slow=7.1,SNR=43					
CMAR			LR	LR	21 00 39.7	
	comp=Z,410nm,18.3s,baz=65,slow=38					
CM01	**Chiang Mai Arr**	**43.69 254**	*e*P	**P**	**20 40 50.5**	**-0.6**
SUKH	**Sukhothai**	**43.77 253**	P	**P**	**20 40 52.8**	**+1.0**
	comp=Z,9.1nm,0.8s,comp=Z,76nm					
OHAK	**Old Harbor**	**43.93 44**	*e*P	**P**	**20 40 51.9**	**-0.7**
	comp=Z,21nm,1.0s					
RSO	**Redoubt South**	**44.05 40**	*e*P	**P**	**20 40 55.0**	**+1.2**
KDAK	**Kodiak Island**	**44.27 44**	P	**P**	**20 40 55.1**	**-0.1**
	comp=Z,25nm,0.9s,baz=273,slow=5.3,SNR=32					
KDAK	**Kodiak Island**	**44.27 44**	*e*P	**P**	**20 40 55.3**	**0.0**
	comp=Z,43nm,1.0s					
KDAK	**Kodiak Island**	**44.27 44**	*i* P	**P**	**20 40 55.4**	**+0.1**
MK01	**Makanchi Array**	**44.27 300**	*e*P	**P**	**20 40 55.0**	**-0.5**
SRAK	**Srakaew**	**44.27 247**	P	**P**	**20 40 54.3**	**-1.5**
	comp=Z,83nm,1.2s,comp=Z,780nm					
MK31	**Makanchi Array**	**44.27 300**	*e*P	**P**	**20 40 55.8**	**+0.2**
MKAR	**Makanchi Array**	**44.27 300**	P	**P**	**20 40 55.9**	**+0.3**
	comp=Z,27nm,0.7s,baz=84,slow=9.5,SNR=214					
MKAR			LR	LR	21 00 17.8	
	comp=Z,2μm,18.3s,baz=61,slow=37					
MKAR	**Makanchi Array**	**44.27 300**	*e*P	**P**	**20 40 55.8**	**+0.2**
	comp=Z,441nm,0.8s					
CAST	**Castle Rocks**	**44.36 35**	*e*P	**P**	**20 40 57.7**	**+1.7**
	comp=Z,17nm,1.0s					
MAKZ	**Makanchi**	**44.48 301**	*e*P	**P**	**20 40 57.6**	**+0.4**
	comp=Z,63nm,0.9s					
MAKZ	**Makanchi**	**44.48 301**	*e*P	**P**	**20 40 57.6**	**+0.4**

MAKZ pmax pmax
comp=Z,63nm,0.9s
CNPM China Poot 44.85 41 *e*P **P 20 41 00.3 +0.3**
comp=Z,21nm,1.1s
BPAW Bear Paw Mtn. 44.86 35 *e*P **P 20 41 00.9 +0.8**
comp=Z,45nm,1.9s
MLY Manley 44.99 33 *e*P **P 20 41 02.7 +1.7**
comp=Z,21nm,1.0s
SUA Susitna One 45.00 38 *e*P **P 20 41 01.8 +0.5**
comp=Z,20nm,0.9s
BRLK Bradley Lake 45.01 41 *e*P **P 20 41 02.1 +0.8**
comp=Z,11nm,0.7s
SHL Shillong 45.08 268 *e*P **P 20 41 03.0 +0.6**
comp=Z,3.5nm,0.6s
SHL *i*S S 20 47 30.0 -10
SHL Shillong 45.08 268 *e*P **P 20 41 03.0 +0.6**
comp=Z,28nm,0.8s
SHL Shillong 45.08 268 *e*P **P 20 41 03.0 +0.6**
SHL pmax pmax
comp=Z,28nm,0.8s
COLD Coldfoot 45.30 30 *e*P **P 20 41 05.0 +1.6**
comp=Z,10nm,1.0s
RC01 Rabbit Creek A 45.50 39 *e*P **P 20 41 05.7 +0.6**
comp=Z,32nm,1.0s
BWN Browne 45.53 34 *e*P **P 20 41 07.1 +1.8**
comp=Z,99nm,1.0s
TOLK Toolik Lake Re 45.63 28 P **P 20 41 06.9 +0.9**
baz=266
TOLK Toolik Lake Re 45.63 28 *e*P **P 20 41 07.7 +1.7**
comp=Z,24nm,1.0s
PMR Palmer 45.76 38 *e*P **P 20 41 07.4 +0.3**
comp=Z,18nm,0.9s
PMR Palmer 45.76 38 *e*P **P 20 41 07.4 +0.3**
PMR pmax pmax
comp=Z,18nm,0.9s
MCK McKinley 45.77 35 *e*P **P 20 41 08.1 +0.9**
comp=Z,20nm,1.1s
MCK McKinley 45.77 35 *e*P **P 20 41 08.1 +0.9**
MCK pmax pmax
comp=Z,21nm,1.1s
KURK Kurchatov 45.78 307 *e*P **P 20 41 07.7 +0.2**
comp=Z,102nm,0.7s
KURK Kurchatov 45.78 307 P **P 20 41 07.7 +0.2**
SNR=56
KURK Kurchatov 45.78 307 *ce*P **P 20 41 07.5 0.0**
KURK pmax pmax
comp=Z,62nm,0.8s
RND Reindeer 45.81 35 *e*P **P 20 41 08.1 +0.5**
comp=Z,27nm,1.0s
RND Reindeer 45.81 35 *e*P **P 20 41 08.1 +0.5**
RND pmax pmax
comp=Z,27nm,1.0s
GHO Glory Hole Cre 45.85 38 *e*P **P 20 41 08.8 +0.9**
comp=Z,37nm,1.0s
KURBB Kurchatov Arra 45.86 306 P **P 20 41 08.6 +0.6**
comp=Z,75nm,0.7s,baz=81,slow=8.5,SNR=310
WRH Wood River Hil 46.12 34 *e*P **P 20 41 10.7 +0.8**
comp=Z,11nm,0.8s
CCB Clear Creek Bu 46.24 34 *e*P **P 20 41 11.5 +0.7**
comp=Z,9.9nm,1.0s
SBUM Sibu 46.48 226 *e*P **P 20 41 13.6 +0.3**
comp=Z,8.0nm,0.7s
DHY Denali Highway 46.50 36 *e*P **P 20 41 13.6 +0.5**
comp=Z,16nm,0.8s
IL1 Eielson Array 46.63 34 *e*P **P 20 41 13.0 -1.0**
ILAR Eielson Array 46.63 34 P **P 20 41 13.8 -0.1**
comp=Z,10nm,0.8s,baz=262,slow=6.1,SNR=128
ILB Eielson Array 46.63 34 *e*P **P 20 41 14.3 +0.4**
PHET Kaeng Krachan 46.74 248 P **P 20 41 18.8 +3.4**
comp=Z,16nm,0.8s,comp=Z,157nm
BRDH Bariadhala 46.79 265 LR LR 21 02 42.9
comp=Z,872nm,18.2s,baz=51,slow=38
PDGK Podgornoye 47.13 297 P **P 20 41 18.4 +0.1**
PDGK pmax pmax
comp=Z,56nm,1.2s
TAPN Taplejung 47.41 273 *e*P **P 20 41 21.8 +0.9**
comp=Z,29nm,0.6s
HARP HAARP 47.57 37 *e*P **P 20 41 23.3 +2.0**
HARP *e*pP **pP 20 41 30.4 +0.2**
RIDG Independ'e Rid 47.59 35 *e*P **P 20 41 21.8 +0.3**
comp=Z,52nm,1.7s
ODAN Odare 47.90 273 *e*P **P 20 41 25.5 +0.9**
comp=Z,74nm,0.6s
SCRK Sand Creek 47.94 35 *e*P **P 20 41 24.6 +0.3**
comp=Z,26nm,1.1s
BMRM Bremner River 48.00 39 *e*P **P 20 41 26.1 +1.4**
comp=Z,37nm,1.0s
RAGM Ragged Mountai 48.05 39 *e*P **P 20 41 26.9 +1.9**
comp=Z,28nm,1.0s
KSM Kuching 48.35 227 *e*P **P 20 41 29.0 +1.1**
comp=Z,24nm,1.1s
JIRN Jiri 48.44 274 *e*P **P 20 41 29.9 +1.0**
comp=Z,112nm,0.5s
RAMN Ramite 48.47 273 *e*P **P 20 41 29.7 +0.7**
comp=Z,189nm,0.8s
GUN Gumba 48.55 275 *e*P **P 20 41 30.5 +0.7**
comp=Z,210nm,0.5s
TGL Tana Glacier 48.89 39 *e*P **P 20 41 33.2 +1.6**
comp=Z,25nm,0.9s
EGAK Eagle 49.08 33 *e*P **P 20 41 33.6 +0.8**
comp=Z,15nm,0.9s
KKN Kakani 49.08 275 *e*P **P 20 41 34.0 +0.4**
comp=Z,214nm,0.6s
PKIN Phulchoki 49.09 275 *e*P **P 20 41 34.0 +0.2**
comp=Z,55nm,0.5s
DMN Daman 49.30 275 *e*P **P 20 41 35.9 +0.5**
comp=Z,177nm,1.0s
GKN Gorkha 49.47 275 *e*P **P 20 41 37.2 +0.6**
comp=Z,116nm,0.6s
TKM2 Tokmak 2 49.96 297 P **P 20 41 41.3 +1.2**
SNR=52
DANN Dangsing 49.98 276 *e*P **P 20 41 41.8 +1.2**
comp=Z,440nm,0.6s
BVAR Borovoye Array 50.20 311 P **P 20 41 42.2 +0.5**
comp=Z,23nm,0.6s,baz=66,slow=8.3,SNR=217
BVAR LR LR 21 04 56.1
comp=Z,1μm,18.7s,baz=72,slow=38
NRN Naryn 50.20 295 *e*P **P 20 41 43.4 +1.1**
comp=Z,16nm,0.9s
BRVK Borovoye 50.26 311 *e*P **P 20 41 42.7 +0.7**
comp=Z,49nm,0.8s
BRVK Borovoye 50.26 311 P **P 20 41 42.7 +0.7**
SNR=29
BRVK Borovoye 50.26 311 *c i*P **P 20 41 42.4 +0.4**
BRVK pmax pmax
comp=Z,30nm,0.8s
OTUK Ortayu 50.38 305 P **P 20 41 43.3 +0.2**
OTUK pmax pmax
comp=Z,48nm,0.7s
KOLN Koldanda 50.38 276 *e*P **P 20 41 44.3 +0.7**
comp=Z,110nm,0.7s
KZA Kyzart 50.49 296 P **P 20 41 46.1 +1.6**
SNR=12
KBK Karagaybulak 50.50 297 P **P 20 41 45.0 +0.8**
SNR=34
CHMS Chumysh 50.51 298 P **P 20 41 44.6 +0.4**
SNR=6.0
USP Ospenovka 50.59 298 P **P 20 41 45.3 +0.5**
SNR=12
FRU Bishkek 50.66 297 *e*P **P 20 41 46.0 +0.7**
FRU pmax pmax
comp=Z,80nm,2.0s
PYUN Piuthan 50.69 277 *e*P **P 20 41 46.3 +0.4**
comp=Z,301nm,0.9s
AAK Ala-Archa 50.82 297 P P 20 41 55.8 +9.1
SNR=28
AAK Ala-Archa 50.82 297 *e*P **P 20 41 44.8 -1.8**
comp=Z,13nm,0.6s
AAK Ala-Archa 50.82 297 *e*P **P 20 41 44.8 -1.8**
AAK pmax pmax
comp=Z,13nm,0.6s
KSH Kashi 50.94 293 P **P 20 41 52.0 +4.4**
KSH pP sP 20 42 00.3 +0.2
KSH PP **PP 20 43 50.4 +6.5**
KSH S **S 20 49 07.4 +4.9**
KSH sS sS 20 49 22.8 +5.5
KSH SS **SS 20 52 38.3 +1.1**
KSH pmax pmax
comp=Z,34nm,0.7s
KSH LR LR
comp=Z,4μm,17.1s
KSH LR LR
comp=Z,5μm,14.6s
KSH LR LR
comp=Z,7μm,16.0s
PKDT Phuket 51.12 244 P P 20 41 59.3 +10
EKS2 Erkin-Say 51.30 298 P **P 20 41 50.8 +0.6**
SNR=11
KULM Kulim 51.40 240 *e*P **P 20 41 52.0 +0.9**
comp=Z,26nm,1.2s
INK Inuvik 51.54 28 P **P 20 41 52.8 +1.3**
comp=Z,10nm,0.8s,baz=289,slow=6.0,SNR=32
INK Inuvik 51.54 28 *e*P **P 20 41 52.8 +1.3**
comp=Z,17nm,0.9s
AML Almayashu 51.55 297 P **P 20 41 53.6 +1.2**
SNR=13
IPM Ipoh 51.75 239 *e*P **P 20 41 54.3 +0.6**
comp=Z,28nm,1.1s
IPM *e*pP **pP 20 42 03.6 +0.8**
MNAS Manas 52.24 298 P **P 20 41 57.9 +0.7**
MNAS pmax pmax
comp=Z,60nm,0.9s
SFK Sufi-Kurgan 52.50 295 P **P 20 41 59.8 +0.5**
SFK pmax pmax
comp=Z,55nm,0.8s
BATI Baumata 52.68 205 LR LR 21 03 27.4
comp=Z,362nm,21.2s,baz=32,slow=35
MTN Manton Dam 53.23 195 *e*P **P 20 42 04.4 -0.1**
comp=Z,18nm,0.9s
KK31 Karatay Array 53.36 299 *e*P **P 20 42 05.6 +0.2**
KK31 Karatay Array 53.36 299 *e*P **P 20 42 05.6 +0.2**
KKAR Karatay Array 53.36 299 *e*P **P 20 42 05.6 +0.2**
KKAR Karatay Array 53.36 299 *e*P **P 20 42 05.6 +0.2**
PSI Prapat 54.39 240 P **P 20 42 13.7 +0.4**
comp=Z,7.4nm,0.6s,baz=0.1,slow=18,SNR=9.1
PSI LR LR 21 07 35.2
comp=Z,501nm,18.2s,baz=89,slow=38
PSI Prapat 54.39 240 *e*P **P 20 42 14.0 +0.7**
comp=Z,13nm,0.9s
SVE Sverdlovsk 54.46 318 *d i*P **P 20 42 14.1 +1.0**
SVE *e* 20 44 18.0
SVE *e*S **S 20 49 50.9 +1.2**
SVE pmax pmax
comp=Z,95nm,0.9s
SVE MLR MLR
comp=E,4μm,14.0s
SVE MLR MLR
comp=Z,5μm,14.0s
CRAG Craig 55.23 44 *e*P **P 20 42 20.8 +2.1**
comp=Z,22nm,1.0s
NIL Nilore 55.43 288 *e*P **P 20 42 22.0 +1.5**
comp=Z,78nm,0.8s
NIL Nilore 55.43 288 *e*P **P 20 42 22.0 +1.5**
NIL pmax pmax
comp=Z,78nm,0.8s
ARU Arti 55.67 318 *e*P **P 20 42 22.0 +0.1**
comp=Z,96nm,0.9s
ARU Arti 55.67 318 *c i*P **P 20 42 22.3 +0.4**
ARU *PP **pP 20 42 31.1 +0.1**
ARU 20 43 22.0
ARU 20 44 27.3
ARU PPP PPP 20 45 37.0
ARU *e*S **S 20 50 07.5 +1.5**
ARU 20 52 06.5
ARU SS **SS 20 53 52.1 +1.3**
ARU SSS SSS 20 55 56.6
ARU pmax pmax
comp=Z,95nm,1.2s
ARU MLR MLR
comp=Z,4μm,15.0s
DLBC Dease Lake 55.77 39 P **P 20 42 25.1 +2.5**
comp=Z,7.6nm,0.8s,baz=275,slow=7.8,SNR=12
DLBC LR LR 21 10 50.2
comp=Z,190nm,18.0s,baz=307,slow=41
DLBC Dease Lake 55.77 39 *e*P **P 20 42 25.2 +2.5**
comp=Z,17nm,1.0s
GSI Gunungsitoli 56.40 240 *e*P **P 20 42 28.2 +0.6**
comp=Z,84nm,1.2s
DIB Dawson Inlet, 56.41 46 *e*P **P 20 42 28.6 +1.5**
comp=Z,23nm,1.0s
DIB *e*pP **pP 20 42 37.4 +1.2**
LEM Lembang 56.70 224 P **P 20 42 30.4 +0.5**
comp=Z,45nm,0.9s,baz=294,slow=20,SNR=9.5
LEM LR LR 21 07 55.7
comp=Z,272nm,19.6s,baz=19,slow=37
ABKAR Akbulak array 57.67 310 *e*P **P 20 42 36.5 +0.4**
KBL Kabul 58.09 290 *e*P **P 20 42 39.6 0.0**
comp=Z,54nm,0.8s
KBL Kabul 58.09 290 *e*P **P 20 42 39.6 0.0**
KBL pmax pmax
comp=Z,54nm,0.8s
AKTO Aktyubinsk 58.31 311 P **P 20 42 41.1 +0.4**
comp=Z,9.9nm,0.7s,baz=75,slow=13,SNR=28
AKTO LR LR 21 10 16.0
comp=Z,691nm,18.1s,baz=58,slow=38
SPITS Spitsbergen Ar 58.52 349 P **P 20 42 42.6 +0.9**
comp=Z,5.1nm,0.7s,baz=66,slow=12,SNR=2.9
SPITS LR LR 21 10 30.9
comp=Z,633nm,18.5s,baz=55,slow=39
WRAB Tennant Creek 59.64 190 *e*P **P 20 42 49.3 -0.8**
comp=Z,30nm,1.2s
WB2 Warramunga Arr 59.65 190 *e*P **P 20 42 49.1 -1.1**
comp=Z,13nm,0.8s
WRA Warramunga Arr 59.65 190 P **P 20 42 49.0 -1.2**
comp=Z,10nm,0.6s,baz=9.2,slow=7.0,SNR=97
WRA Warramunga Arr 59.65 190 P **P 20 42 49.0 -1.2**
WRA pmax pmax
comp=Z,10.0nm,0.6s
PRGR Permogore 59.67 327⇑ *i*P **P 20 42 50.0 +0.1**
PRGR *e*PP **pP 20 42 59.7 +0.7**
PRGR pmax pmax
comp=Z,39nm,1.1s
HYB Hyderabad 59.89 268 *i*P **P 20 42 52.0 -0.1**
HYB *e* 20 43 01.5
RES Resolute Bay 59.90 15 P **P 20 42 51.9 +0.6**
comp=Z,7.2nm,0.6s,baz=310,slow=6.3,SNR=29
RES Resolute Bay 59.90 15 *e*P **P 20 42 52.0 +0.6**
comp=Z,16nm,0.8s
RES Resolute Bay 59.90 15 *e*P **P 20 42 52.0 +0.7**
RES pmax pmax
comp=Z,16nm,0.8s
YKW3 Yellowknife Ar 60.91 31 *e*P **P 20 42 59.1 +0.7**
comp=Z,36nm,1.8s
YKA Yellowknife Ar 60.95 31 P **P 20 42 59.5 +0.9**
comp=Z,3.8nm,0.8s,baz=295,slow=6.7,SNR=20
YKA LR LR 21 11 19.3
comp=Z,16nm,18.9s,baz=304,slow=38
APA Apatity 61.20 336⇑ *e*P P 20 42 48.6 -12
APA pmax pmax
comp=Z,10.0nm,1.2s
APA MLR MLR
comp=Z,1μm,16.0s
TMCR Tamitsa 61.45 331 *e*P **P 20 43 01.6 -0.3**
TMCR pmax pmax
comp=Z,23nm,0.6s
ARCES ARCESS Array B 62.35 339 P **P 20 43 07.4 -0.6**
comp=Z,4.3nm,0.8s,baz=52,slow=7.9,SNR=10
ARCES LR LR 21 13 02.1
comp=Z,856nm,21.6s,baz=44,slow=39
KLMR Klimovskoe 62.62 328 *e*P **P 20 43 07.9 -2.0**
KLMR *e* 20 45 25.5
KLMR pmax pmax
comp=Z,34nm,1.2s
KLMR Klimovskoe 62.62 328 *e*P **P 20 43 07.9 -2.0**
KLMR AMP 20 43 19.9
comp=Z,34nm,1.2s
KLMR *e*PP **PP 20 45 25.6 -1.7**
KLMR LQ LQ 21 05 13.8
KLMR LR LR 21 09 44.4
POO Poona 62.89 272 *e*P **P 20 43 08.0 -4.4**
AS01 Alice Springs 63.37 190 *e*P **P 20 43 14.4 -0.8**
AS31 Alice Springs 63.37 190 *e*P **P 20 43 15.3 0.0**
comp=Z,2.6nm,0.8s
ASAR Alice Springs 63.37 190 P **P 20 43 14.8 -0.4**
comp=Z,4.6nm,0.7s,baz=14,slow=7.1,SNR=38
SGF Sodankyl 63.40 337 P **P 20 43 15.7 +0.8**
SGF pmax pmax
comp=Z,52nm,1.0s
LLLB Lillooet 63.43 45 *e*P **P 20 43 16.9 +1.4**
comp=Z,11nm,0.8s
DAG Danmarks Havn 63.55 355 *i*P **P 20 43 16.5 +0.7**
comp=Z,17nm,0.9s
DAG Danmarks Havn 63.55 355 *e*P **P 20 43 16.5 +0.7**
DAG pmax pmax
comp=Z,17nm,0.9s
MSF Maaselka 63.58 335 P **P 20 43 17.0 +0.8**
MSF pmax pmax
comp=Z,31nm,1.3s
A04D Lummi Island 63.93 47 P **P 20 43 19.7 +1.0**
baz=301
NLWA Neilton Lookou 63.93 49 *e*P **P 20 43 21.0 +2.1**
comp=Z,46nm,1.2s
GEYT Alibeck 64.11 299 P **P 20 43 20.6 +0.3**
comp=Z,39nm,0.8s,baz=11,slow=3.0,SNR=28
GEYT LR LR 21 13 51.2
comp=Z,635nm,18.5s,baz=65,slow=38
GYA0B ALIBECK ARRAY 64.11 299 *e*P **P 20 43 20.9 +0.7**
comp=Z,28nm,0.9s
B05A Bryant 64.51 48 P **P 20 43 23.6 +1.1**
baz=301
E03A Lebam 64.55 50 *e*P **P 20 43 24.9 +2.1**
comp=Z,48nm,1.1s
JOF Joensuu 64.64 332 P **P 20 43 23.3 +0.2**
JOF pmax pmax
comp=Z,40nm,1.2s
DZM Mont Dzumac 64.82 156 LR LR 21 13 42.4
comp=Z,304nm,18.1s,baz=9.0,slow=38
DZM Mont Dzumac 64.82 156 *e*P **P 20 43 27.2 +2.3**
comp=Z,65nm,1.4s
DZM *e*S **S 20 51 59.6 -4.4**
comp=Z,367nm,23.6s
DZM Mont Dzumac 64.82 156 *e*LR LR 21 02 48.3
comp=Z,478nm,22.2s
F04D Rainier, OR 65.11 50 P **P 20 43 27.3 +0.8**
baz=302
OUL Oulu 65.12 336 P **P 20 43 26.8 +0.6**
OUL pmax pmax
comp=Z,36nm,1.0s
D05A Enumclaw 65.14 49 *e*P **P 20 43 29.6 +3.0**
comp=Z,45nm,1.2s
G03D McMinnville, O 65.42 51 P **P 20 43 29.8 +1.3**
baz=302
LON Longmire 65.47 49 *e*P **P 20 43 30.4 +1.4**
LON Longmire 65.47 49 *e*P **P 20 43 30.4 +1.4**
COR Corvallis 65.73 52 *e*P **P 20 43 33.6 +3.1**
comp=Z,66nm,1.1s
COR Corvallis 65.73 52 *e*P **P 20 43 33.6 +3.1**
COR pmax pmax
comp=Z,66nm,1.1s
LTY Liberty 65.86 48 *e*P **P 20 43 32.7 +1.2**
comp=Z,98nm,2.0s
LTY *e*S **S 20 52 17.6 +1.2**
KEBM Edson Butte 66.00 54 *e*P **P 20 43 35.3 +2.9**
comp=Z,58nm,1.0s
B08A Colville Reser 66.03 46 *e*P **P 20 43 33.8 +1.3**
comp=Z,49nm,1.5s
I03D Drain, OR 66.17 52 P **P 20 43 33.6 +0.1**
baz=302,SNR=11
MOS Moscow 66.31 324 *e*P **P 20 43 33.1 -1.0**
MOS *e* 20 46 02.1
MOS pmax pmax
comp=Z,72nm,1.4s
MOS MLR MLR
comp=Z,2μm,16.0s
MOS MLR MLR
comp=N,1μm,15.0s
MOS MLR MLR
comp=E,1μm,15.0s
H04A Detroit Lake 66.35 51 *e*P **P 20 43 36.4 +1.8**
comp=E,41nm,1.1s
G05D Wamic, OR 66.57 50 P **P 20 43 37.0 +1.0**
baz=303
I04A Tendick Farm, 66.69 52 P **P 20 43 37.6 +0.7**
baz=303,SNR=10
L02D Cave Junction, 66.84 54 P **P 20 43 39.4 +1.6**
baz=303
C09A Chrisman Ranch 66.93 46 *e*P **P 20 43 39.6 +1.4**
comp=E,36nm,1.1s
D08A Wollman Farm, 66.97 47 *e*P **P 20 43 40.0 +1.5**
comp=E,23nm,1.0s
G06A Carlson Farm, 66.98 50 *e*P **P 20 43 40.5 +1.8**
comp=E,18nm,1.0s
HUMO Hull Mountain 67.00 53 *e*P **P 20 43 40.7 +1.9**
comp=E,22nm,1.4s
I05D Terrebonne, OR 67.05 51 P **P 20 43 39.6 +0.5**
baz=303
OBN Obninsk 67.17 323 *c i*P **P 20 43 39.5 0.0**
OBN *i* 20 43 48.0
OBN *i* 20 44 05.9
OBN *i* 20 46 07.8
OBN *i*S **S 20 52 29.1 -2.6**
OBN pmax pmax
comp=Z,16nm,0.9s
OBN MLR MLR
comp=Z,2μm,15.0s
J04D Umpqua Nationa 67.18 52 P **P 20 43 41.3 +1.2**
baz=303
E08A Dider Farm, El 67.20 48 *e*P **P 20 43 42.1 +2.1**
comp=Z,16nm,1.0s
NEW Newport 67.31 46 P **P 20 43 41.3 +0.6**
baz=304
NEW Newport 67.31 46 *e*P **P 20 43 42.0 +1.3**
comp=Z,25nm,1.0s
KHMM Horse Mountain 67.45 55 *e*P **P 20 43 44.7 +2.9**
comp=Z,21nm,1.0s
AFI Afiamalu 67.47 132 LR LR 21 09 15.2
comp=Z,322nm,19.3s,baz=6.0,slow=32
FIA1 FINESS Array S 67.47 332 *e*P **P 20 43 41.3 0.0**
FINES FINESS Array B 67.47 332 P **P 20 43 41.6 +0.3**
comp=Z,16nm,0.7s,baz=46,slow=8.2,SNR=58
FINES pP **pP 20 43 50.0 -0.6**
comp=Z,25nm,0.7s,baz=46,slow=8.2,SNR=24
FINES LR LR 21 16 11.8
comp=Z,2μm,18.3s,baz=34,slow=39
PINE Pine Mountain 67.58 51 *e*P **P 20 43 44.8 +2.1**
comp=Z,50nm,1.0s
YBH Yreka Blue Hor 67.63 54 P **P 20 43 44.9 +2.0**
comp=Z,11nm,0.9s,baz=293,slow=1.7,SNR=20
YBH LR LR 21 06 35.6
comp=Z,101nm,21.4s,baz=319,slow=30
YBH Yreka Blue Hor 67.63 54 *e*P **P 20 43 44.9 +2.0**
comp=Z,16nm,1.0s
J05D Fort Rock, OR 67.69 52 P **P 20 43 44.4 +1.1**
baz=304,SNR=20
E09A Wood Farm, Sta 67.72 48 *e*P **P 20 43 44.9 +1.6**
comp=Z,36nm,1.1s
M02C Callahan 67.73 54 P **P 20 43 45.0 +1.5**
baz=304,SNR=8.3
K04D Chiloquin, OR 67.73 53 P **P 20 43 44.5 +1.0**
baz=304
G08A Pilot Rock 67.93 49 *e*P **P 20 43 46.9 +2.1**
comp=Z,10nm,1.1s
N02D Trinity Center 68.05 55 P **P 20 43 47.1 +1.5**
baz=304,SNR=6.1
M04C Macdoel 68.14 53 P **P 20 43 47.1 +1.0**
baz=304,SNR=8.4
K05A Summer Lake 68.20 52 *e*P **P 20 43 48.2 +1.6**
comp=Z,59nm,1.1s
VSR Storozhevoye 68.21 319 *e*P **P 20 43 45.7 -0.5**
VSR *e*PP **pP 20 43 55.1 -0.4**
VSR pmax pmax
comp=Z,10.0nm,0.8s
VSR MLR MLR
comp=Z,2μm,17.0s
MAK Makhachkala 68.27 308 *e*P **P 20 43 46.4 -0.3**
MAK *e*PPP PPP 20 47 59.3
MAK *e*S **S 20 52 44.8 -0.6**
MAK pmax pmax
comp=Z,61nm,1.1s
MAK MLR MLR
comp=Z,2μm,14.0s
VORD Divnogorie 68.30 319 *e*P **P 20 43 46.0 -0.7**
VORD *e*PP **pP 20 43 54.8 -1.2**
VORD pmax pmax
comp=Z,10.0nm,0.5s
VORD MLR MLR
comp=Z,4μm,17.0s
SUMG Summit 68.31 1 *i*P **P 20 43 47.8 +0.8**
SUMG Summit 68.31 1 *e*P **P 20 43 47.9 +0.8**
comp=Z,62nm,1.5s
SUMG Summit 68.31 1 *i*P **P 20 43 47.8 +0.8**
WDC Whiskeytown Da 68.37 55 *e*P **P 20 43 49.0 +1.6**
comp=Z,15nm,0.9s
WDC Whiskeytown Da 68.37 55 *e*P **P 20 43 49.0 +1.6**
WDC pmax pmax
comp=Z,15nm,0.9s
F10A Beach Ranch, E 68.55 48 *e*P **P 20 43 50.0 +1.5**
comp=Z,16nm,1.1s
WALA Waterton Lakes 68.60 44 *e*P **P 20 43 50.1 +1.2**
comp=Z,21nm,1.1s
AKT Akhty 68.96 307⇑ *i*P **P 20 43 51.6 +0.3**
AKT *e* 20 44 16.1
AKT pmax pmax
comp=Z,41nm,0.9s
O03D Paynes Creek 69.00 55 P **P 20 43 51.6 +0.2**
baz=304
MOD Modoc Plateau 69.03 53 *e*P **P 20 43 53.1 +1.4**
comp=Z,16nm,1.0s
BMO Blue Mountains 69.14 49 *e*P **P 20 43 53.7 +1.4**
comp=Z,13nm,1.0s

BMO Blue Mountains 69.14 49 eP P 20 43 53.7 +1.4
BMO pmax pmax
comp=Z,13nm,1.0s
JTMT Jette 69.17 45 eP P 20 43 54.3 +1.8
comp=Z,30nm,1.1s
VSU Vasula 69.23 330c iP P 20 43 52.7 +0.3
VSU pmax pmax
comp=Z,68nm,0.9s
J08A Circle Bar Ran 69.31 51 eP P 20 43 55.2 +1.8
comp=Z,27nm,1.1s
WVOR Wild Horse Val 69.74 51 eP P 20 43 57.6 +1.5
comp=Z,25nm,1.2s
WVOR Wild Horse Val 69.74 51 eP P 20 43 57.6 +1.5
WVOR pmax pmax
comp=Z,25nm,1.2s
MSO Missoula 69.90 46 P P 20 43 57.4 +0.5
baz=306
MSO Missoula 69.90 46 eP P 20 43 58.2 +1.2
comp=Z,15nm,1.0s
DDFL Dedoflistskaro 69.98 307 P P 20 43 59.5 +2.0
CPIM Pinole Ridge 70.04 57 eP P 20 43 57.6 -0.2
BEKR Beckworth 70.15 54 eP P 20 44 00.5 +1.8
comp=Z,19nm,1.0s
AFDM Forest Hills D 70.29 56 eP P 20 44 00.8 +1.4
comp=Z,8.3nm,1.0s
NCK Nalchik 70.31 310 i P P 20 44 00.3 +0.9
NCK pmax pmax
comp=Z,22nm,1.0s
DUS Dusheti 70.47 309 P P 20 44 02.0 +1.5
DUS Dusheti 70.47 309 eP P 20 44 01.9 +1.5
ZEI Tsey 70.54 310 eP P 20 43 58.5 -2.6
ZEI pmax pmax
comp=Z,36nm,0.8s
KVAR Kislovodsk Arr 70.57 311 LR LR 21 20 38.5
comp=Z,894nm,18.6s,slow=41
JBNB Ben Lomond Mou 70.57 58 eP P 20 44 03.0 +1.9
KIV Kislovodsk 70.57 311 eP P 20 44 02.1 +0.9
comp=Z,136nm,0.8s
KIV Kislovodsk 70.57 311 P P 20 44 02.3 +1.2
SNR=46
KIV Kislovodsk 70.57 311 i P P 20 44 02.5 +1.5
SNR=23
KIV Kislovodsk 70.57 311 eP P 20 44 02.0 +0.9
KIV e 20 46 36.6
KIV eS **S 20 53 12.9 +0.2**
KIV eSS **SS 20 57 45.0 +1.4**
KIV pmax pmax
comp=Z,50nm,4.0s
KIV pmax pmax
comp=Z,187nm,1.1s
KIV MLR MLR
comp=Z,1µm,18.0s
KBZ Khabaz 70.58 311 P P 20 44 02.1 +1.1
comp=Z,29nm,0.9s,baz=59,slow=4.7,SNR=62
KBZ pP **pP 20 44 11.3 +1.1**
comp=Z,62nm,0.8s,baz=6.1,slow=4.1,SNR=35
TBLG Delisi 70.66 308 P P 20 44 10.3 +8.7
TBLG Delisi 70.66 308 eP P 20 44 10.3 +8.7
FFC Flin Flon 70.84 34 eP P 20 44 03.5 +1.1
comp=Z,16nm,0.9s
MFID Camas Ranch 70.85 49 eP P 20 44 04.3 +1.5
comp=Z,50nm,1.8s
PAHR Pah Rah Range 70.86 54 eP P 20 44 04.4 +1.4
comp=Z,20nm,1.0s
STKA Stephens Creek 70.94 182 P P 20 44 03.1 +0.1
comp=Z,2.1nm,0.5s,baz=356,slow=7.4,SNR=6.5
STKA LR LR 21 14 42.2
comp=Z,142nm,21.3s,baz=15,slow=36
NEY Neytrino 70.97 311 i P P 20 44 04.1 +0.5
NEY pmax pmax
comp=Z,3.0nm,0.8s
PNTR Pine Nut 71.08 55 eP P 20 44 06.7 +2.3
comp=Z,20nm,0.8s
HRY Holter Researc 71.13 45 eP P 20 44 06.2 +1.7
HRY epP **pP 20 44 15.0 +1.3**
FCC Fort Churchill 71.16 28 eP P 20 44 04.8 +0.6
comp=Z,45nm,1.8s
FCC Fort Churchill 71.16 28 eP P 20 44 04.8 +0.6
FCC pmax pmax
comp=Z,45nm,1.8s
CMB Columbia Colle 71.19 56 eP P 20 44 06.4 +1.5
comp=Z,15nm,1.0s
CMB Columbia Colle 71.19 56 eP P 20 44 06.4 +1.5
CMB pmax pmax
comp=Z,15nm,1.0s
IZAR Zarasai 71.27 328 eP P 20 44 05.8 +0.8
IZAR IAmb IAmb 20 44 15.9
comp=Z,13nm,0.6s
LRM Limekiln Ridge 71.33 46 eP P 20 44 07.2 +1.4
IDID Didziasalis 71.37 327 eP P 20 44 06.4 +0.9
IDID IAmb IAmb 20 44 16.7
comp=Z,16nm,0.8s
YERR Yerington 71.37 55 eP P 20 44 07.7 +1.6
comp=Z,29nm,1.0s
EGMT Eagleton 71.43 43 P P 20 44 06.6 +0.4
baz=309
EGMT Eagleton 71.43 43 eP P 20 44 07.5 +1.2
comp=Z,26nm,1.1s
MICGM Minsk 71.44 326 e P 20 44 06.0 0.0
MICGM eLR LR 21 15 24.0
MICGM LRM MLR 21 18 08.0
comp=Z,2.7nm,18.0s
MNK Minsk 71.44 326 eP P 20 44 06.0 0.0
ISAL Salakas 71.44 328 eP P 20 44 06.9 +0.9
ISAL IAmb IAmb 20 44 17.3
comp=Z,27nm,0.8s
WAKR Walker 71.53 55 eP P 20 44 08.8 +1.7
comp=Z,13nm,1.1s
DLMT Dillon 71.53 46 eP P 20 44 08.9 +2.0
comp=Z,20nm,0.9s
IIGN Ignalina 71.56 328 eP P 20 44 07.6 +0.9
IIGN IAmb IAmb 20 44 17.9
comp=Z,15nm,0.7s
GNI Garni 71.58 307 LR LR 21 18 04.3
comp=Z,227nm,18.5s,baz=49,slow=38
GNI Garni 71.58 307 eP P 20 44 08.9 +1.5
comp=Z,34nm,0.9s
GNI Garni 71.58 307 P P 20 44 08.9 +1.5
GNI Garni 71.58 307 P P 20 44 08.7 +1.3
GNI Garni 71.58 307 i P P 20 44 08.8 +1.4
GNI pmax pmax
comp=Z,45nm,1.1s
HLID Hailey 71.58 49 P P 20 44 08.4 +1.1
baz=307
HLID Hailey 71.58 49 eP P 20 44 08.4 +1.1
comp=Z,10nm,1.0s
AKH Akhalkalaki 71.60 309 P P 20 44 09.2 +1.7
AKH Akhalkalaki 71.60 309 eP P 20 44 09.2 +1.7
BGD Bogdanovka 71.62 308 P P 20 44 08.4 +0.8
NACGM Naroch 71.63 327 e P 20 44 07.0 -0.1
NACGM eLQ LQ 21 13 36.0
NACGM eLR LR 21 17 03.0
CHVG Ch'k'valeri 71.66 310 P P 20 44 08.7 +1.1
BMN Battle Mountai 71.78 52 eP P 20 44 10.3 +1.8
comp=Z,17nm,1.0s
BMN Battle Mountai 71.78 52 eP P 20 44 10.4 +1.8
BMN pmax pmax
comp=Z,17nm,1.0s
WSAR Wadi Sarin 71.81 285 P P 20 44 09.8 +1.0
comp=Z,8.9nm,0.8s,baz=75,slow=10,SNR=3.8
WSAR pP **pP 20 44 18.8 +0.7**
comp=Z,14nm,0.8s,baz=71,slow=13,SNR=5.3
WSAR LR LR 21 19 55.8
comp=Z,491nm,18.4s,baz=88,slow=39
BOZ Bozeman (W) 71.92 46 P P 20 44 09.9 +0.6
baz=308
BOZ Bozeman (W) 71.92 46 eP P 20 44 10.9 +1.6
comp=Z,17nm,0.8s
BOZ Bozeman (W) 71.92 46 eP P 20 44 10.9 +1.6
BOZ pmax pmax
comp=Z,17nm,0.8s
BANOM Banah 71.98 289 P P 20 44 10.7 +0.9
BANOM Banah 71.98 289 P P 20 44 10.5 +0.7
SHME Shamm 72.02 289 i P P 20 44 10.5 +0.5
SNR=7.2
RYN Ryan 72.03 55 eP P 20 44 11.8 +1.7
comp=Z,15nm,1.0s
KVN Kaiserville 72.05 54 eP P 20 44 11.3 +1.1
comp=Z,28nm,1.0s
KVN Kaiserville 72.05 54 eP P 20 44 11.3 +1.1
KVN pmax pmax
comp=Z,28nm,1.0s
NV01 Mina Array Sit 72.29 55 eP P 20 44 12.6 +0.9
NVAR Mina Array Bea 72.29 55 P P 20 44 13.2 +1.5
comp=Z,12nm,0.9s,baz=284,slow=6.1,SNR=45
NVAR LR LR 21 13 28.0
comp=Z,166nm,18.4s,baz=73,slow=34
OMMB Old Mammoth Mi 72.33 56 eP P 20 44 14.2 +2.1
comp=Z,9.7nm,1.1s
MDH Madha 72.34 288 P P 20 44 11.7 -0.2
NV11 Mina Array Sit 72.38 55 eP P 20 44 13.5 +1.3
comp=Z,1.2nm,1.1s
MSFE Esma-Masafi 72.41 289 P P 20 44 12.1 -0.3
NC405 NORSAR Array S 72.41 338 eP P 20 44 11.4 -0.3
MLAC Mammoth, Mammo 72.42 56 P P 20 44 13.8 +1.3
baz=306
NC303 NORSAR Array S 72.43 338 eP P 20 44 12.6 +0.8
SOC Sochi 72.51 312c iP P 20 44 12.8 +0.1
SOC e*PP **pP 20 44 22.1 +0.1**
SOC e 20 46 48.9
SOC ePPP PPP 20 48 33.1
SOC eS **S 20 53 35.8 +0.9**
SOC eSS **SS 20 58 06.8 -6.3**
SOC pmax pmax
comp=Z,30nm,0.8s
SOC MLR MLR
comp=Z,682nm,14.0s
NC204 NORSAR Array S 72.56 338 eP P 20 44 13.4 +0.7
HFS Hagfors 72.59 336 P P 20 44 13.4 +0.6
comp=Z,12nm,0.6s,baz=46,slow=6.2,SNR=103
HFS LR LR 21 19 19.8
comp=Z,1µm,19.4s,baz=30,slow=38
NB201 NORSAR Array S 72.59 338 eP P 20 44 12.4 -0.4
UOSS Minazif 72.62 288 eP P 20 44 14.1 +0.5
comp=Z,38nm,0.8s
UOSS Minazif 72.62 288 P P 20 44 13.8 +0.2
UOSS Minazif 72.62 288 i P P 20 44 13.7 +0.1
SNR=6.5
NB2 NORSAR Subarra 72.62 338 P P 20 44 12.7 -0.3
comp=Z,9.0nm,0.7s,baz=36,slow=6.2
NOA NORSAR Array B 72.62 338 LR LR 21 20 19.7
comp=Z,659nm,18.9s,baz=45,slow=39
HATD Hatta, Dubai 72.74 288 i P P 20 44 14.8 +0.5
SNR=7.2
NBO00 NORSAR Array S 72.75 338 eP P 20 44 14.4 +0.6
SOHO SOHO 72.85 287 i P P 20 44 15.2 +0.2
SNR=9.4
NAO01 NORSAR Array S 72.87 338 eP P 20 44 15.0 +0.5
SMMC Simmler 73.04 58 P P 20 44 16.9 +0.9
baz=307
ANN Anapa 73.05 314 eP P 20 44 15.9 +0.1
ANN e 20 44 25.1
ANN e 20 47 06.8
ANN ePPP PPP 20 48 46.5
ANN eS **S 20 53 41.4 +0.5**
ANN e 20 54 23.5
ANN eSS **SS 20 58 17.1 -4.1**
ANN pmax pmax
comp=Z,38nm,1.3s
YFT Old Faithful 73.08 46 eP P 20 44 20.5 +4.1
comp=Z,23nm,1.1s
TIN Tinemaha, Big 73.15 56 P P 20 44 17.9 +1.2
baz=307
H17A Grant Village 73.26 46 P P 20 44 20.1 +2.7
baz=309
H17A Grant Village 73.26 46 eP P 20 44 20.8 +3.3
comp=Z,23nm,1.0s
VES Vestal, Richgr 73.33 57 P P 20 44 17.9 +0.3
baz=307
IMW Indian Meadow 73.37 47 eP P 20 44 20.3 +2.2
comp=Z,11nm,0.8s
SFJD Kangerlussuaq 73.38 6 LR LR 21 19 41.4
comp=Z,651nm,19.3s,baz=347,slow=38
AKASG Malin Array Be 73.41 323 P P 20 44 17.9 +0.1
comp=Z,9.5nm,0.6s,baz=45,slow=6.2,SNR=33
AKASG pP **pP 20 44 27.0 -0.1**
comp=Z,15nm,0.7s,baz=46,slow=6.1,SNR=15
AKASG LR LR 21 20 44.2
comp=Z,620nm,18.2s,baz=45,slow=39
AKASG Malin Array Be 73.41 323 P P 20 44 17.9 +0.1
AKASG *PP **pP 20 44 27.0 -0.1**
AKASG pmax pmax
comp=Z,11nm,0.6s
AKASG MLR MLR
comp=Z,620nm,18.2s
AKBB Malin Array Si 73.41 323 eP P 20 44 18.0 +0.2
comp=Z,24nm,0.8s
PKM Mcpherson Peak 73.41 58 P P 20 44 19.1 +0.7
baz=307
KIEV Kiev 73.42 323 eP P 20 44 17.9 +0.1
comp=Z,24nm,0.9s
KIEV Kiev 73.42 323 i P P 20 44 18.1 +0.2
SNR=8.8
KIEV Kiev 73.42 323c iP P 20 44 17.7 -0.2
KIEV pmax pmax
comp=Z,11nm,0.8s
AK11 Malin Array Si 73.45 323 eP P 20 44 18.4 +0.4
ASUD Al Ashush, Dub 73.45 288 P P 20 44 19.3 +0.8
ASUD Al Ashush, Dub 73.45 288 i P P 20 44 19.3 +0.8
SNR=7.8
ALNE Al Ain 73.47 288 i P P 20 44 19.3 +0.6
SNR=11
FXWY Fox Creek 73.48 47 eP P 20 44 20.8 +2.1
comp=Z,18nm,1.1s
RLMT Red Lodge 73.52 45 P P 20 44 18.8 -0.1
baz=310
MOOW Moose Ponds 73.57 47 eP P 20 44 21.4 +2.1
comp=Z,60nm,1.8s
TPAW Teton Pass 73.61 47 eP P 20 44 21.8 +2.2
comp=Z,20nm,1.0s
CWC Cottonwood Cre 73.62 56 P P 20 44 20.3 +0.7
baz=307
HVU Hansel Valley 73.63 49 eP P 20 44 21.4 +1.8
comp=Z,19nm,1.2s
LOHW Long Hollow 73.73 47 eP P 20 44 22.2 +2.0
comp=Z,19nm,1.4s
GRAC Grapevine Rang 73.74 55 P P 20 44 21.2 +1.1
baz=307
REDW Red Top Meadow 73.75 47 eP P 20 44 22.2 +1.9
comp=Z,17nm,1.1s
SUW Suwalki 73.75 328 eP P 20 44 19.7 -0.1
SUW LMZ LR 21 19 19.3
comp=Z,2µm,18.2s
SUW Suwalki 73.75 328 eP P 20 44 20.2 +0.4
comp=Z,33nm,0.9s
SUW Suwalki 73.75 328 eP P 20 44 19.7 -0.1
SUW MLR MLR
comp=Z,2µm,18.2s
ISA Isabella, Lake 73.83 57 P P 20 44 21.0 +0.3
baz=307
DGMT Dagmar 73.98 40 P P 20 44 21.4 +0.1
baz=312
BGU Big Grassy Mou 74.01 50 eP P 20 44 23.4 +1.6
comp=Z,20nm,1.5s
DAC Darwin (Calif) 74.03 56 eP P 20 44 23.0 +1.0
comp=Z,7.7nm,1.0s
DAC Darwin (Calif) 74.03 56 eP P 20 44 23.0 +1.0
DAC pmax pmax
comp=Z,8.0nm,1.0s
R11A Troy Canyon, C 74.04 53 P P 20 44 22.8 +0.8
baz=308
R11A Troy Canyon, C 74.04 53 eP P 20 44 23.5 +1.5
comp=Z,15nm,1.0s
FRB Frobisher Bay 74.09 14 LR LR 21 21 02.6
comp=Z,536nm,19.4s,baz=356,slow=39
FRB Frobisher Bay 74.09 14 P P 20 44 22.3 +0.7
FRB pmax pmax
comp=Z,29nm,0.7s
SPUT South Promonto 74.11 49 eP P 20 44 24.3 +1.9
comp=Z,31nm,1.5s
LAO LASA Array 74.13 42 P P 20 44 22.3 +0.1
baz=311
KONO Kongsberg 74.22 338 eP P 20 44 24.8 +2.4
comp=Z,12nm,1.0s
KONO Kongsberg 74.22 338 eP P 20 44 24.8 +2.4
KONO pmax pmax
comp=Z,12nm,1.0s
MPMC Manual Prospec 74.23 56 P P 20 44 22.9 -0.3
baz=308
FURC Furnace Creek, 74.38 56 P P 20 44 24.6 +0.9
baz=308
HWUT Hardware Ranch 74.45 49 eP P 20 44 26.1 +1.8
comp=Z,18nm,1.1s
TPNV Topopah Spring 74.48 55 P P 20 44 25.3 +0.7
baz=308
TPNV Topopah Spring 74.48 55 eP P 20 44 25.9 +1.3
comp=Z,29nm,1.3s
TPNV Topopah Spring 74.48 55 eP P 20 44 25.9 +1.3
TPNV pmax pmax
comp=Z,29nm,1.3s
DUG Dugway, Tooele 74.59 51 P P 20 44 26.2 +1.1
baz=309
DUG Dugway, Tooele 74.59 51 eP P 20 44 26.9 +1.7
comp=Z,17nm,1.0s
DUG Dugway, Tooele 74.59 51 eP P 20 44 26.9 +1.7
DUG pmax pmax
comp=Z,17nm,1.0s
EDW2 Edwards Air Fo 74.61 57 P P 20 44 26.0 +0.8
baz=308
SIM Simferopol' 74.76 316 eP P 20 44 26.4 +0.6
SIM eS **S 20 54 02.0 +1.7**
SIM ePS **PnS 20 54 38.0 +1.1**
SIM eSS **SS 20 58 46.0 -1.3**
SIM pmax pmax
comp=Z,30nm,1.0s
SIM MLR MLR
comp=N,650nm,15.6s
TCUT Toone Canyon 74.85 49 eP P 20 44 29.0 +2.3
comp=N,23nm,0.8s
BW06 Boulder Array 74.86 47 P P 20 44 27.3 +0.5
baz=310
PDAR Pinedale Array 74.86 47 P P 20 44 27.8 +1.0
comp=N,4.1nm,0.8s,baz=261,slow=0.8,SNR=10
PDAR pP **pP 20 44 36.8 +0.7**
comp=N,6.1nm,0.6s,baz=278,slow=2.8,SNR=13
PDAR LR LR 21 19 42.0
comp=N,79nm,18.9s,baz=345,slow=38
PDAR Pinedale Array 74.86 47 eP P 20 44 27.3 +0.6
PDAR pP **pP 20 44 36.8 +0.7**
KELT Kelkit 74.92 310 i P P 20 44 28.9 +1.8
PSUT Pine Spring 75.00 52 eP P 20 44 29.2 +1.6
comp=N,12nm,1.0s
GSC Goldstone, Bar 75.13 57 P P 20 44 28.4 +0.2
baz=308
GSC Goldstone, Bar 75.13 57 eP P 20 44 29.4 +1.1
comp=N,12nm,1.1s
GSC Goldstone, Bar 75.13 57 eP P 20 44 29.4 +1.1
GSC pmax pmax
comp=Z,12nm,1.1s
JLU Jordanelle 75.15 50 eP P 20 44 30.2 +1.7
comp=Z,25nm,1.4s
BFSC Mount Baldy Ra 75.22 58 P P 20 44 29.2 +0.3
baz=308
HANI Diyarbakir_Han 75.31 308 i P P 20 44 30.2 +0.9
MPU Maple Canyon 75.41 50 eP P 20 44 31.8 +1.9
comp=Z,13nm,0.9s
SHPR Sheep Range 75.44 55 eP P 20 44 31.8 +1.7
comp=Z,18nm,1.2s
BORG Borgarnes 75.50 353 P P 20 44 32.1 +2.4
comp=Z,5.6nm,0.6s,baz=315,slow=13,SNR=5.3
BORG LR LR 21 16 35.7
comp=Z,106nm,21.0s,baz=11,slow=35
SORM Soroca 75.58 321 ⇑ i P P 20 44 31.2 +0.8
SORM Soroca 75.58 321 P P 20 44 31.2 +0.8
TUQ Turquoise Moun 75.61 56 P P 20 44 31.3 +0.2
baz=308
HEC Hector,Ludlow 75.72 57 P P 20 44 31.8 +0.1
baz=308
MZR Muzera 75.77 288 i P P 20 44 32.6 +0.6
SNR=9.8
CCUT Cedar City 75.91 53 eP P 20 44 34.6 +1.7
comp=Z,14nm,1.1s
MURC Murrieta 75.92 58 P P 20 44 33.2 +0.4
baz=308
NWAO Narrogin (SRO) 75.97 203 P P 20 44 32.4 -0.3
comp=Z,11nm,0.8s,baz=239,slow=5.4,SNR=5.5
NWAO LR LR 21 16 59.5
comp=Z,124nm,21.0s,baz=322,slow=35
MSU Marysvale 76.03 52 eP P 20 44 35.7 +2.1
MSU Marysvale 76.03 52 eP P 20 44 35.7 +2.1
BSD Bornholm Skovb 76.11 332 i P P 20 44 36.3 +2.9
comp=Z,1µm,20.0s
BSD Bornholm Skovb 76.11 332 eP P 20 44 36.3 +2.9
BSD MLR MLR
comp=Z,1µm,20.0s
TMUT Trail Mountain 76.12 50 eP P 20 44 36.2 +2.1
comp=Z,56nm,2.0s
KIS Kishinev 76.13 320 eP P 20 44 32.0 -1.6
KIS Kishinev 76.13 320 ePcP PcP 20 44 42.0 -3.7
KIS Kishinev 76.13 320 ePP PP 20 47 42.0 +18
KIS Kishinev 76.13 320 ePS PnS 20 54 47.0 -7.4
KIS eSSS SSS 21 02 50.0
KIS eLQ LQ 21 12 30.0
KIS eLR LR 21 15 36.0
comp=Z,2µm,16.0s
KIS Kishinev 76.13 320 eP P 20 44 32.0 -1.6
KIS e 20 44 42.0
KIS e 20 47 24.0
KIS ePPP PPP 20 49 14.0
KIS eS **S 20 54 14.0 -1.3**
KIS ePS **PnS 20 54 47.0 -7.4**
KIS MLR MLR
comp=E,1µm,15.0s
KIS MLR MLR
comp=Z,2µm,15.0s
KIS MLR MLR
comp=N,1µm,16.0s
KIS MLR MLR
comp=Z,2µm,16.0s
GMRC Granite Mounta 76.19 56 P P 20 44 35.1 +0.7
baz=309
P17A Butcher Ranch, 76.29 50 eP P 20 44 36.6 +1.7
comp=Z,23nm,1.0s
LCMT Little Creek M 76.33 53 eP P 20 44 37.0 +1.9
comp=Z,16nm,1.0s
MTPU Mount Pierson 76.33 52 eP P 20 44 37.6 +2.2
comp=Z,13nm,1.0s
BEL Belsk 76.34 327 eP P 20 44 36.0 +1.3
BEL LMZ LR 21 20 59.5
comp=Z,1µm,18.4s
BEL Belsk 76.34 327 eP P 20 44 36.0 +1.3
BEL MLR MLR
comp=Z,1µm,18.4s
PFO Pinyon Flats O 76.39 58 P P 20 44 35.7 +0.1
baz=308
LVV L'vov 76.41 325 ⇑ i P P 20 44 36.5 +1.3
LVV eS **S 20 54 18.6 +0.3**
LVV MLR MLR
comp=Z,1µm,18.0s
BELC Belle Mtn. Jos 76.45 57 P P 20 44 36.1 +0.2
baz=309
P18A Preston Nutter 76.48 50 eP P 20 44 37.9 +1.7
comp=Z,16nm,1.0s
COP Copenhagen 76.53 334 i P P 20 44 40.0 +4.3
comp=Z,1µm,16.0s
COP Copenhagen 76.53 334 eP P 20 44 40.0 +4.3
COP MLR MLR
comp=Z,1µm,16.0s
KNB Kanab 76.58 53 eP P 20 44 38.5 +1.8
comp=Z,23nm,1.1s
K22A Casper 76.63 45 P P 20 44 37.1 +0.3
baz=312
ULM Lac du Bonnet 76.64 35 P P 20 44 36.8 +0.3
comp=Z,1.9nm,0.4s,baz=303,slow=6.5,SNR=4.0
SRU San Rafael Swe 76.65 50 eP P 20 44 38.4 +1.4
comp=Z,24nm,0.7s
SRU San Rafael Swe 76.65 50 eP P 20 44 38.4 +1.4
SRU pmax pmax
comp=Z,24nm,0.7s
MDND Maddock 76.65 38 P P 20 44 36.8 +0.2
baz=315
GKP Gorka Klasztor 76.68 330 eP P 20 44 37.0 +0.4
GKP LMZ LR 21 21 19.6
comp=Z,1µm,18.6s
GKP Gorka Klasztor 76.68 330 eP P 20 44 37.0 +0.4
GKP MLR MLR
comp=Z,1µm,18.6s
LEOM Leova 76.78 320 ⇓ i P P 20 44 38.6 +1.3
LEOM Leova 76.78 320 P P 20 44 38.6 +1.3
MONP2 Monument Peak 76.86 58 P P 20 44 38.6 +0.3
baz=309
IRM Iron Mountain 76.91 57 P P 20 44 38.5 +0.1
baz=309
MUD Monsted U'grnd 76.97 336 i P P 20 44 39.3 +1.1
comp=Z,880nm,19.0s
MUD Monsted U'grnd 76.97 336 eP P 20 44 39.3 +1.1
MUD MLR MLR
comp=Z,890nm,19.0s
RSSD Black Hills 76.99 43 P P 20 44 38.8 0.0
baz=313
KWP Kalwaria Pacla 77.14 325 eP P 20 44 40.4 +1.1
KWP Kalwaria Pacla 77.14 325 eP P 20 44 40.6 +1.3
comp=Z,485nm,0.9s
KWP Kalwaria Pacla 77.14 325 eP P 20 44 40.4 +1.1
PRAR RASCA 77.14 322 ⇓ i P P 20 44 40.1 +0.7
B31A Greenbush Farm 77.16 37 P P 20 44 39.3 -0.1
baz=316
IKP In-Ko-Pah, Jac 77.22 58 P P 20 44 40.5 +0.3
baz=309

U15A	North Rim	77.29	53	eP		P	20 44 42.5 +1.7
	comp=Z,24nm,1.3s						
O20A	White River Ci	77.32	48	P		P	20 44 40.8 0.0
	baz=311						
BUR08	Bucovina Ar. S	77.43	322	eP		P	20 44 41.9 +0.7
BUR04	Bucovina Ar. S	77.44	322	eP		P	20 44 41.4 +0.2
BURAR	Bucovina Array	77.44	322	⇑iP		P	20 44 41.7 +0.5
BURAR	Bucovina Array	77.44	322	P		P	20 44 41.6 +0.4
PDMCI	Parker Dam,Lak	77.47	56	P		P	20 44 41.8 +0.4
	baz=309						
TESR	Tescani	77.54	321	⇓iP		P	20 44 41.8 +0.2
ILGA	Ilgaz	77.55	313	eP		P	20 44 44.2 +2.2
	comp=Z,45nm,0.9s						
CFR	Carcaliu	77.73	319	⇓iP		P	20 44 42.9 +0.2
CFR	Carcaliu	77.73	319	P		P	20 44 43.4 +0.7
CFR				pmax	pmax		
	comp=Z,17nm,1.4s						
GLA	Glamis	77.81	57	P		P	20 44 43.8 +0.4
	baz=309						
A33A	Warroad	77.81	35	P		P	20 44 42.8 -0.3
	baz=317						
PV09	Paradox Valley	77.87	50	eP		P	20 44 45.6 +1.6
VRI	Vrincioaia	77.95	320	⇓iP		P	20 44 45.7 +1.7
VRI	Vrincioaia	77.95	320	P		P	20 44 46.2 +2.2
OJC	Ojcow	77.96	327	eP		P	20 44 44.8 +0.9
OJC				LMZ	LR		21 22 11.2
	comp=Z,2μm,18.4s						
OJC	Ojcow	77.96	327	eP		P	20 44 44.8 +0.9
	comp=Z,50nm,1.0s						
OJC	Ojcow	77.96	327	eP		P	20 44 44.8 +0.9
OJC				MLR	MLR		
	comp=Z,2μm,18.4s						
PLOR	Plostina	78.00	320	⇑iP		P	20 44 45.6 +1.3
PLOR	Plostina	78.00	320	P		P	20 44 45.6 +1.3
PV10	Paradox Valley	78.01	50	eP		P	20 44 46.8 +2.1
	comp=Z,52nm,0.7s						
UZH	Uzhgorod	78.05	325	eP		P	20 44 44.3 -0.1
UZH				e			20 44 52.7
UZH				e			20 44 56.7
AGMN	Agassiz Nation	78.07	36	P		P	20 44 44.0 -0.5
	baz=317						
AGMN	Agassiz Nation	78.07	36	eP		P	20 44 44.9 +0.3
	comp=Z,15nm,1.4s						
PV04	Paradox Valley	78.07	50	eP		P	20 44 46.7 +1.7
	comp=Z,17nm,0.8s						
C32A	Crookston	78.11	37	P		P	20 44 44.5 -0.2
	baz=317						
N23A	Red Feather La	78.13	46	P		P	20 44 46.2 +0.8
	baz=312						
PV05	Paradox Valley	78.17	50	eP		P	20 44 46.2 +0.6
	comp=Z,29nm,0.8s						
HARR	Harsova	78.18	319	⇑iP		P	20 44 46.6 +1.4
HARR	Harsova	78.18	319	P		P	20 44 46.5 +1.4
PV07	Paradox Valley	78.20	50	eP		P	20 44 46.2 +0.5
	comp=Z,30nm,1.5s						
PV03	Paradox Valley	78.20	50	eP		P	20 44 47.2 +1.5
	comp=Z,20nm,0.8s						
BMR	Baia Mare	78.21	323	⇑iP		P	20 44 47.2 +1.9
CRVS	Cervenica-Dubn	78.22	325	eP		P	20 44 46.4 +1.0
CRVS				e			20 44 56.2
CRVS				eS		S	20 54 38.3 +0.2
CRVS				pmax	pmax		
	comp=Z,16nm,1.3s						
CRVS				MLR	MLR		
	comp=Z,1μm,14.6s						
CRVS	Cervenica-Dubn	78.22	325	eP		P	20 44 46.4 +1.0
CRVS				e			20 44 56.2
CRVS				eS		S	20 54 38.3 +0.2
CRVS				eL		L	21 23 23.3
ARCR	ARCALIA	78.23	322	⇑iP		P	20 44 47.3 +1.8
PV02	Paradox Valley	78.30	50	eP		P	20 44 48.3 +2.0
	comp=Z,45nm,1.6s						
NIE	Niedzica	78.35	326	eP		P	20 44 47.4 +1.3
NIE				eS		S	20 54 46.6 +7.1
NIE				LMZ	LR		21 22 37.7
	comp=Z,1μm,17.9s						
NIE	Niedzica	78.35	326	eP		P	20 44 47.4 +1.3
NIE				eS		S	20 54 46.6 +7.1
NIE				MLR	MLR		
	comp=Z,1μm,17.9s						
PV15	Paradox Valley	78.36	50	eP		P	20 44 48.6 +2.0
	comp=Z,11nm,0.8s						
E31A	Nome	78.39	38	P		P	20 44 46.1 -0.2
	baz=316						
WUAZ	Wupatki	78.44	53	P		P	20 44 47.8 +0.8
	baz=310						
WUAZ	Wupatki	78.44	53	eP		P	20 44 48.9 +1.9
	comp=Z,14nm,1.0s						
PV01	Paradox Valley	78.44	50	eP		P	20 44 48.6 +1.5
	comp=Z,15nm,1.1s						
BR131	Keskin Array S	78.48	312	eP		P	20 44 48.2 +1.0
BRTR	Keskin Array B	78.48	312	P		P	20 44 47.8 +0.6
	comp=Z,2.9nm,0.7s,baz=94,slow=4.2,SNR=18						
BRTR				pP		pP	20 44 57.2 +0.7
	comp=Z,6.8nm,0.6s,baz=80,slow=4.3,SNR=18						
BRTR				LR	LR		21 24 54.9
	comp=Z,350nm,18.1s,baz=12,slow=40						
B34A	Aery, Baudette	78.48	35	P		P	20 44 46.2 -0.6
	baz=318						
C33A	Trail	78.51	36	P		P	20 44 46.6 -0.3
	baz=317						
DOPR	Dopca	78.54	321	⇓iP		P	20 44 49.0 +1.8
ISR	Istrita	78.58	320	⇑iP		P	20 44 49.6 +2.1
ISR	Istrita	78.58	320	P		P	20 44 49.2 +1.7
ISR				pmax	pmax		
	comp=Z,45nm,0.7s						
MLR	Muntele Rosu	78.61	320	LR	LR		21 23 05.1
	comp=Z,204nm,19.9s,baz=32,slow=38						
MLR	Muntele Rosu	78.61	320	⇓iP		P	20 44 48.5 +0.8
MLR	Muntele Rosu	78.61	320	eP		P	20 44 48.5 +0.8
	comp=Z,30nm,1.4s						
MLR	Muntele Rosu	78.61	320	eP		P	20 44 48.5 +0.8
MLR				pmax	pmax		
	comp=Z,30nm,1.4s						
ICOR	Ion Corvin	78.65	319	⇓iP		P	20 44 48.0 +0.2
SMCO	Snowmass	78.69	48	eP		P	20 44 50.1 +1.4
	comp=Z,43nm,1.9s						
ANTO	Ankara	78.86	313	⇑iP		P	20 44 50.0 +0.8
ANTO	Ankara	78.86	313	eP		P	20 44 50.7 +1.5
	comp=Z,41nm,0.8s						
ANTO	Ankara	78.86	313	P		P	20 44 50.4 +1.2
	SNR=8.5						
ANTO	Ankara	78.86	313	eP		P	20 44 50.7 +1.5
ANTO				pmax	pmax		
	comp=Z,41nm,0.8s						
BR231	Keskin MP Arra	78.89	313	eP		P	20 44 50.1 +0.7
BR231				epP		pP	20 45 00.3 +1.5
LANS	Liptovska Anna	78.91	326	eP		P	20 44 51.2 +2.0
LANS				e			20 45 00.0
LANS	Liptovska Anna	78.91	326	eP		P	20 44 51.2 +2.0
LANS				e			20 45 00.0
KSP	Ksiaz	78.92	329	eP		P	20 44 50.0 +0.8
KSP				eS		S	20 54 51.3 +5.8
KSP				LMZ	LR		21 22 50.7
	comp=Z,2μm,17.9s						
KSP	Ksiaz	78.92	329	eP		P	20 44 50.0 +0.8
KSP				eS		S	20 54 51.3 +5.8
KSP				MLR	MLR		
	comp=Z,2μm,17.9s						
OKC	Ostrava-Krasne	78.94	327	eS		S	20 54 48.4 +2.7
OKC				AMS	AMS		21 22 50.0
	comp=Z,1μm,17.5s						
B35A	Bob, Littlefor	78.98	35	P		P	20 44 49.2 -0.4
	baz=319						
B35A	Bob, Littlefor	78.98	35	eP		P	20 44 49.8 +0.2
	comp=Z,13nm,1.1s						
ISCO	Idaho Springs	79.05	47	P		P	20 44 51.2 +0.7
	baz=313						
ISCO	Idaho Springs	79.05	47	eP		P	20 44 52.3 +1.8
	comp=Z,18nm,1.4s						
VOIR		79.09	321	⇑iP		P	20 44 52.1 +1.8
MVCO	Mesa Verde	79.09	51	P		P	20 44 51.1 +0.4
	baz=312						
MVCO	Mesa Verde	79.09	51	eP		P	20 44 52.2 +1.5
	comp=Z,9.2nm,0.7s						
X16A	Lo Mia Camp, P	79.11	54	eP		P	20 44 52.6 +1.8
	comp=Z,8.1nm,1.0s						
G31A	Conde	79.19	39	P		P	20 44 50.2 -0.6
	baz=316						
MORC	Moravsky Berou	79.24	328	⇑iP		P	20 44 52.2 +1.2
MORC	Moravsky Berou	79.24	328	eP		P	20 44 51.6 +0.6
	comp=Z,116nm,1.0s						
MORC	Moravsky Berou	79.24	328	eP		P	20 44 51.6 +0.6
MORC				pmax	pmax		
	comp=Z,116nm,1.0s						
MORC	Moravsky Berou	79.24	328	eP		P	20 44 51.9 +0.9
MORC				e			20 45 01.2
F32A	Veblen	79.25	38	P		P	20 44 50.8 -0.3
	baz=317						
D34A	Park Rapids	79.27	36	P		P	20 44 50.7 -0.5
	baz=318						
DPC	Dobruska-Polom	79.30	329	eP		P	20 44 52.9 +1.6
DPC				ex		x	20 45 00.8
DPC				eS		S	20 54 51.4 +1.8
DPC				AMS	AMS		21 23 00.0
	comp=Z,1μm,16.3s						
DPC	Dobruska-Polom	79.30	329	eP		P	20 44 52.9 +1.6
DPC				e			20 45 00.8
DPC				eS		S	20 54 51.4 +1.8
DPC				MLR	MLR		
	comp=Z,1μm,16.3s						
UPC	Upice	79.30	329	eP		P	20 44 52.8 +1.5
UPC				eS		S	20 54 52.0 +2.5
UPC				AMS	AMS		21 22 50.0
	comp=Z,1μm,16.0s						
UPC	Upice	79.30	329	eP		P	20 44 52.8 +1.5
UPC				eS		S	20 54 52.0 +2.5
UPC				MLR	MLR		
	comp=Z,1μm,16.0s						
E33A	Westby DABS, E	79.32	37	P		P	20 44 51.4 -0.1
	baz=317						
KRLC	Kraliky	79.33	328	eP		P	20 44 52.6 +1.1
KRLC				ePCP		pP	20 45 02.3 +1.4
KRLC	Kraliky	79.33	328	eP		P	20 44 52.6 +1.1
KRLC				e			20 45 02.3
ARR	Arges	79.34	321	⇓iP		P	20 44 52.6 +0.9
C35A	Jirik Farms, M	79.36	35	P		P	20 44 51.1 -0.5
	baz=318						
SUSD	Miller	79.38	40	P		P	20 44 51.6 -0.2
	baz=316						
G32A	Webster	79.52	39	P		P	20 44 52.4 -0.1
	baz=317						
PSZ	Piszkesteto	79.65	325	⇑iP		P	20 44 54.8 +1.5
PSZ	Piszkesteto	79.65	325	eP		P	20 44 54.8 +1.5
	comp=Z,35nm,1.1s						
VYHS	Vyhne	79.68	326	eP		P	20 44 54.5 +1.1
VYHS				e			20 45 03.7
VYHS				eS		S	20 54 54.7 +1.1
VYHS				pmax	pmax		
	comp=Z,11nm,1.1s						
VYHS	Vyhne	79.68	326	eP		P	20 44 54.5 +1.1
VYHS				e			20 45 03.7
VYHS				eS		S	20 54 54.7 +1.1
E34A	Wadena	79.70	37	P		P	20 44 53.4 -0.2
	baz=318						
W18A	Petrified Fore	79.72	53	P		P	20 44 55.1 +1.1
	baz=311						
S22A	4UR Ranch, Cre	79.73	49	P		P	20 44 55.2 +1.0
	baz=312						
S22A	4UR Ranch, Cre	79.73	49	eP		P	20 44 56.0 +1.8
	comp=Z,15nm,1.2s						
D35A	Remer	79.79	36	P		P	20 44 53.6 -0.4
	baz=318						
214A	Organ Pipe Nat	79.82	57	P		P	20 44 55.0 +0.5
	baz=310						
BRG	Berggiesshubel	79.82	330	eP		P	20 44 54.8 +0.7
	comp=Z,7.1nm,0.9s						
BRG				ePCP		pP	20 45 03.7 +0.2
	comp=Z,14nm,0.9s						
BRG				S		S	20 54 57.0 +2.0
BRG				SS		SS	21 00 08.0 +4.9
	comp=N,1μm,15.7s						
	comp=E,639nm,15.4s						
	comp=Z,1μm,15.1s						
BRG	Berggiesshubel	79.82	330	eP		P	20 44 54.8 +0.7
BRG				e			20 45 03.7
BRG				S		S	20 54 57.0 +2.0
BRG				SS		SS	21 00 08.0 +4.9
BRG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BRG				MLR	MLR		
	comp=N,1μm,15.7s						
BRG				MLR	MLR		
	comp=E,639nm,15.4s						
BRG				MLR	MLR		
	comp=Z,1μm,15.1s						
C36A	Pine Crest Far	79.83	35	P		P	20 44 53.6 -0.6
	baz=319						
CLL	Collm	79.83	331	⇑iP		P	20 44 54.3 +0.2
	comp=Z,14nm,0.9s						
CLL				i PcP		pP	20 45 03.4 -0.1
	comp=Z,25nm,0.9s						
CLL				ePP		PP	20 47 51.0 -3.9
CLL				e			20 48 05.0
CLL				ePPP		PPP	20 49 42.0
CLL				eS		S	20 54 54.0 -1.1
CLL				ePS		PnS	20 55 42.0 +0.8
CLL				eSS		SS	20 59 48.0 -15
CLL				e			21 01 00.0
CLL				eSSS		SSS	21 03 24.0
CLL				LmH			21 18 00.0
	comp=N,900nm,19.0s						
CLL				LmH			21 18 00.0
	comp=E,2μm,20.4s						
CLL				LmV			21 23 00.0
	comp=Z,1μm,19.3s						
CLL	Collm	79.83	331	eP		P	20 44 53.9 -0.2
	comp=Z,22nm,0.9s						
CLL	Collm	79.83	331	⇑iP		P	20 44 54.3 +0.2
CLL				i			20 45 03.4
CLL				eS		S	20 54 54.0 -1.1
CLL				pmax	pmax		
	comp=Z,14nm,0.9s						
CLL				MLR	MLR		
	comp=Z,1μm,19.3s						
PVCC	Panska Ves	79.85	330	eP		P	20 44 55.2 +0.9
PVCC				ex		x	20 45 04.1
PVCC	Panska Ves	79.85	330	eP		P	20 44 55.2 +0.9
PVCC				e			20 45 04.1
Q24A	Divide	79.88	48	P		P	20 44 54.4 -0.7
	baz=313						
JAVC	Velka Javorina	79.90	327	eP		P	20 44 56.6 +2.0
JAVC				e			20 45 05.7
VRAC	Vranov	80.00	328	⇑iP		P	20 44 55.9 +0.9
VRAC	Vranov	80.00	328	eP		P	20 44 56.0 +0.9
VRAC				e			20 45 05.5
E35A	Pequot Lakes	80.03	36	P		P	20 44 54.4 -0.9
	baz=318						
G33A	Ortonville	80.08	38	P		P	20 44 55.5 -0.1
	baz=317						
H32A	Carlson Farm,	80.09	39	P		P	20 44 55.5 -0.2
	baz=317						
OGNE	Ogallala	80.25	44	P		P	20 44 56.4 -0.3
	baz=314						
GOPC	GO Pecny, Ondr	80.25	329	eP		P	20 44 57.7 +1.2
GOPC				ePCP		pP	20 45 07.3 +1.4
GOPC				eS		S	20 55 01.6 +2.0
GOPC				AMS	AMS		21 23 30.0
	comp=Z,1μm,17.2s						
GOPC	GO Pecny, Ondr	80.25	329	eP		P	20 44 57.7 +1.2
GOPC				e			20 45 07.3
GOPC				eS		S	20 55 01.6 +2.0
GOPC				MLR	MLR		
	comp=Z,1μm,17.2s						
SMOL	Smolenice	80.27	327	eP		P	20 44 58.0 +1.5
SMOL				e			20 45 07.8
SMOL	Smolenice	80.27	327	eP		P	20 44 58.0 +1.5
SMOL				e			20 45 07.8
PRA	Prague	80.27	329	AMS	AMS		21 23 40.0
	comp=Z,1μm,16.5s						
KRUC	Moravsky	80.27	328	eP		P	20 44 57.4 +0.9
KRUC				e			20 45 06.5
EYMN	Ely	80.27	34	P		P	20 44 56.5 -0.1
	baz=320						
RAR	Rarotonga	80.28	128	LR	LR		21 14 58.2
	comp=Z,287nm,19.3s,baz=293,slow=32						
PRU	Pruhonice	80.29	329	eP		P	20 44 57.9 +1.3
PRU				ePCP		pP	20 45 07.3 +1.3
PRU				eS		S	20 54 57.8 -2.2
PRU				AMS	AMS		21 23 40.0
	comp=Z,1μm,16.8s						
PRU	Pruhonice	80.29	329	eP		P	20 44 57.9 +1.3
PRU				e			20 45 07.3
PRU				eS		S	20 54 57.8 -2.2
PRU				MLR	MLR		
	comp=Z,1μm,16.8s						
G34A	Benson	80.42	38	P		P	20 44 57.3 -0.1
	baz=318						
MODS	Modra-Piesok	80.44	327	eP		P	20 44 57.8 +0.3
MODS				e			20 45 06.9
MODS				eS		S	20 55 05.6 +3.9
MODS				pmax	pmax		
	comp=Z,31nm,1.1s						
MODS				MLR	MLR		
	comp=Z,2μm,19.3s						
MODS	Modra-Piesok	80.44	327	eP		P	20 44 57.8 +0.3
MODS				e			20 45 06.9
MODS				eS		S	20 55 05.5 +3.9
MODS				eL		L	21 23 52.4
SDCO	Great Sand Dun	80.50	49	P		P	20 44 59.1 +0.7
	baz=313						
SDCO	Great Sand Dun	80.50	49	eP		P	20 44 58.9 +0.5
	comp=Z,8.9nm,1.2s						
C38A	Sawbill Land.	80.55	34	P		P	20 44 56.9 -1.2
	baz=320						
E36A	McGregor	80.58	36	P		P	20 44 57.9 -0.4
	baz=319						
BZS	Buzias	80.60	323	⇓iP		P	20 44 58.6 +0.2
BZS	Buzias	80.60	323	P		P	20 44 58.8 +0.4
BZS				pmax	pmax		
	comp=Z,16nm,1.3s						
HERR	Herculane	80.77	322	⇑iP		P	20 44 58.0 -1.3
MOX	Moxa	80.89	331	P		P	20 45 01.2 +1.4
MOX				pmax	pmax		
	comp=Z,13nm,1.0s						
TUC	Tucson	80.90	56	eP		P	20 45 01.6 +1.3
	comp=Z,11nm,1.4s						
TUC	Tucson	80.90	56	eP		P	20 45 01.6 +1.3
TUC				pmax	pmax		
	comp=Z,11nm,1.4s						
NKC	Novy Kostel	80.91	331	eP		P	20 45 01.0 +1.0
NKC				ePP		PP	20 48 04.2 +0.3
NKC				eS		S	20 55 07.1 +0.6
NKC				AMS	AMS		21 24 00.0
	comp=Z,900nm,16.0s						
NKC	Novy Kostel	80.91	331	eP		P	20 45 01.0 +1.0
NKC				e			20 48 04.2
NKC				eS		S	20 55 07.1 +0.6
NKC				MLR	MLR		
	comp=Z,900nm,16.0s						
G35A	Watkins	80.99	37	P		P	20 44 58.9 -1.6
	baz=318						
ECSD	EROS Data Cent	81.06	39	P		P	20 45 00.7 -0.2
	baz=317						
ECSD	EROS Data Cent	81.06	39	eP		P	20 45 01.5 +0.6
	comp=Z,44nm,1.8s						
MDVR	Moldovita	81.17	322	⇓iP		P	20 45 02.1 +0.6
H35A	Sunnyside Ranc	81.21	38	P		P	20 45 02.0 +0.4
	baz=318						
RAYN	Ar Rayn	81.24	293	eP		P	20 45 02.6 +0.4
	comp=Z,30nm,0.8s						
RAYN	Ar Rayn	81.24	293	i P		P	20 45 02.5 +0.4
	SNR=16						
E38A	The Farm, Brul	81.28	35	P		P	20 45 01.3 -0.7
	baz=320						
E38A	The Farm, Brul	81.28	35	eP		P	20 45 02.2 +0.2
	comp=Z,12nm,0.8s						
SOP	Sopron	81.28	327	P		P	20 45 02.7 +0.8
SOP				pmax	pmax		
	comp=Z,38nm,1.3s						
DIM	Dimitrovgrad	81.28	318	eP		P	20 45 12.8 +11
G36A	St. Michael	81.32	37	P		P	20 45 02.4 +0.2
	baz=319						
KHC	Kasperske Hory	81.35	329	eP		P	20 45 03.5 +1.1
KHC				ex		x	20 45 12.6
KHC				ePP		PP	20 48 04.2 -3.4
KHC				eS		S	20 55 12.9 +1.7
KHC				AMS	AMS		21 24 20.0
	comp=Z,1μm,17.3s						
KHC	Kasperske Hory	81.35	329	eP		P	20 45 03.4 +1.0
	comp=Z,8.2nm,0.9s						
KHC	Kasperske Hory	81.35	329	eP		P	20 45 03.5 +1.1
KHC				e			20 45 12.6
KHC				e			20 48 04.2
KHC				eS		S	20 55 12.9 +1.7
KHC				MLR	MLR		
	comp=Z,1μm,17.3s						
CONA	Conrad Observa	81.38	327	i pP		P	20 45 04.1 +1.5
	comp=Z,12nm,1.1s,SNR=10						
CONA				i PcP		pP	20 45 13.4 +1.4
	comp=Z,22nm,1.0s						
EKA	Eskdalemuir Ar	81.42	341	P		P	20 45 03.8 +1.3
	comp=Z,3.0nm,0.6s,baz=29,slow=4.8,SNR=11						
EKA				LR	LR		21 27 53.4
	comp=Z,176nm,18.4s,baz=355,slow=41						
GEC2	GERESS Array S	81.53	329	eP		P	20 45 04.3 +0.9
	comp=Z,8.6nm,1.0s						
GEC2	GERESS Array S	81.53	329	eP		P	20 45 04.3 +0.9
GEC2				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GERES	GERESS Array B	81.53	329	P		P	20 45 03.9 +0.5
	comp=Z,3.5nm,0.7s,baz=38,slow=5.4,SNR=27						
GERES				pP		pP	20 45 13.4 +0.5
	comp=Z,3.9nm,0.7s,baz=46,slow=5.9,SNR=14						
GERES				LR	LR		21 24 56.0
	comp=Z,1μm,18.2s,baz=20,slow=38						
GEA0	GERESS Array S	81.54	329	eP		P	20 45 03.7 +0.3
T25A	Trinidad	81.55	48	P		P	20 45 04.7 +0.8
	baz=314						
T25A	Trinidad	81.55	48	eP		P	20 45 05.2 +1.3
	comp=Z,11nm,0.7s						
WET	Wettzell	81.62	330	P		P	20 45 05.1 +1.3
WET				pmax	pmax		
	comp=Z,18nm,1.4s						
F38A	Pierce - Schro	81.63	35	P		P	20 45 04.4 +0.6
	baz=320						
KDZ	Kurdzhali	81.63	318	eP		P	20 45 06.6 +2.6
H36A	Jessenland, He	81.73	37	P		P	20 45 04.7 +0.3
	baz=319						
BUG	Bochum--Univer	81.77	334	P		P	20 45 04.8 +0.3
BUG				pmax	pmax		
	comp=Z,11nm,0.9s						
GRF	Grafenberg Arr	81.81	331	P		P	20 45 06.3 +1.5
GRF				pmax	pmax		
	comp=Z,40nm,1.0s						
GRFO	Grafenberg	81.81	331	eP		P	20 45 05.9 +1.2
	comp=Z,35nm,1.0s						
GRFO	Grafenberg	81.81	331	eP		P	20 45 05.9 +1.2
GRFO				pmax	pmax		
	comp=Z,35nm,1.0s						
TASM	ASL Pad, Albuq	81.83	51	P		P	20 45 06.2 +0.8
	baz=313						
ANMO	Albuquerque	81.84	51	LR	LR		21 21 04.3
	comp=Z,124nm,18.3s,baz=330,slow=35						
ANMO	Albuquerque	81.84	51	P		P	20 45 06.2 +0.8
	baz=313						
ANMO	Albuquerque	81.84	51	eP		P	20 45 07.1 +1.7
	comp=Z,7.7nm,0.9s						
ANMO	Albuquerque	81.84	51	d iP		P	20 45 05.8 +0.4
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ALN	Alexandroupoli	81.85	317	epP		pP	20 45 15.1 +0.6
CSS	Mathiatis	81.86	309	eP		P	20 45 06.3 +1.0
	comp=Z,11nm,0.7s						
E39A	Mellen	81.89	34	P		P	20 45 05.2 0.0
	baz=321						
MMAI	Mount Meron Ar	81.89	306	P		P	20 45 07.2 +1.6
	comp=Z,17nm,0.9s,baz=38,slow=7.3,SNR=24						
MMAI				LR	LR		21 25 55.4
	comp=Z,826nm,18.1s,baz=60,slow=39						
BGNE	Belgrade	81.98	42	P		P	20 45 05.0 -0.8
	baz=317						
ARSA	Arzberg	82.05	327	i pP		P	20 45 07.2 +1.1
	comp=Z,12nm,1.2s						
VTS	Vitosha	82.07	320	⇑iP		P	20 45 07.7 +1.3
VTS	Vitosha	82.07	320	eP		P	20 45 06.9 +0.5
	comp=Z,21nm,0.8s						
VTS	Vitosha	82.07	320	eP		P	20 45 07.9 +1.5
VTS	Vitosha	82.07	320	eP		P	20 45 06.9 +0.5
VTS				pmax	pmax		
	comp=Z,21nm,0.8s						
F39A	Loretta	82.09	35	P		P	20 45 05.7 -0.6
	baz=321						
MOA	Molln	82.10	328	i P		P	20 45 06.9 +0.6
	comp=Z,14nm,1.4s						
I36A	Fitzsimmons Fa	82.11	38	P		P	20 45 06.1 -0.3
	baz=319						
E40A	Wakefield	82.12	34	P		P	20 45 06.6 +0.1
	baz=321						
Y22E	IRIS PASSCAL I	82.14	52	P		P	20 45 08.1 +1.1
	baz=313						
H37A	Dierke Farm, C	82.20	37	P		P	20 45 06.8 0.0
	baz=320						
D41A	Chassel	82.21	33	P		P	20 45 07.2 +0.4
	baz=322						
I37A	Lemond, Waseca	82.40	38	P		P	20 45

baz=319
I37A **Lemond, Waseca** 82.40 38 eP P 20 45 09.2 +1.2
comp=Z,25nm,0.8s
H38A **Maiden Rock** 82.42 37 P P 20 45 07.9 -0.1
baz=320
F40A **Park Falls** 82.44 35 P P 20 45 07.8 -0.3
baz=321
G39A **Holcombe** 82.46 36 P P 20 45 07.9 -0.4
baz=321
J36A **Seneca 1, Swea** 82.47 39 P P 20 45 08.3 0.0
baz=319
J36A **Seneca 1, Swea** 82.47 39 eP P 20 45 09.3 +1.0
comp=Z,12nm,0.9s
319A **Douglas** 82.47 55 eP P 20 45 10.6 +1.9
comp=Z,8.8nm,0.7s
DIVS **Divibare** 82.50 323 eP P 20 45 08.6 +0.1
comp=Z,11nm,0.9s
E41A **Kenton** 82.51 34 P P 20 45 07.6 -0.9
baz=322
MMB **Musomiste** 82.54 319 eP P 20 45 09.5 +0.7
SCHQ **Schefferville** 82.61 17 P P 20 45 09.5 +0.7
comp=Z,4.1nm,0.8s,baz=305,slow=16,SNR=3.9
SCHQ LR LR 21 23 35.1
comp=Z,211nm,20.9s,baz=1.5,slow=37
121A **Cookes Peak, D** 82.64 54 P P 20 45 10.6 +0.9
baz=312
KKB **Krupnik** 82.67 319 eP P 20 45 10.3 +0.9
PERS **Pernice** 82.71 327 eP P 20 45 10.2 +0.6
PERS i 20 45 19.2
SOKA **Soboth** 82.71 327 i P P 20 45 10.3 +0.6
comp=Z,19nm,0.7s,SNR=19
SOKA i PcP pP 20 45 20.3 +1.3
comp=Z,41nm,0.9s
J37A **Redenius Farm,** 82.86 38 P P 20 45 10.1 -0.3
baz=319
H39A **Augusta** 82.88 36 P P 20 45 10.7 +0.3
baz=320
I38A **Scanlan Farm,** 82.89 37 P P 20 45 10.4 0.0
baz=320
MEM **Membach** 82.90 334 ⇑P P 20 45 11.4 +1.0
comp=Z,15nm,1.2s
G40A **Rib Lake** 82.91 35 P P 20 45 10.1 -0.5
baz=321
K36A **Gilmore City** 82.93 39 P P 20 45 10.3 -0.5
baz=319
SRS **Serrai** 82.96 319 P P 20 45 11.1 +0.2
SRS pmax pmax
comp=Z,18nm,1.3s
E42A **Champion** 82.99 33 P P 20 45 10.9 0.0
baz=323
CBKS **Cedar Bluff** 83.01 45 P P 20 45 10.8 -0.4
baz=316
OBKA **Obir** 83.05 327 i P P 20 45 12.0 +0.6
comp=Z,9.9nm,0.8s,SNR=6.5
KBA **Koelnbreinsper** 83.09 328 i P P 20 45 11.3 -0.4
comp=Z,30nm,1.0s,SNR=8.1
KBA **Koelnbreinsper** 83.09 328 P P 20 45 13.2 +1.5
KBA pmax pmax
comp=Z,32nm,1.3s
L36A **Harm Buss Farm** 83.23 40 P P 20 45 12.3 +0.1
baz=319
K37A **Belmond** 83.23 39 P P 20 45 11.8 -0.5
baz=319
STIP **Stip** 83.24 320 i P P 20 45 11.6 -0.7
KNT **Kendrikon** 83.28 319 P P 20 45 06.7 -5.9
BLY **Banja Luka** 83.29 325 epP pP 20 45 22.5 +0.5
SOH **Sokhos** 83.30 319 P P 20 45 12.4 -0.3
SOH pmax pmax
comp=Z,3.0nm,1.7s
BCLA **Clavier** 83.30 335 ⇑P P 20 45 12.4 -0.1
H40A **Chili** 83.33 35 P P 20 45 12.5 -0.3
baz=321
VAY **Valandovo** 83.33 319 i P P 20 45 13.5 +0.7
MYKA **Terra Mystica** 83.33 328 i P P 20 45 12.9 +0.1
comp=Z,9.5nm,0.9s,SNR=5.3
J38A **Wedel Dairy, R** 83.37 37 P P 20 45 12.2 -0.8
baz=320
PLE **Pljevlja** 83.37 323 ⇑iP P 20 45 13.6 +0.5
I39A **Houston** 83.40 37 P P 20 45 12.5 -0.6
baz=320
SKO **Skopje** 83.41 320 i P P 20 45 14.5 +1.3
F42A **Maple Grove Fa** 83.42 34 P P 20 45 12.8 -0.4
baz=322
IVA **Berane** 83.48 322 eP P 20 45 14.4 +0.7
VISS **Visnje** 83.49 327 i P P 20 45 13.5 -0.1
VISS i 20 45 22.6
BOJS **Bojanci** 83.55 326 i P P 20 45 13.3 -0.6
BOJS i 20 45 23.2
M36A **Felix, Anita** 83.65 40 P P 20 45 13.6 -0.9
baz=319
PVY **Plav** 83.66 322 ⇑iP P 20 45 14.6 0.0
H41A **Junction City** 83.66 35 P P 20 45 13.6 -0.9
baz=322
L37A **Phoenix Point,** 83.66 39 P P 20 45 14.0 -0.5
baz=319
E44A **Grand Marais A** 83.66 32 P P 20 45 13.9 -0.5
baz=324
KOME **Kolasin** 83.67 322 eP P 20 45 15.1 +0.4
PMOR **Pomariorio Ree** 83.68 115 eT T 22 17 08.3
comp=Z,8.9nm,0.3s
GRG **Griva** 83.68 319 P P 20 45 15.4 +0.7
UPM **Unac-Piva** 83.69 323 eP P 20 45 14.9 0.0
ABTA **Abfaltersbach** 83.70 328 i P P 20 45 14.4 -0.3
comp=Z,7.2nm,1.0s
ABTA i PcP pP 20 45 24.5 +0.3
comp=Z,17nm,1.1s
G42A **Mountain** 83.71 34 P P 20 45 14.1 -0.6
baz=322
J39A **Decorah** 83.72 37 P P 20 45 14.3 -0.5
baz=320
K38A **Parkersburg** 83.74 38 P P 20 45 14.7 -0.2
baz=320
JAVS **Javornik** 83.74 327 i P P 20 45 14.4 -0.6
JAVS e 20 45 23.5
MOTA **Moosalm** 83.77 330 i P P 20 45 14.9 -0.3
comp=Z,12nm,0.8s,SNR=10.0
MOTA i PcP pP 20 45 24.6 0.0
comp=Z,34nm,1.0s
F43A **Flat Rock, Esc** 83.78 33 P P 20 45 15.0 0.0
baz=323
I40A **Norwalk** 83.79 36 P P 20 45 14.8 -0.3
baz=321
RETA **Reutte** 83.79 330 i pP P 20 45 16.1 +1.0
comp=Z,22nm,1.2s,SNR=8.0
RETA i PcP pP 20 45 26.0 +1.4
comp=Z,43nm,1.1s
NKY **Niksic** 83.95 322 eP P 20 45 16.1 0.0
KRUS **Krusevo** 83.95 320 i P P 20 45 12.5 -3.7
F44A **Big Bay de Noc** 83.97 32 P P 20 45 15.7 -0.3
baz=324
I41A **Arkdale** 84.00 36 P P 20 45 16.0 -0.2
baz=322
NKME **Niksic** 84.00 322 ⇑iP P 20 45 16.3 0.0
G43A **Wallace** 84.01 34 P P 20 45 15.7 -0.5
baz=323
L38A **Oak Wood Farm,** 84.03 39 P P 20 45 15.3 -1.1
baz=320
N36A **Muff Farm, Cla** 84.05 41 P P 20 45 16.6 +0.1
baz=319
M37A **Trindle Farm,** 84.06 40 P P 20 45 16.4 -0.2
baz=319
SCIA **State Center** 84.09 39 P P 20 45 16.8 +0.1
baz=320
BRY **Bratogost** 84.10 323 ⇑iP P 20 45 16.5 -0.4
K39A **Oelwein** 84.11 38 P P 20 45 15.5 -1.3
baz=320
PHP **Peshkopia** 84.11 321 P P 20 45 14.4 -2.5
J40A **Soldiers Grove** 84.12 36 P P 20 45 15.9 -0.9
baz=321
PDG **Podgorica** 84.12 322 ||iP P 20 45 16.3 -0.5
TTG **Podgorica** 84.12 322 eP P 20 45 17.0 +0.2
TTG **Podgorica** 84.12 322 eP P 20 45 15.8 -1.0
comp=Z,44nm,0.8s
TTG **Podgorica** 84.12 322 eP P 20 45 15.8 -1.0
TTG pmax pmax
comp=Z,44nm,0.8s
BIA **Bitola** 84.18 320 eP P 20 45 12.2 -5.0
FETA **Feichten** 84.18 330 i P P 20 45 17.9 +0.6
comp=Z,11nm,0.8s,SNR=5.9
CEME **Cevo** 84.19 322 eP P 20 45 17.3 0.0
H42A **Shiocton** 84.24 35 P P 20 45 17.2 -0.2
baz=322
LIT **Litokhoron** 84.28 319 eP P 20 45 18.0 +0.3
comp=Z,26nm,0.9s
LIT **Litokhoron** 84.28 319 P P 20 45 16.2 -1.5
LIT **Litokhoron** 84.28 319 eP P 20 45 18.0 +0.3
LIT pmax pmax
comp=Z,26nm,0.9s
PPT **Papeete** 84.28 118 LR LR 21 20 11.0
comp=Z,273nm,18.5s,baz=306,slow=34
DAVA **Damuels** 84.30 330 i P P 20 45 16.2 -1.6
comp=Z,15nm,0.9s
DAVA i PcP pP 20 45 28.5 +1.2
comp=Z,40nm,1.0s
PPT2 **Papeete2** 84.30 118 eLR LR 21 11 54.4
comp=Z,666nm,22.5s,baz=318
FNA **Florina** 84.33 320 eP P 20 45 18.4 +0.4
comp=Z,19nm,1.0s
FNA **Florina** 84.33 320 eP P 20 45 18.4 +0.4
FNA pmax pmax
comp=Z,19nm,1.0s
DRME **Dracevica, Mon** 84.34 322 eP P 20 45 18.3 +0.3
OHR **Ohrid** 84.37 320 i P P 20 45 11.7 -6.5
BUM **Brajici-Budva** 84.39 322 eP P 20 45 18.4 +0.1
N37A **Lee Faris, Mou** 84.47 40 P P 20 45 18.7 +0.1
baz=319
HCY **Herceg Novi** 84.47 322 eP P 20 45 18.4 -0.2
M38A **Pleasantville** 84.47 39 P P 20 45 17.8 -0.8
baz=320
KSU1 **Kansas State U** 84.47 43 P P 20 45 18.2 -0.4
baz=318
K40A **Colesburg** 84.47 37 P P 20 45 18.3 -0.3
baz=321
J41A **Loganville** 84.47 36 P P 20 45 17.6 -1.1
baz=321
ULC **Ulcinj** 84.48 322 ⇑iP P 20 45 18.7 0.0
L39A **Vinton** 84.51 38 P P 20 45 18.8 0.0
baz=320
ECH **Echery** 84.53 332 eP P 20 45 18.9 +0.1
comp=Z,17nm,1.1s
ECH **Echery** 84.53 332 eP P 20 45 18.9 +0.1
ECH pmax pmax
comp=Z,17nm,1.1s
I42A **Draeger Farm,** 84.56 35 P P 20 45 18.4 -0.6
baz=322
F45A **CMU Biological** 84.58 32 P P 20 45 18.4 -0.7
baz=324
H43A **Windswept, Lux** 84.60 34 P P 20 45 18.6 -0.6
baz=323
FUORN **Ofenpass-Fuorn** 84.70 330 eP P 20 45 21.3 +1.3
comp=Z,48nm,0.8s
MNTX **Cornudas Mount** 84.70 53 P P 20 45 20.2 +0.1
baz=314
MNTX **Cornudas Mount** 84.70 53 eP P 20 45 21.1 +1.1
comp=Z,6.0nm,0.9s
AMTX **Amarillo** 84.71 49 P P 20 45 20.2 +0.1
baz=315
AMTX **Amarillo** 84.71 49 eP P 20 45 21.5 +1.4
comp=Z,13nm,0.9s
MSTX **Muleshoe** 84.71 50 eP P 20 45 20.9 +0.8
comp=Z,9.2nm,0.8s
DAVOX **Davos/Dischmat** 84.71 330 P P 20 45 21.0 +1.0
comp=Z,8.7nm,0.6s,baz=32,slow=7.3,SNR=15
DAVOX pP pP 20 45 29.8 +0.4
comp=Z,19nm,0.9s,baz=36,slow=8.7,SNR=12
DAVOX LR LR 21 26 58.9
comp=Z,1µm,18.0s,baz=67,slow=38
JFWS **Jewell Farm** 84.72 36 P P 20 45 18.9 -0.9
baz=321
NEST **Nestorio** 84.77 320 P P 20 45 20.2 -0.1
I43A **Langenfeld Bro** 84.90 35 P P 20 45 20.2 -0.6
baz=323
J42A **Columbus** 84.92 36 P P 20 45 20.6 -0.2
baz=322
M39A **Webster** 84.92 39 P P 20 45 20.4 -0.5
baz=320
L40A **Anamosa** 84.92 38 P P 20 45 20.7 -0.2
baz=321
L40A **Anamosa** 84.92 38 eP P 20 45 21.2 +0.3
comp=Z,9.7nm,0.9s
N38A **Joes South For** 84.92 40 P P 20 45 21.1 +0.2
baz=320
K41A **Shullsburg** 84.93 37 P P 20 45 20.8 -0.1
baz=321
O37A **Wolven Farm, M** 84.94 41 P P 20 45 20.9 -0.1
baz=319
BFZ **Birch Farm** 85.13 156 eP P 20 45 20.8 -0.8
comp=Z,193nm,1.4s
TUE **Stuetta** 85.17 330 eP P 20 45 23.2 +0.8
comp=Z,20nm,0.9s
J43A **Natural Harves** 85.18 35 P P 20 45 21.9 -0.3
baz=322
TAOE **Nuku Hiva Isla** 85.21 105 eLR LR 21 12 16.7
comp=Z,649nm,21.0s
N39A **Derby Farms, D** 85.22 39 P P 20 45 22.1 -0.3
baz=320
N39A **Derby Farms, D** 85.22 39 eP P 20 45 23.4 +1.0
comp=Z,46nm,1.5s
K42A **Prairie Point,** 85.24 36 P P 20 45 21.7 -0.7
baz=322
L41A **Preston** 85.25 37 P P 20 45 21.9 -0.7
baz=321
P37A **Lathrop** 85.28 41 P P 20 45 22.5 -0.2
baz=319
O38A **Galt** 85.31 40 P P 20 45 22.7 -0.2
baz=320
N40A **Mertquake, Sal** 85.66 39 P P 20 45 24.6 0.0
baz=321
P38A **Dawn** 85.66 41 P P 20 45 24.5 -0.1
baz=320
O39A **Kirksville** 85.67 40 P P 20 45 24.8 +0.2
baz=320
K43A **Burlington** 85.75 36 P P 20 45 24.2 -0.9
baz=322
Q37A **Longview Farm,** 85.76 42 P P 20 45 24.7 -0.4
baz=319
M41A **Milan** 85.78 38 P P 20 45 24.7 -0.5
baz=321
L43A **Garden Prairie** 85.98 36 P P 20 45 25.9 -0.3
baz=322
SENIN **Lac Senin/Sane** 86.04 331 eP P 20 45 27.4 +0.7
comp=Z,12nm,0.8s
O40A **La Belle** 86.11 39 P P 20 45 26.3 -0.5
baz=320
Q38A **Cooks Store, C** 86.12 41 P P 20 45 26.6 -0.3
baz=320
N41A **Harden Midland** 86.15 38 P P 20 45 26.9 -0.1
baz=321
P39B **Salisbury** 86.16 40 P P 20 45 27.2 +0.1
baz=320
VAL **Valentia** 86.19 344 eS S 20 56 01.5 +2.0
Q39A **Willow Grove F** 86.38 41 P P 20 45 27.9 -0.3
baz=320
N42A **Yates City** 86.44 38 P P 20 45 28.5 +0.1
baz=322
M43A **Waltham Townsh** 86.47 37 P P 20 45 28.4 -0.2
baz=322
P40A **Paris** 86.47 40 P P 20 45 29.2 +0.5
baz=320
P40A **Paris** 86.47 40 eP P 20 45 29.5 +0.9
comp=Z,12nm,0.9s
WMOK **Wichita Mounta** 86.47 47 P P 20 45 28.8 0.0
baz=317
WMOK **Wichita Mounta** 86.47 47 eP P 20 45 29.5 +0.7
comp=Z,6.8nm,1.0s
WMOK **Wichita Mounta** 86.47 47 eP P 20 45 29.5 +0.7
WMOK pmax pmax
comp=Z,7.0nm,1.0s
IDI **Anoyia** 86.54 314 P P 20 45 28.8 -0.3
comp=Z,5.1nm,0.4s,baz=15,slow=12,SNR=9.9
IDI LR LR 21 30 24.3
comp=Z,256nm,19.1s,baz=34,slow=40
R38A **Fenwick Farm,** 86.56 42 P P 20 45 28.2 -0.9
baz=319
O41A **Passleys Farm,** 86.59 39 P P 20 45 28.9 -0.3
baz=321
LPIG **La Paz** 86.62 62 LR LR 21 21 59.4
comp=Z,156nm,18.4s,baz=236,slow=34
MATE **Matera** 86.71 322 ||iP P 20 45 30.3 +0.6
N43A **Stutzman Famil** 86.76 37 P P 20 45 29.9 -0.2
baz=322
P41A **Barry, Barry** 86.85 39 P P 20 45 29.7 -0.8
baz=321
AQU **L'Aquila** 86.86 325 epP pP 20 45 40.8 +0.8
AQU **L'Aquila** 86.86 325 P P 20 45 31.1 +0.5
AQU pmax pmax
comp=Z,29nm,1.4s
R39A **Chumby, Stover** 86.91 41 P P 20 45 29.9 -0.9
baz=320
M44A **Midewin, Midew** 86.93 36 P P 20 45 30.4 -0.4
baz=323
S38A **Stockton** 86.98 42 P P 20 45 30.7 -0.5
baz=319
HDIL **Hopedale** 87.01 37 P P 20 45 30.9 -0.3
baz=322
O43A **Sugar Creek Fa** 87.21 38 P P 20 45 31.8 -0.5
baz=322
T38A **Diamond** 87.22 43 P P 20 45 32.0 -0.3
baz=319
S39A **Bolivar** 87.23 42 P P 20 45 31.2 -1.2
baz=320
S39A **Bolivar** 87.23 42 eP P 20 45 32.5 +0.1
comp=Z,7.9nm,1.1s
TUL1 **Leonard** 87.27 44 P P 20 45 32.5 -0.1
baz=318
M45A **Boilermakers S** 87.29 36 P P 20 45 32.4 -0.2
baz=323
R40A **Maddies Statio** 87.31 41 P P 20 45 31.9 -0.9
baz=320
R40A **Maddies Statio** 87.31 41 eP P 20 45 33.0 +0.3
comp=Z,26nm,1.6s
Q41A **Truxton** 87.32 40 P P 20 45 32.8 +0.1
baz=321
BNI **Bardonecchia** 87.38 331 P P 20 45 33.1 -0.1
TX31 **Lajitas Ar. Si** 87.41 54 eP P 20 45 33.7 +0.2
TXAR **Lajitas Array** 87.41 54 LR LR 21 22 23.2
comp=Z,112nm,19.6s,baz=0.0,slow=34
ABTX **Abilene, Hawle** 87.51 49 P P 20 45 34.1 +0.2
baz=316
P43A **Skaggs, Pawnee** 87.62 38 P P 20 45 34.1 -0.1
baz=322
Q42A **Golden Eagle** 87.70 39 P P 20 45 34.9 +0.3
baz=321
DAMY **Dhamar** 87.72 287 epP pP 20 45 46.3 +1.3
S40A **Lebanon** 87.72 41 P P 20 45 34.0 -0.8
baz=320
R41A **Rosebud** 87.75 40 P P 20 45 34.0 -0.8
baz=321
N46A **Monticello** 87.92 36 P P 20 45 35.5 -0.1
baz=324
O45A **Potomac** 87.98 37 P P 20 45 35.5 -0.4
baz=323
CCM **Cathedral Cave** 88.01 40 P P 20 45 35.5 -0.6
baz=321
CCM **Cathedral Cave** 88.01 40 eP P 20 45 36.7 +0.6
comp=Z,12nm,0.9s
CCM **Cathedral Cave** 88.01 40 eP P 20 45 36.7 +0.6
CCM pmax pmax
comp=Z,12nm,0.9s
R42A **Luebbering** 88.06 40 P P 20 45 36.0 -0.4
baz=321
T40A **Mansfield** 88.06 42 P P 20 45 36.2 -0.2
baz=320
Q43A **New Douglas** 88.08 39 P P 20 45 36.3 -0.1
baz=322
S41A **Jillco Farms,** 88.12 41 P P 20 45 36.4 -0.2
baz=321
U39A **Green Forest** 88.14 43 P P 20 45 36.5 -0.3
baz=320
SFIN **Lafayette** 88.17 36 P P 20 45 36.2 -0.6
baz=323
P44A **Sand Creek, Wi** 88.18 38 P P 20 45 37.1 +0.2
baz=322
TBI **Tubuai** 88.38 122 eS S 20 56 19.7 -1.6
comp=Z,258nm,27.2s
TBI **Tubuai** 88.38 122 eLR LR 21 13 42.0
comp=Z,333nm,24.0s,baz=308
TBI **Tubuai** 88.38 122 eT T 22 22 54.3
comp=Z,12nm,0.3s
Q44A **Meyer Farm, Va** 88.44 38 P P 20 45 37.7 -0.4
baz=322
S42A **Caledonia** 88.45 40 P P 20 45 38.2 0.0
baz=321
V39A **Pettigrew** 88.47 43 P P 20 45 37.9 -0.6
baz=320
R43A **Red Bud** 88.49 39 P P 20 45 38.2 -0.1
baz=322
U40A **Yellville** 88.49 42 P P 20 45 37.6 -0.9
baz=320
T41A **Mountain View** 88.53 41 P P 20 45 38.5 -0.1
baz=321
P46A **Rosedale** 88.72 37 P P 20 45 39.6 +0.2
baz=323
Q45A **Warren Harvey,** 88.86 38 P P 20 45 40.0 -0.1
baz=323
T42A **Van Buren** 88.88 41 P P 20 45 40.0 -0.2
baz=321
S43A **Fulton Ridge,** 88.97 40 P P 20 45 40.4 -0.2
baz=322
Q46A **CEJHS Indians,** 89.13 37 P P 20 45 41.3 -0.1
baz=323
X39A **Fountain Ranch** 89.22 44 P P 20 45 42.3 +0.4
baz=319
WHTX **Lake Whitney,** 89.23 48 P P 20 45 41.4 -0.6
baz=318
T43A **Greenville** 89.24 40 P P 20 45 41.8 -0.1
baz=322
W40A **Ferguson Farm,** 89.27 43 P P 20 45 41.7 -0.4
baz=320
R45A **Skylar, Fairfi** 89.27 38 P P 20 45 41.9 -0.1
baz=323
S44A **Carbondale** 89.27 39 P P 20 45 41.4 -0.7
baz=322
V41A **Mountainview** 89.29 42 P P 20 45 41.7 -0.5
baz=320
U42A **Revenden** 89.33 41 P P 20 45 41.3 -1.0
baz=321
MIAR **Mount Ida** 89.49 44 P P 20 45 42.6 -0.5
baz=320
MIAR **Mount Ida** 89.49 44 eP P 20 45 44.1 +1.0
comp=Z,26nm,1.8s
MIAR **Mount Ida** 89.49 44 eP P 20 45 44.1 +1.0
MIAR pmax pmax
comp=Z,26nm,1.8s
WHAR **Wooly Hollow** 89.60 43 eP P 20 45 44.6 +1.0
comp=Z,11nm,1.0s
S45A **Carrier Mills** 89.62 39 P P 20 45 43.1 -0.6
baz=322
W41B **Gary Mavity, V** 89.71 43 P P 20 45 42.7 -1.4
baz=320
X40A **Basin Creek Fa** 89.93 43 P P 20 45 44.7 -0.4
baz=320
R47A **Wooly Knot Far** 90.10 37 P P 20 45 46.0 0.0
baz=324
WCI **Wyandotte Cave** 90.26 37 P P 20 45 46.6 0.0
baz=324
U44B **Burton Farm, H** 90.29 40 P P 20 45 46.4 -0.4
baz=322
VAE **Valguarnera** 90.31 322 LR LR 21 30 51.1
comp=Z,308nm,19.0s,baz=62,slow=38
T46A **Princeton** 90.45 39 P P 20 45 47.8 +0.2
baz=323
833A **Chaparral WMA,** 90.76 52 P P 20 45 49.2 +0.1
baz=317
ATD **Arta Tunnel** 90.83 286 LR LR 21 30 44.3
comp=Z,246nm,19.5s,baz=35,slow=38
342A **Flagon Creek P** 92.58 45 P P 20 45 57.8 +0.3
baz=320
PAL **Palisades** 93.03 27 P P 20 45 59.5 +0.1
baz=332
TKL **Tuckaleechee C** 93.52 37 LR LR 21 29 23.3
comp=Z,149nm,21.1s,baz=324,slow=36
Y49A **Blount Mountai** 93.72 40 P P 20 46 02.4 -0.3
baz=324
BLA **Blacksburg** 93.73 34 P P 20 46 02.3 -0.5
baz=328
KEST **Kesra** 94.09 324 LR LR 21 33 30.0
comp=Z,1µm,18.2s,baz=358,slow=39
Z49A **Columbiana** 94.19 40 P P 20 46 04.6 -0.3
baz=324
W53A **Cullowhee** 94.21 37 P P 20 46 04.8 -0.3
baz=326
Y51A **Rockmart** 94.35 39 P P 20 46 05.0 -0.6
baz=325
Z50A **Ashland** 94.45 40 P P 20 46 05.9 -0.2
baz=324
PGAV **Gavieira, Arco** 95.03 339 eLR LR 21 26 59.0
comp=Z,224nm,16.0s
MVO **Moncorvo** 95.43 338 eLR LR 21 27 47.4
comp=Z,594nm,18.0s
BRAL **Brewton** 95.55 42 P P 20 46 11.1 -0.1
baz=323
ESDC **Sonseca Array** 95.85 335 P P 20 46 12.1 -0.4
comp=Z,0.1nm,0.3s,baz=26,slow=3.3,SNR=3.5
ESDC LR LR 21 35 06.4
comp=Z,512nm,18.2s,baz=15,slow=39
MTE **Manteigas** 96.28 338 eLR LR 21 28 33.8
comp=Z,475nm,18.0s
PMRV **Marv??o** 97.14 338 eLR LR 21 28 53.5
comp=Z,455nm,20.0s
RKT **Rikitea** 98.17 113 eLR LR 21 18 26.5
comp=Z,415nm,22.5s

PVAQ	**Vaqueiros**	**99.10**	**337**	*e*LR	LR	21 28 50.3	
	comp=Z,1μm,18.0s						
PMOZ	**Porto Moniz, M**	**105.93**	**343**	*e*LR	LR	21 30 23.8	
	comp=Z,166nm,18.0s						
TORD	**Torodi Ar. Bea**	**116.75**	**318**	PKP	**PKPdf**	**20 51 30.4**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=32,slow=1.4,SNR=7.9						
TORD				pPKP	pPKPdf	20 51 39.6	-0.9
	comp=Z,1.0nm,0.6s,baz=12,slow=1.5,SNR=6.1						
VNDA	**Vanda**	**117.20**	**176**	PKP	**PKPdf**	**20 51 29.7**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=296,slow=1.2,SNR=5.0						
VNDA				pPKP	**pPKPdf**	**20 51 39.0**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=322,slow=5.9,SNR=2.7						
KOWA	**Kowa**	**118.39**	**324**	PKP	**PKPdf**	**20 51 33.9**	**0.0**
	comp=Z,1.3nm,0.3s,baz=310,slow=6.3,SNR=3.9						
KOWA				pPKP	**pPKPdf**	**20 51 43.0**	**-0.7**
	comp=Z,3.3nm,0.8s,baz=253,slow=1.4,SNR=3.1						
DBIC	**Dimbokro**	**125.59**	**320**	PKP	**PKPdf**	**20 51 47.2**	**-0.5**
	comp=Z,5.9nm,0.9s,baz=76,slow=8.3,SNR=3.1						
DBIC				pPKP	**pPKPdf**	**20 51 57.4**	**-0.1**
	comp=Z,4.1nm,0.6s,baz=352,slow=3.3,SNR=2.7						
SNAA	**Sanae**	**143.48**	**197**	PKhKP	PKPpre	20 52 15.7	
	comp=Z,5.1nm,0.6s,baz=184,slow=5.5,SNR=13						
LPAZ	**La Paz**	**144.09**	**59**	PKP	PKPbc	20 52 20.6	-0.2
	comp=Z,2.4nm,0.8s,baz=351,slow=3.8,SNR=8.1						
LPAZ	**La Paz**	**144.09**	**59**	*e*PKPdf	PKPbc	20 52 21.4	+0.6
MNMC	**Minye Minye**	**145.07**	**64**	*e*PKPbc	**PKPdf**	**20 52 24.5**	**+0.6**
PB01	**IPOC Station P**	**146.41**	**67**	*e*PKPdf	**PKPab**	**20 52 29.3**	**+1.2**

*DDA **21** 20:40:35.7,39.°07N×28.°06E,h7km,Ml3.6*
*ISCJB **21** 20:40:36.4±0.4,39.°10N±0.°02×28.°05E±0.°02,h4km±4km,*
Error ellipse: s-maj=3.2km s-min=3.0km az=142.2
*ISK **21** 20:40:36.3,39.°09N×28.°03E,h7km,ML3.0/39*
*CSEM **21** 20:40:36.8±0.1,39.°10N×28.°03E,h5km,ML3.0, Error*
ellipse: s-maj=2.1km s-min=1.9km az=159.0
*ATH **21** 20:40:37.2,39.°14N×27.°99E,h22km±4km,ML2.5/7, Error*
ellipse: s-maj=6.3km s-min=2.1km az=273.0

ISC 21 20:40:36.8±0.9,**39.°11N**±0.°02×**28.°03E**±0.°02,**h11**km±8km,
n125,σ0°**80**/146,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKS	**Akhisar**	**0.28**	**216**	PG	**Pg**	**20 40 42.2**	**-0.4**
AKS				SG	**Sg**	**20 40 46.6**	**+0.2**
AKS	**Akhisar**	**0.28**	**216**	*e*Pg	**Pg**	**20 40 42.2**	**-0.4**
AKS				*e*Sg	**Sg**	**20 40 46.6**	**+0.2**
STEP	**BALIKESIR_Sava**	**0.36**	**318**	*i* P	**Pg**	**20 40 44.3**	**+0.3**
STEP				*i* S	**Sb**	**20 40 50.5**	**-0.4**
STEP	**BALIKESIR_Sava**	**0.36**	**318**	P	**Pg**	**20 40 44.3**	**+0.3**
STEP				S	**Sb**	**20 40 50.5**	**-0.4**
BALB	**Balikesir**	**0.54**	**348**	PG	**Pb**	**20 40 48.2**	**-0.1**
BALB				SG	**Sb**	**20 40 56.9**	**+0.8**
BALB	**Balikesir**	**0.54**	**348**	*e*Pg	**Pb**	**20 40 48.2**	**-0.1**
BALB				*e*Sg	**Sb**	**20 40 56.9**	**+0.8**
DURS	**Dursunbey**	**0.60**	**35**	*i* P	**Pg**	**20 40 48.2**	**-0.3**
DURS				*i* S	**Sg**	**20 40 57.0**	**+0.5**
DURS	**Dursunbey**	**0.60**	**35**	P	**Pg**	**20 40 48.2**	**-0.3**
DURS				S	**Sg**	**20 40 57.0**	**+0.5**
DST	**Dursunbey**	**0.68**	**43**	PG	**Pg**	**20 40 49.8**	**-0.1**
DST	**Dursunbey**	**0.68**	**43**	*e*Pg	**Pg**	**20 40 49.8**	**-0.1**
BALY	**Balya**	**0.70**	**334**	*i* P	**Pg**	**20 40 49.7**	**-0.7**
BALY				*i* S	**Sg**	**20 40 58.8**	**-0.9**
BALY	**Balya**	**0.70**	**334**	P	**Pg**	**20 40 49.7**	**-0.7**
BALY				S	**Sg**	**20 40 58.8**	**-0.9**
SMAA	**Simav-Kutahya**	**0.74**	**90**	PG	**Pg**	**20 40 50.9**	**-0.3**
SMAA	**Simav-Kutahya**	**0.74**	**90**	*e*Pg	**Pg**	**20 40 50.9**	**-0.3**
SIMA	**Simav-Kutahya**	**0.75**	**92**	PG	**Pg**	**20 40 50.8**	**-0.4**
SIMA	**Simav-Kutahya**	**0.75**	**92**	*e*Pg	**Pg**	**20 40 50.8**	**-0.4**
KULA	**Kula-Manisa**	**0.78**	**140**	PG	**Pg**	**20 40 51.4**	**-0.4**
KULA	**Kula-Manisa**	**0.78**	**140**	*e*Pg	**Pg**	**20 40 51.4**	**-0.4**
DKL	**Dikili**	**0.87**	**268**	PG	**Pg**	**20 40 53.5**	**-0.1**
DKL	**Dikili**	**0.87**	**268**	*e*Pg	**Pg**	**20 40 53.5**	**-0.1**
SHAP	**Saphane-Kutahy**	**0.94**	**95**	PG	**Pg**	**20 40 54.5**	**-0.4**
SHAP	**Saphane-Kutahy**	**0.94**	**95**	*e*Pg	**Pg**	**20 40 54.5**	**-0.4**
GONE	**Gonen-Balikesi**	**0.97**	**344**	PG	**Pg**	**20 40 55.5**	**0.0**
GONE	**Gonen-Balikesi**	**0.97**	**344**	*e*Pg	**Pg**	**20 40 55.5**	**0.0**
AYVA	**Ayvalik**	**1.05**	**281**	*i* P	**Pb**	**20 40 56.2**	**-0.9**
AYVA				*i* S	**Sn**	**20 41 11.8**	**-0.5**
AYVA	**Ayvalik**	**1.05**	**281**	P	**Pb**	**20 40 56.2**	**-0.9**
AYVA				S	**Sn**	**20 41 11.8**	**-0.5**
GEDZ	**Gediz**	**1.08**	**93**	PG	**Pb**	**20 40 57.2**	**-0.4**
GEDZ	**Gediz**	**1.08**	**93**	*e*Pg	**Pb**	**20 40 57.2**	**-0.4**
FOCM	**Fo¨§a**	**1.08**	**249**	PN	**Pb**	**20 40 57.4**	**-0.2**
FOCM	**Fo¨§a**	**1.08**	**249**	*e*Pn	**Pb**	**20 40 57.4**	**-0.2**
AYDB	**Zeytinkoy-Aydi**	**1.17**	**185**	PN	**Pb**	**20 40 58.6**	**-0.5**
AYDB	**Zeytinkoy-Aydi**	**1.17**	**185**	*e*Pn	**Pb**	**20 40 58.6**	**-0.5**
TVSB	**Tavsanli**	**1.17**	**73**	PN	**Pb**	**20 40 58.4**	**-0.7**
TVSB	**Tavsanli**	**1.17**	**73**	*e*Pn	**Pb**	**20 40 58.4**	**-0.7**
KCTX	**Karacabey (Bur**	**1.18**	**12**	PN	**Pb**	**20 40 59.1**	**-0.2**
KCTX	**Karacabey (Bur**	**1.18**	**12**	*e*Pn	**Pb**	**20 40 59.1**	**-0.2**
KNL	**Bal¨–kesir**	**1.22**	**342**	*i* P	**Pg**	**20 41 00.4**	**+0.1**
KNL				*i* S	**Sn**	**20 41 17.5**	**+1.1**
EDC	**Edincik**	**1.24**	**354**	PN	**Pg**	**20 41 00.6**	**-0.1**
EDC	**Edincik**	**1.24**	**354**	*e*Pn	**Pg**	**20 41 00.6**	**-0.1**
KRBN	**Karaburun**	**1.26**	**246**	PN	**Pb**	**20 41 00.6**	**0.0**
KRBN	**Karaburun**	**1.26**	**246**	*e*Pn	**Pb**	**20 41 00.6**	**0.0**
BAYC	**CANAKKALE_Bayr**	**1.31**	**299**	*i* P	**Pg**	**20 41 02.7**	**+0.8**
BAYC				*i* S	**Sb**	**20 41 18.2**	**0.0**
BAYC	**CANAKKALE_Bayr**	**1.31**	**299**	P	**Pg**	**20 41 02.7**	**+0.8**
BAYC				S	**Sb**	**20 41 18.2**	**0.0**
URLA	**Izmir**	**1.34**	**237**	PN	**Pn**	**20 41 01.2**	**-0.4**
URLA	**Izmir**	**1.34**	**237**	*e*Pn	**Pn**	**20 41 01.2**	**-0.4**
PRK	**Paraskevi**	**1.37**	**276**	P	**Pb**	**20 41 02.5**	**0.0**
PRK				S	**Sg**	**20 41 22.2**	**+1.3**
PRK				AML	AML	20 41 26.1	
	comp=E,615μm,0.5s						
PRK				AML	AML	20 41 27.7	
	comp=N,416μm,0.5s						
PRK	**Paraskevi**	**1.37**	**276**	P	**Pb**	**20 41 02.5**	**0.0**
PRK				S	**Sg**	**20 41 21.7**	**+0.8**
KRBG	**Karabiga-Canak**	**1.40**	**337**	PN	**Pn**	**20 41 02.5**	**+0.2**
KRBG	**Karabiga-Canak**	**1.40**	**337**	*e*Pn	**Pn**	**20 41 02.5**	**+0.2**
EZN	**Ezine**	**1.50**	**299**	PN	**Pb**	**20 41 04.3**	**-0.3**
EZN	**Ezine**	**1.50**	**299**	*e*Pn	**Pb**	**20 41 04.3**	**-0.3**
GCAM	**G?zelcaml?**	**1.54**	**204**	PN	**Pn**	**20 41 04.4**	**+0.2**
GCAM	**G?zelcaml?**	**1.54**	**204**	*e*Pn	**Pn**	**20 41 04.4**	**+0.2**
KUTH	**Kutahya**	**1.58**	**79**	PN	**Pn**	**20 41 05.4**	**+0.5**
KUTH	**Kutahya**	**1.58**	**79**	*e*Pn	**Pn**	**20 41 05.4**	**+0.5**
LPK	**Lapseki**	**1.59**	**323**	PN	**Pb**	**20 41 05.7**	**-0.6**
LPK	**Lapseki**	**1.59**	**323**	*e*Pn	**Pb**	**20 41 05.7**	**-0.6**
SBT5	**Esenkoy-Cinarc**	**1.66**	**23**	PN	**Pb**	**20 41 06.6**	**-0.7**
SBT5	**Esenkoy-Cinarc**	**1.66**	**23**	*e*Pn	**Pb**	**20 41 06.6**	**-0.7**
IZI	**Iznik**	**1.66**	**42**	PN	**Pn**	**20 41 06.7**	**+0.8**
IZI	**Iznik**	**1.66**	**42**	*e*Pn	**Pn**	**20 41 06.7**	**+0.8**
SMG	**Samos**	**1.68**	**214**	P	**Pg**	**20 41 08.7**	**-0.4**
SMG				S	**Sg**	**20 41 30.5**	**-0.4**
SMG				AML	AML	20 41 34.3	
	comp=N,336μm,0.3s						
SMG				AML	AML	20 41 36.5	
	comp=E,494μm,0.4s						
SMG	**Samos**	**1.68**	**214**	P	**Pb**	**20 41 08.2**	**+0.4**
SMG				S	**Sg**	**20 41 30.2**	**-0.7**
SIGR	**SIGRI**	**1.69**	**274**	PN	**Pn**	**20 41 06.9**	**+0.6**
SIGR	**SIGRI**	**1.69**	**274**	P	**Pn**	**20 41 06.5**	**+0.2**
SIGR				AML	AML	20 41 34.7	
	comp=N,237μm,0.4s						
SIGR				AML	AML	20 41 35.1	
	comp=E,277μm,0.4s						
SIGR	**SIGRI**	**1.69**	**274**	P	**Pn**	**20 41 06.8**	**+0.5**
SIGR	**SIGRI**	**1.69**	**274**	*e*Pn	**Pn**	**20 41 06.9**	**+0.6**
CHOS	**Chios island**	**1.70**	**245**	PN	**Pn**	**20 41 07.2**	**+0.7**
CHOS	**Chios island**	**1.70**	**245**	P	**Pn**	**20 41 06.0**	**-0.5**
CHOS				AML	AML	20 41 38.2	
	comp=E,274μm,0.3s						
CHOS				AML	AML	20 41 39.6	
	comp=N,181μm,0.3s						
CHOS	**Chios island**	**1.70**	**245**	P	**Pn**	**20 41 06.8**	**+0.3**
CHOS	**Chios island**	**1.70**	**245**	*e*Pn	**Pn**	**20 41 07.2**	**+0.7**
RKY	**Sarkoy-Tekirda**	**1.71**	**338**	PN	**Pn**	**20 41 07.2**	**+0.6**
RKY	**Sarkoy-Tekirda**	**1.71**	**338**	*e*Pn	**Pn**	**20 41 07.2**	**+0.6**
AUBOZ	**BOZOYUK**	**1.75**	**62**	PN	**Pn**	**20 41 07.8**	**+0.7**
AUBOZ	**BOZOYUK**	**1.75**	**62**	*e*Pn	**Pn**	**20 41 07.8**	**+0.7**
GELI	**Tayfur-Gelibol**	**1.76**	**318**	PN	**Pb**	**20 41 08.2**	**-0.8**
GELI	**Tayfur-Gelibol**	**1.76**	**318**	*e*Pn	**Pb**	**20 41 08.2**	**-0.8**
SBT3	**Marmara-Eregli**	**1.77**	**359**	PN	**Pn**	**20 41 08.3**	**+1.0**
SBT3	**Marmara-Eregli**	**1.77**	**359**	*e*Pn	**Pn**	**20 41 08.3**	**+1.0**
CAVI	**Cavuskoy**	**1.78**	**52**	PN	**Pn**	**20 41 08.2**	**+0.7**
CAVI	**Cavuskoy**	**1.78**	**52**	*e*Pn	**Pn**	**20 41 08.2**	**+0.7**
YLV	**Yalova**	**1.79**	**35**	PN	**Pn**	**20 41 08.5**	**+0.8**
YLV	**Yalova**	**1.79**	**35**	*e*Pn	**Pn**	**20 41 08.5**	**+0.8**
MLSB	**Milas**	**1.82**	**186**	PN	**Pn**	**20 41 08.6**	**+0.5**
MLSB	**Milas**	**1.82**	**186**	*e*Pn	**Pn**	**20 41 08.6**	**+0.5**
ADVT	**Abdulvahap**	**1.87**	**44**	PN	**Pn**	**20 41 09.6**	**+0.9**
ADVT	**Abdulvahap**	**1.87**	**44**	*e*Pn	**Pn**	**20 41 09.6**	**+0.9**
KESN	**Edirne-Kesan**	**2.00**	**329**	*i* P	**Pn**	**20 41 10.5**	**-0.4**
KESN				*i* S	**Sn**	**20 41 33.8**	**-2.4**
KESN	**Edirne-Kesan**	**2.00**	**329**	P	**Pn**	**20 41 10.5**	**-0.4**
KESN				S	**Sn**	**20 41 33.8**	**-2.4**
BORA	**Eskisehir**	**2.03**	**67**	PN	**Pn**	**20 41 11.9**	**+0.8**
BORA	**Eskisehir**	**2.03**	**67**	*e*Pn	**Pn**	**20 41 11.9**	**+0.8**
KAVV	**Kandilli-Istan**	**2.11**	**22**	PN	**Pn**	**20 41 13.0**	**+1.0**
KAVV	**Kandilli-Istan**	**2.11**	**22**	*e*Pn	**Pn**	**20 41 13.0**	**+1.0**
ISK	**Istanbul-Kandi**	**2.11**	**22**	PN	**Pn**	**20 41 12.9**	**+0.9**
ISK	**Istanbul-Kandi**	**2.11**	**22**	*e*Pn	**Pn**	**20 41 12.9**	**+0.9**
BODT	**Bodrum**	**2.12**	**196**	PN	**Pn**	**20 41 12.9**	**+0.7**
BODT	**Bodrum**	**2.12**	**196**	*e*Pn	**Pn**	**20 41 12.9**	**+0.7**
HRT	**Hereke**	**2.12**	**36**	PN	**Pn**	**20 41 13.1**	**+0.8**
HRT	**Hereke**	**2.12**	**36**	*e*Pn	**Pn**	**20 41 13.1**	**+0.8**
TURN	**Turunc**	**2.28**	**168**	PN	**Pn**	**20 41 16.0**	**+1.6**
TURN	**Turunc**	**2.28**	**168**	*e*Pn	**Pn**	**20 41 16.0**	**+1.6**
GULT	**Gulveren**	**2.33**	**55**	PN	**Pn**	**20 41 16.1**	**+0.9**
GULT	**Gulveren**	**2.33**	**55**	*e*Pn	**Pn**	**20 41 16.1**	**+0.9**
LIA	**Limnos Island**	**2.33**	**291**	P	**Pn**	**20 41 15.9**	**+0.8**
LIA	**Limnos Island**	**2.33**	**291**	P	**Pn**	**20 41 16.0**	**+0.8**
ALN	**Alexandroupoli**	**2.34**	**320**	P	**Pn**	**20 41 16.3**	**+1.0**
ALN				AML	AML	20 41 53.1	
	comp=N,106μm,0.4s						
ALN				AML	AML	20 41 54.2	
	comp=E,72μm,0.6s						
ALN	**Alexandroupoli**	**2.34**	**320**	P	**Pn**	**20 41 16.2**	**+1.0**
SMTH	**Samothraki Isl**	**2.35**	**306**	P	**Pn**	**20 41 16.6**	**+1.2**
SMTH				AML	AML	20 41 53.1	
	comp=N,99μm,0.3s						
SMTH				AML	AML	20 41 54.1	
	comp=E,71μm,0.3s						
SMTH	**Samothraki Isl**	**2.35**	**306**	P	**Pn**	**20 41 16.5**	**+1.1**
SPNC	**Sapanca-Adapaz**	**2.36**	**47**	PN	**Pn**	**20 41 16.5**	**+1.0**
SPNC	**Sapanca-Adapaz**	**2.36**	**47**	*e*Pn	**Pn**	**20 41 16.5**	**+1.0**
DAT	**Datca**	**2.40**	**189**	PN	**Pn**	**20 41 16.9**	**+0.7**
DAT	**Datca**	**2.40**	**189**	*e*Pn	**Pn**	**20 41 16.9**	**+0.7**
SAUV	**Serdivan-Sakar**	**2.41**	**47**	PN	**Pn**	**20 41 17.2**	**+1.1**
SAUV	**Serdivan-Sakar**	**2.41**	**47**	*e*Pn	**Pn**	**20 41 17.2**	**+1.1**
FETY	**Fethiye**	**2.61**	**161**	PN	**Pn**	**20 41 19.8**	**+0.8**
FETY	**Fethiye**	**2.61**	**161**	*e*Pn	**Pn**	**20 41 19.8**	**+0.8**
AUMIH	**MIHALICIK**	**2.78**	**73**	PN	**Pn**	**20 41 22.6**	**+1.2**
AUMIH	**MIHALICIK**	**2.78**	**73**	*e*Pn	**Pn**	**20 41 22.6**	**+1.2**
RDO	**Rodhopi**	**2.79**	**318**	P	**Pn**	**20 41 23.1**	**+1.8**
RDO				AML	AML	20 42 07.9	
	comp=N,58μm,0.3s						
RDO				AML	AML	20 42 10.3	
	comp=E,48μm,0.3s						
RDO	**Rodhopi**	**2.79**	**318**	P	**Pn**	**20 41 22.8**	**+1.4**
ARG	**Arkhangelos**	**2.89**	**178**	P	**Pn**	**20 41 25.1**	**+2.3**
ARG	**Arkhangelos**	**2.89**	**178**	P	**Pn**	**20 41 25.0**	**+2.3**
KIZT	**Kizilcal**	**3.01**	**93**	PN	**Pn**	**20 41 25.8**	**+1.2**
KIZT	**Kizilcal**	**3.01**	**93**	*e*Pn	**Pn**	**20 41 25.8**	**+1.2**

*IDC **21** 20:42:42.8±2.2,39.°50N×143.°52E,h0km,mb3.6/5,*
mb1 3.7/7,mb1mx3.5/70,mbtmp3.6/7,ML3.4/2,Error
ellipse: s-maj=45.3km s-min=31.1km az=153.0
*JMA **21** 20:42:44.6±0.2,39.°42N×143.°57E,h33km,M3.9*
*ISCJB **21** 20:42:45.0±2.0,39.°44N±0.°06×143.°54E±0.°08,*
h29km±16km,mb3.6/5,Error ellipse: s-maj=12.3km
s-min=8.2km az=135.8

ISC 21 20:42:45.5±3.9,**39.°51N**±0.°06×**143.°41E**±0.°08,**h17**km±24km,
n22,σ0°**95**/27,**mb3.6/5**,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**1.23**	**274**	P	**Pb**	**20 43 08.1**	**-0.3**
JTH	**Tanohata**	**1.27**	**290**	P	**Pb**	**20 43 08.7**	**-0.3**
OFUJ	**Ofunato**	**1.42**	**253**	P	**Pn**	**20 43 10.2**	**-0.3**
OFUJ				*e*S	**Sn**	**20 43 28.7**	**-0.1**
JOM	**Ohasama**	**1.64**	**269**	P	**Pn**	**20 43 14.2**	**+0.6**
JOM				*e*S	**Sb**	**20 43 35.4**	**-0.3**
JANG	**Nango**	**1.69**	**301**	P	**Pn**	**20 43 14.5**	**+0.2**
JMK	**Ichinoseki**	**1.79**	**253**	P	**Pn**	**20 43 15.7**	**+0.1**
JMK				*e*S	**Sn**	**20 43 38.3**	**+0.3**
JIO	**Ouri**	**1.92**	**237**	P	**Pn**	**20 43 16.5**	**-0.9**
JRG	**Rokugo**	**2.15**	**268**	P	**Pn**	**20 43 21.4**	**+0.8**
JTM	**Tenmabayashi**	**2.20**	**306**	P	**Pn**	**20 43 22.4**	**+1.1**
JTM				*e*S	**Sb**	**20 43 50.4**	**-1.5**
JAH	**Hinai**	**2.24**	**289**	P	**Pn**	**20 43 23.2**	**+1.3**
JOU	**Okura**	**2.43**	**243**	P	**Pn**	**20 43 24.4**	**0.0**
JOU				*e*S	**Sn**	**20 43 54.6**	**+0.9**
JYK	**Kaneyama**	**2.44**	**257**	P	**Pn**	**20 43 25.5**	**+0.9**
JFT	**Otama**	**3.12**	**231**	P	**Pn**	**20 43 33.7**	**-0.3**
ASAJ	**Asahikawa**	**4.64**	**353**	Pn	**Pn**	**20 43 56.2**	**+1.3**
	1.3nm,0.3s,baz=195,slow=11,SNR=14						
ASAJ				Sn	**Sn**	**20 44 46.5**	**-1.9**
	1.1nm,0.3s,baz=225,slow=16,SNR=2.7						
MJAR	**Matsushiro Arr**	**5.06**	**236**	Pn	**Pn**	**20 44 02.1**	**+1.4**
	1.7nm,0.3s,baz=33,slow=14,SNR=22						
MAT	**Matsushiro**	**5.07**	**236**	P	**Pn**	**20 44 01.8**	**+1.1**
JHJ	**Hachijo jima 2**	**7.02**	**206**	Sn	Sn	20 45 37.7	-9.2
	6.5nm,0.3s,baz=51,slow=19,SNR=2.7						
ZALV	**Zalesovo Beam**	**41.46**	**310**	P	**P**	**20 50 30.8**	**-0.3**
	0.8nm,0.5s,baz=97,slow=7.7,SNR=2.4						
MKAR	**Makanchi Array**	**44.18**	**300**	P	**P**	**20 50 52.6**	**-0.7**
	0.4nm,0.7s,baz=86,slow=7.4,SNR=3.1						
KURBB	**Kurchatov Arra**	**45.76**	**306**	P	**P**	**20 51 06.7**	**+0.8**
	0.9nm,0.5s,baz=82,slow=8.4,SNR=6.6						
BVAR	**Borovoye Array**	**50.10**	**311**	P	**P**	**20 51 40.7**	**+1.3**
	0.4nm,0.5s,baz=80,slow=8.9,SNR=3.3						
PDAR	**Pinedale Array**	**74.82**	**47**	P	**P**	**20 54 24.9**	**-0.3**
	0.3nm,0.5s,baz=225,slow=2.7,SNR=4.1						

*IDC **21** 20:44:04.1±1.0,36.°38S×179.°74E,h0km,mb4.6/2,*
mb1 4.8/3,mb1mx4.0/43,mbtmp4.5/3,ML4.1/1,MS3.9/4,
Ms1 3.9/4,ms1mx3.3/43,Error ellipse: s-maj=44.8km
s-min=31.9km az=158.0
*NEIC **21** 20:44:05.4±0.5,36.°40S×179.°80E,h10km,mb4.6/1,Error*
ellipse: s-maj=19.5km s-min=10.7km az=128.0
*ISCJB **21** 20:44:06.2±0.8,36.°87S±0.°07×179.°95W±0.°08,h10km,*
mb4.5/3,Error ellipse: s-maj=11.4km s-min=6.7km
az=137.7
*WEL **21** 20:44:07.6,37.°S±7.°×18.°0W±1.°3,h81km±29km*

ISC 21 20:44:03.4±3.6,**36.°71S**±0.°08×**179.°95W**±0.°09,**h2**km±21km,
n101,σ1°**73**/113,**mb4.6**/3,**East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.63**	**238**	P	**Pn**	**20 44 33.8**	**+0.7**
MXZ				S	**Sn**	**20 44 53.6**	**-1.1**
WMGZ	**Waiomatatini S**	**1.71**	**229**	P	**Pn**	**20 44 36.3**	**+2.0**
WMGZ				S	**Sn**	**20 44 57.7**	**+1.0**
PKGZ	**Pakihiroa**	**1.96**	**233**	P	**Pn**	**20 44 39.4**	**+1.6**
PKGZ				S	**Sn**	**20 45 02.5**	**-0.6**
PUZ	**Puketiti**	**1.97**	**226**	P	**Pn**	**20 44 39.6**	**+1.8**
PUZ				P	**Pn**	**20 44 39.6**	**+1.8**
PUZ				S	**Sn**	**20 45 02.5**	**-0.7**
HAZ	**Te Kaha**	**2.09**	**239**	P	**Pn**	**20 44 40.7**	**+1.2**
HAZ				S	**Sn**	**20 45 06.8**	**+0.8**
TWGZ	**Tauwhareparae**	**2.20**	**228**	P	**Pb**	**20 44 43.1**	**-0.9**
TWGZ				P	**Pn**	**20 44 43.0**	**+1.9**
TWGZ				S	**Sn**	**20 45 09.9**	**+1.0**
RUGZ	**Raukumara Rang**	**2.27**	**236**	P	**Pn**	**20 44 44.0**	**+1.9**
RUGZ				S	**Sn**	**20 45 11.4**	**+0.8**
CNGZ	**Carnagh Statio**	**2.30**	**219**	P	**Pn**	**20 44 44.9**	**+2.5**
TKGZ	**Te Karaka**	**2.46**	**225**	P	**Pn**	**20 44 46.2**	**+1.7**
TKGZ				S	**Sn**	**20 45 14.9**	**-0.2**
MWZ	**Matawai**	**2.58**	**230**	P	**Pn**	**20 44 47.6**	**+1.4**
MWZ				S	**Sn**	**20 45 17.1**	**-1.1**
RIGZ	**Rimuhau**	**2.69**	**222**	P	**Pn**	**20 44 49.5**	**+1.7**
RIGZ				S	**Sn**	**20 45 20.3**	**-0.8**
WHRZ	**Whale Island**	**2.70**	**244**	P	**Pn**	**20 44 50.7**	**+2.7**
RAGZ	**Rawiri**	**2.75**	**229**	P	**Pn**	**20 44 50.6**	**+2.0**
RAGZ				S	**Sn**	**20 45 22.0**	**-0.5**
PRGZ	**Paritu Road**	**2.80**	**217**	P	**Pn**	**20 44 50.7**	**+1.4**
PRGZ				S	**Sn**	**20 45 24.4**	**+0.8**
URZ	**Urewera**	**2.80**	**236**	Pn	**Pn**	**20 44 50.4**	**+1.2**
	31nm,0.3s,baz=264,slow=3.6,SNR=67						
URZ				Sn	**Sn**	**20 45 22.1**	**-1.5**
	90nm,0.3s,baz=159,slow=18,SNR=17						
URZ				LR	LR	20 46 21.0	
	comp=Z,2μm,18.4s,baz=28,slow=49						
URZ	**Urewera**	**2.80**	**236**	P	**Pn**	**20 44 50.5**	**+1.2**
URZ				S	**Sn**	**20 45 21.8**	**-1.8**
MHGZ	**Mahia Peninsul**	**2.97**	**214**	P	**Pn**	**20 44 53.1**	**+1.5**
MARZ	**Manawahe**	**2.97**	**244**	P	**Pn**	**20 44 52.9**	**+1.3**
KNZ	**Kokohu**	**2.98**	**218**	P	**Pn**	**20 44 53.4**	**+1.7**
KNZ				S	**Sn**	**20 45 25.9**	**-2.0**
EDRZ	**Edgecumbe**	**2.98**	**241**	P	**Pn**	**20 44 53.0**	**+1.2**
SNGZ	**Shannon Statio**	**2.98**	**225**	P	**Pn**	**20 44 54.5**	**+2.7**
SNGZ				S	**Sn**	**20 45 26.6**	**-1.5**
OPRZ	**Ohinepanea**	**3.01**	**247**	P	**Pn**	**20 44 52.8**	**+0.7**
RTZ	**Ruatahuna**	**3.09**	**231**	P	**Pn**	**20 44 54.6**	**+1.3**
MUGZ	**Murupara**	**3.15**	**235**	P	**Pn**	**20 44 55.9**	**+1.9**
TGRZ	**Tauranga**	**3.19**	**250**	P	**Pn**	**20 44 55.0**	**+0.4**
TARZ	**Mount Tarawera**	**3.20**	**240**	P	**Pn**	**20 44 56.2**	**+1.3**
RAHZ	**Arahi**	**3.22**	**226**	P	**Pn**	**20 44 57.5**	**+2.5**
OMRZ	**Omania**	**3.24**	**243**	P	**Pn**	**20 44 57.6**	**+2.2**
RRRZ	**Republican Roa**	**3.25**	**239**	P	**Pn**	**20 44 56.4**	**+1.0**
WHHZ	**Waihua**	**3.25**	**222**	P	**Pn**	**20 44 56.8**	**+1.4**
KARZ	**Kaharoa**	**3.30**	**245**	P	**Pn**	**20 44 57.5**	**+1.4**
HLRZ	**Highlands Stat**	**3.32**	**241**	P	**Pn**	**20 44 58.8**	**+2.3**
MTHZ	**Maungataniwha**	**3.32**	**229**	P	**Pn**	**20 44 58.2**	**+1.7**
NGRZ	**Ngongotaha**	**3.37**	**244**	P	**Pb**	**20 45 02.5**	**-1.5**
PRRZ	**Plateau Road**	**3.41**	**237**	P	**Pn**	**20 44 59.9**	**+2.2**
HSRZ	**Hossack Road**	**3.42**	**241**	P	**Pn**	**20 45 01.2**	**+3.4**
HRRZ	**Handcock Road**	**3.43**	**240**	P	**Pn**	**20 45 01.6**	**+3.7**
KMRZ	**Kaimai**	**3.46**	**250**	P	**Pn**	**20 44 59.2**	**+0.8**
ALRZ	**Allen Road**	**3.47**	**237**	P	**Pn**	**20 45 01.6**	**+3.0**
NMHZ	**Naumai**	**3.50**	**226**	P	**Pn**	**20 45 00.6**	**+1.7**
ARHZ	**Aropaoanui**	**3.51**	**222**	P	**Pn**	**20 45 00.5**	**+1.5**
GRRZ	**Galatos Road**	**3.53**	**241**	P	**Pn**	**20 45 02.1**	**+2.8**
MRHZ	**Matea Rd**	**3.57**	**232**	P	**Pn**	**20 45 02.1**	**+2.1**
BKZ

comp=Z,6.5nm,0.3s,baz=37,slow=23,SNR=17
ROSC S **Sn** **21 01 08.8 +0.7**
comp=Z,25nm,0.3s,baz=211,slow=22,SNR=10
ROSC El Rosal 2.48 211 *eP* **Pn** **21 00 37.3 +1.6**
ROSC *eS* **Sn** **21 01 08.6 +0.5**
ROSC *i* 21 01 17.2
comp=Z,174nm,0.6s
HELC Santa Helena 2.59 253 *eP* **Pn** **21 00 37.7 +0.7**
HELC *i* 21 01 16.4
comp=Z,126nm,0.2s
VILC Villavicencio, 2.92 193 *eP* **Pn** **21 00 41.3 +0.4**
VILC *eS* **Sn** **21 01 17.1 -0.3**
VILC *i* 21 01 20.6
comp=Z,54nm,0.2s
CODC Agust`n Codaz 2.96 352 *eP* **Pn** **21 00 41.0 -0.2**
SDV Santo Domingo 3.05 51 P **Pn** **21 00 42.9 +0.5**
comp=Z,22nm,0.3s,baz=218,slow=1.8,SNR=9.4
SDV S **Sn** **21 01 19.8 -0.4**
comp=Z,26nm,0.3s,baz=242,slow=24,SNR=24
DBBC Dabeiba 3.14 271 *eP* **Pn** **21 00 43.8 +0.2**
TOLC Tolima 3.29 224 *eP* **Pn** **21 00 46.6 +1.0**
ANIL Santa Ana 3.41 224 *eP* **Pn** **21 00 48.3 +1.2**
PRAC Prado 3.73 210 *eP* **Pn** **21 00 50.7 -0.2**
PRAC *eS* **Sn** **21 01 34.6 -0.9**
LPAZ La Paz 23.62 168 P **P** **21 04 50.0 -0.8**
comp=Z,1.1nm,0.4s,baz=332,slow=6.6,SNR=6.8
TXAR Lajitas Array 36.41 311 P **P** **21 06 43.5 +0.7**
comp=Z,0.6nm,0.5s,baz=123,slow=9.4,SNR=7.1
ULM Lac du Bonnet 47.16 340 P **P** **21 08 08.6 -1.0**
comp=Z,2.4nm,0.4s,baz=145,slow=7.8,SNR=3.5
PDAR Pinedale Array 47.99 324 P **P** **21 08 16.5 0.0**
comp=Z,0.3nm,0.5s,baz=34,slow=7.6,SNR=3.2
NVAR Mina Array Bea 51.43 314 P **P** **21 08 42.7 +0.3**
comp=Z,0.6nm,0.7s,baz=165,slow=6.2,SNR=3.7
YKA Yellowknife Ar 63.14 340 P **P** **21 10 03.3 -0.5**
comp=Z,1.1nm,0.5s,baz=134,slow=6.6,SNR=11
ASAR Alice Springs 149.27 234 PKPbc **PKPdf** **21 19 22.1 +2.6**
comp=Z,0.4nm,0.5s,baz=113,slow=3.7,SNR=9.2
WRA Warramunga Arr 150.48 241 PKPbc **PKPbc** **21 19 25.5 -1.5**
comp=Z,0.7nm,0.4s,baz=107,slow=2.5,SNR=16

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*IDC **21** 21:18:00.7±1.0,25°.65N×127°.41E,h0km,mb3.4/6, mb1 3.6/6,mb1mx3.3/71,mbtmp3.4/6,MS3.1/1,Ms1 3.3/1, ms1mx2.6/41,Error ellipse: s-maj=24.0km s-min=14.4km az=111.0*
*ISCJB **21** 21:18:02.5±0.7,25°.55N±0°.05×127°.68E±0°.08,h29km, mb3.5/6,MS2.9/1,Error ellipse: s-maj=10.6km s-min=6.8km az=5.1*
*JMA **21** 21:18:03.3±0.3,25°.57N×127°.65E,h44km±3km,M3.3*
ISC 21 21:18:03.8±0.9,25°.59N±0°.07×127°.76E±0°.06,h29km,n17,
σ1°29/21,mb3.5/6,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT3	**Tamagusuku3**	**0.56**	**3**	P	**Pn**	**21 18 15.3**	**-0.5**
JJT3				S	**Sn**	**21 18 23.7**	**-0.4**
JNTH	**Nagotoyohara**	**0.96**	**14**	P	**Pn**	**21 18 21.0**	**-0.4**
JNTH				*eS*	**Sn**	**21 18 34.4**	**+0.3**
JAGN	**Aguni-jima**	**1.10**	**335**	P	**Pn**	**21 18 22.7**	**-0.6**
JAGN				*eS*	**Sn**	**21 18 36.5**	**-1.0**
JKE	**Kume jima 2**	**1.14**	**310**	P	**Pn**	**21 18 22.6**	**-1.3**
JOW	**Kunigami**	**1.33**	**20**	Pg	**Pn**	**21 18 26.6**	**+0.1**
	80nm,0.3s,baz=196,slow=13,SNR=208						
JOW				Lg	Lg	21 18 45.9	
	57nm,0.3s,baz=114,slow=20,SNR=11						
JOW	**Kunigami**	**1.33**	**20**	P	**Pn**	**21 18 26.4**	**0.0**
JIH	**Iheya**	**1.46**	**7**	P	**Pn**	**21 18 28.4**	**+0.2**
JIH				*eS*	**Sn**	**21 18 45.6**	**-0.7**
JOKE	**Okinoerabujima**	**1.91**	**22**	P	**Pn**	**21 18 35.3**	**+0.8**
JTK	**Tokunoshima**	**2.44**	**26**	P	**Pn**	**21 18 42.2**	**+0.5**
JMZ	**Minamidaito 2**	**3.13**	**85**	P	**Pn**	**21 18 50.2**	**-1.1**
JMZ				*eS*	**Sn**	**21 19 24.9**	**-2.9**
CMAR	**Chiang Mai Arr**	**27.60**	**261**	LR	LR	21 34 35.3	
	comp=Z,33nm,18.6s,baz=30,slow=36						
MKAR	**Makanchi Array**	**41.65**	**313**	P	**P**	**21 25 48.2**	**-1.4**
	0.4nm,0.7s,baz=102,slow=10.0,SNR=5.2						
KURBB	**Kurchatov Arra**	**45.03**	**317**	P	**P**	**21 26 14.9**	**-1.9**
	0.2nm,0.3s,baz=102,slow=9.3,SNR=2.4						
WRA	**Warramunga Arr**	**45.70**	**171**	P	**P**	**21 26 23.8**	**+1.4**
	0.4nm,0.7s,baz=351,slow=8.3,SNR=3.6						
ASAR	**Alice Springs**	**49.32**	**173**	P	**P**	**21 26 53.2**	**+2.7**
	0.3nm,0.8s,baz=358,slow=8.3,SNR=3.6						
BVAR	**Borovoye Array**	**50.47**	**319**	P	**P**	**21 26 59.7**	**+0.7**
	0.3nm,0.4s,baz=82,slow=10,SNR=3.6						
FINES	**FINESS Array B**	**73.21**	**331**	P	**P**	**21 29 31.6**	**-0.1**
	0.5nm,0.5s,baz=76,slow=8.0,SNR=5.5						

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*ISCJB **21** 21:23:18.8±1.0,65°.49S±0°.08×178°.0E±0°.5,h10km, mb4.0/7,MS3.9/13,Error ellipse: s-maj=28.6km s-min=11.3km az=176.9*
*IDC **21** 21:23:19.6±1.2,65°.50S×177°.86E,h0km,mb4.1/3, mb1 4.4/4,mb1mx4.1/34,mbtmp4.2/4,ML4.0/1,MS3.8/14, Ms1 3.8/14,ms1mx3.6/35,Error ellipse: s-maj=54.9km s-min=30.3km az=48.0*
*NEIC **21** 21:23:20.7±0.6,65°.47S×177°.97E,h10km,mb4.3/3,Error ellipse: s-maj=19.3km s-min=11.0km az=88.0*
ISC 21 21:23:21.1±0.8,65°.5S±0°.1×177°.9E±0°.2,h10km,n31,
σ1°06/15,mb4.3/7,MS3.9/13,Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBA	**Scott Base**	**12.88**	**191**	*ePn*	**Pn**	**21 26 23.3**	**-0.6**
	19nm,1.0s						
VNDA	**Vanda**	**13.04**	**195**	Pn	**Pn**	**21 26 26.5**	**+0.4**
	0.7nm,0.3s,baz=45,slow=17,SNR=63						
VNDA				LR	LR	21 30 17.4	
	comp=Z,411nm,21.5s,baz=10.0,slow=32						
QSPA	**South Pole Qui**	**24.62**	**180**	*eP*	**P**	**21 28 39.7**	**-1.7**
	2.9nm,0.4s						
CASY	**Casey**	**26.36**	**237**	P	**P**	**21 28 57.8**	**+1.0**
	0.1nm,0.5s						
URZ	**Urewera**	**27.25**	**359**	LR	LR	21 37 40.5	
	comp=Z,294nm,21.5s,baz=150,slow=32						
TAU	**Tasmania Unive**	**28.29**	**308**	P	**P**	**21 29 13.6**	**-0.8**
	5.2nm,1.0s						
MAW	**Mawson**	**39.50**	**213**	LR	LR	21 47 05.9	
	comp=Z,188nm,19.8s,baz=90,slow=36						
STKA	**Stephens Creek**	**40.20**	**309**	LR	LR	21 46 13.1	
	comp=Z,66nm,18.2s,baz=195,slow=34						
SNAA	**Sanae**	**43.12**	**180**	LR	LR	21 48 47.7	
	comp=Z,310nm,20.0s,baz=182,slow=36						
DZM	**Mont Dzumac**	**44.02**	**345**	LR	LR	21 47 24.5	
	comp=Z,253nm,19.4s,baz=207,slow=33						
RAR	**Rarotonga**	**46.59**	**29**	LR	LR	21 45 33.4	
	comp=Z,65nm,20.0s,baz=178,slow=29						
H01W1	**Cape Leeuwin H**	**47.99**	**277**	T	T	22 24 46.5	
	baz=149,slow=76,SNR=48						
H01W2	**Cape Leeuwin H**	**47.99**	**277**	T	T	22 24 46.2	
	baz=149,slow=76,SNR=57						
H01W3	**Cape Leeuwin H**	**48.00**	**277**	T	T	22 24 47.1	
	baz=149,slow=76,SNR=48						
ASAR	**Alice Springs**	**50.35**	**304**	P	**P**	**21 32 19.1**	**+1.1**
	3.0nm,0.8s,baz=153,slow=7.4,SNR=15						
AFI	**Afiamalu**	**51.98**	**13**	LR	LR	21 51 44.1	
	comp=Z,49nm,19.2s,baz=90,slow=33						
AFI	**Afiamalu**	**51.98**	**13**	P	**P**	**21 32 30.3**	**0.0**
	2.5nm,0.3s						
WRA	**Warramunga Arr**	**53.65**	**306**	P	**P**	**21 32 42.6**	**+0.1**
	2.9nm,0.9s,baz=160,slow=6.3,SNR=10						
HNR	**Honiara**	**57.33**	**339**	LR	LR	21 53 50.5	
	comp=Z,135nm,20.9s,baz=138,slow=32						
HNR	**Honiara**	**57.33**	**339**	P	**P**	**21 33 08.7**	**-0.2**
RPN	**Rapa Nui**	**58.51**	**87**	LR	LR	21 51 15.9	
	comp=Z,143nm,20.2s,baz=296,slow=29						
PMG	**Port Moresby**	**59.89**	**324**	LR	LR	21 54 26.5	
	comp=Z,116nm,21.3s,baz=168,slow=31						
SUR	**Sutherland**	**80.86**	**199**	LR	LR	22 08 44.1	
	comp=Z,11nm,19.1s,baz=344,slow=34						
DAV	**Davao City (W)**	**81.82**	**307**	LR	LR	22 11 33.3	
	comp=Z,30nm,18.7s,baz=68,slow=35						
LPAZ	**La Paz**	**84.82**	**118**	P	**P**	**21 35 58.0**	**+1.6**
	0.9nm,0.7s,baz=194,slow=8.3,SNR=3.8						
OPO	**Ambohidratompo**	**88.32**	**226**	LR	LR	22 09 26.5	
	comp=Z,92nm,18.2s,baz=32,slow=31						
JTS	**JuntasAbangare**	**102.27**	**92**	*e*Pdif	**Pdif**	**21 37 15.9**	**-0.4**
ENH	**Enshi**	**108.83**	**302**	*eP*	**PKiKP**	**21 41 49.5**	**-0.4**
ILAR	**Eielson Array**	**132.44**	**20**	PKP	**PKPdf**	**21 42 31.9**	**-1.8**
	0.4nm,0.8s,baz=216,slow=3.9,SNR=3.2						
BRTR	**Keskin Array B**	**147.12**	**236**	PKPbc	**PKPdf**	**21 43 01.8**	**+0.5**
	0.5nm,0.7s,baz=122,slow=4.7,SNR=3.5						
KBZ	**Khabaz**	**147.13**	**251**	PKPbc	**PKPdf**	**21 43 01.7**	**+0.8**
	2.2nm,1.0s,baz=153,slow=2.3,SNR=3.4						

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*IDC **21** 21:25:07.4±2.3,13°.59N×125°.03E,h0km,mb3.7/5, mb1 3.9/5,mb1mx3.4/65,mbtmp3.7/5,Error ellipse: s-maj=217.2km s-min=20.9km az=66.0*
*ISCJB **21** 21:25:19.1±0.5,13°.33N±0°.06×124°.11E±0°.07,h100km, mb3.6/5,Error ellipse: s-maj=11.4km s-min=5.2km az=137.6*
*MAN **21** 21:25:19.4,13°.37N×124°.12E,h89km,mb4.5,ML3.4, MS3.2*
ISC 21 21:25:20.0±0.9,13°.33N±0°.06×124°.07E±0°.07,h100km,n13,
σ2°46/18,mb3.7/5,1C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVCP	**Virac**	**0.28**	**17**	*eP*	**Pn**	**21 25 34.3**	**-0.3**
PVCP				*eS*	**Sn**	**21 25 44.2**	**-1.1**
CNP	**Catarman**	**1.00**	**145**	*eP*	**Pn**	**21 25 39.9**	**-0.6**
CNP				*eS*	**Sn**	**21 25 54.7**	**-1.0**
GQP	**Guinayangan**	**1.68**	**290**	*iP*	Pn	21 25 54.7	+6.2
BOAC	**Boac**	**2.17**	**274**	*eP*	**Pn**	**21 25 55.3**	**+0.5**
BOAC				*eS*	**Sn**	**21 26 22.5**	**+1.0**
BESP	**Borongan**	**2.18**	**142**	*eP*	**Pn**	**21 25 54.4**	**-0.5**
BESP				*eS*	**Sn**	**21 26 21.0**	**-0.6**
OTRP	**Odiongan**	**2.22**	**245**	*eP*	**Pn**	**21 25 55.2**	**-0.3**
BALP	**Baler**	**3.40**	**315**	*eP*	**Pn**	**21 26 09.9**	**-1.3**
BALP				*eS*	**Sn**	**21 26 42.5**	**-8.2**
APYP	**Conner**	**5.27**	**329**	*eP*	**Pn**	**21 26 37.8**	**+1.4**
APYP				*eS*	**Sn**	**21 27 36.5**	**+0.6**
WRA	**Warramunga Arr**	**34.57**	**163**	P	**P**	**21 31 57.4**	**-2.0**
	0.1nm,0.3s,baz=345,slow=8.7,SNR=5.6						
ASAR	**Alice Springs**	**38.01**	**165**	P	**P**	**21 32 27.9**	**-0.7**
	0.4nm,0.3s,baz=343,slow=7.2,SNR=8.8						
MKAR	**Makanchi Array**	**48.30**	**322**	P	**P**	**21 33 53.2**	**+2.0**
	0.7nm,0.6s,baz=115,slow=9.2,SNR=7.6						
KURBB	**Kurchatov Arra**	**52.35**	**325**	P	**P**	**21 34 23.9**	**+2.3**
	0.4nm,0.5s,baz=126,slow=7.6,SNR=5.3						
FINES	**FINESS Array B**	**82.19**	**331**	P	**P**	**21 37 31.0**	**+1.2**
	2.3nm,1.1s,baz=20,slow=8.9,SNR=3.3						

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*IDC **21** 21:25:40.0±1.6,17°.71S×178°.43W,h511km±18km, mb3.5/18,mb1 3.7/20,mb1mx3.4/56,mbtmp4.4/20,Error ellipse: s-maj=15.7km s-min=10.8km az=150.0*
*ISCJB **21** 21:25:42.3±0.5,17°.7S±0°.1×178°.58W±0°.09,h547km, mb4.0/18,Error ellipse: s-maj=15.1km s-min=10.8km az=154.3*
ISC 21 21:25:43.0±0.6,17°.7S±0°.1×178°.5W±0°.1,h547km,n28,
σ1°08/30,mb3.9/18,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.53**	**61**	P	P	21 27 30.3	-5.8
	3.9nm,0.3s,baz=39,slow=6.6,SNR=5.0						
DZM	**Mont Dzumac**	**14.78**	**251**	P	**P**	**21 28 50.2**	**-0.1**
	0.5nm,0.3s,baz=94,slow=19,SNR=4.2						
URZ	**Urewera**	**20.82**	**190**	P	**P**	**21 29 44.4**	**-2.0**
	5.3nm,0.4s,baz=334,slow=3.3,SNR=5.6						
CTA	**Charters Tower**	**33.36**	**260**	P	**P**	**21 31 35.9**	**-0.6**
	6.7nm,0.6s,baz=85,slow=12,SNR=6.2						
PMG	**Port Moresby**	**34.31**	**279**	P	**P**	**21 31 45.3**	**+0.8**
	28nm,0.8s,baz=79,slow=9.7,SNR=6.0						
STKA	**Stephens Creek**	**38.62**	**241**	P	**P**	**21 32 20.9**	**+1.1**
	5.5nm,0.4s,baz=90,slow=10,SNR=18						
JAY	**Jayapura**	**42.74**	**286**	P	**P**	**21 32 53.1**	**+0.3**
	15nm,0.8s,baz=190,slow=4.0,SNR=6.2						
WRA	**Warramunga Arr**	**44.55**	**259**	P	**P**	**21 33 05.5**	**-1.2**
	4.9nm,0.6s,baz=98,slow=7.0,SNR=88						
WRA				ScP	**ScP**	**21 37 40.9**	**+2.5**
	0.9nm,0.8s,baz=90,slow=3.7,SNR=5.7						
ASAR	**Alice Springs**	**44.73**	**254**	P	**P**	**21 33 08.0**	**-0.2**
	50nm,0.6s,baz=88,slow=8.1,SNR=600						
ASAR				S	**S**	**21 39 03.9**	**-1.6**
	1.1nm,0.8s,baz=90,slow=14,SNR=6.1						
VNDA	**Vanda**	**60.62**	**185**	P	**P**	**21 35 01.6**	**+1.1**
	1.0nm,0.9s,baz=359,slow=3.2,SNR=6.2						
LEM	**Lembang**	**72.60**	**268**	P	**P**	**21 36 16.4**	**+0.5**
	18nm,0.6s,baz=139,slow=19,SNR=4.5						
KSRS	**Korea Array**	**74.48**	**318**	P	**P**	**21 36 25.4**	**-0.4**
	0.7nm,0.5s,baz=137,slow=6.9,SNR=3.7						
YBH	**Yreka Blue Hor**	**78.45**	**39**	P	**P**	**21 36 46.9**	**-0.8**
	0.5nm,0.4s,baz=156,slow=12,SNR=3.8						
NVAR	**Mina Array Bea**	**79.37**	**44**	P	**P**	**21 36 52.7**	**-0.1**
	1.5nm,0.7s,baz=222,slow=8.7,SNR=9.9						
ELK	**Elko**	**82.60**	**43**	P	**P**	**21 37 10.6**	**+1.1**
	1.4nm,0.8s,baz=334,slow=7.0,SNR=6.1						
MAW	**Mawson**	**84.00**	**200**	P	**P**	**21 37 15.7**	**+0.1**
	1.7nm,0.4s,baz=124,slow=3.7,SNR=6.4						
ILAR	**Eielson Array**	**85.73**	**13**	P	**P**	**21 37 22.4**	**-1.5**
	0.4nm,0.4s,baz=220,slow=5.3,SNR=5.8						
TXAR	**Lajitas Array**	**86.00**	**58**	P	**P**	**21 37 26.9**	**+0.8**
	1.4nm,0.7s,baz=224,slow=5.2,SNR=11						
PDAR	**Pinedale Array**	**87.30**	**43**	P	**P**	**21 37 31.5**	**-0.6**
	0.7nm,0.5s,baz=211,slow=3.7,SNR=9.5						
CMAR	**Chiang Mai Arr**	**88.71**	**290**	P	**P**	**21 37 39.8**	**+0.9**
	0.3nm,0.5s,baz=106,slow=6.7,SNR=4.0						
SNAA	**Sanae**	**90.79**	**179**	P	**P**	**21 37 47.1**	**-0.6**
	2.3nm,0.6s,baz=220,slow=12,SNR=7.7						
VNA3	**Neumayer Olymp**	**90.93**	**176**	P	**P**	**21 37 48.7**	**+0.4**
VNA2	**Neumayer--Watz**	**91.37**	**177**	P	**P**	**21 37 51.1**	**+0.8**
	baz=186,slow=3.9						
VNA1	**Neumayer--Stat**	**91.60**	**177**	P	**P**	**21 37 52.5**	**+1.2**
BRTR	**Keskin Array B**	**144.56**	**315**	PKP	**PKPab**	**21 44 19.1**	**+0.5**
	0.4nm,0.7s,baz=134,slow=4.2,SNR=2.8						
MMAI	**Mount Meron Ar**	**145.94**	**303**	PKPbc	**PKPab**	**21 44 24.5**	**+0.4**
	0.8nm,0.5s,baz=117,slow=5.4,SNR=4.6						
GERES	**GERESS Array B**	**147.40**	**345**	PKPbc	**PKPbc**	**21 44 25.0**	**-0.6**
	0.2nm,0.5s,baz=357,slow=2.0,SNR=6.6						
TORD	**Torodi Ar. Bea**	**175.45**	**183**	PKP	**PKPdf**	**21 44 49.2**	**-2.0**
	0.5nm,0.8s,baz=186,slow=1.4,SNR=3.0						
TORD				PKPab	**PKPab**	**21 46 31.5**	**-0.4**
	0.5nm,0.6s,baz=175,slow=3.2,SNR=5.1						

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*ISCJB **21** 21:27:30.9±1.0,39°.41N±0°.05×143°.69E±0°.08,h11km, mb3.5/3,Error ellipse: s-maj=10.2km s-min=5.1km az=28.0*
*JMA **21** 21:27:32.5±0.2,39°.38N×143°.72E,h36km,M3.3*
*IDC **21** 21:27:46.2±10.0,39°.98N×141°.14E,h0km,mb3.6/3, mb1 3.6/4,mb1mx3.3/68,mbtmp3.5/4,ML2.9/1,Error ellipse: s-maj=207.7km s-min=40.7km az=93.0*
ISC 21 21:27:32.0±1.7,39°.41N±0°.06×143°.63E±0°.10,h11km,n17,
σ1°11/24,mb3.6/3,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**1.41**	**277**	P	**Pb**	**21 27 57.7**	**-0.6**
MIYJ				*eS*	**Sb**	**21 28 16.4**	**0.0**
JTH	**Tanohata**	**1.46**	**292**	P	**Pb**	**21 27 58.2**	**-1.0**
OFUJ	**Ofunato**	**1.56**	**258**	P	**Pb**	**21 27 59.7**	**-1.1**
JOM	**Ohasama**	**1.81**	**273**	P	**Pb**	**21 28 03.8**	**-1.4**
JOM				*eS*	**Sn**	**21 28 25.9**	**-0.2**
JANG	**Nango**	**1.89**	**301**	P	**Pn**	**21 28 03.9**	**-0.3**
JMK	**Ichinoseki**	**1.93**	**257**	P	**Pb**	**21 28 05.2**	**-2.0**
JMK				*eS*	**Sn**	**21 28 29.5**	**+0.5**
JIO	**Ouri**	**2.02**	**243**	P	**Pn**	**21 28 05.6**	**-0.4**
JIO				*eS*	**Sn**	**21 28 30.1**	**-1.1**
JYK	**Kaneyama**	**2.59**	**260**	P	**Pn**	**21 28 14.9**	**+1.1**
JOT	**Ohata**	**2.79**	**316**	*eS*	**Sn**	**21 28 51.9**	**+1.7**
JNBK	**Urakawa-nobuka**	**2.94**	**347**	P	**Pn**	**21 28 19.6**	**+0.9**
JNBK				*eS*	**Sn**	**21 28 54.1**	**+0.1**
JFT	**Otama**	**3.20**	**235**	P	**Pn**	**21 28 22.7**	**+0.4**
JFT				*eS*	**Sn**	**21 29 00.0**	**-0.4**
JCH	**Churui**	**3.21**	**356**	P	**Pn**	**21 28 22.2**	**-0.1**
JCH				*eS*	**Sn**	**21 28 59.2**	**-1.3**
MJAR	**Matsushiro Arr**	**5.15**	**238**	Pn	**Pn**	**21 28 50.7**	**+1.7**
	0.8nm,0.3s,baz=33,slow=14,SNR=11						
MAT	**Matsushiro**	**5.15**	**238**	P	**Pn**	**21 28 51.1**	**+2.0**
ZALV	**Zalesovo Beam**	**41.66**	**310**	P	**P**	**21 35 21.2**	**+1.1**
	0.5nm,0.4s,baz=96,slow=10,SNR=3.7						
MKAR	**Makanchi Array**	**44.38**	**300**	P	**P**	**21 35 42.4**	**0.0**
	0.5nm,0.8s,baz=82,slow=8.7,SNR=4.4						
KURBB	**Kurchatov Arra**	**45.96**	**307**	P	**P**	**21 35 55.4**	**+0.6**
	0.6nm,0.7s,baz=82,slow=8.5,SNR=6.7						

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*NIED **21** 21:37:00,39°.40N×143°.60E,h23km,Mw3.6 Best double couple: M$_0$3.04000×10^{14} NP1:ϕ_1=170.00000°,δ38.00000°, λ89.00000°. NP2:ϕ_2=352.00000°,δ52.00000°,λ91.00000°.*
*IDC **21** 21:37:25.0±2.2,39°.31N×143°.94E,h0km,mb3.7/5, mb1 3.8/7,mb1mx3.5/71,mbtmp3.7/7,ML3.6/2,Error ellipse: s-maj=58.3km s-min=24.8km az=80.0*
*ISCJB **21** 21:37:27.3±0.9,39°.42N±0°.05×143°.59E±0°.08,h11km, mb3.6/5,Error ellipse: s-maj=10.1km s-min=5.4km az=36.1*
*JMA **21** 21:37:28.5±0.2,39°.39N×143°.65E,h34km,M3.9*
ISC 21 21:37:28.2±1.3,39°.40N±0°.06×143°.54E±0°.10,h11km,n22,
σ1°02/26,mb3.7/5,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**1.35**	**278**	P	**Pn**	**21 37 53.0**	**0.0**
MIYJ				*eS*	**Sn**	**21 38 10.7**	**-0.2**
JTH	**Tanohata**	**1.41**	**293**	P	**Pn**	**21 37 53.6**	**-0.2**
OFUJ	**Ofunato**	**1.49**	**258**	P	**Pn**	**21 37 55.0**	**+0.1**
OFUJ				*eS*	**Sn**	**21 38 14.1**	**-0.3**
JOM	**Ohasama**	**1.75**	**273**	P	**Pn**	**21 37 59.1**	**+0.6**
JOM				*eS*	**Sn**	**21 38 20.9**	**+0.2**
JANG	**Nango**	**1.84**	**303**	P	**Pn**	**21 37 59.3**	**-0.5**
JMK	**Ichinoseki**	**1.86**	**257**	P	**Pn**	**21 38 00.5**	**+0.5**
JMK				*eS*	**Sn**	**21 38 24.0**	**+0.5**
JIO	**Ouri**	**1.95**	**242**	P	**Pn**	**21 38 01.1**	**-0.2**
JIO				*eS*	**Sn**	**21 38 24.7**	**-1.1**
JYK	**Kaneyama**	**2.52**	**260**	P	**Pn**	**21 38 10.2**	**+1.1**
JOT	**Ohata**	**2.75**	**317**	P	**Pn**	**21 38 13.5**	**+1.2**
JNBK	**Urakawa-nobuka**	**2.94**	**348**	P	**Pn**	**21 38 16.0**	**+1.1**
JNBK				*eS*	**Sn**	**21 38 49.5**	**-0.7**
JFT	**Otama**	**3.14**	**234**	P	**Pn**	**21 38 18.2**	**+0.6**
ASAJ	**Asahikawa**	**4.77**	**352**	Pn	**Pn**	**21 38 41.6**	**+1.6**
	1.8nm,0.3s,baz=252,slow=7.4,SNR=8.2						
ASAJ				Sn	**Sn**	**21 39 33.8**	**-1.5**
	1.5nm,0.3s,baz=198,slow=20,SNR=4.5						
MJAR	**Matsushiro Arr**	**5.09**	**238**	Pn	**Pn**	**21 38 46.5**	**+2.1**
	3.8nm,0.3s,baz=37,slow=120,SNR=39						
MAT	**Matsushiro**	**5.09**	**238**	P	**Pn**	**21 38 46.4**	**+1.9**
H11N2	**WAKE ISLAND Hy**	**28.08**	**128**	T	T	22 12 45.4	
	baz=318,slow=76,SNR=24						
H11N1	**WAKE ISLAND Hy**	**28.09**	**128**	T	T	22 12 44.9	
	baz=318,slow=76,SNR=23						
H11N3	**WAKE ISLAND Hy**	**28.10**	**128**	T	T	22 12 45.4	
	baz=318,slow=76,SNR=20						
ZALV	**Zalesovo Beam**	**41.61**	**310**	P	**P**	**21 45 16.9**	**+0.9**
	0.6nm,0.4s,baz=101,slow=5.7,SNR=3.6						
MKAR	**Makanchi Array**	**44.33**	**300**	P	**P**	**21 45 38.3**	**+0.1**
	0.4nm,0.6s,baz=87,slow=8.2,SNR=5.3						
KURBB	**Kurchatov Arra**	**45.91**	**307**	P	**P**	**21 45 51.0**	**+0.4**
	1.1nm,0.6s,baz=82,slow=8.3,SNR=11						
BVAR	**Borovoye Array**	**50.25**	**311**	P	**P**	**21 46 24.7**	**+0.5**
	0.4nm,0.4s,baz=73,slow=6.6,SNR=3.8						
WRA	**Warramunga Arr**	**59.65**	**190**	P	**P**	**21 47 30.8**	**-1.7**
	0.6nm,0.9s,baz=9.0,slow=6.9,SNR=3.3						

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*NEIC **21** 21:45:50.7±0.0,16°.94N×95°.33W,h68km,MD4.3(MEX), After MEX.*
MEX 21 21:45:50.7±0.4,16°.94N×95°.33W,h68km±13km,MD4.3,
Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OXBJ	**Oaxaca**	**1.34**	**276**	*eP*	Pn	21 46 12.2	-1.5
OXBJ				*i* S	Sn	21 46 29.3	-1.6
VHO	**Vista Hermosa**	**1.35**	**276**	*eP*	Pn	21 46 12.4	-1.4
VHO				*eS*	Sn	21 46 29.1	-2.0
VHO	**Vista Hermosa**	**1.35**	**276**	*eP*	Pn	21 46 12.4	-1.4
VHO				*eS*	Sn	21 46 29.1	-2.0
TGIG		**2.12**	**94**	*eP*	Pn	21 46 22.6	-1.4
TGIG				*eS*	Sn	21 46 48.0	-1.5
TGIG		**2.12**	**94**	*eP*	Pn	21 46 22.6	-1.4
TGIG				*eS*	Sn	21 46 48.0	-1.5
PCIG		**2.37**	**121**	*i* P	Pn	21 46 26.1	-1.3
PCIG				*i* S	Sn	21 46 53.9	-1.4
PCIG		**2.37**	**121**	*i* P	Pn	21 46 26.1	-1.3
PCIG				*i* S	Sn	21 46 53.9	-1.4
TPIG	**Tehuac#an**	**2.43**	**308**	*eP*	Pn	21 46 27.2	-1.1
TPIG	**Tehuac#an**	**2.43**	**308**	*eP*	Pn	21 46 27.2	-1.1
TLIG	**Tlapa**	**3.15**	**282**	*eP*	Pn	21 46 36.7	-1.4
TLIG				*i* S	Sn	21 47 12.2	-2.5
TLIG	**Tlapa**	**3.15**	**282**	*eP*	Pn	21 46 36.7	-1.4
TLIG				*i* S	Sn	21 47 12.2	-2.5
PPM	**Popocatepetl**	**3.78**	**305**	*i* P	Pn	21 46 49.2	+2.2
PPM	**Popocatepetl**	**3.78**	**305**	*i* P	Pn	21 46

TSUM	Tsumeb	22.98	258	P		P	22 01 52.1	+0.8
	4.6nm,0.8s,baz=83,slow=6.3,SNR=6.7						
TSUM	Tsumeb	22.98	258	*e*P		P	22 01 51.9	+0.6
	6.1nm,0.9s						
SUR	Sutherland	24.98	225	P		P	22 02 11.3	+0.9
	0.5nm,0.5s,baz=68,slow=13,SNR=24						
TORD	Torodi Ar. Bea	48.66	304	P		P	22 05 31.0	+0.1
	1.4nm,0.9s,baz=129,slow=7.4,SNR=5.8						
TORD				PcP		PcP	22 06 56.6	+0.3
	0.6nm,0.7s,baz=112,slow=4.0,SNR=3.4						
DBIC	Dimbokro	50.94	292	LR		LR	22 28 02.9	
	comp=Z,76nm,20.1s,baz=173,slow=37						
KOWA	Kowa	54.02	302	LR		LR	22 31 38.2	
	comp=Z,94nm,18.7s,baz=215,slow=39						
CASY	Casey	67.32	156	P		P	22 07 41.8	+0.8
	1.6nm,1.0s						
GERES	GERESS Array B	68.86	341	P		P	22 07 50.7	-0.3
	0.8nm,0.6s,baz=147,slow=5.9,SNR=8.6						
ESDC	Sonseca Array	69.48	324	P		P	22 07 55.9	+0.9
	0.6nm,0.6s,baz=133,slow=5.3,SNR=5.1						
MKAR	Makanchi Array	72.29	28	P		P	22 08 11.5	-0.5
	0.3nm,0.7s,baz=213,slow=6.6,SNR=3.0						
KURBB	Kurchatov Arra	73.68	24	P		P	22 08 19.8	-0.2
	0.3nm,0.6s,baz=228,slow=6.3,SNR=3.8						
KURK	Kurchatov	73.79	24	P		P	22 08 19.8	-0.8
JAY	Jayapura	98.26	95	LR		LR	22 56 24.7	
	comp=Z,95nm,18.0s,slow=36						
TXAR	Lajitas Array	145.17	299	PKPbc		PKPbc	22 16 23.6	-0.8
	1.6nm,0.9s,baz=90,slow=5.0,SNR=9.1						
HWUT	Hardware Ranch	145.26	323	*e*PKPbc		PKPdf	22 16 24.5	-0.2
BMO	Blue Mountains	145.88	333	*e*PKPdf		PKPab	22 16 26.5	-0.1

*ISN **21** 22:09:29.2±0.8, 37°.21N×42°.59E, h0km±3km, ML3.5*
*CSEM **21** 22:09:30.6±0.2, 37°.20N×42°.46E, h2km, ML3.2, Error ellipse: s-maj=4.6km s-min=3.7km az=59.0*
*DDA **21** 22:09:30.6, 37°.24N×42°.43E, h12km, Ml3.6*
*ISK **21** 22:09:30.3, 37°.29N×42°.36E, h5km, ML3.2/15*
*NSSC **21** 22:09:31.7±0.7, 37°.24N×42°.53E, h134km±13km, ML3.1*

ISC 21 22:09:30.5±1.2, 37°21N±0°.03×42°.43E±0°.02, h5km±9km, n73, σ1°.02/108, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SIRN	S¨–rnak	0.29	357	*i* P			Pg	22 09 35.7	-0.4
SIRN				*i* S			Sg	22 09 39.8	-0.1
SIRN	S¨–rnak	0.29	357	P			Pg	22 09 35.7	-0.4
SIRN				S			Sg	22 09 39.8	-0.1
SIRT	Sirnak	0.29	1	PG			Pg	22 09 35.5	-0.7
SIRT				SG			Sg	22 09 39.7	-0.4
SIRT	Sirnak	0.29	1	*e*Pg			Pg	22 09 35.5	-0.7
SIRT				*e*Sg			Sg	22 09 39.7	-0.4
SRTM	Siirt_Merkez	0.88	333	*i* P			Pg	22 09 47.4	0.0
SRTM				*i* S			Sn	22 10 01.5	-1.4
SRTM	Siirt_Merkez	0.88	333	P			Pg	22 09 47.4	0.0
SRTM				S			Sn	22 10 01.5	-1.4
BTMN	Batman	1.15	307	*i* P			Pb	22 09 53.1	+0.2
BTMN				*i* S			Sn	22 10 09.3	-0.1
BTMN	Batman	1.15	307	P			Pb	22 09 53.1	+0.2
BTMN				S			Sn	22 10 09.3	-0.1
GEVA	Gevas	1.21	24	*i* P			Pg	22 09 53.0	-0.7
GEVA				*i* S			Sn	22 10 10.8	-0.3
GEVA	Gevas	1.21	24	P			Pg	22 09 53.0	-0.7
GEVA				S			Sn	22 10 10.8	-0.3
MARD	Mardin	1.32	275	*i* P			Pn	22 09 55.2	-0.5
MARD				*i* S			Sn	22 10 14.5	+0.7
SVAN	Silvan-Diyarba	1.36	314	PN			Pn	22 09 55.6	-0.5
SVAN	Silvan-Diyarba	1.36	314	*i* P			Pg	22 09 56.7	+0.2
SVAN				*i* S			Sn	22 10 15.5	+0.9
SVAN	Silvan-Diyarba	1.36	314	*e*Pn			Pn	22 09 55.6	-0.5
SVAN	Silvan-Diyarba	1.36	314	P			Pg	22 09 56.7	+0.2
SVAN				S			Sn	22 10 15.5	+0.9
GURO	Guroymak-BITLI	1.38	347	PN			Pn	22 09 56.1	-0.4
GURO	Guroymak-BITLI	1.38	347	*e*Pn			Pn	22 09 56.1	-0.4
YOVA	Hakkari_Y¨…kse	1.53	75	*i* P			Pb	22 09 59.1	-0.3
YOVA				*i* S			Sg	22 10 19.9	+0.3
YOVA	Hakkari_Y¨…kse	1.53	75	P			Pb	22 09 59.1	-0.3
VANB	Van	1.58	28	PN			Pn	22 09 59.1	-0.1
VANB	Van	1.58	28	*e*Pn			Pn	22 09 59.1	-0.1
MAZI	Mazidag	1.60	280	PN			Pn	22 09 59.9	+0.3
MAZI	Mazidag	1.60	280	*e*Pn			Pn	22 09 59.9	+0.3
ADCV	BITLIS_Adilcev	1.61	8	*i* P			Pg	22 10 01.4	0.0
ADCV				*i* S			Sg	22 10 25.3	+3.0
ADCV	BITLIS_Adilcev	1.61	8	P			Pg	22 10 01.4	0.0
ADCV				S			Sg	22 10 25.3	+3.0
DIY	Diyarbakir	1.88	292	*e*Pn			Pb	22 10 04.9	-0.5
DYBB	Diyarbakir	1.97	293	PN			Pn	22 10 04.9	+0.4
DIYA	Diyarbakir	1.97	292	*i* P			Pb	22 10 06.9	0.0
DIYA				*i* S			Sb	22 10 32.9	+1.1
DIYA	Diyarbakir	1.97	292	P			Pb	22 10 06.9	0.0
DIYA				S			Sb	22 10 32.8	+1.1
VMUR	Van-Muradiye	1.99	26	*i* P			Pb	22 10 06.9	-0.4
VMUR				*i* S			Sg	22 10 34.1	-0.3
VMUR	Van-Muradiye	1.99	26	P			Pb	22 10 06.9	-0.4
VMUR				S			Sg	22 10 34.2	-0.3
HANI	Diyarbakir_Han	2.01	307	*i* P			Pb	22 10 06.7	-0.9
HANI				*i* S			Sb	22 10 33.9	+1.0
HANI	Diyarbakir_Han	2.01	307	P			Pb	22 10 06.7	-0.9
HANI				S			Sb	22 10 33.9	+1.0
BNGL	BINGOL	2.01	330	*i* P			Pn	22 10 05.6	+0.3
BNGL				*i* S			Sg	22 10 34.1	-1.0
SFNV	Sufian	2.02	248	*e*P			Pb	22 10 07.5	-0.2
SFNV				*e*S			Sb	22 10 34.2	+0.9
SFNV				AML		AML	22 10 42.6	
	comp=Z,479nm,0.8s							
EKAR	Karacoban	2.06	352	*i* P			Pb	22 10 07.4	-1.2
EKAR				*i* S			Sg	22 10 38.3	+1.5
EKAR	Karacoban	2.06	352	P			Pb	22 10 07.4	-1.2
VRTB	Varto-Mus	2.10	339	PN			Pn	22 10 06.7	+0.3
VRTB	Varto-Mus	2.10	339	*i* P			Pn	22 10 06.9	+0.5
VRTB				*i* S			Sb	22 10 35.5	0.0
VRTB	Varto-Mus	2.10	339	P			Pn	22 10 06.9	+0.5
VRTB				S			Sb	22 10 35.5	0.0
TUTA	Tutak	2.21	8	*i* P			Pn	22 10 08.2	+0.2
TUTA				*i* S			Sb	22 10 38.0	-0.8
TUTA	Tutak	2.21	8	P			Pn	22 10 08.2	+0.2
TUTA				S			Sb	22 10 38.0	-0.8
BNGB	Bing¨¶l	2.25	323	PN			Pn	22 10 08.9	+0.4
CLDR	Caldiran	2.26	31	PN			Pn	22 10 09.7	+1.0
CLDR	Caldiran	2.26	31	*i* P			Pn	22 10 09.5	+0.8
CLDR	Caldiran	2.26	31	P			Pn	22 10 09.5	+0.8
BINT	Bingol	2.26	318	*e*Pn			Pn	22 10 08.9	+0.2
AGRB	Hanur-Agry	2.40	10	PN			Pn	22 10 11.5	+0.8
AGRB	Hanur-Agry	2.40	10	*e*Pn			Pn	22 10 11.5	+0.8
YEDI	Yedisu-Bingol	2.67	327	PN			Pn	22 10 14.9	+0.5
YEDI	Yedisu-Bingol	2.67	327	*e*Pn			Pn	22 10 14.9	+0.5
SVRC	Sivrice-ELAZID	2.74	296	PN			Pn	22 10 14.8	-0.4
SVRC	Sivrice-ELAZID	2.74	296	*e*Pn			Pn	22 10 14.8	-0.4
HOMI	Horasan	2.86	352	*i* P			Pb	22 10 22.5	+0.3
URFA	Urfa	2.89	276	PN			Pn	22 10 18.3	+1.1
URFA	Urfa	2.89	276	*e*Pn			Pn	22 10 18.3	+1.1
PTK	Pertek	2.93	306	PN			Pn	22 10 18.0	+0.1
PTK	Pertek	2.93	306	*e*Pn			Pn	22 10 18.0	+0.1
SURC	SANLIURFA_SURC	3.07	265	*i* P			Pb	22 10 25.1	-0.6
SURC				*i* S			Sg	22 11 09.2	-0.1
SENK	Senkaya-Erzuru	3.35	359	PN			Pn	22 10 24.7	+1.0
SENK	Senkaya-Erzuru	3.35	359	*e*Pn			Pn	22 10 24.7	+1.0
MALT	Malatya	3.36	290	PN			Pn	22 10 24.9	+1.2
MALT	Malatya	3.36	290	*e*Pn			Pn	22 10 24.9	+1.2
GNI	Garni	3.45	31	PN			Pn	22 10 26.7	+1.7
GNI	Garni	3.45	31	*e*Pn			Pn	22 10 26.7	+1.7
BAYT	Ayd¨–ntepe-Bay	3.65	331	PN			Pn	22 10 28.8	+1.0
BAYT	Ayd¨–ntepe-Bay	3.65	331	*e*Pn			Pn	22 10 28.8	+1.0
AKCD	Akcadag	3.74	288	*i* P			Pn	22 10 29.0	+0.1
AKCD				*i* S			Sg	22 11 29.9	-0.6
AKCD	Akcadag	3.74	288	P			Pn	22 10 29.0	+0.1
SLMH	Al Salmeh	3.75	256	*e*P			Pn	22 10 30.6	+1.6
SLMH				*e*S			Sn	22 11 12.5	-1.1
SLMH				AML		AML	22 11 34.4	
	comp=E,170nm,0.6s							
SLMH				AML		AML	22 11 44.6	
	comp=N,253nm,0.6s							
RTB	Rutbah	4.52	203	*e*Pn			Pn	22 10 41.5	+1.9
	SNR=3.0							
RTB				*e*Sn			Sn	22 11 32.0	-0.6
	SNR=3.0							
TOTH	TOTAH	6.23	234	*e*P			Pn	22 11 04.7	+1.6
TOTH				*e*S			Sn	22 12 10.9	-3.9
TOTH				AML		AML	22 13 03.9	
	comp=E,15nm,0.7s							
TOTH				AML		AML	22 13 04.7	
BRBR	Barbar	6.51	236	*e*P		Pn	22 11 08.2	+1.1
BRBR				*e*S		Sn	22 12 17.9	-4.1
BRBR				AML		AML	22 13 17.3	
	comp=E,7.8nm,0.5s							
BRBR				AML		AML	22 13 18.8	
	comp=N,14nm,0.6s							

*ISCJB **21** 22:17:09.3±0.4, 11°.53S±0°.03×76°.64W±0°.06, h81km, mb4.2/20, Error ellipse: s-maj=8.5km s-min=4.9km az=172.9*
*IDC **21** 22:17:09.7±0.6, 11°.53S×76°.75W, h80km±6km, mb3.8/13, mb1 4.1/16, mb1mx3.9/41, mbtmp4.2/16, MS3.3/3, Ms1 3.3/3, ms1mx2.9/40, Error ellipse: s-maj=19.0km s-min=13.6km az=59.0*
*BJI **21** 22:17:10.7, 11°.50S×76°.30W, h45km, mB5.2/3, Ms5.2/2, Ms7 4.8/1*
*NEIC **21** 22:17:11.0±0.7, 11°.55S×76°.67W, h92km±6km, mb4.6/15, ML4.7(ARE), Error ellipse: s-maj=10.1km s-min=6.0km az=72.0*
NEIC Felt [IV] at Matucana and [III] at Huacho, Lima, Ricardo Palma, San Luis and Santa Eulalia. Also felt at Morococha and Santa Maria.

ISC 21 22:17:10.8±0.4, 11°.48S±0°.05×76°.59W±0°.08, h81km, n91, σ2°.00/88, mb4.2/20, 2C, Central Peru

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NNA	Nana	0.56	207	P			Pn	22 17 24.8	-0.4
	890nm,0.3s,baz=339,slow=3.8,SNR=933								
NNA				S			Sn	22 17 34.9	-1.0
	7μm,0.3s,baz=258,slow=20,SNR=122								
NNA				LR		LR		22 17 42.7	
	comp=Z,1μm,20.0s,baz=305,slow=72								
NNA	Nana	0.56	207	*e*Pn			Pn	22 17 24.9	-0.4
NNA				*e*Sn			Sn	22 17 36.0	0.0
LPAZ	La Paz	9.50	121	P			Pn	22 19 27.1	+1.7
	0.9nm,0.3s,baz=306,slow=12,SNR=22								
LPAZ				LR		LR		22 22 42.2	
	comp=Z,75nm,19.8s,baz=5.5,slow=35								
LPAZ	La Paz	9.50	121	*e*Pn			Pn	22 19 25.3	-0.1
MNMC	Minye Minye	10.16	139	*e*Pn			Pn	22 19 35.3	+1.2
OTAV	Otavalo	11.79	351	*e*Pn			Pn	22 19 57.5	+1.0
OTAV	Otavalo	11.79	351	*e*P			Pn	22 20 05.5	+9.0
GCUF	Volcan Galeras	12.65	357	*e*P			Pn	22 20 07.9	-0.3
FLOC	Florencia	13.01	4	*e*P			Pn	22 20 11.1	-1.5
SAML	Samuel	13.43	80	*e*Pn			Pn	22 20 16.2	-1.9
PCON	Cinco Dias	13.72	1	*e*P			Pn	22 20 22.8	+0.3
POPC	Popayan, Colom	13.93	360	*e*P			Pn	22 20 20.8	-4.1
BETC	Betania	14.12	5	*e*P			Pn	22 20 29.3	+2.1
MARP	Paez Belalcaza	14.25	3	*e*P			Pn	22 20 30.8	+1.8
HORQ	Saladito	14.87	360	*e*P			P	22 20 40.0	-0.9
GO02	Mina Guanaco	15.13	155	*e*Pn			P	22 20 43.5	-0.3
	32nm,0.9s								
PRAC	Prado	15.19	6	*e*Pn			Pn	22 20 41.9	+0.9
	45nm,0.8s								
PRAC	Prado	15.19	6	*e*P			Pn	22 20 42.1	+1.2
YOTC	Yotoco, Valle	15.37	1	*e*P			P	22 20 45.1	-1.2
SIV	San Ignacio	15.72	108	P			Pn	22 20 47.8	+0.2
	0.2nm,0.3s,baz=282,slow=11,SNR=18								
VILC	Villavicencio,	15.76	11	*e*P			Pn	22 20 49.4	+1.1
TOLC	Tolima	16.01	5	*e*P			P	22 20 52.8	-0.8
CHIC	Chingaza	16.26	10	*e*P			P	22 20 55.8	-0.6
PLMC	San Jos¨ del	16.28	1	*e*P			Pn	22 20 47.6	-7.1
ROSC	El Rosal	16.37	8	P			P	22 20 59.2	+1.6
	1.0nm,0.3s,baz=143,slow=5.1,SNR=13								
ROSC				LR		LR		22 28 22.9	
	comp=Z,73nm,21.1s,baz=236,slow=41								
ROSC	El Rosal	16.37	8	*e*Pn			P	22 20 58.9	+1.3
	24nm,0.9s								
ROSC	El Rosal	16.37	8	*e*P			P	22 21 06.3	+8.6
NORC	Norcasia	17.02	6	*e*P			P	22 21 06.3	+1.9
HELC	Santa Helena	17.59	3	*e*Pn			Pn	22 21 13.9	+2.8
	33nm,1.0s								
RUSC	La Rusia	17.61	12	*e*Pn			Pn	22 21 12.7	+1.2
	55nm,1.3s								
RUSC	La Rusia	17.61	12	*e*P			Pn	22 21 12.6	+1.1
PTBC	PUERTO BERRIO,	18.03	7	*e*P			Pn	22 21 16.3	+0.2
BARC	Barichara	18.27	11	*e*P			Pn	22 21 19.6	+0.4
LCO	Las Campanas	18.29	163	*e*P			Pn	22 21 19.8	+0.5
	36nm,1.3s								
BRRC	Barranca, Sant	18.69	9	*e*P			P	22 21 22.2	-0.6
ZARC	Zaragoza, Cauc	18.93	5	*e*P			P	22 21 26.0	+0.6
PTGA	Pitinga	19.66	58	P			P	22 21 34.2	+0.8
	2.0nm,0.3s,baz=227,slow=10,SNR=51								
PTGA				S			S	22 25 06.5	-4.5
	0.4nm,0.3s,baz=342,slow=13,SNR=4.4								
PTGA	Pitinga	19.66	58	*e*P			P	22 21 33.9	+0.5
	29nm,0.8s								
PTGA				S			S	22 25 06.5	-4.5
MOTC	Monteria, Cord	20.15	3	*e*P			P	22 21 39.1	+0.4
SDV	Santo Domingo	21.08	17	P			P	22 21 49.4	+0.4
	28nm,0.8s,baz=212,slow=8.6,SNR=7.9								
SDV	Santo Domingo	21.08	17	*e*P			P	22 21 49.5	+0.6
	32nm,0.9s								
SJCC	San Jacinto, C	21.29	4	*e*P			P	22 21 52.2	+1.2
ROC1	El Roble	22.00	167	*e*P			P	22 22 01.2	+2.6
	20nm,1.0s								
CPUP	Villa Florida	23.40	132	P			P	22 22 11.9	-0.9
	11nm,1.2s,baz=320,slow=9.8,SNR=6.8								
CPUP	Villa Florida	23.40	132	*e*P			P	22 22 12.8	+0.1
	23nm,1.4s								
PLCA	Paso Flores	29.62	171	P			P	22 23 07.0	-1.5
	3.2nm,0.9s,baz=13,slow=12,SNR=3.4								
MTP	Monte Pirata	31.34	20	*e*P			P	22 23 27.8	+4.0
	20nm,0.9s								
GRTK	Grand Turk	33.22	9	*e*P			P	22 23 44.9	+4.7
	518nm,2.0s								
RPN	Rapa Nui	34.46	238	LR		LR		22 33 38.4	
	comp=Z,143nm,19.1s,baz=78,slow=29								
TXAR	Lajitas Array	48.27	328	P			P	22 25 42.9	-1.1
	0.5nm,0.7s,baz=158,slow=8.6,SNR=4.6								
ANMO	Albuquerque	54.16	330	P			P	22 26 27.2	-0.9
	2.3nm,0.9s,baz=132,slow=10,SNR=6.0								
ANMO	Albuquerque	54.16	330	*e*P			P	22 26 27.9	-0.2
SDCO	Great Sand Dun	55.97	332	*e*P			P	22 26 40.5	-0.8
	3.8nm,1.1s								
PDAR	Pinedale Array	61.85	333	P			P	22 27 20.0	-1.8
	0.2nm,0.3s,baz=134,slow=3.9,SNR=2.2								
PDAR				PcP			PcP	22 28 00.0	-2.0
	1.1nm,0.9s,baz=125,slow=5.6,SNR=3.7								
NVAR	Mina Array Bea	63.11	324	P			P	22 27 29.8	-0.4
	1.4nm,0.8s,baz=145,slow=6.8,SNR=6.8								
NVAR				PcP			PcP	22 28 06.3	-1.0
	0.2nm,0.3s,baz=139,slow=5.6,SNR=3.5								
MFID	Camas Ranch	65.31	330	*e*P			P	22 27 43.2	-1.2
	12nm,1.6s								
SNAA	Sanae	74.07	162	P			P	22 28 37.0	-0.8
	4.6nm,0.9s,baz=314,slow=5.6,SNR=6.4								
KOWA	Kowa	76.40	72	P			P	22 28 51.9	-0.2
	2.0nm,0.8s,baz=276,slow=5.4,SNR=3.8								
YKA	Yellowknife Ar	79.43	343	P			P	22 29 05.3	-2.5
	0.5nm,0.3s,baz=142,slow=5.8,SNR=7.6								
TORD	Torodi Ar. Bea	81.42	75	P			P	22 29 19.6	+0.1
	2.6nm,0.9s,baz=252,slow=5.0,SNR=14								
VNDA	Vanda	85.33	191	P			P	22 29 37.8	-0.6
	1.8nm,0.8s,baz=162,slow=3.0,SNR=13								
SYO	Syowa Base	88.36	161¶	*e*P			P	22 29 51.0	-2.3
SYO	Syowa Base	88.36	161¶	*e*X			P	22 29 56.2	+2.9
DAWY	Dawson	88.89	337	*e*P			P	22 29 55.0	-0.8
	7.4nm,1.2s								
EGAK	Eagle	89.91	337	*e*P			P	22 29 59.7	-0.8
	4.1nm,0.9s								
ILAR	Eielson Array	92.13	336	P			P	22 30 08.9	-1.9
	0.2nm,0.7s,baz=166,slow=4.0,SNR=4.5								
H11N3	WAKE ISLAND Hyl	18.58	286	T			T	00 44 47.9	
	baz=95,slow=75,SNR=5.2								
H11N2	WAKE ISLAND Hyl	18.60	286	T			T	00 44 54.6	
	baz=95,slow=75,SNR=4.3								
H11N1	WAKE ISLAND Hyl	18.60	286	T			T	00 44 49.8	
	baz=95,slow=75,SNR=6.5								
H11S2	WAKE ISLAND Hyl	18.72	285	T			T	00 44 51.1	
	baz=95,slow=75,SNR=23								
H11S1	WAKE ISLAND Hyl	18.72	285	T			T	00 45 03.2	
	baz=95,slow=75,SNR=32								
H11S3	WAKE ISLAND Hyl	18.73	285	T			T	00 44 58.1	
	baz=95,slow=75,SNR=21								
AS01	Alice Springs	134.04	220	*e*PKPpre			PKPdf	22 36 17.7	-2.1
ASAR	Alice Springs	134.07	220	PKP			PKPdf	22 36 17.8	-2.0
	1.1nm,0.7s,baz=130,slow=2.1,SNR=11								
ZAA0	Zalesovo Array	135.13	15	*e*PKPpre			PKPdf	22 36 20.0	-0.8
ZALV	Zalesovo Beam	135.13	15	PKP			PKPdf	22 36 19.8	-1.0
	2.5nm,0.7s,baz=303,slow=2.3,SNR=12								
ZALV	Zalesovo Beam	135.13	15	*e*PKPpre			PKPdf	22 36 19.6	-1.2
ZALV				PKP			PKPdf	22 36 19.8	-1.0
KURK	Kurchatov	135.92	23	PKP			PKPdf	22 36 21.4	-0.9
KURBB	Kurchatov Arra	135.96	23	PKP			PKPdf	22 36 21.4	-1.0
	1.5nm,0.8s,baz=315,slow=2.5,SNR=11								
WB2	Warramunga Arr	136.38	225	*e*PKPpre			PKPdf	22 36 22.7	-1.5
WRA	Warramunga Arr	136.39	225	PKP			PKPdf	22 36 22.2	-1.9
	2.5nm,0.9s,baz=122,slow=1.7,SNR=12								
MKAR	Makanchi Array	140.53	23	PKhKP			PKPpre	22 36 23.4	
	0.6nm,0.8s,baz=294,slow=1.2,SNR=3.8								
MKAR				PKP			PKPdf	22 36 29.6	-1.4
	0.6nm,0.8s,baz=327,slow=1.6,SNR=5.2								
KSH	Kashi	142.97	36	PKP			PKPdf	22 36 41.1	+5.4
WMQ	Urumqi	145.03	20	PKPbc			PKPdf	22 36 44.1	+5.0
WMQ				LR			LR		
	comp=E,160nm,23.9s								
WMQ				LR			LR		
	comp=Z,180nm,26.1s								
KSRS	Korea Array	146.05	324	PKPbc			PKPdf	22 36 40.6	-0.3
	2.7nm,0.9s,baz=59,slow=4.4,SNR=11								
KSAR	Wonju Array Be	146.09	324	PKPbc			PKPdf	22 36 40.6	-0.4
HHC	Hu-ho-hao-te	149.88	348	*e*PKPbc			PKPbc	22 36 52.0	-0.2
GTA	Gaotai	152.00	6	*e*PKPbc			PKPbc	22 36 56.4	-0.8
GTA				pPKP			PKPab	22 37 07.0	+0.4
GTA				sPKP				22 37 11.3	
NJ2	Nanjing	155.07	328	*e*PKP			PKPdf	22 36 59.8	+4.8
LZH	Lanzhou	155.50	359	*e*PKP			PKPdf	22 37 01.3	+5.6
LZH				pPKP			pPKPdf	22 37 10.9	-7.7
LZH				sPKP				22 37 14.3	
LZH				PKPab			sPKPbc	22 37 32.4	-3.8
CD2	Chengdu	160.66	359	PKP			PKPdf	22 37 05.9	+3.9

*ISCJB **21** 22:34:33.6±0.5, 17°.92S±0°.03×178°.20W±0°.02, h506km±6km, mb5.1/281, Error ellipse: s-maj=4.7km s-min=3.0km az=149.5*
*IDC **21** 22:34:36.6±0.4, 17°.91S×178°.11W, h531km±3km, mb4.6/37, mb1 4.6/40, mb1mx4.6/51, mbtmp5.5/40, Error ellipse: s-maj=8.1km s-min=7.0km az=155.0*
*MOS **21** 22:34:36.6±1.0, 17°.87S×178°.23W, h538km, mb5.2/39, Error ellipse: s-maj=8.1km s-min=7.6km az=87.7*
*GCMT **21** 22:34:37.3±0.2, 17°.97S×178°.15W, h553km±1km, MW5.5/112, Moment Tensor Solution. s112,c190; Duration: 1+3 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.17±.03; $M_{\theta\theta}$-0.11±.05; $M_{\phi\phi}$1.28±.04; $M_{r\theta}$-0.22±.05; $M_{r\phi}$0.45±.04; $M_{\theta r}$-1.61±.04; Best double couple: $M_0$2.07700×10^{17} NP1:ϕ_s9.00000°, δ71.00000°, λ-96.00000°. NP2:ϕ_s206.00000°, δ20.00000°, λ-74.00000°. Principal axes: T 2.1860, Plg26.0000°, Azm104.0000°; N -0.2140, Plg6.0000°, Azm11.0000°; P -1.9680, Plg64.0000°, Azm270.0000°; nsta1 refers to body waves, cutoff=40s.*
*NEIC **21** 22:34:37.3±0.4, 17°.96S×178°.19W, h543km±4km, mb5.2/138, MW5.5 Error ellipse: s-maj=5.1km s-min=3.4km az=137.0, Moment Tensor Solution. s30 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.27; $M_{\theta\theta}$0.76; $M_{\phi\phi}$0.50; $M_{r\theta}$-0.33; $M_{\theta\phi}$0.79; $M_{\phi r}$-2.16; Best double couple: $M_0$2.60000×10^{17} NP1:ϕ_s17.00000°, δ76.00000°, λ-108.00000°. NP2:ϕ_s250.00000°, δ23.00000°, λ-39.00000°. Principal axes: T 2.3900, Plg29.0000°, Azm122.0000°; N 0.3300, Plg17.0000°, Azm22.0000°; P -2.7300, Plg56.0000°, Azm265.0000°;*
*BJI **21** 22:34:37.1, 17°.48S×177°.84W, h545km, mb5.1/58, mB5.0/38*

**ISC 21 22:34:37.1±0.3, 17°.95S±0°.04×178°.07W±0°.04, h543km±3km, h544km:pP-P, n841, σ1°.29/970, mb5.2/281,

FOZ	Fox Glacier	27.48	199	eP		P	22 39 39.0 -0.8
	322nm,1.0s						
FOZ	Fox Glacier	27.48	199	P		P	22 39 39.2 -0.6
LBZ	Lake Benmore	28.14	198	eP		P	22 39 43.8 -1.9
	131nm,0.9s						
LBZ	Lake Benmore	28.14	198	P		P	22 39 44.2 -1.4
JCZ	Jackson Bay	28.30	200	P		P	22 39 46.5 -0.6
XMAS	Kiritimati	28.42	48	eP		P	22 39 47.6 -0.8
	208nm,1.4s						
ODZ	Otahua Downs	28.62	197	eP		P	22 39 49.3 -0.4
	30nm,1.1s						
ODZ	Otahua Downs	28.62	197	P		P	22 39 49.1 -0.6
WKZ	Wanaka	28.90	199	eP		P	22 39 51.1 -1.2
	123nm,0.9s						
WKZ				eS		S	22 44 03.4 -1.2
WKZ	Wanaka	28.90	199	P		P	22 39 51.4 -0.8
PMOR	Pomariorio Ree	29.07	89	eP		P	22 39 54.5 +0.5
	835nm,1.3s						
MSZ	Milford Sound	29.12	201	P		P	22 39 54.8 +0.7
EAZ	Earnscleugh	29.17	198	P		P	22 39 54.2 -0.4
VAH	Vaihoa	29.28	89	eP		P	22 39 55.9 0.0
	318nm,1.1s						
EIDS	Eidsvold	29.56	250	P		P	22 39 57.5 -0.7
	baz=29,SNR=18						
EIDS	Eidsvold	29.56	250	eP		P	22 39 57.7 -0.5
	132nm,0.8s						
MLZ	Mavora Lakes	29.67	200	eP		P	22 39 59.2 +0.3
	226nm,0.8s						
TUZ	Tuapeka	29.74	197	P		P	22 39 59.4 0.0
DCZ	Deep Cove	30.07	201	eP		P	22 40 02.4 0.0
	79nm,0.9s						
WHZ	Wether Hill Ro	30.19	200	eP		P	22 40 03.6 +0.2
	349nm,1.1s						
ARMA	Armidale	30.20	240	P		P	22 40 04.5 +0.7
	baz=30,SNR=59						
ARMA	Armidale	30.20	240	eP		P	22 40 04.0 +0.2
	134nm,0.9s						
PYZ	Puysegur Point	30.85	201	eP		P	22 40 08.8 -0.2
	81nm,0.7s						
MGCD	Mangrove Creek	31.54	235	P		P	22 40 16.1 +1.0
	baz=31,SNR=40						
RIV	Riverview	31.73	234	P		P	22 40 17.3 +0.6
	baz=32,SNR=4.6						
RMQ	Roma	31.79	249	P		P	22 40 17.9 +0.5
	baz=32,SNR=54						
CNB	Canberra Magne	33.66	233	P		P	22 40 33.9 +0.7
	baz=34,SNR=157						
CTA	Charters Tower	33.76	261	P		P	22 40 33.6 -0.5
	119nm,0.9s,baz=88,slow=11,SNR=65						
CTA				PcP		PcP	22 42 58.8 +1.0
	26nm,1.0s,baz=53,slow=5.7,SNR=3.9						
CTAO	Charters Tower	33.76	261	eP		P	22 40 33.6 -0.5
	140nm,0.9s						
CTAO	Charters Tower	33.76	261	eP		P	22 40 33.6 -0.5
CTAO				pmax		pmax	
	comp=Z,140nm,0.9s						
PATS	Pohnpei	33.92	315	eP		P	22 40 34.6 -0.9
	comp=Z,236nm,1.2s						
CAN	Canberra	33.94	233	P		P	22 40 36.0 +0.5
	baz=34						
CAN	Canberra	33.94	233	eP		P	22 40 35.8 +0.3
	comp=Z,155nm,0.9s						
CAN	Canberra	33.94	233	eP		P	22 40 35.8 +0.3
CAN				pmax		pmax	
	comp=Z,155nm,0.9s						
YNG	Young	34.03	235	P		P	22 40 36.9 +0.6
	baz=34,SNR=15						
PMG	Port Moresby	34.79	279	P		P	22 40 43.4 +0.7
	comp=Z,80nm,0.8s,baz=87,slow=4.6,SNR=16						
PMG	Port Moresby	34.79	279	eP		P	22 40 42.7 -0.1
	comp=Z,161nm,1.0s						
CMSA	Cobar Meteorol	35.41	241	P		P	22 40 47.9 +0.1
	baz=35,SNR=148						
JOHN	Johnston Islan	35.48	14	eP		P	22 40 47.4 -1.0
	comp=Z,165nm,0.9s						
MTSU	Mount Surprise	35.73	264	P		P	22 40 49.9 -0.6
	baz=36,SNR=61						
QLP	Quilpie	35.82	249	P		P	22 40 50.9 -0.4
	baz=36,SNR=60						
TOO	Toolangi	37.40	231	P		P	22 41 04.6 +0.5
	baz=37,SNR=116						
TOO	Toolangi	37.40	231	P		P	22 41 04.6 +0.5
TOO				pmax		pmax	
	comp=Z,549nm,1.2s						
MANU	Manus Island	37.42	291	eP		P	22 41 05.0 +0.5
	comp=Z,316nm,1.0s						
COEN	Coen	37.43	270	P		P	22 41 04.7 +0.1
	baz=37,SNR=34						
COEN	Coen	37.43	270	eP		P	22 41 04.6 0.0
	comp=Z,121nm,0.9s						
TAOE	Nuku Hiva Isla	37.91	81	eP		P	22 41 09.6 +1.0
	comp=Z,153nm,1.0s						
MOO	Moorlands	38.28	223	P		P	22 41 11.8 +0.6
	baz=38,SNR=13						
TAU	Tasmania Unive	38.43	222	eP		P	22 41 12.2 -0.1
	comp=Z,132nm,1.1s						
TAU	Tasmania Unive	38.43	222	eP		P	22 41 12.2 -0.1
TAU				pmax		pmax	
	comp=Z,132nm,1.1s						
STKA	Stephens Creek	38.89	241	P		P	22 41 16.9 +0.7
	comp=Z,236nm,0.8s,baz=89,slow=9.8,SNR=148						
STKA	Stephens Creek	38.89	241	eP		P	22 41 16.9 +0.7
	comp=Z,83nm,1.0s						
STKA	Stephens Creek	38.89	241	eP		P	22 41 17.0 +0.7
STKA				pmax		pmax	
	comp=Z,83nm,1.0s						
ARPS	Mount Arapiles	39.89	234	P		P	22 41 24.3 +0.1
	baz=40,SNR=29						
WAKE	Wake Island	39.93	337	eP		P	22 41 23.4 -1.2
	comp=Z,139nm,0.9s						
QIS	Mount Isa	39.97	259	P		P	22 41 24.1 -1.0
	baz=40,SNR=16						
RKT	Rikitea	40.58	105	eP		P	22 41 30.7 +0.8
	comp=Z,245nm,1.1s						
JAY	Jayapura	43.23	286	S		S	22 47 41.7 +2.7
	comp=Z,6.4nm,0.9s,baz=244,slow=23,SNR=10.0						
BBOO	Buckleboo	43.67	241	eP		P	22 41 54.3 +0.2
	comp=Z,415nm,0.9s						
BBOO				eS		S	22 47 44.7 -0.1
WB2	Warramunga Arr	44.93	260	eP		P	22 42 02.7 -1.3
	comp=Z,140nm,0.6s						
WRAB	Tennant Creek	44.93	260	eP		P	22 42 02.8 -1.2
	comp=Z,123nm,0.7s						
WRAB	Tennant Creek	44.93	260	ceP		P	22 42 02.7 -1.4
WRAB				pmax		pmax	
	comp=Z,125nm,1.0s						
WRA	Warramunga Arr	44.94	260	P		P	22 42 02.8 -1.3
	comp=Z,106nm,0.7s,baz=90,slow=7.7,SNR=394						
WRA				PcP		PcP	22 43 34.2 +0.3
	comp=Z,35nm,0.9s,baz=91,slow=4.1,SNR=13						
WRA				ScP		ScP	22 46 38.1 +3.3
	comp=Z,2.7nm,0.8s,baz=90,slow=4.1,SNR=5.4						
WRA				S		S	22 47 60.0 -3.2
	comp=Z,10nm,1.0s,baz=90,slow=13,SNR=8.8						
AS01	Alice Springs	45.05	254	eP		P	22 42 03.2 -1.7
AS31	Alice Springs	45.09	254	eP		P	22 42 04.5 -0.7
	comp=Z,218nm,0.6s						
AS31				eS		S	22 48 03.2 -2.0
ASAR	Alice Springs	45.09	254	P		P	22 42 04.7 -0.6
	comp=Z,882nm,0.7s,baz=88,slow=8.3,SNR=5326						
ASAR				PcP		PcP	22 43 34.8 +0.3
	comp=Z,39nm,0.9s,baz=106,slow=3.6,SNR=8.2						
ASAR				S		S	22 48 02.8 -2.4
	comp=Z,64nm,0.9s,baz=88,slow=15,SNR=58						
ASAR	Alice Springs	45.09	254	P		P	22 42 04.7 -0.6
ASAR							22 43 34.8
ASAR				S		S	22 48 02.8 -2.4
ASAR				pmax		pmax	
	comp=Z,931nm,0.7s						
ASAR				pmax		pmax	
	comp=Z,39nm,0.9s						
ASAR				smax		smax	
	comp=N,64nm,0.9s						
GUMO	Guam	48.16	308	P		P	22 42 28.7 +0.4
	comp=N,502nm,0.9s,baz=174,slow=7.6,SNR=21						
GUMO	Guam	48.16	308	eP		P	22 42 28.8 +0.4
	comp=N,525nm,0.8s						
GUMO	Guam	48.16	308	eP		P	22 42 28.8 +0.4
GUMO				pmax		pmax	
	comp=Z,525nm,0.8s						
MTN	Manton Dam	49.12	268	eP		P	22 42 34.7 -1.0
	comp=Z,143nm,1.0s						
MTN				eS		S	22 48 59.3 -1.8
KMPI	Kaimana, Papua	49.28	281	P		P	22 42 36.8 0.0
	comp=Z,457nm,0.9s,comp=Z,360µm						
RKPI	Ransiki, Papua	49.62	284	P		P	22 42 39.0 -0.4
	comp=Z,126nm,1.1s,comp=Z,5µm						
SAUI	Saumlaki	50.19	275	eP		P	22 42 43.3 -0.1
	comp=Z,487nm,1.1s						
FORT	Forrest	50.28	245	eP		P	22 42 43.1 -0.8
	comp=Z,293nm,0.7s						
FAKI	Fak Fak	50.91	281	P		P	22 42 47.9 -0.9
	comp=Z,118nm,1.6s,comp=Z,2µm						
FAKI	Fak Fak	50.91	281	eP		P	22 42 47.9 -0.9
	comp=Z,277nm,1.5s						
SIJI	Sorong	52.56	283	P		P	22 43 00.6 -0.1
	comp=Z,376nm,0.9s,baz=86,slow=5.7,SNR=128						
MSAI	Masohi	53.87	279	P		P	22 43 09.2 -0.8
	comp=Z,26nm,0.7s,comp=Z,1µm						
AAI	Ambon	54.45	278	P		P	22 43 13.3 -0.7
	comp=Z,174nm,1.4s,comp=Z,3µm						
NLAI	Namlea	55.62	279	P		P	22 43 23.7 +1.5
SOEI	Soe	56.40	270	P		P	22 43 27.8 +0.1
SOEI	Soe	56.40	270	eP		P	22 43 28.5 +0.7
	comp=Z,438nm,1.0s						
TNTI	Ternate	56.79	283	eP		P	22 43 30.5 +0.2
	comp=Z,308nm,1.1s						
BATI	Baumata	56.86	269	P		P	22 43 32.1 +1.3
	comp=Z,97nm,0.7s,baz=197,slow=3.8,SNR=17						
BATI	Baumata	56.86	269	P		P	22 43 30.7 -0.1
	comp=Z,84nm,0.9s,comp=Z,1µm						
MBWA	Marble Bar	58.38	256	eP		P	22 43 40.4 -0.6
	comp=Z,314nm,1.4s						
MMRI	Maumere	58.62	271	P		P	22 43 42.1 -0.6
	comp=Z,188nm,1.1s						
MMRI	Maumere	58.62	271	eP		P	22 43 42.3 -0.4
	comp=Z,203nm,1.2s						
CBIJ	Chichi jima	59.09	318	eP		P	22 43 45.0 -0.6
	comp=Z,146nm,1.2s						
NWAO	Narrogin (SRO)	59.48	242	P		P	22 43 48.2 0.0
	comp=Z,57nm,0.7s,baz=313,slow=8.1,SNR=47						
NWAO	Narrogin (SRO)	59.48	242	eP		P	22 43 47.8 -0.4
	comp=Z,264nm,1.4s						
BASI	Baing, Sumba	59.79	268	P		P	22 43 50.1 -0.4
	comp=Z,279nm,1.5s,comp=Z,4µm						
SBA	Scott Base	60.40	184	eP		P	22 43 55.7 +2.2
	comp=Z,74nm,1.0s						
SBA	Scott Base	60.40	184	P		P	22 43 55.6 +2.2
SBA				pmax		pmax	
	comp=Z,54nm,1.0s						
VNDA	Vanda	60.43	185	P		P	22 43 55.5 +1.8
	comp=Z,15nm,0.8s,baz=0.3,slow=7.2,SNR=86						
VNDA	Vanda	60.43	185	eP		P	22 43 55.5 +1.8
	comp=Z,81nm,1.5s						
LUWI	Luwuk	60.43	279	eP		P	22 43 55.2 +0.4
	comp=Z,571nm,1.2s						
DAV	Davao City (W)	60.92	289	P		P	22 43 57.7 -0.3
	comp=Z,139nm,0.4s,baz=56,slow=3.5,SNR=7.1						
WBSI	Waikabubak, Su	61.07	269	P		P	22 43 58.5 -0.5
BKSI	Bulukumba	61.58	274	P		P	22 44 01.2 -1.1
	comp=Z,34nm,1.7s,comp=Z,556nm						
BUKP	Musuan	61.73	290	eP		P	22 44 02.2 -1.1
H01W1	Cape Leeuwin H	61.94	240	P		P	22 44 05.6 +1.5
	baz=110,slow=6.9,SNR=12						
H01W3	Cape Leeuwin H	61.96	240	P		P	22 44 05.7 +1.5
	baz=110,slow=6.9,SNR=12						
H01W2	Cape Leeuwin H	61.96	240	P		P	22 44 05.7 +1.5
	baz=110,slow=6.9,SNR=7.0						
PLAI	Plampang	62.82	269	P		P	22 44 09.2 -1.2
MSLP	Maasin	62.88	292	eP		P	22 44 10.5 -0.2
TWSI	Taliwang, Sumb	63.69	269	P		P	22 44 15.4 -0.6
CNP	Catarman	64.11	294	eP		P	22 44 19.0 +0.5
PVCP	Virac	65.04	295	eP		P	22 44 24.1 -0.4
IGBI	Denpasar	65.33	268	P		P	22 44 26.1 -0.2
	comp=Z,452nm,1.0s,comp=Z,4µm						
RCP	Roxas	65.36	292	eP		P	22 44 26.1 -0.4
SRBI	Singaraja	65.46	269	P		P	22 44 26.4 -0.7
CASY	Casey	66.23	205	eP		P	22 44 31.6 +0.5
	comp=Z,126nm,1.0s						
JAGI	Jajag, Banyuwa	66.36	268	P		P	22 44 31.1 -1.7
JAGI	Jajag, Banyuwa	66.36	268	eP		P	22 44 31.4 -1.4
	comp=Z,268nm,0.9s						
MYLDM	Lahad Datu	66.64	284	eP		P	22 44 36.0 +1.6
	comp=Z,316nm,1.3s						
GMJI	Gumukmas	67.09	268	P		P	22 44 35.9 -1.4
BLJI	Banyuglugur	67.09	269	P		P	22 44 36.7 -0.6
TGY	Tagaytay City	68.06	294	P		P	22 44 42.8 -0.4
	comp=Z,228nm,0.3s,baz=194,slow=8.3,SNR=5.3						
MJAR	Matsushiro Arr	68.14	323	P		P	22 44 42.6 -0.6
	comp=Z,34nm,0.9s,baz=167,slow=6.0,SNR=50						
MJAR	Matsushiro Arr	68.14	323	P		P	22 44 42.6 -0.6
MJAR				pmax		pmax	
	comp=Z,32nm,1.0s						
MAJO	Matsushiro	68.14	323	eP		P	22 44 43.2 0.0
	comp=Z,41nm,0.9s						
MAJO	Matsushiro	68.14	323	iP		P	22 44 42.5 -0.7
MAJO				pmax		pmax	
	comp=Z,36nm,0.9s						
MAT	Matsushiro	68.14	323	P		P	22 44 42.5 -0.7
MJB9	Matsu-Tunnel	68.14	323	eP		P	22 44 43.2 -0.1
	comp=Z,42nm,0.9s						
JOW	Kunigami	68.50	309	P		P	22 44 46.3 +0.8
	comp=Z,60nm,1.0s,baz=144,slow=2.2,SNR=8.9						
JOW	Kunigami	68.50	309	eP		P	22 44 44.4 -1.2
	comp=Z,135nm,1.2s						
PWJI	Pagerwojo	68.72	268	P		P	22 44 47.1 -0.1
	comp=Z,150nm,1.0s						
TBJI	Tambak Boyo	69.02	269	P		P	22 44 49.4 +0.4
	comp=Z,276nm,1.2s,comp=Z,3µm						
KKM	Kota Kinabalu	69.07	284	eP		P	22 44 49.0 -0.4
	comp=Z,111nm,1.0s						
NGJI	Ngawi	69.23	269	P		P	22 44 51.5 +1.2
	comp=Z,141nm,1.0s						
PCJI	Pacitan	69.27	268	P		P	22 44 50.7 +0.2
	comp=Z,802nm,1.1s,comp=Z,6µm						
WOJI	Wonogiri, Jawa	69.61	268	P		P	22 44 52.3 -0.2
UGM	Wanagama	69.97	268	P		P	22 44 54.3 -0.4
UGM	Wanagama	69.97	268	eP		P	22 44 54.4 -0.3
	comp=Z,232nm,0.6s						
SMRI	Semarang	70.29	269	P		P	22 44 56.6 0.0
SMRI	Semarang	70.29	269	eP		P	22 44 56.7 0.0
	comp=Z,210nm,0.8s						
JNU	Nakatsue	70.39	316	P		P	22 44 56.9 +0.1
	comp=Z,30nm,0.9s,baz=72,slow=2.4,SNR=8.9						
JNU	Nakatsue	70.39	316	eP		P	22 44 56.9 +0.1
	comp=Z,76nm,1.1s						
PBKI	Pangkalan Bun	70.40	274	P		P	22 44 57.8 +0.6
YOJ	Yonaguni jima	71.24	304	eP		P	22 45 01.1 -0.8
	comp=Z,287nm,0.8s						
YOJ	Yonaguni jima	71.24	304	eP		P	22 45 01.1 -0.8
YOJ				pmax		pmax	
	comp=Z,287nm,0.8s						
ASAJ	Asahikawa	71.47	331	P		P	22 45 04.4 +1.6
	comp=Z,38nm,0.8s,baz=212,slow=9.5,SNR=20						
ASAJ	Asahikawa	71.47	331	eP		P	22 45 04.3 +1.5
	comp=Z,56nm,0.9s						
SBUM	Sibu	71.53	279	eP		P	22 45 04.5 +0.6
	comp=Z,73nm,1.0s						
KPJI	Karang Pucung	71.65	268	P		P	22 45 04.1 -0.5
TWG	Pinlang	71.97	302	eP		P	22 45 04.3 -2.0
	comp=Z,184nm,0.8s						
YULB	Yu-li	72.06	303	eP		P	22 45 05.3 -1.5
	comp=Z,38nm,0.8s						
QSPA	South Pole Qui	72.10	180	eP		P	22 45 07.1 +0.7
	comp=Z,447nm,0.9s						
NACB	Ningancheiao	72.21	304	eP		P	22 45 06.8 -0.8
	comp=Z,230nm,1.0s						
JCJI	Jatiwangi	72.51	269	P		P	22 45 09.6 0.0
	comp=Z,408nm,1.1s,comp=Z,6µm						
SSLB	Suanglung	72.53	303	eP		P	22 45 08.3 -1.2
	comp=Z,78nm,0.9s						
TPUB	Ta-pu	72.56	302	eP		P	22 45 08.4 -1.3
	comp=Z,209nm,0.8s						
YHNB	Yeheng	72.63	304	eP		P	22 45 09.4 -0.7
	comp=Z,185nm,1.1s						
CISI	Cisompet, Garu	72.64	268	P		P	22 45 09.5 -0.9
	comp=Z,287nm,1.3s,comp=Z,3µm						
CISI	Cisompet, Garu	72.64	268	eP		P	22 45 09.5 -0.9
	comp=Z,590nm,1.5s						
TATO	Taipei	72.69	304	eP		P	22 45 10.4 +0.1
	comp=Z,156nm,0.9s						
KSM	Kuching	73.01	277	eP		P	22 45 13.1 +0.6
	comp=Z,345nm,0.9s						
LEM	Lembang	73.04	268	P		P	22 45 13.5 +0.7
	comp=Z,321nm,0.8s,baz=117,slow=4.5,SNR=41						
MIR	Mirnyy	73.27	205	iP		P	22 45 14.0 +1.1
MIR				pmax		pmax	
	comp=Z,168nm,1.0s						
PET	Petropavlovsk	73.50	346	eP		P	22 45 13.1 -1.2
PET				eS		S	22 53 58.2 -2.0
PET				eSP		SPn	22 54 36.7 -0.3
PET				pmax		pmax	
	comp=Z,40nm,1.3s						
PET				pmax		pmax	
	comp=Z,100nm,15.8s						
YSS	Yuzh-Sakhalins	73.60	333	eP		P	22 45 16.1 +1.1
	comp=Z,48nm,0.9s						
YSS	Yuzh-Sakhalins	73.60	333	eP		P	22 45 15.8 +0.8
YSS				pmax		pmax	
	comp=Z,50nm,1.1s						
PEA0B	Petropavlovsk-	73.80	345	eP		P	22 45 16.0 -0.1
	comp=Z,93nm,1.0s						
PETK	Petropavlovsk-	73.80	345	P		P	22 45 16.0 0.0
	comp=Z,43nm,0.8s,baz=122,slow=8.7,SNR=52						
PETK	Petropavlovsk-	73.80	345	eP		P	22 45 15.3 -0.7
SKJI	Sukabumi	74.00	268	P		P	22 45 17.6 -0.5
	comp=Z,476nm,1.1s,comp=Z,5µm						
SDPT	Sand Point	74.52	10	eP		P	22 45 19.3 -0.7
	comp=Z,45nm,1.0s						
SBJI	Serang	74.66	268	P		P	22 45 21.5 -0.3
	comp=Z,549nm,1.3s,comp=Z,6µm						
TJN	Taejon	74.66	317	ceP		P	22 45 22.2 +0.9
CGJI	Cibinong	74.93	268	P		P	22 45 22.3 -1.0
	comp=Z,408nm,1.2s,comp=Z,4µm						
KSRS	Korea Array	74.95	318	P		P	22 45 23.7 +0.9
	comp=Z,16nm,0.9s,baz=136,slow=6.1,SNR=49						
KS15	Wonju Array Si	74.97	318	eP		P	22 45 24.1 +1.1
KSAR	Wonju Array Be	74.97	318	P		P	22 45 23.7 +0.7
KSAR	Wonju Array Be	74.97	318	P		P	22 45 23.7 +0.7
QZH	Quanzhou	74.97	303	iP		P	22 45 23.3 0.0
QZH				sP		sP	22 48 15.3 +1.9
QZH				S		S	22 54 20.3 +2.8
QZH				pmax		pmax	
	comp=Z,94nm,1.0s						
KS01	Wonju Array Si	74.98	318	eP		P	22 45 22.8 -0.3
CHGN	Chignik	75.80	11	eP		P	22 45 26.0 -1.1
	comp=Z,29nm,0.9s						
PPBI	Pangkal Pinang	75.83	272	P		P	22 45 29.0 +0.7
	comp=Z,0.7nm,0.9s,comp=Z,62nm						
MSHR	Mys Shultsa	76.23	324	ceP		P	22 45 31.5 +1.7
KASI	Kota Agung	76.38	269	P		P	22 45 30.6 -0.8
	comp=Z,388nm,1.0s,comp=Z,3µm						
USRK	Ussuriysk Ar.	76.83	326	P		P	22 45 34.1 +1.0
	comp=Z,9.6nm,0.9s,baz=116,slow=4.4,SNR=23						
KMRM	Mail Ridge	76.84	40	eP		P	22 45 35.6 +2.2
	comp=Z,26nm,0.9s						
PMBI	Palembang	76.89	271	P		P	22 45 36.1 +1.9
MDSI	Maura Dua	76.99	269	P		P	22 45 33.7 -1.0
	comp=Z,96nm,1.2s,comp=Z,1µm						
BFSC	Mount Baldy Ra	77.42	48	P		P	22 45 37.3 +0.6
	baz=238						
EDW2	Edwards Air Fo	77.52	47	P		P	22 45 38.0 +0.8
	baz=238						
MONP2	Monument Peak	77.59	49	P		P	22 45 38.9 +1.1
	baz=239						
ISA	Isabella, Lake	77.61	46	P		P	22 45 38.8 +1.1
	baz=237						
CMB	Columbia Colle	77.65	43	eP		P	22 45 38.9 +1.1
	comp=Z,7.8nm,0.9s						
CMB				epP		pP	22 47 37.8 +4.8
CMB	Columbia Colle	77.65	43	eP		P	22 45 38.9 +1.1
CMB				e*PP		pP	22 47 37.8 +4.8
CMB				pmax		pmax	
	comp=Z,8.0nm,0.9s						
IKP	In-Ko-Pah, Jac	77.70	50	P		P	22 45 39.7 +1.4
	baz=239						
WDC	Whiskeytown Da	77.77	40	eP		P	22 45 40.0 +1.7
	comp=Z,21nm,1.4s						
WDC	Whiskeytown Da	77.77	40	eP		P	22 45 40.0 +1.7
WDC				pmax		pmax	
	comp=Z,21nm,1.4s						
AFDM	Forest Hills D	77.79	42	eP		P	22 45 40.0 +1.4
	comp=Z,5.7nm,1.0s						
PFO	Pinyon Flats O	77.94	49	P		P	22 45 40.5 +0.9
	baz=239						
PFO	Pinyon Flats O	77.94	49	eP		P	22 45 40.9 +1.3
	comp=Z,13nm,1.3s						
PFO	Pinyon Flats O	77.94	49	eP		P	22 45 40.9 +1.3
PFO				pmax		pmax	
	comp=Z,13nm,1.3s						
TPFO	Pinon Flats	77.94	49	P		P	22 45 40.4 +0.8
	baz=239						
M02C	Callahan	78.06	39	P		P	22 45 41.2 +1.3
	baz=233						
SWSC	Sam W. Stewart	78.07	50	P		P	22 45 41.1 +1.0
	baz=239						
LPIG	La Paz	78.18	60	P		P	22 45 40.5 -0.3
	comp=Z,17nm,0.3s,baz=46,slow=0.2,SNR=2.4						
NJ2	Nanjing	78.22	309	eP		P	22 45 41.6 +0.7
NJ2				pmax		pmax	
	comp=Z,60nm,1.2s						
MDPB	Devils Postpil	78.28	44	eP		P	22 45 43.2 +1.7
	comp=Z,20nm,1.0s						
CWC	Cottonwood Cre	78.30	45	P		P	22 45 42.2 +0.8
	baz=237						
SLBS	Sierra La Lagu	78.30	60	eP		P	22 45 43.7 +2.1
	comp=Z,76nm,1.9s						
TPRI	Tanjung Pinang	78.31	275	P		P	22 45 42.4 +0.6
	comp=Z,127nm,1.1s,comp=Z,20µm						
YBH	Yreka Blue Hor	78.35	39	P		P	22 45 42.5 +1.0
	comp=Z,3.6nm,0.8s,baz=114,slow=5.6,SNR=10						
YBH	Yreka Blue Hor	78.35	39	eP		P	22 45 43.1 +1.6
	comp=Z,11nm,1.3s						
YBH	Yreka Blue Hor	78.35	39	eP		P	22 45 43.1 +1.6
YBH				pmax		pmax	
	comp=Z,11nm,1.3s						
KDAK	Kodiak Island	78.37	14	P		P	22 45 41.1 +0.1
	comp=Z,31nm,1.1s,baz=202,slow=4.0,SNR=20						
KDAK				pP		pP	22 47 36.3 -0.2
	comp=Z,8.3nm,1.1s,baz=201,slow=5.9,SNR=3.9						
KDAK	Kodiak Island	78.37	14	eP		P	22 45 41.5 +0.5
	comp=Z,55nm,1.2s						
KDAK				pP		pP	22 47 36.3 -0.2
KDAK	Kodiak Island	78.37	14	ceP		P	22 45 41.3 +0.2
MDJ	Mudanjiang	78.41	325	P		P	22 45 39.8 -1.8
MDJ				pmax		pmax	
	comp=Z,100nm,1.0s						
MDJ				pmax		pmax	
	comp=Z,450nm,6.3s						
MDJ	Mudanjiang	78.41	325	eP		P	22 45 42.5 +0.8
	comp=Z,70nm,1.0s						
BELC	Belle Mt

baz=241
TPNV **Topopah Spring** 79.82 46 P P 22 45 50.5 +1.0
baz=238
MOD **Modoc Plateau** 79.91 40 eP P 22 45 50.8 +0.9
comp=Z,6.4nm,0.8s
K05A **Summer Lake** 80.03 39 eP P 22 45 51.8 +1.2
comp=Z,10nm,0.8s
J05D **Fort Rock, OR** 80.15 38 P P 22 45 52.3 +1.2
baz=234
CNPM **China Poot** 80.25 13 eP P 22 45 51.1 +0.1
comp=Z,35nm,1.0s
CN2 **Changchun** 80.25 322 eP P 22 45 51.5 +0.1
CN2 pmax pmax
comp=Z,60nm,1.2s
KRJI **Kerinci** 80.29 271 P P 22 45 51.2 -1.3
comp=Z,108nm,1.2s
KLR **Kul'dur** 80.31 329 P P 22 45 52.4 +0.8
comp=Z,1.3nm,1.1s,baz=101,slow=4.4,SNR=25
KLR **Kul'dur** 80.31 329 d iP P 22 45 51.7 +0.1
SHPR **Sheep Range** 80.34 47 eP P 22 45 54.0 +1.7
SHPR epP pP 22 47 49.2 +0.8
BRLK **Bradley Lake** 80.54 14 eP P 22 45 52.6 0.0
comp=Z,36nm,0.9s
BRLK epP pP 22 47 50.6 +1.7
Y14A **Wickenburg** 80.59 50 eP P 22 45 55.0 +1.5
comp=Z,6.5nm,1.0s
PINE **Pine Mountain** 80.62 38 eP P 22 45 55.2 +1.6
comp=Z,12nm,0.9s
RSO **Redoubt South** 80.77 12 eP P 22 45 53.5 -0.5
SVW2 **Sparrevohn** 80.82 11 eP P 22 45 53.8 -0.2
comp=Z,14nm,1.0s
WHN **Wuhan** 80.89 306 ⇑P P 22 45 56.3 +1.3
WHN pmax pmax
comp=Z,200nm,1.2s
R11A **Troy Canyon, C** 80.99 45 P P 22 45 56.1 +0.5
baz=239
R11A **Troy Canyon, C** 80.99 45 eP P 22 45 56.6 +1.0
R11A epP pP 22 47 53.2 +1.2
BMN **Battle Mountai** 81.02 42 eP P 22 45 56.9 +1.2
comp=Z,9.5nm,1.0s
NLWA **Neilton Lookou** 81.17 34 eP P 22 45 57.5 +1.4
comp=Z,6.7nm,0.8s
WVOR **Wild Horse Val** 81.23 40 eP P 22 45 58.0 +1.3
comp=Z,9.9nm,0.9s
WVOR **Wild Horse Val** 81.23 40 eP P 22 45 58.0 +1.3
WVOR pmax pmax
comp=Z,10.0nm,0.9s
MA2 **Magadan** 81.32 345 P P 22 45 55.9 -0.7
comp=Z,26nm,0.9s,baz=138,slow=8.4,SNR=6.3
MA2 **Magadan** 81.32 345 ⇑eP P 22 45 55.5 -1.1
MA2 pmax pmax
comp=Z,43nm,1.0s
BKNI **Bangkinang** 81.44 273 P P 22 45 59.3 +1.1
comp=Z,341nm,1.3s,comp=Z,4μm
BKNI **Bangkinang** 81.44 273 eP P 22 45 58.9 +0.7
comp=Z,337nm,1.1s
TUC **Tucson** 81.47 52 P P 22 45 59.8 +1.7
baz=243
TUC **Tucson** 81.47 52 eP P 22 45 60.0 +1.9
comp=Z,20nm,1.1s
TUC epP pP 22 47 58.7 +4.0
TUC **Tucson** 81.47 52 eP P 22 46 00.0 +1.9
TUC e*PP pP 22 47 58.7 +4.0
TUC pmax pmax
comp=Z,20nm,1.1s
TIA **Tai'an** 81.52 312 P P 22 45 58.3 +0.2
TIA pmax pmax
comp=Z,16nm,1.0s
PDSI **Padang** 81.60 272 P P 22 45 58.1 -1.0
comp=Z,78nm,1.2s,comp=Z,32μm
I07A **Izee** 81.64 38 eP P 22 46 00.6 +1.8
comp=Z,6.9nm,0.9s
J08A **Circle Bar Ran** 81.84 39 eP P 22 46 00.4 +0.6
comp=Z,7.5nm,0.8s
LCMT **Little Creek M** 81.92 47 eP P 22 46 01.9 +1.5
comp=Z,8.2nm,0.9s
X16A **Lo Mia Camp, P** 81.96 50 eP P 22 46 02.6 +1.9
comp=Z,12nm,1.0s
RC01 **Rabbit Creek A** 81.98 13 eP P 22 45 59.8 -0.1
comp=Z,34nm,1.1s
RC01 epP pP 22 47 59.8 +3.0
SUA **Susitna One** 82.10 13 eP P 22 46 00.3 -0.4
comp=Z,26nm,0.8s
CCUT **Cedar City** 82.10 47 eP P 22 46 03.1 +1.8
comp=Z,9.4nm,0.9s
319A **Douglas** 82.19 54 eP P 22 46 03.9 +2.0
comp=Z,26nm,1.0s
KNB **Kanab** 82.22 47 eP P 22 46 03.6 +1.7
comp=Z,9.4nm,0.9s
PSUT **Pine Spring** 82.26 45 eP P 22 46 03.4 +1.3
comp=Z,5.5nm,0.8s
U15A **North Rim** 82.31 48 eP P 22 46 04.4 +1.9
comp=Z,17nm,0.8s
SKT **Skwentna** 82.41 12 eP P 22 46 00.9 -1.2
comp=Z,17nm,1.1s
WUAZ **Wupatki** 82.53 49 P P 22 46 04.7 +1.2
baz=242
WUAZ **Wupatki** 82.53 49 eP P 22 46 05.2 +1.7
comp=Z,11nm,1.0s
PMR **Palmer** 82.57 13 eP P 22 46 02.6 -0.2
comp=Z,27nm,1.1s
PMR **Palmer** 82.57 13 eP P 22 46 02.6 -0.2
PMR pmax pmax
comp=Z,27nm,1.1s
RAGM **Ragged Mountai** 82.60 16 eP P 22 46 03.3 +0.2
comp=Z,33nm,1.1s
A04D **Lummi Island** 82.60 33 P P 22 46 04.8 +1.5
baz=232
B05A **Bryant** 82.64 34 P P 22 46 04.6 +1.1
baz=233
G08A **Pilot Rock** 82.64 38 eP P 22 46 04.9 +1.1
G08A epP pP 22 48 01.6 +0.8
IPM **Ipoh** 82.75 277 eP P 22 46 04.6 -0.3
comp=Z,190nm,1.0s
GHO **Glory Hole Cre** 82.77 13 eP P 22 46 03.5 -0.5
LTY **Liberty** 82.81 35 eP P 22 46 05.5 +0.9
comp=Z,5.8nm,0.9s
HAWA **Hanford** 82.94 37 eP P 22 46 06.8 +1.7
comp=Z,10nm,0.9s
DIV **Divide** 82.95 15 eP P 22 46 04.8 -0.1
comp=Z,34nm,1.0s
MNSI **Mandailing Nat** 82.97 273 P P 22 46 04.8 -1.2
comp=Z,79nm,1.1s,comp=Z,1μm
PPLA **Purkeypile** 83.11 12 eP P 22 46 03.7 -2.0
comp=Z,21nm,1.2s
BMRM **Bremner River** 83.11 16 eP P 22 46 05.8 +0.2
comp=Z,44nm,1.1s
BMRM epP pP 22 48 06.0 +3.1
MTPU **Mount Pierson** 83.16 47 eP P 22 46 09.0 +2.2
comp=Z,10nm,0.9s
MTPU epP pP 22 48 08.2 +4.1
SCM **Sheep Creek Mo** 83.19 14 eP P 22 46 05.9 -0.2
comp=Z,41nm,0.8s
SCM **Sheep Creek Mo** 83.19 14 eP P 22 46 05.9 -0.2
SCM pmax pmax
comp=Z,41nm,0.8s
KLU **Klutina** 83.23 15 eP P 22 46 06.3 +0.1
comp=Z,18nm,1.1s
KULM **Kulim** 83.36 278 eP P 22 46 08.6 +0.6
comp=Z,119nm,1.2s
BMO **Blue Mountains** 83.37 39 eP P 22 46 08.2 +0.8
BMO epP pP 22 48 05.2 +0.5
BMO **Blue Mountains** 83.37 39 eP P 22 46 08.2 +0.8
BMO e*PP pP 22 48 05.2 +0.5
MSU **Marysvale** 83.39 46 eP P 22 46 09.9 +2.1
TGL **Tana Glacier** 83.40 17 eP P 22 46 07.5 +0.4
comp=Z,44nm,1.1s
WRAK **Wrangell Islan** 83.42 24 eP P 22 46 08.3 +1.1
comp=Z,19nm,1.1s
MFID **Camas Ranch** 83.49 40 eP P 22 46 09.2 +1.1
comp=Z,5.7nm,0.9s
CAST **Castle Rocks** 83.61 11 eP P 22 46 06.3 -1.8
comp=Z,44nm,1.0s
D08A **Wollman Farm,** 83.67 36 eP P 22 46 09.8 +1.1
comp=Z,8.5nm,0.9s
D08A epP pP 22 48 07.0 +0.9
121A **Cookes Peak, D** 83.84 53 P P 22 46 11.8 +1.7
baz=244
SEY **Seymchan** 83.89 347 P P 22 46 09.0 -0.4
comp=Z,56nm,1.0s,baz=148,slow=5.6,SNR=72
MAW **Mawson** 83.93 200 P P 22 46 10.5 +0.8
comp=Z,41nm,0.8s,baz=125,slow=6.3,SNR=52
TRF **Thorofare Moun** 83.98 12 eP P 22 46 09.0 -1.1
comp=Z,41nm,0.8s
F10A **Beach Ranch, E** 84.03 38 eP P 22 46 11.3 +0.6
comp=Z,10.0nm,0.9s
BJT **Baijiatuau** 84.04 315 eP P 22 46 10.4 -0.3
comp=Z,178nm,1.5s
BJT **Baijiatuau** 84.04 315 eP P 22 46 10.4 -0.3
BJT pmax pmax
comp=Z,178nm,1.5s
BJI **Beijing** 84.04 315 ⇓iP P 22 46 11.3 +0.6
BJI pmax pmax
comp=Z,110nm,1.2s
JIS **Juneau Island** 84.05 22 eP P 22 46 11.2 +0.9
comp=Z,12nm,0.5s
BESE **Bessie Mountai** 84.12 21 eP P 22 46 12.4 +1.6
comp=Z,24nm,1.1s
ZAIG **Zacatecas** 84.14 64 eP P 22 46 13.6 +1.6
comp=Z,19nm,1.2s
B08A **Colville Reser** 84.19 35 eP P 22 46 11.8 +0.5
comp=Z,7.1nm,0.8s
B08A epP pP 22 48 09.6 +0.7
SKNT **Sakolnakorn** 84.19 290 P P 22 46 11.2 -0.7
comp=Z,84nm,1.1s,comp=Z,999nm
HARP **HAARP** 84.20 15 eP P 22 46 11.4 +0.3
comp=Z,36nm,0.9s
PSI **Prapat** 84.21 275 P P 22 46 11.9 -0.3
comp=Z,144nm,0.9s,baz=158,slow=0.0,SNR=94
PSI **Prapat** 84.21 275 P P 22 46 11.9 -0.3
comp=Z,194nm,1.0s
PSI **Prapat** 84.21 275 P P 22 46 12.0 -0.3
PSI pmax pmax
comp=Z,144nm,1.0s
DHY **Denali Highway** 84.27 14 eP P 22 46 11.3 -0.1
comp=Z,42nm,1.4s
TMUT **Trail Mountain** 84.43 46 eP P 22 46 14.8 +1.8
comp=Z,21nm,1.4s
BPAW **Bear Paw Mtn.** 84.43 12 eP P 22 46 10.8 -1.3
comp=Z,26nm,1.6s
HLID **Hailey** 84.45 41 P P 22 46 13.9 +1.0
baz=239
HLID **Hailey** 84.45 41 eP P 22 46 13.8 +1.0
comp=Z,4.8nm,0.9s
HLID epP pP 22 48 09.9 -0.6
MCK **McKinley** 84.51 13 eP P 22 46 12.0 -0.5
comp=Z,45nm,1.0s
MCK **McKinley** 84.51 13 eP P 22 46 12.0 -0.5
MCK pmax pmax
comp=Z,45nm,1.0s
ENH **Enshi** 84.56 304 eP P 22 46 14.3 +0.7
comp=Z,266nm,1.0s
SPUT **South Promonto** 84.57 44 eP P 22 46 15.1 +1.6
SPUT epP pP 22 48 13.4 +2.2
HVU **Hansel Valley** 84.59 43 eP P 22 46 15.0 +1.4
HVU epP pP 22 48 13.4 +2.1
HVU **Hansel Valley** 84.59 43 eP P 22 46 15.0 +1.4
HVU e*PP pP 22 48 13.4 +2.1
BWN **Browne** 84.79 12 eP P 22 46 13.5 -0.3
comp=Z,81nm,1.2s
SRU **San Rafael Swe** 84.81 46 eP P 22 46 15.9 +1.1
SRU epP pP 22 48 14.8 +2.3
SRU **San Rafael Swe** 84.81 46 eP P 22 46 15.9 +1.1
SRU e*PP pP 22 48 14.9 +2.3
SRAK **Srakaew** 84.92 286 P P 22 46 14.0 -1.6
comp=Z,216nm,1.3s,comp=Z,2μm
GSI **Gunungsitoli** 85.03 273 P P 22 46 17.1 +0.9
comp=Z,321nm,1.2s
GSI **Gunungsitoli** 85.03 273 eP P 22 46 17.1 +0.9
comp=Z,296nm,1.0s
TRTT **Trang** 85.08 280 P P 22 46 16.8 +0.4
comp=Z,95nm,1.2s,comp=Z,1μm
TCUT **Toone Canyon** 85.17 44 eP P 22 46 18.2 +1.7
TCUT epP pP 22 48 16.9 +2.4
NONG **Nongkai** 85.31 291 P P 22 46 18.0 +0.6
comp=Z,91nm,1.4s,comp=Z,7μm
MLY **Manley** 85.32 11 eP P 22 46 15.6 -0.8
comp=Z,28nm,1.3s
MLY epP pP 22 48 15.2 +0.8
MNTX **Cornudas Mount** 85.34 55 P P 22 46 18.4 +1.2
baz=246
MNTX **Cornudas Mount** 85.34 55 eP P 22 46 19.0 +1.7
comp=Z,6.5nm,0.9s
MNTX epP pP 22 48 18.1 +2.9
GYA **Guiyang** 85.34 300 ⇓iP P 22 46 18.0 +0.5
GYA pP pP 22 48 18.3 +2.8
GYA sP sP 22 49 12.0 +1.5
GYA PP PP 22 49 48.4 +2.6
GYA SKS SKSac 22 55 49.6 -1.6
GYA S S 22 56 03.3 -0.2
GYA sS sS 22 59 33.3 -0.5
GYA pmax pmax
comp=Z,80nm,1.1s
GYA pmax pmax
comp=Z,130nm,6.2s
WRH **Wood River Hil** 85.34 13 eP P 22 46 15.4 -1.0
comp=Z,63nm,1.2s
WRH epP pP 22 48 15.6 +1.1
ZEA **Zeya** 85.38 331 eP P 22 46 17.2 +0.3
ZEA pmax pmax
comp=N,59nm,1.0s
ZEA pmax pmax
comp=Z,110nm,1.2s
RIDG **Independ'e Rid** 85.42 14 eP P 22 46 16.4 -0.6
comp=Z,32nm,1.0s
RIDG epP pP 22 48 18.8 +3.8
KCSI **Kotacane, Aceh** 85.53 275 P P 22 46 18.2 -0.4
comp=Z,104nm,1.3s,comp=Z,1μm
CCB **Clear Creek Bu** 85.55 13 eP P 22 46 16.3 -1.2
comp=Z,34nm,1.0s
CCB epP pP 22 48 16.6 +1.0
CHAI **Chaiyaphum** 85.61 288 P P 22 46 19.2 +0.3
comp=Z,16nm,1.0s,comp=Z,152nm
DLBC **Dease Lake** 85.74 23 eP P 22 46 19.8 +1.2
comp=Z,12nm,1.1s
TX31 **Lajitas Ar. Si** 85.74 57 eP P 22 46 21.1 +1.7
TX31 epP pP 22 48 18.2 +0.7
TXAR **Lajitas Array** 85.74 57 P P 22 46 21.3 +1.9
comp=Z,11nm,0.9s,baz=224,slow=5.2,SNR=68
TXAR pP pP 22 48 16.1 -1.5
comp=Z,1.8nm,1.1s,baz=246,slow=6.8,SNR=2.5
TXAR PKPPKP P'P'df 23 12 29.1 +5.1
comp=Z,0.8nm,0.9s,baz=172,slow=2.6,SNR=4.1
SCRK **Sand Creek** 85.82 14 eP P 22 46 19.0 0.0
comp=Z,17nm,1.2s
ILAR **Eielson Array** 85.86 13 P P 22 46 17.7 -1.2
comp=Z,19nm,1.1s,baz=227,slow=5.4,SNR=88
ILAR pP pP 22 48 15.3 -1.9
comp=Z,3.3nm,1.0s,baz=208,slow=5.1,SNR=5.6
ILAR PKKP PKKPbc 23 04 16.1 -3.3
comp=Z,0.6nm,0.7s,baz=355,slow=2.6,SNR=5.9
ILAR PKPPKP P'P'df 23 12 16.6 -4.3
comp=Z,0.7nm,1.0s,baz=277,slow=0.7,SNR=6.5
ILB **Eielson Array** 85.86 13 eP P 22 46 18.4 -0.6
ILB epP pP 22 48 18.1 +1.0
IL1 **Eielson Array** 85.86 13 eP P 22 46 16.3 -2.6
IL1 epP pP 22 48 17.7 +0.5
TASM **ASL Pad, Albuq** 85.87 51 P P 22 46 20.5 +0.6
baz=245
ANMO **Albuquerque** 85.87 51 P P 22 46 21.4 +1.4
comp=Z,4.6nm,1.0s,baz=144,slow=8.7,SNR=8.2
ANMO **Albuquerque** 85.87 51 P P 22 46 20.6 +0.6
baz=245
ANMO **Albuquerque** 85.87 51 eP P 22 46 21.0 +1.1
comp=Z,18nm,1.4s
ANMO **Albuquerque** 85.87 51 ceP P 22 46 21.1 +1.1
ANMO pmax pmax
comp=Z,6.0nm,1.0s
TASL **Snake Pit, Alb** 85.87 51 P P 22 46 20.5 +0.6
baz=245
TPTI 86.01 275 P P 22 46 20.8 -0.1
comp=Z,118nm,1.2s,comp=Z,1μm
MCMT **McKenzie Canyo** 86.06 40 eP P 22 46 22.0 +1.3
MCMT epP pP 22 48 19.9 +0.9
PKDT **Phuket** 86.37 279 P P 22 46 23.3 +0.8
comp=Z,39nm,1.4s
DLMT **Dillon** 86.48 40 eP P 22 46 23.8 +1.2
DLMT epP pP 22 48 22.6 +1.6
BILL **Bilibino** 86.51 354 eP P 22 46 21.4 -0.6
comp=Z,43nm,1.3s
BILL **Bilibino** 86.51 354 d iP P 22 46 21.2 -0.7
BILL i *PP pP 22 48 22.8 +2.4
BILL pmax pmax
comp=Z,36nm,1.2s
XAN **Xi'an** 86.54 307 P P 22 46 22.9 -0.1
XAN pmax pmax
comp=Z,98nm,0.6s
XAN pmax pmax
comp=Z,570nm,4.7s
SNSI **Sinabang, Aceh** 86.56 274 P P 22 46 22.9 -0.5
comp=Z,254nm,1.3s
REDW **Red Top Meadow** 86.60 42 eP P 22 46 24.9 +1.6
REDW epP pP 22 48 23.7 +2.0
FXWY **Fox Creek** 86.62 42 eP P 22 46 25.1 +1.7
FXWY epP pP 22 48 22.8 +1.0
PHET **Kaeng Krachan** 86.77 285 P P 22 46 26.2 +1.8
comp=Z,74nm,0.9s,comp=Z,634nm
S22A **4UR Ranch, Cre** 86.79 49 P P 22 46 25.2 +0.8
baz=244
S22A **4UR Ranch, Cre** 86.79 49 eP P 22 46 25.8 +1.3
S22A epP pP 22 48 26.0 +3.0
LRM **Limekiln Ridge** 86.80 40 eP P 22 46 25.4 +1.2
IMW **Indian Meadow** 86.80 42 eP P 22 46 25.7 +1.4
comp=Z,7.4nm,0.9s
IMW epP pP 22 48 24.4 +1.5
LHMI **Lhok Sumawe** 86.84 276 P P 22 46 26.0 +1.3
comp=Z,264nm,1.2s
LHMI **Lhok Sumawe** 86.84 276 eP P 22 46 26.1 +1.3
comp=Z,281nm,1.1s
O20A **White River Ci** 86.85 46 epP pP 22 48 27.4 +4.3
MOOW **Moose Ponds** 86.85 42 epP pP 22 48 25.0 +2.0
LOHW **Long Hollow** 86.88 42 epP pP 22 48 26.6 +3.5
QLMT **Earthquake Lak** 86.94 41 eP P 22 46 27.1 +2.3
QLMT epP pP 22 48 25.7 +2.3
DAWY **Dawson** 87.04 16 eP P 22 46 25.0 +0.4
comp=Z,17nm,1.1s
DAWY epP pP 22 48 23.7 +0.4
DAWY e 22 48 23.8
MLSI **Meulaboh, Aceh** 87.06 275 P P 22 46 26.0 +0.2
comp=Z,512nm,1.2s,comp=Z,5μm
YPP **Pitchstone Pla** 87.06 42 epP pP 22 48 27.6 +3.4
BW06 **Boulder Array** 87.16 43 P P 22 46 26.3 +0.4
baz=242
BW06 **Boulder Array** 87.16 43 eP P 22 46 26.5 +0.6
comp=Z,4.4nm,0.9s
BW06 epP pP 22 48 26.2 +1.6
PD31 **Pinedale Array** 87.16 43 eP P 22 46 26.5 +0.6
PDAR **Pinedale Array** 87.16 43 P P 22 46 26.4 +0.6
comp=Z,2.6nm,0.7s,baz=205,slow=3.1,SNR=23
PDAR pP pP 22 48 23.2 -1.4
comp=Z,1.1nm,0.9s,baz=0.0,slow=1.2,SNR=4.5
PDAR PP PP 22 49 57.0 -3.1
comp=Z,1.0nm,0.9s,baz=242,slow=6.2,SNR=4.7
PDAR PKKP PKKPbc 23 04 14.0 -1.5
comp=Z,2.3nm,0.9s,baz=90,slow=3.6,SNR=10
PDAR PKPPKP P'P'df 23 12 16.9 -3.7
comp=Z,0.2nm,0.4s,baz=114,slow=3.6,SNR=3.9
EGAK **Eagle** 87.17 15 eP P 22 46 25.0 -0.1
comp=Z,22nm,1.1s
EGAK epP pP 22 48 24.1 +0.3
BOZ **Bozeman (W)** 87.19 40 P P 22 46 26.7 +0.8
baz=241
BOZ **Bozeman (W)** 87.19 40 eP P 22 46 27.1 +1.2
BOZ epP pP 22 48 25.6 +1.0
BOZ **Bozeman (W)** 87.19 40 eP P 22 46 27.1 +1.2
BOZ e*PP pP 22 48 25.6 +1.0
COLD **Coldfoot** 87.39 10 eP P 22 46 26.6 +0.5
comp=Z,14nm,0.9s
COLD epP pP 22 48 27.1 +2.2
PHIT **Phitsanulok** 87.46 289 P P 22 46 29.0 +1.4
comp=Z,46nm,1.0s
UTTA **Uttaradit** 87.52 289 P P 22 46 29.0 +1.2
comp=Z,13nm,1.1s,comp=Z,127nm
HHC **Hu-ho-hao-te** 87.53 314 eP P 22 46 28.5 +0.9
HHC pP pP 22 48 25.3 -1.1
HHC sP sP 22 49 19.8 -1.4
HHC S S 22 56 25.3 +1.7
HHC sS sS 22 59 53.8 -1.5
HHC pmax pmax
comp=Z,54nm,1.2s
HHC pmax pmax
comp=Z,380nm,7.7s
LNIG **Linares** 87.56 63 eP P 22 46 28.2 +0.3
comp=Z,24nm,1.0s
WALA **Waterton Lakes** 87.58 36 eP P 22 46 28.7 +1.1
WALA epP pP 22 48 27.5 +1.1
SRDT **SRDT** 87.71 286 P P 22 46 29.8 +1.0
comp=Z,109nm,1.2s
SDCO **Great Sand Dun** 87.75 49 P P 22 46 29.1 +0.3
baz=245
SDCO **Great Sand Dun** 87.75 49 eP P 22 46 29.6 +0.8
SDCO epP pP 22 48 31.7 +4.0
NANT **Nan** 87.75 290 P P 22 46 29.5 +0.6
comp=Z,11nm,1.2s
KMI **Kunming** 88.14 297 P P 22 46 31.8 +0.9
KMI pmax pmax
comp=Z,85nm,1.3s
KMI pmax pmax
comp=Z,350nm,4.4s
MSTX **Muleshoe** 88.25 54 P P 22 46 31.4 +0.3
baz=247
SUKH **Sukhothai** 88.27 289 P P 22 46 32.6 +1.3
comp=Z,18nm,1.3s,comp=Z,178nm
RLMT **Red Lodge** 88.43 41 eP P 22 46 33.2 +1.4
RLMT epP pP 22 48 32.8 +1.9
RLMT e 22 48 33.2
BSI **Banda Aceh** 88.48 276 P P 22 46 33.2 +0.7
comp=Z,158nm,1.2s
N23A **Red Feather La** 88.75 46 eP P 22 46 34.8 +1.3
comp=Z,8.7nm,1.2s
TOLK **Toolik Lake Re** 88.77 10 P P 22 46 32.7 +0.1
baz=207
TOLK **Toolik Lake Re** 88.77 10 eP P 22 46 32.9 +0.3
comp=Z,17nm,1.1s
CM01 **Chiang Mai Arr** 89.18 290 eP P 22 46 36.0 +0.5
SYO **Syowa Base** 89.19 193 ⇑iP P 22 46 33.2 -1.4
CM31 **Chiang Mai Arr** 89.20 290 eP P 22 46 37.4 +1.7
CMAR **Chiang Mai Arr** 89.20 290 P P 22 46 37.5 +1.8
comp=Z,53nm,0.9s,baz=108,slow=2.9,SNR=155
JCT **Junction City** 89.28 58 P P 22 46 36.4 +0.5
baz=249
CHTO **Chiang Mai** 89.32 290 P P 22 46 37.1 +0.9
comp=Z,377nm,1.4s,comp=Z,4μm
CHTO **Chiang Mai** 89.32 290 eP P 22 46 36.6 +0.4
comp=Z,69nm,0.9s
CHTO **Chiang Mai** 89.32 290 eP P 22 46 36.6 +0.4
CHTO pmax pmax
comp=Z,69nm,0.9s
CD2 **Chengdu** 89.36 303 P P 22 46 36.8 +0.5
CD2 pP pP 22 48 36.3 +0.8
CD2 sP sP 22 49 31.6 +1.4
CD2 PP PP 22 50 17.5 +0.1
CD2 SKS SKSac 22 56 14.0 -0.9
CD2 S S 22 56 40.8 +0.1
CD2 sS sS 23 00 15.3 +1.8
CD2 SS SS 23 02 53.6 +0.9
CD2 pmax pmax
comp=Z,50nm,1.2s
CD2 pmax pmax
comp=Z,290nm,5.5s
AMTX **Amarillo** 89.44 53 P P 22 46 36.8 +0.2
baz=248
CMAI **Chiengmai2** 89.59 291 P P 22 46 38.6 +0.9
comp=Z,528nm,1.2s
YAK **Yakutsk** 89.74 338 eP P 22 46 35.3 -1.8
YAK eS SKSac 22 56 16.4 +1.0
YAK e 22 56 38.1
YAK pmax pmax
comp=Z,10.0nm,0.9s
YAK pmax pmax
comp=E,4.0nm,0.6s
YAK pmax pmax
comp=N,2.0nm,0.6s
YAK pmax pmax
comp=Z,17nm,1.0s
YAK pmax pmax
comp=N,3.0nm,0.9s
YAK pmax pmax
comp=E,16nm,1.3s
YAK smax smax
comp=N,18nm,1.5s
YAK smax smax
comp=E,9.0nm,1.2s
ABTX **Abilene, Hawle** 90.18 56 P P 22 46 40.6 +0.6
baz=249
ABTX **Abilene, Hawle** 90.18 56 eP P 22 46 41.0 +1.1
comp=E,25nm,1.1s
SNAA **Sanae** 90.55 178 P P 22 46 41.3 +0.3
comp=E,34nm,1.0s,baz=188,slow=9.5,SNR=36
VNA3 **Neumayer Olymp** 90.68 176 P P 22 46 42.5 +0.9
LAO **LASA Array** 91.03 41 P P 22 46 44.9 +1.2
baz=245
LAO **LASA Array** 91.03 41 eP P 22 46 44.6 +1.0
comp=E,8.2nm,0.8s
PLCA **Paso Flores** 91.07 134 P P 22 46 45.9 +1.8
comp=E,14nm,1.0s,baz=257,slow=7.2,SNR=11
VNA2 **Neumayer--Watz** 91.12 177 P P 22 46 44.6 +1.0
baz=174,slow=3.5

LZH	Lanzhou	91.17	308	eP	P	22 46 45.9	+1.2
LZH				pP	pP	22 48 46.9	+2.7
LZH				sP	sP	22 49 37.3	-1.4
LZH				PP	PP	22 50 31.1	-0.5
LZH				SKS	SKSac	22 56 25.9	+0.8
LZH				eS	S	22 56 55.1	-1.8
LZH				sS	sS	23 00 25.5	-5.4
LZH				pmax	pmax		
	comp=E,130nm,1.1s						
LZH				pmax	pmax		
	comp=E,370nm,4.6s						
NVL	N'lazarevskaya	91.25	183⇑	iP	P	22 46 43.3	-0.8
NVL				e*PP	pP	22 48 41.5	-2.1
NVL				eS	SKSac	22 56 21.6	-2.5
NVL				eSS	SS	23 03 15.3	-0.7
NVL				pmax	pmax		
	comp=Z,58nm,0.9s						
VNA1	Neumayer--Stat	91.34	177	P	P	22 46 45.9	+1.4
RSSD	Black Hills	91.37	44	P	P	22 46 45.6	+0.2
	baz=246						
RSSD	Black Hills	91.37	44	eP	P	22 46 46.0	+0.6
	comp=Z,10nm,1.3s						
RSSD	Black Hills	91.37	44	eP	P	22 46 46.0	+0.6
RSSD				pmax	pmax		
	comp=Z,10.0nm,1.3s						
INK	Inuvik	91.84	15	P	P	22 46 46.4	-0.4
	comp=Z,16nm,1.0s,baz=223,slow=5.0,SNR=20						
ULN	Ulaanbaatar	93.40	319	eP	P	22 46 53.8	-0.8
	comp=Z,28nm,1.1s						
ULN	Ulaanbaatar	93.40	319	ceP	P	22 46 54.1	-0.5
ULN				pmax	pmax		
	comp=Z,26nm,1.2s						
SONA1	Songino Array	93.79	319	eP	P	22 46 55.8	-0.6
SONM	Songino Array	93.80	319	P	P	22 46 56.0	-0.4
	comp=Z,6.9nm,1.1s,baz=131,slow=4.0,SNR=19						
SONM	Songino Array	93.80	319	P	P	22 46 56.0	-0.4
SONM				pmax	pmax		
	comp=Z,7.0nm,1.1s						
YKA	Yellowknife Ar	94.23	25	P	P	22 46 57.8	+0.1
	comp=Z,3.6nm,0.8s,baz=242,slow=4.4,SNR=15						
YKA				PKKP	PKKPdf	23 03 55.7	-1.4
	comp=Z,0.9nm,0.7s,baz=37,slow=2.2,SNR=4.6						
GTA	Gaotai	95.31	310	⇑P	P	22 47 04.1	+0.7
GTA				pP	pP	22 49 04.9	+1.6
GTA				sP	sP	22 49 58.0	+0.2
GTA				S	S	22 57 31.8	-0.9
GTA				sS	sS	23 01 06.9	-1.6
GTA				pmax	pmax		
	comp=Z,13nm,1.2s						
GTA				pmax	pmax		
	comp=Z,74nm,4.9s						
TIXI	Tiksi	96.28	345	ceP	P	22 47 05.9	-0.9
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ZAK	Zakamensk	96.63	321	eP	P	22 47 07.5	-1.5
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.5s						
TLY	Talaya	96.86	322⇑	eP	P	22 47 09.6	-0.3
TLY				pmax	pmax		
	comp=Z,40nm,1.2s						
SHL	Shillong	97.60	294	eP	Pdif	22 47 14.0	-0.1
SHL	Shillong	97.60	294	eP	P	22 47 14.7	+0.6
	comp=Z,36nm,1.4s						
SHL	Shillong	97.60	294	eP	P	22 47 14.7	+0.6
SHL				pmax	pmax		
	comp=Z,36nm,1.4s						
LPAZ	La Paz	103.08	112	PKKP	PKKPbc	23 03 33.1	+0.1
	comp=Z,1.5nm,0.7s,baz=24,slow=5.1,SNR=7.3						
CPUP	Villa Florida	107.55	126	PKKP	PKKPbc	23 03 33.9	+15
	comp=Z,1.1nm,0.4s,baz=259,slow=5.2,SNR=3.4						
ZALV	Zalesovo Beam	108.47	322	PKiKP	PKiKP	22 52 02.9	-0.9
	comp=Z,3.8nm,0.9s,baz=157,slow=1.1,SNR=13						
ZALV				PP	PP	22 52 35.6	-4.3
	comp=Z,1.3nm,0.7s,baz=90,slow=7.4,SNR=4.1						
MKAR	Makanchi Array	109.40	314	Pdiff	Pdif	22 48 05.8	-0.1
	comp=Z,0.5nm,0.8s,baz=52,slow=5.7,SNR=4.9						
MKAR				PKiKP	PKiKP	22 52 05.1	-0.8
	comp=Z,3.3nm,0.7s,baz=70,slow=1.7,SNR=22						
KURK	Kurchatov	112.07	318	PKiKP	PKiKP	22 52 10.2	-0.5
KURK				PP	PP	22 52 56.5	-9.1
KURK	Kurchatov	112.07	318	iPKIKP	PKiKP	22 52 10.2	-0.5
KURK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KURK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KURBB	Kurchatov Arra	112.13	318	PKiKP	PKiKP	22 52 10.2	-0.7
	comp=Z,7.4nm,0.8s,baz=97,slow=1.9,SNR=52						
KURBB				PP	PP	22 52 56.5	-9.5
	comp=Z,1.1nm,1.0s,baz=84,slow=5.0,SNR=4.7						
KSH	Kashi	113.37	306	PKP	PKiKP	22 52 14.8	+1.0
KSH				PP	PP	22 53 21.8	+6.6
KSH				SKS	SKSdf	22 58 30.8	-3.9
KSH				SKKS	SKKSac	22 59 19.3	-0.9
KSH				AMB	AMB		
	comp=Z,280nm,4.9s						
TKM2	Tokmak 2	113.86	310	P	PKiKP	22 52 14.3	-0.4
	SNR=12						
KBK	Karagaybulak	114.33	309	P	PKPdf	22 52 15.5	-0.1
	SNR=9.0						
CHMS	Chumysh	114.48	310	P	PKPdf	22 52 15.5	-0.2
	SNR=8.3						
FRU	Bishkek	114.58	309	ePKIKP	PKPdf	22 52 15.0	-0.9
FRU				e		22 53 27.5	
UCH	Uchtor	114.63	309	P	PKPdf	22 52 16.9	+0.4
	SNR=11						
AAK	Ala-Archa	114.66	309	ePKPdf	PKPdf	22 52 14.5	-1.7
AAK	Ala-Archa	114.66	309	ePKIKP	PKPdf	22 52 14.5	-1.7
USP	Ospenovka	114.68	310	P	PKPdf	22 52 15.8	-0.2
	SNR=7.9						
AML	Almayashu	115.24	309	P	PKPdf	22 52 17.8	+0.2
	SNR=12						
BVAR	Borovoye Array	117.08	321	PKP	PKPdf	22 52 20.2	-0.1
	comp=Z,9.2nm,0.8s,baz=113,slow=3.2,SNR=60						
BRVK	Borovoye	117.14	321	ePKPdf	PKPdf	22 52 19.6	-0.8
BRVK	Borovoye	117.14	321	ciPKIKP	PKPdf	22 52 19.9	-0.5
BRVK				pmax	pmax		
	comp=Z,19nm,1.0s						
KBL	Kabul	118.59	300	ePKPdf	PKPdf	22 52 24.3	+0.2
KBL	Kabul	118.59	300	ePKIKP	PKPdf	22 52 24.3	+0.2
SVE	Sverdlovsk	121.85	326	ePKIKP	PKPdf	22 52 29.5	+0.2
SVE				pmax	pmax		
	comp=Z,30nm,1.1s						
ABPO	Ambohimpanom	122.30	233	ePKPdf	PKPdf	22 52 32.5	+0.9
ARU	Arti	123.06	326	ePKPdf	PKPdf	22 52 31.1	-0.5
ARU	Arti	123.06	326	iPKIKP	PKPdf	22 52 31.0	-0.7
ARU						22 54 17.5	
ARU						22 58 50.3	
AKTO	Aktyubinsk	125.11	320	PKP	PKPdf	22 52 35.7	-0.1
	comp=Z,13nm,0.9s,baz=27,slow=4.5,SNR=39						
ARCES	ARCESS Array B	126.41	350	PKP	PKPdf	22 52 37.2	-0.5
	comp=Z,7.5nm,0.8s,baz=31,slow=1.1,SNR=11						
PRGR	Permogore	126.71	336	ePKIKP	PKPdf	22 52 37.5	-1.0
PRGR				pmax	pmax		
	comp=Z,15nm,1.1s						
SUR	Sutherland	126.79	200	PKP	PKPdf	22 52 41.0	+1.0
	comp=Z,1.8nm,0.9s,baz=173,slow=4.7						
GEYT	Alibeck	127.33	304	PKP	PKPdf	22 52 40.9	+0.4
	comp=Z,62nm,0.8s,baz=270,slow=1.5,SNR=60						
GEYT				pPKP	pPKPdf	22 54 45.8	-1.9
	comp=Z,8.3nm,1.2s,baz=90,slow=2.1,SNR=6.5						
GYA0B	ALIBECK ARRAY	127.33	304	ePKPdf	PKPdf	22 52 41.0	+0.5
BOSA	Boshof	128.51	206	PKP	PKPdf	22 52 43.8	+0.6
	comp=Z,14nm,0.9s,baz=117,slow=1.0,SNR=14						
BOSA				pPKP	pPKPdf	22 54 51.6	+1.1
	comp=Z,2.7nm,0.9s,baz=225,slow=1.4,SNR=1.8						
BOSA	Boshof	128.51	206	ePKPdf	PKPdf	22 52 44.8	+1.5
BOSA				pPKP	pPKPdf	22 54 51.6	+1.1
SOHO	SOHO	128.93	287	iP	PKPdf	22 52 43.5	-0.3
	SNR=46						
BANOM	Banah	129.24	289	P	PKPdf	22 52 44.3	-0.2
UOSS	Minazif	129.28	288	ePKPdf	PKPdf	22 52 44.6	0.0
UOSS	Minazif	129.28	288	P	PKPdf	22 52 44.6	0.0
UOSS	Minazif	129.28	288	iP	PKPdf	22 52 44.3	-0.2
	SNR=6.5						
HATD	Hatta, Dubai	129.34	288	P	PKPdf	22 52 44.6	-0.1
	SNR=5.4						
HATD	Hatta, Dubai	129.34	288	iP	PKPdf	22 52 44.3	-0.4
	SNR=15						
MSFE	Esma-Masafi	129.34	288	iP	PKPdf	22 52 44.1	-0.6
	SNR=8.7						
KLMR	Klimovskoe	129.52	337	ePKIKP	PKPdf	22 52 41.6	-2.3
KLMR				pmax	pmax		
	comp=Z,38nm,1.4s						
KLMR	Klimovskoe	129.52	337	ePKPdf	PKPdf	22 52 41.7	-2.2
KLMR				AMP		22 52 44.9	
	comp=Z,38nm,1.4s						
KLMR				eSKP		22 55 17.1	
ALNE	Al Ain	129.63	287	iP	PKPdf	22 52 45.1	-0.1
	SNR=17						
NAZ	Nazwa, Dubai	129.77	288	P	PKPdf	22 52 47.0	+1.5
	SNR=7.1						
NAZ	Nazwa, Dubai	129.77	288	iP	PKPdf	22 52 45.7	+0.2
	SNR=12						
ASUD	Al Ashush, Dub	130.06	287	P	PKPdf	22 52 45.4	-0.6
ASUD	Al Ashush, Dub	130.06	287	iP	PKPdf	22 52 46.0	0.0
	SNR=8.5						
AJN	Ajban	130.36	287	P	PKPdf	22 52 47.3	+0.8
LBTB	Lobatse	131.47	209	PKP	PKPdf	22 52 49.3	+0.4
	comp=Z,13nm,1.0s,baz=223,slow=4.6,SNR=5.7						
LBTB	Lobatse	131.47	209	ePKPdf	PKPdf	22 52 49.5	+0.6
MZR	Muzera	131.64	285	iP	PKPdf	22 52 49.7	+0.6
	SNR=13						
FINES	FINESS Array B	133.32	344	PKhKP	PKPpre	22 52 43.3	
	comp=Z,1.8nm,0.5s,baz=58,slow=5.1,SNR=6.3						
FINES				PKP	PKPdf	22 52 51.3	+0.3
	comp=Z,2.0nm,0.6s,baz=57,slow=5.1,SNR=10						
FINES				SKPbc	SKPab	22 55 31.6	+0.1
	comp=Z,2.5nm,0.9s,baz=46,slow=4.0,SNR=3.2						
OBN	Obninsk	134.48	333	iPKIKP	PKPdf	22 52 52.1	-1.3
OBN				i		22 55 33.4	
OBN				i		22 59 13.5	
OBN				pmax	pmax		
	comp=Z,13nm,1.1s						
AKT	Akhty	134.49	311⇓	eP	Pdif	22 49 56.0	-1.7
AKT				e		22 55 35.3	
AKT				pmax	pmax		
	comp=Z,31nm,1.0s						
VSU	Vasula	135.63	342	iPKIKP	PKPdf	22 52 55.6	+0.2
VSR	Storozhevoye	135.63	327	ePKIKP	PKPdf	22 52 54.9	-0.8
VSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NB2	NORSAR Subarra	136.46	353	PKP	PKPpre	22 52 45.7	
	comp=Z,6.6nm,1.0s,baz=21,slow=3.8						
NCK	Nalchik	136.69	315	iPKIKP	PKPdf	22 52 57.5	-0.4
ZEI	Tsey	136.75	314	ePKIKP	PKPdf	22 52 56.0	-2.3
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HFS	Hagfors	137.02	351	PKhKP	PKPpre	22 52 48.3	
	comp=Z,2.1nm,0.8s,baz=52,slow=2.4,SNR=5.2						
HFS				PKP	PKiKP	22 52 59.6	-0.4
	comp=Z,5.5nm,0.8s,baz=123,slow=5.3,SNR=7.8						
GNI	Garni	137.06	310	PKP	PKPdf	22 52 59.0	+0.1
	comp=Z,11nm,0.8s,baz=175,slow=3.6,SNR=7.4						
GNI	Garni	137.06	310	ePKPdf	PKPdf	22 52 59.8	+0.9
GNI	Garni	137.06	310	P	PKPdf	22 52 58.8	-0.1
GNI	Garni	137.06	310	P	PKPdf	22 52 57.8	-1.1
GNI	Garni	137.06	310	iPKIKP	PKPdf	22 52 58.2	-0.7
KBZ	Khabaz	137.06	316	PKhKP	PKPpre	22 52 49.7	
	comp=Z,3.2nm,0.9s,baz=143,slow=4.3,SNR=7.0						
KBZ				PKP	PKiKP	22 53 00.1	-0.5
	comp=Z,6.0nm,0.9s,baz=117,slow=0.9,SNR=4.1						
KBZ				SKP		22 55 43.1	
	comp=Z,3.2nm,0.8s,baz=101,slow=0.7,SNR=5.8						
KBZ	Khabaz	137.06	316	PKHKP	PKPpre	22 52 49.7	
KBZ						22 53 00.1	
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KBZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KBZ				pmax	pmax		
	comp=N,3.0nm,0.8s						
KIV	Kislovodsk	137.11	316	ePKPdf	PKPdf	22 52 59.1	+0.4
KIV	Kislovodsk	137.11	316	P	PKPdf	22 52 59.2	+0.4
KIV	Kislovodsk	137.11	316	P	PKPdf	22 52 58.3	-0.5
KIV	Kislovodsk	137.11	316	iPKIKP	PKPdf	22 52 58.3	-0.5
KIV				e		22 55 47.7	
KIV				e		22 59 14.4	
KIV				pmax	pmax		
	comp=Z,18nm,1.1s						
NEY	Neytrino	137.37	315	iPKIKP	PKPdf	22 52 59.8	+0.4
IZAR	Zarasai	138.00	340	eP	PKPpre	22 52 54.6	
LSZ	Lusaka	138.05	220	PKhKP	PKPpre	22 52 52.4	
	comp=Z,1.7nm,0.2s,baz=147,slow=4.1,SNR=1.7						
LSZ				PKP	PKPdf	22 53 02.1	+0.7
	comp=Z,15nm,0.7s,baz=52,slow=0.3,SNR=7.5						
LSZ				SKPbc	SKiKP	22 55 48.3	-0.1
	comp=Z,1.5nm,0.2s,baz=147,slow=5.9,SNR=3.5						
IDID	Didziasalis	138.19	339	eP	PKPpre	22 52 53.9	
IIGN	Ignalina	138.33	339	eP	PKPpre	22 52 55.3	
NACGM	Naroch	138.50	339	e	PKPpre	22 52 55.0	
TSUM	Tsumeb	140.01	203	PKhKP	PKPpre	22 52 58.8	
	comp=Z,2.9nm,0.7s,baz=203,slow=2.0,SNR=6.0						
TSUM				PKP	PKPdf	22 53 05.3	+0.4
	comp=Z,17nm,1.0s,baz=99,slow=3.2,SNR=7.8						
TSUM				SKPbc	SKiKP	22 55 52.5	+0.2
	comp=Z,5.0nm,1.0s,baz=317,slow=9.7,SNR=3.3						
ANN	Anapa	140.07	320	ePKIKP	PKPdf	22 53 03.9	-0.1
ANN				e		22 59 23.1	
ANN				pmax	pmax		
	comp=Z,26nm,1.3s						
ANN				pmax	pmax		
	comp=Z,40nm,1.2s						
KMBO	Kilima Mbogo	140.41	245	PKP	PKPdf	22 53 13.2	+7.3
	comp=Z,5.7nm,1.0s,baz=37,slow=3.6,SNR=13						
SUW	Suwalki	140.44	340	ePKP	PKPdf	22 53 03.9	-0.4
SUW	Suwalki	140.44	340	ePKPdf	PKPdf	22 53 03.1	-1.3
SUW	Suwalki	140.44	340	ePKIKP	PKPdf	22 53 03.9	-0.4
AKASG	Malin Array Be	140.75	333	PKhKP	PKPpre	22 52 60.0	
	comp=Z,3.6nm,0.7s,baz=38,slow=3.1,SNR=12						
AKASG				SKPbc	SKiKP	22 55 53.7	+1.1
	comp=Z,0.8nm,0.3s,baz=37,slow=3.3,SNR=4.8						
AKASG				SKPab	SKPab	22 56 07.0	+2.3
	comp=Z,2.9nm,0.8s,baz=46,slow=4.1,SNR=4.1						
AKASG	Malin Array Be	140.75	333	PKHKP	PKPpre	22 53 00.0	
AKASG						22 56 07.0	
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.7s						
AKASG				pmax	pmax		
	comp=N,1.0nm,0.4s						
AKASG				pmax	pmax		
	comp=N,3.0nm,0.8s						
KIEV	Kiev	140.76	333	ePKPdf	PKPpre	22 53 01.9	
KIEV	Kiev	140.76	333	P	PKPpre	22 53 01.9	
KIEV	Kiev	140.76	333	iPKIKP	PKPdf	22 53 04.9	-0.1
SIM	Simferopol'	141.98	322	ePHKKP	PKPpre	22 53 04.0	
SIM				pmax	pmax		
	comp=Z,53nm,1.2s						
EKA	Eskdalemuir Ar	142.48	5	PKhKP	PKPpre	22 53 04.7	
	comp=Z,7.6nm,0.9s,baz=22,slow=3.9,SNR=10.0						
GKP	Gorka Klasztor	142.79	345	ePKPdf	PKPdf	22 53 05.8	-2.7
GKP	Gorka Klasztor	142.79	345	ePKHKP	PKPdf	22 53 05.8	-2.7
SORM	Soroca	142.99	330	iP	PKPdf	22 53 06.2	-2.9
SORM	Soroca	142.99	330	⇓PKHKP	PKPdf	22 53 06.2	-2.9
HAVZ	Havza	143.00	316	iP	PKPdf	22 53 08.0	-1.5
BEL	Belsk	143.05	341	ePKPdf	PKPbc	22 53 07.2	0.0
BEL	Belsk	143.05	341	ePKIKP	PKPbc	22 53 07.2	0.0
BOYT	Boyabat	143.37	317	iP	PKPbc	22 53 08.7	+0.1
CUSAR	Sarkisla-SIVAS	143.40	313	iP	PKPdf	22 53 09.7	-0.6
KIS	Kishinev	143.56	329⇓	iP	PKPab	22 53 08.0	-0.8
KIS				XM		22 53 09.0	
	comp=Z,300nm,2.0s						
KIS	Kishinev	143.56	329K	iPKIKP	PKPab	22 53 08.0	-0.8
KIS				pmax	pmax		
	comp=Z,340nm,2.0s						
KIS				pmax	pmax		
	comp=Z,400nm,2.0s						
LVV	L`vov	143.58	336	ePKIKP	PKPbc	22 53 09.3	+0.4
CTAK	Corum_Osmancik	143.82	316	iP	PKPdf	22 53 11.2	+0.1
COAL	Corum-Alaca	143.88	315	iP	PKPdf	22 53 10.8	-0.3
IAS	Iasi	144.03	330	⇑iP	PKPab	22 53 10.6	+0.1
IAS	Iasi	144.03	330	⇑PKIKP	PKPab	22 53 10.6	+0.1
LEOM	Leova	144.21	328	⇑iP	PKPdf	22 53 11.4	+0.2
LEOM	Leova	144.21	328	⇑PKIKP	PKPdf	22 53 11.5	+0.2
LODK	Lodwar	144.22	250	iP	PKPdf	22 53 12.8	+0.5
KWP	Kalwaria Pacla	144.24	337	iPKPdf	PKPbc	22 53 11.0	0.0
KWP	Kalwaria Pacla	144.24	337	⇓iPKIKP	PKPbc	22 53 11.0	0.0
ILGA	Ilgaz	144.33	317	iP	PKPab	22 53 12.9	+0.7
CDAG	Cicekdag	144.59	314	iP	PKPbc	22 53 12.5	0.0
AVNS	Nevsehir-Avano	144.64	313	iP	PKPbc	22 53 12.6	-0.1
VAL	Valentia	144.75	13	⇓iP	PKPab	22 53 18.2	+5.1
OJC	Ojcow	144.76	340	iPKPdf	PKPdf	22 53 12.0	-0.1
OJC	Ojcow	144.76	340	⇓iPKIKP	PKPdf	22 53 12.0	-0.1
TLCR		144.79	326	⇓iP	PKPab	22 53 13.5	0.0
TLCR		144.79	326	⇓PKIKP	PKPab	22 53 13.5	0.0
TESR	Tescani	144.96	330	⇓iP	PKPdf	22 53 11.9	-0.7
BR131	Keskin Array S	145.04	315	P	PKPbc	22 53 14.1	+0.2
BRTR	Keskin Array B	145.04	315	PKP	PKPdf	22 53 12.6	-0.6
	comp=Z,76nm,1.0s,baz=140,slow=3.2,SNR=190						
BRTR				pPKP	pPKPbc	22 55 18.6	-0.6
	comp=Z,3.2nm,0.9s,baz=158,slow=5.9,SNR=4.8						
BRTR				SKPbc	SKiKP	22 56 03.9	+1.9
	comp=Z,3.1nm,0.9s,baz=132,slow=1.5,SNR=3.0						
BRTR				SKKPbc	SKKPbc	23 04 04.5	+1.2
	comp=Z,4.3nm,1.0s,baz=220,slow=3.6,SNR=18						
CFR	Carcaliu	145.15	327⇑	iP	PKPdf	22 53 13.1	+0.2
CFR	Carcaliu	145.15	327	⇑PKIKP	PKPdf	22 53 13.1	+0.2
UZH	Uzhgorod	145.21	336⇑	iPKIKP	PKPbc	22 53 14.0	+0.1
UZH				i		22 53 16.5	
UZH				e*PP	pPKPab	22 55 13.3	-4.4
PETR	Petresti	145.24	328⇑	iP	PKPbc	22 53 14.3	+0.2
KSP	Ksiaz	145.24	344	ePKPdf	PKPab	22 53 14.5	-0.5
KSP	Ksiaz	145.24	344⇓	ePKP2	PKPab	22 53 14.5	-0.5
NIE	Niedzica	145.28	339	iPKPdf	PKPbc	22 53 14.7	+0.5
NIE	Niedzica	145.28	339	⇓iPKP2	PKPbc	22 53 14.7	+0.5
CRVS	Cervenica-Dubn	145.30	337	ePKIKP	PKPbc	22 53 14.0	-0.2
CRVS	Cervenica-Dubn	145.30	337	ePKP	PKPbc	22 53 14.0	-0.2
CRVS				e		22 55 22.0	
VRI	Vrincioaia	145.38	329	⇓iP	PKPdf	22 53 12.3	-1.1
VRI	Vrincioaia	145.38	329	⇓PKIKP	PKPdf	22 53 12.3	-1.1
PLOR	Plostina	145.43	329	⇓iP	PKPbc	22 53 14.7	0.0
PLOR	Plostina	145.43	329	⇓PKIKP	PKPbc	22 53 14.7	0.0
SHEL	Horse Pasture	145.47	167	iP	PKPab	22 53 18.4	+1.5
ASF	Jabal al Asfar	145.48	301	PKPbc	PKPbc	22 53 14.9	-0.5
	comp=Z,57nm,0.9s,baz=353,slow=0.3,SNR=77						
ANTO	Ankara	145.54	316	ePKPdf	PKPdf	22 53 13.8	-0.1
ANTO	Ankara	145.54	316	P	PKPdf	22 53 13.9	0.0
ANTO	Ankara	145.54	316	ePKIKP	PKPdf	22 53 13.8	-0.1
CLL	Collm	145.57	348	ePKPdf	PKPdf	22 53 13.0	-0.5
CLL				⇓iPKPbc	PKPbc	22 53 14.7	-0.2
	comp=Z,98nm,1.0s						
CLL				iPKPab	PKPab	22 53 16.7	+0.4
CLL				e		22 53 20.0	
CLL				e		22 53 32.0	
CLL				ePKPdf	pPKPdf	22 55 22.0	+1.0
CLL	Collm	145.57	348	⇓iPKIKP	PKPbc	22 53 14.7	-0.2
CLL				e		22 55 22.0	
CLL				pmax	pmax		
	comp=Z,98nm,1.0s						
ARCR	ARCALIA	145.59	333⇑	iP	PKPbc	22 53 15.1	0.0
HARR	Harsova	145.59	326	⇓iP	PKPbc	22 53 15.5	+0.4
HARR	Harsova	145.59	326	⇓PKP2	PKPbc	22 53 15.5	+0.4
OKC	Ostrava-Krasne	145.62	341	ePKP	PKPab	22 53 16.0	-0.6
OKC	Ostrava-Krasne	145.62	341	ePKP2	PKPab	22 53 16.0	-0.6
UPC	Upice	145.62	344	ePKP	PKPbc	22 53 15.8	+0.7
UPC				epPKP	pPKPdf	22 55 20.7	-0.5
UPC	Upice	145.62	344	ePKP2	PKPbc	22 53 15.8	+0.7
DPC	Dobruska-Polom	145.68	344	ePKP	PKPab	22 53 16.3	-0.6
DPC				epPKP	pPKPbc	22 55 20.5	0.0
DPC	Dobruska-Polom	145.68	344	ePKP2	PKPab	22 53 16.3	-0.6
BRG	Berggiesshubel	145.78	346	iPKP	PKPdf	22 53 14.4	+0.6
BRG				epPKP	pPKPdf	22 55 22.4	+1.0
	comp=Z,18nm,1.5s						
BRG	Berggiesshubel	145.78	346	iPKIKP	PKPdf	22 53 14.4	+0.6
BRG				pmax	pmax		
	comp=Z,19nm,1.5s						
LANS	Liptovska Anna	145.79	339	ePKP2	PKPab	22 53 16.8	-0.6
LANS	Liptovska Anna	145.79	339	ePKP	PKPab	22 53 16.8	-0.6
LANS				e		22 55 21.4	
KRLC	Kraliky	145.80	343	ePKP	PKPbc	22 53 16.4	+0.7
KRLC	Kraliky	145.80	343	ePKP2	PKPbc	22 53 16.4	+0.7
WTSB	Winterswijk	145.84	355	ePKP	PKPbc	22 53 15.3	-0.3
	comp=Z,147nm,1.0s						
MORC	Moravsky Berou	145.85	342⇑	iP	PKPbc	22 53 15.2	-0.6
MORC	Moravsky Berou	145.85	342	⇑PKIKP	PKPbc	22 53 15.2	-0.6
MORC	Moravsky Berou	145.85	342	ePKP	PKPdf	22 53 14.6	+0.5
MORC				e		22 55 24.7	
PGOR	Pogoanele	145.93	328	⇓iP	PKPab	22 53 17.2	-0.7
BHL	Bhannes	145.95	304	eP	PKPdf	22 53 14.6	-0.2
PVCC	Panska Ves	145.96	346	ePKP	PKPbc	22 53 16.9	+0.9
PVCC				epPKP	pPKPdf	22 55 25.6	+3.9
PVCC	Panska Ves	145.96	346	ePKP2	PKPbc	22 53 16.9	+0.9
ISR	Istrita	146.00	328	⇓iP	PKPab	22 53 17.6	-0.7
ISR	Istrita	146.00	328	⇓PKP2	PKPab	22 53 17.6	-0.7
MLR	Muntele Rosu	146.03	329	PKPbc	PKPdf	22 53 14.4	-0.2
	comp=Z,37nm,1.4s,baz=20,slow=5

ALFC	**Alefka**	**147.84 308**	P	**PKPbc**	**22 53 21.4**	**-0.2**
CONA	**Conrad Observa**	**148.00 342**	*i* PKPdf	**PKPdf**	**22 53 18.1**	**+0.3**
	comp=Z,14nm,1.7s,SNR=48					
CONA			*i* PKiKP	**PKiKP**	**22 53 22.8**	**-0.2**
CONA			*i* pPKPab	**pPKPbc**	**22 55 27.4**	**0.0**
	comp=Z,21nm,1.2s					
AKMC	**Akamas**	**148.09 308**	P	**PKPbc**	**22 53 21.5**	**-0.7**
PPCY	**Paphos**	**148.14 308**	P	**PKPdf**	**22 53 20.1**	**+1.9**
HERR	**Herculane**	**148.15 332**	⇓*i*P	**PKPdf**	**22 53 18.0**	**+0.1**
WLF	**Walferdange**	**148.18 355**	⇑PKP	**PKPbc**	**22 53 22.8**	**+0.9**
MOA	**Molln**	**148.52 344**	*i* PKPdf	**PKPdf**	**22 53 16.6**	**-1.9**
	comp=Z,5.0nm,1.5s					
MOA			*i* PKiKP	**PKPbc**	**22 53 23.4**	**+0.5**
	comp=Z,40nm,1.6s,SNR=12					
MOA			*i* pPKPab	**pPKPbc**	**22 55 28.9**	**+0.1**
	comp=Z,22nm,1.4s,SNR=5.2					
MDVR	**Moldovita**	**148.54 333**	⇓*i*P	**PKPbc**	**22 53 23.7**	**+0.7**
ARSA	**Arzberg**	**148.71 342**	*i* PKiKP	**PKPbc**	**22 53 23.7**	**+0.3**
	comp=Z,40nm,1.6s,SNR=12					
ARSA			*i* pPKPab	**pPKPbc**	**22 55 29.2**	**-0.2**
	comp=Z,14nm,1.5s,SNR=5.8					
BEHE	**Becsehely**	**149.02 340**	⇓*ex*	**PKPbc**	**22 53 24.2**	**+0.1**
PGB	**Panagyurishte**	**149.04 327**	*e*P	**PKPbc**	**22 53 24.6**	**+0.2**
ALN	**Alexandroupoli**	**149.14 323**	P	PKPpre	22 53 15.3	
ALN	**Alexandroupoli**	**149.14 323**	P	PKPpre	22 53 15.3	
ALN	**Alexandroupoli**	**149.14 323**	PKIKP	PKPpre	22 53 15.3	
RDO	**Rodhopi**	**149.27 324**	P	**PKPdf**	**22 53 18.7**	**-1.1**
RDO	**Rodhopi**	**149.27 324**	P	**PKPdf**	**22 53 18.7**	**-1.1**
SOKA	**Soboth**	**149.38 342**	*i* PKPdf	**PKPdf**	**22 53 20.0**	**0.0**
	comp=Z,6.9nm,1.0s					
SOKA			*i* PKiKP	**PKPbc**	**22 53 25.1**	**+0.1**
	comp=Z,55nm,1.3s,SNR=14					
SOKA			*i* pPKPbc	**pPKPbc**	**22 55 30.9**	**-0.3**
	comp=Z,12nm,1.0s,SNR=5.3					
PERS	**Pernice**	**149.39 342**	*i* PKPdf	**PKPdf**	**22 53 19.3**	**-0.7**
PERS			*e*PKPbc	**PKPbc**	**22 53 24.3**	**-0.7**
PERS			*e*PKPab	**PKPab**	**22 53 31.9**	**-0.1**
PERS			*ep*PKPbc	**pPKPbc**	**22 55 30.4**	**-0.9**
KBA	**Koelnbreinsper**	**149.47 345**	*i* PKPbc	**PKPbc**	**22 53 25.3**	**-0.1**
	comp=Z,21nm,0.8s,SNR=7.2					
KBA			*i* pPKPbc	**pPKPbc**	**22 55 31.0**	**-0.6**
	comp=Z,10nm,1.2s					
KBA	**Koelnbreinsper**	**149.47 345**	PKIKP	**PKPdf**	**22 53 19.7**	**-0.5**
VTS	**Vitosha**	**149.50 328**	⇓*i*P	**PKPbc**	**22 53 25.7**	**+0.1**
VTS	**Vitosha**	**149.50 328**	P	**PKPdf**	**22 53 21.3**	**+0.9**
VTS	**Vitosha**	**149.50 328**	*e*P	**PKPbc**	**22 53 25.1**	**-0.5**
VTS	**Vitosha**	**149.50 328**	P	**PKPdf**	**22 53 21.3**	**+0.9**
WATA	**Walderalm**	**149.64 347**	*i* PKPdf	**PKPdf**	**22 53 20.6**	**+0.1**
	comp=Z,12nm,1.2s					
WATA			*i* PKiKP	**PKPbc**	**22 53 26.0**	**+0.3**
	comp=Z,41nm,1.1s,SNR=9.3					
WATA			*i* pPKPbc	**pPKPbc**	**22 55 31.2**	**-0.8**
	comp=Z,8.6nm,1.0s					
RETA	**Reutte**	**149.66 348**	*i* PKiKP	**PKiKP**	**22 53 26.1**	**-0.3**
	comp=Z,30nm,1.1s					
RETA			*i* pPKiKP	**pPKPbc**	**22 55 32.2**	**+0.2**
	comp=Z,12nm,1.1s					
OBKA	**Obir**	**149.67 343**	*i* PKPbc	**PKPbc**	**22 53 25.7**	**-0.1**
	comp=Z,36nm,1.8s,SNR=7.9					
OBKA			*i* pPKPbc	**pPKPbc**	**22 55 31.7**	**-0.4**
	comp=Z,6.9nm,1.2s					
FETY	**Fethiye**	**149.69 313**	P	**PKPdf**	**22 53 19.5**	**-1.2**
FETY	**Fethiye**	**149.69 313**	P	**PKPdf**	**22 53 19.5**	**-1.2**
WTTA	**Wattenberg**	**149.69 347**	*i* PKPdf	**PKPdf**	**22 53 20.8**	**+0.2**
	comp=Z,14nm,1.5s					
WTTA			*i* PKiKP	**PKiKP**	**22 53 26.5**	**-0.2**
	comp=Z,40nm,0.8s,SNR=10					
SMTH	**Samothraki Isl**	**149.72 323**	P	**PKPdf**	**22 53 19.5**	**-1.1**
SMTH	**Samothraki Isl**	**149.72 323**	P	**PKPdf**	**22 53 19.5**	**-1.1**
MOTA	**Moosalm**	**149.73 348**	*i* PKPdf	**PKPdf**	**22 53 19.7**	**-0.9**
	comp=Z,8.7nm,1.1s,SNR=26					
MOTA			*i* PKPbc	**PKPbc**	**22 53 25.2**	**-0.7**
	comp=Z,29nm,0.9s					
MOTA			*i* pPKPbc	**pPKPbc**	**22 55 31.0**	**-1.2**
	comp=Z,13nm,1.2s					
MYKA	**Terra Mystica**	**149.81 344**	*i* PKPdf	**PKPdf**	**22 53 20.3**	**-0.4**
	comp=Z,7.5nm,1.0s					
MYKA			*i* PKPbc	**PKPbc**	**22 53 25.9**	**-0.2**
	comp=Z,28nm,0.9s,SNR=9.2					
MYKA			*i* pPKPbc	**pPKPbc**	**22 55 31.1**	**-1.2**
	comp=Z,12nm,1.0s					
MMB	**Musomiste**	**149.95 326**	*e*P	**PKPbc**	**22 53 26.9**	**+0.4**
ABTA	**Abfaltersbach**	**149.98 345**	*i* PKPdf	**PKPdf**	**22 53 20.7**	**-0.2**
	comp=Z,26nm,1.2s,SNR=33					
ABTA			*i* PKPbc	**PKPbc**	**22 53 26.5**	**-0.1**
	comp=Z,61nm,0.9s					
ABTA			*i* pPKPbc	**pPKPbc**	**22 55 31.0**	**-1.8**
	comp=Z,18nm,1.1s					
DAVA	**Damuels**	**150.02 349**	*i* PKPdf	**PKPdf**	**22 53 20.0**	**-1.1**
	comp=Z,7.6nm,1.3s					
DAVA			*i* PKiKP	**PKiKP**	**22 53 27.1**	**-0.1**
	comp=Z,45nm,1.1s,SNR=11					
DAVA			*i* pPKiKP	**pPKPbc**	**22 55 33.0**	**0.0**
	comp=Z,24nm,1.1s					
NVR	**Nevrokopi**	**150.05 326**	P	**PKPdf**	**22 53 21.4**	**+0.3**
NVR	**Nevrokopi**	**150.05 326**	P	**PKPdf**	**22 53 21.4**	**+0.3**
KKB	**Krupnik**	**150.09 327**	*e*P	**PKPbc**	**22 53 26.4**	**-0.4**
FETA	**Feichten**	**150.12 348**	*i* PKPdf	**PKPdf**	**22 53 21.4**	**+0.2**
	comp=Z,19nm,1.2s,SNR=14					
FETA			*i* PKiKP	**PKiKP**	**22 53 27.5**	**0.0**
	comp=Z,37nm,0.9s					
FETA			*i* pPKiKP	**pPKPbc**	**22 55 33.6**	**+0.4**
	comp=Z,26nm,1.2s,SNR=6.6					
OZLJ	**Ozalj**	**150.20 341**	P	**PKPdf**	**22 53 19.1**	**-2.0**
VISS	**Visnje**	**150.22 342**	*i* PKPdf	**PKPdf**	**22 53 20.9**	**-0.3**
VISS			*i* PKPbc	**PKPbc**	**22 53 26.8**	**-0.2**
VISS			*i* PKPab	**PKPab**	**22 53 35.1**	**-0.4**
VISS			*ep*PKPbc	**pPKPbc**	**22 55 33.4**	**0.0**
LIA	**Limnos Island**	**150.29 322**	P	**PKPdf**	**22 53 20.3**	**-1.2**
LIA	**Limnos Island**	**150.29 322**	P	**PKPdf**	**22 53 20.3**	**-1.2**
BOJS	**Bojanci**	**150.37 341**	*i* PKPdf	**PKPdf**	**22 53 21.6**	**+0.1**
BOJS			*i* PKPbc	**PKPbc**	**22 53 27.4**	**+0.1**
BOJS			*i* pPKPbc	**pPKPbc**	**22 55 33.7**	**0.0**
JAVS	**Javornik**	**150.37 343**	*i* PKPdf	**PKPdf**	**22 53 21.2**	**-0.3**
JAVS			*e*PKPbc	**PKPbc**	**22 53 26.8**	**-0.7**
JAVS			*i* PKPab	**PKPab**	**22 53 35.3**	**-0.9**
JAVS			*ep*PKPbc	**pPKPbc**	**22 55 32.5**	**-1.3**
BLY	**Banja Luka**	**150.38 338**	⇑*i*P	**PKPbc**	**22 53 28.2**	**+0.8**
DAVOX	**Davos/Dischmat**	**150.51 349**	PKP	**PKPdf**	**22 53 22.3**	**+0.4**
	comp=Z,5.8nm,0.7s,baz=272,slow=3.4,SNR=9.5					
DAVOX			PKPbc	**PKiKP**	**22 53 28.6**	**+0.3**
	comp=Z,38nm,0.8s,baz=345,slow=1.7,SNR=16					
DAVOX			pPKPbc	**pPKPbc**	**22 55 32.0**	**-2.3**
	comp=Z,10nm,1.0s,baz=221,slow=4.0,SNR=4.4					
ARG	**Arkhangelos**	**150.57 313**	P	**PKPbc**	**22 53 25.9**	**-2.2**
ARG	**Arkhangelos**	**150.57 313**	P	**PKPbc**	**22 53 25.9**	**-2.2**
BODT	**Bodrum**	**150.67 316**	P	**PKPdf**	**22 53 20.3**	**-1.9**
BODT	**Bodrum**	**150.67 316**	P	**PKPdf**	**22 53 20.3**	**-1.9**
STIP	**Stip**	**150.67 328**	*i* PKP	**PKPbc**	**22 53 26.8**	**-1.4**
OUR	**Ouranopolis**	**150.69 324**	P	**PKPbc**	**22 53 25.8**	**-2.4**
OUR	**Ouranopolis**	**150.69 324**	P	**PKPbc**	**22 53 25.8**	**-2.4**
VAY	**Valandovo**	**150.75 327**	P	**PKPdf**	**22 53 23.5**	**+1.4**
VAY	**Valandovo**	**150.75 327**	P	**PKPdf**	**22 53 23.5**	**+1.4**
VAY	**Valandovo**	**150.75 327**	*i* PKP	**PKPbc**	**22 53 28.0**	**-0.3**
SKO	**Skopje**	**150.83 329**	*i* PKP	**PKPbc**	**22 53 28.8**	**+0.3**
PLG	**Polygyros**	**150.96 325**	P	**PKPdf**	**22 53 25.0**	**+2.4**
PLG	**Polygyros**	**150.96 325**	P	**PKPdf**	**22 53 25.0**	**+2.4**
UDBI	**Udbina**	**151.07 339**	P	**PKPdf**	**22 53 22.2**	**-0.5**
PAIG	**Paliouri**	**151.13 324**	P	**PKPbc**	**22 53 26.7**	**-2.5**
PAIG	**Paliouri**	**151.13 324**	P	**PKPbc**	**22 53 26.7**	**-2.5**
NVLJ	**Novalja**	**151.33 341**	P	**PKPdf**	**22 53 21.1**	**-1.8**
KRUS	**Krusevo**	**151.38 329**	*i* PKP	**PKPbc**	**22 53 29.6**	**-0.3**
PDG	**Podgorica**	**151.49 332**	⇑*i*P	**PKPbc**	**22 53 30.2**	**+0.3**
BIA	**Bitola**	**151.61 328**	*i* PKP	**PKPbc**	**22 53 30.5**	**+0.2**
FNA	**Florina**	**151.76 328**	P	**PKPdf**	**22 53 22.5**	**-1.3**
FNA	**Florina**	**151.76 328**	P	**PKPdf**	**22 53 22.5**	**-1.3**
STON	**Ston**	**151.78 335**	P	**PKPdf**	**22 53 20.7**	**-2.9**
XOR	**Xorichti**	**151.79 324**	P	PKPpre	22 53 18.4	
XOR	**Xorichti**	**151.79 324**	P	PKPpre	22 53 18.4	
OHR	**Ohrid**	**151.80 329**	*i* PKP	**PKPbc**	**22 53 30.8**	**0.0**
TIR	**Tirane**	**152.07 330**	⇑*i*P	**PKPbc**	**22 53 31.4**	**+0.1**
TIR	**Tirane**	**152.07 330**	⇑PKIKP	**PKPdf**	**22 53 31.4**	**+0.1**
NEST	**Nestorio**	**152.20 328**	P	**PKPdf**	**22 53 26.9**	**+2.4**
ATHU	**Athens Univers**	**152.37 321**	P	**PKPdf**	**22 53 23.4**	**-1.3**
ATHU	**Athens Univers**	**152.37 321**	P	**PKPdf**	**22 53 23.4**	**-1.3**
LKR	**Lokris**	**152.38 323**	P	**PKPdf**	**22 53 26.2**	**+1.5**
LKR	**Lokris**	**152.38 323**	P	**PKPdf**	**22 53 26.2**	**+1.5**
VLY	**Voula,Athens**	**152.44 320**	P	**PKPdf**	**22 53 23.1**	**-1.7**
VLY	**Voula,Athens**	**152.44 320**	P	**PKPdf**	**22 53 23.1**	**-1.7**
AGG	**Agios Georgios**	**152.51 324**	P	PKPpre	22 53 21.0	
AGG	**Agios Georgios**	**152.51 324**	P	PKPpre	22 53 21.0	
AGG	**Agios Georgios**	**152.51 324**	PKIKP	PKPpre	22 53 21.0	
IDI	**Anoyia**	**153.28 315**	PKPbc	**PKPbc**	**22 53 34.5**	**+0.3**
	comp=Z,22nm,1.0s,baz=121,slow=5.6,SNR=8.1					
IDI	**Anoyia**	**153.28 315**	⇓*i*P	**PKPbc**	**22 53 34.7**	**+0.5**
KLV	**Kalavryta, Ach**	**153.29 323**	P	**PKPdf**	**22 53 24.2**	**-1.9**
KLV	**Kalavryta, Ach**	**153.29 323**	P	**PKPdf**	**22 53 24.2**	**-1.9**
KEK	**Kerkira**	**153.36 328**	P	**PKPdf**	**22 53 24.1**	**-2.0**
KEK	**Kerkira**	**153.36 328**	P	**PKPdf**	**22 53 24.1**	**-2.0**
PBRG	**Braganca**	**155.09 16**	*e*PKPab	**PKPab**	**22 53 56.8**	**+0.5**
POLO	**Lamas de Olo**	**155.21 18**	*e*PKPab	**PKPab**	**22 53 56.9**	**0.0**
TIP	**Timpagrande**	**155.23 332**	⇓*i*P	**PKPdf**	**22 53 28.6**	**-0.1**
PVRL	**Vila Real**	**155.32 18**	*e*PKPab	**PKPab**	**22 53 56.7**	**-0.6**
MVO	**Moncorvo**	**155.62 17**	*e*PKPab	**PKPab**	**22 53 59.3**	**+0.7**
ESDC	**Sonseca Array**	**157.76 12**	PKP	**PKPdf**	**22 53 31.8**	**-0.2**
	comp=Z,1.3nm,0.8s,baz=342,slow=3.1,SNR=7.3					
ESDC			PKPab	**PKPab**	**22 54 06.6**	**-1.4**
	comp=Z,4.1nm,0.9s,baz=340,slow=3.9,SNR=12					
PNCL	**Nicolau / Gran**	**157.92 22**	*e*PKPab	**PKPab**	**22 54 08.8**	**+0.2**
PBAR	**Barrancos**	**158.38 19**	*e*PKPab	**PKPab**	**22 54 06.8**	**-3.8**
KEST	**Kesra**	**161.11 341**	PKP	**PKPdf**	**22 53 36.0**	**+0.1**
	comp=Z,5.6nm,0.9s,baz=274,slow=3.0,SNR=7.1					
KEST			PKPab	**PKPab**	**22 54 22.6**	**-0.1**
	comp=Z,14nm,0.9s,baz=318,slow=3.5,SNR=11					
MDT	**Midelt**	**164.07 20**	PKP	**PKPdf**	**22 53 40.4**	**+1.5**
	comp=Z,14nm,1.1s,baz=349,slow=2.3,SNR=14					
MDT			PKPab	**PKPab**	**22 54 36.7**	**+0.9**
	comp=Z,3.7nm,0.9s,baz=0.6,slow=11,SNR=4.1					
LIC	**Lamto**	**166.51 149**	*e*PKIKP	**PKPdf**	**22 53 40.5**	**-0.8**
	comp=Z,85nm,1.2s					
KIC	**Kosan Boka**	**166.77 150**	*e*PKIKP	**PKPdf**	**22 53 41.1**	**-0.4**
	comp=Z,100nm,1.3s					
TIC	**Toumodi**	**166.88 148**	*e*PKIKP	**PKPdf**	**22 53 41.0**	**-0.6**
DBIC	**Dimbokro**	**166.98 149**	PKP	**PKPdf**	**22 53 41.3**	**-0.3**
	comp=Z,15nm,1.1s,baz=258,slow=1.5,SNR=5.8					
DBIC			PKPab	**PKPab**	**22 54 49.7**	**+0.7**
	comp=Z,4.2nm,0.8s,baz=80,slow=18,SNR=3.2					
DBIC	**Dimbokro**	**166.98 149**	PKIKP	**PKPdf**	**22 53 41.3**	**-0.3**
DBIC					22 54 49.7	
DBIC			pmax	pmax		
	comp=Z,10.0nm,0.9s					
DBIC			pmax	pmax		
	comp=Z,4.0nm,0.9s					
KOWA	**Kowa**	**173.33 120**	PKP	**PKPdf**	**22 53 44.9**	**-0.2**
	comp=Z,9.9nm,0.9s,baz=16,slow=0.3,SNR=14					
KOWA			PKPab	**PKPab**	**22 55 17.6**	**+0.3**
	comp=Z,11nm,1.1s,baz=241,slow=6.0,SNR=7.4					
TORD	**Torodi Ar. Bea**	**175.22 177**	PKP	**PKPdf**	**22 53 45.3**	**-0.4**
	comp=Z,16nm,1.0s,baz=331,slow=1.2,SNR=48					
TORD			PKPab	**PKPab**	**22 55 25.7**	**+0.4**
	comp=Z,4.4nm,0.8s,baz=177,slow=3.9,SNR=10					
TORD			PP	**PP**	**22 59 18.2**	**+1.4**
	comp=Z,4.6nm,0.9s,baz=172,slow=5.2,SNR=8.2					

DJA 21 22:42:49.1±0.9, 6°S±5°×10°2E±°, h10km, M3.8/6, MLv3.8/6, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LWLI	**Liwa**	**1.99**	**53**	P	Pn	22 43 23.8	+0.8
LWLI				S	Sn	22 43 49.3	+1.2
KASI	**Kota Agung**	**2.14**	**71**	P	Pn	22 43 24.7	-0.2
KASI				S	Sn	22 43 51.4	-0.1
MDSI	**Maura Dua**	**2.44**	**44**	P	Pn	22 43 29.9	+0.9
MDSI				S	Sn	22 43 59.8	+1.0
MASI	**Maura Aman, Be**	**3.09**	**356**	P	Pn	22 43 38.9	+0.9
CGJI	**Cibinong**	**3.22**	**97**	P	Pn	22 43 38.6	-1.2
CISI	**Cisompet, Garu**	**5.47**	**104**	P	Pn	22 44 08.5	-2.2
KPJI	**Karang Pucung**	**6.51**	**100**	P	Pn	22 44 27.6	+2.6

MEX 21 22:43:10.1±0.4, 16°80N×100°23W, h3km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.25**	**352**	*i* P	Pg	22 43 14.9	-0.2
CAIG				*e*S	Sg	22 43 18.4	+0.1
ACP2	**Acapulco**	**0.34**	**76**	*e*P	Pg	22 43 15.7	-1.0
ACP2				*e*S	Sg	22 43 19.9	-1.1
ACX	**Acapulco**	**0.36**	**78**	*i* P	Pg	22 43 16.8	-0.3
ACX				*i* S	Sg	22 43 21.7	-0.1
ZIIG	**Zihuatanejo**	**1.43**	**305**	*e*P	Pn	22 43 34.0	-3.0
ZIIG				*e*S	Sb	22 43 51.8	-4.3
ARIG	**Puente Sto Nin**	**1.48**	**356**	*e*P	Pn	22 43 34.2	-3.5
ARIG				*e*S	Sb	22 43 52.7	-4.9
PLIG	**Platanillo**	**1.73**	**23**	*e*P	Pn	22 43 38.8	-2.4
PLIG				*e*S	Sn	22 43 58.2	-5.7
TLIG	**Tlapa**	**1.76**	**64**	*e*P	Pn	22 43 38.0	-3.6
TLIG				*i* S	Sn	22 43 60.0	-4.7

*ISCJB **21** 22:52:18.3±0.9, 21°.05S±0°.06×67°.8W±0°.1, h197km±10km, mb3.5/3, Error ellipse: s-maj=23.4km s-min=7.8km az=13.6*
*GUC **21** 22:52:18.8±0.5, 21°.07S×67°.84W, h196km±6km, ML3.9*
*IDC **21** 22:52:22.5±5.5, 20°.62S×67°.19W, h208km±39km, mb3.4/3, mb1 3.8/5, mb1mx3.2/45, mbtmp4.1/5, Error ellipse: s-maj=61.8km s-min=19.5km az=16.0*

ISC 21 22:52:18.2±1.4, 21°.06S±0°.07×67°.6W±0°.2, h184km±13km, n17, σ0.94/27, mb3.9/3, 1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**1.67**	**244**	*e*P	**Pn**	**22 52 53.5**	**+1.2**
PB09				*i* S	**Sn**	**22 53 18.9**	**+0.1**
PB09				IAML		22 53 23.2	
	comp=N,213nm,0.2s						
PB08	**IPOC Station P**	**1.69**	**302**	*e*P	**Pn**	**22 52 53.6**	**+0.8**
PB08				*i* S	**Sn**	**22 53 20.3**	**+0.7**
PB08				IAML		22 53 21.1	
	comp=N,419nm,0.5s						
PB01	**IPOC Station P**	**1.73**	**270**	*e*P	**Pn**	**22 52 53.0**	**0.0**
PB01				*i* S	**Sn**	**22 53 19.4**	**-0.4**
PB01				IAML		22 53 21.7	
	comp=N,611nm,0.2s						
PB02	**IPOC Station P**	**2.13**	**263**	*e*P	**Pn**	**22 52 57.3**	**+0.2**
PB02				*i* S	**Sn**	**22 53 26.3**	**-1.0**
PB02				IAML		22 53 26.8	
	comp=N,1μm,0.2s						
PB07	**IPOC Station P**	**2.20**	**252**	*e*P	**Pn**	**22 52 58.1**	**+0.2**
PB07				*e*S	**Sn**	**22 53 28.0**	**-0.9**
PB07				IAML		22 53 28.3	
	comp=N,1μm,0.2s						
PB03	**IPOC Station P**	**2.21**	**243**	*e*P	**Pn**	**22 52 58.3**	**+0.3**
PB03				*e*S	**Sn**	**22 53 28.0**	**-0.9**
PB03				IAML		22 53 28.8	
	comp=N,646nm,0.3s						
PB06	**IPOC Station P**	**2.43**	**227**	⇓*i*P	**Pn**	**22 53 01.0**	**+0.5**
PB06				*i* S	**Sn**	**22 53 33.0**	**-0.6**
PB06				IAML		22 53 35.1	
	comp=N,398nm,0.1s						
PB04	**IPOC Station P**	**2.66**	**241**	*e*P	**Pn**	**22 53 03.4**	**+0.2**
PB04				*e*S	**Sn**	**22 53 36.8**	**-1.5**
PB04				IAML		22 53 39.9	
	comp=N,291nm,0.3s						
PB15	**IPOC Station P**	**2.73**	**218**	*e*P	**Pn**	**22 53 04.3**	**+0.2**
PB15				*i* S	**Sn**	**22 53 39.8**	**-0.1**
PB15				IAML		22 53 42.8	
	comp=N,2μm,0.3s						
PB05	**IPOC Station P**	**2.98**	**233**	*e*P	**Pn**	**22 53 07.2**	**+0.3**
PB05				*i* S	**Sn**	**22 53 43.2**	**-1.8**
PB05				IAML		22 53 50.2	
	comp=E,165nm,0.4s						
LPAZ	**La Paz**	**4.77**	**354**	P	**Pn**	**22 53 30.6**	**+0.6**
	comp=E,13nm,0.3s,baz=164,slow=9.0,SNR=245						
LPAZ				S	**Sn**	**22 54 23.9**	**-2.3**
	baz=17,slow=19,SNR=1.2						
SIV	**San Ignacio**	**8.01**	**52**	P	Pn	22 54 08.0	-3.7
	comp=E,4.0nm,0.3s,baz=253,slow=13,SNR=68						
SIV				S	Sn	22 55 32.4	-9.3
	comp=E,0.3nm,0.3s,baz=330,slow=23,SNR=6.6						
PDAR	**Pinedale Array**	**74.33**	**329**	P	**P**	**23 03 36.3**	**+0.6**
	comp=E,0.1nm,0.3s,baz=145,slow=3.3,SNR=2.4						
TORD	**Torodi Ar. Bea**	**76.09**	**70**	P	**P**	**23 03 44.9**	**-1.1**
	comp=E,1.0nm,0.4s,baz=250,slow=6.2,SNR=27						
YKA	**Yellowknife Ar**	**91.18**	**340**	P	**P**	**23 05 01.9**	**+0.3**
	comp=E,0.9nm,0.6s,baz=141,slow=4.4,SNR=3.6						
WRA	**Warramunga Arr**	**133.93**	**209**	PKP	**PKPdf**	**23 11 15.5**	**+1.3**
	comp=E,0.5nm,0.7s,baz=181,slow=1.5,SNR=3.9						
MKAR	**Makanchi Array**	**144.58**	**36**	PKP	**PKPdf**	**23 11 32.5**	**-0.2**
	comp=E,1.0nm,0.5s,baz=316,slow=4.0,SNR=10						

*ISCJB **21** 23:06:06.9±0.3, 23°.72N±0°.01×121°.60E±0°.02, h4km±2km, Error ellipse: s-maj=2.8km s-min=1.8km az=31.8*

*JMA **21** 23:06:06.7±0.1, 23°.71N×121°.59E, h4km, M2.9*
*TAP **21** 23:06:07.1, 23°.73N×121°.53E, h8km, ML3.7, C*

ISC 21 23:06:07.1±0.8, 23°.71N±0°.02×121°.57E±0°.02, h11km±6km, n90, σ0.75/127, 3C-18D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	**Guangfu**	**0.14**	**252**	P	**Pg**	**23 06 10.0**	**-0.4**
	baz=246						
EGFH				S	**Sg**	**23 06 12.3**	**-0.5**
	baz=246						
ESL	**Shilin**	**0.16**	**309**	⇓*i*P	**Pg**	**23 06 10.1**	**-0.7**
	baz=304						
ESL				*i* S	**Sg**	**23 06 12.0**	**-1.4**
	baz=304						
ENLB	**Shoufeng**	**0.19**	**8**	⇓*e*P	**Pg**	**23 06 12.7**	**+1.4**
	baz=18						
ENLB				*e*S	**Sg**	**23 06 16.5**	**+2.3**
	baz=18						
HGSD	**Ruisui**	**0.26**	**212**	⇓P	**Pb**	**23 06 13.4**	**-0.3**
	baz=197						
HGSD				S	**Sb**	**23 06 18.2**	**0.0**
	baz=197						
HWA	**Hwalien**	**0.27**	**7**	*e*P	**Pb**	**23 06 13.4**	**-0.4**
	baz=5.0						
HWA				*e*S	**Sb**	**23 06 18.2**	**-0.2**
	baz=5.0						
EHY	**Hungye**	**0.31**	**228**	*e*P	**Pg**	**23 06 13.3**	**0.0**
	baz=230						
EHY				*e*S	**Sg**	**23 06 17.5**	**0.0**
	baz=230						
TWD	**Chiawan**	**0.37**	**3**	⇓*i*P	**Pg**	**23 06 14.6**	**+0.1**
	baz=357						
TWD				S	**Sb**	**23 06 20.3**	**-1.0**
	baz=357						
VWDT	**VWDT**	**0.40**	**276**	⇓P	**Pg**	**23 06 14.9**	**-0.1**
	baz=273						
VWDT				*e*S	**Sg**	**23 06 20.3**	**0.0**
	baz=273						
YULB	**Yu-li**	**0.41**	**218**	⇑P	**Pg**	**23 06 15.2**	**+0.1**
	baz=224						
YULB				*e*S	**Sb**	**23 06 21.9**	**-0.6**
	baz=224						
TWF1	**Yuli**	**0.44**	**215**	P	**Pg**	**23 06 16.1**	**+0.3**
	baz=224						
TWF1				*e*S	**Sb**	**23 06 22.7**	**-0.7**
	baz=224						
NACB	**Ninganchiao**	**0.46**	**3**	⇓P	**Pg**	**23 06 15.9**	**-0.3**
	baz=355						
NACB				*e*S	**Sg**	**23 06 21.9**	**-0.4**
	baz=355						
CHGB	**Renai**	**0.50**	**314**	⇓P	**Pg**	**23 06 16.9**	**-0.1**
	baz=321						
CHGB				S	**Sg**	**23 06 22.9**	**-0.8**
	baz=321						
FULB	**Fuli**	**0.57**	**207**	*e*P	**Pb**	**23 06 19.3**	**+0.2**
	baz=188						
SSLB	**Suanglung**	**0.57**	**278**	⇓P	**Pg**	**23 06 18.0**	**-0.2**
	baz=275						
SSLB				S	**Sg**	**23 06 24.4**	**-1.4**
	baz=275						
CHKT	**Chengkung**	**0.64**	**197**	P	**Pb**	**23 06 20.2**	**0.0**
	baz=196						
CHKT				*e*S	**Sb**	**23 06 30.4**	**+1.3**
	baz=196						
SMLT	**Sun Moon Lake**	**0.64**	**286**	⇑P	**Pb**	**23 06 19.7**	**-0.7**
	baz=284						
SMLT				*e*S	**Sg**	**23 06 27.4**	**-0.6**
	baz=284						
TWT	**Tachien**	**0.65**	**326**	*e*P	**Pg**	**23 06 19.7**	**-0.1**
	baz=317						
TWT				*e*S	**Sg**	**23 06 26.6**	**-1.

CHN1	Nanshi	1.09	242	eP	Pn	23 06 29.0 +0.7
	baz=254					
CHN1				eS	Sn	23 06 44.4 +1.0
	baz=254					
SGST	Jiashian	1.10	236	eP	Pn	23 06 29.1 +0.7
	baz=236					
SGST				eS	Sn	23 06 44.8 +1.1
	baz=236					
SLGT	Liugui	1.11	230	eP	Pn	23 06 28.9 +0.4
	baz=230					
RLNB	Erlin	1.12	279	eP	Pn	23 06 29.1 +0.3
	baz=277					
RLNB				eS	Sn	23 06 45.2 +1.1
	baz=277					
WLTB	Daxi	1.17	346	eP	Pn	23 06 30.1 +0.7
	baz=355					
EGS		1.18	16	eP	Pn	23 06 30.4 +0.9
	baz=26					
SBCB	Hsinchu	1.20	334	eP	Pg	23 06 29.6 -0.7
	baz=332					
WSF	Szhu	1.24	267	eP	Pn	23 06 30.8 +0.5
	baz=265					
ECL	Taimali	1.25	207	eP	Pb	23 06 30.7 +0.1
	baz=194					
TATO	Taipei	1.26	357	eP	Pn	23 06 31.1 +0.4
	baz=355					
TWA	Mucha	1.26	0	eP	Pn	23 06 31.7 +1.1
	baz=359					
TIPB	Shuangxi	1.28	10	eP	Pn	23 06 30.0 -0.9
	baz=355					
SSD	Sandimen	1.29	222	eP	Pn	23 06 31.2 +0.2
	baz=216					
NWF	Wu-fen Shan	1.37	8	eP	Pg	23 06 34.6 +1.2
	baz=6.0					
WFSB	Wu-fen Shan	1.37	8	eP	Pg	23 06 33.6 +0.2
	baz=6.0					
TWS1	Kuangyinshan	1.39	354	eP	Pg	23 06 34.7 +0.9
	baz=352					
MASBT	Mashibuluo	1.39	218	eP	Pn	23 06 32.6 +0.2
	baz=211					
YM04	YM04	1.44	359	eP	Pg	23 06 34.8 +0.1
	baz=355					
YM10	YM10	1.44	360	eP	Pb	23 06 33.8 -0.1
	baz=356					
YM11	YM11	1.45	0	eP	Pg	23 06 35.2 +0.2
	baz=357					
JYNG	Yonagunijimaku	1.46	59	P	Pn	23 06 33.7 +0.4
JYNG				eS	Sn	23 06 53.1 +0.8
YM07	YM07	1.46	2	eP	Pn	23 06 33.1 -0.3
	baz=358					
YM12	YM12	1.46	360	eP	Pg	23 06 35.2 0.0
	baz=356					
EAST	Anshuo	1.48	207	eP	Pn	23 06 33.9 +0.3
	baz=196					
YOJ	Yonaguni jima	1.51	60	eP	Pn	23 06 33.7 -0.4
	baz=61					
YOJ	Yonaguni jima	1.51	60	P	Pn	23 06 34.4 +0.3
YOJ				eS	Sn	23 06 54.1 +0.4
SCZT	Fangliau	1.60	214	eP	Pb	23 06 36.9 +0.4
	baz=202					
WDGT	Dungji	1.81	256	eP	Pn	23 06 38.5 +0.3
	baz=263					
PHUB	P'eng-hu	1.84	264	eP	Pn	23 06 38.0 -0.7
	baz=261					
IRIF	Iriomote-Funau	2.07	72	eS	Sn	23 07 08.1 +0.6
HATJ	Hateruma jima	2.07	80	eS	Sn	23 07 07.7 +0.1
JKRS	Kuro-shima	2.29	76	eS	Sn	23 07 13.5 +0.6
VWUC	VWUC	2.32	304	eP	Pn	23 06 44.5 -0.6
	baz=300					
JIJ	Ishigaki jima	2.44	74	P	Pn	23 06 47.2 +0.4
JIJ				eS	Sn	23 07 15.6 -1.0
JISG	Ishigakijimahi	2.65	70	P	Pn	23 06 49.5 -0.2
JISG				S	Sn	23 07 19.9 -1.9
MATB	Ma-tsu	2.84	329	eP	Pn	23 06 52.0 -0.4
	baz=324					
KNM	Kinmen	2.95	284	eP	Pn	23 06 55.6 +1.7
	baz=279					
KNMB	Chin-men Tao	3.00	285	eP	Pn	23 06 55.1 +0.6
	baz=281					
JTJ	Tarama	3.00	71	eS	Sn	23 07 32.5 +1.9

NIED ***21*** *23:12:00, 37.°30N×142.°10E, h20km, Mw4.0 Best double couple: M₀1.16000×10¹⁵ NP1:φ₀21.00000°, δ27.00000°, λ-9.00000°. NP2:φ₀119.00000°, δ86.00000°, λ-116.00000°.*
IDC ***21*** *23:12:46.5±0.7, 37.°24N×142.°17E, h0km, mb4.1/15, mb1 4.2/20, mb1mx3.9/72, mbtmp4.1/20, ML3.9/4, MS3.1/5, Ms1 3.1/5, ms1mx2.7/76, Error ellipse: s-maj=16.8km s-min=14.7km az=119.0*
ISCJB ***21*** *23:12:47.3±1.5, 37.°28N±0.°04×142.°14E±0.°04, h15km±10km, mb4.0/17, MS3.0/1, Error ellipse: s-maj=6.6km s-min=5.0km az=157.9*
JMA ***21*** *23:12:48.7±0.2, 37.°28N×142.°09E, h33km, M4.1*
JMA Felt I J1.
NEIC ***21*** *23:12:51.7±0.5, 37.°29N×142.°11E, h35km, mb4.4/2, Error ellipse: s-maj=11.3km s-min=7.1km az=144.0*
NEIC Recorded [1 JMA] in Miyagi.

ISC 21 23:12:47.2±2.0, 37.°28N±0.°05×142.°09E±0.°06, h4km±11km, n49, σ1°33/50, mb4.2/17, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	Kawauchi	0.97	275	P	Pg	23 13 06.4	+0.6
JFK				S	Sg	23 13 18.5	+0.1
ONAJ	Iwakimizuishiy	1.04	261	P	Pg	23 13 07.2	0.0
ONAJ				eS	Sg	23 13 20.4	-0.4
JMM	Marumori	1.18	300	P	Pg	23 13 09.7	-0.2
JMM				eS	Sg	23 13 24.2	-1.0
JIO	Ouri	1.31	334	P	Pn	23 13 11.1	-1.1
JIO				eS	Sb	23 13 26.5	-3.0
JFT	Otama	1.42	280	P	Pn	23 13 13.8	+0.1
JFT				eS	Sb	23 13 31.2	-1.3
JOU	Okura	1.56	314	P	Pn	23 13 15.7	-0.1
JOU				eS	Sn	23 13 35.0	-1.5
JMK	Ichinoseki	1.81	338	P	Pn	23 13 18.6	-0.4
JFY	Yanaizu	1.90	275	P	Pn	23 13 20.7	+0.3
JFY				S	Sn	23 13 44.3	-0.6
JYK	Kaneyama	2.13	321	P	Pn	23 13 23.6	+0.1
JNS	Sasagawa	2.27	285	P	Pn	23 13 26.5	+1.1
JOM	Ohasama	2.28	344	P	Pn	23 13 25.4	-0.1
JAG	Ashikaga	2.28	249	P	Pn	23 13 25.1	-0.5
MJAR	Matsushiro Arr	3.19	258	Pn	Pn	23 13 39.2	+1.0
	12nm,0.3s,baz=88,slow=14,SNR=22						
MJAR				Sn	Sb	23 14 21.2	-2.6
	7.6nm,0.3s,baz=160,slow=10,SNR=6.4						
MJAR				LR	LR	23 15 01.0	
	comp=Z,210nm,19.8s,baz=85,slow=42						
MAJO	Matsushiro	3.20	258	ePn	Pn	23 13 39.1	+0.9
MAT	Matsushiro	3.20	258	P	Pn	23 13 39.3	+1.1
MAT				S	Sn	23 14 18.4	+1.6
JHJ	Hachijo jima 2	4.56	205	Pn	Pn	23 13 56.8	-0.1
	55nm,0.3s,baz=150,slow=23,SNR=9.2						
JHJ				Sn	Sn	23 14 46.8	-3.5
	85nm,0.3s,baz=248,slow=23,SNR=8.0						
ERM	Erimo	4.80	10	ePn	Pn	23 13 59.8	-0.4
ERM				eSn	Sn	23 14 58.9	+2.6
ASAJ	Asahikawa	6.84	3	Pn	Pn	23 14 28.7	+0.5
	2.1nm,0.3s,baz=203,slow=8.9,SNR=11						
JNU	Nakatsue	10.06	249	LR	LR	23 19 18.5	
	comp=Z,106nm,21.0s,baz=128,slow=39						
USRK	Ussuriysk Ar.	10.31	315	Pn	Pn	23 15 18.8	+2.9
	0.3nm,0.3s,baz=125,slow=14,SNR=4.3						
KSRS	Korea Array	11.28	275	Pn	Pn	23 15 31.9	+2.9
	0.2nm,0.3s,baz=92,slow=14,SNR=6.6						
KSAR	Wonju Array Be	11.31	275	Pn	Pn	23 15 31.9	+2.5
JOW	Kunigami	15.65	232	LR	LR	23 22 20.6	
	comp=Z,68nm,19.5s,baz=328,slow=37						
PETK	Petropavlovsk-	19.21	30	LR	LR	23 24 30.4	
	comp=Z,60nm,21.1s,baz=219,slow=37						
SEY	Seymchan	26.45	11	P	P	23 18 23.1	-1.7
	2.3nm,0.5s,baz=195,slow=8.9,SNR=9.2						
H11N2	WAKE ISLAND Hy 27.82	122		T	T	23 47 41.9	
	baz=315,slow=75,SNR=283						
H11N1	WAKE ISLAND Hy 27.82	122		T	T	23 47 41.5	
	baz=315,slow=75,SNR=367						
H11N3	WAKE ISLAND Hy 27.83	122		T	T	23 48 01.4	
	baz=315,slow=75,SNR=295						
ENH	Enshi	27.89	265	eP	P	23 18 37.9	-0.3
	1.9nm,0.4s						
SONM	Songino Array	28.10	303	P	P	23 18 40.0	0.0
	1.6nm,0.5s,baz=97,slow=11,SNR=5.5						
H11S1	WAKE ISLAND Hy 28.55	124		T	T	23 48 47.4	
	baz=316,slow=76,SNR=292						
H11S3	WAKE ISLAND Hy 28.55	124		T	T	23 48 38.7	
	baz=316,slow=76,SNR=303						
H11S2	WAKE ISLAND Hy 28.56	124		T	T	23 48 41.3	
	baz=316,slow=76,SNR=160						
DAV	Davao City (W)	33.62	211	LR	LR	23 31 19.4	
	comp=Z,32nm,22.0s,baz=83,slow=33						
ZALV	Zalesovo Beam	42.15	312	P	P	23 20 41.1	+0.6
	1.3nm,0.6s,baz=100,slow=6.6,SNR=6.3						
MKAR	Makanchi Array	44.45	302	P	P	23 20 59.6	+0.4
	1.7nm,0.7s,baz=86,slow=9.9,SNR=19						
KURK	Kurchatov	46.20	308	eP	P	23 21 13.8	+0.8
	3.0nm,0.3s						
KURBB	Kurchatov Arra	46.28	308	P	P	23 21 14.0	+0.4
	2.6nm,0.5s,baz=81,slow=7.7,SNR=18						
KDAK	Kodiak Island	46.56	42	P	P	23 21 14.8	-0.8
	3.6nm,0.9s,baz=288,slow=11,SNR=3.7						
ILAR	Eielson Array	49.00	32	P	P	23 21 34.8	+0.2
	1.8nm,0.8s,baz=266,slow=6.3,SNR=20						
BVAR	Borovoye Array	50.81	312	P	P	23 21 49.0	+0.5
	0.5nm,0.5s,baz=88,slow=11,SNR=5.0						
INK	Inuvik	53.92	27	P	P	23 22 12.3	+1.0
	1.4nm,0.6s,baz=306,slow=7.0,SNR=4.1						
WRA	Warramunga Arr	57.38	189	P	P	23 22 35.8	-0.9
	4.5nm,0.5s,baz=3.9,slow=7.4,SNR=40						
ASAR	Alice Springs	61.11	189	P	P	23 23 02.2	-0.3
	2.1nm,0.7s,baz=13,slow=6.6,SNR=17						
FINES	FINESS Array B	68.85	332	P	P	23 23 52.4	0.0
	1.1nm,0.7s,baz=33,slow=14,SNR=3.4						
NVAR	Mina Array Bea	74.41	54	P	P	23 24 27.6	+1.0
	0.2nm,0.4s,baz=298,slow=6.1,SNR=2.5						
PDAR	Pinedale Array	77.11	46	P	P	23 24 42.1	+0.1
	0.5nm,0.5s,baz=225,slow=1.0,SNR=6.8						
GERES	GERESS Array B	82.78	329	P	P	23 25 12.6	+0.2
	0.2nm,0.4s,baz=54,slow=5.0,SNR=3.5						
LPAZ	La Paz	146.10	60	PKPbc	PKPdf	23 32 28.9	+0.1
	0.9nm,0.8s,baz=360,slow=6.8,SNR=4.3						

ISK ***21*** *23:14:16.2, 39.°61N×26.°07E, h2km, ML2.5/22*
ATH ***21*** *23:14:16.7, 39.°59N×26.°06E, h26km±1km, ML2.0/9, Error ellipse: s-maj=1.8km s-min=0.7km az=253.0*
CSEM ***21*** *23:14:17.3±0.1, 39.°60N×26.°06E, h8km, ML2.5, Error ellipse: s-maj=2.4km s-min=1.7km az=83.0*
ISCJB ***21*** *23:14:17.1±0.3, 39.°61N±0.°02×26.°05E±0.°03, h7km±3km, Error ellipse: s-maj=3.6km s-min=2.7km az=173.5*
THE ***21*** *23:14:17.4, 39.°61N×26.°05E, h6km, ML2.0/6, Error ellipse: s-maj=0.8km s-min=0.3km az=89.0*
DDA ***21*** *23:14:17.6, 39.°62N×26.°12E, h6km, Ml3.0*

ISC 21 23:14:17.5±0.9, 39.°61N±0.°01×26.°06E±0.°02, h10km±7km, n99, σ0°63/133, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GPNR	Gulpinar-Canak	0.16	160	PG	Pg	23 14 20.2	-0.8
GPNR				SG	Sg	23 14 23.0	-0.4
GPNR	Gulpinar-Canak	0.16	160	ePg	Pg	23 14 20.2	-0.8
GPNR				eSg	Sg	23 14 23.0	-0.4
BOZC	Bozcaada	0.23	358	iP	Pg	23 14 22.4	+0.1
BOZC				iS	Sg	23 14 26.3	+0.7
EZN	Ezine	0.30	43	PG	Pg	23 14 22.9	-0.6
EZN				SG	Sg	23 14 27.9	+0.4
EZN	Ezine	0.30	43	P	Pg	23 14 23.5	0.0
EZN				S	Sg	23 14 27.9	+0.4
EZN	Ezine	0.30	43	ePg	Pg	23 14 22.9	-0.6
EZN	Ezine	0.30	43	P	Pg	23 14 23.5	0.0
EZN				S	Sg	23 14 27.9	+0.4
PRK	Paraskevi	0.40	156	P	Pg	23 14 25.6	+0.3
PRK				S	Sg	23 14 30.9	+0.5
PRK				AML	AML	23 14 31.5	
	comp=N,1703μm,0.3s						
PRK				AML	AML	23 14 32.4	
	comp=E,1646μm,0.4s						
PRK	Paraskevi	0.40	156	P	Pg	23 14 25.4	+0.1
PRK				S	Sg	23 14 31.4	+0.9
PRK	Paraskevi	0.40	156	P	Pg	23 14 25.4	+0.1
PRK				S	Sg	23 14 31.2	+0.7
BAYC	CANAKKALE_Bayr	0.40	70	iP	Pg	23 14 25.4	0.0
BAYC				iS	Sg	23 14 30.9	+0.2
SIGR	SIGRI	0.43	202	PG	Pg	23 14 25.6	-0.2
SIGR				SG	Sg	23 14 32.3	+0.9
SIGR	SIGRI	0.43	202	P	Pg	23 14 25.7	-0.2
SIGR				S	Sg	23 14 31.7	+0.3
SIGR				eSg	Sg	23 14 32.3	+0.9
AYVA	Ayvalik	0.57	121	iP	Pg	23 14 28.5	-0.1
AYVA	Ayvalik	0.57	121	P	Pg	23 14 28.5	-0.1
GADA	Gvkgeada	0.60	348	PG	Pg	23 14 28.6	-0.5
GADA	Gvkgeada	0.60	348	P	Pg	23 14 28.7	-0.4
GADA				S	Sg	23 14 37.5	+0.6
GADA	Gvkgeada	0.60	348	P	Pg	23 14 28.7	-0.4
GADA				S	Sg	23 14 37.5	+0.6
LIA	Limnos Island	0.74	294	P	Pg	23 14 31.9	+0.2
LIA				S	Sg	23 14 41.2	-0.1
LIA				AML	AML	23 14 44.9	
	comp=E,343μm,0.3s						
LIA				AML	AML	23 14 45.4	
	comp=N,346μm,0.4s						
LIA	Limnos Island	0.74	294	P	Pg	23 14 31.7	0.0
LIA				S	Sb	23 14 42.1	-0.4
LIA	Limnos Island	0.74	294	P	Pg	23 14 31.6	-0.1
LIA				S	Sg	23 14 41.7	+0.4
DKL	Dikili	0.84	129	PG	Pg	23 14 33.2	-0.5
DKL	Dikili	0.84	129	ePg	Pg	23 14 33.2	-0.5
GELI	Tayfur-Gelibol	0.85	22	PG	Pg	23 14 33.4	-0.5
GELI	Tayfur-Gelibol	0.85	22	ePg	Pg	23 14 33.4	-0.5
LPK	Lapseki	0.94	35	PG	Pg	23 14 34.4	-1.1
LPK	Lapseki	0.94	35	ePg	Pg	23 14 34.4	-1.1
SMTH	Samothraki Isl	0.95	335	P	Pg	23 14 35.5	-0.3
SMTH				S	Sb	23 14 48.8	0.0
SMTH				AML	AML	23 14 52.1	
	comp=E,104μm,0.2s						
SMTH				AML	AML	23 14 52.4	
	comp=N,89μm,0.2s						
SMTH	Samothraki Isl	0.95	335	P	Pg	23 14 35.4	-0.4
SMTH				S	Sb	23 14 48.9	+0.1
SMTH	Samothraki Isl	0.95	335	P	Pg	23 14 35.5	-0.3
SMTH				S	Sb	23 14 48.9	+0.1
FOCM	Fo¨§a	1.03	150	PG	Pg	23 14 36.9	-0.4
FOCM	Fo¨§a	1.03	150	ePg	Pg	23 14 36.9	-0.4
ERIK	Erikli-Kesan	1.12	18	PN	Pg	23 14 38.2	-0.8
ERIK	Erikli-Kesan	1.12	18	ePn	Pg	23 14 38.2	-0.8
ENEZ	Enez	1.13	4	PN	Pg	23 14 38.7	-0.5
ENEZ	Enez	1.13	4	ePn	Pg	23 14 38.7	-0.5
PSRA	Psara	1.13	200	P	Pg	23 14 37.9	-1.3
PSRA				S	Sb	23 14 54.0	+0.2
PSRA				AML	AML	23 14 57.4	
	comp=N,313μm,0.2s						
PSRA				AML	AML	23 14 57.5	
	comp=E,326μm,0.5s						
PSRA	Psara	1.13	200	P	Pg	23 14 38.0	-1.2
PSRA				S	Sb	23 14 53.9	+0.2
BALY	Balya	1.21	83	iP	Pg	23 14 39.1	-1.6
BALY				iS	Sg	23 14 56.0	-0.4
BALY	Balya	1.21	83	P	Pg	23 14 39.1	-1.6
CHOS	Chios island	1.22	180	PN	Pg	23 14 40.5	-0.4
CHOS	Chios island	1.22	180	P	Pg	23 14 39.9	-0.9
CHOS				S	Sg	23 14 56.1	-0.6
CHOS				AML	AML	23 15 00.5	
	comp=N,165μm,0.4s						
CHOS				AML	AML	23 15 01.4	
	comp=E,280μm,0.3s						
CHOS	Chios island	1.22	180	P	Pg	23 14 39.7	-1.2
CHOS				S	Sb	23 14 57.2	+0.8
CHOS	Chios island	1.22	180	P	Pg	23 14 39.7	-1.2
CHOS	Chios island	1.22	180	ePn	Pg	23 14 40.5	-0.4
CHOS				S	Sg	23 14 56.1	-0.6
KRBG	Karabiga-Canak	1.23	50	PN	Pg	23 14 40.5	-0.6
KRBG	Karabiga-Canak	1.23	50	ePn	Pg	23 14 40.5	-0.6
ALN	Alexandroupoli	1.29	359	PN	Pn	23 14 41.5	0.0
ALN	Alexandroupoli	1.29	359	P	Pn	23 14 41.1	-0.4
ALN				S	Sg	23 14 58.4	-0.6
ALN				AML	AML	23 14 59.6	
	comp=E,71μm,0.4s						
ALN				AML	AML	23 15 01.8	
	comp=N,59μm,0.3s						
ALN	Alexandroupoli	1.29	359	P	Pn	23 14 41.0	-0.4
ALN				S	Sb	23 14 58.9	+0.5
ALN	Alexandroupoli	1.29	359	P	Pn	23 14 41.1	-0.4
ALN	Alexandroupoli	1.29	359	ePn	Pn	23 14 41.5	0.0
ALN				S	Sg	23 14 58.7	-0.3
STEP	BALIKESIR_Sava	1.30	100	iP	Pn	23 14 41.9	+0.2
STEP	BALIKESIR_Sava	1.30	100	P	Pn	23 14 41.9	+0.2
KESN	Edirne-Kesan	1.31	21	iP	Pg	23 14 41.9	-0.7
KESN	Edirne-Kesan	1.31	21	P	Pg	23 14 41.9	-0.7
GONE	Gonen-Balikesi	1.33	70	PN	Pn	23 14 42.2	+0.2
GONE	Gonen-Balikesi	1.33	70	ePn	Pn	23 14 42.2	+0.2
RKY	Sarkoy-Tekirda	1.38	38	PN	Pn	23 14 43.1	+0.3
RKY	Sarkoy-Tekirda	1.38	38	ePn	Pn	23 14 43.1	+0.3
BALB	Balikesir	1.41	88	PN	Pn	23 14 43.3	+0.2
BALB	Balikesir	1.41	88	ePn	Pn	23 14 43.3	+0.2
EDC	Edincik	1.57	61	PN	Pn	23 14 45.8	+0.4
EDC	Edincik	1.57	61	ePn	Pn	23 14 45.8	+0.4
RDO	Rodhopi	1.59	346	PN	Pn	23 14 46.2	+0.6
RDO	Rodhopi	1.59	346	P	Pn	23 14 45.6	-0.1
RDO				S	Sn	23 15 05.7	-0.5
RDO				AML	AML	23 15 09.4	
	comp=E,25μm,0.2s						
RDO				AML	AML	23 15 12.8	
	comp=N,22μm,0.3s						
RDO	Rodhopi	1.59	346	P	Pn	23 14 45.1	-0.5
RDO	Rodhopi	1.59	346	P	Pn	23 14 45.5	-0.1
RDO	Rodhopi	1.59	346	ePn	Pn	23 14 46.2	+0.6
RDO				S	Sn	23 15 06.0	-0.2
OUR	Ouranopolis	1.75	295	PN	Pn	23 14 48.7	+0.8
OUR	Ouranopolis	1.75	295	P	Pn	23 14 48.5	+0.6
OUR	Ouranopolis	1.75	295	P	Pn	23 14 47.4	-0.5
OUR	Ouranopolis	1.75	295	P	Pn	23 14 48.0	+0.1
OUR	Ouranopolis	1.75	295	ePn	Pn	23 14 48.7	+0.8
KAVA	Kavala	1.82	320	P	Pn	23 14 48.7	-0.2
KAVA				AML	AML	23 15 10.5	
	comp=E,36μm,0.4s						
KAVA				AML	AML	23 15 11.8	
	comp=N,34μm,0.5s						
KAVA	Kavala	1.82	320	P	Pn	23 14 48.6	-0.2
KAVA	Kavala	1.82	320	P	Pn	23 14 48.6	-0.2
KCTX	Karacabey (Bur	1.88	69	PN	Pn	23 14 50.1	+0.4
KCTX	Karacabey (Bur	1.88	69	ePn	Pn	23 14 50.1	+0.4
SBT3	Marmara-Eregli	1.94	48	PN	Pn	23 14 51.2	+0.9
SBT3	Marmara-Eregli	1.94	48	ePn	Pn	23 14 51.2	+0.9
PLG	Polygyros	2.15	292	P	Pn	23 14 51.9	-1.4
AYDB	Zeytinkoy-Aydi	2.19	139	PN	Pn	23 14 54.7	+0.7
AYDB	Zeytinkoy-Aydi	2.19	139	ePn	Pn	23 14 54.7	+0.7
EDRB	Edirne	2.30	13	PN	Pn	23 14 56.2	+0.8
EDRB	Edirne	2.30	13	ePn	Pn	23 14 56.2	+0.8
SLVT	Silivri	2.31	45	PN	Pn	23 14 56.3	+0.8
SLVT	Silivri	2.31	45	ePn	Pn	23 14 56.3	+0.8
SBT5	Esenkoy-Cinarc	2.39	64	PN	Pn	23 14 57.6	+1.0
SBT5	Esenkoy-Cinarc	2.39	64	ePn	Pn	23 14 57.6	+1.0
SRS	Serrai	2.42	309	P	Pn	23 14 57.9	+0.9
NVR	Nevrokopi	2.42	317	P	Pn	23 14 56.8	-0.2
ISK	Istanbul-Kandi	2.72	57	PN	Pn	23 15 02.1	+1.0
ISK	Istanbul-Kandi	2.72	57	ePn	Pn	23 15 02.1	+1.0
YLV	Yalova	2.72	68	PN	Pn	23 15 02.2	+1.0
YLV	Yalova	2.72	68	ePn	Pn	23 15 02.2	+1.0
KNT	Kendrikon	2.87	304	P	Pn	23 15 04.3	+1.0

ISK ***21*** *23:25:37.6, 39.°19N×42.°28E, h8km, ML1.7/4*
ATA ***21*** *23:25:37.6±0.8, 39.°17N×42.°27E, h15km±7km, ML2.5, MW2.5*
ISCJB ***21*** *23:25:38.7±0.5, 39.°16N±0.°03×42.°28E±0.°03, h11km±5km, Error ellipse: s-maj=5.4km s-min=4.1km az=151.9*
CSEM ***21*** *23:25:38.1±0.2, 39.°18N×42.°26E, h15km, ML2.3, Error ellipse: s-maj=6.3km s-min=4.6km az=152.0*
DDA ***21*** *23:25:39.0, 39.°19N×42.°27E, h7km, Ml2.3*

ISC 21 23:25:38.0±1.1, 39.°19N±0.°03×42.°27E±0.°02, h16km±8km, n24, σ0°57/44, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKAR	Karacoban	0.17	294	iP	Pg	23 25 42.4	-0.1
EKAR				eS	Sb	23 25 46.9	+0.6
EKAR				IAML		23 25 49.6	
	comp=Z,56nm,0.6s						
EKAR	Karacoban	0.17	294	iP	Pg	23 25 42.5	-0.1
EKAR				iS	Sb	23 25 47.2	+0.9
EKAR	Karacoban	0.17	294	P	Pg	23 25 42.5	-0.1
EKAR				S	Sb	23 25 47.2	+0.9
TUTA	Tutak	0.47	63	eP	Pb	23 25 48.1	-0.1
TUTA				eS	Sb	23 25 55.5	+0.5
TUTA				IAML		23 25 57.3	
	comp=Z,64nm,0.3s						
TUTA	Tutak	0.47	63	iP	Pb	23 25 48.1	-0.1
TUTA				iS	Sb	23 25 55.7	+0.7
TUTA	Tutak	0.47	63	P	Pb	23 25 48.1	-0.1
TUTA				S	Sb	23 25 55.7	+0.7
ADCV	BITLIS_Adilcev	0.52	137	iP	Pb	23 25 49.1	+0.2
ADCV				iS	Sb	23 25 57.7	+1.5
ADCV	BITLIS_Adilcev	0.52	137	P	Pb	23 25 49.1	+0.2
ADCV				S	Sb	23 25 57.7	+1.5
VRTB	Varto-Mus	0.63	268	PG	Pg	23 25 50.5	0.0
VRTB				SG	Sb	23 25 59.7	+0.3
VRTB	Varto-Mus	0.63	268	iP	Pg	23 25 50.5	0.0
VRTB				iS	Sn	23 26 01.4	-0.9
VRTB	Varto-Mus	0.63	268	P	Pg	23 25 50.5	0.0
VRTB				eSg	Sb	23 25 59.7	+0.3
VRTB				S	Sn	23 26 01.4	-0.9
GURO	Guroymak-BITLI	0.66	196	PG	Pg	23 25 50.9	-0.1
GURO				SG	Sb	23 26 00.7	+0.4
GURO	Guroymak-BITLI	0.66	196	ePg	Pg	23 25 50.9	-0.1
GURO				eSg	Sb	23 26 00.7	+0.4
AGRB	Hanur-Agry	0.68	55	PG	Pg	23 25 51.1	-0.4
AGRB				SG	Sb	23 26 00.9	-0.1
AGRB	Hanur-Agry	0.68	55	ePg	Pg	23 25 51.1	-0.4
AGRB				eSg	Sb	23 26 00.9	-0.1
EATA	Eleskirt	0.70	14	eP	Pb	23 25 52.3	+0.3
EATA				eS	Sn	23 26 04.0	-0.2
EATA	Eleskirt	0.70	14	iP	Pb	23 25 52.4	+0.4
EATA				iS	Sn	23 26 03.9	-0.2
EATA	Eleskirt	0.70	14	P

h25km±17km, mb3.5/3, Error ellipse: s-maj=11.6km s-min=5.9km az=27.4

ISC 21 23:31:34.2±2.5, 39.48N±0.05×143.41E±0.08, h6km±14km, n20, σ0.96/28, mb3.6/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**1.23**	**275**	P	**Pb**	**23 31 57.9**	**0.0**
MIYJ				*e*S	**Sn**	**23 32 15.2**	**+0.3**
JTH	**Tanohata**	**1.28**	**292**	P	**Pg**	**23 31 58.8**	**+0.1**
OFUJ	**Ofunato**	**1.41**	**254**	P	**Pn**	**23 32 00.0**	**-0.4**
JOM	**Ohasama**	**1.64**	**270**	P	**Pb**	**23 32 04.1**	**-0.7**
JOM				*e*S	**Sb**	**23 32 25.4**	**-0.3**
JANG	**Nango**	**1.71**	**302**	P	**Pn**	**23 32 04.4**	**-0.1**
JMK	**Ichinoseki**	**1.78**	**254**	P	**Pn**	**23 32 05.5**	**0.0**
JIO	**Ouri**	**1.90**	**238**	P	**Pn**	**23 32 06.0**	**-1.2**
JIO				*e*S	**Sn**	**23 32 29.4**	**-2.1**
JRG	**Rokugo**	**2.15**	**269**	P	**Pn**	**23 32 11.7**	**+1.1**
JTM	**Tenmabayashi**	**2.22**	**307**	P	**Pn**	**23 32 12.6**	**+1.1**
JAH	**Hinai**	**2.25**	**289**	P	**Pn**	**23 32 12.8**	**+0.9**
JAH				*e*S	**Sb**	**23 32 41.8**	**-1.5**
JOU	**Okura**	**2.41**	**243**	P	**Pn**	**23 32 14.0**	**-0.2**
JOU				S	**Sn**	**23 32 44.0**	**-0.1**
JYK	**Kaneyama**	**2.44**	**258**	P	**Pn**	**23 32 15.2**	**+0.7**
JNBK	**Urakawa-nobuka**	**2.84**	**350**	P	**Pn**	**23 32 20.3**	**+0.2**
JNBK				S	**Sn**	**23 32 55.1**	**+0.5**
JFT	**Otama**	**3.10**	**232**	P	**Pn**	**23 32 23.2**	**-0.5**
JFT				S	**Sn**	**23 33 00.5**	**-0.7**
JCH	**Churui**	**3.13**	**359**	P	**Pn**	**23 32 23.4**	**-0.7**
JCH				*e*S	**Sn**	**23 32 59.9**	**-1.9**
MAT	**Matsushiro**	**5.05**	**236**	P	**Pn**	**23 32 51.6**	**+1.2**
MJAR	**Matsushiro Arr**	**5.05**	**236**	Pn	**Pn**	**23 32 51.6**	**+1.2**
	1.4nm,0.3s,baz=44,slow=14,SNR=15						
MJAR				LR	LR	23 35 05.4	
	comp=Z,55nm,19.0s,baz=55,slow=41						
MKAR	**Makanchi Array**	**44.20**	**300**	P	**P**	**23 39 44.2**	**+0.3**
	0.4nm,0.8s,baz=82,slow=8.4,SNR=3.6						
KURBB	**Kurchatov Arra**	**45.78**	**306**	P	**P**	**23 39 56.4**	**0.0**
	0.3nm,0.4s,baz=82,slow=8.2,SNR=4.0						
WRA	**Warramunga Arr**	**59.72**	**190**	P	**P**	**23 41 40.9**	**+1.3**
	0.6nm,0.9s,baz=13,slow=7.5,SNR=3.5						

JSN 21 23:40:12.2±0.3, 17.51N×78.57W, h15km, MD3.7, Jamaica region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCJ	**Malvern**	**0.94**	**64**	*i* S	Sb	23 40 40.8	-1.6
MCJ				*i* S	Sg	23 40 41.1	-1.5
BBJ	**Bamboo Saint A**	**1.51**	**55**	*i* P	Pn	23 40 37.5	-1.4
STH	**Stony Hill**	**1.77**	**71**	*i* P	Pn	23 40 40.8	-1.5

*IDC **21** 23:52:50.6±0.5, 32.65S×178.61W, h0km, mb4.7/17, mb1 4.9/20, mb1mx4.7/47, mbtmp4.7/20, ML4.8/3, MS4.9/38, Ms1 4.9/38, ms1mx4.9/45, Error ellipse: s-maj=16.7km s-min=13.3km az=172.0*

*MOS **21** 23:52:52.9±1.0, 32.80S×178.69W, h18km, mb5.1/19, MS5.1/12, Error ellipse: s-maj=14.5km s-min=12.3km az=116.4*

*GCMT **21** 23:52:53.3±0.1, 32.75S×178.15W, h20km, MW5.4/118, Moment Tensor Solution. s103,c183; s118,c202; Duration: 1s2 Moment tensor: Scale 10^{17}Nm; M_{rr}1.16±.03; $M_{\theta\theta}$-0.10±.02; $M_{\phi\phi}$-1.06±.02; $M_{r\theta}$0.22±.04; $M_{\theta\phi}$-0.29±.01; $M_{r\phi}$1.13±.04; Best double couple: $M_0$1.62800×10^{17} NP1:ϕs12.00000°, δ68.00000°, λ87.00000°. NP2:ϕs199.00000°, δ23.00000°, λ96.00000°. Principal axes: T 1.6380, Plg67.0000°, Azm278.0000°; N -0.0200, Plg2.0000°, Azm13.0000°; P -1.6170, Plg22.0000°, Azm104.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **21** 23:52:53.3±2.5, 32.83S×178.62W, h14km±15km, mb5.2/36 Error ellipse: s-maj=8.3km s-min=5.9km az=138.0*

*ISCJB **21** 23:52:54.9±0.2, 32.95S±0.04×178.60W±0.04, h33km, mb5.2/80, MS5.0/50, Error ellipse: s-maj=6.3km s-min=3.4km az=136.8*

*BJI **21** 23:52:55.4, 32.67S×178.02W, h45km, mb5.2/16, mB5.6/17, Ms5.3/19, Ms7 5.1/18*

ISC 21 23:52:55.5±0.3, 32.77S±0.04×178.44W±0.06, h32km, n356, σ2.10/323, mb5.3/78, MS5.0/50, 12C-17D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.53**	**7**	Pn	**Pn**	**23 53 45.0**	**-3.1**
	100nm,0.3s,baz=100,slow=9.4,SNR=8.6						
RAO				Sn	**Sn**	**23 54 25.6**	**-3.2**
	689nm,0.3s,baz=253,slow=19,SNR=5.8						
RAO	**Raoul Island**	**3.53**	**7**	*e*Pn	**Pn**	**23 53 45.4**	**-2.7**
RAO				Sn	**Sn**	**23 54 25.6**	**-3.2**
MXZ	**Matakaoa Point**	**5.48**	**208**	*e*Pn	**Pn**	**23 54 13.2**	**-1.6**
URZ	**Urewera**	**6.57**	**212**	Pn	**Pn**	**23 54 27.1**	**-2.8**
	18nm,0.3s,baz=276,slow=3.9,SNR=86						
URZ				Sn	**Sn**	**23 55 41.8**	**-1.9**
	41nm,0.3s,baz=248,slow=3.7,SNR=7.6						
URZ	**Urewera**	**6.57**	**212**	*e*Pn	**Pn**	**23 54 28.0**	**-1.9**
URZ				Sn	**Sn**	**23 55 41.8**	**-1.9**
OUZ	**Omahuta**	**7.06**	**248**	*e*Pn	**Pn**	**23 54 36.4**	**-0.1**
BKZ	**Black Stump Fm**	**7.59**	**211**	*e*Pn	**Pn**	**23 54 41.5**	**-2.5**
HIZ	**Hauiti**	**7.92**	**222**	*e*Pn	**Pn**	**23 54 47.5**	**-0.8**
BFZ	**Birch Farm**	**8.98**	**207**	*e*Pn	**Pn**	**23 54 58.4**	**-4.5**
SNZO	**South Karori**	**10.13**	**211**	*e*Pn	**Pn**	**23 55 14.9**	**-3.8**
THZ	**Tophouse**	**11.32**	**215**	*e*Pn	**Pn**	**23 55 32.4**	**-2.6**
KHZ	**Kahutara**	**11.54**	**211**	*e*Pn	**Pn**	**23 55 34.4**	**-3.6**
LTZ	**Lake Taylor**	**12.40**	**214**	*e*Pn	**Pn**	**23 55 48.2**	**-1.6**
OXZ	**Oxford**	**12.93**	**213**	*e*Pn	**Pn**	**23 55 52.2**	**-4.7**
MOZ	**McQueen's Vall**	**12.96**	**210**	*e*Pn	**Pn**	**23 55 54.3**	**-3.0**
MOZ				*e*Sn	Sn	23 58 07.6	-13
RPZ	**Rata Peaks**	**13.69**	**214**	Pn	Pn	23 55 58.5	-8.8
	0.9nm,0.3s,baz=53,slow=20,SNR=2.6						
RPZ				Sn	Sn	23 58 24.1	-14
	5.4nm,0.3s,baz=332,slow=14,SNR=7.7						
RPZ	**Rata Peaks**	**13.69**	**214**	*e*Pn	**Pn**	**23 56 03.3**	**-4.0**
RPZ				*e*Sn	Sn	23 58 27.6	-11
FOZ	**Fox Glacier**	**14.16**	**217**	*e*Pn	**Pn**	**23 56 12.5**	**-1.2**
LBZ	**Lake Benmore**	**14.60**	**214**	*e*Pn	**Pn**	**23 56 18.2**	**-1.6**
ODZ	**Otahua Downs**	**14.90**	**211**	*e*Pn	**Pn**	**23 56 23.0**	**-0.8**
WKZ	**Wanaka**	**15.49**	**215**	*e*Pn	**Pn**	**23 56 30.7**	**-0.9**
	182nm,1.8s						
MLZ	**Mavora Lakes**	**16.32**	**216**	*e*Pn	**Pn**	**23 56 41.1**	**-1.1**
	46nm,1.0s						
WHZ	**Wether Hill Ro**	**16.79**	**215**	*e*Pn	**Pn**	**23 56 47.5**	**-0.5**
	193nm,1.9s						
DZM	**Mont Dzumac**	**17.12**	**305**	Pn	**P**	**23 56 54.7**	**+0.8**
	0.5nm,0.3s,baz=122,slow=16,SNR=9.1						
DZM				LR	LR	00 02 25.8	
	comp=Z,16μm,18.7s,baz=130,slow=34						
DZM	**Mont Dzumac**	**17.12**	**305**	*e*P	**P**	**23 56 57.7**	**+3.8**
	348nm,1.2s						
DZM				*e*LR	LR	00 00 52.0	
	14μm,22.9s						
AFI	**Afiamalu**	**19.73**	**19**	Pn	**P**	**23 57 22.0**	**-0.6**
	3.7nm,0.3s,baz=37,slow=20,SNR=3.7						
AFI	**Afiamalu**	**19.73**	**19**	*e*P	**Pn**	**23 57 23.9**	**-0.4**
	214nm,1.0s						
AFI	**Afiamalu**	**19.73**	**19**	*e*P	**Pn**	**23 57 23.9**	**-0.4**
AFI				pmax	pmax		
	comp=Z,214nm,1.0s						
RAR	**Rarotonga**	**20.19**	**60**	P	**P**	**23 57 26.2**	**-1.3**
	comp=Z,36nm,0.8s,baz=187,slow=1.5,SNR=3.8						
RAR				LR	LR	00 06 07.5	
	comp=Z,2μm,18.2s,baz=226,slow=39						
ARMA	**Armidale**	**25.57**	**267**	P	**P**	**23 58 22.7**	**+1.0**
	baz=25,SNR=4.5						
ARMA	**Armidale**	**25.57**	**267**	*e*P	**P**	**23 58 22.3**	**+0.6**
	comp=Z,108nm,1.7s						
CNB	**Canberra Magne**	**26.74**	**256**	P	**P**	**23 58 33.7**	**+1.4**
	baz=26,SNR=4.3						
TBI	**Tubuai**	**27.16**	**77**	*e*LQ	LQ	00 03 49.9	
	comp=Z,3μm,25.8s						
TBI				*e*LR	LR	00 05 21.0	
	comp=Z,4μm,29.2s,baz=242						
TBI	**Tubuai**	**27.16**	**77**	*e*T	T	00 26 06.2	
	comp=Z,21nm,0.4s						
EIDS	**Eidsvold**	**27.58**	**278**	P	**P**	**23 58 40.4**	**+0.6**
	baz=27,SNR=4.5						
EIDS	**Eidsvold**	**27.58**	**278**	*e*P	**P**	**23 58 40.6**	**+0.8**
	comp=Z,26nm,0.8s						
YNG	**Young**	**27.63**	**258**	P	**P**	**23 58 41.9**	**+1.7**
	baz=27,SNR=4.5						
RMQ	**Roma**	**29.12**	**274**	P	**P**	**23 58 55.5**	**+1.9**
	baz=29,SNR=15						
PAE	**Paea**	**30.00**	**67**	*e*P	**P**	**23 59 02.0**	**+0.7**
	comp=Z,14nm,1.0s						
PAE	**Paea**	**30.00**	**67**	*e*T	T	00 29 35.9	
	comp=Z,5.1nm,0.3s						
PPT2	**Papeete2**	**30.05**	**67**	*e*S	**S**	**00 03 53.4**	**-4.8**
	comp=Z,433nm,26.0s						
PPT2				*e*LQ	LQ	00 05 07.6	
	comp=Z,2μm,21.8s						
PPT2				*e*LR	LR	00 06 39.5	
	comp=Z,3μm,24.5s,baz=230						
PPT2	**Papeete2**	**30.05**	**67**	*e*T	T	00 29 41.1	
	comp=Z,9.5nm,0.3s						
PPTF	**Pamatai, Papee**	**30.05**	**67**	*e*P	**P**	**23 59 05.0**	**+3.1**
	comp=Z,146nm,1.2s						
PPT	**Papeete**	**30.06**	**67**	LR	LR	00 07 56.5	
	comp=Z,2μm,21.7s,baz=244,slow=30						
TIAR	**Tiarei**	**30.24**	**67**	*e*P	**P**	**23 59 04.3**	**+0.8**
	comp=Z,22nm,0.8s						
TIAR	**Tiarei**	**30.24**	**67**	*e*T	T	00 30 56.4	
	comp=Z,2.4nm,0.2s						
CMSA	**Cobar Meteorol**	**30.31**	**263**	P	**P**	**23 59 05.1**	**+1.1**
	baz=30,SNR=22						
HNR	**Honiara**	**30.62**	**314**	LR	LR	00 10 21.3	
	comp=Z,2μm,18.5s,baz=165,slow=34						
PMOR	**Pomarlorio Ree**	**32.88**	**65**	*e*P	**P**	**23 59 27.6**	**+0.9**
	comp=Z,229nm,1.5s						
QLP	**Quilpie**	**32.90**	**271**	P	**P**	**23 59 27.5**	**+0.7**
	baz=33,SNR=6.8						
VAH	**Vaihoa**	**32.94**	**65**	*e*P	**P**	**23 59 27.8**	**+0.6**
	comp=Z,117nm,1.3s						
VAH	**Vaihoa**	**32.94**	**65**	*e*T	T	00 33 16.7	
	comp=Z,13nm,0.3s						
STKA	**Stephens Creek**	**33.65**	**260**	P	**P**	**23 59 32.9**	**-0.5**
	comp=Z,5.4nm,0.8s,baz=45,slow=4.3,SNR=3.8						
STKA				LR	LR	00 12 33.3	
	comp=Z,6μm,18.3s,baz=97,slow=35						
STKA	**Stephens Creek**	**33.65**	**260**	*e*P	**P**	**23 59 33.0**	**-0.3**
	comp=Z,8.2nm,1.5s						
CTA	**Charters Tower**	**33.89**	**283**	P	**P**	**23 59 35.7**	**+0.2**
	comp=Z,27nm,0.6s,baz=115,slow=9.9,SNR=28						
CTA				LR	LR	00 11 57.1	
	comp=Z,2μm,18.1s,baz=115,slow=34						
CTAO	**Charts Tower**	**33.89**	**283**	*e*P	**P**	**23 59 35.9**	**+0.4**
	comp=Z,126nm,1.5s						
CTAO	**Charters Tower**	**33.89**	**283**	*e*P	**P**	**23 59 35.9**	**+0.4**
CTAO				pmax	pmax		
	comp=Z,126nm,1.5s						
MTSU	**Mount Surprise**	**36.45**	**284**	P	**P**	**23 59 57.8**	**+0.2**
	baz=36,SNR=35						
QIS	**Mount Isa**	**39.18**	**277**	P	**P**	**00 00 22.0**	**+1.4**
	baz=39,SNR=4.1						
PMG	**Port Moresby**	**39.34**	**298**	P	**P**	**00 00 21.6**	**-0.4**
	comp=Z,25nm,0.4s,baz=150,slow=20,SNR=6.9						
PMG				LR	LR	00 14 44.2	
	comp=Z,2μm,19.6s,baz=124,slow=34						
PMG	**Port Moresby**	**39.34**	**298**	*e*P	**P**	**00 00 21.9**	**-0.1**
	comp=Z,62nm,1.0s						
RKT	**Rikitea**	**39.35**	**87**	*e*LR	LR	00 11 03.0	
	comp=Z,4μm,29.0s,baz=248						
COEN	**Coen**	**39.62**	**289**	P	**P**	**00 00 25.2**	**+0.8**
	baz=39,SNR=3.9						
TAOE	**Nuku Hiva Isla**	**42.62**	**65**	*e*S	**S**	**00 07 05.5**	**-4.7**
	comp=Z,594nm,24.3s						
TAOE				*e*LR	LR	00 12 27.4	
	comp=Z,2μm,26.9s						
AS01	**Alice Springs**	**42.63**	**270**	*e*P	**P**	**00 00 48.4**	**-0.7**
AS31	**Alice Springs**	**42.67**	**270**	*e*P	**P**	**00 00 48.6**	**-0.8**
	comp=Z,12nm,0.7s						
ASAR	**Alice Springs**	**42.67**	**270**	P	**P**	**00 00 48.3**	**-1.1**
	comp=Z,18nm,0.6s,baz=107,slow=7.4,SNR=150						
ASAR				S	**S**	**00 07 09.3**	**-1.5**
	comp=Z,2.4nm,0.9s,baz=111,slow=15,SNR=5.8						
ASAR				LR	LR	00 18 14.7	
	comp=Z,2μm,18.7s,baz=124,slow=36						
WB2	**Warramunga Arr**	**43.86**	**275**	*e*P	**P**	**00 00 57.8**	**-1.3**
	comp=Z,85nm,1.2s						
WRAB	**Tennant Creek**	**43.87**	**275**	*e*P	**P**	**00 00 58.7**	**-0.3**
	comp=Z,74nm,1.1s						
WRAB	**Tennant Creek**	**43.87**	**275**	*i* P	**P**	**00 00 58.1**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,23nm,0.8s						
WRA	**Warramunga Arr**	**43.87**	**275**	P	**P**	**00 00 57.8**	**-1.4**
	comp=Z,34nm,0.6s,baz=115,slow=7.7,SNR=201						
WRA				S	**S**	**00 07 28.3**	**-0.1**
	comp=Z,1.7nm,0.8s,baz=114,slow=14,SNR=5.2						
WRA				LR	LR	00 17 58.5	
	comp=Z,2μm,21.5s,baz=115,slow=34						
FORT	**Forrest**	**45.13**	**258**	P	**P**	**00 01 07.7**	**-1.3**
	baz=45,SNR=10						
FORT	**Forrest**	**45.13**	**258**	*e*P	**P**	**00 01 07.9**	**-1.1**
	comp=Z,66nm,0.8s						
SBA	**Scott Base**	**45.66**	**184**	*e*P	**P**	**00 01 12.0**	**-0.6**
	comp=Z,88nm,1.4s						
SBA	**Scott Base**	**45.66**	**184**	P	**P**	**00 01 11.9**	**-0.6**
SBA				pmax	pmax		
	comp=Z,88nm,1.4s						
VNDA	**Vanda**	**45.71**	**186**	P	**P**	**00 01 14.8**	**+1.8**
	comp=Z,3.0nm,0.9s,baz=16,slow=6.0,SNR=19						
VNDA				LR	LR	00 17 29.8	
	comp=Z,1μm,19.0s,baz=6.0,slow=32						
VNDA	**Vanda**	**45.71**	**186**	*e*P	**P**	**00 01 14.2**	**+1.2**
	comp=Z,26nm,1.6s						
WRKA	**Warakurna**	**46.86**	**265**	P	**P**	**00 01 20.6**	**-2.2**
	baz=46,SNR=26						
KDU	**Kakadu**	**49.01**	**282**	P	**P**	**00 01 39.2**	**-0.2**
	baz=49,SNR=4.2						
JOHN	**Johnston Islan**	**49.95**	**11**	*e*P	**P**	**00 01 49.0**	**+2.6**
	comp=Z,252nm,1.3s						
MTN	**Manton Dam**	**50.03**	**281**	P	**P**	**00 01 46.2**	**-1.0**
	baz=50,SNR=8.7						
MTN	**Manton Dam**	**50.03**	**281**	*e*P	**P**	**00 01 46.4**	**-0.8**
	comp=Z,29nm,0.8s						
KNRA	**Kununurra**	**50.56**	**277**	P	**P**	**00 01 51.7**	**+0.5**
	baz=50,SNR=5.0						
CASY	**Casey**	**52.89**	**209**	*e*P	**P**	**00 02 07.3**	**-0.6**
	comp=Z,24nm,1.0s						
NWAO	**Narrogin (SRO)**	**53.25**	**251**	LR	LR	00 24 45.9	
	comp=Z,1μm,18.2s,baz=316,slow=36						
KLBR	**Kellerberrin**	**53.26**	**253**	P	**P**	**00 02 09.2**	**-2.1**
	baz=53,SNR=5.1						
MEEK	**Meekatharra**	**54.33**	**259**	P	**P**	**00 02 17.3**	**-1.9**
	baz=54,SNR=5.7						
SIJI	**Sorong**	**56.89**	**293**	P	**P**	**00 02 35.7**	**-1.9**
	comp=Z,6.1nm,0.5s,baz=106,slow=6.2,SNR=7.1						
SIJI				LR	LR	00 27 44.7	
	comp=Z,2μm,18.0s,baz=124,slow=37						
QSPA	**South Pole Qui**	**57.35**	**180**	*e*P	**P**	**00 02 40.3**	**-0.1**
	comp=Z,319nm,1.0s						
SOEI	**Soe**	**57.36**	**280**	*e*P	**P**	**00 02 40.8**	**-0.3**
	comp=Z,149nm,1.2s						
BATI	**Baumata**	**57.62**	**279**	P	**P**	**00 02 40.6**	**-2.2**
	comp=Z,10nm,0.4s,baz=90,slow=1.0,SNR=3.1						
BATI				LR	LR	00 27 27.4	
	comp=Z,2μm,19.6s,baz=154,slow=36						
GUMO	**Guam**	**57.92**	**317**	LR	LR	00 25 06.4	
	comp=Z,735nm,19.9s,baz=120,slow=34						
RPN	**Rapa Nui**	**59.19**	**104**	LR	LR	00 22 13.1	
	comp=Z,719nm,20.8s,baz=239,slow=30						
MIR	**Mirnyy**	**59.86**	**208**	*i* P	**P**	**00 02 58.0**	**+0.5**
MIR				pmax	pmax		
	comp=Z,84nm,2.0s						
DAV	**Davao City (W)**	**66.30**	**296**	LR	LR	00 32 17.4	
	comp=Z,472nm,19.9s,baz=120,slow=36						
MAW	**Mawson**	**69.97**	**201**	P	**P**	**00 04 02.9**	**-0.3**
	comp=Z,3.1nm,0.7s,baz=105,slow=8.3,SNR=5.9						
MAW				LR	LR	00 33 27.2	
	comp=Z,2μm,20.4s,baz=111,slow=35						
MAW	**Mawson**	**69.97**	**201**	*e*P	**P**	**00 04 03.6**	**+0.3**
	comp=Z,5.7nm,1.3s						
PMSA	**Palmer Station**	**70.27**	**156**	LR	LR	00 28 57.6	
	comp=Z,498nm,18.1s,baz=240,slow=31						
LEM	**Lembang**	**72.84**	**273**	LR	LR	00 36 50.5	
	comp=Z,1μm,20.2s,baz=112,slow=36						
TGY	**Tagaytay City**	**74.30**	**299**	LR	LR	00 34 41.1	
	comp=Z,351nm,21.7s,baz=164,slow=34						
SYO	**Syowa Base**	**74.73**	**193**	*i* P	**P**	**00 04 29.8**	**-1.9**
SYO	**Syowa Base**	**74.73**	**193**	*i* PcP	**PcP**	**00 04 43.6**	**-2.1**
SNAA	**Sanae**	**75.81**	**179**	LR	LR	00 37 45.3	
	comp=Z,1μm,18.0s,baz=182,slow=36						
VNA3	**Neumayer Olymp**	**75.98**	**176**	P	**P**	**00 04 38.7**	**-0.2**
VNA2	**Neumayer--Watz**	**76.40**	**177**	P	**P**	**00 04 42.8**	**+1.6**
	baz=177,slow=3.7						
NVL	**N'lazarevskaya**	**76.50**	**183**	*e*P	P	00 04 34.7	-7.1
NVL				*e*S	**S**	**00 14 21.3**	**-3.6**
NVL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
NVL				MLR	MLR		
	comp=Z,880nm,18.0s						
VNA1	**Neumayer--Stat**	**76.64**	**177**	P	P	00 04 47.9	+5.4
JOW	**Kunigami**	**77.98**	**313**	LR	LR	00 38 40.6	
	comp=Z,759nm,18.0s,baz=148,slow=35						
MJAR	**Matsushiro Arr**	**79.98**	**326**	LR	LR	00 36 14.3	
	comp=Z,440nm,21.2s,baz=135,slow=33						
JNU	**Nakatsue**	**81.08**	**319**	LR	LR	00 36 36.9	
	comp=Z,263nm,20.2s,baz=133,slow=32						
PLCA	**Paso Flores**	**81.17**	**133**	P	**P**	**00 05 08.8**	**+0.7**
	comp=Z,6.6nm,1.0s,baz=260,slow=5.6,SNR=5.3						
PLCA				LR	LR	00 35 24.9	
	comp=Z,532nm,18.2s,baz=259,slow=31						
PLCA	**Paso Flores**	**81.17**	**133**	*e*P	**P**	**00 05 09.4**	**+1.3**
	comp=Z,53nm,1.4s						
YUK	**Yuzh-Kuril'sk**	**83.09**	**335**	*e*P	**P**	**00 05 16.8**	**-0.8**
YUK						00 05 25.1	
YUK				*e*S	**S**	**00 15 30.1**	**-4.7**
PSI	**Prapat**	**85.32**	**276**	LR	LR	00 44 05.2	
	comp=Z,1μm,21.1s,baz=91,slow=36						
PEL	**Peldehue**	**85.55**	**127**	*e*P	**P**	**00 05 31.8**	**+1.1**
	comp=Z,206nm,1.2s						
PEL	**Peldehue**	**85.55**	**127**	P	**P**	**00 05 31.8**	**+1.1**
PEL				pmax	pmax		
	comp=Z,210nm,1.2s						
GSI	**Gunungsitoli**	**85.64**	**274**	*e*P	**P**	**00 05 30.3**	**-1.1**
	comp=Z,37nm,1.1s						
KSRS	**Korea Array**	**85.91**	**320**	P	**P**	**00 05 31.9**	**-0.1**
	comp=Z,1.4nm,0.8s,baz=140,slow=5.9,SNR=3.9						
KSRS				LR	LR	00 42 44.6	
	comp=Z,373nm,18.0s,baz=132,slow=35						
KSRS	**Korea Array**	**85.91**	**320**	P	**P**	**00 05 32.0**	**-0.1**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KSRS				MLR	MLR		
	comp=Z,373nm,18.0s						
KSAR	**Wonju Array Be**	**85.92**	**320**	P	**P**	**00 05 31.9**	**-0.2**
KS01	**Wonju Array Si**	**85.94**	**320**	*e*P	**P**	**00 05 32.5**	**+0.3**
LPIG	**La Paz**	**86.09**	**58**	LR	LR	00 36 31.6	
	comp=Z,847nm,19.6s,baz=216,slow=30						
YSS	**Yuzh-Sakhalins**	**86.71**	**335**	*i* P	**P**	**00 05 37.7**	**+1.9**
YSS				pmax	pmax		
	comp=Z,14nm,1.0s						
NJ2	**Nanjing**	**87.50**	**311**	*e*P	**P**	**00 05 43.3**	**+3.3**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MONP2	**Monument Peak**	**87.62**	**48**	P	**P**	**00 05 41.5**	**+0.7**
	baz=228						
PET	**Petropavlovsk**	**87.73**	**346**	*e*P	P	00 05 32.3	-8.2
PET				*e*S	**S**	**00 16 12.9**	**-7.3**
PET				*e*PS	**PnS**	**00 17 21.4**	**-3.7**
PET				*e*SS	**SS**	**00 22 07.9**	**-0.2**
PET				pmax	pmax		
	comp=Z,200nm,11.6s						
BFSC	**Mount Baldy Ra**	**87.76**	**46**	P	**P**	**00 05 42.6**	**+1.2**
	baz=227						
EDW2	**Edwards Air Fo**	**87.99**	**46**	P	**P**	**00 05 44.1**	**+1.7**
	baz=227						
PETK	**Petropavlovsk-**	**88.01**	**346**	P	**P**	**00 05 41.9**	**0.0**
	comp=Z,2.2nm,0.4s,baz=106,slow=7.9,SNR=3.8						
PETK				LR	LR	00 41 28.0	
	comp=Z,648nm,19.4s,baz=167,slow=33						
PETK	**Petropavlovsk-**	**88.01**	**346**	*e*P	**P**	**00 05 42.2**	**+0.3**
PETK	**Petropavlovsk-**	**88.01**	**346**	P	**P**	**00 05 41.9**	**0.0**
PETK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
PFO	**Pinyon Flats O**	**88.08**	**47**	*e*P	**P**	**00 05 44.4**	**+1.5**
	comp=Z,35nm,1.5s						
ISA	**Isabella, Lake**	**88.23**	**45**	P	**P**	**00 05 44.0**	**+0.5**
	baz=227						
ISA	**Isabella, Lake**	**88.23**	**45**	*e*P	**P**	**00 05 44.2**	**+0.7**
	comp=Z,54nm,1.7s						
BELC	**Belle Mtn. Jos**	**88.62**	**47**	P	**P**	**00 05 47.1**	**+1.6**
	baz=228						
BC3	**Big Chuckawall**	**88.73**	**48**	P	**P**	**00 05 47.9**	**+2.0**
	baz=229						
CMB	**Columbia Colle**	**88.76**	**42**	*e*P	**P**	**00 05 46.6**	**+0.7**
	comp=Z,42nm,1.6s						
USRK	**Ussuriysk Ar.**	**88.93**	**327**	LR	LR	00 44 08.8	
	comp=Z,310nm,18.3s,baz=129,slow=35						
HEC	**Hector,Ludlow**	**88.96**	**47**	P	**P**	**00 05 48.2**	**+1.2**
	baz=228						
GSC	**Goldstone, Bar**	**88.99**	**46**	P	**P**	**00 05 48.2**	**+1.1**
	baz=228						
GSC	**Goldstone, Bar**	**88.99**	**46**	*e*P	**P**	**00 05 48.7**	**+1.6**
	comp=Z,52nm,1.7s						
CWC	**Cottonwood Cre**	**89.00**	**45**	P	**P**	**00 05 48.3**	**+1.1**
	baz=227						
AFDM	**Forest Hills D**	**89.08**	**41**	*e*P	**P**	**00 05 49.4**	**+2.0**
	comp=Z,25nm,1.4s						
MPMC	**Manual Prospec**

comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=Z,410nm,17.0s
CN2 LR LR
comp=Z,370nm,17.0s
CN2 LR LR
comp=Z,400nm,17.0s
J05D Fort Rock, OR 91.99 38 P **P 00 06 01.0 +0.1**
baz=225
BMN Battle Mountai 92.19 42 *e*P **P 00 06 03.7 +1.7**
comp=Z,15nm,1.4s
LCMT Little Creek M 92.29 47 *e*P **P 00 06 05.2 +2.7**
comp=Z,3.7nm,0.9s
GYA Guiyang 92.40 300 *e*P **P 00 06 05.0 +1.7**
GYA pP sP 00 06 17.8 +0.6
GYA PP **PP 00 09 49.0 +4.2**
GYA SKS **SKSac 00 16 34.3 -0.3**
GYA S **S 00 17 03.0 -1.9**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,130nm,6.2s
H04A Detroit Lake 92.50 36 *e*P **P 00 06 05.7 +2.5**
comp=Z,68nm,1.9s
PINE Pine Mountain 92.50 38 *e*P **P 00 06 04.4 +1.0**
comp=Z,53nm,1.6s
U15A North Rim 92.50 48 *e*P **P 00 06 06.3 +2.6**
KNB Kanab 92.55 47 *e*P **P 00 06 06.6 +2.9**
comp=Z,36nm,1.9s
CCUT Cedar City 92.56 46 *e*P **P 00 06 06.9 +3.0**
comp=Z,17nm,1.8s
KLR Kul'dur 92.89 330 P **P 00 06 05.2 +0.5**
comp=Z,0.1nm,0.3s,baz=84,slow=3.6,SNR=4.3
KLR Kul'dur 92.89 330 *i* P **P 00 06 06.5 +1.7**
NNA Nana 93.12 106 LR LR 00 38 49.9
comp=Z,637nm,19.9s,baz=247,slow=30
J08A Circle Bar Ran 93.49 39 *e*P **P 00 06 09.0 +1.2**
comp=Z,13nm,1.2s
MTPU Mount Pierson 93.59 46 *e*P **P 00 06 10.0 +1.2**
comp=Z,25nm,2.0s
CMAR Chiang Mai Arr 93.83 289 PP PP 00 09 56.0 +0.1
comp=Z,0.5nm,0.3s,baz=148,slow=7.1,SNR=3.3
TX31 Lajitas Ar. Si 93.97 58 *e*P **P 00 06 11.9 +1.5**
TXAR Lajitas Array 93.97 58 P **P 00 06 12.6 +2.2**
comp=Z,0.9nm,0.9s,baz=212,slow=3.2,SNR=2.8
TXAR LR LR 00 43 15.7
comp=Z,593nm,18.0s,baz=0.0,slow=32
KMI Kunming 94.55 297 P **P 00 06 15.3 +2.0**
KMI pmax pmax
comp=Z,6.0nm,0.6s
KMI pmax pmax
comp=Z,110nm,4.0s
KMI LR LR
comp=Z,200nm,17.6s
KMI LR LR
comp=Z,250nm,16.9s
KMI LR LR
comp=Z,280nm,19.4s
G08A Pilot Rock 94.56 38 *e*P **P 00 06 14.3 +1.6**
comp=Z,24nm,1.6s
MFID Camas Ranch 94.96 40 *e*P **P 00 06 16.2 +1.6**
comp=Z,9.4nm,1.2s
BMO Blue Mountains 95.12 39 *e*P **P 00 06 15.3 0.0**
comp=Z,16nm,1.7s
ANMO Albuquerque 95.34 52 *e*P **P 00 06 17.2 +0.5**
comp=Z,3.0nm,1.1s
ANMO Albuquerque 95.34 52 *i* P **P 00 06 19.4 +2.7**
ANMO pmax pmax
comp=Z,3.0nm,1.1s
HVU Hansel Valley 95.61 43 *e*P **P 00 06 19.6 +1.9**
comp=Z,16nm,1.6s
HLID Hailey 95.83 41 P **P 00 06 19.0 +0.3**
baz=230
HLID Hailey 95.83 41 *e*P **P 00 06 19.6 +0.9**
comp=Z,5.5nm,1.2s
F10A Beach Ranch, E 95.91 38 *e*P **P 00 06 21.5 +2.6**
comp=Z,6.0nm,1.1s
LPAZ La Paz 97.51 115 P Pdif 00 06 29.5 +1.9
comp=Z,1.0nm,0.7s,baz=73,slow=2.4,SNR=4.8
LPAZ LR LR 00 40 58.5
comp=Z,187nm,20.6s,baz=226,slow=30
HHC Hu-ho-hao-te 97.61 314 *e*P Pdif 00 06 28.8 +2.0
HHC PP **PP 00 10 32.3 +7.3**
HHC S **S 00 17 50.0 +0.4**
HHC pmax pmax
comp=Z,21nm,1.5s
HHC pmax pmax
comp=Z,130nm,8.6s
HHC LR LR
comp=Z,380nm,19.6s
HHC LR LR
comp=Z,370nm,18.2s
HHC LR LR
comp=Z,550nm,17.7s
PDAR Pinedale Array 98.10 44 P Pdif 00 06 30.1 +1.0
comp=Z,0.5nm,0.7s,baz=178,slow=3.5,SNR=4.6
PDAR LR LR 00 43 51.8
comp=Z,704nm,20.2s,baz=240,slow=31
JTS JuntasAbangare 98.39 83 LR LR 00 41 28.4
comp=Z,323nm,20.4s,baz=324,slow=30
CPUP Villa Florida 98.80 129 LR LR 00 46 14.2
comp=Z,482nm,18.2s,baz=231,slow=32
LZH Lanzhou 99.83 307 *e*P **Pdif 00 06 40.3 +3.5**
LZH pP sP 00 06 50.8 0.0
LZH sP pP 00 06 54.5 +7.4
LZH *e*S **S 00 18 10.8 +2.0**
LZH sS sS 00 18 32.0 +6.2
LZH SS **SS 00 24 58.6 -3.5**
LZH pmax pmax
comp=Z,40nm,1.1s
LZH pmax pmax
comp=Z,220nm,5.7s
LZH LR LR
comp=Z,1μm,15.5s
LZH LR LR
comp=Z,1μm,15.7s
LZH LR LR
comp=Z,2μm,19.0s
ILAR Eielson Array 100.31 13 PP PP 00 10 39.9 -5.1
comp=Z,0.4nm,0.8s,baz=212,slow=8.2,SNR=2.8
BILL Biiibino 101.15 354⇓*e*P **Pdif 00 06 41.6 -0.1**
BILL pmax pmax
comp=Z,3.0nm,1.7s
BILL MLR MLR
comp=Z,749nm,18.0s
WMQ Urumqi 114.38 308 PKP PKPdf 00 11 32.8 +1.0
WMQ LR LR
comp=Z,440nm,19.1s
WMQ LR LR
comp=Z,490nm,19.7s
WMQ LR LR
comp=Z,410nm,19.5s
MK31 Makanchi Array 118.99 309 *e*PKPdf **PKPdf 00 11 39.4 -1.1**
MKAR Makanchi Array 118.99 309 PKP **PKPdf 00 11 39.6 -1.0**
comp=Z,1.6nm,0.6s,baz=205,slow=1.4,SNR=13
MKAR Makanchi Array 118.99 309 *e*PKPdf **PKPdf 00 11 39.4 -1.1**
MAKZ Makanchi 119.20 309 *e*PKPdf **PKPdf 00 11 39.7 -1.3**
ZALV Zalesovo Beam 119.53 318 PKP **PKPdf 00 11 39.6 -1.7**
comp=Z,1.7nm,0.6s,baz=182,slow=2.1,SNR=8.7
NVS Novosibirsk 120.66 318 *i* PKIKP **PKPdf 00 11 42.1 -1.3**
KSH Kashi 121.10 300 PKP **PKPdf 00 11 45.4 +0.4**
KSH PP **PP 00 13 18.6 +3.0**
KSH SKS **SKSdf 00 18 53.8 -0.9**
KSH SKKS **SKKSac 00 20 08.3 -4.0**
KSH AMB AMB
comp=Z,270nm,4.4s
KSH LR LR
comp=Z,220nm,8.2s
KSH LR LR
comp=Z,180nm,4.7s
KSH LR LR
comp=Z,520nm,7.0s
NRIK Noril'sk 121.63 335 PKP **PKPdf 00 11 44.7 -0.2**
comp=Z,3.6nm,0.8s,baz=95,slow=2.4,SNR=7.2
KURK Kurchatov 122.40 313 *e*PKPdf **PKPdf 00 11 45.9 -1.0**
KURK Kurchatov 122.40 313 *i* PKIKP **PKPdf 00 11 48.4 +1.5**
KURBB Kurchatov Arra 122.43 313 PKP **PKPdf 00 11 45.9 -1.1**
comp=Z,2.5nm,0.5s,baz=112,slow=1.8,SNR=15
FRU Bishkek 123.06 303 *e*PKIKP **PKPdf 00 11 48.0 -0.5**
KBL Kabul 124.78 292 *e*PKPdf **PKPdf 00 11 52.3 0.0**
PQI Presque Isle 126.37 53 *e*PKPdf **PKPdf 00 11 54.3 -0.4**
BVAR Borovoye Array 127.81 315 PKP **PKPdf 00 11 56.4 -0.9**
comp=Z,2.8nm,0.5s,baz=80,slow=0.8,SNR=21
BRVK Borovoye 127.88 315 *e*PKPdf **PKPdf 00 11 57.4 +0.1**
BRVK Borovoye 127.88 315 *i* PKIKP **PKPdf 00 11 56.5 -0.9**
SVE Sverdlovsk 133.47 319 *e*PKIKP **PKPdf 00 12 07.4 -0.4**
GEYT Alibeck 134.18 293 PKP **PKPdf 00 12 10.5 +0.7**
comp=Z,1.1nm,0.6s,baz=288,slow=1.4,SNR=3.8
ARU Arti 134.65 319 *e*PKPdf **PKPdf 00 12 10.1 0.0**
ARU Arti 134.65 319 *i* PKIKP **PKPdf 00 12 09.6 -0.5**
ARU 00 19 16.5
AKTO Aktyubinsk 135.39 311 PKP **PKPdf 00 12 11.9 +0.3**
comp=Z,2.2nm,0.6s,baz=108,slow=5.7,SNR=6.6
AKTO Aktyubinsk 135.39 311 PKIKP **PKPdf 00 12 12.0 +0.3**
AKTO pmax pmax
comp=Z,2.0nm,0.6s
PRGR Permogore 139.67 329 *e*PKIKP **PKPdf 00 12 21.2 +2.0**
PRGR pmax pmax
comp=Z,6.0nm,0.7s
RAYN Ar Rayn 140.41 268 *e*PKPdf **PKPdf 00 12 24.5 +2.6**
RAYN Ar Rayn 140.41 268 PKIKP **PKPdf 00 12 24.4 +2.6**
ARCES ARCESS Array B 140.81 347 PKP **PKPdf 00 12 20.7 -0.3**
comp=Z,2.4nm,0.5s,baz=69,slow=1.6,SNR=10
KLMR Klimovskoe 142.65 330 *e*PKIKP **PKPdf 00 12 28.1 +3.6**
KLMR pmax pmax
comp=Z,24nm,1.2s
KLMR Klimovskoe 142.65 330 *e*PKPdf **PKPdf 00 12 28.2 +3.7**
KLMR AMP 00 12 30.3
comp=Z,24nm,1.2s
GNI Garni 144.77 295 PKP PKPbc 00 12 28.7 +0.4
comp=Z,2.8nm,0.4s,baz=0.0,slow=4.0,SNR=6.1
GNI Garni 144.77 295 *e*PKPdf **PKPdf 00 12 28.9 -0.3**
GNI *e*PKPdf PKPbc 00 12 29.2 +0.9
GNI Garni 144.77 295 *i* PKIKP **PKPdf 00 12 29.6 +0.4**
ZEI Tsey 145.39 299 *e*PKIKP **PKPbc 00 12 29.5 -0.7**
ZEI pmax pmax
comp=Z,13nm,0.6s
NCK Nalchik 145.57 300 *i* PKIKP **PKPab 00 12 30.9 +0.1**
MOS Moscow 146.04 323α *i* PKIKP **PKPdf 00 12 29.4 -1.2**
MOS pmax pmax
comp=Z,125nm,1.0s
KBZ Khabaz 146.06 301 PKPbc **PKPbc 00 12 31.8 -0.1**
comp=Z,2.8nm,0.7s,baz=87,slow=6.0,SNR=12
KIV Kislovodsk 146.20 301 *e*PKPdf **PKPdf 00 12 31.2 -0.2**
KIV Kislovodsk 146.20 301 *e*PKIKP **PKPdf 00 12 30.0 -1.4**
KIV pmax pmax
comp=Z,16nm,1.0s
NEY Neytrino 146.23 300*c* *i* PKIKP **PKPdf 00 12 31.3 -0.3**
VORR Voronezh 146.81 316 *e*PKIKP **PKPdf 00 12 31.0 -1.0**
VORR pmax pmax
comp=Z,300nm,1.8s
OBN Obninsk 146.86 323 *e*PKPdf **PKPdf 00 12 32.4 +0.4**
OBN Obninsk 146.86 323*c* *i* PKIKP **PKPdf 00 12 32.5 +0.5**
OBN *i* 00 12 37.5
OBN *e*PPS PPS 00 28 41.1
OBN SS SS 00 34 56.0 +0.2
OBN pmax pmax
comp=Z,161nm,1.8s
OBN pmax pmax
comp=Z,122nm,1.9s
PUL Pulkovo 146.97 333 *i* PKP2 **PKPbc 00 12 33.5 -0.5**
VSR Storozhevoye 146.99 315 *e*PKIKP **PKPdf 00 12 31.7 -0.7**
VSR pmax pmax
comp=Z,60nm,1.6s
VORD Divnogorie 147.00 315 *e*PKIKP **PKPdf 00 12 32.3 -0.1**
VORD pmax pmax
comp=Z,10.0nm,0.7s
FINES FINESS Array B 147.22 338 PKPbc **PKPdf 00 12 33.4 +1.0**
comp=Z,23nm,0.5s,baz=54,slow=2.6,SNR=87
SOC Sochi 148.37 301*c* *i* PKIKP **PKPdf 00 12 35.3 +0.4**
SOC *i* 00 12 39.7
SOC *e*PPP PPP 00 19 24.4
SOC pmax pmax
comp=Z,6.0nm,0.4s
SOC pmax pmax
comp=Z,13nm,0.6s
VSU Vasula 149.21 334*c* *i* PKIKP **PKPbc 00 12 38.8 -1.2**
ANN Anapa 149.81 304 *i* PKHKP PKPpre 00 12 40.4
ANN pmax pmax
comp=Z,34nm,0.7s
SLMH Al Salmeh 149.94 287 *e*P PKPpre 00 12 32.2
ASF Jabal al Asfar 150.27 279 PKPbc **PKPbc 00 12 42.9 -0.7**
comp=Z,3.1nm,0.6s,baz=90,slow=2.2,SNR=12
TOTH TOTAH 150.85 281 *e*P **PKPbc 00 12 43.8 -1.1**
QASN Qassioun 151.00 281 *e*P **PKPdf 00 12 40.0 +0.4**
NB2 NORSAR Subarra151.02 350 PKP **PKPbc 00 12 43.3 -1.1**
comp=Z,174nm,2.0s,baz=17,slow=2.6
NB2 NORSAR Subarra151.02 350 PKP **PKPbc 00 12 43.3 -1.1**
baz=17,slow=2.6
BRBR Barbar 151.26 281 *e*P **PKPdf 00 12 38.2 -1.9**
ANDN Andirin 151.27 289 *i* P **PKPbc 00 12 44.4 -1.5**
IZAR Zarasai 151.30 331 *e*P **PKPbc 00 12 44.3 -0.8**
IZAR IAmb IAmb 00 12 53.6
comp=Z,9.9nm,0.9s
IDID Didziasalis 151.38 329 *e*P **PKPbc 00 12 44.7 -0.7**
IDID IAmb IAmb 00 12 53.7
comp=Z,17nm,1.0s
MICGM Minsk 151.40 327⇓*e*P **PKPbc 00 12 44.0 -1.4**
MICGM PM 00 12 45.0
comp=Z,0.3nm,2.0s
MICGM *e*LR LR 01 21 16.0
MNK Minsk 151.40 327⇓*e*PKIKP **PKPbc 00 12 44.0 -1.4**
ISAL Salakas 151.47 330 *e*P **PKPbc 00 12 45.5 0.0**
ISAL IAmb IAmb 00 12 53.9
comp=Z,12nm,0.9s
HFS Hagfors 151.47 347 PKPbc **PKPbc 00 12 43.9 -1.6**
comp=Z,16nm,0.8s,baz=93,slow=3.2,SNR=22
IIGN Ignalina 151.58 330 *e*P **PKPbc 00 12 46.1 +0.3**
IIGN IAmb IAmb 00 12 54.2
comp=Z,24nm,1.0s
NACGM Naroch 151.64 329 *e* **PKPbc 00 12 44.0 -1.9**
YURE YUREGIR 151.82 288 *i* P **PKPbc 00 12 46.5 -0.6**
GULE Gulek 152.51 289 *i* P **PKPbc 00 12 48.2 -0.6**
LIC Lamto 152.89 165 *e*P **PKPbc 00 12 50.7 +0.7**
comp=Z,66nm,1.1s
AKASG Malin Array Be 152.91 320 PKPbc **PKPbc 00 12 47.9 -1.0**
comp=Z,3.0nm,0.4s,baz=54,slow=2.6,SNR=25
KIEV Kiev 152.92 320 *e*PKPbc **PKPbc 00 12 49.0 0.0**
KIEV Kiev 152.92 320 *i* PKIKP **PKPbc 00 12 46.6 -2.3**
KERG Konya-Eregli 153.03 289 *i* P **PKPbc 00 12 48.1 -1.8**
KIC Kosan Boka 153.08 166 *e*P **PKPbc 00 12 52.9 +2.4**
comp=Z,82nm,1.3s
TIC Toumodi 153.30 165 *e*P **PKPbc 00 12 50.2 -0.8**
BRTR Keskin Array B 153.31 294 PKPbc **PKPbc 00 12 49.9 -0.5**
comp=Z,3.8nm,0.5s,baz=143,slow=3.5,SNR=36
DBIC Dimbokro 153.36 166 PKPbc **PKPbc 00 12 51.0 -0.1**
comp=Z,3.9nm,0.7s,baz=210,slow=4.8,SNR=5.6
GULN MERSIN_Gulnar 153.48 286 *i* P **PKPbc 00 12 49.5 -1.2**
ANTO Ankara 153.95 295⇑*i*P **PKPbc 00 12 51.9 +0.2**
ANTO Ankara 153.95 295⇑PKIKP **PKPbc 00 12 51.9 +0.2**
SORM Soroca 154.66 315⇓*i*P **PKPbc 00 12 51.2 -1.6**
SORM Soroca 154.66 315⇓PKIKP **PKPbc 00 12 51.2 -1.6**
KIS Kishinev 154.87 312 *e*PKP **PKPdf 00 12 43.0 -1.6**
KIS Kishinev 154.87 312 *e*PP PP 00 16 36.0 -8.8
KIS *e*L L 01 17 40.0
KIS LRM MLR 01 22 18.0
comp=Z,300nm,20.0s
KIS Kishinev 154.87 312 *e*PKIKP **PKPdf 00 12 43.0 -1.6**
KIS *e* 00 12 48.0
KIS *e* 00 13 08.0
CFR Carcaliu 156.03 309⇓*i*P **PKPdf 00 12 51.5 +5.3**
CFR Carcaliu 156.03 309⇓PKIKP **PKPdf 00 12 51.5 +5.3**
LVV L'vov 156.16 322 *e*PKIKP **PKPdf 00 12 47.1 +0.8**
VRI Vrincioaia 156.66 311⇓*i*P PKPdf 00 12 58.2 +11
VRI Vrincioaia 156.66 311⇓PKIKP PKPdf 00 12 58.2 +11
BURAR Bucovina Array 156.75 317⇓*i*P PKPdf 00 12 58.5 +11
BURAR Bucovina Array 156.75 317⇓PKIKP PKPdf 00 12 58.5 +11
MLR Muntele Rosu 157.32 311⇑⇑*i*P PKPdf 00 12 57.2 +9.1
MLR Muntele Rosu 157.32 311⇑PKIKP PKPdf 00 12 57.2 +9.1
UZH Uzhgorod 157.79 322 *e*PKIKP **PKPdf 00 12 56.1 +7.7**
UZH *e* 00 13 06.1
ARR Arges 158.20 312⇓*i*P **PKPdf 00 12 49.0 -0.1**
OKC Ostrava-Krasne 158.96 329 *e*PKP PKPpre 00 12 44.3
OKC *ex* x 00 17 02.3
OKC AMS AMS 01 36 30.0
comp=Z,400nm,20.3s
OKC Ostrava-Krasne 158.96 329 *e*PKIKP PKPpre 00 12 44.3
OKC *e* 00 17 02.3
OKC MLR MLR
comp=Z,400nm,20.3s
MORC Moravsky Berou 159.26 330 *e*PKP **PKPdf 00 12 47.9 -2.3**
MORC *e* 00 13 03.4
UPC Upice 159.31 333 *e*PKP PKPpre 00 12 46.0
UPC AMS AMS 01 29 20.0
comp=Z,500nm,21.9s
UPC Upice 159.31 333 *e*PKIKP PKPpre 00 12 46.0
UPC MLR MLR
comp=Z,500nm,21.9s
DPC Dobruska-Polom 159.32 332 *e*PKP PKPpre 00 12 46.0
DPC AMS AMS 01 37 20.0
comp=Z,500nm,21.2s
DPC Dobruska-Polom 159.32 332 *e*PKIKP PKPpre 00 12 46.0
DPC MLR MLR
comp=Z,500nm,21.2s
CLL Collm 159.66 339 *e*PKPdf **PKPdf 00 12 51.0 +0.5**
CLL *e*PKPdf(2) 00 13 03.0
CLL ⇓*i*PKPab **PKPab 00 13 28.3 -0.8**
comp=Z,28nm,1.7s
CLL *i* PKPab(2) 00 13 39.8
comp=Z,47nm,1.6s
CLL *e*PP **PP 00 17 12.0 +1.6**
CLL *e*PPP PPP 00 20 54.0
CLL *e*PSKS 00 27 31.0
CLL *e*SKKSdf SKKSdf 00 28 25.0 +7.3
CLL *e*PPS PPS 00 30 36.0
CLL *e*SS **SS 00 37 14.0 -1.0**
CLL *e*SSS SSS 00 43 27.0
CLL *e*PSSrev 00 45 24.0
CLL *e*SSSS 00 47 30.0
CLL LmH 01 32 00.0
comp=N,400nm,19.0s
CLL LmH 01 32 00.0
comp=E,300nm,21.0s
CLL LmV 01 43 00.0
comp=Z,500nm,19.9s
CLL Collm 159.66 339⇓*e*PKIKP **PKPdf 00 12 51.0 +0.5**
CLL *i* 00 13 28.3
CLL pmax pmax
comp=Z,28nm,1.7s
CLL MLR MLR
comp=Z,500nm,19.9s
BRG Berggiesshubel 159.74 337 *e*PKP PKPdf 00 13 03.8 +13
comp=Z,39nm,1.9s
BRG Berggiesshubel 159.74 337 *e*PKP PKPab 00 13 41.3 +12
comp=Z,46nm,1.8s
BRG Berggiesshubel 159.74 337 *e*PKIKP PKPdf 00 13 03.8 +13
BRG pmax pmax
comp=Z,39nm,2.0s
BRG pmax pmax
comp=Z,46nm,1.8s
JAVC Velka Javorina 159.89 328 *e*PKP **PKPdf 00 12 49.9 -1.1**
BZS Buzias 159.91 316⇓*i*P **PKPdf 00 12 50.5 -0.5**
BZS Buzias 159.91 316⇓PKIKP **PKPdf 00 12 50.5 -0.5**
VRAC Vranov 160.02 330 *e*PKP **PKPdf 00 12 49.7 -1.3**
PRA Prague 160.25 335 AMS AMS 01 36 40.0
comp=Z,700nm,20.2s
PRU Pruhonice 160.28 335 *e*PKP PKPpre 00 12 47.6
PRU *ex* x 00 17 10.5
PRU AMS AMS 01 36 50.0
comp=Z,600nm,19.4s
PRU Pruhonice 160.28 335 *e*PKIKP PKPpre 00 12 47.6
PRU *e* 00 17 10.5
PRU MLR MLR
comp=Z,600nm,19.4s
KRUC Moravsky 160.29 330 *e*PKP **PKPdf 00 12 49.2 -2.1**
TORD Torodi Ar. Bea 160.47 180 PKP **PKPdf 00 12 51.8 -0.8**
comp=Z,1.1nm,1.1s,baz=260,slow=2.9,SNR=4.5
TORD PKPab **PKPab 00 13 34.6 +1.2**
comp=Z,2.6nm,0.9s,baz=181,slow=3.6,SNR=6.9
NKC Novy Kostel 160.78 338 AMS AMS 01 37 10.0
comp=Z,500nm,18.4s
KHC Kasperske Hory 161.34 335 *e*PKP **PKPdf 00 12 49.5 -3.0**
KHC *ex* x 00 13 05.5
KHC *ex* x 00 13 48.5
KHC *ex* x 00 17 13.8
KHC AMS AMS 01 34 30.0
comp=Z,600nm,18.5s
KHC Kasperske Hory 161.34 335 *e*PKIKP **PKPdf 00 12 49.5 -3.0**
KHC MLR MLR
comp=Z,600nm,18.5s
CONA Conrad Observa 161.39 329 PKPdf **PKPdf 00 12 53.2 +0.6**
comp=Z,4.2nm,1.4s
GERES GERESS Array B 161.53 334 PKP **PKPdf 00 12 52.0 -0.7**
comp=Z,0.1nm,0.3s,baz=20,slow=3.1,SNR=3.3
GERES PKPab **PKPab 00 13 35.6 -1.9**
comp=Z,0.7nm,0.6s,baz=28,slow=6.0,SNR=5.4
ARSA Arzberg 162.05 328 PKPdf **PKPdf 00 12 53.6 +0.3**
comp=Z,4.4nm,1.4s
MOA Molln 162.13 331 pPKPdf PKPdf 00 13 03.1 +10
comp=Z,3.6nm,1.5s
SOKA Soboth 162.70 327 *e*PKPdf **PKPdf 00 12 54.2 +0.2**
comp=Z,3.4nm,1.0s
VISS Visnje 163.44 326 *e*PKPdf **PKPdf 00 12 52.8 -1.8**
BOJS Bojanci 163.46 324 *e*PKPdf **PKPdf 00 12 52.8 -1.9**
RETA Reutte 163.72 337 PKPab **PKPab 00 13 46.5 -0.6**
comp=Z,6.8nm,1.4s
ABTA Abfaltersbach 163.72 332 PKPdf **PKPdf 00 12 54.6 -0.4**
comp=Z,6.4nm,1.3s
MOTA Moosalm 163.73 336 pPKPdf PKPdf 00 13 06.2 +11
comp=Z,3.4nm,0.9s
JAVS Javornik 163.74 327 *i* PKPdf **PKPdf 00 12 52.0 -3.0**
DAVA Damuels 164.18 339 *e*PKPdf **PKPdf 00 12 58.0 +2.5**
comp=Z,7.7nm,1.5s
PGAV Gavieira, Arco 167.95 38 *e*PKPdf **PKPdf 00 13 04.1 +5.5**
POLO Lamas de Olo 168.62 38 *e*PKPdf **PKPdf 00 13 03.9 +4.8**
PCAS Casmilo, Conde 169.11 45 *e*PKPdf **PKPdf 00 13 03.3 +4.0**
MVO Moncorvo 169.16 37 *e*PKPdf **PKPdf 00 13 05.0 +5.6**
PMAFR Mafra 169.25 52 *e*PKPdf **PKPdf 00 13 04.9 +5.5**
MTE Manteigas 169.44 41 *e*PKPdf **PKPdf 00 13 00.8 +1.2**
PMRV Marv??o 170.17 45 *e*PKPdf **PKPdf 00 13 04.4 +4.4**
PNCL Nicolau / Gran 170.19 54 *e*PKPdf **PKPdf 00 13 02.4 +2.4**
PFVI Vila Bisbo 170.42 60 *e*PKPdf **PKPdf 00 13 04.0 +3.9**
PCVE Castro Verde 170.76 56 *e*PKPdf **PKPdf 00 13 05.6 +5.3**
PBDV Barranco-do-Ve 171.02 58 *e*PKPdf **PKPdf 00 13 05.8 +5.3**
PVAQ Vaqueiros 171.10 56 *e*PKPdf **PKPdf 00 13 06.1 +5.6**
ESDC Sonseca Array 171.79 31 PKP **PKPdf 00 13 01.8 +0.9**
comp=Z,1.0nm,0.9s,baz=90,slow=1.5,SNR=5.2
ESDC PKPab **PKPab 00 14 22.5 -0.4**
comp=Z,1.1nm,0.9s,baz=320,slow=4.0,SNR=3.1

NIED ***21*** *23:58:00, 39°.40N×143°.70E, h14km, Mw3.8 Best double couple: M0=5.16000×10^14 NP1:φs=192.00000°, δ39.00000°, λ78.00000°. NP2:φs=27.00000°, δ52.00000°, λ100.00000°.*
ISCJB ***21*** *23:58:13.0±0.8, 39°.42N±0°.04×143°.72E±0°.08, h11km, mb3.9/10, MS4.8/2, Error ellipse: s-maj=9.4km s-min=4.6km az=29.8*
IDC ***21*** *23:58:12.1±2.2, 39°.41N×143°.95E, h0km, mb3.8/7, mb1 3.8/10, mb1mx3.6/74, mbtmp3.8/10, ML3.3/3, MS4.7/2, Ms1 4.7/2, ms1mx3.0/72, Error ellipse: s-maj=42.4km s-min=26.9km az=146.0*
JMA ***21*** *23:58:15.1±0.3, 39°.40N×143°.73E, h40km, M3.7*
NEIC ***21*** *23:58:17.1±0.9, 39°.41N×143°.90E, h35km, mb4.0/2, Error ellipse: s-maj=18.5km s-min=9.0km az=132.0*
ISC 21 23:58:14.3±1.2, 39°.41N±0°.07×143°.64E±0°.09, h11km, n34, σ1§40/35, mb3.9/10, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**1.41**	**277**	P	**Pb**	**23 58 40.1**	**-0.6**
JTH	**Tanohata**	**1.46**	**292**	P	**Pb**	**23 58 40.6**	**-1.0**
OFUJ	**Ofunato**	**1.56**	**258**	P	**Pn**	**23 58 42.2**	**+0.2**
OFUJ				*e*S	**Sn**	**23 59 01.3**	**-1.0**
JOM	**Ohasama**	**1.81**	**273**	P	**Pb**	**23 58 46.3**	**-1.3**
JANG	**Nango**	**1.89**	**301**	P	**Pn**	**23 58 46.2**	**-0.4**
JMK	**Ichinoseki**	**1.93**	**257**	P	**Pn**	**23 58 47.6**	**+0.5**
JMK				*e*S	**Sb**	**23 59 12.0**	**-1.7**
JIO	**Ouri**	**2.02**	**242**	P	**Pn**	**23 58 48.3**	**-0.1**
JIO				*e*S	**Sn**	**23 59 12.4**	**-1.2**
JYK	**Kaneyama**	**2.59**	**260**	P	**Pn**	**23 58 57.3**	**+1.1**
ERM	**Erimo**	**2.62**	**352**	*e*Pn	**Pn**	**23 58 56.6**	**0.0**
JOT	**Ohata**	**2.79**	**316**	*e*S	**Sn**	**23 59 33.1**	**+0.6**
JNBK	**Urakawa-nobuka**	**2.94**	**347**	P	**Pn**	**23 59 01.9**	**+0.9**
JNBK				*e*S	**Sn**	**23 59 37.1**	**+0.8**
JCH	**Churui**	**3.20**	**356**	*e*S	**Sn**	**23 59 41.5**	**-1.3**
JFT	**Otama**	**3.21**	**235**	P	**Pn**	**23 59 05.2**	**+0.5**
ASAJ	**Asahikawa**	**4.76**	**351**	Pn	**Pn**	**23 59 26.6**	**+0.6**
	1.6nm,0.3s,baz=208,slow=24,SNR=4.4						
ASAJ				Sn	**Sn**	**00 00 21.2**	**0.0**
	0.6nm,0.3s,baz=319,slow=20,SNR=3.1						
MAT	**Matsushiro**	**5.16**	**238**	P	**Pn**	**23 59 33.5**	**+2.0**
MJAR	**Matsushiro Arr**	**5.16**	**238**	Pn	**Pn**	**23 59 33.2**	**+1.7**
	2.5nm,0.3s,baz=34,slow=12,SNR=18						
USRK	**Ussuriysk Arr.**	**9.92**	**303**	Pn	**Pn**	**00 00 40.2**	**+3.4**
	0.3nm,0.3s,baz=94,slow=13,SNR=4.0						
JNU	**Nakatsue**	**12.05**	**243**	LR	LR	00 05 29.7	
	comp=Z,140nm,18.2s,baz=127,slow=36						
KSRS	**Korea Array**	**12.48**	**266**	LR	LR	00 04 34.8	
	comp=Z,14nm,21.6s,baz=1.0,slow=30						
KLR	**Kul'dur**	**12.97**	**323**	Pn	**P**	**00 01 26.1**	**-3.0**
	0.0nm,0.3s,baz=121,slow=12,SNR=7.5						

KLR				LR	LR	00 06 40.9	
	comp=Z,6.9nm,19.5s,baz=33,slow=39						
BJT	**Baijiatuau**	**21.11 280**	P		**P**	**00 03 01.4**	**+2.5**
	2.1nm,0.5s						
SONM	**Songino Array**	**28.02 300**	P		**P**	**00 04 06.1**	**+0.7**
	0.6nm,0.5s,baz=87,slow=6.8,SNR=3.6						
ENH	**Enshi**	**29.33 262**	P		**P**	**00 04 18.4**	**+1.3**
	5.0nm,1.1s						
ZALV	**Zalesovo Beam**	**41.65 310**	P		**P**	**00 06 03.5**	**+1.0**
	1.7nm,0.5s,baz=93,slow=7.8,SNR=10.0						
MKAR	**Makanchi Array**	**44.38 300**	P		**P**	**00 06 25.7**	**+1.0**
	0.8nm,0.7s,baz=86,slow=9.0,SNR=7.7						
KURK	**Kurchatov**	**45.88 307**	*e*P		**P**	**00 06 37.3**	**+0.8**
	22nm,0.5s						
KURBB	**Kurchatov Arra**	**45.96 307**	P		**P**	**00 06 37.8**	**+0.7**
	1.9nm,0.6s,baz=79,slow=8.3,SNR=14						
COLA	**College**	**46.13 33**	P		**P**	**00 06 36.8**	**-1.5**
ILAR	**Eielson Array**	**46.55 34**	P		**P**	**00 06 39.9**	**-1.7**
	0.1nm,0.5s,baz=261,slow=6.0,SNR=3.5						
ILAR	**Eielson Array**	**46.55 34**	P		**P**	**00 06 39.9**	**-1.7**
PMG	**Port Moresby**	**48.68 175**	LR		LR	00 24 54.0	
	comp=Z,963nm,20.8s,baz=125,slow=33						
BVAR	**Borovoye Array**	**50.29 311**	P		**P**	**00 07 11.8**	**+1.2**
	0.7nm,0.5s,baz=88,slow=10,SNR=4.9						
FINES	**FINESS Array B**	**67.52 333**	P		**P**	**00 09 10.7**	**+0.6**
	0.8nm,0.7s,baz=352,slow=6.0,SNR=3.5						
TKL	**Tuckaleechee C**	**93.44 37**	LR		LR	00 58 02.0	
	comp=Z,348nm,18.4s,baz=229,slow=38						

IDC ***22*** *00:00:26.5±0.9, 32°.92S×178°.33W, h0km, mb4.6/3, mb1 4.7/5, mb1mx4.1/48, mbtmp4.6/5, ML4.6/2, Error ellipse: s-maj=34.0km s-min=24.2km az=128.0*

NEIC ***22*** *00:00:27.6±2.3, 32°.90S×178°.32W, h9km±14km, mb4.6/9, Error ellipse: s-maj=10.6km s-min=5.6km az=126.0*

ISCJB ***22*** *00:00:28.9±0.6, 32°.98S±0°.07×178°.3W±0°.1, h32km, mb4.8/10, Error ellipse: s-maj=17.1km s-min=7.1km az=30.0*

ISC 22 00:00:31.1±0.6, 32°.84S±0°.08×178°.4W±0°.1, h32km, n33, σ1♀03/35, mb4.8/10, 1C-1D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**3.60**	**6**	Pn	**Pn**	**00 01 26.2**	**-1.5**
	69nm,0.3s,baz=266,slow=18,SNR=3.7						
RAO				Sn	**Sn**	**00 02 02.1**	**-4.0**
	112nm,0.3s,baz=308,slow=19,SNR=3.4						
RAO	**Raoul Island**	**3.60**	**6**	*e*Pn	**Pn**	**00 01 23.6**	**-1.1**
URZ	**Urewera**	**6.54**	**213**	Pn	**Pn**	**00 02 04.6**	**-0.4**
	7.8nm,0.3s,baz=273,slow=3.9,SNR=20						
URZ				Sn	**Sn**	**00 03 17.3**	**-1.3**
	5.7nm,0.3s,baz=158,slow=9.5,SNR=7.5						
SNZO	**South Karori**	**10.10**	**211**	Pn	**Pn**	**00 02 51.7**	**-2.1**
AFI	**Afiamalu**	**19.78**	**19**	P	**P**	**00 04 58.8**	**-0.1**
	6.2nm,0.6s						
RAR	**Rarotonga**	**20.18**	**60**	P	**P**	**00 05 02.8**	**-0.2**
	3.3nm,0.7s						
FUNA	**Funafuti**	**24.30**	**354**	P	**P**	**00 05 46.6**	**+0.8**
	14nm,0.4s						
CTA	**Charters Tower**	**33.96**	**283**	P	**P**	**00 07 13.2**	**+1.4**
	6.5nm,0.6s,baz=111,slow=13,SNR=6.9						
CTAO	**Charters Tower**	**33.96**	**283**	P	**P**	**00 07 12.7**	**+0.9**
	32nm,0.7s						
ASAR	**Alice Springs**	**42.73**	**270**	P	**P**	**00 08 25.6**	**+0.1**
	2.7nm,0.5s,baz=109,slow=7.5,SNR=16						
WRAB	**Tennant Creek**	**43.93**	**275**	P	**P**	**00 08 34.9**	**-0.3**
	1.1nm,0.4s						
WRA	**Warramunga Arr**	**43.94**	**275**	P	**P**	**00 08 34.9**	**-0.3**
	4.5nm,0.4s,baz=114,slow=7.7,SNR=27						
CASY	**Casey**	**52.85**	**209**	*e*P	**P**	**00 09 43.0**	**-0.2**
MBWA	**Marble Bar**	**55.68**	**266**	P	**P**	**00 10 04.8**	**+0.2**
	66nm,1.2s						
SYO	**Syowa Base**	**74.67**	**193⇓**	*e*P	**P**	**00 12 06.8**	**-0.1**
SYO	**Syowa Base**	**74.67**	**193⇑**	*e*PcP	**PcP**	**00 12 20.6**	**-0.5**
COCO	**West Island**	**79.17**	**262**	P	**P**	**00 12 33.1**	**-0.1**
	93nm,0.4s						
TATO	**Taipei**	**81.16**	**307**	P	**P**	**00 12 44.5**	**+0.9**
	4.8nm,0.4s						
CMB	**Columbia Colle**	**88.78**	**42**	P	**P**	**00 13 22.0**	**+0.3**
	2.3nm,0.5s						
SDCO	**Great Sand Dun**	**97.61**	**50**	P	**P**	**00 14 02.9**	**+0.2**
	0.4nm,0.7s						
MKAR	**Makanchi Array**	**119.08**	**309**	PKP	**PKPdf**	**00 19 16.2**	**-0.2**
	0.2nm,0.5s,baz=83,slow=3.5,SNR=2.6						
KURK	**Kurchatov**	**122.49**	**313**	PKP	**PKPdf**	**00 19 22.7**	**0.0**
KURBB	**Kurchatov Arra**	**122.53**	**313**	PKP	**PKPdf**	**00 19 22.7**	**-0.1**
	0.8nm,0.8s,baz=113,slow=2.5,SNR=6.4						
BVAR	**Borovoye Array**	**127.91**	**314**	PKP	**PKPdf**	**00 19 34.0**	**+0.9**
	0.6nm,0.6s,baz=193,slow=5.8,SNR=4.5						
ARU	**Arti**	**134.75**	**319**	*e*PKPdf	**PKPdf**	**00 19 46.6**	**+0.7**
KBZ	**Khabaz**	**146.15**	**301**	PKPbc	**PKPbc**	**00 20 07.8**	**-0.1**
	2.3nm,0.9s,baz=16,slow=6.9,SNR=3.6						
FINES	**FINESS Array B**	**147.31**	**338**	PKPbc	**PKPbc**	**00 20 10.8**	**+0.2**
	9.8nm,0.8s,baz=50,slow=4.3,SNR=27						
NB2	**NORSAR Subarra**	**151.11**	**350**	PKP	**PKPbc**	**00 20 20.1**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=19,slow=2.6						
HFS	**Hagfors**	**151.56**	**347**	PKPbc	**PKPbc**	**00 20 21.2**	**-0.1**
	comp=Z,4.1nm,0.8s,baz=117,slow=0.3,SNR=8.7						
MMAI	**Mount Meron Ar**	**151.72**	**280**	PKPbc	**PKPbc**	**00 20 23.7**	**+1.1**
	comp=Z,3.3nm,0.6s,baz=46,slow=4.2,SNR=15						
AKASG	**Malin Array Be**	**153.00**	**320**	PKPbc	**PKPbc**	**00 20 25.4**	**+0.7**
	comp=Z,0.5nm,0.3s,baz=52,slow=3.1,SNR=8.3						
BRTR	**Keskin Array B**	**153.40**	**294**	PKPbc	**PKPbc**	**00 20 26.2**	**0.0**
	comp=Z,1.5nm,0.7s,baz=130,slow=4.5,SNR=9.7						
TORD	**Torodi Ar. Bea**	**160.39**	**180**	PKPab	**PKPab**	**00 21 09.3**	**+0.6**
	comp=Z,0.7nm,0.9s,baz=161,slow=4.7,SNR=2.8						

IDC ***22*** *00:02:58.4±0.5, 32°.58S×178°.38W, h0km, mb4.9/15, mb1 5.0/16, mb1mx4.7/43, mbtmp4.9/16, ML5.0/1, MS4.8/11, Ms1 4.8/11, ms1mx4.5/45, Error ellipse: s-maj=18.4km s-min=17.0km az=78.0*

NEIC ***22*** *00:02:60.0±0.4, 32°.80S×178°.51W, h10km, mb4.9/12, Error ellipse: s-maj=12.1km s-min=6.0km az=112.0*

GCMT ***22*** *00:03:00.0±0.2, 32°.80S×178°.06W, h23km, MW5.3/110, Moment Tensor Solution. s69,c94; s110,c172; Duration: 1♀1 Moment tensor: Scale 10^17Nm; Mrr0.85±.04; Mθθ-0.12±.02; Mφφ-0.73±.02; Mrθ0.21±.03; Mθφ-0.19±.01; Mφr0.66±.03; Best double couple: M0 1.07300×10^17 NP1:φs17.00000°, δ65.00000°, λ91.00000°. NP2:φs195.00000°, δ25.00000°, λ88.00000°. Principal axes: T 1.1070, Plg70.0000°, Azm289.0000°; N -0.0680, Plg1.0000°, Azm196.0000°; P -1.0390, Plg20.0000°, Azm106.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISCJB ***22*** *00:03:01.7±0.4, 32°.92S±0°.03×178°.57W±0°.07, h32km, mb5.0/40, MS4.8/1 Error ellipse: s-maj=8.5km s-min=3.1km az=15.5*

WEL ***22*** *00:03:01.3±1.7, 33°.S±23°×17°.7W±2°.5, h180km±66km*

MOS ***22*** *00:03:04.0±1.3, 32°.47S×178°.78W, h33km, mb5.1/20, MS5.2/5, Error ellipse: s-maj=14.9km s-min=11.0km az=106.9*

BJI ***22*** *00:03:09.5, 33°.10S×179°.50W, h35km, mb5.2/10, mB5.5/5, Ms5.2/5, Ms7 4.9/7*

ISC 22 00:03:04.0±0.4, 32°.90S±0°.05×178°.55W±0°.07, h32km, n268, σ2♀61/272, mb5.0/40, 11C-11D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**3.67**	**9**	Pn	Pn	00 03 52.0	-6.5
	156nm,0.3s,baz=170,slow=22,SNR=8.4						
RAO				Sn	**Sn**	**00 04 32.6**	**-8.2**
	257nm,0.3s,baz=325,slow=21,SNR=4.2						
MXZ	**Matakaoa Point**	**5.32**	**208**	*e*Pn	**Pn**	**00 04 22.7**	**+1.4**
MXZ	**Matakaoa Point**	**5.32**	**208**	P	**Pn**	**00 04 19.6**	**-1.6**
MXZ				S	**Sn**	**00 05 22.8**	**+1.3**
WMGZ	**Waiomatatini S**	**5.50**	**206**	P	**Pn**	**00 04 22.9**	**-0.9**
WMGZ				S	**Sn**	**00 05 27.7**	**+1.7**
PKGZ	**Pakihiroa**	**5.69**	**208**	P	**Pn**	**00 04 25.0**	**-1.5**
PKGZ				S	**Sn**	**00 05 31.2**	**+0.5**
HAZ	**Te Kaha**	**5.70**	**211**	P	**Pn**	**00 04 26.2**	**-0.3**
HAZ				S	**Sn**	**00 05 35.2**	**+4.4**
PUZ	**Puketiti**	**5.79**	**206**	P	**Pn**	**00 04 27.3**	**-0.3**
PUZ				S	**Sn**	**00 05 34.1**	**+1.2**
RUGZ	**Raukumara Rang**	**5.92**	**210**	P	**Pn**	**00 04 28.9**	**-0.8**
RUGZ				S	**Sn**	**00 05 39.2**	**+2.7**
TWGZ	**Tauwhareparae**	**5.98**	**207**	P	**Pn**	**00 04 29.7**	**-0.7**
TWGZ				S	**Sn**	**00 05 40.3**	**+2.5**
WHRZ	**Whale Island**	**6.15**	**215**	P	**Pn**	**00 04 36.1**	**+3.3**
WHRZ				S	**Sn**	**00 05 46.0**	**+4.0**
CNGZ	**Carnagh Statio**	**6.17**	**204**	P	**Pn**	**00 04 30.6**	**-2.3**
TKGZ	**Te Karaka**	**6.26**	**207**	P	**Pn**	**00 04 32.1**	**-2.0**
TKGZ				S	**Sn**	**00 05 46.2**	**+1.7**
MWZ	**Matawai**	**6.30**	**209**	P	**Pn**	**00 04 32.9**	**-1.8**
MWZ				S	**Sn**	**00 05 46.1**	**+0.6**
OPRZ	**Ohinepanea**	**6.36**	**218**	P	**Pn**	**00 04 36.2**	**+0.8**
URZ	**Urewera**	**6.42**	**212**	Pn	**Pn**	**00 04 35.9**	**-0.4**
	24nm,0.3s,baz=271,slow=3.9,SNR=28						
URZ				Sn	**Sn**	**00 05 49.4**	**+1.0**
	49nm,0.3s,baz=148,slow=19,SNR=9.8						
URZ	**Urewera**	**6.42**	**212**	*e*Pn	**Pn**	**00 04 36.8**	**+0.5**
URZ				Sn	**Sn**	**00 05 49.4**	**+1.0**
URZ	**Urewera**	**6.42**	**212**	P	**Pn**	**00 04 35.7**	**-0.5**
URZ				S	**Sn**	**00 05 49.1**	**+0.7**
RAGZ	**Rawiri**	**6.48**	**209**	P	**Pn**	**00 04 35.6**	**-1.7**
RIGZ	**Rimuhau**	**6.53**	**206**	P	**Pn**	**00 04 36.7**	**-1.2**
RIGZ				S	**Sn**	**00 05 51.4**	**+0.2**
OMRZ	**Omania**	**6.65**	**217**	P	**Pn**	**00 04 43.2**	**+3.7**
KARZ	**Kaharoa**	**6.65**	**218**	P	**Pn**	**00 04 42.7**	**+3.2**
PRGZ	**Paritu Road**	**6.67**	**205**	P	**Pn**	**00 04 36.9**	**-3.0**
MUGZ	**Murupara**	**6.75**	**213**	P	**Pn**	**00 04 40.0**	**-0.8**
MUGZ				S	**Sn**	**00 05 57.2**	**+0.6**
SNGZ	**Shannon Statio**	**6.76**	**208**	P	**Pn**	**00 04 39.9**	**-1.1**
RTZ	**Ruatahuna**	**6.77**	**211**	P	**Pn**	**00 04 40.5**	**-0.7**
KNZ	**Kokohu**	**6.84**	**206**	P	**Pn**	**00 04 38.9**	**-3.2**
MHGZ	**Mahia Peninsul**	**6.87**	**204**	P	**Pn**	**00 04 39.5**	**-3.0**
OUZ	**Omahuta**	**6.92**	**248**	*e*Pn	**Pn**	**00 04 46.1**	**+2.8**
RAHZ	**Arahi**	**6.97**	**209**	P	**Pn**	**00 04 44.0**	**0.0**
RAHZ				S	**Sn**	**00 06 03.4**	**+1.2**
MTHZ	**Maungataniwha**	**7.02**	**211**	P	**Pn**	**00 04 45.0**	**+0.3**
WHHZ	**Waihua**	**7.05**	**208**	P	**Pn**	**00 04 45.1**	**+0.1**
WHHZ				S	**Sn**	**00 06 03.8**	**-0.3**
MRHZ	**Matea Rd**	**7.20**	**213**	P	**Pn**	**00 04 45.9**	**-1.2**
BKZ	**Black Stump Fm**	**7.43**	**211**	*e*Pn	**Pn**	**00 04 50.4**	**+0.1**
HIZ	**Hauiti**	**7.76**	**222**	*e*Pn	**Pn**	**00 04 55.6**	**+0.9**
BFZ	**Birch Farm**	**8.82**	**207**	*e*Pn	**Pn**	**00 05 07.4**	**-1.8**
KIW	**Kapiti Island**	**9.52**	**212**	P	**Sn**	**00 06 59.9**	**-4.8**
CAW	**Cannon Point**	**9.65**	**210**	P	**Sn**	**00 07 03.4**	**-4.6**
PAWZ	**Paruwai Farm**	**9.74**	**208**	P	**Sn**	**00 07 04.3**	**-5.9**
MSWZ	**Moikau Station**	**9.84**	**208**	P	**Sn**	**00 07 06.3**	**-6.3**
DUWZ	**D'Urville Isla**	**9.93**	**215**	P	**Sn**	**00 07 10.4**	**-4.4**
PLWZ	**Palliser**	**9.97**	**208**	P	**Sn**	**00 07 08.1**	**-7.6**
SNZO	**South Karori**	**9.98**	**211**	*e*Pn	**Pn**	**00 05 25.8**	**+0.7**
SNZO				*e*Sn	**Sn**	**00 07 10.7**	**-5.2**
BHW	**Baring Head**	**9.99**	**210**	P	**Sn**	**00 07 09.8**	**-6.3**
TCW	**Tory Channel**	**10.08**	**213**	P	**Sn**	**00 07 12.3**	**-6.3**
TUWZ	**Tuamarina**	**10.41**	**213**	P	**Sn**	**00 07 20.5**	**-6.0**
NNZ	**Nelson**	**10.51**	**216**	P	**Sn**	**00 07 24.8**	**-4.2**
CMWZ	**Cape Campbell**	**10.55**	**211**	P	**Sn**	**00 07 24.0**	**-5.9**
QRZ	**Quartz Range**	**10.66**	**220**	P	**Sn**	**00 07 29.2**	**-3.4**
BSWZ	**Blackbirch Sta**	**10.67**	**212**	P	**Sn**	**00 07 26.9**	**-5.9**
THZ	**Tophouse**	**11.16**	**215**	*e*Pn	**Pn**	**00 05 40.5**	**-0.9**
THZ				*e*Sn	**Sn**	**00 07 40.4**	**-4.6**
KHZ	**Kahutara**	**11.38**	**211**	*e*Pn	**Pn**	**00 05 43.6**	**-0.7**
KHZ				*e*Sn	**Sn**	**00 07 43.7**	**-6.6**
LTZ	**Lake Taylor**	**12.24**	**214**	*e*Pn	**Pn**	**00 05 55.2**	**-0.9**
LTZ				*e*Sn	**Sn**	**00 08 07.7**	**-3.8**
RPZ	**Rata Peaks**	**13.53**	**214**	Pn	**Pn**	**00 06 10.4**	**-3.3**
	2.6nm,0.3s,baz=288,slow=9.5,SNR=3.9						
RPZ				Sn	Sn	00 08 31.1	-12
	5.9nm,0.3s,baz=140,slow=23,SNR=10						
RPZ	**Rata Peaks**	**13.53**	**214**	*e*Pn	**Pn**	**00 06 11.4**	**-2.3**
RPZ				*e*Sn	**Sn**	**00 08 35.7**	**-7.1**
FOZ	**Fox Glacier**	**14.00**	**217**	*e*Pn	**Pn**	**00 06 18.4**	**-1.6**
LBZ	**Lake Benmore**	**14.45**	**214**	*e*Pn	**Pn**	**00 06 25.7**	**-0.5**
ODZ	**Otahua Downs**	**14.74**	**212**	*e*Pn	**Pn**	**00 06 30.4**	**+0.2**
WKZ	**Wanaka**	**15.33**	**215**	*e*Pn	**Pn**	**00 06 37.2**	**-0.9**
MLZ	**Mavora Lakes**	**16.16**	**216**	*e*Pn	**Pn**	**00 06 48.4**	**-0.3**
	161nm,1.9s						
WHZ	**Wether Hill Ro**	**16.63**	**215**	*e*Pn	**Pn**	**00 06 52.6**	**-2.0**
	78nm,1.4s						
DZM	**Mont Dzumac**	**17.11**	**305**	Pn	**P**	**00 07 04.0**	**+1.6**
	0.8nm,0.3s,baz=97,slow=16,SNR=7.0						
DZM				LR	LR	00 12 24.4	
	comp=Z,12μm,18.1s,baz=136,slow=33						
DZM	**Mont Dzumac**	**17.11**	**305**	*e*P	**P**	**00 07 04.6**	**+2.2**
	265nm,1.3s						
DZM				*e*LR	LR	00 10 55.3	
	9μm,22.9s						
RAR	**Rarotonga**	**20.33**	**60**	LR	LR	00 16 05.9	
	comp=Z,2μm,18.1s,baz=226,slow=39						
MGCD	**Mangrove Creek**	**25.40**	**261**	P	**P**	**00 08 27.8**	**-0.8**
	baz=24,SNR=4.8						
ARMA	**Armidale**	**25.47**	**268**	P	**P**	**00 08 29.0**	**-0.4**
	baz=24,SNR=7.3						
ARMA	**Armidale**	**25.47**	**268**	*e*P	**P**	**00 08 29.2**	**-0.1**
	33nm,1.0s						
CNB	**Canberra Magne**	**26.62**	**256**	P	**P**	**00 08 38.6**	**-1.2**
	baz=25,SNR=8.6						
TBI	**Tubuai**	**27.28**	**77**	*e*S	**S**	**00 13 25.5**	**+2.4**
	2μm,24.8s						
TBI	**Tubuai**	**27.28**	**77**	*e*T	T	00 36 53.1	
	16nm,0.3s						
EIDS	**Eidsvold**	**27.50**	**278**	P	**P**	**00 08 49.2**	**+1.6**
	baz=26,SNR=5.9						
EIDS	**Eidsvold**	**27.50**	**278**	*e*P	**P**	**00 08 48.4**	**+0.7**
	33nm,0.8s						
YNG	**Young**	**27.51**	**258**	P	**P**	**00 08 46.5**	**-1.1**
	baz=26,SNR=6.4						
RMQ	**Roma**	**29.04**	**274**	P	**P**	**00 09 03.9**	**+2.5**
	baz=28,SNR=21						
PAE	**Paea**	**30.14**	**67**	*e*T	T	00 40 25.2	
	3.4nm,0.2s						
PPT2	**Papeete2**	**30.18**	**67**	*e*LR	LR	00 16 45.4	
	2μm,27.2s						
PPT	**Papeete**	**30.20**	**67**	LR	LR	00 18 03.9	
	comp=Z,875nm,21.2s,baz=242,slow=30						
HNR	**Honiara**	**30.65**	**315**	LR	LR	00 20 29.5	
	comp=Z,2μm,18.0s,baz=166,slow=34						
QLP	**Quilpie**	**32.80**	**271**	P	**P**	**00 09 35.5**	**+1.0**
	baz=32,SNR=12						
STKA	**Stephens Creek**	**33.54**	**261**	P	**P**	**00 09 41.7**	**+0.8**
	10.0nm,1.0s,baz=106,slow=8.6,SNR=4.4						
STKA				LR	LR	00 22 50.5	
	comp=Z,4μm,18.0s,baz=96,slow=35						
STKA	**Stephens Creek**	**33.54**	**261**	*e*P	**P**	**00 09 40.2**	**-0.7**
	14nm,1.8s						
STKA	**Stephens Creek**	**33.54**	**261**	*e*P	**P**	**00 09 40.2**	**-0.7**
STKA				pmax	pmax		
	comp=Z,14nm,1.8s						
CTA	**Charters Tower**	**33.83**	**283**	P	**P**	**00 09 44.7**	**+1.2**
	comp=Z,37nm,0.6s,baz=118,slow=10,SNR=43						
CTA				LR	LR	00 22 13.8	
	comp=Z,1μm,18.3s,baz=118,slow=34						
CTAO	**Charters Tower**	**33.83**	**283**	*e*P	**P**	**00 09 44.3**	**+0.8**
	comp=Z,13nm,0.5s						
CTAO	**Charters Tower**	**33.83**	**283**	*e*P	**P**	**00 09 44.3**	**+0.8**
CTAO				pmax	pmax		
	comp=Z,13nm,0.5s						
HTT	**Hallett**	**35.43**	**257**	P	**P**	**00 09 55.8**	**-1.5**
	baz=34,SNR=3.7						
MTSU	**Mount Surprise**	**36.39**	**285**	P	**P**	**00 10 06.7**	**+1.1**
	baz=36,SNR=31						
QIS	**Mount Isa**	**39.11**	**278**	P	**P**	**00 10 28.5**	**-0.1**
	baz=38,SNR=7.5						
RKT	**Rikitea**	**39.45**	**87**	*e*LR	LR	00 21 10.2	
	comp=Z,2μm,29.0s						
AS01	**Alice Springs**	**42.53**	**270**	*e*P	**P**	**00 10 55.8**	**-1.0**
AS31	**Alice Springs**	**42.57**	**270**	*e*P	**P**	**00 10 56.8**	**-0.4**
	comp=Z,17nm,0.8s						
ASAR	**Alice Springs**	**42.57**	**270**	P	**P**	**00 10 56.8**	**-0.4**
	comp=Z,18nm,0.6s,baz=106,slow=7.6,SNR=96						
ASAR				S	**S**	**00 17 17.2**	**-0.8**
	comp=Z,3.6nm,0.9s,baz=104,slow=15,SNR=6.8						
ASAR				LR	LR	00 28 24.0	
	comp=Z,942nm,18.9s,baz=132,slow=36						
TAOE	**Nuku Hiva Isla**	**42.76**	**65**	*e*LR	LR	00 22 35.5	
	comp=Z,1μm,27.2s						
WB2	**Warramunga Arr**	**43.78**	**275**	*e*P	**P**	**00 11 06.0**	**-0.9**
	comp=Z,64nm,0.7s						
WRAB	**Tennant Creek**	**43.78**	**275**	*e*P	**P**	**00 11 06.5**	**-0.5**
	comp=Z,68nm,0.8s						
WRAB	**Tennant Creek**	**43.78**	**275**	*c iP*	**P**	**00 11 06.2**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,70nm,1.1s						
WRA	**Warramunga Arr**	**43.79**	**275**	P	**P**	**00 11 05.8**	**-1.2**
	comp=Z,42nm,0.6s,baz=115,slow=7.6,SNR=96						
WRA				S	**S**	**00 17 33.8**	**-1.9**
	comp=Z,3.0nm,1.0s,baz=118,slow=13,SNR=4.3						
WRA				LR	LR	00 27 54.1	
	comp=Z,2μm,19.4s,baz=100,slow=34						
FORT	**Forrest**	**45.01**	**258**	P	**P**	**00 11 15.6**	**-1.0**
	baz=44,SNR=16						
FORT	**Forrest**	**45.01**	**258**	*e*P	**P**	**00 11 14.2**	**-2.4**
	comp=Z,72nm,0.8s						
SBA	**Scott Base**	**45.52**	**184**	*e*P	**P**	**00 11 23.8**	**+3.8**
	comp=Z,24nm,1.2s						
SBA	**Scott Base**	**45.52**	**184**	*e*P	**P**	**00 11 23.8**	**+3.8**
SBA				pmax	pmax		
	comp=Z,24nm,1.2s						
VNDA	**Vanda**	**45.57**	**186**	P	**P**	**00 11 23.8**	**+3.4**
	comp=Z,2.9nm,0.8s,baz=53,slow=4.0,SNR=13						
VNDA				LR	LR	00 27 28.4	
	comp=Z,731nm,19.1s,baz=14,slow=32						
VNDA	**Vanda**	**45.57**	**186**	*e*P	**P**	**00 11 24.0**	**+3.5**
	comp=Z,25nm,1.8s						
VNDA	**Vanda**	**45.57**	**186**	*e*P	**P**	**00 11 24.0**	**+3.5**
VNDA				pmax	pmax		
	comp=Z,25nm,1.8s						
WRKA	**Warakurna**	**46.76**	**265**	P	**P**	**00 11 29.0**	**-1.6**
	baz=46,SNR=27						
JAY	**Jayapura**	**48.68**	**300**	P	**P**	**00 11 44.6**	**-0.9**
	comp=Z,20nm,0.9s,baz=298,slow=3.3,SNR=6.5						
KMBL	**Kambalda**	**49.88**	**255**	P	**P**	**00 11 53.3**	**-1.1**
	baz=48,SNR=5.4						
CASY	**Casey**	**52.73**	**209**	*e*P	**P**	**00 12 15.4**	**+0.1**
	comp=Z,22nm,0.8s						
NWAO	**Narrogin (SRO)**	**53.12**	**251**	P	**P**	**00 12 16.2**	**-2.5**
	comp=Z,7.1nm,0.7s,baz=127,slow=10,SNR=4.5						
KLBR	**Kellerberrin**	**53.14**	**253**	P	**P**	**00 12 17.0**	**-1.9**
	baz=52,SNR=4.8						
MORW	**Morawa**	**55.41**	**255**	P	**P**	**00 12 34.6**	**-0.8**
	baz=54,SNR=3.2						
SIJI	**Sorong**	**56.85**	**293**	P	**P**	**00 12 46.1**	**+0.2**
	comp=Z,4.7nm,0.3s,baz=110,slow=12,SNR=8.5						
QSPA	**South Pole Qui**	**57.22**	**180**	*e*P	**P**	**00 12 50.1**	**+2.1**
	comp=Z,5.4nm,0.4s						
SOEI	**Soe**	**57.29**	**280**	*e*P	**P**	**00 12 49.3**	**+0.2**
	comp=Z,99nm,1.1s						
BATI	**Baumata**	**57.55**	**279**	P	**P**	**00 12 51.4**	**+0.5**
	comp=Z,34nm,0.7s,baz=270,slow=16,SNR=4.3						
RPN	**Rapa Nui**	**59.25**	**104**	LR	LR	00 32 10.2	
	comp=Z,510nm,21.1s,baz=237,slow=30						
MAW	**Mawson**	**69.82**	**201**	P	**P**	**00 14 11.3**	**+0.4**
	comp=Z,17nm,1.2s,baz=133,slow=5.3,SNR=3.5						
MAW	**Mawson**	**69.82**	**201**	*e*P	**P**	**00 14 15.2**	**+4.3**
	comp=Z,3.7nm,1.1s						
MAW	**Mawson**	**69.82**	**201**	*e*P	**P**	**00 14 15.2**	**+4.3**
MAW				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SYO	**Syowa Base**	**74.59**	**193⇑**	*e*X	**P**	**00 14 36.0**	**-3.4**
SNAA	**Sanae**	**75.68**	**179**	P	**P**	**00 14 50.2**	**+4.4**
	comp=Z,22nm,1.0s,baz=203,slow=5.5,SNR=3.9						
VNA3	**Neumayer Olymp**	**75.85**	**176**	P	**P**	**00 14 47.3**	**+0.6**
VNA2	**Neumayer--Watz**	**76.28**	**177**	P	**P**	**00 14 50.0**	**+0.9**
	baz=178,slow=5.0						
NVL	**N'lazarevskaya**	**76.36**	**184**	*e*P	**P**	00 14 55.2	+5.6
NVL				*e*S	**S**	**00 24 34.5**	**+2.5**
NVL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
NVL				MLR	MLR		
	comp=Z,1μm,17.0s						
VNA1	**Neumayer--Stat**	**76.51**	**177**	P	**P**	**00 14 50.0**	**-0.4**
MJAR	**Matsushiro Art**	**80.03**	**326**	P	**P**	**00 15 07.9**	**-2.4**
	comp=Z,3.3nm,0.9s,baz=168,slow=7.4,SNR=4.0						
MAJO	**Matsushiro**	**80.03**	**326**	*i* P	**P**	**00 15 13.1**	**+2.8**
MAJO				pmax	pmax		
	comp=Z,10.0nm,1.2s						
PLCA	**Paso Flores**	**81.15**	**133**	P	**P**	**00 15 16.3**	**-0.3**
	comp=Z,9.9nm,1.0s,

SNR=92
AML Almayashu 123.52 302 P **PKPdf 00 21 58.2 -0.2**
SNR=6.6
LSZ Lusaka 125.71 212 PKP **PKPdf 00 22 04.8 +1.6**
comp=Z,3.2nm,0.9s,baz=180,slow=3.0,SNR=5.8
BVAR Borovoye Array 127.84 314 PKP **PKPdf 00 22 05.1 -0.8**
comp=Z,5.3nm,0.6s,baz=104,slow=1.3,SNR=34
BRVK Borovoye 127.91 314 *e*PKPdf **PKPdf 00 22 04.5 -1.5**
BRVK Borovoye 127.91 314 *e*PKIKP **PKPdf 00 22 04.5 -1.5**
SVE Sverdlovsk 133.51 319 *e*PKIKP **PKPdf 00 22 17.2 +0.8**
SVE pmax pmax
comp=Z,12nm,1.3s
ARU Arti 134.69 319 *e*PKPdf **PKPdf 00 22 17.9 -0.8**
ARU Arti 134.69 319 *i* PKIKP **PKPdf 00 22 18.1 -0.6**
ARU MLR MLR
comp=Z,608nm,19.0s
AKTO Aktyubinsk 135.40 311 PKP **PKPdf 00 22 20.4 +0.2**
comp=Z,4.6nm,0.6s,baz=66,slow=4.1,SNR=11
PRGR Permogore 139.74 329 *e*PKIKP PKPpre 00 22 22.1
PRGR pmax pmax
comp=Z,8.0nm,0.9s
ARCES ARCESS Array B 140.91 347 PKhKP PKPpre 00 22 25.9
comp=Z,8.7nm,0.9s,baz=88,slow=1.3,SNR=9.2
KLMR Klimovskoe 142.71 330 *e*PKHKP PKPpre 00 22 26.3
KLMR pmax pmax
comp=Z,24nm,1.3s
KLMR Klimovskoe 142.71 330 *e*PKPdf PKPpre 00 22 26.3
KLMR AMP 00 22 38.8
comp=Z,24nm,1.3s
KLMR *e*SKP 00 26 08.2
GNI Garni 144.74 294 PKP **PKPab 00 22 35.7 -0.9**
comp=Z,4.9nm,0.9s,baz=283,slow=8.6,SNR=3.1
GNI Garni 144.74 294 PKP **PKPab 00 22 35.7 -0.9**
GNI *e*PKPdf **PKiKP 00 22 40.7 -0.7**
GNI Garni 144.74 294 PKIKP **PKPab 00 22 35.7 -0.9**
GNI *e* 00 22 40.7
ZEI Tsey 145.37 299 *i* PKIKP **PKPbc 00 22 37.1 -1.6**
ZEI pmax pmax
comp=Z,35nm,1.4s
NCK Nalchik 145.56 300 *i* PKP2 **PKPdf 00 22 37.6 -1.2**
KBZ Khabaz 146.05 301 PKPbc **PKPdf 00 22 39.0 -0.5**
comp=Z,21nm,1.0s,baz=126,slow=1.4,SNR=14
MOS Moscow 146.09 323 *c i* PKIKP **PKPdf 00 22 37.7 -1.5**
MOS *e* 00 22 43.1
MOS pmax pmax
comp=Z,252nm,1.1s
KIV Kislovodsk 146.18 301 *i* PKIKP **PKPdf 00 22 37.8 -2.1**
KIV pmax pmax
comp=Z,20nm,1.1s
NEY Neytrino 146.21 300 *i* PKP2 **PKPdf 00 22 39.9 -0.2**
VORR Voronezh 146.84 316 *e*PKIKP **PKPdf 00 22 40.0 -0.6**
VORR pmax pmax
comp=Z,250nm,1.2s
OBN Obninsk 146.91 323 *c i* PKIKP **PKPdf 00 22 40.3 -0.3**
OBN *i* 00 22 45.7
OBN *e* 00 22 54.8
OBN pmax pmax
comp=Z,63nm,1.1s
OBN pmax pmax
comp=Z,87nm,1.7s
VSR Storozhevoye 147.02 315 *e*PKIKP **PKPdf 00 22 40.9 0.0**
VSR pmax pmax
comp=Z,40nm,0.8s
VORD Divnogorie 147.02 315 *e*PKIKP **PKPdf 00 22 40.9 0.0**
VORD pmax pmax
comp=Z,50nm,1.3s
PUL Pulkovo 147.04 333 *i* PKP2 **PKPdf 00 22 41.0 +0.3**
FINES FINESS Array B 147.30 338 PKPbc **PKPdf 00 22 41.9 +0.8**
comp=Z,50nm,0.7s,baz=62,slow=3.6,SNR=74
SOC Sochi 148.36 301 *e*PKIKP **PKPdf 00 22 42.5 -0.9**
SOC *i* 00 22 48.6
SOC *e* 00 26 16.0
SOC *e*PPP PPP 00 29 32.5
SOC *e*SS SS 00 45 11.2 -11
SOC pmax pmax
comp=Z,18nm,0.4s
SOC pmax pmax
comp=Z,12nm,0.4s
SOC MLR MLR
comp=Z,216nm,15.0s
VSU Vasula 149.28 334 *i* PKP2 **PKPbc 00 22 47.2 -1.5**
ANN Anapa 149.80 304 *e*PKP2 **PKPbc 00 22 53.1 +2.6**
NB2 NORSAR Subarra151.13 350 PKP **PKPbc 00 22 51.3 -1.9**
comp=Z,20nm,1.2s,baz=17,slow=2.6
IZAR Zarasai 151.36 330 *e*P **PKPbc 00 22 52.9 -1.0**
IZAR IAmb IAmb 00 22 55.4
comp=Z,20nm,1.1s
IDID Didziasalis 151.45 329 *e*P **PKPbc 00 22 52.8 -1.3**
IDID IAmb IAmb 00 22 55.5
comp=Z,20nm,0.9s
MICGM Minsk 151.46 327 ↓*e*P **PKPbc 00 22 52.0 -2.1**
MICGM PM 00 22 53.0
comp=Z,0.2nm,1.1s
MICGM *e*LR LR 01 34 32.0
MNK Minsk 151.46 327 ↓↓*e*PKIKP **PKPbc 00 22 52.0 -2.1**
ISAL Salakas 151.53 330 *e*P **PKPbc 00 22 52.2 -2.0**
ISAL IAmb IAmb 00 22 54.6
comp=Z,15nm,1.0s
HFS Hagfors 151.58 347 PKPbc **PKPbc 00 22 52.5 -1.8**
comp=Z,13nm,0.7s,baz=52,slow=2.4,SNR=27
MMAI Mount Meron Ar 151.58 280 PKPbc **PKPbc 00 22 55.0 -0.3**
comp=Z,32nm,0.8s,baz=73,slow=5.0,SNR=55
IIGN Ignalina 151.64 330 *e*P **PKPbc 00 22 53.5 -1.0**
IIGN IAmb IAmb 00 22 54.9
comp=Z,21nm,0.9s
NACGM Naroch 151.70 329 *e* **PKPbc 00 22 52.0 -2.6**
SIM Simferopol' 152.07 305 *de*PKIKP **PKPbc 00 22 54.6 -1.2**
SIM *e* 00 23 08.9
SIM pmax pmax
comp=Z,45nm,0.8s
AKASG Malin Array Be 152.94 319 PKPbc **PKPbc 00 22 56.1 -1.4**
comp=Z,8.4nm,0.6s,baz=46,slow=2.8,SNR=36
KIEV Kiev 152.96 319 *e*PKPdf **PKPbc 00 22 56.5 -1.1**
KIEV Kiev 152.96 319 *e*PKIKP **PKPbc 00 22 56.5 -1.1**
BRTR Keskin Array B 153.28 294 PKPbc **PKPbc 00 22 57.2 -1.7**
comp=Z,7.8nm,0.6s,baz=133,slow=3.2,SNR=41
SUW Suwalki 153.85 330 *e*PKP **PKPbc 00 22 58.9 -0.5**
SUW Suwalki 153.85 330 *e*PKIKP **PKPbc 00 22 58.9 -0.5**
ANTO Ankara 153.92 294 *e*PKPdf **PKPbc 00 22 58.3 -1.8**
ANTO Ankara 153.92 294 ↓↓PKIKP **PKPbc 00 22 59.3 -0.9**
SORM Soroca 154.68 315 ↑↑*i*P **PKPbc 00 23 00.7 -0.7**
SORM Soroca 154.68 315 ↑↑PKIKP **PKPbc 00 23 00.7 -0.7**
CFR Carcaliu 156.04 309 ↓↓*i*P **PKPdf 00 22 57.5 +2.7**
CFR Carcaliu 156.04 309 ↓↓PKIKP **PKPdf 00 22 57.5 +2.7**
VRI Vrincioaia 156.68 311 ↑↑*i*P PKPdf 00 23 06.6 +11
VRI Vrincioaia 156.68 311 ↑↑PKIKP PKPdf 00 23 06.6 +11
BURAR Bucovina Array 156.78 316 ↓↓*i*P **PKPdf 00 22 52.5 -3.3**
KWP Kalwaria Pacla 157.00 323 *e*PKP PKPab 00 23 11.8 -14
KWP Kalwaria Pacla 157.00 323 *e*PKIKP PKPab 00 23 11.8 -14
KWP Kalwaria Pacla 157.00 323 *e*PKPdf PKPab 00 23 11.8 -14
MLR Muntele Rosu 157.33 311 ↓↓*i*P **PKPdf 00 22 54.7 -1.9**
MLR Muntele Rosu 157.33 311 ↓↓PKIKP **PKPdf 00 22 54.7 -1.9**
UZH Uzhgorod 157.83 321 *e*PKIKP **PKPdf 00 22 59.9 +2.9**
UZH *e* 00 23 07.9
UZH *i* 00 23 14.3
CRVS Cervenica-Dubn 158.09 323 *e*PKP2 **PKPab 00 23 30.0 -1.0**
CRVS Cervenica-Dubn 158.09 323 *e*PKP **PKPab 00 23 30.0 -1.0**
ARR Arges 158.22 312 ↓↓*i*P **PKPdf 00 22 58.6 +0.9**
NIE Niedzica 158.33 325 *e*PKP **PKPdf 00 23 03.4 +5.8**
NIE Niedzica 158.33 325 *e*PKIKP **PKPdf 00 23 03.4 +5.8**
HUMR Humele 158.36 309 ↑↑*i*P PKPdf 00 23 08.6 +11
KECS Kecovo 158.86 323 *e*PKP2 **PKPab 00 23 33.6 -0.7**
KECS Kecovo 158.86 323 *e*PKP **PKPab 00 23 33.6 -0.7**
LANS Liptovska Anna 158.91 326 *e*PKP2 **PKPab 00 23 33.6 -1.0**
LANS Liptovska Anna 158.91 326 *e*PKP **PKPab 00 23 33.6 -1.0**
KSP Ksiaz 159.01 333 *e*PKP **PKPab 00 23 33.5 -1.4**
KSP Ksiaz 159.01 333 *e*PKP2 **PKPab 00 23 33.5 -1.4**
KSP Ksiaz 159.01 333 *e*PKPdf **PKPab 00 23 33.5 -1.4**
MORC Moravsky Berou 159.33 329 *e*PKP **PKPdf 00 23 03.2 +4.4**
VYHS Vyhne 159.67 325 *e*PKP2 **PKPab 00 23 36.7 -1.1**
VYHS Vyhne 159.67 325 *e*PKP **PKPab 00 23 36.7 -1.1**
VYHS Vyhne 159.67 325 *e*PKPdf **PKPab 00 23 36.7 -1.1**
CLL Collm 159.75 339 *e*PKPdf **PKPdf 00 23 00.0 +0.9**
CLL *e* 00 23 11.0
CLL *i* PKPab **PKPab 00 23 35.8 -2.2**
comp=Z,13nm,1.2s
CLL *i* 00 23 45.9
CLL Collm 159.75 339 *e*PKIKP **PKPdf 00 23 00.0 +0.9**
CLL *e* 00 23 11.0
CLL *i* 00 23 35.8
CLL pmax pmax
comp=Z,13nm,1.2s
BRG Berggiesshubel 159.82 337 *e*PKP **PKPab 00 23 36.1 -2.3**
comp=Z,7.4nm,1.2s
BRG SS SS 00 37 15.0 -610
comp=N,208nm,14.7s
comp=E,349nm,21.6s
comp=Z,362nm,18.6s
BRG Berggiesshubel 159.82 337 *e*PKP2 **PKPab 00 23 36.1 -2.3**
BRG pmax pmax
comp=Z,7.0nm,1.2s
BRG MLR MLR
comp=N,208nm,14.7s
BRG MLR MLR
comp=E,349nm,21.6s
BRG MLR MLR
comp=Z,362nm,18.6s
JAVC Velka Javorina 159.95 327 *e*PKP **PKPdf 00 23 05.7 +6.1**
JAVC *e* 00 23 38.2
VRAC Vranov 160.09 330 *e*PKP **PKPdf 00 23 05.0 +5.4**
VRAC *e* 00 23 37.7
TORD Torodi Ar. Bea 160.34 181 PKP **PKPdf 00 23 02.4 +1.5**
comp=Z,3.1nm,1.0s,baz=180,slow=1.5,SNR=3.9
TORD PKPab **PKPab 00 23 41.0 -0.5**
comp=Z,1.8nm,0.8s,baz=173,slow=3.1,SNR=5.5
KRUC Moravsky 160.36 330 *e*PKP **PKPdf 00 23 04.3 +4.4**
KRUC *e* 00 23 38.1
MODS Modra-Piesok 160.48 327 *e*PKP2 **PKPab 00 23 39.5 -1.9**
MODS Modra-Piesok 160.48 327 *e*PKP **PKPab 00 23 39.5 -1.9**
MODS Modra-Piesok 160.48 327 *e*PKPdf **PKPab 00 23 39.5 -1.9**
KHC Kasperske Hory 161.42 334 *e*PKP **PKPdf 00 23 01.5 +0.4**
KHC *ex* x 00 23 43.5
KHC Kasperske Hory 161.42 334 *e*PKIKP **PKPdf 00 23 01.5 +0.4**
KHC *e* 00 23 43.5
CONA Conrad Observa 161.45 328 *es*PKPdf **PKPdf 00 23 07.0 +5.8**
comp=Z,12nm,1.3s
GERES GERESS Array B 161.61 334 PKP **PKPdf 00 23 00.8 -0.6**
comp=Z,0.3nm,0.5s,baz=147,slow=2.3,SNR=4.6
GERES PKPab **PKPab 00 23 44.1 -2.2**
comp=Z,7.6nm,1.2s,baz=23,slow=5.3,SNR=10
ARSA Arzberg 162.11 327 *es*PKPdf **PKPdf 00 23 07.4 +5.5**
comp=Z,4.5nm,1.1s
SOKA Soboth 162.76 327 *es*PKPdf **PKPdf 00 23 08.3 +5.6**
comp=Z,4.7nm,0.8s
OBKA Obir 163.11 327 sPKPdf **PKPdf 00 23 07.8 +4.8**
comp=Z,3.4nm,1.2s
MYKA Terra Mystica 163.42 329 *es*PKPdf PKPdf 00 23 11.6 +8.4
comp=Z,3.1nm,0.6s
ABTA Abfaltersbach 163.79 332 sPKPdf **PKPdf 00 23 10.6 +7.0**
comp=Z,4.5nm,0.8s
MOTA Moosalm 163.81 336 *es*PKPdf **PKPdf 00 23 09.4 +5.7**
comp=Z,5.6nm,1.0s
FETA Feichten 164.22 336 sPKPdf **PKPdf 00 23 10.3 +6.2**
comp=Z,9.1nm,1.3s
DAVA Damuels 164.26 338 sPKPdf **PKPdf 00 23 09.6 +5.5**
comp=Z,6.7nm,1.0s
ESDC Sonseca Array 171.95 31 PKPab **PKPab 00 24 29.8 -2.4**
comp=Z,0.1nm,0.4s,baz=312,slow=4.2,SNR=2.5

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*IDC **22** 00:07:32.5±1.7, 32°.83S×178°.13W, h0km, mb4.2/3, mb1 4.4/4, mb1mx3.9/44, mbtmp4.2/4, ML3.8/1, Error ellipse: s-maj=57.1km s-min=37.7km az=149.0*
*NEIC **22** 00:07:33.8±0.7, 32°.85S×178°.11W, h10km, mb4.4/3, Error ellipse: s-maj=23.0km s-min=14.8km az=143.0*
*ISCJB **22** 00:07:36.0±1.4, 33°.0S±0°.1×178°.2W±0°.2, h34km, mb4.2/5, Error ellipse: s-maj=31.7km s-min=11.9km az=24.3*
ISC 22 00:07:37.1±1.3, 32°.9S±0°.2×178°.1W±0°.2, h34km, n14, σ1§00/13, mb4.3/5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.58**	**215**	Pn	**Pn**	**00 09 11.7**	**+0.3**
	1.9nm,0.3s,baz=98,slow=15,SNR=6.1						
URZ				Sn	**Sn**	**00 10 24.7**	**-0.6**
	7.4nm,0.3s,baz=258,slow=11,SNR=6.4						
RPZ	**Rata Peaks**	**13.70**	**215**	Sn	Sn	00 13 05.7	-14
	0.6nm,0.3s,baz=237,slow=8.0,SNR=5.2						
CTA	**Charters Tower**	**34.20**	**283**	P	**P**	**00 14 20.8**	**+1.2**
	4.1nm,0.8s,baz=60,slow=8.1,SNR=4.9						
CTAO	**Charters Tower**	**34.20**	**283**	P	**P**	**00 14 19.6**	**0.0**
	4.4nm,0.4s						
ASAR	**Alice Springs**	**42.95**	**270**	P	**P**	**00 15 32.5**	**-0.5**
	0.8nm,0.3s,baz=113,slow=7.7,SNR=4.2						
WRAB	**Tennant Creek**	**44.16**	**275**	P	**P**	**00 15 42.4**	**-0.4**
	1.5nm,0.5s						
WRA	**Warramunga Arr**	**44.17**	**275**	P	**P**	**00 15 42.0**	**-0.9**
	2.0nm,0.4s,baz=115,slow=7.9,SNR=4.2						
COCO	**West Island**	**79.38**	**262**	P	**P**	**00 19 40.7**	**+0.6**
HWUT	**Hardware Ranch**	**96.14**	**44**	*e*P	**P**	**00 21 01.6**	**+0.1**
	0.6nm,0.4s						
INK	**Inuvik**	**106.25**	**16**	*e*PKP		00 25 57.4	
FINES	**FINESS Array B**	**147.49**	**339**	PKPbc	**PKPab**	**00 27 17.5**	**-1.4**
	2.1nm,0.5s,baz=49,slow=4.2,SNR=7.1						
HFS	**Hagfors**	**151.71**	**348**	PKPbc	**PKPbc**	**00 27 26.7**	**-0.5**
	1.9nm,0.8s,baz=111,slow=3.2,SNR=2.7						
MMAI	**Mount Meron Ar**	**151.96**	**279**	PKPbc	**PKPbc**	**00 27 30.9**	**+2.0**
	1.4nm,0.5s,baz=93,slow=2.9,SNR=4.7						
BRTR	**Keskin Array B**	**153.65**	**294**	PKPbc	**PKPbc**	**00 27 31.8**	**-0.6**
	0.4nm,0.5s,baz=128,slow=2.9,SNR=4.0						

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*ISCJB **22** 00:07:55.8±0.5, 6°.31S±0°.05×128°.30E±0°.06, h334km, mb3.3/4, Error ellipse: s-maj=8.4km s-min=6.3km az=6.5*
*DJA **22** 00:07:55.9±0.9, 6°.5±4°.×12°.8E±°., h342km±22km, M4.3/7, mb4.3/6, mB4.6/5, MLv4.5/7, Mw(mB)3.8/5*
*IDC **22** 00:07:56.4±1.4, 6°.40S×128°.27E, h330km±16km, mb3.1/4, mb1 3.4/8, mb1mx3.1/57, mbtmp4.1/8, Error ellipse: s-maj=20.1km s-min=10.6km az=81.0*
ISC 22 00:07:56.2±0.7, 6°.32S±0°.07×128°.34E±0°.09, h334km, n18, σ1§81/21, mb3.4/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**3.30**	**338**	P	**Pn**	**00 08 58.4**	**+1.2**
SANI	**Sanana**	**4.84**	**331**	P	**Pn**	**00 09 13.2**	**-0.2**
FAKI	**Fak Fak**	**5.15**	**49**	P	**Pn**	**00 09 16.6**	**-0.3**
SOEI	**Soe**	**5.29**	**229**	P	**Pn**	**00 09 18.5**	**0.0**
LBMI	**Labuha**	**5.70**	**352**	P	**Pn**	**00 09 23.5**	**+0.4**
BATI	**Baumata**	**6.03**	**230**	P	**Pn**	**00 09 27.1**	**+0.1**
	21nm,0.3s,baz=272,slow=0.7,SNR=12						
BATI				S	**S**	**00 10 37.4**	**-2.9**
	22nm,0.3s,baz=327,slow=20,SNR=12						
BATI	**Baumata**	**6.03**	**230**	P	**Pn**	**00 09 27.6**	**+0.7**
SIJI	**Sorong**	**6.15**	**28**	P	**Pn**	**00 09 27.8**	**-0.5**
	2.4nm,0.3s,baz=259,slow=23,SNR=9.2						
SIJI				S	**S**	**00 10 37.4**	**-5.5**
	5.0nm,0.3s,baz=267,slow=23,SNR=7.9						
KDI	**Kendari**	**6.16**	**292**	P	**Pn**	**00 09 27.9**	**-0.5**
BKSI	**Bulukumba**	**8.23**	**276**	P	**Pn**	**00 09 53.2**	**+0.2**
JAY	**Jayapura**	**12.89**	**74**	P	**Pn**	**00 10 51.2**	**+2.2**
	0.9nm,0.3s,baz=220,slow=8.0,SNR=6.0						
WRA	**Warramunga Arr**	**14.75**	**157**	S	**S**	**00 13 46.2**	**-2.6**
	0.6nm,0.3s,baz=340,slow=20,SNR=5.7						
ASAR	**Alice Springs**	**18.06**	**163**	P	**P**	**00 11 46.2**	**+1.4**
	1.8nm,0.3s,baz=344,slow=10,SNR=15						
ASAR				S	**S**	**00 14 53.5**	**-0.9**
	0.4nm,0.3s,baz=344,slow=23,SNR=17						
MEEK	**Meekatharra**	**22.23**	**204**	P	**P**	**00 12 25.6**	**-0.3**
	baz=53,SNR=3.9						
KSRS	**Korea Array**	**43.54**	**360**	P	**P**	**00 15 28.6**	**+0.6**
	0.9nm,0.5s,baz=184,slow=9.4,SNR=4.1						
SONM	**Songino Array**	**57.29**	**343**	P	**P**	**00 17 11.6**	**+1.6**
	0.6nm,0.5s,baz=169,slow=8.4,SNR=2.7						
MKAR	**Makanchi Array**	**66.76**	**327**	P	**P**	**00 18 12.7**	**+0.3**
	0.6nm,0.5s,baz=122,slow=7.6,SNR=6.5						
KURBB	**Kurchatov Arra**	**71.07**	**329**	P	**P**	**00 18 39.0**	**+0.4**
	0.4nm,0.5s,baz=131,slow=5.0,SNR=6.0						

ATA 22 00:10:34.5±0.8, 39°.20N×42°.30E, h3km±769km, ML1.9, MW1.9, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKAR	**Karacoban**	**0.20**	**288**	*e*P	Pg	00 10 39.6	+1.3
EKAR				*e*S	Sg	00 10 42.6	+1.7
EKAR				IAML		00 10 45.4	
	comp=Z,12nm,0.4s						
TUTA	**Tutak**	**0.45**	**62**	*e*P	Pb	00 10 44.2	-1.0
TUTA				*e*S	Sb	00 10 51.4	-1.0
TUTA				IAML		00 10 53.0	
	comp=Z,11nm,0.2s						
EATA	**Eleskirt**	**0.68**	**12**	*e*P	Pg	00 10 48.1	+0.5
EATA				*e*S	Sb	00 10 59.8	+0.5

UCR 22 00:10:55.5±1.8, 11°.78N×87°.11W, h28km±5km, MD3.5, ML3.2, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.64**	**52**	*e*P	Pb	00 11 08.0	-0.3
COPN				*e*S	Sn	00 11 18.0	0.0
COPN				IAML		00 11 19.8	
	comp=Z,2μm,0.5s						
CNGN	**Cerro Negro**	**0.82**	**29**	*e*P	Pn	00 11 10.4	-0.8
CNGN				*e*S	Sn	00 11 22.8	+0.3
CNGN				IAML		00 11 23.1	
	comp=E,849nm,0.6s						
MOMN	**Momotombo**	**0.84**	**42**	*e*P	Pn	00 11 10.5	-0.9
MOMN				*e*S	Sn	00 11 23.6	+0.7
XAVN	**Gruta Xavier**	**0.85**	**64**	*e*P	Pn	00 11 11.0	-0.6
TELN	**Telica**	**0.86**	**18**	*e*P	Pn	00 11 11.9	0.0
MGAN	**Managua**	**0.92**	**66**	*e*P	Pn	00 11 12.0	-0.5
MGAN				*e*S	Sb	00 11 24.0	-0.7
MGAN				IAML		00 11 26.3	
CONN	**Concepcion**	**1.47**	**98**	*e*P	Pn	00 11 19.1	-1.0
CONN				*e*S	Sn	00 11 37.8	-0.6
CONN				IAML		00 11 42.5	
	comp=Z,150nm,0.7s						
ESTN	**Estel**	**1.50**	**29**	*e*P	Pn	00 11 20.7	+0.1
ESTN				*e*S	Sn	00 11 40.3	+1.0
ESTN				IAML		00 11 42.2	
	comp=N,175nm,0.6s						
BOAB	**BOACO BROADBAN**	**1.56**	**65**	*e*P	Pn	00 11 21.3	0.0
BOAB				IAML		00 11 43.5	
MATN	**Matagalpa**	**1.62**	**45**	*e*P	Pn	00 11 21.8	-0.6
MATN				*e*S	Sn	00 11 43.3	+0.9
CNCH	**Conchagua**	**1.65**	**335**	*e*P	Pn	00 11 22.9	+0.1
CNCH				*e*S	Sb	00 11 45.1	-0.7
GBS3	**Finca Las lm˜¡**	**1.90**	**121**	*e*P	Pn	00 11 26.7	+0.6
BUEV	**Buena Vista**	**1.93**	**120**	*e*P	Pn	00 11 27.2	+0.6
RCON	**San Juan de Ri**	**1.93**	**29**	*e*P	Pn	00 11 26.8	+0.1
GPS2	**Hotel Rinc˜‡n**	**2.00**	**120**	*e*P	Pb	00 11 30.5	-0.8
LIM1	**Limonal**	**2.11**	**120**	*e*P	Pn	00 11 29.7	+0.7
MESS	**Mesas**	**2.14**	**119**	*e*P	Pn	00 11 29.8	+0.3
TECA	**Tecapa**	**2.18**	**322**	*e*P	Pn	00 11 29.0	-1.1
CUI	**Cuipilapa**	**2.21**	**120**	*e*P	Pn	00 11 30.3	0.0
TGUH	**Tegucigalpa,Un**	**2.27**	**356**	*e*P	Pn	00 11 31.9	+0.8
ACAL	**Aguas Claras**	**2.33**	**119**	*e*P	Pn	00 11 32.8	+0.7
LFRS	**El Faro**	**2.65**	**314**	*e*P	Pn	00 11 35.1	-1.3
LFRS				*e*S	Sn	00 12 08.1	+0.5

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*ISCJB **22** 00:11:08.9±0.8, 44°.86N±0°.05×11°.23E±0°.10, h21km±4km, Error ellipse: s-maj=11.4km s-min=8.4km az=176.3*
*ROM **22** 00:11:08.1±0.1, 44°.834N±0°.004×11°.265E±0°.009, h10km, Md1.4/3, ML1.7/3*
*CSEM **22** 00:11:08.5±0.3, 44°.85N×11°.21E, h18km±1km, ML2.1/6, Error ellipse: s-maj=11.1km s-min=6.6km az=64.0*
*VIE **22** 00:11:08.1±0.8, 44°.90N×10°.95E, h14km, mb1.7/3, ml2.0/9, Error ellipse: s-maj=7.1km s-min=5.0km az=104.0 53 km NW of Bologna*
ISC 22 00:11:09.1±0.8, 44°.87N±0°.03×11°.29E±0°.04, h17km±3km, n30, σ0§83/40, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0800	**Massa Finalese**	**0.04**	**237**	P	**Pg**	**00 11 11.7**	**-0.4**
T0800				S	**Sg**	**00 11 13.9**	**-0.1**
T0800	**Massa Finalese**	**0.04**	**237**	P	**Pg**	**00 11 11.7**	**-0.4**
T0800				S	**Sg**	**00 11 13.9**	**-0.1**
T0800				END			
T0800				END			
T0800				END			
T0800				END			
T0805	**Bondeno (FE)**	**0.06**	**24**	P	**Pb**	**00 11 12.4**	**+0.2**
T0805	**Bondeno (FE)**	**0.06**	**24**	P	**Pb**	**00 11 12.4**	**+0.2**
T0802	**SanFelice sul**	**0.08**	**275**	P	**Pg**	**00 11 12.3**	**0.0**
T0802				S	**Sg**	**00 11 15.3**	**+0.8**
T0802	**SanFelice sul**	**0.08**	**275**	P	**Pg**	**00 11 12.3**	**0.0**
T0802				S	**Sg**	**00 11 15.3**	**+0.8**
T0802				END			
T0802				END			
T0802				END			
T0802				END			
SERM	**Sermide**	**0.14**	**2**	P	**Pb**	**00 11 13.9**	**+0.6**
SERM				S	**Sb**	**00 11 17.5**	**+1.3**
SERM	**Sermide**	**0.14**	**2**	P	**Pb**	**00 11 13.9**	**+0.6**
SERM				S	**Sb**	**00 11 17.5**	**+1.3**
RAVA	**Ravarino**	**0.17**	**228**	P	**Pb**	**00 11 13.0**	**-0.7**
RAVA				S	**Sb**	**00 11 17.9**	**+1.1**
RAVA	**Ravarino**	**0.17**	**228**	P	**Pb**	**00 11 13.9**	**+0.2**
RAVA				S	**Sb**	**00 11 17.9**	**+1.1**
RAVA				AML	AML		
	comp=E,942μm,0.5s						
RAVA				AML	AML		
	comp=N,940μm,0.6s						
RAVA				AML	AML		
	comp=E,942μm,0.5s						
RAVA				AML	AML		
	comp=N,941μm,0.6s						
RAVA				AML	AML		
	comp=N,941μm,0.6s						
RAVA				AML	AML		
	comp=E,942μm,0.5s						
RAVA				END			
RAVA				END			
RAVA				END			
RAVA				END			
T0821	**Loc. Casaglia**	**0.18**	**79**	P	**Pb**	**00 11 14.1**	**+0.1**
T0821	**Loc. Casaglia**	**0.18**	**79**	P	**Pb**	**00 11 14.1**	**+0.1**
T0820	**Chiesuol del F**	**0.21**	**111**	P	**Pb**	**00 11 15.2**	**+0.6**
T0820	**Chiesuol del F**	**0.21**	**111**	P	**Pb**	**00 11 15.2**	**+0.6**
T0820				AML	AML		
	comp=E,273μm,0.5s						
T0820				AML	AML		
	comp=N,288μm,1.6s						
T0820				AML	AML		
	comp=E,274μm,0.5s						
T0820				AML	AML		
	comp=N,388μm,0.1s						
T0820				AML	AML		
	comp=E,274μm,0.5s						
T0820				AML	AML		
	comp=N,388μm,0.1s						
FIU	**Minerbio Fiu**	**0.27**	**148**	P	**Pb**	**00 11 15.5**	**0.0**
FIU	**Minerbio Fiu**	**0.27**	**148**	P	**Pb**	**00 11 15.5**	**0.0**
FIU				AML	AML		
	comp=E,146μm,0.4s						
FIU				AML	AML		
	comp=N,178μm,1.6s						
FIU				AML	AML		
	comp=E,147μm,0.4s						
FIU				AML	AML		
	comp=N,178μm,1.6s						
FIU				AML	AML		
	comp=N,178μm,1.6s						
FIU				AML	AML		
	comp=E,147μm,0.4s						
TEOL	**Teolo**	**0.56**	**29**	AML	AML		
	comp=N,72μm,0.5s						
TEOL				AML	AML		
	comp=E,108μm,0.8s						
TEOL				AML	AML		
	comp=N,72μm,0.5s						
TEOL				AML	AML		
	comp=E,108μm,0.8s						
MAGA	**Magasa**	**1.02**	**333**	AML	AML		
	comp=E,143μm,1.4s						
MAGA				AML	AML		
	comp=N,118μm,0.3s						
ABTA	**Abfaltersbach**	**2.06**	**24**	Sn	**Sb**	**00 12 10.8**	**-0.8**
	comp=N,1.3nm,0.4s						
ABTA	**Abfaltersbach**	**2.06**	**24**	Sn	**Sb**	**00 12 10.8**	**-0.8**
	comp=N,1.3nm,0.4s						
FETA	**Feichten**	**2.19**	**350**	Sg	**Sg**	**00 12 19.0**	**-0.5**
	comp=N,0.6nm,0.3s						
FETA	**Feichten**	**2.19**	**350**	Sg	**Sg**	**00 12 19.0**	**-0.5**
	comp=N,0.6nm,0.3s						
WTTA	**Wattenberg**	**2.41**	**6**	Sn	**Sn**	**00 12 18.3**	**+1.2**
	comp=N,1.6nm,0.3s						
WTTA	**Wattenberg**	**2.41**	**6**	Sn	**Sn**	**00 12 18.3**	**+1.2**
	comp=N,1.6nm,0.3s						
WATA	**Walderalm**	**2.48**	**5**	*e*Pn	**Pn**	**00 11 48.1**	**-0.7**
	com

WATA Sn **Sn** **00 12 19.3 +0.6**
comp=N,1.1nm,0.3s
MOTA Moosalm 2.48 357 *e*Pn **Pn** **00 11 48.1 -0.8**
comp=N,0.7nm,0.3s
MOTA Sn **Sn** **00 12 20.0 +1.1**
comp=N,1.1nm,0.4s
MOTA Moosalm 2.48 357 Pn **Pn** **00 11 48.1 -0.8**
comp=N,0.7nm,0.3s
MOTA Sn **Sn** **00 12 20.0 +1.1**
comp=N,1.1nm,0.4s
RETA Reutte 2.65 352 *e*Sn **Sn** **00 12 21.2 -1.6**
comp=N,0.3nm,0.2s
RETA Reutte 2.65 352 Sn **Sn** **00 12 21.2 -1.6**
comp=N,0.3nm,0.2s

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*IDC **22** 00:12:08.4±2.0, 32°.74S×178°.25W, h0km, mb4.1/3, mb1 4.3/4, mb1mx3.9/44, mbtmp4.1/4, ML3.8/1, Error ellipse: s-maj=56.2km s-min=40.6km az=146.0*
*NEIC **22** 00:12:09.7±0.6, 32°.77S×178°.21W, h10km, mb4.2/5, Error ellipse: s-maj=15.3km s-min=12.4km az=104.0*
*ISCJB **22** 00:12:12.0±1.1, 32°.91S±0°.08×178°.4W±0°.2, h34km, mb4.2/8, Error ellipse: s-maj=23.4km s-min=10.5km az=15.0*
ISC 22 00:12:13.6±1.0, 32°.9S±0°.1×178°.3W±0°.2, h34km, n17, σ1§17/16, mb4.2/8, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.55**	**213**	Pn	**Pn**	**00 13 47.4**	**0.0**
	1.8nm,0.3s,baz=248,slow=5.4,SNR=5.9						
URZ				Sn	**Sn**	**00 14 58.9**	**-2.0**
	1.4nm,0.3s,baz=156,slow=20,SNR=5.1						
RPZ	**Rata Peaks**	**13.66**	**214**	Sn	Sn	00 17 43.0	-12
	0.3nm,0.3s,baz=42,slow=19,SNR=3.1						
FUNA	**Funafuti**	**24.32**	**354**	*e*P	**P**	**00 17 26.6**	**-1.6**
HNR	**Honiara**	**30.76**	**314**	P	**P**	**00 18 24.7**	**-1.2**
	12nm,0.2s						
CTA	**Charters Tower**	**34.00**	**283**	P	**P**	**00 18 56.2**	**+1.9**
	5.2nm,0.9s,baz=111,slow=8.6,SNR=4.1						
CTAO	**Charters Tower**	**34.00**	**283**	P	**P**	**00 18 54.8**	**+0.5**
	2.2nm,0.4s						
ASAR	**Alice Springs**	**42.76**	**270**	P	**P**	**00 20 07.8**	**-0.2**
	0.8nm,0.5s,baz=109,slow=7.7,SNR=7.7						
WRAB	**Tennant Creek**	**43.97**	**275**	P	**P**	**00 20 17.4**	**-0.3**
	0.6nm,0.8s						
WRA	**Warramunga Arr**	**43.97**	**275**	P	**P**	**00 20 17.0**	**-0.8**
	1.8nm,0.6s,baz=114,slow=7.9,SNR=9.4						
CASY	**Casey**	**52.85**	**209**	P	**P**	**00 21 26.1**	**+0.7**
	1.0nm,0.7s						
MBWA	**Marble Bar**	**55.72**	**265**	P	**P**	**00 21 48.6**	**+1.6**
	2.1nm,0.7s						
EFI	**East Falkland**	**80.88**	**147**	P	**P**	**00 24 24.0**	**0.0**
	4.0nm,0.8s						
INK	**Inuvik**	**106.22**	**16**	*e*PKP		00 30 33.1	
RES	**Resolute Bay**	**119.67**	**18**	*e*PKPdf	**PKPdf**	**00 30 58.8**	**+0.1**
FINES	**FINESS Array B**	**147.34**	**338**	PKPbc	**PKPbc**	**00 31 52.4**	**-0.4**
	2.9nm,0.8s,baz=54,slow=3.9,SNR=11						
MMAI	**Mount Meron Ar**	**151.76**	**280**	PKPbc	**PKPbc**	**00 32 06.1**	**+1.2**
	0.5nm,0.5s,baz=78,slow=6.6,SNR=3.4						
BRTR	**Keskin Array B**	**153.44**	**294**	PKPbc	**PKPbc**	**00 32 07.8**	**-0.7**
	0.6nm,0.7s,baz=134,slow=3.6,SNR=4.1						

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*CSEM **22** 00:22:39.3±2.0, 51°.25N×21°.62E, h1km, Error ellipse: s-maj=52.3km s-min=32.7km az=11.0*
PRU 22 00:23:28.3, 49°.82N×18°.37E, h0km, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.14**	**277**	*e*PG	Pg	00 23 30.5	-0.6
OKC				*e*SG	Sg	00 23 33.9	+0.9
	comp=Z,6.8nm,0.3s						
OKC	**Ostrava-Krasne**	**0.14**	**277**	*e*PKP2	Pg	00 23 30.5	-0.6
OKC	**Ostrava-Krasne**	**0.14**	**277**	Pg	Pg	00 23 30.5	-0.6
MORC	**Moravsky Berou**	**0.54**	**266**	*e*Pg	Pg	00 23 37.8	-0.8
MORC	**Moravsky Berou**	**0.54**	**266**	*e*PG	Pg	00 23 37.8	-0.8
MORC				*e*SG	Sg	00 23 45.9	+0.3
LANS	**Liptovska Anna**	**0.98**	**133**	*e*SG	Sg	00 24 00.1	+0.3
LANS	**Liptovska Anna**	**0.98**	**133**	*e*Sg	Sg	00 24 00.1	+0.3
DPC	**Dobruska-Polom**	**1.42**	**293**	*e*SG	Sg	00 24 13.5	-0.5

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*IDC **22** 00:23:24.0±1.1, 32°.78S×178°.26W, h0km, mb4.5/3, mb1 4.6/4, mb1mx4.0/44, mbtmp4.4/4, ML4.0/1, Error ellipse: s-maj=42.3km s-min=31.0km az=162.0*
*NEIC **22** 00:23:25.7±0.4, 32°.73S×178°.35W, h10km, mb4.3/8, Error ellipse: s-maj=13.0km s-min=9.1km az=118.0*
*ISCJB **22** 00:23:27.4±1.0, 32°.91S±0°.08×178°.5W±0°.2, h32km, mb4.3/11, Error ellipse: s-maj=23.7km s-min=9.8km az=19.6*
ISC 22 00:23:29.1±0.7, 32°.79S±0°.10×178°.4W±0°.1, h32km, n29, σ1§01/29, mb4.3/11, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.55**	**212**	Pn	**Pn**	**00 25 02.4**	**-0.7**
	2.8nm,0.3s,baz=266,slow=3.1,SNR=19						
URZ				Sn	**Sn**	**00 26 14.5**	**-2.3**
	8.3nm,0.3s,baz=52,slow=23,SNR=8.5						
RPZ	**Rata Peaks**	**13.66**	**214**	Sn	Sn	00 28 56.2	-15
	0.3nm,0.3s,baz=51,slow=15,SNR=2.9						
AFI	**Afiamalu**	**19.75**	**19**	P	**P**	**00 27 54.7**	**-1.8**
	2.3nm,0.2s						
FUNA	**Funafuti**	**24.25**	**354**	P	**P**	**00 28 42.7**	**-0.5**
	6.4nm,0.3s						
CTA	**Charters Tower**	**33.89**	**283**	P	**P**	**00 30 11.3**	**+2.2**
	4.8nm,0.5s,baz=118,slow=11,SNR=6.0						
CTAO	**Charters Tower**	**33.89**	**283**	P	**P**	**00 30 09.5**	**+0.3**
	7.4nm,0.5s						
PMG	**Port Moresby**	**39.35**	**298**	P	**P**	**00 30 54.5**	**-1.2**
	2.5nm,0.4s						
ASAR	**Alice Springs**	**42.66**	**270**	P	**P**	**00 31 23.4**	**+0.4**
	2.0nm,0.5s,baz=108,slow=7.5,SNR=27						
WRAB	**Tennant Creek**	**43.87**	**275**	*e*P	**P**	**00 31 32.7**	**+0.1**
	2.1nm,0.5s						
WRA	**Warramunga Arr**	**43.87**	**275**	P	**P**	**00 31 32.8**	**+0.1**
	4.7nm,0.5s,baz=115,slow=7.6,SNR=32						
SBA	**Scott Base**	**45.63**	**184**	P	**P**	**00 31 47.9**	**+2.0**
	0.3nm,0.8s						
CASY	**Casey**	**52.86**	**209**	P	**P**	**00 32 40.7**	**-0.6**
	0.6nm,0.4s						
MBWA	**Marble Bar**	**55.63**	**266**	P	**P**	**00 33 03.0**	**+0.9**
	10nm,0.8s						
COCO	**West Island**	**79.12**	**262**	P	**P**	**00 35 31.5**	**+0.6**
	40nm,0.4s						
HWUT	**Hardware Ranch**	**96.23**	**44**	P	**P**	**00 36 53.7**	**-0.4**
	0.2nm,0.5s						
INK	**Inuvik**	**106.18**	**16**	*e*PKP	**PKiKP**	**00 41 49.0**	**-0.1**
MKAR	**Makanchi Array**	**119.00**	**309**	PKP	**PKPdf**	**00 42 13.0**	**-1.2**
	0.2nm,0.6s,baz=110,slow=0.2,SNR=2.7						
KURK	**Kurchatov**	**122.41**	**313**	PKP	**PKPdf**	**00 42 19.9**	**-0.7**
KURBB	**Kurchatov Arra**	**122.44**	**313**	PKP	**PKPdf**	**00 42 19.9**	**-0.7**
	0.7nm,0.7s,baz=119,slow=1.9,SNR=4.5						
BVAR	**Borovoye Array**	**127.83**	**315**	PKP	**PKPdf**	**00 42 31.5**	**+0.6**
	0.5nm,0.5s,baz=106,slow=3.2,SNR=4.3						
ARU	**Arti**	**134.67**	**319**	*e*PKPdf	**PKPdf**	**00 42 44.8**	**+1.1**
OBN	**Obninsk**	**146.88**	**323**	*e*P	**PKPdf**	**00 43 05.7**	**+0.1**
FINES	**FINESS Array B**	**147.24**	**338**	PKPbc	**PKPbc**	**00 43 08.3**	**0.0**
	2.7nm,0.5s,baz=48,slow=4.1,SNR=34						
NB2	**NORSAR Subarra151.04**	**350**		PKP	**PKPbc**	**00 43 17.8**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=17,slow=2.6						
HFS	**Hagfors**	**151.50**	**347**	PKPbc	**PKPbc**	**00 43 18.9**	**-0.2**
	comp=Z,2.1nm,0.7s,baz=160,slow=4.7,SNR=4.7						
MMAI	**Mount Meron Ar**	**151.65**	**280**	PKPbc	**PKPbc**	**00 43 21.3**	**+0.9**
	comp=Z,2.0nm,0.5s,baz=92,slow=3.5,SNR=8.1						
AKASG	**Malin Array Be**	**152.92**	**320**	PKPbc	**PKPbc**	**00 43 22.9**	**+0.3**
	comp=Z,0.6nm,0.4s,baz=39,slow=2.5,SNR=2.9						
BRTR	**Keskin Array B**	**153.32**	**294**	PKPbc	**PKPbc**	**00 43 23.9**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=152,slow=4.0,SNR=7.4						
TORD	**Torodi Ar. Bea**	**160.45**	**180**	PKPab	**PKPab**	**00 44 07.5**	**+0.5**
	comp=Z,0.7nm,1.1s,baz=208,slow=2.8,SNR=2.2						

IDC 22 00:35:20.1±3.0, 32°.62S×178°.43W, h0km, mb3.6/2, mb1 3.9/3, mb1mx3.6/42, mbtmp3.7/3, ML3.5/1, Error ellipse: s-maj=72.6km s-min=45.7km az=123.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.70**	**212**	Pn	Pn	00 36 59.7	-0.1
	0.9nm,0.3s,baz=328,slow=14,SNR=3.9						
URZ				Sn	Sn	00 38 14.2	-2.7
	2.4nm,0.3s,baz=93,slow=22,SNR=10						
ASAR	**Alice Springs**	**42.67**	**270**	P	P	00 43 19.2	+0.3
	0.6nm,0.6s,baz=109,slow=7.7,SNR=6.0						
WRA	**Warramunga Arr**	**43.86**	**275**	P	P	00 43 27.9	-0.5
	0.4nm,0.4s,baz=116,slow=7.4,SNR=3.5						
FINES	**FINESS Array B**	**147.08**	**338**	PKPbc	PKPbc	00 55 03.4	-0.8
	1.3nm,0.8s,baz=46,slow=4.0,SNR=7.6						

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*ATA **22** 00:49:31.7±0.9, 39°.17N×42°.29E, h1km±5km, ML2.2, MW2.3*
*ISCJB **22** 00:49:33.4±0.8, 39°.18N±0°.05×42°.26E±0°.05, h11km±6km, Error ellipse: s-maj=8.7km s-min=6.1km az=12.0*
*CSEM **22** 00:49:33.9, 39°.32N×42°.25E, h7km, ML2.5*
*DDA **22** 00:49:33.9, 39°.32N×42°.25E, h7km, Ml2.5*
ISC 22 00:49:33.3±1.1, 39°.20N±0°.05×42°.26E±0°.03, h13km±8km, n12, σ1§60/20, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKAR	**Karacoban**	**0.16**	**289**	*i* P	**Pg**	**00 49 36.5**	**-0.7**
EKAR				*e*S	**Sg**	**00 49 41.0**	**+0.9**
EKAR				IAML		00 49 43.4	
	comp=Z,33nm,0.4s						
EKAR	**Karacoban**	**0.16**	**289**	*i* P	**Pg**	**00 49 36.5**	**-0.7**
EKAR				*i* S	**Sg**	**00 49 41.1**	**+1.1**
EKAR	**Karacoban**	**0.16**	**289**	P	**Pg**	**00 49 36.5**	**-0.7**
EKAR				S	**Sg**	**00 49 41.1**	**+1.1**
TUTA	**Tutak**	**0.48**	**65**	*e*P	**Pg**	**00 49 42.2**	**-0.5**
TUTA				*e*S	**Sg**	**00 49 49.5**	**+0.3**
TUTA				IAML		00 49 51.3	
	comp=Z,44nm,0.4s						
TUTA	**Tutak**	**0.48**	**65**	*i* P	**Pg**	**00 49 42.6**	**-0.1**
TUTA				*i* S	**Sb**	**00 49 49.8**	**-0.9**
TUTA	**Tutak**	**0.48**	**65**	P	**Pg**	**00 49 42.6**	**-0.1**
TUTA				S	**Sb**	**00 49 49.8**	**-0.9**
ADCV	**BITLIS_Adilcev**	**0.54**	**137**	*i* S	**Sg**	**00 49 51.5**	**+0.4**
ADCV	**BITLIS_Adilcev**	**0.54**	**137**	S	**Sg**	**00 49 51.5**	**+0.4**
EATA	**Eleskirt**	**0.68**	**15**	*e*P	**Pb**	**00 49 46.4**	**-0.9**
EATA				*e*S	**Sn**	**00 49 57.5**	**-2.1**
EATA				IAML		00 49 59.8	
	comp=Z,2.4nm,0.2s						
BNGL	**BINGOL**	**0.90**	**254**	*e*P	**Pg**	**00 49 50.0**	**-0.6**
ERZM	**Erzurum**	**0.98**	**316**	*e*P	**Pb**	**00 49 52.4**	**0.0**
DIGO	**Kars**	**1.48**	**35**	*e*P	**Pg**	**00 50 01.0**	**-0.8**
DIGO				*e*S	**Sn**	**00 50 24.6**	**+5.2**

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*IDC **22** 00:56:31.9±1.2, 32°.78S×178°.35W, h0km, mb4.2/2, mb1 4.4/3, mb1mx3.7/47, mbtmp4.2/3, ML4.0/1, Error ellipse: s-maj=45.8km s-min=34.3km az=149.0*
*ISCJB **22** 00:56:33.3±0.6, 32°.92S±0°.04×178°.2W±0°.1, h34km, mb4.5/10, Error ellipse: s-maj=15.3km s-min=3.5km az=19.6*
*NEIC **22** 00:56:33.1±0.4, 32°.77S×178°.28W, h10km, mb4.6/8, Error ellipse: s-maj=11.2km s-min=6.7km az=123.0*
*WEL **22** 00:56:36.2±0.8, 33°.S±13°×17°.8W±1°.5, h23km±18km, ML5.0/15*
ISC 22 00:56:36.1±0.7, 32°.85S±0°.07×178°.2W±0°.1, h34km, n48, σ1§18/62, mb4.7/10, 1D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.60**	**4**	Sn	**Sn**	**00 58 10.5**	**-0.3**
	58nm,0.3s,baz=254,slow=22,SNR=3.7						
RAO	**Raoul Island**	**3.60**	**4**	Pn	**Pn**	**00 57 28.3**	**-1.2**
RAO				Sn	**Sn**	**00 58 10.5**	**-0.3**
MXZ	**Matakaoa Point**	**5.50**	**210**	P	**Pn**	**00 57 54.4**	**-1.1**
MXZ				S	**Sn**	**00 58 56.0**	**-1.5**
WMGZ	**Waiomatatini S**	**5.67**	**208**	P	**Pn**	**00 57 58.3**	**+0.4**
WMGZ				S	**Sn**	**00 59 01.8**	**0.0**
PKGZ	**Pakihiroa**	**5.87**	**210**	P	**Pn**	**00 57 59.1**	**-1.6**
PKGZ				S	**Sn**	**00 59 05.6**	**-1.2**
HAZ	**Te Kaha**	**5.89**	**213**	P	**Pn**	**00 58 00.3**	**-0.6**
HAZ				S	**Sn**	**00 59 09.5**	**+2.4**
PUZ	**Puketiti**	**5.95**	**208**	P	**Pn**	**00 57 59.9**	**-1.9**
PUZ				P	**Pn**	**00 57 59.8**	**-1.9**
PUZ				S	**Sn**	**00 59 07.7**	**-1.1**
RUGZ	**Raukumara Rang**	**6.11**	**212**	P	**Pn**	**00 58 03.2**	**-0.8**
RUGZ				S	**Sn**	**00 59 13.3**	**+0.5**
TWGZ	**Tauwhareparae**	**6.15**	**209**	P	**Pn**	**00 58 05.3**	**+0.7**
TWGZ				S	**Sn**	**00 59 14.3**	**+0.6**
TKGZ	**Te Karaka**	**6.43**	**209**	P	**Pn**	**00 58 08.4**	**+0.1**
TKGZ				S	**Sn**	**00 59 18.3**	**-2.2**
MWZ	**Matawai**	**6.48**	**211**	P	**Pn**	**00 58 07.4**	**-1.7**
MWZ				S	**Sn**	**00 59 20.7**	**-1.0**
URZ	**Urewera**	**6.61**	**214**	Pn	**Pn**	**00 58 10.8**	**+0.1**
	2.8nm,0.3s,baz=251,slow=4.1,SNR=11						
URZ				Sn	**Sn**	**00 59 23.9**	**-1.0**
	13nm,0.3s,baz=105,slow=22,SNR=13						
URZ	**Urewera**	**6.61**	**214**	P	**Pn**	**00 58 10.8**	**+0.1**
URZ				S	**Sn**	**00 59 23.6**	**-1.2**
RAGZ	**Rawiri**	**6.66**	**211**	P	**Pn**	**00 58 11.3**	**-0.3**
RAGZ				S	**Sn**	**00 59 25.7**	**-0.7**
RIGZ	**Rimuhau**	**6.69**	**208**	P	**Pn**	**00 58 12.3**	**+0.3**
RIGZ				S	**Sn**	**00 59 27.2**	**+0.1**
PRGZ	**Paritu Road**	**6.83**	**207**	P	**Pn**	**00 58 11.4**	**-2.6**
PRGZ				S	**Sn**	**00 59 28.3**	**-2.3**
MUGZ	**Murupara**	**6.94**	**215**	P	**Pn**	**00 58 15.1**	**-0.2**
RTZ	**Ruatahuna**	**6.95**	**213**	P	**Pn**	**00 58 15.3**	**-0.3**
MHGZ	**Mahia Peninsul**	**7.03**	**206**	P	**Pn**	**00 58 14.2**	**-2.4**
RAHZ	**Arahi**	**7.15**	**211**	P	**Pn**	**00 58 18.6**	**+0.3**
MTHZ	**Maungataniwha**	**7.21**	**212**	P	**Pn**	**00 58 19.7**	**+0.6**
ARHZ	**Aropaoanui**	**7.48**	**210**	P	**Pn**	**00 58 22.8**	**0.0**
BKZ	**Black Stump Fm**	**7.62**	**213**	P	**Pn**	**00 58 24.1**	**-0.7**
MCHZ	**McNeill Hill**	**7.76**	**211**	P	**Pn**	**00 58 25.8**	**-0.8**
CKHZ	**Cape Kidnapper**	**7.78**	**208**	P	**Pn**	**00 58 25.4**	**-1.5**
TMWZ	**Te Maipa**	**9.49**	**208**	P	**Pn**	**00 58 47.5**	**-2.8**
RPZ	**Rata Peaks**	**13.72**	**215**	Sn	Sn	01 02 05.2	-14
	0.6nm,0.3s,baz=16,slow=19,SNR=4.0						
AFI	**Afiamalu**	**19.75**	**19**	P	**P**	**01 01 01.9**	**-1.3**
	20nm,0.1s						
RAR	**Rarotonga**	**20.07**	**59**	P	**P**	**01 01 06.8**	**+0.2**
	12nm,0.9s						
FUNA	**Funafuti**	**24.33**	**354**	P	**P**	**01 01 50.8**	**+0.1**
	13nm,0.6s						
TAU	**Tasmania Unive**	**28.82**	**240**	P	**P**	**01 02 31.0**	**-0.1**
	3.5nm,0.9s						
HNR	**Honiara**	**30.82**	**314**	P	**P**	**01 02 48.4**	**-0.5**
	8.0nm,0.3s						
CTAO	**Charters Tower**	**34.09**	**283**	P	**P**	**01 03 17.2**	**-0.5**
	5.0nm,0.3s						
ASAR	**Alice Springs**	**42.86**	**270**	P	**P**	**01 04 30.9**	**-0.3**
	1.4nm,0.5s,baz=109,slow=7.5,SNR=17						
WRAB	**Tennant Creek**	**44.06**	**275**	P	**P**	**01 04 40.3**	**-0.7**
	1.5nm,0.6s						
WRA	**Warramunga Arr**	**44.07**	**275**	P	**P**	**01 04 40.5**	**-0.6**
	1.6nm,0.4s,baz=114,slow=8.0,SNR=24						
NWAO	**Narrogin (SRO)**	**53.40**	**251**	P	**P**	**01 05 54.4**	**+1.8**
	10nm,0.9s						
MBWA	**Marble Bar**	**55.82**	**265**	*e*P	**P**	**01 06 10.4**	**+0.2**
	5.2nm,0.4s						
QSPA	**South Pole Qui**	**57.26**	**180**	P	**P**	**01 06 21.4**	**+1.3**
	2.7nm,0.3s						
SYO	**Syowa Base**	**74.69**	**193**	‖ *e*pP	pP	01 08 24.8	+2.4
MKAR	**Makanchi Array**	**119.19**	**309**	PKP	**PKPdf**	**01 15 21.4**	**+0.2**
	0.2nm,0.5s,baz=107,slow=1.5,SNR=2.9						
BVAR	**Borovoye Array**	**128.01**	**314**	PKP	**PKPdf**	**01 15 39.2**	**+1.2**
	0.4nm,0.5s,baz=113,slow=2.3,SNR=4.0						
FINES	**FINESS Array B**	**147.37**	**338**	PKPbc	**PKPbc**	**01 16 15.9**	**+0.5**
	2.7nm,0.4s,baz=39,slow=4.4,SNR=52						
NB2	**NORSAR Subarra151.14**	**350**		PKP	**PKPbc**	**01 16 25.5**	**+0.5**
	comp=Z,1.2nm,0.8s,baz=16,slow=4.1						
HFS	**Hagfors**	**151.60**	**347**	PKPbc	**PKPbc**	**01 16 26.7**	**+0.7**
	comp=Z,1.0nm,0.6s,baz=119,slow=1.8,SNR=5.2						
MMAI	**Mount Meron Ar**	**151.86**	**280**	PKPbc	**PKPbc**	**01 16 29.6**	**+2.1**
	comp=Z,0.6nm,0.4s,baz=85,slow=3.0,SNR=8.4						
BRTR	**Keskin Array B**	**153.53**	**294**	PKPbc	**PKPbc**	**01 16 31.6**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=64,slow=3.4,SNR=11						
TORD	**Torodi Ar. Bea**	**160.38**	**180**	PKPab	**PKPab**	**01 17 13.9**	**+0.5**
	comp=Z,0.7nm,1.1s,baz=178,slow=4.4,SNR=2.0						

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*IDC **22** 01:00:53.5±1.0, 32°.88S×178°.27W, h0km, mb4.6/3, mb1 4.7/5, mb1mx4.0/50, mbtmp4.6/5, ML4.3/2, MS4.0/2, Ms1 4.0/2, ms1mx3.2/40, Error ellipse: s-maj=36.2km s-min=27.4km az=140.0*
*ISCJB **22** 01:00:56.3±0.8, 32°.95S±0°.06×178°.3W±0°.2, h34km, mb4.4/5, MS3.9/1, Error ellipse: s-maj=23.2km s-min=4.7km az=19.6*
*NEIC **22** 01:00:56.6±3.6, 32°.91S×178°.28W, h20km±21km, mb4.5/3, Error ellipse: s-maj=17.1km s-min=8.8km az=117.0*
*WEL **22** 01:01:00.1±1.6, 33°.S±23°×17°.8W±2°.9, h152km±63km*
ISC 22 01:00:58.3±0.9, 32°.89S±0°.09×178°.2W±0°.2, h34km, n47, σ1§09/58, mb4.4/5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.64**	**4**	Pn	**Pn**	**01 01 51.8**	**-0.4**
	32nm,0.3s,baz=72,slow=20,SNR=2.3						
RAO				Sn	**Sn**	**01 02 31.2**	**-2.8**
	57nm,0.3s,baz=233,slow=20,SNR=3.1						
MXZ	**Matakaoa Point**	**5.45**	**210**	P	**Pn**	**01 02 17.8**	**+0.7**
MXZ				S	**Sn**	**01 03 17.1**	**-1.5**
WMGZ	**Waiomatatini S**	**5.63**	**208**	P	**Pn**	**01 02 20.5**	**+1.0**
WMGZ				S	**Sn**	**01 03 23.4**	**+0.5**
PKGZ	**Pakihiroa**	**5.82**	**210**	P	**Pn**	**01 02 20.4**	**-1.8**
PKGZ				S	**Sn**	**01 03 27.3**	**-0.6**
HAZ	**Te Kaha**	**5.84**	**213**	P	**Pn**	**01 02 22.5**	**0.0**
HAZ				S	**Sn**	**01 03 29.3**	**+1.1**
PUZ	**Puketiti**	**5.91**	**208**	P	**Pn**	**01 02 21.8**	**-1.6**
PUZ				S	**Sn**	**01 03 28.6**	**-1.3**
RUGZ	**Raukumara Rang**	**6.06**	**212**	P	**Pn**	**01 02 24.9**	**-0.7**
RUGZ				S	**Sn**	**01 03 34.3**	**+0.5**
TWGZ	**Tauwhareparae**	**6.11**	**209**	P	**Pn**	**01 02 27.4**	**+1.2**
TWGZ				S	**Sn**	**01 03 34.8**	**0.0**
CNGZ	**Carnagh Statio**	**6.29**	**206**	P	**Pn**	**01 02 29.5**	**+1.0**
TKGZ	**Te Karaka**	**6.39**	**209**	P	**Pn**	**01 02 29.8**	**-0.1**
TKGZ				S	**Sn**	**01 03 39.6**	**-2.0**
MWZ	**Matawai**	**6.43**	**211**	P	**Pn**	**01 02 31.3**	**+0.6**
OPRZ	**Ohinepanea**	**6.52**	**219**	P	**Pn**	**01 02 34.0**	**+2.2**
URZ	**Urewera**	**6.56**	**214**	Pn	**Pn**	**01 02 31.4**	**-0.9**
	4.4nm,0.3s,baz=263,slow=4.0,SNR=9.3						
URZ				Sn	**Sn**	**01 03 44.8**	**-1.1**
	8.5nm,0.3s,baz=287,slow=23,SNR=10						
URZ	**Urewera**	**6.56**	**214**	P	**Pn**	**01 02 30.8**	**-1.5**
URZ				S	**Sn**	**01 03 44.3**	**-1.7**
RAGZ	**Rawiri**	**6.62**	**211**	P	**Pn**	**01 02 33.0**	**-0.1**
RAGZ				S	**Sn**	**01 03 45.5**	**-1.9**
RIGZ	**Rimuhau**	**6.65**	**208**	P	**Pn**	**01 02 32.4**	**-1.2**
RIGZ				S	**Sn**	**01 03 47.4**	**-0.8**
PRGZ	**Paritu Road**	**6.79**	**206**	P	**Pn**	**01 02 34.2**	**-1.3**
SNGZ	**Shannon Statio**	**6.89**	**210**	P	**Pn**	**01 02 37.2**	**+0.3**
MUGZ	**Murupara**	**6.89**	**215**	P	**Pn**	**01 02 36.9**	**-0.1**
RTZ	**Ruatahuna**	**6.91**	**213**	P	**Pn**	**01 02 39.3**	**+2.1**
RAHZ	**Arahi**	**7.11**	**211**	P	**Pn**	**01 02 40.4**	**+0.5**
MTHZ	**Maungataniwha**	**7.16**	**212**	P	**Pn**	**01 02 40.7**	**0.0**
ARHZ	**Aropaoanui**	**7.44**	**210**	P	**Pn**	**01 02 43.6**	**-0.7**
BKZ	**Black Stump Fm**	**7.58**	**213**	P	**Pn**	**01 02 45.1**	**-1.2**
RPZ	**Rata Peaks**	**13.68**	**215**	Sn	Sn	01 06 24.8	-16
	0.4nm,0.3s,baz=137,slow=19,SNR=5.1						
DZM	**Mont Dzumac**	**17.32**	**305**	LR	LR	01 10 30.5	
	comp=Z,540nm,18.4s,baz=196,slow=33						
AFI	**Afiamalu**	**19.79**	**19**	*e*P	**P**	**01 05 26.3**	**+0.4**
	30nm,0.8s						
STKA	**Stephens Creek**	**33.79**	**261**	LR	LR	01 19 59.4	
	comp=Z,197nm,18.2s,baz=32,slow=34						
CTA	**Charters Tower**	**34.08**	**283**	P	**P**	**01 07 41.1**	**+1.5**
	4.6nm,0.5s,baz=118,slow=11,SNR=7.3						
CTAO	**Charters Tower**	**34.08**	**283**	*e*P	**P**	**01 07 40.5**	**+0.8**
ASAR	**Alice Springs**	**42.83**	**270**	P	**P**	**01 08 52.7**	**-0.6**
	3.1nm,0.5s,baz=110,slow=7.6,SNR=39						
ASAR				PcP	**PcP**	**01 10 44.0**	**-0.1**
	0.4nm,0.5s,baz=111,slow=5.1,SNR=2.5						
WRAB	**Tennant Creek**	**44.04**	**275**	*e*P	**P**	**01 09 01.9**	**-1.0**
	3.7nm,0.5s						
WRA	**Warramunga Arr**	**44.05**	**275**	P	**P**	**01 09 02.3**	**-0.8**
	5.4nm,0.5s,baz=115,slow=7.8,SNR=58						
CASY	**Casey**	**52.86**	**209**	*e*P	**P**	**01 10 10.0**	**-0.2**
	1.6nm,0.4s						
MKAR	**Makanchi Array**	**119.20**	**309**	PKP	**PKPdf**	**01 19 43.4**	**-0.1**
	0.3nm,0.6s,baz=222,slow=1.9,SNR=2.2						
ZALV	**Zalesovo Beam**	**119.74**	**317**	PKP	**PKPdf**	**01 19 45.0**	**+0.8**
	0.4nm,0.3s,baz=104,slow=3.7,SNR=2.4						
ZALV	**Zalesovo Beam**	**119.74**	**317**	PKP	**PKPdf**	**01 19 45.0**	**+0.8**
KURK	**Kurchatov**	**122.60**	**313**	PK

MAT *e*S **Sn** **01 10 59.3 +0.8**
USRK Ussuriysk Ar. 9.84 303 P **Pn** **01 11 07.7 +3.5**
0.4nm,0.3s,baz=101,slow=12,SNR=7.1
KSRS Korea Array 12.41 266 P **Pn** **01 11 42.6 +3.3**
0.3nm,0.3s,baz=85,slow=14,SNR=4.4
KSRS LR LR 01 16 27.5
comp=Z,184nm,18.5s,baz=164,slow=37
KSAR Wonju Array Be 12.44 266 P **Pn** **01 11 42.6 +2.8**
KLR Kul'dur 12.90 323 P **Pn** **01 11 49.4 +3.4**
0.0nm,0.3s,baz=127,slow=14,SNR=3.5
KLR LR LR 01 16 52.4
comp=Z,13nm,18.4s,baz=159,slow=37
PETK Petropavlovsk- 16.75 31 P **P** **01 12 40.8 +1.3**
0.4nm,0.3s,baz=176,slow=3.9,SNR=4.6
ULN Ulaanbaatar 27.50 300 *e*P **P** **01 14 29.3 +0.1**
1.8nm,0.8s
SONM Songino Array 27.94 300 P **P** **01 14 32.2 -0.9**
1.0nm,0.7s,baz=138,slow=43,SNR=2.4
H11N2 WAKE ISLAND Hy 28.12 128 T T 01 43 53.6
baz=322
H11N1 WAKE ISLAND Hy 28.13 128 T T 01 43 51.4
baz=322
H11N3 WAKE ISLAND Hy 28.14 128 T T 01 43 52.0
baz=322
H11S1 WAKE ISLAND Hy 28.93 130 T T 01 45 00.2
baz=318,slow=74
H11S3 WAKE ISLAND Hy 28.93 130 T T 01 44 57.6
baz=318
H11S2 WAKE ISLAND Hy 28.95 130 T T 01 44 58.7
baz=318,slow=74
ZALV Zalesovo Beam 41.58 310 P **P** **01 16 30.1 -0.2**
1.5nm,0.5s,baz=90,slow=9.1,SNR=6.0
ZALV PcP **PcP** **01 18 27.3 0.0**
0.9nm,0.6s,baz=93,slow=2.9,SNR=3.7
MKAR Makanchi Array 44.30 300 P **P** **01 16 52.3 -0.2**
1.8nm,0.8s,baz=82,slow=8.5,SNR=10
KURK Kurchatov 45.80 307 P **P** **01 17 04.5 +0.2**
KURBB Kurchatov Arra 45.88 306 P **P** **01 17 04.5 -0.4**
5.5nm,0.2s,baz=80,slow=8.3,SNR=12
ILAR Eielson Array 46.55 34 P **P** **01 17 10.2 +0.1**
1.1nm,0.8s,baz=267,slow=6.4,SNR=14
BVAR Borovoye Array 50.21 311 P **P** **01 17 38.4 -0.1**
0.9nm,0.4s,baz=70,slow=8.7,SNR=12
BRVK Borovoye 50.27 311 *e*P **P** **01 17 38.3 -0.6**
2.9nm,0.8s
INK Inuvik 51.47 28 P **P** **01 17 48.4 +0.7**
0.6nm,0.3s,baz=275,slow=7.1,SNR=5.0
ARU Arti 55.68 318 *e*P **P** **01 18 17.4 -1.2**
1.7nm,0.6s
WRA Warramunga Arr 59.71 190 P **P** **01 18 44.8 -2.6**
1.5nm,0.7s,baz=9.8,slow=6.9,SNR=7.0
FINES FINESS Array B 67.45 333 P **P** **01 19 37.8 -0.3**
1.8nm,0.8s,baz=349,slow=5.8,SNR=4.7
BMO Blue Mountains 69.07 49 *e*P **P** **01 19 48.8 +0.1**
0.6nm,0.4s
KBZ Khabaz 70.59 311 P **P** **01 19 58.5 +0.6**
1.8nm,0.7s,baz=20,slow=7.8,SNR=3.7
FFC Flin Flon 70.77 34 *e*P **P** **01 19 58.8 0.0**
1.4nm,0.6s
HFS Hagfors 72.56 336 P **P** **01 20 09.5 -0.1**
0.9nm,0.5s,baz=46,slow=6.2,SNR=10
PDAR Pinedale Array 74.78 47 P **P** **01 20 23.2 0.0**
0.4nm,0.6s,baz=256,slow=1.9,SNR=5.2
CLL Collm 79.82 331 *e*P **P** **01 20 51.0 +0.1**
SDCO Great Sand Dun 80.43 49 *e*P **P** **01 20 54.5 -0.4**
0.5nm,0.5s
RAYN Ar Rayn 81.27 293 *e*P **P** **01 20 58.5 -0.8**
1.2nm,0.8s
TXAR Lajitas Array 87.33 54 P **P** **01 21 30.6 +0.6**
0.6nm,0.9s,baz=302,slow=5.2,SNR=5.2

*IDC **22** 01:20:03.9±1.8, 32°.85S×178°.20W, h0km, mb4.0/3, mb1 4.2/4, mb1mx3.7/44, mbtmp4.0/4, ML3.9/1, Error ellipse: s-maj=54.2km s-min=39.1km az=151.0*
*ISCJB **22** 01:20:06.6±5.4, 33°.0S±0°.2×178°.2W±0°.8, h34km, mb4.0/3, Error ellipse: s-maj=97.4km s-min=14.9km az=13.4*
ISC 22 01:20:08.8±2.2, 33°.0S±0°.2×178°.2W±0°.3, h34km, n7, σ1§16/8, mb4.0/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.53**	**215**	Pn	**Pn**	**01 21 42.4**	**0.0**
URZ	2.3nm,0.3s,baz=269,slow=4.1,SNR=8.0			Sn	**Sn**	**01 22 55.7**	**+0.1**
CTA	**Charters Tower**	**34.17**	**283**	P	**P**	**01 26 52.3**	**+1.3**
ASAR	2.6nm,0.3s,baz=148,slow=22,SNR=8.2 **Alice Springs**	**42.91**	**270**	P	**P**	**01 28 03.4**	**-1.0**
WRA	1.9nm,0.6s,baz=124,slow=11,SNR=4.2 **Warramunga Arr**	**44.13**	**275**	P	**P**	**01 28 12.8**	**-1.4**
FINES	1.0nm,0.6s,baz=104,slow=7.6,SNR=12 **FINESS Array B**	**147.50**	**338**	PKPbc	**PKPbc**	**01 39 48.2**	**-0.3**
MMAI	1.5nm,0.6s,baz=115,slow=7.5,SNR=14 **Mount Meron Ar**	**151.92**	**279**	PKPbc	**PKPbc**	**01 40 01.7**	**+1.3**
BRTR	2.5nm,0.9s,baz=28,slow=3.9,SNR=9.4 **Keskin Array B**	**153.62**	**294**	PKPbc	**PKPbc**	**01 40 03.5**	**-0.5**
	0.3nm,0.4s,baz=39,slow=5.5,SNR=3.0						
	0.2nm,0.4s,baz=134,slow=4.2,SNR=3.6						

*IDC **22** 01:24:23.2±1.4, 0°.21N×92°.09E, h0km, mb3.7/4, mb1 4.0/7, mb1mx3.5/72, mbtmp3.8/7, ML4.0/3, MS3.3/1, Ms1 3.3/1, ms1mx2.7/71, Error ellipse: s-maj=43.9km s-min=23.4km az=43.0*
*NEIC **22** 01:24:24.3±0.7, 0°.18N×92°.03E, h10km, mb4.0/1, Error ellipse: s-maj=19.1km s-min=10.7km az=210.0*
*ISCJB **22** 01:24:25.4±1.0, 0°.3N±0°.1×92°.1E±0°.1, h33km, mb3.7/5, Error ellipse: s-maj=22.4km s-min=13.4km az=31.6*
ISC 22 01:24:27.9±1.2, 0°.3N±0°.2×92°.1E±0°.1, h35km, n10, σ1§05/10, mb3.9/5, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**7.31**	**70**	Pn	**Pn**	**01 26 12.1**	**-0.3**
PSI	1.0nm,0.3s,baz=179,slow=13,SNR=4.9			Sn	Sn	01 27 19.8	-14
PSI	0.4nm,0.3s,baz=180,slow=20,SNR=3.0			LR	LR	01 29 07.4	
PALK	comp=Z,197nm,18.1s,baz=271,slow=39 **Pallekele**	**13.29**	**302**	Pn	**Pn**	**01 27 33.5**	**-0.8**
PALK	0.9nm,0.3s,baz=116,slow=14,SNR=3.7			Sn	Sn	01 29 52.3	-8.8
PALK	1.0nm,0.3s,baz=116,slow=5.4,SNR=3.4 **Pallekele**	**13.29**	**302**	*e*Pn	**Pn**	**01 27 33.1**	**-1.2**
PALK	0.3nm,0.3s,baz=211,slow=14,SNR=5.5			Sn	Sn	01 29 52.3	-8.8
CMAR	**Chiang Mai Arr**	**19.31**	**20**	P	**P**	**01 28 50.2**	**+0.1**
WRA	1.1nm,0.7s,baz=295,slow=8.4,SNR=8.4 **Warramunga Arr**	**46.01**	**118**	P	**P**	**01 32 48.0**	**-0.4**
WRAB	0.7nm,0.6s,baz=111,slow=5.9,SNR=4.2 **Tennant Creek**	**46.02**	**118**	*e*P	**P**	**01 32 48.1**	**-0.3**
ASAR	1.2nm,0.7s **Alice Springs**	**47.06**	**123**	P	**P**	**01 32 56.4**	**-0.1**
MKAR	0.4nm,0.7s,baz=308,slow=8.1,SNR=2.8 **Makanchi Array**	**47.13**	**351**	P	**P**	**01 32 56.8**	**+0.1**
GERES	0.3nm,0.6s,baz=161,slow=9.2,SNR=4.4 **GERESS Array B**	**82.14**	**319**	P	**P**	**01 36 47.5**	**+2.2**
TXAR	0.7nm,0.6s,baz=111,slow=5.9,SNR=4.2 **Lajitas Array**	**146.96**	**26**	PKPbc	**PKPab**	**01 44 08.3**	**-0.7**
	0.2nm,0.7s,baz=298,slow=1.9,SNR=3.2						

IDC 22 01:30:52.9±3.0, 32°.37S×178°.53W, h0km, mb3.7/2, mb1 3.9/3, mb1mx3.5/46, mbtmp3.7/3, ML3.4/1, Error ellipse: s-maj=73.0km s-min=46.3km az=119.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.87**	**210**	Pn	Pn	01 32 34.7	-0.2
URZ	0.7nm,0.3s,baz=38,slow=19,SNR=2.9			Sn	Sn	01 33 44.8	-9.0
ASAR	0.4nm,0.3s,baz=252,slow=20,SNR=3.1 **Alice Springs**	**42.59**	**269**	P	P	01 38 50.8	0.0
WRA	0.2nm,0.3s,baz=111,slow=8.3,SNR=4.2 **Warramunga Arr**	**43.76**	**274**	P	P	01 39 00.1	-0.2
FINES	0.6nm,0.4s,baz=116,slow=7.6,SNR=6.9 **FINESS Array B**	**146.82**	**339**	PKPbc	PKPbc	01 50 35.4	-0.8
	1.6nm,0.9s,baz=64,slow=3.2,SNR=5.9						

*NIED **22** 01:47:00, 31°.90N×132°.00E, h32km, Mw3.8 Best double couple: M0:6.47000×10^14 NP1:φs191.00000°, δ22.00000°, λ66.00000°. NP2:φs37.00000°, δ70.00000°, λ100.00000°.*
*ISCJB **22** 01:47:06.7±1.2, 31°.86N±0°.05×132°.06E±0°.08, h22km±9km, mb3.6/5, Error ellipse: s-maj=12.9km s-min=5.6km az=34.0*
*JMA **22** 01:47:07.6±0.1, 31°.90N×132°.00E, h26km±2km, M3.6 Broadband fault plane solution: P waves. NP1: φs44.00000°, δ78.00000°, λ88.00000°. NP2:φs233.00000°, δ12.00000°, λ99.00000°. Principal axes: T Plg57.0000°, Azm312.0000°; N Plg2.0000°, Azm45.0000°; P Plg33.0000°, Azm136.0000°;*
*IDC **22** 01:47:12.1±1.2, 32°.03N×130°.37E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/73, mbtmp3.6/4 Error ellipse: s-maj=33.6km s-min=17.3km az=96.0*
ISC 22 01:47:06.2±1.2, 31°.83N±0°.05×132°.08E±0°.07, h20km±5km, n16, σ1§25/18, mb3.9/5, 4C-2D, Southeast of Shikoku

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTSN	**Tsuno**	**0.64**	**310**	P	**Pb**	**01 47 18.2**	**-0.5**
JTSN				*e*S	**Sb**	**01 47 25.7**	**-1.5**
JNAR	**Kushima--Naru**	**0.75**	**246**	⇓P	**Pn**	**01 47 21.5**	**-0.1**
JNAR				S	**Sb**	**01 47 31.3**	**+1.0**
JTZ	**Takazaki**	**0.84**	**275**	⇑P	**Pb**	**01 47 21.9**	**-0.2**
JTO	**Tosashimizu**	**1.20**	**31**	P	**Pn**	**01 47 27.7**	**0.0**
JTO				*e*S	**Sb**	**01 47 42.4**	**-0.7**
JUS	**Usuki**	**1.26**	**347**	⇑P	**Pb**	**01 47 29.3**	**+0.1**
JUS				S	**Sb**	**01 47 45.5**	**+0.4**
JIU2	**Izumi 2**	**1.29**	**304**	⇑P	**Pn**	**01 47 29.0**	**0.0**
UWA2	**Uwa jima 2**	**1.45**	**18**	⇑P	**Pn**	**01 47 31.7**	**+0.4**
JTN	**Tanegashima 3**	**1.50**	**219**	⇓P	**Pn**	**01 47 32.5**	**+0.6**
JTN				S	**Sb**	**01 47 52.3**	**+0.3**
JNU	**Nakatsue**	**1.64**	**322**	Pg	**Pn**	**01 47 34.7**	**+0.9**
JNU	97nm,0.3s,baz=44,slow=2.1,SNR=194			Lg	Lg	01 47 57.9	
JNU	24nm,0.3s,baz=225,slow=22,SNR=16			LR	LR	01 48 02.4	
KSRS	comp=Z,119nm,19.7s,baz=136,slow=43 **Korea Array**	**6.57**	**330**	Pn	**Pn**	**01 48 43.7**	**+2.2**
KLR	0.4nm,0.3s,baz=143,slow=16,SNR=3.4 **Kul'dur**	**17.38**	**359**	P	**P**	**01 51 11.0**	**+2.5**
SONM	0.0nm,0.3s,baz=214,slow=6.7,SNR=5.5 **Songino Array**	**25.22**	**317**	P	**P**	**01 52 30.4**	**-0.2**
MKAR	0.4nm,0.5s,baz=121,slow=8.3,SNR=4.5 **Makanchi Array**	**40.63**	**306**	P	**P**	**01 54 42.4**	**-2.3**
WRA	0.3nm,0.8s,baz=88,slow=9.4,SNR=3.1 **Warramunga Arr**	**51.52**	**177**	P	P	01 56 21.3	+11
ASAR	1.1nm,0.8s,baz=351,slow=8.0,SNR=4.9 **Alice Springs**	**55.21**	**178**	P	P	01 56 49.3	+12
FINES	1.2nm,0.9s,baz=356,slow=7.2,SNR=6.4 **FINESS Array B**	**69.66**	**330**	P	P	01 58 21.2	+7.3
	1.2nm,0.9s,baz=64,slow=4.4,SNR=4.2						

*IDC **22** 01:52:49.5±0.9, 5°.96N×78°.04W, h0km, mb3.7/6, mb1 4.0/9, mb1mx3.7/57, mbtmp3.8/9, ML3.1/3, Error ellipse: s-maj=32.2km s-min=17.8km az=34.0*
*RSNC **22** 01:52:51.7±0.7, 5°.80N×77°.87W, h32km±8km, ML3.9, Mw4.3*
ISC 22 01:52:50.3±1.6, 5°.79N±0°.05×77°.90W±0°.05, h17km±10km, n31, σ1§83/38, mb3.7/7, 3D, Near west coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOLC	**Bahia Solano**	**0.65**	**49**	*e*P	**Pg**	**01 53 03.1**	**-0.1**
SOLC				*e*S	**Sg**	**01 53 11.6**	**-0.4**
PLMC	**San Jos~ del**	**1.84**	**119**	⇓*i*P	**Pn**	**01 53 19.4**	**-1.7**
PLMC				*e*S	**Sn**	**01 53 41.2**	**-2.8**
PLMC				*i*		01 53 46.0	
	comp=Z,1μm,0.3s						
MALC	**Bahia Malaga**	**1.85**	**162**	⇓*i*P	**Pn**	**01 53 20.9**	**-0.4**
MALC				*e*S	**Sn**	**01 53 42.8**	**-1.6**
YOTC	**Yotoco, Valle**	**2.37**	**139**	*e*P	**Pn**	**01 53 27.2**	**-1.4**
YOTC				*i*		01 53 56.7	
	comp=Z,478nm,0.6s						
HELC	**Santa Helena**	**2.39**	**80**	⇓*i*P	**Pn**	**01 53 28.6**	**-0.4**
HELC				*e*S	**Sn**	**01 53 56.2**	**-1.9**
HORQ	**Saladito**	**2.62**	**151**	*e*P	**Pn**	**01 53 30.8**	**-1.4**
GRGC	**Isla de Gorgon**	**2.78**	**185**	*e*P	**Pn**	**01 53 34.1**	**0.0**
ANIL	**Santa Ana**	**2.80**	**117**	*e*P	**Pn**	**01 53 34.2**	**-0.4**
ANIL				*i*		01 54 12.0	
	comp=Z,753nm,0.4s						
TOLC	**Tolima**	**2.84**	**115**	*e*P	**Pn**	**01 53 35.6**	**+0.5**
TOLC				*e*S	**Sn**	**01 54 08.2**	**-0.9**
CAPC	**Capurgana**	**2.88**	**11**	*e*P	**Pn**	**01 53 34.4**	**-1.0**
NORC	**Norcasia**	**3.03**	**94**	*e*S	**Sn**	**01 54 11.9**	**-1.5**
POPC	**Popayan, Colom**	**3.45**	**159**	*e*S	**Sn**	**01 54 22.3**	**-1.9**
PTBC	**PUERTO BERRIO,**	**3.50**	**78**	*e*S	**Sn**	**01 54 23.1**	**-2.1**
MARP	**Paez Belalcaza**	**3.51**	**146**	*e*P	**Pn**	**01 53 45.4**	**+1.0**
MARP				*e*S	**Sn**	**01 54 24.7**	**-1.0**
ROSC	**El Rosal**	**3.69**	**105**	Pn	**Pn**	**01 53 50.3**	**+3.4**
	comp=Z,8.8nm,0.3s,baz=34,slow=20,SNR=19						
SOTA	**Rioblanco**	**3.85**	**160**	*e*S	**Sn**	**01 54 32.2**	**-2.2**
SOTA				*i*		01 54 48.9	
	comp=Z,123nm,0.6s						
BCIP	**Isla Barro Col**	**3.86**	**330**	*e*S	**Sn**	**01 54 32.2**	**-1.8**
BCIP				*i*		01 54 41.3	
	comp=Z,189nm,0.5s						
BETC	**Betania**	**3.94**	**141**	*e*P	**Pn**	**01 53 48.9**	**-1.2**
CHIC	**Chingaza**	**4.31**	**105**	*e*S	**Sn**	**01 54 42.5**	**-3.0**
SDV	**Santo Domingo**	**7.84**	**66**	Pn	**Pn**	**01 54 45.6**	**+1.9**
	comp=Z,3.5nm,0.3s,baz=249,slow=12,SNR=7.6						
SDV				Sn	**Sn**	**01 56 08.4**	**-3.8**
	comp=Z,1.4nm,0.3s,baz=357,slow=17,SNR=2.2						
JTS	**JuntasAbangare**	**8.29**	**303**	Pn	**Pn**	**01 54 49.3**	**-0.5**
	comp=Z,1.2nm,0.3s,baz=340,slow=20,SNR=6.9						
JTS				Sn	**Sn**	**01 56 20.4**	**-2.8**
	comp=Z,0.3nm,0.3s,baz=41,slow=20,SNR=2.0						
PTGA	**Pitinga**	**19.04**	**109**	P	**P**	**01 57 11.7**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=279,slow=17,SNR=4.2						
LPAZ	**La Paz**	**23.97**	**156**	P	**P**	**01 58 06.5**	**+1.8**
	comp=Z,1.5nm,0.8s,baz=334,slow=10.0,SNR=7.6						
SIV	**San Ignacio**	**27.31**	**143**	P	**P**	**01 58 34.0**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=324,slow=13,SNR=4.8						
PDAR	**Pinedale Array**	**46.25**	**328**	P	**P**	**02 01 15.4**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=119,slow=7.3,SNR=3.6						
YKA	**Yellowknife Ar**	**62.67**	**342**	P	**P**	**02 03 13.3**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=131,slow=6.6,SNR=4.6						
KOWA	**Kowa**	**73.00**	**77**	P	P	02 04 23.9	+4.2
	comp=Z,1.9nm,0.7s,baz=271,slow=5.9,SNR=6.1						
ILAR	**Eielson Array**	**75.91**	**336**	P	**P**	**02 04 35.4**	**-0.4**
	comp=Z,0.3nm,0.7s,baz=104,slow=3.8,SNR=3.3						
TORD	**Torodi Ar. Bea**	**78.60**	**78**	P	**P**	**02 04 54.0**	**+2.2**
	comp=Z,0.9nm,1.0s,baz=277,slow=6.0,SNR=8.3						
ASAR	**Alice Springs**	**144.62**	**237**	PKP	**PKPdf**	**02 12 29.4**	**+2.5**
	comp=Z,1.6nm,0.9s,baz=111,slow=4.2,SNR=7.5						
WRA	**Warramunga Arr**	**145.66**	**243**	PKPbc	**PKPab**	**02 12 32.1**	**+2.7**
	comp=Z,1.5nm,1.0s,baz=102,slow=3.6,SNR=4.5						

*SJA **22** 02:03:08.5±0.7, 27°.12S×71°.38W, h39km±8km, ML3.7, MW4.0*
*GUC **22** 02:03:10.7±0.5, 27°.21S×71°.20W, h66km±21km, ML4.4*
ISC 22 02:03:07.2±3.4, 27°.13S±0°.03×71°.26W±0°.09, h3km±25km, n15, σ1§46/22, 2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPCH	**Copiapo**	**0.84**	**106**	*e*P	**Pn**	**02 03 26.3**	**+0.3**
CPCH				*e*S	**Sb**	**02 03 36.6**	**+0.6**
GO03	**Copiap**	**1.02**	**117**	*e*P	**Pn**	**02 03 29.1**	**+0.6**
GO03				*e*S	**Sb**	**02 03 41.8**	**+0.4**
GO03				IAML		02 03 42.8	
	comp=E,15μm,0.3s						
LCO	**Las Campanas**	**1.93**	**165**	*i*P	**Pb**	**02 03 42.0**	**-1.2**
LCO				*i*S	**Sn**	**02 04 06.0**	**-0.2**
LCO	**Las Campanas**	**1.93**	**165**	⇓*i*P	**Pb**	**02 03 42.2**	**-1.0**
LCO				*e*S	**Sn**	**02 04 04.2**	**-2.0**
LCO				IAML		02 04 04.4	
	comp=E,3μm,0.3s						
GO02	**Mina Guanaco**	**2.47**	**38**	⇓*i*P	**Pb**	**02 03 51.1**	**-1.3**
PB14	**IPOC Station P**	**2.61**	**17**	*i*P	**Pn**	**02 03 50.7**	**0.0**
PB14				*i*S	**Sn**	**02 04 22.7**	**-0.3**
PB14	**IPOC Station P**	**2.61**	**17**	*e*P	**Pn**	**02 03 52.2**	**+1.6**
PB14				*e*S	**Sn**	**02 04 22.5**	**-0.6**
PB14				IAML		02 04 23.8	
	comp=E,2μm,0.2s						
TLL	**Tololo Astrono**	**3.05**	**173**	*e*P	**Pn**	**02 03 57.7**	**+1.1**
TLL				*e*S	**Sn**	**02 04 32.2**	**-1.5**
GO04	**Tololo Observa**	**3.06**	**172**	*e*P	**Pn**	**02 03 57.6**	**+1.0**
AGUA	**GUANDACOL**	**3.38**	**134**	*i*P	**Pn**	**02 04 02.9**	**+1.9**
ACDV	**Cuesta del Vie**	**3.56**	**149**	*i*P	**Pn**	**02 04 05.1**	**+1.5**
ACDV				IAML		02 05 06.0	
	comp=Z,142nm,0.4s						
PB10	**IPOC Station P**	**3.66**	**10**	*e*P	**Pn**	**02 04 05.6**	**+0.9**
PB15	**IPOC Station P**	**4.23**	**23**	*e*P	**Pn**	**02 04 14.8**	**+2.1**
RTLL	**Cerro Villicun**	**4.84**	**150**	*i*P	**Pn**	**02 04 23.1**	**+2.1**
RTLS	**Leoncito**	**4.95**	**160**	*i*P	**Pn**	**02 04 25.2**	**+2.4**

IDC 22 02:06:02.6±2.2, 32°.88S×178°.10W, h0km, mb4.1/3, mb1 4.2/4, mb1mx3.9/43, mbtmp4.0/4, ML3.7/1, Error ellipse: s-maj=58.2km s-min=41.3km az=143.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.64**	**215**	Pn	Pn	02 07 42.3	+1.0
URZ	1.4nm,0.3s,baz=76,slow=17,SNR=6.9			Sn	Sn	02 08 54.3	-3.4
CTA	1.2nm,0.3s,baz=26,slow=18,SNR=6.0 **Charters Tower**	**34.19**	**283**	P	P	02 12 51.6	+1.7
ASAR	2.2nm,0.6s,baz=100,slow=11,SNR=3.1 **Alice Springs**	**42.95**	**270**	P	P	02 14 02.6	-0.9
WRA	0.7nm,0.4s,baz=108,slow=7.4,SNR=7.9 **Warramunga Arr**	**44.16**	**275**	P	P	02 14 12.0	-1.3
FINES	1.7nm,0.5s,baz=117,slow=7.5,SNR=7.4 **FINESS Array B**	**147.43**	**339**	PKPbc	PKPbc	02 25 47.0	-0.6
BRTR	1.2nm,0.5s,baz=47,slow=2.9,SNR=10 **Keskin Array B**	**153.62**	**294**	PKPbc	PKPbc	02 26 03.3	-0.1
	0.3nm,0.5s,baz=148,slow=4.3,SNR=3.5						

IDC 22 02:07:43.6±6.4, 6°.54S×129°.63E, h75km±82km, mb3.2/1, mb1 3.6/4, mb1mx3.1/54, mbtmp3.7/4, ML3.9/3, Error ellipse: s-maj=143.9km s-min=25.6km az=82.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.86**	**16**	P	Pn	02 09 07.9	-0.1
SIJI	2.5nm,0.3s,baz=204,slow=20,SNR=12			S	Sn	02 10 06.1	-7.8
WRA	2.6nm,0.3s,baz=266,slow=23,SNR=6.7 **Warramunga Arr**	**14.09**	**162**	P	Pn	02 10 57.9	-1.8
WRA	0.6nm,0.3s,baz=344,slow=13,SNR=17			S	Sn	02 13 25.5	-9.2
ASAR	0.2nm,0.3s,baz=339,slow=20,SNR=3.9 **Alice Springs**	**17.52**	**167**	P	P	02 11 44.0	+0.9
MKAR	0.3nm,0.3s,baz=345,slow=10,SNR=12 **Makanchi Array**	**67.64**	**327**	P	P	02 18 32.7	0.0
	0.3nm,0.4s,baz=114,slow=6.9,SNR=3.1						

*IDC **22** 02:07:40.5±0.9, 32°.85S×178°.21W, h0km, mb4.4/4, mb1 4.6/6, mb1mx4.1/44, mbtmp4.5/6, ML4.4/2, Error ellipse: s-maj=29.5km s-min=24.6km az=103.0*
*NEIC **22** 02:07:43.7±3.3, 32°.87S×178°.19W, h22km±22km, mb4.4/2, Error ellipse: s-maj=18.0km s-min=11.2km az=101.0*
*ISCJB **22** 02:07:45.0±0.9, 32°.93S±0°.05×178°.4W±0°.2, h34km, mb4.3/6, Error ellipse: s-maj=20.6km s-min=5.0km az=16.0*
*WEL **22** 02:07:45.8±0.8, 33°S±11°×17°9W±2°8, h33km, ML5.1/12*
ISC 22 02:07:45.3±0.8, 32°.83S±0°.07×178°.2W±0°.2, h34km, n47, σ1§50/59, mb4.4/6, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.57**	**4**	P	**Pn**	**02 08 36.4**	**-1.8**
GLKZ				S	**Sn**	**02 09 17.2**	**-2.1**
RAO	**Raoul Island**	**3.58**	**4**	Pn	**Pn**	**02 08 38.4**	**0.0**
RAO	31nm,0.3s,baz=270,slow=20,SNR=2.3			Sn	**Sn**	**02 09 16.4**	**-3.1**
MXZ	43nm,0.3s,baz=108,slow=20,SNR=2.4 **Matakaoa Point**	**5.51**	**210**	P	**Pn**	**02 09 05.4**	**+0.6**
MXZ				S	**Sn**	**02 10 05.8**	**-1.1**
WMGZ	**Waiomatatini S**	**5.68**	**208**	P	**Pn**	**02 09 08.9**	**+1.7**
WMGZ				S	**Sn**	**02 10 11.0**	**-0.3**
PKGZ	**Pakihiroa**	**5.88**	**210**	P	**Pn**	**02 09 08.4**	**-1.6**
PKGZ				S	**Sn**	**02 10 13.9**	**-2.4**
HAZ	**Te Kaha**	**5.90**	**212**	P	**Pn**	**02 09 10.1**	**-0.1**
HAZ				S	**Sn**	**02 10 16.7**	**+0.2**
PUZ	**Puketiti**	**5.96**	**208**	P	**Pn**	**02 09 10.2**	**-1.0**
PUZ				S	**Sn**	**02 10 16.1**	**-2.2**
RUGZ	**Raukumara Rang**	**6.12**	**212**	P	**Pn**	**02 09 13.4**	**+0.1**
RUGZ				S	**Sn**	**02 10 21.9**	**-0.3**
TWGZ	**Tauwhareparae**	**6.16**	**209**	P	**Pn**	**02 09 14.5**	**+0.6**
TWGZ				S	**Sn**	**02 10 21.8**	**-1.5**
CNGZ	**Carnagh Statio**	**6.34**	**206**	P	**Pn**	**02 09 17.2**	**+0.9**
CNGZ				S	**Sn**	**02 10 26.3**	**-1.3**
TKGZ	**Te Karaka**	**6.44**	**209**	P	**Pn**	**02 09 18.4**	**+0.7**
TKGZ				S	**Sn**	**02 10 27.9**	**-2.1**
MWZ	**Matawai**	**6.49**	**211**	P	**Pn**	**02 09 17.9**	**-0.5**
MWZ				S	**Sn**	**02 10 28.8**	**-2.4**
OPRZ	**Ohinepanea**	**6.57**	**219**	P	**Pn**	**02 09 19.9**	**+0.5**
URZ	**Urewera**	**6.61**	**214**	Pn	**Pn**	**02 09 18.8**	**-1.3**
URZ	9.7nm,0.3s,baz=102,slow=20,SNR=16			Sn	**Sn**	**02 10 29.3**	**-4.9**
URZ	3.7nm,0.3s,baz=150,slow=20,SNR=4.7 **Urewera**	**6.61**	**214**	P	**Pn**	**02 09 19.4**	**-0.7**
URZ				S	**Sn**	**02 10 31.1**	**-3.1**
RAGZ	**Rawiri**	**6.67**	**211**	P	**Pn**	**02 09 20.4**	**-0.6**
RAGZ				S	**Sn**	**02 10 33.5**	**-2.3**
RIGZ	**Rimuhau**	**6.71**	**208**	P	**Pn**	**02 09 21.5**	**+0.2**
RIGZ				S	**Sn**	**02 10 34.0**	**-2.6**
PRGZ	**Paritu Road**	**6.85**	**206**	P	**Pn**	**02 09 22.9**	**-0.4**
SNGZ	**Shannon Statio**	**6.94**	**210**	P	**Pn**	**02 09 24.7**	**+0.1**
KNZ	**Kokohu**	**7.01**	**207**	P	**Pn**	**02 09 24.3**	**-1.3**
TOZ	**Tahuroa Road**	**7.08**	**225**	P	**Pn**	**02 09 28.3**	**+1.8**
RPZ	**Rata Peaks**	**13.73**	**215**	Pn	Pn	02 10 50.9	-6.6
RPZ	0.9nm,0.3s,baz=9.5,slow=6.1,SNR=6.1			Sn	Sn	02 13 13.4	-15
CTA	0.9nm,0.3s,baz=9.7,slow=19,SNR=5.4 **Charters Tower**	**34.08**	**283**	P	**P**	**02 14 28.4**	**+1.6**
CTAO	5.8nm,0.5s,baz=118,slow=10,SNR=12 **Charters Tower**	**34.08**	**283**	*e*P	**P**	**02

σ0°90/25, mb4.3/5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	6.54	214	Pn	Pn	02 21 12.0	-0.7
	3.6nm,0.3s,baz=105,slow=19,SNR=16						
MUGZ	Murupara	6.88	214	P	Pn	02 21 18.0	+0.7
RAHZ	Arahi	7.09	211	P	Pn	02 21 21.0	+0.8
MTHZ	Maungataniwha	7.15	212	P	Pn	02 21 21.6	+0.5
ARHZ	Aropaoanui	7.42	210	P	Pn	02 21 24.5	-0.2
BKZ	Black Stump Fm	7.56	213	P	Pn	02 21 26.5	-0.2
MCHZ	McNeill Hill	7.70	210	P	Pn	02 21 28.0	-0.6
KAHZ	Kahuranaki	7.92	208	P	Pn	02 21 30.2	-1.4
TWVZ	Taurewa	8.00	218	P	Pn	02 21 30.8	-1.9
BHHZ	Black Hill Sta	8.02	213	P	Pn	02 21 33.3	+0.3
RPZ	Rata Peaks	13.66	215	Pn	Pn	02 22 45.3	-4.8
	0.6nm,0.3s,baz=16,slow=19,SNR=3.3						
CTA	Charters Tower	34.05	283	P	P	02 26 21.2	+1.1
	4.3nm,0.6s,baz=120,slow=12,SNR=7.7						
CTAO	Charters Tower	34.05	283	eP	P	02 26 21.1	+1.1
ASAR	Alice Springs	42.80	270	P	P	02 27 33.1	-0.5
	2.2nm,0.5s,baz=108,slow=7.6,SNR=32						
WRAB	Tennant Creek	44.01	275	eP	P	02 27 42.3	-1.1
	3.2nm,0.6s						
WRA	Warramunga Arr	44.02	275	P	P	02 27 43.0	-0.4
	4.3nm,0.5s,baz=115,slow=7.7,SNR=62						
CASY	Casey	52.84	209	eP	P	02 28 51.2	+0.5
	1.5nm,0.6s						
MKAR	Makanchi Array	119.17	309	PKP	PKPdf	02 38 23.9	-0.1
	0.3nm,0.6s,baz=156,slow=2.0,SNR=3.0						
KURK	Kurchatov	122.58	313	PKP	PKPdf	02 38 30.4	0.0
KURBB	Kurchatov Arra	122.61	313	PKP	PKPdf	02 38 30.4	-0.1
	0.3nm,0.5s,baz=103,slow=1.8,SNR=5.2						
RAYN	Ar Rayn	140.54	268	ePKPdf	PKPdf	02 39 05.7	+0.6
FINES	FINESS Array B	147.38	338	PKPbc	PKPab	02 39 18.2	-2.0
	2.9nm,0.6s,baz=57,slow=4.3,SNR=24						
HFS	Hagfors	151.63	347	PKPbc	PKPbc	02 39 28.9	0.0
	1.9nm,0.7s,baz=333,slow=1.6,SNR=4.5						
MMAI	Mount Meron Ar	151.81	280	PKPbc	PKPbc	02 39 31.1	+0.9
	1.8nm,0.5s,baz=83,slow=6.1,SNR=4.7						
AKASG	Malin Array Be	153.09	320	PKPbc	PKPbc	02 39 32.7	+0.3
	0.6nm,0.4s,baz=44,slow=2.5,SNR=3.7						
BRTR	Keskin Array B	153.49	294	PKPbc	PKPbc	02 39 34.0	+0.1
	1.0nm,0.5s,baz=146,slow=3.1,SNR=9.2						

IDC ***22*** *02:20:04.2±0.4, 32.°70S×178.°47W, h0km, mb4.8/25, mb1 4.9/28, mb1mx4.8/43, mbtmp4.8/28, ML5.0/3, MS5.4/2, Ms1 5.4/2, ms1mx4.5/13, Error ellipse: s-maj=14.1km s-min=12.9km az=149.0*

ISCJB ***22*** *02:20:04.7±1.2, 32.°89S±0.°02×178.°65W±0.°04, h6km±7km, mb5.2/110, MS5.4/223, Error ellipse: s-maj=6.6km s-min=2.6km az=30.9*

GCMT ***22*** *02:20:06.6±0.1, 32.°81S×178.°14W, h20km, MW5.7/132, Moment Tensor Solution. s117,c216; s132,c325; Duration: 1s6 Moment tensor: Scale 10^17^Nm; Mrr2.66±.04; Mθθ-0.22±.03; Mφφ-2.43±.03; Mrθ0.42±.06; Mθφ-0.70±.02; Mφr2.55±.07; Best double couple: M0 3.69900×10^17^ NP1:φs11.00000°, δ67.00000°, λ86.00000°. NP2:φs201.00000°, δ23.00000°, λ99.00000°. Principal axes: T 3.7210, Plg68.0000°, Azm275.0000°; N -0.0370, Plg3.0000°, Azm13.0000°; P -3.6780, Plg22.0000°, Azm104.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

BJI ***22*** *02:20:06.2, 32.°63S×178.°31W, h20km, mb5.5/24, mB5.7/26, Ms5.5/35, Ms7 5.3/34*

NEIC ***22*** *02:20:06.6±2.4, 32.°94S×178.°65W, h14km±14km, mb5.3/80, MS5.4/199, MW5.5, Error ellipse: s-maj=6.8km s-min=5.7km az=140.0, Moment Tensor Solution. s20 Moment tensor: Scale 10^17^Nm; Mrr2.35; Mθθ0.08; Mφφ-2.42; Mrθ-0.04; Mθφ-0.43; Mφr0.94; Best double couple: M0 2.60000×10^17^ NP1:φs194.00000°, δ35.00000°, λ98.00000°. NP2:φs5.00000°, δ56.00000°, λ85.00000°. Principal axes: T 2.5300, Plg79.0000°, Azm256.0000°; N 0.1300, Plg4.0000°, Azm8.0000°; P -2.6700, Plg10.0000°, Azm99.0000°;*

WEL ***22*** *02:20:06.0, 32.°94S×178.°65W, h14km, ML6.1/16*

MOS ***22*** *02:20:08.7±1.0, 32.°79S×178.°64W, h33km, mb5.4/41, MS5.4/22, Error ellipse: s-maj=11.8km s-min=10.0km az=110.1*

ISC 22 02:20:08.2±0.6, 32.°78S±0.°04×178.°43W±0.°05, h23km±3km, h23km:pP-P, n739, σ2°08/611, mb5.2/108, MS5.5/223, 18C-17D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.53	7	P	Pn	02 20 58.7	-2.9
GLKZ				S	Sn	02 21 39.7	-2.9
RAO	Raoul Island	3.54	7	Pn	Pn	02 20 58.4	-3.3
	177nm,0.3s,baz=149,slow=18,SNR=10.0						
RAO				Sn	Sn	02 21 38.2	-4.7
	318nm,0.3s,baz=285,slow=20,SNR=3.6						
RAO	Raoul Island	3.54	7	ePn	Pn	02 20 59.8	-1.9
RAO				eSn	Sn	02 21 42.2	-0.7
RAO	Raoul Island	3.54	7	eP	Pn	02 20 59.8	-1.9
RAO				e		02 21 42.2	
RIZ	Raoul Island	3.55	7	P	Pn	02 20 59.6	-2.2
RIZ				S	Sn	02 21 40.0	-3.0
MXZ	Matakaoa Point	5.47	208	ePn	Pn	02 21 26.2	-2.0
MXZ	Matakaoa Point	5.47	208	P	Pn	02 21 26.1	-2.0
MXZ				S	Sn	02 22 28.2	-2.2
WMGZ	Waiomatatini S	5.65	206	P	Pn	02 21 31.0	+0.2
WMGZ				S	Sn	02 22 35.1	+0.2
PKGZ	Pakihiroa	5.84	208	P	Pn	02 21 31.0	-2.4
PKGZ				S	Sn	02 22 38.3	-1.4
HAZ	Te Kaha	5.85	211	P	Pn	02 21 32.4	-1.1
HAZ				S	Sn	02 22 41.2	+1.3
PUZ	Puketiti	5.93	206	P	Pn	02 21 33.3	-1.4
PUZ				S	Sn	02 22 40.0	-1.9
RUGZ	Raukumara Rang	6.07	210	P	Pn	02 21 35.5	-1.1
RUGZ	Raukumara Rang	6.07	210	P	Pn	02 21 35.5	-1.1
RUGZ				S	Sn	02 22 44.6	-0.9
TWGZ	Tauwhareparae	6.13	207	P	Pn	02 21 35.5	-1.8
TWGZ	Tauwhareparae	6.13	207	P	Pn	02 21 35.5	-1.8
TWGZ				S	Sn	02 22 45.8	-0.9
CNGZ	Carnagh Statio	6.32	205	P	Pn	02 21 37.2	-2.7
CNGZ				S	Sn	02 22 51.3	0.0
TKGZ	Te Karaka	6.41	207	P	Pn	02 21 40.7	-0.4
MWZ	Matawai	6.45	210	P	Pn	02 21 40.4	-1.3
MWZ				S	Sn	02 22 51.5	-3.1
URZ	Urewera	6.57	212	Pn	Pn	02 21 42.2	-1.1
	22nm,0.3s,baz=11,slow=3.5,SNR=6.9						
URZ				Sn	Sn	02 22 53.0	-4.4
	59nm,0.3s,baz=66,slow=24,SNR=9.7						
URZ	Urewera	6.57	212	ePn	Pn	02 21 41.2	-2.1
URZ				Sn	Sn	02 22 53.0	-4.4
URZ	Urewera	6.57	212	P	Pn	02 21 41.8	-1.4
URZ				S	Sn	02 22 54.8	-2.6
RAGZ	Rawiri	6.63	209	P	Pn	02 21 42.1	-2.2
RAGZ				S	Sn	02 22 55.5	-3.6
RIGZ	Rimuhau	6.67	207	P	Pn	02 21 42.9	-1.9
RIGZ				S	Sn	02 22 57.3	-2.8
PRGZ	Paritu Road	6.82	205	P	Pn	02 21 42.5	-4.3
PRGZ				S	Sn	02 22 58.4	-5.4
MUGZ	Murupara	6.90	213	P	Pn	02 21 46.1	-1.7
SNGZ	Shannon Statio	6.91	209	P	Pn	02 21 46.7	-1.2
SNGZ				S	Sn	02 23 04.2	-1.6
RTZ	Ruatahuna	6.92	211	P	Pn	02 21 46.5	-1.7
MHGZ	Mahia Peninsul	7.02	204	P	Pn	02 21 44.7	-4.8
OUZ	Omahuta	7.05	248	ePn	Pn	02 21 53.5	+3.6
MTHZ	Maungataniwha	7.17	211	P	Pn	02 21 51.2	-0.4
BKZ	Black Stump Fm	7.59	211	ePn	Pn	02 21 54.5	-2.8
HIZ	Hauiti	7.91	222	ePn	Pn	02 22 01.8	+0.1
BFZ	Birch Farm	8.97	207	ePn	Pn	02 22 10.8	-5.5
BFZ				eSn	Sn	02 23 47.6	-8.9
SNZO	South Karori	10.13	211	ePn	Pn	02 22 28.3	-3.7
SNZO				eSn	Sn	02 24 13.9	-11
THZ	Tophouse	11.31	215	ePn	Pn	02 22 43.5	-4.9
KHZ	Kahutara	11.53	211	ePn	Pn	02 22 46.0	-5.3
LTZ	Lake Taylor	12.39	214	ePn	Pn	02 22 58.4	-4.7
OXZ	Oxford	12.92	213	ePn	Pn	02 23 06.2	-4.1
MQZ	McQueen's Vall	12.96	210	ePn	Pn	02 23 05.0	-5.8
MQZ				eSn	Sn	02 25 20.9	-13
RPZ	Rata Peaks	13.68	214	Pn	Pn	02 23 13.2	-7.4
	3.6nm,0.3s,baz=11,slow=2.9,SNR=9.7						
RPZ				Sn	Sn	02 25 33.1	-19
	3.5nm,0.3s,baz=0.0,slow=20,SNR=2.5						
RPZ	Rata Peaks	13.68	214	ePn	Pn	02 23 14.5	-6.1
RPZ				Sn	Sn	02 25 33.1	-19
FOZ	Fox Glacier	14.15	217	ePn	Pn	02 23 23.2	-3.9
LBZ	Lake Benmore	14.60	214	ePn	Pn	02 23 28.7	-4.5
ODZ	Otahua Downs	14.89	212	ePn	Pn	02 23 33.7	-3.5
WKZ	Wanaka	15.48	215	ePn	Pn	02 23 41.0	-4.0
	94nm,1.4s						
MLZ	Mavora Lakes	16.31	216	ePn	Pn	02 23 53.4	-2.3
	42nm,0.9s						
WHZ	Wether Hill Ro	16.78	215	ePn	Pn	02 23 55.2	-6.3
	11nm,1.4s						
DZM	Mont Dzumac	17.12	305	P	P	02 24 07.9	+0.2
	0.3nm,0.3s,baz=126,slow=16,SNR=7.5						
DZM	Mont Dzumac	17.12	305	eP	P	02 24 10.5	+2.8
	392nm,1.4s						
DZM				eLQ	LQ	02 27 38.7	
	12μm,27.1s						
DZM				eLR	LR	02 28 18.6	
	32μm,22.9s						
AFI	Afiamalu	19.74	19	P	P	02 24 34.8	-1.6
	3.5nm,0.3s,baz=228,slow=19,SNR=3.3						
AFI				S	S	02 27 58.7	-19
	1.6nm,0.3s,baz=232,slow=19,SNR=2.7						
AFI	Afiamalu	19.74	19	eP	P	02 24 31.1	-5.3
	248nm,1.1s						
AFI				S	S	02 27 58.7	-19
RAR	Rarotonga	20.19	60	P	P	02 24 39.9	-1.4
	33nm,0.7s,baz=252,slow=3.2,SNR=3.5						
RAR	Rarotonga	20.19	60	eP	P	02 24 41.5	+0.2
RAR				LR	LR		
	comp=Z,6μm,19.0s						
RAR	Rarotonga	20.19	60	eP	P	02 24 41.5	+0.2
RAR				MLR	MLR		
	comp=Z,6μm,19.0s						
FUNA	Funafuti	24.23	354	PFAKE		02 25 40.0	+17
FUNA				LR	LR		
	comp=Z,11μm,19.0s						
MGCD	Mangrove Creek	25.51	261	P	P	02 25 36.6	+1.7
	baz=26,SNR=5.0						
ARMA	Armidale	25.57	267	P	P	02 25 37.8	+2.2
	baz=26,SNR=5.2						
ARMA	Armidale	25.57	267	eP	P	02 25 37.8	+2.2
	comp=Z,46nm,1.1s						
ARMA				LR	LR		
	comp=Z,11μm,18.0s						
MCQ	Macquarie Isla	26.97	210	PFAKE		02 26 00.0	+12
MCQ				LR	LR		
	comp=Z,13μm,19.0s						
CAN	Canberra	27.04	256	PFAKE		02 26 00.0	+11
CAN				LR	LR		
	comp=Z,17μm,18.0s						
TBI	Tubuai	27.16	77	eLQ	LQ	02 31 04.5	
	comp=Z,6μm,25.2s						
TBI				eLR	LR	02 32 28.5	
	comp=Z,9μm,29.2s,baz=239						
TBI	Tubuai	27.16	77	eT	T	02 53 34.8	
	comp=Z,42nm,0.3s						
EIDS	Eidsvold	27.58	278	P	P	02 25 55.5	+1.9
	baz=28,SNR=9.3						
EIDS	Eidsvold	27.58	278	eP	P	02 25 55.6	+1.9
	comp=Z,43nm,1.0s						
EIDS				LR	LR		
	comp=Z,6μm,20.0s						
YNG	Young	27.62	258	P	P	02 25 56.1	+2.1
	baz=28,SNR=7.0						
TAU	Tasmania Unive	28.70	239	PFAKE		02 26 10.0	+6.6
TAU				LR	LR		
	comp=Z,16μm,18.0s						
MOO	Moorlands	28.72	240	P	P	02 26 04.4	+0.7
	baz=29,SNR=3.4						
RMQ	Roma	29.12	274	P	P	02 26 10.1	+2.7
	baz=29,SNR=16						
PAE	Paea	30.00	67	eT	T	02 57 18.4	
	comp=Z,12nm,0.3s						
PPT2	Papeete2	30.05	67	eS	S	02 31 02.4	-10
	comp=Z,987nm,26.2s						
PPT2				eLQ	LQ	02 32 22.0	
	comp=Z,4μm,21.8s						
PPT2				eLR	LR	02 33 53.3	
	comp=Z,9μm,27.2s,baz=230						
PPT2	Papeete2	30.05	67	eT	T	02 57 22.8	
	comp=Z,23nm,0.4s						
TVO	Taravao	30.19	67	eT	T	02 57 31.6	
	comp=Z,3.0nm,0.4s						
CMSA	Cobar Meteorol	30.31	263	P	P	02 26 19.5	+1.7
	baz=30,SNR=20						
HNR	Honiara	30.63	314	LR	LR	02 37 36.5	
	comp=Z,4μm,18.5s,baz=164,slow=34						
ARPS	Mount Arapiles	32.71	252	P	P	02 26 40.7	+1.8
	baz=33,SNR=6.9						
PMOR	Pomariorio Ree	32.89	65	eT	T	03 00 56.5	
	comp=Z,5.9nm,0.4s						
QLP	Quilpie	32.90	271	P	P	02 26 42.0	+1.3
	baz=33,SNR=10						
VAH	Vaihoa	32.95	65	eT	T	03 01 00.2	
	comp=Z,30nm,0.3s						
STKA	Stephens Creek	33.65	261	P	P	02 26 47.4	+0.2
	comp=Z,5.4nm,0.8s,baz=81,slow=10,SNR=5.5						
STKA				PcP	PcP	02 29 25.8	-1.2
	comp=Z,7.2nm,0.8s,baz=42,slow=4.0,SNR=3.9						
STKA	Stephens Creek	33.65	261	eP	P	02 26 46.6	-0.6
	comp=Z,20nm,1.9s						
STKA				PcP	PcP	02 29 25.8	-1.2
STKA				LR	LR		
	comp=Z,3μm,19.0s						
STKA	Stephens Creek	33.65	261	eP	P	02 26 46.6	-0.6
STKA						02 29 25.8	
STKA				pmax	pmax		
	comp=Z,20nm,1.9s						
STKA				MLR	MLR		
	comp=Z,3μm,19.0s						
CTA	Charters Tower	33.89	283	P	P	02 26 50.5	+1.1
	comp=Z,38nm,0.5s,baz=112,slow=10,SNR=27						
CTAO	Charters Tower	33.89	283	eP	P	02 26 50.1	+0.7
	comp=Z,347nm,1.9s						
CTAO				LR	LR		
	comp=Z,6μm,18.0s						
CTAO	Charters Tower	33.89	283	eP	P	02 26 50.1	+0.7
CTAO				pmax	pmax		
	comp=Z,347nm,1.9s						
CTAO				MLR	MLR		
	comp=Z,6μm,18.0s						
TARA	Tarawa	34.92	345	PFAKE		02 27 10.0	+12
TARA				LR	LR		
	comp=Z,8μm,18.0s						
HTT	Hallett	35.55	257	P	P	02 27 05.6	+2.0
	baz=36,SNR=6.6						
MTSU	Mount Surprise	36.45	284	P	P	02 27 12.9	+1.5
	baz=37,SNR=15						
BBOO	Buckleboo	38.02	257	P	P	02 27 24.5	-0.1
	baz=38,SNR=5.5						
BBOO	Buckleboo	38.02	257	PFAKE		02 27 30.0	+5.3
BBOO				LR	LR		
	comp=Z,8μm,18.0s						
QIS	Mount Isa	39.19	277	P	P	02 27 35.8	+1.3
	baz=39,SNR=5.4						
PMG	Port Moresby	39.35	298	P	P	02 27 36.5	+0.6
	comp=Z,18nm,0.8s,baz=73,slow=7.6,SNR=4.6						
PMG	Port Moresby	39.35	298	eP	P	02 27 36.8	+0.9
	comp=Z,36nm,1.0s						
PMG				LR	LR		
	comp=Z,6μm,18.0s						
RKT	Rikitea	39.35	87	eS	S	02 33 21.3	-15
	comp=Z,899nm,25.8s						
RKT				eLQ	LQ	02 36 24.9	
	comp=Z,1μm,25.8s						
RKT				eLR	LR	02 38 03.7	
	comp=Z,8μm,29.0s,baz=249						
RABL	Rabaul	39.55	310	PFAKE		02 27 50.0	+12
RABL				LR	LR		
	comp=Z,5μm,21.0s						
COEN	Coen	39.63	289	P	P	02 27 39.4	+1.2
	baz=40,SNR=24						
COEN	Coen	39.63	289	eP	P	02 27 39.5	+1.2
	comp=Z,280nm,1.9s						
COEN				LR	LR		
	comp=Z,19μm,18.0s						
TAOE	Nuku Hiva Isla	42.62	65	eS	S	02 34 15.3	-10
	comp=Z,1μm,24.4s						
TAOE				eLQ	LQ	02 37 50.2	
	comp=Z,4μm,28.8s						
TAOE				eLR	LR	02 39 41.0	
	comp=Z,5μm,27.0s						
AS01	Alice Springs	42.63	270	eP	P	02 28 01.8	-1.1
AS31	Alice Springs	42.67	270	eP	P	02 28 02.6	-0.7
	comp=Z,13nm,0.7s						
AS31				LR	LR		
	comp=Z,100nm,18.0s						
ASAR	Alice Springs	42.67	270	P	P	02 28 02.6	-0.7
	comp=Z,35nm,0.7s,baz=108,slow=7.5,SNR=72						
WR9	Warramunga Arr	43.72	275	PFAKE		02 28 20.0	+8.2
WR9				LR	LR		
	comp=Z,6μm,18.0s						
WR8	Warramunga Arr	43.73	275	PFAKE		02 28 20.0	+8.1
WR8				LR	LR		
	comp=Z,6μm,18.0s						
WR7	Warramunga Arr	43.75	275	PFAKE		02 28 20.0	+8.0
WR7				LR	LR		
	comp=Z,6μm,18.0s						
WR6	Warramunga Arr	43.77	275	PFAKE		02 28 20.0	+7.8
WR6				LR	LR		
	comp=Z,6μm,18.0s						
WR5	Warramunga Arr	43.79	275	PFAKE		02 28 20.0	+7.7
WR5				LR	LR		
	comp=Z,6μm,18.0s						
WR4	Warramunga Arr	43.81	275	PFAKE		02 28 20.0	+7.5
WR4				LR	LR		
	comp=Z,5μm,18.0s						
WR3	Warramunga Arr	43.83	275	PFAKE		02 28 20.0	+7.4
WR3				LR	LR		
	comp=Z,5μm,18.0s						
WC3	Warramunga Arr	43.84	275	PFAKE		02 28 20.0	+7.3
WC3				LR	LR		
	comp=Z,6μm,19.0s						
WR2	Warramunga Arr	43.85	275	PFAKE		02 28 20.0	+7.2
WR2				LR	LR		
	comp=Z,5μm,18.0s						
WC2	Warramunga Arr	43.86	275	PFAKE		02 28 20.0	+7.1
WC2				LR	LR		
	comp=Z,6μm,18.0s						
WB2	Warramunga Arr	43.86	275	eP	P	02 28 11.9	-1.0
	comp=Z,82nm,0.8s						
WB2				LR	LR		
	comp=Z,6μm,19.0s						
WC4	Warramunga Arr	43.86	275	PFAKE		02 28 20.0	+7.1
WC4				LR	LR		
	comp=Z,5μm,18.0s						
WB3	Warramunga Arr	43.87	275	PFAKE		02 28 20.0	+7.0
WB3				LR	LR		
	comp=Z,5μm,18.0s						
WRAB	Tennant Creek	43.87	275	eP	P	02 28 12.1	-0.9
	comp=Z,70nm,0.8s						
WRAB				LR	LR		
	comp=Z,6μm,18.0s						
WRAB	Tennant Creek	43.87	275	i P	P	02 28 12.4	-0.6
WRAB				pmax	pmax		
	comp=Z,42nm,0.8s						
WR1	Warramunga Arr	43.87	275	PFAKE		02 28 20.0	+7.0
WR1				LR	LR		
	comp=Z,5μm,18.0s						
WRA	Warramunga Arr	43.87	275	P	P	02 28 11.8	-1.2
	comp=Z,55nm,0.7s,baz=116,slow=7.7,SNR=79						
WRA				S	S	02 34 38.9	-4.2
	comp=Z,9.5nm,1.2s,baz=115,slow=14,SNR=11						
WB4	Warramunga Arr	43.87	275	PFAKE		02 28 20.0	+7.0
WB4				LR	LR		
	comp=Z,5μm,18.0s						
WB5	Warramunga Arr	43.88	275	PFAKE		02 28 20.0	+7.0
WB5				LR	LR		
	comp=Z,5μm,18.0s						
WC1	Warramunga Arr	43.88	275	PFAKE		02 28 20.0	+6.9
WC1				LR	LR		
	comp=Z,4μm,18.0s						
WB6	Warramunga Arr	43.89	275	PFAKE		02 28 20.0	+6.9
WB6				LR	LR		
	comp=Z,6μm,18.0s						
WB8	Warramunga Arr	43.90	275	PFAKE		02 28 20.0	+6.8
WB8				LR	LR		
	comp=Z,6μm,18.0s						
WB9	Warramunga Arr	43.90	275	PFAKE		02 28 20.0	+6.8
WB9				LR	LR		
	comp=Z,12μm,18.0s						
WB0	Warramunga Arr	43.91	275	PFAKE		02 28 20.0	+6.7
WB0				LR	LR		
	comp=Z,6μm,18.0s						
MANU	Manus Island	44.32	306	PFAKE		02 28 30.0	+13
MANU				LR	LR		
	comp=Z,5μm,19.0s						
FORT	Forrest	45.13	258	P	P	02 28 21.9	-1.0
	baz=45,SNR=12						
FORT	Forrest	45.13	258	eP	P	02 28 20.3	-2.6
	comp=Z,57nm,0.6s						
FORT				LR	LR		
	comp=Z,9μm,19.0s						
PATS	Pohnpei	45.18	326	PFAKE		02 28 40.0	+17
PATS				LR	LR		
	comp=Z,5μm,20.0s						
SBA	Scott Base	45.65	184	eP	P	02 28 27.6	+1.2
	comp=Z,50nm,1.3s						
SBA				LR	LR		
	comp=Z,3μm,21.0s						
SBA	Scott Base	45.65	184	eP	P	02 28 27.6	+1.2
SBA				pmax	pmax		
	comp=Z,50nm,1.3s						
SBA				MLR	MLR		
	comp=Z,3μm,21.0s						
VNDA	Vanda	45.70	186	P	P	02 28 28.2	+1.4
	comp=Z,3.2nm,0.8s,baz=22,slow=6.4,SNR=10.0						
VNDA	Vanda	45.70	186	eP	P	02 28 27.7	+0.9
	comp=Z,10nm,1.1s						
VNDA	Vanda	45.70	186	eP	P	02 28 27.7	+0.9
VNDA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
JAY	Jayapura	48.70	300	P	P	02 28 50.9	-0.1
	comp=Z,16nm,0.8s,baz=232,slow=4.3,SNR=11						
MTN	Manton Dam	50.03	281	eP	P	02 29 00.1	-1.0
	comp=Z,132nm,1.6s						
MTN				LR	LR		
	comp=Z,5μm,20.0s						
SAUI	Saumlaki	52.58	286	PFAKE		02 29 30.0	+10
SAUI				LR	LR		
	comp=Z,9μm,19.0s						
CASY	Casey	52.88	209	eP	P	02 29 20.5	-1.3
	comp=Z,275nm,1.9s						
CASY				LR	LR		
	comp=Z,2μm,20.0s						
NWAO	Narrogin (SRO)	53.25	251	P	P	02 29 23.6	-1.4
	comp=Z,5.2nm,0.7s,baz=56,slow=8.5,SNR=3.3						
NWAO	Narrogin (SRO)	53.25	251	P	P	02 29 23.6	-1.4
NWAO				LR	LR		
	comp=Z,4μm,18.0s						
WAKE	Wake Island	53.70	342	PFAKE		02 29 40.0	+12
WAKE				LR	LR		
	comp=Z,4μm,20.0s						
FAKI	Fak Fak	54.85	292	eP	P	02 29 34.5	-2.4
	comp=Z,55nm,1.1s						
FAKI				LR	LR		
	comp=Z,3μm,18.0s						
MORW	Morawa	55.53	255	P	P	02 29 40.7	-1.0
	baz=56,SNR=3.9						
MBWA	Marble Bar	55.63	265	eP	P	02 29 40.0	-2.5
MBWA				LR	LR		
	comp=Z,5μm,19.0s						
KHLU	Kahalu'u	56.36	26	PFAKE		02 30 00.0	+12
KHLU				LR	LR		
	comp=Z,2μm,18.0s						
MWH	Moku'aweowe	56.37	26	PFAKE		02 30 00.0	+12
MWH				LR	LR		
	comp=Z,2μm,20.0s						
SDHHI	Sand Hill	56.40	26	PFAKE		02 30 00.0	+12
SDHHI				LR	LR		
	comp=Z,2μm,21.0s						
RIM	Rim	56.41	26	PFAKE		02 30 00.0	+12
RIM				LR	LR		
	comp=Z,2μm,21.0s						
HULD	Heiheiahulu Di	56.54	27	PFAKE		02 30 00.0	+11
HULD				LR

GUMO	Guam	57.93 317	PFAKE			02 30 10.0 +11
GUMO			LR	LR		
comp=Z,2μm,18.0s						
MMRI	Maumere	59.65 280	PFAKE			02 30 20.0 +9.2
MMRI			LR	LR		
comp=Z,3μm,18.0s						
MIR	Mirnyy	59.85 208	⇑ *i*P		P	02 30 12.0 +0.6
MIR			*e*PS		PnS	02 38 48.0 +13
MIR			pmax	pmax		
comp=Z,84nm,2.0s						
MIR			pmax	pmax		
comp=Z,2μm,8.0s						
MIDW	Midway	60.67 1	PFAKE			02 30 30.0 +13
MIDW			LR	LR		
comp=Z,3μm,19.0s						
TNTI	Ternate	60.95 292	PFAKE			02 30 30.0 +10
TNTI			LR	LR		
comp=Z,2μm,18.0s						
LUWI	Luwuk	63.50 287	PFAKE			02 30 50.0 +13
LUWI			LR	LR		
comp=Z,2μm,19.0s						
KAPI	Kappang	63.69 282	PFAKE			02 30 50.0 +12
KAPI			LR	LR		
comp=Z,3μm,18.0s						
DAV	Davao City (W)	66.31 296	PFAKE			02 31 10.0 +15
DAV			LR	LR		
comp=Z,1μm,19.0s						
JAGI	Jajag, Banyuwa	66.49 275	PFAKE			02 31 10.0 +14
JAGI			LR	LR		
comp=Z,2μm,21.0s						
UGM	Wanagama	69.83 274	PFAKE			02 31 30.0 +13
UGM			LR	LR		
comp=Z,3μm,20.0s						
MAW	Mawson	69.96 201	P		P	02 31 16.8 -0.3
comp=Z,16nm,1.1s,baz=124,slow=5.8,SNR=9.4						
MAW	Mawson	69.96 201	*e*P		P	02 31 17.7 +0.5
comp=Z,7.1nm,1.2s						
MAW			LR	LR		
comp=Z,800nm,20.0s						
SMRI	Semarang	70.36 274	PFAKE			02 31 30.0 +9.5
SMRI			LR	LR		
comp=Z,4μm,20.0s						
CISI	Cisompet, Garu	72.30 272	PFAKE			02 31 40.0 +7.7
CISI			LR	LR		
comp=Z,3μm,20.0s						
KKM	Kota Kinabalu	72.96 289	*e*P		P	02 31 34.3 -1.9
comp=Z,13nm,0.6s						
KKM			LR	LR		
comp=Z,2μm,20.0s						
SBUM	Sibu	74.10 284	PFAKE			02 31 50.0 +7.2
SBUM			LR	LR		
comp=Z,2μm,18.0s						
SYO	Syowa Base	74.72 193	‖ *e*P		P	02 31 43.8 -1.8
SYO	Syowa Base	74.72 193	⇑ *i*pP		P	02 31 47.4 +1.8
KSM	Kuching	75.12 282	PFAKE			02 32 00.0 +11
KSM			LR	LR		
comp=Z,2μm,21.0s						
SNAA	Sanae	75.80 179	P		P	02 31 52.8 +1.0
SNAA	Sanae	75.80 179	P		P	02 31 51.0 -0.8
comp=Z,3.3nm,0.6s,baz=153,slow=4.5,SNR=7.2						
VNA3	Neumayer Olymp	75.97 176	P		P	02 31 52.0 -0.7
VNA2	Neumayer--Watz	76.39 177	P		P	02 31 54.8 -0.4
slow=4.2						
NVL	N'lazarevskaya	76.49 183	⇑ *i*P		P	02 32 01.5 +5.8
NVL			*i*S		S	02 41 40.3 +0.7
NVL			*e*SS		SS	02 46 44.0 +11
NVL			pmax	pmax		
comp=Z,33nm,1.4s						
NVL			MLR	MLR		
comp=Z,2μm,17.0s						
VNA1	Neumayer--Stat	76.63 177	P		P	02 31 55.0 -1.4
JOW	Kunigami	77.99 313	PFAKE			02 32 20.0 +15
JOW			LR	LR		
comp=Z,2μm,19.0s						
MNAI	Manna	78.08 272	PFAKE			02 32 20.0 +14
MNAI			LR	LR		
comp=Z,4μm,21.0s						
COCO	West Island	79.12 262	PFAKE			02 32 20.0 +8.7
COCO			LR	LR		
comp=Z,3μm,20.0s						
INU	Inuyama	79.60 324	PFAKE			02 32 20.0 +6.7
INU			LR	LR		
comp=Z,2μm,19.0s						
TWG	Pinlang	79.92 305	PFAKE			02 32 30.0 +15
TWG			LR	LR		
comp=Z,3μm,20.0s						
MJAR	Matsushiro Arr	79.99 326	P		P	02 32 13.8 -1.6
comp=Z,1.1nm,0.3s,baz=168,slow=5.9,SNR=4.9						
MAJO	Matsushiro	79.99 326	PFAKE			02 32 30.0 +15
MAJO			LR	LR		
comp=Z,2μm,20.0s						
MAJO	Matsushiro	79.99 326	*i* P		P	02 32 17.9 +2.5
MAJO			pmax	pmax		
comp=Z,7.0nm,0.9s						
MJB9	Matsu-Tunnel	79.99 326	PFAKE			02 32 30.0 +15
MJB9			LR	LR		
comp=Z,2μm,20.0s						
YULB	Yu-li	80.14 306	PFAKE			02 32 30.0 +13
YULB			LR	LR		
comp=Z,800nm,20.0s						
NACB	Ninganchiao	80.47 307	PFAKE			02 32 30.0 +12
NACB			LR	LR		
comp=Z,900nm,19.0s						
TPUB	Ta-pu	80.54 305	PFAKE			02 32 30.0 +11
TPUB			LR	LR		
comp=Z,900nm,19.0s						
SSLB	Suanglung	80.64 306	PFAKE			02 32 30.0 +11
SSLB			LR	LR		
comp=Z,1μm,19.0s						
MYKOM	Kota Tinggi	80.65 278	PFAKE			02 32 30.0 +10
MYKOM			LR	LR		
comp=Z,3μm,19.0s						
YHNB	Yeheng	80.95 307	PFAKE			02 32 30.0 +9.1
YHNB			LR	LR		
comp=Z,1μm,19.0s						
EFI	East Falkland	81.00 147	PFAKE			02 32 30.0 +9.2
EFI			LR	LR		
comp=Z,3μm,20.0s						
TATO	Taipei	81.08 307	PFAKE			02 32 30.0 +8.5
TATO			LR	LR		
comp=Z,343nm,21.0s						
JNU	Nakatsue	81.09 319	P		P	02 32 20.3 -1.2
comp=Z,13nm,0.9s,baz=130,slow=2.5,SNR=6.1						
PLCA	Paso Flores	81.16 133	P		P	02 32 22.9 +0.8
comp=Z,19nm,1.2s,baz=225,slow=6.3,SNR=6.1						
PLCA	Paso Flores	81.16 133	*e*P		P	02 32 24.0 +2.0
comp=Z,47nm,1.2s						
ERM	Erimo	82.38 332	PFAKE			02 32 40.0 +12
ERM			LR	LR		
comp=Z,3μm,20.0s						
QZH	Quanzhou	83.02 305	⇑ *i*P		P	02 32 30.1 -1.6
QZH			S		S	02 42 49.6 -0.2
QZH			pmax	pmax		
comp=Z,330nm,5.0s						
QZH			LR	LR		
comp=Z,670nm,17.8s						
QZH			LR	LR		
comp=Z,550nm,17.4s						
QZH			LR	LR		
comp=Z,660nm,15.3s						
YUK	Yuzh-Kuril'sk	83.10 335	*e*P		P	02 32 30.9 -0.7
YUK			*e*			02 32 37.3
YUK			*i* S		S	02 42 45.0 -4.7
YUK			pmax	pmax		
comp=Z,324nm,1.2s						
YUK			pmax	pmax		
comp=N,181nm,0.9s						
YUK			MLR	MLR		
comp=E,656nm,14.0s						
YUK			MLR	MLR		
comp=Z,1μm,17.0s						
YUK			MLR	MLR		
comp=N,915nm,13.0s						
KUR	Kuril'sk	83.45 337	P		P	02 32 33.5 +0.1
KUR			*e*			02 32 38.5
KUR			S		S	02 42 55.2 +1.9
KUR			MLR	MLR		
comp=N,849nm,13.0s						
KUR			MLR	MLR		
comp=Z,1μm,13.0s						
ASAJ	Asahikawa	84.38 333	P		P	02 32 36.9 -1.4
comp=Z,4.3nm,0.4s,baz=139,slow=24,SNR=3.6						
TJN	Taejon	85.44 319	*ce*P		P	02 32 44.5 +0.8
GZH	Guangzhou	85.54 301	P		P	02 32 44.8 +0.2
GZH			PP		PP	02 36 04.8 +1.2
GZH			S		S	02 43 14.5 -0.6
GZH			SS		SS	02 48 51.4 -0.2
GZH			LR	LR		
comp=Z,560nm,17.3s						
GZH			LR	LR		
comp=Z,950nm,17.3s						
PEL	Peldehue	85.54 127	*e*P		P	02 32 45.4 +0.7
comp=Z,342nm,1.3s						
PEL	Peldehue	85.54 127	*e*P		P	02 32 45.4 +0.7
PEL			pmax	pmax		
comp=Z,342nm,1.3s						
QIZ	Qiongzhong	85.68 296	P		P	02 32 44.9 -0.5
QIZ			S		S	02 43 14.4 -2.3
QIZ			pmax	pmax		
comp=Z,430nm,11.0s						
QIZ			LR	LR		
comp=Z,370nm,16.2s						
QIZ			LR	LR		
comp=Z,350nm,20.1s						
QIZ			LR	LR		
comp=Z,570nm,20.1s						
QIZ	Qiongzhong	85.68 296	PFAKE			02 33 00.0 +15
QIZ			LR	LR		
comp=Z,679nm,20.0s						
KSRS	Korea Array	85.92 320	P		P	02 32 45.5 -0.6
comp=Z,4.2nm,0.9s,baz=142,slow=5.5,SNR=11						
KSAR	Wonju Array Be	85.93 320	P		P	02 32 45.5 -0.7
KSAR	Wonju Array Be	85.93 320	P		P	02 32 45.5 -0.7
KS01	Wonju Array Si	85.95 320	*e*P		P	02 32 45.8 -0.5
YSS	Yuzh-Sakhalins	86.72 335	*e*P		P	02 32 50.8 +1.0
comp=Z,36nm,0.9s						
YSS			LR	LR		
comp=Z,1μm,20.0s						
YSS	Yuzh-Sakhalins	86.72 335	⇑ *e*P		P	02 32 51.1 +1.3
YSS			pmax	pmax		
comp=Z,20nm,0.8s						
PKM	Mcpherson Peak	86.92 45	P		P	02 32 53.2 +1.8
baz=226						
PAGB	Antelope Grade	87.24 44	*e*P		P	02 32 55.3 +2.6
comp=Z,27nm,1.1s						
HOPE	Hope Point	87.28 159	PFAKE			02 33 00.0 +7.3
HOPE			LR	LR		
comp=Z,1μm,19.0s						
BAR	Barrett	87.33 48	*e*P		P	02 32 55.7 +2.5
comp=Z,14nm,1.1s						
NJ2	Nanjing	87.51 311	*e*P		P	02 32 56.3 +2.3
NJ2			S		S	02 43 34.6 +0.7
NJ2			pmax	pmax		
comp=Z,14nm,0.5s						
NJ2			LR	LR		
comp=Z,620nm,19.5s						
NJ2			LR	LR		
comp=Z,570nm,20.6s						
NJ2			LR	LR		
comp=Z,1μm,21.1s						
MWC	Mount Wilson	87.51 46	*e*P		P	02 32 56.1 +1.9
comp=Z,21nm,1.3s						
MURC	Murrieta	87.62 47	P		P	02 32 56.2 +1.6
baz=228,SNR=5.8						
MONP2	Monument Peak	87.63 48	P		P	02 32 56.6 +1.8
baz=228,SNR=5.2						
IKP	In-Ko-Pah, Jac	87.66 48	P		P	02 32 56.9 +2.0
baz=228						
ARVC	Arvin	87.66 45	P		P	02 32 56.4 +1.7
baz=226						
PET	Petropavlovsk	87.75 346	PFAKE			02 33 10.0 +15
PET			LR	LR		
comp=Z,1μm,20.0s						
PET	Petropavlovsk	87.75 346	*e*P		P	02 32 54.0 -0.6
PET			*e*			02 43 11.8
PET			*e*S		S	02 43 33.9 -1.2
PET			*e*PS		PnS	02 44 40.6 +1.7
PET			*e*SS		SS	02 49 21.6 -1.3
PET			pmax	pmax		
comp=Z,500nm,5.3s						
PET			pmax	pmax		
comp=Z,400nm,11.6s						
BFSC	Mount Baldy Ra	87.77 46	P		P	02 32 56.9 +1.5
baz=227,SNR=7.7						
LCO	Las Campanas	87.98 123	*e*P		P	02 32 57.4 +0.5
comp=Z,22nm,1.1s						
LCO			LR	LR		
comp=Z,2μm,20.0s						
EDW2	Edwards Air Fo	88.00 46	P		P	02 32 57.9 +1.5
baz=227,SNR=7.9						
VES	Vestal, Richgr	88.00 44	P		P	02 32 57.7 +1.4
baz=226						
PEA0B	Petropavlovsk-	88.02 346	*e*P		P	02 32 56.3 +0.4
comp=Z,76nm,1.3s						
PETK	Petropavlovsk-	88.02 346	P		P	02 32 55.6 -0.3
comp=Z,12nm,0.9s,baz=121,slow=7.1,SNR=15						
PETK	Petropavlovsk-	88.02 346	*e*P		P	02 32 55.8 -0.1
PETK	Petropavlovsk-	88.02 346	*e*P		P	02 32 55.8 -0.1
TRQA	Tornquist	88.02 135	*e*P		P	02 32 56.9 +0.2
comp=Z,12nm,1.2s						
TRQA			LR	LR		
comp=Z,2μm,19.0s						
SWSC	Sam W. Stewart	88.05 48	P		P	02 32 58.4 +1.8
baz=228						
PAYG	Puerto Ayora	88.08 90	PFAKE			02 33 10.0 +13
PAYG			LR	LR		
comp=Z,2μm,19.0s						
PFO	Pinyon Flats O	88.08 47	P		P	02 32 58.8 +1.9
baz=228						
PFO	Pinyon Flats O	88.08 47	*e*P		P	02 32 58.0 +1.1
comp=Z,18nm,1.1s						
PFO			LR	LR		
comp=Z,2μm,19.0s						
PFO	Pinyon Flats O	88.08 47	*e*P		P	02 32 58.0 +1.1
PFO			pmax	pmax		
comp=Z,18nm,1.1s						
PFO			MLR	MLR		
comp=Z,2μm,19.0s						
XPFO	Piæon Flat	88.08 47	*e*P		P	02 32 59.1 +2.2
comp=Z,16nm,1.1s						
BBRC	Big Bear Solar	88.23 47	P		P	02 32 59.5 +1.7
baz=228						
ISA	Isabella, Lake	88.24 45	P		P	02 32 59.3 +1.8
baz=227,SNR=15						
ISA	Isabella, Lake	88.24 45	*e*P		P	02 32 59.1 +1.5
comp=Z,31nm,1.2s						
ISA	Isabella, Lake	88.24 45	*e*P		P	02 32 59.1 +1.5
ISA			pmax	pmax		
comp=Z,31nm,1.2s						
LRMC	Laurel Mtn Rad	88.59 45	P		P	02 33 00.8 +1.5
baz=227,SNR=5.7						
RRX	Edison Barstow	88.60 46	P		P	02 33 01.0 +1.8
baz=228						
BELC	Belle Mtn. Jos	88.63 47	P		P	02 33 01.0 +1.5
baz=228,SNR=5.9						
GLA	Glamis	88.74 49	P		P	02 33 02.0 +2.1
baz=229						
GLA	Glamis	88.74 49	*e*P		P	02 33 02.8 +2.9
comp=Z,18nm,1.0s						
BC3	Big Chuckawall	88.74 48	P		P	02 33 02.2 +2.2
baz=228,SNR=6.3						
CMB	Columbia Colle	88.77 42	*e*P		P	02 33 00.7 +0.7
comp=Z,43nm,1.5s						
CMB	Columbia Colle	88.77 42	*e*P		P	02 33 00.7 +0.7
CMB			pmax	pmax		
comp=Z,43nm,1.5s						
USRK	Ussuriysk Ar.	88.94 327	P		P	02 32 59.9 -0.5
comp=Z,5.5nm,0.8s,baz=142,slow=3.9,SNR=8.9						
HEC	Hector,Ludlow	88.97 47	P		P	02 33 02.8 +1.7
baz=228						
GSC	Goldstone, Bar	89.00 46	P		P	02 33 02.7 +1.6
baz=228,SNR=11						
GSC	Goldstone, Bar	89.00 46	*e*P		P	02 33 02.4 +1.2
comp=Z,26nm,1.2s						
GSC	Goldstone, Bar	89.00 46	*e*P		P	02 33 02.4 +1.2
GSC			pmax	pmax		
comp=Z,26nm,1.2s						
CWC	Cottonwood Cre	89.00 45	P		P	02 33 02.6 +1.4
baz=227						
AFDM	Forest Hills D	89.08 41	*e*P		P	02 33 02.9 +1.6
comp=Z,30nm,1.5s						
MPMC	Manual Prospec	89.10 45	P		P	02 33 03.5 +1.7
baz=227,SNR=10						
IRM	Iron Mountain	89.26 48	P		P	02 33 04.5 +2.2
baz=229,SNR=13						
214A	Organ Pipe Nat	89.33 51	P		P	02 33 04.7 +2.0
baz=230						
TIN	Tinemaha, Big	89.33 44	P		P	02 33 04.3 +1.6
baz=227						
GMRC	Granite Mounta	89.36 47	P		P	02 33 04.8 +1.9
baz=228,SNR=6.6						
MLAC	Mammoth, Mammo	89.38 43	P		P	02 33 04.9 +1.8
baz=226						
Y12C	Blythe	89.39 48	P		P	02 33 05.0 +2.1
baz=229						
Y12C	Blythe	89.39 48	*e*P		P	02 33 05.5 +2.7
comp=Z,18nm,1.1s						
WDC	Whiskeytown Da	89.39 39	*e*P		P	02 33 04.4 +1.7
comp=Z,14nm,1.1s						
WDC	Whiskeytown Da	89.39 39	*e*P		P	02 33 04.4 +1.7
WDC			pmax	pmax		
comp=Z,14nm,1.1s						
WHN	Wuhan	89.48 307	⇑ P		P	02 33 02.8 -0.6
WHN			LR	LR		
comp=Z,2μm,19.9s						
WHN			LR	LR		
comp=Z,2μm,19.8s						
WHN			LR	LR		
comp=Z,1μm,13.1s						
O03D	Paynes Creek	89.58 40	P		P	02 33 04.6 +0.9
baz=225,SNR=8.4						
N02D	Trinity Center	89.58 39	P		P	02 33 04.9 +1.2
baz=224,SNR=5.2						
TUQ	Turquoise Moun	89.62 46	P		P	02 33 05.9 +1.8
baz=228						
WAKR	Walker	89.63 42	*e*P		P	02 33 05.9 +1.7
comp=Z,47nm,1.5s						
SHOC	Shoshone, Teco	89.72 46	P		P	02 33 06.0 +1.5
baz=228						
GRAC	Grapevine Rang	89.80 44	P		P	02 33 06.6 +1.8
baz=227						
M02C	Callahan	89.81 38	P		P	02 33 06.6 +1.9
baz=224						
PNTR	Pine Nut	89.95 42	*e*P		P	02 33 07.7 +2.0
comp=Z,56nm,1.5s						
L02D	Cave Junction,	89.97 37	P		P	02 33 07.3 +1.9
baz=224						
PDMCI	Parker Dam,Lak	89.98 48	P		P	02 33 07.5 +1.8
baz=229,SNR=5.9						
NEE2	Needles Airpor	89.99 48	P		P	02 33 07.5 +1.8
baz=229						
BEKR	Beckworth	90.06 41	*e*P		P	02 33 07.8 +1.6
comp=Z,11nm,0.9s						
TYV	Tymovskoe	90.08 337	*e*P		P	02 33 06.2 +0.6
TYV			*e*S		S	02 43 56.1 -1.1
TYV			pmax	pmax		
comp=Z,23nm,0.7s						
TYV			pmax	pmax		
comp=Z,700nm,5.2s						
TYV			smax	smax		
comp=N,500nm,9.2s						
KEBM	Edson Butte	90.12 37	*e*P		P	02 33 08.5 +2.4
comp=N,68nm,1.3s						
YBH	Yreka Blue Hor	90.12 38	P		P	02 33 06.5 +0.3
comp=N,4.4nm,1.1s,baz=173,slow=4.1,SNR=7.1						
YBH	Yreka Blue Hor	90.12 38	*e*P		P	02 33 07.8 +1.6
comp=N,24nm,1.4s						
NV01	Mina Array Sit	90.23 43	*e*P		P	02 33 07.3 +0.4
NVAR	Mina Array Bea	90.23 43	P		P	02 33 07.3 +0.3
comp=N,8.1nm,0.9s,baz=215,slow=7.7,SNR=20						
NV11	Mina Array Sit	90.31 43	*e*P		P	02 33 08.6 +1.3
comp=N,0.7nm,1.0s						
CHGN	Chignik	90.35 11	*e*P		P	02 33 07.3 +0.5
comp=N,26nm,0.9s						
MDJ	Mudanjiang	90.37 326	PFAKE			02 33 20.0 +13
MDJ			LR	LR		
comp=Z,1μm,22.0s						
TPNV	Topopah Spring	90.43 45	P		P	02 33 09.6 +1.7
baz=228,SNR=5.0						
TPNV	Topopah Spring	90.43 45	*e*P		P	02 33 09.8 +2.0
comp=Z,13nm,1.1s						
TPNV	Topopah Spring	90.43 45	*e*P		P	02 33 09.9 +2.0
TPNV			pmax	pmax		
comp=Z,13nm,1.1s						
Y14A	Wickenburg	90.47 49	*e*P		P	02 33 10.1 +2.1
comp=Z,20nm,1.3s						
PAHR	Pah Rah Range	90.49 41	*e*P		P	02 33 10.2 +2.1
comp=Z,28nm,1.5s						
M04C	Macdoel	90.62 39	P		P	02 33 10.1 +1.5
baz=225						
HUMO	Hull Mountain	90.63 37	*e*P		P	02 33 10.3 +1.8
comp=Z,41nm,1.5s						
W13A	Hualapai Mount	90.66 48	*e*P		P	02 33 10.7 +1.6
comp=Z,16nm,1.2s						
KVN	Kaiserville	90.77 43	*e*P		P	02 33 09.9 +0.5
comp=Z,24nm,1.5s						
KVN	Kaiserville	90.77 43	*e*P		P	02 33 09.9 +0.5
KVN			pmax	pmax		
comp=Z,24nm,1.5s						
SHPR	Sheep Range	90.80 46	*e*P		P	02 33 12.0 +2.4
comp=Z,12nm,1.2s						
TUC	Tucson	90.88 52	P		P	02 33 12.5 +2.5
baz=231						
TUC	Tucson	90.88 52	*e*P		P	02 33 11.9 +1.9
comp=Z,25nm,1.4s						
TUC			LR	LR		
comp=Z,2μm,19.0s						
TUC	Tucson	90.88 52	*e*P		P	02 33 11.9 +1.9
TUC			pmax	pmax		
comp=Z,25nm,1.4s						
TUC			MLR	MLR		
comp=Z,2μm,19.0s						
I03D	Drain, OR	91.21 37	P		P	02 33 12.9 +1.7
baz=224						
K04D	Chiloquin, OR	91.26 38	P		P	02 33 13.8 +2.2
baz=225						
319A	Douglas	91.30 53	*e*P		P	02 33 14.2 +2.2
comp=Z,16nm,1.4s						
TIA	Tai'an	91.32 313	P		P	02 33 12.5 +0.7
TIA			pmax	pmax		
comp=Z,6.0nm,0.7s						
J04D	Umpqua Nationa	91.51 37	P		P	02 33 14.6 +1.8
baz=224						
MOD	Modoc Plateau	91.52 39	*e*P		P	02 33 14.5 +1.7
comp=Z,11nm,1.1s						
I04A	Tendick Farm,	91.76 37	P		P	02 33 14.6 +0.8
baz=224,SNR=5.9						
R11A	Troy Canyon, C	91.76 44	P		P	02 33 15.3 +1.3
baz=228						
X16A	Lo Mia Camp, P	91.77 50	*e*P		P	02 33 15.7 +1.4
comp=Z,19nm,1.3s						
K05A	Summer Lake	91.78 38	*e*P		P	02 33 15.1 +1.0
comp=Z,22nm,1.3s						
CN2	Changchun	91.81 323	*e*P		P	02 33 13.1 -0.8
CN2			SKS		SKSac	02 43 42.6 -2.4
CN2			*e*S		S	02 44 10.6 -2.8
CN2			pmax	pmax		
comp=Z,20nm,0.9s						
CN2			pmax	pmax		
comp=Z,200nm,5.0s						
CN2			LR	LR		
comp=Z,620nm,18.0s						
CN2			LR	LR		
comp=Z,680nm,18.0s						
CN2			LR	LR		
comp=Z,690nm,18.0s						
J05D	Fort Rock, OR	92.00 38	P		P	02 33 16.5 +1.5
baz=225						
BMN	Battle Mountai	92.20 42	*e*P		P	02 33 15.5 -0.5
comp=Z,32nm,1.6s						
BMN	Battle Mountai	92.20 42	*e*P		P	02 33 15.5 -0.5
BMN			pmax	pmax		
comp=Z,32nm,1.6s						
GRNR	Gornyy	92.23 333	*e*P		P	02 33 16.8 +1.1
LCMT	Little Creek M	92.29 47	*e*P		P	02 33 18.8 +2.2
comp=Z,6.4nm,1.0s						
G03D	McMinnville, O	92.35 36	P		P	02 33 18.1 +1.7
baz=224						
GYA	Guiyang	92.41 300	P		P	02 33 19.0 +1.7
GYA			pP		pP	02 33 27.4 +2.5
GYA			PP		PP	02 37 03.0 +4.3
GYA			SKS		SKSac	02 43 49.9 +0.4
GYA			S		S	02 44 19.3 -0.5
GYA			SS		SS	02 50 34.8 +3.0
GYA			pmax	pmax		
comp=Z,30nm,1.0s						
GYA			pmax	pmax		
comp=Z,160nm,6.6s						
GYA			LR	LR		
comp=Z,740nm,20.1s						
GYA			LR	LR		
comp=Z,710nm,20.8s						
GYA			LR	LR		
comp=Z,810nm,20.6s						
H04A	Detroit Lake	92.50 36	*e*P		P	02 33 17.7 +0.5
comp=Z,16nm,1.0s						
PINE	Pine Mountain	92.50 38	*e*P		P	02 33 19.0 +1.6
comp=Z,13nm,0.8s						
U15A	North Rim	92.51 48	*e*P		P	02 33 19.7 +2.0

	comp=Z,25nm,1.5s						
WUAZ	**Wupatki**	**92.51**	**49**	P	**P**	**02 33 19.1**	**+1.5**
	baz=231						
WUAZ	**Wupatki**	**92.51**	**49**	PFAKE		02 33 30.0	+12
WUAZ				LR	LR		
	comp=Z,1μm,19.0s						
KNB	**Kanab**	**92.55**	**47**	*e*P	**P**	**02 33 19.9**	**+2.1**
	comp=Z,10.0nm,1.0s						
CCUT	**Cedar City**	**92.57**	**46**	*e*P	**P**	**02 33 20.4**	**+2.5**
	comp=Z,17nm,1.6s						
ENH	**Enshi**	**92.64**	**305**	PFAKE		02 33 30.0	+12
ENH				LR	LR		
	comp=Z,766nm,19.0s						
NKL	**Nikolayevsk**	**92.67**	**337**	*e*P	**P**	**02 33 16.0**	**-1.6**
NKL				pmax	pmax		
	comp=Z,500nm,10.0s						
I05D	**Terrebonne, OR**	**92.69**	**37**	P	**P**	**02 33 19.5**	**+1.4**
	baz=225						
WVOR	**Wild Horse Val**	**92.78**	**40**	PFAKE		02 33 30.0	+11
WVOR				LR	LR		
	comp=Z,4μm,20.0s						
KDAK	**Kodiak Island**	**92.80**	**14**	PFAKE		02 33 30.0	+12
KDAK				LR	LR		
	comp=Z,404nm,19.0s						
X18A	**Snowflake**	**92.80**	**50**	*e*P	**P**	**02 33 20.9**	**+1.9**
	comp=Z,15nm,1.5s						
KLR	**Kul'dur**	**92.90**	**330**	P	**P**	**02 33 18.1**	**-0.7**
	comp=Z,0.3nm,0.9s,baz=212,slow=1.4,SNR=8.3						
KLR				LR	LR	03 12 23.7	
	comp=Z,81nm,18.8s,slow=34						
KLR	**Kul'dur**	**92.90**	**330**	*i* P	**P**	**02 33 18.3**	**-0.5**
F04D	**Rainier, OR**	**93.10**	**35**	P	**P**	**02 33 22.1**	**+2.3**
	baz=224						
NNA	**Nana**	**93.12**	**106**	PFAKE		02 33 30.0	+9.2
NNA				LR	LR		
	comp=Z,921nm,19.0s						
W18A	**Petrified Fore**	**93.31**	**50**	P	**P**	**02 33 23.1**	**+1.8**
	baz=232						
G05D	**Wamic, OR**	**93.33**	**36**	P	**P**	**02 33 22.5**	**+1.5**
	baz=225						
J08A	**Circle Bar Ran**	**93.50**	**39**	*e*P	**P**	**02 33 22.5**	**+0.6**
	comp=Z,10nm,1.1s						
MTPU	**Mount Pierson**	**93.60**	**46**	*e*P	**P**	**02 33 25.5**	**+2.7**
	comp=Z,12nm,1.2s						
NLWA	**Neilton Lookou**	**93.64**	**34**	PFAKE		02 33 30.0	+7.7
NLWA				LR	LR		
	comp=Z,2μm,20.0s						
CMAR	**Chiang Mai Arr**	**93.83**	**289**	PP	PP	02 37 12.5	+2.6
	comp=Z,0.9nm,0.3s,baz=149,slow=6.7,SNR=6.6						
TX31	**Lajitas Ar. Si**	**93.97**	**58**	*e*P	**P**	**02 33 26.0**	**+1.6**
TXAR	**Lajitas Array**	**93.98**	**58**	P	**P**	**02 33 25.0**	**+0.6**
	comp=Z,3.1nm,1.1s,baz=199,slow=6.2,SNR=9.7						
CHTO	**Chiang Mai**	**94.03**	**290**	PFAKE		02 33 40.0	+15
CHTO				LR	LR		
	comp=Z,1μm,19.0s						
MNTX	**Cornudas Mount**	**94.15**	**55**	P	**P**	**02 33 25.9**	**+0.9**
	baz=234						
MNTX	**Cornudas Mount**	**94.15**	**55**	PFAKE		02 33 40.0	+15
MNTX				LR	LR		
	comp=Z,740nm,19.0s						
BJT	**Baijiatuau**	**94.34**	**316**	PFAKE		02 33 40.0	+14
BJT				LR	LR		
	comp=Z,2μm,21.0s						
BJI	**Beijing**	**94.36**	**316**	*e*P	**P**	**02 33 26.8**	**+1.1**
BJI				SKS	**SKSac**	**02 44 01.0**	**+1.7**
BJI				S	**ScS**	**02 44 40.8**	**+3.5**
BJI				pmax	pmax		
	comp=Z,12nm,0.7s						
BJI				pmax	pmax		
	comp=Z,390nm,10.3s						
BJI				LR	LR		
	comp=Z,1μm,19.4s						
BJI				LR	LR		
	comp=Z,1μm,21.1s						
BJI				LR	LR		
	comp=Z,2μm,21.7s						
LNIG	**Linares**	**94.54**	**63**	*e*P	**P**	**02 33 27.6**	**+0.6**
	comp=Z,15nm,1.6s						
KMI	**Kunming**	**94.56**	**297**	P	**P**	**02 33 29.4**	**+2.0**
KMI				pP	pP	02 33 36.9	+1.9
KMI				sP	sP	02 33 39.8	+2.1
KMI				PP	**PP**	**02 37 16.9**	**+1.2**
KMI				S	**S**	**02 44 38.0**	**-1.1**
KMI				sS	pS	02 44 48.8	-0.1
KMI				SS	**SS**	**02 51 06.4**	**+3.6**
KMI				pmax	pmax		
	comp=Z,11nm,0.5s						
KMI				pmax	pmax		
	comp=Z,260nm,6.0s						
KMI				LR	LR		
	comp=Z,310nm,17.6s						
KMI				LR	LR		
	comp=Z,520nm,18.4s						
KMI				LR	LR		
	comp=Z,680nm,18.2s						
G08A	**Pilot Rock**	**94.56**	**38**	*e*P	**P**	**02 33 28.4**	**+1.7**
	comp=Z,9.4nm,1.1s						
DUG	**Dugway, Tooele**	**94.59**	**44**	P	**P**	**02 33 28.4**	**+1.3**
	baz=230						
DUG	**Dugway, Tooele**	**94.59**	**44**	PFAKE		02 33 40.0	+13
DUG				LR	LR		
	comp=Z,1μm,20.0s						
MFID	**Camas Ranch**	**94.96**	**40**	*e*P	**P**	**02 33 29.2**	**+0.6**
	comp=Z,5.3nm,0.9s						
HAWA	**Hanford**	**95.03**	**37**	PFAKE		02 33 40.0	+11
HAWA				LR	LR		
	comp=Z,3μm,19.0s						
BMO	**Blue Mountains**	**95.13**	**39**	*e*P	**P**	**02 33 30.4**	**+1.1**
	comp=Z,10nm,1.8s						
BMO				LR	LR		
	comp=Z,3μm,19.0s						
BMO	**Blue Mountains**	**95.13**	**39**	*e*P	**P**	**02 33 30.4**	**+1.1**
BMO				pmax	pmax		
	comp=Z,10.0nm,1.8s						
BMO				MLR	MLR		
	comp=Z,3μm,19.0s						
SRU	**San Rafael Swe**	**95.28**	**46**	*e*P	**P**	**02 33 32.2**	**+2.0**
	comp=Z,19nm,1.7s						
TASM	**ASL Pad, Albuq**	**95.34**	**52**	P	**P**	**02 33 31.7**	**+1.1**
	baz=233						
ANMO	**Albuquerque**	**95.34**	**52**	P	**P**	**02 33 30.7**	**+0.1**
	comp=Z,1.8nm,0.9s,baz=197,slow=4.0,SNR=3.7						
ANMO	**Albuquerque**	**95.34**	**52**	P	**P**	**02 33 31.9**	**+1.2**
	baz=233						
ANMO	**Albuquerque**	**95.34**	**52**	*e*P	**P**	**02 33 31.7**	**+1.0**
	comp=Z,5.4nm,1.3s						
ANMO				LR	LR		
	comp=Z,2μm,19.0s						
ANMO	**Albuquerque**	**95.34**	**52**	*ce*P	**P**	**02 33 29.7**	**-1.0**
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.3s						
TASL	**Snake Pit, Alb**	**95.34**	**52**	P	**P**	**02 33 31.6**	**+0.9**
	baz=233						
P17A	**Butcher Ranch,**	**95.37**	**46**	*e*P	**P**	**02 33 30.3**	**-0.3**
	comp=Z,4.7nm,0.9s						
MVCO	**Mesa Verde**	**95.38**	**49**	P	**P**	**02 33 31.9**	**+1.1**
	baz=232						
MVCO	**Mesa Verde**	**95.38**	**49**	PFAKE		02 33 40.0	+9.2
MVCO				LR	LR		
	comp=Z,1μm,20.0s						
MA2	**Magadan**	**95.48**	**345**	PFAKE		02 33 40.0	+10
MA2				LR	LR		
	comp=Z,2μm,20.0s						
HVU	**Hansel Valley**	**95.62**	**43**	*e*P	**P**	**02 33 33.1**	**+1.4**
	comp=Z,9.6nm,1.3s						
HVU	**Hansel Valley**	**95.62**	**43**	*e*P	**P**	**02 33 33.1**	**+1.4**
HVU				pmax	pmax		
	comp=Z,10.0nm,1.3s						
HLID	**Hailey**	**95.84**	**41**	P	**P**	**02 33 34.2**	**+1.5**
	baz=230						
HLID	**Hailey**	**95.84**	**41**	*e*P	**P**	**02 33 33.0**	**+0.3**
	comp=Z,4.0nm,1.0s						
HLID				LR	LR		
	comp=Z,1μm,20.0s						
F10A	**Beach Ranch, E**	**95.92**	**38**	*e*P	**P**	**02 33 33.3**	**+0.4**
	comp=Z,6.6nm,1.1s						
HWUT	**Hardware Ranch**	**96.21**	**44**	PFAKE		02 33 50.0	+16
HWUT				LR	LR		
	comp=Z,2μm,20.0s						
SUA	**Susitna One**	**96.57**	**13**	*e*P	**P**	**02 33 38.2**	**+2.8**
	comp=Z,3.9nm,1.0s						
S22A	**4UR Ranch, Cre**	**96.76**	**49**	P	**P**	**02 33 38.3**	**+1.1**
	baz=234						
CD2	**Chengdu**	**97.04**	**302**	P	**P**	**02 33 38.3**	**0.0**
CD2				sP	pP	02 33 46.0	+0.1
CD2				PP	**PP**	**02 37 34.3**	**-0.3**
CD2				SKS	**SKSac**	**02 44 14.4**	**+0.3**
CD2				S	**ScS**	**02 45 00.6**	**+0.4**
CD2				sS	pS	02 45 10.4	+0.7
CD2				SS	**SS**	**02 51 39.4**	**+2.0**
CD2				pmax	pmax		
	comp=Z,20nm,0.7s						
CD2				LR	LR		
	comp=Z,1μm,17.2s						
CD2				LR	LR		
	comp=Z,590nm,15.7s						
WRAK	**Wrangell Islan**	**97.08**	**24**	PFAKE		02 33 50.0	+12
WRAK				LR	LR		
	comp=Z,923nm,19.0s						
KVTX	**Kingsville**	**97.18**	**62**	PFAKE		02 33 50.0	+11
KVTX				LR	LR		
	comp=Z,1μm,20.0s						
AHID	**Auburn Hatcher**	**97.21**	**43**	PFAKE		02 33 50.0	+11
AHID				LR	LR		
	comp=Z,2μm,20.0s						
JCT	**Junction City**	**97.39**	**59**	PFAKE		02 33 50.0	+10
JCT				LR	LR		
	comp=Z,1μm,20.0s						
LPAZ	**La Paz**	**97.50**	**115**	P	Pdif	02 33 42.3	+0.7
	comp=Z,0.8nm,0.8s,baz=213,slow=7.5,SNR=3.9						
NEW	**Newport**	**97.51**	**36**	PFAKE		02 33 50.0	+10
NEW				LR	LR		
	comp=Z,3μm,19.0s						
MCMT	**McKenzie Canyo**	**97.51**	**41**	*e*P	Pdif	02 33 41.7	+1.3
SDCO	**Great Sand Dun**	**97.61**	**50**	PFAKE		02 33 50.0	+8.9
SDCO				LR	LR		
	comp=Z,957nm,20.0s						
HHC	**Hu-ho-hao-te**	**97.61**	**314**	*e*P	Pdif	02 33 43.0	+2.2
HHC				sP	pP	02 33 48.5	+0.2
HHC				PP	**PP**	**02 37 36.8**	**-2.2**
HHC				S	**S**	**02 45 07.8**	**+3.3**
HHC				sS	pS	02 45 18.1	+3.7
HHC				SS	**SS**	**02 51 49.6**	**+4.2**
HHC				pmax	pmax		
	comp=Z,19nm,1.0s						
HHC				pmax	pmax		
	comp=Z,280nm,8.6s						
HHC				LR	LR		
	comp=Z,750nm,17.1s						
HHC				LR	LR		
	comp=Z,700nm,18.2s						
HHC				LR	LR		
	comp=Z,1μm,18.9s						
BW06	**Boulder Array**	**98.10**	**44**	PFAKE		02 34 00.0	+17
BW06				LR	LR		
	comp=Z,2μm,20.0s						
PDAR	**Pinedale Array**	**98.10**	**44**	P	**P**	**02 33 43.0**	**0.0**
	comp=Z,0.7nm,0.9s,baz=211,slow=4.9,SNR=5.1						
JTS	**JuntasAbangare**	**98.39**	**83**	PFAKE		02 34 00.0	+15
JTS				LR	LR		
	comp=Z,811nm,20.0s						
HIA	**Hailar**	**98.43**	**324**	PFAKE		02 34 00.0	+16
HIA				LR	LR		
	comp=Z,1μm,20.0s						
TRF	**Thorofare Moun**	**98.48**	**12**	*e*P	Pdif	02 33 46.7	+2.5
	comp=Z,20nm,1.8s						
OTAV	**Otavalo**	**98.53**	**95**	PFAKE		02 34 00.0	+14
OTAV				LR	LR		
	comp=Z,573nm,22.0s						
BOZ	**Bozeman (W)**	**98.67**	**41**	Pdiff	Pdif	02 33 46.6	+1.2
	baz=232						
BOZ	**Bozeman (W)**	**98.67**	**41**	*e*P	Pdif	02 33 47.2	+1.8
	comp=Z,3.7nm,1.2s						
BOZ				LR	LR		
	comp=Z,1μm,19.0s						
BOZ	**Bozeman (W)**	**98.67**	**41**	*e*P	Pdif	02 33 47.2	+1.8
BOZ				pmax	pmax		
	comp=Z,4.0nm,1.2s						
BOZ				MLR	MLR		
	comp=Z,1μm,19.0s						
ABTX	**Abilene, Hawle**	**98.68**	**57**	Pdiff	Pdif	02 33 46.5	+0.8
	baz=237						
LKWY	**Lake**	**98.72**	**42**	PFAKE		02 34 00.0	+14
LKWY				LR	LR		
	comp=Z,4μm,22.0s						
ISCO	**Idaho Springs**	**98.73**	**48**	Pdiff	Pdif	02 33 46.6	+0.6
	baz=234						
ISCO	**Idaho Springs**	**98.73**	**48**	PFAKE		02 34 00.0	+14
ISCO				LR	LR		
	comp=Z,1μm,19.0s						
CPUP	**Villa Florida**	**98.79**	**129**	PKKP	**PKKPdf**	**02 50 15.3**	**-0.3**
	comp=Z,0.9nm,0.4s,baz=112,slow=3.5,SNR=2.8						
RLMT	**Red Lodge**	**99.69**	**42**	PFAKE		02 34 00.0	+10
RLMT				LR	LR		
	comp=Z,2μm,20.0s						
LZH	**Lanzhou**	**99.84**	**307**	*e*P	**Pdif**	**02 33 55.9**	**+5.0**
LZH				pP	sP	02 34 03.8	+2.6
LZH				sP	pP	02 34 06.5	+8.0
LZH				SKS	**SKSac**	**02 44 30.3**	**+2.1**
LZH				*e*S	**S**	**02 45 28.8**	**+5.1**
LZH				sS	sS	02 45 39.6	+3.2
LZH				SS	**SS**	**02 52 20.4**	**+3.5**
LZH				pmax	pmax		
	comp=Z,22nm,1.0s						
LZH				pmax	pmax		
	comp=Z,98nm,4.3s						
LZH				LR	LR		
	comp=Z,2μm,14.1s						
LZH				LR	LR		
	comp=Z,2μm,16.8s						
LZH				LR	LR		
	comp=Z,2μm,17.0s						
COLA	**College**	**100.23**	**13**	PFAKE		02 34 00.0	+8.4
COLA				LR	LR		
	comp=Z,1.0nm,19.0s						
ILAR	**Eielson Array**	**100.32**	**13**	P	**Pdif**	**02 33 50.8**	**-1.3**
	comp=Z,0.6nm,1.0s,baz=244,slow=6.3,SNR=3.1						
ILAR				PP	**PP**	**02 37 52.8**	**-6.1**
	comp=Z,0.9nm,0.9s,baz=217,slow=8.2,SNR=4.4						
WMOK	**Wichita Mounta**	**100.43**	**55**	PFAKE		02 34 10.0	+17
WMOK				LR	LR		
	comp=Z,976nm,19.0s						
BILL	**Bilibino**	**101.16**	**354**	PFAKE		02 34 10.0	+14
BILL				LR	LR		
	comp=Z,2μm,20.0s						
BILL	**Bilibino**	**101.16**	**354**	*i* P	**Pdif**	**02 33 55.8**	**+0.1**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.2s						
EGMT	**Eagleton**	**101.17**	**40**	PFAKE		02 34 10.0	+14
EGMT				LR	LR		
	comp=Z,3μm,19.0s						
EGAK	**Eagle**	**101.51**	**15**	PFAKE		02 34 10.0	+13
EGAK				LR	LR		
	comp=Z,1μm,19.0s						
OGNE	**Ogallala**	**101.64**	**49**	PFAKE		02 34 10.0	+11
OGNE				LR	LR		
	comp=Z,2μm,19.0s						
NATX	**Nacogdoches**	**101.79**	**60**	PFAKE		02 34 10.0	+11
NATX				LR	LR		
	comp=Z,1μm,21.0s						
DGAR	**Diego Garcia**	**101.80**	**253**	PFAKE		02 34 10.0	+10
DGAR				LR	LR		
	comp=Z,984nm,20.0s						
CBKS	**Cedar Bluff**	**101.97**	**52**	PFAKE		02 34 10.0	+10
CBKS				LR	LR		
	comp=Z,1μm,19.0s						
BCIP	**Isla Barro Col**	**102.10**	**87**	PFAKE		02 34 10.0	+8.8
BCIP				LR	LR		
	comp=Z,2μm,20.0s						
LAO	**LASA Array**	**102.33**	**42**	PFAKE		02 34 10.0	+8.4
LAO				LR	LR		
	comp=Z,1μm,20.0s						
YAK	**Yakutsk**	**103.30**	**338**	PFAKE		02 34 20.0	+15
YAK				LR	LR		
	comp=Z,2μm,19.0s						
MIAR	**Mount Ida**	**103.99**	**58**	Pdiff	**Pdif**	**02 34 09.9**	**+0.8**
	baz=240						
MIAR	**Mount Ida**	**103.99**	**58**	PFAKE		02 34 20.0	+11
MIAR				LR	LR		
	comp=Z,952nm,19.0s						
KSU1	**Kansas State U**	**104.19**	**53**	PFAKE		02 34 20.0	+10
KSU1				LR	LR		
	comp=Z,1μm,19.0s						
ULN	**Ulaanbaatar**	**104.29**	**318**	PFAKE		02 34 20.0	+10
ULN				LR	LR		
	comp=Z,929nm,19.0s						
DGMT	**Dagmar**	**104.47**	**41**	PFAKE		02 34 20.0	+9.0
DGMT				LR	LR		
	comp=Z,1μm,19.0s						
SONM	**Songino Array**	**104.65**	**318**	PKKP	**PKKPab**	**02 50 14.5**	**+2.1**
	comp=Z,0.2nm,0.4s,baz=310,slow=5.4,SNR=2.2						
LSA	**Lhasa**	**105.72**	**295**	PFAKE		02 38 40.0	
LSA				LR	LR		
	comp=Z,898nm,20.0s						
SAML	**Samuel**	**105.77**	**112**	PFAKE		02 38 40.0	
SAML				LR	LR		
	comp=Z,1μm,19.0s						
INK	**Inuvik**	**106.16**	**16**	PP	PP	02 38 41.3	-1.2
	comp=Z,2.4nm,1.1s,baz=194,slow=7.0,SNR=4.7						
INK	**Inuvik**	**106.16**	**16**	*e*PKP	**PKiKP**	**02 38 29.3**	**-0.2**
INK				PP	**PP**	**02 38 41.3**	**-1.2**
ECSD	**EROS Data Cent**	**106.52**	**48**	PFAKE		02 38 40.0	
ECSD				LR	LR		
	comp=Z,1μm,19.0s						
BRAL	**Brewton**	**107.15**	**64**	PFAKE		02 38 40.0	
BRAL				LR	LR		
	comp=Z,524nm,19.0s						
YKA	**Yellowknife Ar**	**107.74**	**26**	PKKPbc	PKKPbc	02 49 45.8	-2.2
	comp=Z,0.7nm,0.8s,baz=26,slow=2.9,SNR=4.3						
YKA				PKKP	**PKKPdf**	**02 50 00.6**	**-1.6**
	comp=Z,0.6nm,0.6s,baz=48,slow=3.2,SNR=5.2						
SCIA	**State Center**	**107.83**	**51**	PFAKE		02 38 50.0	
SCIA				LR	LR		
	comp=Z,1μm,19.0s						
TLY	**Talaya**	**108.17**	**320**	PFAKE		02 38 50.0	
TLY				LR	LR		
	comp=Z,864nm,20.0s						
MTDJ	**Mount Denham**	**108.60**	**80**	PFAKE		02 38 50.0	
MTDJ				LR	LR		
	comp=Z,1μm,20.0s						
553A	**Crawfordville**	**108.69**	**66**	PKiKP	**PKiKP**	**02 38 34.7**	**-0.7**
	baz=242						
FFC	**Flin Flon**	**108.93**	**37**	PFAKE		02 38 50.0	
FFC				LR	LR		
	comp=Z,2μm,20.0s						
AGMN	**Agassiz Nation**	**109.17**	**45**	PFAKE		02 38 50.0	
AGMN				LR	LR		
	comp=Z,2μm,20.0s						
SDV	**Santo Domingo**	**109.70**	**92**	PFAKE		02 38 50.0	
SDV				LR	LR		
	comp=Z,962nm,19.0s						
HDIL	**Hopedale**	**109.84**	**54**	PFAKE		02 38 50.0	
HDIL				LR	LR		
	comp=Z,918nm,19.0s						
JFWS	**Jewell Farm**	**110.24**	**52**	PFAKE		02 38 50.0	
JFWS				LR	LR		
	comp=Z,1μm,19.0s						
TIXI	**Tiksi**	**110.45**	**344**	PFAKE		02 38 50.0	
TIXI				LR	LR		
	comp=Z,1μm,21.0s						
TIXI	**Tiksi**	**110.45**	**344**	*c i* PKIKP	**PKiKP**	**02 38 35.7**	**-1.7**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GOGA	**Godfrey**	**110.87**	**63**	PFAKE		02 38 50.0	
GOGA				LR	LR		
	comp=Z,674nm,20.0s						
GTBY	**Guantanamo Bay**	**111.42**	**80**	PFAKE		02 38 50.0	
GTBY				LR	LR		
	comp=Z,604nm,19.0s						
EYMN	**Ely**	**111.63**	**46**	PFAKE		02 38 50.0	
EYMN				LR	LR		
	comp=Z,2μm,19.0s						
COWI	**Conover**	**112.32**	**49**	PFAKE		02 38 50.0	
COWI				LR	LR		
	comp=Z,2μm,19.0s						
ABPO	**Ambohimpanom**	**112.49**	**227**	PFAKE		02 38 50.0	
ABPO				LR	LR		
	comp=Z,724nm,20.0s						
SUR	**Sutherland**	**112.69**	**198**	PFAKE		02 38 50.0	
SUR				LR	LR		
	comp=Z,2μm,19.0s						
NHSC	**New Hope**	**113.23**	**65**	PFAKE		02 39 00.0	
NHSC				LR	LR		
	comp=Z,697nm,19.0s						
ACSO	**Alum Creek Sta**	**114.07**	**57**	PFAKE		02 39 00.0	+15
ACSO				LR	LR		
	comp=Z,1μm,19.0s						
WMQ	**Urumqi**	**114.39**	**308**	PKP	PKPdf	02 38 46.8	+0.9
WMQ				LR	LR		
	comp=Z,1μm,16.7s						
WMQ				LR	LR		
	comp=Z,870nm,19.9s						
WMQ				LR	LR		
	comp=Z,830nm,19.9s						
AAM	**Ann Arbor**	**114.42**	**54**	PFAKE		02 39 00.0	+14
AAM				LR	LR		
	comp=Z,827nm,19.0s						
FCC	**Fort Churchill**	**114.62**	**35**	*e*PKP	PKPdf	02 38 44.7	-1.0
FCC	**Fort Churchill**	**114.62**	**35**	*e*PKIKP	PKPdf	02 38 44.7	-1.0
BLA	**Blacksburg**	**114.72**	**60**	PFAKE		02 39 00.0	+13
BLA				LR	LR		
	comp=Z,683nm,20.0s						
GRTK	**Grand Turk**	**115.45**	**80**	PFAKE		02 39 00.0	+12
GRTK				LR	LR		
	comp=Z,655nm,20.0s						
CNNC	**Cliffs of the**	**115.83**	**63**	PFAKE		02 39 00.0	+11
CNNC				LR	LR		
	comp=Z,1μm,19.0s						
MSEY	**Mahe Island**	**116.81**	**244**	PFAKE		02 39 00.0	+8.5
MSEY				LR	LR		
	comp=Z,2μm,19.0s						
CBN	**Corbin Frederi**	**117.33**	**61**	PFAKE		02 39 00.0	+8.4
CBN				LR	LR		
	comp=Z,658nm,21.0s						
SSPA	**Standing Stone**	**117.83**	**58**	PKiKP	**PKiKP**	**02 38 52.7**	**+0.1**
	baz=249						
SJG	**San Juan**	**118.05**	**86**	PFAKE		02 39 10.0	+16
SJG				LR	LR		
	comp=Z,485nm,22.0s						
GRGR	**Grenville**	**118.93**	**94**	PFAKE		02 39 10.0	+15
GRGR				LR	LR		
	comp=Z,501nm,20.0s						
MK01	**Makanchi Array**	**118.98**	**309**	*e*PKPdf	**PKPdf**	**02 38 53.1**	**-1.4**
MK31	**Makanchi Array**	**119.00**	**309**	*e*PKPdf	**PKPdf**	**02 38 54.7**	**+0.1**
MKAR	**Makanchi Array**	**119.00**	**309**	PKP	**PKPdf**	**02 38 53.4**	**-1.2**
	comp=Z,2.9nm,0.6s,baz=86,slow=1.1,SNR=23						
MKAR				PKKPab	**PKKPab**	**02 49 14.9**	**+5.4**
	comp=Z,0.8nm,0.8s,baz=298,slow=3.1,SNR=4.9						
MKAR	**Makanchi Array**	**119.00**	**309**	*e*PKPdf	**PKPdf**	**02 38 54.7**	**+0.1**
MKAR				PKKPab	**PKKPab**	**02 49 14.9**	**+5.4**
MAKZ	**Makanchi**	**119.21**	**309**	*e*PKPdf	**PKPdf**	**02 38 53.9**	**-1.1**
MAKZ	**Makanchi**	**119.21**	**309**	PKIKP	**PKPdf**	**02 38 53.4**	**-1.6**
MAKZ				pmax	pmax		
	comp=Z,12nm,1.1s						
ZALV	**Zalesovo Beam**	**119.54**	**318**	PKP	**PKPdf**	**02 38 55.0**	**-0.3**
	comp=Z,1.8nm,0.4s,baz=183,slow=2.0,SNR=5.6						
ZALV	**Zalesovo Beam**	**119.54**	**318**	*e*PKPdf	**PKPdf**	**02 38 55.0**	**-0.3**
ZALV	**Zalesovo Beam**	**119.54**	**318**	PKIKP	**PKPdf**	**02 38 55.0**	**-0.3**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s						
RES	**Resolute Bay**	**119.62**	**18**	*e*PKPdf	**PKPdf**	**02 38 53.0**	**-1.9**
RES	**Resolute Bay**	**119.62**	**18**	*e*PKIKP	**PKPdf**	**02 38 53.0**	**-1.9**
BINY	**Binghamton**	**119.70**	**57**	PFAKE		02 39 10.0	+14
BINY				LR	LR		
	comp=Z,1μm,19.0s						
NVS	**Novosibirsk**	**120.67**	**318**	*e*PKIKP	**PKPdf**	**02 38 57.8**	**+0.3**
KSH	**Kashi**	**121.11**	**300**	PKP	**PKPdf**	**02 38 59.8**	**+0.8**
KSH				PP	**PP**	**02 40 29.1**	**-0.5**
KSH				AMB	AMB		
	comp=Z,400nm,6.1s						
NIL	**Nilore**	**121.20**	**292**	PFAKE		02 39 10.0	+11
NIL				LR	LR		
	comp=Z,476nm,19.0s						
BBGH	**Gun Hill**	**121.20**	**94**	PFAKE		02 39 10.0	+10
BBGH				LR	LR		
	comp=Z,2μm,22.0s						
LONY	**Lake Ozonia**	**121.41**	**54**	PFAKE		02 39 10.0	+11
LONY				LR	LR		
	comp=Z,1μm,19.0s						
ANWB	**Willy Bob**	**121.52**	**88**	PFAKE		02 39 10.0	+10
ANWB				LR	LR		
	comp=Z,491nm,19.0s						
NRIK	**Noril'sk**	**121.64**	**335**	PKP	**PKPdf**	**02 38 58.3**	**-0.7**
	comp=Z,4.2nm,0.6s,baz=102,slow=3.6,SNR=6.6						
KURK	**Kurchatov**	**122.40**	**313**	*e*PKPdf	**PKPdf**	**02 39 00.0**	**-0.9**
KURK				LR	LR		
	com

comp=Z,664nm,22.0s
PKME Peaks-Kenny Pk 125.21 55 PKiKP PKiKP 02 39 07.0 +0.2
baz=257
PKME Peaks-Kenny Pk 125.21 55 *e*PKPdf **PKPdf 02 39 06.3 -0.2**
PKME LR LR
comp=Z,1μm,19.0s
LSZ Lusaka 125.86 212 *e*PKPdf **PKPdf 02 39 09.0 +0.1**
LSZ LR LR
comp=Z,2μm,20.0s
KK31 Karatay Array 126.05 302 *e*PKPdf **PKPdf 02 39 07.8 -0.5**
KK31 Karatay Array 126.05 302 *i* PKIKP **PKPdf 02 39 07.4 -0.9**
KK31 pmax pmax
comp=Z,10.0nm,0.9s
KKAR Karatay Array 126.05 302 *e*PKPdf **PKPdf 02 39 07.8 -0.5**
KKAR Karatay Array 126.05 302 *e*PKIKP **PKPdf 02 39 07.8 -0.5**
TSUM Tsumeb 126.09 199 *e*PKPdf **PKPdf 02 39 08.5 -0.8**
TSUM LR LR
comp=Z,2μm,19.0s
PQI Presque Isle 126.38 53 *e*PKPdf **PKPdf 02 39 07.8 -0.8**
BVA0 Borovoye Array 127.82 315 *i* PKIKP **PKPdf 02 39 10.2 -1.1**
BVA0 pmax pmax
comp=Z,28nm,1.3s
BVAR Borovoye Array 127.82 315 PKP **PKPdf 02 39 10.9 -0.3**
comp=Z,6.3nm,0.6s,baz=95,slow=1.8,SNR=22
BRVK Borovoye 127.89 315 *e*PKPdf **PKPdf 02 39 11.1 -0.3**
BRVK LR LR
comp=Z,648nm,20.0s
BRVK Borovoye 127.89 315*c* *i* PKIKP **PKPdf 02 39 10.1 -1.3**
BRVK pmax pmax
comp=Z,14nm,1.2s
SCHQ Schefferville 128.24 43 PKP **PKPdf 02 39 11.5 -0.5**
comp=Z,3.8nm,0.6s,baz=254,slow=18,SNR=3.7
SHEL Horse Pasture 131.04 171 PFAKE 02 39 30.0 +11
SHEL LR LR
comp=Z,745nm,19.0s
KMBO Kilima Mbogo 132.34 232 PFAKE 02 39 30.0 +8.6
KMBO LR LR
comp=Z,1μm,21.0s
KBS Kingsbay 133.54 357 PFAKE 02 39 30.0 +8.6
KBS LR LR
comp=Z,742nm,20.0s
SPITS Spitsbergen Ar 134.04 356 PKP **PKPdf 02 39 22.3 -0.1**
comp=Z,18nm,1.1s,baz=339,slow=3.6,SNR=3.1
AB31 Akbulak array 134.14 309 PKIKP **PKPdf 02 39 23.7 +0.3**
AB31 pmax pmax
comp=Z,3.0nm,0.9s
ABKAR Akbulak array 134.14 309 *e*PKPdf **PKPdf 02 39 24.1 +0.7**
SFJD Kangerlussuaq 134.30 26 PFAKE 02 39 40.0 +17
SFJD LR LR
comp=Z,1μm,19.0s
ARU Arti 134.66 319 *e*PKPdf **PKPdf 02 39 25.1 +1.0**
ARU Arti 134.66 319 *i* PKIKP **PKPdf 02 39 24.7 +0.6**
SUMG Summit 135.08 16 *e*PKPdf **PKPdf 02 39 24.9 -0.1**
SUMG Summit 135.08 16 *e*PKIKP **PKPdf 02 39 24.9 -0.1**
AKTO Aktyubinsk 135.39 311 PKIKP **PKPdf 02 39 25.9 +0.2**
comp=Z,4.7nm,0.7s,baz=115,slow=4.4,SNR=24
AKTO Aktyubinsk 135.39 311 PKIKP **PKPdf 02 39 23.8 -1.9**
AKTO pmax pmax
comp=Z,12nm,1.3s
ASCN Ascension 136.77 157 PFAKE 02 39 40.0 +11
ASCN LR LR
comp=Z,725nm,19.0s
MBAR Mbarara 136.88 225 PFAKE 02 39 40.0 +10
MBAR LR LR
comp=Z,1μm,22.0s
PRGR Permogore 139.68 329 *e*PKIKP **PKPdf 02 39 30.7 -2.5**
PRGR pmax pmax
comp=Z,7.0nm,0.6s
KEV Kevo 140.34 346 PFAKE 02 39 50.0 +16
KEV LR LR
comp=Z,2μm,21.0s
RAYN Ar Rayn 140.41 268 *e*PKPdf **PKPdf 02 39 35.4 -0.5**
RAYN LR LR
comp=Z,1μm,19.0s
APA Apatity 140.55 341 ⇓ *i* PKIKP **PKPdf 02 39 36.0 +1.4**
ARCES ARCESS Array B 140.82 347 PKhKP PKPpre 02 39 29.2
comp=Z,2.6nm,0.7s,baz=75,slow=1.7,SNR=9.2
KLMR Klimovskoe 142.66 330 *e*PKIKP **PKPdf 02 39 40.7 +2.1**
KLMR pmax pmax
comp=Z,34nm,1.3s
KLMR Klimovskoe 142.66 330 *e*PKPdf **PKPdf 02 39 40.7 +2.1**
KLMR AMP 02 39 50.1
comp=Z,34nm,1.3s
KLMR *e*SKP 02 43 16.1
KLMR *e*SKKP 02 52 19.3
KLMR LQ LQ 03 33 47.3
KLMR LR LR 03 38 10.6
DDFL Dedoflistskaro 143.76 297 P **PKPdf 02 39 40.2 -1.1**
DGRG David-gareji 144.33 297 P **PKPdf 02 39 44.9 +2.6**
DGRG David-gareji 144.33 297 *e*PKIKP **PKPdf 02 39 44.9 +2.6**
GNI Garni 144.78 295 PKP **PKPab 02 39 41.6 -0.6**
comp=Z,5.6nm,0.7s,baz=100,slow=6.1,SNR=5.1
GNI Garni 144.78 295 *e*PKPdf **PKPab 02 39 40.7 -1.4**
GNI LR LR
comp=Z,768nm,22.0s
GNI Garni 144.78 295*c* *i* PKIKP **PKPab 02 39 40.5 -1.7**
TBLG Delisi 144.80 297 P **PKPab 02 39 41.9 -0.2**
TBLG Delisi 144.80 297 *e*PKIKP **PKPab 02 39 41.8 -0.2**
DUS Dusheti 144.82 298 P **PKPab 02 39 41.3 -0.9**
DUS Dusheti 144.82 298 *e*PKIKP **PKPab 02 39 41.3 -0.9**
BORG Borgarnes 145.05 17 PKP **PKPbc 02 39 41.7 -0.4**
comp=Z,14nm,0.9s,baz=355,slow=3.3,SNR=7.3
ZEI Tsey 145.40 299 *i* PKP2 **PKPbc 02 39 42.3 -1.9**
ZEI pmax pmax
comp=Z,18nm,0.6s
NCK Nalchik 145.58 300 *e*PKIKP **PKPdf 02 39 43.2 -1.1**
BGD Bogdanovka 145.66 297 P **PKPdf 02 39 43.8 -0.9**
AKH Akhalkalaki 145.74 297 P **PKPdf 02 39 44.6 -0.3**
AKH Akhalkalaki 145.74 297 *e*PKP2 **PKPdf 02 39 44.6 -0.3**
KBZ Khabaz 146.07 301 PKPbc **PKPdf 02 39 44.9 -0.1**
comp=Z,15nm,0.9s,baz=106,slow=3.5,SNR=19
KIV Kislovodsk 146.20 301 *e*PKPdf **PKPbc 02 39 46.2 -0.4**
KIV LR LR
comp=Z,798nm,20.0s
KIV Kislovodsk 146.20 301 *i* PKIKP **PKPdf 02 39 44.4 -1.0**
KIV pmax pmax
comp=Z,19nm,1.1s
NEY Neytrino 146.23 300 *e*PKP2 **PKPbc 02 39 46.7 -0.1**
CHVG Ch'k'valeri 146.74 299 P **PKPbc 02 39 47.8 -0.3**
VORR Voronezh 146.82 316 *e*PKIKP **PKPdf 02 39 45.0 -1.1**
VORR pmax pmax
comp=Z,250nm,1.2s
OBN Obninsk 146.87 323 *e*PKPdf **PKPbc 02 39 47.1 -0.8**
OBN LR LR
comp=Z,466nm,21.0s
OBN Obninsk 146.87 323 ⇓ *e*PKIKP **PKPdf 02 39 45.6 -0.4**
OBN *i* 02 39 48.9
OBN *e* 02 39 57.2
OBN PPP PPP 02 46 31.0
OBN *e*PPS PPS 02 55 57.0
OBN pmax pmax
comp=Z,72nm,1.1s
OBN pmax pmax
comp=Z,170nm,2.1s
OBN MLR MLR
comp=Z,732nm,21.0s
PUL Pulkovo 146.98 333*c* *i* PKP2 **PKPbc 02 39 48.2 +0.1**
PUL pmax pmax
comp=Z,171nm,0.7s
VSR Storozhevoye 147.00 315 *e*PKIKP **PKPdf 02 39 46.4 0.0**
VSR pmax pmax
comp=Z,50nm,0.8s
VORD Divnogorie 147.01 315 *e*PKIKP **PKPdf 02 39 46.0 -0.4**
VORD pmax pmax
comp=Z,40nm,0.6s
FIA1 FINESS Array S 147.23 338 *e*PKPdf **PKPbc 02 39 48.0 -0.7**
FINES FINESS Array B 147.23 338 PKPbc **PKPbc 02 39 48.0 -0.8**
comp=Z,102nm,0.8s,baz=66,slow=4.6,SNR=71
FINES FINESS Array B 147.23 338 PKP2 **PKPbc 02 39 48.0 -0.8**
FINES pmax pmax
comp=Z,103nm,0.8s
SOC Sochi 148.38 301 *e*PKIKP **PKPdf 02 39 48.6 -0.3**
SOC *i* 02 39 57.3
SOC *e* 02 43 27.2
SOC pmax pmax
comp=Z,49nm,1.0s
SOC pmax pmax
comp=Z,32nm,0.9s
VSU Vasula 149.22 334*c* *i* PKP2 **PKPbc 02 39 53.3 -0.8**
VSU pmax pmax
comp=Z,255nm,1.0s
ANN Anapa 149.81 304 *i* PKHKP PKPpre 02 39 54.8
ANN pmax pmax
comp=Z,122nm,1.0s

AKCD Akcadag 150.04 291 *i* P **PKPbc 02 39 57.3 +0.3**
ASF Jabal al Asfar 150.27 279 PKPbc **PKPbc 02 39 57.5 -0.2**
comp=Z,14nm,0.8s,baz=91,slow=4.9,SNR=34
NC303 NORSAR Array S 150.83 350 *e*PKPbc **PKPbc 02 39 56.9 -1.0**
NC204 NORSAR Array S 150.87 351 *e*PKPbc **PKPbc 02 39 57.5 -0.6**
NC405 NORSAR Array S 150.89 350 *e*PKPbc **PKPbc 02 39 56.8 -1.3**
NB2 NORSAR Subarra 151.03 350 PKP **PKPbc 02 39 57.7 -0.8**
comp=Z,32nm,1.2s,baz=17,slow=2.6
SACV Santiago Islan 151.07 122 PFAKE 02 40 10.0 +2.5
SACV LR LR
comp=Z,359nm,19.0s
NBO00 NORSAR Array S 151.10 351 *e*PKPbc **PKPbc 02 39 58.3 -0.3**
NAO01 NORSAR Array S 151.26 351 *e*PKPbc **PKPbc 02 39 58.5 -0.5**
ANDN Andirin 151.28 289 *i* P **PKPbc 02 39 59.4 -0.4**
NC602 NORSAR Array S 151.28 350 *e*PKPbc **PKPbc 02 39 58.2 -0.8**
IZAR Zarasai 151.31 331 *e*P **PKPbc 02 39 59.4 +0.3**
IZAR IAmb IAmb 02 40 14.1
comp=Z,42nm,1.0s
CUSAR Sarkisla-SIVAS 151.33 293 *i* P **PKPbc 02 39 59.7 -0.3**
IDID Didziasalis 151.39 329 *e*P **PKPbc 02 39 59.2 -0.2**
IDID IAmb IAmb 02 40 14.2
comp=Z,42nm,1.0s
YAYL Yayladag 151.41 286 *i* P **PKPbc 02 40 00.0 -0.2**
MICGM Minsk 151.41 327 ⇓ *e*P **PKPbc 02 39 58.0 -1.5**
MICGM PM 02 39 59.0
comp=Z,0.4nm,2.0s
MICGM *e*LR LR 03 46 36.0
MNK Minsk 151.41 327 ⇓ *e*PKIKP **PKPbc 02 39 58.0 -1.5**
ISAL Salakas 151.48 330 *e*P **PKPbc 02 39 59.5 -0.1**
ISAL IAmb IAmb 02 40 14.5
comp=Z,36nm,1.0s
HFS Hagfors 151.48 347 PKPbc **PKPbc 02 39 58.5 -1.0**
comp=Z,42nm,0.7s,baz=101,slow=1.5,SNR=51
SAIM ADANA 151.49 290 *i* P **PKPbc 02 40 00.2 -0.1**
IIGN Ignalina 151.59 330 *e*P **PKPbc 02 39 59.8 0.0**
IIGN IAmb IAmb 02 40 14.7
comp=Z,50nm,1.1s
NACGM Naroch 151.65 329 *e* **PKPbc 02 40 02.0 +2.0**
MMAI Mount Meron Ar 151.66 280 PKPbc **PKPbc 02 40 01.2 +0.4**
comp=Z,36nm,0.7s,baz=72,slow=4.7,SNR=52
YURE YUREGIR 151.82 288 *i* P **PKPbc 02 40 01.1 0.0**
YAHY KAYSERI_Yahyal 152.05 291 *i* P **PKPbc 02 40 01.5 -0.2**
SIM Simferopol' 152.08 305*d* *i* PKIKP **PKPbc 02 40 00.9 -0.4**
SIM *e* 02 40 15.1
SIM pmax pmax
comp=Z,42nm,0.9s
GULE Gulek 152.52 289 *i* P **PKPbc 02 40 03.1 +0.3**
KONO Kongsberg 152.59 351 *e*PKPbc **PKPbc 02 40 01.9 -0.1**
CDAG Cicekdag 152.76 294 *i* P **PKPbc 02 40 02.3 -0.9**
LIC Lamto 152.88 165 *e*P **PKPdf 02 39 55.7 -1.2**
comp=Z,83nm,1.3s
AKASG Malin Array Be 152.91 320 PKPbc **PKPbc 02 40 02.4 -0.6**
comp=Z,12nm,0.7s,baz=50,slow=2.5,SNR=38
AKASG PKPab **pPKPbc 02 40 13.4 +2.7**
comp=Z,16nm,0.9s,baz=54,slow=3.6,SNR=14
AKBB Malin Array Si 152.91 320 *ep*PKPdf **PKPbc 02 40 01.8 -1.2**
AKBB *e*PKPab **sPKPbc 02 40 15.9 +2.5**
AKBB Malin Array Si 152.91 320 *e*PKIKP **PKPbc 02 40 01.8 -1.2**
AKBB *e* 02 40 15.9
KIEV Kiev 152.93 320 *e*PKPbc **PKPbc 02 40 02.2 -0.8**
KIEV *e*PKPab **pPKPbc 02 40 13.3 +2.5**
KIEV LR LR
comp=Z,924nm,20.0s
AK11 Malin Array Si 152.96 320 *ep*PKPdf **PKPbc 02 40 01.1 -2.0**
AK11 *e*PKPab **sPKPbc 02 40 16.1 +2.6**
KERG Konya-Eregli 153.04 289 *i* P **PKPbc 02 40 02.5 -1.4**
KIC Kosan Boka 153.07 166 *e*P **PKPdf 02 39 57.9 +0.8**
comp=Z,57nm,1.0s
TIC Toumodi 153.29 165 *e*P **PKPdf 02 39 57.4 -0.1**
BR131 Keskin Array S 153.32 294 *ep*PKPdf **PKPbc 02 40 03.2 -1.2**
BRTR Keskin Array B 153.32 294 PKPbc **PKPbc 02 40 03.2 -1.2**
comp=Z,15nm,0.9s,baz=144,slow=3.5,SNR=44
DBIC Dimbokro 153.35 166 PKPbc **PKPbc 02 40 05.8 +0.8**
comp=Z,7.2nm,1.0s,baz=159,slow=2.0,SNR=3.9
CSS Mathiatis 153.59 284 *e*PKPbc **PKPbc 02 40 04.6 -0.4**
SUW Suwalki 153.79 331 *e*PKP **PKPbc 02 40 05.7 +0.9**
SUW Suwalki 153.79 331 *e*PKPbc **PKPbc 02 40 04.0 -0.7**
SUW *e*PKPab **pPKPbc 02 40 16.2 +3.6**
SUW Suwalki 153.79 331 *e*PKIKP **PKPbc 02 40 05.7 +0.9**
KKUL Konya-Kulu 153.92 293 *i* P **PKPbc 02 40 05.7 0.0**
ANTO Ankara 153.95 295 ⇓ *i* P **PKPbc 02 40 05.6 -0.1**
ANTO Ankara 153.95 295 *e*PKPbc **PKPbc 02 40 04.9 -0.8**
ANTO *e*PKPab **PKPab 02 40 18.1 -1.0**
ANTO LR LR
comp=Z,590nm,19.0s
ANTO Ankara 153.95 295 ⇓ PKIKP **PKPbc 02 40 05.6 -0.1**
ERMK Ermenek 154.00 287 *i* P **PKPbc 02 40 04.3 -1.8**
KDHN Kadinhani 154.59 292 *i* P **PKPbc 02 40 06.2 -1.0**
SORM Soroca 154.66 315 ⇓ *i* P **PKPbc 02 40 07.1 +0.3**
SORM Soroca 154.66 315 ⇓ PKIKP **PKPbc 02 40 07.1 +0.3**
KIS Kishinev 154.88 312 *e*PKP **PKPdf 02 39 56.0 -2.6**
KIS Kishinev 154.88 312 *e*PP PP 02 44 00.0 +1.2
KIS Kishinev 154.88 312 *e*PKIKP **PKPdf 02 39 56.0 -2.6**
KIS *e* 02 40 07.0
KIS *e* 02 40 20.0
KIS *e* 02 44 00.0
KIS *e*PPP PPP 02 47 37.0
CFR Carcaliu 156.04 309 ⇓ *i* P PKPdf 02 40 10.5 +10
CFR Carcaliu 156.04 309 PKIKP PKPdf 02 40 10.5 +10
VRI Vrincioaia 156.67 311 ⇓ *i* P PKPdf 02 40 11.6 +10
VRI Vrincioaia 156.67 311 ⇓ PKIKP PKPdf 02 40 11.6 +10
BURAR Bucovina Array 156.76 317 ⇓ *i* P PKPdf 02 40 13.9 +13
BURAR Bucovina Array 156.76 317 ⇓ PKIKP PKPdf 02 40 14.0 +13
BUR04 Bucovina Ar. S 156.76 317 *e*PKPdf **PKPdf 02 40 01.9 +0.6**
KWP Kalwaria Pacla 156.96 323 *e*PKP PKPdf 02 40 13.3 +12
KWP Kalwaria Pacla 156.96 323 *e*PKIKP PKPdf 02 40 13.4 +12
EKA Eskdalemuir Ar 157.21 7 PKPab **PKPab 02 40 32.1 -0.2**
comp=Z,1.4nm,0.6s,baz=345,slow=2.9,SNR=3.4
ESK Eskdalemuir 157.22 7 PFAKE 02 40 10.0 +8.5
ESK LR LR
comp=Z,1μm,19.0s
MLR Muntele Rosu 157.32 311 PKP **PKPdf 02 40 01.2 -0.9**
comp=Z,0.3nm,0.9s,baz=340,slow=1.2,SNR=4.5
MLR Muntele Rosu 157.32 311 ⇓ *i* P **PKPdf 02 40 08.9 +6.8**
MLR Muntele Rosu 157.32 311 *e*PKPdf **PKPdf 02 40 02.1 0.0**
MLR *e*PKPab **PKPab 02 40 33.9 +0.4**
CMLA Cha da Macela 157.37 70 PFAKE 02 40 10.0 +7.7
CMLA LR LR
comp=Z,1μm,20.0s
UZH Uzhgorod 157.80 322 *e*PKP2 PKPab 02 40 22.8 -12
CRVS Cervenica-Dubn 158.06 323 *e*PKP2 **PKPab 02 40 36.3 0.0**
CRVS Cervenica-Dubn 158.06 323 *e*PKP **PKPab 02 40 36.3 0.0**
ARR Arges 158.21 312 ⇓ *i* P **PKPdf 02 40 04.6 +1.5**
NIE Niedzica 158.29 325 *e*PKP **PKPdf 02 40 00.8 -2.3**
NIE Niedzica 158.29 325 *e*PKIKP **PKPdf 02 40 00.8 -2.3**
LANS Liptovska Anna 158.87 326 *e*PKP2 **PKPab 02 40 40.9 +1.1**
LANS Liptovska Anna 158.87 326 *e*PKP **PKPab 02 40 40.9 +1.1**
OKC Ostrava-Krasne 158.97 329 *ex* x 02 54 40.9
OKC AMS AMS 04 02 50.0
comp=Z,700nm,18.3s
VAL Valentia 159.01 21 *e*P **PKPdf 02 40 04.7 +1.0**
MORC Moravsky Berou 159.27 330 *e*PKP **PKPdf 02 40 02.5 -1.7**
UPC Upice 159.32 333 *e*PKPAB **PKPab 02 40 41.9 +0.2**
UPC *e*SKKS 02 51 17.9
UPC *ex* x 02 54 42.5
UPC AMS AMS 03 56 30.0
comp=Z,900nm,19.9s
UPC Upice 159.32 333 *e*PKP2 **PKPab 02 40 41.9 +0.2**
UPC MLR MLR
comp=Z,900nm,19.9s
DPC Dobruska-Polom 159.33 332 *e*PKPAB **PKPab 02 40 41.6 -0.2**
DPC *e*PP **PP 02 44 16.1 -6.7**
DPC *ex* x 02 54 38.8
DPC AMS AMS 03 58 10.0
comp=Z,900nm,20.5s
DPC Dobruska-Polom 159.33 332 *e*PKP2 **PKPab 02 40 41.6 -0.2**
DPC MLR MLR
comp=Z,900nm,20.5s
KRLC Kraliky 159.36 331 *e*PKPAB PKPab 02 40 49.7 +7.8
KRLC Kraliky 159.36 331 *e*PKP2 PKPab 02 40 49.7 +7.8
VYHS Vyhne 159.62 325 *e*PKP2 **PKPab 02 40 43.0 -0.1**
VYHS Vyhne 159.62 325 *e*PKP **PKPab 02 40 43.0 -0.1**
CLL Collm 159.67 339 *e*PKPdf **PKPdf 02 40 06.0 +1.5**
CLL *e* 02 40 17.0
CLL *i* PKPab **PKPab 02 40 41.5 -1.6**
comp=Z,16nm,0.9s
CLL *e* 02 40 52.0
CLL *e* 02 40 56.0
CLL *e* 02 41 00.0
CLL *e*PP **PP 02 44 25.0 +0.6**
CLL *e*PPP PPP 02 48 06.0
CLL *e*SKKSac SKKSac 02 51 12.0 +0.2

CLL *e* 02 52 00.0
CLL *e*PSKS 02 54 48.0
CLL *e*PPS PPS 02 57 47.0
CLL *e* 03 00 56.0
CLL *e*SS SS 03 04 18.0 -12
CLL *e* 03 06 36.0
CLL *e*SSS SSS 03 10 40.0
CLL *e*PSSrev 03 12 36.0
CLL *e*SSSS 03 14 48.0
CLL *e* 03 16 18.0
CLL LmH 03 55 00.0
comp=N,700nm,20.8s
CLL LmH 03 55 00.0
comp=E,500nm,21.2s
CLL LmV 04 00 00.0
comp=Z,1μm,19.9s
CLL Collm 159.67 339 *e*PKPab **PKPab 02 40 42.3 -0.8**
CLL Collm 159.67 339 *e*PKIKP **PKPdf 02 40 06.0 +1.5**
CLL *e* 02 40 17.0
CLL *i* 02 40 41.5
CLL pmax pmax
comp=Z,16nm,0.9s
CLL MLR MLR
comp=Z,1μm,19.9s
BRG Berggiesshubel 159.75 337 *e*PKP **PKPdf 02 40 04.8 +0.2**
comp=Z,8.1nm,1.5s
BRG Berggiesshubel 159.75 337 *e*PKP **PKPab 02 40 42.8 -0.7**
comp=Z,10nm,0.9s
BRG *e* 02 51 17.0
BRG *e* 02 54 45.0
BRG SS SS 03 04 29.0 -1.9
comp=N,277nm,19.0s
comp=E,383nm,15.8s
comp=Z,811nm,17.0s
BRG Berggiesshubel 159.75 337 *e*PKIKP **PKPdf 02 40 04.8 +0.2**
BRG *e* 02 40 42.8
BRG SS SS 03 04 29.0 -1.9
BRG pmax pmax
comp=Z,8.0nm,1.5s
BRG pmax pmax
comp=Z,10.0nm,0.9s
BRG MLR MLR
comp=N,277nm,19.0s
BRG MLR MLR
comp=E,383nm,15.8s
BRG MLR MLR
comp=Z,811nm,17.0s
PVCC Panska Ves 159.83 335 *e*PKPAB **PKPab 02 40 44.1 +0.2**
PVCC Panska Ves 159.83 335 *e*PKP2 **PKPab 02 40 44.1 +0.2**
JAVC Velka Javorina 159.90 328 *e*PKP **PKPdf 02 40 06.0 +1.0**
JAVC *e* 02 40 44.6
VRAC Vranov 160.03 330 *e*PKP **PKPdf 02 40 05.8 +0.7**
VRAC *e* 02 40 44.2
GOPC GO Pecny, Ondr 160.26 334 *e*PKPAB **PKPab 02 40 44.6 -1.2**
GOPC *e*PP **PP 02 44 23.5 -4.2**
GOPC AMS AMS 04 04 40.0
comp=Z,900nm,18.5s
GOPC GO Pecny, Ondr 160.26 334 *e*PKP2 **PKPab 02 40 44.6 -1.2**
GOPC *e* 02 44 23.5
GOPC MLR MLR
comp=Z,900nm,18.5s
PRU Pruhonice 160.29 335 *e*PKPAB **PKPab 02 40 46.0 +0.1**
PRU *e*PP **PP 02 44 21.1 -6.7**
PRU *e*SKKS 02 51 22.9
PRU *ex* x 02 54 46.5
PRU AMS AMS 04 05 40.0
comp=Z,1μm,17.2s
PRU Pruhonice 160.29 335 *e*PKP2 **PKPab 02 40 46.0 +0.1**
PRU MLR MLR
comp=Z,1μm,17.2s
KRUC Moravsky 160.31 330 *e*PKP **PKPdf 02 40 04.6 -0.7**
KRUC *e* 02 40 45.1
MODS Modra-Piesok 160.44 327 *e*PKP2 **PKPab 02 40 45.0 -1.6**
MODS Modra-Piesok 160.44 327 *e*PKP **PKPab 02 40 45.0 -1.6**
TOA0 Torodi Ar. Sit 160.46 180 *e*PKPdf **PKPdf 02 40 05.8 -0.8**
TOA0 *e*PKPab **PKPab 02 40 48.6 +1.2**
TORD Torodi Ar. Bea 160.46 180 PKP **PKPdf 02 40 05.8 -0.8**
comp=Z,2.3nm,1.0s,baz=257,slow=0.4,SNR=7.4
TORD PKPab **PKPab 02 40 46.3 -1.1**
comp=Z,2.9nm,1.0s,baz=152,slow=3.1,SNR=6.6
NKC Novy Kostel 160.78 338 *e*SKKS **SKKSac 02 51 26.0 +8.3**
NKC AMS AMS 04 04 20.0
comp=Z,1μm,19.1s
KOWA Kowa 161.10 163 PKP **PKPdf 02 40 06.6 -0.6**
comp=Z,5.8nm,1.0s,baz=122,slow=4.6,SNR=4.0
KOWA Kowa 161.10 163 *e*PKPdf **PKPdf 02 40 07.3 +0.1**
KHC Kasperske Hory 161.35 335 *e*PKPDF **PKPdf 02 40 02.0 -4.5**
KHC *e*PKPab **PKPab 02 40 49.8 -0.8**
KHC *e*PP PP 02 44 13.6 -20
KHC *e*SKKS 02 51 26.4
KHC AMS AMS 04 02 10.0
comp=Z,900nm,19.1s
KHC Kasperske Hory 161.35 335 *e*PKPab **PKPab 02 40 50.3 -0.4**
KHC Kasperske Hory 161.35 335 *e*PKIKP **PKPdf 02 40 02.0 -4.5**
KHC *e* 02 40 49.8
KHC MLR MLR
comp=Z,900nm,19.1s
CONA Conrad Observa 161.40 329 *e*PKPab **PKPab 02 40 49.8 -1.1**
comp=Z,8.9nm,1.0s
GERES GERESS Array B 161.54 334 PKP **PKPdf 02 40 06.1 -0.8**
comp=Z,0.7nm,0.8s,baz=116,slow=3.1,SNR=5.5
GERES PKPab **PKPab 02 40 50.4 -1.1**
comp=Z,2.7nm,0.8s,baz=2.5,slow=2.3,SNR=7.6
GEA0 GERESS Array S 161.55 334 *e*PKPdf **PKPdf 02 40 06.1 -0.7**
GEA0 *e*PKPab **PKPab 02 40 50.0 -1.5**
GRFO Grafenberg 161.63 340 *e*PKPdf **PKPdf 02 40 06.8 +0.1**
GRFO *e*PKPab **PKPab 02 40 51.8 +0.1**
GRFO Grafenberg 161.63 340 *e*PKIKP **PKPdf 02 40 06.8 +0.1**
GRFO *e* 02 40 51.8
DIVS Divibare 161.71 313 *e*PKPdf **PKPdf 02 40 06.4 -0.8**
MEM Membach 161.88 351 ⇑ PKP **PKPab 02 40 53.7 +0.9**
ARSA Arzberg 162.06 328 PKPab **PKPab 02 40 52.6 -1.2**
comp=Z,4.1nm,1.1s
MOA Molln 162.14 331 PKPab **PKPab 02 40 53.8 -0.3**
comp=Z,5.9nm,1.0s
BCLA Clavier 162.16 352 ⇑ PKP **PKPab 02 40 53.5 -0.4**
SNF Seneffe 162.17 354 ⇑ PKP **PKPab 02 40 53.1 -0.9**
SNF ⇑ APKP **pPKPab 02 41 00.3 -1.3**
SOKA Soboth 162.71 327 *e*PKPab **PKPab 02 40 55.7 -1.0**
comp=Z,8.6nm,1.1s
MYKA Terra Mystica 163.36 330 *e*PKPab **PKPab 02 40 57.8 -1.8**
comp=Z,3.6nm,0.8s
VISS Visnje 163.45 326 *e*PKPdf **PKPdf 02 40 07.0 -1.7**
BOJS Bojanci 163.47 324 *e*PKPdf **PKPdf 02 40 07.6 -1.1**
WATA Walderalm 163.59 335 *e*PKPab **PKPab 02 40 59.9 -0.7**
comp=Z,1.7nm,0.5s
WTTA Wattenberg 163.62 335 *e*PKPab **PKPab 02 41 00.5 -0.3**
comp=Z,8.6nm,1.4s
ABTA Abfaltersbach 163.73 332 *e*PKPab **PKPab 02 40 59.7 -1.5**
comp=Z,6.9nm,0.9s
RETA Reutte 163.73 337 *e*PKPab **PKPab 02 41 00.6 -0.5**
comp=Z,8.7nm,0.9s
MOTA Moosalm 163.74 336 *e*PKPab **PKPab 02 41 00.2 -1.0**
comp=Z,4.2nm,0.7s
JAVS Javornik 163.75 327 *e*PKPdf **PKPdf 02 40 05.4 -3.7**
FETA Feichten 164.15 336 *e*PKPab **PKPab 02 41 02.5 -0.5**
comp=Z,6.6nm,1.0s
DAVA Damuels 164.19 339 *e*PKPab **PKPab 02 41 02.5 -0.7**
comp=Z,4.9nm,0.6s
PMOZ Porto Moniz, M 164.22 85 *e*PKPdf **PKPdf 02 40 15.0 +5.0**
DAVOX Davos/Dischmat 164.64 338 PKPab **PKPab 02 41 03.5 -1.7**
comp=Z,5.8nm,0.7s,baz=319,slow=3.0,SNR=5.3
FUORN Ofenpass-Fuorn 164.65 337 *e*PKPab **PKPab 02 41 05.1 -0.3**
PMPS Porto Santo 164.96 84 *e*PKPdf **PKPdf 02 40 17.9 +7.5**
SENIN Lac Senin/Sane 165.74 344 *e*PKPab **PKPab 02 41 09.6 -0.5**
PGAV Gavieira, Arco 167.95 38 *e*PKPdf **PKPdf 02 40 17.4 +4.8**
POLO Lamas de Olo 168.63 38 *e*PKPdf **PKPdf 02 40 18.4 +5.3**
PBRG Braganca 168.83 34 *e*PKPdf **PKPdf 02 40 17.9 +4.8**
PCAS Casmilo, Conde 169.12 45 *e*PKPdf **PKPdf 02 40 16.0 +2.7**
MVO Moncorvo 169.17 37 *e*PKPdf **PKPdf 02 40 18.4 +5.0**
PMAFR Mafra 169.26 52 *e*PKPdf **PKPdf 02 40 17.8 +4.3**
PMST Lisbon--Monsan 169.44 53 *e*PKPdf **PKPdf 02 40 18.8 +5.3**
MTE Manteigas 169.44 41 *e*PKPdf **PKPdf 02 40 18.6 +5.0**
TAM Tamanrasset 169.46 200 *e*PKPdf **PKPdf 02 40 15.7 +1.4**
TAM Tamanrasset 169.46 200 *e*PKIKP **PKPdf 02 40 15.7 +1.4**
LIS Lisbon 169.47 53 *e*PKP **PKPdf 02 40 14.1 +0.5**
LIS AMS AMS 04 07 01.1
comp=N,2μm,18.1s
ALMR Almeirim 169.61 49 *e*PKP **PKPdf 02 40 14.1 +0.4**
ALMR AMS AMS 04 01 47.5
comp=Z,1μm,20.8s
PCBR Castelo Branco 169.86 43 *e*PKPdf **PKPdf 02 40 17.4 +3.6**
PMTG Montargil 169.88 49 *e*PKPdf **PKPdf 02 40 18.4 +4.6**
PMRV Marv??o 170.18 45 *e*PKPdf **PKPdf 02 40 16.0 +2.0**

PNCL	**Nicolau / Gran**	**170.20**	**54**	*e*PKPdf	**PKPdf**	**02 40 16.7**	**+2.7**
EVO	**Evora**	**170.32**	**51**	*e*PKPdf	**PKPdf**	**02 40 19.3**	**+5.2**
PTEO	**Sao Teotonio**	**170.33**	**58**	*e*PKPdf	**PKPdf**	**02 40 18.4**	**+4.3**
PESTR	**Estremoz**	**170.40**	**48**	*e*PKPdf	**PKPdf**	**02 40 15.8**	**+1.7**
PFVI	**Vila Bisbo**	**170.43**	**60**	*e*PKPdf	**PKPdf**	**02 40 20.3**	**+6.1**
MORF	**Marmelete**	**170.48**	**59**	*e*PKP	**PKPdf**	**02 40 14.6**	**+0.4**
MORF				AMS	AMS	03 57 22.9	
	comp=Z,1μm,20.1s						
MORF	**Marmelete**	**170.48**	**59**	*e*PKPdf	**PKPdf**	**02 40 20.3**	**+6.0**
MESJ	**Messejana**	**170.54**	**55**	*e*PKP	**PKPdf**	**02 40 14.5**	**+0.3**
MESJ				*e*SS	SS	03 06 24.9	+2.0
MESJ				AMS	AMS	04 02 23.2	
	comp=Z,1μm,17.7s						
MESJ	**Messejana**	**170.54**	**55**	*e*PKPdf	**PKPdf**	**02 40 19.7**	**+5.5**
PCVE	**Castro Verde**	**170.77**	**56**	*e*PKPdf	**PKPdf**	**02 40 17.5**	**+3.2**
PBDV	**Barranco-do-Ve**	**171.03**	**58**	*e*PKPdf	**PKPdf**	**02 40 20.3**	**+5.8**
PVAQ	**Vaqueiros**	**171.10**	**56**	*e*PKPdf	**PKPdf**	**02 40 20.3**	**+5.8**
PBAR	**Barrancos**	**171.16**	**50**	*e*PKPdf	**PKPdf**	**02 40 16.9**	**+2.4**
PAB	**San Pablo**	**171.72**	**34**	PFAKE		02 40 30.0	+15
PAB				LR	LR		
	comp=Z,1μm,19.0s						
ESDC	**Sonseca Array**	**171.80**	**31**	PKP	**PKPdf**	**02 40 14.8**	**-0.1**
	comp=Z,1.1nm,0.9s,baz=349,slow=3.9,SNR=5.9						
ESDC				PKPab	**PKPab**	**02 41 36.4**	**-0.6**
	comp=Z,1.0nm,0.8s,baz=289,slow=3.9,SNR=3.4						
ES19	**SONSECA Array**	**171.80**	**31**	*e*PKPdf	**PKPdf**	**02 40 15.6**	**+0.7**
KEST	**Kesra**	**172.92**	**297**	PKP	**PKPdf**	**02 40 16.0**	**+0.5**
	comp=Z,3.0nm,0.9s,baz=108,slow=6.4,SNR=3.1						
MDT	**Midelt**	**174.80**	**88**	PKP	**PKPdf**	**02 40 16.8**	**+0.5**
	comp=Z,5.5nm,1.0s,baz=357,slow=3.4,SNR=8.3						

*IDC **22** 02:24:45.8±2.0, 32°.83S×178°.43W, h0km, mb4.1/2, mb1 4.4/3, mb1mx3.8/45, mbtmp4.2/3, ML4.0/1, Error ellipse: s-maj=63.6km s-min=42.4km az=136.0*
*ISCJB **22** 02:24:49.9±5.6, 33°.0S±0°.2×178°.6W±0°.8, h32km, mb4.0/2, Error ellipse: s-maj=102.8km s-min=16.4km az=11.9*

ISC 22 02:24:50.5±2.3, 33°.0S±0°.2×178°.5W±0°.4, h32km, n6, σ0§65/7, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.38**	**213**	Pn	**Pn**	**02 26 22.6**	**+0.2**
	3.3nm,0.3s,baz=18,slow=19,SNR=3.2						
URZ				Sn	**Sn**	**02 27 33.7**	**-0.4**
	0.6nm,0.3s,baz=342,slow=20,SNR=3.0						
ASAR	**Alice Springs**	**42.64**	**270**	P	**P**	**02 32 44.5**	**+0.3**
	1.1nm,0.5s,baz=109,slow=7.4,SNR=5.6						
WRA	**Warramunga Arr**	**43.86**	**275**	P	**P**	**02 32 53.9**	**-0.2**
	2.1nm,0.5s,baz=116,slow=7.6,SNR=5.1						
FINES	**FINESS Array B**	**147.40**	**338**	PKPbc	**PKPbc**	**02 44 29.5**	**-0.7**
	1.6nm,0.6s,baz=53,slow=2.2,SNR=4.1						
MMAI	**Mount Meron Ar**	**151.66**	**279**	PKPbc	**PKPbc**	**02 44 42.8**	**+0.9**
	0.6nm,0.4s,baz=94,slow=4.3,SNR=3.0						
BRTR	**Keskin Array B**	**153.37**	**294**	PKPbc	**PKPbc**	**02 44 45.4**	**-0.1**
	0.3nm,0.5s,baz=41,slow=2.9,SNR=4.7						

*CSEM **22** 02:25:27.5±0.7, 51°.43N×16°.21E, h1km, ML2.6/5*
*PRU **22** 02:25:28.6, 51°.41N×16°.17E, h0km*

ISC 22 02:25:26.6±1.9, 51°.49N±0°.08×16°.31E±0°.05, h0km, n19, σ0§47/32, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.65**	**181**	*e*Pg	**Pg**	**02 25 39.4**	**+0.5**
KSP				*e*Sg	**Sg**	**02 25 47.3**	**+0.1**
UPC	**Upice**	**1.00**	**191**	*e*PG	**Pb**	**02 25 46.2**	**-0.5**
UPC				*e*SG	**Sg**	**02 25 58.4**	**-0.2**
	comp=Z,14nm,0.3s						
UPC	**Upice**	**1.00**	**191**	Pg	**Pb**	**02 25 46.2**	**-0.5**
UPC				Sg	**Sg**	**02 25 58.4**	**-0.2**
	14nm,0.3s						
DPC	**Dobruska-Polom**	**1.14**	**179**	*e*PG	**Pb**	**02 25 48.7**	**-0.4**
DPC				*e*SG	**Sg**	**02 26 02.7**	**-0.4**
	comp=Z,3.6nm,0.3s						
DPC	**Dobruska-Polom**	**1.14**	**179**	Pg	**Pb**	**02 25 48.7**	**-0.4**
DPC				Sg	**Sg**	**02 26 02.7**	**-0.4**
	3.6nm,0.3s						
KRLC	**Kraliky**	**1.45**	**168**	*e*PG	**Pb**	**02 25 54.4**	**0.0**
KRLC				*e*SG	**Sg**	**02 26 12.5**	**-0.4**
KRLC	**Kraliky**	**1.45**	**168**	Pg	**Pb**	**02 25 54.4**	**0.0**
KRLC				Sg	**Sg**	**02 26 12.5**	**-0.4**
PVCC	**Panska Ves**	**1.46**	**229**	*e*PG	**Pn**	**02 25 53.9**	**-0.2**
PVCC				*e*SG	**Sg**	**02 26 12.5**	**-0.8**
	comp=Z,19nm,0.2s						
PVCC	**Panska Ves**	**1.46**	**229**	Pg	**Pn**	**02 25 53.9**	**-0.2**
PVCC				Sg	**Sg**	**02 26 12.5**	**-0.8**
	19nm,0.2s						
BRG	**Berggiesshubel**	**1.61**	**248**	PG	**Pb**	**02 25 57.2**	**+0.1**
BRG				SG	**Sn**	**02 26 16.9**	**-0.7**
	4.5nm,0.4s						
GOPC	**GO Pecny, Ondr**	**1.85**	**212**	*e*SG	**Sn**	**02 26 23.8**	**+0.2**
	comp=Z,2.0nm,0.3s						
GOPC	**GO Pecny, Ondr**	**1.85**	**212**	Sg	**Sn**	**02 26 23.8**	**+0.2**
	2.0nm,0.3s						
PRU	**Pruhonice**	**1.87**	**217**	*e*SG	**Sn**	**02 26 24.3**	**+0.1**
	comp=Z,3.0nm,0.2s						
PRU	**Pruhonice**	**1.87**	**217**	Sg	**Sn**	**02 26 24.3**	**+0.1**
	3.0nm,0.2s						
MORC	**Moravsky Berou**	**1.89**	**155**	*e*Pn	**Pn**	**02 26 00.0**	**-0.1**
MORC				*e*Sg	**Sg**	**02 26 26.4**	**-0.7**
MORC	**Moravsky Berou**	**1.89**	**155**	*e*PN	**Pn**	**02 26 00.0**	**-0.1**
MORC				*e*SG	**Sg**	**02 26 26.4**	**-0.7**
CLL	**Collm**	**2.08**	**266**	*e*Pg	**Pb**	**02 26 05.0**	**-0.1**
CLL				*e*Sg	**Sb**	**02 26 32.0**	**+0.6**
KHC	**Kasperske Hory**	**2.94**	**218**	*e*SG	**Sb**	**02 26 56.9**	**+0.7**
KHC	**Kasperske Hory**	**2.94**	**218**	Sg	**Sb**	**02 26 56.9**	**+0.7**

IDC 22 02:27:46.6±3.0, 32°.82S×178°.42W, h0km, mb3.8/2, mb1 4.1/3, mb1mx3.8/44, mbtmp3.9/3, ML3.6/1, Error ellipse: s-maj=73.2km s-min=45.9km az=123.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.54**	**213**	Pn	Pn	02 29 23.6	-0.4
	1.2nm,0.3s,baz=73,slow=19,SNR=7.3						
URZ				Sn	Sn	02 30 36.2	-3.1
	1.4nm,0.3s,baz=323,slow=20,SNR=4.5						
ASAR	**Alice Springs**	**42.68**	**270**	P	P	02 35 45.5	+0.1
	0.5nm,0.5s,baz=110,slow=8.0,SNR=2.2						
WRA	**Warramunga Arr**	**43.89**	**275**	P	P	02 35 54.8	-0.3
	1.0nm,0.5s,baz=116,slow=7.6,SNR=5.4						
FINES	**FINESS Array B**	**147.27**	**338**	PKPbc	PKPbc	02 47 30.5	-0.7
	0.6nm,0.5s,baz=55,slow=4.1,SNR=6.3						

*IDC **22** 02:28:00.3±0.9, 32°.09N×95°.16E, h0km, mb3.8/10, mb1 3.9/12, mb1mx3.7/72, mbtmp3.7/12, ML3.3/2, MS4.4/2, Ms1 4.4/2, ms1mx3.2/78, Error ellipse: s-maj=37.8km s-min=16.6km az=50.0*
*NEIC **22** 02:28:02.1±0.7, 32°.03N×95°.05E, h10km, mb4.1/2, Error ellipse: s-maj=13.3km s-min=11.6km az=84.0*
*ISCJB **22** 02:28:03.5±0.7, 32°.01N±0°.07×95°.04E±0°.10, h33km, mb4.0/15, MS4.5/2, Error ellipse: s-maj=13.4km s-min=8.4km az=37.8*

ISC 22 02:28:05.7±1.0, 32°.0N±0°.1×95°.0E±0°.1, h35km, n23, σ1§24/22, mb4.0/15, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**4.05**	**236**	*e*Pn	**Pn**	**02 29 05.1**	**-0.6**
LSA				*e*Sn	**Sn**	**02 29 51.6**	**-0.5**
MKAR	**Makanchi Array**	**17.70**	**330**	P	**Pn**	**02 32 06.3**	**-3.0**
	0.1nm,0.3s,baz=137,slow=11,SNR=3.0						
MKAR				LR	LR	02 38 56.3	
	comp=Z,35nm,19.3s,baz=256,slow=37						
SONM	**Songino Array**	**18.01**	**25**	P	**Pn**	**02 32 12.5**	**-0.8**
	0.2nm,0.3s,baz=202,slow=11,SNR=3.7						
NIL	**Nilore**	**18.36**	**281**	*e*P	**Pn**	**02 32 17.1**	**-0.6**
	17nm,0.6s						
AAK	**Ala-Archa**	**19.41**	**309**	*e*P	**P**	**02 32 28.7**	**-0.3**
	2.1nm,0.5s						
KURBB	**Kurchatov Arra**	**22.24**	**331**	P	**P**	**02 32 57.9**	**-1.4**
	3.3nm,0.8s,baz=137,slow=11,SNR=20						
KURK	**Kurchatov**	**22.28**	**332**	*e*P	**P**	**02 32 59.3**	**-0.4**
ZALV	**Zalesovo Beam**	**23.10**	**345**	P	**P**	**02 33 07.3**	**-1.0**
	0.5nm,0.3s,baz=161,slow=14,SNR=2.8						
BVAR	**Borovoye Array**	**27.51**	**327**	P	**P**	**02 33 48.3**	**-0.4**
	0.4nm,0.4s,baz=128,slow=12,SNR=3.7						
BRVK	**Borovoye**	**27.58**	**327**	*e*P	**P**	**02 33 50.3**	**+1.0**
	5.1nm,0.5s						

GEYT	**Alibeck**	**30.67**	**291**	P	**P**	**02 34 18.4**	**+1.4**
	12nm,0.6s,baz=99,slow=9.3,SNR=2.7						
AKTO	**Aktyubinsk**	**32.91**	**315**	P	**P**	**02 34 37.4**	**+0.8**
	1.8nm,0.7s,baz=115,slow=12,SNR=8.0						
OBN	**Obninsk**	**46.59**	**318**	LR	LR	02 56 24.6	
	comp=Z,535nm,19.1s,baz=174,slow=37						
BRTR	**Keskin Array B**	**49.48**	**297**	P	**P**	**02 36 53.0**	**+0.2**
	0.8nm,0.9s,baz=90,slow=4.3,SNR=4.0						
AKASG	**Malin Array Be**	**51.05**	**312**	P	**P**	**02 37 03.8**	**-0.5**
	0.9nm,0.5s,baz=73,slow=7.0,SNR=4.7						
FINES	**FINESS Array B**	**52.45**	**326**	P	**P**	**02 37 16.6**	**+2.0**
	0.6nm,0.5s,baz=100,slow=7.2,SNR=7.2						
ARCES	**ARCESS Array B**	**53.24**	**336**	P	**P**	**02 37 22.4**	**+2.1**
	4.1nm,1.0s,baz=48,slow=7.2,SNR=4.6						
MLR	**Muntele Rosu**	**53.95**	**306**	P	**P**	**02 37 26.0**	**-0.1**
	1.0nm,0.8s,baz=144,slow=3.2,SNR=11						
NB2	**NORSAR Subarra**	**59.63**	**326**	P	**P**	**02 38 07.6**	**+1.6**
	comp=Z,1.3nm,0.8s,baz=78,slow=7.4						
GERES	**GERESS Array B**	**61.26**	**312**	P	**P**	**02 38 17.6**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=63,slow=4.5,SNR=3.7						
WRA	**Warramunga Arr**	**63.94**	**138**	P	**P**	**02 38 34.6**	**-0.8**
	comp=Z,1.1nm,0.8s,baz=327,slow=7.3,SNR=4.7						
ASAR	**Alice Springs**	**66.69**	**141**	P	**P**	**02 38 53.3**	**0.0**
	comp=Z,1.2nm,0.7s,baz=327,slow=7.0,SNR=9.0						
YKA	**Yellowknife Ar**	**82.85**	**13**	LR	LR	03 22 09.3	
	comp=Z,146nm,18.1s,baz=232,slow=39						

*IDC **22** 02:28:52.5±0.8, 1°.02N×127°.05E, h0km, mb4.0/9, mb1 4.1/9, mb1mx3.8/60, mbtmp4.0/9, Error ellipse: s-maj=50.7km s-min=16.0km az=76.0*
*ISCJB **22** 02:28:55.5±0.5, 1°.11N±0°.06×127°.3E±0°.1, h33km, mb4.1/12, Error ellipse: s-maj=19.2km s-min=8.2km az=168.8*
*NEIC **22** 02:28:57.8±0.4, 1°.04N×127°.08E, h35km, mb4.2/2, Error ellipse: s-maj=24.9km s-min=7.4km az=73.0*
*DJA **22** 02:28:57.5±3.3, 1°.N±16°.×12°.7E±2°.2, h85km±67km, M4.1/6, MLv4.1/6*

ISC 22 02:28:57.6±0.7, 1°.13N±0°.09×127°.3E±0°.1, h35km, n21, σ1§07/19, mb4.0/12, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**1.76**	**174**	P	**Pn**	**02 29 28.2**	**+2.5**
SANI	**Sanana**	**3.43**	**203**	P	**Pn**	**02 29 47.1**	**-1.5**
NLAI	**Namlea**	**4.34**	**183**	P	**Pn**	**02 30 01.2**	**0.0**
LUWI	**Luwuk**	**5.04**	**245**	P	Pn	02 30 20.2	+9.4
MPSI	**Mapaga**	**7.47**	**264**	P	Pn	02 30 55.7	+11
KMPI	**Kaimana, Papua**	**7.95**	**127**	P	**Pn**	**02 30 49.1**	**-1.7**
WRAB	**Tennant Creek**	**22.03**	**162**	*e*P	**P**	**02 33 50.0**	**+0.7**
	3.1nm,0.5s						
WRA	**Warramunga Arr**	**22.04**	**162**	P	**P**	**02 33 49.1**	**-0.2**
	2.8nm,0.6s,baz=339,slow=11,SNR=14						
ASAR	**Alice Springs**	**25.46**	**166**	P	**P**	**02 34 22.6**	**+0.1**
	1.3nm,0.5s,baz=343,slow=8.0,SNR=8.7						
KSAR	**Wonju Array Be**	**36.14**	**1**	P	**P**	**02 35 57.6**	**+1.0**
KSRS	**Korea Array**	**36.15**	**1**	P	**P**	**02 35 57.6**	**+1.0**
	0.9nm,0.5s,baz=178,slow=10,SNR=4.6						
MJAR	**Matsushiro Arr**	**36.65**	**15**	P	**P**	**02 36 02.0**	**+1.1**
	0.9nm,0.3s,baz=192,slow=9.3,SNR=3.7						
SONM	**Songino Array**	**49.94**	**342**	P	**P**	**02 37 49.1**	**+0.9**
	0.7nm,0.5s,baz=157,slow=7.8,SNR=4.2						
MKAR	**Makanchi Array**	**60.03**	**326**	P	**P**	**02 39 01.2**	**+0.2**
	2.2nm,0.7s,baz=119,slow=7.4,SNR=11						
KURBB	**Kurchatov Arra**	**64.24**	**328**	P	**P**	**02 39 29.1**	**0.0**
	3.3nm,0.5s,baz=128,slow=6.3,SNR=15						
KURK	**Kurchatov**	**64.25**	**328**	P	**P**	**02 39 29.1**	**0.0**
BRVK	**Borovoye**	**69.89**	**327**	*e*P	**P**	**02 40 04.3**	**-0.7**
	7.9nm,0.6s						
AKTO	**Aktyubinsk**	**76.06**	**322**	P	**P**	**02 40 40.8**	**-0.8**
	2.1nm,0.7s,baz=134,slow=7.8,SNR=1.9						
VNDA	**Vanda**	**80.79**	**173**	P	**P**	**02 41 06.8**	**-0.3**
	0.4nm,0.8s,baz=317,slow=4.6,SNR=2.8						
RAYN	**Ar Rayn**	**82.06**	**293**	*e*P	**P**	**02 41 14.1**	**-1.0**
	3.6nm,1.0s						
TORD	**Torodi Ar. Bea**	**124.27**	**287**	PKP	**PKPdf**	**02 47 53.5**	**-0.4**
	0.5nm,1.1s,baz=63,slow=3.0,SNR=3.0						

MEX 22 02:37:55.2±0.3, 17°.30N×100°.06W, h20km, MD3.6, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.32**	**219**	*e*P	Pb	02 38 01.1	-1.1
CAIG				*e*S	Sb	02 38 05.6	-1.4
ACP2	**Acapulco**	**0.45**	**159**	*e*P	Pb	02 38 02.9	-1.6
ACP2				*e*S	Sb	02 38 09.1	-1.8
ACX	**Acapulco**	**0.47**	**156**	*e*P	Pb	02 38 03.2	-1.6
ACX				*e*S	Sb	02 38 09.6	-1.7
ARIG	**Puente Sto Nin**	**1.01**	**344**	*i* P	Pn	02 38 15.0	+0.6
ARIG				*e*S	Sn	02 38 29.3	+1.3
PLIG	**Platanillo**	**1.21**	**26**	*e*P	Pb	02 38 19.2	+1.7
PLIG				*i* S	Sn	02 38 37.6	+4.6
ZIIG	**Zihuatanejo**	**1.38**	**283**	*e*P	Pn	02 38 18.2	-1.0
TLIG	**Tlapa**	**1.45**	**79**	*e*P	Pn	02 38 20.2	-0.2

NDI 22 02:44:45.6±5.1, 29°.02N×77°.08E, h15km±20km, ML3.5, Northern India

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHGR	**Bahadurgarh**	**0.35**	**200**	*e*P	Pg	02 44 52.2	-0.6
BHGR				*e*S	Sb	02 44 59.8	+0.8
NDI	**New Delhi**	**0.36**	**160**	*e*P	Pb	02 44 53.5	-0.2
NDI				*e*S	Sg	02 44 58.5	+0.5
LDR	**Lodi Road**	**0.45**	**164**	*e*P	Pg	02 44 51.2	-3.5
LDR				*e*S	Sg	02 44 55.6	-5.2
KHET	**Khetri**	**1.46**	**230**	*e*P	Pb	02 45 12.4	-0.1
KHET				*e*S	Sb	02 45 31.4	+0.4
KHET				IAML		02 45 33.3	
	comp=E,361nm,0.2s						
KHET				IAML		02 45 33.3	
	comp=N,574nm,0.5s						
DDI	**Dehra Dun**	**1.55**	**33**	*e*P	Pn	02 45 13.2	+0.5
DDI				*e*S	Sn	02 45 32.9	+0.2
DDI				IAML		02 45 36.2	
	comp=N,2μm,0.2s						
DDI				IAML		02 45 36.2	
	comp=E,1μm,0.2s						
SMLA	**Simla**	**2.10**	**2**	*e*P	Pn	02 45 20.8	+0.6
SMLA				*e*S	Sn	02 45 46.0	-0.1
SMLA				IAML		02 45 52.0	
	comp=N,284nm,0.2s						
SMLA				IAML		02 45 52.2	
	comp=E,524nm,0.2s						
JOSI	**Joshimath**	**2.64**	**54**	*e*P	Pn	02 45 28.2	+0.3
JOSI				*e*S	Sn	02 45 58.4	-1.4
DHRM	**DHARAMSHALA**	**3.29**	**348**	*e*P	Pn	02 45 35.3	-1.5
DHRM				*e*S	Sn	02 46 15.2	-0.6
DHRM				IAML		02 46 34.1	
	comp=E,275nm,0.4s						
DHRM				IAML		02 46 36.2	
	comp=N,216nm,0.5s						
BHPL	**Bhopal**	**5.77**	**177**	*ex*	Pn	02 46 09.0	-1.7

IDC 22 02:45:57.3±2.7, 32°.82S×178°.20W, h0km, mb4.1/3, mb1 4.2/4, mb1mx3.7/50, mbtmp4.1/4, ML3.9/1, Error ellipse: s-maj=61.5km s-min=43.1km az=129.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.64**	**214**	Pn	Pn	02 47 35.6	-0.5
	2.7nm,0.3s,baz=86,slow=19,SNR=12						
URZ				Sn	Sn	02 48 48.5	-4.0
	4.3nm,0.3s,baz=74,slow=22,SNR=11						
CTA	**Charters Tower**	**34.09**	**283**	P	P	02 52 45.2	+1.5
	2.0nm,0.5s,baz=135,slow=9.5,SNR=4.8						
ASAR	**Alice Springs**	**42.86**	**270**	P	P	02 53 57.1	-0.4
	0.7nm,0.5s,baz=110,slow=7.8,SNR=9.7						
WRA	**Warramunga Arr**	**44.07**	**275**	P	P	02 54 06.4	-0.9
	1.6nm,0.5s,baz=113,slow=8.0,SNR=32						
FINES	**FINESS Array B**	**147.34**	**339**	PKPbc	PKPbc	03 05 41.4	-0.7
	1.2nm,0.5s,baz=44,slow=3.6,SNR=19						

*IDC **22** 02:46:28.6±0.6, 33°.63N×47°.99E, h0km, mb4.0/20, mb1 4.0/27, mb1mx3.8/86, mbtmp4.0/27, ML3.6/7, MS4.5/1, Ms1 4.5/1, ms1mx2.9/71, Error ellipse: s-maj=14.6km s-min=11.4km az=146.0*
*ISCJB **22** 02:46:29.9±0.5, 33°.72N±0°.02×47°.91E±0°.03, h15km±3km, mb4.0/30, MS4.5/1, Error ellipse: s-maj=4.1km s-min=3.6km az=155.4*
*CSEM **22** 02:46:30.3±0.2, 33°.76N×47°.96E, h5km, mb4.3/8, Error ellipse: s-maj=5.5km s-min=4.2km az=179.0*
*NEIC **22** 02:46:31.1±0.0, 33°.78N×47°.99E, h5km, mb4.0/1, ML3.8(THR), MN3.8(TEH), After TEH.*
*TEH **22** 02:46:31.1, 33°.78N×47°.99E, h5km, ML3.8*
*THR **22** 02:46:32.0±1.6, 33°.81N×48°.02E, h41km±10km, ML3.8*
*ISN **22** 02:46:33.6±1.1, 33°.70N×47°.82E, h32km±5km, ML3.9*
*SGS **22** 02:46:34.1, 33°.73N×47°.96E, h10km*

ISC 22 02:46:30.6±0.9, 33°.75N±0°.02×48°.03E±0°.02, h10km±6km, n138, σ1§78/145, mb4.1/31, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKFM	**Kafar-mosalman**	**0.27**	**214**	*e*Pg	**Pg**	**02 46 35.6**	**-0.5**
IKFM				*e*Sg	**Sg**	**02 46 40.0**	**+0.2**
IKFM				*e*		02 46 41.4	
	comp=Z,99nm,0.0s						
IKFM				*e*		02 46 41.5	
	comp=E,99nm,0.2s						
IKFM				*e*		02 46 41.7	
	comp=N,99nm,0.1s						
IKFM	**Kafar-mosalman**	**0.27**	**214**	*e*Pg	**Pg**	**02 46 35.6**	**-0.5**
IKFM				*e*Sg	**Sg**	**02 46 40.0**	**+0.2**
IKOM	**Komasi**	**0.60**	**315**	*e*	Pn	02 46 55.6	+10
	comp=Z,99nm,0.1s						
HSAM	**Samen**	**0.66**	**46**	*e*Pg	**Pg**	**02 46 42.2**	**-1.3**
HSAM				*e*Sg	**Sg**	**02 46 51.9**	**-0.3**
HSAM				*e*Sg	**Sg**	**02 46 52.2**	**0.0**
HSAM				*e*		02 46 52.4	
	comp=N,99nm,0.2s						
HSAM				*e*		02 46 52.5	
	comp=Z,99nm,0.1s						
HSAM				*e*		02 46 53.8	
	comp=E,99nm,0.2s						
HSAM	**Samen**	**0.66**	**46**	*e*Pg	**Pg**	**02 46 42.2**	**-1.3**
HSAM				*e*Sg	**Sg**	**02 46 52.2**	**0.0**
IBZA	**Bozab**	**0.73**	**349**	Pg	**Pg**	**02 46 43.6**	**-1.2**
IBZA	**Bozab**	**0.73**	**349**	*e*Pg	**Pg**	**02 46 43.7**	**-1.1**
IBZA				*e*		02 46 59.8	
	comp=Z,26μm,0.2s						
IBZA	**Bozab**	**0.73**	**349**	*e*Pg	**Pg**	**02 46 43.7**	**-1.1**
KCHF	**Cheshme Sefid,**	**0.97**	**303**	*e*Pg	**Pg**	**02 46 48.6**	**-0.7**
KCHF				*e*		02 47 08.2	
	comp=Z,99nm,0.2s						
KCHF	**Cheshme Sefid,**	**0.97**	**303**	*e*Pg	**Pg**	**02 46 48.6**	**-0.7**
IVIS	**Veis**	**1.25**	**309**	Pg	**Pn**	**02 46 52.8**	**-1.4**
IVIS	**Veis**	**1.25**	**309**	*e*Pg	**Pn**	**02 46 52.9**	**-1.3**
IVIS				*e*		02 47 17.3	
	comp=Z,25μm,0.2s						
IVIS				*e*		02 47 19.6	
	comp=E,27μm,0.2s						
IVIS				*e*		02 47 22.3	
	comp=N,50μm,0.2s						
IVIS	**Veis**	**1.25**	**309**	*e*Pg	**Pn**	**02 46 52.9**	**-1.3**
HAGD	**Aghdareh**	**1.41**	**40**	*e*Pg	**Pn**	**02 46 55.5**	**-1.0**
HAGD				*e*		02 47 22.0	
	comp=N,99nm,0.1s						
HAGD				*e*		02 47 22.6	
	comp=Z,99nm,0.2s						
HAGD				*e*		02 47 22.6	
	comp=E,99nm,0.1s						
HAGD	**Aghdareh**	**1.41**	**40**	*e*Pg	**Pn**	**02 46 55.5**	**-1.0**
SNGE	**Sanandaj**	**1.45**	**337**	Pg	**Pg**	**02 47 00.0**	**+1.5**
SNGE	**Sanandaj**	**1.45**	**337**	*e*Pg	**Pb**	**02 46 57.8**	**0.0**
SNGE				AML	AML	02 47 24.1	
	comp=E,1μm,0.8s						
SNGE				AML	AML	02 47 27.3	
	comp=N,1μm,0.5s						
SNGE	**Sanandaj**	**1.45**	**337**	*e*Pg	**Pb**	**02 46 57.8**	**0.0**
ILIN	**Lien**	**1.46**	**323**	Pn	**Pb**	**02 46 57.8**	**-0.2**
ILIN	**Lien**	**1.46**	**323**	*e*Pn	**Pb**	**02 46 57.9**	**-0.1**
ILIN				*e*		02 47 07.2	
	comp=N,2μm,0.0s						
ILIN				*e*		02 47 24.5	
	comp=Z,34μm,0.4s						
ILIN				*e*		02 47 24.7	
	comp=E,45μm,0.3s						
ILIN	**Lien**	**1.46**	**323**	Pn	**Pb**	**02 46 57.8**	**-0.2**
KHMZ	**Khomeyn**	**1.61**	**90**	Pn	**Pn**	**02 46 59.0**	**-0.2**
KHMZ				Sg	**Sg**	**02 47 23.0**	**+0.6**
KHMZ	**Khomeyn**	**1.61**	**90**	*e*Pn	**Pn**	**02 46 59.4**	**+0.2**
KHMZ				*e*Sg	**Sg**	**02 47 23.5**	**+1.1**
KHMZ				AML	AML	02 47 28.1	
	comp=N,621nm,0.5s						
KHMZ				AML	AML	02 47 29.3	
	comp=E,929nm,0.5s						
KHMZ	**Khomeyn**	**1.61**	**90**	*e*Pn	**Pn**	**02 46 59.4**	**+0.2**
KHMZ	**Khomeyn**	**1.61**	**90**	*e*Pn	**Pn**	**02 46 59.4**	**+0.2**
KHMZ				*e*Sg	**Sg**	**02 47 23.5**	**+1.1**
SHGR	**Shooshtar-Gavs**	**1.76**	**158**	Pn	**Pb**	**02 47 03.0**	**+0.1**
SHGR	**Shooshtar-Gavs**	**1.

SNR=5.0
NSR Nassriya 3.17 211 *e*Pn **Pn 02 47 21.0 +0.6**
SNR=5.0
NSR *e*Sn **Sn 02 47 55.0 -3.2**
SNR=5.0
IGZV Ghazvin 3.18 34 Pn **Pn 02 47 21.9 +1.0**
IGZV Ghazvin 3.18 34 *e*Pn **Pn 02 47 22.0 +1.0**
IGZV *e* 02 47 36.3
comp=Z,3μm,0.3s
IGZV *e* 02 48 17.5
comp=E,3μm,0.3s
IGZV *e* 02 48 27.4
comp=N,4μm,0.3s
IGZV Ghazvin 3.18 34 Pn **Pn 02 47 21.9 +1.0**
IVRN Varamin 3.30 67 Pn **Pn 02 47 25.3 +2.9**
IVRN Varamin 3.30 67 *e*Pn **Pn 02 47 25.3 +2.9**
IVRN *e* 02 47 37.2
comp=E,2μm,0.3s
IVRN *e* 02 48 32.9
comp=Z,3μm,0.4s
IVRN Varamin 3.30 67 *e*Pn **Pn 02 47 25.3 +2.9**
QALM Alamut, Qazvin 3.43 38 *e*Pn **Pn 02 47 26.8 +2.5**
QALM *e* 02 48 28.0
comp=N,99nm,0.4s
QALM *e* 02 48 35.5
comp=E,99nm,0.5s
QALM *e* 02 48 35.7
comp=Z,99nm,0.5s
QALM Alamut, Qazvin 3.43 38 *e*Pn **Pn 02 47 26.8 +2.5**
IGAR Gharneh 3.63 111 *e* Sg 02 48 38.9 +12
comp=Z,2μm,0.3s
IGAR *e* 02 48 39.2
comp=N,2μm,0.3s
IAFJ Afjeh 3.69 54 Pn **Pn 02 47 31.6 +3.7**
IAFJ Afjeh 3.69 54 *e*Pn **Pn 02 47 31.7 +3.8**
IAFJ *e* 02 47 42.4
comp=Z,3μm,0.3s
IAFJ *e* 02 48 45.7
comp=E,8μm,0.5s
IAFJ *e* 02 48 54.7
comp=N,5μm,0.4s
IAFJ Afjeh 3.69 54 Pn **Pn 02 47 31.6 +3.7**
IZEF Zefreh 3.70 102 Pn **Pn 02 47 29.5 +1.5**
IZEF Zefreh 3.70 102 *e*Pn **Pn 02 47 29.6 +1.5**
IZEF *e* 02 48 38.9
comp=Z,1μm,0.3s
IZEF *e* 02 48 40.6
comp=N,1μm,0.4s
IZEF *e* 02 48 44.8
comp=E,2μm,0.5s
IZEF Zefreh 3.70 102 Pn **Pn 02 47 29.5 +1.5**
IDMV Damavand 3.77 60 Pn **Pn 02 47 31.4 +2.4**
IDMV Damavand 3.77 60 *e*Pn **Pn 02 47 31.5 +2.4**
IDMV *e* 02 47 50.1
comp=Z,2μm,0.2s
IDMV *e* 02 48 39.3
comp=N,3μm,0.3s
IDMV *e* 02 48 40.0
comp=E,3μm,0.3s
IDMV Damavand 3.77 60 Pn **Pn 02 47 31.4 +2.4**
IBST Bostanabad 4.05 347 *e* Pg 02 47 53.0 +4.9
comp=Z,748nm,0.3s
IBST *e* 02 47 53.2
comp=N,746nm,0.3s
IBST *e* 02 48 48.3
comp=E,647nm,0.5s
IRAM Rameshe h 4.15 117 Pn **Pn 02 47 35.1 +0.9**
IRAM Rameshe h 4.15 117 *e*Pn **Pn 02 47 35.2 +1.0**
IRAM *e* 02 48 57.8
comp=Z,662nm,0.3s
IRAM *e* 02 49 06.3
comp=N,821nm,0.3s
IRAM *e* 02 49 08.2
comp=E,2μm,0.7s
IRAM Rameshe h 4.15 117 *e*Pn **Pn 02 47 35.2 +1.0**
IFIR Firoozkooh 4.33 63 Pn **Pn 02 47 39.4 +2.8**
IFIR Firoozkooh 4.33 63 *e*Pn **Pn 02 47 39.4 +2.8**
IFIR *e* 02 47 55.6
comp=Z,829nm,0.2s
IFIR *e* 02 48 07.3
comp=E,2μm,0.4s
IFIR *e* 02 48 56.1
comp=N,2μm,0.4s
IFIR Firoozkooh 4.33 63 *e*Pn **Pn 02 47 39.4 +2.8**
IALA Alasht 4.56 58 Pn **Pn 02 47 44.6 +4.6**
IALA Alasht 4.56 58 *e*Pn **Pn 02 47 44.7 +4.7**
IALA *e* 02 48 07.8
comp=Z,1μm,0.2s
IALA Alasht 4.56 58 Pn **Pn 02 47 44.6 +4.6**
ITBZ Tabriz 4.72 342 *e* **Pg 02 48 04.7 +3.6**
comp=Z,415nm,0.3s
ITBZ *e* 02 49 22.4
comp=N,421nm,0.2s
ITBZ *e* 02 49 23.0
comp=E,660nm,0.3s
ISHB Shabestar 4.93 337 *e* Pg 02 48 11.4 +6.4
comp=Z,1μm,0.3s
ISHB *e* 02 49 24.2
comp=N,2μm,0.4s
ISHB *e* 02 49 30.8
comp=E,2μm,0.5s
IGLO Ghaloghah 5.49 58 *e*Pn **Pb 02 48 02.5 -4.2**
IGLO *e* 02 49 43.6
comp=E,3μm,0.6s
IGLO *e* 02 49 49.0
comp=Z,1μm,0.4s
IGLO *e* 02 50 03.2
comp=N,2μm,0.5s
KFJS 5.55 181 P **Pn 02 47 54.7 +1.5**
KFJS S **Sn 02 48 53.9 -3.1**
RTB Rutbah 6.50 266 *e*Pn **Pn 02 48 07.0 +0.7**
SNR=5.0
GNI Garni 6.91 339 Pn Pn 02 48 21.1 +9.2
comp=N,0.3nm,0.3s,baz=149,slow=5.9,SNR=2.2
GNI Lg Lg 02 50 14.3
comp=N,0.6nm,0.3s,baz=46,slow=17,SNR=2.3
GNI Garni 6.91 339 *e*Pn **Pn 02 48 11.8 -0.2**
GNI Lg Lg 02 50 14.3
GNI Garni 6.91 339 *e*Pn **Pn 02 48 11.8 -0.2**
BOQSS 7.94 171 P **Pn 02 48 26.6 +0.5**
ASF Jabal al Asfar 9.48 263 Pn **Pn 02 48 46.5 -0.8**
comp=N,0.3nm,0.3s,baz=51,slow=13,SNR=3.3
ASF Sn Sn 02 50 22.4 -12
comp=N,0.0nm,0.3s,baz=72,slow=20,SNR=1.9
RAYN Ar Rayn 10.43 193 *e*Pn **Pn 02 48 58.4 -1.9**
comp=N,18nm,0.8s
RAYN *e*Sn Sn 02 50 47.9 -9.3
MMAI Mount Meron Ar 10.58 270 Pn **Pn 02 49 00.5 -1.9**
comp=N,0.3nm,0.3s,baz=92,slow=16,SNR=2.5
MMAI Lg Lg 02 52 05.5
comp=N,0.9nm,0.3s,baz=97,slow=34,SNR=3.2
EIL Elat 11.85 253 Pn **Pn 02 49 19.3 -0.4**
comp=N,1.0nm,0.3s,baz=54,slow=4.3,SNR=7.1
EIL Sn **Sn 02 51 34.8 +2.7**
comp=N,0.2nm,0.3s,baz=131,slow=18,SNR=1.7
BRTR Keskin Array B 12.98 301 Pn **Pn 02 49 37.2 +2.0**
comp=N,0.1nm,0.3s,baz=117,slow=12,SNR=2.4
WSAR Wadi Sarin 14.01 136 Pn **Pn 02 49 46.3 -2.9**
comp=N,0.4nm,0.3s,baz=14,slow=8.7,SNR=5.1
WSAR Sn Sn 02 52 13.8 -11
comp=N,0.2nm,0.3s,baz=270,slow=20,SNR=2.9
AKTO Aktyubinsk 18.21 21 P **P 02 50 44.9 +1.3**
comp=N,0.3nm,0.3s,baz=208,slow=13,SNR=8.4
IDI Anoyia 19.12 281 P **P 02 50 53.6 -0.2**
comp=N,0.5nm,0.3s,baz=66,slow=12,SNR=4.1
MLR Muntele Rosu 20.59 311 P Pn 02 51 11.8 -0.1
comp=N,0.5nm,0.7s,baz=190,slow=17,SNR=2.5
NIL Nilore 20.98 83 *e*P **P 02 51 14.2 +0.2**
NIL Nilore 20.98 83 *e*P **P 02 51 14.1 +0.2**
AKASG Malin Array Be 21.82 327 P **P 02 51 23.7 +0.9**
comp=N,0.2nm,0.3s,baz=135,slow=9.9,SNR=4.5
ARU Arti 23.81 15 P **P 02 51 46.1 +2.7**
comp=N,4.8nm,0.2s,baz=276,slow=14,SNR=3.3
CRVS Cervenica-Dubn 24.87 315 *e*P **P 02 51 55.0 +1.7**
CRVS Cervenica-Dubn 24.87 315 *e*P **P 02 51 55.0 +1.7**
BRVK Borovoye 25.00 33 *e*P **P 02 51 55.1 +0.8**
comp=N,6.1nm,0.5s
BVAR Borovoye Array 25.02 33 P **P 02 51 55.7 +1.2**
comp=N,3.9nm,0.6s,baz=232,slow=7.4,SNR=16
VYHS Vyhne 26.27 313 *e*P **P 02 52 06.5 +0.6**
VYHS Vyhne 26.27 313 *e*P **P 02 52 06.5 +0.6**
MODS Modra-Piesok 27.18 312 *e*P **P 02 52 15.5 +1.3**
MODS Modra-Piesok 27.18 312 *e*P **P 02 52 15.5 +1.3**
CONA Conrad Observa 27.92 310 *e*P **P 02 52 26.5 +5.6**
comp=N,3.9nm,1.3s
KURBB Kurchatov Arra 27.92 44 P **P 02 52 21.8 +1.1**
comp=N,1.7nm,0.8s,baz=248,slow=9.4,SNR=5.3
KURK Kurchatov 28.02 44 *e*P **P 02 52 22.8 +1.2**
OBKA Obir 28.37 307 *ep*P **P 02 52 26.5 +1.6**
comp=N,4.8nm,1.3s
MOA Molln 28.92 309 *e*P **P 02 52 29.6 -0.1**
comp=N,2.4nm,0.8s
MKAR Makanchi Array 28.96 53 P **P 02 52 31.5 +1.4**
comp=N,0.9nm,0.7s,baz=246,slow=7.7,SNR=6.2
GERES GERESS Array B 29.58 311 P **P 02 52 35.0 -0.6**
comp=N,0.5nm,0.6s,baz=113,slow=7.6,SNR=3.2
WTTA Wattenberg 30.49 307 *e*P **P 02 52 42.4 -1.4**
comp=N,2.2nm,0.5s
MOTA Moosalm 30.86 307 *e*P **P 02 52 44.5 -2.6**
comp=N,1.5nm,0.4s
FETA Feichten 31.04 306 *e*P **P 02 52 47.9 -0.8**
comp=N,5.4nm,0.8s
FINES FINESS Array B 31.09 340 P **P 02 52 48.2 -0.5**
comp=N,1.0nm,0.9s,baz=152,slow=8.6,SNR=5.5
RETA Reutte 31.12 307 *e*P **P 02 52 47.8 -1.4**
comp=N,1.4nm,0.4s
RETA Reutte 31.12 307 P **P 02 52 47.8 -1.4**
comp=N,1.4nm,0.4s
DAVA Damuels 31.66 307 *e*P **P 02 52 52.6 -1.5**
comp=N,4.9nm,0.4s
ZALV Zalesovo Beam 32.81 41 P **P 02 53 04.1 +0.2**
comp=N,0.7nm,0.4s,baz=262,slow=8.3,SNR=2.6
HFS Hagfors 34.60 330 P **P 02 53 19.0 -0.4**
comp=N,1.7nm,0.6s,baz=112,slow=11,SNR=10
ARCES ARCESS Array B 37.97 347 P **P 02 53 48.7 +0.7**
comp=N,1.8nm,0.8s,baz=137,slow=8.2,SNR=4.6
EKA Eskdalemuir Ar 41.22 317 P **P 02 54 13.9 -1.3**
comp=N,1.2nm,0.6s,baz=104,slow=9.0,SNR=5.3
ESDC Sonseca Array 41.62 294 P **P 02 54 20.1 +1.3**
comp=N,0.4nm,0.6s,baz=84,slow=10,SNR=3.8
SONM Songino Array 45.33 54 LR LR 03 17 04.9
comp=N,643nm,21.9s,baz=108,slow=40
ULN Ulaanbaatar 45.77 54 *e*P **P 02 54 53.6 +1.3**
comp=N,1.2nm,0.6s
SPITS Spitsbergen Ar 46.58 351 P **P 02 54 57.7 -0.4**
comp=N,2.5nm,0.7s,baz=83,slow=12,SNR=3.1
TORD Torodi Ar. Bea 46.73 255 P **P 02 54 59.0 -1.1**
comp=N,2.8nm,0.8s,baz=56,slow=8.5,SNR=16
CMAR Chiang Mai Arr 47.73 95 P **P 02 55 06.8 -1.0**
comp=N,0.9nm,0.3s,baz=294,slow=8.1,SNR=4.3
KOWA Kowa 50.66 261 P **P 02 55 29.3 -1.0**
comp=N,1.8nm,0.7s,baz=67,slow=12,SNR=4.1
LSZ Lusaka 52.30 204 P **P 02 55 40.7 -1.8**
comp=N,2.6nm,0.8s,baz=26,slow=5.2,SNR=4.8
DBIC Dimbokro 55.72 253 P **P 02 56 06.1 -1.5**
comp=N,2.6nm,0.8s,baz=6.3,slow=9.2,SNR=3.2
LBTB Lobatse 62.21 203 P **P 02 56 52.5 0.0**
comp=N,2.4nm,0.7s,baz=29,slow=7.3,SNR=2.5
KSAR Wonju Array Be 63.16 61 P **P 02 56 58.1 -0.6**
KSRS Korea Array 63.18 61 P **P 02 56 58.1 -0.7**
comp=N,0.9nm,0.6s,baz=283,slow=6.3,SNR=3.7
BOSA Boshof 65.67 202 P **P 02 57 14.4 -0.8**
comp=N,2.3nm,0.8s,baz=34,slow=7.3,SNR=3.0

IDC ***22*** *02:51:29.2±0.7,35°.89N×69°.37E, h0km, mb3.9/17, mb1 4.0/22, mb1mx3.8/90, mbtmp3.9/22, ML3.7/5, MS3.8/2, Ms1 3.8/2, ms1mx3.1/74, Error ellipse: s-maj=17.0km s-min=14.6km az=146.0*
NNC ***22*** *02:51:31.6±1.6, 36°.32N×68°.88E, h0km, mb4.4, mpv4.3, Error ellipse: s-maj=13.3km s-min=9.7km az=163.0*
ISCJB ***22*** *02:51:32.7±0.3, 36°.02N±0°.03×69°.23E±0°.04, h35km, mb3.8/18, MS3.8/2, Error ellipse: s-maj=5.0km s-min=3.0km az=150.9*
MOS ***22*** *02:51:34.2±2.0, 36°.20N×69°.24E, h38km, mb4.1/10, Error ellipse: s-maj=11.8km s-min=6.0km az=83.9*
NEIC ***22*** *02:51:39.1±1.2, 36°.04N×69°.36E, h76km±13km, mb4.1/6, Error ellipse: s-maj=9.7km s-min=8.3km az=55.0*
ISC 22 02:51:34.8±0.5, 36°.10N±0°.05×69°.15E±0°.05, h35km, n81, σ2°32/99, mb3.8/18, 14C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THW	**Thamme Wali**	**3.93**	**146**	P	**Pn**	**02 52 35.1**	**+2.5**
NIL	**Nilore**	**4.17**	**125**	*e*Pn	**Pn**	**02 52 38.6**	**+2.8**
NIL				*e*Sn	**Sn**	**02 53 23.1**	**-0.2**
NIL	**Nilore**	**4.17**	**125**	*e*PN	**Pn**	**02 52 38.6**	**+2.8**
CHCP	**Chirah Chowk**	**4.17**	**124**	P	**Pn**	**02 52 38.6**	**+2.7**
SFK	**Sufi-Kurgan**	**5.21**	**40**	⇑Pn	**Pn**	**02 52 51.9**	**+1.6**
	21nm,0.6s						
SFK				⇑Sn	**Sn**	**02 53 52.5**	**+3.2**
	20nm,0.3s						
SFK				⇑Lg	Lg	02 54 15.1	
	143nm,0.7s						
SFK	**Sufi-Kurgan**	**5.21**	**40**	PN	**Pn**	**02 52 51.9**	**+1.6**
SFK				S	**Sn**	**02 53 52.5**	**+3.2**
SFK				pmax	pmax		
	comp=Z,21nm,0.6s						
SFK				smax	smax		
	comp=N,20nm,0.3s						
MNAS	**Manas**	**6.89**	**21**	⇑Pn	**Pn**	**02 53 13.0**	**-0.4**
	comp=N,16nm,0.6s						
MNAS				⇑Sn	**Sn**	**02 54 31.4**	**+0.7**
	comp=N,33nm,1.0s						
MNAS				⇑Lg	Lg	02 55 06.7	
	comp=N,46nm,1.1s						
MNAS	**Manas**	**6.89**	**21**	PN	**Pn**	**02 53 13.3**	**-0.1**
MNAS				S	**Sn**	**02 54 31.4**	**+0.7**
MNAS				pmax	pmax		
	comp=Z,16nm,0.6s						
MNAS				smax	smax		
	comp=N,33nm,1.0s						
AML	**Almayashu**	**6.99**	**29**	P	**Pn**	**02 53 14.8**	**-0.1**
	SNR=72						
DHRM	**DHARAMSHALA**	**7.06**	**121**	*e*P	**Pn**	**02 53 15.8**	**0.0**
DHRM				*e*S	**Sn**	**02 54 34.8**	**-0.1**
KK31	**Karatay Array**	**7.08**	**8**	⇓Pn	**Pn**	**02 53 12.3**	**-3.5**
	comp=N,9.2nm,0.6s,baz=220,slow=19,SNR=52						
KK31				⇑Sn	**Sn**	**02 54 35.9**	**+0.8**
	comp=N,11nm,0.5s						
KK31				⇑Lg	Lg	02 55 09.7	
	comp=N,11nm,0.5s						
KK31	**Karatay Array**	**7.08**	**8**	PN	**Pn**	**02 53 12.3**	**-3.5**
KK31				S	**Sn**	**02 54 36.9**	**+1.9**
KK31				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KK31				smax	smax		
	comp=N,11nm,0.5s						
UCH	**Uchtor**	**7.41**	**33**	P	**Pn**	**02 53 21.1**	**+0.4**
	SNR=30						
EKS2	**Erkin-Say**	**7.47**	**27**	P	**Pn**	**02 53 24.2**	**+2.8**
	SNR=13						
KZA	**Kyzart**	**7.63**	**37**	P	**Pn**	**02 53 24.8**	**+1.0**
	SNR=6.3						
FRU	**Bishkek**	**7.95**	**30**	*e*P	**Pn**	**02 53 31.0**	**+3.2**
FRU				*e*S	**Sn**	**02 55 00.0**	**+3.6**
FRU				pmax	pmax		
	comp=Z,40nm,1.6s						
FRU				pmax	pmax		
	comp=E,175nm,2.0s						
CHMS	**Chumysh**	**8.14**	**30**	P	**Pn**	**02 53 32.9**	**+2.5**
	SNR=24						
USP	**Ospenovka**	**8.26**	**28**	P	**Pn**	**02 53 34.3**	**+2.1**
	SNR=16						
SMLA	**Simla**	**8.32**	**124**	*e*P	**Pn**	**02 53 33.6**	**+0.7**
SMLA				*e*S	**Sn**	**02 55 05.7**	**+0.1**
SMLA				IAML		02 55 08.1	
	comp=E,96nm,0.5s						
SMLA				IAML		02 55 08.4	
	comp=N,79nm,0.3s						
TKM2	**Tokmak 2**	**8.44**	**34**	⇓Pn	**Pn**	**02 53 34.5**	**-0.2**
	comp=N,13nm,0.7s						
TKM2				⇑Sn	**Sn**	**02 55 10.2**	**+1.4**
	comp=N,7.8nm,0.6s						
TKM2				⇑Lg	Lg	02 55 56.5	
	comp=N,14nm,1.1s						
TKM2	**Tokmak 2**	**8.44**	**34**	P	**Pn**	**02 53 36.5**	**+1.8**
	SNR=14						
TKM2	**Tokmak 2**	**8.44**	**34**	P	**Pn**	**02 53 34.5**	**-0.2**
TKM2				S	**Sn**	**02 55 10.2**	**+1.4**
TKM2				pmax	pmax		
	comp=Z,13nm,0.7s						
TKM2				smax	smax		
	comp=N,8.0nm,0.6s						
GEYT	**Alibeck**	**9.01**	**285**	Pn	**Pn**	**02 53 42.1**	**-0.2**
	comp=N,1.8nm,0.3s,baz=106,slow=11,SNR=2.7						
GEYT				Sn	**Sn**	**02 55 22.7**	**+0.1**
	comp=N,3.4nm,0.3s,baz=90,slow=18,SNR=3.1						
DDI	**Dehra Dun**	**9.42**	**125**	*e*S	**Sn**	**02 55 32.2**	**-0.6**
KHET	**Khetri**	**9.79**	**143**	*e*S	**Sn**	**02 55 39.2**	**-2.5**
KHET				IAML		02 56 32.1	
	comp=N,11nm,0.3s						
KHET				IAML		02 56 32.6	
	comp=E,10nm,0.3s						
BHGR	**Bahadurgarh**	**9.89**	**136**	*e*S	**Sn**	**02 55 41.5**	**-2.7**
NDI	**New Delhi**	**10.05**	**135**	*ex*	**Sn**	**02 55 42.0**	**-6.2**
NDI				*e*S	**Sn**	**02 55 46.5**	**-1.7**
JOSI	**Joshimath**	**10.31**	**119**	*e*P	**Pn**	**02 54 01.0**	**+0.6**
JOSI				*e*S	**Sn**	**02 55 54.5**	**-0.3**
JOSI				IAML		02 55 59.0	
	comp=E,173nm,0.7s						
JOSI				IAML		02 55 59.8	
	comp=N,138nm,0.4s						
OTUK	**Ortayu**	**12.37**	**10**	⇑Pn	**Pn**	**02 54 25.9**	**-2.4**
	comp=N,2.2nm,0.5s						
OTUK	**Ortayu**	**12.37**	**10**	P	**Pn**	**02 54 25.9**	**-2.4**
OTUK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
PYUN	**Piuthan**	**14.18**	**120**	*e*P	**Pn**	**02 54 50.9**	**-2.3**
	comp=Z,30nm,0.5s						
MKAR	**Makanchi Array**	**14.52**	**39**	Pn	**Pn**	**02 54 54.6**	**-3.0**
	comp=Z,0.1nm,0.3s,baz=224,slow=15,SNR=7.1						
MK31	**Makanchi Array**	**14.52**	**39**	⇓Pn	**Pn**	**02 54 57.0**	**-0.6**
	comp=Z,2.7nm,0.7s,baz=222,slow=15,SNR=6.4						
DANN	**Dangsing**	**14.57**	**118**	*e*P	**Pn**	**02 54 58.7**	**0.0**
	comp=Z,34nm,0.6s						
AB31	**Akbulak array**	**14.78**	**336**	⇓Pn	**Pn**	**02 54 57.9**	**-3.1**
	comp=Z,2.5nm,0.5s,baz=149,slow=10,SNR=43						
AB31				Sn	**Sn**	**02 57 39.6**	**-3.8**
	comp=Z,2.1nm,0.7s,baz=153,slow=23,SNR=5.7						
AB31	**Akbulak array**	**14.78**	**336**	P	**Pn**	**02 54 57.9**	**-3.1**
AB31				S	**Sn**	**02 57 39.6**	**-3.8**
AB31				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AB31				smax	smax		
	comp=N,2.0nm,0.7s						
KOLN	**Koldanda**	**14.80**	**120**	*e*P	**Pn**	**02 54 58.0**	**-3.7**
	comp=N,18nm,0.5s						
GKN	**Gorkha**	**15.40**	**117**	*e*P	**Pn**	**02 55 08.5**	**-1.1**
	comp=N,31nm,0.3s						
DMN	**Daman**	**15.97**	**118**	*e*P	**Pn**	**02 55 13.2**	**-3.8**
	comp=N,26nm,0.6s						
KKN	**Kakani**	**15.99**	**117**	*e*P	**Pn**	**02 55 14.9**	**-2.3**
	comp=N,30nm,0.5s						
KURBB	**Kurchatov Arra**	**16.02**	**22**	Pn	**Pn**	**02 55 14.9**	**-2.4**
	comp=N,0.1nm,0.3s,baz=213,slow=10,SNR=6.4						
KURBB	**Kurchatov Arra**	**16.02**	**22**	⇑Pn	**Pn**	**02 55 16.7**	**-0.6**
	comp=N,10nm,0.7s						
KURK	**Kurchatov**	**16.13**	**22**	*e*Pn	**P**	**02 55 21.4**	**-0.2**
	comp=N,26nm,0.8s						
KURK	**Kurchatov**	**16.13**	**22**	*e*P	**P**	**02 55 21.4**	**-0.2**
KURK				pmax	pmax		
	comp=Z,27nm,0.8s						
PKIN	**Phulchoki**	**16.20**	**117**	*e*P	**Pn**	**02 55 16.3**	**-3.6**
	comp=Z,26nm,0.4s						
GUN	**Gumba**	**16.36**	**115**	*e*P	**Pn**	**02 55 19.9**	**-2.1**
	comp=Z,21nm,0.4s						
AKTO	**Aktyubinsk**	**16.44**	**334**	Pn	**Pn**	**02 55 21.6**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=138,slow=14,SNR=7.8						
AKTO				Sn	**Sn**	**02 58 14.3**	**-9.5**
	baz=198,slow=20,SNR=2.6						
AKTO	**Aktyubinsk**	**16.44**	**334**	⇑Pn	**Pn**	**02 55 20.1**	**-2.5**
	comp=Z,6.9nm,1.0s						
AKTO				⇑Sn	**Sn**	**02 58 20.9**	**-2.9**
	comp=Z,0.8nm,0.5s						
JIRN	**Jiri**	**16.73**	**115**	*e*P	**Pn**	**02 55 24.2**	**-2.5**
	comp=Z,62nm,0.4s						
BVA0	**Borovoye Array**	**16.95**	**3**	Pn	**Pn**	**02 55 25.6**	**-3.4**
	comp=Z,4.4nm,1.0s,baz=169,slow=12,SNR=14						
BVA0	**Borovoye Array**	**16.95**	**3**	P	**Pn**	**02 55 25.6**	**-3.4**
BVA0				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BVAR	**Borovoye Array**	**16.95**	**3**	Pn	**Pn**	**02 55 26.9**	**-2.1**
	comp=Z,0.7nm,0.3s,baz=165,slow=12,SNR=6.8						
BRVK	**Borovoye**	**16.98**	**2**	*e*Pn	**P**	**02 55 30.5**	**-0.4**
	comp=Z,12nm,0.8s						
BRVK	**Borovoye**	**16.98**	**2**	*e*P	**P**	**02 55 30.5**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,12nm,0.8s						
LSA	**Lhasa**	**19.53**	**103**	*e*P	**P**	**02 55 58.2**	**-1.5**
	comp=Z,11nm,0.8s						
LSA	**Lhasa**	**19.53**	**103**	*e*P	**P**	**02 55 58.2**	**-1.5**
LSA				pmax	pmax		
	comp=Z,11nm,0.8s						
ZALV	**Zalesovo Beam**	**20.93**	**27**	P	**P**	**02 56 15.3**	**+1.2**
	comp=Z,6.3nm,0.5s,baz=219,slow=10,SNR=14						
NVS	**Novosibirsk**	**21.12**	**23**	*i P*	**P**	**02 56 18.0**	**+1.8**
ARU	**Arti**	**21.57**	**344**	P	**P**	**02 56 22.6**	**+1.7**
	comp=Z,4.6nm,0.2s,baz=120,slow=8.1,SNR=3.9						
RAYN	**Ar Rayn**	**23.97**	**245**	*e*P	**P**	**02 56 46.9**	**+0.9**
	comp=Z,3.1nm,0.8s						
RAYN	**Ar Rayn**	**23.97**	**245**	*e*P	**P**	**02 56 46.9**	**+0.9**
BRTR	**Keskin Array B**	**28.13**	**288**	P	**P**	**02 57 27.1**	**+3.4**
	comp=Z,0.2nm,0.3s,baz=88,slow=12,SNR=4.9						
SONM	**Songino Array**	**29.80**	**55**	P	**P**	**02 57 38.2**	**0.0**
	comp=Z,0.4nm,0.5s,baz=251,slow=9.0,SNR=2.6						
AKASG	**Malin Array Be**	**32.04**	**310**	P	**P**	**02 57 59.3**	**+1.4**
	comp=Z,0.5nm,0.4s,baz=110,slow=7.7,SNR=3.4						
MLR	**Muntele Rosu**	**33.67**	**300**	P	**P**	**02 58 16.1**	**+3.7**
	comp=Z,0.5nm,0.9s,baz=67,slow=5.3,SNR=5.0						
IDI	**Anoyia**	**35.72**	**282**	LR	LR	03 14 14.4	
	comp=Z,263nm,21.5s,baz=287,slow=38						
FINES	**FINESS Array B**	**36.99**	**327**	P	**P**	**02 58 41.6**	**+1.1**
	comp=Z,1.0nm,0.6s,baz=108,slow=11,SNR=5.8						
FINES				LR	LR	03 16 14.5	
	comp=Z,90nm,18.5s,baz=156,slow=40						
ARCES	**ARCESS Array B**	**40.96**	**338**	P	**P**	**02 59 15.1**	**+1.5**
	comp=Z,2.1nm,0.8s,baz=100,slow=10,SNR=3.0						
HFS	**Hagfors**	**42.47**	**322**	P	**P**	**02 59 27.1**	**+1.1**
	comp=Z,1.1nm,0.5s,baz=98,slow=10,SNR=7.5						
NB2	**NORSAR Subarra**	**43.81**	**323**	P	**P**	**02 59 37.2**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=98,slow=7.9						
LSZ	**Lusaka**	**64.11**	**225**	P	**P**	**03 02 05.8**	**+0.2**
	comp=Z,1.1nm,0.5s,baz=76,slow=7.1,SNR=3.8						
LSZ	**Lusaka**	**64.11**	**225**	*e*P	**P**	**03 02 05.9**	**+0.3**
	comp=Z,1.1nm,0.6s						
TORD	**Torodi Ar. Bea**	**64.21**	**268**	P	**P**	**03 02 06.5**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=47,slow=6.1,SNR=30						
KOWA	**Kowa**	**68.09**	**272**	P	**P**	**03 02 32.3**	**+1.1**
	comp=Z,1.1nm,0.6s,baz=42,slow=5.3,SNR=3.7						
INK	**Inuvik**	**74.53**	**9**	P	**P**	**03 03 10.2**	**+0.9**
	comp=Z,1.6nm,1.0s,baz=318,slow=7.6,SNR=3.5						
INK	**Inuvik**	**74.53**	**9**	*e*P	**P**	**03 03 09.1**	**-0.3**
	comp=Z,0.8nm,0.5s						
ILAR	**Eielson Array**	**75.57**	**15**	P	**P**	**03 03 16.1**	**+0.8**
	comp=Z,0.4nm,0.8s,baz=315,slow=4.7,SNR=4.3						
YKA	**Yellowknife Ar**	**81.71**	**2**	P	**P**	**03 03 49.3**	**+0.1**
	comp=Z,0.6nm,0.8s,baz=353,slow=5.6,SNR=2.9						
WRA	**Warramunga Arr**	**83.06**	**121**	P	**P**	**03 03 56.0**	**-0.9**
	comp=Z,0.5nm,0.7s,baz=322,slow=5.1,SNR=6.0						
WRA	**Warramunga Arr**	**83.06**	**121**	P	**P**	**03 03 56.0**	**-0.9**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR	**Alice Springs**	**85.27**	**124**	P	**P**	**03 04 06.2**	**-1.8**
	comp=Z,0.5nm,0.7s,baz=326,slow=5.7,SNR=3.8						

IDC ***22*** *03:08:12.4±1.8, 32°.92S×178°.21W, h0km, mb4.1/3, mb1 4.3/4, mb1mx3.8/46, mbtmp4.1/4, ML4.0/1, MS3.9/1, Ms1 4.0/1, ms1mx3.1/46, Error ellipse: s-maj=55.8km s-min=35.4km az=151.0*
ISCJB ***22*** *03:08:13.5±1.2, 32°.97S±0°.08×178°.1W±0°.2, h32km, mb4.1/3, MS3.9/1, Error ellipse: s-maj=29.5km s-min=6.2km az=18.7*
WEL ***22*** *03:08:16.0±1.2, 33°.S±16°×17°.9W±3°.7, h105km±72km*
ISC 22 03:08:15.7±1.6, 32°.84S±0°.10×178°.2W±0°.3, h32km, n25, σ1°59/35, mb4.2/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.57**	**3**	P	**Pn**	**03 09 08.8**	**-0.2**
GLKZ				S	**Sn**	**03 09 47.0**	**-3.0**
MXZ	**Matakaoa Point**	**5.

MWZ	**Matawai**	**6.51 211**	P	**Pn**	**03 09 48.4**	**-0.9**
URZ	**Urewera**	**6.64 214**	Pn	**Pn**	**03 09 50.3**	**-0.7**
3.3nm,0.3s,baz=19,slow=18,SNR=15						
URZ			Sn	**Sn**	**03 11 03.2**	**-2.4**
0.9nm,0.3s,baz=307,slow=20,SNR=4.2						
URZ	**Urewera**	**6.64 214**	P	**Pn**	**03 09 50.1**	**-0.9**
URZ			S	**Sn**	**03 11 03.7**	**-1.9**
RAGZ	**Rawiri**	**6.70 211**	P	**Pn**	**03 09 50.5**	**-1.4**
RAGZ			S	**Sn**	**03 11 04.3**	**-2.8**
RIGZ	**Rimuhau**	**6.73 208**	P	**Pn**	**03 09 51.9**	**-0.4**
PRGZ	**Paritu Road**	**6.87 207**	P	**Pn**	**03 09 53.7**	**-0.5**
RTZ	**Ruatahuna**	**6.99 213**	P	**Pn**	**03 09 55.1**	**-0.8**
MTHZ	**Maungataniwha**	**7.24 213**	P	**Pn**	**03 09 59.5**	**+0.1**
MTHZ			S	**Sn**	**03 11 17.1**	**-3.5**
ARHZ	**Aropaoanui**	**7.51 210**	P	**Pn**	**03 10 02.5**	**-0.5**
CTA	**Charters Tower**	**34.13 283**	P	**P**	**03 15 00.8**	**+2.9**
1.6nm,0.4s,baz=108,slow=9.6,SNR=3.2						
ASAR	**Alice Springs**	**42.90 270**	P	**P**	**03 16 11.9**	**+0.4**
0.8nm,0.4s,baz=109,slow=7.6,SNR=11						
WRA	**Warramunga Arr**	**44.11 275**	P	**P**	**03 16 21.2**	**-0.1**
2.0nm,0.5s,baz=115,slow=7.6,SNR=18						
VNDA	**Vanda**	**45.66 186**	LR	LR	03 31 41.3	
comp=Z,163nm,20.9s,baz=348,slow=31						
FINES	**FINESS Array B**	**147.37 339**	PKPbc	**PKPab**	**03 27 57.0**	**-0.3**
0.9nm,0.4s,baz=49,slow=3.5,SNR=15						
HFS	**Hagfors**	**151.60 348**	PKPbc	**PKPbc**	**03 28 07.4**	**+1.4**
1.0nm,0.6s,baz=27,slow=3.5,SNR=4.0						
BRTR	**Keskin Array B**	**153.56 294**	PKPbc	**PKPbc**	**03 28 13.4**	**+2.2**
0.5nm,0.6s,baz=101,slow=5.6,SNR=2.8						

JMA 22 03:10:58.0±0.2, 37°.59N×144°.48E, h39km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**2.62**	**290**	P	Pn	03 11 39.6	+1.9
JIO				S	Sn	03 12 09.9	+1.6
OFUJ	**Ofunato**	**2.66**	**305**	P	Pn	03 11 40.0	+1.6
OFUJ				S	Sn	03 12 11.4	+2.0
JMK	**Ichinoseki**	**2.90**	**299**	P	Pn	03 11 43.6	+1.9
JMK				S	Sn	03 12 17.7	+2.4
JOM	**Ohasama**	**3.13**	**308**	P	Pn	03 11 47.1	+2.4
JOM				S	Sn	03 12 23.5	+2.7
JFT	**Otama**	**3.29**	**270**	P	Pn	03 11 49.7	+2.7
JFT				eS	Sn	03 12 27.1	+2.1
JYK	**Kaneyama**	**3.50**	**293**	P	Pn	03 11 52.4	+2.5
JYK				eS	Sn	03 12 33.2	+3.1
JRY	**Ryogami san**	**4.74**	**252**	eS	Sn	03 12 59.5	-1.2
JKB	**Kayabe**	**5.05**	**329**	P	Pn	03 12 13.4	+2.3
JCH	**Churui**	**5.09**	**351**	P	Pn	03 12 11.8	+0.1
JCH				eS	Sn	03 13 06.8	-2.4
NEM2	**Nemuro 2**	**5.85**	**9**	P	Pn	03 12 19.6	-2.5
NEM2				eS	Sn	03 13 21.6	-6.2
JTKR	**Abashiri--Toko**	**6.39**	**356**	P	Pn	03 12 29.6	+0.1
JTKR				eS	Sn	03 13 37.9	-3.2

ISCJB 22 03:13:53.9±0.5, 38°.80N±0°.03×38°.10E±0°.03, h10km±5km, Error ellipse: s-maj=5.5km s-min=4.2km az=26.9
ISK 22 03:13:53.1, 38°.80N×38°.09E, h12km, ML2.0/6
CSEM 22 03:13:54.1±0.2, 38°.80N×38°.11E, h5km, ML2.7, Error ellipse: s-maj=5.4km s-min=4.5km az=18.0
DDA 22 03:13:54.2, 38°.80N×38°.08E, h7km, Ml2.7
ISC 22 03:13:53.9±0.9, 38°.79N±0°.02×38°.08E±0°.02, h13km±7km, n21, σ0°39/37, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HEKM	**Malatya_Hekimh**	**0.13**	**315**	*i* P	**Pg**	**03 13 57.5**	**0.0**
HEKM				*i* S	**Sg**	**03 14 00.2**	**+0.2**
HEKM	**Malatya_Hekimh**	**0.13**	**315**	P	**Pg**	**03 13 57.5**	**0.0**
HEKM				S	**Sg**	**03 14 00.2**	**+0.2**
AKCD	**Akcadag**	**0.51**	**194**	*i* P	**Pg**	**03 14 04.0**	**+0.1**
AKCD				*i* S	**Sb**	**03 14 12.8**	**+0.9**
AKCD	**Akcadag**	**0.51**	**194**	P	**Pg**	**03 14 04.0**	**+0.1**
AKCD				S	**Sb**	**03 14 12.9**	**+0.9**
DARE	**Darende-Malaty**	**0.51**	**245**	PG	**Pg**	**03 14 03.8**	**-0.2**
DARE				SG	**Sb**	**03 14 11.8**	**-0.3**
DARE	**Darende-Malaty**	**0.51**	**245**	*e*Pg	**Pg**	**03 14 03.8**	**-0.2**
DARE				*e*Sg	**Sb**	**03 14 11.8**	**-0.3**
MALT	**Malatya**	**0.55**	**150**	PG	**Pg**	**03 14 04.4**	**-0.3**
MALT				SG	**Sg**	**03 14 12.4**	**+0.4**
MALT	**Malatya**	**0.55**	**150**	*e*Pg	**Pg**	**03 14 04.4**	**-0.3**
MALT				*e*Sg	**Sg**	**03 14 12.4**	**+0.4**
KEMA	**Kemaliye**	**0.58**	**34**	*i* P	**Pg**	**03 14 05.2**	**-0.1**
KEMA				*i* S	**Sb**	**03 14 14.7**	**+0.6**
KEMA	**Kemaliye**	**0.58**	**34**	P	**Pg**	**03 14 05.2**	**-0.1**
KEMA				S	**Sb**	**03 14 14.7**	**+0.6**
CUKAN	**kangal_SIVAS**	**0.71**	**318**	*i* P	**Pg**	**03 14 08.1**	**+0.4**
CUKAN				*i* S	**Sg**	**03 14 17.2**	**+0.1**
CUKAN	**kangal_SIVAS**	**0.71**	**318**	P	**Pg**	**03 14 08.1**	**+0.4**
CUKAN				S	**Sg**	**03 14 17.2**	**+0.1**
ELZG	**Elazig**	**0.77**	**112**	*i* P	**Pg**	**03 14 08.8**	**0.0**
ELZG				*i* S	**Sb**	**03 14 19.9**	**+0.3**
ELZG	**Elazig**	**0.77**	**112**	P	**Pg**	**03 14 08.8**	**0.0**
ELZG				S	**Sb**	**03 14 19.9**	**+0.3**
PTK	**Pertek**	**1.03**	**84**	PG	**Pb**	**03 14 13.1**	**-0.6**
PTK				SG	**Sg**	**03 14 27.6**	**+0.2**
PTK	**Pertek**	**1.03**	**84**	*e*Pg	**Pb**	**03 14 13.1**	**-0.6**
PTK				*e*Sg	**Sg**	**03 14 27.6**	**+0.2**
SVRC	**Sivrice-ELAZID**	**1.05**	**113**	PG	**Pb**	**03 14 13.4**	**-0.5**
SVRC	**Sivrice-ELAZID**	**1.05**	**113**	*e*Pg	**Pb**	**03 14 13.4**	**-0.5**
SARI	**SarD1z-Kayseri**	**1.35**	**254**	PN	**Pn**	**03 14 18.7**	**+0.1**
SVSK	**Karacayir**	**1.40**	**324**	PN	**Pn**	**03 14 19.1**	**0.0**
SVSK	**Karacayir**	**1.40**	**324**	*e*Pn	**Pn**	**03 14 19.1**	**0.0**

ISCJB 22 03:20:26.4±0.5, 21°.77N±0°.06×98°.4E±0°.1, h10km, mb4.0/13, MS4.6/1, Error ellipse: s-maj=19.1km s-min=6.2km az=164.0
IDC 22 03:20:26.9±0.7, 21°.77N×98°.38E, h0km, mb4.1/10, mb1 4.2/12, mb1mx3.8/74, mbtmp4.1/12, ML4.3/2, MS4.6/1, Ms1 4.6/1, ms1mx3.2/79, Error ellipse: s-maj=32.1km s-min=11.5km az=73.0
NEIC 22 03:20:28.2±0.4, 21°.76N×98°.35E, h10km, mb4.2/3, Error ellipse: s-maj=14.6km s-min=6.3km az=74.0
ISC 22 03:20:28.3±0.6, 21°.76N±0°.07×98°.4E±0°.1, h10km, n22, σ0°77/23, mb4.0/13, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHTO	**Chiang Mai**	**2.98**	**169**	P	**Pn**	**03 21 15.0**	**-0.7**
CHTO	**Chiang Mai**	**2.98**	**169**	*e*Pn	**Pn**	**03 21 14.9**	**-0.7**
CHTO				*e*Sn	**Sn**	**03 21 50.4**	**-1.1**
CMAR	**Chiang Mai Arr**	**3.33**	**170**	Pn	**Pn**	**03 21 20.2**	**-0.3**
8.1nm,0.3s,baz=348,slow=14,SNR=31							
CMAR				Pg	**Pb**	**03 21 28.2**	**+0.7**
35nm,0.3s,baz=348,slow=16,SNR=79							
CMAR				Lg	Lg	03 22 12.2	
22nm,0.3s,baz=344,slow=28,SNR=5.6							
PBKT	**Sadao Pong**	**5.72**	**154**	P	**Pn**	**03 21 53.4**	**+0.1**
NONG	**Nongkai**	**5.81**	**128**	P	**Pg**	**03 22 19.3**	**-0.3**
36nm,0.9s,0.3nm							
PSI	**Prapat**	**18.85**	**178**	P	**Pn**	**03 24 51.4**	**+2.1**
1.0nm,0.3s,baz=0.0,slow=9.3,SNR=10							
SONM	**Songino Array**	**26.81**	**12**	P	**P**	**03 26 09.5**	**+0.7**
1.9nm,0.9s,baz=194,slow=11,SNR=8.7							
MKAR	**Makanchi Array**	**28.18**	**336**	P	**P**	**03 26 21.1**	**+0.1**
1.5nm,0.6s,baz=143,slow=9.0,SNR=13							
KURBB	**Kurchatov Arra**	**32.74**	**336**	P	**P**	**03 27 00.8**	**-0.4**
1.5nm,0.8s,baz=146,slow=8.6,SNR=7.8							
KURK	**Kurchatov**	**32.79**	**337**	P	**P**	**03 27 00.8**	**-0.7**
ZALV	**Zalesovo Beam**	**33.75**	**346**	P	**P**	**03 27 09.1**	**-0.9**
0.7nm,0.3s,baz=170,slow=9.0,SNR=5.1							
MJAR	**Matsushiro Arr**	**37.51**	**58**	P	**P**	**03 27 42.5**	**0.0**
1.6nm,0.6s,baz=263,slow=11,SNR=5.1							
BVAR	**Borovoye Array**	**37.85**	**332**	P	**P**	**03 27 44.8**	**-0.3**
1.6nm,0.6s,baz=132,slow=8.2,SNR=9.0							
BRVK	**Borovoye**	**37.92**	**332**	*e*P	**P**	**03 27 45.1**	**-0.6**
8.9nm,0.9s							
ARU	**Arti**	**45.32**	**330**	P	**P**	**03 28 45.5**	**-0.8**
4.8nm,0.2s,baz=108,slow=6.4,SNR=3.8							
ARU	**Arti**	**45.32**	**330**	*e*P	**P**	**03 28 45.9**	**-0.4**
RAYN	**Ar Rayn**	**48.59**	**283**	*e*P	**P**	**03 29 12.3**	**-0.2**
0.9nm,0.5s							
WRA	**Warramunga Arr**	**54.35**	**137**	P	**P**	**03 29 55.2**	**-0.3**
0.6nm,0.6s,baz=322,slow=7.7,SNR=4.0							
SEY	**Seymchan**	**54.72**	**27**	LR	LR	03 53 09.1	
comp=Z,543nm,21.4s,baz=327,slow=36							
ASAR	**Alice Springs**	**56.87**	**140**	P	**P**	**03 30 13.3**	**-0.3**
0.5nm,0.6s,baz=324,slow=7.5,SNR=4.3							
HFS	**Hagfors**	**68.76**	**328**	P	**P**	**03 31 33.3**	**+1.0**
5.3nm,1.1s,baz=133,slow=8.1,SNR=2.7							
LSZ	**Lusaka**	**78.01**	**248**	*e*P	**P**	**03 32 27.1**	**-0.6**
1.2nm,0.6s							

BEO 22 03:24:59.6±0.8, 40°.39N×25°.89E, h0km
CSEM 22 03:25:00.7±0.1, 40°.28N×25°.55E, h5km, ML3.0, Error ellipse: s-maj=2.1km s-min=1.5km az=35.0
SOF 22 03:25:00.1, 40°.32N×25°.53E, h4km, MD2.9
ISCJB 22 03:25:00.3±0.4, 40°.29N±0°.02×25°.55E±0°.02, h5km±3km, Error ellipse: s-maj=2.9km s-min=2.0km az=40.2
ATH 22 03:25:00.3, 40°.29N×25°.58E, h22km±1km, ML3.0/11, Error ellipse: s-maj=2.0km s-min=1.1km az=69.0
DDA 22 03:25:00.9, 40°.27N×25°.59E, h22km, Ml3.5
ISK 22 03:25:00.2, 40°.28N×25°.59E, h4km, ML3.5/21
THE 22 03:25:00.9, 40°.28N×25°.58E, h5km±1km, ML2.9/8, Error ellipse: s-maj=1.9km s-min=0.5km az=75.0
ISC 22 03:25:00.5±0.9, 40°.26N±0°.02×25°.56E±0°.01, h8km±7km, n203, σ0°90/260, 5C-7D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMTH	**Samothraki Isl**	**0.21**	**355**	P	**Pg**	**03 25 04.7**	**-0.1**
SMTH				S	**Sg**	**03 25 07.3**	**-0.4**
SMTH				AML	AML	03 25 08.4	
comp=E,9636μm,0.1s							
SMTH				AML	AML	03 25 09.2	
comp=N,10187μm,0.2s							
SMTH	**Samothraki Isl**	**0.21**	**355**	P	**Pg**	**03 25 05.1**	**+0.3**
SMTH				S	**Sg**	**03 25 08.0**	**+0.2**
SMTH	**Samothraki Isl**	**0.21**	**355**	P	**Pg**	**03 25 05.1**	**+0.3**
SMTH				S	**Sg**	**03 25 08.0**	**+0.2**
GADA	**Gvkgeada**	**0.27**	**104**	PG	**Pb**	**03 25 06.4**	**-1.3**
GADA				SG	**Sg**	**03 25 10.2**	**+0.7**
GADA	**Gvkgeada**	**0.27**	**104**	P	**Pg**	**03 25 06.3**	**+0.4**
GADA				S	**Sg**	**03 25 10.0**	**+0.5**
GADA	**Gvkgeada**	**0.27**	**104**	P	**Pg**	**03 25 06.3**	**+0.4**
GADA				*e*Sg	**Sg**	**03 25 10.2**	**+0.7**
LIA	**Limnos Island**	**0.46**	**219**	P	**Pb**	**03 25 10.8**	**0.0**
LIA				S	**Sb**	**03 25 17.5**	**-0.4**
LIA				AML	AML	03 25 18.4	
comp=N,4291μm,0.3s							
LIA				AML	AML	03 25 18.5	
comp=E,5428μm,0.3s							
LIA	**Limnos Island**	**0.46**	**219**	P	**Pb**	**03 25 10.7**	**-0.2**
LIA				S	**Sb**	**03 25 16.6**	**-1.2**
LIA	**Limnos Island**	**0.46**	**219**	P	**Pb**	**03 25 10.7**	**-0.2**
LIA				S	**Sb**	**03 25 16.6**	**-1.2**
BOZC	**Bozcaada**	**0.56**	**137**	*i* P	**Pb**	**03 25 12.3**	**-0.4**
BOZC				*i* S	**Sb**	**03 25 20.3**	**-0.6**
ENEZ	**Enez**	**0.66**	**44**	PG	**Pg**	**03 25 12.9**	**-0.4**
ENEZ				SG	**Sg**	**03 25 22.5**	**+0.6**
ENEZ	**Enez**	**0.66**	**44**	*e*Pg	**Pg**	**03 25 12.9**	**-0.4**
ENEZ				*e*Sg	**Sg**	**03 25 22.5**	**+0.6**
GELI	**Tayfur-Gelibol**	**0.72**	**78**	PG	**Pg**	**03 25 14.0**	**-0.3**
GELI				SG	**Sg**	**03 25 23.9**	**+0.3**
GELI	**Tayfur-Gelibol**	**0.72**	**78**	*e*Pg	**Pg**	**03 25 14.0**	**-0.3**
GELI				*e*Sg	**Sg**	**03 25 23.9**	**+0.3**
EZN	**Ezine**	**0.73**	**126**	PG	**Pb**	**03 25 14.8**	**-0.7**
EZN	**Ezine**	**0.73**	**126**	P	**Pg**	**03 25 14.5**	**-0.1**
EZN				S	**Sb**	**03 25 24.8**	**-0.9**
EZN	**Ezine**	**0.73**	**126**	P	**Pg**	**03 25 14.5**	**-0.1**
EZN	**Ezine**	**0.73**	**126**	*e*Pg	**Pb**	**03 25 14.8**	**-0.7**
EZN				S	**Sb**	**03 25 24.8**	**-0.9**
ALN	**Alexandroupoli**	**0.74**	**30**	PG	**Pg**	**03 25 14.1**	**-0.7**
ALN	**Alexandroupoli**	**0.74**	**30**	P	**Pg**	**03 25 14.8**	**0.0**
ALN				S	**Sg**	**03 25 24.2**	**-0.3**
ALN				AML	AML	03 25 26.9	
comp=N,1254μm,3.9s							
ALN				AML	AML	03 25 27.5	
comp=E,1443μm,0.3s							
ALN	**Alexandroupoli**	**0.74**	**30**	P	**Pg**	**03 25 14.4**	**-0.4**
ALN				S	**Sg**	**03 25 24.1**	**-0.3**
ALN	**Alexandroupoli**	**0.74**	**30**	*e*Pg	**Pg**	**03 25 14.1**	**-0.7**
ALN	**Alexandroupoli**	**0.74**	**30**	P	**Pg**	**03 25 14.4**	**-0.4**
ALN				S	**Sg**	**03 25 24.1**	**-0.3**
ERIK	**Erikli-Kesan**	**0.84**	**60**	PG	**Pg**	**03 25 16.2**	**-0.5**
ERIK	**Erikli-Kesan**	**0.84**	**60**	*e*Pg	**Pg**	**03 25 16.2**	**-0.5**
RDO	**Rodhopi**	**0.89**	**359**	PG	**Pg**	**03 25 17.7**	**+0.1**
RDO	**Rodhopi**	**0.89**	**359**	P	**Pg**	**03 25 17.0**	**-0.6**
RDO	**Rodhopi**	**0.89**	**359**	P	**Pg**	**03 25 17.1**	**-0.5**
RDO				S	**Sb**	**03 25 30.5**	**+0.3**
RDO	**Rodhopi**	**0.89**	**359**	P	**Pg**	**03 25 17.1**	**-0.5**
RDO	**Rodhopi**	**0.89**	**359**	*e*Pg	**Pg**	**03 25 17.7**	**+0.1**
RDO				S	**Sb**	**03 25 30.5**	**+0.3**
GPNR	**Gulpinar-Canak**	**0.92**	**151**	PG	**Pb**	**03 25 18.9**	**+0.2**
GPNR	**Gulpinar-Canak**	**0.92**	**151**	*e*Pg	**Pb**	**03 25 18.9**	**+0.2**
BAYC	**CANAKKALE_Bayr**	**0.92**	**124**	*i* P	**Pb**	**03 25 18.3**	**-0.4**
BAYC				*i* S	**Sn**	**03 25 32.8**	**-0.4**
BAYC	**CANAKKALE_Bayr**	**0.92**	**124**	P	**Pb**	**03 25 18.3**	**-0.4**
BAYC				S	**Sn**	**03 25 32.8**	**-0.4**
LPK	**Lapseki**	**0.93**	**83**	PG	**Pg**	**03 25 17.9**	**-0.5**
LPK	**Lapseki**	**0.93**	**83**	*e*Pg	**Pg**	**03 25 17.9**	**-0.5**
KESN	**Edirne-Kesan**	**1.03**	**56**	*i* P	**Pg**	**03 25 19.8**	**-0.5**
KESN				*i* S	**Sb**	**03 25 34.3**	**-0.3**
KESN	**Edirne-Kesan**	**1.03**	**56**	P	**Pg**	**03 25 19.8**	**-0.5**
KESN				S	**Sb**	**03 25 34.3**	**-0.3**
SIGR	**SIGRI**	**1.07**	**167**	PN	**Pn**	**03 25 21.9**	**+0.1**
SIGR	**SIGRI**	**1.07**	**167**	P	**Pb**	**03 25 21.0**	**-0.3**
SIGR				S	**Sn**	**03 25 37.3**	**+0.4**
SIGR				AML	AML	03 25 38.0	
comp=E,2054μm,0.4s							
SIGR				AML	AML	03 25 40.2	
comp=N,3118μm,0.4s							
SIGR	**SIGRI**	**1.07**	**167**	P	**Pb**	**03 25 21.2**	**-0.1**
SIGR				S	**Sn**	**03 25 37.3**	**+0.4**
SIGR	**SIGRI**	**1.07**	**167**	P	**Pb**	**03 25 21.2**	**-0.1**
SIGR	**SIGRI**	**1.07**	**167**	*e*Pn	**Pn**	**03 25 21.9**	**+0.1**
SIGR				S	**Sn**	**03 25 37.0**	**+0.1**
KAVA	**Kavala**	**1.08**	**313**	P	**Pn**	**03 25 21.9**	**-0.1**
KAVA				S	**Sb**	**03 25 36.1**	**+0.3**
KAVA				AML	AML	03 25 37.1	
comp=N,2044μm,0.2s							
KAVA				AML	AML	03 25 39.1	
comp=E,1390μm,0.3s							
KAVA	**Kavala**	**1.08**	**313**	P	**Pg**	**03 25 21.3**	**0.0**
KAVA				S	**Sb**	**03 25 36.2**	**+0.4**
KAVA	**Kavala**	**1.08**	**313**	P	**Pg**	**03 25 21.3**	**0.0**
KAVA				S	**Sb**	**03 25 35.9**	**+0.1**
KVLA	**Kavala**	**1.12**	**308**	P	**Pn**	**03 25 23.0**	**+0.5**
KVLA				S	**Sb**	**03 25 37.8**	**+0.9**
KVLA				AML	AML	03 25 39.5	
comp=N,1358μm,0.2s							
KVLA				AML	AML	03 25 40.0	
comp=E,1871μm,0.2s							
KVLA	**Kavala**	**1.12**	**308**	P	**Pb**	**03 25 22.3**	**+0.2**
KVLA				S	**Sb**	**03 25 37.4**	**+0.5**
PRK	**Paraskevi**	**1.15**	**151**	P	**Pn**	**03 25 23.3**	**+0.4**
PRK				S	**Sn**	**03 25 39.4**	**+0.5**
PRK				AML	AML	03 25 40.0	
comp=N,1820μm,0.6s							
PRK				AML	AML	03 25 40.3	
comp=E,2073μm,0.5s							
PRK	**Paraskevi**	**1.15**	**151**	P	**Pn**	**03 25 23.1**	**+0.1**
PRK				S	**Sn**	**03 25 38.6**	**-0.3**
PRK	**Paraskevi**	**1.15**	**151**	P	**Pn**	**03 25 23.1**	**+0.1**
PRK				S	**Sn**	**03 25 38.6**	**-0.3**
OUR	**Ouranopolis**	**1.21**	**274**	PN	**Pg**	**03 25 22.6**	**-1.1**
OUR	**Ouranopolis**	**1.21**	**274**	P	**Pg**	**03 25 22.2**	**-1.4**
OUR				AML	AML	03 25 43.3	
comp=E,1330μm,0.3s							
OUR				AML	AML	03 25 45.0	
comp=N,846μm,0.4s							
OUR	**Ouranopolis**	**1.21**	**274**	P	**Pn**	**03 25 23.8**	**+0.1**
OUR	**Ouranopolis**	**1.21**	**274**	*e*Pn	**Pg**	**03 25 22.6**	**-1.1**
OUR	**Ouranopolis**	**1.21**	**274**	P	**Pn**	**03 25 23.8**	**+0.1**
AYVA	**Ayvalik**	**1.29**	**137**	*i* P	**Pb**	**03 25 25.3**	**+0.2**
AYVA				*i* S	**Sn**	**03 25 43.0**	**+0.7**
AYVA	**Ayvalik**	**1.29**	**137**	P	**Pb**	**03 25 25.3**	**+0.2**
AYVA				S	**Sn**	**03 25 43.0**	**+0.7**
RKY	**Sarkoy-Tekirda**	**1.31**	**70**	PN	**Pg**	**03 25 25.1**	**-0.6**
RKY	**Sarkoy-Tekirda**	**1.31**	**70**	*e*Pn	**Pg**	**03 25 25.1**	**-0.6**
KRBG	**Karabiga-Canak**	**1.34**	**84**	PN	**Pn**	**03 25 25.6**	**+0.1**
KRBG	**Karabiga-Canak**	**1.34**	**84**	*e*Pn	**Pn**	**03 25 25.6**	**+0.1**
KDZ	**Kurdzhali**	**1.39**	**356**	PN	**Pn**	**03 25 26.5**	**+0.2**
KDZ	**Kurdzhali**	**1.39**	**356**	*i* P	**Pn**	**03 25 25.0**	**-1.3**
KDZ	**Kurdzhali**	**1.39**	**356**	*i* P	**Pn**	**03 25 25.0**	**-1.3**
KDZ	**Kurdzhali**	**1.39**	**356**	*e*Pn	**Pn**	**03 25 26.5**	**+0.2**
PAIG	**Paliouri**	**1.48**	**258**	P	**Pg**	**03 25 29.9**	**+1.1**
PAIG	**Paliouri**	**1.48**	**258**	P	**Pn**	**03 25 26.7**	**-0.7**
PAIG				S	**Sg**	**03 25 49.0**	**+1.0**
PAIG	**Paliouri**	**1.48**	**258**	P	**Pg**	**03 25 29.0**	**+0.2**
PAIG				S	**Sg**	**03 25 49.0**	**+1.0**
KNL	**Bal¯–kesir**	**1.51**	**89**	*i* P	**Pb**	**03 25 28.3**	**-0.4**
KNL				*i* S	**Sg**	**03 25 49.0**	**0.0**
RZN	**Rozhen**	**1.56**	**336**	*i* P	**Pn**	**03 25 28.4**	**-0.4**
RZN	**Rozhen**	**1.56**	**336**	*i* P	**Pn**	**03 25 28.4**	**-0.4**
DKL	**Dikili**	**1.58**	**138**	PN	**Pb**	**03 25 29.6**	**-0.4**
DKL	**Dikili**	**1.58**	**138**	*e*Pn	**Pb**	**03 25 29.6**	**-0.4**
PLG	**Polygyros**	**1.62**	**275**	P	**Pn**	**03 25 28.4**	**-1.1**
PLG				AML	AML	03 25 56.4	
comp=N,296μm,0.4s							
PLG				AML	AML	03 25 58.3	
comp=E,335μm,0.3s							
PLG	**Polygyros**	**1.62**	**275**	P	**Pn**	**03 25 29.1**	**-0.3**
PLG	**Polygyros**	**1.62**	**275**	P	**Pn**	**03 25 29.1**	**-0.3**
GONE	**Gonen-Balikesi**	**1.65**	**97**	PN	**Pb**	**03 25 30.6**	**-0.5**
GONE	**Gonen-Balikesi**	**1.65**	**97**	*e*Pn	**Pb**	**03 25 30.6**	**-0.5**
TKR	**Tekirdag**	**1.68**	**63**	PN	**Pn**	**03 25 30.6**	**+0.4**
TKR	**Tekirdag**	**1.68**	**63**	*e*Pn	**Pn**	**03 25 30.6**	**+0.4**
NVR	**Nevrokopi**	**1.69**	**311**	P	**Pn**	**03 25 29.9**	**-0.4**
NVR				AML	AML	03 25 55.6	
comp=E,592μm,0.4s							
NVR				AML	AML	03 25 56.8	
comp=N,490μm,0.3s							
NVR	**Nevrokopi**	**1.69**	**311**	P	**Pn**	**03 25 30.1**	**-0.3**
NVR	**Nevrokopi**	**1.69**	**311**	P	**Pn**	**03 25 30.2**	**-0.2**
PSRA	**Psara**	**1.71**	**180**	P	**Pn**	**03 25 29.8**	**-0.8**
PSRA	**Psara**	**1.71**	**180**	P	**Pn**	**03 25 30.7**	**0.0**
SRS	**Serrai**	**1.72**	**301**	*e*Pg	**Pg**	**03 25 33.6**	**+0.1**
SRS				*e*Sg	**Sg**	**03 25 58.3**	**+2.4**
SRS	**Serrai**	**1.72**	**301**	P	**Pn**	**03 25 29.8**	**-1.0**
SRS				AML	AML	03 26 01.7	
comp=N,514μm,0.5s							
SRS				AML	AML	03 26 02.0	
comp=E,552μm,0.3s							
SRS	**Serrai**	**1.72**	**301**	P	**Pn**	**03 25 30.4**	**-0.4**
SRS	**Serrai**	**1.72**	**301**	P	**Pn**	**03 25 30.5**	**-0.4**
SRS	**Serrai**	**1.72**	**301**	*e*Pg	**Pg**	**03 25 33.6**	**+0.1**
SRS				*e*Sg	**Sg**	**03 25 58.3**	**+2.4**
EDC	**Edincik**	**1.77**	**86**	PN	**Pn**	**03 25 32.0**	**+0.6**
EDC	**Edincik**	**1.77**	**86**	*e*Pn	**Pn**	**03 25 32.0**	**+0.6**
SOH	**Sokhos**	**1.77**	**289**	P	**Pn**	**03 25 30.7**	**-0.9**
SOH	**Sokhos**	**1.77**	**289**	P	**Pn**	**03 25 31.1**	**-0.4**
SOH	**Sokhos**	**1.77**	**289**	P	**Pn**	**03 25 31.3**	**-0.2**
DIM	**Dimitrovgrad**	**1.79**	**359**	*i* P	**Pn**	**03 25 31.2**	**-0.5**
DIM	**Dimitrovgrad**	**1.79**	**359**	*i* P	**Pn**	**03 25 31.2**	**-0.5**
FOCM	**Fo¯§a**	**1.79**	**149**	PN	**Pb**	**03 25 32.8**	**-0.8**
FOCM	**Fo¯§a**	**1.79**	**149**	*e*Pn	**Pb**	**03 25 32.8**	**-0.8**
EDRB	**Edirne**	**1.82**	**29**	PN	**Pn**	**03 25 33.0**	**+0.8**
EDRB	**Edirne**	**1.82**	**29**	*e*Pn	**Pn**	**03 25 33.0**	**+0.8**
CRLT	**Corlu**	**1.87**	**62**	PN	**Pn**	**03 25 33.6**	**+0.7**
CRLT	**Corlu**	**1.87**	**62**	*e*Pn	**Pn**	**03 25 33.6**	**+0.7**
STEP	**BALIKESIR_Sava**	**1.88**	**117**	*i* P	**Pn**	**03 25 33.5**	**+0.4**
STEP				*i* S	**Sb**	**03 25 59.5**	**+0.6**
STEP	**BALIKESIR_Sava**	**1.88**	**117**	P	**Pn**	**03 25 33.5**	**+0.4**
STEP				S	**Sb**	**03 25 59.5**	**+0.6**
BALB	**Balikesir**	**1.89**	**108**	PN	**Pn**	**03 25 33.7**	**+0.6**
BALB	**Balikesir**	**1.89**	**108**	*e*Pn	**Pn**	**03 25 33.7**	**+0.6**

MLR	Muntele Rosu	5.24	3⇑	iP	Pn	03 26 19.4 +0.1
MDVR	Moldovita	5.34	329⇑	iP	Pn	03 26 16.8 -3.7
MDVR	Moldovita	5.34	329⇑	iP	Pn	03 26 16.8 -3.7
DIVS	Divibare	5.64	315	ePn	Pn	03 26 24.5 -0.2
DIVS	Divibare	5.64	315	ePn	Pn	03 26 24.5 -0.2
VRI	Vrincioaia	5.67	8⇓	iP	Pn	03 26 25.3 +0.2
VRI	Vrincioaia	5.67	8⇓	iP	Pn	03 26 25.3 +0.2
BZS	Buzias	6.08	333⇓	iP	Pn	03 26 28.4 -2.4
BZS	Buzias	6.08	333	S	Sg	03 28 13.9 -1.9

*ISCJB **22** 03:26:14.9±0.6, 4°.71N±0°.06×126°.0E±0°.1, h100km, mb3.9/7, Error ellipse: s-maj=16.1km s-min=5.7km az=151.9*
*IDC **22** 03:26:14.6±2.4, 5°.09N×126°.21E, h78km±25km, mb3.7/7, mb1 3.8/9, mb1mx3.4/63, mbtmp4.1/9, MS3.7/1, Ms1 3.7/1, ms1mx2.9/60, Error ellipse: s-maj=107.0km s-min=15.1km az=67.0*
*MAN **22** 03:26:18.3, 4°.99N×125°.87E, h8km, mb4.7, ML3.5, MS3.4*
ISC 22 03:26:16.3±0.7, 4°.76N±0°.09×126°.0E±0°.1, h100km, n16, σ1§79/18, mb4.0/7, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	Mati	2.19	7	eP	Pn	03 27 00.9	+10
MATI				eS	Sn	03 27 18.6	+0.4
SKMP	Bagumbayan, Su	2.28	320	eP	Pn	03 26 54.1	+1.6
SKMP				eS	Sn	03 27 18.4	-1.9
DAV	Davao City (W)	2.34	350	P	Pn	03 26 47.5	-5.9
	67nm,0.3s,baz=236,slow=11,SNR=2.1						
DAV				S	Sn	03 27 11.9	-10
	95nm,0.3s,baz=120,slow=20,SNR=3.6						
BUKP	Musuan	3.24	343	eP	Pn	03 27 05.4	0.0
BUKP				eS	Sn	03 27 43.3	0.0
PAGZ	Pagadian	4.03	320	eP	Pn	03 27 17.5	+1.5
BUTP	Butuan	4.20	355	eP	Pn	03 27 20.7	+2.4
BUTP				eS	Sn	03 28 15.1	+8.7
SIJI	Sorong	7.67	137	P	Pn	03 28 04.7	-0.7
	5.8nm,0.3s,baz=319,slow=19,SNR=7.0						
SIJI				S	Sn	03 29 28.5	-2.3
	0.9nm,0.3s,baz=37,slow=20,SNR=4.1						
WRA	Warramunga Arr	25.87	162	P	P	03 31 42.1	+3.2
	0.7nm,0.5s,baz=339,slow=10.0,SNR=8.2						
ASAR	Alice Springs	29.28	165	P	P	03 32 11.9	+2.6
	0.2nm,0.5s,baz=353,slow=7.2,SNR=3.3						
KSRS	Korea Array	32.59	3	LR		03 45 31.2	
	comp=Z,136nm,21.2s,baz=234,slow=36						
MKAR	Makanchi Array	56.31	325	P	P	03 35 46.6	-0.2
	0.5nm,0.4s,baz=126,slow=7.8,SNR=14						
KURBB	Kurchatov Arra	60.49	327	P	P	03 36 14.6	-1.1
	0.5nm,0.3s,baz=129,slow=6.7,SNR=4.6						
KURBB				pP	pP	03 36 37.6	-2.9
	0.6nm,0.5s,baz=122,slow=6.9,SNR=3.8						
ARCES	ARCESS Array B	89.24	340	P	P	03 39 00.3	-0.5
	2.1nm,0.9s,baz=70,slow=5.3,SNR=3.8						
SPITS	Spitsbergen Ar	89.34	349	P	P	03 39 01.3	+0.2
	9.6nm,1.0s,baz=91,slow=12,SNR=4.8						
FINES	FINESS Array B	90.59	332	P	P	03 39 06.2	-1.0
	1.3nm,1.1s,baz=72,slow=4.5,SNR=3.7						
TORD	Torodi Ar. Bea	121.91	289	PKP	PKPdf	03 45 00.7	+0.6
	0.3nm,0.8s,baz=101,slow=1.0,SNR=4.2						

NNC 22 03:30:17.7±1.1, 36°.75N×70°.72E, h84km±36km, mb3.4, mpv3.7, 6D, Error ellipse: s-maj=15.8km s-min=9.1km az=110.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.92	33	⇓P	Pn	03 31 16.0	+0.1
	6.6nm,0.3s						
SFK				⇓S	Sn	03 32 01.7	+0.8
	17nm,0.3s						
MNAS	Manas	5.89	13	⇓P	Pn	03 31 42.0	-0.6
	3.9nm,0.7s						
MNAS				⇓S	Sn	03 32 49.4	+0.6
	6.5nm,0.6s						
KK31	Karatay Array	6.35	359	⇓P	Pn	03 31 49.2	+0.5
	2.6nm,0.3s,baz=180,slow=13,SNR=30						
KK31				S	Sn	03 33 00.6	+0.9
	0.8nm,0.3s,baz=184,slow=22,SNR=4.5						
AB31	Akbulak array	14.76	331	P	Pn	03 33 42.0	+0.1
	0.7nm,0.6s,baz=146,slow=12,SNR=12						
AKTO	Aktyubinsk	16.45	330	⇓P	Pn	03 34 03.4	+0.1
	2.3nm,0.9s						

IDC 22 03:39:54.1±3.7, 5°.01S×153°.03E, h0km, mb3.3/2, mb1 3.6/2, mb1mx3.1/50, mbtmp3.3/2, Error ellipse: s-maj=177.2km s-min=46.7km az=122.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.48	229	P	P	03 45 05.5	-0.2
	0.6nm,0.5s,baz=54,slow=9.9,SNR=8.8						
ASAR	Alice Springs	26.15	223	P	P	03 45 30.4	+0.1
	0.2nm,0.4s,baz=58,slow=8.8,SNR=3.6						
TORD	Torodi Ar. Bea	150.59	288	PKPbc	PKPbc	03 59 48.9	-0.3
	0.7nm,1.1s,baz=90,slow=1.3,SNR=2.9						

*ISCJB **22** 03:43:36.8±0.7, 32°.11N±0°.07×94°.91E±0°.09, h10km, mb3.9/14, Error ellipse: s-maj=13.2km s-min=7.3km az=41.4*
*IDC **22** 03:43:37.1±0.8, 32°.21N×95°.02E, h0km, mb3.8/12, mb1 3.9/14, mb1mx3.6/93, mbtmp3.8/14, ML3.5/2, Error ellipse: s-maj=31.5km s-min=17.0km az=51.0*
*NEIC **22** 03:43:38.7±0.5, 32°.16N×94°.96E, h10km, mb4.3/2, Error ellipse: s-maj=10.9km s-min=9.7km az=95.0*
ISC 22 03:43:38.6±0.9, 32°.2N±0°.1×95°.0E±0°.1, h10km, n19, σ0§75/20, mb4.0/14, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	Lhasa	4.08	234	ePn	Pn	03 44 41.1	-0.4
LSA				eSg	Sg	03 45 49.6	-0.2
MKAR	Makanchi Array	17.55	330	P	Pn	03 47 43.1	-0.2
	0.1nm,0.3s,baz=137,slow=13,SNR=7.4						
SONM	Songino Array	17.91	26	P	Pn	03 47 47.9	0.0
	0.3nm,0.3s,baz=213,slow=10,SNR=4.2						
NIL	Nilore	18.29	281	eP	P	03 47 53.0	+0.4
	28nm,0.6s						
KURBB	Kurchatov Arra	22.10	331	P	P	03 48 34.0	+0.2
	4.9nm,0.9s,baz=139,slow=11,SNR=17						
KURK	Kurchatov	22.13	332	P	P	03 48 34.0	-0.2
ZALV	Zalesovo Beam	22.96	345	P	P	03 48 43.5	+0.6
	0.9nm,0.7s,baz=146,slow=8.5,SNR=3.3						
BRVK	Borovoye	27.43	327	eP	P	03 49 24.9	+0.5
	5.1nm,0.7s						
AKTO	Aktyubinsk	32.78	315	P	P	03 50 12.5	+0.8
	1.7nm,0.7s,baz=102,slow=11,SNR=3.3						
BRTR	Keskin Array B	49.37	297	P	P	03 52 29.2	+0.7
	0.4nm,0.6s,baz=93,slow=9.1,SNR=3.3						
AKASG	Malin Array Be	50.91	312	P	P	03 52 39.0	-0.8
	0.8nm,0.5s,baz=73,slow=6.8,SNR=4.0						
KIEV	Kiev	50.92	312	eP	P	03 52 39.3	-0.6
	1.4nm,0.5s						
FINES	FINESS Array B	52.31	325	P	P	03 52 49.7	-0.4
	0.9nm,0.9s,baz=72,slow=8.9,SNR=4.8						
MLR	Muntele Rosu	53.83	306	P	P	03 53 03.3	+1.6
	0.6nm,0.6s,baz=101,slow=9.2,SNR=5.3						
WRA	Warramunga Arr	64.08	138	P	P	03 54 13.8	+0.8
	1.0nm,1.0s,baz=331,slow=7.0,SNR=4.5						
ASAR	Alice Springs	66.83	141	P	P	03 54 31.4	+0.6
	0.7nm,0.5s,baz=324,slow=6.5,SNR=9.3						
ILAR	Eielson Array	72.12	23	P	P	03 55 01.6	-1.4
	0.8nm,0.9s,baz=297,slow=5.4,SNR=7.3						
TORD	Torodi Ar. Bea	85.83	283	P	P	03 56 18.1	-0.8
	1.0nm,0.7s,baz=55,slow=4.9,SNR=5.4						
KOWA	Kowa	89.79	287	P	P	03 56 37.5	-0.4
	1.6nm,0.8s,baz=79,slow=5.2,SNR=3.9						

*ISCJB **22** 03:52:47.0±0.5, 39°.19N±0°.03×42°.26E±0°.04, h9km±5km, Error ellipse: s-maj=5.5km s-min=4.7km az=167.9*
*CSEM **22** 03:52:46.4±0.3, 39°.18N×42°.23E, h12km, ML2.9, Error ellipse: s-maj=8.9km s-min=6.8km az=102.0*
*ATA **22** 03:52:46.8±1.6, 39°.24N×42°.20E, h19km±10km, ML2.6, MW2.6*
*ISK **22** 03:52:46.0, 39°.19N×42°.27E, h5km, ML2.1/5*
*DDA **22** 03:52:46.7, 39°.20N×42°.24E, h7km, Ml2.9*
ISC 22 03:52:46.1±0.9, 39°.21N±0°.02×42°.25E±0°.02, h14km±5km, n28, σ0§60/48, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKAR	Karacoban	0.15	288	iP	Pg	03 52 50.4	+0.2
EKAR				iPg	Sg	03 52 52.7	-0.2
EKAR				eS	Sb	03 52 54.8	+0.9
EKAR				IAML		03 52 59.5	
	comp=Z,134nm,0.2s						
EKAR	Karacoban	0.15	288	iP	Pg	03 52 50.4	+0.2
EKAR				eS	Sg	03 52 52.6	-0.2
EKAR				IAML		03 52 59.5	
	comp=Z,134nm,0.2s						
EKAR	Karacoban	0.15	288	iP	Pb	03 52 50.6	-0.2
EKAR				iS	Sb	03 52 55.0	+1.1
EKAR	Karacoban	0.15	288	P	Pb	03 52 50.6	-0.2
EKAR				S	Sb	03 52 55.0	+1.1
ADCV	BITLIS_Adilcev	0.55	137	iP	Pg	03 52 57.1	+0.2
ADCV				iS	Sb	03 53 05.9	+0.5
ADCV	BITLIS_Adilcev	0.55	137	P	Pg	03 52 57.2	+0.2
ADCV				S	Sb	03 53 05.9	+0.5
EATA	Eleskirt	0.68	16	eP	Pb	03 53 00.3	+0.4
EATA				eS	Sn	03 53 11.2	-0.9
EATA				IAML		03 53 13.4	
	comp=Z,14nm,0.3s						
EATA	Eleskirt	0.68	16	eP	Pb	03 53 00.2	+0.4
EATA				iPg	Pn	03 53 00.9	-0.7
EATA				eS	Sn	03 53 11.2	-0.9
EATA	Eleskirt	0.68	16	iP	Pb	03 53 00.3	+0.4
EATA				iS	Sn	03 53 11.5	-0.6
EATA	Eleskirt	0.68	16	P	Pb	03 53 00.3	+0.4
EATA				S	Sn	03 53 11.5	-0.6
GURO	Guroymak-BITLI	0.68	194	PG	Pg	03 52 59.4	0.0
GURO				SG	Sb	03 53 08.7	-0.4
GURO	Guroymak-BITLI	0.68	194	ePg	Pg	03 52 59.4	0.0
GURO				eSg	Sb	03 53 08.7	-0.4
AGRB	Hanur-Agry	0.68	58	PG	Pg	03 52 59.5	0.0
AGRB	Hanur-Agry	0.68	58	ePg	Pg	03 52 59.5	0.0
HOMI	Horasan	0.87	343	eP	Pb	03 53 03.7	+0.6
HOMI	Horasan	0.87	343	eP	Pb	03 53 03.8	+0.6
HOMI				eS	Sn	03 53 17.8	+0.9
HOMI				IAML		03 53 20.1	
	comp=Z,13nm,0.8s						
HOMI	Horasan	0.87	343	iP	Pg	03 53 02.9	-0.2
HOMI				iS	Sn	03 53 16.0	-0.8
BNGL	BINGOL	0.89	254	eP	Pn	03 53 03.9	-0.5
BNGL				eS	Sn	03 53 17.4	+0.2
BNGL				IAML		03 53 22.2	
	comp=Z,50nm,0.4s						
BNGL	BINGOL	0.89	254	iP	Pb	03 53 03.8	+0.3
BNGL				iS	Sn	03 53 16.9	-0.3
ERZM	Erzurum	0.97	316	eP	Pb	03 53 05.0	+0.1
ERZM				eS	Sn	03 53 19.5	+0.2
ERZM	Erzurum	0.97	316	eP	Pn	03 53 05.4	-0.2
ERZM				eS	Sn	03 53 19.4	+0.2
GEVA	Gevas	1.10	144	eP	Pg	03 53 09.1	+1.8
BNGB	Bing¶ll	1.24	260	PN	Pg	03 53 10.2	+0.2
YEDI	Yedisu-Bingol	1.34	280	PN	Pg	03 53 12.3	+0.4
YEDI	Yedisu-Bingol	1.34	280	ePn	Pg	03 53 12.3	+0.4
SENK	Senkaya-Erzuru	1.35	3	PN	Pg	03 53 12.5	+0.3
SENK	Senkaya-Erzuru	1.35	3	ePn	Pg	03 53 12.5	+0.3
BINT	Bingol	1.41	257	ePn	Pn	03 53 10.2	-1.2

*IDC **22** 03:58:35.4±0.7, 32°.77S×178°.45W, h0km, mb4.3/8, mb1 4.5/10, mb1mx4.2/44, mbtmp4.4/10, ML4.4/2, MS3.7/5, Ms1 3.7/5, ms1mx3.3/48, Error ellipse: s-maj=24.6km s-min=20.3km az=97.0*
*WEL **22** 03:58:36.0, 32°.79S×178°.42W, h10km, ML5.3/25*
*NEIC **22** 03:58:36.8±0.3, 32°.79S×178°.42W, h10km, mb4.5/4, Error ellipse: s-maj=13.0km s-min=9.0km az=112.0*
ISC 22 03:58:39.6±0.5, 32°.81S±0°.06×178°.3W±0°.1, h32km, n78, σ1§69/89, mb4.5/12, MS3.5/4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.55	5	P	Pn	03 59 29.5	-3.0
GLKZ				S	Sn	04 00 09.0	-4.4
RAO	Raoul Island	3.56	5	Pn	Pn	03 59 31.5	-1.2
	76nm,0.3s,baz=156,slow=20,SNR=4.7						
RAO				Sn	Sn	04 00 10.4	-3.2
	115nm,0.3s,baz=180,slow=20,SNR=3.6						
RIZ	Raoul Island	3.56	5	P	Pn	03 59 31.1	-1.7
RIZ				S	Sn	04 00 11.5	-2.3
MXZ	Matakaoa Point	5.50	209	P	Pn	03 59 57.5	-1.7
MXZ				S	Sn	04 01 00.5	-0.9
WMGZ	Waiomatatini S	5.67	207	P	Pn	04 00 00.5	-1.2
WMGZ				S	Sn	04 01 04.2	-1.6
PKGZ	Pakihiroa	5.87	209	P	Pn	04 00 02.8	-1.7
PKGZ				S	Sn	04 01 09.3	-1.3
HAZ	Te Kaha	5.88	212	P	Pn	04 00 03.8	-0.8
HAZ				S	Sn	04 01 11.2	+0.3
PUZ	Puketiti	5.96	207	P	Pn	04 00 03.3	-2.3
PUZ				S	Sn	04 01 10.0	-2.7
RUGZ	Raukumara Rang	6.10	211	P	Pn	04 00 06.3	-1.4
RUGZ				S	Sn	04 01 16.4	-0.2
TWGZ	Tauwhareparae	6.16	208	P	Pn	04 00 07.0	-1.3
TWGZ				S	Sn	04 01 16.5	-1.2
CNGZ	Carnagh Statio	6.34	206	P	Pn	04 00 08.9	-1.9
TKGZ	Te Karaka	6.43	208	P	Pn	04 00 12.2	0.0
TKGZ				S	Sn	04 01 23.4	-1.1
MWZ	Matawai	6.48	210	P	Pn	04 00 10.6	-2.2
MWZ				S	Sn	04 01 24.5	-1.1
OPRZ	Ohinepanea	6.55	218	P	Pn	04 00 13.7	-0.1
URZ	Urewera	6.60	213	Pn	Pn	04 00 11.7	-2.7
	4.1nm,0.3s,baz=36,slow=4.6,SNR=43						
URZ				Sn	Sn	04 01 25.2	-3.3
	7.7nm,0.3s,baz=120,slow=21,SNR=7.8						
URZ	Urewera	6.60	213	P	Pn	04 00 12.3	-2.1
URZ				S	Sn	04 01 26.3	-2.2
RAGZ	Rawiri	6.66	210	P	Pn	04 00 13.5	-1.8
RAGZ				S	Sn	04 01 28.2	-1.9
RIGZ	Rimuhau	6.70	207	P	Pn	04 00 15.0	-0.8
RIGZ				S	Sn	04 01 28.1	-2.9
PRGZ	Paritu Road	6.84	206	P	Pn	04 00 14.9	-2.9
PRGZ				S	Sn	04 01 30.8	-3.7
MKAZ	Moumakai	6.87	230	P	Pn	04 00 21.5	+3.4
SNGZ	Shannon Statio	6.93	209	P	Pn	04 00 19.2	+0.2
SNGZ				S	Sn	04 01 34.9	-1.9
MUGZ	Murupara	6.93	214	P	Pn	04 00 17.5	-1.5
MUGZ				S	Sn	04 01 34.0	-2.8
RTZ	Ruatahuna	6.95	212	P	Pn	04 00 17.8	-1.5
KNZ	Kokohu	7.01	207	P	Pn	04 00 16.7	-3.3
MHGZ	Mahia Peninsul	7.04	205	P	Pn	04 00 17.2	-3.3
RAHZ	Arahi	7.15	210	P	Pn	04 00 22.1	0.0
MTHZ	Maungataniwha	7.21	212	P	Pn	04 00 22.0	-0.8
WHHZ	Waihua	7.23	209	P	Pn	04 00 23.1	+0.1
MRHZ	Matea Rd	7.38	214	P	Pn	04 00 23.8	-1.5
ARHZ	Arapoaanui	7.48	209	P	Pn	04 00 26.4	-0.1
BKZ	Black Stump Fm	7.62	212	P	Pn	04 00 21.5	-6.9
BKZ				P	Pn	04 00 27.6	-0.9
CKHZ	Cape Kidnapper	7.79	207	P	Pn	04 00 29.3	-1.4
KWHZ	Kaweka Forest	7.86	211	P	Pn	04 00 30.4	-1.4
KAHZ	Kahuranaki	7.98	208	P	Pn	04 00 32.4	-1.1
KRHZ	Kereru	8.06	211	P	Pn	04 00 32.3	-2.3
RPZ	Rata Peaks	13.72	214	Pn	Pn	04 01 45.9	-5.9
	0.5nm,0.3s,baz=50,slow=7.9,SNR=2.6						
RPZ				Sn	Sn	04 04 07.4	-16
	0.7nm,0.3s,baz=18,slow=20,SNR=3.7						
DZM	Mont Dzumac	17.23	305	LR	LR	04 08 01.0	
	comp=Z,606nm,19.7s,baz=132,slow=33						
RAR	Rarotonga	20.11	60	LR	LR	04 11 45.1	
	comp=Z,47nm,18.0s,baz=234,slow=39						
PPT	Papeete	29.97	67	LR	LR	04 15 44.8	
	comp=Z,69nm,19.2s,baz=248,slow=34						
STKA	Stephens Creek	33.76	261	LR	LR	04 17 59.1	
	comp=Z,335nm,18.5s,baz=40,slow=35						
CTA	Charters Tower	34.01	283	P	P	04 05 21.9	+1.2
	11nm,0.6s,baz=115,slow=11,SNR=18						
CTAO	Charters Tower	34.01	283	eP	P	04 05 21.9	+1.2
PMG	Port Moresby	39.46	298	LR	LR	04 19 28.1	
	comp=Z,113nm,21.1s,baz=177,slow=32						
ASAR	Alice Springs	42.78	270	P	P	04 06 33.9	-0.6
	5.8nm,0.8s,baz=108,slow=7.8,SNR=31						
WRAB	Tennant Creek	43.98	275	eP	P	04 06 43.2	-1.0
	13nm,0.6s						
WRA	Warramunga Arr	43.98	275	P	P	04 06 43.7	-0.5
	15nm,0.7s,baz=115,slow=7.6,SNR=141						
VNDA	Vanda	45.68	186	P	P	04 06 59.0	+2.0
	0.5nm,0.7s,baz=50,slow=6.2,SNR=3.7						
CASY	Casey	52.90	209	eP	P	04 07 52.5	+0.3
	4.5nm,0.6s						
QSPA	South Pole Qui	57.31	180	eP	P	04 08 24.7	+0.5
SNAA	Sanae	75.76	179	P	P	04 10 31.5	+10
SNAA	Sanae	75.76	179	P	P	04 10 22.5	+0.7
	1.1nm,0.9s,baz=174,slow=10,SNR=2.1						
VNA3	Neumayer Olymp	75.93	176	P	P	04 10 23.9	+1.1
VNA1	Neumayer--Stat	76.59	177	P	P	04 10 27.1	+0.6
KSRS	Korea Array	86.01	320	P	P	04 11 16.7	0.0
	0.6nm,0.3s,baz=134,slow=7.2,SNR=4.3						
KSAR	Wonju Array Be	86.03	320	P	P	04 11 16.7	-0.1
PETK	Petropavlovsk-	88.07	346	P	P	04 11 26.4	0.0
	3.5nm,0.8s,baz=120,slow=5.3,SNR=4.2						
CMB	Columbia Colle	88.72	42	eP	P	04 11 30.9	+1.0
NVAR	Mina Array Bea	90.17	43	P	P	04 11 40.0	+3.0
	0.2nm,0.4s,baz=230,slow=7.0,SNR=2.8						
TUC	Tucson	90.81	51	eP	P	04 11 41.2	+1.3
	1.2nm,0.6s						
BMN	Battle Mountai	92.15	42	eP	P	04 11 46.4	+0.4
	1.0nm,0.5s						
BOSA	Boshof	114.95	203	PKP	PKPdf	04 17 19.1	+1.3
	1.3nm,0.6s,baz=142,slow=0.5,SNR=3.8						
MKAR	Makanchi Array	119.10	309	PKP	PKPdf	04 17 24.2	-0.8
	0.6nm,0.6s,baz=205,slow=1.2,SNR=6.3						
RES	Resolute Bay	119.61	18	ePKPdf	PKPdf	04 17 25.3	+0.2
KURK	Kurchatov	122.51	313	PKP	PKPdf	04 17 31.2	-0.1
KURBB	Kurchatov Arra	122.54	313	PKP	PKPdf	04 17 31.2	-0.2
	1.3nm,0.7s,baz=110,slow=2.3,SNR=9.6						
BVAR	Borovoye Array	127.92	314	PKP	PKPdf	04 17 42.6	+1.0
	1.3nm,0.5s,baz=114,slow=2.5,SNR=9.7						
BRVK	Borovoye	127.99	315	ePKPdf	PKPdf	04 17 42.0	+0.2
ARCES	ARCESS Array B	140.87	347	PKhKP	PKPpre	04 18 02.1	
	1.5nm,0.8s,baz=66,slow=2.2,SNR=4.3						
KBZ	Khabaz	146.18	301	PKPbc	PKPdf	04 18 15.1	-0.3
	1.8nm,0.8s,baz=117,slow=2.3,SNR=4.5						
FINES	FINESS Array B	147.30	338	PKPbc	PKPbc	04 18 19.4	+0.3
	28nm,1.0s,baz=49,slow=3.9,SNR=79						
ASF	Jabal al Asfar	150.38	278	PKPbc	PKPbc	04 18 28.5	+0.4
	3.2nm,0.8s,baz=22,slow=1.7,SNR=7.3						
NB2	NORSAR Subarra	151.08	350	PKP	PKPbc	04 18 28.8	+0.1
	comp=Z,1.3nm,0.7s,baz=17,slow=2.6						
HFS	Hagfors	151.54	347	PKPbc	PKPbc	04 18 29.8	+0.1
	comp=Z,5.5nm,0.7s,baz=108,slow=3.3,SNR=12						
MMAI	Mount Meron Ar	151.77	280	PKPbc	PKPbc	04 18 32.3	+1.0
	comp=Z,7.7nm,0.7s,baz=58,slow=3.8,SNR=8.2						
AKASG	Malin Array Be	153.01	320	PKPbc	PKPbc	04 18 33.9	+0.6
	comp=Z,3.7nm,0.8s,baz=58,slow=2.6,SNR=11						
BRTR	Keskin Array B	153.43	294	PKPbc	PKPbc	04 18 34.6	-0.2
	comp=Z,2.4nm,0.6s,baz=137,slow=4.5,SNR=17						
BRTR				PKPab	PKPab	04 18 46.5	-0.7
	comp=Z,1.1nm,0.9s,baz=81,slow=2.7,SNR=4.3						
CLL	Collm	159.74	339	ePKPab	PKPab	04 19 14.0	+0.4
TORD	Torodi Ar. Bea	160.43	180	PKPab	PKPab	04 19 18.5	+1.0
	comp=Z,0.5nm,0.7s,baz=172,slow=3.5,SNR=3.6						

IDC 22 04:09:17.2±3.0, 32°.74S×178°.37W, h0km, mb3.7/2, mb1 3.9/3, mb1mx3.6/47, mbtmp3.7/3, ML3.3/1, Error ellipse: s-maj=72.9km s-min=45.5km az=123.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	6.63	213	Pn	Pn	04 10 55.2	-0.8
	0.6nm,0.3s,baz=255,slow=4.8,SNR=6.3						
URZ				Sn	Sn	04 12 08.7	-3.5
	1.0nm,0.3s,baz=13,slow=20,SNR=6.2						
ASAR	Alice Springs	42.73	270	P	P	04 17 16.8	+0.5
	0.2nm,0.3s,baz=113,slow=7.9,SNR=4.3						
WRA	Warramunga Arr	43.93	275	P	P	04 17 25.7	-0.4
	0.8nm,0.4s,baz=114,slow=8.0,SNR=12						
FINES	FINESS Array B	147.21	338	PKPbc	PKPbc	04 29 00.9	-0.8
	0.5nm,0.4s,baz=67,slow=3.2,SNR=7.1						

*ISCJB **22** 04:17:23.5±0.7, 1°.70S±0°.05×78°.4W±0°.1, h150km, mb3.8/8, Error ellipse: s-maj=16.0km s-min=7.1km az=174.9*
*IDC **22** 04:17:24.9±2.4, 1°.72S×78°.41W, h149km±21km, mb3.6/8, mb1 3.7/14, mb1mx3.4/47, mbtmp4.1/14, Error ellipse: s-maj=24.9km s-min=15.3km az=80.0*
ISC 22 04:17:24.7±0.8, 1°.69S±0°.07×78°.4W±0°.1, h150km, n23, σ1§29/24, mb4.0/8, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTAV	Otavalo	1.91	359	eP	Pn	04 17 57.6	-1.8
OTAV				i		04 17 59.1	
	comp=Z,159nm,0.3s						
OTAV				eS	Sn	04 18 23.5	-2.4
GCUF	Volcan Galeras	3.08	20	eP	Pn	04 18 13.8	+0.2
CRUC	La Cruz	3.54	24	eP	Pn	04 18 19.4	0.0
FLOC	Florencia	4.26	40	eP	Pn	04 18 27.0	-1.4
POPC	Popayan, Colom	4.54	22	eP	Pn	04 18 33.4	+1.1
HORQ	Saladito	5.43	19	eP	Pn	04 18 40.9	-3.3
PRAC	Prado	6.41	33	eP	Pn	04 18 55.9	-1.2
ROSC	El Rosal	7.66	32	P	Pn	04 19 13.9	-0.1
	comp=Z,1.0nm,0.3s,baz=221,slow=19,SNR=3.2						
NNA	Nana	10.35	171	P	Pn	04 19 47.9	-1.7
	comp=Z,5.2nm,0.3s,baz=337,slow=7.9,SNR=13						
NNA				S	S

19nm,0.4s,baz=312,slow=2.1,SNR=30
URZ S **S** 04 33 47.4 -0.8
9.1nm,0.8s,baz=3.6,slow=9.9,SNR=4.5
URZ Urewera 20.88 198 *eP* **P** 04 30 08.2 +0.8
50nm,1.2s
URZ S **S** 04 33 47.4 -0.8
URZ Urewera 20.88 198 P **P** 04 30 07.6 +0.2
BKZ Black Stump Fm 21.90 198 *eP* **P** 04 30 19.4 +1.5
20nm,1.1s
BFZ Birch Farm 23.38 197 *eP* **P** 04 30 31.9 +0.6
25nm,1.1s
THZ Tophouse 25.40 201 *eP* **P** 04 30 50.4 +0.6
21nm,0.9s
KHZ Kahutara 25.78 200 *eP* **P** 04 30 53.0 0.0
15nm,0.9s
LTZ Lake Taylor 26.52 201 *eP* **P** 04 31 00.8 +1.1
30nm,0.9s
OXZ Oxford 27.09 201 *eP* **P** 04 31 04.4 -0.4
44nm,0.8s
RPZ Rata Peaks 27.77 202 P **P** 04 31 11.7 +0.9
14nm,0.7s,baz=295,slow=19,SNR=2.5
EIDS Eidsvold 32.13 252 *eP* **P** 04 31 49.3 -0.1
37nm,1.0s
CTA Charters Tower 36.54 261 P **P** 04 32 26.7 -0.7
26nm,0.5s,baz=91,slow=10.0,SNR=34
CTAO Charters Tower 36.54 261 *eP* **P** 04 32 26.6 -0.8
PMG Port Moresby 37.73 279 P **P** 04 32 37.0 -0.4
13nm,0.9s,baz=77,slow=11,SNR=3.3
PMG Port Moresby 37.73 279 *eP* **P** 04 32 36.1 -1.3
10nm,0.6s
COEN Coen 40.33 270 *eP* **P** 04 32 58.6 -0.4
15nm,0.6s
STKA Stephens Creek 41.21 243 P **P** 04 33 06.0 0.0
19nm,1.0s,baz=83,slow=10,SNR=12
STKA Stephens Creek 41.21 243 *eP* **P** 04 33 06.3 +0.3
5.7nm,1.0s
WB2 Warramunga Arr 47.69 260 *eP* **P** 04 33 56.5 -0.9
53nm,0.8s
WRAB Tennant Creek 47.69 260 *eP* **P** 04 33 55.8 -1.7
WRA Warramunga Arr 47.70 260 P **P** 04 33 56.6 -0.9
39nm,0.7s,baz=97,slow=7.4,SNR=219
WRA PcP **PcP** 04 35 24.1 +0.5
2.0nm,0.7s,baz=92,slow=3.6,SNR=3.3
AS01 Alice Springs 47.70 255 *eP* **P** 04 33 55.8 -1.7
ASAR Alice Springs 47.75 255 P **P** 04 33 57.5 -0.4
229nm,0.8s,baz=86,slow=8.6,SNR=1023
ASAR PcP **PcP** 04 35 23.8 +0.1
2.7nm,0.6s,baz=94,slow=4.1,SNR=3.0
GUMO Guam 50.78 306 P **P** 04 34 20.6 -0.2
98nm,0.8s,baz=22,slow=20,SNR=4.3
BATI Baumata 59.75 269 P **P** 04 35 25.9 +1.0
46nm,0.7s,baz=247,slow=4.9,SNR=4.4
VNDA Vanda 60.18 186 P **P** 04 35 28.0 +1.2
1.6nm,0.9s,baz=7.7,slow=8.1,SNR=8.6
VNDA Vanda 60.18 186 P **P** 04 35 28.0 +1.2
MBWA Marble Bar 61.06 256 *eP* **P** 04 35 32.4 -1.3
NWAO Narrogin (SRO) 61.80 242 P **P** 04 35 38.2 -0.2
9.9nm,0.7s,baz=325,slow=6.3,SNR=5.9
CASY Casey 66.99 205 *eP* **P** 04 36 11.3 -0.1
MJAR Matsushiro Arr 70.32 321 P **P** 04 36 31.2 -1.2
12nm,0.9s,baz=164,slow=6.2,SNR=16
MAJO Matsushiro 70.32 321 *eP* **P** 04 36 31.8 -0.8
9.6nm,0.5s
MAT Matsushiro 70.32 321 P **P** 04 36 31.7 -0.8
QSPA South Pole Qui 71.59 180 P **P** 04 36 40.4 +0.5
4.6nm,0.6s,baz=7.7,slow=2.3,SNR=4.3
JNU Nakatsue 72.80 315 P **P** 04 36 47.0 -0.5
16nm,0.8s,baz=92,slow=6.7,SNR=5.7
ASAJ Asahikawa 73.35 330 P **P** 04 36 50.1 -0.2
16nm,0.7s,baz=26,slow=0.8,SNR=9.0
PETK Petropavlovsk- 75.09 343 P **P** 04 36 59.8 -0.4
11nm,0.7s,baz=126,slow=8.3,SNR=11
LEM Lembang 75.92 267 P **P** 04 37 05.8 -0.2
44nm,0.7s,baz=92,slow=5.6,SNR=8.7
AFDM Forest Hills D 76.27 41 *eP* **P** 04 37 07.7 +0.5
2.6nm,0.9s
YBH Yreka Blue Hor 76.97 37 P **P** 04 37 11.2 0.0
3.1nm,0.8s,baz=161,slow=6.8,SNR=11
YBH Yreka Blue Hor 76.97 37 *eP* **P** 04 37 11.7 +0.6
4.0nm,0.9s
BEKR Beckworth 77.20 40 *eP* **P** 04 37 12.7 0.0
11nm,0.6s
KSRS Korea Array 77.29 317 P **P** 04 37 13.4 +0.5
9.7nm,1.0s,baz=135,slow=6.4,SNR=27
KSAR Wonju Array Be 77.31 317 P **P** 04 37 13.4 +0.4
KS01 Wonju Array Si 77.32 317 *eP* **P** 04 37 13.0 -0.1
HUMO Hull Mountain 77.38 37 *eP* **P** 04 37 13.5 +0.1
3.8nm,0.9s
NV01 Mina Array Sit 77.63 42 *eP* **P** 04 37 14.8 -0.3
NVAR Mina Array Bea 77.63 42 P **P** 04 37 15.2 +0.2
3.7nm,1.0s,baz=226,slow=9.0,SNR=11
NV11 Mina Array Sit 77.73 42 *eP* **P** 04 37 15.8 +0.3
0.3nm,1.0s
KDAK Kodiak Island 78.23 12 *eP* **P** 04 37 15.2 -2.4
20nm,1.5s
K05A Sumner Lake 78.64 38 *eP* **P** 04 37 20.7 +0.2
17nm,1.4s
USRK Ussuriysk Ar. 78.92 324 P **P** 04 37 20.2 -1.5
3.2nm,0.7s,baz=90,slow=5.7,SNR=6.6
PINE Pine Mountain 79.28 37 *eP* **P** 04 37 24.4 +0.5
8.2nm,0.9s
TUC Tucson 79.52 51 *eP* **P** 04 37 26.4 +1.0
2.6nm,0.9s
X16A Lo Mia Camp, P 80.09 49 *eP* **P** 04 37 29.7 +1.1
9.4nm,1.7s
BRLK Bradley Lake 80.40 12 *eP* **P** 04 37 28.9 -0.5
8.8nm,0.9s
J08A Circle Bar Ran 80.43 38 *eP* **P** 04 37 30.2 +0.1
6.1nm,1.1s
U15A North Rim 80.53 47 *eP* **P** 04 37 31.9 +1.0
8.8nm,1.6s
NJ2 Nanjing 80.80 308 *eP* **P** 04 37 33.4 +1.3
NJ2 pmax pmax
comp=Z,11nm,0.5s
ELK Elko 80.89 42 P **P** 04 37 32.5 -0.2
comp=Z,0.6nm,0.4s,baz=289,slow=8.9,SNR=4.1
G08A Pilot Rock 81.31 36 *eP* **P** 04 37 34.9 +0.2
comp=Z,7.6nm,0.9s
RC01 Rabbit Creek A 81.85 12 *eP* **P** 04 37 36.3 -0.6
comp=Z,9.8nm,1.1s
BMO Blue Mountains 81.99 37 *eP* **P** 04 37 38.0 -0.2
comp=Z,5.8nm,1.3s
SUA Susitna One 82.00 11 *eP* **P** 04 37 36.9 -0.9
comp=Z,7.1nm,0.9s
PMR Palmer 82.43 12 *eP* **P** 04 37 39.2 -0.7
comp=Z,8.1nm,1.2s
GHO Glory Hole Cre 82.63 12 *eP* **P** 04 37 40.5 -0.6
comp=Z,8.5nm,0.9s
F10A Beach Ranch, E 82.69 37 *eP* **P** 04 37 41.1 -0.7
comp=Z,7.3nm,0.9s
TMUT Trail Mountain 82.74 45 *eP* **P** 04 37 43.4 +1.0
comp=Z,8.2nm,1.1s
BMRM Bremner River 82.86 14 *eP* **P** 04 37 41.9 -0.3
comp=Z,8.7nm,0.9s
HLID Hailey 82.97 40 *eP* **P** 04 37 43.6 +0.2
comp=Z,4.0nm,1.0s
HVU Hansel Valley 83.02 42 *eP* **P** 04 37 43.9 +0.2
comp=Z,3.3nm,0.8s
SRU San Rafael Swe 83.10 45 *eP* **P** 04 37 44.7 +0.6
comp=Z,9.6nm,0.4s
TCUT Toone Canyon 83.54 43 *eP* **P** 04 37 46.9 +0.5
comp=Z,16nm,0.8s
PV05 Paradox Valley 83.56 46 *eP* **P** 04 37 47.6 +1.0
comp=Z,7.7nm,1.1s
CAST Castle Rocks 83.57 10 *eP* **P** 04 37 43.8 -1.9
comp=Z,8.2nm,1.5s
TX31 Lajitas Ar. Si 83.59 56 *eP* **P** 04 37 48.1 +1.3
TXAR Lajitas Array 83.59 56 P **P** 04 37 46.1 -0.7
comp=Z,1.8nm,1.0s,baz=215,slow=9.6,SNR=13
HWUT Hardware Ranch 83.69 42 *eP* **P** 04 37 47.0 -0.1
comp=Z,2.0nm,0.7s
PV03 Paradox Valley 83.81 46 *eP* **P** 04 37 48.2 +0.3
comp=Z,6.4nm,1.4s
PV04 Paradox Valley 83.84 46 *eP* **P** 04 37 48.9 +0.9
comp=Z,4.2nm,0.8s
TRF Thorofare Moun 83.91 11 *eP* **P** 04 37 46.3 -1.4
comp=Z,7.7nm,0.9s
ANMO Albuquerque 83.95 50 P **P** 04 37 49.2 +0.6
comp=Z,2.8nm,0.8s,baz=207,slow=5.1,SNR=8.7
ANMO Albuquerque 83.95 50 *eP* **P** 04 37 49.1 +0.6
comp=Z,4.1nm,0.9s
PV01 Paradox Valley 83.95 47 *eP* **P** 04 37 48.8 +0.2
comp=Z,3.4nm,0.9s
DHY Denali Highway 84.12 12 *eP* **P** 04 37 45.9 -2.9
comp=Z,13nm,0.9s
RND Reindeer 84.14 12 *eP* **P** 04 37 48.4 -0.3
comp=Z,20nm,1.2s
MAW Mawson 84.40 199 P **P** 04 37 51.4 +1.4
comp=Z,5.0nm,0.8s,baz=106,slow=8.4,SNR=6.7
MAW Mawson 84.40 199 *eP* **P** 04 37 51.3 +1.2
comp=Z,25nm,1.4s
MCK McKinley 84.42 11 *eP* **P** 04 37 49.3 -0.7
comp=Z,22nm,1.1s
PAX Paxson 84.43 13 *eP* **P** 04 37 49.4 -0.8
comp=Z,7.1nm,1.4s
MCMT McKenzie Canyo 84.60 39 *eP* **P** 04 37 51.8 +0.1
S22A 4UR Ranch, Cre 84.97 48 *eP* **P** 04 37 54.6 +0.8
comp=Z,3.6nm,1.0s
REDW Red Top Meadow 85.05 41 *eP* **P** 04 37 54.1 +0.1
comp=Z,19nm,1.8s
RIDG Independ'e Rid 85.24 13 *eP* **P** 04 37 53.4 -0.8
comp=Z,7.9nm,1.0s
IMW Indian Meadow 85.28 41 *eP* **P** 04 37 55.5 +0.4
comp=Z,4.8nm,1.1s
MLY Manley 85.29 10 *eP* **P** 04 37 52.8 -1.6
comp=Z,9.5nm,1.1s
CCB Clear Creek Bu 85.46 11 *eP* **P** 04 37 54.0 -1.1
comp=Z,18nm,1.1s
BW06 Boulder Array 85.57 42 *eP* **P** 04 37 55.7 -0.8
comp=Z,2.5nm,0.6s
PD31 Pinedale Array 85.57 42 *eP* **P** 04 37 56.1 -0.5
PDAR Pinedale Array 85.57 42 P **P** 04 37 56.0 -0.5
comp=Z,1.3nm,0.8s,baz=205,slow=3.6,SNR=10
PDAR Pinedale Array 85.57 42 *eP* **P** 04 37 55.5 -1.0
SCRK Sand Creek 85.63 13 *eP* **P** 04 37 55.6 -0.6
comp=Z,4.9nm,1.0s
COLA College 85.66 11 *eP* **P** 04 37 55.7 -0.4
MDM Murphy Dome 85.66 11 *eP* **P** 04 37 55.3 -0.9
comp=Z,16nm,1.1s
IL1 Eielson Array 85.75 12 *eP* **P** 04 37 55.2 -1.4
ILAR Eielson Array 85.75 12 P **P** 04 37 55.3 -1.3
comp=Z,6.0nm,1.0s,baz=218,slow=5.6,SNR=33
ILB Eielson Array 85.75 12 *eP* **P** 04 37 55.4 -1.2
SDCO Great Sand Dun 85.91 48 *eP* **P** 04 38 01.1 +2.6
comp=Z,2.2nm,1.1s
MSTX Muleshoe 86.25 52 *eP* **P** 04 38 00.6 +0.7
comp=Z,9.3nm,1.2s
KULM Kulim 86.30 277 *eP* **P** 04 38 01.7 +1.2
comp=Z,24nm,1.2s
BJI Beijing 86.47 314 ⇑*iP* **P** 04 38 01.4 +0.7
BJI Beijing 86.47 314 sS sS 04 49 33.8 -13
BJI Beijing 86.47 314 SS SS 04 54 06.4 +1.3
BJI pmax pmax
comp=Z,17nm,1.9s
BJI LR LR
comp=N,480nm,16.9s
BJI LR LR
comp=E,810nm,19.9s
BJI LR LR
comp=Z,530nm,66.7s
DAWY Dawson 86.77 15 *eP* **P** 04 38 01.4 -0.2
comp=Z,9.4nm,0.9s
EGAK Eagle 86.95 14 *eP* **P** 04 38 02.3 -0.1
comp=Z,7.8nm,1.0s
SKNT Sakolnakorn 87.09 289 P **P** 04 38 05.2 +1.0
comp=Z,7.2nm,1.5s
PSI Prapat 87.14 274 *eP* **P** 04 38 04.5 -0.2
comp=Z,15nm,1.0s,baz=180,slow=4.1,SNR=15
PSI Prapat 87.14 274 *eP* **P** 04 38 04.5 -0.2
comp=Z,36nm,1.2s
ENH Enshi 87.27 303 *eP* **P** 04 38 05.6 +0.8
comp=Z,9.3nm,0.6s
BILL Bilibino 87.34 353 *eP* **P** 04 38 03.7 -0.6
comp=Z,15nm,1.1s
TRTT Trang 88.02 279 P **P** 04 38 09.5 +0.8
comp=Z,28nm,1.0s
GYA Guiyang 88.13 299 *eP* **P** 04 38 09.0 -0.1
GYA pP pP 04 38 51.3 -8.2
GYA PP **PP** 04 41 40.6 +1.3
GYA Guiyang 88.13 299 SKS **SKSac** 04 48 19.5 +1.0
GYA Guiyang 88.13 299 S **S** 04 48 36.0 -0.1
GYA pmax pmax
comp=Z,10.0nm,1.0s
XAN Xi'an 89.18 306 P **P** 04 38 14.8 +1.0
XAN pP PcP 04 38 23.9 +8.9
XAN pmax pmax
comp=Z,14nm,0.6s
XAN pmax pmax
comp=Z,85nm,7.1s
PBKT Sadao Pong 89.68 287 P **P** 04 38 17.9 +1.6
comp=Z,12nm,1.4s,comp=Z,936nm
PBKT Sadao Pong 89.68 287 *eP* **P** 04 38 17.3 +1.0
comp=Z,25nm,1.5s
SNAA Sanae 89.93 178 P **P** 04 38 17.2 +0.5
comp=Z,4.7nm,1.2s,baz=200,slow=6.4,SNR=4.6
HHC Hu-ho-hao-te 89.98 313 *eP* **P** 04 38 18.3 +0.9
HHC pP pP 04 38 58.9 -9.1
HHC PP **PP** 04 41 59.3 +5.5
HHC Hu-ho-hao-te 89.98 313 SS SS 04 55 02.6 +6.1
HHC pmax pmax
comp=Z,27nm,1.0s
NANT Nan 90.65 289 P **P** 04 38 22.4 +1.5
comp=Z,4.1nm,0.9s,comp=Z,153nm
SUKH Sukhothai 91.18 288 P **P** 04 38 25.3 +2.0
comp=Z,5.2nm,0.8s
INK Inuvik 91.61 14 *eP* **P** 04 38 23.2 -1.0
comp=Z,6.5nm,1.1s
CM01 Chiang Mai Arr 92.09 289 *eP* **P** 04 38 28.8 +1.2
CD2 Chengdu 92.09 302 P **P** 04 38 26.3 -1.1
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CMAR Chiang Mai Arr 92.11 289 P **P** 04 38 29.2 +1.6
comp=Z,7.1nm,1.0s,baz=109,slow=2.7,SNR=13
CHTO Chiang Mai 92.23 289 P **P** 04 38 30.2 +2.0
CHTO Chiang Mai 92.23 289 *eP* **P** 04 38 28.4 +0.2
comp=Z,6.1nm,0.7s
YKA Yellowknife Ar 93.52 24 P **P** 04 38 32.1 -0.9
comp=Z,1.6nm,0.9s,baz=237,slow=4.4,SNR=10
LZH Lanzhou 93.80 307 *eP* **P** 04 38 34.8 -0.5
LZH pP PcP 04 38 35.5 -0.2
LZH sP pP 04 38 42.3 -44
LZH pP sP 04 39 14.9 -32
LZH sP sP 04 39 30.3 -17
LZH PP **PP** 04 42 25.3 +1.4
LZH Lanzhou 93.80 307 SKS **SKSac** 04 48 50.3 -0.2
LZH Lanzhou 93.80 307 *e*S **S** 04 49 21.8 -5.3
LZH Lanzhou 93.80 307 sS sS 04 50 36.0 -20
LZH Lanzhou 93.80 307 SS SS 04 55 49.0 -2.4
LZH pmax pmax
comp=Z,19nm,1.0s
LZH pmax pmax
comp=Z,35nm,1.1s
LZH pmax pmax
comp=Z,240nm,4.0s
SONM Songino Array 96.10 318 P **P** 04 38 46.4 +0.9
comp=Z,0.4nm,0.3s,baz=120,slow=4.5,SNR=3.0
TIXI Tiksi 97.53 345 *eP* **P** 04 38 50.0 -1.2
ZALV Zalesovo Beam 110.67 322 PP PP 04 44 33.0 +3.8
comp=Z,0.6nm,0.3s,baz=108,slow=4.8,SNR=3.6
MKAR Makanchi Array 111.85 314 PKiKP **PKiKP** 04 43 50.3 -1.3
comp=Z,1.0nm,0.7s,baz=109,slow=1.7,SNR=9.6
MKAR PP **PP** 04 44 43.2 +5.3
comp=Z,1.4nm,1.1s,baz=102,slow=6.5,SNR=4.0
KURK Kurchatov 114.40 318 *e*PKP PKPdf 04 43 55.2 -1.1
KURBB Kurchatov Arra 114.46 318 PKP PKPdf 04 43 55.2 -1.2
comp=Z,1.0nm,0.8s,baz=90,slow=1.9,SNR=9.3
SCHQ Schefferville 115.35 37 PKP **PKPdf** 04 43 56.8 -1.2
comp=Z,7.4nm,0.7s,baz=236,slow=13,SNR=3.6
KSH Kashi 116.02 306 PKP **PKPdf** 04 44 01.4 +1.4
KSH PP sPKPdf 04 45 12.3 -1.5
KSH AMB AMB
comp=Z,190nm,5.0s
BVAR Borovoye Array 119.31 321 PKP **PKPdf** 04 44 04.9 -0.8
comp=Z,1.5nm,0.3s,baz=110,slow=2.7,SNR=12
BRVK Borovoye 119.37 321 *e*PKPdf **PKPdf** 04 44 04.5 -1.3
AKTO Aktyubinsk 127.38 320 PKP **PKPdf** 04 44 21.6 +0.4
comp=Z,1.4nm,0.7s,baz=237,slow=2.1,SNR=4.1
ARCES ARCESS Array B 127.40 351 PKP **PKPdf** 04 44 20.0 -0.7
comp=Z,1.2nm,0.3s,baz=359,slow=1.4,SNR=22
FINES FINESS Array B 134.56 346 PKP **PKPdf** 04 44 34.8 +0.3
comp=Z,1.5nm,0.4s,baz=31,slow=3.2,SNR=11
LSZ Lusaka 139.42 216 *e*PKPdf **PKPdf** 04 44 45.4 +0.3
RAYN Ar Rayn 141.93 285 *e*PKPpre PKPpre 04 44 44.6
AKASG Malin Array Be 142.50 335 PKhKP PKPpre 04 44 44.1
comp=Z,1.2nm,0.4s,baz=42,slow=4.5,SNR=9.6
KIEV Kiev 142.51 335 *e*PKPpre PKPpre 04 44 44.2
SORM Soroca 144.83 333 ⇓*iP* PKPbc 04 44 51.8 -1.2
KWP Kalwaria Pacla 145.80 339 *e*PKP **PKPdf** 04 44 54.8 -0.4
OJC Ojcow 146.18 343 *e*PKP **PKPbc** 04 44 57.1 0.0
KSP Ksiaz 146.47 347 *e*PKP **PKPbc** 04 44 58.3 +0.3
BURAR Bucovina Array 146.56 335 ⇑*iP* **PKPab** 04 44 59.5 -0.4
CLL Collm 146.62 351 ⇓*iP*KPbc **PKPbc** 04 44 58.1 -0.2
comp=Z,24nm,0.9s
CLL *e* 04 45 16.0
NIE Niedzica 146.75 342 *e*PKP **PKPbc** 04 44 59.3 +0.5
TESR Tescani 146.82 332 ⇓*iP* **PKPbc** 04 44 58.2 -0.9
CRVS Cervenica-Dubn 146.84 340 *e*PKP **PKPab** 04 45 00.6 -0.2
BRG Berggiesshubel 146.89 350 *e*PKP **PKPdf** 04 44 57.1 +0.2
comp=Z,18nm,1.1s
DPC Dobruska-Polom 146.93 347 *e*PKP **PKPbc** 04 44 59.6 +0.3
DPC *ex* x 04 45 05.6
PVCC Panska Ves 147.11 349 *e*PKP **PKPab** 04 45 01.0 -0.8
TRPA Tarpa 147.14 338 ⇑*iP* **PKPbc** 04 44 59.8 -0.1
MORC Moravsky Berou 147.18 345 ⇓*iP* **PKPdf** 04 44 57.4 -0.1
MORC Moravsky Berou 147.18 345 *e*PKP **PKPbc** 04 44 59.9 -0.1
LANS Liptovska Anna 147.24 342 *e*PKP **PKPbc** 04 45 00.8 +0.6
VRI Vrincioaia 147.28 331 ⇓*iP* **PKPbc** 04 45 00.2 -0.2
PLOR Plostina 147.32 331 ⇑*iP* **PKPbc** 04 45 00.0 -0.5
ARCR ARCALIA 147.33 335 ⇓*iP* **PKPbc** 04 45 00.7 +0.2
BRTR Keskin Array B 147.44 317 PKPbc **PKPbc** 04 45 00.8 -0.3
comp=Z,13nm,0.8s,baz=142,slow=3.7,SNR=36
HARR Harsova 147.58 329 ⇑*iP* **PKPbc** 04 45 01.2 0.0
PRU Pruhonice 147.63 348 *e*PKP **PKPbc** 04 45 01.3 +0.1
GOPC GO Pecny, Ondr 147.66 348 *e*PKP **PKPbc** 04 45 01.3 0.0
NKC Novy Kostel 147.75 351 *e*PKP **PKPbc** 04 45 01.7 +0.2
DOPR Dopca 147.79 333 ⇑*iP* **PKPbc** 04 45 02.4 +0.6
VRAC Vranov 147.84 346 *e*PKP **PKPbc** 04 45 01.8 0.0
ANTO Ankara 147.91 317 *e*PKPbc **PKPbc** 04 45 02.3 -0.1
MLR Muntele Rosu 147.92 332 PKPbc **PKPbc** 04 45 02.1 -0.2
comp=Z,2.3nm,1.0s,baz=340,slow=6.2,SNR=13
MLR Muntele Rosu 147.92 332 ⇑*iP* **PKPbc** 04 45 01.7 -0.6
JAVC Velka Javorina 147.99 344 *e*PKP **PKPbc** 04 45 03.3 +1.1
VYHS Vyhne 148.01 343 *e*PKP **PKPbc** 04 45 02.6 +0.4
KRUC Moravsky 148.12 346 *e*PKP **PKPbc** 04 45 02.3 -0.2
DRGR 148.21 337 ⇑*iP* **PKPbc** 04 45 03.1 +0.2
ASF Jabal al Asfar 148.22 302 PKPbc **PKPbc** 04 45 03.8 +0.4
comp=Z,5.2nm,0.8s,baz=329,slow=3.8,SNR=8.7
VOIR 148.36 333 ⇓*iP* **PKPbc** 04 45 03.9 +0.6
GRFO Grafenberg 148.45 352 *e*PKPbc **PKPbc** 04 45 04.0 +0.7
MODS Modra-Piesok 148.54 344 *e*PKP **PKPbc** 04 45 03.0 -0.6
ARR Arges 148.59 333 ⇓*iP* **PKPdf** 04 45 00.9 +0.9
KHC Kasperske Hory 148.64 349 *e*PKP **PKPbc** 04 45 04.1 +0.2
WLF Walferdange 148.87 359 ⇓PKP **PKPbc** 04 45 05.2 +0.8
WLF ⇑PKP 04 52 07.6
WLF ⇑APKP 04 52 11.8
GERES GERESS Array B 148.89 349 PKPbc **PKPbc** 04 45 04.3 -0.3
comp=Z,2.2nm,0.6s,baz=36,slow=2.5,SNR=25
MMAI Mount Meron Ar 149.14 304 *e*PKPbc **PKPbc** 04 45 06.4 +0.7
comp=Z,14nm,0.8s,baz=52,slow=5.4,SNR=17
CONA Conrad Observa 149.31 346 *e*PKiKP **PKPbc** 04 45 05.9 +0.3
comp=Z,26nm,1.4s,SNR=10.0
BZS Buzias 149.61 337 ⇓*iP* **PKPbc** 04 45 06.0 -0.3
MOA Molln 149.73 348 *e*PKPbc **PKPbc** 04 45 06.6 0.0
comp=Z,12nm,1.4s
HERR Herculane 149.91 335 ⇑*iP* **PKPbc** 04 45 06.9 -0.2
ARSA Arzberg 150.02 346 *e*PKPbc **PKPbc** 04 45 07.3 0.0
comp=Z,9.8nm,1.4s
KBA Koelnbreinsper 150.65 348 *e*PKPbc **PKPbc** 04 45 08.3 -0.7
comp=Z,6.9nm,0.6s
RETA Reutte 150.68 352 *e*PKPbc **PKPbc** 04 45 08.5 -0.4
comp=Z,13nm,1.1s,SNR=5.4
SOKA Soboth 150.68 346 *e*PKPbc **PKPbc** 04 45 08.2 -0.7
comp=Z,14nm,1.1s,SNR=5.1
WATA Walderalm 150.71 351 *e*PKPbc **PKPbc** 04 45 08.5 -0.6
comp=Z,6.1nm,0.4s
MOTA Moosalm 150.77 351 *e*PKPbc **PKPbc** 04 45 07.9 -1.4
comp=Z,10.0nm,0.8s,SNR=5.6
WTTA Wattenberg 150.77 351 *e*PKPbc **PKPbc** 04 45 08.0 -1.3
comp=Z,8.1nm,0.4s
OBKA Obir 150.94 346 *i* PKPbc **PKPbc** 04 45 09.5 -0.1
comp=Z,7.2nm,1.2s
DAVA Damuels 150.98 353 *e*PKiKP **PKiKP** 04 45 10.1 -0.2
comp=Z,13nm,0.7s,SNR=5.3
MYKA Terra Mystica 151.02 348 *e*PKPbc **PKPbc** 04 45 08.2 -1.5
comp=Z,4.4nm,0.5s
ABTA Abfaltersbach 151.13 349 *e*PKPbc **PKPbc** 04 45 09.0 -1.0
comp=Z,20nm,0.9s,SNR=6.7
FETA Feichten 151.14 352 *e*PKPbc **PKPbc** 04 45 09.8 -0.4
comp=Z,13nm,0.9s
VTS Vitosha 151.41 331 ⇓*iP* **PKPbc** 04 45 10.8 -0.1
DAVOX Davos/Dischmat 151.48 353 PKPbc **PKPbc** 04 45 11.1 +0.2
comp=Z,8.0nm,0.4s,baz=254,slow=1.5,SNR=18
ESDC Sonseca Array 157.50 18 PKPab **PKPab** 04 45 45.5 -0.2
comp=Z,0.9nm,0.7s,baz=321,slow=3.6,SNR=5.9
TORD Torodi Ar. Bea 173.83 149 PKP **PKPdf** 04 45 25.8 -1.0
comp=Z,1.4nm,0.9s,baz=207,slow=2.1,SNR=5.2
TORD PKPab **PKPab** 04 46 58.5 +0.4
comp=Z,0.7nm,0.9s,baz=262,slow=2.9,SNR=2.7

ISCJB ***22*** *04:31:14.6±0.8, 54°.27S±0°.03×158°.84E±0°.05, h4km±5km, mb5.7/96, MS5.5/229, Error ellipse: s-maj=5.3km s-min=4.4km az=137.9*

IDC ***22*** *04:31:15.4±0.3, 54°.35S×158°.54E, h0km, mb5.1/28, mb1 5.1/29, mb1mx5.0/43, mbtmp5.1/29, ML5.0/1, MS5.3/32, Ms1 5.3/32, ms1mx5.2/37, Error ellipse: s-maj=13.3km s-min=7.4km az=85.0*

BJI ***22*** *04:31:15.4, 54°.30S×158°.80E, h12km, mb5.6/29, mB6.1/33, Ms5.6/47, Ms7 5.3/40*

MOS ***22*** *04:31:16.0±1.6, 54°.27S×158°.73E, h10km, mb5.6/43, MS5.4/22, Error ellipse: s-maj=17.3km s-min=6.7km az=101.1*

NEIC ***22*** *04:31:17.3±0.1, 54°.36S×158°.79E, h14km, mb5.9/62, ME5.5, MS5.5/179, MW5.8, MW5.7, Error ellipse: s-maj=5.3km s-min=4.2km az=135.0, Moment Tensor Solution. s24 Moment tensor: Scale 10^{17}Nm; M_{rr}4.46; $M_{\theta\theta}$-0.58; $M_{\phi\phi}$-3.88; $M_{r\theta}$0.21; $M_{\theta\phi}$-1.43; $M_{\phi r}$4.38; Best double couple: $M_0$6.20000×10^{17} NP1:ϕ_s211.00000°, δ24.00000°, λ111.00000°. NP2:ϕ_s8.00000°, δ68.00000°, λ81.00000°. Principal axes: T 6.3600, Plg66.0000°, Azm262.0000°; N -0.2500, Plg8.0000°, Azm12.0000°; P -6.1100, Plg22.0000°, Azm105.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s190.00000°, δ20.00000°, λ90.00000°. NP2:ϕ_s10.00000°, δ70.00000°, λ90.00000°. Principal axes: T Plg65.0000°, Azm280.0000°; N Plg0.0000°, Azm0.0000°; P Plg25.0000°, Azm100.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC ***22*** *04:31:17.0±0.0, 54°.30S×158°.55E, h15km, Moment Tensor Solution. s19 Moment tensor: Scale 10^{17}Nm; M_{rr}3.76; $M_{\theta\theta}$0.33; $M_{\phi\phi}$-4.08; $M_{r\theta}$-0.87; $M_{\theta\phi}$1.15; $M_{\phi r}$2.85; Best double couple: $M_0$5.10000×10^{17} NP1:ϕ_s344.00000°, δ63.00000°, λ88.00000°. NP2:ϕ_s169.00000°, δ27.00000°, λ94.00000°. Principal axes: T 4.7400, Plg71.0000°, Azm249.0000°; N 0.6000, Plg1.0000°, Azm345.0000°; P -5.3300, Plg18.0000°, Azm75.0000°;*

GCMT ***22*** *04:31:17.3±0.1, 54°.27S×158°.49E, h17km, MW5.8/122, Moment Tensor Solution. s118,c248; s122,c368; Duration: 1s8 Moment tensor: Scale 10^{17}Nm; M_{rr}4.04±.05; $M_{\theta\theta}$0.72±.04; $M_{\phi\phi}$-4.77±.04; $M_{r\theta}$0.92±.11; $M_{\theta\phi}$1.36±.03; $M_{\phi r}$2.30±.11; Best double couple: $M_0$5.24700×10^{17} NP1:ϕ_s5.00000°, δ60.00000°, λ112.00000°. NP2:ϕ_s147.00000°, δ36.00000°, λ58.00000°. Principal axes: T 4.9610, Plg68.0000°, Azm318.0000°; N 0.5670, Plg18.0000°, Azm174.0000°; P -5.5330, Plg12.0000°, Azm80.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

WEL ***22*** *04:31:17.0, 54°.36S×158°.79E, h14km*

ISC 22 04:31:16.6±0.5, 54°.30S±0°.03×158°.96E±0°.04, h6km±2km, h7km:pP-P, n1051, σ2°18/1002, mb5.8/96, MS5.5/230, 59C-30D, Macquarie Island region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**0.20**	**180**	*e*Pg	**Pg**		**04 31 21.2**	**+0.7**
MCQ	**Macquarie Isla**	**0.20**	**180**	*e*P	**Pg**		**04 31 21.2**	**+0.7**
APZ	**The Paps**	**9.42**	**41**	P	**Pn**		**04 33 30.4**	**-2.4**
APZ				S	**Sn**		**04 35 11.7**	**-7.3**
PYZ	**Puysegur Point**	**9.52**	**34**	*e*Pn	**Pn**		**04 33 33.2**	**-0.9**
PYZ	**Puysegur Point**	**9.52**	**34**	P	**Pn**		**04 33 33.4**	**-0.7**
WHZ	**Wether Hill Ro**	**10.20**	**38**	*e*Pn	**Pn**		**04 33 41.6**	**-1.8**
WHZ	**Wether Hill Ro**	**10.20**	**38**	P	**Pn**		**04 33 41.2**	**-2.2**
WHZ				S	**Sn**		**04 35 30.8**	**-7.1**
DCZ	**Deep Cove**	**10.30**	**34**	*e*Pn	**Pn**		**04 33 45.7**	**+1.1**
DCZ	**Deep Cove**	**10.30**	**34**	P	**Pn**		**04 33 44.4**	**-0.2**
MLZ	**Mavora Lakes**	**10.71**	**37**	*e*Pn	**Pn**		**04 33 50.6**	**+0.2**
MLZ	**Mavora Lakes**	**10.71**	**37**	P	**Pn**		**04 33 50.9**	**+0.5**
MLZ				S	**Sn**		**04 35 46.8**	**-3.8**
TUZ	**Tuapeka**	**10.79**	**44**	P	**Pn**		**04 33 50.9**	**-0.5

EAZ	Earnscleugh	11.27	41	P	Pn	04 33 58.0	0.0
EAZ				S	Sn	04 35 59.0	-5.0
WKZ	Wanaka	11.50	39	*e*Pn	Pn	04 34 03.8	+2.7
WKZ	Wanaka	11.50	39	P	Pn	04 34 02.3	+1.1
WKZ				S	Sn	04 36 06.1	-3.7
ODZ	Otahua Downs	11.95	44	*e*Pn	Pn	04 34 07.2	0.0
ODZ	Otahua Downs	11.95	44	P	Pn	04 34 05.2	-2.0
ODZ				S	Sn	04 36 13.6	-7.1
JCZ	Jackson Bay	12.07	36	P	Pn	04 34 10.7	+1.6
LBZ	Lake Benmore	12.31	41	*e*Pn	Pn	04 34 12.2	-0.1
LBZ	Lake Benmore	12.31	41	P	Pn	04 34 10.6	-1.7
LBZ				S	Sn	04 36 23.5	-6.2
FOZ	Fox Glacier	12.91	38	*e*Pn	Pn	04 34 23.3	+3.0
FOZ	Fox Glacier	12.91	38	P	Pn	04 34 22.9	+2.5
RPZ	Rata Peaks	13.22	42	Pn	Pn	04 34 26.2	+1.6
6.9nm,0.3s,baz=197,slow=5.1,SNR=14							
RPZ				Sn	Sn	04 36 43.9	-7.9
1.6nm,0.3s,baz=58,slow=9.3,SNR=2.7							
RPZ	Rata Peaks	13.22	42	P	Pn	04 34 25.0	+0.4
RPZ				P	P	04 34 27.0	-7.7
WVZ	Waitaha Valley	13.64	39	P	Pn	04 34 31.7	+1.3
TAU	Tasmania Unive	13.73	321	*e*Pn	Pn	04 34 28.4	-3.2
TAU				*e*Sn	Sn	04 36 51.4	-13
TAU	Tasmania Unive	13.73	321	*e*P	Pn	04 34 28.4	-3.2
MQZ	McQueen's Vall	13.87	46	*e*Pn	Pn	04 34 33.1	-0.4
MQZ	McQueen's Vall	13.87	46	P	Pn	04 34 32.7	-0.8
OXZ	Oxford	13.93	43	*e*Pn	Pn	04 34 34.8	+0.5
OXZ	Oxford	13.93	43	P	Pn	04 34 33.5	-0.9
OKCZ	Okains Bay	14.03	47	P	Pn	04 34 35.9	+0.2
INZ	Inchbonnie	14.21	40	P	Pn	04 34 38.3	+0.2
LTZ	Lake Taylor	14.48	43	*e*Pn	Pn	04 34 42.8	+0.9
KHZ	Kahutara	15.30	45	*e*Pn	Pn	04 34 53.7	+0.8
2μm,1.9s							
KHZ	Kahutara	15.30	45	P	Pn	04 34 53.4	+0.5
THZ	Tophouse	15.60	42	*e*Pn	Pn	04 34 58.6	+1.8
1μm,1.8s							
THZ	Tophouse	15.60	42	P	Pn	04 34 58.0	+1.2
BSWZ	Blackbirch Sta	16.02	44	P	P	04 35 04.5	-1.3
QRZ	Quartz Range	16.26	40	P	Pn	04 35 05.6	+0.3
SNZO	South Karori	16.70	45	*e*Pn	P	04 35 12.2	-1.1
2μm,1.8s							
BFZ	Birch Farm	17.88	47	*e*Pn	P	04 35 26.9	+0.5
1μm,1.9s							
TOO	Toolangi	19.12	326	P	Pn	04 35 40.6	-0.2
baz=19,SNR=33							
TOO	Toolangi	19.12	326	P	Pn	04 35 41.0	+0.2
TOO				pmax	pmax		
comp=Z,571nm,1.9s							
BKZ	Black Stump Fm	19.25	45	*e*P	Pn	04 35 44.7	+2.4
comp=Z,1μm,1.9s							
CNB	Canberra Magne	20.13	337	P	Pn	04 35 52.6	-0.4
baz=20,SNR=12							
CAN	Canberra	20.21	336	*e*P	P	04 35 52.7	+0.7
comp=Z,1μm,1.8s							
CAN				*e*S	Sn	04 39 41.1	-0.4
CAN				LR	LR		
comp=Z,15μm,19.0s							
CAN	Canberra	20.21	336	*e*P	P	04 35 52.7	+0.7
CAN				*e*S	Sn	04 39 41.1	-0.4
CAN				pmax	pmax		
comp=Z,1μm,1.8s							
CAN				MLR	MLR		
comp=Z,15μm,19.0s							
URZ	Urewera	20.27	45	P	P	04 35 53.4	+0.9
comp=Z,96nm,1.1s,baz=228,slow=7.7,SNR=17							
URZ				S	Sn	04 39 42.7	0.0
comp=Z,5.5nm,0.9s,baz=351,slow=5.2,SNR=2.4							
URZ				LR	LR	04 43 27.0	
comp=Z,13μm,18.1s,baz=221,slow=36							
URZ	Urewera	20.27	45	*e*P	Pn	04 35 54.9	+0.4
comp=Z,1μm,1.6s							
URZ				S	Sn	04 39 42.7	0.0
RIV	Riverview	21.19	342	P	P	04 36 04.2	+1.7
baz=21,SNR=6.2							
RIV	Riverview	21.19	342	P	P	04 36 04.5	+2.0
RIV				pmax	pmax		
comp=Z,307nm,1.2s							
YNG	Young	21.33	335	P	P	04 36 04.1	0.0
baz=21,SNR=11							
MXZ	Matakaoa Point	21.36	46	*e*P	P	04 36 08.4	+4.1
comp=Z,1μm,1.7s							
OUZ	Omahuta	21.65	34	*e*P	P	04 36 11.3	+4.0
comp=Z,712nm,1.7s							
MGCD	Mangrove Creek	21.81	342	P	P	04 36 09.7	+0.6
baz=22,SNR=5.6							
VNDA	Vanda	23.34	178	P	P	04 36 24.5	-0.4
comp=Z,16nm,0.8s,baz=344,slow=9.3,SNR=47							
VNDA				S	S	04 40 40.5	+2.8
comp=Z,4.9nm,1.2s,baz=110,slow=17,SNR=1.6							
VNDA				LR	LR	04 43 51.4	
comp=Z,9μm,19.1s,baz=359,slow=32							
VNDA	Vanda	23.34	178	*e*P	P	04 36 24.6	-0.4
comp=Z,75nm,1.4s							
VNDA				S	S	04 40 40.5	+2.8
VNDA	Vanda	23.34	178	*e*P	P	04 36 24.6	-0.4
VNDA				S	S	04 40 40.5	+2.8
VNDA				pmax	pmax		
comp=Z,75nm,1.4s							
SBA	Scott Base	23.82	176	*e*P	P	04 36 32.4	+2.7
comp=Z,270nm,1.8s							
SBA				LR	LR		
comp=Z,8μm,20.0s							
SBA	Scott Base	23.82	176	*e*P	P	04 36 32.4	+2.7
SBA				pmax	pmax		
comp=Z,270nm,1.8s							
SBA				MLR	MLR		
comp=Z,8μm,20.0s							
ARMA	Armidale	24.45	345	P	P	04 36 35.1	-1.0
baz=24,SNR=8.9							
ARMA	Armidale	24.45	345	*e*P	P	04 36 36.4	+0.3
comp=Z,260nm,1.6s							
ARMA				LR	LR		
comp=Z,8μm,20.0s							
CMSA	Cobar Meteorol	24.66	332	P	P	04 36 37.1	-0.7
baz=24,SNR=14							
HTT	Hallett	25.21	318	P	P	04 36 41.9	-1.0
baz=25,SNR=19							
STKA	Stephens Creek	25.61	324	P	P	04 36 46.8	+0.3
comp=Z,60nm,1.3s,baz=145,slow=11,SNR=24							
STKA				S	S	04 41 23.1	+8.4
comp=Z,3.7nm,0.9s,baz=332,slow=5.8,SNR=1.8							
STKA				LR	LR	04 46 04.8	
comp=Z,11μm,18.1s,baz=151,slow=35							
STKA	Stephens Creek	25.61	324	*e*P	P	04 36 47.0	+0.5
comp=Z,51nm,1.4s							
STKA				S	S	04 41 23.1	+8.4
STKA	Stephens Creek	25.61	324	*e*P	P	04 36 47.0	+0.5
STKA				pmax	pmax		
comp=Z,51nm,1.4s							
CASY	Casey	26.06	224	*e*P	P	04 36 50.5	+0.3
comp=Z,149nm,1.4s							
CASY				LR	LR		
comp=Z,4μm,22.0s							
BBOO	Buckleboo	26.92	314	P	P	04 36 58.6	+0.3
baz=27,SNR=6.9							
BBOO	Buckleboo	26.92	314	*e*P	P	04 36 58.4	+0.1
comp=Z,556nm,1.9s							
BBOO				LR	LR		
comp=Z,18μm,19.0s							
RMQ	Roma	28.79	341	P	P	04 37 14.3	-0.8
baz=29,SNR=19							
EIDS	Eidsvold	29.49	345	P	P	04 37 21.2	-0.1
baz=29,SNR=5.9							
EIDS	Eidsvold	29.49	345	*e*P	P	04 37 21.1	-0.1
comp=Z,358nm,2.0s							
EIDS				LR	LR		
comp=Z,7μm,19.0s							
QLP	Quilpie	29.75	333	P	P	04 37 24.0	+0.5
baz=30,SNR=9.5							
RAO	Raoul Island	30.13	43	LR	LR	04 49 26.8	
comp=Z,5μm,18.2s,baz=201,slow=36							
FORT	Forrest	32.28	304	P	P	04 37 46.3	+0.5
baz=32,SNR=8.0							
FORT	Forrest	32.28	304	*e*P	P	04 37 45.8	0.0
comp=Z,145nm,0.9s							
FORT				LR	LR		
comp=Z,8μm,22.0s							
DZM	Mont Dzumac	32.68	13	P	P	04 37 50.6	+1.2
comp=Z,33nm,0.9s,baz=165,slow=4.3,SNR=12							
DZM				S	S	04 43 09.7	+3.7
comp=Z,3.2nm,0.7s,baz=256,slow=23,SNR=1.7							
DZM				LR	LR	04 48 35.3	
comp=Z,3μm,19.4s,baz=194,slow=32							
DZM	Mont Dzumac	32.68	13	*e*P	P	04 37 48.8	-0.6
comp=Z,384nm,1.4s							
DZM				*e*S	S	04 43 03.0	-2.9
comp=Z,991nm,26.9s							
DZM				*e*LQ	LQ	04 44 59.9	
comp=Z,7μm,25.1s							
DZM				*e*LR	LR	04 46 24.8	
comp=Z,5μm,25.5s							
MIR	Mirnyy	33.05	222	⇑ *i*P	P	04 37 56.0	+3.8
MIR				*i*		04 37 59.0	
MIR				*e*		04 39 08.0	
MIR				pmax	pmax		
comp=Z,319nm,2.0s							
MIR				pmax	pmax		
comp=Z,4μm,8.0s							
MIR				MLR	MLR		
comp=N,7μm,16.0s							
MIR				MLR	MLR		
comp=E,6μm,16.0s							
MIR				MLR	MLR		
comp=Z,11μm,16.0s							
KMBL	Kambalda	34.95	296	P	P	04 38 09.0	-0.1
baz=35,SNR=4.5							
CTA	Charters Tower	35.51	339	P	P	04 38 13.9	-0.1
comp=Z,44nm,0.9s,baz=168,slow=9.6,SNR=29							
CTA				S	S	04 43 48.5	-1.1
comp=Z,1.4nm,0.4s,baz=334,slow=17,SNR=2.3							
CTA				LR	LR	04 51 09.9	
comp=Z,5μm,18.9s,baz=166,slow=34							
CTAO	Charters Tower	35.51	339	*e*P	P	04 38 14.4	+0.4
comp=Z,348nm,1.5s							
CTAO				LR	LR		
comp=Z,6μm,20.0s							
CTAO	Charters Tower	35.51	339	*e*P	P	04 38 14.4	+0.4
CTAO				pmax	pmax		
comp=Z,348nm,1.5s							
CTAO				MLR	MLR		
comp=Z,6μm,20.0s							
QSPA	South Pole Qui	35.81	180	P	P	04 38 16.5	+0.1
comp=Z,34nm,0.9s,baz=3.3,slow=1.7,SNR=20							
QSPA				S	S	04 43 53.3	-0.6
comp=Z,1.0nm,0.5s,baz=283,slow=6.4,SNR=1.4							
QSPA				LR	LR	04 50 42.8	
comp=Z,5μm,21.0s,baz=19,slow=33							
QSPA	South Pole Qui	35.81	180	*e*P	P	04 38 16.0	-0.4
comp=Z,46nm,0.9s							
QSPA				S	S	04 43 53.2	-0.6
AS01	Alice Springs	35.86	319	*e*P	P	04 38 15.1	-1.9
AS31	Alice Springs	35.88	319	*e*P	P	04 38 16.2	-0.9
comp=Z,36nm,1.0s							
AS31				LR	LR		
comp=Z,100nm,21.0s							
ASAR	Alice Springs	35.88	319	P	P	04 38 16.1	-1.1
comp=Z,59nm,1.1s,baz=154,slow=7.5,SNR=74							
ASAR				PcP	PcP	04 40 42.3	-2.0
comp=Z,4.3nm,0.7s,baz=146,slow=3.7,SNR=7.4							
ASAR				S	S	04 43 54.9	-0.5
comp=Z,0.4nm,0.7s,baz=162,slow=24,SNR=2.6							
NWAO	Narrogin (SRO)	36.27	289	P	P	04 38 18.4	-2.0
comp=Z,15nm,0.7s,baz=335,slow=7.0,SNR=9.6							
NWAO				S	S	04 44 02.4	+1.3
comp=Z,16nm,1.2s,baz=43,slow=11,SNR=1.7							
NWAO				LR	LR	04 49 58.4	
comp=Z,10μm,18.3s,baz=360,slow=31							
NWAO	Narrogin (SRO)	36.27	289	*e*P	P	04 38 19.2	-1.2
comp=Z,167nm,1.4s							
NWAO				*e*PcP	PcP	04 40 44.0	-1.3
NWAO				S	S	04 44 02.4	+1.3
NWAO	Narrogin (SRO)	36.27	289	*e*P	P	04 38 19.2	-1.2
NWAO				*e*		04 40 44.0	
NWAO				S	S	04 44 02.4	+1.3
NWAO				pmax	pmax		
comp=Z,167nm,1.4s							
H01W1	Cape Leeuwin H	36.56	283	T	T	05 17 02.4	
baz=136,slow=76							
H01W2	Cape Leeuwin H	36.57	283	T	T	05 17 03.1	
baz=136,slow=76							
H01W3	Cape Leeuwin H	36.58	283	T	T	05 17 03.7	
baz=136,slow=76							
QIS	Mount Isa	36.77	329	P	P	04 38 24.1	-0.6
baz=37,SNR=4.9							
KLBR	Kellerberrin	36.99	291	P	P	04 38 25.6	-1.0
baz=37,SNR=20							
WRKA	Warakurna	37.03	310	P	P	04 38 25.8	-1.1
baz=37,SNR=33							
MUN	Mundaring	37.55	289	P	P	04 38 31.4	+0.1
baz=37,SNR=7.8							
MTSU	Mount Surprise	37.82	337	P	P	04 38 34.2	+0.5
baz=38,SNR=11							
BLDU	Ballidu	38.32	291	P	P	04 38 37.2	-0.6
baz=38,SNR=4.6							
WR0	Warramunga Arr	39.02	322	PFAKE		04 38 50.0	+6.3
WR0				LR	LR		
comp=Z,26μm,18.0s							
WR8	Warramunga Arr	39.03	322	PFAKE		04 38 50.0	+6.1
WR8				LR	LR		
comp=Z,26μm,18.0s							
WR7	Warramunga Arr	39.04	322	PFAKE		04 39 00.0	+16
WR7				LR	LR		
comp=Z,26μm,18.0s							
WR6	Warramunga Arr	39.05	322	PFAKE		04 39 00.0	+16
WR6				LR	LR		
comp=Z,26μm,18.0s							
WR5	Warramunga Arr	39.06	322	PFAKE		04 39 00.0	+16
WR5				LR	LR		
comp=Z,26μm,19.0s							
WR4	Warramunga Arr	39.07	322	PFAKE		04 39 00.0	+16
WR4				LR	LR		
comp=Z,25μm,18.0s							
WC3	Warramunga Arr	39.08	322	PFAKE		04 39 00.0	+16
WC3				LR	LR		
comp=Z,26μm,18.0s							
WR3	Warramunga Arr	39.08	322	PFAKE		04 39 00.0	+16
WR3				LR	LR		
comp=Z,26μm,18.0s							
WC4	Warramunga Arr	39.09	322	PFAKE		04 39 00.0	+16
WC4				LR	LR		
comp=Z,26μm,18.0s							
WR2	Warramunga Arr	39.09	322	PFAKE		04 39 00.0	+16
WR2				LR	LR		
comp=Z,24μm,19.0s							
WB2	Warramunga Arr	39.10	322	*e*P	P	04 38 42.8	-1.7
WB2				*e*PcP	PcP	04 40 54.4	+0.2
WB2				LR	LR		
comp=Z,27μm,20.0s							
WR1	Warramunga Arr	39.10	322	PFAKE		04 39 00.0	+16
WR1				LR	LR		
comp=Z,26μm,19.0s							
WRA	Warramunga Arr	39.10	322	P	P	04 38 42.5	-1.9
comp=Z,30nm,1.0s,baz=160,slow=7.1,SNR=92							
WRA				PP	PP	04 40 14.2	+0.2
comp=Z,16nm,1.1s,baz=157,slow=10,SNR=5.6							
WRA				PcP	PcP	04 40 52.5	-1.6
comp=Z,14nm,1.1s,baz=159,slow=2.9,SNR=6.4							
WRA				S	S	04 44 45.9	+1.5
comp=Z,1.5nm,1.2s,baz=172,slow=19,SNR=5.4							
WRA				LR	LR	04 54 29.8	
comp=Z,27μm,18.2s,baz=160,slow=36							
WRAB	Tennant Creek	39.11	322	*e*P	P	04 38 43.3	-1.2
comp=Z,435nm,1.7s							
WRAB				LR	LR		
comp=Z,27μm,18.0s							
WRAB	Tennant Creek	39.11	322	*c i*P	P	04 38 42.5	-2.0
WRAB				pmax	pmax		
comp=Z,87nm,1.6s							
WC2	Warramunga Arr	39.11	322	PFAKE		04 39 00.0	+15
WC2				LR	LR		
comp=Z,29μm,18.0s							
WB3	Warramunga Arr	39.12	322	PFAKE		04 39 00.0	+15
WB3				LR	LR		
comp=Z,26μm,18.0s							
WC1	Warramunga Arr	39.12	322	PFAKE		04 39 00.0	+15
WC1				LR	LR		
comp=Z,20μm,18.0s							
WB4	Warramunga Arr	39.13	322	PFAKE		04 39 00.0	+15
WB4				LR	LR		
comp=Z,24μm,19.0s							
WB5	Warramunga Arr	39.16	322	PFAKE		04 39 00.0	+15
WB5				LR	LR		
comp=Z,25μm,19.0s							
WB6	Warramunga Arr	39.18	322	PFAKE		04 39 00.0	+15
WB6				LR	LR		
comp=Z,26μm,18.0s							
WB8	Warramunga Arr	39.21	322	PFAKE		04 39 00.0	+15
WB8				LR	LR		
comp=Z,26μm,18.0s							
WB9	Warramunga Arr	39.23	322	PFAKE		04 39 00.0	+14
WB9				LR	LR		
comp=Z,53μm,18.0s							
WB0	Warramunga Arr	39.25	322	PFAKE		04 39 00.0	+14
WB0				LR	LR		
comp=Z,25μm,19.0s							
MORW	Morawa	39.88	292	P	P	04 38 50.1	-0.7
baz=40,SNR=10							
MEEK	Meekatharra	40.43	297	P	P	04 38 55.0	-0.5
baz=40,SNR=14							
COEN	Coen	42.12	337	P	P	04 39 09.2	-0.2
baz=42,SNR=20							
COEN	Coen	42.12	337	*e*P	P	04 39 08.8	-0.6
comp=Z,414nm,1.6s							
COEN				LR	LR		
comp=Z,9μm,19.0s							
MAW	Mawson	43.57	214	P	P	04 39 19.3	-1.2
comp=Z,24nm,1.0s,baz=117,slow=9.9,SNR=14							
MAW				PcP	PcP	04 41 09.2	+1.3
comp=Z,22nm,1.0s,baz=124,slow=4.1,SNR=6.3							
MAW				S	S	04 45 48.0	-1.5
comp=Z,1.1nm,0.7s,baz=310,slow=6.9,SNR=1.5							
MAW				LR	LR	04 56 43.0	
comp=Z,3μm,18.0s,baz=114,slow=35							
MAW	Mawson	43.57	214	*e*P	P	04 39 20.9	+0.3
comp=Z,25nm,1.4s							
MAW				PcP	PcP	04 41 09.2	+1.3
MAW				S	S	04 45 48.0	-1.5
MAW	Mawson	43.57	214	*e*P	P	04 39 20.9	+0.3
MAW						04 41 09.2	
MAW				S	S	04 45 48.0	-1.5
MAW				pmax	pmax		
comp=Z,25nm,1.4s							
MBWA	Marble Bar	44.39	302	*e*P	P	04 39 27.1	-0.6
comp=Z,485nm,1.9s							
MBWA				LR	LR		
comp=Z,7μm,18.0s							
HNR	Honiara	44.76	1	P	P	04 39 33.2	+2.5
comp=Z,255nm,0.8s,baz=58,slow=9.9,SNR=2.8							
HNR				S	S	04 46 04.8	-3.0
comp=Z,64nm,0.3s,baz=64,slow=22,SNR=1.8							
HNR				LR	LR	04 54 54.9	
comp=Z,3μm,18.9s,baz=183,slow=32							
KNRA	Kununurra	45.13	317	P	P	04 39 32.7	-0.9
baz=45,SNR=13							
RAR	Rarotonga	45.37	60	P	P	04 39 36.9	+1.3
comp=Z,34nm,0.8s,baz=143,slow=2.2,SNR=3.8							
RAR				LR	LR	04 55 08.3	
comp=Z,3μm,19.7s,baz=212,slow=31							
PMG	Port Moresby	45.76	344	P	P	04 39 38.3	-0.3
comp=Z,31nm,0.8s,baz=182,slow=5.9,SNR=14							
PMG				S	S	04 46 24.3	+1.9
comp=Z,6.3nm,0.4s,baz=298,slow=5.6,SNR=3.5							
PMG				LR	LR	04 57 20.7	
comp=Z,6μm,18.4s,baz=181,slow=34							
PMG	Port Moresby	45.76	344	*e*P	P	04 39 39.2	+0.6
comp=Z,139nm,1.1s							
PMG				S	S	04 46 24.3	+1.9
PMG	Port Moresby	45.76	344	*e*P	P	04 39 39.2	+0.6
PMG				S	S	04 46 24.3	+1.9
PMG				pmax	pmax		
comp=Z,139nm,1.1s							
GIRL	Giralia	45.98	295	P	P	04 39 39.4	-1.0
baz=46,SNR=4.6							
AFI	Afiamalu	46.37	41	P	P	04 39 45.8	+2.3
comp=Z,55nm,1.0s,baz=310,slow=14,SNR=4.3							
AFI				S	S	04 46 37.8	+6.6
comp=Z,9.4nm,0.4s,baz=244,slow=21,SNR=2.0							
AFI				LR	LR	04 59 23.4	
comp=Z,987nm,18.9s,baz=194,slow=36							
KDU	Kakadu	46.47	323	P	P	04 39 43.2	-1.0
baz=46,SNR=4.5							
MTN	Manton Dam	46.80	321	P	P	04 39 46.0	-0.9
baz=47,SNR=5.0							
MTN	Manton Dam	46.80	321	*e*P	P	04 39 45.3	-1.5
comp=Z,117nm,1.2s							
MTN				LR	LR		
comp=Z,10μm,22.0s							
FUNA	Funafuti	48.45	27	PFAKE		04 40 10.0	+10
FUNA				LR	LR		
comp=Z,3μm,20.0s							
TBI	Tubuai	49.15	72	*e*S	S	04 47 11.5	+0.9
comp=Z,4μm,28.5s							
TBI				*e*SS	SS	04 50 43.4	+1.9
comp=Z,1μm,33.0s							
TBI				*e*LR	LR	04 54 02.6	
comp=Z,11μm,31.2s,baz=213							
TBI	Tubuai	49.15	72	*e*T	T	05 32 46.9	
comp=Z,10nm,0.4s							
SYO	Syowa Base	49.29	204	⇑ *e*P	P	04 40 02.8	-2.6
SYO	Syowa Base	49.29	204	⇓ *i*pP	pP	04 40 08.0	+0.5
RABL	Rabaul	50.26	351	PFAKE		04 40 30.0	+17
RABL				LR	LR		
comp=Z,1μm,19.0s							
SAUI	Saumlaki	51.25	324	PFAKE		04 40 30.0	+9.1
SAUI				LR	LR		
comp=Z,15μm,19.0s							
PAF	Port-aux-Franc	51.58	237	PFAKE		04 40 30.0	+6.9
PAF				LR	LR		
comp=Z,11μm,19.0s							
BATI	Baumata	52.15	314	P	P	04 40 28.2	+0.4
comp=Z,30nm,0.5s,baz=191,slow=8.5,SNR=7.2							
BATI				S	S	04 48 00.8	+8.4
comp=Z,27nm,0.4s,baz=93,slow=9.5,SNR=2.0							
SOEI	Soe	52.31	315	*e*P	P	04 40 30.4	+1.4
comp=Z,404nm,1.4s							
SOEI				LR	LR		
comp=Z,9μm,20.0s							
MANU	Manus Island	52.95	345	*e*P	P	04 40 33.8	+0.2
comp=Z,550nm,1.9s							
MANU				LR	LR		
comp=Z,1μm,19.0s							
NVL	N'lazarevskaya	53.03	193	⇓ *i*P	P	04 40 33.0	-0.6
NVL				*i* S	S	04 48 03.5	+0.3
NVL				*e*		04 50 21.0	
NVL				*e*SS	SS	04 51 39.4	-2.0
NVL				pmax	pmax		
comp=Z,105nm,1.7s							
NVL				MLR	MLR		
comp=Z,4μm,15.0s							
PAE	Paea	53.67	68	*e*T	T	05 38 24.4	
comp=Z,2.6nm,0.3s							
SNAA	Sanae	53.67	187	P	P	04 40 37.1	-1.2
SNAA	Sanae	53.67	187	P	P	04 40 37.3	-1.0
comp=Z,31nm,1.1s,baz=182,slow=9.0,SNR=34							
SNAA				S	S	04 48 08.9	-3.0
comp=Z,0.7nm,0.7s,baz=111,slow=12,SNR=2.4							
SNAA				LR	LR	05 03 13.1	
comp=Z,3μm,19.3s,baz=179,slow=36							
PPT2	Papeete2	53.73	68	*e*P	P	04 40 40.6	+1.2
comp=Z,137nm,1.4s							
PPT2				*e*S	S	04 48 13.9	0.0
comp=Z,4μm,29.8s							
PPT2				*e*SS	SS	04 51 55.0	+0.5
comp=Z,2μm,25.8s							
PPT2				*e*LR	LR	04 56 15.3	
comp=Z,12μm,28.0s,baz=210							
PPT2	Papeete2	53.73	68	*e*T	T	05 38 29.3	
comp=Z,3.8nm,0.3s							
PPTF	Pamatai, Papee	53.73	68	PFAKE		04 40 50.0	+11
PPTF				LR	LR		
comp=Z,7μm,19.0s							
JAY	Jayapura	53.74	337	P	P	04 40 37.6	-1.9
PPT	Papeete	53.74	68	LR	LR	05 00 22.9	
comp=Z,4μm,18.1s,baz=223,slow=32							
PPT	Papeete	53.74	68	*e*P	P	04 40 40.3	+0.8
PPT	Papeete	53.74	68	*e*P	P	04 40 40.3	+0.8
TVO	Taravao	53.75	68	*e*P	P	04 40 40.6	+1.1
comp=Z,76nm,1.3s							
TIAR	Tiarei	53.88	68	*e*P	P	04 40 41.5	+1.1
comp=Z,77nm,1.2s							
MMRI	Maumere	54.17	313	*e*P	P	04 40 42.4	-0.2
comp=Z,283nm,1.4s							
MMRI				LR	LR		
comp

comp=Z,376nm,1.5s
RKT Rikitea 57.64 85 *e*S **S 04 49 06.1 +0.2**
comp=Z,4μm,30.2s
RKT *e*SS **SS 04 52 54.7 -1.1**
comp=Z,1μm,29.5s
RKT *e*LR LR 04 57 59.0
comp=Z,9μm,28.2s,baz=221
RKT Rikitea 57.64 85 *e*T T 05 43 25.1
comp=Z,4.2nm,0.3s
SRBI Singaraja 57.83 306 P **P 04 41 12.7 +4.0**
JAGI Jajag, Banyuwa 58.00 305 *e*P **P 04 41 09.4 -0.6**
comp=Z,143nm,1.3s
JAGI LR LR
comp=Z,4μm,19.0s
BKSI Bulukumba 58.04 313 P **P 04 41 10.9 +0.7**
KAPI Kappang 58.48 312 PFAKE 04 41 20.0 +6.7
KAPI LR LR
comp=Z,3μm,20.0s
PWJI Pagerwojo 59.53 303 P **P 04 41 21.2 +0.6**
UGM Wanagama 60.26 301 PFAKE 04 41 40.0 +14
UGM LR LR
comp=Z,4μm,18.0s
TNTI Ternate 60.77 323 PFAKE 04 41 40.0 +11
TNTI LR LR
comp=Z,2μm,19.0s
LUWI Luwuk 60.82 317 *e*P **P 04 41 28.7 -0.7**
comp=Z,413nm,1.6s
LUWI LR LR
comp=Z,2μm,20.0s
SMRI Semarang 61.05 302 *e*P **P 04 41 32.2 +1.2**
comp=Z,404nm,1.5s
SMRI LR LR
comp=Z,4μm,18.0s
CISI Cisompet, Garu 61.94 299 *e*P **P 04 41 37.3 +0.2**
comp=Z,378nm,1.3s
CISI LR LR
comp=Z,4μm,21.0s
LEM Lembang 62.66 299 P **P 04 41 43.4 +1.4**
comp=Z,165nm,1.0s,baz=165,slow=5.8,SNR=34
LEM LR LR 05 04 30.4
comp=Z,5μm,22.0s,baz=148,slow=32
COCO West Island 64.03 286 PFAKE 04 42 00.0 +9.1
COCO LR LR
comp=Z,4μm,22.0s
TAOE Nuku Hiva Isla 66.07 71 *e*S **S 04 50 51.8 -1.1**
comp=Z,3μm,29.9s
TAOE *e*SS **SS 04 55 10.8 +2.6**
comp=Z,2μm,25.0s
TAOE *e*LR LR 05 01 55.0
comp=Z,5μm,24.5s,baz=223
DAV Davao City (W) 67.25 324 LR LR 05 12 37.8
comp=Z,2μm,20.2s,baz=138,slow=37
DAV Davao City (W) 67.25 324⇑*i*P **P 04 42 09.9 -1.7**
MYLDM Lahad Datu 68.19 316 *e*P **P 04 42 17.4 -0.2**
comp=Z,113nm,1.3s
SBUM Sibu 68.47 309 *e*P **P 04 42 18.5 -0.9**
comp=Z,125nm,1.4s
SBUM LR LR
comp=Z,3μm,20.0s
KSM Kuching 68.51 306 *e*P **P 04 42 18.6 -1.0**
comp=Z,97nm,1.2s
KSM LR LR
comp=Z,3μm,20.0s
GUMO Guam 68.68 345 PFAKE 04 42 30.0 +9.5
GUMO LR LR
comp=Z,779nm,20.0s
RPN Rapa Nui 69.40 108 LR LR 05 05 10.2
comp=Z,2μm,20.4s,baz=217,slow=29
KKM Kota Kinabalu 69.92 314 *e*P **P 04 42 27.5 -1.0**
comp=Z,122nm,1.5s
KKM LR LR
comp=Z,2μm,19.0s
EFI East Falkland 69.97 156 *i*P **P 04 42 28.8 +0.6**
EFI pmax pmax
comp=Z,56nm,1.1s
HOPE Hope Point 71.03 170 PFAKE 04 42 50.0 +15
HOPE LR LR
comp=Z,2μm,19.0s
MYKOM Kota Tinggi 71.94 300 *e*P **P 04 42 39.7 -0.9**
comp=Z,168nm,1.5s
MYKOM LR LR
comp=Z,2μm,19.0s
BKNI Bangkinang 72.14 297 PFAKE 04 42 50.0 +8.1
BKNI LR LR
comp=Z,2μm,18.0s
WAKE Wake Island 73.58 8 *e*P **P 04 42 50.0 -0.2**
comp=Z,350nm,1.6s
WAKE LR LR
comp=Z,1μm,20.0s
GSI Gunungsitoli 74.79 295 *e*P **P 04 42 58.1 +0.6**
comp=Z,662nm,1.9s
GSI LR LR
comp=Z,3μm,18.0s
PSI Prapat 75.34 297 P **P 04 42 57.5 -3.3**
comp=Z,7.2nm,0.7s,baz=180,slow=6.3,SNR=18
PSI LR LR 05 10 14.2
comp=Z,1μm,21.8s,baz=91,slow=31
PSI Prapat 75.34 297 *e*P **P 04 42 57.8 -3.0**
comp=Z,78nm,1.3s
PSI Prapat 75.34 297 *e*P **P 04 42 57.8 -3.0**
PSI pmax pmax
comp=Z,78nm,1.3s
IPM Ipoh 75.68 299 *e*P **P 04 43 02.0 -0.6**
comp=Z,73nm,1.2s
IPM LR LR
comp=Z,3μm,19.0s
JOHN Johnston Islan 75.70 31 *e*P **P 04 43 05.0 +2.4**
comp=Z,115nm,0.8s
PLCA Paso Flores 76.26 143 P **P 04 43 07.3 +1.5**
comp=Z,5.5nm,1.0s,baz=177,slow=3.0,SNR=4.5
PLCA Paso Flores 76.26 143 *e*P **P 04 43 05.4 -0.3**
comp=Z,64nm,1.6s
KULM Kulim 76.56 299 *e*P **P 04 43 06.2 -1.4**
comp=Z,124nm,1.1s
KULM LR LR
comp=Z,2μm,20.0s
LHMI Lhok Sumawe 78.43 296 *e*P **P 04 43 16.2 -1.8**
comp=Z,286nm,1.3s
LHMI LR LR
comp=Z,2μm,22.0s
TRTT Trang 79.22 300 P **P 04 43 25.9 +3.5**
comp=Z,66nm,1.1s,comp=Z,1μm
PKDT Phuket 79.96 299 P **P 04 43 25.7 -0.7**
comp=Z,65nm,0.7s,comp=Z,1μm
GO05 HualaaeØ 80.84 140 PFAKE 04 43 40.0 +9.0
GO05 LR LR
comp=Z,2μm,20.0s
TRQA Tornquist 81.50 148 *e*P **P 04 43 35.1 +0.7**
comp=Z,253nm,2.3s
TRQA LR LR
comp=Z,1μm,20.0s
H08S2 Diego Garcia H 81.78 268 T T 06 13 35.6
baz=143,slow=76,SNR=3902
H08S1 Diego Garcia H 81.79 268 T T 06 13 38.5
baz=143,slow=76,SNR=446
H08S3 Diego Garcia H 81.80 268 T T 06 13 39.2
baz=143,slow=76
DGAR Diego Garcia 81.99 268 PFAKE 04 43 50.0 +13
DGAR LR LR
comp=Z,4μm,20.0s
DGAR Diego Garcia 81.99 268 *i*P **P 04 43 36.8 -0.5**
CBIJ Chichi jima 82.35 345 P **P 04 43 39.4 +0.7**
JCJ Chichijima 82.35 345 P **P 04 43 39.4 +0.7**
comp=Z,34nm,0.4s,baz=261,slow=7.2,SNR=4.2
HULD Heiheiahulu Di 83.33 43 PFAKE 04 44 00.0 +16
HULD LR LR
comp=Z,2μm,19.0s
SRAK Srakaew 83.36 305 P **P 04 43 44.7 +0.4**
comp=Z,72nm,1.6s,comp=Z,3μm
POHA Pohakuloa 83.42 43 PFAKE 04 44 00.0 +15
POHA LR LR
comp=Z,1μm,19.0s
PHET Kaeng Krachan 83.59 302 P P 04 43 50.7 +5.2
comp=Z,12nm,1.4s,comp=Z,178nm
YULB Yu-li 83.89 326 PFAKE 04 44 00.0 +13
YULB LR LR
comp=Z,1μm,19.0s
KIP Kipapa 83.97 40 *i*P **P 04 43 47.8 +0.5**
TPUB Ta-pu 84.03 325 PFAKE 04 44 00.0 +12
TPUB LR LR
comp=Z,1μm,21.0s
QIZ Qiongzhong 84.24 314 P **P 04 43 48.4 -0.3**
QIZ PP **PP 04 47 08.0 +4.5**
QIZ S **S 04 54 18.1 +3.8**
QIZ pmax pmax
comp=Z,1μm,11.4s
QIZ LR LR
comp=Z,750nm,16.2s
QIZ LR LR
comp=Z,650nm,17.7s
QIZ LR LR
comp=Z,1μm,26.0s
QIZ Qiongzhong 84.24 314 *e*P **P 04 43 46.4 -2.3**
comp=Z,162nm,1.6s
QIZ LR LR
comp=Z,1μm,21.0s
SSLB Suanglung 84.37 325 PFAKE 04 44 00.0 +11
SSLB LR LR
comp=Z,1μm,20.0s
NACB Ninganchiao 84.52 326 PFAKE 04 44 00.0 +10
NACB LR LR
comp=Z,1μm,19.0s
JOW Kunigami 85.03 333 LR LR 05 20 46.6
comp=Z,2μm,20.0s,baz=143,slow=35
YHNB Yeheng 85.05 326 PFAKE 04 44 00.0 +7.2
YHNB LR LR
comp=Z,1μm,20.0s
SRDT SRDT 85.07 303 P **P 04 43 57.7 +4.7**
comp=Z,72nm,1.6s,comp=Z,4μm
TATO Taipei 85.30 326 PFAKE 04 44 00.0 +6.1
TATO LR LR
comp=Z,1μm,20.0s
PBKT Sadao Pong 86.08 305 *e*P **P 04 43 57.1 -0.9**
comp=Z,102nm,1.5s
QZH Quanzhou 86.24 324⇑*i*P **P 04 43 55.6 -2.9**
QZH PP **PP 04 47 17.1 -2.6**
QZH S **S 04 54 28.6 -5.2**
QZH SS **SS 05 00 09.5 -4.0**
QZH pmax pmax
comp=Z,840nm,2.7s
QZH LR LR
comp=Z,570nm,17.0s
QZH LR LR
comp=Z,500nm,19.3s
QZH LR LR
comp=Z,1μm,20.3s
NONG Nongkai 86.35 308 P **P 04 43 59.5 +0.2**
comp=Z,92nm,1.8s,comp=Z,2μm
SUR Sutherland 86.42 214 P **P 04 43 59.1 -0.8**
comp=Z,3.6nm,0.9s,baz=128,slow=7.5,SNR=15
SUR Sutherland 86.42 214 *e*P **P 04 43 58.8 -1.2**
comp=Z,387nm,1.8s
GZH Guangzhou 86.47 319 P **P 04 44 01.0 +1.3**
GZH S **S 04 54 40.5 +4.4**
GZH pmax pmax
comp=Z,670nm,4.7s
GZH LR LR
comp=Z,780nm,14.9s
GZH LR LR
comp=Z,520nm,14.1s
LCO Las Campanas 86.64 138 PFAKE 04 44 10.0 +8.9
LCO LR LR
comp=Z,2μm,20.0s
ABPO Ambohimpanom 86.72 242 *e*P **P 04 44 02.1 +0.6**
comp=Z,276nm,1.6s
ABPO LR LR
comp=Z,2μm,19.0s
ABPO Ambohimpanom 86.72 242 *e*P **P 04 44 02.2 +0.6**
ABPO pmax pmax
comp=Z,276nm,1.6s
ABPO MLR MLR
comp=Z,2μm,19.0s
UMPA Umpang Tak 86.79 303 P P 04 44 07.7 +6.2
comp=Z,12nm,0.8s,comp=Z,1μm
OPO Ambohidratompo 87.12 242 P **P 04 44 02.8 -0.7**
comp=Z,13nm,0.9s,baz=151,slow=3.6,SNR=8.2
OPO LR LR 05 16 34.1
comp=Z,2μm,18.1s,baz=153,slow=31
BOSA Boshof 88.28 219 P **P 04 44 07.2 -1.6**
comp=Z,12nm,0.7s,baz=147,slow=5.1,SNR=22
BOSA LR LR 05 18 49.1
comp=Z,2μm,18.2s,baz=152,slow=32
BOSA Boshof 88.28 219 *e*P **P 04 44 07.6 -1.3**
comp=Z,118nm,1.8s
BOSA Boshof 88.28 219 *e*P **P 04 44 07.6 -1.3**
BOSA pmax pmax
comp=Z,118nm,1.8s
CM01 Chiang Mai Arr 88.64 305 *e*P **P 04 44 09.0 -1.3**
CMAR Chiang Mai Arr 88.68 305 P **P 04 44 10.7 +0.2**
comp=Z,19nm,1.2s,baz=175,slow=3.7,SNR=17
CMAR LR LR 05 21 32.9
comp=Z,2μm,20.7s,baz=172,slow=34
CHTO Chiang Mai 88.98 305 P **P 04 44 11.9 0.0**
comp=Z,434nm,0.8s,comp=Z,10μm
CHTO Chiang Mai 88.98 305 *e*P **P 04 44 11.1 -0.9**
comp=Z,115nm,1.4s
CHTO LR LR
comp=Z,2μm,20.0s
PALK Pallekele 89.06 284 P **P 04 44 12.0 -0.4**
comp=Z,16nm,1.0s,baz=116,slow=7.5,SNR=4.3
PALK LR LR 05 19 41.9
comp=Z,2μm,18.0s,baz=102,slow=33
PALK Pallekele 89.06 284 *e*P **P 04 44 10.5 -2.0**
comp=Z,128nm,1.5s
JNU Nakatsue 90.38 337 P **P 04 44 18.7 +0.5**
comp=Z,16nm,0.9s,baz=151,slow=7.2,SNR=6.4
JNU LR LR 05 22 12.7
comp=Z,2μm,21.2s,baz=136,slow=34
JNU Nakatsue 90.38 337 *e*P **P 04 44 18.6 +0.5**
comp=Z,258nm,1.6s
SSE Sheshan 91.09 328 P **P 04 44 23.4 +2.0**
SSE S **S 04 55 23.8 +4.5**
SSE pmax pmax
comp=Z,34nm,0.8s
SSE pmax pmax
comp=Z,440nm,10.3s
SSE LR LR
comp=Z,380nm,18.4s
SSE LR LR
comp=Z,330nm,18.2s
LBTB Lobatse 91.40 221 P **P 04 44 23.7 +0.2**
comp=Z,9.8nm,1.2s,baz=98,slow=7.6,SNR=3.9
LBTB Lobatse 91.40 221 *e*P **P 04 44 22.3 -1.2**
comp=Z,87nm,1.8s
GYA Guiyang 92.16 315⇑*i*P **P 04 44 25.8 -0.9**
GYA PP **PP 04 48 11.0 +3.8**
GYA SKS **SKSac 04 54 59.5 -0.6**
GYA S **S 04 55 29.6 +0.1**
GYA SS **SS 05 01 40.0 +0.1**
GYA pmax pmax
comp=Z,60nm,1.0s
GYA LR LR
comp=Z,740nm,18.9s
GYA LR LR
comp=Z,1μm,19.6s
GYA LR LR
comp=Z,1μm,18.6s
MJAR Matsushiro Arr 92.23 343 P **P 04 44 26.8 +0.1**
comp=Z,9.3nm,0.9s,baz=180,slow=6.7,SNR=9.0
MJAR LR LR 05 23 00.6
comp=Z,501nm,21.2s,baz=180,slow=34
MJAR Matsushiro Arr 92.23 343 P **P 04 44 26.8 +0.1**
MJAR pmax pmax
comp=Z,10.0nm,0.9s
MAJO Matsushiro 92.23 343 *e*P **P 04 44 27.0 +0.4**
comp=Z,187nm,1.5s
MAJO LR LR
comp=Z,1μm,20.0s
MAJO Matsushiro 92.23 343*d i*P **P 04 44 26.8 +0.2**
MAJO pmax pmax
comp=Z,83nm,1.3s
MAT Matsushiro 92.23 343 P **P 04 44 25.8 -0.8**
MAT S **S 04 55 33.2 +3.7**
MJB9 Matsu-Tunnel 92.24 343 *e*P **P 04 44 27.1 +0.4**
comp=Z,199nm,1.5s
KMI Kunming 92.68 311 P **P 04 44 30.1 +0.9**
KMI pP sP 04 44 34.3 +2.1
KMI sP pP 04 44 35.8 +4.4
KMI PP **PP 04 48 11.9 +0.5**
KMI S **S 04 55 33.5 -0.9**
KMI sS sS 04 55 38.6 +0.6
KMI SS **SS 05 01 48.1 +0.6**
KMI pmax pmax
comp=Z,25nm,1.7s
KMI pmax pmax
comp=Z,770nm,4.8s
KMI LR LR
comp=Z,1μm,23.2s
KMI LR LR
comp=Z,1μm,22.8s
KMI LR LR
comp=Z,1μm,19.7s
NJ2 Nanjing 92.71 327 *e*P **P 04 44 28.1 -0.8**
NJ2 sP **sP 04 44 33.8 +2.0**
NJ2 PP **PP 04 48 10.1 -1.2**
NJ2 S **S 04 55 38.9 +5.1**
NJ2 pmax pmax
comp=Z,30nm,1.0s
NJ2 LR LR
comp=Z,960nm,19.0s
NJ2 LR LR
comp=Z,710nm,16.3s
NJ2 LR LR
comp=Z,950nm,17.4s
WHN Wuhan 92.85 323⇑P **P 04 44 29.0 -0.6**
WHN PP **PP 04 48 12.6 +0.2**
WHN S **S 04 55 35.9 +0.7**
WHN LR LR
comp=Z,3μm,22.1s
WHN LR LR
comp=Z,1μm,13.2s
WHN LR LR
comp=Z,1μm,12.7s
CPUP Villa Florida 93.81 148 P **P 04 44 35.9 +1.5**
comp=Z,3.0nm,1.0s,baz=215,slow=15,SNR=2.6
CPUP LR LR 05 21 55.4
comp=Z,2μm,19.4s,baz=200,slow=32
MSEY Mahe Island 94.05 256 PFAKE 04 44 50.0 +14
MSEY LR LR
comp=Z,3μm,19.0s
TJN Taejon 94.33 335*ce*P **P 04 44 38.3 +2.0**
ENH Enshi 94.41 319 *e*P **P 04 44 36.4 -0.4**
comp=Z,83nm,1.5s
ENH LR LR
comp=Z,1μm,20.0s
KSAR Wonju Array Be 95.22 336 P **P 04 44 40.9 +0.6**
KSAR PP **PP 04 48 31.1 +0.3**
KSAR Wonju Array Be 95.22 336 P **P 04 44 40.9 +0.6**
KSAR 04 48 31.1
KSRS Korea Array 95.22 336 P **P 04 44 40.9 +0.6**
comp=Z,1.7nm,0.7s,baz=147,slow=5.4,SNR=4.0
KSRS PP **PP 04 48 31.1 +0.3**
comp=Z,0.5nm,0.4s,baz=163,slow=8.5,SNR=4.1
KSRS LR LR 05 26 21.1
comp=Z,693nm,19.5s,baz=167,slow=35
KS01 Wonju Array Si 95.25 336 *e*P **P 04 44 40.6 +0.1**
ERM Erimo 96.89 348 PFAKE 04 45 00.0 +12
ERM LR LR
comp=Z,792nm,20.0s
CD2 Chengdu 97.28 315 P **P 04 44 49.8 -0.1**
CD2 sP sP 04 44 55.3 +2.4
CD2 PP **PP 04 48 44.0 -2.9**
CD2 SKS **SKSac 04 55 28.1 +0.8**
CD2 S **S 04 56 13.3 -0.6**
CD2 sS sS 04 56 21.3 +3.8
CD2 pmax pmax
comp=Z,40nm,1.3s
CD2 pmax pmax
comp=Z,710nm,8.4s
CD2 LR LR
comp=Z,2μm,19.1s
CD2 LR LR
comp=Z,2μm,21.6s
XAN Xi'an 97.98 320 P **P 04 44 52.6 -0.4**
XAN pP sP 04 45 02.9 +6.9
XAN sP pP 04 45 06.5 +11
XAN pmax pmax
comp=Z,13nm,0.4s
XAN pmax pmax
comp=Z,420nm,6.4s
YUK Yuzh-Kuril'sk 98.60 350 *e*P Pdif 04 44 56.0 +0.6
YUK *e* 04 48 54.8
YUK *e*S **SKSac 04 55 32.6 -0.5**
YUK pmax pmax
comp=Z,307nm,1.1s
YUK pmax pmax
comp=N,116nm,0.9s
YUK pmax pmax
comp=E,134nm,1.1s
NNA Nana 98.93 125 LR LR 05 20 36.6
comp=E,1μm,19.1s,baz=212,slow=30
LSZ Lusaka 99.05 228 *e*P **Pdif 04 44 56.5 -2.0**
comp=E,20nm,1.6s
LSZ LR LR
comp=Z,3μm,19.0s
LSZ Lusaka 99.05 228 *e*P **Pdif 04 44 56.5 -2.0**
LSZ pmax pmax
comp=Z,20nm,1.6s
LSZ MLR MLR
comp=Z,3μm,19.0s
LPAZ La Paz 99.06 135 LR LR 05 19 09.6
comp=Z,1μm,21.6s,baz=186,slow=29
TSUM Tsumeb 99.66 217 PFAKE 04 45 10.0 +8.8
TSUM LR LR
comp=Z,2μm,20.0s
BJT Baijiatuau 100.87 328 PFAKE 04 45 20.0 +14
BJT LR LR
comp=Z,1μm,20.0s
BJI Beijing 100.89 328 P **Pdif 04 45 10.3 +4.6**
BJI PP **PP 04 49 11.8 -2.5**
BJI SS SS 05 03 42.8 -0.1
BJI pmax pmax
comp=Z,12nm,0.9s
BJI LR LR
comp=Z,1μm,19.8s
BJI LR LR
comp=Z,740nm,18.8s
BJI LR LR
comp=Z,1μm,21.6s
PAYG Puerto Ayora 101.43 107 PFAKE 04 45 20.0 +11
PAYG LR LR
comp=Z,2μm,19.0s
MDJ Mudanjiang 101.67 339 PFAKE 04 45 20.0 +11
MDJ LR LR
comp=Z,773nm,22.0s
LZH Lanzhou 101.75 317 *e*P **Pdif 04 45 11.8 +1.9**
LZH pP sPdif 04 45 15.6 +2.7
LZH sP pP 04 45 17.9 +5.6
LZH PP **PP 04 49 18.9 -2.2**
LZH SKS 04 55 49.9
LZH *e*S **Sdif 04 56 41.5 -10**
LZH SS **SS 05 03 50.8 -4.4**
LZH pmax pmax
comp=Z,24nm,1.1s
LZH pmax pmax
comp=Z,150nm,6.8s
LZH LR LR
comp=Z,1μm,14.8s
LZH LR LR
comp=Z,1μm,16.0s
LZH LR LR
comp=Z,3μm,17.3s
YSS Yuzh-Sakhalins 101.81 349 PFAKE 04 45 20.0 +10
YSS LR LR
comp=Z,383nm,22.0s
CN2 Changchun 101.83 336 *e*P **Pdif 04 45 06.8 -3.0**
CN2 *e*PP **PP 04 49 20.1 -1.3**
CN2 *e*S **Sdif 04 56 44.1 -7.3**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=Z,780nm,18.0s
CN2 LR LR
comp=Z,380nm,18.0s
CN2 LR LR
comp=Z,840nm,17.0s
LSA Lhasa 101.93 305 PFAKE 04 45 20.0 +8.7
LSA LR LR
comp=Z,741nm,20.0s
KLR Kul'dur 105.67 342 PKiKP **PKiKP 04 49 44.0 +4.3**
comp=Z,0.1nm,0.7s,baz=110,slow=2.2,SNR=5.2
PET Petropavlovsk 106.96 360 PFAKE 04 49 50.0
PET LR LR
comp=Z,652nm,21.0s
KMBO Kilima Mbogo 106.99 243 PFAKE 04 49 50.0
KMBO LR LR
comp=Z,864nm,20.0s
PETK Petropavlovsk- 107.05 359 PP PP 04 50 03.7 +3.6
comp=Z,4.5nm,1.0s,baz=108,slow=4.8,SNR=3.9
SAML Samuel 107.71 136 PFAKE 04 50 00.0
SAML LR LR
comp=Z,778nm,19.0s
HIA Hailar 108.34 334 PFAKE 04 50 00.0
HIA LR LR
comp=Z,820nm,19.0s
OTAV Otavalo 108.61 117 PFAKE 04 50 00.0
OTAV LR LR
comp=Z,858nm,21.0s

SHEL Horse Pasture 108.81 196 PFAKE 04 50 00.0
SHEL LR LR
comp=Z,976nm,21.0s
ULN Ulaanbaatar 110.83 325 PFAKE 04 50 00.0
ULN LR LR
comp=Z,809nm,20.0s
SONM Songino Array 111.02 325 PKiKP **PKiKP 04 49 49.7 -0.2**
comp=Z,0.4nm,0.5s,baz=160,slow=4.6,SNR=3.4
SONM PP **PP 04 50 30.3 +1.1**
comp=Z,0.5nm,0.3s,baz=168,slow=7.6,SNR=4.9
JTS JuntasAbangare 113.42 106 PFAKE 04 50 10.0
JTS LR LR
comp=Z,2μm,19.0s
PFO Pinyon Flats O 113.59 65 PFAKE 04 50 10.0
PFO LR LR
comp=Z,1μm,21.0s
MA2 Magadan 113.72 355 PFAKE 04 50 10.0
MA2 LR LR
comp=Z,784nm,22.0s
NIL Nilore 114.22 294 PFAKE 04 50 10.0 +14
NIL LR LR
comp=Z,914nm,19.0s
ZAK Zakamensk 114.26 325 *e*PKIKP PKPdf 04 49 54.1 -1.8
ZAK pmax pmax
comp=Z,7.0nm,1.5s
ZAK pmax pmax
comp=Z,5.0nm,1.0s
WMQ Urumqi 115.01 311 PKP **PKPdf 04 49 58.3 +0.8**
WMQ LR LR
comp=Z,1μm,20.7s
WMQ LR LR
comp=Z,1μm,17.9s
WMQ LR LR
comp=Z,1μm,20.3s
TLY Talaya 115.24 326 PFAKE 04 50 10.0 +12
TLY LR LR
comp=Z,766nm,20.0s
TLY Talaya 115.24 326 *i* PKIKP **PKPdf 04 50 02.5 +4.8**
TLY *e* 04 50 58.8
TLY *e*PS **PS 05 00 37.1 -0.7**
TLY *e*PPS PPS 05 01 54.1
TLY *e*SS SS 05 07 11.8 +15
TLY pmax pmax
comp=Z,11nm,1.7s
BCIP Isla Barro Col 115.34 111 PFAKE 04 50 10.0 +11
BCIP LR LR
comp=Z,1μm,20.0s
TUC Tucson 115.67 70 PFAKE 04 50 10.0 +11
TUC LR LR
comp=Z,5μm,19.0s
NVAR Mina Array Bea 116.32 60 PKP **PKPdf 04 50 02.8 +2.4**
comp=Z,1.3nm,0.9s,baz=145,slow=3.3,SNR=3.2
NVAR PKKPab **PKKPab 05 00 30.8 -1.1**
comp=Z,1.0nm,0.8s,baz=64,slow=6.8,SNR=5.4
HATD Hatta, Dubai 117.16 275 P **PKPdf 04 50 02.8 +0.6**
HUMO Hull Mountain 117.20 54 *e*PKPdf **PKPdf 04 50 01.4 -0.3**
KSH Kashi 117.27 300 PKP **PKPdf 04 50 06.3 +4.2**
KSH PP **PP 04 51 19.1 +5.5**
KSH SKS **SKSdf 04 57 13.5 -0.9**
KSH SKKS **SKKSac 04 58 10.3 -3.7**
KSH LR LR
comp=Z,740nm,12.8s
KSH LR LR
comp=Z,860nm,13.2s
KSH LR LR
comp=Z,1μm,18.9s
TXAR Lajitas Array 117.43 77 PKP **PKPdf 04 50 02.7 0.0**
comp=Z,0.5nm,1.0s,baz=187,slow=2.2,SNR=2.7
TXAR PKKPab **PKKPab 05 00 27.4 -0.5**
comp=Z,1.2nm,0.9s,baz=70,slow=3.7,SNR=12
WUAZ Wupatki 117.77 67 PFAKE 04 50 10.0 +6.7
WUAZ LR LR
comp=Z,2μm,20.0s
TARG Taragay, Kyrgy 118.02 303 *e*PKPdf **PKPdf 04 50 03.7 -0.1**
MNTX Cornudas Mount 118.23 74 *e*PKPdf **PKPdf 04 50 05.8 +1.7**
MNTX LR LR
comp=Z,1μm,21.0s
YAK Yakutsk 118.26 345 PFAKE 04 50 10.0 +6.9
YAK LR LR
comp=Z,633nm,19.0s
KDAK Kodiak Island 118.42 27 PFAKE 04 50 10.0 +6.5
KDAK LR LR
comp=Z,299nm,19.0s
UZB Uzynbulak 118.50 305 *e*PP PP 04 51 21.2 -1.0
UZB *e*PPP PPP 04 53 51.5
SATY Saty 118.73 304 *e*PKP **PKPdf 04 50 04.9 +0.1**
comp=Z,7.9nm,1.5s
SATY *e*PP **PP 04 51 22.5 -1.2**
ZHN Zhinishke 118.80 305 *e*PKP **PKPdf 04 50 04.5 -0.4**
comp=Z,3.2nm,1.6s
KPKS Kokpek 118.90 305 *e*PKP **PKPdf 04 50 03.8 -1.3**
comp=Z,5.3nm,1.6s
KPKS *e*PP **PP 04 51 21.4 -3.5**
ZSN Zaisan 119.08 312 *e*PKP **PKPdf 04 50 05.4 +0.2**
WVOR Wild Horse Val 119.17 57 PFAKE 04 50 20.0 +14
WVOR LR LR
comp=Z,632nm,20.0s
KVTX Kingsville 119.41 83 PFAKE 04 50 20.0 +14
KVTX LR LR
comp=Z,2μm,20.0s
MDOK Medeo 119.47 304 *e*PP PP 04 51 26.3 -2.6
MDOK *e*PPP PPP 04 53 57.9
MDOK LR LR 05 46 35.2
comp=Z,210nm,19.0s
AAA Alma-Ata 119.57 304 *e*PP PP 04 51 26.9 -2.5
AAA *e*PPP PPP 04 53 58.8
AAA LR LR 05 46 47.1
comp=Z,253nm,20.1s
ELK Elko 119.62 61 PP PP 04 51 36.9 +6.9
comp=Z,0.3nm,0.3s,baz=250,slow=8.3,SNR=3.9
DGZ Jazzator, Alta 119.71 315 *i* PKIKP **PKPdf 04 50 05.1 -1.4**
MK31 Makanchi Array 119.72 310 *i* PKIKP **PKPdf 04 50 04.2 -2.3**
MK31 pmax pmax
comp=Z,22nm,1.5s
MKAR Makanchi Array 119.72 310 PKP **PKPdf 04 50 03.9 -2.6**
comp=Z,2.2nm,0.8s,baz=233,slow=2.1,SNR=12
MKAR PKKPab PKKPab 05 00 25.7 +10
comp=Z,0.6nm,0.9s,baz=5.7,slow=2.4,SNR=3.8
MKAR Makanchi Array 119.72 310 *e*PKPdf **PKPdf 04 50 04.3 -2.2**
MKAR PKKPab PKKPab 05 00 25.7 +10
MKAR Makanchi Array 119.72 310 *e*PKIKP **PKPdf 04 50 04.3 -2.2**
MAKZ Makanchi 119.88 309 *e*PKPdf **PKPdf 04 50 05.0 -1.7**
MAKZ Makanchi 119.88 309 *e*PKIKP **PKPdf 04 50 05.0 -1.7**
SDV Santo Domingo 119.99 120 PFAKE 04 50 20.0 +12
SDV LR LR
comp=Z,2μm,21.0s
TKM2 Tokmak 2 120.00 303 PKIKP **PKPdf 04 50 05.3 -2.1**
TKM2 pmax pmax
comp=Z,21nm,1.4s
ANMO Albuquerque 120.03 71 PP PP 04 51 38.6 +5.7
comp=Z,0.4nm,0.5s,baz=212,slow=8.3,SNR=4.1
ANMO Albuquerque 120.03 71 PP PP 04 51 38.6 +5.7
ANMO LR LR
comp=Z,3μm,20.0s
AAK Ala-Archa 120.34 302 *e*PKPdf **PKPdf 04 50 05.4 -2.6**
AAK Ala-Archa 120.34 302 *e*PKIKP **PKPdf 04 50 05.4 -2.6**
KUU Kurty 120.35 304 *e*PKP **PKPdf 04 50 06.6 -1.2**
comp=Z,14nm,1.4s
KUU *e*PP **PP 04 51 31.7 -3.1**
KUU *e*PPP PPP 04 54 04.6
NLWA Neilton Lookou 120.40 50 PFAKE 04 50 20.0 +12
NLWA LR LR
comp=Z,1μm,19.0s
FRU Bishkek 120.42 302 *e*PKIKP **PKPdf 04 50 07.0 -1.0**
FRU pmax pmax
comp=Z,67nm,2.0s
DUG Dugway, Tooele 120.46 63 PFAKE 04 50 20.0 +12
DUG LR LR
comp=Z,1μm,19.0s
JCT Junction City 120.50 79 PFAKE 04 50 20.0 +11
JCT LR LR
comp=Z,2μm,19.0s
MVCO Mesa Verde 120.58 68 PFAKE 04 50 20.0 +11
MVCO LR LR
comp=Z,1μm,20.0s
MNAS Manas 121.23 300 PKIKP **PKPdf 04 50 08.7 -1.0**
MNAS pmax pmax
comp=Z,18nm,1.3s
MFID Camas Ranch 121.28 58 *e*PKPdf **PKPdf 04 50 08.8 -0.9**
BMO Blue Mountains 121.60 56 *e*PKPdf **PKPdf 04 50 09.4 -0.8**
BMO LR LR
comp=Z,771nm,20.0s
HAWA Hanford 121.66 54 PFAKE 04 50 20.0 +10
HAWA LR LR
comp=Z,630nm,19.0s

B05A Bryant 121.85 51 P **PKPdf 04 50 14.6 +4.1**
baz=223
HLID Hailey 122.10 59 *e*PKPdf **PKPdf 04 50 11.1 -0.2**
HLID LR LR
comp=Z,622nm,20.0s
HWUT Hardware Ranch 122.14 62 *e*PKPdf **PKPdf 04 50 09.5 -2.0**
HWUT LR LR
comp=Z,1μm,20.0s
BILL Bilibino 122.14 3 *e*PKPdf **PKPdf 04 50 09.3 -1.2**
BILL LR LR
comp=Z,694nm,22.0s
BILL Bilibino 122.14 3 ‖ *i* PKIKP **PKPdf 04 50 11.7 +1.3**
BILL *e* 04 50 15.0
BILL *e*PS **PS 05 01 43.1 +3.4**
BILL *e*SS SS 05 08 26.7 +1.3
BILL SSS SSS 05 13 00.0
BILL pmax pmax
comp=Z,4.0nm,1.1s
IUG Iuzhnay 122.24 298 *e*PKP **PKPdf 04 50 11.2 -0.4**
comp=Z,6.9nm,1.2s
BTLS Baital 122.31 303 *e*PKP **PKPdf 04 50 10.7 -0.8**
comp=Z,4.4nm,1.4s
RAYN Ar Rayn 122.39 266 *e*PKPdf **PKPdf 04 50 11.5 -0.9**
RAYN LR LR
comp=Z,2μm,20.0s
HKT Hockley 122.41 83 *i* PKIKP **PKPdf 04 50 13.9 +1.9**
SDCO Great Sand Dun 122.60 69 PFAKE 04 50 20.0 +7.3
SDCO LR LR
comp=Z,2μm,20.0s
KK31 Karatay Array 122.69 300 *e*PKPdf **PKPdf 04 50 11.4 -0.8**
KK31 Karatay Array 122.69 300 *e*PKIKP **PKPdf 04 50 11.5 -0.8**
KKAR Karatay Array 122.69 300 *e*PKPdf **PKPdf 04 50 11.4 -0.8**
KKAR Karatay Array 122.69 300 *e*PKIKP **PKPdf 04 50 11.5 -0.8**
WHTX Lake Whitney, 122.97 80 P **PKPdf 04 50 16.4 +3.3**
baz=223
AHID Auburn Hatcher 123.21 62 *e*PKPdf **PKPdf 04 50 12.2 -1.3**
AHID LR LR
comp=Z,1μm,20.0s
SEM Semipalatinsk 123.31 311 *e*PKP **PKPdf 04 50 13.0 -0.5**
SEM *e*PP **PP 04 51 52.5 -2.5**
SEM *e*PPP PPP 04 54 29.8
WRAK Wrangell Islan 123.73 38 PFAKE 04 50 30.0 +16
WRAK LR LR
comp=Z,673nm,19.0s
MCMT McKenzie Canyo 123.79 59 *e*PKPdf **PKPdf 04 50 14.5 -0.2**
TPAW Teton Pass 123.80 61 *e*PKPdf **PKPdf 04 50 14.6 -0.2**
TRF Thorofare Moun 123.86 25 *e*PKPdf **PKPdf 04 50 12.8 -1.3**
FXWY Fox Creek 123.87 61 *e*PKPdf **PKPdf 04 50 14.7 -0.1**
ZAA0 Zalesovo Array 123.98 317 *e*PKPdf **PKPdf 04 50 13.9 -0.4**
ZALV Zalesovo Beam 123.98 317 PKP **PKPdf 04 50 12.8 -1.5**
comp=Z,2.8nm,0.8s,baz=151,slow=3.4,SNR=4.4
ZALV PP **PP 04 52 03.1 +4.0**
comp=Z,1.0nm,0.5s,baz=148,slow=8.5,SNR=2.7
ISCO Idaho Springs 124.01 68 PFAKE 04 50 30.0 +15
ISCO LR LR
comp=Z,2μm,19.0s
BW06 Boulder Array 124.01 63 *e*PKPdf **PKPdf 04 50 15.3 +0.2**
BW06 LR LR
comp=Z,1μm,20.0s
PDAR Pinedale Array 124.01 63 PKP **PKPdf 04 50 14.8 -0.4**
comp=Z,0.5nm,0.7s,baz=251,slow=4.5,SNR=2.8
PDAR PP **PP 04 51 59.6 -0.3**
comp=Z,0.1nm,0.3s,baz=209,slow=7.2,SNR=3.5
PDAR PKKPab **PKKPbc 05 00 06.0 +6.3**
comp=Z,0.5nm,0.9s,baz=29,slow=3.4,SNR=4.5
MTDJ Mount Denham 124.02 107 PFAKE 04 50 30.0 +14
MTDJ LR LR
comp=Z,1μm,20.0s
NEW Newport 124.15 53 P **PKPdf 04 50 18.6 +3.7**
baz=225
NEW Newport 124.15 53 *e*PKPdf **PKPdf 04 50 14.6 -0.4**
NEW LR LR
comp=Z,908nm,21.0s
RND Reindeer 124.18 25 *e*PKPdf **PKPdf 04 50 13.9 -0.7**
RND Reindeer 124.18 25 *e*PKIKP **PKPdf 04 50 13.9 -0.7**
WMOK Wichita Mounta 124.20 77 *e*PKPdf **PKPdf 04 50 14.1 -1.4**
WMOK LR LR
comp=Z,1μm,19.0s
WMOK Wichita Mounta 124.20 77 *e*PKIKP **PKPdf 04 50 14.1 -1.4**
WMOK MLR MLR
comp=Z,1μm,19.0s
KURBB Kurchatov Arra 124.23 311 PKP **PKPdf 04 50 12.9 -2.0**
comp=Z,10nm,1.2s,baz=149,slow=1.8,SNR=17
KURBB PP **PP 04 52 00.4 -0.5**
comp=Z,2.6nm,1.1s,baz=141,slow=5.2,SNR=5.7
BPAW Bear Paw Mtn. 124.24 24 *e*PKPdf **PKPdf 04 50 13.6 -1.0**
KURK Kurchatov 124.26 311 *e*PKPdf **PKPdf 04 50 13.4 -1.6**
KURK PP **PP 04 52 00.4 -0.7**
KURK LR LR
comp=Z,2μm,22.0s
KURK Kurchatov 124.26 311 P **PKPdf 04 50 14.4 -0.5**
SNR=19
KURK Kurchatov 124.26 311 *c* *i* PKIKP **PKPdf 04 50 13.4 -1.6**
KURK pmax pmax
comp=Z,21nm,1.7s
DLMT Dillon 124.29 59 *e*PKPdf **PKPdf 04 50 16.1 +0.6**
NATX Nacogdoches 124.42 82 PFAKE 04 50 30.0 +14
NATX LR LR
comp=Z,1μm,20.0s
MCK McKinley 124.43 25 *e*PKPdf **PKPdf 04 50 16.0 +1.0**
RWWY Rawlins 124.49 65 *e*PKPdf **PKPdf 04 50 17.9 +1.8**
YHB Horse Butte 124.57 60 *e*PKPdf **PKPdf 04 50 14.5 -1.6**
YHB *e*Sdif Sdif 05 00 01.7 +0.1
MSO Missoula 124.66 56 P **PKPdf 04 50 20.8 +4.8**
baz=225
MSO Missoula 124.66 56 *e*PKPdf **PKPdf 04 50 15.3 -0.7**
LRM Limekiln Ridge 124.69 58 *e*PKPdf **PKPdf 04 50 16.7 +0.3**
LKWY Lake 124.84 61 PFAKE 04 50 30.0 +13
LKWY LR LR
comp=Z,1μm,21.0s
BOZ Bozeman (W) 124.94 59 P **PKPdf 04 50 21.9 +5.2**
baz=226
BOZ Bozeman (W) 124.94 59 *e*PKPdf **PKPdf 04 50 15.8 -0.9**
BOZ LR LR
comp=Z,592nm,20.0s
BOZ Bozeman (W) 124.94 59 *e*PKIKP **PKPdf 04 50 15.8 -0.9**
BOZ MLR MLR
comp=Z,592nm,20.0s
WRH Wood River Hil 125.25 25 *e*PKPdf **PKPdf 04 50 15.2 -1.3**
NVS Novosibirsk 125.26 317 *e*PKIKP **PKPdf 04 50 20.8 +4.0**
CCB Clear Creek Bu 125.47 25 *e*PKPdf **PKPdf 04 50 15.4 -1.5**
RIDG Independ'e Rid 125.50 27 *e*PKPdf **PKPdf 04 50 16.0 -1.0**
IL1 Eielson Array 125.80 25 *e*PKPdf **PKPdf 04 50 15.4 -2.1**
ILAR Eielson Array 125.80 25 PKP **PKPdf 04 50 16.5 -1.0**
comp=Z,1.4nm,1.0s,baz=252,slow=3.6,SNR=11
ILB Eielson Array 125.80 25 *e*PKPdf **PKPdf 04 50 16.8 -0.7**
RLMT Red Lodge 125.81 61 P **PKPdf 04 50 22.4 +3.9**
baz=226
RLMT Red Lodge 125.81 61 *e*PKPdf **PKPdf 04 50 18.6 +0.1**
RLMT LR LR
comp=Z,662nm,19.0s
SCRK Sand Creek 125.91 27 *e*PKPdf **PKPdf 04 50 17.9 0.0**
DLBC Dease Lake 126.07 38 *e*PKPdf **PKPdf 04 50 18.3 -0.1**
WALA Waterton Lakes 126.23 55 *e*PKPdf **PKPdf 04 50 16.9 -2.1**
BRZS Berezniki 126.46 307 *e*PKP **PKPdf 04 50 18.2 -1.1**
comp=Z,8.6nm,1.4s
BRZS *e*PP **PP 04 52 13.0 -2.8**
BRZS *e*PPP PPP 04 54 54.5
CBKS Cedar Bluff 126.55 72 *e*PKPdf **PKPdf 04 50 18.8 -1.1**
CBKS LR LR
comp=Z,1μm,21.0s
X39A Fountain Ranch 126.72 80 P **PKPdf 04 50 24.3 +4.0**
baz=224
GTBY Guantanamo Bay 126.73 108 PFAKE 04 50 30.0 +9.3
GTBY LR LR
comp=Z,1μm,19.0s
OGNE Ogallala 126.76 69 *e*PKPdf **PKPdf 04 50 20.6 +0.4**
OGNE LR LR
comp=Z,783nm,19.0s
COLD Coldfoot 127.03 22 *e*PKPdf **PKPdf 04 50 20.4 +0.6**
MIAR Mount Ida 127.05 81 PFAKE 04 50 30.0 +9.1
MIAR LR LR
comp=Z,911nm,20.0s
GRGR Grenville 127.18 127 PFAKE 04 50 30.0 +8.3
GRGR LR LR
comp=Z,742nm,20.0s
DAWY Dawson 127.25 29 *e*PKPdf **PKPdf 04 50 19.5 -0.9**
EGAK Eagle 127.31 28 *e*PKPdf **PKPdf 04 50 20.0 -0.4**
EGAK LR LR
comp=Z,649nm,19.0s
W39A Magazine 127.40 80 P **PKPdf 04 50 25.1 +3.6**
baz=225
TIXI Tiksi 127.44 348 PKP **PKPdf 04 50 19.4 -1.1**
comp=Z,1.0nm,0.3s,baz=129,slow=1.9,SNR=9.8

TIXI Tiksi 127.44 348 *e*PKPdf **PKPdf 04 50 18.4 -2.0**
TIXI LR LR
comp=Z,460nm,20.0s
TIXI Tiksi 127.44 348 *c* *i* PKIKP **PKPdf 04 50 17.6 -2.8**
TIXI pmax pmax
comp=Z,13nm,1.2s
EGMT Eagleton 127.55 58 PFAKE 04 50 30.0 +8.5
EGMT LR LR
comp=Z,723nm,20.0s
W40A Ferguson Farm, 127.81 80 P **PKPdf 04 50 25.9 +3.6**
baz=225
RSSD Black Hills 127.85 65 P **PKPdf 04 50 26.6 +4.2**
baz=227
RSSD Black Hills 127.85 65 *e*PKPdf **PKPdf 04 50 21.3 -1.1**
RSSD Black Hills 127.85 65 *e*PKIKP **PKPdf 04 50 21.3 -1.1**
V39A Pettigrew 127.93 79 P **PKPdf 04 50 26.7 +4.1**
baz=225
HHAR Hobbs 128.07 79 *e*PKPdf **PKPdf 04 50 22.7 -0.1**
W41B Gary Mavity, V 128.27 81 P **PKPdf 04 50 27.4 +4.2**
baz=225
TOLK Toolik Lake Re 128.33 21 P **PKPdf 04 50 27.9 +5.6**
baz=216
TOLK Toolik Lake Re 128.33 21 *e*PKPdf **PKPdf 04 50 22.7 +0.4**
T38A Diamond 128.40 78 P **PKPdf 04 50 27.1 +3.7**
baz=226
U39A Green Forest 128.41 79 P **PKPdf 04 50 27.1 +3.6**
baz=225
BRAL Brewton 128.43 89 PFAKE 04 50 30.0 +6.4
BRAL LR LR
comp=Z,679nm,22.0s
LAO LASA Array 128.43 61 P **PKPdf 04 50 28.6 +5.3**
baz=228
LAO LASA Array 128.43 61 *e*PKPdf **PKPdf 04 50 21.7 -1.5**
LAO LR LR
comp=Z,1μm,20.0s
KSU1 Kansas State U 128.51 74 P **PKPdf 04 50 28.2 +4.6**
baz=226
KSU1 Kansas State U 128.51 74 *e*PKPdf **PKPdf 04 50 22.0 -1.5**
KSU1 LR LR
comp=Z,2μm,21.0s
X43A Marvell 128.60 83 P **PKPdf 04 50 28.7 +4.8**
baz=225
U40A Yellville 128.75 80 P **PKPdf 04 50 27.9 +3.8**
baz=225
V41A Mountainview 128.75 81 P **PKPdf 04 50 27.7 +3.6**
baz=225
T39A Clever 128.91 79 P **PKPdf 04 50 28.3 +3.9**
baz=226
Y45A Yeager Farm, C 128.91 84 P **PKPdf 04 50 28.5 +4.0**
baz=224
S38A Stockton 129.03 78 P **PKPdf 04 50 28.6 +4.0**
baz=226
BBGH Gun Hill 129.03 129 PFAKE 04 50 40.0 +15
BBGH LR LR
comp=Z,1μm,21.0s
BGNE Belgrade 129.22 71 P **PKPdf 04 50 29.3 +4.4**
baz=227
U41A Viola 129.28 80 P **PKPdf 04 50 28.9 +3.9**
baz=226
Z47A Carrollton 129.30 86 P **PKPdf 04 50 29.2 +4.0**
baz=224
X45A UM Field Stati 129.40 84 P **PKPdf 04 50 29.2 +3.9**
baz=225
S39A Bolivar 129.41 78 P **PKPdf 04 50 29.4 +4.1**
baz=226
S39A Bolivar 129.41 78 *e*PKPdf **PKPdf 04 50 23.6 -1.6**
R38A Fenwick Farm, 129.41 77 P **PKPdf 04 50 29.2 +3.9**
baz=226
OXF Oxford 129.45 84 P **PKPdf 04 50 29.4 +4.0**
baz=225
OXF Oxford 129.45 84 *e*PKPdf **PKPdf 04 50 23.4 -2.0**
OXF Oxford 129.45 84 *e*PKIKP **PKPdf 04 50 23.5 -2.0**
T40A Mansfield 129.49 79 P **PKPdf 04 50 29.4 +3.9**
baz=226
BVA0 Borovoye Array 129.56 308 *i* PKIKP **PKPdf 04 50 23.8 -1.3**
BVA0 pmax pmax
comp=Z,37nm,1.5s
BVAR Borovoye Array 129.56 308 PKP **PKPdf 04 50 23.9 -1.1**
comp=Z,1.9nm,0.5s,baz=73,slow=5.0,SNR=15
BRVK Borovoye 129.63 308 *e*PKPdf **PKPdf 04 50 25.1 -0.1**
BRVK LR LR
comp=Z,439nm,21.0s
BRVK Borovoye 129.63 308 P **PKPdf 04 50 26.4 +1.2**
SNR=23
BRVK Borovoye 129.63 308 *c* *i* PKIKP **PKPdf 04 50 23.5 -1.7**
BRVK pmax pmax
comp=Z,31nm,1.2s
S40A Lebanon 129.81 79 P **PKPdf 04 50 29.7 +3.6**
baz=226
T41A Mountain View 129.85 80 P **PKPdf 04 50 30.0 +3.9**
baz=226
R39A Chumby, Stover 130.00 78 P **PKPdf 04 50 30.3 +3.9**
baz=226
251A Midway 130.06 89 P **PKPdf 04 50 31.4 +4.7**
baz=223
SJG San Juan 130.07 118 PFAKE 04 50 40.0 +13
SJG LR LR
comp=Z,824nm,19.0s
Q38A Cooks Store, C 130.11 77 P **PKPdf 04 50 30.2 +3.7**
baz=227
P37A Lathrop 130.12 75 P **PKPdf 04 50 30.0 +3.4**
baz=227
GRTK Grand Turk 130.21 111 PFAKE 04 50 40.0 +13
GRTK LR LR
comp=Z,1μm,21.0s
T42A Van Buren 130.23 80 P **PKPdf 04 50 31.0 +4.1**
baz=226
T42A Van Buren 130.23 80 *e*PKPdf **PKPdf 04 50 26.8 -0.1**
S41A Jillco Farms, 130.24 79 P **PKPdf 04 50 30.7 +3.8**
baz=226
252A Lumpkin 130.39 90 P **PKPdf 04 50 32.3 +5.0**
baz=223
151A Opelika 130.42 89 P **PKPdf 04 50 32.2 +4.8**
baz=224
R40A Maddies Statio 130.42 78 P **PKPdf 04 50 31.1 +3.9**
baz=227
W46A Michie 130.49 84 P **PKPdf 04 50 31.7 +4.3**
baz=225
Q39A Willow Grove F 130.53 77 P **PKPdf 04 50 31.4 +4.0**
baz=227
PLAL Pickwick Lake 130.56 84 *e*PKPdf **PKPdf 04 50 25.8 -1.8**
P38A Dawn 130.61 76 *e*PKPdf **PKPdf 04 50 28.1 +0.6**
DGMT Dagmar 130.64 61 PFAKE 04 50 40.0 +13
DGMT LR LR
comp=Z,840nm,20.0s
DBIC Dimbokro 130.74 201 PKP **PKPdf 04 50 27.3 -1.3**
comp=Z,8.3nm,1.0s,baz=223,slow=6.5,SNR=3.4
DBIC Dimbokro 130.74 201 PKIKP **PKPdf 04 50 27.3 -1.3**
DBIC pmax pmax
comp=Z,27nm,1.3s
CCM Cathedral Cave 130.85 79 P **PKPdf 04 50 31.9 +3.9**
baz=227
CCM Cathedral Cave 130.85 79 *e*PKPdf **PKPdf 04 50 27.3 -0.7**
CCM Cathedral Cave 130.85 79 *e*PKIKP **PKPdf 04 50 27.3 -0.7**
S42A Caledonia 130.91 80 P **PKPdf 04 50 31.6 +3.5**
baz=226
R41A Rosebud 130.94 79 P **PKPdf 04 50 31.5 +3.4**
baz=227
Q40A Laux Farm, Aux 131.01 78 P **PKPdf 04 50 31.2 +2.9**
baz=227
W47A Westpoint 131.03 84 P **PKPdf 04 50 32.2 +3.8**
baz=225
T44A Benton 131.14 81 P **PKPdf 04 50 32.4 +3.9**
baz=226
S43A Fulton Ridge, 131.19 80 P **PKPdf 04 50 32.3 +3.6**
baz=226
X49A Woodville 131.25 86 P **PKPdf 04 50 33.4 +4.5**
baz=225
R42A Luebbering 131.26 79 P **PKPdf 04 50 32.6 +3.8**
baz=227
W48A Pulaski 131.34 85 P **PKPdf 04 50 32.6 +3.6**
baz=225
P40A Paris 131.39 77 P **PKPdf 04 50 33.0 +4.0**
baz=228
Q41A Truxton 131.47 78 P **PKPdf 04 50 33.3 +4.2**
baz=227
V47A Nunnelly 131.47 84 P **PKPdf 04 50 33.2 +3.9**
baz=226
WVT Waverly 131.50 83 P **PKPdf 04 50 33.3 +4.0**
baz=226
ECSD EROS Data Cent 131.61 70 PFAKE 04 50 40.0 +11
ECSD LR LR
comp=Z,2μm,21.0s
W49A Belvidere 131.71 86 P **PKPdf 04 50 33.9 +4.1**
baz=225
V48A Smith Brothers 131.82 85 P **PKPdf 04 50 33.5 +3.5**
baz=226

O40A **La Belle** 131.88 77 P PKPdf 04 50 33.7 +3.8
baz=228
ANWB **Willy Bob** 131.90 123 PFAKE 04 50 40.0 +9.4
ANWB LR LR
comp=Z,483nm,21.0s
INK **Inuvik** 131.98 28 *e*PKPdf PKPdf 04 50 28.9 -0.2
INK **Inuvik** 131.98 28 *e*PKIKP PKPdf 04 50 29.0 -0.2
N39A **Derby Farms, D** 132.03 75 P PKPdf 04 50 34.0 +3.8
baz=228
U47A **Clarksville** 132.03 84 P PKPdf 04 50 34.2 +3.9
baz=226
T46A **Princeton** 132.09 83 P PKPdf 04 50 34.5 +4.1
baz=226
GOGA **Godfrey** 132.15 89 PFAKE 04 50 40.0 +9.4
GOGA LR LR
comp=Z,846nm,22.0s
AB31 **Akbulak array** 132.24 299 *i* PKIKP PKPdf 04 50 29.0 -1.2
AB31 pmax pmax
comp=Z,7.0nm,1.2s
ABKAR **Akbulak array** 132.24 299 *e*PKPdf PKPdf 04 50 29.5 -0.7
SCIA **State Center** 132.31 74 *e*PKPdf PKPdf 04 50 30.4 -0.3
SCIA LR LR
comp=Z,1μm,19.0s
J36A **Seneca 1, Swea** 132.60 72 *e*PKPdf PKPdf 04 50 30.7 -0.5
U49A **Red Boiling Sp** 132.96 85 P PKPdf 04 50 30.7 -1.4
baz=226
P44A **Sand Creek, Wi** 133.31 80 P PKPdf 04 50 31.5 -1.1
baz=228
TKL **Tuckaleechee C** 133.54 87 PKP PKPdf 04 50 32.2 -1.0
comp=Z,1.1nm,0.5s,baz=147,slow=4.9,SNR=3.3
HDIL **Hopedale** 133.65 78 PFAKE 04 50 40.0 +6.8
HDIL LR LR
comp=Z,1μm,19.0s
NRIK **Noril'sk** 133.72 332 PKP PKPdf 04 50 32.7 +0.3
comp=Z,1.5nm,0.2s,baz=194,slow=1.8,SNR=7.1
NRIK PP PP 04 53 00.1 -2.5
comp=Z,3.1nm,0.5s,baz=124,slow=7.8,SNR=4.0
R47A **Wooly Knot Far** 133.74 82 P PKPdf 04 50 32.2 -1.2
baz=227
WCI **Wyandotte Cave** 133.83 83 *e*PKPdf PKPdf 04 50 31.6 -2.0
WCI **Wyandotte Cave** 133.83 83 *e*PKIKP PKPdf 04 50 31.6 -2.0
NHSC **New Hope** 133.85 92 PFAKE 04 50 50.0 +16
NHSC LR LR
comp=Z,643nm,21.0s
ASF **Jabal al Asfar** 133.88 266 PKP PKPdf 04 50 35.2 +1.2
comp=Z,0.8nm,0.4s,baz=125,slow=3.2,SNR=3.2
AKTO **Aktyubinsk** 133.95 299 PKP PKPdf 04 50 32.4 -1.1
comp=Z,2.0nm,0.6s,baz=164,slow=5.9,SNR=8.0
AKT **Akhty** 133.96 283 *i* PKIKP PKPdf 04 50 34.6 +0.7
AKT pmax pmax
comp=Z,27nm,1.2s
TZTN **Tazewell** 134.29 86 *e*PKPdf PKPdf 04 50 34.3 -0.3
YKA **Yellowknife Ar** 134.48 41 PKP PKPdf 04 50 33.9 -0.1
comp=Z,0.5nm,0.6s,baz=236,slow=2.1,SNR=8.4
YKA PP PP 04 53 05.7 -1.9
comp=Z,0.4nm,0.9s,baz=243,slow=5.3,SNR=3.1
JFWS **Jewell Farm** 134.63 75 PFAKE 04 50 50.0 +15
JFWS LR LR
comp=Z,1μm,22.0s
F36A **Milaca** 134.66 70 *e*PKPdf PKPdf 04 50 34.5 -0.4
GNI **Garni** 134.80 280 PKIKP PKPdf 04 50 35.6 0.0
comp=Z,4.4nm,0.4s,baz=334,slow=4.9,SNR=4.2
GNI **Garni** 134.80 280 *e*PKPdf PKPdf 04 50 35.1 -0.6
GNI LR LR
comp=Z,1μm,22.0s
GNI **Garni** 134.80 280*c* *i* PKIKP PKPdf 04 50 35.2 -0.4
AGMN **Agassiz Nation** 134.88 65 PFAKE 04 50 50.0 +15
AGMN LR LR
comp=Z,627nm,20.0s
TOA0 **Torodi Ar. Sit** 135.21 212 *e*PKPpre PKPpre 04 50 25.1
TOA0 *e*PKPdf PKPdf 04 50 35.0 -1.9
TOA0 **Torodi Ar. Sit** 135.21 212 P PKPdf 04 50 38.5 +1.6
TORD **Torodi Ar. Bea** 135.21 212 PKhKP PKPpre 04 50 23.0
comp=Z,1.9nm,1.0s,baz=160,slow=3.9,SNR=5.0
TORD PKP PKPdf 04 50 36.0 -0.9
comp=Z,5.4nm,0.8s,baz=153,slow=3.4,SNR=19
MMAI **Mount Meron Ar** 135.36 265 PKP PKPdf 04 50 38.7 +1.9
comp=Z,0.5nm,0.3s,baz=130,slow=8.9,SNR=3.1
FFC **Flin Flon** 135.52 55 *e*PKPdf PKPdf 04 50 34.4 -1.8
FFC LR LR
comp=Z,636nm,19.0s
FFC **Flin Flon** 135.52 55 *e*PKIKP PKPdf 04 50 34.4 -1.8
FFC MLR MLR
comp=Z,636nm,19.0s
ULM **Lac du Bonnet** 136.03 63 PKP PKPdf 04 50 39.8 +2.5
comp=Z,4.9nm,1.0s,baz=222,slow=5.5,SNR=4.0
D37A **Cotton** 136.05 69 P PKPdf 04 50 35.9 -1.5
baz=233
SVE **Sverdlovsk** 136.34 308 *e*PKIKP PKPdf 04 50 39.1 +1.4
SVE pmax pmax
comp=Z,41nm,1.4s
BLA **Blacksburg** 136.57 88 PFAKE 04 50 50.0 +11
BLA LR LR
comp=Z,724nm,22.0s
CNNC **Cliffs of the** 136.70 92 PFAKE 04 50 50.0 +11
CNNC LR LR
comp=Z,658nm,20.0s
ZEI **Tsey** 136.98 282 *i* PKIKP PKPdf 04 50 42.7 +3.1
ZEI pmax pmax
comp=Z,21nm,1.4s
EYMN **Ely** 137.02 68 P PKPdf 04 50 38.0 -1.3
baz=234
EYMN **Ely** 137.02 68 *e*PKPdf PKPdf 04 50 38.4 -0.9
EYMN LR LR
comp=Z,1μm,20.0s
ACSO **Alum Creek Sta** 137.08 83 PFAKE 04 50 50.0 +10
ACSO LR LR
comp=Z,802nm,21.0s
ARU **Arti** 137.09 307 PKP PKPdf 04 50 39.0 -0.1
comp=Z,2.2nm,0.3s,baz=147,slow=1.7,SNR=7.1
ARU **Arti** 137.09 307 *e*PKPdf PKPdf 04 50 39.5 +0.4
ARU LR LR
comp=Z,1μm,20.0s
ARU **Arti** 137.09 307 *i* PKIKP PKPdf 04 50 38.8 -0.3
ARU MLR MLR
comp=Z,1μm,22.0s
COWI **Conover** 137.23 72 *e*PKPdf PKPdf 04 50 37.9 -1.8
COWI LR LR
comp=Z,2μm,19.0s
NEY **Neytrino** 137.94 282 *i* PKIKP PKPdf 04 50 41.0 -0.4
AAM **Ann Arbor** 138.01 80 PFAKE 04 50 50.0 +8.7
AAM LR LR
comp=Z,1μm,20.0s
KOWA **Kowa** 138.10 205 PKhKP PKPpre 04 50 34.6
comp=Z,4.2nm,1.2s,baz=221,slow=4.6,SNR=3.5
KOWA PKP PKPdf 04 50 43.0 +0.7
comp=Z,8.5nm,1.2s,baz=236,slow=6.4,SNR=4.1
KBZ **Khabaz** 138.14 283 PKP PKPdf 04 50 42.3 +0.9
comp=Z,3.2nm,0.8s,baz=340,slow=5.1,SNR=5.6
KIV **Kislovodsk** 138.40 283 PFAKE 04 50 50.0 +7.9
KIV LR LR
comp=Z,723nm,20.0s
KIV **Kislovodsk** 138.40 283 P PKPdf 04 50 42.9 +0.8
SNR=6.7
KIV **Kislovodsk** 138.40 283 *i* PKIKP PKPdf 04 50 40.7 -1.4
KIV *e* 04 53 28.4
KIV *e*SS SS 05 11 39.9 -6.3
KIV pmax pmax
comp=Z,24nm,1.1s
CBN **Corbin Frederi** 139.03 89 PFAKE 04 50 50.0 +6.8
CBN LR LR
comp=Z,644nm,19.0s
O56A **Blue Knob Stat** 139.68 86 P PKPdf 04 50 42.9 -1.5
baz=230
SOC **Sochi** 139.88 280 *e*PKIKP PKPdf 04 50 44.5 -0.1
SOC *i* 04 50 48.0
SOC *e* 04 53 38.4
SOC *e*SS SS 05 11 55.5 -7.9
SOC *e*SSS SSS 05 17 17.0
SOC pmax pmax
comp=Z,6.0nm,0.5s
SOC pmax pmax
comp=Z,8.0nm,0.4s
SDMD **Soldier's Deli** 140.14 88 *e*PKPdf PKPdf 04 50 45.0 -0.2
SSPA **Standing Stone** 140.31 86 *e*PKPdf PKPdf 04 50 44.2 -1.4
SACV **Santiago Islan** 140.70 176 PFAKE 04 51 00.0 +13
SACV LR LR
comp=Z,388nm,21.0s
BR131 **Keskin Array S** 140.99 271 *e*PKPdf PKPdf 04 50 45.7 -1.3
BRTR **Keskin Array B** 140.99 271 PKhKP PKPpre 04 50 42.5
comp=Z,1.3nm,0.5s,baz=161,slow=5.2,SNR=6.9
BRTR PKP PKPdf 04 50 47.7 +0.7
comp=Z,3.4nm,1.1s,baz=160,slow=3.9,SNR=8.7
BRTR PP PP 04 53 45.8 -2.9
comp=Z,2.1nm,0.9s,baz=140,slow=6.5,SNR=6.2
FCC **Fort Churchill** 141.31 53 *e*PKPdf PKPdf 04 50 43.9 -2.8

FCC **Fort Churchill** 141.31 53 *e*PKIKP PKPdf 04 50 43.9 -2.8
ANTO **Ankara** 141.58 271 PFAKE 04 51 00.0 +12
ANTO LR LR
comp=Z,867nm,20.0s
ANTO **Ankara** 141.58 271 P PKPdf 04 50 48.5 +0.5
SNR=8.7
ILGA **Ilgaz** 141.80 273 *e*PKPdf PKPdf 04 50 48.3 -0.2
ANN **Anapa** 141.92 280 *i* PKHKP PKPpre 04 50 41.8
ANN *e* 04 53 51.7
ANN pmax pmax
comp=Z,39nm,1.3s
SADO **Sadowa** 142.12 80 *e*PKPdf PKPdf 04 50 48.0 -0.6
BBSR **BB Station** 142.24 107 PFAKE 04 51 00.0 +11
BBSR LR LR
comp=Z,951nm,22.0s
BINY **Binghamton** 142.41 86 *e*PKPdf PKPpre 04 50 44.0
BINY LR LR
comp=Z,707nm,19.0s
ODNJ **Ogdensburg** 142.52 88 *e*PKPdf PKPdf 04 50 48.4 -1.1
TAM **Tamanrasset** 142.74 223 *e*PKPpre PKPpre 04 50 46.4
IDI **Anoyia** 143.08 258 PKP PKPdf 04 50 52.1 +1.4
comp=Z,24nm,1.1s,baz=142,slow=8.1,SNR=3.2
PLVO **Plovna** 143.47 81 *e*PKPdf PKPdf 04 50 50.6 -0.5
SMG **Samos** 143.63 263 P PKPab 04 50 46.8 -1.4
SMG **Samos** 143.63 263 P PKPab 04 50 46.8 -1.4
SIM **Simferopol'** 143.93 278*d* *i* PKIKP PKPab 04 50 47.6 -1.5
SIM *e* 04 54 03.0
SIM pmax pmax
comp=Z,445nm,1.3s
VORD **Divnogorie** 144.20 290 *e*PKIKP PKPab 04 50 48.6 -1.3
VORD pmax pmax
comp=Z,30nm,1.4s
VSR **Storozhevoye** 144.40 290 *e*PKHKP PKPpre 04 50 48.2
VSR *e* 04 54 08.6
VSR pmax pmax
comp=Z,90nm,1.5s
VSR MLR MLR
comp=Z,610nm,20.0s
ANKY **Antikythira Is** 144.40 257 P PKPab 04 50 49.1 -2.0
ANKY **Antikythira Is** 144.40 257 P PKPab 04 50 49.1 -2.0
NCB **Newcomb** 144.51 85 *e*PKPdf PKPdf 04 50 52.8 -0.1
VORR **Voronezh** 144.59 291 PKIKP PKPab 04 50 49.0 -2.3
VORR pmax pmax
comp=Z,300nm,2.2s
LONY **Lake Ozonia** 144.68 83 P PKPab 04 50 51.3 -0.7
baz=234
LONY **Lake Ozonia** 144.68 83 *e*PKPdf PKPab 04 50 51.6 -0.3
LONY LR LR
comp=Z,911nm,20.0s
KYTH **Kithira** 144.82 257 P PKPab 04 50 51.7 -1.1
KYTH **Kithira** 144.82 257 P PKPab 04 50 51.7 -1.1
KTHR **Kythira** 144.85 257 P PKPab 04 50 51.0 -1.8
PRK **Paraskevi** 144.99 264 P PKPbc 04 50 50.5 -2.7
PRK **Paraskevi** 144.99 264 P PKPbc 04 50 50.5 -2.7
PRK **Paraskevi** 144.99 264 PKIKP PKPbc 04 50 50.5 -2.7
HRV **Adam Dziewonsk** 145.19 89 P PKPbc 04 50 53.4 -0.4
baz=232
HRV **Adam Dziewonsk** 145.19 89 *e*PKPbc PKPab 04 50 53.8 0.0
VLI **Veliai** 145.21 258 P PKPbc 04 50 50.3 -3.7
VLI **Veliai** 145.21 258 P PKPbc 04 50 50.3 -3.7
SIGR **SIGRI** 145.21 264 P PKPbc 04 50 51.5 -2.4
SIGR **SIGRI** 145.21 264 P PKPbc 04 50 51.5 -2.4
PRGR **Permogore** 145.36 310⇑ *i* PKP2 PKPbc 04 50 51.7 -2.0
PRGR pmax pmax
comp=Z,274nm,1.3s
FRNY **Flat Rock** 145.38 84 *e*PKPbc PKPab 04 50 56.6 +2.1
VLY **Voula,Athens** 145.50 260 P PKPdf 04 50 51.9 -2.9
VLY **Voula,Athens** 145.50 260 P PKPdf 04 50 51.9 -2.9
RES **Resolute Bay** 145.53 27 *e*PKPbc PKPdf 04 50 52.3 -1.4
RES **Resolute Bay** 145.53 27 *e*PKP2 PKPdf 04 50 52.3 -1.4
KRND **KRANIDI** 145.55 259 P PKPdf 04 50 52.6 -2.3
VT1 **Waterbury** 145.58 85 *e*PKPdf PKPdf 04 50 53.9 -0.8
ATHU **Athens Univers** 145.58 260 P PKPdf 04 50 52.6 -2.3
ATHU **Athens Univers** 145.58 260 P PKPdf 04 50 52.6 -2.3
DID **Didima** 145.58 259 P PKPdf 04 50 51.9 -3.1
DID **Didima** 145.58 259 P PKPdf 04 50 51.9 -3.1
DYR **Agios Nikonas** 145.58 257 P PKPdf 04 50 53.2 -1.8
PTL **Penteli** 145.59 260 P PKPdf 04 50 52.4 -2.6
PTL **Penteli** 145.59 260 P PKPdf 04 50 52.4 -2.6
TRQ **Mont Tremblant** 145.60 81 *e*PKPdf PKPdf 04 50 53.3 -1.5
TRQ *e*PKPbc PKPbc 04 50 58.8 +3.7
ATH **Athens Observa** 145.62 260 P PKPdf 04 50 52.8 -2.2
ATH **Athens Observa** 145.62 260 P PKPdf 04 50 52.8 -2.2
FFD **Franklin Falls** 145.71 87 *e*PKPdf PKPdf 04 50 55.1 +0.2
FFD *e*PKPbc PKPbc 04 51 00.3 +4.9
GADA **Gvkgeada** 145.83 265 P PKPdf 04 50 53.4 -1.9
GADA **Gvkgeada** 145.83 265 P PKPdf 04 50 53.4 -1.9
VLX **Vlachokerasia** 145.98 258 P PKPdf 04 50 55.0 -0.8
VLX **Vlachokerasia** 145.98 258 P PKPdf 04 50 55.0 -0.8
VILL **Villia** 145.99 260 P PKPdf 04 50 52.8 -2.9
LBNH **Lisbon** 146.01 86 P PKPdf 04 50 55.5 +0.1
baz=234
LBNH **Lisbon** 146.01 86 *e*PKPdf PKPbc 04 50 55.9 -0.4
LBNH **Lisbon** 146.01 86 *e*PKP2 PKPbc 04 50 55.9 -0.4
PYL **PYLOS** 146.01 257 P PKPdf 04 50 54.4 -1.3
PYL **PYLOS** 146.01 257 P PKPdf 04 50 54.4 -1.3
LIA **Limnos Island** 146.06 264 P PKPdf 04 50 54.3 -1.3
LIA **Limnos Island** 146.06 264 P PKPdf 04 50 54.3 -1.3
LOUT **Loutraki** 146.06 260 P PKPdf 04 50 54.0 -1.8
LTK **Loutraki** 146.09 260 P PKPdf 04 50 53.7 -2.1
LTK **Loutraki** 146.09 260 P PKPdf 04 50 53.7 -2.1
ITM **Ithomi** 146.11 257 *e*PKPdf PKPdf 04 50 55.0 -0.9
ITM **Ithomi** 146.11 257 P PKPdf 04 50 53.1 -2.8
TRIP **Tripoli** 146.15 258 P PKPdf 04 50 54.9 -1.1
ALN **Alexandroupoli** 146.19 266 *e*PKPdf PKPdf 04 50 55.0 -0.9
ALN **Alexandroupoli** 146.19 266 P PKPdf 04 50 53.1 -2.8
ALN **Alexandroupoli** 146.19 266 *e*PKP2 PKPdf 04 50 55.0 -0.9
SMTH **Samothraki Isl** 146.22 265 P PKPdf 04 50 53.5 -2.5
SMTH **Samothraki Isl** 146.22 265 P PKPdf 04 50 53.5 -2.5
THAL **Thalero** 146.28 259 P PKPdf 04 50 54.8 -1.3
GUR **Goura** 146.39 259 P PKPdf 04 50 55.5 -1.0
GUR **Goura** 146.39 259 P PKPdf 04 50 55.5 -1.0
AMT **Artemida-Makis** 146.48 258 P PKPdf 04 50 56.3 -0.2
LKR **Lokris** 146.50 260 P PKPdf 04 50 55.6 -0.9
LKR **Lokris** 146.50 260 P PKPdf 04 50 55.6 -0.9
SMIA **Simia** 146.53 261 P PKPdf 04 50 56.7 +0.1
SKIA **Skiathos** 146.57 262 P PKPdf 04 50 55.3 -1.3
KLV **Kalavryta, Ach** 146.57 259 P PKPdf 04 50 52.8 -3.9
KLV **Kalavryta, Ach** 146.57 259 P PKPdf 04 50 52.8 -3.9
DSF **Desfina** 146.61 260 P PKPdf 04 50 55.3 -1.4
DSF **Desfina** 146.61 260 P PKPdf 04 50 55.3 -1.4
PSN **Preselentsi** 146.65 272 *e*P PKPdf 04 50 56.7 +0.2
RDO **Rodhopi** 146.65 266 P PKPdf 04 50 54.2 -2.4
RDO **Rodhopi** 146.65 266 P PKPdf 04 50 54.2 -2.4
DRO **Drossia** 146.76 258 P PKPdf 04 50 57.0 0.0
NEO **Neokhori** 146.81 262 P PKPdf 04 50 56.6 -0.4
NEO **Neokhori** 146.81 262 P PKPdf 04 50 56.6 -0.4
LAKA **Lakka** 146.81 259 P PKPdf 04 50 57.4 +0.3
LAKA **Lakka** 146.81 259 P PKPdf 04 50 57.4 +0.3
PRD **Provadia** 146.82 271 *e*P PKPdf 04 50 56.8 0.0
TRIZ **Trizonia** 146.84 259 P PKPdf 04 50 55.5 -1.5
JMB **Yambol** 146.86 269 *e*P PKPdf 04 50 57.0 +0.1
XOR **Xorichti** 146.86 262 P PKPdf 04 50 55.3 -1.8
XOR **Xorichti** 146.86 262 P PKPdf 04 50 55.3 -1.8
SERG **Sergoula** 146.88 259 P PKPdf 04 50 57.3 +0.1
PAIG **Paliouri** 146.95 263 P PKPdf 04 50 56.9 -0.3
PAIG **Paliouri** 146.95 263 P PKPdf 04 50 56.9 -0.3
EFP **Efpalio** 146.98 259 P PKPdf 04 50 58.2 +0.9
RLS **Riolos of Patr** 146.98 258 P PKPdf 04 50 56.9 -0.4
RLS **Riolos of Patr** 146.98 258 P PKPdf 04 50 56.9 -0.4
KDZ **Kurdzhali** 147.04 267 *e*P PKPdf 04 50 57.0 -0.3
FYTO **Fytoko, Volos** 147.04 261 P PKPdf 04 50 57.0 -0.3
FYTO **Fytoko, Volos** 147.04 261 P PKPdf 04 50 57.0 -0.3
OUR **Ouranopolis** 147.04 264 P PKPdf 04 50 56.9 -0.4
OUR **Ouranopolis** 147.04 264 P PKPdf 04 50 56.9 -0.4
ANX **Ano Chora** 147.08 259 P PKPdf 04 50 57.1 -0.5
ICOR **Ion Corvin** 147.13 272⇑ *i*P PKPbc 04 50 58.8 -0.7
AGG **Agios Georgios** 147.13 260 *e*PKPdf PKPdf 04 50 57.5 -0.1
AGG **Agios Georgios** 147.13 260 P PKPdf 04 50 57.5 -0.1
TLCR 147.15 275⇑ *i*P PKPbc 04 50 58.7 -0.8
TLCR 147.15 275⇑ *i*PKP2 PKPbc 04 50 58.7 -0.8
MOS **Moscow** 147.20 297 *e*PKIKP PKPdf 04 50 55.6 -1.4
MOS *e* 04 54 31.3
MOS pmax pmax
comp=Z,254nm,1.6s
PVO **Paravola** 147.32 259 P PKPdf 04 50 58.3 +0.4
PLG **Polygyros** 147.38 263 P PKPdf 04 50 58.9 +1.0
PLG **Polygyros** 147.38 263 P PKPdf 04 50 58.9 +1.0
HARR **Harsova** 147.38 273⇓ *i*P PKPbc 04 50 59.0 -1.2
HARR **Harsova** 147.38 273⇓ PKP2 PKPbc 04 50 59.0 -1.2
KFL **Anninata** 147.40 258 P PKPdf 04 50 59.2 +1.2

RZN **Rozhen** 147.47 266 *e*P PKPdf 04 50 58.0 -0.3
PDO **Prodromos** 147.51 259 P PKPdf 04 50 58.0 -0.2
OBN **Obninsk** 147.51 295 *e*PKPdf PKPdf 04 50 57.2 -0.4
OBN *e*PKPbc PKPbc 04 51 00.0 -0.2
OBN *e*PKPab PKPab 04 51 01.9 -0.5
OBN LR LR
comp=Z,279nm,19.0s
OBN **Obninsk** 147.51 295⇓ *e*PKP2 PKPbc 04 50 59.6 -0.6
OBN *e* 04 54 32.3
OBN *e* 05 07 13.2
OBN pmax pmax
comp=Z,176nm,2.7s
OBN pmax pmax
comp=Z,374nm,1.2s
WVL **Waterville** 147.52 87 *e*PKPbc PKPbc 04 50 59.8 -0.8
CFR **Carcaliu** 147.54 274⇑ *i*P PKPdf 04 50 59.1 +1.1
CFR **Carcaliu** 147.54 274⇑ PKP2 PKPdf 04 50 59.1 +1.1
THL **Klokotos Trika** 147.68 261 P PKPdf 04 50 56.2 -2.2
SOH **Sokhos** 147.72 264 P PKPdf 04 50 58.8 +0.3
SOH **Sokhos** 147.72 264 P PKPdf 04 50 58.8 +0.3
SZH **Strazhica** 147.72 270 *e*P PKPdf 04 50 59.2 +0.8
HORT **Hortiatis** 147.72 263 P PKPdf 04 50 59.0 +0.4
HORT **Hortiatis** 147.72 263 P PKPdf 04 50 59.0 +0.4
LIT **Litokhoron** 147.75 262 *e*PKPdf PKPdf 04 50 59.7 +1.1
LIT **Litokhoron** 147.75 262 P PKPdf 04 50 56.9 -1.7
NVR **Nevrokopi** 147.76 265 P PKPdf 04 50 55.3 -3.2
NVR **Nevrokopi** 147.76 265 P PKPdf 04 50 55.3 -3.2
SRS **Serrai** 147.77 264 P PKPdf 04 50 56.7 -1.8
SRS **Serrai** 147.77 264 P PKPdf 04 50 56.7 -1.8
SRS **Serrai** 147.77 264 PKIKP PKPdf 04 50 56.7 -1.8
FSK **Fiskardo** 147.77 258 P PKPdf 04 50 55.1 -3.5
DSL **Palaion Diasel** 147.92 259 P PKPdf 04 50 57.2 -1.7
DSL **Palaion Diasel** 147.92 259 P PKPdf 04 50 57.2 -1.7
LKD2 **Lefkada island** 147.94 258 P PKPdf 04 50 56.7 -2.2
LKD2 **Lefkada island** 147.94 258 P PKPdf 04 50 56.7 -2.2
KLMR **Klimovskoe** 147.94 307 *e*PKIKP PKPdf 04 50 58.8 +0.7
KLMR pmax pmax
comp=Z,362nm,1.3s
KLMR **Klimovskoe** 147.94 307 *e*PKPdf PKPdf 04 50 58.9 +0.8
KLMR AMP 04 51 07.2
comp=Z,362nm,1.3s
MMB **Musomiste** 147.99 265 *e*P PKPdf 04 50 59.0 +0.1
PKME **Peaks-Kenny Pk** 148.13 86 P PKPbc 04 51 01.1 -1.1
baz=236
PKME **Peaks-Kenny Pk** 148.13 86 *e*PKPbc PKPbc 04 51 01.7 -0.5
PKME LR LR
comp=Z,2μm,20.0s
KIS **Kishinev** 148.14 278⇓ *i*PKP PKPbc 04 51 01.0 -1.2
KIS M M 04 51 01.5
comp=Z,400nm,2.0s
KIS *e*SKP 04 54 28.0
KIS **Kishinev** 148.14 278 *e*PPP PPP 04 57 50.0
KIS **Kishinev** 148.14 278 *e*PKPP PKKPdf 05 00 04.0 +11
KIS **Kishinev** 148.14 278*k* *i*PKP2 PKPbc 04 51 01.0 -1.2
KIS *e* 04 54 28.0
KIS *e*PPP PPP 04 57 50.0
KIS pmax pmax
comp=Z,400nm,2.0s
KIS pmax pmax
comp=Z,900nm,4.0s
KIS MLR MLR
comp=Z,600nm,20.0s
LEOM **Leova** 148.19 276⇓ *i*P PKPab 04 51 06.1 +0.8
LEOM **Leova** 148.19 276⇓ PKP2 PKPab 04 51 06.1 +0.8
KNT **Kendrikon** 148.20 264 P PKPdf 04 50 59.7 +0.5
KNT **Kendrikon** 148.20 264 P PKPdf 04 50 59.7 +0.5
KZN **Kozani** 148.31 262 P PKPdf 04 51 00.8 +1.3
KZN **Kozani** 148.31 262 P PKPdf 04 51 00.8 +1.3
KPRO **Kipourio** 148.31 261 P PKPdf 04 50 59.0 -0.5
PGB **Panagyurishte** 148.32 267 *e*P PKPdf 04 51 00.0 +0.5
GRG **Griva** 148.36 263 P PKPdf 04 50 57.4 -2.1
GRG **Griva** 148.36 263 P PKPdf 04 50 57.4 -2.1
JAN **Janina** 148.41 260 P PKPdf 04 50 59.1 -0.6
JAN **Janina** 148.41 260 P PKPdf 04 50 59.1 -0.6
ISR **Istrita** 148.44 273⇑ *i*P PKPab 04 51 08.7 +2.2
ISR **Istrita** 148.44 273⇑ PKP2 PKPab 04 51 08.7 +2.2
VAY **Valandovo** 148.49 264 P PKPdf 04 51 00.2 +0.5
VAY **Valandovo** 148.49 264 P PKPdf 04 51 00.2 +0.5
VAY **Valandovo** 148.49 264 *i* PKP PKPdf 04 50 57.0 -2.7
KKB **Krupnik** 148.54 265 *e*P PKPdf 04 51 01.0 +1.2
SGD **Sagiada** 148.74 259 P PKPbc 04 51 02.4 -1.6
VRI **Vrincioaia** 148.75 274⇓ *i*P PKPbc 04 51 02.8 -1.0
VRI **Vrincioaia** 148.75 274⇓ PKP2 PKPbc 04 51 02.8 -1.0
PLOR **Plostina** 148.78 274⇓ *i*P PKPbc 04 51 02.1 -1.9
PLOR **Plostina** 148.78 274⇓ PKP2 PKPbc 04 51 02.1 -1.9
FNA **Florina** 148.84 262 P PKPdf 04 50 59.2 -1.2
FNA **Florina** 148.84 262 P PKPdf 04 50 59.2 -1.2
VTS **Vitosha** 148.91 266⇑ *i*P PKPbc 04 51 02.8 -1.7
VTS **Vitosha** 148.91 266 *e*PKPdf PKPdf 04 50 57.9 -2.6
VTS *e*PKPbc PKPbc 04 51 03.9 -0.7
VTS **Vitosha** 148.91 266 *e*P PKPdf 04 51 02.0 +1.5
VTS **Vitosha** 148.91 266 P PKPdf 04 50 57.9 -2.6
VTS **Vitosha** 148.91 266 ⇑PKP2 PKPbc 04 51 02.8 -1.7
STIP **Stip** 148.95 264 *i* PKP PKPdf 04 50 58.3 -2.2
SORM **Soroca** 148.99 279⇑ *i*P PKPbc 04 51 02.5 -1.8
SORM **Soroca** 148.99 279⇑ PKP2 PKPbc 04 51 02.5 -1.8
MLR **Muntele Rosu** 149.00 273 PKPbc PKPbc 04 51 02.9 -1.7
comp=Z,3.5nm,0.7s,baz=354,slow=0.4,SNR=31
MLR **Muntele Rosu** 149.00 273⇑ *i*P PKPbc 04 51 03.0 -1.7
MLR **Muntele Rosu** 149.00 273 *e*PKPdf PKPdf 04 50 59.3 -1.2
MLR *e*PKPbc sPKPbc 04 51 08.2 +0.6
MLR **Muntele Rosu** 149.00 273⇑ PKP2 PKPbc 04 51 03.1 -1.5
BIA **Bitola** 149.03 262 *e*PKP PKPdf 04 51 02.6 +1.9
KEK **Kerkira** 149.05 259 P PKPbc 04 51 04.3 -0.5
KEK **Kerkira** 149.05 259 P PKPbc 04 51 04.3 -0.5
MPEP **Malo Peshtene** 149.06 268 *e*P PKPbc 04 51 03.5 -1.2
KBN **Korca** 149.08 261 P PKPdf 04 51 02.7 +1.9
KBN **Korca** 149.08 261 P PKPdf 04 51 02.7 +1.9
TESR **Tescani** 149.14 275⇑ *i*P PKPdf 04 51 02.6 +2.0
KRUS **Krusevo** 149.29 263 *i* PKP PKPdf 04 51 00.7 -0.5
TMCR **Tamitsa** 149.35 312 *e*PKIKP PKPdf 04 51 02.4 +2.1
TMCR pmax pmax
comp=Z,96nm,1.2s
MTUR **Matau** 149.37 272⇑ *i*P PKPbc 04 51 04.7 -0.8
MTUR **Matau** 149.37 272⇑ PKP2 PKPbc 04 51 04.7 -0.8
OHR **Ohrid** 149.39 262 *i* PKP PKPdf 04 50 58.6 -2.6
VOIR 149.49 272⇓ *i*P PKPbc 04 51 05.5 -0.3
VOIR 149.49 272⇓ PKP2 PKPbc 04 51 05.5 -0.3
SKO **Skopje** 149.56 264 P PKPbc 04 51 04.3 -1.7
SKO **Skopje** 149.56 264 P PKPbc 04 51 04.3 -1.7
SKO **Skopje** 149.56 264 *i* PKP PKPdf 04 50 57.9 -3.5
DOPR **Dopca** 149.58 273⇓ *i*P PKPbc 04 51 04.9 -1.0
PQI **Presque Isle** 149.65 85 *e*pPKPdf pPKPdf 04 51 04.5 +1.0
ARR **Arges** 149.69 272⇑ *i*P PKPbc 04 51 05.3 -1.0
AKASG **Malin Array Be** 149.72 284 PKPbc PKPbc 04 51 04.3 -1.7
comp=Z,5.1nm,0.4s,baz=75,slow=2.6,SNR=7.1
AKBB **Malin Array Si** 149.72 284 *e*PKPdf PKPdf 04 51 01.4 0.0
AKBB *e*PKPbc PKPbc 04 51 05.8 -0.2
KIEV **Kiev** 149.72 284 *e*PKPdf PKPdf 04 51 00.4 -0.9
KIEV *e*PKPbc PKPbc 04 51 04.5 -1.6
KIEV *e*PKPab PKPab 04 51 09.1 -2.3
KIEV LR LR
comp=Z,482nm,20.0s
KIEV **Kiev** 149.72 284*c* *i*PKIKP PKPpre 04 50 57.1
PHP **Peshkopia** 149.96 262 P PKPdf 04 51 00.6 -1.5
PHP **Peshkopia** 149.96 262 P PKPdf 04 51 00.6 -1.5
PHP **Peshkopia** 149.96 262 PKIKP PKPdf 04 51 00.6 -1.5
TIR **Tirane** 150.08 261⇑ *i*P PKPbc 04 51 06.9 -0.4
TIR **Tirane** 150.08 261 *e*PKPbc PKPbc 04 51 06.8 -0.4
TIR **Tirane** 150.08 261 ⇑PKP2 PKPbc 04 51 06.9 -0.4
LOT **Lotru** 150.25 271⇓ *i*P PKPbc 04 51 07.1 -0.6
CEL **Celeste** 150.28 253 *e*PKPbc PKPbc 04 51 07.6 -0.3
TIP **Timpagrande** 150.43 255⇓ *i*P PKPbc 04 51 09.0 +0.7
TIP **Timpagrande** 150.43 255 *e*PKPdf PKPdf 04 51 01.9 -1.0
TIP *e*PKPbc PKiKP 04 51 09.3 +0.3
TIP **Timpagrande** 150.43 255 P PKPdf 04 51 00.9 -2.1
VAE **Valguarnera** 150.54 250 PKPbc PKPbc 04 51 07.4 -1.1
comp=Z,8.5nm,0.4s,baz=164,slow=21,SNR=3.3
BURAR **Bucovina Array** 150.55 276⇑ *i*P PKPbc 04 51 08.0 -0.3
BURAR **Bucovina Array** 150.55 276 ⇑PKIKP PKPbc 04 51 08.0 -0.3
BUR04 **Bucovina Ar. S** 150.56 276 *e*PKPdf PKPdf 04 51 00.8 -2.1
BUR04 *e*PKPbc PKPbc 04 51 07.3 -1.0
BUR08 **Bucovina Ar. S** 150.58 276 *e*PKPdf PKPdf 04 51 03.3 +0.3
BUR08 *e*PKPbc PKPbc 04 51 13.1 +4.8
HERR **Herculane** 150.72 269⇓ *i*P PKPbc 04 51 07.3 -1.4
ARCR **ARCALIA** 150.78 275⇑ *i*P PKPbc 04 51 08.4 -0.4
PVY **Plav** 150.81 263 *e*PKP PKPbc 04 51 06.9 -2.2
ULC **Ulcinj** 150.83 262⇑ *i*PKP PKPbc 04 51 07.6 -1.5
DRME **Dracevica, Mon** 151.01 262⇑ *i*PKP PKPbc 04 51 07.8 -1.6
IVA **Berane** 151.02 264⇑ *i*PKP PKPbc 04 51 06.9 -2.7
MDVR **Moldovita** 151.08 269⇓ *i*P PKPbc 04 51 08.2 -1.4

PDG	**Podgorica**	**151.12 262**	⇑*i*P	**PKPbc**	**04 51 08.4**	**-1.2**
TTG	**Podgorica**	**151.12 262**	⇑*i*PKP	**PKPbc**	**04 51 08.1**	**-1.5**
TTG	**Podgorica**	**151.12 262**	*e*PKPdif	**PKPdf**	**04 51 05.2**	**+1.4**
TTG			*e*PKPbc	**PKPbc**	**04 51 13.6**	**+4.0**
TTG			*e*PKPab	**PKPab**	**04 51 21.7**	**+4.2**
TTG	**Podgorica**	**151.12 262**	*e*PKIKP	**PKPdf**	**04 51 05.2**	**+1.4**
TTG			*e*		04 51 13.6	
KOME	**Kolasin**	**151.22 263**	⇑*i*PKP	**PKPbc**	**04 51 08.3**	**-1.7**
BUM	**Brajici-Budva**	**151.25 262**	⇑*i*PKP	**PKPbc**	**04 51 08.0**	**-2.1**
CEME	**Cevo**	**151.38 262**	⇑*i*PKP	**PKPbc**	**04 51 08.3**	**-2.1**
MATE	**Matera**	**151.45 257**	⇓*i*P	**PKPbc**	**04 51 09.8**	**-0.7**
NKME	**Niksic**	**151.50 263**	*e*PKP	**PKPbc**	**04 51 07.6**	**-3.0**
NKY	**Niksic**	**151.50 263**	⇑*i*PKP	**PKPbc**	**04 51 07.8**	**-2.9**
HCY	**Herceg Novi**	**151.57 262**	⇑*i*PKP	**PKPbc**	**04 51 08.5**	**-2.2**
PLE	**Pljevlja**	**151.59 264**	⇑*i*PKP	**PKPbc**	**04 51 07.8**	**-3.1**
DRGR		**151.59 273**	⇓*i*P	**PKPbc**	**04 51 10.1**	**-0.6**
DRGR		**151.59 273**	⇓PKIKP	**PKPbc**	**04 51 10.1**	**-0.6**
BZS	**Buzias**	**151.60 270**	⇑*i*P	**PKPbc**	**04 51 08.8**	**-1.9**
BZS	**Buzias**	**151.60 270**	⇑PKIKP	**PKPbc**	**04 51 08.8**	**-1.9**
DIVS	**Divibare**	**151.69 266**	*e*PKPdif	**PKPdf**	**04 51 05.4**	**+0.6**
UPM	**Unac-Piva**	**151.79 263**	*e*PKP	**PKPdf**	**04 51 07.6**	**+2.5**
BRY	**Bratogost**	**151.82 263**	*e*PKP	**PKPdf**	**04 51 08.2**	**+3.1**
SIRR	**Siria**	**151.93 271**	⇑*i*P	**PKPbc**	**04 51 12.7**	**+1.3**
KEST	**Kesra**	**151.94 241**	PKPbc	**PKPbc**	**04 51 10.6**	**-1.3**
	comp=Z,24nm,0.9s,baz=220,slow=3.8,SNR=5.1					
MICGM	**Minsk**	**151.98 291**	*e*P	**PKPdf**	**04 51 04.0**	**-0.7**
MNK	**Minsk**	**151.98 291**	*e*PKIKP	**PKPdf**	**04 51 04.0**	**-0.7**
LVV	**L'vov**	**152.30 279**	*e*PKIKP	**PKPbc**	**04 51 09.5**	**-2.6**
LVV			*e*		04 54 52.0	
LVV			*e*		04 58 28.0	
TRPA	**Tarpa**	**152.37 275**	⇓*i*P	**PKPbc**	**04 51 09.5**	**-2.8**
NACGM	**Naroch**	**152.71 291**	*e*	**PKPbc**	**04 51 12.0**	**-0.9**
SPITS	**Spitsbergen Ar**	**152.72 344**	PKPbc	**PKPbc**	**04 51 11.1**	**-1.3**
	comp=Z,7.2nm,0.6s,baz=64,slow=2.9,SNR=7.1					
UZH	**Uzhgorod**	**152.76 276**	*e*PKIKP	**PKPbc**	**04 51 10.3**	**-2.9**
IDID	**Didziasalis**	**152.87 292**	*e*P	**PKPbc**	**04 51 14.0**	**+0.8**
IDID			IAmb	IAmb	04 51 20.3	
	comp=Z,27nm,1.1s					
KBS	**Kingsbay**	**152.87 347**	PFAKE		04 51 20.0	-3.9
KBS			LR	LR		
	comp=Z,1μm,21.0s					
KWP	**Kalwaria Pacla**	**152.98 278**	*e*PKP	**PKPbc**	**04 51 14.0**	**+0.3**
KWP	**Kalwaria Pacla**	**152.98 278**	*e*PKPdf	**PKPdf**	**04 51 06.2**	**-0.2**
KWP			*e*PKPbc	**pPKPbc**	**04 51 15.0**	**-0.9**
KWP	**Kalwaria Pacla**	**152.98 278**	*e*PKIKP	**PKPdf**	**04 51 06.2**	**-0.2**
IIGN	**Ignalina**	**153.16 292**	*e*P	**PKPbc**	**04 51 14.6**	**+0.8**
IIGN			IAmb	IAmb	04 51 19.6	
	comp=Z,26nm,1.3s					
IZAR	**Zarasai**	**153.26 293**	*e*P	**PKPbc**	**04 51 14.9**	**+0.9**
IZAR			IAmb	IAmb	04 51 19.6	
	comp=Z,38nm,1.5s					
ISAL	**Salakas**	**153.28 292**	*e*P	**PKPbc**	**04 51 15.0**	**+0.9**
ISAL			IAmb	IAmb	04 51 19.8	
	comp=Z,40nm,1.5s					
ABSA	**Djebel Ababsia**	**153.31 239**	P	**PKPbc**	**04 51 18.9**	**+3.9**
CRVS	**Cervenica-Dubn**	**153.37 276**	*e*PKIKP	**PKPdf**	**04 51 10.3**	**+3.3**
CRVS	**Cervenica-Dubn**	**153.37 276**	*e*PKP	**PKPdf**	**04 51 10.3**	**+3.3**
CRVS			*e*		04 51 28.0	
CMAH	**Djebel Manchou**	**153.61 240**	P	**PKPbc**	**04 51 18.9**	**+3.3**
KEV	**Kevo**	**153.63 324**	*e*PKPbc	**PKPbc**	**04 51 13.3**	**-1.1**
KEV			LR	LR		
	comp=Z,1μm,19.0s					
VSU	**Vasula**	**153.68 299***c*	*i*PKIKP	**PKPbc**	**04 51 14.8**	**0.0**
VSU			pmax	pmax		
	comp=Z,149nm,1.2s					
BLY	**Banja Luka**	**153.71 265**	⇑*i*P	**PKPbc**	**04 51 15.0**	**-0.4**
CKFL	**Kef-Lekhel**	**153.78 238**	P	**PKPbc**	**04 51 17.0**	**+1.0**
PSZ	**Piszkesteto**	**153.81 273**	*e*PKPdf	**PKPdf**	**04 51 09.7**	**+2.0**
PSZ			*e*PKPbc	**PKPbc**	**04 51 19.6**	**+3.9**
CAEH	**'Ain El Ouahch**	**154.02 239**	P	**PKPbc**	**04 51 13.2**	**-3.2**
ARCES	**ARCESS Array B**	**154.19 324**	PKPbc	**PKPbc**	**04 51 14.4**	**-1.3**
	comp=Z,3.3nm,0.6s,baz=114,slow=1.6,SNR=16					
NIE	**Niedzica**	**154.28 276**	*e*PKP	**PKPdf**	**04 51 06.3**	**-2.0**
NIE	**Niedzica**	**154.28 276**	*e*PKIKP	**PKPdf**	**04 51 06.3**	**-2.0**
FRB	**Frobisher Bay**	**154.39 49**	PKPab	**PKPab**	**04 51 30.6**	**0.0**
	comp=Z,14nm,1.1s,baz=241,slow=9.3,SNR=2.5					
SUW	**Suwalki**	**154.42 288**	*e*PKP	**PKPdf**	**04 51 11.2**	**+3.0**
SUW	**Suwalki**	**154.42 288**	*e*PKPdf	**PKPdf**	**04 51 09.3**	**+1.1**
SUW			*e*PKPbc	**PKPbc**	**04 51 20.1**	**+3.5**
SUW			*e*PKPab	**PKPab**	**04 51 30.0**	**-1.1**
SUW	**Suwalki**	**154.42 288**	*e*PKIKP	**PKPdf**	**04 51 11.2**	**+3.0**
FINES	**FINESS Array B**	**154.45 305**	PKPbc	**PKPbc**	**04 51 15.3**	**-1.1**
	comp=Z,6.5nm,0.5s,baz=96,slow=3.6,SNR=71					
FINES			PKPab	**PKPab**	**04 51 29.4**	**-1.5**
	comp=Z,8.2nm,0.7s,baz=74,slow=6.8,SNR=7.1					
LANS	**Liptovska Anna**	**154.65 275**	*e*PKP	**PKPbc**	**04 51 21.9**	**+4.6**
LANS			*e*PP	**PP**	**04 55 06.5**	**-2.0**
VYHS	**Vyhne**	**154.71 273**	*e*PKIKP	**PKPbc**	**04 51 18.1**	**+0.7**
VYHS			*e*		04 51 31.5	
VYHS	**Vyhne**	**154.71 273**	*e*PKP	**PKPbc**	**04 51 18.1**	**+0.7**
VYHS			*e*		04 51 31.5	
OJC	**Ojcow**	**154.93 278**	*e*PKP	**PKPdf**	**04 51 09.1**	**-0.1**
OJC	**Ojcow**	**154.93 278**	*e*PKPdf	**PKPdf**	**04 51 09.7**	**+0.6**
OJC			*e*PKPbc	**PKPbc**	**04 51 22.6**	**+4.8**
OJC			*e*PKPab	**PKPab**	**04 51 36.7**	**+3.3**
OJC	**Ojcow**	**154.93 278**	*e*PKIKP	**PKPdf**	**04 51 09.7**	**+0.6**
BOJS	**Bojanci**	**155.26 264**	*e*PKPdf	**PKPdf**	**04 51 07.5**	**-2.3**
BOJS			*e*		04 51 33.4	
MDT	**Midelt**	**155.56 215**	PKPab	**PKPab**	**04 51 35.4**	**-1.2**
	comp=Z,7.7nm,1.0s,baz=146,slow=3.3,SNR=5.7					
JAVC	**Velka Javorina**	**155.56 273**	*e*PP	PP	04 55 10.4	-3.3
MODS	**Modra-Piesok**	**155.57 272**	*e*PKP	**PKPdf**	**04 51 06.5**	**-3.6**
MODS			*e*		04 51 32.5	
MODS			*e*PP	**PP**	**04 55 08.3**	**-5.3**
VISS	**Visnje**	**155.67 264**	*e*PKPdf	**PKPdf**	**04 51 07.5**	**-2.8**
VISS			*e*		04 51 39.6	
OKC	**Ostrava-Krasne**	**155.73 276**	⇑*e*PKP	PKPpre	04 51 02.5	
OKC			*e*PP	**PP**	**04 55 15.1**	**+0.6**
OKC			*e*SKKS		05 05 37.6	
OKC	**Ostrava-Krasne**	**155.73 276**	*e*PKIKP	PKPpre	04 51 02.5	
OKC			*e*		04 55 15.1	
PERS	**Pernice**	**155.96 266**	*i*PKPdf	**PKPdf**	**04 51 07.7**	**-3.0**
PERS			*e*		04 51 36.5	
LJU	**Ljubljana**	**155.98 265**	*e*PKPdf	PKPpre	04 51 05.5	
SOKA	**Soboth**	**156.03 266**	PKPab	**PKPab**	**04 51 38.2**	**-0.1**
	comp=Z,34nm,1.4s					
ARSA	**Arzberg**	**156.04 268**	*e*PKPab	**PKPab**	**04 51 37.4**	**-0.8**
	comp=Z,66nm,1.4s					
MORC	**Moravsky Berou**	**156.05 275**	*e*PKP	**PKPdf**	**04 51 09.7**	**-1.0**
MORC			*e*PP	**PP**	**04 55 14.3**	**-2.1**
JAVS	**Javornik**	**156.17 264**	*e*PKPdf	**PKPdf**	**04 51 08.5**	**-2.5**
JAVS			*e*		04 51 35.7	
CONA	**Conrad Observa**	**156.18 270**	PKPab	**PKPab**	**04 51 39.0**	**+0.1**
	comp=Z,31nm,1.8s					
OBKA	**Obir**	**156.22 266**	PKPab	**PKPab**	**04 51 40.5**	**+1.4**
	comp=Z,18nm,1.3s					
VRAC	**Vranov**	**156.40 273**	*e*PKP	**PKPdf**	**04 51 12.4**	**+1.3**
VRAC			*e*		04 51 42.7	
VRAC			*e*PP	**PP**	**04 55 13.5**	**-4.8**
KRUC	**Moravsky**	**156.41 273**	*e*PKP	**PKPdf**	**04 51 09.8**	**-1.3**
KRUC			*e*		04 51 43.0	
KRUC			*e*PP	**PP**	**04 55 14.1**	**-4.2**
MYKA	**Terra Mystica**	**156.82 265**	*e*PKPab	**PKPab**	**04 51 41.8**	**+0.2**
	comp=Z,19nm,1.1s					
DPC	**Dobruska-Polom**	**157.01 276**	*e*PKPAB	**PKPab**	**04 51 42.8**	**+0.4**
DPC			*e*SKS	SKSdf	04 59 04.1	+46
DPC	**Dobruska-Polom**	**157.01 276**	*e*PKIKP	**PKPdf**	**04 51 07.2**	**-4.7**
DPC			*e*		04 59 04.1	
MOA	**Molln**	**157.08 268**	PKPab	**PKPab**	**04 51 42.7**	**0.0**
	comp=Z,24nm,1.1s					
KSP	**Ksiaz**	**157.22 277**	*e*PKP	**PKPdf**	**04 51 11.0**	**-1.1**
KSP	**Ksiaz**	**157.22 277**	*e*PKIKP	**PKPdf**	**04 51 11.0**	**-1.1**
KBA	**Koelnbreinsper**	**157.23 266**	*e*PKPab	**PKPab**	**04 51 43.3**	**-0.2**
	comp=Z,14nm,1.4s					
UPC	**Upice**	**157.25 276**	*e*PKPDF	**PKPdf**	**04 51 11.9**	**-0.3**
UPC			*e*PKPAB	**PKPab**	**04 51 43.3**	**-0.1**
UPC			*e*PP	**PP**	**04 55 24.4**	**+1.4**
UPC			*e*SKS	SKSdf	04 58 57.0	+39
UPC			*e*SKKS		05 05 42.9	
UPC	**Upice**	**157.25 276**	*e*PKIKP	**PKPdf**	**04 51 11.9**	**-0.3**
UPC			*e*		04 55 24.4	
UPC			*e*		04 58 57.0	
DAG	**Danmarks Havn**	**157.42 359**	*i*P	PKPpre	04 51 06.9	
DAG			*i*		04 55 19.5	
	comp=Z,990nm,19.0s					
DAG	**Danmarks Havn**	**157.42 359**	*i*PKIKP	PKPpre	04 51 06.9	
DAG			*i*		04 55 19.5	
DAG			MLR	MLR		
	comp=Z,1μm,19.0s					
ABTA	**Abfaltersbach**	**157.54 264**	*e*PKPab	**PKPab**	**04 51 45.1**	**+0.3**
	comp=Z,52nm,2.0s					
GOPC	**GO Pecny, Ondr**	**157.72 273**	⇑*e*PKP	PKPpre	04 51 07.2	
GOPC			*e*PKPAB	**PKPab**	**04 51 42.9**	**-2.5**
GOPC			*e*SKKS		05 05 46.1	
GOPC	**GO Pecny, Ondr**	**157.72 273**	*e*PKIKP	PKPpre	04 51 07.2	
GOPC			*e*		04 51 42.9	
GEA0	**GERESS Array S**	**157.88 270**	*e*PKPdif	PKPdf	04 51 26.5	+13
GEA0			*e*PKPab	**PKPab**	**04 51 43.7**	**-2.5**
GEC2	**GERESS Array S**	**157.88 270**	*e*PKPdf	**PKPdf**	**04 51 14.3**	**+1.2**
GEC2			*e*PKPab	**PKPab**	**04 51 44.7**	**-1.6**
GERES	**GERESS Array B**	**157.88 270**	PKPab	**PKPab**	**04 51 43.4**	**-2.8**
	comp=Z,3.5nm,0.9s,baz=140,slow=5.0,SNR=10.0					
PRU	**Pruhonice**	**157.90 273**	*e*PKPDF	**PKPdf**	**04 51 10.7**	**-2.3**
PRU			*e*PKPAB	**PKPab**	**04 51 44.4**	**-1.7**
PRU			*e*PP	**PP**	**04 55 20.7**	**-5.8**
PRU			*e*x	x	05 05 50.4	
PRU			AMS	AMS	06 20 10.0	
PRU	**Pruhonice**	**157.90 273**	*e*PKIKP	**PKPdf**	**04 51 10.7**	**-2.3**
PRU			*e*		04 51 44.4	
PRU			*e*		04 55 20.7	
PRA	**Prague**	**158.00 274**⇑	*e*PKP	PKPpre	04 51 04.8	
PRA	**Prague**	**158.00 274**	*e*PKIKP	PKPpre	04 51 04.8	
KHC	**Kasperske Hory**	**158.09 271**⇑	*e*PKP	**PKPdf**	**04 51 13.5**	**+0.1**
KHC			*e*x	x	04 51 44.6	
KHC			*e*PP	**PP**	**04 55 23.6**	**-4.0**
KHC			*e*SKS	SKSdf	04 58 46.1	+27
KHC			*e*SKKS	SKKSdf	05 05 47.2	-59
KHC	**Kasperske Hory**	**158.09 271**	*e*PKPdf	**PKPdf**	**04 51 13.4**	**+0.1**
KHC			*e*PKPab	**PKPab**	**04 51 44.7**	**-2.3**
KHC	**Kasperske Hory**	**158.09 271**	*e*PKIKP	**PKPdf**	**04 51 13.4**	**+0.1**
KHC			*e*		04 51 44.7	
FUL	**Funchal**	**158.15 189**	*e*PKPdf	**PKPdf**	**04 51 14.5**	**+0.7**
FUL	**Funchal**	**158.15 189**	*e*PKPab	PKPab	04 51 57.7	+10
WTTA	**Wattenberg**	**158.32 265**	PKPab	**PKPab**	**04 51 46.9**	**-1.4**
	comp=Z,25nm,1.3s					
PMOZ	**Porto Moniz, M**	**158.36 189**	*e*PKPdf	**PKPdf**	**04 51 18.4**	**+4.1**
PMOZ	**Porto Moniz, M**	**158.36 189**	*e*PP	PP	04 55 30.2	+2.0
PMOZ	**Porto Moniz, M**	**158.36 189**	*e*LR	LR	05 49 08.7	
	comp=Z,498nm,20.0s					
WATA	**Walderalm**	**158.39 265**	*e*PKPab	**PKPab**	**04 51 48.8**	**+0.2**
	comp=Z,22nm,1.0s					
PMPS	**Porto Santo**	**158.50 191**	*e*PKPdf	PKPdf	04 51 24.5	+10
PMPS	**Porto Santo**	**158.50 191**	*e*PP	PP	04 55 32.6	+3.7
BRG	**Berggiesshubel**	**158.61 275**	*e*PKP	**PKPdf**	**04 51 17.2**	**+3.4**
	comp=Z,30nm,1.8s					
BRG	**Berggiesshubel**	**158.61 275**	*e*PKP	**PKPab**	**04 51 49.3**	**+0.1**
	comp=Z,43nm,1.6s					
BRG			SKP		04 54 44.0	
BRG			PP	PP	04 55 19.0	-11
BRG			SS	SS	05 15 15.0	-18
	comp=N,520nm,20.0s					
	comp=E,516nm,21.4s					
	comp=Z,932nm,18.8s					
BRG	**Berggiesshubel**	**158.61 275**	*e*PKIKP	**PKPdf**	**04 51 17.2**	**+3.4**
BRG			*e*		04 51 49.3	
BRG			pmax	pmax		
	comp=Z,30nm,1.8s					
BRG			pmax	pmax		
	comp=Z,43nm,1.6s					
BRG			MLR	MLR		
	comp=N,520nm,20.0s					
BRG			MLR	MLR		
	comp=E,516nm,21.4s					
BRG			MLR	MLR		
	comp=Z,932nm,18.8s					
MOTA	**Moosalm**	**158.67 264**	*e*PKPab	**PKPab**	**04 51 49.0**	**-0.8**
	comp=Z,7.8nm,0.9s					
FETA	**Feichten**	**158.72 263**	PKPab	**PKPab**	**04 51 49.4**	**-0.6**
	comp=Z,51nm,1.4s					
FUORN	**Ofenpass-Fuorn**	**158.78 262**	*e*PKPdf	**PKPdf**	**04 51 14.6**	**+0.1**
FUORN			*e*PKPab	**PKPab**	**04 51 49.7**	**-0.7**
RETA	**Reutte**	**158.94 264**	*e*PKPab	**PKPab**	**04 51 49.7**	**-1.2**
	comp=Z,78nm,1.8s					
DAVOX	**Davos/Dischmat**	**159.09 262**	PKPab	**PKPab**	**04 51 49.4**	**-2.3**
	comp=Z,13nm,0.9s,baz=128,slow=9.6,SNR=10					
NKC	**Novy Kostel**	**159.22 272**	*e*PKP	**PKPdf**	**04 51 10.7**	**-3.9**
NKC			*e*PKPAB	**PKPab**	**04 51 49.3**	**-2.6**
NKC			*e*PP	**PP**	**04 55 31.6**	**-2.2**
NKC	**Novy Kostel**	**159.22 272**	*e*PKIKP	**PKPdf**	**04 51 10.7**	**-3.9**
NKC			*e*		04 51 49.3	
NKC			*e*		04 55 31.6	
TUE	**Stuetta**	**159.23 260**	*e*PKPdf	**PKPdf**	**04 51 15.5**	**+0.5**
TUE			*e*PKPab	**PKPab**	**04 51 51.4**	**-0.9**
CLL	**Collm**	**159.32 276**	*e*PKPdf	**PKPdf**	**04 51 17.0**	**+2.4**
	comp=Z,34nm,1.7s					
CLL			⇓*i*PKPab	**PKPab**	**04 51 50.6**	**-1.7**
	comp=Z,204nm,2.8s					
CLL			*i*pPKPab	**sPKPab**	**04 51 55.6**	**+0.4**
	comp=Z,107nm,2.0s					
CLL			*i* PP	**PP**	**04 55 30.6**	**-3.6**
	comp=Z,177nm,2.8s					
CLL			*e*PPP	PPP	04 59 15.0	
CLL			*e*SKKSac	SKKSac	05 02 24.0	+1.6
CLL			*e*		05 03 08.0	
CLL			*e*(PSKS)		05 05 44.0	
CLL			*e*(PPS)		05 08 42.0	
CLL			*e*		05 10 42.0	
CLL			*e*		05 13 06.0	
CLL			*e*SS	**SS**	**05 15 42.0**	**+1.7**
CLL			*e*		05 16 42.0	
CLL			*e*(SSS)		05 21 24.0	
CLL			*e*SSSS		05 26 00.0	
CLL			Lm	MLR	06 11 00.0	
	comp=Z,1μm,21.0s					
CLL	**Collm**	**159.32 276**⇓	*e*PKIKP	**PKPdf**	**04 51 17.0**	**+2.4**
CLL			*i*		04 51 50.6	
CLL			pmax	pmax		
	comp=Z,34nm,1.7s					
CLL			pmax	pmax		
	comp=Z,204nm,2.8s					
CLL			MLR	MLR		
	comp=Z,1μm,21.0s					
DAVA	**Damuels**	**159.35 263**	*e*PKPab	**PKPab**	**04 51 51.9**	**-0.8**
	comp=Z,53nm,1.1s					
ILULI	**Ilulissat**	**159.71 31**	*i* P	**PKPdf**	**04 51 13.0**	**-1.5**
ILULI	**Ilulissat**	**159.71 31**	*e*PKIKP	**PKPdf**	**04 51 13.0**	**-1.5**
GRFO	**Grafenberg**	**159.72 270**	*e*PKPab	**PKPab**	**04 51 53.1**	**-1.0**
SENIN	**Lac Senin/Sane**	**160.35 258**	*e*PKPab	**PKPab**	**04 51 56.4**	**-0.8**
HFS	**Hagfors**	**160.48 301**	PKPab	**PKPab**	**04 51 56.1**	**-1.0**
	comp=Z,9.9nm,0.9s,baz=108,slow=4.8,SNR=9.6					
PBDV	**Barranco-do-Ve**	**160.70 213**	*e*PKPdf	**PKPdf**	**04 51 17.1**	**+0.4**
PBDV	**Barranco-do-Ve**	**160.70 213**	*e*PKPab	**PKPab**	**04 52 00.1**	**+1.5**
PBDV	**Barranco-do-Ve**	**160.70 213**	*e*PP	PP	04 55 44.7	+3.6
PVAQ	**Vaqueiros**	**160.78 214**	*e*PKPdf	**PKPdf**	**04 51 17.4**	**+0.7**
PVAQ	**Vaqueiros**	**160.78 214**	*e*PP	PP	04 55 43.0	+1.5
PVAQ	**Vaqueiros**	**160.78 214**	*e*LR	LR	05 47 58.0	
	comp=Z,919nm,18.0s					
PFVI	**Vila Bisbo**	**160.88 211**	*e*PKPdf	**PKPdf**	**04 51 17.4**	**+0.6**
PFVI	**Vila Bisbo**	**160.88 211**	*e*PKPab	**PKPab**	**04 52 00.6**	**+1.3**
PFVI	**Vila Bisbo**	**160.88 211**	*e*PP	PP	04 55 42.6	+0.6
SFJD	**Kangerlussuaq**	**160.97 37**	PKPab	**PKPab**	**04 51 59.8**	**+0.9**
	comp=Z,14nm,0.9s,baz=113,slow=1.5,SNR=2.0					
SFJD	**Kangerlussuaq**	**160.97 37**	*i* P	PKPpre	04 51 11.5	
	comp=Z,1μm,20.0s					
SFJD	**Kangerlussuaq**	**160.97 37**	PKPab	**PKPab**	**04 51 59.9**	**+0.9**
SFJD			LR	LR		
	comp=Z,1μm,20.0s					
SFJD	**Kangerlussuaq**	**160.97 37**	*i* PKIKP	PKPpre	04 51 11.5	
SFJD			MLR	MLR		
	comp=Z,1μm,20.0s					
MORF	**Marmelete**	**160.98 212**	*e*PKP	**PKPdf**	**04 51 16.9**	**-0.2**
MORF			*e*PP	**PP**	**04 55 43.0**	**+0.3**
MORF			AMS	AMS	06 05 26.4	
	comp=Z,920nm,18.1s					
MORF	**Marmelete**	**160.98 212**	*e*PKPdf	**PKPdf**	**04 51 16.7**	**-0.3**
MORF	**Marmelete**	**160.98 212**	*e*PKPab	**PKPab**	**04 52 02.7**	**+2.8**
PCVE	**Castro Verde**	**161.09 213**	*e*PKPdf	**PKPdf**	**04 51 20.3**	**+3.2**
PCVE	**Castro Verde**	**161.09 213**	*e*PKPab	**PKPab**	**04 52 02.5**	**+2.2**
PTEO	**Sao Teotonio**	**161.23 212**	*e*PKPdf	**PKPdf**	**04 51 24.1**	**+6.9**
PTEO	**Sao Teotonio**	**161.23 212**	*e*PKPab	PKPab	04 52 09.6	+8.8
PBAR	**Barrancos**	**161.25 216**	*e*PKPdf	**PKPdf**	**04 51 17.9**	**+0.7**
PBAR	**Barrancos**	**161.25 216**	*e*PKPab	**PKPab**	**04 52 05.3**	**+4.4**
PBAR	**Barrancos**	**161.25 216**	*e*PP	PP	04 55 45.9	+1.9
MESJ	**Messejana**	**161.34 213**	*e*PKP	**PKPdf**	**04 51 17.1**	**-0.2**
MESJ			*e*PP	**PP**	**04 55 44.6**	**+0.1**
MESJ			*e*SS	SS	05 16 01.8	+1.4
MESJ			AMS	AMS	06 16 49.1	
	comp=Z,874nm,21.4s					
MESJ	**Messejana**	**161.34 213**	*e*PKPdf	**PKPdf**	**04 51 17.3**	**0.0**
MESJ	**Messejana**	**161.34 213**	*e*PKPab	**PKPab**	**04 52 01.1**	**-0.2**
MESJ	**Messejana**	**161.34 213**	*e*PP	PP	04 55 48.3	+3.8
ES19	**SONSECA Array**	**161.37 225**	*e*PKPdf	**PKPdf**	**04 51 18.6**	**+1.3**
ES19			*e*PKPab	**PKPab**	**04 52 01.6**	**+0.1**
ESDC	**Sonseca Array**	**161.37 225**	PKP	**PKPdf**	**04 51 18.2**	**+0.8**
	comp=Z,8.1nm,1.1s,baz=180,slow=3.5,SNR=9.0					
ESDC			PKPab	**PKPab**	**04 52 00.8**	**-0.8**
	comp=Z,3.5nm,1.0s,baz=150,slow=3.7,SNR=4.9					
PBEJ	**Beja**	**161.39 214**	*e*PKPdf	**PKPdf**	**04 51 24.1**	**+6.7**
PBEJ	**Beja**	**161.39 214**	*e*PP	PP	04 55 47.3	+2.5
ECH	**Echery**	**161.41 262**	*e*PKPab	**PKPab**	**04 52 01.0**	**-0.5**
PAB	**San Pablo**	**161.42 224**	*e*PKPdf	**PKPdf**	**04 51 16.5**	**-1.0**
PAB			*e*PKPab	**PKPab**	**04 52 01.0**	**-0.8**
PAB			LR	LR		
	comp=Z,950nm,20.0s					
PAB	**San Pablo**	**161.42 224**	*e*PKIKP	**PKPdf**	**04 51 16.5**	**-1.0**
PAB			*e*		04 52 01.0	
PAB			MLR	MLR		
	comp=Z,950nm,20.0s					
NB2	**NORSAR Subarra**	**161.63 304**	PKP	**PKPab**	**04 52 00.6**	**-1.5**
	comp=Z,75nm,1.7s,baz=75,slow=4.4					
NB2	**NORSAR Subarra**	**161.63 304**	PKP	**PKPab**	**04 52 00.6**	**-1.5**
	baz=75,slow=4.4					
PNCL	**Nicolau / Gran**	**161.68 213**	*e*PKPdf	**PKPdf**	**04 51 15.0**	**-2.7**
PNCL	**Nicolau / Gran**	**161.68 213**	*e*PKPab	**PKPab**	**04 52 02.9**	**+0.1**
PNCL	**Nicolau / Gran**	**161.68 213**	*e*PP	PP	04 55 46.4	+0.1
EVO	**Evora**	**161.90 215**	*e*PKPdf	**PKPdf**	**04 51 16.1**	**-1.8**
EVO	**Evora**	**161.90 215**	*e*PKPab	**PKPab**	**04 52 02.4**	**-1.4**
EVO	**Evora**	**161.90 215**	*e*PP	PP	04 55 47.9	+0.4
PESTR	**Estremoz**	**162.06 216**	*e*PKPdf	**PKPdf**	**04 51 19.0**	**+0.9**
PESTR	**Estremoz**	**162.06 216**	*e*PKPab	**PKPab**	**04 52 04.1**	**-0.4**
PESTR	**Estremoz**	**162.06 216**	*e*PP	PP	04 55 54.0	+5.6
LIS	**Lisbon**	**162.43 212**	*e*PKP	**PKPdf**	**04 51 18.3**	**-0.1**
LIS			AMS	AMS	06 02 17.0	
	comp=N,1μm,18.7s					
LIS	**Lisbon**	**162.43 212**	*e*PKPdf	**PKPdf**	**04 51 17.7**	**-0.7**
PMTG	**Montargil**	**162.45 215**	*e*PKPdf	**PKPdf**	**04 51 20.6**	**+2.2**
PMTG	**Montargil**	**162.45 215**	*e*PKPab	**PKPab**	**04 52 05.8**	**-0.4**
PMTG	**Montargil**	**162.45 215**	*e*PP	PP	04 55 57.3	+6.8
PMST	**Lisbon--Monsan**	**162.46 212**	*e*PKPdf	**PKPdf**	**04 51 22.1**	**+3.7**
PMRV	**Marv??o**	**162.49 217**	*e*PKPdf	**PKPdf**	**04 51 22.0**	**+3.5**
PMRV	**Marv??o**	**162.49 217**	*e*PKPab	**PKPab**	**04 52 03.8**	**-2.6**
PMRV	**Marv??o**	**162.49 217**	*e*PP	PP	04 55 54.0	+3.3
PMRV	**Marv??o**	**162.49 217**	*e*LR	LR	05 53 14.9	
	comp=N,881nm,20.0s					
ALMR	**Almeirim**	**162.65 214**	*e*PKP	**PKPdf**	**04 51 18.5**	**-0.1**
ALMR			*e*PP	**PP**	**04 55 51.7**	**+0.2**
ALMR			AMS	AMS	06 06 30.6	
	comp=Z,1μm,17.6s					
ALMR	**Almeirim**	**162.65 214**	*e*PKPdf	**PKPdf**	**04 51 17.7**	**-0.9**
ALMR	**Almeirim**	**162.65 214**	*e*PP	PP	04 55 54.0	+2.5
PMAFR	**Mafra**	**162.69 212**	*e*PKPdf	**PK

ARCES	ARCESS Array B	55.60 336	P		P	04 57 26.2	+0.3
	2.6nm,0.7s,baz=72,slow=8.6,SNR=7.6						
MLR	Muntele Rosu	56.31 307	P		P	04 57 33.2	+1.6
	0.8nm,0.8s,baz=110,slow=12,SNR=6.3						
HFS	Hagfors	61.04 325	P		P	04 58 03.8	-0.3
	1.7nm,0.6s,baz=93,slow=10,SNR=4.8						
WRAB	Tennant Creek	61.49 139	*eP*		P	04 58 06.8	-0.8
	1.3nm,0.6s						
WRA	Warramunga Arr	61.50 139	P		P	04 58 06.6	-1.0
	0.9nm,0.7s,baz=324,slow=8.1,SNR=12						
NB2	NORSAR Subarra	62.07 327	P		P	04 58 10.5	-0.5
	comp=Z,1.7nm,0.6s,baz=79,slow=6.9						
GERES	GERESS Array B	63.68 313	P		P	04 58 22.7	+0.7
	comp=Z,1.0nm,0.6s,baz=68,slow=7.4,SNR=6.4						
ASAR	Alice Springs	64.25 142	P		P	04 58 25.1	-0.8
	comp=Z,0.7nm,0.7s,baz=329,slow=6.5,SNR=3.5						
DAVOX	Davos/Dischmat	66.76 312	P		P	04 58 42.2	0.0
	comp=Z,5.6nm,0.6s,baz=107,slow=11,SNR=6.6						
ILAR	Eielson Array	73.36 24	P		P	04 59 21.9	-0.2
	comp=Z,0.9nm,0.9s,baz=294,slow=5.8,SNR=10						
INK	Inuvik	75.07 17	P		P	04 59 32.0	0.0
	comp=Z,1.5nm,0.8s,baz=317,slow=8.4,SNR=7.6						
YKA	Yellowknife Ar	84.33 14	P		P	05 00 21.7	-0.7
	comp=Z,0.5nm,0.7s,baz=316,slow=3.2,SNR=4.2						
YKA			LR		LR	05 42 22.2	
	comp=Z,99nm,20.0s,baz=226,slow=39						
TORD	Torodi Ar. Bea	87.84 284	P		P	05 00 39.9	-0.7
	comp=Z,0.8nm,0.9s,baz=90,slow=3.0,SNR=3.5						

KRSC 22 04:53:44.4±1.6, 52°.74N×160°.63E, h21km±18km, ML3.8, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.52	315	*eP*	Pb	04 53 55.4	+0.6
SPN				*eS*	Sb	04 54 03.0	+1.1
NLC	Nalytchevo	0.89	300	*eP*	Pb	04 54 01.1	-0.1
NLC				*eS*	Sb	04 54 13.1	+0.5
DALK	Dalny	1.18	285	*eP*	Pn	04 54 05.7	+0.1
DALK				*eS*	Sb	04 54 20.6	-0.1
SDLR	Sedlovina	1.19	298	*eP*	Pn	04 54 06.0	+0.1
SDLR				*eS*	Sn	04 54 21.4	0.0
UGLR	Uglovaya	1.19	294	*eP*	Pb	04 54 06.3	0.0
UGLR				*eS*	Sn	04 54 21.8	+0.3
PET	Petropavlovsk	1.23	284	*eP*	Pn	04 54 06.4	0.0
PET				*eS*	Sn	04 54 22.1	-0.2
AVH	Avacha	1.26	296	*eP*	Pb	04 54 07.6	+0.1
AVH				*eS*	Sb	04 54 24.4	+1.1
KRER	Koryakskii	1.27	297	*eP*	Pb	04 54 07.7	-0.1
KRER				*eS*	Sb	04 54 24.8	+1.1
RUS	Russkaya	1.33	258	*eP*	Pn	04 54 08.1	+0.5
RUS				*eS*	Sb	04 54 25.4	+0.3
KOK	Koryaka	1.33	296	*eP*	Pb	04 54 08.9	+0.2
KOK				*eS*	Sb	04 54 26.5	+1.3
KRX	Arik	1.35	298	*eP*	Pn	04 54 08.5	+0.4
KRX				*eS*	Sb	04 54 26.0	+0.1
KII	Karymskiy	1.48	332	*eP*	Pb	04 54 10.9	-0.4
KII				*eS*	Sb	04 54 30.1	+0.4
MTVR	Mutnovka	1.51	261	*eP*	Pb	04 54 11.2	-0.7
MTVR				*eS*	Sb	04 54 30.6	0.0
KRMR	Karymshinskiy	1.52	275	*eP*	Pn	04 54 10.8	+0.5
KRMR				*eS*	Sb	04 54 30.3	-0.4
GRL	Gorelyy	1.57	264	*eP*	Pb	04 54 12.1	-0.7
GRL				*eS*	Sb	04 54 32.1	-0.1
ASAK	Asacha	1.70	259	*eP*	Pb	04 54 14.6	-0.5
ASAK				*eS*	Sb	04 54 36.6	+0.6
KDTR	Khodutka, Kamc	1.82	240	*eP*	Pn	04 54 15.0	+0.5
KDTR				*eS*	Sn	04 54 38.0	+1.1
GNL	Ganaly	1.88	302	*eP*	Pb	04 54 17.3	-0.8
GNL				*eS*	Sb	04 54 41.4	+0.2
MKZ	Mys Kozlova	1.94	19	*eP*	Pn	04 54 16.1	0.0
MKZ				*eS*	Sn	04 54 39.4	-0.3
APC	Apacha	2.12	277	*eP*	Pb	04 54 20.7	-1.3
APC				*eS*	Sb	04 54 47.7	-0.1
KZV	Kizimen	2.39	355	*eP*	Pn	04 54 24.2	+1.7
KZV				*eS*	Sn	04 54 52.9	+1.7
TUMD	Tumrok D	2.48	357	*eP*	Pn	04 54 24.7	+1.2
TUMD				*eS*	Sn	04 54 53.5	+0.4
TUMR	Tumrok	2.57	354	*eP*	Pn	04 54 27.2	+2.3
TUMR				*eS*	Sb	04 54 58.4	-2.6
PAU	Pauzhetka	2.67	243	*eP*	Pb	04 54 30.9	-0.7
KMNR	Kamenistaya	3.04	356	*eP*	Pb	04 54 35.2	-2.6
KMNR				*eS*	Sb	04 55 12.1	-2.3
BZMR	Bezymyannaya	3.21	359	*eP*	Pb	04 54 37.2	-3.5
BZGR	Bezymyannyi-Gr	3.21	1	*eP*	Pn	04 54 36.4	+2.7
KIRR	Kirishev	3.23	357	*eP*	Pn	04 54 37.3	+3.3
BZWR	Bezymyannyi-We	3.24	359	*eP*	Pb	04 54 37.8	-3.4
KPT	Kopyto	3.25	356	*eP*	Pb	04 54 39.7	-1.7
ZLN	Zelenaya	3.29	2	*eP*	Pb	04 54 38.9	-3.2
ZLN				*eS*	Sb	04 55 17.5	-4.2
LGNR	Loginova	3.35	1	*eP*	Pb	04 54 40.6	-2.7
KOZ	Kozyrevsk	3.36	353	*eP*	Pb	04 54 39.7	-3.5
CIRR	Tsirk	3.39	1	*eP*	Pn	04 54 39.5	+3.4
KRSR	Krestovskiy	3.49	359	*eP*	Pn	04 54 40.7	+3.2
KLY	Klyuchi	3.59	0	*eP*	Pb	04 54 45.2	-1.9
KBTR	Krutoberegovo	3.71	19	*eP*	Pn	04 54 41.6	+1.2
SMKR	Semkarok	3.89	7	*eP*	Pn	04 54 46.0	+3.1
SMKR				*eS*	Sn	04 55 32.4	+4.5
SRKR	Sorokina	3.94	4	*eP*	Pb	04 54 49.7	-3.4

IDC 22 04:54:52.7±2.5, 32°.74S×178°.60W, h0km, mb3.6/2, mb1 3.9/3, mb1mx3.5/44, mbtmp3.7/3, ML3.6/1, Error ellipse: s-maj=67.2km s-min=42.4km az=129.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	6.53	211	Pn	Pn	04 56 29.1	-0.8
	1.1nm,0.3s,baz=276,slow=5.1,SNR=8.1						
URZ				Sn	Sn	04 57 41.1	-4.0
	1.6nm,0.3s,baz=248,slow=23,SNR=5.8						
ASAR	Alice Springs	42.53	270	P	P	05 02 50.2	0.0
	0.3nm,0.5s,baz=108,slow=7.9,SNR=4.5						
WRA	Warramunga Arr	43.73	275	P	P	05 02 60.0	0.0
	0.7nm,0.4s,baz=114,slow=7.9,SNR=16						
KBZ	Khabaz	145.93	301	PKPbc	PKPdf	05 14 32.9	-0.3
	0.5nm,0.4s,baz=65,slow=5.1,SNR=2.5						
FINES	FINESS Array B	147.14	338	PKPbc	PKPbc	05 14 36.4	-0.5
	1.1nm,0.7s,baz=18,slow=3.0,SNR=8.7						

*IDC **22** 05:02:06.0±0.4, 32°.81S×178°.31W, h0km, mb4.7/21, mb1 4.8/23, mb1mx4.7/44, mbtmp4.7/23, ML4.7/2, MS4.4/7, Ms1 4.4/7, ms1mx4.0/49, Error ellipse: s-maj=15.8km s-min=14.0km az=75.0*

*BJI **22** 05:02:06.1, 32°.45S×177°.89W, h13km, mb5.5/18, mB5.6/12, Ms5.2/10, Ms7 4.9/9*

*ISCJB **22** 05:02:06.3±0.2, 32°.99S±0°.03×178°.44W±0°.05, h10km, mb5.0/71, MS4.9/15, Error ellipse: s-maj=6.9km s-min=2.4km az=28.7*

*WEL **22** 05:02:06.0, 32°.98S×178°.33W, h7km, ML5.8/23*

*NEIC **22** 05:02:06.8±2.5, 32°.98S×178°.33W, h7km±15km, mb5.1/45, Error ellipse: s-maj=7.4km s-min=6.5km az=124.0*

*GCMT **22** 05:02:06.8±0.4, 32°.71S×177°.99W, h22km±1km, MW5.1/60, Moment Tensor Solution. s28,c35; s60,c78; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.46±.35; $M_{\theta\theta}$-0.09±.22; $M_{\phi\phi}$-3.38±.22; $M_{r\theta}$0.36±.42; $M_{\theta\phi}$-1.07±.16; $M_{r\phi}$3.61±.40; Best double couple: $M_0$5.09800×10^{16} NP1:ϕ_s9.00000°, δ68.00000°, λ84.00000°. NP2: ϕ_s205.00000°, δ23.00000°, λ105.00000°. Principal axes: T 5.0140, Plg67.0000°, Azm267.0000°; N 0.1620, Plg6.0000°, Azm11.0000°; P -5.1820, Plg23.0000°, Azm104.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **22** 05:02:10.4±1.1, 32°.95S×178°.51W, h33km, mb5.2/43, MS5.1/6 Error ellipse: s-maj=12.5km s-min=11.5km az=7.4*

ISC 22 05:02:07.5±0.6, 32°.92S±0°.05×178°.23W±0°.06, h14km±3km, h14km:pP-P, n356, σ1$90/376, mb5.1/69, MS5.0/15, 14C-4D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.65	4	P	Pn	05 02 59.6	-4.0
GLKZ				S	Sn	05 03 39.6	-6.9
RAO	Raoul Island	3.66	4	Pn	Pn	05 03 01.2	-2.5
	120nm,0.3s,baz=291,slow=17,SNR=3.9						
RAO				Sn	Sn	05 03 41.7	-5.0
	272nm,0.3s,baz=293,slow=23,SNR=6.8						
RIZ	Raoul Island	3.67	4	P	Pn	05 03 01.3	-2.5
RIZ				S	Sn	05 03 41.1	-5.8
MXZ	Matakaoa Point	5.43	210	*e*Pn	Pn	05 03 27.0	-1.0
MXZ	Matakaoa Point	5.43	210	P	Pn	05 03 26.9	-1.0
MXZ				S	Sn	05 04 29.9	-0.4
WMGZ	Waiomatatini S	5.61	208	P	Pn	05 03 30.3	-0.1
WMGZ				S	Sn	05 04 35.1	+0.5
PKGZ	Pakihiroa	5.80	210	P	Pn	05 03 32.3	-0.9
PKGZ				S	Sn	05 04 39.2	-0.4
HAZ	Te Kaha	5.82	213	P	Pn	05 03 33.2	-0.1
HAZ				S	Sn	05 04 42.2	+2.3
PUZ	Puketiti	5.88	208	P	Pn	05 03 33.0	-1.3
PUZ				S	Sn	05 04 41.0	-0.6
RUGZ	Raukumara Rang	6.04	212	P	Pn	05 03 35.3	-1.2
RUGZ				S	Sn	05 04 45.4	-0.1
TWGZ	Tauwhareparae	6.09	209	P	Pn	05 03 36.4	-0.7
TWGZ				S	Sn	05 04 46.7	+0.2
CNGZ	Carnagh Statio	6.26	207	P	Pn	05 03 38.4	-1.0
WHRZ	Whale Island	6.29	217	P	Pn	05 03 42.1	+2.3
WHRZ				S	Sn	05 04 52.8	+1.3
TKGZ	Te Karaka	6.37	209	P	Pn	05 03 40.6	-0.3
TKGZ				S	Sn	05 04 52.2	-1.1
MWZ	Matawai	6.41	211	P	Pn	05 03 40.5	-1.0
MWZ				P	Pn	05 03 40.1	-1.4
MWZ				S	Sn	05 04 54.0	-0.6
OPRZ	Ohinepanea	6.50	219	P	Pn	05 03 44.8	+2.1
URZ	Urewera	6.54	214	Pn	Pn	05 03 42.2	-1.1
	10nm,0.3s,baz=45,slow=4.2,SNR=87						
URZ				Sn	Sn	05 04 57.6	0.0
	84nm,0.3s,baz=154,slow=20,SNR=9.2						
URZ	Urewera	6.54	214	*e*Pn	Pn	05 03 42.1	-1.1
URZ				*e*Sn	Sn	05 04 58.3	+0.7
URZ	Urewera	6.54	214	P	Pn	05 03 42.4	-0.9
TGRZ	Tauranga	6.58	222	P	Pn	05 03 46.8	+3.1
RAGZ	Rawiri	6.59	211	P	Pn	05 03 42.4	-1.7
EDRZ	Edgecumbe	6.60	217	P	Pn	05 03 46.9	+2.7
EDRZ	Edgecumbe	6.60	217	P	Sn	05 05 01.3	+2.0
RIGZ	Rimuhau	6.63	208	P	Pn	05 03 43.5	-1.0
RIGZ				S	Sn	05 04 58.7	-1.1
LIRZ	Lichensteins R	6.71	219	P	Sn	05 05 11.5	+10
PRGZ	Paritu Road	6.77	207	P	Pn	05 03 44.5	-1.9
OMRZ	Omania	6.79	219	P	Pn	05 03 49.1	+2.4
SNGZ	Shannon Statio	6.87	210	P	Pn	05 03 48.4	+0.6
SNGZ	Shannon Statio	6.87	210	P	Sn	05 05 06.7	+1.0
MUGZ	Murupara	6.88	215	P	Pn	05 03 46.6	-1.3
RTZ	Ruatahuna	6.89	213	P	Pn	05 03 48.2	+0.1
RTZ	Ruatahuna	6.89	213	P	Sn	05 05 07.0	+0.7
RRRZ	Republican Roa	6.89	217	P	Sn	05 05 08.6	+2.2
KNZ	Kokohu	6.94	207	P	Pn	05 03 46.4	-2.2
MHGZ	Mahia Peninsul	6.96	206	P	Pn	05 03 46.8	-2.2
TOZ	Tahuroa Road	7.02	225	P	Pn	05 03 52.3	+2.5
RAHZ	Arahi	7.09	211	P	Pn	05 03 51.9	+1.1
RAHZ	Arahi	7.09	211	P	Sn	05 05 12.1	+1.0
MTHZ	Maungataniwha	7.14	213	P	Pn	05 03 51.3	-0.3
MTHZ	Maungataniwha	7.14	213	P	Sn	05 05 13.3	+0.7
ALRZ	Allen Road	7.15	217	P	Pn	05 03 52.4	+0.7
ALRZ	Allen Road	7.15	217	P	Sn	05 05 10.9	-1.8
OUZ	Omahuta	7.16	249	*e*Pn	Pn	05 03 54.5	+2.8
WHHZ	Waihua	7.16	210	P	Pn	05 03 52.1	+0.4
WHHZ	Waihua	7.16	210	P	Sn	05 05 11.2	-1.7
WPRZ	Whakapapatarin	7.21	218	P	Sn	05 05 08.8	-5.4
MRHZ	Matea Rd	7.33	215	P	Pn	05 03 53.7	-0.4
NMHZ	Naumai	7.36	212	P	Pn	05 03 55.4	+0.9
NMHZ	Naumai	7.36	212	P	Sn	05 05 17.8	-0.1
ARHZ	Aropaoanui	7.42	210	P	Pn	05 03 54.7	-0.6
ARHZ	Aropaoanui	7.42	210	P	Sn	05 05 18.8	-0.4
BKZ	Black Stump Fm	7.56	213	*e*Pn	Pn	05 03 56.6	-0.6
BKZ	Black Stump Fm	7.56	213	P	Pn	05 03 57.1	-0.1
BKZ	Black Stump Fm	7.56	213	P	Sn	05 05 22.3	-0.4
BKZ	Black Stump Fm	7.56	213	*e*Sn	Sn	05 05 22.0	-0.7
MCHZ	McNeill Hill	7.69	211	P	Sn	05 05 25.6	-0.4
CKHZ	Cape Kidnapper	7.72	208	P	Sn	05 05 23.2	-3.4
KWHZ	Kaweka Forest	7.80	212	P	Sn	05 05 26.8	-1.9
KAHZ	Kahuranaki	7.91	208	P	Sn	05 05 27.3	-4.2
HIZ	Hauiti	7.92	223	*e*Pn	Pn	05 04 03.0	+0.9
KRHZ	Kereru	8.00	211	P	Sn	05 05 31.6	-2.0
TUVZ	Tukino	8.04	216	P	Sn	05 05 31.5	-3.2
PXZ	Pawanui	8.12	208	P	Sn	05 05 30.0	-6.5
BFZ	Birch Farm	8.92	208	*e*Pn	Pn	05 04 13.9	-2.0
BFZ				*e*Sn	Sn	05 05 53.6	-2.7
SNZO	South Karori	10.09	212	*e*Pn	Pn	05 04 31.4	-0.6
SNZO				*e*Sn	Sn	05 06 17.0	-7.9
THZ	Tophouse	11.29	216	*e*Pn	Pn	05 04 48.0	-0.4
THZ				*e*Sn	Sn	05 06 47.0	-7.5
KHZ	Kahutara	11.50	212	*e*Pn	Pn	05 04 48.4	-2.8
KHZ				*e*Sn	Sn	05 06 52.4	-7.0
LTZ	Lake Taylor	12.37	215	*e*Pn	Pn	05 05 00.7	-2.4
LTZ				*e*Sn	Sn	05 07 11.2	-10
OXZ	Oxford	12.90	214	*e*Pn	Pn	05 05 06.2	-4.1
OXZ				*e*Sn	Sn	05 07 20.5	-13
MQZ	McQueen's Vall	12.92	211	*e*Pn	Pn	05 05 07.8	-2.9
MQZ				*e*Sn	Sn	05 07 19.9	-14
RPZ	Rata Peaks	13.66	215	Pn	Pn	05 05 18.5	-2.2
	2.1nm,0.3s,baz=329,slow=1.6,SNR=7.6						
RPZ				Sn	Sn	05 07 37.8	-14
	4.2nm,0.3s,baz=41,slow=23,SNR=8.5						
RPZ	Rata Peaks	13.66	215	*e*Pn	Pn	05 05 16.7	-4.1
RPZ				*e*Sn	Sn	05 07 39.7	-13
FOZ	Fox Glacier	14.14	218	*e*Pn	Pn	05 05 24.6	-2.7
FOZ				*e*Sn	Sn	05 07 52.6	-11
LBZ	Lake Benmore	14.58	215	*e*Pn	Pn	05 05 31.0	-2.2
LBZ				*e*Sn	Sn	05 08 03.0	-12
ODZ	Otahua Downs	14.86	212	*e*Pn	Pn	05 05 35.3	-1.8
WKZ	Wanaka	15.47	216	*e*Pn	Pn	05 05 42.5	-2.7
	171nm,1.7s						
MLZ	Mavora Lakes	16.30	216	*e*Pn	Pn	05 05 54.1	-1.8
	31nm,1.0s						
WHZ	Wether Hill Ro	16.76	215	*e*Pn	Pn	05 05 60.0	-1.8
DCZ	Deep Cove	16.86	218	*e*Pn	Pn	05 06 01.2	-1.7
	163nm,1.9s						
DZM	Mont Dzumac	17.34	305	P	P	05 06 11.6	+1.0
	1.1nm,0.3s,baz=129,slow=16,SNR=13						
DZM				LR	LR	05 11 35.0	
	comp=Z,4μm,18.2s,baz=126,slow=33						
DZM	Mont Dzumac	17.34	305	*e*P	P	05 06 13.3	+2.7
	185nm,1.1s						
DZM				*e*LR	LR	05 10 22.0	
	2μm,22.6s						
RAR	Rarotonga	20.12	59	LR	LR	05 15 02.2	
	comp=Z,467nm,18.2s,baz=236,slow=39						
TBI	Tubuai	27.03	77	*e*LQ	LQ	05 13 01.7	
	732nm,25.8s						
TBI				*e*LR	LR	05 14 26.9	
	703nm,30.8s						
TBI	Tubuai	27.03	77	*e*T	T	05 35 09.8	
	10nm,0.4s						
CAN	Canberra	27.17	256	*e*P	P	05 07 48.6	-1.9
	100nm,1.7s						
CAN	Canberra	27.17	256	*e*P	P	05 07 48.6	-1.9
CAN				pmax	pmax		
	comp=Z,100nm,1.7s						
EIDS	Eidsvold	27.77	278	*e*P	P	05 07 57.5	+1.6
	comp=Z,26nm,0.9s						
TAU	Tasmania Unive	28.77	240	*e*P	P	05 08 05.2	+0.5
	comp=Z,45nm,1.0s						
TAU	Tasmania Unive	28.77	240	*e*P	P	05 08 05.2	+0.5
TAU				pmax	pmax		
	comp=Z,45nm,1.0s						
PAE	Paea	29.91	66	*e*T	T	05 38 49.5	
	comp=Z,2.6nm,0.3s						
PPT2	Papeete2	29.95	66	*e*LQ	LQ	05 14 08.4	
	comp=Z,554nm,23.5s						
PPT2				*e*LR	LR	05 15 50.7	
	comp=Z,781nm,27.0s,baz=226						
PPT2	Papeete2	29.95	66	*e*T	T	05 38 53.5	
	comp=Z,3.8nm,0.3s						
PPT	Papeete	29.96	66	LR	LR	05 20 04.2	
	comp=Z,234nm,19.1s,baz=238,slow=36						
STKA	Stephens Creek	33.79	261	P	P	05 08 50.2	+1.1
	comp=Z,5.0nm,0.8s,baz=116,slow=7.7,SNR=5.9						
STKA				LR	LR	05 21 59.4	
	comp=Z,1μm,18.5s,baz=89,slow=35						
CTA	Charters Tower	34.09	283	P	P	05 08 53.0	+1.3
	comp=Z,24nm,0.6s,baz=114,slow=10,SNR=38						
CTAO	Charters Tower	34.09	283	*e*P	P	05 08 53.0	+1.3
	comp=Z,32nm,0.8s						
CTAO	Charters Tower	34.09	283	*e*P	P	05 08 53.0	+1.3
CTAO				pmax	pmax		
	comp=Z,32nm,0.8s						
BBOO	Buckleboo	38.16	257	*e*P	P	05 09 26.3	-0.1
	comp=Z,103nm,1.6s						
RKT	Rikitea	39.19	87	*e*LR	LR	05 19 58.4	
	comp=Z,711nm,24.2s						
PMG	Port Moresby	39.56	298	P	P	05 09 38.2	-0.2
	comp=Z,22nm,0.9s,baz=285,slow=5.5,SNR=4.3						
COEN	Coen	39.83	289	*e*P	P	05 09 41.4	+0.7
	comp=Z,23nm,0.8s						
TAOE	Nuku Hiva Isla	42.53	64	*e*LQ	LQ	05 19 47.8	
	comp=Z,448nm,29.5s						
TAOE				*e*LR	LR	05 21 39.8	
	comp=Z,382nm,27.6s						
AS01	Alice Springs	42.80	270	*e*P	P	05 10 04.7	-0.3
AS31	Alice Springs	42.84	270	*e*P	P	05 10 04.9	-0.4
	comp=Z,11nm,0.7s						
ASAR	Alice Springs	42.84	270	P	P	05 10 05.3	0.0
	comp=Z,36nm,0.8s,baz=110,slow=7.6,SNR=218						
ASAR				S	S	05 16 24.9	-4.5
	comp=Z,3.1nm,0.8s,baz=112,slow=16,SNR=8.2						
ASAR	Alice Springs	42.84	270	P	P	05 10 05.3	0.0
ASAR				S	S	05 16 24.9	-4.5
ASAR				pmax	pmax		
	comp=Z,35nm,0.8s						
ASAR				smax	smax		
	comp=N,3.0nm,0.9s						
WB2	Warramunga Arr	44.04	275	*e*P	P	05 10 14.4	-0.6
	comp=N,39nm,0.6s						
WRAB	Tennant Creek	44.05	275	*e*P	P	05 10 14.6	-0.4
	comp=N,34nm,0.6s						
WRAB	Tennant Creek	44.05	275	*ce*P	P	05 10 14.2	-0.9
WRAB				pmax	pmax		
	comp=Z,44nm,1.0s						
WRA	Warramunga Arr	44.05	275	P	P	05 10 14.4	-0.7
	comp=Z,36nm,0.6s,baz=114,slow=7.8,SNR=301						
WRA				S	S	05 16 41.1	-6.2
	comp=Z,1.5nm,0.6s,baz=112,slow=12,SNR=8.1						
FORT	Forrest	45.26	258	*e*P	P	05 10 23.9	-0.7
	comp=Z,70nm,0.7s						
SBA	Scott Base	45.52	184	*e*P	P	05 10 28.8	+2.8
	comp=Z,26nm,1.1s						
VNDA	Vanda	45.58	186	P	P	05 10 28.7	+2.2
	comp=Z,1.1nm,0.8s,baz=12,slow=6.4,SNR=9.0						
VNDA	Vanda	45.58	186	*e*P	P	05 10 28.2	+1.8
	comp=Z,4.1nm,0.8s						
VNDA	Vanda	45.58	186	*e*P	P	05 10 28.3	+1.8
VNDA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MTN	Manton Dam	50.22	281	*e*P	P	05 11 02.4	-0.9
	comp=Z,38nm,1.0s						
CASY	Casey	52.84	209	*e*P	P	05 11 23.0	+0.9
	comp=Z,22nm,1.0s						
NWAO	Narrogin (SRO)	53.36	251	*e*P	P	05 11 24.8	-1.8
	comp=Z,41nm,1.3s						
NWAO	Narrogin (SRO)	53.36	251	*e*P	P	05 11 24.8	-1.8
NWAO				pmax	pmax		
	comp=Z,41nm,1.3s						
FAKI	Fak Fak	55.06	292	*e*P	P	05 11 38.3	-0.8
	comp=Z,34nm,0.9s						
MBWA	Marble Bar	55.79	265	*e*P	P	05 11 42.9	-1.4
	comp=Z,101nm,1.5s						
SIJI	Sorong	57.10	293	LR	LR	05 34 25.2	
	comp=Z,385nm,19.8s,slow=34						
QSPA	South Pole Qui	57.20	180	P	P	05 11 56.1	+2.2
	comp=Z,7.6nm,1.1s,baz=26,slow=3.2,SNR=7.7						
QSPA	South Pole Qui	57.20	180	*e*P	P	05 11 56.2	+2.2
	comp=Z,35nm,0.8s						
SOEI	Soe	57.55	280	*e*P	P	05 11 57.3	+0.2
	comp=Z,103nm,1.1s						
BATI	Baumata	57.81	279	P	P	05 12 00.2	+1.4
	comp=Z,33nm,0.4s,baz=156,slow=1.4,SNR=4.2						
RPN	Rapa Nui	58.99	104	LR	LR	05 33 51.0	
	comp=Z,152nm,18.1s,baz=254,slow=32						
MAW	Mawson	69.89	201	P	P	05 13 18.9	+1.4
	comp=Z,4.1nm,0.7s,baz=131,slow=8.9,SNR=6.4						
MAW	Mawson	69.89	201	*e*P	P	05 13 18.5	+1.0
	comp=Z,3.7nm,1.1s						
SYO	Syowa Base	74.62	193⇑	*i*P	P	05 13 45.4	-0.4
SYO	Syowa Base	74.62	193⇑	*i*sP	sP	05 13 50.1	-2.0
SNAA	Sanae	75.65	178	P	P	05 13 48.9	-2.8
SNAA	Sanae	75.65	178	P	P	05 13 54.1	+2.3
	comp=Z,2.3nm,1.0s,baz=184,slow=8.0,SNR=3.4						
VNA3	Neumayer Olymp	75.81	176	P	P	05 13 53.0	+0.4
NVL	N'lazarevskaya	76.36	183⇑	*i*P	P	05 14 04.4	+8.7
NVL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
VNA1	Neumayer--Stat	76.48	177	P	P	05 13 55.4	-0.9
PAF	Port-aux-Franc	78.05	218	*e*P	P	05 14 04.5	-1.0
	comp=Z,496nm,1.7s						
PAF	Port-aux-Franc	78.05	218	*e*P	P	05 14 04.5	-1.0
PAF				pmax	pmax		
	comp=Z,496nm,1.7s						
MAJO	Matsushiro	80.20	326	*i*P	P

baz=228
TPNV Topopah Spring 90.41 45 *e*P **P 05 15 10.8 +2.1**
comp=Z,5.2nm,0.9s
TPNV Topopah Spring 90.41 45 *e*P **P 05 15 10.8 +2.2**
TPNV pmax pmax
comp=Z,5.0nm,0.9s
Y14A Wickenburg 90.43 49 *e*P **P 05 15 11.0 +2.4**
comp=Z,9.9nm,1.3s
W13A Hualapai Mount 90.63 48 *e*P **P 05 15 11.4 +1.7**
W13A *es*P **P 05 15 11.8 +2.1**
HUMO Hull Mountain 90.64 37 *e*P **P 05 15 10.1 +0.8**
comp=Z,12nm,1.4s
SHPR Sheep Range 90.77 46 *e*P **P 05 15 12.1 +1.9**
comp=Z,11nm,1.5s
TUC Tucson 90.83 51 *e*P **P 05 15 12.4 +1.8**
comp=Z,8.0nm,1.1s
TUC Tucson 90.83 51 *e*P **P 05 15 12.4 +1.8**
TUC pmax pmax
comp=Z,8.0nm,1.1s
X16A Lo Mia Camp, P 91.74 49 *e*P **P 05 15 17.6 +2.8**
comp=Z,4.9nm,0.9s
I04A Tendick Farm, 91.77 37 P **P 05 15 15.9 +1.3**
baz=224
K05A Summer Lake 91.79 38 *e*P **P 05 15 16.4 +1.5**
comp=Z,12nm,1.1s
CN2 Changchun 92.02 323 *e*P **P 05 15 15.9 +0.2**
CN2 pmax pmax
comp=Z,20nm,0.8s
BMN Battle Mountai 92.19 42 *e*P **P 05 15 17.7 +0.9**
comp=Z,8.3nm,1.2s
BMN Battle Mountai 92.19 42 *e*P **P 05 15 17.7 +0.9**
BMN pmax pmax
comp=Z,8.0nm,1.2s
LCMT Little Creek M 92.27 47 *e*P **P 05 15 18.0 +0.9**
comp=Z,4.5nm,1.1s
WUAZ Wupatki 92.47 49 *e*P **P 05 15 19.7 +1.5**
comp=Z,5.5nm,1.0s
U15A North Rim 92.48 47 *e*P **P 05 15 20.1 +1.7**
comp=Z,19nm,1.8s
PINE Pine Mountain 92.51 38 *e*P **P 05 15 19.6 +1.4**
comp=Z,12nm,1.1s
H04A Detroit Lake 92.52 36 *e*P **P 05 15 18.7 +0.7**
comp=Z,6.3nm,0.9s
KNB Kanab 92.53 47 *e*P **P 05 15 20.1 +1.7**
comp=Z,6.4nm,1.0s
KNB Kanab 92.53 47 *e*P **P 05 15 20.1 +1.7**
KNB pmax pmax
comp=Z,6.0nm,1.0s
GYA Guiyang 92.63 300 *e*P **P 05 15 20.3 +1.2**
GYA PP **PP 05 19 04.3 +3.2**
GYA SKS **SKSac 05 25 52.6 +0.1**
GYA S **S 05 26 22.0 -1.5**
GYA pmax pmax
comp=Z,20nm,1.0s
I05D Terrebonne, OR 92.70 37 P **P 05 15 19.5 +0.6**
baz=225
NNA Nana 92.92 106 LR LR 05 49 50.5
comp=Z,180nm,18.4s,baz=248,slow=31
KLR Kul'dur 93.10 330 *i* P **P 05 15 20.7 +0.2**
J08A Circle Bar Ran 93.50 39 *e*P **P 05 15 23.3 +0.6**
comp=Z,7.8nm,1.1s
TX31 Lajitas Ar. Si 93.91 58 *e*P **P 05 15 26.0 +1.2**
TXAR Lajitas Array 93.91 58 P **P 05 15 25.2 +0.3**
comp=Z,0.6nm,1.0s,baz=230,slow=9.7,SNR=3.5
KMI Kunming 94.77 297 P **P 05 15 29.8 +0.7**
KMI pmax pmax
comp=Z,5.0nm,0.6s
KMI pmax pmax
comp=Z,130nm,4.2s
TMUT Trail Mountain 94.96 46 *e*P **P 05 15 32.0 +2.2**
comp=Z,8.3nm,0.6s
ANMO Albuquerque 95.30 52 *i* P **P 05 15 35.5 +4.2**
ANMO pmax pmax
comp=Z,1.0nm,1.2s
MA2 Magadan 95.66 345 *i* P P 05 15 37.5 +5.5
MA2 pmax pmax
comp=Z,17nm,1.1s
HLID Hailey 95.83 41 P **P 05 15 34.8 +1.4**
baz=229
HLID Hailey 95.83 41 *e*P **P 05 15 34.2 +0.7**
comp=Z,3.7nm,1.2s
CD2 Chengdu 97.25 302 P Pdif 05 15 40.3 +0.2
CD2 pmax pmax
comp=Z,10.0nm,0.8s
LPAZ La Paz 97.29 115 P **P 05 15 41.3 0.0**
comp=Z,1.0nm,0.8s,baz=69,slow=3.3,SNR=3.1
HHC Hu-ho-hao-te 97.83 314 *e*P Pdif 05 15 44.0 +1.5
HHC sP sP 05 15 52.1 +3.2
HHC PP **PP 05 19 43.6 +2.3**
HHC SS SS 05 33 49.9 -0.1
HHC pmax pmax
comp=Z,14nm,1.0s
HHC pmax pmax
comp=Z,290nm,9.6s
HHC LR LR
comp=Z,310nm,17.2s
HHC LR LR
comp=Z,150nm,18.1s
HHC LR LR
comp=Z,240nm,18.1s
PDAR Pinedale Array 98.09 44 P Pdif 05 15 44.5 +0.7
comp=Z,0.4nm,0.7s,baz=248,slow=1.6,SNR=4.1
LZH Lanzhou 100.06 306 *e*P **Pdif 05 15 56.3 +3.7**
LZH pP sP 05 15 59.5 +0.4
LZH sP sPdif 05 16 01.3 +2.3
LZH PP **PP 05 20 03.5 +5.0**
LZH pmax pmax
comp=Z,14nm,1.2s
ILAR Eielson Array 100.42 13 P **Pdif 05 15 55.3 +2.0**
comp=Z,0.3nm,0.9s,baz=220,slow=5.4,SNR=2.7
ILAR PP **PKiKP 05 20 12.3 -7.6**
comp=Z,0.9nm,1.0s,baz=220,slow=7.6,SNR=5.0
BILL Bilibino 101.32 354⇑ *e*P **Pdif 05 15 55.5 -1.7**
BILL pmax pmax
comp=Z,2.0nm,1.2s
BILL MLR MLR
comp=Z,377nm,17.0s
ODAN Odare 107.48 291 *e*P PKiKP 05 20 25.5 -8.9
comp=Z,56nm,0.8s
YKA Yellowknife Ar 107.79 26 PKKPbc PKKPbc 05 31 48.9 +0.2
comp=Z,0.5nm,0.9s,baz=38,slow=4.3,SNR=3.6
YKA PKKP **PKKPdf 05 32 03.8 +0.8**
comp=Z,0.2nm,0.6s,baz=37,slow=3.6,SNR=4.3
RAMN Ramite 108.14 291 *e*P **PKiKP 05 20 29.7 -5.9**
comp=Z,60nm,0.9s
JIRN Jiri 108.80 291 *e*P **PKiKP 05 20 33.5 -3.5**
comp=Z,67nm,0.8s
GUN Gumba 109.16 291 *e*P **PKiKP 05 20 35.6 -2.0**
comp=Z,48nm,0.8s
KKN Kakani 109.57 291 *e*P **PKiKP 05 20 38.7 +0.5**
DMN Daman 109.63 291 *e*P **PKiKP 05 20 38.5 +0.1**
comp=Z,35nm,1.1s
GKN Gorkha 110.18 291 *e*P **PKiKP 05 20 41.8 +2.5**
comp=Z,77nm,1.0s
KOLN Koldanda 110.89 290 *e*P **PKiKP 05 20 46.8 +6.1**
comp=Z,35nm,0.9s
PYUN Piuthan 111.52 290 *e*P PKiKP 05 20 50.0 +8.1
comp=Z,50nm,0.9s
WMQ Urumqi 114.61 307 PKP PKPdf 05 20 47.4 +0.3
WMQ LR LR
comp=Z,1μm,20.5s
WMQ LR LR
comp=Z,1μm,18.9s
WMQ LR LR
comp=Z,1μm,23.1s
MK01 Makanchi Array 119.20 309 *e*PKPdf **PKPdf 05 20 54.9 -0.9**
MK31 Makanchi Array 119.22 309 *e*PKPdf **PKPdf 05 20 55.6 -0.2**
MK31 Makanchi Array 119.22 309 *i* PKIKP **PKPdf 05 20 54.8 -1.0**
MK31 pmax pmax
comp=Z,2.0nm,0.7s
MKAR Makanchi Array 119.22 309 PKP **PKPdf 05 20 55.2 -0.6**
comp=Z,2.1nm,0.9s,baz=226,slow=1.6,SNR=10
MKAR Makanchi Array 119.22 309 *e*PKPdf **PKPdf 05 20 54.9 -1.0**
MAKZ Makanchi 119.43 309 *e*PKPdf **PKPdf 05 20 55.3 -0.9**
MAKZ Makanchi 119.43 309 *e*PKIKP **PKPdf 05 20 55.3 -0.9**
ZALV Zalesovo Beam 119.76 317 *e*PKPdf **PKPdf 05 20 56.2 -0.4**
comp=Z,1.9nm,0.7s,baz=133,slow=3.0,SNR=6.6
ZALV Zalesovo Beam 119.76 317 *e*PKPdf **PKPdf 05 20 55.4 -1.2**
PDGK Podgornoye 120.02 305 PKIKP **PKPdf 05 20 56.8 -0.8**
PDGK pmax pmax
comp=Z,6.0nm,0.9s
KSH Kashi 121.32 299 PKP **PKPdf 05 21 04.0 +3.7**
KSH SKS **SKSdf 05 28 13.6 +1.7**
KSH SKKS **SKKSac 05 29 31.3 +0.8**
KSH SS **SS 05 39 11.8 +5.9**
KSH AMB AMB
comp=Z,190nm,4.1s
KSH LR LR
comp=Z,400nm,8.1s
KSH LR LR
comp=Z,260nm,5.5s
KSH LR LR
comp=Z,460nm,6.0s
NRIK Noril'sk 121.84 335 PKP **PKPdf 05 20 59.6 -0.5**
comp=Z,6.7nm,0.8s,baz=110,slow=5.8,SNR=5.3
TKM2 Tokmak 2 122.62 303 PKIKP **PKPdf 05 21 02.2 -0.6**
TKM2 pmax pmax
comp=Z,5.0nm,0.9s
KURK Kurchatov 122.62 313 *e*PKPdf **PKPdf 05 21 01.8 -0.4**
KURK Kurchatov 122.62 313 *c i* PKIKP **PKPdf 05 21 01.7 -0.5**
KURK pmax pmax
comp=Z,11nm,1.2s
KURBB Kurchatov Arra 122.66 313 PKP **PKPdf 05 21 01.8 -0.4**
comp=Z,3.6nm,0.8s,baz=113,slow=2.0,SNR=25
SFK Sufi-Kurgan 123.29 299 PKIKP **PKPdf 05 21 04.3 +0.1**
SFK pmax pmax
comp=Z,4.0nm,0.6s
MNAS Manas 124.69 302 PKIKP **PKPdf 05 21 06.4 -0.3**
KBL Kabul 124.99 292 *e*PKPdf **PKPdf 05 21 08.1 +0.5**
KBL Kabul 124.99 292 *e*PKIKP **PKPdf 05 21 08.1 +0.5**
LSZ Lusaka 125.83 212 PKP **PKPdf 05 21 11.6 +1.9**
comp=Z,1.0nm,0.3s,baz=106,slow=4.0,SNR=3.9
KK31 Karatay Array 126.27 302 *e*PKPdf **PKPdf 05 21 09.9 +0.4**
KK31 Karatay Array 126.27 302 *e*PKIKP **PKPdf 05 21 09.9 +0.4**
KKAR Karatay Array 126.27 302 *e*PKPdf **PKPdf 05 21 10.0 +0.5**
KKAR Karatay Array 126.27 302 *e*PKIKP **PKPdf 05 21 10.0 +0.5**
PQI Presque Isle 126.32 53 *e*PKPdf **PKPdf 05 21 09.5 +0.1**
BVA0 Borovoye Array 128.04 314 *i* PKIKP **PKPdf 05 21 12.4 -0.1**
BVA0 pmax pmax
comp=Z,13nm,1.3s
BVAR Borovoye Array 128.04 314 PKP **PKPdf 05 21 13.5 +1.0**
comp=Z,3.6nm,0.7s,baz=104,slow=0.6,SNR=13
BRVK Borovoye 128.11 314 *e*PKPdf **PKPdf 05 21 12.8 +0.1**
BRVK Borovoye 128.11 314 *c i* PKIKP **PKPdf 05 21 12.0 -0.6**
BRVK pmax pmax
comp=Z,14nm,1.7s
AB31 Akbulak array 134.36 309 *i* PKIKP **PKPdf 05 21 25.8 +1.2**
AB31 pmax pmax
comp=Z,3.0nm,0.9s
ABKAR Akbulak array 134.36 309 *e*PKPdf **PKPdf 05 21 23.9 -0.7**
ARU Arti 134.88 319 *i* PKIKP **PKPdf 05 21 25.0 -0.3**
AKTO Aktyubinsk 135.61 311 PKP **PKPdf 05 21 29.0 +2.0**
comp=Z,2.7nm,0.8s,baz=136,slow=0.6,SNR=8.0
AKTO Aktyubinsk 135.61 311 PKIKP **PKPdf 05 21 25.9 -1.0**
AKTO pmax pmax
comp=Z,5.0nm,1.0s
PRGR Permogore 139.89 329 *e*PKIKP **PKPdf 05 21 32.6 -1.8**
PRGR pmax pmax
comp=Z,13nm,0.9s
ARCES ARCESS Array B 141.00 347 PKhKP PKPpre 05 21 32.0
comp=Z,3.7nm,0.8s,baz=42,slow=3.8,SNR=6.4
ARCES PKP **PKiKP 05 21 37.8 -1.1**
comp=Z,5.7nm,0.8s,baz=56,slow=2.3,SNR=8.0
KLMR Klimovskoe 142.86 330 *e*PKHKP PKPpre 05 21 34.0
KLMR pmax pmax
comp=Z,17nm,1.2s
KLMR Klimovskoe 142.86 330 *e*PKPdf PKPpre 05 21 34.1
KLMR AMP 05 21 36.6
comp=Z,17nm,1.2s
STEI Steigen 144.08 351 *e*P **PKPdf 05 21 43.6 +1.9**
GNI Garni 144.99 294 *e*PKPdf PKPbc 05 21 44.0 +0.3
GNI Garni 144.99 294 *c i* PKIKP **PKPab 05 21 43.7 -0.1**
GNI pmax pmax
comp=Z,88nm,1.7s
ZEI Tsey 145.61 299 *i* PKP2 **PKPdf 05 21 44.4 -1.1**
ZEI pmax pmax
comp=Z,15nm,0.9s
MOR8 Moi Rana 145.85 351 *e*P **PKPdf 05 21 44.4 -0.5**
MOS Moscow 146.26 323 *e*PKIKP **PKPdf 05 21 44.9 -0.9**
MOS *e* 05 21 52.1
MOS *e* 05 21 59.9
MOS pmax pmax
comp=Z,169nm,0.9s
MOS MLR MLR
comp=Z,800nm,18.0s
KBZ Khabaz 146.29 301 PKPbc **PKPbc 05 21 47.0 -0.4**
comp=Z,12nm,0.9s,baz=100,slow=2.4,SNR=22
KBZ Khabaz 146.29 301 PKP2 **PKPbc 05 21 47.0 -0.4**
KBZ pmax pmax
comp=Z,12nm,0.9s
KIV Kislovodsk 146.42 301 *e*PKPdf **PKPdf 05 21 47.3 +0.6**
KIV Kislovodsk 146.42 301 *i* PKP2 **PKPdf 05 21 47.4 +0.8**
KIV pmax pmax
comp=Z,20nm,1.0s
NEY Neytrino 146.45 300 *i* PKIKP **PKPdf 05 21 46.6 -0.2**
OBN Obninsk 147.09 323 *e*PKPdf **PKPdf 05 21 47.4 +0.2**
OBN Obninsk 147.09 323⇓ *e*PKIKP **PKPdf 05 21 47.8 +0.6**
OBN *i* 05 21 51.0
OBN *e* 05 21 55.5
OBN *e* 05 22 01.3
OBN *e*SSS SSS 05 49 40.7
OBN pmax pmax
comp=Z,80nm,1.2s
OBN pmax pmax
comp=Z,73nm,1.3s
PUL Pulkovo 147.18 333 *c i* PKP2 **PKPab 05 21 50.5 -0.7**
PUL pmax pmax
comp=Z,156nm,0.4s
VSR Storozhevoye 147.22 315 *e*PKP2 **PKPbc 05 21 49.1 -0.8**
VSR pmax pmax
comp=Z,50nm,0.9s
VSR MLR MLR
comp=Z,910nm,20.0s
VORD Divnogorie 147.22 315 *e*PKP2 **PKPbc 05 21 49.3 -0.6**
VORD pmax pmax
comp=Z,20nm,0.8s
FIA1 FINESS Array S 147.42 338 *e*PKPdf **PKPdf 05 21 48.1 +0.5**
FIA1 *e*PKPbc **PKPbc 05 21 50.0 -0.1**
FINES FINESS Array B 147.42 338 PKPbc **PKPbc 05 21 49.8 -0.3**
comp=Z,39nm,0.8s,baz=43,slow=3.9,SNR=96
NSS Namsos 147.74 352 *e*P **PKPbc 05 21 50.7 -0.2**
SOC Sochi 148.60 301 *e*PKIKP **PKPbc 05 21 52.3 -1.5**
SOC *i* 05 21 56.4
SOC *e* 05 25 27.6
SOC *e*SS SS 05 44 27.6 -5.5
SOC *e*SSS SSS 05 49 59.3
SOC pmax pmax
comp=Z,35nm,1.0s
SOC pmax pmax
comp=Z,18nm,0.7s
SOC MLR MLR
comp=Z,195nm,14.0s
VSU Vasula 149.42 334 *c i* PKP2 **PKPbc 05 21 55.6 +0.2**
VSU pmax pmax
comp=Z,297nm,1.7s
ANN Anapa 150.03 304 *i* PKHKP PKPpre 05 21 57.3
ANN pmax pmax
comp=Z,137nm,1.3s
DOMB Dombas 150.48 353 *e*P **PKPbc 05 21 58.1 +0.2**
AKN Aaknes 150.53 355 *e*P **PKPbc 05 21 58.7 +0.7**
NC303 NORSAR Array S 151.00 350 *e*PKPdf **PKPbc 05 21 58.0 -1.2**
NC303 *e*PKPbc **pPKPdf 05 21 58.8 +0.5**
NC204 NORSAR Array S 151.03 351 *e*PKPdf **PKPbc 05 21 59.3 0.0**
NC204 *e*PKPbc **sPKPdf 05 21 59.5 -0.5**
NC405 NORSAR Array S 151.06 350 *e*PKPdf **PKPbc 05 21 58.0 -1.3**
NC405 *e*PKPbc **pPKPdf 05 21 58.8 +0.4**
NB201 NORSAR Array S 151.18 350 *e*PKPdf **PKPbc 05 21 58.5 -1.1**
NB201 *e*PKPbc **pPKPdf 05 21 58.9 +0.3**
NB2 NORSAR Subarra151.20 350 PKP **PKPbc 05 21 59.5 -0.2**
comp=Z,14nm,0.8s,baz=18,slow=2.6
NB2 NORSAR Subarra151.20 350 PKP **PKPbc 05 21 59.5 -0.2**
baz=18,slow=2.6
NBO00 NORSAR Array S 151.27 351 *e*PKPdf **PKPbc 05 21 59.6 -0.2**
NBO00 *e*PKPbc **sPKPdf 05 21 60.0 -0.4**
NAO01 NORSAR Array S 151.43 351 *e*PKPdf **PKPbc 05 21 60.0 -0.2**
NAO01 *e*PKPbc **sPKPdf 05 22 00.1 -0.4**
NC602 NORSAR Array S 151.44 350 *e*PKPdf **PKPbc 05 21 59.6 -0.6**
NC602 *e*PKPbc **sPKPdf 05 22 00.1 -0.4**
NC602 NORSAR Array S 151.44 350 *e*P **PKPbc 05 22 00.0 -0.2**
MNK Minsk 151.62 327 *e*PKIKP **PKPbc 05 22 01.0 +0.2**
HFS Hagfors 151.66 347 PKPbc **PKPbc 05 22 00.5 -0.2**
comp=Z,26nm,0.8s,baz=166,slow=1.2,SNR=39
MMAI Mount Meron Ar 151.84 279 PKPbc **PKPbc 05 22 02.9 +0.8**
comp=Z,33nm,0.8s,baz=77,slow=3.7,SNR=28
SIM Simferopol' 152.30 305 *d i* PKIKP **PKPbc 05 22 02.8 +0.2**
SIM *e* 05 22 17.5
SIM pmax pmax
comp=Z,32nm,0.6s
BER Bergen 152.42 356 *e*P **PKPbc 05 22 04.3 +1.9**
KONO Kongsberg 152.76 351 *c i* PKIKP **PKPbc 05 22 04.2 +1.0**
KONO pmax pmax
comp=Z,15nm,1.2s
ODD1 Odda 152.81 355 *e*P **PKPbc 05 22 04.0 +0.7**
AKASG Malin Array Be 153.13 320 PKP **PKPdf 05 21 58.0 +1.2**
comp=Z,0.2nm,0.3s,baz=70,slow=1.4,SNR=3.6
AKASG PKPbc **PKPbc 05 22 03.9 -0.4**
comp=Z,3.8nm,0.5s,baz=55,slow=2.5,SNR=30
AKBB Malin Array Si 153.13 320 *e*PKPbc **PKPbc 05 22 04.2 -0.1**
KIEV Kiev 153.14 320 *e*PKPbc **PKPbc 05 22 04.2 -0.1**
DBIC Dimbokro 153.17 165 PKPbc **PKPbc 05 22 06.7 +1.2**
comp=Z,6.2nm,0.8s,baz=142,slow=1.9,SNR=4.1
DBIC PKPab **PKPab 05 22 16.2 -0.7**
comp=Z,6.7nm,0.8s,baz=161,slow=3.5,SNR=4.2
AK11 Malin Array Si 153.17 320 *e*PKPbc **PKPbc 05 22 04.0 -0.4**
ILGA Ilgaz 153.33 297 *e*PKPbc **PKPbc 05 22 05.4 0.0**
BR131 Keskin Array S 153.53 294 *e*PKPbc **PKPbc 05 22 05.0 -0.7**
BRTR Keskin Array B 153.53 294 PKP **PKPdf 05 21 58.0 -0.1**
comp=Z,0.7nm,0.8s,baz=134,slow=3.6,SNR=3.9
BRTR PKPbc **PKPbc 05 22 05.5 -0.2**
comp=Z,7.5nm,0.8s,baz=134,slow=3.6,SNR=38
BRTR PKPab **PKPab 05 22 18.5 +0.3**
comp=Z,4.6nm,0.8s,baz=139,slow=4.0,SNR=8.4
CSS Mathiatis 153.79 283 *e*PKPbc **PKPbc 05 22 06.4 +0.1**
ANTO Ankara 154.16 294 *e*PKPbc **PKPbc 05 22 06.7 -0.3**
ANTO Ankara 154.16 294 *e*PKIKP **PKPbc 05 22 06.7 -0.3**
BR231 Keskin MP Arra 154.18 294 *e*PKPbc **PKPbc 05 22 07.8 +0.7**
BUR08 Bucovina Ar. S 156.97 317 *e*PKPdf **PKPdf 05 22 04.1 +1.7**
BUR08 *e*PKPab **PKPab 05 22 33.1 +0.5**
BUR04 Bucovina Ar. S 156.98 317 *e*PKPdf **PKPdf 05 22 03.1 +0.7**
BUR04 *e*PKPab **PKPab 05 22 32.6 0.0**
KWP Kalwaria Pacla 157.18 323 *e*PKPab **PKPab 05 22 32.9 -0.4**
KWP Kalwaria Pacla 157.18 323 *e*PKP2 **PKPab 05 22 32.9 -0.4**
MLR Muntele Rosu 157.54 311 PKPab **PKPab 05 22 35.3 +0.2**
comp=Z,0.5nm,0.7s,baz=233,slow=14,SNR=3.6
CRVS Cervenica-Dubn 158.27 323 *e*PKP2 **PKPab 05 22 38.1 +0.1**
CRVS Cervenica-Dubn 158.27 323 *e*PKP **PKPab 05 22 38.1 +0.1**
OKC Ostrava-Krasne 159.18 329 AMS AMS 06 26 20.0
comp=Z,300nm,19.2s
UPC Upice 159.52 333 AMS AMS 06 18 40.0
comp=Z,500nm,16.5s
DPC Dobruska-Polom 159.53 333 *e*PKPAB **PKPab 05 22 42.9 -0.5**
DPC AMS AMS 06 24 40.0
comp=Z,500nm,18.2s
DPC Dobruska-Polom 159.53 333 *e*PKP2 **PKPab 05 22 42.9 -0.5**
DPC MLR MLR
comp=Z,500nm,18.2s
VYHS Vyhne 159.83 326 *e*PKP2 **PKPab 05 22 44.8 0.0**
VYHS Vyhne 159.83 326 *e*PKP **PKPab 05 22 44.8 0.0**
CLL Collm 159.86 339⇓ *i* PKPab **PKPab 05 22 44.3 -0.5**
comp=Z,8.0nm,0.8s
CLL *e*pPKPab **pPKPab 05 22 48.0 -1.5**
comp=Z,9.0nm,0.7s
CLL Collm 159.86 339 *e*PKPab **PKPab 05 22 44.3 -0.5**
CLL Collm 159.86 339⇓ *i* PKP2 **PKPab 05 22 44.3 -0.5**
CLL pmax pmax
comp=Z,8.0nm,0.8s
JAVC Velka Javorina 160.11 328 *e*PKP **PKPab 05 22 46.5 +0.5**
VRAC Vranov 160.24 330 *e*PKP **PKPab 05 22 46.3 -0.2**
TOA0 Torodi Ar. Sit 160.32 180 *e*PKPdf **PKPdf 05 22 06.4 -0.8**
TORD Torodi Ar. Bea 160.32 180 PKP **PKPdf 05 22 07.4 +0.2**
comp=Z,1.3nm,1.0s,baz=198,slow=1.6,SNR=5.0
TORD PKPab **PKPab 05 22 46.8 -0.8**
comp=Z,2.6nm,1.1s,baz=170,slow=3.2,SNR=3.9
GOPC GO Pecny, Ondr 160.46 334 AMS AMS 06 18 10.0
comp=Z,700nm,19.2s
PRU Pruhonice 160.49 335 AMS AMS 06 20 20.0
comp=Z,900nm,20.6s
KRUC Moravsky 160.51 330 *e*PKP **PKPab 05 22 47.0 -0.7**
NKC Novy Kostel 160.98 339 AMS AMS 06 19 40.0
comp=Z,900nm,18.4s
KHC Kasperske Hory 161.55 335 *e*PKPAB **PKPab 05 22 52.0 -0.3**
KHC AMS AMS 06 20 50.0
comp=Z,700nm,17.1s
KHC Kasperske Hory 161.55 335 *e*PKPab **PKPab 05 22 51.6 -0.7**
KHC Kasperske Hory 161.55 335 *e*PKP2 **PKPab 05 22 51.6 -0.7**
GERES GERESS Array B 161.74 334 PKPab **PKPab 05 22 52.2 -1.0**
comp=Z,0.9nm,0.6s,baz=38,slow=5.0,SNR=7.5
GEA0 GERESS Array S 161.75 334 *e*PKPab **PKPab 05 22 52.0 -1.2**
DAVOX Davos/Dischmat 164.83 338 PKPab **PKPab 05 23 06.7 -0.2**
comp=Z,2.8nm,0.6s,baz=357,slow=4.1,SNR=4.1
FUORN Ofenpass-Fuorn 164.85 337 *e*PKPab **PKPab 05 23 07.1 0.0**
TUE Stuetta 165.27 339 *e*PKPab **PKPab 05 23 08.9 +0.1**
VAE Valguarnera 168.70 297 PKPab **PKPab 05 23 22.1 -2.2**
comp=Z,11nm,0.6s,baz=18,slow=23,SNR=4.1
ESDC Sonseca Array 171.82 33 PKP **PKPdf 05 22 17.3 +1.6**
comp=Z,0.1nm,0.3s,baz=196,slow=37,SNR=3.3
ESDC PKPab **PKPab 05 23 38.6 +0.7**
comp=Z,0.7nm,0.7s,baz=257,slow=4.0,SNR=2.7
KEST Kesra 173.13 296 PKP **PKPdf 05 22 16.7 +0.2**
comp=Z,2.4nm,0.9s,baz=268,slow=13,SNR=2.5
MDT Midelt 174.63 89 PKP **PKPdf 05 22 19.5 +2.4**
comp=Z,1.4nm,0.8s,baz=214,slow=5.4,SNR=3.3

ISK ***22*** *05:11:26.6, 35°.32N±27°.89E, h9km, ML2.8/6*
ISCJB ***22*** *05:11:27.6±1.1, 35°.42N±0°.06±27°.88E±0°.05, h4km±8km,*
Error ellipse: s-maj=9.8km s-min=6.1km az=156.3
CSEM ***22*** *05:11:28.6±0.4, 35°.44N±27°.89E, h10km, ML2.1, Error*
ellipse: s-maj=9.6km s-min=4.7km az=155.0
ATH ***22*** *05:11:29.9, 35°.63N±27°.69E, h15km±4km, ML2.1/2, Error*
ellipse: s-maj=6.1km s-min=1.2km az=318.0
DDA ***22*** *05:11:30.4, 35°.56N±28°.08E, h22km, Md3.0*
ISC 22 05:11:29.2±1.4, 35°.46N±0°.05±27°.77E±0°.03, h21km±5km,
n42, σ1§48/61, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.50**	**281**		PG	**Pb**	**05 11 39.7**	**+0.3**
KARP					SG	**Sn**	**05 11 48.5**	**-0.7**
KARP	**Karpathos**	**0.50**	**281**		P	**Pb**	**05 11 39.3**	**-0.1**
KARP					S	**Sb**	**05 11 44.7**	**-1.6**
KARP					AML	AML	05 11 51.8	
	comp=N,705μm,0.5s							
KARP					AML	AML	05 11 52.2	
	comp=E,709μm,0.4s							
KARP	**Karpathos**	**0.50**	**281**		P	**Pb**	**05 11 39.0**	**-0.4**
KARP	**Karpathos**	**0.50**	**281**	*e*Pg		**Pb**	**05 11 39.7**	**+0.3**
KARP				*e*Sg		**Sn**	**05 11 48.5**	**-0.7**
ARG	**Arkhangelos**	**0.81**	**21**		PG	**Pb**	**05 11 44.5**	**-0.2**
ARG					SG	**Sn**	**05 11 57.8**	**+1.0**
ARG	**Arkhangelos**	**0.81**	**21**		P	**Pb**	**05 11 43.4**	**-1.3**
ARG					S	**Sb**	**05 11 52.0**	**-3.2**
ARG					AML	AML	05 12 04.0	
	comp=N,246μm,0.3s							
ARG					AML	AML	05 12 06.6	
	comp=E,435μm,0.4s							
ARG	**Arkhangelos**	**0.81**	**21**		P	**Pb**	**05 11 43.2**	**-1.5**
ARG	**Arkhangelos**	**0.81**	**21**	*e*Pg		**Pb**	**05 11 44.5**	**-0.2**
ARG					S	**Sb**	**05 11 52.3**	**-2.9**
ARG				*e*Sg		**Sn**	**05 11 57.8**	**+1.0**
NISR	**Nisiros**	**1.27**	**336**		P	**Pn**	**05 11 50.7**	**-0.9**
DAT	**Datca**	**1.28**	**353**		PN	**Pb**	**05 11 53.0**	**+0.4**
DAT	**Datca**	**1.28**	**353**	*i* P		**Pb**	**05 11 53.1**	**+0.4**
DAT				*i* S		**Sb**	**05 12 10.9**	**+2.2**
DAT	**Datca**	**1.28**	**353**		P	**Pb**	**05 11 53.1**	**+0.4**
DAT					S	**Sb**	**05 12 10.9**	**+2.2**
DATC	**Datca-Mugla**	**1.30**	**356**		PN	**Pb**	**05 11 53.9**	**+0.9**
DATC	**Datca-Mugla**	**1.30**	**356**	*e*Pn		**Pb**	**05 11 53.9**	**+0.9**
ZKR	**Zakros**	**1.31**	**255**		P	**Pb**	**05 11 54.5**	**+1.4**
ZKR	**Zakros**	**1.31**	**255**		P	**Pb**	**05 11 54.6**	**+1.4**
DALY	**Dalyan (Mu¨la**	**1.54**	**28**		PN	**Pn**	**05 11 55.9**	**+0.6**
DALY	**Dalyan (Mu¨la**	**1.54**	**28**	*i* P		**Pb**	**05 11 56.4**	**-0.6**
DALY				*i* S		**Sb**	**05 12 23.0**	**+7.0**
DALY	**Dalyan (Mu¨la**	**1.54**	**28**	*e*Pn		**Pn**	**05 11 55.9**	**+0.6**
DALY	**Dalyan (Mu¨la**	**1.54**	**28**	P		**Pb**	**05 11 56.4**	**-0.6**
TURN	**Turunc**	**1.57**	**25**	PN		**Pn**	**05 11 54.1**	**-1.7**
TURN	**Turunc**	**1.57**	**25**	*i* P		**Pn**	**05 11 54.0**	**-1.8**
TURN				*i* S		**Sb**	**05 12 16.4**	**-0.5**
TURN	**Turunc**	**1.57**	**25**	*e*Pn		**Pn**	**05 11 54.1**	**-1.7**
TURN				S		**Sb**	**05 12 16.4**	**-0.5**
FETY	**Fethiye**	**1.59**	**42**	PN		**Pn**	**05 11 56.2**	**+0.1**
FETY	**Fethiye**	**1.59**	**42**	P		**Pn**	**05 11 56.0**	**-0.1**
BDRM	**Kayabasi**	**1.63**	**351**	*i* P		**Pb**	**05 11 57.6**	**-0.9**
BDRM				*i* S		**Sb**	**05 12 18.0**	**-0.6**
BDRM	**Kayabasi**	**1.63**	**351**	P		**Pb**	**05 11 57.7**	**-0.9**
BDRM				S		**Sb**	**05 12 18.0**	**-0.6**
BODT	**Bodrum**	**1.65**	**347**	PN		**Pb**	**05 11 58.2**	**-0.6**
BODT	**Bodrum**	**1.65**	**347**	*e*Pn		**Pb**	**05 11 58.2**	**-0.6**
AKAS	**Kas**	**1.68**	**62**	PN		**Pn**	**05 11 56.6**	**-0.9**
AKAS	**Kas**	**1.68**	**62**	*i* P		**Pn**	**05 11 56.3**	**-1.2**
AKAS				*i* S		**Sb**	**05 12 19.8**	**-0.6**
AKAS	**Kas**	**1.68**	**62**	P		**Pn**	**05 11 56.3**	**-1.2**

AKAS	**Kas**	**1.68**	**62**	*e*Pn	**Pn**	**05 11 56.6**	**-0.9**
AKAS				S	**Sb**	**05 12 19.8**	**-0.6**
NPS	**Neapolis**	**1.77**	**264**	P	**Pb**	**05 12 01.1**	**+0.1**
NPS	**Neapolis**	**1.77**	**264**	P	**Pb**	**05 12 01.4**	**+0.4**
AYDN	**Tasoluk**	**2.20**	**2**	*i* P	**Pn**	**05 12 05.6**	**+1.0**
AYDN				*i* S	**Sb**	**05 12 36.2**	**+1.0**
AYDN	**Tasoluk**	**2.20**	**2**	P	**Pn**	**05 12 05.6**	**+1.0**
AYDN				S	**Sb**	**05 12 36.2**	**+1.0**
GOLH	**Golhisar**	**2.29**	**39**	*i* P	**Pn**	**05 12 06.2**	**+0.3**
GOLH				*i* S	**Sb**	**05 12 39.4**	**+1.4**
GOLH	**Golhisar**	**2.29**	**39**	P	**Pn**	**05 12 06.2**	**+0.3**
APE	**Apeiranthos**	**2.42**	**312**	PN	**Pb**	**05 12 10.8**	**-1.3**
APE	**Apeiranthos**	**2.42**	**312**	*e*Pn	**Pb**	**05 12 10.8**	**-1.3**
DNZL	**Cakiroluk**	**2.46**	**24**	*i* P	**Pb**	**05 12 14.4**	**+1.7**
DNZL				*i* S	Sb	05 12 51.9	+9.3

*IDC **22** 05:14:42.2±0.6, 1°.23N×92°.52E, h0km, mb4.3/22, mb1 4.5/26, mb1mx4.2/83, mbtmp4.4/26, ML4.6/4, Error ellipse: s-maj=19.7km s-min=11.7km az=63.0*
*BJI **22** 05:14:43.3, 0°.69N×92°.57E, h44km, mb4.7/40, mB4.9/23, Ms4.7/14, Ms7 4.6/14*
*DJA **22** 05:14:43.4±0.4, 1°.N±4'×9°.2E±°, h10km, M5.5/21, mb5.4/21, mB5.9/12, MLv5.6/9, Mw(mB)5.5/12*
*ISCJB **22** 05:14:45.2±0.3, 1°.22N±0°.03×92°.52E±0°.03, h33km, mb4.6/60, MS4.7/6, Error ellipse: s-maj=5.1km s-min=3.5km az=138.8*
*MOS **22** 05:14:45.3±1.1, 1°.28N×92°.47E, h35km, mb4.9/19, Error ellipse: s-maj=9.7km s-min=6.7km az=104.6*
*NEIC **22** 05:14:47.5±0.7, 1°.23N×92°.51E, h38km±6km, mb4.8/24, Error ellipse: s-maj=7.5km s-min=4.3km az=62.0*
ISC 22 05:14:47.1±0.3, 1°.27N±0°.05×92°.49E±0°.05, h35km, n184, σ1§67/184, **mb4.8**/66, **MS4.7**/6, **7C-1D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSI	**Meulaboh, Aceh**	**4.91**	**53**	P	**Pn**	**05 15 59.4**	**+0.8**
BSI	**Banda Aceh**	**5.05**	**34**	P	**Pn**	**05 16 00.9**	**+0.5**
GSI	**Gunungsitoli**	**5.09**	**90**	P	**Pn**	**05 16 01.4**	**+0.4**
GSI	**Gunungsitoli**	**5.09**	**90**	*e*Pn	**Pn**	**05 16 01.1**	**+0.1**
GSI				*e*Sn	**Sn**	**05 16 56.3**	**-2.2**
TPTI		**5.09**	**67**	P	**Pn**	**05 16 01.0**	**0.0**
	502nm,0.5s,8μm2.5nm						
KCSI	**Kotacane, Aceh**	**5.73**	**67**	P	**Pn**	**05 16 11.4**	**+1.5**
	975nm,1.0s,12μm3.6nm						
LHMI	**Lhok Sumawe**	**5.94**	**48**	P	**Pn**	**05 16 14.4**	**+1.7**
	1μm,0.9s,23μm4.6nm						
LHMI	**Lhok Sumawe**	**5.94**	**48**	*e*Pn	**Pn**	**05 16 14.4**	**+1.7**
TSI	**Tuntungan**	**6.46**	**70**	P	**Pn**	**05 16 24.5**	**+4.6**
PSI	**Prapat**	**6.61**	**77**	Pn	**Pn**	**05 16 21.8**	**-0.2**
	13nm,0.3s,baz=182,slow=1.1,SNR=23						
PSI				Sn	**Sn**	**05 17 31.3**	**-5.0**
	16nm,0.3s,baz=0.0,slow=14,SNR=6.0						
PSI	**Prapat**	**6.61**	**77**	*e*Pn	**Pn**	**05 16 22.2**	**+0.2**
PSI				Sn	**Sn**	**05 17 31.3**	**-5.0**
PSI	**Prapat**	**6.61**	**77**	*e*P	**Pn**	**05 16 22.2**	**+0.2**
PSI						05 17 31.3	
SISI	**Saibi**	**7.09**	**111**	P	**Pn**	**05 16 28.3**	**-0.2**
MNSI	**Mandailing Nat**	**7.11**	**94**	P	**Pn**	**05 16 29.6**	**+0.9**
PDSI	**Padang**	**8.27**	**105**	P	**Pn**	**05 16 44.0**	**-0.7**
PPSI	**Pulau Pagai**	**8.52**	**118**	P	**Pn**	**05 16 47.3**	**-0.9**
PKDT	**Phuket**	**8.79**	**41**	P	**Pn**	**05 16 50.9**	**-0.9**
	312nm,0.8s,3μm1.3nm						
KULM	**Kulim**	**9.07**	**64**	*e*Pn	**Pn**	**05 16 56.0**	**+0.3**
IPM	**Ipoh**	**9.10**	**69**	*e*Pn	**Pn**	**05 16 56.3**	**+0.2**
KRJI	**Kerinci**	**9.58**	**110**	P	**Pn**	**05 17 03.8**	**+1.1**
KRAB	**Krabi**	**9.61**	**44**	P	Pn	05 17 12.3	+9.3
TRTT	**Trang**	**9.70**	**48**	P	**Pn**	**05 17 03.5**	**-0.8**
	112nm,1.2s,1μm						
SURT	**Suratani**	**9.88**	**39**	P	**Pn**	**05 17 07.0**	**+0.2**
	0.3nm,0.8s						
PBA	**Port Blair**	**10.32**	**1**	*e*Pn	Pn	05 17 14.7	+1.9
MASI	**Maura Aman, Be**	**10.69**	**114**	P	**Pn**	**05 17 17.0**	**-0.9**
MNAI	**Manna**	**11.86**	**118**	P	**Pn**	**05 17 33.4**	**-0.6**
MNAI	**Manna**	**11.86**	**118**	*e*Pn	**Pn**	**05 17 32.5**	**-1.5**
MDSI	**Maura Dua**	**13.01**	**116**	P	**Pn**	**05 17 48.7**	**-0.9**
PALK	**Pallekele**	**13.17**	**297**	Pn	**Pn**	**05 17 50.2**	**-1.7**
	2.9nm,0.3s,baz=116,slow=12,SNR=13						
PALK				Sn	Sn	05 20 05.8	-12
	6.7nm,0.3s,baz=310,slow=0.2,SNR=11						
PHET	**Kaeng Krachan**	**13.55**	**31**	P	**Pn**	**05 17 58.3**	**+1.2**
	19nm,1.0s,199nm						
KASI	**Kota Agung**	**13.77**	**119**	P	**P**	**05 18 04.0**	**-4.0**
COCO	**West Island**	**14.06**	**162**	*e*Pn	**Pn**	**05 18 05.7**	**+1.8**
COCO	**West Island**	**14.06**	**162**	*e*P	**Pn**	**05 18 05.7**	**+1.8**
CGJI	**Cibinong**	**15.33**	**121**	P	**P**	**05 18 26.2**	**+0.7**
SRAK	**Srakaew**	**15.80**	**36**	P	**P**	**05 18 34.3**	**+3.7**
UMPA	**Umpang Tak**	**16.11**	**23**	P	**P**	**05 18 32.8**	**-1.3**
	37nm,0.8s						
LEM	**Lembang**	**17.11**	**118**	P	**Pn**	**05 18 42.5**	**-1.4**
	1.7nm,0.3s,baz=327,slow=17,SNR=5.1						
PBKT	**Sadao Pong**	**17.34**	**28**	P	**Pn**	**05 18 46.1**	**-0.5**
	45nm,1.4s						
PBKT	**Sadao Pong**	**17.34**	**28**	*e*Pn	**Pn**	**05 18 46.2**	**-0.4**
	48nm,1.1s						
SUKH	**Sukhothai**	**17.57**	**23**	P	**P**	**05 18 52.2**	**+2.0**
	16nm,0.9s,137nm						
CISI	**Cisompet, Garu**	**17.63**	**120**	P	**P**	**05 18 52.3**	**+1.3**
PHIT	**Phitsanulok**	**17.64**	**26**	P	**P**	**05 18 52.0**	**+1.1**
	35nm,0.9s						
CM01	**Chiang Mai Arr**	**18.19**	**20**	*e*P	**P**	**05 18 57.0**	**0.0**
CM31	**Chiang Mai Arr**	**18.21**	**20**	*e*P	**Pn**	**05 18 57.5**	**+0.2**
CMAR	**Chiang Mai Arr**	**18.21**	**20**	P	**Pn**	**05 18 57.8**	**+0.5**
	0.7nm,0.3s,baz=216,slow=13,SNR=44						
KPJI	**Karang Pucung**	**18.50**	**118**	P	**Pn**	**05 19 01.7**	**+0.8**
CHTO	**Chiang Mai**	**18.55**	**20**	P	**Pn**	**05 19 02.5**	**+1.1**
	136nm,1.2s						
CHTO	**Chiang Mai**	**18.55**	**20**	*e*P	**Pn**	**05 19 01.5**	**+0.1**
	34nm,1.1s						
CHTO	**Chiang Mai**	**18.55**	**20**	*e*P	**Pn**	**05 19 01.5**	**+0.1**
CHTO				pmax	pmax		
	comp=Z,34nm,1.1s						
SKNT	**Sakolnakorn**	**19.27**	**35**	P	**P**	**05 19 09.1**	**+0.1**
	comp=Z,14nm,0.9s,comp=Z,1μm						
PAYA	**Payao**	**19.38**	**21**	P	**Pn**	**05 19 13.7**	**+2.3**
	comp=Z,8.6nm,0.9s						
CMAI	**Chiengmai2**	**19.62**	**19**	P	**Pn**	**05 19 15.7**	**+1.2**
	comp=Z,236nm,1.1s,comp=Z,6μm						
NONG	**Nongkai**	**19.70**	**31**	P	**Pn**	**05 19 14.9**	**-0.3**
	comp=Z,91nm,0.9s,comp=Z,2μm						
WOJI	**Wonogiri, Jawa**	**20.49**	**116**	P	Pn	05 19 25.4	+0.8
HYB	**Hyderabad**	**21.10**	**320**	*i* P	**P**	**05 19 30.0**	**+1.2**
HYB				*e*S	**S**	**05 23 13.0**	**-8.9**
HYB	**Hyderabad**	**21.10**	**320**	*e*P	**P**	**05 19 29.2**	**+0.4**
HYB				IAmb	IAmb	05 19 29.8	
	comp=Z,40nm,0.3s						
H08S2	**Diego Garcia H**	**21.82**	**246**	T	T	05 41 35.6	
	baz=65,slow=75,SNR=12						
H08S3	**Diego Garcia H**	**21.82**	**246**	T	T	05 41 34.8	
	baz=65,slow=75,SNR=8.1						
H08S1	**Diego Garcia H**	**21.84**	**246**	T	T	05 41 33.8	
	baz=65,slow=75,SNR=6.0						
AGT	**Agartala**	**22.51**	**357**	*e*P	**P**	**05 19 43.9**	**+0.1**
BOK	**Bokaro**	**23.28**	**345**	*e*P	**P**	**05 19 52.1**	**+0.2**
BOK				IAmb	IAmb	05 20 07.5	
	comp=Z,106nm,1.3s						
IMP	**Imphal**	**23.46**	**3**	*e*P	**P**	**05 19 54.9**	**+1.1**
SHL	**Shillong**	**24.16**	**359**	*e*P	**P**	**05 19 58.9**	**-1.5**
SHL				IAmb	IAmb	05 20 08.1	
	comp=Z,4.2nm,0.6s						
TURI	**Tura**	**24.23**	**355**	*e*P	**P**	**05 20 00.4**	**-0.4**
DHUB	**DHUBRI**	**24.72**	**355**	*e*P	**P**	**05 20 02.1**	**-3.1**
GUWA	**GUWAHATI**	**24.79**	**358**	*e*P	**P**	**05 20 06.3**	**+0.4**
MOKO	**MOKOCHONG**	**24.98**	**4**	*e*P	**P**	**05 20 08.7**	**+0.9**
POO	**Poona**	**25.07**	**314**	*e*P	**P**	**05 20 09.2**	**+0.6**
POO				IAmb	IAmb	05 20 11.6	
TEZP	**TEZPUR**	**25.20**	**1**	*e*P	**P**	**05 20 10.3**	**+0.7**
KMI	**Kunming**	**25.70**	**22**	P	**P**	**05 20 16.8**	**+2.4**
KMI				pmax	pmax		
	comp=Z,15nm,0.6s						
KMI				pmax	pmax		
	comp=Z,260nm,5.6s						
KMI				LR	LR		
	comp=Z,960nm,17.0s						
KMI				LR	LR		
	comp=Z,930nm,17.5s						
KMI				LR	LR		
	comp=Z,1μm,17.5s						
ITAN	**ITANAGAR**	**25.75**	**3**	*e*P	**P**	**05 20 14.8**	**+0.1**
ZIRO	**ZIRO**	**26.14**	**3**	*e*P	**P**	**05 20 21.7**	**+3.4**
GTK	**Tadong**	**26.16**	**352**	*e*P	**P**	**05 20 18.6**	**+0.1**
MYLDM	**Lahad Datu**	**26.25**	**81**	*e*P	**P**	**05 20 18.2**	**-1.1**
	comp=Z,17nm,1.0s						
BHPL	**Bhopal**	**26.28**	**327**	*e*P	**P**	**05 20 20.0**	**+0.5**
BHPL				IAmb	IAmb	05 20 34.8	
	comp=Z,191nm,2.4s						
GYA	**Guiyang**	**28.51**	**27**	*e*P	**P**	**05 20 42.0**	**+2.4**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CD2	**Chengdu**	**31.35**	**19**	P	**P**	**05 21 05.5**	**+0.9**
CD2				pmax	pmax		
	comp=Z,30nm,0.8s						
SMLA	**Simla**	**33.05**	**335**	*e*P	**P**	**05 21 20.7**	**+1.3**
SMLA				IAmb	IAmb	05 21 22.2	
	comp=Z,19nm,1.2s						
ENH	**Enshi**	**33.05**	**28**	*e*P	**P**	**05 21 20.1**	**+0.6**
	comp=Z,20nm,0.9s						
DHRM	**DHARAMSHALA**	**34.38**	**335**	*e*P	**P**	**05 21 31.6**	**+0.3**
DHRM				IAmb	IAmb	05 21 39.2	
	comp=Z,9.0nm,0.8s						
WHN	**Wuhan**	**35.74**	**33**	P	**P**	**05 21 44.6**	**+1.8**
XAN	**Xi'an**	**36.04**	**24**	P	**P**	**05 21 45.3**	**-0.1**
XAN				pmax	pmax		
	comp=Z,20nm,0.7s						
XAN				pmax	pmax		
	comp=Z,75nm,5.6s						
LZH	**Lanzhou**	**36.21**	**16**	*e*P	**P**	**05 21 46.1**	**-0.8**
LZH				pmax	pmax		
	comp=Z,22nm,1.1s						
NIL	**Nilore**	**36.91**	**333**	*e*P	**P**	**05 21 53.2**	**+0.4**
	comp=Z,20nm,0.6s						
NIL	**Nilore**	**36.91**	**333**	*e*P	**P**	**05 21 53.2**	**+0.4**
NIL				pmax	pmax		
	comp=Z,21nm,0.6s						
GTA	**Gaotai**	**38.54**	**9**	*e*P	**P**	**05 22 07.5**	**+0.9**
GTA				S	**S**	**05 28 04.6**	**+4.3**
GTA				SS	**SS**	**05 30 50.1**	**-0.8**
GTA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,74nm,6.0s						
GTA				LR	LR		
	comp=Z,500nm,17.9s						
GTA				LR	LR		
	comp=Z,690nm,18.9s						
GTA				LR	LR		
	comp=Z,960nm,18.0s						
NJ2	**Nanjing**	**39.44**	**36**	*e*P	**P**	**05 22 14.4**	**+0.4**
NJ2				pmax	pmax		
	comp=Z,16nm,0.6s						
KSH	**Kashi**	**40.94**	**340**	P	**P**	**05 22 27.3**	**+0.8**
KSH				pP	pP	05 22 37.5	+0.7
KSH				pmax	pmax		
	comp=Z,210nm,4.8s						
NWAO	**Narrogin (SRO)**	**41.27**	**148**	P	**P**	**05 22 29.1**	**-0.1**
	comp=Z,9.1nm,0.9s,baz=199,slow=9.3,SNR=4.4						
NWAO	**Narrogin (SRO)**	**41.27**	**148**	*e*P	**P**	**05 22 29.1**	**-0.1**
	comp=Z,23nm,1.1s						
NWAO	**Narrogin (SRO)**	**41.27**	**148**	*e*P	**P**	**05 22 29.1**	**-0.1**
NWAO				pmax	pmax		
	comp=Z,23nm,1.1s						
H01W3	**Cape Leeuwin H**	**41.29**	**153**	T	T	06 07 11.7	
	baz=333,slow=76,SNR=3.7						
H01W2	**Cape Leeuwin H**	**41.30**	**153**	T	T	06 07 10.3	
	baz=333,slow=76,SNR=5.3						
H01W1	**Cape Leeuwin H**	**41.31**	**153**	T	T	06 07 09.7	
	baz=333,slow=76,SNR=3.0						
WMQ	**Urumqi**	**42.58**	**355**	P	**P**	**05 22 41.0**	**+1.2**
WMQ				pmax	pmax		
	comp=Z,36nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,340nm,6.1s						
WMQ				LR	LR		
	comp=Z,1μm,22.9s						
WMQ				LR	LR		
	comp=Z,1μm,21.7s						
WMQ				LR	LR		
	comp=Z,1μm,23.3s						
HHC	**Hu-ho-hao-te**	**43.02**	**21**	*e*P	**P**	**05 22 46.4**	**+2.9**
HHC				sS	sS	05 29 29.3	+5.5
HHC				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC				pmax	pmax		
	comp=Z,180nm,8.4s						
HHC				LR	LR		
	comp=Z,740nm,16.0s						
HHC				LR	LR		
	comp=Z,430nm,15.7s						
HHC				LR	LR		
	comp=Z,570nm,16.1s						
BJT	**Baijiatuau**	**44.17**	**26**	*e*P	**P**	**05 22 54.8**	**+2.2**
	comp=Z,29nm,0.8s						
BJT	**Baijiatuau**	**44.17**	**26**	*e*P	**P**	**05 22 54.8**	**+2.2**
BJT				pmax	pmax		
	comp=Z,29nm,0.8s						
BJI	**Beijing**	**44.19**	**26⇑**	*i* P	**P**	**05 22 54.8**	**+2.0**
BJI				pmax	pmax		
	comp=Z,48nm,0.7s						
FRU	**Bishkek**	**44.37**	**341**	*e*P	P	05 23 01.0	+6.8
FRU				*e*		05 23 08.0	
WRA	**Warramunga Arr**	**46.12**	**119**	P	**P**	**05 23 07.8**	**-0.7**
	comp=Z,12nm,0.8s,baz=296,slow=8.6,SNR=49						
WRAB	**Tennant Creek**	**46.13**	**119**	*e*P	**P**	**05 23 07.6**	**-0.9**
	comp=Z,20nm,0.9s						
WRAB	**Tennant Creek**	**46.13**	**119**	*i* P	**P**	**05 23 07.9**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,15nm,0.9s						
WB2	**Warramunga Arr**	**46.14**	**119**	*e*P	**P**	**05 23 07.9**	**-0.7**
	comp=Z,16nm,0.8s						
WC3	**Warramunga Arr**	**46.16**	**119**	*e*P	**P**	**05 23 08.2**	**-0.6**
	comp=Z,19nm,0.9s						
MK01	**Makanchi Array**	**46.18**	**350**	*e*P	**P**	**05 23 08.8**	**+0.2**
MK31	**Makanchi Array**	**46.20**	**350**	*e*P	**P**	**05 23 09.0**	**+0.3**
MK31	**Makanchi Array**	**46.20**	**350**	*e*P	**P**	**05 23 09.0**	**+0.3**
MKAR	**Makanchi Array**	**46.20**	**350**	P	**P**	**05 23 09.2**	**+0.4**
	comp=Z,3.0nm,0.8s,baz=170,slow=9.2,SNR=17						
MKAR	**Makanchi Array**	**46.20**	**350**	*e*P	**P**	**05 23 09.1**	**+0.4**
	comp=Z,29nm,0.8s						
FORT	**Forrest**	**46.48**	**136**	*e*P	**P**	**05 23 10.8**	**-0.3**
	comp=Z,33nm,0.8s						
ASAR	**Alice Springs**	**47.27**	**124**	P	**P**	**05 23 16.8**	**-0.7**
	comp=Z,3.6nm,0.8s,baz=302,slow=7.7,SNR=21						
ASAR				PcP	**PcP**	**05 24 48.2**	**-0.1**
	comp=Z,1.4nm,0.6s,baz=312,slow=3.1,SNR=6.2						
AS01	**Alice Springs**	**47.30**	**124**	*e*P	**P**	**05 23 16.2**	**-1.6**
SONM	**Songino Array**	**47.92**	**13**	P	**P**	**05 23 23.4**	**+1.2**
	comp=Z,15nm,0.8s,baz=191,slow=8.8,SNR=44						
SONA1	**Songino Array**	**47.94**	**13**	*e*P	**P**	**05 23 23.3**	**+1.0**
ULN	**Ulaanbaatar**	**48.10**	**13**	*e*P	**P**	**05 23 23.5**	**-0.1**
	comp=Z,4.4nm,0.7s						
ULN	**Ulaanbaatar**	**48.10**	**13**	*c e*P	**P**	**05 23 24.0**	**+0.4**
ULN				pmax	pmax		
	comp=Z,11nm,1.7s						
KSAR	**Wonju Array Be**	**48.55**	**38**	P	**P**	**05 23 28.0**	**+1.0**
KSAR	**Wonju Array Be**	**48.55**	**38**	P	**P**	**05 23 28.0**	**+1.0**
KSRS	**Korea Array**	**48.58**	**38**	P	**P**	**05 23 28.0**	**+0.7**
	comp=Z,3.4nm,0.8s,baz=224,slow=8.9,SNR=12						
KSRS	**Korea Array**	**48.58**	**38**	P	**P**	**05 23 28.0**	**+0.7**
KSRS				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KNGR	**Kungurtug, Tuv**	**49.34**	**4**	*e*P	**P**	**05 23 32.4**	**-0.6**
HVS	**Khovu-Aksy**	**49.69**	**1**	*i* P	**P**	**05 23 36.6**	**+0.9**
HVS				pmax	pmax		
	comp=Z,16nm,1.0s						
KURBB	**Kurchatov Arra**	**50.58**	**349**	P	**P**	**05 23 42.6**	**+0.3**
	comp=Z,1.8nm,0.6s,baz=172,slow=7.1,SNR=14						
RAYN	**Ar Rayn**	**50.59**	**300**	*e*P	**P**	**05 23 43.3**	**+0.3**
KURK	**Kurchatov**	**50.65**	**349**	P	**P**	**05 23 42.6**	**-0.2**
KURK	**Kurchatov**	**50.65**	**349**	*c e*P	**P**	**05 23 41.6**	**-1.2**
KURK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TLY	**Talaya**	**51.10**	**9**	*e*P	**P**	**05 23 48.7**	**+2.5**
TLY				*e*S	**S**	**05 31 04.4**	**+2.8**
TLY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CN2	**Changchun**	**51.49**	**30**	*e*P	**P**	**05 23 50.1**	**+0.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ZAA0	**Zalesovo Array**	**52.88**	**354**	*e*P	**P**	**05 23 59.7**	**+0.3**
	comp=Z,9.2nm,0.7s						
ZALV	**Zalesovo Beam**	**52.88**	**354**	P	**P**	**05 23 59.5**	**+0.1**
	comp=Z,4.1nm,0.4s,baz=183,slow=8.1,SNR=12						
HIA	**Hailar**	**53.21**	**22**	*i* P	**P**	**05 24 02.0**	**0.0**
HIA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BBOO	**Buckleboo**	**53.27**	**134**	*e*P	**P**	**05 24 01.9**	**-0.8**
	comp=Z,10nm,1.1s						
NVS	**Novosibirsk**	**53.93**	**353**	*e*P	**P**	**05 24 07.4**	**+0.3**
BVAR	**Borovoye Array**	**54.75**	**344**	P	**P**	**05 24 12.6**	**-0.5**
	comp=Z,1.3nm,0.8s,baz=161,slow=9.2,SNR=4.2						
BRVK	**Borovoye**	**54.81**	**344**	*c e*P	**P**	**05 24 13.0**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,11nm,2.5s						
MJAR	**Matsushiro Arr**	**54.89**	**45**	P	**P**	**05 24 13.9**	**-0.6**
	comp=Z,0.9nm,0.3s,baz=237,slow=8.7,SNR=4.8						
USRK	**Ussuriysk Ar.**	**55.24**	**34**	P	**P**	**05 24 17.5**	**+0.7**
	comp=Z,3.7nm,0.8s,baz=253,slow=7.4,SNR=3.6						
ABKAR	**Akbulak array**	**55.33**	**335**	*e*P	**P**	**05 24 18.9**	**+1.5**
CTA	**Charters Tower**	**56.78**	**115**	P	**P**	**05 24 28.2**	**-0.1**
	comp=Z,4.9nm,0.8s,baz=303,slow=12,SNR=4.3						
CTAO	**Charters Tower**	**56.78**	**115**	*e*P	**P**	**05 24 28.2**	**-0.1**
	comp=Z,7.7nm,1.0s						
CTAO	**Charters Tower**	**56.78**	**115**	*e*P	**P**	**05 24 28.2**	**-0.1**
CTAO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
STKA	**Stephens Creek**	**56.96**	**130**	P	**P**	**05 24 29.3**	**-0.1**
	comp=Z,6.5nm,0.6s,baz=288,slow=6.6,SNR=10						
STKA	**Stephens Creek**	**56.96**	**130**	*e*P	**P**	**05 24 29.1**	**-0.3**
	comp=Z,0.8nm,1.0s						
AKTO	**Aktyubinsk**	**57.04**	**334**	P	**P**	**05 24 31.5**	**+1.9**
	comp=Z,0.8nm,0.5s,baz=121,slow=5.9,SNR=3.3						
KLR	**Kul'dur**	**58.39**	**29**	P	**P**	**05 24 40.0**	**+0.9**
	comp=Z,0.7nm,0.9s,baz=236,slow=7.3,SNR=14						
KLR	**Kul'dur**	**58.39**	**29**	*i* P	**P**	**05 24 39.5**	**+0.4**
ZEI	**Tsey**	**59.88**	**320**	*e*P	**P**	**05 24 49.8**	**0.0**
ZEI				pmax	pmax		
	comp=Z,6.0nm,0.4s						
KIV	**Kislovodsk**	**61.23**	**321**	*e*P	**P**	**05 24 59.0**	**+0.1**
KIV				pmax	pmax		
	comp=Z,12nm,1.1s						
EIDS	**Eidsvold**	**62.49**	**119**	*e*P	**P**	**05 25 08.0**	**+0.4**
	comp=Z,6.1nm,0.8s						
ARMA	**Armidale**	**64.42**	**125**	*e*P	**P**	**05 25 21.0**	**+0.6**
	comp=Z,9.8nm,0.9s						
TAU	**Tasmania Unive**	**65.92**	**139**	*e*P	**P**	**05 25 30.4**	**+0.7**
	comp=Z,32nm,1.1s						
TAU	**Tasmania Unive**	**65.92**	**139**	*e*P	**P**	**05 25 30.4**	**+0.7**
TAU				pmax	pmax		
	comp=Z,33nm,1.1s						
MOS	**Moscow**	**69.90**	**330**	*e*P	P	05 26 00.8	+6.3
OBN	**Obninsk**	**70.13**	**330⇑**	*e*P	**P**	**05 25 55.4**	**-0.5**
OBN				*PP	**pP**	**05 26 04.0**	**-2.7**
OBN				*SP	**sP**	**05 26 08.0**	**-2.8**
OBN				*i* S	**S**	**05 34 56.4**	**-8.1**
OBN				SSS	SSS	05 42 41.0	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.4s						
OBN				MLR	MLR		
	comp=Z,437nm,19.0s						
KLMR	**Klimovskoe**	**71.70**	**336**	*e*P	**P**	**05 26 08.5**	**+3.2**
KLMR				pmax	pmax		
	comp=Z,15nm,1.3s						
KLMR	**Klimovskoe**	**71.70**	**336**	*e*P	**P**	**05 26 08.6**	**+3.2**
KLMR				AMP		05 26 19.3	
	comp=Z,15nm,1.3s						
MAW	**Mawson**	**71.78**	**192**	P	**P**	**05 26 06.4**	**+0.8**
	comp=Z,1.2nm,0.4s,baz=51,slow=14,SNR=4.1						
KIEV	**Kiev**	**72.36**	**323**	*i* P	**P**	**05 26 07.5**	**-2.0**
KIEV				pmax	pmax		
	comp=Z,2.0nm,0.9s						
TIXI	**Tiksi**	**73.98**	**11**	P	**P**	**05 26 17.8**	**-0.8**
	comp=Z,8.2nm,0.5s,baz=261,slow=4.7,SNR=25						
TIXI	**Tiksi**	**73.98**	**11**	*e*P	**P**	**05 26 18.1**	**-0.6**
	comp=Z,12nm,0.6s						
TIXI	**Tiksi**	**73.98**	**11**	*i* P	**P**	**05 26 16.0**	**-2.7**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
FIA1	**FINESS Array S**	**77.78**	**333**	*e*P	**P**	**05 26 39.7**	**-0.9**
	comp=Z,2.4nm,0.9s						
FINES	**FINESS Array B**	**77.78**	**333**	P	**P**	**05 26 40.5**	**0.0**
	comp=Z,0.8nm,0.6s,baz=90,slow=4.2,SNR=2.9						
SYO	**Syowa Base**	**78.65**	**197⇓**	*e*P	**P**	**05 26 44.3**	**-0.9**
SYO	**Syowa Base**	**78.65**	**197⇓**	*e*PcP	**PcP**	**05 26 55.6**	**+1.6**
GERES	**GERESS Array B**	**81.66**	**319**	P	**P**	**05 27 03.3**	**+1.2**
	comp=Z,0.5nm,0.2s,baz=76,slow=4.5,SNR=3.3						
BILL	**Bilibino**	**82.79**	**21⇑**	*e*P	**P**	**05 27 08.5**	**+1.1**
BILL				*SP	**sP**	**05 27 21.0**	**-1.5**
BILL				S	**S**	**05 37 23.0**	**+0.2**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,433nm,18.0s						
KEST	**Kesra**	**83.69**	**306**	P	**P**	**05 27 15.1**	**+2.3**
	comp=Z,0.9nm,0.5s,baz=108,slow=3.2,SNR=1.

ARMA Armidale 19.24 227 *eP* **P** **05 27 03.7 +1.9**
11nm,0.9s
TARA Tarawa 19.81 15 *eP* **Pn** **05 27 08.8 -0.9**
98nm,1.0s
AFI Afiamalu 20.09 82 LR LR 05 33 05.8
comp=Z,2µm,21.7s,baz=254,slow=31
AFI Afiamalu 20.09 82 *eP* Pn 05 27 13.6 +0.5
167nm,1.1s
AFI Afiamalu 20.09 82 *eP* Pn 05 27 13.6 +0.5
AFI pmax pmax
comp=Z,167nm,1.1s
CTA Charters Tower 20.43 260 P **P** **05 27 13.1 -1.8**
comp=Z,11nm,1.0s,baz=82,slow=12,SNR=7.4
CTA LR LR 05 34 48.3
comp=Z,3µm,18.2s,baz=64,slow=36
CTAO Charters Tower 20.43 260 *eP* **P** **05 27 16.4 +1.6**
comp=Z,26nm,1.0s
CTAO Charters Tower 20.43 260 *eP* **P** **05 27 16.4 +1.6**
CTAO pmax pmax
comp=Z,26nm,1.0s
RABL Rabaul 20.46 310 *eP* **P** **05 27 14.9 -0.2**
comp=Z,93nm,0.6s
HIZ Hauiti 21.45 165 *eP* **P** **05 27 29.4 +3.9**
comp=Z,126nm,1.1s
PMG Port Moresby 21.70 290 P **P** **05 27 27.1 -1.3**
comp=Z,9.6nm,0.7s,baz=351,slow=2.9,SNR=3.2
PMG LR LR 05 34 45.8
comp=Z,2µm,18.3s,baz=126,slow=34
URZ Urewera 21.87 160 P **P** **05 27 30.1 +0.1**
comp=Z,16nm,0.8s,baz=282,slow=9.3,SNR=9.9
URZ LR LR 05 35 15.2
comp=Z,2µm,18.1s,baz=346,slow=35
URZ Urewera 21.87 160 *eP* **P** **05 27 31.3 +1.2**
BKZ Black Stump Fm 22.50 162 *eP* **P** **05 27 38.5 +1.6**
comp=Z,59nm,1.1s
BFZ Birch Farm 23.85 164 *eP* **P** **05 27 50.2 -0.3**
comp=Z,38nm,1.0s
CAN Canberra 24.04 220 *eP* **P** **05 27 53.9 +1.5**
comp=Z,42nm,1.0s
CAN Canberra 24.04 220 *eP* **P** **05 27 53.9 +1.5**
CAN pmax pmax
comp=Z,42nm,1.0s
THZ Tophouse 24.18 171 *eP* **P** **05 27 54.6 +0.9**
comp=Z,27nm,0.8s
KHZ Kahutara 24.92 170 *eP* **P** **05 28 00.5 +0.3**
LTZ Lake Taylor 25.09 172 *eP* **P** **05 28 02.9 +1.1**
comp=Z,35nm,1.0s
OXZ Oxford 25.59 173 *eP* **P** **05 28 08.2 +1.9**
comp=Z,19nm,0.8s
RPZ Rata Peaks 25.87 174 P **P** **05 28 07.4 -1.5**
comp=Z,12nm,0.8s,baz=98,slow=22,SNR=1.9
RPZ LR LR 05 37 47.6
comp=Z,2µm,18.4s,baz=352,slow=35
STKA Stephens Creek 27.40 235 P **P** **05 28 22.2 -0.6**
comp=Z,7.2nm,0.8s,baz=56,slow=7.5,SNR=6.9
STKA LR LR 05 39 09.6
comp=Z,2µm,18.0s,baz=60,slow=36
STKA Stephens Creek 27.40 235 *eP* **P** **05 28 23.3 +0.5**
comp=Z,5.5nm,1.1s
STKA Stephens Creek 27.40 235 *eP* **P** **05 28 23.3 +0.5**
STKA pmax pmax
comp=Z,6.0nm,1.1s
RAR Rarotonga 30.76 101 LR LR 05 38 17.8
comp=Z,616nm,21.6s,baz=278,slow=31
WB2 Warramunga Arr 31.62 261 *eP* **P** **05 28 59.8 -0.6**
comp=Z,6.3nm,1.0s
WRA Warramunga Arr 31.63 261 P **P** **05 28 58.9 -1.7**
comp=Z,2.8nm,0.8s,baz=91,slow=8.6,SNR=9.6
AS01 Alice Springs 32.05 254 *eP* **P** **05 29 04.1 -0.2**
AS31 Alice Springs 32.10 254 *eP* **P** **05 29 03.6 -1.0**
comp=Z,3.7nm,0.6s
ASAR Alice Springs 32.10 254 P **P** **05 29 03.1 -1.5**
comp=Z,5.2nm,0.7s,baz=82,slow=8.4,SNR=31
FORT Forrest 38.16 243 *eP* **P** **05 29 56.1 -0.6**
comp=Z,52nm,1.1s
TBI Tubual 40.31 105 *eS* S 05 36 08.6 -13
comp=Z,453nm,28.0s
TBI *e*LQ LQ 05 39 29.5
comp=Z,2µm,26.2s
TBI *e*LR LR 05 41 09.0
comp=Z,983nm,26.2s
PPT2 Papeete2 40.59 96 *eS* S 05 36 13.6 -12
comp=Z,405nm,24.8s
PPT2 *e*LQ LQ 05 39 36.1
comp=Z,1µm,26.8s
PPT2 *e*LR LR 05 41 24.0
comp=Z,2µm,25.5s,baz=252
PPT Papeete 40.59 96 LR LR 05 42 53.8
comp=Z,642nm,19.6s,baz=258,slow=30
BATI Baumata 43.35 274 LR LR 05 48 21.5
comp=Z,904nm,20.1s,baz=140,slow=36
NWAO Narrogin (SRO) 47.57 242 P **P** **05 31 12.3 -0.7**
comp=Z,16nm,0.9s,baz=304,slow=4.7,SNR=5.1
NWAO LR LR 05 51 07.1
comp=Z,1µm,18.8s,baz=307,slow=36
NWAO Narrogin (SRO) 47.57 242 *eP* **P** **05 31 12.2 -0.8**
comp=Z,20nm,0.8s
NWAO Narrogin (SRO) 47.57 242 *eP* **P** **05 31 12.2 -0.8**
NWAO pmax pmax
comp=Z,20nm,0.8s
TAOE Nuku Hiva Isla 51.34 87 *eS* S 05 38 48.4 -12
comp=Z,633nm,24.5s
TAOE *e*LR LR 05 46 17.7
comp=Z,2µm,22.0s,baz=258
JOW Kunigami 58.70 318 LR LR 05 58 47.3
comp=Z,282nm,18.1s,baz=104,slow=37
LEM Lembang 59.53 273 P **P** **05 32 41.3 +0.1**
comp=Z,12nm,0.5s,baz=188,slow=22,SNR=3.4
LEM LR LR 05 59 43.5
comp=Z,390nm,19.7s,baz=82,slow=37
VNDA Vanda 59.71 181 P **P** **05 32 41.1 -0.1**
comp=Z,0.7nm,0.7s,baz=324,slow=4.0,SNR=4.8
VNDA Vanda 59.71 181 *eP* **P** **05 32 42.2 +1.0**
comp=Z,7.7nm,1.1s
VNDA Vanda 59.71 181 *eP* **P** **05 32 42.2 +1.0**
VNDA pmax pmax
comp=Z,8.0nm,1.1s
SBA Scott Base 59.97 180 *eP* **P** **05 32 43.9 +0.9**
comp=Z,15nm,1.0s
SBA Scott Base 59.97 180 *eP* **P** **05 32 43.9 +0.9**
SBA pmax pmax
comp=Z,15nm,1.0s
MJAR Matsushiro Arr 60.93 333 P **P** **05 32 49.1 -1.0**
comp=Z,9.6nm,1.0s,baz=169,slow=7.1,SNR=9.5
MJAR LR LR 06 00 24.7
comp=Z,90nm,18.6s,baz=145,slow=37
MAT Matsushiro 60.93 333 P **P** **05 32 49.8 -0.3**
JNU Nakatsue 61.77 325 P **P** **05 32 55.4 -0.5**
comp=Z,4.3nm,0.7s,baz=139,slow=22,SNR=2.7
JNU LR LR 05 56 14.5
comp=Z,166nm,20.8s,baz=132,slow=33
ASAJ Asahikawa 65.88 340 P **P** **05 33 23.8 +1.2**
comp=Z,6.9nm,0.8s,baz=5,2,slow=14,SNR=3.0
KSRS Korea Array 66.62 326 P **P** **05 33 28.3 +0.7**
comp=Z,0.5nm,0.3s,baz=148,slow=7.2,SNR=3.6
KSRS LR LR 06 02 10.8
comp=Z,188nm,18.8s,baz=150,slow=36
KSAR Wonju Array Be 66.63 326 P **P** **05 33 28.3 +0.6**
KSAR Wonju Array Be 66.63 326 P **P** **05 33 28.3 +0.6**
MIR Mirnyy 67.63 205 *eP* **P** **05 33 36.0 +2.4**
MIR pmax pmax
comp=Z,42nm,1.0s
NJ2 Nanjing 68.27 316 *eP* **P** **05 33 39.6 +1.4**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
USRK Ussuriysk Ar. 69.92 333 P **P** **05 33 47.7 -0.4**
comp=Z,3.3nm,0.8s,baz=108,slow=4.8,SNR=8.0
PEA0B Petropavlovsk- 71.26 354 *eP* **P** **05 33 56.3 +0.2**
comp=Z,38nm,1.1s
PETK Petropavlovsk- 71.26 354 P **P** **05 33 56.3 +0.2**
comp=Z,20nm,0.9s,baz=116,slow=6.8,SNR=24
PETK LR LR 06 02 56.0
comp=Z,316nm,18.8s,baz=175,slow=34
PETK Petropavlovsk- 71.26 354 *eP* **P** **05 33 56.2 +0.1**
PETK Petropavlovsk- 71.26 354 *eP* **P** **05 33 56.2 +0.1**
MDJ Mudanjiang 71.29 332 P **P** **05 33 55.8 -0.7**
MDJ S **S** **05 43 13.3 +0.6**
MDJ pmax pmax
comp=Z,23nm,1.6s
MDJ pmax pmax
comp=Z,570nm,12.9s
MDJ LR LR
comp=Z,360nm,12.7s
MDJ LR LR
comp=Z,320nm,17.9s
GSI Gunungsitoli 71.58 278 *eP* **P** **05 33 59.0 +0.1**
comp=Z,26nm,1.0s

QSPA South Pole Qui 72.13 180 P **P** **05 34 01.5 -0.1**
comp=Z,16nm,1.0s,baz=38,slow=1.8,SNR=19
QSPA South Pole Qui 72.13 180 *eP* **P** **05 34 01.3 -0.3**
comp=Z,32nm,0.9s
CN2 Changchun 72.60 329 *eP* **P** **05 34 05.6 +1.3**
CN2 *es*P PcP 05 34 20.8 -1.0
CN2 pmax pmax
comp=Z,10.0nm,0.6s
GRNR Gornyy 73.72 340 *eP* **P** **05 34 09.0 -1.8**
GYA Guiyang 73.90 305 *eP* **P** **05 34 13.3 +0.7**
GYA pP sP 05 34 24.4 +1.6
GYA PP **PP** **05 37 00.6 +2.7**
GYA S **SKiKP** **05 43 41.8 +1.3**
GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,120nm,5.8s
PBKT Sadao Pong 74.13 294 *eP* **P** **05 34 14.6 +0.7**
BJI Beijing 75.02 321 *eP* **P** **05 34 21.4 +2.8**
BJI pmax pmax
comp=Z,16nm,1.4s
KMI Kunming 76.37 302 P **P** **05 34 28.3 +1.3**
KMI pmax pmax
comp=Z,11nm,0.6s
KMI pmax pmax
comp=Z,560nm,12.8s
KMI LR LR
comp=Z,180nm,10.8s
KMI LR LR
comp=Z,230nm,12.1s
KMI LR LR
comp=Z,300nm,15.6s
CMAR Chiang Mai Arr 76.67 295 P **P** **05 34 29.5 +1.0**
comp=Z,6.5nm,1.1s,baz=122,slow=3.7,SNR=16
CHTO Chiang Mai 76.81 295 *eP* **P** **05 34 29.1 -0.2**
comp=Z,11nm,1.1s
CHTO Chiang Mai 76.81 295 *eP* **P** **05 34 29.1 -0.2**
CHTO pmax pmax
comp=Z,11nm,1.1s
HHC Hu-ho-hao-te 78.30 320 *eP* **P** **05 34 38.8 +1.5**
HHC S **S** **05 44 26.1 -5.3**
HHC pmax pmax
comp=Z,20nm,1.0s
HHC pmax pmax
comp=Z,390nm,7.9s
HHC LR LR
comp=Z,190nm,16.1s
HHC LR LR
comp=Z,250nm,15.1s
HHC LR LR
comp=Z,270nm,17.8s
CD2 Chengdu 78.31 308 P **P** **05 34 36.5 -1.0**
CD2 pmax pmax
comp=Z,10.0nm,0.6s
MA2 Magadan 78.44 351 P **P** **05 34 38.0 +0.5**
comp=Z,3.4nm,0.3s,baz=233,slow=7.4,SNR=2.6
MA2 Magadan 78.44 351 P **P** **05 34 38.0 +0.5**
MAW Mawson 79.12 202 P **P** **05 34 42.5 +1.2**
comp=Z,4.4nm,1.0s,baz=93,slow=10,SNR=3.4
MAW LR LR 06 06 55.0
comp=Z,300nm,18.4s,baz=69,slow=34
ZEA Zeya 79.38 337 *eP* **P** **05 34 43.6 +0.8**
ZEA pmax pmax
comp=Z,48nm,1.8s
LZH Lanzhou 80.79 313 *eP* **P** **05 34 48.9 -2.2**
LZH pP PcP 05 34 56.1 -1.6
LZH sP pP 05 34 59.6 +1.0
LZH pmax pmax
comp=Z,20nm,1.1s
SEY Seymchan 81.48 353 P **P** **05 34 53.7 -0.2**
comp=Z,18nm,1.0s,baz=154,slow=5.0,SNR=21
OHAK Old Harbor 81.60 20 *eP* **P** **05 34 53.9 -0.6**
comp=Z,13nm,1.0s
KDAK Kodiak Island 82.27 20 *eP* **P** **05 34 57.6 -0.5**
comp=Z,7.8nm,1.1s
KDAK Kodiak Island 82.27 20 *eP* **P** **05 34 57.6 -0.5**
KDAK pmax pmax
comp=Z,8.0nm,1.1s
SVW2 Sparrevohn 84.04 17 *eP* **P** **05 35 07.0 -0.3**
comp=Z,7.1nm,1.1s
CNPM China Poot 84.08 20 *eP* **P** **05 35 06.4 -1.1**
comp=Z,24nm,1.0s
RSO Reykjadt South 84.35 18 *eP* **P** **05 35 08.1 -1.0**
BRLK Bradley Lake 84.38 20 *eP* **P** **05 35 08.4 -0.6**
comp=Z,13nm,1.0s
ULN Ulaanbaatar 84.96 324 *eP* **P** **05 35 11.8 -0.6**
comp=Z,17nm,1.1s
ULN Ulaanbaatar 84.96 324 *eP* **P** **05 35 11.8 -0.6**
ULN pmax pmax
comp=Z,17nm,1.1s
GTA Gaotai 85.19 314 *eP* **P** **05 35 14.6 +0.9**
GTA pP PcP 05 35 18.9 +2.0
GTA sP pP 05 35 21.9 +0.6
GTA pmax pmax
comp=Z,3.0nm,0.8s
SONM Songino Array 85.31 324 P **P** **05 35 14.6 +0.5**
comp=Z,5.6nm,1.0s,baz=134,slow=3.3,SNR=16
SONA1 Songino Array 85.32 324 *eP* **P** **05 35 15.0 +0.8**
BILL Bilibino 85.71 359 *eP* **P** **05 35 14.9 -0.6**
comp=Z,36nm,1.1s
BILL Bilibino 85.71 359*c iP* **P** **05 35 15.1 -0.4**
BILL *i* 05 35 24.2
BILL pmax pmax
comp=Z,71nm,1.4s
BILL MLR MLR
comp=Z,193nm,17.0s
SYO Syowa Base 85.80 197 *eX* P 05 35 11.7 -4.4
CAST Castle Rocks 86.89 17 *eP* **P** **05 35 20.1 -1.4**
comp=Z,7.8nm,1.0s
AFDM Forest Hills D 87.32 48 *eP* **P** **05 35 23.1 -1.0**
comp=Z,19nm,1.2s
CMB Columbia Colle 87.34 49 *eP* **P** **05 35 23.4 -0.9**
comp=Z,14nm,1.0s
CMB Columbia Colle 87.34 49 *eP* **P** **05 35 23.4 -0.9**
CMB pmax pmax
comp=Z,14nm,1.0s
YBH Yreka Blue Hor 87.35 45 P **P** **05 35 23.8 -0.4**
comp=Z,4.2nm,1.0s,baz=262,slow=2.0,SNR=8.5
YBH LR LR 06 09 10.6
comp=Z,268nm,18.3s,baz=284,slow=32
YBH Yreka Blue Hor 87.35 45 *eP* **P** **05 35 24.3 0.0**
comp=Z,5.3nm,1.0s
YBH Yreka Blue Hor 87.35 45 *eP* **P** **05 35 24.3 0.0**
TRF Thorofare Moun 87.42 18 *eP* **P** **05 35 23.4 -0.8**
comp=Z,4.9nm,0.9s
HUMO Hull Mountain 87.58 44 *eP* **P** **05 35 24.8 -0.5**
comp=Z,7.4nm,1.1s
ISA Isabella, Lake 87.76 51 *eP* **P** **05 35 25.7 -0.7**
comp=Z,17nm,1.1s
ISA Isabella, Lake 87.76 51 *eP* **P** **05 35 25.7 -0.7**
ISA pmax pmax
comp=Z,17nm,1.1s
RND Reindeer 87.80 18 *eP* **P** **05 35 23.5 -2.4**
comp=Z,9.5nm,1.2s
RND Reindeer 87.80 18 *eP* **P** **05 35 23.5 -2.4**
RND pmax pmax
comp=Z,10.0nm,1.2s
MDPB Devils Postpil 88.11 49 *eP* **P** **05 35 27.6 -0.7**
comp=Z,18nm,1.2s
BEKR Beckworth 88.14 47 *eP* **P** **05 35 27.2 -1.0**
comp=Z,9.4nm,1.1s
OMMB Old Mammoth Mi 88.16 50 *eP* **P** **05 35 27.8 -0.7**
comp=Z,9.3nm,1.2s
WAKR Walker 88.22 49 *eP* **P** **05 35 28.7 0.0**
comp=Z,12nm,1.0s
ZAK Zakamensk 88.40 325 *eP* **P** **05 35 26.9 -2.2**
ZAK pmax pmax
comp=Z,7.0nm,2.0s
PFO Pinyon Flats O 88.48 54 *eP* **P** **05 35 29.4 -0.5**
comp=Z,6.3nm,1.0s
PFO Pinyon Flats O 88.48 54 *eP* **P** **05 35 29.4 -0.5**
PFO pmax pmax
comp=Z,6.0nm,1.0s
XPFO Piæon Flat 88.48 54 *eP* **P** **05 35 29.4 -0.5**
comp=Z,7.4nm,1.1s
DAC Darwin (Calif) 88.66 51 *eP* **P** **05 35 30.8 0.0**
comp=Z,0.6nm,0.9s
DAC Darwin (Calif) 88.66 51 *eP* **P** **05 35 30.8 0.0**
DAC pmax pmax
comp=Z,1.0nm,0.9s
PAHR Pah Rah Range 88.75 48 *eP* **P** **05 35 30.8 -0.2**
comp=Z,3.4nm,0.8s
GSC Goldstone, Bar 88.87 52 *eP* **P** **05 35 31.3 -0.3**
comp=Z,2.5nm,1.0s
K05A Summer Lake 89.00 44 *eP* **P** **05 35 31.8 -0.4**
comp=Z,11nm,1.1s

NV01 Mina Array Sit 89.00 49 *eP* **P** **05 35 31.3 -1.1**
NVAR Mina Array Bea 89.00 49 P **P** **05 35 31.8 -0.6**
comp=Z,5.6nm,0.9s,baz=227,slow=7.5,SNR=26
H04A Detroit Lake 89.01 42 *eP* **P** **05 35 31.2 -0.8**
comp=Z,3.9nm,0.9s
MOD Modoc Plateau 89.04 45 *eP* **P** **05 35 31.1 -1.3**
comp=Z,6.6nm,0.9s
CCB Clear Creek Bu 89.04 18 *eP* **P** **05 35 29.1 -2.5**
comp=Z,3.0nm,1.1s
NV11 Mina Array Sit 89.11 49 *eP* **P** **05 35 31.9 -0.9**
comp=Z,0.6nm,1.1s
MDM Murphy Dome 89.16 17 *eP* **P** **05 35 29.7 -2.5**
comp=Z,3.9nm,1.0s
IL1 Eielson Array 89.40 18 *eP* **P** **05 35 30.5 -2.8**
ILAR Eielson Array 89.40 18 P **P** **05 35 31.0 -2.3**
comp=Z,1.2nm,0.8s,baz=235,slow=5.7,SNR=12
ILAR Eielson Array 89.40 18 P **P** **05 35 31.0 -2.3**
PINE Pine Mountain 89.42 43 *eP* **P** **05 35 33.5 -0.7**
comp=Z,12nm,1.1s
BESE Bessie Mountai 89.52 26 *eP* **P** **05 35 32.9 -1.3**
comp=Z,6.3nm,1.0s
SCRK Sand Creek 89.70 19 *eP* **P** **05 35 33.9 -1.0**
comp=Z,2.9nm,0.9s
TPNV Topopah Spring 89.92 51 *eP* **P** **05 35 35.7 -0.9**
comp=Z,15nm,1.1s
TPNV Topopah Spring 89.92 51 *eP* **P** **05 35 35.7 -0.9**
TPNV pmax pmax
comp=Z,15nm,1.1s
NVL N'lazarevskaya 89.98 188 *eP* P 05 35 51.8 +16
NVL pmax pmax
comp=Z,9.0nm,0.8s
LDFC Landfair 90.07 53 *eP* **P** **05 35 36.7 -0.6**
comp=Z,38nm,1.1s
LPIG La Paz 90.13 65 LR LR 06 09 41.1
comp=Z,777nm,18.0s,baz=230,slow=31
D05A Enumclaw 90.25 40 *eP* **P** **05 35 37.7 0.0**
comp=Z,10nm,1.1s
113A Mohawk Valley, 90.27 56 *eP* **P** **05 35 37.4 -0.7**
comp=Z,7.1nm,0.9s
WVOR Wild Horse Val 90.39 45 *eP* **P** **05 35 37.1 -1.5**
comp=Z,8.1nm,0.8s
WVOR Wild Horse Val 90.39 45 *eP* **P** **05 35 37.1 -1.5**
WVOR pmax pmax
comp=Z,8.0nm,0.8s
SNAA Sanae 90.41 183 P **P** **05 35 37.7 -0.6**
SNAA Sanae 90.41 183 P **P** **05 35 37.6 -0.6**
comp=Z,13nm,1.2s,baz=165,slow=2.5,SNR=9.8
I07A Izee 90.49 43 *eP* **P** **05 35 38.5 -0.5**
comp=Z,11nm,1.1s
SHPR Sheep Range 90.56 52 *eP* **P** **05 35 39.6 0.0**
comp=Z,11nm,1.2s
BMN Battle Mountai 90.56 48 *eP* **P** **05 35 39.1 -0.5**
comp=Z,13nm,1.1s
BMN Battle Mountai 90.56 48 *eP* **P** **05 35 39.1 -0.5**
BMN pmax pmax
comp=Z,13nm,1.1s
J08A Circle Bar Ran 90.87 44 *eP* **P** **05 35 39.9 -1.0**
comp=Z,18nm,1.1s
R11A Troy Canyon, C 90.94 50 *eP* **P** **05 35 40.1 -1.3**
comp=Z,2.8nm,1.0s
VNA3 Neumayer Olymp 91.06 181 P **P** **05 35 40.4 -0.8**
EGAK Eagle 91.15 19 *eP* **P** **05 35 40.5 -0.9**
comp=Z,5.6nm,1.1s
Y14A Wickenburg 91.28 55 *eP* **P** **05 35 42.1 -0.8**
G08A Pilot Rock 91.34 43 *eP* **P** **05 35 42.0 -1.0**
comp=Z,14nm,1.1s
VNA1 Neumayer--Stat 91.63 181 P **P** **05 35 43.7 -0.1**
ELK Elko 92.08 48 P **P** **05 35 47.4 +0.7**
comp=Z,2.0nm,0.8s,baz=254,slow=5.5,SNR=7.7
LCMT Little Creek M 92.18 52 *eP* **P** **05 35 46.3 -0.8**
comp=Z,12nm,1.1s
BMO Blue Mountains 92.24 43 *eP* **P** **05 35 45.9 -1.2**
comp=Z,2.5nm,1.1s
BMO Blue Mountains 92.24 43 *eP* **P** **05 35 45.9 -1.2**
BMO pmax pmax
comp=Z,3.0nm,1.1s
CCUT Cedar City 92.28 51 *eP* **P** **05 35 47.2 -0.4**
comp=Z,6.1nm,1.2s
TUC Tucson 92.47 57 *eP* **P** **05 35 48.2 -0.3**
comp=Z,6.2nm,1.0s
TUC *e*pP **pP** **05 35 56.9 +0.9**
TUC Tucson 92.47 57 P **P** **05 35 48.2 -0.3**
TUC pmax pmax
comp=Z,6.0nm,1.0s
KNB Kanab 92.50 52 *eP* **P** **05 35 48.2 -0.4**
comp=Z,10nm,1.2s
KNB Kanab 92.50 52 *eP* **P** **05 35 48.2 -0.4**
KNB pmax pmax
comp=Z,10.0nm,1.2s
X16A Lo Mia Camp, P 92.66 55 *eP* **P** **05 35 49.1 -0.4**
comp=Z,14nm,1.0s
U15A North Rim 92.69 53 *eP* **P** **05 35 49.3 -0.4**
comp=Z,16nm,1.1s
F10A Beach Ranch, E 92.73 42 *eP* **P** **05 35 48.3 -1.1**
comp=Z,6.1nm,1.0s
WUAZ Wupatki 93.08 54 *eP* **P** **05 35 51.0 -0.3**
comp=Z,7.8nm,1.0s
TIXI Tiksi 93.16 349 *eP* **P** **05 35 49.6 -1.0**
comp=Z,3.3nm,0.9s
TIXI Tiksi 93.16 349 *eP* **P** **05 35 49.6 -1.0**
TIXI pmax pmax
comp=Z,3.0nm,0.9s
MTPU Mount Pierson 93.33 51 *eP* **P** **05 35 51.6 -1.0**
comp=Z,5.4nm,1.1s
319A Douglas 93.37 58 *eP* **P** **05 35 52.6 -0.1**
comp=Z,19nm,1.0s
MSU Marysvale 93.49 51 *eP* **P** **05 35 53.0 -0.2**
MSU Marysvale 93.49 51 *eP* **P** **05 35 53.0 -0.2**
HLID Hailey 93.68 45 *eP* **P** **05 35 52.6 -1.4**
comp=Z,1.9nm,0.9s
HVU Hansel Valley 94.18 48 *eP* **P** **05 35 55.3 -0.9**
comp=Z,2.8nm,0.9s
HVU Hansel Valley 94.18 48 *eP* **P** **05 35 55.3 -0.9**
HVU pmax pmax
comp=Z,3.0nm,0.9s
TMUT Trail Mountain 94.47 50 *eP* **P** **05 35 57.0 -0.8**
comp=Z,3.4nm,0.8s
P17A Butcher Ranch, 94.87 50 *eP* **P** **05 35 58.0 -1.4**
comp=Z,3.2nm,0.8s
TCUT Toone Canyon 94.92 48 *eP* **P** **05 35 58.3 -1.5**
comp=Z,5.5nm,1.0s
WMQ Urumqi 95.27 314 P **P** **05 36 01.0 -0.1**
WMQ pP sP 05 36 12.1 +0.7
WMQ sP pP 05 36 16.3 +7.6
WMQ LR LR
comp=Z,1µm,19.9s
WMQ LR LR
comp=Z,740nm,15.7s
WMQ LR LR
comp=Z,410nm,18.1s
INK Inuvik 95.74 19 P **P** **05 36 01.4 -1.2**
comp=Z,0.9nm,0.9s,baz=302,slow=4.9,SNR=5.1
INK Inuvik 95.74 19 *eP* **P** **05 36 01.7 -0.8**
comp=Z,1.6nm,1.0s
INK Inuvik 95.74 19 *eP* **P** **05 36 01.7 -0.8**
INK pmax pmax
comp=Z,2.0nm,1.0s
REDW Red Top Meadow 96.05 46 *eP* **P** **05 36 03.7 -1.2**
comp=Z,2.7nm,1.0s
ANMO Albuquerque 96.72 56 P **P** **05 36 07.2 -0.9**
comp=Z,1.2nm,0.9s,baz=183,slow=2.4,SNR=4.2
PDAR Pinedale Array 96.76 47 P **P** **05 36 07.9 -0.2**
comp=Z,0.3nm,0.5s,baz=204,slow=3.3,SNR=4.4
PDAR Pinedale Array 96.76 47 *eP* **P** **05 36 06.8 -1.3**
TXAR Lajitas Array 97.39 62 P **P** **05 36 10.4 -0.6**
comp=Z,1.0nm,0.9s,baz=235,slow=4.4,SNR=4.0
TXAR LR LR 06 14 12.3
comp=Z,342nm,18.3s,baz=0,0,slow=32
MKAR Makanchi Array 99.80 316 P **Pdif** **05 36 21.4 +0.1**
comp=Z,0.4nm,0.7s,baz=99,slow=5.7,SNR=3.4
YKA Yellowknife Ar 100.15 27 P **Pdif** **05 36 21.5 -1.0**
comp=Z,0.5nm,0.5s,baz=257,slow=4.7,SNR=9.3
YKA PKiKP **PKiKP** **05 40 49.3 -0.6**
comp=Z,0.2nm,0.7s,baz=274,slow=1.7,SNR=4.0
ZALV Zalesovo Beam 100.21 323 P **Pdif** **05 36 23.2 +0.2**
comp=Z,0.6nm,0.4s,baz=134,slow=8.3,SNR=3.3
KSH Kashi 102.50 308 P **Pdif** **05 36 36.0 +2.3**
KSH pP sPdif 05 36 45.1 +1.1
KURK Kurchatov 103.10 319 Pdif **Pdif** **05 36 43.5 +7.6**
KURK PKiKP **PKiKP** **05 40 55.7 +0.2**
KURK PKKP **PKKPdf** **05 52 40.1 -1.9**
KURK Kurchatov 103.10 319 P **Pdif** **05 36 43.5 +7.6**
KURK *i* 05 40 55.7
KURBB Kurchatov Arra 103.14 319 Pdiff **Pdif** **05 36 43.5 +7.5**
comp=Z,0.2nm,0.3s,baz=101,slow=7.5,SNR=3.7
KURBB PKiKP **PKiKP** **05 40 55.7 +0.1**
comp=Z,0.2nm,0.2s,baz=94,slow=2.8,SNR=3.2

KURBB PKKP **PKKPdf 05 52 40.1 -1.9**
comp=Z,1.0nm,0.9s,baz=273,slow=4.0,SNR=5.9
NCB Newcomb 122.32 49 *e*PKPdf **PKPdf 05 41 30.9 -1.3**
SUMG Summit 123.29 9 *e*PKPdf **PKPdf 05 41 33.0 -0.8**
ILULI Ilulissat 123.39 16 *e*PKPdf **PKPdf 05 41 33.1 -0.4**
ARCES ARCESS Array B 123.43 345 PKP **PKPdf 05 41 32.8 -0.8**
comp=Z,2.2nm,0.8s,baz=76,slow=2.3,SNR=9.9
ARCES ARCESS Array B 123.43 345 *e*PKPdf **PKPdf 05 41 33.0 -0.6**
ARCES ARCESS Array B 123.43 345 *e*PKIKP **PKPdf 05 41 33.0 -0.6**
ARE0 ARCESS Array S 123.43 345 *e*PKPdf **PKPdf 05 41 33.4 -0.2**
PKME Peaks-Kenny Pk 125.61 47 *e*PKPdf **PKPdf 05 41 37.1 -1.4**
PQI Presque Isle 126.20 45 *e*PKPdf **PKPdf 05 41 37.6 -1.9**
ZEI Tsey 126.67 310 *i*PKIKP **PKPdf 05 41 41.4 +0.5**
OBN Obninsk 127.61 327⇑ *i*PKIKP **PKPdf 05 41 42.3 +0.3**
OBN pmax pmax
comp=Z,7.0nm,1.1s
OBN MLR MLR
comp=Z,234nm,18.0s
FINES FINESS Array B 128.83 338 PKP **PKPdf 05 41 44.0 -0.1**
comp=Z,2.5nm,0.9s,baz=8.5,slow=3.9,SNR=5.9
AKASG Malin Array Be 133.59 324 PKP **PKPdf 05 41 53.2 -0.3**
comp=Z,0.2nm,0.3s,baz=66,slow=1.1,SNR=4.3
AKASG SKPbc **SKPab 05 45 22.8 -0.2**
comp=Z,0.5nm,0.3s,baz=52,slow=5.0,SNR=4.5
BRTR Keskin Array B 134.88 309 PKP PKPdf 05 41 56.9 +0.4
comp=Z,1.6nm,1.0s,baz=121,slow=4.2,SNR=6.3
CLL Collm 141.12 335 *e*PKiKP **PKiKP 05 42 11.0 +0.9**
CLL Collm 141.12 335 *e*PKIKP **PKiKP 05 42 11.0 +0.9**
EKA Eskdalemuir Ar 142.00 352 PKP PKPdf 05 42 07.9 -0.9
comp=Z,0.6nm,0.4s,baz=359,slow=3.0,SNR=4.5
CONA Conrad Observa 142.28 329 PKiKP **PKPdf 05 42 11.7 +2.1**
comp=Z,3.9nm,1.0s
GERES GERESS Array B 142.66 332 PKhKP PKPpre 05 42 05.4
comp=Z,0.6nm,0.6s,baz=4.3,slow=3.9,SNR=3.2
GERES PKP **PKPdf 05 42 10.0 -0.3**
comp=Z,0.3nm,0.2s,baz=0.0,slow=2.7,SNR=4.1
MOA Molln 143.11 330 *e*PKPdf PKPab 05 42 06.6 +0.1
comp=Z,5.1nm,1.1s
SOKA Soboth 143.54 328 *e*PKPdf PKPab 05 42 09.2 +0.9
comp=Z,4.0nm,0.9s
OBKA Obir 143.90 328 *e*PKPdf PKPab 05 42 10.2 +0.4
comp=Z,7.3nm,0.9s
KBA Koelnbreinsper 144.09 330 *e*PKPdf PKPab 05 42 10.9 +0.3
comp=Z,14nm,1.2s
MEM Membach 144.26 340 ⇑PKP PKPdf 05 42 16.8 +3.9
MYKA Terra Mystica 144.27 329 PKPdf **PKPab 05 42 11.1 0.0**
comp=Z,10nm,1.2s
ITM Ithomi 144.39 310 *e*PKPdf **PKPab 05 42 12.6 +0.8**
ABTA Abfaltersbach 144.73 330 *e*PKPdf **PKPab 05 42 12.7 -0.2**
comp=Z,20nm,1.2s,SNR=6.3
WATA Walderalm 144.73 332 *e*PKPdf **PKPab 05 42 13.0 +0.1**
comp=Z,5.4nm,0.8s
WTTA Wattenberg 144.76 331 *e*PKPdf **PKPab 05 42 13.1 +0.1**
comp=Z,14nm,1.3s
MOTA Moosalm 144.94 332 *e*PKPdf **PKPab 05 42 12.9 -0.8**
comp=Z,28nm,1.3s,SNR=6.0
RETA Reutte 144.98 332 *e*PKPdf **PKPab 05 42 14.1 +0.4**
comp=Z,19nm,1.3s,SNR=6.5
WLF Walferdange 145.02 339 ||PKP **PKPab 05 42 14.1 +0.5**
WLF Walferdange 145.02 339 *e*PKPbc PKPbc 05 42 14.3 +0.7
WLF Walferdange 145.02 339 *e*PKIKP PKPbc 05 42 14.3 +0.7
FETA Feichten 145.35 332 *e*PKPdf **PKPbc 05 42 15.2 +0.2**
comp=Z,28nm,1.2s,SNR=10
DAVA Damuels 145.52 333 *e*PKPab **PKPbc 05 42 15.7 +0.1**
comp=Z,31nm,1.2s,SNR=6.9
FUORN Ofenpass-Fuorn 145.86 332 *e*PKPdf **PKPbc 05 42 17.6 +0.8**
ECH Echery 145.88 337 *e*PKPdf **PKPdf 05 42 16.6 +0.8**
ECH Echery 145.88 337 *e*PKP2 **PKPdf 05 42 16.6 +0.8**
DAVOX Davos/Dischmat 145.91 332 PKPbc **PKPdf 05 42 17.1 +0.9**
comp=Z,7.2nm,0.7s,baz=77,slow=1.3,SNR=15
RCBR Riachuelo 146.82 133 *e*PKPdf **PKPdf 05 42 18.4 -0.1**
RCBR Riachuelo 146.82 133 *e*PKIKP **PKPdf 05 42 18.4 -0.1**
BNI Bardonecchia 148.65 334 *e*PKPbc **PKPdf 05 42 22.8 +2.1**
BNI Bardonecchia 148.65 334 *e*PKP2 **PKPdf 05 42 22.8 +2.1**
SSB Saint Sauveur 149.32 336 *e*PKPbc **PKPdf 05 42 23.7 +2.0**
SSB Saint Sauveur 149.32 336 *e*PKIKP **PKPdf 05 42 23.7 +2.0**
ES19 SONSECA Array 157.11 343 *e*PKPab **PKPab 05 43 01.5 -2.0**
ESDC Sonseca Array 157.15 343 PKPab **PKPab 05 43 04.3 +0.6**
comp=Z,0.5nm,0.6s,baz=332,slow=5.0,SNR=4.4
TOA0 Torodi Ar. Sit 165.75 253 *e*PKPdf **PKPdf 05 42 42.1 -0.7**
TORD Torodi Ar. Bea 165.75 253 PKP **PKPdf 05 42 41.9 -0.8**
comp=Z,4.1nm,1.2s,baz=27,slow=2.5,SNR=8.4
TORD PKPab **PKPab 05 43 41.2 -0.8**
comp=Z,2.2nm,1.1s,baz=109,slow=2.3,SNR=2.4

IDC 22 05:28:20.6±8.9, 32°.91S×178°.44W, h45km±85km, mb3.9/3, mb1 4.0/4, mb1mx3.6/52, mbtmp4.0/4, ML3.5/1, Error ellipse: s-maj=71.1km s-min=57.3km az=175.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.46**	**213**	P	Pn	05 29 53.1	+0.1
URZ	1.1nm,0.3s,baz=256,slow=4.9,SNR=11			S	Sn	05 31 05.8	+0.4
CTA	**Charters Tower**	**33.92**	**283**	P	P	05 35 00.6	+1.1
ASAR	1.1nm,0.3s,baz=264,slow=6.8,SNR=4.9 **Alice Springs**	**42.66**	**270**	P	P	05 36 12.7	-0.3
WRA	2.9nm,0.5s,baz=114,slow=9.0,SNR=3.2 **Warramunga Arr**	**43.88**	**275**	P	P	05 36 22.2	-0.7
FINES	1.1nm,0.5s,baz=115,slow=7.6,SNR=23 **FINESS Array B**	**147.35**	**338**	PKPbc	PKPbc	05 47 57.7	-0.8
	1.1nm,0.6s,baz=48,slow=3.5,SNR=7.7						

IDC 22 05:37:04.7±3.2, 27°.90S×177°.79W, h91km±28km, mb3.5/3, mb1 3.8/4, mb1mx3.4/48, mbtmp3.9/4, Error ellipse: s-maj=42.0km s-min=34.9km az=49.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.36**	**185**	P	Pn	05 37 27.6	-1.1
RAO	454nm,0.3s,baz=60,slow=16,SNR=31			S	Sn	05 37 46.9	+0.2
URZ	2μm,0.3s,baz=89,slow=21,SNR=16 **Urewera**	**11.18**	**201**	P	Pn	05 39 40.3	-1.2
URZ	0.3nm,0.3s,baz=276,slow=11,SNR=2.5			S	Sn	05 41 36.1	-8.3
ASAR	0.7nm,0.3s,baz=148,slow=22,SNR=4.9 **Alice Springs**	**43.49**	**264**	P	P	05 44 59.0	-0.3
WRA	0.3nm,0.5s,baz=94,slow=7.1,SNR=5.7 **Warramunga Arr**	**44.25**	**269**	P	P	05 45 05.2	-0.2
MJAR	1.0nm,0.6s,baz=108,slow=7.7,SNR=13 **Matsushiro Arr**	**76.30**	**325**	P	P	05 48 44.1	+0.5
H10S3	1.7nm,0.6s,baz=166,slow=6.3,SNR=3.7 **ASCENSION HYDR**	**139.89**	**154**	T	T	08 32 53.5	
H10S2	baz=205 **ASCENSION HYDR**	**139.89**	**154**	T	T	08 32 52.5	
H10S1	baz=205 **ASCENSION HYDR**	**139.91**	**154**	T	T	08 32 52.0	
H10N3	baz=205 **ASCENSION HYDR**	**140.97**	**153**	T	T	08 34 11.3	
H10N1	baz=205,slow=75,SNR=4.4 **ASCENSION HYDR**	**140.97**	**153**	T	T	08 34 10.7	
H10N2	baz=205,slow=75,SNR=3.7 **ASCENSION HYDR**	**140.99**	**153**	T	T	08 34 13.4	
AKASG	baz=205,slow=75,SNR=5.7 **Malin Array Be**	**149.39**	**325**	PKPbc	PKPbc	05 56 42.2	-0.6
TORD	0.5nm,0.4s,baz=51,slow=3.8,SNR=3.0 **Torodi Ar. Bea**	**165.32**	**178**	PKPab	PKPab	05 57 56.3	-0.6
	0.4nm,0.8s,baz=197,slow=4.5,SNR=2.4						

NEIC 22 06:01:28.4±0.0, 18°.88N×68°.75W, h170km, MD3.7(RSPR), After RSPR.

RSPR 22 06:01:28.4, 18°.88N×68°.75W, h170km±2km, MD3.7/13, 19C-7D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DR12	**Loma Pena Alta**	**0.60**	**261⇑**	*i*P	Pn	06 01 52.1	-0.5
DR12				eS	Sn	06 02 11.3	+0.1
DR12	**Loma Pena Alta**	**0.60**	**261**	*i*Pu	Pn	06 01 52.1	-0.5
IMPR	**Mona Island, P**	**1.12**	**136**	||*e*P	Pn	06 01 55.2	-0.8
AGPR	**Aguadilla, PR**	**1.61**	**105⇑**	*e*P	Pn	06 02 02.1	+1.6
AGPR	**Aguadilla, PR**	**1.61**	**105**	*e*S	Sn	06 02 26.8	+1.3
AGPR	**Aguadilla, PR**	**1.61**	**105⇑**	*e*P	Pn	06 02 02.1	+1.6
AGPR				*e*S	Sn	06 02 26.8	+1.3
LSP	**Las Mesas**	**1.73**	**114**	||*e*P	Pn	06 02 03.0	+1.1
LSP	**Las Mesas**	**1.73**	**114**	*e*S	Sn	06 02 28.6	+0.9
LSP	**Las Mesas**	**1.73**	**114**	||*e*P	Pn	06 02 03.0	+1.1
LSP				*e*S	Sn	06 02 28.6	+0.9
CRPR	**Cabo Rojo, PR**	**1.79**	**119⇑**	*e*P	Pn	06 02 02.2	-0.2
CRPR	**Cabo Rojo, PR**	**1.79**	**119**	||*e*P	Pn	06 02 02.2	-0.2
CRPR				*e*S	Sn	06 02 28.5	-0.2
AOPR	**Arecibo Observ**	**1.97**	**105**	*e*S	Sn	06 02 32.8	+0.5
AOPR	**Arecibo Observ**	**1.97**	**105**	||*e*P	Pn	06 02 05.1	+0.6
AOPR	**Arecibo Observ**	**1.97**	**105**	||*e*P	Pn	06 02 05.1	+0.6
AOPR				*e*S	Sn	06 02 32.8	+0.5
OBIP	**Obispado Ponce**	**2.20**	**112**	*e*S	Sn	06 02 37.4	+0.4
OBIP	**Obispado Ponce**	**2.20**	**112**	||*e*P	Pn	06 02 08.0	+0.9
OBIP	**Obispado Ponce**	**2.20**	**112**	||*e*P	Pn	06 02 08.0	+0.9
OBIP				*e*S	Sn	06 02 37.4	+0.4
CELP	**Cerrillos**	**2.21**	**111**	||*e*P	Pn	06 02 08.3	+1.1
CELP				*e*S	Sn	06 02 38.2	+1.0
CELP	**Cerrillos**	**2.21**	**111**	||*e*P	Pn	06 02 08.3	+1.1
SJG	**San Juan**	**2.58**	**107**	||*e*P	Pn	06 02 11.9	+0.3
SJG	**San Juan**	**2.58**	**107**	*e*S	Sn	06 02 45.1	+0.1
SJG	**San Juan**	**2.58**	**107**	||*e*P	Pn	06 02 11.9	+0.3
SJG				*e*S	Sn	06 02 45.1	+0.1
CBYP	**Canovanas**	**2.81**	**102**	*e*S	Sn	06 02 50.5	+0.5
HUMP	**Col San Antoni**	**2.85**	**105**	||*e*P	Pn	06 02 14.9	+0.1
HUMP	**Col San Antoni**	**2.85**	**105**	||*e*P	Pn	06 02 15.9	+1.2
HUMP	**Col San Antoni**	**2.85**	**105**	||*e*P	Pn	06 02 14.9	+0.1
MTP	**Monte Pirata**	**3.13**	**104**	||*e*P	Pn	06 02 18.9	+0.7
MTP	**Monte Pirata**	**3.13**	**104**	*e*S	Sn	06 02 58.0	+1.0
MTP	**Monte Pirata**	**3.13**	**104**	||*e*P	Pn	06 02 18.9	+0.7
MTP				*e*S	Sn	06 02 58.0	+1.0
CUPR	**Culebra, Puert**	**3.34**	**99**	||*e*P	Pn	06 02 20.9	+0.1
CUPR	**Culebra, Puert**	**3.34**	**99**	||*e*P	Pn	06 02 20.9	+0.1
STVI	**Saint Thomas**	**3.64**	**98**	||*e*P	Pn	06 02 25.3	+0.7
STVI	**Saint Thomas**	**3.64**	**98**	*e*S	Sn	06 03 08.8	+0.5
STVI	**Saint Thomas**	**3.64**	**98**	||*e*P	Pn	06 02 25.3	+0.7
STVI				*e*S	Sn	06 03 08.8	+0.5
ABV	**Anegada**	**4.19**	**91**	||*e*P	Pn	06 02 33.0	+1.4
ABV	**Anegada**	**4.19**	**91**	*e*S	Sn	06 03 22.6	+1.7
ABVI	**Anegada Island**	**4.19**	**91**	||*e*P	Pn	06 02 33.0	+1.4
ABVI				*e*S	Sn	06 03 22.6	+1.7

IDC 22 06:22:34.6±3.6, 4°.89S×76°.62W, h59km±37km, mb3.4/7, mb1 3.6/11, mb1mx3.4/42, mbtmp3.6/11, ML3.4/4, Error ellipse: s-maj=30.0km s-min=18.7km az=38.0

ISC 22 06:22:29.1±0.6, 4°.92S±0°.09×76°.6W±0°.2, h10km, n36, σ2°.17/32, mb3.6/7, Northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARRY	**Arrayan**	**3.85**	**332**	P	**Pb**	**06 23 37.8**	**+0.4**
ARRY				S	**Sb**	**06 24 24.4**	**+0.1**
RUN5	**Runtun**	**3.92**	**333**	P	**Pn**	**06 23 30.4**	**+0.7**
RUN5				S	**Sb**	**06 24 30.7**	**+4.6**
POND	**Pondoa**	**3.92**	**332**	P	**Pn**	**06 23 29.2**	**-0.6**
MILO	**Milagro-Astudi**	**3.93**	**312**	P	**Pb**	**06 23 39.2**	**+0.8**
PISA	**Pisayambo**	**4.22**	**335**	P	**Pn**	**06 23 33.0**	**-1.0**
PISA				S	**Sb**	**06 24 38.4**	**+3.5**
BTAM	**Cotopaxi Volca**	**4.57**	**337**	P	**Pn**	**06 23 38.1**	**-0.8**
BVC2	**Cotopaxi Volca**	**4.59**	**337**	P	**Pn**	**06 23 38.1**	**-1.1**
VC1	**Cotopaxi 1**	**4.60**	**337**	P	**Pn**	**06 23 40.0**	**+0.7**
BNAS	**Cotopaxi Volca**	**4.61**	**336**	P	**Pn**	**06 23 38.1**	**-1.2**
ANTM	**Antisana-La Mi**	**4.64**	**340**	P	Pg	06 24 04.3	+6.3
ANTS	**Antisana-Sarah**	**4.66**	**341**	P	**Pn**	**06 23 39.5**	**-0.5**
ANTG	**Antisana-Guama**	**4.68**	**340**	P	**Pn**	**06 23 38.5**	**-1.9**
QUEV	**Quevedo**	**4.69**	**325**	P	Pn	06 23 35.9	-4.1
PITA	**Cotopaxi Volc**	**4.69**	**337**	P	Pn	06 23 38.1	-2.4
PITA				S	**Sb**	**06 24 55.3**	**+6.7**
GGPC	**Guagua Pichinc**	**5.10**	**337**	P	Pn	06 23 42.3	-3.9
OTAV	**Otavalo**	**5.44**	**340**	*e*P	**Pb**	**06 24 04.5**	**+0.1**
CRUC	**La Cruz**	**6.45**	**357**	*e*P	Pn	06 24 00.6	-4.0
FLOC	**Florencia**	**6.53**	**9**	*e*P	Pn	06 24 12.5	+7.2
NNA	**Nana**	**7.03**	**182**	P	Pn	06 24 16.7	+4.5
NNA	1.2nm,0.3s,baz=345,slow=12,SNR=3.6			S	**Sn**	**06 25 32.8**	**+0.6**
SJAC	4.7nm,0.3s,baz=216,slow=17,SNR=5.4 **San Juan de Ar**	**8.56**	**18**	*e*P	Pn	06 24 29.8	-3.5
VILC	**Villavicencio,**	**9.44**	**18**	*e*P	Pn	06 24 57.7	+12
LPAZ	**La Paz**	**14.04**	**144**	P	**Pn**	**06 25 52.6**	**+3.9**
PTGA	0.1nm,0.3s,baz=257,slow=6.1,SNR=3.0 **Pitinga**	**17.14**	**76**	P	**Pn**	**06 26 29.5**	**+0.5**
SIV	0.2nm,0.3s,baz=274,slow=22,SNR=2.5 **San Ignacio**	**18.82**	**127**	P	**P**	**06 26 50.7**	**+1.5**
TXAR	0.1nm,0.3s,baz=325,slow=11,SNR=4.3 **Lajitas Array**	**42.83**	**324**	P	**P**	**06 30 26.9**	**-0.7**
ANMO	0.2nm,0.6s,baz=146,slow=9.8,SNR=3.5 **Albuquerque**	**48.59**	**327**	P	**P**	**06 31 12.7**	**-0.5**
NVAR	1.6nm,0.8s,baz=143,slow=11,SNR=7.3 **Mina Array Bea**	**57.88**	**322**	P	**P**	**06 32 20.8**	**-0.8**
YKA	0.5nm,0.8s,baz=113,slow=8.9,SNR=3.1 **Yellowknife Ar**	**73.19**	**343**	P	**P**	**06 33 57.7**	**-2.2**
KOWA	0.3nm,0.5s,baz=140,slow=6.3,SNR=11 **Kowa**	**74.50**	**74**	P	**P**	**06 34 07.4**	**-1.1**
TORD	1.2nm,0.4s,baz=272,slow=5.5,SNR=3.1 **Torodi Ar. Bea**	**79.79**	**76**	P	**P**	**06 34 36.8**	**-1.5**
ILAR	0.3nm,0.4s,baz=283,slow=5.1,SNR=6.8 **Eielson Array**	**86.14**	**336**	P	**P**	**06 35 09.2**	**-1.0**
ZALV	0.3nm,0.7s,baz=123,slow=3.3,SNR=3.9 **Zalesovo Beam**	**128.83**	**14**	PKP	**PKPdf**	**06 41 36.2**	**-0.7**
KURBB	0.6nm,0.3s,baz=336,slow=3.2,SNR=3.2 **Kurchatov Arra**	**129.91**	**20**	PKP	**PKPdf**	**06 41 37.8**	**-1.2**
MKAR	0.4nm,0.7s,baz=323,slow=2.7,SNR=4.5 **Makanchi Array**	**134.48**	**20**	PKP	**PKPdf**	**06 41 44.9**	**-2.9**
ASAR	0.3nm,0.5s,baz=140,slow=8.8,SNR=4.0 **Alice Springs**	**138.84**	**225**	PKP	**PKPdf**	**06 41 53.8**	**-2.9**
WRA	0.3nm,0.5s,baz=98,slow=2.8,SNR=3.1 **Warramunga Arr**	**140.80**	**230**	PKP	**PKPdf**	**06 41 59.2**	**-1.1**
	0.4nm,0.9s,baz=132,slow=2.0,SNR=3.5						

IDC 22 06:42:08.2±2.7, 32°.93S×178°.12W, h0km, mb4.1/3, mb1 4.2/4, mb1mx3.7/49, mbtmp4.1/4, ML3.8/1, Error ellipse: s-maj=62.2km s-min=43.1km az=130.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.58**	**215**	Pn	Pn	06 43 45.8	-0.5
URZ	1.9nm,0.3s,baz=266,slow=4.4,SNR=13			Sn	Sn	06 44 57.7	-4.3
CTA	**Charters Tower**	**34.18**	**283**	P	P	06 48 56.4	+1.0
ASAR	6.6nm,1.1s,baz=114,slow=11,SNR=3.7 **Alice Springs**	**42.93**	**270**	P	P	06 50 08.6	-0.5
WRA	0.8nm,0.6s,baz=106,slow=7.8,SNR=8.0 **Warramunga Arr**	**44.15**	**275**	P	P	06 50 18.2	-0.6
FINES	1.3nm,0.5s,baz=114,slow=7.7,SNR=26 **FINESS Array B**	**147.47**	**339**	PKPbc	PKPbc	07 01 52.7	-0.7
	1.5nm,0.5s,baz=29,slow=4.4,SNR=17						

ISCJB 22 06:51:00.5±1.2, 33°.56N±0°.07×141°.9E±0°.2, h35km, mb3.8/4, Error ellipse: s-maj=24.9km s-min=5.4km az=157.6
JMA 22 06:51:00.0±0.8, 33°.63N×141°.97E, h79km, M3.1
IDC 22 06:51:03.9±2.0, 32°.99N×140°.18E, h0km, mb3.7/4, mb1 3.8/6, mb1mx3.5/68, mbtmp3.7/6, ML3.6/2, Error ellipse: s-maj=74.6km s-min=17.3km az=68.0

ISC 22 06:51:02.8±1.5, 33°.59N±0°.07×141°.9E±0°.2, h35km, n11, σ0°.85/15, mb3.9/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**1.31**	**324**	P	**Pn**	**06 51 23.1**	**-1.0**
BSO1				*e*S	**Sn**	**06 51 40.5**	**+0.5**
BSO3	**Boso 3**	**1.67**	**317**	P	**Pn**	**06 51 27.9**	**-1.4**
JHJ2	**Mitsune**	**1.81**	**255**	P	**Pn**	**06 51 30.9**	**-0.6**
BSO4	**Boso 4**	**1.90**	**318**	P	**Pn**	**06 51 32.2**	**-0.5**
BSO4				*e*S	**Sn**	**06 51 56.1**	**+0.7**
JAG	**Ashikaga**	**3.47**	**325**	P	**Pn**	**06 51 53.7**	**-0.6**
MJAR	**Matsushiro Arr**	**4.22**	**315**	Pn	**Pn**	**06 52 03.9**	**-0.8**
MJAR	1.2nm,0.3s,baz=155,slow=13,SNR=5.0			Sn	**Sn**	**06 52 52.6**	**-0.2**
JCJ	**Chichijima**	**6.48**	**178**	Pn	**Pn**	**06 52 34.9**	**-0.8**
JCJ	5.2nm,0.3s,baz=300,slow=20,SNR=2.5			Sn	**Sn**	**06 53 48.0**	**-0.3**
MKAR	32nm,0.3s,baz=314,slow=21,SNR=8.7 **Makanchi Array**	**46.35**	**305**	P	**P**	**06 59 25.6**	**+0.2**
KURBB	1.1nm,0.7s,baz=90,slow=9.2,SNR=11 **Kurchatov Arra**	**48.48**	**310**	P	**P**	**06 59 42.0**	**+0.1**
WRA	1.6nm,0.8s,baz=85,slow=8.3,SNR=14 **Warramunga Arr**	**53.72**	**189**	P	**P**	**07 00 21.4**	**0.0**
ASAR	0.9nm,0.8s,baz=6.0,slow=7.7,SNR=11 **Alice Springs**	**57.45**	**189**	P	**P**	**07 00 49.8**	**+1.6**
	0.2nm,0.6s,baz=8.2,slow=8.4,SNR=3.8						

CSEM 22 06:56:57.7, 38°.68N×43°.19E, h13km, ML2.4
ATA 22 06:56:57.9±0.9, 38°.64N×42°.95E, h6km±26km, ML3.0, MW2.8
ISK 22 06:56:57.7, 38°.68N×43°.19E, h13km±6km, ML2.4/4
ISCJB 22 06:56:58.5±0.8, 38°.63N±0°.04×43°.18E±0°.07, h21km±10km, Error ellipse: s-maj=10.4km s-min=6.3km az=25.3

ISC 22 06:56:58.1±1.0, 38°.67N±0°.03×43°.18E±0°.04, h17km±10km, n12, σ0°.80/21, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.18**	**114**	PG	**Pb**	**06 57 03.1**	**+0.1**
VANB				SG	**Sb**	**06 57 07.4**	**+1.2**
VANB	**Van**	**0.18**	**114**	*e*Pg	**Pb**	**06 57 03.1**	**+0.1**
VANB				*e*Sg	**Sb**	**06 57 07.4**	**+1.2**
GEVA	**Gevas**	**0.37**	**195**	*i*P	**Pg**	**06 57 05.1**	**-0.6**
GEVA				*e*S	**Sg**	**06 57 11.1**	**+0.1**
GEVA				IAML		06 57 15.1	
	comp=Z,126nm,0.4s						
CLDR	**Caldiran**	**0.74**	**50**	PG	**Pg**	**06 57 12.0**	**-0.7**
CLDR				SG	**Sb**	**06 57 23.3**	**+0.6**
CLDR	**Caldiran**	**0.74**	**50**	*e*Pg	**Pg**	**06 57 12.0**	**-0.7**
CLDR				*e*Sg	**Sb**	**06 57 23.3**	**+0.6**
TUTA	**Tutak**	**0.79**	**339**	*e*P	**Pb**	**06 57 13.6**	**+0.1**
TUTA				IAML		06 57 22.7	
	comp=Z,35nm,0.5s						
TUTA				*e*S	**Sb**	**06 57 24.6**	**+0.7**
GURO	**Guroymak-BITLI**	**0.91**	**263**	PG	**Pb**	**06 57 15.8**	**+0.4**
GURO	**Guroymak-BITLI**	**0.91**	**263**	*e*Pg	**Pb**	**06 57 15.8**	**+0.4**
AGRB	**Hanur-Agry**	**0.92**	**351**	PG	**Pb**	**06 57 15.6**	**-0.1**
AGRB				SG	**Sn**	**06 57 28.6**	**-0.7**
AGRB	**Hanur-Agry**	**0.92**	**351**	*e*Pg	**Pb**	**06 57 15.6**	**-0.1**
AGRB				*e*Sg	**Sn**	**06 57 28.6**	**-0.7**
EATA	**Eleskirt**	**1.31**	**336**	*e*P	**Pg**	**06 57 22.9**	**-0.5**
EATA				*e*S	**Sg**	**06 57 42.4**	**+1.9**
BNGL	**BINGOL**	**1.61**	**281**	*e*P	**Pn**	**06 57 25.4**	**-0.6**

SFS 22 07:05:29.0, 36°.62N×11°.90W, h0km, ML4.3
MDD 22 07:05:29.6±1.5, 36°.64N×11°.92W, h0km, mb4.3/12, Error ellipse: s-maj=13.6km s-min=12.0km az=55.0, PRXIMO
IGIL 22 07:05:30.4, 36°.63N×11°.92W, h1km, ML2.8
CNRM 22 07:05:30.2, 35°.97N×11°.61W, h30km, ML3.3
INMG 22 07:05:30.9±1.3, 36°.49N×12°.14W, h31km, ML2.8, Error ellipse: s-maj=6.3km s-min=4.7km az=88.0
CSEM 22 07:05:32.9±0.3, 36°.72N×11°.86W, h30km, mb4.3, Error ellipse: s-maj=4.9km s-min=4.5km az=56.0

ISC 22 07:05:25.3±3.2, 36°.6N±0°.1×12°.1W±0°.1, h10km, n109, σ2°.24/196, 1D, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**2.66**	**78**	*e*Pn	**Pn**	**07 06 10.3**	**+2.1**
PFVI				*e*Sn	**Sn**	**07 06 39.9**	**-0.6**
PFVI				A	A	07 06 43.4	
	20nm,0.5s						
PFVI	**Vila Bisbo**	**2.66**	**78**	P	**Pn**	**07 06 10.4**	**+2.1**
	8.0nm,0.1s,SNR=12						
PFVI				S	**Sn**	**07 06 40.0**	**-0.6**
	19nm,0.1s,SNR=5.6						
PFVI	**Vila Bisbo**	**2.66**	**78**	P	**Pn**	**07 06 10.4**	**+2.1**
	8.0nm,0.1s,SNR=12						
PFVI				S	**Sn**	**07 06 40.0**	**-0.6**
	19nm,0.1s,SNR=5.6						
MORF	**Marmelete**	**2.83**	**75**	*e*P	**Pn**	**07 06 13.0**	**+2.4**
MORF	**Marmelete**	**2.83**	**75**	*e*Pn	**Pn**	**07 06 13.0**	**+2.4**
MORF				A	A	07 06 47.5	
	18nm,0.3s						
MORF	**Marmelete**	**2.83**	**75**	P	**Pn**	**07 06 13.0**	**+2.4**
MORF	**Marmelete**	**2.83**	**75**	P	**Pn**	**07 06 13.0**	**+2.4**
PTEO	**Sao Teotonio**	**2.84**	**70**	*e*Pn	**Pb**	**07 06 13.8**	**-2.3**
PTEO				*e*Sn	**Sn**	**07 06 45.8**	**+0.9**
PTEO				A	A	07 06 48.8	
	14nm,0.6s						
PTEO	**Sao Teotonio**	**2.84**	**70**	Pn	**Pb**	**07 06 13.8**	**-2.3**
PTEO				S	**Sn**	**07 06 45.8**	**+0.9**
	6.9nm,0.6s						
PTEO	**Sao Teotonio**	**2.84**	**70**	*e*Pn	**Pb**	**07 06 13.8**	**-2.3**
PTEO				S	**Sn**	**07 06 45.8**	**+0.9**
	6.9nm,0.6s						
PMST	**Lisbon--Monsan**	**3.12**	**47**	*e*Sn	**Sn**	**07 06 53.6**	**+1.8**
PMST				A	A	07 06 56.0	
	47nm,0.2s						
PMST	**Lisbon--Monsan**	**3.12**	**47**	*e*Sn	**Sn**	**07 06 53.6**	**+1.8**
PNCL	**Nicolau / Gran**	**3.20**	**61**	*e*Pn	**Pn**	**07 06 18.4**	**+2.8**
PNCL				*e*Sn	**Sn**	**07 06 54.6**	**+0.9**
PNCL				A	A	07 06 57.2	
	9.8nm,0.2s						
PNCL	**Nicolau / Gran**	**3.20**	**61**	*e*Pn	**Pn**	**07 06 18.4**	**+2.8**
PNCL				*e*Sn	**Sn**	**07 06 54.6**	**+0.9**
PMAFR	**Mafra**	**3.21**	**43**	*e*Pn	**Pn**	**07 06 19.1**

ALMR	**Almeirim**	**3.75**	**47**	P	**Pn**	**07 06 26.1**	**+2.9**
ALMR				S	**Sn**	**07 07 07.2**	**-0.2**
	comp=N,29nm,0.3s						
ALMR	**Almeirim**	**3.75**	**47**	P	**Pn**	**07 06 26.1**	**+2.9**
ALMR	**Almeirim**	**3.75**	**47**	*e*Pn	**Pn**	**07 06 27.1**	**+3.9**
ALMR				S	**Sn**	**07 07 07.2**	**-0.2**
	comp=N,29nm,0.3s						
ALMR				*e*Sn	**Sn**	**07 07 08.7**	**+1.3**
EVO	**Evora**	**3.75**	**58**	*e*Pn	**Pn**	**07 06 25.9**	**+2.7**
EVO				*e*Sn	**Sn**	**07 07 07.6**	**+0.2**
EVO				A	A	07 07 12.3	
	comp=N,13nm,0.1s						
EVO	**Evora**	**3.75**	**58**	P	**Pn**	**07 06 26.5**	**+3.3**
EVO				S	**Sn**	**07 07 07.0**	**-0.4**
EVO	**Evora**	**3.75**	**58**	*e*Pn	**Pn**	**07 06 25.9**	**+2.7**
EVO	**Evora**	**3.75**	**58**	P	**Pn**	**07 06 26.5**	**+3.3**
EVO				S	**Sn**	**07 07 07.0**	**-0.4**
EGRO	**El Granado**	**3.79**	**75**	P	**Pn**	**07 06 26.2**	**+2.5**
	comp=N,1.5nm,0.1s,SNR=12						
EGRO				S	**Sn**	**07 07 07.8**	**-0.6**
	comp=N,5.7nm,0.2s,SNR=5.2						
EGRO	**El Granado**	**3.79**	**75**	P	**Pn**	**07 06 26.2**	**+2.5**
	comp=N,1.5nm,0.1s,SNR=12						
EGRO				S	**Sn**	**07 07 07.8**	**-0.6**
	comp=N,5.7nm,0.2s,SNR=5.2						
PMTG	**Montargil**	**3.91**	**50**	*e*Pn	**Pn**	**07 06 28.0**	**+2.7**
PMTG				*e*Sn	**Sn**	**07 07 11.3**	**0.0**
PMTG				A	A	07 07 13.2	
	comp=N,7.4nm,0.1s						
PMTG	**Montargil**	**3.91**	**50**	*e*Pn	**Pn**	**07 06 28.0**	**+2.7**
PMTG				*e*Sn	**Sn**	**07 07 11.3**	**0.0**
PTOM	**Tomar**	**4.16**	**43**	*e*Sn	**Sn**	**07 07 18.8**	**+1.3**
PTOM				A	A	07 07 19.5	
	comp=N,25nm,0.1s						
PTOM	**Tomar**	**4.16**	**43**	S	**Sn**	**07 07 18.8**	**+1.3**
	comp=N,12nm,0.1s						
PTOM	**Tomar**	**4.16**	**43**	S	**Sn**	**07 07 18.8**	**+1.3**
	comp=N,12nm,0.1s						
PESTR	**Estremoz**	**4.21**	**57**	*e*Pn	**Pn**	**07 06 32.5**	**+3.0**
PESTR				*e*Sn	**Sn**	**07 07 18.6**	**0.0**
PESTR				A	A	07 07 24.4	
	comp=N,5.1nm,0.3s						
PESTR	**Estremoz**	**4.21**	**57**	*e*Pn	**Pn**	**07 06 32.5**	**+3.0**
PESTR	**Estremoz**	**4.21**	**57**	P	**Pn**	**07 06 32.9**	**+3.4**
PESTR				*e*Sn	**Sn**	**07 07 18.6**	**0.0**
PBAR	**Barrancos**	**4.30**	**68**	*e*Pn	**Pn**	**07 06 33.9**	**+3.1**
PBAR				*e*Sn	**Sn**	**07 07 21.2**	**+0.1**
PBAR				A	A	07 07 26.7	
	comp=N,6.1nm,0.2s						
PBAR	**Barrancos**	**4.30**	**68**	P	**Pn**	**07 06 33.9**	**+3.1**
PBAR				S	**Sn**	**07 07 21.2**	**+0.1**
	comp=N,6.1nm,0.2s						
PBAR	**Barrancos**	**4.30**	**68**	P	**Pn**	**07 06 33.9**	**+3.1**
PBAR				S	**Sn**	**07 07 21.2**	**+0.1**
	comp=N,6.1nm,0.2s						
PCAS	**Casmilo, Conde**	**4.43**	**38**	*e*Pn	**Pn**	**07 06 35.9**	**+3.3**
PCAS				*e*Sn	**Sn**	**07 07 24.2**	**0.0**
PCAS				A	A	07 07 32.1	
	comp=N,9.5nm,0.3s						
PCAS	**Casmilo, Conde**	**4.43**	**38**	*e*Pn	**Pn**	**07 06 35.9**	**+3.3**
PCAS				*e*Sn	**Sn**	**07 07 24.2**	**0.0**
EMIN	**Mina Concepcio**	**4.47**	**74**	⇓P	**Pn**	**07 06 35.5**	**+2.4**
	comp=N,3.0nm,0.1s,SNR=18						
EMIN				S	**Sn**	**07 07 23.4**	**-1.7**
	comp=N,2.1nm,0.2s,SNR=6.7						
EMIN	**Mina Concepcio**	**4.47**	**74**	P	**Pn**	**07 06 35.5**	**+2.4**
	comp=N,3.0nm,0.1s,SNR=18						
EMIN				S	**Sn**	**07 07 23.4**	**-1.7**
	comp=N,2.1nm,0.2s,SNR=6.7						
EBAD	**Badajoz**	**4.55**	**61**	P	**Pn**	**07 06 37.1**	**+2.9**
	comp=N,3.1nm,0.1s,SNR=12						
EBAD				S	**Sn**	**07 07 27.3**	**+0.2**
	comp=N,6.0nm,0.2s,SNR=7.3						
EBAD	**Badajoz**	**4.55**	**61**	P	**Pn**	**07 06 37.1**	**+2.9**
	comp=N,3.1nm,0.1s,SNR=12						
EBAD				S	**Sn**	**07 07 27.3**	**+0.2**
	comp=N,6.0nm,0.2s,SNR=7.3						
PMRV	**Marv??o**	**4.64**	**52**	*e*Pn	**Pn**	**07 06 38.0**	**+2.5**
PMRV				*e*Sn	**Sn**	**07 07 28.5**	**-0.9**
PMRV				A	A	07 07 31.0	
	comp=N,14nm,0.3s						
PMRV	**Marv??o**	**4.64**	**52**	P	**Pn**	**07 06 38.0**	**+2.5**
PMRV				S	**Sn**	**07 07 28.5**	**-0.9**
	comp=N,14nm,0.3s						
PMRV	**Marv??o**	**4.64**	**52**	P	**Pn**	**07 06 38.0**	**+2.5**
PMRV				S	**Sn**	**07 07 28.5**	**-0.9**
	comp=N,14nm,0.3s						
PCBR	**Castelo Branco**	**4.84**	**47**	*e*Pn	**Pn**	**07 06 41.8**	**+3.6**
PCBR				*e*Sn	**Sn**	**07 07 33.9**	**-0.4**
PCBR				A	A	07 07 35.3	
	comp=N,5.2nm,0.3s						
PCBR	**Castelo Branco**	**4.84**	**47**	P	**Pn**	**07 06 41.8**	**+3.6**
PCBR				S	**Sn**	**07 07 33.9**	**-0.4**
	comp=N,2.6nm,0.3s						
PCBR	**Castelo Branco**	**4.84**	**47**	P	**Pn**	**07 06 41.8**	**+3.6**
PCBR				S	**Sn**	**07 07 33.9**	**-0.4**
	comp=N,2.6nm,0.3s						
MTE	**Manteigas**	**5.18**	**42**	*e*Pn	**Pn**	**07 06 46.1**	**+3.2**
MTE				*e*Sn	**Sn**	**07 07 42.5**	**-0.3**
MTE				A	A	07 07 48.0	
	comp=N,10nm,0.5s						
MTE	**Manteigas**	**5.18**	**42**	P	**Pn**	**07 06 46.1**	**+3.2**
MTE				S	**Sn**	**07 07 42.5**	**-0.3**
	comp=N,5.1nm,0.5s						
MTE	**Manteigas**	**5.18**	**42**	P	**Pn**	**07 06 46.1**	**+3.2**
MTE				S	**Sn**	**07 07 42.5**	**-0.3**
	comp=N,5.1nm,0.5s						
PVIS	**Viseu**	**5.23**	**38**	*e*Pn	**Pn**	**07 06 46.6**	**+3.0**
PVIS				*e*Sn	**Sn**	**07 07 43.7**	**-0.3**
PVIS				A	A	07 07 46.1	
	comp=N,17nm,0.5s						
PVIS	**Viseu**	**5.23**	**38**	P	**Pn**	**07 06 46.6**	**+3.0**
PVIS				S	**Sn**	**07 07 43.7**	**-0.3**
	comp=N,8.4nm,0.5s						
PVIS	**Viseu**	**5.23**	**38**	P	**Pn**	**07 06 46.6**	**+3.0**
PVIS				S	**Sn**	**07 07 43.7**	**-0.3**
	comp=N,8.4nm,0.5s						
ECAB	**El Cabril**	**5.50**	**73**	P	**Pn**	**07 06 49.7**	**+2.3**
	comp=N,2.0nm,0.1s,SNR=28						
ECAB				S	**Sn**	**07 07 48.9**	**-1.8**
	comp=N,5.6nm,0.3s						
ECAB	**El Cabril**	**5.50**	**73**	P	**Pn**	**07 06 49.7**	**+2.3**
	comp=N,2.0nm,0.1s,SNR=28						
ECAB				S	**Sn**	**07 07 48.9**	**-1.8**
	comp=N,5.6nm,0.3s						
PVRL	**Vila Real**	**5.75**	**35**	*e*Sn	**Sn**	**07 07 56.0**	**-0.9**
PVRL	**Vila Real**	**5.75**	**35**	S	**Sn**	**07 07 56.0**	**-0.9**
PVRL	**Vila Real**	**5.75**	**35**	S	**Sn**	**07 07 56.0**	**-0.9**
POLO	**Lamas de Olo**	**5.80**	**34**	*e*Sn	**Sn**	**07 07 56.6**	**-1.4**
POLO				A	A	07 07 58.7	
	comp=N,3.8nm,0.2s						
POLO	**Lamas de Olo**	**5.80**	**34**	*e*Sn	**Sn**	**07 07 56.6**	**-1.4**
EPLA	**Plasencia**	**5.83**	**52**	P	**Pn**	**07 06 54.8**	**+2.9**
	comp=N,1.8nm,0.1s,SNR=9.8						
EPLA				S	**Sn**	**07 07 56.6**	**-2.2**
	comp=N,1.7nm,0.1s,SNR=8.4						
EPLA	**Plasencia**	**5.83**	**52**	P	**Pn**	**07 06 54.8**	**+2.9**
	comp=N,1.8nm,0.1s,SNR=9.8						
EPLA				S	**Sn**	**07 07 56.6**	**-2.2**
	comp=N,1.7nm,0.1s,SNR=8.4						
PCAB	**Cabril**	**5.97**	**31**	*e*Sn	**Sn**	**07 08 01.0**	**-1.2**
PCAB				A	A	07 08 04.4	
	comp=N,10.0nm,0.3s						
PCAB	**Cabril**	**5.97**	**31**	S	**Sn**	**07 08 01.0**	**-1.2**
	comp=N,5.0nm,0.3s						
PCAB	**Cabril**	**5.97**	**31**	S	**Sn**	**07 08 01.0**	**-1.2**
	comp=N,5.0nm,0.3s						
MVO	**Moncorvo**	**6.00**	**40**	*e*Pn	**Pn**	**07 06 57.0**	**+2.8**
MVO				*e*Sn	**Sn**	**07 08 01.6**	**-1.4**
MVO				A	A	07 08 03.9	
	comp=N,12nm,0.1s						
MVO	**Moncorvo**	**6.00**	**40**	P	**Pn**	**07 06 57.0**	**+2.8**
	comp=N,1.4nm,0.1s,SNR=6.2						
MVO				S	**Sn**	**07 08 01.9**	**-1.1**
	comp=N,7.8nm,0.1s,SNR=15						
MVO	**Moncorvo**	**6.00**	**40**	P	**Pn**	**07 06 57.0**	**+2.8**
	comp=N,1.4nm,0.1s,SNR=6.2						
MVO				*e*Sn	**Sn**	**07 08 01.6**	**-1.4**
MVO				S	**Sn**	**07 08 01.9**	**-1.1**
	comp=N,7.8nm,0.1s,SNR=15						
ELOB	**Lobios**	**6.09**	**30**	P	**Pn**	**07 06 59.2**	**+3.8**
	comp=N,2.3nm,0.2s,SNR=5.8						
ELOB				S	**Sn**	**07 08 04.1**	**-1.1**
	comp=N,6.3nm,0.1s,SNR=9.6						
ELOB	**Lobios**	**6.09**	**30**	P	**Pn**	**07 06 59.2**	**+3.8**
	comp=N,2.3nm,0.2s,SNR=5.8						
ELOB				S	**Sn**	**07 08 04.1**	**-1.1**
	comp=N,6.3nm,0.1s,SNR=9.6						
PGAV	**Gavieira, Arco**	**6.09**	**28**	*e*Pn	**Pn**	**07 06 59.3**	**+3.8**
PGAV				*e*Sn	**Sn**	**07 08 04.4**	**-0.9**
PGAV				A	A	07 08 10.4	
	comp=N,7.3nm,0.4s						
PGAV	**Gavieira, Arco**	**6.09**	**28**	*e*Pn	**Pn**	**07 06 59.3**	**+3.8**
PGAV				*e*Sn	**Sn**	**07 08 04.4**	**-0.9**
EADA	**Adamuz**	**6.17**	**73**	P	**Pn**	**07 06 59.0**	**+2.5**
	comp=N,4.9nm,0.2s,SNR=19						
EADA				S	**Sn**	**07 08 05.6**	**-1.6**
	comp=N,1.6nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**6.17**	**73**	P	**Pn**	**07 06 59.0**	**+2.5**
	comp=N,4.9nm,0.2s,SNR=19						
EADA				S	**Sn**	**07 08 05.6**	**-1.6**
	comp=N,1.6nm,0.2s,SNR=7.9						
PBRG	**Braganca**	**6.62**	**37**	*e*Sn	**Sn**	**07 08 17.1**	**-1.2**
PBRG				A	A	07 08 20.9	
	comp=N,5.0nm,0.1s						
PBRG	**Braganca**	**6.62**	**37**	S	**Sn**	**07 08 17.1**	**-1.2**
	comp=N,2.5nm,0.1s						
PBRG	**Braganca**	**6.62**	**37**	S	**Sn**	**07 08 17.1**	**-1.2**
	comp=N,2.5nm,0.1s						
EMAZ	**Mazaricos**	**6.75**	**20**	P	**Pn**	**07 07 07.5**	**+3.1**
	comp=N,0.5nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**07 08 17.6**	**-3.7**
	comp=N,14nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**6.75**	**20**	P	**Pn**	**07 07 07.5**	**+3.1**
	comp=N,0.5nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**07 08 17.6**	**-3.7**
	comp=N,14nm,0.1s,SNR=7.9						
PAB	**San Pablo**	**6.76**	**62**	P	**Pn**	**07 07 07.1**	**+2.5**
	comp=N,0.5nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**07 08 20.1**	**-1.6**
	comp=N,0.8nm,0.2s,SNR=7.9						
PAB	**San Pablo**	**6.76**	**62**	P	**Pn**	**07 07 07.1**	**+2.5**
	comp=N,0.5nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**07 08 20.1**	**-1.6**
	comp=N,0.8nm,0.2s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.89**	**25**	P	**Pn**	**07 07 09.5**	**+3.1**
	comp=N,1.9nm,0.1s,SNR=7.9						
EAGO				S	**Sn**	**07 08 21.3**	**-3.5**
	comp=N,3.6nm,0.1s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.89**	**25**	P	**Pn**	**07 07 09.5**	**+3.1**
	comp=N,1.9nm,0.1s,SNR=7.9						
EAGO				S	**Sn**	**07 08 21.3**	**-3.5**
	comp=N,3.6nm,0.1s,SNR=7.9						
EPON	**Pontenova**	**7.69**	**28**	P	**Pn**	**07 07 20.4**	**+3.1**
	comp=N,1.1nm,0.1s,SNR=7.9						
EPON				S	**Sn**	**07 08 41.3**	**-3.0**
	comp=N,1.5nm,0.2s,SNR=4.5						
EPON	**Pontenova**	**7.69**	**28**	P	**Pn**	**07 07 20.4**	**+3.1**
	comp=N,1.1nm,0.1s,SNR=7.9						
EPON				S	**Sn**	**07 08 41.3**	**-3.0**
	comp=N,1.5nm,0.2s,SNR=4.5						
EARI	**Arriondas**	**8.50**	**36**	P	**Pn**	**07 07 31.8**	**+3.4**
	comp=N,0.1nm,0.1s,SNR=7.9						
EARI				S	**Sn**	**07 09 02.5**	**-1.9**
	comp=N,0.3nm,0.2s,SNR=5.7						
EARI	**Arriondas**	**8.50**	**36**	P	**Pn**	**07 07 31.8**	**+3.4**
	comp=N,0.1nm,0.1s,SNR=7.9						
EARI				S	**Sn**	**07 09 02.5**	**-1.9**
	comp=N,0.3nm,0.2s,SNR=5.7						

MEX 22 07:30:26.0±0.4, 15.˚93N×97.˚70W, h16km±999km, MD3.8,
Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**1.47**	**39**	*e*P	Pn	07 30 48.5	-3.5
VHO				*e*S	Sn	07 31 05.0	-5.0
TLIG	**Tlapa**	**1.83**	**333**	*e*P	Pn	07 30 53.2	-3.6
TLIG				*e*S	Sn	07 31 15.1	-4.6
CAIG	**El Cayaco**	**2.71**	**295**	*e*P	Pg	07 31 29.6	+12

BJI ***22*** *07:50:13.0, 56.˚80N×153.˚00W, h15km, mb4.9/41, mB5.0/24, Ms5.2/11, Ms7 5.0/10*
ISCJB ***22*** *07:50:14.1±0.7, 56.˚91N±0.˚02×152.˚93W±0.˚02, h7km±4km, mb4.7/315, MS4.3/25, Error ellipse: s-maj=3.1km s-min=1.9km az=27.3*
MOS ***22*** *07:50:16.7±0.8, 57.˚01N×153.˚14W, h22km, mb5.2/81, Error ellipse: s-maj=8.4km s-min=3.8km az=90.3*
NEIC ***22*** *07:50:17.8±0.0, 56.˚77N×152.˚95W, h15km, mb4.6/221, MW4.8, ML4.7(AEIC), Moment Tensor Solution. s11 Moment tensor: Scale 10^{16}Nm; M_{rr}=0.12; $M_{\theta\theta}$0.32; $M_{\phi\phi}$-0.19; $M_{r\theta}$1.36; $M_{\theta\phi}$0.17; $M_{\phi r}$1.04; Best double couple: M_0=1.70000×10^{16} NP1:ϕ_s115.00000°, δ8.00000°, λ-27.00000°. NP2:ϕ_s232.00000°, δ87.00000°, λ-97.00000°. Principal axes: T 1.8200, Plg41.0000°, Azm328.0000°; N -0.1700, Plg7.0000°, Azm232.0000°; P -1.6600, Plg48.0000°, Azm135.0000°; After AEIC.*
IDC ***22*** *07:50:18.6±2.2, 56.˚97N×153.˚21W, h24km±12km, mb4.4/33, mb1 4.5/36, mb1mx4.3/82, mbtmp4.5/36, ML4.0/3, MS4.2/22, Ms1 4.2/22, ms1mx3.9/73 Error ellipse: s-maj=14.5km s-min=9.0km az=23.0*

ISC 22 07:50:17.4±0.5, 56.˚94N±0.˚04×152.˚93W±0.˚03, h17km±2km, h18km:pP-P,n944,σ1§31/951, mb4.7/315, MS4.2/25, 15C-2D, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**0.34**	**326**	P	**Pn**	**07 50 26.8**	**-0.7**
OHAK				S	**Sn**	**07 50 33.3**	**-0.7**
KDAK	**Kodiak Island**	**0.86**	**12**	Pg	**Pn**	**07 50 35.6**	**+0.9**
	3μm,0.3s,baz=205,slow=7.3						
KDAK				Lg	Lg	07 50 48.2	
	2μm,0.3s,baz=120,slow=20,SNR=37						
KDAK				LR	LR	07 51 01.2	
	comp=Z,4μm,18.0s,baz=243,slow=48						
KDAK	**Kodiak Island**	**0.86**	**12**	P	**Pn**	**07 50 35.6**	**+0.9**
KDAK				S	**Sn**	**07 50 49.5**	**+2.7**
KDAK	**Kodiak Island**	**0.86**	**12**	*i* P	**Pg**	**07 50 34.3**	**+0.1**
CAHL	**Cahill**	**1.70**	**312**	P	**Pn**	**07 50 46.3**	**+0.1**
KAKN	**Katmai Knife C**	**1.78**	**321**	P	**Pn**	**07 50 47.8**	**+0.5**
KAKN				S	**Sb**	**07 51 10.8**	**-0.7**
KAPH	**Katmai Pasha**	**1.82**	**336**	P	**Pb**	**07 50 49.2**	**-1.1**
KABU	**Katmai Buttres**	**1.84**	**317**	P	**Pn**	**07 50 48.9**	**+0.7**
KABU				S	**Sb**	**07 51 14.6**	**+1.3**
ANCK	**Angle Creek**	**1.87**	**313**	P	**Pn**	**07 50 49.4**	**+0.9**
PLK3	**Peulik 3**	**1.96**	**294**	P	**Pn**	**07 50 49.7**	**-0.1**
PLK3				S	**Sn**	**07 51 13.6**	**-0.3**
FONW	**Fourpeaked Sta**	**1.97**	**345**	P	**Pb**	**07 50 51.4**	**-1.3**
PLK2	**Peulik 2**	**2.02**	**296**	P	**Pn**	**07 50 50.6**	**+0.1**
CDD	**Cape Douglas**	**2.03**	**350**	P	**Pb**	**07 50 52.5**	**-1.2**
KAHC	**Katmai Hardscr**	**2.04**	**328**	P	**Pn**	**07 50 51.9**	**+0.9**
KELA	**Mount Kelaz**	**2.13**	**316**	P	**Pn**	**07 50 52.6**	**+0.4**
PLK1	**Peulik 1**	**2.17**	**295**	P	**Pn**	**07 50 52.6**	**0.0**
MCNL	**McNeil River**	**2.37**	**342**	P	**Pn**	**07 50 57.1**	**+1.7**
PLK5	**Peulik 5**	**2.38**	**298**	P	**Pn**	**07 50 55.7**	**+0.2**
AUI	**Augustine Isla**	**2.42**	**354**	P	**Pn**	**07 50 58.0**	**+2.0**
AUJK	**Augustine Jueg**	**2.43**	**354**	P	**Pn**	**07 50 58.3**	**+2.1**
AUW	**Augustine West**	**2.45**	**354**	P	**Pn**	**07 50 58.7**	**+2.1**
AUNW	**Augustine NWes**	**2.46**	**353**	P	**Pn**	**07 50 58.8**	**+2.1**
CNPM	**China Poot**	**2.74**	**18**	P	**Pn**	**07 51 01.9**	**+1.4**
CNPM				S	**Sn**	**07 51 34.9**	**+1.7**
HOM	**Homer**	**2.81**	**13**	P	**Pn**	**07 51 03.3**	**+1.9**
HOM				S	**Sn**	**07 51 37.2**	**+2.4**
ANNE	**Aniakchak Nort**	**2.81**	**272**	P	**Pn**	**07 51 00.4**	**-1.1**
ANNW	**Aniakchak Nort**	**2.89**	**273**	P	**Pn**	**07 51 02.2**	**-0.5**
AZAC	**Aniakchak**	**2.91**	**271**	P	**Pn**	**07 51 02.2**	**-0.6**
BRLK	**Bradley Lake**	**3.03**	**20**	P	**Pn**	**07 51 05.1**	**+0.6**
CHGN	**Chignik**	**3.10**	**260**	P	**Pn**	**07 51 03.5**	**-1.8**
ILIM	**Iliamna**	**3.15**	**360**	P	**Pn**	**07 51 08.0**	**+1.8**
VNHG	**Veniaminof 1**	**3.52**	**261**	P	**Pn**	**07 51 10.1**	**-1.2**
RSO	**Redoubt South**	**3.53**	**1**	*e*Pn	**Pn**	**07 51 13.2**	**+1.6**
RDWB	**Redoubt West**	**3.56**	**1**	P	**Pn**	**07 51 13.2**	**+1.3**
NCT	**North Crescent**	**3.63**	**0**	P	**Pn**	**07 51 14.3**	**+1.5**
RDJH	**Redoubt Jeurge**	**3.66**	**1**	P	**Pn**	**07 51 14.7**	**+1.4**
DFR	**Drift River**	**3.66**	**2**	P	**Pn**	**07 51 14.6**	**+1.4**
VNFG	**Veniaminof 2**	**3.72**	**263**	P	**Pn**	**07 51 12.7**	**-1.3**
VNWF	**Veniaminof 8**	**3.75**	**261**	P	**Pn**	**07 51 13.0**	**-1.5**
SLKM	**Skilak Lake**	**3.85**	**20**	P	**Pn**	**07 51 16.2**	**+0.5**
SLKM	**Skilak Lake**	**3.85**	**20**	P	**Pn**	**07 51 16.2**	**+0.5**
SPU	**Mount Spurr**	**4.28**	**6**	*e*Pn	**Pn**	**07 51 22.6**	**+1.0**
CKL	**Chakachamna La**	**4.28**	**4**	P	**Pn**	**07 51 22.9**	**+1.2**
MID	**Middleton Isla**	**4.29**	**52**	P	**Pn**	**07 51 21.8**	**+0.1**
MID	**Middleton Isla**	**4.29**	**52**	P	**Pn**	**07 51 21.8**	**+0.1**
CKT	**Bend**	**4.29**	**5**	P	**Pn**	**07 51 23.4**	**+1.6**
SPWE	**Spurr West**	**4.35**	**2**	P	**Pn**	**07 51 24.4**	**+1.7**
SPCP	**Crater Peak Br**	**4.36**	**5**	P	**Pn**	**07 51 24.5**	**+1.6**
SVW2	**Sparrevohn**	**4.39**	**343**	P	**Pn**	**07 51 24.3**	**+1.2**
SPCG	**Spurr Capps Gl**	**4.39**	**6**	P	**Pn**	**07 51 24.4**	**+1.2**
FIB	**Fire Island**	**4.47**	**17**	P	**Pn**	**07 51 25.5**	**+1.3**
FIB	**Fire Island**	**4.47**	**17**	P	**Pn**	**07 51 25.5**	**+1.3**
RC01	**Rabbit Creek A**	**4.48**	**20**	P	**Pn**	**07 51 25.0**	**+0.7**
SDPT	**Sand Point**	**4.51**	**252**	P	**Pn**	**07 51 22.9**	**-1.8**
SUA	**Susitna One**	**4.67**	**13**	P	**Pn**	**07 51 27.8**	**+0.6**
HIN	**Hinchinbrook I**	**4.82**	**41**	P	**Pn**	**07 51 28.9**	**-0.2**
KNK	**Knik Glacier**	**5.04**	**25**	P	**Pn**	**07 51 32.0**	**0.0**
PMR	**Palmer**	**5.05**	**21**	P	**Pn**	**07 51 32.3**	**+0.1**
PMR	**Palmer**	**5.05**	**21**	P	**Pn**	**07 51 32.3**	**+0.1**
SKT	**Skwentna**	**5.11**	**7**	P	**Pn**	**07 51 33.6**	**+0.6**
PS4A	**Pavlof South-4**	**5.24**	**256**	P	**Pn**	**07 51 32.3**	**-2.5**
GHO	**Glory Hole Cre**	**5.26**	**21**	P	**Pn**	**07 51 35.5**	**+0.3**
VMT	**TAPS Ti Valdez**	**5.36**	**36**	P	**Pn**	**07 51 36.5**	**+0.1**
KAIM	**Kayak Island**	**5.38**	**53**	P	**Pn**	**07 51 36.9**	**+0.2**
SML	**Sawmill**	**5.42**	**24**	P	**Pn**	**07 51 37.6**	**+0.3**
SML	**Sawmill**	**5.42**	**24**	P	**Pn**	**07 51 37.6**	**+0.3**
RAGM	**Ragged Mountai**	**5.52**	**48**	P	**Pn**	**07 51 38.6**	**-0.1**
DT1	**Dutton Round H**	**5.56**	**255**	P	**Pn**	**07 51 37.3**	**-1.8**
DIV	**Divide**	**5.59**	**38**	P	**Pn**	**07 51 40.0**	**+0.3**
DRIA	**Deer Island**	**5.60**	**253**	P	**Pn**	**07 51 37.4**	**-2.4**
GOAT	**Goat Mountain**	**5.62**	**46**	P	**Pn**	**07 51 40.0**	**0.0**
SCM	**Sheep Creek Mo**	**5.68**	**28**	P	**Pn**	**07 51 41.5**	**+0.6**
SCM	**Sheep Creek Mo**	**5.68**	**28**	P	**Pn**	**07 51 41.5**	**+0.6**
SUCK	**Suckling Hills**	**5.73**	**53**	P	**Pn**	**07 51 41.2**	**-0.4**
NICHA	**Nichawak Mount**	**5.73**	**51**	P	**Pn**	**07 51 41.1**	**-0.5**
KLU	**Klutina**	**5.81**	**35**	P	**Pn**	**07 51 42.6**	**-0.1**
BMRM	**Bremner River**	**5.90**	**43**	P	**Pn**	**07 51 43.8**	**-0.2**
BERG	**Berg Lake**	**5.93**	**50**	P	**Pn**	**07 51 44.2**	**-0.1**
PPLA	**Purkeypile**	**5.99**	**3**	P	**Pn**	**07 51 46.4**	**+1.2**
GRIN	**Grindle Hills**	**6.04**	**52**	P	**Pn**	**07 51 45.4**	**-0.4**
KHIT	**Khitrov Hills**	**6.15**	**51**	P	**Pn**	**07 51 47.5**	**+0.2**
TT01	**Tatalina**	**6.18**	**347**	P	**Pn**	**07 51 48.7**	**+1.0**
FALS	**False Pass**	**6.26**	**255**	P	**Pn**	**07 51 46.6**	**-2.1**
KULT	**Kultieth River**	**6.28**	**54**	P	**Pn**	**07 51 49.8**	**+0.7**
WAX	**Waxell Ridge**	**6.32**	**52**	P	**Pn**	**07 51 49.4**	**-0.3**
CRQM	**Cirque**	**6.36**	**49**	*e*Pn	**Pn**	**07 51 50.8**	**+0.5**
BARK	**Barkley Ridge**	**6.46**	**53**	P	**Pn**	**07 51 51.7**	**+0.1**
TGL	**Tana Glacier**	**6.49**	**50**	*e*Pn	**Pn**	**07 51 52.3**	**+0.3**
VRDI	**Verde Repeater**	**6.50**	**45**	P	**Pn**	**07 51 52.1**	**-0.2**
CAST	**Castle Rocks**	**6.51**	**3**	P	**Pn**	**07 51 53.5**	**+1.2**
MESA	**MESA**	**6.60**	**56**	P	**Pn**	**07 51 53.3**	**-0.3**
ISLE	**Juniper Island**	**6.62**	**52**	P	**Pn**	**07 51 54.3**	**+0.5**
TRF	**Thorofare Moun**	**6.66**	**10**	P	**Pn**	**07 51 55.0**	**+0.5**
BAGL	**Bagley Icefiel**	**6.67**	**53**	P	**Pn**	**07 51 55.1**	**+0.7**
KTH	**Kantishna Hill**	**6.71**	**8**	P	**Pn**	**07 51 55.9**	**+0.9**
HARP	**HAARP**	**6.75**	**32**	P	**Pn**	**07 51 55.9**	**+0.5**
DHY	**Denali Highway**	**6.75**	**22**	P	**Pn**	**07 51 56.0**	**+0.3**
MCARA	**McCarthy VSAT**	**6.76**	**45**	P	**Pn**	**07 51 55.7**	**0.0**
KIAG	**Kiagna River**	**6.77**	**49**	P	**Pn**	**07 51 55.9**	**-0.1**
RND	**Reindeer**	**6.80**	**16**	P	**Pn**	**07 51 56.5**	**+0.4**
RND	**Reindeer**	**6.80**	**16**	P	**Pn**	**07 51 56.6**	**+0.4**
BALM	**Baldy**	**6.84**	**49**	P	**Pn**	**07 51 56.9**	**+0.1**
**

LON pmax pmax
comp=Z,7.0nm,1.0s
G03D McMinnville, O 21.83 110 P **P 07 55 06.6 -2.0**
baz=313
LTY Liberty 21.86 102 *eP* **P 07 55 11.1 +2.0**
comp=Z,27nm,1.4s
B08A Colville Reser 21.92 99 *eP* **P 07 55 11.7 +2.1**
comp=Z,35nm,1.2s
H04A Detroit Lake 22.75 109 *eP* **P 07 55 20.2 +1.8**
comp=Z,46nm,1.3s
G05D Wamic, OR 22.82 107 P **P 07 55 17.2 -2.0**
baz=312
C09A Chrisman Ranch 22.82 99 *eP* **P 07 55 20.6 +1.4**
comp=Z,22nm,1.3s
I03D Drain, OR 22.85 113 P **P 07 55 17.7 -1.7**
baz=316
D08A Wollman Farm, 22.93 101 *eP* **P 07 55 22.2 +1.9**
comp=Z,25nm,1.1s
KEBM Edson Butte 22.96 116 *eP* **P 07 55 21.6 +0.9**
comp=Z,66nm,1.3s
HAWA Hanford 23.02 103 *eP* **P 07 55 22.5 +1.3**
NEW Newport 23.18 97 P **P 07 55 24.9 +2.0**
comp=Z,5.7nm,0.8s,baz=311,slow=7.7,SNR=7.0
NEW Newport 23.18 97 P **P 07 55 21.2 -1.6**
baz=305,SNR=5.2
NEW Newport 23.18 97 *eP* **P 07 55 24.8 +1.9**
comp=Z,9.6nm,0.9s
NEW Newport 23.18 97 *eP* **P 07 55 24.8 +1.9**
NEW pmax pmax
comp=Z,10.0nm,0.9s
I04A Tendick Farm, 23.26 111 P **P 07 55 22.8 -0.9**
baz=315,SNR=6.4
I05D Terrebonne, OR 23.43 109 P **P 07 55 24.7 -0.7**
baz=314
KBO Bosley Butte 23.50 117 *eP* **P 07 55 29.1 +2.9**
comp=Z,23nm,1.2s
E09A Wood Farm, Sta 23.68 101 *eP* **P 07 55 29.7 +1.9**
comp=Z,17nm,1.0s
J04D Umpqua Nationa 23.81 112 P **P 07 55 28.1 -1.1**
baz=316,SNR=9.8
HUMO Hull Mountain 23.84 114 *eP* **P 07 55 31.7 +2.4**
comp=Z,12nm,0.8s
L02D Cave Junction, 23.85 116 P **P 07 55 28.6 -0.8**
baz=318
PINE Pine Mountain 24.02 109 *eP* **P 07 55 33.3 +2.0**
comp=Z,19nm,1.0s
G08A Pilot Rock 24.04 104 *eP* **P 07 55 32.9 +1.6**
comp=Z,10nm,1.3s
J05D Fort Rock, OR 24.22 111 P **P 07 55 31.4 -1.7**
baz=315,SNR=19
WALA Waterton Lakes 24.48 92 *eP* **P 07 55 37.5 +2.1**
comp=Z,12nm,1.1s
F10A Beach Ranch, E 24.52 101 *eP* **P 07 55 37.5 +1.8**
comp=Z,17nm,1.3s
YBH Yreka Blue Hor 24.61 115 P **P 07 55 39.2 +2.6**
comp=Z,8.6nm,1.0s,baz=341,slow=6.1,SNR=28
YBH LR LR 08 03 10.8
comp=Z,650nm,18.6s,baz=305,slow=31
YBH Yreka Blue Hor 24.61 115 *eP* **P 07 55 39.5 +2.9**
comp=Z,9.1nm,0.8s
YBH Yreka Blue Hor 24.61 115 *eP* **P 07 55 39.5 +2.9**
YBH pmax pmax
comp=Z,9.0nm,0.8s
JCC Jacoby Creek, 24.66 118 *eP* **P 07 55 39.5 +2.6**
comp=Z,26nm,1.4s
KHMM Horse Mountain 24.76 118 *eP* **P 07 55 41.1 +3.1**
comp=Z,8.3nm,0.8s
K05A Summer Lake 24.80 111 *eP* **P 07 55 41.4 +3.0**
comp=Z,25nm,0.9s
M02C Callahan 24.80 116 P **P 07 55 37.4 -0.9**
baz=319,SNR=17
M04C Macdoel 25.01 114 P **P 07 55 39.0 -1.2**
baz=318,SNR=15
N02D Trinity Center 25.19 116 P **P 07 55 40.5 -1.2**
baz=319,SNR=7.6
BMO Blue Mountains 25.20 103 *eP* **P 07 55 44.2 +2.3**
comp=Z,7.0nm,1.0s
BMO Blue Mountains 25.20 103 *eP* **P 07 55 44.2 +2.3**
BMO pmax pmax
comp=Z,7.0nm,1.0s
WDC Whiskeytown Da 25.57 117 *eP* **P 07 55 47.0 +1.9**
comp=Z,8.0nm,0.9s
WDC Whiskeytown Da 25.57 117 *eP* **P 07 55 47.0 +1.9**
WDC pmax pmax
comp=Z,8.0nm,0.9s
J08A Circle Bar Ran 25.60 107 *eP* **P 07 55 47.3 +1.8**
comp=Z,11nm,1.1s
MOD Modoc Plateau 25.70 112 *eP* **P 07 55 48.7 +2.2**
comp=Z,23nm,1.3s
MSO Missoula 25.77 96 P **P 07 55 45.9 -1.1**
baz=307
MSO Missoula 25.77 96 *eP* **P 07 55 47.8 +0.8**
comp=Z,11nm,1.1s
O03D Paynes Creek 26.15 116 P **P 07 55 48.6 -1.9**
baz=320,SNR=19
WVOR Wild Horse Val 26.17 109 *eP* **P 07 55 53.0 +2.3**
comp=Z,24nm,1.3s
WVOR Wild Horse Val 26.17 109 *eP* **P 07 55 53.0 +2.3**
WVOR pmax pmax
comp=Z,24nm,1.3s
ORV Oroville 26.87 117 *eP* **P 07 55 57.6 +0.8**
comp=Z,4.2nm,0.8s
ORV Oroville 26.87 117 *eP* **P 07 55 57.7 +0.8**
ORV pmax pmax
comp=Z,4.0nm,0.8s
MFID Camas Ranch 26.96 104 *eP* **P 07 55 59.6 +1.8**
comp=Z,4.8nm,1.0s
HRY Holter Researc 26.99 95 *eP* **P 07 55 59.9 +1.8**
BEKR Beckworth 27.19 115 *eP* **P 07 56 01.8 +1.8**
comp=Z,4.0nm,0.9s
SEY Seymchan 27.29 305 P **P 07 55 58.7 -1.7**
comp=Z,7.5nm,0.9s,baz=89,slow=9.6,SNR=15
EGMT Eagleton 27.35 90 P **P 07 56 00.0 -1.2**
baz=305,SNR=7.3
EGMT Eagleton 27.35 90 *eP* **P 07 56 02.4 +1.2**
comp=Z,9.9nm,0.7s
DLMT Dillon 27.41 98 *eP* **P 07 56 04.1 +2.2**
comp=Z,8.4nm,1.3s
PET Petropavlovsk 27.59 283 *i* P **P 07 56 01.7 -1.5**
PET pmax pmax
comp=Z,21nm,1.1s
HLID Hailey 27.61 102 P **P 07 56 02.1 -1.6**
baz=312
HLID Hailey 27.61 102 *eP* **P 07 56 05.4 +1.6**
comp=Z,7.0nm,1.3s
MCMT McKenzie Canyo 27.62 99 *eP* **P 07 56 05.0 +1.1**
BOZ Bozeman (W) 27.79 96 P **P 07 56 04.0 -1.3**
baz=309
BOZ Bozeman (W) 27.79 96 *eP* **P 07 56 06.0 +0.8**
comp=Z,4.4nm,1.3s
BOZ Bozeman (W) 27.79 96 *eP* **P 07 56 06.1 +0.8**
BOZ pmax pmax
comp=Z,4.0nm,1.3s
PAHR Pah Rah Range 27.80 114 *eP* **P 07 56 07.9 +2.5**
comp=Z,5.4nm,0.8s
RES Resolute Bay 27.94 29 P **P 07 56 06.3 +0.2**
comp=Z,2.4nm,0.6s,baz=255,slow=11,SNR=6.4
RES LR LR 08 09 08.9
comp=Z,256nm,20.8s,baz=248,slow=40
RES Resolute Bay 27.94 29 *eP* **P 07 56 06.3 +0.2**
comp=Z,11nm,1.2s
RES Resolute Bay 27.94 29 *eP* **P 07 56 06.3 +0.2**
RES pmax pmax
comp=Z,11nm,1.2s
VCNR Virginia City 27.98 115 *eP* **P 07 56 07.9 +0.8**
comp=Z,22nm,1.4s
PEA0B Petropavlovsk- 28.05 283 *eP* **P 07 56 08.8 +1.3**
comp=Z,27nm,1.3s
PETK Petropavlovsk- 28.05 283 P **P 07 56 05.7 -1.7**
comp=Z,2.5nm,0.4s,baz=74,slow=11,SNR=5.7
PETK Petropavlovsk- 28.05 283 *eP* **P 07 56 07.0 -0.4**
PNTR Pine Nut 28.16 115 *eP* **P 07 56 11.6 +2.9**
comp=Z,19nm,1.0s
YHB Horse Butte 28.56 97 *eP* **P 07 56 12.2 -0.1**
comp=Z,17nm,1.5s
CMB Columbia Colle 28.59 117 *eP* **P 07 56 14.0 +1.6**
comp=Z,10nm,1.5s
CMB Columbia Colle 28.59 117 *eP* **P 07 56 14.0 +1.6**
CMB pmax pmax
comp=Z,10.0nm,1.5s
WAKR Walker 28.69 116 *eP* **P 07 56 15.5 +2.1**
comp=Z,5.7nm,0.8s
GCMT Greycliff 28.74 94 *eP* **P 07 56 15.8 +2.1**
YMR Madison River 28.74 97 *eP* **P 07 56 15.8 +2.0**
comp=Z,15nm,1.3s
KVN Kaiserville 28.94 113 *eP* **P 07 56 17.7 +2.1**
comp=Z,8.0nm,1.3s
KVN Kaiserville 28.94 113 *eP* **P 07 56 17.7 +2.1**

KVN pmax pmax
comp=Z,8.0nm,1.3s
YFT Old Faithful 28.95 97 *eP* **P 07 56 18.1 +2.3**
comp=Z,6.8nm,1.0s
YPP Pitchstone Pla 29.09 98 *eP* **P 07 56 19.2 +2.1**
comp=Z,2.2nm,1.0s
H17A Grant Village 29.13 97 P **P 07 56 19.7 +2.3**
baz=310,SNR=5.4
H17A Grant Village 29.13 97 *eP* **P 07 56 20.5 +3.1**
comp=Z,10nm,1.3s
ELK Elko 29.15 108 P **P 07 56 22.0 +4.4**
comp=Z,0.9nm,0.6s,baz=344,slow=8.6,SNR=6.9
IMW Indian Meadow 29.26 98 *eP* **P 07 56 19.7 +1.1**
comp=Z,7.3nm,1.2s
NV01 Mina Array Sit 29.32 114 *eP* **P 07 56 21.0 +2.0**
NVAR Mina Array Bea 29.32 114 P **P 07 56 21.0 +2.0**
comp=Z,4.5nm,0.9s,baz=301,slow=9.4,SNR=17
NVAR LR LR 08 06 36.7
comp=Z,841nm,18.1s,baz=56,slow=33
RLMT Red Lodge 29.38 95 P **P 07 56 18.0 -1.5**
baz=309
RLMT Red Lodge 29.38 95 *eP* **P 07 56 21.3 +1.8**
comp=Z,4.6nm,1.1s
FXWY Fox Creek 29.39 99 *eP* **P 07 56 21.1 +1.5**
comp=Z,4.0nm,1.2s
NV11 Mina Array Sit 29.39 114 *eP* **P 07 56 21.2 +1.6**
comp=Z,0.5nm,1.0s
MOOW Moose Ponds 29.46 98 *eP* **P 07 56 22.7 +2.4**
comp=Z,2.2nm,1.0s
TPAW Teton Pass 29.53 99 *eP* **P 07 56 22.4 +1.5**
comp=Z,7.7nm,1.4s
MDPB Devils Postpil 29.55 116 *eP* **P 07 56 21.8 +0.7**
comp=Z,7.0nm,0.8s
OMMB Old Mammoth Mi 29.60 116 *eP* **P 07 56 22.6 +0.9**
comp=Z,18nm,1.3s
LOHW Long Hollow 29.63 98 *eP* **P 07 56 23.6 +1.8**
comp=Z,5.5nm,1.3s
SNOW Snow King Moun 29.65 99 *eP* **P 07 56 23.4 +1.5**
comp=Z,7.1nm,1.5s
REDW Red Top Meadow 29.66 99 *eP* **P 07 56 23.9 +1.8**
comp=Z,9.2nm,1.4s
HVU Hansel Valley 29.72 103 *eP* **P 07 56 23.7 +1.2**
comp=Z,5.6nm,1.3s
HVU Hansel Valley 29.72 103 *eP* **P 07 56 23.7 +1.2**
HVU pmax pmax
comp=Z,6.0nm,1.3s
PHSB Hesperia Broad 30.05 121 *eP* **P 07 56 29.7 +4.4**
LAO LASA Array 30.07 90 P **P 07 56 24.9 -0.6**
baz=307
LAO LASA Array 30.07 90 *eP* **P 07 56 27.4 +1.9**
comp=Z,10nm,1.0s
HWUT Hardware Ranch 30.48 102 *eP* **P 07 56 30.3 +1.0**
comp=Z,6.8nm,1.1s
R11A Troy Canyon, C 30.75 111 P **P 07 56 31.0 -0.6**
baz=319
R11A Troy Canyon, C 30.75 111 *eP* **P 07 56 32.7 +1.1**
comp=Z,4.5nm,0.7s
BW06 Boulder Array 30.77 99 P **P 07 56 30.9 -1.0**
baz=312
BW06 Boulder Array 30.77 99 *eP* **P 07 56 32.4 +0.6**
comp=Z,4.7nm,1.1s
PD31 Pinedale Array 30.77 99 *eP* **P 07 56 32.7 +0.9**
PDAR Pinedale Array 30.77 99 P **P 07 56 33.5 +1.7**
comp=Z,2.1nm,0.6s,baz=308,slow=4.8,SNR=26
PDAR LR LR 08 08 00.6
comp=Z,63nm,18.5s,baz=308,slow=34
PDAR Pinedale Array 30.77 99 *eP* **P 07 56 33.3 +1.5**
DUG Dugway, Tooele 30.82 106 P **P 07 56 31.6 -0.6**
baz=316
DUG Dugway, Tooele 30.82 106 *eP* **P 07 56 33.6 +1.4**
comp=Z,3.7nm,1.0s
DUG Dugway, Tooele 30.82 106 *eP* **P 07 56 33.6 +1.4**
DUG pmax pmax
comp=Z,4.0nm,1.0s
GRAC Grapevine Rang 30.89 115 P **P 07 56 32.8 0.0**
baz=321
VES Vestal, Richgr 30.97 118 P **P 07 56 31.9 -1.5**
baz=323
CWC Cottonwood Cre 30.98 116 P **P 07 56 31.8 -1.9**
baz=322
DAC Darwin (Calif) 31.35 116 *eP* **P 07 56 40.0 +3.0**
comp=Z,3.9nm,0.8s
DAC Darwin (Calif) 31.35 116 *eP* **P 07 56 40.0 +3.0**
DAC pmax pmax
comp=Z,4.0nm,0.8s
ISA Isabella, Lake 31.41 118 P **P 07 56 36.2 -1.1**
baz=323
TPNV Topopah Spring 31.49 114 P **P 07 56 37.4 -0.8**
baz=321
TPNV Topopah Spring 31.49 114 *eP* **P 07 56 40.1 +1.9**
comp=Z,18nm,1.4s
TPNV Topopah Spring 31.49 114 *eP* **P 07 56 40.1 +1.9**
TPNV pmax pmax
comp=Z,18nm,1.4s
MPMC Manual Prospec 31.57 116 P **P 07 56 38.8 -0.1**
baz=322,SNR=5.0
EDW2 Edwards Air Fo 32.27 118 P **P 07 56 44.3 -0.6**
baz=324
SHPR Sheep Range 32.38 113 *eP* **P 07 56 47.5 +1.5**
comp=Z,6.1nm,1.5s
MSU Marysvale 32.39 107 *eP* **P 07 56 48.0 +1.8**
K22A Casper 32.49 96 *eP* **P 07 56 46.9 0.0**
comp=Z,6.3nm,1.1s
CCUT Cedar City 32.50 110 *eP* **P 07 56 48.6 +1.6**
comp=Z,8.1nm,1.4s
GSC Goldstone, Bar 32.51 116 *eP* **P 07 56 47.7 +0.7**
comp=Z,8.5nm,1.3s
GSC Goldstone, Bar 32.51 116 *eP* **P 07 56 47.7 +0.7**
GSC pmax pmax
comp=Z,9.0nm,1.3s
SZCU Shurtz Canyon 32.61 109 *eP* **P 07 56 50.0 +1.9**
comp=Z,3.9nm,0.9s
RWWY Rawlins 32.78 98 *eP* **P 07 56 51.0 +1.4**
comp=Z,20nm,1.0s
SRU San Rafael Swe 32.82 105 *eP* **P 07 56 51.6 +1.7**
comp=Z,18nm,1.0s
SRU San Rafael Swe 32.82 105 *eP* **P 07 56 51.6 +1.7**
SRU pmax pmax
comp=Z,18nm,1.0s
SNCC San Nicolas Is 32.88 122 P **P 07 56 49.1 -1.1**
baz=326
RSSD Black Hills 32.88 92 P **P 07 56 49.5 -0.9**
baz=310
RSSD Black Hills 32.88 92 *eP* **P 07 56 52.6 +2.2**
comp=Z,12nm,0.8s
RSSD Black Hills 32.88 92 *eP* **P 07 56 52.6 +2.2**
RSSD pmax pmax
comp=Z,12nm,0.8s
BFSC Mount Baldy Ra 32.95 118 P **P 07 56 50.5 -0.5**
baz=324
LCMT Little Creek M 32.97 110 *eP* **P 07 56 52.7 +1.6**
comp=Z,3.9nm,0.9s
KNB Kanab 33.18 110 *eP* **P 07 56 53.8 +0.8**
comp=Z,3.8nm,0.9s
KNB Kanab 33.18 110 *eP* **P 07 56 53.8 +0.8**
KNB pmax pmax
comp=Z,4.0nm,0.9s
CIS Catalina Islan 33.27 120 P **P 07 56 53.5 -0.2**
baz=325
O20A White River Ci 33.31 101 P **P 07 56 53.7 -0.3**
baz=315,SNR=8.0
O20A White River Ci 33.31 101 *eP* **P 07 56 55.8 +1.7**
comp=Z,24nm,1.2s
LDFC Landfair 33.53 114 *eP* **P 07 56 58.2 +2.2**
comp=Z,12nm,0.8s
ULM Lac du Bonnet 33.63 77 LR LR 08 10 47.6
comp=Z,577nm,18.4s,baz=292,slow=36
ULM Lac du Bonnet 33.63 77 *eP* **P 07 56 58.8 +2.2**
comp=Z,5.8nm,1.1s
ULM Lac du Bonnet 33.63 77 *eP* **P 07 56 58.8 +2.2**
ULM pmax pmax
comp=Z,6.0nm,1.1s
A31A Linda, St. Vin 33.67 79 P **P 07 56 56.6 -0.3**
baz=305
B31A Greenbush Farm 33.72 81 P **P 07 56 57.4 0.0**
baz=306
U15A North Rim 33.91 110 *eP* **P 07 57 00.7 +1.2**
comp=Z,8.2nm,1.4s
CRY Cary Ranch 33.94 118 *eP*cP **PcP 07 59 38.7 +1.2**
BELC Belle Mtn. Jos 33.95 117 P **P 07 56 59.2 -0.5**
baz=324
PV09 Paradox Valley 34.01 104 *eP* **P 07 57 01.3 +1.0**
N23A Red Feather La 34.01 98 P **P 07 56 59.9 -0.4**
baz=314
N23A Red Feather La 34.01 98 *eP* **P 07 57 01.4 +1.1**
comp=Z,7.4nm,1.2s
TIXI Tiksi 34.02 326 P **P 07 56 59.5 -0.2**
comp=Z,8.3nm,0.5s,baz=87,slow=8.3,SNR=20

TIXI LR LR 08 10 56.8
comp=Z,240nm,20.8s,baz=45,slow=36
TIXI Tiksi 34.02 326 *eP* **P 07 56 58.8 -0.9**
comp=Z,28nm,1.3s
TIXI Tiksi 34.02 326*c i*P **P 07 56 58.7 -0.9**
TIXI pmax pmax
comp=Z,18nm,1.0s
PFO Pinyon Flats O 34.04 118 P **P 07 56 59.0 -1.4**
baz=324
C31A Landman Farms, 34.05 81 P **P 07 57 00.4 +0.2**
baz=306
W13A Hualapai Mount 34.13 113 *eP* **P 07 57 03.1 +1.8**
comp=Z,13nm,1.5s
PV04 Paradox Valley 34.21 104 *eP* **P 07 57 04.4 +2.5**
comp=Z,11nm,1.2s
IRM Iron Mountain 34.24 115 P **P 07 57 02.2 +0.1**
baz=323,SNR=11
PV07 Paradox Valley 34.31 103 *eP* **P 07 57 04.2 +1.3**
comp=Z,12nm,1.3s
PV05 Paradox Valley 34.34 104 *eP* **P 07 57 05.3 +2.2**
comp=Z,6.2nm,1.0s
PV03 Paradox Valley 34.34 104 *eP* **P 07 57 04.3 +1.2**
comp=Z,5.5nm,1.0s
PV15 Paradox Valley 34.47 103 *eP* **P 07 57 06.1 +1.8**
comp=Z,17nm,1.2s
BC3 Big Chuckawall 34.50 116 P **P 07 57 03.7 -0.7**
baz=324
PV01 Paradox Valley 34.58 104 *eP* **P 07 57 06.9 +1.7**
comp=Z,13nm,1.3s
A33A Warroad 34.64 78 P **P 07 57 04.2 -1.1**
baz=305
MONP2 Monument Peak 34.64 118 P **P 07 57 05.0 -0.8**
baz=325
SMCO Snowmass 34.67 101 *eP* **P 07 57 06.8 +0.6**
comp=Z,7.1nm,1.2s
C32A Crookston 34.68 81 P **P 07 57 04.5 -1.2**
baz=306
AGMN Agassiz Nation 34.76 79 P **P 07 57 05.8 -0.6**
baz=306
AGMN Agassiz Nation 34.76 79 *eP* **P 07 57 08.1 +1.8**
comp=Z,12nm,1.3s
Y12C Blythe 34.88 115 P **P 07 57 06.8 -0.7**
baz=323,SNR=5.4
Y12C Blythe 34.88 115 *eP* **P 07 57 10.0 +2.5**
comp=Z,14nm,0.8s
IKP In-Ko-Pah, Jac 34.99 118 P **P 07 57 08.4 -0.2**
baz=325
WUAZ Wupatki 35.08 110 P **P 07 57 09.5 0.0**
baz=321
WUAZ Wupatki 35.08 110 *eP* **P 07 57 10.6 +1.1**
comp=Z,8.0nm,1.0s
C33A Trail 35.13 80 P **P 07 57 09.7 +0.2**
baz=307
GLA Glamis 35.29 116 P **P 07 57 10.2 -1.0**
baz=324
GLA Glamis 35.29 116 *eP* **P 07 57 13.6 +2.4**
comp=Z,15nm,1.1s
B34A Aery, Baudette 35.30 78 P **P 07 57 11.4 +0.4**
baz=306
MVCO Mesa Verde 35.30 105 P **P 07 57 10.8 -0.6**
baz=318
MVCO Mesa Verde 35.30 105 *eP* **P 07 57 12.7 +1.3**
comp=Z,8.1nm,1.3s
OPA Opana 35.41 188 *eP* **P 07 57 13.0 +0.9**
comp=Z,62nm,0.9s
OPA Opana 35.41 188 *eP* **P 07 57 13.0 +0.9**
OPA pmax pmax
comp=Z,62nm,0.9s
SUSD Miller 35.46 87 P **P 07 57 10.9 -1.6**
baz=310,SNR=5.6
D33A AnnSam, Waubun 35.46 81 P **P 07 57 10.7 -1.8**
baz=307
Y14A Wickenburg 35.49 113 *eP* **P 07 57 15.0 +2.2**
comp=Z,15nm,1.3s
F32A Veblen 35.55 84 P **P 07 57 12.4 -0.8**
baz=309
G32A Webster 35.73 85 P **P 07 57 13.8 -1.1**
baz=309
G32A Webster 35.73 85 *eP* **P 07 57 15.8 +1.0**
comp=Z,13nm,1.0s
S22A 4UR Ranch, Cre 35.79 102 P **P 07 57 15.2 -0.5**
baz=317
S22A 4UR Ranch, Cre 35.79 102 *eP* **P 07 57 17.9 +2.1**
comp=Z,6.1nm,1.3s
Q24A Divide 35.81 99 P **P 07 57 15.4 -0.5**
baz=316
Q24A Divide 35.81 99 *eP* **P 07 57 18.6 +2.6**
comp=Z,6.3nm,1.2s
D34A Park Rapids 35.85 81 P **P 07 57 14.8 -0.9**
baz=308
D34A Park Rapids 35.85 81 *eP* **P 07 57 16.9 +1.1**
comp=Z,14nm,1.1s
B35A Bob, Littlefor 35.87 78 P **P 07 57 14.5 -1.4**
baz=306
X16A Lo Mia Camp, P 35.90 111 *eP* **P 07 57 18.3 +1.8**
comp=Z,5.5nm,0.8s
113A Mohawk Valley, 36.04 115 *eP* **P 07 57 18.8 +1.2**
comp=Z,12nm,1.4s
OGNE Ogallala 36.11 94 P **P 07 57 17.0 -1.2**
baz=314
OGNE Ogallala 36.11 94 *eP* **P 07 57 19.8 +1.6**
comp=Z,24nm,1.0s
C35A Jirik Farms, M 36.13 79 P **P 07 57 17.0 -1.2**
baz=307
H32A Carlson Farm, 36.25 86 P **P 07 57 17.5 -1.8**
baz=310,SNR=8.7
SDCO Great Sand Dun 36.51 101 *eP* **P 07 57 23.5 +1.7**
comp=Z,6.8nm,1.3s
X18A Snowflake 36.59 109 *eP* **P 07 57 24.4 +2.0**
comp=Z,6.6nm,1.1s
C36A Pine Crest Far 36.71 78 P **P 07 57 22.4 -0.6**
baz=307
D36A Goodland 36.89 79 P **P 07 57 25.3 +0.6**
baz=308
D36A Goodland 36.89 79 *eP* **P 07 57 26.3 +1.7**
comp=Z,11nm,1.2s
C37A Embarrass 37.07 78 P **P 07 57 26.9 +0.7**
baz=307
KSCO Kaye Shedlock' 37.15 97 P **P 07 57 27.3 +0.3**
baz=316
KSCO Kaye Shedlock' 37.15 97 *eP* **P 07 57 29.1 +2.0**
comp=Z,26nm,0.9s
214A Organ Pipe Nat 37.17 115 P **P 07 57 27.1 -0.1**
baz=324
ECSD EROS Data Cent 37.20 86 P **P 07 57 26.6 -0.7**
baz=311
ECSD EROS Data Cent 37.20 86 *eP* **P 07 57 27.7 +0.4**
comp=Z,4.8nm,0.9s
E36A McGregor 37.24 80 P **P 07 57 26.5 -1.2**
baz=308
D37A Cotton 37.29 79 P **P 07 57 27.6 -0.5**
baz=308
EYMN Ely 37.31 77 P **P 07 57 27.4 -0.9**
baz=307
EYMN Ely 37.31 77 *eP* **P 07 57 29.1 +0.9**
comp=Z,8.1nm,1.0s
YAK Yakutsk 37.43 311 *eP* **P 07 57 28.0 -1.1**
comp=Z,48nm,0.5s
YAK Yakutsk 37.43 311 *i* P **P 07 57 27.4 -1.6**
YAK pmax pmax
comp=Z,38nm,1.2s
F36A Milaca 37.51 81 P **P 07 57 29.7 -0.3**
baz=309
F36A Milaca 37.51 81 *eP* **P 07 57 30.9 +1.0**
comp=Z,16nm,1.5s
H35A Sunnyside Ranc 37.55 84 P **P 07 57 30.7 +0.5**
baz=310
TUC Tucson 37.91 112 P **P 07 57 34.2 +0.7**
baz=323
TUC Tucson 37.91 112 *eP* **P 07 57 35.2 +1.7**
comp=Z,4.8nm,1.1s
TUC Tucson 37.91 112 *eP* **P 07 57 35.2 +1.7**
TUC pmax pmax
comp=Z,5.0nm,1.1s
BGNE Belgrade 37.92 90 P **P 07 57 33.9 +0.5**
baz=313
BGNE Belgrade 37.92 90 *eP* **P 07 57 35.2 +1.8**
comp=Z,50nm,0.9s
F37A Hinrichs Farm, 38.09 81 P **P 07 57 34.5 -0.3**
baz=309
TASM ASL Pad, Albuq 38.09 105 P **P 07 57 35.9 +0.8**
baz=320
ANMO Albuquerque 38.09 105 P **P 07 57 37.1 +2.0**
comp=Z,1.2nm,0.7s,baz=336,slow=11,SNR=7.8
ANMO LR LR 08 13 23.2
comp=Z,190nm,18.1s,baz=312,slow=36
ANMO Albuquerque 38.09 105 P **P 07 57 36.1 +0.9**
baz=320

ANMO	Albuquerque	38.09	105	eP	P	07 57 36.5	+1.4
	comp=Z,4.4nm,1.1s						
ANMO	Albuquerque	38.09	105	ceP	P	07 57 36.6	+1.4
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.2s						
TASL	Snake Pit, Alb	38.09	105	P	P	07 57 35.8	+0.6
	baz=320						
E38A	The Farm, Brul	38.11	79	P	P	07 57 34.4	-0.6
	baz=309						
E38A	The Farm, Brul	38.11	79	eP	P	07 57 36.7	+1.8
	comp=Z,7.3nm,0.9s						
H36A	Jessenland, He	38.12	83	P	P	07 57 34.7	-0.3
	baz=310						
C39A	Grand Marais	38.12	76	P	P	07 57 34.5	-0.6
	baz=308						
SPMN	Marine on St.	38.31	81	P	P	07 57 37.3	+0.6
	baz=310						
SPMN	Marine on St.	38.31	81	eP	P	07 57 38.4	+1.7
	comp=Z,9.8nm,1.3s						
F38A	Pierce - Schro	38.34	80	P	P	07 57 37.0	0.0
	baz=309,SNR=9.6						
J36A	Seneca 1, Swea	38.71	85	P	P	07 57 40.1	+0.1
	baz=311						
J36A	Seneca 1, Swea	38.71	85	eP	P	07 57 42.2	+2.1
	comp=Z,6.4nm,1.1s						
I37A	Lemond, Waseca	38.77	83	P	P	07 57 41.6	+1.0
	baz=311						
I37A	Lemond, Waseca	38.77	83	eP	P	07 57 41.5	+1.0
	comp=Z,9.1nm,0.9s						
G38A	Ridgeland	38.86	81	P	P	07 57 41.2	-0.1
	baz=310						
CBKS	Cedar Bluff	38.86	95	P	P	07 57 41.5	+0.1
	baz=316						
CBKS	Cedar Bluff	38.86	95	eP	P	07 57 42.7	+1.2
	comp=Z,24nm,1.0s						
CBKS	Cedar Bluff	38.86	95	eP	P	07 57 42.7	+1.2
CBKS				pmax	pmax		
	comp=Z,24nm,1.0s						
H38A	Maiden Rock	38.95	82	P	P	07 57 42.2	+0.2
	baz=310						
G39A	Holcombe	39.15	80	P	P	07 57 44.4	+0.6
	baz=310						
J37A	Redenius Farm,	39.15	84	P	P	07 57 44.4	+0.6
	baz=312						
121A	Cookes Peak, D	39.27	109	P	P	07 57 45.8	+0.8
	baz=322						
F40A	Park Falls	39.31	79	P	P	07 57 45.7	+0.6
	baz=310						
I38A	Scanlan Farm,	39.33	82	P	P	07 57 46.5	+1.2
	baz=311						
FRB	Frobisher Bay	39.38	44	LR	LR	08 15 26.3	
	comp=Z,525nm,18.9s,baz=294,slow=38						
319A	Douglas	39.42	112	eP	P	07 57 47.1	+0.9
	comp=Z,11nm,1.1s						
D41A	Chassel	39.42	76	P	P	07 57 46.4	+0.4
	baz=309						
K37A	Belmond	39.47	85	P	P	07 57 46.8	+0.4
	baz=312						
H39A	Augusta	39.48	81	P	P	07 57 47.9	+1.4
	baz=310						
G40A	Rib Lake	39.69	79	P	P	07 57 48.6	+0.4
	baz=310						
G40A	Rib Lake	39.69	79	eP	P	07 57 49.5	+1.3
	comp=Z,5.5nm,1.0s						
M36A	Felix, Anita	39.72	87	P	P	07 57 48.6	+0.1
	baz=313						
COWI	Conover	39.72	78	eP	P	07 57 50.1	+1.6
	comp=Z,4.4nm,1.3s						
J38A	Wedel Dairy, R	39.73	83	P	P	07 57 48.4	-0.2
	baz=312						
L37A	Phoenix Point,	39.84	86	P	P	07 57 50.1	+0.6
	baz=313						
I39A	Houston	39.90	82	P	P	07 57 50.1	+0.2
	baz=311,SNR=5.5						
I39A	Houston	39.90	82	eP	P	07 57 51.4	+1.5
	comp=Z,9.5nm,0.8s						
H40A	Chili	40.00	80	P	P	07 57 51.5	+0.6
	baz=311						
K38A	Parkersburg	40.02	84	P	P	07 57 51.8	+0.8
	baz=312						
K38A	Parkersburg	40.02	84	eP	P	07 57 52.1	+1.1
	comp=Z,26nm,1.4s						
J39A	Decorah	40.14	83	P	P	07 57 52.8	+0.8
	baz=312						
M37A	Trindle Farm,	40.16	87	P	P	07 57 52.1	-0.1
	baz=313						
L38A	Oak Wood Farm,	40.26	85	P	P	07 57 53.5	+0.5
	baz=313						
SCIA	State Center	40.28	86	eP	P	07 57 54.7	+1.5
	comp=Z,18nm,1.5s						
I40A	Norwalk	40.36	81	P	P	07 57 54.5	+0.7
	baz=311						
K39A	Oelwein	40.46	84	P	P	07 57 53.0	-1.7
	baz=312,SNR=6.1						
N37A	Lee Faris, Mou	40.52	88	eP	P	07 57 57.0	+1.8
	comp=Z,41nm,1.3s						
EPT	El Paso	40.53	108	eP	P	07 57 57.3	+1.9
	comp=Z,8.9nm,0.8s						
J40A	Soldiers Grove	40.62	82	P	P	07 57 56.5	+0.5
	baz=312						
M38A	Pleasantville	40.62	86	P	P	07 57 56.1	+0.1
	baz=313						
I41A	Arkdale	40.66	81	P	P	07 57 57.4	+1.2
	baz=311						
I41A	Arkdale	40.66	81	eP	P	07 57 57.9	+1.7
	comp=Z,14nm,1.3s						
G42A	Mountain	40.66	78	P	P	07 57 56.9	+0.7
	baz=310						
E43A	Lone Tree Farm	40.69	76	P	P	07 57 56.9	+0.4
	baz=310						
AMTX	Amarillo	40.69	100	P	P	07 57 56.5	-0.3
	baz=319						
AMTX	Amarillo	40.69	100	eP	P	07 57 58.9	+2.2
	comp=Z,28nm,1.3s						
L39A	Vinton	40.80	84	P	P	07 57 57.5	+0.1
	baz=313						
MSTX	Muleshoe	40.80	102	P	P	07 57 57.8	+0.1
	baz=320						
MSTX	Muleshoe	40.80	102	eP	P	07 57 59.3	+1.7
	comp=Z,10nm,1.0s						
K40A	Colesburg	40.88	83	P	P	07 57 58.5	+0.4
	baz=312						
F43A	Flat Rock, Esc	40.95	77	P	P	07 57 59.0	+0.4
	baz=310						
O37A	Wolven Farm, M	40.97	88	P	P	07 57 58.4	-0.5
	baz=314						
N38A	Joes South For	41.03	87	P	P	07 57 58.7	-0.7
	baz=314						
J41A	Loganville	41.04	81	P	P	07 58 00.0	+0.6
	baz=312						
M39A	Webster	41.14	85	P	P	07 58 00.9	+0.6
	baz=313						
MNTX	Cornudas Mount	41.18	107	P	P	07 58 01.0	+0.4
	baz=322,SNR=13						
MNTX	Cornudas Mount	41.18	107	eP	P	07 58 03.1	+2.4
	comp=Z,12nm,1.1s						
JFWS	Jewell Farm	41.22	82	P	P	07 58 01.1	+0.2
	baz=312						
JFWS	Jewell Farm	41.22	82	eP	P	07 58 02.5	+1.6
	comp=Z,12nm,1.2s						
JFWS	Jewell Farm	41.22	82	eP	P	07 58 02.5	+1.6
JFWS				pmax	pmax		
	comp=Z,12nm,1.2s						
L40A	Anamosa	41.26	84	P	P	07 58 01.4	+0.2
	baz=313						
L40A	Anamosa	41.26	84	eP	P	07 58 01.9	+0.7
	comp=Z,12nm,1.1s						
P37A	Lathrop	41.27	89	P	P	07 58 00.2	-1.1
	baz=315,SNR=7.2						
O38A	Galt	41.37	88	P	P	07 58 01.6	-0.6
	baz=314						
N39A	Derby Farms, D	41.38	86	P	P	07 58 02.8	+0.6
	baz=314						
N39A	Derby Farms, D	41.38	86	eP	P	07 58 03.2	+1.0
	comp=Z,6.6nm,0.8s						
ASAJ	Asahikawa	41.38	281	P	P	07 58 01.3	-0.9
	comp=Z,1.9nm,0.3s,baz=120,slow=16,SNR=3.5						
ASAJ				LR	LR	08 16 41.5	
	comp=Z,423nm,18.1s,baz=159,slow=38						
K41A	Shullsburg	41.39	83	P	P	07 58 01.9	-0.4
	baz=312						
H43A	Windswept, Lux	41.52	79	P	P	07 58 03.4	+0.1
	baz=311						
L41A	Preston	41.65	83	P	P	07 58 03.8	-0.6
	baz=313						
P38A	Dawn	41.69	88	P	P	07 58 03.3	-1.5
	baz=315,SNR=6.1						
P38A	Dawn	41.69	88	eP	P	07 58 05.3	+0.5
	comp=Z,11nm,0.7s						
I43A	Langenfeld Bro	41.70	80	P	P	07 58 03.7	-1.1
	baz=312						
Q37A	Longview Farm,	41.71	90	P	P	07 58 04.3	-0.7
	baz=315						
O39A	Kirksville	41.79	87	P	P	07 58 06.2	+0.6
	baz=314						
K42A	Prairie Point,	41.80	82	P	P	07 58 06.0	+0.4
	baz=312						
M41A	Milan	42.10	84	P	P	07 58 07.9	-0.2
	baz=313						
Q38A	Cooks Store, C	42.11	89	P	P	07 58 07.8	-0.4
	baz=315,SNR=6.8						
P39B	Salisbury	42.21	88	P	P	07 58 08.9	-0.1
	baz=315						
O40A	La Belle	42.25	86	P	P	07 58 09.2	-0.1
	baz=314						
WMOK	Wichita Mounta	42.37	98	P	P	07 58 09.6	-0.8
	baz=319,SNR=21						
WMOK	Wichita Mounta	42.37	98	eP	P	07 58 11.7	+1.3
	comp=Z,14nm,1.0s						
WMOK	Wichita Mounta	42.37	98	eP	P	07 58 11.7	+1.3
WMOK				pmax	pmax		
	comp=Z,14nm,1.0s						
K43A	Burlington	42.40	81	P	P	07 58 10.2	-0.3
	baz=313						
Q39A	Willow Grove F	42.40	88	P	P	07 58 09.5	-1.1
	baz=315,SNR=11						
R38A	Fenwick Farm,	42.51	90	P	P	07 58 11.5	0.0
	baz=316						
L43A	Garden Prairie	42.53	82	P	P	07 58 10.5	-1.1
	baz=313						
P40A	Paris	42.57	87	P	P	07 58 11.5	-0.4
	baz=315,SNR=6.0						
P40A	Paris	42.57	87	eP	P	07 58 12.7	+0.8
	comp=Z,6.6nm,0.8s						
O41A	Passleys Farm,	42.79	86	P	P	07 58 13.4	-0.3
	baz=314						
R39A	Chumby, Stover	42.89	89	P	P	07 58 13.2	-1.3
	baz=316,SNR=5.5						
S38A	Stockton	42.90	91	P	P	07 58 13.8	-0.9
	baz=316,SNR=9.4						
M43A	Waltham Townsh	42.92	83	P	P	07 58 14.1	-0.7
	baz=314						
Q40A	Laux Farm, Aux	42.93	88	P	P	07 58 13.7	-1.2
	baz=315,SNR=8.4						
ZEA	Zeya	43.08	301	eP	P	07 58 13.8	-2.1
ZEA				pmax	pmax		
	comp=Z,23nm,1.0s						
T38A	Diamond	43.12	92	P	P	07 58 15.5	-1.0
	baz=317,SNR=9.8						
TUL1	Leonard	43.13	94	P	P	07 58 15.6	-0.9
	baz=318						
TUL1	Leonard	43.13	94	eP	P	07 58 18.0	+1.5
	comp=Z,16nm,1.1s						
S39A	Bolivar	43.18	90	P	P	07 58 15.5	-1.5
	baz=316,SNR=8.0						
S39A	Bolivar	43.18	90	eP	P	07 58 16.8	-0.1
	comp=Z,5.7nm,0.6s						
SUMG	Summit	43.18	24⇑	iP	P	07 58 18.0	+1.0
SUMG	Summit	43.18	24	eP	P	07 58 17.7	+0.7
	comp=Z,27nm,1.1s						
SUMG	Summit	43.18	24⇑	iP	P	07 58 18.0	+1.0
R40A	Maddies Statio	43.33	89	P	P	07 58 16.4	-1.7
	baz=316,SNR=12						
R40A	Maddies Statio	43.33	89	eP	P	07 58 18.4	+0.3
	comp=Z,11nm,0.6s						
HDIL	Hopedale	43.35	84	P	P	07 58 17.3	-1.0
	baz=314						
HDIL	Hopedale	43.35	84	eP	P	07 58 19.4	+1.1
	comp=Z,15nm,0.8s						
Q41A	Truxton	43.42	87	P	P	07 58 18.2	-0.7
	baz=315						
P42A	Winchester	43.46	86	P	P	07 58 18.8	-0.3
	baz=315						
DAG	Danmarks Havn	43.46	14⇑	iP	P	07 58 19.2	+0.5
	comp=Z,20nm,0.5s						
DAG	Danmarks Havn	43.46	14⇑	iP	P	07 58 19.2	+0.5
DAG				pmax	pmax		
	comp=Z,20nm,0.5s						
ABTX	Abilene, Hawle	43.51	101	P	P	07 58 19.0	-0.7
	baz=320						
ABTX	Abilene, Hawle	43.51	101	eP	P	07 58 21.1	+1.4
	comp=Z,23nm,1.4s						
T39A	Clever	43.63	91	P	P	07 58 18.9	-1.7
	baz=317,SNR=10						
SFJD	Kangerlussuaq	43.68	34	LR	LR	08 18 46.4	
	comp=Z,241nm,18.5s,baz=314,slow=39						
SFJD	Kangerlussuaq	43.68	34	iP	P	07 58 30.5	+10
	comp=Z,13nm,0.6s						
SFJD	Kangerlussuaq	43.68	34	iP	P	07 58 30.5	+10
SFJD				pmax	pmax		
	comp=Z,13nm,0.6s						
S40A	Lebanon	43.70	90	P	P	07 58 20.2	-0.9
	baz=316						
KLR	Kul'dur	43.72	293	P	P	07 58 20.0	-1.1
	comp=Z,2.0nm,1.0s,baz=28,slow=9.6,SNR=47						
R41A	Rosebud	43.81	88	P	P	07 58 21.1	-0.9
	baz=316,SNR=5.2						
N44A	Piper City	43.82	83	P	P	07 58 21.6	-0.4
	baz=314						
Q42A	Golden Eagle	43.83	87	P	P	07 58 20.9	-1.3
	baz=315						
HHAR	Hobbs	43.87	92	eP	P	07 58 22.0	-0.5
	comp=Z,5.8nm,0.7s						
TX31	Lajitas Ar. Si	43.95	108	eP	P	07 58 25.1	+1.8
TXAR	Lajitas Array	43.95	108	P	P	07 58 25.2	+1.9
	comp=Z,2.1nm,0.7s,baz=309,slow=5.7,SNR=30						
TXAR				PcP	PcP	08 00 08.4	-0.5
	comp=Z,0.6nm,1.0s,baz=282,slow=4.5,SNR=2.2						
TXAR				ScP	ScP	08 03 58.1	-1.5
	comp=Z,0.4nm,1.0s,baz=323,slow=1.4,SNR=3.5						
TXAR				LR	LR	08 16 17.1	
	comp=Z,424nm,18.4s,baz=0.0,slow=35						
U39A	Green Forest	44.05	92	P	P	07 58 21.5	-2.4
	baz=317,SNR=6.6						
CCM	Cathedral Cave	44.06	88	P	P	07 58 23.1	-0.9
	baz=316						
CCM	Cathedral Cave	44.06	88	eP	P	07 58 24.3	+0.3
	comp=Z,3.9nm,0.8s						
CCM	Cathedral Cave	44.06	88	eP	P	07 58 24.3	+0.3
CCM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
S41A	Jillco Farms,	44.12	89	P	P	07 58 22.8	-1.7
	baz=316,SNR=17						
R42A	Luebbering	44.14	87	P	P	07 58 23.2	-1.5
	baz=316						
Q43A	New Douglas	44.27	86	P	P	07 58 24.4	-1.3
	baz=315,SNR=6.3						
V39A	Pettigrew	44.35	92	P	P	07 58 24.2	-2.2
	baz=318,SNR=7.6						
U40A	Yellville	44.41	91	P	P	07 58 25.3	-1.5
	baz=317						
O45A	Potomac	44.42	83	P	P	07 58 26.3	-0.5
	baz=315						
P44A	Sand Creek, Wi	44.48	85	P	P	07 58 27.0	-0.3
	baz=315						
T41A	Mountain View	44.50	90	P	P	07 58 26.4	-1.2
	baz=317						
S42A	Caledonia	44.51	88	P	P	07 58 26.8	-0.8
	baz=316						
R43A	Red Bud	44.62	87	P	P	07 58 27.6	-0.9
	baz=316						
SFIN	Lafayette	44.67	82	P	P	07 58 28.1	-0.7
	baz=314						
W39A	Magazine	44.76	93	P	P	07 58 29.6	0.0
	baz=318						
W39A	Magazine	44.76	93	eP	P	07 58 30.3	+0.7
	comp=Z,6.9nm,0.9s						
T42A	Van Buren	44.88	89	P	P	07 58 29.8	-0.8
	baz=317						
LPIG	La Paz	44.91	119	LR	LR	08 14 53.7	
	comp=Z,195nm,19.2s,baz=353,slow=33						
P45A	Graceland, Par	44.92	84	P	P	07 58 30.6	-0.2
	baz=315						
U41A	Viola	44.93	90	P	P	07 58 30.4	-0.6
	baz=317						
SPITS	Spitsbergen Ar	44.98	3	P	P	07 58 31.2	+0.4
	comp=Z,5.7nm,0.5s,baz=23,slow=7.8,SNR=29						
SPITS				LR	LR	08 17 07.4	
	comp=Z,218nm,19.6s,baz=45,slow=36						
S43A	Fulton Ridge,	45.05	88	P	P	07 58 30.2	-1.7
	baz=316,SNR=9.7						
X39A	Fountain Ranch	45.09	94	P	P	07 58 31.7	-0.6
	baz=318						
JCT	Junction City	45.09	103	P	P	07 58 30.9	-1.4
	baz=322,SNR=9.1						
JCT	Junction City	45.09	103	eP	P	07 58 34.2	+1.8
	comp=Z,20nm,1.0s						
Q45A	Warren Harvey,	45.15	85	P	P	07 58 32.7	+0.1
	baz=316						
P46A	Rosedale	45.15	83	P	P	07 58 31.0	-1.7
	baz=315						
W40A	Ferguson Farm,	45.15	92	P	P	07 58 31.6	-1.1
	baz=318						
WHTX	Lake Witney,	45.18	99	P	P	07 58 32.1	-0.8
	baz=320						
WHTX	Lake Whitney,	45.18	99	eP	P	07 58 33.8	+0.8
	comp=Z,8.9nm,0.9s						
V41A	Mountainview	45.21	91	P	P	07 58 31.8	-1.5
	baz=318,SNR=7.3						
SCHQ	Schefferville	45.27	54	LR	LR	08 20 18.0	
	comp=Z,237nm,18.2s,baz=335,slow=40						
O47A	Sheridan	45.27	82	P	P	07 58 32.6	-1.0
	baz=315						
T43A	Greenville	45.28	88	P	P	07 58 32.6	-1.2
	baz=317,SNR=5.9						
OLIL	Olney	45.29	85	eP	P	07 58 34.6	+0.8
	comp=Z,13nm,0.9s						
MIAR	Mount Ida	45.35	93	P	P	07 58 33.0	-1.3
	baz=318,SNR=8.0						
MIAR	Mount Ida	45.35	93	eP	P	07 58 34.2	-0.2
	comp=Z,25nm,1.4s						
MIAR	Mount Ida	45.35	93	eP	P	07 58 34.2	-0.2
MIAR				pmax	pmax		
	comp=Z,25nm,1.4s						
PBMO	Poplar Bluff	45.43	89	eP	P	07 58 35.1	+0.2
	comp=Z,3.9nm,0.6s						
R45A	Skylar, Fairfi	45.51	85	P	P	07 58 34.5	-1.0
	baz=316						
T44A	Benton	45.66	88	P	P	07 58 35.9	-0.9
	baz=317						
P47A	Martinsville	45.75	83	P	P	07 58 37.2	-0.2
	baz=315						
X40A	Basin Creek Fa	45.80	93	P	P	07 58 36.2	-1.7
	baz=318						
BLO	Bloomington	45.84	83	eP	P	07 58 39.7	+1.6
	comp=Z,7.6nm,0.6s						
BLO	Bloomington	45.84	83	eP	P	07 58 39.7	+1.6
BLO				pmax	pmax		
	comp=Z,8.0nm,0.6s						
SADO	Sadowa	45.89	72	LR	LR	08 17 58.9	
	comp=Z,170nm,18.4s,baz=334,slow=36						
435B	Jarrell	46.04	100	P	P	07 58 39.2	-0.6
	baz=321						
435B	Jarrell	46.04	100	eP	P	07 58 42.0	+2.1
	comp=Z,42nm,1.2s						
Q47A	Bedord North L	46.06	83	P	P	07 58 38.8	-1.1
	baz=316,SNR=7.1						
USIN	University of	46.08	85	eP	P	07 58 41.0	+1.0
	comp=Z,16nm,1.0s						
BOD	Bodaibo	46.30	312	eP	P	07 58 38.8	-2.7
BOD				pmax	pmax		
	comp=Z,30nm,1.0s						
Y41A	Eaglette Beard	46.38	93	P	P	07 58 40.5	-1.9
	baz=319						
R47A	Wooly Knot Far	46.46	84	P	P	07 58 41.1	-2.0
	baz=316						
T46A	Princeton	46.62	86	P	P	07 58 43.5	-0.9
	baz=317						
NRIK	Noril'sk	46.67	335	P	P	07 58 44.5	+0.2
	comp=Z,34nm,0.7s,baz=54,slow=7.1,SNR=44						
O50A	Cable	46.72	80	P	P	07 58 44.1	-1.0
	baz=315,SNR=5.1						
140A	Cam and Jess,	46.79	95	P	P	07 58 45.1	-0.5
	baz=320						
Y42A	Garnett, Star	46.86	93	P	P	07 58 45.2	-1.0
	baz=319						
USRK	Ussuriysk Ar.	46.95	288	LR	LR	08 18 26.0	
	comp=Z,382nm,19.9s,baz=43,slow=36						
ACSO	Alum Creek Sta	47.00	80	P	P	07 58 47.1	-0.1
	baz=315						
T47A	Sharon Grove	47.09	86	P	P	07 58 46.5	-1.5
	baz=317						
T47A	Sharon Grove	47.09	86	eP	P	07 58 49.1	+1.0
	comp=Z,6.1nm,1.0s						
S48A	Wiedeman Farm,	47.18	84	P	P	07 58 47.8	-0.9
	baz=316,SNR=6.8						
WVT	Waverly	47.33	87	P	P	07 58 49.4	-0.5
	baz=317						
WVT	Waverly	47.33	87	eP	P	07 58 51.2	+1.4
	comp=Z,13nm,1.5s						
WVT	Waverly	47.33	87	eP	P	07 58 51.2	+1.4
WVT				pmax	pmax		
	comp=Z,13nm,1.5s						
U47A	Clarksville	47.39	86	P	P	07 58 50.3	-0.1
	baz=317						
T48A	Bowling Green	47.40	85	P	P	07 58 49.8	-0.6
	baz=317						
V46A	Holladay	47.41	88	P	P	07 58 48.8	-1.7
	baz=318,SNR=7.9						
241A	Mo Tay, Goldon	47.62	95	P	P	07 58 50.7	-1.4
	baz=320						
241A	Mo Tay, Goldon	47.62	95	eP	P	07 58 53.3	+1.2
	comp=Z,17nm,0.9s						
HKT	Hockley	47.63	100	eP	P	07 58 52.5	+0.3
	comp=Z,20nm,1.3s						
HKT	Hockley	47.63	100	eP	P	07 58 52.5	+0.3
HKT				pmax	pmax		
	comp=Z,20nm,1.3s						
OXF	Oxford	47.66	90	P	P	07 58 51.1	-1.3
	baz=318						
OXF	Oxford	47.66	90	eP	P	07 58 53.6	+1.2
	comp=Z,18nm,0.8s						
OXF	Oxford	47.66	90	eP	P	07 58 53.6	+1.2
OXF				pmax	pmax		
	comp=Z,18nm,0.8s						
V47A	Nunnelly	47.72	87	P	P	07 58 51.4	-1.5
	baz=318,SNR=6.6						
X45A	UM Field Stati	47.73	90	P	P	07 58 51.4	-1.6
	baz=318						
U48A	Cassie Pea, Po	47.75	86	P	P	07 58 51.8	-1.4
	baz=317						
W46A	Michie	47.76	88	P	P	07 58 51.0	-2.2
	baz=318,SNR=5.4						
T49A	Edmonton	47.87	84	P	P	07 58 53.3	-0.7
	baz=317						
M54A	Oil Creek Stat	47.88	76	P	P	07 58 52.8	-1.3
	baz=315						
143A	Socs Landing,	47.93	93	eP	P	07 58 55.2	+0.7
	comp=Z,13nm,0.9s						
MMNY	Mt. Morris Dam	47.94	73	eP	P	07 58 55.1	+0.5
	comp=Z,12nm,1.3s						
PLAL	Pickwick Lake	48.04	88	eP	P	07 58 55.7	+0.3
	comp=Z,13nm,0.6s						
N54A	Moraine State	48.09	77	P	P	07 58 54.2	-1.6
	baz=315						
W47A	Westpoint	48.10	88	P	P	07 58 54.6	-1.3
	baz=318,SNR=16						
V48A	Smith Brothers	48.17	87	P	P	07 58 56.0	-0.3
	baz=318						
V48A	Smith Brothers	48.17	87	eP	P	07 58 56.5	+0.1
	comp=Z,23nm,1.5s						
U49A	Red Boiling Sp	48.17	85	P	P	07 58 55.5	-0.9
	baz=317						
T50A	Nancy	48.31	84	P	P	07 58 57.0	-0.4
	baz=317						
Z45A	Winona	48.36	91	eP	P	07 58 58.6	+0.8
	comp=Z,9.0nm,0.7s						
IVI	Ivigtut	48.38	39	eP	P	07 58 58.4	+0.8
	comp=Z,15nm,1.0s						
ANGG	Ammassalik, Gr	48.41	30	eP	P	07 58 57.7	-0.1
	comp=Z,26nm,1.1s						
Y46A	Houston	48.43	90	P	P	07 58 56.8	-1.6
	baz=319,SNR=6.4						
X47A	Russelville	48.51	89	P	P	07 58 57.5	-1.5
	baz=318						
S51A	Beattyville	48.53	82	P	P	07 58 56.8	-2.4
	baz=317,SNR=7.4						
W48A	Pulaski	48.55	87	P	P	07 58 57.7	-1.7
	baz=318,SNR=5.7						
V49A	McMinnville	48.65	86	P	P	07 58 58.4	-1.7
	baz=318,SNR=7.9						
FRNY	Flat Rock	48.71	69	eP	P	07 59 01.6	+1.1
	comp=Z,2.9nm,0.8s						
S52A	Salyersville	48.79	82	P	P	07 58 59.3	-1.8
	baz=317,SNR=5.5						
244A	Avery, Jackson	48.83	93	P	P	07 59 00.3	-1.1
	baz=320						
W49A	Belvidere	48.93	87	P	P	07 59 00.7	-1.6
	baz=318						
Y47A	UCPARC, Winfie	48.97	89	P	P	07 59 00.8	-1.7
	baz=319,SNR=9.4	

comp=Z,7.6nm,0.9s
SWET Sewanee 49.04 86 *e*P **P 07 59 03.9 +0.7**
comp=Z,8.7nm,0.8s
V50A Pikevile 49.16 85 P **P 07 59 02.7 -1.3**
baz=318
T52A Hallie 49.25 82 P **P 07 59 03.7 -1.0**
baz=317
Y48A Jasper 49.34 89 P **P 07 59 04.7 -0.7**
baz=319
O56A Blue Knob Stat 49.34 76 P **P 07 59 04.4 -1.0**
baz=316
X49A Woodville 49.35 87 P **P 07 59 04.0 -1.5**
baz=318,SNR=7.5
TZTN Tazewell 49.36 83 P **P 07 59 04.7 -0.8**
baz=317
TZTN Tazewell 49.36 83 *e*P **P 07 59 06.8 +1.2**
comp=Z,4.8nm,1.0s
Z47A Carrollton 49.38 90 P **P 07 59 05.0 -0.7**
baz=319
W50A Signal Mountai 49.39 86 P **P 07 59 04.6 -1.2**
baz=318,SNR=5.5
W50A Signal Mountai 49.39 86 *e*P **P 07 59 07.2 +1.3**
comp=Z,8.3nm,0.9s
SSPA Standing Stone 49.44 75 P **P 07 59 05.3 -0.7**
baz=316
SSPA Standing Stone 49.44 75 *e*P **P 07 59 07.2 +1.1**
comp=Z,8.2nm,0.9s
Z48A Northport 49.53 89 P **P 07 59 05.9 -0.9**
baz=319
CPCT Cooper Cave 49.64 85 *e*P **P 07 59 08.5 +0.9**
comp=Z,6.2nm,1.3s
147A Livingston 49.67 91 P **P 07 59 07.6 -0.3**
baz=319
LNIG Linares 49.72 107 *e*P **P 07 59 08.8 +0.3**
comp=Z,10nm,1.1s
X50B Fort Payne 49.76 87 P **P 07 59 08.1 -0.5**
baz=318
Y49A Blount Mountai 49.79 88 P **P 07 59 08.0 -0.9**
baz=319
Y49A Blount Mountai 49.79 88 *e*P **P 07 59 09.4 +0.5**
comp=Z,6.8nm,0.8s
V52A Sevierville 49.85 84 *e*P **P 07 59 10.3 +1.0**
comp=Z,10.0nm,1.3s
TKL Tuckaleechee C 49.89 84 P **P 07 59 10.5 +0.9**
comp=Z,1.7nm,0.5s,baz=198,slow=1.0,SNR=5.4
TKL LR LR 08 20 30.5
comp=Z,875nm,18.4s,baz=332,slow=36
TKL Tuckaleechee C 49.89 84 *e*P **P 07 59 11.4 +1.8**
comp=Z,14nm,1.4s
TKL Tuckaleechee C 49.89 84 *e*P **P 07 59 11.4 +1.8**
TKL pmax pmax
comp=Z,14nm,1.4s
247A Quitman 49.95 91 P **P 07 59 08.0 -2.1**
baz=320
LBNH Lisbon 49.98 68 P **P 07 59 08.6 -1.5**
baz=315
U53A Fall Branch 50.02 83 P **P 07 59 09.5 -1.1**
baz=318
148A Greensboro 50.07 90 P **P 07 59 09.6 -1.3**
baz=319
LRAL Lakeview Retre 50.09 89 P **P 07 59 10.0 -1.1**
baz=319
LRAL Lakeview Retre 50.09 89 *e*P **P 07 59 12.8 +1.7**
comp=Z,2.7nm,0.7s
X51A Calhoun 50.11 86 P **P 07 59 09.8 -1.5**
baz=318
Y50A Piedmont 50.14 87 P **P 07 59 11.6 +0.1**
baz=319
W52A Murphy 50.23 85 P **P 07 59 10.6 -1.6**
baz=318
Z49A Columbiana 50.23 89 P **P 07 59 11.3 -0.9**
baz=319
248A Dixon Mills 50.40 91 P **P 07 59 12.8 -0.6**
baz=320
V53A Saluda 50.41 84 P **P 07 59 11.9 -1.6**
baz=318,SNR=8.1
347A Saraland 50.49 92 P **P 07 59 13.6 -0.5**
baz=320
Y51A Rockmart 50.50 87 P **P 07 59 13.3 -0.9**
baz=319
Z50A Ashland 50.52 88 P **P 07 59 13.8 -0.6**
baz=319
Z50A Ashland 50.52 88 *e*P **P 07 59 14.8 +0.4**
comp=Z,5.2nm,0.9s
149A Jones 50.53 89 P **P 07 59 12.8 -1.7**
baz=319,SNR=6.3
BLA Blacksburg 50.57 80 P **P 07 59 14.5 -0.3**
baz=317
BLA Blacksburg 50.57 80 *e*P **P 07 59 16.4 +1.7**
comp=Z,6.3nm,0.8s
BLA Blacksburg 50.57 80 *e*P **P 07 59 16.4 +1.7**
BLA pmax pmax
comp=Z,6.0nm,0.8s
PKME Peaks-Kenny Pk 50.58 65 P **P 07 59 13.8 -0.8**
baz=315
W53A Cullowhee 50.59 84 P **P 07 59 14.6 -0.4**
baz=318
CN2 Changchun 50.60 292 *e*P **P 07 59 13.5 -1.3**
CN2 *es*P pP 07 59 20.5 +0.2
CN2 pmax pmax
comp=Z,10.0nm,0.6s
X52A Dahlonega 50.61 85 P **P 07 59 14.0 -1.1**
baz=318,SNR=5.7
249A Camden 50.83 90 P **P 07 59 15.3 -1.4**
baz=320,SNR=5.2
BG3 Lake Jocassee 50.85 84 *e*P **P 07 59 17.9 +1.1**
comp=Z,21nm,1.5s
X53A Estanollee 51.01 85 P **P 07 59 16.7 -1.4**
baz=318
Y52A Lilburn 51.07 86 P **P 07 59 17.5 -1.1**
baz=319
250A Grady 51.29 89 P **P 07 59 18.4 -1.8**
baz=320
Y53A Monroe 51.34 86 P **P 07 59 19.1 -1.4**
baz=319
Z52A Williamson 51.39 87 P **P 07 59 19.8 -1.1**
baz=319
151A Opelika 51.39 88 P **P 07 59 19.1 -1.8**
baz=320
KMSC Kings Mountain 51.60 83 *e*P **P 07 59 22.8 +0.3**
comp=Z,9.1nm,0.6s
152A Waverly Hall 51.62 88 P **P 07 59 21.7 -0.9**
baz=319
449A Pace 51.71 91 P **P 07 59 22.3 -1.0**
baz=320
GOGA Godfrey 51.74 86 P **P 07 59 22.5 -1.0**
baz=319
Z53A Monticello 51.78 86 P **P 07 59 22.9 -0.9**
baz=319
HODGE Hodges 51.78 84 *e*P **P 07 59 25.4 +1.6**
comp=Z,5.8nm,1.1s
Y54A Tignall 51.83 85 P **P 07 59 22.8 -1.3**
baz=319
BRYW Bryant College 51.84 70 *e*P **P 07 59 24.2 0.0**
comp=Z,5.1nm,0.9s
EMMW East Machias 51.88 65 *e*P **P 07 59 24.3 -0.1**
comp=Z,6.5nm,1.1s
252A Lumpkin 52.12 88 P **P 07 59 25.3 -1.0**
baz=320
351A Pinckard 52.20 89 P **P 07 59 26.1 -0.8**
baz=320
Z54A Sparta 52.21 86 P **P 07 59 26.0 -1.0**
baz=319
JSC Jenkinsville 52.29 84 *e*P **P 07 59 28.0 +0.4**
comp=Z,12nm,1.2s
JSC Jenkinsville 52.29 84 *e*P **P 07 59 28.0 +0.4**
JSC pmax pmax
comp=Z,12nm,1.2s
253A Americus 52.40 88 P **P 07 59 27.9 -0.5**
baz=320
253A Americus 52.40 88 *e*P **P 07 59 29.0 +0.6**
comp=Z,11nm,1.0s
352A Blakely 52.41 89 P **P 07 59 28.0 -0.5**
baz=320
BORG Borgarnes 53.17 24 LR LR 08 24 53.3
comp=Z,137nm,19.5s,baz=340,slow=39
BORG Borgarnes 53.17 24 *i* P **P 07 59 36.3 +2.7**
156A Sylvania 53.39 85 P **P 07 59 35.9 +0.1**
baz=320
KEV Kevo 53.60 0 *e*P **P 07 59 37.1 +0.3**
comp=Z,64nm,1.4s
KEV Kevo 53.60 0 *e*P **P 07 59 37.1 +0.3**
KEV pmax pmax
comp=Z,64nm,1.4s
ARCES ARCESS Array B 53.82 1 P **P 07 59 38.4 0.0**
comp=Z,2.4nm,0.4s,baz=7.9,slow=7.5,SNR=35
ARCES ARCESS Array B 53.82 1 *e*P **P 07 59 38.5 +0.1**
ARE0 ARCESS Array S 53.82 1 *e*P **P 07 59 38.7 +0.3**
comp=Z,36nm,1.4s
KSRS Korea Array 53.94 285 P **P 07 59 38.8 -0.9**
comp=Z,3.3nm,0.8s,baz=39,slow=6.6,SNR=10
KSRS LR LR 08 25 09.2
comp=Z,95nm,18.2s,baz=35,slow=39
KSAR Wonju Array Be 53.97 285 P **P 07 59 38.8 -1.1**
KSAR Wonju Array Be 53.97 285 P **P 07 59 38.8 -1.1**
TLY Talaya 54.88 312 P **P 07 59 45.5 -0.8**
comp=Z,6.1nm,1.0s,baz=7.6,slow=13,SNR=4.3
TLY Talaya 54.88 312 *e*P **P 07 59 46.9 +0.5**
comp=Z,15nm,1.2s
TLY Talaya 54.88 312 *e*P **P 07 59 46.6 +0.2**
TLY pmax pmax
comp=Z,15nm,1.3s
SGF Sodankyl 55.93 0 P **P 07 59 55.1 +1.4**
SGF pmax pmax
comp=Z,19nm,1.2s
ZAK Zakamensk 56.02 311 *e*P **P 07 59 54.0 -0.7**
ZAK pmax pmax
comp=Z,4.0nm,1.4s
ULN Ulaanbaatar 56.34 307 *e*P **P 07 59 56.9 -0.2**
comp=Z,9.0nm,0.9s
ULN Ulaanbaatar 56.34 307*c i*P **P 07 59 56.7 -0.4**
ULN pmax pmax
comp=Z,11nm,1.0s
SONA1 Songino Array 56.64 308 *e*P **P 07 59 59.0 -0.2**
SONM Songino Array 56.65 308 P **P 07 59 59.3 0.0**
comp=Z,18nm,0.9s,baz=46,slow=7.6,SNR=47
KNGR Kungurtug, Tuv 58.15 315 *i* P **P 08 00 09.1 -0.7**
OUL Oulu 58.29 1 P **P 08 00 11.1 +0.7**
OUL pmax pmax
comp=Z,24nm,0.9s
NVS Novosibirsk 59.62 326 *i* P **P 08 00 19.8 +0.1**
HHC Hu-ho-hao-te 59.66 299 *e*P **P 08 00 22.3 +1.9**
HHC pP sP 08 00 27.3 -0.8
HHC S **S 08 08 32.8 +2.9**
HHC sS sS 08 08 38.0 -1.1
HHC pmax pmax
comp=Z,26nm,1.0s
HHC pmax pmax
comp=Z,110nm,5.1s
HHC LR LR
comp=Z,340nm,12.6s
HHC LR LR
comp=Z,310nm,12.6s
HHC LR LR
comp=Z,390nm,12.8s
ZAA0 Zalesovo Array 59.88 325 *e*P **P 08 00 21.6 +0.1**
comp=Z,24nm,1.2s
ZALV Zalesovo Beam 59.88 325 P **P 08 00 21.5 0.0**
comp=Z,7.2nm,0.6s,baz=29,slow=6.4,SNR=32
ZALV Zalesovo Beam 59.88 325 *e*P **P 08 00 21.4 -0.2**
ZALV Zalesovo Beam 59.88 325 *e*P **P 08 00 21.4 -0.2**
PRGR Permogore 60.87 350 *e*P **P 08 00 28.1 -0.1**
PRGR *e**PP **sP 08 00 35.3 -0.6**
PRGR pmax pmax
comp=Z,37nm,1.2s
NC204 NORSAR Array S 61.43 9 *e*P **P 08 00 32.1 +0.1**
NC303 NORSAR Array S 61.53 9 *e*P **P 08 00 33.6 +0.9**
NC405 NORSAR Array S 61.67 8 *e*P **P 08 00 33.2 -0.4**
NBO00 NORSAR Array S 61.67 9 *e*P **P 08 00 34.3 +0.6**
NB201 NORSAR Array S 61.70 9 *e*P **P 08 00 33.7 -0.2**
NB2 NORSAR Subarra 61.70 9 P **P 08 00 34.0 +0.1**
comp=Z,4.9nm,0.7s,baz=351,slow=6.9
NAO01 NORSAR Array S 61.87 9 *e*P **P 08 00 35.4 +0.4**
FIA1 FINESS Array S 61.95 1 *e*P **P 08 00 36.1 +0.6**
comp=Z,18nm,1.0s
FINES FINESS Array B 61.95 1 P **P 08 00 35.8 +0.3**
comp=Z,3.4nm,0.5s,baz=5.0,slow=7.5,SNR=27
KLMR Klimovskoe 62.14 353 *e*P **P 08 00 35.9 -0.9**
KLMR pmax pmax
comp=Z,28nm,1.1s
KLMR Klimovskoe 62.14 353 *e*P **P 08 00 35.9 -0.9**
KLMR AMP 08 00 37.6
comp=Z,28nm,1.1s
DGZ Jazzator, Alta 62.60 321 *i* P **P 08 00 40.9 +0.6**
HFS Hagfors 62.79 7 P **P 08 00 41.6 +0.4**
comp=Z,6.3nm,0.4s,baz=37,slow=3.6,SNR=56
NJ2 Nanjing 62.85 287 *e*P **P 08 00 42.8 +0.8**
NJ2 pmax pmax
comp=Z,12nm,0.5s
KONO Kongsberg 62.93 10 *e*P **P 08 00 42.5 +0.4**
comp=Z,47nm,1.4s
KONO Kongsberg 62.93 10*ce*P **P 08 00 43.1 +1.0**
KONO pmax pmax
comp=Z,26nm,1.2s
SVE Sverdlovsk 63.41 340 *e*P **P 08 00 45.4 +0.1**
SVE pmax pmax
comp=Z,35nm,1.1s
ARU Arti 64.16 341 P **P 08 00 49.6 -0.6**
baz=15,slow=4.4
ARU Arti 64.16 341*c i*P **P 08 00 49.8 -0.5**
ARU 08 01 23.2
ARU S **S 08 09 27.0 +0.9**
ARU SS **SS 08 13 31.5 -2.7**
ARU pmax pmax
comp=Z,25nm,1.0s
KURK Kurchatov 64.59 327 *e*P **P 08 00 53.1 -0.1**
comp=Z,18nm,1.3s
KURK Kurchatov 64.59 327 *e*P **P 08 00 53.1 -0.1**
KURK pmax pmax
comp=Z,18nm,1.3s
KURBB Kurchatov Arra 64.70 327 P **P 08 00 53.7 -0.2**
comp=Z,4.7nm,0.5s,baz=27,slow=6.9,SNR=62
BRVK Borovoye 64.80 333 *e*P **P 08 00 54.3 -0.1**
comp=Z,27nm,1.1s
BRVK Borovoye 64.80 333*c i*P **P 08 00 54.4 -0.1**
BRVK pmax pmax
comp=Z,24nm,1.0s
BVA0 Borovoye Array 64.80 333 *i* P **P 08 00 54.0 -0.5**
BVA0 pmax pmax
comp=Z,24nm,1.1s
BVAR Borovoye Array 64.80 333 P **P 08 00 54.3 -0.2**
comp=Z,9.9nm,0.6s,baz=47,slow=6.3,SNR=59
VSU Vasula 64.94 0 *ce*P **P 08 00 55.8 +0.5**
VSU pmax pmax
comp=Z,60nm,1.2s
EKA Eskdalemuir Ar 65.43 18 P **P 08 00 59.3 +0.8**
comp=Z,2.9nm,0.4s,baz=352,slow=4.4,SNR=32
ESK Eskdalemuir 65.43 18 *e*P **P 08 00 59.4 +0.8**
comp=Z,47nm,1.3s
ESK Eskdalemuir 65.43 18 *e*P **P 08 00 59.4 +0.8**
ESK pmax pmax
comp=Z,47nm,1.3s
TAOE Nuku Hiva Isla 66.40 166 *e*T T 09 12 52.2
comp=Z,41nm,0.4s
MK31 Makanchi Array 66.86 322 *e*P **P 08 01 07.7 -0.3**
MK31 Makanchi Array 66.86 322 *e*P **P 08 01 07.7 -0.3**
MKAR Makanchi Array 66.86 322 P **P 08 01 07.4 -0.5**
comp=Z,6.0nm,0.5s,baz=34,slow=6.7,SNR=106
MKAR Makanchi Array 66.86 322 *e*P **P 08 01 07.6 -0.3**
comp=Z,104nm,1.3s
MKAR Makanchi Array 66.86 322 *e*P **P 08 01 07.6 -0.3**
MKAR pmax pmax
comp=Z,104nm,1.3s
MK01 Makanchi Array 66.88 322 *e*P **P 08 01 07.7 -0.3**
MAKZ Makanchi 66.95 322 *e*P **P 08 01 08.3 -0.2**
comp=Z,17nm,1.1s
MAKZ Makanchi 66.95 322 *e*P **P 08 01 08.3 -0.2**
MAKZ pmax pmax
comp=Z,17nm,1.1s
LZH Lanzhou 67.11 301 *e*P **P 08 01 09.1 -0.8**
LZH pP pP 08 01 14.6 -0.9
LZH sP sP 08 01 17.1 -0.5
LZH PcP **PcP 08 01 37.4 -0.5**
LZH PP **PP 08 03 37.1 -0.2**
LZH *e*S S 08 09 53.3 -10
LZH SS **SS 08 14 20.4 -0.9**
LZH pmax pmax
comp=Z,21nm,1.3s
LZH pmax pmax
comp=Z,130nm,5.2s
WMQ Urumqi 67.51 317 P **P 08 01 13.3 +1.2**
WMQ pP sP 08 01 19.0 -0.9
WMQ sP pP 08 01 23.3 +5.5
WMQ pmax pmax
comp=Z,30nm,0.9s
WMQ pmax pmax
comp=Z,250nm,4.9s
WMQ LR LR
comp=Z,2μm,13.3s
WMQ LR LR
comp=Z,1μm,14.1s
WMQ LR LR
comp=Z,540nm,14.5s
OBN Obninsk 68.03 354⇓ *e*P **P 08 01 15.3 +0.2**
OBN *e**PP **sP 08 01 21.8 -1.1**
OBN *e**SP **pP 08 01 25.3 +4.5**
OBN pmax pmax
comp=Z,12nm,0.5s
OTUK Ortayu 68.64 329 P **P 08 01 18.8 -0.3**
OTUK pmax pmax
comp=Z,9.0nm,0.7s
JTS JuntasAbangare 69.47 103 LR LR 08 33 52.8
comp=Z,76nm,18.0s,baz=25,slow=38
AKTO Aktyubinsk 69.97 340 P **P 08 01 27.1 -0.2**
comp=Z,6.1nm,0.5s,baz=28,slow=6.3,SNR=25
AB31 Akbulak array 70.71 338 *i* P **P 08 01 31.4 -0.4**
AB31 pmax pmax
comp=Z,5.0nm,0.5s
ABKAR Akbulak array 70.71 338 *e*P **P 08 01 31.8 0.0**
PDGK Podgornoye 70.85 322 P **P 08 01 33.0 0.0**
PDGK pmax pmax
comp=Z,27nm,1.2s
CD2 Chengdu 71.39 298 P **P 08 01 35.5 -0.8**
CD2 pmax pmax
comp=Z,13nm,0.5s
CLL Collm 71.49 9⇑ *i*P **P 08 01 37.1 +0.6**
comp=Z,22nm,1.5s
CLL *e*pP **pP 08 01 42.0 -0.2**
CLL *e*S **S 08 10 57.0 +3.0**
CLL Collm 71.49 9⇑ *i*P **P 08 01 37.1 +0.6**
CLL *e**PP **pP 08 01 42.0 -0.2**
CLL *e*S **S 08 10 57.0 +3.0**
CLL pmax pmax
comp=Z,22nm,1.5s
BAIF Baives 71.70 15 *e*P **P 08 01 38.6 +0.8**
BAIF pmax pmax
comp=Z,40nm,1.5s
GIVF Givet 71.74 15 *e*P **P 08 01 38.7 +0.7**
GIVF pmax pmax
comp=Z,18nm,1.1s
VSR Storozhevoye 71.75 352 *e*P **P 08 01 37.0 -1.0**
VSR pmax pmax
comp=Z,20nm,0.9s
PMOR Pomariorio Ree 71.80 175 *e*T T 09 19 33.6
comp=Z,80nm,0.3s
VORD Divnogorie 71.98 352 *e*P **P 08 01 37.4 -2.0**
VORD pmax pmax
comp=Z,30nm,0.4s
BRG Berggiesshubel 72.00 9 *i* P **P 08 01 40.4 +0.8**
comp=Z,12nm,1.1s
BRG *i* 08 01 46.5
comp=Z,8.0nm,1.0s
BRG *i* 08 01 55.1
comp=Z,8.1nm,1.1s
BRG Berggiesshubel 72.00 9 *i* P **P 08 01 40.4 +0.8**
BRG *i* 08 01 46.5
BRG *i* 08 01 55.1
BRG pmax pmax
comp=Z,12nm,1.1s
BRG pmax pmax
comp=Z,8.0nm,1.0s
BRG pmax pmax
comp=Z,8.0nm,1.1s
TKM2 Tokmak 2 72.49 325 P **P 08 01 43.5 +0.6**
SNR=15
TKM2 Tokmak 2 72.49 325 P **P 08 01 43.1 +0.2**
TKM2 pmax pmax
comp=Z,17nm,1.0s
USP Ospenovka 72.52 326 P **P 08 01 43.8 +0.9**
SNR=6.3
CHMS Chumysh 72.68 325 P **P 08 01 44.5 +0.7**
SNR=8.9
DPC Dobruska-Polom 72.70 7 *e*P **P 08 01 45.0 +1.1**
DPC *ep*P **sP 08 01 50.6 -1.0**
DPC Dobruska-Polom 72.70 7 *e*P **P 08 01 45.0 +1.1**
DPC *e* 08 01 50.6
DPC MLR MLR
comp=Z,700nm,16.0s
AKASG Malin Array Be 72.71 359 P **P 08 01 43.4 -0.4**
comp=Z,5.6nm,0.5s,baz=5.8,slow=6.1,SNR=8.1
AKBB Malin Array Si 72.71 359 *e*P **P 08 01 43.8 +0.1**
comp=Z,34nm,1.3s
AKBB Malin Array Si 72.71 359 *e*P **P 08 01 43.8 +0.1**
AKBB pmax pmax
comp=Z,34nm,1.3s
KIEV Kiev 72.71 359 *e*P **P 08 01 43.6 -0.2**
comp=Z,33nm,1.3s
KIEV Kiev 72.71 359*c i*P **P 08 01 43.4 -0.4**
KIEV pmax pmax
comp=Z,17nm,1.0s
TARG Taragay, Kyrgy 72.84 323 *e*P **P 08 01 43.8 -1.5**
comp=Z,8.1nm,0.9s
FRU Bishkek 72.87 325 *e*P **P 08 01 45.0 0.0**
FRU pmax pmax
comp=Z,68nm,2.0s
ULHL Ulahol 72.89 324 P **P 08 01 46.0 +0.7**
SNR=7.5
KBK Karagaybulak 72.93 325 P **P 08 01 46.2 +0.7**
SNR=7.9
EKS2 Erkin-Say 73.29 326 P **P 08 01 48.4 +0.8**
SNR=15
KZA Kyzart 73.36 325 P **P 08 01 49.2 +0.9**
SNR=5.6
GYA Guiyang 73.62 293 *e*P **P 08 01 50.6 +0.9**
GYA pmax pmax
comp=Z,10.0nm,1.0s
KHC Kasperske Hory 73.70 9 *e*P **P 08 01 51.3 +1.5**
KHC *ep*P **sP 08 01 58.4 +0.9**
KHC Kasperske Hory 73.70 9 *e*P **P 08 01 51.1 +1.3**
comp=Z,6.6nm,1.3s
KHC Kasperske Hory 73.70 9 *e*P **P 08 01 51.3 +1.5**
KHC *e* 08 01 58.4
CDF Champ du Feu 73.73 14 *e*P **P 08 01 50.7 +0.7**
CDF pmax pmax
comp=Z,18nm,1.2s
KWP Kalwaria Pacla 73.73 3 *e*P **P 08 01 51.1 +1.2**
comp=Z,116nm,0.8s
VRAC Vranov 73.76 7 *e*P **P 08 01 50.8 +0.7**
AML Almayashu 73.80 326 P **P 08 01 52.0 +1.1**
SNR=5.6
MNAS Manas 73.83 327 P **P 08 01 51.0 +0.2**
MNAS pmax pmax
comp=Z,28nm,1.2s
KK31 Karatay Array 73.86 328 *e*P **P 08 01 50.8 0.0**
KK31 Karatay Array 73.86 328 *e*P **P 08 01 50.8 0.0**
KKAR Karatay Array 73.86 328 *e*P **P 08 01 50.8 0.0**
KKAR Karatay Array 73.86 328 *e*P **P 08 01 50.8 0.0**
ECH Echery 73.91 14 *e*P **P 08 01 52.0 +1.0**
comp=Z,17nm,1.2s
ECH Echery 73.91 14 *e*P **P 08 01 52.0 +1.0**
ECH pmax pmax
comp=Z,17nm,1.2s
KRUC Moravsky 73.99 7 *e*P **P 08 01 52.0 +0.6**
GERES GERESS Array B 74.00 9 P **P 08 01 52.5 +0.9**
comp=Z,2.3nm,0.5s,baz=345,slow=4.6,SNR=13
GEA0 GERESS Array S 74.00 9 *e*P **P 08 01 52.5 +0.9**
HAU Haudompre 74.01 14 *e*P **P 08 01 52.1 +0.6**
HAU pmax pmax
comp=Z,23nm,1.2s
HINF Hinteralfeld 74.26 14 *e*P **P 08 01 53.5 +0.5**
HINF pmax pmax
comp=Z,26nm,1.5s
TIAR Tiarei 74.27 176 *e*T T 09 22 40.2
comp=Z,8.3nm,0.4s
JAVC Velka Javorina 74.28 6 *e*P **P 08 01 54.0 +0.9**
PPT2 Papeete2 74.30 177 *e*LR LR 08 24 31.3
comp=Z,270nm,21.0s
PPT2 Papeete2 74.30 177 *e*T T 09 22 41.8
comp=Z,5.8nm,0.4s
PAE Paea 74.37 177 *e*T T 09 22 47.2
comp=Z,1.7nm,0.3s
TVO Taravao 74.50 176 *e*T T 09 22 56.9
comp=Z,1.7nm,0.3s
SSF Saint Saulge 74.52 16 *e*P **P 08 01 55.1 +0.6**
SSF pmax pmax
comp=Z,17nm,0.9s
VYHS Vyhne 74.71 6 *e*P **P 08 01 56.5 +0.9**
VYHS pmax pmax
comp=Z,7.0nm,1.2s
VYHS Vyhne 74.71 6 *e*P **P 08 01 56.5 +0.9**
UZH Uzhgorod 74.72 3⇓ *e*P **P 08 01 56.1 +0.5**
UZH *e* 08 02 03.1
UZH *e* 08 02 06.3
MODS Modra-Piesok 74.74 7 *e*P **P 08 01 56.3 +0.5**
MODS pmax pmax
comp=Z,18nm,1.2s
MODS Modra-Piesok 74.74 7 *e*P **P 08 01 56.3 +0.5**
AVF Avril sur Loir 74.76 17 *e*P **P 08 01 56.2 +0.3**

AVF				pmax	pmax		
	comp=Z,11nm,0.8s						
BGF	**Bois d'Agland**	**74.90**	**17**	*e*P	**P**	**08 01 56.7**	**0.0**
BGF				pmax	pmax		
	comp=Z,18nm,0.9s						
SMF	**Signal de Mont**	**74.97**	**16**	*e*P	**P**	**08 01 56.7**	**-0.5**
SMF				pmax	pmax		
	comp=Z,36nm,1.4s						
MOA	**Molln**	**75.03**	**9**	*e*P	**P**	**08 01 59.1**	**+1.6**
	comp=Z,7.3nm,1.4s						
RETA	**Reutte**	**75.05**	**11**	*e*P	**P**	**08 01 59.0**	**+1.3**
	comp=Z,6.3nm,1.2s						
CONA	**Conrad Observa**	**75.08**	**8**	*e*P	**P**	**08 01 59.2**	**+1.4**
	comp=Z,11nm,1.2s						
DAVA	**Damuels**	**75.15**	**12**	*e*P	**P**	**08 01 59.8**	**+1.4**
	comp=Z,5.7nm,0.9s						
MOTA	**Moosalm**	**75.23**	**11**	*e*P	**P**	**08 01 58.6**	**-0.2**
	comp=Z,15nm,1.2s						
WATA	**Walderalm**	**75.29**	**11**	*e*P	**P**	**08 02 00.4**	**+1.3**
	comp=Z,13nm,1.0s						
CABF	**La Chapelle**	**75.34**	**15**	*e*P	**P**	**08 02 00.2**	**+0.8**
CABF				pmax	pmax		
	comp=Z,25nm,1.3s						
PSZ	**Piszkesteto**	**75.34**	**5**	*e*P	**P**	**08 02 00.6**	**+1.3**
	comp=Z,10nm,1.0s						
PSZ	**Piszkesteto**	**75.34**	**5**	*e*P	**P**	**08 02 00.6**	**+1.3**
PSZ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
WTTA	**Wattenberg**	**75.37**	**11**	*e*P	**P**	**08 02 00.5**	**+0.8**
	comp=Z,5.1nm,1.0s						
KSH	**Kashi**	**75.44**	**323**	P	**P**	**08 02 03.5**	**+3.4**
KSH				pP	PcP	08 02 10.9	-2.3
KSH				PP	**PP**	**08 04 55.5**	**+7.0**
KSH				S	**S**	**08 11 44.0**	**+4.7**
KSH				sS	sS	08 11 53.1	+4.4
KSH				SKS	**SKKSac**	**08 12 09.8**	**+0.6**
KSH				SS	SS	08 16 42.3	+14
KSH				pmax	pmax		
	comp=Z,31nm,0.7s						
KSH				pmax	pmax		
	comp=Z,310nm,5.0s						
KSH				LR	LR		
	comp=Z,1μm,12.9s						
KSH				LR	LR		
	comp=Z,1μm,11.0s						
KSH				LR	LR		
	comp=Z,3μm,12.8s						
FETA	**Feichten**	**75.51**	**11**	*e*P	**P**	**08 02 01.4**	**+1.0**
	comp=Z,9.0nm,1.1s						
KBA	**Koelnbreinsper**	**75.72**	**10**	*e*P	**P**	**08 02 03.0**	**+1.3**
	comp=Z,7.4nm,0.5s,SNR=7.4						
ARSA	**Arzberg**	**75.73**	**8**	*e*P	**P**	**08 02 02.4**	**+0.9**
	comp=Z,6.7nm,1.2s						
BUR08	**Bucovina Ar. S**	**75.77**	**1**	*e*P	**P**	**08 02 02.5**	**+0.6**
SFK	**Sufi-Kurgan**	**75.78**	**325**	P	**P**	**08 02 02.1**	**-0.1**
SFK				pmax	pmax		
	comp=Z,14nm,1.0s						
BUR04	**Bucovina Ar. S**	**75.80**	**1**	*e*P	**P**	**08 02 02.5**	**+0.5**
ABTA	**Abfaltersbach**	**75.97**	**10**	*e*P	**P**	**08 02 05.4**	**+2.4**
	comp=Z,5.8nm,0.9s						
MYKA	**Terra Mystica**	**76.19**	**9**	*i* P	**P**	**08 02 05.0**	**+0.8**
	comp=Z,4.5nm,0.8s						
SOKA	**Soboth**	**76.26**	**8**	*e*P	**P**	**08 02 05.9**	**+1.3**
	comp=Z,15nm,1.3s,SNR=7.1						
CAF	**Calviac**	**76.36**	**18**	*e*P	**P**	**08 02 03.9**	**-1.2**
CAF				pmax	pmax		
	comp=Z,10.0nm,1.0s						
OBKA	**Obir**	**76.39**	**9**	*e*P	**P**	**08 02 06.4**	**+1.0**
	comp=Z,19nm,1.0s,SNR=6.9						
LPG	**La Plagne**	**76.52**	**15**	*e*P	**P**	**08 02 09.1**	**+2.7**
LPG				pmax	pmax		
	comp=Z,25nm,1.5s						
KMI	**Kunming**	**76.69**	**296**	P	**P**	**08 02 08.4**	**+0.8**
KMI				pmax	pmax		
	comp=Z,13nm,0.5s						
KMI				pmax	pmax		
	comp=Z,120nm,4.5s						
EPF	**Esparros**	**77.89**	**20**	*e*P	**P**	**08 02 14.0**	**+0.2**
EPF				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MLR	**Muntele Rosu**	**77.93**	**1**	*e*P	**P**	**08 02 15.4**	**+1.3**
	comp=Z,15nm,1.4s						
MLR	**Muntele Rosu**	**77.93**	**1**	*e*P	**P**	**08 02 15.4**	**+1.3**
MLR				pmax	pmax		
	comp=Z,15nm,1.4s						
LSA	**Lhasa**	**78.23**	**307**	*e*P	**P**	**08 02 17.5**	**+1.0**
	comp=Z,12nm,1.0s						
LSA	**Lhasa**	**78.23**	**307**	*e*P	**P**	**08 02 17.5**	**+1.0**
LSA				pmax	pmax		
	comp=Z,12nm,1.0s						
KIV	**Kislovodsk**	**78.62**	**349**	*e*P	**P**	**08 02 18.4**	**+0.5**
KIV				pmax	pmax		
	comp=Z,22nm,1.1s						
NCK	**Nalchik**	**78.97**	**348**	*i* P	**P**	**08 02 20.4**	**+0.7**
NCK				pmax	pmax		
	comp=Z,28nm,1.0s						
TBI	**Tubuai**	**80.03**	**177**	*e*LR	LR	08 27 17.5	
	comp=Z,278nm,23.2s						
TBI	**Tubuai**	**80.03**	**177**	*e*T	T	09 29 51.0	
	comp=Z,21nm,0.4s						
ES19	**SONSECA Array**	**80.23**	**24**	*e*P	**P**	**08 02 27.2**	**+0.5**
ESDC	**Sonseca Array**	**80.25**	**24**	P	**P**	**08 02 27.9**	**+1.1**
	comp=Z,2.1nm,0.6s,baz=345,slow=4.4,SNR=13						
TTG	**Podgorica**	**80.78**	**6**	*e*P	**P**	**08 02 29.7**	**+0.3**
	comp=Z,12nm,1.0s						
TTG	**Podgorica**	**80.78**	**6**	*e*P	**P**	**08 02 29.7**	**+0.3**
TTG				pmax	pmax		
	comp=Z,12nm,1.0s						
VTS	**Vitosha**	**80.78**	**3**	*e*P	**P**	**08 02 29.6**	**-0.1**
	comp=Z,4.1nm,0.9s						
VTS	**Vitosha**	**80.78**	**3**	*e*P	**P**	**08 02 29.6**	**-0.1**
VTS				pmax	pmax		
	comp=Z,4.0nm,0.9s						
RKT	**Rikitea**	**81.17**	**163**	*e*T	T	09 31 18.9	
	comp=Z,6.7nm,0.3s						
NIL	**Nilore**	**81.67**	**323**	*e*P	**P**	**08 02 34.7**	**+0.2**
	comp=Z,36nm,1.3s						
NIL	**Nilore**	**81.67**	**323**	*e*P	**P**	**08 02 34.7**	**+0.2**
NIL				pmax	pmax		
	comp=Z,36nm,1.3s						
GEYT	**Alibeck**	**81.91**	**336**	P	**P**	**08 02 35.1**	**-0.5**
	comp=Z,18nm,0.5s,baz=41,slow=4.6,SNR=7.4						
GYA0B	**ALIBECK ARRAY**	**81.91**	**336**	*e*P	**P**	**08 02 36.2**	**+0.6**
	comp=Z,9.5nm,0.9s						
GUN	**Gumba**	**82.05**	**310**	*e*P	**P**	**08 02 36.8**	**-0.1**
	comp=Z,21nm,0.6s						
JIRN	**Jiri**	**82.14**	**310**	*e*P	**P**	**08 02 37.7**	**+0.3**
	comp=Z,62nm,0.5s						
KBL	**Kabul**	**82.20**	**326**	*e*P	**P**	**08 02 35.8**	**-1.6**
	comp=Z,13nm,1.3s						
KBL	**Kabul**	**82.20**	**326**	*e*P	**P**	**08 02 35.8**	**-1.6**
KBL				pmax	pmax		
	comp=Z,13nm,1.3s						
ILGA	**Ilgaz**	**82.21**	**355**	*e*P	**P**	**08 02 38.7**	**+1.3**
	comp=Z,12nm,1.2s						
KKN	**Kakani**	**82.41**	**311**	*e*P	**P**	**08 02 38.6**	**0.0**
	comp=Z,14nm,0.5s						
GKN	**Gorkha**	**82.48**	**311**	*e*P	**P**	**08 02 39.0**	**+0.1**
	comp=Z,44nm,1.0s						
FNA	**Florina**	**82.52**	**4**	*e*P	**P**	**08 02 38.7**	**-0.1**
	comp=Z,17nm,1.3s						
FNA	**Florina**	**82.52**	**4**	*e*P	**P**	**08 02 38.7**	**-0.1**
FNA				pmax	pmax		
	comp=Z,17nm,1.3s						
ALN	**Alexandroupoli**	**82.52**	**1**	*e*P	**P**	**08 02 38.2**	**-0.5**
	comp=Z,9.2nm,1.1s						
ALN	**Alexandroupoli**	**82.52**	**1**	*e*P	**P**	**08 02 38.2**	**-0.5**
ALN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
DANN	**Dangsing**	**82.54**	**312**	*e*P	**P**	**08 02 39.7**	**+0.3**
	comp=Z,51nm,0.7s						
PKIN	**Phulchoki**	**82.55**	**310**	*e*P	**P**	**08 02 39.8**	**+0.4**
	comp=Z,8.9nm,0.4s						
RAMN	**Ramite**	**82.59**	**309**	*e*P	**P**	**08 02 39.4**	**-0.2**
	comp=Z,68nm,1.0s						
DMN	**Daman**	**82.64**	**311**	*e*P	**P**	**08 02 39.9**	**0.0**
	comp=Z,21nm,0.6s						
KOLN	**Koldanda**	**83.12**	**312**	*e*P	**P**	**08 02 42.1**	**-0.2**
	comp=Z,9.7nm,0.6s						
LIT	**Litokhoron**	**83.25**	**4**	*e*P	**P**	**08 02 42.8**	**+0.3**
	comp=Z,20nm,1.1s						
LIT	**Litokhoron**	**83.25**	**4**	*e*P	**P**	**08 02 42.8**	**+0.3**
LIT				pmax	pmax		
	comp=Z,20nm,1.1s						
ANTO	**Ankara**	**83.43**	**356**	*e*P	**P**	**08 02 44.4**	**+0.8**
	comp=Z,19nm,1.1s						
ANTO	**Ankara**	**83.43**	**356**	P	**P**	**08 02 44.4**	**+0.8**
ANTO				pmax	pmax		
	comp=Z,19nm,1.1s						
BR231	**Keskin MP Arra**	**83.46**	**356**	*e*P	**P**	**08 02 45.2**	**+1.4**
BR131	**Keskin Array S**	**83.54**	**355**	*e*P	**P**	**08 02 44.4**	**+0.2**
BRTR	**Keskin Array B**	**83.54**	**355**	P	**P**	**08 02 43.9**	**-0.4**
	comp=Z,4.6nm,1.0s,baz=35,slow=4.5,SNR=17						
CMAR	**Chiang Mai Arr**	**84.18**	**295**	P	**P**	**08 02 46.3**	**-1.3**
	comp=Z,3.3nm,0.6s,baz=28,slow=6.5,SNR=7.4						
CM01	**Chiang Mai Arr**	**84.20**	**295**	*e*P	**P**	**08 02 46.4**	**-1.3**
MANT	**Manisa**	**84.92**	**359**	*e*P	**P**	**08 02 51.3**	**0.0**
	comp=Z,82nm,1.4s						
MDT	**Midelt**	**86.65**	**26**	P	**P**	**08 03 00.7**	**+0.8**
	comp=Z,1.9nm,0.8s,baz=308,slow=4.5,SNR=3.7						
RAYN	**Ar Rayn**	**98.35**	**343**	*e*P	Pdif	08 03 54.7	+0.5
	comp=Z,4.3nm,1.0s						
RAYN	**Ar Rayn**	**98.35**	**343**	*e*P	Pdif	08 03 54.7	+0.5
RAYN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
QSPA	**South Pole Qui**	**146.73**	**180**	PKPbc	**PKPdf**	**08 09 55.5**	**+0.6**
	comp=Z,1.8nm,0.8s,baz=359,slow=2.4,SNR=6.6						
QSPA	**South Pole Qui**	**146.73**	**180**	*e*PKPdf	**PKPbc**	**08 09 56.3**	**-0.3**
BOSA	**Boshof**	**151.66**	**3**	PKPbc	**PKPbc**	**08 10 09.5**	**-0.9**
	comp=Z,2.3nm,0.4s,baz=340,slow=2.8,SNR=14						
BOSA	**Boshof**	**151.66**	**3**	*e*PKPbc	**PKPbc**	**08 10 09.8**	**-0.6**

NIED ***22*** *07:58:00,39.˚40N×143.˚70E,h14km,Mw5.0 Best double couple: M₀3.60000×10¹⁶ NP1:φs207.00000°,δ33.00000°, λ130.00000°. NP2:φs341.00000°,δ65.00000°,λ67.00000°.*
IDC ***22*** *07:58:39.4±0.4,39.˚36N×143.˚60E,h0km,mb4.6/49, mb1 4.7/55,mb1mx4.6/84,mbtmp4.7/55,ML4.4/5,MS4.4/49, Ms1 4.4/49,ms1mx4.3/69,Error ellipse: s-maj=10.5km s-min=8.8km az=114.0*
JMA ***22*** *07:58:40.6±0.1,39.˚40N×143.˚67E,h37km,M5.2*
JMA Felt II J1.
ISCJB ***22*** *07:58:40.8±0.6,39.˚39N±0.˚02×143.˚53E±0.˚02,h20km±4km, mb4.9/378,MS4.7/81,Error ellipse: s-maj=3.3km s-min=2.1km az=157.2*
MOS ***22*** *07:58:41.0±1.0,39.˚43N×143.˚54E,h24km,mb5.1/108, MS4.8/25,Error ellipse: s-maj=6.9km s-min=4.5km az=96.0*
BJI ***22*** *07:58:42.1,39.˚49N×143.˚42E,h28km,mb5.1/79,mB5.2/59, Ms5.1/84,MS7 5.0/78*
NEIC ***22*** *07:58:43.4±0.9,39.˚37N×143.˚49E,h26km±6km,mb5.0/270, Error ellipse: s-maj=3.5km s-min=2.0km az=146.0*
NEIC Recorded [2 JMA] in Iwate and Miyagi.
GCMT ***22*** *07:58:43.4±0.2,39.˚48N×143.˚74E,h24km±1km,MW5.1/96, Moment Tensor Solution. s37,c44; s96,c141; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr2.54±.22; Mθθ1.16±.13; Mφφ-3.70±.15; Mrθ-1.18±.23; Mφθ-1.12±.08; Mφr3.72±.25; Best double couple: M₀5.19500×10¹⁶ NP1:φs347.00000°,δ73.00000°,λ67.00000°. NP2: φs223.00000°,δ29.00000°,λ142.00000°. Principal axes: T 4.9140, Plg56.0000°, Azm227.0000°; N 0.5630, Plg22.0000°, Azm354.0000°; P -5.4770, Plg24.0000°, Azm95.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 22 07:58:43.3±0.5,39.˚41N±0.˚03×143.˚59E±0.˚03,h28km±3km, h28km:pP-P,n989,σ1§37/998,mb5.0/385,MS4.8/81, 41C-21D,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**1.38**	**277**	⇑P	**Pn**	**07 59 05.1**	**-1.6**
MIYJ				*e*S	**Sn**	**07 59 23.0**	**-1.0**
JTH	**Tanohata**	**1.43**	**292**	⇑P	**Pn**	**07 59 05.7**	**-1.7**
JTH				*e*S	**Sn**	**07 59 24.1**	**-1.2**
OFUJ	**Ofunato**	**1.53**	**258**	⇑P	**Pn**	**07 59 07.2**	**-1.5**
OFUJ				*e*S	**Sn**	**07 59 26.2**	**-1.5**
JOM	**Ohasama**	**1.78**	**273**	⇑P	**Pn**	**07 59 11.2**	**-1.0**
JOM				*e*S	**Sn**	**07 59 33.7**	**-0.2**
JKZ	**Kuzumaki**	**1.84**	**289**	⇑P	**Pn**	**07 59 12.0**	**-1.0**
JANG	**Nango**	**1.86**	**302**	⇑P	**Pn**	**07 59 11.2**	**-2.1**
JANG				*e*S	**Sn**	**07 59 33.6**	**-2.4**
JMK	**Ichinoseki**	**1.90**	**257**	⇑P	**Pn**	**07 59 12.6**	**-1.2**
JMK				*e*S	**Sn**	**07 59 36.0**	**-0.8**
JIO	**Ouri**	**1.99**	**242**	⇑P	**Pn**	**07 59 13.3**	**-1.8**
JIO				*e*S	**Sn**	**07 59 37.3**	**-1.8**
JYK	**Kaneyama**	**2.56**	**260**	⇑P	**Pn**	**07 59 22.3**	**-0.6**
ERM	**Erimo**	**2.62**	**353**	*e*Pn	**Pn**	**07 59 23.6**	**-0.1**
ERM				*e*Sn	**Sn**	**07 59 54.5**	**-0.1**
ERM	**Erimo**	**2.62**	**353**	*c e*P	**Pn**	**07 59 23.3**	**-0.4**
ERM				pmax	pmax		
	comp=Z,84nm,0.7s						
JOT	**Ohata**	**2.76**	**316**	P	**Pn**	**07 59 25.0**	**-0.7**
JNBK	**Urakawa-nobuka**	**2.93**	**348**	⇑P	**Pn**	**07 59 27.6**	**-0.4**
JNBK				*e*S	**Sn**	**08 00 01.6**	**-0.8**
JKB	**Kayabe**	**3.15**	**323**	P	**Pn**	**07 59 31.2**	**+0.2**
JFT	**Otama**	**3.18**	**235**	⇑P	**Pn**	**07 59 30.1**	**-1.3**
JCH	**Churui**	**3.20**	**357**	P	**Pn**	**07 59 30.2**	**-1.5**
JCH				*e*S	**Sn**	**08 00 07.1**	**-1.9**
JAW	**Awa shima**	**3.52**	**256**	⇑P	**Pn**	**07 59 35.8**	**-0.3**
JNS	**Sasagawa**	**3.71**	**246**	⇑P	**Pn**	**07 59 38.2**	**-0.5**
JAG	**Ashikaga**	**4.43**	**229**	⇑P	**Pn**	**07 59 47.5**	**-1.1**
ASAJ	**Asahikawa**	**4.76**	**351**	Pn	**Pn**	**07 59 52.7**	**-0.4**
	comp=Z,16nm,0.3s,baz=188,slow=12,SNR=40						
ASAJ				Sn	**Sn**	**08 00 45.2**	**-2.1**
	comp=Z,24nm,0.3s,baz=43,slow=33,SNR=6.6						
JGK	**Kuni**	**4.84**	**236**	P	**Pn**	**07 59 55.1**	**+0.8**
JJN	**Nakama**	**4.86**	**243**	P	**Pn**	**07 59 54.9**	**+0.4**
YUK	**Yuzh-Kuril'sk**	**4.92**	**19**	*c i*P	**Pn**	**07 59 53.1**	**-2.2**
YUK				*i* S	**Sn**	**08 00 47.6**	**-3.7**
YUK				pmax	pmax		
	comp=N,429nm,0.3s						
YUK				pmax	pmax		
	comp=Z,767nm,0.3s						
YUK				pmax	pmax		
	comp=E,293nm,0.4s						
YUK				smax	smax		
	comp=E,221nm,0.6s						
YUK				smax	smax		
	comp=N,3μm,0.8s						
YUK				MLR	MLR		
	comp=Z,3μm,12.0s						
YUK				MLR	MLR		
	comp=N,3μm,11.0s						
YUK				smax	smax		
	comp=N,86nm,0.3s						
YUK				smax	smax		
	comp=E,114nm,0.4s						
JRY	**Ryogami san**	**5.03**	**229**	P	**Pn**	**07 59 55.7**	**-1.2**
SHO	**Shikotan**	**5.07**	**28**	*e*P	**Pn**	**07 59 54.7**	**-2.7**
SHO				*i* S	**Sn**	**08 00 50.0**	**-5.0**
SHO				pmax	pmax		
	comp=Z,181nm,0.5s						
SHO				pmax	pmax		
	comp=N,105nm,0.3s						
SHO				pmax	pmax		
	comp=E,87nm,0.3s						
SHO				smax	smax		
	comp=N,868nm,0.4s						
SHO				smax	smax		
	comp=E,948nm,0.4s						
SHO				smax	smax		
	comp=N,4μm,14.0s						
SHO				smax	smax		
	comp=E,3μm,14.0s						
SHO				smax	smax		
	comp=Z,4μm,14.0s						
MAJO	**Matsushiro**	**5.13**	**238**	*e*Pn	**Pn**	**07 59 58.4**	**+0.2**
MAJO	**Matsushiro**	**5.13**	**238**	*c i*P	**Pn**	**07 59 58.5**	**+0.2**
MAT	**Matsushiro**	**5.13**	**238**	P	**Pn**	**07 59 58.7**	**+0.5**
MAT	**Matsushiro**	**5.13**	**238**	P	**Pn**	**07 59 58.4**	**+0.2**
MAT				S	**Sn**	**08 00 55.7**	**-0.8**
MJAR	**Matsushiro Arr**	**5.13**	**238**	Pn	**Pn**	**07 59 58.5**	**+0.3**
	comp=Z,40nm,0.3s,baz=44,slow=12,SNR=389						
MJAR				LR	LR	08 01 49.0	
	comp=Z,3μm,18.2s,baz=55,slow=37						
MJB9	**Matsu-Tunnel**	**5.13**	**238**	*e*Pn	**Pn**	**07 59 58.5**	**+0.2**
JNG	**Nsakai**	**5.28**	**237**	⇑P	**Pn**	**08 00 00.7**	**+0.3**
JGN	**Niukaw**	**5.90**	**239**	P	**Pn**	**08 00 09.5**	**+0.6**
INU	**Inuyama**	**6.62**	**234**	*e*Pn	**Pn**	**08 00 18.8**	**+0.1**
KUR	**Kuril'sk**	**6.62**	**27**	*d i*P	**Pn**	**08 00 18.3**	**-0.4**
KUR				*i* S	**Sn**	**08 01 29.4**	**-3.8**
KUR				pmax	pmax		
	comp=Z,254nm,0.6s						
KUR				pmax	pmax		
	comp=N,62nm,0.3s						
KUR				pmax	pmax		
	comp=E,47nm,0.2s						
KUR				smax	smax		
	comp=N,164nm,0.3s						
KUR				smax	smax		
	comp=E,56nm,0.4s						
KUR				smax	smax		
	comp=E,2μm,3.7s						
KUR				smax	smax		
	comp=N,2μm,2.5s						
KUR				MLR	MLR		
	comp=N,4μm,13.0s						
KUR				MLR	MLR		
	comp=Z,5μm,13.0s						
JHJ2	**Mitsune**	**6.99**	**207**	*e*Pn	**Pn**	**08 00 21.9**	**-1.8**
JHJ2				*e*Sn	**Sn**	**08 01 39.6**	**-2.7**
JHJ	**Hachijo jima 2**	**6.99**	**207**	Pn	**Pn**	**08 00 21.6**	**-2.2**
	comp=Z,63nm,0.3s,baz=73,slow=20,SNR=13						
JHJ				Sn	Sn	08 01 34.9	-7.5
	comp=Z,128nm,0.3s,baz=62,slow=23,SNR=8.4						
YSS	**Yuzh-Sakhalins**	**7.56**	**356**	*e*Pn	**Pn**	**08 00 33.0**	**+1.4**
YSS	**Yuzh-Sakhalins**	**7.56**	**356**	‖ *e*P	**Pn**	**08 00 33.3**	**+1.7**
YSS				*e*S	**Sn**	**08 01 59.4**	**+3.1**
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS				pmax	pmax		
	comp=N,40nm,0.7s						
YSS				pmax	pmax		
	comp=Z,200nm,4.1s						
YSS				smax	smax		
	comp=N,140nm,1.0s						
YSS				MLR	MLR		
	comp=Z,6μm,14.0s						
TEY	**Ternei**	**7.64**	**320**	*e*P	**Pn**	**08 00 34.9**	**+2.2**
TEY				pmax	pmax		
	comp=E,50nm,0.8s						
TEY				pmax	pmax		
	comp=N,40nm,0.7s						
TEY				pmax	pmax		
	comp=Z,50nm,0.7s						
TEY				MLR	MLR		
	comp=E,5μm,12.0s						
TEY				MLR	MLR		
	comp=N,4μm,16.0s						
TEY				MLR	MLR		
	comp=Z,8μm,13.0s						
JHS	**Saijyo**	**9.44**	**245**	P	**Pn**	**08 00 58.6**	**+1.1**
UGL	**Uglegorsk**	**9.72**	**354**	*e*P	Pn	08 00 56.3	-4.9
UGL				pmax	pmax		
	comp=Z,39nm,0.3s						
UGL				MLR	MLR		
	comp=E,5μm,15.0s						
UGL				MLR	MLR		
	comp=Z,3μm,13.0s						
UGL				MLR	MLR		
	comp=N,4μm,14.0s						
USRK	**Ussuriysk Ar.**	**9.89**	**303**	Pn	**Pn**	**08 01 05.2**	**+1.6**
	comp=N,1.6nm,0.3s,baz=114,slow=14,SNR=34						
USRK				LR	LR	08 04 42.6	
	comp=N,2μm,19.4s,baz=104,slow=37						
JTO	**Tosashimizu**	**10.90**	**236**	P	**Pn**	**08 01 16.3**	**-1.1**
TYV	**Tymovskoe**	**11.47**	**357**	*e*P	**Pn**	**08 01 24.5**	**-0.6**
TYV				*e*S	**Sn**	**08 03 31.4**	**-0.8**
TYV				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TYV				pmax	pmax		
	comp=Z,300nm,3.4s						
TYV				smax	smax		
	comp=E,900nm,7.4s						
TYV				MLR	MLR		
	comp=E,2μm,16.0s						
TYV				MLR	MLR		
	comp=Z,3μm,16.0s						
MDJ	**Mudanjiang**	**11.63**	**301**	P	**Pn**	**08 01 24.9**	**-2.5**
MDJ				S	**Sn**	**08 03 38.8**	**+2.5**
MDJ				SS	**SnSn**	**08 03 49.5**	**+1.4**
MDJ				pmax	pmax		
	comp=Z,34nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,1μm,8.0s						
MDJ				LR	LR		
	comp=Z,5μm,11.2s						
MDJ				LR	LR		
	comp=Z,6μm,13.9s						
MDJ				LR	LR		
	comp=Z,9μm,14.5s						
MDJ	**Mudanjiang**	**11.63**	**301**	*e*Pn	**Pn**	**08 01 28.1**	**+0.8**
JNU	**Nakatsue**	**12.02**	**242**	Pn	**Pn**	**08 01 31.9**	**-0.8**
	comp=Z,1.3nm,0.3s,baz=69,slow=6.8,SNR=20						
JNU				LR	LR	08 06 39.0	
	comp=Z,5μm,18.4s,baz=81,slow=40						
JNU	**Nakatsue**	**12.02**	**242**	*e*Pn	**Pn**	**08 01 31.6**	**-1.2**
CBIJ	**Chichi jima**	**12.34**	**186**	*e*Pn	**Pn**	**08 01 36.2**	**-0.9**
GRNR	**Gornyy**	**12.43**	**338**	*e*P	**Pn**	**08 01 39.2**	**+1.0**
GRNR				pmax	pmax		
	comp=Z,42nm,1.0s						
KSRS	**Korea Array**	**12.44**	**266**	Pn	**Pn**	**08 01 39.5**	**+1.0**
	comp=Z,0.7nm,0.3s,baz=83,slow=13,SNR=52						
KSRS				LR	LR	08 06 06.6	
	comp=Z,3μm,18.6s,baz=59,slow=36						
KS01	**Wonju Array Si**	**12.46**	**266**	*e*Pn	**Pn**	**08 01 39.8**	**+1.1**
KS15	**Wonju Array Si**	**12.48**	**266**	*e*Pn	**Pn**	**08 01 39.2**	**+0.3**
KSAR	**Wonju Array Be**	**12.48**	**266**	Pn	**Pn**	**08 01 39.5**	**+0.6**
KSAR	**Wonju Array Be**	**12.48**	**266**	P	**Pn**	**08 01 39.5**	**+0.6**
KLR	**Kul'dur**	**12.95**	**323**	Pn	**Pn**	**08 01 44.8**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=138,slow=11,SNR=9.0						
KLR				LR	LR	08 07 01.7	
	comp=Z,310nm,19.0s,baz=138,slow=39						
KLR	**Kul'dur**	**12.95**	**323**	*i* P	**Pn**	**08 01 44.1**	**-1.3**
TJN	**Taejon**	**13.17**	**262**	*c e*P	**Pn**	**08 01 48.9**	**+0.5**
NKL	**Nikolayevsk**	**13.89**	**353**	*e*P	**Pn**	**08 01 58.0**	**0.0**
NKL				*e*S	**Sn**	**08 04 26.0**	**-5.1**
NKL				pmax	pmax		
	comp=Z,300nm,2.0s						
NKL				pmax	pmax		
	comp=N,40nm,1.0s						
NKL				pmax	pmax		
	comp=Z,43nm,1.0s						
NKL				smax	smax		
	comp=E,500nm,10.0s						
NKL				MLR	MLR		
	comp=N,2μm,15.0s						
NKL				MLR	MLR		
	comp=E,2μm,15.0s						
NKL				MLR	MLR		
	comp=Z,4μm,15.0s						
OKH	**Okha**	**14.15**	**358**	*e*P	**P**	**08 02 06.4**	**-2.5**
OKH				pmax	pmax		
	comp=Z,100nm,14.0s						
CN2	**Changchun**	**14.26**	**294**	*e*P	**Pn**	**08 02 03.1**	**-0.2**
CN2				*es*P	P	08 02 15.3	+5.1
CN2				*e*S	**Sn**	**08 04 40.9**	**+0.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,400nm,8.0s						
CN2

comp=N,2μm,14.0s
HIA Hailar 19.62 308 *e*P P 08 03 07.2 -2.3
comp=N,35nm,0.7s
HIA Hailar 19.62 308 *e*P P 08 03 07.2 -2.3
HIA pmax pmax
comp=Z,35nm,0.7s
SSE Sheshan 20.05 252 P P 08 03 15.0 +0.8
SSE pmax pmax
comp=Z,34nm,0.9s
SSE pmax pmax
comp=Z,310nm,10.6s
SSE LR LR
comp=Z,1μm,14.6s
SSE LR LR
comp=Z,2μm,14.4s
MA2 Magadan 20.69 10 P P 08 03 20.5 -0.4
comp=Z,18nm,0.7s,baz=198,slow=9.1,SNR=9.6
MA2 LR LR 08 12 05.8
comp=Z,1μm,18.5s,baz=186,slow=39
MA2 Magadan 20.69 10 *e*P P 08 03 21.0 +0.1
comp=Z,44nm,0.8s
BJI Beijing 21.07 280⇑ *i*P P 08 03 22.3 -2.9
BJI pmax pmax
comp=Z,77nm,0.7s
BJI pmax pmax
comp=Z,760nm,8.4s
BJI LR LR
comp=Z,2μm,12.0s
BJI LR LR
comp=Z,5μm,15.1s
BJI LR LR
comp=Z,2μm,17.1s
BJT Baijiatuau 21.08 280 *e*P P 08 03 22.1 -3.2
comp=Z,54nm,0.8s
BJT Baijiatuau 21.08 280 *e*P P 08 03 22.1 -3.2
BJT pmax pmax
comp=Z,54nm,0.8s
TIA Tai'an 21.13 270 P P 08 03 23.4 -2.5
TIA S S 08 07 15.8 -3.7
TIA pmax pmax
comp=Z,100nm,2.4s
TIA LR LR
comp=Z,590nm,13.4s
TIA LR LR
comp=Z,2μm,13.0s
TIA LR LR
comp=Z,4μm,14.2s
CLNS Chul'man 21.32 331 *e*P P 08 03 27.0 -0.8
CLNS *e**PP **pP 08 03 36.2 +0.9**
CLNS *e* 08 03 45.4
CLNS *e*S **S 08 07 17.2 -5.8**
CLNS *e* 08 07 35.3
CLNS *e*SS **SnSn 08 07 55.5 +9.4**
CLNS *e* 08 14 43.9
CLNS pmax pmax
comp=N,7.0nm,1.0s
CLNS pmax pmax
comp=Z,22nm,0.7s
CLNS pmax pmax
comp=E,13nm,0.9s
CLNS pmax pmax
comp=Z,34nm,0.8s
CLNS pmax pmax
comp=N,21nm,0.8s
CLNS pmax pmax
comp=E,17nm,0.9s
CLNS smax smax
comp=E,338nm,10.2s
CLNS smax smax
comp=N,149nm,11.8s
CLNS MLR MLR
comp=E,3μm,16.0s
CLNS MLR MLR
comp=Z,2μm,14.0s
CLNS MLR MLR
comp=N,2μm,14.0s
NJ2 Nanjing 21.34 258 *e*P P 08 03 29.8 +1.6
NJ2 pmax pmax
comp=N,37nm,0.9s
NJ2 LR LR
comp=N,2μm,15.2s
NJ2 LR LR
comp=N,2μm,14.6s
NJ2 LR LR
comp=N,3μm,15.2s
YOJ Yonaguni jima 22.89 235 *e*P P 08 03 43.9 -0.8
comp=N,201nm,1.5s
YOJ Yonaguni jima 22.89 235 *e*P P 08 03 43.9 -0.8
YOJ pmax pmax
comp=Z,201nm,1.5s
TATO Taipei 23.52 239 *e*P P 08 03 49.7 -1.3
comp=Z,300nm,1.6s
YHNB Yeheng 23.80 238 *e*P P 08 03 52.0 -1.9
comp=Z,215nm,1.7s
NACB Ninganchiao 24.00 237 *e*P P 08 03 52.8 -2.8
comp=Z,35nm,0.8s
SEY Seymchan 24.14 10 P P 08 03 56.7 +0.1
comp=Z,26nm,0.9s,baz=192,slow=8.2,SNR=28
SEY Seymchan 24.14 10 P P 08 03 56.7 +0.1
SEY pmax pmax
comp=Z,16nm,0.8s
YAK Yakutsk 24.19 344 P P 08 03 57.1 +0.1
comp=Z,46nm,0.4s,baz=135,slow=1.9,SNR=6.5
YAK Yakutsk 24.19 344 *e*P P 08 03 57.2 +0.1
comp=Z,71nm,0.6s
YAK Yakutsk 24.19 344 *i*P P 08 03 57.7 +0.6
YAK pmax pmax
comp=Z,36nm,0.7s
TIY Taiyuan 24.36 276 *e*P P 08 04 01.0 +2.0
TIY PP **PnPn 08 04 33.5 +3.8**
TIY SS S 08 09 05.6 +49
TIY pmax pmax
comp=Z,31nm,0.6s
TIY pmax pmax
comp=Z,230nm,4.0s
TIY LR LR
comp=Z,2μm,14.9s
TIY LR LR
comp=Z,2μm,17.6s
TIY LR LR
comp=Z,2μm,16.9s
HHC Hu-ho-hao-te 24.46 284 *e*P P 08 03 58.3 -1.6
HHC pP pP 08 04 08.4 +0.4
HHC PP **PnPn 08 04 31.5 +0.5**
HHC S **S 08 08 14.8 -3.6**
HHC sS sS 08 08 31.3 -0.3
HHC SS **SnSn 08 09 08.4 +5.0**
HHC pmax pmax
comp=Z,27nm,1.0s
HHC pmax pmax
comp=Z,420nm,6.1s
HHC LR LR
comp=Z,1μm,14.4s
HHC LR LR
comp=Z,4μm,16.3s
HHC LR LR
comp=Z,4μm,15.7s
SSLB Suanglung 24.69 238 *e*P P 08 03 59.5 -2.4
comp=Z,42nm,1.0s
YULB Yu-li 24.74 236 *e*P P 08 03 59.9 -2.5
comp=Z,50nm,1.0s
TPUB Ta-pu 25.24 237 *e*P P 08 04 04.5 -2.4
comp=Z,57nm,1.1s
TWG Pinlang 25.30 236 *e*P P 08 04 06.8 -0.6
comp=Z,1μm,1.8s
WHN Wuhan 25.45 259 ⇑P P 08 04 08.5 -0.3
WHN sP **pP 08 04 17.9 +1.1**
WHN S **S 08 08 39.6 +5.4**
WHN pmax pmax
comp=Z,170nm,0.9s
WHN LR LR
comp=Z,1μm,8.6s
WHN LR LR
comp=Z,8μm,14.4s
WHN LR LR
comp=Z,7μm,14.3s
QZH Quanzhou 25.50 243⇑ *i*P P 08 04 07.4 -1.9
QZH S **S 08 08 30.8 -4.2**
QZH pmax pmax
comp=Z,480nm,7.4s
QZH LR LR
comp=Z,3μm,15.8s
QZH LR LR
comp=Z,2μm,13.9s
QZH LR LR
comp=Z,4μm,14.7s
BTO Baotou 25.66 284 *e*P P 08 04 07.6 -3.1

GUMO Guam 25.75 177 LR LR 08 15 01.4
comp=Z,488nm,18.5s,baz=4.0,slow=38
BOD Bodaibo 26.53 324 *e*P P 08 04 15.7 -2.6
BOD pmax pmax
comp=Z,38nm,1.0s
ULN Ulaanbaatar 27.55 300 *e*P P 08 04 27.3 -0.5
comp=Z,171nm,1.9s
ULN Ulaanbaatar 27.55 300 P P 08 04 28.9 +1.1
SNR=39
ULN Ulaanbaatar 27.55 300 *c i*P P 08 04 27.9 +0.1
ULN pmax pmax
comp=Z,17nm,0.8s
SONA1 Songino Array 27.98 300 *e*P P 08 04 31.8 +0.1
SONM Songino Array 27.99 300 P P 08 04 32.0 +0.3
comp=Z,14nm,0.7s,baz=94,slow=9.1,SNR=21
SONM LR LR 08 16 15.3
comp=Z,2μm,19.3s,baz=86,slow=38
H11N2 WAKE ISLAND Hy 28.06 128 T T 08 33 56.9
baz=320
H11N1 WAKE ISLAND Hy 28.07 128 T T 08 33 56.9
baz=320
H11N3 WAKE ISLAND Hy 28.08 128 T T 08 33 52.6
baz=320
XAN Xi'an 28.19 270 P P 08 04 33.0 -0.5
XAN pP pP 08 04 42.3 +0.7
XAN sP sP 08 04 48.0 +3.0
XAN S **S 08 09 24.1 +6.7**
XAN pmax pmax
comp=Z,17nm,0.4s
XAN pmax pmax
comp=Z,380nm,5.0s
XAN LR LR
comp=Z,2μm,10.8s
XAN LR LR
comp=Z,2μm,11.8s
XAN LR LR
comp=Z,3μm,9.8s
H11S1 WAKE ISLAND Hy 28.88 130 T T 08 35 04.0
baz=314
H11S3 WAKE ISLAND Hy 28.88 130 T T 08 35 00.9
baz=314
H11S2 WAKE ISLAND Hy 28.89 130 T T 08 34 59.3
baz=314
ENH Enshi 29.30 262 *e*P P 08 04 43.1 -0.2
comp=Z,83nm,0.8s
IRK Irkutsk 29.87 309 *e*P P 08 04 46.6 -1.6
IRK pmax pmax
comp=Z,54nm,2.4s
TLY Talaya 30.16 307 P P 08 04 51.4 +0.5
comp=Z,8.1nm,0.8s,baz=134,slow=3.9,SNR=16
TLY LR LR 08 16 56.4
comp=Z,359nm,19.5s,baz=98,slow=36
TLY Talaya 30.16 307 *e*P P 08 04 51.0 +0.2
comp=Z,15nm,0.9s
TLY Talaya 30.16 307 P P 08 04 51.7 +0.9
SNR=16
TLY Talaya 30.16 307 *c i*P P 08 04 50.3 -0.5
TLY *e* 08 05 58.6
TLY *e*S **S 08 09 46.6 -1.5**
TLY *e*SSS SSS 08 11 19.0
TLY pmax pmax
comp=Z,27nm,1.5s
TLY MLR MLR
comp=Z,1μm,14.0s
ZAK Zakamensk 30.23 305 *e*P P 08 04 51.6 0.0
ZAK pmax pmax
comp=Z,18nm,1.5s
GZH Guangzhou 30.37 247 P P 08 04 42.6 -10
GZH S **S 08 09 46.9 -4.7**
GZH LR LR
comp=N,2μm,15.9s
GZH LR LR
comp=E,2μm,15.3s
BILL Bilibino 31.27 16 *e*P P 08 05 00.1 -0.2
comp=E,13nm,0.9s
BILL Bilibino 31.27 16⇓ *e*P P 08 05 00.2 -0.1
BILL *e* 08 05 04.9
BILL *e**PP **sP 08 05 11.2 -0.6**
BILL PPP PPP 08 06 16.0
BILL SSS SSS 08 12 18.0
BILL pmax pmax
comp=Z,13nm,1.1s
BILL MLR MLR
comp=Z,1μm,17.0s
LZH Lanzhou 31.43 277 *e*P P 08 05 02.6 +0.3
LZH pP pP 08 05 06.9 -3.5
LZH PP **PnPn 08 06 00.0 -5.4**
LZH *e*S **S 08 10 05.3 -3.2**
LZH pmax pmax
comp=Z,45nm,1.3s
LZH pmax pmax
comp=Z,190nm,4.6s
LZH LR LR
comp=Z,4μm,12.2s
LZH LR LR
comp=Z,8μm,13.6s
LZH LR LR
comp=Z,9μm,13.8s
MOY Mondy 31.80 307 *e*P P 08 05 08.5 +3.1
MOY pmax pmax
comp=Z,52nm,2.8s
TIXI Tiksi 33.16 352⇑ *e*P P 08 05 17.0 +0.1
TIXI pmax pmax
comp=Z,2.0nm,0.8s
GYA Guiyang 33.34 258⇑ *i*P P 08 05 17.9 -1.2
GYA pP pP 08 05 25.8 -1.5
GYA PP **PnPn 08 06 31.0 +0.9**
GYA S **S 08 10 38.8 +0.4**
GYA sS pS 08 10 48.3 +0.7
GYA pmax pmax
comp=Z,40nm,0.8s
GYA pmax pmax
comp=Z,190nm,7.2s
GYA LR LR
comp=Z,1μm,14.9s
GYA LR LR
comp=Z,1μm,13.3s
GYA LR LR
comp=Z,2μm,14.0s
CD2 Chengdu 33.43 268 ⇑P P 08 05 18.6 -1.2
CD2 sP sP 08 05 31.3 0.0
CD2 PP **PnPn 08 06 33.3 +2.2**
CD2 PcP **PcP 08 08 00.3 -0.4**
CD2 S **S 08 10 37.8 -1.7**
CD2 sS sS 08 10 57.8 +4.8
CD2 pmax pmax
comp=Z,60nm,0.8s
CD2 pmax pmax
comp=Z,330nm,8.4s
CD2 LR LR
comp=Z,4μm,13.1s
CD2 LR LR
comp=Z,4μm,13.5s
GTA Gaotai 33.57 284 *e*P P 08 05 21.1 +0.1
GTA pP pP 08 05 26.3 -2.9
GTA sP sP 08 05 29.6 -2.9
GTA S **S 08 10 43.3 +1.6**
GTA sS pS 08 10 52.8 +2.0
GTA pmax pmax
comp=Z,24nm,0.8s
GTA pmax pmax
comp=Z,280nm,6.7s
GTA LR LR
comp=Z,950nm,17.5s
GTA LR LR
comp=Z,3μm,16.8s
GTA LR LR
comp=Z,4μm,16.8s
KNGR Kungurtug, Tuv 33.92 305⇓ *i*P P 08 05 24.4 +0.5
QIZ Qiongzhong 35.48 245 P P 08 05 38.3 +0.8
QIZ PP **PP 08 06 58.9 +0.6**
QIZ S **S 08 11 18.0 +6.8**
QIZ LR LR
comp=Z,960nm,12.8s
QIZ LR LR
comp=Z,1μm,15.2s
QIZ LR LR
comp=Z,2μm,14.7s
DAV Davao City (W) 36.05 211 LR LR 08 20 34.0
comp=Z,617nm,19.4s,baz=56,slow=36
HVS Khovu-Aksy 36.34 306 *i*P P 08 05 44.8 +0.1
HVS pmax pmax
comp=Z,9.0nm,0.6s
KRAR Krasnoyarsk 37.00 314 *i*P P 08 05 50.5 +0.4
KMI Kunming 37.04 260 P P 08 05 50.6 -0.5
KMI pP pP 08 06 00.3 +1.0

KMI sP sP 08 06 03.4 +0.7
KMI PP **PnPn 08 07 16.8 +0.7**
KMI S **S 08 11 33.9 -1.5**
KMI sS sS 08 11 49.3 +0.3
KMI SS **SnSn 08 14 02.8 -7.2**
KMI pmax pmax
comp=Z,26nm,0.7s
KMI pmax pmax
comp=Z,360nm,5.4s
KMI LR LR
comp=Z,850nm,13.5s
KMI LR LR
comp=Z,2μm,17.7s
KMI LR LR
comp=Z,1μm,16.3s
DGZ Jazzator, Alta 40.45 304 *i*P P 08 06 20.3 +1.0
DGZ pmax pmax
comp=Z,7.0nm,0.6s
RDOG Red Dog Mine 40.61 28 *e*P P 08 06 20.8 +0.6
comp=Z,79nm,1.8s
NONG Nongkai 40.91 250 P P 08 06 25.1 +1.8
comp=Z,32nm,1.0s,comp=Z,3μm
SKNT Sakolnakorn 41.01 248 P P 08 06 32.7 +8.6
comp=Z,13nm,1.2s,comp=Z,1μm
WMQ Urumqi 41.35 295 P P 08 06 27.8 +1.1
WMQ pP pP 08 06 33.5 -1.5
WMQ sP sP 08 06 36.1 -2.2
WMQ S **S 08 12 42.3 +2.8**
WMQ sS sS 08 12 53.8 +0.7
WMQ SS **SS 08 15 40.9 -2.6**
WMQ pmax pmax
comp=Z,190nm,1.1s
WMQ pmax pmax
comp=Z,780nm,3.7s
WMQ LR LR
comp=Z,2μm,13.1s
WMQ LR LR
comp=Z,2μm,14.1s
WMQ LR LR
comp=Z,990nm,17.1s
ZAA0 Zalesovo Array 41.63 310 *e*P P 08 06 28.6 -0.1
comp=Z,21nm,0.6s
ZALV Zalesovo Beam 41.63 310 P P 08 06 29.1 +0.3
comp=Z,11nm,0.5s,baz=86,slow=7.6,SNR=34
ZALV PcP **PcP 08 08 27.0 +1.8**
comp=Z,2.7nm,0.4s,baz=28,slow=3.9,SNR=2.5
ZALV Zalesovo Beam 41.63 310 *e*P P 08 06 28.4 -0.4
ZALV PcP **PcP 08 08 27.1 +1.8**
SIJI Sorong 41.65 199 P P 08 06 29.3 0.0
comp=Z,9.4nm,0.7s,baz=44,slow=10,SNR=4.8
JAY Jayapura 41.81 184 P P 08 06 30.6 0.0
comp=Z,5.9nm,0.8s,baz=22,slow=5.4,SNR=2.7
NRIK Noril'sk 41.86 334 P P 08 06 31.2 +0.8
comp=Z,1.7nm,0.4s,baz=107,slow=15,SNR=6.1
NVS Novosibirsk 42.48 312⇑ *i*P P 08 06 36.3 +0.6
NVS pmax pmax
comp=Z,15nm,0.7s
NVS pmax pmax
comp=N,4.0nm,0.3s
NVS pmax pmax
comp=E,9.0nm,0.5s
PAYA Payao 42.53 255 P P 08 06 45.0 +8.5
comp=E,7.6nm,0.9s
SVW2 Sparrevohn 42.59 39 *e*P P 08 06 37.2 +0.6
comp=E,11nm,1.0s
CMAI Chiengmai2 42.80 256 P P 08 06 47.3 +8.4
comp=E,497nm,0.8s
PBKT Sadao Pong 43.46 251 P P 08 06 52.5 +8.5
comp=E,23nm,2.2s
PBKT Sadao Pong 43.46 251 *e*P P 08 06 42.9 -1.1
CHTO Chiang Mai 43.55 255 P P 08 06 45.8 +1.0
CHTO Chiang Mai 43.55 255 *e*P P 08 06 43.5 -1.2
comp=E,16nm,0.8s
CHTO Chiang Mai 43.55 255 *e*P P 08 06 43.6 -1.2
CHTO pmax pmax
comp=Z,16nm,0.8s
LSA Lhasa 43.73 274 *e*P P 08 06 46.6 -0.1
comp=Z,23nm,0.8s
LSA Lhasa 43.73 274 *e*P P 08 06 46.6 -0.1
LSA pmax pmax
comp=Z,23nm,0.8s
CM31 Chiang Mai Arr 43.77 255 *e*P P 08 06 46.0 -0.6
CMAR Chiang Mai Arr 43.77 255 P P 08 06 46.6 +0.1
comp=Z,5.8nm,0.7s,baz=44,slow=7.3,SNR=20
CMAR LR LR 08 25 42.7
comp=Z,348nm,19.2s,baz=60,slow=37
CM01 Chiang Mai Arr 43.78 255 *e*P P 08 06 46.7 0.0
OHAK Old Harbor 43.85 44 *e*P P 08 06 46.6 -0.1
comp=Z,17nm,1.0s
SUKH Sukhothai 43.86 253 P P 08 06 48.8 +1.5
comp=Z,8.8nm,0.8s,comp=Z,86nm
RSO Redoubt South 43.98 40 *e*P P 08 06 48.9 +0.9
KDAK Kodiak Island 44.19 44 P P 08 06 49.4 0.0
comp=Z,12nm,0.7s,baz=259,slow=4.6,SNR=23
KDAK Kodiak Island 44.19 44 *e*P P 08 06 49.0 -0.4
comp=Z,17nm,0.9s
KDAK Kodiak Island 44.19 44 *i*P P 08 06 49.8 +0.4
PPLA Purkeypile 44.24 36 *e*P P 08 06 50.6 +0.6
comp=Z,99nm,1.9s
CAST Castle Rocks 44.30 35 *e*P P 08 06 51.5 +1.2
comp=Z,63nm,1.9s
SPU Mount Spurr 44.31 39 *e*P P 08 06 51.8 +1.4
MK01 Makanchi Array 44.35 300 *e*P P 08 06 50.8 -0.2
MK31 Makanchi Array 44.35 300 *e*P P 08 06 50.7 -0.3
MK31 Makanchi Array 44.35 300 *i*P P 08 06 50.8 -0.2
MK31 pmax pmax
comp=Z,43nm,0.8s
MKAR Makanchi Array 44.35 300 P P 08 06 50.4 -0.6
comp=Z,23nm,0.7s,baz=83,slow=9.1,SNR=72
MKAR LR LR 08 26 04.0
comp=Z,647nm,19.8s,baz=69,slow=37
MKAR Makanchi Array 44.35 300 *e*P P 08 06 50.8 -0.2
comp=Z,244nm,0.7s
MKAR Makanchi Array 44.35 300 *e*P P 08 06 50.8 -0.2
MKAR pmax pmax
comp=Z,244nm,0.7s
SRAK Srakaew 44.37 247 P P 08 06 58.1 +6.8
comp=Z,67nm,1.2s,comp=Z,917nm
SKT Skwentna 44.54 38 *e*P P 08 06 51.0 -1.3
comp=Z,9.4nm,1.2s
MAKZ Makanchi 44.56 301 *e*P P 08 06 52.5 -0.1
comp=Z,27nm,0.9s
MAKZ Makanchi 44.56 301 *e*P P 08 06 52.5 -0.1
MAKZ pmax pmax
comp=Z,27nm,0.9s
CNPM China Poot 44.78 41 *e*P P 08 06 54.7 +0.6
comp=Z,10nm,0.9s
BPAW Bear Paw Mtn. 44.80 35 *e*P P 08 06 55.4 +1.1
comp=Z,6.5nm,0.9s
KTH Kantishna Hill 44.82 35 *e*P P 08 06 55.3 +0.8
comp=Z,49nm,1.5s
MLY Manley 44.92 33 *e*P P 08 06 56.1 +0.8
comp=Z,11nm,0.9s
SUA Susitna One 44.93 38 *e*P P 08 06 56.2 +0.7
comp=Z,13nm,0.8s
BRLK Bradley Lake 44.94 41 *e*P P 08 06 56.0 +0.5
comp=Z,9.8nm,0.9s
TRF Thorofare Moun 45.10 35 *e*P P 08 06 58.1 +1.2
comp=Z,11nm,0.9s
SHL Shillong 45.17 268 *e*P P 08 07 01.5 +3.6
COLD Coldfoot 45.24 30 *e*P P 08 06 58.5 +0.7
comp=Z,10.0nm,1.1s
RC01 Rabbit Creek A 45.43 39 *e*P P 08 07 00.0 +0.7
comp=Z,14nm,0.9s
BWN Browne 45.46 34 *e*P P 08 07 01.1 +1.6
comp=Z,120nm,1.3s
TOLK Toolik Lake Re 45.57 28 P P 08 07 01.6 +1.2
baz=266,SNR=7.1
TOLK Toolik Lake Re 45.57 28 *e*P P 08 07 01.1 +0.7
comp=Z,11nm,0.8s
PMR Palmer 45.70 38 *e*P P 08 07 01.2 -0.1
comp=Z,10nm,1.0s
PMR Palmer 45.70 38 *e*P P 08 07 01.2 -0.1
PMR pmax pmax
comp=Z,10.0nm,1.0s
MCK McKinley 45.70 35 *e*P P 08 07 01.8 +0.3
comp=Z,15nm,1.0s
MCK McKinley 45.70 35 *e*P P 08 07 01.8 +0.3
MCK pmax pmax
comp=Z,15nm,1.0s
RND Reindeer 45.75 36 *e*P P 08 07 02.1 +0.2
comp=Z,10.0nm,0.8s
RND Reindeer 45.75 36 *e*P P 08 07 02.1 +0.2
RND pmax pmax
comp=Z,10.0nm,0.8s
GHO Glory Hole Cre 45.78 38 *e*P P 08 07 02.6 +0.4
comp=Z,26nm,1.0s

KURK	Kurchatov	45.85	307	eP		P	08 07 02.5 -0.3
	comp=Z,49nm,0.6s						
KURK	Kurchatov	45.85	307	P		P	08 07 02.9 +0.1
	SNR=27						
KURK	Kurchatov	45.85	307	c iP		P	08 07 02.4 -0.3
KURK					pmax	pmax	
	comp=Z,34nm,0.7s						
KURBB	Kurchatov Arra	45.93	306	P		P	08 07 03.2 -0.2
	comp=Z,32nm,0.7s,baz=82,slow=8.2,SNR=182						
MDM	Murphy Dome	45.99	33	eP		P	08 07 05.0 +1.2
	comp=Z,22nm,1.1s						
WRH	Wood River Hil	46.06	34	eP		P	08 07 04.4 +0.2
	comp=Z,8.8nm,0.8s						
SML	Sawmill	46.06	38	eP		P	08 07 04.8 +0.5
	comp=Z,24nm,0.9s						
SML	Sawmill	46.06	38	eP		P	08 07 04.9 +0.5
SML					pmax	pmax	
	comp=Z,24nm,0.9s						
COLA	College	46.15	33	eP		P	08 07 05.8 +0.9
	comp=Z,25nm,0.9s						
COLA	College	46.15	33	eP		P	08 07 05.8 +0.9
COLA					pmax	pmax	
	comp=Z,25nm,0.9s						
CCB	Clear Creek Bu	46.18	34	eP		P	08 07 05.6 +0.4
	comp=Z,14nm,1.2s						
DHY	Denali Highway	46.43	36	eP		P	08 07 07.7 +0.3
	comp=Z,22nm,1.3s						
SCM	Sheep Creek Mo	46.54	38	eP		P	08 07 08.8 +0.7
	comp=Z,55nm,0.8s						
SBUM	Sibu	46.55	226	eP		P	08 07 08.6 0.0
	comp=Z,23nm,1.4s						
ILAR	Eielson Array	46.57	34	P		P	08 07 08.6 +0.4
	comp=Z,5.1nm,0.7s,baz=263,slow=6.6,SNR=88						
ILB	Eielson Array	46.57	34	eP		P	08 07 08.4 +0.2
IL1	Eielson Array	46.57	34	eP		P	08 07 08.3 +0.1
PHET	Kaeng Krachan	46.84	248	P		P	08 07 14.4 +3.5
	comp=Z,13nm,0.7s						
BRDH	Bariadhala	46.89	265	LR		LR	08 27 42.4
	comp=Z,403nm,19.6s,baz=86,slow=37						
FYU	Fort Yukon	47.19	31	eP		P	08 07 15.1 +2.0
	comp=Z,106nm,1.7s						
PDGK	Podgornoye	47.21	297	P		P	08 07 13.1 -0.6
PDGK					pmax	pmax	
	comp=Z,23nm,0.8s						
KLU	Klutina	47.24	38	eP		P	08 07 14.8 +1.2
	comp=Z,18nm,1.0s						
PAX	Paxson	47.31	36	eP		P	08 07 15.7 +1.6
	comp=Z,5.2nm,0.8s						
PAX	Paxson	47.31	36	eP		P	08 07 15.7 +1.6
PAX					pmax	pmax	
	comp=Z,5.0nm,0.8s						
DIV	Divide	47.35	39	eP		P	08 07 15.7 +1.2
	comp=Z,32nm,0.8s						
RIDG	Independ'e Rid	47.52	35	eP		P	08 07 15.8 0.0
	comp=Z,17nm,1.0s						
DOT	Dot Lake	47.88	35	eP		P	08 07 20.0 +1.5
	comp=Z,48nm,0.8s						
SCRK	Sand Creek	47.88	35	eP		P	08 07 18.9 +0.3
	comp=Z,26nm,1.2s						
BMRM	Bremner River	47.93	39	eP		P	08 07 19.4 +0.5
	comp=Z,34nm,1.2s						
RAGM	Ragged Mountai	47.98	39	eP		P	08 07 20.4 +1.1
	comp=Z,24nm,1.0s						
ODAN	Odare	48.00	273	eP		P	08 07 20.3 +0.1
	comp=Z,76nm,0.8s						
KSM	Kuching	48.43	227	eP		P	08 07 23.7 +0.5
	comp=Z,15nm,0.9s						
JIRN	Jiri	48.53	274	eP		P	08 07 24.7 +0.3
	comp=Z,110nm,0.8s						
RAMN	Ramite	48.56	273	eP		P	08 07 24.6 +0.1
	comp=Z,161nm,0.9s						
GUN	Gumba	48.65	275	eP		P	08 07 25.3 0.0
	comp=Z,185nm,0.8s						
CRQM	Cirque	48.67	39	eP		P	08 07 25.6 +0.8
	comp=Z,59nm,1.4s						
TGL	Tana Glacier	48.82	39	eP		P	08 07 27.6 +1.7
	comp=Z,16nm,0.8s						
TARG	Taragay, Kyrgy	48.92	295	eP		P	08 07 27.5 +0.3
	comp=Z,26nm,0.7s						
BALM	Baldy	49.01	38	eP		P	08 07 28.3 +1.0
	comp=Z,12nm,0.9s						
BALM	Baldy	49.01	38	eP		P	08 07 28.3 +1.0
BALM					pmax	pmax	
	comp=Z,12nm,0.9s						
EGAK	Eagle	49.01	33	eP		P	08 07 27.9 +0.8
	comp=Z,70nm,2.0s						
KKN	Kakani	49.17	275	eP		P	08 07 29.4 +0.3
	comp=Z,140nm,0.6s						
PKIN	Phulchoki	49.19	275	eP		P	08 07 29.0 -0.3
	comp=Z,68nm,0.6s						
DMN	Daman	49.39	275	eP		P	08 07 30.8 -0.1
	comp=Z,93nm,0.9s						
GKN	Gorkha	49.56	276	eP		P	08 07 32.0 -0.1
	comp=Z,153nm,1.0s						
DAWY	Dawson	49.87	34	eP		P	08 07 35.1 +1.3
	comp=Z,31nm,2.0s						
TKM2	Tokmak 2	50.04	297	P		P	08 07 35.7 +0.1
TKM2					pmax	pmax	
	comp=Z,21nm,0.9s						
DANN	Dangsing	50.07	276	eP		P	08 07 36.6 +0.5
	comp=Z,366nm,0.7s						
BVA0	Borovoye Array	50.27	311	P		P	08 07 37.1 +0.2
BVA0					pmax	pmax	
	comp=Z,18nm,1.0s						
BVAR	Borovoye Array	50.27	311	P		P	08 07 37.2 +0.3
	comp=Z,11nm,0.7s,baz=78,slow=9.2,SNR=41						
NRN	Naryn	50.29	295	eP		P	08 07 38.1 +0.5
	comp=Z,8.1nm,0.8s						
BRVK	Borovoye	50.32	311	eP		P	08 07 37.2 -0.1
	comp=Z,26nm,0.8s						
BRVK	Borovoye	50.32	311	P		P	08 07 38.4 +1.1
	SNR=16						
BRVK	Borovoye	50.32	311	c iP		P	08 07 37.6 +0.3
BRVK					pmax	pmax	
	comp=Z,15nm,0.7s						
OTUK	Ortayu	50.45	305	P		P	08 07 38.2 -0.2
OTUK					pmax	pmax	
	comp=Z,10.0nm,1.0s						
KOLN	Koldanda	50.48	276	eP		P	08 07 38.9 -0.2
	comp=Z,69nm,0.8s						
FRU	Bishkek	50.74	298	eP		P	08 07 40.0 -0.7
FRU				i			08 07 49.0
FRU					pmax	pmax	
	comp=Z,115nm,2.2s						
PYUN	Piuthan	50.78	277	eP		P	08 07 41.5 +0.1
	comp=Z,192nm,0.9s						
KSH	Kashi	51.03	293	P		P	08 07 47.3 +4.3
KSH				pP		pP	08 07 52.3 +0.9
KSH				PP		PP	08 09 45.8 +6.4
KSH				S		S	08 15 03.3 +4.7
KSH				sS		sS	08 15 13.3 +0.8
KSH				SS		SS	08 18 32.1 -1.4
KSH					pmax	pmax	
	comp=Z,38nm,0.5s						
KSH					LR	LR	
	comp=Z,2μm,12.6s						
KSH					LR	LR	
	comp=Z,1μm,11.6s						
KSH					LR	LR	
	comp=Z,3μm,15.3s						
INK	Inuvik	51.49	28	P		P	08 07 47.0 +1.2
	comp=Z,5.0nm,0.6s,baz=283,slow=5.4,SNR=21						
INK	Inuvik	51.49	28	eP		P	08 07 47.0 +1.2
	comp=Z,15nm,0.7s						
INK	Inuvik	51.49	28	P		P	08 07 47.0 +1.2
INK					pmax	pmax	
	comp=Z,5.0nm,0.6s						
IPM	Ipoh	51.84	239	eP		P	08 07 49.0 -0.1
	comp=Z,16nm,0.9s						
MYKOM	Kota Tinggi	52.05	234	eP		P	08 07 50.9 +0.3
	comp=Z,26nm,1.3s						
BATI	Baumata	52.73	205	LR		LR	08 29 02.2
	comp=Z,414nm,21.2s,baz=42,slow=35						
SKAG	Skagway	52.77	39	eP		P	08 07 57.2 +1.8
	comp=Z,30nm,1.8s						
BESE	Bessie Mountai	53.26	40	eP		P	08 08 00.6 +1.5
	comp=Z,13nm,1.2s						
MTN	Manton Dam	53.27	195	eP		P	08 07 60.0 +0.4
	comp=Z,15nm,0.8s						
KK31	Karatay Array	53.44	299	eP		P	08 08 00.1 -0.6
KK31	Karatay Array	53.44	299	eP		P	08 08 00.1 -0.6
KKAR	Karatay Array	53.44	299	eP		P	08 08 00.1 -0.6
KKAR	Karatay Array	53.44	299	eP		P	08 08 00.1 -0.6
JIS	Juneau Island	53.58	41	eP		P	08 08 03.1 +1.7
	comp=Z,14nm,1.0s						
PSI	Prapat	54.48	240	LR		LR	08 33 11.7
	comp=Z,306nm,18.9s,baz=88,slow=38						
PSI	Prapat	54.48	240	eP		P	08 08 08.2 -0.5
	comp=Z,44nm,1.7s						
PSI	Prapat	54.48	240	eP		P	08 08 08.2 -0.5
PSI					pmax	pmax	
	comp=Z,44nm,1.7s						
SVE	Sverdlovsk	54.52	318⇑	eP		P	08 08 09.6 +1.3
SVE					pmax	pmax	
	comp=Z,46nm,1.1s						
SVE					MLR	MLR	
	comp=Z,3μm,15.0s						
BKNI	Bangkinang	54.95	236	eP		P	08 08 13.0 +1.0
	comp=Z,100nm,0.4s						
CRAG	Craig	55.15	44	eP		P	08 08 15.3 +2.4
	comp=Z,72nm,1.8s						
NIL	Nilore	55.52	288	eP		P	08 08 17.0 +1.0
	comp=Z,44nm,0.8s						
NIL	Nilore	55.52	288	eP		P	08 08 17.0 +1.0
NIL					pmax	pmax	
	comp=Z,44nm,0.8s						
DLBC	Dease Lake	55.70	39	P		P	08 08 19.1 +2.2
	comp=Z,3.9nm,0.8s,baz=286,slow=8.8,SNR=9.6						
DLBC	Dease Lake	55.70	39	eP		P	08 08 18.6 +1.7
	comp=Z,14nm,1.0s						
ARU	Arti	55.73	318	P		P	08 08 17.8 +0.7
	comp=Z,18nm,0.7s,baz=84,slow=4.9,SNR=20						
ARU	Arti	55.73	318	c iP		P	08 08 17.4 +0.3
ARU							08 09 17.7
ARU							08 10 19.0
ARU					S	S	08 16 02.8 +1.1
ARU							08 17 59.8
ARU					SS	SS	08 19 45.6 -1.0
ARU					pmax	pmax	
	comp=Z,22nm,0.8s						
DIB	Dawson Inlet,	56.33	46	eP		P	08 08 22.8 +1.4
	comp=Z,34nm,1.5s						
GSI	Gunungsitoli	56.49	240	eP		P	08 08 23.8 +0.8
	comp=Z,163nm,1.7s						
LEM	Lembang	56.78	224	P		P	08 08 25.5 +0.3
	comp=Z,22nm,0.5s,baz=22,slow=5.4,SNR=2.9						
LEM				LR		LR	08 33 50.8
	comp=Z,184nm,20.1s,baz=36,slow=37						
AB31	Akbulak array	57.73	310	i P		P	08 08 30.9 -0.5
AB31					pmax	pmax	
	comp=Z,15nm,0.7s						
ABKAR	Akbulak array	57.73	310	eP		P	08 08 31.3 -0.1
AKTO	Aktyubinsk	58.37	312	P		P	08 08 35.9 0.0
	comp=Z,7.0nm,0.8s,baz=61,slow=13,SNR=21						
AKTO	Aktyubinsk	58.37	312	P		P	08 08 35.9 0.0
AKTO					pmax	pmax	
	comp=Z,9.0nm,0.7s						
SPITS	Spitsbergen Ar	58.52	349	LR		LR	08 36 26.8
	comp=Z,307nm,19.1s,baz=30,slow=39						
FITZ	Fitzroy Crossi	59.62	200	P		P	08 08 45.5 +0.7
	comp=Z,4.8nm,0.8s,baz=15,slow=8.8,SNR=6.6						
WRAB	Tennant Creek	59.66	190	eP		P	08 08 43.0 -2.1
	comp=Z,9.7nm,0.8s						
WRAB	Tennant Creek	59.66	190	ceP		P	08 08 45.0 -0.1
WRAB					pmax	pmax	
	comp=Z,9.0nm,1.2s						
WRA	Warramunga Arr	59.67	190	P		P	08 08 43.8 -1.3
	comp=Z,4.4nm,0.5s,baz=8.4,slow=7.0,SNR=34						
PRGR	Permogore	59.71	327	eP		P	08 08 45.6 +0.7
PRGR					pmax	pmax	
	comp=Z,25nm,1.1s						
RES	Resolute Bay	59.87	15	P		P	08 08 46.0 +0.2
	comp=Z,5.3nm,0.7s,baz=316,slow=6.4,SNR=15						
RES	Resolute Bay	59.87	15	eP		P	08 08 46.5 +0.7
	comp=Z,12nm,0.8s						
RES	Resolute Bay	59.87	15	eP		P	08 08 46.5 +0.7
RES					pmax	pmax	
	comp=Z,12nm,0.8s						
HYB	Hyderabad	59.98	268	i P		P	08 08 48.0 +0.5
HYB				e			08 08 57.0
YKW3	Yellowknife Ar	60.85	31	eP		P	08 08 53.2 +0.5
	comp=Z,27nm,1.6s						
YKA	Yellowknife Ar	60.89	31	P		P	08 08 53.3 +0.4
	comp=Z,2.0nm,0.8s,baz=302,slow=6.4,SNR=38						
YKA				LR		LR	08 39 42.6
	comp=Z,11nm,18.0s,baz=302,slow=40						
APA	Apatity	61.23	336⇑	i P		P	08 08 52.7 -2.5
APA					pmax	pmax	
	comp=Z,6.0nm,1.0s						
APA					MLR	MLR	
	comp=Z,700nm,12.0s						
ARCES	ARCESS Array B	62.38	340	P		P	08 09 03.5 +0.6
	comp=Z,1.9nm,0.7s,baz=46,slow=3.9,SNR=4.5						
ARCES				LR		LR	08 38 56.0
	comp=Z,644nm,20.5s,baz=40,slow=39						
KLMR	Klimovskoe	62.66	328	eP		P	08 09 04.8 -0.2
KLMR					pmax	pmax	
	comp=Z,30nm,1.5s						
KLMR	Klimovskoe	62.66	328	eP		P	08 09 04.9 -0.1
KLMR					AMP		08 09 15.9
	comp=Z,30nm,1.5s						
KLMR					LQ	LQ	08 31 19.4
KLMR					LQ	LQ	08 31 19.4
KLMR					LR	LR	08 36 29.6
LLLB	Lillooet	63.36	45	eP		P	08 09 11.0 +1.2
	comp=Z,17nm,1.1s						
AS01	Alice Springs	63.39	190	eP		P	08 09 10.0 -0.2
ASAR	Alice Springs	63.40	190	P		P	08 09 09.3 -0.9
	comp=Z,2.1nm,0.7s,baz=6.2,slow=5.8,SNR=17						
ASAR				LR		LR	08 37 14.1
	comp=Z,31nm,20.8s,baz=15,slow=36						
SGF	Sodankyl	63.42	337	eP		P	08 09 09.8 -0.1
SGF					pmax	pmax	
	comp=Z,32nm,1.3s						
MSF	Maaselka	63.61	335	eP		P	08 09 11.0 -0.2
MSF					pmax	pmax	
	comp=Z,29nm,1.9s						
NLWA	Neilton Lookou	63.85	49	eP		P	08 09 14.8 +1.6
	comp=Z,23nm,1.0s						
GEYT	Alibeck	64.19	299	P		P	08 09 15.6 +0.1
	comp=Z,24nm,0.9s,baz=48,slow=2.1,SNR=3.5						
GYA0B	ALIBECK ARRAY	64.19	299	eP		P	08 09 16.0 +0.5
	comp=Z,14nm,0.8s						
B05A	Bryant	64.43	48	P		P	08 09 18.3 +1.5
	baz=301						
E03A	Lebam	64.47	50	eP		P	08 09 18.8 +1.7
	comp=Z,34nm,1.1s						
JOF	Joensuu	64.67	332	eP		P	08 09 17.7 -0.5
JOF					pmax	pmax	
	comp=Z,19nm,1.1s						
F03A	Seaside	64.79	50	eP		P	08 09 21.2 +2.0
	comp=Z,133nm,1.8s						
DZM	Mont Dzumac	64.79	157	eLR		LR	08 28 41.6
	comp=Z,294nm,22.9s						
D05A	Enumclaw	65.06	49	eP		P	08 09 22.8 +1.8
	comp=Z,73nm,1.6s						
OUL	Oulu	65.15	336	P		P	08 09 19.9 -1.3
OUL					pmax	pmax	
	comp=Z,17nm,1.3s						
G03D	McMinnville, O	65.34	51	P		P	08 09 23.8 +1.0
	baz=302						
LON	Longmire	65.39	49	eP		P	08 09 24.1 +0.9
	comp=Z,20nm,1.4s						
LON	Longmire	65.39	49	eP		P	08 09 24.1 +0.9
LON					pmax	pmax	
	comp=Z,20nm,1.4s						
COR	Corvallis	65.64	52	eP		P	08 09 27.2 +2.4
	comp=Z,45nm,1.4s						
COR	Corvallis	65.64	52	eP		P	08 09 27.2 +2.4
COR					pmax	pmax	
	comp=Z,45nm,1.4s						
LTY	Liberty	65.78	48	eP		P	08 09 27.1 +1.4
	comp=Z,73nm,2.0s						
B08A	Colville Reser	65.95	46	eP		P	08 09 27.4 +0.6
	comp=Z,40nm,1.5s						
I03D	Drain, OR	66.09	52	P		P	08 09 29.8 +2.1
	baz=302,SNR=7.5						
H04A	Detroit Lake	66.27	51	eP		P	08 09 30.5 +1.6
	comp=Z,30nm,1.1s						
MOS	Moscow	66.36	324	eP		P	08 09 29.9 +0.7
MOS				e			08 09 37.6
MOS					MLR	MLR	
	comp=Z,1μm,16.0s						
G05D	Wamic, OR	66.49	50	P		P	08 09 31.8 +1.6
	baz=303						
I04A	Tendick Farm,	66.61	52	P		P	08 09 32.5 +1.4
	baz=303,SNR=10						
L02D	Cave Junction,	66.75	54	P		P	08 09 33.5 +1.5
	baz=303						
C09A	Chrisman Ranch	66.85	47	eP		P	08 09 33.1 +0.6
	comp=Z,18nm,0.9s						
D08A	Wollman Farm,	66.89	47	eP		P	08 09 33.7 +0.9
	comp=Z,20nm,1.0s						
G06A	Carlson Farm,	66.89	50	eP		P	08 09 33.6 +0.8
	comp=Z,64nm,1.8s						
HAWA	Hanford	66.91	48	eP		P	08 09 34.7 +1.9
	comp=Z,32nm,1.5s						
HUMO	Hull Mountain	66.92	53	eP		P	08 09 32.8 -0.2
	comp=Z,31nm,1.9s						
F07A	Phinny Hill Vi	66.95	49	eP		P	08 09 34.0 +0.9
	comp=Z,18nm,0.8s						
I05D	Terrebonne, OR	66.96	51	P		P	08 09 34.5 +1.2
	baz=303						
J04D	Umpqua Nationa	67.09	52	P		P	08 09 36.0 +1.6
	baz=303,SNR=7.5						
E08A	Dider Farm, El	67.13	48	eP		P	08 09 35.8 +1.5
	comp=Z,20nm,1.2s						
OBN	Obninsk	67.22	323	eP		P	08 09 35.8 +1.2
	comp=Z,106nm,0.4s						
OBN	Obninsk	67.22	323⇓	eP		P	08 09 35.6 +1.0
OBN				e*PP		pP	08 09 42.8 -0.5
OBN				e			08 10 06.7
OBN				i S		S	08 18 23.6 -3.7
OBN				e			08 19 25.7
OBN					pmax	pmax	
	comp=Z,5.0nm,0.4s						
OBN					MLR	MLR	
	comp=Z,1μm,15.0s						
NEW	Newport	67.23	46	P		P	08 09 35.9 +0.9
	baz=304						
NEW	Newport	67.23	46	eP		P	08 09 36.4 +1.4
	comp=Z,17nm,1.0s						
NEW	Newport	67.23	46	eP		P	08 09 36.4 +1.4
NEW					pmax	pmax	
	comp=Z,17nm,1.0s						
AFI	Afiamalu	67.40	132	LR		LR	08 35 08.9
	comp=Z,218nm,19.2s,baz=76,slow=32						
FIA1	FINESS Array S	67.50	333	eP		P	08 09 36.6 +0.3
	comp=Z,21nm,0.9s						
PINE	Pine Mountain	67.50	51	eP		P	08 09 38.9 +2.0
	comp=Z,45nm,1.1s						
FINES	FINESS Array B	67.50	333	P		P	08 09 36.8 +0.4
	comp=Z,6.4nm,0.7s,baz=46,slow=8.2,SNR=22						
FINES				LR		LR	08 42 06.4
	comp=Z,1μm,18.6s,baz=32,slow=39						
FINES	FINESS Array B	67.50	333	P		P	08 09 36.8 +0.4
FINES					pmax	pmax	
	comp=Z,6.0nm,0.7s						
FINES					MLR	MLR	
	comp=Z,1μm,18.6s						
YBH	Yreka Blue Hor	67.55	54	P		P	08 09 37.6 +0.4
	comp=Z,4.7nm,0.8s,baz=328,slow=2.8,SNR=22						
YBH				LR		LR	08 33 52.1
	comp=Z,70nm,19.6s,baz=316,slow=31						
YBH	Yreka Blue Hor	67.55	54	eP		P	08 09 38.6 +1.6
	comp=Z,14nm,1.1s						
YBH	Yreka Blue Hor	67.55	54	eP		P	08 09 38.7 +1.6
YBH					pmax	pmax	
	comp=Z,14nm,1.1s						
VAF	Ylistaro	67.58	335	eP		P	08 09 37.0 +0.2
VAF					pmax	pmax	
	comp=Z,13nm,0.9s						
J05D	Fort Rock, OR	67.60	52	P		P	08 09 38.9 +1.3
	baz=304,SNR=12						
E09A	Wood Farm, Sta	67.64	48	eP		P	08 09 38.4 +0.9
	comp=Z,34nm,1.2s						
M02C	Callahan	67.64	54	P		P	08 09 39.6 +1.9
	baz=303,SNR=5.3						
K04D	Chiloquin, OR	67.65	53	P		P	08 09 39.2 +1.4
	baz=304						
G08A	Pilot Rock	67.85	49	eP		P	08 09 40.2 +1.2
	comp=Z,34nm,1.9s						
N02D	Trinity Center	67.97	55	P		P	08 09 41.4 +1.7
	baz=304,SNR=5.5						
M04C	Macdoel	68.06	53	P		P	08 09 41.9 +1.4
	baz=304,SNR=6.5						
KCPM	Cahto Peak	68.12	56	eP		P	08 09 42.4 +1.6
	comp=Z,31nm,1.2s						
K05A	Summer Lake	68.12	52	eP		P	08 09 42.5 +1.6
	comp=Z,46nm,1.0s						
I07A	Izee	68.20	50	eP		P	08 09 43.1 +1.8
	comp=Z,13nm,1.4s						
VSR	Storozhevoye	68.27	319	eP		P	08 09 40.4 -1.0
VSR					pmax	pmax	
	comp=Z,9.0nm,0.9s						
VSR					MLR	MLR	
	comp=Z,1μm,16.0s						
WDC	Whiskeytown Da	68.29	55	eP		P	08 09 42.8 +1.1
	comp=Z,18nm,1.4s						
WDC	Whiskeytown Da	68.29	55	eP		P	08 09 42.8 +1.1
WDC					pmax	pmax	
	comp=Z,18nm,1.4s						
SUMG	Summit	68.30	1	i P		P	08 09 42.0 +0.3
SUMG	Summit	68.30	1	eP		P	08 09 42.1 +0.3
	comp=Z,12nm,0.7s						
SUMG	Summit	68.30	1	eP		P	08 09 42.1 +0.3
SUMG					pmax	pmax	
	comp=Z,12nm,0.7s						
VORD	Divnogorie	68.35	319	eP		P	08 09 40.9 -1.0
VORD					pmax	pmax	
	comp=Z,7.0nm,0.6s						
F10A	Beach Ranch, E	68.47	48	eP		P	08 09 44.0 +1.2
	comp=Z,9.4nm,0.9s						
WALA	Waterton Lakes	68.53	44	eP		P	08 09 44.5 +1.2
	comp=Z,12nm,0.9s						
O03D	Paynes Creek	68.91	55	P		P	08 09 46.4 +0.7
	baz=304,SNR=7.7						
MOD	Modoc Plateau	68.95	53	eP		P	08 09 47.2 +1.2
	comp=Z,15nm,1.1s						
BMO	Blue Mountains	69.06	49	eP		P	08 09 47.9 +1.3
	comp=Z,12nm,1.1s						
BMO	Blue Mountains	69.06	49	eP		P	08 09 47.9 +1.3
BMO					pmax	pmax	
	comp=Z,12nm,1.1s						
JTMT	Jette	69.10	45	eP		P	08 09 48.2 +1.4
	comp=Z,21nm,0.9s						
J08A	Circle Bar Ran	69.23	51	eP		P	08 09 49.0 +1.4
	comp=Z,27nm,1.2s						
VSU	Vasula	69.27	330	ceP		P	08 09 48.7 +1.3
VSU					pmax	pmax	
	comp=Z,50nm,1.2s						
ORV	Oroville	69.52	55	eP		P	08 09 49.7 +0.3
	comp=Z,26nm,1.5s						
ORV	Oroville	69.52	55	eP		P	08 09 49.7 +0.3
ORV					pmax	pmax	
	comp=Z,26nm,1.5s						
WVOR	Wild Horse Val	69.66	51	eP		P	08 09 52.2 +1.8
	comp=Z,21nm,1.3s						
WVOR	Wild Horse Val	69.66	51	eP		P	08 09 52.2 +1.8
WVOR					pmax	pmax	
	comp=Z,21nm,1.3s						
MSO	Missoula	69.82	46	P		P	08 09 52.0 +0.7
	baz=306						
MSO	Missoula	69.82	46	eP		P	08 09 50.9 -0.3
	comp=Z,14nm,1.0s						
BEKR	Beckworth	70.07	55	eP		P	08 09 53.8 +0.8
	comp=Z,18nm,1.0s						
AFDM	Forest Hills D	70.20	56	eP		P	08 09 54.1 +0.5
	comp=Z,13nm,1.2s						
ZEI	Tsey	70.61	310	eP		P	08 09 55.1 -1.2
ZEI					pmax	pmax	
	comp=Z,11nm,0.6s						
KVAR	Kislovodsk Arr	70.63	311	P		P	08 09 58.0 +1.7
	comp=Z,26nm,0.9s,baz=220,slow=4.5,SNR=9.8						
KIV	Kislovodsk	70.64	311	eP		P	08 09 57.8 +1.5
	comp=Z,48nm,0.9s						
KIV	Kislovodsk	70.64	311	P		P	08 09 58.3 +2.0
	SNR=16						
KIV	Kislovodsk	70.64	311	i P		P	08 09 57.8 +1.5
	SNR=6.0						
KIV	Kislovodsk	70.64	311	eP		P	08 09 57.6 +1.3
KIV				e			08 10 23.2
KIV				eS		S	08 19 09.1 +0.6
KIV					pmax	pmax	
	comp=Z,22nm,4.9s						
KIV					pmax	pmax	
	comp=Z,51nm,1.0s						
KIV					MLR	MLR	

comp=Z,9.6nm,0.8s
STKA Stephens Creek 70.95 182 P P 08 09 57.9 -0.1
comp=Z,2.2nm,0.7s,baz=346,slow=7.5,SNR=3.6
STKA LR LR 08 40 37.7
comp=Z,120nm,20.9s,baz=12,slow=36
STKA Stephens Creek 70.95 182 P P 08 09 57.9 -0.1
STKA pmax pmax
comp=Z,3.0nm,0.8s
PNTR Pine Nut 71.00 55 eP P 08 09 59.8 +1.1
comp=Z,14nm,0.9s
HRY Holter Researc 71.05 45 eP P 08 10 00.2 +1.4
FCC Fort Churchill 71.11 28 eP P 08 09 59.3 +0.6
comp=Z,30nm,1.5s
FCC Fort Churchill 71.11 28 eP P 08 09 59.3 +0.6
FCC pmax pmax
comp=Z,30nm,1.5s
CMB Columbia Colle 71.11 56 eP P 08 09 60.0 +0.8
comp=Z,9.5nm,1.0s
CMB Columbia Colle 71.11 56 eP P 08 10 00.0 +0.8
CMB pmax pmax
comp=Z,10.0nm,1.0s
LRM Limekiln Ridge 71.25 46 eP P 08 10 01.2 +1.0
EGMT Eagleton 71.36 43 P P 08 10 01.1 +0.6
baz=309
EGMT Eagleton 71.36 43 eP P 08 10 01.4 +0.8
comp=Z,43nm,1.2s
IDID Didziasalis 71.41 327 eP P 08 10 02.8 +2.2
IDID IAmb IAmb 08 10 12.3
comp=Z,7.1nm,0.8s
DLMT Dillon 71.45 46 eP P 08 10 02.2 +0.9
comp=Z,17nm,0.9s
ISAL Salakas 71.49 328 eP P 08 10 03.2 +2.1
ISAL IAmb IAmb 08 10 12.8
comp=Z,10nm,0.5s
HLID Hailey 71.51 49 P P 08 10 02.9 +1.2
baz=307,SNR=7.8
HLID Hailey 71.51 49 eP P 08 10 02.9 +1.2
comp=Z,12nm,1.1s
IIGN Ignalina 71.60 328 eP P 08 10 03.9 +2.2
IIGN IAmb IAmb 08 10 13.5
comp=Z,12nm,1.1s
MCMT McKenzie Canyo 71.64 47 eP P 08 10 03.4 +0.9
GNI Garni 71.65 307 *i* P P 08 10 04.1 +1.5
comp=Z,7.3nm,0.3s,baz=66,slow=18,SNR=2.7
GNI Garni 71.65 307 *i* P P 08 10 03.6 +1.0
GNI pmax pmax
comp=Z,15nm,1.0s
NACGM Naroch 71.67 327 *e* P 08 10 23.0 +21
NACGM *e*LQ LQ 08 39 40.0
NACGM *e*LR LR 08 43 47.0
BMN Battle Mountai 71.69 53 eP P 08 10 03.6 +0.8
comp=Z,18nm,1.0s
BMN Battle Mountai 71.69 53 eP P 08 10 03.6 +0.8
BMN pmax pmax
comp=Z,18nm,1.0s
BOZ Bozeman (W) 71.85 46 P P 08 10 04.5 +0.9
baz=308,SNR=28
BOZ Bozeman (W) 71.85 46 eP P 08 10 04.8 +1.2
comp=Z,15nm,0.9s
BOZ Bozeman (W) 71.85 46 eP P 08 10 04.8 +1.2
BOZ pmax pmax
comp=Z,15nm,0.9s
WSAR Wadi Sarin 71.90 285 P P 08 10 05.0 +0.9
comp=Z,3.7nm,0.8s,baz=54,slow=9.0,SNR=2.8
WSAR LR LR 08 47 07.8
comp=Z,211nm,18.0s,baz=88,slow=40
WSAR Wadi Sarin 71.90 285 P P 08 10 13.7 +10
RYN Ryan 71.95 55 eP P 08 10 05.6 +1.3
comp=Z,11nm,1.1s
KVN Kaiserville 71.96 54 eP P 08 10 06.1 +1.6
comp=Z,24nm,1.1s
KVN Kaiserville 71.96 54 eP P 08 10 06.1 +1.6
KVN pmax pmax
comp=Z,24nm,1.1s
WBK Wadi Bani Khal 72.01 285 P P 08 10 14.3 +10
BANOM Banah 72.07 289 P P 08 10 13.9 +8.8
BANOM Banah 72.07 289 P P **08 10 05.6 +0.5**
SHME Shamm 72.11 289 P P **08 10 06.0 +0.6**
BIDO Bidbid 72.11 286 P P 08 10 14.5 +9.1
MDPB Devils Postpil 72.18 56 eP P 08 10 06.5 +0.6
comp=Z,7.7nm,0.9s
NV01 Mina Array Sit 72.20 55 eP P 08 10 07.3 +1.3
NVAR Mina Array Bea 72.20 55 P P 08 10 07.3 +1.4
comp=Z,5.7nm,0.9s,baz=285,slow=6.5,SNR=36
NVAR LR LR 08 39 21.9
comp=Z,152nm,18.5s,baz=62,slow=34
OMMB Old Mammoth Mi 72.24 56 eP P 08 10 07.2 +0.9
comp=Z,9.1nm,1.2s
NV11 Mina Array Sit 72.30 55 eP P 08 10 07.6 +1.2
comp=Z,0.9nm,1.1s
MLAC Mammoth, Mammo 72.34 56 P P 08 10 07.8 +1.0
baz=306
QLMT Earthquake Lak 72.43 46 eP P 08 10 08.6 +1.3
NC405 NORSAR Array S 72.44 338 eP P 08 10 07.1 +0.4
PAGB Antelope Grade 72.54 58 eP P 08 10 09.4 +1.6
comp=Z,24nm,1.2s
SOC Sochi 72.58 312 eP P 08 10 15.7 +7.9
SOC *e*PPP PPP 08 14 26.4
SOC *e*SS SS 08 24 12.5 +3.4
SOC *e*SSS SSS 08 27 27.2
SOC pmax pmax
comp=Z,15nm,0.7s
SOC MLR MLR
comp=Z,407nm,17.0s
NC204 NORSAR Array S 72.59 338 eP P 08 10 08.1 +0.5
YHB Horse Butte 72.61 46 eP P 08 10 09.5 +1.2
comp=Z,13nm,0.9s
NB201 NORSAR Array S 72.61 338 eP P 08 10 07.8 0.0
HFS Hagfors 72.62 336 P P 08 10 08.3 +0.6
comp=Z,4.2nm,0.6s,baz=38,slow=7.5,SNR=24
HFS LR LR 08 45 14.4
comp=Z,648nm,20.3s,baz=32,slow=38
NB2 NORSAR Subarra 72.64 338 P P 08 10 08.3 +0.3
comp=Z,10nm,1.0s,baz=35,slow=6.2
NOA NORSAR Array B 72.64 338 LR LR 08 47 34.1
comp=Z,596nm,18.9s,baz=50,slow=40
UOSS Minazif 72.71 288 eP P 08 10 08.9 0.0
comp=Z,28nm,0.8s
UOSS Minazif 72.71 288 P P 08 10 09.3 +0.4
ELK Elko 72.72 51 P P 08 10 12.4 +3.4
comp=Z,0.7nm,0.4s,baz=326,slow=1.8,SNR=7.4
NBO00 NORSAR Array S 72.78 338 eP P 08 10 09.7 +0.9
YMR Madison River 72.79 46 eP P 08 10 11.3 +2.0
comp=Z,13nm,0.9s
GCMT Greycliff 72.80 45 eP P 08 10 10.7 +1.4
HATD Hatta, Dubai 72.83 288 *i* P P 08 10 10.4 +0.8
SNR=5.9
SOHO SOHO 72.94 287 *i* P P 08 10 10.9 +0.6
SNR=6.5
SMMC Simmler 72.95 58 P P 08 10 11.7 +1.4
baz=306
YFT Old Faithful 73.00 46 eP P 08 10 13.0 +2.3
TIN Tinemaha, Big 73.07 56 P P 08 10 12.2 +1.2
baz=307
GATR Gnd/Air Tx Cnt 73.07 59 eP P 08 10 14.3 +3.4
YPP Pitchstone Pla 73.13 46 eP P 08 10 13.1 +1.6
comp=Z,8.2nm,1.0s
H17A Grant Village 73.18 46 P P 08 10 14.5 +2.8
baz=309,SNR=8.3
H17A Grant Village 73.18 46 eP P 08 10 12.5 +0.8
comp=Z,19nm,0.9s
VES Vestal, Richgr 73.24 57 P P 08 10 12.4 +0.5
baz=307
IMW Indian Meadow 73.29 47 eP P 08 10 14.0 +1.6
comp=Z,14nm,0.9s
PKM Mcpherson Peak 73.33 58 P P 08 10 12.5 -0.2
baz=307
SFJD Kangerlussuaq 73.36 6 LR LR 08 45 45.4
comp=Z,381nm,18.8s,baz=346,slow=38
FXWY Fox Creek 73.40 47 eP P 08 10 14.7 +1.7
comp=Z,14nm,1.0s
RLMT Red Lodge 73.44 45 P P 08 10 14.3 +1.1
baz=310
RLMT Red Lodge 73.44 45 eP P 08 10 14.5 +1.2
comp=Z,54nm,1.8s
AKASG Malin Array Be 73.45 323 P P 08 10 13.0 +0.1
comp=Z,3.4nm,0.6s,baz=43,slow=5.9,SNR=15
AKBB Malin Array Si 73.45 323 eP P 08 10 12.9 0.0
comp=Z,11nm,0.8s
AKBB Malin Array Si 73.45 323 eP P 08 10 12.9 0.0
AKBB pmax pmax
comp=Z,11nm,0.8s
KIEV Kiev 73.47 323 eP P 08 10 13.2 +0.2
comp=Z,11nm,0.8s
KIEV Kiev 73.47 323 *i* P P 08 10 13.3 +0.4
KIEV pmax pmax
comp=Z,5.0nm,0.9s
MOOW Moose Ponds 73.49 47 eP P 08 10 15.4 +1.8
comp=Z,11nm,1.0s
AK11 Malin Array Si 73.50 323 eP P 08 10 13.3 +0.2
CWC Cottonwood Cre 73.53 56 P P 08 10 14.6 +0.8
baz=307
ASUD Al Ashush, Dub 73.54 288 P P 08 10 14.7 +0.9
TPAW Teton Pass 73.54 47 eP P 08 10 15.6 +1.8
comp=Z,8.9nm,0.9s
HVU Hansel Valley 73.55 49 eP P 08 10 15.3 +1.5
comp=Z,12nm,0.9s
ALNE Al Ain 73.56 288 *i* P P 08 10 14.9 +1.0
SNR=5.3
GRAC Grapevine Rang 73.66 55 P P 08 10 15.4 +1.0
baz=307
LOHW Long Hollow 73.66 47 eP P 08 10 15.7 +1.2
comp=Z,15nm,1.4s
SBC Santa Barbara 73.66 59 P P 08 10 15.0 +0.7
baz=307
SNOW Snow King Moun 73.67 47 eP P 08 10 16.5 +1.9
comp=Z,13nm,1.0s
REDW Red Top Meadow 73.67 47 eP P 08 10 15.9 +1.3
comp=Z,11nm,1.0s
ISA Isabella, Lake 73.74 57 P P 08 10 15.1 +0.2
baz=307
ISA Isabella, Lake 73.74 57 eP P 08 10 15.2 +0.2
comp=Z,6.8nm,1.1s
ISA Isabella, Lake 73.74 57 eP P 08 10 15.2 +0.2
ISA pmax pmax
comp=Z,7.0nm,1.1s
ARVC Arvin 73.83 58 P P 08 10 16.1 +0.8
baz=307
AHID Auburn Hatcher 73.91 48 eP P 08 10 17.0 +1.1
comp=Z,9.8nm,1.0s
DGMT Dagmar 73.91 40 P P 08 10 16.2 +0.6
baz=312
DGMT Dagmar 73.91 40 eP P 08 10 15.8 +0.1
comp=Z,18nm,1.0s
BGU Big Grassy Mou 73.93 50 eP P 08 10 16.9 +0.8
comp=Z,7.1nm,1.0s
DAC Darwin (Calif) 73.94 56 eP P 08 10 18.6 +2.3
comp=Z,7.3nm,1.1s
DAC Darwin (Calif) 73.94 56 eP P 08 10 18.6 +2.3
DAC pmax pmax
comp=Z,7.0nm,1.1s
R11A Troy Canyon, C 73.96 53 P P 08 10 17.5 +1.2
baz=308
R11A Troy Canyon, C 73.96 53 eP P 08 10 17.6 +1.3
comp=Z,16nm,1.1s
LAO LASA Array 74.06 42 P P 08 10 17.4 +0.8
baz=311
LAO LASA Array 74.06 42 eP P 08 10 17.6 +1.0
comp=Z,17nm,0.9s
MPMC Manual Prospec 74.14 56 P P 08 10 18.2 +0.7
baz=307
OSI Osito Audit: C 74.21 58 P P 08 10 18.5 +0.8
baz=307
BLG Laguna Peak, P 74.29 59 P P 08 10 19.4 +1.3
baz=307
FURC Furnace Creek, 74.30 56 P P 08 10 19.5 +1.4
baz=308
HWUT Hardware Ranch 74.37 49 eP P 08 10 20.1 +1.4
comp=Z,23nm,1.1s
LRMC Laurel Mtn Rad 74.37 57 P P 08 10 19.3 +0.6
baz=308
TPNV Topopah Spring 74.39 55 P P 08 10 19.6 +0.7
baz=308
TPNV Topopah Spring 74.39 55 eP P 08 10 19.4 +0.6
comp=Z,22nm,1.0s
TPNV Topopah Spring 74.39 55 eP P 08 10 19.4 +0.6
TPNV pmax pmax
comp=Z,22nm,1.0s
DUG Dugway, Tooele 74.51 51 P P 08 10 20.7 +1.2
baz=309,SNR=18
DUG Dugway, Tooele 74.51 51 eP P 08 10 20.6 +1.2
comp=Z,16nm,0.9s
DUG Dugway, Tooele 74.51 51 eP P 08 10 20.6 +1.2
DUG pmax pmax
comp=Z,16nm,0.9s
EDW2 Edwards Air Fo 74.53 58 P P 08 10 20.0 +0.5
baz=308
TCUT Toone Canyon 74.77 49 eP P 08 10 22.6 +1.5
comp=Z,137nm,2.0s
BW06 Boulder Array 74.78 47 P P 08 10 21.5 +0.4
baz=310
BW06 Boulder Array 74.78 47 eP P 08 10 21.8 +0.6
comp=Z,8.3nm,0.8s
PD31 Pinedale Array 74.78 47 eP P 08 10 21.9 +0.8
PDAR Pinedale Array 74.78 47 P P 08 10 21.8 +0.7
comp=Z,2.2nm,0.6s,baz=264,slow=1.9,SNR=32
PDAR LR LR 08 41 31.7
comp=Z,45nm,20.8s,baz=340,slow=34
PDAR Pinedale Array 74.78 47 eP P 08 10 21.6 +0.5
SIM Simferopol' 74.82 316 *de*P P 08 10 32.4 +11
SIM *e*S **S 08 20 01.0 +5.1**
SIM pmax pmax
comp=Z,30nm,0.9s
CTU Camp Tracy 74.83 50 eP P 08 10 22.8 +1.4
comp=Z,10nm,1.0s
PSUT Pine Spring 74.91 52 eP P 08 10 23.0 +1.0
comp=Z,11nm,0.9s
SHOC Shoshone, Teco 75.02 56 P P 08 10 23.0 +0.6
baz=308
GSC Goldstone, Bar 75.04 57 P P 08 10 23.2 +0.6
baz=308
GSC Goldstone, Bar 75.04 57 eP P 08 10 23.2 +0.6
comp=Z,11nm,1.3s
GSC Goldstone, Bar 75.04 57 eP P 08 10 23.2 +0.6
GSC pmax pmax
comp=Z,11nm,1.3s
JLU Jordanelle 75.07 50 eP P 08 10 23.7 +0.9
comp=Z,58nm,1.9s
BFSC Mount Baldy Ra 75.14 58 P P 08 10 23.1 -0.1
baz=308
RRX Edison Barstow 75.18 57 P P 08 10 24.0 +0.7
baz=308
SCI2 San Clemente I 75.31 59 P P 08 10 24.8 +0.7
baz=308
MPU Maple Canyon 75.33 50 eP P 08 10 25.2 +1.0
comp=Z,14nm,0.9s
SHPR Sheep Range 75.36 55 eP P 08 10 25.8 +1.4
comp=Z,17nm,1.2s
BORG Borgarnes 75.50 353 LR LR 08 42 51.2
comp=Z,88nm,20.8s,baz=4.6,slow=35
TUQ Turquoise Moun 75.53 56 P P 08 10 26.2 +0.8
baz=308
HEC Hector,Ludlow 75.64 57 P P 08 10 26.6 +0.6
baz=308
TCRU Three Creeks R 75.73 52 eP P 08 10 28.4 +1.8
comp=Z,10nm,1.0s
CCUT Cedar City 75.83 53 eP P 08 10 28.6 +1.4
comp=Z,11nm,1.0s
MZR Muzera 75.86 288 *i* P P 08 10 28.0 +0.7
SNR=5.1
MSU Marysvale 75.95 52 eP P 08 10 29.7 +1.8
MSU Marysvale 75.95 52 eP P 08 10 29.7 +1.8
SZCU Shurtz Canyon 75.97 53 eP P 08 10 29.1 +1.1
comp=Z,8.3nm,1.0s
NWAO Narrogin (SRO) 76.01 203 P P 08 10 28.5 +0.8
comp=Z,7.9nm,0.9s,baz=72,slow=20,SNR=2.9
TMUT Trail Mountain 76.04 50 eP P 08 10 29.0 +0.5
comp=Z,14nm,0.5s
GMRC Granite Mounta 76.10 56 P P 08 10 29.5 +0.8
baz=308
KIS Kishinev 76.18 320 eP P 08 10 34.0 +5.3
KIS *e*S **S 08 20 05.0 -5.9**
KIS LRM MLR 08 47 16.0
comp=Z,900nm,16.0s
KIS Kishinev 76.18 320 eP P 08 10 34.0 +5.3
KIS *e* 08 10 48.0
KIS *e* 08 13 20.0
KIS *e* 08 15 10.0
KIS *e*S **S 08 20 05.0 -5.9**
KIS MLR MLR
comp=Z,1μm,15.0s
KIS MLR MLR
comp=Z,900nm,16.0s
P17A Butcher Ranch, 76.20 50 eP P 08 10 30.0 +0.7
comp=Z,22nm,0.9s
LCMT Little Creek M 76.24 53 eP P 08 10 30.7 +1.3
comp=Z,18nm,1.1s
MTPU Mount Pierson 76.25 52 eP P 08 10 31.6 +1.9
comp=Z,13nm,1.1s
LDFC Landfair 76.27 56 eP P 08 10 30.9 +1.3
comp=Z,34nm,1.4s
PFO Pinyon Flats O 76.31 58 P P 08 10 30.6 +0.8
baz=308
PFO Pinyon Flats O 76.31 58 eP P 08 10 30.1 +0.3
comp=Z,8.3nm,1.1s
PFO Pinyon Flats O 76.31 58 eP P 08 10 30.1 +0.3
PFO pmax pmax
comp=Z,8.0nm,1.1s
XPFO Piæon Flat 76.31 58 eP P 08 10 29.9 0.0
comp=Z,6.9nm,1.1s
P18A Preston Nutter 76.40 50 eP P 08 10 31.3 +0.8
comp=Z,13nm,0.9s
LVV L'vov 76.45 325 eP P 08 10 42.5 +12
LVV *e* 08 13 20.0
LVV MLR MLR
comp=Z,2μm,16.0s
KNB Kanab 76.50 53 eP P 08 10 32.0 +1.0
comp=Z,26nm,1.2s
K22A Casper 76.56 46 P P 08 10 31.7 +0.5
baz=312
K22A Casper 76.56 46 eP P 08 10 31.6 +0.5
comp=Z,17nm,1.0s
SRU San Rafael Swe 76.57 50 eP P 08 10 32.0 +0.7
comp=Z,19nm,0.7s
ULM Lac du Bonnet 76.58 35 P P 08 10 30.9 0.0
comp=Z,1.7nm,0.5s,baz=337,slow=7.7,SNR=4.1
ULM Lac du Bonnet 76.58 35 eP P 08 10 31.1 +0.2
comp=Z,6.4nm,0.8s
ULM Lac du Bonnet 76.58 35 eP P 08 10 31.1 +0.2
ULM pmax pmax
comp=Z,6.0nm,0.8s
MDND Maddock 76.58 38 P P 08 10 31.2 +0.2
baz=315
RWWY Rawlins 76.81 47 eP P 08 10 33.1 +0.4
comp=Z,13nm,0.9s
IRM Iron Mountain 76.82 57 P P 08 10 32.9 +0.3
baz=309
RSSD Black Hills 76.92 43 P P 08 10 33.1 -0.1
baz=313
RSSD Black Hills 76.92 43 eP P 08 10 33.2 -0.1
comp=Z,14nm,0.9s
RSSD Black Hills 76.92 43 eP P 08 10 33.2 -0.1
RSSD pmax pmax
comp=Z,14nm,0.9s
BC3 Big Chuckawall 76.94 57 P P 08 10 34.0 +0.6
baz=309
A31A Linda, St. Vin 76.94 36 P P 08 10 33.1 +0.1
baz=316
B31A Greenbush Farm 77.09 37 P P 08 10 34.1 +0.3
baz=316
IKP In-Ko-Pah, Jac 77.13 58 P P 08 10 34.1 -0.4
baz=309
KWP Kalwaria Pacla 77.18 325 eP P 08 10 36.5 +2.1
KWP Kalwaria Pacla 77.18 325 eP P 08 10 35.6 +1.2
comp=Z,574nm,1.3s
KWP Kalwaria Pacla 77.18 325 eP P 08 10 35.6 +1.2
KWP pmax pmax
comp=Z,574nm,1.3s
U15A North Rim 77.20 53 eP P 08 10 36.2 +1.1
comp=Z,18nm,1.0s
O20A White River Ci 77.24 48 P P 08 10 35.5 +0.4
baz=311
O20A White River Ci 77.24 48 eP P 08 10 35.2 +0.1
comp=Z,14nm,0.9s
BUR08 Bucovina Ar. S 77.48 322 eP P 08 10 36.9 +0.7
Y12C Blythe 77.48 57 P P 08 10 36.6 +0.4
baz=309
Y12C Blythe 77.48 57 eP P 08 10 37.5 +1.2
comp=Z,10nm,1.0s
BUR04 Bucovina Ar. S 77.49 322 eP P 08 10 36.9 +0.7
BURAR Bucovina Array 77.49 322 ⇑*i*P P 08 10 37.6 +1.3
BURAR Bucovina Array 77.49 322 ⇑P P 08 10 37.6 +1.3
C31A Landman Farms, 77.51 37 P P 08 10 36.4 +0.2
baz=316
ILGA Ilgaz 77.61 313 eP P 08 10 38.6 +1.4
comp=Z,28nm,1.1s
GLA Glamis 77.72 57 P P 08 10 37.6 -0.1
baz=309
A33A Warroad 77.75 35 P P 08 10 37.5 0.0
baz=317
PV09 Paradox Valley 77.79 50 eP P 08 10 39.4 +1.1
PV10 Paradox Valley 77.92 50 eP P 08 10 40.5 +1.5
comp=Z,45nm,0.8s
PV04 Paradox Valley 77.99 50 eP P 08 10 40.5 +1.1
comp=Z,29nm,1.1s
OJC Ojcow 78.00 327 eP P 08 10 41.1 +2.2
OJC Ojcow 78.00 327 eP P 08 10 40.3 +1.4
comp=Z,39nm,1.2s
OJC Ojcow 78.00 327 eP P 08 10 40.3 +1.4
OJC pmax pmax
comp=Z,39nm,1.2s
AGMN Agassiz Nation 78.01 36 P P 08 10 38.5 -0.4
baz=317
AGMN Agassiz Nation 78.01 36 eP P 08 10 39.1 +0.1
comp=Z,6.4nm,0.9s
VRI Vrincioaia 78.01 320 ⇓*i*P P 08 10 50.0 +11
VRI Vrincioaia 78.01 320 ⇓P P 08 10 50.0 +11
C32A Crookston 78.05 37 P P 08 10 38.5 -0.7
baz=317
N23A Red Feather La 78.05 47 P P 08 10 40.9 +1.2
baz=312,SNR=5.8
N23A Red Feather La 78.05 47 eP P 08 10 40.1 +0.4
comp=Z,20nm,1.1s
PHWY Pilot Hill 78.05 46 eP P 08 10 40.3 +0.6
comp=Z,19nm,1.5s
PLOR Plostina 78.06 320 ⇓*i*P P 08 10 49.2 +10
PLOR Plostina 78.06 320 ⇓P P 08 10 49.2 +10
PV05 Paradox Valley 78.08 50 eP P 08 10 41.4 +1.5
comp=Z,32nm,0.9s
UZH Uzhgorod 78.10 325 eP P 08 10 39.7 +0.2
UZH *i* 08 10 49.5
PV07 Paradox Valley 78.12 50 eP P 08 10 41.2 +1.2
comp=Z,25nm,1.3s
PV03 Paradox Valley 78.12 50 eP P 08 10 40.8 +0.7
comp=Z,39nm,1.3s
TLB Topalu 78.25 319 ⇓*i*P P 08 10 48.7 +8.4
TLB Topalu 78.25 319 ⇓P P 08 10 48.7 +8.4
PV15 Paradox Valley 78.28 50 eP P 08 10 42.1 +1.1
comp=Z,10nm,0.9s
E31A Nome 78.32 38 P P 08 10 41.0 +0.2
baz=316
Y14A Wickenburg 78.34 56 eP P 08 10 42.2 +1.1
comp=Z,8.8nm,0.9s
WUAZ Wupatki 78.36 54 P P 08 10 42.5 +1.2
baz=310
WUAZ Wupatki 78.36 54 eP P 08 10 42.6 +1.2
comp=Z,18nm,1.1s
TRPA Tarpa 78.36 324 ⇓*i*P P 08 10 43.5 +2.6
PV01 Paradox Valley 78.36 50 eP P 08 10 42.6 +1.2
comp=Z,12nm,1.1s
NIE Niedzica 78.39 326 eP P 08 10 43.2 +2.0
NIE Niedzica 78.39 326 eP P 08 10 43.2 +2.0
B34A Aery, Baudette 78.41 35 P P 08 10 40.9 -0.3
baz=318
C33A Trail 78.44 36 P P 08 10 41.2 -0.2
baz=317
BR131 Keskin Array S 78.54 312 eP P 08 10 43.1 +0.8
BRTR Keskin Array B 78.54 312 P P 08 10 42.9 +0.6
comp=Z,1.2nm,0.6s,baz=46,slow=3.6,SNR=6.3
BRTR LR LR 08 50 18.7
comp=Z,177nm,18.0s,baz=7.5,slow=39
113A Mohawk Valley, 78.59 57 eP P 08 10 43.0 +0.5
comp=Z,6.6nm,1.0s
SMCO Snowmass 78.61 48 eP P 08 10 43.4 +0.4
comp=Z,8.3nm,0.9s
MLR Muntele Rosu 78.66 321 P P 08 10 43.4 +0.6
comp=Z,0.2nm,0.5s,baz=135,slow=10.0,SNR=3.5
MLR LR LR 08 49 35.7
comp=Z,107nm,20.4s,baz=38,slow=39
MLR Muntele Rosu 78.66 321 ⇓*i*P P 08 10 52.4 +10
MLR Muntele Rosu 78.66 321 eP P 08 10 42.9 +0.1
comp=Z,24nm,1.5s
D33A AnnSam, Waubun 78.86 37 P P 08 10 43.4 -0.3
baz=317
C34A RKJ Ranch, Bem 78.92 36 P P 08 10 43.3 -0.7
baz=318
B35A Bob, Littlefor 78.92 35 P P 08 10 43.4 -0.6
baz=318
B35A Bob, Littlefor 78.92 35 eP P 08 10 44.3 +0.3
comp=Z,8.2nm,0.8s
LANS Liptovska Anna 78.95 326 eP P 08 10 45.3 +1.1
LANS *e* 08 10 54.6
LANS Liptovska Anna 78.95 326 eP P 08 10 45.3 +1.1
LANS *e* 08 10 54.6
ISCO Idaho Springs 78.97 47 P P 08 10 45.4 +0.6
baz=313
ISCO Idaho Springs 78.97 47 eP P 08 10 45.8 +0.9
comp=Z,8.1nm,1.0s
ISCO Idaho Springs 78.97 47 P P 08 10 46.2 +1.3
ISCO pmax pmax

comp=Z,9.0nm,1.8s
OKC Ostrava-Krasne 78.99 327 AMS AMS 08 48 40.0
comp=Z,1µm,18.3s
MVCO Mesa Verde 79.01 51 P P 08 10 46.0 +1.0
baz=312
MVCO Mesa Verde 79.01 51 eP P 08 10 46.0 +1.0
comp=Z,14nm,0.9s
X16A Lo Mia Camp, P 79.03 54 eP P 08 10 45.8 +0.7
comp=Z,8.3nm,1.0s
G31A Conde 79.12 39 P P 08 10 44.9 -0.3
baz=316
VOIR 79.14 321⇑iP P 08 10 45.8 +0.4
VOIR 79.14 321⇑P P 08 10 45.8 +0.4
F32A Veblen 79.18 38 P P 08 10 45.5 0.0
baz=317
D34A Park Rapids 79.20 37 P P 08 10 45.0 -0.6
baz=318
D34A Park Rapids 79.20 37 eP P 08 10 45.6 0.0
comp=Z,14nm,0.8s
E33A Westby DABS, E 79.25 37 P P 08 10 45.8 -0.1
baz=317,SNR=6.2
MORC Moravsky Berou 79.28 328⇓iP P 08 10 48.3 +2.3
MORC Moravsky Berou 79.28 328 eP P 08 10 45.5 -0.6
comp=Z,50nm,0.6s
MORC Moravsky Berou 79.28 328 eP P 08 10 45.5 -0.6
MORC pmax pmax
comp=Z,50nm,0.6s
MORC Moravsky Berou 79.28 328 eP P 08 10 47.5 +1.5
C35A Jirik Farms, M 79.30 35 P P 08 10 45.3 -0.8
baz=318
SUSD Miller 79.31 40 P P 08 10 46.1 -0.2
baz=316
DPC Dobruska-Polom 79.34 329 eS S 08 20 48.1 +3.1
DPC AMS AMS 08 48 50.0
comp=Z,700nm,16.0s
UPC Upice 79.34 329 eS S 08 20 46.7 +1.8
UPC AMS AMS 08 48 40.0
comp=Z,800nm,17.6s
G32A Webster 79.45 39 P P 08 10 47.0 0.0
baz=316,SNR=5.9
G32A Webster 79.45 39 eP P 08 10 47.0 0.0
comp=Z,41nm,0.9s
W18A Petrified Fore 79.63 53 P P 08 10 48.7 +0.3
baz=311
E34A Wadena 79.64 37 P P 08 10 47.8 -0.2
baz=318
S22A 4UR Ranch, Cre 79.65 49 P P 08 10 48.2 -0.4
baz=312
S22A 4UR Ranch, Cre 79.65 49 eP P 08 10 49.4 +0.9
comp=Z,9.8nm,0.9s
PSZ Piszkesteto 79.70 325⇓iP P 08 10 50.7 +2.3
PSZ Piszkesteto 79.70 325 eP P 08 10 49.8 +1.4
comp=Z,23nm,1.1s
PSZ Piszkesteto 79.70 325⇓P P 08 10 50.7 +2.3
VYHS Vyhne 79.72 326 eP P 08 10 50.5 +2.1
VYHS pmax pmax
comp=Z,9.0nm,1.3s
VYHS Vyhne 79.72 326 eP P 08 10 50.5 +2.1
214A Organ Pipe Nat 79.73 57 P P 08 10 49.5 +0.7
baz=310
C36A Pine Crest Far 79.77 35 P P 08 10 48.5 -0.2
baz=319
Q24A Divide 79.80 48 P P 08 10 48.3 -1.1
baz=313
BRG Berggiesshubel 79.86 330 eP P 08 10 51.3 +2.2
comp=Z,2.3nm,0.6s
comp=N,541nm,14.4s
comp=E,489nm,15.2s
comp=Z,758nm,15.9s
BRG Berggiesshubel 79.86 330 eP P 08 10 51.3 +2.2
BRG pmax pmax
comp=Z,2.0nm,0.6s
BRG MLR MLR
comp=N,541nm,14.4s
BRG MLR MLR
comp=E,489nm,15.2s
BRG MLR MLR
comp=Z,758nm,15.9s
CLL Collm 79.87 331 eP P 08 10 49.0 -0.1
comp=Z,6.0nm,0.9s
CLL *i* pP **pP 08 10 58.1 +0.2**
comp=Z,11nm,0.9s
CLL *e* 08 11 03.0
CLL *e*S **S 08 20 47.0 -3.4**
CLL *e* 08 27 06.0
CLL *e*(SSS) 08 30 18.0
CLL *e*(SSSS) 08 32 00.0
CLL LmH 08 44 00.0
comp=N,800nm,18.6s
CLL LmH 08 44 00.0
comp=E,1µm,20.1s
CLL LmV 08 49 00.0
comp=Z,600nm,20.0s
CLL Collm 79.87 331 eP P 08 10 49.0 -0.1
comp=Z,11nm,1.0s
CLL Collm 79.87 331 eP P 08 10 49.0 -0.1
CLL *i* *PP **pP 08 10 58.1 +0.2**
CLL *e*S **S 08 20 47.0 -3.4**
CLL pmax pmax
comp=Z,6.0nm,0.9s
CLL MLR MLR
comp=Z,600nm,20.0s
X18A Snowflake 79.89 54 eP P 08 10 51.1 +1.3
comp=Z,5.7nm,0.9s
JAVC Velka Javorina 79.94 327 eP P 08 10 52.2 +2.6
E35A Pequot Lakes 79.96 36 P P 08 10 48.9 -0.8
baz=318
G33A Ortonville 80.01 38 P P 08 10 49.6 -0.4
baz=317
H32A Carlson Farm, 80.02 39 P P 08 10 50.0 -0.2
baz=317
VRAC Vranov 80.04 328 P P 08 10 51.1 +1.0
comp=Z,6.2nm,1.0s,baz=12,slow=6.1,SNR=2.5
VRAC Vranov 80.04 328⇓iP P 08 10 51.4 +1.3
VRAC Vranov 80.04 328 eP P 08 10 50.8 +0.7
VRAC *e* 08 11 00.1
D36A Goodland 80.06 35 P P 08 10 49.7 -0.6
baz=319
C37A Embarrass 80.08 35 P P 08 10 50.0 -0.3
baz=320
F34A Alexandria 80.13 37 P P 08 10 50.5 -0.2
baz=318
OGNE Ogallala 80.18 44 P P 08 10 51.4 +0.3
baz=314
OGNE Ogallala 80.18 44 eP P 08 10 52.0 +0.9
comp=Z,28nm,1.0s
RAR Rarotonga 80.21 128 LR LR 08 43 55.9
comp=Z,160nm,19.9s,baz=313,slow=34
EYMN Ely 80.21 34 P P 08 10 51.0 -0.1
baz=320
EYMN Ely 80.21 34 eP P 08 10 51.9 +0.9
comp=Z,8.0nm,1.0s
GOPC GO Pecny, Ondr 80.29 329 eS S 08 20 55.3 +0.3
GOPC AMS AMS 08 49 20.0
comp=Z,800nm,17.9s
KRUC Moravsky 80.31 328 eP P 08 10 52.6 +1.0
KRUC *e* 08 11 01.3
PRU Pruhonice 80.33 329 eP P 08 10 54.1 +2.5
PRU *e*S **S 08 20 56.5 +1.1**
PRU AMS AMS 08 49 30.0
comp=Z,600nm,18.5s
PRU Pruhonice 80.33 329 eP P 08 10 54.1 +2.5
PRU *e*S **S 08 20 56.5 +1.1**
PRU MLR MLR
comp=Z,600nm,18.5s
G34A Benson 80.36 38 P P 08 10 51.7 -0.2
baz=318
D37A Cotton 80.40 35 P P 08 10 51.4 -0.7
baz=320
F35A Swanville 80.40 37 P P 08 10 52.2 +0.1
baz=318
SDCO Great Sand Dun 80.43 49 P P 08 10 52.3 -0.4
baz=313
SDCO Great Sand Dun 80.43 49 eP P 08 10 52.7 0.0
comp=Z,5.7nm,0.9s
C38A Sawbill Land. 80.48 34 P P 08 10 51.8 -0.7
baz=320
E36A McGregor 80.51 36 P P 08 10 52.0 -0.7
baz=319
TUC Tucson 80.81 56 P P 08 10 53.9 -0.7
baz=311
TUC Tucson 80.81 56 eP P 08 10 54.7 0.0
comp=Z,15nm,1.6s
TUC Tucson 80.81 56 eP P 08 10 54.7 0.0
TUC pmax pmax
comp=Z,15nm,1.6s
F36A Milaca 80.89 36 P P 08 10 53.7 -1.0
baz=319
C39A Grand Marais 80.90 33 P P 08 10 53.9 -0.8
baz=321
G35A Watkins 80.92 37 eP P 08 10 55.1 +0.2
comp=Z,11nm,1.0s
ECSD EROS Data Cent 80.99 40 P P 08 10 55.2 -0.1
baz=317,SNR=8.1
ECSD EROS Data Cent 80.99 40 eP P 08 10 55.4 +0.1
comp=Z,12nm,0.8s
BANR Banloc 81.05 323⇓iP P 08 10 42.2 -13
H35A Sunnyside Ranc 81.14 38 P P 08 10 56.6 +0.5
baz=318,SNR=6.7
KSCO Kaye Shedlock' 81.20 46 P P 08 10 56.3 -0.4
baz=314
KSCO Kaye Shedlock' 81.20 46 eP P 08 10 57.0 +0.4
comp=Z,61nm,1.7s
E38A The Farm, Brul 81.21 35 P P 08 10 56.2 -0.2
baz=320
E38A The Farm, Brul 81.21 35 eP P 08 10 56.1 -0.2
comp=Z,12nm,0.8s
MDVR Moldovita 81.22 322⇓iP P 08 10 58.3 +1.7
C40A Isle Royale Na 81.23 33 P P 08 10 55.9 -0.6
baz=322
RAYN Ar Rayn 81.32 293 eP P 08 10 56.6 -0.8
comp=Z,13nm,0.8s
RAYN Ar Rayn 81.32 293 *i* P P 08 10 57.9 +0.5
SNR=6.4
KHC Kasperske Hory 81.39 329 eP P 08 10 58.8 +1.4
KHC *e*pP **pP 08 11 06.7 +0.5**
KHC *e*S **S 08 21 07.7 +1.1**
KHC AMS AMS 08 51 10.0
comp=Z,800nm,15.0s
KHC Kasperske Hory 81.39 329 eP P 08 10 57.5 +0.2
comp=Z,4.9nm,1.0s
KHC Kasperske Hory 81.39 329 eP P 08 10 58.8 +1.4
KHC *e* 08 11 06.7
KHC *e*S **S 08 21 07.7 +1.1**
KHC MLR MLR
comp=Z,800nm,15.0s
F37A Hinrichs Farm, 81.40 36 P P 08 10 56.9 -0.6
baz=320
CONA Conrad Observa 81.42 327 eP P 08 10 56.8 -0.9
comp=Z,22nm,1.5s
EKA Eskdalemuir Ar 81.44 342 P P 08 10 58.4 +1.0
comp=Z,1.7nm,0.7s,baz=35,slow=5.2,SNR=3.6
EKA LR LR 08 53 46.5
comp=Z,133nm,18.2s,baz=290,slow=41
EKA Eskdalemuir Ar 81.44 342 P P 08 10 58.4 +1.0
EKA pmax pmax
comp=Z,1.0nm,0.7s
T25A Trinidad 81.47 49 P P 08 10 57.8 -0.5
baz=314
F38A Pierce - Schro 81.56 36 P P 08 10 57.3 -1.0
baz=320
GERES GERESS Array B 81.57 329 P P 08 10 58.6 +0.2
comp=Z,0.7nm,0.4s,baz=50,slow=7.2,SNR=6.9
GERES LR LR 08 50 40.6
comp=Z,599nm,18.2s,baz=20,slow=38
GEA0 GERESS Array S 81.58 329 eP P 08 10 58.8 +0.3
ASF Jabal al Asfar 81.58 305 P P 08 11 00.1 +1.3
comp=Z,2.5nm,0.7s,baz=12,slow=4.8,SNR=4.2
SPMN Marine on St. 81.70 37 P P 08 10 57.8 -1.2
baz=319
TASM ASL Pad, Albuq 81.75 51 P P 08 10 59.2 -0.5
baz=313
ANMO Albuquerque 81.75 51 P P 08 11 00.9 +1.1
comp=Z,1.6nm,0.8s,baz=304,slow=12,SNR=9.2
ANMO LR LR 08 47 17.1
comp=Z,103nm,18.2s,baz=336,slow=36
ANMO Albuquerque 81.75 51 P P 08 10 59.7 0.0
baz=313
ANMO Albuquerque 81.75 51 eP P 08 11 01.1 +1.3
comp=Z,12nm,1.1s
ANMO Albuquerque 81.75 51 *c*eP P 08 11 01.4 +1.6
ANMO pmax pmax
comp=Z,9.0nm,1.7s
TASL Snake Pit, Alb 81.75 51 P P 08 10 59.6 -0.1
baz=313
E39A Mellen 81.83 35 P P 08 10 59.0 -0.7
baz=321
BGNE Belgrade 81.91 42 P P 08 10 59.5 -0.7
baz=317
BGNE Belgrade 81.91 42 eP P 08 11 00.0 -0.2
comp=Z,38nm,0.8s
MMAI Mount Meron Ar 81.97 306 P P 08 11 01.8 +1.1
comp=Z,1.7nm,0.4s,baz=23,slow=7.8,SNR=4.5
MMAI LR LR 08 51 50.5
comp=Z,428nm,18.2s,baz=25,slow=39
F39A Loretta 82.02 35 P P 08 10 60.0 -0.7
baz=321
I36A Fitzsimmons Fa 82.04 38 P P 08 10 59.8 -1.1
baz=319
E40A Wakefield 82.06 34 P P 08 10 59.7 -1.3
baz=321
ARSA Arzberg 82.10 327 eP P 08 11 00.5 -0.6
comp=Z,10nm,1.4s
VTS Vitosha 82.12 320 eP P 08 11 01.0 -0.5
comp=Z,92nm,0.8s
VTS Vitosha 82.12 320 eP P 08 11 01.0 -0.5
VTS pmax pmax
comp=Z,92nm,0.8s
H37A Dierke Farm, C 82.13 37 P P 08 11 01.1 -0.2
baz=319
MOA Molln 82.14 328 eP P 08 11 01.9 +0.6
comp=Z,16nm,1.8s
D41A Chassel 82.15 33 P P 08 10 60.0 -1.4
baz=322
G38A Ridgeland 82.17 36 P P 08 11 00.9 -0.6
baz=320
I37A Lemond, Waseca 82.33 38 P P 08 11 02.7 +0.3
baz=319,SNR=5.1
I37A Lemond, Waseca 82.33 38 eP P 08 11 02.4 0.0
comp=Z,27nm,0.9s
H38A Maiden Rock 82.36 37 P P 08 11 01.8 -0.7
baz=320
F40A Park Falls 82.37 35 P P 08 11 02.5 -0.1
baz=321
319A Douglas 82.39 56 eP P 08 11 02.7 -0.3
comp=Z,12nm,0.9s
G39A Holcombe 82.39 36 P P 08 11 02.3 -0.3
baz=320
J36A Seneca 1, Swea 82.40 39 P P 08 11 02.3 -0.4
baz=319
J36A Seneca 1, Swea 82.40 39 eP P 08 11 03.0 +0.2
comp=Z,10.0nm,0.9s
E41A Kenton 82.45 34 P P 08 11 02.5 -0.5
baz=322
DIVS Divibare 82.55 323 eP P 08 11 03.7 +0.1
comp=Z,16nm,1.3s
121A Cookes Peak, D 82.56 54 P P 08 11 03.9 -0.1
baz=312
SCHQ Schefferville 82.57 17 LR LR 08 49 18.9
comp=Z,247nm,21.0s,baz=354,slow=37
PERS Pernice 82.75 327 eP P 08 11 14.2 +10
SOKA Soboth 82.75 327 eP P 08 11 04.9 +0.2
comp=Z,16nm,1.0s
J37A Redenius Farm, 82.79 38 P P 08 11 04.4 -0.4
baz=319
H39A Augusta 82.81 36 P P 08 11 04.7 -0.2
baz=320
I38A Scanlan Farm, 82.82 37 P P 08 11 04.7 -0.2
baz=320
G40A Rib Lake 82.84 35 P P 08 11 04.7 -0.4
baz=321
K36A Gilmore City 82.86 39 P P 08 11 04.9 -0.3
baz=319
E42A Champion 82.92 33 P P 08 11 04.5 -0.9
baz=322
CBKS Cedar Bluff 82.93 45 P P 08 11 04.8 -0.8
baz=316
F41A Three Lakes 82.96 34 P P 08 11 04.7 -0.9
baz=322
OBKA Obir 83.09 327 eP P 08 11 06.3 -0.1
comp=Z,12nm,0.9s
KBA Koelnbreinsper 83.13 328 eP*c*P P 08 11 08.2 +1.5
comp=Z,5.1nm,0.8s
KBA Koelnbreinsper 83.13 328 P P 08 11 05.9 -0.8
KBA pmax pmax
comp=Z,13nm,1.1s
K37A Belmond 83.16 39 P P 08 11 06.4 -0.3
baz=319
H40A Chili 83.26 36 P P 08 11 06.5 -0.7
baz=321
J38A Wedel Dairy, R 83.30 38 P P 08 11 06.8 -0.6
baz=320
KNT Kendrikon 83.33 319 P P 08 11 04.9 -2.7
KNT pmax pmax
comp=Z,13nm,2.2s
I39A Houston 83.34 37 P P 08 11 07.1 -0.5
baz=320
I39A Houston 83.34 37 eP P 08 11 06.7 -0.9
comp=Z,10nm,0.8s
MYKA Terra Mystica 83.37 328 epP P 08 11 13.3 +5.5
comp=Z,5.6nm,0.7s
VISS Visnje 83.53 327 *i* P P 08 11 18.0 +9.5
M36A Felix, Anita 83.58 40 P P 08 11 08.6 -0.3
baz=318
BOJS Bojanci 83.59 326 *i* P P 08 11 18.2 +9.3
L37A Phoenix Point, 83.59 39 P P 08 11 07.7 -1.2
baz=319
H41A Junction City 83.59 35 P P 08 11 08.6 -0.3
baz=322
PMOR Pomariorio Ree 83.60 115 eT T 09 42 48.7
comp=Z,6.3nm,0.2s
E44A Grand Marais A 83.60 32 P P 08 11 08.1 -0.8
baz=324
G42A Mountain 83.64 34 P P 08 11 08.9 -0.2
baz=322
WTTA Wattenberg 83.67 329 ePcP P 08 11 10.8 +1.4
comp=Z,4.1nm,0.6s
K38A Parkersburg 83.67 38 P P 08 11 09.3 -0.1
baz=320
F43A Flat Rock, Esc 83.71 33 P P 08 11 08.6 -0.9
baz=323
I40A Norwalk 83.72 36 P P 08 11 08.7 -0.9
baz=321
ABTA Abfaltersbach 83.74 329 eP P 08 11 10.4 +0.6
comp=Z,5.0nm,0.9s
JAVS Javornik 83.79 327 eP P 08 11 18.4 +8.4
MOTA Moosalm 83.81 330 eP P 08 11 10.6 +0.5
comp=Z,8.8nm,0.9s
RETA Reutte 83.83 330 ePcP P 08 11 11.5 +1.4
comp=Z,23nm,1.4s
F44A Big Bay de Noc 83.91 33 P P 08 11 09.9 -0.6
baz=324
G43A Wallace 83.95 34 P P 08 11 10.9 +0.2
baz=323
L38A Oak Wood Farm, 83.97 39 P P 08 11 10.9 +0.1
baz=320
N36A Muff Farm, Cla 83.97 41 P P 08 11 11.3 +0.4
baz=318
M37A Trindle Farm, 83.99 40 P P 08 11 10.9 0.0
baz=319
SCIA State Center 84.02 39 P P 08 11 10.3 -0.8
baz=320
K39A Oelwein 84.05 38 P P 08 11 10.5 -0.7
baz=320
J40A Soldiers Grove 84.05 37 P P 08 11 10.3 -1.0
baz=321
E45A Wooded Hills, 84.12 32 P P 08 11 10.9 -0.6
baz=324
BRY Bratogost 84.15 323 P P 08 11 12.9 +1.0
PDG Podgorica 84.17 322⇓iP P 08 11 12.4 +0.6
TTG Podgorica 84.17 322 eP P 08 11 11.3 -0.5
comp=Z,35nm,1.3s
TTG Podgorica 84.17 322 eP P 08 11 11.3 -0.5
TTG pmax pmax
comp=Z,35nm,1.3s
PPT Papeete 84.20 118 LR LR 08 50 10.7
comp=Z,199nm,18.9s,baz=322,slow=37
PPT2 Papeete2 84.22 118 eLR LR 08 37 38.3
comp=Z,399nm,23.0s
PPT2 Papeete2 84.22 118 eT T 09 43 33.2
comp=Z,4.1nm,0.4s
FETA Feichten 84.22 330 ePcP P 08 11 13.0 +0.7
comp=Z,5.3nm,1.0s
DAVA Damuels 84.33 330 eP P 08 11 11.8 -1.0
comp=Z,16nm,0.9s
FNA Florina 84.38 320 eP P 08 11 13.1 0.0
comp=Z,7.1nm,0.9s
FNA Florina 84.38 320 eP P 08 11 13.1 0.0
FNA pmax pmax
comp=Z,7.0nm,0.9s
N37A Lee Faris, Mou 84.39 40 P P 08 11 12.9 -0.2
baz=319
N37A Lee Faris, Mou 84.39 40 eP P 08 11 13.5 +0.4
comp=Z,26nm,0.9s
KSU1 Kansas State U 84.40 43 P P 08 11 12.7 -0.4
baz=318
KSU1 Kansas State U 84.40 43 eP P 08 11 13.3 +0.2
comp=Z,13nm,0.8s
M38A Pleasantville 84.40 39 P P 08 11 12.4 -0.7
baz=320
K40A Colesburg 84.40 37 P P 08 11 12.7 -0.3
baz=321
J41A Loganville 84.41 36 P P 08 11 12.5 -0.6
baz=321
L39A Vinton 84.44 38 P P 08 11 13.1 -0.2
baz=320
EIL Elat 84.50 304 P P 08 11 16.3 +2.5
comp=Z,6.0nm,0.8s,baz=39,slow=5.1,SNR=6.6
H43A Windswept, Lux 84.54 34 P P 08 11 13.1 -0.6
baz=323
H43A Windswept, Lux 84.54 34 eP P 08 11 13.7 0.0
comp=Z,15nm,0.9s
MNTX Cornudas Mount 84.62 53 P P 08 11 13.8 -0.5
baz=314
MNTX Cornudas Mount 84.62 53 eP P 08 11 13.5 -0.8
comp=Z,4.9nm,0.8s
AMTX Amarillo 84.63 49 P P 08 11 14.5 +0.1
baz=315
AMTX Amarillo 84.63 49 eP P 08 11 16.0 +1.5
comp=Z,18nm,0.8s
MSTX Muleshoe 84.63 50 P P 08 11 14.7 +0.2
baz=315
MSTX Muleshoe 84.63 50 eP P 08 11 15.4 +0.9
comp=Z,10nm,0.8s
JFWS Jewell Farm 84.65 37 P P 08 11 13.7 -0.6
baz=321
FUORN Ofenpass-Fuorn 84.73 330 eP P 08 11 15.7 +0.7
comp=Z,19nm,0.8s
DAVOX Davos/Dischmat 84.75 330 P P 08 11 16.6 +1.6
comp=Z,3.0nm,0.4s,baz=60,slow=8.1,SNR=5.0
DAVOX LR LR 08 54 20.3
comp=Z,652nm,18.0s,baz=78,slow=39
I43A Langenfeld Bro 84.84 35 P P 08 11 14.1 -1.1
baz=322
J42A Columbus 84.85 36 P P 08 11 14.0 -1.3
baz=322
M39A Webster 84.85 39 P P 08 11 15.0 -0.3
baz=320
N38A Joes South For 84.85 40 P P 08 11 14.8 -0.6
baz=320
L40A Anamosa 84.86 38 P P 08 11 15.2 -0.2
baz=321
K41A Shullsburg 84.86 37 P P 08 11 15.3 -0.1
baz=321
O37A Wolven Farm, M 84.87 41 P P 08 11 15.3 -0.2
baz=319
J43A Natural Harves 85.12 35 P P 08 11 15.9 -0.7
baz=322
TAOE Nuku Hiva Isla 85.12 106 eLR LR 08 38 08.8
comp=Z,412nm,20.9s
TAOE Nuku Hiva Isla 85.12 106 eT T 09 44 50.0
comp=Z,27nm,0.2s
N39A Derby Farms, D 85.15 39 P P 08 11 16.8 0.0
baz=320
N39A Derby Farms, D 85.15 39 eP P 08 11 17.0 +0.1
comp=Z,15nm,0.9s
K42A Prairie Point, 85.17 36 P P 08 11 15.5 -1.4
baz=322
L41A Preston 85.19 37 P P 08 11 16.6 -0.5
baz=321
P37A Lathrop 85.20 41 P P 08 11 17.0 -0.2
baz=319
TUE Stuetta 85.21 330 eP P 08 11 17.6 +0.3
comp=Z,12nm,0.9s
M40A Post Highland 85.22 38 P P 08 11 16.9 -0.3
baz=320
O38A Galt 85.24 40 P P 08 11 16.8 -0.6
baz=319
P38A Dawn 85.59 41 P P 08 11 18.6 -0.4
baz=319
P38A Dawn 85.59 41 eP P 08 11 19.9 +0.8
comp=Z,15nm,1.0s
N40A Mertquake, Sal 85.59 39 P P 08 11 19.0 0.0
baz=320
O39A Kirksville 85.60 40 P P 08 11 18.7 -0.4
baz=320
M41A Milan 85.71 38 P P 08 11 19.4 -0.2
baz=321
O40A La Belle 86.04 39 P P 08 11 20.4 -0.8
baz=320
Q38A Cooks Store, C 86.05 41 P P 08 11 21.2 -0.2
baz=319
N41A Harden Midland 86.08 38 eP P 08 11 22.3 +0.8

	comp=Z,28nm,1.4s							
P39B	Salisbury	86.08	40	P		P	08 11 21.1	-0.4
	baz=320							
Q39A	Willow Grove F	86.31	41	P		P	08 11 22.5	-0.2
	baz=320							
WMOK	Wichita Mounta	86.40	47	P		P	08 11 23.3	+0.1
	baz=317							
WMOK	Wichita Mounta	86.40	47	eP		P	08 11 23.0	-0.2
	comp=Z,7.3nm,0.8s							
WMOK	Wichita Mounta	86.40	47	eP		P	08 11 23.0	-0.2
WMOK				pmax		pmax		
	comp=Z,7.0nm,0.8s							
M43A	Waltham Townsh	86.40	37	P		P	08 11 22.8	-0.2
	baz=322							
P40A	Paris	86.40	40	P		P	08 11 21.9	-1.2
	baz=320							
P40A	Paris	86.40	40	eP		P	08 11 22.8	-0.3
	comp=Z,16nm,1.0s							
R38A	Fenwick Farm,	86.49	42	P		P	08 11 22.8	-0.7
	baz=319							
O41A	Passleys Farm,	86.52	39	P		P	08 11 23.2	-0.4
	baz=321							
LPIG	La Paz	86.53	62	LR		LR	08 48 30.6	
	comp=Z,159nm,18.7s,baz=274,slow=35							
IDI	Anoyia	86.60	314	LR		LR	08 56 19.0	
	comp=Z,140nm,18.7s,baz=62,slow=40							
N43A	Stutzman Famil	86.69	37	P		P	08 11 24.3	-0.2
	baz=322							
P41A	Barry, Barry	86.78	39	P		P	08 11 24.6	-0.3
	baz=321							
Q40A	Laux Farm, Aux	86.80	40	P		P	08 11 24.7	-0.3
	baz=320							
R39A	Chumby, Stover	86.83	41	P		P	08 11 24.5	-0.7
	baz=320							
M44A	Midewin, Midew	86.86	36	P		P	08 11 24.3	-1.0
	baz=323							
S38A	Stockton	86.91	42	P		P	08 11 24.6	-0.9
	baz=319							
HDIL	Hopedale	86.94	37	P		P	08 11 25.2	-0.5
	baz=322							
HDIL	Hopedale	86.94	37	eP		P	08 11 25.5	-0.2
	comp=Z,14nm,0.9s							
O43A	Sugar Creek Fa	87.14	38	P		P	08 11 26.5	-0.2
	baz=322							
T38A	Diamond	87.15	43	P		P	08 11 26.0	-0.8
	baz=319							
S39A	Bolivar	87.16	42	P		P	08 11 26.0	-0.8
	baz=320							
S39A	Bolivar	87.16	42	eP		P	08 11 26.4	-0.5
	comp=Z,7.8nm,0.9s							
TUL1	Leonard	87.19	44	P		P	08 11 26.1	-0.9
	baz=318							
P42A	Winchester	87.20	39	P		P	08 11 26.1	-0.8
	baz=321							
P42A	Winchester	87.20	39	eP		P	08 11 27.5	+0.6
	comp=Z,16nm,1.1s							
R40A	Maddies Statio	87.24	41	P		P	08 11 26.9	-0.3
	baz=320							
R40A	Maddies Statio	87.24	41	eP		P	08 11 27.2	0.0
	comp=Z,8.8nm,0.8s							
Q41A	Truxton	87.25	40	P		P	08 11 27.4	+0.2
	baz=321							
N44A	Piper City	87.29	37	P		P	08 11 27.2	-0.2
	baz=323							
TX31	Lajitas Ar. Si	87.32	54	eP		P	08 11 28.2	+0.4
TXAR	Lajitas Array	87.32	54	P		P	08 11 28.6	+0.7
	comp=Z,1.6nm,1.0s,baz=291,slow=3.3,SNR=12							
TXAR				PP		PP	08 14 52.4	+0.6
	comp=Z,0.4nm,0.9s,baz=317,slow=6.2,SNR=3.8							
TXAR				LR		LR	08 48 07.7	
	comp=Z,115nm,19.5s,baz=0.0,slow=34							
ABTX	Abilene, Hawle	87.43	49	P		P	08 11 28.8	+0.5
	baz=316							
N45A	Kentland	87.54	36	P		P	08 11 28.2	-0.3
	baz=323							
P43A	Skaggs, Pawnee	87.55	38	P		P	08 11 28.2	-0.4
	baz=322							
Q42A	Golden Eagle	87.63	39	P		P	08 11 28.9	-0.2
	baz=321							
T39A	Clever	87.64	42	P		P	08 11 28.6	-0.6
	baz=320							
O44A	Mansfield	87.65	37	P		P	08 11 28.9	-0.2
	baz=322							
S40A	Lebanon	87.65	41	P		P	08 11 28.9	-0.3
	baz=320							
R41A	Rosebud	87.68	40	P		P	08 11 29.0	-0.3
	baz=321							
O45A	Potomac	87.92	37	P		P	08 11 30.6	+0.2
	baz=323							
CCM	Cathedral Cave	87.94	40	P		P	08 11 30.2	-0.3
	baz=321							
CCM	Cathedral Cave	87.94	40	eP		P	08 11 29.9	-0.7
	comp=Z,14nm,0.8s							
CCM	Cathedral Cave	87.94	40	eP		P	08 11 29.9	-0.7
CCM				pmax		pmax		
	comp=Z,14nm,0.8s							
R42A	Luebbering	87.99	40	P		P	08 11 30.3	-0.4
	baz=321							
Q43A	New Douglas	88.01	39	P		P	08 11 30.9	+0.1
	baz=322							
S41A	Jillco Farms,	88.05	41	P		P	08 11 31.0	-0.1
	baz=320							
U39A	Green Forest	88.07	43	P		P	08 11 31.1	-0.2
	baz=320							
SFIN	Lafayette	88.10	36	P		P	08 11 31.1	-0.2
	baz=323							
P44A	Sand Creek, Wi	88.11	38	P		P	08 11 30.9	-0.5
	baz=322							
TBI	Tubuai	88.30	122	eLR		LR	08 39 13.0	
	comp=Z,240nm,32.2s							
TBI	Tubuai	88.30	122	eT		T	09 48 36.3	
	comp=Z,12nm,0.3s							
Q44A	Meyer Farm, Va	88.37	38	P		P	08 11 31.5	-1.1
	baz=322							
S42A	Caledonia	88.38	40	P		P	08 11 32.2	-0.5
	baz=321							
V39A	Pettigrew	88.40	43	P		P	08 11 32.5	-0.4
	baz=320							
R43A	Red Bud	88.42	39	P		P	08 11 31.6	-1.2
	baz=322							
U40A	Yellville	88.42	42	P		P	08 11 32.7	-0.2
	baz=320							
T41A	Mountain View	88.46	41	P		P	08 11 33.4	+0.3
	baz=320							
Q45A	Warren Harvey,	88.79	38	P		P	08 11 34.2	-0.3
	baz=323							
T42A	Van Buren	88.81	41	P		P	08 11 34.4	-0.3
	baz=321							
W39A	Magazine	88.81	44	P		P	08 11 35.1	+0.4
	baz=319							
R44A	Waltonville	88.86	39	P		P	08 11 34.3	-0.6
	baz=322							
JCT	Junction City	88.88	51	eP		P	08 11 35.3	+0.1
	comp=Z,5.7nm,0.7s							
JCT	Junction City	88.88	51	eP		P	08 11 35.3	+0.1
JCT				pmax		pmax		
	comp=Z,6.0nm,0.7s							
S43A	Fulton Ridge,	88.90	40	P		P	08 11 35.1	+0.1
	baz=322							
U41A	Viola	88.91	42	P		P	08 11 34.1	-1.1
	baz=320							
X39A	Fountain Ranch	89.15	44	P		P	08 11 35.1	-1.2
	baz=319							
T43A	Greenville	89.17	40	P		P	08 11 36.2	-0.2
	baz=321							
W40A	Ferguson Farm,	89.19	43	P		P	08 11 35.8	-0.7
	baz=320							
W40A	Ferguson Farm,	89.19	43	eP		P	08 11 36.7	+0.2
	comp=Z,11nm,0.9s							
P47A	Martinsville	89.19	36	P		P	08 11 36.3	-0.1
	baz=324							
R45A	Skylar, Fairfi	89.20	38	P		P	08 11 36.8	+0.3
	baz=323							
S44A	Carbondale	89.20	39	P		P	08 11 36.1	-0.5
	baz=322							
V41A	Mountainview	89.22	42	P		P	08 11 36.3	-0.3
	baz=320							
PBMO	Poplar Bluff	89.34	41	eP		P	08 11 36.9	-0.2
	comp=Z,18nm,1.3s							
MIAR	Mount Ida	89.41	44	P		P	08 11 37.7	+0.1
	baz=320							
MIAR	Mount Ida	89.41	44	eP		P	08 11 38.1	+0.6
	comp=Z,9.9nm,1.1s							
MIAR	Mount Ida	89.41	44	eP		P	08 11 38.1	+0.6
MIAR				pmax		pmax		
	comp=Z,10.0nm,1.1s							
WHAR	Wooly Hollow	89.53	43	eP		P	08 11 38.7	+0.6
	comp=Z,12nm,1.0s							
Q47A	Bedord North L	89.57	37	P		P	08 11 38.4	+0.2
	baz=324							
W41B	Gary Mavity, V	89.64	43	P		P	08 11 38.3	-0.3
	baz=320							
W41B	Gary Mavity, V	89.64	43	eP		P	08 11 39.0	+0.5
	comp=Z,4.4nm,0.9s							
O50A	Cable	89.84	34	P		P	08 11 38.6	-0.9
	baz=326							
X40A	Basin Creek Fa	89.85	43	P		P	08 11 38.6	-1.1
	baz=320							
435B	Jarrell	89.97	49	P		P	08 11 39.1	-1.1
	baz=317							
X41A	Kaden, Bauxite	90.02	43	P		P	08 11 39.5	-0.9
	baz=320							
WCI	Wyandotte Cave	90.20	37	P		P	08 11 40.5	-0.6
	baz=324							
U44B	Burton Farm, H	90.22	40	P		P	08 11 40.3	-1.0
	baz=322							
VAE	Valguarnera	90.36	322	LR		LR	08 56 45.7	
	comp=Z,225nm,19.3s,baz=128,slow=39							
M54A	Oil Creek Stat	90.36	31	P		P	08 11 40.8	-1.1
	baz=328							
ATD	Arta Tunnel	90.92	286	LR		LR	08 56 28.6	
	comp=Z,166nm,18.1s,baz=1.5,slow=38							
N59A	State Game Lan	92.37	29	P		P	08 11 50.8	-0.4
	baz=331							
Z45A	Winona	92.37	42	P		P	08 11 50.1	-1.2
	baz=322							
Y46A	Houston	92.40	41	P		P	08 11 51.0	-0.5
	baz=322							
W49A	Belvidere	92.71	39	P		P	08 11 51.2	-1.7
	baz=324							
TZTN	Tazewell	92.83	36	P		P	08 11 52.3	-1.1
	baz=326							
TKL	Tuckaleechee C	93.46	37	LR		LR	08 54 57.7	
	comp=Z,138nm,21.5s,baz=346,slow=36							
KEST	Kesra	94.14	324	LR		LR	08 59 34.4	
	comp=Z,789nm,18.1s,baz=358,slow=39							
ESDC	Sonseca Array	95.88	335	LR		LR	09 00 59.8	
	comp=Z,320nm,18.3s,baz=20,slow=39							
TORD	Torodi Ar. Bea	116.80	318	PKP		PKPdf	08 17 25.7	+0.1
	comp=Z,0.7nm,1.1s,baz=358,slow=2.5,SNR=2.6							
TORD				PP		PP	08 18 31.9	-1.3
	comp=Z,1.6nm,0.9s,baz=28,slow=9.3,SNR=5.6							
VNDA	Vanda	117.20	176	PKP		PKPdf	08 17 25.0	+0.6
	comp=Z,0.4nm,0.6s,baz=352,slow=7.1,SNR=2.2							
QSPA	South Pole Qui	129.15	180	PKP		PKPdf	08 17 47.5	-0.2
	comp=Z,0.6nm,0.5s,baz=326,slow=3.6,SNR=6.8							
SNAA	Sanae	143.52	197	PKP		PKPab	08 18 11.1	+0.5
SNAA	Sanae	143.52	197	PKhKP		PKPpre	08 18 10.7	
	comp=Z,3.1nm,0.7s,baz=183,slow=6.6,SNR=4.4							
LPAZ	La Paz	144.01	59	PKP		PKPdf	08 18 19.2	+1.9
	comp=Z,1.1nm,0.6s,baz=304,slow=3.6,SNR=3.5							
VNA3	Neumayer Olymp	145.30	195	PKP		PKPbc	08 18 17.0	-0.1
VNA1	Neumayer--Stat	145.47	196	PKP		PKPbc	08 18 17.8	+0.3
PB04	IPOC Station P	146.65	69	ePKPdf		PKPdf	08 18 20.4	-0.8
SIV	San Ignacio	148.24	50	PKPbc		PKPbc	08 18 27.0	-0.1
	comp=Z,3.6nm,0.8s,baz=333,slow=0.9,SNR=14							
PMSA	Palmer Station	149.93	157	ePKPdf		PKPbc	08 18 28.1	-1.7

*NSSC **22** 08:00:17.8±1.7,38°.75N×43°.63E,h105km±102km,ML3.2*
*AZER **22** 08:00:27.4±3.2,39°.21N×41°.40E,h5km,ml3.6/6,Error ellipse: s-maj=36.9km s-min=25.2km az=5.0*
*NSSP **22** 08:00:31.7,39°.17N×42°.33E,h5km,Ms3.4*
*ATA **22** 08:00:31.3±1.8,39°.17N×42°.28E,h10km±16km,ML4.2, MW3.9,Fault plane solution: NP1:φs=351.73000°, δ60.50000°, λ-42.39000°.*
*ISK **22** 08:00:31.8,39°.17N×42°.27E,h5km,ML3.5/18*
*DDA **22** 08:00:32.2,39°.20N×42°.25E,h7km,Ml3.6*
*CSEM **22** 08:00:32.8±0.1,39°.19N×42°.26E,h2km,ML3.6,Error ellipse: s-maj=4.0km s-min=3.1km az=155.0*

ISC 22 08:00:32.7±0.9,**39°.18N**±0°.02×**42°.24E**±0°.02,**h15**km±7km, **n110**,σ1§**45**/132,**20C-6D,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKAR	Karacoban	0.16	299	⇑iP	Pg	08 00 36.2	-0.8
EKAR	Karacoban	0.16	299	iP	Pg	08 00 36.1	-0.8
EKAR	Karacoban	0.16	299	P	Pg	08 00 36.1	-0.8
TUTA	Tutak	0.50	63	⇑iP	Pg	08 00 41.6	-1.1
TUTA				eS	Sg	08 00 49.1	-0.4
TUTA	Tutak	0.50	63	iP	Pg	08 00 41.9	-0.9
TUTA				iS	Sg	08 00 49.4	0.0
TUTA	Tutak	0.50	63	P	Pg	08 00 41.8	-0.9
TUTA				S	Sg	08 00 49.4	0.0
ADCV	BITLIS_Adilcev	0.53	134	iP	Pg	08 00 42.8	-0.5
ADCV				iS	Sg	08 00 50.7	+0.3
ADCV	BITLIS_Adilcev	0.53	134	P	Pg	08 00 42.8	-0.5
ADCV				S	Sg	08 00 50.7	+0.3
VRTB	Varto-Mus	0.61	268	PG	Pb	08 00 45.1	-0.1
VRTB				SG	Sb	08 00 54.6	+1.0
VRTB	Varto-Mus	0.61	268	iP	Pb	08 00 45.0	-0.1
VRTB	Varto-Mus	0.61	268	ePg	Pb	08 00 45.1	-0.1
VRTB				eSg	Sb	08 00 54.6	+1.0
GURO	Guroymak-BITLI	0.65	194	PG	Pg	08 00 45.1	-0.4
GURO				SG	Sb	08 00 54.6	-0.1
GURO	Guroymak-BITLI	0.65	194	ePg	Pg	08 00 45.1	-0.4
GURO				eSg	Sb	08 00 54.6	-0.1
AGRB	Hanur-Agry	0.70	56	PG	Pg	08 00 45.6	-0.9
AGRB				SG	Sb	08 00 56.4	0.0
AGRB	Hanur-Agry	0.70	56	ePg	Pg	08 00 45.6	-0.9
AGRB				eSg	Sb	08 00 56.4	0.0
EATA	Eleskirt	0.71	16	⇑iP	Pg	08 00 45.9	-0.8
EATA				eS	Sb	08 00 56.5	-0.2
EATA				IAML		08 00 59.2	
	comp=Z,406nm,0.5s						
EATA	Eleskirt	0.71	16	iP	Pg	08 00 45.7	-0.9
EATA	Eleskirt	0.71	16	P	Pg	08 00 45.7	-0.9
BNGL	BINGOL	0.88	255	⇑iP	Pg	08 00 49.2	-0.6
BNGL				eS	Sb	08 01 02.5	+1.1
BNGL	BINGOL	0.88	255	iP	Pg	08 00 49.0	-0.8
HOMI	Horasan	0.90	344	⇓iP	Pg	08 00 49.0	-1.3
HOMI	Horasan	0.90	344	iP	Pg	08 00 48.9	-1.3
ERZM	Erzurum	0.99	317	⇓ePg	Pg	08 00 51.3	-0.7
ERZM	Erzurum	0.99	317	iP	Pg	08 00 50.7	-1.2
ERZM	Erzurum	0.99	317	P	Pg	08 00 50.7	-1.2
VMUR	Van-Muradiye	1.05	100	iP	Pg	08 00 52.1	-1.0
VMUR	Van-Muradiye	1.05	100	P	Pg	08 00 52.1	-1.0
ECAT	Cat-ERZURUM	1.07	294	eP	Pg	08 00 53.2	-0.2
ECAT				eS	Sn	08 01 08.6	+0.6
ECAT				IAML		08 01 15.8	
	comp=Z,571nm,0.4s						
ECAT	Cat-ERZURUM	1.07	294	iP	Pg	08 00 53.2	-0.2
ECAT	Cat-ERZURUM	1.07	294	P	Pg	08 00 53.2	-0.2
VANB	Van	1.07	123	PN	Pn	08 00 54.1	+0.8
VANB	Van	1.07	123	ePn	Pn	08 00 54.1	+0.8
GEVA	Gevas	1.08	143	⇓iP	Pg	08 00 52.4	-1.2
GEVA				eS	Sg	08 01 07.2	-0.5
GEVA				IAML		08 01 11.5	
	comp=Z,284nm,0.4s						
GEVA	Gevas	1.08	143	iP	Pg	08 00 52.5	-1.0
GEVA	Gevas	1.08	143	P	Pg	08 00 52.5	-1.0
DYDN	Diyadin	1.18	72	⇑iP	Pg	08 00 53.6	-1.9
DYDN				eS	Sg	08 01 09.4	-1.6
SRTM	Siirt_Merkez	1.21	192	iP	Pb	08 00 55.9	+0.4
SRTM	Siirt_Merkez	1.21	192	P	Pb	08 00 55.8	+0.4
BNGB	Bing¶‖	1.23	262	PN	Pn	08 00 55.9	+0.4
BGOL	Bingol	1.23	262	iP	Pn	08 00 55.6	+0.1
BGOL	Bingol	1.23	262	P	Pn	08 00 55.6	+0.1
CLDR	Caldiran	1.30	91	PN	Pn	08 00 56.8	+0.2
CLDR	Caldiran	1.30	91	iP	Pn	08 00 56.9	+0.2
CLDR	Caldiran	1.30	91	P	Pn	08 00 56.8	+0.2
SVAN	Silvan-Diyarba	1.31	219	iP	Pb	08 00 57.5	+0.4
SVAN	Silvan-Diyarba	1.31	219	P	Pb	08 00 57.5	+0.4
YEDI	Yedisu-Bingol	1.34	282	PN	Pg	08 00 58.9	+0.4
YEDI	Yedisu-Bingol	1.34	282	ePn	Pg	08 00 58.9	+0.4
SENK	Senkaya-Erzuru	1.38	4	PN	Pg	08 00 58.9	-0.5
SENK	Senkaya-Erzuru	1.38	4	ePn	Pg	08 00 58.9	-0.5
BINT	Bingol	1.40	258	ePn	Pn	08 00 55.9	-1.9
BTMN	Batman	1.49	211	iP	Pb	08 01 00.9	+0.7
BTMN	Batman	1.49	211	P	Pb	08 01 00.9	+0.7
DIGO	Kars	1.51	35	eP	Pn	08 00 59.8	+0.3
DIGO	Kars	1.51	35	iP	Pn	08 00 59.3	-0.2
DIGO	Kars	1.51	35	P	Pn	08 00 59.3	-0.2
IGDI	IGDIR	1.58	64	⇑iP	Pn	08 01 00.8	+0.5
IGDI				iPg	Pg	08 01 03.0	-0.1
IGDI				eS	Sg	08 01 23.1	-0.5
IGDI				IAML		08 01 26.1	
	comp=Z,78nm,0.7s						
IGDI	IGDIR	1.58	64	iP	Pn	08 01 00.7	+0.5
KARS	Kars	1.58	24	PN	Pb	08 01 01.7	-0.1
KARS	Kars	1.58	24	ePn	Pb	08 01 01.7	-0.1
KOPT	Kop Dagi	1.58	302	eP	Pg	08 01 03.2	0.0
KOPT				IAML		08 01 32.8	
	comp=Z,122nm,0.5s						
KOPT	Kop Dagi	1.58	302	iP	Pb	08 01 02.3	+0.4
KOPT	Kop Dagi	1.58	302	P	Pb	08 01 02.3	+0.4
HANI	Diyarbakir_Han	1.63	243	iP	Pb	08 01 03.3	+0.8
HANI	Diyarbakir_Han	1.63	243	P	Pb	08 01 03.3	+0.8
SIRT	Sirnak	1.68	175	PN	Pb	08 01 03.9	+0.4
SIRT	Sirnak	1.68	175	ePn	Pb	08 01 03.9	+0.4
EAK	Akyaka	1.84	35	⇑eP	Pb	08 01 05.9	-0.2
EAK				eS	Sg	08 01 35.8	+4.0
EAK	Akyaka	1.84	35	iP	Pb	08 01 06.4	+0.3
EAK	Akyaka	1.84	35	P	Pb	08 01 06.4	+0.3
ERZN	Erzincan	1.99	283	PN	Pb	08 01 08.3	-0.5
BAYT	Ayd¯-ntepe-Bay	2.02	308	PN	Pb	08 01 08.4	-0.9
BAYT	Ayd¯-ntepe-Bay	2.02	308	ePn	Pb	08 01 08.4	-0.9
DIY	Diyarbakir	2.03	232	ePn	Pb	08 01 09.3	-0.1
DYBB	Diyarbakir	2.05	234	PN	Pb	08 01 09.3	-0.4
HYR	Heyderabad	2.09	74	⇑P	Pb	08 01 11.3	+0.9
HYR	Heyderabad	2.09	74	⇑P	Pb	08 01 11.3	+0.9
HYR				⇓S	Sg	08 01 44.0	+3.9
TNCL	Tunceli-Merkez	2.10	269	eP	Pb	08 01 11.2	+0.6
TNCL	Tunceli-Merkez	2.10	269	iP	Pb	08 01 10.6	+0.1
TNCL	Tunceli-Merkez	2.10	269	P	Pb	08 01 10.6	+0.1
GNI	Garni	2.16	63	Pn	Pn	08 01 09.9	+1.6
GNI	Garni	2.16	63	⇑iP	Pb	08 01 11.0	-0.7
GNI				⇑iS	Sb	08 01 39.9	+1.6
GNI	Garni	2.16	63	ePn	Pn	08 01 09.9	+1.6
GNI	Garni	2.16	63	⇑P	Pb	08 01 11.0	-0.7
GNI				S	Sb	08 01 39.9	+1.6
MAZI	Mazidag	2.22	220	PN	Pn	08 01 11.2	+2.1
MAZI	Mazidag	2.22	220	ePn	Pn	08 01 11.2	+2.1
EZC	Erzincan	2.31	285	ePn	Pn	08 01 08.3	-2.0
BCA	Borcka	2.31	348	PN	Pn	08 01 12.3	+2.0
BCA	Borcka	2.31	348	ePn	Pn	08 01 12.3	+2.0
EPOS	Posof	2.35	9	eP	Pn	08 01 12.8	+1.8
SVRC	Sivrice-ELAZID	2.43	252	PN	Pn	08 01 14.4	+2.4
SVRC	Sivrice-ELAZID	2.43	252	ePn	Pn	08 01 14.4	+2.4
KELT	Kelkit	2.50	294	eP	Pb	08 01 16.4	-1.0
NAX	Nakhchivan	2.53	89	⇓P	Pb	08 01 19.0	+1.1
	SNR=5.0						
KBSD	Kabsdagh	2.55	212	eP	Pn	08 01 04.1	-10
KBSD				eS	Sn	08 01 37.7	-6.7
KBSD				AML	AML	08 01 50.3	
	comp=Z,138nm,0.4s						
SBZ	Shahbuz	2.58	84	⇑P	Pb	08 01 19.8	+1.0
SBZ				⇑S	Sg	08 01 58.8	+3.1
KEMA	Kemaliye	2.91	273	eP	Pb	08 01 23.4	-1.0
ORD	Ordubad	2.93	94	⇑P	Pb	08 01 24.0	-0.8
ORD	Ordubad	2.93	94	⇑P	Pb	08 01 24.0	-0.8
QZX	Qazax, Azerbai	3.05	51	⇑P	Pn	08 01 23.5	+3.1
QZX	Qazax, Azerbai	3.05	51	⇑P	Pn	08 01 23.5	+3.1
QZX				⇓S	Sg	08 02 07.2	-3.4
MALT	Malatya	3.10	255	PN	Pn	08 01 24.0	+2.7
MALT	Malatya	3.10	255	ePn	Pn	08 01 24.0	+2.7
GDB	GEDABAY	3.11	59	⇑P	Pn	08 01 24.1	+2.7
	SNR=11						
GDB	GEDABAY	3.11	59	⇑P	Pn	08 01 24.1	+2.7
	SNR=11						
URFA	Urfa	3.20	238	PN	Pn	08 01 25.2	+2.6
URFA	Urfa	3.20	238	ePn	Pn	08 01 25.2	+2.6
SFNV	Sufian	3.23	212	eP	Pn	08 01 14.8	-8.2
SFNV				eS	Sn	08 01 52.6	-8.6
SFNV				AML	AML	08 02 12.4	
	comp=Z,246nm,0.6s						
MZRK	Al-Mazaregh	3.58	201	eP	Pn	08 01 13.7	-14
MZRK				eS	Sn	08 01 56.0	-14
MZRK				AML	AML	08 02 20.0	
	comp=Z,100nm,0.4s						
SLMH	Al Salmeh	4.52	230	eP	Pn	08 01 33.7	-7.0
SLMH				eS	Sn	08 02 29.8	-3.2

*ISCJB **22** 08:01:53.5±0.5,39°.17N±0°.03×42°.26E±0°.04,h5km±6km, Error ellipse: s-maj=5.4km s-min=4.2km az=43.0*
*CSEM **22** 08:01:53.5±0.2,39°.16N×42°.28E,h5km,ML3.5,Error ellipse: s-maj=5.0km s-min=4.1km az=148.0*
*ISK **22** 08:01:53.4,39°.12N×42°.34E,h10km,ML3.1/17*
*NSSP **22** 08:01:53.5,39°.17N×42°.32E,h8km,Ms3.1*
*DDA **22** 08:01:53.0,39°.19N×42°.23E,h7km,Ml3.5*

ISC 22 08:01:53.2±1.0,**39°.19N**±0°.02×**42°.26E**±0°.02,**h11**km±9km, **n50**,σ0§**74**/59,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKAR	Karacoban	0.17	294	iP	Pg	08 01 57.0	-0.1
EKAR	Karacoban	0.17	294	P	Pg	08 01 57.0	-0.1
TUTA	Tutak	0.48	64	iP	Pg	08 02 02.8	+0.2
TUTA				iS	Sb	08 02 10.3	-0.6
TUTA	Tutak	0.48	64	P	Pg	08 02 02.8	+0.2
TUTA				S	Sb	08 02 10.3	-0.6
ADCV	BITLIS_Adilcev	0.53	136	iP	Pb	08 02 03.6	-0.9
ADCV				iS	Sb	08 02 12.0	-0.1
ADCV	BITLIS_Adilcev	0.53	136	P	Pb	08 02 03.6	-0.9
ADCV				S	Sb	08 02 12.0	-0.1
VRTB	Varto-Mus	0.62	268	PG	Pn	08 02 07.6	-0.5
VRTB	Varto-Mus	0.62	268	ePg	Pn	08 02 07.6	-0.5
GURO	Guroymak-BITLI	0.66	196	PG	Pg	08 02 05.9	-0.1
GURO				SG	Sg	08 02 14.7	0.0
GURO	Guroymak-BITLI	0.66	196	ePg	Pg	08 02 05.9	-0.1
GURO				eSg	Sg	08 02 14.7	0.0
AGRB	Hanur-Agry	0.69	56	PG	Pg	08 02 06.8	+0.3
AGRB				SG

PB15	**IPOC Station P**	**2.61 267**	*e*P	**Pn**	**08 15 38.6**	**+1.0**
PB15			*e*S	**Sn**	**08 16 13.0**	**+0.2**
PB15			IAML		08 16 15.8	
	comp=E,2μm,0.3s					
PB06	**IPOC Station P**	**2.73 278**	*e*P	**Pn**	**08 15 40.0**	**+1.0**
PB06			*e*S	**Sn**	**08 16 15.3**	**0.0**
PB06			IAML		08 16 18.2	
	comp=E,207nm,0.1s					
PB09	**IPOC Station P**	**2.74 298**	*e*P	**Pn**	**08 15 41.1**	**+2.1**
PB09			*e*S	**Sn**	**08 16 17.6**	**+2.1**
PB03	**IPOC Station P**	**3.06 289**	*e*P	**Pn**	**08 15 43.7**	**+0.9**
PB03			*e*S	**Sn**	**08 16 21.8**	**-0.5**
PB03			IAML		08 16 23.3	
	comp=E,274nm,0.2s					
PB05	**IPOC Station P**	**3.29 274**	*e*P	**Pn**	**08 15 45.6**	**+0.1**
PB07	**IPOC Station P**	**3.30 294**	*e*P	**Pn**	**08 15 46.7**	**+1.0**
PB07			*e*S	**Sn**	**08 16 26.5**	**-1.0**
PB07			IAML		08 16 27.4	
	comp=N,473nm,0.3s					
PB04	**IPOC Station P**	**3.33 283**	*e*P	**Pn**	**08 15 46.2**	**+0.2**
PB04			*e*S	**Sn**	**08 16 26.9**	**-1.1**
PB04			IAML		08 16 28.5	
	comp=N,216nm,0.2s					
PB02	**IPOC Station P**	**3.50 300**	*e*P	**Pn**	**08 15 48.7**	**+0.7**
PB02			*e*S	**Sn**	**08 16 30.7**	**-1.0**
PB02			IAML		08 16 34.1	
	comp=E,271nm,0.3s					
PB10	**IPOC Station P**	**3.62 263**	*e*P	**Pn**	**08 15 49.4**	**0.0**
PB10			*e*S	**Sn**	**08 16 31.6**	**-2.5**
PB10			IAML		08 16 35.6	
	comp=E,66nm,0.2s					
LPAZ	**La Paz**	**6.93 348**	P	**Pn**	**08 16 34.3**	**+2.1**
	comp=E,0.5nm,0.3s,baz=185,slow=9.7,SNR=14					
LPAZ			S	**Sn**	**08 17 50.4**	**-0.9**
	baz=252,slow=20,SNR=2.0					
SIV	**San Ignacio**	**8.81 38**	P	**Pn**	**08 16 55.7**	**-0.5**
	comp=E,0.2nm,0.3s,baz=254,slow=12,SNR=5.7					
PLCA	**Paso Flores**	**17.88 190**	P	**Pn**	**08 18 51.2**	**+2.3**
	comp=E,0.1nm,0.3s,baz=11,slow=5.2,SNR=4.2					
TORD	**Torodi Ar. Bea**	**75.94 69**	P	**P**	**08 26 15.9**	**-1.6**
	comp=E,0.3nm,0.6s,baz=254,slow=5.6					
NVAR	**Mina Array Bea**	**78.05 321**	P	**P**	**08 26 28.5**	**-0.6**
	comp=E,0.3nm,0.6s,baz=156,slow=4.7,SNR=2.9					
YKA	**Yellowknife Ar**	**93.40 340**	P	**P**	**08 27 44.1**	**-0.1**
	comp=E,0.1nm,0.4s,baz=130,slow=5.0,SNR=6.6					
MKAR	**Makanchi Array**	**145.63 39**	PKPbc	**PKPdf**	**08 34 06.3**	**-0.3**
	comp=E,0.5nm,0.6s,baz=316,slow=3.5,SNR=4.9					

IDC 22 08:19:45.0±2.9, 33°.01S×178°.39W, h0km, mb3.9/2, mb1 4.2/3, mb1mx3.7/44, mbtmp4.0/3, ML4.1/1, Error ellipse: s-maj=68.2km s-min=35.3km az=119.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.39 214**		Pn	Pn	08 21 20.1	-0.2
	4.6nm,0.3s,baz=257,slow=4.0,SNR=27						
URZ				Sn	Sn	08 22 32.8	-1.1
	2.1nm,0.3s,baz=14,slow=23,SNR=8.4						
ASAR	**Alice Springs**	**42.71 270**		P	P	08 27 44.0	+0.1
	0.8nm,0.6s,baz=103,slow=7.4,SNR=12						
WRA	**Warramunga Arr**	**43.93 275**		P	P	08 27 53.8	-0.1
	1.2nm,0.4s,baz=114,slow=7.7,SNR=42						
FINES	**FINESS Array B**	**147.46 338**		PKPbc	PKPbc	08 39 29.2	-0.8
	0.9nm,0.4s,baz=41,slow=2.8,SNR=10						

IDC 22 08:27:57.1±1.1, 7°.38S×128°.29E, h0km, mb3.9/2, mb1 4.2/6, mb1mx3.7/51, mbtmp4.0/6, ML4.1/4, Error ellipse: s-maj=44.8km s-min=23.3km az=75.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.36 238**		Pn	Pn	08 29 20.4	+1.9
	8.0nm,0.3s,baz=122,slow=9.9,SNR=3.3						
BATI				Sn	Sn	08 30 12.3	-8.7
	29nm,0.3s,baz=58,slow=18,SNR=10.0						
FITZ	**Fitzroy Crossi**	**10.96 193**		Pn	Pn	08 30 33.8	-1.6
	1.2nm,0.3s,baz=14,slow=12,SNR=30						
FITZ				Sn	Sn	08 32 21.6	-17
	baz=307,slow=20,SNR=5.5						
WRA	**Warramunga Arr**	**13.80 155**		Pn	Pn	08 31 14.4	+0.3
	1.0nm,0.3s,baz=322,slow=14,SNR=41						
WRA				Sn	Sn	08 33 31.5	-17
	0.5nm,0.3s,baz=333,slow=22,SNR=6.1						
ASAR	**Alice Springs**	**17.07 162**		P	P	08 31 58.3	-0.9
	0.4nm,0.3s,baz=331,slow=9.6,SNR=30						
ASAR				S	Sn	08 34 51.2	-17
	0.2nm,0.3s,baz=330,slow=16,SNR=4.9						
MKAR	**Makanchi Array**	**67.62 328**		P	P	08 38 56.0	+0.1
	0.4nm,0.5s,baz=121,slow=8.3,SNR=6.7						
KURBB	**Kurchatov Arra**	**71.95 329**		P	P	08 39 22.3	-0.1
	1.2nm,0.6s,baz=123,slow=4.8,SNR=8.9						
CPUP	**Villa Florida**	**146.05 171**		PKPbc	PKPdf	08 47 38.6	-0.5
	2.3nm,0.8s,baz=146,slow=3.6,SNR=3.2						
LPAZ	**La Paz**	**151.42 145**		PKPbc	PKPbc	08 47 54.5	-0.3
	0.8nm,0.4s,baz=216,slow=4.7,SNR=9.7						

*NNC **22** 08:55:45.4±1.4, 53°.78N×88°.25E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=11.3km s-min=9.6km az=59.0*

IDC 22 08:55:48.1±2.5, 53°.65N×87°.96E, h0km, mb1 3.4/3, mb1mx3.0/74, mbtmp3.4/3, ML3.1/3, 9C-2D, Error ellipse: s-maj=22.0km s-min=13.6km az=59.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.89 280**	*i*			09 08 06.0	
	baz=93,slow=323,SNR=0.9						
ZAA0	**Zalesovo Array**	**1.89 280**		⇑Pn	Pn	08 56 20.9	-0.7
	16nm,0.6s						
ZAA0				⇑Lg	Lg	08 56 49.6	
	21nm,0.3s						
ZALV	**Zalesovo Beam**	**1.89 280**		Pg	Pn	08 56 20.7	-0.9
	5.2nm,0.3s,baz=100,slow=15,SNR=38						
ZALV				Lg	Lg	08 56 47.9	
	14nm,0.3s,baz=99,slow=29,SNR=18						
KURK	**Kurchatov**	**6.45 247**		⇑Pn	Pn	08 57 24.5	+0.2
	1.6nm,0.6s						
KURK				⇑Sn	Sn	08 58 43.4	+4.9
	1.2nm,0.6s						
KURK				⇑Lg	Lg	08 59 17.6	
	4.7nm,0.7s						
KURBB	**Kurchatov Arra**	**6.55 246**		Pn	Pn	08 57 26.1	+0.5
	0.3nm,0.3s,baz=62,slow=14,SNR=14						
KURBB				Sn	Sn	08 58 39.4	-1.6
	0.1nm,0.3s,baz=33,slow=29,SNR=2.7						
KURBB				Lg	Lg	08 59 15.2	
	0.0nm,0.3s,baz=67,slow=37,SNR=4.5						
KURBB	**Kurchatov Arra**	**6.55 246**		⇓Pn	Pn	08 57 25.7	+0.1
	3.5nm,0.3s						
KURBB				⇑Sn	Sn	08 58 45.2	+4.3
	5.1nm,0.5s						
KURBB				⇑Lg	Lg	08 59 19.0	
	5.4nm,0.6s						
MK31	**Makanchi Array**	**7.77 210**		⇑Pn	Pn	08 57 43.0	+0.7
	0.1nm,0.3s,baz=27,slow=13,SNR=16						
MK31				⇑Sn	Sn	08 59 12.9	+1.9
	0.6nm,0.6s,baz=35,slow=26,SNR=3.3						
MK31				⇓Lg	Lg	08 59 57.0	
	1.8nm,0.8s,baz=12,slow=9.8,SNR=2.9						
MKAR	**Makanchi Array**	**7.77 210**		Pn	Pn	08 57 43.2	+0.8
	0.3nm,0.3s,baz=29,slow=14,SNR=12						
MKAR				Sn	Sn	08 59 11.8	+0.8
	0.4nm,0.3s,baz=34,slow=26,SNR=6.9						
MKAR				Lg	Lg	08 59 51.5	
	0.0nm,0.3s,baz=29,slow=34,SNR=2.6						
BVAR	**Borovoye Array**	**10.53 274**		Pn	Pn	08 58 20.1	0.0
	0.1nm,0.3s,baz=87,slow=14,SNR=2.6						
BVAR				Sn	Sn	09 00 14.8	-3.9
	0.3nm,0.3s,baz=82,slow=23,SNR=3.3						

*ISCJB **22** 09:00:51.8±0.7, 39°.65N±0°.04×29°.43E±0°.09, h0km, Error ellipse: s-maj=10.1km s-min=5.8km az=13.0*
*ISK **22** 09:00:51.8, 39°.61N×29°.45E, h10km±8km, ML2.0/4, Suspected Mining explosion.*
*CSEM **22** 09:00:52.1±0.2, 39°.64N×29°.44E, h1km, ML2.0, Error ellipse: s-maj=7.2km s-min=4.6km az=116.0, Suspected Mining explosion.*
*DDA **22** 09:00:54.7, 39°.57N×29°.18E, h7km, Ml2.5, Suspected Mining explosion.*

ISC 22 09:00:52.4±1.2, 39°.63N±0°.04×29°.43E±0°.04, h0km, n14, σ0°.34/16, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVSB	**Tavsanli**	**0.18 171**		PG	**Pg**	**09 00 55.6**	**-0.2**
TVSB				SG	**Sg**	**09 00 58.7**	**+0.6**
TVSB	**Tavsanli**	**0.18 171**		*e*Pg	**Pg**	**09 00 55.6**	**-0.2**
TVSB				*e*Sg	**Sg**	**09 00 58.7**	**+0.6**
CAVI	**Cavuskoy**	**0.66 29**		PG	**Pg**	**09 01 04.7**	**-0.3**
CAVI	**Cavuskoy**	**0.66 29**		*e*Pg	**Pg**	**09 01 04.7**	**-0.3**
DURS	**Dursunbey**	**0.73 268**		*i* P	**Pg**	**09 01 06.2**	**-0.3**
DURS	**Dursunbey**	**0.73 268**		P	**Pg**	**09 01 06.2**	**-0.3**
BORA	**Eskisehir**	**0.83 72**		PG	**Pg**	**09 01 08.1**	**-0.2**
BORA	**Eskisehir**	**0.83 72**		*e*Pg	**Pg**	**09 01 08.1**	**-0.2**
YLV	**Yalova**	**0.94 358**		PG	**Pg**	**09 01 10.6**	**+0.2**
YLV	**Yalova**	**0.94 358**		*i* Pg	**Pg**	**09 01 10.6**	**+0.2**
GULT	**Gulveren**	**1.16 46**		PN	**Pg**	**09 01 14.4**	**-0.2**
GULT	**Gulveren**	**1.16 46**		*i* Pn	**Pg**	**09 01 14.4**	**-0.2**
MANT	**Manisa**	**1.32 211**		*i* P	**Pb**	**09 01 18.0**	**-0.2**
MANT	**Manisa**	**1.32 211**		P	**Pb**	**09 01 18.0**	**-0.2**

MAN 22 09:04:38.5, 10°.04N×123°.23E, h3km, mb4.1, ML2.9, MS2.5, 2C-1D, Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.77**	**69⇓**	*e*P	Pg	09 04 52.2	-1.0
LLP				*e*S	Sg	09 05 02.4	-0.8
GUIM	**Jordan**	**0.86 312**		*e*P	Pg	09 04 55.5	+0.5
GUIM				*e*S	Sb	09 05 08.6	+0.6
DCPH	**Dipolog City**	**1.46 175⇑**		*e*P	Pn	09 05 04.8	-0.9
DCPH				*e*S	Sg	09 05 28.3	+3.0
RCP	**Roxas**	**1.58 342⇑**		*e*P	Pn	09 05 07.0	-0.4
RCP				*e*S	Sg	09 05 31.6	+2.3
MSLP	**Maasin**	**1.60 87**		*e*P	Pn	09 05 07.2	-0.5
MSLP				*e*S	Sg	09 05 29.9	-0.1

*ISCJB **22** 09:16:02.8±0.7, 34°.08S±0°.04×148°.47E±0°.04, h28km±6km, Error ellipse: s-maj=6.8km s-min=5.3km az=28.7*
*IDC **22** 09:16:02.7±8.4, 33°.76S×148°.60E, h0km, mb1 3.6/3, mb1mx3.4/43, mbtmp3.4/3, ML3.7/3, Error ellipse: s-maj=153.2km s-min=50.8km az=1.0*
*AUST **22** 09:16:02.9±0.0, 34°.11S×148°.64E, h14km, Error ellipse: s-maj=0.6km s-min=0.3km az=6.0*
*NEIC **22** 09:16:04.0±0.0, 34°.23S×148°.71E, h10km, ML3.8(AUST), After AUST.*
NEIC Felt [III] at Cowra and Young. Also felt at Crookwell, Goulburn, Grenfell, Jugiong, Neville and Wollongong.

ISC 22 09:16:03.9±1.0, 34°.12S±0°.06×148°.48E±0°.05, h27km±8km, n24, σ1°.96/32, New South Wales

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YNG	**Young**	**0.19 202**		P	**Pb**	**09 16 09.4**	**-0.2**
	baz=0.3,SNR=1000						
YNG				S	**Sb**	**09 16 13.0**	**-0.6**
	baz=0.3						
CAN	**Canberra**	**1.27 161**		P	**Pn**	**09 16 25.7**	**-0.3**
	baz=1.2						
CAN				S	**Sn**	**09 16 42.5**	**+0.3**
	baz=1.2						
CAN	**Canberra**	**1.27 161**		*e*Pn	**Pn**	**09 16 25.6**	**-0.4**
CAN				*e*Sn	**Sn**	**09 16 41.7**	**-0.5**
CNB	**Canberra Magne**	**1.40 149**		P	**Pn**	**09 16 26.7**	**-1.0**
	baz=1.3,SNR=447						
CNB				S	**Sn**	**09 16 45.4**	**+0.1**
	baz=1.3						
RIV	**Riverview**	**2.24 83**		P	**Pn**	**09 16 38.4**	**-0.9**
	baz=2.1,SNR=39						
RIV				S	**Sn**	**09 17 05.5**	**-0.6**
	baz=2.1						
MGCD	**Mangrove Creek**	**2.37 68**		P	**Pn**	**09 16 40.1**	**-1.0**
	baz=2.2,SNR=144						
MGCD				S	**Sn**	**09 17 09.6**	**+0.3**
	baz=2.2						
CMSA	**Cobar Meteorol**	**3.48 317**		P	**Pn**	**09 16 57.6**	**+1.2**
	baz=3.6						
TOO	**Toolangi**	**4.21 214**		P	**Pn**	**09 17 08.4**	**+2.0**
	baz=4.3,SNR=15						
ARMA	**Armidale**	**4.55 37**		P	**Pn**	**09 17 11.7**	**+0.5**
	baz=4.5,SNR=5.4						
ARMA	**Armidale**	**4.55 37**		*e*Pg	Pb	09 17 30.6	+7.4
ARPS	**Mount Arapiles**	**6.03 242**		P	**Pn**	**09 17 33.6**	**+2.2**
	baz=6.1,SNR=13						
STKA	**Stephens Creek**	**6.20 289**		Pn	**Pn**	**09 17 34.8**	**+1.1**
	1.2nm,0.3s,baz=107,slow=9.8,SNR=26						
STKA				Sn	**Sn**	**09 18 43.3**	**-0.5**
	7.2nm,0.3s,baz=306,slow=6.4,SNR=6.5						
STKA				Lg	Lg	09 19 20.0	
	3.5nm,0.3s,baz=18,slow=19,SNR=2.3						
STKA	**Stephens Creek**	**6.20 289**		*e*Pn	**Pn**	**09 17 35.2**	**+1.5**
STKA				*e*Sn	**Sn**	**09 18 44.6**	**+0.9**
RMQ	**Roma**	**7.61 2**		P	**Pn**	**09 17 53.7**	**+0.6**
	baz=7.6,SNR=4.7						
HTT	**Hallett**	**7.99 272**		P	**Pn**	**09 17 59.1**	**+0.8**
	baz=8.1,SNR=20						
QLP	**Quilpie**	**8.36 333**		P	**Pn**	**09 18 04.6**	**+1.3**
	baz=8.4,SNR=3.7						
EIDS	**Eidsvold**	**9.01 15**		P	**Pn**	**09 18 14.2**	**+1.9**
	baz=9.0,SNR=4.9						
EIDS	**Eidsvold**	**9.01 15**		*e*Pn	**Pn**	**09 18 13.7**	**+1.5**
BBOO	**Buckleboo**	**10.46 274**		P	**Pn**	**09 18 32.3**	**+0.2**
	baz=11,SNR=7.6						
BBOO	**Buckleboo**	**10.46 274**		*e*Pn	**Pn**	**09 18 32.1**	**0.0**
AS01	**Alice Springs**	**16.43 306**		*e*Pn	**P**	**09 19 57.5**	**+2.3**
AS31	**Alice Springs**	**16.46 305**		*e*Pn	**P**	**09 19 56.4**	**+0.9**
	2.6nm,1.4s						
ASAR	**Alice Springs**	**16.46 305**		Pn	**Pn**	**09 19 53.3**	**+0.3**
	0.1nm,0.3s,baz=137,slow=14,SNR=10.0						
ASAR				Sn	**Sn**	**09 22 46.4**	**-8.6**
	0.1nm,0.3s,baz=133,slow=23,SNR=3.0						
WRA	**Warramunga Arr**	**18.89 315**		P	**Pn**	**09 20 23.0**	**-0.2**
	0.2nm,0.3s,baz=140,slow=13,SNR=10						
WRA				S	Sn	09 23 42.2	-12
	0.1nm,0.3s,baz=142,slow=25,SNR=3.2						

IDC 22 09:19:42.5±3.2, 33°.09S×178°.41W, h0km, mb3.5/2, mb1 3.8/3, mb1mx3.4/45, mbtmp3.6/3, ML3.5/1, Error ellipse: s-maj=72.9km s-min=36.8km az=116.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.32 214**		Pn	Pn	09 21 17.6	+0.8
	1.0nm,0.3s,baz=259,slow=3.6,SNR=6.3						
URZ				Sn	Sn	09 22 28.5	-1.2
	0.3nm,0.3s,baz=270,slow=20,SNR=2.8						
ASAR	**Alice Springs**	**42.69 270**		P	P	09 27 41.2	-0.1
	0.5nm,0.9s,baz=113,slow=8.2,SNR=4.2						
WRA	**Warramunga Arr**	**43.92 275**		P	P	09 27 51.1	-0.1
	0.5nm,0.5s,baz=116,slow=8.0,SNR=12						
FINES	**FINESS Array B**	**147.52 338**		PKPbc	PKPbc	09 39 26.8	-1.0
	0.9nm,0.9s,baz=72,slow=4.5,SNR=4.8						

*IDC **22** 09:29:43.7±0.9, 32°.64S×178°.34W, h0km, mb4.4/3, mb1 4.6/4, mb1mx3.9/44, mbtmp4.4/4, ML4.5/1, MS3.4/5, Ms1 3.4/5, ms1mx2.9/48, Error ellipse: s-maj=34.0km s-min=27.1km az=84.0*
*NEIC **22** 09:29:45.6±0.8, 33°.04S×178°.53W, h10km, mb4.4/1, Error ellipse: s-maj=24.2km s-min=15.3km az=108.0*

ISC 22 09:29:48.8±1.0, 32°.9S±0°.1×178°.7W±0°.2, h32km, n24, σ1°.56/18, mb4.5/4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.72 11**		Pn	Pn	09 30 37.3	-6.7
	42nm,0.3s,baz=270,slow=20,SNR=2.0						
RAO				Sn	**Sn**	**09 31 23.9**	**-2.7**
	119nm,0.3s,baz=300,slow=20,SNR=4.0						
URZ	**Urewera**	**6.33 211**		Pn	**Pn**	**09 31 17.6**	**-2.2**
	16nm,0.3s,baz=257,slow=4.8,SNR=77						
URZ				Sn	**Sn**	**09 32 29.5**	**-1.4**
	9.1nm,0.3s,baz=260,slow=8.0,SNR=8.3						
RPZ	**Rata Peaks**	**13.44 214**		Pn	**Pn**	**09 32 55.2**	**-2.0**
	1.2nm,0.3s,baz=37,slow=5.6,SNR=4.1						
RPZ				Sn	Sn	09 35 13.6	-12
	0.7nm,0.3s,baz=131,slow=20,SNR=4.5						
DZM	**Mont Dzumac**	**17.02 306**		LR	LR	09 39 12.7	
	comp=Z,288nm,18.4s,baz=124,slow=33						
DZM	**Mont Dzumac**	**17.02 306**		*e*LR	LR	09 37 59.0	
	288nm,23.1s						
PPT2	**Papeete2**	**30.31 67**		*e*LR	LR	09 43 13.2	
	71nm,23.8s						
PPT	**Papeete**	**30.33 67**		LR	LR	09 45 02.6	
	comp=Z,45nm,20.9s,baz=230,slow=31						
HNR	**Honiara**	**30.57 315**		LR	LR	09 47 08.9	
	comp=Z,30nm,18.3s,baz=227,slow=34						
STKA	**Stephens Creek**	**33.40 261**		LR	LR	09 49 37.0	
	comp=Z,144nm,18.1s,baz=32,slow=35						
ASAR	**Alice Springs**	**42.44 270**		P	**P**	**09 37 42.9**	**+2.0**
	3.0nm,0.6s,baz=107,slow=7.7,SNR=52						
ASAR				PcP	**PcP**	**09 39 33.5**	**0.0**
	0.3nm,0.4s,baz=119,slow=3.6,SNR=3.1						
WRAB	**Tennant Creek**	**43.65 275**		*e*P	**P**	**09 37 52.4**	**+1.8**
	5.0nm,0.8s						
WRA	**Warramunga Arr**	**43.66 275**		P	**P**	**09 37 52.6**	**+1.9**
	4.6nm,0.4s,baz=114,slow=8.0,SNR=147						
JAY	**Jayapura**	**48.57 300**		LR	LR	09 58 09.2	
	comp=Z,35nm,18.4s,baz=277,slow=35						
QSPA	**South Pole Qui**	**57.20 180**		P	**P**	**09 39 34.4**	**+1.9**
	1.8nm,0.7s,baz=130,slow=5.5,SNR=8.8						
QSPA	**South Pole Qui**	**57.20 180**		*e*P	**P**	**09 39 33.8**	**+1.3**
	29nm,1.1s						
KURK	**Kurchatov**	**122.33 313**		PKP	**PKPdf**	**09 48 39.6**	**-0.5**
KURBB	**Kurchatov Arra**	**122.37 313**		PKP	**PKPdf**	**09 48 39.6**	**-0.6**
	0.2nm,0.4s,baz=94,slow=1.9,SNR=5.3						
ARCES	**ARCESS Array B**	**140.91 347**		PKhKP	PKPpre	09 49 11.8	
	2.7nm,0.8s,baz=33,slow=3.5,SNR=5.8						
FINES	**FINESS Array B**	**147.28 338**		PKPbc	**PKPbc**	**09 49 28.2**	**0.0**
	3.3nm,0.4s,baz=36,slow=4.0,SNR=39						
NB2	**NORSAR Subarra**	**151.13 350**		PKP	**PKPbc**	**09 49 37.9**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=17,slow=2.5						
MMAI	**Mount Meron Ar**	**151.46 280**		PKPbc	**PKPbc**	**09 49 41.1**	**+1.5**
	comp=Z,1.0nm,0.3s,baz=76,slow=6.1,SNR=3.0						
HFS	**Hagfors**	**151.57 347**		PKPbc	**PKPbc**	**09 49 38.8**	**-0.2**
	comp=Z,3.1nm,0.8s,baz=86,slow=4.6,SNR=7.4						
BRTR	**Keskin Array B**	**153.17 294**		PKPbc	**PKPbc**	**09 49 43.6**	**+0.3**
	comp=Z,0.9nm,0.5s,baz=150,slow=4.1,SNR=7.5						
TORD	**Torodi Ar. Bea**	**160.32 181**		PKPab	**PKPab**	**09 50 26.1**	**0.0**
	comp=Z,0.3nm,0.7s,baz=183,slow=3.5,SNR=3.1						

IDC 22 09:30:10.9±3.1, 53°.53N×87°.60E, h0km, mb1 3.1/2, mb1mx2.9/70, mbtmp3.1/2, ML2.7/2, Error ellipse: s-maj=27.6km s-min=14.9km az=62.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.70 285**	*i*			09 41 12.8	
	baz=103,slow=326,SNR=1.4						
ZALV	**Zalesovo Beam**	**1.70 285**		Pg	Pn	09 30 41.1	-0.8
	3.3nm,0.3s,baz=102,slow=14,SNR=9.5						
ZALV				Lg	Lg	09 31 05.4	
	1.6nm,0.3s,baz=100,slow=21,SNR=3.8						
KURBB	**Kurchatov Arra**	**6.30 246**		Pn	Pn	09 31 46.0	+0.9
	0.1nm,0.3s,baz=63,slow=14,SNR=10.0						
KURBB				Lg	Lg	09 33 29.2	
	0.0nm,0.3s,baz=65,slow=31,SNR=4.1						
MKAR	**Makanchi Array**	**7.56 209**		Pn	Pn	09 32 03.3	+1.0
	0.2nm,0.3s,baz=31,slow=14,SNR=6.9						
MKAR				Sn	Sn	09 33 29.1	+0.5
	0.1nm,0.3s,baz=25,slow=21,SNR=5.3						
MKAR				Lg	Lg	09 34 08.5	
	0.1nm,0.3s,baz=39,slow=28,SNR=5.7						

MEX 22 09:43:10.0±0.4, 15°.73N×93°.73W, h86km±5km, MD3.6, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.49**	**93**	*e*P	Pn	09 43 22.7	-1.5
PCIG				*i* S	Sn	09 43 33.5	-1.3
TGIG		**1.19**	**29**	*i* P	Pn	09 43 30.7	-1.1
TGIG				*i* S	Sn	09 43 46.3	-1.9
CCIG	**Comitan**	**1.62**	**70**	*e*P	Pn	09 43 36.2	-1.1
CCIG				*e*S	Sn	09 43 55.9	-2.1

*IDC **22** 09:44:41.7±1.7, 4°.32N×73°.79W, h0km, mb3.6/1, mb1 4.0/1, mb1mx3.3/41, mbtmp3.6/1, Error ellipse: s-maj=79.0km s-min=13.8km az=45.0*
*RSNC **22** 09:44:47.9±1.2, 5°.04N×74°.75W, h0km±6km, ML3.4, Mw3.6*
*ISCJB **22** 09:44:48.0±1.1, 5°.05N±0°.03×74°.73W±0°.04, h12km±9km, mb3.7/1, Error ellipse: s-maj=6.6km s-min=4.2km az=13.2*

ISC 22 09:44:46.9±1.4, 5°.06N±0°.03×74°.72W±0°.03, h4km±11km, n19, σ0°.93/28, 3C-2D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**0.45 119**		Pg	**Pb**	**09 44 57.6**	**-0.1**
	718nm,0.3s,baz=51,slow=13,SNR=1020						
ROSC				Lg	Lg	09 45 05.5	
	560nm,0.3s,baz=288,slow=20,SNR=64						
ROSC	**El Rosal**	**0.45 119**	⇓	*i* P	**Pb**	**09 44 57.6**	**-0.1**
ROSC				*i*		09 44 58.1	
	comp=Z,3μm,0.3s						
ROSC				*e*S	**Sb**	**09 45 05.0**	**+0.1**
NORC	**Norcasia**	**0.52 343**		*i* P	**Pb**	**09 44 58.4**	**-0.3**
NORC				*e*S	**Sb**	**09 45 06.4**	**-0.3**
GUYC	**Guyana, Colomb**	**0.69 284**		*e*S	**Sb**	**09 45 11.9**	**+0.1**
TOLC	**Tolima**	**0.76 232**		*e*P	**Pg**	**09 45 01.9**	**+0.4**
TOLC				*e*S	**Sg**	**09 45 12.2**	**+0.8**
ANIL	**Santa Ana**	**0.88 230**	⇑	*i* P	**Pg**	**09 45 03.5**	**-0.4**
ANIL				*e*S	**Sg**	**09 45 14.9**	**-0.4**
CHIC	**Chingaza**	**1.07 113**	⇓	*i* P	**Pg**	**09 45 08.2**	**+0.7**
CHIC				*i*		09 45 11.2	
	comp=Z,465nm,0.1s						
PRAC	**Prado**	**1.35 187**	⇑	*i* P	**Pn**	**09 45 11.4**	**-1.1**
PRA

BZWR Bezymyannyi-We 1.75 333 *e*P Pn 09 52 42.4 +2.3
KIRR Kirishev 1.79 331 *e*P Pn 09 52 43.1 +2.5
LGNR Loginova 1.81 338 *e*P Pn 09 52 43.7 +2.6
LGNR *e*S Sn 09 53 06.3 +3.3
CIRR Tsirk 1.83 340 *e*P Pn 09 52 42.4 +1.2
KBTR Krutoberegovo 1.88 16 *e*P Pn 09 52 44.8 +3.1
KBTR *e*S Sn 09 53 07.7 +3.5
NLC Nalytchevo 1.95 232 *e*P Pn 09 52 46.1 +3.4
KRSR Krestovskiy 1.97 338 *e*P Pn 09 52 45.0 +2.0
KOZ Kozyrevsk 2.02 326 *e*P Pn 09 52 46.5 +2.9
KLY Klyuchi 2.04 340 *e*P Pn 09 52 45.8 +2.0
KLY *e*S Sn 09 53 09.2 +1.2
SDLR Sedlovina 2.11 239 *e*P Pn 09 52 47.8 +2.8
SDLR *e*S Sn 09 53 11.4 +1.4
KRER Koryakskii 2.16 241 *e*P Pn 09 52 49.1 +3.3
KRER *e*S Sn 09 53 14.0 +2.6
UGLR Uglovaya 2.18 238 *e*P Pn 09 52 49.1 +3.2
UGLR *e*S Sn 09 53 13.8 +2.2
KRX Arik 2.19 243 *e*P Pn 09 52 49.1 +3.1
AVH Avacha 2.19 240 *e*P Pn 09 52 49.6 +3.6
AVH *e*S Sn 09 53 15.1 +3.2
SMKR Semkarok 2.19 354 *e*P Pn 09 52 48.6 +2.5
BDR Baidarnaya 2.20 350 *e*P Pn 09 52 49.3 +3.1
KOK Koryaka 2.23 241 *e*P Pn 09 52 49.8 +3.2
KOK *e*S Sn 09 53 16.0 +3.2
SRKR Sorokina 2.29 350 *e*P Pn 09 52 50.0 +2.6
DALK Dalny 2.32 235 *e*P Pn 09 52 50.2 +2.5
DALK *e*S Sn 09 53 17.0 +2.1
PET Petropavlovsk 2.37 236 *e*P Pn 09 52 52.5 +4.1
PET *e*S Sn 09 53 18.8 +2.6
GNL Ganaly 2.43 255 *e*P Pn 09 52 52.7 +3.3
BKI Bering 2.50 70 *e*P Pn 09 52 52.7 +2.6
BKI *e*S Sn 09 53 21.1 +1.8
KRMR Karymshinskiy 2.74 236 *e*P Pn 09 52 57.3 +3.8
KRMR *e*S Sn 09 53 29.4 +4.1
RUS Russkaya 2.83 227 *e*P Pn 09 52 57.5 +2.8
RUS *e*S Sn 09 53 30.9 +3.5
MTVR Mutnovka 2.94 230 *e*P Pn 09 53 00.8 +4.5
ASAK Asacha 3.13 231 *e*P Pn 09 53 03.4 +4.4
ASAK *e*S Sn 09 53 39.0 +3.9
APC Apacha 3.18 244 *e*P Pn 09 53 03.5 +3.9
APC *e*S Sn 09 53 41.2 +5.0
KDTR Khodutka, Kamc 3.47 223 *e*P Pn 09 53 07.2 +3.7

IDC ***22*** *09:53:05.0±2.8, 32°.67S×178°.42W, h0km, mb4.1/2, mb1 4.3/3, mb1mx3.7/46, mbtmp4.1/3, ML4.1/1, Error ellipse: s-maj=67.7km s-min=43.0km az=126.0*
WEL ***22*** *09:53:06.8±0.7, 33°.S±8°.×17°.8W±1°.8, h33km, ML4.9/21*
ISC 22 09:53:04.4±1.8, 32°.9S±0°.1×177°.8W±0°.3, h26km, n39, σ1§16/62, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.59**	**359**	P	**Pn**	**09 53 58.4**	**0.0**
GLKZ				S	**Sn**	**09 54 37.5**	**-2.5**
MXZ	**Matakaoa Point**	**5.66**	**213**	P	**Pn**	**09 54 27.1**	**+0.3**
MXZ				S	**Sn**	**09 55 31.0**	**+0.2**
WMGZ	**Waiomatatini S**	**5.82**	**211**	P	**Pn**	**09 54 29.4**	**+0.4**
WMGZ				S	**Sn**	**09 55 35.0**	**+0.1**
PKGZ	**Pakihiroa**	**6.03**	**213**	P	**Pn**	**09 54 31.9**	**-0.1**
PKGZ				S	**Sn**	**09 55 39.5**	**-0.6**
HAZ	**Te Kaha**	**6.06**	**215**	P	**Pn**	**09 54 33.2**	**+0.9**
HAZ				S	**Sn**	**09 55 42.3**	**+1.5**
PUZ	**Puketiti**	**6.10**	**210**	P	**Pn**	**09 54 32.4**	**-0.5**
PUZ				S	**Sn**	**09 55 41.3**	**-0.6**
RUGZ	**Raukumara Rang**	**6.28**	**215**	P	**Pn**	**09 54 36.1**	**+0.7**
RUGZ				S	**Sn**	**09 55 47.3**	**+1.0**
TWGZ	**Tauwhareparae**	**6.31**	**212**	P	**Pn**	**09 54 37.5**	**+1.8**
TWGZ				S	**Sn**	**09 55 48.0**	**+1.0**
CNGZ	**Carnagh Statio**	**6.47**	**209**	P	**Pn**	**09 54 38.3**	**+0.3**
TKGZ	**Te Karaka**	**6.58**	**211**	P	**Pn**	**09 54 40.7**	**+1.2**
MWZ	**Matawai**	**6.64**	**213**	P	**Pn**	**09 54 40.3**	**-0.1**
MWZ				S	**Sn**	**09 55 53.1**	**-2.2**
OPRZ	**Ohinepanea**	**6.76**	**221**	P	**Pn**	**09 54 43.2**	**+1.2**
OPRZ				S	**Sn**	**09 55 56.5**	**-1.6**
URZ	**Urewera**	**6.78**	**216**	Pn	**Pn**	**09 54 42.8**	**+0.6**
3.5nm,0.3s,baz=270,slow=2.0,SNR=20							
URZ				Sn	**Sn**	**09 55 56.0**	**-2.6**
4.9nm,0.3s,baz=113,slow=17,SNR=10							
URZ	**Urewera**	**6.78**	**216**	P	**Pn**	**09 54 42.9**	**+0.6**
URZ				S	**Sn**	**09 55 57.5**	**-1.1**
RAGZ	**Rawiri**	**6.82**	**213**	P	**Pn**	**09 54 42.6**	**-0.3**
RAGZ				S	**Sn**	**09 55 58.7**	**-1.0**
RIGZ	**Rimuhau**	**6.84**	**210**	P	**Pn**	**09 54 43.3**	**+0.2**
RIGZ				S	**Sn**	**09 55 59.0**	**-1.2**
PRGZ	**Paritu Road**	**6.98**	**209**	P	**Pn**	**09 54 44.4**	**-0.6**
PRGZ				S	**Sn**	**09 56 01.8**	**-1.6**
SNGZ	**Shannon Statio**	**7.09**	**212**	P	**Pn**	**09 54 48.1**	**+1.6**
SNGZ				S	**Sn**	**09 56 05.6**	**-0.7**
MUGZ	**Murupara**	**7.12**	**217**	P	**Pn**	**09 54 47.7**	**+0.8**
MUGZ				S	**Sn**	**09 56 04.7**	**-2.3**
RTZ	**Ruatahuna**	**7.12**	**215**	P	**Pn**	**09 54 47.7**	**+0.7**
RTZ				S	**Sn**	**09 56 05.4**	**-1.7**
MHGZ	**Mahia Peninsul**	**7.17**	**208**	P	**Pn**	**09 54 46.9**	**-0.5**
RAHZ	**Arahi**	**7.32**	**213**	P	**Pn**	**09 54 51.6**	**+2.0**
RAHZ				S	**Sn**	**09 56 09.9**	**-1.9**
MTHZ	**Maungataniwha**	**7.38**	**214**	P	**Pn**	**09 54 51.7**	**+1.2**
MTHZ				S	**Sn**	**09 56 12.6**	**-0.7**
WHHZ	**Waihua**	**7.38**	**211**	P	**Pn**	**09 54 52.2**	**+1.8**
WHHZ				S	**Sn**	**09 56 12.5**	**-0.8**
MRHZ	**Matea Rd**	**7.57**	**216**	P	**Pn**	**09 54 54.1**	**+0.9**
NMHZ	**Naumai**	**7.59**	**213**	P	**Pn**	**09 54 54.7**	**+1.3**
NMHZ				S	**Sn**	**09 56 18.1**	**-0.5**
ARHZ	**Aropaoanui**	**7.64**	**212**	P	**Pn**	**09 54 55.3**	**+1.3**
ARHZ				S	**Sn**	**09 56 18.4**	**-1.2**
BKZ	**Black Stump Fm**	**7.79**	**215**	P	**Pn**	**09 54 56.7**	**+0.5**
MCHZ	**McNeill Hill**	**7.92**	**212**	P	**Pn**	**09 54 59.0**	**+1.2**
CKHZ	**Cape Kidnapper**	**7.93**	**210**	P	**Pn**	**09 54 58.2**	**+0.2**
KRHZ	**Kereru**	**8.23**	**213**	P	**Pn**	**09 55 01.1**	**-1.1**
BHHZ	**Black Hill Sta**	**8.25**	**215**	P	**Pn**	**09 55 03.6**	**+1.2**
TUVZ	**Tukino**	**8.29**	**218**	P	**Pn**	**09 55 03.3**	**+0.3**
PXZ	**Pawanui**	**8.33**	**209**	P	**Pn**	**09 55 03.5**	**0.0**
TSZ	**Takapari Road**	**8.75**	**213**	P	**Pn**	**09 55 08.6**	**-0.6**
THZ	**Tophouse**	**11.54**	**217**	P	**Pn**	**09 55 48.2**	**+0.7**
ASAR	**Alice Springs**	**43.18**	**269**	P	**P**	**10 01 04.0**	**+0.7**
0.8nm,0.4s,baz=111,slow=7.8,SNR=18							
WRA	**Warramunga Arr**	**44.39**	**275**	P	**P**	**10 01 13.2**	**+0.2**
1.5nm,0.4s,baz=113,slow=8.0,SNR=92							
FINES	**FINESS Array B**	**147.50**	**339**	PKPbc	**PKPab**	**10 12 48.5**	**+1.1**
1.4nm,0.4s,baz=43,slow=4.2,SNR=36							

ISCJB ***22*** *09:58:08.1±0.8, 33°.11S±0°.05×177°.9W±0°.2, h32km, mb4.4/8, MS3.7/12, Error ellipse: s-maj=20.5km s-min=3.8km az=18.3*
IDC ***22*** *09:58:09.1±0.8, 32°.75S×178°.43W, h0km, mb4.4/7, mb1 4.6/9, mb1mx4.1/47, mbtmp4.5/9, ML4.7/2, MS3.7/14, Ms1 3.7/14, ms1mx3.4/46, Error ellipse: s-maj=25.3km s-min=19.8km az=117.0*
NEIC ***22*** *09:58:11.0±4.3, 32°.79S×178°.46W, h12km±25km, mb4.9/1, Error ellipse: s-maj=17.8km s-min=10.8km az=115.0*
WEL ***22*** *09:58:11.0, 32°.79S×178°.46W, h12km, ML5.3/16*
ISC 22 09:58:12.5±0.7, 33°.05S±0°.07×178°.1W±0°.1, h32km, n76, σ2§06/79, mb4.4/8, MS3.7/12, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.78**	**2**	P	**Pn**	**09 59 05.6**	**-2.9**
RAO	**Raoul Island**	**3.79**	**2**	Pn	**Pn**	**09 59 06.2**	**-2.5**
79nm,0.3s,baz=288,slow=20,SNR=3.2							
RAO				Sn	**Sn**	**09 59 49.2**	**-3.0**
93nm,0.3s,baz=108,slow=20,SNR=3.0							
MXZ	**Matakaoa Point**	**5.38**	**212**	P	**Pn**	**09 59 29.2**	**-1.4**
MXZ				S	**Sn**	**10 00 31.5**	**+0.1**
WMGZ	**Waiomatatini S**	**5.55**	**210**	P	**Pn**	**09 59 33.4**	**+0.6**
WMGZ				S	**Sn**	**10 00 37.5**	**+2.0**
PKGZ	**Pakihiroa**	**5.75**	**212**	P	**Pn**	**09 59 35.1**	**-0.6**
PKGZ				S	**Sn**	**10 00 41.4**	**+0.8**
HAZ	**Te Kaha**	**5.78**	**215**	P	**Pn**	**09 59 36.5**	**+0.5**
HAZ				S	**Sn**	**10 00 44.2**	**+3.0**
PUZ	**Puketiti**	**5.83**	**210**	P	**Pn**	**09 59 36.2**	**-0.6**
PUZ				S	**Sn**	**10 00 42.1**	**-0.3**
GRZ	**Great Barrier**	**6.21**	**237**	P	**Pn**	**09 59 44.1**	**+2.2**
KUZ	**Kuaotunu**	**6.28**	**232**	P	**Pn**	**09 59 44.6**	**+1.7**
MWZ	**Matawai**	**6.37**	**213**	P	**Pn**	**09 59 43.5**	**-0.6**
MWZ				S	**Sn**	**10 00 55.7**	**0.0**
URZ	**Urewera**	**6.50**	**216**	Pn	**Pn**	**09 59 45.8**	**-0.1**
15nm,0.3s,baz=261,slow=4.7,SNR=47							
URZ				Sn	**Sn**	**10 00 58.9**	**-0.1**
19nm,0.3s,baz=320,slow=23,SNR=9.9							
URZ				LR	LR	10 02 23.8	
comp=Z,389nm,18.4s,baz=28,slow=39							
URZ	**Urewera**	**6.50**	**216**	P	**Pn**	**09 59 46.0**	**0.0**
URZ				S	**Sn**	**10 00 58.9**	**-0.1**
RTZ	**Ruatahuna**	**6.85**	**214**	P	**Pn**	**09 59 50.5**	**-0.2**
KNZ	**Kokohu**	**6.88**	**209**	P	**Pn**	**09 59 49.3**	**-1.7**
RAHZ	**Arahi**	**7.04**	**212**	P	**Pn**	**09 59 54.8**	**+1.4**
RAHZ				S	**Sn**	**10 01 12.0**	**-0.3**
WHHZ	**Waihua**	**7.11**	**211**	P	**Pn**	**09 59 55.5**	**+1.3**
WHHZ				S	**Sn**	**10 01 12.9**	**-1.0**
NMHZ	**Naumai**	**7.31**	**213**	P	**Pn**	**09 59 57.8**	**+0.6**
NMHZ				S	**Sn**	**10 01 19.1**	**0.0**
ARHZ	**Aropaoanui**	**7.36**	**211**	P	**Pn**	**09 59 58.0**	**+0.3**
ARHZ				S	**Sn**	**10 01 18.9**	**-1.3**
BKZ	**Black Stump Fm**	**7.51**	**214**	P	**Pn**	**09 59 58.9**	**-1.0**
BKZ				S	**Sn**	**10 01 20.9**	**-3.1**
MCHZ	**McNeill Hill**	**7.64**	**212**	P	**Pn**	**10 00 03.2**	**+1.5**
MCHZ				S	**Sn**	**10 01 26.7**	**-0.4**
CKHZ	**Cape Kidnapper**	**7.66**	**209**	P	**Pn**	**09 59 59.3**	**-2.5**
CKHZ				S	**Sn**	**10 01 25.0**	**-2.5**
KAHZ	**Kahuranaki**	**7.86**	**210**	P	**Pn**	**10 00 01.7**	**-2.9**
KAHZ				S	**Sn**	**10 01 30.2**	**-2.3**
KRHZ	**Kereru**	**7.95**	**213**	P	**Pn**	**10 00 04.2**	**-1.7**
KRHZ				S	**Sn**	**10 01 30.7**	**-4.0**
BHHZ	**Black Hill Sta**	**7.97**	**215**	P	**Pn**	**10 00 06.0**	**-0.2**
BHHZ				S	**Sn**	**10 01 33.0**	**-2.3**
PXZ	**Pawanui**	**8.06**	**209**	P	**Pn**	**10 00 06.4**	**-1.0**
PXZ				S	**Sn**	**10 01 33.3**	**-4.1**
PNHZ	**Pukenui**	**8.25**	**212**	P	**Pn**	**10 00 08.5**	**-1.4**
PNHZ				S	**Sn**	**10 01 38.0**	**-4.1**
TSZ	**Takapari Road**	**8.47**	**213**	P	**Pn**	**10 00 12.0**	**-1.1**
TSZ				S	**Sn**	**10 01 43.4**	**-4.1**
DVHZ	**Dannevirke**	**8.58**	**211**	P	**Pn**	**10 00 12.8**	**-1.7**
DVHZ				S	**Sn**	**10 01 45.6**	**-4.5**
BFZ	**Birch Farm**	**8.86**	**209**	P	**Pn**	**10 00 15.6**	**-2.7**
BFZ				S	**Sn**	**10 01 51.2**	**-5.9**
PRWZ	**Pori Road**	**8.87**	**211**	P	**Pn**	**10 00 17.7**	**-0.8**
MRZ	**Mangatainoka R**	**9.13**	**212**	P	**Pn**	**10 00 19.2**	**-2.8**
HOWZ	**Holdsworth Sta**	**9.35**	**211**	P	**Pn**	**10 00 22.9**	**-2.2**
OGWZ	**Otaki Gorge**	**9.44**	**213**	P	**Pn**	**10 00 24.2**	**-2.1**
MSWZ	**Moikau Station**	**9.89**	**211**	P	**Pn**	**10 00 31.1**	**-1.4**
RPZ	**Rata Peaks**	**13.62**	**215**	Pn	Pn	10 01 18.8	-4.7
1.1nm,0.3s,baz=61,slow=10,SNR=4.8							
RPZ				Sn	Sn	10 03 38.6	-15
1.3nm,0.3s,baz=0.0,slow=17,SNR=6.7							
DZM	**Mont Dzumac**	**17.52**	**305**	LR	LR	10 07 44.2	
comp=Z,665nm,18.2s,baz=148,slow=34							
DZM	**Mont Dzumac**	**17.52**	**305**	*e*P	**P**	**10 02 18.4**	**+3.0**
66nm,1.1s							
DZM				*e*LR	LR	10 06 33.2	
610nm,23.1s							
DZM	**Mont Dzumac**	**17.52**	**305**	*e*LR	LR	10 01 15.3	
181nm,21.6s							
TBI	**Tubuai**	**26.94**	**76**	*e*LR	LR	10 10 38.8	
231nm,33.2s							
TBI	**Tubuai**	**26.94**	**76**	*e*T	T	10 31 53.6	
6.4nm,0.4s							
PAE	**Paea**	**29.84**	**66**	*e*T	T	10 35 41.9	
1.7nm,0.3s							
PPT2	**Papeete2**	**29.89**	**66**	*e*LR	LR	10 12 12.7	
147nm,24.5s							
PPT	**Papeete**	**29.90**	**66**	LR	LR	10 13 18.1	
comp=Z,67nm,21.9s,baz=207,slow=30							
STKA	**Stephens Creek**	**33.90**	**261**	P	**P**	**10 04 52.3**	**-0.2**
2.4nm,0.8s,baz=37,slow=8.0,SNR=3.6							
STKA				LR	LR	10 17 41.0	
comp=Z,252nm,18.1s,baz=40,slow=35							
CTA	**Charters Tower**	**34.24**	**283**	P	**P**	**10 04 55.1**	**-0.5**
8.6nm,0.6s,baz=116,slow=9.8,SNR=22							
PMG	**Port Moresby**	**39.74**	**298**	LR	LR	10 19 42.8	
comp=Z,113nm,18.7s,baz=186,slow=33							
TAOE	**Nuku Hiva Isla**	**42.47**	**64**	*e*LR	LR	10 17 49.0	
92nm,27.8s							
ASAR	**Alice Springs**	**42.96**	**270**	P	**P**	**10 06 07.6**	**-1.2**
3.7nm,0.6s,baz=108,slow=7.9,SNR=59							
ASAR				LR	LR	10 23 00.3	
comp=Z,64nm,18.4s,baz=137,slow=35							
WRAB	**Tennant Creek**	**44.18**	**275**	*e*P	**P**	**10 06 17.0**	**-1.7**
11nm,0.6s							
WRA	**Warramunga Arr**	**44.19**	**275**	P	**P**	**10 06 16.8**	**-1.9**
14nm,0.6s,baz=114,slow=7.9,SNR=176							
VNDA	**Vanda**	**45.46**	**186**	LR	LR	10 22 04.2	
comp=Z,56nm,21.4s,baz=134,slow=31							
JAY	**Jayapura**	**49.09**	**299**	LR	LR	10 27 53.9	
comp=Z,59nm,18.0s,baz=148,slow=37							
QSPA	**South Pole Qui**	**57.07**	**180**	P	**P**	**10 08 00.0**	**+4.7**
3.3nm,0.8s,baz=84,slow=2.6,SNR=8.2							
QSPA	**South Pole Qui**	**57.07**	**180**	*e*P	P	10 08 00.6	+5.3
MAW	**Mawson**	**69.81**	**201**	LR	LR	10 39 56.1	
comp=Z,110nm,18.5s,baz=24,slow=36							
VNA3	**Neumayer Olymp**	**75.67**	**176**	P	P	10 10 05.4	+11
VNA1	**Neumayer--Stat**	**76.33**	**177**	P	P	10 10 05.5	+7.6
ASAJ	**Asahikawa**	**84.75**	**333**	LR	LR	10 42 20.4	
comp=Z,41nm,20.1s,baz=178,slow=31							
KSRS	**Korea Array**	**86.32**	**320**	LR	LR	10 47 26.6	
comp=Z,19nm,19.0s,baz=255,slow=34							
PETK	**Petropavlovsk-**	**88.36**	**346**	P	**P**	**10 10 59.4**	**-1.2**
1.6nm,0.8s,baz=164,slow=6.8,SNR=4.2							
PETK				LR	LR	10 45 01.9	
comp=Z,30nm,19.3s,baz=118,slow=32							
YBH	**Yreka Blue Hor**	**90.16**	**38**	LR	LR	10 46 34.8	
comp=Z,22nm,18.7s,baz=233,slow=32							
NVAR	**Mina Array Bea**	**90.23**	**43**	P	**P**	**10 11 12.3**	**+2.3**
0.5nm,0.8s,baz=225,slow=2.4,SNR=3.9							
NNA	**Nana**	**92.76**	**106**	LR	LR	10 47 05.0	
comp=Z,40nm,18.2s,baz=196,slow=32							
MKAR	**Makanchi Array**	**119.40**	**309**	PKP	**PKPdf**	**10 16 58.9**	**+0.5**
0.2nm,0.6s,baz=96,slow=1.4,SNR=3.3							
KURK	**Kurchatov**	**122.81**	**313**	PKP	**PKPdf**	**10 17 04.6**	**-0.1**
KURBB	**Kurchatov Arra**	**122.84**	**312**	PKP	**PKPdf**	**10 17 04.6**	**-0.2**
0.8nm,0.8s,baz=117,slow=2.0,SNR=5.7							
BVAR	**Borovoye Array**	**128.23**	**314**	PKP	**PKPdf**	**10 17 16.2**	**+1.2**
0.8nm,0.5s,baz=289,slow=4.4,SNR=4.9							
ARCES	**ARCESS Array B**	**141.15**	**347**	PKhKP	PKPpre	10 17 34.1	
2.4nm,0.8s,baz=26,slow=4.3,SNR=3.7							
FINES	**FINESS Array B**	**147.59**	**338**	PKPbc	**PKPab**	**10 17 53.2**	**-1.8**
6.9nm,0.6s,baz=40,slow=4.4,SNR=62							
NB2	**NORSAR Subarra**	**151.35**	**351**	PKP	**PKPbc**	**10 18 02.8**	**+0.6**
comp=Z,1.8nm,0.7s,baz=18,slow=2.6							
HFS	**Hagfors**	**151.82**	**348**	PKPbc	**PKPbc**	**10 18 03.6**	**+0.3**
comp=Z,4.0nm,0.6s,baz=98,slow=2.9,SNR=14							
MMAI	**Mount Meron Ar**	**151.99**	**279**	PKPbc	**PKPbc**	**10 18 06.1**	**+1.5**
comp=Z,1.8nm,0.3s,baz=90,slow=5.8,SNR=4.9							
AKASG	**Malin Array Be**	**153.31**	**319**	PKPbc	**PKPbc**	**10 18 07.8**	**+0.9**
comp=Z,0.7nm,0.5s,baz=58,slow=3.0,SNR=6.0							
BRTR	**Keskin Array B**	**153.70**	**294**	PKPbc	**PKPbc**	**10 18 08.4**	**+0.1**
comp=Z,1.2nm,0.5s,baz=116,slow=4.3,SNR=8.9							
CLL	**Collm**	**160.03**	**339**	*e*PKPab	**PKPab**	**10 18 47.0**	**-0.7**
TORD	**Torodi Ar. Bea**	**160.19**	**179**	PKPab	**PKPab**	**10 18 51.6**	**+2.3**
comp=Z,0.7nm,1.0s,baz=164,slow=3.9,SNR=2.6							

NIED ***22*** *10:05:00, 39°.40N×143°.60E, h17km, Mw3.4 Best double couple: M0=1.63000×10^14 NP1:φs=10.00000°, δ=36.00000°, λ=-90.00000°. NP2:φs=190.00000°, δ=54.00000°, λ=-90.00000°.*
IDC ***22*** *10:05:14.3±0.8, 39°.28N×143°.60E, h0km, mb3.5/9, mb1 3.7/10, mb1mx3.6/67, mbtmp3.5/10, ML3.5/1, MS3.0/3, Ms1 3.0/3, ms1mx2.4/52, Error ellipse: s-maj=25.6km s-min=20.0km az=100.0*
JMA ***22*** *10:05:17.6±0.1, 39°.39N×143°.57E, h33km, M3.7*
ISC 22 10:05:15.6±3.8, 39°.47N±0°.05×143°.52E±0°.07, h4km±24km, n25, σ1§19/32, mb3.6/9, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**1.32**	**275**	P	**Pn**	**10 05 41.1**	**+0.4**
MIYJ				S	**Sb**	**10 05 58.2**	**+0.2**
JTH	**Tanohata**	**1.36**	**291**	P	**Pn**	**10 05 41.7**	**+0.4**
JTH				*e*S	**Sn**	**10 06 00.0**	**+0.3**
OFUJ	**Ofunato**	**1.48**	**256**	P	**Pn**	**10 05 43.2**	**+0.2**
OFUJ				*e*S	**Sn**	**10 06 01.8**	**-1.0**
JOM	**Ohasama**	**1.72**	**271**	P	**Pn**	**10 05 47.2**	**+0.9**
JOM				S	**Sn**	**10 06 08.1**	**-0.6**
JANG	**Nango**	**1.79**	**301**	P	**Pn**	**10 05 47.6**	**+0.5**
JMK	**Ichinoseki**	**1.86**	**255**	P	**Pn**	**10 05 48.7**	**+0.6**
JMK				S	**Sn**	**10 06 12.0**	**0.0**
JIO	**Ouri**	**1.97**	**240**	P	**Pn**	**10 05 49.5**	**-0.1**
JIO				*e*S	**Sn**	**10 06 12.6**	**-2.1**
JYK	**Kaneyama**	**2.51**	**258**	P	**Pn**	**10 05 58.5**	**+1.3**
JOT	**Ohata**	**2.69**	**316**	P	**Pb**	**10 06 03.0**	**-1.1**
JNBK	**Urakawa-nobuka**	**2.87**	**349**	P	**Pn**	**10 06 03.5**	**+1.5**
JNBK				S	**Sn**	**10 06 37.5**	**+0.5**
ASAJ	**Asahikawa**	**4.70**	**352**	Pn	**Pn**	**10 06 28.4**	**+1.2**
1.5nm,0.3s,baz=190,slow=12,SNR=15							
ASAJ				Sn	**Sn**	**10 07 20.0**	**-2.0**
0.7nm,0.3s,baz=288,slow=20,SNR=2.3							
MJAR	**Matsushiro Arr**	**5.11**	**237**	Pn	**Pn**	**10 06 34.5**	**+1.7**
1.7nm,0.3s,baz=84,slow=3.4,SNR=15							
MJAR				Sn	**Sn**	**10 07 33.7**	**+1.4**
baz=53,slow=24,SNR=3.1							
MAT	**Matsushiro**	**5.11**	**237**	P	**Pn**	**10 06 34.9**	**+2.1**
MAT				*e*S	**Sn**	**10 07 33.9**	**+1.6**
KSRS	**Korea Array**	**12.39**	**266**	LR	LR	10 12 45.4	
comp=Z,16nm,19.2s,baz=15,slow=36							
MKAR	**Makanchi Array**	**44.27**	**300**	P	**P**	**10 13 26.9**	**+0.7**
0.2nm,0.5s,baz=80,slow=14,SNR=4.0							
KURBB	**Kurchatov Arra**	**45.85**	**306**	P	**P**	**10 13 39.1**	**+0.5**
1.1nm,0.6s,baz=81,slow=8.7,SNR=5.3							
ILAR	**Eielson Array**	**46.55**	**34**	P	**P**	**10 13 44.0**	**+0.1**
0.4nm,0.7s,baz=259,slow=6.6,SNR=7.2							
BVAR	**Borovoye Array**	**50.19**	**311**	P	**P**	**10 14 12.8**	**+0.7**
0.6nm,0.5s,baz=77,slow=7.8,SNR=3.4							
AKTO	**Aktyubinsk**	**58.30**	**311**	LR	LR	10 40 05.2	
comp=Z,22nm,18.0s,baz=179,slow=36							
WRA	**Warramunga Arr**	**59.72**	**190**	P	**P**	**10 15 19.4**	**-1.9**
0.3nm,0.9s,baz=8.7,slow=7.0,SNR=6.6							
YKA	**Yellowknife Ar**	**60.87**	**31**	P	**P**	**10 15 29.6**	**+0.8**
0.2nm,0.6s,baz=302,slow=6.3,SNR=4.0							
ASAR	**Alice Springs**	**63.44**	**190**	P	**P**	**10 15 44.6**	**-1.8**
0.3nm,0.8s,baz=9.8,slow=6.8,SNR=3.6							
DZM	**Mont Dzumac**	**64.86**	**156**	LR	LR	10 41 00.2	
comp=Z,31nm,21.1s,baz=164,slow=33							
PDAR	**Pinedale Array**	**74.79**	**47**	P	**P**	**10 16 57.0**	**-0.1**
0.2nm,0.5s,baz=248,slow=0.8,SNR=4.7							
TXAR	**Lajitas Array**	**87.34**	**54**	P	**P**	**10 18 03.7**	**-0.3**
0.2nm,0.5s,baz=289,slow=2.8,SNR=3.7							

IDC ***22*** *10:12:00.3±1.2, 9°.06N×122°.57E, h0km, mb3.8/3, mb1 4.1/3, mb1mx3.5/61, mbtmp3.8/3, MS2.9/1, Ms1 2.9/1, ms1mx2.3/57, Error ellipse: s-maj=132.9km s-min=26.0km az=66.0*
MAN ***22*** *10:12:01.9, 9°.02N×121°.98E, h30km, mb4.6, ML3.5, MS3.3*
ISC 22 10:11:59.3±2.0, 9°.00N±0°.05×121°.99E±0°.04, h0km±13km, n19, σ1§67/28, mb3.8/3, 4C-2D, Sulu Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**1.28**	**75**	⇑*i*P	**Pg**	**10 12 23.3**	**-0.5**
SNPH				*i* S	**Sg**	**10 12 40.8**	**+0.4**
DCPH	**Dipolog City**	**1.41**	**107**	⇓*e*P	**Pn**	**10 12 24.5**	**-1.7**
GUIM	**Jordan**	**1.72**	**20**	*e*P	**Pn**	**10 12 30.2**	**-0.2**
GUIM				*e*S	**Sn**	**10 12 50.6**	**-2.6**
JAP	**San Jose, Anti**	**1.73**	**359**	⇑*e*P	Pg	10 12 42.5	+10
PAGZ	**Pagadian**	**1.79**	**130**	*e*P	**Pn**	**10 12 31.3**	**-0.2**
PAGZ				*e*S	**Sn**	**10 12 53.9**	**-1.1**
CUYO	**Cuyo Island**	**2.07**	**333**	*e*P	**Pn**	**10 12 35.8**	**+0.5**
CUYO				*e*S	**Sn**	**10 12 60.0**	**-1.9**
LLP	**Lapu-Lapu**	**2.35**	**56**	⇑*e*P	**Pn**	**10 12 38.9**	**-0.2**
LLP				*e*S	**Sn**	**10 13 06.6**	**-2.1**
RCP	**Roxas**	**2.65**	**16**	⇓*e*P	**Pn**	**10 12 45.4**	**+2.1**
RCP				*e*S	**Sn**	**10 13 18.0**	**+1.8**
MSLP	**Maasin**	**3.05**	**68**	*e*P	**Pn**	**10 12 50.1**	**+1.4**
MSLP				*e*S	**Sb**	**10 13 30.0**	**-2.1**
BUKP	**Musuan**	**3.24**	**110**	*e*P	**P

H11N3 WAKE ISLAND Hy 28.26 121 T T 11 42 34.7
baz=313,slow=75,SNR=87
H11S1 WAKE ISLAND Hy 28.96 123 T T 11 43 26.9
baz=315,slow=75,SNR=39
H11S3 WAKE ISLAND Hy 28.96 123 T T 11 43 25.9
baz=315,slow=75,SNR=48
H11S2 WAKE ISLAND Hy 28.97 123 T T 11 43 27.5
baz=315,slow=75,SNR=16
MKAR Makanchi Array 44.02 302 P **P 11 15 18.4 -0.7**
0.2nm,0.5s,baz=86,slow=8.3,SNR=2.3
ILAR Eielson Array 49.52 32 P **P 11 16 04.1 +2.3**
0.2nm,0.6s,baz=273,slow=7.1,SNR=3.2
WRA Warramunga Arr 57.08 188 P **P 11 16 56.6 -1.2**
0.3nm,0.5s,baz=4.5,slow=7.4,SNR=8.1

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*ISCJB **22** 11:12:57.4±0.5,43.84N±0.07×139.80E±0.08,h250km, mb3.3/5,Error ellipse: s-maj=9.7km s-min=7.0km az=29.4*
*JMA **22** 11:12:57.8±0.2,43.97N×139.70E,h240km±2km,M2.7*
*IDC **22** 11:12:58.5±1.3,45.25N×139.44E,h163km±33km,mb3.2/5, mb1 3.3/8,mb1mx3.0/72,mbtmp3.8/8,MS3.4/1,Ms1 3.4/1, ms1mx2.1/30,Error ellipse: s-maj=61.0km s-min=16.9km az=1.0*
ISC 22 11:12:58.0±0.9,43.84N±0.08×139.70E±0.06,h250km,n21, σ1.98/23,mb3.3/5,Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK	**Shakotan**	**0.74**	**131**	P	**Pn**	**11 13 30.9**	**-0.8**
JSH	**Shimam**	**1.22**	**168**	P	**Pn**	**11 13 34.2**	**-0.2**
JOSM	**Okushiri--Mats**	**1.77**	**186**	P	**Pn**	**11 13 38.8**	**+0.4**
ASAJ	**Asahikawa**	**2.11**	**81**	P	**Pn**	**11 13 40.7**	**-0.7**
	1.4nm,0.3s,baz=261,slow=7.2,SNR=19						
ASAJ				S	**S**	**11 14 13.4**	**-2.2**
	0.1nm,0.3s,baz=349,slow=11,SNR=3.3						
JKB	**Kayabe**	**2.18**	**153**	P	**Pn**	**11 13 42.1**	**0.0**
JKK2	**Kamakawa 2**	**2.20**	**88**	P	**Pn**	**11 13 41.7**	**-0.6**
JSE	**Soyaes**	**2.35**	**61**	P	**Pn**	**11 13 42.6**	**-1.0**
JNBK	**Urakawa-nobuka**	**2.73**	**124**	P	**Pn**	**11 13 48.4**	**+0.9**
JNBK				*e*S	**S**	**11 14 26.3**	**-0.4**
JCH	**Churui**	**2.94**	**113**	*e*S	**S**	**11 14 26.4**	**-4.4**
JAR	**Ashorobuto**	**3.00**	**99**	P	**Pn**	**11 13 50.4**	**-0.1**
JAR				*e*S	**S**	**11 14 31.0**	**-1.0**
JTKR	**Abashiri--Toko**	**3.04**	**86**	P	**Pn**	**11 13 50.1**	**-0.7**
JANG	**Nango**	**3.72**	**158**	P	**Pn**	**11 13 58.2**	**-0.3**
JANG				*e*S	**S**	**11 14 44.0**	**-2.6**
JAK	**Akkeshi**	**3.73**	**101**	*e*S	**S**	**11 14 42.8**	**-3.9**
USRK	**Ussuriysk Ar.**	**5.58**	**276**	P	**Pn**	**11 14 17.9**	**-2.9**
	0.2nm,0.3s,baz=81,slow=14,SNR=2.6						
YAK	**Yakutsk**	**19.15**	**346**	P	P	11 16 53.3	-9.3
	0.0nm,0.3s,baz=163,slow=0.9,SNR=4.0						
KURBB	**Kurchatov Arra**	**41.03**	**302**	P	**P**	**11 20 17.8**	**+1.0**
	0.6nm,0.5s,baz=71,slow=9.0,SNR=3.0						
KDAK	**Kodiak Island**	**43.13**	**46**	LR	LR	11 38 12.5	
	comp=Z,47nm,20.1s,baz=231,slow=36						
BVAR	**Borovoye Array**	**45.21**	**307**	P	**P**	**11 20 51.3**	**+1.2**
	0.5nm,0.4s,baz=71,slow=12,SNR=2.8						
YKA	**Yellowknife Ar**	**58.64**	**32**	P	**P**	**11 22 30.5**	**+2.0**
	0.2nm,0.7s,baz=297,slow=5.5,SNR=2.5						
FINES	**FINESS Array B**	**62.23**	**330**	P	**P**	**11 22 53.4**	**+0.6**
	2.0nm,1.1s,baz=44,slow=6.2,SNR=5.6						
HFS	**Hagfors**	**67.38**	**334**	P	**P**	**11 23 26.9**	**+0.9**
	1.5nm,0.8s,baz=36,slow=5.4,SNR=2.6						

IDC 22 11:15:23.2±3.0,32.95S×178.49W,h0km,mb3.5/2, mb1 3.8/3,mb1mx3.5/49,mbtmp3.7/3,ML3.8/1,Error ellipse: s-maj=70.2km s-min=35.8km az=117.0,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.40**	**213**	Pn	Pn	11 16 58.8	+0.1
	2.2nm,0.3s,baz=288,slow=2.0,SNR=13						
URZ				Sn	Sn	11 18 11.4	-1.0
	1.4nm,0.3s,baz=168,slow=22,SNR=7.3						
ASAR	**Alice Springs**	**42.62**	**270**	P	P	11 23 21.6	+0.1
	0.4nm,0.6s,baz=105,slow=7.7,SNR=5.6						
WRA	**Warramunga Arr**	**43.84**	**275**	P	P	11 23 31.3	0.0
	0.5nm,0.5s,baz=114,slow=7.9,SNR=11						
FINES	**FINESS Array B**	**147.37**	**338**	PKPbc	PKPbc	11 35 07.2	-0.9
	0.6nm,0.7s,baz=59,slow=5.4,SNR=3.5						
BRG	**Berggiesshubel**	**159.89**	**337**	*e*PKP	PKPab	11 36 01.6	-1.4
	5.3nm,0.7s						

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*IDC **22** 11:26:50.6±0.9,51.18N×178.14W,h0km,mb3.9/17, mb1 4.0/18,mb1mx3.8/81,mbtmp3.9/18,ML4.3/1,MS2.8/4, Ms1 2.8/4,ms1mx2.4/84,Error ellipse: s-maj=24.5km s-min=16.4km az=171.0*
*NEIC **22** 11:26:53.6±0.0,51.00N×178.05W,h11km,mb3.8/3, ML3.6(AEIC),After AEIC.*
ISC 22 11:26:55.6±0.8,51.14N±0.09×178.11W±0.04,h34km,n48, σ1.40/51,mb3.9/21,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAPA	**Tanaga Point A**	**0.70**	**15**	P	**Pn**	**11 27 09.7**	**+0.5**
GALAA	**Gareloi Lava P**	**0.75**	**327**	P	**Pb**	**11 27 11.0**	**+0.6**
KIKV	**Kanaga Island**	**0.94**	**38**	P	**Pn**	**11 27 12.9**	**+0.4**
KIKV				S	**Sb**	**11 27 27.6**	**+1.7**
KICM	**Kanaga Island**	**0.97**	**36**	P	**Pn**	**11 27 13.4**	**+0.7**
KIRH	**Kanaga Island**	**0.99**	**39**	P	**Pn**	**11 27 13.8**	**+0.6**
ADAG	**Mount Adagdak**	**1.26**	**47**	P	**Pn**	**11 27 17.5**	**+0.6**
ETKA	**Kagalaska Isla**	**1.29**	**55**	P	**Pn**	**11 27 16.6**	**-0.6**
CERAA	**Semis' Rag'd T**	**1.58**	**300**	P	**Pn**	**11 27 22.5**	**+1.2**
GSTR	**Great Sitkin T**	**1.60**	**52**	P	**Pn**	**11 27 22.3**	**+0.9**
GSTR				S	**Sb**	**11 27 44.8**	**+0.4**
CESW	**Semis' Southwe**	**1.65**	**299**	P	**Pn**	**11 27 23.2**	**+1.1**
AMKA	**Amchitka**	**1.65**	**279**	P	**Pn**	**11 27 22.8**	**+0.6**
CETU	**Semis' Tuman**	**1.71**	**300**	P	**Pn**	**11 27 24.2**	**+1.1**
LSPA	**Little Sitkin**	**2.23**	**293**	P	**Pn**	**11 27 31.6**	**+1.4**
LSPA				S	**Sb**	**11 28 00.9**	**-1.5**
LSNW	**Little Sitkin**	**2.27**	**293**	P	**Pn**	**11 27 32.5**	**+1.8**
ATKA	**Atka Island**	**2.66**	**65**	P	**Pn**	**11 27 36.5**	**+0.5**
ATKA				S	**Sn**	**11 28 09.6**	**+2.5**
KOWE	**Korovin West**	**2.69**	**61**	P	**Pn**	**11 27 38.4**	**+1.8**
KOKL	**Mount Kliuchef**	**2.70**	**62**	P	**Pn**	**11 27 38.3**	**+1.6**
KOFP	**Korovin Flat P**	**2.74**	**64**	P	**Pn**	**11 27 39.2**	**+2.0**
MREP	**Makushin Rep't**	**7.44**	**64**	P	**Pn**	**11 28 43.9**	**+2.2**
UNV	**Unalaska Valle**	**7.59**	**65**	P	**Pn**	**11 28 45.4**	**+1.8**
PETK	**Petropavlovsk-**	**14.97**	**287**	LR	LR	11 35 58.2	
	comp=Z,40nm,21.7s,baz=99,slow=37						
KDAK	**Kodiak Island**	**16.20**	**56**	Pn	**Pn**	**11 30 36.9**	**-3.4**
	1.0nm,0.3s,baz=174,slow=4.6,SNR=16						
KDAK				Sn	**Sn**	**11 33 35.7**	**-2.9**
	0.1nm,0.3s,baz=128,slow=12,SNR=2.7						
KDAK	**Kodiak Island**	**16.20**	**56**	*e*Pn	**Pn**	**11 30 37.2**	**-3.1**
KDAK				Sn	**Sn**	**11 33 35.7**	**-2.9**
BILL	**Bilibino**	**18.60**	**341**	*e*P	**Pn**	**11 31 12.3**	**+2.3**
	5.4nm,0.9s						
MA2	**Magadan**	**19.45**	**308**	LR	LR	11 38 20.2	
	comp=Z,25nm,19.9s,baz=98,slow=36						
ILAR	**Eielson Array**	**21.16**	**38**	P	**P**	**11 31 36.7**	**-0.8**
	0.3nm,0.4s,baz=241,slow=9.3,SNR=8.6						
EGAK	**Eagle**	**23.45**	**40**	*e*P	**P**	**11 32 00.8**	**-0.7**
	2.1nm,0.6s						
DAWY	**Dawson**	**23.99**	**43**	*e*P	**P**	**11 32 06.0**	**-0.7**
	2.5nm,0.9s						
KLR	**Kul'dur**	**31.67**	**287**	P	**P**	**11 33 15.8**	**+0.3**
	0.5nm,0.5s,baz=74,slow=7.6,SNR=25						
YKA	**Yellowknife Ar**	**35.08**	**46**	P	**P**	**11 33 44.3**	**-0.7**
	0.4nm,0.7s,baz=284,slow=9.7,SNR=4.0						
KSRS	**Korea Array**	**40.08**	**272**	LR	LR	11 51 51.1	
	comp=Z,5.9nm,19.2s,baz=200,slow=37						
PDAR	**Pinedale Array**	**45.97**	**72**	P	**P**	**11 35 16.4**	**+1.0**
	1.2nm,0.7s,baz=297,slow=4.0,SNR=14						
SPITS	**Spitsbergen Ar**	**50.65**	**356**	P	**P**	**11 35 50.0**	**-0.7**
	0.9nm,0.5s,baz=61,slow=8.9,SNR=4.1						
TXAR	**Lajitas Array**	**58.26**	**82**	P	**P**	**11 36 46.7**	**-0.1**
	0.2nm,0.5s,baz=297,slow=4.8,SNR=2.7						
ARCES	**ARCESS Array B**	**58.40**	**350**	P	**P**	**11 36 46.6**	**-0.5**
	4.9nm,1.0s,baz=30,slow=11,SNR=2.9						
KURK	**Kurchatov**	**59.50**	**314**	P	**P**	**11 36 55.8**	**+0.8**
KURBB	**Kurchatov Arra**	**59.61**	**314**	P	**P**	**11 36 55.8**	**+0.1**
	1.2nm,0.2s,baz=44,slow=7.4,SNR=3.3						
MKAR	**Makanchi Array**	**60.52**	**309**	P	**P**	**11 37 00.9**	**-1.2**
	0.4nm,0.4s,baz=53,slow=6.2,SNR=4.5						
BVAR	**Borovoye Array**	**61.35**	**320**	P	**P**	**11 37 07.3**	**-0.3**
	1.0nm,0.4s,baz=53,slow=7.6,SNR=5.8						
BVAR				LR	LR	12 07 21.0	
	comp=Z,21nm,18.6s,baz=128,slow=40						
FINES	**FINESS Array B**	**66.11**	**348**	P	**P**	**11 37 38.9**	**+0.1**
	0.2nm,0.4s,baz=30,slow=11,SNR=3.4						

AKTO	**Aktyubinsk**	**68.13**	**325**	P	**P**	**11 37 52.4**	**+0.6**
	0.9nm,0.3s,baz=63,slow=6.4,SNR=6.6						
AKASG	**Malin Array Be**	**75.91**	**342**	P	**P**	**11 38 38.5**	**+0.1**
	0.6nm,0.4s,baz=24,slow=5.2,SNR=3.6						
KVAR	**Kislovodsk Arr**	**78.89**	**331**	P	**P**	**11 38 54.8**	**-0.5**
	4.9nm,0.5s,baz=191,slow=10,SNR=3.2						
KBZ	**Khabaz**	**79.03**	**331**	P	**P**	**11 38 55.6**	**-0.3**
	1.0nm,0.5s,baz=27,slow=6.8,SNR=3.3						
MLR	**Muntele Rosu**	**81.53**	**343**	P	**P**	**11 39 10.7**	**+1.2**
	0.5nm,0.5s,baz=202,slow=5.3,SNR=3.1						
WRA	**Warramunga Arr**	**82.14**	**224**	P	**P**	**11 39 12.7**	**0.0**
	0.4nm,0.8s,baz=34,slow=6.4,SNR=3.3						
BRTR	**Keskin Array B**	**85.34**	**336**	P	**P**	**11 39 29.1**	**-0.1**
	0.9nm,0.6s,baz=39,slow=3.2,SNR=4.5						
ASAR	**Alice Springs**	**85.61**	**223**	P	**P**	**11 39 30.8**	**+0.4**
	0.3nm,0.6s,baz=26,slow=5.6,SNR=5.3						

IDC 22 11:47:08.1±2.4,30.91S×178.31W,h0km,mb3.7/2, mb1 3.9/3,mb1mx3.5/47,mbtmp3.7/3,ML2.9/1,Error ellipse: s-maj=61.4km s-min=23.4km az=119.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.69**	**12**	Pn	Pn	11 47 37.8	-1.0
	76nm,0.3s,baz=198,slow=20,SNR=3.7						
RAO				Sn	Sn	11 47 56.1	-5.1
	262nm,0.3s,baz=174,slow=23,SNR=7.8						
URZ	**Urewera**	**8.24**	**206**	Pn	Pn	11 49 07.8	-1.0
	0.2nm,0.3s,baz=273,slow=2.5,SNR=3.6						
URZ				Sn	Sn	11 50 42.3	-0.3
	0.7nm,0.3s,baz=106,slow=19,SNR=6.3						
ASAR	**Alice Springs**	**42.81**	**268**	P	P	11 55 07.8	-0.2
	0.6nm,0.7s,baz=107,slow=7.3,SNR=9.3						
WRA	**Warramunga Arr**	**43.85**	**273**	P	P	11 55 16.3	0.0
	0.7nm,0.5s,baz=112,slow=7.8,SNR=12						
FINES	**FINESS Array B**	**145.53**	**339**	PKPbc	PKPdf	12 06 47.5	0.0
	2.0nm,0.7s,baz=46,slow=4.0,SNR=12						

IDC 22 11:48:26.9±1.6,4.07N×124.87E,h0km,mb3.6/5, mb1 3.7/5,mb1mx3.4/70,mbtmp3.7/5,MS3.5/2,Ms1 3.5/2, ms1mx2.5/68,Error ellipse: s-maj=124.0km s-min=19.5km az=68.0,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**22.04**	**178**	P	P	11 53 25.3	+1.9
	0.7nm,0.5s,baz=9.7,slow=11,SNR=4.3						
WRA	**Warramunga Arr**	**25.62**	**159**	P	P	11 53 57.5	-0.7
	0.1nm,0.3s,baz=333,slow=11,SNR=5.8						
PSI	**Prapat**	**25.93**	**268**	LR	LR	12 07 19.4	
	comp=Z,38nm,19.0s,baz=270,slow=44						
ASAR	**Alice Springs**	**28.94**	**163**	P	P	11 54 27.4	-0.8
	0.3nm,0.9s,baz=343,slow=7.6,SNR=3.8						
MKAR	**Makanchi Array**	**56.23**	**326**	P	P	11 58 10.0	+1.0
	0.7nm,0.4s,baz=122,slow=7.7,SNR=6.7						
KURBB	**Kurchatov Arra**	**60.46**	**328**	P	P	11 58 37.5	-1.0
	1.7nm,0.2s,baz=111,slow=5.1,SNR=4.5						
RES	**Resolute Bay**	**97.80**	**10**	LR	LR	12 48 49.8	
	comp=Z,64nm,20.7s,baz=33,slow=37						

IDC 22 11:52:32.1±61.0,16.65S×179.48W,h0km,mb3.7/3, mb1 3.9/3,mb1mx3.4/56,mbtmp3.7/3,Error ellipse: s-maj=1115.0km s-min=162.6km az=77.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.35**	**239**	P	P	11 59 55.0	-0.1
	0.8nm,0.4s,baz=73,slow=8.2,SNR=3.7						
WRA	**Warramunga Arr**	**43.86**	**258**	P	P	12 00 40.2	-0.4
	0.5nm,1.1s,baz=92,slow=7.7,SNR=8.3						
ASAR	**Alice Springs**	**44.16**	**253**	P	P	12 00 43.0	+0.1
	1.6nm,0.5s,baz=89,slow=7.9,SNR=48						

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*IDC **22** 11:57:02.3±1.1,32.85S×178.41W,h0km,mb4.3/5, mb1 4.4/6,mb1mx3.9/49,mbtmp4.3/6,ML4.3/1,MS3.6/1, Ms1 3.6/1,ms1mx2.6/50,Error ellipse: s-maj=32.0km s-min=29.3km az=36.0*
*NEIC **22** 11:57:03.8±0.9,32.97S×178.40W,h10km,mb4.7/1,Error ellipse: s-maj=21.8km s-min=18.9km az=97.0*
*ISCJB **22** 11:57:06.8±1.7,33.08S±0.09×178.7W±0.3,h32km, mb4.4/6,Error ellipse: s-maj=31.1km s-min=12.8km az=9.1*
ISC 22 11:57:07.5±1.1,33.0S±0.1×178.5W±0.2,h32km,n17, σ1.08/17,mb4.4/6,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.33**	**213**	Pn	**Pn**	**11 58 37.4**	**-1.2**
	6.3nm,0.3s,baz=297,slow=2.4,SNR=25						
URZ				Sn	**Sn**	**11 59 49.8**	**0.0**
	5.2nm,0.3s,baz=190,slow=18,SNR=6.7						
DZM	**Mont Dzumac**	**17.20**	**306**	LR	LR	12 06 41.1	
	comp=Z,196nm,18.7s,baz=202,slow=34						
CTA	**Charters Tower**	**33.88**	**283**	P	**P**	**12 03 48.5**	**+1.0**
	3.4nm,0.5s,baz=128,slow=9.5,SNR=8.8						
CTAO	**Charters Tower**	**33.88**	**283**	*e*P	**P**	**12 03 49.1**	**+1.6**
	15nm,0.5s						
ASAR	**Alice Springs**	**42.60**	**270**	P	**P**	**12 05 01.1**	**+0.2**
	2.2nm,0.6s,baz=105,slow=7.5,SNR=40						
WRAB	**Tennant Creek**	**43.82**	**275**	*e*P	**P**	**12 05 10.4**	**-0.3**
	16nm,1.4s						
WRA	**Warramunga Arr**	**43.83**	**275**	P	**P**	**12 05 10.8**	**+0.1**
	3.4nm,0.4s,baz=113,slow=8.0,SNR=130						
FITZ	**Fitzroy Crossi**	**51.97**	**272**	P	**P**	**12 06 13.2**	**-0.6**
	2.4nm,0.8s,baz=145,slow=4.5,SNR=7.2						
QSPA	**South Pole Qui**	**57.11**	**180**	P	**P**	**12 06 51.9**	**+1.2**
	2.9nm,1.1s,baz=314,slow=13,SNR=4.6						
QSPA	**South Pole Qui**	**57.11**	**180**	*e*P	**P**	**12 06 52.3**	**+1.6**
FINES	**FINESS Array B**	**147.42**	**338**	PKPbc	**PKPbc**	**12 16 46.7**	**-0.6**
	3.5nm,0.5s,baz=48,slow=4.1,SNR=34						
NB2	**NORSAR Subarra**	**151.25**	**350**	PKP	**PKPbc**	**12 16 56.2**	**-0.8**
	comp=Z,0.7nm,0.7s,baz=17,slow=2.6						
MMAI	**Mount Meron Ar**	**151.63**	**279**	PKPbc	**PKPbc**	**12 16 59.3**	**+0.5**
	comp=Z,1.4nm,0.4s,baz=90,slow=5.8,SNR=3.0						
HFS	**Hagfors**	**151.70**	**347**	PKPbc	**PKPbc**	**12 16 56.6**	**-1.3**
	comp=Z,2.5nm,0.8s,baz=85,slow=3.0,SNR=4.2						
AKASG	**Malin Array Be**	**153.05**	**319**	PKPbc	**PKPbc**	**12 17 01.9**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=56,slow=2.5,SNR=3.2						
BRTR	**Keskin Array B**	**153.35**	**294**	PKPbc	**PKPbc**	**12 17 01.1**	**-1.4**
	comp=Z,1.0nm,0.6s,baz=113,slow=3.4,SNR=2.9						
CLL	**Collm**	**159.87**	**339**	*e*PKPab	**PKPab**	**12 17 41.0**	**-1.0**

IDC 22 12:01:22.6±6.5,6.73N×94.50E,h0km,mb3.5/3,mb1 3.7/3, mb1mx3.3/80,mbtmp3.5/3,MS3.6/1,Ms1 3.6/1, ms1mx2.5/60,Error ellipse: s-maj=336.7km s-min=27.1km az=58.0,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**41.28**	**347**	P	P	12 09 09.6	-0.1
	0.2nm,0.4s,baz=170,slow=8.4,SNR=3.5						
WRA	**Warramunga Arr**	**47.31**	**125**	P	P	12 09 58.4	-0.1
	0.9nm,0.6s,baz=305,slow=8.6,SNR=15						
ASAR	**Alice Springs**	**48.91**	**129**	P	P	12 10 10.7	-0.1
	0.5nm,0.6s,baz=299,slow=7.5,SNR=9.8						
ARU	**Arti**	**57.08**	**337**	LR	LR	12 38 10.9	
	comp=Z,58nm,22.0s,baz=294,slow=39						

IDC 22 12:06:15.4±17.0,21.03S×174.42W,h0km,mb4.0/5, mb1 4.2/5,mb1mx3.7/51,mbtmp4.0/5,Error ellipse: s-maj=323.7km s-min=152.5km az=81.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**36.77**	**264**	P	P	12 13 25.7	+0.6
	1.1nm,0.3s,baz=80,slow=12,SNR=3.8						
STKA	**Stephens Creek**	**40.59**	**245**	P	P	12 13 57.6	+0.6
	0.9nm,0.5s,baz=105,slow=9.8,SNR=3.4						
ASAR	**Alice Springs**	**47.66**	**257**	P	P	12 14 53.5	-0.5
	1.3nm,0.6s,baz=100,slow=7.6,SNR=20						
WRA	**Warramunga Arr**	**47.84**	**262**	P	P	12 14 54.5	-0.9
	1.4nm,0.6s,baz=100,slow=8.5,SNR=56						
FITZ	**Fitzroy Crossi**	**56.27**	**262**	P	P	12 15 58.1	0.0
	2.3nm,0.9s,baz=90,slow=9.1,SNR=12						

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*BJI **22** 12:12:48.5,33.48S×178.58W,h9km,mb5.3/15,mB5.5/6, Ms4.9/7,Ms7 4.7/8*

*GCMT **22** 12:12:49.6±0.2,32.95S×178.03W,h23km,MW5.2/92, Moment Tensor Solution. s73,c105; s92,c152; Duration: 1s0 Moment tensor: Scale 1016Nm; M_{rr}5.53±.19; $M_{\theta\theta}$-0.2±.13; $M_{\phi\phi}$-5.31±.13; $M_{r\theta}$1.15±.22; $M_{r\phi}$-1.74±.10; $M_{\theta\phi}$4.80±.22; Best double couple: $M_0$7.53200×10^16 NP1:ϕ_s15.00000°,δ_s65.00000°, λ_s88.00000°. NP2:ϕ_s200.00000°,δ_s25.00000°,λ_s95.00000°. Principal axes: T 7.3790, Plg69.0000°, Azm280.0000°; N 0.3120, Plg2.0000°, Azm16.0000°; P -7.6850, Plg20.0000°, Azm106.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **22** 12:12:49.6±0.3,33.06S×178.31W,h10km,mb4.9/23 Error ellipse: s-maj=10.8km s-min=5.9km az=121.0*
*IDC **22** 12:12:49.5±0.5,32.78S×178.46W,h0km,mb4.5/17, mb1 4.6/20,mb1mx4.4/53,mbtmp4.5/20,ML5.0/2,MS4.6/39, Ms1 4.6/39,ms1mx4.6/47,Error ellipse: s-maj=17.9km s-min=15.3km az=83.0*
*WEL **22** 12:12:50.2±0.8,33.5S±6.5×17.8W±1.7,h33km,ML5.7/20*
*ISCJB **22** 12:12:51.7±0.3,33.12S±0.03×178.32W±0.07,h34km, mb4.8/44,MS4.7/46,Error ellipse: s-maj=8.7km s-min=2.8km az=23.0*
*MOS **22** 12:12:54.4±1.5,32.67S×178.39W,h41km,mb5.1/16, MS4.8/5,Error ellipse: s-maj=13.7km s-min=11.6km az=105.3*
ISC 22 12:12:53.2±0.4,33.02S±0.04×178.16W±0.06,h34km, n202,σ2.18/201,mb4.8/43,MS4.7/46,3C-1D,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.75**	**3**	P	**Pn**	**12 13 45.4**	**-3.1**
GLKZ				S	**Sn**	**12 14 27.4**	**-4.1**
RAO	**Raoul Island**	**3.76**	**3**	Pn	**Pn**	**12 13 46.5**	**-2.2**
	127nm,0.3s,baz=165,slow=21,SNR=5.7						
RAO				Sn	**Sn**	**12 14 27.0**	**-4.8**
	148nm,0.3s,baz=326,slow=19,SNR=4.3						
RAO	**Raoul Island**	**3.76**	**3**	*e*Pn	**Pn**	**12 13 46.4**	**-2.3**
RAO				Sn	**Sn**	**12 14 27.0**	**-4.8**
RAO				*e*Sn	Sb	12 14 34.6	-9.3
RIZ	**Raoul Island**	**3.76**	**3**	P	**Pn**	**12 13 46.5**	**-2.3**
RIZ				S	**Sn**	**12 14 29.3**	**-2.7**
MXZ	**Matakaoa Point**	**5.38**	**212**	*e*Pn	**Pn**	**12 14 08.8**	**-2.2**
MXZ	**Matakaoa Point**	**5.38**	**212**	P	**Pn**	**12 14 08.3**	**-2.7**
MXZ				S	**Sn**	**12 15 11.8**	**+0.1**
WMGZ	**Waiomatatini S**	**5.55**	**209**	P	**Pn**	**12 14 11.3**	**-2.0**
WMGZ				S	**Sn**	**12 15 16.8**	**+0.8**
PKGZ	**Pakihiroa**	**5.75**	**211**	P	**Pn**	**12 14 13.7**	**-2.4**
PKGZ				S	**Sn**	**12 15 19.5**	**-1.5**
HAZ	**Te Kaha**	**5.78**	**214**	P	**Pn**	**12 14 15.9**	**-0.5**
HAZ				S	**Sn**	**12 15 21.9**	**+0.4**
PUZ	**Puketiti**	**5.83**	**209**	P	**Pn**	**12 14 14.7**	**-2.5**
PUZ				S	**Sn**	**12 15 21.0**	**-1.9**
RUGZ	**Raukumara Rang**	**6.00**	**213**	P	**Pn**	**12 14 17.9**	**-1.7**
RUGZ				S	**Sn**	**12 15 23.5**	**-3.5**
TWGZ	**Tauwhareparae**	**6.04**	**210**	P	**Pn**	**12 14 18.0**	**-2.0**
TWGZ				S	**Sn**	**12 15 26.5**	**-1.5**
CNGZ	**Carnagh Statio**	**6.21**	**207**	P	**Pn**	**12 14 20.7**	**-1.7**
CNGZ				S	**Sn**	**12 15 30.9**	**-1.2**
WHRZ	**Whale Island**	**6.25**	**218**	P	**Pn**	**12 14 24.1**	**+1.1**
WHRZ				S	**Sn**	**12 15 34.1**	**+0.7**
TKGZ	**Te Karaka**	**6.31**	**210**	P	**Pn**	**12 14 22.8**	**-1.0**
TKGZ				S	**Sn**	**12 15 32.9**	**-1.7**
MWZ	**Matawai**	**6.36**	**212**	P	**Pn**	**12 14 22.1**	**-2.5**
MWZ				S	**Sn**	**12 15 35.3**	**-0.8**
OPRZ	**Ohinepanea**	**6.47**	**220**	P	**Pn**	**12 14 25.3**	**-0.7**
URZ	**Urewera**	**6.50**	**215**	Pn	**Pn**	**12 14 25.9**	**-0.4**
	33nm,0.3s,baz=317,slow=2.1,SNR=152						
URZ				Sn	**Sn**	**12 15 38.3**	**-1.0**
	26nm,0.3s,baz=212,slow=17,SNR=9.2						
URZ	**Urewera**	**6.50**	**215**	*e*Pn	**Pn**	**12 14 25.3**	**-1.0**
URZ				*e*Sn	**Sn**	**12 15 37.6**	**-1.7**
URZ	**Urewera**	**6.50**	**215**	P	**Pn**	**12 14 23.8**	**-2.5**
URZ				S	**Sn**	**12 15 37.8**	**-1.5**
MARZ	**Manawahe**	**6.51**	**219**	P	**Pn**	**12 14 26.5**	**0.0**
RAGZ	**Rawiri**	**6.55**	**212**	P	**Pn**	**12 14 24.5**	**-2.6**
RAGZ				S	**Sn**	**12 15 38.6**	**-2.0**
TGRZ	**Tauranga**	**6.55**	**223**	P	**Pn**	**12 14 27.6**	**+0.5**
EDRZ	**Edgecumbe**	**6.56**	**218**	P	**Pn**	**12 14 27.5**	**+0.1**
RIGZ	**Rimuhau**	**6.57**	**209**	P	**Pn**	**12 14 24.8**	**-2.6**
RIGZ			

comp=Z,2μm,28.8s
PMG Port Moresby 39.67 298 LR LR 12 36 01.8
comp=Z,1μm,18.1s,baz=116,slow=35
RABL Rabaul 39.88 310 *e*P **P** **12 20 24.1 +0.2**
comp=Z,74nm,0.6s
COEN Coen 39.93 289 *e*P **P** **12 20 23.2 -1.1**
comp=Z,12nm,0.8s
TAOE Nuku Hiva Isla 42.51 64 *e*S **S** **12 27 02.0 -3.9**
comp=Z,238nm,24.4s
TAOE *e*LQ LQ 12 30 36.0
comp=Z,945nm,28.4s
TAOE *e*LR LR 12 32 28.0
comp=Z,671nm,27.3s,baz=235
AS01 Alice Springs 42.86 270 *e*P **P** **12 20 47.3 -1.1**
AS31 Alice Springs 42.90 270 *e*P **P** **12 20 48.0 -0.7**
ASAR Alice Springs 42.90 270 P **P** **12 20 47.9 -0.8**
comp=Z,7.7nm,0.7s,baz=108,slow=7,7,SNR=67
ASAR S **S** **12 27 09.6 -1.9**
comp=Z,1.4nm,0.8s,baz=111,slow=15,SNR=6.2
ASAR LR LR 12 38 06.7
comp=Z,645nm,18.1s,baz=114,slow=36
WB2 Warramunga Arr 44.12 275 *e*P **P** **12 20 57.4 -1.1**
WRAB Tennant Creek 44.12 275 *e*P **P** **12 20 57.4 -1.1**
comp=Z,15nm,0.6s
WRAB Tennant Creek 44.12 275 *i*P **P** **12 20 57.9 -0.6**
WRAB pmax pmax
comp=Z,12nm,1.0s
WRA Warramunga Arr 44.12 275 P **P** **12 20 57.5 -1.1**
comp=Z,8.6nm,0.4s,baz=116,slow=8.0,SNR=232
WRA S **S** **12 27 27.5 -1.8**
comp=Z,1.1nm,0.9s,baz=113,slow=14,SNR=3.8
WRA LR LR 12 37 47.9
comp=Z,978nm,21.5s,baz=115,slow=34
SBA Scott Base 45.43 184 *e*P P 12 21 14.4 +6.2
comp=Z,50nm,1.6s
VNDA Vanda 45.49 186 P **P** **12 21 11.2 +2.6**
comp=Z,0.6nm,0.7s,baz=340,slow=5.1,SNR=4.5
VNDA LR LR 12 37 44.2
comp=Z,610nm,19.5s,baz=15,slow=33
VNDA Vanda 45.49 186 *e*P **P** **12 21 06.3 -2.3**
comp=Z,4.4nm,1.0s
JAY Jayapura 49.02 299 P **P** **12 21 37.3 +0.3**
JAY pmax pmax
comp=Z,7.0nm,1.1s
MTN Manton Dam 50.31 281 *e*P **P** **12 21 42.8 -3.9**
comp=Z,9.7nm,0.6s
FITZ Fitzroy Crossi 52.27 272 P **P** **12 22 00.4 -1.1**
comp=Z,6.0nm,0.7s,baz=153,slow=8.2,SNR=19
FITZ LR LR 12 44 01.7
comp=Z,2μm,18.3s,baz=112,slow=36
CASY Casey 52.78 209 *e*P **P** **12 22 03.2 -1.3**
comp=Z,46nm,1.4s
NWAO Narrogin (SRO) 53.39 251 LR LR 12 44 00.1
comp=Z,611nm,19.1s,baz=346,slow=35
QSPA South Pole Qui 57.10 180 P **P** **12 22 40.3 +4.3**
comp=Z,34nm,1.0s,baz=43,slow=3.0,SNR=51
QSPA LR LR 12 44 34.8
comp=Z,829nm,19.4s,baz=40,slow=33
QSPA South Pole Qui 57.10 180 *e*P **P** **12 22 38.9 +2.9**
comp=Z,33nm,1.0s
BATI Baumata 57.89 279 LR LR 12 47 46.7
comp=Z,950nm,18.9s,baz=150,slow=36
GUMO Guam 58.26 317 LR LR 12 45 10.2
comp=Z,332nm,20.2s,baz=126,slow=34
RPN Rapa Nui 58.90 104 LR LR 12 44 52.3
comp=Z,567nm,18.0s,baz=252,slow=32
MIR Mirnyy 59.74 208 *e*P **P** **12 22 54.0 -0.2**
MIR pmax pmax
comp=Z,42nm,1.0s
DAV Davao City (W) 66.62 296 LR LR 12 52 19.0
comp=Z,247nm,20.0s,baz=134,slow=36
MAW Mawson 69.82 201 P **P** **12 24 01.8 +2.1**
comp=Z,4.8nm,0.9s,baz=100,slow=8.6,SNR=3.7
PMSA Palmer Station 69.95 155 LR LR 12 50 38.3
comp=Z,573nm,19.0s,baz=249,slow=32
LEM Lembang 73.09 273 LR LR 12 57 10.5
comp=Z,571nm,20.2s,baz=152,slow=36
SYO Syowa Base 74.55 193‖ *e*P **P** **12 24 26.7 -1.3**
SYO Syowa Base 74.55 193‖ *i*PcP **PcP** **12 24 40.4 -1.9**
TGY Tagaytay City 74.63 298 LR LR 12 54 55.6
comp=Z,165nm,21.8s,baz=128,slow=34
SNAA Sanae 75.55 178 P **P** **12 24 33.5 -0.4**
SNAA Sanae 75.55 178 P **P** **12 24 36.9 +3.0**
comp=Z,1.5nm,0.4s,baz=188,slow=15,SNR=2.5
SNAA LR LR 12 57 19.8
comp=Z,468nm,18.0s,baz=182,slow=35
VNA3 Neumayer Olymp 75.71 176 P **P** **12 24 37.1 +2.3**
NVL N'lazarevskaya 76.27 183‖ *i*P P 12 24 54.5 +17
NVL *e*S **S** **12 34 23.5 +3.9**
NVL pmax pmax
comp=Z,9.0nm,0.8s
NVL MLR MLR
comp=Z,877nm,19.0s
VNA1 Neumayer--Stat 76.38 177 P **P** **12 24 41.4 +3.0**
JHJ Hachijo jima 2 76.79 325 LR LR 12 53 15.0
comp=Z,196nm,20.4s,baz=94,slow=32
JOW Kunigami 78.33 313 LR LR 12 58 44.2
comp=Z,256nm,18.0s,baz=130,slow=35
MJAR Matsushiro Arr 80.31 326 P **P** **12 25 00.8 +0.1**
comp=Z,0.8nm,0.7s,baz=169,slow=5.1,SNR=3.3
MJAR LR LR 12 56 48.4
comp=Z,182nm,20.4s,baz=150,slow=33
PLCA Paso Flores 80.83 133 P P 12 25 08.6 +4.9
comp=Z,7.2nm,1.0s,baz=128,slow=1.1,SNR=4.4
PLCA LR LR 12 55 20.3
comp=Z,403nm,18.3s,baz=248,slow=31
JNU Nakatsue 81.42 319 LR LR 12 57 18.2
comp=Z,91nm,18.1s,baz=137,slow=33
ASAJ Asahikawa 84.69 333 LR LR 13 00 07.8
comp=Z,310nm,19.1s,baz=171,slow=34
LPIG La Paz 86.03 58 LR LR 12 59 12.6
comp=Z,522nm,18.1s,baz=214,slow=32
KSRS Korea Array 86.25 320 P **P** **12 25 30.1 -1.1**
comp=Z,1.3nm,0.8s,baz=142,slow=5.3,SNR=5.0
KSRS LR LR 13 02 30.5
comp=Z,118nm,18.2s,baz=138,slow=35
KSAR Wonju Array Be 86.26 320 P **P** **12 25 30.1 -1.1**
KSAR Wonju Array Be 86.26 320 P **P** **12 25 30.1 -1.1**
YSS Yuzh-Sakhalins 87.04 334 *e*P **P** **12 25 33.9 -0.8**
YSS pmax pmax
comp=Z,300nm,6.5s
YSS MLR MLR
comp=Z,300nm,15.0s
NJ2 Nanjing 87.84 311 *e*P **P** **12 25 40.4 +1.4**
NJ2 pmax pmax
comp=Z,13nm,0.5s
PET Petropavlovsk 88.03 346 *e*P **P** **12 25 40.5 +1.1**
PET *e*S **S** **12 36 21.2 +1.0**
PET pmax pmax
comp=Z,100nm,12.1s
PFO Pinyon Flats O 88.07 47 *e*P **P** **12 25 40.0 -0.2**
comp=Z,10nm,1.3s
PFO Pinyon Flats O 88.07 47 *e*P **P** **12 25 40.0 -0.2**
PFO pmax pmax
comp=Z,10.0nm,1.3s
XPFO Piæon Flat 88.07 47 *e*P **P** **12 25 40.3 0.0**
comp=Z,8.7nm,1.3s
ISA Isabella, Lake 88.25 45 *e*P **P** **12 25 42.2 +1.2**
comp=Z,9.8nm,1.2s
ISA Isabella, Lake 88.25 45 *e*P **P** **12 25 42.2 +1.2**
ISA pmax pmax
comp=Z,10.0nm,1.2s
PETK Petropavlovsk- 88.31 346 P **P** **12 25 40.3 -0.4**
comp=Z,3.8nm,0.9s,baz=111,slow=3.3,SNR=6.8
PETK LR LR 13 01 32.2
comp=Z,310nm,19.6s,baz=163,slow=33
PETK Petropavlovsk- 88.31 346 *e*P **P** **12 25 42.3 +1.6**
CMB Columbia Colle 88.79 42 *e*P **P** **12 25 43.4 0.0**
comp=Z,4.7nm,1.0s
CMB Columbia Colle 88.79 42 *e*P **P** **12 25 43.4 0.0**
CMB pmax pmax
comp=Z,5.0nm,1.0s
GSC Goldstone, Bar 89.00 46 *e*P **P** **12 25 45.2 +0.6**
comp=Z,13nm,1.4s
GSC Goldstone, Bar 89.00 46 *e*P **P** **12 25 45.2 +0.6**
GSC pmax pmax
comp=Z,13nm,1.4s
USRK Ussuriysk Ar. 89.26 327 P **P** **12 25 46.0 +0.6**
comp=Z,2.0nm,0.5s,baz=225,slow=5.4,SNR=4.0
USRK LR LR 13 04 13.9
comp=Z,138nm,18.1s,baz=136,slow=35
WDC Whiskeytown Da 89.43 39 *e*P **P** **12 25 46.6 +0.3**
comp=Z,15nm,1.6s
WDC Whiskeytown Da 89.43 39 *e*P **P** **12 25 46.6 +0.3**
WDC pmax pmax
comp=Z,15nm,1.6s
YBH Yreka Blue Hor 90.17 38 LR LR 13 01 07.1
comp=Z,365nm,19.0s,baz=227,slow=32
YBH Yreka Blue Hor 90.17 38 *e*P **P** **12 25 48.5 -1.4**
comp=Z,3.3nm,1.1s
YBH Yreka Blue Hor 90.17 38 *e*P **P** **12 25 48.5 -1.4**
YBH pmax pmax
comp=Z,3.0nm,1.1s
NV01 Mina Array Sit 90.24 43 *e*P **P** **12 25 53.6 +3.1**
NVAR Mina Array Bea 90.24 43 P **P** **12 25 53.4 +2.9**
comp=Z,2.4nm,1.0s,baz=222,slow=7.3,SNR=10
NVAR LR LR 13 02 24.8
comp=Z,360nm,18.3s,baz=113,slow=33
KVN Kaiserville 90.78 42 *e*P **P** **12 25 54.1 +1.2**
comp=Z,6.1nm,1.4s
KVN Kaiserville 90.78 42 P **P** **12 25 54.1 +1.2**
KVN pmax pmax
comp=Z,6.0nm,1.4s
TUC Tucson 90.84 51 *e*P **P** **12 25 52.6 -0.7**
comp=Z,18nm,1.8s
TUC Tucson 90.84 51 *e*P **P** **12 25 52.6 -0.7**
TUC pmax pmax
comp=Z,17nm,1.8s
CN2 Changchun 92.14 323 *e*P **P** **12 26 01.0 +2.2**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 LR LR
comp=Z,130nm,18.0s
CN2 LR LR
comp=Z,210nm,18.0s
CN2 LR LR
comp=Z,270nm,23.0s
GYA Guiyang 92.73 300 *e*P **P** **12 26 03.0 +0.8**
GYA pmax pmax
comp=Z,10.0nm,1.0s
NNA Nana 92.83 106 LR LR 13 01 39.2
comp=Z,446nm,18.0s,baz=244,slow=32
KLR Kul'dur 93.22 330 P **P** **12 26 04.7 +1.0**
comp=Z,0.2nm,0.8s,baz=17,slow=3.1,SNR=3.6
KLR LR LR 13 06 18.3
comp=Z,16nm,18.5s,baz=142,slow=34
KLR Kul'dur 93.22 330 *i*P **P** **12 26 03.2 -0.5**
TX31 Lajitas Ar. Si 93.91 57 *e*P **P** **12 26 11.4 +3.9**
TXAR Lajitas Array 93.91 57 P **P** **12 26 09.9 +2.5**
comp=Z,0.7nm,1.0s,baz=182,slow=7.0,SNR=6.0
TXAR LR LR 13 03 33.9
comp=Z,354nm,18.0s,baz=0.0,slow=32
TXAR Lajitas Array 93.91 57 P **P** **12 26 10.0 +2.5**
CMAR Chiang Mai Arr 94.13 289 LR LR 13 10 45.3
comp=Z,85nm,19.7s,baz=165,slow=37
KMI Kunming 94.88 297 P **P** **12 26 13.3 +1.1**
KMI pmax pmax
comp=Z,3.0nm,0.5s
KMI pmax pmax
comp=Z,120nm,3.9s
LPAZ La Paz 97.19 115 LR LR 13 06 20.2
comp=Z,103nm,18.1s,baz=214,slow=33
CD2 Chengdu 97.36 302 P **P** **12 26 22.3 -0.9**
CD2 pmax pmax
comp=Z,10.0nm,0.8s
HHC Hu-ho-hao-te 97.95 314 *e*P Pdif 12 26 27.0 +1.3
HHC sP pP 12 26 34.0 -2.5
HHC PP **PP** **12 30 25.6 +0.6**
HHC SKS **SKSac** **12 37 05.9 +5.3**
HHC S **ScS** **12 37 53.4 +3.6**
HHC SS **SS** **12 44 35.3 +2.7**
HHC pmax pmax
comp=Z,21nm,1.0s
HHC LR LR
comp=Z,190nm,15.7s
HHC LR LR
comp=Z,220nm,16.5s
HHC LR LR
comp=Z,240nm,17.5s
PDAR Pinedale Array 98.11 44 P Pdif 12 26 29.4 +2.9
comp=Z,0.2nm,0.5s,baz=234,slow=7.7,SNR=2.4
PDAR LR LR 13 03 44.0
comp=Z,292nm,19.6s,baz=244,slow=31
JTS JuntasAbangare 98.19 83 LR LR 13 04 27.2
comp=Z,178nm,18.0s,baz=325,slow=32
CPUP Villa Florida 98.46 129 LR LR 13 06 18.9
comp=Z,434nm,18.1s,baz=228,slow=32
LZH Lanzhou 100.17 306 *e*P **Pdif** **12 26 36.3 +0.6**
LZH pP pPdif 12 26 41.3 -5.3
LZH sP pP 12 26 43.1 -3.5
LZH SKS **SKSac** **12 37 17.3 +5.2**
LZH *e*S **Sdif** **12 38 05.9 -2.8**
LZH SS **SS** **12 45 00.3 -3.7**
LZH pmax pmax
comp=Z,16nm,1.1s
LZH LR LR
comp=Z,1μm,16.3s
WMQ Urumqi 114.72 307 PKP PKPdf 12 31 30.1 +0.2
WMQ LR LR
comp=Z,120nm,23.1s
WMQ LR LR
comp=Z,150nm,19.9s
WMQ LR LR
comp=Z,180nm,19.3s
BOSA Boshof 114.81 203 PKP PKPdf 12 31 33.1 +2.4
comp=Z,2.1nm,0.6s,baz=51,slow=2.7,SNR=4.7
DGZ Jazzator, Alta 117.03 313 *i*PKIKP **PKPdf** **12 31 35.8 +1.6**
MKAR Makanchi Array 119.33 309 PKP **PKPdf** **12 31 38.7 +0.1**
comp=Z,0.5nm,0.6s,baz=107,slow=2.5,SNR=3.7
ZALV Zalesovo Beam 119.88 317 PKP **PKPdf** **12 31 39.4 +0.1**
comp=Z,0.3nm,0.4s,baz=232,slow=1.6,SNR=2.9
KSH Kashi 121.43 299 PKP **PKPdf** **12 31 46.1 +3.1**
KSH pP pP 12 32 52.1
KSH PP PP 12 33 23.4 +8.2
KSH pmax pmax
comp=Z,160nm,4.5s
KSH AMB AMB
comp=Z,220nm,4.6s
KURK Kurchatov 122.74 313 PKP **PKPdf** **12 31 45.2 +0.2**
KURK Kurchatov 122.74 313 *i*PKIKP **PKPdf** **12 31 45.3 +0.4**
KURBB Kurchatov Arra 122.77 313 PKP **PKPdf** **12 31 45.2 +0.2**
comp=Z,1.0nm,0.7s,baz=150,slow=2.0,SNR=6.0
BVAR Borovoye Array 128.16 314 PKP **PKPdf** **12 31 55.8 +0.5**
comp=Z,0.4nm,0.4s,baz=129,slow=3.9,SNR=4.3
BRVK Borovoye 128.22 314 *e*PKIKP **PKPdf** **12 31 57.0 +1.6**
ARU Arti 135.00 319 *i*PKIKP **PKPdf** **12 32 09.8 +1.7**
ARU 12 34 39.1
ARU MLR MLR
comp=Z,206nm,20.0s
PRGR Permogore 140.01 329 *e*PKIKP **PKPdf** **12 32 18.4 +1.3**
PRGR pmax pmax
comp=Z,6.0nm,0.9s
ARCES ARCESS Array B 141.10 347 PKhKP PKPpre 12 32 16.8
comp=Z,2.1nm,0.8s,baz=60,slow=1.8,SNR=5.8
KLMR Klimovskoe 142.98 330 *e*PKIKP **PKPdf** **12 32 19.3 -3.2**
KLMR pmax pmax
comp=Z,17nm,1.3s
KLMR Klimovskoe 142.98 330 *e*PKPdf **PKPdf** **12 32 19.4 -3.1**
KLMR AMP 12 32 33.7
comp=Z,17nm,1.3s
ZEI Tsey 145.72 299 *i*PKIKP **PKPab** **12 32 30.5 +1.5**
NCK Nalchik 145.90 300 *i*PKIKP **PKPab** **12 32 29.3 -0.1**
KBTC Kuba-Taba 146.02 301 *e*PKP2 PKPab 12 32 42.5 +13
MOS Moscow 146.38 323 *e*PKP2 **PKPbc** **12 32 29.5 -0.4**
KBZ Khabaz 146.39 301 PKPbc **PKPab** **12 32 30.7 -0.5**
comp=Z,3.2nm,0.4s,baz=192,slow=1.7,SNR=7.2
KIV Kislovodsk 146.53 301 *e*PKP2 **PKPab** **12 32 32.6 +0.7**
NEY Neytrino 146.55 300 *i*PKP2 **PKPab** **12 32 32.0 -0.1**
SHA1 Shidzhatmaz 146.56 301 *i*PKP2 **PKPab** **12 32 34.2 +2.0**
OBN Obninsk 147.20 323‖ *i*PKP2 **PKPab** **12 32 33.8 -0.2**
OBN pmax pmax
comp=Z,16nm,0.6s
VSR Storozhevoye 147.33 315 *e*PKP2 **PKPbc** **12 32 31.8 -0.9**
VSR pmax pmax
comp=Z,10.0nm,0.9s
VORD Divnogorie 147.34 315 *e*PKHKP PKPpre 12 32 26.9
VORD pmax pmax
comp=Z,10.0nm,0.7s
FINES FINESS Array B 147.53 338 PKPbc **PKPab** **12 32 33.9 -1.2**
comp=Z,27nm,0.9s,baz=42,slow=3.9,SNR=90
ASF Jabal al Asfar 150.53 278 PKPbc **PKPbc** **12 32 42.0 +0.4**
comp=Z,1.3nm,0.3s,baz=97,slow=5.2,SNR=7.4
ASF Jabal al Asfar 150.53 278 PKIKP **PKPbc** **12 32 42.0 +0.4**
ASF pmax pmax
comp=Z,1.0nm,0.4s
NB2 NORSAR Subarra151.31 350 PKP **PKPbc** **12 32 43.6 +1.1**
comp=Z,14nm,1.2s,baz=18,slow=2.6
MNK Minsk 151.74 327 *e*PKIKP **PKPab** **12 32 49.0 -3.5**
HFS Hagfors 151.77 347 PKPbc **PKPbc** **12 32 43.3 -0.2**
comp=Z,3.7nm,0.4s,baz=222,slow=1.9,SNR=23
MMAI Mount Meron Ar 151.93 279 PKPbc **PKPbc** **12 32 45.8 +1.0**
comp=Z,5.0nm,0.6s,baz=302,slow=3.2,SNR=10
SIM Simferopol' 152.41 305 *i*PKIKP **PKPbc** **12 32 48.8 +3.4**
SIM *e* 12 33 01.3
SIM pmax pmax
comp=Z,22nm,1.5s
AKASG Malin Array Be 153.25 319 PKPbc **PKPbc** **12 32 47.4 +0.3**
comp=Z,0.3nm,0.3s,baz=56,slow=2.9,SNR=12
KIEV Kiev 153.26 319 *e*PKPdf **PKPdf** **12 32 38.8 -0.8**
KIEV *e*PKPbc **PKiKP** **12 32 47.4 +0.2**
KIEV Kiev 153.26 319 *e*PKIKP **PKPdf** **12 32 38.8 -0.8**
KIEV *e* 12 32 47.4
BRTR Keskin Array B 153.63 294 PKPbc **PKPbc** **12 32 48.5 0.0**
comp=Z,2.1nm,0.5s,baz=149,slow=3.8,SNR=10
VYHS Vyhne 159.95 325 *e*PKP2 **PKPab** **12 33 28.7 +0.8**
VYHS Vyhne 159.95 325 *e*PKP **PKPab** **12 33 28.7 +0.8**
CLL Collm 159.98 339 *e*(PKPdf) **PKPdf** **12 32 51.0 +2.8**
CLL *e*PKPab **PKPab** **12 33 28.0 +0.1**
CLL *ep*PKPab **pPKPab** **12 33 34.0 -4.7**
CLL *e* 12 33 40.0
CLL *e*PP **PP** **12 37 12.0 +2.5**
CLL *e* 12 44 48.0
CLL *e*PSKS 12 47 30.0
CLL *e*SS SS 12 57 18.0 +2.4
CLL *e*SSS SSS 13 03 34.0
CLL *e*(SSSS) 13 07 06.0
CLL LmH 13 57 00.0
comp=N,200nm,18.7s
CLL LmH 13 57 00.0
comp=E,100nm,21.8s
CLL LmV 13 59 00.0
comp=Z,100nm,20.7s
CLL Collm 159.98 339 *e*PKIKP **PKPdf** **12 32 51.0 +2.8**
CLL *e* 12 33 28.0
BRG Berggiesshubel 160.06 337 *e*PKP2 **PKPab** **12 33 29.2 +0.9**
BRG pmax pmax
comp=Z,8.0nm,1.4s
TORD Torodi Ar. Bea 160.22 180 PKPab **PKPab** **12 33 31.4 +1.6**
comp=Z,1.8nm,0.8s,baz=184,slow=2.4,SNR=5.2
KHC Kasperske Hory 161.67 335 *e*PKPAB **PKPab** **12 33 35.5 +0.1**
KHC Kasperske Hory 161.67 335 *e*PKP2 **PKPab** **12 33 35.5 +0.1**
GERES GERESS Array B 161.86 334 PKPab **PKPab** **12 33 35.2 -1.1**
comp=Z,0.4nm,0.4s,baz=145,slow=3.6,SNR=2.9

IDC 22 12:22:53.1±3.2,32°.96S×178°.48W,h0km,mb3.5/2, mb1 3.7/3,mb1mx3.4/48,mbtmp3.5/3,ML3.3/1,Error ellipse: s-maj=73.6km s-min=36.9km az=115.0,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.39**	**213**	Pn	Pn	12 24 28.5	0.0
	0.7nm,0.3s,baz=241,slow=15,SNR=6.3						
URZ				Sn	Sn	12 25 40.7	-1.4
	0.7nm,0.3s,baz=21,slow=18,SNR=3.6						
ASAR	**Alice Springs**	**42.63**	**270**	P	P	12 30 51.8	+0.3
	0.2nm,0.3s,baz=113,slow=7.1,SNR=3.9						
WRA	**Warramunga Arr**	**43.85**	**275**	P	P	12 31 01.0	-0.3
	0.4nm,0.4s,baz=114,slow=8.1,SNR=6.9						
FINES	**FINESS Array B**	**147.39**	**338**	PKPbc	PKPbc	12 42 37.2	-0.9
	1.3nm,0.9s,baz=31,slow=3.2,SNR=4.3						

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*IDC **22** 12:30:32.7±0.4,30°.27S×177°.78W,h0km,mb4.5/20, mb1 4.6/20,mb1mx4.5/43,mbtmp4.5/20,MS4.1/17, Ms1 4.1/17,ms1mx3.8/50,Error ellipse: s-maj=16.4km s-min=12.0km az=91.0*
*NEIC **22** 12:30:33.8±0.4,30°.48S×177°.73W,h10km,mb4.8/18, Error ellipse: s-maj=11.6km s-min=5.9km az=112.0*
*WEL **22** 12:30:33.0,30°.48S×177°.73W,h10km,ML5.9/3*
*ISCJB **22** 12:30:36.3±0.2,30°.54S±0°.03×178°.00W±0°.06,h33km, mb4.8/45,MS4.2/18,Error ellipse: s-maj=8.0km s-min=2.6km az=21.6*
*MOS **22** 12:30:36.5±1.1,30°.36S×177°.79W,h33km,mb5.2/10, Error ellipse: s-maj=12.5km s-min=11.1km az=83.3*
ISC 22 12:30:39.1±0.3,30°.41S±0°.04×177°.84W±0°.08,h46km, n225,σ2°.31/212,mb4.8/45,MS4.2/18,5C-11D,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**1.15**	**356**	P	**Pn**	**12 30 56.0**	**-2.8**
GLKZ				S	**Sn**	**12 31 08.4**	**-4.9**
RAO	**Raoul Island**	**1.16**	**356**	Pn	**Pn**	**12 30 56.2**	**-2.6**
	2μm,0.3s,baz=80,slow=12,SNR=106						
RAO				Sn	**Sn**	**12 31 09.0**	**-4.5**
	17μm,0.3s,baz=323,slow=20,SNR=34						
RAO	**Raoul Island**	**1.16**	**356**	*e*Pn	**Pn**	**12 30 56.8**	**-2.1**
RAO				Sn	**Sn**	**12 31 09.1**	**-4.5**
RAO	**Raoul Island**	**1.16**	**356**	*e*P	**Pn**	**12 30 56.8**	**-2.1**
RAO						12 31 09.1	
RIZ	**Raoul Island**	**1.17**	**356**	P	**Pn**	**12 30 56.4**	**-2.6**
RIZ				S	**Sn**	**12 31 09.4**	**-4.4**
MXZ	**Matakaoa Point**	**7.82**	**203**	*e*Pn	**Pn**	**12 32 27.4**	**-2.8**
MXZ	**Matakaoa Point**	**7.82**	**203**	P	**Pn**	**12 32 26.9**	**-3.2**
MXZ				S	**Sn**	**12 33 53.7**	**-3.6**
WMGZ	**Waiomatatini S**	**8.01**	**202**	P	**Pn**	**12 32 29.5**	**-3.3**
WMGZ				S	**Sn**	**12 34 00.9**	**-1.2**
HAZ	**Te Kaha**	**8.18**	**205**	P	**Pn**	**12 32 32.2**	**-2.9**
HAZ				S	**Sn**	**12 34 06.9**	**+0.8**
PKGZ	**Pakihiroa**	**8.19**	**203**	P	**Pn**	**12 32 31.7**	**-3.6**
PKGZ				S	**Sn**	**12 34 03.3**	**-3.3**
PUZ	**Puketiti**	**8.29**	**202**	P	**Pn**	**12 32 32.3**	**-4.4**
PUZ				S	**Sn**	**12 34 07.9**	**-1.2**
RUGZ	**Raukumara Rang**	**8.40**	**205**	P	**Pn**	**12 32 34.3**	**-4.0**
RUGZ				S	**Sn**	**12 34 10.9**	**-0.9**
TWGZ	**Tauwhareparae**	**8.48**	**203**	P	**Pn**	**12 32 35.8**	**-3.5**
TWGZ				S	**Sn**	**12 34 11.3**	**-2.4**
OUZ	**Omahuta**	**8.66**	**234**	*e*Pn	Pn	12 32 48.1	+6.4
CNGZ	**Carnagh Statio**	**8.69**	**201**	P	**Pn**	**12 32 38.8**	**-3.3**
CNGZ				S	**Sn**	**12 34 16.8**	**-1.8**
OPRZ	**Ohinepanea**	**8.75**	**211**	P	**Pn**	**12 32 43.3**	**+0.4**
MWZ	**Matawai**	**8.78**	**205**	P	**Pn**	**12 32 39.1**	**-4.3**
MWZ				S	**Sn**	**12 34 19.5**	**-1.5**
URZ	**Urewera**	**8.87**	**207**	Pn	Pn	12 32 39.8	-4.8
	1.9nm,0.3s,baz=266,slow=3.8,SNR=16						
URZ				Sn	**Sn**	**12 34 20.1**	**-3.0**
	18nm,0.3s,baz=234,slow=19,SNR=11						
URZ	**Urewera**	**8.87**	**207**	*e*Pn	**Pn**	**12 32 41.6**	**-3.0**
URZ				Sn	**Sn**	**12 34 20.1**	**-3.0**
URZ	**Urewera**	**8.87**	**207**	P	**Pn**	**12 32 40.4**	**-4.1**
RAGZ	**Rawiri**	**8.96**	**205**	P	**Pn**	**12 32 42.9**	**-3.0**
RIGZ	**Rimuhau**	**9.03**	**202**	P	**Pn**	**12 32 43.2**	**-3.6**
PRGZ	**Paritu Road**	**9.19**	**201**	P	**Pn**	**12 32 44.3**	**-4.7**
MUGZ	**Murupara**	**9.19**	**208**	P	Pn	12 32 44.3	-4.8
SNGZ	**Shannon Statio**	**9.24**	**204**	P	**Pn**	**12 32 46.3**	**-3.4**
MHGZ	**Mahia Peninsul**	**9.39**	**201**	P	Pn	12 32 46.7	-5.1
RAHZ	**Arahi**	**9.46**	**205**	P	**Pn**	**12 32 51.5**	**-1.1**
MTHZ	**Maungataniwha**	**9.49**	**206**	P	**Pn**	**12 32 49.1**	**-4.0**
ARHZ	**Aropaoanui**	**9.79**	**204**	P	**Pn**	**12 32 53.3**	**-4.0**
BKZ	**Black Stump Fm**	**9.90**	**207**	*e*Pn	**Pn**	**12 32 54.0**	**-4.7**
BKZ	**Black Stump Fm**	**9.90**	**207**	P	**Pn**	**12 32 55.7**	**-3.0**
HIZ	**Hauiti**	**10.08**	**215**	*e*Pn	**Pn**	**12 33 03.7**	**+2.5**
KAHZ	**Kahuranaki**	**10.31**	**203**	P	Pn	12 32 58.9	-5.4
BFZ	**Birch Farm**	**11.32**	**204**	*e*Pn	**Pn**	**12 33 17.9**	**-0.2**
BFZ				*e*Sn	**Sn**	**12 35 16.8**	**-6.3**
THZ	**Tophouse**	**13.56**	**211**	*e*Pn	**Pn**	**12 33 46.6**	**-2.2**
THZ				*e*Sn	**Sn**	**12 36 09.8**	**-8.3**
KHZ	**Kahutara**	**13.84**	**208**	*e*Pn	Pn	12 33 44.9	-7.5
KHZ				*e*Sn	Sn	12 36 14.1	-10
LTZ	**Lake Taylor**	**14.66**	**210**	*e*Pn	**Pn**	**12 34 01.3**	**-2.3**
	52nm,1.4s						
OXZ	**Oxford**	**15.21**	**209**	*e*Pn	**Pn**	**12 34 08.3**	**-2.4**
	32nm,0.8s						
OXZ				*e*Sn	Sn	12 36 43.8	-14
MQZ	**McQueen's Vall**	**15.27**	**207**	*e*Pn	**Pn**	**12 34 07.7**	**-3.8**
	14nm,0.9s						
MQZ				*e*Sn	Sn	12 36 45.0	-14
RPZ	**Rata Peaks**	**15.94**	**211**	Pn	**Pn**	**12 34 17.5**	**-2.6**
	1.5nm,0.3s,baz=42,slow=0.4,SNR=7.6						
RPZ				Sn	Sn	12 37 00.4	-15
	3.1nm,0.3s,baz=348,slow=18,SNR=7.5						
RPZ				LR	LR	12 40 34.3	
	comp=Z,612nm,18.9s,baz=49,slow=37						
RPZ	**Rata Peaks**	**15.94**	**211**	*e*Pn	**Pn**	**12 34 18.3**	**-1.9**
	48nm,1.5s						
RPZ				Sn	Sn	12 37 00.4	-15
DZM	**Mont Dzumac**	**16.36**	**297**	Pn	**P**	**12 34 30.3**	**+2.4**
	0.6nm,0.3s,baz=214,slow=23,SNR=6.5						
DZM				LR	LR	12 39 24.0	
	comp=Z,1μm,18.8s,baz=158,slow=32						
DZM	**Mont Dzumac**	**16.36**	**297**	*e*P	**P**	**12 34 33.2**	**+5.3**
	88nm,0.9s						
DZM				*e*LR	LR	12 38 29.9	

2μm,24.9s
DZM Mont Dzumac 16.36 297 *e*Pn **P 12 34 32.4 +4.5**
61nm,1.1s
FOZ Fox Glacier 16.37 213 *e*Pn **Pn 12 34 23.8 -1.7**
ODZ Otahua Downs 17.19 209 *e*Pn **Pn 12 34 33.5 -2.2**
20nm,0.8s
AFI Afiamalu 17.35 20 Pn **P 12 34 38.9 0.0**
3.6nm,0.3s,baz=14,slow=12,SNR=4.7
WKZ Wanaka 17.73 212 *e*P **Pn 12 34 38.2 -4.2**
103nm,1.5s
MLZ Mavora Lakes 18.55 213 *e*P **P 12 34 48.2 -3.7**
21nm,0.8s
RAR Rarotonga 18.64 65 LR LR 12 40 05.3
comp=Z,601nm,19.7s,baz=258,slow=31
TBI Tubuai 26.22 81 *e*LQ LQ 12 41 17.2
TBI 378nm,26.2s *e*LR LR 12 42 29.0
687nm,25.5s
TBI Tubuai 26.22 81 *e*T T 13 02 49.9
70nm,0.3s
ARMA Armidale 26.30 262 *e*P **P 12 36 14.2 +3.6**
27nm,1.0s
RIV Riverview 26.43 254 P **P 12 36 14.7 +3.2**
RIV pmax pmax
comp=Z,143nm,1.3s
EIDS Eidsvold 27.88 273 *e*P **P 12 36 26.7 +2.1**
comp=Z,23nm,0.9s
CAN Canberra 28.20 251 *e*P **P 12 36 30.0 +2.5**
comp=Z,40nm,0.8s
CAN Canberra 28.20 251 *e*P **P 12 36 30.0 +2.5**
CAN pmax pmax
comp=Z,40nm,0.8s
PAE Paea 28.67 70 *e*T T 13 06 00.4
comp=Z,17nm,0.4s
PPT2 Papeete2 28.71 70 *e*LQ LQ 12 42 12.9
comp=Z,362nm,25.8s
PPT2 *e*LR LR 12 43 39.6
comp=Z,723nm,25.8s
PPT2 Papeete2 28.71 70 *e*T T 13 06 04.8
comp=Z,10nm,0.3s
PPT Papeete 28.72 70 LR LR 12 47 44.6
comp=Z,123nm,18.1s,baz=234,slow=36
TVO Taravao 28.87 71 *e*T T 13 06 15.8
comp=Z,4.3nm,0.3s
HNR Honiara 29.42 311 LR LR 12 46 18.5
comp=Z,307nm,19.1s,baz=187,slow=32
TOO Toolangi 31.09 247 P **P 12 36 54.8 +1.8**
TOO pmax pmax
comp=Z,25nm,1.7s
PMOR Pomariorio Ree 31.46 68 *e*T T 13 09 32.4
comp=Z,8.8nm,0.4s
VAH Vaihoa 31.55 68 *e*T T 13 09 37.9
comp=Z,49nm,0.3s
CTA Charters Tower 33.94 279 P **P 12 37 19.6 +1.5**
comp=Z,67nm,0.6s,baz=101,slow=12,SNR=118
CTA LR LR 12 49 48.3
comp=Z,608nm,19.1s,baz=116,slow=34
CTAO Charters Tower 33.94 279 *e*P **P 12 37 20.4 +2.3**
comp=Z,94nm,0.8s
CTAO Charters Tower 33.94 279 *e*P **P 12 37 20.4 +2.3**
CTAO pmax pmax
comp=Z,94nm,0.8s
STKA Stephens Creek 34.61 257 P **P 12 37 26.2 +2.4**
comp=Z,62nm,0.7s,baz=100,slow=10.0,SNR=136
STKA LR LR 12 50 02.0
comp=Z,458nm,18.3s,baz=59,slow=34
STKA Stephens Creek 34.61 257 *e*P **P 12 37 26.3 +2.4**
comp=Z,14nm,0.8s
STKA Stephens Creek 34.61 257 *e*P **P 12 37 26.3 +2.4**
STKA pmax pmax
comp=Z,14nm,0.8s
PMG Port Moresby 38.74 295 LR LR 12 51 35.2
comp=Z,290nm,18.2s,baz=127,slow=33
RKT Rikitea 38.77 90 *e*T T 13 18 25.7
comp=Z,4.2nm,0.3s
BBOO Buckleboo 39.10 254 *e*P **P 12 38 03.1 +1.1**
comp=Z,53nm,0.8s
COEN Coen 39.41 286 *e*P **P 12 38 06.7 +2.0**
comp=Z,19nm,1.0s
TAOE Nuku Hiva Isla 41.18 67 *e*LR LR 12 49 28.2
comp=Z,429nm,25.9s
AS01 Alice Springs 43.21 267 *e*P **P 12 38 36.1 +0.2**
AS31 Alice Springs 43.25 267 *e*P **P 12 38 36.3 +0.1**
comp=Z,4.4nm,0.8s
ASAR Alice Springs 43.25 267 P **P 12 38 36.0 -0.2**
comp=Z,12nm,0.6s,baz=104,slow=7.5,SNR=206
ASAR PcP **PcP 12 40 27.0 +2.2**
comp=Z,2.5nm,0.7s,baz=117,slow=3.5,SNR=5.5
ASAR ScP **ScP 12 44 17.2 +4.9**
comp=Z,0.5nm,0.7s,baz=115,slow=3.6,SNR=3.0
ASAR LR LR 12 55 13.2
comp=Z,410nm,18.0s,baz=108,slow=34
WB2 Warramunga Arr 44.23 272 *e*P **P 12 38 44.3 +0.2**
comp=Z,51nm,0.8s
WRAB Tennant Creek 44.23 272 *e*P **P 12 38 44.1 0.0**
comp=Z,52nm,0.9s
WRAB Tennant Creek 44.23 272 *e*P **P 12 38 44.1 0.0**
WRAB pmax pmax
comp=Z,52nm,0.9s
WRA Warramunga Arr 44.24 272 P **P 12 38 43.8 -0.3**
comp=Z,39nm,0.6s,baz=110,slow=8.1,SNR=288
WRA ScP **ScP 12 44 21.2 +4.8**
comp=Z,1.0nm,0.8s,baz=107,slow=3.9,SNR=4.3
WRA S **S 12 45 14.2 -0.6**
comp=Z,1.0nm,0.8s,baz=108,slow=14,SNR=3.3
WRA PKiKP **PKiKP 12 47 27.1 -1.7**
comp=Z,0.4nm,0.8s,baz=89,slow=0.6,SNR=4.6
WRA LR LR 12 56 04.7
comp=Z,204nm,18.2s,baz=75,slow=35
VNDA Vanda 48.10 186 P **P 12 39 16.2 +2.5**
comp=Z,2.5nm,0.7s,baz=21,slow=6.2,SNR=13
VNDA LR LR 12 57 41.6
comp=Z,71nm,18.1s,baz=351,slow=34
MTN Manton Dam 50.12 279 *e*P **P 12 39 28.3 -1.7**
comp=Z,10nm,0.8s
FITZ Fitzroy Crossi 52.50 270 P **P 12 39 48.5 +0.8**
comp=Z,10nm,0.7s,baz=161,slow=7.2,SNR=20
FITZ LR LR 13 00 11.4
comp=Z,289nm,19.9s,baz=62,slow=34
CASY Casey 55.19 208 *e*P **P 12 40 07.2 +0.5**
comp=Z,39nm,0.8s
GUMO Guam 56.59 315 LR LR 13 03 09.6
comp=Z,72nm,19.0s,baz=148,slow=35
BATI Baumata 57.79 277 LR LR 13 04 06.1
comp=Z,537nm,19.1s,baz=116,slow=35
RPN Rapa Nui 59.30 105 LR LR 12 59 45.0
comp=Z,98nm,20.9s,baz=285,slow=30
QSPA South Pole Qui 59.70 180 P **P 12 40 40.8 +2.1**
comp=Z,9.5nm,0.8s,baz=39,slow=1.3,SNR=34
MPSI Mapaga 66.48 285 P **P 12 41 23.1 -1.1**
MAW Mawson 72.34 201 P **P 12 42 00.7 +1.1**
comp=Z,9.8nm,0.8s,baz=93,slow=6.0,SNR=7.8
KKM Kota Kinabalu 72.69 288 *e*P **P 12 42 01.3 -1.4**
comp=Z,13nm,0.7s
SBUM Sibu 74.06 283 *e*P **P 12 42 10.7 0.0**
comp=Z,8.3nm,1.0s
SYO Syowa Base 77.13 193‖*e*PcP **P 12 42 26.6 -0.7**
MDSI Maura Dua 77.38 272 P **P 12 42 28.2 -1.4**
comp=Z,27nm,0.7s,comp=Z,2μm
SNAA Sanae 78.14 178 P **P 12 42 33.8 +0.8**
SNAA Sanae 78.14 178 P **P 12 42 32.8 -0.2**
comp=Z,3.0nm,0.7s,baz=214,slow=11,SNR=3.9
VNA3 Neumayer Olymp 78.28 176 P **P 12 42 34.5 +0.7**
MJAR Matsushiro Arr 78.33 325 P **P 12 42 33.5 -0.8**
comp=Z,2.2nm,0.8s,baz=166,slow=5.2,SNR=6.4
NVL N'lazarevskaya 78.87 183 *e*P **P** 12 42 30.4 -6.5
NVL *e*S **S 12 52 30.2 -1.0**
NVL pmax pmax
comp=Z,6.0nm,0.7s
VNA1 Neumayer--Stat 78.95 176 P **P 12 42 38.5 +1.2**
PLCA Paso Flores 82.39 133 P **P 12 42 58.0 +1.6**
comp=Z,4.6nm,1.2s,baz=297,slow=4.5,SNR=3.0
ASAJ Asahikawa 82.52 332 P **P 12 42 57.6 +1.0**
comp=Z,8.0nm,0.8s,baz=0.0,slow=1.0,SNR=4.0
SKR Severo-Kuril's 83.97 344 *e*P **P 12 43 03.9 0.0**
SKR pmax pmax
comp=Z,100nm,6.0s
SKR pmax pmax
comp=Z,300nm,2.5s
SKR MLR MLR
comp=Z,200nm,18.0s
TJN Taejon 84.01 318 *i*P P 12 42 58.6 -5.9
KSRS Korea Array 84.45 320 P **P 12 43 06.5 -0.2**
comp=Z,1.8nm,0.6s,baz=143,slow=5.6,SNR=6.5
KSAR Wonju Array Be 84.46 320 P **P 12 43 06.5 -0.3**
KSAR Wonju Array Be 84.46 320 P **P 12 43 06.5 -0.3**
MONP2 Monument Peak 85.67 48 P **P 12 43 14.2 +0.9**
baz=229
PETK Petropavlovsk- 85.86 346 P **P 12 43 13.1 -0.3**
comp=Z,13nm,0.7s,baz=128,slow=7.7,SNR=22
GSI Gunungsitoli 85.98 274 P **P 12 43 14.7 -0.3**
EDW2 Edwards Air Fo 85.98 45 P **P 12 43 15.7 +1.2**
baz=228
ISA Isabella, Lake 86.21 45 P **P 12 43 17.1 +1.4**
baz=228
NJ2 Nanjing 86.36 311 *e*P P 12 43 11.4 -5.0
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
BELC Belle Mtn. Jos 86.66 47 P **P 12 43 19.5 +1.5**
baz=230
BC3 Big Chuckawall 86.78 48 P **P 12 43 20.1 +1.6**
baz=230
CWC Cottonwood Cre 86.96 44 P **P 12 43 20.6 +1.1**
baz=228
GSC Goldstone, Bar 86.99 46 P **P 12 43 20.8 +1.3**
baz=229
MPMC Manual Prospec 87.07 45 P **P 12 43 21.2 +1.2**
baz=228
USRK Ussuriysk Ar. 87.25 326 P **P 12 43 20.7 +0.3**
comp=Z,2.8nm,0.8s,baz=36,slow=10.0,SNR=4.2
IRM Iron Mountain 87.30 48 P **P 12 43 22.6 +1.6**
baz=230
214A Organ Pipe Nat 87.44 50 P **P 12 43 23.4 +1.7**
baz=231
M02C Callahan 87.64 38 P **P 12 43 23.9 +1.5**
baz=225
FURC Furnace Creek, 87.72 45 P **P 12 43 24.2 +1.4**
baz=229
GRAC Grapevine Rang 87.76 44 P **P 12 43 24.5 +1.4**
baz=229
YBH Yreka Blue Hor 87.96 38 P **P 12 43 25.0 +1.0**
comp=Z,1.8nm,0.8s,baz=156,slow=10.0,SNR=8.4
YBH Yreka Blue Hor 87.96 38 P **P 12 43 25.0 +1.0**
NVAR Mina Array Bea 88.15 43 P **P 12 43 26.2 +1.1**
comp=Z,2.8nm,0.7s,baz=223,slow=8.3,SNR=29
TPNV Topopah Spring 88.41 45 P **P 12 43 27.8 +1.5**
baz=229
M04C Macdoel 88.46 38 P **P 12 43 27.2 +0.8**
baz=226
TUC Tucson 89.01 51 P **P 12 43 30.9 +1.7**
baz=232
I04A Tendick Farm, 89.56 37 P **P 12 43 32.2 +0.7**
baz=225
CN2 Changchun 90.24 323 *e*P **P 12 43 34.1 -0.4**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
I05D Terrebonne, OR 90.50 37 P **P 12 43 36.6 +0.8**
baz=226
WUAZ Wupatki 90.57 48 P **P 12 43 38.1 +1.6**
baz=232
KLR Kul'dur 91.12 330 P **P 12 43 39.2 +0.7**
comp=Z,0.4nm,0.7s,baz=124,slow=4.5,SNR=9.3
GYA Guiyang 91.68 300 *e*P P 12 43 36.3 -5.5
GYA pmax pmax
comp=Z,10.0nm,1.0s
TXAR Lajitas Array 92.28 57 P **P 12 43 45.0 +0.5**
comp=Z,0.4nm,0.8s,baz=207,slow=6.3,SNR=5.9
MNTX Cornudas Mount 92.37 54 P **P 12 43 46.0 +1.2**
baz=235
NNA Nana 93.28 106 LR LR 13 15 41.4
comp=Z,80nm,21.8s,baz=246,slow=29
TASM ASL Pad, Albuq 93.47 51 P **P 12 43 51.0 +0.9**
baz=235
ANMO Albuquerque 93.47 51 P **P 12 43 50.9 +0.9**
baz=235
TASL Snake Pit, Alb 93.48 51 P **P 12 43 50.9 +0.9**
baz=235
CMAR Chiang Mai Arr 93.54 289 P **P 12 43 51.5 +1.1**
comp=Z,0.6nm,0.3s,baz=132,slow=4.1,SNR=4.2
HLID Hailey 93.72 41 P **P 12 43 51.7 +0.8**
baz=230
KMI Kunming 93.95 297 P P 12 43 47.0 -5.5
KMI pmax pmax
comp=Z,6.0nm,0.6s
SEY Seymchan 96.02 347 P **P 12 43 59.6 -1.1**
comp=Z,1.2nm,0.7s,baz=37,slow=20
PDAR Pinedale Array 96.05 43 P **P 12 44 01.1 -0.5**
comp=Z,0.2nm,0.6s,baz=146,slow=3.4,SNR=3.9
PDAR PKKPbc **PKKPbc 13 00 49.5 -0.6**
comp=Z,0.6nm,0.7s,baz=84,slow=3.9,SNR=7.8
CD2 Chengdu 96.21 302 P P 12 43 55.3 -7.2
HHC Hu-ho-hao-te 96.34 314 *e*P P 12 43 55.6 -7.3
HHC pP PcP 12 44 01.3 -1.7
HHC PP **PP 12 47 54.3 -3.1**
HHC S **S 12 55 15.5 -3.9**
HHC sS ScS 12 55 25.6 +5.7
HHC SS SS 13 02 05.8 +12
HHC LR LR
comp=Z,120nm,16.3s
HHC LR LR
comp=Z,120nm,15.6s
HHC LR LR
comp=Z,160nm,17.7s
ILAR Eielson Array 97.91 13 P **P 12 44 08.5 -0.7**
comp=Z,0.5nm,0.6s,baz=219,slow=5.7,SNR=8.1
ILAR PP **PP 12 48 03.5 -5.3**
comp=Z,0.4nm,0.9s,baz=227,slow=7.1,SNR=4.1
ILAR PKKP PKKPdf 13 00 57.9 +9.2
comp=Z,0.6nm,0.8s,baz=359,slow=2.5,SNR=5.4
LPAZ La Paz 98.01 114 LR LR 13 20 23.9
comp=Z,65nm,19.3s,baz=174,slow=30
LZH Lanzhou 98.84 307 *e*P P 12 44 07.4 -6.9
LZH pP PcP 12 44 10.3 -4.0
LZH eS **S 12 55 39.6 -1.4**
LZH sS ScS 12 55 49.3 +8.2
BILL Bilibino 98.87 354 *i*P P 12 44 02.3 -11
BILL pmax pmax
comp=Z,1.0nm,0.8s
YKA Yellowknife Ar 105.39 25 PKiKP **PKiKP 12 48 55.6 -0.4**
comp=Z,0.4nm,0.6s,baz=256,slow=1.9,SNR=6.3
YKA PKKPbc **PKKPbc 13 00 21.7 -1.6**
comp=Z,0.7nm,0.7s,baz=46,slow=2.9,SNR=4.8
WMQ Urumqi 113.34 308 PKP PKiKP 12 49 00.1 -12
WMQ LR LR
comp=Z,140nm,19.1s
WMQ LR LR
comp=Z,110nm,20.1s
WMQ LR LR
comp=Z,150nm,19.7s
MKAR Makanchi Array 117.89 310 PKP **PKPdf 12 49 19.2 -1.1**
comp=Z,3.1nm,0.7s,baz=197,slow=1.0,SNR=18
ZALV Zalesovo Beam 118.14 318 PKP **PKPdf 12 49 19.3 -1.2**
comp=Z,1.8nm,0.6s,baz=179,slow=1.6,SNR=9.2
NVS Novosibirsk 119.24 319 *i*PKiKP **PKPdf 12 49 22.0 -0.5**
KSH Kashi 120.37 301 PKP PKPdf 12 49 16.3 -9.1
KSH PP **PP 12 50 56.1 +3.5**
KURK Kurchatov 121.16 314 PKP **PKPdf 12 49 25.4 -1.0**
KURK Kurchatov 121.16 314 PKiKP **PKPdf 12 49 25.4 -1.0**
KURBB Kurchatov Arra 121.20 314 PKP **PKPdf 12 49 25.4 -1.0**
comp=Z,8.4nm,0.7s,baz=105,slow=1.9,SNR=51
BVAR Borovoye Array 126.51 316 PKP **PKPdf 12 49 36.2 -0.4**
comp=Z,10nm,0.7s,baz=86,slow=1.9,SNR=48
ARU Arti 133.19 321 PKP **PKPdf 12 49 48.6 -0.6**
comp=Z,5.1nm,0.3s,baz=279,slow=0.7,SNR=12
ARU Arti 133.19 321 *i*PKiKP **PKPdf 12 49 48.9 -0.2**
GEYT Aibeck 133.69 295 PKP **PKPdf 12 49 49.5 -1.3**
comp=Z,19nm,1.0s,baz=307,slow=5.2,SNR=3.2
AKTO Aktyubinsk 134.22 312 PKP **PKPdf 12 49 51.1 -0.1**
comp=Z,3.4nm,0.7s,baz=147,slow=2.9,SNR=12
ARCES ARCESS Array B 138.63 348 PKhKP PKPpre 12 49 50.5
comp=Z,1.9nm,0.9s,baz=18,slow=1.5,SNR=4.0
ARCES PKP **PKPdf 12 49 57.5 -1.4**
comp=Z,3.8nm,0.8s,baz=19,slow=1.7,SNR=7.8
KLMR Klimovskoe 140.84 332 *e*PKHKP PKPpre 12 49 56.4
KLMR pmax pmax
comp=Z,7.0nm,1.0s
KLMR Klimovskoe 140.84 332 *e*PKPdf PKPpre 12 49 56.4
KLMR AMP 12 50 14.5
comp=Z,7.0nm,1.0s
GNI Garni 144.20 298 *i*PKHKP PKPpre 12 50 06.0
NCK Nalchik 144.77 303 *i*PKHKP PKPpre 12 50 06.2
FINES FINESS Array B 145.21 340 PKPbc **PKPbc 12 50 09.8 -0.8**
comp=Z,65nm,0.8s,baz=56,slow=3.8,SNR=288
KBZ Khabaz 145.24 304 PKPbc **PKPbc 12 50 10.8 -0.4**
comp=Z,8.8nm,0.9s,baz=105,slow=0.8,SNR=11
OBN Obninsk 145.26 325‖*i*PKHKP PKPpre 12 50 06.8
OBN *i* 12 50 10.6
OBN pmax pmax
comp=Z,7.0nm,0.4s
OBN MLR MLR
comp=Z,175nm,19.0s
KIV Kislovodsk 145.35 304 *i*PKHKP PKPpre 12 50 08.2
KIV pmax pmax
comp=Z,11nm,1.0s
VSR Storozhevoye 145.64 318 *e*PKIKP **PKPdf 12 50 11.2 -0.7**
VSR pmax pmax
comp=Z,40nm,0.9s
VORD Divnogorie 145.66 317 *e*PKIKP **PKPdf 12 50 10.8 -1.1**
VORD pmax pmax
comp=Z,20nm,0.9s
AKN Aaknes 148.07 356 *e*P **PKPbc 12 50 18.8 -0.1**
NB2 NORSAR Subarra148.78 352 PKP **PKPbc 12 50 20.2 -0.6**
comp=Z,13nm,0.9s,baz=13,slow=2.8
NB2 NORSAR Subarra148.78 352 PKP **PKPbc 12 50 20.2 -0.6**
comp=Z,13nm,0.9s,baz=13,slow=2.8
NC602 NORSAR Array S 149.04 351 *e*P **PKPdf 12 50 18.1 +0.8**
HFS Hagfors 149.28 349 PKPbc **PKPbc 12 50 21.4 -0.7**
comp=Z,14nm,0.8s,baz=315,slow=0.2,SNR=21
MNK Minsk 149.67 330 *e*PKP2 **PKPbc 12 50 24.0 +0.9**
LRW Lerwick 150.19 3 *e*P **PKPbc 12 50 24.3 +0.1**
KONO Kongsberg 150.34 352 *e*P **PKPbc 12 50 24.3 -0.3**
ODD1 Odda 150.35 355 *e*P **PKPab 12 50 31.2 0.0**
STRU Stroemstad 150.73 350 *e*P **PKPbc 12 50 25.3 -0.2**
SIM Simferopol' 151.06 309 *i*PKIKP **PKPbc 12 50 27.0 +0.2**
AKASG Malin Array Be 151.40 323 PKPbc **PKPbc 12 50 26.9 -0.5**
comp=Z,30nm,0.7s,baz=49,slow=2.9,SNR=71
MMAI Mount Meron Ar 151.67 284 PKPbc **PKPbc 12 50 28.8 +0.1**
comp=Z,27nm,0.8s,baz=72,slow=5.0,SNR=15
SNART Snartemo 151.86 354 *e*P **PKPbc 12 50 28.6 +0.4**
KPL Plockton 152.54 9 *e*P **PKPbc 12 50 29.7 0.0**
BRTR Keskin Array B 152.73 298 PKP **PKPdf 12 50 23.4 -0.4**
comp=Z,0.4nm,0.4s,baz=129,slow=4.9,SNR=3.6
BRTR PKPbc **PKPbc 12 50 30.4 -0.6**
comp=Z,4.0nm,0.7s,baz=134,slow=3.6,SNR=16
SORM Soroca 153.29 319⇑‖*i*P **PKPbc 12 50 31.3 -0.4**
SORM Soroca 153.29 319⇑‖PKIKP **PKPbc 12 50 31.3 -0.4**
ANTO Ankara 153.34 299‖*i*P **PKPbc 12 50 32.8 +0.6**
ANTO Ankara 153.34 299‖PKIKP **PKPbc 12 50 32.8 +0.6**
EKA Eskdalemuir Ar 154.81 7 PKPab **PKPab 12 50 49.8 -0.1**
comp=Z,2.6nm,0.7s,baz=314,slow=3.5,SNR=4.0
TIRR Tirgusor 155.01 311‖*i*P PKPdf 12 50 35.7 +9.0
TIRR Tirgusor 155.01 311‖PKIKP PKPdf 12 50 35.7 +9.0
BURAR Bucovina Array 155.33 321⇑*i*P PKPdf 12 50 37.5 +10
BURAR Bucovina Array 155.33 321⇑PKIKP PKPdf 12 50 37.5 +10
VRI Vrincioaia 155.41 316‖*i*P **PKPab 12 50 55.9 +3.0**
VRI Vrincioaia 155.41 316‖PKP2 **PKPab 12 50 55.9 +3.0**
DBIC Dimbokro 155.48 163 PKPab **PKPab 12 50 56.8 +2.9**
comp=Z,7.7nm,0.8s,baz=161,slow=7.1,SNR=3.7
ISR Istrita 155.90 314‖*i*P **PKPdf 12 50 32.8 +4.8**
ISR Istrita 155.90 314‖PKIKP **PKPdf 12 50 32.8 +4.8**
CRVS Cervenica-Dubn 156.42 327 *e*PKP2 **PKPab 12 51 00.8 +3.7**
CRVS Cervenica-Dubn 156.42 327 *e*PKP **PKPab 12 51 00.8 +3.7**
ARR Arges 156.93 317⇑*i*P **PKPdf 12 50 30.8 +1.5**
CLL Collm 157.62 342 *e*PKIKP **PKPdf 12 50 28.0 -1.9**
CLL *i* 12 51 01.4
CLL pmax pmax
comp=Z,9.0nm,1.2s
CLL Collm 157.62 342 *e*PPS **PKPdf 12 50 28.0 -1.9**
BRG Berggiesshubel 157.75 340 *e*PKP **PKPab 12 51 02.5 -0.2**
comp=Z,6.6nm,0.8s
BRG *e* 12 51 06.6
comp=Z,6.0nm,0.8s
BRG Berggiesshubel 157.75 340 *e*PKP2 **PKPab 12 51 02.5 -0.2**
BRG pmax pmax
comp=Z,7.0nm,0.8s
BRG pmax pmax
comp=Z,6.0nm,0.8s
VYHS Vyhne 157.91 330 *e*PKP **PKPab 12 51 07.2 +3.7**
KHC Kasperske Hory 159.39 338 *e*PKP **PKPab 12 51 09.5 -0.5**
KHC Kasperske Hory 159.39 338 *e*PKP2 **PKPab 12 51 09.5 -0.5**
GERES GERESS Array B 159.60 338 PKP **PKPdf 12 50 32.7 +0.2**
comp=Z,0.6nm,0.7s,baz=108,slow=3.0,SNR=3.7
GERES PKPab **PKPab 12 51 11.8 +0.9**
comp=Z,1.7nm,0.6s,baz=20,slow=4.3,SNR=8.5
TORD Torodi Ar. Bea 162.81 178 PKP **PKPdf 12 50 36.6 -0.1**
comp=Z,0.2nm,0.5s,baz=185,slow=3.6,SNR=2.4
TORD PKPab **PKPab 12 51 26.2 +0.6**
comp=Z,6.2nm,0.8s,baz=179,slow=3.7,SNR=16
ESDC Sonseca Array 169.49 27 PKPab **PKPab 12 51 54.8 +0.2**
comp=Z,0.1nm,0.3s,baz=298,slow=2.8,SNR=4.1

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*IDC **22** 12:38:07.3±2.0,30.°32S×177.°94W,h0km,mb4.0/4, mb1 4.1/5,mb1mx3.7/50,mbtmp4.0/5,ML3.4/1,Error ellipse: s-maj=46.7km s-min=18.3km az=114.0*
*ISCJB **22** 12:38:08.7±3.0,30.°49S±0.°10×177.°7W±0.°5,h35km, mb4.0/4,Error ellipse: s-maj=61.0km s-min=7.6km az=10.8*

ISC 22 12:38:09.4±2.1,30.°43S±0.°08×177.°5W±0.°3,h35km,n8, σ1§03/10,mb4.1/4,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.22**	**343**	Pn	**Pn**	**12 38 30.3**	**+0.3**
	102nm,0.3s,baz=75,slow=15,SNR=12						
RAO				Sn	**Sn**	**12 38 44.3**	**-0.9**
	345nm,0.3s,baz=59,slow=21,SNR=11						
URZ	**Urewera**	**8.99**	**208**	Pn	**Pn**	**12 40 17.2**	**+0.5**
	0.4nm,0.3s,baz=303,slow=4.4,SNR=3.3						
URZ				Sn	**Sn**	**12 41 55.0**	**-1.6**
	1.3nm,0.3s,baz=98,slow=20,SNR=7.2						
CTA	**Charters Tower**	**34.21**	**279**	P	**P**	**12 44 52.4**	**+0.5**
	2.5nm,0.5s,baz=102,slow=12,SNR=4.7						
STKA	**Stephens Creek**	**34.88**	**257**	P	**P**	**12 44 58.8**	**+1.2**
	1.3nm,0.6s,baz=111,slow=5.4,SNR=3.0						
ASAR	**Alice Springs**	**43.52**	**267**	P	**P**	**12 46 09.8**	**0.0**
	0.5nm,0.5s,baz=106,slow=7.0,SNR=6.8						
WRA	**Warramunga Arr**	**44.51**	**272**	P	**P**	**12 46 16.7**	**-1.1**
	1.8nm,0.6s,baz=110,slow=8.1,SNR=20						
FINES	**FINESS Array B**	**145.31**	**340**	PKPbc	**PKPbc**	**12 57 42.5**	**-0.1**
	1.0nm,0.6s,baz=47,slow=2.9,SNR=7.4						
HFS	**Hagfors**	**149.35**	**349**	PKPbc	**PKPab**	**12 57 57.9**	**-0.8**
	2.2nm,0.8s,baz=217,slow=7.0,SNR=3.2						

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*IDC **22** 12:41:27.7±1.3,32.°82S×178.°33W,h0km,mb4.2/3, mb1 4.4/4,mb1mx3.7/51,mbtmp4.2/4,ML4.0/1,Error ellipse: s-maj=39.8km s-min=33.8km az=171.0*
*ISCJB **22** 12:41:30.5±5.3,33.°1S±0.°2×178.°3W±0.°8,h32km,mb4.2/3, Error ellipse: s-maj=94.5km s-min=14.4km az=12.8*

ISC 22 12:41:32.7±1.5,33.°0S±0.°1×178.°4W±0.°2,h32km,n9, σ0§94/10,mb4.3/3,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.37**	**214**	Pn	**Pn**	**12 43 04.0**	**-0.2**
	3.2nm,0.3s,baz=250,slow=4.4,SNR=7.5						
URZ				Sn	**Sn**	**12 44 15.7**	**-0.1**
	3.3nm,0.3s,baz=229,slow=19,SNR=3.9						
CTA	**Charters Tower**	**33.99**	**283**	P	**P**	**12 48 14.5**	**+0.9**
	1.9nm,0.5s,baz=120,slow=11,SNR=6.2						
ASAR	**Alice Springs**	**42.71**	**270**	P	**P**	**12 49 26.6**	**-0.4**
	1.4nm,0.6s,baz=106,slow=7.4,SNR=22						
WRA	**Warramunga Arr**	**43.94**	**275**	P	**P**	**12 49 36.2**	**-0.6**
	2.7nm,0.4s,baz=114,slow=7.9,SNR=45						
FINES	**FINESS Array B**	**147.49**	**338**	PKPbc	**PKPbc**	**13 01 11.3**	**-1.3**
	3.7nm,0.5s,baz=46,slow=4.0,SNR=34						
NB2	**NORSAR Subarra151.30**	**350**	PKP	**PKPbc**	**13 01 21.6**	**-0.6**	
	comp=Z,0.5nm,0.6s,baz=12,slow=2.5						
MMAI	**Mount Meron Ar**	**151.74**	**279**	PKPbc	**PKPbc**	**13 01 25.0**	**+0.8**
	comp=Z,2.0nm,0.6s,baz=72,slow=6.2,SNR=4.1						
HFS	**Hagfors**	**151.75**	**347**	PKPbc	**PKPbc**	**13 01 22.3**	**-1.0**
	comp=Z,2.5nm,0.9s,baz=100,slow=6.0,SNR=3.7						
TORD	**Torodi Ar. Bea**	**160.20**	**180**	PKPab	**PKPab**	**13 02 10.5**	**+1.0**
	comp=Z,0.7nm,0.8s,baz=183,slow=2.5,SNR=3.1						

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*NEIC **22** 12:42:24.0±0.0,43.°48S×172.°80E,h12km,ML4.0(WEL), After WEL.*

WEL 22 12:42:22.7,43.°S±1.°×17.°3E±.°,h9km±1km,ML4.1/8,South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MQZ	**McQueen's Vall**	**0.22**	**199**	P*	Pg	12 42 29.3	+2.1
MQZ				S*	Sg	12 42 33.3	+3.1
MQZ	**McQueen's Vall**	**0.22**	**199**	P	Pg	12 42 29.4	+2.2
MQZ				S	Sg	12 42 33.1	+2.8
EYCZ	**Eyrewell**	**0.30**	**284**	P	Pb	12 42 30.9	+0.7
EYCZ				S	Sb	12 42 35.9	+0.7
OKCZ	**Okains Bay**	**0.32**	**136**	P	Pb	12 42 30.7	+0.1
OKCZ				S	Sb	12 42 35.7	-0.3
AKCZ	**Akaroa Harbour**	**0.40**	**163**	P	Pb	12 42 32.4	+0.5
AKCZ				S	Sb	12 42 38.3	+0.2
OXZ	**Oxford**	**0.55**	**288**	P*	Pb	12 42 34.9	+0.5
OXZ	**Oxford**	**0.55**	**288**	P	Pb	12 42 35.3	+0.9
OXZ				S	Sn	12 42 44.3	-1.7
LTZ	**Lake Taylor**	**0.79**	**334**	P*	Pb	12 42 39.2	+0.5

LTZ	Lake Taylor	0.79	334	P	Pn	12 42 39.5	-0.6
KHZ	Kahutara	1.22	28	P*	Pn	12 42 44.7	-1.3
INZ	Inchbonnie	1.23	308	P	Pg	12 42 46.1	-0.1
RPZ	Rata Peaks	1.25	259	Pn	Pg	12 42 46.8	+0.1
RPZ	Rata Peaks	1.25	259	P	Pg	12 42 46.9	+0.2
WVZ	Waitaha Valley	1.53	285	Pn	Pb	12 42 51.0	-0.2
WVZ	Waitaha Valley	1.53	285	P	Pb	12 42 51.0	-0.2
THZ	Tophouse	1.73	4	Pn	Pn	12 42 52.3	-0.8
THZ	Tophouse	1.73	4	P	Pn	12 42 52.6	-0.5
DSZ	Denniston Nort	1.88	338	Pn	Pn	12 42 55.4	+0.3
DSZ	Denniston Nort	1.88	338	P	Pn	12 42 55.4	+0.3
BSWZ	Blackbirch Sta	1.96	25	Pn	Pn	12 42 55.7	-0.5
BSWZ	Blackbirch Sta	1.96	25	P	Pn	12 42 55.7	-0.5
LBZ	Lake Benmore	2.06	243	Pn	Pn	12 42 58.6	+1.1
LBZ	Lake Benmore	2.06	243	P	Pn	12 42 58.6	+1.1
FOZ	Fox Glacier	2.14	268	Pn	Pb	12 43 00.6	-0.9
FOZ	Fox Glacier	2.14	268	P	Pb	12 43 00.7	-0.8
ODZ	Otahua Downs	2.17	224	Pn	Pn	12 42 59.4	+0.5
ODZ	Otahua Downs	2.17	224	P	Pn	12 42 59.5	+0.5
TUWZ	Tuamarina	2.24	24	Pn	Pn	12 42 59.3	-0.7
TUWZ	Tuamarina	2.24	24	P	Pn	12 42 59.4	-0.7
NNZ	Nelson	2.32	12	Pn	Pn	12 43 00.9	-0.2
NNZ	Nelson	2.32	12	P	Pn	12 43 01.1	0.0
TCW	Tory Channel	2.55	27	P	Pn	12 43 03.0	-1.2
BHW	Baring Head	2.61	38	Pn	Pn	12 43 03.7	-1.3
BHW	Baring Head	2.61	38	P	Pn	12 43 03.8	-1.3
WEL	Wellington	2.67	35	Pn	Pn	12 43 04.6	-1.2
PLWZ	Palliser	2.67	45	Pn	Pn	12 43 04.1	-1.8
PLWZ	Palliser	2.67	45	P	Pn	12 43 04.4	-1.5
QRZ	Quartz Range	2.67	356	Pn	Pn	12 43 06.1	+0.2
QRZ	Quartz Range	2.67	356	P	Pn	12 43 06.2	+0.3
MSWZ	Moikau Station	2.78	43	Pn	Pn	12 43 05.5	-1.9
MSWZ	Moikau Station	2.78	43	P	Pn	12 43 05.6	-1.8
DUWZ	D'Urville Isla	2.83	18	P	Pn	12 43 10.3	+2.2
HHSZ	Highcliff Hill	2.84	212	Pn	Pn	12 43 08.7	+0.4
HHSZ	Highcliff Hill	2.84	212	P	Pn	12 43 08.8	+0.5
PAWZ	Paruwai Farm	2.90	44	P	Pn	12 43 07.1	-1.9
CAW	Cannon Point	2.94	37	Pn	Pn	12 43 08.0	-1.6
CAW	Cannon Point	2.94	37	P	Pn	12 43 08.2	-1.4
WKZ	Wanaka	3.00	242	Pn	Pn	12 43 11.6	+1.2
WKZ	Wanaka	3.00	242	P	Pn	12 43 11.7	+1.3
TRWZ	Traveller	3.02	47	Pn	Pn	12 43 08.7	-2.0
TRWZ	Traveller	3.02	47	P	Pn	12 43 08.7	-2.0
EAZ	Earnscleugh	3.02	234	Pn	Pn	12 43 11.4	+0.7
EAZ	Earnscleugh	3.02	234	P	Pn	12 43 11.4	+0.7
KIW	Kapiti Island	3.08	32	P	Pn	12 43 10.3	-1.3
MTW	Mount Morrison	3.10	42	Pn	Pn	12 43 09.2	-2.6
MTW	Mount Morrison	3.10	42	P	Pn	12 43 09.8	-2.0
OGWZ	Otaki Gorge	3.22	35	P	Pn	12 43 12.2	-1.3
TUZ	Tuapeka	3.32	221	Pn	Pn	12 43 15.4	+0.7
TUZ	Tuapeka	3.32	221	P	Pn	12 43 15.4	+0.7
MRZ	Mangatainoka R	3.53	38	Pn	Pn	12 43 16.2	-1.5
MRZ	Mangatainoka R	3.53	38	P	Pn	12 43 16.0	-1.6
MLZ	Mavora Lakes	3.81	239	Pn	Pn	12 43 22.5	+0.9
MLZ	Mavora Lakes	3.81	239	P	Pn	12 43 22.6	+1.0
BFZ	Birch Farm	3.83	44	P	Pn	12 43 19.4	-2.4
DVHZ	Dannevirke	4.08	40	P	Pn	12 43 22.8	-2.5
WAZ	Wanganui	4.09	25	P	Pn	12 43 26.2	+0.8
ANWZ	Angora Road	4.11	44	P	Pn	12 43 23.3	-2.4
NMEZ	Namu Road	4.16	12	P	Pn	12 43 28.0	+1.6
WHZ	Wether Hill Ro	4.18	233	P	Pn	12 43 27.2	+0.6
TSZ	Takapari Road	4.19	36	P	Pn	12 43 24.9	-1.9
PREZ	Palmer Road	4.28	15	Pn	Pn	12 43 29.6	+1.5
PREZ	Palmer Road	4.28	15	P	Pn	12 43 29.6	+1.5
NWEZ	Newall Road	4.30	12	Pn	Pn	12 43 29.4	+1.2
KHEZ	Kahui Hut	4.30	13	Pn	Pn	12 43 30.1	+1.7
KHEZ	Kahui Hut	4.30	13	P	Pn	12 43 29.7	+1.3
NEZ	North Egmont	4.34	14	Pn	Pn	12 43 29.9	+1.0
PKE	Pukeiti	4.40	13	Pn	Pn	12 43 30.8	+1.1
PKE	Pukeiti	4.40	13	P	Pn	12 43 30.8	+1.2
PNHZ	Pukenui	4.41	37	P	Pn	12 43 27.6	-2.2
DREZ	Durham Road	4.44	15	P	Pn	12 43 31.4	+1.2
MTVZ	Mangateitei	4.59	27	Pn	Pn	12 43 33.0	+0.7
MTVZ	Mangateitei	4.59	27	P	Pn	12 43 33.1	+0.8
VRZ	Vera Road	4.62	20	Pn	Pn	12 43 33.4	+0.8
VRZ	Vera Road	4.62	20	P	Pn	12 43 33.8	+1.1
PKVZ	Pokaka	4.63	26	P	Pn	12 43 33.9	+1.0
MOVZ	Moawhango	4.67	30	P	Pn	12 43 33.2	-0.2
TRVZ	Turoa	4.69	28	P	Pn	12 43 33.8	0.0
KRHZ	Kereru	4.71	36	P	Pn	12 43 31.8	-2.2
WHVZ	Whangaehu Hut	4.72	28	P	Pn	12 43 34.7	+0.4
FWVZ	Far West T-bar	4.73	27	P	Pn	12 43 35.0	+0.6
APZ	The Paps	4.74	224	P	Pn	12 43 35.6	+1.3
TUVZ	Tukino	4.75	28	P	Pn	12 43 35.0	+0.3
COVZ	Chateau Observ	4.78	27	P	Pn	12 43 35.1	+0.2
COVZ				P	Pn	12 43 35.1	+0.2
NGZ	Ngauruhoe	4.82	27	P	Pn	12 43 35.9	+0.3
TWVZ	Taurewa	4.86	26	P	Pn	12 43 36.1	0.0
WTVZ	West Tongariro	4.87	27	P	Pn	12 43 36.5	+0.3
KRVZ	Karewarewa	4.91	27	P	Pn	12 43 36.5	-0.2
RITZ	Rihia Road	5.08	28	P	Pn	12 43 38.6	-0.5
HIZ	Hauiti	5.22	18	P	Pn	12 43 41.0	0.0
HIZ				P	Pn	12 43 41.2	+0.2

*ISCJB **22** 12:44:48.2±0.7, 38°.18N±0°.04×141°.77E±0°.08, h59km±5km, mb3.9/9, MS4.4/1, Error ellipse: s-maj=11.6km s-min=5.1km az=21.8*
*JMA **22** 12:44:49.6±0.1, 38°.17N×141°.68E, h51km±1km, M3.6*
JMA Felt II J1.
*IDC **22** 12:44:51.1±1.1, 38°.22N×141°.82E, h71km±7km, mb3.6/9, mb1 3.7/14, mb1mx3.4/79, mbtmp3.9/14, MS3.4/2, Ms1 3.4/2, ms1mx2.6/73, Error ellipse: s-maj=24.0km s-min=14.5km az=88.0*

ISC 22 12:44:48.4±0.9, 38°.14N±0°.04×141°.84E±0°.08, h45km±6km, n29, σ1§11/43, mb4.1/9, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	Ouri	0.50	309	P	Pn	12 44 59.8	+0.5
JIO				*i* S	Sn	12 45 06.6	-0.5
JMM	Marumori	0.87	252	P	Pn	12 45 04.0	-0.3
JMM				S	Sn	12 45 14.1	-1.8
JMK	Ichinoseki	0.94	329	P	Pn	12 45 05.7	+0.5
JMK				S	Sn	12 45 17.1	-0.5
OFUJ	Ofunato	0.94	352	P	Pn	12 45 06.0	+0.7
OFUJ				S	Sn	12 45 17.6	0.0
JOU	Okura	0.95	284	P	Pn	12 45 05.3	-0.1
JOU				S	Sn	12 45 16.6	-1.3
JFK	Kawauchi	1.09	225	P	Pn	12 45 07.6	+0.3
JFK				S	Sn	12 45 20.3	-0.9
JFT	Otama	1.35	243	P	Pn	12 45 11.2	+0.5
JFT				S	Sn	12 45 26.7	-0.7
JOM	Ohasama	1.40	342	P	Pn	12 45 12.2	+0.8
JOM				S	Sn	12 45 28.6	0.0
JYK	Kaneyama	1.40	304	P	Pn	12 45 11.4	0.0
JYS	Shirataka	1.40	274	P	Pn	12 45 11.5	0.0
JYS				S	Sn	12 45 27.9	-0.9
JRG	Rokugo	1.57	323	P	Pn	12 45 14.6	+0.8
JYA	Atsumi	1.73	286	P	Pn	12 45 16.0	0.0
JFY	Yanaizu	1.85	247	P	Pn	12 45 18.2	+0.6
MJAR	Matsushiro Arr	3.31	242	P	Pn	12 45 39.4	+1.7
	2.7nm,0.3s,baz=232,slow=14,SNR=21						
MJAR				LR	LR	12 47 06.8	
	comp=Z,80nm,18.2s,baz=65,slow=41						
MAT	Matsushiro	3.31	242	P	Pn	12 45 39.4	+1.7
MAT				*e*S	Sn	12 46 18.4	+2.6
JHJ	Hachijo jima 2	5.29	199	P	Pn	12 46 07.4	+2.6
	8.8nm,0.3s,baz=90,slow=20,SNR=5.2						
JHJ				S	Sn	12 47 02.1	-2.4
	12nm,0.3s,baz=90,slow=20,SNR=3.4						
ASAJ	Asahikawa	5.99	5	P	Pn	12 46 14.6	+0.1
	1.2nm,0.3s,baz=219,slow=15,SNR=19						
USRK	Ussuriysk Ar.	9.58	312	P	Pn	12 47 04.5	+1.0
	0.6nm,0.3s,baz=122,slow=14,SNR=7.3						
KSRS	Korea Array	11.04	271	P	Pn	12 47 26.2	+2.6
	0.2nm,0.3s,baz=76,slow=14,SNR=3.6						
ZALV	Zalesovo Beam	41.43	311	P	P	12 52 29.7	-0.5
	1.5nm,0.5s,baz=75,slow=5.7,SNR=10.0						
ZALV				pP	sP	12 52 47.8	0.0
	2.8nm,0.7s,baz=80,slow=6.6,SNR=4.7						
MKAR	Makanchi Array	43.83	301	P	P	12 52 50.0	+0.1
	0.9nm,0.6s,baz=86,slow=8.7,SNR=6.8						
MKAR				pP	sP	12 53 07.6	+0.1
	2.1nm,0.7s,baz=87,slow=10,SNR=12						
KURBB	Kurchatov Arra	45.60	307	P	P	12 53 03.3	-0.5
	2.5nm,0.6s,baz=82,slow=8.1,SNR=14						
KURBB				pP	sP	12 53 20.8	-0.7
	7.4nm,0.7s,baz=82,slow=8.2,SNR=18						
ILAR	Eielson Array	48.38	33	P	P	12 53 24.7	-0.6
	0.3nm,0.8s,baz=243,slow=6.0,SNR=3.8						
BVAR	Borovoye Array	50.08	312	P	P	12 53 37.5	-1.1
	0.5nm,0.4s,baz=69,slow=7.9,SNR=3.2						
BVAR				pP	sP	12 53 55.9	-0.5
	1.5nm,0.7s,baz=64,slow=6.8,SNR=4.5						
WRA	Warramunga Arr	58.21	188	P	P	12 54 38.4	+0.4
	0.9nm,0.5s,baz=5.8,slow=7.1,SNR=14						
ASAR	Alice Springs	61.93	188	P	P	12 55 04.2	+0.7
	0.5nm,0.4s,baz=2.9,slow=4.7,SNR=7.2						
FINES	FINESS Array B	67.99	332	P	P	12 55 41.3	-1.1
	1.4nm,0.7s,baz=72,slow=4.5,SNR=4.0						
HFS	Hagfors	73.22	336	P	P	12 56 14.2	-0.1
	1.0nm,0.4s,baz=32,slow=9.0,SNR=10						
MMAI	Mount Meron Ar	81.60	305	LR	LR	13 38 08.7	
	comp=Z,163nm,20.1s,baz=145,slow=39						

DDA 22 12:48:16.5, 38°.73N×30°.55E, h7km, MI2.1, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLV	Bolvadin	0.32	91	*i* P	Pg	12 48 23.5	+0.7
BOLV				*i* S	Sg	12 48 27.3	+0.4
KZIL	AFYON_Kizioren	0.57	214	*i* P	Pg	12 48 26.8	-0.7
KZIL				*i* S	Sg	12 48 35.5	+0.7
BAGO	Egridir - ISPA	0.76	165	*i* P	Pb	12 48 32.3	+0.2

CSEM 22 12:51:11.3, 44°.07N×19°.15E, h4km, ML1.1/5, 2D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAPS	Han Pijesak,BI	0.14	277	*e*Pg	Pg	12 51 13.6	-0.6
HAPS				*e*Sg	Sg	12 51 17.0	+0.9
BBLS	Lazići	0.28	137	⇓*i*Pg	Pg	12 51 16.6	0.0
BBLS				*e*Sg	Sg	12 51 21.3	+1.0
TEKS	Tekeris	0.55	30	*e*Pg	Pg	12 51 21.7	-0.2
TEKS				*e*Sg	Sg	12 51 29.4	+0.3
DIVS	Divibare	0.61	87	⇓*i*Pg	Pg	12 51 21.7	-1.3
DIVS				*e*Sg	Sg	12 51 30.7	-0.2
UPM	Unac-Piva	0.88	192	*e*Pg	Pg	12 51 27.4	-0.8
UPM				*e*Sg	Sg	12 51 39.5	-0.2

MAN 22 12:54:11.9, 10°.05N×123°.25E, h1km, mb4.6, ML3.4, MS3.3, 2C-2D, Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBP	Tagbilaran	0.70	120	*e*P	Pg	12 54 25.6	+0.3
SNPH	Sibulan	0.70	181	⇓*i*P	Pb	12 54 26.8	-0.1
SNPH				*i* S	Sb	12 54 38.0	+0.9
LLP	Lapu-Lapu	0.75	69	*e*P	Pg	12 54 26.0	-0.4
LLP				*e*S	Sg	12 54 36.2	+0.1
GUIM	Jordan	0.87	312	*e*P	Pg	12 54 29.1	+0.5
GUIM				*e*S	Sb	12 54 41.7	-0.2
DCPH	Dipolog City	1.46	176	⇑*e*P	Pn	12 54 38.2	-1.1
DCPH				*e*S	Sg	12 54 58.6	-0.2
JAP	San Jose, Anti	1.46	299	⇑*e*P	Pg	12 54 41.0	+1.2
JAP				*e*S	Sn	12 55 11.0	+12
RCP	Roxas	1.58	342	⇓*e*P	Pn	12 54 41.0	-0.1
RCP				*e*S	Sg	12 55 04.7	+1.8
MSLP	Maasin	1.59	87	*e*P	Pn	12 54 40.9	-0.3
MSLP				*e*S	Sg	12 55 03.5	+0.6
PAGZ	Pagadian	2.19	177	*e*P	Pb	12 54 51.9	-0.4
PAGZ				*e*S	Sg	12 55 21.7	-0.6
CUYO	Cuyo Island	2.34	290	*e*P	Pn	12 54 52.0	+0.6
CUYO				*e*S	Sn	12 55 22.3	+1.4
BUKP	Musuan	2.80	140	*e*P	Pn	12 55 00.0	+2.1
BUKP				*e*S	Sb	12 55 38.9	+1.2
SJMP	San Jose	3.18	319	*e*P	Pn	12 55 06.0	+2.9
BUSP	Coron	3.57	303	*e*P	Pn	12 55 09.3	+0.8

IDC 22 12:54:57.7±1.5, 5°.23S×129°.82E, h163km±19km, mb3.3/2, mb1 3.6/7, mb1mx3.2/59, mbtmp4.0/7, Error ellipse: s-maj=35.7km s-min=13.3km az=99.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	4.57	19	P	Pn	12 56 07.5	+1.8
	21nm,0.3s,baz=209,slow=0.9,SNR=121						
SIJI				S	Sn	12 56 58.2	-0.7
	10nm,0.3s,baz=233,slow=23,SNR=9.6						
BATI	Baumata	7.85	231	P	Pn	12 56 50.3	+1.2
	5.9nm,0.3s,baz=74,slow=1.6,SNR=7.0						
FITZ	Fitzroy Crossi	13.43	197	P	Pn	12 58 00.6	-1.4
	0.3nm,0.3s,baz=14,slow=8.7,SNR=10						
FITZ				S	Sn	13 00 21.2	-10
	0.1nm,0.3s,baz=263,slow=17,SNR=2.6						
WRA	Warramunga Arr	15.27	164	P	Pn	12 58 23.3	-1.7
	0.4nm,0.3s,baz=342,slow=12,SNR=29						
WRA				S	Sn	13 01 04.8	-11
	0.5nm,0.3s,baz=338,slow=23,SNR=8.9						
ASAR	Alice Springs	18.75	168	P	P	12 59 04.7	+0.3
	0.9nm,0.3s,baz=338,slow=9.6,SNR=53						
ASAR				S	S	13 02 24.1	-5.1
	0.1nm,0.3s,baz=188,slow=26,SNR=4.7						
MKAR	Makanchi Array	66.66	326	P	P	13 05 31.0	+0.1
	0.3nm,0.4s,baz=118,slow=6.5,SNR=5.1						
KURBB	Kurchatov Arra	70.92	328	P	P	13 05 57.1	0.0
	0.5nm,0.6s,baz=130,slow=4.2,SNR=5.0						

MAN 22 13:00:43.1, 10°.02N×123°.25E, h4km, mb4.0, ML2.7, MS2.3, 1C-1D, Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	Sibulan	0.67	181	⇓*i*P	Pb	13 00 57.2	-0.3
SNPH				*i* S	Sb	13 01 08.5	+1.3
TBP	Tagbilaran	0.69	118	*e*P	Pg	13 00 56.5	+0.1
TBP				*i* S	Sn	13 01 10.2	-0.7
GUIM	Jordan	0.88	313	*e*P	Pg	13 00 59.5	-0.7
GUIM				*e*S	Sg	13 01 12.1	+0.5
DCPH	Dipolog City	1.43	176	*e*P	Pn	13 01 09.1	-0.8
DCPH				*e*S	Sb	13 01 28.9	-0.2
MSLP	Maasin	1.59	86	*e*P	Pn	13 01 11.7	-0.5
MSLP				*e*S	Sn	13 01 33.3	+0.1
RCP	Roxas	1.61	342	⇑*e*P	Pn	13 01 12.6	+0.3
PAGZ	Pagadian	2.16	176	*e*P	Pb	13 01 23.2	+0.3

*ISCJB **22** 13:03:49.7±0.5, 20°.84S±0°.03×69°.18W±0°.10, h119km±4km, mb3.6/5, Error ellipse: s-maj=14.8km s-min=4.3km az=1.4*
*IDC **22** 13:03:51.0±1.4, 20°.80S×68°.78W, h115km±8km, mb3.4/5, mb1 3.7/7, mb1mx3.4/42, mbtmp3.9/7, Error ellipse: s-maj=35.0km s-min=24.2km az=9.0*
*GUC **22** 13:03:50.1±0.5, 20°.855S×69°.29W, h115km±2km, ML4.0*

ISC 22 13:03:50.2±0.7, 20°.83S±0°.03×69°.08W±0°.09, h111km±6km, n25, σ0§99/38, mb3.8/5, 11C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	IPOC Station P	0.44	240	⇑*i*P	Pn	13 04 06.7	-0.3
PB01				*i* S	Sn	13 04 19.1	-0.4
PB08	IPOC Station P	0.68	354	⇓*i*P	Pn	13 04 09.3	+0.3
PB08				*i* S	Sn	13 04 23.6	+0.5
PB08				IAML		13 04 23.8	
	comp=E,10μm,0.3s						
PB02	IPOC Station P	0.91	237	⇑*i*P	Pn	13 04 10.7	0.0
PB02				*i* S	Sn	13 04 26.0	-0.2
PB02				IAML		13 04 27.5	
	comp=N,8μm,0.3s						
PB09	IPOC Station P	0.98	189	⇑*i*P	Pn	13 04 11.8	+0.3
PB09				*i* S	Sn	13 04 28.4	+0.9
PB09				IAML		13 04 29.6	
	comp=E,4μm,0.3s						
PB07	IPOC Station P	1.17	220	⇑*i*P	Pn	13 04 13.5	-0.1
PB07				*i* S	Sn	13 04 30.6	-0.6
PB07				IAML		13 04 31.8	
	comp=E,6μm,0.4s						
PB03	IPOC Station P	1.37	207	⇑*i*P	Pn	13 04 15.7	-0.1
PB03				*i* S	Sn	13 04 34.4	-0.7
PB03				IAML		13 04 34.9	
	comp=E,2μm,0.2s						
PSGC	Pisagua	1.57	321	⇑*i*P	Pn	13 04 17.6	-0.4
PSGC				*i* S	Sn	13 04 38.2	-0.9
PSGC				IAML		13 04 41.9	
	comp=N,1μm,0.5s						
MNMC	Minye Minye	1.75	344	⇑*i*P	Pn	13 04 20.9	+0.4
MNMC				*i* S	Sn	13 04 44.4	+0.9
MNMC				IAML		13 04 46.3	
	comp=N,3μm,0.4s						
PB04	IPOC Station P	1.80	213	⇓*i*P	Pn	13 04 20.5	-0.5
PB04				*i* S	Sn	13 04 43.2	-1.2
PB04				IAML		13 04 47.2	
	comp=N,1μm,0.3s						
PB06	IPOC Station P	1.93	194	⇑*i*P	Pn	13 04 22.3	-0.2
PB06				*i* S	Sn	13 04 46.4	-0.8
PB06				IAML		13 04 48.6	
	comp=E,1μm,0.3s						
PB05	IPOC Station P	2.27	207	⇑*i*P	Pn	13 04 26.3	-0.6
PB05				IAML		13 04 55.7	
	comp=E,686nm,0.3s						
PB15	IPOC Station P	2.40	189	⇑*i*P	Pn	13 04 28.6	0.0
PB15				*e*S	Sn	13 04 58.2	+0.2
PB12	IPOC Station P	2.50	332	⇓*i*P	Pn	13 04 28.9	-0.9
PB12				*i* S	Sn	13 04 58.9	-1.1
PB12				IAML		13 05 05.9	
	comp=E,767nm,0.5s						
PB16	IPOC Station P	2.51	351	⇑*i*P	Pn	13 04 31.6	+1.2
PB16				*e*S	Sn	13 05 00.6	-0.5
LPAZ	La Paz	4.60	11	P	Pn	13 05 00.0	+1.7
	comp=E,1.8nm,0.3s,baz=210,slow=6.5,SNR=25						
SIV	San Ignacio	8.99	59	P	Pn	13 05 54.1	-3.1
	comp=E,4.4nm,0.3s,baz=256,slow=11,SNR=68						
PTGA	Pitinga	21.86	25	P	P	13 08 32.4	-1.8
	comp=E,1.6nm,0.3s,baz=268,slow=9.8,SNR=4.4						
TXAR	Lajitas Array	59.99	325	P	P	13 13 45.7	+0.4
	comp=E,0.2nm,0.5s,baz=145,slow=9.7,SNR=4.0						
NVAR	Mina Array Bea	74.87	322	P	P	13 15 21.0	+1.9
	comp=E,0.3nm,0.6s,baz=129,slow=3.6,SNR=3.4						
TORD	Torodi Ar. Bea	77.28	71	P	P	13 15 31.7	-1.2
	comp=E,0.8nm,0.3s,baz=252,slow=5.5,SNR=18						
TORD				pP	pP	13 16 01.1	0.0
	comp=E,1.2nm,0.6s,baz=249,slow=5.5,SNR=3.5						
YKA	Yellowknife Ar	90.50	341	P	P	13 16 39.4	+0.4
	comp=E,0.5nm,0.6s,baz=130,slow=4.7,SNR=4.6						
YKA				pP	pP	13 17 08.5	+0.5
	comp=E,0.3nm,0.6s,baz=141,slow=6.3,SNR=2.5						
H11S2	WAKE ISLAND Hyl27.64	278		T	T	15 42 41.1	
	baz=102,slow=74,SNR=5.6						
H11S1	WAKE ISLAND Hyl27.64	278		T	T	15 42 41.5	
	baz=102,slow=74,SNR=8.2						
H11S3	WAKE ISLAND Hyl27.65	278		T	T	15 42 41.9	
	baz=102,slow=74,SNR=3.8						
MKAR	Makanchi Array	145.18	35	PKP	PKPbc	13 23 14.7	+0.1
	comp=E,0.9nm,0.6s,baz=314,slow=4.0,SNR=7.4						
MKAR				pPKP	pPKPdf	13 23 45.9	+0.9
	comp=E,0.5nm,0.7s,baz=331,slow=4.7,SNR=3.3						

NEIC 22 13:06:34.8±0.0, 51°.93N×177°.73E, h2km, ML3.2(AEIC), After AEIC., Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSSA	Little Sitkin	0.49	88	P	Pb	13 06 46.1	0.0
LSNW	Little Sitkin	0.49	85	P	Pb	13 06 45.8	-0.4
LSSE	Little Sitkin	0.52	90	P	Pb	13 06 46.6	-0.1
LSPA	Little Sitkin	0.52	87	P	Pb	13 06 46.5	-0.2
LSPA				S	Sb	13 06 55.9	+1.2
AMKA	Amchitka	1.13	119	P	Pn	13 06 57.3	-0.3
CEAP	Semis' Anvil P	1.15	86	P	Pb	13 06 57.4	+0.1
CERB	Semis' Cerberu	1.18	89	P	Pb	13 06 57.9	0.0
CERB				S	Sn	13 07 15.6	+0.7
CERAA	Semis' Rag'd T	1.21	91	P	Pg	13 06 57.8	-0.2
SMY	Shemya	2.36	291	P	Pn	13 07 14.9	+0.3
SMY				S	Sb	13 07 46.7	-1.0
KIKV	Kanaga Island	3.16	89	P	Pn	13 07 26.1	+0.5
ADAG	Mount Adagdak	3.51	87	P	Pn	13 07 31.0	+0.7
ATKA	Atka Island	4.99	84	P	Pn	13 07 50.5	-0.2
ATKA				S	Sn	13 08 51.8	+2.9
EGAK	Eagle	24.58	43	*e*P	P	13 11 52.4	-3.3
DAWY	Dawson	25.21	45	*e*P	P	13 11 59.9	-1.7

*IDC **22** 13:08:36.6±1.9, 32°.92S×178°.44W, h0km, mb4.1/4, mb1 4.3/5, mb1mx3.8/44, mbtmp4.1/5, ML3.8/1, MS3.6/1, Ms1 3.6/1, ms1mx2.6/48, Error ellipse: s-maj=49.2km s-min=30.6km az=134.0*

ISC 22 13:08:40.7±2.4, 33°.0S±0°.2×178°.3W±0°.3, h32km, n8, σ0§99/8, mb4.2/4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	6.43	214	Pn	Pn	13 10 12.8	-0.4
	2.2nm,0.3s,baz=280,slow=3.3,SNR=18						
URZ				Sn	Sn	13 11 26.2	+0.6
	6.7nm,0.3s,baz=253,slow=14,SNR=9.9						
DZM	Mont Dzumac	17.32	305	LR	LR	13 18 02.4	
	comp=Z,172nm,18.1s,baz=180,slow=33						
CTA

0.8nm,0.8s,baz=206,slow=5.5,SNR=11
ILAR Eielson Array 86.50 13 P P 13 28 46.4 +1.7
0.2nm,0.4s,baz=226,slow=5.0,SNR=3.8
PDAR Pinedale Array 87.56 43 P P 13 28 53.3 +2.7
0.3nm,0.7s,baz=236,slow=6.4,SNR=3.2
BRTR Keskin Array B 145.63 314 PKPbc PKPab 13 35 39.9 -0.3
0.7nm,0.7s,baz=123,slow=5.3,SNR=2.4
GERES GERESS Array B 148.44 345 PKPbc PKPab 13 35 47.9 -3.2
0.5nm,0.7s,baz=134,slow=4.2,SNR=4.6

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*SOME **22** 13:27:39.1, 44°.70N×82°.12E, h5km*
*NNC **22** 13:27:41.5±0.8, 44°.73N×81°.85E, h0km, mb3.1, mpv2.6,*
Error ellipse: s-maj=11.0km s-min=4.0km az=119.0
ISC 22 13:27:39.3±3.8, 44°.61N±0°.07×82°.1E±0°.2, h3km±24km, n8, σ1°46/15, 3C-8D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.68**	**261**	⇓*iP*	**Pg**	**13 28 11.6**	**+0.2**
	5.6nm,0.4s						
DJR				⇓*iS*	**Sg**	**13 28 35.2**	**+2.1**
	7.8nm,0.4s						
KAPS	**Kapalarasan**	**2.06**	**290**	⇑*iP*	**Pg**	**13 28 18.0**	**-0.7**
	2.1nm,0.2s						
KAPS				⇓*iS*	**Sg**	**13 28 46.0**	**+0.6**
	7.6nm,0.4s						
MK31	**Makanchi Array**	**2.18**	**3**	⇓Pn	**Pn**	**13 28 17.5**	**+1.0**
	3.5nm,0.3s,baz=189,slow=16,SNR=97						
MK31				⇓Sn	**Sb**	**13 28 45.4**	**-1.5**
	2.6nm,0.3s,baz=189,slow=26,SNR=25						
MAKZ	**Makanchi**	**2.20**	**358**	⇓Pn	**Pn**	**13 28 17.6**	**+0.9**
	2.1nm,0.5s						
MAKZ				⇓Sn	**Sb**	**13 28 45.6**	**-1.7**
	9.8nm,0.4s						
PDGK	**Podgornoye**	**2.28**	**237**	⇑Pg	**Pb**	**13 28 21.4**	**+0.2**
	1.0nm,0.4s						
PDGK				⇓Lg	Lg	13 28 53.2	
	9.2nm,0.5s						
SHLS	**Shalkode**	**2.40**	**234**	*eP*	**Pn**	**13 28 20.9**	**+1.4**
	3.9nm,0.5s						
SHLS				⇑*iS*	**Sb**	**13 28 51.0**	**-2.1**
	20nm,0.4s						
UZB	**Uzynbulak**	**2.66**	**238**	*eP*	**Pb**	**13 28 28.1**	**+0.4**
	1.7nm,0.4s						
UZB				*eS*	**Sg**	**13 29 03.3**	**-1.6**
	2.8nm,0.2s						
KPKS	**Kokpek**	**2.72**	**246**	*eP*	**Pb**	**13 28 29.1**	**+0.6**
	6.8nm,0.4s						
KPKS				*eS*	**Sg**	**13 29 05.2**	**-1.3**
	17nm,0.7s						

MAN 22 13:29:49.6, 5°.88N×126°.13E, h89km, mb4.3, ML3.2, MS2.9, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.06**	**7**	*eP*	Pn	13 30 10.2	+0.2
MATI				*eS*	Sn	13 30 21.4	-3.8
DMPH	**Davao City--Mi**	**1.34**	**333**	⇑*eP*	Pn	13 30 07.8	-5.5
DMPH				*eS*	Sn	13 30 29.1	-2.1
SKMP	**Bagumbayan, Su**	**1.69**	**292**	*eP*	Pn	13 30 18.3	+0.5
SKMP				*eS*	Sn	13 30 40.4	+1.2
BUKP	**Musuan**	**2.25**	**332**	*eP*	Pn	13 30 25.4	+0.3
BUKP				*eS*	Sn	13 30 52.5	+0.3
BIPH	**Bislig**	**2.30**	**6**	⇓*iP*	Pn	13 30 27.6	+1.9
BIPH				*i* S	Sn	13 30 54.8	+1.5
PAGZ	**Pagadian**	**3.35**	**306**	*eP*	Pn	13 30 41.0	+1.2

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*SJA **22** 13:34:24.0±0.5, 32°.42S×71°.97W, h30km±13km, ML3.3, MW3.4*
*GUC **22** 13:34:26.7±0.4, 32°.45S×71°.56W, h29km±3km, ML3.7*
ISC 22 13:34:20.2±2.4, 32°.53S±0°.05×72°.1W±0°.1, h6km±12km, n16, σ1°07/24, 5D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROCH	**El Roble**	**0.98**	**117**	⇓*iP*	**Pn**	**13 34 41.3**	**+0.6**
ROCH				*i* S	**Sg**	**13 34 52.0**	**+0.2**
ROCH				IAML		13 34 53.0	
	comp=N,4μm,0.3s						
PEL	**Peldehue**	**1.30**	**118**	*eP*	**Pg**	**13 34 46.0**	**+0.8**
PEL				*i* S	**Sb**	**13 35 00.4**	**-1.6**
PEL				IAML		13 35 03.9	
	comp=N,5μm,0.4s						
CLCH	**Cerro Calan**	**1.54**	**125**	⇓*iP*	**Pg**	**13 34 50.3**	**+0.6**
CLCH				*i* S	**Sn**	**13 35 08.1**	**-0.4**
CLCH				IAML		13 35 15.0	
	comp=E,3μm,0.6s						
ANTU	**Antumapu**	**1.58**	**131**	*eP*	**Pg**	**13 34 51.4**	**+0.9**
ANTU				IAML		13 35 14.8	
	comp=E,1μm,0.5s						
FCH	**Farellones**	**1.68**	**119**	⇓*iP*	**Pg**	**13 34 52.3**	**-0.1**
FCH				*i* S	**Sn**	**13 35 12.0**	**-0.4**
FCH				IAML		13 35 13.8	
	comp=E,2μm,0.3s						
LMEL	**Las Melosas**	**2.03**	**131**	*eP*	**Pg**	**13 34 58.1**	**-1.0**
LMEL				*eS*	**Sb**	**13 35 22.2**	**-0.9**
LMEL				IAML		13 35 27.4	
	comp=N,1μm,0.2s						
RTLS	**Leoncito**	**2.44**	**73**	*eP*	**Pg**	**13 35 07.0**	**-0.1**
RTLS				⇓*eS*	**Sg**	**13 35 39.0**	**+0.2**
GO04	**Tololo Observa**	**2.58**	**25**	*eP*	**Pb**	**13 35 07.1**	**+0.1**
TLL	**Tololo Astrono**	**2.58**	**25**	*eP*	**Pb**	**13 35 07.0**	**0.0**
TLL				IAML		13 35 54.5	
	comp=N,588nm,0.5s						
ARCO	**CERRO ARCO**	**2.65**	**98**	*eP*	**Pg**	**13 35 10.1**	**-0.9**
ARCO				IAML		13 35 15.7	
	comp=Z,159nm,0.5s						
ASAL	**Salagasta**	**2.71**	**92**	*eP*	**Pg**	**13 35 11.1**	**-1.1**
ASAL				*eS*	**Sb**	**13 35 46.0**	**+3.2**
AAGR	**Agrelo**	**2.77**	**102**	*eP*	**Pg**	**13 35 12.1**	**-1.2**
RTCV	**Cerro Valdivia**	**3.05**	**78**	*eP*	**Pb**	**13 35 15.4**	**+0.6**
AROD	**Rodeo**	**3.23**	**44**	⇓*eP*	**Pb**	**13 35 18.0**	**0.0**
AROD				*eS*	**Sb**	**13 35 57.9**	**+0.2**
AMOG	**MOGNA**	**3.42**	**63**	*eP*	**Pb**	**13 35 20.4**	**-0.9**
ACDV	**Cuesta del Vie**	**3.44**	**48**	*eP*	**Pb**	**13 35 20.6**	**-0.9**
ACDV				IAML		13 36 19.4	
	comp=Z,69nm,0.5s						

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*IDC **22** 13:34:09.0±5.1, 23°.59S×68°.50W, h0km, mb3.9/1,*
mb1 3.8/2, mb1mx3.4/36, mbtmp3.7/2, ML3.6/1, Error
ellipse: s-maj=154.6km s-min=56.3km az=71.0
*ISCJB **22** 13:34:24.2±0.8, 22°.58S±0°.05×68°.8W±0°.1, h122km±10km,*
mb3.6/1, Error ellipse: s-maj=21.1km s-min=7.1km az=6.6
*GUC **22** 13:34:24.4±0.4, 22°.58S×68°.73W, h111km±3km, ML3.5*
ISC 22 13:34:24.9±1.2, 22°.58S±0°.05×68°.7W±0°.1, h114km±11km, n17, σ0°61/26, 8C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB06	**IPOC Station P**	**0.78**	**261**	⇑*eP*	**Pn**	**13 34 44.0**	**-0.6**
PB06				*i* S	**Sn**	**13 34 59.2**	**-0.1**
PB06				IAML		13 35 01.2	
	comp=E,913nm,0.1s						
PB09	**IPOC Station P**	**0.91**	**329**	⇓*eP*	**Pn**	**13 34 45.7**	**-0.1**
PB09				*eS*	**Sn**	**13 35 01.4**	**-0.1**
PB09				IAML		13 35 01.9	
	comp=N,864nm,0.5s						
PB15	**IPOC Station P**	**0.92**	**227**	⇑*iP*	**Pn**	**13 34 45.7**	**-0.2**
PB15				*i* S	**Sn**	**13 35 02.2**	**+0.5**
PB03	**IPOC Station P**	**1.08**	**299**	⇑*iP*	**Pn**	**13 34 47.3**	**-0.2**
PB03				*i* S	**Sn**	**13 35 04.5**	**0.0**
PB03				IAML		13 35 06.5	
	comp=N,1μm,0.3s						
PB04	**IPOC Station P**	**1.33**	**280**	*eP*	**Pn**	**13 34 50.3**	**+0.1**
PB04				*eS*	**Sn**	**13 35 09.6**	**+0.3**
PB04				IAML		13 35 13.8	
	comp=E,1μm,0.1s						
PB07	**IPOC Station P**	**1.36**	**308**	⇑*eP*	**Pn**	**13 34 50.6**	**+0.1**
PB07				*i* S	**Sn**	**13 35 10.6**	**+0.6**
PB07				IAML		13 35 13.0	
	comp=N,919nm,0.3s						
PB05	**IPOC Station P**	**1.38**	**258**	⇑*iP*	**Pn**	**13 34 50.7**	**0.0**
PB05				*i* S	**Sn**	**13 35 10.7**	**+0.5**
PB05				IAML		13 35 14.6	
	comp=N,609nm,0.3s						
PB02	**IPOC Station P**	**1.65**	**319**	⇓*eP*	**Pn**	**13 34 54.1**	**+0.1**
PB02				*i* S	**Sn**	**13 35 16.3**	**+0.3**
PB02				IAML		13 35 24.6	
	comp=E,2μm,0.2s						
PB01	**IPOC Station P**	**1.68**	**335**	⇑*eP*	**Pn**	**13 34 54.1**	**-0.2**
PB01				*i* S	**Sn**	**13 35 17.1**	**+0.5**
PB01				IAML		13 35 18.6	
	comp=N,991nm,0.2s						
PB10	**IPOC Station P**	**1.91**	**241**	*eP*	**Pn**	**13 34 57.3**	**+0.3**
PB10				IAML		13 35 32.5	
	comp=N,368nm,0.3s						
PB08	**IPOC Station P**	**2.46**	**351**	⇑*eP*	**Pn**	**13 35 04.8**	**+0.4**
PB08				IAML		13 35 46.8	
	comp=E,145nm,0.3s						
PB14	**IPOC Station P**	**2.54**	**217**	*eP*	**Pn**	**13 35 06.0**	**+0.6**
PB14				IAML		13 35 43.4	
	comp=E,321nm,0.3s						
GO02	**Mina Guanaco**	**2.68**	**197**	⇓*eP*	**Pn**	**13 35 06.7**	**-0.5**
GO02				IAML		13 35 50.8	
	comp=N,408nm,0.3s						
PB12	**IPOC Station P**	**4.22**	**339**	⇑*eP*	**Pn**	**13 35 25.6**	**-1.8**
LPAZ	**La Paz**	**6.29**	**5**	Pn	**Pn**	**13 35 57.1**	**+1.2**
	comp=N,0.5nm,0.3s,baz=192,slow=4.3,SNR=9.6						
TORD	**Torodi Ar. Bea**	**77.57**	**70**	P	**P**	**13 46 08.2**	**-0.7**
	comp=N,0.5nm,0.4s,baz=240,slow=6.0,SNR=7.6						
MKAR	**Makanchi Array**	**146.41**	**37**	PKPbc	**PKPbc**	**13 53 53.0**	**+0.4**
	comp=N,0.2nm,0.5s,baz=314,slow=1.8,SNR=3.7						

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*MAN **22** 14:16:12.8, 4°.95N×126°.55E, h29km, mb4.9, ML3.8, MS3.8*
*ISCJB **22** 14:16:16.1±0.6, 5°.10N±0°.05×126°.44E±0°.09, h71km,*
mb3.7/11, Error ellipse: s-maj=13.5km s-min=6.2km
az=163.4
*IDC **22** 14:16:16.1±7.6, 5°.17N×126°.42E, h55km±70km, mb3.6/11,*
mb1 3.8/11, mb1mx3.5/57, mbtmp3.9/11, MS2.8/5,
Ms1 2.9/5, ms1mx2.6/58, Error ellipse: s-maj=43.1km
s-min=17.9km az=73.0
ISC 22 14:16:17.6±0.7, 5°.02N±0°.07×126°.5E±0°.1, h71km, n23, σ2°89/25, mb3.7/11, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.92**	**354**	*eP*	**Pn**	**14 16 45.9**	**-2.4**
MATI				*eS*	**Sn**	**14 17 09.5**	**-2.1**
DAV	**Davao City (W)**	**2.21**	**337**	S	**Sn**	**14 17 13.4**	**-5.2**
	77nm,0.3s,baz=269,slow=18,SNR=3.7						
DAV				LR	LR	14 17 47.9	
	comp=Z,145nm,21.9s,baz=154,slow=44						
DMPH	**Davao City--Mi**	**2.25**	**336**	⇑*eP*	**Pn**	**14 16 55.7**	**+2.9**
DMPH				*eS*	**Sn**	**14 17 27.1**	**+7.5**
SKMP	**Bagumbayan, Su**	**2.41**	**308**	*eP*	**Pn**	**14 16 52.9**	**-2.0**
SKMP				*eS*	**Sn**	**14 17 23.1**	**-0.3**
BIPH	**Bislig**	**3.14**	**358**	⇑*iP*	**Pn**	**14 17 05.9**	**+1.1**
BIPH				*i* S	**Sn**	**14 17 39.9**	**-1.3**
BUKP	**Musuan**	**3.16**	**334**	*eP*	**Pn**	**14 17 02.3**	**-2.8**
BUKP				*eS*	**Sn**	**14 17 47.0**	**+5.3**
BUTP	**Butuan**	**4.01**	**348**	*eP*	Pn	14 17 23.4	+6.7
BUTP				*eS*	**Sn**	**14 18 07.5**	**+5.1**
GUMO	**Guam**	**20.06**	**64**	LR	LR	14 26 54.1	
	comp=Z,40nm,21.8s,baz=217,slow=32						
JOW	**Kunigami**	**21.76**	**4**	LR	LR	14 28 24.9	
	comp=Z,36nm,21.0s,baz=173,slow=34						
FITZ	**Fitzroy Crossi**	**22.99**	**182**	P	**P**	**14 21 17.1**	**+0.6**
	2.7nm,0.9s,baz=12,slow=9.6,SNR=7.5						
WRA	**Warramunga Arr**	**25.99**	**163**	P	**P**	**14 21 45.8**	**+1.7**
	1.3nm,0.8s,baz=343,slow=10,SNR=27						
ASAR	**Alice Springs**	**29.43**	**166**	P	**P**	**14 22 16.1**	**+1.3**
	0.5nm,0.5s,baz=340,slow=6.7,SNR=14						
CMAR	**Chiang Mai Arr**	**29.99**	**299**	LR	LR	14 34 48.5	
	comp=Z,18nm,18.8s,baz=275,slow=37						
PETK	**Petropavlovsk-**	**54.35**	**23**	P	**P**	**14 25 36.8**	**-0.1**
	2.3nm,0.9s,baz=250,slow=3.0,SNR=3.8						
MKAR	**Makanchi Array**	**56.34**	**325**	P	**P**	**14 25 50.6**	**-0.8**
	1.0nm,0.5s,baz=120,slow=7.6,SNR=11						
MKAR				PcP	**PcP**	**14 26 48.0**	**0.0**
	0.8nm,0.7s,baz=117,slow=4.8,SNR=4.5						
KURBB	**Kurchatov Arra**	**60.51**	**327**	P	**P**	**14 26 19.7**	**-0.6**
	0.8nm,0.6s,baz=125,slow=6.8,SNR=8.6						
BVAR	**Borovoye Array**	**66.09**	**327**	P	**P**	**14 26 56.7**	**-0.5**
	0.6nm,0.6s,baz=126,slow=7.3,SNR=5.1						
ILAR	**Eielson Array**	**84.07**	**25**	P	**P**	**14 28 39.4**	**-0.9**
	0.4nm,0.9s,baz=251,slow=5.6,SNR=3.3						
VNDA	**Vanda**	**84.73**	**173**	P	**P**	**14 28 44.4**	**+1.0**
	0.9nm,1.1s,baz=313,slow=5.5,SNR=4.2						
ARCES	**ARCESS Array B**	**89.15**	**340**	P	**P**	**14 29 03.9**	**-1.2**
	1.7nm,0.8s,baz=80,slow=7.5,SNR=3.9						
FINES	**FINESS Array B**	**90.57**	**332**	P	**P**	**14 29 10.4**	**-1.4**
	0.5nm,0.5s,baz=72,slow=6.2,SNR=5.1						
MLR	**Muntele Rosu**	**93.78**	**316**	LR	LR	15 14 36.0	
	comp=Z,5.9nm,21.1s,baz=222,slow=37						
TORD	**Torodi Ar. Bea**	**122.25**	**289**	PKP	**PKPdf**	**14 35 06.3**	**+0.7**
	0.5nm,0.6s,baz=85,slow=0.2,SNR=4.6						

IDC 22 14:26:27.4±3.3, 14°.61S×65°.94E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/70, mbtmp3.5/4, MS3.4/2, Ms1 3.5/2, ms1mx2.7/56, Error ellipse: s-maj=117.2km s-min=31.3km az=57.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**9.44**	**44**	T	T	14 38 06.9	
	baz=221,slow=76,SNR=18						
H08S2	**Diego Garcia H**	**9.45**	**44**	T	T	14 38 06.7	
	baz=221,slow=76,SNR=118						
H08S3	**Diego Garcia H**	**9.46**	**43**	T	T	14 38 05.1	
	baz=221,slow=76,SNR=347						
H08N3	**Diego Garcia H**	**9.60**	**32**	T	T	14 38 14.1	
	baz=210,slow=75,SNR=679						
H08N1	**Diego Carcia H**	**9.61**	**32**	T	T	14 38 18.0	
	baz=210						
H08N2	**Diego Garcia H**	**9.62**	**32**	T	T	14 38 16.3	
	baz=210,slow=75,SNR=691						
CMAR	**Chiang Mai Arr**	**46.23**	**46**	LR	LR	14 53 53.1	
	comp=Z,35nm,18.0s,baz=194,slow=36						
H01W3	**Cape Leeuwin H**	**47.69**	**124**	T	T	15 26 04.1	
	baz=282,slow=75,SNR=5.5						
H01W2	**Cape Leeuwin H**	**47.69**	**124**	T	T	15 26 06.1	
	baz=282,slow=75,SNR=6.5						
H01W1	**Cape Leeuwin H**	**47.70**	**124**	T	T	15 26 04.7	
	baz=282,slow=75,SNR=6.5						
MKAR	**Makanchi Array**	**62.86**	**13**	P	P	14 36 55.2	+0.1
	0.5nm,0.7s,baz=188,slow=6.8,SNR=3.8						
ASAR	**Alice Springs**	**64.34**	**109**	P	P	14 37 06.0	+0.6
	0.5nm,0.8s,baz=280,slow=5.5,SNR=4.1						
WRA	**Warramunga Arr**	**65.15**	**105**	P	P	14 37 10.3	-0.5
	0.4nm,0.8s,baz=272,slow=5.8,SNR=6.5						
KURBB	**Kurchatov Arra**	**65.88**	**9**	P	P	14 37 14.8	0.0
	0.2nm,0.6s,baz=208,slow=7.1,SNR=2.4						
KOWA	**Kowa**	**74.98**	**290**	LR	LR	15 07 31.6	
	comp=Z,24nm,19.1s,baz=216,slow=33						
PDAR	**Pinedale Array**	**151.67**	**353**	PKPbc	PKPbc	14 46 24.0	-0.4
	0.4nm,0.7s,baz=1.4,slow=5.9,SNR=3.7						

IDC 22 14:27:58.7±2.9, 14°.80S×65°.66E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/70, mbtmp3.5/3, Error ellipse: s-maj=108.7km s-min=34.9km az=53.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**9.76**	**44**	T	T	14 39 38.6	
	baz=221,slow=75,SNR=9.1						
H08S2	**Diego Garcia H**	**9.77**	**44**	T	T	14 39 38.5	
	baz=221,slow=75,SNR=14						
H08S3	**Diego Garcia H**	**9.78**	**44**	T	T	14 39 41.7	
	baz=221,slow=75,SNR=11						
H08N3	**Diego Garcia H**	**9.90**	**32**	T	T	14 39 48.8	
	baz=210,slow=75,SNR=24						
H08N1	**Diego Carcia H**	**9.92**	**33**	T	T	14 39 49.9	
	baz=210,slow=75,SNR=765						
H08N2	**Diego Garcia H**	**9.93**	**32**	T	T	14 39 50.7	
	baz=210,slow=75,SNR=22						
H01W3	**Cape Leeuwin H**	**47.80**	**124**	T	T	15 27 31.0	
	baz=283						
H01W2	**Cape Leeuwin H**	**47.80**	**124**	T	T	15 27 33.2	
	baz=283,slow=74,SNR=5.3						
H01W1	**Cape Leeuwin H**	**47.82**	**124**	T	T	15 27 31.8	
	baz=283,slow=74,SNR=7.0						
MKAR	**Makanchi Array**	**63.11**	**13**	P	P	14 38 28.0	0.0
	0.3nm,0.7s,baz=204,slow=12,SNR=3.2						
ASAR	**Alice Springs**	**64.53**	**109**	P	P	14 38 37.9	-0.1
	0.4nm,0.7s,baz=266,slow=6.0,SNR=4.5						
WRA	**Warramunga Arr**	**65.36**	**105**	P	P	14 38 43.6	+0.1
	0.5nm,0.7s,baz=268,slow=5.8,SNR=6.4						
PDAR	**Pinedale Array**	**151.83**	**353**	PKPbc	PKPbc	14 47 55.9	-0.2
	0.1nm,0.3s,baz=17,slow=6.6,SNR=2.5						

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*IDC **22** 14:35:40.4±2.5, 19°.04N×122°.39E, h0km, mb3.6/6,*
mb1 3.7/6, mb1mx3.4/70, mbtmp3.6/6, Error ellipse:
s-maj=188.5km s-min=17.9km az=65.0
*ISCJB **22** 14:35:43.4±0.9, 19°.10N±0°.06×122°.5E±0°.2, h33km,*
mb3.5/6, Error ellipse: s-maj=25.3km s-min=8.5km az=5.1
ISC 22 14:35:45.5±1.3, 19°.06N±0°.09×122°.4E±0°.3, h35km, n9, σ1°28/11, mb3.6/6, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CVP	**Callao Caves**	**1.44**	**201**	*i* P	**Pn**	**14 36 10.0**	**+0.8**
CVP				*i* S	**Sn**	**14 36 25.1**	**-1.7**
CAUP	**Cauayan**	**2.16**	**194**	*eP*	**Pn**	**14 36 20.0**	**+0.9**
CAUP				*eS*	**Sn**	**14 36 46.5**	**+1.8**
BALP	**Baler**	**3.38**	**193**	*eP*	**Pn**	**14 36 34.6**	**-1.2**
FITZ	**Fitzroy Crossi**	**37.06**	**175**	P	**P**	**14 42 51.0**	**-1.3**
	2.1nm,0.9s,baz=36,slow=14,SNR=2.0						
WRA	**Warramunga Arr**	**40.49**	**163**	P	**P**	**14 43 20.8**	**-0.4**
	0.2nm,0.6s,baz=347,slow=8.8,SNR=4.9						
MKAR	**Makanchi Array**	**42.86**	**319**	P	**P**	**14 43 40.5**	**+0.1**
	1.1nm,0.8s,baz=119,slow=8.8,SNR=9.5						
ASAR	**Alice Springs**	**43.93**	**165**	P	**P**	**14 43 50.2**	**+1.1**
	0.2nm,0.6s,baz=339,slow=6.8,SNR=6.1						
KURBB	**Kurchatov Arra**	**46.78**	**323**	P	**P**	**14 44 12.1**	**+0.6**
	2.6nm,0.8s,baz=122,slow=7.8,SNR=19						
BVAR	**Borovoye Array**	**52.37**	**323**	P	**P**	**14 44 53.4**	**-0.7**
	0.4nm,0.6s,baz=116,slow=12,SNR=3.7						

MEX 22 14:50:54.6±1.6, 16°.61N×98°.24W, h16km±77km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.00**	**342**	*eP*	Pb	14 51 10.2	-3.4
TLIG				*i* S	Sb	14 51 21.5	-5.0
VHO	**Vista Hermosa**	**1.52**	**72**	*eP*	Pn	14 51 16.8	-4.5
VHO				*eS*	Sn	14 51 35.6	-5.2
ACX	**Acapulco**	**1.57**	**280**	*eP*	Pn	14 51 18.7	-3.1
ACX				*i* S	Sn	14 51 38.2	-3.6
CAIG	**El Cayaco**	**1.99**	**283**	*eP*	Pn	14 51 25.1	-2.4
CAIG				*eS*	Sn	14 51 52.1	0.0
PLIG	**Platanillo**	**2.14**	**326**	*eP*	Pn	14 51 29.6	-0.1
PLIG				*eS*	Sb	14 51 59.0	-0.4
ARIG	**Puente Sto Nin**	**2.61**	**310**	*eP*	Pb	14 51 42.1	+1.1

KRSC 22 14:52:12.2±1.6, 51°.82N×161°.44E, h41km±24km, ML3.7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**1.55**	**326**	*eP*	Pn	14 52 38.6	+1.4
SPN				*eS*	Sn	14 52 57.3	+1.3
NLC	**Nalytchevo**	**1.86**	**317**	*eP*	Pn	14 52 44.3	+2.8
NLC				*eS*	Sn	14 53 07.3	+3.5
RUS	**Russkaya**	**1.91**	**290**	*eP*	Pn	14 52 44.1	+2.0
RUS				*eS*	Sn	14 53 06.8	+2.0
DALK	**Dalny**	**2.04**	**307**	*eP*	Pn	14 52 46.6	+2.6
DALK				*eS*	Sn	14 53 11.0	+2.8
KDTR	**Khodutka, Kamc**	**2.09**	**271**	*eP*	Pn	14 52 46.0	+1.4
KDTR				*eS*	Sn	14 53 09.7	+0.4
PET	**Petropavlovsk**	**2.09**	**306**	*eP*	Pn	14 52 47.5	+2.9
PET				*eS*	Sn	14 53 12.7	+3.3
MTVR	**Mutnovka**	**2.11**	**290**	*eP*	Pn	14 52 47.3	+2.2
MTVR				*eS*	Sn	14 53 12.4	+2.2
UGLR	**Uglovaya**	**2.12**	**312**	*eP*	Pn	14 52 48.7	+3.5
UGLR				*eS*	Sn	14 53 14.8	+4.5
SDLR	**Sedlovina**	**2.14**	**314**	*eP*	Pn	14 52 48.4	+3.0
AVH	**Avacha**	**2.19**	**312**	*eS*	Sn	14 53 14.6	+2.5
KRER	**Koryakskii**	**2.21**	**313**	*eP*	Pn	14 52 50.1	+3.5
ASAK	**Asacha**	**2.25**	**286**	*eP*	Pn	14 52 49.5	+2.5
ASAK				*eS*	Sn	14 53 16.2	+2.6
KOK	**Koryaka**	**2.26**	**312**	*eP*	Pn	14 52 49.8	+2.7
KRMR	**Karymshinskiy**	**2.27**	**298**	*eP*	Pn	14 52 49.6	+2.5
KRMR				*eS*	Sn	14 53 16.4	+2.6
MKZ	**Mys Kozlova**	**2.75**	**4**	*eP*	Pn	14 52 55.6	+2.0
MKZ				*eS*	Sn	14 53 27.8	+2.3
GNL	**Ganaly**	**2.84**	**313**	*eP*	Pn	14 52 58.9	+3.9
GNL				*eS*	Sn	14 53 32.3	+4.3
APC	**Apacha**	**2.85**	**295**	*eP*	Pn	14 52 59.3	+4.3
APC				*eS*	Sn	14 53 33.3	+5.2
KZV	**Kizimen**	**3.37**	**349**	*eP*	Pn	14 53 05.8	+3.4
TUMR	**Tumrok**	**3.56**	**348**	*eP*	Pn	14 53 09.0	+4.1

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*TIF **22** 15:04:05.3, 42°.10N×45°.81E, h18km±2km*
*ATA **22** 15:04:06.9±0.4, 42°.07N×45°.71E, h26km±6km, ML3.5,*
MW3.5
*CSEM **22** 15:04:06.1±0.2, 42°.06N×45°.84E, h2km, ML3.5/4, Error*
ellipse: s-maj=4.3km s-min=2.6km az=148.0
*MOS **22** 15:04:06.5±1.3, 42°.05N×45°.87E, h15km, mb4.0/1, Error*
ellipse: s-maj=6.8km s-min=5.5km az=95.9
*ISK **22** 15:04:16.3, 41°.44N×44°.97E, h5km±1km, ML2.5/1*
*DDA **22** 15:04:26.4, 42°.19N×45°.81E, h13km, Ml3.4*
ISC 22 15:04:05.9±1.1, 42°.10N±0°.02×45°.76E±0°.02, h9km±9km, n86, σ0°95/135, 3C-2D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTLR	**Botlikh**	**0.66**	**31**	⇓*iP*G	**Pg**	**15 04 18.3**	**-0.3**
BTLR				*i*		15 04 27.1	
BTLR			

UNCR				*i* S	**Sb**	**15 04 38.0**	**0.0**
UNCR				pmax	pmax		
	comp=Z,71nm,0.2s						
UNCR	**Uncukul**	**0.98**	**51**	*i* Pg	**Pg**	**15 04 24.0**	**-0.7**
	comp=Z,71nm,0.2s						
UNCR				*i* Sg	**Sb**	**15 04 38.0**	**0.0**
KMKR	**Kumukh**	**0.99**	**88**	*e*PG	**Pg**	**15 04 25.0**	**0.0**
KMKR				*i* S	**Sn**	**15 04 40.1**	**-0.3**
KMKR				pmax	pmax		
	comp=Z,38nm,0.4s						
KMKR	**Kumukh**	**0.99**	**88**	*e*Pg	**Pg**	**15 04 25.0**	**0.0**
	comp=Z,38nm,0.4s						
ARKR	**Arakani**	**1.04**	**61**	*e*PG	**Pg**	**15 04 25.0**	**-0.9**
ARKR				*e*S	**Sb**	**15 04 40.0**	**+0.2**
ARKR	**Arakani**	**1.04**	**61**	*e*Pg	**Pg**	**15 04 25.0**	**-0.9**
ARKR				*e*Sg	**Sb**	**15 04 40.0**	**+0.2**
GROC	**Groznyy**	**1.10**	**1**	*e*PG	**Pg**	**15 04 26.1**	**-0.9**
GROC				*e*		15 04 40.5	
GROC				pmax	pmax		
	comp=Z,96nm,0.4s						
GROC				smax	smax		
	comp=E,792nm,0.6s						
GROC				smax	smax		
	comp=N,785nm,0.6s						
GROC	**Groznyy**	**1.10**	**1**	*e*Pg	**Pg**	**15 04 26.1**	**-0.9**
	comp=N,96nm,0.4s						
GROC				*e*Sg	**Sg**	**15 04 40.5**	**-0.8**
	comp=N,785nm,0.6s						
DLMR	**Dylym**	**1.16**	**33**	PG	**Pn**	**15 04 29.5**	**+1.3**
DLMR				*e*S	**Sn**	**15 04 45.5**	**+1.3**
DLMR				pmax	pmax		
	comp=Z,53nm,0.2s						
DLMR	**Dylym**	**1.16**	**33**	Pg	**Pn**	**15 04 29.5**	**+1.3**
	comp=Z,53nm,0.2s						
DLMR				*e*Sg	**Sn**	**15 04 45.5**	**+1.3**
KMGR	**Komgaron**	**1.16**	**325**	*e*PG	**Pn**	**15 04 28.8**	**+0.5**
KMGR				pmax	pmax		
	comp=Z,54nm,0.4s						
KMGR	**Komgaron**	**1.16**	**325**	*e*Pg	**Pn**	**15 04 28.8**	**+0.5**
	comp=Z,54nm,0.4s						
DBC	**Dubki**	**1.21**	**40⇑**	*i*PG	**Pb**	**15 04 28.2**	**-0.7**
DBC				*i*		15 04 44.3	
DBC	**Dubki**	**1.21**	**40**	*i* Pg	**Pb**	**15 04 28.2**	**-0.7**
DBC				*i* Sg	**Sg**	**15 04 44.3**	**-0.5**
KZR	**Kazreti**	**1.24**	**235**	P	**Pb**	**15 04 28.0**	**-1.4**
KZR				S	**Sb**	**15 04 45.9**	**+0.3**
KZR	**Kazreti**	**1.24**	**235**	P	**Pb**	**15 04 28.0**	**-1.4**
KZR				S	**Sb**	**15 04 45.9**	**+0.3**
ARNR	**Ardon**	**1.53**	**315**	*e*PN	**Pg**	**15 04 35.5**	**+0.2**
ARNR				*e*S	**Sg**	**15 04 57.8**	**+2.6**
ARNR	**Ardon**	**1.53**	**315**	*e*Pn	**Pg**	**15 04 35.5**	**+0.2**
ARNR				*e*Sg	**Sg**	**15 04 57.8**	**+2.6**
BTKR	**Batakoyurt**	**1.56**	**325**	*e*PN	**Pg**	**15 04 36.1**	**+0.4**
BTKR				*e*S	**Sg**	**15 04 58.7**	**+2.8**
BTKR	**Batakoyurt**	**1.56**	**325**	*e*Pn	**Pg**	**15 04 36.1**	**+0.4**
BTKR				*e*Sg	**Sg**	**15 04 58.7**	**+2.8**
AKT	**Akhty**	**1.60**	**112⇑**	*e*PG	**Pn**	**15 04 34.9**	**+0.6**
AKT				*e*		15 04 56.1	
AKT				pmax	pmax		
	comp=Z,44nm,0.6s						
AKT				smax	smax		
	comp=N,82nm,0.8s						
AKT	**Akhty**	**1.60**	**112**	*e*Pg	**Pn**	**15 04 34.9**	**+0.6**
	comp=N,44nm,0.6s						
AKT				*e*Sg	**Sb**	**15 04 56.1**	**+0.2**
	comp=N,82nm,0.8s						
STDR	**Stavd-Durt**	**1.78**	**316**	*e*PN	**Pg**	**15 04 39.5**	**-0.5**
STDR	**Stavd-Durt**	**1.78**	**316**	*e*Pn	**Pg**	**15 04 39.5**	**-0.5**
BGD	**Bogdanovka**	**1.83**	**243**	P	**Pn**	**15 04 37.1**	**-0.4**
BGD				S	**Sb**	**15 05 02.4**	**-0.2**
BGD	**Bogdanovka**	**1.83**	**243**	P	**Pn**	**15 04 37.6**	**0.0**
AKH	**Akhalkalaki**	**1.83**	**249**	PN	**Pn**	**15 04 38.4**	**+0.7**
AKH	**Akhalkalaki**	**1.83**	**249**	P	**Pn**	**15 04 38.4**	**+0.7**
AKH				S	**Sb**	**15 05 03.0**	**+0.2**
AKH	**Akhalkalaki**	**1.83**	**249**	*e*PN	**Pn**	**15 04 38.4**	**+0.7**
AKH	**Akhalkalaki**	**1.83**	**249**	P	**Pn**	**15 04 38.4**	**+0.7**
LSNR	**Lesken**	**1.85**	**310**	*e*PN	**Pg**	**15 04 41.1**	**-0.2**
LSNR	**Lesken**	**1.85**	**310**	*e*Pn	**Pg**	**15 04 41.1**	**-0.2**
DRN	**Derbent**	**1.91**	**91**	*e*PN	**Pb**	**15 04 40.1**	**-0.7**
DRN				*e*S	**Sb**	**15 05 05.8**	**+1.0**
DRN	**Derbent**	**1.91**	**91**	*e*Pn	**Pb**	**15 04 40.1**	**-0.7**
DRN				*e*Sg	**Sb**	**15 05 05.8**	**+1.0**
GNI	**Garni**	**2.10**	**202**	PN	**Pn**	**15 04 42.0**	**+0.7**
GNI	**Garni**	**2.10**	**202**	*i* PN	**Pn**	**15 04 42.4**	**+1.1**
GNI	**Garni**	**2.10**	**202**	*i* Pn	**Pn**	**15 04 42.4**	**+1.1**
NCK	**Nalchik**	**2.12**	**312**	*i* PN	**Pb**	**15 04 43.9**	**-0.5**
NCK	**Nalchik**	**2.12**	**312**	*i* Pn	**Pb**	**15 04 43.9**	**-0.5**
EAK	**Akyaka**	**2.15**	**230**	*i* P	**Pn**	**15 04 42.7**	**+0.7**
EAK				*i* Pg	**Pg**	**15 04 46.5**	**-0.7**
EAK				*e*S	**Sb**	**15 05 11.5**	**-0.4**
EAK				IAML		15 05 23.7	
	comp=Z,43nm,0.5s						
EAK	**Akyaka**	**2.15**	**230**	*i* P	**Pn**	**15 04 42.5**	**+0.5**
EAK				*i* S	**Sb**	**15 05 11.6**	**-0.4**
EAK	**Akyaka**	**2.15**	**230**	P	**Pn**	**15 04 42.5**	**+0.5**
EAK				S	**Sb**	**15 05 11.6**	**-0.4**
EPOS	**Posof**	**2.35**	**256**	*e*P	**Pb**	**15 04 46.9**	**-1.5**
EPOS	**Posof**	**2.35**	**256**	*i* P	**Pn**	**15 04 44.9**	**+0.2**
EPOS				*i* S	**Sb**	**15 05 18.0**	**+0.5**
EPOS	**Posof**	**2.35**	**256**	P	**Pn**	**15 04 44.9**	**+0.2**
EPOS				S	**Sb**	**15 05 18.0**	**+0.5**
KBTC	**Kuba-Taba**	**2.43**	**316**	*e*PN	**Pb**	**15 04 48.0**	**-1.8**
KBTC				*e*S	**Sb**	**15 05 18.4**	**-1.5**
KBTC	**Kuba-Taba**	**2.43**	**316**	*e*Pn	**Pb**	**15 04 48.0**	**-1.8**
KBTC				*e*Sn	**Sb**	**15 05 18.4**	**-1.5**
DIGO	**Kars**	**2.47**	**228**	*e*P	**Pn**	**15 04 48.4**	**+1.9**
DIGO				*e*S	**Sb**	**15 05 21.1**	**0.0**
DIGO				IAML		15 05 23.8	
	comp=Z,11nm,0.4s						
DIGO	**Kars**	**2.47**	**228**	*i* P	**Pn**	**15 04 47.5**	**+1.1**
DIGO				*i* S	**Sb**	**15 05 20.9**	**-0.2**
DIGO	**Kars**	**2.47**	**228**	P	**Pn**	**15 04 47.5**	**+1.1**
DIGO				S	**Sb**	**15 05 20.9**	**-0.2**
NEY	**Neytrino**	**2.52**	**298**	*e*PN	**Pb**	**15 04 52.4**	**+1.1**
NEY				pmax	pmax		
	comp=Z,36nm,0.5s						
CHVG	**Ch'k'valeri**	**2.79**	**284**	PN	**Pb**	**15 04 56.0**	**+0.1**
CHVG	**Ch'k'valeri**	**2.79**	**284**	*e*Pn	**Pb**	**15 04 56.0**	**+0.1**
SHA1	**Shidzhatmaz**	**2.81**	**307**	*e*PN	**Pb**	**15 04 55.0**	**-1.3**
SHA1				*e*S	**Sb**	**15 05 29.8**	**-1.0**
SHA1	**Shidzhatmaz**	**2.81**	**307**	*e*Pn	**Pb**	**15 04 55.0**	**-1.3**
SHA1				*e*Sn	**Sb**	**15 05 29.8**	**-1.0**
KIV	**Kislovodsk**	**2.92**	**310**	*i* PN	**Pb**	**15 04 56.6**	**-1.5**
KIV	**Kislovodsk**	**2.92**	**310**	*i* Pn	**Pb**	**15 04 56.6**	**-1.5**
BCA	**Borcka**	**3.17**	**259**	PN	**Pb**	**15 04 59.9**	**-2.4**
BCA	**Borcka**	**3.17**	**259**	*e*Pn	**Pb**	**15 04 59.9**	**-2.4**
EATA	**Eleskirt**	**3.34**	**229**	*e*P	**Pn**	**15 05 00.6**	**+2.1**
ANN	**Anapa**	**6.63**	**297**	*e*P	Pn	15 05 49.5	+6.1
ANN				pmax	pmax		
	comp=Z,47nm,1.8s						
BRVK	**Borovoye**	**19.74**	**48**	*e*P	**P**	**15 08 35.4**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,1.0nm,1.0s						

ISCJB ***22*** *15:07:16.3±1.1,5°.8S±0°.2×154°.7E±0°.2,h118km,mb3.6/7, Error ellipse: s-maj=32.8km s-min=12.4km az=141.1*
IDC ***22*** *15:07:22.4±5.5,5°.70S×154°.40E,h152km±45km,mb3.4/7, mb1 3.6/8,mb1mx3.3/51,mbtmp3.9/8,Error ellipse: s-maj=45.8km s-min=24.0km az=110.0*
ISC 22 15:07:17.9±1.3,5°.7S±0°.2×154°.7E±0°.2,h118km,n8, σ0°99/9,mb3.8/7,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**8.30**	**244**	P	**Pn**	**15 09 16.5**	**+1.0**
	2.4nm,0.3s,baz=57,slow=7.4,SNR=9.1						
PMG				S	**Sn**	**15 10 48.0**	**+0.3**
	1.1nm,0.3s,baz=324,slow=19,SNR=4.7						
WRA	**Warramunga Arr**	**24.30**	**233**	P	**P**	**15 12 24.8**	**+0.1**
	2.6nm,0.5s,baz=57,slow=10,SNR=62						
ASAR	**Alice Springs**	**26.79**	**226**	P	**P**	**15 12 46.8**	**-0.3**
	1.0nm,0.4s,baz=57,slow=9.2,SNR=69						
STKA	**Stephens Creek**	**28.75**	**204**	P	**P**	**15 13 04.7**	**+0.3**
	0.9nm,0.4s,baz=9.3,slow=10,SNR=4.0						
FITZ	**Fitzroy Crossi**	**30.90**	**244**	P	**P**	**15 13 21.8**	**-1.8**
	1.1nm,0.6s,baz=78,slow=14,SNR=4.3						
MKAR	**Makanchi Array**	**82.27**	**319**	P	**P**	**15 19 26.8**	**+0.5**
	0.2nm,0.5s,baz=93,slow=8.7,SNR=3.2						
ILAR	**Eielson Array**	**82.33**	**22**	P	**P**	**15 19 26.9**	**+0.7**
	0.3nm,0.6s,baz=250,slow=5.3,SNR=3.3						
KURBB	**Kurchatov Arra**	**85.70**	**322**	P	**P**	**15 19 42.7**	**-0.9**
	0.2nm,0.3s,baz=78,slow=4.9,SNR=3.1						

JMA ***22*** *15:28:42.6±0.2,33°.38N×137°.59E,h370km,M2.7*
ISCJB ***22*** *15:28:44.7±0.5,33°.48N±0°.08×137°.51E±0°.09,h352km, mb3.0/3,Error ellipse: s-maj=11.8km s-min=8.8km az=147.1*
IDC ***22*** *15:28:46.6±0.7,33°.56N×137°.30E,h357km±10km,mb2.9/3, mb1 2.9/9,mb1mx2.7/77,mbtmp3.6/9,Error ellipse: s-maj=23.6km s-min=14.2km az=62.0*
ISC 22 15:28:46.2±0.9,33°.61N±0°.09×137°.42E±0°.08,h352km,n19, σ1°26/23,mb2.7/3,Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TK01	**Tokai 1**	**0.21**	**42**	P	**Pn**	**15 29 28.6**	**-1.1**
TTO2	**TONANKAI O.B.S**	**0.35**	**291**	P	**Pn**	**15 29 30.1**	**+0.2**
TTO1	**TONANKAI O.B.S**	**0.53**	**272**	P	**Pn**	**15 29 30.1**	**-0.2**
JIE	**Ise**	**0.98**	**323**	P	**Pn**	**15 29 31.7**	**-0.3**
JIE				S	**S**	**15 30 09.8**	**+1.0**
JWZ	**Kozaga**	**1.43**	**267**	P	**Pn**	**15 29 33.0**	**-1.1**
JWY	**Kouya**	**1.64**	**292**	P	**Pn**	**15 29 34.9**	**-0.4**
JHJ	**Hachijo jima 2**	**2.04**	**103**	P	**Pn**	**15 29 38.5**	**+0.7**
	5.8nm,0.3s,baz=61,slow=19,SNR=2.4						
JHJ				S	**S**	**15 30 23.1**	**+3.7**
	8.8nm,0.3s,baz=90,slow=20,SNR=4.5						
JRY	**Ryogami san**	**2.69**	**26**	P	**Pn**	**15 29 43.3**	**+0.4**
JRY				S	**S**	**15 30 29.8**	**+1.1**
MAT	**Matsushiro**	**3.00**	**12**	P	**Pn**	**15 29 45.7**	**+0.1**
MJAR	**Matsushiro Arr**	**3.00**	**12**	P	**Pn**	**15 29 45.5**	**0.0**
	1.0nm,0.3s,baz=181,slow=9.6,SNR=16						
BSO1	**Boso 1**	**3.13**	**70**	P	**Pn**	**15 29 44.3**	**-1.8**
BSO1				S	**S**	**15 30 32.4**	**-2.1**
JAG	**Ashikaga**	**3.27**	**30**	P	**Pn**	**15 29 46.7**	**-1.3**
JNU	**Nakatsue**	**5.50**	**267**	P	**Pn**	**15 30 10.8**	**-0.6**
	1.3nm,0.3s,baz=71,slow=3.2,SNR=14						
KSRS	**Korea Array**	**8.64**	**299**	P	**Pn**	**15 30 48.1**	**+0.4**
	0.2nm,0.3s,baz=110,slow=12,SNR=7.4						
ASAJ	**Asahikawa**	**11.24**	**19**	P	**P**	**15 31 19.0**	**-0.1**
	0.4nm,0.3s,baz=253,slow=9.5,SNR=5.8						
USRK	**Ussuriysk Ar.**	**11.39**	**340**	P	**P**	**15 31 21.2**	**+0.6**
	0.2nm,0.3s,baz=173,slow=12,SNR=4.9						
WRA	**Warramunga Arr**	**53.33**	**184**	P	**P**	**15 37 29.0**	**-1.3**
	0.3nm,0.7s,baz=1.0,slow=7.7,SNR=2.9						
ASAR	**Alice Springs**	**57.05**	**184**	P	**P**	**15 37 56.7**	**+0.1**
	0.3nm,0.9s,baz=355,slow=6.6,SNR=2.9						
FINES	**FINESS Array B**	**70.29**	**332**	P	**P**	**15 39 21.9**	**+0.1**
	1.6nm,0.8s,baz=64,slow=8.7,SNR=6.8						

NNC ***22*** *15:34:58.6±2.7,47°.44N×84°.99E,h0km,mb2.9,mpv2.5, Error ellipse: s-maj=31.8km s-min=22.4km az=164.0*
SOME 22 15:34:50.6,47°.95N×84°.93E,h0km,4C-2D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZSN	**Zaisan**	**0.50**	**185**	*e*P	Pb	15 35 01.4	-0.9
	5.4nm,0.1s						
ZSN				*e*S	Sg	15 35 06.5	-0.1
	36nm,0.2s						
MK31	**Makanchi Array**	**2.14**	**238**	⇓Pn	Pg	15 35 32.7	+1.1
	0.9nm,0.4s,baz=81,slow=15,SNR=75						
MK31				⇑Lg	Lg	15 36 00.8	
	2.9nm,0.3s,baz=264,slow=14,SNR=16						
MAKZ	**Makanchi**	**2.31**	**241**	⇑Pn	Pg	15 35 36.1	+1.3
	2.0nm,0.3s						
MAKZ				⇑Lg	Lg	15 36 06.9	
	6.2nm,0.3s						
KAPS	**Kapalarasan**	**4.68**	**237**	*e*P	Pb	15 36 15.7	+2.2
	0.4nm,0.4s						
KAPS				*e*S	Sb	15 37 15.3	+5.0
	1.5nm,0.5s						
KURK	**Kurchatov**	**4.97**	**306**	⇓Lg	Lg	15 37 46.3	
	3.6nm,0.6s						
KURBB	**Kurchatov Arra**	**4.97**	**305**	⇑Lg	Lg	15 37 45.9	
	11nm,0.7s						

ATA ***22*** *16:03:25.9±0.6,39°.17N×42°.28E,h13km±4km,ML2.8, MW2.5*
ISCJB ***22*** *16:03:27.3±0.8,39°.17N±0°.05×42°.26E±0°.05,h10km±6km, Error ellipse: s-maj=8.6km s-min=5.7km az=14.4*
CSEM ***22*** *16:03:27.1,39°.18N×42°.26E,h7km,ML2.6*
DDA ***22*** *16:03:27.1,39°.18N×42°.26E,h7km,Ml2.6*
ISC 22 16:03:26.2±1.1,39°.13N±0°.03×42°.30E±0°.03,h6km±13km, n15,σ1°02/29,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKAR	**Karacoban**	**0.23**	**305**	*i* P	**Pg**	**16 03 30.5**	**-0.2**
EKAR				*e*S	**Sg**	**16 03 35.0**	**+1.2**
EKAR	**Karacoban**	**0.23**	**305**	*i* P	**Pg**	**16 03 30.5**	**-0.2**
EKAR				*i* S	**Sg**	**16 03 34.0**	**+0.2**
EKAR	**Karacoban**	**0.23**	**305**	P	**Pg**	**16 03 30.5**	**-0.2**
EKAR				S	**Sg**	**16 03 34.0**	**+0.2**
ADCV	**BITLIS_Adilcev**	**0.46**	**134**	*e*P	**Pg**	**16 03 33.3**	**-1.7**
ADCV				*i* S	**Sb**	**16 03 45.5**	**+1.7**
ADCV	**BITLIS_Adilcev**	**0.46**	**134**	P	**Pg**	**16 03 33.3**	**-1.7**
ADCV				S	**Sb**	**16 03 45.5**	**+1.7**
TUTA	**Tutak**	**0.48**	**55**	*i* P	**Pg**	**16 03 36.3**	**+0.7**
TUTA				*e*S	**Sb**	**16 03 43.8**	**-0.9**
TUTA				IAML		16 03 45.4	
	comp=Z,138nm,0.3s						
TUTA	**Tutak**	**0.48**	**55**	*i* P	**Pg**	**16 03 36.3**	**+0.7**
TUTA				*i* S	**Sb**	**16 03 44.0**	**-0.7**
TUTA	**Tutak**	**0.48**	**55**	P	**Pg**	**16 03 36.3**	**+0.7**
TUTA				S	**Sb**	**16 03 44.0**	**-0.7**
EATA	**Eleskirt**	**0.75**	**11**	*e*P	**Pg**	**16 03 40.5**	**-0.2**
EATA				*e*S	**Sb**	**16 03 51.5**	**-1.0**
EATA				IAML		16 03 54.0	
	comp=Z,7.8nm,0.3s						
EATA	**Eleskirt**	**0.75**	**11**	*i* P	**Pg**	**16 03 40.4**	**-0.2**
EATA				*i* S	**Sb**	**16 03 51.5**	**-1.0**
EATA	**Eleskirt**	**0.75**	**11**	P	**Pg**	**16 03 40.4**	**-0.2**
EATA				S	**Sb**	**16 03 51.5**	**-1.0**
BNGL	**BINGOL**	**0.91**	**259**	*e*P	**Pg**	**16 03 43.6**	**-0.1**
ERZM	**Erzurum**	**1.06**	**317**	*e*P	**Pg**	**16 03 46.0**	**-0.6**
ERZM				*e*S	**Sb**	**16 04 01.5**	**+0.1**
ERZM	**Erzurum**	**1.06**	**317**	*i* P	**Pb**	**16 03 48.1**	**+0.9**
ERZM				*i* S	**Sg**	**16 03 59.0**	**-1.4**
ERZM	**Erzurum**	**1.06**	**317**	P	**Pb**	**16 03 48.1**	**+0.9**
ERZM				S	**Sg**	**16 03 59.0**	**-1.4**

MAN 22 16:11:07.8,9°.86N×123°.14E,h5km,mb4.5,ML3.4,MS3.2, 1C-1D,Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**0.53**	**170**	⇓*i*P	Pb	16 11 19.8	+0.2
SNPH				*i* S	Sb	16 11 28.6	+1.2
TBP	**Tagbilaran**	**0.73**	**104**	*e*P	Pg	16 11 21.2	-0.6
TBP				*i* S	Sb	16 11 32.7	-0.7
LLP	**Lapu-Lapu**	**0.93**	**61**	*e*P	Pg	16 11 25.0	-0.6
LLP				*e*S	Sg	16 11 36.7	-1.0
GUIM	**Jordan**	**0.93**	**324**	*e*P	Pb	16 11 26.2	-0.2
GUIM				*e*S	Sn	16 11 40.7	-0.6
DCPH	**Dipolog City**	**1.29**	**171⇑**	*e*P	Pn	16 11 31.6	-0.8
DCPH				*e*S	Sb	16 11 49.6	+0.2
MSLP	**Maasin**	**1.71**	**81**	*e*P	Pn	16 11 38.6	+0.3
MSLP				*e*S	Sb	16 12 01.7	0.0

IDC 22 16:24:33.5±3.0,32°.99S×178°.48W,h0km,mb3.7/2, mb1 3.9/3,mb1mx3.6/48,mbtmp3.7/3,ML3.6/1,MS3.2/1, Ms1 3.2/1,ms1mx2.4/43,Error ellipse: s-maj=68.9km s-min=35.7km az=117.0,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.37**	**213**	Pn	Pn	16 26 08.9	+0.4
	1.5nm,0.3s,baz=276,slow=4.3,SNR=12						
URZ				Sn	Sn	16 27 20.9	-1.1
	1.5nm,0.3s,baz=209,slow=19,SNR=4.3						
DZM	**Mont Dzumac**	**17.22**	**305**	LR	LR	16 33 53.1	
	comp=Z,78nm,18.4s,baz=22,slow=32						
ASAR	**Alice Springs**	**42.63**	**270**	P	P	16 32 31.9	0.0
	0.5nm,0.7s,baz=108,slow=7.7,SNR=10						
WRA	**Warramunga Arr**	**43.86**	**275**	P	P	16 32 41.6	-0.1
	0.6nm,0.4s,baz=115,slow=7.9,SNR=17						
FINES	**FINESS Array B**	**147.41**	**338**	PKPbc	PKPbc	16 44 17.5	-0.9
	0.8nm,0.5s,baz=22,slow=2.3,SNR=7.6						

NIED ***22*** *16:32:00,39°.40N×143°.90E,h23km,Mw3.6 Best double couple: M0 2.76000×10^14 NP1:φ0 179.00000°,δ41.00000°, λ92.00000°. NP2:φ0 357.00000°,δ50.00000°,λ89.00000°.*
ISCJB ***22*** *16:32:19.4±0.8,39°.41N±0°.04×143°.77E±0°.08,h11km, mb3.4/8,Error ellipse: s-maj=9.0km s-min=5.7km az=25.7*
JMA ***22*** *16:32:19.0±0.2,39°.40N×143°.88E,h21km,M4.0*
IDC ***22*** *16:32:19.1±1.3,39°.33N×143°.85E,h0km,mb3.5/8, mb1 3.6/11,mb1mx3.5/78,mbtmp3.6/11,ML3.6/3,MS2.6/1, Ms1 2.6/1,ms1mx2.1/48,Error ellipse: s-maj=29.0km s-min=19.9km az=101.0*
ISC 22 16:32:20.7±1.0,39°.36N±0°.06×143°.72E±0°.09,h11km,n23, σ1°57/28,mb3.5/8,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**1.49**	**279**	P	**Pn**	**16 32 46.7**	**-0.7**
MIYJ				*e*S	**Sn**	**16 33 06.8**	**0.0**
JTH	**Tanohata**	**1.55**	**293**	P	**Pn**	**16 32 47.4**	**-0.8**
OFUJ	**Ofunato**	**1.62**	**261**	P	**Pn**	**16 32 48.8**	**-0.4**
JOM	**Ohasama**	**1.89**	**274**	P	**Pn**	**16 32 52.8**	**0.0**
JOM				*e*S	**Sn**	**16 33 15.1**	**-1.5**
JANG	**Nango**	**1.98**	**302**	P	**Pn**	**16 32 52.9**	**-1.2**
JMK	**Ichinoseki**	**1.99**	**259**	P	**Pn**	**16 32 54.3**	**+0.1**
JYK	**Kaneyama**	**2.65**	**262**	P	**Pn**	**16 33 03.9**	**+0.5**
JNBK	**Urakawa-nobuka**	**3.01**	**346**	P	**Pn**	**16 33 09.2**	**+0.9**
JNBK				*e*S	**Sn**	**16 33 43.9**	**-0.4**
JFT	**Otama**	**3.23**	**236**	P	**Pn**	**16 33 12.0**	**+0.6**
JCH	**Churui**	**3.26**	**355**	*e*S	**Sn**	**16 33 48.3**	**-2.3**
ASAJ	**Asahikawa**	**4.83**	**350**	Pn	**Pn**	**16 33 34.5**	**+1.2**
	1.1nm,0.3s,baz=212,slow=18,SNR=24						
ASAJ				Sn	**Sn**	**16 34 27.0**	**-2.2**
	1.2nm,0.3s,baz=164,slow=32,SNR=6.0						
MJAR	**Matsushiro Arr**	**5.18**	**239**	Pn	**Pn**	**16 33 40.5**	**+2.3**
	3.3nm,0.3s,baz=34,slow=15,SNR=48						
MAT	**Matsushiro**	**5.19**	**239**	P	**Pn**	**16 33 39.9**	**+1.7**
MAT				*e*S	**Sn**	**16 34 35.2**	**-2.9**
JHJ	**Hachijo jima 2**	**6.99**	**208**	Pn	**Pn**	**16 34 01.8**	**-1.3**
	9.1nm,0.3s,baz=72,slow=20,SNR=4.3						
JHJ				Sn	**Sn**	**16 35 18.0**	**-4.5**
	8.6nm,0.3s,baz=72,slow=20,SNR=2.6						
KSRS	**Korea Array**	**12.54**	**266**	LR	LR	16 39 56.4	
	comp=Z,26nm,18.4s,baz=84,slow=36						
SONM	**Songino Array**	**28.10**	**300**	P	**P**	**16 38 14.3**	**+1.8**
	0.5nm,0.4s,baz=87,slow=10,SNR=2.0						
ZALV	**Zalesovo Beam**	**41.74**	**311**	P	**P**	**16 40 10.2**	**+0.6**
	0.5nm,0.3s,baz=75,slow=8.3,SNR=2.8						
CMAR	**Chiang Mai Arr**	**43.85**	**255**	P	**P**	**16 40 27.7**	**+0.6**
	0.2nm,0.4s,baz=46,slow=7.7,SNR=2.7						
MKAR	**Makanchi Array**	**44.47**	**301**	P	**P**	**16 40 31.4**	**-0.3**
	0.5nm,0.7s,baz=88,slow=8.6,SNR=4.9						
KURBB	**Kurchatov Arra**	**46.04**	**307**	P	**P**	**16 40 45.0**	**+0.8**
	0.9nm,0.6s,baz=82,slow=8.5,SNR=6.6						
ILAR	**Eielson Array**	**46.56**	**34**	P	**P**	**16 40 48.0**	**0.0**
	0.1nm,0.5s,baz=255,slow=6.4,SNR=2.6						
BVAR	**Borovoye Array**	**50.38**	**311**	P	**P**	**16 41 18.1**	**+0.5**
	0.2nm,0.4s,baz=83,slow=12,SNR=2.5						
WRA	**Warramunga Arr**	**59.64**	**190**	P	**P**	**16 42 25.0**	**+0.2**
	0.2nm,0.7s,baz=8.7,slow=7.1,SNR=3.6						

GUC 22 16:43:43.3±0.7,23°.94S×69°.53W,h92km±5km,ML3.7, 8C-2D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB15	**IPOC Station P**	**0.73**	**4⇓**	*i*P	Pn	16 44 01.5	+0.9
PB15				*i* S	Sn	16 44 14.2	+0.7
PB10	**IPOC Station P**	**1.03**	**294⇑**	*i*P	Pn	16 44 04.0	+0.5
PB10				*i* S	Sn	16 44 19.6	+0.9
PB10				IAML		16 44 23.0	
	comp=E,1μm,0.4s						
PB14	**IPOC Station P**	**1.05**	**229⇑**	*i*P	Pn	16 44 04.5	+0.4
PB14				*i* S	Sn	16 44 19.3	-0.4
PB14				IAML		16 44 21.0	
	comp=E,3μm,0.4s						
GO02	**Mina Guanaco**	**1.22**	**183⇓**	*i*P	Pn	16 44 06.9	+0.8
GO02				*i* S	Sn	16 44 24.4	+1.3
GO02				IAML		16 44 24.6	
	comp=N,5μm,0.1s						
PB06	**IPOC Station P**	**1.23**	**358⇑**	*i*P	Pn	16 44 07.0	+1.0
PB06				*i* S	Sn	16 44 24.2	+1.1
PB06	

ADCV	**BITLIS_Adilcev**	**0.52**	**134**	P		**Pg**	**17 27 24.6**	**-0.3**
ADCV				S		**Sb**	**17 27 33.5**	**+0.6**
EATA	**Eleskirt**	**0.72**	**15**	*e*P		**Pg**	**17 27 28.4**	**-0.3**
EATA				*e*S		**Sb**	**17 27 39.4**	**+0.4**
EATA	**Eleskirt**	**0.72**	**15**	*i* P		**Pg**	**17 27 28.5**	**-0.3**
EATA				*i* S		**Sb**	**17 27 39.6**	**+0.6**
EATA	**Eleskirt**	**0.72**	**15**	P		**Pg**	**17 27 28.5**	**-0.3**
EATA				S		**Sb**	**17 27 39.6**	**+0.6**
BNGL	**BINGOL**	**0.88**	**256**	*e*P		**Pg**	**17 27 30.2**	**-1.5**
BNGL				*e*S		**Sg**	**17 27 44.4**	**+1.1**

*IDC **22** 17:27:01.0±3.6, 35°.68N×72°.00E, h0km, mb3.8/4, mb1 3.7/9, mb1mx3.4/74, mbtmp3.7/9, ML3.5/5, MS3.2/1, Ms1 3.2/1, ms1mx2.1/69, Error ellipse: s-maj=68.9km s-min=25.6km az=138.0*
*ISCJB **22** 17:27:20.6±1.3, 36°.6N±0°.1×72°.1E±0°.1, h150km, mb3.6/4, Error ellipse: s-maj=18.7km s-min=9.6km az=41.9*
*NNC **22** 17:27:21.3±3.5, 36°.69N×71°.95E, h177km±49km, mb2.7, mpv3.8, Error ellipse: s-maj=58.5km s-min=33.4km az=94.0*

ISC 22 17:27:19.9±1.9, 36°.5N±0°.2×72°.2E±0°.2, h150km, n24, σ1§25/27, mb3.6/4, 3C-5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.67**	**16**	⇑P	**Pn**	**17 28 15.9**	**-0.2**
	12nm,0.4s						
SFK				⇓S	**Sn**	**17 29 01.1**	**+1.5**
	20nm,0.2s						
AML	**Almayashu**	**5.76**	**11**	P	**Pn**	**17 28 43.4**	**-0.2**
	SNR=20						
MNAS	**Manas**	**6.00**	**2**	⇑P	**Pn**	**17 28 45.8**	**-0.9**
	3.8nm,0.5s						
MNAS				⇓S	**Sn**	**17 29 52.2**	**-2.3**
	7.3nm,0.4s						
UCH	**Uchtor**	**6.01**	**17**	P	**Pn**	**17 28 47.4**	**+0.3**
	SNR=20						
KZA	**Kyzart**	**6.07**	**22**	P	**Pn**	**17 28 47.5**	**-0.4**
	SNR=14						
EKS2	**Erkin-Say**	**6.29**	**11**	P	**Pn**	**17 28 51.0**	**+0.5**
	SNR=12						
AAK	**Ala-Archa**	**6.40**	**16**	Pn	**Pn**	**17 28 52.2**	**+0.3**
	4.0nm,0.3s,baz=177,slow=6.0,SNR=12						
AAK				Sn	**Sn**	**17 30 04.1**	**+0.1**
	1.2nm,0.3s,baz=323,slow=18,SNR=16						
AAK	**Ala-Archa**	**6.40**	**16**	⇓P	**Pn**	**17 28 52.0**	**+0.1**
	5.9nm,0.5s						
AAK				⇓S	**Sn**	**17 30 03.7**	**-0.3**
	8.6nm,0.6s						
KBK	**Karagaybulak**	**6.52**	**18**	P	**Pn**	**17 28 55.8**	**+2.2**
	SNR=5.1						
ULHL	**Ulahol**	**6.55**	**27**	P	**Pn**	**17 28 54.1**	**-0.1**
	SNR=18						
TKM2	**Tokmak 2**	**6.94**	**21**	⇑P	**Pn**	**17 29 00.2**	**+0.9**
	2.0nm,0.5s						
TKM2				⇓S	**Sn**	**17 30 15.6**	**-1.6**
	2.1nm,0.7s						
TKM2	**Tokmak 2**	**6.94**	**21**	P	**Pn**	**17 28 59.5**	**+0.2**
	SNR=5.3						
GEYT	**Alibeck**	**11.31**	**282**	Sn	Sn	17 31 51.1	-11
	1.5nm,0.3s,baz=252,slow=25,SNR=9.4						
MKAR	**Makanchi Array**	**12.76**	**33**	Pn	**Pn**	**17 30 15.1**	**-0.8**
	0.1nm,0.3s,baz=213,slow=13,SNR=4.5						
KURBB	**Kurchatov Arra**	**14.85**	**16**	Pn	**Pn**	**17 30 40.7**	**-1.6**
	0.1nm,0.3s,baz=203,slow=10,SNR=4.6						
AB31	**Akbulak array**	**15.57**	**329**	P	**Pn**	**17 30 50.1**	**-1.1**
	0.5nm,0.4s,baz=222,slow=8.6,SNR=9.3						
BVAR	**Borovoye Array**	**16.59**	**356**	P	**Pn**	**17 31 04.5**	**+1.0**
	0.1nm,0.3s,baz=168,slow=14,SNR=2.9						
AKTO	**Aktyubinsk**	**17.28**	**328**	P	**Pn**	**17 31 11.2**	**-0.7**
	0.3nm,0.3s,baz=130,slow=12,SNR=6.4						
ZALV	**Zalesovo Beam**	**19.55**	**23**	P	**Pn**	**17 31 38.4**	**-0.1**
	1.6nm,0.4s,baz=208,slow=12,SNR=10.0						
FINES	**FINESS Array B**	**38.03**	**326**	P	**P**	**17 34 25.4**	**+2.3**
	0.4nm,0.3s,baz=119,slow=11,SNR=6.9						
YAK	**Yakutsk**	**43.43**	**35**	LR	LR	17 53 20.8	
	comp=Z,27nm,19.6s,baz=58,slow=36						
HFS	**Hagfors**	**43.66**	**322**	P	**P**	**17 35 11.2**	**+1.9**
	1.7nm,0.4s,baz=99,slow=8.9,SNR=16						
NB2	**NORSAR Subarra**	**44.96**	**323**	P	**P**	**17 35 21.4**	**+1.7**
	comp=Z,0.7nm,0.6s,baz=98,slow=7.9						
TORD	**Torodi Ar. Bea**	**66.67**	**269**	P	**P**	**17 37 53.1**	**-1.7**
	comp=Z,0.3nm,0.4s,baz=44,slow=6.7,SNR=2.8						

*ISCJB **22** 17:28:02.5±0.3, 49°.83N±0°.02×18°.44E±0°.02, h0km, Error ellipse: s-maj=3.3km s-min=2.2km az=14.6*
*BGR **22** 17:28:02.3±0.9, 49°.89N×18°.62E, h1km, ML3.0/7, Error ellipse: s-maj=12.2km s-min=8.9km az=62.0*
*CSEM **22** 17:28:02.9±0.2, 49°.84N×18°.50E, h1km, ML3.2/10, Error ellipse: s-maj=5.5km s-min=3.4km az=20.0*
*IPEC **22** 17:28:03.6±0.2, 49°.83N×18°.59E, h0km, 3km, ML2.8/3, Error ellipse: s-maj=1.8km s-min=1.1km az=165.0*
*VIE **22** 17:28:04.7±0.9, 49°.66N×18°.51E, h0km, mb2.4/4, ml3.1/4, Error ellipse: s-maj=7.1km s-min=5.1km az=29.0 27 km SE of Ostrava Suspected Mining induced.*
*PRU **22** 17:28:04.2, 49°.80N×18°.50E, h0km*

ISC 22 17:28:02.7±0.7, 49°.81N±0°.02×18°.54E±0°.02, h0km, n62, σ0§88/115, 5D, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.26**	**276**	*e*Pg	**Pb**	**17 28 09.7**	**-0.6**
OKC				*e*Sg	**Sb**	**17 28 13.9**	**-1.4**
OKC	**Ostrava-Krasne**	**0.26**	**276**	⇓*i*PG	**Pb**	**17 28 09.6**	**-0.6**
OKC				*e*SG	**Sg**	**17 28 12.9**	**+1.9**
	comp=Z,404nm,0.4s						
OKC	**Ostrava-Krasne**	**0.26**	**276**	Pg	**Pb**	**17 28 09.6**	**-0.6**
OKC				Sg	**Sg**	**17 28 12.9**	**+1.9**
	404nm,0.4s						
RAC	**Raciborz**	**0.35**	**321**	*e*Sg	**Sb**	**17 28 17.8**	**-0.2**
CHZP	**Chorzow**	**0.56**	**31**	*e*Pg	**Pb**	**17 28 14.8**	**-0.7**
CHZP				*e*Sg	**Sb**	**17 28 22.9**	**-1.1**
MORC	**Moravsky Berou**	**0.65**	**267**	*e*Pg	**Pb**	**17 28 16.4**	**-0.6**
MORC				*e*Sg	**Sb**	**17 28 25.8**	**-0.8**
MORC	**Moravsky Berou**	**0.65**	**267**	Pg	**Pb**	**17 28 16.4**	**-0.6**
MORC				*e*Sg	**Sg**	**17 28 24.8**	**+1.3**
	254nm,0.5s						
MORC	**Moravsky Berou**	**0.65**	**267**	*e*PG	**Pb**	**17 28 16.6**	**-0.4**
MORC				*e*SG	**Sg**	**17 28 24.8**	**+1.3**
MORC	**Moravsky Berou**	**0.65**	**267**	*e*Pg	**Pb**	**17 28 16.5**	**-0.4**
	baz=86						
MORC				*e*Sg	**Sg**	**17 28 24.8**	**+1.3**
	254nm,0.5s,baz=86						
LANS	**Liptovska Anna**	**0.89**	**137**	*e*PG	**Pb**	**17 28 21.1**	**0.0**
LANS				*e*SG	**Sb**	**17 28 34.2**	**+0.6**
LANS	**Liptovska Anna**	**0.89**	**137**	*e*Pg	**Pb**	**17 28 21.1**	**0.0**
OJC	**Ojcow**	**0.91**	**63**	*e*Pg	**Pg**	**17 28 20.4**	**+0.3**
OJC				*e*Sg	**Sb**	**17 28 33.1**	**-0.8**
OJC	**Ojcow**	**0.91**	**63**	*e*Pg	**Pg**	**17 28 20.4**	**+0.3**
OJC				*e*Sg	**Sb**	**17 28 33.1**	**-0.8**
JAVC	**Velka Javorina**	**1.11**	**211**	*e*Pg	**Pn**	**17 28 26.3**	**+0.8**
JAVC	**Velka Javorina**	**1.11**	**211**	*e*Pg	**Pn**	**17 28 25.7**	**+0.2**
JAVC	**Velka Javorina**	**1.11**	**211**	*e*PG	**Pn**	**17 28 25.8**	**+0.2**
JAVC	**Velka Javorina**	**1.11**	**211**	*e*Pg	**Pn**	**17 28 25.7**	**+0.2**
	baz=32						
KRLC	**Kraliky**	**1.17**	**284**	*e*PG	**Pg**	**17 28 25.1**	**0.0**
KRLC				*e*SG	**Sb**	**17 28 41.4**	**-0.1**
	comp=Z,41nm,0.3s						
KRLC	**Kraliky**	**1.17**	**284**	Pg	**Pg**	**17 28 25.1**	**0.0**
KRLC				Sg	**Sb**	**17 28 41.4**	**-0.1**
	41nm,0.3s						
NIE	**Niedzica**	**1.21**	**108**	*e*Pg	**Pn**	**17 28 26.9**	**0.0**
NIE				*e*Sg	**Sn**	**17 28 45.0**	**+1.0**
NIE	**Niedzica**	**1.21**	**108**	*e*Pg	**Pn**	**17 28 26.9**	**0.0**
NIE				*e*Sg	**Sn**	**17 28 45.0**	**+1.0**
VYHS	**Vyhne**	**1.33**	**172**	*e*PG	**Pn**	**17 28 28.6**	**0.0**
VYHS				*e*SG	**Sn**	**17 28 46.9**	**-0.1**
VYHS				*e*LG	Lg	17 28 51.1	
VYHS	**Vyhne**	**1.33**	**172**	*e*Pn	**Pn**	**17 28 28.6**	**0.0**
VYHS				*e*Sn	**Sn**	**17 28 46.9**	**-0.1**
VRAC	**Vranov**	**1.36**	**249**	*e*Pg	**Pg**	**17 28 28.9**	**+0.1**
VRAC				*e*Sg	**Sn**	**17 28 47.9**	**+0.1**
VRAC	**Vranov**	**1.36**	**249**	*e*Pn	**Pb**	**17 28 29.7**	**+0.6**
VRAC				*e*Sg	**Sb**	**17 28 47.4**	**+0.3**
	116nm,0.4s						
VRAC	**Vranov**	**1.36**	**249**	*e*PG	**Pb**	**17 28 29.7**	**+0.6**
VRAC				*e*SG	**Sb**	**17 28 47.5**	**+0.3**
VRAC	**Vranov**	**1.36**	**249**	*e*Pg	**Pb**	**17 28 29.6**	**+0.5**
	baz=68						
VRAC				*e*Sg	**Sb**	**17 28 47.4**	**+0.3**
	116nm,0.4s,baz=68						
SMOL	**Smolenice**	**1.49**	**210**	*e*PN	**Pn**	**17 28 30.2**	**-0.5**
SMOL				*e*SN	**Sg**	**17 28 50.4**	**-0.1**
SMOL	**Smolenice**	**1.49**	**210**	*e*Pn	**Pn**	**17 28 30.2**	**-0.5**
SMOL				*e*Sn	**Sg**	**17 28 50.5**	**-0.1**
DPC	**Dobruska-Polom**	**1.53**	**292**	*e*Pg	**Pb**	**17 28 31.9**	**0.0**
DPC				*e*Sg	**Sn**	**17 28 52.3**	**+0.4**
DPC	**Dobruska-Polom**	**1.53**	**292**	*e*PG	**Pb**	**17 28 31.9**	**0.0**
DPC				*e*SG	**Sn**	**17 28 52.4**	**+0.5**
	comp=Z,67nm,0.3s						
DPC	**Dobruska-Polom**	**1.53**	**292**	Pg	**Pb**	**17 28 31.9**	**0.0**
DPC				Sg	**Sn**	**17 28 52.3**	**+0.4**
KRUC	**Moravsky**	**1.59**	**243**	*e*Pg	**Pb**	**17 28 33.2**	**+0.2**
KRUC				*e*Sg	**Sg**	**17 28 54.8**	**+1.1**
KRUC	**Moravsky**	**1.59**	**243**	Pg	**Pb**	**17 28 33.2**	**+0.2**
KRUC				Sg	**Sg**	**17 28 54.8**	**+1.1**
KRUC	**Moravsky**	**1.59**	**243**	*e*PG	**Pb**	**17 28 33.1**	**+0.2**
KRUC				*e*SG	**Sg**	**17 28 54.5**	**+0.8**
KRUC	**Moravsky**	**1.59**	**243**	*e*Pg	**Pb**	**17 28 33.0**	**+0.1**
	baz=61						
KRUC				*e*Sg	**Sg**	**17 28 54.5**	**+0.8**
	79nm,0.2s,baz=61						
MODS	**Modra-Piesok**	**1.66**	**211**	*e*PN	**Pn**	**17 28 32.5**	**-0.6**
MODS				*e*SN	**Sn**	**17 28 54.6**	**-0.5**
MODS				*e*LG	Lg	17 28 57.3	
MODS	**Modra-Piesok**	**1.66**	**211**	*e*Pn	**Pn**	**17 28 32.5**	**-0.6**
MODS				*e*Sn	**Sn**	**17 28 54.6**	**-0.5**
UPC	**Upice**	**1.77**	**294**	⇓*e*PG	**Pg**	**17 28 36.4**	**-0.2**
UPC				*e*SG	**Sg**	**17 29 00.0**	**+0.4**
	comp=Z,53nm,0.6s						
UPC	**Upice**	**1.77**	**294**	Pg	**Pg**	**17 28 36.4**	**-0.2**
UPC				Sg	**Sg**	**17 29 00.0**	**+0.4**
	53nm,0.6s						
KSP	**Ksiaz**	**1.77**	**306**	*e*Pb	**Pn**	**17 28 35.0**	**+0.4**
KSP				*e*Pg	**Pg**	**17 28 37.0**	**+0.3**
KSP				*e*Sg	**Sn**	**17 28 58.3**	**+0.4**
PSZ	**Piszkesteto**	**2.09**	**154**	⇓*e*Pn	**Pb**	**17 28 40.5**	**-1.1**
PSZ				*e*Sn	**Sb**	**17 29 08.4**	**+0.3**
CRVS	**Cervenica-Dubn**	**2.11**	**114**	*e*PN	**Pg**	**17 28 43.2**	**+0.1**
CRVS				*e*SN	**Sg**	**17 29 11.3**	**+0.7**
CRVS				*e*LG	Lg	17 29 22.8	
CRVS	**Cervenica-Dubn**	**2.11**	**114**	*e*Pn	**Pg**	**17 28 43.3**	**+0.1**
CONA	**Conrad Observa**	**2.58**	**224**	*e*Pn	**Pn**	**17 28 46.0**	**+0.2**
	2.9nm,0.3s						
CONA				*e*Sn	**Sn**	**17 29 16.1**	**-1.9**
	13nm,0.5s						
CONA	**Conrad Observa**	**2.58**	**224**	Pn	**Pn**	**17 28 46.0**	**+0.2**
	2.9nm,0.3s						
CONA				Sn	**Sn**	**17 29 16.1**	**-1.9**
	13nm,0.5s						
PRU	**Pruhonice**	**2.59**	**275**	*e*Pg	**Pb**	**17 28 50.1**	**+0.1**
PRU				*e*Sg	**Sb**	**17 29 24.2**	**+1.8**
PRU	**Pruhonice**	**2.59**	**275**	⇓*e*PG	**Pb**	**17 28 50.0**	**0.0**
PRU				*e*SG	**Sb**	**17 29 24.2**	**+1.8**
	comp=Z,24nm,0.4s						
PRU	**Pruhonice**	**2.59**	**275**	Pg	**Pb**	**17 28 50.1**	**+0.1**
PRU				Sg	**Sb**	**17 29 24.2**	**+1.8**
	24nm,0.4s						
PVCC	**Panska Ves**	**2.65**	**287**	⇓*e*PG	**Pb**	**17 28 52.1**	**+1.0**
PVCC				*e*SG	**Sg**	**17 29 27.0**	**-0.9**
	comp=Z,50nm,0.5s						
PVCC	**Panska Ves**	**2.65**	**287**	Pg	**Pb**	**17 28 52.1**	**+1.0**
PVCC				Sg	**Sg**	**17 29 27.0**	**-0.9**
	50nm,0.5s						
BRG	**Berggiesshubel**	**3.13**	**292**	PG	**Pg**	**17 29 01.2**	**-1.6**
BRG				SG	**Sg**	**17 29 42.1**	**-1.2**
	17nm,0.4s						
BRG	**Berggiesshubel**	**3.13**	**292**	*e*Pg	**Pb**	**17 29 00.6**	**+1.4**
BRG				*e*Sg	**Sg**	**17 29 41.1**	**-2.2**
BRG	**Berggiesshubel**	**3.13**	**292**	Pg	**Pb**	**17 29 00.6**	**+1.4**
BRG				Sg	**Sg**	**17 29 41.1**	**-2.2**
KHC	**Kasperske Hory**	**3.31**	**260**	*e*PN	**Pn**	**17 28 56.5**	**+0.7**
KHC				*e*PG	**Pb**	**17 29 03.8**	**+1.5**
KHC				*e*SG	**Sg**	**17 29 47.0**	**-1.9**
	comp=Z,22nm,0.4s						
KHC	**Kasperske Hory**	**3.31**	**260**	Pn	**Pn**	**17 28 56.5**	**+0.7**
KHC				Sg	**Sg**	**17 29 47.0**	**-1.9**
	22nm,0.4s						
GEC2	**GERESS Array S**	**3.31**	**255**	*e*Pg	**Pg**	**17 29 05.0**	**-1.1**
GEC2	**GERESS Array S**	**3.31**	**255**	Pg	**Pg**	**17 29 05.0**	**-1.1**
MOA	**Molln**	**3.44**	**237**	*i* Pn	**Pn**	**17 28 57.9**	**+0.4**
	0.4nm,0.1s						
MOA				*e*Sn	**Sn**	**17 29 38.4**	**-0.6**
	4.6nm,0.4s						
MOA	**Molln**	**3.44**	**237**	Pn	**Pn**	**17 28 57.9**	**+0.4**
	0.4nm,0.1s						
MOA				Sn	**Sn**	**17 29 38.4**	**-0.6**
	4.6nm,0.4s						
FBE	**Freiberg**	**3.50**	**290**	*e*Sg	**Sg**	**17 29 54.3**	**-0.9**
FBE	**Freiberg**	**3.50**	**290**	Sg	**Sg**	**17 29 54.3**	**-0.9**

IDC 22 17:51:03.1±2.8, 32°.81S×178°.45W, h0km, mb3.7/2, mb1 4.0/3, mb1mx3.6/43, mbtmp3.7/3, ML3.6/1, Error ellipse: s-maj=68.8km s-min=43.7km az=127.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.53**	**212**	Pn	Pn	17 52 39.3	-1.0
	1.3nm,0.3s,baz=251,slow=4.8,SNR=8.5						
URZ				Sn	Sn	17 53 51.0	-4.6
	1.6nm,0.3s,baz=124,slow=23,SNR=7.0						
ASAR	**Alice Springs**	**42.65**	**270**	P	P	17 59 01.6	0.0
	0.4nm,0.5s,baz=107,slow=7.4,SNR=14						
WRA	**Warramunga Arr**	**43.86**	**275**	P	P	17 59 11.3	0.0
	0.9nm,0.5s,baz=114,slow=7.8,SNR=22						
FINES	**FINESS Array B**	**147.26**	**338**	PKPbc	PKPbc	18 10 46.9	-0.7
	0.7nm,0.5s,baz=42,slow=4.0,SNR=13						

WEL 22 17:54:41.3, 43°S±2°×17°3E±°, h11km±3km, ML3.6/5, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MQZ	**McQueen's Vall**	**0.27**	**200**	P	Pb	17 54 48.5	+0.4
MQZ				S	Sb	17 54 53.0	+0.4
EYCZ	**Eyrewell**	**0.31**	**276**	P	Pb	17 54 49.8	+1.0
EYCZ				S	Sb	17 54 54.7	+0.8
OKCZ	**Okains Bay**	**0.34**	**143**	P	Pb	17 54 49.5	+0.2
OKCZ				S	Sb	17 54 54.6	-0.1
AKCZ	**Akaroa Harbour**	**0.43**	**167**	P	Pb	17 54 51.4	+0.5
AKCZ				S	Sb	17 54 57.6	+0.4
OXZ	**Oxford**	**0.56**	**283**	P	Pb	17 54 54.0	+0.9
OXZ				S	Sn	17 55 02.8	-1.6
LTZ	**Lake Taylor**	**0.77**	**331**	P	Pn	17 54 57.6	-0.5
KHZ	**Kahutara**	**1.18**	**28**	P	Pb	17 55 02.7	-0.9
INZ	**Inchbonnie**	**1.22**	**306**	P	Pg	17 55 04.6	-0.2
RPZ	**Rata Peaks**	**1.28**	**258**	P	Pb	17 55 05.6	+0.2
WVZ	**Waitaha Valley**	**1.54**	**284**	P	Pb	17 55 09.6	-0.2
THZ	**Tophouse**	**1.70**	**3**	P	Pn	17 55 10.6	-0.3
DSZ	**Denniston Nort**	**1.86**	**337**	P	Pn	17 55 13.7	+0.6
BSWZ	**Blackbirch Sta**	**1.92**	**25**	P	Pn	17 55 13.7	-0.2
LBZ	**Lake Benmore**	**2.09**	**243**	P	Pn	17 55 17.3	+1.0
FOZ	**Fox Glacier**	**2.16**	**267**	P	Pb	17 55 19.4	-1.0
TUWZ	**Tuamarina**	**2.20**	**23**	P	Pn	17 55 17.1	-0.7
ODZ	**Otahua Downs**	**2.21**	**223**	P	Pn	17 55 18.3	+0.5
NNZ	**Nelson**	**2.28**	**11**	P	Pn	17 55 18.9	0.0
TCW	**Tory Channel**	**2.50**	**27**	P	Pn	17 55 21.1	-0.9
PLWZ	**Palliser**	**2.63**	**45**	P	Pn	17 55 22.1	-1.6
QRZ	**Quartz Range**	**2.64**	**356**	P	Pn	17 55 24.1	+0.3
HHSZ	**Highcliff Hill**	**2.88**	**212**	P	Pn	17 55 27.4	+0.2
CAW	**Cannon Point**	**2.90**	**37**	P	Pn	17 55 26.1	-1.2
KIW	**Kapiti Island**	**3.04**	**32**	P	Pn	17 55 28.3	-1.0
MTW	**Mount Morrison**	**3.06**	**42**	P	Pn	17 55 27.5	-2.1
EAZ	**Earnscleugh**	**3.06**	**233**	P	Pn	17 55 30.0	+0.5
OGWZ	**Otaki Gorge**	**3.18**	**35**	P	Pn	17 55 29.9	-1.3
TUZ	**Tuapeka**	**3.36**	**221**	P	Pn	17 55 34.3	+0.6
MRZ	**Mangatainoka R**	**3.48**	**38**	P	Pn	17 55 33.7	-1.7
BFZ	**Birch Farm**	**3.79**	**44**	P	Pn	17 55 37.4	-2.1
PREZ	**Palmer Road**	**4.24**	**15**	P	Pn	17 55 47.5	+1.7
KHEZ	**Kahui Hut**	**4.26**	**13**	P	Pn	17 55 48.1	+1.9
PKE	**Pukeiti**	**4.36**	**12**	P	Pn	17 55 48.8	+1.4
VRZ	**Vera Road**	**4.58**	**20**	P	Pn	17 55 51.3	+0.9
TRVZ	**Turoa**	**4.65**	**28**	P	Pn	17 55 52.2	+0.6
WHVZ	**Whangaehu Hut**	**4.67**	**28**	P	Pn	17 55 52.6	+0.6
FWVZ	**Far West T-bar**	**4.69**	**27**	P	Pn	17 55 53.0	+0.9
TUVZ	**Tukino**	**4.71**	**28**	P	Pn	17 55 53.0	+0.6
NGZ	**Ngauruhoe**	**4.78**	**27**	P	Pn	17 55 54.2	+1.0
KAHZ	**Kahuranaki**	**4.78**	**41**	P	Pn	17 55 52.1	-1.1
TWVZ	**Taurewa**	**4.82**	**25**	P	Pn	17 55 53.5	-0.3
HIZ	**Hauiti**	**5.18**	**18**	P	Pn	17 55 58.9	+0.2
TLZ	**Tolley Road**	**5.53**	**23**	P	Pn	17 56 02.8	-0.7

IDC 22 17:56:23.4±7.0, 16°.23S×173°.32W, h0km, mb3.8/3, mb1 4.0/4, mb1mx3.6/50, mbtmp3.7/4, ML3.2/1, MS3.2/1, Ms1 3.2/1, ms1mx2.5/55, Error ellipse: s-maj=308.7km s-min=25.5km az=139.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.75**	**33**	Pn	Pn	17 57 06.8	-2.1
	4.2nm,0.3s,baz=70,slow=4.1,SNR=5.8						
AFI				Sn	Sn	17 57 40.0	-2.9
	17nm,0.3s,baz=118,slow=23,SNR=11						
HNR	**Honiara**	**26.91**	**281**	LR	LR	18 11 29.7	
	comp=Z,55nm,20.5s,baz=198,slow=34						
WRA	**Warramunga Arr**	**49.73**	**257**	P	P	18 05 17.6	-0.4
	0.9nm,0.7s,baz=96,slow=7.0,SNR=9.2						
ASAR	**Alice Springs**	**49.93**	**253**	P	P	18 05 18.9	-0.6
	2.5nm,0.7s,baz=88,slow=8.9,SNR=47						
ILAR	**Eielson Array**	**83.25**	**11**	P	P	18 08 52.0	+0.6
	0.2nm,0.6s,baz=218,slow=5.4,SNR=2.8						
BRTR	**Keskin Array B**	**146.85**	**320**	PKPbc	PKPbc	18 16 08.6	+0.4
	0.5nm,0.7s,baz=90,slow=5.8,SNR=2.4						

IDC 22 18:06:46.0±2.9, 32°.93S×178°.56W, h0km, mb3.4/2, mb1 3.7/3, mb1mx3.5/46, mbtmp3.5/3, ML3.5/1, Error ellipse: s-maj=68.6km s-min=35.6km az=116.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.38**	**212**	Pn	Pn	18 08 21.1	-0.1
	1.1nm,0.3s,baz=18,slow=3.2,SNR=14						
URZ				Sn	Sn	18 09 33.2	-1.5
	0.6nm,0.3s,baz=137,slow=19,SNR=4.2						
ASAR	**Alice Springs**	**42.56**	**270**	P	P	18 14 43.8	0.0
	0.3nm,0.8s,baz=108,slow=7.4,SNR=8.8						
WRA	**Warramunga Arr**	**43.78**	**275**	P	P	18 14 53.7	0.0
	0.4nm,0.5s,baz=114,slow=8.0,SNR=11						
FINES	**FINESS Array B**	**147.33**	**338**	PKPbc	PKPbc	18 26 29.9	-0.8
	1.3nm,0.8s,baz=46,slow=4.0,SNR=4.1						

*NIED **22** 18:10:00, 26°.40N×144°.30E, h11km, Mw4.6 Best double couple: M0§9.62000×10^15 NP1:φ§52.00000°, δ43.00000°, λ169.00000°. NP2:φ§150.00000°, δ82.00000°, λ48.00000°.*
*MOS **22** 18:10:35.6±0.9, 26°.02N×144°.37E, h10km, mb4.7/41, Error ellipse: s-maj=10.3km s-min=5.7km az=116.0*
*BJI **22** 18:10:36.5, 26°.00N×144°.40E, h15km, mb4.5/52, mB4.8/37, Ms4.4/34, Ms7 4.1/24*
*IDC **22** 18:10:36.1±0.5, 26°.04N×144°.36E, h0km, mb4.3/29, mb1 4.4/35, mb1mx4.3/74, mbtmp4.3/35, ML4.1/6, MS3.7/41, Ms1 3.7/41, ms1mx3.6/69, Error ellipse: s-maj=14.5km s-min=12.7km az=92.0*
*NEIC **22** 18:10:37.5±0.2, 26°.07N×144°.39E, h10km, mb4.7/57, Error ellipse: s-maj=4.8km s-min=4.4km az=129.0*
*JMA **22** 18:10:40.5±0.1, 26°.44N×144°.32E, h92km±5km, M4.6*
*ISCJB **22** 18:10:41.1±0.3, 26°.47N±0°.04×144°.33E±0°.03, h33km, mb4.6/108, MS3.9/49, Error ellipse: s-maj=5.4km s-min=3.7km az=3.1*

ISC 22 18:10:41.5±0.4, 26°.20N±0°.05×144°.44E±0°.05, h35km, n254, σ2§22/251, mb4.7/108, MS3.8/49, 7C-2D, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**2.07**	**282**	P	**Pn**	**18 11 12.4**	**-1.3**
JHHJ				S	**Sn**	**18 11 36.5**	**-1.8**
CBIJ	**Chichi jima**	**2.20**	**294**	*e*Pn	**Pn**	**18 11 13.4**	**-2.2**
CBIJ				*e*Sn	**Sn**	**18 11 41.5**	**-0.1**
CBIJ	**Chichi jima**	**2.20**	**294**	P	**Pn**	**18 11 13.6**	**-2.0**
CBIJ				*e*S	**Sn**	**18 11 38.3**	**-3.3**
JCJ	**Chichijima**	**2.20**	**294**	Pn	**Pn**	**18 11 13.8**	**-1.8**
	304nm,0.3s,baz=108,slow=20,SNR=104						
JCJ				Sn	**Sn**	**18 11 39.9**	**-1.7**
	442nm,0.3s,baz=287,slow=19,SNR=10						
JHJ2	**Mitsune**	**7.97**	**331**	*e*

KUR MLR MLR
comp=Z,248nm,13.0s
KUR MLR MLR
comp=E,256nm,14.0s
MSHR Mys Shultsa 19.63 330 *ce*P **P 18 15 06.0 -1.0**
TEY Ternei 19.82 343 *e*P **Pn 18 15 12.2 +1.4**
USRK Ussuriysk Ar. 20.59 334 P **P 18 15 18.4 +1.0**
comp=E,12nm,0.9s,baz=143,slow=11,SNR=20
YSS Yuzh-Sakhalins 20.76 357 *e*P **P 18 15 15.8 -3.3**
YSS *e* 18 15 23.9
YSS MLR MLR
comp=Z,300nm,10.0s
YHNB Yeheng 20.88 271 *e*P **P 18 15 20.6 -0.1**
comp=Z,226nm,1.9s
YULB Yu-li 21.18 267 *e*P **P 18 15 25.5 +1.5**
comp=Z,20nm,1.0s
SSLB Suanglung 21.41 269 *e*P **P 18 15 27.6 +1.1**
comp=Z,26nm,0.8s
TWG Pinlang 21.52 266 *e*P **P 18 15 29.5 +1.9**
comp=Z,108nm,1.0s
H11N2 WAKE ISLAND Hy 21.65 103 T T 18 37 51.0
baz=291,slow=74,SNR=248
H11N1 WAKE ISLAND Hy 21.65 103 T T 18 37 51.0
baz=291,slow=74,SNR=135
H11N3 WAKE ISLAND Hy 21.66 103 T T 18 37 51.4
baz=291,slow=74,SNR=151
MDJ Mudanjiang 21.94 331 P **P 18 15 29.4 -2.5**
MDJ S Sn 18 19 38.3 -5.0
MDJ SS **SnSn 18 20 10.9 +12**
MDJ pmax pmax
comp=Z,10.0nm,1.0s
MDJ pmax pmax
comp=Z,95nm,3.6s
MDJ LR LR
comp=Z,480nm,15.1s
MDJ LR LR
comp=Z,320nm,13.5s
MDJ Mudanjiang 21.94 331 *e*P **P 18 15 32.2 +0.4**
comp=Z,43nm,1.4s
H11S3 WAKE ISLAND Hy 21.94 106 T T 18 38 13.2
baz=294,slow=75,SNR=342
H11S1 WAKE ISLAND Hy 21.95 106 T T 18 38 13.6
baz=294,slow=75,SNR=214
H11S2 WAKE ISLAND Hy 21.96 106 T T 18 38 14.5
baz=294,slow=75,SNR=216
NJ2 Nanjing 23.07 291 *e*P **P 18 15 42.8 -1.2**
NJ2 pmax pmax
comp=Z,16nm,0.5s
CN2 Changchun 23.36 324 *e*P **P 18 15 48.3 +1.5**
CN2 *e*S **S 18 19 57.4 +0.2**
CN2 pmax pmax
comp=Z,20nm,1.1s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=Z,540nm,16.0s
CN2 LR LR
comp=Z,510nm,16.0s
TGY Tagaytay City 25.08 246 LR LR 18 25 37.6
comp=Z,130nm,19.2s,baz=136,slow=36
GRNR Gornyy 25.29 348 *e*P **P 18 16 09.4 +4.9**
GRNR pmax pmax
comp=Z,10.0nm,0.9s
DAV Davao City (W) 26.16 227 LR LR 18 25 01.6
comp=Z,151nm,21.0s,baz=12,slow=33
WHN Wuhan 26.78 286 P **P 18 16 20.0 +1.8**
WHN S **S 18 20 55.6 +3.6**
WHN LR LR
comp=Z,780nm,13.9s
WHN LR LR
comp=Z,610nm,12.6s
WHN LR LR
comp=Z,510nm,12.1s
BJI Beijing 27.26 307 *e*P **P 18 16 20.8 -1.6**
BJI pmax pmax
comp=Z,13nm,0.5s
BJI LR LR
comp=Z,300nm,14.7s
BJI LR LR
comp=Z,360nm,16.3s
PETK Petropavlovsk- 28.65 17 LR LR 18 26 42.5
comp=Z,184nm,21.8s,baz=195,slow=34
ZEA Zeya 30.33 340 *e*P **P 18 16 50.8 +1.2**
ZEA pmax pmax
comp=N,21nm,0.8s
ZEA pmax pmax
comp=Z,35nm,1.0s
ZEA MLR MLR
comp=Z,300nm,15.0s
HHC Hu-ho-hao-te 30.85 307 *e*P **P 18 16 55.6 +1.2**
HHC pP pP 18 17 00.1 -4.4
HHC sP sP 18 17 07.8 -1.0
HHC PP **PP 18 18 01.5 -2.9**
HHC S **S 18 22 00.0 +4.0**
HHC sS sS 18 22 08.6 -4.0
HHC pmax pmax
comp=Z,17nm,0.9s
HHC LR LR
comp=Z,310nm,13.3s
HHC LR LR
comp=Z,340nm,14.3s
HHC LR LR
comp=Z,210nm,15.7s
ENH Enshi 30.98 286 *e*P **P 18 16 54.0 -1.7**
comp=Z,21nm,1.4s
XAN Xi'an 31.58 293 P **P 18 17 01.0 +0.1**
XAN pP pP 18 17 09.6 -1.4
XAN pmax pmax
comp=Z,19nm,1.4s
MA2 Magadan 33.65 6 *e*P **P 18 17 19.6 +1.1**
comp=Z,77nm,1.8s
MA2 Magadan 33.65 6 *e*P **P 18 17 19.7 +1.1**
MA2 pmax pmax
comp=Z,77nm,1.8s
GYA Guiyang 33.77 279 *e*P **P 18 17 18.9 -1.4**
GYA pmax pmax
comp=Z,10.0nm,0.8s
LZH Lanzhou 35.89 296 *e*P **P 18 17 40.1 +1.6**
LZH pP pP 18 17 44.4 -4.3
LZH sP sP 18 17 46.3 -6.6
LZH *e*S **S 18 23 16.0 +1.6**
LZH sS sS 18 23 24.4 -6.7
LZH SS **SnSn 18 25 38.9 -0.4**
LZH pmax pmax
comp=Z,24nm,1.0s
LZH pmax pmax
comp=Z,170nm,4.3s
LZH LR LR
comp=Z,1μm,13.1s
LZH LR LR
comp=Z,1μm,13.4s
LZH LR LR
comp=Z,1μm,15.6s
CD2 Chengdu 35.90 287 P **P 18 17 35.9 -2.6**
CD2 pP pP 18 17 40.5 -8.1
CD2 PP **PnPn 18 18 57.4 -2.0**
CD2 S **S 18 23 13.8 -0.5**
CD2 pmax pmax
comp=Z,30nm,0.5s
CD2 pmax pmax
comp=Z,170nm,3.9s
CD2 LR LR
comp=Z,510nm,15.5s
CD2 LR LR
comp=Z,320nm,16.7s
ULN Ulaanbaatar 36.35 316 *e*P **P 18 17 42.9 +0.6**
comp=Z,8.1nm,0.8s
ULN Ulaanbaatar 36.35 316 *ce*P **P 18 17 43.2 +0.9**
ULN pmax pmax
comp=Z,21nm,1.7s
SONA0 Songino Array 36.75 316 *e*P **P 18 17 46.3 +0.6**
SONA1 Songino Array 36.75 316 *e*P **P 18 17 46.4 +0.7**
SONM Songino Array 36.75 316 P **P 18 17 46.3 +0.6**
comp=Z,2.9nm,0.7s,baz=112,slow=6.5,SNR=10
SONM LR LR 18 32 22.5
comp=Z,75nm,19.2s,baz=92,slow=36
SONM Songino Array 36.75 316 *e*P **P 18 17 46.9 +1.2**
SONM pmax pmax
comp=Z,3.0nm,0.7s
YAK Yakutsk 37.17 349 *e*P **P 18 17 49.4 +0.6**
comp=Z,14nm,0.8s
YAK Yakutsk 37.17 349 *i* P **P 18 17 49.3 +0.5**
YAK pmax pmax
comp=Z,6.0nm,0.7s
KMI Kunming 37.48 278 P **P 18 17 51.3 -0.9**
KMI pmax pmax
comp=Z,4.0nm,0.7s
KMI pmax pmax
comp=Z,55nm,5.0s
HNR Honiara 38.49 155 LR LR 18 32 11.9
comp=Z,140nm,20.0s,baz=44,slow=34
GTA Gaotai 39.37 301 *e*P **P 18 18 07.1 -0.7**
GTA pP pP 18 18 11.3 -6.8
GTA sP sP 18 18 14.3 -8.0
GTA S **S 18 24 12.4 +5.4**
GTA sS sS 18 24 20.0 -3.9
GTA pmax pmax
comp=Z,3.0nm,0.9s
GTA pmax pmax
comp=Z,51nm,4.8s
GTA LR LR
comp=Z,170nm,15.1s
GTA LR LR
comp=Z,130nm,16.8s
GTA LR LR
comp=Z,150nm,12.5s
ZAK Zakamensk 39.61 319 *e*P **P 18 18 11.1 +1.5**
ZAK pmax pmax
comp=Z,9.0nm,1.1s
TLY Talaya 39.90 321 *e*P **P 18 18 13.2 +1.2**
comp=Z,5.8nm,0.7s
TLY Talaya 39.90 321 *e*P **P 18 18 13.7 +1.7**
TLY *e*S **S 18 24 12.7 -1.8**
TLY *e*SS **SS 18 27 06.1 -5.5**
TLY pmax pmax
comp=Z,6.0nm,0.9s
TLY MLR MLR
comp=Z,121nm,16.0s
COEN Coen 39.93 182 *e*P **P 18 18 10.5 -2.0**
comp=Z,11nm,1.0s
MTN Manton Dam 40.91 200 *e*P **P 18 18 18.5 -2.1**
comp=Z,12nm,0.9s
PBKT Sadao Pong 41.43 266 *e*P **P 18 18 23.8 -1.1**
comp=Z,12nm,1.1s
CHTO Chiang Mai 42.49 270 *e*P **P 18 18 32.5 -1.2**
comp=Z,4.9nm,0.9s
CHTO Chiang Mai 42.49 270 *e*P **P 18 18 32.5 -1.2**
CHTO pmax pmax
comp=Z,5.0nm,0.9s
CM01 Chiang Mai Arr 42.61 269 *e*P **P 18 18 33.8 -0.8**
CM31 Chiang Mai Arr 42.61 269 *e*P **P 18 18 33.9 -0.7**
CMAR Chiang Mai Arr 42.61 269 P **P 18 18 33.8 -0.8**
comp=Z,1.3nm,0.7s,baz=60,slow=6.1,SNR=10
CMAR LR LR 18 36 21.3
comp=Z,83nm,19.2s,baz=82,slow=36
CMAR Chiang Mai Arr 42.61 269 *e*P **P 18 18 34.0 -0.6**
CMAR pmax pmax
comp=Z,1.0nm,0.6s
BILL Bilibino 43.90 12 *e*P **P 18 18 45.4 +1.0**
comp=Z,7.2nm,0.8s
BILL Bilibino 43.90 12 *c i*P **P 18 18 45.5 +1.2**
BILL *e**PP **pP 18 18 48.6 -6.1**
BILL *e*S **S 18 25 13.3 +0.3**
BILL pmax pmax
comp=Z,7.0nm,0.8s
BILL MLR MLR
comp=Z,102nm,16.0s
CTA Charters Tower 46.05 178 P **P 18 19 00.2 -1.7**
comp=Z,2.4nm,0.8s,baz=14,slow=8.3,SNR=2.4
TIXI Tiksi 46.32 353 LR LR 18 37 20.3
comp=Z,68nm,22.0s,baz=168,slow=34
TIXI Tiksi 46.32 353 *i* P **P 18 19 04.9 +1.4**
TIXI pmax pmax
comp=Z,3.0nm,1.0s
KULM Kulim 46.68 251 *e*P **P 18 19 06.4 -0.7**
comp=Z,10.0nm,1.2s
WRAB Tennant Creek 46.89 193 *e*P **P 18 19 06.4 -2.1**
comp=Z,11nm,0.8s
WRAB Tennant Creek 46.89 193 *e*P **P 18 19 06.4 -2.1**
WRAB pmax pmax
comp=Z,11nm,0.8s
WB2 Warramunga Arr 46.90 193 *e*P **P 18 19 06.0 -2.7**
WR1 Warramunga Arr 46.90 193 *e*P **P 18 19 06.5 -2.2**
comp=Z,8.9nm,0.8s
WRA Warramunga Arr 46.90 193 P **P 18 19 06.5 -2.2**
comp=Z,8.1nm,0.9s,baz=16,slow=8.8,SNR=23
WRA LR LR 18 39 21.8
comp=Z,86nm,18.6s,baz=255,slow=37
WRA Warramunga Arr 46.90 193 *e*P **P 18 19 06.4 -2.2**
WRA pmax pmax
comp=Z,5.0nm,0.6s
FITZ Fitzroy Crossi 47.67 204 P **P 18 19 13.2 -1.4**
comp=Z,4.9nm,0.8s,baz=66,slow=11,SNR=3.6
LEM Lembang 48.52 233 P **P 18 19 20.4 -1.2**
comp=Z,13nm,0.8s,baz=343,slow=19,SNR=2.9
WMQ Urumqi 48.73 306 P **P 18 19 23.5 +0.8**
WMQ pP pP 18 19 26.6 -6.6
WMQ sP sP 18 19 29.6 -7.7
WMQ pmax pmax
comp=Z,43nm,1.3s
WMQ pmax pmax
comp=Z,190nm,3.7s
WMQ LR LR
comp=Z,520nm,17.1s
WMQ LR LR
comp=Z,210nm,14.7s
WMQ LR LR
comp=Z,170nm,19.3s
DGZ Jazzator, Alta 49.33 314 *i* P **P 18 19 29.3 +1.9**
PSI Prapat 49.45 250 P **P 18 19 27.9 -0.7**
comp=Z,2.7nm,0.4s,baz=179,slow=5.2,SNR=4.0
PSI Prapat 49.45 250 *e*P **P 18 19 27.3 -1.3**
comp=Z,6.4nm,1.0s
CHGN Chignik 50.49 37 *e*P **P 18 19 36.0 +0.2**
comp=Z,9.5nm,0.6s
AS01 Alice Springs 50.60 192 *e*P **P 18 19 34.0 -3.0**
AS31 Alice Springs 50.61 193 *e*P **P 18 19 35.0 -2.1**
comp=Z,0.8nm,0.7s
ASAR Alice Springs 50.61 193 P **P 18 19 34.7 -2.4**
comp=Z,0.9nm,0.7s,baz=12,slow=11,SNR=8.9
ASAR LR LR 18 40 38.8
comp=Z,46nm,20.4s,baz=19,slow=36
ASAR Alice Springs 50.61 193 *e*P **P 18 19 35.3 -1.8**
ASAR pmax pmax
comp=Z,1.0nm,0.6s
ZAA0 Zalesovo Array 51.48 319 *e*P **P 18 19 43.3 0.0**
comp=Z,3.6nm,0.8s
ZAA1 Zalesovo Array 51.48 319 *e*P **P 18 19 43.6 +0.2**
ZALV Zalesovo Beam 51.48 319 P **P 18 19 43.6 +0.3**
comp=Z,3.5nm,0.7s,baz=102,slow=6.7,SNR=15
ZALV LR LR 18 42 02.7
comp=Z,92nm,19.1s,baz=70,slow=37
ZALV Zalesovo Beam 51.48 319 *e*P **P 18 19 43.2 -0.1**
DZM Mont Dzumac 52.51 154 *e*LR LR 18 35 01.5
comp=Z,190nm,23.0s
MK01 Makanchi Array 52.59 310 *e*P **P 18 19 52.2 +0.5**
MK31 Makanchi Array 52.59 310 *e*P **P 18 19 52.3 +0.5**
MK31 Makanchi Array 52.59 310 *i* P **P 18 19 52.3 +0.5**
MK31 pmax pmax
comp=Z,6.0nm,0.8s
MK32 Makanchi Array 52.59 310 *e*P **P 18 19 52.5 +0.7**
MKAR Makanchi Array 52.59 310 P **P 18 19 52.5 +0.7**
comp=Z,5.2nm,0.8s,baz=93,slow=9.0,SNR=57
MKAR LR LR 18 43 10.1
comp=Z,143nm,18.3s,baz=72,slow=37
MKAR Makanchi Array 52.59 310 *e*P **P 18 19 52.5 +0.7**
comp=Z,35nm,0.9s
MKAR Makanchi Array 52.59 310 *e*P **P 18 19 52.7 +0.9**
MKAR pmax pmax
comp=Z,5.0nm,0.7s
MAKZ Makanchi 52.81 310 *e*P **P 18 19 53.1 -0.2**
comp=Z,5.5nm,0.8s
MAKZ Makanchi 52.81 310 *e*P **P 18 19 53.1 -0.2**
MAKZ pmax pmax
comp=Z,6.0nm,0.8s
SVW2 Sparrevohn 52.98 32 *e*P **P 18 19 56.1 +1.7**
comp=Z,6.5nm,0.8s
OHAK Old Harbor 53.43 37 *e*P **P 18 19 58.0 +0.3**
comp=Z,13nm,0.8s
KDAK Kodiak Island 53.88 36 P **P 18 20 01.3 +0.3**
comp=Z,5.6nm,0.7s,baz=272,slow=6.5,SNR=7.1
KDAK Kodiak Island 53.88 36 *e*P **P 18 20 01.6 +0.6**
comp=Z,12nm,0.8s
KDAK Kodiak Island 53.88 36 *i* P **P 18 20 03.4 +2.4**
NRIK Noril'sk 54.21 339 P **P 18 20 04.1 +0.8**
comp=Z,3.5nm,0.5s,baz=135,slow=5.7,SNR=2.8
PDGK Podgornoye 54.70 306 P **P 18 20 07.1 -0.3**
PDGK pmax pmax
comp=Z,14nm,1.0s
CNPM China Poot 54.82 34 *e*P **P 18 20 08.2 +0.4**
comp=Z,12nm,0.8s
KURK Kurchatov 55.04 315 *e*P **P 18 20 10.1 +0.6**
comp=Z,8.9nm,0.8s
KURK Kurchatov 55.04 315 *ce*P **P 18 20 09.7 +0.1**
KURK pmax pmax
comp=Z,11nm,1.0s
SKT Skwentna 55.05 31 *e*P **P 18 20 10.0 +0.5**
comp=Z,9.9nm,1.0s
CAST Castle Rocks 55.07 29 *e*P **P 18 20 10.9 +1.3**
comp=Z,11nm,1.1s
KURBB Kurchatov Arra 55.10 315 P **P 18 20 10.3 +0.3**
comp=Z,6.3nm,0.7s,baz=91,slow=8.1,SNR=55
BPAW Bear Paw Mtn. 55.68 29 *e*P **P 18 20 15.4 +1.5**
comp=Z,4.9nm,0.9s
TRF Thorofare Moun 55.87 30 *e*P **P 18 20 14.8 -0.7**
comp=Z,17nm,1.2s
MLY Manley 55.96 28 *e*P **P 18 20 17.7 +1.7**
comp=Z,18nm,1.7s
RND Reindeer 56.50 30 *e*P **P 18 20 20.3 +0.4**
comp=Z,9.5nm,0.9s
MCK McKinley 56.51 29 *e*P **P 18 20 20.1 +0.3**
comp=Z,10nm,1.0s
MCK McKinley 56.51 29 *e*P **P 18 20 20.2 +0.3**
MCK pmax pmax
comp=Z,10.0nm,1.0s
COLD Coldfoot 56.61 25 *e*P **P 18 20 22.1 +1.6**
comp=Z,6.6nm,1.1s
WRH Wood River Hil 56.98 29 *e*P **P 18 20 23.7 +0.4**
comp=Z,5.5nm,1.1s
MDM Murphy Dome 56.99 28 *e*P **P 18 20 24.7 +1.4**
comp=Z,15nm,1.6s
SCM Sheep Creek Mo 57.00 32 *e*P **P 18 20 24.5 +1.0**
comp=Z,17nm,0.8s
SCM Sheep Creek Mo 57.00 32 *e*P **P 18 20 24.5 +1.0**
SCM pmax pmax
comp=Z,17nm,0.8s
DHY Denali Highway 57.12 30 *e*P **P 18 20 25.1 +0.7**
comp=Z,4.5nm,1.0s
HDA Harding Lake 57.47 29 *e*P **P 18 20 26.7 0.0**
comp=Z,3.9nm,0.8s
ILAR Eielson Array 57.54 28 P **P 18 20 27.6 +0.5**
comp=Z,3.4nm,0.7s,baz=260,slow=5.9,SNR=43
ILAR LR LR 18 43 27.8
comp=Z,82nm,20.7s,baz=277,slow=34
ILAR Eielson Array 57.54 28 *e*P **P 18 20 27.6 +0.5**
ILAR pmax pmax
comp=Z,4.0nm,0.7s
ILB Eielson Array 57.54 28 *e*P **P 18 20 27.2 0.0**
IL1 Eielson Array 57.54 28 *e*P **P 18 20 27.3 +0.2**
TKM2 Tokmak 2 57.57 306 P **P 18 20 28.7 +0.7**
TKM2 pmax pmax
comp=Z,4.0nm,0.9s
KSH Kashi 57.76 302 P P 18 20 37.4 +8.1
KSH pP sP 18 20 42.4 -1.7
KSH PP PP 18 22 48.3 +11
KSH S S 18 28 35.4 +9.2
KSH sS sS 18 28 43.3 -0.3
KSH SS **SS 18 32 21.8 +5.1**
KSH pmax pmax
comp=Z,18nm,0.7s
KSH pmax pmax
comp=Z,270nm,4.3s
KSH LR LR
comp=Z,240nm,6.6s
KSH LR LR
comp=Z,280nm,5.3s
KSH LR LR
comp=Z,240nm,8.3s
STKA Stephens Creek 57.82 183 *e*P **P 18 20 26.9 -2.5**
STKA pmax pmax
comp=Z,2.0nm,0.7s
FRU Bishkek 58.30 306 *e*P **P 18 20 32.0 -0.9**
AFI Afiamalu 58.34 128 LR LR 18 40 26.8
comp=Z,47nm,21.1s,baz=138,slow=31
AAK Ala-Archa 58.42 306 *e*P **P 18 20 30.3 -3.6**
comp=Z,6.6nm,1.0s
AAK Ala-Archa 58.42 306 *e*P **P 18 20 30.3 -3.6**
AAK pmax pmax
comp=Z,7.0nm,1.0s
SCRK Sand Creek 58.71 29 *e*P **P 18 20 36.3 +0.8**
comp=Z,8.4nm,0.8s
CRQM Cirque 58.95 33 *e*P **P 18 20 38.8 +1.5**
comp=Z,15nm,0.7s
OTUK Ortayu 59.26 312 P **P 18 20 39.9 +0.5**
OTUK pmax pmax
comp=Z,9.0nm,1.2s
BALM Baldy 59.35 33 *e*P **P 18 20 40.4 +0.4**
comp=Z,7.1nm,0.7s
BALM Baldy 59.35 33 *e*P **P 18 20 40.4 +0.4**
BALM pmax pmax
comp=Z,7.0nm,0.7s
SFK Sufi-Kurgan 59.56 303 P **P 18 20 42.8 +0.9**
SFK pmax pmax
comp=Z,6.0nm,0.6s
MNAS Manas 59.89 306 P **P 18 20 42.8 -1.3**
EGAK Eagle 59.98 28 *e*P **P 18 20 45.0 +0.8**
comp=Z,16nm,1.8s
BVAR Borovoye Array 60.06 318 P **P 18 20 45.4 +0.6**
comp=Z,4.9nm,0.7s,baz=89,slow=6.7,SNR=24
BVAR LR LR 18 47 10.9
comp=Z,119nm,18.2s,baz=80,slow=36
BRVK Borovoye 60.12 318 *e*P **P 18 20 45.8 +0.5**
comp=Z,7.6nm,0.8s
BRVK Borovoye 60.12 318 *d i*P **P 18 20 45.6 +0.3**
BRVK pmax pmax
comp=Z,5.0nm,0.8s
DAWY Dawson 60.74 29 *e*P **P 18 20 51.0 +1.6**
comp=Z,5.8nm,0.8s
NIL Nilore 61.06 296 *e*P **P 18 20 52.7 +0.7**
comp=Z,12nm,1.0s
NIL Nilore 61.06 296 *e*P **P 18 20 52.7 +0.7**
NIL pmax pmax
comp=Z,12nm,1.0s
KK31 Karatay Array 61.24 307 *e*P **P 18 20 53.9 +0.8**
KK31 Karatay Array 61.24 307 *e*P **P 18 20 53.9 +0.8**
KKAR Karatay Array 61.24 307 *e*P **P 18 20 53.8 +0.7**
KKAR Karatay Array 61.24 307 *e*P **P 18 20 53.8 +0.7**
INK Inuvik 63.01 24 P **P 18 21 05.6 +1.1**
comp=Z,2.5nm,0.5s,baz=288,slow=7.7,SNR=9.1
INK Inuvik 63.01 24 *e*P **P 18 21 04.6 +0.1**
comp=Z,8.2nm,1.2s
SVE Sverdlovsk 65.15 323 ||*e*P **P 18 21 19.6 +0.8**
SVE pmax pmax
comp=Z,15nm,1.0s
ARU Arti 66.36 323 LR LR 18 52 18.0
comp=Z,74nm,18.1s,baz=70,slow=38
ARU Arti 66.36 323 *e*P **P 18 21 27.9 +1.4**
comp=Z,8.1nm,0.8s
ARU Arti 66.36 323 *c i*P **P 18 21 27.0 +0.5**
ARU 18 21 55.9
ARU 18 23 52.0
ARU S **S 18 30 19.3 +5.6**
ARU 18 31 25.6
ARU SS **SS 18 34 31.5 +1.5**
ARU pmax pmax
comp=Z,3.0nm,1.0s
AB31 Akbulak array 67.16 315 *i* P **P 18 21 31.7 0.0**
AB31 pmax pmax
comp=Z,4.0nm,0.8s
AKTO Aktyubinsk 68.07 317 P **P 18 21 37.9 +0.4**
comp=Z,1.9nm,0.6s,baz=86,slow=12,SNR=7.6
AKTO LR LR 18 52 17.2
comp=Z,76nm,18.8s,baz=67,slow=37
AKTO Aktyubinsk 68.07 317 P **P 18 21 39.6 +2.1**
AKTO pmax pmax
comp=Z,3.0nm,0.7s
SPITS Spitsbergen Ar 71.61 350 LR LR 18 56 00.1
comp=Z,29nm,20.0s,baz=60,slow=38
RAR Rarotonga 71.74 126 LR LR 18 46 54.7
comp=Z,51nm,20.9s,baz=336,slow=30
YKA Yellowknife Ar 71.96 29 P **P 18 22 01.9 +0.8**
comp=Z,1.9nm,0.8s,baz=294,slow=5.8,SNR=6.4
YKA Yellowknife Ar 71.96 29 *e*P **P 18 22 02.1 +1.0**
YKA pmax pmax
comp=Z,2.0nm,0.8s
RES Resolute Bay 72.45 14 P **P 18 22 05.9 +2.1**
RES pmax pmax
comp=Z,7.0nm,1.2s
SP2 Seward Park 2 73.27 45 *e*P **P 18 22 09.6 +0.4**
KLMR Klimovskoe 74.35 331 *e*P **P 18 22 14.8 -0.5**
KLMR pmax pmax
comp=Z,6.0nm,1.0s
KLMR Klimovskoe 74.35 331 *e*P **P 18 22 14.8 -0.5**
KLMR AMP 18 22 25.6
comp=Z,6.0nm,1.0s
ARA0 ARCESS Array S 75.03 341 *e*P **P 18 22 21.6 +2.5**
ARCES ARCESS Array B 75.03 341 P **P 18 22 21.6 +2.5**
comp=Z,4.1nm,1.0s,baz=36,slow=12,SNR=3.3

YBH Yreka Blue Hor 75.07 51 P **P 18 22 21.4 +1.5**
comp=Z,1.1nm,0.5s,baz=301,slow=5.9,SNR=3.5
YBH LR LR 18 47 54.2
comp=Z,44nm,20.6s,baz=293,slow=30
PPT Papeete 77.47 117 LR LR 18 52 21.4
comp=Z,50nm,20.4s,baz=351,slow=32
PMOR Pomariorio Ree 77.47 114 *e*T T 19 47 17.2
comp=Z,40nm,0.2s
PPT2 Papeete2 77.48 117 *e*LR LR 18 46 13.9
comp=Z,103nm,23.0s
VSR Storozhevoye 78.90 322 *e*P **P 18 22 41.0 -0.1**
VSR pmax pmax
comp=Z,4.0nm,0.4s
VORD Divnogorie 78.94 322 *e*P P 18 22 36.2 -5.2
VORD pmax pmax
comp=Z,9.0nm,0.4s
NV01 Mina Array Sit 79.48 52 *e*P **P 18 22 45.9 +1.0**
NVAR Mina Array Bea 79.48 52 P **P 18 22 46.3 +1.4**
comp=Z,1.4nm,0.8s,baz=274,slow=5.5,SNR=7.9
NVAR LR LR 18 50 32.9
comp=Z,58nm,20.2s,baz=94,slow=30
FIA0 FINESS Array S 79.63 335 *e*P **P 18 22 46.2 +1.3**
FIA0 FINESS Array S 79.63 335 *e*P **P 18 22 46.2 +1.3**
FINES FINESS Array B 79.63 335 P **P 18 22 46.2 +1.3**
comp=Z,1.1nm,0.5s,baz=61,slow=6.1,SNR=8.8
FINES LR LR 19 01 12.8
comp=Z,27nm,20.9s,baz=51,slow=38
FINES FINESS Array B 79.63 335 *e*P **P 18 22 48.9 +4.0**
FINES pmax pmax
comp=Z,1.0nm,0.5s
KBZ Khabaz 80.08 314 P **P 18 22 49.0 +1.3**
comp=Z,3.9nm,0.8s,baz=47,slow=3.0,SNR=9.6
KBZ LR LR 19 01 11.4
comp=Z,56nm,18.1s,baz=54,slow=38
KVAR Kislovodsk Arr 80.11 314 LR LR 19 00 48.5
comp=Z,87nm,18.7s,baz=74,slow=38
KIV Kislovodsk 80.12 314 *e*P **P 18 22 48.9 +0.8**
comp=Z,4.9nm,0.8s
KIV Kislovodsk 80.12 314 *e*P **P 18 22 46.2 -1.9**
KIV pmax pmax
comp=Z,4.0nm,1.0s
GNI Garni 80.44 310 LR LR 19 01 52.4
comp=Z,49nm,18.5s,baz=72,slow=38
TAOE Nuku Hiva Isla 81.00 104 *e*LR LR 18 48 22.3
comp=Z,104nm,25.7s
ALPC Antelope 81.08 56 *e*P **P 18 22 50.6 -2.7**
FFC Flin Flon 81.42 33 P **P 18 22 55.4 +0.7**
FFC pmax pmax
comp=Z,7.0nm,0.9s
PSRC Puddingstone R 81.70 56 *e*P **P 18 22 58.5 +1.9**
DUG Dugway, Tooele 82.51 49 P **P 18 23 00.4 -0.5**
DUG pmax pmax
comp=Z,5.0nm,1.0s
HWB Hans Werner Br 82.80 57 *e*P **P 18 23 02.1 -0.3**
DANC Danby, Needles 83.25 55 *e*P **P 18 23 02.2 -2.5**
PD31 Pinedale Array 83.42 45 *e*P **P 18 23 04.6 -1.1**
PDAR Pinedale Array 83.42 45 P **P 18 23 06.7 +1.1**
comp=Z,0.2nm,0.5s,baz=126,slow=1.2,SNR=3.3
PDAR LR LR 18 55 05.5
comp=Z,73nm,19.6s,baz=285,slow=32
AKASG Malin Array Be 84.52 325 P **P 18 23 10.6 -0.2**
comp=Z,1.2nm,0.8s,baz=50,slow=7.6,SNR=4.2
AKASG LR LR 19 03 22.4
comp=Z,66nm,18.7s,baz=75,slow=37
AKASG Malin Array Be 84.52 325 *e*P **P 18 23 10.0 -0.8**
AKASG pmax pmax
comp=Z,1.0nm,0.7s
AKBB Malin Array Si 84.52 325 *e*P **P 18 23 10.1 -0.7**
comp=Z,4.4nm,1.0s
AKBB Malin Array Si 84.52 325 *e*P **P 18 23 10.1 -0.7**
AKBB pmax pmax
comp=Z,4.0nm,1.0s
HFS Hagfors 85.03 338 P **P 18 23 13.0 -0.2**
comp=Z,0.8nm,0.6s,baz=102,slow=6.2,SNR=4.0
HFS LR LR 19 05 36.3
comp=Z,29nm,20.6s,baz=54,slow=39
NB2 NORSAR Subarra 85.17 339 P **P 18 23 17.5 +3.5**
comp=Z,3.9nm,1.2s,baz=44,slow=5.3
ULM Lac du Bonnet 87.08 34 LR LR 18 59 26.5
comp=Z,20nm,20.8s,baz=344,slow=34
BR101 Keskin Array S 88.08 314 *e*P **P 18 23 29.4 +0.7**
BRTR Keskin Array B 88.08 314 P **P 18 23 29.4 +0.7**
comp=Z,0.4nm,0.7s,baz=18,slow=6.4,SNR=3.2
BRTR LR LR 19 05 34.2
comp=Z,35nm,21.0s,baz=66,slow=37
MLR Muntele Rosu 89.39 322 LR LR 19 07 12.6
comp=Z,13nm,18.0s,baz=69,slow=38
ANMO Albuquerque 89.50 51 LR LR 18 55 37.6
comp=Z,55nm,20.3s,baz=262,slow=30
LPIG La Paz 92.16 62 LR LR 18 59 39.5
comp=Z,26nm,18.9s,baz=129,slow=32
GEC2 GERESS Array S 93.30 330 *e*P **P 18 23 51.9 -0.9**
comp=Z,12nm,1.8s
GEC2 GERESS Array S 93.30 330 *e*P **P 18 23 51.9 -0.9**
GEC2 pmax pmax
comp=Z,12nm,1.8s
GERES GERESS Array B 93.30 330 LR LR 19 08 50.5
comp=Z,56nm,20.6s,baz=44,slow=37
TXAR Lajitas Array 94.51 54 P **P 18 24 00.1 +1.3**
comp=Z,0.2nm,0.5s,baz=291,slow=2.8,SNR=2.6
SCHQ Schefferville 94.94 18 LR LR 19 07 29.8
comp=Z,28nm,21.6s,baz=352,slow=36
SADO Sadowa 98.94 30 LR LR 19 07 16.0
comp=Z,49nm,22.0s,baz=357,slow=34
PLCA Paso Flores 147.65 125 PKPbc **PKPab 18 30 27.4 +2.7**
comp=Z,3.4nm,1.0s,baz=63,slow=2.3,SNR=2.8
PLCA Paso Flores 147.65 125 *e*PKPbc **PKPab 18 30 26.5 +1.7**
LPAZ La Paz 148.16 79 PKPbc **PKPbc 18 30 26.7 +1.5**
comp=Z,3.6nm,0.9s,baz=229,slow=2.7,SNR=10
LPAZ La Paz 148.16 79 *e*PKPbc **PKPbc 18 30 26.5 +1.3**

MAN ***22*** *18:12:18.7,9°.50N×126°.72E, h44km, mb5.3, ML4.2, MS4.4*
ISCJB ***22*** *18:12:21.3±0.7,9°.53N±0°.02×126°.60E±0°.05, h68km±6km, mb4.2/30, Error ellipse: s-maj=7.7km s-min=3.8km az=171.3*
NEIC ***22*** *18:12:22.1±1.1,9°.46N×126°.42E, h57km±10km, mb4.6/18, Error ellipse: s-maj=10.0km s-min=5.0km az=72.0*
IDC ***22*** *18:12:26.2±2.0,9°.43N×126°.43E, h97km±19km, mb3.8/17, mb1 3.9/20, mb1mx3.7/62, mbtmp4.2/20, MS3.3/3, Ms1 3.3/3, ms1mx2.7/66, Error ellipse: s-maj=22.5km s-min=11.8km az=77.0*
ISC 22 18:12:22.0±1.1, 9°.51N±0°.03×126°.67E±0°.06, h54km±11km, n78, σ1s50/92, mb4.3/30, 6C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**1.17 243**		*e*P	Pn	18 12 37.1	-4.9
BUTP				*e*S	**Sn**	**18 12 55.6**	**-1.4**
BIPH	**Bislig**	**1.35 193**	‖	*e*P	**Pn**	**18 12 41.0**	**-3.5**
BIPH				*e*S	**Sn**	**18 12 57.7**	**-3.6**
MSLP	**Maasin**	**1.89 289**		*e*P	**Pn**	**18 12 50.5**	**-1.4**
MSLP				*e*S	**Sn**	**18 13 16.3**	**+1.6**
CGP	**Cagayan de Oro**	**2.22 242**	⇑	*e*P	**Pn**	**18 12 54.1**	**-2.3**
CGP				*i* S	**Sn**	**18 13 21.4**	**-1.1**
BUKP	**Musuan**	**2.27 225**		*e*P	**Pn**	**18 12 55.7**	**-1.4**
BUKP				*e*S	**Sn**	**18 13 25.9**	**+2.0**
PLP	**Palo**	**2.34 315**	⇑	*e*P	**Pn**	**18 12 56.0**	**-2.1**
PLP				*i* S	**Sn**	**18 13 27.5**	**+1.8**
BESP	**Borongan**	**2.41 330**		*e*P	**Pn**	**18 12 58.1**	**-0.9**
BESP				*e*S	**Sn**	**18 13 28.0**	**+0.7**
OCLP	**Ormoc**	**2.55 307**		*e*P	**Pn**	**18 13 00.1**	**-0.8**
MATI	**Mati**	**2.58 189**		*e*P	**Pn**	**18 12 58.7**	**-2.6**
MATI				*e*S	Sn	18 13 42.0	+11
DAV	**Davao City (W)**	**2.65 204**		P	**Pn**	**18 13 04.3**	**+2.0**
	83nm,0.3s,baz=276,slow=3.2,SNR=6.0						
DAV				S	**Sn**	**18 13 36.2**	**+2.9**
	50nm,0.3s,baz=323,slow=23,SNR=3.6						
DAV				LR	LR	18 14 14.1	
	comp=Z,624nm,18.9s,baz=3.0,slow=43						
DAV	**Davao City (W)**	**2.65 204**		*e*Pn	**Pn**	**18 13 00.4**	**-1.9**
DMPH	**Davao City--Mi**	**2.67 206**	⇑	*e*P	**Pn**	**18 13 04.2**	**+1.7**
DMPH				*e*S	**Sn**	**18 13 35.9**	**+2.2**
TBP	**Tagbilaran**	**2.78 274**		*e*P	**Pn**	**18 13 02.4**	**-1.6**
TBP				*e*S	**Sn**	**18 13 35.4**	**-1.0**
LLP	**Lapu-Lapu**	**2.79 287**		*e*P	**Pn**	**18 13 03.8**	**-0.4**
LLP				*e*S	**Sn**	**18 13 36.5**	**0.0**
CTBH	**Cotabato--PC H**	**3.30 227**	⇑	*e*P	**Pn**	**18 13 09.4**	**-1.8**
CTBH				*i* S	**Sn**	**18 13 48.5**	**-0.8**
DCPH	**Dipolog City**	**3.41 255**	‖	*e*P	**Pn**	**18 13 11.4**	**-1.2**
DCPH				*e*S	**Sn**	**18 13 50.4**	**-1.4**
CNP	**Cataman**	**3.58 327**		*e*P	**Pn**	**18 13 13.9**	**-1.1**
CNP				*e*S	**Sn**	**18 13 54.7**	**-1.4**
SKMP	**Bagumbayan, Su**	**3.64 216**		*e*P	**Pn**	**18 13 16.9**	**+1.0**
PAGZ	**Pagadian**	**3.65 243**		*e*P	**Pn**	**18 13 17.3**	**+1.4**
PAGZ				*e*S	**Sn**	**18 13 58.8**	**+1.0**
GUIM	**Jordan**	**4.17 286**		*e*P	**Pn**	**18 13 24.1**	**+0.9**
GUIM				*e*S	**Sn**	**18 14 10.8**	**+0.1**
RCP	**Roxas**	**4.37 298**	⇑	*e*P	**Pn**	**18 13 26.1**	**+0.2**
PVCP	**Virac**	**4.76 329**		*e*P	**Pn**	**18 13 30.1**	**-1.1**
PVCP				*e*S	**Sn**	**18 14 24.6**	**-0.4**
JAP	**San Jose, Anti**	**4.81 285**	‖	*e*P	**Pn**	**18 13 34.7**	**+2.8**
TNTI	**Ternate**	**8.70 175**		*e*Pn	**Pn**	**18 14 24.6**	**-0.7**
APYP	**Conner**	**9.84 328**		*e*P	**Pn**	**18 14 41.2**	**+0.4**
LUWI	**Luwuk**	**11.18 201**		*e*Pn	**Pn**	**18 15 02.6**	**+3.5**
SIJI	**Sorong**	**11.28 156**		P	**Pn**	**18 15 03.5**	**+3.0**
	1.7nm,0.3s,baz=327,slow=12,SNR=4.3						
SBUM	**Sibu**	**15.98 245**		*e*Pn	**P**	**18 16 06.5**	**+0.4**
	9.3nm,1.1s						
BATI	**Baumata**	**19.81 189**		P	**P**	**18 16 48.8**	**+0.6**
	4.8nm,0.3s,baz=15,slow=2.1,SNR=8.3						
MTN	**Manton Dam**	**22.64 169**		*e*P	**P**	**18 17 19.1**	**+0.4**
	16nm,1.2s						
JNU	**Nakatsue**	**23.82 9**		P	**P**	**18 17 31.0**	**+0.8**
	4.5nm,0.9s,baz=225,slow=2.9,SNR=3.7						
JNU	**Nakatsue**	**23.82 9**		*e*P	**P**	**18 17 30.4**	**+0.3**
	27nm,1.5s						
PBKT	**Sadao Pong**	**25.99 288**		*e*P	**P**	**18 17 49.0**	**-1.0**
	12nm,1.1s						
FITZ	**Fitzroy Crossi**	**27.45 182**		P	**P**	**18 18 02.6**	**-0.3**
	3.3nm,0.6s,baz=4.6,slow=6.4,SNR=15						
PMG	**Port Moresby**	**27.73 132**		LR	LR	18 30 27.9	
	comp=Z,34nm,18.4s,baz=353,slow=39						
CM31	**Chiang Mai Arr**	**28.31 291**		*e*P	**P**	**18 18 09.2**	**-1.6**
CMAR	**Chiang Mai Arr**	**28.31 291**		P	**P**	**18 18 09.1**	**-1.7**
	0.3nm,0.6s,baz=88,slow=7.6,SNR=5.0						
MJAR	**Matsushiro Arr**	**28.88 19**		LR	LR	18 30 59.4	
	comp=Z,61nm,18.2s,baz=170,slow=38						
WR1	**Warramunga Arr**	**30.22 166**		*e*P	**P**	**18 18 27.0**	**-0.7**
	8.9nm,0.8s						
WRA	**Warramunga Arr**	**30.22 166**		P	**P**	**18 18 27.0**	**-0.7**
	0.6nm,0.8s,baz=344,slow=9.6,SNR=4.2						
MBWA	**Marble Bar**	**31.23 193**		*e*P	**P**	**18 18 36.2**	**-0.3**
	136nm,1.9s						
AS31	**Alice Springs**	**33.72 168**		*e*P	**P**	**18 18 57.7**	**-0.7**
	0.8nm,0.7s						
ASAR	**Alice Springs**	**33.72 168**		P	**P**	**18 18 57.0**	**-1.3**
	0.5nm,0.6s,baz=344,slow=7.7,SNR=14						
AS01	**Alice Springs**	**33.73 168**		*e*P	**P**	**18 18 58.6**	**+0.2**
ASAJ	**Asahikawa**	**37.15 19**		*e*P	**P**	**18 19 29.0**	**+1.4**
	48nm,1.7s						
FORT	**Forrest**	**40.08 178**		*e*P	**P**	**18 19 52.4**	**+0.2**
	25nm,1.0s						
BBOO	**Buckleboo**	**43.02 168**		*e*P	**P**	**18 20 16.7**	**+0.3**
	98nm,1.8s						
NWAO	**Narrogin (SRO)**	**43.14 192**		P	**P**	**18 20 17.1**	**-0.3**
	5.3nm,0.6s,baz=266,slow=3.7,SNR=6.2						
NWAO	**Narrogin (SRO)**	**43.14 192**		*e*P	**P**	**18 20 16.9**	**-0.5**
	80nm,1.6s						
STKA	**Stephens Creek**	**43.55 161**		P	**P**	**18 20 20.4**	**-0.2**
	1.4nm,0.6s,baz=325,slow=11,SNR=2.3						
STKA	**Stephens Creek**	**43.55 161**		*e*P	**P**	**18 20 20.2**	**-0.5**
	1.4nm,0.8s						
PETK	**Petropavlovsk-**	**50.17 24**		P	**P**	**18 21 14.0**	**+1.9**
	1.1nm,0.7s,baz=197,slow=7.3,SNR=3.2						
PETK	**Petropavlovsk-**	**50.17 24**		*e*P	**P**	**18 21 14.9**	**+2.8**
PEA1	**Petropavlovsk-**	**50.17 24**		*e*P	**P**	**18 21 14.0**	**+1.9**
MK01	**Makanchi Array**	**52.85 323**		*e*P	**P**	**18 21 31.5**	**-0.8**
MK31	**Makanchi Array**	**52.87 323**		*e*P	**P**	**18 21 31.2**	**-1.2**
MK32	**Makanchi Array**	**52.87 323**		*e*P	**P**	**18 21 31.3**	**-1.2**
MKAR	**Makanchi Array**	**52.87 323**		P	**P**	**18 21 31.3**	**-1.2**
	1.5nm,0.5s,baz=126,slow=8.1,SNR=12						
MKAR	**Makanchi Array**	**52.87 323**		*e*P	**P**	**18 21 30.9**	**-1.5**
	18nm,0.5s						
MAKZ	**Makanchi**	**53.07 323**		*e*P	**P**	**18 21 32.6**	**-1.2**
	1.9nm,0.6s						
KURK	**Kurchatov**	**56.92 326**		*e*P	**P**	**18 22 00.1**	**-1.5**
	2.1nm,0.8s						
KURBB	**Kurchatov Arra**	**56.92 326**		P	**P**	**18 22 00.4**	**-1.2**
	0.8nm,0.6s,baz=124,slow=6.7,SNR=4.3						
KBL	**Kabul**	**58.09 305**		*e*P	**P**	**18 22 09.0**	**-1.4**
	4.4nm,0.6s						
KK31	**Karatay Array**	**59.07 315**		*e*P	**P**	**18 22 15.4**	**-1.4**
KKAR	**Karatay Array**	**59.07 315**		*e*P	**P**	**18 22 15.4**	**-1.4**
TIXI	**Tiksi**	**62.11 1**		*e*P	**P**	**18 22 37.4**	**+0.5**
	2.8nm,0.6s						
BVAR	**Borovoye Array**	**62.52 326**		P	**P**	**18 22 38.7**	**-1.3**
	1.1nm,0.6s,baz=102,slow=6.1,SNR=3.1						
KDAK	**Kodiak Island**	**77.08 33**		P	**P**	**18 24 10.9**	**+1.6**
	3.2nm,0.9s,baz=276,slow=9.2,SNR=3.2						
KDAK	**Kodiak Island**	**77.08 33**		*e*P	**P**	**18 24 11.2**	**+1.8**
	16nm,1.5s						
ILAR	**Eielson Array**	**79.95 26**		P	**P**	**18 24 25.1**	**0.0**
	0.7nm,0.6s,baz=236,slow=6.0,SNR=5.7						
ARA0	**ARCESS Array S**	**85.05 340**		*e*P	**P**	**18 24 50.9**	**-0.7**
ARCES	**ARCESS Array B**	**85.05 340**		P	**P**	**18 24 50.9**	**-0.7**
	2.6nm,0.6s,baz=69,slow=6.6,SNR=6.3						
FIA0	**FINESS Array S**	**86.75 332**		*e*P	**P**	**18 24 59.0**	**-1.1**
FINES	**FINESS Array B**	**86.75 332**		P	**P**	**18 24 59.0**	**-1.1**
	1.3nm,0.7s,baz=72,slow=5.6,SNR=3.4						
VNDA	**Vanda**	**89.12 173**		P	**P**	**18 25 12.5**	**+1.5**
	0.5nm,0.6s,baz=300,slow=5.7,SNR=4.0						
VNDA	**Vanda**	**89.12 173**		*e*P	**P**	**18 25 12.0**	**+1.0**
HFS	**Hagfors**	**92.91 333**		P	**P**	**18 25 27.3**	**-1.7**
	1.4nm,0.6s,baz=96,slow=13,SNR=3.5						
YKA	**Yellowknife Ar**	**94.29 24**		P	**P**	**18 25 34.9**	**-0.4**
	0.6nm,0.7s,baz=297,slow=4.1,SNR=2.6						

IDC 22 18:15:43.4±34.0, 18°.24S×177°.41W, h581km±247km, mb3.4/6, mb1 3.5/6, mb1mx3.0/49, mbtmp4.4/6, Error ellipse: s-maj=405.6km s-min=52.1km az=88.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.31 242**		P	P	18 22 23.2	-0.4
	1.6nm,0.7s,baz=113,slow=13,SNR=3.8						
JAY	**Jayapura**	**43.91 286**		P	P	18 23 00.2	+0.1
	4.0nm,0.6s,baz=218,slow=4.2,SNR=5.9						
WRA	**Warramunga Arr**	**45.51 260**		P	P	18 23 12.1	-0.1
	1.4nm,0.3s,baz=94,slow=7.2,SNR=43						
ASAR	**Alice Springs**	**45.62 254**		P	P	18 23 13.1	0.0
	4.0nm,0.6s,baz=90,slow=8.4,SNR=87						
SIJI	**Sorong**	**53.24 283**		P	P	18 24 08.8	-0.3
	3.9nm,0.4s,baz=153,slow=18,SNR=3.5						
FITZ	**Fitzroy Crossi**	**53.91 261**		P	P	18 24 13.7	-0.1
	6.0nm,1.1s,baz=89,slow=6.3,SNR=4.3						

IDC 22 18:23:18.8±14.0, 14°.67S×166°.32E, h0km, mb3.6/3, mb1 3.7/4, mb1mx3.5/55, mbtmp3.6/4, ML3.4/1, Error ellipse: s-maj=248.8km s-min=38.2km az=59.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.36 179**		Pn	Pn	18 25 07.8	+0.1
	0.7nm,0.3s,baz=64,slow=9.6,SNR=12						
DZM				Sn	Sn	18 26 33.6	+1.5
	0.9nm,0.3s,baz=334,slow=21,SNR=5.6						
STKA	**Stephens Creek**	**28.34 229**		P	P	18 29 14.5	-0.1
	1.7nm,0.8s,baz=56,slow=11,SNR=3.3						
WRA	**Warramunga Arr**	**30.95 256**		P	P	18 29 38.1	+0.2
	0.2nm,0.5s,baz=82,slow=6.9,SNR=3.9						
ASAR	**Alice Springs**	**31.84 249**		P	P	18 29 45.4	-0.3
	0.3nm,0.5s,baz=78,slow=8.9,SNR=12						

IDC 22 18:30:44.7±3.0, 32°.72S×178°.03W, h0km, mb3.7/2, mb1 3.9/3, mb1mx3.5/47, mbtmp3.7/3, ML3.3/1, Error ellipse: s-maj=73.0km s-min=44.8km az=126.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.80 214**		Pn	Pn	18 32 25.2	-0.6
	0.6nm,0.3s,baz=272,slow=5.1,SNR=4.6						
URZ				Sn	Sn	18 33 37.3	-6.6
	2.5nm,0.3s,baz=221,slow=17,SNR=14						
ASAR	**Alice Springs**	**43.01 269**		P	P	18 38 46.0	-0.1
	0.8nm,0.8s,baz=108,slow=7.2,SNR=10						
WRA	**Warramunga Arr**	**44.20 275**		P	P	18 38 55.7	-0.1
	0.6nm,0.5s,baz=115,slow=7.7,SNR=14						
FINES	**FINESS Array B**	**147.29 339**		PKPbc	PKPbc	18 50 28.7	-0.7
	0.6nm,0.7s,baz=48,slow=2.1,SNR=2.8						

ATA ***22*** *18:30:52.3±0.7,39°.16N×42°.26E, h19km±4km, ML2.6, MW2.5*

ISCJB ***22*** *18:30:53.5±0.8,39°.16N±0°.05×42°.21E±0°.07, h25km±7km, Error ellipse: s-maj=10.0km s-min=7.0km az=142.6*
CSEM ***22*** *18:30:54.1,39°.19N×42°.26E, h7km, ML2.5*
DDA ***22*** *18:30:54.1,39°.19N×42°.26E, h7km, Ml2.5*
ISC 22 18:30:53.5±0.9, 39°.19N±0°.04×42°.31E±0°.06, h15km±10km, n14, σ0s96/25, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKAR	**Karacoban**	**0.20 289**		*i* P	**Pg**	**18 30 57.8**	**-0.6**
EKAR				*e*S	**Sg**	**18 31 02.0**	**+0.5**
EKAR				IAML		18 31 02.8	
	comp=Z,47nm,0.3s						
EKAR	**Karacoban**	**0.20 289**		*i* P	**Pg**	**18 30 57.7**	**-0.6**
EKAR				*i* S	**Sg**	**18 31 02.1**	**+0.6**
EKAR	**Karacoban**	**0.20 289**		P	**Pg**	**18 30 57.7**	**-0.6**
EKAR				S	**Sg**	**18 31 02.2**	**+0.6**
TUTA	**Tutak**	**0.45 61**		*i* P	**Pb**	**18 31 03.4**	**+0.2**
TUTA				*e*S	**Sb**	**18 31 10.9**	**+1.1**
TUTA				IAML		18 31 11.7	
	comp=Z,58nm,0.2s						
TUTA	**Tutak**	**0.45 61**		*i* P	**Pb**	**18 31 03.5**	**+0.2**
TUTA				*i* S	**Sb**	**18 31 10.2**	**+0.4**
TUTA	**Tutak**	**0.45 61**		P	**Pb**	**18 31 03.5**	**+0.3**
TUTA				S	**Sb**	**18 31 10.2**	**+0.4**
ADCV	**BITLIS_Adilcev**	**0.50 140**		*i* P	**Pb**	**18 31 04.4**	**+0.3**
ADCV				*i* S	**Sb**	**18 31 12.7**	**+1.4**
ADCV	**BITLIS_Adilcev**	**0.50 140**		P	**Pb**	**18 31 04.4**	**+0.3**
ADCV				S	**Sb**	**18 31 12.7**	**+1.4**
EATA	**Eleskirt**	**0.69 12**		*e*P	**Pb**	**18 31 07.0**	**-0.4**
EATA				*e*S	**Sb**	**18 31 18.5**	**+1.6**
EATA	**Eleskirt**	**0.69 12**		*i* P	**Pb**	**18 31 07.3**	**-0.1**
EATA				*i* S	**Sb**	**18 31 18.4**	**+1.6**
EATA	**Eleskirt**	**0.69 12**		P	**Pb**	**18 31 07.3**	**-0.1**
EATA				S	**Sb**	**18 31 18.4**	**+1.6**
HOMI	**Horasan**	**0.91 340**		*e*P	**Pg**	**18 31 10.2**	**-0.9**
ERZM	**Erzurum**	**1.02 315**		*e*P	**Pn**	**18 31 12.6**	**-1.0**
GEVA	**Gevas**	**1.05 146**		*e*P	**Pg**	**18 31 12.5**	**-1.3**

MAN ***22*** *18:40:09.5,4°.70N×126°.63E, h93km, mb4.5, ML3.3, MS3.1*
IDC ***22*** *18:40:09.1±1.2,5°.33N×126°.61E, h0km, mb3.6/7, mb1 3.7/7, mb1mx3.5/60, mbtmp3.6/7, MS2.5/1, Ms1 2.5/1, ms1mx2.1/47, Error ellipse: s-maj=99.7km s-min=17.0km az=70.0*
ISCJB ***22*** *18:40:17.1±0.7,5°.07N±0°.05×126°.2E±0°.2, h71km, mb3.5/7, Error ellipse: s-maj=22.9km s-min=7.2km az=173.3*
ISC 22 18:40:18.5±0.9, 5°.12N±0°.08×126°.4E±0°.1, h71km, n14, σ2s62/18, mb3.4/7, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.82 356**		*e*P	**Pn**	**18 40 49.4**	**+1.5**
MATI				*e*S	**Sn**	**18 41 10.4**	**+0.4**
DAV	**Davao City (W)**	**2.10 337**		Sn	**Sn**	**18 41 10.2**	**-6.6**
	baz=252,slow=20,SNR=2.2						
DMPH	**Davao City--Mi**	**2.14 336**	⇑	*e*P	**Pn**	**18 40 51.2**	**-0.9**
DMPH				*e*S	**Sn**	**18 41 21.5**	**+3.7**
SKMP	**Bagumbayan, Su**	**2.31 307**		*e*P	**Pn**	**18 40 53.3**	**-1.1**
SKMP				*e*S	**Sn**	**18 41 24.9**	**+3.1**
BUKP	**Musuan**	**3.04 334**		*e*P	**Pn**	**18 41 02.5**	**-1.9**
BUKP				*e*S	**Sn**	**18 41 44.8**	**+5.0**
BIPH	**Bislig**	**3.05 359**	‖	*i* P	Pn	18 41 12.2	+7.8
BIPH				*i* S	**Sn**	**18 41 40.4**	**+0.7**
GUMO	**Guam**	**20.07 64**		LR	LR	18 52 09.3	
	comp=Z,13nm,18.6s,baz=215,slow=36						
FITZ	**Fitzroy Crossi**	**23.08 182**		P	**P**	**18 45 18.8**	**+0.4**
	1.4nm,0.8s,baz=352,slow=9.0,SNR=3.4						
WRA	**Warramunga Arr**	**26.10 163**		P	**P**	**18 45 46.1**	**+0.3**
	0.5nm,0.5s,baz=344,slow=10,SNR=8.2						
ASAR	**Alice Springs**	**29.53 166**		P	**P**	**18 46 16.9**	**+0.3**
	0.3nm,0.5s,baz=336,slow=7.2,SNR=11						
ASAR				PcP	**PcP**	**18 49 21.3**	**+0.9**
	0.4nm,0.9s,baz=1.1,slow=2.4,SNR=3.5						
MKAR	**Makanchi Array**	**56.23 325**		P	**P**	**18 49 51.1**	**-0.4**
	0.4nm,0.5s,baz=116,slow=8.0,SNR=7.4						
KURBB	**Kurchatov Arra**	**60.40 327**		P	**P**	**18 50 19.8**	**-0.6**
	0.2nm,0.4s,baz=130,slow=6.6,SNR=3.8						
BVAR	**Borovoye Array**	**65.98 327**		P	**P**	**18 50 56.8**	**-0.5**
	0.2nm,0.4s,baz=107,slow=5.0,SNR=2.6						
FINES	**FINESS Array B**	**90.46 332**		P	**P**	**18 53 11.6**	**-0.6**
	1.0nm,1.0s,baz=31,slow=3.7,SNR=3.1						

NEIC ***22*** *18:55:23.3±0.8,32°.88S×177°.60W, h10km, mb4.4/3, Error ellipse: s-maj=21.5km s-min=9.4km az=121.0*
ISCJB ***22*** *18:55:25.1±0.8,33°.13S±0°.09×177°.6W±0°.1, h34km, mb4.1/5, Error ellipse: s-maj=20.8km s-min=8.0km az=34.2*
IDC ***22*** *18:55:27.2±3.0,32°.78S×178°.45W, h0km, mb3.8/2, mb1 4.0/3, mb1mx3.6/49, mbtmp3.8/3, ML3.6/1, Error ellipse: s-maj=69.8km s-min=36.1km az=115.0*
ISC 22 18:55:26.9±1.0, 33°.13S±0°.1×177°.6W±0°.2, h34km, n20, σ2s01/23, mb3.9/5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.81 356**		*e*Pn	**Pn**	**18 56 18.8**	**-4.3**
MXZ	**Matakaoa Point**	**5.59 215**		*e*Pn	**Pn**	**18 56 51.2**	**+3.6**
MXZ				*e*Sn	**Sn**	**18 57 50.9**	**+0.2**
URZ	**Urewera**	**6.73 218**		Pn	**Pn**	**18 57 04.9**	**+1.7**
	1.4nm,0.3s,baz=307,slow=5.1,SNR=8.1						
URZ				Sn	**Sn**	**18 58 19.1**	**+0.4**
	2.5nm,0.3s,baz=210,sl

GEVA				S		Sb	19 17 26.7	-0.8
VMUR	**Van-Muradiye**	**0.41**	**39**	*i* P		**Pg**	19 17 20.4	-0.3
VMUR				*i* S		**Sb**	19 17 28.6	+0.2
VMUR	**Van-Muradiye**	**0.41**	**39**	P		**Pg**	19 17 20.4	-0.3
VMUR				S		**Sb**	19 17 28.6	+0.2
ADCV	**BITLIS_Adilcev**	**0.43**	**289**	*i* P		**Pg**	19 17 21.0	+0.1
ADCV				*i* S		**Sb**	19 17 28.6	-0.3
ADCV	**BITLIS_Adilcev**	**0.43**	**289**	P		**Pg**	19 17 21.0	+0.1
ADCV				S		**Sb**	19 17 28.5	-0.3
CLDR	**Caldiran**	**0.71**	**48**	PG		**Pg**	19 17 24.9	-1.4
CLDR	**Caldiran**	**0.71**	**48**	*i* P		**Pg**	19 17 24.8	-1.4
CLDR				*i* S		**Sb**	19 17 36.4	-0.6
CLDR	**Caldiran**	**0.71**	**48**	*e*Pg		**Pg**	19 17 24.9	-1.4
CLDR				S		**Sb**	19 17 36.4	-0.6
TUTA	**Tutak**	**0.80**	**336**	*i* P		**Pg**	19 17 27.5	-0.6
TUTA				*e*S		**Sb**	19 17 39.1	-0.7
TUTA				IAML			19 17 43.9	
	comp=Z,58nm,0.4s							
TUTA	**Tutak**	**0.80**	**336**	*i* P		**Pg**	19 17 27.3	-0.8
TUTA				*i* S		**Sb**	19 17 39.0	-0.7
TUTA	**Tutak**	**0.80**	**336**	P		**Pg**	19 17 27.3	-0.8
TUTA				S		**Sb**	19 17 39.0	-0.7
AGRB	**Hanur-Agry**	**0.93**	**348**	PG		**Pb**	19 17 30.4	-0.4
AGRB	**Hanur-Agry**	**0.93**	**348**	*e*Pg		**Pb**	19 17 30.4	-0.4
GURO	**Guroymak-BITLI**	**0.95**	**263**	PG		**Pg**	19 17 29.6	-1.3
GURO	**Guroymak-BITLI**	**0.95**	**263**	*e*Pg		**Pg**	19 17 29.6	-1.3
EKAR	**Karacoban**	**1.09**	**303**	*e*P		**Pg**	19 17 31.7	-1.8
EKAR	**Karacoban**	**1.09**	**303**	*i* P		**Pg**	19 17 32.4	-1.0
EKAR				*i* S		**Sn**	19 17 52.2	+3.0
EKAR	**Karacoban**	**1.09**	**303**	P		**Pg**	19 17 32.4	-1.0
EKAR				S		**Sn**	19 17 52.2	+3.0
SRTM	**Siirt_Merkez**	**1.24**	**237**	*i* P		**Pg**	19 17 35.5	-0.8
SRTM				*i* S		**Sn**	19 17 54.2	+1.5
SRTM	**Siirt_Merkez**	**1.24**	**237**	P		**Pg**	19 17 35.5	-0.8
SRTM				S		**Sn**	19 17 54.2	+1.5
EATA	**Eleskirt**	**1.33**	**334**	*e*P		**Pg**	19 17 37.0	-1.0
EATA				*e*S		**Sn**	19 17 56.5	+1.3
EATA	**Eleskirt**	**1.33**	**334**	*i* P		**Pg**	19 17 37.0	-1.0
EATA				*i* S		**Sn**	19 17 56.3	+1.1
EATA	**Eleskirt**	**1.33**	**334**	P		**Pg**	19 17 37.0	-1.0
EATA				S		**Sn**	19 17 56.3	+1.1
SIRT	**Sirnak**	**1.33**	**209**	PN		**Pn**	19 17 37.2	+0.1
SIRT	**Sirnak**	**1.33**	**209**	*e*Pn		**Pn**	19 17 37.2	+0.1
CUKT	**Cukurca**	**1.45**	**168**	PN		**Pg**	19 17 39.8	-0.5
CUKT	**Cukurca**	**1.45**	**168**	*e*Pn		**Pg**	19 17 39.8	-0.5
BNGL	**BINGOL**	**1.66**	**280**	*e*P		**Pb**	19 17 42.6	-0.6
BNGL				*e*S		**Sg**	19 18 06.5	+0.7
BNGL	**BINGOL**	**1.66**	**280**	*i* P		**Pb**	19 17 42.6	-0.6
BNGL				*i* S		**Sg**	19 18 06.0	+0.2
SVAN	**Silvan-Diyarba**	**1.69**	**253**	PN		**Pn**	19 17 42.9	+0.9
SVAN				SN		**Sg**	19 18 06.2	-0.5
SVAN	**Silvan-Diyarba**	**1.69**	**253**	*e*Pn		**Pn**	19 17 42.9	+0.9
SVAN				*e*Sn		**Sg**	19 18 06.2	-0.5
BTMN	**Batman**	**1.73**	**244**	*i* P		**Pn**	19 17 43.2	+0.5
BTMN				*i* S		**Sg**	19 18 08.5	+0.2
BTMN	**Batman**	**1.73**	**244**	P		**Pn**	19 17 43.2	+0.5
BTMN				S		**Sg**	19 18 08.5	+0.2
GNI	**Garni**	**1.88**	**38**	PN		**Pn**	19 17 45.1	+0.3
GNI	**Garni**	**1.88**	**38**	*e*Pn		**Pn**	19 17 45.1	+0.3
ERZM	**Erzurum**	**1.91**	**311**	*e*P		**Pb**	19 17 47.1	-0.4

*ISCJB **22** 19:43:04.6±1.5, 14°.68S±0°.10×167°.2E±0°.2, h170km, mb3.7/7, Error ellipse: s-maj=28.4km s-min=12.2km az=165.5*
*IDC **22** 19:43:05.5±5.2, 14°.69S×167°.25E, h162km±40km, mb3.5/8, mb1 3.6/9, mb1mx3.3/54, mbtmp4.0/9, Error ellipse: s-maj=39.2km s-min=20.3km az=36.0*

ISC 22 19:43:06.3±1.3, 14°.7S±0°.1×167°.3E±0°.2, h170km, n11, σ0°33/13, mb3.9/7, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.35**	**186**	P	**Pn**	**19 44 50.6**	**-0.5**
	2.4nm,0.3s,baz=352,slow=14,SNR=16						
DZM				S	**Sn**	**19 46 13.9**	**0.0**
	2.5nm,0.3s,baz=330,slow=23,SNR=5.6						
CTA	**Charters Tower**	**20.73**	**252**	P	**P**	**19 47 34.2**	**+0.5**
	1.8nm,0.7s,baz=76,slow=8.3,SNR=2.3						
STKA	**Stephens Creek**	**28.99**	**229**	P	**P**	**19 48 50.5**	**+0.4**
	3.9nm,0.7s,baz=360,slow=8.5,SNR=6.5						
WRA	**Warramunga Arr**	**31.81**	**256**	P	**P**	**19 49 14.9**	**-0.2**
	0.3nm,0.8s,baz=83,slow=8.0,SNR=4.6						
ASAR	**Alice Springs**	**32.66**	**249**	P	**P**	**19 49 22.1**	**-0.4**
	1.0nm,0.8s,baz=77,slow=9.3,SNR=13						
ASAR				PcP	**PcP**	**19 52 04.6**	**+0.1**
	0.2nm,0.6s,baz=89,slow=4.1,SNR=3.2						
FITZ	**Fitzroy Crossi**	**40.00**	**259**	P	**P**	**19 50 24.6**	**-0.1**
	1.5nm,0.8s,baz=86,slow=13,SNR=2.6						
VNDA	**Vanda**	**62.87**	**181**	P	**P**	**19 53 13.9**	**+0.3**
	1.0nm,0.6s,baz=352,slow=7.6,SNR=13						
QSPA	**South Pole Qui**	**75.31**	**180**	P	**P**	**19 54 30.9**	**+0.3**
	2.4nm,0.8s,baz=335,slow=1.5,SNR=7.7						
MKAR	**Makanchi Array**	**97.18**	**316**	P	**P**	**19 56 19.2**	**-0.3**
	0.4nm,0.8s,baz=243,slow=1.4,SNR=4.1						
ARCES	**ARCESS Array B**	**120.24**	**345**	PKP	**PKPdf**	**20 01 36.4**	**-0.1**
	3.5nm,1.0s,baz=66,slow=1.5,SNR=5.5						
FINES	**FINESS Array B**	**125.71**	**338**	PKP	**PKPdf**	**20 01 47.1**	**0.0**
	0.2nm,0.5s,baz=38,slow=17,SNR=3.3						

MAN 22 19:45:01.3, 8°.61N×124°.38E, h26km, mb3.6, ML2.3, MS1.7, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGP	**Cagayan de Oro**	**0.34**	**116**	⇑*i*P	Pb	19 45 09.4	+0.3
CGP				*i* S	Sb	19 45 14.2	-0.1
BUKP	**Musuan**	**0.99**	**137**	*e*P	Pb	19 45 19.9	+0.1
BUKP				*e*S	Sn	19 45 32.8	+0.1
PAGZ	**Pagadian**	**1.25**	**233**	*e*P	Pn	19 45 23.4	+0.3
PAGZ				*e*S	Sn	19 45 38.5	-0.5

*IDC **22** 20:24:11.0±0.8, 19°.09S×168°.68E, h0km, mb4.0/12, mb1 4.1/13, mb1mx4.0/46, mbtmp4.0/13, ML4.3/1, MS3.3/10, Ms1 3.3/10, ms1mx3.0/42, Error ellipse: s-maj=22.3km s-min=18.5km az=102.0*
*ISCJB **22** 20:24:16.1±0.3, 19°.26S±0°.06×168°.47E±0°.07, h42km, mb4.5/26, MS3.3/7, Error ellipse: s-maj=9.9km s-min=7.0km az=36.7*
*NEIC **22** 20:24:17.0±0.8, 19°.16S×168°.52E, h37km±7km, mb4.8/15, Error ellipse: s-maj=9.0km s-min=7.6km az=131.0*

ISC 22 20:24:17.5±0.5, 19°.23S±0°.08×168°.5E±0°.1, h42km, n53, σ1°37/52, mb4.6/26, MS3.4/7, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.42**	**214**	Pn	**Pn**	**20 25 07.2**	**-1.1**
	28nm,0.3s,baz=100,slow=11,SNR=281						
DZM				Sn	**Sn**	**20 25 45.1**	**-2.5**
	113nm,0.3s,baz=127,slow=23,SNR=13						
DZM				LR	LR	20 26 17.5	
	comp=Z,266nm,20.3s,baz=15,slow=35						
DZM	**Mont Dzumac**	**3.42**	**214**	*e*Pn	**Pn**	**20 25 06.4**	**-1.9**
DZM				*e*Sn	**Sn**	**20 25 44.8**	**-2.8**
HNR	**Honiara**	**12.77**	**318**	LR	LR	20 31 23.3	
	comp=Z,68nm,21.0s,baz=181,slow=34						
OUZ	**Omahuta**	**16.56**	**165**	*e*Pn	**P**	**20 28 11.3**	**+2.6**
	21nm,0.9s						
AFI	**Afiamalu**	**19.64**	**77**	LR	LR	20 34 58.6	
	comp=Z,102nm,21.3s,baz=87,slow=33						
URZ	**Urewera**	**20.40**	**160**	P	**P**	**20 28 50.2**	**-0.6**
	9.4nm,0.7s,baz=329,slow=4.7,SNR=6.1						
CTA	**Charters Tower**	**20.95**	**264**	P	**P**	**20 28 58.8**	**+1.7**
	2.0nm,0.8s,baz=75,slow=12,SNR=2.3						
BKZ	**Black Stump Fm**	**21.04**	**162**	*e*P	**P**	**20 28 57.2**	**-0.7**
	16nm,0.7s						
BFZ	**Birch Farm**	**22.40**	**164**	*e*P	**P**	**20 29 12.7**	**+0.4**
	80nm,1.6s						
THZ	**Tophouse**	**22.78**	**171**	*e*P	**P**	**20 29 19.9**	**+3.4**
	57nm,1.3s						
PMG	**Port Moresby**	**22.83**	**292**	LR	LR	20 36 48.9	
	comp=Z,42nm,19.1s,baz=213,slow=33						
KHZ	**Kahutara**	**23.51**	**171**	*e*P	**P**	**20 29 24.2**	**+0.6**
	79nm,1.6s						
CAN	**Canberra**	**23.53**	**223**	*e*P	**P**	**20 29 24.0**	**0.0**
	140nm,2.0s						
STKA	**Stephens Creek**	**27.25**	**237**	P	**P**	**20 29 59.0**	**+1.2**
	2.0nm,0.5s,baz=78,slow=12,SNR=13						
STKA				LR	LR	20 40 09.1	
	comp=Z,62nm,19.8s,baz=32,slow=35						
STKA	**Stephens Creek**	**27.25**	**237**	*e*P	**P**	**20 29 59.1**	**+1.3**
	9.5nm,1.7s						
RAR	**Rarotonga**	**29.83**	**99**	LR	LR	20 40 33.1	
	comp=Z,27nm,19.8s,baz=44,slow=33						
BBOO	**Buckleboo**	**31.98**	**238**	*e*P	**P**	**20 30 40.7**	**+0.9**
	81nm,1.8s						
WB2	**Warramunga Arr**	**32.14**	**263**	*e*P	**P**	**20 30 42.1**	**+0.9**
	11nm,1.3s						
WR1	**Warramunga Arr**	**32.15**	**263**	*e*P	**P**	**20 30 41.6**	**+0.2**
	14nm,1.4s						
WR1				*e*PcP	**PcP**	**20 33 29.7**	**-0.1**
WRA	**Warramunga Arr**	**32.15**	**263**	P	**P**	**20 30 41.6**	**+0.2**
	0.3nm,0.6s,baz=96,slow=8.2,SNR=4.7						
WRA				PcP	**PcP**	**20 33 29.7**	**-0.1**
	0.5nm,0.8s,baz=88,slow=4.3,SNR=4.4						
AS01	**Alice Springs**	**32.40**	**256**	*e*P	**P**	**20 30 44.0**	**+0.4**
AS31	**Alice Springs**	**32.44**	**256**	*e*P	**P**	**20 30 43.7**	**-0.2**
	3.0nm,1.0s						
ASAR	**Alice Springs**	**32.44**	**256**	P	**P**	**20 30 44.1**	**+0.2**
	1.7nm,0.6s,baz=86,slow=8.7,SNR=24						
ASAR				LR	LR	20 43 57.9	
	comp=Z,82nm,18.5s,baz=118,slow=36						
FORT	**Forrest**	**38.21**	**244**	*e*P	**P**	**20 31 34.6**	**+1.2**
	23nm,0.9s						
FITZ	**Fitzroy Crossi**	**40.53**	**264**	P	**P**	**20 31 55.4**	**+2.5**
	3.8nm,1.1s,baz=99,slow=19,SNR=2.5						
FITZ				LR	LR	20 48 07.7	
	comp=Z,78nm,19.0s,baz=110,slow=35						
JOHN	**Johnston Islan**	**41.76**	**33**	*e*P	**P**	**20 32 02.1**	**-0.8**
	215nm,1.1s						
VNDA	**Vanda**	**58.42**	**182**	P	**P**	**20 34 08.9**	**+0.5**
	0.5nm,0.7s,baz=350,slow=6.3,SNR=2.7						
SBA	**Scott Base**	**58.67**	**180**	*e*P	**P**	**20 34 11.7**	**+1.6**
	29nm,1.8s						
SBUM	**Sibu**	**59.31**	**285**	*e*P	**P**	**20 34 14.2**	**-1.4**
	6.7nm,1.2s						
ASAJ	**Asahikawa**	**67.34**	**340**	P	**P**	**20 35 07.2**	**-0.9**
	8.1nm,0.9s,baz=190,slow=11,SNR=3.0						
QSPA	**South Pole Qui**	**70.83**	**180**	P	**P**	**20 35 31.2**	**+1.5**
	1.0nm,0.8s,baz=103,slow=5.3,SNR=2.6						
CMAR	**Chiang Mai Arr**	**77.85**	**295**	P	**P**	**20 36 11.8**	**+0.6**
	0.2nm,0.6s,baz=107,slow=6.0,SNR=2.9						
SONA0	**Songino Array**	**86.78**	**323**	*e*P	**P**	**20 36 57.9**	**+0.5**
SONM	**Songino Array**	**86.78**	**323**	P	**P**	**20 36 57.9**	**+0.5**
	1.3nm,0.7s,baz=140,slow=7.0,SNR=5.5						
SONA1	**Songino Array**	**86.78**	**323**	*e*P	**P**	**20 36 57.9**	**+0.5**
MWC	**Mount Wilson**	**87.73**	**53**	*e*P	**P**	**20 37 03.4**	**+1.1**
YBH	**Yreka Blue Hor**	**87.79**	**44**	LR	LR	21 07 49.0	
	comp=Z,36nm,21.5s,baz=281,slow=30						
CHFC	**Chilao Flat St**	**87.80**	**53**	*e*P	**P**	**20 37 03.0**	**+0.3**
BFSC	**Mount Baldy Ra**	**88.03**	**53**	*e*P	**P**	**20 37 02.1**	**-1.6**
EML	**El Monte City P**	**88.09**	**54**	*e*P	**P**	**20 37 00.3**	**-3.6**
EML				*e*PcP	**PcP**	**20 37 06.2**	**+0.7**
MDPB	**Devils Postpil**	**88.43**	**49**	*e*P	**P**	**20 37 06.5**	**+0.8**
	22nm,0.8s						
BEKR	**Beckworth**	**88.52**	**47**	*e*pP	pP	20 37 17.9	-0.8
GMRC	**Granite Mounta**	**89.76**	**53**	*e*P	**P**	**20 37 11.6**	**-0.2**
ILAR	**Eielson Array**	**90.43**	**18**	P	**P**	**20 37 13.2**	**-0.9**
	0.7nm,0.7s,baz=236,slow=6.4,SNR=11						
ILAR				LR	LR	21 11 31.3	
	comp=Z,15nm,20.7s,baz=226,slow=32						
IL1	**Eielson Array**	**90.43**	**18**	*e*P	**P**	**20 37 12.9**	**-1.2**
R11A	**Troy Canyon, C**	**91.24**	**50**	*e*P	**P**	**20 37 20.2**	**+1.5**
	6.5nm,0.9s						
LCMT	**Little Creek M**	**92.43**	**52**	*e*P	**P**	**20 37 24.2**	**0.0**
	18nm,1.0s						
SPITS	**Spitsbergen Ar**	**119.51**	**354**	PKP	**PKPdf**	**20 43 01.1**	**-0.6**
	6.4nm,0.9s,baz=64,slow=3.4,SNR=3.8						
ARA0	**ARCESS Array S**	**124.87**	**345**	*e*PKPdf	**PKPdf**	**20 43 10.9**	**-1.3**
ARCES	**ARCESS Array B**	**124.87**	**345**	PKP	**PKPdf**	**20 43 10.9**	**-1.3**
	1.7nm,0.7s,baz=52,slow=2.0,SNR=5.3						
EKA	**Eskdalemuir Ar**	**143.40**	**352**	PKP	**PKPdf**	**20 43 46.9**	**-0.2**
	1.0nm,0.8s,baz=347,slow=2.2,SNR=3.3						
GERES	**GERESS Array B**	**144.14**	**331**	PKP	**PKPdf**	**20 43 48.1**	**-0.7**
	0.5nm,0.6s,baz=46,slow=2.8,SNR=5.7						
DAVOX	**Davos/Dischmat**	**147.40**	**332**	PKPbc	**PKPbc**	**20 43 56.4**	**-0.6**
	3.9nm,0.5s,baz=250,slow=4.3,SNR=6.7						

*MEX **22** 20:27:46.5±0.4, 31°.15N×115°.92W, h4km±31km, MD3.6*
*ECX **22** 20:27:46.2±0.6, 31°.23N×115°.92W, h5km, MD2.1, ML2.3*

ISC 22 20:27:43.8±1.4, 31°.2N±0°.1×115°.94W±0°.06, h29km±11km, n12, σ0°44/19, 7C-3D, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPIG	**San Pedro Mart**	**0.42**	**105**	⇓*e*P	**Pn**	**20 27 54.0**	**-0.1**
SPIG	**San Pedro Mart**	**0.42**	**105**	*i* P	**Pn**	**20 27 54.2**	**+0.1**
SPIG				*e*S	**Sb**	**20 27 59.7**	**+0.2**
SPX	**San Pedro Mart**	**0.42**	**105**	⇑*e*P	**Pn**	**20 27 54.2**	**+0.1**
SPX				*e*S	**Sn**	**20 28 00.3**	**-0.8**
SPX				IAML		20 28 00.4	
	comp=E,211nm,0.1s						
SPX				⇑*e*		20 28 00.4	
SPX	**San Pedro Mart**	**0.42**	**105**	*e*P	**Pn**	**20 27 53.8**	**-0.4**
SPX				*e*S	**Sb**	**20 27 60.0**	**+0.4**
ZAX	**El Zacaton**	**0.46**	**321**	⇓*e*P	**Pb**	**20 27 53.3**	**-0.3**
ZAX				*e*S	**Sb**	**20 27 59.4**	**-1.0**
ZAX				IAML		20 28 00.9	
	comp=N,461nm,0.3s						
ECNX	**Esteban Cantu**	**0.76**	**312**	⇓*e*P	**Pn**	**20 27 58.9**	**+0.3**
ECBX	**El Chinero**	**0.82**	**67**	⇑⇓*e*P	**Pb**	**20 27 60.0**	**+0.5**
ECBX				*e*S	**Sb**	**20 28 10.0**	**-0.2**
ECBX				*e*		20 28 12.2	
PBX	**Punta Banda**	**0.89**	**311**	⇑*e*P	**Pb**	**20 28 01.3**	**+0.6**
PBX				*e*S	**Sn**	**20 28 12.5**	**+0.2**
CBX	**Cerro Bola**	**1.31**	**332**	⇑*e*P	**Pb**	**20 28 08.0**	**+0.2**
CBX				IAML		20 28 32.7	
	comp=N,51nm,0.4s						
TJIG	**Tijuana**	**1.42**	**334**	*i* P	**Pb**	**20 28 09.5**	**-0.1**
TJIG				*i* S	**Sb**	**20 28 27.5**	**+0.1**
IKP	**In-Ko-Pah, Jac**	**1.50**	**354**	⇑*e*P	**Pb**	**20 28 11.3**	**+0.3**
BAR	**Barrett**	**1.65**	**338**	⇑*e*P	**Pb**	**20 28 13.8**	**+0.3**

IDC 22 20:33:40.5±2.4, 17°.67S×175°.33W, h229km±28km, mb3.6/7, mb1 3.7/8, mb1mx3.3/50, mbtmp4.2/8, Error ellipse: s-maj=24.4km s-min=21.1km az=72.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.07**	**43**	P	Pn	20 34 56.6	0.0
	5.2nm,0.3s,baz=217,slow=10,SNR=7.0						
AFI				S	S	20 35 52.0	-4.9
	8.5nm,0.3s,baz=122,slow=21,SNR=6.2						
URZ	**Urewera**	**21.56**	**196**	P	P	20 38 12.0	0.0
	12nm,0.4s,baz=27,slow=4.5,SNR=17						
STKA	**Stephens Creek**	**41.32**	**242**	P	P	20 41 04.2	+0.2
	1.5nm,0.5s,baz=87,slow=10,SNR=5.7						
WRA	**Warramunga Arr**	**47.56**	**259**	P	P	20 41 53.0	-0.6
	1.1nm,0.8s,baz=97,slow=6.8,SNR=14						
ASAR	**Alice Springs**	**47.68**	**254**	P	P	20 41 54.0	-0.4
	8.6nm,0.7s,baz=90,slow=8.0,SNR=69						
FITZ	**Fitzroy Crossi**	**55.96**	**260**	P	P	20 42 56.0	+0.4
	2.0nm,0.8s,baz=101,slow=10,SNR=3.4						
VNDA	**Vanda**	**60.95**	**186**	P	P	20 43 29.5	+0.5
	0.7nm,0.9s,baz=25,slow=8.3,SNR=4.0						
QSPA	**South Pole Qui**	**72.39**	**180**	P	P	20 44 41.3	-0.2
	1.4nm,0.8s,baz=94,slow=2.5,SNR=3.7						
BRTR	**Keskin Array B**	**146.65**	**317**	PKPbc	PKPbc	20 52 54.9	-0.8
	0.4nm,0.7s,baz=62,slow=5.2,SNR=3.3						

*IDC **22** 20:49:31.4±2.1, 16°.95N×147°.69E, h0km, mb3.6/8, mb1 3.8/9, mb1mx3.5/67, mbtmp3.6/9, ML3.7/1, Error ellipse: s-maj=66.8km s-min=19.5km az=89.0*
*ISCJB **22** 20:49:36.4±1.3, 16°.92N±0°.10×147°.4E±0°.2, h41km, mb3.6/8, Error ellipse: s-maj=34.9km s-min=9.8km az=17.3*

ISC 22 20:49:37.9±1.8, 16°.9N±0°.1×147°.5E±0°.3, h41km, n9, σ0°51/10, mb3.7/8, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.14**	**218**	Pn	**Pn**	**20 50 38.4**	**-0.3**
	4.2nm,0.3s,baz=198,slow=20,SNR=3.4						
GUMO				Sn	**Sn**	**20 51 25.7**	**-0.2**
	6.7nm,0.3s,baz=195,slow=20,SNR=2.9						
MJAR	**Matsushiro Arr**	**21.25**	**339**	P	**P**	**20 54 20.8**	**+0.3**
	0.9nm,0.6s,baz=168,slow=10.0,SNR=4.1						
WRA	**Warramunga Arr**	**38.81**	**200**	P	**P**	**20 56 59.1**	**+0.1**
	0.3nm,0.7s,baz=34,slow=9.0,SNR=4.3						
ASAR	**Alice Springs**	**42.43**	**199**	P	**P**	**20 57 29.4**	**+0.5**
	0.2nm,0.6s,baz=16,slow=11,SNR=3.2						
CMAR	**Chiang Mai Arr**	**46.19**	**280**	P	**P**	**20 57 59.9**	**+0.8**
	0.8nm,0.9s,baz=74,slow=6.1,SNR=4.7						
ZALV	**Zalesovo Beam**	**60.49**	**323**	P	**P**	**20 59 43.0**	**-0.6**
	0.3nm,0.3s,baz=108,slow=9.3,SNR=2.5						
MKAR	**Makanchi Array**	**60.95**	**314**	P	**P**	**20 59 46.6**	**-0.4**
	0.5nm,0.8s,baz=95,slow=8.2,SNR=4.6						
KURBB	**Kurchatov Arra**	**63.81**	**319**	P	**P**	**21 00 05.5**	**-0.4**
	1.2nm,0.7s,baz=96,slow=6.9,SNR=14						
FINES	**FINESS Array B**	**89.24**	**336**	P	**P**	**21 02 29.1**	**-0.3**
	1.2nm,0.8s,baz=132,slow=2.8,SNR=4.7						

*IDC **22** 21:05:05.1±1.7, 8°.65S×160°.46E, h87km±20km, mb3.3/5, mb1 3.5/5, mb1mx3.2/46, mbtmp3.6/5, MS2.9/1, Ms1 2.9/1, ms1mx2.3/23, Error ellipse: s-maj=88.6km s-min=26.7km az=133.0*

ISC 22 21:05:01.6±1.3, 8°.22S±0°.09×160°.1E±0°.3, h35km, n14, σ1°17/9, mb3.3/5, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.21**	**187**	*i* P	**Pn**	**21 05 22.0**	**0.0**
HNR				*i* S	**Sn**	**21 05 36.5**	**-0.7**
HNR	**Honiara**	**1.21**	**187**	P	**Pn**	**21 05 22.7**	**+0.6**
	249nm,0.3s,baz=67,slow=1.5,SNR=87						
HNR				LR	LR	21 05 37.0	
	comp=Z,51nm,18.2s,baz=102,slow=34						
HNR				S	**Sn**	**21 05 38.4**	**+1.2**
	852nm,0.3s,baz=38,slow=22,SNR=40						
DZM	**Mont Dzumac**	**15.07**	**157**	LR	LR	21 13 17.0	
	comp=Z,43nm,18.4s,baz=60,slow=34						
H11S2	**WAKE ISLAND Hy**	**27.33**	**14**	T	T	21 39 32.4	
	baz=194,slow=76,SNR=413						
H11S3	**WAKE ISLAND Hy**	**27.33**	**14**	T	T	21 39 27.7	
	baz=194,slow=76,SNR=405						
H11S1	**WAKE ISLAND Hy**	**27.35**	**14**	T	T	21 39 29.0	
	baz=194,slow=76,SNR=235						
WRA	**Warramunga Arr**	**27.51**	**242**	P	**P**	**21 10 44.6**	**-0.5**
	0.5nm,0.7s,baz=69,slow=9.5,SNR=7.9						
H11N1	**WAKE ISLAND Hy**	**28.56**	**14**	T	T	21 41 00.7	
	baz=193,slow=76,SNR=243						
H11N3	**WAKE ISLAND Hy**	**28.57**	**14**	T	T	21 41 03.8	
	baz=193,slow=76,SNR=277						
H11N2	**WAKE ISLAND Hy**	**28.57**	**14**	T	T	21 41 02.1	
	baz=193,slow=76,SNR=310						
ASAR	**Alice Springs**	**29.41**	**235**	P	**P**	**21 11 00.5**	**-1.5**
	0.2nm,0.6s,baz=62,slow=12,SNR=3.6						
SONM	**Songino Array**	**73.15**	**325**	P	**P**	**21 16 29.9**	**+1.1**
	0.9nm,0.5s,baz=134,slow=6.2,SNR=3.6						
ILAR	**Eielson Array**	**82.72**	**20**	P	**P**	**21 17 20.2**	**-1.2**
	0.2nm,0.7s,baz=230,slow=4.2,SNR=3.2						
MKAR	**Makanchi Array**	**87.68**	**318**	P	**P**	**21 17 47.6**	**+0.9**
	0.8nm,0.7s,baz=102,slow=5.7,SNR=8.3						

IDC 22 21:18:28.0±2.0, 6°.92S×129°.71E, h0km, mb3.2/1, mb1 3.7/5, mb1mx3.4/51, mbtmp3.5/5, ML3.5/4, Error ellipse: s-maj=50.5km s-min=27.5km az=82.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.81**	**241**	Pn	Pn	21 20 10.6	+1.3
	0.9nm,0.3s,baz=78,slow=9.3,SNR=2.3						
BATI				Sn	Sn	21 21 20.4	-7.2
	1.5nm,0.3s,baz=86,slow=19,SNR=3.4						
FITZ	**Fitzroy Crossi**	**11.79**	**199**	Pn	Pn	21 21 15.7	-2.0
	0.3nm,0.3s,baz=18,slow=11,SNR=28						
FITZ				Sn	Sn	21 23 13.4	-17
	0.2nm,0.3s,baz=36,slow=19,SNR=3.2						
WRA	**Warramunga Arr**	**13.70**	**161**	Pn	Pn	21 21 44.7	+1.0
	0.3nm,0.3s,baz=340,slow=12,SNR=20						
WRA				Sn	Sn	21 24 07.5	-9.3
	0.4nm,0.3s,baz=336,slow=22,SNR=11						
ASAR	**Alice Springs**	**17.13**	**167**	P	Pn	21 22 29.4	+0.3

IDC 22 22:44:37.9±3.0, 32°.96S×178°.30W, h0km, mb3.5/2, mb1 3.7/3, mb1mx3.5/45, mbtmp3.5/3, ML2.8/1, Error ellipse: s-maj=73.7km s-min=35.8km az=119.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.47**	**214**	Pn	Pn	22 46 13.3	-1.0
	0.2nm,0.3s,baz=18,slow=16,SNR=3.2						
URZ				Sn	Sn	22 47 30.1	+1.2
	1.7nm,0.3s,baz=126,slow=19,SNR=10						
ASAR	**Alice Springs**	**42.78**	**270**	P	P	22 52 37.6	+0.2
	0.3nm,0.5s,baz=111,slow=7.1,SNR=4.0						
WRA	**Warramunga Arr**	**44.00**	**275**	P	P	22 52 47.0	-0.2
	0.5nm,0.5s,baz=114,slow=8.0,SNR=5.4						
FINES	**FINESS Array B**	**147.44**	**338**	PKPbc	PKPbc	23 04 22.3	-0.7
	1.8nm,0.9s,baz=29,slow=4.4,SNR=8.7						

ISCJB 22 22:49:09.7±0.5, 5°.93S±0°.04×146°.8E±0°.1, h10km, mb3.9/13, MS3.2/8, Error ellipse: s-maj=16.4km s-min=6.0km az=173.8
IDC 22 22:49:14.8±3.6, 5°.97S×146°.79E, h32km±26km, mb3.7/12, mb1 3.9/16, mb1mx3.8/48, mbtmp4.0/16, ML3.8/3, MS3.2/11, Ms1 3.2/11, ms1mx3.0/40, Error ellipse: s-maj=27.0km s-min=15.1km az=78.0
NEIC 22 22:49:15.1±0.4, 5°.97S×146°.77E, h35km, mb4.0/3, Error ellipse: s-maj=14.5km s-min=5.9km az=90.0
ISC 22 22:49:12.2±0.6, 5°.90S±0°.06×146°.7E±0°.2, h10km, n37, σ1°.54/32, mb4.1/13, MS3.3/8, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.51**	**173**	Pn	**Pn**	**22 50 07.3**	**+0.5**
	14nm,0.3s,baz=36,slow=10,SNR=22						
PMG				Pg	**Pb**	**22 50 18.1**	**+3.6**
	42nm,0.3s,baz=351,slow=9.0,SNR=65						
PMG				Sn	**Sn**	**22 50 47.7**	**-0.8**
	10nm,0.3s,baz=143,slow=20,SNR=2.6						
PMG				Lg	Lg	22 51 02.8	
	14nm,0.3s,baz=314,slow=9.8,SNR=4.3						
PMG				LR	LR	22 51 57.2	
	comp=Z,500nm,19.9s,baz=354,slow=47						
HNR	**Honiara**	**13.55**	**106**	LR	LR	22 56 34.1	
	comp=Z,55nm,18.1s,baz=321,slow=33						
CTA	**Charters Tower**	**14.11**	**182**	Pn	**Pn**	**22 52 30.6**	**-1.7**
	0.1nm,0.3s,baz=2.4,slow=12,SNR=2.4						
CTAO	**Charters Tower**	**14.11**	**182**	*e*Pn	**Pn**	**22 52 31.2**	**-1.1**
SIJI	**Sorong**	**16.23**	**287**	Pn	**Pn**	**22 53 02.0**	**+1.5**
	1.0nm,0.3s,baz=133,slow=19,SNR=1.7						
WRAB	**Tennant Creek**	**18.43**	**220**	*e*P	**P**	**22 53 27.3**	**-0.6**
	13nm,1.2s						
WRA	**Warramunga Arr**	**18.44**	**220**	P	**P**	**22 53 26.9**	**-1.2**
	0.3nm,0.3s,baz=38,slow=11,SNR=10						
WRA				PcP	**PcP**	**22 57 59.1**	**+0.3**
	0.1nm,0.3s,baz=21,slow=1.6,SNR=4.7						
GUMO	**Guam**	**19.45**	**355**	LR	LR	23 00 22.0	
	comp=Z,42nm,19.4s,baz=128,slow=34						
GUMO	**Guam**	**19.45**	**355**	P	**P**	**22 53 39.9**	**+0.7**
	5.1nm,0.6s						
ASAR	**Alice Springs**	**21.55**	**214**	P	**P**	**22 54 01.6**	**-0.4**
	0.5nm,0.3s,baz=56,slow=8.6,SNR=9.6						
ASAR				PcP	**PcP**	**22 58 03.1**	**-1.4**
	1.2nm,1.1s,baz=313,slow=15,SNR=4.1						
ASAR				LR	LR	23 03 06.5	
	comp=Z,114nm,18.4s,baz=34,slow=39						
BATI	**Baumata**	**23.23**	**258**	LR	LR	23 05 47.0	
	comp=Z,96nm,19.0s,baz=104,slow=43						
FITZ	**Fitzroy Crossi**	**23.89**	**238**	P	**P**	**22 54 25.6**	**-0.7**
	baz=70,slow=12						
STKA	**Stephens Creek**	**26.29**	**190**	P	**P**	**22 54 47.0**	**-1.1**
	1.3nm,0.7s,baz=24,slow=5.4,SNR=3.6						
STKA				LR	LR	23 06 14.8	
	comp=Z,89nm,18.4s,baz=23,slow=39						
H11N1	**WAKE ISLAND Hy**	**32.27**	**37**	T	T	23 29 39.3	
	baz=218,slow=76,SNR=8.4						
H11N3	**WAKE ISLAND Hy**	**32.28**	**37**	T	T	23 29 40.6	
	baz=218,slow=76,SNR=9.1						
H11N2	**WAKE ISLAND Hy**	**32.29**	**37**	T	T	23 29 40.7	
	baz=218,slow=76,SNR=20						
JNU	**Nakatsue**	**41.63**	**340**	LR	LR	23 12 26.3	
	comp=Z,20nm,18.1s,baz=130,slow=33						
MJAR	**Matsushiro Arr**	**42.97**	**350**	LR	LR	23 15 02.7	
	comp=Z,18nm,18.0s,baz=75,slow=36						
KSRS	**Korea Array**	**46.57**	**339**	P	**P**	**22 57 40.3**	**0.0**
	0.5nm,0.5s,baz=156,slow=9.5,SNR=5.3						
KSAR	**Wonju Array Be**	**46.57**	**339**	P	**P**	**22 57 40.3**	**0.0**
USRK	**Ussuriysk Ar.**	**51.61**	**346**	P	**P**	**22 58 19.9**	**+1.1**
	1.3nm,0.5s,baz=174,slow=2.9,SNR=3.1						
CMAR	**Chiang Mai Arr**	**52.97**	**298**	P	**P**	**22 58 30.2**	**+0.8**
	1.0nm,0.4s,baz=120,slow=5.7,SNR=8.5						
PETK	**Petropavlovsk-**	**59.52**	**8**	LR	LR	23 20 41.8	
	comp=Z,29nm,21.8s,baz=184,slow=32						
ULN	**Ulaanbaatar**	**63.90**	**331**	*e*P	**P**	**22 59 45.3**	**-0.1**
	1.1nm,0.6s						
SONM	**Songino Array**	**64.19**	**331**	P	**P**	**22 59 47.1**	**-0.2**
	0.6nm,0.4s,baz=144,slow=5.4,SNR=5.3						
VNDA	**Vanda**	**72.03**	**177**	P	**P**	**23 00 34.8**	**-1.2**
	0.4nm,0.6s,baz=337,slow=5.9,SNR=5.1						
MKAR	**Makanchi Array**	**77.25**	**321**	P	**P**	**23 01 06.0**	**-0.8**
	0.6nm,0.8s,baz=101,slow=6.3,SNR=5.4						
ZALV	**Zalesovo Beam**	**78.79**	**328**	P	**P**	**23 01 13.5**	**-1.6**
	1.0nm,0.5s,baz=115,slow=6.9,SNR=5.7						
ZALV				LR	LR	23 34 37.4	
	comp=Z,9.6nm,21.9s,baz=244,slow=34						
QSPA	**South Pole Qui**	**84.07**	**180**	P	**P**	**23 01 41.2**	**-1.9**
	0.9nm,0.5s,baz=329,slow=12,SNR=6.7						
ILAR	**Eielson Array**	**85.49**	**23**	P	**P**	**23 01 48.5**	**-1.6**
	2.0nm,0.7s,baz=252,slow=5.0,SNR=23						
BVAR	**Borovoye Array**	**86.53**	**324**	P	**P**	**23 01 55.2**	**-0.3**
	0.3nm,0.5s,baz=100,slow=7.5,SNR=3.3						
YBH	**Yreka Blue Hor**	**94.30**	**49**	LR	LR	23 38 41.0	
	comp=Z,14nm,19.4s,baz=315,slow=32						
LPAZ	**La Paz**	**139.06**	**123**	PKP	**PKPdf**	**23 08 40.4**	**-0.7**
	1.0nm,0.7s,baz=237,slow=7.1,SNR=3.7						
TORD	**Torodi Ar. Bea**	**144.81**	**284**	PKP	**PKPab**	**23 08 48.5**	**-1.0**
	1.7nm,0.6s,baz=82,slow=2.9,SNR=21						
PCRV	**Puerto La Cruz**	**148.66**	**80**	PKPbc	**PKPdf**	**23 09 00.4**	**+3.2**
	7.0nm,0.7s,baz=221,slow=11,SNR=2.0						
KOWA	**Kowa**	**150.00**	**289**	PKPbc	**PKPdf**	**23 09 01.8**	**+2.6**
	0.8nm,0.5s,baz=56,slow=7.3,SNR=3.3						
DBIC	**Dimbokro**	**151.75**	**273**	PKPbc	**PKPbc**	**23 09 08.3**	**0.0**
	6.2nm,0.9s,baz=99,slow=3.8,SNR=7.0						
DBIC				PKPab	**pPKPbc**	**23 09 15.0**	**+3.3**
	3.1nm,0.8s,baz=93,slow=4.5,SNR=3.7						

MEX 22 23:06:52.0±0.4, 14°.11N×92°.00W, h10km, MD3.7, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.98**	**324**	*e*P	Pn	23 07 22.3	-3.3
PCIG				*e*S	Sn	23 07 45.8	-4.7

DDA 22 23:18:33.4, 37°.22N×42°.48E, h7km, Ml2.8
CSEM 22 23:18:34.0±0.2, 37°.24N×42°.55E, h2km, ML2.3, Error ellipse: s-maj=7.3km s-min=3.4km az=35.0
ISK 22 23:18:34.5, 37°.34N×42°.59E, h11km, ML2.3/5
ISN 22 23:18:34.5±0.3, 37°.15N×42°.69E, h0km, ML2.3
ISC 22 23:18:34.2±1.4, 37°.24N±0°.06×42°.47E±0°.03, h7km±10km, n24, σ0°.89/41, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRN	**S¨–rnak**	**0.26**	**350**	*i* P	**Pg**	**23 18 38.8**	**-0.6**
SIRN				*i* S	**Sg**	**23 18 43.2**	**+0.3**
SIRN	**S¨–rnak**	**0.26**	**350**	P	**Pg**	**23 18 38.8**	**-0.6**
SIRN				S	**Sg**	**23 18 43.2**	**+0.3**
SIRT	**Sirnak**	**0.27**	**354**	PG	**Pg**	**23 18 38.8**	**-0.7**
SIRT				SG	**Sg**	**23 18 43.3**	**+0.3**
SIRT	**Sirnak**	**0.27**	**354**	*e*Pg	**Pg**	**23 18 38.8**	**-0.7**
SIRT				*e*Sg	**Sg**	**23 18 43.3**	**+0.3**
SRTM	**Siirt_Merkez**	**0.87**	**330**	*i* P	**Pg**	**23 18 50.9**	**0.0**
SRTM				*i* S	**Sn**	**23 19 05.2**	**-0.9**
SRTM	**Siirt_Merkez**	**0.87**	**330**	P	**Pg**	**23 18 50.9**	**0.0**
SRTM				S	**Sn**	**23 19 05.2**	**-0.9**
CUKT	**Cukurca**	**0.91**	**89**	PG	**Pg**	**23 18 50.6**	**-1.0**
CUKT	**Cukurca**	**0.91**	**89**	*i* P	**Pg**	**23 18 50.3**	**-1.3**
CUKT				*i* S	**Sn**	**23 19 07.5**	**+0.5**
CUKT	**Cukurca**	**0.91**	**89**	P	**Pg**	**23 18 50.3**	**-1.3**
CUKT	**Cukurca**	**0.91**	**89**	*e*Pg	**Pg**	**23 18 50.6**	**-1.0**
BTMN	**Batman**	**1.16**	**305**	*i* P	**Pb**	**23 18 56.5**	**-0.1**
BTMN				*i* S	**Sb**	**23 19 12.5**	**+0.6**
BTMN	**Batman**	**1.16**	**305**	P	**Pb**	**23 18 56.5**	**-0.1**
BTMN				S	**Sb**	**23 19 12.5**	**+0.6**
MARD	**Mardin**	**1.35**	**274**	*i* P	**Pn**	**23 18 58.3**	**-1.4**
MARD				*i* S	**Sn**	**23 19 17.1**	**-0.9**
GURO	**Guroymak-BITLI**	**1.36**	**345**	PN	**Pb**	**23 18 59.9**	**-0.2**
GURO	**Guroymak-BITLI**	**1.36**	**345**	*e*Pn	**Pb**	**23 18 59.9**	**-0.2**
SVAN	**Silvan-Diyarba**	**1.36**	**312**	PN	**Pn**	**23 18 59.7**	**0.0**
SVAN				SN	**Sb**	**23 19 18.7**	**+1.0**
SVAN	**Silvan-Diyarba**	**1.36**	**312**	*i* P	**Pn**	**23 18 59.8**	**0.0**
SVAN				*i* S	**Sg**	**23 19 18.9**	**+0.9**
SVAN	**Silvan-Diyarba**	**1.36**	**312**	P	**Pn**	**23 18 59.8**	**0.0**
SVAN				S	**Sg**	**23 19 18.9**	**+0.9**
YOVA	**Hakkari_Y¨…kse**	**1.49**	**76**	*i* P	**Pg**	**23 19 02.0**	**-0.7**
YOVA				*i* S	**Sg**	**23 19 24.2**	**+2.1**
YOVA	**Hakkari_Y¨…kse**	**1.49**	**76**	P	**Pg**	**23 19 02.0**	**-0.7**
YOVA				S	**Sg**	**23 19 24.2**	**+2.1**
MAZI	**Mazidag**	**1.63**	**278**	PN	**Pb**	**23 19 05.7**	**+1.0**
MAZI	**Mazidag**	**1.63**	**278**	*e*Pn	**Pb**	**23 19 05.7**	**+1.0**
HANI	**Diyarbakir_Han**	**2.02**	**306**	*i* P	**Pb**	**23 19 10.8**	**-0.5**
HANI				*i* S	**Sb**	**23 19 37.5**	**+0.8**
HANI	**Diyarbakir_Han**	**2.02**	**306**	P	**Pb**	**23 19 10.8**	**-0.5**
HANI				S	**Sb**	**23 19 37.5**	**+0.8**

IDC 22 23:21:29.9±2.7, 8°.50S×118°.19E, h105km±24km, mb3.6/13, mb1 3.7/16, mb1mx3.5/57, mbtmp4.0/16, Error ellipse: s-maj=27.3km s-min=9.8km az=60.0
ISCJB 22 23:21:32.5±0.3, 8°.59S±0°.06×118°.34E±0°.04, h152km, mb3.7/13, Error ellipse: s-maj=9.2km s-min=4.7km az=18.6
DJA 22 23:21:34.2±0.3, 9°.S±4°×11°.8E±°, h118km±4km, M4.3/15, mB4.7/2, mb4.5/3, MLv4.3/15, Mw(mB)3.9/2
ISC 22 23:21:34.1±0.5, 8.71S±0°.06×118°.32E±0°.05, h152km, n36, σ2°.32/42, mb3.7/13, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.55**	**258**	P	**Pn**	**23 21 53.8**	**-2.1**
PLAI				S	**Sn**	**23 22 08.1**	**-4.4**
WBSI	**Waikabubak, Su**	**1.40**	**131**	P	**Pn**	**23 22 00.5**	**-2.4**
WBSI				S	**Sn**	**23 22 21.1**	**-3.8**
TWSI	**Taliwang, Sumb**	**1.42**	**269**	P	**Pn**	**23 22 01.6**	**-1.4**
TWSI				S	**Sn**	**23 22 23.6**	**-1.5**
WSI	**Waingapu**	**2.17**	**116**	P	**Pn**	**23 22 12.0**	**+0.6**
BASI	**Baing, Sumba**	**2.68**	**124**	P	**Pn**	**23 22 16.8**	**-0.8**
SRBI	**Singaraja**	**3.14**	**281**	P	**Pn**	**23 22 22.9**	**-0.4**
IGBI	**Denpasar**	**3.14**	**268**	P	**Pn**	**23 22 23.5**	**+0.2**
BKSI	**Bulukumba**	**3.82**	**28**	P	**Pn**	**23 22 30.4**	**-1.7**
MMRI	**Maumere**	**3.87**	**89**	P	**Pn**	**23 22 32.2**	**-0.6**
JAGI	**Jajag, Banyuwa**	**4.13**	**273**	P	**Pn**	**23 22 34.8**	**-1.3**
BLJI	**Banyuglugur**	**4.78**	**281**	P	**Pn**	**23 22 44.7**	**+0.1**
GMJI	**Gumukmas**	**4.84**	**275**	P	**Pn**	**23 22 43.9**	**-1.6**
SPSI	**Sidrap Palu**	**4.93**	**17**	P	Pn	23 22 53.9	+7.2
BATI	**Baumata**	**5.47**	**106**	P	**Pn**	**23 22 53.1**	**-0.8**
	19nm,0.3s,baz=278,slow=2.3,SNR=14						
BATI				S	**Sn**	**23 23 53.2**	**-3.1**
	25nm,0.3s,baz=319,slow=20,SNR=8.6						
BATI	**Baumata**	**5.47**	**106**	P	**Pn**	**23 22 53.3**	**-0.6**
	34nm,0.5s,705nm0.2nm						
TTSI	**Tana Toraja**	**5.83**	**15**	P	**Pn**	**23 23 00.0**	**+1.4**
SOEI	**Soe**	**5.96**	**100**	P	**Pn**	**23 22 59.9**	**-0.6**
	63nm,0.7s,879nm0.4nm						
PWJI	**Pagerwojo**	**6.49**	**276**	P	**Pn**	**23 23 07.7**	**+0.4**
FITZ	**Fitzroy Crossi**	**11.73**	**143**	P	**Pn**	**23 24 16.6**	**-0.3**
	0.4nm,0.3s,baz=341,slow=9.0,SNR=13						
FITZ				S	**Sn**	**23 26 20.6**	**-6.1**
	2.8nm,0.3s,baz=183,slow=16,SNR=12						
WRA	**Warramunga Arr**	**19.10**	**127**	P	**P**	**23 25 46.1**	**+0.7**
	0.6nm,0.3s,baz=302,slow=13,SNR=20						
WRA				S	**S**	**23 29 11.4**	**-2.6**
	0.2nm,0.3s,baz=302,slow=24,SNR=3.4						
ASAR	**Alice Springs**	**21.06**	**137**	P	**P**	**23 26 08.2**	**+1.7**
	2.9nm,0.5s,baz=309,slow=9.1,SNR=61						
ASAR				S	**S**	**23 30 00.0**	**+7.6**
	0.6nm,0.5s,baz=308,slow=22,SNR=3.8						
STKA	**Stephens Creek**	**31.60**	**140**	P	**P**	**23 27 44.9**	**+2.3**
	1.8nm,0.5s,baz=322,slow=9.1,SNR=5.3						
KSRS	**Korea Array**	**46.80**	**10**	P	**P**	**23 29 46.0**	**-2.4**
	1.7nm,0.9s,baz=188,slow=7.4,SNR=2.6						
USRK	**Ussuriysk Ar.**	**54.10**	**12**	P	**P**	**23 30 42.9**	**-0.2**
	1.8nm,0.6s,baz=205,slow=5.9,SNR=3.1						
SONM	**Songino Array**	**57.28**	**350**	P	**P**	**23 31 05.2**	**-0.8**
	0.8nm,0.4s,baz=172,slow=6.6,SNR=3.2						
MKAR	**Makanchi Array**	**63.90**	**333**	P	**P**	**23 31 50.0**	**-0.7**
	0.5nm,0.5s,baz=145,slow=5.7,SNR=8.9						
KURBB	**Kurchatov Arra**	**68.42**	**334**	P	**P**	**23 32 18.5**	**-0.9**
	0.4nm,0.4s,baz=140,slow=6.1,SNR=3.6						
ZALV	**Zalesovo Beam**	**68.54**	**339**	P	**P**	**23 32 18.5**	**-1.5**
	1.2nm,0.6s,baz=132,slow=3.3,SNR=5.7						
PETK	**Petropavlovsk-**	**70.09**	**24**	P	**P**	**23 32 30.3**	**+0.8**
	2.4nm,0.8s,baz=252,slow=1.4,SNR=4.3						
VNDA	**Vanda**	**72.37**	**17**	P	**P**	**23 32 46.5**	**+3.5**
	0.3nm,0.4s,baz=304,slow=7.7,SNR=7.2						
BVAR	**Borovoye Array**	**73.73**	**332**	P	**P**	**23 32 50.6**	**-0.7**
	0.2nm,0.5s,baz=98,slow=7.4,SNR=3.0						
QSPA	**South Pole Qui**	**81.28**	**180**	P	**P**	**23 33 34.3**	**+1.1**
	0.6nm,0.7s,baz=323,slow=10,SNR=3.1						
MMAI	**Mount Meron Ar**	**88.81**	**303**	P	**P**	**23 34 12.6**	**+1.3**
	0.2nm,0.4s,baz=77,slow=6.5,SNR=1.9						
TORD	**Torodi Ar. Bea**	**117.75**	**280**	PKP	**PKPdf**	**23 40 04.5**	**+1.1**
	0.7nm,0.5s,baz=51,slow=2.1,SNR=17						
TKL	**Tuckaleechee C**	**146.44**	**34**	PKPbc	**PKPbc**	**23 40 57.7**	**-0.1**
	1.5nm,0.5s,baz=278,slow=7.1,SNR=3.7						
CMIG	**Matias Romero**	**146.62**	**72**	PKPbc	**PKPab**	**23 41 00.1**	**-0.1**
	1.8nm,0.7s,baz=330,slow=8.1,SNR=3.4						

MEX 22 23:31:02.0±0.5, 14°.64N×92°.92W, h17km±999km, MD4.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.10**	**345**	*e*P	Pb	23 31 19.1	-3.6
PCIG				*e*S	Sb	23 31 32.3	-4.4
CCIG	**Comitan**	**1.80**	**25**	*e*P	Pn	23 31 31.8	-0.6
CCIG				*e*S	Sg	23 32 02.0	+1.9
TGIG		**2.14**	**355**	*e*P	Pn	23 31 36.0	-1.0
TGIG				*e*S	Sb	23 32 08.1	+1.4

IDC 22 23:36:07.7±9.1, 24°.38S×178°.95E, h527km±91km, mb3.3/4, mb1 3.4/5, mb1mx3.0/55, mbtmp4.3/5, Error ellipse: s-maj=91.7km s-min=39.4km az=33.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**13.93**	**186**	P	P	23 39 06.0	-0.2
	0.7nm,0.3s,baz=6.3,slow=9.2,SNR=5.7						
URZ				S	S	23 41 32.9	-0.3
	0.4nm,0.3s,baz=13,slow=19,SNR=3.3						
CTA	**Charters Tower**	**30.52**	**272**	P	P	23 41 39.1	+0.9
	5.2nm,0.3s,baz=99,slow=10,SNR=19						
ASAR	**Alice Springs**	**41.01**	**261**	P	P	23 43 05.5	+0.3
	0.5nm,0.4s,baz=93,slow=7.7,SNR=9.6						
WRA	**Warramunga Arr**	**41.42**	**267**	P	P	23 43 07.8	-0.5
	1.2nm,0.3s,baz=96,slow=8.4,SNR=14						
FITZ	**Fitzroy Crossi**	**49.84**	**266**	P	P	23 44 11.2	-1.4
	5.2nm,1.1s,baz=135,slow=5.7,SNR=3.7						
BRTR	**Keskin Array B**	**147.09**	**34**	PKPbc	PKPbc	23 54 51.6	-0.1
	0.4nm,0.6s,baz=99,slow=3.1,SNR=3.8						

MAN 22 23:42:07.7, 10°.09N×123°.13E, h1km, mb4.2, ML3.0, MS2.7, 1C-1D, Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIM	**Jordan**	**0.75**	**315**	*e*P	Pg	23 42 22.1	+0.1
GUIM				*e*S	Sb	23 42 33.7	-0.5
LLP	**Lapu-Lapu**	**0.86**	**75⇑**	*e*P	Pg	23 42 23.3	-0.8
LLP				*e*S	Sg	23 42 32.6	-2.7
RCP	**Roxas**	**1.51**	**346⇓**	*e*P	Pn	23 42 35.1	-0.7
RCP				*e*S	Sg	23 42 57.1	+1.0
MSLP	**Maasin**	**1.71**	**88**	*e*P	Pn	23 42 39.0	+0.4
MSLP				*e*S	Sb	23 43 02.1	+0.2

ISN 22 23:43:19.0±0.8, 37°.19N×42°.56E, h0km±2km, ML3.5
DDA 22 23:43:19.9, 37°.25N×42°.58E, h6km, Ml3.5
CSEM 22 23:43:20.5±0.1, 37°.23N×42°.57E, h2km, ML3.5, Error ellipse: s-maj=3.8km s-min=3.0km az=39.0
ISK 22 23:43:20.1, 37°.27N×42°.52E, h3km±1km, ML3.5/18
ATA 22 23:43:21.5±0.3, 37°.42N×42°.47E, h8km±17km, ML4.2, MW3.9
ISC 22 23:43:19.5±1.2, 37°.21N±0°.03×42°.57E±0°.02, h2km±10km, n87, σ1°.28/126, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRT	**Sirnak**	**0.31**	**341**	PG	**Pg**	**23 43 25.4**	**-0.2**
SIRT				SG	**Sg**	**23 43 29.3**	**-0.4**
SIRT	**Sirnak**	**0.31**	**341**	*e*Pg	**Pg**	**23 43 25.4**	**-0.2**
SIRT				*e*Sg	**Sg**	**23 43 29.3**	**-0.4**
SIRN	**S¨–rnak**	**0.32**	**337**	*i* P	**Pg**	**23 43 25.6**	**-0.1**
SIRN				*i* S	**Sg**	**23 43 29.5**	**-0.2**
SIRN	**S¨–rnak**	**0.32**	**337**	P	**Pg**	**23 43 25.5**	**-0.1**
SIRN				S	**Sg**	**23 43 29.5**	**-0.2**
CUKT	**Cukurca**	**0.83**	**87**	PG	Pn	23 43 36.8	-1.5
CUKT	**Cukurca**	**0.83**	**87**	*i* P	**Pg**	**23 43 35.5**	**+0.1**
CUKT				*i* S	**Sb**	**23 43 47.1**	**-1.3**
CUKT	**Cukurca**	**0.83**	**87**	P	**Pg**	**23 43 35.5**	**+0.1**
CUKT	**Cukurca**	**0.83**	**87**	*e*Pg	Pn	23 43 36.8	-1.5
CUKT				S	**Sb**	**23 43 47.1**	**-1.3**
SRTM	**Siirt_Merkez**	**0.94**	**327**	*i* P	**Pg**	**23 43 37.7**	**+0.2**
SRTM				*i* S	**Sg**	**23 43 47.2**	**-2.5**
SRTM	**Siirt_Merkez**	**0.94**	**327**	P	**Pg**	**23 43 37.7**	**+0.2**
SRTM				S	**Sg**	**23 43 47.2**	**-2.5**
GEVA	**Gevas**	**1.17**	**19**	*e*P	**Pb**	**23 43 41.2**	**-1.4**
GEVA				*e*S	**Sb**	**23 43 56.6**	**-1.7**
GEVA				IAML		23 44 03.7	
	comp=Z,153nm,0.4s						
GEVA	**Gevas**	**1.17**	**19**	*i* P	**Pb**	**23 43 40.9**	**-1.7**
GEVA				*i* S	**Sb**	**23 43 57.1**	**-1.1**
GEVA	**Gevas**	**1.17**	**19**	P	**Pb**	**23 43 40.9**	**-1.7**
GEVA				S	**Sb**	**23 43 57.1**	**-1.1**
BTMN	**Batman**	**1.24**	**304**	*i* P	**Pg**	**23 43 44.0**	**+0.8**
BTMN				*i* S	**Sn**	**23 44 01.4**	**+0.2**
BTMN	**Batman**	**1.24**	**304**	P	**Pg**	**23 43 44.0**	**+0.8**
BTMN				S	**Sn**	**23 44 01.4**	**+0.2**
GURO	**Guroymak-BITLI**	**1.41**	**343**	PN	**Pb**	**23 43 46.4**	**-0.2**
GURO	**Guroymak-BITLI**	**1.41**	**343**	*e*Pn	**Pb**	**23 43 46.4**	**-0.2**
YOVA	**Hakkari_Y¨…kse**	**1.42**	**74**	*i* P	**Pg**	**23 43 46.8**	**0.0**
YOVA				*i* S	**Sg**	**23 44 06.4**	**+1.2**
YOVA	**Hakkari_Y¨…kse**	**1.42**	**74**	P	**Pg**	**23 43 46.8**	**0.0**
YOVA				S	**Sg**	**23 44 06.4**	**+1.2**
MARD	**Mardin**	**1.43**	**275**	*i* P	**Pb**	**23 43 46.4**	**-0.6**
MARD				*i* S	**Sg**	**23 44 06.6**	**+1.0**
SVAN	**Silvan-Diyarba**	**1.44**	**311**	PN	**Pb**	**23 43 46.9**	**-0.2**
SVAN	**Silvan-Diyarba**	**1.44**	**311**	*i* P	**Pb**	**23 43 47.1**	**+0.1**
SVAN				*i* S	**Sg**	**23 44 06.8**	**+1.0**
SVAN	**Silvan-Diyarba**	**1.44**	**311**	P	**Pb**	**23 43 47.1**	**+0.1**
SVAN				S	**Sg**	**23 44 06.8**	**+1.0**
TVAN	**Van**	**1.48**	**26**	*i* P	**Pg**	**23 43 48.1**	**+0.2**
TVAN				*i* S	**Sg**	**23 44 11.4**	**+4.4**
TVAN	**Van**	**1.48**	**26**	P	**Pg**	**23 43 48.1**	**+0.2**
TVAN				S	**Sg**	**23 44 11.4**	**+4.4**
VANB	**Van**	**1.53**	**25**	PN	**Pb**	**23 43 47.9**	**-0.8**
VANB	**Van**	**1.53**	**25**	*e*Pn	**Pb**	**23 43 47.9**	**-0.8**
ADCV	**BITLIS_Adilcev**	**1.60**	**4**	*i* P	**Pg**	**23 43 53.0**	**0.0**
ADCV				*i* S	**Sg**	**23 44 11.6**	**+0.5**
ADCV	**BITLIS_Adilcev**	**1.60**	**4**	P	**Pg**	**23 43 50.3**	**0.0**
ADCV				S	**Sg**	**23 44 11.6**	**+0.5**
MAZI	**Mazidag**	**1.71**	**279**	PN	**Pb**	**23 43 51.6**	**-0.1**
MAZI	**Mazidag**	**1.71**	**279**	*e*Pn	**Pb**	**23 43 51.6**	**-0.1**
VMUR	**Van-Muradiye**	**1.95**	**24**	*i* P	**Pb**	**23 43 55.8**	**0.0**
VMUR				*i* S	**Sg**	**23 44 23.0**	**+0.8**
VMUR	**Van-Muradiye**	**1.95**	**24**	P	**Pb**	**23 43 55.8**	**0.0**
VMUR				S	**Sg**	**23 44 23.0**	**+0.8**
DIY	**Diyarbakir**	**1.99**	**291**	*e*Pn	**Pb**	**23 43 56.1**	**-0.3**
DYBB	**Diyarbakir**	**2.07**	**292**	PN	**Pn**	**23 43 56.1**	**+0.8**
BNGL	**BİNGOL**	**2.07**	**328**	*i* P

IVIS				*e*Sg	Sg	00 03 23.1	-0.4
IVIS				*e*		00 03 25.7	
	comp=N,1μm,0.1s						
IVIS				*e*		00 03 28.3	
	comp=E,1μm,0.2s						
KCHF	**Cheshme Sefid,**	**1.73**	**83**	*e*		00 03 01.5	
	comp=Z,99nm,0.1s						
KCHF				*e*Pn	Pn	00 03 01.3	-0.3
ILIN	**Lien**	**1.85**	**63**	*e*		00 03 04.4	
	comp=Z,4μm,0.1s						
ILIN				*e*Pn	Pn	00 03 03.2	-0.1
ILIN				*e*		00 03 06.0	
	comp=N,4μm,0.0s						
ILIN				*e*		00 03 06.0	
	comp=E,2μm,0.0s						
ILIN				*e*Sg	Sn	00 03 27.6	+0.8
IKOM	**Komasi**	**2.11**	**87**	*e*		00 03 07.3	
	comp=Z,99nm,0.1s						
IKOM				*e*Pn	Pn	00 03 06.5	-0.4
IBZA	**Bozab**	**2.43**	**80**	*e*Pn	Pn	00 03 11.2	-0.1
IBZA				*e*		00 03 12.0	
	comp=Z,1μm,0.0s						
IKFM	**Kafar-mosalman**	**2.46**	**102**	*e*Pn	Pn	00 03 10.8	-0.7
IKFM				*e*		00 03 41.6	
	comp=Z,99nm,0.1s						
IKFM				*e*		00 03 43.3	
	comp=N,99nm,0.1s						
IKFM				*e*		00 03 43.6	
	comp=E,99nm,0.1s						
HSAM	**Samen**	**3.02**	**87**	*e*		00 02 00.0	
HSAM				*e*Pn	Pn	00 03 19.3	-0.1
NSR	**Nassriya**	**3.23**	**162**	*e*Pn	Pn	00 03 22.0	0.0
	SNR=4.0						
NSR				*e*Sn	Sn	00 04 00.0	-0.5
	SNR=4.0						
HKZM	**Kohzaman**	**3.49**	**67**	*e*Pn	Pn	00 03 26.1	+0.2
HKZM				*e*		00 04 28.6	
	comp=Z,99nm,0.2s						
HAGD	**Aghdareh**	**3.53**	**77**	*e*Pn	Pn	00 03 26.6	+0.2
HAGD				*e*		00 03 28.2	
	comp=Z,99nm,0.0s						
RTB	**Rutbah**	**4.03**	**256**	*e*Pn	Pn	00 03 36.0	+2.9
	SNR=4.0						
RTB				*e*Sn	Sn	00 04 25.0	+4.6
	SNR=4.0						
ISHB	**Shabestar**	**4.22**	**7**	*e*		00 04 07.3	
	comp=Z,89nm,0.2s						
ISHB				*e*		00 04 46.8	
	comp=N,178nm,0.3s						
ISHB				*e*		00 05 07.6	
	comp=E,240nm,0.4s						
IRAZ	**Razeghan**	**4.29**	**71**	*e*Pn	Pn	00 03 36.3	-0.6
IRAZ				*e*		00 04 48.9	
	comp=E,71nm,0.2s						
IRAZ				*e*		00 04 58.8	
	comp=N,30nm,0.2s						
IRAZ				*e*		00 04 59.3	
	comp=Z,68nm,0.3s						
IHRS	**Heris**	**4.54**	**21**	*e*		00 04 20.9	
	comp=Z,37nm,0.2s						
IHRS				*e*		00 04 27.4	
	comp=N,63nm,0.2s						
IHRS				*e*		00 04 50.8	
	comp=E,51nm,0.2s						
ZNGN	**Zangian**	**5.32**	**110**	*e*		00 04 49.8	
	comp=N,99nm,0.2s						
ZNGN				*e*		00 04 50.3	
	comp=Z,99nm,0.2s						
ZNGN				*e*		00 04 52.2	
	comp=E,99nm,0.2s						
QAM	**Ghamsar**	**5.39**	**92**	*e*Pn	Pn	00 03 52.4	+0.4
QAM				*e*		00 04 56.6	
	comp=Z,143nm,0.0s						
IKLH	**Kolahrood**	**5.57**	**96**	*e*Pn	Pn	00 03 54.7	+0.3
IKLH				*e*		00 04 58.7	
	comp=N,266nm,0.1s						
IKLH				*e*		00 05 00.2	
	comp=E,181nm,0.1s						
IKLH				*e*		00 05 03.7	
	comp=Z,90nm,0.2s						
IZEF	**Zefreh**	**6.27**	**99**	*e*Pn	Pn	00 04 02.9	-1.2
IZEF				*e*		00 05 13.6	
	comp=N,67nm,0.1s						
IZEF				*e*		00 05 14.6	
	comp=Z,37nm,0.1s						
IZEF				*e*		00 05 15.7	
	comp=E,61nm,0.1s						
IRAM	**Ramesheh**	**6.64**	**108**	*e*Pn	Pn	00 04 07.9	-1.2
IRAM				*e*		00 05 21.4	
	comp=E,87nm,0.2s						
IRAM				*e*		00 05 21.7	
	comp=Z,44nm,0.1s						
IRAM				*e*		00 05 21.8	
	comp=N,98nm,0.2s						

IDC ***23*** *00:06:32.0±0.8, 2°.10N×126°.42E, h0km, mb3.8/9, mb1 3.9/9, mb1mx3.7/59, mbtmp3.8/9, Error ellipse: s-maj=49.3km s-min=16.1km az=77.0*
ISCJB ***23*** *00:06:36.3±0.7, 2°.1N±0°.1×126°.4E±0°.3, h47km, mb3.7/8, Error ellipse: s-maj=44.4km s-min=12.9km az=168.8*

ISC 23 00:06:38.4±0.9, 2°.1N±0°.1×126°.6E±0°.4, h47km, n9, σ1§21/9, mb3.7/8, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.08**	**183**	P	**P**	**00 11 08.5**	**+0.4**
	2.6nm,0.8s,baz=9.8,slow=10,SNR=3.4						
WRA	**Warramunga Arr**	**23.19**	**161**	P	**P**	**00 11 39.9**	**-1.4**
	1.1nm,0.4s,baz=339,slow=11,SNR=5.4						
ASAR	**Alice Springs**	**26.58**	**165**	P	**P**	**00 12 14.0**	**+1.6**
	1.0nm,0.5s,baz=347,slow=10.0,SNR=8.5						
KSRS	**Korea Array**	**35.22**	**2**	P	**P**	**00 13 29.5**	**+1.3**
	0.6nm,0.3s,baz=182,slow=8.2,SNR=2.7						
PETK	**Petropavlovsk-**	**57.01**	**22**	P	**P**	**00 16 18.8**	**-0.4**
	0.9nm,0.5s,baz=244,slow=9.0,SNR=2.6						
MKAR	**Makanchi Array**	**58.80**	**326**	P	**P**	**00 16 31.6**	**-0.4**
	0.4nm,0.6s,baz=137,slow=5.8,SNR=6.6						
KURBB	**Kurchatov Arra**	**63.02**	**328**	P	**P**	**00 16 59.4**	**-1.1**
	1.2nm,0.9s,baz=130,slow=6.4,SNR=7.5						
BVAR	**Borovoye Array**	**68.59**	**327**	P	**P**	**00 17 36.5**	**+0.1**
	0.3nm,0.6s,baz=108,slow=4.7,SNR=2.5						
VNDA	**Vanda**	**81.83**	**173**	P	**P**	**00 18 51.3**	**-0.8**
	0.7nm,0.9s,baz=311,slow=5.9,SNR=3.7						

DDA ***23*** *00:16:28.8, 38°.72N×26°.32E, h7km, Ml2.5*
ATH ***23*** *00:16:29.9, 38°.75N×26°.50E, h28km±2km, ML1.6/3, Error ellipse: s-maj=3.5km s-min=1.0km az=279.0*
ISCJB ***23*** *00:16:30.2±0.5, 38°.75N±0°.02×26°.51E±0°.05, h8km±5km, Error ellipse: s-maj=6.5km s-min=3.3km az=172.2*
CSEM ***23*** *00:16:30.1±0.2, 38°.74N×26°.54E, h15km, ML2.5, Error ellipse: s-maj=4.8km s-min=2.8km az=91.0*

ISC 23 00:16:29.9±1.0, 38°.74N±0°.02×26°.49E±0°.04, h14km±9km, n22, σ0§51/37, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.39**	**168**	*i* P	**Pg**	**00 16 37.0**	**-0.7**
URLA				*i* S	**Sb**	**00 16 43.6**	**-0.8**
URLA	**Izmir**	**0.39**	**168**	P	**Pg**	**00 16 37.0**	**-0.7**
URLA				S	**Sb**	**00 16 43.7**	**-0.8**
CHOS	**Chios island**	**0.49**	**224**	P	**Pb**	**00 16 40.8**	**+0.4**
CHOS				S	**Sg**	**00 16 46.6**	**+0.4**
CHOS				AML	AML	00 16 47.9	
	comp=N,114μm,0.4s						
CHOS				AML	AML	00 16 52.3	
	comp=E,202μm,0.3s						
CHOS	**Chios island**	**0.49**	**224**	P	**Pb**	**00 16 40.6**	**+0.2**
ZEY	**¨zmir**	**0.50**	**179**	*i* P	**Pg**	**00 16 39.8**	**+0.1**
ZEY				*i* S	**Sb**	**00 16 48.7**	**+1.1**
PRK	**Paraskevi**	**0.53**	**342**	P	**Pb**	**00 16 40.8**	**-0.2**
PRK				S	**Sb**	**00 16 49.1**	**+0.4**
PRK				AML	AML	00 16 49.3	
	comp=N,185μm,0.5s						
PRK				AML	AML	00 16 53.4	
	comp=E,137μm,0.3s						
PRK	**Paraskevi**	**0.53**	**342**	P	**Pb**	**00 16 40.9**	**-0.2**
AYVA	**Ayvalik**	**0.59**	**15**	*i* P	**Pg**	**00 16 41.2**	**-0.2**
AYVA				*i* S	**Sb**	**00 16 50.8**	**+0.6**
AYVA	**Ayvalik**	**0.59**	**15**	P	**Pg**	**00 16 41.2**	**-0.2**
AYVA				S	**Sb**	**00 16 50.8**	**+0.6**
SIGR	**SIGRI**	**0.68**	**314**	P	**Pb**	**00 16 44.2**	**+0.6**
SIGR				S	**Sg**	**00 16 52.7**	**+0.5**
SIGR				AML	AML	00 16 56.1	
	comp=N,89μm,0.3s						
SIGR				AML	AML	00 16 56.1	
	comp=E,109μm,0.3s						
SIGR	**SIGRI**	**0.68**	**314**	P	**Pb**	**00 16 43.8**	**+0.2**
SIGR				S	**Sb**	**00 16 53.1**	**+0.2**
PSRA	**Psara**	**0.75**	**255**	P	**Pn**	**00 16 45.5**	**-0.6**
PSRA				S	**Sn**	**00 16 57.0**	**-0.3**
PSRA	**Psara**	**0.75**	**255**	P	**Pb**	**00 16 45.2**	**+0.5**
PSRA				S	**Sn**	**00 16 56.4**	**-0.9**
DGB	**¨zmir**	**0.75**	**156**	*i* P	**Pg**	**00 16 44.4**	**-0.1**
DGB				*i* S	**Sb**	**00 16 55.1**	**+0.2**
BAYC	**CANAKKALE_Bayr**	**1.00**	**3**	*i* P	**Pb**	**00 16 49.0**	**-0.1**
BAYC				*i* S	**Sg**	**00 17 02.7**	**+0.4**
BAYC	**CANAKKALE_Bayr**	**1.00**	**3**	P	**Pb**	**00 16 49.0**	**-0.1**
BAYC				S	**Sg**	**00 17 02.7**	**+0.4**
SMG	**Samos**	**1.07**	**165**	P	**Pg**	**00 16 50.8**	**+0.4**
SMG				S	**Sn**	**00 17 05.6**	**+0.5**
SMG	**Samos**	**1.07**	**165**	P	**Pg**	**00 16 50.7**	**+0.3**
LIA	**Limnos Island**	**1.54**	**319**	P	**Pb**	**00 16 57.5**	**-0.6**
LIA	**Limnos Island**	**1.54**	**319**	P	**Pb**	**00 16 57.5**	**-0.6**
SMTH	**Samothraki Isl**	**1.88**	**337**	P	**Pn**	**00 17 01.5**	**-0.2**
SMTH	**Samothraki Isl**	**1.88**	**337**	P	**Pn**	**00 17 01.9**	**+0.2**

MEX 23 00:54:42.3±0.6, 14°.62N×94°.30W, h20km, MD3.8, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.50**	**44**	*i* P	Pn	00 55 04.8	-3.3
PCIG				*i* S	Sn	00 55 23.0	-4.2
TGIG		**2.43**	**28**	*e*P	Pn	00 55 18.9	-2.0
TGIG				*e*S	Sn	00 55 49.0	-1.1
CCIG	**Comitan**	**2.66**	**51**	*e*P	Pn	00 55 24.0	-0.3
CCIG				*e*S	Sn	00 55 55.7	-0.4

IDC ***23*** *01:11:60.0±1.2, 38°.59N×110°.15E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.4/69, mbtmp3.6/6, ML3.1/1, MS2.7/2, Ms1 2.7/2, ms1mx2.2/66, Error ellipse: s-maj=42.6km s-min=17.0km az=64.0*
ISCJB ***23*** *01:12:02.2±1.0, 38°.69N±0°.09×110°.3E±0°.3, h33km, mb3.6/5, MS2.5/2, Error ellipse: s-maj=32.0km s-min=9.9km az=166.2*

ISC 23 01:12:04.9±1.3, 38°.6N±0°.1×110°.1E±0°.3, h35km, n8, σ1§23/7, mb3.8/5, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**9.61**	**345**	Pn	**Pn**	**01 14 19.8**	**-1.0**
	0.2nm,0.3s,baz=167,slow=13,SNR=2.3						
SONM				Sn	**Sn**	**01 16 08.3**	**+0.7**
	0.2nm,0.3s,baz=162,slow=20,SNR=3.6						
SONM				Lg	Lg	01 17 05.5	
	0.3nm,0.3s,baz=167,slow=27,SNR=2.5						
MKAR	**Makanchi Array**	**21.91**	**301**	P	**P**	**01 16 54.8**	**-0.2**
	0.7nm,0.7s,baz=96,slow=11,SNR=6.1						
CMAR	**Chiang Mai Arr**	**22.29**	**209**	P	**P**	**01 16 58.9**	**-0.3**
	1.4nm,0.4s,baz=6.5,slow=9.7,SNR=7.7						
ZALV	**Zalesovo Beam**	**23.07**	**320**	LR	LR	01 27 34.9	
	comp=Z,10nm,18.3s,baz=254,slow=40						
KURBB	**Kurchatov Arra**	**25.27**	**309**	P	**P**	**01 17 29.0**	**+1.4**
	1.3nm,0.9s,baz=111,slow=11,SNR=9.7						
PETK	**Petropavlovsk-**	**35.51**	**50**	LR	LR	01 34 35.6	
	comp=Z,15nm,18.2s,baz=109,slow=38						
WRA	**Warramunga Arr**	**62.52**	**154**	P	**P**	**01 22 26.3**	**+1.2**
	1.1nm,0.8s,baz=347,slow=7.3,SNR=3.4						
ASAR	**Alice Springs**	**65.84**	**156**	P	**P**	**01 22 45.9**	**-0.9**
	0.3nm,0.4s,baz=356,slow=7.1,SNR=3.5						

ISCJB ***23*** *01:18:56.0±0.3, 23°.91S±0°.06×13°.48W±0°.06, h10km, mb4.5/47, MS3.9/34, Error ellipse: s-maj=9.3km s-min=6.7km az=42.8*
IDC ***23*** *01:18:56.0±0.4, 23°.91S×13°.50W, h0km, mb4.3/26, mb1 4.4/26, mb1mx4.3/51, mbtmp4.3/26, MS3.9/33, Ms1 3.9/33, ms1mx3.8/43, Error ellipse: s-maj=16.4km s-min=12.3km az=122.0*
NEIC ***23*** *01:18:57.8±0.2, 23°.90S×13°.49W, h10km, mb4.7/30, Error ellipse: s-maj=9.3km s-min=6.6km az=146.0*
GCMT ***23*** *01:18:57.8±0.3, 23°.94S×13°.37W, h19km±1km, MW4.9/71, Moment Tensor Solution. s20,c23; s71,c91; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=2.68±.20; $M_{\theta\theta}$0.88±.12; $M_{\phi\phi}$1.80±.13; $M_{r\theta}$0.23±.30; $M_{\theta\phi}$-1.09±.08; $M_{\phi r}$-0.39±.27; Best double couple: M_o2.64000×10^{16} NP1:ϕ_s327.00000°, δ50.00000°, λ-89.00000°. NP2: ϕ_s146.00000°, δ40.00000°, λ-91.00000°. Principal axes: T 2.5610, Plg5.0000°, Azm57.0000°; N 0.1550, Plg0.0000°, Azm147.0000°; P -2.7190, Plg85.0000°, Azm241.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 23 01:18:57.7±0.3, 23°.95S±0°.08×13°.49W±0°.08, h10km, n125, σ1§12/105, mb4.5/47, MS4.0/34, 10C-13D, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10S2	**ASCENSION HYDR**	**14.94**	**356**	T	T	01 37 41.7	
	baz=176,slow=74						
H10S3	**ASCENSION HYDR**	**14.95**	**355**	T	T	01 37 42.3	
	baz=176,slow=74						
H10S1	**ASCENSION HYDR**	**14.96**	**356**	T	T	01 37 42.7	
	baz=176,slow=74						
H10N1	**ASCENSION HYDR**	**16.04**	**356**	T	T	01 39 03.0	
	baz=167,slow=75						
H10N3	**ASCENSION HYDR**	**16.04**	**356**	T	T	01 39 06.4	
	baz=167,slow=75						
H10N2	**ASCENSION HYDR**	**16.06**	**356**	T	T	01 39 05.5	
	baz=167,slow=75						
TSUM	**Tsumeb**	**29.24**	**87**	P	**P**	**01 24 59.4**	**-0.8**
	2.0nm,0.6s,baz=263,slow=7.6,SNR=3.5						
TSUM				LR	LR	01 34 38.2	
	comp=Z,428nm,20.0s,baz=259,slow=32						
TSUM	**Tsumeb**	**29.24**	**87**	*e*P	**P**	**01 24 59.7**	**-0.6**
	9.9nm,1.1s						
DBIC	**Dimbokro**	**31.57**	**17**	P	**P**	**01 25 19.5**	**-1.1**
	6.8nm,0.9s,baz=176,slow=11,SNR=4.1						
DBIC				LR	LR	01 34 52.6	
	comp=Z,360nm,20.8s,baz=174,slow=30						
BOSA	**Boshof**	**34.94**	**106**	P	**P**	**01 25 49.2**	**-0.9**
	6.0nm,0.9s,baz=285,slow=9.5,SNR=7.9						
BOSA				LR	LR	01 37 59.7	
	comp=Z,152nm,18.2s,baz=256,slow=33						
LBTB	**Lobatse**	**35.50**	**100**	*e*P	**P**	**01 25 54.5**	**-0.5**
	17nm,1.1s						
KOWA	**Kowa**	**39.31**	**15**	P	**P**	**01 26 26.5**	**-0.6**
	12nm,0.8s,baz=195,slow=8.8,SNR=12						
KOWA				LR	LR	01 39 58.9	
	comp=Z,322nm,18.2s,baz=215,slow=32						
KOWA	**Kowa**	**39.31**	**15**	*e*P	**P**	**01 26 27.2**	**0.0**
	18nm,0.9s						
CPUP	**Villa Florida**	**39.62**	**257**	P	**P**	**01 26 29.7**	**-0.1**
	2.2nm,0.9s,baz=91,slow=7.4,SNR=1.6						
CPUP				LR	LR	01 40 28.8	
	comp=Z,208nm,19.4s,baz=110,slow=33						
TOA0	**Torodi Ar. Sit**	**39.74**	**24**	*e*P	**P**	**01 26 30.4**	**-0.3**
	26nm,1.4s						
TORD	**Torodi Ar. Bea**	**39.74**	**24**	P	**P**	**01 26 30.0**	**-0.7**
	8.7nm,0.8s,baz=202,slow=8.9,SNR=47						
TORD				PcP	**PcP**	**01 28 36.3**	**-0.9**
	1.4nm,0.9s,baz=198,slow=2.5,SNR=3.7						
TORD				LR	LR	01 39 48.3	
	comp=Z,359nm,20.0s,baz=205,slow=32						
LSZ	**Lusaka**	**40.07**	**85**	P	**P**	**01 26 34.0**	**+0.3**
	2.9nm,0.7s,baz=251,slow=7.5,SNR=11						
LSZ	**Lusaka**	**40.07**	**85**	*e*P	**P**	**01 26 34.4**	**+0.7**
	25nm,1.7s						
TRQA	**Tornquist**	**43.41**	**239**	*e*P	**P**	**01 27 00.5**	**-0.2**
	15nm,0.9s						
SIV	**San Ignacio**	**45.25**	**271**	P	**P**	**01 27 16.4**	**+0.7**
	5.4nm,0.9s,baz=108,slow=7.2,SNR=27						
VNA1	**Neumayer--Stat**	**46.83**	**178**	P	**P**	**01 27 27.8**	**+0.4**
VNA3	**Neumayer Olymp**	**47.37**	**178**	P	**P**	**01 27 30.2**	**-1.5**
SNAA	**Sanae**	**48.14**	**175**	P	**P**	**01 27 36.5**	**-1.2**
SNAA	**Sanae**	**48.14**	**175**	P	**P**	**01 27 37.8**	**+0.2**
	1.5nm,0.7s,baz=356,slow=10.0,SNR=4.4						
SNAA				LR	LR	01 43 08.5	
	comp=Z,84nm,21.2s,baz=68,slow=30						
SNAA	**Sanae**	**48.14**	**175**	*e*P	**P**	**01 27 38.0**	**+0.4**
	28nm,1.9s						
MBAR	**Mbarara**	**48.71**	**68**	*e*P	**P**	**01 27 43.5**	**+0.5**
	17nm,1.3s						
SAML	**Samuel**	**49.68**	**279**	*e*P	**P**	**01 27 50.6**	**+0.4**
	8.4nm,0.8s						
TAM	**Tamanrasset**	**49.99**	**23**	*e*P	**P**	**01 27 52.6**	**+0.1**
	12nm,1.8s						
PLCA	**Paso Flores**	**50.18**	**236**	P	**P**	**01 27 53.4**	**-0.4**
	4.0nm,0.8s,baz=84,slow=9.2,SNR=2.8						
PLCA				LR	LR	01 46 14.6	
	comp=Z,146nm,20.3s,baz=130,slow=33						
PTGA	**Pitinga**	**50.57**	**290**	*e*P	**P**	**01 27 58.4**	**+1.4**
	22nm,1.5s						
LCO	**Las Campanas**	**51.05**	**251**	*e*P	**P**	**01 28 01.2**	**+0.5**
	17nm,1.0s						
LPAZ	**La Paz**	**51.62**	**268**	P	**P**	**01 28 04.0**	**-1.5**
	3.3nm,0.8s,baz=122,slow=6.6,SNR=12						
LPAZ				LR	LR	01 47 46.5	
	comp=Z,103nm,21.8s,baz=108,slow=34						
LPAZ	**La Paz**	**51.62**	**268**	*e*P	**P**	**01 28 05.1**	**-0.4**
	4.2nm,0.9s						
MNMC	**Minye Minye**	**52.13**	**264**	*e*P	**P**	**01 28 08.8**	**-0.2**
	11nm,1.0s						
PMSA	**Palmer Station**	**52.14**	**205**	LR	LR	01 45 31.7	
	comp=Z,197nm,20.0s,baz=34,slow=31						
KMBO	**Kilima Mbogo**	**54.07**	**73**	LR	LR	01 49 28.6	
	comp=Z,186nm,19.5s,baz=270,slow=34						
SYO	**Syowa Base**	**54.93**	**159**	*e*P	**P**	**01 28 28.0**	**-0.4**
MDT	**Midelt**	**57.08**	**9**	LR	LR	01 51 37.1	
	comp=Z,165nm,18.8s,baz=184,slow=34						
NNA	**Nana**	**61.00**	**269**	LR	LR	01 55 02.5	
	comp=Z,74nm,18.9s,baz=138,slow=36						
NNA	**Nana**	**61.00**	**269**	*e*P	**P**	**01 29 12.2**	**+0.2**
	35nm,0.9s						
MAW	**Mawson**	**62.90**	**155**	P	**P**	**01 29 24.4**	**+0.7**
	9.6nm,0.9s,baz=285,slow=9.0,SNR=9.4						
MAW				LR	LR	01 51 48.3	
	comp=Z,20nm,21.6s,baz=238,slow=31						
MAW	**Mawson**	**62.90**	**155**	*e*P	**P**	**01 29 25.0**	**+1.2**
	3.7nm,1.0s						
KEST	**Kesra**	**63.16**	**21**	P	**P**	**01 29 26.2**	**+0.2**
	5.3nm,1.1s,baz=231,slow=13,SNR=2.8						
KEST				LR	LR	01 54 28.1	
	comp=Z,176nm,21.1s,baz=291,slow=34						
KEST	**Kesra**	**63.16**	**21**	*e*P	**P**	**01 29 25.3**	**-0.7**
	7.2nm,1.0s						
ESDC	**Sonseca Array**	**63.91**	**8**	P	**P**	**01 29 30.0**	**-0.8**
	0.3nm,0.5s,baz=179,slow=7.1,SNR=4.2						
ESDC				LR	LR	01 55 32.4	
	comp=Z,38nm,18.4s,baz=160,slow=34						
ROSC	**El Rosal**	**65.77**	**287**	LR	LR	01 57 33.3	
	comp=Z,121nm,18.8s,baz=150,slow=35						
QSPA	**South Pole Qui**	**66.27**	**180**	P	**P**	**01 29 46.9**	**+0.9**
	8.9nm,0.9s,baz=209,slow=6.2,SNR=18						
QSPA	**South Pole Qui**	**66.27**	**180**	*e*P	**P**	**01 29 47.0**	**+1.1**
OTAV	**Otavalo**	**67.33**	**281**	*e*P	**P**	**01 29 53.1**	**-0.9**
	1.5nm,0.9s						
TIP	**Timpagrande**	**68.88**	**25**	*i*P	**P**	**01 30 02.7**	**+0.1**
IDI	**Anoyia**	**69.23**	**33**	LR	LR	02 00 11.4	
	comp=Z,35nm,18.9s,baz=251,slow=36						
IDI	**Anoyia**	**69.23**	**33**	*i*P	**P**	**01 30 04.4**	**-0.5**
TIR	**Tirane**	**71.95**	**26**	*i*P	**P**	**01 30 21.6**	**+0.3**
MMAI	**Mount Meron Ar**	**73.35**	**41**	P	**P**	**01 30 31.1**	**+1.2**
	6.0nm,0.8s,baz=257,slow=5.8,SNR=10						
MMAI				LR	LR	02 00 25.9	
	comp=Z,23nm,21.3s,baz=165,slow=34						
DAVOX	**Davos/Dischmat**	**73.50**	**17**	LR	LR	02 01 17.7	
	comp=Z,100nm,19.0s,baz=262,slow=35						
ASF	**Jabal al Asfar**	**73.69**	**43**	P	**P**	**01 30 33.1**	**+1.1**
	1.6nm,0.8s,baz=219,slow=6.5,SNR=4.8						
BLY	**Banja Luka**	**73.88**	**22**	*i*P	**P**	**01 30 32.5**	**-0.2**
RAYN	**Ar Rayn**	**74.19**	**55**	*e*P	**P**	**01 30 36.9**	**+1.9**
	5.2nm,1.0s						
DIVS	**Divibare**	**74.34**	**24**	*e*P	**P**	**01 30 35.2**	**-0.3**
	4.4nm,1.0s						
VTS	**Vitosha**	**74.36**	**27**	*i*P	**P**	**01 30 36.0**	**+0.3**
VTS	**Vitosha**	**74.36**	**27**	*e*P	**P**	**01 30 35.4**	**-0.3**
	2.5nm,0.9s						
MDVR	**Moldovita**	**75.57**	**25**	*i*P	**P**	**01 30 42.6**	**0.0**
HERR	**Herculane**	**75.93**	**25**	*i*P	**P**	**01 30 43.8**	**-0.7**
BZS	**Buzias**	**76.24**	**25**	*i*P	**P**	**01 30 46.0**	**-0.3**
GERES	**GERESS Array B**	**76.43**	**18**	P	**P**	**01 30 47.6**	**+0.2**
	0.1nm,0.3s,baz=230,slow=3.3,SNR=4.2						
GERES				PP	**PP**	**01 33 44.5**	**+4.9**
	0.7nm,0.9s,baz=202,slow=10,SNR=4.4						
GERES				LR	LR	02 04 14.1	
	comp=Z,89nm,18.4s,baz=168,slow=36						
GRFO	**Grafenberg**	**76.53**	**16**	*e*P	**P**	**01 30 47.4**	**-0.4**
	4.3nm,0.9s						
LOT	**Lotru**	**76.94**	**26**	*i*P	**P**	**01 30 49.9**	**-0.5**
BR131	**Keskin Array S**	**77.10**	**35**	*e*P	**P**	**01 30 52.5**	**+1.1**
BRTR	**Keskin Array B**	**77.10**	**35**	P	**P**	**01 30 51.9**	**+0.4**
	3.7nm,1.0s,baz=190,slow=6.3,SNR=18						
BRTR				LR	LR	02 03 37.3	
	comp=Z,23nm,21.3s,baz=242,slow=35						
ARR	**Arges**	**77.22**	**27**	*i*P	**P**	**01 30 51.5**	**-0.4**
PSZ	**Piszkesteto**	**77.57**	**22**	*i*P	**P**	**01 30 53.5**	**-0.3**
ICOR	**Ion Corvin**	**77.57**	**29**	*i*P	**P**	**01 30 53.4**	**-0.4**
JTS	**JuntasAbangare**	**77.61**	**287**	LR	LR	02 06 11.0	
	comp=Z,88nm,18.9s,baz=210,slow=36						
VYHS	**Vyhne**	**77.70**	**21**	*e*P	**P**	**01 30 54.2**	**-0.3**
CVDA	**Cernavoda**	**77.85**	**29**	*i*P	**P**	**01 30 54.7**	**-0.6**
MLR	**Muntele Rosu**	**77.86**	**27**	P	**P**	**01 30 55.0**	**-0.6**
	1.8nm,0.8s,baz=222,slow=14,SNR=22						
MLR				LR	LR	02 04 46.2	
	comp=Z,11nm,19.8s,baz=210,slow=35						
MLR	**Muntele Rosu**	**77.86**	**27**	*i*P	**P**	**01 30 55.5**	**-0.1**
MLR	**Muntele Rosu**	**77.86**	**27**	*e*P	**P**	**01 30 55.1**	**-0.5**
	8.8nm,0.8s						
TLB	**Topalu**	**78.05**	**29**	*i*P	**P**	**01 30 55.4**	**-1.0**
ILGA	**Ilgaz**	**78.11**	**35**	*e*P	**P**	**01 30 58.4**	**+1.3**
	9.9nm,1.0s						
TIRR	**Tirgusor**	**78.11**	**29**

LZH	Lanzhou	125.23	62	ePKP	PKPdf	01 37 53.6	-5.5
LZH				pPKP	sPKPdf	01 38 05.5	+1.8
LZH				sP	pPKPdf	01 38 09.9	+7.3
LZH				LR	LR		
	comp=N,150nnm,18.3s						
LZH				LR	LR		
	comp=E,140nnm,18.0s						
LZH				LR	LR		
	comp=Z,190nnm,20.1s						
WRA	Warrarmunga Arr	126.28	142	PKP	PKPdf	01 38 00.3	-1.2
	comp=Z,0.8nm,0.7s,baz=235,slow=1.7,SNR=5.7						
EGAK	Eagle	127.17	335	ePKPdf	PKPdf	01 38 01.6	-0.2
SONM	Songino Array	127.25	47	PKP	PKPdf	01 38 01.8	-0.8
	comp=Z,0.4nm,0.3s,baz=191,slow=6.6,SNR=2.8						
ILAR	Eielson Array	129.35	336	PKP	PKPdf	01 38 05.7	-0.2
	comp=Z,3.2nm,0.8s,baz=314,slow=0.7,SNR=35						
HHC	Hu-ho-hao-te	131.42	56	eP	PKPdf	01 38 12.9	+2.2
CTAO	Charters Tower	131.99	154	ePKPdf	PKPdf	01 38 13.2	+0.9
NJ2	Nanjing	137.43	68	eP	PKPdf	01 38 21.6	-0.4
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KSAR	Wonju Array Be	144.41	59	PKP	PKPab	01 38 31.9	-0.8
KSRS	Korea Array	144.44	59	PKP	PKPab	01 38 31.9	-0.9
	comp=Z,3.2nm,0.8s,baz=281,slow=2.3,SNR=11						
USRK	Ussuriysk Ar.	145.34	46	PKPbc	PKPbc	01 38 34.5	-1.2
	comp=Z,3.5nm,0.8s,baz=222,slow=1.9,SNR=8.0						
JNU	Nakatsue	147.51	66	PKPbc	PKPdf	01 38 40.5	+0.6
	comp=Z,5.9nm,0.8s,baz=239,slow=5.9,SNR=4.6						
PETK	Petropavlovsk-	150.12	11	PKPbc	PKPbc	01 38 48.1	-0.4
	comp=Z,5.1nm,1.0s,baz=50,slow=2.3,SNR=5.9						
MJAR	Matsushiro Arr	152.62	56	PKPbc	PKPbc	01 38 53.1	-1.8
	comp=Z,1.6nm,0.7s,baz=256,slow=3.9,SNR=5.8						

*CSEM **23** 01:19:02.6±0.9, 49.°97N×18.°58E, h1km, Error ellipse: s-maj=16.8km s-min=14.7km az=65.0*
*PRU **23** 01:19:03.9, 49.°88N×18.°53E, h0km*
ISC 23 01:19:02.8±3.1, 50.0N±0.°1×18.6E±0.°2, h0km, n15, σ0§51/13, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.30	244	ePG	Pg	01 19 09.2	+0.6
OKC				eSG	Sg	01 19 12.4	0.0
	comp=Z,6.7nm,0.2s						
OKC	Ostrava-Krasne	0.30	244	AMS	AMS	02 03 50.0	
	comp=Z,200nm,22.0s						
OKC	Ostrava-Krasne	0.30	244	Pg	Pg	01 19 09.2	+0.6
OKC				Sg	Sg	01 19 12.4	0.0
	6.7nm,0.2s						
MORC	Moravsky Berou	0.69	254	ePG	Pg	01 19 16.4	+0.4
MORC				eSG	Sg	01 19 24.1	-0.8
VRAC	Vranov	1.44	243	ePn	Pn	01 19 29.6	-0.6
VRAC	Vranov	1.44	243	ePG	Pn	01 19 29.6	-0.6
DPC	Dobruska-Polom	1.49	286	ePG	Pb	01 19 31.4	0.0
DPC				eSG	Sn	01 19 51.4	+0.3
DPC	Dobruska-Polom	1.49	286	AMS	AMS	02 05 30.0	
	comp=Z,100nm,19.7s						
DPC	Dobruska-Polom	1.49	286	Pg	Pb	01 19 31.4	0.0
DPC				Sg	Sn	01 19 51.4	+0.3
KRUC	Moravsky	1.68	238	ePG	Pn	01 19 33.2	-0.3
GOPC	GO Pecny, Ondr	2.44	270	AMS	AMS	02 03 20.0	
	comp=Z,200nm,21.4s						
PRU	Pruhonice	2.60	272	AMS	AMS	02 03 20.0	
	comp=Z,200nm,20.2s						
PRA	Prague	2.67	274	AMS	AMS	02 02 50.0	
	comp=Z,200nm,20.8s						
KHC	Kasperske Hory	3.35	257	AMS	AMS	02 02 30.0	
	comp=Z,100nm,18.2s						
NKC	Novy Kostel	3.95	276	AMS	AMS	02 03 40.0	
	comp=Z,200nm,21.3s						

MEX 23 01:24:15.5±0.4, 16.°47N×98.°52W, h1km±13km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	Tlapa	1.09	358	eP	Pg	01 24 33.8	-2.5
ACX	Acapulco	1.34	287	eP	Pg	01 24 38.9	-2.4
ACX				eS	Sg	01 24 56.3	-2.4
CAIG	El Cayaco	1.77	289	eP	Pn	01 24 44.0	-3.3
CAIG				eS	Sn	01 25 05.1	-5.3
VHO	Vista Hermosa	1.81	70	i P	Pn	01 24 44.1	-3.9
VHO				eS	Sn	01 25 06.2	-5.5

IDC 23 01:34:46.2±1.7, 38.°40N×109.°96E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.3/70, mbtmp3.5/5, ML3.4/1, MS3.2/2, Ms1 3.2/2, ms1mx2.4/57, Error ellipse: s-maj=52.1km s-min=22.8km az=62.0, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	Songino Array	9.79	346	Pn	Pn	01 37 09.1	+0.9
	0.3nm,0.3s,baz=161,slow=9.2,SNR=2.9						
MKAR	Makanchi Array	21.94	301	P	P	01 39 40.2	-1.1
	0.6nm,0.7s,baz=99,slow=12,SNR=6.6						
CMAR	Chiang Mai Arr	22.07	209	P	P	01 39 43.4	+0.6
	0.7nm,0.3s,baz=10,slow=10,SNR=5.0						
KURBB	Kurchatov Arra	25.33	309	P	P	01 40 14.9	+0.5
	1.5nm,1.0s,baz=106,slow=11,SNR=5.3						
JAY	Jayapura	49.63	138	LR	LR	02 06 35.6	
	comp=Z,12nm,18.3s,baz=122,slow=38						
ASAR	Alice Springs	65.70	156	P	P	01 45 32.3	-0.2
	0.6nm,0.8s,baz=343,slow=5.8,SNR=2.9						
KMBO	Kilima Mbogo	77.21	258	LR	LR	02 19 56.9	
	comp=Z,32nm,21.5s,baz=72,slow=35						

*IDC **23** 01:38:55.7±1.2, 38.°47N×110.°06E, h0km, mb3.8/6, mb1 4.0/7, mb1mx3.6/71, mbtmp3.8/7, ML3.2/1, MS2.8/6, Ms1 2.9/6, ms1mx2.6/69, Error ellipse: s-maj=43.5km s-min=16.6km az=63.0*
*ISCJB **23** 01:38:58.1±1.0, 38.°5N±0.°1×110.°2E±0.°3, h33km, mb3.8/6, MS2.8/2, Error ellipse: s-maj=32.9km s-min=13.2km az=158.4*
ISC 23 01:39:00.2±1.3, 38.°6N±0.°1×110.°1E±0.°3, h35km, n11, σ1§85/8, mb3.8/6, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	Songino Array	9.60	345	Pn	Pn	01 41 16.8	+0.8
	0.2nm,0.3s,baz=159,slow=13,SNR=5.0						
SONM				Sn	Sn	01 43 00.1	-2.6
	0.2nm,0.3s,baz=155,slow=24,SNR=2.5						
SONM				Lg	Lg	01 44 02.0	
	0.1nm,0.3s,baz=159,slow=29,SNR=3.4						
SONM				LR	LR	01 45 19.5	
	comp=Z,102nm,18.3s,baz=144,slow=39						
TLY	Talaya	13.83	343	LR	LR	01 47 55.8	
	comp=Z,44nm,18.8s,baz=174,slow=39						
KSRS	Korea Array	14.14	89	LR	LR	01 47 50.9	
	comp=Z,18nm,20.2s,baz=240,slow=38						
JNU	Nakatsue	17.73	102	LR	LR	01 49 40.0	
	comp=Z,24nm,19.5s,baz=305,slow=36						
MKAR	Makanchi Array	21.90	301	P	P	01 43 50.9	+0.7
	1.5nm,0.7s,baz=98,slow=13,SNR=12						
CMAR	Chiang Mai Arr	22.28	209	P	P	01 43 52.7	-1.7
	1.1nm,0.4s,baz=14,slow=8.7,SNR=13						
CMAR				LR	LR	01 52 46.4	
	comp=Z,17nm,19.2s,baz=145,slow=38						
ZALV	Zalesovo Beam	23.05	320	P	P	01 44 03.7	+1.4
	0.3nm,0.3s,baz=128,slow=9.6,SNR=3.8						
KURBB	Kurchatov Arra	25.25	309	P	P	01 44 24.8	+2.0
	6.3nm,1.2s,baz=110,slow=10,SNR=18						
YAK	Yakutsk	26.38	21	LR	LR	01 55 47.6	
	comp=Z,50nm,18.1s,baz=194,slow=38						
WRA	Warramunga Arr	62.54	154	P	P	01 49 20.1	-0.4
	1.8nm,0.9s,baz=345,slow=6.9,SNR=3.9						
ASAR	Alice Springs	65.86	156	P	P	01 49 42.8	+0.5
	0.7nm,0.6s,baz=342,slow=5.8,SNR=6.7						

*ISCJB **23** 01:56:51.4±0.6, 43.°61N±0.°02×16.°38E±0.°03, h1km±3km, Error ellipse: s-maj=4.7km s-min=2.4km az=41.6*
*CSEM **23** 01:56:52.3±0.2, 43.°60N×16.°37E, h2km, ML2.9/6, Error ellipse: s-maj=5.1km s-min=2.5km az=40.0*
*BEO **23** 01:56:52.6±0.6, 43.°62N×16.°33E, h0km*
*VIE **23** 01:56:54.5±0.9, 43.°71N×16.°65E, h10km, mb2.4/6, ml2.5/6, Error ellipse: s-maj=13.6km s-min=7.6km az=72.0 26 km NE of Split*
*PRU **23** 01:56:54.2, 43.°71N×16.°57E, h0km*

ISC 23 01:56:52.0±1.2, 43.°64N±0.°03×16.°46E±0.°03, h2km±10km, n61, σ1§60/119, 2C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UDBI	Udbina	1.02	331	ePg	Pg	01 57 11.2	-0.3
UDBI				Sg	Sg	01 57 25.7	+1.0
UDBI	Udbina	1.02	331	ePg	Pg	01 57 11.1	-0.3
UDBI				Sg	Sg	01 57 25.6	+1.0
STON	Ston	1.19	130	ePg	Pg	01 57 14.2	-0.6
STON				eSg	Sg	01 57 32.1	+1.9
STON	Ston	1.19	130	ePg	Pg	01 57 13.0	-1.7
STON				Sg	Sg	01 57 31.4	+1.2
STON	Ston	1.19	130	ePg	Pg	01 57 14.2	-0.6
STON				eSg	Sg	01 57 32.1	+1.9
BLY	Banja Luka	1.22	25	ePg	Pg	01 57 15.5	+0.1
BLY				eSg	Sn	01 57 34.8	+1.5
BLY	Banja Luka	1.22	25	ePg	Pg	01 57 15.5	+0.1
BLY				eSg	Sn	01 57 32.5	-0.8
DOB	Doboj	1.61	47	ePn	Pn	01 57 22.2	+0.8
TREB	Trebinje	1.67	123	↑iPn	Pn	01 57 22.1	-0.1
TREB				eSn	Sn	01 57 44.5	+0.4
BRY	Bratogost	1.69	115	↑iPn	Pn	01 57 23.2	+0.5
BRY				eSn	Sn	01 57 45.2	+0.2
UPM	Unac-Piva	1.84	103	ePn	Pn	01 57 25.3	+0.6
UPM				eSn	Sb	01 57 50.0	+0.1
HAPS	Han Pijesak,BI	1.86	75	ePn	Pn	01 57 25.9	+0.9
HAPS				eSg	Sg	01 57 53.7	+2.1
HAPS	Han Pijesak,BI	1.86	75	ePn	Pn	01 57 25.9	+0.9
HAPS				eSn	Sg	01 57 50.9	-0.7
HAPS				eSg	Sg	01 57 53.7	+2.1
HCY	Herceg Novi	1.91	128	ePn	Pn	01 57 25.8	+0.2
HCY				eSn	Sn	01 57 50.2	0.0
BOJS	Bojanci	2.05	336	i Pn	Pn	01 57 28.8	+1.3
BOJS				i Sn	Sn	01 57 56.0	+2.3
	comp=Z,35nm,0.5s						
BOJS	Bojanci	2.05	336	i Pn	Pn	01 57 28.8	+1.3
BOJS				i Sn	Sn	01 57 56.0	+2.3
	comp=Z,35nm,0.5s						
OZLJ	Ozalj	2.10	341	ePn	Pn	01 57 30.0	+1.8
OZLJ				Sn	Sn	01 57 56.3	+1.5
OZLJ	Ozalj	2.10	341	ePn	Pn	01 57 29.9	+1.8
OZLJ				Sn	Sn	01 57 56.2	+1.5
BBLS	Lazići	2.15	83	ePn	Pn	01 57 30.9	+2.0
BBLS				eSn	Sg	01 57 59.6	-1.4
BBLS	Lazići	2.15	83	ePn	Pn	01 57 30.0	+1.1
BBLS				eSn	Sn	01 57 57.1	+0.9
ZAG	Zagreb	2.21	351	ePn	Pn	01 57 29.2	-0.5
ZAG				eSn	Sn	01 57 57.3	-0.3
CRES	Cresnjev	2.30	342	ePn	Pn	01 57 30.9	0.0
CRES				eSn	Sn	01 57 58.9	-0.9
PDG	Podgorica	2.38	120	ePn	Pn	01 57 35.1	+3.1
PDG				eSg	Sg	01 58 10.9	+2.4
PDG	Podgorica	2.38	120	ePn	Pn	01 57 32.4	+0.4
PDG				eSn	Sn	01 58 02.6	+0.8
PDG				eSg	Sg	01 58 10.9	+2.4
TEKS	Tekeris	2.39	67	ePn	Pn	01 57 34.1	+1.9
TEKS				eSn	Sb	01 58 05.7	0.0
TEKS	Tekeris	2.39	67	ePn	Pn	01 57 34.1	+1.9
TEKS				eSn	Sn	01 58 03.3	+1.2
DRME	Dracevica, Mon	2.48	125	ePn	Pn	01 57 34.5	+1.2
DRME				eSn	Sn	01 58 04.8	+0.6
CEY	Cerknica	2.55	326	ePn	Pn	01 57 34.1	-0.3
CEY				eSn	Sn	01 58 04.8	-1.2
AQU	L'Aquila	2.58	241	ePn	Pn	01 57 33.7	-1.2
AQU				eSn	Sn	01 58 04.5	-2.4
SJES	Sjenica	2.59	97	ePn	Pn	01 57 37.5	+2.5
SJES				eSn	Sb	01 58 10.9	-0.6
DIVS	Divibare	2.60	79	ePn	Pn	01 57 37.9	+2.8
DIVS				eSn	Sb	01 58 10.1	-1.6
DIVS	Divibare	2.60	79	ePn	Pn	01 57 36.0	+0.9
DIVS				eSn	Sb	01 58 10.1	-1.6
BEHE	Becsehely	2.84	4	ePn	Pn	01 57 38.7	+0.4
BEHE				eSn	Sn	01 58 12.8	-0.3
FGSL	Fruska Gora	2.84	57	ePn	Pb	01 57 41.6	-1.8
FGSL				eSn	Sb	01 58 16.3	-2.4
FRGS	Fruska Gora	2.84	57	ePn	Pb	01 57 41.6	-1.8
FRGS				eSn	Sb	01 58 16.3	-2.4
FRGS	Fruska Gora	2.84	57	ePn	Pn	01 57 39.3	+0.9
FRGS				eSn	Sn	01 58 14.3	+1.1
TRUS	Trudelj	2.91	77	ePn	Pn	01 57 40.2	+0.9
TRUS				eSn	Sb	01 58 18.2	-2.5
TRUS	Trudelj	2.91	77	ePn	Pn	01 57 40.2	+0.9
TRUS				eSn	Sb	01 58 18.2	-2.5
GRUS	Gruza	3.10	84	ePn	Pn	01 57 43.8	+1.9
GRUS				eSn	Sb	01 58 23.1	-2.8
GRUS	Gruza	3.10	84	ePn	Pn	01 57 43.8	+1.9
GRUS				eSn	Sb	01 58 23.1	-2.8
OBKA	Obir	3.17	335	i Pn	Pn	01 57 45.1	+2.1
	comp=Z,0.7nm,0.2s						
OBKA				i Sn	Sn	01 58 24.9	+3.5
	comp=Z,16nm,0.7s						
OBKA	Obir	3.17	335	Pn	Pn	01 57 45.1	+2.1
	comp=Z,0.7nm,0.2s						
OBKA				Sn	Sn	01 58 24.9	+3.5
	comp=Z,16nm,0.7s						
SOKA	Soboth	3.20	342	i Pn	Pn	01 57 44.7	+1.3
	comp=Z,1.2nm,0.2s						
SOKA				eSn	Sn	01 58 21.9	-0.3
	comp=Z,2.0nm,0.3s						
SOKA	Soboth	3.20	342	Pn	Pn	01 57 44.7	+1.3
	comp=Z,1.2nm,0.2s						
SOKA				Sn	Sn	01 58 21.9	-0.3
	comp=Z,2.0nm,0.3s						
SELS	Selova	3.42	95	ePn	Pn	01 57 47.9	+1.5
SELS				eSn	Sn	01 58 30.3	+2.8
SELS	Selova	3.42	95	ePn	Pn	01 57 47.9	+1.5
SELS				eSn	Sn	01 58 30.3	+2.8
ARSA	Arzberg	3.67	350	i Pn	Pn	01 57 50.9	+1.1
	comp=Z,3.4nm,0.3s						
ARSA				eSn	Sn	01 58 33.6	0.0
	comp=Z,2.1nm,0.3s						
ARSA	Arzberg	3.67	350	Pn	Pn	01 57 50.9	+1.1
	comp=Z,3.4nm,0.3s						
ARSA				Sn	Sn	01 58 33.6	0.0
	comp=Z,2.1nm,0.3s						
ABTA	Abfaltersbach	4.17	319	i Pn	Pn	01 57 58.1	+1.3
	comp=Z,0.6nm,0.3s						
ABTA	Abfaltersbach	4.17	319	Pn	Pn	01 57 58.1	+1.3
	comp=Z,0.6nm,0.3s						
ZAGS	Zajecar	4.19	86	ePn	Pn	01 57 58.6	+1.7
ZAGS				eSn	Sn	01 58 47.6	+1.2
ZAGS	Zajecar	4.19	86	ePn	Pn	01 57 58.6	+1.7
ZAGS				eSn	Sn	01 58 47.6	+1.2
CONA	Conrad Observa	4.31	355	i Pn	Pn	01 57 60.0	+1.4
	comp=Z,0.4nm,0.2s						
CONA				i Sn	Sn	01 58 50.5	+1.0
	comp=Z,2.1nm,0.2s						
CONA	Conrad Observa	4.31	355	Pn	Pn	01 58 00.0	+1.4
	comp=Z,0.4nm,0.2s						
CONA				Sn	Sn	01 58 50.5	+1.0
	comp=Z,2.1nm,0.2s						
MOA	Molin	4.48	341	i Pn	Pn	01 58 02.7	+1.8
	comp=Z,2.7nm,0.3s						
MOA				i Sn	Sn	01 58 56.0	+2.4
	comp=Z,1.3nm,0.2s						
MOA	Molin	4.48	341	Pn	Pn	01 58 02.7	+1.8
	comp=Z,2.7nm,0.3s						
MOA				Sn	Sn	01 58 56.0	+2.4
	comp=Z,1.3nm,0.2s						
ZAPS	Zavoj	4.51	93	ePn	Pn	01 58 02.8	+1.4
ZAPS				eSn	Sn	01 58 54.8	+0.4
VYHS	Vyhne	5.13	18	ePN	Pn	01 58 10.7	+0.9
VYHS				eSN	Sn	01 59 08.1	-1.5
VYHS				eLG	Lg	01 59 11.2	
VYHS	Vyhne	5.13	18	ePn	Pn	01 58 10.7	+0.9
VYHS				eSn	Sn	01 59 08.1	-1.5
KHC	Kasperske Hory	5.84	341	ePN	Pn	01 58 21.6	+2.0
KHC				eSN	Sn	01 59 25.5	-1.7
KHC	Kasperske Hory	5.84	341	Pn	Pn	01 58 21.6	+2.0

*ISCJB **23** 02:05:21.4±0.7, 18.°4S±0.°2×177.°8W±0.°2, h350km, mb3.5/9, Error ellipse: s-maj=36.6km s-min=12.6km az=151.3*
*IDC **23** 02:05:22.1±2.3, 18.°39S×177.°78W, h346km±23km, mb3.4/9, mb1 3.7/10, mb1mx3.4/49, mbtmp4.2/10, Error ellipse: s-maj=29.3km s-min=13.6km az=152.0*
ISC 23 02:05:22.1±0.7, 18.°3S±0.°2×177.°7W±0.°2, h350km, n13, σ1§70/15, mb3.6/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	7.14	54	P	Pn	02 07 07.6	+1.4
	26nm,0.3s,baz=171,slow=1.9,SNR=24						
AFI				S	S	02 08 26.4	-4.6
	1.6nm,0.3s,baz=49,slow=19,SNR=3.2						
CTA	Charters Tower	34.06	261	P	P	02 11 34.9	0.0
	1.5nm,0.3s,baz=88,slow=9.9,SNR=4.7						
STKA	Stephens Creek	39.06	242	P	P	02 12 16.4	-0.2
	0.9nm,0.3s,baz=84,slow=8.3,SNR=4.8						
WRA	Warramunga Arr	45.24	260	P	P	02 13 04.7	-1.4
	0.7nm,0.3s,baz=97,slow=8.2,SNR=10						
ASAR	Alice Springs	45.35	255	P	P	02 13 06.4	-0.6
	5.5nm,0.5s,baz=90,slow=8.3,SNR=84						
ASAR				PcP	PcP	02 14 39.5	-0.4
	1.5nm,0.8s,baz=100,slow=4.0,SNR=5.4						
FITZ	Fitzroy Crossi	53.65	261	P	P	02 14 08.3	-0.7
	2.3nm,0.8s,baz=101,slow=6.4,SNR=6.9						
QSPA	South Pole Qui	71.80	180	P	P	02 16 06.7	-0.4
	2.1nm,0.6s,baz=156,slow=3.6,SNR=10						
TXAR	Lajitas Array	85.61	57	P	P	02 17 24.1	+1.9
	1.1nm,0.8s,baz=221,slow=5.4,SNR=7.2						
ILAR	Eielson Array	86.08	13	P	P	02 17 25.6	+2.1
	0.1nm,0.3s,baz=225,slow=3.8,SNR=3.4						
PDAR	Pinedale Array	87.14	43	P	P	02 17 29.8	+0.4
	0.1nm,0.3s,baz=217,slow=4.4,SNR=3.2						
BRTR	Keskin Array B	145.51	315	PKPbc	PKPdf	02 24 19.5	+0.2
	0.8nm,0.7s,baz=86,slow=3.2,SNR=5.9						
MMAI	Mount Meron Ar	146.91	303	PKPbc	PKPbc	02 24 24.3	0.0
	1.4nm,0.5s,baz=59,slow=5.6,SNR=8.7						
GERES	GERESS Array B	148.12	346	PKPbc	PKPbc	02 24 26.4	-0.6
	0.3nm,0.5s,baz=35,slow=3.6,SNR=4.7						

*IDC **23** 02:24:36.1±1.0, 32.°81S×178.°24W, h0km, mb4.4/4, mb1 4.6/6, mb1mx4.0/50, mbtmp4.4/6, ML4.3/2, MS3.3/5, Ms1 3.3/5, ms1mx2.8/43, Error ellipse: s-maj=33.4km s-min=25.8km az=143.0*
*NEIC **23** 02:24:37.5±0.5, 32.°81S×178.°22W, h10km, mb4.3/2, Error ellipse: s-maj=14.2km s-min=9.3km az=105.0*
*ISCJB **23** 02:24:38.1±1.1, 32.°78S±0.°07×178.°2W±0.°2, h32km, mb4.3/6, MS3.6/1, Error ellipse: s-maj=26.8km s-min=8.4km az=14.1*
ISC 23 02:24:40.8±0.9, 32.°79S±0.°09×178.°3W±0.°2, h32km, n26, σ1§06/23, mb4.4/6, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	3.54	5	Pn	Pn	02 25 32.3	-1.2
	37nm,0.3s,baz=135,slow=20,SNR=4.3						
RAO				Sn	Sn	02 26 12.4	-1.9
	84nm,0.3s,baz=90,slow=20,SNR=3.3						
URZ	Urewera	6.62	213	Pn	Pn	02 26 14.4	-1.3
	3.9nm,0.3s,baz=263,slow=4.8,SNR=15						
URZ				Sn	Sn	02 27 27.8	-2.2
	6.3nm,0.3s,baz=151,slow=19,SNR=8.3						
DZM	Mont Dzumac	17.22	304	LR	LR	02 33 51.6	
	comp=Z,168nm,19.8s,baz=146,slow=32						
RAR	Rarotonga	20.10	60	LR	LR	02 35 09.1	
	comp=Z,30nm,21.0s,baz=252,slow=32						
PPT	Papeete	29.97	67	LR	LR	02 39 41.8	
	comp=Z,30nm,20.9s,baz=173,slow=30						
STKA	Stephens Creek	33.76	260	LR	LR	02 43 52.1	
	comp=Z,83nm,18.5s,baz=31,slow=34						
CTA	Charters Tower	34.00	283	P	P	02 31 23.5	+1.7
	4.7nm,0.5s,baz=107,slow=13,SNR=11						
CTAO	Charters Tower	34.00	283	eP	P	02 31 23.7	+1.9
ASAR	Alice Springs	42.78	270	P	P	02 32 36.0	+0.4
	2.0nm,0.5s,baz=109,slow=7.6,SNR=28						
WRAB	Tennant Creek	43.98	275	eP	P	02 32 45.0	-0.3
	2.0nm,0.5s						
WRA	Warramunga Arr	43.98	275	P	P	02 32 45.4	+0.1
	5.2nm,0.6s,baz=115,slow=7.7,SNR=34						
FITZ	Fitzroy Crossi	52.14	272	P	P	02 33 47.9	-0.4
	3.2nm,0.7s,baz=136,slow=9.5,SNR=4.8						
CASY	Casey	52.92	209	eP	P	02 33 53.9	+0.5
	2.9nm,0.6s						
QSPA	South Pole Qui	57.33	180	eP	P	02 34 25.6	+0.1
NVAR	Mina Array Bea	90.16	43	LR	LR	03 17 57.0	
	comp=Z,20nm,18.0s,baz=119,slow=36						
MKAR	Makanchi Array	119.09	309	PKP	PKPdf	02 43 26.0	-0.1
	0.3nm,0.5s,baz=118,slow=1.6,SNR=3.1						
KURK	Kurchatov	122.49	313	PKP	PKPdf	02 43 32.2	-0.2
KURBB	Kurchatov Arra	122.53	313	PKP	PKPdf	02 43 32.2	-0.3
	0.6nm,0.6s,baz=118,slow=2.2,SNR=5.6						
BVAR	Borovoye Array	127.91	314	PKP	PKPdf	02 43 42.8	+0.1
	0.5nm,0.5s,baz=174,slow=1.4,SNR=4.8						
FINES	FINESS Array B	147.28	338	PKPbc	PKPbc	02 44 20.9	+0.7
	3.6nm,0.5s,baz=46,slow=4.0,SNR=34						
NB2	NORSAR Subarra	151.06	350	PKP	PKPbc	02 44 30.6	+0.8
	comp=Z,0.6nm,0.6s,baz=16,slow=2.6						
HFS	Hagfors	151.52	347	PKPbc	PKPbc	02 44 30.9	+0.1
	comp=Z,1.9nm,0.6s,baz=101,slow=1.5,SNR=7.7						
MMAI	Mount Meron Ar	151.76	280	PKPbc	PKPbc	02 44 33.8	+1.4
	comp=Z,2.9nm,0.6s,baz=90,slow=4.3,SNR=4.9						
AKASG	Malin Array Be	152.99	320	PKPbc	PKPbc	02 44 35.0	+0.5
	comp=Z,0.6nm,0.4s,baz=54,slow=2.5,SNR=3.6						
BRTR	Keskin Array B	153.42	294	PKPbc	PKPbc	02 44 36.5	+0.5
	comp=Z,1.0nm,0.5s,baz=145,slow=3.8,SNR=10.0						
TORD	Torodi Ar. Bea	160.45	180	PKPab	PKPab	02 45 19.2	+0.5
	comp=Z,0.4nm,0.8s,baz=180,slow=4.0,SNR=2.6						

*ISCJB **23** 02:35:49.3±0.5, 53.°0N±0.°1×175.°1W±0.°1, h235km, mb3.2/2, Error ellipse: s-maj=18.1km s-min=5.8km az=152.9*
*NEIC **23** 02:35:50.2±0.0, 52.°40N×175.°02W, h235km, ML3.2(AEIC), After AEIC.*
*IDC **23** 02:35:53.9±13.0, 53.°13N×174.°53W, h239km±109km, mb3

1.6nm,0.5s
MAKZ ⇑Sn **Sb** **02 41 37.6 -1.3**
1.4nm,0.5s
PDGK Podgornoye 2.28 237 ⇑Pn **Pn** **02 41 09.7 +0.5**
1.1nm,0.5s
PDGK ⇓Sn **Sb** **02 41 39.2 -1.8**
0.9nm,0.3s
SHLS Shalkode 2.40 234 *e*P **Pn** **02 41 12.0 +1.2**
2.3nm,0.1s
SHLS *e*S **Sb** **02 41 42.2 -2.2**
5.5nm,0.2s
ARXS Arharly 3.10 264 *e*P **Pb** **02 41 26.0 -0.3**
1.2nm,0.3s
ARXS *e*S **Sb** **02 42 05.7 +1.3**
3.9nm,0.4s

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*KRNET **23** 02:53:48.5±0.1, 41°.49N×80°.47E, mb2.5*
*SOME **23** 02:53:50.8, 41°.82N×80°.15E, h15km*
ISC 23 02:53:51.3±2.5, 41°.82N±0°.08×80°.13E±0°.07, h7km±12km, n19, σ1°.47/38, 10C-4D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**1.43 340**		*e*P	**Pn**	**02 54 15.8**	**-1.9**
	19nm,0.1s						
SHLS				*e*S	**Sn**	**02 54 33.7**	**-3.2**
	52nm,0.4s						
PRZ	**Przheval'sk**	**1.45 298**		⇑*i*P	**Pg**	**02 54 18.5**	**-0.6**
	baz=4.0						
PRZ				⇑*i*S	**Sg**	**02 54 40.5**	**+2.6**
	baz=4.0						
UZB	**Uzynbulak**	**1.56 329**		*e*P	**Pn**	**02 54 18.8**	**-0.8**
	1.7nm,0.1s						
UZB				*e*S	**Sn**	**02 54 39.0**	**-1.2**
	4.6nm,0.2s						
PDGK	**Podgornoye**	**1.58 343**		⇑Pn	**Pb**	**02 54 19.9**	**-1.1**
	1.8nm,0.4s						
PDGK				⇑Sn	**Sb**	**02 54 41.6**	**+0.4**
	16nm,0.5s						
PDGK	**Podgornoye**	**1.58 343**		⇑*i*P	**Pb**	**02 54 20.6**	**-0.4**
	baz=39						
PDGK				⇑*i*S	**Sg**	**02 54 44.1**	**+1.9**
	baz=39						
TARG	**Taragay, Kyrgy**	**1.74 268**		⇓*i*P	**Pn**	**02 54 21.1**	**-1.3**
	baz=78						
TARG				⇓*i*S	**Sb**	**02 54 44.9**	**-1.3**
	baz=78						
SATY	**Saty**	**1.78 315**		⇓*i*P	**Pb**	**02 54 24.2**	**-0.2**
	5.7nm,0.3s						
SATY				⇑*i*S	**Sb**	**02 54 47.5**	**+0.6**
	22nm,0.5s						
KPKS	**Kokpek**	**1.96 327**		*e*P	**Pb**	**02 54 26.1**	**-1.4**
	7.3nm,0.2s						
KPKS				*e*S	**Sb**	**02 54 51.0**	**-1.1**
	19nm,0.3s						
KURS	**Kuram**	**2.21 320**		*e*P	**Pb**	**02 54 32.0**	**+0.4**
	2.3nm,0.3s						
KURS				*e*S	**Sg**	**02 55 00.8**	**-1.4**
	6.4nm,0.5s						
DJR	**Jarkent**	**2.52 354**		*e*P	**Pb**	**02 54 36.3**	**-0.7**
	1.9nm,0.1s						
DJR				*e*S	**Sb**	**02 55 08.8**	**+0.5**
	11nm,0.3s						
MDOK	**Medeo**	**2.65 301**		*e*P	**Pb**	**02 54 38.2**	**-1.0**
	1.6nm,0.1s						
MDOK				*e*S	**Sb**	**02 55 12.0**	**+0.1**
	6.2nm,0.4s						
TNSS	**Tian-Shan**	**2.65 298**		*e*P	**Pb**	**02 54 39.5**	**+0.1**
	1.5nm,0.6s						
TNSS				*e*S	**Sb**	**02 55 13.8**	**+1.5**
	3.8nm,0.7s						
IZV	**Izvestkoviy**	**2.88 296**		*e*P	**Pb**	**02 54 42.3**	**-0.7**
	3.9nm,0.4s						
IZV				*e*S	**Sb**	**02 55 18.9**	**+0.5**
	7.6nm,0.5s						
ULHL	**Ulahol**	**2.93 280**		⇑*i*P	**Pn**	**02 54 38.5**	**0.0**
	baz=85						
ULHL				⇑*i*S	**Sn**	**02 55 15.4**	**+1.3**
	baz=85						
CHKK	**Chushkaly**	**3.08 312**		*e*P	**Pb**	**02 54 46.1**	**-0.3**
	2.2nm,0.4s						
CHKK				*e*S	**Sb**	**02 55 25.6**	**+1.4**
	7.8nm,0.4s						
KTBS	**Karatobe**	**3.17 308**		*e*P	**Pb**	**02 54 47.7**	**-0.2**
	1.6nm,0.3s						
KTBS				*e*S	**Sb**	**02 55 28.1**	**+1.4**
	5.3nm,0.2s						
KST	**Kastek**	**3.32 293**		*e*P	**Pb**	**02 54 50.0**	**-0.6**
	1.9nm,0.4s						
KST				*e*S	**Sb**	**02 55 32.4**	**+1.2**
	2.3nm,0.6s						
DGS	**Degeres**	**3.52 295**		*e*P	**Pb**	**02 54 54.5**	**+0.5**
	1.2nm,0.4s						
DGS				*e*S	**Sb**	**02 55 39.9**	**+2.8**
	3.8nm,0.4s						
MK31	**Makanchi Array**	**5.21 17**		Pn	**Pn**	**02 55 10.1**	**+0.4**
	0.1nm,0.2s,baz=200,slow=14,SNR=23						
MK31				⇓Sn	**Sn**	**02 56 13.9**	**+4.0**
	0.4nm,0.5s						
MK31				⇑Lg	Lg	02 56 32.7	
	0.3nm,0.3s,baz=197,slow=28						

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*IDC **23** 03:29:29.4±0.6, 4°.69S×129°.84E, h0km, mb4.3/14, mb1 4.6/19, mb1mx4.3/55, mbtmp4.5/19, ML4.6/4, MS3.4/20, Ms1 3.4/20, ms1mx3.2/52, Error ellipse: s-maj=20.8km s-min=12.7km az=68.0*
*ISCJB **23** 03:29:31.1±0.6, 4°.64S±0°.03×129°.93E±0°.03, h23km±4km, mb4.5/37, MS3.5/18, Error ellipse: s-maj=5.3km s-min=5.0km az=2.0*
*NEIC **23** 03:29:35.8±0.6, 4°.64S×129°.96E, h47km±6km, mb4.6/16, Error ellipse: s-maj=5.8km s-min=5.0km az=66.0*
*DJA **23** 03:29:35.0±0.3, 5°.S±2°.×13°.0E±°, h106km±23km, M4.9/9, mB5.2/8, mb5.1/9, MLv5.1/9, Mw(mB)4.5/8*
*BJI **23** 03:29:36.4, 4°.71S×129°.83E, h54km, mb4.7/26, mB4.7/12, Ms4.2/5, Ms7 3.9/5*
ISC 23 03:29:31.1±1.0, 4°.75S±0°.04×129°.97E±0°.05, h13km±6km, n99, σ2°.15/98, mb4.6/37, MS3.5/18, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.23 345**		P	**Pg**	**03 29 35.6**	**-0.5**
BNDI				S	**Sg**	**03 29 38.0**	**-1.4**
MSAI	**Masohi**	**1.73 323**		P	**Pn**	**03 29 58.7**	**-2.3**
MSAI				S	**Sn**	**03 30 18.8**	**-4.2**
MSAI				Sg	Sg	03 31 21.4	+54
AAI	**Ambon**	**2.06 301**		P	**Pn**	**03 30 03.1**	**-2.3**
FAKI	**Fak Fak**	**2.91 52**		P	**Pn**	**03 30 18.5**	**+1.3**
FAKI				Pg	Pg	03 30 27.9	+0.9
FAKI				S	**Sn**	**03 30 49.3**	**-2.9**
FAKI	**Fak Fak**	**2.91 52**		*e*Pn	**Pn**	**03 30 18.3**	**+1.0**
SAUI	**Saumlaki**	**3.48 158**		P	**Pb**	**03 30 30.2**	**-2.4**
SAUI				Pg	Pg	03 30 45.6	+7.8
SAUI	**Saumlaki**	**3.48 158**		*e*Pn	**Pb**	**03 30 30.5**	**-2.1**
KMPI	**Kaimana, Papua**	**3.88 74**		P	**Pn**	**03 30 33.4**	**+2.8**
KMPI				S	**Sn**	**03 31 16.9**	**+0.8**
SIJI	**Sorong**	**4.07 19**		Pn	**Pn**	**03 30 33.0**	**-0.1**
	115nm,0.3s,baz=226,slow=12,SNR=59						
SIJI				Sn	**Sn**	**03 31 17.3**	**-3.3**
	77nm,0.3s,baz=30,slow=23,SNR=10.0						
SIJI				LR	LR	03 32 43.8	
	comp=Z,604nm,19.9s,baz=130,slow=48						
LBMI	**Labuha**	**4.77 329**		P	**Pn**	**03 30 43.1**	**+0.4**
LBMI				S	**Sn**	**03 31 35.5**	**-2.4**
SANI	**Sanana**	**4.79 304**		P	**Pn**	**03 30 42.6**	**-0.4**
RKPI	**Ransiki, Papua**	**5.29 53**		P	**Pn**	**03 30 51.0**	**+1.0**
SOEI	**Soe**	**7.53 228**		P	**Pn**	**03 31 24.7**	**+3.9**
SOEI	**Soe**	**7.53 228**		*e*Pn	**Pn**	**03 31 24.9**	**+4.1**
LUWI	**Luwuk**	**8.07 297**		*e*Pn	**Pn**	**03 31 29.6**	**+1.5**
BATI	**Baumata**	**8.27 229**		Pn	**Pn**	**03 31 31.6**	**+0.6**
	9.1nm,0.3s,baz=324,slow=1.6,SNR=6.4						
BATI				LR	LR	03 35 03.0	
	comp=Z,457nm,20.1s,baz=56,slow=41						
BATI	**Baumata**	**8.27 229**		P	**Pn**	**03 31 34.6**	**+3.7**
MMRI	**Maumere**	**8.59 243**		*e*Pn	**Pn**	**03 31 39.7**	**+4.4**
EDFI	**Ende, Flores**	**9.13 244**		P	**Pn**	**03 31 44.8**	**+2.0**
APSI	**Ampana**	**9.14 294**		P	**Pn**	**03 31 42.6**	**-0.2**
MRSI	**Marisa**	**9.55 303**		P	**Pn**	**03 31 48.5**	**+0.1**
BKSI	**Bulukumba**	**9.82 266**		P	**Pn**	**03 31 53.4**	**+1.2**
JAY	**Jayapura**	**10.95 79**		Pn	**Pn**	**03 32 08.7**	**+1.0**
	0.5nm,0.3s,baz=242,slow=10,SNR=2.5						
JAY				LR	LR	03 37 56.5	
	comp=Z,121nm,19.2s,baz=41,slow=46						
MYLDM	**Lahad Datu**	**15.11 311**		*e*Pn	**Pn**	**03 33 06.7**	**+2.2**
	51nm,1.0s						
WRAB	**Tennant Creek**	**15.69 165**		*e*Pn	**Pn**	**03 33 08.2**	**-3.8**
	51nm,0.8s						
WRA	**Warramunga Arr**	**15.69 165**		Pn	**Pn**	**03 33 08.8**	**-3.3**
	3.3nm,0.3s,baz=348,slow=13,SNR=45						
WRA				Sn	**Sn**	**03 35 58.4**	**-7.7**
	1.7nm,0.3s,baz=339,slow=20,SNR=5.6						
WB2	**Warramunga Arr**	**15.70 165**		*e*Pn	**Pn**	**03 33 08.7**	**-3.5**
	69nm,0.9s						
PMG	**Port Moresby**	**17.68 106**		P	**P**	**03 33 39.7**	**+1.5**
	2.1nm,0.3s,baz=290,slow=10.0,SNR=13						
PMG				LR	LR	03 43 25.2	
	comp=Z,149nm,19.0s,baz=312,slow=47						
MBWA	**Marble Bar**	**19.10 210**		*e*P	**Pn**	**03 33 55.5**	**+0.9**
AS31	**Alice Springs**	**19.19 169**		*e*P	**Pn**	**03 33 56.2**	**+0.5**
	20nm,0.7s						
ASAR	**Alice Springs**	**19.19 169**		P	**Pn**	**03 33 56.6**	**+0.9**
	5.0nm,0.3s,baz=349,slow=10,SNR=125						
ASAR				Sn	**Sn**	**03 37 23.9**	**-6.9**
	0.2nm,0.3s,baz=345,slow=17,SNR=4.1						
ASAR				LR	LR	03 41 40.6	
	comp=Z,153nm,19.8s,baz=344,slow=38						
AS01	**Alice Springs**	**19.20 169**		*e*P	**Pn**	**03 33 56.5**	**+0.7**
TGY	**Tagaytay City**	**20.76 335**		LR	LR	03 44 31.5	
	comp=Z,71nm,18.5s,baz=146,slow=44						
LEM	**Lembang**	**22.33 264**		LR	LR	03 43 34.2	
	comp=Z,182nm,19.7s,baz=53,slow=38						
FORT	**Forrest**	**25.96 184**		*e*P	**P**	**03 35 05.3**	**+1.8**
	35nm,0.7s						
STKA	**Stephens Creek**	**29.11 159**		P	**P**	**03 35 32.4**	**+0.7**
	4.2nm,0.6s,baz=338,slow=9.7,SNR=18						
STKA				LR	LR	03 48 19.8	
	comp=Z,138nm,19.0s,baz=351,slow=39						
STKA	**Stephens Creek**	**29.11 159**		*e*P	**P**	**03 35 33.5**	**+1.7**
	6.0nm,1.4s						
NWAO	**Narrogin (SRO)**	**30.45 201**		LR	LR	03 50 07.9	
	comp=Z,112nm,18.5s,baz=65,slow=41						
SKNT	**Sakolnakorn**	**33.54 311**		P	P	03 36 15.6	+4.6
	6.9nm,0.7s,2μm						
NONG	**Nongkai**	**34.84 311**		P	P	03 36 28.7	+6.5
	20nm,1.0s,1μm						
SUKH	**Sukhothai**	**37.21 307**		P	**P**	**03 36 45.7**	**+3.1**
	5.9nm,0.8s						
JNU	**Nakatsue**	**37.67 1**		LR	LR	03 52 11.9	
	comp=Z,75nm,19.8s,baz=124,slow=36						
NJ2	**Nanjing**	**38.09 345**		*e*P	**P**	**03 36 51.3**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**38.30 308**		P	**P**	**03 36 52.0**	**+0.3**
	3.7nm,0.5s,baz=138,slow=7.2,SNR=11						
CMAR				LR	LR	03 53 04.1	
	comp=Z,37nm,20.8s,baz=134,slow=37						
GYA	**Guiyang**	**38.36 325**		*e*P	**P**	**03 36 54.0**	**+1.7**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CHTO	**Chiang Mai**	**38.50 308**		P	**P**	**03 36 54.1**	**+0.7**
CHTO	**Chiang Mai**	**38.50 308**		*e*P	**P**	**03 36 53.6**	**+0.2**
	10nm,1.0s						
CMAI	**Chiengmai2**	**39.06 310**		P	P	03 37 11.3	+13
DZM	**Mont Dzumac**	**39.28 119**		P	**P**	**03 37 01.2**	**+1.1**
	3.1nm,0.5s,baz=292,slow=19,SNR=4.9						
KMI	**Kunming**	**39.77 320**		P	**P**	**03 37 05.8**	**+1.5**
KMI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ENH	**Enshi**	**39.96 332**		*e*P	**P**	**03 37 04.2**	**-1.3**
	8.0nm,0.6s						
MAJO	**Matsushiro**	**41.79 10**		*e*P	**P**	**03 37 19.5**	**-1.0**
	14nm,0.9s						
MAT	**Matsushiro**	**41.79 10**		P	**P**	**03 37 19.9**	**-0.6**
MJAR	**Matsushiro Arr**	**41.79 10**		P	**P**	**03 37 20.3**	**-0.2**
	4.9nm,0.8s,baz=186,slow=9.8,SNR=13						
MJAR				LR	LR	03 54 28.8	
	comp=Z,37nm,19.5s,baz=185,slow=36						
MJB9	**Matsu-Tunnel**	**41.80 10**		*e*P	**P**	**03 37 20.7**	**+0.1**
	14nm,0.9s						
KSAR	**Wonju Array Be**	**42.02 358**		P	**P**	**03 37 23.0**	**+0.7**
KSRS	**Korea Array**	**42.03 358**		P	**P**	**03 37 23.0**	**+0.6**
	0.8nm,0.6s,baz=172,slow=9.0,SNR=3.2						
KSRS				LR	LR	03 53 18.2	
	comp=Z,58nm,21.4s,baz=166,slow=34						
CD2	**Chengdu**	**43.41 326**		P	**P**	**03 37 33.8**	**0.0**
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
LZH	**Lanzhou**	**47.42 331**		*e*P	**P**	**03 38 07.9**	**+2.2**
LZH				pP	sP	03 38 19.3	+8.0
LZH				sP	pP	03 38 23.8	+14
LZH				*e*PP	**PP**	**03 39 59.9**	**+2.8**
LZH				pmax	pmax		
	comp=Z,22nm,1.2s						
LZH				pmax	pmax		
	comp=Z,140nm,6.0s						
LZH				LR	LR		
	comp=N,250nm,16.2s						
LZH				LR	LR		
	comp=E,230nm,16.1s						
LZH				LR	LR		
	comp=Z,350nm,18.3s						
HHC	**Hu-ho-hao-te**	**48.41 341**		*e*P	**P**	**03 38 16.3**	**+3.1**
HHC				PP	**PP**	**03 40 09.0**	**+3.0**
HHC				S	**S**	**03 45 15.9**	**+2.2**
HHC				SS	**SS**	**03 48 38.5**	**-5.2**
HHC				pmax	pmax		
	comp=Z,33nm,1.0s						
HHC				pmax	pmax		
	comp=Z,64nm,5.5s						
HHC				LR	LR		
	comp=N,270nm,13.3s						
HHC				LR	LR		
	comp=E,210nm,14.7s						
HHC				LR	LR		
	comp=Z,330nm,13.3s						
USRK	**Ussuriysk Ar.**	**48.76 2**		P	**P**	**03 38 14.7**	**-1.0**
	3.1nm,0.7s,baz=202,slow=7.3,SNR=2.2						
ASAJ	**Asahikawa**	**49.95 12**		LR	LR	04 02 15.0	
	comp=Z,16nm,18.1s,baz=158,slow=39						
LSA	**Lhasa**	**50.57 315**		*e*P	**P**	**03 38 29.4**	**-1.0**
	5.2nm,0.5s						
GTA	**Gaotai**	**52.00 330**		*e*P	**P**	**03 38 39.9**	**-0.6**
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
RAMN	**Ramite**	**52.43 309**		*e*P	**P**	**03 38 43.5**	**-0.6**
	40nm,0.9s						
JIRN	**Jiri**	**53.11 310**		*e*P	**P**	**03 38 48.3**	**-0.9**
	34nm,0.9s						
GUN	**Gumba**	**53.47 310**		*e*P	**P**	**03 38 50.7**	**-1.2**
	30nm,0.7s						
KOLN	**Koldanda**	**55.16 309**		*e*P	**P**	**03 39 03.3**	**-0.7**
	24nm,0.6s						
DANN	**Dangsing**	**55.31 309**		*e*P	**P**	**03 39 03.9**	**-1.3**
	25nm,0.7s						
PYUN	**Piuthan**	**55.79 309**		*e*P	**P**	**03 39 06.1**	**-2.4**
	34nm,1.0s						
SONM	**Songino Array**	**56.31 341**		P	**P**	**03 39 11.8**	**+0.1**
	1.5nm,0.7s,baz=171,slow=5.5,SNR=7.6						
WMQ	**Urumqi**	**61.51 326**		P	**P**	**03 39 49.3**	**+1.4**
WMQ				pmax	pmax		
	comp=Z,22nm,0.7s						
WMQ				LR	LR		
	comp=N,81nm,30.7s						
WMQ				LR	LR		
	comp=E,44nm,35.5s						
WMQ				LR	LR		
	comp=Z,61nm,24.3s						
PETK	**Petropavlovsk-**	**62.21 18**		P	**P**	**03 39 52.7**	**+0.3**
	2.6nm,0.5s,baz=193,slow=5.9,SNR=4.0						
PETK				LR	LR	04 02 15.5	
	comp=Z,16nm,21.1s,baz=140,slow=32						
MK01	**Makanchi Array**	**66.32 326**		*e*P	**P**	**03 40 18.7**	**-0.8**
MK31	**Makanchi Array**	**66.34 326**		*e*P	**P**	**03 40 19.1**	**-0.5**
MKAR	**Makanchi Array**	**66.34 326**		P	**P**	**03 40 18.9**	**-0.7**
	5.5nm,0.7s,baz=123,slow=8.0,SNR=56						
KSH	**Kashi**	**66.35 317**		P	P	03 40 26.5	+6.5
KSH				pP	sP	03 40 35.5	+10
KSH				pmax	pmax		
	comp=Z,210nm,6.2s						
MAKZ	**Makanchi**	**66.52 326**		*e*P	**P**	**03 40 20.4**	**-0.4**
	9.7nm,1.3s						
ZAA0	**Zalesovo Array**	**69.56 333**		*e*P	**P**	**03 40 38.6**	**-1.1**
	3.5nm,0.8s						
ZALV	**Zalesovo Beam**	**69.56 333**		P	**P**	**03 40 38.7**	**-1.0**
	2.7nm,0.6s,baz=108,slow=4.8,SNR=9.1						
ZALV				LR	LR	04 12 56.5	
	comp=Z,17nm,19.5s,baz=72,slow=38						
ZALV	**Zalesovo Beam**	**69.56 333**		*e*P	**P**	**03 40 38.4**	**-1.3**
KURBB	**Kurchatov Arra**	**70.59 328**		P	**P**	**03 40 45.5**	**-0.6**
	6.0nm,0.6s,baz=128,slow=5.5,SNR=67						
KURK	**Kurchatov**	**70.59 328**		*e*P	**P**	**03 40 45.6**	**-0.5**
VNDA	**Vanda**	**74.67 173**		P	**P**	**03 41 10.5**	**+0.5**
	0.8nm,0.7s,baz=301,slow=5.9,SNR=7.5						
VNDA				LR	LR	04 14 10.0	
	comp=Z,63nm,18.3s,baz=323,slow=36						
WSAR	**Wadi Sarin**	**74.86 295**		LR	LR	04 15 53.5	
	comp=Z,25nm,20.7s,baz=108,slow=37						
BVAR	**Borovoye Array**	**76.15 328**		P	**P**	**03 41 18.6**	**-0.3**
	2.7nm,0.8s,baz=127,slow=6.1,SNR=14						
BRVK	**Borovoye**	**76.22 328**		*e*P	**P**	**03 41 19.2**	**0.0**
	5.7nm,0.8s						
TIXI	**Tiksi**	**76.25 360**		*e*P	**P**	**03 41 18.7**	**-0.3**
	3.1nm,0.7s						
NRIK	**Noril'sk**	**79.38 346**		LR	LR	04 21 01.0	
	comp=Z,26nm,18.3s,baz=148,slow=39						
PPT	**Papeete**	**79.50 107**		LR	LR	04 16 09.6	
	comp=Z,11nm,18.8s,baz=209,slow=35						
ABKAR	**Akbulak array**	**80.73 321**		*e*P	**P**	**03 41 43.8**	**-0.5**
AKTO	**Aktyubinsk**	**82.28 322**		P	**P**	**03 41 51.2**	**-1.2**
	1.1nm,0.4s,baz=64,slow=4.4,SNR=4.1						
ARU	**Arti**	**83.79 328**		*e*P	**P**	**03 41 59.0**	**-1.0**
	3.2nm,0.6s						
RAYN	**Ar Rayn**	**86.81 294**		*e*P	**P**	**03 42 15.5**	**-0.5**
	3.8nm,0.9s						
KECS	**Kecovo**	**106.41 319**		*e*PDIFF	**Pdif**	**03 43 42.4**	**-2.3**
TORD	**Torodi Ar. Bea**	**128.31 283**		PKP	**PKPdf**	**03 48 37.5**	**-1.1**
	0.7nm,0.8s,baz=72,slow=2.1,SNR=2.8						
JTS	**JuntasAbangare**	**144.97 79**		PKPbc	PKPbc	03 49 09.5	+0.9
	2.7nm,0.3s,baz=280,slow=6.1,SNR=5.6						
CPUP	**Villa Florida**	**148.31 167**		PKPbc	**PKPbc**	**03 49 17.3**	**-0.7**
	3.0nm,1.0s,baz=180,slow=13,SNR=3.1						
LPAZ	**La Paz**	**152.48 140**		PKPbc	**PKPbc**	**03 49 30.6**	**+1.5**
	0.5nm,0.4s,baz=254,slow=9.8,SNR=4.7						

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*NIED **23** 03:36:00, 44°.00N×147°.80E, h65km, Mw3.5 Best double couple: M0 1.70000×10^14 NP1:φ=281.00000°, δ19.00000°, λ-174.00000°. NP2:φ=186.00000°, δ88.00000°, λ-71.00000°.*
*JMA **23** 03:36:17.9±0.2, 43°.96N×147°.84E, h0km, M4.1*
*SKHL **23** 03:36:18.6±0.1, 44°.31N×148°.09E, h42km±8km, mb4.2/6*
*MOS **23** 03:36:19.7±1.6, 44°.29N×147°.86E, h38km, mb4.2/1, Error ellipse: s-maj=28.8km s-min=18.2km az=143.1*
ISC 23 03:36:15.3±2.7, 44°.26N±0°.08×148°.2E±0°.1, h14km±10km, n22, σ1°.23/41, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.00 349**		*e*P	**Pg**	**03 36 34.7**	**+0.1**
KUR				AMB	AMB	03 36 35.1	
	62nm,0.1s						
KUR				AMB	AMB	03 36 35.1	
	71nm,0.1s						
KUR				AMB	AMB	03 36 35.1	
	46nm,0.1s						
KUR				*e*S	**Sg**	**03 36 46.7**	**-0.9**
KUR				A	A	03 36 49.5	
	1μm,0.3s						
KUR				A	A	03 36 49.5	
	1μm,0.3s						
KUR	**Kuril'sk**	**1.00 349**	*d*	*i*PN	**Pg**	**03 36 34.8**	**+0.1**
KUR				*i* S	**Sg**	**03 36 46.6**	**-1.0**
KUR				pmax	pmax		
	comp=N,62nm,0.1s						
KUR				pmax	pmax		
	comp=E,71nm,0.1s						
KUR				pmax	pmax		
	comp=Z,551nm,0.1s						
KUR				smax	smax		
	comp=N,846nm,0.2s						
KUR				smax	smax		
	comp=E,358nm,0.2s						
SHO	**Shikotan**	**1.02 248**		*e*P	**Pg**	**03 36 35.4**	**+0.3**
SHO				AMB	AMB	03 36 35.6	
	comp=E,98nm,0.4s						
SHO				*e*S	**Sg**	**03 36 48.1**	**-0.4**
SHO				A	A	03 36 50.8	
	comp=E,1μm,0.4s						
SHO				A	A	03 36 50.8	
	comp=E,820nm,0.4s						
SHO	**Shikotan**	**1.02 248**		*e*PN	**Pg**	**03 36 35.4**	**+0.3**
SHO				*e*S	**Sg**	**03 36 47.8**	**-0.7**
SHO				pmax	pmax		
	comp=Z,125nm,0.3s						
SHO				pmax	pmax		
	comp=N,42nm,0.2s						
SHO				pmax	pmax		
	comp=E,53nm,0.2s						
SHO				smax	smax		
	comp=E,1μm,0.2s						
SHO				smax	smax		
	comp=N,823nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.66 263**		*e*P	**Pn**	**03 36 44.3**	**+0.4**
YUK				AMB	AMB	03 36 46.2	
	comp=N,150nm,0.3s						
YUK				AMB	AMB	03 36 46.2	
	comp=N,136nm,0.3s						
YUK				AMB	AMB	03 36 46.2	
	comp=N,44nm,0.3s						
YUK				*e*S	**Sn**	**03 37 03.5**	**-1.5**
YUK				A	A	03 37 06.7	
	comp=N,121nm,0.3s						
YUK				A	A	03 37 06.7	
	comp=N,870nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.66 263**		*e*PN	**Pn**	**03 36 44.5**	**+0.6**
YUK				*e*S	**Sn**	**03 37 04.6**	**-0.4**
YUK				pmax	pmax		
	comp=Z,444nm,0.2s						
YUK				pmax	pmax		
	comp=N,149nm,0.1s						
YUK				pmax	pmax		
	comp=E,135nm,0.1s						
YUK				smax	smax		
	comp=E,1μm,0.4s						
YUK				smax	smax		
	comp=N,712nm,0.2s						
LAGR	**Lagunnoye**	**1.71 264**		*e*P	**Pn**	**03 36 44.5**	**-0.1**
LAGR				AMB	AMB	03 36 46.5	
	comp=N,30nm,0.3s						
LAGR				*e*S	**Sn**	**03 37 05.6**	**-0.7**
LAGR				A	A	03 37 12.2	
	comp=N,1μm,0.5s						
LAGR				A	A	03 37 12.2	
	comp=N,713nm,0.5s						
LAGR	**Lagunnoye**	**1.71 264**		*e*PN	**Pn**	**03 36 44.5**	**-0.1**
LAGR				*e*S	**Sn**	**03 37 05.6**	**-0.7**
LAGR				pmax	pmax		
	comp=N,118nm,0.1s						
LAGR				pmax	pmax		
	comp=Z,301nm,0.1s						
LAGR				smax	smax		
	comp=E,1μm,0.5s						
LAGR				smax	smax		
	comp=N,713nm,0.4s						
GRPR	**Tuman**	**1.73 262**		*e*P	**Pn**	**03 36 45.4**	**+0.5**
GRPR				AMB	AMB	03 36 46.6	
	comp=N,144nm,0.4s						
GRPR				*e*S	**Sn**	**03 37 05.0**	**-1.8**
GRPR				A	A	03 37 11.7	
	comp=N,102nm,0.4s						
GRPR				A	A	03 37 11

comp=E,1μm,0.4s
GLVR smax smax
comp=N,978nm,0.3s
JRA Rausu 2.20 263 P **Pn** 03 36 53.1 +1.7
JRA eS **Sn** 03 37 18.9 +0.5
JNK Nakash 2.57 256 P **Pn** 03 36 57.6 +1.2
JNK eS **Sn** 03 37 26.5 -0.9
JAK Akkeshi 2.80 245 P **Pn** 03 37 00.3 +0.6
JAK eS **Sn** 03 37 31.2 -2.0
JAR Ashorobuto 3.31 255 P **Pn** 03 37 08.6 +1.9
JAR eS **Sn** 03 37 46.6 +0.8
JOB Onbets 3.41 248 P **Pn** 03 37 09.4 +1.4
JOB eS **Sn** 03 37 47.3 -1.0
JMP Maruseppu 3.46 268 P **Pn** 03 37 10.7 +2.0
JCH Churui 3.85 246 P **Pn** 03 37 14.9 +0.8
JCH eS **Sn** 03 37 57.3 -1.8
JKK2 Kamakawa 2 3.91 266 P **Pn** 03 37 17.7 +2.8
YSS Yuzh-Sakhalins 4.65 307 eP **Pn** 03 37 25.9 +0.9

IDC 23 03:38:09.2±6.9, 5°62S×147°37E, h176km±79km, mb3.2/1, mb1 3.5/3, mb1mx3.0/49, mbtmp3.8/3, Error ellipse: s-maj=142.0km s-min=49.0km az=121.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.77**	**183**	P	Pn	03 39 08.2	+0.9
	10.0nm,0.3s,baz=0.0,slow=8.1,SNR=24						
PMG				S	Sn	03 39 52.5	-0.2
	6.8nm,0.3s,baz=80,slow=23,SNR=11						
WRA	**Warramunga Arr**	**19.06**	**220**	P	P	03 42 18.7	+0.4
	0.3nm,0.3s,baz=40,slow=12,SNR=8.0						
ASAR	**Alice Springs**	**22.14**	**215**	P	P	03 42 51.5	+0.7
	1.9nm,0.7s,baz=39,slow=8.6,SNR=6.6						
TORD	**Torodi Ar. Bea**	**145.35**	**285**	PKPbc	PKPdf	03 57 25.4	-1.7
	0.2nm,0.7s,baz=87,slow=3.6,SNR=3.9						

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*ISCJB **23** 03:51:57.6±0.2, 39°.33N±0°.01×119°.92W±0°.02, h10km, mb4.4/7, Error ellipse: s-maj=2.3km s-min=1.7km az=150.7*
*NEIC **23** 03:51:57.2±0.0, 39°.32N×119°.99W, h7km, mb4.2/12, MW4.0, ML4.2(REN), Moment Tensor Solution. s71 Moment tensor: Scale 10^{15}Nm; M_{rr}0.03; $M_{\theta\theta}$-0.54; $M_{\phi\phi}$0.52; $M_{r\theta}$-0.10; $M_{\theta\phi}$-1.13; $M_{r\phi}$0.45; Best double couple: $M_0$1.30000×10^{15} NP1:ϕ_s281.00000°, δ72.00000°, λ172.00000°. NP2:ϕ_s14.00000°, δ83.00000°, λ18.00000°. Principal axes: T 1.3800, Plg18.0000°, Azm239.0000°; N -0.0900, Plg70.0000°, Azm35.0000°; P -1.2900, Plg7.0000°, Azm146.0000°; After REN.*
NEIC Felt [IV] at Incline Village and [III] at Carson City, Dayton, Reno, Sparks, Sun Valley and Washoe Valley. Also felt at Fernley, Silver Springs and Virginia City. Felt [IV] at Carnelian Bay and Kings Beach; [III] at Arnold, Grass Valley, Homewood, Loyalton, Olympic Valley, Pollock Pines, Soda Springs, South Lake Tahoe, Tahoe City, Tahoe Vista, Tahoma and Truckee, California. Felt in much of the Janesville-Oroville-Sonora area.
*IDC **23** 03:51:57.4±1.1, 39°.27N×120°.05W, h0km, mb3.6/2, mb1 3.9/6, mb1mx3.6/63, mbtmp3.7/6, ML3.7/4, MS3.2/11, Ms1 3.1/11, ms1mx2.9/52 Error ellipse: s-maj=15.5km s-min=5.6km az=40.0*

ISC 23 03:51:57.0±0.9, 39°29N±0°.02×120°02W±0°.02, h2km±6km, n156, σ2°18/220, mb4.5/8, Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUBR	**Rubicon Trail**	**0.26**	**203**	ePg	**Pg**	03 52 03.1	+1.2
RUBR				eSg	**Sg**	03 52 07.5	+2.3
VCNR	**Virginia City**	**0.29**	**88**	ePg	**Pg**	03 52 02.2	-0.3
VCNR				eSg	**Sg**	03 52 05.8	-0.5
PNTR	**Pine Nut**	**0.39**	**121**	ePg	**Pg**	03 52 04.4	+0.1
BEKR	**Beckworth**	**0.63**	**336**	ePg	**Pg**	03 52 08.3	-0.8
BEKR				eSg	**Sg**	03 52 17.3	-0.1
PAHR	**Pah Rah Range**	**0.65**	**50**	ePg	**Pg**	03 52 08.8	-0.6
PAHR				eSg	**Sg**	03 52 17.2	-0.6
YERR	**Yerington**	**0.68**	**116**	ePg	**Pg**	03 52 09.7	-0.3
YERR				eSg	**Sg**	03 52 18.0	-0.8
AFDM	**Forest Hills D**	**0.81**	**246**	ePg	**Pg**	03 52 13.1	+0.6
WAKR	**Walker**	**0.91**	**150**	ePg	**Pg**	03 52 14.1	-0.2
ORV	**Oroville**	**1.18**	**284**	ePg	**Pb**	03 52 18.7	-1.3
ORV				eSg	**Sb**	03 52 33.0	-2.8
CMB	**Columbia Colle**	**1.28**	**193**	ePn	**Pn**	03 52 21.0	-1.0
CMB				eSn	**Sb**	03 52 37.3	-1.6
RYN	**Ryan**	**1.34**	**119**	ePn	**Pn**	03 52 21.7	-1.2
RYN				eSg	**Sb**	03 52 39.3	-1.4
KVN	**Kaiserville**	**1.51**	**98**	ePn	**Pn**	03 52 23.7	-1.6
KVN				eSn	**Sn**	03 52 44.0	-1.7
NV01	**Mina Array Sit**	**1.59**	**122**	ePn	**Pn**	03 52 25.3	-1.1
NV01				eSn	**Sb**	03 52 47.9	0.0
NVAR	**Mina Array Bea**	**1.59**	**122**	Pg	**Pn**	03 52 26.4	0.0
	baz=298,slow=16,SNR=5017						
NVAR				Lg	Lg	03 52 48.1	
	baz=308,slow=28,SNR=13						
NV11	**Mina Array Sit**	**1.69**	**120**	ePn	**Pn**	03 52 26.9	-0.9
NV11				eSn	**Sb**	03 52 50.9	+0.1
O03D	**Paynes Creek**	**1.70**	**307**	P	**Pn**	03 52 27.9	+0.2
	baz=124,SNR=1000						
O03D				S	**Sb**	03 52 50.2	-0.7
	baz=124						
MDPB	**Devils Postpil**	**1.81**	**156**	ePn	**Pb**	03 52 30.2	-0.9
MDPB				eSn	**Sb**	03 52 54.5	+0.2
OMMB	**Old Mammoth Mi**	**1.85**	**154**	ePn	**Pb**	03 52 30.9	-0.9
MLAC	**Mammoth, Mammo**	**1.90**	**150**	P	**Pn**	03 52 30.4	-0.2
	baz=332						
GDXM	**Geysers**	**2.21**	**258**	ePn	**Pn**	03 52 35.6	+0.8
WDC	**Whiskeytown Da**	**2.33**	**304**	ePn	**Pb**	03 52 37.9	-1.8
WDC				eSn	**Sb**	03 53 08.6	-0.3
HOPS	**Hopland Field**	**2.39**	**264**	ePn	**Pn**	03 52 37.6	+0.4
BMN	**Battle Mountai**	**2.44**	**61**	ePn	**Pn**	03 52 36.1	-2.0
BMN				ePb	**Pb**	03 52 40.3	-1.4
BMN				ePg	**Pg**	03 52 41.8	-1.9
BMN				eSg	**Sb**	03 53 12.6	+0.3
MCCM	**Marconi Confer**	**2.51**	**244**	ePn	**Pn**	03 52 39.6	+0.8
MOD	**Modoc Plateau**	**2.62**	**355**	ePn	**Pn**	03 52 39.7	-0.8
MOD				ePg	**Pb**	03 52 43.9	-0.9
MOD				eSg	**Sb**	03 53 18.8	+1.3
TIN	**Tinemaha, Big**	**2.64**	**147**	Pb	**Pb**	03 52 46.4	+1.3
	baz=329						
N02D	**Trinity Center**	**2.66**	**310**	P	**Pn**	03 52 41.5	+0.5
	baz=128,SNR=37						
N02D				Sb	**Sg**	03 53 22.1	-0.2
	baz=128						
SAO	**San Andreas Ge**	**2.76**	**204**	ePn	**Pn**	03 52 44.0	+1.7
SAO				ePg	**Pg**	03 52 51.2	+1.3
SAO				eSg	**Sg**	03 53 24.7	-0.9
KCPM	**Cahto Peak**	**2.78**	**279**	ePn	**Pb**	03 52 45.2	-2.3
M04C	**Macdoel**	**2.85**	**332**	P	**Pn**	03 52 44.8	+1.1
	baz=150,SNR=333						
M04C				Sb	**Sg**	03 53 28.1	-0.4
	baz=150						
KMRM	**Mail Ridge**	**2.99**	**289**	ePn	**Pb**	03 52 48.7	-2.3
M02C	**Callahan**	**3.02**	**315**	P	**Pn**	03 52 46.6	+0.7
	baz=133,SNR=28						
M02C				Sb	**Sb**	03 53 30.5	+1.7
	baz=133						
GRAC	**Grapevine Rang**	**3.10**	**137**	Pb	**Pb**	03 52 53.7	+0.8
	baz=319						
PMPB	**Monarch Peak**	**3.13**	**192**	ePn	**Pn**	03 52 49.8	+2.4
YBH	**Yreka Blue Hor**	**3.19**	**321**	Pn	**Pn**	03 52 49.5	+1.3
	3.4nm,0.3s,baz=149,slow=8.6,SNR=65						
YBH				Lg	Lg	03 53 37.5	
	4.9nm,0.3s,baz=180,slow=5.1,SNR=32						
YBH				LR	LR	03 54 11.9	
	comp=Z,260nm,21.3s,baz=137,slow=42						
YBH	**Yreka Blue Hor**	**3.19**	**321**	ePn	**Pn**	03 52 50.5	+2.3
YBH				Lg	Lg	03 53 37.5	
CWC	**Cottonwood Cre**	**3.23**	**151**	P	**Pn**	03 52 48.4	-0.6
	baz=333						
CWC				Pb	**Pb**	03 52 56.3	+1.1
	baz=333						
CWC				Sb	**Sg**	03 53 39.0	-1.8
	baz=333						
KHMM	**Horse Mountain**	**3.26**	**300**	ePn	**Pn**	03 52 51.8	+2.6
WVOR	**Wild Horse Val**	**3.31**	**18**	ePn	**Pn**	03 52 49.3	-0.7
WVOR				ePg	**Pb**	03 52 57.6	+1.0
WVOR				eSg	**Sb**	03 53 39.6	+2.2
JCC	**Jacoby Creek,**	**3.43**	**298**	ePn	**Pn**	03 52 54.0	+2.5
JCC				ePg	**Pg**	03 53 01.3	-1.5
K05A	**Summer Lake**	**3.50**	**349**	ePn	**Pn**	03 52 54.5	+1.9
VES	**Vestal, Richgr**	**3.52**	**167**	P	**Pn**	03 52 52.8	0.0
	baz=349						
VES				Pb	**Pb**	03 53 00.6	+0.6
	baz=349						
VES				Sb	**Sb**	03 53 45.7	+2.5
	baz=349						
PAGB	**Antelope Grade**	**3.56**	**183**	ePn	**Pn**	03 52 53.7	+0.5
PAGB				ePg	**Pb**	03 53 00.8	+0.2
DAC	**Darwin (Calif)**	**3.57**	**147**	ePg	**Pb**	03 53 01.6	+0.7
DAC				eSn	**Sn**	03 53 35.9	-0.5
DAC				eSg	**Sg**	03 53 48.7	-2.9
K04D	**Chiloquin, OR**	**3.58**	**339**	P	**Pn**	03 52 53.9	+0.3
	baz=158						
K04D				Sb	**Sg**	03 53 50.0	-2.0
	baz=158						
R11A	**Troy Canyon, C**	**3.59**	**104**	P	**Pn**	03 52 53.0	-0.8
	baz=287						
R11A				Sb	**Sb**	03 53 47.3	+1.8
	baz=287						
R11A	**Troy Canyon, C**	**3.59**	**104**	ePn	**Pn**	03 52 53.0	-0.8
R11A				ePg	**Pb**	03 53 03.5	+2.2
R11A				eSg	**Sb**	03 53 47.3	+1.8
FURC	**Furnace Creek,**	**3.77**	**137**	P	**Pn**	03 52 55.3	-0.7
	baz=320						
FURC				Sb	**Sg**	03 53 54.9	-3.0
	baz=320						
TPNV	**Topopah Spring**	**3.78**	**127**	P	**Pn**	03 52 56.4	-0.1
	baz=310						
TPNV				Sb	**Sg**	03 53 56.4	-2.1
	baz=310						
TPNV	**Topopah Spring**	**3.78**	**127**	ePn	**Pn**	03 52 56.9	+0.4
MPMC	**Manual Prospec**	**3.80**	**147**	P	**Pn**	03 52 57.4	+0.7
	baz=330						
MPMC				Pb	**Pb**	03 53 06.6	+1.7
	baz=330						
ISA	**Isabella, Lake**	**3.82**	**161**	P	**Pn**	03 52 55.6	-1.3
	baz=342						
ISA				Pb	**Pb**	03 53 06.1	+0.9
	baz=342						
ISA				Sb	**Sb**	03 53 55.6	+3.6
	baz=342						
ISA	**Isabella, Lake**	**3.82**	**161**	ePn	**Pn**	03 52 60.0	+3.0
ISA				ePg	**Pg**	03 53 08.1	-2.2
ISA				eSg	**Sb**	03 53 55.2	+3.2
ELK	**Elko**	**3.95**	**67**	Pn	**Pn**	03 53 00.6	+1.7
	5.8nm,0.3s,baz=306,slow=14,SNR=152						
ELK				Lg	Lg	03 54 01.6	
	23nm,0.3s,baz=194,slow=16,SNR=9.9						
ELK				LR	LR	03 54 54.5	
	comp=Z,244nm,18.5s,baz=292,slow=45						
L02D	**Cave Junction,**	**3.95**	**318**	P	**Pn**	03 53 00.1	+1.4
	baz=135						
SMMC	**Simmler**	**3.97**	**180**	P	**Pn**	03 52 58.7	-0.2
	baz=0.1						
SMMC				Sb	**Sb**	03 53 58.2	+2.1
	baz=0.1						
HUMO	**Hull Mountain**	**3.99**	**327**	ePn	**Pn**	03 53 00.2	+1.0
HUMO				ePb	**Pb**	03 53 06.8	-1.2
HUMO				ePg	**Pg**	03 53 10.1	-3.3
HUMO				eSg	**Sg**	03 54 02.8	-2.4
J05D	**Fort Rock, OR**	**4.10**	**348**	P	**Pn**	03 53 01.7	+0.9
	baz=166						
J05D				Sb	**Sg**	03 54 06.2	-2.3
	baz=166						
J08A	**Circle Bar Ran**	**4.23**	**16**	ePn	**Pn**	03 53 06.2	+3.6
J08A				ePg	**Pb**	03 53 13.9	+1.7
J08A				eSg	**Sg**	03 54 10.5	-2.4
LRMC	**Laurel Mtn Rad**	**4.23**	**153**	Sb	**Sg**	03 54 09.4	-3.6
	baz=335						
J04D	**Umpqua Nationa**	**4.25**	**339**	P	**Pn**	03 53 05.7	+2.8
	baz=157						
ARVC	**Arvin**	**4.26**	**167**	P	**Pn**	03 53 03.7	+0.8
	baz=348						
ARVC				Pb	**Pb**	03 53 13.5	+0.9
	baz=348						
ARVC				Sb	**Sb**	03 54 08.2	+3.6
	baz=348						
KBO	**Bosley Butte**	**4.33**	**314**	ePg	**Pg**	03 53 20.4	+0.5
PKM	**Mcpherson Peak**	**4.39**	**178**	P	**Pn**	03 53 03.9	-1.1
	baz=358						
PKM				Sb	**Sb**	03 54 10.4	+1.8
	baz=358						
PINE	**Pine Mountain**	**4.55**	**352**	ePn	**Pn**	03 53 08.0	+0.9
PINE				ePg	**Pb**	03 53 20.1	+2.4
EDW2	**Edwards Air Fo**	**4.69**	**159**	Pb	**Pb**	03 53 21.4	+1.5
	baz=341						
GSC	**Goldstone, Bar**	**4.73**	**146**	P	**Pn**	03 53 09.8	+0.3
	baz=329						
GSC	**Goldstone, Bar**	**4.73**	**146**	ePg	**Pg**	03 53 24.6	-3.1
SHPR	**Sheep Range**	**4.74**	**124**	ePn	**Pn**	03 53 09.8	+0.1
SHPR				ePg	**Pg**	03 53 24.8	-3.1
SHPR				eSg	**Sg**	03 54 26.7	-2.7
OSI	**Osito Audit: C**	**4.78**	**167**	Sb	**Sb**	03 54 21.7	+2.2
	baz=348						
I07A	**Izee**	**4.81**	**4**	ePg	**Pb**	03 53 24.1	+2.1
I07A				eSg	**Sg**	03 54 27.7	-3.6
SBC	**Santa Barbara**	**4.84**	**177**	Sb	**Sb**	03 54 23.6	+2.3
	baz=358						
I04A	**Tendick Farm,**	**4.84**	**339**	P	**Pn**	03 53 12.7	+1.7
	baz=157						
PSUT	**Pine Spring**	**4.87**	**97**	ePn	**Pn**	03 53 11.6	+0.1
PSUT				ePg	**Pg**	03 53 28.1	-2.2
PSUT				eSg	**Sb**	03 54 27.4	+5.1
I03D	**Drain, OR**	**5.06**	**332**	P	**Pn**	03 53 16.8	+2.9
	baz=149						
I05D	**Terrebonne, OR**	**5.14**	**349**	P	**Pn**	03 53 17.0	+1.9
	baz=168						
I05D				Pb	**Pb**	03 53 30.3	+2.7
	baz=168						
MFID	**Camas Ranch**	**5.19**	**36**	ePn	**Pn**	03 53 14.5	-1.4
MFID				ePg	**Pb**	03 53 31.4	+2.9
MFID				eSg	**Sb**	03 54 35.9	+4.4
MWC	**Mount Wilson**	**5.29**	**162**	ePn	**Pn**	03 53 19.7	+2.4
BFSC	**Mount Baldy Ra**	**5.38**	**159**	P	**Pn**	03 53 19.7	+1.2
	baz=340						
CCUT	**Cedar City**	**5.51**	**106**	ePn	**Pn**	03 53 19.8	-0.5
BGU	**Big Grassy Mou**	**5.61**	**71**	ePn	**Pn**	03 53 22.0	+0.5
H04A	**Detroit Lake**	**5.63**	**344**	ePn	**Pn**	03 53 26.4	+4.7
DUG	**Dugway, Tooele**	**5.63**	**78**	P	**Pn**	03 53 22.8	+1.0
	baz=263						
DUG	**Dugway, Tooele**	**5.63**	**78**	ePn	**Pn**	03 53 22.9	+1.0
DUG				eSg	**Sg**	03 54 53.8	-4.0
LDFC	**Landfair**	**5.75**	**135**	ePg	**Pg**	03 53 43.8	-3.3
BMO	**Blue Mountains**	**5.92**	**19**	ePn	**Pn**	03 53 24.5	-1.2
BMO				ePg	**Pb**	03 53 43.4	+2.5
BMO				eSg	**Sg**	03 54 59.7	-7.2
TCRU	**Three Creeks R**	**5.94**	**94**	ePn	**Pn**	03 53 26.5	+0.2
HLID	**Hailey**	**6.00**	**43**	P	**Pn**	03 53 29.0	+2.1
	baz=226						
HLID	**Hailey**	**6.00**	**43**	ePn	**Pn**	03 53 28.2	+1.2
HLID				ePb	**Pb**	03 53 40.3	-2.0
HLID				eSg	**Sb**	03 55 01.9	+7.2
G05D	**Wamic, OR**	**6.03**	**351**	P	**Pn**	03 53 29.6	+2.4
	baz=170						
G08A	**Pilot Rock**	**6.05**	**7**	ePn	**Pn**	03 53 28.1	+0.5
G08A				ePg	Pg	03 53 48.8	-4.1
HVU	**Hansel Valley**	**6.06**	**63**	ePn	**Pn**	03 53 27.1	-0.6
KNB	**Kanab**	**6.11**	**110**	ePn	**Pn**	03 53 28.3	-0.2
MURC	**Murrieta**	**6.12**	**157**	P	**Pn**	03 53 29.1	+0.7
	baz=339						
SPUT	**South Promonto**	**6.13**	**68**	ePn	**Pn**	03 53 31.1	+2.3
MSU	**Marysvale**	**6.17**	**95**	ePn	**Pn**	03 53 30.6	+1.2
NLU	**North Lily Min**	**6.17**	**81**	ePn	**Pn**	03 53 31.1	+1.7
BELC	**Belle Mtn. Jos**	**6.19**	**147**	P	**Pn**	03 53 29.1	-0.4
	baz=330						
MTPU	**Mount Pierson**	**6.26**	**99**	ePn	**Pn**	03 53 32.3	+1.6
PFO	**Pinyon Flats O**	**6.35**	**152**	ePn	**Pn**	03 53 31.3	-0.5
PFO				ePg	**Pg**	03 53 55.2	-3.4
PFO				eSn	**Sn**	03 54 44.0	-0.9
PFO				eSg	**Sg**	03 55 14.8	-6.2
XPFO	**Piæon Flat**	**6.35**	**152**	ePn	**Pn**	03 53 32.8	+1.0
XPFO				ePg	**Pg**	03 53 55.2	-3.5
XPFO				eLg	Lg	03 55 19.1	
W13A	**Hualapai Mount**	**6.44**	**129**	ePn	**Pn**	03 53 33.2	+0.2
W13A				ePg	**Pg**	03 53 57.1	-3.3
CTU	**Camp Tracy**	**6.51**	**75**	ePn	Pn	03 53 38.2	+4.2
MPU	**Maple Canyon**	**6.51**	**81**	ePn	**Pn**	03 53 36.2	+2.1
JLU	**Jordanelle**	**6.72**	**76**	ePn	**Pn**	03 53 38.4	+1.5
TMUT	**Trail Mountain**	**6.84**	**87**	ePn	**Pn**	03 53 41.0	+2.4
HWUT	**Hardware Ranch**	**6.85**	**68**	ePn	**Pn**	03 53 37.3	-1.4
HWUT				ePg	Pg	03 54 03.9	-4.4
HWUT				eSn	**Sn**	03 54 55.0	-2.4
HWUT				eSg	**Sb**	03 55 26.0	+6.7
Y12C	**Blythe**	**7.08**	**140**	ePg	**Pg**	03 54 09.2	-3.4
P17A	**Butcher Ranch,**	**7.19**	**86**	ePn	**Pn**	03 53 44.8	+1.5
SRU	**San Rafael Swe**	**7.38**	**88**	ePn	**Pn**	03 53 48.4	+2.4
LON	**Longmire**	**7.57**	**351**	ePn	**Pn**	03 53 49.5	+1.0
LON				ePg	Pb	03 54 15.1	+6.1
AHID	**Auburn Hatcher**	**7.59**	**60**	ePn	**Pn**	03 53 47.5	-1.3
	11nm,0.8s						
AHID				ePg	Pg	03 54 17.2	-5.1
AHID				eSg	**Sb**	03 55 48.3	+7.9
MCMT	**McKenzie Canyo**	**7.69**	**42**	ePn	**Pn**	03 53 51.3	+1.1
Y14A	**Wickenburg**	**7.77**	**131**	ePn	**Pn**	03 53 51.7	+0.6
Y14A				ePg	Pg	03 54 21.7	-4.1
WUAZ	**Wupatki**	**7.84**	**116**	ePn	**Pn**	03 53 51.6	-0.7
WUAZ				ePg	Pg	03 54 22.4	-4.8
WUAZ				eSg	Sg	03 55 59.1	-10
D05A	**Enumclaw**	**8.03**	**350**	ePn	**Pn**	03 53 55.7	+1.1
MOOW	**Moose Ponds**	**8.26**	**54**	ePg	Pb	03 54 27.6	+6.7
BW06	**Boulder Array**	**8.64**	**63**	ePn	**Pn**	03 54 03.7	+0.4
PD31	**Pinedale Array**	**8.64**	**63**	ePn	**Pn**	03 54 07.4	+4.2
PDAR	**Pinedale Array**	**8.64**	**63**	Pn	**Pn**	03 54 06.5	+3.3
	0.2nm,0.3s,baz=240,slow=12,SNR=31						
PDAR				LR	LR	03 58 20.4	
	comp=Z,38nm,18.2s,baz=246,slow=44						
PDAR	**Pinedale Array**	**8.64**	**63**	ePn	**Pn**	03 54 04.3	+1.1
MSO	**Missoula**	**8.75**	**29**	ePn	Pn	03 54 10.2	+5.6
BOZ	**Bozeman (W)**	**8.84**	**42**	ePn	**Pn**	03 54 02.7	-3.2
	3.1nm,0.7s						
BOZ				eLg	Lg	03 56 30.1	
O20A	**White River Ci**	**9.12**	**81**	ePn	Pn	03 54 14.5	+4.7
NEW	**Newport**	**9.21**	**12**	Lg	Lg	03 56 54.4	
	0.2nm,0.3s,baz=40,slow=8.1,SNR=3.6						
NEW				LR	LR	03 58 12.8	
	comp=Z,85nm,20.9s,baz=196,slow=41						
NEW	**Newport**	**9.21**	**12**	ePn	**Pn**	03 54 08.5	-2.4
NEW				Lg	Lg	03 56 54.4	
RWWY	**Rawlins**	**10.05**	**72**	ePn	**Pn**	03 54 26.7	+4.0
WALA	**Waterton Lakes**	**10.70**	**22**	ePn	**Pn**	03 54 29.4	-2.0
	7.3nm,1.2s						
WALA				eLg	Lg	03 57 32.3	
ISCO	**Idaho Springs**	**11.14**	**83**	ePn	**Pn**	03 54 36.8	-0.8
	4.0nm,1.0s						
SDCO	**Great Sand Dun**	**11.48**	**93**	ePn	**Pn**	03 54 41.3	-0.9
TXAR	**Lajitas Array**	**16.75**	**121**	Pn	**P**	03 55 55.6	+0.4
	0.0nm,0.3s,baz=310,slow=13,SNR=6.1						
TXAR				LR	LR	04 03 32.6	
	comp=Z,44nm,20.8s,baz=0.0,slow=42						
LPIG	**La Paz**	**17.23**	**149**	LR	LR	04 02 15.2	
	comp=Z,77nm,21.1s,baz=249,slow=36						
AGMN	**Agassiz Nation**	**19.56**	**55**	eP	**P**	03 56 24.3	-1.7
	20nm,1.7s						
FFC	**Flin Flon**	**19.65**	**32**	eP	**P**	03 56 25.3	-1.6
	2.0nm,0.6s						
J36A	**Seneca 1, Swea**	**19.68**	**70**	eP	**Pn**	03 56 30.6	+1.8
	7.2nm,0.8s						
DLBC	**Dease Lake**	**20.22**	**345**	LR	LR	04 04 29.1	
	comp=Z,145nm,20.5s,baz=142,slow=37						
ULM	**Lac du Bonnet**	**20.25**	**49**	P	Pn	03 56 34.2	-1.2
	2.1nm,0.9s,baz=238,slow=9.2,SNR=4.3						
ULM				LR	LR	04 05 00.2	
	comp=Z,65nm,18.0s,baz=298,slow=39						
ULM	**Lac du Bonnet**	**20.25**	**49**	eP	Pn	03 56 36.6	+1.2
	21nm,1.7s						
F36A	**Milaca**	**20.54**	**63**	eP	Pn	03 56 39.6	+0.9
	14nm,1.5s						
SPMN	**Marine on St.**	**20.95**	**65**	eP	Pn	03 56 44.5	+0.9
	9.1nm,0.8s						
D36A	**Goodland**	**21.02**	**59**	eP	**P**	03 56 44.6	+2.7
	6.3nm,1.0s						
E38A	**The Farm, Brul**	**22.00**	**61**	eP	**P**	03 56 54.7	+2.3
	14nm,0.3s						
F41A	**Three Lakes**	**23.59**	**64**	eP	**P**	03 57 11.2	+2.2
	32nm,1.8s						
COWI	**Conover**	**23.60**	**63**	eP	**P**	03 57 10.2	+1.1
	5.8nm,0.9s						
G42A	**Mountain**	**24.03**	**65**	eP	**P**	03 57 16.3	+3.0
	21nm,1.5s						
D41A	**Chassel**	**24.10**	**61**	eP	**P**	03 57 17.0	+3.1
E43A	**Lone Tree Farm**	**25.10**	**63**	eP	**P**	03 57 24.9	+1.9
	5.6nm,0.6s						
TKL	**Tuckaleechee C**	**28.87**	**86**	LR	LR	04 10 00.8	
	comp=Z,46nm,20.2s,baz=329,slow=38						
ILAR	**Eielson Array**	**29.94**	**337**	P	**P**	03 58 08.8	+2.6
	0.7nm,1.0s,baz=143,slow=9.1,SNR=5.3						
SCHQ	**Schefferville**	**38.42**	**48**	LR	LR	04 15 41.1	
	comp=Z,77nm,19.8s,baz=340,slow=37						
BORG	**Borgarnes**	**58.71**	**30**	LR	LR	04 26 51.8	
	comp=Z,32nm,19.6s,baz=307,slow=36						
HHC	**Hu-ho-hao-te**	**87.41**	**323**	eP	**P**	04 04 45.9	-0.1
HHC				PP	**PP**	04 08 11.8	+2.2
HHC	**Hu-ho-hao-te**	**87.41**	**323**	SKS	**SKSac**	04 15 11.8	-3.1
HHC	**Hu-ho-hao-te**	**87.41**	**323**	S	**S**	04 15 24.6	-3.2
WMQ	**Urumqi**	**93.56**	**340**	P	**P**	04 05 14.8	+0.2
LZH	**Lanzhou**	**94.78**	**326**	eP	**P**	04 05 16.3	-4.2
LZH				pP	pP	04 05 21.4	+0.4
LZH				sP	sP	04 05 24.3	+3.1
LZH				ePP	**PP**	04 09 07.9	-0.1
LZH				pmax	pmax		
	comp=Z,23nm,0.9s						
LZH				pmax	pmax		
	comp=Z,100nm,4.9s						

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*IDC **23** 04:18:40.6±1

ISC 23 04:26:05.6±0.8, 36°.42N±0°.02×28°.96E±0°.01, h28km±6km, n149, σ1°18/215, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.23**	**25**	PG	**Pb**	**04 26 11.4**	**-0.6**
FETY				SG	**Sb**	**04 26 16.7**	**+0.2**
FETY	**Fethiye**	**0.23**	**25**	P	**Pb**	**04 26 11.5**	**-0.6**
FETY				S	**Sb**	**04 26 16.5**	**+0.1**
FETY	**Fethiye**	**0.23**	**25**	*e*Pg	**Pb**	**04 26 11.4**	**-0.6**
FETY				S	**Sb**	**04 26 16.5**	**+0.1**
DALY	**Dalyan (Mu¨la**	**0.46**	**328**	PG	**Pb**	**04 26 15.2**	**-0.2**
DALY				SG	**Sb**	**04 26 21.9**	**-0.1**
DALY	**Dalyan (Mu¨la**	**0.46**	**328**	*i* P	**Pb**	**04 26 15.1**	**-0.3**
DALY				*i* S	**Sb**	**04 26 21.7**	**-0.3**
DALY	**Dalyan (Mu¨la**	**0.46**	**328**	*e*Pg	**Pb**	**04 26 15.2**	**-0.2**
DALY				S	**Sb**	**04 26 21.7**	**-0.3**
TURN	**Turunc**	**0.53**	**328**	PG	**Pn**	**04 26 18.8**	**+1.4**
TURN	**Turunc**	**0.53**	**328**	*i* P	**Pn**	**04 26 18.7**	**+1.4**
TURN				*i* S	**Sn**	**04 26 28.0**	**+2.6**
TURN	**Turunc**	**0.53**	**328**	P	**Pn**	**04 26 18.7**	**+1.4**
AKAS	**Kas**	**0.56**	**110**	PG	**Pn**	**04 26 17.7**	**-0.1**
AKAS	**Kas**	**0.56**	**110**	*i* P	**Pb**	**04 26 17.6**	**+0.6**
AKAS				*i* S	**Sn**	**04 26 27.8**	**+1.6**
AKAS	**Kas**	**0.56**	**110**	*e*Pg	**Pn**	**04 26 17.7**	**-0.1**
AKAS				S	**Sn**	**04 26 27.8**	**+1.6**
KSL	**Kastellorizon**	**0.57**	**118**	P	**Pn**	**04 26 18.8**	**+0.8**
KSL				S	**Sn**	**04 26 29.2**	**+2.8**
KSL				AML	AML	04 26 29.6	
	comp=E,11630μm,0.5s						
KSL				AML	AML	04 26 32.3	
	comp=N,3848μm,0.6s						
KSL	**Kastellorizon**	**0.57**	**118**	P	**Pn**	**04 26 18.7**	**+0.8**
KSL				S	**Sn**	**04 26 28.6**	**+2.2**
MRSB	**Marmaris-Mugla**	**0.68**	**296**	PG	**Pb**	**04 26 18.6**	**-0.3**
MRSB	**Marmaris-Mugla**	**0.68**	**296**	*e*Pg	**Pb**	**04 26 18.6**	**-0.3**
ARG	**Arkhangelos**	**0.70**	**253**	PG	**Pb**	**04 26 19.4**	**+0.1**
ARG				SG	**Sn**	**04 26 29.9**	**+0.3**
ARG	**Arkhangelos**	**0.70**	**253**	P	**Pb**	**04 26 19.5**	**+0.1**
ARG				S	**Sn**	**04 26 30.5**	**+0.8**
ARG				AML	AML	04 26 30.6	
	comp=N,1960μm,0.3s						
ARG				AML	AML	04 26 32.6	
	comp=E,3056μm,0.4s						
ARG	**Arkhangelos**	**0.70**	**253**	P	**Pb**	**04 26 19.5**	**+0.1**
ARG				S	**Sn**	**04 26 30.1**	**+0.5**
ARG	**Arkhangelos**	**0.70**	**253**	P	**Pb**	**04 26 19.5**	**+0.1**
ARG				*e*Sg	**Sn**	**04 26 29.9**	**+0.3**
ELL	**Elmali**	**0.83**	**67**	PG	**Pn**	**04 26 22.3**	**+0.7**
GOLH	**Golhisar**	**0.94**	**31**	*i* P	**Pn**	**04 26 22.8**	**-0.3**
GOLH				*i* S	**Sn**	**04 26 36.0**	**+0.2**
GOLH	**Golhisar**	**0.94**	**31**	P	**Pn**	**04 26 22.8**	**-0.3**
GOLH				S	**Sn**	**04 26 36.0**	**+0.2**
TAVA	**DENIZLI_Tavas**	**1.04**	**358**	*i* P	**Pb**	**04 26 24.9**	**-0.2**
TAVA				*i* S	**Sb**	**04 26 38.5**	**+0.1**
TAVA	**DENIZLI_Tavas**	**1.04**	**358**	P	**Pb**	**04 26 24.9**	**-0.2**
TAVA				S	**Sb**	**04 26 38.5**	**+0.1**
DATC	**Datca-Mugla**	**1.10**	**288**	PG	**Pn**	**04 26 25.3**	**+0.2**
DATC	**Datca-Mugla**	**1.10**	**288**	*e*Pg	**Pn**	**04 26 25.3**	**+0.2**
DAT	**Datca**	**1.15**	**286**	PN	**Pb**	**04 26 26.8**	**-0.2**
DAT	**Datca**	**1.15**	**286**	*i* P	**Pn**	**04 26 26.4**	**+0.4**
DAT				*i* S	**Sb**	**04 26 42.2**	**+0.6**
DAT	**Datca**	**1.15**	**286**	P	**Pn**	**04 26 26.4**	**+0.4**
DAT	**Datca**	**1.15**	**286**	*e*Pn	**Pb**	**04 26 26.8**	**-0.2**
DAT				S	**Sb**	**04 26 42.2**	**+0.6**
KORT	**Korkueli**	**1.26**	**62**	PN	**Pb**	**04 26 29.2**	**+0.4**
KORT	**Korkueli**	**1.26**	**62**	*i* P	**Pb**	**04 26 29.4**	**+0.7**
KORT				*i* S	**Sb**	**04 26 49.2**	**+4.6**
KORT	**Korkueli**	**1.26**	**62**	*e*Pn	**Pb**	**04 26 29.2**	**+0.4**
KORT	**Korkueli**	**1.26**	**62**	P	**Pb**	**04 26 29.5**	**+0.7**
DNZL	**Cakiroluk**	**1.27**	**3**	*i* P	**Pn**	**04 26 28.2**	**+0.6**
DNZL				*i* S	**Sb**	**04 26 44.8**	**-0.1**
DNZL	**Cakiroluk**	**1.27**	**3**	P	**Pn**	**04 26 28.2**	**+0.6**
DNZL				S	**Sb**	**04 26 44.8**	**-0.1**
MLSB	**Milas**	**1.29**	**313**	PN	**Pb**	**04 26 29.0**	**-0.2**
MLSB	**Milas**	**1.29**	**313**	*e*Pn	**Pb**	**04 26 29.0**	**-0.2**
DENT	**Denizli**	**1.33**	**3**	PN	**Pn**	**04 26 28.5**	**+0.1**
DENT	**Denizli**	**1.33**	**3**	*e*Pn	**Pn**	**04 26 28.5**	**+0.1**
BDRM	**Kayabasi**	**1.38**	**298**	*e*P	**Pb**	**04 26 30.3**	**-0.4**
BDRM				*i* S	**Sb**	**04 26 47.8**	**-0.1**
BDRM	**Kayabasi**	**1.38**	**298**	P	**Pb**	**04 26 30.3**	**-0.4**
BDRM				S	**Sb**	**04 26 47.8**	**-0.1**
ANTB	**Antalya**	**1.44**	**70**	PN	**Pb**	**04 26 32.1**	**+0.3**
ANTB	**Antalya**	**1.44**	**70**	*e*Pn	**Pb**	**04 26 32.1**	**+0.3**
BODT	**Bodrum**	**1.47**	**296**	PN	**Pb**	**04 26 29.8**	**-0.5**
BODT	**Bodrum**	**1.47**	**296**	P	**Pn**	**04 26 29.7**	**-0.5**
BODT				S	**Sn**	**04 26 48.4**	**-0.2**
BODT	**Bodrum**	**1.47**	**296**	*e*Pn	**Pn**	**04 26 29.8**	**-0.5**
BODT				S	**Sn**	**04 26 48.4**	**-0.2**
NISR	**Nisiros**	**1.49**	**278**	P	**Pn**	**04 26 30.5**	**0.0**
NISR				S	**Sn**	**04 26 47.7**	**-1.2**
NISR				AML	AML	04 26 57.5	
	comp=E,1242μm,0.4s						
NISR				AML	AML	04 27 01.7	
	comp=N,594μm,1.0s						
NISR	**Nisiros**	**1.49**	**278**	P	**Pn**	**04 26 31.3**	**+0.8**
NISR	**Nisiros**	**1.49**	**278**	P	**Pn**	**04 26 31.3**	**+0.8**
NISR				S	**Sn**	**04 26 48.3**	**-0.6**
AYDN	**Tasoluk**	**1.51**	**325**	*i* P	**Pb**	**04 26 32.4**	**-0.6**
AYDN				*i* S	**Sb**	**04 26 51.4**	**-0.3**
AYDN	**Tasoluk**	**1.51**	**325**	P	**Pb**	**04 26 32.4**	**-0.6**
AYDN				S	**Sb**	**04 26 51.4**	**-0.3**
BRDR	**BURDUR-Merkez**	**1.55**	**34**	*i* P	**Pb**	**04 26 32.7**	**-0.9**
BRDR				*i* S	**Sb**	**04 26 53.9**	**+1.1**
BRDR	**BURDUR-Merkez**	**1.55**	**34**	P	**Pb**	**04 26 32.7**	**-0.9**
BRDR				S	**Sb**	**04 26 53.9**	**+1.1**
DIDI	**Didim-Aydin**	**1.67**	**305**	PN	**Pb**	**04 26 34.9**	**-0.9**
DIDI	**Didim-Aydin**	**1.67**	**305**	*e*Pn	**Pb**	**04 26 34.9**	**-0.9**
KARP	**Karpathos**	**1.70**	**240**	PN	**Pb**	**04 26 35.4**	**-0.8**
KARP	**Karpathos**	**1.70**	**240**	P	**Pn**	**04 26 34.2**	**+0.8**
KARP				S	**Sn**	**04 26 54.4**	**+0.1**
KARP				AML	AML	04 26 56.4	
	comp=N,701μm,0.3s						
KARP				AML	AML	04 26 57.6	
	comp=E,795μm,0.2s						
KARP	**Karpathos**	**1.70**	**240**	P	**Pn**	**04 26 34.2**	**+0.8**
KARP				S	**Sn**	**04 26 54.6**	**+0.3**
KARP	**Karpathos**	**1.70**	**240**	P	**Pn**	**04 26 34.2**	**+0.8**
KARP	**Karpathos**	**1.70**	**240**	*e*Pn	**Pb**	**04 26 35.4**	**-0.8**
KARP				S	**Sn**	**04 26 54.6**	**+0.3**
AYDB	**Zeytinkoy-Aydi**	**1.74**	**331**	PN	**Pn**	**04 26 34.9**	**+0.8**
AYDB	**Zeytinkoy-Aydi**	**1.74**	**331**	*e*Pn	**Pn**	**04 26 34.9**	**+0.8**
ISP	**Isparta**	**1.87**	**41**	PN	**Pb**	**04 26 38.1**	**-1.1**
ISP	**Isparta**	**1.87**	**41**	P	**Pn**	**04 26 36.9**	**+1.0**
ISP				S	**Sb**	**04 27 00.8**	**-1.5**
ISP	**Isparta**	**1.87**	**41**	P	**Pn**	**04 26 36.9**	**+1.0**
ISP	**Isparta**	**1.87**	**41**	*e*Pn	**Pb**	**04 26 38.1**	**-1.1**
ISP				S	**Sb**	**04 27 00.8**	**-1.5**
GCAM	**G?zelcaml?**	**1.88**	**313**	PN	**Pn**	**04 26 37.1**	**+1.4**
GCAM	**G?zelcaml?**	**1.88**	**313**	*i* P	**Pn**	**04 26 36.7**	**+0.9**
GCAM				*i* S	**Sn**	**04 26 59.7**	**+1.1**
GCAM	**G?zelcaml?**	**1.88**	**313**	P	**Pn**	**04 26 36.7**	**+0.9**
GCAM	**G?zelcaml?**	**1.88**	**313**	*e*Pn	**Pn**	**04 26 37.2**	**+1.4**
GCAM				S	**Sn**	**04 26 59.7**	**+1.1**
SUTC	**Sutluce-Ispart**	**1.94**	**57**	PN	**Pb**	**04 26 39.1**	**-1.3**
SUTC	**Sutluce-Ispart**	**1.94**	**57**	*e*Pn	**Pb**	**04 26 39.1**	**-1.3**
KHL	**Karahalli**	**1.95**	**13**	PN	**Pn**	**04 26 38.0**	**+1.1**
KHL	**Karahalli**	**1.95**	**13**	*e*Pn	**Pn**	**04 26 38.0**	**+1.1**
KZIL	**AFYON_Kizioren**	**2.06**	**27**	*i* P	**Pn**	**04 26 38.0**	**-0.5**
KZIL				*i* S	**Sn**	**04 27 05.3**	**+2.0**
KZIL	**AFYON_Kizioren**	**2.06**	**27**	P	**Pn**	**04 26 38.0**	**-0.5**
KZIL				S	**Sn**	**04 27 05.3**	**+2.0**
MANT	**Manisa**	**2.09**	**351**	*i* P	**Pn**	**04 26 38.4**	**-0.6**
MANT				*i* S	**Sn**	**04 27 02.5**	**-1.6**
MANT	**Manisa**	**2.09**	**351**	P	**Pn**	**04 26 38.4**	**-0.6**
KULA	**Kula-Manisa**	**2.10**	**354**	PN	**Pn**	**04 26 38.9**	**-0.1**
KULA	**Kula-Manisa**	**2.10**	**354**	*e*Pn	**Pn**	**04 26 38.9**	**-0.1**
SMG	**Samos**	**2.13**	**308**	P	**Pn**	**04 26 40.0**	**+0.7**
SMG				S	**Sn**	**04 27 05.8**	**+1.0**
SMG				AML	AML	04 27 07.7	
	comp=N,1642μm,0.4s						
SMG				AML	AML	04 27 07.7	
	comp=E,1845μm,0.2s						
SMG	**Samos**	**2.13**	**308**	P	**Pn**	**04 26 39.5**	**+0.2**
SMG				S	**Sn**	**04 27 04.8**	**0.0**
SMG	**Samos**	**2.13**	**308**	P	**Pn**	**04 26 39.9**	**+0.6**
SMG				S	**Sn**	**04 27 05.2**	**+0.4**
BAGO	**Egridir - ISPA**	**2.14**	**42**	*i* P	**Pn**	**04 26 40.6**	**+1.1**
BAGO				*i* S	**Sb**	**04 27 10.4**	**+0.4**
KEPZ	**Antalya-Kepez**	**2.18**	**77**	*i* P	**Pb**	**04 26 42.5**	**-1.9**
KEPZ				*i* S	**Sb**	**04 27 09.1**	**-1.9**
KEPZ	**Antalya-Kepez**	**2.18**	**77**	P	**Pb**	**04 26 42.5**	**-1.9**
KEPZ				S	**Sb**	**04 27 09.1**	**-1.9**
DGB	**˜zmir**	**2.32**	**315**	*i* P	**Pn**	**04 26 42.5**	**+0.6**
DGB				*i* S	**Sn**	**04 27 09.0**	**-0.5**
AMGA	**Amorgos Island**	**2.50**	**280**	P	**Pn**	**04 26 45.5**	**+1.1**
AMGA	**Amorgos Island**	**2.50**	**280**	P	**Pn**	**04 26 45.2**	**+0.8**
ZKR	**Zakros**	**2.58**	**240**	P	**Pn**	**04 26 47.9**	**+2.3**
ZKR	**Zakros**	**2.58**	**240**	P	**Pn**	**04 26 47.1**	**+1.5**
DEMI	**Demirci**	**2.62**	**356**	*i* P	**Pn**	**04 26 45.9**	**-0.3**
DEMI				*i* S	**Sn**	**04 27 15.3**	**-1.9**
DEMI	**Demirci**	**2.62**	**356**	P	**Pn**	**04 26 45.9**	**-0.3**
SIMA	**Simav-Kutahya**	**2.66**	**0**	PN	**Pn**	**04 26 46.5**	**-0.1**
SIMA	**Simav-Kutahya**	**2.66**	**0**	*e*Pn	**Pn**	**04 26 46.5**	**-0.1**
URLA	**Izmir**	**2.70**	**316**	PN	**Pn**	**04 26 48.2**	**+1.0**
URLA	**Izmir**	**2.70**	**316**	*e*Pn	**Pn**	**04 26 48.2**	**+1.0**
GAZI	**Gazipasa**	**2.72**	**93**	*i* P	**Pn**	**04 26 47.6**	**+0.2**
GAZI				*i* S	**Sn**	**04 27 17.6**	**-1.8**
GAZI	**Gazipasa**	**2.72**	**93**	P	**Pn**	**04 26 47.6**	**+0.2**
SANT	**Santorini**	**2.82**	**270**	PN	**Pn**	**04 26 50.2**	**+1.3**
SANT	**Santorini**	**2.82**	**270**	*e*Pn	**Pn**	**04 26 50.2**	**+1.3**
APE	**Apeiranthos**	**2.83**	**284**	PN	**Pn**	**04 26 50.3**	**+1.3**
APE	**Apeiranthos**	**2.83**	**284**	P	**Pn**	**04 26 48.1**	**-0.8**
APE	**Apeiranthos**	**2.83**	**284**	P	**Pn**	**04 26 48.8**	**-0.2**
APE				S	**Sn**	**04 27 22.4**	**+0.3**
APE	**Apeiranthos**	**2.83**	**284**	P	**Pn**	**04 26 48.9**	**-0.1**
APE	**Apeiranthos**	**2.83**	**284**	*e*Pn	**Pn**	**04 26 50.3**	**+1.3**
APE				S	**Sn**	**04 27 22.4**	**+0.3**
NPS	**Neapolis**	**2.96**	**248**	P	**Pn**	**04 26 51.0**	**+0.3**
NPS	**Neapolis**	**2.96**	**248**	P	**Pn**	**04 26 51.3**	**+0.6**
IOSP	**Ios island**	**2.97**	**277**	P	**Pn**	**04 26 50.7**	**-0.2**
IOSP	**Ios island**	**2.97**	**277**	P	**Pn**	**04 26 51.1**	**+0.2**
CHOS	**Chios island**	**3.03**	**311**	PN	**Pn**	**04 26 53.2**	**+1.4**
CHOS	**Chios island**	**3.03**	**311**	P	**Pn**	**04 26 52.9**	**+1.1**
CHOS	**Chios island**	**3.03**	**311**	P	**Pn**	**04 26 52.7**	**+0.9**
CHOS				S	**Sn**	**04 27 27.0**	**-0.2**
CHOS	**Chios island**	**3.03**	**311**	P	**Pn**	**04 26 52.7**	**+0.9**
CHOS	**Chios island**	**3.03**	**311**	*e*Pn	**Pn**	**04 26 53.2**	**+1.4**
CHOS				S	**Sn**	**04 27 27.0**	**-0.2**
AKMC	**Akamas**	**3.08**	**116**	P	**Pn**	**04 26 52.0**	**-0.4**
	baz=302						
AKMC	**Akamas**	**3.08**	**116**	P	**Pn**	**04 26 52.0**	**-0.4**
LAST	**Lasithi**	**3.10**	**247**	P	**Pn**	**04 26 53.3**	**+0.7**
LAST	**Lasithi**	**3.10**	**247**	P	**Pn**	**04 26 53.2**	**+0.5**
LAST	**Lasithi**	**3.10**	**247**	P	**Pn**	**04 26 53.4**	**+0.7**
DKL	**Dikili**	**3.10**	**329**	PN	**Pn**	**04 26 54.8**	**+2.1**
DKL	**Dikili**	**3.10**	**329**	*e*Pn	**Pn**	**04 26 54.8**	**+2.1**
KONT	**Konya--Tatoy**	**3.11**	**60**	PN	**Pn**	**04 26 54.8**	**+1.9**
KONT	**Konya--Tatoy**	**3.11**	**60**	*e*Pn	**Pn**	**04 26 54.8**	**+1.9**
PPCY	**Paphos**	**3.16**	**118**	P	**Pn**	**04 26 53.5**	**+0.1**
	baz=304						
PPCY	**Paphos**	**3.16**	**118**	P	**Pn**	**04 26 53.5**	**+0.1**
ERMK	**Ermenek**	**3.19**	**85**	*i* P	**Pn**	**04 26 57.1**	**+3.0**
ERMK				*i* S	**Sn**	**04 27 35.8**	**+4.4**
ERMK	**Ermenek**	**3.19**	**85**	P	**Pn**	**04 26 57.1**	**+3.0**
ERMK				S	**Sn**	**04 27 35.8**	**+4.4**
ALFC	**Alefka**	**3.22**	**112**	P	**Pn**	**04 26 53.8**	**-0.5**
	baz=298						
ALFC				S	**Sn**	**04 27 29.7**	**-2.1**
ALFC	**Alefka**	**3.22**	**112**	P	**Pn**	**04 26 53.8**	**-0.5**
ALFC				S	**Sn**	**04 27 29.7**	**-2.1**
PSRA	**Psara**	**3.43**	**309**	P	**Pn**	**04 26 57.9**	**+0.7**
PSRA	**Psara**	**3.43**	**309**	P	**Pn**	**04 26 58.0**	**+0.8**
IDI	**Anoyia**	**3.49**	**252**	Pn	**Pn**	**04 26 58.5**	**+0.3**
	comp=E,2.0nm,0.3s,baz=31,slow=11,SNR=3.3						
IDI				Sn	**Sn**	**04 27 35.9**	**-2.7**
	comp=E,3.8nm,0.3s,baz=285,slow=16,SNR=4.2						
SZAC	**Souni**	**3.60**	**116**	P	**Pn**	**04 26 59.4**	**-0.2**
	baz=302						
SZAC				S	**Sn**	**04 27 39.8**	**-1.5**
SZAC	**Souni**	**3.60**	**116**	P	**Pn**	**04 26 59.4**	**-0.2**
SZAC				S	**Sn**	**04 27 39.8**	**-1.5**
SIVA	**Sivas**	**3.66**	**249**	P	**Pn**	**04 27 01.8**	**+1.5**
SIVA	**Sivas**	**3.66**	**249**	P	**Pn**	**04 27 01.5**	**+1.2**
SIGR	**SIGRI**	**3.71**	**319**	P	**Pn**	**04 27 01.1**	**0.0**
SIGR	**SIGRI**	**3.71**	**319**	P	**Pn**	**04 27 01.6**	**+0.5**
CSS	**Mathiatis**	**3.84**	**111**	P	**Pn**	**04 27 02.8**	**-0.1**
	baz=296						
CSS	**Mathiatis**	**3.84**	**111**	P	**Pn**	**04 27 02.8**	**-0.1**
GVD	**Gavdhos**	**4.27**	**250**	P	**Pn**	**04 27 08.6**	**-0.2**
GVD	**Gavdhos**	**4.27**	**250**	P	**Pn**	**04 27 09.3**	**+0.5**
BRTR	**Keskin Array B**	**4.95**	**47**	Pn	**Pn**	**04 27 19.0**	**+0.8**
	comp=E,0.7nm,0.3s,baz=208,slow=11,SNR=23						
BRTR				Sn	**Sn**	**04 28 14.2**	**-0.4**
	comp=E,0.3nm,0.3s,baz=218,slow=27,SNR=5.5						
MMAI	**Mount Meron Ar**	**6.30**	**121**	Pn	**Pn**	**04 27 35.5**	**-1.2**
	comp=E,4.1nm,0.3s,baz=306,slow=12,SNR=14						
MMAI				Sn	**Sn**	**04 28 43.0**	**-4.8**
	comp=E,7.8nm,0.3s,baz=304,slow=27,SNR=6.7						
TORD	**Torodi Ar. Bea**	**33.70**	**234**	P	**P**	**04 32 46.0**	**+1.6**
	comp=E,0.3nm,0.7s,baz=38,slow=8.6,SNR=5.7						
MKAR	**Makanchi Array**	**40.49**	**58**	P	**P**	**04 33 40.1**	**-1.8**
	comp=E,0.1nm,0.4s,baz=272,slow=8.4,SNR=2.5						

BJI ***23*** *04:34:51.8, 2°.98N×97°.91E, h100km, mb6.2/91, mB6.3/66*
MOS ***23*** *04:34:52.5±0.9, 3°.04N×98°.00E, h105km, mb6.2/130, MS5.2/39, Error ellipse: s-maj=6.0km s-min=3.4km az=117.9*
ISCJB ***23*** *04:34:52.3±0.2, 2°.99N±0°.02×97°.93E±0°.01, h103km±1km, mb6.1/373, Error ellipse: s-maj=2.8km s-min=1.9km az=33.9*
KLM ***23*** *04:34:53.0, 2°.93N×97°.81E, h104km, mb6.6*
NEIC ***23*** *04:34:53.2±0.1, 3°.01N×97°.90E, h95km, mb6.3/222, ME6.4, MW6.1, MW6.1, Error ellipse: s-maj=3.2km s-min=2.3km az=35.0, Moment Tensor Solution. s51 Moment tensor: Scale 10^{18}Nm; M_{rr}0.26; $M_{\theta\theta}$0.25; $M_{\phi\phi}$-0.51; $M_{r\theta}$1.05; $M_{\theta\phi}$-1.01; $M_{\phi r}$-1.51; Best double couple: $M_0$2.10000×10^{18} NP1:ϕ_s67.00000°, δ31.00000°, λ174.00000°. NP2: ϕ_s162.00000°, δ87.00000°, λ59.00000°. Principal axes: T 2.4100, Plg40.0000°, Azm43.0000°; N -0.7100, Plg31.0000°, Azm164.0000°; P -1.7000, Plg34.0000°, Azm278.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s67.00000°, δ57.00000°, λ156.00000°. NP2: ϕ_s170.00000°, δ70.00000°, λ35.00000°. Principal axes: T Plg39.0000°, Azm32.0000°; N Plg0.0000°, Azm0.0000°; P Plg8.0000°, Azm296.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt [IV] at Blangpidie and Sibolga; [III] at Banda Aceh, Kabanjahe and Medan. Felt in much of northern Sumatra. Felt [III] at Ayer Itam, Gelugor, Georgetown, Kuala Lumpur and Sungai Ara; [II] at Sungai Petani, Malaysia. Felt from Kuah south to Petaling Jaya.
NEIC ***23*** *04:34:53.0±0.0, 2°.86N×97°.81E, h100km, Moment Tensor Solution. s30 Moment tensor: Scale 10^{18}Nm; M_{rr}0.22; $M_{\theta\theta}$0.06; $M_{\phi\phi}$-0.28; $M_{r\theta}$0.94; $M_{\theta\phi}$-1.09; $M_{\phi r}$-1.35; Best double couple: $M_0$2.00000×10^{18} NP1:ϕ_s169.00000°, δ85.00000°, λ53.00000°. NP2:ϕ_s73.00000°, δ37.00000°, λ172.00000°. Principal axes: T 2.2600, Plg38.0000°, Azm46.0000°; N -0.7900, Plg36.0000°, Azm172.0000°; P -1.4700, Plg30.0000°, Azm288.0000°;*
DJA ***23*** *04:34:53.1±0.1, 3°N±1°×9°8E±°, h92km±1km, M6.3/25, mb6.2/25, mB6.5/25, MLv6.3/2, Mw(mB)6.3/25, Mwp6.0/6*
GCMT ***23*** *04:34:53.2±0.1, 2°.98N×97°.77E, h104km, MW6.1/146, Moment Tensor Solution. s146, c368; s139, c500; Duration: ≥8 Moment tensor: Scale 10^{18}Nm; M_{rr}0.21±.01; $M_{\theta\theta}$0.01±.01; $M_{\phi\phi}$-0.21±.01; $M_{r\theta}$1.09±.01; $M_{\theta\phi}$-1.24±.01; $M_{\phi r}$-1.33±.01; Best double couple: $M_0$1.95300×10^{18} NP1:ϕ_s174.00000°, δ81.00000°, λ46.00000°. NP2:ϕ_s75.00000°, δ45.00000°, λ168.00000°. Principal axes: T 2.4450, Plg37.0000°, Azm45.0000°; N -0.9840, Plg44.0000°, Azm182.0000°; P -1.4600, Plg23.0000°, Azm296.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
IDC ***23*** *04:34:54.7±0.4, 3°.02N×98°.02E, h110km±3km, mb5.8/55, mb1 5.7/57, mb1mx5.6/71, mbtmp6.1/57, MS5.1/58, Ms1 5.1/58, ms1mx5.0/73 Error ellipse: s-maj=7.9km s-min=5.0km az=42.0*

ISC 23 04:34:53.6±0.2, 3°.00N±0°.02×97°.91E±0°.02, h102km±1km, h103km: pP-P, n2347, σ1°63/2676, mb6.1/377, 160C-48D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCSI	**Kotacane, Aceh**	**0.54**	**345**	P	**Pn**	**04 35 09.6**	**-0.3**
KCSI				S	**Sn**	**04 35 21.6**	**-0.5**
TPTI		**0.77**	**289**	P	**Pn**	**04 35 11.1**	**-0.8**
TPTI				S	**Sn**	**04 35 23.3**	**-2.3**
TSI	**Tuntungan**	**0.82**	**53**	P	**Pn**	**04 35 13.3**	**+1.0**
TSI				S	**Sn**	**04 35 27.6**	**+1.2**
PSI	**Prapat**	**1.03**	**101**	P	**Pn**	**04 35 14.8**	**+0.2**
	baz=359,slow=3.8						
PSI				S	**Sn**	**04 35 31.6**	**+1.2**
	6μm,0.3s,baz=180,slow=16,SNR=21						
PSI				LR	LR	04 35 49.4	
	comp=Z,175μm,18.7s,baz=270,slow=57						
SNSI	**Sinabang, Aceh**	**1.69**	**250**	P	**Pn**	**04 35 21.0**	**-1.3**
SNSI				S	**Sn**	**04 35 40.6**	**-3.5**
GSI	**Gunungsitoli**	**1.72**	**191**	P	**Pn**	**04 35 20.4**	**-2.3**
GSI				S	**Sn**	**04 35 41.7**	**-3.2**
GSI	**Gunungsitoli**	**1.72**	**191**	*e*Pn	**Pn**	**04 35 19.3**	**-3.4**
MLSI	**Meulaboh, Aceh**	**1.96**	**310**	P	**Pn**	**04 35 25.7**	**-0.1**
MLSI				S	**Sn**	**04 35 50.4**	**+0.1**
LHMI	**Lhok Sumawe**	**2.41**	**337**	P	**Pn**	**04 35 32.5**	**+0.9**
LHMI				S	**Sn**	**04 36 02.1**	**+1.3**
LHMI	**Lhok Sumawe**	**2.41**	**337**	*e*Pn	**Pn**	**04 35 32.6**	**+1.0**
MNSI	**Mandailing Nat**	**2.75**	**143**	P	**Pn**	**04 35 35.7**	**-0.4**
PBSI	**Pulau Batu**	**3.06**	**173**	P	**Pn**	**04 35 38.2**	**-2.0**
PBSI				S	**Sn**	**04 36 12.3**	**-3.8**
IPM	**Ipoh**	**3.44**	**65**	*e*Pn	**Pn**	**04 35 46.7**	**+1.4**
KULM	**Kulim**	**3.55**	**50**	*e*Pn	**Pn**	**04 35 48.1**	**+1.2**
BSI	**Banda Aceh**	**3.60**	**314**	P	**Pn**	**04 35 47.3**	**-0.1**
BKNI	**Bangkinang**	**4.10**	**130**	P	**Pn**	**04 35 54.2**	**-0.1**
BKNI	**Bangkinang**	**4.10**	**130**	*e*Pn	**Pn**	**04 35 53.4**	**-0.8**
PPI	**Padang Panjang**	**4.24**	**144**	P	**Pn**	**04 35 56.1**	**0.0**
PDSI	**Padang**	**4.65**	**147**	P	**Pn**	**04 36 00.7**	**-1.0**
TRTT	**Trang**	**5.12**	**20**	P	**Pn**	**04 36 07.3**	**-0.7**
	3μm,1.6s,121μm40nm						
KRAB	**Krabi**	**5.34**	**14**	P	**Pn**	**04 36 11.9**	**+0.9**
	24μm,0.7s,398μm95nm						
RGRI	**Rengat**	**5.53**	**127**	P	**Pn**	**04 36 14.3**	**+0.7**
SURT	**Suratani**	**5.98**	**8**	P	**Pn**	**04 36 18.8**	**-0.9**
	3.6nm,0.6s,151nm0.0nm						
MYKOM	**Kota Tinggi**	**6.05**	**101**	*e*Pn	**Pn**	**04 36 21.2**	**+0.5**
PPSI	**Pulau Pagai**	**6.10**	**160**	P	**Pn**	**04 36 17.7**	**-3.6**
KRJI	**Kerinci**	**6.18**	**145**	P	**Pn**	**04 36 21.6**	**-0.9**
TPRI	**Tanjung Pinang**	**6.93**	**107**	P	**Pn**	**04 36 33.3**	**+0.7**
MASI	**Maura Aman, Be**	**7.48**	**145**	P	**Pn**	**04 36 38.7**	**-1.4**
DSRI	**Dabo**	**7.51**	**117**	P	**Pn**	**04 36 41.3**	**+0.8**
MNAI	**Manna**	**8.88**	**145**	P	**Pn**	**04 36 56.1**	**-3.1**
MNAI	**Manna**	**8.88**	**145**	*e*Pn	**Pn**	**04 36 56.1**	**-3.1**
PMBI	**Palembang**	**9.04**	**131**	P	**Pn**	**04 37 00.8**	**-0.5**
PPBI	**Pangkal Pinang**	**9.69**	**122**	P	**Pn**	**04 37 11.7**	**+1.5**
MDSI	**Maura Dua**	**9.72**	**140**	P	**Pn**	**04 37 08.4**	**-2.2**
PHET	**K

QIZ pmax pmax
comp=Z,10μm,12.7s
QIZ Qiongzhong 19.75 35 *e*P **P 04 39 16.7 +1.2**
comp=Z,2μm,1.5s
QIZ *e*ScP **ScP 04 46 58.4 +1.1**
JAGI Jajag, Banyuwa 19.80 125 P **P 04 39 16.8 +0.6**
JAGI Jajag, Banyuwa 19.80 125 *e*P **P 04 39 16.8 +0.6**
comp=Z,4μm,1.7s
SGKI Sangatta, Kali 20.00 100 P **P 04 39 18.3 0.0**
VIS Vishakhapatnam 20.46 317 *i*P **P 04 39 23.2 0.0**
VIS *i*x x 04 43 11.3
SRBI Singaraja 20.47 123 P **P 04 39 23.9 +0.5**
BRDH Bariadhala 20.48 343 P **P 04 39 23.6 +0.2**
comp=Z,882nm,0.6s,baz=109,slow=6.5,SNR=18
BRDH LR LR 04 49 01.4
comp=Z,11μm,19.5s,baz=172,slow=41
CHLP Challavanipeta 20.53 320 *e*P **P 04 39 23.9 -0.1**
CHLP IAmb IAmb 04 39 27.6
comp=Z,3μm,1.7s
CHLP *e*S **S 04 43 07.8 -0.4**
BATP Bataraza 20.60 73 *e*P **P 04 39 24.5 -0.2**
MYLDM Lahad Datu 20.65 83 *e*P Pn 04 39 27.1 -1.5
comp=Z,8μm,1.3s
IGBI Denpasar 20.81 124 P Pn 04 39 31.2 +0.8
SKHT Srikalahasti 20.91 302 *e*P Pn 04 39 30.5 -1.0
SKHT IAmb IAmb 04 39 37.0
comp=Z,5μm,1.2s
SKHT *e*S **S 04 43 13.9 -1.8**
BELO BELONIA 21.08 343 *e*P **P 04 39 30.2 +0.4**
PVM Polavaram 21.36 313 *e*P **P 04 39 33.6 +0.7**
PVM IAmb IAmb 04 39 39.5
comp=Z,2μm,1.0s
PVM *e*S **S 04 43 22.8 -1.6**
AGT Agartala 21.73 343 *e*P **P 04 39 35.7 -1.1**
AGT IAmb IAmb 04 39 42.9
comp=Z,1μm,1.0s
PPR Puerto Princes 21.75 71⇑*e*P **P 04 39 38.7 +1.6**
ADKI Addanki 21.79 307 *e*P **P 04 39 39.4 +2.0**
ADKI IAmb IAmb 04 39 45.7
comp=Z,4μm,1.1s
ADKI *e*S **S 04 43 32.5 -0.2**
MPSI Mapaga 22.13 96 P **P 04 39 41.5 +0.3**
TWSI Taliwang, Sumb 22.22 122 P **P 04 39 41.0 -1.1**
comp=Z,546nm,1.1s,comp=Z,7μm
PCI Palu 22.26 100 P **P 04 39 42.8 +0.3**
KMI Kunming 22.48 12 P **P 04 39 45.8 +0.9**
KMI pP pP 04 40 07.6 +2.9
KMI sP sP 04 40 19.3 +1.9
KMI S **S 04 43 46.9 +2.2**
KMI pmax pmax
comp=Z,990nm,1.7s
KMI pmax pmax
comp=Z,10μm,5.8s
KMI LR LR
comp=Z,12μm,14.1s
KMI LR LR
comp=Z,14μm,13.5s
KMI LR LR
comp=Z,14μm,14.1s
TTSI Tana Toraja 22.71 105 P **P 04 39 47.7 +0.6**
NJS Nagarjunasagar 22.71 308 *e*P **P 04 39 48.3 +1.2**
NJS IAmb IAmb 04 39 51.7
comp=Z,1μm,0.9s
NJS *e*S **S 04 43 48.5 +0.4**
SRLM Srisailam 22.80 306 *e*P **P 04 39 49.3 +1.3**
SRLM IAmb IAmb 04 39 57.1
comp=Z,3μm,1.2s
SRLM *e*S **S 04 43 49.9 +0.4**
ENPP El Nido 22.83 68 *e*P **P 04 39 47.9 -0.5**
SPSI Sidrap Palu 22.91 107 P **P 04 39 48.9 -0.2**
PLAI Plampang 23.03 121 P **P 04 39 47.4 -2.8**
SHL Shillong 23.17 346 *i*PCN **P 04 39 52.0 +0.3**
comp=Z,66nm,0.8s
SHL *i*S **S 04 43 55.0 -0.6**
SHL Shillong 23.17 346 *e*P **P 04 39 49.8 -1.9**
comp=Z,4μm,1.3s
SHL Shillong 23.17 346 *e*P **P 04 39 49.8 -1.9**
SHL pmax pmax
comp=Z,4μm,1.3s
MOKO MOKOCHONG 23.41 352 *e*P **P 04 39 52.6 -1.2**
MOKO IAmb IAmb 04 39 55.7
comp=Z,4μm,1.3s
URV Uravakonda 23.57 302 *e*P **P 04 39 56.9 +1.6**
URV IAmb IAmb 04 40 01.9
comp=Z,4μm,0.9s
URV *e*S **S 04 44 03.4 +1.4**
TURI Tura 23.57 343 *e*P **P 04 39 52.6 -2.6**
BKSI Bulukumba 23.68 110 P **P 04 39 56.9 +0.7**
comp=Z,2μm,0.9s,comp=Z,21μmcomp=Z,22μm
BOK Bokaro 23.72 332 *e*P **P 04 39 55.6 -0.9**
BOK IAmb IAmb 04 39 59.4
comp=Z,3μm,1.3s
HYB Hyderabad 23.79 308⇓*i*P **P 04 39 57.0 -0.3**
comp=Z,1μm,1.0s
HYB *e*S **S 04 44 06.0 +0.4**
HYB Hyderabad 23.79 308 *e*P **P 04 39 57.8 +0.5**
HYBB Hyderabad (bro 23.80 308 *e*P **P 04 39 58.3 +1.0**
HYBB IAmb IAmb 04 40 02.9
comp=Z,433nm,0.7s
HYBB *e*S **S 04 44 05.8 +0.2**
BUSP Coron 23.82 67 *e*P **P 04 39 57.0 -0.5**
GUWA GUWAHATI 23.82 346 *e*P **P 04 39 55.8 -1.6**
GUWA IAmb IAmb 04 39 58.0
comp=Z,978nm,0.3s
JORH JORHAT 23.87 352 *e*P **P 04 39 55.6 -2.2**
JORH IAmb IAmb 04 39 59.1
comp=Z,717nm,0.7s
TEZP TEZPUR 23.99 349 *e*P **P 04 39 57.2 -1.6**
TEZP IAmb IAmb 04 39 59.9
comp=Z,378nm,0.6s
APSI Ampana 24.05 99 P **P 04 40 00.7 +1.2**
RPR Rampur 24.09 312 *e*P **P 04 40 00.5 +0.7**
RPR IAmb IAmb 04 40 02.4
comp=Z,1μm,1.1s
MRSI Marisa 24.15 96 P **P 04 40 00.4 0.0**
CUYO Cuyo Island 24.21 70 *e*P **P 04 40 00.9 -0.1**
MCO Taipa Grande 24.33 37 P **P 04 40 03.0 +1.0**
LUBP Lubang 24.50 63 *e*P **P 04 40 02.2 -1.4**
GYA Guiyang 24.79 19⇑*i*P **P 04 40 05.8 -0.5**
GYA pP pP 04 40 30.5 +1.9
GYA sP sP 04 40 42.0 +1.3
GYA PP **PnPn 04 40 49.8 +4.7**
GYA PcP **PcP 04 43 41.6 +1.2**
GYA S **S 04 44 20.1 -1.4**
GYA sS sS 04 45 00.8 +0.1
GYA SS **SnSn 04 45 27.9 +7.6**
GYA ScP **ScP 04 47 11.3 +1.0**
GYA pmax pmax
comp=Z,490nm,0.9s
GYA pmax pmax
comp=Z,5μm,12.4s
GYA LR LR
comp=Z,15μm,13.4s
GYA LR LR
comp=Z,9μm,11.8s
GYA LR LR
comp=Z,16μm,11.8s
WBSI Waikabubak, Su 24.81 121 P **P 04 40 02.9 -3.6**
SJMP San Jose 24.82 66 *e*P **P 04 40 06.1 -0.4**
SRSP Sriramsagar 24.84 311 *e*P **P 04 40 07.6 +0.9**
SRSP IAmb IAmb 04 40 11.2
comp=Z,657nm,0.9s
SRSP *e*S **S 04 44 22.3 0.0**
HKC Hong Kong Obse 24.84 38⇑P **P 04 40 07.0 +0.3**
GZH Guangzhou 24.94 36 P **P 04 40 13.5 +6.0**
GZH pP **pP 04 40 34.8 +4.8**
GZH sP **sP 04 40 47.3 +5.4**
GZH PP PnPn 04 40 58.3 +11
GZH S **S 04 44 33.8 +10**
GZH sS **sS 04 45 09.9 +7.0**
GZH LR LR
comp=N,12μm,14.0s
GZH LR LR
comp=E,13μm,14.2s
JAP San Jose, Anti 25.05 71⇑*e*P **P 04 40 10.6 +1.9**
LUWI Luwuk 25.17 99 P **P 04 40 10.2 +0.4**
LUWI Luwuk 25.17 99 *e*P **P 04 40 10.4 +0.6**
comp=E,2μm,1.2s
TGY Tagaytay City 25.27 63 P **P 04 40 11.7 +1.0**
comp=E,1μm,0.9s,baz=287,slow=3.0,SNR=41
TGY LR LR 04 49 50.3
comp=E,2μm,20.1s,baz=250,slow=36
BOLP Bolinao 25.39 57 *e*P **P 04 40 12.1 +0.4**
WSI Waingapu 25.61 120 P **P 04 40 13.9 +0.2**

OTRP Odiongan 25.61 67 *e*P **P 04 40 13.4 -0.3**
KDI Kendari 25.64 105 P **P 04 40 14.0 0.0**
KLRI Killari 25.70 307 *e*P **P 04 40 15.6 +1.0**
KLRI IAmb IAmb 04 40 18.5
comp=Z,2μm,1.4s
KLRI *e*S **S 04 44 36.2 +0.1**
NGP Nagpur 25.74 316 *e*P **P 04 40 14.8 0.0**
NGP IAmb IAmb 04 40 17.1
comp=Z,902nm,1.4s
NGP *e*x x 04 44 33.3
GTK Tadong 25.77 341 *e*P **P 04 40 14.2 -1.0**
ODAN Odare 25.78 338 *e*P **P 04 40 15.5 +0.1**
comp=Z,756nm,0.6s
PAGZ Pagadian 25.80 78 *e*P **P 04 40 15.2 -0.3**
BOAC Boac 25.83 65 *e*P **P 04 40 14.7 -1.0**
RCP Roxas 26.04 70⇑*e*P **P 04 40 18.7 +1.2**
TAPN Taplejung 26.10 339 *e*P **P 04 40 18.4 0.0**
comp=Z,809nm,0.8s
BASI Baing, Sumba 26.11 120 P **P 04 40 16.4 -1.9**
RAMN Ramite 26.16 337 *e*P **P 04 40 19.5 +0.7**
comp=Z,706nm,0.7s
KMSI Cibinong 26.17 95 P **P 04 40 20.8 +2.0**
EDFI Ende, Flores 26.43 116 P **P 04 40 18.6 -2.6**
CTBH Cotabato--PC H 26.56 80⇑*e*P **P 04 40 22.8 +0.5**
TBP Tagbilaran 26.62 74 *e*P **P 04 40 23.2 +0.4**
ABRA Dolores 26.68 55 *e*P **P 04 40 24.1 +0.7**
SKMP Bagumbayan, Su 26.76 82 *e*P **P 04 40 24.8 +0.6**
LLP Lapu-Lapu 26.86 73⇑*e*P **P 04 40 25.7 +0.7**
MMRI Maumere 26.87 116 P **P 04 40 22.4 -2.7**
MMRI Maumere 26.87 116 *e*P **P 04 40 23.3 -1.8**
comp=Z,628nm,1.1s
MMRI *e*S **S 04 44 52.2 -2.3**
JIRN Jiri 26.96 337 *e*P **P 04 40 26.3 +0.2**
comp=Z,1μm,0.8s
CGP Cagayan de Oro 27.18 77⇓*e*P **P 04 40 30.5 +2.6**
PKIN Phulchoki 27.21 335 *e*P **P 04 40 27.8 -0.5**
comp=Z,235nm,0.6s
APYP Conner 27.23 56 *e*P **P 04 40 27.5 -0.8**
GUN Gumba 27.30 336 *e*P **P 04 40 29.0 -0.2**
comp=Z,921nm,0.5s
LSA Lhasa 27.32 347 P **P 04 40 29.5 +0.1**
LSA sP **sP 04 41 04.3 +0.4**
LSA S **S 04 44 58.3 -3.8**
LSA sS **sS 04 45 35.9 -5.7**
LSA pmax pmax
comp=Z,81nm,0.6s
LSA pmax pmax
comp=Z,680nm,6.8s
LSA LR LR
comp=Z,1μm,19.7s
LSA LR LR
comp=Z,920nm,17.8s
LSA LR LR
comp=Z,3μm,11.8s
LSA Lhasa 27.32 347 *e*P **P 04 40 29.6 +0.1**
comp=Z,707nm,1.3s
LSA *e*S **S 04 45 01.8 -0.3**
LSA Lhasa 27.32 347 *e*P **P 04 40 29.6 +0.1**
LSA *e*S **S 04 45 01.8 -0.3**
LSA pmax pmax
comp=Z,707nm,1.3s
DMN Daman 27.36 335 *e*P **P 04 40 29.5 -0.1**
comp=Z,1μm,0.9s
I52GB DIEGO GARCIA I 27.39 248 *i* 07 30 10.0
baz=68,slow=325,SNR=0.3
DGAR Diego Garcia 27.43 248 *e*P **P 04 40 31.1 +1.0**
comp=Z,2μm,1.5s
DGAR Diego Garcia 27.43 248 *i*P **P 04 40 31.1 +1.0**
KKN Kakani 27.44 335 *e*P **P 04 40 29.8 -0.5**
comp=Z,353nm,0.5s
BUKP Musuan 27.45 79 *e*P **P 04 40 30.6 +0.3**
DAV Davao City (W) 27.85 81 P **P 04 40 34.7 +0.8**
comp=Z,642nm,0.4s,baz=334,slow=2.6,SNR=29
DAV LR LR 04 52 57.2
comp=Z,3μm,21.3s,baz=274,slow=39
DAV Davao City (W) 27.85 81⇑*e*P **P 04 40 30.0 -3.9**
DAV Davao City (W) 27.85 81 P **P 04 40 35.9 +2.0**
SNR=38
GKN Gorkha 27.90 334 *e*P **P 04 40 34.0 -0.3**
comp=Z,2μm,1.0s
PVCP Virac 27.98 66 *e*P **P 04 40 32.8 -2.2**
PLP Palo 28.04 72⇑*i*P **P 04 40 36.1 +0.6**
CNP Cataraman 28.11 69 *e*P **P 04 40 38.0 +1.9**
POO Poona 28.16 305 *e*P **P 04 40 37.2 +0.6**
POO IAmb IAmb 04 40 42.3
comp=Z,296nm,0.9s
KOLN Koldanda 28.17 332 *e*P **P 04 40 37.0 +0.2**
comp=Z,1μm,0.7s
BHPL Bhopal 28.25 317 *e*P **P 04 40 37.0 -0.4**
BHPL IAmb IAmb 04 40 38.7
comp=Z,498nm,1.2s
CD2 Chengdu 28.30 11 P **P 04 40 36.8 -0.9**
CD2 pP pP 04 40 57.4 -3.0
CD2 sP sP 04 41 08.3 -4.0
CD2 PcP **PcP 04 43 46.4 -2.1**
CD2 S **S 04 45 11.9 -4.9**
CD2 sS sS 04 45 54.6 -1.7
CD2 pmax pmax
comp=Z,780nm,0.6s
CD2 pmax pmax
comp=Z,4μm,8.6s
CD2 LR LR
comp=Z,19μm,12.8s
CD2 LR LR
comp=Z,20μm,28.5s
H08N1 Diego Carcia H 28.41 251 P **P 04 40 39.0 +0.5**
baz=90,slow=5.4,SNR=7.5
H08N2 Diego Garcia H 28.42 251 P **P 04 40 38.8 +0.2**
baz=90,slow=5.4,SNR=8.3
H08N3 Diego Garcia H 28.44 251 P **P 04 40 39.2 +0.5**
baz=90,slow=5.4,SNR=8.9
MATI Mati 28.50 81 *e*P **P 04 40 38.9 -0.8**
SANI Sanana 28.51 100 P **P 04 40 38.7 -1.0**
BESP Borongan 28.58 71 *e*P **P 04 40 39.9 -0.4**
DANN Dangsing 28.59 333 *e*P **P 04 40 40.3 -0.3**
comp=Z,948nm,0.5s
PYUN Piuthan 28.73 332 *e*P **P 04 40 42.0 +0.2**
BATI Baumata 28.81 117 P **P 04 40 42.2 -0.1**
comp=Z,208nm,0.6s,baz=262,slow=6.4,SNR=11
BATI S **S 04 45 17.7 -7.3**
comp=Z,237nm,0.8s,baz=10,slow=16,SNR=4.7
BATI LR LR 04 54 11.7
comp=Z,7μm,20.9s,baz=300,slow=40
BATI Baumata 28.81 117 P **P 04 40 40.7 -1.7**
SOEI Soe 29.15 116 P **P 04 40 42.5 -3.1**
SOEI Soe 29.15 116 *e*P **P 04 40 42.5 -3.1**
comp=Z,469nm,0.9s
BOM Bombay 29.20 305 *e*P **P 04 40 46.4 +0.7**
BOM AMb AMB 04 41 50.7
comp=Z,359nm,14.1s
ENH Enshi 29.25 21 *e*P **P 04 40 45.2 -0.9**
comp=Z,702nm,0.6s
ENH *e*PcP **PcP 04 43 51.7 +0.8**
ENH *e*ScP **ScP 04 47 24.7 +1.2**
TNTI Ternate 29.52 94 *e*P **P 04 40 47.4 -1.3**
comp=Z,267nm,1.2s
QZH Quanzhou 29.54 41⇑*i*P **P 04 40 49.3 +0.6**
QZH pP **pP 04 41 11.5 0.0**
QZH PP **PnPn 04 41 47.8 -0.4**
QZH S **S 04 45 37.0 +0.7**
QZH ScP **ScP 04 47 25.4 +1.0**
QZH pmax pmax
comp=Z,380nm,1.1s
QZH pmax pmax
comp=Z,5μm,3.0s
QZH LR LR
comp=Z,7μm,11.4s
QZH LR LR
comp=Z,5μm,10.4s
LBMI Labuha 29.80 97 P **P 04 40 50.9 -0.3**
TPUB Ta-pu 29.84 46 *e*P **P 04 40 52.4 +1.0**
comp=Z,1μm,1.4s
TWG Pinlang 29.86 47 *e*P **P 04 40 52.4 +0.8**
comp=Z,7μm,1.4s
YULB Yu-li 30.38 46 *e*P **P 04 40 57.3 +1.1**
comp=Z,1μm,1.4s
SSLB Suanglung 30.38 45 *e*P **P 04 40 56.1 -0.2**
comp=Z,1μm,1.3s
AAI Ambon 30.99 102 P **P 04 41 01.2 -0.4**
NACB Ninganchiao 31.08 45 *e*P **P 04 41 02.4 +0.1**
comp=Z,998nm,1.4s
YHNB Yeheng 31.24 44 *e*P **P 04 41 04.5 +0.7**
comp=Z,248nm,0.8s
WHN Wuhan 31.50 28⇑P **P 04 41 06.3 +0.4**
WHN S **S 04 46 07.1 +0.3**

WHN pmax pmax
comp=Z,2μm,1.3s
WHN LR LR
comp=Z,10μm,9.4s
WHN LR LR
comp=Z,15μm,11.5s
WHN LR LR
comp=Z,18μm,11.7s
TATO Taipei 31.51 44 *e*P **P 04 41 06.3 +0.3**
comp=Z,979nm,1.3s
TATO *e*PP **PP 04 42 18.1 -1.1**
TATO Taipei 31.51 44 P **P 04 41 07.4 +1.3**
SNR=7.5
MSAI Masohi 31.64 101 P **P 04 41 07.3 -0.1**
MBWA Marble Bar 32.15 139 *e*P **P 04 41 11.9 +0.1**
comp=Z,2μm,1.6s
MBWA *e*ScP **ScP 04 47 33.5 +0.3**
MBWA Marble Bar 32.15 139 P **P 04 41 11.7 0.0**
SNR=5.5
NDI New Delhi 32.26 324 *e*P **P 04 41 12.0 -0.6**
YOJ Yonaguni jima 32.27 46 *e*P **P 04 41 12.8 +0.1**
comp=Z,946nm,1.6s
YOJ Yonaguni jima 32.27 46 *e*P **P 04 41 12.8 +0.1**
YOJ pmax pmax
comp=Z,946nm,1.6s
XAN Xi'an 32.54 17 P **P 04 41 14.3 -0.8**
XAN S **S 04 46 19.0 -4.1**
XAN SS **SnSn 04 48 30.9 +2.7**
XAN pmax pmax
comp=Z,510nm,2.5s
XAN pmax pmax
comp=Z,4μm,7.1s
XAN LR LR
comp=Z,7μm,12.9s
XAN LR LR
comp=Z,10μm,12.9s
XAN LR LR
comp=Z,10μm,12.7s
DDI Dehra Dun 33.04 327 *e*P **P 04 41 19.4 -0.1**
LZH Lanzhou 33.38 9⇑P **P 04 41 22.1 -0.3**
LZH pP pP 04 41 47.8 +2.4
LZH sP sP 04 42 00.0 +2.8
LZH S **S 04 46 32.8 -3.4**
LZH SS **SnSn 04 48 48.8 +0.3**
LZH pmax pmax
comp=Z,650nm,1.2s
LZH pmax pmax
comp=Z,2μm,6.8s
LZH LR LR
comp=Z,11μm,18.4s
LZH LR LR
comp=Z,10μm,17.3s
LZH LR LR
comp=Z,17μm,18.3s
SIJI Sorong 33.56 96 P **P 04 41 23.8 -0.4**
comp=Z,396nm,0.7s,baz=298,slow=6.9,SNR=98
SIJI ScP **ScP 04 47 38.5 +0.2**
comp=Z,28nm,0.8s,baz=319,slow=13,SNR=4.5
SIJI pScP 04 48 22.4
comp=Z,29nm,0.8s,baz=81,slow=4.1,SNR=6.0
BHJ Bhuj 33.96 309 *e*P **P 04 41 28.9 +1.4**
BHJ IAmb IAmb 04 41 32.3
comp=Z,406nm,1.1s
SMLA Simla 34.15 327 *e*P **P 04 41 28.9 0.0**
SMLA IAmb IAmb 04 41 30.6
comp=Z,855nm,0.6s
BHK Bhakra 34.77 327 *e*P **P 04 41 34.3 -0.2**
BHK *e*x x 04 42 05.5
FAKI Fak Fak 34.82 99 P **P 04 41 34.1 -1.0**
FAKI Fak Fak 34.82 99 *e*P **P 04 41 34.4 -0.7**
comp=Z,504nm,1.1s
NJ2 Nanjing 34.97 32 *e*P **P 04 41 36.3 +0.2**
NJ2 pP **pP 04 41 58.8 -0.3**
NJ2 sP **sP 04 42 08.5 -2.4**
NJ2 PP **PP 04 42 57.1 -0.3**
NJ2 PcP **PcP 04 44 08.0 +1.6**
NJ2 S **S 04 46 56.8 -3.7**
NJ2 ScP **ScP 04 47 42.8 0.0**
NJ2 ScS **ScS 04 51 45.3 -1.4**
NJ2 pmax pmax
comp=Z,450nm,1.5s
NJ2 pmax pmax
comp=Z,2μm,4.3s
NJ2 LR LR
comp=Z,9μm,10.3s
NJ2 LR LR
comp=Z,8μm,10.8s
NJ2 LR LR
comp=Z,10μm,10.8s
DHRM DHARAMSHALA 35.48 327 *e*P **P 04 41 39.5 -1.3**
SSE Sheshan 35.54 36 P **P 04 41 41.8 +0.8**
SSE S **S 04 47 13.8 +4.5**
SSE pmax pmax
comp=Z,130nm,0.8s
SSE pmax pmax
comp=Z,2μm,3.6s
SSE LR LR
comp=Z,3μm,13.2s
SSE LR LR
comp=Z,3μm,15.0s
GTA Gaotai 36.28 2⇑P **P 04 41 46.8 -0.6**
GTA PP **PnPn 04 43 12.5 -0.1**
GTA PcP **PcP 04 44 12.0 +1.7**
GTA S **S 04 47 18.1 -2.6**
GTA SS **SnSn 04 49 47.3 -11**
GTA ScS **ScS 04 51 52.4 -1.6**
GTA pmax pmax
comp=Z,140nm,1.4s
GTA pmax pmax
comp=Z,3μm,6.5s
GTA LR LR
comp=Z,4μm,12.0s
GTA LR LR
comp=Z,4μm,11.0s
GTA LR LR
comp=Z,3μm,12.4s
KMPI Kaimana, Papua 36.38 100 P **P 04 41 47.7 -0.7**
RKPI Ransiki, Papua 36.53 97 P **P 04 41 49.3 -0.4**
MTN Manton Dam 36.55 116 *e*P **P 04 41 48.2 -1.7**
comp=Z,303nm,1.1s
TIY Taiyuan 37.02 19 *e*P **P 04 41 53.5 -0.1**
TIY S **S 04 47 31.3 -0.6**
TIY SS **SnSn 04 50 10.4 -5.9**
TIY pmax pmax
comp=Z,130nm,0.7s
TIY pmax pmax
comp=Z,2μm,4.3s
TIY LR LR
comp=Z,8μm,10.7s
TIY LR LR
comp=Z,6μm,9.6s
TIY LR LR
comp=Z,9μm,12.7s
JOW Kunigami 37.51 48 P **P 04 41 58.5 +0.8**
comp=Z,359nm,0.4s,baz=215,slow=7.3,SNR=81
JOW LR LR 04 57 20.2
comp=Z,2μm,20.0s,baz=277,slow=36
JOW Kunigami 37.51 48 *e*P **P 04 41 58.2 +0.5**
comp=Z,676nm,1.0s
TIA Tai'an 37.51 26 P **P 04 41 57.3 -0.4**
TIA PP **PnPn 04 43 31.0 +3.7**
TIA S **S 04 47 35.6 -3.6**
TIA pmax pmax
comp=Z,58nm,0.6s
TIA pmax pmax
comp=Z,2μm,3.7s
TIA LR LR
comp=Z,3μm,14.2s
TIA LR LR
comp=Z,3μm,12.3s
TIA LR LR
comp=Z,6μm,10.0s
NIL Nilore 38.21 326 *e*P **P 04 42 03.2 -0.5**
comp=Z,6μm,0.8s
NIL *e*S **S 04 47 51.6 +1.7**
NIL Nilore 38.21 326 *e*P **P 04 42 03.2 -0.5**
NIL *e*S **S 04 47 51.6 +1.7**
NIL pmax pmax
comp=Z,6μm,0.8s
BAKI Biak 38.41 96 P **P 04 42 05.8 +0.2**
BTO Baotou 39.00 15 *e*P **P 04 42 09.3 -0.9**
BTO pmax pmax
comp=Z,43nm,0.9s
HHC Hu-ho-hao-te 39.64 16 *e*P **P 04 42 16.3 +0.7**
HHC pP pP 04 42 39.0 0.0

HHC				sP	sP	04 42 50.6 -0.1
HHC				PP	**PnPn**	**04 43 53.3 +0.6**
HHC				S	**S**	**04 48 13.3 +2.0**
HHC				sS	sS	04 48 52.4 +0.5
HHC				SS	**SS**	**04 51 07.0 -3.6**
HHC				ScS	**ScS**	**04 52 11.6 -1.5**
HHC				pmax	pmax	
	comp=Z,350nm,1.7s					
HHC				pmax	pmax	
	comp=Z,3μm,5.1s					
HHC				LR	LR	
	comp=Z,5μm,17.7s					
HHC				LR	LR	
	comp=Z,9μm,15.9s					
HHC				LR	LR	
	comp=Z,3μm,15.9s					
NWAO	**Narrogin (SRO)**	**40.14 154**		P	**P**	**04 42 21.1 +1.4**
	comp=Z,417nm,1.0s,baz=193,slow=9.9,SNR=77					
NWAO				LR	LR	04 58 08.9
	comp=Z,2μm,21.9s,baz=212,slow=35					
NWAO	**Narrogin (SRO)**	**40.14 154**		*e*P	**P**	**04 42 20.9 +1.2**
	comp=Z,671nm,1.0s					
NWAO	**Narrogin (SRO)**	**40.14 154**		P	**P**	**04 42 21.6 +1.9**
	SNR=30					
BJT	**Baijiatuau**	**40.39**	**22**	*e*P	**P**	**04 42 22.6 +1.0**
	comp=Z,1μm,0.6s					
BJT				*e*ScP	**ScP**	**04 48 03.7 +0.6**
BJT	**Baijiatuau**	**40.39**	**22**	*e*P	**P**	**04 42 22.6 +1.0**
BJT				pmax	pmax	
	comp=Z,1μm,0.6s					
BJI	**Beijing**	**40.41**	**22⇑**	*i*P	**P**	**04 42 22.8 +1.0**
BJI				sP	**sP**	**04 42 55.3 -1.7**
BJI				PP	**PP**	**04 43 56.9 0.0**
BJI				PcP	**PcP**	**04 44 24.8 +1.8**
BJI				ScP	**ScP**	**04 48 03.0 -0.2**
BJI				S	**S**	**04 48 25.1 +2.5**
BJI				sS	**sS**	**04 49 05.3 +2.1**
BJI				ScS	**ScS**	**04 52 17.8 +0.4**
BJI				pmax	pmax	
	comp=Z,2μm,0.6s					
BJI				pmax	pmax	
	comp=Z,9μm,3.7s					
BJI				LR	LR	
	comp=Z,6μm,17.5s					
BJI				LR	LR	
	comp=Z,5μm,11.1s					
BJI				LR	LR	
	comp=Z,240nm,36.3s					
H01W3	**Cape Leeuwin H**	**40.65 159**		P	**P**	**04 42 26.4 +2.8**
	baz=328,slow=5.9,SNR=65					
H01W2	**Cape Leeuwin H**	**40.66 159**		P	**P**	**04 42 26.0 +2.3**
	baz=328,slow=5.9,SNR=49					
H01W1	**Cape Leeuwin H**	**40.67 159**		P	**P**	**04 42 26.5 +2.8**
	baz=328,slow=5.9,SNR=60					
KBL	**Kabul**	**41.30 323**		*e*P	**P**	**04 42 29.2 -0.3**
	comp=Z,298nm,0.7s					
KBL				*e*S	**S**	**04 48 35.6 -0.8**
KBL	**Kabul**	**41.30 323**		*e*P	**P**	**04 42 29.2 -0.3**
KBL				*e*S	**S**	**04 48 35.6 -0.8**
KBL				pmax	pmax	
	comp=Z,298nm,0.7s					
KSH	**Kashi**	**41.45 334⇑**		*i*P	**P**	**04 42 28.8 -1.7**
KSH				pP	pP	04 42 49.8 -4.4
KSH				PP	**PP**	**04 44 08.0 -0.3**
KSH				S	**S**	**04 48 33.3 -5.1**
KSH				sS	sS	04 49 13.5 -5.6
KSH				SS	**SS**	**04 51 41.8 -4.8**
KSH				ScS	**ScS**	**04 52 23.5 -0.6**
KSH				pmax	pmax	
	comp=Z,520nm,0.7s					
KSH				LR	LR	
	comp=Z,4μm,11.1s					
KSH				LR	LR	
	comp=Z,3μm,8.5s					
KSH				LR	LR	
	comp=Z,3μm,12.2s					
WMQ	**Urumqi**	**41.65 349**		P	**P**	**04 42 32.3 +0.3**
WMQ				sP	sP	04 43 04.9 -2.3
WMQ				PcP	**PcP**	**04 44 29.0 +1.9**
WMQ				ScP	**ScP**	**04 48 07.8 -0.3**
WMQ				S	**S**	**04 48 42.0 +1.0**
WMQ				SS	**SS**	**04 51 45.3 -4.9**
WMQ				ScS	**ScS**	**04 52 22.8 -2.2**
WMQ				pmax	pmax	
	comp=Z,800nm,1.1s					
WMQ				pmax	pmax	
	comp=Z,4μm,3.7s					
WMQ				LR	LR	
	comp=Z,5μm,18.1s					
WMQ				LR	LR	
	comp=Z,7μm,24.5s					
WMQ				LR	LR	
	comp=Z,9μm,30.9s					
DL2	**Dalian**	**41.76**	**28⇑**	*i*P	**P**	**04 42 33.0 +0.1**
DL2				pP	**pP**	**04 42 55.8 -0.7**
DL2				ScP	**ScP**	**04 48 10.4 +1.8**
DL2				S	**S**	**04 48 43.4 +0.7**
DL2				ScS	**ScS**	**04 52 23.9 -1.8**
DL2				pmax	pmax	
	comp=Z,1μm,0.7s					
DL2				pmax	pmax	
	comp=Z,4μm,5.5s					
DL2				LR	LR	
	comp=Z,2μm,16.2s					
DL2				LR	LR	
	comp=Z,5μm,18.6s					
WRA	**Warramunga Arr**	**42.41 124**		P	**P**	**04 42 37.7 -0.8**
	comp=Z,168nm,0.6s,baz=301,slow=9.1,SNR=430					
WRA				ScP	**ScP**	**04 48 12.4 +0.8**
	comp=Z,45nm,1.0s,baz=312,slow=3.8,SNR=7.9					
WRA				S	**S**	**04 48 47.1 -5.8**
	comp=Z,153nm,0.9s,baz=294,slow=16,SNR=30					
WRA				LR	LR	05 01 16.0
	comp=Z,3μm,20.5s,baz=330,slow=37					
WRAB	**Tennant Creek**	**42.42 124**		*e*P	**P**	**04 42 37.9 -0.7**
	comp=Z,768nm,1.5s					
WRAB				*e*S	**S**	**04 48 46.7 -6.2**
WRAB	**Tennant Creek**	**42.42 124**	*c*	*i*P	**P**	**04 42 37.9 -0.7**
WRAB				pmax	pmax	
	comp=Z,319nm,1.1s					
WB2	**Warramunga Arr**	**42.42 124**		*e*P	**P**	**04 42 37.9 -0.7**
	comp=Z,764nm,1.5s					
WBK	**Wadi Bani Khal**	**42.47 301**		P	**P**	**04 42 42.2 +3.3**
	SNR=17					
GENI	**Genyem**	**42.60**	**97**	P	**P**	**04 42 38.9 -1.2**
TJN	**Taejon**	**42.90**	**36**	*c* *i*P	**P**	**04 42 41.9 -0.3**
WSAR	**Wadi Sarin**	**42.99 301**		P	**P**	**04 42 45.3 +2.1**
	comp=Z,284nm,0.7s,baz=144,slow=7.7,SNR=84					
WSAR				LR	LR	05 02 14.1
	comp=Z,2μm,18.2s,baz=124,slow=38					
JNU	**Nakatsue**	**43.00**	**42**	P	**P**	**04 42 42.5 -0.6**
	comp=Z,175nm,0.9s,baz=235,slow=4.5,SNR=71					
JNU				ScP	**ScP**	**04 48 13.8 +0.1**
	comp=Z,11nm,0.7s,baz=216,slow=2.2,SNR=5.2					
JNU				LR	LR	05 01 10.7
	comp=Z,2μm,21.1s,baz=232,slow=37					
JNU	**Nakatsue**	**43.00**	**42**	*e*P	**P**	**04 42 42.8 -0.2**
	comp=Z,778nm,1.3s					
JNU				ScP	**ScP**	**04 48 13.8 +0.1**
PRZ	**Przheval'sk**	**43.00 339**		*e*P	**P**	**04 42 44.5 +1.3**
	comp=Z,246nm,0.8s					
NRN	**Naryn**	**43.03 336**		*e*P	**P**	**04 42 43.4 -0.2**
NRN	**Naryn**	**43.03 336**		*e*P	**P**	**04 42 43.4 -0.2**
MSEY	**Mahe Island**	**43.08 260**		*e*P	**P**	**04 42 46.2 +2.2**
	comp=Z,256nm,0.8s					
MSEY	**Mahe Island**	**43.08 260**		P	**P**	**04 42 46.1 +2.1**
	SNR=6.0					
MSEY	**Mahe Island**	**43.08 260**		*i* P	**P**	**04 42 45.3 +1.3**
	SNR=6.7					
MSEY	**Mahe Island**	**43.08 260**		*e*P	**P**	**04 42 46.2 +2.2**
MSEY				pmax	pmax	
	comp=Z,256nm,0.8s					
JAY	**Jayapura**	**43.13**	**97**	P	**P**	**04 42 42.7 -1.7**
JMDO	**Jabal Madar**	**43.13 300**		P	P	04 42 50.0 +5.7
	SNR=14					
SHLS	**Shalkode**	**43.22 340⇑**		*i*P	**P**	**04 42 44.0 -0.8**
	comp=Z,130nm,0.8s					
SHLS				*i* sP	**sP**	**04 43 15.8 -4.4**
SHLS				*i* S	**S**	**04 49 01.5 -2.8**
UZB	**Uzynbulak**	**43.37 340⇑**		*i*P	**P**	**04 42 46.1 +0.1**
	comp=Z,68nm,0.6s					
UZB				*i* sP	**sP**	**04 43 18.1 -3.3**
UZB				*i* S	**S**	**04 49 05.3 -1.2**
SMDO	**Samad**	**43.42 301**		P	P	04 42 52.0 +5.2
	SNR=30					
SATY	**Saty**	**43.50 339⇑**		*i*P	**P**	**04 42 47.4 +0.3**
	comp=Z,358nm,0.9s					
SATY				*i* S	**S**	**04 49 07.9 -0.5**
BIDO	**Bidbid**	**43.53 301**		P	**P**	**04 42 50.0 +2.5**
	SNR=158					
ZHN	**Zhinishke**	**43.59 339⇑**		*i*P	**P**	**04 42 47.8 +0.1**
	comp=Z,100nm,1.2s					
ZHN				*i* sP	**sP**	**04 43 19.7 -3.5**
ZHN				*i* S	**S**	**04 49 08.0 -1.6**
ULHL	**Ulahol**	**43.62 337**		P	**P**	**04 42 48.1 -0.1**
	SNR=119					
KPKS	**Kokpek**	**43.76 340⇑**		*i*P	**P**	**04 42 49.1 -0.1**
	comp=Z,160nm,0.9s					
KPKS				*i* sP	**sP**	**04 43 21.0 -3.5**
KPKS				*i* S	**S**	**04 49 11.0 -1.1**
KZA	**Kyzart**	**43.88 336**		P	**P**	**04 42 50.7 +0.3**
	SNR=108					
ASAR	**Alice Springs**	**43.94 129**		P	**P**	**04 42 49.9 -0.9**
	comp=Z,72nm,0.6s,baz=298,slow=7.7,SNR=433					
ASAR				ScP	**ScP**	**04 48 18.0 +0.2**
	comp=Z,28nm,0.7s,baz=309,slow=3.8,SNR=8.4					
ASAR				S	**S**	**04 49 09.8 -5.3**
	comp=Z,50nm,0.9s,baz=295,slow=13,SNR=16					
ASAR				LR	LR	05 03 23.4
	comp=Z,3μm,19.5s,baz=308,slow=39					
ASAR				PKPPKP	P'P'df	05 13 59.3 -39
	comp=Z,1.4nm,1.0s,baz=154,slow=3.6,SNR=5.3					
AS31	**Alice Springs**	**43.94 129**		*e*P	**P**	**04 42 49.8 -1.0**
	comp=Z,34nm,0.9s					
KS15	**Wonju Array Si**	**43.94**	**35**	*e*P	**P**	**04 42 50.4 -0.2**
KSAR	**Wonju Array Be**	**43.94**	**35**	P	**P**	**04 42 50.3 -0.2**
KSAR				PcP	**PP**	**04 44 38.3 +3.4**
KSAR				ScP	**ScP**	**04 48 17.9 +0.5**
KSAR				pScP		04 49 00.5
KS01	**Wonju Array Si**	**43.97**	**35**	*e*P	**P**	**04 42 48.6 -2.1**
KSRS	**Korea Array**	**43.97**	**35**	P	**P**	**04 42 50.3 -0.4**
	comp=Z,195nm,0.8s,baz=225,slow=8.7,SNR=346					
KSRS				PcP	**PP**	**04 44 38.3 +3.1**
	comp=Z,26nm,0.9s,baz=248,slow=3.0,SNR=5.0					
KSRS				ScP	**ScP**	**04 48 17.9 +0.4**
	comp=Z,23nm,1.1s,baz=213,slow=4.0,SNR=10					
KSRS				pScP		04 49 00.5
	comp=Z,28nm,1.2s,baz=213,slow=4.6,SNR=6.1					
KSRS				LR	LR	05 02 42.4
	comp=Z,4μm,18.7s,baz=228,slow=38					
KSRS	**Korea Array**	**43.97**	**35**	P	**P**	**04 42 50.3 -0.4**
KSRS						04 44 38.3
KSRS				pmax	pmax	
	comp=Z,192nm,0.8s					
KSRS				MLR	MLR	
	comp=Z,4μm,18.7s					
AS01	**Alice Springs**	**43.98 129**		*e*P	**P**	**04 42 49.2 -1.8**
BSY	**Bisya**	**44.04 300**		P	**P**	**04 42 56.0 +4.3**
	SNR=35					
MDOK	**Medeo**	**44.09 338**		*i* P	**P**	**04 42 52.3 +0.5**
	comp=Z,11μm,0.7s					
MDOK				*i* sP	**sP**	**04 43 23.3 -3.9**
MDOK				*i* S	**S**	**04 49 15.8 -1.1**
AAA	**Alma-Ata**	**44.18 338**		*e*P	**P**	**04 42 53.5 +1.0**
	comp=Z,460nm,0.6s					
AAA				*e*S	**S**	**04 49 17.5 -0.6**
AAA	**Alma-Ata**	**44.18 338**		*e*P	**P**	**04 42 53.1 +0.7**
AAA				*e*S	**S**	**04 49 18.5 +0.4**
AAA				pmax	pmax	
	comp=Z,2μm,1.5s					
AAA				smax	smax	
	comp=N,8μm,5.8s					
FORT	**Forrest**	**44.21 142**		*e*P	**P**	**04 42 53.0 +0.2**
	comp=N,802nm,0.6s					
HOQ	**Hoqain**	**44.25 301**		P	**P**	**04 42 56.0 +2.7**
	SNR=48					
UCH	**Uchtor**	**44.31 335**		P	**P**	**04 42 54.3 +0.4**
	SNR=317					
TKM2	**Tokmak 2**	**44.44 337**		P	**P**	**04 42 54.9 +0.2**
	SNR=249					
KBK	**Karagaybulak**	**44.48 336**		P	**P**	**04 42 55.8 +0.8**
	SNR=385					
AML	**Almayashu**	**44.58 334**		P	**P**	**04 42 56.7 +0.7**
	SNR=95					
AAK	**Ala-Archa**	**44.66 335**		P	**P**	**04 42 58.0 +1.6**
	SNR=34					
AAK	**Ala-Archa**	**44.66 335**		*e*P	**P**	**04 42 54.4 -2.0**
	comp=N,111nm,0.6s					
AAK				*e*PcP	**PcP**	**04 44 37.2 -0.2**
AAK				*e*ScP	**ScP**	**04 48 21.2 +0.7**
AAK	**Ala-Archa**	**44.66 335**		*e*P	**P**	**04 42 54.4 -2.0**
AAK				*e*		04 44 37.2
AAK				pmax	pmax	
	comp=Z,111nm,0.6s					
FRU	**Bishkek**	**44.77 336⇑**		*i*P	**P**	**04 42 56.0 -1.1**
FRU				*e*PPP	PPP	04 45 28.0
FRU				*e*S	**S**	**04 49 26.0 -0.6**
FRU				*i* ′SS	**sS**	**04 50 13.0 +5.3**
FRU				*i* SS	**ScS**	**04 52 46.0 +1.5**
FRU				*e*SSS	SSS	04 53 43.0
FRU				pmax	pmax	
	comp=Z,630nm,2.2s					
FRU				smax	smax	
	comp=Z,1μm,2.0s					
ARQ	**Araqi**	**44.84 300**		P	**P**	**04 43 02.0 +4.1**
	SNR=36					
CHMS	**Chumysh**	**44.85 336**		P	**P**	**04 42 57.9 +0.2**
	SNR=11					
EKS2	**Erkin-Say**	**44.98 335**		P	**P**	**04 42 59.6 +0.7**
	SNR=149					
KUU	**Kurty**	**44.98 338⇑**		*i*P	**P**	**04 42 58.4 -0.4**
	comp=Z,257nm,0.9s					
KUU				*i* sP	**sP**	**04 43 30.0 -4.2**
KUU				*i* S	**S**	**04 49 27.7 -1.9**
SNY	**Shenyang**	**44.99**	**27**	⇑P	**P**	**04 42 58.3 -0.4**
SNY				PP	**PP**	**04 44 44.9 -0.9**
SNY				S	**S**	**04 49 27.0 -2.6**
SNY				SS	**ScS**	**04 52 45.0 -0.7**
SNY				pmax	pmax	
	comp=Z,98nm,1.3s					
SNY				pmax	pmax	
	comp=Z,4μm,6.4s					
SNY				LR	LR	
	comp=Z,6μm,19.0s					
SNY				LR	LR	
	comp=Z,4μm,14.7s					
SNY				LR	LR	
	comp=Z,6μm,18.6s					
SOHO	**SOHO**	**45.11 302**		*i* P	**P**	**04 43 00.9 +0.9**
	SNR=73					
USP	**Ospenovka**	**45.17 336**		P	**P**	**04 43 00.5 +0.2**
	SNR=196					
RBK	**Rabkut**	**45.22 292**		P	P	04 43 06.1 +5.0
	SNR=9.0					
SONM	**Songino Array**	**45.26**	**8**	P	**P**	**04 43 01.1 +0.1**
	comp=Z,151nm,0.5s,baz=192,slow=9.4,SNR=223					
SONM				PcP	**PcP**	**04 44 39.8 +0.5**
	comp=Z,59nm,0.7s,baz=204,slow=4.0,SNR=9.0					
SONM				ScP	**ScP**	**04 48 23.0 +0.1**
	comp=Z,37nm,0.8s,baz=197,slow=3.8,SNR=8.2					
SONM				LR	LR	05 03 12.1
	comp=Z,5μm,18.9s,baz=186,slow=38					
SONM	**Songino Array**	**45.26**	**8**	P	**P**	**04 43 01.1 +0.1**
SONM						04 44 39.8
SONM				pmax	pmax	
	comp=Z,151nm,0.5s					
SONM				MLR	MLR	
	comp=Z,5μm,18.9s					
SONA1	**Songino Array**	**45.27**	**8**	*e*P	**P**	**04 42 59.8 -1.3**
ULN	**Ulaanbaatar**	**45.38**	**9**	*e*P	**P**	**04 43 01.9 -0.1**
	comp=Z,138nm,0.8s					
ULN				*e*ScP	**ScP**	**04 48 23.5 +0.1**
ULN	**Ulaanbaatar**	**45.38**	**9**	P	**P**	**04 43 02.3 +0.3**
	SNR=142					
ULN	**Ulaanbaatar**	**45.38**	**9**	*c* *i*P	**P**	**04 43 01.8 -0.2**
ULN				pmax	pmax	
	comp=Z,149nm,1.0s					
MK01	**Makanchi Array**	**45.66 345**		*e*P	**P**	**04 43 02.7 -1.4**
UOSS	**Minazif**	**45.68 302**		*e*P	**P**	**04 43 05.7 +1.1**
	comp=Z,118nm,0.9s					
UOSS	**Minazif**	**45.68 302**		*i* P	**P**	**04 43 04.9 +0.3**
	SNR=20					
MK31	**Makanchi Array**	**45.69 345**		*e*P	**P**	**04 43 03.9 -0.4**
MK31	**Makanchi Array**	**45.69 345**		*e*P	**P**	**04 43 03.9 -0.4**
MKAR	**Makanchi Array**	**45.69 345**		P	**P**	**04 43 03.9 -0.4**
	comp=Z,572nm,0.8s,baz=159,slow=6.9,SNR=1159					
MKAR				PKPPKP	P'P'df	05 14 11.5 -23
	comp=Z,1.1nm,1.0s,baz=259,slow=2.5,SNR=4.0					
MKAR	**Makanchi Array**	**45.69 345**		*e*P	**P**	**04 43 03.9 -0.4**
	comp=Z,3μm,0.9s					
MKAR				P'P'		05 14 11.5
MKAR	**Makanchi Array**	**45.69 345**		P	**P**	**04 43 03.9 -0.4**
MKAR				pmax	pmax	
	comp=Z,566nm,0.8s					
ZSN	**Zaisan**	**45.69 348⇑**		*i*P	**P**	**04 43 05.0 +0.7**
	comp=Z,109nm,0.7s					
ZSN				*i* S	**S**	**04 49 39.5 -0.3**
HATD	**Hatta, Dubai**	**45.70 302**		P	**P**	**04 43 07.0 +2.3**
	SNR=80					
HATD	**Hatta, Dubai**	**45.70 302**		*i* P	**P**	**04 43 05.7 +1.0**
	SNR=32					
WHFO	**Wadi Hawf**	**45.72 292**		P	**P**	**04 43 07.1 +2.1**
	SNR=11					
MDH	**Madha**	**45.74 303**		*i* P	**P**	**04 43 04.8 -0.2**
	SNR=22					
ALNE	**Al Ain**	**45.75 301**		*i* P	**P**	**04 43 06.6 +1.5**
	SNR=58					
MAKZ	**Makanchi**	**45.78 345**		*e*P	**P**	**04 43 04.5 -0.5**
	comp=Z,411nm,0.8s					
MAKZ	**Makanchi**	**45.78 345**		*e*P	**P**	**04 43 04.5 -0.5**
MAKZ				pmax	pmax	
	comp=Z,411nm,0.8s					
MSFE	**Esma-Masafi**	**45.88 303**		*i* P	**P**	**04 43 07.0 +0.8**
	SNR=33					
MRIV	**Mauritius Mete**	**45.91 238**		*e*P	**P**	**04 43 06.5 0.0**
	comp=Z,439nm,1.5s					
BANOM	**Banah**	**45.97 304**		P	**P**	**04 43 09.8 +2.9**
	SNR=15					
BANOM	**Banah**	**45.97 304**		*i* P	**P**	**04 43 07.6 +0.7**
	SNR=26					
ABTO	**Aybut**	**46.02 291**		P	**P**	**04 43 12.0 +4.6**
	SNR=6.7					
SHME	**Shamm**	**46.15 304**		*i* P	**P**	**04 43 09.1 +0.8**
	SNR=25					
NAZ	**Nazwa, Dubai**	**46.16 302**		P	**P**	**04 43 10.0 +1.7**
	SNR=26					
NAZ	**Nazwa, Dubai**	**46.16 302**		*i* P	**P**	**04 43 09.1 +0.8**
	SNR=27					
DZA	**Taraz**	**46.24 333**		*e*S	**S**	**04 49 46.3 -1.5**
IUG	**Iuzhnay**	**46.27 331**		*i* P	**P**	**04 43 09.5 +0.5**
	comp=Z,336nm,0.8s					
IUG				*i* S	**S**	**04 49 46.8 -1.6**
ASUD	**Al Ashush, Dub**	**46.31 302**		P	**P**	**04 43 12.0 +2.5**
	SNR=70					
ASUD	**Al Ashush, Dub**	**46.31 302**		*i* P	**P**	**04 43 11.1 +1.7**
	SNR=98					
UMQ	**Umm Al-Quwin**	**46.35 303**		*i* P	**P**	**04 43 12.9 +3.1**
	SNR=8.4					
AJN	**Ajban**	**46.58 301**		*i* P	**P**	**04 43 13.2 +1.6**
	SNR=35					
CHM	**Chimkent**	**46.61 331**		*e*P	**P**	**04 43 12.1 +0.5**
	comp=Z,95nm,0.8s					
CHM				*e*S	**S**	**04 49 52.3 -0.7**
KK31	**Karatay Array**	**46.78 332**		*e*P	**P**	**04 43 12.6 -0.3**
KK31	**Karatay Array**	**46.78 332**		*e*P	**P**	**04 43 12.6 -0.3**
KKAR	**Karatay Array**	**46.78 332**		*e*P	**P**	**04 43 12.6 -0.3**
KKAR	**Karatay Array**	**46.78 332**		*e*P	**P**	**04 43 12.6 -0.3**
BTLS	**Baital**	**46.83 337⇑**		*i*P	**P**	**04 43 12.9 -0.4**
	comp=Z,75nm,0.9s					
BTLS				*i* S	**S**	**04 49 52.6 -3.4**
BRLS	**Borolday**	**47.04 332**		*i* S	**S**	**04 49 56.2 -2.9**
MZR	**Muzera**	**47.37 299**		*i* P	**P**	**04 43 19.1 +1.3**
	SNR=80					
DGZ	**Jazzator, Alta**	**47.38 351**		*i* P	**P**	**04 43 17.9 +0.3**
DGZ				pmax	pmax	
	comp=Z,291nm,0.8s					
CN2	**Changchun**	**47.39**	**27**	⇑P	**P**	**04 43 16.8 -0.8**
CN2				*e*sP	sP	04 43 51.3 -1.9
CN2				PP	**PP**	**04 45 09.3 -0.4**
CN2				*e*S	**S**	**04 50 03.8 -0.2**
CN2				ScS	**ScS**	**04 52 57.8 -3.5**
CN2				pmax	pmax	
	comp=Z,500nm,7.0s					
CN2				LR	LR	
	comp=Z,4μm,20.0s					
CN2				LR	LR	
	comp=Z,1μm,20.0s					
CN2				LR	LR	
	comp=Z,3μm,17.0s					
ZAK	**Zakamensk**	**47.43**	**5**	*e*P	**P**	**04 43 17.2 -0.7**
ZAK				pmax	pmax	
	comp=Z,142nm,1.7s					
KNGR	**Kungurtug, Tuv**	**47.43 360**		*i* P	**P**	**04 43 18.4 +0.4**
GUMO	**Guam**	**47.55**	**74**	P	**P**	**04 43 18.5 -0.7**
	comp=Z,169nm,0.3s,baz=169,slow=4.6,SNR=27					
GUMO				LR	LR	05 03 11.1
	comp=Z,1μm,21.8s,baz=259,slow=36					
GUMO	**Guam**	**47.55**	**74**	*e*P	**P**	**04 43 18.5 -0.7**
	comp=Z,2μm,1.4s					
RER	**Riviere de l'E**	**47.76 238**		*e*P	**P**	**04 43 22.7 +1.8**
	comp=Z,812nm,0.9s					
COEN	**Coen**	**47.94 112**		*e*P	**P**	**04 43 21.2 -1.1**
	comp=Z,373nm,1.3s					
HVS	**Khovu-Aksy**	**48.10 356**	*c*	*i*P	**P**	**04 43 23.5 +0.5**
HVS				pmax	pmax	
	comp=Z,129nm,0.9s					
INU	**Inuyama**	**48.44**	**44**	*e*P	**P**	**04 43 24.7 -1.1**
	comp=Z,450nm,1.1s					
MOY	**Mondy**	**48.57**	**3**	*e*P	**P**	**04 43 26.7 0.0**
MOY				pmax	pmax	
	comp=Z,547nm,3.6s					
CBIJ	**Chichi jima**	**48.62**	**56**	*e*P	**P**	**04 43 24.9 -2.4**
	comp=Z,505nm,0.6s					
JCJ	**Chichijima**	**48.62**	**56**	P	**P**	**04 43 26.5 -0.9**
	comp=Z,414nm,0.5s,baz=278,slow=3.1,SNR=42					
JCJ				LR	LR	05 03 35.3
	comp=Z,826nm,21.0s,baz=255,slow=36					
TLY	**Talaya**	**48.75**	**5**	P	**P**	**04 43 28.5 +0.5**
	comp=Z,122nm,0.6s,baz=213,slow=6.3,SNR=107					
TLY	**Talaya**	**48.75**	**5**	*e*P	**P**	**04 43 28.5 +0.5**
	comp=Z,150nm,0.7s					
TLY	**Talaya**	**48.75**	**5**	P	**P**	**04 43 28.8 +0.8**
	SNR=118					
TLY	**Talaya**	**48.75**	**5**	*c* *i*P	**P**	**04 43 28.4 +0.5**
TLY				*e*		04 44 52.0
TLY				*e*		04 45 24.1
TLY				*e*S	**S**	**04 50 24.0 +1.0**
TLY				*e*		04 53 10.7
TLY				*e*SS	**SS**	**04 53 53.2 -1.6**
TLY				pmax	pmax	
	comp=Z,175nm,0.8s					
TLY				MLR	MLR	
	comp=Z,3μm,17.0s					
JHJ	**Hachijo jima 2**	**49.28**	**48**	P	**P**	**04 43 32.4 0.0**
	comp=Z,257nm,0.9s,baz=20,slow=21,SNR=5.7					
MSHR	**Mys Shultsa**	**49.31**	**32**	*c* *i*P	**P**	**04 43 31.9 -0.4**
IRK	**Irkutsk**	**49.36**	**5**	*e*P	**P**	**04 43 32.3 -0.3**
IRK				*e*S	**S**	**04 50 32.7 +1.2**
IRK				*e*		04 53 14.6
IRK				pmax	pmax	
	comp=Z,816nm,2.2s					
MUKL	**Al Mukalla**	**49.52 286**		*e*P	**P**	**04 43 35.0 +0.6**
MANU	**Manus Island**	**49.69**	**95**	*e*P	**P**	**04 43 36.0 +0.2**
	comp=Z,2μm,1.4s					
HIA	**Hailar**	**49.72**	**19**	*e*P	**P**	**04 43 34.7 -0.7**
	comp=Z,276nm,0.6s					
HIA				*e*ScP	**ScP**	**04 48 42.1 +0.6**
HIA	**Hailar**	**49.72**	**19**	*e*P	**P**	**04 43 34.7 -0.7**
HIA				pmax	pmax	
	comp=Z,276nm,0.6s					
MAJO	**Matsushiro**	**49.89**	**43**	*e*P	**P**	**04 43 36.0 -0.9**
	comp=Z,451nm,1.3s					
MAJO				*e*PcP	**PcP**	**04 44 57.1 +1.1**
MAJO				*e*ScP	**ScP**	**04 48 43.8 +1.4**
MAJO	**Matsushiro**	**49.89**	**43**	*c* *i*P	**P**	**04 43 35.9 -1.0**
MAJO				pmax	pmax	
	comp=Z,200nm,1.1s					
MAT	**Matsushiro**	**49.89**	**43**	P	**P**	**04 43 36.0 -0.9**
MAT				S	**S**	**04 50 39.6 +0.1**
MJB9	**Matsu-Tunnel**	**49.89**	**43**	*e*P	**P**	**04 43 36.1 -0.8**
	comp=Z,460nm,1.3s					
MJAR	**Matsushiro Arr**	**49.89**	**43**	P	**P**	**04

MDJ LR LR
comp=Z,4μm,19.1s
MDJ LR LR
comp=Z,6μm,20.7s
MDJ Mudanjiang 49.96 29 *e*P **P 04 43 37.5 +0.2**
comp=Z,137nm,0.6s
MDJ *e*ScP **ScP 04 48 43.1 +0.5**
KURBB Kurchatov Arra 50.20 344 P **P 04 43 39.3 +0.4**
comp=Z,590nm,0.6s,baz=162,slow=7.1,SNR=2083
KURBB PcP **PcP 04 44 57.8 +1.1**
comp=Z,51nm,0.6s,baz=158,slow=3.2,SNR=3.5
KURBB ScP **ScP 04 48 44.4 +1.0**
comp=Z,8.0nm,0.6s,baz=158,slow=4.0,SNR=4.7
KURBB S **S 04 50 37.0 -6.2**
comp=Z,12nm,0.9s,baz=155,slow=14,SNR=5.5
KURBB PKPPKP P'P'df 05 14 15.7 -12
comp=Z,0.9nm,0.8s,baz=293,slow=3.5,SNR=4.9
KURBB P4KPbc 05 21 11.1
comp=Z,1.0nm,0.5s,baz=163,slow=3.4,SNR=12
KURK Kurchatov 50.26 344 *e*P **P 04 43 39.5 +0.1**
comp=Z,506nm,0.8s
KURK PcP **PcP 04 44 57.8 +0.9**
KURK *e*ScP **ScP 04 48 43.4 -0.3**
KURK *e*S **S 04 50 39.2 -4.8**
KURK P'P' 05 14 15.7
KURK *e* 05 21 11.1
KURK Kurchatov 50.26 344 P **P 04 43 39.7 +0.3**
SNR=271
KURK Kurchatov 50.26 344*c i*P **P 04 43 39.2 -0.1**
KURK pmax pmax
comp=Z,365nm,0.8s
GEYT Alibeck 50.31 319 P **P 04 43 41.2 +1.1**
comp=Z,356nm,0.6s,baz=126,slow=7.5,SNR=73
GYA0B ALIBECK ARRAY 50.31 319 *e*P **P 04 43 40.7 +0.6**
comp=Z,651nm,0.7s
GYA0B *e*S **S 04 50 48.7 +3.4**
PMG Port Moresby 50.59 105 LR LR 05 08 38.2
comp=Z,1μm,20.0s,baz=270,slow=40
PMG Port Moresby 50.59 105 *e*P **P 04 43 42.3 -0.2**
comp=Z,2μm,0.8s
PMG *e*ScP **ScP 04 48 47.6 +1.7**
PMG Port Moresby 50.59 105 *e*P **P 04 43 42.3 -0.2**
PMG pmax pmax
comp=Z,2μm,0.8s
BBOO Buckleboo 50.70 138 *e*P **P 04 43 42.5 -0.6**
comp=Z,349nm,1.1s
BBOO *e*S **S 04 50 49.7 -1.1**
USRK Ussuriysk Ar. 50.87 31 P **P 04 43 44.1 0.0**
comp=Z,103nm,0.5s,baz=236,slow=8.2,SNR=192
USRK LR LR 05 06 24.1
comp=Z,5μm,20.5s,baz=208,slow=37
BRZS Berezniki 51.47 339⇑*i*P **P 04 43 48.6 0.0**
comp=Z,292nm,1.2s
BRZS *i* sP **sP 04 44 20.2 -4.2**
BRZS *i* S **S 04 50 59.6 -1.3**
ZAA0 Zalesovo Array 51.91 350 *e*P **P 04 43 51.6 -0.1**
comp=Z,798nm,0.5s
ZALV Zalesovo Beam 51.91 350 P **P 04 43 51.6 0.0**
comp=Z,906nm,0.5s,baz=175,slow=7.0,SNR=3200
ZALV S **S 04 51 06.1 -0.5**
comp=Z,47nm,0.8s,baz=172,slow=12,SNR=14
ZALV ScS **ScS 04 53 29.4 -2.2**
comp=Z,47nm,0.9s,baz=167,slow=7.3,SNR=9.1
ZALV LR LR 05 10 19.8
comp=Z,1μm,19.6s,baz=190,slow=41
ZALV Zalesovo Beam 51.91 350 *e*P **P 04 43 50.6 -1.1**
ZALV S **S 04 51 06.1 -0.5**
ZALV ScS **ScS 04 53 29.4 -2.2**
CTA Charters Tower 52.69 118 ScP **ScP 04 48 56.4 +1.5**
comp=Z,22nm,0.9s,baz=301,slow=8.5,SNR=4.6
CTA S **S 04 51 16.1 -2.3**
comp=Z,7.4nm,1.0s,baz=58,slow=22,SNR=8.9
CTA LR LR 05 10 27.3
comp=Z,1μm,18.8s,baz=290,slow=40
CTAO Charters Tower 52.69 118 *e*P **P 04 43 58.1 0.0**
comp=Z,622nm,1.6s
CTAO *e*ScP **ScP 04 48 56.2 +1.3**
CTAO Charters Tower 52.69 118 *e*P **P 04 43 58.1 0.0**
CTAO pmax pmax
comp=Z,622nm,1.6s
BDHA Al Bayda' 52.79 285 *e*P **P 04 44 00.3 +1.1**
BDHA AMb AMB 04 44 01.3
comp=Z,113nm,0.7s
NVS Novosibirsk 53.04 349⇑*i*P **P 04 43 59.6 -0.4**
NVS *e**PP **pP 04 44 23.2 -1.4**
NVS *e* 04 45 12.4
NVS *e*S **S 04 51 17.0 -5.0**
NVS *e* 04 53 36.8
NVS pmax pmax
comp=E,171nm,0.6s
NVS pmax pmax
comp=Z,280nm,0.6s
NVS pmax pmax
comp=N,212nm,0.8s
NVS smax smax
comp=N,486nm,1.9s
NVS smax smax
comp=E,658nm,1.8s
LBOS 53.08 285 *e*P **P 04 44 02.7 +1.3**
LBOS AMb AMB 04 44 04.6
comp=Z,2μm,1.9s
TEY Ternei 53.89 33 *e*P **P 04 44 05.8 -0.6**
TEY *e* 05 45 10.0
TEY pmax pmax
comp=Z,220nm,1.2s
TEY pmax pmax
comp=N,80nm,1.2s
TEY pmax pmax
comp=E,70nm,1.2s
TEY MLR MLR
comp=Z,6μm,11.0s
DAMY Dhamar 53.99 286 *e*P **P 04 44 09.4 +1.4**
comp=Z,351nm,0.9s
STKA Stephens Creek 54.05 133 P **P 04 44 07.7 -0.1**
comp=Z,447nm,0.7s,baz=308,slow=7.3,SNR=659
STKA S **S 04 51 34.7 -1.8**
comp=Z,23nm,1.1s,baz=61,slow=22,SNR=6.9
STKA LR LR 05 09 13.3
comp=Z,2μm,19.6s,baz=305,slow=38
STKA Stephens Creek 54.05 133 *e*P **P 04 44 07.8 -0.1**
comp=Z,102nm,0.7s
STKA *e*S **S 04 51 35.2 -1.3**
STKA Stephens Creek 54.05 133 *e*P **P 04 44 07.8 -0.1**
STKA *e*S **S 04 51 35.2 -1.3**
STKA pmax pmax
comp=Z,102nm,0.7s
OPO Ambohidratompo 54.32 245 LR LR 05 03 06.9
comp=Z,2μm,21.9s,baz=74,slow=31
ABPO Ambohimpanom 54.42 244 *e*P **P 04 44 12.2 +1.3**
comp=Z,218nm,0.8s
ABPO Ambohimpanom 54.42 244 *e*P **P 04 44 12.2 +1.3**
ABPO pmax pmax
comp=Z,218nm,0.8s
RAYN Ar Rayn 54.56 297 *e*P **P 04 44 12.3 +0.5**
comp=Z,322nm,0.9s
RAYN *e*pP **pP 04 44 35.4 -1.0**
RAYN Ar Rayn 54.56 297 *i* P **P 04 44 12.1 +0.4**
SNR=108
RABL Rabaul 54.68 97 *e*P **P 04 44 12.1 -0.6**
comp=Z,442nm,0.9s
BVAR Borovoye Array 54.80 340 S **S 04 51 45.0 -0.9**
comp=Z,35nm,0.8s,baz=130,slow=16,SNR=18
BVAR LR LR 05 10 46.5
comp=Z,1μm,20.8s,baz=156,slow=39
BRVK Borovoye 54.87 340 *e*P **P 04 44 12.9 -0.5**
comp=Z,721nm,0.6s
BRVK *e*S **S 04 51 46.4 -0.3**
BRVK Borovoye 54.87 340 P **P 04 44 13.1 -0.2**
SNR=301
BRVK Borovoye 54.87 340*c i*P **P 04 44 12.7 -0.6**
BRVK pmax pmax
comp=Z,514nm,0.8s
ATD Arta Tunnel 55.19 282 LR LR 05 05 53.6
comp=Z,590nm,18.6s,baz=90,slow=34
ATD Arta Tunnel 55.19 282 *e*P **P 04 44 17.6 +1.2**
comp=Z,156nm,0.9s
ZEA Zeya 56.01 21*c e*P **P 04 44 22.0 +0.5**
ZEA *e* 04 45 19.0
ZEA *e* 04 46 27.0
ZEA *e* 04 47 54.0
ZEA *e*S **S 04 52 03.0 +1.0**
ZEA *e* 04 53 58.0
ZEA *e*SS **SS 04 55 41.0 -8.6**
ZEA pmax pmax
comp=E,150nm,1.0s
ZEA pmax pmax
comp=N,190nm,0.8s
ZEA pmax pmax
comp=Z,360nm,0.8s
ZEA pmax pmax
comp=Z,2μm,7.0s
ZEA pmax pmax
comp=N,2μm,6.0s
ZEA pmax pmax
comp=Z,1μm,4.0s
ZEA pmax pmax
comp=E,600nm,3.0s
ZEA pmax pmax
comp=N,1μm,5.0s
ZEA smax smax
comp=E,1μm,14.0s
ZEA smax smax
comp=N,2μm,10.0s
ZEA MLR MLR
comp=N,4μm,14.0s
ZEA MLR MLR
comp=Z,4μm,14.0s
ZEA MLR MLR
comp=E,2μm,15.0s
ERM Erimo 56.04 40 *e*P **P 04 44 21.6 -0.4**
comp=E,367nm,1.6s
ERM *e*ScP **ScP 04 49 10.1 +1.1**
ERM Erimo 56.04 40*d i*P **P 04 44 22.4 +0.5**
ERM pmax pmax
comp=Z,113nm,1.2s
BOD Bodaibo 56.12 10⇓*i*P **P 04 44 22.3 +0.1**
BOD *e*S **ScS 04 53 58.9 -2.5**
BOD pmax pmax
comp=Z,721nm,1.9s
ABKAR Akbulak array 56.28 331 *e*P **P 04 44 23.3 -0.3**
ASAJ Asahikawa 56.80 37 P **P 04 44 27.6 +0.2**
comp=Z,35nm,0.3s,baz=249,slow=13,SNR=67
ASAJ Asahikawa 56.80 37 *e*P **P 04 44 27.5 +0.2**
comp=Z,993nm,1.6s
PAF Port-aux-Franc 57.39 201 *e*P **P 04 44 33.4 +2.1**
comp=Z,942nm,1.5s
PAF Port-aux-Franc 57.39 201 *e*P **P 04 44 33.4 +2.1**
PAF pmax pmax
comp=Z,942nm,1.5s
GRNR Gornyy 57.56 28 *e*P **P 04 44 34.5 +1.9**
GRNR pmax pmax
comp=N,340nm,1.0s
GRNR pmax pmax
comp=E,160nm,1.0s
GRNR pmax pmax
comp=Z,680nm,1.0s
CLNS Chul'man 57.82 17 *e*P **P 04 44 34.7 +0.4**
CLNS *e* 04 45 23.9
CLNS *e* 04 46 43.6
CLNS *e*PPP PPP 04 48 02.8
CLNS *e*S **S 04 52 32.1 +6.3**
CLNS *e* 04 54 05.4
CLNS *e*SS **SS 04 56 13.4 -4.6**
CLNS pmax pmax
comp=Z,177nm,0.9s
CLNS pmax pmax
comp=E,81nm,0.9s
CLNS pmax pmax
comp=N,116nm,0.8s
CLNS pmax pmax
comp=Z,39nm,0.9s
CLNS pmax pmax
comp=E,21nm,0.9s
CLNS pmax pmax
comp=N,58nm,0.9s
CLNS smax smax
comp=E,1μm,13.1s
CLNS smax smax
comp=N,2μm,11.5s
CLNS MLR MLR
comp=Z,4μm,14.0s
CLNS MLR MLR
comp=E,2μm,12.0s
CLNS MLR MLR
comp=N,2μm,13.0s
AKTO Aktyubinsk 58.00 331 P **P 04 44 35.2 -0.4**
comp=N,81nm,0.6s,baz=139,slow=11,SNR=148
AKTO S **S 04 52 26.7 -1.5**
comp=N,16nm,0.8s,baz=311,slow=20,SNR=16
YSS Yuzh-Sakhalins 58.47 35⇑*i*P **P 04 44 39.3 +0.4**
YSS *e**PP **pP 04 45 05.2 +1.3**
YSS *e**SP **sP 04 45 14.1 -1.1**
YSS *e* 04 45 28.5
YSS *e* 04 46 50.4
YSS *i* S **S 04 52 32.9 -1.5**
YSS *e*PS **SPn 04 52 49.3 +4.6**
YSS *e* 04 54 17.0
YSS *e*SS **SS 04 56 29.4 +0.9**
YSS pmax pmax
comp=Z,550nm,1.4s
YSS pmax pmax
comp=N,120nm,1.5s
YSS pmax pmax
comp=E,200nm,1.5s
YSS pmax pmax
comp=Z,2μm,6.9s
YSS pmax pmax
comp=N,900nm,4.1s
YSS pmax pmax
comp=E,1μm,3.4s
YSS pmax pmax
comp=Z,1μm,7.4s
YSS smax smax
comp=N,800nm,8.2s
YSS MLR MLR
comp=N,2μm,13.0s
YSS MLR MLR
comp=E,3μm,13.0s
YSS MLR MLR
comp=Z,3μm,13.0s
EIDS Eidsvold 58.71 122 *e*P **P 04 44 41.3 +0.3**
comp=Z,396nm,0.9s
YUK Yuzh-Kuril'sk 58.77 39*d i*P P 04 44 28.4 -13
YUK *e* 04 45 27.8
YUK *e* 04 46 49.6
YUK *e*S **S 04 52 31.1 -7.3**
YUK *e* 04 54 16.7
YUK pmax pmax
comp=Z,759nm,1.3s
YUK pmax pmax
comp=E,573nm,1.0s
YUK pmax pmax
comp=N,311nm,0.8s
YUK pmax pmax
comp=E,417nm,1.9s
YUK pmax pmax
comp=Z,2μm,1.9s
YUK pmax pmax
comp=N,604nm,2.0s
YUK MLR MLR
comp=Z,1μm,17.0s
YUK MLR MLR
comp=E,618nm,18.0s
YUK MLR MLR
comp=N,738nm,16.0s
AKT Akhty 59.01 318 *e*P **P 04 44 42.8 -0.2**
AKT *e**PP **pP 04 45 06.2 -1.8**
AKT *e* 04 45 28.9
AKT *e* 04 47 00.4
AKT *e*S **S 04 52 39.7 -2.3**
AKT pmax pmax
comp=Z,266nm,1.1s
AAE Adis Abeba 59.07 279 *i* P **P 04 44 41.0 -3.1**
AAE *i* S **S 04 52 49.0 +5.1**
AAE Adis Abeba 59.07 279 *i* P **P 04 44 41.0 -3.1**
AAE *i* S **S 04 52 49.0 +5.1**
AAE Adis Abeba 59.07 279 *i* P **P 04 44 41.0 -3.1**
AAE *i* S **S 04 52 49.0 +5.1**
AAE Adis Abeba 59.07 279 *i* P **P 04 44 41.0 -3.1**
AAE *i* S **S 04 52 49.0 +5.1**
MAK Makhachkala 59.83 319 *e*P **P 04 44 44.9 -3.5**
MAK *e**PP **pP 04 45 11.7 -1.8**
MAK *e**SP **sP 04 45 22.8 -1.9**
MAK *e* 04 46 59.9
MAK *e*S **S 04 52 49.1 -3.0**
MAK *e*SS **SS 04 56 48.3 -1.7**
MAK pmax pmax
comp=Z,14nm,0.3s
CUKT Cukurca 60.24 312 *e*P **P 04 44 50.7 -0.8**
PATS Pohnpei 60.27 84 *e*P **P 04 44 52.9 +0.9**
comp=Z,619nm,1.1s
GNI Garni 60.51 315 LR LR 05 14 14.9
comp=Z,568nm,19.6s,baz=105,slow=39
GNI Garni 60.51 315 *e*P **P 04 44 54.4 +1.0**
GNI Garni 60.51 315 *e*P **P 04 44 54.0 +0.6**
comp=Z,1μm,1.7s
GNI *e*S **S 04 53 05.7 +4.3**
GNI Garni 60.51 315 P **P 04 44 55.3 +2.0**
SNR=40
GNI Garni 60.51 315 *i* P **P 04 44 54.5 +1.1**
SNR=22
GNI Garni 60.51 315*d i*P **P 04 44 54.2 +0.8**
GNI pmax pmax
comp=Z,130nm,0.8s
KUR Kuril'sk 60.61 38*c i*P **P 04 44 53.8 +0.2**
KUR *i* 04 47 11.4
KUR *i* PPP PPP 04 48 37.2
KUR *i* S **S 04 53 04.3 +2.4**
KUR pmax pmax
comp=Z,1μm,1.5s
KUR pmax pmax
comp=E,66nm,1.4s
KUR pmax pmax
comp=N,270nm,1.5s
KUR pmax pmax
comp=Z,6μm,3.9s
KUR MLR MLR
comp=Z,838nm,17.0s
KUR MLR MLR
comp=E,467nm,16.0s
KUR MLR MLR
comp=N,591nm,11.0s
TYV Tymovskoe 60.68 31 *e*P **P 04 44 55.4 +1.4**
TYV *e*S **S 04 53 07.4 +4.7**
TYV pmax pmax
comp=Z,5μm,4.4s
TYV pmax pmax
comp=Z,243nm,1.6s
TYV smax smax
comp=E,2μm,10.7s
TYV smax smax
comp=E,30nm,2.0s
CLDR Caldiran 60.71 314 *e*P **P 04 44 54.6 -0.2**
KMBO Kilima Mbogo 60.78 267 P P 04 45 10.2 +14
comp=E,88nm,0.8s,baz=67,slow=10,SNR=153
KMBO LR LR 05 06 36.6
comp=E,2μm,21.1s,baz=126,slow=31
VANB Van 60.89 313 *e*P **P 04 44 56.2 +0.3**
ARMA Armidale 61.03 127 *e*P **P 04 44 58.4 +1.4**
comp=E,474nm,1.3s
GROC Groznyy 61.06 319 *e*P **P 04 44 55.6 -1.2**
GROC *e**PP **pP 04 45 20.0 -2.0**
GROC *e**SP **sP 04 45 31.6 -1.6**
GROC *e*S **S 04 53 04.2 -3.6**
GROC *e* 04 54 37.7
GROC pmax pmax
comp=Z,321nm,1.2s
NKL Nikolayevsk 61.11 28 *i* P **P 04 44 57.0 +0.1**
NKL *e*S **S 04 53 07.0 -1.1**
NKL *i* 04 54 38.0
NKL pmax pmax
comp=Z,1μm,1.5s
NKL pmax pmax
comp=N,2μm,4.0s
NKL pmax pmax
comp=E,2μm,4.0s
NKL pmax pmax
comp=Z,4μm,10.0s
NKL smax smax
comp=E,2μm,11.0s
NKL MLR MLR
comp=N,2μm,16.0s
NKL MLR MLR
comp=E,4μm,16.0s
NKL MLR MLR
comp=Z,4μm,14.0s
CAN Canberra 61.12 133 *e*P **P 04 44 57.1 -0.3**
comp=Z,300nm,1.0s
CAN Canberra 61.12 133 *e*P **P 04 44 57.1 -0.3**
CAN pmax pmax
comp=Z,300nm,1.0s
TBLG Delisi 61.15 317 *e*P **P 04 44 58.1 +0.6**
TBLG Delisi 61.15 317 *e*P **P 04 44 57.8 +0.3**
comp=Z,777nm,1.2s
TBLG *e*S **S 04 53 14.1 +5.0**
TBLG Delisi 61.15 317 *e*P **P 04 44 57.8 +0.3**
TBLG *e*S **S 04 53 14.1 +5.0**
TBLG pmax pmax
comp=Z,777nm,1.2s
SIRT Sirnak 61.20 312 *e*P **P 04 44 58.1 +0.1**
SVE Sverdlovsk 61.29 338*d i*P **P 04 44 58.2 +0.1**
SVE *e* 04 45 38.7
SVE *e* 04 47 16.4
SVE *e*S **S 04 53 08.6 -1.7**
SVE *e* 04 54 34.2
SVE pmax pmax
comp=Z,705nm,0.8s
SVE MLR MLR
comp=Z,2μm,22.0s
AGRB Hanur-Agry 61.54 314 *e*P **P 04 44 58.1 -2.2**
ARU Arti 61.82 336 P **P 04 45 01.5 -0.1**
comp=Z,95nm,0.4s,baz=109,slow=7.2,SNR=127
ARU LR LR 05 13 41.9
comp=Z,1μm,21.0s,baz=134,slow=38
ARU Arti 61.82 336 *e*P **P 04 45 01.0 -0.6**
comp=Z,430nm,1.0s
ARU *e*S **S 04 53 15.6 -1.4**
ARU Arti 61.82 336*c i*P **P 04 45 01.1 -0.6**
ARU *PP **pP 04 45 26.2 -0.7**
ARU 04 45 39.4
ARU 04 47 15.4
ARU PPP PPP 04 48 45.6
ARU *e*S **S 04 53 16.4 -0.6**
ARU *SS **sS 04 53 54.3 -5.9**
ARU 04 54 40.8
ARU SS **SS 04 57 14.1 -6.6**
ARU SSS SSS 05 00 07.2
ARU pmax pmax
comp=Z,1μm,2.5s
ARU MLR MLR
comp=Z,2μm,19.0s
GURO Guroymak-BITLI 61.87 313 *e*P **P 04 45 03.2 +0.7**
KARS Kars 61.87 315 *e*P **P 04 45 04.2 +1.7**
AKH Akhalkalaki 61.88 316 *e*P **P 04 45 04.1 +1.5**
AKH Akhalkalaki 61.88 316⇓*i*P **P 04 45 04.1 +1.5**
AKH Akhalkalaki 61.88 316 *e*P **P 04 45 03.9 +1.3**
comp=Z,273nm,1.1s
AKH Akhalkalaki 61.88 316 *e*P **P 04 45 03.9 +1.3**
AKH pmax pmax
comp=Z,273nm,1.1s
SVAN Silvan-Diyarba 62.35 312 *e*P **P 04 45 01.8 -3.8**
SENK Senkaya-Erzuru 62.36 315 *e*P **P 04 45 06.6 +0.8**
LODK Lodwar 62.44 272 *i* P **P 04 45 08.3 +1.6**
LODK Lodwar 62.44 272 *i* P **P 04 45 08.3 +1.6**
LODK Lodwar 62.44 272 *i* P **P 04 45 08.3 +1.6**
NCK Nalchik 62.64 318 *i* P **P 04 45 07.6 +0.2**
NCK pmax pmax
comp=Z,46nm,0.8s
MAZI Mazidag 62.68 311 *e*P **P 04 45 08.5 +0.5**
HNR Honiara 63.03 102 *e*P **P 04 45 10.0 -0.5**
HNR Honiara 63.03 102 *e*P **P 04 45 10.4 -0.1**
comp=Z,2μm,1.1s
HNR Honiara 63.03 102 *e*P **P 04 45 10.4 -0.1**
HNR pmax pmax
comp=Z,2μm,1.1s
DYBB Diyarbakir 63.07 311 *e*P **P 04 45 10.6 +0.1**
NEY Neytrino 63.12 318*c i*P **P 04 45 11.9 +1.1**
NEY pmax pmax
comp=Z,5.0nm,0.7s
BCA Borcka 63.19 316 *i* P **P 04 45 11.1 0.0**
KBZ Khabaz 63.20 318 P **P 04 45 11.0 0.0**
comp=Z,107nm,0.9s,baz=121,slow=7.1,SNR=144
KBZ PKPPKP P'P'df 05 14 18.1 +8.3
comp=Z,3.7nm,1.0s,baz=281,slow=4.7,SNR=6.1
CHVG Ch'k'valeri 63.35 317 *e*P **P 04 45 14.1 +2.0**
CHVG Ch'k'valeri 63.35 317⇑*i*P **P 04 45 13.5 +1.4**
KVAR Kislovodsk Arr 63.42 318 P **P 04 45 13.1 +0.4**
comp=Z,132nm,0.9s,baz=230,slow=2.7,SNR=46
KIV Kislovodsk 63.43 318 *e*P **P 04 45 12.1 -0.7**
comp=Z,595nm,1.0s
KIV *e*S **S 04 53 36.6 -1.2**
KIV Kislovodsk 63.43 318 P **P 04 45 12.9 +0.2**
SNR=76
KIV Kislovodsk 63.43 318 *i* P **P 04 45 12.7 -0.1**
SNR=41
KIV Kislovodsk 63.43 318 *e*P **P 04 45 12.4 -0.3**
KIV *e**PP **pP 04 45 36.9 -1.1**

KIV e 04 45 45.0
KIV eS S 04 53 35.9 -1.9
KIV eSS SS 04 57 45.7 -0.8
KIV pmax pmax
comp=Z,204nm,3.9s
KIV pmax pmax
comp=Z,250nm,1.1s
YAK Yakutsk 63.50 16 P P 04 45 12.9 +0.2
comp=Z,377nm,0.4s,baz=313,slow=1.7,SNR=67
YAK Yakutsk 63.50 16 eP P 04 45 12.3 -0.4
comp=Z,3μm,1.5s
YAK Yakutsk 63.50 16 i P P 04 45 12.0 -0.7
YAK pmax pmax
comp=Z,708nm,1.2s
TAU Tasmania Unive 63.76 142 eP P 04 45 15.4 +0.7
comp=Z,215nm,1.2s
TAU Tasmania Unive 63.76 142 eP P 04 45 15.4 +0.7
TAU pmax pmax
comp=Z,215nm,1.2s
CRZF Crozet Islands 63.78 214 eP P 04 45 16.1 +1.3
comp=Z,251nm,0.7s
SVRC Sivrice-ELAZID 63.83 312 eP P 04 45 15.1 -0.5
BAYT Ayd¨–ntepe-Bay 63.87 314 eP P 04 45 17.0 +1.2
URFA Urfa 63.91 311 eP P 04 45 16.2 +0.2
ERZN Erzincan 63.91 313 eP P 04 45 15.4 -0.6
PTK Pertek 63.93 312 eP P 04 45 16.7 +0.4
ASF Jabal al Asfar 64.03 304 P P 04 45 18.3 +1.5
comp=Z,51nm,1.0s,baz=58,slow=5.0,SNR=46
ASF LR LR 05 16 52.3
comp=Z,1μm,18.1s,baz=55,slow=39
MALT Malatya 64.47 311 eP P 04 45 20.2 +0.5
GAZ Gaziantep 65.06 310 eP P 04 45 24.7 +1.2
ESPY Espiye-Giresun 65.06 314 eP P 04 45 23.9 +0.5
EIL Elat 65.12 301 LR LR 05 15 37.4
comp=Z,2μm,18.2s,baz=107,slow=38
RCY Rachaya 65.20 306 eP P 04 45 26.1 +1.5
SHBL Chebaa 65.25 305 eP P 04 45 26.2 +1.4
DARE Darende-Malaty 65.25 311 i P P 04 45 25.5 +0.7
SOC Sochi 65.28 317c i P P 04 45 23.7 -1.0
SOC e*PP pP 04 45 47.6 -2.5
SOC e*SP PcP 04 45 55.7 -0.5
SOC e 04 47 47.1
SOC ePPP PPP 04 49 20.8
SOC i S S 04 53 56.4 -4.0
SOC eSS SS 04 58 16.8 +1.6
SOC pmax pmax
comp=Z,247nm,0.7s
HWQ Hawqa 65.30 306 eP P 04 45 26.8 +1.7
KMRS Kahramanmaras 65.39 310 i P P 04 45 26.3 +0.7
MMAI Mount Meron Ar 65.45 305 P P 04 45 27.5 +1.5
comp=Z,92nm,0.8s,baz=96,slow=12,SNR=103
MMAI LR LR 05 16 58.2
comp=Z,1μm,18.9s,baz=100,slow=38
BHL Bhannes 65.45 306 eP P 04 45 27.3 +1.2
DQRL Deir Qamar 65.47 306 eP P 04 45 28.3 +2.0
YAYL Yayladag 65.61 308 eP P 04 45 28.2 +1.0
TAHT Tahtakopru-Hat 65.64 309 eP P 04 45 28.4 +1.2
RSDY Resadiye-TOKAT 65.91 313 eP P 04 45 28.9 0.0
SARI SarD1z-Kayseri 66.01 311 eP P 04 45 28.9 -0.8
CEYT Ceyhan 66.14 309 eP P 04 45 31.9 +1.5
YURE YUREGIR 66.19 309 eP P 04 45 32.9 +2.2
KOZT Kozan 66.21 310 eP P 04 45 30.8 0.0
KRTS Karatas 66.32 309 i P P 04 45 33.6 +2.1
TOKT Tokat 66.46 313 eP P 04 45 32.4 0.0
BNN Bunyan 66.56 311 i P P 04 45 33.2 0.0
NRIK Noril'sk 66.59 356 P P 04 45 32.2 -0.3
comp=Z,258nm,0.7s,baz=147,slow=5.3,SNR=144
NRIK S S 04 54 14.6 -0.8
comp=Z,49nm,1.0s,baz=252,slow=22,SNR=26
NRIK PKPPKP P'P'df 05 14 00.5 -2.1
comp=Z,2.6nm,0.5s,baz=8.3,slow=2.1,SNR=4.0
NRIK LR LR 05 17 03.5
comp=Z,2μm,21.2s,baz=166,slow=38
KVT Kavak 67.04 314 eP P 04 45 37.2 +1.1
YOZ Yozgat 67.17 312 eP P 04 45 37.2 +0.2
ANN Anapa 67.24 318 eP P 04 45 35.5 -1.7
ANN i *PP pP 04 46 02.0 -0.7
ANN e 04 48 04.9
ANN eS S 04 54 18.9 -5.2
ANN eSS SS 04 58 43.2 -2.3
ANN pmax pmax
comp=Z,88nm,1.1s
MBAR Mbarara 67.24 268 eP P 04 45 39.1 +1.1
comp=Z,160nm,1.0s
MBAR Mbarara 67.24 268 eP P 04 45 39.1 +1.1
MBAR pmax pmax
comp=Z,160nm,1.0s
CSS Mathiatis 67.56 307 eP P 04 45 39.8 +0.4
comp=Z,143nm,1.5s
CSS Mathiatis 67.56 307 P **P 04 45 40.1 +0.7**
CSS Mathiatis 67.56 307 P **P 04 45 39.9 +0.5**
MAMC Mammari 67.69 307 P **P 04 45 41.8 +1.5**
SZAC Souni 67.87 306 P **P 04 45 42.2 +0.8**
SKR Severo-Kuril's 67.98 36 eP P 04 45 43.0 +1.3
SKR e 04 46 01.4
SKR eS S 04 54 34.9 +2.2
SKR e 04 55 09.4
SKR pmax pmax
comp=Z,1μm,2.2s
SKR pmax pmax
comp=Z,8μm,2.7s
SKR MLR MLR
comp=Z,2μm,17.0s
ALFC Alefka 68.19 307 P **P 04 45 43.5 +0.1**
VORD Divnogorie 68.34 324 eP P 04 45 42.6 -1.3
VORD pmax pmax
comp=Z,90nm,0.8s
AKMC Akamas 68.38 306 P **P 04 45 44.7 +0.1**
BR131 Keskin Array S 68.44 312 eP P 04 45 44.8 -0.2
BR131 Keskin Array S 68.44 312 P **P 04 45 44.9 -0.2**
SNR=127
BRTR Keskin Array B 68.44 312 P **P 04 45 44.5 -0.5**
comp=Z,83nm,0.6s,baz=129,slow=6.6,SNR=225
BRTR S S 04 54 43.5 +4.5
comp=Z,4.7nm,1.0s,baz=113,slow=8.7,SNR=4.1
BRTR PKPPKP P'P'df 05 14 01.7 +0.1
comp=Z,0.5nm,0.3s,baz=241,slow=1.3,SNR=6.0
BRTR LR LR 05 17 24.3
comp=Z,511nm,21.2s,baz=104,slow=37
BRTR Keskin Array B 68.44 312 P **P 04 45 44.6 -0.5**
BRTR S S 04 54 43.5 +4.5
BRTR pmax pmax
comp=Z,79nm,0.6s
BRTR smax smax
comp=N,5.0nm,1.0s
BRTR MLR MLR
comp=Z,511nm,21.2s
VSR Storozhevoye 68.51 325 eP P 04 45 43.6 -1.4
VSR e 04 48 14.5
VSR eS S 04 54 32.3 -6.7
VSR pmax pmax
comp=Z,180nm,0.8s
VSR pmax pmax
comp=Z,600nm,1.8s
VSR smax smax
comp=N,2μm,2.4s
VORR Voronezh 68.67 325 eP P 04 45 47.0 +1.0
VORR pmax pmax
comp=Z,600nm,2.0s
ILGA Ilgaz 68.73 313 eP P 04 45 47.4 +0.5
comp=Z,657nm,1.3s
H11S3 WAKE ISLAND Hy 68.93 71 P **P 04 45 48.6 +0.6**
baz=246,slow=5.6,SNR=19
H11S1 WAKE ISLAND Hy 68.94 71 P **P 04 45 48.7 +0.6**
baz=246,slow=5.6,SNR=25
H11S2 WAKE ISLAND Hy 68.95 71 P **P 04 45 48.7 +0.6**
baz=246,slow=5.6,SNR=25
WAKE Wake Island 68.96 71 eP P 04 45 48.8 +0.4
comp=Z,846nm,1.2s
ANTO Ankara 69.11 312 ⇓iP P 04 45 49.2 +0.1
ANTO Ankara 69.11 312 eP P 04 45 49.2 +0.1
comp=Z,326nm,1.0s
ANTO eS S 04 54 44.8 -1.9
ANTO Ankara 69.11 312 P **P 04 45 49.5 +0.4**
SNR=52
ANTO Ankara 69.11 312 eP P 04 45 49.2 +0.1
ANTO eS S 04 54 44.8 -1.9
ANTO pmax pmax
comp=Z,326nm,1.0s
BR231 Keskin MP Arra 69.11 312 eP P 04 45 49.7 +0.5
MA2 Magadan 69.41 26 P **P 04 45 50.8 +0.4**
comp=Z,184nm,0.7s,baz=229,slow=5.7,SNR=80
MA2 LR LR 05 18 54.3
comp=Z,2μm,18.6s,baz=224,slow=38
MA2 Magadan 69.41 26 eP P 04 45 50.6 +0.2
comp=Z,3μm,1.9s
MA2 Magadan 69.41 26 i P P 04 45 50.9 +0.4
MA2 pmax pmax
comp=Z,398nm,1.2s
SIM Simferopol' 69.53 317ceP P 04 45 51.4 0.0
SIM pmax pmax
comp=Z,223nm,0.8s
CASY Casey 69.72 175 eP P 04 45 52.7 +0.5
comp=Z,144nm,1.0s
PEA0B Petropavlovsk- 69.85 34 eP P 04 45 53.4 +0.1
comp=Z,988nm,1.6s
PETK Petropavlovsk- 69.85 34 P **P 04 45 53.2 0.0**
comp=Z,87nm,0.8s,baz=191,slow=3.1,SNR=102
PETK PKPPKP **P'P'df 05 13 58.0 -0.1**
comp=Z,11nm,1.0s,baz=74,slow=11,SNR=8.1
PETK LR LR 05 17 06.5
comp=Z,1μm,21.8s,baz=242,slow=36
PETK Petropavlovsk- 69.85 34 eP P 04 45 52.4 -0.9
PETK P'P' 05 13 58.0
PRGR Permogore 70.28 336⇑iP P 04 45 55.3 -0.4
PRGR e 04 46 17.7
PRGR e 04 48 37.1
PRGR i S S 04 54 56.0 -3.4
PRGR pmax pmax
comp=Z,1μm,0.7s
PET Petropavlovsk 70.35 34 eP P 04 45 56.5 +0.3
comp=Z,2μm,1.4s
PET Petropavlovsk 70.35 34α iP P 04 45 56.4 +0.1
PET e*PP pP 04 46 24.2 +2.2
PET i S S 04 55 00.9 +0.4
PET e*SS SKSac 04 55 47.9 -0.5
PET pmax pmax
comp=Z,817nm,0.5s
PET pmax pmax
comp=Z,3μm,17.2s
PET pmax pmax
comp=Z,4μm,16.2s
PET MLR MLR
comp=Z,2μm,18.0s
PET MLR MLR
comp=Z,2μm,15.0s
ISP Isparta 70.38 309⇓iP P 04 45 56.7 -0.3
ISP Isparta 70.38 309 eP P 04 45 57.1 +0.1
comp=Z,432nm,1.3s
ISP eS S 04 55 03.2 +1.5
ISP Isparta 70.38 309 P **P 04 45 55.6 -1.4**
ISP Isparta 70.38 309c iP P 04 45 57.3 +0.3
ISP pmax pmax
comp=Z,53nm,1.1s
KSL Kastellorizon 70.79 307 P **P 04 45 58.2 -1.1**
KSL Kastellorizon 70.79 307 P **P 04 45 58.2 -1.1**
MOS Moscow 71.17 329α iP P 04 46 00.4 -0.8
MOS e 04 46 21.9
MOS e*PP pP 04 46 26.1 -0.9
MOS i *SP sP 04 46 37.9 -0.2
MOS i S S 04 55 03.8 -6.1
MOS i *SS pS 04 55 43.8 +3.0
MOS i 04 55 52.6
MOS pmax pmax
comp=Z,800nm,0.8s
MOS pmax pmax
comp=Z,695nm,0.8s
MOS smax smax
comp=N,9μm,4.6s
MOS smax smax
comp=E,3μm,4.0s
MOS MLR MLR
comp=E,2μm,23.0s
MOS MLR MLR
comp=Z,2μm,23.0s
FETY Fethiye 71.28 308 P **P 04 46 00.8 -1.5**
FETY Fethiye 71.28 308 P **P 04 46 00.8 -1.5**
TIXI Tiksi 71.30 10 P **P 04 46 00.9 -0.8**
comp=Z,174nm,0.6s,baz=225,slow=3.5,SNR=250
TIXI LR LR 05 19 59.4
comp=Z,2μm,19.4s,baz=222,slow=38
TIXI Tiksi 71.30 10 eP P 04 46 00.8 -0.8
comp=Z,3μm,2.0s
TIXI eS S 04 55 11.1 +0.2
TIXI Tiksi 71.30 10c iP P 04 46 00.6 -1.1
TIXI pmax pmax
comp=Z,354nm,1.3s
LSZ Lusaka 71.31 253 eP P 04 46 03.6 +0.6
comp=Z,155nm,0.8s
LSZ Lusaka 71.31 253 P **P 04 46 04.0 +1.0**
SNR=29
LSZ Lusaka 71.31 253 eP P 04 46 03.6 +0.6
LSZ pmax pmax
comp=Z,155nm,0.8s
DZM Mont Dzumac 71.36 114 LR LR 05 21 16.8
comp=Z,1μm,18.1s,baz=287,slow=39
DZM Mont Dzumac 71.36 114 eP P 04 46 03.4 +0.2
comp=Z,558nm,1.2s
DZM eS S 04 55 14.4 +0.8
comp=Z,2μm,23.9s
DZM eSS SS 04 59 47.7 -2.5
comp=Z,3μm,26.2s
DZM eLR LR 05 08 03.3
comp=Z,6μm,31.1s
DZM Mont Dzumac 71.36 114 eP P 04 46 03.7 +0.5
comp=Z,405nm,1.3s
OBN Obninsk 71.47 328 P **P 04 46 02.4 -0.6**
comp=Z,560nm,0.8s,baz=89,slow=4.5,SNR=46
OBN Obninsk 71.47 328 eP P 04 46 02.3 -0.7
comp=Z,3μm,1.6s
OBN Obninsk 71.47 328c iP P 04 46 02.4 -0.6
OBN e 04 46 19.4
OBN e*PP pP 04 46 28.7 -0.2
OBN e*SP sP 04 46 38.8 -1.1
OBN e 04 48 41.4
OBN ePPP PPP 04 50 23.4
OBN i S S 04 55 08.2 -5.2
BLWY Bulawayo 71.71 248 i P P 04 46 05.9 +0.6
BLWY Bulawayo 71.71 248 i P P 04 46 05.9 +0.6
SEY Seymchan 71.84 23 P **P 04 46 05.4 +0.3**
comp=Z,111nm,0.4s,baz=237,slow=7.2,SNR=321
SEY Seymchan 71.84 23c iP P 04 46 05.2 +0.1
ARG Arkhangelos 71.96 307 P **P 04 46 06.6 +0.2**
ARG Arkhangelos 71.96 307 P **P 04 46 06.6 +0.2**
ARG Arkhangelos 71.96 307 P **P 04 46 06.6 +0.2**
MANT Manisa 72.03 309 eP P 04 46 07.9 +0.9
comp=Z,682nm,1.1s
KLMR Klimovskoe 72.45 334 eP P 04 46 07.5 -1.2
KLMR e 04 48 50.6
KLMR eS S 04 55 22.2 -2.2
KLMR pmax pmax
comp=Z,444nm,1.2s
KLMR Klimovskoe 72.45 334 eP P 04 46 07.6 -1.2
KLMR AMP 04 46 15.7
comp=Z,444nm,1.2s
KLMR ePP PP 04 48 50.7 -0.4
KLMR eS S 04 55 22.2 -2.2
KLMR LQ LQ 05 11 29.0
KLMR LR LR 05 17 51.3
KARP Karpathos 72.63 306 eP P 04 46 11.0 +0.6
comp=Z,268nm,0.8s
KARP eS S 04 55 30.7 +3.2
KARP Karpathos 72.63 306 P **P 04 46 10.7 +0.3**
BODT Bodrum 72.75 308 P **P 04 46 09.5 -1.6**
BODT Bodrum 72.75 308 P **P 04 46 09.5 -1.6**
EFOR EFORIE 73.10 315⇑iP P 04 46 14.5 +1.6
TLCR 73.22 316⇓iP P 04 46 13.9 +0.3
TLCR 73.22 316 P **P 04 46 17.6 +4.0**
SMG Samos 73.23 308 P **P 04 46 14.1 +0.2**
SMG Samos 73.23 308 P **P 04 46 14.1 +0.2**
ZKR Zakros 73.33 306 P **P 04 46 15.1 +0.6**
ZKR Zakros 73.33 306 P **P 04 46 15.1 +0.6**
TIRR Tirgusor 73.33 316⇑iP P 04 46 14.4 +0.1
TIRR Tirgusor 73.33 316⇓iP S 04 55 32.8 -2.3
TIRR Tirgusor 73.33 316 eP P 04 46 13.6 -0.7
comp=Z,295nm,1.0s
TIRR Tirgusor 73.33 316 eP P 04 46 13.6 -0.7
TIRR pmax pmax
comp=Z,295nm,1.0s
CVDA Cernavoda 73.57 315⇓iP P 04 46 16.9 +1.2
TLB Topalu 73.62 316⇓iP P 04 46 16.1 0.0
TLB Topalu 73.62 316⇑iP S 04 55 36.8 -1.5
TLB Topalu 73.62 316 P **P 04 46 16.0 0.0**
KIS Kishinev 73.63 318⇑iP P 04 46 15.0 -1.0
comp=Z,400nm,1.8s
KIS i pP pP 04 46 40.0 -2.0
KIS Kishinev 73.63 318 i PS 04 56 54.0
KIS LRM MLR 05 21 34.0
comp=Z,1μm,15.0s
KIS Kishinev 73.63 318⇓iP P 04 46 16.1 +0.1
KIS Kishinev 73.63 318α iP P 04 46 15.0 -1.0
KIS i *PP pP 04 46 40.0 -2.0
KIS i S SKiKP 04 55 32.0 -4.2
KIS i *SS pS 04 56 10.0 +0.2
KIS pmax pmax
comp=Z,400nm,1.8s
KIS pmax pmax
comp=Z,900nm,7.0s
KIS smax smax
comp=N,5μm,10.0s
KIS MLR MLR
comp=Z,1μm,15.0s
KIS MLR MLR
comp=Z,1μm,16.0s
CFR Carcaliu 73.68 316⇑iP P 04 46 16.4 0.0
CFR Carcaliu 73.68 316 P **P 04 46 16.4 0.0**
ICOR Ion Corvin 73.69 315⇑iP P 04 46 17.5 +1.1
HARR Harsova 73.72 316⇑iP P 04 46 17.0 +0.4
HARR Harsova 73.72 316 P **P 04 46 17.0 +0.4**
AMGA Amorgos Island 73.83 307 P **P 04 46 17.0 -0.5**
NPS Neapolis 73.84 306 P **P 04 46 18.2 +0.7**
NPS Neapolis 73.84 306 P **P 04 46 18.2 +0.7**
PRK Paraskevi 73.92 310 P **P 04 46 18.4 +0.5**
PRK Paraskevi 73.92 310 P **P 04 46 18.4 +0.5**
LAST Lasithi 73.93 306 P **P 04 46 18.3 +0.1**
LAST Lasithi 73.93 306 P **P 04 46 18.3 +0.1**
CHOS Chios island 73.94 309 P **P 04 46 18.8 +0.6**
CHOS Chios island 73.94 309 P **P 04 46 18.8 +0.6**
SANT Santorini 74.11 307⇑iP P 04 46 18.7 -0.5
SANT Santorini 74.11 307 eP P 04 46 18.7 -0.5
comp=Z,312nm,1.0s
AMRR Amara 74.12 316⇑iP P 04 46 20.8 +1.9
APE Apeiranthos 74.16 308⇑iP P 04 46 18.3 -1.1
APE Apeiranthos 74.16 308 P **P 04 46 17.0 -2.4**
APE Apeiranthos 74.16 308 P **P 04 46 17.0 -2.4**
APE Apeiranthos 74.16 308 i P P 04 46 18.3 -1.1
APE pmax pmax
comp=Z,75nm,1.1s
THR6 Thira Island, 74.16 307 P **P 04 46 19.1 -0.3**
THR6 Thira Island, 74.16 307 P **P 04 46 19.1 -0.3**
THR3 Thira Island, 74.17 307 P **P 04 46 18.9 -0.5**
THR3 Thira Island, 74.17 307 P **P 04 46 18.9 -0.5**
SORM Soroca 74.20 319⇓iP P 04 46 19.3 0.0
SORM Soroca 74.20 319 P **P 04 46 19.3 0.0**
SIGR SIGRI 74.23 310 P **P 04 46 19.5 -0.2**
SIGR SIGRI 74.23 310 P **P 04 46 19.5 -0.2**
JMB Yambol 74.24 313 P **P 04 46 20.9 +1.2**
AKASG Malin Array Be 74.28 322 P **P 04 46 18.9 -0.8**
comp=Z,40nm,0.6s,baz=88,slow=5.2,SNR=144
AKASG PP PP 04 49 07.2 +0.3
comp=Z,41nm,0.9s,baz=88,slow=6.6,SNR=4.7
AKASG S S 04 55 41.7 -3.8
comp=Z,6.2nm,0.9s,baz=96,slow=12,SNR=7.5
AKASG PKPPKP **P'P'df 05 13 53.9 +3.3**
comp=Z,0.6nm,0.5s,baz=268,slow=4.8,SNR=4.1
AKASG LR LR 05 21 08.5
comp=Z,670nm,20.4s,baz=90,slow=37
AKBB Malin Array Si 74.28 322 eP P 04 46 19.0 -0.7
comp=Z,134nm,0.9s
KIEV Kiev 74.29 322 eP P 04 46 18.9 -0.8
comp=Z,130nm,0.9s
KIEV eS S 04 55 41.4 -4.1
KIEV Kiev 74.29 322 i P P 04 46 18.7 -1.0
SNR=18
KIEV Kiev 74.29 322c iP P 04 46 18.6 -1.2
KIEV pmax pmax
comp=Z,43nm,0.7s
IOSP Ios island 74.30 307 P **P 04 46 19.6 -0.6**
AK11 Malin Array Si 74.31 322 eP P 04 46 19.9 -1.0
AK11 eS S 04 55 51.6 +5.8
GADA Gvkgeada 74.36 311 P **P 04 46 20.5 +0.1**
GADA Gvkgeada 74.36 311 P **P 04 46 20.5 +0.1**
ALN Alexandroupoli 74.36 312 eP P 04 46 20.8 +0.3
comp=Z,248nm,1.3s
ALN eS S 04 55 48.5 +1.7
ALN Alexandroupoli 74.36 312 P **P 04 46 20.7 +0.3**
ALN Alexandroupoli 74.36 312 eP P 04 46 20.8 +0.3
ALN eS S 04 55 48.5 +1.7
ALN pmax pmax
comp=Z,248nm,1.3s
PETR Petresti 74.42 317⇑iP P 04 46 22.5 +1.9
IDI Anoyia 74.43 306 S **S 04 55 45.8 -2.1**
comp=Z,15nm,1.1s,baz=112,slow=11,SNR=3.1
IDI Anoyia 74.43 306⇑iP P 04 46 21.1 +0.1
IDI Anoyia 74.43 306⇑iP S 04 55 55.8 +7.9
IDI Anoyia 74.43 306 eP P 04 46 21.2 +0.1
comp=Z,137nm,0.7s
IDI S S 04 55 45.8 -2.1
SIVA Sivas 74.46 305 P **P 04 46 21.3 +0.2**
SIVA Sivas 74.46 305 P **P 04 46 21.3 +0.2**
IAS Iasi 74.51 318⇑iP P 04 46 23.5 +2.4
TMCR Tamitsa 74.55 337 eP P 04 46 21.3 +0.3
TMCR pmax pmax
comp=Z,675nm,0.7s
MAW Mawson 74.62 193 P **P 04 46 22.4 +1.1**
comp=Z,34nm,0.6s,baz=38,slow=5.0,SNR=67
MAW LR LR 05 12 23.4
comp=Z,2μm,21.9s,baz=36,slow=30
MAW Mawson 74.62 193 eP P 04 46 22.3 +1.1
comp=Z,22nm,1.3s
SMTH Samothraki Isl 74.68 311 P **P 04 46 22.3 0.0**
SMTH Samothraki Isl 74.68 311 P **P 04 46 22.3 0.0**
ISR Istrita 74.77 316⇑iP P 04 46 24.7 +1.9
RDO Rodhopi 74.78 312 P **P 04 46 22.6 -0.2**
RDO Rodhopi 74.78 312 P **P 04 46 22.6 -0.2**
VRI Vrincioaia 74.80 317⇓iP P 04 46 23.8 +0.9
VRI Vrincioaia 74.80 317⇑iP S 04 55 51.9 +0.4
VRI Vrincioaia 74.80 317 P **P 04 46 23.7 +0.9**
PLOR Plostina 74.84 317⇓iP P 04 46 24.5 +1.3
PLOR Plostina 74.84 317⇓iP S 04 55 51.8 -0.3
PLOR Plostina 74.84 317 P **P 04 46 24.4 +1.3**
LIA Limnos Island 74.85 310 P **P 04 46 23.1 -0.2**
LIA Limnos Island 74.85 310 P **P 04 46 23.1 -0.2**
SZH Strazhica 74.86 314 P **P 04 46 23.8 +0.5**
SULR 74.89 315⇑iP P 04 46 25.0 +1.6
KDZ Kurdzhali 74.96 312 P **P 04 46 24.6 +0.7**
TARA Tarawa 74.96 89 eP P 04 46 25.7 +1.3
TESR Tescani 74.98 317⇓iP P 04 46 24.0 +0.1
TESR Tescani 74.98 317⇓iP S 04 55 54.3 +0.8
BUC1 Bucharest 74.99 315⇓iP P 04 46 25.8 +1.8
BUC1 Bucharest 74.99 315 P **P 04 46 25.7 +1.8**
SGRR Singureni 75.00 315⇑iP P 04 46 25.0 +1.0
GVD Gavdhos 75.02 305 P **P 04 46 24.8 +0.4**
GVD Gavdhos 75.02 305 P **P 04 46 24.8 +0.4**
PLAR PLOIESTI 75.09 316⇓iP P 04 46 26.5 +1.9
MLR Muntele Rosu 75.26 316 S **S 04 55 55.5 -1.4**
comp=Z,2.8nm,0.8s,baz=147,slow=22,SNR=15
MLR LR LR 05 27 23.4
comp=Z,214nm,18.4s,baz=100,slow=42
MLR Muntele Rosu 75.26 316⇑iP P 04 46 26.2 +0.5
MLR Muntele Rosu 75.26 316⇑iP S 04 55 55.0 -1.9
MLR Muntele Rosu 75.26 316 eP P 04 46 26.2 +0.5
comp=Z,662nm,1.3s
MLR S S 04 55 55.5 -1.4
MLR Muntele Rosu 75.26 316 eP P 04 46 26.2 +0.5
MLR S S 04 55 55.5 -1.4
MLR pmax pmax
comp=Z,662nm,1.3s
LBTB Lobatse 75.32 243 eP P 04 46 27.2 +0.8
comp=Z,301nm,0.8s
LBTB Lobatse 75.32 243 eP P 04 46 27.2 +0.8
LBTB pmax pmax
comp=Z,301nm,0.8s
ZIMR 75.33 314⇑iP P 04 46 27.0 +1.1
ZIMR 75.33 314 P **P 04 46 27.5 +1.6**
PRAR RASCA 75.43 318⇑iP P 04 46 26.8 +0.3
RZN Rozhen 75.48 312 P **P 04 46 27.4 +0.3**
PTL Penteli 75.60 308 P **P 04 46 26.8 -0.9**
PTL Penteli 75.60 308 P **P 04 46 26.8 -0.9**
VLY Voula,Athens 75.63 308 P **P 04 46 27.1 -0.7**
VLY Voula,Athens 75.63 308 P **P 04 46 27.1 -0.7**
DOPR Dopca 75.73 317⇑iP P 04 46 29.0 +0.8
HUMR Humele 75.76 315⇑iP P 04 46 29.1 +0.7
ANKY Antikythira Is 75.78 306 P **P 04 46 29.0 +0.3**
ANKY Antikythira Is 75.78 306 P **P 04 46 29.0 +0.3**
MTUR Matau 75.82 316⇓iP P 04 46 29.8 +0.9
GOLR 75.83 315⇓iP P 04 46 30.3 +1.5
OUR Ouranopolis 75.83 311 P **P 04 46 28.8 0.0**
OUR Ouranopolis 75.83 311 P **P 04 46 28.8 0.0**
VOIR 75.87 316⇑iP P 04 46 29.2 +0.1
VOIR 75.87 316⇓iP S 04 56 01.1 -2.4

VOIR		**75.87 316**	P	**P**	**04 46 29.2**	**+0.1**
PAIG	**Paliouri**	**76.00 310**	P	**P**	**04 46 28.4**	**-1.4**
PAIG	**Paliouri**	**76.00 310**	P	**P**	**04 46 28.4**	**-1.4**
PAIG	**Paliouri**	**76.00 310**	P	**P**	**04 46 28.4**	**-1.4**
DID	**Didima**	**76.03 308**	P	**P**	**04 46 28.4**	**-1.7**
DID	**Didima**	**76.03 308**	P	**P**	**04 46 28.4**	**-1.7**
KYTH	**Kithira**	**76.03 306**	P	**P**	**04 46 29.9**	**-0.3**
KYTH	**Kithira**	**76.03 306**	P	**P**	**04 46 29.9**	**-0.3**
MICGM	**Minsk**	**76.04 326**⇑	*e*P	**P**	**04 46 29.0**	**-0.8**
MICGM			PM		04 46 31.0	
	comp=Z,0.5nm,1.0s					
MICGM			*e*pP	**pP**	**04 47 00.0**	**+4.1**
MICGM			*e*PP	PP	04 48 36.0	-46
MICGM			*e*PPP	PPP	04 51 17.0	
MICGM			*e*S	**S**	**04 56 01.0**	**-3.8**
MICGM			*e*sS	**SKSac**	**04 56 30.0**	**-1.2**
MICGM			*e*SS	SS	05 00 44.0	-16
MICGM			*e*SSS	SSS	05 03 40.0	
MICGM			*e*LR	LR	05 14 24.0	
MNK	**Minsk**	**76.04 326**⇑	*e*P	**P**	**04 46 29.0**	**-0.8**
MNK			*e**PP		05 47 00.0	
MNK			*e*PPP	PPP	05 51 17.0	
MNK			*e**SS		05 56 30.0	
MNK			pmax	pmax		
	comp=Z,8μm,0.5s					
VILL	**Villia**	**76.05 308**	P	**P**	**04 46 28.9**	**-1.4**
NVR	**Nevrokopi**	**76.06 312**	P	**P**	**04 46 29.7**	**-0.5**
NVR	**Nevrokopi**	**76.06 312**	P	**P**	**04 46 29.7**	**-0.5**
KTHR	**Kythira**	**76.07 306**	P	**P**	**04 46 29.8**	**-0.5**
KRND	**KRANIDI**	**76.08 308**	P	**P**	**04 46 29.0**	**-1.4**
ARR	**Arges**	**76.15 316**⇑	*i*P	**P**	**04 46 31.0**	**+0.3**
ARR	**Arges**	**76.15 316**⇓	*i*P	**S**	**04 56 04.0**	**-2.5**
BURAR	**Bucovina Array**	**76.16 318**⇑	*i*P	**P**	**04 46 31.9**	**+1.2**
BURAR	**Bucovina Array**	**76.16 318**⇓	*i*P	**S**	**04 56 07.7**	**+1.1**
BURAR	**Bucovina Array**	**76.16 318**	P	P	04 46 36.8	+6.1
BUR04	**Bucovina Ar. S**	**76.16 318**	*e*P	**P**	**04 46 30.8**	**+0.1**
BUR08	**Bucovina Ar. S**	**76.17 318**	*e*P	**P**	**04 46 31.9**	**+1.1**
MMB	**Musomiste**	**76.20 312**	P	**P**	**04 46 31.1**	**+0.1**
SRS	**Serrai**	**76.23 312**	P	**P**	**04 46 30.5**	**-0.7**
SRS	**Serrai**	**76.23 312**	P	**P**	**04 46 30.5**	**-0.7**
SRS	**Serrai**	**76.23 312**	P	**P**	**04 46 30.5**	**-0.7**
PLG	**Polygyros**	**76.24 311**	P	**P**	**04 46 31.0**	**-0.3**
PLG	**Polygyros**	**76.24 311**	P	**P**	**04 46 31.0**	**-0.3**
PLG	**Polygyros**	**76.24 311**	P	**P**	**04 46 31.0**	**-0.3**
PUL	**Pulkovo**	**76.26 331**	*i* P	**P**	**04 46 31.4**	**+0.5**
PUL			pmax	pmax		
	comp=Z,245nm,0.8s					
BOSA	**Boshof**	**76.29 240**	P	**P**	**04 46 32.3**	**+0.4**
	comp=Z,170nm,0.8s,baz=90,slow=4.1,SNR=298					
BOSA			LR	LR	05 17 38.2	
	comp=Z,2μm,18.0s,baz=68,slow=34					
BOSA	**Boshof**	**76.29 240**	*e*P	**P**	**04 46 32.4**	**+0.4**
	comp=Z,151nm,0.8s					
LOUT	**Loutraki**	**76.29 308**	P	**P**	**04 46 30.3**	**-1.3**
XOR	**Xorichti**	**76.30 310**	P	**P**	**04 46 30.6**	**-1.0**
XOR	**Xorichti**	**76.30 310**	P	**P**	**04 46 30.6**	**-1.0**
LTK	**Loutraki**	**76.30 308**	P	**P**	**04 46 29.9**	**-1.8**
LTK	**Loutraki**	**76.30 308**	P	**P**	**04 46 29.9**	**-1.8**
LKR	**Lokris**	**76.36 309**	P	**P**	**04 46 29.9**	**-2.0**
LKR	**Lokris**	**76.36 309**	P	**P**	**04 46 29.9**	**-2.0**
SOH	**Sokhos**	**76.37 311**	P	**P**	**04 46 31.1**	**-0.9**
SOH	**Sokhos**	**76.37 311**	P	**P**	**04 46 31.1**	**-0.9**
SOH	**Sokhos**	**76.37 311**	P	**P**	**04 46 31.1**	**-0.9**
MDB	**Medias**	**76.45 317**⇓	*i*P	**P**	**04 46 34.1**	**+1.8**
HORT	**Hortiatis**	**76.53 311**	P	**P**	**04 46 32.3**	**-0.7**
HORT	**Hortiatis**	**76.53 311**	P	**P**	**04 46 32.3**	**-0.7**
ARCR	**ARCALIA**	**76.64 318**⇓	*i*P	**P**	**04 46 35.0**	**+1.7**
DYR	**Agios Nikonas**	**76.66 307**	P	**P**	**04 46 33.0**	**-0.7**
VLX	**Vlachokerasia**	**76.69 308**	P	**P**	**04 46 33.7**	**-0.3**
VLX	**Vlachokerasia**	**76.69 308**	P	**P**	**04 46 33.7**	**-0.3**
DSF	**Desfina**	**76.69 309**	P	**P**	**04 46 32.0**	**-1.9**
DSF	**Desfina**	**76.69 309**	P	**P**	**04 46 32.0**	**-1.9**
KKB	**Krupnik**	**76.71 312**	P	**P**	**04 46 33.7**	**-0.2**
VTS	**Vitosha**	**76.72 313**⇑	*i*P	**P**	**04 46 34.2**	**+0.1**
VTS	**Vitosha**	**76.72 313**⇓	*i*P	**S**	**04 56 09.2**	**-4.0**
VTS	**Vitosha**	**76.72 313**	*e*P	**P**	**04 46 34.4**	**+0.3**
	comp=Z,239nm,1.2s					
VTS	**Vitosha**	**76.72 313**	P	**P**	**04 46 34.6**	**+0.5**
VTS	**Vitosha**	**76.72 313**	P	**P**	**04 46 38.1**	**+4.0**
KNT	**Kendrikon**	**76.76 311**	P	**P**	**04 46 33.7**	**-0.4**
KNT	**Kendrikon**	**76.76 311**	P	**P**	**04 46 33.7**	**-0.4**
KNT	**Kendrikon**	**76.76 311**	P	**P**	**04 46 33.7**	**-0.4**
LOT	**Lotru**	**76.76 316**⇑	*i*P	**P**	**04 46 34.5**	**+0.3**
NACGM	**Naroch**	**76.76 326**	*e*P	**P**	**04 46 33.0**	**-0.8**
NACGM			*e*P	**P**	**04 46 33.0**	**-0.8**
NACGM			*e*pP	**pP**	**04 46 53.0**	**-6.9**
NACGM			*e*sP	**sP**	**04 47 06.0**	**-4.9**
NACGM			*e*PP	**PP**	**04 49 24.0**	**-3.7**
NACGM			*e*S	**S**	**04 56 08.0**	**-4.7**
NACGM			*e*sS	**SKKSac**	**04 56 37.0**	**-0.1**
NACGM			*e*PS	PnS	04 56 48.0	-17
NACGM			*e*SS	SS	05 00 25.0	-46
NACGM			*e*SSS	SSS	05 03 42.0	
GUR	**Goura**	**76.78 308**	P	**P**	**04 46 33.3**	**-1.2**
GUR	**Goura**	**76.78 308**	P	**P**	**04 46 33.3**	**-1.2**
IDID	**Didziasalis**	**76.88 326**	*e*P	**P**	**04 46 35.0**	**+0.5**
IDID			IAmb	IAmb	04 46 39.0	
	comp=Z,127nm,1.1s					
AGG	**Agios Georgios**	**76.92 309**	*e*P	**P**	**04 46 33.9**	**-1.2**
	comp=Z,167nm,0.7s					
AGG	**Agios Georgios**	**76.92 309**	P	**P**	**04 46 33.4**	**-1.7**
AGG	**Agios Georgios**	**76.92 309**	*e*P	**P**	**04 46 33.9**	**-1.2**
AGG			pmax	pmax		
	comp=Z,167nm,0.7s					
LIT	**Litokhoron**	**76.93 310**	*e*P	**P**	**04 46 34.3**	**-0.8**
	comp=Z,308nm,1.0s					
LIT	**Litokhoron**	**76.93 310**	P	**P**	**04 46 34.1**	**-1.0**
LIT	**Litokhoron**	**76.93 310**	*e*P	**P**	**04 46 34.3**	**-0.8**
LIT			pmax	pmax		
	comp=Z,308nm,1.0s					
KLV	**Kalavryta, Ach**	**76.95 308**	P	**P**	**04 46 33.9**	**-1.4**
KLV	**Kalavryta, Ach**	**76.95 308**	P	**P**	**04 46 33.9**	**-1.4**
VAY	**Valandovo**	**77.02 312**	*i* P	**P**	**04 46 35.6**	**0.0**
ITM	**Ithomi**	**77.03 307**	*e*P	**P**	**04 46 35.3**	**-0.4**
	comp=Z,178nm,0.9s					
ITM	**Ithomi**	**77.03 307**	P	**P**	**04 46 35.1**	**-0.7**
SRE	**Strehaia**	**77.03 315**⇓	*i*P	**P**	**04 46 36.8**	**+1.2**
SRE	**Strehaia**	**77.03 315**	P	**P**	**04 46 36.7**	**+1.2**
TRIZ	**Trizonia**	**77.04 309**	P	**P**	**04 46 34.6**	**-1.2**
SERG	**Sergoula**	**77.06 309**	P	**P**	**04 46 35.0**	**-0.9**
CJR	**Cluj-Napoca**	**77.08 317**⇑	*i*P	**P**	**04 46 37.4**	**+1.5**
GRG	**Griva**	**77.10 311**	P	**P**	**04 46 35.6**	**-0.5**
GRG	**Griva**	**77.10 311**	P	**P**	**04 46 35.6**	**-0.5**
GRG	**Griva**	**77.10 311**	P	**P**	**04 46 35.6**	**-0.5**
LAKA	**Lakka**	**77.10 308**	P	**P**	**04 46 35.2**	**-1.0**
LAKA	**Lakka**	**77.10 308**	P	**P**	**04 46 35.2**	**-1.0**
PYL	**PYLOS**	**77.14 307**	P	**P**	**04 46 35.3**	**-1.1**
PYL	**PYLOS**	**77.14 307**	P	**P**	**04 46 35.3**	**-1.1**
IIGN	**Ignalina**	**77.18 326**	*e*P	**P**	**04 46 36.7**	**+0.6**
IIGN			IAmb	IAmb	04 46 44.4	
	comp=Z,143nm,0.7s					
EFP	**Efpalio**	**77.18 309**	P	**P**	**04 46 36.0**	**-0.5**
ANX	**Ano Chora**	**77.19 309**	P	**P**	**04 46 35.9**	**-0.8**
THL	**Klokotos Trika**	**77.23 310**	P	**P**	**04 46 35.4**	**-1.4**
AMT	**Artemida-Makis**	**77.24 308**	P	**P**	**04 46 36.3**	**-0.6**
DRO	**Drossia**	**77.28 308**	P	**P**	**04 46 37.3**	**+0.1**
BMR	**Baia Mare**	**77.31 318**⇓	*i*P	**P**	**04 46 38.7**	**+1.6**
EVR	**Evrytania**	**77.31 309**	P	**P**	**04 46 36.4**	**-1.0**
EVR	**Evrytania**	**77.31 309**	P	**P**	**04 46 36.4**	**-1.0**
LVV	**L'vov**	**77.34 320**	*e*P	**P**	**04 46 38.4**	**+1.2**
LVV			*e**PP	**pP**	**04 47 01.1**	**-2.2**
LVV			*e*S	**S**	**04 56 17.8**	**-1.4**
LVV			pmax	pmax		
	comp=Z,600nm,1.6s					
STIP	**Stip**	**77.36 312**	*i* P	**P**	**04 46 35.8**	**-1.6**
DEV	**Deva**	**77.43 316**⇑	*i*P	**P**	**04 46 39.7**	**+1.9**
DEV	**Deva**	**77.43 316**	P	P	04 46 49.6	+12
RLS	**Riolos of Patr**	**77.48 308**	P	**P**	**04 46 38.1**	**-0.1**
RLS	**Riolos of Patr**	**77.48 308**	P	**P**	**04 46 38.1**	**-0.1**
PVO	**Paravola**	**77.50 309**	P	**P**	**04 46 38.4**	**+0.1**
HERR	**Herculane**	**77.62 315**⇑	*i*P	**P**	**04 46 39.8**	**+1.0**
HERR	**Herculane**	**77.62 315**⇓	*i*P	**S**	**04 56 19.3**	**-3.1**
VSU	**Vasula**	**77.67 329***c*	*i*P	**P**	**04 46 38.8**	**0.0**
VSU			pmax	pmax		
	comp=Z,252nm,0.8s					
DRGR		**77.70 317**⇑	*i*P	**P**	**04 46 40.2**	**+0.8**
DRGR		**77.70 317**	P	**P**	**04 46 40.2**	**+0.8**
APA	**Apatity**	**77.70 339**⇓	*i*P	**P**	**04 46 39.2**	**+0.4**
APA			*i*		04 46 44.9	
APA			*i*		04 49 35.0	
APA			*i* S	**S**	**04 56 21.0**	**-1.4**
APA			*i*		04 56 38.0	
APA			*i* PS	PnS	04 56 55.0	-21
APA			pmax	pmax		
	comp=Z,139nm,0.6s					
DCZ	**Deep Cove**	**77.75 138**	*e*P	**P**	**04 46 41.5**	**+2.0**
	comp=Z,159nm,1.2s					
PDO	**Prodromos**	**77.76 309**	P	**P**	**04 46 39.5**	**-0.3**
KPRO	**Kipourio**	**77.77 310**	P	**P**	**04 46 37.9**	**-2.0**
FNA	**Florina**	**77.85 311**	*e*P	**P**	**04 46 39.6**	**-0.7**
	comp=Z,102nm,1.1s					
FNA	**Florina**	**77.85 311**	P	**P**	**04 46 38.6**	**-1.7**
FNA	**Florina**	**77.85 311**	*e*P	**P**	**04 46 39.6**	**-0.7**
FNA			pmax	pmax		
	comp=Z,103nm,1.1s					
DSL	**Palaion Diasel**	**77.89 309**	P	**P**	**04 46 40.0**	**-0.5**
DSL	**Palaion Diasel**	**77.89 309**	P	**P**	**04 46 40.0**	**-0.5**
BIA	**Bitola**	**77.92 311**	*e*P	**P**	**04 46 40.3**	**-0.4**
SKO	**Skopje**	**77.94 312**	*i* P	**P**	**04 46 40.4**	**-0.3**
KRUS	**Krusevo**	**78.02 312**	*i* P	**P**	**04 46 40.4**	**-0.8**
TRPA	**Tarpa**	**78.02 318**⇑	*i*P	**P**	**04 46 41.7**	**+0.7**
TRPA	**Tarpa**	**78.02 318**⇑	*e*P	**P**	**04 46 41.5**	**+0.5**
TRPA	**Tarpa**	**78.02 318**⇓	*e*S	**S**	**04 56 23.1**	**-3.5**
KFL	**Anninata**	**78.02 308**	P	**P**	**04 46 40.9**	**-0.3**
NEST	**Nestorio**	**78.06 311**	P	**P**	**04 46 40.7**	**-0.8**
MDVR	**Moldovita**	**78.10 315**⇓	*i*P	**P**	**04 46 41.7**	**+0.1**
JAN	**Janina**	**78.13 310**	P	**P**	**04 46 41.9**	**+0.1**
JAN	**Janina**	**78.13 310**	P	**P**	**04 46 41.9**	**+0.1**
KWP	**Kalwaria Pacla**	**78.15 320**	*e*P	**P**	**04 46 42.4**	**+0.7**
	comp=Z,1μm,6.2s					
KWP			*i* S	**S**	**04 56 25.5**	**-2.5**
KWP	**Kalwaria Pacla**	**78.15 320**	*e*P	**P**	**04 46 42.3**	**+0.7**
	comp=Z,6μm,1.4s					
KWP	**Kalwaria Pacla**	**78.15 320**⇑	*e*P	**P**	**04 46 42.4**	**+0.7**
KWP			*i* S	**S**	**04 56 25.5**	**-2.5**
VLS	**Valsamata**	**78.19 308**	P	**P**	**04 46 41.7**	**-0.5**
VLS	**Valsamata**	**78.19 308**	P	**P**	**04 46 41.7**	**-0.5**
VLS	**Valsamata**	**78.19 308**	P	**P**	**04 46 41.7**	**-0.5**
LKD2	**Lefkada island**	**78.19 309**	P	**P**	**04 46 41.9**	**-0.3**
LKD2	**Lefkada island**	**78.19 309**	P	**P**	**04 46 41.9**	**-0.3**
FSK	**Fiskardo**	**78.23 309**	P	**P**	**04 46 41.6**	**-0.8**
KBN	**Korca**	**78.28 311**	*i* P	**P**	**04 46 43.2**	**+0.5**
BZS	**Buzias**	**78.28 316**⇑	*i*P	**P**	**04 46 43.0**	**+0.5**
OHR	**Ohrid**	**78.32 311**	*i* P	**P**	**04 46 42.4**	**-0.5**
LTVH	**L"tav"rtes,**	**78.33 318**⇑	*e*P	**P**	**04 46 44.5**	**+1.8**
LTVH	**L"tav"rtes,**	**78.33 318**⇓	*e*S	**S**	**04 56 25.7**	**-4.2**
SIRR	**Siria**	**78.34 317**⇓	*i*P	**P**	**04 46 43.7**	**+0.9**
SGD	**Sagiada**	**78.60 310**	P	**P**	**04 46 44.0**	**-0.4**
SUW	**Suwalki**	**78.63 324**	*e*P	**P**	**04 46 43.9**	**-0.3**
	comp=Z,1μm,5.3s					
SUW			*i* S	**S**	**04 56 28.0**	**-4.8**
SUW	**Suwalki**	**78.63 324**	*e*P	**P**	**04 46 43.8**	**-0.4**
	comp=Z,700nm,1.1s					
SUW	**Suwalki**	**78.63 324**⇑	*e*P	**P**	**04 46 43.9**	**-0.3**
SUW			*i* S	**S**	**04 56 28.0**	**-4.8**
PHP	**Peshkopia**	**78.65 312**	P	**P**	**04 46 45.0**	**+0.3**
PHP	**Peshkopia**	**78.65 312**	P	**P**	**04 46 45.0**	**+0.3**
PHP	**Peshkopia**	**78.65 312**	*i* P	**P**	**04 46 44.9**	**+0.2**
FIA1	**FINESS Array S**	**78.74 332**	*e*P	**P**	**04 46 44.5**	**-0.1**
	comp=Z,212nm,1.0s					
FINES	**FINESS Array B**	**78.74 332**	P	**P**	**04 46 44.6**	**-0.1**
	comp=Z,69nm,0.4s,baz=105,slow=5.8,SNR=504					
FINES			S	**S**	**04 56 31.4**	**-2.4**
	comp=Z,12nm,1.0s,baz=93,slow=7.6,SNR=7.0					
FINES			PKKPbc	**PKKPbc**	**05 05 46.1**	**+4.7**
	comp=Z,1.8nm,0.8s,baz=288,slow=1.3,SNR=4.3					
FINES			LR	LR	05 26 26.2	
	comp=Z,1μm,20.0s,baz=106,slow=39					
FINES	**FINESS Array B**	**78.74 332**	P	**P**	**04 46 44.6**	**-0.1**
FINES			S	**S**	**04 56 31.4**	**-2.4**
FINES			pmax	pmax		
	comp=Z,69nm,0.4s					
FINES			smax	smax		
	comp=N,12nm,1.0s					
FINES			MLR	MLR		
	comp=Z,1μm,20.0s					
CRVS	**Cervenica-Dubn**	**78.84 319**	*e*P	**P**	**04 46 47.0**	**+1.4**
CRVS			*e*		04 47 11.2	
CRVS			*e*S	**S**	**04 56 32.2**	**-3.2**
CRVS			pmax	pmax		
	comp=Z,491nm,1.4s					
CRVS	**Cervenica-Dubn**	**78.84 319**	*e*P	**P**	**04 46 47.0**	**+1.4**
CRVS			*e*pP	**pP**	**04 47 11.2**	**-0.6**
CRVS			*e*S	**S**	**04 56 32.2**	**-3.2**
TIR	**Tirane**	**79.05 311**⇓	*i*P	**P**	**04 46 47.4**	**+0.6**
TIR	**Tirane**	**79.05 311**⇓	*i*P	**S**	**04 56 34.2**	**-3.7**
TIR	**Tirane**	**79.05 311**	*e*P	**P**	**04 46 46.2**	**-0.5**
	comp=Z,103nm,1.0s					
TIR			*e*S	**S**	**04 56 43.1**	**+5.3**
TIR	**Tirane**	**79.05 311**	*i* P	P	04 46 55.3	+8.5
TIR	**Tirane**	**79.05 311**	*e*P	**P**	**04 46 46.3**	**-0.5**
TIR			*e*S	**S**	**04 56 43.2**	**+5.3**
TIR			pmax	pmax		
	comp=Z,103nm,1.0s					
PUK	**Puka**	**79.10 312**	*i* P	**P**	**04 46 47.7**	**+0.6**
PVY	**Plav**	**79.11 313**⇑	*i*P	**P**	**04 46 47.2**	**-0.1**
IVA	**Berane**	**79.18 313**⇑	*i*P	**P**	**04 46 47.5**	**-0.1**
BILL	**Bilibino**	**79.24 21**	*e*P	**P**	**04 46 46.4**	**-0.8**
	comp=Z,1μm,1.5s					
BILL			*e*S	**S**	**04 56 34.6**	**-4.2**
BILL	**Bilibino**	**79.24 21***c*	*i*P	**P**	**04 46 46.7**	**-0.6**
BILL			*e*		04 46 53.3	
BILL			*e*		04 49 47.4	
BILL			*e*PPP	PPP	04 51 36.4	
BILL			*i* S	**S**	**04 56 34.3**	**-4.5**
BILL			*e*SS	**SS**	**05 01 50.1**	**+2.8**
BILL			pmax	pmax		
	comp=Z,288nm,1.6s					
BILL			MLR	MLR		
	comp=Z,3μm,22.0s					
DIVS	**Divibare**	**79.24 314**	*e*P	**P**	**04 46 47.7**	**-0.2**
	comp=Z,321nm,1.3s					
SMY	**Shemya**	**79.26 37**	*e*P	**P**	**04 46 47.9**	**+0.2**
	comp=Z,2μm,1.2s					
SMY	**Shemya**	**79.26 37**	*e*P	**P**	**04 46 47.9**	**+0.2**
SMY			pmax	pmax		
	comp=Z,2μm,1.2s					
KECS	**Kecovo**	**79.43 319**	*e*P	**P**	**04 46 49.3**	**+0.6**
KECS			pmax	pmax		
	comp=Z,77nm,1.1s					
KECS	**Kecovo**	**79.43 319**	*e*P	**P**	**04 46 49.3**	**+0.6**
KECS			*e*PP	**PP**	**04 49 51.6**	**+1.4**
KECS			*e*S	**S**	**04 56 38.6**	**-3.0**
KOME	**Kolasin**	**79.46 313**⇑	*i*P	**P**	**04 46 49.0**	**-0.1**
LBZ	**Lake Benmore**	**79.53 136**	*e*P	**P**	**04 46 50.1**	**+0.8**
	comp=Z,178nm,1.2s					
ULC	**Ulcinj**	**79.57 312**⇑	*i*P	**P**	**04 46 49.0**	**-0.7**
PLE	**Pljevlja**	**79.60 313**⇑	*i*P	**P**	**04 46 50.3**	**+0.4**
PDG	**Podgorica**	**79.61 312**⇑	*i*P	**P**	**04 46 49.8**	**-0.1**
PDG	**Podgorica**	**79.61 312**⇓	*i*S	**S**	**04 56 39.4**	**-4.3**
PDG	**Podgorica**	**79.61 312**	P	**P**	**04 46 49.5**	**-0.3**
TTG	**Podgorica**	**79.61 312**⇑	*i*P	**P**	**04 46 49.7**	**-0.1**
TTG	**Podgorica**	**79.61 312**	*e*P	**P**	**04 46 49.7**	**-0.1**
	comp=Z,359nm,0.6s					
TTG			*e*S	**S**	**04 56 45.0**	**+1.3**
TTG	**Podgorica**	**79.61 312**	*e*P	**P**	**04 46 49.7**	**-0.1**
TTG			*e*S	**S**	**04 56 45.0**	**+1.3**
TTG			pmax	pmax		
	comp=Z,359nm,0.6s					
DRME	**Dracevica, Mon**	**79.64 312**⇑	*i*P	**P**	**04 46 50.0**	**0.0**
NIE	**Niedzica**	**79.67 320**	*e*P	**P**	**04 46 50.8**	**+0.7**
	comp=Z,400nm,8.2s					
NIE			*i* S	**S**	**04 56 41.6**	**-2.6**
NIE	**Niedzica**	**79.67 320**⇑	*e*P	**P**	**04 46 50.8**	**+0.7**
NIE			*i* S	**S**	**04 56 41.6**	**-2.6**
BEL	**Belsk**	**79.69 322**	*e*P	**P**	**04 46 50.5**	**+0.5**
	comp=Z,2μm,5.7s					
BEL			*i* S	**S**	**04 56 41.4**	**-2.8**
BEL	**Belsk**	**79.69 322**⇑	*e*P	**P**	**04 46 50.5**	**+0.5**
BEL			*i* S	**S**	**04 56 41.4**	**-2.8**
PSZ	**Piszkesteto**	**79.75 318**⇑	*i*P	**P**	**04 46 51.6**	**+1.0**
PSZ	**Piszkesteto**	**79.75 318**⇑	*e*P	**P**	**04 46 51.1**	**+0.5**
PSZ	**Piszkesteto**	**79.75 318**⇓	*e*S	**S**	**04 56 41.0**	**-4.2**
PSZ	**Piszkesteto**	**79.75 318**	*e*P	**P**	**04 46 50.9**	**+0.3**
	comp=Z,277nm,1.1s					
PSZ	**Piszkesteto**	**79.75 318**	*e*P	**P**	**04 46 50.9**	**+0.3**
PSZ			pmax	pmax		
	comp=Z,277nm,1.1s					
NKY	**Niksic**	**79.84 313**⇑	*i*P	**P**	**04 46 50.7**	**-0.5**
NKME	**Niksic**	**79.86 313**⇑	*i*P	**P**	**04 46 51.2**	**-0.1**
BUM	**Brajici-Budva**	**79.86 312**⇑	*i*P	**P**	**04 46 51.1**	**-0.2**
CEME	**Cevo**	**79.87 313**⇑	*i*P	**P**	**04 46 51.0**	**-0.3**
UPM	**Unac-Piva**	**79.94 313**⇑	*i*P	**P**	**04 46 51.5**	**-0.3**
RPZ	**Rata Peaks**	**79.97 135**	LR	LR	05 23 14.2	
	comp=Z,943nm,20.2s,baz=274,slow=36					
RPZ	**Rata Peaks**	**79.97 135**	*e*P	**P**	**04 46 52.2**	**+0.5**
	comp=Z,545nm,1.4s					
OUZ	**Omahuta**	**80.08 126**	*e*P	**P**	**04 46 54.7**	**+2.3**
	comp=Z,277nm,1.5s					
OJC	**Ojcow**	**80.09 320**	*e*P	**P**	**04 46 52.6**	**+0.4**
	comp=Z,1μm,6.8s					
OJC			*i* S	**S**	**04 56 46.1**	**-2.4**
OJC	**Ojcow**	**80.09 320**	*e*P	**P**	**04 46 52.7**	**+0.4**
	comp=Z,295nm,1.2s					
OJC	**Ojcow**	**80.09 320**	*e*P	**P**	**04 46 52.7**	**+0.4**
OJC			pmax	pmax		
	comp=Z,295nm,1.2s					
HCY	**Herceg Novi**	**80.17 312**⇑	*i*P	**P**	**04 46 52.7**	**-0.2**
BRY	**Bratogost**	**80.18 313**⇑	*i*P	**P**	**04 46 52.7**	**-0.4**
LANS	**Liptovska Anna**	**80.18 319**	*e*P	**P**	**04 46 54.2**	**+1.4**
LANS			*e*		04 47 18.0	
LANS			*e*		04 49 55.6	
LANS			*e*S	**S**	**04 56 48.1**	**-1.5**
LANS	**Liptovska Anna**	**80.18 319**	*e*P	**P**	**04 46 54.2**	**+1.4**
LANS			*e*pS	**pP**	**04 47 18.0**	**-1.1**
LANS			*e*PP	**PP**	**04 49 55.5**	**-0.9**
LANS			*e*S	**S**	**04 56 48.1**	**-1.5**
BUD	**Budapest**	**80.28 318**⇑	*e*P	**P**	**04 46 53.8**	**+0.5**
BUD	**Budapest**	**80.28 318**⇓	*e*S	**S**	**04 56 48.3**	**-2.3**
VYHS	**Vyhne**	**80.52 319**	*e*P	**P**	**04 46 55.0**	**+0.4**
VYHS			*e*		04 47 19.6	
VYHS			*e*S	**S**	**04 56 49.9**	**-3.2**
VYHS			pmax	pmax		
	comp=Z,97nm,1.2s					
VYHS	**Vyhne**	**80.52 319**	*e*P	**P**	**04 46 55.0**	**+0.4**
VYHS			*e*pP	**pP**	**04 47 19.6**	**-1.4**
VYHS			*e*S	**S**	**04 56 49.9**	**-3.2**
OXZ	**Oxford**	**80.58 135**	*e*P	**P**	**04 46 55.4**	**+0.4**
	comp=Z,93nm,0.8s					
LTZ	**Lake Taylor**	**80.62 134**	*e*P	**P**	**04 46 56.2**	**+0.9**
	comp=Z,77nm,1.1s					
KEV	**Kevo**	**80.65 341**	*e*P	**P**	**04 46 54.4**	**-0.4**
	comp=Z,181nm,0.8s					
KEV	**Kevo**	**80.65 341**	*e*P	**P**	**04 46 54.4**	**-0.4**
KEV			pmax	pmax		
	comp=Z,181nm,0.8s					
SRO2	**Moca**	**80.74 318**	*e*pP	pP	04 47 20.5	-1.6
SUR	**Sutherland**	**80.74 237**	PKKPbc	PKKPbc	05 05 33.0	-3.1
	comp=Z,18nm,1.2s,baz=55,slow=6.2,SNR=3.7					
SUR			LR	LR	05 16 34.3	
	comp=Z,3μm,20.6s,baz=77,slow=31					
SUR	**Sutherland**	**80.74 237**	*e*P	**P**	**04 46 57.9**	**+1.5**
	comp=Z,346nm,1.1s					
SUR			PKKPbc	**PKKPbc**	**05 05 33.0**	**-3.1**
SUR	**Sutherland**	**80.74 237**	P	**P**	**04 46 59.1**	**+2.7**
	SNR=5.8					
CSKK	**Cs"±kako**	**80.79 317**⇑	*e*P	**P**	**04 46 57.0**	**+0.9**
STON	**Ston**	**80.79 313**	*i* P	**P**	**04 46 54.8**	**-1.3**
THZ	**Tophouse**	**80.86 133**	*e*P	**P**	**04 46 56.8**	**+0.2**
	comp=Z,282nm,0.9s					
ARCES	**ARCESS Array B**	**81.09 340**	P	**P**	**04 46 57.5**	**+0.3**
	comp=Z,74nm,0.6s,baz=94,slow=5.6,SNR=286					
ARCES			S	**S**	**04 56 54.2**	**-4.0**
	comp=Z,9.6nm,1.0s,baz=92,slow=10,SNR=3.8					
ARCES			PKKPbc	**PKKPbc**	**05 05 34.8**	**-1.7**
	comp=Z,2.7nm,1.0s,baz=270,slow=2.4,SNR=3.5					
ARCES			LR	LR	05 25 51.1	
	comp=Z,2μm,21.5s,baz=110,slow=38					
ARCES	**ARCESS Array B**	**81.09 340**	*e*P	**P**	**04 46 57.0**	**-0.2**
ARCES			S	**S**	**04 56 54.2**	**-4.0**
ARCES			PKKPbc	**PKKPbc**	**05 05 34.8**	**-1.7**
ARCES	**ARCESS Array B**	**81.09 340**	P	**P**	**04 46 57.5**	**+0.3**
ARCES

KSP	**Ksiaz**	**82.39 321**	*e*P	**P**	**04 47 05.2**	**+0.8**
	comp=Z,800nm,6.4s					
KSP			*i* S	**S**	**04 57 09.5**	**-2.7**
KSP	**Ksiaz**	**82.39 321⇑**	*e*P	**P**	**04 47 05.2**	**+0.8**
KSP			*i* S	**S**	**04 57 09.5**	**-2.7**
CONA	**Conrad Observa**	**82.45 318**	*i* P	**P**	**04 47 05.1**	**+0.2**
	comp=Z,61nm,1.3s,SNR=27					
CONA			*e*S	**S**	**04 57 11.3**	**-1.9**
	comp=Z,1µm,6.1s					
UPC	**Upice**	**82.54 320**	*e*P	**P**	**04 47 06.4**	**+1.2**
UPC			*e*pP	**pP**	**04 47 29.2**	**-2.5**
UPC			*e*SKS	**S**	**04 57 11.2**	**-2.6**
UPC			AMS	AMS	05 32 00.0	
	comp=Z,900nm,18.8s					
UPC	**Upice**	**82.54 320**	*e*P	**P**	**04 47 06.4**	**+1.2**
UPC			*e*		04 47 29.2	
UPC			*e*		04 57 11.2	
UPC			MLR	MLR		
	comp=Z,900nm,18.8s					
OZLJ	**Ozalj**	**82.58 315**	*i* P	**P**	**04 47 05.8**	**+0.4**
KIF	**Kilpisjarvi**	**82.60 339⇑**	*i* P	**P**	**04 47 05.1**	**0.0**
ARSA	**Arzberg**	**82.63 317**	*i* P	**P**	**04 47 06.6**	**+0.8**
	comp=Z,96nm,1.1s,SNR=40					
ARSA			*i* S	**S**	**04 57 09.9**	**-5.1**
	comp=Z,2µm,6.6s					
BOJS	**Bojanci**	**82.72 315**	*i* P	**P**	**04 47 06.8**	**+0.6**
BOJS			*e*S	**S**	**04 57 12.9**	**-2.9**
PERS	**Pernice**	**82.88 316**	*i* P	**P**	**04 47 07.7**	**+0.6**
PERS			*e*S	**S**	**04 57 15.8**	**-1.7**
SOKA	**Soboth**	**82.94 316**	*i* P	**P**	**04 47 08.3**	**+0.8**
	comp=Z,195nm,1.3s,SNR=69					
SOKA			*e*S	**S**	**04 57 12.7**	**-5.5**
	comp=Z,2µm,3.5s					
VISS	**Visnje**	**83.03 316**	*i* P	**P**	**04 47 08.5**	**+0.6**
VISS			*e*S	**S**	**04 57 15.6**	**-3.4**
BKZ	**Black Stump Fm**	**83.05 130**	*e*P	**P**	**04 47 07.8**	**-0.4**
	comp=Z,384nm,0.8s					
BKZ			*e*S	**S**	**04 57 21.7**	**+2.1**
BFZ	**Birch Farm**	**83.12 131**	*e*P	**P**	**04 47 09.0**	**+0.6**
	comp=Z,644nm,1.3s					
HOPEN	**Hopen**	**83.14 347**	*e*P	**P**	**04 47 08.1**	**+0.3**
OBKA	**Obir**	**83.26 316**	*i* P	**P**	**04 47 09.9**	**+0.8**
	comp=Z,64nm,0.6s,SNR=22					
OBKA			*e*SKSac	**S**	**04 57 17.3**	**-4.2**
	comp=Z,3µm,4.2s					
GOPC	**GO Pecny, Ondr**	**83.28 320**	*e*P	**P**	**04 47 10.1**	**+1.0**
GOPC			*e*PCP	**PcP**	**04 47 12.7**	**-0.6**
GOPC			*e*SKS	**S**	**04 57 19.6**	**-1.8**
GOPC			AMS	AMS	05 32 30.0	
	comp=Z,1µm,18.9s					
GOPC	**GO Pecny, Ondr**	**83.28 320**	*e*P	**P**	**04 47 10.1**	**+1.0**
GOPC			*e*		04 57 19.6	
GOPC			MLR	MLR		
	comp=Z,1µm,18.9s					
TRO	**Tromso**	**83.36 340**	*e*P	**P**	**04 47 08.8**	**-0.2**
URZ	**Urewera**	**83.38 129**	PKKPbc	PKKPbc	05 05 30.1	+0.1
	comp=Z,9.8nm,1.0s,baz=66,slow=12,SNR=3.0					
URZ			LR	LR	05 25 46.3	
	comp=Z,1µm,19.8s,baz=287,slow=37					
URZ	**Urewera**	**83.38 129**	*e*P	**P**	**04 47 09.3**	**-0.4**
	comp=Z,442nm,1.2s					
URZ			*e*S	**S**	**04 57 22.1**	**-0.7**
URZ			PKKPbc	**PKKPbc**	**05 05 30.1**	**+0.1**
PRU	**Pruhonice**	**83.44 320**	*e*P	**P**	**04 47 10.7**	**+0.8**
PRU			*e*PCP	**PcP**	**04 47 12.8**	**-1.2**
PRU			*e*pP	**pP**	**04 47 35.2**	**-1.2**
PRU			*e*SKS	**S**	**04 57 21.7**	**-1.3**
PRU			AMS	AMS	05 32 30.0	
	comp=Z,1µm,18.3s					
PRU	**Pruhonice**	**83.44 320**	*e*P	**P**	**04 47 10.7**	**+0.8**
PRU			*e*		04 47 35.2	
PRU			*e*		04 57 21.7	
PRU			MLR	MLR		
	comp=Z,1µm,18.3s					
PVCC	**Panska Ves**	**83.46 320**	*e*P	**P**	**04 47 11.3**	**+1.4**
PVCC			*e*PCP	**PcP**	**04 47 14.1**	**0.0**
PVCC			*e*SKS	**S**	**04 57 21.5**	**-1.6**
PVCC	**Panska Ves**	**83.46 320**	*e*P	**P**	**04 47 11.3**	**+1.4**
PVCC			*e*		04 57 21.5	
MOA	**Molln**	**83.52 318**	*i* P	**P**	**04 47 11.0**	**+0.7**
	comp=Z,87nm,1.2s,SNR=27					
MOA			*e*SKSac	**SKSac**	**04 57 19.7**	**-4.0**
	comp=Z,462nm,3.7s					
PRA	**Prague**	**83.52 320**	*e*P	**P**	**04 47 11.6**	**+1.4**
PRA			*e*PCP	**PcP**	**04 47 14.0**	**-0.3**
PRA			*e*pP	**pP**	**04 47 35.1**	**-1.6**
PRA			*e*SKS	**S**	**04 57 22.4**	**-1.3**
PRA			AMS	AMS	05 33 00.0	
	comp=Z,900nm,17.0s					
PRA	**Prague**	**83.52 320**	*e*P	**P**	**04 47 11.6**	**+1.4**
PRA			*e*		04 47 35.1	
PRA			*e*		04 57 22.4	
PRA			MLR	MLR		
	comp=Z,900nm,17.0s					
BSD	**Bornholm Skovb**	**83.54 325**	*i* P	**P**	**04 47 10.1**	**-0.1**
	comp=Z,72nm,0.9s					
BSD	**Bornholm Skovb**	**83.54 325**	*i* P	**P**	**04 47 10.1**	**-0.1**
BSD			pmax	pmax		
	comp=Z,72nm,0.9s					
BSD	**Bornholm Skovb**	**83.54 325**	*e*P	**P**	**04 47 09.9**	**-0.3**
JAVS	**Javornik**	**83.57 316**	*i* P	**P**	**04 47 10.9**	**+0.1**
JAVS			*e*S	**S**	**04 57 22.4**	**-2.3**
TRI	**Trieste**	**83.77 315**	*e*P	**P**	**04 47 11.5**	**-0.1**
	comp=Z,114nm,0.5s					
TRI	**Trieste**	**83.77 315**	*e*P	**P**	**04 47 11.5**	**-0.1**
TRI			pmax	pmax		
	comp=Z,114nm,0.5s					
BRG	**Berggiesshubel**	**83.87 321**	*i* P	**P**	**04 47 12.9**	**+0.8**
	comp=Z,66nm,1.0s					
BRG			*i* PCP	**PcP**	**04 47 16.3**	**+0.5**
	comp=Z,135nm,1.1s					
BRG			*i* pP	**pP**	**04 47 37.9**	**-0.7**
	comp=Z,336nm,1.5s					
BRG			sP	**sP**	**04 47 57.0**	**+7.5**
BRG			S	**S**	**04 57 27.0**	**-0.3**
BRG			SS	**SS**	**05 03 06.0**	**+9.0**
	comp=N,896nm,20.1s					
	comp=E,839nm,22.5s					
	comp=Z,1µm,25.6s					
BRG	**Berggiesshubel**	**83.87 321**	*i* P	**P**	**04 47 12.9**	**+0.8**
BRG			*i* *PP	**pP**	**04 47 37.9**	**-0.7**
BRG			S	**S**	**04 57 27.0**	**-0.3**
BRG			pmax	pmax		
	comp=Z,66nm,1.0s					
BRG			MLR	MLR		
	comp=N,896nm,20.1s					
BRG			MLR	MLR		
	comp=E,839nm,22.5s					
BRG			MLR	MLR		
	comp=Z,1µm,25.6s					
MYKA	**Terra Mystica**	**83.89 316**	*i* P	**P**	**04 47 12.7**	**+0.4**
	comp=Z,83nm,0.7s,SNR=28					
MYKA			*e*SKSac	**SKSac**	**04 57 23.1**	**-3.2**
	comp=Z,3µm,5.7s					
AQU	**L'Aquila**	**83.93 312**	*e*P	**P**	**04 47 12.6**	**0.0**
	comp=Z,299nm,1.0s					
AQU	**L'Aquila**	**83.93 312**	*e*P	**P**	**04 47 12.6**	**0.0**
AQU			pmax	pmax		
	comp=Z,299nm,1.0s					
GEA0	**GERESS Array S**	**83.94 319**	*e*P	**P**	**04 47 12.5**	**-0.1**
GEA0			*e*S	**S**	**04 57 28.9**	**+0.7**
GEC2	**GERESS Array S**	**83.94 319**	*e*P	**P**	**04 47 13.1**	**+0.5**
	comp=Z,378nm,1.3s					
GEC2			*e*S	**S**	**04 57 29.5**	**+1.3**
GERES	**GERESS Array B**	**83.94 319**	P	**P**	**04 47 13.0**	**+0.5**
	comp=Z,33nm,0.5s,baz=100,slow=5.8,SNR=162					
GERES			LR	LR	05 28 41.8	
	comp=Z,776nm,21.9s,baz=91,slow=38					
CLTB	**Caltabellotta**	**83.98 307**	*e*P	**P**	**04 47 13.9**	**+0.9**
	comp=Z,212nm,1.1s					
KHC	**Kasperske Hory**	**84.03 319**	*e*P	**P**	**04 47 13.6**	**+0.6**
KHC			*e*PCP	**PcP**	**04 47 16.2**	**-0.5**
KHC			*e*pP	**pP**	**04 47 35.1**	**-4.4**
KHC			*e*SKS	**S**	**04 57 24.1**	**-4.9**
KHC			AMS	AMS	05 25 50.0	
	comp=Z,1µm,22.5s					
KHC	**Kasperske Hory**	**84.03 319**	*e*P	**P**	**04 47 13.1**	**+0.1**
	comp=Z,27nm,0.6s					
KHC	**Kasperske Hory**	**84.03 319**	*e*P	**P**	**04 47 13.6**	**+0.6**
KHC			*e*		04 57 24.1	
KHC			MLR	MLR		
	comp=Z,1µm,22.5s					
KBA	**Koelnbreinsper**	**84.11 317**	*i* P	**P**	**04 47 13.9**	**+0.3**
	comp=Z,47nm,0.7s,SNR=22					
KBA			*e*SKSac	**SKSac**	**04 57 26.4**	**-1.5**
	comp=Z,943nm,4.0s					
KBA	**Koelnbreinsper**	**84.11 317**	P	**P**	**04 47 13.6**	**0.0**
MXZ	**Matakaoa Point**	**84.21 128**	*e*P	**P**	**04 47 15.5**	**+1.4**
	comp=Z,479nm,1.7s					
RGN	**Rugen**	**84.43 324**	*e*P	**P**	**04 47 15.9**	**+1.2**
	comp=Z,330nm,1.2s					
RGN			*e*pP	**pP**	**04 47 43.6**	**+2.3**
STEI	**Steigen**	**84.47 338⇑**	*i*P	**P**	**04 47 14.8**	**+0.2**
CLL	**Collm**	**84.48 321**	*i* P	**P**	**04 47 15.7**	**+0.6**
	comp=Z,215nm,1.6s					
CLL			*e*Plp		04 47 17.0	
	comp=Z,300nm,17.1s					
CLL			*i* PcP	**PcP**	**04 47 19.4**	**+0.9**
	comp=Z,215nm,1.6s					
CLL			*i* pP	**pP**	**04 47 40.5**	**-1.2**
	comp=Z,185nm,1.4s					
CLL			*e*sP	**sP**	**04 47 53.0**	**+0.4**
CLL			*e*PP	**PP**	**04 50 30.0**	**-1.6**
CLL			*e*sPP		04 51 06.0	
CLL			*e*S	**S**	**04 57 32.0**	**-1.3**
	comp=N,3µm,30.5s					
CLL			*e*S	**S**	**04 57 32.0**	**-1.3**
	comp=E,2µm,21.8s					
CLL			*e*SSS	SSS	05 06 30.0	
CLL			*e*		05 07 24.0	
CLL			*e*SSSS		05 09 30.0	
CLL			*e*pPKPPKPd		05 13 58.0	
CLL	**Collm**	**84.48 321**	*e*P	**P**	**04 47 15.3**	**+0.2**
	comp=E,145nm,1.2s					
CLL	**Collm**	**84.48 321**	*i* P	**P**	**04 47 15.7**	**+0.6**
CLL			*i* *PP	**pP**	**04 47 40.5**	**-1.2**
CLL			*e*S	**S**	**04 57 32.0**	**-1.3**
CLL			pmax	pmax		
	comp=Z,215nm,1.6s					
WET	**Wettzell**	**84.49 319**	P	**P**	**04 47 15.9**	**+0.6**
HFS	**Hagfors**	**84.53 330**	P	**P**	**04 47 15.2**	**0.0**
	comp=Z,73nm,0.5s,baz=111,slow=6.3,SNR=199					
HFS			S	**S**	**04 57 32.4**	**-1.0**
	comp=Z,38nm,1.2s,baz=106,slow=11,SNR=7.9					
HFS			LR	LR	05 29 28.5	
	comp=Z,871nm,20.5s,baz=87,slow=39					
MOR8	**Moi Rana**	**84.62 336⇑**	*i*P	**P**	**04 47 15.2**	**-0.3**
ABTA	**Abfaltersbach**	**84.67 316**	*i* P	**P**	**04 47 16.1**	**-0.2**
	comp=Z,46nm,0.9s,SNR=25					
ABTA			*e*SKSac	**SKSac**	**04 57 30.3**	**-1.0**
	comp=Z,2µm,5.6s					
NKC	**Novy Kostel**	**84.80 320**	*e*P	**P**	**04 47 17.9**	**+1.1**
NKC			*e*pP	**pP**	**04 47 39.5**	**-3.9**
NKC			*e*SKS	**S**	**04 57 35.6**	**-1.0**
NKC			AMS	AMS	05 27 00.0	
	comp=Z,1µm,19.8s					
NKC	**Novy Kostel**	**84.80 320**	*e*P	**P**	**04 47 17.9**	**+1.1**
NKC			*e*		04 57 35.6	
NKC			MLR	MLR		
	comp=Z,1µm,19.8s					
COP	**Copenhagen**	**84.98 325**	*i* P	**P**	**04 47 18.1**	**+0.6**
	comp=Z,70nm,0.7s					
COP	**Copenhagen**	**84.98 325**	*i* P	**P**	**04 47 18.1**	**+0.6**
COP			pmax	pmax		
	comp=Z,70nm,0.7s					
LLD	**Lille Linde**	**85.09 325⇑**	*i*P	**P**	**04 47 19.7**	**+1.7**
LLD	**Lille Linde**	**85.09 325⇑**	*i*P	**P**	**04 47 19.7**	**+1.7**
LOF	**Lofoten**	**85.13 338**	*e*P	**P**	**04 47 17.4**	**-0.6**
LOF		⇑	*i*P	**P**	**04 47 17.7**	**-0.2**
KONS	**Konsvik**	**85.18 336**	*e*P	**P**	**04 47 18.1**	**-0.1**
WTTA	**Wattenberg**	**85.28 317**	*i* P	**P**	**04 47 19.2**	**-0.3**
	comp=Z,45nm,0.6s,SNR=32					
WTTA			*e*S	**S**	**04 57 38.2**	**-3.6**
	comp=Z,928nm,3.1s					
WATA	**Walderalm**	**85.32 317**	*i* P	**P**	**04 47 19.2**	**-0.4**
	comp=Z,62nm,0.6s,SNR=52					
MOX	**Moxa**	**85.34 320**	P	**P**	**04 47 20.1**	**+0.6**
SPA0	**Spitsbergen Ar**	**85.34 348**	*e*P	**P**	**04 47 18.7**	**-0.2**
SPA0	**Spitsbergen Ar**	**85.34 348**	*e*P	**P**	**04 47 18.6**	**-0.4**
SPITS	**Spitsbergen Ar**	**85.34 348**	P	**P**	**04 47 18.8**	**-0.2**
	comp=Z,64nm,0.5s,baz=117,slow=8.9,SNR=156					
SPITS			LR	LR	05 31 03.7	
	comp=Z,2µm,21.2s,baz=85,slow=40					
HSPB	**Hornsund (broa**	**85.37 347**	*e*P	**P**	**04 47 19.8**	**+0.7**
HSPB	**Hornsund (broa**	**85.37 347**	*e*P	**P**	**04 47 18.9**	**-0.1**
FUR	**Furstenfeldbru**	**85.53 318**	P	**P**	**04 47 21.0**	**+0.5**
NC405	**NORSAR Array S**	**85.55 331**	*e*P	**P**	**04 47 19.4**	**-0.9**
NSS	**Namsos**	**85.56 334**	*e*P	**P**	**04 47 19.3**	**-0.8**
NSS			*e*P	**P**	**04 47 20.2**	**0.0**
GRF	**Grafenberg Arr**	**85.58 319**	P	**P**	**04 47 21.9**	**+1.2**
GRFO	**Grafenberg**	**85.58 319**	*e*P	**P**	**04 47 22.1**	**+1.4**
	comp=Z,212nm,1.1s					
GRFO	**Grafenberg**	**85.58 319**	*e*P	**P**	**04 47 22.1**	**+1.4**
GRFO			pmax	pmax		
	comp=Z,212nm,1.1s					
NC602	**NORSAR Array S**	**85.62 331**	*e*P	**P**	**04 47 20.6**	**0.0**
NC602	**NORSAR Array S**	**85.62 331**	*e*P	**P**	**04 47 20.5**	**0.0**
MOTA	**Moosalm**	**85.64 317**	*i* P	**P**	**04 47 19.9**	**-1.4**
	comp=Z,68nm,0.6s,SNR=64					
NC303	**NORSAR Array S**	**85.72 331**	*e*P	**P**	**04 47 21.2**	**+0.1**
NC303	**NORSAR Array S**	**85.72 331**	*e*P	**P**	**04 47 21.1**	**+0.1**
NB201	**NORSAR Array S**	**85.75 331**	*e*P	**P**	**04 47 20.3**	**-0.9**
STRU	**Stroemstad**	**85.76 329**	*e*P	**P**	**04 47 21.6**	**+0.3**
NB2	**NORSAR Subarra**	**85.79 331**	P	**P**	**04 47 21.4**	**-0.1**
	comp=Z,55nm,0.6s,baz=93,slow=6.2					
NB2	**NORSAR Subarra**	**85.79 331**	P	**P**	**04 47 21.4**	**-0.1**
	baz=93,slow=6.2					
NOA	**NORSAR Array B**	**85.79 331**	LR	LR	05 29 43.5	
	comp=Z,748nm,21.9s,baz=100,slow=38					
RETA	**Reutte**	**85.88 317**	*i* P	**P**	**04 47 22.3**	**0.0**
	comp=Z,94nm,0.5s,SNR=52					
RETA			*e*SKSac	**SKSac**	**04 57 40.6**	**+1.7**
	comp=Z,235nm,2.4s					
FETA	**Feichten**	**85.90 317**	*i* P	**P**	**04 47 22.7**	**+0.2**
	comp=Z,79nm,0.9s,SNR=28					
FETA			*e*SKSac	**SKSac**	**04 57 40.9**	**+1.7**
	comp=Z,529nm,3.5s					
NAO01	**NORSAR Array S**	**85.94 331**	*e*P	**P**	**04 47 21.9**	**-0.3**
NAO01	**NORSAR Array S**	**85.94 331**	*e*P	**P**	**04 47 22.3**	**+0.1**
NBO00	**NORSAR Array S**	**86.00 331**	*e*P	**P**	**04 47 23.1**	**+0.6**
NBO00	**NORSAR Array S**	**86.00 331**	*e*P	**P**	**04 47 22.3**	**-0.2**
OSL	**Oslo**	**86.01 330**	*e*P	**P**	**04 47 23.0**	**+0.5**
OSL			*e*P	**P**	**04 47 23.5**	**+1.0**
NC204	**NORSAR Array S**	**86.01 331**	*e*P	**P**	**04 47 23.3**	**+0.7**
NC204	**NORSAR Array S**	**86.01 331**	*e*P	**P**	**04 47 22.7**	**+0.1**
VLC	**Villacollemand**	**86.15 314**	*e*P	**P**	**04 47 23.9**	**+0.3**
	comp=Z,58nm,0.8s					
FUORN	**Ofenpass-Fuorn**	**86.22 316**	*e*P	**P**	**04 47 24.9**	**+0.6**
	comp=Z,465nm,1.5s					
TBLU	**Trondheim**	**86.28 333**	*e*P	**P**	**04 47 22.9**	**-0.9**
KBS	**Kingsbay**	**86.30 349**	*e*P	**P**	**04 47 22.5**	**-1.1**
	comp=Z,640nm,2.0s					
KBS	**Kingsbay**	**86.30 349**	*e*P	**P**	**04 47 22.5**	**-1.1**
KBS			pmax	pmax		
	comp=Z,639nm,2.0s					
KBS	**Kingsbay**	**86.30 349⇑**	*i*P	**P**	**04 47 22.9**	**-0.7**
KBS		⇑	*i*P	**P**	**04 47 23.0**	**-0.6**
DAVA	**Damuels**	**86.48 317**	*i* P	**P**	**04 47 25.7**	**+0.4**
	comp=Z,243nm,1.4s,SNR=35					
DAVA			*e*SKSac	**SKSac**	**04 57 45.2**	**+2.4**
	comp=Z,651nm,4.6s					
DAVOX	**Davos/Dischmat**	**86.48 317**	P	**P**	**04 47 26.4**	**+0.9**
	comp=Z,172nm,0.5s,baz=149,slow=3.5,SNR=162					
DAVOX			S	**S**	**04 57 45.0**	**-8.5**
	comp=Z,13nm,1.1s,baz=211,slow=22,SNR=5.7					
DAVOX			LR	LR	05 31 19.7	
	comp=Z,410nm,20.8s,baz=73,slow=39					
KONO	**Kongsberg**	**86.58 329**	*e*P	**P**	**04 47 25.8**	**+0.5**
	comp=Z,161nm,0.7s					
KONO	**Kongsberg**	**86.58 329***c*	*i*P	**P**	**04 47 25.8**	**+0.5**
KONO			pmax	pmax		
	comp=Z,102nm,0.8s					
KONO	**Kongsberg**	**86.58 329**	*e*P	**P**	**04 47 25.7**	**+0.5**
KONO		⇑	*i*P	**P**	**04 47 26.0**	**+0.7**
MUD	**Monsted U'grnd**	**86.82 326⇑**	*i*P	**P**	**04 47 28.5**	**+2.0**
MUD	**Monsted U'grnd**	**86.82 326⇑**	*i*P	**P**	**04 47 28.5**	**+2.0**
MUD	**Monsted U'grnd**	**86.82 326**	*e*P	**P**	**04 47 27.8**	**+1.3**
DOMB	**Dombas**	**86.83 332**	*e*P	**P**	**04 47 27.1**	**+0.5**
TUE	**Stuetta**	**86.85 316**	*e*P	**P**	**04 47 27.4**	**+0.2**
	comp=Z,67nm,0.9s					
STU	**Stuttgart**	**86.92 319**	*e*P	**P**	**04 47 28.1**	**+0.9**
	comp=Z,62nm,0.6s					
STU			*e*pP	**pP**	**04 47 53.3**	**-0.6**
STU	**Stuttgart**	**86.92 319**	*e*P	**P**	**04 47 28.1**	**+0.9**
STU			*e**PP	**pP**	**04 47 53.3**	**-0.6**
STU			pmax	pmax		
	comp=Z,63nm,0.6s					
KEST	**Kesra**	**87.10 305**	P	**P**	**04 47 29.8**	**+1.3**
	comp=Z,130nm,0.9s,baz=222,slow=0.1,SNR=91					
KEST	**Kesra**	**87.10 305**	*e*P	**P**	**04 47 30.2**	**+1.6**
	comp=Z,200nm,1.0s					
HOMB	**Homborsund**	**87.16 328**	*e*P	**P**	**04 47 29.3**	**+1.2**
PGF	**Pioggiola**	**87.19 312**	*e*P	**P**	**04 47 30.0**	**+1.2**
PGF			pmax	pmax		
	comp=Z,45nm,0.6s					
SLE	**Schleitheim**	**87.41 318**	P	**P**	**04 47 31.0**	**+1.3**
VNDA	**Vanda**	**87.44 169**	P	**P**	**04 47 29.6**	**+0.5**
	comp=Z,9.0nm,0.6s,baz=302,slow=5.1,SNR=92					
VNDA			PKKPbc	**PKKPbc**	**05 05 19.9**	**-2.1**
	comp=Z,4.7nm,1.1s,baz=148,slow=1.6,SNR=8.5					
VNDA			PKPPKP	**P'P'df**	**05 13 24.3**	**-0.7**
	comp=Z,1.4nm,0.8s,baz=34,slow=2.8,SNR=5.4					
VNDA			LR	LR	05 20 50.2	
	comp=Z,993nm,21.8s,baz=314,slow=32					
VNDA	**Vanda**	**87.44 169**	*e*P	**P**	**04 47 29.2**	**+0.1**
	comp=Z,61nm,1.3s					
VNDA			PKKPbc	**PKKPbc**	**05 05 19.9**	**-2.1**
VNDA			P'P'		05 13 24.3	
GAMB	**Gambell**	**87.50 26**	*e*P	**P**	**04 47 30.4**	**+0.7**
	comp=Z,635nm,1.1s					
MOL	**Molde**	**87.53 332**	*e*P	**P**	**04 47 29.7**	**-0.1**
THTN	**Thala**	**87.64 305**	*e*P	**P**	**04 47 33.1**	**+2.0**
	comp=Z,157nm,1.0s					
AKN	**Aaknes**	**87.80 332**	*e*P	**P**	**04 47 32.2**	**+1.0**
LANF	**Langenberg**	**87.83 319**	P	**P**	**04 47 32.8**	**+1.2**
SNART	**Snartemo**	**87.84 328**	*e*P	**P**	**04 47 33.0**	**+1.6**
BLS5	**Blasjo**	**88.18 329**	*e*P	**P**	**04 47 34.4**	**+1.4**
CDF	**Champ du Feu**	**88.20 318**	*e*P	**P**	**04 47 33.2**	**-0.3**
CDF			pmax	pmax		
	comp=Z,93nm,1.5s					
HYA	**Hoyanger**	**88.23 331**	*e*P	**P**	**04 47 34.9**	**+1.7**
SENIN	**Lac Senin/Sane**	**88.27 316**	*e*P	**P**	**04 47 34.6**	**+0.5**
	comp=Z,86nm,0.8s					
SBF	**Sospel**	**88.29 314**	*e*P	**P**	**04 47 34.0**	**0.0**
SBF			pmax	pmax		
	comp=Z,113nm,0.6s					
ECH	**Echery**	**88.29 318**	*e*P	**P**	**04 47 33.8**	**0.0**
	comp=Z,93nm,1.3s					
ECH	**Echery**	**88.29 318**	*e*P	**P**	**04 47 33.8**	**0.0**
ECH			pmax	pmax		
	comp=Z,93nm,1.3s					
WTSB	**Winterswijk**	**88.34 322**	*e*P	**P**	**04 47 34.8**	**+0.9**
	comp=Z,190nm,0.8s					
WTSB			*e*pP	**pP**	**04 47 58.7**	**-2.0**
WTSB			*e*sP	**sP**	**04 48 08.0**	**-3.6**
SPIA	**Saint Paul Isl**	**88.50 33**	*e*P	**P**	**04 47 36.5**	**+1.9**
	comp=Z,3µm,1.7s					
HINF	**Hinteralfeld**	**88.51 318**	*e*P	**P**	**04 47 34.2**	**-0.7**
HINF			pmax	pmax		
	comp=Z,172nm,2.2s					
SBA	**Scott Base**	**88.54 169**	*e*P	**P**	**04 47 36.0**	**+1.7**
	comp=Z,132nm,1.1s					
SBA	**Scott Base**	**88.54 169**	*e*P	**P**	**04 47 36.0**	**+1.7**
SBA			pmax	pmax		
	comp=Z,132nm,1.1s					
STAV	**Stavanger**	**88.59 329**	*e*P	**P**	**04 47 36.3**	**+1.4**
STAV			*e*P	**PcP**	**04 47 36.8**	**+0.3**
BER	**Bergen**	**88.69 330**	*e*P	**P**	**04 47 37.7**	**+2.3**
LPG	**La Plagne**	**88.70 315**	*e*P	**P**	**04 47 36.3**	**+0.1**
LPG			pmax	pmax		
	comp=Z,95nm,0.9s					
LPL	**La Plagne**	**88.71 315**	*e*P	**P**	**04 47 36.3**	**+0.2**
LPL			pmax	pmax		
	comp=Z,65nm,0.6s					
ASK	**Askoy**	**88.75 330**	*e*P	**P**	**04 47 36.5**	**+0.9**
BNI	**Bardonecchia**	**88.77 315**	*e*P	**P**	**04 47 36.7**	**+0.4**
	comp=Z,55nm,0.8s					
BNI	**Bardonecchia**	**88.77 315**	*e*P	**P**	**04 47 36.7**	**+0.4**
BNI			pmax	pmax		
	comp=Z,55nm,0.8s					
HAU	**Haudompre**	**88.84 318**	*e*P	**P**	**04 47 36.3**	**-0.1**
HAU			pmax	pmax		
	comp=Z,98nm,1.1s					
FRF	**La Foret Royal**	**88.87 313**	*e*P	**P**	**04 47 36.9**	**+0.3**
FRF			pmax	pmax		
	comp=Z,72nm,0.6s					
WLF	**Walferdange**	**88.88 319**	⇑P	**P**	**04 47 38.0**	**+1.6**
	comp=Z,112nm,1.3s					
WLF	**Walferdange**	**88.88 319**	*e*P	**P**	**04 47 38.1**	**+1.6**
	comp=Z,154nm,1.1s					
WLF	**Walferdange**	**88.88 319**	*e*P	**P**	**04 47 38.1**	**+1.6**
WLF			pmax	pmax		
	comp=Z,154nm,1.1s					
MEM	**Membach**	**88.91 320**	⇑P	**P**	**04 47 37.5**	**+0.9**
	comp=Z,91nm,1.0s					
MEM	**Membach**	**88.91 320**	*e*P	**P**	**04 47 37.6**	**+0.9**
SUE	**Sulen**	**88.92 331**	*e*P	**P**	**04 47 38.0**	**+1.5**
HGN	**Heimansgroeve**	**88.95 321**	*e*P	**P**	**04 47 37.4**	**+0.5**
	comp=Z,314nm,1.7s					
HGN			*e*pP	**pP**	**04 48 05.2**	**+1.6**
HGN			*e*PP	PKiKP	04 51 56.8	-39
HGN			*e*S	**S**	**04 58 18.3**	**+1.9**
HGN			*e*SS	SS	05 03 33.5	-38
CABF	**La Chapelle**	**89.10 316**	*e*P	**P**	**04 47 38.0**	**+0.2**
CABF			pmax	pmax		
	comp=Z,69nm,0.8s					
BEBN	**Eben Emael**	**89.11 321**	⇑P	**P**	**04 47 38.9**	**+1.3**
ORIF	**Oris-en-Rattie**	**89.34 315**	*e*P	**P**	**04 47 39.3**	**+0.3**
ORIF			pmax	pmax		
	comp=Z,61nm,0.8s					
BCLA	**Clavier**	**89.38 320**	⇑P	**P**	**04 47 39.5**	**+0.7**
	comp=Z,70nm,1.4s					
NIKH	**Nikolski High**	**89.58 37**	*e*P	**P**	**04 47 39.9**	**+0.1**
	comp=Z,2µm,1.9s					
GIVF	**Givet**	**89.70 320**	*e*P	**

DAG Danmarks Havn 92.99 348⇑ *i* P P 04 47 54.4 -0.7
comp=Z,3µm,26.0s
DAG Danmarks Havn 92.99 348⇑ *i* P P 04 47 54.4 -0.7
DAG MLR MLR
comp=Z,3µm,26.0s
LDF La Druitiere 93.08 319 *e*P P 04 47 56.3 +0.2
LDF pmax pmax
comp=Z,71nm,0.8s
GRR Gorron 93.59 319 *e*P P 04 47 58.7 +0.3
GRR pmax pmax
comp=Z,43nm,1.0s
EDI Edinburgh 93.74 326 *e*P P 04 48 00.4 +1.5
EKA Eskdalemuir Ar 93.83 326 LR LR 05 35 35.8
comp=Z,605nm,21.2s,baz=40,slow=39
ESK Eskdalemuir 93.86 326 *e*P P 04 48 00.6 +1.1
comp=Z,72nm,0.9s
ESK Eskdalemuir 93.86 326 *e*P P 04 48 00.6 +1.1
ESK pmax pmax
comp=Z,73nm,0.9s
ESK Eskdalemuir 93.86 326 *e*P P 04 47 59.4 -0.1
SDPT Sand Point 94.14 34 *e*P P 04 48 00.4 -0.4
comp=Z,373nm,1.0s
KPL Plockton 94.78 328 *e*P P 04 48 05.0 +1.4
CHGN Chignik 95.07 33 *e*P P 04 48 04.0 -1.0
comp=Z,128nm,0.9s
QUIF Quistinic 95.20 318 *e*P P 04 48 05.4 -0.4
QUIF pmax pmax
comp=Z,15nm,0.6s
CART Cartagena 95.24 308 *e*P P 04 48 07.6 +1.4
comp=Z,40nm,0.8s
TOLK Toolik Lake Re 95.26 20 P **P 04 48 06.3 +0.7**
baz=292
TOLK Toolik Lake Re 95.26 20 *e*P P 04 48 06.4 +0.7
comp=Z,967nm,1.9s
TOA0 Torodi Ar. Sit 95.37 283 *e*P P 04 48 07.7 +0.4
comp=Z,69nm,1.3s
TORD Torodi Ar. Bea 95.37 283 P **P 04 48 07.2 0.0**
comp=Z,12nm,0.8s,baz=88,slow=3.6,SNR=70
TORD PP **PP 04 52 04.5 +5.3**
comp=Z,8.1nm,0.9s,baz=75,slow=6.9,SNR=4.4
TORD PKKPbc **PKKPdf 05 05 00.4 +0.6**
comp=Z,1.7nm,0.5s,baz=308,slow=2.0,SNR=25
TORD LR LR 05 30 45.9
comp=Z,978nm,18.8s,baz=110,slow=35
COLD Coldfoot 95.57 21 *e*P P 04 48 07.9 +0.8
comp=Z,440nm,1.8s
MLY Manley 96.16 23 *e*P P 04 48 10.2 +0.4
comp=Z,469nm,1.8s
CAST Castle Rocks 96.16 25 *e*P P 04 48 10.4 +0.5
comp=Z,424nm,1.6s
SNAA Sanae 96.22 198 P **P 04 48 10.8 +0.8**
SNAA Sanae 96.22 198 PKKPbc PKKPbc 05 04 55.7 -3.6
comp=Z,9.0nm,0.7s,baz=260,slow=2.6,SNR=19
SNAA LR LR 05 23 47.5
comp=Z,688nm,20.2s,baz=86,slow=30
SNAA Sanae 96.22 198 *e*P P 04 48 12.1 +2.1
comp=Z,20nm,1.3s
SNAA PKKPbc **PKKPbc 05 04 55.7 -3.6**
SNAA Sanae 96.22 198 *i* P P 04 48 11.0 +1.0
SNAA pmax pmax
comp=Z,375nm,1.1s
PPLA Purkeypile 96.28 26 *e*P P 04 48 10.9 +0.2
comp=Z,326nm,1.7s
RSO Redoubt South 96.81 28 *e*P P 04 48 13.7 +0.6
SKT Skwentna 96.88 26 *e*P P 04 48 12.7 -0.5
comp=Z,381nm,1.7s
TRF Thorofare Moun 96.90 25 *e*P P 04 48 13.7 +0.3
comp=Z,370nm,1.6s
BWN Browne 96.98 24 *e*P P 04 48 16.6 +3.1
comp=Z,734nm,1.9s
ES19 SONSECA Array 97.16 310 *e*P Pdif 04 48 15.8 +0.7
MDM Murphy Dome 97.17 23 *e*P Pdif 04 48 15.1 +0.6
comp=Z,248nm,1.8s
ESDC Sonseca Array 97.21 310 P Pdif 04 48 16.1 +0.8
comp=Z,6.4nm,0.6s,baz=59,slow=4.2,SNR=30
ESDC PP **PP 04 52 14.2 +1.6**
comp=Z,4.0nm,0.7s,baz=71,slow=7.2,SNR=6.0
ESDC PKKP **PKKPbc 05 04 55.8 +0.4**
comp=Z,1.1nm,0.9s,baz=294,slow=1.5,SNR=5.2
ESDC LR LR 05 39 44.6
comp=Z,250nm,18.0s,baz=105,slow=40
ESLA Sonseca Array 97.21 310 *e*P Pdif 04 48 16.5 +1.2
comp=Z,11nm,0.9s
COLA College 97.35 23 *e*P Pdif 04 48 16.4 +1.2
comp=Z,93nm,1.5s
MCK McKinley 97.36 24 *e*P Pdif 04 48 15.7 +0.3
comp=Z,691nm,1.9s
MCK McKinley 97.36 24 *e*P Pdif 04 48 15.7 +0.3
MCK pmax pmax
comp=Z,691nm,1.9s
SUA Susitna One 97.41 27 *e*P Pdif 04 48 15.8 0.0
comp=Z,129nm,1.0s
WRH Wood River Hil 97.42 24 *e*P Pdif 04 48 15.6 +0.1
comp=Z,268nm,1.8s
CCB Clear Creek Bu 97.46 23 *e*P P 04 48 14.5 -1.1
comp=Z,131nm,1.7s
RND Reindeer 97.52 25 *e*P Pdif 04 48 16.4 +0.2
comp=Z,655nm,2.0s
PAB San Pablo 97.53 310 *e*P Pdif 04 48 17.2 +0.5
comp=Z,31nm,1.4s
OHAK Old Harbor 97.55 31 *e*P Pdif 04 48 16.4 +0.2
comp=Z,464nm,1.9s
FYU Fort Yukon 97.63 21 *e*P Pdif 04 48 17.3 +0.9
comp=Z,777nm,2.0s
KDAK Kodiak Island 97.74 31 P Pdif 04 48 17.2 +0.1
comp=Z,44nm,0.6s,baz=272,slow=3.3,SNR=90
KDAK PP **PP 04 52 12.6 -3.3**
comp=Z,11nm,0.7s,baz=288,slow=6.9,SNR=3.6
KDAK S **SKSac 04 58 44.6 -0.6**
comp=Z,22nm,1.2s,baz=84,slow=9.3,SNR=16
KDAK Kodiak Island 97.74 31 *e*P Pdif 04 48 17.2 +0.1
comp=Z,295nm,1.8s
KDAK PP **PP 04 52 12.6 -3.3**
KDAK S **SKSac 04 58 44.6 -0.6**
ILAR Eielson Array 97.77 23 P **P 04 48 15.9 -1.1**
comp=Z,9.5nm,0.5s,baz=289,slow=3.6,SNR=156
ILAR PP **PP 04 52 13.6 -2.5**
comp=Z,5.2nm,0.6s,baz=297,slow=6.7,SNR=9.5
ILAR S **SKSac 04 58 44.5 -0.7**
comp=Z,1.4nm,0.9s,baz=292,slow=3.8,SNR=5.8
ILAR PKKPbc **PKKPbc 05 04 51.3 -3.4**
comp=Z,3.7nm,0.9s,baz=150,slow=2.3,SNR=14
ILAR LR LR 05 38 08.3
comp=Z,1µm,18.2s,baz=298,slow=39
ILAR Eielson Array 97.77 23 P **P 04 48 16.0 -1.1**
ILAR 04 52 13.6
ILAR S **SKSac 04 58 44.5 -0.7**
ILAR pmax pmax
comp=Z,9.0nm,0.5s
ILAR smax smax
comp=N,1.0nm,0.9s
ILB Eielson Array 97.77 23 *e*P P 04 48 15.6 -1.5
CNPM China Poot 97.84 29 *e*P P 04 48 17.5 -0.1
comp=N,346nm,1.8s
BRLK Bradley Lake 97.93 28 *e*P P 04 48 17.6 -0.4
comp=N,78nm,0.8s
RC01 Rabbit Creek A 97.99 27 *e*P Pdif 04 48 18.3 +0.1
comp=N,393nm,1.8s
PMR Palmer 98.08 26 *e*P P 04 48 18.4 -0.1
comp=N,330nm,1.8s
PMR Palmer 98.08 26 *e*P P 04 48 18.4 -0.1
PMR pmax pmax
comp=Z,330nm,1.8s
GHO Glory Hole Cre 98.11 26 *e*P Pdif 04 48 19.8 +1.0
comp=Z,256nm,1.8s
VNA1 Neumayer--Stat 98.15 199 Pdiff Pdif 04 48 21.4 +2.7
DHY Denali Highway 98.27 25 *e*P Pdif 04 48 20.0 +0.4
comp=Z,241nm,1.9s
VNA3 Neumayer Olymp 98.44 198 Pdiff Pdif 04 48 25.7 +5.7
VAL Valentia 98.73 323 *e*P Pdif 04 48 22.6 +1.0
VAL Valentia 98.73 323 *i* S S 04 59 45.1 +2.5
RIDG Independ'e Rid 99.02 24 *e*P Pdif 04 48 22.4 -0.4
comp=Z,45nm,0.6s
PAX Paxson 99.10 24 *e*P Pdif 04 48 24.1 +0.9
comp=Z,211nm,1.8s
PAX Paxson 99.10 24 *e*P Pdif 04 48 24.1 +0.9
PAX pmax pmax
comp=Z,211nm,1.8s
MVO Moncorvo 99.22 312 *e*Pdif Pdif 04 48 30.5 +6.3
MVO Moncorvo 99.22 312 *e*SKS SKSac 04 58 56.7 +3.1
MVO Moncorvo 99.22 312 *e*LQ LQ 05 19 21.5
MVO *e*LR LR 05 23 29.7
comp=Z,487nm,20.0s
SCRK Sand Creek 99.25 23 *e*P Pdif 04 48 23.8 -0.1
comp=Z,28nm,0.7s
BORG Borgarnes 99.34 338 LR LR 05 38 22.9
comp=Z,441nm,18.5s,baz=58,slow=38

DOT Dot Lake 99.37 24 *e*Pdif Pdif 04 48 25.1 +0.8
comp=Z,69nm,0.6s
SUMG Summit 99.68 348⇑ *i* P Pdif 04 48 26.3 +0.3
SUMG Summit 99.68 348 *e*Pdif Pdif 04 48 26.2 +0.2
comp=Z,384nm,2.0s
SUMG Summit 99.68 348⇑ *i* P Pdif 04 48 26.3 +0.3
POLO Lamas de Olo 99.74 313 *e*Pdif Pdif 04 48 32.1 +5.5
MTE Manteigas 99.77 312 *e*Pdif Pdif 04 48 30.3 +3.6
MTE Manteigas 99.77 312 *e*SKS SKSac 04 58 57.7 +1.4
MTE Manteigas 99.77 312 *e*LQ LQ 05 19 35.1
MTE *e*LR LR 05 23 40.0
comp=Z,415nm,22.0s
PBAR Barrancos 99.85 309 *e*Pdif Pdif 04 48 30.5 +3.5
PMRV Marv??o 99.86 311 *e*Pdif Pdif 04 48 30.9 +3.9
PMRV Marv??o 99.86 311 *e*SKS SKSac 04 58 56.1 -0.6
PGAV Gavieira, Arco 99.96 313 *e*Pdif Pdif 04 48 33.7 +6.2
PGAV Gavieira, Arco 99.96 313 *e*SKS SKSac 04 58 59.9 +2.7
PGAV Gavieira, Arco 99.96 313 *e*LQ LQ 05 20 17.8
PGAV *e*LR LR 05 24 03.9
comp=Z,418nm,18.0s
EGAK Eagle 99.96 22 *e*Pdif Pdif 04 48 27.6 +0.8
PESTR Estremoz 100.13 310 *e*Pdif Pdif 04 48 36.1 +7.9
BMRM Bremner River 100.33 26 *e*Pdif Pdif 04 48 29.4 +0.7
PBEJ Beja 100.52 309 *e*Pdif Pdif 04 48 40.8 +11
EVO Evora 100.52 310 *e*Pdif Pdif 04 48 32.8 +2.8
PVAQ Vaqueiros 100.53 309 *e*Pdif Pdif 04 48 32.9 +2.9
PVAQ Vaqueiros 100.53 309 *e*SKS SKSac 04 58 59.9 -0.1
INK Inuvik 100.56 17 P **Pdif 04 48 29.3 -0.1**
comp=Z,6.6nm,0.6s,baz=314,slow=5.9,SNR=31
INK PP **PP 04 52 36.7 -0.3**
comp=Z,14nm,1.1s,baz=288,slow=6.5,SNR=6.3
INK PKiKP **PKiKP 04 52 55.1 -0.2**
comp=Z,14nm,0.9s,baz=359,slow=2.6,SNR=8.8
INK PKKPbc **PKKPbc 05 04 44.0 -2.9**
comp=Z,2.6nm,1.0s,baz=244,slow=2.9,SNR=4.1
PCAS Casmilo, Conde 100.56 311 *e*Pdif Pdif 04 48 34.1 +4.0
PMTG Montargil 100.57 310 *e*Pdif Pdif 04 48 41.2 +11
PBDV Barranco-do-Ve 100.73 309 *e*Pdif Pdif 04 48 40.8 +10
PCVE Castro Verde 100.73 309 *e*Pdif Pdif 04 48 36.9 +6.0
KOWA Kowa 100.78 285 P **Pdif 04 48 32.1 +0.6**
comp=Z,10nm,0.9s,baz=75,slow=5.6,SNR=10
ALMR Almeirim 100.82 311 *e*P Pdif 04 48 30.8 -0.4
ALMR *e*SKS 04 59 00.7
ALMR Almeirim 100.82 311 *e*Pdif Pdif 04 48 40.3 +9.1
MESJ Messejana 100.83 309 *e*P Pdif 04 48 30.7 -0.6
MESJ *e*SKS 04 59 00.7
MESJ Messejana 100.83 309 *e*Pdif Pdif 04 48 37.6 +6.3
DAWY Dawson 100.98 22 *e*Pdif Pdif 04 48 32.1 +0.6
PNCL Nicolau / Gran 101.01 310 *e*Pdif Pdif 04 48 39.6 +7.5
KULLO Kullorsuaq 101.09 353⇑ *i* P Pdif 04 48 31.7 0.0
comp=Z,2µm,21.0s
KULLO Kullorsuaq 101.09 353⇑ *i* P Pdif 04 48 31.7 0.0
KULLO MLR MLR
comp=Z,2µm,21.0s
MORF Marmelete 101.28 309 *e*P Pdif 04 48 32.7 -0.7
MORF *e*SKS 04 59 03.0
MORF Marmelete 101.28 309 *e*Pdif Pdif 04 48 34.0 +0.6
LIS Lisbon 101.35 310 *e*P Pdif 04 48 33.0 -0.7
PMST Lisbon--Monsan 101.37 310 *e*Pdif Pdif 04 48 41.2 +7.5
PMAFR Mafra 101.40 311 *e*Pdif Pdif 04 48 42.0 +8.1
PFVI Vila Bisbo 101.45 309 *e*Pdif Pdif 04 48 41.6 +7.5
RES Resolute Bay 102.04 3 P **Pdif 04 48 36.8 +0.9**
comp=Z,13nm,0.8s,baz=332,slow=3.9,SNR=27
RES Resolute Bay 102.04 3 *e*Pdif Pdif 04 48 37.1 +1.2
RES Resolute Bay 102.04 3 *e*P Pdif 04 48 37.1 +1.2
DBIC Dimbokro 102.31 277 P **Pdif 04 48 39.0 +0.6**
comp=Z,4.9nm,0.6s,baz=60,slow=4.1,SNR=6.3
ILULI Ilulissat 104.89 349 *i* P Pdif 04 48 48.7 0.0
comp=Z,2µm,27.0s
ILULI Ilulissat 104.89 349 *i* P Pdif 04 48 48.7 0.0
ILULI MLR MLR
comp=Z,2µm,27.0s
SFJD Kangerlussuaq 106.67 348⇑ *i* P Pdif 04 48 56.5 -0.2
comp=Z,2µm,24.0s
SFJD Kangerlussuaq 106.67 348 *e*PKP PKiKP 04 53 07.4 +0.9
SFJD Kangerlussuaq 106.67 348⇑ *i* P Pdif 04 48 56.5 -0.2
SFJD MLR MLR
comp=Z,2µm,24.0s
DLBC Dease Lake 107.92 24 *e*Pdif Pdif 04 49 03.1 +0.6
comp=Z,73nm,2.0s
DLBC *e*PKP **PKiKP 04 53 09.2 0.0**
YKA Yellowknife Ar 110.18 15 Pdiff **Pdif 04 49 15.0 +2.7**
comp=Z,1.7nm,0.6s,baz=331,slow=5.0,SNR=6.9
YKA PKiKP **PKiKP 04 53 13.0 -0.2**
comp=Z,5.4nm,0.8s,baz=327,slow=1.9,SNR=14
YKA PP **PP 04 53 42.5 -5.4**
comp=Z,11nm,0.7s,baz=331,slow=7.9,SNR=6.7
YKA PKKPbc **PKKPbc 05 04 14.0 -3.4**
comp=Z,2.5nm,0.9s,baz=136,slow=3.2,SNR=8.0
TBI Tubuai 111.94 114 *e*PP PP 04 53 58.7 -3.7
comp=Z,393nm,25.2s
TBI *e*Sdif Sdif 05 01 37.3 +3.2
comp=Z,1µm,28.8s
TBI Tubuai 111.94 114 *e*PS PS 05 03 33.5 -3.5
comp=Z,955nm,30.2s
TBI *e*SS SS 05 09 34.0 +1.5
comp=Z,2µm,26.2s
TBI Tubuai 111.94 114 *e*LQ LQ 05 22 02.2
comp=Z,4µm,42.5s
TBI *e*LR LR 05 26 49.3
comp=Z,3µm,35.0s
PPT2 Papeete2 112.35 108 *e*Pdif Pdif 04 49 21.1 -2.0
comp=Z,115nm,25.0s
PPT2 Papeete2 112.35 108 *e*PP PP 04 54 00.3 -5.3
comp=Z,455nm,23.2s
PPT2 *e*Sdif Sdif 05 01 34.4 -3.5
comp=Z,1µm,26.5s
PPT2 Papeete2 112.35 108 *e*PS PS 05 03 35.4 -5.8
comp=Z,1µm,28.0s
PPT2 Papeete2 112.35 108 *e*LQ LQ 05 22 21.9
comp=Z,6µm,42.2s
PPT2 *e*LR LR 05 27 08.5
comp=Z,3µm,30.5s
PSMN Pico do Norte, 113.83 313 *e*SP SP 05 03 40.0 -1.2
CMLA Cha da Macela 113.85 314 *e*SP SP 05 03 39.5 -1.9
PGRA Graciosa 115.05 316 *e*SP SP 05 03 44.8 -7.4
ROSA Rosais 115.37 316 *e*SP SP 05 03 52.3 -2.9
LLLB Lillooet 116.67 27 *e*PKPdf PKPdf 04 53 26.6 +0.5
PGC Sidney 117.27 30 *e*PKPdf PKPdf 04 53 27.9 +0.8
A04D Lummi Island 117.58 29 PKiKP **PKiKP 04 53 28.2 +0.4**
baz=313
FCC Fort Churchill 117.69 7 *e*PKPdf PKPdf 04 53 27.4 -0.2
FCC Fort Churchill 117.69 7 *e*PKIKP PKPdf 04 53 27.5 -0.2
NLWA Neilton Lookou 117.89 31 *e*PKPdf PKPdf 04 53 29.7 +1.2
B05A Bryant 118.19 29 PKiKP **PKiKP 04 53 29.4 +0.4**
baz=313
B06A Marblemount 118.31 29 *e*PKPdf PKPdf 04 53 29.4 +0.2
E03A Lebam 118.61 31 *e*PKPdf PKPdf 04 53 30.9 +1.1
D05A Enumclaw 118.98 30 *e*PKPdf PKPdf 04 53 31.4 +0.9
F03A Seaside 119.01 32 *e*PKPdf PKPdf 04 53 32.0 +1.4
F04D Rainier, OR 119.20 31 PKiKP **PKiKP 04 53 31.6 +0.6**
baz=312
LON Longmire 119.37 30 *e*PKPdf PKPdf 04 53 31.8 +0.4
LON Longmire 119.37 30 *e*PKIKP PKPdf 04 53 31.8 +0.4
B08A Colville Reser 119.44 28 *e*PKPdf PKPdf 04 53 31.4 -0.1
LTY Liberty 119.58 29 *e*PKPdf PKPdf 04 53 31.7 -0.1
G03D McMinnville, O 119.64 32 PKiKP **PKiKP 04 53 32.5 +0.5**
baz=311
COR Corvallis 120.03 33 *e*PKPdf PKPdf 04 53 34.1 +1.5
FFC Flin Flon 120.16 13 *e*PKPdf PKPdf 04 53 32.1 -0.5
FFC Flin Flon 120.16 13 *e*PKIKP PKPdf 04 53 32.1 -0.5
C09A Chrisman Ranch 120.33 27 *e*PKPdf PKPdf 04 53 33.5 +0.3
NEW Newport 120.51 26 PKP **PKPdf 04 53 33.6 +0.1**
comp=Z,43nm,0.8s,baz=281,slow=2.4,SNR=33
NEW Newport 120.51 26 PKiKP **PKPdf 04 53 33.6 +0.1**
baz=318
NEW SKSac **SKSac 05 00 21.2 -0.9**
baz=318
KEBM Edson Butte 120.54 35 *e*PKPdf PKPdf 04 53 35.4 +1.6
H04A Detroit Lake 120.56 32 *e*PKPdf PKPdf 04 53 33.9 +0.2
D08A Wollman Farm, 120.57 28 *e*PKPdf PKPdf 04 53 34.0 +0.4
I03D Drain, OR 120.58 34 PKiKP **PKiKP 04 53 34.4 +0.6**
baz=310
G05D Wamic, OR 120.64 31 PKiKP **PKiKP 04 53 34.2 +0.3**
baz=313
HAWA Hanford 120.75 29 *e*PKPdf PKPdf 04 53 35.1 +1.1
HAWA *e*SKPdf **SKiKP 04 57 00.9 +0.1**
F07A Phinny Hill Vi 120.90 30 *e*PKPdf PKPdf 04 53 35.5 +1.2
E08A Dider Farm, El 120.91 29 *e*PKPdf PKPdf 04 53 35.0 +0.7
SCHQ Schefferville 121.00 350 PKP **PKPdf 04 53 34.3 +0.1**
comp=Z,16nm,0.5s,baz=243,slow=14,SNR=10
SCHQ PP **PP 04 55 02.4 -1.4**
comp=Z,36nm,1.0s,baz=27,slow=7.0,SNR=8.6
G06A Carlson Farm, 121.00 31 *e*PKPdf PKPdf 04 53 35.5 +0.9

I04A Tendick Farm, 121.03 33 PKiKP **PKiKP 04 53 34.7 -0.1**
baz=311
I05D Terrebonne, OR 121.24 32 PKiKP **PKiKP 04 53 35.7 +0.5**
baz=312
WALA Waterton Lakes 121.26 24 *e*PKPdf PKPdf 04 53 35.0 -0.1
E09A Wood Farm, Sta 121.33 28 *e*PKPdf PKPdf 04 53 35.7 +0.6
L02D Cave Junction, 121.41 35 PKiKP **PKiKP 04 53 36.1 +0.5**
baz=309
HUMO Hull Mountain 121.50 35 *e*PKPdf PKPdf 04 53 36.0 +0.5
HUMO *e*SKPdf **SKiKP 04 57 03.0 +0.6**
J04D Umpqua Nationa 121.56 33 PKiKP **PKiKP 04 53 36.3 +0.3**
baz=311
G08A Pilot Rock 121.81 30 *e*PKPdf PKPdf 04 53 37.0 +0.8
PINE Pine Mountain 121.83 32 *e*PKPdf PKPdf 04 53 37.4 +1.0
JCC Jacoby Creek, 122.00 37 *e*PKPdf PKPdf 04 53 38.2 +1.7
J05D Fort Rock, OR 122.01 33 PKiKP **PKiKP 04 53 37.4 +0.5**
baz=312
TAOE Nuku Hiva Isla 122.01 99 *e*PP PP 04 55 14.0 +1.0
comp=Z,506nm,23.8s
TAOE Nuku Hiva Isla 122.01 99 *e*PS PS 05 05 06.0 -2.7
comp=Z,2µm,25.2s
TAOE Nuku Hiva Isla 122.01 99 *e*LQ LQ 05 26 17.7
comp=Z,1µm,31.2s
TAOE *e*LR LR 05 31 32.7
comp=Z,2µm,32.6s
JTMT Jette 122.14 25 *e*PKPdf PKPdf 04 53 37.1 +0.3
KHMM Horse Mountain 122.14 37 *e*PKPdf PKPdf 04 53 38.2 +1.2
F10A Beach Ranch, E 122.16 28 *e*PKPdf PKPdf 04 53 37.1 +0.3
K04D Chiloquin, OR 122.16 34 PKiKP **PKiKP 04 53 37.6 +0.4**
baz=311
YBH Yreka Blue Hor 122.20 35 PKP **PKPdf 04 53 37.1 +0.1**
comp=Z,8.9nm,0.5s,baz=38,slow=2.8,SNR=32
YBH PP **PP 04 55 11.4 -1.3**
comp=Z,2.3nm,0.8s,baz=340,slow=4.9,SNR=3.4
YBH PKKPbc **PKKPab 05 03 32.5 -2.2**
comp=Z,2.7nm,0.7s,baz=85,slow=6.3,SNR=9.9
M02C Callahan 122.33 36 PKiKP **PKiKP 04 53 38.2 +0.7**
baz=310
I07A Izee 122.38 31 *e*PKPdf PKPdf 04 53 38.5 +1.1
KMRM Mail Ridge 122.56 37 *e*PKPdf PKPdf 04 53 39.3 +1.5
K05A Summer Lake 122.57 33 *e*PKPdf PKPdf 04 53 38.9 +1.1
M04C Macdoel 122.66 35 PKiKP **PKiKP 04 53 38.4 +0.2**
baz=311
N02D Trinity Center 122.68 36 PKiKP **PKiKP 04 53 38.7 +0.6**
baz=310
BMO Blue Mountains 122.94 29 *e*PKPdf PKPdf 04 53 37.7 -0.7
BMO Blue Mountains 122.94 29 *e*PKIKP PKPdf 04 53 37.7 -0.7
KCPM Cahto Peak 122.96 38 *e*PKPdf PKPdf 04 53 40.0 +1.4
MSO Missoula 123.00 26 PKiKP **PKPdf 04 53 38.2 -0.2**
baz=321
MSO Missoula 123.00 26 *e*PKPdf PKPdf 04 53 37.6 -0.8
WDC Whiskeytown Da 123.03 36 *e*PKPdf PKPdf 04 53 38.8 +0.2
WDC Whiskeytown Da 123.03 36 *e*PKIKP PKPdf 04 53 38.8 +0.2
J08A Circle Bar Ran 123.42 31 *e*PKPdf PKPdf 04 53 40.3 +1.0
MOD Modoc Plateau 123.44 34 *e*PKPdf PKPdf 04 53 40.4 +0.9
O03D Paynes Creek 123.65 36 PKiKP **PKPdf 04 53 39.8 0.0**
baz=310
HOPS Hopland Field 123.70 38 *e*PKPdf PKPdf 04 53 41.2 +1.3
EGMT Eagleton 123.72 22 PKiKP **PKiKP 04 53 40.0 0.0**
baz=326
EGMT Eagleton 123.72 22 *e*PKPdf PKPdf 04 53 40.5 +0.7
HRY Holter Researc 123.98 24 *e*PKPdf PKPdf 04 53 40.7 +0.3
WVOR Wild Horse Val 123.98 32 *e*PKPdf PKPdf 04 53 41.4 +0.9
WVOR Wild Horse Val 123.98 32 *e*PKIKP PKPdf 04 53 41.4 +0.9
GDXM Geysers 123.99 38 *e*PKPdf PKPdf 04 53 42.0 +1.4
ORV Oroville 124.30 36 *e*PKPdf PKPdf 04 53 41.5 +0.5
ORV Oroville 124.30 36 *e*PKIKP PKPdf 04 53 41.5 +0.5
MCCM Marconi Confer 124.34 39 *e*PKPdf PKPdf 04 53 42.2 +1.1
MFID Camas Ranch 124.72 29 *e*PKPdf PKPdf 04 53 43.0 +1.1
MFID *e*PP **PP 04 55 29.6 +0.1**
DLMT Dillon 124.73 26 *e*PKPdf PKPdf 04 53 42.4 +0.5
BEKR Beckworth 124.77 35 *e*PKPdf PKPdf 04 53 42.5 +0.4
BOZ Bozeman (W) 124.96 25 PKiKP **PKiKP 04 53 42.6 0.0**
baz=323
BOZ Bozeman (W) 124.96 25 *e*PKPdf PKiKP 04 53 42.6 0.0
MCMT McKenzie Canyo 125.04 26 *e*PKPdf PKPdf 04 53 43.2 +0.6
DGMT Dagmar 125.23 18 PKiKP **PKPdf 04 53 42.7 +0.2**
baz=333
DGMT Dagmar 125.23 18 *e*PKPdf PKPdf 04 53 42.8 +0.2
DGMT *e*PP **PP 04 55 32.4 -0.1**
HLID Hailey 125.29 28 PKiKP **PKiKP 04 53 43.9 +0.5**
baz=319
HLID Hailey 125.29 28 *e*PKPdf PKPdf 04 53 43.7 +0.6
PAHR Pah Rah Range 125.43 35 *e*PKPdf PKPdf 04 53 44.1 +0.7
VCNR Virginia City 125.55 36 *e*PKPdf PKPdf 04 53 45.0 +1.3
GCMT Greycliff 125.60 23 *e*PKPdf PKPdf 04 53 44.0 +0.5
ULM Lac du Bonnet 125.64 11 PKP **PKPdf 04 53 42.9 -0.4**
comp=Z,87nm,0.7s,baz=349,slow=2.8,SNR=98
ULM Lac du Bonnet 125.64 11 *e*PKPdf PKPdf 04 53 42.2 -1.0
QLMT Earthquake Lak 125.65 25 *e*PKPdf PKPdf 04 53 44.8 +1.1
PNTR Pine Nut 125.72 36 *e*PKPdf PKPdf 04 53 45.4 +1.4
YHB Horse Butte 125.82 25 *e*PKPdf PKPdf 04 53 45.3 +1.2
CMB Columbia Colle 125.94 37 *e*PKPdf PKPdf 04 53 44.6 +0.3
YMR Madison River 125.98 25 *e*PKPdf PKPdf 04 53 45.8 +1.4
YERR Yerington 126.00 36 *e*PKPpre PKPpre 04 53 34.6
YERR *e*PKPdf **PKiKP 04 53 45.8 +0.8**
SAO San Andreas Ge 126.09 39 *e*PKPdf PKPdf 04 53 45.5 +1.0
LAO LASA Array 126.13 20 PKiKP **PKiKP 04 53 45.4 +0.6**
baz=330
LAO LASA Array 126.13 20 *e*PKPdf PKPdf 04 53 44.5 +0.1
BMN Battle Mountai 126.14 33 *e*PKPdf PKPdf 04 53 45.5 +0.8
WAKR Walker 126.20 36 *e*PKPdf PKPdf 04 53 46.5 +1.6
RLMT Red Lodge 126.31 24 PKiKP **PKiKP 04 53 45.7 +0.3**
baz=326
RLMT Red Lodge 126.31 24 *e*PKPdf PKPdf 04 53 45.6 +0.6
RLMT *e*PP **PP 04 55 40.2 +0.2**
H17A Grant Village 126.37 25 PKiKP **PKiKP 04 53 46.7 +1.1**
baz=324
H17A Grant Village 126.37 25 *e*PKPdf PKPdf 04 53 45.8 +0.6
YPP Pitchstone Pla 126.37 25 *e*PKPdf PKPdf 04 53 47.1 +1.8
KVN Kaiserville 126.61 35 *e*PKPdf PKPdf 04 53 46.2 +0.5
IMW Indian Meadow 126.61 26 *e*PKPdf PKPdf 04 53 46.5 +0.8
A31A Linda, St. Vin 126.64 12 PKiKP **PKPdf 04 53 44.5 -0.6**
baz=341
RYN Ryan 126.65 35 *e*PKPdf PKPdf 04 53 47.7 +1.9
MOOW Moose Ponds 126.81 26 *e*PKPdf PKPdf 04 53 45.9 -0.1
NVAR Mina Array Bea 126.91 35 PKP **PKPdf 04 53 47.5 +1.1**
comp=Z,75nm,0.8s,baz=257,slow=1.3,SNR=4.7
NVAR PKKPbc **PKKPbc 05 03 16.5 -0.4**
comp=Z,1.4nm,0.7s,baz=116,slow=3.4,SNR=4.7
TPAW Teton Pass 126.93 26 *e*PKPdf PKPdf 04 53 45.5 -0.8
ELK Elko 126.97 31 PKP **PKPdf 04 53 48.9 +2.5**
comp=Z,46nm,0.7s,baz=344,slow=3.5,SNR=133
ELK PKKPbc **PKKPbc 05 03 17.4 +0.6**
comp=Z,1.6nm,0.8s,baz=173,slow=2.4,SNR=3.8
LOHW Long Hollow 126.98 26 *e*PKPdf PKPdf 04 53 46.7 +0.4
A33A Warroad 126.99 11 PKiKP **PKPdf 04 53 45.6 -0.3**
baz=343
NV11 Mina Array Sit 127.00 35 *e*PKPdf PKPdf 04 53 47.5 +1.1
B31A Greenbush Farm 127.02 13 PKiKP **PKPdf 04 53 45.3 -0.6**
baz=340
SNOW Snow King Moun 127.04 26 *e*PKPdf PKPdf 04 53 46.8 +0.3
OMMB Old Mammoth Mi 127.05 37 *e*PKPdf PKPdf 04 53 48.6 +1.9
REDW Red Top Meadow 127.08 26 *e*PKPdf PKPdf 04 53 47.1 +0.6
MDND Maddock 127.09 15 PKiKP **PKPdf 04 53 45.8 -0.3**
baz=338
MDND Maddock 127.09 15 *e*PKPdf PKPdf 04 53 46.9 +0.8
MLAC Mammoth, Mammt 127.13 37 PKiKP **PKiKP 04 53 47.6 +0.3**
baz=312
HVU Hansel Valley 127.43 29 *e*PKPdf PKPdf 04 53 47.7 +0.5
AHID Auburn Hatcher 127.44 27 *e*PKPdf PKPdf 04 53 48.0 +0.8
PAGB Antelope Grade 127.49 39 *e*PKPdf PKPdf 04 53 49.5 +2.3
AGMN Agassiz Nation 127.51 12 PKiKP **PKPdf 04 53 46.1 -0.8**
baz=343
AGMN Agassiz Nation 127.51 12 *e*PKPdf PKPdf 04 53 46.8 -0.1
B34A Aery, Baudette 127.56 11 PKiKP **PKPdf 04 53 46.5 -0.5**
baz=344
C31A Landman Farms, 127.59 13 PKiKP **PKPdf 04 53 46.6 -0.5**
baz=340
C32A Crookston 127.83 12 PKiKP **PKPdf 04 53 46.8 -0.7**
baz=342
B35A Bob, Littlefor 127.85 10 PKiKP **PKPdf 04 53 47.0 -0.5**
baz=345
B35A Bob, Littlefor 127.85 10 *e*PKPpre PKPpre 04 53 40.7
TIN Tinemaha, Big 127.88 37 PKiKP **PKPdf 04 53 48.3 +0.2**
baz=312
SMMC Simmler 127.91 40 PKiKP **PKiKP 04 53 48.9 +0.2**
baz=309
SPUT South Promonto 127.95 29 *e*PKPdf PKPdf 04 53 49.2 +1.0
BGU Big Grassy Mou 127.96 30 *e*PKPdf PKPdf 04 53 48.9 +0.7
C33A Trail 128.05 12 PKiKP **PKPdf 04 53 47.4 -0.5**
baz=343
BW06 Boulder Array 128.12 26 PKiKP **PKPdf 04 53 48.2 -0.3**
baz=324

BW06	Boulder Array	128.12	26	ePKPdf	PKPdf	04 53 48.0	-0.6
BW06				ePP	PP	04 55 49.0	-3.0
PD31	Pinedale Array	128.12	26	ePKPpre	PKPpre	04 53 41.2	
PDAR	Pinedale Array	128.12	26	PKP	PKPdf	04 53 49.0	+0.4
	comp=Z,25nm,0.6s,baz=166,slow=0.7,SNR=107						
PDAR				SKPbc	SKPbc	04 56 58.1	
	comp=Z,6.7nm,0.8s,baz=28,slow=0.9,SNR=5.5						
PDAR	Pinedale Array	128.12	26	ePKPpre	PKPpre	04 53 41.0	
PDAR				PKP	PKPdf	04 53 49.0	+0.4
PDAR				SKPbc	SKPbc	04 56 58.1	
HWUT	Hardware Ranch	128.14	28	ePKPdf	PKPdf	04 53 48.2	-0.3
VES	Vestal, Richgr	128.15	38	PKiKP	PKPdf	04 53 48.4	0.0
	baz=310						
PKM	Mcpherson Peak	128.29	40	PKiKP	PKiKP	04 53 49.9	+0.2
	baz=309						
C34A	RKJ Ranch, Bem	128.32	11	PKiKP	PKPdf	04 53 47.8	-0.7
	baz=344						
CWC	Cottonwood Cre	128.37	37	PKiKP	PKiKP	04 53 49.7	0.0
	baz=312						
GRAC	Grapevine Rang	128.43	36	PKiKP	PKPdf	04 53 49.2	+0.2
	baz=313						
C35A	Jirik Farms, M	128.44	10	PKiKP	PKPdf	04 53 48.0	-0.7
	baz=345						
R11A	Troy Canyon, C	128.51	34	PKiKP	PKiKP	04 53 50.1	+0.1
	baz=315						
R11A	Troy Canyon, C	128.51	34	ePKPdf	PKPdf	04 53 50.3	+1.0
C36A	Pine Crest Far	128.58	9	PKiKP	PKPdf	04 53 48.6	-0.4
	baz=346						
TCUT	Toone Canyon	128.59	28	ePKPdf	PKPdf	04 53 51.6	+2.1
EYMN	Ely	128.60	8	PKiKP	PKPdf	04 53 48.8	-0.2
	baz=348						
EYMN	Ely	128.60	8	ePKPpre	PKPpre	04 53 41.2	
EYMN				ePKPdf	PKiKP	04 53 49.5	-0.1
DUG	Dugway, Tooele	128.62	30	PKiKP	PKiKP	04 53 50.1	0.0
	baz=319						
DUG	Dugway, Tooele	128.62	30	ePKPdf	PKPdf	04 53 50.4	+1.0
ISA	Isabella, Lake	128.64	38	PKiKP	PKPdf	04 53 49.6	+0.1
	baz=311						
C37A	Embarrass	128.71	9	PKiKP	PKPdf	04 53 48.9	-0.3
	baz=347						
E31A	Nome	128.71	14	PKiKP	PKPdf	04 53 48.7	-0.5
	baz=340						
CTU	Camp Tracy	128.76	29	ePKPdf	PKPdf	04 53 50.9	+1.1
ARVC	Arvin	128.77	39	PKiKP	PKPdf	04 53 50.0	+0.3
	baz=310						
DAC	Darwin (Calif)	128.78	37	ePKPdf	PKPdf	04 53 48.4	-1.6
C38A	Sawbill Land.	128.85	8	PKiKP	PKPdf	04 53 49.0	-0.5
	baz=348						
C39A	Grand Marais	128.90	7	PKiKP	PKPdf	04 53 48.8	-0.7
	baz=350						
C40A	Isle Royale Na	128.92	6	PKiKP	PKPdf	04 53 49.3	-0.3
	baz=351						
C40A	Isle Royale Na	128.92	6	ePKPdf	PKPdf	04 53 49.8	+0.2
JLU	Jordanelle	128.97	29	ePKPdf	PKPdf	04 53 51.3	+1.0
MPMC	Manual Prospec	128.98	37	PKiKP	PKiKP	04 53 50.7	-0.3
	baz=312						
D35A	Remer	129.03	11	PKiKP	PKPdf	04 53 49.2	-0.7
	baz=345						
FURC	Furnace Creek,	129.08	36	PKiKP	PKiKP	04 53 51.0	+0.1
	baz=313						
D36A	Goodland	129.09	10	PKiKP	PKPdf	04 53 49.3	-0.6
	baz=346						
D36A	Goodland	129.09	10	ePKPpre	PKPpre	04 53 42.0	
TPNV	Topopah Spring	129.11	35	PKiKP	PKiKP	04 53 51.2	0.0
	baz=314						
TPNV	Topopah Spring	129.11	35	ePKPdf	PKPdf	04 53 51.4	+0.9
RSSD	Black Hills	129.12	20	PKiKP	PKPdf	04 53 50.0	-0.4
	baz=331						
RSSD	Black Hills	129.12	20	ePKPpre	PKPpre	04 53 43.9	
RSSD				ePKPdf	PKPdf	04 53 50.5	+0.1
OSI	Osito Audit: C	129.16	39	PKiKP	PKPdf	04 53 50.1	-0.4
	baz=310						
NLU	North Lily Min	129.17	30	ePKPdf	PKPdf	04 53 51.8	+1.2
E33A	Westby DABS, E	129.19	12	PKiKP	PKPdf	04 53 49.9	-0.3
	baz=342						
D37A	Cotton	129.23	9	PKiKP	PKPdf	04 53 49.9	-0.3
	baz=347						
LRMC	Laurel Mtn Rad	129.25	38	PKiKP	PKiKP	04 53 51.3	-0.2
	baz=312						
BLG	Laguna Peak, P	129.26	40	PKiKP	PKiKP	04 53 51.1	-0.3
	baz=309						
PSUT	Pine Spring	129.32	32	ePKPdf	PKPdf	04 53 51.9	+0.9
MPU	Maple Canyon	129.34	29	ePKPdf	PKPdf	04 53 52.3	+1.4
E34A	Wadena	129.36	12	PKiKP	PKPdf	04 53 50.2	-0.3
	baz=343						
EDW2	Edwards Air Fo	129.45	39	PKiKP	PKiKP	04 53 51.8	0.0
	baz=311						
E35A	Pequot Lakes	129.47	11	PKiKP	PKPdf	04 53 50.2	-0.4
	baz=344						
K22A	Casper	129.47	23	PKiKP	PKPdf	04 53 50.6	-0.4
	baz=328						
SNCC	San Nicolas Is	129.50	41	PKiKP	PKiKP	04 53 51.6	-0.2
	baz=308						
F32A	Veblen	129.54	14	PKiKP	PKPdf	04 53 50.2	-0.6
	baz=340						
DECC	Green Verdugo	129.64	39	PKiKP	PKPdf	04 53 51.7	+0.2
	baz=310						
E36A	McGregor	129.71	10	PKiKP	PKPdf	04 53 50.9	-0.3
	baz=346						
PASC	Pasadena Art C	129.79	39	ePKPdf	PKPdf	04 53 53.4	+1.8
E37A	Wrenshall	129.81	9	PKiKP	PKPdf	04 53 51.3	0.0
	baz=347						
SHOC	Shoshone, Teco	129.82	36	PKiKP	PKiKP	04 53 52.2	-0.3
	baz=313						
D41A	Chassel	129.82	6	PKiKP	PKPdf	04 53 51.4	+0.1
	baz=352						
D41A	Chassel	129.82	6	ePKPpre	PKPpre	04 53 44.7	
G31A	Conde	129.88	15	PKiKP	PKPdf	04 53 51.0	-0.5
	baz=339						
E38A	The Farm, Brul	129.90	8	PKiKP	PKPdf	04 53 51.3	-0.2
	baz=348						
E38A	The Farm, Brul	129.90	8	ePKPpre	PKPpre	04 53 42.6	
GSC	Goldstone, Bar	129.90	37	PKiKP	PKiKP	04 53 52.9	+0.2
	baz=312						
RWWY	Rawlins	130.00	25	ePKPdf	PKPdf	04 53 51.4	-0.8
FMP	Fort Macarthur	130.01	40	PKiKP	PKPdf	04 53 52.3	+0.2
	baz=310						
F34A	Alexandria	130.03	12	PKiKP	PKPdf	04 53 51.4	-0.4
	baz=343						
G32A	Webster	130.03	14	PKiKP	PKPdf	04 53 51.5	-0.3
	baz=340						
G32A	Webster	130.03	14	ePKPdf	PKPdf	04 53 52.6	+0.8
SHPR	Sheep Range	130.05	35	ePKPdf	PKPdf	04 53 53.0	+0.7
RRX	Edison Barstow	130.07	38	PKiKP	PKPdf	04 53 52.6	+0.4
	baz=312						
BFSC	Mount Baldy Ra	130.08	39	PKiKP	PKPdf	04 53 52.6	+0.2
	baz=311						
TMUT	Trail Mountain	130.10	30	ePKPpre	PKPpre	04 53 45.6	
F35A	Swanville	130.10	11	PKiKP	PKPdf	04 53 51.7	-0.2
	baz=344						
CIS	Catalina Islan	130.13	40	PKiKP	PKPdf	04 53 52.7	+0.3
	baz=310						
P17A	Butcher Ranch,	130.19	29	ePKPdf	PKPdf	04 53 53.2	+0.7
MSU	Marysvale	130.21	31	ePKPdf	PKPdf	04 53 52.0	-0.6
E39A	Mellen	130.26	8	PKiKP	PKPdf	04 53 52.0	-0.2
	baz=349						
E40A	Wakefield	130.28	7	PKiKP	PKPdf	04 53 52.1	-0.2
	baz=350						
F36A	Milaca	130.30	10	PKiKP	PKPdf	04 53 52.0	-0.2
	baz=345						
F36A	Milaca	130.30	10	ePKPpre	PKPpre	04 53 42.1	
CCUT	Cedar City	130.30	33	ePKPdf	PKPdf	04 53 53.6	+0.8
G33A	Ortonville	130.34	13	PKiKP	PKPdf	04 53 51.9	-0.5
	baz=341						
TUQ	Turquoise Moun	130.34	37	PKiKP	PKiKP	04 53 53.9	+0.2
	baz=313						
E41A	Kenton	130.37	6	PKiKP	PKPdf	04 53 52.0	-0.3
	baz=351						
SUSD	Miller	130.41	16	PKiKP	PKPdf	04 53 52.4	-0.2
	baz=338						
SZCU	Shurtz Canyon	130.42	33	ePKPdf	PKPdf	04 53 54.8	+1.7
G34A	Benson	130.47	13	PKiKP	PKPdf	04 53 52.6	0.0
	baz=342						
E44A	Grand Marais A	130.47	3	PKiKP	PKPdf	04 53 53.0	+0.4
	baz=355						
E44A	Grand Marais A	130.47	3	ePKPdf	PKPdf	04 53 52.8	+0.2
F38A	Pierce - Schro	130.48	9	PKiKP	PKPdf	04 53 52.7	+0.1
	baz=347						
HEC	Hector,Ludlow	130.51	38	PKiKP	PKiKP	04 53 53.9	0.0
	baz=312						
E42A	Champion	130.51	5	PKiKP	PKPdf	04 53 52.6	-0.1
	baz=352						
BBRC	Big Bear Solar	130.52	38	PKiKP	PKiKP	04 53 54.0	-0.2
	baz=312						
TRQ	Mont Tremblant	130.53	353	ePKPdf	PKPdf	04 53 52.4	-0.4
MTPU	Mount Pierson	130.56	31	ePKPdf	PKPdf	04 53 55.7	+2.2
F37A	Hinrichs Farm,	130.59	10	PKiKP	PKPdf	04 53 52.8	0.0
	baz=346						
PKME	Peaks-Kenny Pk	130.61	348	PKiKP	PKPdf	04 53 52.7	-0.1
	baz=17						
PKME	Peaks-Kenny Pk	130.61	348	ePKPdf	PKPdf	04 53 53.8	+1.0
PKME				eSKPbc	SKPab	04 57 08.5	+0.9
E43A	Lone Tree Farm	130.64	4	PKiKP	PKPdf	04 53 52.5	-0.4
	baz=354						
E43A	Lone Tree Farm	130.64	4	ePKPpre	PKPpre	04 53 46.8	
F39A	Loretta	130.67	8	PKiKP	PKPdf	04 53 52.9	-0.1
	baz=348						
COWI	Conover	130.71	6	ePKPpre	PKPpre	04 53 42.5	
COWI				ePKPdf	PKPdf	04 53 53.5	+0.4
COWI				eSKPbc	SKPbc	04 57 07.8	-0.2
EMMW	East Machias	130.73	346	ePKPdf	PKPdf	04 53 54.8	+1.7
G35A	Watkins	130.73	12	PKiKP	PKPdf	04 53 53.2	0.0
	baz=344						
G35A	Watkins	130.73	12	ePKPpre	PKPpre	04 53 44.2	
H32A	Carlson Farm,	130.75	14	PKiKP	PKPdf	04 53 52.7	-0.5
	baz=340						
LCMT	Little Creek M	130.76	33	ePKPpre	PKPpre	04 53 44.9	
F40A	Park Falls	130.77	7	PKiKP	PKPdf	04 53 52.9	-0.3
	baz=349						
E45A	Wooded Hills,	130.78	3	PKiKP	PKPdf	04 53 53.4	+0.3
	baz=356						
MURC	Murrieta	130.78	39	PKiKP	PKiKP	04 53 54.3	-0.2
	baz=311						
O20A	White River Ci	130.83	27	PKiKP	PKPdf	04 53 53.9	+0.1
	baz=325						
O20A	White River Ci	130.83	27	ePKPdf	PKPdf	04 53 53.8	+0.1
O20A				ePP	PP	04 56 10.2	+0.5
O20A				eSKPbc	SKPab	04 57 10.0	+1.0
G36A	St. Michael	130.86	11	PKiKP	PKPdf	04 53 53.3	0.0
	baz=345						
PKCU	Pink Cliffs	130.94	32	ePKPdf	PKPdf	04 53 56.7	+2.5
GMRC	Granite Mounta	130.94	37	PKiKP	PKiKP	04 53 55.5	+0.5
	baz=313						
KNB	Kanab	130.99	33	ePKPpre	PKPpre	04 53 43.3	
KNB				ePKPdf	PKPdf	04 53 54.0	-0.1
PHWY	Pilot Hill	131.03	23	ePKPdf	PKPdf	04 53 54.5	+0.3
SPMN	Marine on St.	131.04	10	PKiKP	PKPdf	04 53 53.4	-0.3
	baz=346						
F41A	Three Lakes	131.07	7	PKiKP	PKPdf	04 53 53.7	0.0
	baz=351						
F41A	Three Lakes	131.07	7	ePKPpre	PKPpre	04 53 46.2	
F44A	Big Bay de Noc	131.09	4	PKiKP	PKPdf	04 53 53.4	-0.4
	baz=354						
F42A	Maple Grove Fa	131.16	6	PKiKP	PKPdf	04 53 53.6	-0.3
	baz=352						
H35A	Sunnyside Ranc	131.16	12	PKiKP	PKPdf	04 53 53.8	-0.1
	baz=343						
F43A	Flat Rock, Esc	131.17	5	PKiKP	PKPdf	04 53 54.0	+0.1
	baz=353						
N23A	Red Feather La	131.18	24	PKiKP	PKPdf	04 53 54.2	-0.2
	baz=328						
N23A	Red Feather La	131.18	24	ePKPpre	PKPpre	04 53 45.6	
PFO	Pinyon Flats O	131.24	39	PKiKP	PKiKP	04 53 55.8	+0.3
	baz=312						
PFO	Pinyon Flats O	131.24	39	ePKPpre	PKPpre	04 53 42.3	
PFO				ePKPdf	PKiKP	04 53 56.7	+1.1
PFO				eSKPbc	SKPab	04 57 11.3	+0.5
PFO	Pinyon Flats O	131.24	39	ePKHKP	PKPpre	04 53 42.3	
PFO				e		04 53 56.7	
XPFO	Piæon Flat	131.24	39	ePKPpre	PKPpre	04 53 42.3	
G39A	Holcombe	131.25	9	PKiKP	PKPdf	04 53 53.8	-0.3
	baz=348						
G38A	Ridgeland	131.26	9	PKiKP	PKPdf	04 53 53.5	-0.6
	baz=347						
BELC	Belle Mtn. Jos	131.27	38	PKiKP	PKiKP	04 53 55.8	+0.2
	baz=312						
109C	Camp Elliot, M	131.30	40	PKiKP	PKiKP	04 53 55.4	-0.1
	baz=310						
CPE	Camp Elliot	131.30	40	ePKPdf	PKPdf	04 53 56.7	+2.1
WVL	Waterville	131.35	348	ePKPdf	PKPdf	04 53 55.0	+0.7
F46A	Macinaw City C	131.38	2	PKiKP	PKPdf	04 53 54.3	0.0
	baz=356						
G40A	Rib Lake	131.40	8	PKiKP	PKPdf	04 53 54.3	-0.1
	baz=349						
G40A	Rib Lake	131.40	8	ePKPpre	PKPpre	04 53 44.8	
F45A	CMU Biological	131.43	3	PKiKP	PKPdf	04 53 54.3	-0.1
	baz=356						
H36A	Jessenland, He	131.46	11	PKiKP	PKPdf	04 53 54.7	+0.2
	baz=344						
NEE2	Needles Airpor	131.58	36	PKiKP	PKiKP	04 53 55.8	-0.3
	baz=314						
G41A	Antigo	131.58	7	PKiKP	PKPdf	04 53 54.4	-0.4
	baz=351						
G42A	Mountain	131.64	6	PKiKP	PKPdf	04 53 54.7	-0.1
	baz=352						
H37A	Dierke Farm, C	131.65	10	PKiKP	PKPdf	04 53 54.7	-0.2
	baz=346						
H38A	Maiden Rock	131.67	10	PKiKP	PKPdf	04 53 54.5	-0.4
	baz=346						
ECSD	EROS Data Cent	131.68	14	PKiKP	PKPdf	04 53 54.7	-0.3
	baz=340						
ECSD	EROS Data Cent	131.68	14	ePKPdf	PKPdf	04 53 55.2	+0.3
ECSD				eSKPbc	SKPab	04 57 11.9	-0.3
IRM	Iron Mountain	131.68	37	PKiKP	PKiKP	04 53 56.5	+0.2
	baz=313						
G43A	Wallace	131.69	5	PKiKP	PKPdf	04 53 55.0	0.0
	baz=353						
G43A	Wallace	131.69	5	ePKPpre	PKPpre	04 53 46.0	
U15A	North Rim	131.71	33	ePKPpre	PKPpre	04 53 44.9	
PV09	Paradox Valley	131.73	29	ePKPdf	PKPdf	04 53 56.8	+1.2
MONP2	Monument Peak	131.74	39	PKiKP	PKiKP	04 53 56.5	-0.2
	baz=311						
FRNY	Flat Rock	131.77	352	ePKPdf	PKPdf	04 53 55.5	+0.5
W13A	Hualapai Mount	131.77	35	ePKPdf	PKPdf	04 53 57.3	+1.6
H39A	Augusta	131.82	9	PKiKP	PKPdf	04 53 55.1	-0.1
	baz=348						
BC3	Big Chuckawall	131.84	38	PKiKP	PKiKP	04 53 56.8	+0.1
	baz=313						
PV10	Paradox Valley	131.88	29	ePKPdf	PKPdf	04 53 57.5	+1.7
PV04	Paradox Valley	131.93	28	ePKPdf	PKPdf	04 53 55.2	-0.6
PLVO	Plevna	131.96	355	ePKPdf	PKPdf	04 53 56.0	+0.5
I36A	Fitzsimmons Fa	131.98	12	PKiKP	PKPdf	04 53 55.0	-0.5
	baz=344						
H40A	Chili	132.01	8	PKiKP	PKPdf	04 53 55.2	-0.4
	baz=349						
IKP	In-Ko-Pah, Jac	132.09	40	PKiKP	PKiKP	04 53 57.2	-0.1
	baz=311						
SWSC	Sam W. Stewart	132.09	39	PKiKP	PKiKP	04 53 57.0	-0.1
	baz=312						
LBNH	Lisbon	132.09	350	PKiKP	PKPdf	04 53 56.1	+0.3
	baz=14						
LBNH	Lisbon	132.09	350	ePKPdf	PKPdf	04 53 56.9	+1.1
I37A	Lemond, Waseca	132.10	11	PKiKP	PKPdf	04 53 55.5	-0.3
	baz=345						
I37A	Lemond, Waseca	132.10	11	ePKPpre	PKPpre	04 53 45.5	
LONY	Lake Ozonia	132.12	353	PKiKP	PKPdf	04 53 55.6	-0.2
	baz=10						
LONY	Lake Ozonia	132.12	353	ePKPdf	PKPdf	04 53 55.9	+0.1
LONY				ePP	PP	04 56 16.8	-0.5
LONY				eSKPbc	SKPab	04 57 13.6	-0.4
VT1	Waterbury	132.14	351	ePKPdf	PKPdf	04 53 56.6	+0.8
PV02	Paradox Valley	132.15	28	ePKPpre	PKPpre	04 53 49.8	
PV15	Paradox Valley	132.17	28	ePKPpre	PKPpre	04 53 41.9	
PDMCI	Parker Dam,Lak	132.18	36	PKiKP	PKiKP	04 53 57.0	-0.2
	baz=314						
ISCO	Idaho Springs	132.24	25	PKiKP	PKPdf	04 53 56.0	-0.6
	baz=328						
ISCO	Idaho Springs	132.24	25	ePKPpre	PKPpre	04 53 49.1	
ISCO				ePKPdf	PKiKP	04 53 57.2	-0.5
ISCO				ePP	PP	04 56 17.5	-1.3
ISCO				eSKPbc	SKPab	04 57 15.0	-0.1
I38A	Scanlan Farm,	132.28	10	PKiKP	PKPdf	04 53 55.3	-0.7
	baz=346						
PV01	Paradox Valley	132.29	28	ePKPpre	PKPpre	04 53 43.7	
Y12C	Blythe	132.34	37	PKiKP	PKiKP	04 53 57.7	+0.1
	baz=314						
H42A	Shiocton	132.35	6	PKiKP	PKPdf	04 53 55.7	-0.5
	baz=351						
SADO	Sadowa	132.37	357	PKP	PKPdf	04 53 56.0	-0.3
	comp=Z,30nm,0.7s,baz=345,slow=2.7,SNR=29						
SADO				SKPbc	SKPbc	04 57 13.9	0.0
	comp=Z,89nm,0.9s,baz=351,slow=4.2,SNR=15						
SADO	Sadowa	132.37	357	ePKPdf	PKPdf	04 53 55.8	-0.4
SADO				eSKPbc	SKPab	04 57 15.1	0.0
H43A	Windswept, Lux	132.47	6	PKiKP	PKPdf	04 53 55.9	-0.5
	baz=352						
J36A	Seneca 1, Swea	132.58	12	PKiKP	PKPdf	04 53 55.9	-0.8
	baz=343						
J36A	Seneca 1, Swea	132.58	12	ePKPpre	PKPpre	04 53 46.8	
I39A	Houston	132.59	9	PKiKP	PKPdf	04 53 55.9	-0.8
	baz=347						
I39A	Houston	132.59	9	ePKPpre	PKPpre	04 53 42.8	
OGNE	Ogallala	132.62	21	PKiKP	PKPdf	04 53 56.2	-0.8
	baz=332						
OGNE	Ogallala	132.62	21	ePKPdf	PKPdf	04 53 57.6	+0.6
OGNE				ePP	PP	04 56 20.7	-0.1
OGNE				eSKPbc	SKPab	04 57 16.6	+0.2
GLA	Glamis	132.63	38	PKiKP	PKiKP	04 53 58.2	-0.1
	baz=313						
GLA	Glamis	132.63	38	ePKPdf	PKPdf	04 53 57.0	-0.2
I40A	Norwalk	132.69	8	PKiKP	PKPdf	04 53 56.1	-0.8
	baz=348						
NCB	Newcomb	132.71	352	ePKPpre	PKPpre	04 53 50.6	
J37A	Redenius Farm,	132.75	11	PKiKP	PKPdf	04 53 56.7	-0.3
	baz=344						
FFD	Franklin Falls	132.79	350	ePKPdf	PKPdf	04 53 58.4	+1.3
WUAZ	Wupatki	132.88	33	PKiKP	PKiKP	04 53 58.9	+0.1
	baz=318						
WUAZ	Wupatki	132.88	33	ePKPdf	PKPdf	04 53 58.7	+1.0
WUAZ				eSKPbc	SKPab	04 57 17.5	-0.4
WUAZ				eSKPdf	SKiKP	04 57 25.4	-0.5
I42A	Draeger Farm,	132.92	7	PKiKP	PKPdf	04 53 56.6	-0.7
	baz=351						
I42A	Draeger Farm,	132.92	7	ePKPpre	PKPpre	04 53 46.4	
J38A	Wedel Dairy, R	132.95	10	PKiKP	PKPdf	04 53 56.5	-0.8
	baz=346						
I43A	Langenfeld Bro	133.01	6	PKiKP	PKPdf	04 53 56.7	-0.8
	baz=352						
MVCO	Mesa Verde	133.06	29	PKiKP	PKPdf	04 53 58.5	+0.5
	baz=323						
MVCO	Mesa Verde	133.06	29	ePKPdf	PKPdf	04 53 58.6	+0.5
MVCO				eSKPbc	SKPab	04 57 17.9	-0.8
J39A	Decorah	133.07	10	PKiKP	PKPdf	04 53 56.6	-1.0
	baz=347						
Y14A	Wickenburg	133.11	36	ePKPpre	PKPpre	04 53 49.4	
Q24A	Divide	133.14	25	PKiKP	PKPdf	04 53 57.9	-0.4
	baz=328						
J40A	Soldiers Grove	133.16	9	PKiKP	PKPdf	04 53 56.7	-1.0
	baz=348						
ACCN	Adirondack Com	133.21	352	ePKPdf	PKPdf	04 53 57.9	0.0
K36A	Gilmore City	133.21	13	PKiKP	PKPdf	04 53 57.7	-0.1
	baz=343						
K37A	Belmond	133.26	12	PKiKP	PKPdf	04 53 57.2	-0.8
	baz=344						
J41A	Loganville	133.29	8	PKiKP	PKPdf	04 53 57.1	-0.9
	baz=349						
S22A	4UR Ranch, Cre	133.41	27	PKiKP	PKPdf	04 53 59.1	+0.3
	baz=325						
S22A	4UR Ranch, Cre	133.41	27	ePKPpre	PKPpre	04 53 50.1	
BGNE	Belgrade	133.44	17	PKiKP	PKPdf	04 53 57.7	-0.7
	baz=338						
J42A	Columbus	133.46	7	PKiKP	PKPdf	04 53 57.7	-0.7
	baz=350						
J43A	Natural Harves	133.48	6	PKiKP	PKPdf	04 53 57.8	-0.6
	baz=351						
K38A	Parkersburg	133.54	11	PKiKP	PKPdf	04 53 57.9	-0.6
	baz=345						
K39A	Oelwein	133.65	10	PKiKP	PKPdf	04 53 57.4	-1.3
	baz=346						
X16A	Lo Mia Camp, P	133.66	34	ePKPpre	PKPpre	04 53 50.0	
L36A	Harm Buss Farm	133.68	13	PKiKP	PKPdf	04 53 58.3	-0.5
	baz=343						
JFWS	Jewell Farm	133.70	8	PKiKP	PKPdf	04 53 58.1	-0.7
	baz=349						
JFWS	Jewell Farm	133.70	8	ePKPpre	PKPpre	04 53 48.5	
JFWS				ePKPdf	PKPdf	04 53 58.5	-0.3
JFWS				eSKPbc	SKPbc	04 57 19.2	+0.7
JFWS	Jewell Farm	133.70	8	ePKHKP	PKPpre	04 53 48.5	
JFWS				e		04 53 58.5	
HRV	Adam Dziewonsk	133.71	349	PKiKP	PKPdf	04 53 58.7	-0.1
	baz=15						
HRV	Adam Dziewonsk	133.71	349	ePKPdf	PKPdf	04 53 59.9	+1.1
HRV				eSKPbc	SKPbc	04 57 19.6	+1.0
HRV				eSKPab	SKiKP	04 57 26.1	-1.0
K40A	Colesburg	133.78	9	PKiKP	PKPdf	04 53 58.0	-0.9
	baz=348						
WES	Weston	133.78	349	ePKPdf	PKPdf	04 53 59.8	+0.9
BCX	Boston College	133.80	349	ePKPdf	PKPdf	04 53 59.6	+0.6
TRY	Troy	133.84	351	ePKPdf	PKPdf	04 54 00.4	+1.4
L37A	Phoenix Point,	133.85	12	PKiKP	PKPdf	04 53 58.0	-1.1
	baz=344						
K42A	Prairie Point,	133.96	7	PKiKP	PKPdf	04 53 58.4	-0.9
	baz=350						
K41A	Shullsburg	134.00	8	PKiKP	PKPdf	04 53 58.2	-1.1
	baz=349						
L38A	Oak Wood Farm,	134.00	11	PKiKP	PKPdf	04 53 58.8	-0.6
	baz=345						
SDCO	Great Sand Dun	134.01	26	PKiKP	PKPdf	04 53 59.9	0.0
	baz=327						
SDCO	Great Sand Dun	134.01	26	ePKPpre	PKPpre	04 53 47.0	
SDCO				ePKPdf	PKPdf	04 53 58.9	-1.0
SDCO				ePP	PP	04 56 29.3	-0.8
SDCO				eSKPbc	SKPbc	04 57 20.8	+0.7
W18A	Petrified Fore	134.06	32	PKiKP	PKiKP	04

N39A	Derby Farms, D	135.31	11	ePKPpre	PKPpre	04 53 47.5		
CBKS	Cedar Bluff	135.31	20	PKiKP	PKPdf	04 54 02.0	0.0	
	baz=335							
CBKS	Cedar Bluff	135.31	20	ePKPdf	PKPdf	04 54 02.0	0.0	
CBKS				eSKPbc	SKPbc	04 57 24.0	0.0	
M43A	Waltham Townsh	135.33	7	PKiKP	PKPdf	04 54 01.6	-0.3	
	baz=350							
N40A	Mertquake, Sal	135.47	10	PKiKP	PKPdf	04 54 01.5	-0.7	
	baz=346							
M44A	Midewin, Midew	135.49	6	PKiKP	PKPdf	04 54 02.1	0.0	
	baz=352							
ALLY	Alegheny Colle	135.52	358	ePKPdf	PKPdf	04 54 02.8	+0.5	
PAL	Palisades	135.57	351	PKiKP	PKPdf	04 54 02.3	0.0	
	baz=12							
PAL	Palisades	135.57	351	ePKPdf	PKPdf	04 54 03.1	+0.8	
TUC	Tucson	135.57	36	PKiKP	PKiKP	04 54 03.7	-0.6	
	baz=317							
TUC	Tucson	135.57	36	ePKPpre	PKPpre	04 53 56.3		
TUC				ePKPdf	PKiKP	04 54 03.5	-0.7	
TUC				eSKPbc	SKPbc	04 57 26.1	+1.2	
M45A	Boilermakers S	135.57	6	PKiKP	PKPdf	04 54 02.4	0.0	
	baz=353							
ODNJ	Ogdensburg	135.60	352	ePKPpre	PKPpre	04 53 53.8		
M46A	Old House Fiel	135.63	5	PKiKP	PKPdf	04 54 02.3	-0.1	
	baz=354							
M46A	Old House Fiel	135.63	5	ePKPdf	PKPdf	04 54 03.0	+0.6	
O37A	Wolven Farm, M	135.64	13	PKiKP	PKPdf	04 54 01.8	-0.7	
	baz=343							
M54A	Oil Creek Stat	135.65	357	PKiKP	PKPdf	04 54 02.1	-0.4	
	baz=3.5							
M54A	Oil Creek Stat	135.65	357	ePKPpre	PKPpre	04 53 51.6		
N41A	Harden Midland	135.77	10	PKiKP	PKPdf	04 54 01.8	-0.9	
	baz=348							
N42A	Yates City	135.78	9	PKiKP	PKPdf	04 54 02.1	-0.6	
	baz=349							
CPNY	Central Park	135.79	351	ePKPdf	PKPdf	04 54 04.7	+2.0	
N43A	Stutzman Famil	135.79	8	PKiKP	PKPdf	04 54 02.2	-0.5	
	baz=350							
O38A	Galt	135.83	13	PKiKP	PKPdf	04 54 02.2	-0.7	
	baz=344							
TASM	ASL Pad, Albuq	135.86	29	PKiKP	PKiKP	04 54 04.2	-0.7	
	baz=324							
ANMO	Albuquerque	135.86	29	PP	PP	04 56 42.6	+0.8	
	comp=Z,11nm,1.1s,baz=348,slow=4.2,SNR=3.1							
ANMO				SKPbc	SKPbc	04 57 26.6	+0.6	
	comp=Z,57nm,1.0s,baz=326,slow=1.5,SNR=14							
ANMO	Albuquerque	135.86	29	PKiKP	PKPdf	04 54 04.0	+0.7	
	baz=324							
ANMO	Albuquerque	135.86	29	ePKPpre	PKPpre	04 53 51.9		
ANMO				ePKPdf	PKiKP	04 54 04.5	-0.5	
ANMO				PP	PP	04 56 42.6	+0.8	
ANMO				eSKPbc	SKPbc	04 57 27.2	+1.2	
ANMO	Albuquerque	135.86	29	/ PKiKP	PKPdf	04 54 03.4	+0.1	
TASL	Snake Pit, Alb	135.86	29	PKiKP	PKiKP	04 54 04.2	-0.7	
	baz=324							
O39A	Kirksville	135.90	12	PKiKP	PKPdf	04 54 02.4	-0.6	
	baz=345							
N59A	State Game Lan	135.91	353	PKiKP	PKPdf	04 54 03.2	+0.1	
	baz=9.1							
N59A	State Game Lan	135.91	353	ePKPpre	PKPpre	04 53 55.8		
BRNJ	Basking Ridge	135.98	352	ePKPdf	PKPdf	04 54 05.1	+2.0	
KSU1	Kansas State U	136.02	16	PKiKP	PKPdf	04 54 03.1	-0.1	
	baz=339							
KSU1	Kansas State U	136.02	16	ePKPpre	PKPpre	04 53 53.9		
KSU1				ePKPdf	PKPdf	04 54 03.4	+0.2	
KSU1				eSKPbc	SKPbc	04 57 27.1	+1.0	
N44A	Piper City	136.06	7	PKiKP	PKPdf	04 54 03.1	-0.1	
	baz=351							
N45A	Kentland	136.08	6	PKiKP	PKPdf	04 54 03.3	0.0	
	baz=352							
N46A	Monticello	136.11	5	PKiKP	PKPdf	04 54 03.3	-0.1	
	baz=353							
P37A	Lathrop	136.14	14	PKiKP	PKPdf	04 54 03.1	-0.4	
	baz=342							
HDIL	Hopedale	136.15	8	PKiKP	PKPdf	04 54 03.0	-0.4	
	baz=350							
HDIL	Hopedale	136.15	8	ePKPpre	PKPpre	04 53 50.6		
HDIL				ePKPdf	PKPdf	04 54 03.3	-0.1	
HDIL				eSKPbc	SKPbc	04 57 27.2	+0.9	
HDIL				eSKPab	SKiKP	04 57 32.6	+0.4	
O40A	La Belle	136.16	11	PKiKP	PKPdf	04 54 03.0	-0.5	
	baz=346							
LUPA	Lehigh Univers	136.18	353	ePKPdf	PKPdf	04 54 02.7	-0.8	
N54A	Moraine State	136.21	358	PKiKP	PKPdf	04 54 03.2	-0.3	
	baz=3.0							
N54A	Moraine State	136.21	358	ePKPdf	PKPdf	04 54 03.6	+0.1	
P38A	Dawn	136.29	13	PKiKP	PKPdf	04 54 03.2	-0.6	
	baz=343							
P38A	Dawn	136.29	13	ePKPpre	PKPpre	04 53 50.5		
Y22E	IRIS PASSCAL I	136.32	30	PKiKP	PKiKP	04 54 05.4	-0.4	
	baz=323							
Y22D	IRIS PASSCAL I	136.33	30	PKiKP	PKiKP	04 54 05.5	-0.4	
	baz=323							
O41A	Passleys Farm,	136.34	10	PKiKP	PKPdf	04 54 03.3	-0.5	
	baz=347							
O42A	Bath	136.39	9	PKiKP	PKPdf	04 54 03.5	-0.4	
	baz=348							
SSPA	Standing Stone	136.40	355	PKiKP	PKPdf	04 54 03.8	-0.1	
	baz=6.1							
SSPA	Standing Stone	136.40	355	ePKPpre	PKPpre	04 53 53.7		
SSPA				ePKPdf	PKPdf	04 54 03.7	-0.2	
SSPA				ePP	PP	04 56 44.4	0.0	
SSPA				eSKPbc	SKPbc	04 57 28.3	+1.1	
SSPA				eSKPab	SKPab	04 57 34.3	+1.5	
O43A	Sugar Creek Fa	136.42	8	PKiKP	PKPdf	04 54 03.4	-0.6	
	baz=350							
N50A	Nevada	136.43	1	PKiKP	PKPdf	04 54 03.4	-0.5	
	baz=358							
SFIN	Lafayette	136.59	6	PKiKP	PKPdf	04 54 04.0	-0.2	
	baz=353							
SFIN	Lafayette	136.59	6	ePKPpre	PKPpre	04 53 52.8		
P39B	Salisbury	136.59	12	PKiKP	PKPdf	04 54 03.7	-0.6	
	baz=344							
O45A	Potomac	136.65	6	PKiKP	PKPdf	04 54 04.2	-0.2	
	baz=352							
O44A	Mansfield	136.66	7	PKiKP	PKPdf	04 54 03.8	-0.6	
	baz=351							
P40A	Paris	136.69	11	PKiKP	PKPdf	04 54 04.0	-0.5	
	baz=346							
P41A	Barry, Barry	136.74	10	PKiKP	PKPdf	04 54 04.1	-0.5	
	baz=347							
Q37A	Longview Farm,	136.79	14	PKiKP	PKPdf	04 54 03.7	-1.0	
	baz=342							
O47A	Sheridan	136.81	5	PKiKP	PKPdf	04 54 03.9	-0.8	
	baz=354							
O56A	Blue Knob Stat	136.82	356	PKiKP	PKPdf	04 54 04.8	+0.1	
	baz=5.2							
O56A	Blue Knob Stat	136.82	356	ePKPpre	PKPpre	04 53 52.6		
PSUB	Penn St. - Bra	136.85	353	ePKPdf	PKPdf	04 54 05.0	+0.2	
MVL	Millersville	136.88	354	ePKPpre	PKPpre	04 53 56.4		
Q38A	Cooks Store, C	136.91	13	PKiKP	PKPdf	04 54 04.3	-0.6	
	baz=343							
P42A	Winchester	136.95	9	PKiKP	PKPdf	04 54 04.4	-0.5	
	baz=348							
P42A	Winchester	136.95	9	ePKPpre	PKPpre	04 53 53.2		
ACSO	Alum Creek Sta	136.97	1	PKiKP	PKPdf	04 54 04.6	-0.3	
	baz=359							
ACSO	Alum Creek Sta	136.97	1	ePKPpre	PKPpre	04 53 54.9		
ACSO				ePKPdf	PKPdf	04 54 04.6	-0.3	
ACSO				eSKPbc	SKPbc	04 57 28.6	-0.2	
ACSO				eSKPab	SKPab	04 57 36.3	+1.0	
Q39A	Willow Grove F	136.97	12	PKiKP	PKPdf	04 54 04.5	-0.5	
	baz=344							
P43A	Skaggs, Pawnee	137.02	8	PKiKP	PKPdf	04 54 05.0	-0.1	
	baz=349							
O50A	Cable	137.04	2	PKiKP	PKPdf	04 54 04.6	-0.5	
	baz=358							
121A	Cookes Peak, D	137.08	33	PKiKP	PKiKP	04 54 06.8	-0.7	
	baz=321							
319A	Douglas	137.12	35	ePKPpre	PKPpre	04 53 58.0		
Q40A	Laux Farm, Aux	137.21	11	PKiKP	PKPdf	04 54 05.0	-0.4	
	baz=345							
P44A	Sand Creek, Wi	137.31	7	PKiKP	PKPdf	04 54 05.2	-0.4	
	baz=350							
P46A	Rosedale	137.33	6	PKiKP	PKPdf	04 54 05.2	-0.5	
	baz=352							
P45A	Graceland, Par	137.36	6	PKiKP	PKPdf	04 54 05.3	-0.3	
	baz=352							
P45A	Graceland, Par	137.36	6	ePKPpre	PKPpre	04 53 56.7		
Q41A	Truxton	137.41	11	PKiKP	PKPdf	04 54 05.6	-0.2	
	baz=346							
MCWV	Mont Chateau	137.50	357	PKiKP	PKPdf	04 54 06.1	+0.1	
	baz=3.3							
MCWV	Mont Chateau	137.50	357	ePKPpre	PKPpre	04 53 57.8		
SDMD	Soldier's Deli	137.52	354	ePKPdf	PKPdf	04 54 07.0	+1.0	
P47A	Martinsville	137.54	5	PKiKP	PKPdf	04 54 05.6	-0.5	
	baz=354							
P50A	Jamestown	137.57	2	PKiKP	PKPdf	04 54 05.4	-0.7	
	baz=358							
Q42A	Golden Eagle	137.57	10	PKiKP	PKPdf	04 54 05.7	-0.4	
	baz=348							
R38A	Fenwick Farm,	137.58	14	PKiKP	PKPdf	04 54 05.1	-1.0	
	baz=342							
R39A	Chumby, Stover	137.66	13	PKiKP	PKPdf	04 54 05.9	-0.4	
	baz=344							
Q43A	New Douglas	137.68	9	PKiKP	PKPdf	04 54 06.2	-0.1	
	baz=349							
Q44A	Meyer Farm, Va	137.81	8	PKiKP	PKPdf	04 54 06.2	-0.3	
	baz=350							
BLO	Bloomington	137.84	5	ePKPpre	PKPpre	04 53 57.7		
R40A	Maddies Statio	137.85	12	PKiKP	PKPdf	04 54 06.2	-0.4	
	baz=345							
R40A	Maddies Statio	137.85	12	ePKPpre	PKPpre	04 53 54.6		
SLM	Saint Louis	137.89	10	ePKPdf	PKPdf	04 54 07.5	+0.8	
Q46A	CEJHS Indians,	137.90	6	PKiKP	PKPdf	04 54 06.3	-0.4	
	baz=352							
Q45A	Warren Harvey,	137.94	7	PKiKP	PKPdf	04 54 06.5	-0.3	
	baz=351							
R41A	Rosebud	138.02	11	PKiKP	PKPdf	04 54 06.6	-0.4	
	baz=346							
AMTX	Amarillo	138.06	24	PKiKP	PKPdf	04 54 07.3	0.0	
	baz=330							
AMTX	Amarillo	138.06	24	ePKPpre	PKPpre	04 54 00.2		
AMTX				ePKPdf	PKPdf	04 54 07.9	+0.6	
AMTX				ePP	PP	04 56 54.5	-0.7	
Q47A	Bedord North L	138.08	5	PKiKP	PKPdf	04 54 07.1	+0.1	
	baz=354							
OLIL	Olney	138.10	7	ePKPpre	PKPpre	04 53 59.5		
S38A	Stockton	138.11	14	PKiKP	PKPdf	04 54 06.6	-0.5	
	baz=342							
R42A	Luebbering	138.14	10	PKiKP	PKPdf	04 54 06.8	-0.3	
	baz=347							
S39A	Bolivar	138.19	13	PKiKP	PKPdf	04 54 07.1	-0.2	
	baz=343							
S39A	Bolivar	138.19	13	ePKPpre	PKPpre	04 53 55.3		
CCM	Cathedral Cave	138.28	11	PKiKP	PKPdf	04 54 06.9	-0.5	
	baz=346							
CCM	Cathedral Cave	138.28	11	ePKPpre	PKPpre	04 53 56.9		
CCM				ePKPdf	PKPdf	04 54 07.6	+0.2	
CCM				ePP	PP	04 56 52.5	-3.6	
CCM				eSKPbc	SKPbc	04 57 33.4	+0.7	
CCM	Cathedral Cave	138.28	11	ePKHKP	PKPpre	04 53 56.9		
CCM				e		04 54 07.6		
CCM				e		04 56 52.5		
R43A	Red Bud	138.29	9	PKiKP	PKPdf	04 54 07.2	-0.2	
	baz=348							
EPT	El Paso	138.35	32	ePKPdf	PKPdf	04 54 08.7	+0.7	
MSTX	Muleshoe	138.38	26	PKiKP	PKPdf	04 54 07.7	-0.2	
	baz=328							
MSTX	Muleshoe	138.38	26	ePKPpre	PKPpre	04 53 57.9		
R44A	Waltonville	138.45	8	PKiKP	PKPdf	04 54 07.6	-0.1	
	baz=350							
S40A	Lebanon	138.46	13	PKiKP	PKPdf	04 54 07.3	-0.5	
	baz=344							
FVM	French Village	138.49	10	ePKPpre	PKPpre	04 53 58.8		
R45A	Skylar, Fairfi	138.51	7	PKiKP	PKPdf	04 54 08.1	+0.2	
	baz=351							
T38A	Diamond	138.58	15	PKiKP	PKPdf	04 54 07.8	-0.3	
	baz=342							
S41A	Jillco Farms,	138.63	12	PKiKP	PKPdf	04 54 07.8	-0.3	
	baz=345							
S42A	Caledonia	138.64	10	PKiKP	PKPdf	04 54 07.8	-0.3	
	baz=347							
R48A	Northridge Ran	138.66	5	PKiKP	PKPdf	04 54 08.4	+0.2	
	baz=354							
R46A	Gibon Southern	138.69	6	PKiKP	PKPdf	04 54 08.1	0.0	
	baz=352							
R47A	Wooly Knot Far	138.70	5	PKiKP	PKPdf	04 54 08.0	-0.2	
	baz=353							
CBN	Corbin Frederi	138.77	354	PKiKP	PKPdf	04 54 08.5	+0.2	
	baz=7.2							
CBN	Corbin Frederi	138.77	354	ePKPdf	PKPdf	04 54 09.0	+0.7	
CBN				ePP	PP	04 56 58.4	-0.6	
WCI	Wyandotte Cave	138.79	5	PKiKP	PKPdf	04 54 08.2	-0.2	
	baz=354							
WCI	Wyandotte Cave	138.79	5	ePKPpre	PKPpre	04 53 57.8		
WCI				ePKPdf	PKPdf	04 54 08.5	+0.2	
WCI				ePP	PP	04 56 57.8	-1.4	
WCI				eSKPbc	SKPbc	04 57 35.3	+1.2	
WCI				eSKPab	SKPab	04 57 44.6	+1.2	
WCI	Wyandotte Cave	138.79	5	ePKHKP	PKPpre	04 53 57.8		
WCI				e		04 54 08.5		
WCI				e		04 56 57.8		
T39A	Clever	138.81	14	PKiKP	PKPdf	04 54 08.1	-0.4	
	baz=343							
T40A	Mansfield	138.89	13	PKiKP	PKPdf	04 54 08.3	-0.3	
	baz=344							
CVRD	Centerville Ro	138.94	355	ePKPpre	PKPpre	04 54 02.0		
IP04	Greensprings	138.94	355	ePKPpre	PKPpre	04 54 01.7		
SIUC	Southern Illin	138.95	9	ePKPpre	PKPpre	04 54 00.3		
S43A	Fulton Ridge,	138.96	10	PKiKP	PKPdf	04 54 08.7	0.0	
	baz=348							
S44A	Carbondale	138.97	9	PKiKP	PKPdf	04 54 08.9	+0.2	
	baz=349							
MNTX	Cornudas Mount	139.00	31	PKiKP	PKPdf	04 54 09.6	+0.6	
	baz=323							
MNTX	Cornudas Mount	139.00	31	ePKPpre	PKPpre	04 53 59.9		
MNTX				ePKPdf	PKPdf	04 54 09.0	0.0	
MNTX				ePP	PP	04 57 00.2	-1.0	
MNTX				eSKPbc	SKPbc	04 57 35.9	+0.9	
SPRD	Spring Road, M	139.00	355	ePKPpre	PKPpre	04 54 01.7		
IP03	Louisa	139.01	355	ePKPpre	PKPpre	04 54 01.5		
IP01	Cuckoo	139.06	355	ePKPpre	PKPpre	04 54 01.6		
S45A	Carrier Mills	139.08	8	PKiKP	PKPdf	04 54 08.7	-0.2	
	baz=350							
IP06	Yanceyville	139.09	355	ePKPpre	PKPpre	04 54 02.0		
IP07	Quail	139.11	355	ePKPpre	PKPpre	04 54 01.9		
T41A	Mountain View	139.15	12	PKiKP	PKPdf	04 54 08.7	-0.4	
	baz=345							
IP05	Hopewell Churc	139.18	355	ePKPpre	PKPpre	04 54 00.0		
S46A	Don Dixon Farm	139.18	7	PKiKP	PKPdf	04 54 08.6	-0.5	
	baz=351							
TUL1	Leonard	139.22	17	PKiKP	PKPdf	04 54 09.4	+0.1	
	baz=339							
TUL1	Leonard	139.22	17	ePKPpre	PKPpre	04 54 01.3		
T42A	Van Buren	139.30	11	PKiKP	PKPdf	04 54 09.3	0.0	
	baz=346							
T42A	Van Buren	139.30	11	ePKPpre	PKPpre	04 53 58.6		
WMOK	Wichita Mounta	139.31	21	PKiKP	PKPdf	04 54 09.4	-0.1	
	baz=334							
WMOK	Wichita Mounta	139.31	21	ePKPpre	PKPpre	04 53 59.6		
WMOK	Wichita Mounta	139.31	21	ePKHKP	PKPpre	04 53 59.6		
JSRW	J. Sargeant Re	139.32	355	ePKPpre	PKPpre	04 54 03.0		
S48A	Wiedeman Farm,	139.38	5	PKiKP	PKPdf	04 54 09.3	-0.2	
	baz=354							
HHAR	Hobbs	139.38	15	ePKPpre	PKPpre	04 54 00.1		
T43A	Greenville	139.40	10	PKiKP	PKPdf	04 54 09.2	-0.3	
	baz=347							
U39A	Green Forest	139.40	14	PKiKP	PKPdf	04 54 09.1	-0.4	
	baz=342							
URVA	University of	139.41	354	ePKPpre	PKPpre	04 54 01.1		
T44A	Benton	139.51	9	PKiKP	PKPdf	04 54 09.9	+0.2	
	baz=348							
S52A	Salyersville	139.51	1	PKiKP	PKPdf	04 54 09.7	0.0	
	baz=358							
S51A	Beattyville	139.54	2	PKiKP	PKPdf	04 54 09.7	0.0	
	baz=358							
U40A	Yellville	139.57	13	PKiKP	PKPdf	04 54 09.9	0.0	
	baz=343							
PBMO	Poplar Bluff	139.67	10	ePKPpre	PKPpre	04 54 01.0		
T45A	Paducah	139.72	8	PKiKP	PKPdf	04 54 10.1	0.0	
	baz=350							
T45A	Paducah	139.72	8	ePKPdf	PKPdf	04 54 09.7	-0.4	
U41A	Viola	139.79	12	PKiKP	PKPdf	04 54 09.7	-0.5	
	baz=345							
T46A	Princeton	139.80	7	PKiKP	PKPdf	04 54 10.6	+0.4	
	baz=351							
V39A	Pettigrew	139.88	15	PKiKP	PKPdf	04 54 10.0	-0.5	
	baz=342							
T48A	Bowling Green	139.89	5	PKiKP	PKPdf	04 54 10.4	-0.1	
	baz=353							
PARMO	Parma	139.90	10	ePKPpre	PKPpre	04 54 04.4		
U42A	Revenden	139.93	12	PKiKP	PKPdf	04 54 10.3	-0.2	
	baz=346							
T47A	Sharon Grove	139.94	6	PKiKP	PKPdf	04 54 10.5	-0.1	
	baz=352							
T47A	Sharon Grove	139.94	6	ePKPpre	PKPpre	04 54 02.7		
BLA	Blacksburg	139.96	358	PKiKP	PKPdf	04 54 10.5	-0.1	
	baz=2.6							
BLA	Blacksburg	139.96	358	ePKPdf	PKPdf	04 54 09.1	-1.5	
T49A	Edmonton	139.97	4	PKiKP	PKPdf	04 54 09.9	-0.7	
	baz=355							
U44A	Portageville	140.06	10	PKiKP	PKPdf	04 54 10.8	+0.1	
	baz=348							
U43A	Rector	140.07	10	PKiKP	PKPdf	04 54 10.5	-0.3	
	baz=347							
T52A	Hallie	140.09	1	PKiKP	PKPdf	04 54 11.0	+0.2	
	baz=359							
T50A	Nancy	140.10	3	PKiKP	PKPdf	04 54 10.5	-0.3	
	baz=356							
V40A	Witts Springs	140.11	14	PKiKP	PKPdf	04 54 10.8	-0.1	
	baz=343							
V40A	Witts Springs	140.11	14	ePKPpre	PKPpre	04 54 02.8		
U44B	Burton Farm, H	140.28	9	PKiKP	PKPdf	04 54 11.5	+0.4	
	baz=349							
V41A	Mountainview	140.28	13	PKiKP	PKPdf	04 54 10.4	-0.8	
	baz=344							
UTMT	University of	140.35	9	ePKPdf	PKPdf	04 54 12.5	+1.3	
U45A	Rockin P Farm,	140.36	8	PKiKP	PKPdf	04 54 11.0	-0.2	
	baz=350							
V42A	Cord	140.42	12	PKiKP	PKPdf	04 54 11.3	-0.1	
	baz=345							
U46A	Springville	140.43	8	PKiKP	PKPdf	04 54 11.4	0.0	
	baz=350							
W39A	Magazine	140.45	15	PKiKP	PKPdf	04 54 11.5	0.0	
	baz=342							
W39A	Magazine	140.45	15	ePKPpre	PKPpre	04 54 04.2		
U47A	Clarksville	140.46	7	PKiKP	PKPdf	04 54 11.4	-0.1	
	baz=352							
U48A	Cassie Pea, Po	140.47	6	PKiKP	PKPdf	04 54 11.2	-0.3	
	baz=353							
U49A	Red Boiling Sp	140.54	5	PKiKP	PKPdf	04 54 11.1	-0.5	
	baz=354							
TRQA	Tornquist	140.55	205	ePKPpre	PKPpre	04 54 04.1		
TRQA				ePKPdf	PKPdf	04 54 12.7	+1.0	
TZTN	Tazewell	140.63	2	PKiKP	PKPdf	04 54 11.6	-0.2	
	baz=358							
TZTN	Tazewell	140.63	2	ePKPpre	PKPpre	04 54 03.9		
TZTN				ePP	PP	04 57 08.5	-2.0	
TZTN				eSKPdf	SKPbc	04 57 39.1	-0.1	
W40A	Ferguson Farm,	140.63	14	PKiKP	PKPdf	04 54 11.8	0.0	
	baz=343							
W40A	Ferguson Farm,	140.63	14	ePKPpre	PKPpre	04 54 04.2		
V44A	Blytheville	140.69	10	PKiKP	PKPdf	04 54 12.0	+0.1	
	baz=348							
HALT	Halls	140.70	9	ePKPpre	PKPpre	04 54 06.3		
WVT	Waverly	140.70	7	PKiKP	PKPdf	04 54 11.6	-0.3	
	baz=351							
WVT	Waverly	140.70	7	ePKPpre	PKPpre	04 54 03.0		
WVT	Waverly	140.70	7	ePKHKP	PKPpre	04 54 03.0		
WHAR	Wooly Hollow	140.72	13	ePKPpre	PKPpre	04 54 04.4		
U53A	Fall Branch	140.83	1	PKiKP	PKPdf	04 54 11.8	-0.4	
	baz=359							
W41B	Gary Mavity, V	140.85	13	PKiKP	PKPdf	04 54 11.8	-0.4	
	baz=344							
W41B	Gary Mavity, V	140.85	13	ePKPpre	PKPpre	04 54 04.8		
ABTX	Abilene, Hawle	140.86	24	PKiKP	PKPdf	04 54 12.4	+0.1	
	baz=332							
ABTX	Abilene, Hawle	140.86	24	ePKPpre	PKPpre	04 54 05.2		
V45A	Humboldt	140.93	9	PKiKP	PKPdf	04 54 11.9	-0.4	
	baz=349							
V46A	Holladay	140.99	8	PKiKP	PKPdf	04 54 12.3	-0.2	
	baz=350							
X39A	Fountain Ranch	141.01	16	PKiKP	PKPdf	04 54 12.9	+0.4	
	baz=341							
PLCA	Paso Flores	141.02	194	PKhKP	PKPpre	04 54 06.1		
	comp=Z,6.3nm,0.9s,baz=56,slow=5.6,SNR=5.3							
PLCA				SKPbc	SKPbc	04 57 38.7	-1.4	
	comp=Z,8.0nm,0.8s,baz=160,slow=5.9,SNR=3.1							
PLCA	Paso Flores	141.02	194	ePKPpre	PKPpre	04 54 06.7		
PLCA				SKPbc	SKPbc	04 57 38.7	-1.4	
V47A	Nunnelly	141.04	7	PKiKP	PKPdf	04 54 12.5	0.0	
	baz=351							
MIAR	Mount Ida	141.12	15	PKiKP	PKPdf	04 54 12.9	+0.2	
	baz=342							
MIAR	Mount Ida	141.12	15	ePKPpre	PKPpre	04 54 05.0		
MIAR				eSKPbc	SKiKP	04 57 42.0	-0.6	
MIAR	Mount Ida	141.12	15	ePKHKP	PKPpre	04 54 05.0		
UALR	University of	141.21	14	ePKPpre	PKPpre	04 54 06.4		
V48A	Smith Brothers	141.21	6	PKiKP	PKPdf	04 54 12.9	+0.1	
	baz=352							
V48A	Smith Brothers	141.21	6	ePKPpre	PKPpre	04 54 05.9		
W43A	Forest City	141.26	11	PKiKP	PKPdf	04 54 12.8	-0.1	
	baz=346							
V49A	McMinnville	141.27	5	PKiKP	PKPdf	04 54 12.8	-0.1	
	baz=354							
V52A	Sevierville	141.33	2	PKiKP	PKPdf	04 54 13.2	+0.2	
	baz=358							
V52A	Sevierville	141.33	2	ePKPpre	PKPpre	04 54 07.0		
V51A	Loudon	141.34	3	PKiKP	PKPdf	04 54 13.0	-0.1	
	baz=356							
V51A	Loudon	141.34	3	ePKPpre	PKPpre	04 54

baz=344
WHTX Lake Whitney, 142.26 22 PKiKP **PKPdf 04 54 14.4 -0.4**
baz=334
WHTX Lake Whitney, 142.26 22 *e*PKPpre PKPpre 04 54 10.2
X47A Russelville 142.29 8 PKiKP **PKPdf 04 54 14.2 -0.6**
baz=351
Y43A Makayla and Ka 142.35 12 PKiKP **PKPdf 04 54 15.1 +0.2**
baz=346
Z40A Long Farm, Mag 142.38 16 PKiKP **PKPdf 04 54 15.4 +0.4**
baz=341
Y44A Strider, Charl 142.44 11 PKiKP **PKPdf 04 54 14.8 -0.3**
baz=347
X48A Hartselle 142.45 7 PKiKP **PKPdf 04 54 14.3 -0.8**
baz=352
X48A Hartselle 142.45 7 *e*PKPpre PKPpre 04 54 09.7
X49A Woodville 142.47 6 PKiKP **PKPdf 04 54 14.6 -0.5**
baz=353
X51A Calhoun 142.54 4 PKiKP **PKPdf 04 54 15.1 -0.2**
baz=356
X51A Calhoun 142.54 4 *e*PKPpre PKPpre 04 54 10.8
X52A Dahlonega 142.56 2 PKiKP **PKPdf 04 54 15.2 -0.1**
baz=357
X50B Fort Payne 142.59 5 PKiKP **PKPdf 04 54 14.5 -0.9**
baz=354
JCT Junction City 142.66 26 PKiKP **PKPdf 04 54 15.1 -0.5**
baz=330
JCT Junction City 142.66 26 *e*PKPpre PKPpre 04 54 11.1
JCT *e*PKPdf **PKPdf 04 54 16.9 +1.3**
JCT *e*SKPbc **SKiKP 04 57 45.3 -0.6**
JCT Junction City 142.66 26 *e*PKIKP **PKPdf 04 54 11.1 -4.5**
Y45A Yeager Farm, C 142.66 10 PKiKP **PKPdf 04 54 15.1 -0.4**
baz=348
X53A Estanollee 142.68 2 PKiKP **PKPdf 04 54 14.9 -0.6**
baz=358
Z42A Norrel Spur, H 142.74 14 PKiKP **PKPdf 04 54 15.9 +0.3**
baz=344
Y46A Houston 142.76 9 PKiKP **PKPdf 04 54 14.9 -0.7**
baz=349
Y47A UCPARC, Winfie 142.89 8 PKiKP **PKPdf 04 54 15.3 -0.6**
baz=350
140A Cam and Jess, 142.92 16 PKiKP **PKPdf 04 54 15.8 -0.2**
baz=341
Z43A Armstrong Fami 142.96 13 PKiKP **PKPdf 04 54 16.0 0.0**
baz=345
Y48A Jasper 142.97 7 PKiKP **PKPdf 04 54 15.7 -0.4**
baz=352
Z44A Pea Ridge, Bel 143.06 12 PKiKP **PKPdf 04 54 15.8 -0.3**
baz=346
Y49A Blount Mountai 143.11 6 PKiKP **PKPdf 04 54 15.9 -0.4**
baz=353
Z45A Winona 143.12 11 PKiKP **PKPdf 04 54 16.3 0.0**
baz=347
141A Papa Simpson, 143.13 15 PKiKP **PKPdf 04 54 16.4 +0.1**
baz=342
Y50A Piedmont 143.14 5 PKiKP **PKPdf 04 54 16.4 0.0**
baz=354
Y51A Rockmart 143.19 4 PKiKP **PKPdf 04 54 16.6 +0.2**
baz=355
Y52A Lilburn 143.28 3 PKiKP **PKPdf 04 54 16.9 +0.3**
baz=357
435B Jarrell 143.29 23 PKiKP **PKPdf 04 54 17.3 +0.6**
baz=334
Y53A Monroe 143.31 2 PKiKP **PKPdf 04 54 16.7 +0.1**
baz=358
Y54A Tignall 143.33 1 PKiKP **PKPdf 04 54 17.1 +0.5**
baz=359
143A Socs Landing, 143.41 13 PKiKP **PKPdf 04 54 17.0 +0.2**
baz=344
NATX Nacogdoches 143.42 18 PKiKP **PKPdf 04 54 17.1 +0.2**
baz=339
NATX Nacogdoches 143.42 18 *e*PKPdf PKPbc 04 54 14.7 +0.4
NATX *e*PP **PP 04 57 27.4 -0.2**
NATX *e*SKPbc **SKiKP 04 57 48.1 +0.7**
Z46A Louisville 143.42 10 PKiKP **PKPdf 04 54 17.3 +0.5**
baz=349
142A Monroe 143.43 14 PKiKP **PKPdf 04 54 17.3 +0.4**
baz=343
240A Hunter Patters 143.43 17 PKiKP **PKPdf 04 54 17.3 +0.4**
baz=340
Z48A Northport 143.45 8 PKiKP **PKPdf 04 54 16.6 -0.2**
baz=351
Z47A Carrollton 143.55 8 PKiKP **PKPdf 04 54 17.1 0.0**
baz=350
241A Mo Tay, Goldon 143.68 16 PKiKP **PKPdf 04 54 17.8 +0.5**
baz=342
144A Alexander Plac 143.69 12 PKiKP **PKPdf 04 54 18.2 +0.9**
baz=346
Z49A Columbiana 143.75 6 PKiKP **PKPdf 04 54 17.9 +0.5**
baz=352
Z50A Ashland 143.76 5 PKiKP **PKPdf 04 54 17.5 0.0**
baz=354
GOGA Godfrey 143.76 2 PKiKP **PKPdf 04 54 18.0 +0.6**
baz=358
GOGA Godfrey 143.76 2 *e*PKPdf PKPab 04 54 14.7 +0.3
GOGA *e*SKPbc **SKiKP 04 57 48.0 0.0**
GOGA Godfrey 143.76 2 *e*PKIKP PKPab 04 54 14.7 +0.3
Z51A Franklin 143.76 4 PKiKP **PKPdf 04 54 18.1 +0.7**
baz=355
145A Houston Renfro 143.82 11 PKiKP **PKPdf 04 54 18.2 +0.7**
baz=347
242A Grayson 143.84 15 PKiKP **PKPdf 04 54 18.4 +0.8**
baz=343
LRAL Lakeview Retre 143.86 7 PKiKP **PKPdf 04 54 17.8 +0.2**
baz=352
LRAL Lakeview Retre 143.86 7 *e*PKPdf PKPbc 04 54 15.2 -0.3
Z53A Monticello 143.89 2 PKiKP **PKPdf 04 54 18.4 +0.7**
baz=358
Z52A Williamson 143.94 3 PKPdf PKPab 04 54 14.6 -0.5
baz=356
146A Union 143.94 10 PKPdf PKPbc 04 54 15.5 -0.2
baz=348
Z54A Sparta 143.95 1 PKPdf PKPab 04 54 14.3 -0.8
baz=359
Z55A Blythe 143.97 0 PKPdf PKPab 04 54 14.6 -0.7
baz=360
147A Livingston 144.04 9 PKPdf **PKPab 04 54 15.5 0.0**
baz=350
NHSC New Hope 144.04 357 PKPdf **PKPab 04 54 15.5 +0.1**
baz=3.3
NHSC New Hope 144.04 357 *e*PKPdf **PKPdf 04 54 17.2 -0.7**
VBMS Vicksburg 144.07 12 PKPdf PKPbc 04 54 16.1 -0.1
baz=346
CSU Charleston Sou 144.16 357 *e*PKPdf PKPbc 04 54 17.1 +0.8
148A Greensboro 144.17 8 PKPdf **PKPab 04 54 15.5 -0.5**
baz=351
243A Waterproof 144.18 14 PKPdf PKPbc 04 54 16.5 0.0
baz=344
244A Avery, Jackson 144.20 13 PKPdf PKPbc 04 54 16.7 +0.1
baz=345
341A Kurthwood 144.26 16 PKPdf PKPbc 04 54 16.6 -0.1
baz=341
149A Jones 144.31 7 PKPdf **PKPab 04 54 16.3 -0.2**
baz=352
245A Little AP, Sta 144.38 11 PKPdf PKPbc 04 54 17.3 +0.2
baz=347
150A Eclectic 144.39 6 PKPdf **PKPab 04 54 16.1 -0.7**
baz=353
152A Waverly Hall 144.44 4 PKPdf **PKPab 04 54 17.0 0.0**
baz=356
342A Flagon Creek P 144.45 15 PKPdf PKPbc 04 54 17.9 +0.5
baz=342
342A Flagon Creek P 144.45 15 *e*PKPdf **PKPdf 04 54 18.3 -0.4**
153A Fort Valley 144.50 3 PKPdf **PKPab 04 54 17.0 -0.2**
baz=357
151A Opelika 144.53 5 PKPdf **PKPab 04 54 17.2 -0.2**
baz=354
156A Sylvania 144.53 359 PKPdf PKPbc 04 54 17.5 0.0
baz=1.0
246A Jackson Lee, B 144.54 10 PKPdf PKPbc 04 54 18.1 +0.5
baz=348
154A Montrose 144.57 1 PKPdf **PKPab 04 54 17.1 -0.3**
baz=358
154A Montrose 144.57 1 *e*PKPdf **PKPdf 04 54 18.3 -0.5**
155A Kite 144.57 1 PKPdf **PKPab 04 54 17.3 -0.1**
baz=359
RPN Rapa Nui 144.57 135 PKP **PKPab 04 54 17.6 -0.1**
comp=Z,120nm,0.7s,baz=286,slow=2.2,SNR=6.2
247A Quitman 144.59 10 PKPdf PKPbc 04 54 18.1 +0.3
baz=349
248A Dixon Mills 144.69 8 PKPdf PKPbc 04 54 18.1 0.0
baz=350
833A Chaparral WMA, 144.69 27 PKPdf PKPbc 04 54 18.7 +0.5
baz=329
833A Chaparral WMA, 144.69 27 *e*PKPdf **PKPdf 04 54 19.1 -0.1**
HKT Hockley 144.69 21 *e*PKPdf PKPbc 04 54 18.0 0.0
HKT *e*SKPbc **SKiKP 04 57 51.1 +1.2**
HKT Hockley 144.69 21 *e*PKIKP PKPbc 04 54 18.0 -0.1

343A Vidalia 144.72 14 PKPdf **PKPdf 04 54 18.8 -0.4**
baz=344
344A Westbrook Farm 144.76 13 PKPdf PKPbc 04 54 18.7 +0.4
baz=345
344A Westbrook Farm 144.76 13 *e*PKPbc **PKPdf 04 54 19.4 +0.1**
441A DeRidder 144.80 17 PKPdf **PKPdf 04 54 19.1 -0.2**
baz=341
249A Camden 144.89 7 PKPdf PKPbc 04 54 19.0 +0.3
baz=351
251A Midway 144.96 5 PKPdf PKPbc 04 54 19.2 +0.3
baz=354
250A Grady 144.99 6 PKPdf PKPbc 04 54 19.0 0.0
baz=353
250A Grady 144.99 6 *e*PKPbc **PKPdf 04 54 19.4 -0.2**
442A Mamou 145.05 16 PKPdf **PKPdf 04 54 20.5 +0.8**
baz=342
345A Thompson Farm, 145.05 12 PKPdf **PKPdf 04 54 19.7 0.0**
baz=346
253A Americus 145.08 3 PKPdf **PKPab 04 54 19.5 +0.2**
baz=356
253A Americus 145.08 3 *e*PKPbc **PKPbc 04 54 19.0 -0.3**
346A Big Creek Wild 145.09 11 PKPdf **PKPdf 04 54 20.0 +0.2**
baz=347
346A Big Creek Wild 145.09 11 *e*PKPbc **PKPdf 04 54 20.2 +0.4**
252A Lumpkin 145.10 4 PKPdf **PKPab 04 54 19.6 +0.1**
baz=355
443A Delano Plantat 145.17 15 PKPdf **PKPdf 04 54 20.7 +0.8**
baz=343
257A Skidaway Islan 145.20 358 PKPdf **PKPbc 04 54 19.5 -0.2**
baz=1.9
257A Skidaway Islan 145.20 358 *e*PKPbc **PKPdf 04 54 20.5 +0.6**
256A Glennville 145.21 360 PKPdf **PKPbc 04 54 19.6 -0.1**
baz=0.4
347A Saraland 145.24 10 PKiKP **PKPdf 04 54 20.9 +0.9**
baz=349
255A Hazlehurst 145.26 1 PKPdf **PKPbc 04 54 19.6 -0.3**
baz=359
255A Hazlehurst 145.26 1 *e*PKPbc **PKPdf 04 54 20.4 +0.3**
348A Jackson 145.33 9 PKiKP **PKPab 04 54 21.1 +0.7**
baz=350
348A Jackson 145.33 9 *e*PKPdf **PKPab 04 54 21.0 +0.7**
541A Lake Charles 145.45 17 PKiKP **PKPab 04 54 22.0 +1.2**
baz=340
541A Lake Charles 145.45 17 *e*PKPdf **PKPab 04 54 22.2 +1.4**
444A Pine Grove 145.47 13 PKiKP **PKPab 04 54 21.7 +0.9**
baz=345
349A Repton 145.49 8 PKiKP **PKPab 04 54 21.6 +0.7**
baz=351
350A Dozier 145.53 6 PKiKP **PKPab 04 54 21.5 +0.4**
baz=353
445A Amite 145.54 13 PKiKP **PKPab 04 54 21.8 +0.7**
baz=345
542A Morse 145.57 16 PKiKP **PKPab 04 54 22.4 +1.1**
baz=341
352A Blakely 145.60 4 PKiKP **PKPab 04 54 21.5 +0.2**
baz=355
352A Blakely 145.60 4 *e*PKPdf **PKPab 04 54 21.5 +0.2**
446A Poplarville 145.69 11 PKiKP **PKPab 04 54 21.8 +0.2**
baz=347
BRAL Brewton 145.69 8 PKiKP **PKPab 04 54 22.1 +0.4**
baz=351
BRAL Brewton 145.69 8 *e*PKPbc **PKPab 04 54 21.9 +0.3**
TIGA Tifton 145.72 2 PKPdf **PKPbc 04 54 21.6 +0.2**
baz=357
TIGA Tifton 145.72 2 *e*PKPdf **PKPab 04 54 21.8 0.0**
351A Pinckard 145.75 5 PKPdf **PKPab 04 54 21.9 0.0**
baz=354
357A Townsend 145.76 359 PKPdf **PKPab 04 54 21.8 -0.1**
baz=1.1
353A Camilla 145.78 3 PKPdf **PKPab 04 54 21.9 -0.1**
baz=356
543A St. Martinvill 145.80 15 PKPdf **PKPab 04 54 22.6 +0.5**
baz=343
448A Bay Minette 145.81 9 PKPdf **PKPab 04 54 22.6 +0.5**
baz=350
447A Lucedale 145.81 10 PKPdf **PKPab 04 54 22.5 +0.4**
baz=348
447A Lucedale 145.81 10 *e*PKPdf **PKPab 04 54 22.6 +0.5**
355A Pearson 145.84 1 PKPdf **PKPab 04 54 22.3 +0.1**
baz=359
356A Blackshear 145.86 0 PKPdf **PKPab 04 54 22.2 -0.1**
baz=360
544A White Castle 145.95 14 PKPdf **PKPbc 04 54 22.2 +0.1**
baz=344
KVTX Kingsville 146.02 26 *e*PKPbc **PKPab 04 54 24.1 +1.1**
449A Pace 146.07 8 PKPdf **PKPbc 04 54 22.4 -0.1**
baz=351
450A Crestview 146.11 7 PKPdf **PKPbc 04 54 22.7 +0.1**
baz=352
546A Slidell 146.16 12 PKiKP **PKPab 04 54 24.2 +0.8**
baz=346
545A Edgard 146.17 13 PKiKP **PKiKP 04 54 24.8 -1.1**
baz=345
452A Marianna 146.21 5 PKiKP **PKPab 04 54 23.8 +0.2**
baz=354
453A Whigham 146.27 3 PKiKP **PKPab 04 54 24.1 +0.3**
baz=356
453A Whigham 146.27 3 *e*PKPdf **PKPbc 04 54 22.8 -0.2**
451A Vernon 146.39 6 PKiKP **PKPab 04 54 24.7 +0.4**
baz=353
451A Vernon 146.39 6 *e*PKPdf **PKPab 04 54 24.1 -0.2**
454A Quitman 146.44 2 PKiKP **PKPab 04 54 24.7 +0.2**
baz=357
456A Hilliard 146.46 360 PKiKP **PKPab 04 54 24.7 +0.1**
baz=0.1
456A Hilliard 146.46 360 *e*PKPdf **PKPbc 04 54 23.6 0.0**
457A Yulee 146.56 359 PKiKP **PKPab 04 54 24.8 -0.2**
baz=1.0
646A Port Sulphur 146.76 12 PKiKP **PKPab 04 54 26.1 +0.3**
baz=346
CPUP Villa Florida 146.80 223 PKPbc **PKPdf 04 54 23.7 +0.9**
comp=Z,117nm,1.0s,baz=111,slow=1.4,SNR=72
CPUP Villa Florida 146.80 223 *e*PKPdf **PKPdf 04 54 23.3 +0.5**
CPUP Villa Florida 146.80 223 *e*PKP2 **PKPdf 04 54 23.3 +0.5**
552A Lynn Haven 146.91 5 PKiKP **PKPab 04 54 25.9 -0.5**
baz=354
553A Crawfordville 146.92 4 PKiKP **PKPab 04 54 26.0 -0.3**
baz=356
555A McAlpin 147.05 1 PKiKP **PKPab 04 54 26.2 -0.7**
baz=358
555A McAlpin 147.05 1 *e*PKPbc **PKPab 04 54 26.7 -0.2**
554A Perry 147.06 3 PKiKP **PKPbc 04 54 26.0 +0.7**
baz=357
557A Orange Park 147.17 359 PKiKP **PKPab 04 54 26.5 -0.8**
baz=0.7
556A Lake Butler 147.18 1 PKiKP **PKPab 04 54 26.5 -0.9**
baz=359
ZAIG Zacatecas 147.51 37 *e*PKPdf **PKPbc 04 54 26.0 -1.1**
LNIG Linares 147.54 30 *e*PKPdf **PKPdf 04 54 24.0 -0.1**
657A Interlachen 147.60 360 PKiKP **PKPbc 04 54 27.5 +0.7**
baz=0.4
655A Horseshoe Beac 147.65 2 PKiKP **PKPbc 04 54 27.6 +0.7**
baz=358
658A Bunnell 147.75 359 PKiKP **PKPbc 04 54 27.7 +0.5**
baz=1.6
658A Bunnell 147.75 359 *e*PKPbc **PKPbc 04 54 27.6 +0.5**
656A Willston 147.81 1 PKiKP **PKPbc 04 54 28.3 +0.9**
baz=359
656A Willston 147.81 1 *e*PKPdf **PKPbc 04 54 25.9 -1.4**
PEL Peldehue 148.17 198 *e*PKPbc **PKPbc 04 54 28.3 0.0**
PEL Peldehue 148.17 198 *e*PKP2 **PKPbc 04 54 28.3 0.0**
758A Lake Helen 148.21 359 PKiKP **PKPbc 04 54 28.9 +0.5**
baz=1.7
757A Oxford 148.24 360 PKiKP **PKPbc 04 54 29.3 +0.7**
baz=0.1
ROC1 El Roble 148.43 198 *e*PKPdf **PKPdf 04 54 26.6 +0.9**
857A Zephyrhills 148.91 0 PKiKP **PKPbc 04 54 30.8 +0.6**
baz=360
858A St. Cloud 148.96 359 PKiKP **PKiKP 04 54 31.0 -0.7**
baz=1.4
DWPF Disney Wildern 149.06 359 PKiKP **PKPbc 04 54 31.3 +0.6**
baz=1.3
DWPF Disney Wildern 149.06 359 *e*PKPdf **PKPdf 04 54 28.0 +1.5**
DWPF *e*PKPbc **PKPbc 04 54 31.1 +0.4**
859A Kempfer Cattle 149.10 358 PKiKP **PKiKP 04 54 31.5 -0.5**
baz=2.3
957A Wimauma 149.50 0 PKiKP **PKiKP 04 54 32.4 -0.4**
baz=360
957A Wimauma 149.50 0 *e*PKPdf **PKPdf 04 54 28.9 +1.7**
958A Wauchula 149.59 359 PKiKP **PKiKP 04 54 32.6 -0.4**
baz=0.7
959A Okeechobee 149.63 358 PKiKP **PKiKP 04 54 32.8 -0.3**
baz=2.4
058A Arcadia 150.12 359 PKiKP **PKiKP 04 54 33.7 -0.4**
baz=0.6
059A Moore Haven 150.19 358 PKiKP **PKiKP 04 54 33.9 -0.4**
baz=1.9

059A Moore Haven 150.19 358 *e*PKPdf **PKPdf 04 54 29.9 +1.6**
059A *e*PKPbc **PKiKP 04 54 34.4 +0.1**
JRQG Juriquilla Cam 150.35 37 *e*PKPdf **PKPdf 04 54 30.5 +1.5**
MOIG Morelia 150.67 39 *e*PKPdf **PKPdf 04 54 31.2 +1.7**
060Z West Palm Beac 150.73 357 PKiKP **PKPbc 04 54 35.0 +0.2**
baz=3.1
059Z Ave Maria 150.83 359 PKiKP **PKiKP 04 54 35.5 -0.1**
baz=1.4
GO04 Tololo Observa 150.94 200 *e*PKPbc **PKPbc 04 54 35.6 +0.1**
061Z Ochoppi 151.28 358 PKiKP **PKPbc 04 54 36.2 +0.2**
baz=2.5
ANWB Willy Bob 151.31 316 *e*PKPdf **PKPdf 04 54 31.4 +1.1**
ANWB *e*PKPbc **PKPbc 04 54 36.4 +0.1**
ANWB Willy Bob 151.31 316 *e*P **PKPbc 04 54 36.9 +0.5**
ANWB Willy Bob 151.31 316 *e* pPKPbc 04 55 02.8 -1.4
SMRT St. Maarten 151.91 319 *e*PKPdf **PKPdf 04 54 33.0 +1.8**
SMRT *e*PKPbc **PKPbc 04 54 37.4 -0.3**
SMRT St. Maarten 151.91 319 *e*P **PKPbc 04 54 37.6 -0.2**
SMRT St. Maarten 151.91 319 *e* pPKPbc 04 55 04.0 -1.6
LCO Las Campanas 151.96 202 *e*PKPdf **PKPdf 04 54 32.6 +1.3**
LCO *e*PKPbc **PKPbc 04 54 37.9 0.0**
MGG Marie-Galante 152.15 313 *e*P **PKPbc 04 54 38.5 +0.3**
UNM Universidad Na 152.16 36 *e*PKPbc **PKPbc 04 54 39.7 +1.1**
ABVI Anegada Island 152.22 322 *e*PKPdf **PKPdf 04 54 33.9 +2.3**
GDHS Morne Mazeau, 152.25 314 *e*PKPbc **PKPbc 04 54 39.0 +0.4**
MLYT Lee's Yard 152.25 316 *e*P **PKPbc 04 54 39.3 +0.8**
SABA Saba 152.33 318 *e*PKPbc **PKPbc 04 54 39.7 +1.0**
SABA Saba 152.33 318 *e*P **PKPbc 04 54 39.5 +0.9**
SABA Saba 152.33 318 *e* pPKPab 04 55 14.3 -1.7
MDVC Dominica, Viel 152.41 313 *e*P **PKPbc 04 54 39.9 +1.0**
MDVC Dominica, Viel 152.41 313 *e* pPKPab 04 55 13.0 -3.3
MDPV Dominica, Penn 152.42 313 *e*P **PKPbc 04 54 41.4 +2.5**
062Z Marathon 152.42 358 PKiKP **PKPbc 04 54 37.8 -0.8**
baz=2.3
TBG Guadaloupe-3 152.44 313 *e*P **PKPbc 04 54 39.2 +0.3**
TBG Guadaloupe-3 152.44 313 *e* pPKPbc 04 55 05.5 -1.3
MDPO Dominica; Chan 152.47 313 *e*P **PKPbc 04 54 40.0 +1.0**
MDPO Dominica; Chan 152.47 313 *e* pPKPbc 04 55 06.0 -0.9
BBL Barber's Block 152.52 313 *e*P **PKPbc 04 54 40.3 +1.1**
BBL Barber's Block 152.52 313 *e* pPKPbc 04 55 06.0 -1.0
DSTT Stowe 152.57 312 *e*P **PKPbc 04 54 41.0 +1.7**
DSHT Scott's Head 152.65 312 *e*P **PKPbc 04 54 41.3 +1.9**
DSHT Scott's Head P 152.65 312 *e* pPKPbc 04 55 07.2 -0.1
FDF Fort de France 152.78 311 *e*PKPdf **PKPdf 04 54 34.6 +2.0**
FDF Fort de France 152.78 311 *e*P **PKPbc 04 54 40.7 +0.9**
FDF Fort de France 152.78 311 *e*PKIKP **PKPdf 04 54 34.6 +2.0**
STVI Saint Thomas 152.89 322 *e*PKPdf **PKPdf 04 54 33.7 +1.1**
GO03 Copiap 153.05 204 *e*PKPdf **PKPdf 04 54 34.6 +1.9**
CDVI St. Croix 153.22 321 *e*PKPdf **PKPdf 04 54 35.0 +1.9**
GRTK Grand Turk 153.38 337 *e*PKPbc **PKPbc 04 54 41.7 +0.9**
LVIG Laguna Verde 153.39 31 *e*PKPdf **PKPdf 04 54 35.3 +2.0**
MTP Monte Pirata 153.44 323 *e*PKPdf **PKPdf 04 54 34.2 +0.7**
CBYP Canovanas 153.49 323 *e*PKPdf **PKPdf 04 54 34.2 +0.6**
HUMP Col San Antoni 153.59 323 *e*PKPdf **PKPdf 04 54 33.8 +0.2**
SVCV St. Vincent, C 153.66 308 *e*P **PKPdf 04 54 29.1 -4.7**
SVB Belmont 153.75 308 *e*PKPbc **PKPbc 04 54 41.4 -0.5**
SVB Belmont 153.75 308 *e*P **PKPdf 04 54 28.2 -5.8**
SJG San Juan 153.79 324 PKP **PKPdf 04 54 33.9 0.0**
comp=Z,20nm,0.9s,baz=30,slow=5.4,SNR=6.3
SJG PKPbc **PKPbc 04 54 41.4 -0.4**
comp=Z,20nm,0.7s,baz=40,slow=12,SNR=9.1
SJG PKPab **PKPab 04 54 55.2 +0.2**
comp=Z,36nm,0.6s,baz=6.0,slow=2.4,SNR=8.0
SJG San Juan 153.79 324 *e*PKPdf **PKPdf 04 54 34.8 +0.9**
SJG *e*PKPbc **PKPbc 04 54 41.5 -0.4**
SJG *e*PKPab **PKPab 04 54 55.4 +0.4**
SJG San Juan 153.79 324 *e*P **PKPdf 04 54 33.0 -0.9**
TLIG Tlapa 153.89 38 *e*PKPdf **PKPdf 04 54 35.8 +1.6**
AOPR Arecibo Observ 153.96 325 *e*PKPdf **PKPdf 04 54 34.7 +0.5**
OBIP Obispado Ponce 154.11 324 *e*PKPdf **PKPdf 04 54 34.7 +0.4**
ICMP Isla Caja de M 154.19 324 *e*PKPdf **PKPdf 04 54 35.2 +0.7**
MPR Mayaguez 154.28 326 *e*PKPdf **PKPdf 04 54 35.5 +0.9**
MPR *e*PKPbc **PKPbc 04 54 41.8 -1.1**
CRPR Cabo Rojo, PR 154.43 325 *e*PKPbc **PKPbc 04 54 42.9 -0.3**
GRGR Grenville 154.73 307 *e*PKPdf **PKPdf 04 54 35.6 +0.3**
GRGR *e*PKPbc **PKiKP 04 54 44.0 0.0**
GRGR Grenville 154.73 307 *e*P **PKPdf 04 54 34.6 -0.7**
MYIG MØrida 155.03 17 *e*PKPdf **PKPdf 04 54 37.4 +1.8**
MYIG *e*PKPab **PKPab 04 55 01.5 +1.4**
SIV San Ignacio 155.62 237 PKP **PKPdf 04 54 36.6 +0.1**
comp=Z,14nm,1.0s,baz=125,slow=3.8,SNR=34
SIV PKPab **PKPab 04 55 02.8 -0.2**
comp=Z,25nm,0.8s,baz=131,slow=5.8,SNR=14
GTBY Guantanamo Bay 156.21 344 *e*PKPab **PKPab 04 55 06.5 +1.4**
CMIG Matias Romero 156.37 32 PKPab **PKPab 04 55 07.3 +1.3**
comp=Z,28nm,0.7s,baz=272,slow=1.3,SNR=8.2
CMIG PP **PP 04 58 41.7 -1.2**
comp=Z,16nm,1.1s,baz=325,slow=5.0,SNR=4.2
PB04 IPOC Station P 157.56 210 *e*PKPab **PKPab 04 55 11.9 +0.7**
PTGA Pitinga 157.78 275 PKP **PKPdf 04 54 39.4 0.0**
comp=Z,22nm,1.0s,baz=38,slow=0.7,SNR=24
PTGA PKPab **PKPab 04 55 12.6 +0.2**
comp=Z,83nm,0.9s,baz=72,slow=4.6,SNR=20
FSCY Frank Sound, G 157.81 358 *e*PKPab **PKPab 04 55 11.4 -0.6**
PCRV Puerto La Cruz 158.24 307 PKP **PKPdf 04 54 39.8 -0.2**
comp=Z,15nm,0.9s,baz=10,slow=9.0,SNR=5.2
PB01 IPOC Station P 158.27 213 *e*PKPdf **PKPdf 04 54 40.8 +0.9**
CCIG Comitan 158.42 27 *e*PKPdf **PKPdf 04 54 41.5 +1.2**
MTDJ Mount Denham 158.43 348 *e*PKPdf **PKPdf 04 54 39.9 -0.3**
MTDJ *e*PKPab **PKPab 04 55 15.7 +0.8**
MNMC Minye Minye 159.84 216 *e*PKPdf **PKPdf 04 54 42.9 +0.9**
SAML Samuel 160.30 252 *e*PKPdf **PKPdf 04 54 42.3 0.0**
SAML *e*PKPab **PKPab 04 55 23.2 -0.1**
SAML Samuel 160.30 252 *e*P **PKPdf 04 54 42.8 +0.5**
LPAZ La Paz 160.95 225 PKP **PKPdf 04 54 44.2 +0.5**
comp=Z,23nm,1.0s,baz=264,slow=0.6,SNR=42
LPAZ PKPab **PKPab 04 55 28.2 +1.5**
comp=Z,48nm,0.9s,baz=221,slow=4.1,SNR=10.0
TGUH Tegucigalpa,Un 162.29 17 *e*PKPdf **PKPdf 04 54 45.0 +0.7**
TGUH Tegucigalpa,Un 162.29 17 *e*P **PKPdf 04 54 43.7 -0.6**
ESTN Estel 163.45 15 *e*PKPdf **PKPdf 04 54 45.7 +0.1**
ESTN *e*PKPab **PKPab 04 55 37.6 +0.8**
SDV Santo Domingo 163.57 316 PKP **PKPdf 04 54 46.1 +0.2**
comp=Z,24nm,1.0s,baz=190,slow=0.1,SNR=24
SDV PKPab **PKPab 04 55 39.1 +1.4**
comp=Z,51nm,0.9s,baz=63,slow=4.7,SNR=6.5
SDV PP **PP 04 59 23.2 +0.7**
comp=Z,7.6nm,0.5s,baz=19,slow=5.5,SNR=3.4
SDV Santo Domingo 163.57 316 *e*P **PKPdf 04 54 45.5 -0.3**
PRVC Isla de Provid 163.71 357 *e*P **PKPdf 04 54 43.7 -2.0**
CODC Agust`>n Codaz 164.53 326 *e*P **PKPdf 04 54 46.5 0.0**
SJCC San Jacinto, C 165.46 332 *e*P **PKPdf 04 54 47.7 +0.3**
OCAC Ocana 165.82 322 *e*P **PKPdf 04 54 47.5 -0.3**
PAMC Pamplona, Colo 166.10 318 *e*P **PKPdf 04 54 46.0 -2.4**
MOTC Monteria, Cord 166.66 331 *e*P **PKPdf 04 54 48.4 +0.1**
BRRC Barranca, Sant 166.93 320 *e*P **PKPdf 04 54 48.6 +0.2**
BARC Barichara 166.97 317 *e*P **PKPdf 04 54 47.7 -1.1**
ZARC Zaragoza, Cauc 167.32 325 *e*P **PKPdf 04 54 48.6 -0.1**
RUSC La Rusia 167.39 314 *e*PKPdf **PKPdf 04 54 48.5 -0.9**
RUSC La Rusia 167.39 314 *e*P **PKPdf 04 54 48.5 -0.9**
CAPC Capurgana 167.51 338 *e*P **PKPdf 04 54 48.6 -0.3**
BCIP Isla Barro Col 167.71 350 *e*PKPdf **PKPdf 04 54 48.5 -0.4**
BCIP *e*PKPab **PKPab 04 55 55.7 +0.3**
BCIP *e*PP **PP 04 59 41.4 -1.1**
BCIP Isla Barro Col 167.71 350 *e*P **PKPdf 04 54 48.6 -0.3**
PTBC PUERTO BERRIO 167.84 321 *e*P **PKPdf 04 54 48.3 -0.9**
DBBC Dabeiba 168.45 329 *e*P **PKPdf 04 54 48.9 -0.8**
CHIC Chingaza 168.72 312 *e*P **PKPdf 04 54 48.9 -1.3**
HELC Santa Helena 168.76 324 *e*PKPdf **PKPdf 04 54 49.5 -0.7**
HELC Santa Helena 168.76 324 *e*P **PKPdf 04 54 49.4 -0.8**
NORC Norcasia 168.85 320 *e*P **PKPdf 04 54 49.3 -0.5**
ROSC El Rosal 169.00 315 PKP **PKPdf 04 54 50.6 +0.2**
comp=Z,45nm,0.9s,baz=154,slow=1.8,SNR=49
ROSC PKPab **PKPab 04 56 04.2 +2.3**
comp=Z,26nm,0.6s,baz=246,slow=9.3,SNR=11
ROSC PP **PP 04 59 52.0 +1.2**
comp=Z,9.1nm,0.7s,baz=99,slow=8.8,SNR=4.7
ROSC El Rosal 169.00 315 *e*PKPdf **PKPdf 04 54 51.0 +0.5**
ROSC PKPab **PKPab 04 56 04.2 +2.3**
ROSC PP **PP 04 59 52.0 +1.2**
ROSC El Rosal 169.00 315 *e*P **PKPdf 04 54 50.8 +0.4**
VILC Villavicencio, 169.03 310 *e*P **PKPdf 04 54 49.9 -0.2**
NNA Nana 169.67 210 PKP **PKPdf 04 54 50.3 0.0**
comp=Z,20nm,0.9s,baz=109,slow=2.5,SNR=5.3
NNA Nana 169.67 210 *e*PKPdf **PKPdf 04 54 50.8 +0.5**
SOLC Bahia Solano 169.71 333 *e*P **PKPdf 04 54 51.1 +0.8**
SJAC San Juan de Ar 169.75 307 *e*P **PKPdf 04 54 50.9 +0.4**
TOLC Tolima 169.87 318 *e*P **PKPdf 04 54 51.1 +0.2**
ANIL Santa Ana 170.00 318 *e*P **PKPdf 04 54 49.5 -1.4**
PRAC Prado 170.19 313 *e*PKPdf **PKPdf 04 54 49.9 -0.8**
PRAC Prado 170.19 313 *e*P **PKPdf 04 54 49.7 -1.0**
PLMC San Jos`> del 170.24 324 *e*P **PKPdf 04 54 49.2 -1.6**

YOTC	Yotoco, Valle	171.00 320	eP	PKPdf	04 54 50.8	-0.4
BETC	Betania	171.28 310	eP	PKPdf	04 54 52.2	+0.9
HORQ	Saladito	171.56 320	eP	PKPdf	04 54 51.0	-0.7
MARP	Paez Belalcaza	171.56 313	eP	PKPdf	04 54 51.5	-0.2
MALC	Bahia Malaga	171.57 326	eP	PKPdf	04 54 53.1	+1.8
FLOC	Florencia	172.12 305	eP	PKPdf	04 54 51.5	-0.1
PCON	Cinco Dias	172.23 313	eP	PKPdf	04 54 52.1	-0.3
POPC	Popayan, Colom	172.28 315	eP	PKPdf	04 54 51.1	-0.8
SOTA	Rioblanco	172.51 313	eP	PKPdf	04 54 52.6	+0.2
GRGC	Isla de Gorgon	172.86 327	eP	PKPdf	04 54 52.5	+0.6
CRUC	La Cruz	173.15 311	eP	PKPdf	04 54 52.4	-0.1
GCUF	Volcan Galeras	173.67 311	eP	PKPdf	04 54 52.8	0.0
OTAV	Otavalo	175.14 311	ePKPdf	PKPdf	04 54 52.8	-0.5
OTAV			ePKPab	PKPab	04 56 30.2	+0.8
OTAV	Otavalo	175.14 311	eP	PKPdf	04 54 53.3	0.0

JMA 23 04:47:17.4±0.2, 37°.08N×142°.06E, h70km±4km, M3.8, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	Kawauchi	0.99	287	P	Pn	04 47 35.9	+0.1
JFK				S	Sn	04 47 49.4	0.0
ONAJ	Iwakimizuishiy	1.01	272	P	Pn	04 47 36.3	+0.3
ONAJ				S	Sn	04 47 49.8	-0.1
JMM	Marumori	1.28	308	P	Pn	04 47 39.7	+0.3
JMM				S	Sn	04 47 56.2	+0.3
JHO	Hitachi	1.28	249	P	Pn	04 47 39.5	0.0
JHO				S	Sn	04 47 55.2	-0.9
JFT	Otama	1.44	288	P	Pn	04 47 42.7	+1.1
JFT				S	Sn	04 48 01.1	+1.3
JIO	Ouri	1.48	338	P	Pn	04 47 42.3	+0.2
JIO				S	Sn	04 47 59.9	-0.8
JOU	Okura	1.69	320	P	Pn	04 47 45.4	+0.4
JFY	Yanaizu	1.91	281	P	Pn	04 47 48.7	+0.9
JMK	Ichinoseki	1.98	341	P	Pn	04 47 49.2	+0.4
JMK				S	Sn	04 48 12.2	-0.5
JAG	Ashikaga	2.19	253	P	Pn	04 47 52.5	+0.9
JAG				S	Sn	04 48 17.5	-0.3
JYK	Kaneyama	2.27	324	P	Pn	04 47 53.5	+0.8
JYK				eS	Sn	04 48 20.6	+0.9
JOM	Ohasama	2.46	346	P	Pn	04 47 55.6	+0.3
JOM				S	Sn	04 48 23.9	-0.5
BSO1	Boso 1	2.58	200	P	Pn	04 47 56.3	0.0
JRY	Ryogami san	2.76	248	P	Pn	04 47 59.9	+0.6
MAT	Matsushiro	3.14	261	P	Pn	04 48 06.4	+1.9
MAT				S	Sn	04 48 43.5	+2.7

SJA 23 05:02:49.4±0.7, 23°.97S×66°.83W, h222km±13km, ML2.4, MW2.6
ISCJB 23 05:02:51.6±0.9, 24°.02S±0°.07×66°.85W±0°.08, h181km, Error ellipse: s-maj=14.1km s-min=5.0km az=137.1
GUC 23 05:02:51.6±0.4, 23°.91S×67°.20W, h238km±16km, ML4.0
ISC 23 05:02:51.8±1.6, 24°.01S±0°.08×66°.83W±0°.09, h181km, n12, σ0§84/22, 4C, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB15	IPOC Station P	2.55	288	⇑iP	Pn	05 03 36.5	+1.1
PB15				eS	Sn	05 04 11.0	+1.8
PB06	IPOC Station P	2.83	297	⇑eP	Pn	05 03 39.4	+0.7
PB06				eS	Sn	05 04 15.4	+0.3
PB06				IAML		05 04 17.3	
	comp=N,202nm,0.1s						
AHML	Horco Molle	3.08	154	i P	Pn	05 03 41.7	+0.2
AHML				IAML		05 03 42.4	
	comp=Z,6.7nm,0.5s						
AHML				i S	Sn	05 04 21.2	+0.8
PB09	IPOC Station P	3.13	314	eP	Pn	05 03 42.7	+0.4
PB09				eS	Sn	05 04 21.8	+0.2
PB05	IPOC Station P	3.30	290	eP	Pn	05 03 44.2	-0.1
PB05				eS	Sn	05 04 24.3	-1.0
PB05				IAML		05 04 27.3	
	comp=N,85nm,0.3s						
PB14	IPOC Station P	3.31	259	i P	Pn	05 03 45.3	+0.6
PB14				i S	Sn	05 04 25.8	-0.1
PB14	IPOC Station P	3.31	259	eP	Pn	05 03 45.3	+0.6
PB14				eS	Sn	05 04 26.1	+0.2
PB14				IAML		05 04 28.5	
	comp=E,233nm,0.3s						
PB03	IPOC Station P	3.32	305	⇑iP	Pn	05 03 44.5	-0.2
PB03				eS	Sn	05 04 24.7	-1.2
PB03				IAML		05 04 26.4	
	comp=N,165nm,0.1s						
PB10	IPOC Station P	3.44	278	eP	Pn	05 03 46.4	+0.3
PB10				eS	Sn	05 04 27.3	-1.0
PB04	IPOC Station P	3.48	298	⇑eP	Pn	05 03 46.4	-0.2
PB04				eS	Sn	05 04 27.9	-1.5
PB04				IAML		05 04 36.2	
	comp=E,141nm,0.3s						
ACLC	CERRO LA CRUZ	5.39	181	i P	Pn	05 04 10.9	-0.2
APLL	PUNTA DE LOS L	6.37	178	i P	Pn	05 04 22.6	-1.0

MEX 23 05:03:27.5±0.3, 17°.43N×101°.60W, h13km±5km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.21	37	i P	Pg	05 03 31.7	-0.4
ZIIG				i S	Sg	05 03 35.0	-0.3
CAIG	El Cayaco	1.33	107	eP	Pn	05 03 48.1	-3.7
CAIG				eS	Sb	05 04 04.2	-5.1
ARIG	Puente Sto Nin	1.46	55	eP	Pn	05 03 50.0	-3.6
ARIG				eS	Sn	05 04 07.0	-5.8

IDC 23 05:09:22.0±7.2, 36°.12N×70°.91E, h146km±63km, mb3.4/6, mb1 3.4/9, mb1mx3.1/89, mbtmp3.8/9, Error ellipse: s-maj=38.4km s-min=26.0km az=22.0
ISCJB 23 05:09:23.2±0.8, 36°.40N±0°.09×70°.6E±0°.1, h150km, mb3.5/5, Error ellipse: s-maj=18.3km s-min=7.6km az=140.6
ISC 23 05:09:23.2±1.0, 36°.2N±0°.1×70°.8E±0°.1, h150km, n17, σ1§46/17, mb3.6/5, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DANN	Dangsing	13.50	122	eP	P	05 12 32.2	-0.9
	9.3nm,0.3s						
MKAR	Makanchi Array	13.62	36	P	Pn	05 12 29.8	-0.3
	0.1nm,0.3s,baz=214,slow=8.1,SNR=5.5						
KOLN	Koldanda	13.77	124	eP	P	05 12 35.7	-0.2
	6.7nm,0.4s						
GKN	Gorkha	14.32	121	eP	P	05 12 42.3	+0.2
	12nm,0.4s						
DMN	Daman	14.89	121	eP	P	05 12 49.7	+1.2
	11nm,0.5s						
KKN	Kakani	14.90	120	eP	P	05 12 49.7	+1.2
	14nm,0.6s						
GUN	Gumba	15.25	119	eP	P	05 12 55.0	+2.5
	10nm,0.5s						
KURBB	Kurchatov Arra	15.43	19	P	Pn	05 12 52.6	-0.1
	0.0nm,0.3s,baz=212,slow=10.0,SNR=4.1						
JIRN	Jiri	15.62	119	eP	P	05 12 59.7	+3.0
	26nm,0.4s						
RAMN	Ramite	16.34	120	eP	P	05 13 07.0	+2.5
	16nm,0.5s						
AKTO	Aktyubinsk	16.92	331	P	Pn	05 13 11.8	+1.0
	0.4nm,0.3s,baz=136,slow=10,SNR=4.3						
ZALV	Zalesovo Beam	20.23	25	P	P	05 13 45.4	-1.0
	1.3nm,0.4s,baz=225,slow=10,SNR=6.5						
FINES	FINESS Array B	37.60	326	P	P	05 16 23.6	+0.7
	2.7nm,1.1s,baz=112,slow=10.0,SNR=5.3						
ARCES	ARCESS Array B	41.32	338	P	P	05 16 53.9	+0.3
	1.6nm,0.9s,baz=96,slow=7.4,SNR=5.9						
TORD	Torodi Ar. Bea	65.52	269	P	P	05 19 50.4	-0.4
	0.4nm,0.5s,baz=53,slow=6.3,SNR=5.2						
YKA	Yellowknife Ar	81.52	3	P	P	05 21 23.2	-0.2
	0.3nm,0.4s,baz=348,slow=5.4,SNR=8.0						
ASAR	Alice Springs	84.26	125	P	P	05 21 36.9	-1.2
	0.5nm,0.6s,baz=310,slow=4.7,SNR=6.8						

BJI 23 05:18:03.4, 41°.79N×88°.31E, h6km, ML3.4/8
NNC 23 05:18:10.2±6.5, 41°.91N×87°.66E, h0km, mb3.8, mpv3.3, Error ellipse: s-maj=46.0km s-min=34.4km az=133.0
ISC 23 05:18:06.7±4.0, 41°.9N±0°.2×88°.2E±0°.2, h10km, n4, σ0§96/8, 4C-5D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	Urumqi	1.97	350	Pg	Pb	05 18 42.0	-0.7
WMQ				Sg	Sb	05 19 08.4	+1.1
WMQ				smax	smax		
	comp=N,1μm,0.7s						
WMQ				smax	smax		
	comp=E,3μm,0.5s						
MK31	Makanchi Array	6.46	321	⇑Pn	Pn	05 19 42.1	+0.2
	0.2nm,0.1s,baz=139,slow=14,SNR=182						
MK31				⇓Sn	Sn	05 20 55.9	+0.2
	4.5nm,0.7s,baz=144,slow=29						
MK31				⇑Lg	Lg	05 21 23.9	
	3.3nm,0.6s,baz=143,slow=28						
PDGK	Podgornoye	6.55	286	⇓Pn	Pn	05 19 43.5	+0.3
	0.9nm,0.3s						
PDGK				⇓Sn	Sn	05 20 58.0	0.0
	10nm,0.5s						
PDGK				⇑Lg	Lg	05 21 33.6	
	20nm,0.6s						
MAKZ	Makanchi	6.62	320	⇓Pn	Pn	05 19 44.5	+0.5
	0.9nm,0.2s						
MAKZ				⇑Sn	Sn	05 20 58.0	-1.6
	1.6nm,0.5s						
MAKZ				⇓Lg	Lg	05 21 36.6	
	3.7nm,0.8s						

IDC 23 05:28:07.5±8.3, 30°.94S×179°.35W, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.5/42, mbtmp3.5/2, Error ellipse: s-maj=348.1km s-min=60.3km az=157.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	41.93	268	P	P	05 35 59.4	-0.8
	0.2nm,0.5s,baz=103,slow=8.2,SNR=2.9						
WRA	Warramunga Arr	42.97	273	P	P	05 36 09.1	+0.5
	0.3nm,0.4s,baz=114,slow=7.6,SNR=6.7						
FINES	FINESS Array B	145.24	339	PKPbc	PKPbc	05 47 45.2	-0.8
	0.8nm,0.7s,baz=46,slow=5.5,SNR=4.6						

MEX 23 05:32:46.7±0.3, 17°.43N×101°.59W, h12km±5km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.21	33	eP	Pg	05 32 50.9	-0.5
ZIIG				i S	Sg	05 32 54.1	-0.3
CAIG	El Cayaco	1.31	106	eP	Pn	05 33 07.2	-3.7
CAIG				eS	Sb	05 33 23.2	-4.9
ARIG	Puente Sto Nin	1.45	54	eP	Pn	05 33 09.2	-3.7
ARIG				i S	Sn	05 33 26.0	-5.8

IDC 23 05:47:47.2±6.9, 36°.61S×177°.66E, h117km±71km, mb3.0/2, mb1 3.3/2, mb1mx3.1/44, mbtmp3.4/2, Error ellipse: s-maj=91.2km s-min=53.7km az=3.0
ISCJB 23 05:47:50.8±0.7, 37°.21S±0°.05×177°.61E±0°.06, h169km±4km, mb3.2/2, Error ellipse: s-maj=9.4km s-min=6.1km az=140.2
WEL 23 05:47:51.5, 37°.5±4°.×17°.8E±°., h151km±5km
NEIC 23 05:47:52.1±0.0, 37°.02S×177°.52E, h143km, ML4.0(WEL), After WEL.
ISC 23 05:47:49.4±1.1, 37°.16S±0°.06×177°.65E±0°.06, h176km±7km, n105, σ1§31/121, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAZ	Te Kaha	0.61	170	P	Pn	05 48 14.1	-0.1
HAZ				S	Sn	05 48 30.7	-2.8
MXZ	Matakaoa Point	0.66	128	Pn	Pn	05 48 14.6	+0.1
MXZ				Sn	Sn	05 48 33.0	-0.9
MXZ	Matakaoa Point	0.66	128	P	Pn	05 48 14.6	+0.1
MXZ				S	Sn	05 48 31.5	-2.4
PKGZ	Pakihiroa	0.80	155	P	Pn	05 48 16.2	+0.8
PKGZ				S	Sn	05 48 34.6	-1.1
RUGZ	Raukumara Rang	0.81	179	P	Pn	05 48 15.2	-0.4
WHRZ	Whale Island	0.88	217	P	Pn	05 48 16.6	+0.7
WHRZ				S	Sn	05 48 34.0	-2.4
WMGZ	Waiomatatini S	0.90	138	Pn	Pn	05 48 16.8	+0.8
WMGZ	Waiomatatini S	0.90	138	P	Pn	05 48 16.8	+0.8
WMGZ				S	Sn	05 48 35.8	-0.7
PUZ	Puketiti	1.03	152	Pn	Pn	05 48 17.9	+0.9
PUZ				Sn	Sn	05 48 37.9	-0.5
PUZ	Puketiti	1.03	152	P	Pn	05 48 17.9	+0.9
PUZ				S	Sn	05 48 37.3	-1.1
TWGZ	Tauwhareparae	1.05	166	Pn	Pn	05 48 18.7	+1.6
TWGZ	Tauwhareparae	1.05	166	P	Pn	05 48 18.8	+1.6
TWGZ				S	Sn	05 48 38.5	-0.3
OPRZ	Ohinepanea	1.11	232	Pn	Pn	05 48 17.7	+0.1
OPRZ	Ohinepanea	1.11	232	P	Pn	05 48 17.7	+0.1
OPRZ				S	Sn	05 48 37.9	-1.5
MWZ	Matawai	1.18	185	Pn	Pn	05 48 19.1	+0.9
MWZ	Matawai	1.18	185	P	Pn	05 48 19.1	+0.9
MWZ				S	Sn	05 48 39.8	-0.8
URZ	Urewera	1.18	201	P	Pn	05 48 18.7	+0.5
	11nm,0.3s,baz=313,slow=3.4,SNR=1.8						
URZ				S	Sn	05 48 39.2	-1.3
	62nm,0.3s,baz=258,slow=23,SNR=8.5						
URZ	Urewera	1.18	201	P	Pn	05 48 18.8	+0.6
URZ				S	Sn	05 48 39.2	-1.3
EDRZ	Edgecumbe	1.19	217	Pn	Pn	05 48 19.1	+0.8
EDRZ	Edgecumbe	1.19	217	P	Pn	05 48 19.2	+0.8
TGRZ	Tauranga	1.25	242	P	Pn	05 48 19.1	+0.4
TKGZ	Te Karaka	1.29	173	Pn	Pn	05 48 20.4	+1.3
TKGZ	Te Karaka	1.29	173	P	Pn	05 48 20.4	+1.3
TKGZ				S	Sn	05 48 41.5	-0.6
CNGZ	Carnagh Statio	1.40	162	Pn	Pn	05 48 21.9	+1.9
CNGZ	Carnagh Statio	1.40	162	P	Pn	05 48 22.0	+1.9
KARZ	Kaharoa	1.41	232	P	Pn	05 48 21.1	+0.8
MUGZ	Murupara	1.49	208	P	Pn	05 48 21.9	+0.9
MUGZ				S	Sn	05 48 44.9	-0.6
KMRZ	Kaimai	1.52	243	P	Pn	05 48 22.1	+0.8
RIGZ	Rimuhau	1.55	177	P	Pn	05 48 23.1	+1.6
RIGZ				S	Sn	05 48 46.3	-0.3
RTZ	Ruatahuna	1.55	200	P	Pn	05 48 22.4	+0.8
PRRZ	Plateau Road	1.67	216	Pn	Pn	05 48 23.9	+1.2
PRRZ	Plateau Road	1.67	216	P	Pn	05 48 23.9	+1.2
ALRZ	Allen Road	1.74	216	P	Pn	05 48 24.8	+1.3
PRGZ	Paritu Road	1.77	174	Pn	Pn	05 48 25.4	+1.7
PRGZ	Paritu Road	1.77	174	P	Pn	05 48 25.5	+1.7
WPRZ	Whakapapatarin	1.80	220	P	Pn	05 48 25.7	+1.6
TOZ	Tahuroa Road	1.80	251	P	Pn	05 48 25.1	+1.0
MTHZ	Maungataniwha	1.81	200	P	Pn	05 48 24.9	+0.7
KNZ	Kokohu	1.86	179	Pn	Pn	05 48 26.0	+1.3
KNZ	Kokohu	1.86	179	P	Pn	05 48 26.0	+1.3
WHHZ	Waihua	1.94	190	P	Pn	05 48 27.2	+1.6
KUTZ	Kaahu Road	1.96	227	P	Pn	05 48 27.6	+1.7
GRZ	Great Barrier	1.98	297	P	Pn	05 48 25.4	-0.6
MKAZ	Moumakai	1.99	271	Pn	Pn	05 48 26.8	+0.7
MKAZ	Moumakai	1.99	271	P	Pn	05 48 26.8	+0.7
MHGZ	Mahia Peninsul	2.00	174	Pn	Pn	05 48 28.1	+1.8
MHGZ	Mahia Peninsul	2.00	174	P	Pn	05 48 28.2	+2.0
TLZ	Tolley Road	2.04	234	P	Pn	05 48 28.4	+1.7
NMHZ	Naumai	2.05	199	Pn	Pn	05 48 28.7	+1.9
NMHZ	Naumai	2.05	199	P	Pn	05 48 28.7	+1.9
WIAZ	Waiheke Island	2.05	279	P	Pn	05 48 27.1	+0.4
ARHZ	Aropaoanui	2.17	194	Pn	Pn	05 48 29.3	+1.3
ARHZ	Aropaoanui	2.17	194	P	Pn	05 48 29.6	+1.6
ETAZ	East Tamaki Re	2.19	275	P	Pn	05 48 29.3	+1.0
KBAZ	Karaka Road Bo	2.21	271	P	Pn	05 48 30.0	+1.5
RATZ	Rangitukua	2.26	220	P	Pn	05 48 31.2	+2.1
RITZ	Rihia Road	2.30	217	P	Pn	05 48 31.4	+1.7
ABAZ	Army Bay	2.33	283	P	Pn	05 48 30.6	+0.7
EPAZ	Eden Park BICE	2.34	276	P	Pn	05 48 31.5	+1.4
HBAZ	Herne Bay Bore	2.36	277	P	Pn	05 48 31.4	+1.2
MCHZ	McNeill Hill	2.40	198	Pn	Pn	05 48 32.4	+1.7
MCHZ	McNeill Hill	2.40	198	P	Pn	05 48 32.4	+1.7
AWAZ	Awhitu Peninsu	2.41	271	P	Pn	05 48 31.9	+1.2
KWHZ	Kaweka Forest	2.46	203	P	Pn	05 48 32.4	+0.9
WTAZ	Waiatarua	2.47	274	P	Pn	05 48 32.7	+1.1
RVAZ	Riverhead Bore	2.49	273	P	Pn	05 48 32.7	+0.9
KRVZ	Karewarewa	2.50	219	P	Pn	05 48 33.7	+1.7
CKHZ	Cape Kidnapper	2.54	190	Pn	Pn	05 48 33.4	+1.2
CKHZ	Cape Kidnapper	2.54	190	P	Pn	05 48 33.5	+1.2
WTVZ	West Tongariro	2.54	219	P	Pn	05 48 34.0	+1.5
TWVZ	Taurewa	2.59	222	P	Pn	05 48 34.4	+1.4
HIZ	Hauiti	2.59	238	P	Pn	05 48 35.2	+2.2
BHHZ	Black Hill Sta	2.64	208	Pn	Pn	05 48 34.2	+0.7
BHHZ	Black Hill Sta	2.64	208	P	Pn	05 48 34.3	+0.7
FWVZ	Far West T-bar	2.67	218	Pn	Pn	05 48 35.2	+1.2
FWVZ	Far West T-bar	2.67	218	P	Pn	05 48 35.2	+1.2
WHVZ	Whangaehu Hut	2.67	217	Pn	Pn	05 48 35.1	+1.0
WHVZ	Whangaehu Hut	2.67	217	P	Pn	05 48 35.2	+1.1
KRHZ	Kereru	2.68	202	P	Pn	05 48 34.6	+0.6
MOVZ	Moawhango	2.70	213	P	Pn	05 48 34.8	+0.5
KAHZ	Kahuranaki	2.70	193	Pn	Pn	05 48 35.5	+1.2
KAHZ	Kahuranaki	2.70	193	P	Pn	05 48 35.5	+1.2
PXZ	Pawanui	2.93	192	Pn	Pn	05 48 37.8	+0.8
PXZ	Pawanui	2.93	192	P	Pn	05 48 37.6	+0.6
PNHZ	Pukenui	2.98	202	Pn	Pn	05 48 37.9	+0.3
PNHZ	Pukenui	2.98	202	P	Pn	05 48 37.9	+0.3
WPHZ	Waipukurau	3.05	198	Pn	Pn	05 48 39.0	+0.5
TSZ	Takapari Road	3.19	204	Pn	Pn	05 48 40.1	0.0
TSZ	Takapari Road	3.19	204	P	Pn	05 48 40.2	0.0
PRHZ	Porangahau	3.20	194	Pn	Pn	05 48 40.9	+0.6
PRHZ	Porangahau	3.20	194	P	Pn	05 48 40.9	+0.6
BFZ	Birch Farm	3.69	197	Pn	Pn	05 48 46.6	+0.3
MRZ	Mangatainoka R	3.85	204	Pn	Pn	05 48 48.3	-0.2
OGWZ	Otaki Gorge	4.13	207	Pn	Pn	05 48 51.5	-0.6
TMWZ	Te Maipa	4.17	199	Pn	Pn	05 48 52.2	-0.4
KIW	Kapiti Island	4.27	209	Pn	Pn	05 48 52.3	-1.5
MTW	Mount Morrison	4.33	202	Pn	Pn	05 48 53.4	-1.2
MSWZ	Moikau Station	4.64	203	Pn	Pn	05 48 57.4	-1.2
TCW	Tory Channel	4.82	212	Pn	Pn	05 48 59.5	-1.4
NNZ	Nelson	5.24	218	Pn	Pn	05 49 05.5	-0.9
THZ	Tophouse	5.88	217	Pn	Pn	05 49 14.2	-0.7
MQZ	McQueen's Vall	7.57	209	Pn	Pn	05 49 33.8	-3.1
ASAR	Alice Springs	39.72	277	P	P	05 55 07.5	+2.8
	0.3nm,0.5s,baz=121,slow=8.2,SNR=3.3						
WRA	Warramunga Arr	41.34	282	P	P	05 55 20.8	+2.7
	0.4nm,0.6s,baz=119,slow=7.9,SNR=6.6						
FINES	FINESS Array B	149.89	333	PKPbc	PKPab	06 07 20.7	-3.2
	2.3nm,1.0s,baz=33,slow=12,SNR=3.7						

SKHL 23 05:48:48.9±0.8, 44°.32N×149°.39E, h41km±8km, mb4.1/2
JMA 23 05:48:49.5±0.5, 44°.59N×149°.20E, h30km, M3.9
ISC 23 05:48:47.4±3.8, 44°.24N±0°.09×149°.5E±0°.2, h38km, n22, σ1§96/35, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.52	311	eP	Pn	05 49 11.3	-0.6
KUR				AMB	AMB	05 49 12.4	
	162nm,0.4s						
KUR				AMB	AMB	05 49 12.4	
	82nm,0.4s						
KUR				AMB	AMB	05 49 12.4	
	198nm,0.4s						
KUR				eS	Sn	05 49 28.5	-1.8
KUR				A	A	05 49 31.5	
	266nm,0.4s						
KUR				A	A	05 49 31.5	
	586nm,0.4s						
SHO	Shikotan	1.94	260	eP	Pn	05 49 18.2	+0.4
SHO				AMB	AMB	05 49 19.5	
	18nm,0.2s						
SHO				eS	Sn	05 49 39.5	-1.4
SHO				A	A	05 49 46.5	
	165nm,0.2s						
SHO				A	A	05 49 46.5	
	197nm,0.2s						
YUK	Yuzh-Kuril'sk	2.61	267	eP	Pn	05 49 27.7	+0.8
YUK				eS	Sn	05 49 57.0	-0.3
YUK				A	A	05 49 59.4	
	177nm,0.4s						
YUK				A	A	05 49 59.4	
	212nm,0.4s						
LAGR	Lagunnoye	2.66	267	eS	Sn	05 49 58.1	-0.5
GRPR	Tuman	2.68	266	eS	Sn	05 49 58.6	-0.4
NEM2	Nemuro 2	2.84	253	P	Pn	05 49 30.7	+0.6
NEM2				eS	Sn	05 50 01.8	-1.2
JRA	Rausu	3.15	266	P	Pn	05 49 36.5	+2.2
JRA				eS	Sn	05 50 11.0	+0.3
JNK	Nakash	3.50	261	P	Pn	05 49 40.5	+1.3
JNK				eS	Sn	05 50 18.0	-1.3
JAK	Akkeshi	3.69	252	P	Pn	05 49 42.7	+1.0
JAK				eS	Sn	05 50 22.5	-1.4
JAR	Ashorobuto	4.24	259	P	Pn	05 49 51.3	+2.0
JAR				eS	Sn	05 50 38.3	+0.8
JOB	Onbets	4.31	254	P	Pn	05 49 52.0	+1.7
JOB				eS	Sn	05 50 38.8	-0.5
JMP	Maruseppu	4.41	269	P	Pn	05 49 54.2	+2.5
HRK	Horoka	4.66	263	eP	Pn	05 49 57.8	+2.7
JCH	Churui	4.74	252	P	Pn	05 49 58.3	+2.1
JCH				eS	Sn	05 50 48.7	-1.2
MYR	Moyori	4.92	249	eP	Pn	05 50 01.2	+2.5
JNBK	Urakawa-nobuka	5.29	251	P	Pn	05 50 05.2	+1.5
JNBK				eS	Sn	05 51 00.7	-2.6
JBT2	Biratori 2	5.38	257	P	Pn	05 50 07.1	+2.2
JNB	Noboribetsu	6.40	257	P	Pn	05 50 20.9	+1.9
JNB				eS	Sn	05 51 30.1	-0.6
JKB	Kayabe	6.62	252	P	Pn	05 50 23.3	+1.4
JKB				eS	Sn	05 51 32.3	-3.7
JYM2	Yakumo 2	6.99	255	P	Pn	05 50 28.6	+1.6
JANG	Nango	7.05	239	eS	Sn	05 51 41.2	-5.6
JOSM	Okushiri--Mats	7.62	257	P	Pn	05 50 37.2	+1.4

ISCJB 23 05:51:54.0±0.6, 43°.47S±0°.04×172°.12E±0°.06, h15km±4km, mb3.4/2, Error ellipse: s-maj=9.6km s-min=4.3km az=39.1
IDC 23 05:51:54.5±1.4, 43°.14S×171°.95E, h0km, mb3.5/2, mb1 3.7/3, mb1mx3.5/42, mbtmp3.5/3, ML2.9/1, Error ellipse: s-maj=42.8km s-min=11.4km az=132.0
NEIC 23 05:51:55.3±0.0, 43°.45S×172°.12E, h5km, ML4.0(WEL), After WEL.
NEIC Felt in Canterbury.
ISC 23 05:51:55.3±0.9, 43°.37S±0°.04×172°.08E±0°.04, h16km±5km, n24, σ1§46/36, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OXZ	Oxford	0.05	329	ePg	Pg	05 51 58.1	-0.2
OXZ				eSg	Sg	05 52 00.3

CSEM 23 05:55:35.3±0.2, 37°.27N×42°.54E, h8km, ML2.7, Error ellipse: s-maj=5.8km s-min=3.3km az=45.0
ISK 23 05:55:35.3, 37°.29N×42°.53E, h9km, ML2.8/4
ISN 23 05:55:36.3±1.5, 37°.15N×42°.64E, h2km, 7km, ML2.7
DDA 23 05:55:37.9, 37°.42N×42°.30E, h7km, Ml2.7
ISC 23 05:55:35.6±1.4, 37°.26N±0°.06×42°.50E±0°.03, h7km±10km, n23, σ0°74/37, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRN	**S¨–rnak**	**0.24**	**343**	*i* P	**Pg**	**05 55 40.4**	**-0.1**
SIRN				*i* S	**Sg**	**05 55 43.9**	**+0.1**
SIRN	**S¨–rnak**	**0.24**	**343**	P	**Pg**	**05 55 40.4**	**-0.1**
SIRN				S	**Sg**	**05 55 43.9**	**+0.1**
SIRT	**Sirnak**	**0.24**	**348**	PG	**Pg**	**05 55 40.4**	**-0.1**
SIRT				SG	**Sg**	**05 55 44.2**	**+0.4**
SIRT	**Sirnak**	**0.24**	**348**	*e*Pg	**Pg**	**05 55 40.4**	**-0.1**
SIRT				*e*Sg	**Sg**	**05 55 44.2**	**+0.4**
SRTM	**Siirt_Merkez**	**0.86**	**328**	*i* P	**Pg**	**05 55 51.3**	**-0.9**
SRTM				*i* S	**Sg**	**05 56 04.3**	**+0.9**
SRTM	**Siirt_Merkez**	**0.86**	**328**	P	**Pg**	**05 55 51.3**	**-0.9**
SRTM				S	**Sg**	**05 56 04.3**	**+0.9**
CUKT	**Cukurca**	**0.88**	**91**	PG	**Pg**	**05 55 52.4**	**-0.2**
CUKT				SG	**Sb**	**05 56 04.7**	**-0.7**
CUKT	**Cukurca**	**0.88**	**91**	*e*Pg	**Pg**	**05 55 52.4**	**-0.2**
CUKT				*e*Sg	**Sb**	**05 56 04.7**	**-0.7**
GEVA	**Gevas**	**1.14**	**23**	*i* P	**Pg**	**05 55 57.3**	**-0.2**
GEVA				*i* S	**Sn**	**05 56 15.4**	**+1.3**
GEVA	**Gevas**	**1.14**	**23**	P	**Pg**	**05 55 57.3**	**-0.2**
BTMN	**Batman**	**1.16**	**303**	*i* P	**Pg**	**05 55 57.6**	**-0.4**
BTMN				*i* S	**Sg**	**05 56 14.1**	**+1.1**
BTMN	**Batman**	**1.16**	**303**	P	**Pg**	**05 55 57.6**	**-0.4**
BTMN				S	**Sg**	**05 56 14.1**	**+1.1**
GURO	**Guroymak-BITLI**	**1.34**	**344**	PN	**Pn**	**05 56 00.5**	**-0.4**
GURO				SN	**Sg**	**05 56 18.9**	**+0.2**
GURO	**Guroymak-BITLI**	**1.34**	**344**	*e*Pn	**Pn**	**05 56 00.5**	**-0.4**
GURO				*e*Sn	**Sg**	**05 56 18.9**	**+0.2**
MARD	**Mardin**	**1.38**	**273**	*i* P	**Pn**	**05 55 59.8**	**-1.6**
MARD				*i* S	**Sb**	**05 56 18.1**	**-1.4**
MAZI	**Mazidag**	**1.65**	**277**	PN	**Pn**	**05 56 05.6**	**+0.5**
MAZI	**Mazidag**	**1.65**	**277**	*e*Pn	**Pn**	**05 56 05.6**	**+0.5**
DIY	**Diyarbakir**	**1.92**	**290**	*e*Pn	**Pn**	**05 56 09.8**	**+1.0**
DYBB	**Diyarbakir**	**2.00**	**291**	PN	**Pn**	**05 56 09.8**	**-0.1**
SVRC	**Sivrice-ELAZID**	**2.77**	**295**	PN	**Pn**	**05 56 20.3**	**-0.2**
SVRC	**Sivrice-ELAZID**	**2.77**	**295**	*e*Pn	**Pn**	**05 56 20.3**	**-0.2**
URFA	**Urfa**	**2.94**	**275**	PN	**Pn**	**05 56 23.9**	**+1.1**
URFA	**Urfa**	**2.94**	**275**	*e*Pn	**Pn**	**05 56 23.9**	**+1.1**

NNC 23 05:58:30.3±3.0, 54°.00N×86°.40E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=29.5km s-min=19.1km az=166.0
IDC 23 05:58:30.6±2.0, 54°.04N×86°.40E, h0km, mb1 3.4/3, mb1mx3.2/71, mbtmp3.4/3, ML3.3/3, 3C-3D, Error ellipse: s-maj=17.8km s-min=10.2km az=67.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.94**	**265**	*i*		06 03 48.0	
	baz=88,slow=326,SNR=8.1						
ZALV	**Zalesovo Beam**	**0.94**	**265**	Pg	Pg	05 58 46.8	-1.8
	5.4nm,0.3s,baz=79,slow=17,SNR=57						
ZALV				Lg	Lg	05 59 02.0	
	5.7nm,0.3s,baz=79,slow=31,SNR=23						
KURK	**Kurchatov**	**5.81**	**238**	⇑Pn	Pn	05 59 57.9	-0.1
	3.1nm,1.0s						
KURK				⇓Sn	Sn	06 01 05.6	+0.4
	1.7nm,0.7s						
KURK				⇑Lg	Lg	06 01 34.7	
	5.9nm,0.7s						
KURBB	**Kurchatov Arra**	**5.92**	**238**	Pn	Pn	06 00 00.5	+1.1
	0.6nm,0.3s,baz=54,slow=13,SNR=41						
KURBB				Lg	Lg	06 01 38.9	
	0.1nm,0.3s,baz=51,slow=30,SNR=6.6						
KURBB	**Kurchatov Arra**	**5.92**	**238**	Pn	Pn	05 59 57.6	-1.8
KURBB				Sn	Sn	06 01 08.2	+0.4
KURBB				Lg	Lg	06 01 38.5	
MK31	**Makanchi Array**	**7.72**	**201**	⇓Pn	Pn	06 00 24.6	+0.4
	0.8nm,0.5s,baz=27,slow=12,SNR=30						
MK31				⇓Sn	Sn	06 01 50.5	-1.7
	0.6nm,0.5s,baz=24,slow=27,SNR=3.0						
MK31				⇑Lg	Lg	06 02 35.3	
	5.5nm,0.9s,baz=29,slow=32,SNR=7.0						
MKAR	**Makanchi Array**	**7.72**	**201**	Pn	Pn	06 00 25.1	+1.0
	0.6nm,0.3s,baz=25,slow=13,SNR=25						
MKAR				Sn	Sn	06 01 50.9	-1.3
	0.1nm,0.3s,baz=24,slow=26,SNR=4.4						
MKAR				Lg	Lg	06 02 35.8	
	0.1nm,0.3s,baz=23,slow=27,SNR=9.0						
BVAR	**Borovoye Array**	**9.59**	**270**	Pn	Pn	06 00 49.2	-0.5
	0.2nm,0.3s,baz=63,slow=17,SNR=2.9						

MEX 23 06:14:05.5±0.7, 26°.42N×111°.51W, h25km, MD3.5, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRIG	**Santa Rosalia**	**1.11**	**324**	*e*P	Pn	06 14 22.3	-3.1
	baz=142,slow=4.1						
SRIG				*e*S	Sn	06 14 36.3	-3.6
GUYB	**Guaymas**	**1.58**	**21**	*e*P	Pn	06 14 30.3	-1.6
GUYB				*i* S	Sn	06 14 51.5	0.0
HSIG		**2.64**	**11**	*e*P	Pn	06 14 44.3	-2.1

GUC 23 06:31:14.1±0.6, 51°.71S×72°.65W, h17km±13km, ML4.2, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO09	**Cerro Castillo**	**0.48**	**24**	*e*P	Pb	06 31 24.0	-0.1
GO09				*e*S	Sg	06 31 30.5	+0.1
GO09				IAML		06 31 33.8	
	comp=E,27μm,0.3s						
GO10	**Punta Arenas**	**1.74**	**147**	*e*P	Pn	06 31 43.6	0.0
GO10				*e*S	Sn	06 32 06.2	+0.7
GO10				IAML		06 32 13.2	
	comp=E,6μm,0.4s						
CHRN	**Cochrane**	**4.47**	**0**	*e*P	Pn	06 32 21.1	+0.1
COYC	**Coyhaique**	**6.16**	**4**	*e*P	Pn	06 32 44.4	+0.2
COYC				*e*S	Sn	06 33 53.5	-0.6

SJA 23 06:39:31.0±0.6, 34°.59S×71°.50W, h7km±6km, ML3.3, MW4.0
ISCJB 23 06:39:32.5±0.6, 34°.63S±0°.04×71°.92W±0°.08, h53km±6km, mb4.0/7, Error ellipse: s-maj=11.2km s-min=5.5km az=22.1
NEIC 23 06:39:32.0±0.0, 34°.56S×71°.92W, h47km, mb4.2/6, ML4.0(GUC), After GUC.
NEIC Felt [III] at Pichilemu and [II] at Duao, Iloca, Lolol, Pumanque and Rancagua.
GUC 23 06:39:32.1±0.6, 34°.56S×71°.92W, h48km±15km, ML4.0
IDC 23 06:39:35.1±3.9, 34°.56S×71°.65W, h57km±39km, mb3.4/4, mb1 3.6/6, mb1mx3.4/41, mbtmp3.7/6, ML3.7/2, Error ellipse: s-maj=40.9km s-min=30.4km az=78.0
ISC 23 06:39:33.6±0.9, 34°.60S±0°.04×71°.90W±0°.07, h41km±10km, n36, σ1°15/48, mb4.1/7, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO05	**HualaæØ**	**0.41**	**184**	*e*Pg	**Pn**	**06 39 42.7**	**-0.5**
GO05	**HualaæØ**	**0.41**	**184**	*i* P	**Pn**	**06 39 42.4**	**-0.8**
GO05				*i* S	**Sn**	**06 39 51.1**	**+1.0**
GO05	**HualaæØ**	**0.41**	**184**	*e*P	**Pn**	**06 39 42.6**	**-0.7**
GO05				*e*S	**Sn**	**06 39 49.8**	**-0.2**
NICH	**Los Niches**	**0.68**	**126**	*e*P	**Pn**	**06 39 46.4**	**-0.4**
NICH				*e*S	**Sn**	**06 39 56.5**	**+0.3**
ANTU	**Antumapu**	**1.47**	**46**	*e*P	**Pn**	**06 39 57.2**	**-0.5**
ANTU				*e*S	**Sn**	**06 40 16.5**	**+0.8**
ANTU				IAML		06 40 19.3	
	comp=E,3μm,0.6s						
LMEL	**Las Melosas**	**1.59**	**62**	*e*P	**Pn**	**06 39 59.4**	**-0.1**
LMEL				*e*S	**Sn**	**06 40 20.0**	**+1.1**
LMEL				IAML		06 40 21.7	
	comp=N,6μm,0.2s						
CLCH	**Cerro Calan**	**1.65**	**44**	*e*P	**Pn**	**06 39 59.6**	**-0.5**
CLCH				*e*S	**Sn**	**06 40 20.5**	**+0.4**
CLCH				IAML		06 40 23.7	
	comp=N,4μm,0.3s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PEL	**Peldehue**	**1.77**	**35**	*e*Pn	**Pn**	**06 40 01.1**	**-0.6**
PEL				*e*Sn	**Sn**	**06 40 25.6**	**+2.5**
PEL	**Peldehue**	**1.77**	**35**	*e*P	**Pn**	**06 40 01.6**	**-0.2**
PEL				*e*S	**Sn**	**06 40 23.6**	**+0.5**
ROC1	**El Roble**	**1.78**	**25**	*e*Pn	**Pn**	**06 40 01.8**	**-0.3**
ROC1				*e*Sn	**Sn**	**06 40 24.2**	**+0.6**
ROC1	**El Roble**	**1.78**	**25**	*i* P	**Pn**	**06 40 02.7**	**+0.6**
ROC1				*i* S	**Sn**	**06 40 25.9**	**+2.3**
ROCH	**El Roble**	**1.79**	**25**	*e*P	**Pn**	**06 40 01.7**	**-0.4**
ROCH				*e*S	**Sn**	**06 40 24.3**	**+0.6**
ROCH				IAML		06 40 30.6	
	comp=N,2μm,0.6s						
FCH	**Farellones**	**1.84**	**47**	*e*P	**Pn**	**06 40 02.8**	**-0.2**
FCH				*e*S	**Sn**	**06 40 26.8**	**+1.5**
FCH				IAML		06 40 31.6	
	comp=N,1μm,0.1s						
CCHI	**Chillan**	**2.00**	**184**	*i* P	**Pn**	**06 40 08.5**	**+3.6**
AAGR	**Agrelo**	**2.97**	**60**	*i* P	**Pn**	**06 40 17.8**	**-0.4**
ARCO	**CERRO ARCO**	**3.03**	**55**	*i* P	**Pn**	**06 40 18.1**	**-1.1**
ARCO				IAML		06 40 39.3	
	comp=Z,106nm,0.6s						
AUSP	**Uspallata**	**3.17**	**42**	*i* P	**Pn**	**06 40 21.6**	**+0.4**
ASAL	**Salagasta**	**3.25**	**53**	*i* P	**Pn**	**06 40 21.9**	**-0.2**
RTLS	**Leoncito**	**3.54**	**39**	*i* P	**Pn**	**06 40 27.2**	**+0.8**
RTLS				IAML		06 41 22.1	
	comp=Z,82nm,0.4s						
LCO	**Las Campanas**	**5.67**	**11**	*e*Pn	**Pn**	**06 40 54.2**	**-1.3**
PLCA	**Paso Flores**	**6.21**	**171**	P	**Pn**	**06 41 04.2**	**+1.5**
	comp=Z,0.4nm,0.3s,baz=9.4,slow=12,SNR=3.8						
GO03	**Copiap**	**7.13**	**12**	*e*Pn	**Pn**	**06 41 13.2**	**-2.2**
TRQA	**Tornquist**	**8.71**	**116**	*e*Pn	**Pn**	**06 41 38.6**	**+1.6**
MNMC	**Minye Minye**	**15.54**	**8**	*e*Pn	**Pn**	**06 43 09.9**	**-0.3**
	comp=Z,7.0nm,0.6s						
LPAZ	**La Paz**	**18.55**	**11**	P	**Pn**	**06 43 48.5**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=176,slow=9.9,SNR=7.6						
LPAZ	**La Paz**	**18.55**	**11**	*e*P	**Pn**	**06 43 48.4**	**+0.5**
	comp=Z,1.6nm,0.8s						
SIV	**San Ignacio**	**20.93**	**30**	P	**P**	**06 44 10.9**	**-1.9**
	comp=Z,1.4nm,0.7s,baz=211,slow=11,SNR=9.2						
RUSC	**La Rusia**	**40.29**	**358**	*e*P	**P**	**06 47 07.6**	**+0.2**
	comp=Z,1.6nm,0.5s						
059A	**Moore Haven**	**61.86**	**351**	*e*P	**P**	**06 49 48.5**	**0.0**
LNIG	**Linares**	**64.70**	**332**	*e*P	**P**	**06 50 08.2**	**+0.9**
	comp=Z,3.8nm,1.2s						
HPIG		**69.05**	**328**	*e*P	**P**	**06 50 37.0**	**+1.7**
	comp=Z,4.6nm,1.1s						
TXAR	**Lajitas Array**	**70.31**	**331**	P	**P**	**06 50 42.8**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=154,slow=8.6,SNR=9.5						
TX31	**Lajitas Ar. Si**	**70.32**	**331**	*e*P	**P**	**06 50 42.3**	**-0.6**
WVT	**Waverly**	**71.92**	**346**	*e*P	**P**	**06 50 52.0**	**-0.3**
	comp=Z,2.1nm,0.6s						
KOWA	**Kowa**	**80.78**	**65**	P	**P**	**06 51 41.8**	**-1.3**
	comp=Z,2.3nm,0.9s,baz=252,slow=6.4,SNR=3.9						
TORD	**Torodi Ar. Bea**	**84.31**	**70**	P	**P**	**06 52 00.3**	**-1.2**
	comp=Z,0.3nm,0.8s,baz=249,slow=2.8,SNR=2.5						

MEX 23 07:04:42.5±0.7, 15°.76N×97°.93W, h16km±999km, MD3.9, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**1.74**	**41**	*e*P	Pn	07 05 08.7	-3.5
VHO				*e*S	Sn	07 05 29.2	-4.9
TLIG	**Tlapa**	**1.90**	**341**	*e*P	Pn	07 05 10.6	-3.7
TLIG				*e*S	Sn	07 05 33.2	-4.7
CAIG	**El Cayaco**	**2.59**	**300**	*e*P	Pb	07 05 26.7	-1.8
CAIG				*e*S	Sb	07 06 00.8	+0.7

ISCJB 23 07:12:08.8±0.6, 32°.14N±0°.04×115°.12W±0°.05, h27km±6km, Error ellipse: s-maj=7.3km s-min=5.5km az=139.6
MEX 23 07:12:10.8±0.5, 32°.17N×115°.10W, h10km, MD3.8
ECX 23 07:12:10.1±0.5, 32°.10N×115°.18W, h7km, MD2.5, ML2.7
ISC 23 07:12:08.9±1.1, 32°.14N±0°.04×115°.13W±0°.04, h26km±10km, n15, σ0°32/22, 3C-4D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPBX	**Cerro Prieto**	**0.31**	**332**	*e*P	**Pb**	**07 12 16.2**	**0.0**
CPBX				*e*S	**Sb**	**07 12 21.2**	**0.0**
ECBX	**El Chinero**	**0.67**	**174**	*e*P	**Pb**	**07 12 21.9**	**-0.1**
ECBX				*e*S	**Sb**	**07 12 30.4**	**-0.4**
COA	**Coachella**	**0.72**	**1**	⇑*i*P	**Pn**	**07 12 23.3**	**-0.1**
WESC	**Westside Schoo**	**0.80**	**321**	*e*P	**Pb**	**07 12 24.5**	**+0.4**
YUH	**Yuha Desert**	**0.84**	**307**	⇓*i*P	**Pn**	**07 12 24.3**	**-0.7**
RMX	**La Rumorosa**	**0.92**	**300**	⇓*e*	Pb	07 12 37.3	+11
RMX				IAML		07 12 37.3	
	comp=E,198nm,0.2s						
IKP	**In-Ko-Pah, Jac**	**0.97**	**302**	⇑*i*P	**Pn**	**07 12 26.5**	**-0.4**
SPIG	**San Pedro Mart**	**1.13**	**195**	⇓*e*P	**Pn**	**07 12 29.2**	**-0.1**
SPIG	**San Pedro Mart**	**1.13**	**195**	*e*P	**Pn**	**07 12 29.2**	**-0.1**
SPIG				*e*S	**Sn**	**07 12 44.6**	**+0.5**
SPX	**San Pedro Mart**	**1.13**	**195**	⇓*e*P	**Pn**	**07 12 29.2**	**-0.1**
ZAX	**El Zacaton**	**1.16**	**238**	*e*P	**Pn**	**07 12 29.4**	**0.0**
ZAX				*e*S	**Sn**	**07 12 44.4**	**-0.1**
CBX	**Cerro Bola**	**1.31**	**278**	⇑*e*P	**Pn**	**07 12 31.8**	**+0.2**
CBX				*e*S	**Sb**	**07 12 49.7**	**+0.4**
CBX				IAML		07 12 50.5	
	comp=N,219nm,0.4s						
CBX	**Cerro Bola**	**1.31**	**278**	*e*P	**Pn**	**07 12 31.8**	**+0.2**
CBX				*e*S	**Sn**	**07 12 47.9**	**-0.5**
TJIG	**Tijuana**	**1.34**	**283**	*e*P	**Pn**	**07 12 32.1**	**+0.2**
TJIG				*e*S	**Sn**	**07 12 48.9**	**0.0**
214A	**Organ Pipe Nat**	**1.98**	**95**	*e*P	**Pn**	**07 12 41.0**	**+0.3**
214A				*e*S	**Sn**	**07 13 04.5**	**-0.3**

NEIC 23 07:20:43.9±0.0, 17°.85N×101°.54W, h33km, MD4.0(MEX), After MEX.
MEX 23 07:20:43.9±0.5, 17°.85N×101°.54W, h33km, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.25**	**163**	*i* P	Pb	07 20 49.3	-1.8
ZIIG				*e*S	Sn	07 20 54.5	-0.8
ZIIG	**Zihuatanejo**	**0.25**	**163**	*i* P	Pb	07 20 49.3	-1.8
ZIIG				*e*S	Sn	07 20 54.5	-0.8
ARIG	**Puente Sto Nin**	**1.22**	**69**	*e*P	Pn	07 21 02.8	-1.9
ARIG				*e*S	Sn	07 21 17.3	-2.7
ARIG	**Puente Sto Nin**	**1.22**	**69**	*e*P	Pn	07 21 02.8	-1.9
ARIG				*e*S	Sn	07 21 17.3	-2.7
CAIG	**El Cayaco**	**1.45**	**123**	*e*P	Pn	07 21 05.5	-2.4
CAIG				*i* S	Sn	07 21 23.2	-2.6
CAIG	**El Cayaco**	**1.45**	**123**	*e*P	Pn	07 21 05.5	-2.4
CAIG				*i* S	Sn	07 21 23.2	-2.6
MMIG	**Aquila**	**1.77**	**285**	*i* P	Pn	07 21 10.5	-1.7
MMIG				*i* S	Sn	07 21 30.9	-2.8
MMIG	**Aquila**	**1.77**	**285**	*i* P	Pn	07 21 10.5	-1.7
MMIG				*i* S	Sn	07 21 30.9	-2.8
EZ5V		**2.54**	**310**	*e*P	Pn	07 21 22.2	-0.8
EZ5V				*i* S	Sn	07 21 50.1	-2.9
R15V		**2.66**	**300**	*e*P	Pn	07 21 22.7	-1.9
R15V				*e*S	Sn	07 21 54.1	-1.7

IDC 23 07:23:00.4±3.0, 36°.72S×179°.37E, h0km, mb3.7/2, mb1 3.9/3, mb1mx3.6/43, mbtmp3.7/3, ML3.5/1, Error ellipse: s-maj=76.9km s-min=41.4km az=135.0
WEL 23 07:23:03.2, 37°S±8°×18°OE±°, h78km±21km, ML3.6/12
ISC 23 07:23:00.8±1.8, 37°.28S±0°.07×179°.81E±0°.08, h19km±4km, n46, σ1°20/61, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.23**	**256**	P	**Pn**	**07 23 23.0**	**0.0**
MXZ				S	**Sb**	**07 23 38.7**	**-0.2**
WMGZ	**Waiomatatini S**	**1.23**	**244**	P	**Pg**	**07 23 24.2**	**-0.4**
WMGZ				S	**Sg**	**07 23 41.3**	**+0.4**
PUZ	**Puketiti**	**1.47**	**237**	P	**Pg**	**07 23 28.3**	**-0.8**
PKGZ	**Pakihiroa**	**1.51**	**246**	P	**Pb**	**07 23 28.2**	**0.0**
PKGZ				S	**Sb**	**07 23 46.7**	**-0.2**
HAZ	**Te Kaha**	**1.68**	**253**	P	**Pb**	**07 23 30.5**	**-0.6**
HAZ				S	**Sn**	**07 23 50.8**	**+0.6**
TWGZ	**Tauwhareparae**	**1.71**	**238**	P	**Pb**	**07 23 31.4**	**-0.2**
TWGZ				S	**Sn**	**07 23 49.9**	**-0.9**
CNGZ	**Carnagh Statio**	**1.75**	**226**	P	**Pb**	**07 23 32.1**	**-0.2**
RUGZ	**Raukumara Rang**	**1.83**	**247**	P	**Pn**	**07 23 32.5**	**+1.3**
TKGZ	**Te Karaka**	**1.94**	**233**	P	**Pn**	**07 23 34.2**	**+1.5**
TKGZ				S	**Sn**	**07 23 57.8**	**+1.3**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MWZ	**Matawai**	**2.09**	**239**	P	**Pn**	**07 23 36.0**	**+1.2**
MWZ				S	**Sn**	**07 24 00.5**	**+0.1**
PRGZ	**Paritu Road**	**2.24**	**222**	P	**Pn**	**07 23 38.1**	**+1.3**
URZ	**Urewera**	**2.35**	**245**	Pn	**Pn**	**07 23 39.9**	**+1.6**
	11nm,0.3s,baz=256,slow=2.4,SNR=64						
URZ				Sn	**Sn**	**07 24 06.8**	**+0.1**
	11nm,0.3s,baz=147,slow=22,SNR=11						
URZ	**Urewera**	**2.35**	**245**	P	**Pn**	**07 23 40.0**	**+1.6**
URZ				S	**Sn**	**07 24 06.2**	**-0.5**
MHGZ	**Mahia Peninsul**	**2.40**	**218**	P	**Pn**	**07 23 40.6**	**+1.6**
KNZ	**Kokohu**	**2.42**	**223**	P	**Pn**	**07 23 40.3**	**+1.0**
OPRZ	**Ohinepanea**	**2.65**	**257**	P	**Pn**	**07 23 43.5**	**+1.1**
MUGZ	**Murupara**	**2.69**	**243**	P	**Pn**	**07 23 45.3**	**+2.3**
MUGZ				S	**Sn**	**07 24 13.1**	**-1.9**
RRRZ	**Republican Roa**	**2.82**	**247**	P	**Pn**	**07 23 47.5**	**+2.7**
MTHZ	**Maungataniwha**	**2.82**	**235**	P	**Pn**	**07 23 46.5**	**+1.6**
KARZ	**Kaharoa**	**2.93**	**254**	P	**Pn**	**07 23 47.3**	**+1.0**
PRRZ	**Plateau Road**	**2.97**	**245**	P	**Pn**	**07 23 47.9**	**+1.0**
ARHZ	**Aropaoanui**	**2.97**	**227**	P	**Pn**	**07 23 48.4**	**+1.5**
ARHZ				S	**Sn**	**07 24 21.9**	**-0.1**
NMHZ	**Naumai**	**2.98**	**232**	P	**Pn**	**07 23 48.4**	**+1.3**
NMHZ				S	**Sn**	**07 24 23.0**	**+0.6**
ALRZ	**Allen Road**	**3.03**	**244**	P	**Pn**	**07 23 50.1**	**+2.4**
KMRZ	**Kaimai**	**3.13**	**258**	P	**Pn**	**07 23 48.9**	**-0.2**
MCHZ	**McNeill Hill**	**3.27**	**228**	P	**Pn**	**07 23 52.1**	**+1.2**
MCHZ				S	**Sn**	**07 24 29.8**	**+0.6**
KAHZ	**Kahuranaki**	**3.41**	**222**	P	**Pn**	**07 23 53.4**	**+0.5**
TOZ	**Tahuroa Road**	**3.46**	**261**	P	**Pn**	**07 23 54.6**	**+1.1**
KRHZ	**Kereru**	**3.59**	**228**	P	**Pn**	**07 23 55.9**	**+0.5**
KRHZ				S	**Sn**	**07 24 36.1**	**-1.1**
GRZ	**Great Barrier**	**3.64**	**285**	P	**Pn**	**07 23 56.4**	**+0.3**
BHHZ	**Black Hill Sta**	**3.68**	**232**	P	**Pn**	**07 23 57.4**	**+0.7**
BHHZ				S	**Sn**	**07 24 38.4**	**-1.2**
MKAZ	**Moumakai**	**3.72**	**271**	P	**Pn**	**07 23 57.8**	**+0.7**
PRHZ	**Porangahau**	**3.88**	**219**	P	**Pn**	**07 23 59.8**	**+0.4**
ETAZ	**East Tamaki Re**	**3.92**	**273**	P	**Pn**	**07 24 01.3**	**+1.4**
ABAZ	**Army Bay**	**4.05**	**278**	P	**Pn**	**07 24 02.9**	**+1.2**
TSZ	**Takapari Road**	**4.10**	**226**	P	**Pn**	**07 24 01.9**	**-0.5**
HIZ	**Hauiti**	**4.11**	**251**	P	**Pn**	**07 24 04.6**	**+2.1**
AWAZ	**Awhitu Peninsu**	**4.13**	**271**	P	**Pn**	**07 24 04.2**	**+1.4**
RVAZ	**Riverhead Bore**	**4.22**	**275**	P	**Pn**	**07 24 05.3**	**+1.3**
BFZ	**Birch Farm**	**4.39**	**218**	P	**Pn**	**07 24 05.4**	**-0.9**
WCZ	**Waipu Caves**	**4.60**	**285**	P	**Pn**	**07 24 10.2**	**+1.0**
OUZ	**Omahuta**	**5.43**	**290**	P	**Pn**	**07 24 21.9**	**+1.2**
CTZ	**Chatham Island**	**7.00**	**158**	P	**Pn**	**07 24 44.5**	**+2.3**
ASAR	**Alice Springs**	**41.44**	**276**	P	**P**	**07 30 45.6**	**-0.7**
	0.8nm,0.7s,baz=120,slow=8.1,SNR=11						
WRA	**Warramunga Arr**	**43.05**	**281**	P	**P**	**07 30 58.4**	**-1.1**
	0.7nm,0.7s,baz=121,slow=7.6,SNR=10						
FINES	**FINESS Array B**	**150.77**	**334**	PKPbc	**PKPbc**	**07 42 51.8**	**+1.0**
	1.5nm,0.8s,baz=343,slow=4.4,SNR=2.7						

ISCJB 23 07:34:08.7±1.2, 38°.65N±0°.05×142°.1E±0°.1, h46km±10km, mb3.5/3, MS3.1/1, Error ellipse: s-maj=14.8km s-min=5.8km az=24.9
JMA 23 07:34:08.5±0.1, 38°.66N×142°.16E, h39km±1km, M3.7
JMA Felt I J1.
IDC 23 07:34:11.9±1.9, 39°.18N×140°.91E, h0km, mb3.6/3, mb1 3.5/5, mb1mx3.3/74, mbtmp3.4/5, ML3.0/2, MS3.1/1, Ms1 3.3/1, ms1mx2.4/64, Error ellipse: s-maj=45.8km s-min=23.8km az=96.0
ISC 23 07:34:09.1±2.4, 38°.68N±0°.06×142°.14E±0°.09, h33km±6km, n23, σ1°43/26, mb3.6/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.54**	**317**	P	**Pn**	**07 34 20.2**	**-0.3**
OFUJ				S	**Sb**	**07 34 28.2**	**+0.1**
JIO	**Ouri**	**0.66**	**250**	P	**Pn**	**07 34 21.3**	**-0.8**
JIO				S	**Sn**	**07 34 30.1**	**-1.3**
JMK	**Ichinoseki**	**0.77**	**291**	P	**Pn**	**07 34 23.2**	**-0.4**
JMK				S	**Sn**	**07 34 33.6**	**-0.4**
JOM	**Ohasama**	**1.03**	**320**	P	**Pn**	**07 34 27.2**	**0.0**
JOM				S	**Sn**	**07 34 40.7**	**+0.2**
JOU	**Okura**	**1.20**	**255**	P	**Pn**	**07 34 29.2**	**-0.4**
JOU				*e*S	**Sn**	**07 34 45.1**	**+0.3**
JTH	**Tanohata**	**1.27**	**350**	P	**Pn**	**07 34 30.6**	**+0.1**
JTH				*e*S	**Sb**	**07 34 48.7**	**+0.1**
JMM	**Marumori**	**1.34**	**233**	P	**Pn**	**07 34 30.4**	**-1.1**
JMM

3.6nm,0.3s,baz=51,slow=23,SNR=18
SIJI S **Sn** **07 45 41.1 -3.3**
8.0nm,0.3s,baz=106,slow=21,SNR=3.7
KDI Kendari 7.12 299 P **Pn** **07 44 31.5 +4.2**
EDFI Ende, Flores 7.19 259 P **Pn** **07 44 28.6 +0.3**
RKPI Ransiki, Papua 7.97 42 P **Pn** **07 44 39.2 +0.5**
FITZ Fitzroy Crossi 11.00 196 P **Pn** **07 45 16.6 -2.2**
2.1nm,0.3s,baz=22,slow=9.1,SNR=39
FITZ S Sn 07 47 13.1 -7.4
8.0nm,0.3s,baz=132,slow=22,SNR=6.2
JAY Jayapura 12.81 68 P **P** **07 45 45.5 -2.2**
0.6nm,0.3s,baz=234,slow=14,SNR=5.2
JAY LR LR 07 52 25.1
comp=Z,73nm,18.3s,baz=226,slow=45
WRAB Tennant Creek 13.47 157 *e*Pn Pn 07 45 47.9 -3.0
WRAB *e*Sn Sn 07 48 10.6 -10
WRAB Tennant Creek 13.47 157 *c i*P **Pn** **07 45 48.4 -2.5**
WRA Warramunga Arr 13.48 157 P **Pn** **07 45 48.4 -2.6**
2.7nm,0.3s,baz=336,slow=12,SNR=86
WRA S Sn 07 48 10.4 -10
4.9nm,0.3s,baz=333,slow=22,SNR=6.7
WRA LR LR 07 51 57.9
comp=Z,329nm,19.3s,baz=335,slow=40
WB2 Warramunga Arr 13.48 157 *e*Pn **Pn** **07 45 48.2 -2.9**
WB2 *e*Sn Sn 07 48 10.4 -10
WC3 Warramunga Arr 13.51 157 *e*Pn **Pn** **07 45 48.6 -2.7**
COEN Coen 15.48 116 *e*Pn **Pn** **07 46 15.8 -0.2**
69nm,0.8s
AS31 Alice Springs 16.80 164 *e*P **P** **07 46 32.8 +0.9**
12nm,0.6s
ASAR Alice Springs 16.80 164 P **P** **07 46 32.9 +1.0**
4.8nm,0.3s,baz=338,slow=9.8,SNR=397
ASAR S **S** **07 49 32.5 -6.7**
3.0nm,0.3s,baz=328,slow=21,SNR=8.0
AS01 Alice Springs 16.82 164 *e*P **P** **07 46 31.6 -0.4**
PMG Port Moresby 18.22 97 P **Pn** **07 46 51.7 +2.6**
2.3nm,0.3s,baz=270,slow=6.8,SNR=22
PMG LR LR 07 54 52.1
comp=Z,175nm,19.9s,baz=261,slow=39
MANU Manus Island 19.23 75 *e*P **P** **07 46 59.2 +0.8**
32nm,0.8s
SBUM Sibu 19.30 300 *e*P **Pn** **07 47 00.6 -1.3**
26nm,0.9s
KSM Kuching 20.52 295 *e*P **P** **07 47 12.7 +0.4**
48nm,0.9s
CTA Charters Tower 21.02 128 P **P** **07 47 20.1 +2.6**
19nm,0.9s,baz=304,slow=10,SNR=5.6
FORT Forrest 23.18 182 *e*P **P** **07 47 40.3 +1.2**
79nm,1.0s
BBOO Buckleboo 26.07 166 *e*P **P** **07 48 06.6 +1.3**
19nm,0.9s
STKA Stephens Creek 27.02 156 P **P** **07 48 14.8 +1.1**
3.8nm,0.6s,baz=327,slow=9.5,SNR=9.0
STKA LR LR 08 00 25.6
comp=Z,182nm,21.7s,baz=2.2,slow=39
STKA Stephens Creek 27.02 156 *e*P **P** **07 48 15.4 +1.6**
1.2nm,0.8s
STKA Stephens Creek 27.02 156 *e*P **P** **07 48 15.4 +1.6**
STKA pmax pmax
comp=Z,1.0nm,0.8s
NWAO Narrogin (SRO) 27.51 201 P **P** **07 48 18.4 +0.3**
comp=Z,10nm,0.8s,baz=282,slow=8.3,SNR=8.3
HNR Honiara 30.82 96 LR LR 08 01 33.0
comp=Z,68nm,18.6s,baz=269,slow=36
PSI Prapat 31.55 288 P **P** **07 48 52.5 -1.8**
comp=Z,8.3nm,0.7s,baz=357,slow=0.8,SNR=7.0
PSI Prapat 31.55 288 *e*P **P** **07 48 52.7 -1.5**
comp=Z,9.9nm,0.8s
PSI Prapat 31.55 288 *e*P **P** **07 48 52.7 -1.5**
PSI pmax pmax
comp=Z,10.0nm,0.8s
JOW Kunigami 34.12 359 P **P** **07 49 16.0 -0.2**
comp=Z,14nm,0.6s,baz=174,slow=12,SNR=3.5
CM01 Chiang Mai Arr 39.14 311 *e*P **P** **07 49 58.5 -0.4**
CM31 Chiang Mai Arr 39.18 312 *e*P **P** **07 49 59.4 +0.2**
CMAR Chiang Mai Arr 39.18 312 P **P** **07 49 58.5 -0.6**
comp=Z,1.3nm,0.5s,baz=144,slow=7.2,SNR=11
CMAR PcP **PcP** **07 52 06.5 +0.9**
comp=Z,0.7nm,0.3s,baz=166,slow=3.8,SNR=4.6
CHTO Chiang Mai 39.40 312 *e*P **P** **07 50 00.4 -0.6**
comp=Z,6.5nm,1.0s
CHTO Chiang Mai 39.40 312 *e*P **P** **07 50 00.4 -0.6**
CHTO pmax pmax
comp=Z,6.0nm,1.0s
GYA Guiyang 40.02 328 *e*P **P** **07 50 07.0 +0.8**
GYA pmax pmax
comp=Z,10.0nm,1.0s
JNU Nakatsue 40.43 3 P **P** **07 50 08.2 -1.2**
comp=Z,6.9nm,0.8s,baz=185,slow=3.6,SNR=3.4
NJ2 Nanjing 40.46 347 *e*P **P** **07 50 10.3 +0.8**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
KMI Kunming 41.19 323 P **P** **07 50 15.8 -0.1**
KMI pP pP 07 50 50.8 +1.8
KMI sP sP 07 51 03.0 -2.9
KMI pmax pmax
comp=Z,17nm,1.2s
KMI pmax pmax
comp=Z,87nm,3.7s
KMI LR LR
comp=Z,200nm,25.8s
KMI LR LR
comp=Z,100nm,24.4s
KMI LR LR
comp=Z,150nm,34.9s
ENH Enshi 41.89 335 *e*P **P** **07 50 20.1 -1.2**
comp=Z,12nm,0.8s
TJN Taejon 43.66 358⇑ *e*P **P** **07 50 34.6 -0.8**
MJAR Matsushiro Arr 44.67 11 P **P** **07 50 41.5 -2.0**
comp=Z,9.4nm,0.9s,baz=193,slow=10.0,SNR=20
MAJO Matsushiro 44.67 11 *e*P **P** **07 50 42.1 -1.4**
comp=Z,17nm,0.9s
MAJO Matsushiro 44.67 11 *e*P **P** **07 50 42.1 -1.4**
MAJO pmax pmax
comp=Z,17nm,0.9s
MJB9 Matsu-Tunnel 44.68 11 *e*P **P** **07 50 42.0 -1.5**
comp=Z,17nm,0.9s
KSAR Wonju Array Be 44.70 359 P **P** **07 50 43.0 -0.7**
KSAR Wonju Array Be 44.70 359 P **P** **07 50 43.0 -0.7**
KSRS Korea Array 44.72 359 P **P** **07 50 43.0 -0.8**
comp=Z,2.0nm,0.7s,baz=179,slow=11,SNR=12
KS01 Wonju Array Si 44.74 359 *e*P **P** **07 50 43.4 -0.6**
CD2 Chengdu 45.11 329 P **P** **07 50 46.8 -0.3**
CD2 pmax pmax
comp=Z,30nm,0.8s
XAN Xi'an 45.41 337 P **P** **07 50 47.9 -1.5**
XAN pmax pmax
comp=Z,22nm,0.6s
XAN pmax pmax
comp=Z,73nm,3.6s
SHL Shillong 48.69 314 *e*P **P** **07 51 13.5 -1.7**
comp=Z,11nm,0.8s
SHL Shillong 48.69 314 *e*P **P** **07 51 13.5 -1.7**
SHL pmax pmax
comp=Z,11nm,0.8s
BJT Baijiatuan 48.70 347 *e*P **P** **07 51 14.2 -0.5**
comp=Z,17nm,1.1s
BJI Beijing 48.72 347 P **P** **07 51 13.8 -1.1**
BJI pmax pmax
comp=Z,18nm,1.0s
BJI LR LR
comp=Z,390nm,19.8s
BJI LR LR
comp=Z,310nm,21.6s
BJI LR LR
comp=Z,490nm,26.5s
LZH Lanzhou 49.31 333 ⇓P **P** **07 51 19.8 +0.1**
LZH pP pP 07 51 52.1 -1.7
LZH sP sP 07 52 10.1 -0.4
LZH PP **PP** **07 53 16.8 +1.6**
LZH pmax pmax
comp=Z,52nm,1.3s
LZH pmax pmax
comp=Z,150nm,6.5s
LZH LR LR
comp=Z,210nm,15.2s
LZH LR LR
comp=Z,210nm,16.3s
LZH LR LR
comp=Z,340nm,18.5s
MSHR Mys Shultsa 49.87 2⇑ *e*P **P** **07 51 22.9 -0.7**
HHC Hu-ho-hao-te 50.66 343 *e*P **P** **07 51 32.9 +3.2**
HHC PP **PP** **07 53 32.0 +4.7**
HHC S **S** **07 58 36.3 +3.0**
HHC sS sS 07 59 33.0 +0.3
HHC pmax pmax
comp=Z,26nm,1.1s
HHC pmax pmax
comp=Z,66nm,5.1s
USRK Ussuriysk Ar. 51.53 3 P **P** **07 51 34.5 -1.5**
comp=Z,5.3nm,0.8s,baz=210,slow=4.2,SNR=6.2
LSA Lhasa 51.77 317 *e*P **P** **07 51 38.5 -0.1**
comp=Z,13nm,1.1s
LSA Lhasa 51.77 317 *e*P **P** **07 51 38.5 -0.1**
LSA pmax pmax
comp=Z,13nm,1.1s
ODAN Odare 52.72 312 *e*P **P** **07 51 44.4 -1.0**
comp=Z,12nm,0.5s
RAMN Ramite 53.35 312 *e*P **P** **07 51 49.7 -0.4**
comp=Z,30nm,0.7s
YUK Yuzh-Kuril'sk 53.55 15⇑ *e*P **P** **07 51 50.4 -0.4**
GTA Gaotai 53.86 332 P **P** **07 51 53.0 -0.4**
GTA pP pP 07 52 25.5 -2.5
GTA sP sP 07 52 41.5 -3.1
GTA pmax pmax
comp=Z,13nm,1.0s
JIRN Jiri 54.05 312 *e*P **P** **07 51 54.5 -0.8**
GUN Gumba 54.42 312 *e*P **P** **07 51 57.1 -0.8**
comp=Z,24nm,0.7s
PKIN Phulchoki 54.59 312 *e*P **P** **07 51 57.7 -1.4**
comp=Z,7.6nm,0.6s
DMN Daman 54.82 311 *e*P **P** **07 51 59.9 -0.8**
comp=Z,10nm,0.7s
GKN Gorkha 55.38 311 *e*P **P** **07 52 03.8 -0.8**
KOLN Koldanda 56.04 311 *e*P **P** **07 52 08.7 -0.6**
comp=Z,17nm,0.7s
DANN Dangsing 56.22 311 *e*P **P** **07 52 09.8 -1.0**
ULN Ulaanbaatar 58.38 343⇑ *e*P **P** **07 52 25.3 -0.1**
ULN pmax pmax
comp=Z,5.0nm,1.0s
CASY Casey 60.05 188 *e*P **P** **07 52 38.1 +1.8**
comp=Z,9.9nm,1.0s
TLY Talaya 62.79 343⇑ *e*P **P** **07 52 55.0 0.0**
TLY pmax pmax
comp=Z,5.0nm,0.8s
WMQ Urumqi 63.18 328 P **P** **07 52 59.1 +1.3**
WMQ pP PcP 07 53 34.0 +0.1
WMQ pmax pmax
comp=Z,30nm,0.7s
WMQ LR LR
comp=Z,360nm,25.7s
WMQ LR LR
comp=Z,350nm,27.5s
WMQ LR LR
comp=Z,300nm,22.1s
PEA0B Petropavlovsk- 65.15 19 *e*P **P** **07 53 10.9 +0.6**
comp=Z,26nm,1.1s
PETK Petropavlovsk- 65.15 19 P **P** **07 53 10.8 +0.4**
comp=Z,13nm,0.8s,baz=187,slow=4.7,SNR=14
PETK Petropavlovsk- 65.15 19 *e*P **P** **07 53 10.4 +0.1**
PETK Petropavlovsk- 65.15 19 *e*P **P** **07 53 10.5 +0.1**
DGZ Jazzator, Alta 67.39 332⇓ *e*P **P** **07 53 24.4 -0.5**
DGZ pmax pmax
comp=Z,3.0nm,0.7s
KSH Kashi 67.61 318 P **P** **07 53 26.8 +0.4**
KSH pP pP 07 54 04.8 +2.2
KSH PP **PP** **07 55 59.9 +2.3**
KSH S **S** **08 02 09.9 -1.7**
KSH sS sS 08 03 12.9 -1.2
KSH SS **SS** **08 06 36.6 +1.0**
KSH pmax pmax
comp=Z,160nm,6.1s
KSH LR LR
comp=Z,260nm,5.9s
KSH LR LR
comp=Z,270nm,7.0s
KSH LR LR
comp=Z,540nm,14.4s
MK01 Makanchi Array 67.99 327 *e*P **P** **07 53 28.1 -0.5**
MK31 Makanchi Array 68.01 327 *e*P **P** **07 53 28.1 -0.6**
MK31 Makanchi Array 68.01 327 *e*P **P** **07 53 28.1 -0.6**
MKAR Makanchi Array 68.01 327 P **P** **07 53 28.2 -0.5**
comp=Z,6.2nm,0.7s,baz=125,slow=7.1,SNR=64
MKAR Makanchi Array 68.01 327 *e*P **P** **07 53 28.4 -0.3**
comp=Z,50nm,0.6s
MKAR Makanchi Array 68.01 327 *e*P **P** **07 53 28.4 -0.3**
MKAR pmax pmax
comp=Z,50nm,0.6s
MAKZ Makanchi 68.19 327 *e*P **P** **07 53 29.1 -0.7**
comp=Z,22nm,1.5s
MAKZ Makanchi 68.19 327 *e*P **P** **07 53 29.1 -0.7**
MAKZ pmax pmax
comp=Z,22nm,1.5s
NRN Naryn 68.59 320 *e*P **P** **07 53 32.1 -0.7**
comp=Z,11nm,1.4s
NRN Naryn 68.59 320 *e*P **P** **07 53 32.1 -0.7**
NRN pmax pmax
comp=Z,11nm,1.4s
YAK Yakutsk 69.31 0 P **P** **07 53 35.9 -0.4**
comp=Z,39nm,0.4s,baz=171,slow=2.0,SNR=6.2
YAK Yakutsk 69.31 0 *e*P **P** **07 53 36.1 -0.3**
comp=Z,92nm,1.2s
YAK Yakutsk 69.31 0⇓ *e*P **P** **07 53 36.0 -0.4**
YAK pmax pmax
comp=Z,27nm,0.5s
KZA Kyzart 69.41 320 P **P** **07 53 38.6 +0.7**
SNR=10
TKM2 Tokmak 2 69.63 321 P **P** **07 53 39.5 +0.5**
SNR=5.5
UCH Uchtor 69.95 320 P **P** **07 53 42.1 +0.8**
SNR=8.6
FRU Bishkek 70.20 321 *e*P **P** **07 53 41.0 -1.3**
KBL Kabul 70.20 311 *e*P **P** **07 53 43.1 +0.4**
comp=Z,4.0nm,0.9s
KBL Kabul 70.20 311 *e*P **P** **07 53 43.1 +0.4**
KBL pmax pmax
comp=Z,4.0nm,0.9s
AML Almayashu 70.43 320 P **P** **07 53 44.5 +0.4**
SNR=12
USP Ospenovka 70.50 321 P **P** **07 53 44.2 +0.1**
SNR=11
EKS2 Erkin-Say 70.64 320 P **P** **07 53 45.7 +0.6**
SNR=11
MNAS Manas 71.37 319 P **P** **07 53 49.3 -0.2**
MNAS pmax pmax
comp=Z,21nm,1.0s
ZAA0 Zalesovo Array 71.52 334 *e*P **P** **07 53 48.7 -1.2**
comp=Z,7.9nm,0.8s
ZALV Zalesovo Beam 71.52 334 P **P** **07 53 48.9 -1.1**
comp=Z,7.8nm,0.7s,baz=125,slow=4.9,SNR=28
ZALV Zalesovo Beam 71.52 334 *e*P **P** **07 53 48.6 -1.3**
ZALV Zalesovo Beam 71.52 334 *e*P **P** **07 53 48.6 -1.3**
VNDA Vanda 72.11 173 P **P** **07 53 54.0 +0.9**
comp=Z,1.6nm,0.8s,baz=319,slow=5.9,SNR=13
VNDA Vanda 72.11 173 P **P** **07 53 54.0 +0.9**
KURBB Kurchatov Arra 72.33 329 P **P** **07 53 54.5 -0.3**
comp=Z,9.0nm,0.8s,baz=128,slow=4.8,SNR=73
KURK Kurchatov 72.34 329 *e*P **P** **07 53 54.2 -0.7**
comp=Z,12nm,0.8s
SEY Seymchan 72.50 11 P **P** **07 53 56.0 +0.4**
comp=Z,8.6nm,0.7s,baz=192,slow=3.7,SNR=18
SEY Seymchan 72.50 11⇓ *e*P **P** **07 53 56.2 +0.6**
NVS Novosibirsk 72.80 334 *e*P **P** **07 53 56.5 -1.0**
KK31 Karatay Array 72.95 319 *e*P **P** **07 53 58.3 -0.4**
KK31 Karatay Array 72.95 319 *e*P **P** **07 53 58.3 -0.4**
KKAR Karatay Array 72.95 319 *e*P **P** **07 53 58.4 -0.3**
KKAR Karatay Array 72.95 319 *e*P **P** **07 53 58.4 -0.3**
SBA Scott Base 73.01 172 *e*P **P** **07 54 00.4 +1.9**
comp=Z,11nm,1.4s
SBA Scott Base 73.01 172 *e*P **P** **07 54 00.4 +1.9**
SBA pmax pmax
comp=Z,11nm,1.4s
MAW Mawson 74.08 201 P **P** **07 54 06.3 +1.5**
comp=Z,4.7nm,0.6s,baz=95,slow=6.5,SNR=8.8
MAW Mawson 74.08 201 *e*P **P** **07 54 06.5 +1.7**
comp=Z,6.9nm,1.4s
MAW Mawson 74.08 201 *e*P **P** **07 54 06.5 +1.7**
MAW pmax pmax
comp=Z,7.0nm,1.4s
OTUK Ortayu 74.37 325 P **P** **07 54 06.8 -0.1**
OTUK pmax pmax
comp=Z,23nm,1.3s
BRVK Borovoye 77.94 328 ⇓*i*P **P** **07 54 26.7 -0.2**
BRVK pmax pmax
comp=Z,8.0nm,1.0s
TIXI Tiksi 78.97 0 P **P** **07 54 31.3 -0.9**
comp=Z,5.6nm,0.6s,baz=173,slow=3.5,SNR=8.5
BILL Bilibino 79.85 13 *e*P **P** **07 54 36.4 -0.6**
BILL *e* 07 54 44.3
BILL pmax pmax
comp=Z,1.0nm,1.0s
NRIK Noril'sk 81.76 346 P **P** **07 54 47.4 +0.3**
comp=Z,8.7nm,1.1s,baz=126,slow=4.1,SNR=3.6
SYO Syowa Base 82.79 201⇑ *i*P **P** **07 54 53.7 +1.1**
ARU Arti 85.51 328 *d i*P **P** **07 55 05.9 -0.6**
ARU 07 58 20.4
ARU S **SKSac** **08 05 16.3 -1.2**
ARU SS **SS** **08 10 56.8 -7.8**
ARU pmax pmax
comp=Z,9.0nm,1.0s
RAYN Ar Rayn 86.89 294 *e*P **P** **07 55 13.7 -0.4**
comp=Z,4.5nm,0.9s
RAYN Ar Rayn 86.89 294 *e*P **P** **07 55 13.7 -0.4**
RAYN pmax pmax
comp=Z,4.0nm,0.9s
NVL N'lazarevskaya 91.55 197 *e*P **P** **07 55 38.8 +3.9**
NVL *e*S **SKSac** **08 05 51.8 -1.3**
NVL pmax pmax
comp=Z,7.0nm,0.8s
KBZ Khabaz 92.20 314 P **P** **07 55 36.9 -1.5**
comp=Z,0.8nm,0.4s,baz=109,slow=2.4,SNR=3.8
NEY Neytrino 92.25 313⇓ *e*P **P** **07 55 40.4 +1.4**
NEY pmax pmax
comp=Z,1.0nm,1.0s
RND Reindeer 93.20 27 *e*P **P** **07 55 41.2 -1.5**
comp=Z,10nm,1.0s
RND Reindeer 93.20 27 *e*P **P** **07 55 41.3 -1.5**
RND pmax pmax
comp=Z,11nm,1.0s
COLD Coldfoot 93.36 23 *e*P **P** **07 55 43.6 +0.4**
comp=Z,2.7nm,1.1s
WRH Wood River Hil 93.72 26 *e*P **P** **07 55 44.0 -1.0**
comp=Z,5.5nm,1.0s
DHY Denali Highway 93.81 27 *e*P **P** **07 55 45.1 -0.5**
comp=Z,6.5nm,1.0s
CCB Clear Creek Bu 93.87 25 *e*P **P** **07 55 44.5 -1.1**
comp=Z,5.2nm,0.9s
ILAR Eielson Array 94.28 25 P **P** **07 55 45.3 -2.2**
comp=Z,1.1nm,0.8s,baz=281,slow=4.2,SNR=6.8
IL1 Eielson Array 94.28 25 *e*P **P** **07 55 45.8 -1.8**
SNAA Sanae 94.92 194 *e*P **P** **07 55 51.5 +1.0**
comp=Z,7.5nm,1.2s
SNAA Sanae 94.92 194⇑ *e*P **P** **07 55 51.8 +1.3**
RIDG Independ'e Rid 95.03 26 *e*P **P** **07 55 50.7 -0.4**
comp=Z,9.5nm,1.3s
HFS Hagfors 108.84 331 PKiKP **PKiKP** **08 00 56.2 -0.6**
comp=Z,2.9nm,1.1s,baz=57,slow=5.3,SNR=7.4
GERES GERESS Array B 112.05 320 PKiKP **PKiKP** **08 01 02.6 -0.8**
comp=Z,0.4nm,0.5s,baz=11,slow=0.7,SNR=4.2
REDW Red Top Meadow 116.97 45 *e*PKPdf **PKPdf** **08 01 14.3 +1.1**
SNOW Snow King Moun 117.01 45 *e*PKPdf **PKPdf** **08 01 14.9 +1.6**
MSU Marysvale 117.21 51 *e*PKPdf **PKPdf** **08 01 11.0 -2.8**
MSU Marysvale 117.21 51 *e*PKiKP **PKPdf** **08 01 11.0 -2.8**
PDAR Pinedale Array 118.05 45 PKP **PKPdf** **08 01 14.8 -0.5**
comp=Z,0.1nm,0.4s,baz=96,slow=3.0,SNR=4.9
PDAR Pinedale Array 118.05 45 *e*PKPdf **PKPdf** **08 01 15.9 +0.7**
ANMO Albuquerque 122.52 53 *e*PKPdf **PKPdf** **08 01 24.1 +0.1**
ANMO Albuquerque 122.52 53 *e*PKiKP **PKPdf** **08 01 24.1 +0.1**
MNTX Cornudas Mount 124.18 57 *e*PKPdf **PKPdf** **08 01 28.1 +1.0**
TXAR Lajitas Array 126.16 59 PKP **PKPdf** **08 01 31.2 +0.2**
comp=Z,0.3nm,0.6s,baz=273,slow=1.3,SNR=4.3
TOA0 Torodi Ar. Sit 127.77 281 *e*PKPdf **PKPdf** **08 01 34.3 -0.1**
TORD Torodi Ar. Bea 127.77 281 PKP **PKPdf** **08 01 34.8 +0.5**
comp=Z,1.4nm,0.8s,baz=70,slow=2.6,SNR=6.1
JCT Junction City 129.12 57 *e*PKPdf **PKPdf** **08 01 37.0 +0.4**
JCT Junction City 129.12 57 *e*PKiKP **PKPdf** **08 01 37.0 +0.4**
S39A Bolivar 131.45 45 *e*PKPdf **PKPdf** **08 01 41.6 +0.9**
M54A Oil Creek Stat 137.73 32 *e*PKPdf **PKPdf** **08 01 53.1 +0.7**
GO02 Mina Guanaco 142.91 152 *e*PKPdf 08 02 00.3
CNNC Cliffs of the 143.06 38 *e*PKPdf **PKPdf** **08 02 02.3 +0.1**
PB04 IPOC Station P 145.00 148 *e*PKPbc **PKPdf** **08 02 06.9 +0.7**
CPUP Villa Florida 145.85 170 PKPbc **PKPbc** **08 02 08.7 +0.6**
comp=Z,10nm,0.8s,baz=190,slow=3.9,SNR=12
CPUP Villa Florida 145.85 170 *e*PKPdf **PKPbc** **08 02 08.9 +0.8**
CPUP Villa Florida 145.85 170 *e*PKP2 **PKPbc** **08 02 08.9 +0.8**
MNMC Minye Minye 147.91 146 *e*PKPdf **PKPdf** **08 02 12.9 +1.7**
MNMC *e*PKPbc **PKiKP** **08 02 16.1 -0.1**
LPAZ La Paz 151.01 145 PKP **PKPdf** **08 02 17.7 +1.0**
comp=Z,2.0nm,1.0s,baz=157,slow=2.6,SNR=5.3
LPAZ PKPbc **PKiKP** **08 02 23.8 +0.7**
comp=Z,6.3nm,0.8s,baz=62,slow=4.0,SNR=31
LPAZ La Paz 151.01 145 *e*PKPdf **PKPdf** **08 02 18.3 +1.6**
LPAZ PKPbc **PKiKP** **08 02 23.8 +0.7**

IDC ***23*** *07:43:40.5±0.5,51°.51N×177°.78W,h0km,mb4.5/31, mb1 4.6/33,mb1mx4.5/81,mbtmp4.5/33,ML4.8/1,MS3.9/47, Ms1 4.0/47,ms1mx3.9/64,Error ellipse: s-maj=16.5km s-min=9.7km az=167.0*

NEIC ***23*** *07:43:45.3±0.0,51°.24N×177°.67W,h35km,mb5.0/299, ML5.1(AEIC),After AEIC.*

GCMT ***23*** *07:43:45.3±0.4,51°.19N×177°.63W,h39km±1km,MW5.1/60, Moment Tensor Solution. s32,c35; s60,c79; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr4.44±.31; Mθθ-3.25±.19; Mφφ-1.19±.19; Mrθ1.56±.16; Mθφ-0.97±.10; Mφr1.98±.18; Best double couple: Mo4.72900×10¹⁶ NP1:φs55.00000°,δ61.00000°,λ79.00000°. NP2: φs256.00000°,δ31.00000°,λ109.00000°. Principal axes: T 5.2400, Plg72.0000°, Azm298.0000°; N -1.0230, Plg10.0000°, Azm60.0000°; P -4.2170, Plg15.0000°, Azm153.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

MOS ***23*** *07:43:46.5±0.8,51°.54N×177°.76W,h53km,mb5.1/75 Error ellipse: s-maj=8.0km s-min=6.3km az=58.1*

ISCJB ***23*** *07:43:47.3±0.3,51°.51N±0°.03×177°.70W±0°.02,h64km±2km, mb5.0/406,Error ellipse: s-maj=5.5km s-min=2.1km az=0.2*

BJI ***23*** *07:43:48.5,51°.48N×178°.30W,h61km,mb4.8/44, mB4.9/32,Ms4.6/28,Ms7 4.3/29*

ISC 23 07:43:48.1±0.6,51°.50N±0°.06×177°.83W±0°.03,h52km±4km, n1196,σ1°.22/1187,mb5.0/406,MS4.0/62,21C-18D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAPA	**Tanaga Point A**	**0.32**	**2**	P	**Pn**	**07 43 57.1**	**-0.6**
TAFP	**Tanaga Falls P**	**0.41**	**347**	P	**Pn**	**07 43 58.6**	**0.0**
TANO	**Tanaga North**	**0.46**	**337**	P	**Pn**	**07 43 59.6**	**+0.5**
KIWB	**Kanaga Island**	**0.55**	**50**	*e*Pn	**Pn**	**07 43 59.0**	**-1.2**
KIWB				*e*Sn	**Sn**	**07 44 09.9**	**+1.1**
KIKV	**Kanaga Island**	**0.56**	**47**	P	**Pn**	**07 43 58.8**	**-1.4**
KICM	**Kanaga Island**	**0.58**	**43**	P	**Pn**	**07 43 59.5**	**-1.0**
KIRH	**Kanaga Island**	**0.61**	**48**	P	**Pn**	**07 43 59.5**	**-1.3**
GAEA	**Gareloi East**	**0.64**	**297**	P	**Pn**	**07 44 01.5**	**+0.3**
GALAA	**Gareloi Lava P**	**0.64**	**295**	P	**Pn**	**07 44 01.6**	**+0.3**
ADAG	**Mount Adagdak**	**0.90**	**57**	P	**Pn**	**07 44 03.3**	**-1.3**
ETKA	**Kagalaska Isla**	**0.96**	**67**	P	**Pn**	**07 44 02.5**	**-2.8**
GSCK	**Great Sitkin C**	**1.16**	**63**	P	**Pn**	**07 44 06.4**	**-1.6**
GSTR	**Great Sitkin T**	**1.25**	**61**	*e*Pn	**Pn**	**07 44 08.1**	**-1.2**
CERAA	**Semis' Rag'd T**	**1.60**	**286**	P	**Pn**	**07 44 14.4**	**+0.4**
CEAP	**Semis' Anvil P**	**1.69**	**288**	P	**Pn**	**07 44 16.0**	**+0.8**
AMKA	**Amchitka**	**1.80**	**267**	P	**Pn**	**07 44 15.1**	**-1.6**
AMKA				S	**Sn**	**07 44 38.9**	**+0.6**
LSNW	**Little Sitkin**	**2.32**	**283**	P	**Pn**	**07 44 24.2**	**+0.4**
ATKA	**Atka Island**	**2.36**	**71**	*e*Pn	**Pn**	**07 44 22.8**	**-1.6**
ATKA				*e*Sn	**Sn**	**07 44 52.9**	**+0.8**
KOWE	**Korovin West**	**2.38**	**67**	P	**Pn**	**07 44 23.9**	**-0.7**
KOKL	**Mount Kliuchef**	**2.40**	**68**	P	**Pn**	**07 44 23.5**	**-1.4**
KOFP	**Korovin Flat P**	**2.44**	**70**	P	**Pn**	**07 44 23.8**	**-1.8**
SMY	**Shemya**	**5.12**	**287**	*e*Pn	**Pn**	**07 45 02.5**	**+0.3**
SMY	**Shemya**	**5.12**	**287**	*e*P	**Pn**	**07 45 02.5**	**+0.3**
NIKH	**Nikolski High**	**5.71**	**71**	*e*Pn	**Pn**	**07 45 10.3**	**0.0**
NIKH				*e*Sn	**Sn**	**07 46 16.9**	**+2.5**
OKTU	**Okmok Mt. Tuli**	**6.28**	**69**	P	**Pn**	**07 45 18.5**	**+0.4**
MTBL	**Makushin Table**	**7.21**	**66**	P	**Pn**	**07 45 31.8**	**+0.9**
SPIA	**Saint Paul Isl**	**7.21**	**35**	*e*Pn	**Pn**	**07 45 32.9**	**+2.1**
UNV	**Unalaska Valle**	**7.28**	**67**	*e*Pn	**Pn**	**07 45 32.1**	**+0.4**
AKMO	**Akutan Morgan**	**7.62**	**65**	P	**Pn**	**07 45 36.9**	**+0.5**
AKUT	**Akutan**	**7.77**	**65**	*e*Pn	**Pn**	**07 45 40.5**	**+2.1**
FALS	**False Pass**	**9.29**	**63**	*e*Pn	**Pn**	**07 45 59.5**	**+0.3**
DRIA	**Deer Island**	**9.96**	**64**	P	**Pn**	**07 46 08.7**	**+0.3**
SDPT	**Sand Point**	**11.04**	**63**	*e*Pn	**Pn**	**07 46 22.8**	**-0.4**
CHGN	**Chignik**	**12.40**	**60**	*e*Pn	**Pn**	**07 46 39.2**	**-2.4**
GAMB	**Gambell**	**12.73**	**12**	*e*Pn	**Pn**	**07 46 49.3**	**+3.1**
PET	**Petropavlovsk**	**14.47**	**285**	*e*P	**Pn**	**07 47 09.4**	**-0.3**
PET				*e*S	**Sn**	**07 49 49.7**	**+1.2**
PET				pmax	pmax		
	comp=Z,200nm,5.1s						
PET				pmax	pmax		
	comp=Z,100nm,7.1s						
PET				MLR	MLR		
	comp=Z,1μm,21.0s						

ANM **Nome** 14.63 22 *e*Pn P 07 47 16.4 -0.4
ANM **Nome** 14.63 22 *e*P P 07 47 16.4 -0.4
PEA0B **Petropavlovsk-** 15.04 286 *e*Pn Pn 07 47 17.4 +0.3
comp=Z,40nm,1.4s
PETK **Petropavlovsk-** 15.04 286 Pn Pn 07 47 16.2 -0.9
baz=92,slow=15,SNR=2.5
PETK **Petropavlovsk-** 15.04 286 *e*Pn P 07 47 20.7 -0.8
PETK **Petropavlovsk-** 15.04 286 *e*P P 07 47 20.7 -0.8
OHAK **Old Harbor** 15.36 59 *e*Pn Pn 07 47 16.9 -4.3
comp=Z,116nm,0.7s
OHAK *e*Sn Sn 07 50 16.2 +6.1
SVW2 **Sparrevohn** 15.57 43 *e*Pn P 07 47 25.4 -1.9
comp=Z,109nm,1.0s
KDAK **Kodiak Island** 15.85 57 Pn Pn 07 47 23.6 -3.9
comp=Z,4.1nm,0.3s,baz=203,slow=3.4,SNR=32
KDAK **Kodiak Island** 15.85 57 *e*Pn Pn 07 47 27.3 -0.2
comp=Z,103nm,0.5s
KDAK *e*Sn Sn 07 50 26.2 +4.3
KDAK **Kodiak Island** 15.85 57 *e*P Pn 07 47 27.3 -0.2
KDAK *e* 07 50 26.2
KDAK pmax pmax
comp=Z,103nm,0.5s
RSO **Redoubt South** 16.56 47 *e*P P 07 47 39.3 +0.8
CNPM **China Poot** 16.97 51 *e*Pn Pn 07 47 40.8 -0.9
comp=Z,104nm,0.7s
CNPM *e*Sn Sn 07 50 50.8 +1.6
SPU **Mount Spurr** 17.15 46 *e*Pn P 07 47 46.9 +2.0
BRLK **Bradley Lake** 17.21 51 *e*Pn Pn 07 47 43.7 -0.9
comp=Z,82nm,0.6s
BRLK *e*Sn Sn 07 50 53.6 -1.3
SKT **Skwentna** 17.70 43 *e*Pn P 07 47 51.8 +0.9
comp=Z,163nm,1.0s
PPLA **Purkeypile** 17.83 40 *e*Pn P 07 47 54.0 +1.5
comp=Z,192nm,1.4s
SUA **Susitna One** 17.84 46 *e*Pn P 07 47 52.8 +0.3
comp=Z,47nm,0.8s
CAST **Castle Rocks** 18.12 39 *e*P Pn 07 47 56.8 +1.0
comp=Z,37nm,0.6s
RDOG **Red Dog Mine** 18.13 18 *e*P P 07 47 55.2 -0.4
comp=Z,56nm,1.4s
RC01 **Rabbit Creek A** 18.17 47 *e*P P 07 47 55.6 -0.4
comp=Z,33nm,0.9s
BILL **Bilibino** 18.31 341 *e*P Pn 07 48 00.1 +2.1
comp=Z,44nm,1.2s
BILL **Bilibino** 18.31 341 *c e*P Pn 07 47 59.6 +1.6
BILL pmax pmax
comp=Z,29nm,1.2s
BILL MLR MLR
comp=Z,1µm,22.0s
PMR **Palmer** 18.61 46 *e*P Pn 07 48 01.9 +0.3
comp=Z,21nm,1.0s
PMR **Palmer** 18.61 46 *e*P Pn 07 48 01.9 +0.3
PMR pmax pmax
comp=Z,21nm,1.0s
KTH **Kantishna Hill** 18.64 39 *e*P Pn 07 48 02.2 +0.1
comp=Z,77nm,0.7s
GHO **Glory Hole Cre** 18.76 46 *e*P Pn 07 48 03.4 -0.2
comp=Z,44nm,1.0s
GHO *e*Sn S 07 51 38.4 +5.1
TRF **Thorofare Moun** 18.85 40 *e*P P 07 48 03.8 +0.1
comp=Z,129nm,0.9s
BPAW **Bear Paw Mtn.** 18.88 38 *e*P Pn 07 48 04.9 0.0
comp=Z,41nm,1.0s
SML **Sawmill** 19.04 46 *e*P Pn 07 48 06.9 +0.1
comp=Z,66nm,0.9s
SML **Sawmill** 19.04 46 *e*P Pn 07 48 06.9 +0.1
SML pmax pmax
comp=Z,66nm,0.9s
MA2 **Magadan** 19.36 307 LR LR 07 55 01.3
comp=Z,790nm,20.5s,baz=106,slow=35
MID **Middleton Isla** 19.38 54 *e*P Pn 07 48 09.8 -1.0
comp=Z,125nm,0.7s
RND **Reindeer** 19.41 41 *e*P P 07 48 09.2 -0.6
comp=Z,71nm,1.1s
RND *e*S Sn 07 51 47.1 -1.0
RND **Reindeer** 19.41 41 *e*P P 07 48 09.2 -0.6
RND *e*S Sn 07 51 47.1 -1.0
RND pmax pmax
comp=Z,71nm,1.1s
MLY **Manley** 19.45 35 *e*P Pn 07 48 11.1 -0.5
comp=Z,53nm,0.8s
SCM **Sheep Creek Mo** 19.50 46 *e*P P 07 48 09.6 -1.1
comp=Z,90nm,1.0s
SCM *e*S Sn 07 51 49.7 -0.5
SCM **Sheep Creek Mo** 19.50 46 *e*P P 07 48 09.6 -1.1
SCM *e*S Sn 07 51 49.7 -0.5
SCM pmax pmax
comp=Z,90nm,1.0s
BWN **Browne** 19.50 39 *e*P Pn 07 48 11.2 -1.0
BWN *e*Pn P 07 48 11.9 +1.3
MCK **McKinley** 19.52 40 *e*P P 07 48 10.4 -0.4
comp=Z,50nm,0.8s
MCK **McKinley** 19.52 40 *e*P P 07 48 10.4 -0.4
MCK pmax pmax
comp=Z,50nm,0.8s
SEY **Seymchan** 19.57 317 P Pn 07 48 13.2 +0.2
comp=Z,2.8nm,0.3s,baz=118,slow=8.2,SNR=66
SEY LR LR 07 54 49.1
comp=Z,690nm,20.8s,baz=150,slow=34
SEY **Seymchan** 19.57 317 ‖ *e*P Pn 07 48 14.0 +1.0
DHY **Denali Highway** 19.90 43 *e*P P 07 48 14.5 -0.6
comp=Z,70nm,0.8s
DHY *e*S Sn 07 51 59.6 -0.4
DIV **Divide** 20.02 49 *e*P Pn 07 48 17.8 -0.6
comp=Z,65nm,0.9s
DIV *e*S Sn 07 52 02.3 -0.4
KLU **Klutina** 20.05 48 *e*P P 07 48 16.9 +0.3
comp=Z,47nm,0.9s
KLU *e*S S 07 51 59.3 +0.4
WRH **Wood River Hil** 20.18 39 *e*P P 07 48 16.2 -1.7
comp=Z,28nm,0.8s
MDM **Murphy Dome** 20.34 37 *e*P P 07 48 19.5 -0.2
comp=Z,100nm,1.0s
CCB **Clear Creek Bu** 20.36 38 *e*P P 07 48 18.8 -1.1
comp=Z,26nm,0.6s
RAGM **Ragged Mountai** 20.38 51 *e*P Pn 07 48 21.7 -1.1
comp=Z,31nm,0.5s
COLA **College** 20.45 38 *e*P P 07 48 21.5 +0.7
comp=Z,41nm,0.8s
COLA **College** 20.45 38 *e*P P 07 48 21.5 +0.7
COLA pmax pmax
comp=Z,41nm,0.8s
BMRM **Bremner River** 20.54 50 *e*P Pn 07 48 23.0 -1.5
comp=Z,74nm,0.8s
BMRM *e*S Sn 07 52 17.0 +2.0
HARP **HAARP** 20.65 45 *e*P P 07 48 22.8 -0.2
comp=Z,167nm,0.7s
PAX **Paxson** 20.68 44 *e*P P 07 48 22.9 -0.6
comp=Z,49nm,0.9s
PAX **Paxson** 20.68 44 *e*P P 07 48 22.9 -0.6
PAX pmax pmax
comp=Z,49nm,0.9s
IL1 **Eielson Array** 20.77 38 *e*P P 07 48 24.4 +0.1
ILAR **Eielson Array** 20.77 38 P P 07 48 23.9 -0.4
comp=Z,4.6nm,0.8s,baz=236,slow=9.6,SNR=46
ILAR PcP PcP 07 52 30.4 -1.0
comp=Z,1.3nm,0.5s,baz=277,slow=2.8,SNR=4.6
ILAR LR LR 07 57 40.3
comp=Z,558nm,18.6s,baz=243,slow=40
ILB **Eielson Array** 20.77 38 *e*P P 07 48 24.1 -0.2
COLD **Coldfoot** 20.84 30 *e*P P 07 48 25.6 +0.6
comp=Z,47nm,1.0s
CRQM **Cirque** 21.20 51 *e*P P 07 48 27.7 -1.4
comp=Z,35nm,0.7s
RIDG **Independ'e Rid** 21.20 42 *e*P P 07 48 27.8 -1.2
comp=Z,76nm,1.2s
RIDG *e*S Sn 07 52 32.7 +1.7
SCRK **Sand Creek** 21.64 42 *e*P P 07 48 32.3 -1.5
comp=Z,33nm,0.8s
SCRK *e*S S 07 52 35.0 +4.6
TOLK **Toolik Lake Re** 21.88 28 P P 07 48 36.6 +0.4
baz=232,SNR=34
TOLK **Toolik Lake Re** 21.88 28 *e*P P 07 48 36.7 +0.5
comp=Z,27nm,0.8s
FYU **Fort Yukon** 22.18 35 *e*P P 07 48 39.4 +0.1
comp=Z,43nm,0.8s
EGAK **Eagle** 23.06 41 *e*P P 07 48 47.3 -1.4
comp=Z,31nm,0.8s
KUR **Kuril'sk** 23.48 268 ‖ *i*P P 07 48 49.2 -3.7
KUR *i*S S 07 52 37.9 -25
KUR pmax pmax
comp=Z,162nm,1.7s
KUR MLR MLR
comp=Z,190nm,18.0s
KUR MLR MLR
comp=E,149nm,15.0s

DAWY **Dawson** 23.61 43 *e*P P 07 48 52.8 -1.2
comp=E,27nm,1.0s
JIS **Juneau Island** 25.51 58 *e*P P 07 49 12.8 +1.6
comp=E,7.4nm,0.8s
YSS **Yuzh-Sakhalins** 25.91 276 *α e*P P 07 49 15.5 +0.5
YSS *e* 07 49 28.0
YSS *e**SP sP 07 49 36.2 +1.8
YSS *e* 07 49 55.8
YSS *e*S S 07 53 39.6 -1.6
YSS *e* 07 53 59.6
YSS pmax pmax
YSS comp=Z,20nm,0.8s
YSS pmax pmax
comp=Z,100nm,11.1s
CRAG **Craig** 26.54 64 *e*P P 07 49 20.9 +0.3
comp=Z,38nm,1.2s
WRAK **Wrangell Islan** 26.81 61 *e*P P 07 49 23.1 +0.1
comp=Z,19nm,1.0s
INK **Inuvik** 27.02 35 P P 07 49 23.4 -1.3
comp=Z,2.6nm,0.4s,baz=242,slow=9.5,SNR=16
INK PcP PcP 07 52 44.4 -0.2
comp=Z,4.0nm,0.5s,baz=254,slow=1.8,SNR=11
INK LR LR 08 01 28.3
comp=Z,351nm,19.3s,baz=233,slow=40
INK **Inuvik** 27.02 35 *e*P P 07 49 24.0 -0.7
comp=Z,9.7nm,0.7s
INK *e*PcP PcP 07 52 44.8 +0.2
INK **Inuvik** 27.02 35 *e*P P 07 49 24.0 -0.7
INK *e* 07 52 44.8
INK pmax pmax
comp=Z,10.0nm,0.7s
ASAJ **Asahikawa** 27.31 270 P P 07 49 28.9 +1.2
comp=Z,6.9nm,0.6s,baz=49,slow=5.7,SNR=6.5
ASAJ LR LR 07 59 07.2
comp=Z,211nm,21.3s,baz=72,slow=34
ASAJ **Asahikawa** 27.31 270 *e*P P 07 49 28.2 +0.5
comp=Z,32nm,1.3s
DIB **Dawson Inlet,** 27.41 68 *e*P P 07 49 29.3 +0.9
comp=Z,54nm,1.1s
DLBC **Dease Lake** 27.79 57 LR LR 08 01 34.8
comp=Z,370nm,19.3s,baz=272,slow=39
ERM **Erimo** 28.06 266 *e*P P 07 49 35.5 +1.2
comp=Z,18nm,1.2s
ERM **Erimo** 28.06 266 ‖ *e*P P 07 49 35.6 +1.2
ERM pmax pmax
comp=Z,8.0nm,0.8s
YAK **Yakutsk** 29.80 311 LR LR 08 02 02.0
comp=Z,495nm,19.5s,baz=91,slow=37
BBB **Bella Bella** 30.24 69 *e*P P 07 49 54.3 +0.8
comp=Z,30nm,1.0s
TIXI **Tiksi** 30.83 330 PcP PcP 07 52 53.7 -0.5
comp=Z,4.2nm,0.4s,baz=117,slow=2.8,SNR=13
TIXI **Tiksi** 30.83 330 ‖ *e*P P 07 49 58.4 -0.2
TIXI pmax pmax
comp=Z,3.0nm,1.1s
USRK **Ussuriysk Ar.** 33.88 278 P P 07 50 25.1 -0.4
comp=Z,7.5nm,0.5s,baz=63,slow=8.9,SNR=16
H11N2 **WAKE ISLAND Hy** 33.90 206 T T 08 26 50.5
baz=18,slow=76,SNR=838
H11N3 **WAKE ISLAND Hy** 33.91 206 T T 08 26 54.0
baz=18,slow=76,SNR=1099
H11N1 **WAKE ISLAND Hy** 33.92 206 T T 08 26 58.5
baz=18,slow=76,SNR=534
PGC **Sidney** 34.34 73 *e*P P 07 50 30.1 +0.7
comp=Z,50nm,1.6s
MJAR **Matsushiro Arr** 34.40 262 P P 07 50 30.2 0.0
comp=Z,2.3nm,0.7s,baz=43,slow=6.5,SNR=8.0
MJAR PcP PcP 07 53 05.0 +0.3
comp=Z,0.7nm,0.5s,baz=276,slow=4.9,SNR=4.1
MJAR LR LR 08 02 35.4
comp=Z,317nm,21.9s,baz=75,slow=33
MAJO **Matsushiro** 34.40 262 *e*P P 07 50 31.0 +0.8
comp=Z,17nm,0.9s
MAJO **Matsushiro** 34.40 262 *e*P P 07 50 31.0 +0.8
MAJO pmax pmax
comp=Z,17nm,0.9s
MAT **Matsushiro** 34.40 262 P P 07 50 30.2 0.0
MJB9 **Matsu-Tunnel** 34.40 262 *e*P P 07 50 31.0 +0.8
comp=Z,17nm,0.9s
LLLB **Lillooet** 34.45 69 *e*P P 07 50 30.8 +0.3
comp=Z,47nm,1.3s
NLWA **Neilton Lookou** 34.66 75 *e*P P 07 50 33.2 +0.9
comp=Z,43nm,1.3s
YKW3 **Yellowknife Ar** 34.69 47 *e*P P 07 50 31.1 -1.2
comp=Z,12nm,0.8s
YKA **Yellowknife Ar** 34.71 47 P P 07 50 31.1 -1.4
comp=Z,7.9nm,0.7s,baz=279,slow=8.3,SNR=27
YKA PcP PcP 07 53 05.2 +0.1
comp=Z,2.7nm,0.6s,baz=288,slow=3.4,SNR=18
YKA ScP ScP 07 56 51.1 +5.3
comp=Z,0.8nm,0.8s,baz=293,slow=3.1,SNR=5.5
YKA LR LR 08 06 32.6
comp=Z,44nm,18.4s,baz=274,slow=40
A04D **Lummi Island** 34.76 72 P P 07 50 33.8 +0.7
baz=296
H11S1 **WAKE ISLAND Hy** 35.12 206 T T 08 27 48.5
baz=17,slow=76,SNR=1093
H11S2 **WAKE ISLAND Hy** 35.13 206 T T 08 27 49.6
baz=17,slow=76,SNR=618
H11S3 **WAKE ISLAND Hy** 35.13 206 T T 08 27 51.3
baz=17,slow=76,SNR=579
E03A **Lebam** 35.24 76 *e*P P 07 50 38.3 +1.1
comp=Z,51nm,1.1s
MSHR **Mys Shultsa** 35.25 276 *c i*P P 07 50 37.6 +0.3
B05A **Bryant** 35.33 73 P P 07 50 38.6 +0.7
baz=296,SNR=13
JHJ **Hachijo jima 2** 35.71 256 LR LR 08 02 41.1
comp=Z,157nm,21.9s,baz=92,slow=32
F04D **Rainier, OR** 35.80 77 P P 07 50 42.9 +0.8
baz=299
D05A **Enumclaw** 35.88 74 *e*P P 07 50 43.8 +1.0
comp=Z,56nm,1.0s
LON **Longmire** 36.20 75 *e*P P 07 50 46.1 +0.5
comp=Z,11nm,0.7s
LON **Longmire** 36.20 75 *e*P P 07 50 46.1 +0.5
LON pmax pmax
comp=Z,11nm,0.7s
COR **Corvallis** 36.37 79 *e*P P 07 50 47.9 +1.0
comp=Z,176nm,1.8s
COR **Corvallis** 36.37 79 *e*P P 07 50 47.9 +1.0
COR pmax pmax
comp=Z,176nm,1.8s
KEBM **Edson Butte** 36.63 82 *e*P P 07 50 50.2 +0.9
comp=Z,139nm,1.4s
LTY **Liberty** 36.64 74 *e*P P 07 50 49.2 -0.1
comp=Z,24nm,1.2s
I03D **Drain, OR** 36.80 80 P P 07 50 51.6 +1.0
baz=302
B08A **Colville Reser** 36.92 71 *e*P P 07 50 52.1 +0.5
comp=Z,64nm,1.0s
H04A **Detroit Lake** 37.00 78 *e*P P 07 50 53.0 +0.6
comp=Z,67nm,1.3s
KBO **Bosley Butte** 37.06 83 *e*P P 07 50 53.9 +1.0
comp=Z,221nm,1.9s
G05D **Wamic, OR** 37.24 77 P P 07 50 55.0 +0.6
baz=300,SNR=8.5
I04A **Tendick Farm,** 37.32 80 P P 07 50 55.6 +0.4
baz=302,SNR=8.2
L02D **Cave Junction,** 37.47 83 P P 07 50 57.0 +0.7
baz=303
HUMO **Hull Mountain** 37.63 82 *e*P P 07 50 58.5 +0.8
comp=Z,16nm,1.2s
G06A **Carlson Farm,** 37.66 76 *e*P P 07 50 57.9 -0.1
comp=Z,50nm,1.5s
I05D **Terrebonne, OR** 37.70 78 P P 07 50 58.7 +0.4
baz=301,SNR=11
HAWA **Hanford** 37.75 74 *e*P P 07 50 59.1 +0.4
comp=Z,27nm,0.8s
F07A **Phinny Hill Vi** 37.76 75 *e*P P 07 50 58.4 -0.3
comp=Z,26nm,0.7s
D08A **Wollman Farm,** 37.79 73 *e*P P 07 50 58.4 -0.6
comp=Z,33nm,1.1s
J04D **Umpqua Nationa** 37.81 80 P P 07 50 59.6 +0.2
baz=302,SNR=7.1
C09A **Chrisman Ranch** 37.81 71 *e*P P 07 50 59.4 +0.2
comp=Z,53nm,1.0s
JCC **Jacoby Creek,** 37.96 85 *e*P P 07 51 01.2 +0.8
comp=Z,56nm,1.4s
E08A **Dider Farm, El** 37.98 74 *e*P P 07 51 00.4 -0.2
comp=Z,24nm,1.1s
KHMM **Horse Mountain** 38.11 84 *e*P P 07 51 03.1 +1.1
comp=Z,76nm,1.6s
CN2 **Changchun** 38.12 281 *e*P P 07 51 00.8 -1.0
CN2 *e*sP sP 07 51 23.3 +1.8
CN2 *e*S S 07 56 48.3 -2.6
CN2 pmax pmax
comp=Z,10.0nm,0.7s

CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=Z,240nm,21.0s
CN2 LR LR
comp=Z,200nm,21.0s
CN2 LR LR
comp=Z,180nm,19.0s
PINE **Pine Mountain** 38.23 79 *e*P P 07 51 03.9 +0.9
comp=Z,44nm,1.1s
YBH **Yreka Blue Hor** 38.26 83 P P 07 51 03.5 +0.3
comp=Z,7.3nm,0.9s,baz=342,slow=6.9,SNR=20
YBH LR LR 08 03 45.2
comp=Z,188nm,21.6s,baz=304,slow=32
YBH **Yreka Blue Hor** 38.26 83 *e*P P 07 51 03.9 +0.8
comp=Z,18nm,1.1s
NEW **Newport** 38.27 70 P P 07 51 02.8 -0.2
baz=298,SNR=19
NEW **Newport** 38.27 70 *e*P P 07 51 03.1 0.0
comp=Z,70nm,1.0s
NEW **Newport** 38.27 70 *e*P P 07 51 03.1 0.0
NEW pmax pmax
comp=Z,70nm,1.0s
J05D **Fort Rock, OR** 38.32 79 P P 07 51 04.2 +0.6
baz=302,SNR=10
K04D **Chiloquin, OR** 38.36 81 P P 07 51 04.5 +0.5
baz=303
M02C **Callahan** 38.37 83 P P 07 51 04.8 +0.8
baz=304
KMRM **Mail Ridge** 38.50 85 *e*P P 07 51 06.3 +1.1
comp=Z,44nm,1.4s
E09A **Wood Farm, Sta** 38.52 73 *e*P P 07 51 05.5 +0.3
comp=Z,53nm,1.3s
G08A **Pilot Rock** 38.65 75 *e*P P 07 51 06.6 +0.2
comp=Z,11nm,1.0s
CBIJ **Chichi jima** 38.68 246 *e*P P 07 51 06.7 0.0
comp=Z,60nm,0.8s
JCJ **Chichijima** 38.68 246 P P 07 51 06.6 -0.1
comp=Z,48nm,0.6s,baz=233,slow=20,SNR=3.9
N02D **Trinity Center** 38.70 84 P P 07 51 07.6 +0.9
baz=305
M04C **Macdoel** 38.77 82 P P 07 51 07.5 0.0
baz=304,SNR=11
K05A **Summer Lake** 38.83 80 *e*P P 07 51 09.0 +0.9
comp=Z,32nm,0.9s
KCPM **Cahto Peak** 38.90 86 *e*P P 07 51 09.1 +0.6
comp=Z,36nm,1.3s
I07A **Izee** 38.95 77 *e*P P 07 51 09.5 +0.6
comp=Z,18nm,0.9s
WDC **Whiskeytown Da** 39.02 84 *e*P P 07 51 09.5 +0.1
comp=Z,20nm,1.0s
WDC **Whiskeytown Da** 39.02 84 *e*P P 07 51 09.5 +0.1
WDC pmax pmax
comp=Z,20nm,1.0s
F10A **Beach Ranch, E** 39.34 73 *e*P P 07 51 11.8 -0.3
comp=Z,14nm,0.8s
RES **Resolute Bay** 39.38 25 *e*P P 07 51 11.3 -0.7
comp=Z,6.1nm,1.1s
RES *e*S S 07 57 05.2 -4.0
RES **Resolute Bay** 39.38 25 *e*P P 07 51 11.3 -0.7
RES *e*S S 07 57 05.2 -4.0
RES pmax pmax
comp=Z,6.0nm,1.1s
O03D **Paynes Creek** 39.65 84 P P 07 51 14.5 -0.2
baz=305,SNR=9.5
MOD **Modoc Plateau** 39.66 81 *e*P P 07 51 15.2 +0.4
comp=Z,17nm,0.8s
WALA **Waterton Lakes** 39.77 67 *e*P P 07 51 14.9 -0.8
comp=Z,32nm,0.9s
BMO **Blue Mountains** 39.88 75 *e*P P 07 51 16.0 -0.6
comp=Z,15nm,1.2s
BMO **Blue Mountains** 39.88 75 *e*P P 07 51 16.0 -0.6
BMO pmax pmax
comp=Z,15nm,1.2s
J08A **Circle Bar Ran** 39.97 78 *e*P P 07 51 17.7 +0.3
comp=Z,35nm,1.2s
JTMT **Jette** 40.19 69 *e*P P 07 51 19.1 -0.1
comp=Z,31nm,1.1s
KSRS **Korea Array** 40.24 271 P P 07 51 20.4 +0.8
comp=Z,3.4nm,0.7s,baz=56,slow=8.2,SNR=12
KSRS LR LR 08 06 56.1
comp=Z,63nm,21.4s,baz=57,slow=35
KS01 **Wonju Array Si** 40.25 271 *e*P P 07 51 19.6 0.0
KSAR **Wonju Array Be** 40.27 271 P P 07 51 20.4 +0.6
KSAR **Wonju Array Be** 40.27 271 P P 07 51 20.4 +0.6
WVOR **Wild Horse Val** 40.38 79 *e*P P 07 51 21.0 +0.1
comp=Z,20nm,0.8s
BEKR **Beckworth** 40.80 83 *e*P P 07 51 23.9 -0.4
comp=Z,13nm,1.0s
MSO **Missoula** 40.86 70 P P 07 51 24.2 -0.4
baz=301,SNR=28
MSO **Missoula** 40.86 70 *e*P P 07 51 24.3 -0.4
comp=Z,92nm,1.4s
AFDM **Forest Hills D** 40.96 85 *e*P P 07 51 25.6 +0.1
comp=Z,8.4nm,1.1s
JNU **Nakatsue** 41.19 264 *e*P P 07 51 28.2 +0.8
comp=Z,58nm,1.8s
TJN **Taejon** 41.26 271 ‖ *e*P P 07 51 28.1 +0.1
PAHR **Pah Rah Range** 41.49 83 *e*P P 07 51 30.1 0.0
comp=Z,36nm,1.0s
MFID **Camas Ranch** 41.55 76 *e*P P 07 51 30.5 +0.1
comp=Z,25nm,1.6s
VCNR **Virginia City** 41.58 84 *e*P P 07 51 31.1 +0.3
comp=Z,26nm,1.1s
PNTR **Pine Nut** 41.73 84 *e*P P 07 51 32.8 +0.8
comp=Z,30nm,0.8s
CMB **Columbia Colle** 41.88 86 *e*P P 07 51 32.1 -1.0
comp=Z,19nm,1.4s
CMB **Columbia Colle** 41.88 86 *e*P P 07 51 32.1 -1.0
CMB pmax pmax
comp=Z,19nm,1.4s
YERR **Yerington** 42.02 84 *e*P P 07 51 34.7 +0.3
comp=Z,20nm,1.1s
HRY **Holter Researc** 42.16 69 *e*P P 07 51 35.1 -0.2
WAKR **Walker** 42.19 84 *e*P P 07 51 35.6 -0.2
comp=Z,11nm,0.9s
LRM **Limekiln Ridge** 42.26 71 *e*P P 07 51 35.5 -0.9
HLID **Hailey** 42.32 75 P P 07 51 36.8 0.0
baz=304,SNR=25
HLID **Hailey** 42.32 75 *e*P P 07 51 36.8 0.0
comp=Z,15nm,1.0s
BMN **Battle Mountai** 42.40 80 *e*P P 07 51 37.8 +0.3
comp=Z,8.0nm,0.8s
BMN **Battle Mountai** 42.40 80 *e*P P 07 51 37.8 +0.3
BMN pmax pmax
comp=Z,8.0nm,0.8s
DLMT **Dillon** 42.42 72 *e*P P 07 51 37.5 -0.1
comp=Z,20nm,1.3s
MCMT **McKenzie Canyo** 42.56 72 *e*P P 07 51 38.4 -0.4
EGMT **Eagleton** 42.67 67 P P 07 51 38.6 -0.9
baz=301,SNR=23
EGMT **Eagleton** 42.67 67 *e*P P 07 51 39.1 -0.4
comp=Z,36nm,0.9s
RYN **Ryan** 42.68 84 *e*P P 07 51 39.8 +0.1
comp=Z,15nm,0.9s
KVN **Kaiserville** 42.68 83 *e*P P 07 51 39.8 0.0
comp=Z,8.3nm,0.9s
KVN **Kaiserville** 42.68 83 *e*P P 07 51 39.8 0.0
KVN pmax pmax
comp=Z,8.0nm,0.9s
PMPB **Monarch Peak** 42.76 88 *e*P P 07 51 41.2 +0.9
comp=Z,16nm,1.1s
BOZ **Bozeman (W)** 42.87 71 P P 07 51 40.7 -0.5
baz=302,SNR=41
BOZ **Bozeman (W)** 42.87 71 *e*P P 07 51 40.9 -0.3
comp=Z,41nm,0.9s
BOZ **Bozeman (W)** 42.87 71 *e*P P 07 51 40.9 -0.3
BOZ pmax pmax
comp=Z,41nm,0.9s
NV01 **Mina Array Sit** 42.94 84 *e*P P 07 51 42.0 +0.1
NVAR **Mina Array Bea** 42.94 84 P P 07 51 41.9 0.0
comp=Z,4.5nm,0.8s,baz=290,slow=8.3,SNR=32
NVAR LR LR 08 06 11.8
comp=Z,124nm,20.7s,baz=74,slow=31
NV11 **Mina Array Sit** 43.03 83 *e*P P 07 51 42.6 +0.1
comp=Z,1.0nm,1.1s
QLMT **Earthquake Lak** 43.41 72 *e*P P 07 51 45.5 0.0
PAGB **Antelope Grade** 43.41 88 *e*P P 07 51 45.7 +0.2
comp=Z,13nm,1.0s
YHB **Horse Butte** 43.59 72 *e*P P 07 51 46.9 -0.1
comp=Z,63nm,1.1s
YMR **Madison River** 43.77 72 *e*P P 07 51 48.7 +0.2
comp=Z,63nm,1.1s
TIN **Tinemaha, Big** 43.83 85 P P 07 51 49.5 +0.5
baz=309
GCMT **Greycliff** 43.92 69 *e*P P 07 51 48.6 -1.0
VES **Vestal, Richgr** 44.07 87 P P 07 51 50.1 -0.6

baz=310
YPP Pitchstone Pla 44.09 72 eP P 07 51 52.1 +0.9
comp=Z,17nm,1.1s
H17A Grant Village 44.16 72 P P 07 51 52.6 +0.9
baz=304,SNR=15
H17A Grant Village 44.16 72 eP P 07 51 52.8 +1.2
comp=Z,50nm,0.9s
IMW Indian Meadow 44.22 72 eP P 07 51 52.4 +0.2
comp=Z,25nm,1.0s
PKM Mcpherson Peak 44.22 89 P P 07 51 51.9 -0.3
baz=310
CWC Cottonwood Cre 44.31 86 P P 07 51 52.8 -0.1
baz=309
FXWY Fox Creek 44.31 73 eP P 07 51 53.2 +0.2
comp=Z,13nm,1.4s
HVU Hansel Valley 44.33 76 eP P 07 51 52.4 -0.6
comp=Z,18nm,1.0s
HVU Hansel Valley 44.33 76 eP P 07 51 52.4 -0.6
HVU pmax pmax
comp=Z,18nm,1.0s
GRAC Grapevine Rang 44.41 85 P P 07 51 53.6 +0.1
baz=309
MOOW Moose Ponds 44.42 72 eP P 07 51 52.9 -0.8
comp=Z,11nm,1.1s
TPAW Teton Pass 44.44 73 eP P 07 51 54.1 +0.1
comp=Z,24nm,1.4s
RLMT Red Lodge 44.52 70 P P 07 51 54.4 -0.1
baz=304,SNR=39
RLMT Red Lodge 44.52 70 eP P 07 51 54.5 -0.1
comp=Z,67nm,1.0s
ISA Isabella, Lake 44.56 87 P P 07 51 53.8 -1.0
baz=310
ISA Isabella, Lake 44.56 87 eP P 07 51 54.2 -0.6
comp=Z,12nm,1.1s
ISA Isabella, Lake 44.56 87 eP P 07 51 54.2 -0.6
ISA pmax pmax
comp=Z,13nm,1.1s
REDW Red Top Meadow 44.58 73 eP P 07 51 55.4 +0.4
comp=Z,18nm,1.1s
SNOW Snow King Moun 44.58 73 eP P 07 51 55.5 +0.5
comp=Z,14nm,0.9s
LOHW Long Hollow 44.58 73 eP P 07 51 54.9 -0.1
comp=Z,14nm,1.3s
NRIK Noril'sk 44.61 330 P P 07 51 54.6 0.0
comp=Z,6.9nm,0.8s,baz=75,slow=8.5,SNR=7.9
NRIK LR LR 08 12 36.9
comp=Z,223nm,19.6s,baz=50,slow=39
R11A Troy Canyon, C 44.67 82 P P 07 51 55.4 -0.4
baz=308,SNR=25
R11A Troy Canyon, C 44.67 82 eP P 07 51 55.3 -0.4
comp=Z,19nm,1.0s
BGU Big Grassy Mou 44.68 77 eP P 07 51 55.5 -0.3
comp=Z,11nm,0.9s
DAC Darwin (Calif) 44.72 86 eP P 07 51 55.8 -0.4
comp=Z,8.2nm,1.1s
DAC Darwin (Calif) 44.72 86 eP P 07 51 55.8 -0.4
DAC pmax pmax
comp=Z,8.0nm,1.1s
MPMC Manual Prospec 44.92 86 P P 07 51 57.3 -0.5
baz=310,SNR=6.0
FURC Furnace Creek, 45.05 85 P P 07 51 58.5 0.0
baz=309
TPNV Topopah Spring 45.13 84 P P 07 51 59.1 -0.3
baz=309,SNR=12
TPNV Topopah Spring 45.13 84 eP P 07 51 59.3 -0.1
comp=Z,22nm,0.8s
TPNV Topopah Spring 45.13 84 eP P 07 51 59.3 -0.1
TPNV pmax pmax
comp=Z,23nm,0.8s
HWUT Hardware Ranch 45.17 75 eP P 07 51 59.9 +0.2
comp=Z,8.2nm,0.8s
DUG Dugway, Tooele 45.25 78 P P 07 52 00.4 +0.2
baz=307,SNR=28
DUG Dugway, Tooele 45.25 78 eP P 07 52 00.5 +0.2
comp=Z,42nm,1.1s
DUG Dugway, Tooele 45.25 78 eP P 07 52 00.5 +0.2
DUG pmax pmax
comp=Z,42nm,1.1s
EDW2 Edwards Air Fo 45.37 87 P P 07 52 01.3 +0.1
baz=310
LAO LASA Array 45.42 67 P P 07 52 01.3 -0.2
baz=303,SNR=11
LAO LASA Array 45.42 67 eP P 07 52 01.7 +0.3
comp=Z,46nm,1.0s
FCC Fort Churchill 45.44 47 eP P 07 52 00.5 -0.8
comp=Z,12nm,1.0s
FCC Fort Churchill 45.44 47 eP P 07 52 00.5 -0.8
FCC pmax pmax
comp=Z,11nm,1.0s
TCUT Toone Canyon 45.55 76 eP P 07 52 02.9 +0.1
comp=Z,16nm,0.8s
DGMT Dagmar 45.59 63 P P 07 52 01.7 -1.1
baz=303
CTU Camp Tracy 45.60 77 eP P 07 52 03.2 +0.1
comp=Z,15nm,1.1s
PSUT Pine Spring 45.62 80 eP P 07 52 03.2 -0.1
comp=Z,15nm,0.8s
BW06 Boulder Array 45.69 73 P P 07 52 03.3 -0.6
baz=306,SNR=27
BW06 Boulder Array 45.69 73 eP P 07 52 03.5 -0.4
comp=Z,49nm,1.0s
PD31 Pinedale Array 45.70 73 eP P 07 52 03.6 -0.3
PDAR Pinedale Array 45.70 73 P P 07 52 03.5 -0.4
comp=Z,10nm,0.7s,baz=297,slow=3.7,SNR=119
PDAR LR LR 08 08 32.1
comp=Z,219nm,21.7s,baz=308,slow=33
PASC Pasadena Art C 45.71 88 eP P 07 52 03.0 -0.8
comp=Z,23nm,1.3s
SHOC Shoshone, Teco 45.78 85 P P 07 52 03.9 -0.5
baz=310,SNR=6.7
GSC Goldstone, Bar 45.83 86 P P 07 52 04.4 -0.5
baz=310,SNR=11
GSC Goldstone, Bar 45.83 86 eP P 07 52 04.2 -0.7
comp=Z,20nm,1.0s
GSC Goldstone, Bar 45.83 86 eP P 07 52 04.2 -0.7
GSC pmax pmax
comp=Z,21nm,1.0s
JLU Jordanelle 45.84 77 eP P 07 52 05.1 +0.1
comp=Z,11nm,0.9s
NLU North Lily Min 45.85 78 eP P 07 52 05.2 +0.1
comp=Z,16nm,0.9s
BJI Beijing 45.94 283 eP P 07 52 06.1 +0.6
BJI pmax pmax
comp=Z,16nm,1.6s
BJI LR LR
comp=Z,390nm,20.2s
BJI LR LR
comp=Z,300nm,21.0s
BJI LR LR
comp=Z,500nm,27.0s
BFSC Mount Baldy Ra 45.99 88 P P 07 52 05.8 -0.4
baz=311
MPU Maple Canyon 46.08 77 eP P 07 52 06.9 0.0
comp=Z,9.3nm,0.8s
SHPR Sheep Range 46.09 84 eP P 07 52 06.1 -0.9
comp=Z,6.5nm,1.0s
TUQ Turquoise Moun 46.30 85 P P 07 52 07.9 -0.7
baz=310
HEC Hector,Ludlow 46.43 86 P P 07 52 09.0 -0.6
baz=310
BBRC Big Bear Solar 46.44 87 P P 07 52 09.1 -0.7
baz=311
TCRU Three Creeks R 46.44 79 eP P 07 52 10.3 +0.5
comp=Z,20nm,0.9s
CCUT Cedar City 46.54 81 eP P 07 52 10.6 0.0
comp=Z,12nm,1.1s
MSU Marysvale 46.67 79 eP P 07 52 12.1 +0.5
MSU Marysvale 46.67 79 eP P 07 52 12.1 +0.5
SZCU Shurtz Canyon 46.68 81 eP P 07 52 12.6 +1.0
comp=Z,8.0nm,0.6s
MURC Murrieta 46.70 88 P P 07 52 11.0 -0.7
baz=311
ULN Ulaanbaatar 46.75 297 eP P 07 52 12.3 +0.3
comp=Z,4.6nm,0.5s
ULN Ulaanbaatar 46.75 297⇑ eP P 07 52 12.3 +0.3
ULN pmax pmax
comp=Z,3.0nm,0.6s
TMUT Trail Mountain 46.78 78 eP P 07 52 12.6 +0.1
comp=Z,21nm,0.9s
GMRC Granite Mounta 46.88 86 P P 07 52 12.6 -0.6
baz=310,SNR=5.6
LCMT Little Creek M 46.95 82 eP P 07 52 13.8 +0.1
comp=Z,17nm,0.9s
P17A Butcher Ranch, 46.96 77 eP P 07 52 13.8 0.0
comp=Z,15nm,0.8s
MTPU Mount Pierson 46.96 80 eP P 07 52 13.1 -1.0
comp=Z,25nm,1.3s
SONA1 Songino Array 47.12 297 eP P 07 52 15.6 +0.7
SONM Songino Array 47.13 297 P P 07 52 15.4 +0.5
comp=Z,1.8nm,0.6s,baz=53,slow=9.1,SNR=7.8
SONM PcP PcP 07 53 45.5 -0.4
comp=Z,1.7nm,0.5s,baz=58,slow=2.2,SNR=3.8
SONM ScP ScP 07 57 39.1 +4.0
comp=Z,1.5nm,0.9s,baz=71,slow=3.8,SNR=4.8
SONM LR LR 08 12 50.9
comp=Z,550nm,20.1s,baz=66,slow=37
PFO Pinyon Flats O 47.16 87 P P 07 52 14.7 -0.6
baz=311
P18A Preston Nutter 47.16 77 eP P 07 52 15.7 +0.2
comp=Z,20nm,0.9s
BELC Belle Mtn. Jos 47.19 87 P P 07 52 14.7 -0.8
baz=311
JOW Kunigami 47.19 260 LR LR 08 11 37.7
comp=Z,80nm,20.3s,baz=234,slow=36
KNB Kanab 47.21 81 eP P 07 52 16.0 +0.3
comp=Z,24nm,1.0s
109C Camp Elliot, M 47.23 89 P P 07 52 15.3 -0.5
baz=312
SRU San Rafael Swe 47.31 78 eP P 07 52 16.4 -0.1
comp=Z,19nm,0.7s
SRU San Rafael Swe 47.31 78 P P 07 52 16.4 -0.1
ZAK Zakamensk 47.41 301 eP P 07 52 16.3 -0.7
ZAK e 07 53 46.6
ZAK pmax pmax
comp=Z,11nm,1.2s
ZAK pmax pmax
comp=Z,7.0nm,1.3s
K22A Casper 47.57 71 P P 07 52 17.4 -1.0
baz=306,SNR=7.3
K22A Casper 47.57 71 eP P 07 52 17.4 -1.0
comp=Z,30nm,1.0s
IRM Iron Mountain 47.62 86 P P 07 52 18.0 -0.8
baz=311
MONP2 Monument Peak 47.66 88 P P 07 52 18.5 -0.8
baz=312
RWWY Rawlins 47.74 73 eP P 07 52 18.9 -1.0
comp=Z,32nm,1.1s
BC3 Big Chuckawall 47.76 87 P P 07 52 18.8 -1.1
baz=311
W13A Hualapai Mount 47.78 84 eP P 07 52 19.7 -0.6
comp=Z,21nm,1.4s
MOY Mondy 47.90 304 eP P 07 52 21.3 +0.4
U15A North Rim 47.91 82 eP P 07 52 21.5 +0.2
comp=Z,26nm,0.8s
IKP In-Ko-Pah, Jac 48.01 88 P P 07 52 21.4 -0.5
baz=312
O20A White River Ci 48.06 75 P P 07 52 21.9 -0.5
baz=308,SNR=29
O20A White River Ci 48.06 75 eP P 07 52 21.9 -0.5
comp=Z,43nm,1.1s
PDMCI Parker Dam,Lak 48.15 85 P P 07 52 22.2 -0.6
baz=311
RSSD Black Hills 48.15 68 P P 07 52 22.0 -1.0
baz=306
RSSD Black Hills 48.15 68 eP P 07 52 22.3 -0.7
comp=Z,39nm,1.4s
RSSD Black Hills 48.15 68 eP P 07 52 22.3 -0.7
RSSD pmax pmax
comp=Z,39nm,1.4s
HHC Hu-ho-hao-te 48.24 286 eP P 07 52 25.0 +1.4
HHC PP PP 07 54 17.3 +1.3
HHC S S 07 59 18.1 -1.1
HHC sS sS 07 59 44.8 +2.2
HHC SS SS 08 02 42.5 -6.1
HHC pmax pmax
comp=Z,38nm,1.0s
HHC pmax pmax
comp=Z,94nm,5.2s
HHC LR LR
comp=Z,690nm,15.7s
HHC LR LR
comp=Z,570nm,17.1s
HHC LR LR
comp=Z,580nm,15.7s
GUMO Guam 48.26 232 LR LR 08 08 32.8
comp=Z,44nm,20.5s,baz=84,slow=31
Y12C Blythe 48.27 86 P P 07 52 23.0 -0.8
baz=311
Y12C Blythe 48.27 86 eP P 07 52 23.5 -0.3
comp=Z,15nm,0.9s
MDND Maddock 48.48 62 P P 07 52 24.1 -1.1
baz=305
MDND Maddock 48.48 62 eP P 07 52 25.2 0.0
comp=Z,33nm,0.9s
PV09 Paradox Valley 48.54 77 eP P 07 52 25.8 -0.4
GLA Glamis 48.55 87 P P 07 52 25.2 -0.8
baz=312
PV10 Paradox Valley 48.68 77 eP P 07 52 27.4 +0.2
comp=Z,31nm,0.7s
PV04 Paradox Valley 48.75 77 eP P 07 52 26.9 -0.7
comp=Z,31nm,0.8s
PV05 Paradox Valley 48.83 78 eP P 07 52 28.3 0.0
comp=Z,25nm,1.0s
PV03 Paradox Valley 48.87 77 eP P 07 52 28.0 -0.6
comp=Z,44nm,1.1s
PV07 Paradox Valley 48.88 77 eP P 07 52 28.3 -0.3
comp=Z,20nm,1.0s
PV02 Paradox Valley 48.97 77 eP P 07 52 29.0 -0.4
comp=Z,45nm,0.8s
N23A Red Feather La 48.98 73 P P 07 52 29.1 -0.3
baz=308,SNR=8.7
N23A Red Feather La 48.98 73 eP P 07 52 29.1 -0.3
comp=Z,31nm,1.1s
PHWY Pilot Hill 49.02 72 eP P 07 52 28.9 -0.9
comp=Z,8.2nm,0.9s
PV15 Paradox Valley 49.04 77 eP P 07 52 29.2 -0.7
comp=Z,20nm,0.9s
WUAZ Wupatki 49.07 82 P P 07 52 30.0 -0.2
baz=310,SNR=7.2
WUAZ Wupatki 49.07 82 eP P 07 52 29.7 -0.4
comp=Z,24nm,0.9s
Y14A Wickenburg 49.09 85 eP P 07 52 29.8 -0.4
comp=Z,11nm,1.0s
ULM Lac du Bonnet 49.11 57 P P 07 52 29.2 -0.8
comp=Z,2.2nm,0.5s,baz=283,slow=7.7,SNR=5.4
ULM LR LR 08 16 01.0
comp=Z,180nm,18.1s,baz=278,slow=40
PV01 Paradox Valley 49.12 77 eP P 07 52 29.9 -0.6
comp=Z,30nm,0.8s
B31A Greenbush Farm 49.22 60 P P 07 52 29.6 -1.2
baz=305
BTO Baotou 49.31 287 eP P 07 52 31.5 -0.3
NJ2 Nanjing 49.41 272 eP P 07 52 32.3 -0.2
NJ2 pmax pmax
comp=Z,13nm,0.5s
SMCO Snowmass 49.43 75 eP P 07 52 31.9 -1.1
comp=Z,32nm,1.8s
C31A Landman Farms, 49.54 61 P P 07 52 32.7 -0.7
baz=306
KBS Kingsbay 49.71 358 eP P 07 52 35.0 +0.8
comp=Z,15nm,0.9s
KBS Kingsbay 49.71 358 eP P 07 52 35.0 +0.8
KBS pmax pmax
comp=Z,15nm,0.9s
MVCO Mesa Verde 49.75 78 P P 07 52 34.7 -0.7
baz=310,SNR=12
MVCO Mesa Verde 49.75 78 eP P 07 52 34.8 -0.5
comp=Z,26nm,1.1s
X16A Lo Mia Camp, P 49.75 83 eP P 07 52 35.4 0.0
comp=Z,12nm,0.9s
ISCO Idaho Springs 49.85 74 P P 07 52 35.8 -0.4
baz=309,SNR=10
ISCO Idaho Springs 49.85 74 eP P 07 52 36.4 +0.2
comp=Z,8.9nm,0.9s
A33A Warroad 50.13 58 P P 07 52 35.9 -1.8
baz=306,SNR=7.8
C32A Crookston 50.18 60 P P 07 52 36.6 -1.5
baz=306
E31A Nome 50.19 62 P P 07 52 36.3 -2.0
baz=306,SNR=8.4
AGMN Agassiz Nation 50.26 59 P P 07 52 36.7 -2.1
baz=306
AGMN Agassiz Nation 50.26 59 eP P 07 52 37.2 -1.5
comp=Z,11nm,1.2s
SPITS Spitsbergen Ar 50.30 356 P P 07 52 38.3 -0.4
comp=Z,2.6nm,0.4s,baz=38,slow=7.7,SNR=13
SPITS LR LR 08 14 47.1
comp=Z,95nm,18.9s,baz=20,slow=37
W18A Petrified Fore 50.34 81 P P 07 52 38.2 -1.6
baz=311
S22A 4UR Ranch, Cre 50.42 77 P P 07 52 40.6 +0.2
baz=310,SNR=24
S22A 4UR Ranch, Cre 50.42 77 eP P 07 52 40.7 +0.2
comp=Z,17nm,1.0s
214A Organ Pipe Nat 50.54 86 P P 07 52 40.3 -0.9
baz=313
X18A Snowflake 50.60 82 eP P 07 52 41.8 0.0
comp=Z,9.5nm,0.8s
C33A Trail 50.63 60 P P 07 52 39.8 -1.7
baz=306
Q24A Divide 50.66 74 P P 07 52 40.6 -1.7
baz=309
Q24A Divide 50.66 74 eP P 07 52 42.5 +0.2
comp=Z,5.4nm,0.8s
G31A Conde 50.82 64 P P 07 52 41.1 -1.9
baz=307
SUSD Miller 50.87 65 P P 07 52 42.1 -1.3
baz=308
F32A Veblen 51.03 62 P P 07 52 42.5 -2.0
baz=307
C34A RKJ Ranch, Bem 51.16 59 P P 07 52 43.4 -2.2
baz=307
G32A Webster 51.19 63 P P 07 52 44.1 -1.7
baz=308
SDCO Great Sand Dun 51.23 76 P P 07 52 46.5 -0.1
baz=310,SNR=14
SDCO Great Sand Dun 51.23 76 eP P 07 52 46.5 -0.1
comp=Z,13nm,0.9s
E33A Westby DABS, E 51.26 61 P P 07 52 44.5 -1.8
baz=307
OGNE Ogallala 51.26 70 P P 07 52 46.0 -0.5
baz=309
OGNE Ogallala 51.26 70 eP P 07 52 47.0 +0.4
comp=Z,51nm,0.6s
B35A Bob, Littlefor 51.36 58 P P 07 52 44.8 -2.2
baz=307
B35A Bob, Littlefor 51.36 58 eP P 07 52 45.3 -1.7
comp=Z,4.7nm,0.7s
TUC Tucson 51.56 85 P P 07 52 48.2 -0.7
baz=312
TUC Tucson 51.56 85 eP P 07 52 48.4 -0.5
comp=Z,19nm,1.1s
TUC Tucson 51.56 85 eP P 07 52 48.4 -0.5
TUC pmax pmax
comp=Z,19nm,1.1s
C35A Jirik Farms, M 51.63 59 P P 07 52 47.0 -2.0
baz=307
H32A Carlson Farm, 51.69 64 P P 07 52 47.7 -1.9
baz=308
E34A Wadena 51.71 61 P P 07 52 48.0 -1.7
baz=308
G33A Ortonville 51.82 63 P P 07 52 48.4 -2.1
baz=308,SNR=5.8
D35A Remer 51.97 60 P P 07 52 49.7 -1.9
baz=308,SNR=5.9
E35A Pequot Lakes 52.10 60 P P 07 52 50.8 -1.8
baz=308,SNR=5.5
F34A Alexandria 52.10 62 P P 07 52 50.8 -1.8
baz=308,SNR=5.1
C36A Pine Crest Far 52.20 58 P P 07 52 51.9 -1.4
baz=308
G34A Benson 52.24 62 P P 07 52 51.8 -1.9
baz=308
T25A Trinidad 52.28 76 P P 07 52 54.2 -0.1
baz=310,SNR=15
T25A Trinidad 52.28 76 eP P 07 52 54.4 +0.1
comp=Z,36nm,0.9s
D36A Goodland 52.38 59 P P 07 52 53.0 -1.7
baz=308
D36A Goodland 52.38 59 eP P 07 52 53.9 -0.8
comp=Z,7.1nm,1.1s
F35A Swanville 52.44 61 P P 07 52 53.4 -1.7
baz=308
TASM ASL Pad, Albuq 52.47 79 P P 07 52 55.1 -0.6
baz=312,SNR=9.9
ANMO Albuquerque 52.48 79 P P 07 52 55.1 -0.6
comp=Z,4.7nm,0.8s,baz=311,slow=11,SNR=24
ANMO LR LR 08 12 43.1
comp=Z,164nm,21.6s,baz=290,slow=33
ANMO Albuquerque 52.48 79 P P 07 52 55.2 -0.6
baz=312
ANMO Albuquerque 52.48 79 eP P 07 52 55.3 -0.5
comp=Z,13nm,1.2s
ANMO Albuquerque 52.48 79⇑ eP P 07 52 55.3 -0.5
ANMO pmax pmax
comp=Z,7.0nm,1.0s
TASL Snake Pit, Alb 52.48 79 P P 07 52 55.3 -0.5
baz=312,SNR=11
C37A Embarrass 52.57 58 P P 07 52 54.1 -1.9
baz=308
ECSD EROS Data Cent 52.63 64 P P 07 52 54.8 -1.8
baz=309,SNR=10
ECSD EROS Data Cent 52.63 64 eP P 07 52 54.8 -1.8
comp=Z,14nm,1.1s
E36A McGregor 52.75 60 P P 07 52 55.7 -1.6
baz=308,SNR=6.0
D37A Cotton 52.79 59 P P 07 52 55.5 -2.2
baz=308
EYMN Ely 52.80 57 P P 07 52 55.8 -1.9
baz=308
EYMN Ely 52.80 57 eP P 07 52 57.3 -0.5
comp=Z,4.8nm,0.6s
G35A Watkins 52.89 62 P P 07 52 56.7 -1.8
baz=309
G35A Watkins 52.89 62 eP P 07 52 57.4 -1.1
comp=Z,7.2nm,0.6s
F36A Milaca 53.01 61 P P 07 52 57.4 -1.9
baz=309
F36A Milaca 53.01 61 eP P 07 52 57.8 -1.5
comp=Z,4.9nm,0.8s
H35A Sunnyside Ranc 53.02 62 P P 07 52 57.8 -1.6
baz=309,SNR=11
SUMG Summit 53.03 14 i P P 07 52 59.8 +0.2
SUMG Summit 53.03 14 eP P 07 52 59.4 -0.2
comp=Z,7.2nm,0.7s
SUMG Summit 53.03 14 i P P 07 52 59.8 +0.2
C38A Sawbill Land. 53.05 58 P P 07 52 57.6 -2.1
baz=308
319A Douglas 53.14 84 eP P 07 53 00.0 -0.5
comp=Z,21nm,1.2s
BGNE Belgrade 53.23 67 P P 07 53 00.0 -1.1
baz=310
BGNE Belgrade 53.23 67 eP P 07 53 00.6 -0.4
comp=Z,86nm,1.0s
121A Cookes Peak, D 53.28 82 P P 07 53 00.9 -0.7
baz=313,SNR=6.1
G36A St. Michael 53.28 61 P P 07 52 59.5 -1.8
baz=309
F37A Hinrichs Farm, 53.59 60 P P 07 53 01.8 -1.7
baz=309
C39A Grand Marais 53.59 57 P P 07 53 01.6 -2.0
baz=309
H36A Jessenland, He 53.60 62 P P 07 53 02.2 -1.4
baz=309,SNR=11
E38A The Farm, Brul 53.60 59 P P 07 53 01.7 -1.9
baz=309,SNR=8.4
E38A The Farm, Brul 53.60 59 eP P 07 53 01.8 -1.9
comp=Z,8.5nm,0.7s
SPMN Marine on St. 53.80 61 P P 07 53 03.2 -1.9
baz=309
SPMN Marine on St. 53.80 61 eP P 07 53 04.2 -0.9
comp=Z,14nm,1.3s
F38A Pierce - Schro 53.84 60 P P 07 53 04.1 -1.3
baz=309,SNR=18
I36A Fitzsimmons Fa 53.91 63 P P 07 53 04.0 -1.9
baz=310
CBKS Cedar Bluff 53.98 71 P P 07 53 05.6 -1.0
baz=311
CBKS Cedar Bluff 53.98 71 eP P 07 53 06.3 -0.3
comp=Z,69nm,1.0s
CBKS Cedar Bluff 53.98 71 eP P 07 53 06.3 -0.3
CBKS pmax pmax
comp=Z,69nm,1.0s
C40A Isle Royale Na 54.04 56 eP P 07 53 06.0 -0.8
comp=Z,10nm,1.2s
H37A Dierke Farm, C 54.15 61 P P 07 53 06.3 -1.4
baz=310
J36A Seneca 1, Swea 54.17 63 P P 07 53 06.1 -1.8
baz=310
J36A Seneca 1, Swea 54.17 63 eP P 07 53 06.7 -1.2
comp=Z,16nm,0.8s
I37A Lemond, Waseca 54.25 62 P P 07 53 07.2 -1.2
baz=310,SNR=8.5
I37A Lemond, Waseca 54.25 62 eP P 07 53 07.2 -1.2
comp=Z,24nm,1.0s
G38A Ridgeland 54.36 60 P P 07 53 07.0 -2.2
baz=310
F39A Loretta 54.38 59 P P 07 53 07.7 -1.7
baz=310,SNR=6.4
ZALV Zalesovo Beam 54.39 314 PcP PcP 07 54 12.7 +0.2
comp=Z,6.2nm,0.6s,baz=44,slow=3.1,SNR=11
H38A Maiden Rock 54.44 61 P P 07 53 08.4 -1.4
baz=310,SNR=6.7
K36A Gilmore City 54.55 64 P P 07 53 08.9 -1.7

baz=310
EPT **El Paso** 54.59 82 *e*P P 07 53 10.7 -0.4
comp=Z,35nm,0.9s
E40A **Wakefield** 54.59 58 P P 07 53 09.5 -1.3
baz=310,SNR=9.6
J37A **Redenius Farm,** 54.62 63 P P 07 53 09.6 -1.5
baz=310,SNR=7.3
G39A **Holcombe** 54.65 60 P P 07 53 09.8 -1.6
baz=310,SNR=7.3
L36A **Harm Buss Farm** 54.78 65 P P 07 53 10.4 -1.8
baz=310
F40A **Park Falls** 54.81 59 P P 07 53 10.6 -1.9
baz=310,SNR=12
I38A **Scanlan Farm,** 54.82 62 P P 07 53 11.2 -1.4
baz=310
D41A **Chassel** 54.89 57 P P 07 53 11.8 -1.2
baz=310
D41A **Chassel** 54.89 57 *e*P P 07 53 12.2 -0.8
comp=Z,18nm,1.2s
K37A **Belmond** 54.92 64 P P 07 53 11.6 -1.7
baz=310,SNR=5.4
H39A **Augusta** 54.98 60 P P 07 53 12.2 -1.6
baz=310,SNR=5.2
E41A **Kenton** 55.07 57 P P 07 53 13.0 -1.4
baz=310
M36A **Felix, Anita** 55.12 65 P P 07 53 13.3 -1.5
baz=311
G40A **Rib Lake** 55.19 59 P P 07 53 13.6 -1.6
baz=310,SNR=7.3
G40A **Rib Lake** 55.19 59 *e*P P 07 53 14.1 -1.1
comp=Z,14nm,1.2s
J38A **Wedel Dairy, R** 55.21 62 P P 07 53 13.7 -1.7
baz=310,SNR=8.6
COWI **Conover** 55.21 58 *e*P P 07 53 14.1 -1.3
comp=Z,4.8nm,0.6s
L37A **Phoenix Point,** 55.28 64 P P 07 53 14.2 -1.6
baz=311
SFJD **Kangerlussuaq** 55.31 22 LR LR 08 18 52.9
comp=Z,160nm,21.7s,baz=310,slow=38
MNTX **Cornudas Mount** 55.33 81 P P 07 53 16.0 -0.4
baz=313,SNR=35
MNTX **Cornudas Mount** 55.33 81 *e*P P 07 53 15.9 -0.5
comp=Z,22nm,1.0s
MSTX **Muleshoe** 55.38 77 P P 07 53 15.9 -1.0
baz=313,SNR=15
MSTX **Muleshoe** 55.38 77 *e*P P 07 53 16.1 -0.7
comp=Z,31nm,1.0s
I39A **Houston** 55.39 61 P P 07 53 14.7 -1.9
baz=310,SNR=5.4
I39A **Houston** 55.39 61 *e*P P 07 53 15.8 -0.9
comp=Z,16nm,0.8s
AMTX **Amarillo** 55.43 76 P P 07 53 16.2 -1.0
baz=312
AMTX **Amarillo** 55.43 76 *e*P P 07 53 16.9 -0.3
comp=Z,16nm,1.0s
N36A **Muff Farm, Cla** 55.45 66 P P 07 53 16.2 -1.0
baz=311,SNR=11
F41A **Three Lakes** 55.47 58 P P 07 53 15.7 -1.5
baz=310,SNR=8.4
F41A **Three Lakes** 55.47 58 *e*P P 07 53 16.4 -0.8
comp=Z,9.3nm,0.6s
K38A **Parkersburg** 55.49 63 P P 07 53 15.8 -1.6
baz=311
K38A **Parkersburg** 55.49 63 *e*P P 07 53 16.3 -1.1
comp=Z,8.8nm,0.9s
H40A **Chili** 55.51 60 P P 07 53 16.1 -1.4
baz=310,SNR=8.0
M37A **Trindle Farm,** 55.58 65 P P 07 53 17.0 -1.1
baz=311,SNR=11
J39A **Decorah** 55.63 62 P P 07 53 16.3 -2.0
baz=311,SNR=18
KSU1 **Kansas State U** 55.63 69 P P 07 53 17.0 -1.4
baz=311,SNR=12
KSU1 **Kansas State U** 55.63 69 *e*P P 07 53 17.3 -1.1
comp=Z,33nm,0.8s
E42A **Champion** 55.64 57 P P 07 53 16.0 -2.4
baz=310
L38A **Oak Wood Farm,** 55.71 64 P P 07 53 17.5 -1.5
baz=311,SNR=6.7
SCIA **State Center** 55.72 64 P P 07 53 17.7 -1.3
baz=311
SCIA **State Center** 55.72 64 *e*P P 07 53 18.4 -0.7
comp=Z,30nm,1.0s
G41A **Antigo** 55.77 59 P P 07 53 17.5 -1.9
baz=311
I40A **Norwalk** 55.86 61 P P 07 53 18.4 -1.6
baz=311
N37A **Lee Faris, Mou** 55.92 66 P P 07 53 19.5 -1.0
baz=311,SNR=12
N37A **Lee Faris, Mou** 55.92 66 *e*P P 07 53 19.8 -0.7
comp=Z,107nm,0.9s
LZH **Lanzhou** 55.93 287 ⇑P P 07 53 21.9 +1.1
LZH pP pP 07 53 35.8 +0.7
LZH sP sP 07 53 41.8 +0.8
LZH PP **PP** **07 55 28.1 +2.4**
LZH S **S** **08 01 06.3 +1.4**
LZH sS sS 08 01 26.3 -2.4
LZH SS **SS** **08 04 50.5 -0.3**
LZH pmax pmax
comp=Z,95nm,1.3s
LZH pmax pmax
comp=Z,220nm,4.9s
LZH LR LR
comp=Z,700nm,16.5s
LZH LR LR
comp=Z,890nm,16.8s
LZH LR LR
comp=Z,930nm,18.4s
DGZ **Jazzator, Alta** 55.94 309⇑*e*P P 07 53 23.5 +2.8
DGZ pmax pmax
comp=Z,3.0nm,0.7s
K39A **Oelwein** 55.94 63 P P 07 53 18.5 -2.1
baz=311,SNR=10
M38A **Pleasantville** 56.06 65 P P 07 53 20.1 -1.4
baz=311,SNR=7.1
GTA **Gaotai** 56.08 292 P P 07 53 22.4 +0.5
GTA pP pP 07 53 38.8 +2.7
GTA sP sP 07 53 45.8 +3.8
GTA S **S** **08 01 05.5 -1.2**
GTA sS sS 08 01 34.0 +3.4
GTA pmax pmax
comp=Z,12nm,1.0s
GTA pmax pmax
comp=Z,73nm,7.4s
GTA LR LR
comp=Z,240nm,19.2s
GTA LR LR
comp=Z,260nm,20.1s
GTA LR LR
comp=Z,450nm,18.6s
J40A **Soldiers Grove** 56.12 61 P P 07 53 20.0 -1.9
baz=311
G42A **Mountain** 56.15 58 P P 07 53 20.6 -1.5
baz=311,SNR=5.2
G42A **Mountain** 56.15 58 *e*P P 07 53 21.2 -0.9
comp=Z,7.6nm,0.8s
E43A **Lone Tree Farm** 56.16 56 P P 07 53 20.7 -1.5
baz=311,SNR=17
E43A **Lone Tree Farm** 56.16 56 *e*P P 07 53 20.8 -1.3
comp=Z,18nm,0.6s
L39A **Vinton** 56.26 63 P P 07 53 21.3 -1.6
baz=311,SNR=8.8
O37A **Wolven Farm, M** 56.35 66 P P 07 53 22.2 -1.3
baz=312,SNR=9.9
K40A **Colesburg** 56.36 62 P P 07 53 21.7 -1.9
baz=311
F43A **Flat Rock, Esc** 56.43 57 P P 07 53 22.6 -1.4
baz=311,SNR=6.8
N38A **Joes South For** 56.45 65 P P 07 53 22.8 -1.4
baz=312,SNR=11
G43A **Wallace** 56.53 58 P P 07 53 23.2 -1.6
baz=311
G43A **Wallace** 56.53 58 *e*P P 07 53 23.5 -1.3
comp=Z,5.4nm,0.6s
J41A **Loganville** 56.54 61 P P 07 53 23.0 -1.8
baz=311,SNR=10
E44A **Grand Marais A** 56.55 56 P P 07 53 23.9 -1.1
baz=311
E44A **Grand Marais A** 56.55 56 *e*P P 07 53 25.5 +0.6
comp=Z,12nm,0.9s
H42A **Shiocton** 56.58 59 P P 07 53 23.3 -1.9
baz=311
H42A **Shiocton** 56.58 59 *e*P P 07 53 24.2 -0.9
comp=Z,5.9nm,0.7s
M39A **Webster** 56.59 64 P P 07 53 23.9 -1.4
baz=312,SNR=21
P37A **Lathrop** 56.62 67 P P 07 53 23.7 -1.7
baz=312,SNR=16
JFWS **Jewell Farm** 56.71 61 P P 07 53 24.0 -2.1
baz=311
JFWS **Jewell Farm** 56.71 61 *e*P P 07 53 24.6 -1.5
comp=Z,13nm,0.8s
JFWS **Jewell Farm** 56.71 61 *e*P P 07 53 24.6 -1.5
JFWS pmax pmax
comp=Z,13nm,0.8s
F44A **Big Bay de Noc** 56.72 57 P P 07 53 24.6 -1.5
baz=311
L40A **Anamosa** 56.73 63 P P 07 53 24.5 -1.8
baz=312,SNR=5.6
L40A **Anamosa** 56.73 63 *e*P P 07 53 24.9 -1.4
comp=Z,10nm,0.9s
O38A **Galt** 56.76 66 P P 07 53 25.1 -1.4
baz=312,SNR=8.6
I42A **Draeger Farm,** 56.78 60 P P 07 53 24.9 -1.7
baz=311
I42A **Draeger Farm,** 56.78 60 *e*P P 07 53 25.8 -0.8
comp=Z,11nm,1.0s
N39A **Derby Farms, D** 56.81 65 P P 07 53 25.3 -1.5
baz=312,SNR=12
N39A **Derby Farms, D** 56.81 65 *e*P P 07 53 25.7 -1.1
comp=Z,47nm,1.1s
K41A **Shullsburg** 56.88 62 P P 07 53 25.5 -1.8
baz=312,SNR=9.6
M40A **Post Highland** 57.01 64 P P 07 53 26.5 -1.7
baz=312,SNR=5.4
H43A **Windswept, Lux** 57.01 59 P P 07 53 26.8 -1.4
baz=312,SNR=6.1
H43A **Windswept, Lux** 57.01 59 *e*P P 07 53 27.5 -0.7
comp=Z,12nm,0.6s
Q37A **Longview Farm,** 57.03 68 P P 07 53 26.3 -2.1
baz=312
J42A **Columbus** 57.05 60 P P 07 53 26.6 -1.9
baz=312
P38A **Dawn** 57.06 66 P P 07 53 26.9 -1.7
baz=312,SNR=24
P38A **Dawn** 57.06 66 *e*P P 07 53 27.0 -1.7
comp=Z,50nm,0.8s
E45A **Wooded Hills,** 57.11 55 P P 07 53 27.8 -1.1
baz=312
L41A **Preston** 57.13 62 P P 07 53 27.1 -2.0
baz=312,SNR=12
O39A **Kirksville** 57.20 65 P P 07 53 28.0 -1.6
baz=312
I43A **Langenfeld Bro** 57.20 59 P P 07 53 28.0 -1.6
baz=312
WMOK **Wichita Mounta** 57.28 74 P P 07 53 29.5 -0.7
baz=313,SNR=13
WMOK **Wichita Mounta** 57.28 74 *e*P P 07 53 29.6 -0.7
comp=Z,17nm,1.0s
WMOK **Wichita Mounta** 57.28 74 *e*P P 07 53 29.6 -0.7
WMOK pmax pmax
comp=Z,17nm,1.0s
K42A **Prairie Point,** 57.29 61 P P 07 53 28.4 -1.8
baz=312,SNR=6.0
N40A **Mertquake, Sal** 57.32 64 P P 07 53 28.6 -1.8
baz=312
F45A **CMU Biological** 57.39 56 P P 07 53 29.4 -1.4
baz=312
J43A **Natural Harves** 57.39 60 P P 07 53 28.9 -2.0
baz=312
Q38A **Cooks Store, C** 57.46 67 P P 07 53 29.2 -2.2
baz=312,SNR=15
M41A **Milan** 57.57 63 P P 07 53 30.4 -1.8
baz=312,SNR=7.1
P39B **Salisbury** 57.60 66 P P 07 53 30.8 -1.5
baz=312,SNR=39
LPIG **La Paz** 57.63 91 LR LR 08 13 52.8
comp=Z,52nm,21.5s,baz=334,slow=32
L42A **Oliver, Polo** 57.63 62 P P 07 53 30.6 -2.0
baz=312
O40A **La Belle** 57.67 65 P P 07 53 31.4 -1.5
baz=312,SNR=28
F46A **Macinaw City C** 57.72 56 P P 07 53 31.7 -1.5
baz=312
Q39A **Willow Grove F** 57.77 66 P P 07 53 31.8 -1.8
baz=312,SNR=48
R38A **Fenwick Farm,** 57.81 68 P P 07 53 31.3 -2.6
baz=312,SNR=16
N41A **Harden Midland** 57.85 64 P P 07 53 32.2 -1.9
baz=312
K43A **Burlington** 57.89 60 P P 07 53 32.6 -1.8
baz=312
K43A **Burlington** 57.89 60 *e*P P 07 53 33.0 -1.4
comp=Z,38nm,1.4s
P40A **Paris** 57.97 65 P P 07 53 33.5 -1.5
baz=312,SNR=55
P40A **Paris** 57.97 65 *e*P P 07 53 33.8 -1.2
comp=Z,68nm,0.6s
L43A **Garden Prairie** 58.02 61 P P 07 53 33.4 -2.0
baz=312
TX31 **Lajitas Ar. Si** 58.03 82 *e*P P 07 53 34.9 -0.8
TXAR **Lajitas Array** 58.04 82 P P 07 53 34.8 -0.9
comp=Z,9.5nm,0.8s,baz=302,slow=5.1,SNR=93
TXAR LR LR 08 19 03.7
comp=Z,52nm,18.3s,baz=0.0,slow=37
ARCES **ARCESS Array B** 58.08 351 P P 07 53 34.3 -1.0
comp=Z,2.3nm,0.5s,baz=26,slow=7.4,SNR=22
ARCES LR LR 08 19 51.6
comp=Z,144nm,20.2s,baz=352,slow=37
ARCES **ARCESS Array B** 58.08 351 *e*P P 07 53 35.7 +0.4
ARCES **ARCESS Array B** 58.08 351 *e*P P 07 53 35.7 +0.4
ARE0 **ARCESS Array S** 58.08 351 *e*P P 07 53 35.9 +0.6
comp=Z,48nm,1.6s
S38A **Stockton** 58.19 68 P P 07 53 34.3 -2.3
baz=313,SNR=21
ABTX **Abilene, Hawle** 58.21 76 P P 07 53 36.1 -0.7
baz=314,SNR=11
ABTX **Abilene, Hawle** 58.21 76 *e*P P 07 53 35.3 -1.5
comp=Z,24nm,1.0s
N42A **Yates City** 58.22 63 P P 07 53 35.2 -1.6
baz=312
R39A **Chumby, Stover** 58.23 67 P P 07 53 34.2 -2.7
baz=313,SNR=9.2
O41A **Passleys Farm,** 58.23 64 P P 07 53 35.3 -1.5
baz=313,SNR=12
TUL1 **Leonard** 58.26 71 P P 07 53 35.9 -1.1
baz=313,SNR=6.5
TUL1 **Leonard** 58.26 71 *e*P P 07 53 36.0 -1.1
comp=Z,33nm,1.0s
Q40A **Laux Farm, Aux** 58.32 66 P P 07 53 35.7 -1.7
baz=313,SNR=28
T38A **Diamond** 58.37 69 P P 07 53 36.1 -1.8
baz=313,SNR=8.2
M43A **Waltham Townsh** 58.41 62 P P 07 53 36.4 -1.6
baz=313
P41A **Barry, Barry** 58.43 65 P P 07 53 36.6 -1.6
baz=313,SNR=12
L44A **Lake County Fo** 58.48 61 P P 07 53 37.1 -1.4
baz=313
S39A **Bolivar** 58.49 68 P P 07 53 36.0 -2.7
baz=313,SNR=12
S39A **Bolivar** 58.49 68 *e*P P 07 53 36.4 -2.3
comp=Z,10.0nm,0.8s
HPIG 58.49 85 *e*P P 07 53 38.4 -0.7
N43A **Stutzman Famil** 58.63 63 P P 07 53 38.0 -1.6
baz=313
O42A **Bath** 58.63 64 P P 07 53 37.8 -1.8
baz=313
R40A **Maddies Statio** 58.69 67 P P 07 53 37.8 -2.2
baz=313,SNR=22
R40A **Maddies Statio** 58.69 67 *e*P P 07 53 38.0 -2.0
comp=Z,19nm,0.6s
HDIL **Hopedale** 58.82 63 P P 07 53 39.5 -1.4
baz=313,SNR=10
HDIL **Hopedale** 58.82 63 *e*P P 07 53 39.6 -1.3
comp=Z,38nm,1.0s
Q41A **Truxton** 58.83 65 P P 07 53 39.4 -1.6
baz=313,SNR=7.5
P42A **Winchester** 58.90 64 P P 07 53 39.9 -1.5
baz=313,SNR=6.1
P42A **Winchester** 58.90 64 *e*P P 07 53 40.1 -1.3
comp=Z,31nm,1.1s
T39A **Clever** 58.91 68 P P 07 53 39.5 -2.2
baz=313,SNR=12
M44A **Midewin, Midew** 58.95 61 P P 07 53 40.2 -1.5
baz=313
M44A **Midewin, Midew** 58.95 61 *e*P P 07 53 40.6 -1.2
comp=Z,32nm,1.1s
O43A **Sugar Creek Fa** 59.00 63 P P 07 53 40.6 -1.5
baz=313,SNR=6.4
S40A **Lebanon** 59.03 67 P P 07 53 40.0 -2.4
baz=313,SNR=6.5
HHAR **Hobbs** 59.09 69 *e*P P 07 53 41.2 -1.7
comp=Z,8.3nm,0.7s
R41A **Rosebud** 59.19 66 P P 07 53 41.6 -1.9
baz=313,SNR=24
Q42A **Golden Eagle** 59.25 65 P P 07 53 42.8 -1.1
baz=313,SNR=24
U39A **Green Forest** 59.29 69 P P 07 53 42.4 -1.9
baz=314,SNR=16
N44A **Piper City** 59.30 62 P P 07 53 43.0 -1.3
baz=313
P43A **Skaggs, Pawnee** 59.32 64 P P 07 53 42.8 -1.6
baz=313,SNR=7.4
T40A **Mansfield** 59.32 68 P P 07 53 42.2 -2.3
baz=313
KURK **Kurchatov** 59.38 314 *e*P P 07 53 44.3 -0.3
comp=Z,12nm,0.8s
KURK **Kurchatov** 59.38 314 *de*P P 07 53 44.1 -0.5
KURK pmax pmax
comp=Z,1.0nm,0.4s
M45A **Boilermakers S** 59.38 61 P P 07 53 43.1 -1.7
baz=313
CCM **Cathedral Cave** 59.43 66 P P 07 53 43.1 -2.1
baz=313
CCM **Cathedral Cave** 59.43 66 *e*P P 07 53 43.2 -1.9
comp=Z,11nm,0.8s
CCM **Cathedral Cave** 59.43 66 *e*P P 07 53 43.3 -1.9
CCM pmax pmax
comp=Z,11nm,0.8s
S41A **Jillco Farms,** 59.47 67 P P 07 53 43.3 -2.1
baz=313,SNR=40
KURBB **Kurchatov Arra** 59.48 314 P P 07 53 45.1 -0.2
comp=Z,1.6nm,0.4s,baz=42,slow=6.7,SNR=30
R42A **Luebbering** 59.54 66 P P 07 53 44.2 -1.7
baz=313,SNR=14
CD2 **Chengdu** 59.54 282 P P 07 53 45.0 -1.1
CD2 pmax pmax
comp=Z,20nm,1.5s
O44A **Mansfield** 59.56 63 P P 07 53 44.5 -1.5
baz=313,SNR=5.9
V39A **Pettigrew** 59.57 70 P P 07 53 44.5 -1.7
baz=314,SNR=12
N45A **Kentland** 59.61 62 P P 07 53 45.3 -1.1
baz=313
JCT **Junction City** 59.61 78 P P 07 53 45.0 -1.6
baz=315,SNR=6.9
JCT **Junction City** 59.61 78 *e*P P 07 53 45.0 -1.6
comp=Z,17nm,1.1s
U40A **Yellville** 59.68 69 P P 07 53 44.8 -2.1
baz=314,SNR=22
Q43A **New Douglas** 59.70 65 P P 07 53 45.8 -1.2
baz=313,SNR=22
WMQ **Urumqi** 59.78 303 P P 07 53 51.4 +3.8
WMQ pP sP 07 54 05.5 -2.4
WMQ PcP **PcP** **07 54 34.6 +0.7**
WMQ pmax pmax
comp=Z,13nm,1.1s
WMQ pmax pmax
comp=Z,220nm,4.7s
WMQ LR LR
comp=Z,470nm,20.7s
WMQ LR LR
comp=Z,560nm,22.7s
WMQ LR LR
comp=Z,580nm,22.7s
T41A **Mountain View** 59.83 67 P P 07 53 45.6 -2.4
baz=314,SNR=12
M46A **Old House Fiel** 59.86 60 P P 07 53 46.6 -1.5
baz=314
M46A **Old House Fiel** 59.86 60 *e*P P 07 53 47.7 -0.3
comp=Z,39nm,1.1s
S42A **Caledonia** 59.89 66 P P 07 53 46.5 -1.9
baz=314,SNR=24
O45A **Potomac** 59.90 62 P P 07 53 47.3 -1.1
baz=314,SNR=13
W39A **Magazine** 59.94 70 P P 07 53 47.5 -1.2
baz=314,SNR=8.8
W39A **Magazine** 59.94 70 *e*P P 07 53 47.6 -1.1
comp=Z,31nm,1.3s
P44A **Sand Creek, Wi** 59.95 63 P P 07 53 47.6 -1.1
baz=314,SNR=21
FVM **French Village** 59.95 66 *e*P P 07 53 47.4 -1.4
comp=Z,18nm,0.7s
FVM **French Village** 59.95 66 *e*P P 07 53 47.4 -1.4
FVM pmax pmax
comp=Z,18nm,0.7s
WHTX **Lake Whitney,** 59.98 75 P P 07 53 48.4 -0.7
baz=314,SNR=5.5
WHTX **Lake Whitney,** 59.98 75 *e*P P 07 53 48.7 -0.3
comp=Z,16nm,0.8s
N46A **Monticello** 60.00 61 P P 07 53 47.6 -1.5
baz=314
R43A **Red Bud** 60.03 65 P P 07 53 47.6 -1.7
baz=314,SNR=13
V40A **Witts Springs** 60.08 69 P P 07 53 47.9 -1.8
baz=314,SNR=18
V40A **Witts Springs** 60.08 69 *e*P P 07 53 48.1 -1.6
comp=Z,22nm,1.0s
Q44A **Meyer Farm, Va** 60.11 64 P P 07 53 48.4 -1.4
baz=314,SNR=8.7
SFIN **Lafayette** 60.16 62 P P 07 53 49.3 -0.8
baz=314,SNR=17
SFIN **Lafayette** 60.16 62 *e*P P 07 53 49.5 -0.6
comp=Z,44nm,0.9s
X39A **Fountain Ranch** 60.22 71 P P 07 53 50.0 -0.7
baz=314,SNR=21
U41A **Viola** 60.23 68 P P 07 53 48.7 -2.0
baz=314,SNR=16
T42A **Van Buren** 60.23 67 P P 07 53 48.2 -2.5
baz=314,SNR=8.7
T42A **Van Buren** 60.23 67 *e*P P 07 53 48.3 -2.3
comp=Z,13nm,1.0s
W40A **Ferguson Farm,** 60.36 70 P P 07 53 50.5 -1.0
baz=314,SNR=17
W40A **Ferguson Farm,** 60.36 70 *e*P P 07 53 50.6 -1.0
comp=Z,62nm,1.3s
P45A **Graceland, Par** 60.39 63 P P 07 53 50.6 -1.2
baz=314,SNR=5.3
P45A **Graceland, Par** 60.39 63 *e*P P 07 53 50.8 -0.9
comp=Z,29nm,1.1s
S43A **Fulton Ridge,** 60.44 66 P P 07 53 50.6 -1.5
baz=314,SNR=16
V41A **Mountainview** 60.48 69 P P 07 53 50.6 -1.8
baz=314,SNR=22
MIAR **Mount Ida** 60.51 71 P P 07 53 51.8 -0.9
baz=314,SNR=18
MIAR **Mount Ida** 60.51 71 *e*P P 07 53 51.9 -0.7
comp=Z,34nm,1.1s
MIAR **Mount Ida** 60.51 71 *e*P P 07 53 51.9 -0.7
MIAR pmax pmax
comp=Z,34nm,1.1s
R44A **Waltonville** 60.53 65 P P 07 53 51.2 -1.5
baz=314,SNR=12
Q45A **Warren Harvey,** 60.60 64 P P 07 53 52.0 -1.2
baz=314
U42A **Revenden** 60.62 68 P P 07 53 51.1 -2.2
baz=314,SNR=10
P46A **Rosedale** 60.63 62 P P 07 53 52.2 -1.2
baz=314,SNR=6.8
T43A **Greenville** 60.66 66 P P 07 53 52.1 -1.5
baz=314,SNR=34
IVI **Ivigtut** 60.67 25 *e*P P 07 53 52.7 -0.6
comp=Z,56nm,1.9s
OLIL **Olney** 60.75 64 *e*P P 07 53 53.3 -0.9
comp=Z,61nm,0.9s
WHAR **Wooly Hollow** 60.75 69 *e*P P 07 53 52.9 -1.4
comp=Z,20nm,1.1s
435B **Jarrell** 60.75 76 P P 07 53 53.4 -0.9
baz=315
435B **Jarrell** 60.75 76 *e*P P 07 53 54.1 -0.2
comp=Z,18nm,0.8s
O47A **Sheridan** 60.77 61 P P 07 53 52.7 -1.6
baz=314,SNR=16
PBMO **Poplar Bluff** 60.79 67 *e*P P 07 53 53.6 -0.9
comp=Z,33nm,0.9s
S44A **Carbondale** 60.82 65 P P 07 53 53.1 -1.5
baz=314
SIUC **Southern Illin** 60.83 65 *e*P P 07 53 53.3 -1.4
comp=Z,19nm,0.9s
W41B **Gary Mavity, V** 60.85 69 P P 07 53 53.4 -1.5
baz=314,SNR=17
W41B **Gary Mavity, V** 60.85 69 *e*P P 07 53 53.5 -1.5
comp=Z,23nm,1.2s
V42A **Cord** 60.91 68 P P 07 53 53.1 -2.2
baz=314
GYA **Guiyang** 60.91 277 *e*P P 07 53 57.0 +1.4
GYA pP pP 07 54 12.4 +2.4
GYA PP **PP** **07 56 13.3 +3.3**
GYA S **S** **08 02 08.8 -1.0**
GYA pmax pmax
comp=Z,10.0nm,1.0s
R45A **Skylar, Fairfi** 60.95 64 P P 07 53 54.5 -1.1
baz=314,SNR=14

Q46A	**CEJHS Indians,** baz=314	60.96	63	P		P	07 53 53.8 -1.8
X40A	**Basin Creek Fa** baz=314,SNR=5.6	60.99	70	P		P	07 53 54.6 -1.3
X40A	**Basin Creek Fa** comp=Z,19nm,1.3s	60.99	70	eP		P	07 53 55.1 -0.8
T44A	**Benton** baz=314,SNR=5.4	61.05	66	P		P	07 53 54.8 -1.4
Y40A	**Okolona** baz=314	61.06	71	P		P	07 53 55.0 -1.3
UALR	**University of** comp=Z,32nm,1.5s	61.08	70	eP		P	07 53 55.4 -1.1
H06N1	**SOCORRO T-PHAS** SNR=7.5	61.08	96	T		T	08 59 48.8
U43A	**Rector** baz=314	61.09	67	P		P	07 53 54.5 -2.0
X41A	**Kaden, Bauxite** baz=314	61.17	70	P		P	07 53 55.7 -1.4
BVAR	**Borovoye Array** comp=Z,3.5nm,0.4s,baz=58,slow=7.1,SNR=17	61.19	320	P		P	07 53 57.0 +0.1
BRVK	**Borovoye**	61.21	320‖	eP		P	07 53 57.0 -0.1
BRVK	comp=Z,13nm,2.0s			pmax	pmax		
W42A	**Bald Knob** baz=314	61.21	69	P		P	07 53 55.9 -1.5
S45A	**Carrier Mills** baz=314	61.21	65	P		P	07 53 55.9 -1.5
P47A	**Martinsville** baz=314,SNR=19	61.24	62	P		P	07 53 56.1 -1.4
PARMO	**Parma** comp=Z,66nm,0.8s	61.26	66	eP		P	07 53 57.0 -0.7
SADO	**Sadowa** comp=Z,11nm,0.9s	61.28	53	eP		P	07 53 57.1 -0.5
BLO	**Bloomington** comp=Z,41nm,1.2s	61.32	62	eP		P	07 53 57.1 -1.0
833A	**Chaparral WMA,** baz=316	61.39	80	P		P	07 53 57.7 -1.0
V43A	**Jonesboro** baz=314	61.41	68	P		P	07 53 57.1 -1.6
R46A	**Gibon Southern** baz=314	61.44	64	P		P	07 53 57.6 -1.3
Z40A	**Long Farm, Mag** baz=315	61.52	72	P		P	07 53 58.1 -1.3
USIN	**University of** comp=Z,72nm,0.9s	61.53	64	eP		P	07 53 58.5 -1.0
Q47A	**Bedord North L** baz=314,SNR=13	61.54	62	P		P	07 53 58.4 -1.1
Y41A	**Eaglette Beard** baz=315	61.55	71	P		P	07 53 58.6 -1.0
T45A	**Paducah** baz=315	61.64	65	P		P	07 53 58.8 -1.4
X42A	**Stuttgart** baz=315	61.65	69	P		P	07 53 59.0 -1.3
S46A	**Don Dixon Farm** baz=315	61.70	64	P		P	07 53 59.1 -1.5
U44B	**Burton Farm, H** baz=315	61.71	66	P		P	07 53 59.6 -1.1
V44A	**Blytheville** baz=315	61.76	67	P		P	07 54 00.1 -0.9
W43A	**Forest City** baz=315	61.81	68	P		P	07 53 59.7 -1.7
NATX	**Nacogdoches** baz=315	61.82	74	P		P	07 54 00.5 -1.0
140A	**Cam and Jess,** baz=315	61.85	72	P		P	07 54 01.3 -0.4
R47A	**Wooly Knot Far** baz=315,SNR=10	61.93	63	P		P	07 54 01.0 -1.2
CCAR	**Cane Creek** comp=Z,82nm,1.7s	62.01	70	eP		P	07 54 02.3 -0.5
HALT	**Halls** comp=Z,98nm,1.2s	62.02	67	eP		P	07 54 02.4 -0.4
N50A	**Nevada** baz=315,SNR=15	62.03	59	P		P	07 54 01.8 -1.0
U45A	**Rockin P Farm,** baz=315,SNR=5.6	62.04	66	P		P	07 54 02.0 -0.9
T46A	**Princeton** baz=315,SNR=12	62.05	65	P		P	07 54 02.2 -0.8
Y42A	**Garnett, Star** baz=315	62.06	70	P		P	07 54 01.5 -1.6
WCI	**Wyandotte Cave** baz=315	62.11	63	P		P	07 54 02.1 -1.3
WCI	**Wyandotte Cave** comp=Z,37nm,1.0s	62.11	63	eP		P	07 54 02.4 -0.9
WCI	**Wyandotte Cave**	62.11	63	eP		P	07 54 02.4 -0.9
WCI	comp=Z,37nm,1.0s			pmax	pmax		
X43A	**Marvell** baz=315	62.11	69	P		P	07 54 02.3 -1.1
PLVO	**Plevna** comp=Z,8.5nm,1.0s	62.11	52	eP		P	07 54 02.3 -1.0
O50A	**Cable** baz=315,SNR=21	62.22	60	P		P	07 54 03.0 -1.1
R48A	**Northridge Ran** baz=315	62.22	63	P		P	07 54 02.9 -1.2
141A	**Papa Simpson,** baz=315	62.27	72	P		P	07 54 03.7 -0.9
W44A	**Shelby Farms P** baz=315	62.29	68	P		P	07 54 03.7 -0.9
V45A	**Humboldt** baz=315	62.36	67	P		P	07 54 03.9 -1.1
Z42A	**Norrel Spur, H** baz=315	62.37	71	P		P	07 54 04.2 -0.9
U46A	**Springville** baz=315	62.37	66	P		P	07 54 04.2 -1.0
HKT	**Hockley** comp=Z,11nm,1.1s	62.40	76	eP		P	07 54 05.0 -0.3
HKT	**Hockley**	62.40	76	eP		P	07 54 05.0 -0.3
HKT	comp=Z,11nm,1.1s			pmax	pmax		
ACSO	**Alum Creek Sta** baz=315,SNR=7.0	62.50	59	P		P	07 54 04.8 -1.2
ACSO	**Alum Creek Sta** comp=Z,17nm,0.8s	62.50	59	eP		P	07 54 05.7 -0.3
P50A	**Jamestown** baz=315,SNR=22	62.50	60	P		P	07 54 05.1 -0.9
Y43A	**Makayla and Ka** baz=315	62.51	69	P		P	07 54 05.3 -0.8
T47A	**Sharon Grove** baz=315,SNR=25	62.53	64	P		P	07 54 05.5 -0.7
T47A	**Sharon Grove** comp=Z,51nm,1.0s	62.53	64	eP		P	07 54 05.6 -0.6
X44A	**Crenshaw** baz=315,SNR=6.4	62.55	68	P		P	07 54 05.5 -0.9
W45A	**Hickory Valley** baz=315	62.64	67	P		P	07 54 06.1 -0.9
S48A	**Wiedeman Farm,** baz=315,SNR=13	62.65	63	P		P	07 54 06.0 -1.0
BORG	**Borgarnes** comp=Z,95nm,21.1s,baz=343,slow=37	62.67	11	LR		LR	08 21 58.9
241A	**Mo Tay, Goldon** baz=315	62.68	72	P		P	07 54 06.7 -0.5
241A	**Mo Tay, Goldon** comp=Z,21nm,0.8s	62.68	72	eP		P	07 54 07.4 +0.1
WVT	**Waverly** baz=315	62.73	66	P		P	07 54 06.7 -0.8
WVT	**Waverly** comp=Z,11nm,0.9s	62.73	66	eP		P	07 54 06.7 -0.8
WVT	**Waverly**	62.73	66	eP		P	07 54 06.7 -0.8
WVT	comp=Z,11nm,0.9s			pmax	pmax		
ERPA	**Erie** baz=316	62.74	56	P		P	07 54 06.7 -0.8
ERPA	**Erie** comp=Z,26nm,1.0s	62.74	56	eP		P	07 54 07.1 -0.4
V46A	**Holladay** baz=315,SNR=9.8	62.80	66	P		P	07 54 06.9 -1.1
U47A	**Clarksville** baz=315,SNR=6.6	62.81	65	P		P	07 54 07.3 -0.8
ARU	**Arti** comp=Z,6.0nm,0.7s	62.82	329	eP		P	07 54 07.5 -0.3
ARU	**Arti**	62.82	329	c iP		P	07 54 07.5 -0.3
ARU				*PP		pP	07 54 19.2 -3.1
ARU							07 54 43.7
ARU							07 56 24.6
ARU				S		S	08 02 34.2 +1.4
ARU	comp=Z,20nm,2.5s			pmax	pmax		
ARU	comp=Z,194nm,18.0s			MLR	MLR		
Z43A	**Armstrong Fami** baz=315	62.83	70	P		P	07 54 07.1 -1.1
T48A	**Bowling Green** baz=315,SNR=11	62.85	64	P		P	07 54 07.4 -0.9
Y44A	**Strider, Charl** baz=315	62.90	69	P		P	07 54 07.7 -1.0
OXF	**Oxford** baz=315,SNR=11	62.97	68	P		P	07 54 08.1 -1.0
OXF	**Oxford**	62.97	68	eP		P	07 54 08.3 -0.9
	comp=Z,55nm,1.0s						
ALLY	**Alegheny Colle** comp=Z,62nm,1.3s	62.99	56	eP		P	07 54 09.1 -0.1
341A	**Kurthwood** baz=316	63.02	73	P		P	07 54 08.9 -0.6
X45A	**UM Field Stati** baz=315	63.04	68	P		P	07 54 08.4 -1.2
242A	**Grayson** baz=316	63.11	72	P		P	07 54 09.0 -1.1
V47A	**Nunnelly** baz=315,SNR=7.2	63.12	66	P		P	07 54 09.0 -1.1
W46A	**Michie** baz=315,SNR=8.8	63.12	67	P		P	07 54 09.0 -1.2
U48A	**Cassie Pea, Po** baz=315,SNR=23	63.19	64	P		P	07 54 09.8 -0.8
Z44A	**Pea Ridge, Bel** baz=316	63.25	70	P		P	07 54 10.2 -0.9
T49A	**Edmonton** baz=316,SNR=16	63.33	63	P		P	07 54 10.7 -0.9
M54A	**Oil Creek Stat** baz=316	63.34	56	P		P	07 54 10.3 -1.3
M54A	**Oil Creek Stat** comp=Z,29nm,1.3s	63.34	56	eP		P	07 54 11.2 -0.4
Y45A	**Yeager Farm, C** baz=316	63.35	69	P		P	07 54 10.7 -1.0
MMNY	**Mt. Morris Dam** comp=Z,21nm,1.0s	63.36	54	eP		P	07 54 11.5 -0.1
PLAL	**Pickwick Lake** comp=Z,23nm,0.6s	63.41	67	eP		P	07 54 10.9 -1.2
441A	**DeRidder** baz=316	63.42	73	P		P	07 54 11.9 -0.3
ZAIG	**Zacatecas**	63.44	86	eP		P	07 54 12.2 -0.6
W47A	**Westpoint** baz=316,SNR=12	63.49	66	P		P	07 54 11.4 -1.2
342A	**Flagon Creek P** baz=316	63.49	72	P		P	07 54 12.0 -0.7
N54A	**Moraine State** baz=316,SNR=9.8	63.57	57	P		P	07 54 11.9 -1.2
N54A	**Moraine State** comp=Z,47nm,1.3s	63.57	57	eP		P	07 54 12.3 -0.7
V48A	**Smith Brothers** baz=316,SNR=10	63.58	65	P		P	07 54 12.1 -1.1
V48A	**Smith Brothers** comp=Z,22nm,1.0s	63.58	65	eP		P	07 54 12.2 -0.9
U49A	**Red Boiling Sp** baz=316,SNR=13	63.62	64	P		P	07 54 12.6 -0.8
Z45A	**Winona** baz=316	63.62	69	P		P	07 54 12.6 -0.9
243A	**Waterproof** baz=316	63.63	71	P		P	07 54 12.9 -0.7
LONY	**Lake Ozonia** comp=Z,14nm,1.5s	63.64	51	eP		P	07 54 11.7 -1.8
144A	**Alexander Plac** baz=316	63.72	70	P		P	07 54 13.5 -0.6
Y46A	**Houston** baz=316,SNR=8.8	63.74	68	P		P	07 54 13.2 -1.0
T50A	**Nancy** baz=316,SNR=22	63.78	63	P		P	07 54 13.7 -0.8
LNIG	**Linares** comp=Z,5.0nm,1.0s	63.81	82	eP		P	07 54 12.7 -2.1
X47A	**Russelville** baz=316,SNR=6.4	63.86	67	P		P	07 54 13.7 -1.4
W48A	**Pulaski** baz=316,SNR=23	63.95	66	P		P	07 54 14.5 -1.1
343A	**Vidalia** baz=316	63.98	72	P		P	07 54 15.1 -0.7
244A	**Avery, Jackson** baz=316,SNR=8.0	63.99	71	P		P	07 54 15.4 -0.5
S51A	**Beattyville** baz=316,SNR=13	64.02	62	P		P	07 54 15.2 -0.9
145A	**Houston Renfro** baz=316	64.03	70	P		P	07 54 15.3 -0.9
KLMR	**Klimovskoe**	64.07	341	eP		P	07 54 15.2 -0.7
KLMR				e			07 54 49.0
KLMR	comp=Z,11nm,1.3s			pmax	pmax		
KLMR	**Klimovskoe**	64.07	341	eP		P	07 54 15.3 -0.7
KLMR	comp=Z,11nm,1.3s			AMP			07 54 17.4
KLMR				ePcP		PcP	07 54 49.1 -1.7
V49A	**McMinnville** baz=316,SNR=21	64.08	65	P		P	07 54 15.4 -1.1
DAV	**Davao City (W)** comp=Z,137nm,21.9s,baz=62,slow=32	64.08	247	LR		LR	08 17 34.6
Z46A	**Louisville** baz=316	64.19	69	P		P	07 54 16.3 -0.9
S52A	**Salyersville** baz=316,SNR=17	64.28	61	P		P	07 54 17.3 -0.5
NCB	**Newcomb** comp=Z,6.6nm,0.8s	64.29	51	eP		P	07 54 17.2 -0.5
Y47A	**UCPARC, Winfie** baz=316,SNR=12	64.31	67	P		P	07 54 16.6 -1.4
KMI	**Kunming**	64.31	279	P		P	07 54 17.8 -0.6
KMI				pP		pP	07 54 33.9 +1.0
KMI				sP		sP	07 54 37.8 -1.0
KMI	comp=Z,13nm,1.3s			pmax	pmax		
KMI	comp=Z,61nm,4.2s			pmax	pmax		
KMI	comp=Z,110nm,17.8s			LR	LR		
KMI	comp=Z,180nm,17.8s			LR	LR		
KMI	comp=Z,140nm,22.5s			LR	LR		
W49A	**Belvidere** baz=316,SNR=9.8	64.34	65	P		P	07 54 17.0 -1.2
X48A	**Hartselle** baz=316,SNR=10	64.38	66	P		P	07 54 16.9 -1.5
X48A	**Hartselle** comp=Z,33nm,1.4s	64.38	66	eP		P	07 54 16.9 -1.5
344A	**Westbrook Farm** comp=Z,17nm,0.9s	64.38	71	eP		P	07 54 18.5 0.0
245A	**Little AP, Sta** baz=316	64.46	70	P		P	07 54 18.0 -1.0
SWET	**Sewanee** comp=Z,28nm,1.1s	64.46	65	eP		P	07 54 18.1 -1.0
146A	**Union** baz=316	64.52	69	P		P	07 54 18.6 -0.7
146A	**Union** comp=Z,43nm,0.9s	64.52	69	eP		P	07 54 19.7 +0.3
MCWV	**Mont Chateau** baz=317	64.59	58	P		P	07 54 18.5 -1.2
V50A	**Pikevile** baz=316,SNR=14	64.60	64	P		P	07 54 18.8 -1.1
Z47A	**Carrollton** baz=316,SNR=6.3	64.69	68	P		P	07 54 19.4 -1.0
Y48A	**Jasper** baz=316,SNR=8.4	64.69	67	P		P	07 54 18.8 -1.7
BINY	**Binghamton** baz=317	64.72	54	P		P	07 54 19.5 -1.1
BINY	**Binghamton** comp=Z,25nm,1.2s	64.72	54	eP		P	07 54 20.1 -0.5
VT1	**Waterbury** comp=Z,16nm,1.4s	64.73	50	eP		P	07 54 19.4 -1.3
T52A	**Hallie** baz=316,SNR=13	64.74	62	P		P	07 54 20.6 -0.2
X49A	**Woodville** baz=316,SNR=14	64.74	66	P		P	07 54 19.7 -1.2
O56A	**Blue Knob Stat** baz=317	64.81	57	P		P	07 54 20.1 -1.2
O56A	**Blue Knob Stat** comp=Z,41nm,1.8s	64.81	57	eP		P	07 54 20.4 -0.9
W50A	**Signal Mountai** baz=316,SNR=24	64.82	65	P		P	07 54 20.4 -0.9
W50A	**Signal Mountai** comp=Z,48nm,1.0s	64.82	65	eP		P	07 54 20.5 -0.9
TZTN	**Tazewell** baz=316,SNR=9.7	64.84	63	P		P	07 54 20.9 -0.5
TZTN	**Tazewell** comp=Z,25nm,1.0s	64.84	63	eP		P	07 54 21.0 -0.4
Z48A	**Northport** baz=316,SNR=10	64.86	68	P		P	07 54 20.3 -1.3
SSPA	**Standing Stone** baz=317	64.90	56	P		P	07 54 20.6 -1.2
SSPA	**Standing Stone** comp=Z,7.6nm,0.9s	64.90	56	eP		P	07 54 21.3 -0.5
345A	**Thompson Farm,** baz=316	64.90	71	P		P	07 54 21.1 -0.8
V51A	**Loudon** baz=316,SNR=13	64.93	64	P		P	07 54 21.0 -1.0
V51A	**Loudon** comp=Z,62nm,1.4s	64.93	64	eP		P	07 54 21.6 -0.4
147A	**Livingston** baz=316	64.95	69	P		P	07 54 21.2 -0.9
147A	**Livingston** comp=Z,64nm,1.4s	64.95	69	eP		P	07 54 21.7 -0.4
ACCN	**Adirondack Com**	64.99	51	eP		P	07 54 21.1 -1.2
	comp=Z,8.7nm,1.1s						
CPCT	**Cooper Cave** comp=Z,47nm,1.4s	65.09	64	eP		P	07 54 22.2 -0.8
445A	**Amite** baz=316	65.14	71	P		P	07 54 22.8 -0.7
X50B	**Fort Payne** baz=316,SNR=21	65.17	65	P		P	07 54 22.5 -1.2
Y49A	**Blount Mountai** baz=316,SNR=6.2	65.17	66	P		P	07 54 22.2 -1.4
Y49A	**Blount Mountai** comp=Z,20nm,1.1s	65.17	66	eP		P	07 54 22.3 -1.4
LBNH	**Lisbon** baz=318	65.19	50	P		P	07 54 22.5 -1.1
LBNH	**Lisbon**	65.19	50	eP		P	07 54 22.5 -1.1
LBNH	**Lisbon**	65.19	50	eP		P	07 54 22.5 -1.1
KSPA	**Keystone Colle** comp=Z,27nm,1.5s	65.31	54	eP		P	07 54 23.8 -0.5
V52A	**Sevierville** baz=316,SNR=13	65.32	63	P		P	07 54 24.0 -0.6
V52A	**Sevierville** comp=Z,46nm,1.1s	65.32	63	eP		P	07 54 24.2 -0.4
TKL	**Tuckaleechee C** comp=Z,127nm,21.6s,baz=342,slow=35	65.36	63	LR		LR	08 21 25.1
TKL	**Tuckaleechee C** comp=Z,46nm,0.9s	65.36	63	eP		P	07 54 24.1 -0.7
TKL	**Tuckaleechee C**	65.36	63	eP		P	07 54 24.1 -0.7
TKL	comp=Z,46nm,0.9s			pmax	pmax		
148A	**Greensboro** baz=316	65.38	68	P		P	07 54 23.7 -1.3
LRAL	**Lakeview Retre** baz=316,SNR=5.6	65.43	67	P		P	07 54 23.7 -1.5
LRAL	**Lakeview Retre** comp=Z,9.1nm,0.9s	65.43	67	eP		P	07 54 24.0 -1.2
U53A	**Fall Branch** baz=317,SNR=12	65.51	62	P		P	07 54 25.2 -0.6
Y50A	**Piedmont** baz=316,SNR=13	65.53	66	P		P	07 54 24.5 -1.4
X51A	**Calhoun** baz=316,SNR=7.9	65.54	65	P		P	07 54 24.9 -1.1
X51A	**Calhoun** comp=Z,48nm,1.2s	65.54	65	eP		P	07 54 25.4 -0.6
Z49A	**Columbiana** baz=316,SNR=12	65.58	67	P		P	07 54 24.9 -1.4
446A	**Poplarville** baz=316	65.67	71	P		P	07 54 26.0 -0.8
248A	**Dixon Mills** baz=316	65.68	69	P		P	07 54 26.0 -0.9
W52A	**Murphy** baz=317,SNR=12	65.68	64	P		P	07 54 26.2 -0.7
W52A	**Murphy** comp=Z,63nm,1.4s	65.68	64	eP		P	07 54 26.2 -0.7
347A	**Saraland** baz=316,SNR=6.9	65.71	70	P		P	07 54 26.6 -0.5
N59A	**State Game Lan** baz=318,SNR=6.3	65.78	54	P		P	07 54 26.8 -0.7
N59A	**State Game Lan** comp=Z,15nm,1.1s	65.78	54	eP		P	07 54 26.8 -0.7
FIA1	**FINESS Array S**	65.80	348	eP		P	07 54 26.8 -0.4
FINES	**FINESS Array B** comp=Z,1.6nm,0.5s,baz=26,slow=7.9,SNR=24	65.80	348	P		P	07 54 25.9 -1.2
FINES				LR	LR		08 25 21.0
FINES	comp=Z,112nm,20.7s,baz=20,slow=38						
FINES	**FINESS Array B**	65.80	348	P		P	07 54 26.0 -1.2
FINES	comp=Z,2.0nm,0.5s			pmax	pmax		
FINES				MLR	MLR		
FINES	comp=Z,112nm,20.7s						
149A	**Jones** baz=317,SNR=8.3	65.86	68	P		P	07 54 27.0 -1.1
546A	**Slidell** baz=317	65.87	71	P		P	07 54 27.0 -1.1
V53A	**Saluda** baz=317,SNR=20	65.88	63	P		P	07 54 27.8 -0.4
Z50A	**Ashland** baz=317,SNR=18	65.89	67	P		P	07 54 26.9 -1.4
Z50A	**Ashland** comp=Z,65nm,1.4s	65.89	67	eP		P	07 54 26.9 -1.4
Y51A	**Rockmart** baz=317,SNR=12	65.91	66	P		P	07 54 26.8 -1.5
W53A	**Cullowhee** baz=317,SNR=17	66.05	63	P		P	07 54 28.5 -0.9
X52A	**Dahlonega** baz=317,SNR=25	66.06	64	P		P	07 54 28.6 -0.7
BLA	**Blacksburg** baz=317,SNR=6.7	66.07	60	P		P	07 54 28.5 -0.9
BLA	**Blacksburg** comp=Z,44nm,1.2s	66.07	60	eP		P	07 54 29.4 0.0
BLA	**Blacksburg**	66.07	60	eP		P	07 54 29.4 0.0
BLA	comp=Z,44nm,1.2s			pmax	pmax		
348A	**Jackson** baz=317	66.08	69	P		P	07 54 28.7 -0.8
348A	**Jackson** comp=Z,30nm,0.8s	66.08	69	eP		P	07 54 30.0 +0.5
447A	**Lucedale** baz=317	66.09	70	P		P	07 54 28.8 -0.7
249A	**Camden** baz=317,SNR=6.2	66.12	68	P		P	07 54 28.7 -1.1
LUPA	**Lehigh Univers** comp=Z,1.4nm,1.0s	66.22	54	eP		P	07 54 29.9 -0.4
Z51A	**Franklin** baz=317,SNR=9.2	66.27	66	P		P	07 54 29.2 -1.5
TARG	**Taragay, Kyrgy** comp=Z,4.4nm,0.9s	66.33	308	eP		P	07 54 34.0 +2.5
448A	**Bay Minette** baz=317	66.45	70	P		P	07 54 31.3 -0.5
X53A	**Estanollee** baz=317,SNR=15	66.46	64	P		P	07 54 31.3 -0.6
Y52A	**Lilburn** baz=317,SNR=13	66.50	65	P		P	07 54 31.4 -0.8
Y52A	**Lilburn** comp=Z,37nm,1.0s	66.50	65	eP		P	07 54 31.4 -0.8
349A	**Repton** baz=317	66.54	69	P		P	07 54 31.5 -0.9
BRNJ	**Basking Ridge** comp=Z,20nm,1.1s	66.56	54	eP		P	07 54 32.2 -0.2
250A	**Grady** baz=317	66.62	68	P		P	07 54 31.8 -1.1
250A	**Grady** comp=Z,112nm,1.5s	66.62	68	eP		P	07 54 32.1 -0.8
PAL	**Palisades** baz=318	66.65	53	P		P	07 54 31.9 -1.0
PAL	**Palisades**	66.65	53	eP		P	07 54 32.7 -0.3
IP04	**Greensprings** comp=Z,12nm,1.0s	66.66	58	eP		P	07 54 33.0 -0.1
HRV	**Adam Dziewonsk** baz=319	66.68	51	P		P	07 54 31.7 -1.4
HRV	**Adam Dziewonsk** comp=Z,42nm,1.7s	66.68	51	eP		P	07 54 32.0 -1.2
HRV	**Adam Dziewonsk**	66.68	51	eP		P	07 54 32.0 -1.2
HRV	comp=Z,42nm,1.7s			pmax	pmax		
PSUB	**Penn St. - Bra** comp=Z,19nm,1.4s	66.68	55	eP		P	07 54 33.2 0.0
151A	**Opelika** baz=317,SNR=5.8	66.76	67	P		P	07 54 31.7 -2.1
IP03	**Louisa** comp=Z,22nm,1.2s	66.76	58	eP		P	07 54 34.0 +0.2
Y53A	**Monroe** baz=317,SNR=18	66.78	65	P		P	07 54 33.1 -0.9
PUL	**Pulkovo**	66.78	345‖	eP		P	07 54 33.4 -0.1
PUL	comp=Z,114nm,0.4s			pmax	pmax		
Z52A	**Williamson** baz=317,SNR=10.0	66.79	66	P		P	07 54 32.5 -1.5
IP07	**Quail** comp=Z,26nm,1.1s	66.83	58	eP		P	07 54 34.3 +0.1
SPRD	**Spring Road, M** comp=Z,13nm,1.3s	66.83	58	eP		P	07 54 34.3 +0.1
IP06	**Yanceyville** comp=Z,12nm,0.9s	66.84	58	eP		P	07 54 34.4 +0.2
IP01	**Cuckoo** comp=Z,7.5nm,1.0s	66.86	58	eP		P	07 54 34.4 0.0
WES	**Weston** comp=Z,24nm,1.6s	66.88	51	eP		P	07 54 33.7 -0.7
WES	**Weston**	66.88	51	eP		P	07 54 33.7 -0.7
WES	comp=Z,24nm,1.6s			pmax	pmax		
EMMW	**East Machias** comp=Z,44nm,1.4s	66.92	47	eP		P	07 54 33.6 -0.9
449A	**Pace** baz=317	66.96	69	P		P	07 54 34.0 -1.1
350A	**Dozier** baz=317	66.98	68	P		P	07 54 34.2 -1.0
152A	**Waverly Hall** baz=317,SNR=5.1	67.00	66	P		P	07 54 33.6 -1.8
152A	**Waverly Hall**	67.00	66	eP		P	07 54 33.9 -1.5

comp=Z,18nm,1.0s
251A Midway 67.03 67 P **P** 07 54 34.3 -1.3
baz=317,SNR=6.1
IP05 Hopewell Churc 67.04 58 eP **P** 07 54 35.0 -0.5
comp=Z,8.8nm,0.9s
PAULI Pauline 67.06 63 eP **P** 07 54 35.4 -0.3
comp=Z,39nm,1.2s
JSRW J. Sargeant Re 67.07 58 eP **P** 07 54 35.2 -0.5
KMSC Kings Mountain 67.09 62 P **P** 07 54 35.4 -0.5
baz=317,SNR=45
KMSC Kings Mountain 67.09 62 eP **P** 07 54 35.7 -0.2
comp=Z,91nm,1.0s
BRYW Bryant College 67.13 51 eP **P** 07 54 35.1 -1.0
comp=Z,42nm,1.7s
GOGA Godfrey 67.17 65 P **P** 07 54 35.2 -1.2
baz=317,SNR=21
GOGA Godfrey 67.17 65 eP **P** 07 54 35.2 -1.2
comp=Z,39nm,1.0s
GOGA Godfrey 67.17 65 eP **P** 07 54 35.3 -1.2
GOGA pmax pmax
comp=Z,39nm,1.0s
Z53A Monticello 67.21 65 P **P** 07 54 35.5 -1.2
baz=317,SNR=20
HODGE Hodges 67.25 63 eP **P** 07 54 36.8 -0.1
comp=Z,37nm,0.9s
Y54A Tignall 67.28 64 P **P** 07 54 36.4 -0.7
baz=317,SNR=21
450A Crestview 67.29 69 P **P** 07 54 36.5 -0.7
baz=317
URVA University of 67.35 58 eP **P** 07 54 36.9 -0.6
NC204 NORSAR Array S 67.37 356 eP **P** 07 54 37.7 +0.4
NC303 NORSAR Array S 67.39 355 eP **P** 07 54 37.4 0.0
NC405 NORSAR Array S 67.48 355 eP **P** 07 54 37.1 -0.8
252A Lumpkin 67.49 67 P **P** 07 54 36.8 -1.6
baz=317
351A Pinckard 67.52 68 P **P** 07 54 37.5 -1.1
baz=317,SNR=6.7
153A Fort Valley 67.52 66 P **P** 07 54 37.3 -1.4
baz=317,SNR=7.3
NB201 NORSAR Array S 67.57 355 eP **P** 07 54 37.7 -0.9
NB2 NORSAR Subarra 67.58 355 P **P** 07 54 38.2 -0.4
comp=Z,0.6nm,0.4s,baz=7.8,slow=7.4
NOA NORSAR Array B 67.58 355 LR LR 08 22 36.7
comp=Z,112nm,21.7s,baz=10.0,slow=35
Z54A Sparta 67.65 65 P **P** 07 54 38.3 -1.1
baz=318,SNR=17
352A Blakely 67.76 67 eP **P** 07 54 39.1 -1.1
comp=Z,51nm,1.0s
PMG Port Moresby 67.76 218 LR LR 08 20 43.3
comp=Z,99nm,19.5s,baz=12,slow=33
JSC Jenkinsville 67.77 63 eP **P** 07 54 40.2 0.0
comp=Z,74nm,1.1s
JSC Jenkinsville 67.77 63 eP **P** 07 54 40.2 0.0
JSC pmax pmax
comp=Z,74nm,1.1s
253A Americus 67.79 66 P **P** 07 54 39.0 -1.3
baz=318,SNR=6.0
253A Americus 67.79 66 eP **P** 07 54 39.2 -1.1
comp=Z,29nm,0.9s
NC602 NORSAR Array S 67.87 355 eP **P** 07 54 40.7 +0.3
AKTO Aktyubinsk 67.94 325 P **P** 07 54 40.9 -0.1
comp=Z,7.5nm,0.5s,baz=59,slow=7.3,SNR=33
154A Montrose 67.96 65 P **P** 07 54 40.3 -1.1
baz=318,SNR=8.3
154A Montrose 67.96 65 eP **P** 07 54 40.4 -1.1
comp=Z,58nm,0.9s
LSA Lhasa 67.97 290 eP **P** 07 54 43.4 +1.3
comp=Z,24nm,0.6s
Z55A Blythe 68.06 64 P **P** 07 54 41.2 -0.8
baz=318
AB31 Akbulak array 68.21 323 i P **P** 07 54 42.2 -0.5
AB31 pmax pmax
comp=Z,3.0nm,0.7s
ABKAR Akbulak array 68.21 323 eP **P** 07 54 42.6 -0.1
353A Camilla 68.26 67 P **P** 07 54 42.2 -1.1
baz=318
TAOE Nuku Hiva Isla 68.31 139 eS **S** 08 03 47.9 +7.0
comp=Z,253nm,27.4s
TAOE Nuku Hiva Isla 68.31 139 eLR LR 08 15 22.1
comp=Z,437nm,22.6s,baz=343
TAOE Nuku Hiva Isla 68.31 139 eT T 09 09 01.4
155A Kite 68.32 65 P **P** 07 54 42.8 -0.9
baz=318,SNR=14
HFS Hagfors 68.33 354 P **P** 07 54 42.6 -0.7
comp=Z,2.6nm,0.4s,baz=343,slow=1.5,SNR=43
HFS LR LR 08 23 19.7
comp=Z,135nm,21.8s,baz=2.0,slow=35
552A Lynn Haven 68.54 68 P **P** 07 54 44.4 -0.7
baz=318
TIGA Tifton 68.55 66 P **P** 07 54 44.2 -0.9
baz=318
453A Whigham 68.57 67 P **P** 07 54 44.6 -0.6
baz=318
453A Whigham 68.57 67 eP **P** 07 54 44.7 -0.5
comp=Z,113nm,1.6s
KK31 Karatay Array 68.75 313 eP **P** 07 54 45.5 -0.7
KK31 Karatay Array 68.75 313 eP **P** 07 54 45.5 -0.7
KKAR Karatay Array 68.75 313 eP **P** 07 54 45.6 -0.6
KKAR Karatay Array 68.75 313 eP **P** 07 54 45.6 -0.6
255A Hazlehurst 68.83 65 P **P** 07 54 46.1 -0.7
baz=318,SNR=6.1
255A Hazlehurst 68.83 65 eP **P** 07 54 46.5 -0.3
comp=Z,57nm,1.1s
156A Sylvania 68.84 64 P **P** 07 54 46.9 0.0
baz=318,SNR=14
CNNC Cliffs of the 68.90 60 P **P** 07 54 46.7 -0.5
baz=318
KSH Kashi 68.91 307 P **P** 07 54 50.4 +3.0
KSH pP sP 07 55 06.1 -1.8
KSH pmax pmax
comp=Z,160nm,5.3s
553A Crawfordville 69.00 68 P **P** 07 54 47.1 -0.8
baz=318
KONO Kongsberg 69.05 356 eP **P** 07 54 48.7 +1.0
comp=Z,73nm,1.6s
KONO Kongsberg 69.05 356 eP **P** 07 54 48.7 +1.0
KONO pmax pmax
comp=Z,73nm,1.6s
355A Pearson 69.05 66 P **P** 07 54 47.3 -0.9
baz=318
454A Quitman 69.07 67 P **P** 07 54 47.5 -0.8
baz=318
256A Glennville 69.12 65 P **P** 07 54 47.9 -0.7
baz=318
NHSC New Hope 69.24 63 P **P** 07 54 49.3 -0.1
baz=318,SNR=10.0
NHSC New Hope 69.24 63 eP **P** 07 54 49.9 +0.5
comp=Z,150nm,1.1s
RGRS Roger Stewart 69.38 63 eP **P** 07 54 50.7 +0.5
comp=Z,909nm,0.4s
CSU Charleston Sou 69.39 63 eP **P** 07 54 50.6 +0.4
257A Skidaway Islan 69.61 64 P **P** 07 54 51.0 -0.7
baz=318
555A McAlpin 69.89 67 P **P** 07 54 52.9 -0.5
baz=318
555A McAlpin 69.89 67 eP **P** 07 54 53.2 -0.2
comp=Z,68nm,1.2s
OBN Obninsk 69.97 340 eP **P** 07 54 53.4 -0.1
OBN e 07 55 11.7
OBN e 07 57 26.6
OBN pmax pmax
comp=Z,31nm,0.6s
456A Hilliard 69.98 66 P **P** 07 54 53.4 -0.6
baz=318
655A Horseshoe Beac 70.18 67 P **P** 07 54 54.6 -0.6
baz=318
556A Lake Butler 70.30 67 P **P** 07 54 55.9 0.0
baz=318,SNR=5.4
SHL Shillong 70.60 287 eP **P** 07 55 01.0 +2.9
SHL Shillong 70.60 287 eP **P** 07 54 58.4 +0.3
comp=Z,163nm,1.4s
SHL Shillong 70.60 287 eP **P** 07 54 58.4 +0.3
SHL pmax pmax
comp=Z,163nm,1.4s
557A Orange Park 70.68 66 P **P** 07 54 58.0 -0.2
baz=319
656A Willston 70.70 67 P **P** 07 54 57.9 -0.5
baz=319
657A Interlachen 70.92 66 P **P** 07 54 59.4 -0.3
baz=319
PMOR Pomariorio Ree 71.17 149 eT T 09 12 35.8
comp=Z,19nm,0.2s
757A Oxford 71.29 67 P **P** 07 55 01.7 -0.3
baz=319
658A Bunnell 71.39 66 P **P** 07 55 02.6 0.0
baz=319

CMAR Chiang Mai Arr 71.60 277 P **P** 07 55 04.2 +0.2
comp=Z,1.3nm,0.3s,baz=25,slow=7.5,SNR=6.9
CMAR LR LR 08 30 13.8
comp=Z,72nm,18.8s,baz=32,slow=39
CM01 Chiang Mai Arr 71.62 277 eP **P** 07 55 03.7 -0.4
857A Zephyrhills 71.70 68 P **P** 07 55 04.2 -0.3
baz=319
TAPN Taplejung 71.73 291 eP **P** 07 55 05.9 +0.9
758A Lake Helen 71.77 66 P **P** 07 55 04.5 -0.4
baz=319
957A Wimauma 72.15 68 P **P** 07 55 06.9 -0.2
baz=319
858A St. Cloud 72.25 67 P **P** 07 55 07.5 -0.2
baz=319
DWPF Disney Wildern 72.28 67 P **P** 07 55 07.7 -0.2
baz=319
DWPF Disney Wildern 72.28 67 eP **P** 07 55 08.0 +0.1
comp=Z,144nm,1.6s
ODAN Odare 72.29 291 eP **P** 07 55 09.3 +1.0
GUN Gumba 72.37 293 eP **P** 07 55 10.0 +1.1
comp=Z,118nm,0.4s
JIRN Jiri 72.38 292 eP **P** 07 55 10.0 +1.0
comp=Z,78nm,0.6s
958A Wauchula 72.49 68 P **P** 07 55 09.1 -0.1
baz=319
859A Kempfer Cattle 72.63 67 P **P** 07 55 09.8 -0.1
baz=319
RAMN Ramite 72.68 291 eP **P** 07 55 11.3 +0.7
KKN Kakani 72.81 293 eP **P** 07 55 12.2 +0.8
comp=Z,37nm,0.5s
058A Arcadia 72.86 68 P **P** 07 55 11.3 -0.1
baz=319
PKIN Phulchoki 72.90 293 eP **P** 07 55 12.5 +0.5
comp=Z,35nm,0.5s
VSR Storozhevoye 72.97 337 eP **P** 07 55 10.8 -0.9
VSR pmax pmax
comp=Z,20nm,1.3s
GKN Gorkha 73.02 294 eP **P** 07 55 13.0 +0.5
959A Okeechobee 73.05 67 P **P** 07 55 12.0 -0.4
baz=319
DMN Daman 73.05 293 eP **P** 07 55 13.5 +0.7
PPT Papeete 73.08 152 LR LR 08 19 54.0
comp=Z,194nm,20.2s,baz=350,slow=30
PPT2 Papeete2 73.10 152 eS **SKiKP** 08 04 42.7 +2.6
comp=Z,144nm,32.5s
PPT2 Papeete2 73.10 152 eLR LR 08 17 36.5
comp=Z,377nm,28.0s,baz=340
PPT2 Papeete2 73.10 152 eT T 09 14 59.7
comp=Z,6.3nm,0.3s
PAE Paea 73.16 152 eT T 09 15 04.5
comp=Z,1.7nm,0.3s
DANN Dangsing 73.25 294 eP **P** 07 55 14.8 +0.7
comp=Z,26nm,0.6s
059A Moore Haven 73.31 68 P **P** 07 55 14.0 -0.1
baz=320
EKA Eskdalemuir Ar 73.44 3 P **P** 07 55 14.5 +0.1
comp=Z,1.6nm,0.5s,baz=356,slow=4.8,SNR=9.9
059Z Ave Maria 73.62 68 P **P** 07 55 15.6 -0.2
baz=320
KOLN Koldanda 73.79 294 eP **P** 07 55 17.4 +0.3
comp=Z,6.9nm,0.5s
PYUN Piuthan 73.88 295 eP **P** 07 55 17.9 +0.2
061Z Ochoppi 74.29 68 P **P** 07 55 19.7 -0.1
baz=320
DZM Mont Dzumac 74.54 195 LR LR 08 20 51.1
comp=Z,121nm,21.6s,baz=2.0,slow=30
DZM Mont Dzumac 74.54 195 eLR LR 08 18 26.3
comp=Z,286nm,24.2s
AKASG Malin Array Be 75.62 343 P **P** 07 55 26.7 -0.3
comp=Z,1.3nm,0.3s,baz=19,slow=6.1,SNR=16
AKASG LR LR 08 31 55.4
comp=Z,114nm,20.9s,baz=30,slow=38
AKBB Malin Array Si 75.62 343 eP **P** 07 55 27.0 0.0
comp=Z,17nm,1.3s
AKBB Malin Array Si 75.62 343 eP **P** 07 55 27.0 0.0
AKBB pmax pmax
comp=Z,17nm,1.3s
KIEV Kiev 75.63 343 eP **P** 07 55 26.9 -0.2
comp=Z,15nm,1.2s
KIEV Kiev 75.63 343 deP **P** 07 55 27.0 -0.1
KIEV pmax pmax
comp=Z,14nm,1.2s
CLL Collm 77.16 353 eP **P** 07 55 36.0 +0.2
CLL eSS SS 08 10 30.0 +12
CLL Lm MLR 08 32 00.0
comp=Z,100nm,22.0s
CLL Collm 77.16 353 eP **P** 07 55 36.0 +0.2
BRG Berggiesshubel 77.52 352 eP **P** 07 55 38.0 +0.2
comp=Z,4.7nm,1.1s
BRG Berggiesshubel 77.52 352 eP **P** 07 55 38.0 +0.2
BRG pmax pmax
comp=Z,5.0nm,1.1s
UPC Upice 77.69 351 AMS AMS 08 26 30.0
comp=Z,200nm,21.9s
KWP Kalwaria Pacla 77.74 346 eP **P** 07 55 39.5 +0.5
comp=Z,421nm,1.0s
KWP Kalwaria Pacla 77.74 346 eP **P** 07 55 39.5 +0.5
KWP pmax pmax
comp=Z,421nm,1.0s
DPC Dobruska-Polom 77.82 351 AMS AMS 08 28 00.0
comp=Z,100nm,25.6s
OKC Ostrava-Krasne 78.13 350 AMS AMS 08 32 00.0
comp=Z,200nm,17.4s
SORM Soroca 78.24 342 ⇓ i P **P** 07 55 42.0 +0.1
SORM Soroca 78.24 342 P **P** 07 55 41.9 +0.1
NKC Novy Kostel 78.27 353 AMS AMS 08 33 00.0
comp=Z,100nm,20.7s
PRU Pruhonice 78.34 352 AMS AMS 08 26 00.0
comp=Z,200nm,23.1s
GOPC GO Pecny, Ondr 78.40 352 AMS AMS 08 32 50.0
comp=Z,200nm,21.1s
GEYT Alibeck 78.41 318 P **P** 07 55 42.9 -0.1
comp=Z,19nm,0.4s,baz=15,slow=1.7,SNR=6.2
TBI Tubuai 78.58 154 eLR LR 08 20 15.6
comp=Z,409nm,30.0s,baz=339
TBI Tubuai 78.58 154 eT T 09 21 50.5
comp=Z,7.4nm,0.3s
KIV Kislovodsk 78.66 331 eP **P** 07 55 44.6 +0.2
KIV pmax pmax
comp=Z,8.0nm,0.9s
KIV MLR MLR
comp=Z,181nm,18.0s
GIVF Givet 78.75 358 eP **P** 07 55 44.5 -0.1
GIVF pmax pmax
comp=Z,10.0nm,1.0s
NCK Nalchik 78.80 331⇑ eP **P** 07 55 46.4 +1.3
NCK pmax pmax
comp=Z,29nm,0.9s
KBZ Khabaz 78.80 331 LR LR 08 35 27.1
comp=Z,261nm,20.6s,baz=26,slow=39
BAIF Baives 78.81 359 eP **P** 07 55 45.1 +0.2
BAIF pmax pmax
comp=Z,40nm,1.8s
FSCY Frank Sound, G 79.15 73 eP **P** 07 55 47.3 +0.1
comp=Z,503nm,1.3s
WLF Walferdange 79.16 357 eP **P** 07 55 48.0 +1.1
comp=Z,8.7nm,0.9s
WLF Walferdange 79.16 357 eP **P** 07 55 48.0 +1.1
WLF pmax pmax
comp=Z,9.0nm,0.9s
KHC Kasperske Hory 79.28 352 eP **P** 07 55 50.1 +2.5
KHC Kasperske Hory 79.28 352 eP **P** 07 55 50.1 +2.5
BUR08 Bucovina Ar. S 79.28 344 eP **P** 07 55 47.5 -0.2
NEY Neytrino 79.29 331⇓ eP **P** 07 55 49.0 +1.1
NEY pmax pmax
comp=Z,2.0nm,1.6s
BUR04 Bucovina Ar. S 79.30 344 eP **P** 07 55 47.5 -0.3
BURAR Bucovina Array 79.31 344 ⇓ i P **P** 07 55 48.2 +0.4
BURAR Bucovina Array 79.31 344 P **P** 07 55 51.8 +4.0
GERES GERESS Array B 79.55 352 P **P** 07 55 48.4 -0.8
comp=Z,0.7nm,0.6s,baz=305,slow=4.7,SNR=6.4
GERES LR LR 08 30 03.4
comp=Z,61nm,22.0s,baz=8.5,slow=35
GEA0 GERESS Array S 79.56 352 eP **P** 07 55 49.0 -0.1
TBLG Delisi 80.04 329 eP **P** 07 55 52.8 +1.0
comp=Z,66nm,1.4s
TBLG Delisi 80.04 329 eP **P** 07 55 52.8 +1.0
TBLG pmax pmax
comp=Z,66nm,1.4s
TESR Tescani 80.12 343 ⇑ i P **P** 07 55 52.6 +0.4
LDF La Druitiere 80.27 2 eP **P** 07 55 52.1 -0.8
LDF pmax pmax
comp=Z,12nm,0.5s
CDF Champ du Feu 80.37 357 eP **P** 07 55 53.6 0.0
CDF pmax pmax
comp=Z,6.0nm,1.0s

ROSF Rostrenen 80.44 4 eP **P** 07 55 53.7 -0.1
ROSF pmax pmax
comp=Z,36nm,1.3s
GRR Gorron 80.46 2 eP **P** 07 55 53.6 -0.3
GRR pmax pmax
comp=Z,16nm,0.7s
VRI Vrincioaia 80.73 343 ⇑ i P **P** 07 55 56.5 +1.1
VRI Vrincioaia 80.73 343 P **P** 07 55 57.7 +2.3
VRI pmax pmax
comp=Z,52nm,0.6s
PLOR Plostina 80.76 343 ⇓ i P **P** 07 55 56.5 +0.9
PLOR Plostina 80.76 343 P **P** 07 55 56.5 +0.9
HAU Haudompre 80.81 357 P **P** 07 55 55.5 -0.4
HAU pmax pmax
comp=Z,10.0nm,1.0s
QUIF Quistinic 80.86 4 eP **P** 07 55 56.0 0.0
QUIF pmax pmax
comp=Z,81nm,1.8s
DOPR Dopca 80.87 344 ⇓ i P **P** 07 55 56.9 +0.7
TLCR 80.98 341 ⇑ i P **P** 07 55 57.5 +0.8
CFR Carcaliu 81.12 342 ⇓ i P **P** 07 55 58.2 +0.7
MLR Muntele Rosu 81.23 343 LR LR 08 37 38.3
comp=Z,37nm,18.2s,baz=26,slow=40
MLR Muntele Rosu 81.23 343 ⇓ i P **P** 07 55 59.3 +1.0
MLR Muntele Rosu 81.23 343 eP **P** 07 55 59.9 +1.6
comp=Z,35nm,1.3s
MLR Muntele Rosu 81.23 343 eP **P** 07 55 59.9 +1.6
MLR pmax pmax
comp=Z,35nm,1.3s
KBA Koelnbreinsper 81.33 352 P **P** 07 56 00.9 +2.0
VOIR 81.44 344 ⇓ i P **P** 07 56 00.8 +1.5
GNI Garni 81.46 328 eP **P** 07 56 00.5 +0.9
GNI pmax pmax
comp=Z,26nm,1.2s
ARR Arges 81.58 344 ⇑ i P **P** 07 56 01.5 +1.4
PERS Pernice 81.61 351 eP **P** 07 56 00.8 +0.7
LOT Lotru 81.65 345 ⇓ i P **P** 07 56 01.1 +0.6
TLB Topalu 81.71 342 ⇑ i P **P** 07 56 01.0 +0.4
TIRR Tirgusor 81.76 341 ⇓ i P **P** 07 56 01.5 +0.6
TIRR Tirgusor 81.76 341 eP **P** 07 56 01.5 +0.6
comp=Z,12nm,1.0s
TIRR Tirgusor 81.76 341 eP **P** 07 56 01.5 +0.6
TIRR pmax pmax
comp=Z,12nm,1.0s
SSF Saint Saulge 81.81 359 eP **P** 07 56 00.9 -0.3
SSF pmax pmax
comp=Z,14nm,1.2s
DAVOX Davos/Dischmat 81.88 355 LR LR 08 31 05.8
comp=Z,86nm,22.0s,baz=80,slow=35
AVF Avril sur Loir 82.09 359 eP **P** 07 56 02.3 -0.3
AVF pmax pmax
comp=Z,13nm,1.1s
CABF La Chapelle 82.21 357 eP **P** 07 56 04.4 +1.0
JAVS Javornik 82.45 352 eP **P** 07 56 00.9 -3.7
VISS Visnje 82.47 351 i P **P** 07 56 00.2 -4.3
WRA Warramunga Arr 82.52 225 P **P** 07 56 03.6 -1.5
comp=Z,2.2nm,0.6s,baz=35,slow=5.8,SNR=4.6
RKT Rikitea 83.27 141 eT T 09 27 42.2
comp=Z,5.0nm,0.2s
LPL La Plagne 83.29 357 eP **P** 07 56 13.1 +4.0
LPL pmax pmax
comp=Z,54nm,2.2s
LPG La Plagne 83.30 357 eP **P** 07 56 10.2 +0.9
LPG pmax pmax
comp=Z,5.0nm,0.9s
DIVS Divibare 83.54 347 eP **P** 07 56 10.4 +0.1
comp=Z,14nm,1.3s
RJF Les Rejaudoux 83.58 0 eP **P** 07 56 10.3 -0.1
RJF pmax pmax
comp=Z,22nm,1.3s
PSI Prapat 83.61 266 P **P** 07 56 10.9 -0.2
comp=Z,9.4nm,0.6s,baz=360,slow=4.2,SNR=11
PSI Prapat 83.61 266 eP **P** 07 56 10.8 -0.2
comp=Z,13nm,0.8s
JTS JuntasAbangare 83.82 81 LR LR 08 34 07.3
comp=Z,47nm,20.3s,baz=12,slow=36
CAF Calviac 83.96 0 eP **P** 07 56 12.4 +0.1
CAF pmax pmax
comp=Z,14nm,1.0s
VIVF Saint-Julien-l 84.00 358 eP **P** 07 56 14.8 +2.2
VTS Vitosha 84.52 345 ⇑ i P **P** 07 56 15.2 -0.2
VTS Vitosha 84.52 345 eP **P** 07 56 14.8 -0.6
comp=Z,6.8nm,0.8s
VTS Vitosha 84.52 345 P **P** 07 56 16.0 +0.6
HYB Hyderabad 84.74 291 i P **P** 07 56 16.0 -0.7
BR131 Keskin Array S 85.09 336 eP **P** 07 56 18.3 0.0
BRTR Keskin Array B 85.09 336 P **P** 07 56 18.3 0.0
comp=Z,8.0nm,0.9s,baz=56,slow=3.1,SNR=38
BRTR LR LR 08 40 11.2
comp=Z,45nm,18.4s,baz=16,slow=40
FRF La Foret Royal 85.24 357 eP **P** 07 56 18.4 -0.4
FRF pmax pmax
comp=Z,17nm,1.1s
PDG Podgorica 85.28 347 ⇑ i P **P** 07 56 18.6 -0.4
TTG Podgorica 85.28 347 eP **P** 07 56 18.7 -0.2
comp=Z,27nm,1.0s
TTG Podgorica 85.28 347 eP **P** 07 56 18.7 -0.2
TTG pmax pmax
comp=Z,27nm,1.0s
ARMA Armidale 85.88 206 eP **P** 07 56 22.3 +0.3
comp=Z,74nm,2.0s
AS01 Alice Springs 85.97 223 eP **P** 07 56 21.9 -0.6
AS31 Alice Springs 85.98 223 eP **P** 07 56 21.8 -0.8
comp=Z,3.5nm,1.3s
ASAR Alice Springs 85.99 223 P **P** 07 56 21.9 -0.6
comp=Z,3.1nm,0.5s,baz=24,slow=5.8,SNR=9.6
ASAR Alice Springs 85.99 223 P **P** 07 56 22.0 -0.6
ASAR pmax pmax
comp=Z,3.0nm,0.5s
PGF Pioggiola 86.15 355 eP **P** 07 56 22.9 -0.5
PGF pmax pmax
comp=Z,32nm,1.2s
PGAV Gavieira, Arco 86.47 8 eLR LR 08 26 28.2
comp=Z,64nm,20.0s
PCAB Cabril 86.75 8 eP **P** 07 56 26.0 -0.3
comp=Z,16nm,1.6s
PVRL Vila Real 87.20 7 eP **P** 07 56 27.9 -0.6
comp=Z,16nm,1.4s
MVO Moncorvo 87.37 7 eLR LR 08 26 36.2
comp=Z,67nm,22.0s
PVIS Viseu 87.75 8 eP **P** 07 56 30.4 -0.8
comp=Z,17nm,1.3s
MTE Manteigas 88.09 7 eLQ LQ 08 18 20.0
MTE eLR LR 08 27 10.6
comp=Z,68nm,22.0s
PCBR Castelo Branco 88.65 7 eP **P** 07 56 34.4 -1.0
comp=Z,18nm,1.6s
TIP Timpagrande 88.80 349 ⇓ i P **P** 07 56 35.5 -0.7
ES19 SONSECA Array 89.02 5 eP **P** 07 56 36.5 -0.8
ESDC Sonseca Array 89.05 5 P **P** 07 56 36.4 -0.9
comp=Z,2.3nm,0.6s,baz=344,slow=4.4,SNR=14
MTP Monte Pirata 89.11 62 eP **P** 07 56 37.6 -0.3
comp=Z,83nm,1.4s
STVI Saint Thomas 89.23 61 eP **P** 07 56 38.5 +0.1
PBAR Barrancos 90.34 7 eP **P** 07 56 42.7 -0.6
comp=Z,26nm,1.8s
STKA Stephens Creek 90.36 214 eP **P** 07 56 42.9 -0.3
comp=Z,12nm,1.9s
STKA Stephens Creek 90.36 214 eP **P** 07 56 42.9 -0.3
STKA pmax pmax
comp=Z,12nm,1.9s
PVAQ Vaqueiros 91.05 8 eLR LR 08 28 37.9
comp=Z,73nm,24.0s
IDI Anoyia 91.31 342 LR LR 08 43 50.7
comp=Z,75nm,18.6s,baz=74,slow=40
PALK Pallekele 91.44 283 LR LR 08 41 26.8
comp=Z,34nm,19.5s,baz=354,slow=38
KEST Kesra 92.91 354 LR LR 08 42 23.9
comp=Z,58nm,19.2s,baz=308,slow=38
MDT Midelt 95.84 6 LR LR 08 41 15.2
comp=Z,31nm,20.6s,baz=2.5,slow=36
RAYN Ar Rayn 96.18 321 eP **P** 07 57 09.7 -0.8
comp=Z,6.0nm,1.0s
RPN Rapa Nui 98.61 123 LR LR 08 32 58.0
comp=Z,112nm,19.8s,baz=24,slow=30
TOA0 Torodi Ar. Sit 115.63 1 ePKPdf **PKPdf** 08 02 23.4 -1.1
TORD Torodi Ar. Bea 115.63 1 PKP **PKPdf** 08 02 23.2 -1.3
comp=Z,1.4nm,0.4s,baz=352,slow=2.2,SNR=32
DBIC Dimbokro 121.75 8 PKP **PKPdf** 08 02 35.7 -0.7
comp=Z,4.9nm,0.4s,baz=355,slow=2.3,SNR=17
DBIC Dimbokro 121.75 8 ePKPdf **PKPdf** 08 02 35.5 -0.9
TSUM Tsumeb 145.56 334 ePKPdf **PKPdf** 08 03 20.4 -0.1
MAW Mawson 146.95 218 PKPbc **PKPbc** 08 03 22.9 -0.4
comp=Z,13nm,1.0s,baz=125,slow=4.7,SNR=9.9
MAW Mawson 146.95 218 ePKP2 **PKPbc** 08 03 23.0 -0.2

LBTB	Lobatse	148.06 317	*e*PKPbc	PKPbc	08 03 28.1	+0.3
LBTB	Lobatse	148.06 317	*e*PKP2	PKPbc	08 03 28.1	+0.3
BOSA	Boshof	151.34 314	PKPbc	PKPbc	08 03 35.5	-0.2
	comp=Z,9.7nm,0.5s,baz=25,slow=2.5,SNR=52					
SYO	Syowa Base	155.09 211⇑	*e*pPKPdf	pPKPdf	08 03 49.2	-0.1

*ISCJB **23** 07:53:40.7±0.6,22°.23S±0°.08×179°.7W±0°.1,h592km, mb4.1/17, Error ellipse: s-maj=13.6km s-min=10.2km az=14.1*
*IDC **23** 07:53:41.5±1.8,22°.03S×179°.64W,h581km±20km, mb3.6/16,mb1 3.7/16,mb1mx3.5/46,mbtmp4.5/16,Error ellipse: s-maj=15.5km s-min=12.7km az=148.0*
ISC 23 07:53:41.8±0.7,22°.2S±0°.1×179°.6W±0°.1,h592km,n25, σ1§41/28,mb4.1/17,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	12.97	268	P	P	07 56 32.7	+2.1
	1.8nm,0.3s,baz=115,slow=20,SNR=17						
URZ	Urewera	16.23	189	P	P	07 57 00.2	-1.2
	1.5nm,0.3s,baz=296,slow=3.2,SNR=12						
URZ				S	S	07 59 40.4	-3.5
	1.0nm,0.3s,baz=254,slow=24,SNR=12						
CTA	Charters Tower	31.92	267	P	P	07 59 20.8	+0.3
	20nm,0.5s,baz=91,slow=10,SNR=34						
PMG	Port Moresby	34.38	286	P	P	07 59 40.6	-0.6
	19nm,0.6s,baz=89,slow=7.1,SNR=6.3						
STKA	Stephens Creek	35.74	246	P	P	07 59 53.2	+0.8
	7.5nm,0.5s,baz=95,slow=11,SNR=28						
ASAR	Alice Springs	42.73	259	P	P	08 00 48.4	-0.1
	22nm,0.8s,baz=97,slow=8.1,SNR=132						
ASAR				ScP	ScP	08 05 24.3	+2.8
	0.5nm,0.7s,baz=80,slow=6.0,SNR=3.5						
ASAR				S	S	08 06 29.4	-1.1
	0.9nm,0.8s,baz=97,slow=17,SNR=4.4						
WRA	Warramunga Arr	42.95	264	P	P	08 00 49.5	-0.8
	6.0nm,0.4s,baz=94,slow=8.0,SNR=218						
WRA				ScP	ScP	08 05 25.1	+2.7
	1.0nm,1.0s,baz=97,slow=3.7,SNR=4.8						
JAY	Jayapura	43.27	291	P	P	08 00 51.6	-1.1
	17nm,0.6s,baz=150,slow=8.5,SNR=8.4						
SIJI	Sorong	52.32	287	P	P	08 01 58.8	-1.3
	58nm,0.7s,baz=89,slow=22,SNR=7.2						
VNDA	Vanda	56.06	185	P	P	08 02 27.3	+2.0
	3.3nm,0.7s,baz=356,slow=6.6,SNR=16						
MJAR	Matsushiro Arr	70.77	325	P	P	08 03 58.5	-1.0
	2.4nm,0.7s,baz=169,slow=6.3,SNR=8.0						
ASAJ	Asahikawa	74.58	333	P	P	08 04 21.2	+0.1
	4.2nm,0.8s,baz=251,slow=16,SNR=4.4						
PETK	Petropavlovsk-	77.59	346	P	P	08 04 36.8	-0.7
	4.8nm,0.6s,baz=116,slow=6.3,SNR=6.3						
USRK	Ussuriysk Ar.	79.60	327	P	P	08 04 48.7	+0.3
	1.4nm,0.6s,baz=354,slow=1.9,SNR=4.6						
NVAR	Mina Array Bea	83.28	44	P	P	08 05 08.1	+0.5
	0.9nm,0.8s,baz=208,slow=8.4,SNR=4.6						
TXAR	Lajitas Array	89.21	58	P	P	08 05 36.5	+0.6
	1.1nm,0.9s,baz=217,slow=6.3,SNR=9.4						
CMAR	Chiang Mai Arr	89.34	290	P	P	08 05 38.0	+1.4
	2.9nm,0.8s,baz=136,slow=3.4,SNR=13						
ILAR	Eielson Array	90.33	13	P	P	08 05 39.1	-1.0
	0.2nm,0.7s,baz=224,slow=5.0,SNR=3.7						
PDAR	Pinedale Array	91.21	44	P	P	08 05 44.8	-0.2
	0.2nm,0.4s,baz=189,slow=3.4,SNR=2.8						
FINES	FINESS Array B	137.00	342	PKP	PKPdf	08 11 57.5	-0.1
	1.4nm,0.8s,baz=66,slow=4.6,SNR=4.3						
AKASG	Malin Array Be	143.78	329	PKP	PKPab	08 12 07.9	-1.6
	2.8nm,0.4s,baz=40,slow=4.4,SNR=15						
BRTR	Keskin Array B	146.87	309	PKPbc	PKPbc	08 12 18.2	-0.7
	1.0nm,0.4s,baz=123,slow=4.6,SNR=4.4						
MMAI	Mount Meron Ar	147.35	297	PKPbc	PKPbc	08 12 20.6	+0.3
	1.2nm,0.3s,baz=65,slow=6.8,SNR=7.1						
GERES	GERESS Array B	151.43	342	PKPbc	PKPbc	08 12 28.8	-0.8
	0.4nm,0.3s,baz=27,slow=2.4,SNR=3.5						
TORD	Torodi Ar. Bea	170.88	188	PKPab	PKPab	08 14 06.4	+0.1
	0.9nm,0.8s,baz=185,slow=3.3,SNR=3.1						

IDC 23 07:55:37.1±3.1,6°.06S×130°.98E,h190km±45km,mb3.1/1, mb1 3.1/4,mb1mx2.9/49,mbtmp3.6/4,Error ellipse: s-maj=111.0km s-min=21.9km az=79.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	5.16	3	P	Pn	07 56 53.6	+0.1
	1.4nm,0.3s,baz=152,slow=11,SNR=6.8						
SIJI				S	Sn	07 57 49.3	-4.3
	1.9nm,0.3s,baz=184,slow=22,SNR=5.8						
WRA	Warramunga Arr	14.18	167	P	Pn	07 58 48.7	-1.1
	0.2nm,0.3s,baz=347,slow=11,SNR=7.5						
ASAR	Alice Springs	17.73	171	P	P	07 59 31.6	+0.9
	0.2nm,0.3s,baz=354,slow=10,SNR=4.9						
MKAR	Makanchi Array	67.98	326	P	P	08 06 15.6	-0.1
	0.2nm,0.4s,baz=117,slow=7.0,SNR=5.0						

MAN 23 08:02:18.9,13°.55N×121°.61E,h5km,mb4.6,ML3.5,MS3.4, 4C,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOAC	Boac	0.24	112	*e*P	Pg	08 02 24.3	+0.6
BOAC				*e*S	Sg	08 02 29.7	+2.8
LQP	Lukban	0.56	353⇑	*e*P	Pg	08 02 29.7	-0.1
TGY	Tagaytay City	0.85	310⇑	*e*P	Pg	08 02 36.0	-0.3
TGY				*i* S	Sn	08 02 50.1	-0.5
GQP	Guinayangan	0.88	66⇑	*i* P	Pn	08 02 40.5	+2.4
GQP				*i* S	Sn	08 02 52.9	+1.6
SJMP	San Jose	1.19	204	*e*P	Pn	08 02 42.2	+0.1
OTRP	Odiongan	1.25	161	*e*P	Pg	08 02 41.7	-1.1
OTRP				*e*S	Sb	08 02 59.3	-0.1
LUBP	Lubang	1.34	278	*e*P	Pn	08 02 42.3	-2.0
LUBP				*e*S	Sn	08 03 03.8	+1.3
BALP	Baler	2.18	359	*e*P	Pn	08 02 55.7	-0.1
BALP				*e*S	Sn	08 03 24.1	+0.9
RCP	Roxas	2.27	151⇑	*e*P	Pg	08 03 02.0	-0.4
RCP				*e*S	Sb	08 03 30.1	+1.4
PVCP	Virac	2.47	89	*e*P	Pn	08 03 01.4	+1.5

MEX 23 08:02:52.8±0.6,15°.61N×93°.53W,h92km±8km,MD3.9, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		0.32	73	*e*P	Pn	08 03 05.0	-1.5
PCIG				*i* S	Sn	08 03 15.4	-1.3
TGIG		1.22	19	*e*P	Pn	08 03 14.4	-0.9
TGIG				*i* S	Sn	08 03 30.3	-2.0
CCIG	Comitan	1.50	63	*e*P	Pn	08 03 17.6	-1.2
CCIG				*i* S	Sn	08 03 36.8	-1.7

*ISCJB **23** 08:08:48.5±0.4,2°.91N±0°.05×97°.85E±0°.04,h103km±3km, mb3.9/10,Error ellipse: s-maj=7.9km s-min=6.9km az=27.8*
*DJA **23** 08:08:50.2±3.0,3°.N±5°.×9°.8E±°,h28km±31km,M4.1/6, MLv4.1/6*
*IDC **23** 08:08:50.7±1.9,3°.08N×98°.02E,h101km±14km,mb3.7/10, mb1 3.7/10,mb1mx3.4/62,mbtmp4.0/10,Error ellipse: s-maj=50.1km s-min=22.2km az=53.0*
ISC 23 08:08:49.2±0.8,2°.91N±0°.05×97°.83E±0°.04,h94km±6km, n26,σ0§96/35,mb3.9/10,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCSI	Kotacane, Aceh	0.61	354	P	Pn	08 09 06.2	+0.8
KCSI				S	Sn	08 09 15.8	-1.6
KCSI	Kotacane, Aceh	0.61	354	P	Pn	08 09 06.2	+0.8
TPTI		0.74	298	P	Pn	08 09 07.5	+1.0
TPTI				S	Sn	08 09 17.7	-1.7
TPTI		0.74	298	P	Pn	08 09 07.4	+1.0
TSI	Tuntungan	0.94	51	P	Pn	08 09 09.9	+1.4
TSI				S	Sn	08 09 22.9	-0.1
PSI	Prapat	1.09	96	P	Pn	08 09 11.6	+1.2
	8.6nm,0.3s,baz=359,slow=3.9,SNR=36						
PSI				S	Sn	08 09 26.9	+0.6
	37nm,0.3s,baz=0.0,slow=14,SNR=30						
SNSI	Sinabang, Aceh	1.58	252	P	Pn	08 09 17.4	+1.2
SNSI				S	Sn	08 09 36.9	+0.2
SNSI	Sinabang, Aceh	1.58	252	P	Pn	08 09 17.1	+0.9
SNSI				S	Sn	08 09 37.2	+0.5
GSI	Gunungsitoli	1.61	189	P	Pn	08 09 16.9	+0.2
GSI				S	Sn	08 09 38.0	+0.6
GSI	Gunungsitoli	1.61	189	P	Pn	08 09 16.8	+0.1
MLSI	Meulaboh, Aceh	1.96	313	P	Pn	08 09 22.6	+1.5
MLSI				S	Sn	08 09 46.3	+0.8
MLSI	Meulaboh, Aceh	1.96	313	P	Pn	08 09 22.4	+1.3
LHMI	Lhok Sumawe	2.47	339	P	Pn	08 09 29.2	+1.4
BSI	Banda Aceh	3.61	316	P	Pn	08 09 44.1	+1.0
BSI	Banda Aceh	3.61	316	P	Pn	08 09 43.3	+0.2
MDSI	Maura Dua	9.70	139	P	Pn	08 11 05.0	-1.0
WRA	Warramunga Arr	42.43	124	P	P	08 16 34.9	-0.2
	0.6nm,0.7s,baz=304,slow=8.9,SNR=6.9						
KSRS	Korea Array	44.09	35	P	P	08 16 47.0	-1.1
	0.6nm,0.5s,baz=216,slow=7.6,SNR=2.6						
SONM	Songino Array	45.36	8	P	P	08 16 57.6	-0.7
	0.7nm,0.4s,baz=194,slow=5.2,SNR=4.2						
MKAR	Makanchi Array	45.76	345	P	P	08 17 00.0	-1.2
	1.1nm,0.7s,baz=163,slow=8.0,SNR=10						
KURBB	Kurchatov Arra	50.27	344	P	P	08 17 35.7	-0.2
	1.2nm,0.5s,baz=162,slow=6.9,SNR=7.3						
KURBB				PcP	PcP	08 18 54.6	+1.1
	0.4nm,0.4s,baz=159,slow=3.2,SNR=2.4						
ZALV	Zalesovo Beam	51.99	350	P	P	08 17 48.6	-0.1
	3.2nm,0.3s,baz=177,slow=6.8,SNR=12						
BVAR	Borovoye Array	54.86	340	P	P	08 18 09.6	-0.2
	1.9nm,0.5s,baz=128,slow=9.3,SNR=5.4						
FINES	FINESS Array B	78.79	332	P	P	08 20 41.9	+0.5
	0.5nm,0.4s,baz=115,slow=6.3,SNR=7.3						
ARCES	ARCESS Array B	81.15	340	P	P	08 20 54.6	+0.5
	2.0nm,1.0s,baz=97,slow=6.5,SNR=5.3						
HFS	Hagfors	84.57	330	P	P	08 21 12.2	+0.3
	1.7nm,0.8s,baz=100,slow=6.7,SNR=1.9						

*ISK **23** 08:31:28.8,39°.27N×34°.96E,h6km,ML2.4/2*
*ISCJB **23** 08:31:29.7±0.6,39°.29N±0°.03×34°.97E±0°.04,h11km±5km, Error ellipse: s-maj=5.4km s-min=5.0km az=164.8*
*CSEM **23** 08:31:29.3±0.2,39°.28N×34°.96E,h5km,ML2.4,Error ellipse: s-maj=5.9km s-min=5.3km az=162.0*
*DDA **23** 08:31:30.0,39°.32N×35°.00E,h7km,Ml2.6*
ISC 23 08:31:29.4±1.2,39°.28N±0°.03×34°.94E±0°.03,h6km±13km, n23,σ0§31/35,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOZ	Yozgat	0.46	39	PG	Pg	08 31 38.6	+0.3
YOZ				SG	Sg	08 31 44.9	+0.5
YOZ	Yozgat	0.46	39	*e*Pg	Pg	08 31 38.6	+0.3
YOZ				*e*Sg	Sg	08 31 44.9	+0.5
AVNS	Nevsehir-Avano	0.48	189	*i* P	Pb	08 31 40.4	0.0
AVNS				*i* S	Sb	08 31 48.1	+0.4
AVNS	Nevsehir-Avano	0.48	189	P	Pb	08 31 40.4	0.0
AVNS				S	Sb	08 31 48.1	+0.4
CDAG	Cicekdag	0.56	308	*i* P	Pb	08 31 41.6	-0.1
CDAG				*i* S	Sb	08 31 49.6	-0.4
CDAG	Cicekdag	0.56	308	P	Pb	08 31 41.6	-0.1
CDAG				S	Sb	08 31 49.6	-0.4
BNN	Bunyan	0.82	121	PG	Pg	08 31 44.9	-0.3
BNN				SG	Sg	08 31 55.6	-0.3
BNN	Bunyan	0.82	121	*e*Pg	Pg	08 31 44.9	-0.3
BNN				*e*Sg	Sg	08 31 55.6	-0.3
CORM	Corum	0.93	345	PG	Pg	08 31 46.8	-0.4
CORM	Corum	0.93	345	*e*Pg	Pg	08 31 46.8	-0.4
CUSAR	Sarkisla-SIVAS	1.02	82	*i* P	Pg	08 31 48.6	-0.3
CUSAR				*i* S	Sb	08 32 03.4	+0.2
CUSAR	Sarkisla-SIVAS	1.02	82	P	Pg	08 31 48.6	-0.3
CUSAR				S	Sb	08 32 03.4	+0.2
GULA	Gulagac	1.09	211	PN	Pg	08 31 50.1	-0.2
GULA				SN	Sb	08 32 05.7	+0.5
GULA	Gulagac	1.09	211	*e*Pn	Pg	08 31 50.1	-0.2
GULA				*e*Sn	Sb	08 32 05.7	+0.5
SERE	Sereflikochisa	1.12	253	PN	Pg	08 31 50.9	-0.1
SERE	Sereflikochisa	1.12	253	*e*Pn	Pg	08 31 50.9	-0.1
SARI	SarD1z-Kayseri	1.45	127	PN	Pn	08 31 56.0	-0.3
KULU	Kulu	1.53	262	PN	Pn	08 31 57.4	+0.1
KULU	Kulu	1.53	262	*e*Pn	Pn	08 31 57.4	+0.1
SULT	Sultanhani-AKS	1.56	226	PN	Pn	08 31 57.9	+0.2
SULT	Sultanhani-AKS	1.56	226	*e*Pn	Pn	08 31 57.9	+0.2
SVSK	Karacayir	1.71	68	PN	Pn	08 31 59.7	0.0
SVSK	Karacayir	1.71	68	*e*Pn	Pn	08 31 59.7	0.0

IDC 23 08:32:24.4±12.0,17°.94S×178°.53W,h564km±166km, mb2.6/4,mb1 3.0/4,mbmx2.7/50,mbtmp3.5/4,Error ellipse: s-maj=231.8km s-min=39.7km az=165.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	44.51	260	P	P	08 39 46.4	-0.3
	0.2nm,0.4s,baz=96,slow=7.4,SNR=5.6						
ASAR	Alice Springs	44.67	254	P	P	08 39 47.8	-0.1
	0.5nm,0.5s,baz=90,slow=8.1,SNR=9.7						
TXAR	Lajitas Array	86.11	58	P	P	08 44 07.0	+0.4
	0.3nm,0.7s,baz=205,slow=5.5,SNR=4.4						
PDAR	Pinedale Array	87.46	43	P	P	08 44 12.1	-0.7
	0.3nm,0.6s,baz=252,slow=1.8,SNR=3.5						
MMAI	Mount Meron Ar	146.06	303	PKPbc	PKPbc	08 51 01.6	-0.6
	0.4nm,0.4s,baz=98,slow=4.4,SNR=1.8						
GERES	GERESS Array B	147.62	345	PKPbc	PKPbc	08 51 05.1	-0.8
	0.5nm,0.4s,baz=34,slow=3.7,SNR=2.8						

*SKO **23** 08:58:47.6,41°.89N×23°.19E,h15km,M2.8,ML3.3*
*CSEM **23** 08:58:48.9±0.1,41°.87N×23°.23E,h2km,ML3.2,Error ellipse: s-maj=2.3km s-min=1.5km az=83.0*
*ATH **23** 08:58:49.5,41°.82N×23°.26E,h24km±1km,ML3.2/6,Error ellipse: s-maj=3.0km s-min=1.0km az=175.0*
*THE **23** 08:58:49.1,41°.88N×23°.22E,h1km±1km,ML3.2/13,Error ellipse: s-maj=1.6km s-min=0.6km az=318.0*
*BEO **23** 08:58:49.8±0.3,41°.89N×23°.25E,h0km*
ISC 23 08:58:48.5±1.1,41°.88N±0°.01×23°.22E±0°.01,h3km±9km, n185,σ1§14/258,21C-22D,Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NVR	Nevrokopi	0.71	137	P	Pg	08 59 02.4	+0.3
NVR				S	Sg	08 59 11.7	+0.3
NVR				AML	AML	08 59 19.3	
	comp=N,4834μm,0.3s						
NVR				AML	AML	08 59 20.6	
	comp=E,4272μm,0.4s						
NVR	Nevrokopi	0.71	137	P	Pg	08 59 02.5	+0.3
NVR				S	Sg	08 59 12.1	+0.7
NVR	Nevrokopi	0.71	137	P	Pg	08 59 02.5	+0.3
NVR				S	Sg	08 59 11.9	+0.5
VTS	Vitosha	0.71	359	*e*Pg	Pg	08 59 02.3	+0.1
VTS				*e*Sg	Sg	08 59 12.2	+0.7
VTS	Vitosha	0.71	359	⇓ *i*P	Pg	08 59 02.2	+0.1
VTS				S	Sg	08 59 11.8	+0.3
VTS	Vitosha	0.71	359	P	Pg	08 59 02.2	+0.1
VTS				S	Sg	08 59 11.7	+0.3
VTS	Vitosha	0.71	359	*e*Pg	Pg	08 59 02.3	+0.1
VTS				S	Sg	08 59 11.7	+0.3
VTS				*e*Sg	Sg	08 59 12.2	+0.7
VAY	Valandovo	0.74	221	*e*Pg	Pg	08 59 03.4	+0.8
VAY				*e*Sg	Sb	08 59 13.8	-0.6
VAY	Valandovo	0.74	221	P	Pg	08 59 03.4	+0.8
VAY				S	Sb	08 59 13.8	-0.6
VAY	Valandovo	0.74	221	⇑ *i*Pg	Pg	08 59 03.3	+0.8
VAY				*i* Sg	Sb	08 59 13.9	-0.5
VAY				*e*Lg	Lg	08 59 14.0	
	comp=E,1μm,0.4s						
VAY				*e*Lg	Lg	08 59 14.0	
	comp=N,1μm,0.5s						
VAY	Valandovo	0.74	221	P	Pg	08 59 03.4	+0.8
KNT	Kendrikon	0.75	199	P	Pg	08 59 03.0	+0.1
KNT				S	Sg	08 59 12.5	-0.2
KNT	Kendrikon	0.75	199	P	Pg	08 59 03.2	+0.3
KNT				S	Sb	08 59 14.3	-0.6
KNT	Kendrikon	0.75	199	P	Pg	08 59 03.3	+0.3
KNT				S	Sg	08 59 13.2	+0.5
STIP	Stip	0.79	257	⇑ *i*Pg	Pg	08 58 59.3	-4.3
STIP				*i* Sg	Sg	08 59 07.4	-6.5
SRS	Serrai	0.81	160	P	Pg	08 59 04.4	+0.4
SRS				S	Sb	08 59 15.9	-0.5
SRS				AML	AML	08 59 22.5	
	comp=N,3468μm,0.4s						
SRS				AML	AML	08 59 22.7	
	comp=E,3555μm,0.2s						
SRS	Serrai	0.81	160	P	Pg	08 59 04.2	+0.2
SRS				S	Sb	08 59 16.1	-0.4
SRS	Serrai	0.81	160	P	Pg	08 59 04.2	+0.2
SRS				S	Sg	08 59 15.5	+1.0
SOH	Sokhos	1.06	174	P	Pg	08 59 09.1	+0.4
SOH				S	Sb	08 59 23.9	+0.1
SOH	Sokhos	1.06	174	P	Pg	08 59 08.9	+0.2
SOH				S	Sb	08 59 23.6	-0.1
SOH	Sokhos	1.06	174	P	Pg	08 59 09.0	+0.2
SOH				S	Sb	08 59 23.4	-0.3
GRG	Griva	1.11	214	P	Pb	08 59 09.9	-0.3
GRG				S	Sg	08 59 24.5	+0.5
GRG	Griva	1.11	214	P	Pb	08 59 09.7	-0.6
GRG				S	Sg	08 59 23.7	-0.3
GRG				AML	AML	08 59 25.1	
	comp=N,2852μm,0.4s						
GRG				AML	AML	08 59 32.3	
	comp=E,2135μm,0.7s						
GRG	Griva	1.11	214	P	Pb	08 59 09.8	-0.4
GRG				S	Sb	08 59 24.9	-0.1
GRG	Griva	1.11	214	P	Pb	08 59 09.9	-0.3
GRG				S	Sg	08 59 24.5	+0.5
PLD	Plovdiv	1.13	78	*e*Pg	Pb	08 59 09.8	-0.8
PLD				*e*Sg	Sg	08 59 25.6	+0.8
PLD	Plovdiv	1.13	78	P	Pb	08 59 10.5	-0.1
PLD				S	Sn	08 59 27.1	-0.1
PLD	Plovdiv	1.13	78	*e*Pg	Pb	08 59 09.8	-0.8
PLD				*e*Sg	Sg	08 59 25.6	+0.8
THE	Thessaloniki	1.26	189	P	Pg	08 59 13.2	+0.6
THE				S	Sb	08 59 28.8	-0.6
THE				AML	AML	08 59 32.7	
	comp=E,2088μm,0.6s						
THE				AML	AML	08 59 33.4	
	comp=N,2040μm,0.5s						
THE	Thessaloniki	1.26	189	P	Pn	08 59 12.6	-0.3
THE				S	Sn	08 59 30.4	+0.1
THE	Thessaloniki	1.26	189	P	Pn	08 59 12.6	-0.3
THE				S	Sb	08 59 29.1	-0.3
HORT	Hortiatis	1.28	184	P	Pg	08 59 13.7	+0.7
HORT				S	Sb	08 59 28.5	-1.6
HORT	Hortiatis	1.28	184	P	Pg	08 59 13.8	+0.7
HORT				S	Sb	08 59 30.0	-0.1
HORT				AML	AML	08 59 34.0	
	comp=E,1654μm,0.3s						
HORT				AML	AML	08 59 34.2	
	comp=N,2090μm,0.6s						
HORT	Hortiatis	1.28	184	P	Pn	08 59 13.0	-0.3
HORT				S	Sn	08 59 30.7	-0.3
HORT	Hortiatis	1.28	184	P	Pb	08 59 13.4	+0.1
HORT				S	Sb	08 59 30.0	-0.1
KVLA	Kavala	1.29	137	P	Pn	08 59 13.0	-0.3
KVLA	Kavala	1.29	137	P	Pn	08 59 12.9	-0.3
SKO	Skopje	1.33	275	P	Pn	08 59 13.1	-0.8
SKO	Skopje	1.33	275	*i* Pg	Pn	08 59 13.2	-0.7
SKO				*e*Sg	Sg	08 59 33.4	+2.2
SKO	Skopje	1.33	275	P	Pn	08 59 13.1	-0.8
BARS	Barje	1.40	313	*e*Pg	Pb	08 59 15.1	-0.2
BARS				*e*Sn	Sg	08 59 35.4	+1.9
BARS	Barje	1.40	313	*e*Pg	Pb	08 59 15.1	-0.2
BARS				*e*Sn	Sg	08 59 35.4	+1.9
ZAPS	Zavoj	1.46	343	*e*Pn	Pb	08 59 16.7	+0.4
ZAPS				*e*Sn	Sg	08 59 36.4	+1.0
PLG	Polygyros	1.51	173	P	Pb	08 59 17.0	-0.2
PLG	Polygyros	1.51	173	P	Pb	08 59 16.8	-0.4
PLG				S	Sg	08 59 37.4	+0.4
PLG	Polygyros	1.51	173	P	Pb	08 59 16.7	-0.4
PLG				S	Sg	08 59 37.4	+0.4
KRUS	Krusevo	1.56	252	*i* Pg	Pn	08 59 17.5	+0.3
KRUS				*e*Sg	Sb	08 59 38.4	+0.2
OUR	Ouranopolis	1.65	159	P	Pn	08 59 18.1	-0.1
OUR	Ouranopolis	1.65	159	P	Pn	08 59 18.7	+0.5
OUR	Ouranopolis	1.65	159	P	Pn	08 59 18.5	+0.3
OUR				S	Sg	08 59 41.5	+0.2
OUR	Ouranopolis	1.65	159	P	Pn	08 59 18.5	+0.3
OUR				S	Sg	08 59 41.5	+0.2
KDZ	Kurdzhali	1.66	97	P	Pn	08 59 18.0	-0.5
BIA	Bitola	1.66	240	*i* Pg	Pb	08 59 20.4	+0.3
BIA				*e*Sg	Sg	08 59 43.0	+1.2
FNA	Florina	1.77	232	P	Pn	08 59 19.6	-0.4
FNA	Florina	1.77	232	P	Pb	08 59 21.1	-0.4
FNA	Florina	1.77	232	P	Pn	08 59 20.6	+0.6
FNA				S	Sb	08 59 43.2	-0.9
FNA	Florina	1.77	232	P	Pn	08 59 20.6	+0.6
FNA				S	Sb	08 59 43.2	-0.9
LIT	Litokhoron	1.86	198	P	Pn	08 59 20.4	-0.8
LIT	Litokhoron	1.86	198	P	Pn	08 59 20.9	-0.3
LIT	Litokhoron	1.86	198	P	Pn	08 59 20.9	-0.3
RDO	Rodhopi	1.89	112	P	Pb	08 59 22.8	-0.7
RDO	Rodhopi	1.89	112	P	Pn	08 59 22.3	+0.7
RDO				S	Sn	08 59 43.4	-2.5
RDO				AML	AML	08 59 53.2	
	comp=N,1892μm,0.3s						
RDO				AML	AML	08 59 58.1	
	comp=E,1742μm,0.3s						
RDO	Rodhopi	1.89	112	P	Pn	08 59 21.5	-0.1
RDO				S	Sb	08 59 47.8	+0.3
RDO	Rodhopi	1.89	112	P	Pn	08 59 22.0	+0.4
RDO				S	Sb	08 59 47.8	+0.3
KZN	Kozani	1.91	215	P	Pn	08 59 21.9	-0.1
KZN	Kozani	1.91	215	P	Pn	08 59 22.5	+0.5
KZN	Kozani	1.91	215	P	Pn	08 59 22.5	+0.5
OHR	Ohrid	1.97	248	*e*Pn	Pn	08 59 23.4	+0.6
OHR				*e*Sg	Sg	08 59 51.6	-0.2
OHR				*e*Lg	Lg	08 59 54.1	
	comp=N,191nm,0.9s						
OHR				*e*Lg	Lg	08 59 54.6	
	comp=E,100nm,0.7s						
PAIG	Paliouri	1.98	170	P	Pn	08 59 23.3	+0.4
PAIG	Pali

SRE	Strehaia	2.78	360		S		Sg	09 00 19.6	+1.7
SRE	Strehaia	2.78	360	⇓	iP		Pn	08 59 34.6	+0.7
AGG	Agios Georgios	2.93	194		eP		Pn	08 59 35.5	-0.4
AGG	Agios Georgios	2.93	194		P		Pn	08 59 35.2	-0.8
AGG	Agios Georgios	2.93	194		P		Pn	08 59 35.6	-0.4
AGG	Agios Georgios	2.93	194		P		Pn	08 59 35.9	-0.1
HUMR	Humele	2.95	25	⇑	iP		Pn	08 59 36.1	0.0
HUMR	Humele	2.95	25	⇑	iP		Pn	08 59 36.1	0.0
HERR	Herculane	3.06	349	⇑	iP		Pn	08 59 37.8	+0.1
HERR	Herculane	3.06	349	⇑	iP		Pn	08 59 37.8	+0.1
LPK	Lapseki	3.07	118		eP		Pn	08 59 38.3	+0.5
SGRR	Singureni	3.09	40	⇓	iP		Pb	08 59 43.7	-0.4
SGRR	Singureni	3.09	40		S		Sg	09 00 27.6	-0.2
MDVR	Moldovita	3.10	340	⇑	iP		Pn	08 59 38.5	+0.1
MDVR	Moldovita	3.10	340	⇑	iP		Pn	08 59 38.5	+0.1
MDVR					S		Sn	09 00 16.1	+0.1
TRUS	Trudelj	3.12	320		ePn		Pn	08 59 40.2	+1.6
TRUS					eSn		Sn	09 00 18.4	+2.1
TRUS	Trudelj	3.12	320		ePn		Pn	08 59 40.2	+1.6
TRUS					eSn		Sn	09 00 18.4	+2.1
EZN	Ezine	3.12	130		eP		Pn	08 59 38.7	+0.2
RKY	Sarkoy-Tekirda	3.21	110		eP		Pn	08 59 39.2	-0.6
DIVS	Divibare	3.25	314		ePn		Pn	08 59 40.4	+0.1
DIVS					eSn		Sn	09 00 21.6	+2.1
DIVS	Divibare	3.25	314		ePn		Pn	08 59 40.4	+0.1
DIVS					eSn		Sn	09 00 21.6	+2.1
BBLS	Lazići	3.44	307		ePn		Pn	08 59 44.6	+1.7
BBLS					eSn		Sn	09 00 25.6	+1.4
BBLS	Lazići	3.44	307		ePn		Pn	08 59 44.6	+1.7
BBLS					eSn		Sn	09 00 25.6	+1.4
LOT	Lotru	3.59	6	⇑	iP		Pn	08 59 45.1	0.0
LOT	Lotru	3.59	6	⇑	iP		Pn	08 59 45.1	0.0
LOT					S		Sn	09 00 26.0	-2.1
ARR	Arges	3.64	16	⇓	iP		Pn	08 59 46.1	+0.4
ARR	Arges	3.64	16	⇓	iP		Pn	08 59 46.1	+0.4
ARR					S		Sn	09 00 28.7	-0.4
SBT3	Marmara-Eregli	3.71	104		eP		Pn	08 59 46.4	-0.1
TEKS	Tekeris	3.79	316		ePn		Pn	08 59 49.1	+1.3
TEKS	Tekeris	3.79	316		ePn		Pn	08 59 49.1	+1.3
VOIR		3.80	20	⇓	iP		Pn	08 59 48.8	+0.9
VOIR		3.80	20	⇓	iP		Pn	08 59 48.8	+0.9
EDC	Edincik	3.83	112		eP		Pn	08 59 48.0	-0.2
BZS	Buzias	3.91	343		ePn		Pn	08 59 50.3	+0.9
BZS					eSg		Sg	09 00 53.3	-0.9
BZS	Buzias	3.91	343	⇑	iP		Pn	08 59 49.3	-0.1
BZS	Buzias	3.91	343		S		Sg	09 00 51.8	-2.4
BZS	Buzias	3.91	343	⇑	iP		Pn	08 59 49.3	-0.1
BZS	Buzias	3.91	343		ePn		Pn	08 59 50.3	+0.9
BZS					eSg		Sg	09 00 53.3	-0.9
ICOR	Ion Corvin	4.04	55	⇑	iP		Pb	09 00 01.3	+1.1
ICOR	Ion Corvin	4.04	55		S		Sg	09 00 56.4	-1.7
ISR	Istrita	4.04	36	⇓	iP		Pn	08 59 52.3	+1.0
ISR	Istrita	4.04	36		S		Sg	09 00 59.9	+1.6
ISR	Istrita	4.04	36	⇓	iP		Pn	08 59 52.3	+1.0
CHOS	Chios island	4.11	147		eP		Pn	08 59 51.9	-0.3
CHOS	Chios island	4.11	147		P		Pn	08 59 51.5	-0.7
CHOS	Chios island	4.11	147		P		Pn	08 59 52.1	-0.1
MLR	Muntele Rosu	4.12	28	⇓	iP		Pn	08 59 54.0	+1.6
MLR	Muntele Rosu	4.12	28	⇓	iP		Pn	08 59 54.0	+1.6
URLA	Izmir	4.36	143		eP		Pn	08 59 54.9	-0.7
DOPR	Dopca	4.38	20	⇑	iP		Pn	08 59 56.7	+0.9
DOPR	Dopca	4.38	20	⇑	iP		Pn	08 59 56.7	+0.9
KLYT	Kilyos	4.41	96		eP		Pn	08 59 57.3	+1.0
HARR	Harsova	4.44	49	⇑	iP		Pn	08 59 57.4	+0.7
HARR	Harsova	4.44	49	⇑	iP		Pn	08 59 57.4	+0.7
TLB	Topalu	4.44	51	⇑	iP		Pn	08 59 57.6	+0.9
TLB	Topalu	4.44	51		S		Sg	09 01 07.6	-3.5
TLB	Topalu	4.44	51	⇑	iP		Pn	08 59 57.6	+0.9
TIRR	Tirgusor	4.59	54	⇓	iP		Pn	08 59 59.2	+0.5
TIRR	Tirgusor	4.59	54		S		Sb	09 01 09.4	+4.1
TIRR	Tirgusor	4.59	54	⇓	iP		Pn	08 59 59.2	+0.5
PLOR	Plostina	4.68	31	⇓	iP		Pn	09 00 01.8	+1.8
PLOR	Plostina	4.68	31	⇓	iP		Pn	09 00 01.8	+1.8
VRI	Vrincioaia	4.73	31	⇓	iP		Pn	09 00 02.4	+1.8
VRI	Vrincioaia	4.73	31	⇓	iP		Pn	09 00 02.4	+1.8
CFR	Carcaliu	4.86	46	⇑	iP		Pn	09 00 03.0	+0.5
CFR	Carcaliu	4.86	46		S		Sg	09 01 19.7	-4.9
CFR	Carcaliu	4.86	46	⇑	iP		Pn	09 00 03.0	+0.5
SILT	Sile	4.88	96		eP		Pn	09 00 04.2	+1.6
DRGR		4.93	356	⇓	iP		Pn	09 00 03.0	-0.4
DRGR		4.93	356		S		Sg	09 01 21.2	-5.5
DRGR		4.93	356	⇓	iP		Pn	09 00 03.0	-0.4
BURAR	Bucovina Array	5.91	13	⇓	iP		Pn	09 00 18.1	+1.2
BURAR	Bucovina Array	5.91	13	⇓	iP		Pn	09 00 18.1	+1.2
UDBI	Udbina	6.06	298		ePn		Pn	09 00 22.7	+3.8
VYHS	Vyhne	7.30	336		ePN		Pn	09 00 44.3	+8.3

*ISCJB **23** 09:03:24.5±0.6, 27°.90N±0°.06×53°.24E±0°.06, h10km, mb3.8/7, MS4.1/1, Error ellipse: s-maj=10.9km s-min=5.3km az=35.8*
*CSEM **23** 09:03:25.9, 28°.09N×53°.34E, h6km, ML3.2*
*TEH **23** 09:03:25.0, 27°.99N×53°.28E, h10km, ML3.2*
*IDC **23** 09:03:25.2±1.3, 28°.13N×53°.23E, h0km, mb3.9/7, mb1 3.8/9, mb1mx3.5/82, mbtmp3.8/9, ML3.3/1, MS4.2/1, Ms1 4.2/1, ms1mx2.3/66, Error ellipse: s-maj=30.0km s-min=22.2km az=165.0*

ISC 23 09:03:26.1±0.8, 27°.96N±0°.06×53°.26E±0°.05, h10km, n29, σ1s79/23, mb3.9/7, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GHIR	Ghir-Karzin	0.40	323	ePg	Pg	09 03 33.3	-0.8
GHIR	Ghir-Karzin	0.40	323	eP	Pg	09 03 33.3	-0.8
JHRM	Jahrom	0.61	27	ePg	Pb	09 03 37.2	-1.7
JHRM				e		09 03 54.8	
	comp=Z,99nm,0.2s						
SHI	Shiraz	1.80	339	e		09 04 08.8	
	comp=Z,2μm,0.2s						
IPAR	Pars	1.88	354	ePn	Pg	09 04 01.0	-1.3
IPAR				e		09 04 30.4	
	comp=E,5μm,0.4s						
IPAR				e		09 04 34.5	
	comp=N,5μm,0.4s						
IPAR				e		09 04 39.9	
	comp=Z,3μm,0.4s						
AHBU	AHRAM	1.95	298	ePg	Pg	09 04 03.2	-0.4
AHBU				eSg	Sg	09 04 30.6	+1.7
IKAZ	Kazeroun	2.20	326	ePn	Pb	09 04 04.0	-2.2
IKAZ				e		09 04 40.2	
	comp=Z,3μm,0.3s						
BNDS	Bandar-Abbas	2.64	102	ePn	Pb	09 04 10.6	-3.0
BNDS	Bandar-Abbas	2.64	102	ePn	Pb	09 04 10.6	-3.0
GENO	Geno	2.64	102	e		09 05 08.7	
	comp=Z,99nm,0.4s						
NIAN	Nian	3.19	96	e		09 05 27.5	
	comp=Z,99nm,0.3s						
NGRK	Negar Kerman	3.47	60	e		09 05 02.2	
	comp=Z,99nm,0.0s						
IRAM	Ramesheh	3.91	349	ePn	Pn	09 04 28.5	+2.1
IRAM				e		09 04 45.7	
	comp=Z,217nm,0.2s						
IRAM				e		09 05 18.5	
	comp=E,314nm,0.3s						
IRAM				e		09 05 20.9	
	comp=N,282nm,0.2s						
ISAD	Sadrabad	3.96	5	e	Pb	09 04 33.5	-2.6
	comp=Z,517nm,0.2s						
ISAD				e		09 05 16.9	
	comp=N,506nm,0.1s						
ICHK	Chekchek	4.38	13	e	Pg	09 04 52.1	+2.1
	comp=N,360nm,0.3s						
IZEF	Zefreh	4.98	351	e	Pg	09 05 05.7	+4.2
	comp=Z,161nm,0.3s						
IZEF				e		09 05 11.1	
	comp=E,107nm,0.3s						
IZEF				e		09 06 17.5	
	comp=N,125nm,0.3s						
IKLH	Kolahrood	5.53	345	e		09 06 01.1	
	comp=N,215nm,0.3s						
IKLH				e		09 06 08.9	
	comp=Z,160nm,0.3s						
WSAR	Wadi Sarin	6.75	133	Pn	Pn	09 05 08.3	+2.9
	comp=Z,0.6nm,0.3s,baz=321,slow=6.5,SNR=13						
WSAR				Sn	Sn	09 06 22.4	0.0
	comp=Z,0.5nm,0.3s,baz=58,slow=13,SNR=1.6						
ASAO	Ashtian	7.12	338	ePn	Pn	09 05 11.9	+1.2
ASAO	Ashtian	7.12	338	ePn	Pn	09 05 11.9	+1.2
BRTR	Keskin Array B	20.04	311	P	Pn	09 07 59.2	-1.9
	baz=141,slow=12,SNR=1.0						
MLR	Muntele Rosu	27.83	316	LR	LR	09 22 14.6	
	comp=Z,473nm,20.0s,baz=194,slow=41						
MKAR	Makanchi Array	29.50	43	P	P	09 09 30.5	0.0
	comp=Z,0.5nm,0.6s,baz=229,slow=9.6,SNR=3.8						
KURBB	Kurchatov Arra	29.65	33	P	P	09 09 31.3	-0.4
	comp=Z,0.3nm,0.6s,baz=232,slow=8.9,SNR=3.5						
ZALV	Zalesovo Beam	34.74	33	P	P	09 10 14.8	-1.5
	comp=Z,1.2nm,0.6s,baz=250,slow=9.7,SNR=5.6						
FINES	FINESS Array B	38.08	339	P	P	09 10 44.6	-0.1
	comp=Z,1.2nm,0.5s,baz=148,slow=8.2,SNR=8.8						
HFS	Hagfors	41.83	331	P	P	09 11 14.3	-1.6
	comp=Z,2.0nm,0.8s,baz=111,slow=7.9,SNR=4.0						
TORD	Torodi Ar. Bea	50.13	264	P	P	09 12 22.1	+0.1
	comp=Z,0.7nm,0.5s,baz=53,slow=7.3,SNR=4.6						
KOWA	Kowa	54.61	268	P	P	09 12 55.5	+0.3
	comp=Z,1.4nm,0.6s,baz=69,slow=8.6,SNR=4.2						

IDC 23 09:04:31.6±1.6, 0°.06N×125°.96E, h0km, mb3.5/4, mb1 3.8/4, mb1mx3.5/70, mbtmp3.6/4, Error ellipse: s-maj=169.6km s-min=22.3km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.51	158	P	P	09 09 22.6	+0.3
	1.4nm,0.4s,baz=337,slow=10,SNR=23						
ASAR	Alice Springs	24.82	162	P	P	09 09 55.5	-0.2
	0.5nm,0.3s,baz=343,slow=9.1,SNR=13						
MKAR	Makanchi Array	60.15	327	P	P	09 14 41.6	+0.4
	0.2nm,0.4s,baz=134,slow=8.2,SNR=5.4						
KURBB	Kurchatov Arra	64.42	329	P	P	09 15 09.1	-0.6
	0.2nm,0.3s,baz=120,slow=5.5,SNR=1.8						

KRSC 23 09:08:59.7±2.9, 49°.48N×157°.21E, h46km±46km, ML4.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.40	330	eP	Pn	09 09 22.0	-0.7
SKR				eS	Sn	09 09 37.1	-2.9
PAU	Pauzhetka	2.01	353	eP	Pn	09 09 33.2	+2.1
PAU				S	Sn	09 09 56.8	+1.8
KDTR	Khodutka, Kamc	2.40	13	P	Pn	09 09 40.4	+4.0
KDTR				S	Sn	09 10 09.0	+4.4
ASAK	Asacha	2.94	8	eP	Pn	09 09 47.8	+3.8
ASAK				S	Sn	09 10 22.8	+4.7
MTVR	Mutnovka	3.07	11	P	Pn	09 09 49.9	+4.1
MTVR				eS	Sn	09 10 25.9	+4.5
RUS	Russkaya	3.07	15	eP	Pn	09 09 49.5	+3.8
RUS				eS	Sn	09 10 24.9	+3.8
KRMR	Karymshinskiy	3.41	9	S	Sn	09 10 35.4	+6.0
APC	Apacha	3.45	359	eP	Pn	09 09 53.8	+2.9
PET	Petropavlovsk	3.67	14	S	Sn	09 10 40.6	+4.9
DALK	Dalny	3.69	15	eP	Pn	09 09 58.5	+4.4
DALK				eS	Sn	09 10 41.1	+4.8
UGLR	Uglovaya	3.87	14	P	Pn	09 10 01.6	+4.8
UGLR				eS	Sn	09 10 46.7	+5.7
AVH	Avacha	3.91	14	eP	Pn	09 10 02.9	+5.6
KOK	Koryaka	3.92	13	P	Pn	09 10 02.1	+4.6
KOK				eS	Sn	09 10 47.9	+5.7
SDLR	Sedlovina	3.95	15	P	Pn	09 10 02.3	+4.5
SDLR				eS	Sn	09 10 47.5	+4.6
KRER	Koryakskii	3.95	13	P	Pn	09 10 02.8	+4.9
KRER				eS	Sn	09 10 48.9	+5.8
SPN	Mys Shipunski	4.03	25	P	Pn	09 10 04.1	+5.3
SPN				eS	Sn	09 10 49.9	+5.1
GNL	Ganaly	4.25	6	eP	Pn	09 10 05.8	+3.9
MKZ	Mys Kozlova	5.80	27	P	Pn	09 10 26.8	+3.7
MKZ				eS	Sn	09 11 28.9	+0.7
KZV	Kizimen	5.95	17	S	Sn	09 11 37.6	+5.4
KBTR	Krutoberegovo	7.55	25	P	Pn	09 10 49.9	+2.9
BKI	Bering	7.85	40	eS	Sn	09 12 20.0	+1.5

IDC 23 09:17:47.9±2.9, 32°.90S×178°.51W, h0km, mb3.9/2, mb1 4.2/3, mb1mx3.7/46, mbtmp4.0/3, ML4.0/1, MS3.1/1, Ms1 3.1/1, ms1mx2.4/41, Error ellipse: s-maj=69.3km s-min=44.2km az=125.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	6.43	212	Pn	Pn	09 19 23.1	-0.7
	3.5nm,0.3s,baz=72,slow=20,SNR=22						
URZ				Sn	Sn	09 20 33.6	-4.3
	2.6nm,0.3s,baz=277,slow=3.3,SNR=7.6						
DZM	Mont Dzumac	17.14	305	LR	LR	09 27 29.9	
	comp=Z,62nm,18.0s,baz=204,slow=34						
ASAR	Alice Springs	42.60	270	P	P	09 25 45.7	-0.3
	1.1nm,0.8s,baz=119,slow=7.7,SNR=12						
WRA	Warramunga Arr	43.81	275	P	P	09 25 56.0	+0.2
	1.1nm,0.5s,baz=114,slow=7.7,SNR=27						
FINES	FINESS Array B	147.31	338	PKPbc	PKPbc	09 37 31.9	-0.7
	2.0nm,0.8s,baz=56,slow=3.5,SNR=9.1						

*IDC **23** 09:25:00.9±2.1, 20°.77S×178°.53W, h564km±22km, mb3.5/19, mb1 3.6/20, mb1mx3.5/49, mbtmp4.4/20, Error ellipse: s-maj=16.2km s-min=9.8km az=155.0*
*ISCJB **23** 09:25:01.1±0.6, 20°.8S±0°.1×178°.59W±0°.10, h579km, mb3.8/19, Error ellipse: s-maj=18.9km s-min=10.3km az=156.4*

ISC 23 09:25:02.0±0.5, 20°.8S±0°.1×178°.6W±0°.1, h579km, n75, σ1s02/80, mb3.9/19, 9C-8D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.03	262	P	P	09 27 59.1	-2.6
	1.0nm,0.3s,baz=85,slow=17,SNR=12						
CTA	Charters Tower	32.95	265	P	P	09 30 49.9	-0.3
	4.6nm,0.5s,baz=108,slow=10,SNR=5.3						
JAY	Jayapura	43.64	289	P	P	09 32 16.5	-0.2
	6.6nm,0.6s,baz=96,slow=4.0,SNR=4.7						
ASAR	Alice Springs	43.95	257	P	P	09 32 18.9	-0.1
	2.1nm,0.5s,baz=94,slow=8.0,SNR=44						
ASAR				PcP	PcP	09 33 52.5	+0.5
	1.7nm,0.6s,baz=104,slow=3.8,SNR=12						
ASAR				ScP	ScP	09 36 54.3	+5.2
	0.6nm,0.9s,baz=102,slow=4.6,SNR=4.3						
ASAR				S	S	09 38 10.8	+1.2
	1.5nm,0.9s,baz=92,slow=16,SNR=9.0						
WRA	Warramunga Arr	44.05	262	P	P	09 32 19.2	-0.6
	0.6nm,0.3s,baz=95,slow=7.6,SNR=86						
WRA				PcP	PcP	09 33 52.2	-0.1
	0.9nm,0.9s,baz=95,slow=3.1,SNR=3.0						
WRA				S	S	09 38 12.2	+1.2
	0.6nm,0.8s,baz=38,slow=27,SNR=3.9						
FITZ	Fitzroy Crossi	52.48	263	P	P	09 33 22.4	+0.1
	2.9nm,0.9s,baz=90,slow=5.9,SNR=7.8						
VNDA	Vanda	57.59	185	P	P	09 33 57.7	+0.8
	0.5nm,0.6s,baz=9.0,slow=6.9,SNR=7.5						
MJAR	Matsushiro Arr	70.12	324	P	P	09 35 17.0	-0.1
	0.6nm,0.6s,baz=136,slow=7.9,SNR=4.2						
JNU	Nakatsue	72.17	317	P	P	09 35 28.5	-0.3
	2.2nm,0.7s,baz=120,slow=20,SNR=2.8						
PETK	Petropavlovsk-	76.40	346	P	P	09 35 52.6	+0.2
	3.9nm,0.7s,baz=116,slow=10,SNR=4.4						
KSRS	Korea Array	76.75	319	P	P	09 35 56.1	+1.5
	0.6nm,0.5s,baz=115,slow=4.6,SNR=3.6						
USRK	Ussuriysk Ar.	78.90	326	P	P	09 36 07.2	+1.2
	1.6nm,0.7s,baz=72,slow=4.7,SNR=4.4						
YBH	Yreka Blue Hor	80.83	39	P	P	09 36 16.9	+0.6
	7.6nm,0.7s,baz=225,slow=4.3,SNR=34						
MAW	Mawson	81.13	200	P	P	09 36 17.4	+0.1
	1.7nm,0.6s,baz=124,slow=3.6,SNR=3.9						
NVAR	Mina Array Bea	81.58	44	P	P	09 36 20.5	+0.1
	3.7nm,0.7s,baz=225,slow=9.0,SNR=26						
TXAR	Lajitas Array	87.64	58	P	P	09 36 50.7	+0.7
	3.0nm,0.9s,baz=216,slow=6.4,SNR=29						
ANMO	Albuquerque	87.98	51	P	P	09 36 51.3	-0.3
	1.7nm,0.9s,baz=223,slow=6.9,SNR=6.6						
ILAR	Eielson Array	88.70	13	P	P	09 36 52.8	-1.2
	3.4nm,0.8s,baz=223,slow=5.7,SNR=32						
PDAR	Pinedale Array	89.52	43	P	P	09 36 58.2	-0.3
	3.0nm,0.6s,baz=212,slow=3.6,SNR=38						
CMAR	Chiang Mai Arr	89.72	290	P	P	09 37 01.0	+1.3
	0.8nm,0.3s,baz=111,slow=4.9,SNR=5.1						
ZALV	Zalesovo Beam	110.38	321	PKiKP	PKiKP	09 42 27.4	-1.3
	1.0nm,0.6s,baz=95,slow=1.5,SNR=4.6						
MKAR	Makanchi Array	111.01	313	PKiKP	PKiKP	09 42 29.4	-0.8
	0.5nm,0.4s,baz=96,slow=1.3,SNR=6.7						
KURBB	Kurchatov Arra	113.89	317	PKiKP	PKiKP	09 42 34.5	-1.0
	1.0nm,0.6s,baz=95,slow=2.0,SNR=10.0						
BVAR	Borovoye Array	118.95	320	PKP	PKPdf	09 42 44.7	-0.5
	3.1nm,0.4s,baz=110,slow=2.3,SNR=11						
ARU	Arti	125.13	325	PKP	PKPdf	09 42 56.7	-0.3
	3.8nm,0.5s,baz=302,slow=3.4,SNR=7.0						
AKTO	Aktyubinsk	126.92	318	PKP	PKPdf	09 43 00.7	+0.1
	1.3nm,0.5s,baz=125,slow=3.6,SNR=5.4						
ARCES	ARCESS Array B	129.09	349	PKP	PKPdf	09 43 03.7	-0.5
	2.9nm,0.6s,baz=30,slow=1.2,SNR=18						
FINES	FINESS Array B	135.89	343	PKP	PKPdf	09 43 15.3	-1.8
	1.8nm,0.7s,baz=48,slow=2.1,SNR=5.0						
NB2	NORSAR Subarra	139.19	353	PKP	PKPpre	09 43 15.1	
	comp=Z,0.8nm,0.7s,baz=16,slow=3.2						
HFS	Hagfors	139.73	351	PKhKP	PKPpre	09 43 15.5	
	comp=Z,1.9nm,0.3s,baz=14,slow=3.0,SNR=22						
AKASG	Malin Array Be	143.00	330	PKhKP	PKPpre	09 43 27.4	
	comp=Z,3.3nm,0.6s,baz=43,slow=4.3,SNR=30						
SORM	Soroca	145.16	328	⇑	iP	PKPbc	09 43 34.8	-0.4
EKA	Eskdalemuir Ar	145.32	5	PKPbc	PKPbc	09 43 34.8	-0.6
	comp=Z,4.0nm,0.7s,baz=337,slow=2.7,SNR=6.6						
BRTR	Keskin Array B	146.64	312	PKPbc	PKPbc	09 43 39.8	-0.1
	comp=Z,3.4nm,0.7s,baz=140,slow=4.8,SNR=18						
TLCR		146.82	324	⇓	iP	PKPbc	09 43 40.1	+0.2
BURAR	Bucovina Array	147.04	330	⇑	iP	PKPbc	09 43 41.4	+0.8
ANTO	Ankara	147.16	312	⇑	iP	PKPbc	09 43 40.5	-0.6
CFR	Carcaliu	147.21	324	⇑	iP	PKPbc	09 43 39.8	-1.1
MMAI	Mount Meron Ar	147.50	299	PKPbc	PKPbc	09 43 43.1	+0.9
	comp=Z,5.8nm,0.5s,baz=66,slow=5.2,SNR=19						
TIRR	Tirgusor	147.50	323	⇑	iP	PKPdf	09 43 39.8	+1.6
VRI	Vrincioaia	147.51	326	⇓	iP	PKPdf	09 43 39.8	+1.6
TLB	Topalu	147.63	323	⇓	iP	PKPbc	09 43 42.7	+0.7
TRPA	Tarpa	147.85	333	⇓	iP	PKPbc	09 43 43.0	+0.5
DOPR	Dopca	148.12	328	⇑	iP	PKPbc	09 43 44.3	+1.0
MLR	Muntele Rosu	148.17	326	PKPbc	PKPbc	09 43 43.6	0.0
	comp=Z,1.0nm,0.6s,baz=30,slow=2.4,SNR=4.0						
UPC	Upice	148.18	342	ePKP	PKPbc	09 43 44.0	+0.7
CLL	Collm	148.21	346	⇓	iPKPbc	PKPbc	09 43 43.5	+0.2
	comp=Z,16nm,0.7s						
CLL				⇑	iPKPab	PKPab	09 43 48.2	-0.3
	comp=Z,9.0nm,0.8s						
DPC	Dobruska-Polom	148.23	342	ePKP	PKPbc	09 43 43.9	+0.4
MORC	Moravsky Berou	148.36	340	ePKP	PKPbc	09 43 44.3	+0.5
BRG	Berggiesshubel	148.39	345	iPKP	PKPbc	09 43 44.0	+0.2
	comp=Z,6.7nm,0.9s						
PVCC	Panska Ves	148.55	344	ePKP	PKPbc	09 43 45.1	+0.9
DRGR		148.80	331	⇓	iP	PKPbc	09 43 44.9	-0.1
ARR	Arges	148.92	327	⇓	iP	PKPbc	09 43 46.4	+1.0
PRU	Pruhonice	149.05	343	ePKP	PKPbc	09 43 46.0	+0.6
GOPC	GO Pecny, Ondr	149.05	343	ePKP	PKPbc	09 43 45.8	+0.3
VRAC	Vranov	149.07	341	ePKP	PKPbc	09 43 46.1	+0.6
JAVC	Velka Javorina	149.11	339	ePKP	PKPbc	09 43 47.3	+1.6
KRUC	Moravsky	149.35	341	ePKP	PKPbc	09 43 46.5	+0.3
KHC	Kasperske Hory	150.09	344	ePKP	PKPbc	09 43 48.6	+0.6
KHC				epPKP	PKPab	09 43 57.2	+0.8
BZS	Buzias	150.19	331	⇑	iP	PKPbc	09 43 48.5	+0.3
GERES	GERESS Array B	150.32	344	PKPbc	PKPbc	09 43 48.7	+0.1
	comp=Z,4.2nm,0.8s,baz=38,slow=2.4,SNR=24						
HERR	Herculane	150.37	329	⇑	iP	PKPbc	09 43 48.9	+0.2
CONA	Conrad Observa	150.51	340	iPKPbc	PKPbc	09 43 49.4	+0.3
	comp=Z,5.3nm,0.7s						
VTS	Vitosha	151.59	325	⇓	iP	PKPbc	09 43 51.8	+0.1
SOKA	Soboth	151.88	340	iPKPbc	PKPbc	09 43 51.5	-0.6
	comp=Z,1.3nm,0.5s						
WATA	Walderalm	152.26	345	iPKPbc	PKPbc	09 43 52.8	-0.2
	comp=Z,2.0nm,0.4s						
RETA	Reutte	152.30	346	iPKPbc	PKPbc	09 43 53.4	+0.4
	comp=Z,1.5nm,0.5s						
WTTA	Wattenberg	152.31	345	iPKPbc	PKPbc	09 43 53.1	-0.2
	comp=Z,2.5nm,0.4s						
MOTA	Moosalm	152.36	346	iPKPbc	PKPbc	09 43 52.2	-1.1
	comp=Z,2.5nm,0.5s						
ABTA	Abfaltersb

SENK	**Senkaya-Erzuru**	**1.90**	**343**	PN	**Pb**	**09 28 02.3 -1.5**
SENK	**Senkaya-Erzuru**	**1.90**	**343**	*e*Pn	**Pb**	**09 28 02.3 -1.5**
GNI	**Garni**	**1.90**	**42**	PN	**Pb**	**09 28 02.7 -1.2**
GNI	**Garni**	**1.90**	**42**	*e*Pn	**Pb**	**09 28 02.7 -1.2**
BINT	**Bingol**	**2.03**	**274**	*e*Pn	**Pn**	**09 28 02.3 -1.3**
YEDI	**Yedisu-Bingol**	**2.09**	**290**	PN	**Pn**	**09 28 05.0 +0.5**
YEDI	**Yedisu-Bingol**	**2.09**	**290**	*e*Pn	**Pn**	**09 28 05.0 +0.5**
DIY	**Diyarbakir**	**2.40**	**250**	*e*Pn	**Pb**	**09 28 09.9 -2.4**
MAZI	**Mazidag**	**2.44**	**239**	PN	**Pn**	**09 28 09.5 +0.2**
MAZI	**Mazidag**	**2.44**	**239**	*e*Pn	**Pn**	**09 28 09.5 +0.2**
DYBB	**Diyarbakir**	**2.44**	**252**	PN	**Pn**	**09 28 09.9 +0.6**
SVRC	**Sivrice-ELAZID**	**2.98**	**264**	PN	**Pn**	**09 28 17.8 +1.1**
SVRC	**Sivrice-ELAZID**	**2.98**	**264**	*e*Pn	**Pn**	**09 28 17.8 +1.1**
URFA	**Urfa**	**3.60**	**250**	PN	**Pn**	**09 28 26.4 +1.2**
URFA	**Urfa**	**3.60**	**250**	*e*Pn	**Pn**	**09 28 26.4 +1.2**
MALT	**Malatya**	**3.67**	**265**	PN	**Pn**	**09 28 27.5 +1.3**
MALT	**Malatya**	**3.67**	**265**	*e*Pn	**Pn**	**09 28 27.5 +1.3**

*ISK **23** 09:28:21.9, 38°.71N×43°.09E, h5km, ML3.5/9*
*CSEM **23** 09:28:22.8±0.2, 38°.73N×43°.11E, h2km, ML3.4, Error ellipse: s-maj=5.4km s-min=4.0km az=127.0*
*DDA **23** 09:28:22.6, 38°.73N×43°.10E, h7km, Ml3.4*
*ISCJB **23** 09:28:23.5±0.4, 38°.74N±0°.02×43°.07E±0°.03, h5km±4km, Error ellipse: s-maj=4.0km s-min=3.3km az=21.5*
ISC 23 09:28:22.5±1.1, 38°.74N±0°.02×43°.10E±0°.02, h5km±10km, n63, σ1°.16/93, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.26**	**122**	PG	**Pb**	**09 28 29.9**	**0.0**
VANB				SG	**Sb**	**09 28 34.9**	**+0.2**
VANB	**Van**	**0.26**	**122**	*e*Pg	**Pb**	**09 28 29.9**	**0.0**
VANB				*e*Sg	**Sb**	**09 28 34.9**	**+0.2**
ADCV	**BITLIS_Adilcev**	**0.30**	**284**	*i* P	**Pb**	**09 28 29.8**	**-0.8**
ADCV				*i* S	**Sb**	**09 28 35.1**	**-0.9**
ADCV	**BITLIS_Adilcev**	**0.30**	**284**	P	**Pb**	**09 28 29.8**	**-0.8**
ADCV				S	**Sb**	**09 28 35.1**	**-0.9**
ERCV	**ERCIS-VAN**	**0.34**	**33**	PG	**Pb**	**09 28 30.6**	**-0.6**
ERCV	**ERCIS-VAN**	**0.34**	**33**	*e*Pg	**Pb**	**09 28 30.6**	**-0.6**
GEVA	**Gevas**	**0.42**	**185**	*i* P	**Pg**	**09 28 30.7**	**-0.1**
GEVA				*i* S	**Sb**	**09 28 38.2**	**-1.2**
GEVA	**Gevas**	**0.42**	**185**	P	**Pg**	**09 28 30.7**	**-0.1**
GEVA				S	**Sb**	**09 28 38.2**	**-1.2**
VMUR	**Van-Muradiye**	**0.45**	**55**	*i* P	**Pb**	**09 28 32.8**	**-0.2**
VMUR				*i* S	**Sb**	**09 28 41.4**	**+1.4**
VMUR	**Van-Muradiye**	**0.45**	**55**	P	**Pb**	**09 28 32.8**	**-0.2**
VMUR				S	**Sb**	**09 28 41.4**	**+1.4**
TUTA	**Tutak**	**0.70**	**341**	*i* P	**Pg**	**09 28 36.8**	**+0.7**
TUTA				*i* S	**Sg**	**09 28 45.6**	**+0.4**
TUTA	**Tutak**	**0.70**	**341**	P	**Pg**	**09 28 36.8**	**+0.7**
TUTA				S	**Sg**	**09 28 45.6**	**+0.4**
CLDR	**Caldiran**	**0.75**	**57**	PG	**Pg**	**09 28 37.4**	**+0.4**
CLDR	**Caldiran**	**0.75**	**57**	*i* P	**Pg**	**09 28 36.3**	**-0.7**
CLDR				*i* S	**Sb**	**09 28 49.9**	**+0.9**
CLDR	**Caldiran**	**0.75**	**57**	P	**Pg**	**09 28 36.3**	**-0.7**
CLDR	**Caldiran**	**0.75**	**57**	*e*Pg	**Pg**	**09 28 37.4**	**+0.4**
CLDR				S	**Sb**	**09 28 49.9**	**+0.9**
GURO	**Guroymak-BITLI**	**0.86**	**258**	PG	**Pg**	**09 28 38.8**	**-0.2**
GURO	**Guroymak-BITLI**	**0.86**	**258**	*e*Pg	**Pg**	**09 28 38.8**	**-0.2**
DYDN	**Diyadin**	**0.93**	**29**	*i* P	**Pg**	**09 28 39.3**	**-1.0**
DYDN				*i* S	**Sn**	**09 28 56.5**	**+0.2**
DYDN	**Diyadin**	**0.93**	**29**	P	**Pg**	**09 28 39.3**	**-1.0**
DYDN				S	**Sn**	**09 28 56.5**	**+0.2**
EKAR	**Karacoban**	**0.96**	**303**	*i* P	**Pg**	**09 28 41.0**	**0.0**
EKAR				*i* S	**Sn**	**09 28 58.9**	**+1.7**
EKAR	**Karacoban**	**0.96**	**303**	P	**Pg**	**09 28 41.0**	**0.0**
EKAR				S	**Sn**	**09 28 58.9**	**+1.7**
SRTM	**Siirt_Merkez**	**1.19**	**232**	*i* P	**Pg**	**09 28 44.7**	**-0.6**
SRTM				*i* S	**Sn**	**09 29 02.8**	**+0.2**
SRTM	**Siirt_Merkez**	**1.19**	**232**	P	**Pg**	**09 28 44.7**	**-0.6**
SRTM				S	**Sn**	**09 29 02.8**	**+0.2**
EATA	**Eleskirt**	**1.22**	**337**	*i* P	**Pg**	**09 28 45.4**	**-0.6**
EATA				*i* S	**Sg**	**09 29 02.3**	**+0.4**
EATA	**Eleskirt**	**1.22**	**337**	P	**Pg**	**09 28 45.4**	**-0.6**
EATA				S	**Sg**	**09 29 02.3**	**+0.4**
SIRT	**Sirnak**	**1.34**	**203**	PN	**Pb**	**09 28 48.0**	**-0.2**
SIRT	**Sirnak**	**1.34**	**203**	*e*Pn	**Pb**	**09 28 48.0**	**-0.2**
SIRN	**S¨–rnak**	**1.35**	**204**	*i* P	**Pn**	**09 28 46.8**	**-1.4**
SIRN				*i* S	**Sn**	**09 29 08.5**	**+2.0**
SIRN	**S¨–rnak**	**1.35**	**204**	P	**Pn**	**09 28 46.8**	**-1.4**
SIRN				S	**Sn**	**09 29 08.5**	**+2.0**
CUKT	**Cukurca**	**1.54**	**165**	PN	**Pn**	**09 28 50.9**	**+0.1**
CUKT	**Cukurca**	**1.54**	**165**	*i* P	**Pn**	**09 28 48.8**	**-2.0**
CUKT				*i* S	**Sb**	**09 29 11.3**	**-0.1**
CUKT	**Cukurca**	**1.54**	**165**	P	**Pn**	**09 28 48.8**	**-2.0**
CUKT	**Cukurca**	**1.54**	**165**	*e*Pn	**Pn**	**09 28 50.9**	**+0.1**
CUKT				S	**Sb**	**09 29 11.3**	**-0.1**
BNGL	**BINGOL**	**1.54**	**279**	*i* P	**Pb**	**09 28 51.6**	**-0.1**
BNGL				*i* S	**Sn**	**09 29 11.2**	**-0.2**
SVAN	**Silvan-Diyarba**	**1.61**	**249**	PN	**Pb**	**09 28 52.2**	**-0.5**
SVAN	**Silvan-Diyarba**	**1.61**	**249**	*i* P	**Pg**	**09 28 53.1**	**-0.2**
SVAN				*i* S	**Sb**	**09 29 13.1**	**-0.2**
SVAN	**Silvan-Diyarba**	**1.61**	**249**	*e*Pn	**Pb**	**09 28 52.2**	**-0.5**
SVAN	**Silvan-Diyarba**	**1.61**	**249**	P	**Pg**	**09 28 53.1**	**-0.2**
SVAN				S	**Sb**	**09 29 13.1**	**-0.2**
BTMN	**Batman**	**1.67**	**240**	*i* P	**Pb**	**09 28 53.6**	**-0.2**
BTMN				*i* S	**Sg**	**09 29 16.9**	**+0.7**
BTMN	**Batman**	**1.67**	**240**	P	**Pb**	**09 28 53.6**	**-0.2**
BTMN				S	**Sg**	**09 29 16.9**	**+0.7**
DIGO	**Kars**	**1.69**	**7**	*i* P	**Pn**	**09 28 53.2**	**+0.2**
DIGO				*i* S	**Sn**	**09 29 08.9**	**-6.2**
DIGO	**Kars**	**1.69**	**7**	P	**Pn**	**09 28 53.2**	**+0.2**
KARS	**Kars**	**1.89**	**359**	PN	**Pb**	**09 28 57.2**	**-0.4**
KARS	**Kars**	**1.89**	**359**	*e*Pn	**Pb**	**09 28 57.2**	**-0.4**
GNI	**Garni**	**1.90**	**41**	PN	**Pb**	**09 28 57.2**	**-0.6**
GNI	**Garni**	**1.90**	**41**	*e*Pn	**Pb**	**09 28 57.2**	**-0.6**
BNGB	**Bing˜¶l**	**1.91**	**278**	PN	**Pn**	**09 28 56.0**	**+0.1**
SENK	**Senkaya-Erzuru**	**1.91**	**343**	PN	**Pb**	**09 28 57.9**	**-0.2**
SENK	**Senkaya-Erzuru**	**1.91**	**343**	*e*Pn	**Pb**	**09 28 57.9**	**-0.2**
BINT	**Bingol**	**2.05**	**275**	*e*Pn	**Pn**	**09 28 56.0**	**-1.8**
YEDI	**Yedisu-Bingol**	**2.11**	**290**	PN	**Pb**	**09 29 00.1**	**-1.3**
YEDI	**Yedisu-Bingol**	**2.11**	**290**	*e*Pn	**Pb**	**09 29 00.1**	**-1.3**
DIY	**Diyarbakir**	**2.41**	**251**	*e*Pn	**Pb**	**09 29 04.6**	**-1.9**
MAZI	**Mazidag**	**2.45**	**240**	PN	**Pn**	**09 29 04.5**	**+1.2**
MAZI	**Mazidag**	**2.45**	**240**	*e*Pn	**Pn**	**09 29 04.5**	**+1.2**
DYBB	**Diyarbakir**	**2.46**	**252**	PN	**Pn**	**09 29 04.6**	**+1.2**
SVRC	**Sivrice-ELAZID**	**3.00**	**264**	PN	**Pn**	**09 29 12.6**	**+1.7**
SVRC	**Sivrice-ELAZID**	**3.00**	**264**	*e*Pn	**Pn**	**09 29 12.6**	**+1.7**
URFA	**Urfa**	**3.62**	**250**	PN	**Pn**	**09 29 21.1**	**+1.8**
URFA	**Urfa**	**3.62**	**250**	*e*Pn	**Pn**	**09 29 21.1**	**+1.8**
MALT	**Malatya**	**3.69**	**265**	PN	**Pn**	**09 29 22.3**	**+1.9**
MALT	**Malatya**	**3.69**	**265**	*e*Pn	**Pn**	**09 29 22.3**	**+1.9**

*DDA **23** 09:43:00.2, 38°.84N×26°.32E, h26km, Ml3.0*
*CSEM **23** 09:43:01.7±0.1, 38°.84N×26°.36E, h10km, ML3.1, Error ellipse: s-maj=2.0km s-min=1.4km az=82.0*
*ISK **23** 09:43:01.2, 38°.84N×26°.37E, h15km, ML3.1/17*
*ATH **23** 09:43:01.3, 38°.85N×26°.35E, h28km±1km, ML2.9/5, Error ellipse: s-maj=2.3km s-min=0.9km az=273.0*
*THE **23** 09:43:02.6, 38°.85N×26°.31E, h10km±1km, ML2.7/5, Error ellipse: s-maj=1.7km s-min=0.5km az=269.0*
*ISCJB **23** 09:43:02.0±0.3, 38°.84N±0°.01×26°.34E±0°.03, h16km±4km, Error ellipse: s-maj=3.5km s-min=2.4km az=164.4*
ISC 23 09:43:01.6±0.9, 38°.84N±0°.01×26°.36E±0°.02, h15km±7km, n124, σ0°.62/173, 1C, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRBN	**Karaburun**	**0.29**	**148**	PG	**Pg**	**09 43 07.9**	**+0.2**
KRBN				SG	**Sg**	**09 43 12.2**	**+0.3**
KRBN	**Karaburun**	**0.29**	**148**	*e*Pg	**Pg**	**09 43 07.9**	**+0.2**
KRBN				*e*Sg	**Sg**	**09 43 12.2**	**+0.3**
FOCM	**Fo˜§a**	**0.32**	**113**	PG	**Pg**	**09 43 07.9**	**-0.3**
FOCM				SG	**Sg**	**09 43 12.9**	**+0.2**
FOCM	**Fo˜§a**	**0.32**	**113**	*e*Pg	**Pg**	**09 43 07.9**	**-0.3**
FOCM				*e*Sg	**Sg**	**09 43 12.9**	**+0.2**
PRK	**Paraskevi**	**0.41**	**350**	P	**Pb**	**09 43 10.3**	**-0.3**
PRK				S	**Sg**	**09 43 15.3**	**-0.3**
PRK				AML	AML	09 43 17.1	
	comp=N,4129μm,0.7s						
PRK				AML	AML	09 43 17.6	
	comp=E,3113μm,0.3s						
PRK	**Paraskevi**	**0.41**	**350**	P	**Pb**	**09 43 10.2**	**-0.4**
PRK				S	**Sb**	**09 43 16.6**	**0.0**
PRK	**Paraskevi**	**0.41**	**350**	P	**Pb**	**09 43 10.2**	**-0.4**
PRK				S	**Sg**	**09 43 16.0**	**+0.4**
DKL	**Dikili**	**0.48**	**61**	PG	**Pg**	**09 43 11.3**	**+0.1**
DKL	**Dikili**	**0.48**	**61**	*e*Pg	**Pg**	**09 43 11.3**	**+0.1**
CESE	**˜e˜me**	**0.51**	**185**	PG	**Pb**	**09 43 12.1**	**-0.1**
CESE	**˜e˜me**	**0.51**	**185**	*e*Pg	**Pb**	**09 43 12.1**	**-0.1**
CHOS	**Chios island**	**0.51**	**208**	PG	**Pb**	**09 43 12.0**	**-0.3**
CHOS				SG	**Sb**	**09 43 19.7**	**+0.2**
CHOS	**Chios island**	**0.51**	**208**	P	**Pb**	**09 43 12.3**	**0.0**
CHOS				S	**Sb**	**09 43 19.5**	**0.0**
CHOS				AML	AML	09 43 24.1	
	comp=E,3546μm,0.3s						
CHOS				AML	AML	09 43 24.7	
	comp=N,2199μm,0.3s						
CHOS	**Chios island**	**0.51**	**208**	P	**Pb**	**09 43 12.2**	**-0.1**
CHOS				S	**Sb**	**09 43 20.0**	**+0.5**
CHOS	**Chios island**	**0.51**	**208**	*e*Pg	**Pb**	**09 43 12.0**	**-0.3**
CHOS	**Chios island**	**0.51**	**208**	P	**Pb**	**09 43 12.3**	**0.0**
CHOS				*e*Sg	**Sb**	**09 43 19.7**	**+0.2**
URLA	**Izmir**	**0.51**	**159**	PG	**Pg**	**09 43 10.8**	**-1.0**
URLA	**Izmir**	**0.51**	**159**	*i* P	**Pg**	**09 43 10.7**	**-1.0**
URLA				*i* S	**Sg**	**09 43 17.9**	**-0.7**
URLA	**Izmir**	**0.51**	**159**	*e*Pg	**Pg**	**09 43 10.8**	**-1.0**
URLA				S	**Sg**	**09 43 17.9**	**-0.7**
AYVA	**Ayvalik**	**0.54**	**29**	*i* P	**Pg**	**09 43 11.7**	**-0.5**
AYVA				*i* S	**Sg**	**09 43 18.7**	**-0.7**
AYVA	**Ayvalik**	**0.54**	**29**	P	**Pg**	**09 43 11.7**	**-0.5**
AYVA				S	**Sg**	**09 43 18.7**	**-0.7**
ZEY	**˜zmir**	**0.61**	**169**	*i* P	**Pg**	**09 43 13.5**	**-0.1**
ZEY				*i* S	**Sb**	**09 43 22.4**	**+0.1**
GPNR	**Gulpinar-Canak**	**0.64**	**344**	PG	**Pb**	**09 43 14.6**	**+0.1**
GPNR				SG	**Sb**	**09 43 23.4**	**+0.2**
GPNR	**Gulpinar-Canak**	**0.64**	**344**	*e*Pg	**Pb**	**09 43 14.6**	**+0.1**
GPNR				*e*Sg	**Sb**	**09 43 23.4**	**+0.2**
PSRA	**Psara**	**0.69**	**245**	P	**Pn**	**09 43 16.1**	**-0.6**
PSRA				S	**Sn**	**09 43 26.0**	**-1.1**
PSRA				AML	AML	09 43 27.3	
	comp=E,4297μm,0.3s						
PSRA				AML	AML	09 43 27.5	
	comp=N,4397μm,0.2s						
PSRA	**Psara**	**0.69**	**245**	P	**Pb**	**09 43 15.7**	**+0.4**
PSRA				S	**Sb**	**09 43 25.7**	**+1.1**
DGB	**˜zmir**	**0.89**	**152**	*i* P	**Pb**	**09 43 18.2**	**-0.4**
DGB				*i* S	**Sb**	**09 43 29.5**	**-0.7**
BAYC	**CANAKKALE_Bayr**	**0.91**	**9**	*i* P	**Pb**	**09 43 18.6**	**-0.5**
BAYC				*i* S	**Sb**	**09 43 30.9**	**-0.2**
BAYC	**CANAKKALE_Bayr**	**0.91**	**9**	P	**Pb**	**09 43 18.6**	**-0.5**
BAYC				S	**Sb**	**09 43 30.9**	**-0.2**
EZN	**Ezine**	**0.99**	**358**	PG	**Pb**	**09 43 20.4**	**+0.1**
EZN	**Ezine**	**0.99**	**358**	P	**Pb**	**09 43 20.5**	**+0.1**
EZN				S	**Sn**	**09 43 34.9**	**+0.4**
EZN	**Ezine**	**0.99**	**358**	P	**Pb**	**09 43 20.5**	**+0.1**
EZN				S	**Sn**	**09 43 34.9**	**+0.4**
AKHS	**Akhisar**	**1.14**	**88**	*i* P	**Pg**	**09 43 23.6**	**+0.1**
AKHS				*i* S	**Sg**	**09 43 39.2**	**+0.9**
AKHS	**Akhisar**	**1.14**	**88**	P	**Pg**	**09 43 23.6**	**+0.1**
AKHS				S	**Sg**	**09 43 39.2**	**+0.9**
AKS	**Akhisar**	**1.14**	**88**	PN	**Pb**	**09 43 22.8**	**-0.1**
AKS	**Akhisar**	**1.14**	**88**	*e*Pn	**Pb**	**09 43 22.8**	**-0.1**
STEP	**BALIKESIR_Sava**	**1.19**	**63**	*i* P	**Pg**	**09 43 24.1**	**-0.4**
STEP				*i* S	**Sg**	**09 43 39.7**	**-0.2**
STEP	**BALIKESIR_Sava**	**1.19**	**63**	P	**Pg**	**09 43 24.1**	**-0.4**
STEP				S	**Sg**	**09 43 39.7**	**-0.2**
SMG	**Samos**	**1.19**	**161**	P	**Pg**	**09 43 25.3**	**+0.8**
SMG				S	**Sn**	**09 43 39.2**	**-0.3**
SMG				AML	AML	09 43 41.9	
	comp=E,865μm,0.4s						
SMG				AML	AML	09 43 43.5	
	comp=N,1374μm,0.2s						
SMG	**Samos**	**1.19**	**161**	P	**Pg**	**09 43 24.7**	**+0.2**
SMG				S	**Sg**	**09 43 41.3**	**+1.3**
SMG	**Samos**	**1.19**	**161**	P	**Pg**	**09 43 24.7**	**+0.2**
SMG				S	**Sg**	**09 43 39.9**	**-0.1**
GCAM	**G?zelcaml?**	**1.33**	**149**	PN	**Pn**	**09 43 25.5**	**0.0**
GCAM	**G?zelcaml?**	**1.33**	**149**	*i* P	**Pg**	**09 43 27.2**	**+0.1**
GCAM				*i* S	**Sg**	**09 43 43.9**	**-0.6**
GCAM	**G?zelcaml?**	**1.33**	**149**	*e*Pn	**Pn**	**09 43 25.5**	**0.0**
GCAM	**G?zelcaml?**	**1.33**	**149**	P	**Pg**	**09 43 27.2**	**+0.1**
GCAM				S	**Sg**	**09 43 43.9**	**-0.6**
GADA	**Gvkgeada**	**1.40**	**345**	PN	**Pb**	**09 43 27.0**	**-0.3**
GADA	**Gvkgeada**	**1.40**	**345**	P	**Pb**	**09 43 27.3**	**0.0**
GADA				S	**Sb**	**09 43 45.1**	**+0.1**
GADA	**Gvkgeada**	**1.40**	**345**	*e*Pn	**Pb**	**09 43 27.0**	**-0.3**
GADA	**Gvkgeada**	**1.40**	**345**	P	**Pb**	**09 43 27.3**	**0.0**
GADA				S	**Sb**	**09 43 45.1**	**+0.1**
LIA	**Limnos Island**	**1.40**	**320**	P	**Pb**	**09 43 27.6**	**+0.2**
LIA				S	**Sn**	**09 43 43.7**	**-1.0**
LIA				AML	AML	09 43 47.3	
	comp=E,419μm,0.7s						
LIA				AML	AML	09 43 50.0	
	comp=N,273μm,0.4s						
LIA	**Limnos Island**	**1.40**	**320**	P	**Pb**	**09 43 27.0**	**-0.3**
LIA				S	**Sb**	**09 43 44.8**	**-0.2**
LIA	**Limnos Island**	**1.40**	**320**	P	**Pb**	**09 43 27.1**	**-0.3**
LIA				S	**Sb**	**09 43 44.8**	**-0.2**
GOKC	**Gokceada-Canak**	**1.40**	**346**	PN	**Pb**	**09 43 27.1**	**-0.3**
GOKC	**Gokceada-Canak**	**1.40**	**346**	*e*Pn	**Pb**	**09 43 27.1**	**-0.3**
BALB	**Balikesir**	**1.43**	**55**	PN	**Pb**	**09 43 27.5**	**-0.3**
BALB	**Balikesir**	**1.43**	**55**	*e*Pn	**Pb**	**09 43 27.5**	**-0.3**
AYDB	**Zeytinkoy-Aydi**	**1.50**	**126**	PN	**Pn**	**09 43 28.0**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**1.50**	**126**	*e*Pn	**Pn**	**09 43 28.0**	**0.0**
GELI	**Tayfur-Gelibol**	**1.56**	**3**	PN	**Pn**	**09 43 29.2**	**+0.5**
GELI	**Tayfur-Gelibol**	**1.56**	**3**	*e*Pn	**Pn**	**09 43 29.2**	**+0.5**
LPK	**Lapseki**	**1.56**	**11**	PN	**Pn**	**09 43 28.6**	**-0.2**
LPK	**Lapseki**	**1.56**	**11**	*e*Pn	**Pn**	**09 43 28.6**	**-0.2**
GONE	**Gonen-Balikesi**	**1.58**	**40**	PN	**Pn**	**09 43 29.4**	**+0.3**
GONE	**Gonen-Balikesi**	**1.58**	**40**	*e*Pn	**Pn**	**09 43 29.4**	**+0.3**
AYDN	**Tasoluk**	**1.68**	**134**	*i* P	**Pn**	**09 43 31.2**	**+0.8**
AYDN				*i* S	**Sb**	**09 43 53.4**	**+0.3**
AYDN	**Tasoluk**	**1.68**	**134**	P	**Pn**	**09 43 31.2**	**+0.8**
AYDN				S	**Sb**	**09 43 53.4**	**+0.3**
KRBG	**Karabiga-Canak**	**1.71**	**25**	PN	**Pn**	**09 43 31.4**	**+0.6**
KRBG	**Karabiga-Canak**	**1.71**	**25**	*e*Pn	**Pn**	**09 43 31.4**	**+0.6**
SMTH	**Samothraki Isl**	**1.75**	**339**	P	**Pn**	**09 43 31.9**	**+0.4**
SMTH	**Samothraki Isl**	**1.75**	**339**	P	**Pn**	**09 43 31.8**	**+0.4**
SMTH	**Samothraki Isl**	**1.75**	**339**	P	**Pn**	**09 43 31.8**	**+0.4**
MANT	**Manisa**	**1.75**	**101**	*i* P	**Pb**	**09 43 33.7**	**+0.1**
MANT				*i* S	**Sg**	**09 43 57.0**	**-1.1**
MANT	**Manisa**	**1.75**	**101**	P	**Pb**	**09 43 33.7**	**+0.1**
MANT				S	**Sg**	**09 43 57.0**	**-1.1**
DURS	**Dursunbey**	**1.81**	**64**	*i* P	**Pn**	**09 43 32.6**	**+0.3**
DURS				*i* S	**Sb**	**09 43 56.2**	**-0.7**
DURS	**Dursunbey**	**1.81**	**64**	P	**Pn**	**09 43 32.6**	**+0.3**
DURS				S	**Sb**	**09 43 56.2**	**-0.7**
KULA	**Kula-Manisa**	**1.83**	**99**	PN	**Pn**	**09 43 32.9**	**+0.4**
KULA	**Kula-Manisa**	**1.83**	**99**	*e*Pn	**Pn**	**09 43 32.9**	**+0.4**
ERIK	**Erikli-Kesan**	**1.83**	**4**	PN	**Pn**	**09 43 33.2**	**+0.7**
ERIK	**Erikli-Kesan**	**1.83**	**4**	*e*Pn	**Pn**	**09 43 33.2**	**+0.7**
DEMI	**Demirci**	**1.85**	**83**	*i* P	**Pn**	**09 43 33.0**	**+0.2**
DEMI				*i* S	**Sb**	**09 43 58.6**	**+0.6**
DEMI	**Demirci**	**1.85**	**83**	P	**Pn**	**09 43 33.0**	**+0.2**
DEMI				S	**Sb**	**09 43 58.6**	**+0.6**
APE	**Apeiranthos**	**1.89**	**201**	PN	**Pn**	**09 43 33.7**	**+0.5**
APE	**Apeiranthos**	**1.89**	**201**	*i*P	**Pn**	**09 43 33.6**	**+0.4**
APE	**Apeiranthos**	**1.89**	**201**	S	**Sg**	**09 44 03.5**	**+1.3**
APE	**Apeiranthos**	**1.89**	**201**	P	**Pn**	**09 43 31.9**	**-1.3**
APE	**Apeiranthos**	**1.89**	**201**	P	**Pn**	**09 43 33.4**	**+0.2**
APE	**Apeiranthos**	**1.89**	**201**	P	**Pn**	**09 43 33.4**	**+0.2**
APE	**Apeiranthos**	**1.89**	**201**	*e*Pn	**Pn**	**09 43 33.7**	**+0.5**
EDC	**Edincik**	**1.90**	**37**	PN	**Pn**	**09 43 33.9**	**+0.5**
EDC	**Edincik**	**1.90**	**37**	*e*Pn	**Pn**	**09 43 33.9**	**+0.5**
ENEZ	**Enez**	**1.90**	**355**	PN	**Pn**	**09 43 34.2**	**+0.8**
ENEZ	**Enez**	**1.90**	**355**	*e*Pn	**Pn**	**09 43 34.2**	**+0.8**
BODT	**Bodrum**	**1.93**	**157**	PN	**Pn**	**09 43 34.2**	**+0.4**
BODT	**Bodrum**	**1.93**	**157**	*e*Pn	**Pn**	**09 43 34.2**	**+0.4**
RKY	**Sarkoy-Tekirda**	**1.95**	**19**	PN	**Pn**	**09 43 35.3**	**+1.1**
RKY	**Sarkoy-Tekirda**	**1.95**	**19**	*e*Pn	**Pn**	**09 43 35.3**	**+1.1**
AMGA	**Amorgos Island**	**2.04**	**191**	P	**Pn**	**09 43 34.2**	**-1.1**
AMGA	**Amorgos Island**	**2.04**	**191**	P	**Pn**	**09 43 35.1**	**-0.2**
DION	**Dionisos Attik**	**2.05**	**249**	P	**Pn**	**09 43 35.2**	**-0.3**
DION	**Dionisos Attik**	**2.05**	**249**	P	**Pn**	**09 43 35.7**	**+0.2**
SIMA	**Simav-Kutahya**	**2.06**	**82**	PN	**Pn**	**09 43 36.1**	**+0.4**
SIMA	**Simav-Kutahya**	**2.06**	**82**	*e*Pn	**Pn**	**09 43 36.1**	**+0.4**
ALN	**Alexandroupoli**	**2.07**	**353**	PN	**Pn**	**09 43 36.5**	**+0.8**
ALN	**Alexandroupoli**	**2.07**	**353**	P	**Pn**	**09 43 36.9**	**+1.1**
ALN	**Alexandroupoli**	**2.07**	**353**	P	**Pn**	**09 43 36.7**	**+1.0**
ALN				S	**Sb**	**09 44 03.1**	**-1.2**
ALN	**Alexandroupoli**	**2.07**	**353**	P	**Pn**	**09 43 36.5**	**+0.8**
ALN				S	**Sb**	**09 44 03.1**	**-1.2**
KCTX	**Karacabey (Bur**	**2.10**	**47**	PN	**Pn**	**09 43 36.6**	**+0.4**
KCTX	**Karacabey (Bur**	**2.10**	**47**	*e*Pn	**Pn**	**09 43 36.6**	**+0.4**
VLY	**Voula,Athens**	**2.25**	**245**	P	**Pn**	**09 43 38.1**	**-0.1**
VLY	**Voula,Athens**	**2.25**	**245**	P	**Pn**	**09 43 38.5**	**+0.3**
RDO	**Rodhopi**	**2.39**	**345**	PN	**Pn**	**09 43 41.2**	**+1.1**
RDO	**Rodhopi**	**2.39**	**345**	*e*Pn	**Pn**	**09 43 41.2**	**+1.1**
TVSB	**Tavsanli**	**2.49**	**75**	PN	**Pn**	**09 43 42.3**	**+0.7**
TVSB	**Tavsanli**	**2.49**	**75**	*e*Pn	**Pn**	**09 43 42.3**	**+0.7**
KAVA	**Kavala**	**2.58**	**327**	P	**Pn**	**09 43 43.5**	**+0.7**
KAVA	**Kavala**	**2.58**	**327**	P	**Pn**	**09 43 43.4**	**+0.7**
KDZ	**Kurdzhali**	**2.90**	**346**	PN	**Pn**	**09 43 48.2**	**+1.0**
KDZ	**Kurdzhali**	**2.90**	**346**	*e*Pn	**Pn**	**09 43 48.2**	**+1.0**
CTKS	**Kestanelik-??a**	**2.91**	**34**	PN	**Pn**	**09 43 49.1**	**+1.9**
CTKS	**Kestanelik-??a**	**2.91**	**34**	*e*Pn	**Pn**	**09 43 49.1**	**+1.9**
EDRB	**Edirne**	**3.02**	**5**	PN	**Pn**	**09 43 50.3**	**+1.5**
EDRB	**Edirne**	**3.02**	**5**	*e*Pn	**Pn**	**09 43 50.3**	**+1.5**
SRS	**Serrai**	**3.12**	**318**	P	**Pn**	**09 43 50.9**	**+0.8**
SRS	**Serrai**	**3.12**	**318**	P	**Pn**	**09 43 50.9**	**+0.8**

*NEIC **23** 10:06:22.0±0.0, 69°.58N×143°.88W, h10km, ML2.9(AEIC), After AEIC.*
PGC 23 10:06:24.0±19.0, 69°.74N×143°.96W, h31km±3km, ML2.9, ML2.7/1, 176km east of Prudhoe Bay, Ak Northern Alaska, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PS01	**TAPS Pump Stn**	**1.68**	**290**	P	Pb	10 06 53.4	-0.9
PS01				S	Sb	10 07 16.2	+1.2
TOLK	**Toolik Lake Re**	**2.29**	**244**	P	Pn	10 06 58.9	-0.8
TOLK				S	Sb	10 07 30.5	-1.9
BM3	**Burnt Mountain**	**2.34**	**186**	P	Pn	10 06 58.7	-1.7
COLD	**Coldfoot**	**3.41**	**225**	Pn	Pn	10 07 13.6	-1.5
COLD			

	20nm,0.7s,baz=282,slow=8.5,SNR=20					
DZM			LR	LR	11 04 24.1	
	comp=Z,156nm,18.9s,baz=334,slow=36					
DZM	**Mont Dzumac**	**21.30 144**	*e*P	**P**	**10 56 20.1**	**-1.0**
	80nm,1.1s					
DZM			*e*S	**S**	**11 00 15.1**	**-1.0**
	80nm,24.5s					
DZM			*e*LR	LR	11 01 36.5	
	360nm,26.8s					
DZM	**Mont Dzumac**	**21.30 144**	*e*P	**P**	**10 56 20.0**	**-1.1**
	60nm,1.3s					
SIJI	**Sorong**	**22.30 280**	LR	LR	11 04 08.2	
	comp=Z,186nm,21.5s,baz=62,slow=34					
MTN	**Manton Dam**	**23.19 249**	*e*P	**P**	**10 56 37.6**	**-3.5**
	91nm,1.6s					
WRAB	**Tennant Creek**	**23.67 229**	*e*P	**P**	**10 56 44.1**	**-1.7**
	14nm,1.0s					
WRAB			*e*Sn	Sn	11 01 15.6	-5.3
WB2	**Warramunga Arr**	**23.67 229**	*e*P	**P**	**10 56 44.9**	**-0.9**
WRA	**Warramunga Arr**	**23.68 229**	P	**P**	**10 56 44.4**	**-1.5**
	4.0nm,0.4s,baz=51,slow=9.7,SNR=25					
WRA			PcP	**PcP**	**11 00 26.5**	**-3.3**
	1.7nm,0.9s,baz=47,slow=2.3,SNR=4.0					
WRA			ScP	**ScP**	**11 03 59.6**	**-6.1**
	1.0nm,0.8s,baz=50,slow=3.6,SNR=4.6					
ARMA	**Armidale**	**25.39 183**	*e*P	**P**	**10 57 01.5**	**0.0**
	14nm,0.9s					
AS01	**Alice Springs**	**26.31 223**	*e*P	**P**	**10 57 08.0**	**-1.9**
AS31	**Alice Springs**	**26.34 223**	*e*P	**P**	**10 57 08.7**	**-1.5**
	1.6nm,0.8s					
ASAR	**Alice Springs**	**26.34 223**	P	**P**	**10 57 08.3**	**-1.9**
	1.5nm,0.8s,baz=56,slow=9.2,SNR=14					
ASAR			PcP	**PcP**	**11 00 32.9**	**-2.8**
	0.9nm,0.6s,baz=60,slow=2.5,SNR=6.4					
ASAR			LR	LR	11 07 22.6	
	comp=Z,66nm,21.1s,baz=54,slow=36					
H11S3	**WAKE ISLAND Hy**	**26.80 29**	T	T	11 25 11.2	
	baz=208,slow=74					
H11S2	**WAKE ISLAND Hy**	**26.80 29**	T	T	11 25 00.0	
	baz=208,slow=74					
H11S1	**WAKE ISLAND Hy**	**26.81 29**	T	T	11 25 03.7	
	baz=208					
STKA	**Stephens Creek**	**28.94 201**	P	P	10 57 30.8	-2.4
	3.7nm,0.8s,baz=17,slow=11,SNR=6.2					
STKA			LR	LR	11 09 49.5	
	comp=Z,59nm,18.6s,baz=25,slow=38					
STKA	**Stephens Creek**	**28.94 201**	*e*P	P	10 57 31.1	-2.2
	9.3nm,2.0s					
BATI	**Baumata**	**29.76 258**	LR	LR	11 11 41.7	
	comp=Z,238nm,18.2s,baz=104,slow=40					
FITZ	**Fitzroy Crossi**	**29.97 242**	P	**P**	**10 57 40.2**	**-2.3**
	2.1nm,0.3s,baz=53,slow=10,SNR=19					
FITZ			LR	LR	11 11 26.6	
	comp=Z,111nm,18.9s,baz=62,slow=40					
DAV	**Davao City (W)**	**30.07 293**	LR	LR	11 08 32.7	
	comp=Z,37nm,21.1s,baz=102,slow=34					
FORT	**Forrest**	**34.96 220**	*e*P	**P**	**10 58 24.2**	**-1.9**
	14nm,0.8s					
TGY	**Tagaytay City**	**37.21 301**	LR	LR	11 11 37.3	
	comp=Z,84nm,21.8s,baz=9.5,slow=32					
URZ	**Urewera**	**39.65 150**	P	**P**	**10 59 04.5**	**-1.2**
	3.0nm,0.6s,baz=337,slow=7.7,SNR=3.1					
JOW	**Kunigami**	**39.76 324**	LR	LR	11 11 51.0	
	comp=Z,66nm,21.8s,baz=125,slow=31					
RPZ	**Rata Peaks**	**41.70 161**	P	**P**	**10 59 21.3**	**-1.3**
	41nm,0.8s,baz=57,slow=1.1,SNR=8.0					
JNU	**Nakatsue**	**43.38 332**	LR	LR	11 16 10.3	
	comp=Z,15nm,19.5s,baz=125,slow=34					
MJAR	**Matsushiro Arr**	**43.59 342**	LR	LR	11 15 26.0	
	comp=Z,30nm,21.1s,baz=165,slow=33					
KSRS	**Korea Array**	**48.31 333**	P	P	11 00 10.7	-4.6
	0.6nm,0.5s,baz=165,slow=10,SNR=4.5					
KSRS			LR	LR	11 20 03.6	
	comp=Z,17nm,18.1s,baz=172,slow=35					
KSAR	**Wonju Array Be**	**48.32 333**	P	P	11 00 10.7	-4.7
RAR	**Rarotonga**	**48.33 114**	LR	LR	11 17 33.4	
	comp=Z,28nm,21.7s,baz=276,slow=32					
NJ2	**Nanjing**	**49.22 321**	*e*P	**P**	**11 00 26.3**	**+4.0**
NJ2			pmax	pmax		
	comp=Z,11nm,0.5s					
ASAJ	**Asahikawa**	**49.76 350**	LR	LR	11 18 31.9	
	comp=Z,29nm,21.5s,baz=168,slow=33					
GYA	**Guiyang**	**54.82 307**	*e*P	**P**	**11 01 08.3**	**+4.0**
GYA			pmax	pmax		
	comp=Z,10.0nm,1.0s					
KMI	**Kunming**	**57.42 304**	P	**P**	**11 01 25.9**	**+2.9**
KMI			pP	pP	11 01 34.3	+0.7
KMI			pmax	pmax		
	comp=Z,5.0nm,1.4s					
KMI			pmax	pmax		
	comp=Z,58nm,5.3s					
KMI			LR	LR		
	comp=N,77nm,15.0s					
KMI			LR	LR		
	comp=E,79nm,18.0s					
KMI			LR	LR		
	comp=Z,130nm,23.7s					
PETK	**Petropavlovsk-**	**57.95 3**	LR	LR	11 21 43.2	
	comp=Z,17nm,21.9s,baz=150,slow=31					
CMAR	**Chiang Mai Arr**	**58.33 295**	P	**P**	**11 01 26.9**	**-2.4**
	0.9nm,0.3s,baz=100,slow=3.1,SNR=3.4					
CMAR			LR	LR	11 25 02.4	
	comp=Z,23nm,20.7s,baz=210,slow=34					
CD2	**Chengdu**	**59.15 310**	P	**P**	**11 01 35.6**	**+0.8**
CD2			pmax	pmax		
	comp=Z,10.0nm,0.6s					
HHC	**Hu-ho-hao-te**	**59.41 324**	*e*P	P	11 01 42.5	+6.0
HHC			PP	**PP**	**11 03 55.8**	**+7.8**
HHC			S	**S**	**11 09 48.8**	**+5.5**
HHC			sS	sS	11 10 01.5	+0.7
HHC			pmax	pmax		
	comp=Z,22nm,1.1s					
HHC			pmax	pmax		
	comp=Z,33nm,5.3s					
HHC			LR	LR		
	comp=N,300nm,14.7s					
HHC			LR	LR		
	comp=E,280nm,14.7s					
HHC			LR	LR		
	comp=Z,290nm,15.3s					
LZH	**Lanzhou**	**61.63 316**	*e*P	P	11 01 57.6	+5.8
LZH			pP	pP	11 02 05.3	+2.8
LZH			sP	sP	11 02 08.3	+1.7
LZH			*e*PP	**PP**	**11 04 12.8**	**+5.0**
LZH			pmax	pmax		
	comp=Z,12nm,1.0s					
LZH			pmax	pmax		
	comp=Z,87nm,4.3s					
LZH			LR	LR		
	comp=N,190nm,16.0s					
LZH			LR	LR		
	comp=E,200nm,16.2s					
LZH			LR	LR		
	comp=Z,280nm,18.6s					
TAOE	**Nuku Hiva Isla**	**66.18 97**	*e*LR	LR	11 22 28.6	
	57nm,31.6s					
SONM	**Songino Array**	**66.67 328**	P	**P**	**11 02 20.7**	**-3.9**
	0.2nm,0.3s,baz=150,slow=6.1,SNR=3.5					
SONM			LR	LR	11 29 59.8	
	comp=Z,18nm,21.9s,baz=256,slow=35					
VNDA	**Vanda**	**72.68 178**	P	**P**	**11 02 59.1**	**-1.8**
	6.4nm,0.9s,baz=331,slow=6.4,SNR=26					
VNDA			pP	**pP**	**11 03 14.3**	**+2.4**
	2.2nm,0.9s,baz=3.2,slow=4.8,SNR=4.1					
VNDA	**Vanda**	**72.68 178**	*e*P	P	11 02 58.1	-2.9
	12nm,1.1s					
VNDA			pP	pP	11 03 14.3	+2.4
SBA	**Scott Base**	**73.22 177**	*e*P	**P**	**11 03 02.5**	**-1.7**
	13nm,1.0s					
KDAK	**Kodiak Island**	**76.10 27**	LR	LR	11 30 12.0	
	comp=Z,60nm,21.5s,baz=271,slow=30					
WMQ	**Urumqi**	**76.13 317**	P	**P**	**11 03 26.5**	**+4.8**
WMQ			pP	PcP	11 03 34.5	+0.7
WMQ			pmax	pmax		
	comp=Z,21nm,1.1s					
WMQ			pmax	pmax		
	comp=Z,270nm,4.7s					
WMQ			LR	LR		
	comp=N,170nm,30.1s					
WMQ			LR	LR		
	comp=Z,160nm,24.1s					
MKAR	**Makanchi Array**	**80.71 319**	P	**P**	**11 03 43.4**	**-3.5**
	2.6nm,0.9s,baz=100,slow=6.5,SNR=14					
ZALV	**Zalesovo Beam**	**81.50 326**	P	P	11 03 45.8	-5.2
	1.2nm,0.6s,baz=134,slow=8.5,SNR=5.0					
ILAR	**Eielson Array**	**82.12 22**	P	P	11 03 47.5	-6.5
	1.1nm,1.0s,baz=259,slow=5.4,SNR=8.1					
ILAR			LR	LR	11 35 42.2	
	comp=Z,19nm,19.6s,baz=172,slow=32					
KSH	**Kashi**	**83.35 311**	P	**P**	**11 04 05.8**	**+4.7**
KSH			pP	pP	11 04 12.8	+0.7
KSH			pmax	pmax		
	comp=Z,120nm,4.4s					
KURK	**Kurchatov**	**84.14 322**	P	P	11 04 00.6	-4.1
KURBB	**Kurchatov Arra**	**84.17 322**	P	P	11 04 00.6	-4.2
	0.7nm,0.3s,baz=104,slow=4.5,SNR=10					
NRIK	**Noril'sk**	**86.23 341**	LR	LR	11 44 12.9	
	comp=Z,22nm,18.2s,baz=92,slow=37					
YBH	**Yreka Blue Hor**	**88.82 48**	LR	LR	11 36 22.4	
	comp=Z,38nm,21.6s,baz=293,slow=30					
BVAR	**Borovoye Array**	**89.61 323**	P	P	11 04 26.3	-4.9
	4.3nm,0.8s,baz=104,slow=6.1,SNR=25					
BVAR			LR	LR	11 46 29.5	
	comp=Z,18nm,19.0s,baz=80,slow=37					
NVAR	**Mina Array Bea**	**91.83 52**	LR	LR	11 41 19.9	
	comp=Z,33nm,18.6s,baz=97,slow=32					
AKTO	**Aktyubinsk**	**97.10 320**	LR	LR	11 49 20.3	
	comp=Z,6.2nm,20.7s,baz=80,slow=36					
PDAR	**Pinedale Array**	**98.62 48**	LR	LR	11 45 57.7	
	comp=Z,20nm,18.3s,baz=265,slow=33					
GERES	**GERESS Array B**	**124.39 329**	PKP	**PKPdf**	**11 10 29.0**	**-3.8**
	0.7nm,0.7s,baz=35,slow=3.6,SNR=4.5					
MDT	**Midelt**	**145.40 326**	PKPbc	**PKPbc**	**11 11 08.2**	**-4.0**
	7.4nm,1.0s,baz=62,slow=1.4,SNR=6.1					
TOA0	**Torodi Ar. Sit**	**150.76 288**	*e*PKPbc	**PKPdf**	**11 11 23.1**	**+1.8**
TORD	**Torodi Ar. Bea**	**150.76 288**	PKPbc	**PKPdf**	**11 11 22.6**	**+1.2**
	8.3nm,0.8s,baz=72,slow=2.3,SNR=32					

CSEM ***23*** *11:12:09.4±0.4,45°.17N×14°.68E, h10km, ML2.5/12, Error ellipse: s-maj=5.9km s-min=2.9km az=4.0*
VIE ***23*** *11:12:11.4±0.8,45°.28N×14°.76E, h6km, ml2.0/1, Error ellipse: s-maj=5.2km s-min=3.0km az=178.0 29 km ESE of Rijeka*

ISC 23 11:12:10.1±1.4,45°.20N±0°.05×14°.69E±0°.03, h9km±9km, n34, σ0°50/58, 2D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBRS	**Gornja Briga**	**0.34**	**14**	*i* Pg	**Pg**	**11 12 17.1**	**+0.2**
GBRS				*i* Sg	**Sg**	**11 12 21.6**	**+0.2**
	comp=Z,35nm,0.1s						
GBRS	**Gornja Briga**	**0.34**	**14**	*i* Pg	**Pg**	**11 12 17.1**	**+0.2**
GBRS				*i* Sg	**Sg**	**11 12 21.5**	**+0.2**
	comp=Z,35nm,0.1s						
KNDS	**Knezji Dol**	**0.39**	**326**	⇓*i* Pg	**Pg**	**11 12 17.7**	**-0.2**
KNDS				*i* Sg	**Sg**	**11 12 23.8**	**+0.7**
	comp=Z,10.0nm,0.1s						
KNDS	**Knezji Dol**	**0.39**	**326**	⇓*i* Pg	**Pg**	**11 12 17.7**	**-0.2**
KNDS				*i* Sg	**Sg**	**11 12 23.8**	**+0.7**
	comp=Z,10.0nm,0.1s						
BOJS	**Bojanci**	**0.50**	**52**	*i* Pg	**Pg**	**11 12 19.6**	**-0.2**
BOJS				*i* Sg	**Sg**	**11 12 26.7**	**+0.4**
	comp=Z,7.0nm,0.1s						
BOJS	**Bojanci**	**0.50**	**52**	*i* Pg	**Pg**	**11 12 19.6**	**-0.2**
BOJS				*i* Sg	**Sg**	**11 12 26.7**	**+0.4**
	comp=Z,7.0nm,0.1s						
CEY	**Cerknica**	**0.57**	**341**	*i* Pg	**Pg**	**11 12 20.9**	**-0.3**
CEY				*i* Sg	**Sg**	**11 12 29.3**	**+0.7**
	comp=Z,7.0nm,0.1s						
CEY	**Cerknica**	**0.57**	**341**	*i* Pg	**Pg**	**11 12 20.9**	**-0.3**
CEY				*i* Sg	**Sg**	**11 12 29.3**	**+0.7**
	comp=Z,7.0nm,0.1s						
SKDS	**Skadanscina**	**0.59**	**306**	*i* Pg	**Pg**	**11 12 21.1**	**-0.5**
SKDS				*i* Sg	**Sg**	**11 12 30.0**	**+0.7**
	comp=Z,12nm,0.1s						
SKDS	**Skadanscina**	**0.59**	**306**	*i* Pg	**Pg**	**11 12 21.1**	**-0.5**
SKDS				*i* Sg	**Sg**	**11 12 30.0**	**+0.7**
	comp=Z,12nm,0.1s						
VISS	**Visnje**	**0.61**	**10**	*i* Pg	**Pg**	**11 12 22.0**	**+0.1**
VISS				*i* Sg	**Sg**	**11 12 29.7**	**-0.2**
	comp=Z,10.0nm,0.1s						
VISS	**Visnje**	**0.61**	**10**	*i* Pg	**Pg**	**11 12 22.0**	**+0.1**
VISS				*i* Sg	**Sg**	**11 12 29.7**	**-0.2**
	comp=Z,10.0nm,0.1s						
OZLJ	**Ozalj**	**0.68**	**53**	*e*Pg	**Pb**	**11 12 24.0**	**-0.2**
OZLJ				Sg	**Sg**	**11 12 32.3**	**0.0**
OZLJ	**Ozalj**	**0.68**	**53**	*e*Pg	**Pb**	**11 12 24.0**	**-0.2**
OZLJ				Sg	**Sg**	**11 12 32.2**	**0.0**
GBAS	**Gorenja Brezov**	**0.75**	**347**	*i* Pg	**Pg**	**11 12 24.1**	**-0.6**
GBAS				*i* Sg	**Sb**	**11 12 35.4**	**-0.6**
	comp=Z,4.0nm,0.1s						
GBAS	**Gorenja Brezov**	**0.75**	**347**	*i* Pg	**Pg**	**11 12 24.1**	**-0.6**
GBAS				*i* Sg	**Sb**	**11 12 35.3**	**-0.6**
	comp=Z,4.0nm,0.1s						
JAVS	**Javornik**	**0.82**	**328**	*i* Pg	**Pg**	**11 12 24.8**	**-1.2**
JAVS				*i* Sg	**Sb**	**11 12 37.5**	**-0.4**
	comp=Z,5.0nm,0.1s						
JAVS	**Javornik**	**0.82**	**328**	*i* Pg	**Pg**	**11 12 24.8**	**-1.2**
JAVS				*i* Sg	**Sb**	**11 12 37.5**	**-0.4**
	comp=Z,5.0nm,0.1s						
CRES	**Cresnjev**	**0.82**	**40**	*i* Pg	**Pg**	**11 12 26.0**	**0.0**
CRES				*i* Sg	**Sg**	**11 12 36.5**	**-0.2**
	comp=Z,4.0nm,0.1s						
CRES	**Cresnjev**	**0.82**	**40**	*i* Pg	**Pg**	**11 12 26.0**	**0.0**
CRES				*i* Sg	**Sg**	**11 12 36.5**	**-0.2**
	comp=Z,4.0nm,0.1s						
LEGS	**Legarje**	**0.87**	**30**	*e*Sg	**Sg**	**11 12 37.5**	**-0.6**
LEGS	**Legarje**	**0.87**	**30**	*e*Sg	**Sg**	**11 12 37.5**	**-0.6**
PDKS	**Podkum**	**0.89**	**14**	*i* Sg	**Sg**	**11 12 38.3**	**-0.4**
	comp=Z,7.0nm,0.1s						
PDKS	**Podkum**	**0.89**	**14**	*i* Sg	**Sg**	**11 12 38.3**	**-0.4**
	comp=Z,6.0nm,0.1s						
CRNS	**Crni Vrh**	**0.93**	**341**	*e*Pg	**Pg**	**11 12 27.2**	**-0.8**
CRNS	**Crni Vrh**	**0.93**	**341**	*e*Pg	**Pg**	**11 12 27.2**	**-0.8**
UDBI	**Udbina**	**1.02**	**131**	Sg	**Sn**	**11 12 45.5**	**+0.3**
UDBI	**Udbina**	**1.02**	**131**	Sg	**Sn**	**11 12 45.4**	**+0.3**
MOZS	**Mozjanca**	**1.11**	**351**	*i* Pg	**Pn**	**11 12 32.2**	**+0.3**
MOZS	**Mozjanca**	**1.11**	**351**	*i* Pg	**Pn**	**11 12 32.2**	**+0.3**
GORS	**Gorjuse**	**1.22**	**337**	*i* Pg	**Pb**	**11 12 33.2**	**-0.2**
GORS				*i* Sg	**Sn**	**11 12 50.7**	**+0.5**
	comp=Z,3.0nm,0.1s						
GORS	**Gorjuse**	**1.22**	**337**	*i* Pg	**Pb**	**11 12 33.2**	**-0.2**
GORS				*i* Sg	**Sn**	**11 12 50.7**	**+0.5**
	comp=Z,2.0nm,0.1s						
OBKA	**Obir**	**1.31**	**356**	*e*Pg	**Pg**	**11 12 35.7**	**+0.4**
	comp=Z,0.7nm,0.1s						
OBKA				*e*Sg	**Sn**	**11 12 53.1**	**+0.6**
	comp=Z,3.8nm,0.2s						
OBKA	**Obir**	**1.31**	**356**	Pg	**Pg**	**11 12 35.7**	**+0.4**
	comp=Z,0.7nm,0.1s						
OBKA				Sg	**Sn**	**11 12 53.1**	**+0.6**
	comp=Z,3.8nm,0.2s						

IDC ***23*** *11:13:40.1±1.4,30°.96N×49°.98E, h0km, mb3.7/11, mb1 3.8/13, mb1mx3.6/80, mbtmp3.8/13, ML3.7/2, MS2.6/2, Ms1 2.6/2, ms1mx2.1/65, Error ellipse: s-maj=28.6km s-min=20.1km az=168.0*
ISCJB ***23*** *11:13:41.9±0.3,30°.93N±0°.03×50°.02E±0°.03, h10km, mb3.6/11, MS3.0/1, Error ellipse: s-maj=4.5km s-min=4.0km az=144.3*
THR ***23*** *11:13:41.7±0.4,30°.85N×50°.09E, h14km±7km, ML3.8*
SGS ***23*** *11:13:43.2,31°.19N×49°.99E, h3km*
CSEM ***23*** *11:13:43.5±0.4,30°.90N×50°.07E, h10km, ML3.8, Error ellipse: s-maj=9.5km s-min=6.8km az=51.0*
TEH ***23*** *11:13:44.6,30°.93N×50°.10E, h10km, ML3.7*

ISC 23 11:13:42.5±0.7,30°.94N±0°.05×50°.09E±0°.05, h10km, n89, σ1°85/88, mb3.7/11, 5C-4D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AHWZ	**Ahwaz**	**1.30**	**288**	*e*		11 14 28.8	
	comp=N,99nm,0.1s						
AHWZ				*e*Pg	**Pn**	**11 14 09.1**	**+2.3**
AHWZ				*e*		11 14 31.4	
	comp=Z,99nm,0.1s						
ZNGN	**Zangian**	**1.34**	**29**	*e*Sg	**Sb**	**11 14 26.8**	**+1.5**
ZNGN				*e*Pg	**Pn**	**11 14 07.6**	**0.0**
ZNGN				*e*		11 14 30.1	
	comp=E,99nm,0.4s						
ZNGN				*e*		11 14 31.4	
	comp=Z,99nm,0.2s						
ZNGN				*e*		11 14 32.1	
	comp=N,99nm,0.2s						
ZNGN	**Zangian**	**1.34**	**29**	*e*Pg	**Pn**	**11 14 08.2**	**+0.6**
ZNGN				*e*Sg	**Sb**	**11 14 27.1**	**+1.8**
IBRJ	**Brojen**	**1.39**	**46**	*e*Sg	**Sb**	**11 14 28.5**	**+1.9**
IBRJ				*e*Pg	**Pn**	**11 14 07.5**	**-0.7**
IBRJ				*e*		11 14 31.5	
	comp=N,12μm,0.2s						
IBRJ				*e*		11 14 31.6	
	comp=Z,11μm,0.2s						
SHGR	**Shooshtar-Gavs**	**1.60**	**317**	*e*Pg	**Pn**	**11 14 12.2**	**+1.3**
SHGR				AML	AML	11 14 37.9	
	comp=N,2μm,0.5s						
SHGR				AML	AML	11 14 37.9	
	comp=E,1μm,0.3s						
SHGR	**Shooshtar-Gavs**	**1.60**	**317**	*e*Pn	**Pn**	**11 14 12.2**	**+1.3**
SHGR	**Shooshtar-Gavs**	**1.60**	**317**	*e*Pg	**Pn**	**11 14 12.2**	**+1.3**
ROKH	**ROKH**	**1.61**	**30**	*e*Pn	**Pn**	**11 14 12.4**	**+1.1**
ROKH				*e*		11 14 37.4	
	comp=N,99nm,0.3s						
ROKH				*e*		11 14 38.0	
	comp=E,99nm,0.2s						
ROKH				*e*		11 14 38.8	
	comp=Z,99nm,0.5s						
ROKH	**ROKH**	**1.61**	**30**	*e*Pn	**Pn**	**11 14 12.6**	**+1.3**
IKAZ	**Kazeroun**	**1.90**	**127**	*e*Pn	**Pn**	**11 14 16.7**	**+1.3**
IKAZ				*e*		11 14 48.2	
	comp=N,39nm,0.1s						
IKAZ				*e*		11 14 49.8	
	comp=Z,18μm,0.2s						
IKAZ	**Kazeroun**	**1.90**	**127**	*e*Pn	**Pn**	**11 14 16.4**	**+1.0**
IRAM	**Ramesheh**	**2.14**	**66**	*e*Pn	**Pn**	**11 14 20.5**	**+2.0**
IRAM				*e*		11 14 24.0	
	comp=Z,6μm,0.2s						
IRAM				*e*		11 14 26.0	
	comp=E,8μm,0.2s						
IRAM				*e*		11 14 31.0	
	comp=N,5μm,0.2s						
IRAM	**Ramesheh**	**2.14**	**66**	*e*Pn	**Pn**	**11 14 20.7**	**+2.2**
IGAR	**Gharneh**	**2.21**	**48**	*e*Pn	**Pn**	**11 14 22.8**	**+3.2**
IGAR				*e*		11 14 57.7	
	comp=Z,7μm,0.4s						
IGAR				*e*		11 14 57.8	
	comp=N,8μm,0.3s						
IGAR	**Gharneh**	**2.21**	**48**	*e*Pn	**Pn**	**11 14 22.7**	**+3.2**
AHBU	**AHRAM**	**2.32**	**153**	*e*Pg	**Pn**	**11 14 22.4**	**+1.6**
SHI	**Shiraz**	**2.46**	**121**	*e*		11 15 10.4	
	comp=Z,4μm,0.4s						
IKLH	**Kolahrood**	**2.69**	**28**	*e*Pn	**Pn**	**11 14 29.4**	**+3.3**
IKLH				*e*		11 15 14.6	
	comp=E,6μm,0.2s						
IKLH				*e*		11 15 17.4	
	comp=Z,3μm,0.3s						
IKLH				*e*		11 15 22.1	
	comp=N,5μm,0.3s						
IKLH	**Kolahrood**	**2.69**	**28**	*e*Pn	**Pn**	**11 14 29.0**	**+2.9**
IZEF	**Zefreh**	**2.72**	**44**	*e*Pn	**Pn**	**11 14 29.0**	**+2.4**
IZEF				*e*		11 15 14.1	
	comp=N,2μm,0.4s						
IZEF				*e*		11 15 16.6	
	comp=E,3μm,0.3s						
IZEF				*e*		11 15 32.4	
	comp=Z,1μm,0.4s						
IZEF	**Zefreh**	**2.72**	**44**	*e*Pn	**Pn**	**11 14 29.6**	**+3.0**
IPAR	**Pars**	**2.78**	**112**	*e*Pn	**Pn**	**11 14 28.9**	**+1.5**
IPAR				*e*		11 15 20.5	
	comp=Z,2μm,0.4s						
IPAR				*e*		11 15 30.8	
	comp=E,4μm,0.5s						
IPAR				*e*		11 15 35.8	
	comp=N,3μm,0.4s						
IPAR	**Pars**	**2.78**	**112**	*e*Pn	**Pn**	**11 14 28.9**	**+1.5**
KHMZ	**Khomeyn**	**2.79**	**358**	*e*Pn	**Pn**	**11 14 29.6**	**+2.1**
KHMZ				AML	AML	11 15 10.8	
	comp=E,157nm,0.6s						
KHMZ	**Khomeyn**	**2.79**	**358**	*e*Pn	**Pn**	**11 14 29.6**	**+2.1**
KHMZ	**Khomeyn**	**2.79**	**358**	*e*Pn	**Pn**	**11 14 29.6**	**+2.1**
NASN	**Na'in**	**2.96**	**51**	*e*Pn	**Pn**	**11 14 31.4**	**+1.5**
NASN	**Na'in**	**2.96**	**51**	*e*Pn	**Pn**	**11 14 31.4**	**+1.5**
NASN	**Na'in**	**2.96**	**51**	*e*Pn	**Pn**	**11 14 31.4**	**+1.5**
QAM	**Ghamsar**	**3.03**	**22**	*e*Pn	**Pn**	**11 14 34.3**	**+3.5**
QAM				*e*		11 14 34.9	
	comp=Z,4μm,0.1s						
QAM				*e*		11 15 12.8	
	comp=E,5μm,0.1s						
QAM				*e*		11 15 13.1	
	comp=N,4μm,0.2s						
IKFM	**Kafar-mosalman**	**3.20**	**324**	*e*Pn	**Pn**	**11 14 34.3**	**+1.4**
IKFM				*e*		11 15 33.2	
	comp=Z,99nm,0.3s						
IKFM				*e*		11 15 45.9	
	comp=N,99nm,0.5s						
ISAD	**Sadrabad**	**3.22**	**72**	*e*Pn	**Pn**	**11 14 36.0**	**+2.5**
ISAD				*e*		11 14 44.9	
	comp=Z,2μm,0.2s						
ISAD				*e*		11 15 29.2	
	comp=E,3μm,0.3s						
ISAD				*e*		11 15 31.8	
	comp=N,2μm,0.3s						
ISAD	**Sadrabad**	**3.22**	**72**	*e*Pn	**Pn**	**11 14 35.9**	**+2.5**
KFJS		**3.32**	**215**	P	**Pn**	**11 14 36.7**	**+2.1**
KFJS				S	**Sn**	**11 15 17.1**	**+2.9**
GHIR	**Ghir-Karzin**	**3.66**	**136**	*e*Pn	**Pn**	**11 14 39.2**	**-0.1**
GHIR	**Ghir-Karzin**	**3.66**	**136**	*e*Pn	**Pn**	**11 14 39.2**	**-0.1**
GHIR	**Ghir-Karzin**	**3.66**	**136**	*e*Pn	**Pn**	**11 14 39.2**	**-0.1**
ANAR	**Anarak**	**3.81**	**53**	*e*Pn	**Pn**	**11 14 43.9**	**+2.4**
ANAR				*e*		11 14 53.9	
	comp=N,99nm,0.3s						
ANAR				*e*		11 16 01.3	
	comp=Z,99nm,0.5s						
ANAR	**Anarak**	**3.81**	**53**	*e*Pn	**Pn**	**11 14 43.9**	**+2.4**
ISFB	**Sefidab**	**3.85**	**27**	*e*Pn	**Pn**	**11 14 43.8**	**+1.8**
ISFB				*e*		11 15 30.3	
	comp=E,2μm,0.5s						
ISFB				*e*		11 15 30.3	
	comp=N,2μm,0.3s						
ISFB				*e*		11 15 31.1	
	comp=Z,1μm,0.3s						
ISFB	**Sefidab**	**3.85**	**27**	*e*Pn	**Pn**	**11 14 43.7**	**+1.8**
IKOM	**Komasi**	**3.89**	**327**	*e*Pn	**Pn**	**11 14 44.0**	**+1.4**
IKOM				*e*		11 16 09.4	
	comp=Z,99nm,0.6s						
IKOM	**Komasi**	**3.89**	**327**	*e*Pn	**Pn**	**11

IFIR *e*Pn **Pn** **11 15 02.2 +1.7**
IFIR *e* 11 15 10.7
comp=Z,498nm,0.1s
IFIR *e* 11 16 30.3
comp=E,479nm,0.3s
IGZV Ghazvin 5.43 1 *e* 11 16 39.6
comp=N,637nm,0.3s
IGZV *e* 11 16 40.2
comp=E,700nm,0.3s
IGZV *e* 11 16 51.5
comp=Z,291nm,0.3s
BTHS 6.90 174 P **Pn** **11 15 25.3 +1.5**
MSFE Esma-Masafi 7.72 135 *e*Pn **Pn** **11 15 33.9 -1.2**
ASUD Al Ashush, Dub 7.81 142 *e*Pn **Pn** **11 15 37.6 +1.3**
HATD Hatta, Dubai 8.10 137 *e*Pn **Pn** **11 15 40.1 -0.2**
GEYT Alibeck 9.61 41 Pn **Pn** **11 16 03.5 +2.4**
comp=Z,3.4nm,0.3s,baz=235,slow=18,SNR=3.4
GEYT Lg Lg 11 18 45.7
comp=Z,5.1nm,0.3s,baz=244,slow=33,SNR=5.3
GNI Garni 10.17 336 LR LR 11 19 30.0
comp=Z,14nm,20.2s,baz=167,slow=35
WSAR Wadi Sarin 10.80 133 Pn **Pn** **11 16 15.7 -1.6**
comp=Z,0.7nm,0.3s,baz=305,slow=9.5,SNR=8.2
WSAR Sn Sn 11 18 11.0 -7.3
comp=Z,0.7nm,0.3s,baz=294,slow=20,SNR=3.9
ASF Jabal al Asfar 11.32 280 Pn Pn 11 16 21.7 -2.8
comp=Z,0.4nm,0.3s,baz=74,slow=7.4,SNR=3.3
ASF Sn Sn 11 18 18.9 -12
comp=Z,0.1nm,0.3s,baz=74,slow=15,SNR=2.6
ASF Lg Lg 11 19 37.9
baz=38,slow=19,SNR=1.9
BRTR Keskin Array B 16.01 308 Pn **Pn** **11 17 30.9 +2.9**
comp=Z,0.2nm,0.3s,baz=134,slow=13,SNR=9.6
AKTO Aktyubinsk 20.36 15 P **P** **11 18 19.2 +0.2**
comp=Z,0.7nm,0.3s,baz=188,slow=13,SNR=3.3
IDI Anoyia 21.53 288 P **P** **11 18 31.1 -0.8**
comp=Z,4.9nm,0.7s,baz=79,slow=10,SNR=4.1
CFR Carcaliu 22.28 316 ⇓*iP* **P** **11 18 38.5 -1.3**
MLR Muntele Rosu 23.77 314 P **P** **11 18 56.4 +1.1**
comp=Z,0.4nm,0.5s,baz=74,slow=2.8,SNR=3.4
MLR Muntele Rosu 23.77 314 ⇑*iP* **P** **11 18 53.6 -1.7**
TESR Tescani 23.88 317 ⇓*iP* **P** **11 18 54.3 -1.8**
VOIR 24.30 314 ⇓*iP* **P** **11 19 00.4 +0.2**
DOPR Dopca 24.35 315 ⇓*iP* **P** **11 19 00.7 +0.1**
ARR Arges 24.53 313 ⇑*iP* **P** **11 19 02.3 0.0**
AKASG Malin Array Be 25.12 328 P **P** **11 19 05.7 -1.8**
comp=Z,1.0nm,0.4s,baz=133,slow=9.6,SNR=6.1
BURAR Bucovina Array 25.29 318 ⇑*iP* **P** **11 19 09.1 -0.1**
MDVR Moldovita 26.16 310 ⇑*iP* **P** **11 19 16.7 -0.4**
DRGR 26.37 315 ⇑*iP* **P** **11 19 18.4 -0.5**
BVAR Borovoye Array 26.55 28 P **P** **11 19 20.2 -0.2**
comp=Z,0.5nm,0.5s,baz=213,slow=10,SNR=3.0
MKAR Makanchi Array 29.39 48 P **P** **11 19 46.4 +0.4**
comp=Z,0.1nm,0.4s,baz=251,slow=8.5,SNR=2.9
GERES GERESS Array B 32.75 314 P **P** **11 20 14.3 -1.3**
comp=Z,0.3nm,0.4s,baz=92,slow=5.0,SNR=2.7
ZALV Zalesovo Beam 33.89 37 LR LR 11 37 32.4
comp=Z,26nm,18.3s,baz=70,slow=42
FINES FINESS Array B 34.33 340 P **P** **11 20 27.1 -1.9**
comp=Z,1.6nm,0.6s,baz=150,slow=9.3,SNR=18
HFS Hagfors 37.90 331 P **P** **11 20 57.5 -2.1**
comp=Z,1.6nm,0.6s,baz=116,slow=10,SNR=11
ARCES ARCESS Array B 41.09 347 P **P** **11 21 23.8 -2.3**
comp=Z,2.7nm,0.9s,baz=134,slow=8.9,SNR=3.6
TORD Torodi Ar. Bea 47.83 259 P **P** **11 22 19.5 -1.2**
comp=Z,0.4nm,0.6s,baz=46,slow=8.6,SNR=3.3
YKA Yellowknife Ar 86.08 353 P **P** **11 26 21.9 -1.3**
comp=Z,0.2nm,0.6s,baz=24,slow=6.2,SNR=3.1

*IDC **23** 11:51:45.2±1.2,2°.95S×129°.78E,h0km,mb3.4/3, mb1 3.7/6,mb1mx3.5/57,mbtmp3.6/6,ML3.4/3,Error ellipse: s-maj=43.5km s-min=21.6km az=84.0*
*ISCJB **23** 11:51:46.9±0.5,2°.93S±0°.05×129°.77E±0°.04,h25km, mb3.5/2,Error ellipse: s-maj=7.7km s-min=5.7km az=171.3*
*DJA **23** 11:51:49.4±1.2,3°.5±3°.×13°.0E±°,h25km±10km,M3.6/7, MLv3.6/7*
ISC 23 11:51:48.9±0.8,2°.92S±0°.05×129°.81E±0°.04,h25km,n13, σ2°.03/20,mb3.6/3,Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.98**	**244**	P	**Pb**	**11 52 08.7**	**+1.5**
MSAI				S	**Sn**	**11 52 23.5**	**+3.4**
BNDI	**Bandanaira**	**1.60**	**177**	P	**Pb**	**11 52 18.7**	**+0.9**
BNDI				S	**Sb**	**11 52 40.8**	**+3.3**
AAI	**Ambon**	**1.79**	**245**	P	**Pn**	**11 52 13.9**	**-4.2**
FAKI	**Fak Fak**	**2.44**	**90**	P	**Pn**	**11 52 27.4**	**+0.3**
FAKI				S	**Sn**	**11 52 56.7**	**+0.6**
SIJI	**Sorong**	**2.50**	**36**	Pn	**Pn**	**11 52 27.6**	**-0.4**
	15nm,0.3s,baz=221,slow=19,SNR=43						
SIJI				Sn	**Sn**	**11 52 56.5**	**-1.2**
	8.6nm,0.3s,baz=229,slow=19,SNR=7.6						
LBMI	**Labuha**	**3.23**	**314**	P	**Pn**	**11 52 39.0**	**+0.9**
SANI	**Sanana**	**3.91**	**283**	P	**Pn**	**11 52 47.2**	**-0.2**
SANI				S	**Sn**	**11 53 30.9**	**-1.7**
RKPI	**Ransiki, Papua**	**4.58**	**72**	P	**Pn**	**11 52 57.1**	**+0.5**
RKPI				S	**Sn**	**11 53 46.6**	**-2.5**
FITZ	**Fitzroy Crossi**	**15.63**	**195**	Pn	**Pn**	**11 55 27.2**	**-0.4**
	0.1nm,0.3s,baz=12,slow=9.3,SNR=2.6						
WRA	**Warramunga Arr**	**17.49**	**166**	P	**Pn**	**11 55 49.8**	**-1.5**
	0.2nm,0.3s,baz=347,slow=12,SNR=12						
WRA				S	Sn	11 58 54.8	-11
	0.0nm,0.3s,baz=339,slow=24,SNR=2.9						
ASAR	**Alice Springs**	**21.00**	**169**	P	**P**	**11 56 30.3**	**-0.4**
	2.7nm,0.8s,baz=351,slow=10,SNR=25						
ASAR				S	**S**	**12 00 20.4**	**-3.3**
	0.7nm,0.9s,baz=349,slow=24,SNR=4.6						
MKAR	**Makanchi Array**	**64.74**	**326**	P	**P**	**12 02 25.5**	**+0.3**
	0.6nm,1.1s,baz=123,slow=5.3,SNR=2.5						
KURBB	**Kurchatov Arra**	**68.96**	**328**	P	**P**	**12 02 52.6**	**+0.7**
	0.2nm,0.4s,baz=130,slow=5.5,SNR=3.1						

IDC 23 12:06:24.9±5.3,5°.36S×151°.13E,h77km±45km,mb3.7/4, mb1 4.0/5,mb1mx3.4/50,mbtmp4.1/5,ML2.4/1,MS3.0/1, Ms1 3.0/1,ms1mx2.3/43,Error ellipse: s-maj=91.7km s-min=30.8km az=130.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.62**	**224**	P	Pn	12 07 46.6	+0.6
	7.6nm,0.3s,baz=34,slow=8.9,SNR=20						
PMG				S	Sn	12 08 46.9	-2.4
	14nm,0.3s,baz=12,slow=19,SNR=8.8						
WRA	**Warramunga Arr**	**21.84**	**227**	P	P	12 11 10.4	-0.8
	6.1nm,0.6s,baz=53,slow=10.0,SNR=43						
ASAR	**Alice Springs**	**24.63**	**221**	P	P	12 11 38.1	-0.3
	2.1nm,0.6s,baz=55,slow=9.1,SNR=25						
FITZ	**Fitzroy Crossi**	**27.93**	**241**	P	P	12 12 08.3	+0.1
	5.2nm,0.5s,baz=43,slow=9.8,SNR=44						
FITZ				LR	LR	12 23 57.6	
	comp=Z,35nm,21.6s,baz=255,slow=38						
ILAR	**Eielson Array**	**83.31**	**22**	P	P	12 18 42.1	-0.8
	0.2nm,0.6s,baz=253,slow=5.6,SNR=3.2						
TORD	**Torodi Ar. Bea**	**148.89**	**287**	PKPbc	PKPbc	12 26 05.1	+0.2
	2.6nm,0.7s,baz=85,slow=3.1,SNR=13						
KOWA	**Kowa**	**153.92**	**292**	PKPbc	PKPbc	12 26 17.1	+0.6
	1.5nm,0.4s,baz=43,slow=4.1,SNR=3.6						

*IDC **23** 12:21:48.8±0.9, 18°.15S×168°.07E,h0km,mb4.0/9, mb1 4.2/10,mb1mx3.9/46,mbtmp4.1/10,ML4.5/1,MS3.4/16, Ms1 3.4/16,ms1mx3.1/45,Error ellipse: s-maj=30.9km s-min=21.7km az=149.0*
*ISCJB **23** 12:21:52.5±0.8, 18°.25S±0°.09×167°.9E±0°.1,h32km, mb3.9/8,MS3.4/13,Error ellipse: s-maj=19.7km s-min=11.4km az=19.7*
ISC 23 12:21:53.9±0.9,18°.3S±0°.1×168°.1E±0°.2,h32km,n25, σ0°.93/15,mb4.0/8,MS3.4/13,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**4.07**	**201**	Pn	**Pn**	**12 22 54.7**	**+0.6**
	30nm,0.3s,baz=68,slow=11,SNR=1022						
DZM				Sn	**Sn**	**12 23 40.8**	**+0.2**
	42nm,0.3s,baz=336,slow=22,SNR=22						
DZM				LR	LR	12 24 10.3	
	comp=Z,107nm,18.9s,baz=1.5,slow=34						
DZM	**Mont Dzumac**	**4.07**	**201**	*e*Pn	**Pn**	**12 22 54.7**	**+0.6**
	64nm,0.1s						
DZM				*e*Sn	**Sn**	**12 23 38.2**	**-2.5**
	201nm,0.2s						
DZM				*e*LR	LR	12 23 46.7	
	560nm,26.4s						
HNR	**Honiara**	**11.79**	**317**	LR	LR	12 28 43.7	
	comp=Z,116nm,20.9s,baz=164,slow=35						
AFI	**Afiamalu**	**19.86**	**80**	LR	LR	12 32 15.8	
	comp=Z,89nm,21.6s,baz=156,slow=32						
CTA	**Charters Tower**	**20.66**	**261**	P	**P**	**12 26 31.4**	**+0.2**
	3.5nm,0.8s,baz=75,slow=15,SNR=2.9						
URZ	**Urewera**	**21.43**	**160**	LR	LR	12 33 42.5	
	comp=Z,122nm,18.8s,baz=357,slow=33						
RPZ	**Rata Peaks**	**25.49**	**175**	LR	LR	12 36 41.4	
	comp=Z,152nm,18.3s,baz=7.5,slow=35						
STKA	**Stephens Creek**	**27.43**	**235**	P	**P**	**12 27 37.6**	**+0.6**
	1.9nm,0.9s,baz=63,slow=11,SNR=5.4						
STKA				LR	LR	12 38 35.2	
	comp=Z,60nm,19.0s,baz=206,slow=37						
RAR	**Rarotonga**	**30.40**	**101**	LR	LR	12 37 53.5	
	comp=Z,44nm,21.3s,baz=284,slow=32						
WRA	**Warramunga Arr**	**31.87**	**261**	P	**P**	**12 28 15.2**	**-1.2**
	0.9nm,0.9s,baz=81,slow=6.4,SNR=5.2						
ASAR	**Alice Springs**	**32.28**	**254**	P	**P**	**12 28 19.8**	**-0.2**
	1.2nm,0.5s,baz=81,slow=8.2,SNR=23						
ASAR				PcP	**PcP**	**12 31 07.3**	**-0.6**
	0.5nm,0.8s,baz=93,slow=4.6,SNR=3.7						
ASAR				LR	LR	12 41 20.0	
	comp=Z,139nm,18.1s,baz=86,slow=36						
GUMO	**Guam**	**39.05**	**323**	LR	LR	12 43 01.7	
	comp=Z,25nm,20.9s,baz=148,slow=33						
FITZ	**Fitzroy Crossi**	**40.22**	**263**	P	**P**	**12 29 28.1**	**+0.3**
	3.7nm,0.9s,baz=80,slow=6.1,SNR=2.7						
FITZ				LR	LR	12 45 08.0	
	comp=Z,84nm,20.6s,baz=107,slow=35						
PPT2	**Papeete2**	**40.26**	**96**	*e*LR	LR	12 41 26.7	
	88nm,25.5s						
TAOE	**Nuku Hiva Isla**	**51.08**	**87**	*e*S	S	12 38 39.4	+30
	27nm,26.6s						
TAOE				*e*LR	LR	12 46 29.0	
	74nm,22.4s						
ASAJ	**Asahikawa**	**66.31**	**340**	LR	LR	12 57 03.3	
	comp=Z,20nm,19.6s,baz=128,slow=32						
PETK	**Petropavlovsk-**	**71.64**	**353**	LR	LR	13 00 52.2	
	comp=Z,17nm,18.7s,baz=90,slow=33						
QSPA	**South Pole Qui**	**71.78**	**180**	P	**P**	**12 33 13.8**	**+0.8**
	7.0nm,0.8s,baz=30,slow=3.9,SNR=18						
YBH	**Yreka Blue Hor**	**87.40**	**44**	LR	LR	13 05 09.9	
	comp=Z,28nm,21.7s,baz=256,slow=30						
NVAR	**Mina Array Bea**	**89.01**	**49**	P	**P**	**12 34 45.4**	**-0.7**
	0.5nm,0.8s,baz=224,slow=7.6,SNR=4.1						
NVAR				LR	LR	13 05 46.2	
	comp=Z,22nm,21.6s,baz=96,slow=30						
ILAR	**Eielson Array**	**89.65**	**18**	P	**P**	**12 34 48.1**	**-0.1**
	0.2nm,0.7s,baz=213,slow=6.5,SNR=2.8						
LPIG	**La Paz**	**90.02**	**65**	LR	LR	13 07 53.0	
	comp=Z,33nm,18.9s,baz=205,slow=31						
SNAA	**Sanae**	**90.07**	**183**	P	**P**	**12 34 50.5**	**+0.2**
	0.9nm,0.7s,baz=195,slow=4.8,SNR=3.4						
TXAR	**Lajitas Array**	**97.30**	**62**	LR	LR	13 11 27.9	
	comp=Z,12nm,20.4s,baz=0.0,slow=31						
ARCES	**ARCESS Array B**	**123.85**	**345**	PKP	**PKPdf**	**12 40 47.7**	**-0.4**
	1.8nm,1.0s,baz=46,slow=2.6,SNR=2.4						

*ISCJB **23** 12:23:24.3±0.6, 16°.43N±0°.06×94°.49W±0°.05,h100km, mb3.7/8,Error ellipse: s-maj=9.7km s-min=5.2km az=25.7*
*IDC **23** 12:23:25.0±1.3, 16°.48N×94°.11W,h77km±5km,mb3.6/8, mb1 3.7/9,mb1mx3.5/46,mbtmp3.8/9,MS3.1/1,Ms1 3.1/1, ms1mx2.3/37,Error ellipse: s-maj=47.3km s-min=19.1km az=40.0*
*MEX **23** 12:23:26.8±0.6, 16°.37N×94°.52W,h80km,MD4.1*
*NEIC **23** 12:23:26.8±0.0, 16°.37N×94°.52W,h80km,mb4.3/1, MD4.1(MEX),After MEX.*
ISC 23 12:23:26.1±0.7,16°.46N±0°.08×94°.47W±0°.04,h100km,n24, σ2°.17/34,mb3.6/10,Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**0.74**	**327**	P	**Pn**	**12 23 42.3**	**-1.5**
	328nm,0.3s,baz=160,slow=7.8,SNR=2572						
CMIG				S	**Sn**	**12 23 55.3**	**-1.9**
	882nm,0.3s,baz=253,slow=20,SNR=209						
CMIG				LR	LR	12 24 03.2	
	comp=Z,46nm,21.6s,baz=40,slow=40						
TGIG		**1.33**	**76**	*e*P	**Pn**	**12 23 49.8**	**-0.5**
TGIG				*e*S	**Sn**	**12 24 07.4**	**-1.2**
TGIG		**1.33**	**76**	*e*P	**Pn**	**12 23 49.8**	**-0.5**
TGIG				*e*S	**Sn**	**12 24 07.4**	**-1.2**
CCIG	**Comitan**	**2.25**	**94**	*e*P	**Pn**	**12 24 01.1**	**-0.9**
CCIG				*e*S	**Sn**	**12 24 27.5**	**-2.0**
CCIG	**Comitan**	**2.25**	**94**	*e*P	**Pn**	**12 24 01.1**	**-0.9**
CCIG				*e*S	**Sn**	**12 24 27.5**	**-2.0**
VHO	**Vista Hermosa**	**2.25**	**286**	*e*P	**Pn**	**12 24 01.2**	**-1.0**
VHO				*i* S	**Sn**	**12 24 27.0**	**-2.7**
VHO	**Vista Hermosa**	**2.25**	**286**	*e*P	**Pn**	**12 24 01.2**	**-1.0**
VHO				*i* S	**Sn**	**12 24 27.0**	**-2.7**
JTS	**JuntasAbangare**	**11.11**	**122**	P	**Pn**	**12 26 00.0**	**-1.8**
	0.7nm,0.3s,baz=336,slow=20,SNR=3.3						
JCT	**Junction City**	**14.78**	**342**	*e*Pn	**P**	**12 26 54.8**	**+1.4**
	6.2nm,0.6s						
JCT				*e*Sn	**Sn**	**12 29 30.3**	**-2.8**
TXAR	**Lajitas Array**	**15.35**	**328**	P	**Pn**	**12 27 00.2**	**+2.9**
	0.0nm,0.3s,baz=146,slow=13,SNR=3.6						
TXAR				pP	**pP**	**12 27 19.4**	**+1.0**
	0.1nm,0.3s,baz=153,slow=12,SNR=8.0						
MIAR	**Mount Ida**	**18.02**	**2**	*e*P	**P**	**12 27 30.5**	**+1.3**
MIAR				*e*S	S	12 30 40.6	-10
WMOK	**Wichita Mounta**	**18.60**	**349**	*e*P	**Pn**	**12 27 41.2**	**+4.2**
WMOK				*e*S	**S**	**12 30 56.3**	**-6.2**
GOGA	**Godfrey**	**19.58**	**28**	*e*P	**P**	**12 27 47.2**	**+1.1**
	8.8nm,0.5s						
GOGA				*e*S	**S**	**12 31 20.6**	**-1.2**
ANMO	**Albuquerque**	**21.31**	**332**	pP	pP	12 28 25.0	+0.8
	0.4nm,0.5s,baz=157,slow=15,SNR=2.0						
NVAR	**Mina Array Bea**	**30.27**	**321**	P	**P**	**12 29 31.9**	**+4.1**
	0.4nm,0.8s,baz=126,slow=5.7,SNR=3.8						
NVAR				pP	**pP**	**12 29 50.3**	**0.0**
	0.7nm,0.7s,baz=134,slow=8.6,SNR=5.0						
SIV	**San Ignacio**	**46.10**	**133**	P	**P**	**12 31 39.9**	**-0.6**
	1.4nm,0.6s,baz=323,slow=9.7,SNR=6.6						
YKA	**Yellowknife Ar**	**48.11**	**348**	P	**P**	**12 31 56.6**	**+1.2**
	0.3nm,0.6s,baz=152,slow=7.1,SNR=5.0						
YKA				pP	**pP**	**12 32 16.4**	**-2.8**
	0.7nm,0.8s,baz=149,slow=7.5,SNR=7.5						
ILAR	**Eielson Array**	**59.65**	**337**	pP	pP	12 33 42.0	-2.1
	0.3nm,0.7s,baz=176,slow=5.3,SNR=4.3						
BORG	**Borgarnes**	**68.05**	**26**	LR	LR	13 04 09.1	
	comp=Z,11nm,18.2s,baz=24,slow=36						
EKA	**Eskdalemuir Ar**	**77.37**	**36**	P	**P**	**12 35 09.9**	**0.0**
	2.3nm,0.7s,baz=274,slow=3.9,SNR=4.2						
ESDC	**Sonseca Array**	**80.06**	**52**	P	**P**	**12 35 25.7**	**+0.6**
	0.4nm,0.6s,baz=289,slow=3.9,SNR=4.1						
ARCES	**ARCESS Array B**	**84.54**	**18**	P	**P**	**12 35 48.5**	**+0.8**
	1.8nm,0.9s,baz=287,slow=4.2,SNR=4.4						
KOWA	**Kowa**	**86.40**	**76**	P	**P**	**12 35 58.5**	**+0.5**
	3.8nm,0.6s,baz=272,slow=8.2,SNR=6.2						
TORD	**Torodi Ar. Bea**	**92.10**	**76**	P	**P**	**12 36 24.0**	**-0.8**
	0.2nm,0.6s,baz=304,slow=4.0,SNR=3.1						

MEX 23 12:36:24.1±0.4,17°.21N×94°.81W,h142km±9km,MD3.8, Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGIG		**1.68**	**105**	*e*P	Pn	12 36 54.0	-1.1
TGIG				*i* S	Sn	12 37 16.8	-2.0
VHO	**Vista Hermosa**	**1.84**	**266**	*e*P	Pn	12 36 55.6	-1.5
VHO				*i* S	Sn	12 37 20.8	-1.6
PCIG		**2.14**	**134**	*e*P	Pn	12 36 59.3	-1.2
PCIG				*e*S	Sn	12 37 25.9	-2.5
TLIG	**Tlapa**	**3.60**	**276**	*e*P	Pn	12 37 18.1	-0.9
TLIG				*e*S	Sn	12 37 59.7	-1.9

*SJA **23** 12:49:32.5±0.4, 35°.93S×71°.72W,h159km±6km,ML3.2, MW3.3*
*ISCJB **23** 12:49:33.4±1.6, 36°.08S±0°.08×71°.4W±0°.3,h131km±20km, Error ellipse: s-maj=36.7km s-min=11.5km az=9.8*
*GUC **23** 12:49:35.0±0.6, 36°.09S×71°.39W,h123km±9km,ML3.5*
ISC 23 12:49:32.6±3.3,36°.09S±0°.09×71°.6W±0°.2,h144km±28km, n17,σ0°.69/21,3D,Central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CCHI	**Chillan**	**0.66**	**219**	*e*P	**Pn**	**12 49 54.8**	**+0.6**
CCHI				*e*S	**Sn**	**12 50 09.6**	**-1.1**
CCHI				IAML		12 50 10.4	
	comp=N,2μm,0.2s						
GO05	**HualaæØ**	**1.12**	**344**	*i* P	**Pn**	**12 49 58.1**	**+0.1**
GO05				*i* S	**Sn**	**12 50 17.1**	**-0.2**
GO05	**HualaæØ**	**1.12**	**344**	⇓*iP*	**Pn**	**12 49 59.0**	**+1.0**
GO05				*e*S	**Sn**	**12 50 16.7**	**-0.6**
GO05				IAML		12 50 21.6	
	comp=E,708nm,0.3s						
CCSP	**San Pedro de C**	**1.46**	**238**	IAML		12 50 26.7	
	comp=N,592nm,0.3s						
LMEL	**Las Melosas**	**2.50**	**27**	⇓*iP*	**Pn**	**12 50 14.5**	**+0.8**
CLCH	**Cerro Calan**	**2.82**	**18**	*e*P	**Pn**	**12 50 18.3**	**+0.7**
CLCH				*e*S	**Sn**	**12 50 51.7**	**-0.5**
FCH	**Farellones**	**2.95**	**21**	*e*P	**Pn**	**12 50 19.8**	**+0.4**
PEL	**Peldehue**	**3.03**	**14**	⇓*iP*	**Pn**	**12 50 21.1**	**+0.8**
PEL				*e*S	**Sn**	**12 50 56.2**	**-0.7**
ROC1	**El Roble**	**3.14**	**8**	*i* P	**Pn**	**12 50 21.3**	**-0.5**
ROCH	**El Roble**	**3.15**	**8**	*e*P	**Pn**	**12 50 22.7**	**+0.8**
AAGR	**Agrelo**	**3.75**	**38**	*i* P	**Pn**	**12 50 30.4**	**+0.7**
ARCO	**CERRO ARCO**	**3.90**	**35**	*i* P	**Pn**	**12 50 32.0**	**+0.3**
ARCO				IAML		12 50 46.9	
	comp=Z,12nm,0.4s						
ASAL	**Salagasta**	**4.16**	**34**	*i* P	**Pn**	**12 50 35.2**	**+0.3**
AUSP	**Uspallata**	**4.26**	**26**	*i* P	**Pn**	**12 50 37.0**	**+0.6**
RTLS	**Leoncito**	**4.68**	**24**	*i* P	**Pn**	**12 50 42.5**	**+0.5**
RTLS				IAML		12 50 44.4	
	comp=Z,51nm,0.3s						
RTCV	**Cerro Valdivia**	**4.91**	**32**	*i* P	**Pn**	**12 50 44.6**	**-0.2**
RTLL	**Cerro Villicun**	**5.40**	**29**	*i* P	**Pn**	**12 50 51.1**	**-0.3**

*ISCJB **23** 12:50:48.5±1.1, 6°.78S±0°.06×156°.17E±0°.05,h160km±11km, mb4.2/27,Error ellipse: s-maj=10.5km s-min=8.0km az=147.0*
*IDC **23** 12:50:49.4±0.7, 6°.80S×156°.11E,h153km±5km,mb4.0/23, mb1 4.2/26,mb1mx4.1/49,mbtmp4.5/26,MS2.8/1, Ms1 2.8/1,ms1mx2.2/41,Error ellipse: s-maj=13.5km s-min=9.6km az=86.0*
*NEIC **23** 12:50:50.8±1.1, 6°.78S×156°.19E,h168km±10km,mb4.5/5, Error ellipse: s-maj=9.2km s-min=8.4km az=158.0*
ISC 23 12:50:49.6±0.6, 6°.80S±0°.07×156°.20E±0°.06,h157km±5km, h158km:pP-P,n57,σ1°.21/61,mb4.2/28, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.54**	**125**	*e*P	**Pn**	**12 51 56.0**	**-1.2**
HNR				*e*S	Sn	12 53 07.0	+17
HNR	**Honiara**	**4.54**	**125**	P	**Pn**	**12 51 56.4**	**-0.8**
	59nm,0.3s,baz=224,slow=5.2,SNR=15						
HNR	**Honiara**	**4.54**	**125**	*e*Pn	**Pn**	**12 51 56.5**	**-0.6**
PMG	**Port Moresby**	**9.32**	**253**	P	**Pn**	**12 53 04.8**	**+4.3**
	2.7nm,0.3s,baz=68,slow=8.1,SNR=8.8						
PMG				S	**Sn**	**12 54 44.6**	**+0.6**
	2.1nm,0.3s,baz=108,slow=20,SNR=2.5						
JAY	**Jayapura**	**16.01**	**285**	P	**Pn**	**12 54 25.0**	**-1.3**
	8.7nm,0.3s,baz=111,slow=4.6,SNR=53						
CTA	**Charters Tower**	**16.36**	**215**	P	**Pn**	**12 54 32.5**	**+2.0**
	0.4nm,0.3s,baz=35,slow=14,SNR=6.3						
DZM	**Mont Dzumac**	**18.12**	**148**	P	**Pn**	**12 54 51.9**	**+0.3**
	2.2nm,0.3s,baz=326,slow=12,SNR=18						
TARA	**Tarawa**	**18.55**	**65**	*e*P	**P**	**12 54 55.3**	**+0.8**
	9.2nm,1.0s						
WRAB	**Tennant Creek**	**24.90**	**236**	*e*P	**P**	**12 55 58.0**	**-0.2**
	14nm,0.6s						
WRAB				*e*S	**S**	**13 00 07.5**	**-2.5**
WRA	**Warramunga Arr**	**24.92**	**236**	P	**P**	**12 55 57.8**	**-0.5**
	13nm,0.5s,baz=59,slow=9.1,SNR=65						
WRA				PcP	**PcP**	**12 59 29.6**	**-0.3**
	0.9nm,0.7s,baz=67,slow=2.6,SNR=4.5						
WRA				S	**S**	**13 00 07.8**	**-2.4**
	1.4nm,1.0s,baz=68,slow=15,SNR=3.2						
SIJI	**Sorong**	**25.55**	**282**	P	**P**	**12 56 03.5**	**-0.6**
	6.5nm,0.3s,baz=66,slow=12,SNR=5.8						
H11S3	**WAKE ISLAND Hy**	**27.18**	**22**	T	T	13 25 13.1	
	baz=202,slow=76,SNR=288						
H11S2	**WAKE ISLAND Hy**	**27.18**	**22**	T	T	13 25 05.3	
	baz=202,slow=76,SNR=264						
H11S1	**WAKE ISLAND Hy**	**27.19**	**22**	T	T	13 25 14.2	
	baz=202,slow=76,SNR=216						
ASAR	**Alice Springs**	**27.20**	**230**	P	**P**	**12 56 18.1**	**-0.8**
	5.2nm,0.3s,baz=61,slow=9.2,SNR=42						
ASAR				pP	**pP**	**12 56 50.5**	**-1.2**
	1.9nm,0.6s,baz=61,slow=9.4,SNR=3.1						
ASAR				PcP	**PcP**	**12 59 34.7**	**-0.5**
	1.5nm,0.8s,baz=71,slow=3.3,SNR=5.8						
ASAR				S	**S**	**13 00 42.4**	**-3.9**
	0.5nm,0.6s,baz=61,slow=17,SNR=3.0						
H11N1	**WAKE ISLAND Hy**	**28.37**	**22**	T	T	13 26 41.0	
	baz=201,slow=79						
H11N3	**WAKE ISLAND Hy**	**28.38**	**22**	T	T	13 26 42.4	
	baz=201,slow=79						
H11N2	**WAKE ISLAND Hy**	**28.39**	**22**	T	T	13 26 45.2	
	baz=201,slow=79						
STKA	**Stephens Creek**	**28.44**	**207**	P	**P**	**12 56 29.4**	**-0.3**
	2.2nm,0.7s,baz=37,slow=13,SNR=3.9						
STKA				PcP	**PcP**	**12 59 37.5**	**-0.5**
	1.2nm,0.5s,baz=27,slow=4.5,SNR=5.5						
FITZ	**Fitzroy Crossi**	**31.82**	**246**	P

0.8nm,0.5s,baz=57,slow=5.5,SNR=4.4
CLL Collm 126.20 332 *e*PKPdf **PKPdf 13 09 34.0 +0.6**
GERES GERESS Array B 127.49 330 PKP **PKPdf 13 09 36.6 +0.5**
1.1nm,0.5s,baz=53,slow=1.6,SNR=9.9
EKA Eskdalemuir Ar 128.86 345 PKP **PKPdf 13 09 38.2 -0.2**
0.5nm,0.5s,baz=19,slow=4.5,SNR=3.8
LPAZ La Paz 130.50 118 PKP **PKPdf 13 09 44.0 +0.6**
0.6nm,0.5s,baz=211,slow=5.9,SNR=3.4
DAVOX Davos/Dischmat 130.79 330 PKP **PKPdf 13 09 42.8 +0.2**
2.2nm,0.5s,baz=58,slow=19,SNR=5.0
MDT Midelt 148.56 328 PKPbc **PKPbc 13 10 19.3 +0.6**
3.7nm,0.8s,baz=65,slow=5.8,SNR=5.3
TORD Torodi Ar. Bea 154.12 286 PKPbc **PKPbc 13 10 31.0 -0.9**
1.1nm,0.6s,baz=50,slow=2.1,SNR=5.6

*JMA **23** 12:55:59.7±0.6, 45°.42N×150°.21E, h30km, M3.9*
*MOS **23** 12:56:00.5±1.7, 45°.51N×150°.18E, h34km, mb4.2/1, Error ellipse: s-maj=99.9km s-min=24.1km az=148.6*
SKHL 23 12:56:00.5±0.6, 45°.46N×150°.21E, h35km±2km, mb4.3/3, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.67**	**263**	*e*P	Pn	12 56 26.5	-0.7
KUR	69nm,0.4s			AMB	AMB	12 56 27.7	
KUR	47nm,0.4s			AMB	AMB	12 56 27.7	
KUR	143nm,0.4s			AMB	AMB	12 56 27.7	
KUR	718nm,0.4s			*e*S	Sn	12 56 46.0	-1.3
KUR	458nm,0.4s			A	A	12 56 49.8	
KUR				A	A	12 56 49.8	
KUR	**Kuril'sk**	**1.67**	**263**	*e*PN	Pn	12 56 26.5	-0.7
KUR	comp=N,68nm,0.2s			*e*S	Sn	12 56 46.0	-1.3
KUR	comp=E,41nm,0.2s			pmax	pmax		
KUR	comp=Z,143nm,0.2s			pmax	pmax		
KUR	comp=E,466nm,0.2s			pmax	pmax		
KUR	comp=N,715nm,0.4s			smax	smax		
SHO	**Shikotan**	**2.89**	**238**	*e*P	Pn	12 56 44.0	0.0
SHO	comp=N,17nm,0.2s			AMB	AMB	12 56 45.9	
SHO	comp=N,66nm,0.3s			*e*S	Sn	12 57 15.4	-2.0
SHO	comp=N,460nm,0.3s			A	A	12 57 19.0	
SHO				A	A	12 57 19.0	
SHO	**Shikotan**	**2.89**	**238**	*e*PN	Pn	12 56 41.9	-2.1
SHO	comp=N,6.0nm,0.2s			pmax	pmax		
SHO	comp=E,15nm,0.2s			pmax	pmax		
SHO	comp=Z,17nm,0.2s			pmax	pmax		
YUK	**Yuzh-Kuril'sk**	**3.41**	**247**	*e*P	Pn	12 56 52.2	+1.1
YUK	comp=Z,36nm,0.3s			AMB	AMB	12 56 53.1	
YUK	comp=Z,91nm,0.3s			*e*S	Sn	12 57 30.5	+0.2
YUK	comp=Z,145nm,0.3s			A	A	12 57 36.8	
YUK				A	A	12 57 36.8	
YUK	**Yuzh-Kuril'sk**	**3.41**	**247**	*e*PN	Pn	12 56 52.2	+1.1
YUK	comp=Z,36nm,0.2s			*e*S	Sn	12 57 31.5	+1.2
YUK	comp=E,145nm,0.4s			pmax	pmax		
YUK	comp=N,90nm,0.2s			smax	smax		
LAGR	**Lagunnoye**	**3.45**	**248**	*e*P	Pn	12 56 52.4	+0.7
LAGR	comp=N,116nm,0.3s			*e*S	Sn	12 57 31.7	+0.4
LAGR	comp=N,205nm,0.3s			A	A	12 57 38.6	
LAGR				A	A	12 57 38.6	
LAGR	**Lagunnoye**	**3.45**	**248**	*e*PN	Pn	12 56 52.4	+0.7
LAGR	comp=N,116nm,0.3s			*e*S	Sn	12 57 32.1	+0.8
LAGR	comp=E,205nm,0.6s			smax	smax		
GRPR	**Tuman**	**3.49**	**247**	*e*S	Sn	12 57 32.3	+0.1
GRPR	comp=E,130nm,0.3s			A	A	12 57 39.3	
GRPR	comp=E,110nm,0.3s			A	A	12 57 39.3	
GRPR	**Tuman**	**3.49**	**247**	PN	Pn	12 56 53.1	+0.9
GLVR	**Golovnino**	**3.77**	**244**	*e*S	Sn	12 57 40.0	+0.9
NEM2	**Nemuro 2**	**3.83**	**238**	P	Pn	12 56 54.9	-1.9
NEM2				*e*S	Sn	12 57 36.3	-4.2
JNK	**Nakash**	**4.35**	**246**	P	Pn	12 57 04.0	-0.1
JNK				*e*S	Sn	12 57 52.7	-0.8
JAK	**Akkeshi**	**4.67**	**240**	P	Pn	12 57 07.1	-1.3
JAK				*e*S	Sn	12 57 57.2	-4.0
JTKR	**Abashiri--Toko**	**4.73**	**254**	P	Pn	12 57 11.2	+1.9
JMP	**Maruseppu**	**5.09**	**256**	P	Pn	12 57 15.5	+1.2
JAR	**Ashorobuto**	**5.10**	**247**	P	Pn	12 57 15.1	+0.8
JAR				*e*S	Sn	12 58 11.6	-0.3
JOB	**Onbets**	**5.25**	**243**	P	Pn	12 57 16.1	-0.3
JOB				*e*S	Sn	12 58 12.0	-3.6
JCH	**Churui**	**5.70**	**242**	P	Pn	12 57 21.7	-0.9
JCH				*e*S	Sn	12 58 22.1	-4.6
MYR	**Moyori**	**5.92**	**240**	*e*P	Pn	12 57 24.9	-0.8
JNBK	**Urakawa-nobuka**	**6.26**	**242**	P	Pn	12 57 28.7	-1.5
JKB	**Kayabe**	**7.55**	**245**	P	Pn	12 57 46.6	-1.4
JKB				*e*S	Sn	12 59 05.8	-6.5
JANG	**Nango**	**8.16**	**235**	*e*S	Sn	12 59 16.9	-10
JTH	**Tanohata**	**8.26**	**231**	*e*S	Sn	12 59 18.5	-11

*ISCJB **23** 13:10:56.8±0.5, 15°.28N±0°.07×93°.51E±0°.09, h33km, mb4.0/8, MS3.0/6, Error ellipse: s-maj=13.6km s-min=7.2km az=146.9*
*IDC **23** 13:10:59.8±1.0, 15°.24N×93°.55E, h37km±7km, mb3.8/8, mb1 4.1/11, mb1mx3.6/72, mbtmp4.1/11, ML4.1/3, MS3.0/6, Ms1 3.0/6, ms1mx2.6/71, Error ellipse: s-maj=36.4km s-min=13.6km az=64.0*
ISC 23 13:10:59.4±0.7, 15°.39N±0°.07×93°.55E±0°.09, h35km, n30, σ1§31/26, mb4.1/9, MS3.0/6, Bay of Bengal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**5.99**	**59**	Pn	**Pn**	**13 12 26.8**	**+1.2**
CMAR	2.3nm,0.3s,baz=243,slow=15,SNR=23			Sn	**Sn**	**13 13 31.4**	**-1.7**
SHL	**Shillong**	**10.24**	**351**	*e*P	Pn	13 13 30.0	+5.9
SHL	2.7nm,0.3s,baz=245,slow=30,SNR=8.0			*e*S	**Sn**	**13 15 15.0**	**-2.8**
ODAN	**Odare**	**12.77**	**334**	*e*P	**Pn**	**13 13 59.2**	**+0.4**
RAMN	**Ramite**	**13.20**	**332**	*e*P	**Pn**	**13 14 04.8**	**+0.2**
PSI	**Prapat**	**13.59**	**157**	Pn	**Pn**	**13 14 11.7**	**+1.8**
JIRN	**Jiri**	**13.99**	**332**	*e*P	**Pn**	**13 14 15.1**	**-0.4**
PKIN	**Phulchoki**	**14.30**	**329**	*e*P	**Pn**	**13 14 19.5**	**-0.1**
DMN	**Daman**	**14.47**	**329**	*e*P	**Pn**	**13 14 22.5**	**+0.6**
PALK	**Pallekele**	**14.96**	**239**	Pn	**Pn**	**13 14 26.5**	**-1.9**
PALK	0.5nm,0.3s,baz=115,slow=8.3,SNR=2.8			Sn	Sn	13 16 57.7	-15
GKN	**Gorkha**	**15.03**	**328**	*e*P	**Pn**	**13 14 28.7**	**-0.7**
KOLN	**Koldanda**	**15.39**	**325**	*e*P	**Pn**	**13 14 34.6**	**+0.4**
PYUN	**Piuthan**	**15.99**	**324**	*e*P	**Pn**	**13 14 42.4**	**+0.5**
H08S3	**Diego Garcia H**	**30.97**	**224**	T	T	13 49 22.6	
H08S2	**Diego Garcia H**	**30.98**	**224**	T	T	13 49 22.3	
H08S1	**Diego Garcia H**	**30.99**	**224**	T	T	13 49 22.7	
MKAR	**Makanchi Array**	**32.69**	**346**	P	**P**	**13 17 30.2**	**+1.8**
	9.9nm,0.3s,baz=72,slow=20,SNR=3.4						
URZ	**Urewera**	**11.93**	**191**	P	**P**	**13 25 31.6**	**-1.3**
	7.6nm,0.3s,baz=292,slow=1.7,SNR=28						
URZ	0.7nm,0.3s,baz=66,slow=20,SNR=3.0			S	**S**	**13 27 40.2**	**-2.7**
DZM	**Mont Dzumac**	**13.17**	**287**	P	**P**	**13 25 46.0**	**-0.4**
	0.7nm,0.3s,baz=108,slow=9.0,SNR=9.1						
AFI	**Afiamalu**	**14.73**	**33**	P	**P**	**13 25 59.3**	**-3.6**
	3.1nm,0.3s,baz=243,slow=9.0,SNR=5.4						
AFI	0.3nm,0.3s,baz=120,slow=20,SNR=2.3			S	S	13 28 28.2	-9.4
RPZ	**Rata Peaks**	**18.61**	**201**	P	**P**	**13 26 41.9**	**+0.9**
	0.9nm,0.3s,baz=49,slow=9.3,SNR=4.1						
CTA	**Charters Tower**	**31.62**	**275**	P	**P**	**13 28 36.6**	**-0.2**
	4.3nm,0.3s,baz=100,slow=12,SNR=20						
STKA	**Stephens Creek**	**33.84**	**252**	P	**P**	**13 28 55.8**	**+0.2**
	2.6nm,0.4s,baz=94,slow=13,SNR=18						
ASAR	**Alice Springs**	**41.70**	**264**	P	**P**	**13 29 59.5**	**-0.5**
	2.7nm,0.4s,baz=97,slow=7.3,SNR=93						
ASAR	0.6nm,0.8s,baz=103,slow=3.7,SNR=3.2			PcP	**PcP**	**13 31 45.1**	**+0.1**
WRA	**Warramunga Arr**	**42.33**	**269**	P	**P**	**13 30 03.9**	**-1.1**
	2.4nm,0.4s,baz=103,slow=8.7,SNR=60						
FITZ	**Fitzroy Crossi**	**50.71**	**268**	P	**P**	**13 31 08.1**	**-0.4**
	3.0nm,0.5s,baz=129,slow=5.1,SNR=16						
QSPA	**South Pole Qui**	**63.54**	**180**	P	**P**	**13 32 38.4**	**+2.5**
	2.3nm,0.7s,baz=54,slow=2.6,SNR=10						
MJAR	**Matsushiro Arr**	**74.10**	**326**	P	**P**	**13 33 39.5**	**-0.5**
	1.9nm,0.7s,baz=157,slow=5.3,SNR=5.9						
KSRS	**Korea Array**	**80.30**	**320**	P	**P**	**13 34 14.2**	**+0.5**
	1.6nm,0.7s,baz=148,slow=7.2,SNR=8.6						
PETK	**Petropavlovsk-**	**81.67**	**347**	P	**P**	**13 34 20.5**	**+0.1**
	1.3nm,0.6s,baz=116,slow=6.6,SNR=8.5						
NVAR	**Mina Array Bea**	**86.63**	**44**	P	**P**	**13 34 47.9**	**+2.3**
	0.2nm,0.6s,baz=238,slow=8.3,SNR=2.6						
KURBB	**Kurchatov Arra**	**117.16**	**315**	PKP	**PKPdf**	**13 40 42.5**	**-0.4**
	0.3nm,0.4s,baz=97,slow=2.0,SNR=3.2						
BOSA	**Boshof**	**120.04**	**206**	PKP	**PKPdf**	**13 40 51.5**	**+2.1**
	3.6nm,1.1s,baz=209,slow=2.8,SNR=3.0						
BVAR	**Borovoye Array**	**122.43**	**318**	PKP	**PKPdf**	**13 40 53.2**	**+0.2**
	0.5nm,0.4s,baz=150,slow=3.2,SNR=3.6						
ARCES	**ARCESS Array B**	**134.48**	**348**	PKP	**PKPdf**	**13 41 14.4**	**-1.0**
	2.1nm,0.9s,baz=55,slow=3.4,SNR=4.0						
FINES	**FINESS Array B**	**140.95**	**340**	PKhKP	PKPpre	13 41 20.5	
	2.4nm,0.9s,baz=54,slow=4.9,SNR=8.4						
FINES	0.9nm,0.7s,baz=320,slow=3.6,SNR=4.0			PKP	**PKiKP**	**13 41 29.7**	**-0.6**
NB2	**NORSAR Subarra**	**144.69**	**351**	PKP	**PKPdf**	**13 41 34.3**	**+0.2**
	comp=Z,3.6nm,1.1s,baz=17,slow=2.6						
HFS	**Hagfors**	**145.14**	**348**	PKP	**PKPdf**	**13 41 35.3**	**+0.5**
	comp=Z,3.5nm,0.6s,baz=64,slow=3.4,SNR=19						
AKASG	**Malin Array Be**	**147.18**	**325**	PKPbc	**PKPbc**	**13 41 41.6**	**0.0**
	comp=Z,3.0nm,0.6s,baz=46,slow=4.3,SNR=6.4						
MMAI	**Mount Meron Ar**	**148.74**	**290**	PKPbc	**PKPbc**	**13 41 47.8**	**+1.6**
	comp=Z,2.1nm,0.4s,baz=74,slow=5.1,SNR=10						
BRTR	**Keskin Array B**	**149.13**	**304**	PKPbc	**PKPbc**	**13 41 48.4**	**+1.3**
	comp=Z,1.1nm,0.6s,baz=99,slow=9.1,SNR=3.8						
EKA	**Eskdalemuir Ar**	**151.15**	**4**	PKPbc	**PKPbc**	**13 41 51.4**	**+0.3**
	comp=Z,0.6nm,0.4s,baz=329,slow=2.1,SNR=7.0						
TORD	**Torodi Ar. Bea**	**166.57**	**187**	PKP	**PKPdf**	**13 42 04.3**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=151,slow=3.3,SNR=2.9						

IDC 23 13:33:45.4±2.0, 11°.47S×117°.98E, h0km, mb3.6/1, mb1 3.6/5, mb1mx3.3/55, mbtmp3.5/5, ML3.1/4, Error ellipse: s-maj=67.3km s-min=25.2km az=43.0, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.72**	**78**	Pn	Pn	13 35 12.3	+0.5
BATI	3.6nm,0.3s,baz=275,slow=11,SNR=3.7			Sn	Sn	13 36 13.5	-4.7
FITZ	**Fitzroy Crossi**	**9.92**	**133**	Pn	Pn	13 36 09.1	-0.2
FITZ	0.1nm,0.3s,baz=320,slow=13,SNR=12			Sn	Sn	13 37 51.6	-10
WRA	**Warramunga Arr**	**17.85**	**120**	P	Pn	13 37 54.3	-1.1
	0.0nm,0.3s,baz=295,slow=14,SNR=3.1						
WRA	0.1nm,0.3s,baz=294,slow=24,SNR=3.8			S	Sn	13 41 00.3	-15
ASAR	**Alice Springs**	**19.41**	**131**	P	Pn	13 38 14.2	-0.2
	0.0nm,0.3s,baz=312,slow=11,SNR=3.1						
ASAR	0.1nm,0.3s,baz=294,slow=21,SNR=4.1			S	Sn	13 41 37.4	-16
MKAR	**Makanchi Array**	**66.20**	**334**	P	P	13 44 34.9	-0.1
	0.3nm,0.5s,baz=152,slow=6.8,SNR=5.6						

*IDC **23** 13:48:18.4±3.4, 36°.26N×70°.89E, h172km±30km, mb3.5/12, mb1 3.6/16, mb1mx3.3/71, mbtmp4.0/16, Error ellipse: s-maj=20.2km s-min=17.9km az=6.0*
*ISCJB **23** 13:48:20.0±0.4, 36°.43N±0°.03×70°.78E±0°.05, h188km, mb3.6/12, Error ellipse: s-maj=5.8km s-min=3.3km az=149.7*
*NNC **23** 13:48:27.9±1.3, 36°.96N×70°.89E, h218km±13km, mb3.1, mpv4.3, Error ellipse: s-maj=13.4km s-min=8.5km az=5.0*
ISC 23 13:48:20.3±0.5, 36°.42N±0°.05×70°.85E±0°.05, h188km, n57, σ2§08/64, mb3.8/12, 9C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.73**	**161**	P	Pn	13 49 12.3	+6.0
CEP				S	**Sn**	**13 49 49.0**	**+6.8**
CHCP	**Chirah Chowk**	**3.40**	**144**	P	Pn	13 49 19.8	+5.6
THW	**Thamme Wali**	**3.69**	**168**	P	Pn	13 49 23.4	+5.5
SFK	**Sufi-Kurgan**	**4.15**	**29**	⇑P	**Pn**	**13 49 26.5**	**+2.8**
SFK	28nm,0.3s			⇑S	**Sn**	**13 50 13.6**	**0.0**
SONM	**Songino Array**	**34.05**	**16**	LR	LR	13 34 02.9	
	comp=Z,29nm,19.8s,baz=238,slow=40						
KURBB	**Kurchatov Arra**	**37.18**	**344**	P	**P**	**13 18 09.2**	**+2.3**
	0.7nm,0.8s,baz=162,slow=8.2,SNR=4.6						
KURBB	1.6nm,0.8s,baz=155,slow=8.3,SNR=7.0			pP	**pP**	**13 18 18.9**	**+1.7**
KSRS	**Korea Array**	**37.50**	**48**	LR	LR	13 34 47.5	
	comp=Z,25nm,18.9s,baz=245,slow=38						
GEYT	**Alibeck**	**38.47**	**313**	LR	LR	13 36 50.9	
	comp=Z,24nm,19.7s,baz=215,slow=40						
ZALV	**Zalesovo Beam**	**39.07**	**352**	P	**P**	**13 18 23.7**	**+0.8**
	0.2nm,0.3s,baz=179,slow=6.4,SNR=2.3						
ZALV	1.0nm,0.6s,baz=185,slow=9.0,SNR=3.1			pP	**pP**	**13 18 34.1**	**+1.0**
FITZ	**Fitzroy Crossi**	**45.91**	**135**	P	**P**	**13 19 17.4**	**-1.4**
	4.1nm,0.6s,baz=323,slow=5.1,SNR=15						
NWAO	**Narrogin (SRO)**	**53.12**	**155**	P	**P**	**13 20 12.4**	**-1.2**
	8.0nm,0.8s,baz=287,slow=2.1,SNR=4.4						
WRA	**Warramunga Arr**	**53.30**	**130**	P	**P**	**13 20 14.4**	**-0.9**
	2.5nm,0.5s,baz=315,slow=8.1,SNR=98						
WRA	0.7nm,0.6s,baz=319,slow=8.7,SNR=3.2			pP	**pP**	**13 20 26.4**	**+0.6**
WRA	1.1nm,0.5s,baz=318,slow=3.4,SNR=12			PcP	**PcP**	**13 21 22.5**	**-0.2**
WRA	0.7nm,0.6s,baz=317,slow=3.4,SNR=4.8			pPcP		13 21 34.8	
ASAR	**Alice Springs**	**55.34**	**134**	P	**P**	**13 20 29.4**	**-0.7**
	1.8nm,0.5s,baz=309,slow=6.8,SNR=78						
ASAR	0.9nm,0.8s,baz=322,slow=3.7,SNR=4.7			PcP	**PcP**	**13 21 30.2**	**-0.2**
IDI	**Anoyia**	**63.97**	**302**	LR	LR	13 55 12.9	
	comp=Z,7.1nm,18.4s,baz=52,slow=41						
STKA	**Stephens Creek**	**65.79**	**136**	P	**P**	**13 21 40.6**	**-0.6**
	1.2nm,0.7s,baz=311,slow=11,SNR=3.8						
GERES	**GERESS Array B**	**71.92**	**317**	pP	pP	13 22 31.1	+0.9
	0.4nm,0.6s,baz=79,slow=6.9,SNR=3.0						
SPITS	**Spitsbergen Ar**	**72.41**	**348**	LR	LR	14 03 49.2	
	comp=Z,9.6nm,18.8s,baz=210,slow=44						
NOA	**NORSAR Array B**	**72.96**	**330**	LR	LR	14 00 21.0	
	comp=Z,9.6nm,19.2s,baz=120,slow=40						

*ISCJB **23** 13:22:53.7±0.6, 26°.51S±0°.07×179°.9W±0°.1, h500km, mb3.8/10, Error ellipse: s-maj=12.8km s-min=9.0km az=174.3*
*IDC **23** 13:22:56.0±1.6, 26°.40S×179°.81E, h493km±17km, mb3.4/10, mb1 3.6/13, mb1mx3.3/48, mbtmp4.4/13, Error ellipse: s-maj=18.4km s-min=15.3km az=3.0*
ISC 23 13:22:55.3±0.5, 26°.55S±0°.08×180°.0W±0°.1, h500km, n27, σ1§48/30, mb3.9/10, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.24**	**146**	P	**P**	**13 24 09.6**	**+1.8**
	44nm,0.3s,baz=17,slow=19,SNR=4.6						
RAO	61nm,0.3s,baz=72,slow=20,SNR=3.4			S	**S**	**13 25 04.0**	**-3.0**
URZ	**Urewera**	**11.93**	**191**	P	**P**	**13 25 31.6**	**-1.3**
	7.6nm,0.3s,baz=292,slow=1.7,SNR=28						
URZ	0.7nm,0.3s,baz=66,slow=20,SNR=3.0			S	**S**	**13 27 40.2**	**-2.7**
DZM	**Mont Dzumac**	**13.17**	**287**	P	**P**	**13 25 46.0**	**-0.4**
	0.7nm,0.3s,baz=108,slow=9.0,SNR=9.1						
AFI	**Afiamalu**	**14.73**	**33**	P	**P**	**13 25 59.3**	**-3.6**
	3.1nm,0.3s,baz=243,slow=9.0,SNR=5.4						
AFI	0.3nm,0.3s,baz=120,slow=20,SNR=2.3			S	S	13 28 28.2	-9.4
RPZ	**Rata Peaks**	**18.61**	**201**	P	**P**	**13 26 41.9**	**+0.9**
	0.9nm,0.3s,baz=49,slow=9.3,SNR=4.1						
CTA	**Charters Tower**	**31.62**	**275**	P	**P**	**13 28 36.6**	**-0.2**
	4.3nm,0.3s,baz=100,slow=12,SNR=20						
STKA	**Stephens Creek**	**33.84**	**252**	P	**P**	**13 28 55.8**	**+0.2**
	2.6nm,0.4s,baz=94,slow=13,SNR=18						
ASAR	**Alice Springs**	**41.70**	**264**	P	**P**	**13 29 59.5**	**-0.5**
	2.7nm,0.4s,baz=97,slow=7.3,SNR=93						
ASAR	0.6nm,0.8s,baz=103,slow=3.7,SNR=3.2			PcP	**PcP**	**13 31 45.1**	**+0.1**
WRA	**Warramunga Arr**	**42.33**	**269**	P	**P**	**13 30 03.9**	**-1.1**
	2.4nm,0.4s,baz=103,slow=8.7,SNR=60						
FITZ	**Fitzroy Crossi**	**50.71**	**268**	P	**P**	**13 31 08.1**	**-0.4**
	3.0nm,0.5s,baz=129,slow=5.1,SNR=16						
QSPA	**South Pole Qui**	**63.54**	**180**	P	**P**	**13 32 38.4**	**+2.5**
	2.3nm,0.7s,baz=54,slow=2.6,SNR=10						
MJAR	**Matsushiro Arr**	**74.10**	**326**	P	**P**	**13 33 39.5**	**-0.5**
	1.9nm,0.7s,baz=157,slow=5.3,SNR=5.9						
KSRS	**Korea Array**	**80.30**	**320**	P	**P**	**13 34 14.2**	**+0.5**
	1.6nm,0.7s,baz=148,slow=7.2,SNR=8.6						
PETK	**Petropavlovsk-**	**81.67**	**347**	P	**P**	**13 34 20.5**	**+0.1**
	1.3nm,0.6s,baz=116,slow=6.6,SNR=8.5						
NVAR	**Mina Array Bea**	**86.63**	**44**	P	**P**	**13 34 47.9**	**+2.3**
	0.2nm,0.6s,baz=238,slow=8.3,SNR=2.6						
KURBB	**Kurchatov Arra**	**117.16**	**315**	PKP	**PKPdf**	**13 40 42.5**	**-0.4**
	0.3nm,0.4s,baz=97,slow=2.0,SNR=3.2						
BOSA	**Boshof**	**120.04**	**206**	PKP	**PKPdf**	**13 40 51.5**	**+2.1**
	3.6nm,1.1s,baz=209,slow=2.8,SNR=3.0						
BVAR	**Borovoye Array**	**122.43**	**318**	PKP	**PKPdf**	**13 40 53.2**	**+0.2**
	0.5nm,0.4s,baz=150,slow=3.2,SNR=3.6						
ARCES	**ARCESS Array B**	**134.48**	**348**	PKP	**PKPdf**	**13 41 14.4**	**-1.0**
	2.1nm,0.9s,baz=55,slow=3.4,SNR=4.0						
FINES	**FINESS Array B**	**140.95**	**340**	PKhKP	PKPpre	13 41 20.5	
	2.4nm,0.9s,baz=54,slow=4.9,SNR=8.4						
FINES	0.9nm,0.7s,baz=320,slow=3.6,SNR=4.0			PKP	**PKiKP**	**13 41 29.7**	**-0.6**
NB2	**NORSAR Subarra**	**144.69**	**351**	PKP	**PKPdf**	**13 41 34.3**	**+0.2**
	comp=Z,3.6nm,1.1s,baz=17,slow=2.6						
HFS	**Hagfors**	**145.14**	**348**	PKP	**PKPdf**	**13 41 35.3**	**+0.5**
	comp=Z,3.5nm,0.6s,baz=64,slow=3.4,SNR=19						
AKASG	**Malin Array Be**	**147.18**	**325**	PKPbc	**PKPbc**	**13 41 41.6**	**0.0**
	comp=Z,3.0nm,0.6s,baz=46,slow=4.3,SNR=6.4						
MMAI	**Mount Meron Ar**	**148.74**	**290**	PKPbc	**PKPbc**	**13 41 47.8**	**+1.6**
	comp=Z,2.1nm,0.4s,baz=74,slow=5.1,SNR=10						
BRTR	**Keskin Array B**	**149.13**	**304**	PKPbc	**PKPbc**	**13 41 48.4**	**+1.3**
	comp=Z,1.1nm,0.6s,baz=99,slow=9.1,SNR=3.8						
EKA	**Eskdalemuir Ar**	**151.15**	**4**	PKPbc	**PKPbc**	**13 41 51.4**	**+0.3**
	comp=Z,0.6nm,0.4s,baz=329,slow=2.1,SNR=7.0						
TORD	**Torodi Ar. Bea**	**166.57**	**187**	PKP	**PKPdf**	**13 42 04.3**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=151,slow=3.3,SNR=2.9						
SARP	**Sargodha**	**4.74**	**161**	P	Pn	13 49 36.6	+5.6
TAS	**Tashkent**	**5.05**	**347**	⇑P	**Pn**	**13 49 37.7**	**+2.7**
	51nm,0.3s						
TAS	195nm,0.3s			⇓S	**Sn**	**13 50 31.5**	**-2.4**
AML	**Almayashu**	**6.12**	**20**	P	**Pn**	**13 49 49.6**	**+0.5**
	SNR=50						
DHRM	**DHARAMSHALA**	**6.14**	**131**	*e*P	**Pn**	**13 49 50.5**	**+1.1**
DHRM				*e*S	**Sn**	**13 50 59.7**	**0.0**
DHRM	comp=E,323nm,0.3s			IAML		13 51 02.1	
DHRM	comp=N,395nm,0.7s			IAML		13 51 02.4	
MNAS	**Manas**	**6.19**	**11**	⇑P	**Pn**	**13 49 51.3**	**+1.4**
	comp=N,8.3nm,0.4s						
MNAS	comp=N,76nm,0.5s			⇓S	**Sn**	**13 50 58.0**	**-2.8**
UCH	**Uchtor**	**6.46**	**25**	P	**Pn**	**13 49 55.3**	**+1.6**
	SNR=35						
KZA	**Kyzart**	**6.60**	**30**	P	**Pn**	**13 49 56.5**	**+1.0**
	SNR=16						
EKS2	**Erkin-Say**	**6.63**	**19**	P	**Pn**	**13 49 57.6**	**+1.9**
	SNR=14						
AAK	**Ala-Archa**	**6.82**	**23**	⇑P	**Pn**	**13 49 59.7**	**+1.6**
	comp=N,5.8nm,0.4s						
AAK	comp=N,28nm,0.6s			⇑S	**Sn**	**13 51 13.8**	**-1.7**
KBK	**Karagaybulak**	**6.99**	**26**	P	**Pn**	**13 50 03.0**	**+2.7**
	SNR=6.7						
ULHL	**Ulahol**	**7.16**	**34**	P	**Pn**	**13 50 04.0**	**+1.3**
	SNR=9.2						
CHMS	**Chumysh**	**7.22**	**23**	P	**Pn**	**13 50 04.6**	**+1.3**
	SNR=6.3						
SMLA	**Simla**	**7.45**	**133**	*e*P	**Pn**	**13 50 08.8**	**+2.4**
SMLA				*e*S	**Sn**	**13 51 29.2**	**-1.2**
SMLA	comp=N,187nm,0.2s			IAML		13 51 32.4	
SMLA	comp=E,184nm,0.1s			IAML		13 51 33.6	
TKM2	**Tokmak 2**	**7.45**	**28**	⇑P	**Pn**	**13 50 07.5**	**+1.0**
	comp=E,5.0nm,0.5s						
TKM2	comp=E,21nm,0.9s			⇑S	**Sn**	**13 51 27.8**	**-2.9**
TKM2	**Tokmak 2**	**7.45**	**28**	P	**Pn**	**13 50 08.0**	**+1.5**
	SNR=10						
KKR	**Kurukshetra**	**8.16**	**140**	*e*S	**Sn**	**13 51 44.3**	**-3.0**
DDI	**Dehra Dun**	**8.56**	**133**	*e*S	**Sn**	**13 51 54.7**	**-2.3**
BHGR	**Bahadurgarh**	**9.27**	**145**	*e*S	**Sn**	**13 52 09.0**	**-4.6**
KHET	**Khetri**	**9.32**	**152**	*e*P	**Pn**	**13 50 28.1**	**-2.8**
KHET				*e*S	**Sn**	**13 52 09.2**	**-5.8**
KHET	comp=N,28nm,0.5s			IAML		13 52 15.8	
KHET	comp=E,24nm,0.5s			IAML		13 52 15.9	
JOSI	**Joshimath**	**9.33**	**126**	*e*P	**Pn**	**13 50 31.8**	**+0.6**
JOSI				*e*S	**Sn**	**13 52 12.9**	**-2.7**
JOSI	comp=E

PXZ	Pawanui	0.43	27	P	Pb	14 04 26.9 +0.5
PXZ				S	Sn	14 04 34.9 +0.1
PRWZ	Pori Road	0.51	254	P	Pn	14 04 28.3 -0.6
PRWZ				S	Sn	14 04 37.0 +0.1
CPWZ	Castlepoint	0.59	212	P	Pn	14 04 30.0 -0.1
TSZ	Takapari Road	0.61	305	P	Pb	14 04 29.4 0.0
POWZ	Post Office Ro	0.64	272	P	Pb	14 04 30.3 +0.3
KAHZ	Kahuranaki	0.65	18	P	Pb	14 04 30.3 +0.2
TIWZ	Tinitelu	0.66	236	P	Pb	14 04 30.4 0.0
TIWZ				S	Sn	14 04 40.7 +0.1
KRHZ	Kereru	0.79	346	P	Pb	14 04 32.5 0.0
MRZ	Mangatainoka R	0.82	252	P	Pb	14 04 32.4 -0.7
CKHZ	Cape Kidnapper	0.83	26	P	Pn	14 04 34.9 +1.5
TMWZ	Te Maipa	0.88	218	P	Pb	14 04 33.3 -0.7
HOWZ	Holdsworth Sta	0.96	239	P	Pn	14 04 34.2 -1.0
MCHZ	McNeill Hill	0.97	4	P	Pn	14 04 35.2 0.0
KWHZ	Kaweka Forest	1.00	352	P	Pb	14 04 36.5 +0.5
BHHZ	Black Hill Sta	1.01	335	P	Pn	14 04 35.6 -0.3
OHWZ	Ohakea	1.01	281	P	Pb	14 04 36.7 +0.5
MTW	Mount Morrison	1.12	228	P	Pn	14 04 36.0 -1.4
OGWZ	Otaki Gorge	1.17	249	P	Pn	14 04 37.0 -1.0
ARHZ	Aropaoanui	1.19	15	P	Pn	14 04 37.8 -0.5
MOVZ	Moawhango	1.20	326	P	Pn	14 04 39.0 +0.5
BKZ	Black Stump Fm	1.25	356	P	Pn	14 04 38.9 -0.3
PAWZ	Paruwai Farm	1.32	222	P	Pn	14 04 39.0 -1.1
NMHZ	Naumai	1.32	7	P	Pn	14 04 40.2 +0.1
MTVZ	Mangateitei	1.35	319	P	Pb	14 04 42.0 0.0
TUVZ	Tukino	1.36	327	P	Pb	14 04 42.5 +0.3
CAW	Cannon Point	1.36	239	P	Pn	14 04 39.4 -1.3
KIW	Kapiti Island	1.37	250	P	Pn	14 04 39.9 -0.9
WHVZ	Whangaehu Hut	1.38	325	P	Pb	14 04 42.6 0.0
TRVZ	Turoa	1.38	323	P	Pb	14 04 42.7 +0.1
WAZ	Wanganui	1.41	297	P	Pb	14 04 42.4 -0.6
FWVZ	Far West T-bar	1.41	324	P	Pb	14 04 43.0 -0.1
WHHZ	Waihua	1.42	20	P	Pn	14 04 40.7 -0.7
MSWZ	Moikau Station	1.44	225	P	Pn	14 04 39.8 -2.0
NGZ	Ngauruhoe	1.46	327	P	Pb	14 04 43.8 -0.2
COVZ	Chateau Observ	1.46	325	P	Pb	14 04 43.7 -0.3
PKVZ	Pokaka	1.48	319	P	Pb	14 04 44.1 -0.2
KRVZ	Karewarewa	1.51	330	P	Pb	14 04 44.6 -0.2
WTVZ	West Tongariro	1.52	328	P	Pb	14 04 44.5 -0.3
RAHZ	Arahi	1.54	14	P	Pn	14 04 42.6 -0.6
PLWZ	Palliser	1.55	221	P	Pn	14 04 41.3 -2.0
RITZ	Rihia Road	1.55	338	P	Pb	14 04 44.6 -0.7
HATZ	Hinemaiaia	1.57	345	P	Pn	14 04 44.1 +0.5
MRHZ	Matea Rd	1.58	355	P	Pn	14 04 44.4 +0.7
MHGZ	Mahia Peninsul	1.61	39	P	Pn	14 04 42.7 -1.3
MHGZ				P	Pb	14 04 43.7 -2.6
KNZ	Kokohu	1.61	31	P	Pn	14 04 42.3 -1.8
TWVZ	Taurewa	1.62	326	P	Pb	14 04 46.3 -0.2
BHW	Baring Head	1.65	232	P	Pn	14 04 43.0 -1.6
RATZ	Rangitukua	1.67	337	P	Pb	14 04 46.9 -0.6
PRGZ	Paritu Road	1.78	34	P	Pn	14 04 44.7 -1.8
ALRZ	Allen Road	1.86	354	P	Pn	14 04 49.0 +1.5
VRZ	Vera Road	1.92	311	P	Pb	14 04 50.2 -1.5
TCW	Tory Channel	1.94	245	P	Pn	14 04 47.1 -1.6
URZ	Urewera	2.18	10	P	Pn	14 04 50.9 -1.1
TUWZ	Tuamarina	2.26	242	P	Pn	14 04 50.9 -2.2
BSWZ	Blackbirch Sta	2.44	237	P	Pn	14 04 53.4 -2.2
THZ	Tophouse	3.11	243	P	Pn	14 05 02.3 -2.4

IDC 23 14:04:22.4±466.0, 46°.96N×46°.81E, h0km, Error ellipse: s-maj=204.9km s-min=149.2km az=178.0, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	8.19	61	*i*		14 56 40.0	
	baz=248,slow=299,SNR=5.7						
I43RU	DUBNA INFRASONI	1.43	332	*i*		15 13 10.0	
	baz=145,slow=317,SNR=1.2						
I26DE	FREYUNG INFRAS	22.18	287	*i*		16 20 40.0	
	baz=82,slow=322,SNR=2.1						

*ISCJB **23** 14:18:10.0±0.9, 11°.4S±0°.1×166°.3E±0°.1, h59km, mb4.1/8, MS3.0/11, Error ellipse: s-maj=20.0km s-min=9.5km az=36.4*
*IDC **23** 14:18:12.2±3.7, 11°.44S×166°.29E, h64km±29km, mb3.9/8, mb1 4.0/10, mb1mx3.6/56, mbtmp4.2/10, ML4.3/2, MS3.1/14, Ms1 3.1/14, ms1mx2.9/48, Error ellipse: s-maj=30.3km s-min=17.9km az=52.0*
ISC 23 14:18:11.9±1.0, 11°.54S±0°.09×166°.3E±0°.1, h59km, n27, σ1°.65/17, mb4.1/8, MS3.0/11, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.56	288	P	Pn	14 19 45.0	-0.9
HNR	Honiara	6.56	288	P	Pn	14 19 46.7	+0.8
	28nm,0.3s,baz=160,slow=3.5,SNR=9.7						
HNR				S	Sn	14 20 59.2	-0.2
	2.4nm,0.3s,baz=299,slow=19,SNR=1.7						
HNR				LR	LR	14 22 36.2	
	comp=Z,161nm,19.1s,baz=141,slow=40						
DZM	Mont Dzumac	10.47	179	P	Pn	14 20 41.9	+2.4
DZM				S	Sn	14 22 31.7	-3.7
	0.1nm,0.3s,baz=321,slow=19,SNR=2.8						
DZM				LR	LR	14 24 22.5	
	comp=Z,134nm,19.1s,baz=55,slow=35						
DZM	Mont Dzumac	10.47	179	*e*Pn	Pn	14 20 42.5	+3.0
	4.5nm,0.3s						
DZM				*e*Sn	Sn	14 22 33.0	-2.4
	2.8nm,0.3s						
DZM				*e*LR	LR	14 23 07.2	
	156nm,26.1s						
PMG	Port Moresby	18.91	275	LR	LR	14 28 42.3	
	comp=Z,90nm,21.2s,baz=117,slow=33						
RAO	Raoul Island	22.98	142	LR	LR	14 30 33.7	
	comp=Z,46nm,19.1s,baz=272,slow=32						
H11S2	WAKE ISLAND Hy	29.84	1	T	T	14 55 14.9	
	baz=181,slow=76,SNR=6.1						
H11S3	WAKE ISLAND Hy	29.85	1	T	T	14 55 21.0	
	baz=181,slow=76,SNR=5.2						
H11S1	WAKE ISLAND Hy	29.86	1	T	T	14 55 17.1	
	baz=181,slow=76,SNR=6.5						
STKA	Stephens Creek	30.45	225	LR	LR	14 35 05.8	
	comp=Z,50nm,21.4s,baz=4.2,slow=33						
WRA	Warramunga Arr	31.80	251	P	P	14 24 31.4	+0.2
	1.0nm,0.8s,baz=84,slow=9.1,SNR=6.2						
WRA				PcP	PcP	14 27 21.7	+0.3
	0.4nm,0.8s,baz=76,slow=3.4,SNR=3.1						
RPZ	Rata Peaks	32.32	174	P	P	14 24 35.9	+0.5
	26nm,1.0s,baz=18,slow=3.2,SNR=3.3						
GUMO	Guam	32.77	319	LR	LR	14 38 58.0	
	comp=Z,13nm,18.3s,baz=130,slow=38						
ASAR	Alice Springs	33.04	244	P	P	14 24 41.7	-0.3
	1.3nm,0.7s,baz=69,slow=9.6,SNR=17						
ASAR				PcP	PcP	14 27 24.6	-0.1
	0.7nm,0.8s,baz=68,slow=3.4,SNR=5.0						
ASAR				LR	LR	14 38 22.8	
	comp=Z,32nm,18.8s,baz=43,slow=37						
RAR	Rarotonga	33.90	111	LR	LR	14 35 51.2	
	comp=Z,13nm,21.5s,baz=258,slow=31						
SIJI	Sorong	36.33	284	LR	LR	14 42 00.2	
	comp=Z,28nm,18.8s,slow=39						
FITZ	Fitzroy Crossi	39.75	256	P	P	14 25 39.9	+0.6
	4.4nm,1.0s,baz=87,slow=18,SNR=2.3						
PPT	Papeete	43.08	103	LR	LR	14 41 08.8	
	comp=Z,38nm,19.4s,baz=304,slow=32						
PPT2	Papeete2	43.08	103	*e*LR	LR	14 38 12.7	
	74nm,30.5s						
JNU	Nakatsue	55.78	324	LR	LR	14 48 49.2	
	comp=Z,20nm,21.6s,baz=121,slow=33						
ASAJ	Asahikawa	59.43	340	LR	LR	14 48 44.2	
	comp=Z,13nm,21.9s,baz=159,slow=31						
PETK	Petropavlovsk-	64.81	354	LR	LR	14 51 36.5	
	comp=Z,16nm,21.6s,baz=111,slow=31						
VNDA	Vanda	66.01	181	P	P	14 28 52.1	+0.2
	0.7nm,0.7s,baz=352,slow=7.3,SNR=4.7						
MA2	Magadan	71.97	352	LR	LR	14 55 02.5	
	comp=Z,11nm,21.0s,baz=193,slow=31						
QSPA	South Pole Qui	78.47	180	P	P	14 30 06.4	-0.1
	4.4nm,0.9s,baz=27,slow=2.2,SNR=9.7						
ILAR	Eielson Array	83.82	18	P	P	14 30 33.3	-1.3
	0.2nm,0.6s,baz=241,slow=5.0,SNR=5.4						
MKAR	Makanchi Array	94.23	317	P	P	14 31 24.3	-0.4
	0.8nm,0.5s,baz=93,slow=5.6,SNR=12						

*NIED **23** 14:25:00, 39°.50N×142°.60E, h29km, Mw3.3 Best double couple: M0=1.02000×10^14 NP1:φs=251.00000°, δ49.00000°, λ-121.00000°. NP2:φs=114.00000°, δ50.00000°, λ-59.00000°.*
JMA 23 14:25:17.3±0.1, 39°.50N×142°.62E, h31km±1km, M3.6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	0.62	277	P	Pb	14 25 29.5	-0.3
MIYJ				S	Sb	14 25 38.1	-0.2
JTH	Tanohata	0.73	307	P	Pn	14 25 31.0	-0.5
JTH				S	Sb	14 25 41.0	-0.3
OFUJ	Ofunato	0.85	241	P	Pn	14 25 32.8	-0.3
OFUJ				S	Sn	14 25 44.0	-0.5
JOM	Ohasama	1.03	269	P	Pn	14 25 35.8	+0.2
JOM				S	Sn	14 25 49.2	+0.3
JKZ	Kuzumaki	1.11	296	P	Pn	14 25 37.0	+0.3
JKZ				S	Sn	14 25 51.0	+0.1
JANG	Nango	1.22	316	P	Pn	14 25 38.1	-0.1
JANG				S	Sn	14 25 53.5	-0.1
JMK	Ichinoseki	1.22	244	P	Pn	14 25 38.4	+0.2
JMK				S	Sn	14 25 54.2	+0.6
JIO	Ouri	1.44	224	P	Pn	14 25 41.4	+0.2
JIO				S	Sn	14 25 58.9	-0.1
JRG	Rokugo	1.54	267	P	Pb	14 25 44.2	-1.0
JRG				S	Sb	14 26 04.8	+0.5
JAH	Hinai	1.68	295	P	Pb	14 25 46.0	-1.5
JAH				S	Sb	14 26 07.1	-1.1
JTM	Tenmabayashi	1.75	318	P	Pn	14 25 46.7	+1.2
JTM				S	Sn	14 26 08.0	+1.2

*ISCJB **23** 14:29:29.3±0.4, 29°.83N±0°.05×139°.8E±0°.1, h350km, mb3.3/10, Error ellipse: s-maj=14.6km s-min=4.9km az=155.7*
*IDC **23** 14:29:30.0±0.9, 29°.89N×139°.70E, h337km±12km, mb3.1/10, mb1 3.0/14, mb1mx2.9/69, mbtmp3.7/14, Error ellipse: s-maj=40.3km s-min=11.4km az=75.0*
*JMA **23** 14:29:30.8±0.1, 29°.91N×139°.86E, h334km, M3.2*
ISC 23 14:29:30.2±0.7, 29°.85N±0°.08×139°.9E±0°.1, h350km, n30, σ1°.21/28, mb3.2/10, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	3.26	359	P	Pn	14 30 32.1	+0.3
	9.2nm,0.3s,baz=70,slow=22,SNR=12						
JHJ				S	S	14 31 18.8	-2.7
	22nm,0.3s,baz=62,slow=23,SNR=8.1						
CBIJ	Chichi jima	3.43	143	*e*S	S	14 31 23.0	-1.7
JCJ	Chichijima	3.43	143	P	Pn	14 30 32.3	-1.4
	4.0nm,0.3s,baz=276,slow=19,SNR=5.5						
JCJ				S	S	14 31 23.1	-1.6
	46nm,0.3s,baz=282,slow=23,SNR=17						
JHHJ	Haha-jima-NKT	3.81	147	P	Pn	14 30 37.7	+0.3
JHHJ				S	S	14 31 30.0	-1.6
BSO1	Boso 1	4.88	11	P	Pn	14 30 48.6	+0.7
BSO3	Boso 3	4.97	6	P	Pn	14 30 49.1	0.0
JIE	Ise	5.25	330	P	Pn	14 30 52.9	+0.4
JHMK	Hamakita	5.25	341	P	Pn	14 30 52.8	+0.4
HMMJ	Hamamatsu 2	5.30	341	P	Pn	14 30 53.5	+0.4
JKN2	Miekihoku	5.32	326	P	Pn	14 30 53.3	0.0
JAO	Obara	5.82	339	P	Pn	14 30 59.6	+0.6
MJAR	Matsushiro Arr	6.81	349	P	Pn	14 31 09.1	-1.2
	0.7nm,0.3s,baz=215,slow=34,SNR=11						
MJAR				S	S	14 32 30.0	-1.7
	0.2nm,0.3s,baz=134,slow=11,SNR=3.8						
KSRS	Korea Array	12.49	311	P	Pn	14 32 16.7	-1.0
	0.1nm,0.3s,baz=122,slow=11,SNR=4.2						
ASAJ	Asahikawa	14.40	8	P	Pn	14 32 42.7	+2.7
	0.2nm,0.3s,baz=240,slow=14,SNR=3.8						
H11N2	WAKE ISLAND Hy	26.48	106	T	T	15 01 44.9	
	baz=318,slow=75,SNR=35						
H11N1	WAKE ISLAND Hy	26.49	106	T	T	15 01 48.8	
	baz=318,slow=75,SNR=18						
H11N3	WAKE ISLAND Hy	26.50	106	T	T	15 01 48.8	
	baz=318,slow=75,SNR=31						
H11S3	WAKE ISLAND Hy	26.90	109	T	T	15 02 49.7	
	baz=313						
H11S1	WAKE ISLAND Hy	26.91	109	T	T	15 02 52.2	
	baz=313						
H11S2	WAKE ISLAND Hy	26.92	109	T	T	15 02 49.4	
	baz=313						
TIXI	Tiksi	42.28	355	P	P	14 36 50.2	+0.1
	0.4nm,0.3s,baz=207,slow=2.3,SNR=2.9						
MKAR	Makanchi Array	47.15	308	P	P	14 37 28.3	-0.3
	0.5nm,0.7s,baz=100,slow=9.2,SNR=5.5						
KURBB	Kurchatov Arra	49.66	313	P	P	14 37 46.9	-0.5
	0.9nm,0.7s,baz=96,slow=7.8,SNR=5.3						
WRA	Warramunga Arr	49.79	187	P	P	14 37 49.6	+0.9
	0.3nm,0.5s,baz=5.6,slow=7.7,SNR=5.3						
ASAR	Alice Springs	53.52	187	P	P	14 38 17.6	+1.6
	0.3nm,0.9s,baz=2.1,slow=7.4,SNR=3.8						
BVAR	Borovoye Array	54.63	316	P	P	14 38 23.9	+0.2
	0.5nm,0.4s,baz=104,slow=7.0,SNR=4.5						
AKTO	Aktyubinsk	62.63	315	P	P	14 39 17.9	-0.5
	0.5nm,0.4s,baz=63,slow=15,SNR=3.0						
FINES	FINESS Array B	74.57	333	P	P	14 40 32.2	+1.0
	2.4nm,1.0s,baz=64,slow=6.3,SNR=5.8						
HFS	Hagfors	80.08	336	P	P	14 41 02.1	+0.5
	2.7nm,0.8s,baz=54,slow=7.3,SNR=4.9						
BRTR	Keskin Array B	82.63	312	P	P	14 41 15.7	+0.2
	0.8nm,0.6s,baz=79,slow=3.5,SNR=4.5						

IDC 23 14:39:22.7±8.2, 36°.41S×97°.27W, h0km, mb3.8/4, mb1 4.3/4, mb1mx3.8/34, mbtmp3.8/4, MS3.4/12, Ms1 3.4/12, ms1mx3.3/31, Error ellipse: s-maj=316.6km s-min=33.5km az=40.0, West Chile Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	Rapa Nui	13.81	309	LR	LR	14 46 12.5	
	comp=Z,328nm,19.4s,baz=56,slow=30						
PLCA	Paso Flores	21.30	110	P	P	14 44 10.9	0.0
	4.7nm,0.9s,baz=274,slow=13,SNR=2.9						
PLCA				LR	LR	14 50 50.2	
	comp=Z,44nm,19.5s,baz=308,slow=32						
NNA	Nana	30.50	42	LR	LR	14 54 40.6	
	comp=Z,233nm,20.9s,baz=214,slow=30						
LPAZ	La Paz	32.71	60	LR	LR	14 56 17.7	
	comp=Z,30nm,20.5s,baz=234,slow=31						
CPUP	Villa Florida	35.34	85	LR	LR	14 58 12.5	
	comp=Z,61nm,18.6s,baz=245,slow=32						
ROSC	El Rosal	46.31	32	LR	LR	15 03 37.7	
	comp=Z,71nm,20.9s,baz=190,slow=31						
JTS	JuntasAbangare	47.88	16	LR	LR	15 03 04.1	
	comp=Z,124nm,21.6s,baz=251,slow=30						
PPT	Papeete	49.62	278	LR	LR	15 03 32.7	
	comp=Z,16nm,18.7s,baz=142,slow=29						
VNDA	Vanda	57.06	195	LR	LR	15 08 04.4	
	comp=Z,22nm,20.4s,baz=144,slow=30						
TXAR	Lajitas Array	65.67	354	P	P	14 50 08.9	0.0
	0.1nm,0.3s,baz=185,slow=9.0,SNR=4.9						
TKL	Tuckaleechee C	72.79	11	LR	LR	15 18 30.2	
	comp=Z,20nm,19.2s,baz=16,slow=32						
NVAR	Mina Array Bea	76.97	343	P	P	14 51 17.5	+0.4
	0.9nm,0.8s,baz=178,slow=7.3,SNR=5.8						
PDAR	Pinedale Array	79.60	351	P	P	14 51 31.4	-0.3
	0.9nm,0.6s,baz=157,slow=4.9,SNR=12						
YBH	Yreka Blue Hor	81.18	341	LR	LR	15 18 57.4	
	comp=Z,26nm,21.3s,baz=192,slow=29						
STKA	Stephens Creek	92.54	227	LR	LR	15 27 54.3	
	comp=Z,33nm,19.8s,baz=205,slow=32						

*IDC **23** 14:41:33.4±1.7, 10°.10S×107°.94E, h0km, mb3.7/7, mb1 3.8/9, mb1mx3.6/63, mbtmp3.7/9, ML3.9/3, Error ellipse: s-maj=61.9km s-min=16.4km az=54.0*
*ISCJB **23** 14:41:35.0±0.7, 9°.96S±0°.06×108°.02E±0°.05, h22km, mb3.5/7, Error ellipse: s-maj=8.9km s-min=6.3km az=15.7*
*DJA **23** 14:41:39.7±0.6, 10°.S±6°×10°.8E±°, h47km, M4.3/13, mB5.2/1, mb4.4/6, MLv4.3/13, Mw(mB)4.6/1*
ISC 23 14:41:37.0±0.9, 9°.84S±0°.08×108°.02E±0°.06, h22km, n26, σ2°.00/31, mb3.4/7, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMJI	Cimerak	2.08	12	P	Pn	14 42 11.6	+0.9
CISI	Cisompet, Garu	2.27	355	P	Pn	14 42 14.1	+0.7
KPJI	Karang Pucung	2.65	20	P	Pb	14 42 22.1	-1.7
LEM	Lembang	3.02	352	Pn	Pb	14 42 28.2	-2.0
	6.6nm,0.3s,baz=127,slow=23,SNR=4.4						
LEM				Sn	Sb	14 43 06.5	-0.1
	14nm,0.3s,baz=190,slow=23,SNR=7.3						
UGM	Wanagama	3.13	53	P	Pn	14 42 27.1	+2.0
UGM				S	Sn	14 43 00.8	-1.0
SKJI	Sukabumi	3.16	333	P	Pn	14 42 25.2	-0.3
WOJI	Wonogiri, Jawa	3.49	56	P	Pn	14 42 32.0	+1.9
WOJI				S	Sn	14 43 10.5	-0.3
PCJI	Pacitan	3.52	63	P	Pn	14 42 32.0	+1.5
PCJI				S	Sn	14 43 12.0	+0.5
CGJI	Cibinong	3.94	324	P	Pn	14 42 36.8	+0.5
PWJI	Pagerwojo	4.15	65	P	Pn	14 42 40.8	+1.6
NGJI	Ngawi	4.20	55	P	Pb	14 42 52.9	+2.7
KASI	Kota Agung	5.53	321	P	Pn	14 42 58.1	+0.1
GMJI	Gumukmas	5.58	74	P	Pn	14 43 00.7	+1.9
JAGI	Jajag, Banyuwa	6.21	78	P	Pn	14 43 08.1	+0.7
SRBI	Singaraja	7.32	77	P	Pn	14 43 23.7	+1.0
TWSI	Taliwang, Sumb	8.82	84	P	Pn	14 43 43.0	-0.3
BATI	Baumata	15.41	93	Pn	Pn	14 45 12.5	-0.9
	2.1nm,0.3s,baz=6.5,slow=11,SNR=4.1						
BATI				Sn	Sn	14 47 55.5	-8.1
	0.7nm,0.3s,baz=135,slow=11,SNR=2.2						
FITZ	Fitzroy Crossi	18.96	118	P	P	14 45 56.5	-0.4
	0.2nm,0.3s,baz=300,slow=8.3,SNR=6.2						
FITZ				S	Sn	14 49 08.1	-21
	0.1nm,0.3s,baz=236,slow=15,SNR=5.0						
WRA	Warramunga Arr	27.31	115	P	P	14 47 18.9	-1.6
	0.9nm,1.1s,baz=286,slow=12,SNR=2.6						
ASAR	Alice Springs	28.28	122	P	P	14 47 28.8	-0.3
	0.2nm,0.6s,baz=303,slow=11,SNR=3.0						
CMAR	Chiang Mai Arr	29.51	342	P	P	14 47 41.9	+2.0
	0.3nm,0.4s,baz=169,slow=10,SNR=2.9						
STKA	Stephens Creek	38.03	130	P	P	14 48 52.8	-1.1
	1.7nm,0.8s,baz=302,slow=15,SNR=3.3						
SONM	Songino Array	57.43	359	P	P	14 51 24.6	+0.4
	0.8nm,0.5s,baz=166,slow=7.0,SNR=3.2						
MKAR	Makanchi Array	60.88	340	P	P	14 51 48.9	+0.9
	0.1nm,0.5s,baz=148,slow=7.1,SNR=3.6						
BVAR	Borovoye Array	70.36	337	P	P	14 52 50.3	+1.3
	0.5nm,0.6s,baz=148,slow=9.3,SNR=3.4						
TXAR	Lajitas Array	144.59	52	PKP	PKPdf	15 01 13.2	+0.4
	0.4nm,0.6s,baz=265,slow=2.2,SNR=5.3						

*NIED **23** 14:41:00, 35°.50N×139°.00E, h35km, Mw3.6 Best double couple: M0=2.50000×10^14 NP1:φs=221.00000°, δ42.00000°, λ80.00000°. NP2:φs=54.00000°, δ49.00000°, λ99.00000°.*
*IDC **23** 14:41:57.1±1.1, 35°.33N×138°.59E, h0km, mb3.4/3, mb1 3.5/5, mb1mx3.2/74, mbtmp3.5/5, ML3.1/2, MS3.2/1, Ms1 3.2/1, ms1mx2.1/44, Error ellipse: s-maj=33.8km s-min=11.3km az=78.0*
*ISCJB **23** 14:41:59.0±0.5, 35°.48N±0°.03×139°.00E±0°.06, h26km±4km, mb3.5/3, MS3.1/1, Error ellipse: s-maj=7.9km s-min=4.9km az=170.4*
*JMA **23** 14:41:59.7, 35°.49N×138°.97E, h19km±1km, M3.5 Broadband fault plane solution: P waves. NP1: φs=216.00000°, δ57.00000°, λ82.00000°. NP2:φs=51.00000°, δ34.00000°, λ103.00000°. Principal axes: T Plg76.0000°, Azm101.0000°; N Plg7.0000°, Azm221.0000°; P Plg12.0000°, Azm312.0000°;*
JMA Felt II J1.
ISC 23 14:41:59.5±0.9, 35°.48N±0°.03×138°.97E±0°.04, h20km±3km, n15, σ0°.87/21, mb3.6/3, 7D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOD2	Odawara 2	0.23	156	⇓P	Pb	14 42 05.2	-0.2
JOD2				S	Sb	14 42 09.1	-0.3
JYN	Shimob	0.35	273	⇓P	Pb	14 42 06.8	-0.2
JYN				S	Sb	14 42 12.3	+0.2
JHU	Hanno	0.45	34	⇓P	Pb	14 42 08.6	-0.1
JRY	Ryogami san	0.54	354	⇓P	Pb	14 42 09.8	-0.5
JRY				S	Sb	14 42 17.1	-0.6
SHZ3	Shizuoka 3	0.75	237	⇓P	Pb	14 42 13.9	+0.1
SHZ3				S	Sb	14 42 24.3	+0.7
JIZS	Izushimoda	0.76	186	⇓P	Pb	14 42 13.3	-0.7
JIZS				S	Sb	14 42 23.6	-0.4
JIM2	Oshima 3	0.85	154	⇓P	Pb	14 42 14.7	-0.8
MJAR	Matsushiro Arr	1.23	330	Pg	Pn	14 42 21.1	-0.4
	109nm,0.3s,baz=165,slow=16,SNR=1399						
MJAR				Lg	Lg	14 42 37.6	
	90nm,0.3s,baz=94,slow=32,SNR=15						
MAT	Matsushiro	1.23	330	P	Pn	14 42 21.5	0.0
MAT				S	Sb	14 42 37.8	+0.3
JHJ	Hachijo jima 2	2.45	164	Pn	Pn	14 42 39.6	+1.4
	25nm,0.3s,baz=331,slow=13,SNR=20						
JHJ				Sn	Sb	14 43 10.6	-1.9
	15nm,0.3s,baz=298,slow=22,SNR=6.0						
ASAJ	Asahikawa	9.07	17	Pn	Pn	14 44 10.3	+1.2
	0.1nm,0.3s,baz=201,slow=17,SNR=3.9						
NRIK	Noril'sk	43.88	336	LR	LR	15 09 24.8	
	comp=Z,24nm,18.5s,baz=204,slow=38						
KURBB	Kurchatov Arra	45.42	309	P	P	14 50 16.1	-0.5
	0.5nm,0.5s,baz=84,slow=7.6,SNR=6.2						
WRA	Warramunga Arr	55.29	185	P	P	14 51 30.0	-1.6
	0.4nm,0.6s,baz=1.4,slow=7.7,SNR=6.2						
ASAR	Alice Springs	59.02	185	P	P	14 51 57.9	+0.1
	0.2nm,0.6s,baz=19,slow=12,SNR=4.2						

*IDC **23** 14:42:26.5±2.7, 30°.06S×68°.76W, h95km±23km, mb3.9/11, mb1 4.0/15, mb1mx3.9/39, mbtmp4.2/15, Error ellipse: s-maj=21.4km s-min=15.5km az=92.0*
*ISCJB **23** 14:42:27.9±0.3, 30°.07S±0°.03×68°.83W±0°.04, h124km±3km, mb4.1/11, Error ellipse: s-ma

FCH				IAML		14 44 09.8	
	comp=E,482nm,0.8s						
CLCH	**Cerro Calan**	**3.63**	**203**	⇑*iP*	**Pn**	**14 43 21.9**	**-0.8**
CLCH				*i*S	**Sn**	**14 44 02.5**	**-2.4**
CLCH				IAML		14 44 07.5	
	comp=E,1μm,0.5s						
LMEL	**Las Melosas**	**3.95**	**197**	⇑*iP*	**Pn**	**14 43 27.1**	**+0.1**
LMEL				*i*S	**Sn**	**14 44 16.0**	**+3.4**
GO02	**Mina Guanaco**	**4.94**	**352**	*e*P	**Pn**	**14 43 41.1**	**+0.6**
GO02				*i*S	**Sn**	**14 44 34.7**	**-2.1**
PLCA	**Paso Flores**	**10.73**	**187**	P	**Pn**	**14 44 56.0**	**-2.6**
	comp=E,0.4nm,0.3s,baz=43,slow=12,SNR=4.8						
CPUP	**Villa Florida**	**10.79**	**73**	P	**Pn**	**14 44 56.5**	**-2.9**
	comp=E,1.3nm,0.3s,baz=247,slow=10,SNR=20						
CPUP				S	**Sn**	**14 46 53.6**	**-4.7**
	comp=E,1.1nm,0.3s,baz=250,slow=14,SNR=3.3						
LPAZ	**La Paz**	**13.73**	**3**	P	**Pn**	**14 45 39.0**	**+0.2**
	comp=E,1.1nm,0.3s,baz=126,slow=5.7,SNR=16						
SIV	**San Ignacio**	**15.71**	**29**	P	**Pn**	**14 46 03.0**	**-0.2**
	comp=E,0.9nm,0.3s,baz=204,slow=8.6,SNR=16						
PTGA	**Pitinga**	**30.37**	**18**	P	**P**	**14 48 29.5**	**+0.2**
	comp=E,1.7nm,0.3s,baz=204,slow=20,SNR=3.5						
SNAA	**Sanae**	**54.22**	**159**	P	**P**	**14 51 42.3**	**+0.7**
	comp=E,1.0nm,0.6s,baz=321,slow=6.5,SNR=4.6						
QSPA	**South Pole Qui**	**60.16**	**180**	P	**P**	**14 52 24.9**	**+1.4**
	comp=E,2.1nm,0.6s,baz=190,slow=1.8,SNR=11						
TXAR	**Lajitas Array**	**67.78**	**327**	P	**P**	**14 53 14.8**	**+1.1**
	comp=E,0.5nm,0.6s,baz=151,slow=9.3,SNR=9.4						
DBIC	**Dimbokro**	**71.30**	**70**	P	**P**	**14 53 36.3**	**+0.7**
	comp=E,2.2nm,0.5s,baz=258,slow=4.2,SNR=6.8						
KOWA	**Kowa**	**76.49**	**64**	P	**P**	**14 54 06.8**	**+1.0**
	comp=E,1.9nm,0.6s,baz=233,slow=5.1,SNR=4.6						
BOSA	**Boshof**	**79.43**	**117**	P	**P**	**14 54 22.7**	**+0.6**
	comp=E,0.9nm,0.4s,baz=255,slow=4.5,SNR=2.6						
TORD	**Torodi Ar. Bea**	**80.26**	**69**	P	**P**	**14 54 27.4**	**+0.9**
	comp=E,2.5nm,0.4s,baz=274,slow=6.6,SNR=22						
PDAR	**Pinedale Array**	**81.59**	**331**	P	**P**	**14 54 33.4**	**+0.1**
	comp=E,1.1nm,0.8s,baz=130,slow=6.0,SNR=7.9						
NVAR	**Mina Array Bea**	**82.32**	**323**	P	**P**	**14 54 38.6**	**+1.4**
	comp=E,1.0nm,0.8s,baz=161,slow=5.9,SNR=5.3						
MDT	**Midelt**	**87.20**	**49**	P	**P**	**14 55 00.4**	**-1.3**
	comp=E,5.3nm,0.7s,baz=258,slow=8.6,SNR=12						
ASAR	**Alice Springs**	**122.29**	**205**	PKP	**PKPdf**	**15 01 10.0**	**-0.2**
	comp=E,0.3nm,0.6s,baz=150,slow=1.9,SNR=2.9						
WRA	**Warramunga Arr**	**125.51**	**207**	PKP	**PKPdf**	**15 01 16.4**	**-0.1**
	comp=E,0.3nm,0.3s,baz=152,slow=2.0,SNR=13						
KURBB	**Kurchatov Arra**	**148.12**	**41**	PKPbc	**PKPbc**	**15 01 58.6**	**-1.5**
	comp=E,2.3nm,0.5s,baz=297,slow=3.2,SNR=21						
ZALV	**Zalesovo Beam**	**149.45**	**31**	PKPbc	**PKPbc**	**15 02 04.2**	**+1.0**
	comp=E,6.2nm,0.4s,baz=307,slow=3.4,SNR=27						
MKAR	**Makanchi Array**	**152.09**	**45**	PKPbc	**PKPbc**	**15 02 10.1**	**+0.3**
	comp=E,2.2nm,0.6s,baz=293,slow=2.1,SNR=25						
MKAR				PKPab	**PKPab**	**15 02 20.7**	**+0.9**
	comp=E,1.9nm,0.6s,baz=298,slow=4.2,SNR=9.5						

IDC 23 14:56:00.8±431.0, 47°.16N×47°.33E, h0km, Error ellipse: s-maj=176.9km s-min=143.4km az=8.0, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	**7.78**	**61**	*i*		15 46 05.0	
	baz=248,slow=312,SNR=2.0						
I43RU	**DUBNA INFRASONI**	**1.41**	**331**	*i*		16 01 30.0	
	baz=143,slow=317,SNR=13						
I26DE	**FREYUNG INFRAS**	**22.45**	**287**	*i*		17 14 52.0	
	baz=82,slow=320,SNR=0.9						

MAN 23 15:01:21.4, 9°.91N×122°.38E, h87km, mb3.9, ML2.7, MS2.3, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIM	**Jordan**	**0.74**	**16**	*e*P	Pn	15 01 39.5	+1.5
GUIM				*e*S	Sn	15 01 52.7	+2.3
CUYO	**Cuyo Island**	**1.63**	**305**	*e*P	Pn	15 01 50.1	+1.4
CUYO				*e*S	Sn	15 02 10.4	+1.0
PAGZ	**Pagadian**	**2.28**	**154**	*e*P	Pn	15 01 59.4	+2.3
PAGZ				*e*S	Sn	15 02 25.1	+0.5
ENPP	**El Nido**	**3.17**	**294**	*e*P	Pn	15 02 09.4	+0.3
ENPP				*e*S	Sn	15 02 44.0	-2.2

*IDC **23** 15:26:21.8±1.1, 23°.54N×123°.31E, h0km, mb3.6/6, mb1 3.7/8, mb1mx3.4/64, mbtmp3.6/8, ML3.1/2, MS2.8/3, Ms1 2.8/3, ms1mx2.3/57, Error ellipse: s-maj=31.4km s-min=21.7km az=95.0*
*JMA **23** 15:26:24.2±0.1, 23°.48N×123°.14E, h52km±5km, M3.3*
ISC 23 15:26:23.8±3.1, 23°.53N±0°.10×123°.24E±0°.09, h13km±18km, n22, σ0s61/32, mb3.5/6, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**0.74**	**45**	P	**Pn**	**15 26 40.0**	**0.0**
HATJ				S	**Sn**	**15 26 51.0**	**-0.1**
IRIF	**Iriomote-Funau**	**0.92**	**29**	P	**Pn**	**15 26 42.5**	**0.0**
IRIF				*e*S	**Sn**	**15 26 55.5**	**-0.1**
YOJ	**Yonaguni jima**	**0.95**	**347**	P	**Pb**	**15 26 42.1**	**-0.1**
YOJ				*e*S	**Sg**	**15 26 54.4**	**-0.2**
JYNG	**Yonagunijimaku**	**0.95**	**344**	P	**Pb**	**15 26 42.2**	**-0.1**
JYNG				*e*S	**Sg**	**15 26 54.7**	**-0.1**
JKRS	**Kuro-shima**	**0.99**	**45**	P	**Pn**	**15 26 43.9**	**+0.3**
JKRS				*e*S	**Sn**	**15 26 57.5**	**0.0**
JIJ	**Ishigaki jima**	**1.17**	**45**	P	**Pn**	**15 26 45.8**	**-0.2**
JIJ				*e*S	**Sb**	**15 27 01.0**	**-0.1**
JISG	**Ishigakijimahi**	**1.44**	**43**	P	**Pn**	**15 26 49.5**	**-0.1**
JISG				*e*S	**Sn**	**15 27 08.5**	**+0.1**
JTJ	**Tarama**	**1.73**	**50**	P	**Pn**	**15 26 54.3**	**+0.6**
JTJ				*e*S	**Sn**	**15 27 16.2**	**+0.5**
JIRB	**Irabujima**	**2.19**	**53**	P	**Pn**	**15 27 00.5**	**+0.5**
JIRB				*e*S	**Sn**	**15 27 26.7**	**-0.2**
JMJ	**Miyako jima 2**	**2.27**	**55**	*e*S	**Sn**	**15 27 29.2**	**+0.2**
JIKM	**Ikemajima**	**2.30**	**53**	P	**Pn**	**15 27 01.6**	**+0.1**
JIKM				S	**Sn**	**15 27 30.0**	**+0.3**
JOGS	**Gusukube**	**2.33**	**58**	P	**Pn**	**15 27 02.8**	**+0.9**
JOGS				*e*S	**Sn**	**15 27 31.3**	**+0.9**
JOW	**Kunigami**	**5.62**	**53**	Pn	**Pn**	**15 27 45.8**	**-1.4**
	1.4nm,0.3s,baz=123,slow=28,SNR=6.7						
JOW				Sn	**Sn**	**15 28 50.0**	**-1.6**
	0.6nm,0.3s,baz=107,slow=19,SNR=2.5						
KSRS	**Korea Array**	**14.45**	**15**	Pn	**Pn**	**15 29 49.0**	**+0.9**
	0.1nm,0.3s,baz=192,slow=11,SNR=3.3						
KSRS				LR	LR	15 36 28.5	
	comp=Z,22nm,18.5s,baz=203,slow=42						
CMAR	**Chiang Mai Arr**	**23.23**	**262**	LR	LR	15 42 17.8	
	comp=Z,8.0nm,18.3s,baz=205,slow=41						
ASAJ	**Asahikawa**	**25.96**	**33**	P	**P**	**15 31 55.5**	**-0.6**
	0.6nm,0.4s,baz=228,slow=7.6,SNR=4.9						
MKAR	**Makanchi Array**	**40.12**	**316**	P	**P**	**15 33 60.0**	**+0.6**
	0.3nm,0.9s,baz=98,slow=7.4,SNR=2.6						
WRA	**Warramunga Arr**	**44.55**	**165**	P	**P**	**15 34 34.9**	**-0.7**
	0.5nm,0.8s,baz=349,slow=9.1,SNR=2.9						
ASAR	**Alice Springs**	**48.05**	**167**	P	**P**	**15 35 03.5**	**+0.3**
	0.5nm,1.0s,baz=350,slow=7.2,SNR=5.1						
FINES	**FINESS Array B**	**72.95**	**330**	P	**P**	**15 37 52.1**	**-0.7**
	2.8nm,0.8s,baz=79,slow=3.0,SNR=5.3						
YKA	**Yellowknife Ar**	**82.83**	**23**	P	**P**	**15 38 48.0**	**+0.2**
	0.3nm,0.8s,baz=308,slow=5.5,SNR=3.2						
DAVOX	**Davos/Dischmat**	**87.81**	**321**	LR	LR	16 23 11.6	
	comp=Z,21nm,19.7s,baz=260,slow=39						

*ISCJB **23** 15:26:35.7±1.2, 12°.3S±0°.2×167°.0E±0°.2, h220km, mb3.6/7, Error ellipse: s-maj=37.1km s-min=21.1km az=36.7*
*IDC **23** 15:26:43.3±4.3, 12°.38S×166°.83E, h279km±42km, mb3.3/7, mb1 3.4/8, mb1mx3.1/52, mbtmp3.9/8, Error ellipse: s-maj=26.7km s-min=23.7km az=111.0*
ISC 23 15:26:36.5±1.0, 12°.4S±0°.1×167°.1E±0°.2, h220km, n9, σ0s98/10, mb3.8/7, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**9.60**	**184**	P	**P**	**15 28 57.5**	**-0.6**
	0.3nm,0.3s,baz=18,slow=19,SNR=5.2						
CTA	**Charters Tower**	**21.42**	**247**	P	**P**	**15 31 08.1**	**+0.5**
	6.0nm,1.2s,baz=80,slow=14,SNR=3.4						
WRA	**Warramunga Arr**	**32.32**	**252**	P	**P**	**15 32 44.2**	**-1.1**
	0.5nm,0.9s,baz=83,slow=9.1,SNR=3.9						
ASAR	**Alice Springs**	**33.42**	**246**	P	**P**	**15 32 53.9**	**-1.0**
	0.5nm,0.7s,baz=70,slow=9.7,SNR=9.3						
ASAR				pP	**pP**	**15 33 41.2**	**+1.6**
	0.5nm,0.8s,baz=62,slow=12,SNR=3.5						
ASAJ	**Asahikawa**	**60.56**	**340**	P	**P**	**15 36 24.0**	**+0.3**
	1.4nm,0.6s,baz=138,slow=14,SNR=4.8						
QSPA	**South Pole Qui**	**77.57**	**180**	P	**P**	**15 38 09.1**	**+1.0**
	0.5nm,0.4s,baz=304,slow=8.4,SNR=3.2						
ILAR	**Eielson Array**	**84.40**	**18**	P	**P**	**15 38 43.5**	**-0.3**
	1.8nm,0.6s,baz=230,slow=5.2,SNR=24						
MKAR	**Makanchi Array**	**95.47**	**317**	P	**P**	**15 39 36.1**	**-0.2**
	0.4nm,0.6s,baz=90,slow=6.2,SNR=4.8						
ARCES	**ARCESS Array B**	**118.02**	**346**	PKP	**PKPdf**	**15 44 56.2**	**-0.3**
	0.8nm,0.5s,baz=78,slow=1.9,SNR=12						

*NEIC **23** 15:28:25.2±0.0, 15°.82N×98°.03W, h20km, MD4.1(MEX), After MEX.*
MEX 23 15:28:25.2±0.7, 15°.82N×98°.03W, h20km, MD4.1, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**1.76**	**45**	*e*P	Pn	15 28 51.5	-3.2
VHO				*e*S	Sn	15 29 13.1	-3.5
VHO	**Vista Hermosa**	**1.76**	**45**	*e*P	Pn	15 28 51.5	-3.2
VHO				*e*S	Sn	15 29 13.1	-3.5
TLIG	**Tlapa**	**1.81**	**343**	*e*P	Pn	15 28 53.0	-2.4
TLIG				*i*S	Sn	15 29 13.3	-4.4
TLIG	**Tlapa**	**1.81**	**343**	*e*P	Pn	15 28 53.0	-2.4
TLIG				*i*S	Sn	15 29 13.3	-4.4
ACX	**Acapulco**	**2.04**	**301**	*e*P	Pb	15 29 01.7	0.0
ACX				*i*S	Sn	15 29 18.4	-5.1
ACX	**Acapulco**	**2.04**	**301**	*e*P	Pb	15 29 01.7	0.0
ACX				*i*S	Sn	15 29 18.4	-5.1
CAIG	**El Cayaco**	**2.47**	**300**	*e*P	Pb	15 29 10.7	+1.7
CAIG	**El Cayaco**	**2.47**	**300**	*e*P	Pb	15 29 10.7	+1.7
PCIG		**4.63**	**91**	*e*P	Pn	15 29 31.2	-2.9
PCIG		**4.63**	**91**	*e*P	Pn	15 29 31.2	-2.9

IDC 23 15:41:13.8±3.2, 29°.98S×177°.38W, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.4/43, mbtmp3.5/2, Error ellipse: s-maj=64.5km s-min=25.3km az=78.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.86**	**327**	Pn	Pn	15 41 34.0	+0.8
	76nm,0.3s,baz=99,slow=8.0,SNR=14						
RAO				Sn	Sn	15 41 45.9	-0.7
	221nm,0.3s,baz=20,slow=21,SNR=8.3						
ASAR	**Alice Springs**	**43.67**	**266**	P	P	15 49 20.4	-0.3
	0.8nm,1.1s,baz=96,slow=7.5,SNR=3.7						
WRA	**Warramunga Arr**	**44.62**	**271**	P	P	15 49 28.2	-0.1
	0.3nm,0.3s,baz=110,slow=8.1,SNR=15						
FINES	**FINESS Array B**	**144.93**	**341**	PKP	PKPab	16 00 50.9	-0.5
	2.2nm,0.9s,baz=50,slow=3.0,SNR=4.8						

IDC 23 15:53:35.2±3.2, 32°.71S×178°.36W, h0km, mb3.6/2, mb1 3.8/3, mb1mx3.6/44, mbtmp3.6/3, ML3.3/1, Error ellipse: s-maj=73.7km s-min=46.6km az=121.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.66**	**212**	Pn	Pn	15 55 14.0	-0.2
	0.6nm,0.3s,baz=36,slow=19,SNR=5.4						
URZ				Sn	Sn	15 56 26.8	-4.0
	1.6nm,0.3s,baz=126,slow=22,SNR=6.0						
ASAR	**Alice Springs**	**42.73**	**270**	P	P	16 01 34.5	+0.1
	0.6nm,0.8s,baz=112,slow=7.7,SNR=11						
WRA	**Warramunga Arr**	**43.93**	**275**	P	P	16 01 43.7	-0.4
	0.7nm,0.6s,baz=115,slow=7.6,SNR=7.1						
FINES	**FINESS Array B**	**147.19**	**338**	PKPbc	PKPbc	16 13 18.8	-0.8
	1.4nm,0.9s,baz=46,slow=5.5,SNR=4.6						

*IDC **23** 16:03:09.0±1.9, 36°.24N×142°.00E, h0km, mb3.7/2, mb1 3.6/5, mb1mx3.3/66, mbtmp3.6/5, ML3.2/3, MS2.4/2, Ms1 2.4/2, ms1mx2.1/69, Error ellipse: s-maj=36.9km s-min=25.1km az=75.0*
*ISCJB **23** 16:03:09.5±1.7, 36°.30N±0°.04×142°.08E±0°.08, h23km±13km, mb3.6/2, Error ellipse: s-maj=11.3km s-min=6.6km az=8.8*
*JMA **23** 16:03:12.6±0.2, 36°.33N×141°.75E, h72km±5km, M3.1*
ISC 23 16:03:10.3±2.8, 36°.29N±0°.05×141°.93E±0°.09, h14km±16km, n15, σ1s16/21, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.05**	**237**	P	**Pn**	**16 03 31.0**	**+0.4**
CHOJ				*e*S	**Sg**	**16 03 44.9**	**+0.7**
JHO	**Hitachi**	**1.15**	**287**	P	**Pb**	**16 03 30.8**	**-1.1**
ONAJ	**Iwakimizuishiy**	**1.22**	**312**	P	**Pn**	**16 03 32.2**	**-0.9**
JFK	**Kawauchi**	**1.37**	**322**	P	**Pn**	**16 03 35.2**	**+0.1**
JFT	**Otama**	**1.77**	**314**	P	**Pn**	**16 03 41.2**	**+0.6**
JFT				S	**Sn**	**16 04 03.3**	**+0.3**
BSO1	**Boso 1**	**1.81**	**206**	P	**Pn**	**16 03 41.7**	**+1.2**
BSO1				S	**Sb**	**16 04 04.6**	**-0.5**
JMM	**Marumori**	**1.82**	**330**	P	**Pn**	**16 03 41.6**	**+0.4**
JAG	**Ashikaga**	**2.01**	**275**	P	**Pn**	**16 03 43.4**	**-0.4**
MJAR	**Matsushiro Arr**	**3.02**	**276**	Pn	**Pn**	**16 03 58.3**	**+0.6**
	3.6nm,0.3s,baz=115,slow=7.5,SNR=62						
MJAR				Sn	**Sb**	**16 04 38.4**	**-2.0**
	2.3nm,0.3s,baz=90,slow=12,SNR=5.7						
MJAR				LR	LR	16 05 22.1	
	comp=Z,55nm,19.3s,baz=120,slow=44						
MAT	**Matsushiro**	**3.02**	**276**	P	**Pn**	**16 03 59.2**	**+1.5**
MAT				S	**Sn**	**16 04 35.3**	**+1.7**
JHJ	**Hachijo jima 2**	**3.62**	**210**	Pn	**Pn**	**16 04 06.1**	**+0.1**
	18nm,0.3s,baz=15,slow=15,SNR=22						
JHJ				Sn	**Sn**	**16 04 46.9**	**-1.7**
	38nm,0.3s,baz=246,slow=19,SNR=6.7						
ASAJ	**Asahikawa**	**7.84**	**4**	Pn	**Pn**	**16 05 05.8**	**+1.9**
	0.2nm,0.3s,baz=205,slow=14,SNR=6.2						
ASAJ				Sn	**Sn**	**16 06 31.4**	**-0.9**
	0.0nm,0.3s,baz=120,slow=20,SNR=3.0						
KSRS	**Korea Array**	**11.29**	**280**	LR	LR	16 09 54.8	
	comp=Z,20nm,18.9s,baz=115,slow=36						
SONM	**Songino Array**	**28.55**	**305**	P	**P**	**16 09 06.6**	**+0.8**
	0.4nm,0.4s,baz=104,slow=10,SNR=1.9						
WRA	**Warramunga Arr**	**56.38**	**189**	P	**P**	**16 12 51.8**	**+0.6**
	0.9nm,1.1s,baz=6.0,slow=7.2,SNR=2.6						

*ISK **23** 16:03:21.9, 39°.98N×33°.51E, h5km, ML2.3/4, Suspected Mining explosion.*
*ISCJB **23** 16:03:23.1±0.4, 39°.98N±0°.03×33°.54E±0°.04, h0km, Error ellipse: s-maj=4.1km s-min=3.6km az=44.3*
*CSEM **23** 16:03:23.3±0.2, 39°.98N×33°.54E, h1km, ML2.5, Error ellipse: s-maj=3.8km s-min=3.3km az=135.0, Suspected Mining explosion.*
*DDA **23** 16:03:23.7, 40°.00N×33°.58E, h7km, Ml2.5*
ISC 23 16:03:23.3±0.8, 39°.96N±0°.02×33°.53E±0°.02, h0km, n36, σ0s72/49, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBAL	**Bala**	**0.52**	**217**	*i*P	**Pg**	**16 03 34.3**	**+1.0**
BBAL				*i*S	**Sb**	**16 03 43.9**	**+0.3**
BBAL	**Bala**	**0.52**	**217**	P	**Pg**	**16 03 34.3**	**+1.0**
BBAL				S	**Sb**	**16 03 43.9**	**+0.3**
ELDT	**Eldivan**	**0.53**	**352**	*i*P	**Pg**	**16 03 33.3**	**-0.2**
ELDT				*i*S	**Sg**	**16 03 41.5**	**+1.1**
ELDT	**Eldivan**	**0.53**	**352**	P	**Pg**	**16 03 33.3**	**-0.2**
ELDT				S	**Sg**	**16 03 41.5**	**+1.1**
ANTO	**Ankara**	**0.57**	**261**	PG	**Pg**	**16 03 34.3**	**0.0**
ANTO	**Ankara**	**0.57**	**261**	*e*Pg	**Pg**	**16 03 34.3**	**0.0**
LOD	**Lodumlu**	**0.59**	**263**	PG	**Pg**	**16 03 34.1**	**-0.5**
LOD				SG	**Sg**	**16 03 42.8**	**+0.5**
LOD	**Lodumlu**	**0.59**	**263**	*e*Pg	**Pg**	**16 03 34.1**	**-0.5**
LOD				*e*Sg	**Sg**	**16 03 42.8**	**+0.5**
AFSR	**Af´ar-Bala (A**	**0.62**	**215**	PG	**Pg**	**16 03 35.4**	**+0.2**
AFSR				SG	**Sb**	**16 03 45.2**	**-1.3**
AFSR	**Af´ar-Bala (A**	**0.62**	**215**	*e*Pg	**Pg**	**16 03 35.4**	**+0.2**
AFSR				*e*Sg	**Sb**	**16 03 45.2**	**-1.3**
CDAG	**Cicekdag**	**0.73**	**117**	*i*P	**Pg**	**16 03 37.6**	**+0.3**
CDAG				*i*S	**Sb**	**16 03 48.2**	**-1.4**
CDAG	**Cicekdag**	**0.73**	**117**	P	**Pg**	**16 03 37.6**	**+0.3**
CDAG				S	**Sb**	**16 03 48.2**	**-1.4**
CORM	**Corum**	**0.87**	**75**	PG	**Pg**	**16 03 39.5**	**-0.5**
CORM	**Corum**	**0.87**	**75**	*e*Pg	**Pg**	**16 03 39.5**	**-0.5**
KKUL	**Konya-Kulu**	**0.92**	**211**	*i*P	**Pb**	**16 03 42.2**	**0.0**
KKUL				*i*S	**Sn**	**16 03 56.7**	**-0.9**
KKUL	**Konya-Kulu**	**0.92**	**211**	P	**Pb**	**16 03 42.2**	**0.0**
KKUL				S	**Sn**	**16 03 56.7**	**-0.9**
KULU	**Kulu**	**1.00**	**204**	PG	**Pg**	**16 03 42.5**	**0.0**
KULU	**Kulu**	**1.00**	**204**	*e*Pg	**Pg**	**16 03 42.5**	**0.0**
SERE	**Sereflikochisa**	**1.01**	**178**	PG	**Pg**	**16 03 42.9**	**+0.2**
SERE	**Sereflikochisa**	**1.01**	**178**	*e*Pg	**Pg**	**16 03 42.9**	**+0.2**
YAYX	**Yaylak**	**1.04**	**168**	PG	**Pg**	**16 03 42.8**	**-0.5**
YAYX	**Yaylak**	**1.04**	**168**	*e*Pg	**Pg**	**16 03 42.8**	**-0.5**
ILGA	**Ilgaz**	**1.10**	**7**	*i*P	**Pg**	**16 03 44.1**	**-0.2**
ILGA	**Ilgaz**	**1.10**	**7**	P	**Pg**	**16 03 44.1**	**-0.2**
COAL	**Corum-Alaca**	**1.16**	**75**	*i*P	**Pb**	**16 03 46.1**	**-0.1**
COAL				*i*S	**Sn**	**16 04 06.2**	**+2.8**
COAL	**Corum-Alaca**	**1.16**	**75**	P	**Pb**	**16 03 46.1**	**-0.1**
BCAM	**Yenicaga**	**1.41**	**308**	*i*P	**Pb**	**16 03 50.3**	**-0.2**
BCAM	**Yenicaga**	**1.41**	**308**	P	**Pb**	**16 03 50.3**	**-0.2**
YOZ	**Yozgat**	**1.42**	**103**	PN	**Pb**	**16 03 50.5**	**-0.2**
YOZ	**Yozgat**	**1.42**	**103**	*e*Pn	**Pb**	**16 03 50.5**	**-0.2**
AUMIH	**MIHALICIK**	**1.58**	**267**	PN	**Pn**	**16 03 52.6**	**0.0**
AUMIH	**MIHALICIK**	**1.58**	**267**	*e*Pn	**Pn**	**16 03 52.6**	**0.0**
KIZT	**Kizilcal**	**1.67**	**230**	PN	**Pn**	**16 03 53.8**	**-0.1**
KIZT	**Kizilcal**	**1.67**	**230**	*e*Pn	**Pn**	**16 03 53.8**	**-0.1**
GULA	**Gulagac**	**1.71**	**161**	PN	**Pn**	**16 03 54.5**	**+0.1**
GULA	**Gulagac**	**1.71**	**161**	*e*Pn	**Pn**	**16 03 54.5**	**+0.1**

IDC 23 16:09:29.9±4.0, 6°.78S×153°.64E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.4/47, mbtmp3.5/4, ML1.4/1, Error ellipse: s-maj=105.1km s-min=30.9km az=113.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.92**	**247**	Pn	Pn	16 11 13.6	+1.0
	0.4nm,0.3s,baz=45,slow=13,SNR=2.1						
PMG				Sn	Sn	16 12 27.4	-4.8
	1.0nm,0.3s,baz=220,slow=7.9,SNR=3.4						
WRA	**Warramunga Arr**	**22.84**	**233**	P	P	16 14 33.4	-1.6
	1.1nm,1.0s,baz=58,slow=9.7,SNR=5.1						
ASAR	**Alice Springs**	**25.32**	**226**	P	P	16 14 59.1	+0.6
	0.3nm,0.4s,baz=58,slow=8.9,SNR=12						
SONM	**Songino Array**	**68.43**	**328**	P	P	16 20 34.0	+0.2
	0.3nm,0.4s,baz=131,slow=4.0,SNR=3.5						

*NNC **23** 16:28:48.2±8.2, 37°.00N×70°.60E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=89.9km s-min=50.9km az=144.0*
ISC 23 16:28:48.0±3.9, 36°.6N±0°.3×70°.8E±0°.2, h35km, n10, σ1s73/13, 2C-5D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**4.00**	**32**	⇓P	**Pn**	**16 29 48.3**	**+1.3**
	3.2nm,0.3s						
SFK				⇑S	**Sn**	**16 30 36.2**	**+3.5**
	3.7nm,0.2s						
AML	**Almayashu**	**5.93**	**22**	P	**Pn**	**16 30 13.8**	**+0.1**
	SNR=15						
MNAS	**Manas**	**5.99**	**12**	⇓P	**Pn**	**16 30 15.2**	**+0.9**
	3.1nm,0.5s						
MNAS				⇓S	**Sn**	**16 31 21.3**	**-0.4**
	2.5nm,0.3s						
EKS2	**Erkin-Say**	**6.45**	**20**	P	**Pn**	**16 30 21.5**	**+1.0**
	SNR=11						
CHMS	**Chumysh**	**7.05**	**25**	P	**Pn**	**16 30 28.2**	**-0.5**
	SNR=5.1						
USP	**Ospenovka**	**7.21**	**22**	P	**Pn**	**16 30 31.1**	**+0.1**
	SNR=6.1						
TKM2	**Tokmak 2**	**7.29**	**29**	⇓P	**Pn**	**16 30 30.7**	**-1.5**
	2.3nm,0.5s						
TKM2				⇓S	**Sn**	**16 31 50.6**	**-3.2**
	0.8nm,0.7s						
TKM2	**Tokmak 2**	**7.29**	**29**	P	**Pn**	**16 30 31.1**	**-1.1**
	SNR=5.7						
AB31	**Akbulak array**	**14.87**	**331**	P	**Pn**	**16 32 15.1**	**-0.5**
	0.5nm,0.3s,baz=153,slow=12,SNR=17						
AKTO	**Aktyubinsk**	**16.57**	**330**	⇑P	**Pn**	**16 32 37.8**	**+0.4**
	1.0nm,0.6s						

*IDC **23** 16:50:41.1±1.1, 3°.48N×127°.71E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.6/55, mbtmp3.7/7, MS2.9/3, Ms1 2.9/3, ms1mx2.4/53, Error ellipse: s-maj=75.8km s-min=17.4km az=74.0*
*MAN **23** 16:50:45.1, 3°.23N×127°.39E, h7km, mb5.1, ML4.0, MS4.1*
**ISC 23 16:50:46.6±0.9, 3°.3N±0°.1×127°.8E±0°.2, h35km, n19, σ1s64/

LANS			eSG	Sn	17 03 55.6	0.0
LANS	**Liptovska Anna**	**1.16 157**	ePg	Pn	17 03 39.0	-0.1
LANS			eSg	Sn	17 03 55.6	0.0
NIE	**Niedzica**	**1.27 129**	ePg	Pb	17 03 40.6	+0.2
NIE			eSg	Sn	17 03 58.9	+0.6
NIE	**Niedzica**	**1.27 129**	ePg	Pb	17 03 40.6	+0.2
NIE			eSg	Sn	17 03 58.9	+0.6
NIE	**Niedzica**	**1.27 129**	ePg	Pb	17 03 40.6	+0.2
NIE			eSg	Sn	17 03 58.9	+0.6
KRLC	**Kraliky**	**1.29 264**	ePG	Pg	17 03 40.5	+0.1
KRLC			eSG	Sg	17 03 57.5	+0.4
comp=Z,5.4nm,0.2s						
KRLC	**Kraliky**	**1.29 264**	Pg	Pg	17 03 40.5	+0.1
KRLC			Sg	Sg	17 03 57.5	+0.4
5.4nm,0.2s						
DPC	**Dobruska-Polom**	**1.58 276**	ePG	Pn	17 03 45.1	+0.2
DPC			eSG	Sg	17 04 06.7	+0.3
comp=Z,21nm,0.6s						
DPC	**Dobruska-Polom**	**1.58 276**	Pg	Pn	17 03 45.1	+0.2
DPC			Sg	Sg	17 04 06.7	+0.3
21nm,0.6s						
VRAC	**Vranov**	**1.69 238**	ePn	Pb	17 03 47.2	-0.2
baz=55						
VRAC			eSg	Sg	17 04 10.5	+0.8
12nm,0.3s,baz=55						
VRAC	**Vranov**	**1.69 238**	ePN	Pb	17 03 47.2	-0.2
VRAC			eSG	Sg	17 04 10.5	+0.8
VRAC	**Vranov**	**1.69 238**	ePn	Pb	17 03 47.2	-0.2
baz=55						
VRAC			eSg	Sg	17 04 10.5	+0.8
12nm,0.3s,baz=55						
KSP	**Ksiaz**	**1.71 293**	ePg	Pg	17 03 48.5	+0.3
KSP			eSg	Sg	17 04 11.2	+0.8
KSP	**Ksiaz**	**1.71 293**	ePg	Pg	17 03 48.5	+0.3
KSP			eSg	Sg	17 04 11.2	+0.8
KSP	**Ksiaz**	**1.71 293**	ePg	Pg	17 03 48.5	+0.3
KSP			eSg	Sg	17 04 11.2	+0.8
VYHS	**Vyhne**	**1.73 179**	ePN	Pn	17 03 47.1	+0.3
VYHS			eSN	Sn	17 04 09.6	0.0
VYHS			eLG	Lg	17 04 14.2	
VYHS	**Vyhne**	**1.73 179**	ePg	Pn	17 03 47.1	+0.3
VYHS			eSn	Sn	17 04 09.7	+0.1
UPC	**Upice**	**1.80 280**	ePG	Pg	17 03 49.9	-0.1
UPC			eSG	Sg	17 04 13.6	+0.3
UPC	**Upice**	**1.80 280**	Pg	Pg	17 03 49.9	-0.1
UPC			Sg	Sg	17 04 13.6	+0.3
KRUC	**Moravsky**	**1.93 234**	ePn	Pn	17 03 50.7	+1.0
baz=51						
KRUC			eSg	Sg	17 04 18.3	+0.6
5.4nm,0.3s,baz=51						
KRUC	**Moravsky**	**1.93 234**	ePn	Pn	17 03 50.7	+1.0
baz=51						
KRUC			eSg	Sg	17 04 18.3	+0.6
5.4nm,0.3s,baz=51						
PVCC	**Panska Ves**	**2.71 278**	eSG	Sg	17 04 42.2	-0.5
PVCC	**Panska Ves**	**2.71 278**	Sg	Sg	17 04 42.2	-0.5
PRU	**Pruhonice**	**2.74 267**	eSG	Sg	17 04 41.8	-1.7
comp=Z,4.7nm,0.8s						
PRU	**Pruhonice**	**2.74 267**	Sg	Sg	17 04 41.8	-1.7
4.7nm,0.8s						
BRG	**Berggiesshubel**	**3.15 284**	SG	Sg	17 04 57.4	+0.5
3.3nm,0.5s						
KHC	**Kasperske Hory**	**3.55 254**	eSG	Sg	17 05 09.7	+0.1
comp=Z,4.9nm,0.4s						
KHC	**Kasperske Hory**	**3.55 254**	Sg	Sg	17 05 09.7	+0.1
4.9nm,0.4s						

IDC 23 17:12:15.5±7.4, 5°42S×152°63E, h75km±54km, mb3.7/3, mb1 3.8/4, mb1mx3.2/50, mbtmp3.9/4, ML1.8/1, MS3.2/1, Ms1 3.2/1, ms1mx2.3/49, Error ellipse: s-maj=99.3km s-min=45.2km az=132.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.71**	**234**	P	Pn	17 13 51.6	+0.1
1.1nm,0.3s,baz=45,slow=4.3,SNR=4.5							
PMG				S	Sn	17 15 07.9	+1.3
0.8nm,0.3s,baz=342,slow=20,SNR=3.4							
WRA	**Warramunga Arr**	**22.91**	**229**	P	P	17 17 12.8	-0.7
2.3nm,0.8s,baz=54,slow=10.0,SNR=12							
ASAR	**Alice Springs**	**25.58**	**223**	P	P	17 17 37.9	0.0
0.6nm,0.5s,baz=54,slow=8.9,SNR=16							
ASAR				LR	LR	17 28 10.5	
comp=Z,54nm,18.8s,baz=300,slow=37							
FITZ	**Fitzroy Crossi**	**29.21**	**242**	P	P	17 18 10.5	+0.1
7.2nm,1.1s,baz=60,slow=8.1,SNR=3.7							
TORD	**Torodi Ar. Bea**	**150.33**	**287**	PKPbc	PKPbc	17 31 59.4	-0.1
baz=58,slow=3.2							

*IDC **23** 17:24:52.7±1.1, 2°48N×128°32E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.6/57, mbtmp3.8/7, Error ellipse: s-maj=66.7km s-min=17.0km az=66.0*
*ISCJB **23** 17:25:07.2±0.5, 2°44N±0°07×128°6E±0°1, h150km, mb4.3/15, Error ellipse: s-maj=17.7km s-min=8.3km az=161.1*
*NEIC **23** 17:25:07.2±1.5, 2°42N×128°62E, h130km±14km, mb4.4/8, Error ellipse: s-maj=19.0km s-min=7.8km az=65.0*
ISC 23 17:25:09.4±0.8, 2°4N±0°1×128°5E±0°1, h150km, n24, σ1§00/24, mb4.4/15, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.94**	**216**	ePn	Pn	17 25 42.3	-1.6
FITZ	**Fitzroy Crossi**	**20.52**	**188**	P	P	17 29 34.1	-1.9
1.3nm,0.7s,baz=354,slow=10,SNR=4.1							
WRAB	**Tennant Creek**	**22.88**	**166**	eP	P	17 30 00.6	+0.4
20nm,1.1s							
WR1	**Warramunga Arr**	**22.89**	**166**	eP	P	17 30 00.5	+0.2
32nm,1.6s							
WRA	**Warramunga Arr**	**22.89**	**166**	P	P	17 30 00.5	+0.2
1.4nm,0.4s,baz=344,slow=11,SNR=47							
WB2	**Warramunga Arr**	**22.89**	**166**	eP	P	17 29 58.9	-1.4
AS31	**Alice Springs**	**26.39**	**169**	eP	P	17 30 31.6	-0.5
1.4nm,1.1s							
ASAR	**Alice Springs**	**26.40**	**169**	P	P	17 30 31.9	-0.2
0.3nm,0.4s,baz=350,slow=7.8,SNR=20							
AS01	**Alice Springs**	**26.40**	**169**	eP	P	17 30 32.0	-0.2
CBIJ	**Chichi jima**	**27.87**	**27**	eP	P	17 30 43.1	-2.1
162nm,1.5s							
CTA	**Charters Tower**	**28.30**	**143**	P	P	17 30 50.0	+0.9
3.5nm,1.0s,baz=317,slow=6.2,SNR=2.2							
PSI	**Prapat**	**29.55**	**272**	eP	P	17 31 02.8	+2.3
8.2nm,1.0s							
FORT	**Forrest**	**32.96**	**181**	eP	P	17 31 30.0	+0.1
24nm,1.3s							
STKA	**Stephens Creek**	**36.25**	**161**	P	P	17 31 58.6	+0.4
1.1nm,0.4s,baz=338,slow=9.5,SNR=7.1							
STKA	**Stephens Creek**	**36.25**	**161**	eP	P	17 31 58.2	+0.1
7.1nm,1.8s							
MK01	**Makanchi Array**	**59.67**	**325**	eP	P	17 34 57.6	-0.3
MK32	**Makanchi Array**	**59.69**	**325**	eP	P	17 34 58.0	-0.1
MKAR	**Makanchi Array**	**59.69**	**325**	P	P	17 34 58.0	-0.1
0.3nm,0.4s,baz=121,slow=7.7,SNR=9.2							
MKAR	**Makanchi Array**	**59.69**	**325**	eP	P	17 34 58.1	-0.1
6.3nm,1.1s							
MAKZ	**Makanchi**	**59.88**	**325**	eP	P	17 34 59.2	-0.2
9.8nm,1.9s							
KHZ	**Kahutara**	**60.30**	**143**	eP	P	17 35 03.0	+0.7
304nm,2.0s							
URZ	**Urewera**	**60.34**	**137**	eP	P	17 35 03.3	+0.7
53nm,1.3s							
KURBB	**Kurchatov Arra**	**63.84**	**327**	P	P	17 35 25.4	-0.4
0.4nm,0.4s,baz=126,slow=6.1,SNR=6.3							
KURK	**Kurchatov**	**63.84**	**327**	eP	P	17 35 25.4	-0.4

*GII **23** 17:51:58.4±0.0, 38°24N×18°78E, h30km*
*BJI **23** 17:52:28.3, 38°20N×22°00E, h52km, mb4.7/33, mB4.9/20, Ms4.6/8, Ms7 4.3/4*
*ISCJB **23** 17:52:29.7±0.1, 38°178N±0°010×22°00E±0°01, h60km, mb4.6/133, Error ellipse: s-maj=1.8km s-min=1.3km az=34.8*
*MOS **23** 17:52:29.9±0.9, 38°20N×22°00E, h65km, mb4.8/48, Error ellipse: s-maj=4.4km s-min=2.6km az=83.8*
*PDG **23** 17:52:30.0±0.9, 38°16N×21°98E, h56km±2km, ML4.6/12, Error ellipse: s-maj=0.8km s-min=1.1km az=0.0*
*CSEM **23** 17:52:30.7±0.1, 38°17N×21°96E, h60km, mb4.8/66, Error ellipse: s-maj=2.1km s-min=1.4km az=33.0*
*THE **23** 17:52:30.6, 38°14N×22°03E, h55km, ML4.6/49, Error ellipse: s-maj=0.7km s-min=0.3km az=272.0*
*IDC **23** 17:52:30.3±1.2, 38°19N×22°03E, h52km±10km, mb4.2/40, mb1 4.3/49, mb1mx4.2/73, mbtmp4.5/49, MS3.2/32, Ms1 3.2/32, ms1mx3.1/74, Error ellipse: s-maj=9.9km s-min=8.8km az=172.0*
*TIR **23** 17:52:30.1, 38°14N×22°03E, h45km, Md4.7/4*
*ATH **23** 17:52:30.3, 38°16N×22°04E, h54km±1km, ML4.7/36, Error ellipse: s-maj=1.5km s-min=0.7km az=308.0*
*NEIC **23** 17:52:30.6±0.0, 38°14N×22°03E, h55km, mb4.7/70, ML4.6(THE), After THE.*
NEIC Felt [III] at Athens. Also felt at Patra, Peristeri and Vrilissia.
ISC 23 17:52:29.9±0.4, 38°15N±0°02×22°00E±0°02, h52km±3km, n1328, σ1§70/1554, mb4.7/133, MS3.4/25, 70C-34D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAKA	**Lakka**	**0.09**	**348**	P	Pn	17 52 38.4	+0.3
LAKA				S	Sn	17 52 45.0	+1.1
LAKA				AML	AML	17 52 45.7	
LAKA				AML	AML	17 52 49.2	
comp=N,71610μm,0.5s							
LAKA	**Lakka**	**0.09**	**348**	ePn	Pn	17 52 38.6	+0.5
LAKA	**Lakka**	**0.09**	**348**	P	Pn	17 52 38.6	+0.5
LAKA				S	Sn	17 52 45.0	+1.1
LAKA	**Lakka**	**0.09**	**348**	P	Pn	17 52 38.7	+0.6
LAKA				S	Sn	17 52 45.2	+1.3
KLV	**Kalavryta, Ach**	**0.16**	**133**	P	Pn	17 52 38.9	+0.6
KLV				S	Sn	17 52 45.4	+1.1
KLV				AML	AML	17 52 45.7	
KLV				AML	AML	17 52 45.8	
KLV	**Kalavryta, Ach**	**0.16**	**133**	ePn	Pn	17 52 38.8	+0.4
KLV	**Kalavryta, Ach**	**0.16**	**133**	P	Pn	17 52 38.8	+0.4
KLV				S	Sn	17 52 45.2	+0.8
KLV	**Kalavryta, Ach**	**0.16**	**133**	P	Pn	17 52 39.0	+0.6
KLV				S	Sn	17 52 45.5	+1.1
UPR	**University Cam**	**0.21**	**308**	P	Pn	17 52 39.0	+0.4
UPR				S	Sn	17 52 47.2	+2.4
UPR	**University Cam**	**0.21**	**308**	P	Pn	17 52 39.4	+0.8
UPR				S	Sn	17 52 46.7	+1.9
UPR	**University Cam**	**0.21**	**308**	P	Pn	17 52 39.4	+0.8
UPR				S	Sn	17 52 46.9	+2.1
TRIZ	**Trizonia**	**0.22**	**15**	P	Pn	17 52 39.4	+0.7
TRIZ				S	Sn	17 52 47.0	+2.1
TRIZ	**Trizonia**	**0.22**	**15**	P	Pn	17 52 39.4	+0.7
TRIZ				S	Sn	17 52 46.6	+1.7
TRIZ	**Trizonia**	**0.22**	**15**	P	Pn	17 52 39.5	+0.9
TRIZ				S	Sn	17 52 46.6	+1.7
SERG	**Sergoula**	**0.26**	**9**	P	Pn	17 52 40.0	+1.0
SERG				S	Sn	17 52 46.9	+1.4
SERG				AML	AML	17 52 48.5	
SERG				AML	AML	17 52 48.6	
SERG	**Sergoula**	**0.26**	**9**	P	Pn	17 52 39.9	+0.9
SERG				S	Sn	17 52 47.5	+2.0
SERG	**Sergoula**	**0.26**	**9**	P	Pn	17 52 40.0	+1.0
SERG				S	Sn	17 52 46.9	+1.4
EFP	**Efpalio**	**0.28**	**344**	P	Pn	17 52 40.3	+1.1
EFP				S	Sn	17 52 47.4	+1.7
EFP				AML	AML	17 52 48.1	
EFP				AML	AML	17 52 51.0	
EFP	**Efpalio**	**0.28**	**344**	P	Pn	17 52 40.1	+1.0
EFP				S	Sn	17 52 47.1	+1.4
EFP	**Efpalio**	**0.28**	**344**	P	Pn	17 52 40.2	+1.1
EFP				S	Sn	17 52 47.4	+1.7
DRO	**Drossia**	**0.30**	**229**	P	Pn	17 52 39.4	0.0
DRO				S	Sn	17 52 46.8	+0.7
DRO				AML	AML	17 52 48.5	
DRO				AML	AML	17 52 48.5	
DRO	**Drossia**	**0.30**	**229**	P	Pn	17 52 39.9	+0.6
DRO				S	Sn	17 52 47.3	+1.2
DRO	**Drossia**	**0.30**	**229**	P	Pn	17 52 40.0	+0.6
DRO				S	Sn	17 52 47.4	+1.3
VVK	**Vomvokou**	**0.31**	**331**	P	Pn	17 52 40.1	+0.7
VVK				S	Sn	17 52 47.3	+1.1
GUR	**Goura**	**0.34**	**129**	P	Pn	17 52 41.0	+1.2
GUR				S	Sn	17 52 48.8	+1.9
GUR				AML	AML	17 52 49.7	
GUR				AML	AML	17 52 50.4	
GUR	**Goura**	**0.34**	**129**	ePn	Pn	17 52 40.7	+0.9
GUR				eSn	Sn	17 52 48.1	+1.2
GUR	**Goura**	**0.34**	**129**	P	Pn	17 52 40.7	+0.9
GUR				S	Sn	17 52 48.1	+1.2
GUR	**Goura**	**0.34**	**129**	ePn	Pn	17 52 40.7	+0.9
GUR				S	Sn	17 52 48.3	+1.4
RLS	**Riolos of Patr**	**0.43**	**258**	P	Pn	17 52 40.1	-0.4
RLS				S	Sn	17 52 49.7	+1.5
RLS				AML	AML	17 52 50.3	
RLS				AML	AML	17 52 51.3	
comp=E,89589μm,0.5s							
RLS	**Riolos of Patr**	**0.43**	**258**	ePn	Pn	17 52 41.1	+0.5
RLS				eSn	Sn	17 52 49.8	+1.6
RLS	**Riolos of Patr**	**0.43**	**258**	P	Pn	17 52 41.1	+0.5
RLS				S	Sn	17 52 49.8	+1.6
RLS	**Riolos of Patr**	**0.43**	**258**	ePn	Pn	17 52 41.1	+0.5
RLS				S	Sn	17 52 50.1	+1.9
ANX	**Ano Chora**	**0.44**	**352**	P	Pn	17 52 42.6	+1.8
ANX				S	Sn	17 52 50.9	+2.2
ANX				AML	AML	17 52 51.9	
ANX				AML	AML	17 52 57.5	
ANX	**Ano Chora**	**0.44**	**352**	P	Pn	17 52 42.1	+1.3
ANX				S	Sn	17 52 49.5	+0.8
ANX	**Ano Chora**	**0.44**	**352**	P	Pn	17 52 42.2	+1.4
ANX				S	Sn	17 52 50.5	+1.8
DSF	**Desfina**	**0.49**	**58**	P	Pn	17 52 42.0	+0.8
DSF				S	Sn	17 52 50.5	+1.0
DSF				AML	AML	17 52 50.8	
DSF				AML	AML	17 52 52.3	
DSF	**Desfina**	**0.49**	**58**	ePn	Pn	17 52 41.9	+0.7
DSF	**Desfina**	**0.49**	**58**	P	Pn	17 52 41.9	+0.7
DSF				S	Sn	17 52 50.2	+0.8
DSF	**Desfina**	**0.49**	**58**	P	Pn	17 52 42.0	+0.8
DSF				S	Sn	17 52 50.4	+1.0
DLFA	**Delphi**	**0.51**	**50**	P	Pn	17 52 42.3	+0.8
DLFA				S	Sn	17 52 50.5	+0.7
DLFA				AML	AML	17 52 51.8	
comp=E,55107μm,0.4s							
DLFA				AML	AML	17 52 53.2	
comp=N,53142μm,0.4s							
DLFA	**Delphi**	**0.51**	**50**	P	Pn	17 52 42.2	+0.8
DLFA				S	Sn	17 52 50.7	+1.0
THAL	**Thalero**	**0.53**	**102**	P	Pn	17 52 42.6	+0.8
THAL				S	Sn	17 52 51.7	+1.5
THAL				AML	AML	17 52 55.5	
THAL				AML	AML	17 52 56.0	
THAL	**Thalero**	**0.53**	**102**	P	Pn	17 52 42.4	+0.7
THAL				S	Sn	17 52 51.2	+1.0
THAL	**Thalero**	**0.53**	**102**	P	Pn	17 52 42.5	+0.8
THAL				S	Sn	17 52 51.5	+1.3
PVO	**Paravola**	**0.60**	**321**	P	Pn	17 52 44.3	+1.8
PVO				S	Sn	17 52 53.9	+2.4
PVO				AML	AML	17 52 56.2	
comp=N,51992μm,0.4s							
PVO				AML	AML	17 52 59.2	
comp=E,44746μm,0.3s							
PVO	**Paravola**	**0.60**	**321**	P	Pn	17 52 42.9	+0.4
PVO				S	Sn	17 52 53.6	+2.1
PVO	**Paravola**	**0.60**	**321**	P	Pn	17 52 44.0	+1.5
PVO				S	Sn	17 52 53.8	+2.3
TRIP	**Tripoli**	**0.66**	**161**	P	Pn	17 52 45.2	+1.9
TRIP				S	Sn	17 52 55.3	+2.2
TRIP				AML	AML	17 52 56.6	
comp=N,52146μm,0.4s							
TRIP				AML	AML	17 53 02.2	
comp=E,61917μm,0.6s							
TRIP	**Tripoli**	**0.66**	**161**	P	Pn	17 52 43.6	+0.3
TRIP				S	Sn	17 52 54.1	+1.1
TRIP	**Tripoli**	**0.66**	**161**	P	Pn	17 52 44.8	+1.5
TRIP				S	Sn	17 52 54.9	+1.9
AMT	**Artemida-Makis**	**0.66**	**201**	P	Pn	17 52 44.1	+0.8
AMT				S	Sn	17 52 55.4	+2.4
AMT				AML	AML	17 53 00.8	
AMT				AML	AML	17 53 01.2	
AMT	**Artemida-Makis**	**0.66**	**201**	P	Pn	17 52 43.0	-0.3
AMT				S	Sn	17 52 53.9	+0.9
AMT	**Artemida-Makis**	**0.66**	**201**	P	Pn	17 52 44.4	+1.1
AMT				S	Sn	17 52 55.2	+2.2
VTN	**Vitineika**	**0.69**	**250**	P	Pn	17 52 44.4	+0.8
VTN				S	Sn	17 52 55.0	+1.5
VTN	**Vitineika**	**0.69**	**250**	P	Pn	17 52 44.4	+0.8
VTN				S	Sn	17 52 55.0	+1.5
PROD	**Prodromos**	**0.71**	**81**	P	Pn	17 52 45.2	+1.3
PROD				AML	AML	17 52 56.5	
PROD				AML	AML	17 52 56.6	
PROD	**Prodromos**	**0.71**	**81**	P	Pn	17 52 44.9	+1.0
PROD				S	Sn	17 52 54.9	+0.7
PROD	**Prodromos**	**0.71**	**81**	P	Pn	17 52 45.0	+1.0
PROD				S	Sn	17 52 54.9	+0.7
LTK	**Loutraki**	**0.77**	**99**	P	Pn	17 52 45.6	+0.9
LTK				S	Sn	17 52 56.2	+0.7
LTK				AML	AML	17 52 58.5	
comp=N,62521μm,0.3s							
LTK				AML	AML	17 52 59.6	
comp=E,76375μm,0.6s							
LTK	**Loutraki**	**0.77**	**99**	ePn	Pn	17 52 44.3	-0.4
LTK	**Loutraki**	**0.77**	**99**	P	Pn	17 52 44.3	-0.4
LTK				S	Sn	17 52 56.2	+0.7
LTK	**Loutraki**	**0.77**	**99**	P	Pn	17 52 45.6	+0.9
LTK				S	Sn	17 52 56.4	+0.9
EVR	**Evrytania**	**0.78**	**349**	ePn	Pn	17 52 45.9	+1.0
EVR				eSn	Sn	17 52 57.8	+2.0
EVR	**Evrytania**	**0.78**	**349**	P	Pn	17 52 45.9	+1.0
EVR				S	Sn	17 52 57.8	+2.0
EVR	**Evrytania**	**0.78**	**349**	P	Pn	17 52 45.9	+1.0
EVR				S	Sn	17 52 57.8	+2.0
PDO	**Prodromos**	**0.78**	**305**	P	Pn	17 52 46.6	+1.7
PDO				S	Sn	17 52 58.3	+2.6
PDO				AML	AML	17 53 01.5	
PDO				AML	AML	17 53 01.6	
PDO	**Prodromos**	**0.78**	**305**	P	Pn	17 52 45.2	+0.4
PDO				S	Sn	17 52 57.5	+1.8
PDO	**Prodromos**	**0.78**	**305**	P	Pn	17 52 46.4	+1.6
PDO				S	Sn	17 52 58.2	+2.5
LOUT	**Loutraki**	**0.78**	**102**	P	Pn	17 52 44.5	-0.4
LOUT				S	Sn	17 52 56.5	+0.7
LOUT	**Loutraki**	**0.78**	**102**	P	Pn	17 52 44.5	-0.4
LOUT				S	Sn	17 52 56.5	+0.7
VLX	**Vlachokerasia**	**0.84**	**159**	P	Pn	17 52 48.0	+2.3
VLX				S	Sn	17 53 00.1	+2.9
VLX				AML	AML	17 53 08.4	
comp=E,92728μm,0.5s							
VLX				AML	AML	17 53 08.7	
VLX	**Vlachokerasia**	**0.84**	**159**	ePn	Pn	17 52 46.1	+0.5
VLX				eSn	Sn	17 52 57.6	+0.5
VLX	**Vlachokerasia**	**0.84**	**159**	P	Pn	17 52 46.1	+0.5
VLX				S	Sn	17 52 57.6	+0.5
VLX	**Vlachokerasia**	**0.84**	**159**	P	Pn	17 52 47.3	+1.7
VLX				S	Sn	17 52 59.3	+2.2
AGG	**Agios Georgios**	**0.91**	**16**	P	Pn	17 52 47.8	+1.3
AGG				S	Sn	17 53 00.7	+2.1
AGG				AML	AML	17 53 07.0	
comp=N,81553μm,0.4s							
AGG				AML	AML	17 53 07.1	
comp=E,79018μm,0.4s							
AGG	**Agios Georgios**	**0.91**	**16**	ePn	Pn	17 52 46.5	0.0
AGG	**Agios Georgios**	**0.91**	**16**	P	Pn	17 52 46.5	0.0
AGG				S	Sn	17 53 00.2	+1.5
AGG	**Agios Georgios**	**0.91**	**16**	eP	Pn	17 52 46.5	0.0
AGG	**Agios Georgios**	**0.91**	**16**	P	Pn	17 52 47.7	+1.2
AGG				S	Sn	17 53 00.4	+1.7
LKR	**Lokris**	**0.93**	**57**	P	Pn	17 52 47.5	+0.7
LKR				AML	AML	17 53 00.9	
comp=N,70042μm,0.5s							
LKR				AML	AML	17 53 01.6	
comp=E,48174μm,0.2s							
LKR	**Lokris**	**0.93**	**57**	ePn	Pn	17 52 47.2	+0.5
LKR	**Lokris**	**0.93**	**57**	P	Pn	17 52 47.2	+0.5
LKR				S	Sn	17 53 00.3	+1.2
LKR	**Lokris**	**0.93**	**57**	P	Pn	17 52 47.6	+0.9
LKR				S	Sn	17 53 00.3	+1.2
KFL	**Anninata**	**0.96**	**268**	P	Pn	17 52 48.7	+1.5
KFL				S	Sn	17 53 03.8	+4.0
KFL				AML	AML	17 53 06.3	
comp=E,73155μm,0.6s							
KFL				AML	AML	17 53 12.2	
comp=N,45304μm,0.8s							
KFL	**Anninata**	**0.96**	**268**	P	Pn	17 52 47.6	+0.4
KFL				S	Sn	17 53 01.3	+1.5
KFL	**Anninata**	**0.96**	**268**	P	Pn	17 52 48.8	+1.6
KFL				S	Sn	17 53 03.1	+3.3
ITM	**Ithomi**	**0.97**	**184**	P	Pn	17 52 50.2	+2.8
ITM				S	Sn	17 53 03.9	+3.7
ITM				AML	AML	17 53 06.5	
comp=N,30849μm,0.5s							
ITM				AML	AML	17 53 09.3	
comp=E,38926μm,0.3s							
ITM	**Ithomi**	**0.97**	**184**	ePn	Pn	17 52 48.2	+0.8
ITM	**Ithomi**	**0.97**	**184**	P	Pn	17 52 48.2	+0.8
ITM				S	Sn	17 53 00.8	+0.6
ITM	**Ithomi**	**0.97**	**184**	P	Pn	17 52 49.4	+2.0
ITM				S	Sn	17 53 03.0	+2.8
VIL2	**Platees**	**1.00**	**86**	P	Pn	17 52 48.9	+1.1
VIL2				S	Sn	17 53 03.8	+3.0
VIL2				AML	AML	17 53 06.5	
comp=N,70574μm,0.8s							
VIL2				AML	AML	17 53 07.1	
comp=E,44740μm,0.4s							
VILL	**Villia**	**1.03**	**89**	P	Pn	17 52 47.9	-0.3
VILL				S	Sn	17 53 02.8	+1.1
VILL	**Villia**	**1.03**	**89**	P	Pn	17 52 49.0	+0.8
VILL				S	Sn	17 53 03.3	+1.6
MGNA	**Meganis,,,**	**1.08**	**298**	P	Pn	17 52 50.1	+1.4
MGNA	**Meganis,,,**	**1.08**	**298**	P	Pn	17 52 50.3	+1.6
VLS	**Valsamata**	**1.11**	**272**	P	Pn	17 52 49.5	+0.2
VLS				AML	AML	17 53 09.5	
comp=N,32215μm,0.5s							
VLS				AML	AML	17 53 10.8	
comp=E,30134μm,0.5s							
VLS	**Valsamata**	**1.11**	**272**	ePn	Pn	17 52 50.1	+0.9
VLS	**Valsamata**	**1.11**	**272**	P	Pn	17 52 50.1	+0.9
VLS				S	Sn	17 53 04.9	+1.3
VLS	**Valsamata**	**1.11**	**272**	eP	Pn	17 52 50.1	+0.9
VLS	**Valsamata**	**1.11**	**272**	P	Pn	17 52 50.2	+1.0
VLS				S	Sn	17 53 04.9	+1.3
DID	**Didima**	**1.17**	**123**	P	Pn	17 52 50.2	+0.2
DID				S	Sn	17 53 06.2	+1.2
DID				AML	AML	17 53 12.6	
DID				AML	AML	17 53 13.2	
comp=E,80284μm,0.3s							
DID	**Didima**	**1.17**	**123**	ePn	Pn	17 52 49.4	-0.6
DID	**Didima**	**1.17**	**123**	P	Pn	17 52 49.4	-0.6
DID				S	Sn	17 53 06.5	+1.5
DID	**Didima**	**1.17**	**123**	P	Pn	17 52 50.6	+0.6
DID				S	Sn	17 53 06.2	+1.2

ATH AML AML 17 53 11.8
comp=N,53941µm,0.4s
ATH AML AML 17 53 11.9
comp=E,78852µm,0.3s
ATH Athens Observa 1.36 97 *e*Pn **Pn 17 52 53.7 +1.1**
ATH *e*Sn **Sn 17 53 10.3 +0.7**
ATH Athens Observa 1.36 97 P **Pn 17 52 53.7 +1.1**
ATH S **Sn 17 53 10.3 +0.7**
ATH Athens Observa 1.36 97 *e*P **Pn 17 52 53.7 +1.1**
ATH *e* 17 53 10.3
ATH Athens Observa 1.36 97 *e*Pn **Pn 17 52 53.7 +1.1**
ATH S **Sn 17 53 10.7 +1.1**
THL Klokotos Trika 1.41 0 P **Pn 17 52 55.0 +1.7**
THL Klokotos Trika 1.41 0 P **Pn 17 52 54.4 +1.2**
THL Klokotos Trika 1.41 0 P **Pn 17 52 54.8 +1.6**
DYR Agios Nikonas 1.41 169 P **Pn 17 52 54.1 +0.8**
DYR Agios Nikonas 1.41 169 P **Pn 17 52 54.1 +0.8**
ATHU Athens Univers 1.42 97 P **Pn 17 52 54.1 +0.8**
ATHU AML AML 17 53 12.9
comp=N,72622µm,0.4s
ATHU AML AML 17 53 12.9
comp=E,13365µm,0.4s
ATHU Athens Univers 1.42 97 *e*Pn **Pn 17 52 53.7 +0.3**
ATHU Athens Univers 1.42 97 P **Pn 17 52 53.7 +0.3**
ATHU S **Sn 17 53 11.4 +0.5**
ATHU Athens Univers 1.42 97 P **Pn 17 52 54.3 +0.9**
ATHU S **Sn 17 53 11.4 +0.5**
VLY Voula,Athens 1.45 101 P **Pn 17 52 54.7 +0.9**
VLY AML AML 17 53 13.3
comp=N,37894µm,0.4s
VLY AML AML 17 53 14.1
comp=E,46672µm,0.5s
VLY Voula,Athens 1.45 101 *e*Pn **Pn 17 52 53.6 -0.1**
VLY Voula,Athens 1.45 101 P **Pn 17 52 53.6 -0.1**
VLY S **Sn 17 53 12.0 +0.4**
VLY Voula,Athens 1.45 101 P **Pn 17 52 54.8 +1.1**
VLY S **Sn 17 53 12.0 +0.4**
FYTO Fytoko, Volos 1.45 30 P **Pn 17 52 54.4 +0.6**
FYTO Fytoko, Volos 1.45 30 *e*Pn **Pn 17 52 53.8 0.0**
FYTO *e*Sn **Sn 17 53 12.3 +0.6**
FYTO Fytoko, Volos 1.45 30 P **Pn 17 52 53.8 0.0**
FYTO S **Sn 17 53 12.3 +0.6**
FYTO Fytoko, Volos 1.45 30 P **Pn 17 52 54.7 +0.9**
FYTO S **Sn 17 53 12.3 +0.6**
PTL Penteli 1.47 93 P **Pn 17 52 55.1 +1.0**
PTL AML AML 17 53 14.5
comp=N,67704µm,0.6s
PTL AML AML 17 53 14.8
comp=E,84116µm,0.6s
PTL Penteli 1.47 93 *e*Pn **Pn 17 52 54.4 +0.3**
PTL Penteli 1.47 93 P **Pn 17 52 54.4 +0.3**
PTL S **Sn 17 53 12.9 +0.6**
PTL Penteli 1.47 93 P **Pn 17 52 55.2 +1.1**
PTL S **Sn 17 53 12.9 +0.6**
NEO Neokhori 1.50 39 P **Pn 17 52 55.1 +0.7**
NEO S **Sn 17 53 13.1 +0.2**
NEO AML AML 17 53 17.6
comp=E,34296µm,0.5s
NEO AML AML 17 53 18.2
comp=N,36602µm,0.4s
NEO Neokhori 1.50 39 *e*Pn **Pn 17 52 55.3 +0.9**
NEO Neokhori 1.50 39 P **Pn 17 52 55.3 +0.9**
NEO S **Sn 17 53 13.5 +0.7**
NEO Neokhori 1.50 39 P **Pn 17 52 55.4 +1.0**
NEO S **Sn 17 53 13.6 +0.7**
DION Dionisos Attik 1.52 92 P **Pn 17 52 56.0 +1.2**
DION S **Sn 17 53 14.0 +0.5**
DION AML AML 17 53 16.0
comp=N,39248µm,0.4s
DION AML AML 17 53 16.7
comp=E,83578µm,0.4s
DION Dionisos Attik 1.52 92 P **Pn 17 52 56.0 +1.2**
DION S **Sn 17 53 14.3 +0.8**
XOR Xorichti 1.53 37 *e*Pn **Pn 17 52 54.6 -0.3**
XOR *e*Sn **Sn 17 53 14.8 +1.2**
XOR Xorichti 1.53 37 P **Pn 17 52 54.6 -0.3**
XOR S **Sn 17 53 14.8 +1.2**
XOR Xorichti 1.53 37 P **Pn 17 52 54.6 -0.3**
XOR S **Sn 17 53 14.8 +1.2**
LRSO Larissa Observ 1.55 11 P **Pn 17 52 56.6 +1.5**
LRSO Larissa Observ 1.55 11 P **Pn 17 52 56.5 +1.5**
LRSO Larissa Observ 1.55 11 P **Pn 17 52 56.6 +1.5**
VLI Veliai 1.61 152 P **Pn 17 52 56.7 +0.7**
VLI S **Sn 17 53 16.2 +0.6**
VLI AML AML 17 53 21.3
comp=N,17725µm,0.7s
VLI AML AML 17 53 24.4
comp=E,16316µm,0.3s
VLI Veliai 1.61 152 *e*Pn **Pn 17 52 55.8 -0.2**
VLI Veliai 1.61 152 P **Pn 17 52 55.8 -0.2**
VLI S **Sn 17 53 17.4 +1.7**
VLI Veliai 1.61 152 P **Pn 17 52 57.1 +1.1**
VLI S **Sn 17 53 16.8 +1.1**
JAN Janina 1.75 329 P **Pn 17 53 01.2 +3.3**
JAN Janina 1.75 329 *e*Pn **Pn 17 53 00.2 +2.3**
JAN Janina 1.75 329 P **Pn 17 53 00.2 +2.3**
JAN Janina 1.75 329 *e*P **Pn 17 53 00.2 +2.3**
JAN Janina 1.75 329 P **Pn 17 53 00.2 +2.3**
KPRO Kipourio 1.87 345 P **Pn 17 53 01.9 +2.4**
KPRO Kipourio 1.87 345 P **Pn 17 53 01.9 +2.4**
IGT Igoumenitsa 1.90 317 *e*Pn **Pn 17 53 00.9 +1.0**
IGT Igoumenitsa 1.90 317 P **Pn 17 53 00.9 +1.0**
IGT Igoumenitsa 1.90 317 *e*P **Pn 17 53 00.9 +1.0**
IGT Igoumenitsa 1.90 317 P **Pn 17 53 00.9 +1.0**
KARY Karystos 1.93 93 P **Pn 17 53 01.2 +1.0**
KARY S **Sn 17 53 23.4 +0.1**
KARY Karystos 1.93 93 P **Pn 17 53 01.2 +1.0**
KARY S **Sn 17 53 23.4 +0.1**
LIT Litokhoron 1.98 11 *e*Pn **Pn 17 53 01.6 +0.5**
LIT Litokhoron 1.98 11 P **Pn 17 53 01.6 +0.5**
LIT Litokhoron 1.98 11 *e*P **Pn 17 53 01.6 +0.5**
LIT Litokhoron 1.98 11 P **Pn 17 53 01.6 +0.5**
SGD Sagiada 2.01 317 P **Pn 17 53 02.7 +1.3**
SGD Sagiada 2.01 317 P **Pn 17 53 02.7 +1.3**
KYTH Kithira 2.06 156 P **Pn 17 53 04.6 +2.4**
KYTH AML AML 17 53 40.3
comp=E,11157µm,0.5s
KYTH AML AML 17 53 44.0
comp=N,9399µm,0.6s
KYTH Kithira 2.06 156 *e*Pn **Pn 17 53 03.5 +1.4**
KYTH Kithira 2.06 156 P **Pn 17 53 03.5 +1.4**
KYTH S **Sn 17 53 26.9 +0.2**
SKY Skiros Island 2.12 69 *e*Pn **Pn 17 53 03.7 +0.7**
SKY Skiros Island 2.12 69 P **Pn 17 53 03.7 +0.7**
SKY S **Sn 17 53 28.9 +0.7**
SKY Skiros Island 2.12 69 P **Pn 17 53 03.7 +0.7**
SKY S **Sn 17 53 28.9 +0.7**
PENT Pentalofos 2.15 342 P **Pn 17 53 06.0 +2.6**
PENT Pentalofos 2.15 342 P **Pn 17 53 06.0 +2.6**
KZN Kozani 2.16 355 *e*Pn **Pn 17 53 05.5 +2.0**
KZN Kozani 2.16 355 P **Pn 17 53 05.5 +2.0**
KZN Kozani 2.16 355 P **Pn 17 53 05.5 +2.0**
KZN Kozani 2.16 355 P **Pn 17 53 05.5 +2.0**
PAIG Paliouri 2.20 36 *e*Pn **Pn 17 53 04.4 +0.4**
PAIG Paliouri 2.20 36 P **Pn 17 53 04.4 +0.4**
PAIG S **Sn 17 53 31.0 +0.9**
PAIG Paliouri 2.20 36 *e*P **Pn 17 53 04.4 +0.4**
PAIG Paliouri 2.20 36 P **Pn 17 53 04.4 +0.4**
PAIG S **Sn 17 53 31.0 +0.9**
SERI Serifos 2.21 116 P **Pn 17 53 04.9 +0.8**
SERI S **Sn 17 53 30.2 0.0**
SERI Serifos 2.21 116 P **Pn 17 53 04.9 +0.8**
SERI S **Sn 17 53 30.2 0.0**
KEK Kerkira 2.32 313 *e*Pn **Pn 17 53 06.3 +0.6**
KEK Kerkira 2.32 313 P **Pn 17 53 06.3 +0.6**
KEK Kerkira 2.32 313 P **Pn 17 53 06.3 +0.6**
NEST Nestorio 2.38 342 P **Pn 17 53 09.3 +2.8**
NEST Nestorio 2.38 342 P **Pn 17 53 09.3 +2.8**
MHLO Agia Marina, M 2.40 127 P **Pn 17 53 07.5 +0.7**
MHLO S **Sn 17 53 35.6 +0.6**
MHLO Agia Marina, M 2.40 127 P **Pn 17 53 07.5 +0.7**
MHLO S **Sn 17 53 35.6 +0.6**
PLG Polygyros 2.48 26 *e*Pn **Pn 17 53 08.0 0.0**
PLG Polygyros 2.48 26 P **Pn 17 53 08.0 0.0**
PLG Polygyros 2.48 26 *e*P **Pn 17 53 08.0 0.0**
PLG Polygyros 2.48 26 P **Pn 17 53 08.0 0.0**
ANKY Antikythira Is 2.51 155 P **Pn 17 53 08.8 +0.6**
ANKY Antikythira Is 2.51 155 *e*Pn **Pn 17 53 09.4 +1.2**
ANKY Antikythira Is 2.51 155 P **Pn 17 53 09.4 +1.2**
ANKY Antikythira Is 2.51 155 *e*Pn **Pn 17 53 09.4 +1.2**
HORT Hortiatis 2.59 19 *e*Pn **Pn 17 53 09.6 +0.2**
HORT Hortiatis 2.59 19 P **Pn 17 53 09.6 +0.2**
THE Thessaloniki 2.59 16 *e*Pn **Pn 17 53 09.5 +0.2**
THE Thessaloniki 2.59 16 P **Pn 17 53 09.5 +0.2**
THE Thessaloniki 2.59 16 *e*P **Pn 17 53 09.5 +0.2**
THE Thessaloniki 2.59 16 P **Pn 17 53 09.5 +0.2**
KBN Korca 2.64 339 *e*Pn **Pn 17 53 13.0 +2.9**
KBN Korca 2.64 339 P **Pn 17 53 13.0 +2.9**
KBN Korca 2.64 339 *i* PG Pn 17 53 00.4 -10
KBN *i* SG Sn 17 53 16.3 -25
KBN Korca 2.64 339 P **Pn 17 53 13.0 +2.9**
KBN Korca 2.64 339 *i* Pg Pn 17 53 00.4 -10
KBN Korca 2.64 339 P **Pn 17 53 13.0 +2.9**
KBN *i* Sg Sn 17 53 16.3 -25
OUR Ouranopolis 2.67 35 *e*Pn **Pn 17 53 10.9 +0.5**
OUR Ouranopolis 2.67 35 P **Pn 17 53 10.9 +0.5**
OUR S **Sn 17 53 42.7 +1.3**
OUR Ouranopolis 2.67 35 *e*P **Pn 17 53 10.9 +0.5**
OUR Ouranopolis 2.67 35 P **Pn 17 53 10.9 +0.5**
OUR S **Sn 17 53 42.7 +1.3**
FNA Florina 2.67 350 *e*Pn **Pn 17 53 12.2 +1.7**
FNA Florina 2.67 350 P **Pn 17 53 12.2 +1.7**
FNA Florina 2.67 350 *e*P **Pn 17 53 12.2 +1.7**
FNA Florina 2.67 350 P **Pn 17 53 12.2 +1.7**
GRG Griva 2.82 6 *e*Pn **Pn 17 53 13.6 +1.1**
GRG Griva 2.82 6 P **Pn 17 53 13.6 +1.1**
GRG Griva 2.82 6 *e*P **Pn 17 53 13.6 +1.1**
GRG Griva 2.82 6 P **Pn 17 53 13.6 +1.1**
SOH Sokhos 2.86 21 *e*Pn **Pn 17 53 14.2 +1.1**
SOH Sokhos 2.86 21 P **Pn 17 53 14.2 +1.1**
SOH Sokhos 2.86 21 *e*P **Pn 17 53 14.2 +1.1**
SOH Sokhos 2.86 21 P **Pn 17 53 14.2 +1.1**
BIA Bitola 2.91 350 *e*Pn **Pn 17 53 50.4 +2.8**
BIA *e*Sg **Sn 17 53 50.4 +2.8**
IOSP Ios island 2.98 118 P **Pn 17 53 15.7 +1.0**
IOSP S **Sn 17 53 49.2 0.0**
IOSP Ios island 2.98 118 P **Pn 17 53 15.7 +1.0**
IOSP S **Sn 17 53 49.2 0.0**
APE Apeiranthos 3.00 110 ⇑*i*P **Pn 17 53 16.0 +1.0**
APE Apeiranthos 3.00 110 S **Sn 17 53 49.9 +0.1**
APE Apeiranthos 3.00 110 *e*Pn **Pn 17 53 16.1 +1.0**
APE *e*Sn **Sn 17 53 49.8 0.0**
APE Apeiranthos 3.00 110 P **Pn 17 53 16.1 +1.0**
APE S **Sn 17 53 49.8 0.0**
APE Apeiranthos 3.00 110 *d i*P **Pn 17 53 16.1 +1.0**
APE Apeiranthos 3.00 110 ⇑*i*P **Pn 17 53 16.0 +1.0**
APE S **Sn 17 53 49.9 +0.1**
LIA Limnos Island 3.03 54 *e*Pn **Pn 17 53 15.8 +0.5**
LIA Limnos Island 3.03 54 P **Pn 17 53 15.8 +0.5**
LIA Limnos Island 3.03 54 P **Pn 17 53 15.8 +0.5**
KNT Kendrikon 3.08 13 *e*Pn **Pn 17 53 17.4 +1.3**
KNT Kendrikon 3.08 13 P **Pn 17 53 17.4 +1.3**
KNT Kendrikon 3.08 13 *e*P **Pn 17 53 17.4 +1.3**
KNT Kendrikon 3.08 13 P **Pn 17 53 17.4 +1.3**
CHAN Chania 3.10 147 P **Pn 17 53 17.7 +1.4**
CHAN Chania 3.10 147 P **Pn 17 53 17.7 +1.4**
OHR Ohrid 3.10 343 *e*Pn **Pn 17 53 18.9 +2.5**
IMMV Iera Moni Meta 3.12 149 P **Pn 17 53 17.4 +0.8**
IMMV Iera Moni Meta 3.12 149 P **Pn 17 53 17.4 +0.8**
SAP3 Santorini-Thir 3.17 122 P **Pn 17 53 18.7 +1.4**
SAP3 Santorini-Thir 3.17 122 P **Pn 17 53 18.7 +1.4**
THR5 Thira Island, 3.18 122 P **Pn 17 53 18.6 +1.1**
THR5 Thira Island, 3.18 122 P **Pn 17 53 18.6 +1.1**
CMBO Columbo, Santo 3.19 121 P **Pn 17 53 18.0 +0.4**
CMBO Columbo, Santo 3.19 121 P **Pn 17 53 18.0 +0.4**
VAY Valandovo 3.19 8 *e*Pn **Pn 17 53 19.2 +1.6**
VAY Valandovo 3.19 8 P **Pn 17 53 19.2 +1.6**
VAY Valandovo 3.19 8 *e*Pn **Pn 17 53 19.2 +1.6**
VAY Valandovo 3.19 8 *e*P **Pn 17 53 19.2 +1.6**
VAY Valandovo 3.19 8 P **Pn 17 53 19.2 +1.6**
SIGR SIGRI 3.19 69 *e*Pn **Pn 17 53 18.4 +0.8**
SIGR SIGRI 3.19 69 P **Pn 17 53 18.4 +0.8**
SIGR SIGRI 3.19 69 P **Pn 17 53 18.4 +0.8**
CHOS Chios island 3.20 85 *e*Pn **Pn 17 53 19.2 +1.4**
CHOS Chios island 3.20 85 P **Pn 17 53 19.2 +1.4**
CHOS Chios island 3.20 85 P **Pn 17 53 19.2 +1.4**
SRS Serrai 3.21 22 *e*Pn **Pn 17 53 18.7 +0.9**
SRS Serrai 3.21 22 P **Pn 17 53 18.7 +0.9**
SRS Serrai 3.21 22 *e*P **Pn 17 53 18.7 +0.9**
SRS Serrai 3.21 22 P **Pn 17 53 18.7 +0.9**
THR9 Santorini-Faro 3.22 123 P **Pn 17 53 19.6 +1.6**
THR9 Santorini-Faro 3.22 123 P **Pn 17 53 19.6 +1.6**
THR3 Thira Island, 3.22 122 *e*Pn **Pn 17 53 19.5 +1.5**
THR3 Thira Island, 3.22 122 P **Pn 17 53 19.5 +1.5**
THR3 Thira Island, 3.22 122 P **Pn 17 53 19.5 +1.5**
THR2 Thira island, 3.22 121 *e*Pn **Pn 17 53 19.4 +1.4**
THR2 Thira island, 3.22 121 P **Pn 17 53 19.4 +1.4**
THR2 Thira island, 3.22 121 P **Pn 17 53 19.4 +1.4**
STAX Taxiarchis Har 3.23 122 P **Pn 17 53 19.5 +1.4**
STAX Taxiarchis Har 3.23 122 P **Pn 17 53 19.5 +1.4**
SAP1 Santorini-Akro 3.25 122 P **Pn 17 53 19.8 +1.5**
SAP1 Santorini-Akro 3.25 122 P **Pn 17 53 19.8 +1.5**
THR6 Thira Island, 3.25 122 *e*Pn **Pn 17 53 19.9 +1.5**
THR6 Thira Island, 3.25 122 P **Pn 17 53 19.9 +1.5**
THR6 Thira Island, 3.25 122 P **Pn 17 53 19.9 +1.5**
VAM Vamos 3.26 147 *e*Pn **Pn 17 53 19.3 +0.8**
VAM Vamos 3.26 147 P **Pn 17 53 19.3 +0.8**
VAM Vamos 3.26 147 *e*P **Pn 17 53 19.3 +0.8**
VAM Vamos 3.26 147 P **Pn 17 53 19.3 +0.8**
KRUS Krusevo 3.26 350 *e*Pn **Pn 17 53 20.2 +1.5**
KRUS *e*Sg **Sn 17 53 58.0 +1.7**
SANT Santorini 3.28 122 ⇑*i*P **Pn 17 53 20.4 +1.5**
SANT Santorini 3.28 122 *e*Pn **Pn 17 53 20.2 +1.2**
SANT Santorini 3.28 122 P **Pn 17 53 20.2 +1.2**
SANT Santorini 3.28 122 *e*Pn **Pn 17 53 20.0 +1.2**
SANT Santorini 3.28 122 ⇑*i*P **Pn 17 53 20.4 +1.5**
SANT S **Sn 17 53 59.3 +2.6**
AMGA Amorgos Island 3.36 112 P **Pn 17 53 21.2 +1.2**
AMGA S **Sn 17 53 58.4 -0.3**
AMGA Amorgos Island 3.36 112 P **Pn 17 53 21.2 +1.2**
AMGA S **Sn 17 53 58.4 -0.3**
KAVA Kavala 3.44 34 *e*Pn **Pn 17 53 20.9 -0.1**
KAVA Kavala 3.44 34 P **Pn 17 53 20.9 -0.1**
KAVA Kavala 3.44 34 P **Pn 17 53 20.9 -0.1**
NVR Nevrokopi 3.50 24 *e*Pn **Pn 17 53 22.9 +1.0**
NVR Nevrokopi 3.50 24 P **Pn 17 53 22.9 +1.0**
NVR Nevrokopi 3.50 24 P **Pn 17 53 22.9 +1.0**
PRK Paraskevi 3.51 71 *e*Pn **Pn 17 53 22.9 +0.9**
PRK Paraskevi 3.51 71 P **Pn 17 53 22.9 +0.9**
PRK Paraskevi 3.51 71 *e*P **Pn 17 53 22.9 +0.9**
PRK Paraskevi 3.51 71 P **Pn 17 53 22.9 +0.9**
STIP Stip 3.54 2 *e*Pn **Pn 17 53 24.6 +2.2**
ZEY ˇzmir 3.55 87 *i* P **Pn 17 53 23.9 +1.5**
BOZC Bozcaada 3.58 61 *i* P **Pn 17 53 23.8 +0.9**
SMTH Samothraki Isl 3.58 49 *e*Pn **Pn 17 53 22.9 -0.1**
SMTH Samothraki Isl 3.58 49 P **Pn 17 53 22.9 -0.1**
SMTH Samothraki Isl 3.58 49 P **Pn 17 53 22.9 -0.1**
TIR Tirane 3.59 333 ⇑*i*P **Pn 17 53 24.0 +0.9**
TIR Tirane 3.59 333 *e*Pn **Pn 17 53 24.2 +1.1**
TIR Tirane 3.59 333 *e*P **Pn 17 53 24.2 +1.1**
TIR Tirane 3.59 333 ⇑*i*P **Pn 17 53 24.0 +0.9**
URLA Izmir 3.62 85 *i* P **Pn 17 53 24.3 +0.8**
URLA Izmir 3.62 85 P **Pn 17 53 24.3 +0.8**
GADA Gvkgeada 3.65 55 *e*Pn **Pn 17 53 24.6 +0.8**
GADA Gvkgeada 3.65 55 P **Pn 17 53 24.6 +0.8**
GADA Gvkgeada 3.65 55 P **Pn 17 53 24.6 +0.8**
MMB Musomiste 3.68 21 P **Pn 17 53 25.4 +1.1**
MMB Musomiste 3.68 21 P **Pn 17 53 25.4 +1.1**
IDI Anoyia 3.68 140 P **Pn 17 53 24.5 +0.1**
comp=N,7.7nm,0.3s,baz=329,slow=17,SNR=43
IDI S **Sn 17 54 05.3 -1.2**
comp=N,73nm,0.3s,baz=292,slow=20,SNR=8.8
IDI Anoyia 3.68 140 ⇑*i*P **Pn 17 53 25.8 +1.4**
IDI Anoyia 3.68 140 *e*Pn **Pn 17 53 24.6 +0.1**
IDI *e*Sn **Sn 17 54 07.4 +0.8**
IDI Anoyia 3.68 140 ⇑*i*P **Pn 17 53 25.8 +1.4**
IDI *e*Sn **Sn 17 54 07.4 +0.8**
IDI S **Sn 17 54 10.1 +3.5**
GVDS Gavdos 3.71 152 P **Pn 17 53 26.2 +1.5**
GVDS Gavdos 3.71 152 P **Pn 17 53 26.2 +1.5**
GVD Gavdhos 3.71 152 *e*Pn **Pn 17 53 26.1 +1.4**
GVD Gavdhos 3.71 152 P **Pn 17 53 26.1 +1.4**
GVD Gavdhos 3.71 152 P **Pn 17 53 26.1 +1.4**
PHP Peshkopia 3.73 342 *e*Pn **Pn 17 53 26.0 +1.0**
PHP Peshkopia 3.73 342 P **Pn 17 53 26.0 +1.0**
PHP Peshkopia 3.73 342 *e*P **Pn 17 53 26.0 +1.0**
PHP Peshkopia 3.73 342 P **Pn 17 53 26.0 +1.0**
EZN Ezine 3.76 62 *e*Pn **Pn 17 53 25.7 +0.3**
EZN Ezine 3.76 62 P **Pn 17 53 25.7 +0.3**
EZN Ezine 3.76 62 *e*P **Pn 17 53 25.7 +0.3**
EZN Ezine 3.76 62 P **Pn 17 53 25.7 +0.3**
SKO Skopje 3.84 354 *e*Pn **Pn 17 53 28.5 +2.0**
AYVA Ayvalik 3.84 71 *i* P **Pn 17 53 27.8 +1.3**
AYVA Ayvalik 3.84 71 P **Pn 17 53 27.8 +1.3**
SMG Samos 3.85 95 *e*Pn **Pn 17 53 28.0 +1.4**
SMG Samos 3.85 95 P **Pn 17 53 28.0 +1.4**
SMG Samos 3.85 95 P **Pn 17 53 28.0 +1.4**
DGB ˇzmir 3.85 90 *i* P **Pn 17 53 28.4 +1.8**
BAYC CANAKKALE_Bayr 3.88 64 *i* P **Pn 17 53 27.9 +0.9**
BAYC CANAKKALE_Bayr 3.88 64 P **Pn 17 53 27.9 +0.9**
RDO Rodhopi 4.05 41 *e*Pn **Pn 17 53 29.3 0.0**
RDO Rodhopi 4.05 41 P **Pn 17 53 29.3 0.0**
RDO Rodhopi 4.05 41 P **Pn 17 53 29.3 0.0**
LAST Lasithi 4.09 136 *e*Pn **Pn 17 53 30.8 +0.8**
LAST Lasithi 4.09 136 P **Pn 17 53 30.8 +0.8**
LAST Lasithi 4.09 136 P **Pn 17 53 30.8 +0.8**
NPS Neapolis 4.09 134 *e*Pn **Pn 17 53 31.0 +1.0**
NPS Neapolis 4.09 134 P **Pn 17 53 31.0 +1.0**
NPS Neapolis 4.09 134 *e*P **Pn 17 53 31.0 +1.0**
NPS Neapolis 4.09 134 P **Pn 17 53 31.0 +1.0**
ALN Alexandroupoli 4.16 47 *e*Pn **Pn 17 53 31.1 +0.3**
ALN Alexandroupoli 4.16 47 P **Pn 17 53 30.7 -0.1**
ALN Alexandroupoli 4.16 47 *e*P **Pn 17 53 31.1 +0.3**
ALN Alexandroupoli 4.16 47 P **Pn 17 53 30.7 -0.1**
ALN Alexandroupoli 4.16 47 *e*Pn **Pn 17 53 31.1 +0.3**
GCAM G?zelcaml? 4.16 95 *i* P **Pn 17 53 32.9 +2.0**
GCAM G?zelcaml? 4.16 95 P **Pn 17 53 32.9 +2.0**
PRZK Prizren 4.16 347 P **Pn 17 53 33.1 +2.1**
PUK Puka 4.21 338 *i* PN Pn 17 53 24.4 -7.2
PUK *i* SN Sn 17 54 02.4 -17
PUK Puka 4.21 338 *i* Pn Pn 17 53 24.4 -7.2
PUK *i* Sn Sn 17 54 02.4 -17
TIP Timpagrande 4.23 286 ⇑*i*P **Pn 17 53 31.6 -0.3**
TIP Timpagrande 4.23 286 *e*Pn **Pn 17 53 32.3 +0.4**
TIP Timpagrande 4.23 286 ⇑*i*P **Pn 17 53 31.6 -0.3**
TIP Timpagrande 4.23 286 *e*Pn **Pn 17 53 32.3 +0.4**
TIP S **Sn 17 54 18.9 -1.1**
CGL1 Ceglie Messapi 4.30 307 *i* Pn **Pn 17 53 32.5 -0.4**
BODT Bodrum 4.35 103 *e*Pn **Pn 17 53 34.5 +1.0**
BODT Bodrum 4.35 103 P **Pn 17 53 34.5 +1.0**
BODT Bodrum 4.35 103 P **Pn 17 53 34.5 +1.0**
ULC Ulcinj 4.36 332 ⇑*i*Pn **Pn 17 53 34.1 +0.5**
ULC *e*Sn **Sn 17 54 22.8 -0.2**
ULC Ulcinj 4.36 332 ⇑*i*Pn **Pn 17 53 34.1 +0.5**
ULC Ulcinj 4.36 332 P **Pn 17 53 34.8 +1.2**
ULC *e*Sn **Sn 17 54 22.8 -0.2**
TAR1 Taranto 4.36 304 *i* Pn **Pn 17 53 32.2 -1.4**
PLD Plovdiv 4.46 27 P **Pn 17 53 36.7 +1.8**
PLD Plovdiv 4.46 27 P **Pn 17 53 36.7 +1.8**
FASA Fasano 4.47 308 *i* Pn **Pn 17 53 34.6 -0.5**
KESN Edirne-Kesan 4.50 52 *i* P **Pn 17 53 37.2 +1.4**
KESN Edirne-Kesan 4.50 52 P **Pn 17 53 37.2 +1.4**
MASS Massafra 4.50 305 *i* Pn **Pn 17 53 35.2 -0.4**
VTS Vitosha 4.53 11 ⇑*i*P **Pn 17 53 38.6 +2.5**
VTS Vitosha 4.53 11 S **Sn 17 54 32.3 +4.8**
VTS Vitosha 4.53 11 *e*Pn **Pn 17 53 38.4 +2.3**
VTS Vitosha 4.53 11 *e*P **Pn 17 53 38.4 +2.3**
VTS Vitosha 4.53 11 *e*P **Pn 17 53 38.4 +2.3**
ZKR Zakros 4.55 131 *e*Pn **Pn 17 53 38.0 +1.8**
ZKR Zakros 4.55 131 P **Pn 17 53 38.0 +1.8**
ZKR Zakros 4.55 131 P **Pn 17 53 38.0 +1.8**
DRME Dracevica, Mon 4.57 333 ⇓*i*Pn **Pn 17 53 36.7 +0.2**
DRME *e*Sn **Sn 17 54 28.3 0.0**
DRME Dracevica, Mon 4.57 333 *e*Pn **Pn 17 53 36.2 -0.3**
DRME *e*Sn **Sn 17 54 28.3 0.0**
AKHS Akhisar 4.62 79 *i* P **Pn 17 53 39.5 +2.4**
AKHS Akhisar 4.62 79 P **Pn 17 53 39.5 +2.4**
STEP BALIKESIR_Sava 4.63 73 *i* P **Pn 17 53 40.2 +2.8**
STEP BALIKESIR_Sava 4.63 73 P **Pn 17 53 40.2 +2.8**
DAT Datca 4.66 106 *i* P **Pn 17 53 39.8 +2.0**
DAT Datca 4.66 106 P **Pn 17 53 39.8 +2.0**
BARS Barje 4.66 358 *e*Pn **Pn 17 53 39.1 +1.4**
AYDN Tasoluk 4.67 94 *i* P **Pn 17 53 40.1 +2.1**
AYDN Tasoluk 4.67 94 P **Pn 17 53 40.1 +2.1**
PVY Plav 4.70 341 ⇑*i*Pn **Pn 17 53 40.0 +1.6**
PVY *e*Sn **Sn 17 54 30.9 -0.8**
PVY Plav 4.70 341 ⇑*i*Pn **Pn 17 53 40.0 +1.6**
PVY *e*Sn **Sn 17 54 30.9 -0.8**
PDG Podgorica 4.76 335 ⇑*i*P **Pn 17 53 39.4 +0.3**
PDG Podgorica 4.76 335 *e*Pn **Pn 17 53 38.8 -0.3**
PDG Podgorica 4.76 335 ⇑*i*P **Pn 17 53 39.4 +0.3**
PDG *e*Sn **Sn 17 54 32.7 -0.2**
PDG S **Sn 17 54 33.6 +0.7**
TTG Podgorica 4.76 335 ⇑*i*Pn **Pn 17 53 39.4 +0.3**
TTG *e*Sn **Sn 17 54 32.7 -0.2**
TTG Podgorica 4.76 335 *e*Pn **Pn 17 53 39.0 -0.1**
TTG Podgorica 4.76 335 *e*P **Pn 17 53 39.0 -0.1**
TTG Podgorica 4.76 335 *e*P **Pn 17 53 39.0 -0.1**
BUM Brajici-Budva 4.78 331 ⇑*i*Pn **Pn 17 53 39.1 -0.3**
BUM *e*Sn **Sn 17 54 32.5 -1.0**
BUM Brajici-Budva 4.78 331 ⇑*i*Pn **Pn 17 53 39.1 -0.3**
BUM *e*Sn **Sn 17 54 32.5 -1.0**
KNL Bal¨–kesir 4.78 62 *i* P **Pn 17 53 41.0 +1.6**
MATE Matera 4.80 303 ⇓*i*P **Pn 17 53 39.2 -0.4**
MATE Matera 4.80 303 ⇓*i*P **Pn 17 53 39.2 -0.4**
MATE S **Sn 17 54 30.0 -3.9**
CEL Celeste 4.81 273 *e*Pn **Pn 17 53 38.9 -1.0**
CEL *e*Sn **Sn 17 54 31.3 -3.0**
CEL Celeste 4.81 273 *e*Pn **Pn 17 53 38.9 -1.0**
CEL *e*Sn **Sn 17 54 31.3 -3.0**
KARP Karpathos 4.89 121 *e*Pn **Pn 17 53 42.9 +2.0**
KARP Karpathos 4.89 121 P **Pn 17 53 42.9 +2.0**
KARP Karpathos 4.89 121 P **Pn 17 53 42.9 +2.0**
SG1 Sgolgore (BA) 4.92 305 *i* Pn **Pn 17 53 41.1 -0.1**
SG1 Sn **Sn 17 54 32.6 -4.2**
BAI Bari 4.93 308 *i* Pn **Pn 17 53 41.1 -0.3**
BEY Berane 4.98 342 ⇑*i*Pn **Pn 17 53 43.1 +0.9**
BEY Berane 4.98 342 P **Pn 17 53 44.0 +1.8**
BEY *e*Sn **Sn 17 54 37.8 -0.7**
IVA Berane 4.98 342 ⇑*i*Pn **Pn 17 53 43.1 +0.9**
IVA *e*Sn **Sn 17 54 37.8 -0.7**
CEME Cevo 4.98 333 ⇑*i*Pn **Pn 17 53 42.0 -0.2**
CEME *e*Sn **Sn 17 54 37.8 -0.7**
CEME Cevo 4.98 333 ⇑*i*Pn **Pn 17 53 42.0 -0.2**
CEME *e*Sn **Sn 17 54 37.8 -0.7**
HCY Herceg Novi 5.06 329 ⇑*i*Pn **Pn 17 53 42.5 -0.7**
HCY *e*Sn **Sn 17 54 37.7 -2.6**
HCY Herceg Novi 5.06 329 *e*Pn **Pn 17 53 42.0 -1.2**
HCY *e*Sn **Sn 17 54 37.7 -2.6**
KOME Kolasin 5.06 339 ⇓*i*Pn **Pn 17 53 44.1 +0.8**
KOME *e*Sn **Sn 17 54 40.0 -0.5**
KOME Kolasin 5.06 339 ⇓*i*Pn **Pn 17 53 44.1 +0.8**
KOME *e*Sn **Sn 17 54 40.0 -0.5**
YER Yerkesik 5.09 100 *e*Pn **Pn 17 53 46.5 +2.9**
YER Yerkesik 5.09 100 P **Pn 17 53 46.5 +2.9**
YER Yerkesik 5.09 100 *e*P **Pn 17 53 46.5 +2.9**
YER Yerkesik 5.09 100 P **Pn 17 53 46.5 +2.9**
CUC Castrocucco 5.15 293 *e*Pn **Pn 17 53 45.3 +0.8**
CUC Castrocucco 5.15 293 *e*Pn **Pn 17 53 45.3 +0.8**
NKME Niksic 5.16 334 ⇓*i*Pn **Pn 17 53 45.0 +0.3**
NKME *e*Sn **Sn 17 54 42.5 -0.4**
NKME Niksic 5.16 334 ⇓*i*Pn **Pn 17 53 45.0 +0.3**
NKME *e*Sn **Sn 17 54 42.5 -0.4**
MANT Manisa 5.17 84 *i* P **Pn 17 53 47.4 +2.5**
MANT Manisa 5.17 84 *e*Pn **Pn 17 53 47.1 +2.2**
MANT Manisa 5.17 84 *e*Pn **Pn 17 53 47.1 +2.2**
MANT Manisa 5.17 84 P **Pn 17 53 47.4 +2.5**

UPM eSn Sn 17 54 52.0 -1.0
UPM Unac-Piva 5.57 336 ePn Pn 17 53 51.1 +0.8
DNZL Cakiroluk 5.59 93 i P Pn 17 53 53.1 +2.5
DNZL Cakiroluk 5.59 93 P Pn 17 53 53.1 +2.5
ZAGS Zajecar 5.66 2 ePn Pn 17 53 52.9 +1.5
STON Ston 5.74 327 i Pn Pn 17 53 50.2 -2.3
STON Sn Sn 17 54 51.3 -5.7
STON Ston 5.74 327 ePn Pn 17 53 50.1 -2.4
GRUS Gruza 5.81 351 ePn Pn 17 53 54.4 +0.9
MS1 Monte Sant'Ang 5.86 309 i Pn Pn 17 53 53.9 -0.3
BBLS Lazići 6.04 342 ePn Pn 17 53 56.3 -0.3
VAE Valguarnera 6.05 266 P Pn 17 53 57.8 +1.0
comp=N,9.1nm,0.3s,baz=151,slow=7,9,SNR=7.0
VAE S Sn 17 55 03.6 -1.1
comp=N,11nm,0.3s,baz=227,slow=17,SNR=3.6
VAE LR LR 17 56 45.1
comp=N,281nm,19.8s,baz=100,slow=42
GOLH Golhisar 6.06 96 i P Pn 17 54 00.1 +3.0
GOLH Golhisar 6.06 96 P Pn 17 54 00.1 +3.0
DIVS Divibare 6.13 346 ePn Pn 17 53 57.6 -0.4
DIVS eSn Sn 17 55 02.7 -4.1
DIVS Divibare 6.13 346 ePn Pn 17 53 57.9 -0.1
DIVS eSn Sn 17 55 02.7 -4.1
HAPS Han Pijesak,BI 6.36 340 ePn Pn 17 53 59.5 -1.6
SRE Strehaia 6.57 8 ⇑i P Pn 17 54 04.9 +1.1
SRE Strehaia 6.57 8 P Pn 17 54 04.8 +1.0
SRE Strehaia 6.57 8 ⇑i P Pn 17 54 04.9 +1.1
MDVR Moldovita 6.63 358 ⇓i P Pn 17 54 07.0 +2.3
TEKS Tekeris 6.66 345 ePn Pn 17 54 04.1 -1.0
HERR Herculane 6.73 3 ⇑i P Pn 17 54 07.8 +1.7
HERR Herculane 6.73 3 S Sn 17 55 17.7 -3.6
HERR Herculane 6.73 3 ⇑i P Pn 17 54 07.8 +1.7
ISP Isparta 6.74 90 ⇑i P Pn 17 54 07.7 +1.4
ISP Isparta 6.74 90 ePn Pn 17 54 09.1 +2.8
ISP Isparta 6.74 90 Pn Pn 17 54 10.1 +3.8
ISP Isparta 6.74 90 c i P Pn 17 54 09.5 +3.2
ISP Isparta 6.74 90 ⇑i P Pn 17 54 07.7 +1.4
ISP Isparta 6.74 90 ePn Pn 17 54 09.1 +2.8
SGRR Singureni 6.76 25 ⇓i P Pn 17 54 08.4 +1.9
SGRR Singureni 6.76 25 ⇓i P Pn 17 54 08.4 +1.9
CLTB Caltabellotta 6.97 268 ePn Pn 17 54 09.9 +0.3
CLTB Caltabellotta 6.97 268 ePn Pn 17 54 09.9 +0.3
FGSL Fruska Gora 7.19 348 ePn Pn 17 54 12.7 +0.3
SULR 7.26 25 ⇑i P Pn 17 54 15.0 +1.7
SULR 7.26 25 ⇑i P Pn 17 54 15.0 +1.7
ICOR Ion Corvin 7.39 34 ⇑i P Pn 17 54 17.8 +2.7
LOT Lotru 7.41 10 ⇑i P Pn 17 54 17.2 +1.7
LOT Lotru 7.41 10 ⇑i P Pn 17 54 17.2 +1.7
LOT S Sn 17 55 37.0 -1.1
BZS Buzias 7.46 358 ⇓i P Pn 17 54 17.6 +1.5
BZS Buzias 7.46 358 S Sn 17 55 34.7 -4.6
BZS Buzias 7.46 358 ⇓i P Pn 17 54 17.6 +1.5
ARR Arges 7.47 14 ⇓i P Pn 17 54 18.5 +2.2
ARR Arges 7.47 14 ⇓i P Pn 17 54 18.5 +2.2
BLY Banja Luka 7.52 333 ⇑i P Pn 17 54 16.7 -0.1
BLY Banja Luka 7.52 333 S Sn 17 55 32.0 -8.6
BLY Banja Luka 7.52 333 ePn Pn 17 54 15.9 -1.0
BLY eSn Sn 17 55 36.3 -4.3
BLY Banja Luka 7.52 333 ePn Pn 17 54 15.7 -1.1
BLY Banja Luka 7.52 333 ⇑i P Pn 17 54 16.7 -0.1
BLY eSn Sn 17 55 36.3 -4.3
VOIR 7.62 16 ⇑i P Pn 17 54 20.7 +2.3
VOIR 7.62 16 P Pn 17 54 20.9 +2.5
VOIR 7.62 16 ⇑i P Pn 17 54 20.7 +2.3
ISR Istrita 7.75 25 ⇑i P Pn 17 54 23.0 +3.0
AQU L'Aquila 7.80 305 ePn Pn 17 54 22.0 +1.2
AQU eSn Sn 17 55 50.7 +3.0
AQU L'Aquila 7.80 305 eP Pn 17 54 22.0 +1.2
AQU e 17 55 50.7
AQU L'Aquila 7.80 305 ePn Pn 17 54 22.0 +1.2
AQU eSn Sn 17 55 50.7 +3.0
TLB Topalu 7.87 33 ⇓i P Pn 17 54 24.1 +2.5
TLB Topalu 7.87 33 S Sn 17 55 55.2 +6.0
MLR Muntele Rosu 7.90 21 P Pn 17 54 24.5 +2.3
comp=N,0.3nm,0.3s,baz=218,slow=6.4,SNR=42
MLR LR LR 17 58 20.0
comp=N,101nm,18.7s,baz=187,slow=44
MLR Muntele Rosu 7.90 21 ⇑i P Pn 17 54 24.8 +2.6
MLR Muntele Rosu 7.90 21 ePn Pn 17 54 24.3 +2.1
HARR Harsova 7.90 32 ⇓i P Pn 17 54 24.5 +2.3
HARR Harsova 7.90 32 P Pn 17 54 24.4 +2.3
HARR Harsova 7.90 32 ⇓i P Pn 17 54 24.5 +2.3
UDBI Udbina 7.91 326 i Pn Pn 17 54 22.3 0.0
UDBI Sn Sn 17 55 45.6 -4.8
TIRR Tirgusor 7.93 35 ⇑i P Pn 17 54 24.4 +1.9
TIRR Tirgusor 7.93 35 S Sn 17 55 53.3 +2.5
TIRR Tirgusor 7.93 35 ePn Pn 17 54 23.6 +1.1
TIRR Tirgusor 7.93 35 eP Pn 17 54 23.6 +1.1
TIRR Tirgusor 7.93 35 ePn Pn 17 54 23.6 +1.1
TIRR Tirgusor 7.93 35 ⇑i P Pn 17 54 24.4 +1.9
DOPR Dopca 8.20 17 ⇑i P Pn 17 54 29.4 +3.1
CFR Carcaliu 8.38 31 ⇑i P Pn 17 54 30.9 +2.2
CFR Carcaliu 8.38 31 S Sn 17 56 04.2 +2.3
CFR Carcaliu 8.38 31 P Pn 17 54 31.5 +2.8
CFR pmax pmax
comp=Z,25nm,0.9s
CFR Carcaliu 8.38 31 ⇑i P Pn 17 54 30.9 +2.2
PLOR Plostina 8.43 23 ⇑i P Pn 17 54 31.9 +2.5
PLOR Plostina 8.43 23 P Pn 17 54 31.8 +2.4
VRI Vrincioaia 8.47 23 ⇓i P Pn 17 54 32.6 +2.7
VRI Vrincioaia 8.47 23 P Pn 17 54 33.5 +3.6
VRI pmax pmax
comp=Z,776nm,0.8s
BR231 Keskin MP Arra 8.56 75 ePn Pn 17 54 35.8 +4.6
BR231 Keskin MP Arra 8.56 75 ePn Pn 17 54 35.8 +4.6
ANTO Ankara 8.57 75 ⇓i P Pn 17 54 34.3 +2.9
ANTO Ankara 8.57 75 ePn Pn 17 54 34.4 +3.0
ANTO Ankara 8.57 75 eP Pn 17 54 34.4 +3.0
ANTO Ankara 8.57 75 ePn Pn 17 54 34.4 +3.0
DRGR 8.65 3 ⇑i P Pn 17 54 33.6 +1.1
DRGR 8.65 3 P Pn 17 54 33.5 +1.1
DRGR 8.65 3 ⇑i P Pn 17 54 33.6 +1.1
TLCR 8.68 34 ⇓i P Pn 17 54 35.1 +2.4
TLCR 8.68 34 ⇓i P Pn 17 54 35.1 +2.4
TLCR S Sn 17 56 11.1 +2.0
AKMC Akamas 8.87 107 P Pn 17 54 36.5 +1.0
BOJS Bojanci 8.90 328 i Pn Pn 17 54 34.4 -1.4
BOJS eSn Sn 17 56 07.4 -7.2
BOJS Bojanci 8.90 328 i Pn Pn 17 54 34.4 -1.4
OZLJ Ozalj 8.90 329 ePn Pn 17 54 36.1 +0.3
OZLJ Sn Sn 17 56 08.2 -6.5
PPCY Paphos 8.94 108 P Pn 17 54 38.9 +2.5
ALFC Alefka 9.02 106 P Pn 17 54 39.3 +1.7
TESR Tescani 9.03 21 ⇓i P Pn 17 54 39.0 +1.4
TESR Tescani 9.03 21 ⇓i P Pn 17 54 39.0 +1.4
CRES Cresnjev 9.08 330 ePn Pn 17 54 35.9 -2.4
BEHE Becsehely 9.17 337 ePn Pn 17 54 38.7 -0.7
BR101 Keskin Array S 9.20 77 ePn Pn 17 54 43.1 +3.1
BR101 e 17 58 51.0
BR101 eScP ScP 18 04 25.1 -0.3
BR101 Keskin Array S 9.20 77 ePn Pn 17 54 43.2 +3.1
BR131 Keskin Array S 9.20 77 ePn Pn 17 54 42.9 +2.8
BR131 Keskin Array S 9.20 77 ePn Pn 17 54 42.9 +2.8
BRTR Keskin Array B 9.20 77 P Pn 17 54 43.1 +3.0
comp=Z,1.7nm,0.3s,baz=258,slow=13,SNR=62
BRTR LR LR 17 58 51.0
comp=Z,133nm,20.1s,baz=274,slow=42
BRTR ScP ScP 18 04 25.1 -0.3
comp=Z,0.1nm,0.3s,baz=180,slow=1.4,SNR=3.9
SZAC Souni 9.40 108 P Pn 17 54 42.3 -0.4
CEY Cerknica 9.45 326 ePn Pn 17 54 41.4 -1.9
ILGA Ilgaz 9.49 69 ePn Pn 17 54 47.0 +2.9
ILGA Ilgaz 9.49 69 ePn Pn 17 54 47.0 +2.9
LEOM Leova 9.51 27 ⇑i P Pn 17 54 46.6 +2.5
LJU Ljubljana 9.64 327 ePn Pn 17 54 43.7 -2.2
CSS Mathiatis 9.65 106 ePn Pn 17 54 48.1 +1.9
CSS Mathiatis 9.65 106 Pn Pn 17 54 49.0 +2.8
CSS Mathiatis 9.65 106 ePn Pn 17 54 48.1 +1.9
TRI Trieste 9.72 324 ePn Pn 17 54 45.4 -1.6
TRI eSn Sn 17 56 27.3 -7.5
TRI Trieste 9.72 324 eP Pn 17 54 45.4 -1.6
TRI e 17 56 27.3
TRI Trieste 9.72 324 ePn Pn 17 54 45.4 -1.6
TRI eSn Sn 17 56 27.3 -7.5
JAVS Javornik 9.73 325 i Pn Pn 17 54 45.2 -2.0
JAVS eSn Sn 17 56 26.9 -8.1
JAVS Javornik 9.73 325 i Pn Pn 17 54 45.2 -2.0
BURAR Bucovina Array 9.74 13 ⇑i P Pn 17 54 50.2 +2.8
BURAR Bucovina Array 9.74 13 P Pn 17 54 50.1 +2.7
BUR04 Bucovina Ar. S 9.75 13 ePn Pn 17 54 47.7 +0.2
BUR04 Bucovina Ar. S 9.75 13 ePn Pn 17 54 47.7 +0.2
BUR08 Bucovina Ar. S 9.77 13 ePn Pn 17 54 50.3 +2.5
BUR08 Bucovina Ar. S 9.77 13 ePn Pn 17 54 50.3 +2.5
PSZ Piszkesteto 9.88 352 ⇓i P Pn 17 54 50.1 +0.8
PSZ Piszkesteto 9.88 352 S Sn 17 56 34.4 -4.2
PSZ Piszkesteto 9.88 352 ePn Pn 17 54 51.0 +1.7
PSZ eSn Sn 17 56 37.5 -1.2
PSZ Piszkesteto 9.88 352 ePn Pn 17 54 50.9 +1.6
PSZ eSn Sn 17 56 34.5 -4.2
PSZ Piszkesteto 9.88 352 eP Pn 17 54 50.9 +1.6
PSZ e 17 56 34.5
PSZ Piszkesteto 9.88 352 ⇓i P Pn 17 54 50.1 +0.8
PSZ Piszkesteto 9.88 352 ePn Pn 17 54 50.9 +1.6
PSZ eSn Sn 17 56 34.5 -4.2
PERS Pernice 9.88 331 i Pn Pn 17 54 47.8 -1.5
PERS eSn Sn 17 56 31.2 -7.6
PERS Pernice 9.88 331 i Pn Pn 17 54 47.8 -1.5
SOKA Soboth 9.95 331 i Pn Pn 17 54 48.9 -1.3
comp=Z,4.5nm,0.3s,SNR=9.6
SOKA eSn Sn 17 56 32.8 -7.7
comp=Z,12nm,0.6s
SOKA Soboth 9.95 331 Pn Pn 17 54 48.9 -1.3
comp=Z,4.5nm,0.3s,SNR=9.6
TRPA Tarpa 9.98 2 ⇓i P Pn 17 54 52.5 +2.0
TRPA Tarpa 9.98 2 ⇓i P Pn 17 54 52.5 +2.0
OBKA Obir 10.00 329 i Pn Pn 17 54 50.1 -0.8
comp=Z,1.6nm,0.2s
OBKA eSn Sn 17 56 37.4 -4.4
comp=Z,54nm,0.6s
OBKA Obir 10.00 329 Pn Pn 17 54 50.1 -0.8
comp=Z,1.6nm,0.2s
MILM Milestii Mici 10.09 28 ⇑i P Pn 17 54 54.9 +2.8
ARSA Arzberg 10.26 334 ePn Pn 17 54 54.8 +0.4
comp=Z,3.4nm,0.3s
ARSA eSn Sn 17 56 42.5 -5.5
comp=Z,4.1nm,0.4s
ARSA Arzberg 10.26 334 Pn Pn 17 54 54.8 +0.4
comp=Z,3.4nm,0.3s
TAMR Tamra 10.29 268 ePn Pn 17 54 55.0 +0.2
TAMR Tamra 10.29 268 ePn Pn 17 54 55.0 +0.2
KECS Kecovo 10.38 354 eP Pn 17 55 04.3 +8.2
KEST Kesra 10.41 260 P Pn 17 54 57.7 +1.1
comp=Z,0.4nm,0.3s,baz=5.8,slow=3.3,SNR=17
KEST S Sn 17 56 47.9 -4.0
comp=Z,0.4nm,0.3s,baz=324,slow=19,SNR=3.4
KEST LR LR 17 59 37.6
comp=Z,182nm,20.8s,baz=355,slow=41
KEST Kesra 10.41 260 ePn Pn 17 54 54.0 -2.7
KEST eSn Sn 17 56 47.0 -4.9
KEST Kesra 10.41 260 ePn Pn 17 54 54.0 -2.7
KEST eSn Sn 17 56 47.0 -4.9
UZH Uzhgorod 10.48 1 eP Pn 17 55 02.3 +5.0
MYKA Terra Mystica 10.48 327 i Sn Sn 17 56 47.1 -6.3
comp=Z,4.8nm,0.3s
VYHS Vyhne 10.59 348 eP Pn 17 55 02.0 +3.1
VYHS e 17 56 49.6
VYHS Vyhne 10.59 348 ePN Pn 17 55 02.0 +3.1
VYHS eSN Sn 17 56 49.6 -6.3
VLC Villacollemand 10.61 308 ePn Pn 17 54 59.5 +0.3
VLC eSn Sn 17 56 48.5 -8.0
VLC Villacollemand 10.61 308 ePn Pn 17 54 59.5 +0.3
VLC eSn Sn 17 56 48.5 -8.0
CONA Conrad Observa 10.75 337 i Pn Pn 17 54 60.0 -1.2
comp=Z,0.3nm,0.2s
CONA eSn Sn 17 56 54.6 -5.3
comp=Z,5.4nm,0.6s
CONA Conrad Observa 10.75 337 Pn Pn 17 55 00.0 -1.2
comp=Z,0.3nm,0.2s
MODS Modra-Piesok 10.78 343 eP Pn 17 55 00.0 -1.5
MODS e 17 56 53.0
MODS Modra-Piesok 10.78 343 ePN Pn 17 55 00.0 -1.5
MODS eSN Sn 17 56 53.0 -7.6
MODS Modra-Piesok 10.78 343 eP Pn 17 55 00.0 -1.5
KBA Koelnbreinsper 10.96 327 i Pn Pn 17 55 01.6 -2.5
comp=Z,1.8nm,0.3s
KBA i Sn Sn 17 56 58.5 -6.7
comp=Z,23nm,0.7s
KBA Koelnbreinsper 10.96 327 P Pn 17 55 05.2 +1.1
KBA pmax pmax
comp=Z,13nm,0.7s
KBA Koelnbreinsper 10.96 327 Pn Pn 17 55 01.6 -2.5
comp=Z,1.8nm,0.3s
KBA Koelnbreinsper 10.96 327 P Pn 17 55 05.2 +1.1
comp=Z,13nm,0.7s
SORM Soroca 11.00 23 ⇑i P Pn 17 55 06.7 +2.3
SORM Soroca 11.00 23 P Pn 17 55 06.7 +2.3
SORM Soroca 11.00 23 P Pn 17 55 06.7 +2.3
ABTA Abfaltersbach 11.08 324 i Pn Pn 17 55 04.9 -0.8
comp=Z,4.5nm,0.3s,SNR=8.2
ABTA i Sn Sn 17 57 01.3 -6.7
comp=Z,44nm,0.7s
ABTA Abfaltersbach 11.08 324 Pn Pn 17 55 04.9 -0.8
comp=Z,4.5nm,0.3s,SNR=8.2
JAVC Velka Javorina 11.15 345 ePN Pn 17 55 07.4 +0.8
MOA Molln 11.22 332 ePn Pn 17 55 06.8 -0.7
comp=Z,2.1nm,0.2s
MOA i Sn Sn 17 57 07.5 -3.9
comp=Z,15nm,0.6s
MOA Molln 11.22 332 Pn Pn 17 55 06.8 -0.7
comp=Z,2.1nm,0.2s
SIM Simferopol' 11.33 49 P Pn 17 55 11.3 +2.3
SIM pmax pmax
comp=Z,54nm,1.0s
SIM Simferopol' 11.33 49 P Pn 17 55 11.3 +2.3
comp=Z,54nm,1.0s
NIE Niedzica 11.33 354 ePn Pn 17 55 17.6 +8.6
NIE Niedzica 11.33 354 eP Pn 17 55 17.6 +8.6
KWP Kalwaria Pacla 11.49 2 ePn Pn 17 55 17.3 +6.1
KWP Kalwaria Pacla 11.49 2 ePn Pn 17 55 14.9 +3.8
KWP Kalwaria Pacla 11.49 2 eP Pn 17 55 14.9 +3.8
KWP Kalwaria Pacla 11.49 2 ePn Pn 17 55 14.9 +3.8
LVV L'vov 11.75 6 eP Pn 17 55 23.6 +8.8
VRAC Vranov 11.81 342 ⇑i P Pn 17 55 16.2 +0.6
VRAC Vranov 11.81 342 P Pn 17 55 16.2 +0.6
VRAC Vranov 11.81 342 P Pn 17 55 16.2 +0.6
HNTI Hanita 11.85 111 Pn Pn 17 55 18.9 +2.7
WTTA Wattenberg 11.87 323 i Pn Pn 17 55 15.7 -0.8
comp=Z,12nm,0.5s,SNR=7.6
WTTA Sn Sn 17 57 19.9 -7.4
comp=Z,33nm,0.6s
WTTA Wattenberg 11.87 323 Pn Pn 17 55 15.7 -0.8
comp=Z,12nm,0.5s,SNR=7.6
OFRI 'Ofer 11.94 114 Pn Pn 17 55 20.0 +2.5
WATA Walderalm 11.95 324 i Pn Pn 17 55 17.0 -0.5
comp=Z,16nm,0.5s,SNR=19
WATA i Sn Sn 17 57 23.8 -5.5
comp=Z,18nm,0.5s
WATA Walderalm 11.95 324 Pn Pn 17 55 17.0 -0.5
comp=Z,16nm,0.5s,SNR=19
OKC Ostrava-Krasne 12.00 348 eS Sn 17 57 28.5 -1.9
OKC Ostrava-Krasne 12.00 348 S Sn 17 57 28.5 -1.9
MMA0B Mount Meron ar 12.05 111 Pn Pn 17 55 20.3 +1.3
MMAI Mount Meron Ar 12.05 111 P Pn 17 55 18.8 -0.1
comp=Z,2.3nm,0.3s,baz=305,slow=12,SNR=13
MMAI S Sn 17 57 26.9 -5.0
comp=Z,3.6nm,0.3s,baz=300,slow=23,SNR=4.1
MORC Moravsky Berou 12.05 346 ePn Pn 17 55 20.0 +1.1
MORC eSn Sn 17 57 28.4 -3.3
MORC Moravsky Berou 12.05 346 P Pn 17 55 18.3 -0.6
MORC pmax pmax
comp=Z,22nm,1.8s
MORC Moravsky Berou 12.05 346 P Pn 17 55 18.3 -0.6
comp=Z,22nm,1.8s
MORC Moravsky Berou 12.05 346 ePn Pn 17 55 20.0 +1.1
MORC eSn Sn 17 57 28.4 -3.3
FUORN Ofenpass-Fuorn 12.11 318 ePn Pn 17 55 19.8 -0.1
FUORN eSn Sn 17 57 25.8 -7.6
FUORN Ofenpass-Fuorn 12.11 318 ePn Pn 17 55 19.8 -0.1
FUORN eSn Sn 17 57 25.8 -7.6
FETA Feichten 12.14 320 i Pn Pn 17 55 20.1 -0.1
comp=Z,4.8nm,0.6s
FETA Feichten 12.14 320 Pn Pn 17 55 20.1 -0.1
comp=Z,4.8nm,0.6s
KSDI Kefar Szold 12.15 110 Pn Pn 17 55 21.2 +0.9
OJC Ojcow 12.17 353 ePn Pn 17 55 22.3 +1.9
OJC Ojcow 12.17 353 ePn Pn 17 55 22.3 +1.9
MOTA Moosalm 12.18 322 i Pn Pn 17 55 18.5 -2.2
comp=Z,12nm,0.8s,SNR=9.9
MOTA i Sn Sn 17 57 28.8 -6.1
comp=Z,25nm,0.5s
MOTA Moosalm 12.18 322 Pn Pn 17 55 18.5 -2.2
comp=Z,12nm,0.8s,SNR=9.9
SLTI Sal'it 12.18 115 Pn Pn 17 55 22.4 +1.7
GEA0 GERESS Array S 12.25 333 ePn Pn 17 55 21.3 -0.4
GEA0 GERESS Array S 12.25 333 ePn Pn 17 55 21.3 -0.4
GEC2 GERESS Array S 12.26 333 ePn Pn 17 55 22.1 +0.3
GEC2 GERESS Array S 12.26 333 ePn Pn 17 55 22.1 +0.3
GEC2 GERESS Array S 12.26 333 eP Pn 17 55 22.1 +0.3
GERES GERESS Array B 12.26 333 P Pn 17 55 21.1 -0.6
comp=Z,0.4nm,0.3s,baz=158,slow=13,SNR=12
GERES S Sn 17 57 30.4 -6.5
comp=Z,0.7nm,0.3s,baz=150,slow=22,SNR=5.0
GERES LR LR 18 01 04.6
comp=Z,160nm,21.5s,baz=145,slow=42
BRBR Barbar 12.27 108 eP Pn 17 55 20.1 -2.1
BRBR AML AML 17 55 32.6
comp=E,15nm,0.6s
BRBR eS Sn 17 57 14.7 -23
BRBR AML AML 17 57 45.2
comp=N,21nm,0.8s
MON Monaco 12.35 301 ePn Pn 17 55 24.7 +1.8
MON Monaco 12.35 301 ePn Pn 17 55 24.7 +1.8
MMLI Mount Malkishu 12.35 113 Pn Pn 17 55 24.1 +1.0
KSHT Keshet 12.37 110 Pn Pn 17 55 24.7 +1.4
SBF Sospel 12.39 302 eP Pn 17 55 25.4 +1.9
SBF pmax pmax
comp=Z,13nm,0.8s
SBF Sospel 12.39 302 eP Pn 17 55 25.4 +1.9
comp=Z,13nm,0.8s
DAVOX Davos/Dischmat 12.41 318 P Pn 17 55 24.5 +0.5
comp=Z,1.2nm,0.3s,baz=112,slow=22,SNR=7.6
DAVOX S Sn 17 57 33.7 -7.1
comp=Z,1.1nm,0.3s,baz=307,slow=22,SNR=6.7
DAVOX LR LR 18 02 57.6
comp=Z,33nm,18.7s,baz=96,slow=51
RETA Reutte 12.44 322 ePn Pn 17 55 24.3 +0.1
comp=Z,2.5nm,0.5s
RETA i Sn Sn 17 57 34.7 -6.6
comp=Z,20nm,0.6s
RETA Reutte 12.44 322 Pn Pn 17 55 24.3 +0.1
comp=Z,2.5nm,0.5s
AMAZ Amatzia 12.49 118 Pn Pn 17 55 25.9 +1.0
KRLC Kraliky 12.49 344 eP P 17 55 32.7 -2.4
KRLC Kraliky 12.49 344 eP P 17 55 32.7 -2.4
KZIT Kziot 12.51 122 Pn Pn 17 55 24.6 -0.6
TUE Stuetta 12.51 316 ePn Pn 17 55 24.7 -0.6
TUE Stuetta 12.51 316 ePn Pn 17 55 24.7 -0.6
HMDT Nahal Hemdat 12.52 114 Pn Pn 17 55 26.4 +1.0
KHC Kasperske Hory 12.54 334 eP Pn 17 55 25.7 +0.1
KHC eS Sn 17 57 38.9 -4.8
KHC AMS AMS 18 00 40.0
comp=Z,200nm,13.0s
KHC Kasperske Hory 12.54 334 ePn Pn 17 55 24.2 -1.4
KHC Kasperske Hory 12.54 334 eP Pn 17 55 25.7 +0.1
KHC eS Sn 17 57 38.9 -4.8
KHC MLR MLR
comp=Z,200nm,13.0s
KHC Kasperske Hory 12.54 334 ePn Pn 17 55 24.2 -1.4
KHC Kasperske Hory 12.54 334 eP Pn 17 55 25.7 +0.1
comp=Z,200nm,13.0s
TOTH TOTAH 12.65 108 eP Pn 17 55 26.4 -0.8
TOTH AML AML 17 55 39.0
comp=Z,16nm,0.6s
TOTH AML AML 17 58 07.2
comp=N,10nm,0.7s
YTIR Yattir 12.73 118 Pn Pn 17 55 28.7 +0.5
ISO Isola 12.77 303 P Pn 17 55 30.9 +2.2
ISO Isola 12.77 303 P Pn 17 55 30.9 +2.2
DSI Dead Sea 12.79 117 Pn Pn 17 55 30.2 +1.2
FRF La Foret Royal 12.81 300 eP Pn 17 55 30.3 +1.1
FRF pmax pmax
comp=Z,14nm,1.0s
FRF La Foret Royal 12.81 300 eP Pn 17 55 30.3 +1.1
comp=Z,14nm,1.0s
DPC Dobruska-Polom 12.85 343 eP Pn 17 55 28.9 -0.9
DPC Dobruska-Polom 12.85 343 eP Pn 17 55 28.9 -0.9
DPC Dobruska-Polom 12.85 343 eP Pn 17 55 28.9 -0.9
MZDA Masada 12.93 118 Pn Pn 17 55 31.6 +0.8
PRU Pruhonice 12.98 338 AMS AMS 18 01 40.0
comp=Z,100nm,16.1s
ZFRI Zfri 13.26 121 Pn Pn 17 55 34.4 -0.9
PRNI Paran 13.27 122 Pn Pn 17 55 34.0 -1.5
BNI Bardonecchia 13.37 306 ePn Pn 17 55 40.4 +3.4
BNI Bardonecchia 13.37 306 P P 17 55 41.2 -3.8
BNI Bardonecchia 13.37 306 ePn Pn 17 55 40.4 +3.4
BNI Bardonecchia 13.37 306 P P 17 55 41.2 -3.8
HRFI Mount Harif 13.49 123 Pn Pn 17 55 37.1 -1.5
AK11 Malin Array Si 13.52 20 ePn Pn 17 55 38.5 -0.3
AK11 Malin Array Si 13.52 20 ePn Pn 17 55 38.5 -0.3
KIEV Kiev 13.54 20 ePn Pn 17 55 38.4 -0.7
KIEV Kiev 13.54 20 ⇑eP Pn 17 55 38.8 -0.4
AKASG Malin Array Be 13.56 20 P Pn 17 55 39.6 +0.3
comp=Z,1.4nm,0.3s,baz=206,slow=12,SNR=8.5
AKASG LR LR 18 01 36.9
comp=Z,133nm,18.5s,baz=185,slow=40
AKBB Malin Array Si 13.56 20 ePn Pn 17 55 39.1 -0.2
AKBB Malin Array Si 13.56 20 eP Pn 17 55 39.1 -0.2
AKBB Malin Array Si 13.56 20 ePn Pn 17 55 39.1 -0.2
ASF Jabal al Asfar 13.56 112 P Pn 17 55 40.9 +1.3
comp=Z,0.5nm,0.3s,baz=215,slow=6.2,SNR=6.0
MBRI Mt Berech 13.56 124 Pn Pn 17 55 37.9 -1.8
SENIN Lac Senin/Sane 13.62 312 ePn Pn 17 55 40.8 +0.4
SENIN Lac Senin/Sane 13.62 312 ePn Pn 17 55 40.8 +0.4
EIL Elat 13.67 124 P Pn 17 55 40.8 -0.2
comp=Z,0.6nm,0.3s,baz=312,slow=2.1,SNR=13
EIL S Sn 17 58 03.7 -7.6
comp=Z,4.4nm,0.3s,baz=240,slow=4.7,SNR=8.1
EIL LR LR 18 02 56.7
comp=Z,25nm,18.7s,baz=278,slow=46
EIL Elat 13.67 124 Pn Pn 17 55 39.6 -1.5
GRFO Grafenberg 13.89 330 ePn Pn 17 55 44.8 +0.9
GRFO Grafenberg 13.89 330 eP Pn 17 55 44.8 +0.9
GRFO Grafenberg 13.89 330 ePn Pn 17 55 44.8 +0.9
BRG Berggiesshubel 13.95 338 eP P 17 55 52.6 +1.4
comp=Z,5.6nm,1.1s
BRG Berggiesshubel 13.95 338 eP P 17 55 52.6 +1.4
BRG pmax pmax
comp=Z,6.0nm,1.1s
BRG Berggiesshubel 13.95 338 eP P 17 55 52.6 +1.4
comp=Z,6.0nm,1.1s
STU Stuttgart 14.09 323 ePn Pn 17 55 45.6 -1.0
STU Stuttgart 14.09 323 eP Pn 17 55 45.6 -1.0
STU Stuttgart 14.09 323 ePn Pn 17 55 45.6 -1.0
SOC Sochi 14.45 62 eP P 17 55 57.3 +0.4
SOC pmax pmax
comp=Z,22nm,0.8s
SOC Sochi 14.45 62 eP P 17 55 57.3 +0.4
comp=Z,22nm,0.8s
SFNV Sufian 14.52 91 eP P 17 55 56.3 -1.5
CLL Collm 14.61 337 i (P) P 17 56 00.2 +1.6
comp=Z,11nm,1.0s
CLL Collm 14.61 337 ePn Pn 17 55 55.4 +2.0
CLL Collm 14.61 337 eP Pn 17 55 55.4 +2.0
CLL Collm 14.61 337 ePn Pn 17 55 55.3 +2.0
KBSD Kabsdagh 14.75 89 eP P 17 56 03.1 +2.8
ECH Echery 14.75 318 ePn Pn 17 55 57.4 +2.1
ECH Echery 14.75 318 eP Pn 17 55 57.4 +2.1
ECH Echery 14.75 318 eP Pn 17 55 57.4 +2.1
EMHD Djebel Mahouad 15.31 269 P P 17 56 08.0 +1.4
EMHD Djebel Mahouad 15.31 269 P P 17 56 08.0 +1.4
SUW Suwalki 15.88 3 ePn Pn 17 56 09.4 -0.4
comp=Z,48nm,0.9s
SUW Suwalki 15.88 3 eP Pn 17 56 09.4 -0.4
SUW pmax pmax
comp=Z,48nm,0.9s
SUW Suwalki 15.88 3 ePn Pn 17 56 09.4 -0.4
comp=Z,48nm,0.9s
CHVG Ch'k'valeri 15.95 67 ⇑i P P 17 56 12.9 -0.6
CHVG Ch'k'valeri 15.95 67 ⇑i P P 17 56 12.9 -0.6
WLF Walferdange 16.17 320 ePn Pn 17 56 12.5 -1.1
comp=Z,16nm,0.9s
WLF Walferdange 16.17 320 eP Pn 17 56 12.5 -1.1
WLF pmax pmax
comp=Z,16nm,0.9s
WLF Walferdange 16.17 320 ePn Pn 17 56 12.5 -1.1
comp=Z,16nm,0.9s
SSF Saint Saulge 16.24 309 eP P 17 56 17.8 +1.1
SSF Saint Saulge 16.24 309 eP P 17 56 17.8 +1.1
EBNR Beni Rached 16.41 270 P P 17 56 20.5 +1.7
EBNR Beni Rached 16.41 270 P P 17 56 20.5 +1.7
BGF Bois d'Agland 16.43 307 eP P 17 56 20.0 +1.1
BGF pmax pmax
comp=Z,31nm,0.9s
BGF Bois d'Agland 16.43 307 eP P 17 56 20.0 +1.1
comp=Z,31nm,0.9s
NEY Neytrino 16.50 66 ⇓eP P 17 56 22.6 +2.7
NEY pmax pmax
comp=Z,3.0nm,0.7s

ECHA	**Ech Chlef**	**16.57**	**269**	P	**P**	**17 56 21.8**	**+1.3**
ECHA	**Ech Chlef**	**16.57**	**269**	P	**P**	**17 56 21.8**	**+1.3**
KIV	**Kislovodsk**	**16.63**	**63**	*e*Pn	**P**	**17 56 22.2**	**+1.1**
	comp=Z,24nm,1.1s						
KIV	**Kislovodsk**	**16.63**	**63**	*e*P	**P**	**17 56 23.1**	**+2.0**
KIV				pmax	pmax		
	comp=Z,23nm,1.0s						
KIV				MLR	MLR		
	comp=Z,17nm,14.0s						
KIV	**Kislovodsk**	**16.63**	**63**	*e*Pn	**P**	**17 56 22.2**	**+1.1**
	comp=Z,24nm,1.1s						
KIV	**Kislovodsk**	**16.63**	**63**	*e*P	**P**	**17 56 23.1**	**+2.0**
	comp=Z,17nm,14.0s						
KVAR	**Kislovodsk Arr**	**16.63**	**63**	P	**P**	**17 56 22.7**	**+1.5**
	baz=243,slow=2.3,SNR=14						
KVAR				LR	LR	18 04 02.8	
	comp=Z,25nm,19.2s,baz=287,slow=42						
KBZ	**Khabaz**	**16.73**	**64**	P	**P**	**17 56 24.4**	**+2.3**
	comp=Z,0.4nm,0.3s,baz=270,slow=6.3,SNR=18						
KBZ				LR	LR	18 04 26.3	
	comp=Z,44nm,21.7s,baz=239,slow=43						
KBZ				ScP	**ScP**	**18 04 37.9**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=225,slow=7.1,SNR=3.6						
ETRT	**Tiaret**	**16.81**	**267**	P	**P**	**17 56 23.3**	**0.0**
ETRT	**Tiaret**	**16.81**	**267**	P	**P**	**17 56 23.3**	**0.0**
AKH	**Akhalkalaki**	**16.83**	**72** ⇑	*i*P	**P**	**17 56 24.7**	**+1.2**
AKH	**Akhalkalaki**	**16.83**	**72**	*e*Pn	**P**	**17 56 25.1**	**+1.6**
	comp=Z,21nm,1.1s						
AKH	**Akhalkalaki**	**16.83**	**72**	*e*P	**P**	**17 56 25.1**	**+1.6**
AKH				pmax	pmax		
	comp=Z,21nm,1.1s						
AKH	**Akhalkalaki**	**16.83**	**72**	*e*P	**P**	**17 56 25.1**	**+1.6**
	comp=Z,21nm,1.1s						
NCK	**Nalchik**	**17.18**	**65** ⇓	*e*P	**P**	**17 56 30.1**	**+3.0**
NCK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ZEI	**Tsey**	**17.28**	**68**	*e*P	**P**	**17 56 30.2**	**+1.7**
ZEI				pmax	pmax		
	comp=Z,14nm,0.6s						
ZEI	**Tsey**	**17.28**	**68**	*e*P	**P**	**17 56 30.2**	**+1.7**
	comp=Z,14nm,0.6s						
IIGN	**Ignalina**	**17.44**	**8**	*e*P	**P**	**17 56 30.1**	**+0.2**
IIGN				IAmb	IAmb	17 56 32.6	
	comp=Z,6.6nm,0.3s						
IIGN	**Ignalina**	**17.44**	**8**	*e*P	**P**	**17 56 30.1**	**+0.2**
IDID	**Didziasalis**	**17.46**	**9**	*e*P	**P**	**17 56 30.4**	**+0.2**
IDID				IAmb	IAmb	17 56 32.7	
	comp=Z,5.6nm,0.8s						
VORD	**Divnogorie**	**17.72**	**38**	*e*P	**P**	**17 56 33.5**	**+0.5**
VORD				pmax	pmax		
	comp=Z,20nm,1.1s						
VORD	**Divnogorie**	**17.72**	**38**	*e*P	**P**	**17 56 33.5**	**+0.5**
	comp=Z,20nm,1.1s						
GNI	**Garni**	**17.74**	**76**	P	**P**	**17 56 36.3**	**+2.7**
	comp=Z,1.6nm,0.3s,baz=309,slow=6.4,SNR=10						
GNI				LR	LR	18 04 07.4	
	comp=Z,92nm,21.2s,baz=265,slow=39						
GNI	**Garni**	**17.74**	**76**	*e*Pn	**P**	**17 56 35.9**	**+2.3**
	comp=Z,105nm,1.4s						
GNI				*e*		18 04 07.4	
GNI	**Garni**	**17.74**	**76**	*de*P	**P**	**17 56 36.4**	**+2.8**
GNI				pmax	pmax		
	comp=Z,291nm,1.7s						
GNI	**Garni**	**17.74**	**76**	*e*Pn	**P**	**17 56 35.9**	**+2.3**
	comp=Z,105nm,1.4s						
TBLG	**Delisi**	**17.79**	**71**	*e*Pn	**P**	**17 56 35.1**	**+1.2**
	comp=Z,11nm,0.7s						
TBLG	**Delisi**	**17.79**	**71**	*e*P	**P**	**17 56 35.1**	**+1.2**
TBLG				pmax	pmax		
	comp=Z,11nm,0.7s						
TBLG	**Delisi**	**17.79**	**71**	*e*P	**P**	**17 56 35.1**	**+1.2**
	comp=Z,11nm,0.7s						
VSR	**Storozhevoye**	**17.82**	**37**	*e*P	**Pn**	**17 56 33.7**	**-0.2**
VSR				*e*S	**Sn**	**17 59 50.5**	**-1.0**
VSR				pmax	pmax		
	comp=Z,20nm,0.8s						
VSR				smax	smax		
	comp=N,30nm,1.4s						
VSR	**Storozhevoye**	**17.82**	**37**	*e*P	**Pn**	**17 56 33.7**	**-0.2**
	comp=N,20nm,0.8s						
OBN	**Obninsk**	**19.62**	**25**	*e*P	**Pn**	**17 56 55.5**	**-0.1**
	comp=N,24nm,0.6s						
OBN	**Obninsk**	**19.62**	**25** ⇑	*e*P	**P**	**17 56 53.6**	**-0.2**
AKT	**Akhty**	**20.02**	**72**	*e*P	Pn	17 57 00.2	-0.3
AKT				*e*S	Sn	18 00 45.1	+0.2
AKT				pmax	pmax		
	comp=Z,90nm,1.4s						
AKT	**Akhty**	**20.02**	**72**	*e*P	Pn	17 57 00.2	-0.3
	comp=Z,90nm,1.4s						
ES19	**SONSECA Array**	**20.19**	**282**	*e*P	**P**	**17 57 00.1**	**-0.1**
ES19	**SONSECA Array**	**20.19**	**282**	*e*P	**P**	**17 57 00.1**	**-0.1**
ESDC	**Sonseca Array**	**20.24**	**282**	P	**P**	**17 57 01.1**	**+0.3**
	comp=Z,26nm,0.8s,baz=77,slow=11,SNR=136						
ESDC				ScP	**ScP**	**18 04 45.1**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=77,slow=2.5,SNR=4.3						
ESDC				LR	LR	18 04 58.2	
	comp=Z,38nm,18.6s,baz=300,slow=37						
ESLA	**Sonseca Array**	**20.24**	**282**	*e*P	**P**	**17 57 00.5**	**-0.3**
	comp=Z,32nm,0.8s						
ESLA	**Sonseca Array**	**20.24**	**282**	*e*P	**P**	**17 57 00.5**	**-0.3**
	comp=Z,32nm,0.8s						
MOS	**Moscow**	**20.49**	**26**	*e*P	**P**	**17 57 01.9**	**-1.3**
PAB	**San Pablo**	**20.55**	**282**	*e*P	**P**	**17 57 03.9**	**-0.3**
	comp=Z,38nm,1.0s						
PAB	**San Pablo**	**20.55**	**282**	*e*P	**P**	**17 57 03.9**	**-0.3**
PAB				pmax	pmax		
	comp=Z,38nm,1.0s						
PAB	**San Pablo**	**20.55**	**282**	*e*P	**P**	**17 57 03.8**	**-0.3**
	comp=Z,38nm,1.0s						
VSU	**Vasula**	**20.56**	**7**	*c i*P	**P**	**17 57 04.0**	**+0.1**
VSU				pmax	pmax		
	comp=Z,185nm,0.8s						
TAM	**Tamanrasset**	**20.83**	**227**	*e*P	Pn	17 57 09.0	-1.4
	comp=Z,24nm,1.2s						
TAM	**Tamanrasset**	**20.83**	**227**	*e*P	Pn	17 57 09.0	-1.3
TAM				pmax	pmax		
	comp=Z,24nm,1.2s						
TAM	**Tamanrasset**	**20.83**	**227**	*e*P	Pn	17 57 09.0	-1.3
	comp=Z,24nm,1.2s						
PBRG	**Braganca**	**22.28**	**288**	*e*P	**P**	**17 57 21.8**	**-0.9**
	comp=Z,13nm,2.3s						
PBRG	**Braganca**	**22.28**	**288**	*e*P	**P**	**17 57 21.8**	**-0.9**
MDT	**Midelt**	**22.28**	**264**	P	**P**	**17 57 22.6**	**-0.3**
	comp=Z,9.8nm,0.8s,baz=86,slow=10,SNR=10						
MVO	**Moncorvo**	**22.51**	**287**	*e*P	**P**	**17 57 23.5**	**-1.6**
	comp=Z,27nm,2.0s						
MVO	**Moncorvo**	**22.51**	**287**	*e*P	**P**	**17 57 23.5**	**-1.6**
HFS	**Hagfors**	**22.63**	**349**	P	**P**	**17 57 25.4**	**-0.7**
	comp=Z,11nm,0.5s,baz=146,slow=13,SNR=32						
HFS				LR	LR	18 07 05.7	
	comp=Z,50nm,21.5s,baz=172,slow=39						
HFS	**Hagfors**	**22.63**	**349**	P	**P**	**17 57 25.4**	**-0.7**
HFS				pmax	pmax		
	comp=Z,6.0nm,0.4s						
HFS				MLR	MLR		
	comp=Z,50nm,21.5s						
PBAR	**Barrancos**	**22.80**	**279**	*e*P	**P**	**17 57 26.4**	**-1.7**
	comp=Z,43nm,1.2s						
PBAR	**Barrancos**	**22.80**	**279**	*e*P	**P**	**17 57 26.4**	**-1.7**
PMRV	**Marv??o**	**22.91**	**282**	*e*P	**P**	**17 57 27.9**	**-1.4**
	comp=Z,22nm,1.5s						
PMRV	**Marv??o**	**22.91**	**282**	*e*P	**P**	**17 57 27.9**	**-1.4**
PCBR	**Castelo Branco**	**22.93**	**283**	*e*P	**P**	**17 57 28.9**	**-0.6**
	comp=Z,13nm,1.6s						
PCBR	**Castelo Branco**	**22.93**	**283**	*e*P	**P**	**17 57 28.9**	**-0.6**
MTE	**Manteigas**	**22.94**	**285**	*e*P	**P**	**17 57 29.6**	**0.0**
	comp=Z,30nm,1.3s						
MTE	**Manteigas**	**22.94**	**285**	*e*P	**P**	**17 57 29.0**	**-0.6**
	comp=Z,29nm,1.3s						
MTE	**Manteigas**	**22.94**	**285**	*e*P	**P**	**17 57 29.0**	**-0.6**
	comp=Z,29nm,1.3s						
PVRL	**Vila Real**	**23.02**	**287**	*e*P	**P**	**17 57 31.0**	**+0.5**
	comp=Z,23nm,1.5s						
PVRL	**Vila Real**	**23.02**	**287**	*e*P	**P**	**17 57 31.0**	**+0.5**
POLO	**Lamas de Olo**	**23.08**	**287**	*e*P	**P**	**17 57 29.8**	**-1.3**
	comp=Z,12nm,1.6s						
POLO	**Lamas de Olo**	**23.08**	**287**	*e*P	**P**	**17 57 29.8**	**-1.3**
PESTR	**Estremoz**	**23.13**	**281**	*e*P	**P**	**17 57 30.2**	**-1.3**
	comp=Z,17nm,1.3s						
PESTR	**Estremoz**	**23.13**	**281**	*e*P	**P**	**17 57 29.0**	**-2.5**
	comp=Z,7.1nm,1.1s						
PESTR	**Estremoz**	**23.13**	**281**	*e*P	**P**	**17 57 30.2**	**-1.3**
PVIS	**Viseu**	**23.18**	**286**	*e*P	**P**	**17 57 31.4**	**-0.7**
	comp=Z,22nm,1.6s						
PVIS	**Viseu**	**23.18**	**286**	*e*P	**P**	**17 57 31.4**	**-0.7**
FIA0	**FINESS Array S**	**23.45**	**5**	*e*P	**P**	**17 57 32.6**	**-1.8**
FIA0				*e*PcP	**PcP**	**18 01 19.0**	**+0.2**
FIA0				*e*ScP	**ScP**	**18 04 51.5**	**-0.9**
FIA0				*e*		18 07 35.4	
FIA0	**FINESS Array S**	**23.45**	**5**	*e*P	**P**	**17 57 32.6**	**-1.8**
FIA0				*e*		18 01 19.0	
FINES	**FINESS Array B**	**23.45**	**5**	P	**P**	**17 57 32.6**	**-1.8**
	comp=Z,2.8nm,0.4s,baz=174,slow=11,SNR=29						
FINES				PcP	**PcP**	**18 01 19.0**	**+0.2**
	comp=Z,1.9nm,0.6s,baz=194,slow=5.7,SNR=3.7						
FINES				ScP	**ScP**	**18 04 51.5**	**-0.9**
	comp=Z,0.9nm,0.6s,baz=202,slow=0.7,SNR=3.7						
FINES				LR	LR	18 07 35.4	
	comp=Z,94nm,20.5s,baz=198,slow=39						
FIA1	**FINESS Array S**	**23.45**	**5**	*e*P	**P**	**17 57 33.0**	**-1.3**
PBEJ	**Beja**	**23.47**	**279**	*e*P	**P**	**17 57 33.1**	**-1.6**
	comp=Z,23nm,1.9s						
PBEJ	**Beja**	**23.47**	**279**	*e*P	**P**	**17 57 33.1**	**-1.6**
NC602	**NORSAR Array S**	**23.55**	**347**	*e*P	**P**	**17 57 34.8**	**-0.4**
PMTG	**Montargil**	**23.59**	**282**	*e*P	**P**	**17 57 35.4**	**-0.5**
	comp=Z,12nm,1.8s						
PMTG	**Montargil**	**23.59**	**282**	*e*P	**P**	**17 57 35.4**	**-0.5**
PBDV	**Barranco-do-Ve**	**23.66**	**277**	*e*P	**P**	**17 57 36.4**	**-0.2**
	comp=Z,41nm,1.1s						
PBDV	**Barranco-do-Ve**	**23.66**	**277**	*e*P	**P**	**17 57 36.4**	**-0.2**
PTOM	**Tomar**	**23.67**	**283**	*e*P	**P**	**17 57 37.3**	**+0.7**
	comp=Z,29nm,0.9s						
PTOM	**Tomar**	**23.67**	**283**	*e*P	**P**	**17 57 37.3**	**+0.7**
NAO01	**NORSAR Array S**	**23.77**	**346**	*e*P	**P**	**17 57 36.9**	**-0.4**
MESJ	**Messejana**	**23.77**	**279**	*e*P	**P**	**17 57 37.6**	**0.0**
MESJ	**Messejana**	**23.77**	**279**	*e*P	**P**	**17 57 36.4**	**-1.2**
	comp=Z,21nm,1.4s						
MESJ	**Messejana**	**23.77**	**279**	*e*P	**P**	**17 57 36.4**	**-1.2**
ALMR	**Almeirim**	**23.85**	**282**	*e*P	**P**	**17 57 38.3**	**0.0**
ALMR				AMb	AMB	17 57 41.4	
	comp=Z,43nm,0.8s						
ALMR	**Almeirim**	**23.85**	**282**	*e*P	**P**	**17 57 38.7**	**+0.4**
	comp=Z,41nm,0.8s						
ALMR	**Almeirim**	**23.85**	**282**	*e*P	**P**	**17 57 38.7**	**+0.4**
NC405	**NORSAR Array S**	**23.87**	**348**	*e*P	**P**	**17 57 36.7**	**-1.5**
NB201	**NORSAR Array S**	**23.88**	**347**	*e*P	**P**	**17 57 36.8**	**-1.6**
NB2	**NORSAR Subarra**	**23.89**	**347**	P	**P**	**17 57 37.9**	**-0.6**
	comp=Z,2.6nm,0.5s,baz=152,slow=9.3						
NOA	**NORSAR Array B**	**23.89**	**347**	LR	LR	18 09 08.7	
	comp=Z,34nm,19.6s,baz=155,slow=42						
NBO00	**NORSAR Array S**	**23.96**	**347**	*e*P	**P**	**17 57 38.9**	**-0.2**
PNCL	**Nicolau / Gran**	**23.97**	**279**	*e*P	**P**	**17 57 40.2**	**+0.8**
	comp=Z,34nm,1.5s						
PNCL	**Nicolau / Gran**	**23.97**	**279**	*e*P	**P**	**17 57 40.2**	**+0.8**
NC303	**NORSAR Array S**	**24.04**	**347**	*e*P	**P**	**17 57 39.6**	**-0.2**
EKA	**Eskdalemuir Ar**	**24.13**	**324**	P	**P**	**17 57 41.0**	**+0.3**
	comp=Z,13nm,0.5s,baz=130,slow=10.0,SNR=76						
ESK	**Eskdalemuir**	**24.14**	**323**	*e*P	**P**	**17 57 40.9**	**+0.1**
	comp=Z,53nm,1.2s						
ESK	**Eskdalemuir**	**24.14**	**323**	*e*P	**P**	**17 57 40.9**	**+0.1**
ESK				pmax	pmax		
	comp=Z,53nm,1.2s						
NC204	**NORSAR Array S**	**24.19**	**347**	*e*P	**P**	**17 57 41.1**	**-0.1**
PFVI	**Vila Bisbo**	**24.38**	**277**	*e*P	**P**	**17 57 42.7**	**-0.4**
	comp=Z,93nm,1.4s						
PFVI	**Vila Bisbo**	**24.38**	**277**	*e*P	**P**	**17 57 42.7**	**-0.4**
	comp=Z,93nm,1.4s						
DSB	**Dublin**	**24.69**	**317**	*e*P	**P**	**17 57 46.5**	**+0.7**
	comp=Z,171nm,1.9s						
RAYN	**Ar Rayn**	**24.80**	**119**	*e*P	**P**	**17 57 48.9**	**+1.8**
	comp=Z,8.5nm,1.1s						
RAYN	**Ar Rayn**	**24.80**	**119**	*e*P	**P**	**17 57 48.9**	**+1.8**
	comp=Z,8.5nm,1.1s						
KLMR	**Klimovskoe**	**25.25**	**20**	*e*P	**P**	**17 57 49.4**	**-1.3**
KLMR				pmax	pmax		
	comp=Z,45nm,1.1s						
KLMR	**Klimovskoe**	**25.25**	**20**	*e*P	**P**	**17 57 49.4**	**-1.3**
KLMR				AMP		17 57 56.3	
	comp=Z,45nm,1.1s						
PRGR	**Permogore**	**27.69**	**24**	*e*P	**P**	**17 58 12.0**	**-0.8**
PRGR				pmax	pmax		
	comp=Z,13nm,0.6s						
AKTO	**Aktyubinsk**	**28.27**	**53**	P	**P**	**17 58 17.9**	**-0.1**
	comp=Z,3.7nm,0.4s,baz=213,slow=2.9,SNR=16						
AKTO				LR	LR	18 11 47.9	
	comp=Z,32nm,20.9s,baz=261,slow=41						
AKTO	**Aktyubinsk**	**28.27**	**53**	P	**P**	**17 58 18.0**	**-0.1**
AKTO				pmax	pmax		
	comp=Z,4.0nm,0.4s						
AKTO				MLR	MLR		
	comp=Z,32nm,20.9s						
GEYT	**Alibeck**	**28.33**	**79**	P	**P**	**17 58 20.5**	**+1.6**
	comp=Z,68nm,0.7s,baz=297,slow=7.4,SNR=4.0						
GEYT				LR	LR	18 10 13.5	
	comp=Z,28nm,21.6s,baz=210,slow=38						
GYA0B	**ALIBECK ARRAY**	**28.33**	**79**	*e*P	**P**	**17 58 18.9**	**+0.1**
	comp=Z,8.8nm,0.8s						
GYA0B	**ALIBECK ARRAY**	**28.33**	**79**	*e*P	**P**	**17 58 18.9**	**+0.1**
	comp=Z,8.8nm,0.8s						
AB31	**Akbulak array**	**29.29**	**55**	*i* P	**P**	**17 58 26.8**	**-0.4**
AB31				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ABKAR	**Akbulak array**	**29.29**	**55**	*e*P	**P**	**17 58 26.8**	**-0.3**
APA	**Apatity**	**30.16**	**9** ⇑	*i*P	**P**	**17 58 34.6**	**0.0**
APA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
APA				pmax	pmax		
	comp=Z,100nm,11.0s						
ARU	**Arti**	**30.31**	**41**	P	**P**	**17 58 32.1**	**-3.9**
	comp=Z,2.4nm,0.5s,baz=287,slow=19,SNR=3.5						
ARU	**Arti**	**30.31**	**41**	*e*P	**P**	**17 58 34.9**	**-1.2**
	comp=Z,9.5nm,0.4s						
ARU	**Arti**	**30.31**	**41**	*c i*P	**P**	**17 58 35.4**	**-0.6**
ARU				*PP	**pP**	**17 58 49.2**	**-0.2**
ARU						17 59 35.2	
ARU						18 01 30.9	
ARU				S	**S**	**18 03 34.2**	**+2.0**
ARU				SS	**SnSn**	**18 05 10.5**	**-0.1**
ARU				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TOA1	**Torodi Ar. Sit**	**30.76**	**221**	*e*P	**P**	**17 58 40.7**	**+0.3**
TOA1				*e*		18 12 14.6	
TOA0	**Torodi Ar. Sit**	**30.76**	**221**	*e*P	**P**	**17 58 40.3**	**-0.1**
TORD	**Torodi Ar. Bea**	**30.76**	**221**	P	**P**	**17 58 40.7**	**+0.2**
	comp=Z,25nm,0.6s,baz=34,slow=9.3,SNR=170						
TORD				LR	LR	18 12 14.6	
	comp=Z,65nm,20.4s,baz=65,slow=38						
ARA0	**ARCESS Array S**	**31.50**	**2**	*e*P	**P**	**17 58 45.9**	**-0.6**
ARA0				*e*ScP	**ScP**	**18 05 15.6**	**-1.2**
ARA0				*e*		18 12 34.2	
ARCES	**ARCESS Array B**	**31.50**	**2**	P	**P**	**17 58 45.9**	**-0.6**
	comp=Z,2.4nm,0.7s,baz=186,slow=9.3,SNR=16						
ARCES				ScP	**ScP**	**18 05 15.6**	**-1.2**
	comp=Z,1.6nm,0.8s,baz=180,slow=1.2,SNR=4.0						
ARCES				LR	LR	18 12 34.2	
	comp=Z,50nm,19.1s,baz=225,slow=38						
ARCES	**ARCESS Array B**	**31.50**	**2**	*e*P	**P**	**17 58 46.0**	**-0.4**
SVE	**Sverdlovsk**	**31.52**	**41** ⇑	*e*P	**P**	**17 58 47.4**	**+0.7**
SVE				pmax	pmax		
	comp=Z,32nm,0.9s						
UOSS	**Minazif**	**31.80**	**104**	*e*P	**P**	**17 58 49.0**	**-0.5**
	comp=Z,5.6nm,0.6s						
UOSS	**Minazif**	**31.80**	**104**	*e*P	**P**	**17 58 49.0**	**-0.5**
	comp=Z,5.6nm,0.6s						
KOWA	**Kowa**	**32.94**	**231**	P	**P**	**17 59 00.0**	**+0.5**
	comp=Z,13nm,0.6s,baz=31,slow=10,SNR=27						
KOWA				LR	LR	18 13 35.1	
	comp=Z,117nm,19.0s,baz=36,slow=38						
KOWA	**Kowa**	**32.94**	**231**	*e*P	**P**	**17 58 59.5**	**0.0**
	comp=Z,12nm,0.7s						
KOWA				*e*		18 13 35.1	
WSAR	**Wadi Sarin**	**34.58**	**105**	P	**P**	**17 59 15.0**	**+1.2**
	comp=Z,4.8nm,0.8s,baz=262,slow=6.4,SNR=5.9						
WSAR	**Wadi Sarin**	**34.58**	**105**	*e*P	**P**	**17 59 15.0**	**+1.2**
BRVK	**Borovoye**	**36.18**	**50**	*e*P	**P**	**17 59 27.6**	**+0.4**
	comp=Z,14nm,0.9s						
BRVK	**Borovoye**	**36.18**	**50**	*c i*P	**P**	**17 59 27.7**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,14nm,0.8s						
BVA0	**Borovoye Array**	**36.24**	**50**	*i* P	**P**	**17 59 27.7**	**0.0**
BVA0				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BVAR	**Borovoye Array**	**36.24**	**50**	P	**P**	**17 59 28.6**	**+0.9**
	comp=Z,6.4nm,0.6s,baz=266,slow=5.9,SNR=51						
BORG	**Borgarnes**	**36.70**	**330**	LR	LR	18 15 12.6	
	comp=Z,35nm,19.1s,baz=170,slow=37						
KK31	**Karatay Array**	**36.74**	**67**	*e*P	**P**	**17 59 32.4**	**+0.3**
KK31	**Karatay Array**	**36.74**	**67**	*e*P	**P**	**17 59 32.4**	**+0.3**
KKAR	**Karatay Array**	**36.74**	**67**	*e*P	**P**	**17 59 32.4**	**+0.3**
KKAR	**Karatay Array**	**36.74**	**67**	*e*P	**P**	**17 59 32.4**	**+0.3**
OTUK	**Ortayu**	**37.45**	**58**	P	**P**	**17 59 38.1**	**0.0**
OTUK				pmax	pmax		
	comp=Z,19nm,1.4s						
MNAS	**Manas**	**38.29**	**67**	P	**P**	**17 59 45.0**	**-0.4**
MNAS				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MBAR	**Mbarara**	**39.40**	**166**	*e*P	**P**	**17 59 55.2**	**+0.3**
	comp=Z,5.6nm,1.0s						
MBAR	**Mbarara**	**39.40**	**166**	*e*P	**P**	**17 59 55.2**	**+0.3**
MBAR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SFK	**Sufi-Kurgan**	**39.56**	**71**	P	**P**	**17 59 57.2**	**+1.0**
SFK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
DBIC	**Dimbokro**	**39.68**	**225**	P	**P**	**17 59 57.4**	**+0.4**
	comp=Z,11nm,0.3s,baz=21,slow=8.7,SNR=52						
DBIC				LR	LR	18 17 11.0	
	comp=Z,36nm,19.8s,baz=42,slow=37						
DBIC	**Dimbokro**	**39.68**	**225**	*e*P	**P**	**17 59 56.7**	**-0.3**
	comp=Z,95nm,1.8s						
DBIC				*e*		18 17 11.0	
DBIC	**Dimbokro**	**39.68**	**225**	*e*P	**P**	**17 59 56.7**	**-0.3**
DBIC				pmax	pmax		
	comp=Z,95nm,1.8s						
AAK	**Ala-Archa**	**39.70**	**66**	*e*P	**P**	**17 59 57.0**	**-0.2**
	comp=Z,22nm,1.4s						
AAK	**Ala-Archa**	**39.70**	**66**	*e*P	**P**	**17 59 57.0**	**-0.2**
AAK				pmax	pmax		
	comp=Z,22nm,1.4s						
FRU	**Bishkek**	**39.75**	**66**	*e*P	**P**	**18 00 01.0**	**+3.6**
FRU				pmax	pmax		
	comp=Z,50nm,1.7s						
TIC	**Toumodi**	**39.79**	**225**	*e*P	**P**	**17 59 57.8**	**-0.2**
KIC	**Kosan Boka**	**39.87**	**224**	*e*P	**P**	**17 59 58.8**	**+0.1**
	comp=Z,15nm,0.3s						
LIC	**Lamto**	**40.14**	**224**	*e*P	**P**	**18 00 01.1**	**+0.2**
	comp=Z,96nm,0.3s						
SPA0	**Spitsbergen Ar**	**40.20**	**358**	*e*P	**P**	**18 00 01.5**	**+0.7**
SPA0				*e*		18 18 03.0	
SPITS	**Spitsbergen Ar**	**40.20**	**358**	P	**P**	**18 00 01.5**	**+0.7**
	comp=Z,0.8nm,0.3s,baz=154,slow=10,SNR=9.6						
SPITS				LR	LR	18 18 03.0	
	comp=Z,42nm,20.6s,baz=275,slow=38						
NRN	**Naryn**	**41.06**	**68**	*e*P	**P**	**18 00 06.3**	**-2.3**
	comp=Z,19nm,1.3s						
NRN	**Naryn**	**41.06**	**68**	*e*P	**P**	**18 00 06.3**	**-2.3**
NRN				pmax	pmax		
	comp=Z,19nm,1.3s						
KBS	**Kingsbay**	**41.09**	**357**	*e*P	**P**	**18 00 06.9**	**-1.1**
	comp=Z,20nm,1.1s						
KBS	**Kingsbay**	**41.09**	**357**	*e*P	**P**	**18 00 06.9**	**-1.1**
KBS				pmax	pmax		
	comp=Z,20nm,1.1s						
KURBB	**Kurchatov Arra**	**41.30**	**54**	P	**P**	**18 00 10.5**	**+0.4**
	comp=Z,25nm,0.6s,baz=281,slow=8.7,SNR=182						
NIL	**Nilore**	**41.33**	**80**	*e*P	**P**	**18 00 09.7**	**-0.9**
	comp=Z,12nm,1.4s						
NIL	**Nilore**	**41.33**	**80**	*e*P	**P**	**18 00 09.7**	**-0.9**
NIL				pmax	pmax		
	comp=Z,12nm,1.4s						
NIL	**Nilore**	**41.33**	**80**	*e*P	**P**	**18 00 09.7**	**-0.9**
	comp=Z,12nm,1.4s						
KURK	**Kurchatov**	**41.35**	**53**	*e*P	**P**	**18 00 10.2**	**-0.3**
	comp=Z,21nm,0.8s						
KURK	**Kurchatov**	**41.35**	**53**	P	**P**	**18 00 10.5**	**0.0**
KURK				pmax	pmax		
	comp=Z,25nm,0.6s						
KSH	**Kashi**	**41.53**	**71**	P	**P**	**18 00 12.1**	**-0.2**
KSH				pP	pP	18 00 24.0	-2.0
KSH				PP	**PP**	**18 01 50.4**	**+1.5**
KSH				S	**S**	**18 06 21.0**	**-3.4**
KSH				sS	sS	18 06 42.3	-5.2
KSH				SS	**SS**	**18 09 24.0**	**-6.4**
KSH				pmax	pmax		
	comp=Z,120nm,4.5s						
KSH				LR	LR		
	comp=Z,160nm,4.6s						
KSH				LR	LR		
	comp=Z,150nm,4.7s						
TARG	**Taragay, Kyrgy**	**42.30**	**67**	*e*P	**P**	**18 00 22.0**	**+3.1**
	comp=Z,6.0nm,0.9s						
PDGK	**Podgornoye**	**43.13**	**64**	P	**P**	**18 00 25.5**	**+0.3**
PDGK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NVS	**Novosibirsk**	**43.84**	**47**	*e*P	**P**	**18 00 31.5**	**+0.9**
NVS				*e*		18 00 43.1	
NVS				*e*S	**S**	**18 06 57.2**	**

ZAK	**Zakamensk**	**56.69**	**49**	*e*P	**P**	**18 02 06.7**	**-1.3**
ZAK				pmax	pmax		
comp=Z,4.0nm,1.1s							
FRB	**Frobisher Bay**	**56.79**	**328**	P	**P**	**18 02 08.9**	**+0.6**
comp=Z,6.9nm,0.5s,baz=74,slow=7.4,SNR=9.8							
TSUM	**Tsumeb**	**57.20**	**185**	*e*P	**P**	**18 02 11.9**	**+0.1**
comp=Z,9.7nm,1.4s							
GTA	**Gaotai**	**58.80**	**62**	*e*P	**P**	**18 02 22.8**	**-0.2**
GTA				pP	pP	18 02 35.3	-2.1
GTA				sP	sP	18 02 41.0	-2.3
GTA				pmax	pmax		
comp=Z,2.0nm,0.7s							
TIXI	**Tiksi**	**59.27**	**21**	*e*P	**P**	**18 02 24.7**	**-0.8**
comp=Z,4.9nm,1.4s							
TIXI	**Tiksi**	**59.27**	**21**	*e*P	**P**	**18 02 24.7**	**-0.8**
TIXI				pmax	pmax		
comp=Z,5.0nm,1.4s							
SCHQ	**Schefferville**	**59.27**	**318**	P	**P**	**18 02 26.1**	**+0.2**
comp=Z,3.4nm,0.3s,baz=63,slow=7.4,SNR=3.6							
SCHQ	**Schefferville**	**59.27**	**318**	*e*P	**P**	**18 02 25.8**	**-0.1**
comp=Z,7.5nm,0.6s							
SHL	**Shillong**	**59.40**	**80**	*e*P	**P**	**18 02 27.0**	**-0.4**
comp=Z,9.3nm,0.4s							
SHL	**Shillong**	**59.40**	**80**	*e*P	**P**	**18 02 27.0**	**-0.4**
SHL				pmax	pmax		
comp=Z,9.0nm,0.4s							
SHL	**Shillong**	**59.40**	**80**	*e*P	**P**	**18 02 27.0**	**-0.4**
comp=Z,9.3nm,0.4s							
SONA0	**Songino Array**	**59.57**	**51**	*e*P	**P**	**18 02 28.5**	**+0.3**
SONA1	**Songino Array**	**59.57**	**51**	*e*P	**P**	**18 02 27.7**	**-0.4**
SONM	**Songino Array**	**59.57**	**51**	P	**P**	**18 02 28.5**	**+0.3**
comp=Z,4.7nm,0.6s,baz=275,slow=7.8,SNR=14							
BOD	**Bodaibo**	**59.67**	**38**	*e*P	**P**	**18 02 27.4**	**-1.1**
BOD				pmax	pmax		
comp=Z,7.0nm,0.8s							
ULN	**Ulaanbaatar**	**59.96**	**51**	*e*P	**P**	**18 02 30.1**	**-0.7**
comp=Z,6.0nm,0.7s							
ULN	**Ulaanbaatar**	**59.96**	**51⇓**	*e*P	**P**	**18 02 30.9**	**0.0**
ULN				pmax	pmax		
comp=Z,5.0nm,0.6s							
RES	**Resolute Bay**	**60.11**	**344**	P	**P**	**18 02 30.9**	**-0.4**
comp=Z,0.9nm,0.6s,baz=73,slow=11,SNR=3.3							
RES	**Resolute Bay**	**60.11**	**344**	*e*P	**P**	**18 02 31.2**	**-0.1**
comp=Z,10nm,1.6s							
RES	**Resolute Bay**	**60.11**	**344**	*e*P	**P**	**18 02 31.2**	**-0.1**
RES				pmax	pmax		
comp=Z,10.0nm,1.6s							
OPO	**Ambohidratompo**	**61.18**	**153**	P	**P**	**18 02 40.8**	**+1.4**
comp=Z,6.2nm,0.8s,baz=337,slow=5.7,SNR=8.1							
ABPO	**Ambohimpanom**	**61.61**	**153**	*e*P	**P**	**18 02 43.5**	**+1.2**
comp=Z,37nm,1.8s							
ABPO	**Ambohimpanom**	**61.61**	**153**	*e*P	**P**	**18 02 43.5**	**+1.2**
ABPO				pmax	pmax		
comp=Z,37nm,1.8s							
LBTB	**Lobatse**	**62.92**	**176**	*e*P	**P**	**18 02 51.0**	**+0.1**
comp=Z,25nm,1.5s							
LBTB	**Lobatse**	**62.92**	**176**	*e*P	**P**	**18 02 51.0**	**+0.1**
LBTB				pmax	pmax		
comp=Z,25nm,1.5s							
LZH	**Lanzhou**	**63.17**	**64**	*e*P	**P**	**18 02 54.8**	**+2.1**
LZH				pP	pP	18 03 07.0	-0.2
LZH				sP	sP	18 03 11.3	-1.8
LZH				*e*PP	**PP**	**18 05 12.3**	**+0.5**
LZH				pmax	pmax		
comp=Z,19nm,1.0s							
LZH				pmax	pmax		
comp=Z,130nm,4.9s							
LZH				LR	LR		
comp=Z,140nm,14.6s							
LZH				LR	LR		
comp=Z,260nm,16.5s							
LZH				LR	LR		
comp=Z,270nm,17.4s							
EMMW	**East Machias**	**64.11**	**308**	*e*P	**P**	**18 02 58.5**	**0.0**
comp=Z,24nm,1.1s							
YAK	**Yakutsk**	**64.55**	**30**	*e*P	**P**	**18 03 00.2**	**-0.9**
comp=Z,11nm,0.7s							
YAK	**Yakutsk**	**64.55**	**30⇑**	*e*P	**P**	**18 03 00.2**	**-0.9**
YAK				pmax	pmax		
comp=Z,5.0nm,0.6s							
PKME	**Peaks-Kenny Pk**	**64.98**	**309**	P	**P**	**18 03 03.7**	**-0.5**
baz=60							
PKME	**Peaks-Kenny Pk**	**64.98**	**309**	*e*P	**P**	**18 03 04.8**	**+0.6**
comp=Z,53nm,1.8s							
CD2	**Chengdu**	**65.69**	**69**	P	**P**	**18 03 08.1**	**-1.0**
CD2				pmax	pmax		
comp=Z,20nm,0.7s							
HHC	**Hu-ho-hao-te**	**66.08**	**56**	*e*P	**P**	**18 03 13.4**	**+1.8**
HHC				PP	**PP**	**18 05 41.1**	**+4.0**
HHC				S	**S**	**18 11 55.8**	**-0.2**
HHC				SS	**SS**	**18 16 11.9**	**+0.3**
HHC				pmax	pmax		
comp=Z,12nm,1.1s							
HHC				pmax	pmax		
comp=Z,88nm,5.4s							
HHC				LR	LR		
comp=Z,180nm,14.3s							
HHC				LR	LR		
comp=Z,220nm,15.9s							
HHC				LR	LR		
comp=Z,280nm,15.3s							
BOSA	**Boshof**	**66.49**	**177**	P	**P**	**18 03 14.6**	**+0.6**
comp=Z,1.9nm,0.5s,baz=356,slow=6.6,SNR=9.1							
BOSA				LR	LR	18 33 10.2	
comp=Z,35nm,18.0s,baz=26,slow=37							
BOSA	**Boshof**	**66.49**	**177**	*e*P	**P**	**18 03 14.5**	**+0.4**
comp=Z,89nm,2.0s							
LBNH	**Lisbon**	**67.11**	**309**	P	**P**	**18 03 17.7**	**-0.3**
baz=58							
LBNH	**Lisbon**	**67.11**	**309**	*e*P	**P**	**18 03 19.6**	**+1.7**
comp=Z,18nm,1.5s							
LBNH	**Lisbon**	**67.11**	**309**	*e*P	**P**	**18 03 19.6**	**+1.7**
LBNH				pmax	pmax		
comp=Z,18nm,1.5s							
TRQ	**Mont Tremblant**	**67.65**	**312**	*e*P	**P**	**18 03 22.5**	**+1.1**
KMI	**Kunming**	**67.99**	**75**	P	P	18 03 29.8	+5.8
KMI				pP	pP	18 03 36.9	-1.8
KMI				pmax	pmax		
comp=Z,5.0nm,1.4s							
LONY	**Lake Ozonia**	**68.53**	**310**	P	**P**	**18 03 27.2**	**+0.3**
baz=57							
CM31	**Chiang Mai Arr**	**68.73**	**83**	*e*P	**P**	**18 03 27.4**	**-1.1**
CMAR	**Chiang Mai Arr**	**68.73**	**83**	P	**P**	**18 03 27.5**	**-1.0**
comp=Z,1.2nm,0.7s,baz=299,slow=6.8,SNR=8.8							
PLVO	**Plevna**	**69.78**	**312**	*e*P	**P**	**18 03 36.0**	**+1.4**
comp=Z,14nm,0.9s							
GYA	**Guiyang**	**70.22**	**72**	*e*P	**P**	**18 03 38.3**	**+0.6**
GYA				pmax	pmax		
comp=Z,10.0nm,1.0s							
BINY	**Binghamton**	**70.71**	**309**	P	**P**	**18 03 40.7**	**+0.4**
baz=56							
BILL	**Bilibino**	**70.77**	**13**	*e*P	**P**	**18 03 38.4**	**-1.8**
BILL				*e*		18 03 58.7	
BILL				*e*		18 06 18.0	
BILL				pmax	pmax		
comp=Z,1.0nm,0.5s							
SADO	**Sadowa**	**71.14**	**312**	P	**P**	**18 03 44.2**	**+1.4**
comp=Z,4.2nm,0.5s,baz=67,slow=4.6,SNR=7.3							
SADO	**Sadowa**	**71.14**	**312**	*e*P	**P**	**18 03 43.1**	**+0.2**
comp=Z,10.0nm,1.3s							
N59A	**State Game Lan**	**71.30**	**308**	P	**P**	**18 03 44.3**	**+0.3**
baz=56							
N59A	**State Game Lan**	**71.30**	**308**	*e*P	**P**	**18 03 45.0**	**+1.0**
comp=Z,8.3nm,0.9s							
SEY	**Seymchan**	**71.74**	**22⇓**	*e*P	**P**	**18 03 46.4**	**+0.3**
INK	**Inuvik**	**72.28**	**351**	P	**P**	**18 03 49.8**	**+0.5**
comp=Z,0.8nm,0.5s,baz=331,slow=1.9,SNR=4.8							
INK	**Inuvik**	**72.28**	**351**	*e*P	**P**	**18 03 49.4**	**+0.1**
comp=Z,2.7nm,0.8s							
SSPA	**Standing Stone**	**72.78**	**308**	P	**P**	**18 03 53.1**	**+0.4**
baz=54							
SSPA	**Standing Stone**	**72.78**	**308**	*e*P	**P**	**18 03 53.0**	**+0.2**
comp=Z,10nm,1.0s							
ERPA	**Erie**	**73.19**	**311**	P	**P**	**18 03 56.0**	**+0.8**
baz=54							
M54A	**Oil Creek Stat**	**73.36**	**310**	P	**P**	**18 03 57.3**	**+1.1**
baz=54							
O56A	**Blue Knob Stat**	**73.42**	**308**	P	**P**	**18 03 57.7**	**+1.1**
baz=54							
YKA	**Yellowknife Ar**	**73.81**	**341**	P	**P**	**18 03 59.0**	**+0.6**
comp=Z,0.8nm,0.8s,baz=46,slow=6.2,SNR=4.2							
E44A	**Grand Marais A**	**73.83**	**317**	P	**P**	**18 03 60.0**	**+1.1**
baz=51							
MA2	**Magadan**	**73.84**	**24**	*i* P	**P**	**18 03 59.1**	**+0.4**
MA2				pmax	pmax		
comp=Z,6.0nm,0.7s							
CBN	**Corbin Frederi**	**73.88**	**306**	P	**P**	**18 03 60.0**	**+0.7**
baz=54							
N54A	**Moraine State**	**73.88**	**310**	P	**P**	**18 04 00.2**	**+1.0**
baz=53							
F45A	**CMU Biological**	**74.19**	**316**	P	**P**	**18 04 01.7**	**+0.8**
baz=51							
F44A	**Big Bay de Noc**	**74.51**	**317**	P	**P**	**18 04 03.2**	**+0.4**
baz=51							
E43A	**Lone Tree Farm**	**74.56**	**317**	P	**P**	**18 04 03.8**	**+0.7**
baz=51							
MCWV	**Mont Chateau**	**74.57**	**308**	P	**P**	**18 04 04.3**	**+1.0**
baz=53							
C40A	**Isle Royale Na**	**74.70**	**319**	P	**P**	**18 04 04.6**	**+0.7**
baz=50							
D41A	**Chassel**	**74.95**	**318**	P	**P**	**18 04 06.3**	**+1.0**
baz=50							
F43A	**Flat Rock, Esc**	**75.00**	**317**	P	**P**	**18 04 05.8**	**+0.2**
baz=50							
E42A	**Champion**	**75.02**	**318**	P	**P**	**18 04 05.9**	**+0.1**
baz=50							
C39A	**Grand Marais**	**75.27**	**320**	P	**P**	**18 04 07.5**	**+0.3**
baz=49							
E41A	**Kenton**	**75.55**	**318**	P	**P**	**18 04 09.0**	**+0.2**
baz=49							
G43A	**Wallace**	**75.65**	**317**	P	**P**	**18 04 10.2**	**+0.8**
baz=50							
NJ2	**Nanjing**	**75.82**	**60**	*e*P	**P**	**18 04 10.0**	**-0.5**
NJ2				pmax	pmax		
comp=Z,11nm,0.5s							
EYMN	**Ely**	**75.87**	**321**	P	**P**	**18 04 11.1**	**+0.5**
baz=48							
N50A	**Nevada**	**75.89**	**311**	P	**P**	**18 04 11.5**	**+0.6**
baz=52							
C38A	**Sawbill Land.**	**75.91**	**320**	P	**P**	**18 04 10.8**	**-0.1**
baz=48							
E40A	**Wakefield**	**76.05**	**319**	P	**P**	**18 04 12.8**	**+1.1**
baz=49							
G42A	**Mountain**	**76.06**	**317**	P	**P**	**18 04 12.7**	**+1.0**
baz=50							
G42A	**Mountain**	**76.06**	**317**	*e*P	**P**	**18 04 13.0**	**+1.3**
comp=Z,7.5nm,0.8s							
F41A	**Three Lakes**	**76.09**	**318**	P	**P**	**18 04 12.5**	**+0.6**
baz=49							
ACSO	**Alum Creek Sta**	**76.13**	**310**	P	**P**	**18 04 13.1**	**+0.8**
baz=52							
H43A	**Windswept, Lux**	**76.20**	**316**	P	**P**	**18 04 13.7**	**+1.2**
baz=50							
BLA	**Blacksburg**	**76.41**	**307**	P	**P**	**18 04 14.6**	**+0.7**
baz=52							
ULM	**Lac du Bonnet**	**76.41**	**324**	P	**P**	**18 04 14.4**	**+0.8**
comp=Z,3.1nm,0.4s,baz=49,slow=9.1,SNR=3.7							
E39A	**Mellen**	**76.44**	**319**	P	**P**	**18 04 14.8**	**+0.9**
baz=48							
USRK	**Ussuriysk Ar.**	**76.49**	**44**	P	**P**	**18 04 14.6**	**+0.4**
comp=Z,2.8nm,0.5s,baz=291,slow=7.8,SNR=6.7							
F40A	**Park Falls**	**76.51**	**318**	P	**P**	**18 04 14.3**	**0.0**
baz=49							
EGAK	**Eagle**	**76.55**	**353**	*e*P	**P**	**18 04 16.1**	**+1.9**
comp=Z,5.5nm,1.4s							
O50A	**Cable**	**76.56**	**311**	P	**P**	**18 04 14.7**	**0.0**
baz=51							
C36A	**Pine Crest Far**	**76.67**	**321**	P	**P**	**18 04 15.0**	**-0.2**
baz=47							
B35A	**Bob, Littlefor**	**76.69**	**322**	P	**P**	**18 04 15.6**	**+0.3**
baz=47							
I43A	**Langenfeld Bro**	**76.78**	**316**	P	**P**	**18 04 16.8**	**+1.0**
baz=49							
F39A	**Loretta**	**76.93**	**319**	P	**P**	**18 04 17.2**	**+0.5**
baz=48							
G40A	**Rib Lake**	**76.98**	**318**	P	**P**	**18 04 17.8**	**+0.8**
baz=48							
P50A	**Jamestown**	**77.01**	**310**	P	**P**	**18 04 17.6**	**+0.4**
baz=51							
IL1	**Eleon Array**	**77.04**	**355**	*e*P	**P**	**18 04 17.2**	**+0.3**
ILAR	**Eielson Array**	**77.04**	**355**	P	**P**	**18 04 18.1**	**+1.1**
comp=Z,0.6nm,0.6s,baz=1.1,slow=3.7,SNR=6.3							
ILB	**Eielson Array**	**77.04**	**355**	*e*P	**P**	**18 04 17.1**	**+0.1**
B34A	**Aery, Baudette**	**77.06**	**322**	P	**P**	**18 04 18.0**	**+0.7**
baz=46,SNR=5.9							
DAWY	**Dawson**	**77.06**	**352**	*e*P	**P**	**18 04 18.1**	**+1.0**
comp=Z,4.1nm,0.8s							
A33A	**Warroad**	**77.10**	**323**	P	**P**	**18 04 17.7**	**+0.2**
baz=46							
MTP	**Monte Pirata**	**77.18**	**283**	*e*P	**P**	**18 04 19.7**	**+1.2**
comp=Z,45nm,1.1s							
I42A	**Draeger Farm,**	**77.20**	**316**	P	**P**	**18 04 19.0**	**+0.8**
baz=49							
D36A	**Goodland**	**77.23**	**321**	P	**P**	**18 04 18.7**	**+0.4**
baz=47							
J43A	**Natural Harves**	**77.26**	**316**	P	**P**	**18 04 19.0**	**+0.5**
baz=49							
F38A	**Pierce - Schro**	**77.40**	**319**	P	**P**	**18 04 19.9**	**+0.6**
baz=48							
WRH	**Wood River Hil**	**77.41**	**356**	*e*P	**P**	**18 04 20.2**	**+1.3**
comp=Z,4.1nm,0.8s							
G39A	**Holcombe**	**77.48**	**318**	P	**P**	**18 04 20.1**	**+0.3**
baz=48							
H40A	**Chili**	**77.52**	**317**	P	**P**	**18 04 20.6**	**+0.6**
baz=48							
J42A	**Columbus**	**77.69**	**316**	P	**P**	**18 04 21.8**	**+0.8**
baz=49							
E36A	**McGregor**	**77.72**	**320**	P	**P**	**18 04 21.5**	**+0.5**
baz=47							
AGMN	**Agassiz Nation**	**77.77**	**323**	P	**P**	**18 04 21.5**	**+0.2**
baz=45							
S52A	**Salyersville**	**77.78**	**308**	P	**P**	**18 04 22.1**	**+0.5**
baz=51							
G38A	**Ridgeland**	**77.92**	**319**	P	**P**	**18 04 22.6**	**+0.4**
baz=47							
N46A	**Monticello**	**77.92**	**313**	P	**P**	**18 04 22.2**	**0.0**
baz=50							
PSI	**Prapat**	**77.99**	**96**	P	**P**	**18 04 23.1**	**0.0**
comp=Z,3.3nm,0.4s,baz=0.2,slow=10,SNR=3.7							
PSI				LR	LR	18 41 26.1	
comp=Z,37nm,20.3s,baz=92,slow=38							
PSI	**Prapat**	**77.99**	**96**	*e*P	**P**	**18 04 21.1**	**-2.1**
comp=Z,49nm,0.7s							
S51A	**Beattyville**	**78.12**	**309**	P	**P**	**18 04 23.5**	**+0.1**
baz=51							
J41A	**Loganville**	**78.15**	**316**	P	**P**	**18 04 23.8**	**+0.3**
baz=48							
KMSC	**Kings Mountain**	**78.26**	**305**	P	**P**	**18 04 24.2**	**-0.1**
baz=52							
E35A	**Pequot Lakes**	**78.27**	**321**	P	**P**	**18 04 24.7**	**+0.6**
baz=46							
U53A	**Fall Branch**	**78.29**	**307**	P	**P**	**18 04 24.9**	**+0.5**
baz=51							
F36A	**Milaca**	**78.31**	**320**	P	**P**	**18 04 24.6**	**+0.3**
baz=46							
M44A	**Midewin, Midew**	**78.35**	**314**	P	**P**	**18 04 24.9**	**+0.2**
baz=49							
N45A	**Kentland**	**78.40**	**313**	P	**P**	**18 04 25.1**	**+0.2**
baz=49							
KS01	**Wonju Array Si**	**78.41**	**51**	*e*P	**P**	**18 04 24.0**	**-1.0**
KS15	**Wonju Array Si**	**78.42**	**51**	*e*P	**P**	**18 04 24.4**	**-0.7**
KSAR	**Wonju Array Be**	**78.42**	**51**	P	**P**	**18 04 24.8**	**-0.3**
KSAR	**Wonju Array Be**	**78.42**	**51**	P	**P**	**18 04 24.8**	**-0.3**
KSRS	**Korea Array**	**78.44**	**51**	P	**P**	**18 04 24.8**	**-0.4**
comp=Z,1.4nm,0.5s,baz=311,slow=4.5,SNR=16							
KSRS				LR	LR	18 44 24.8	
comp=Z,18nm,18.9s,baz=300,slow=40							
SFIN	**Lafayette**	**78.47**	**313**	P	**P**	**18 04 25.6**	**+0.3**
baz=49							
J40A	**Soldiers Grove**	**78.52**	**317**	P	**P**	**18 04 26.0**	**+0.4**
baz=48							
P47A	**Martinsville**	**78.56**	**311**	P	**P**	**18 04 25.9**	**+0.1**
baz=50							
JFWS	**Jewell Farm**	**78.58**	**316**	P	**P**	**18 04 26.2**	**+0.3**
baz=48							
I39A	**Houston**	**78.63**	**317**	P	**P**	**18 04 26.5**	**+0.3**
baz=47							
CAST	**Castle Rocks**	**78.66**	**357**	*e*P	**P**	**18 04 25.4**	**-0.6**
comp=Z,3.6nm,0.7s							
TZTN	**Tazewell**	**78.78**	**308**	P	**P**	**18 04 27.8**	**+0.7**
baz=51							
G36A	**St. Michael**	**78.86**	**320**	P	**P**	**18 04 27.8**	**+0.5**
baz=46							
L42A	**Oliver, Polo**	**78.86**	**315**	P	**P**	**18 04 27.8**	**+0.3**
baz=48							
V53A	**Saluda**	**78.87**	**307**	P	**P**	**18 04 28.0**	**+0.3**
baz=51							
O45A	**Potomac**	**78.92**	**313**	P	**P**	**18 04 27.8**	**0.0**
baz=49							
C31A	**Landman Farms,**	**79.01**	**323**	P	**P**	**18 04 28.0**	**-0.2**
baz=44							
R48A	**Northridge Ran**	**79.02**	**310**	P	**P**	**18 04 29.1**	**+0.7**
baz=50							
P46A	**Rosedale**	**79.03**	**312**	P	**P**	**18 04 28.7**	**+0.4**
baz=49							
J39A	**Decorah**	**79.08**	**317**	P	**P**	**18 04 28.6**	**0.0**
baz=47							
K40A	**Colesburg**	**79.21**	**316**	P	**P**	**18 04 29.5**	**+0.2**
baz=48							
V52A	**Sevierville**	**79.26**	**307**	P	**P**	**18 04 30.3**	**+0.5**
baz=50							
L41A	**Preston**	**79.28**	**316**	P	**P**	**18 04 30.1**	**+0.5**
baz=48							
T50A	**Nancy**	**79.28**	**309**	P	**P**	**18 04 30.3**	**+0.5**
baz=50							
WCI	**Wyandotte Cave**	**79.39**	**310**	P	**P**	**18 04 30.8**	**+0.4**
baz=50							
P45A	**Graceland, Par**	**79.40**	**312**	P	**P**	**18 04 30.5**	**+0.1**
baz=49							
W53A	**Cullowhee**	**79.41**	**306**	P	**P**	**18 04 31.0**	**+0.2**
baz=51							
R47A	**Wooly Knot Far**	**79.48**	**311**	P	**P**	**18 04 31.4**	**+0.5**
baz=49							
TKL	**Tuckaleechee C**	**79.49**	**307**	P	**P**	**18 04 32.0**	**+1.1**
comp=Z,4.2nm,0.8s,baz=88,slow=6.2,SNR=5.2							
TKL	**Tuckaleechee C**	**79.49**	**307**	*e*P	**P**	**18 04 31.1**	**+0.1**
comp=Z,22nm,1.5s							
J38A	**Wedel Dairy, R**	**79.50**	**318**	P	**P**	**18 04 31.1**	**+0.2**
baz=47							
I37A	**Lemond, Waseca**	**79.52**	**318**	P	**P**	**18 04 31.6**	**+0.6**
baz=46							
K39A	**Oelwein**	**79.61**	**317**	P	**P**	**18 04 32.0**	**+0.5**
baz=47							
S48A	**Wiedeman Farm,**	**79.61**	**310**	P	**P**	**18 04 32.0**	**+0.4**
baz=50							
T49A	**Edmonton**	**79.65**	**309**	P	**P**	**18 04 32.5**	**+0.6**
baz=50							
L40A	**Anamosa**	**79.68**	**316**	P	**P**	**18 04 32.3**	**+0.4**
baz=47,SNR=5.6							
V51A	**Loudon**	**79.75**	**308**	P	**P**	**18 04 32.7**	**+0.2**
baz=50							
H35A	**Sunnyside Ranc**	**79.78**	**320**	P	**P**	**18 04 32.7**	**+0.3**
baz=46							
O43A	**Sugar Creek Fa**	**79.81**	**314**	P	**P**	**18 04 33.0**	**+0.4**
baz=48							
I36A	**Fitzsimmons Fa**	**79.83**	**319**	P	**P**	**18 04 32.9**	**+0.2**
baz=46							
N42A	**Yates City**	**79.85**	**314**	P	**P**	**18 04 33.0**	**+0.2**
baz=48							
X53A	**Estanollee**	**79.92**	**306**	P	**P**	**18 04 33.6**	**+0.2**
baz=50							
Y54A	**Tignall**	**79.93**	**305**	P	**P**	**18 04 34.3**	**+0.9**
baz=51							
P44A	**Sand Creek, Wi**	**79.95**	**313**	P	**P**	**18 04 33.8**	**+0.4**
baz=48							
Q45A	**Warren Harvey,**	**80.06**	**312**	P	**P**	**18 04 34.2**	**+0.3**
baz=49							
L39A	**Vinton**	**80.07**	**316**	P	**P**	**18 04 34.0**	**0.0**
baz=47							
J37A	**Redenius Farm,**	**80.08**	**318**	P	**P**	**18 04 34.7**	**+0.6**
baz=46							
YSS	**Yuzh-Sakhalins**	**80.09**	**37**	*e*P	**P**	**18 04 35.9**	**+1.9**
T48A	**Bowling Green**	**80.17**	**310**	P	**P**	**18 04 35.7**	**+1.1**
baz=49,SNR=9.0							
U49A	**Red Boiling Sp**	**80.18**	**309**	P	**P**	**18 04 35.5**	**+0.8**
baz=50,SNR=7.0							
X52A	**Dahlonega**	**80.23**	**306**	P	**P**	**18 04 36.0**	**+1.0**
baz=50							
G33A	**Ortonville**	**80.24**	**321**	P	**P**	**18 04 35.3**	**+0.5**
baz=45							
V50A	**Pikevile**	**80.31**	**308**	P	**P**	**18 04 36.3**	**+0.9**
baz=50,SNR=10							
P43A	**Skaggs, Pawnee**	**80.35**	**313**	P	**P**	**18 04 36.1**	**+0.5**
baz=48							
N41A	**Harden Midland**	**80.39**	**315**	P	**P**	**18 04 36.2**	**+0.4**
baz=47							
Z54A	**Sparta**	**80.43**	**305**	P	**P**	**18 04 37.1**	**+1.1**
baz=50							
J36A	**Seneca 1, Swea**	**80.48**	**318**	P	**P**	**18 04 37.0**	**+0.8**
baz=46							
K37A	**Belmond**	**80.50**	**318**	P	**P**	**18 04 36.6**	**+0.3**
baz=46							
Y53A	**Monroe**	**80.51**	**306**	P	**P**	**18 04 37.1**	**+0.6**
baz=50,SNR=5.1							
R45A	**Skylar, Fairfi**	**80.53**	**312**	P	**P**	**18 04 36.9**	**+0.4**
baz=48							
L38A	**Oak Wood Farm,**	**80.57**	**317**	P	**P**	**18 04 36.8**	**+0.1**
baz=46,SNR=5.9							
M39A	**Webster**	**80.60**	**316**	P	**P**	**18 04 37.1**	**+0.2**
baz=47							
U48A	**Cassie Pea, Po**	**80.65**	**309**	P	**P**	**18 04 38.0**	**+0.8**
baz=49,SNR=6.7							
N40A	**Mertquake, Sal**	**80.68**	**315**	P	**P**	**18 04 37.7**	**+0.4**
baz=47							
T47A	**Sharon Grove**	**80.68**	**310**	P	**P**	**18 04 37.8**	**+0.4**
baz=49							
GOGA	**Godfrey**	**80.72**	**305**	P	**P**	**18 04 38.1**	**+0.4**
baz=50							
G32A	**Webster**	**80.72**	**321**	P	**P**	**18 04 38.0**	**+0.5**
baz=44							
W50A	**Signal Mountai**	**80.74**	**308**	P	**P**	**18 04 39.0**	**+1.2**
baz=50,SNR=7.0							
V49A	**McMinnville**	**80.74**	**308**	P	**P**	**18 04 38.4**	**+0.6**
baz=49							
O41A	**Passleys Farm,**	**80.81**	**314**	P	**P**	**18 04 38.2**	**+0.2**
baz=47							
Y52A	**Lilburn**	**80.81**	**306**	P	**P**	**18 04 39.0**	**+0.9**
baz=50							
P42A	**Winchester**	**80.86**	**314**	P	**P**	**18 04 38.8**	**+0.5**
baz=48							
X51A	**Calhoun**	**80.87**	**307**	P	**P**	**18 04 38.9**	**+0.4**
baz=50							
Z53A	**Monticello**	**80.87**	**305**	P	**P**	**18 04 38.7**	**+0.3**
baz=50							
K36A	**Gilmore City**	**81.02**	**318**	P	**P**	**18 04 39.3**	**+0.1**
baz=46							
T46A	**Princeton**	**81.12**	**310**	P	**P**	**18 04 39.8**	**+0.1**
baz=48							
U47A	**Clarksville**	**81.15**	**310**	P	**P**	**18 04 40.2**	**+0.4**
baz=49							
N39A	**Derby Farms, D**	**81.19**	**316**	P	**P**	**18 04 40.5**	**+0.4**
baz=46							
N39A	**Derby Farms, D**	**81.19**	**316**	*e*P	**P**	**18 04 40.3**	**+0.2**
comp=Z,8.4nm,0.9s							
M38A	**Pleasantville**	**81.20**	**316**	P	**P**	**18 04 40.4**	**+0.4**
baz=46							
V48A	**Smith Brothers**	**81.33**	**309**	P	**P**	**18 04 41.2**	**

S43A	Fulton Ridge,	82.06 312	P		P	18 04 45.0 +0.3
baz=47						
V46A	Holladay	82.08 310	P		P	18 04 44.7 0.0
baz=48,SNR=7.4						
ASAJ	Asahikawa	82.08 39	P		P	18 04 44.4 -0.3
comp=Z,1.6nm,0.5s,baz=337,slow=7.7,SNR=5.7						
ASAJ	Asahikawa	82.08 39	*eP*		P	18 04 45.0 +0.3
comp=Z,30nm,1.7s						
556A	Lake Butler	82.19 302	P		P	18 04 45.8 +0.3
baz=50						
Q40A	Laux Farm, Aux	82.25 314	P		P	18 04 46.3 +0.6
baz=46						
O38A	Galt	82.25 316	P		P	18 04 46.3 +0.6
baz=46						
P39B	Salisbury	82.29 315	P		P	18 04 46.3 +0.5
baz=46						
Y49A	Blount Mountai	82.30 307	P		P	18 04 46.8 +0.8
baz=49						
X48A	Hartselle	82.31 308	P		P	18 04 46.5 +0.5
baz=49,SNR=5.6						
X48A	Hartselle	82.31 308	*eP*		P	18 04 46.0 0.0
comp=Z,12nm,1.0s						
R41A	Rosebud	82.33 313	P		P	18 04 46.7 +0.7
baz=47						
Z50A	Ashland	82.39 306	P		P	18 04 47.2 +0.7
baz=49						
CCM	Cathedral Cave	82.42 313	P		P	18 04 46.8 +0.3
baz=47						
252A	Lumpkin	82.44 305	P		P	18 04 47.5 +0.7
baz=50						
T43A	Greenville	82.52 312	P		P	18 04 47.3 +0.2
baz=47						
P38A	Dawn	82.63 315	P		P	18 04 48.3 +0.6
baz=46,SNR=6.2						
P38A	Dawn	82.63 315	*eP*		P	18 04 48.2 +0.6
comp=Z,8.8nm,0.8s						
Q39A	Willow Grove F	82.72 315	P		P	18 04 48.9 +0.8
baz=46						
Z49A	Columbiana	82.81 307	P		P	18 04 49.3 +0.7
baz=49						
R40A	Maddies Statio	82.84 314	P		P	18 04 49.7 +1.0
baz=46,SNR=5.5						
S41A	Jillco Farms,	83.02 313	P		P	18 04 50.7 +1.0
baz=46						
T42A	Van Buren	83.03 312	P		P	18 04 50.6 +0.9
baz=47,SNR=5.6						
Q38A	Cooks Store, C	83.14 315	P		P	18 04 50.8 +0.5
baz=46						
Y47A	UCPARC, Winfie	83.17 308	P		P	18 04 50.4 -0.1
baz=48						
X46A	Booneville	83.19 309	P		P	18 04 50.4 -0.2
baz=48						
LRAL	Lakeview Retre	83.21 307	P		P	18 04 51.1 +0.4
baz=48						
R39A	Chumby, Stover	83.26 314	P		P	18 04 52.1 +1.2
baz=46						
T41A	Mountain View	83.41 313	P		P	18 04 52.7 +1.0
baz=46,SNR=11						
S40A	Lebanon	83.45 313	P		P	18 04 53.0 +1.1
baz=46,SNR=6.3						
U42A	Revenden	83.57 312	P		P	18 04 53.3 +0.8
baz=47						
OXF	Oxford	83.72 309	*eP*		P	18 04 53.3 0.0
comp=Z,12nm,0.9s						
OXF	Oxford	83.72 309	*eP*		P	18 04 53.3 0.0
OXF			pmax	pmax		
comp=Z,12nm,0.9s						
T40A	Mansfield	83.77 313	P		P	18 04 54.8 +1.2
baz=46,SNR=9.6						
Y46A	Houston	83.81 309	P		P	18 04 53.7 -0.1
baz=48						
R38A	Fenwick Farm,	83.84 315	P		P	18 04 54.7 +0.8
baz=45						
S39A	Bolivar	83.86 314	P		P	18 04 54.8 +0.8
baz=46						
U41A	Viola	83.98 312	P		P	18 04 55.5 +0.9
baz=46						
S38A	Stockton	84.23 314	P		P	18 04 56.2 +0.3
baz=45						
Y45A	Yeager Farm, C	84.24 309	P		P	18 04 56.3 +0.3
baz=47						
KDAK	Kodiak Island	84.32 357	P		P	18 04 55.9 +0.1
comp=Z,2.1nm,0.7s,baz=42,slow=15,SNR=2.4						
KDAK	Kodiak Island	84.32 357	*eP*		P	18 04 55.5 -0.3
comp=Z,69nm,2.0s						
BRAL	Brewton	84.48 306	P		P	18 04 57.8 +0.5
baz=48						
V41A	Mountainview	84.50 312	P		P	18 04 57.7 +0.4
baz=46						
U40A	Yellville	84.52 313	P		P	18 04 57.8 +0.5
baz=46						
RSSD	Black Hills	84.68 324	P		P	18 04 57.8 -0.5
baz=40						
RSSD	Black Hills	84.68 324	*eP*		P	18 04 58.2 -0.1
comp=Z,2.2nm,0.6s						
RSSD	Black Hills	84.68 324	*eP*		P	18 04 58.2 -0.1
RSSD			pmax	pmax		
comp=Z,2.0nm,0.6s						
KSU1	Kansas State U	84.68 317	P		P	18 04 58.3 +0.1
baz=44						
U39A	Green Forest	84.86 313	P		P	18 04 59.7 +0.6
baz=46						
T38A	Diamond	84.87 314	P		P	18 04 59.6 +0.5
baz=45						
V40A	Witts Springs	84.88 312	P		P	18 04 60.0 +0.7
baz=46						
W41B	Gary Mavity, V	84.98 311	P		P	18 05 00.8 +1.1
baz=46						
MAJO	Matsushiro	85.16 46	*eP*		P	18 05 00.3 -0.3
MAJO	Matsushiro	85.16 46	*eP*		P	18 05 00.3 -0.3
MJAR	Matsushiro Arr	85.16 46	P		P	18 05 00.3 -0.3
comp=Z,1.6nm,0.7s,baz=358,slow=2.1,SNR=7.8						
Z44A	Pea Ridge, Bel	85.19 309	P		P	18 05 02.2 +1.5
baz=47						
347A	Saraland	85.27 307	P		P	18 05 02.9 +1.7
baz=48						
V39A	Pettigrew	85.33 313	P		P	18 05 02.1 +0.6
baz=45						
X40A	Basin Creek Fa	85.80 311	P		P	18 05 04.3 +0.5
baz=46						
W39A	Magazine	85.86 312	P		P	18 05 04.6 +0.5
baz=45						
VBMS	Vicksburg	85.96 308	P		P	18 05 05.0 +0.4
baz=47						
Y41A	Eaglette Beard	86.09 311	P		P	18 05 05.6 +0.4
baz=46						
RLMT	Red Lodge	86.20 328	P		P	18 05 06.7 +0.9
baz=36						
MIAR	Mount Ida	86.20 312	P		P	18 05 06.9 +1.1
baz=45						
TUL1	Leonard	86.51 314	P		P	18 05 08.1 +0.8
baz=44						
X39A	Fountain Ranch	86.54 312	P		P	18 05 08.5 +1.1
baz=45						
NEW	Newport	86.60 334	P		P	18 05 08.0 +0.5
baz=31						
SDV	Santo Domingo	86.64 279	P		P	18 05 08.7 +0.3
comp=Z,3.9nm,0.4s,baz=14,slow=12,SNR=3.0						
MSO	Missoula	86.66 331	P		P	18 05 08.5 +0.5
baz=33						
K22A	Casper	86.96 325	P		P	18 05 09.4 -0.1
baz=38						
FXWY	Fox Creek	88.14 328	*eP*		P	18 05 15.7 +0.4
comp=Z,2.1nm,1.0s						
PD31	Pinedale Array	88.22 327	*eP*		P	18 05 14.9 -0.7
PDAR	Pinedale Array	88.22 327	P		P	18 05 15.9 +0.3
comp=Z,1.3nm,0.8s,baz=63,slow=3.5,SNR=11						
PDAR			LR	LR		18 44 44.3
comp=Z,21nm,21.5s,baz=16,slow=36						
TPAW	Teton Pass	88.23 328	*eP*		P	18 05 16.5 +0.7
comp=Z,3.6nm,0.8s						
T25A	Trinidad	90.24 320	P		P	18 05 25.2 -0.1
baz=39						
SDCO	Great Sand Dun	90.31 321	P		P	18 05 26.3 +0.6
baz=39						
P18A	Preston Nutter	91.06 325	*eP*		P	18 05 29.2 0.0
comp=Z,13nm,1.3s						
ANMO	Albuquerque	92.98 320	P		P	18 05 39.4 +1.4
comp=Z,0.5nm,0.4s,baz=324,slow=14,SNR=3.4						
ANMO	Albuquerque	92.98 320	*eP*		P	18 05 38.5 +0.6
baz=38						
ANMO	Albuquerque	92.98 320	*eP*		P	18 05 38.3 +0.4
comp=Z,4.4nm,1.5s						
TASL	Snake Pit, Alb	92.98 320	P		P	18 05 38.8 +0.9
baz=38						
TASM	ASL Pad, Albuq	92.98 320	P		P	18 05 38.7 +0.7
baz=38						
MNTX	Cornudas Mount	94.95 317	P		P	18 05 46.7 -0.2
baz=39						
TX31	Lajitas Ar. Si	95.83 315	*eP*		P	18 05 51.8 +0.8
TXAR	Lajitas Array	95.83 315	P		P	18 05 52.2 +1.2
comp=Z,1.5nm,1.0s,baz=65,slow=4.7,SNR=11						
JTS	JuntasAbangare	96.72 289	LR		LR	18 44 18.2
comp=Z,17nm,21.3s,baz=246,slow=32						
GMRC	Granite Mounta	97.49 326	*eP*		P	18 05 57.4 -1.0
CPUP	Villa Florida	98.07 243	LR		LR	18 51 45.8
comp=Z,42nm,18.1s,baz=124,slow=36						
CLIC	Calipatria	98.81 325	*eP*		Pdif	18 06 05.8 +1.6
MWC	Mount Wilson	99.00 327	*eP*		Pdif	18 06 04.7 -0.6
MWC	Mount Wilson	99.00 327	*eP*		Pdif	18 06 04.7 -0.6
DREC	Desert Rsrch C	99.06 325	*eP*		Pdif	18 06 06.5 +1.2
SWSC	Sam W. Stewart	99.10 325	*eP*		Pdif	18 06 06.1 +0.6
WESC	Westside Schoo	99.22 325	*eP*		Pdif	18 06 07.4 +1.4
WR1	Warramunga Arr	119.37 93	*e*PKPdf		PKPpre	18 11 11.6
WRA	Warramunga Arr	119.37 93	PKhKP		PKPpre	18 11 11.6
comp=Z,0.6nm,0.8s,baz=318,slow=1.9,SNR=3.8						
ASAR	Alice Springs	121.01 97	PKP		PKPdf	18 11 16.5 -0.4
comp=Z,0.5nm,0.6s,baz=309,slow=1.6,SNR=13						
QSPA	South Pole Qui	128.00 180	PKP		PKPdf	18 11 28.5 -0.4
comp=Z,0.9nm,0.9s,baz=270,slow=4.0,SNR=3.5						
STKA	Stephens Creek	130.88 102	SKPbc		SKPbc	18 14 55.3 +0.1
comp=Z,3.2nm,1.0s,baz=280,slow=3.6,SNR=7.3						
DZM	Mont Dzumac	145.56 73	PKPbc		PKPab	18 12 04.4 +1.2
comp=Z,6.8nm,0.9s,baz=247,slow=7.7,SNR=6.2						

*IDC **23** 18:03:32.0±1.4,2.79N×91.38E,h0km,mb4.0/8, mb1 4.2/11,mb1mx3.8/71,mbtmp4.1/11,ML4.3/3,MS3.4/12, Ms1 3.4/12,ms1mx3.0/69,Error ellipse: s-maj=38.5km s-min=21.6km az=36.0*
*NEIC **23** 18:03:32.7±0.4,2.74N×91.23E,h10km,mb4.8/18,Error ellipse: s-maj=8.6km s-min=5.3km az=219.0*
*ISCJB **23** 18:03:33.7±0.3,2.68N±0.05×91.29E±0.03,h33km, mb4.6/26,MS3.4/10,Error ellipse: s-maj=7.2km s-min=3.6km az=30.4*
*BJI **23** 18:03:33.0,2.60N×91.20E,h10km,mb4.3/8,mB4.6/3*
*DJA **23** 18:03:35.2±2.0,3°N±6°×9°1E±°,h27km±24km,M5.0/13, mb5.1/13,mB5.4/6,MLv5.2/7,Mw(mB)4.8/6*
ISC 23 18:03:36.1±0.5,2.76N±0.07×91.27E±0.06,h35km,n131, σ2°16/97,mb4.6/29,MS3.5/10,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	Banda Aceh	4.84	56	P	Pn	18 04 47.1	+0.6
SNSI	Sinabang, Aceh	5.06	94	P	Pn	18 04 49.1	-0.4
463nm,0.8s,12μm4.0nm							
MLSI	Meulaboh, Aceh	5.33	74	P	Pn	18 04 53.6	+0.4
TPTI		5.92	85	P	Pn	18 05 00.9	-0.4
LHMI	Lhok Sumawe	6.17	66	P	Pn	18 05 06.0	+1.3
LHMI	Lhok Sumawe	6.17	66	*e*Pn	Pn	18 05 06.0	+1.3
GSI	Gunungsitoli	6.46	103	P	Pn	18 05 08.3	-0.5
GSI	Gunungsitoli	6.46	103	*e*Pn	Pn	18 05 08.3	-0.5
GSI				*e*Sn	Sn	18 06 13.4	-8.0
KCSI	Kotacane, Aceh	6.53	83	P	Pn	18 05 11.1	+1.4
TSI	Tuntungan	7.32	84	P	Pn	18 05 32.7	+12
PSI	Prapat	7.64	90	Pn	Pn	18 05 24.9	-0.2
4.5nm,0.3s,baz=360,slow=1.7,SNR=17							
PSI				Sn	Sn	18 06 47.1	-3.4
9.8nm,0.3s,baz=180,slow=22,SNR=5.6							
PSI	Prapat	7.64	90	*e*Pn	Pn	18 05 25.1	0.0
PSI				*e*Sn	Sn	18 06 41.4	-9.1
PSI				Sn	Sn	18 06 47.1	-3.4
MNSI	Mandailing Nat	8.53	103	P	Pn	18 05 37.3	+0.2
PKDT	Phuket	8.68	54	P	Pn	18 05 39.3	+0.1
131nm,0.8s,1μm0.5nm							
SISI	Saibi	8.81	117	P	Pn	18 05 40.0	-0.9
PBA	Port Blair	8.96	9	*e*Pn	Pn	18 05 41.7	-1.3
PBA				*e*Sn	Sn	18 07 14.2	-8.5
KULM	Kulim	9.68	75	*e*Pn	Pn	18 05 52.7	-0.3
TRTT	Trang	9.78	59	P	Pn	18 05 53.6	-0.7
36nm,0.8s,529nm							
IPM	Ipoh	9.88	80	*e*Pn	Pn	18 05 55.2	-0.5
PPSI	Pulau Pagai	10.31	122	P	Pn	18 06 00.1	-1.5
PALK	Pallekele	11.44	293	Pn	Pn	18 06 17.1	0.0
3.7nm,0.3s,baz=116,slow=13,SNR=24							
PALK				Sn	Sn	18 08 14.6	-9.2
21nm,0.3s,baz=295,slow=2.9,SNR=20							
PALK				LR	LR	18 10 08.4	
comp=Z,237nm,21.1s,baz=116,slow=34							
PALK	Pallekele	11.44	293	*e*Pn	Pn	18 06 17.0	-0.1
PALK				*e*Sn	Sn	18 08 14.3	-10
MASI	Maura Aman, Be	12.43	118	P	Pn	18 06 29.5	-1.2
MYKOM	Kota Tinggi	12.60	94	*e*Pn	Pn	18 06 33.0	+0.1
PHET	Kaeng Krachan	13.04	39	P	P	18 06 47.5	-1.3
9.9nm,0.7s,126nm							
MNAI	Manna	13.65	121	*e*Pn	Pn	18 06 46.6	-0.7
UMPA	Umpang Tak	15.30	29	P	Pn	18 07 11.8	+2.2
10nm,0.8s							
SKHT	Srikalahasti	15.80	314	*e*P	Pn	18 07 16.6	+0.6
SKHT				IAmb	IAmb	18 07 19.7	
comp=Z,41nm,0.6s							
SKHT				*e*S	Sn	18 09 56.5	-14
COCO	West Island	15.85	160	*e*Pn	Pn	18 07 13.5	-3.1
comp=Z,582nm,2.0s							
PBKT	Sadao Pong	16.71	34	P	P	18 07 30.1	+0.5
comp=Z,17nm,1.2s							
SUKH	Sukhothai	16.77	29	P	P	18 07 32.6	+2.3
comp=Z,7.1nm,1.0s							
VIS	Vishakhapatnam	16.79	333	*i* P	P	18 07 37.1	+6.7
VIS				*i* x	x	18 10 20.6	
ADKI	Addanki	17.11	320	*e*P	P	18 07 33.7	-0.4
ADKI				IAmb	IAmb	18 07 35.4	
comp=Z,43nm,0.6s							
ADKI				*e*S	Sn	18 10 27.1	-15
CHLP	Challavanipeta	17.17	336	*e*P	Pn	18 07 34.0	+0.7
CHLP				IAmb	IAmb	18 07 37.1	
comp=Z,110nm,0.4s							
CHLP				*e*S	Sn	18 10 29.5	-14
PVM	Polavaram	17.24	327	*e*P	P	18 07 35.1	-0.3
PVM				IAmb	IAmb	18 07 39.5	
comp=Z,42nm,0.9s							
PVM				*e*S	Sn	18 10 30.3	-15
CM01	Chiang Mai Arr	17.29	25	*e*Pn	Pn	18 07 33.4	-1.4
CM31	Chiang Mai Arr	17.31	25	*e*Pn	Pn	18 07 34.6	-0.6
CMAR	Chiang Mai Arr	17.31	25	Pn	Pn	18 07 34.9	-0.2
comp=Z,0.3nm,0.3s,baz=216,slow=12,SNR=13							
CMAR				LR	LR	18 13 47.6	
comp=Z,80nm,18.5s,baz=206,slow=36							
CHTO	Chiang Mai	17.63	25	P	P	18 07 44.0	+4.2
comp=Z,51nm,0.8s							
CHTO	Chiang Mai	17.63	25	*e*Pn	P	18 07 40.8	+1.0
comp=Z,5.2nm,0.9s							
SRLM	Srisailam	18.00	318	*e*P	P	18 07 45.3	+1.3
SRLM				IAmb	IAmb	18 07 49.3	
comp=Z,49nm,0.4s							
SRLM				*e*S	Sn	18 10 48.0	-16
NJS	Nagarjunasagar	18.07	320	*e*P	Pn	18 07 44.2	-0.3
NJS				IAmb	IAmb	18 07 46.5	
comp=Z,17nm,0.6s							
NJS				*e*S	Sn	18 10 56.4	-8.7
URV	Uravakonda	18.37	312	*e*P	Pn	18 07 48.9	+0.6
URV				IAmb	IAmb	18 07 52.8	
comp=Z,18nm,0.6s							
URV				*e*S	Sn	18 10 59.1	-14
UBPT	Khong Chiam	18.72	48	P	Pn	18 07 52.6	+0.2
comp=Z,34nm,0.9s							
SKNT	Sakolnakorn	18.85	41	P	Pn	18 08 03.9	+10
KSM	Kuching	19.06	93	*e*P	Pn	18 07 57.9	+1.3
comp=Z,20nm,1.0s							
HYB	Hyderabad	19.18	320	*i* P	Pn	18 08 00.0	+1.9
HYB				*e*		18 11 31.5	
HYB	Hyderabad	19.18	320	*ex*	Pn	18 07 58.4	+0.3
HYB				IAmb	IAmb	18 08 01.1	
comp=Z,151nm,2.3s							
HYBB	Hyderabad (bro	19.19	320	*e*P	P	18 07 56.1	-0.9
HYBB				IAmb	IAmb	18 08 00.2	
comp=Z,22nm,1.0s							
HYBB				*e*S	Sn	18 11 31.8	-0.5
CISI	Cisompet, Garu	19.43	122	*e*P	P	18 08 00.2	+0.5
comp=Z,149nm,1.6s							
RPR	Rampur	19.84	325	*e*P	P	18 08 04.0	0.0
RPR				IAmb	IAmb	18 08 09.8	
comp=Z,28nm,1.1s							
RPR				*e*S	S	18 11 37.4	-8.2
BELO	BELONIA	20.37	0	*e*P	Pn	18 08 21.8	+10
SRSP	Sriramsagar	20.45	323	*e*P	P	18 08 11.3	+0.6
SRSP				IAmb	IAmb	18 08 15.6	
comp=Z,34nm,1.2s							
SRSP				*e*S	S	18 11 46.5	-12
SBUM	Sibu	20.93	90	*e*P	P	18 08 16.8	+0.9
comp=Z,12nm,1.0s							
KLRI	Killari	20.94	318	*e*S	S	18 12 00.3	-7.4
AGT	Agartala	21.00	360	*e*P	Pn	18 08 29.4	+10
H08S2	Diego Garcia H	21.40	241	T	T	18 30 18.0	
baz=59,slow=74,SNR=33							
H08S3	Diego Garcia H	21.40	241	T	T	18 30 22.6	
baz=59,slow=74,SNR=152							
H08S1	Diego Carcia H	21.42	241	T	T	18 30 28.8	
baz=59,slow=74,SNR=21							
BOK	Bokaro	21.55	346	*e*P	P	18 08 34.9	+12
NGP	Nagpur	21.81	328	*e*P	P	18 08 36.0	+11
NGP				IAmb	IAmb	18 08 47.1	
comp=Z,22nm,0.9s							
POO	Poona	23.17	314	*e*P	P	18 08 50.2	+10
GUWA	GUWAHATI	23.30	1	*e*P	P	18 08 55.4	+14
MOKO	MOKOCHONG	23.63	7	*ex*	P	18 08 52.4	+8.1
MOKO				IAmb	IAmb	18 09 03.4	
comp=Z,12nm,0.6s							
TEZP	TEZPUR	23.76	3	*e*P	P	18 08 57.2	+12
ODAN	Odare	24.25	352	*e*P	P	18 08 59.7	+10
BHPL	Bhopal	24.38	328	*e*P	P	18 09 01.5	+10
RAMN	Ramite	24.46	350	*e*P	P	18 09 02.4	+10
GTK	Tadong	24.55	354	*e*P	P	18 09 04.8	+12
ZIRO	ZIRO	24.75	5	*e*P	P	18 09 06.0	+11
KMI	Kunming	24.82	25	P	P	18 08 57.0	+1.6
KMI				pmax	pmax		
comp=Z,9.0nm,1.3s							
JIRN	Jiri	25.23	349	*e*P	P	18 09 11.1	+12
PKIN	Phulchoki	25.31	348	*e*P	P	18 09 13.1	+13
DMN	Daman	25.40	347	*e*P	P	18 09 14.5	+14
KKN	Kakani	25.54	348	*e*P	P	18 09 15.4	+14
KOLN	Koldanda	25.93	344	*e*P	P	18 09 19.9	+15
LSA	Lhasa	26.79	360	P	P	18 09 28.3	+15
LSA				pmax	pmax		
comp=Z,7.0nm,1.0s							
LSA	Lhasa	26.79	360	*e*P	P	18 09 14.6	+1.1
comp=Z,14nm,0.7s							
MYLDM	Lahad Datu	27.26	84	*e*P	P	18 09 17.6	+0.2
comp=Z,16nm,1.0s							
SMLA	Simla	31.20	336	*e*P	P	18 10 03.2	+11
SMLA				IAmb	IAmb	18 10 07.6	
comp=Z,12nm,0.5s							
DHRM	DHARAMSHALA	32.54	336	*e*P	P	18 10 15.1	+11
DHRM				IAmb	IAmb	18 10 19.4	
comp=Z,334nm,3.7s							
BATI	Baumata	34.73	112	LR	LR	18 26 39.9	
comp=Z,159nm,19.2s,baz=139,slow=40							
NIL	Nilore	35.04	333	*e*P	P	18 10 27.0	+1.3
comp=Z,20nm,1.1s							
TWG	Pinlang	35.09	53	*e*P	P	18 10 28.2	+2.0
comp=Z,198nm,1.5s							
GTA	Gaotai	37.30	11	*e*P	P	18 10 51.5	+6.5
GTA				pP	pP	18 10 55.8	+0.6
GTA				sP	sP	18 10 59.4	0.0
GTA				pmax	pmax		
comp=Z,2.0nm,1.2s							
H01W3	Cape Leeuwin H	43.16	152	T	T	18 57 33.8	
baz=318,slow=74							
H01W2	Cape Leeuwin H	43.17	152	T	T	18 57 47.4	
baz=318							
H01W1	Cape Leeuwin H	43.18	152	T	T	18 57 32.1	
baz=318,slow=74							
KK31	Karatay Array	44.22	338	*e*P	P	18 11 41.0	-0.9
KKAR	Karatay Array	44.22	338	*e*P	P	18 11 41.5	-0.5
MK01	Makanchi Array	44.52	351	*e*P	P	18 11 44.8	+0.5
MK31	Makanchi Array	44.55	351	*e*P	P	18 11 44.6	+0.1
MK32	Makanchi Array	44.55	351	*e*P	P	18 11 45.2	+0.8
MKAR	Makanchi Array	44.55	351	P	P	18 11 45.2	+0.7
comp=Z,1.5nm,0.8s,baz=174,slow=9.4,SNR=12							
MKAR	Makanchi Array	44.55	351	*e*P	P	18 11 44.6	+0.1
comp=Z,26nm,0.8s							
MAKZ	Makanchi	44.61	351	*e*P	P	18 11 45.9	+0.9
comp=Z,11nm,1.6s							
GEYT	Alibeck	46.33	323	P	P	18 12 00.9	+2.1
comp=Z,183nm,0.8s,baz=157,slow=9.4,SNR=2.6							
GEYT				LR	LR	18 31 53.5	
comp=Z,58nm,21.6s,baz=330,slow=37							
GYA0B	ALIBECK ARRAY	46.33	323	*e*P	P	18 11 56.1	-2.6
comp=Z,7.7nm,0.8s							
SONA0	Songino Array	46.76	14	*e*P	P	18 12 03.6	+1.5
SONM	Songino Array	46.76	14	P	P	18 12 03.6	+1.5
comp=Z,1.5nm,0.5s,baz=190,slow=10,SNR=9.8							
SONM				LR	LR	18 34 23.4	
comp=Z,50nm,19.6s,baz=226,slow=40							
SONA1	Songino Array	46.77	14	*e*P	P	18 12 03.4	+1.2
JNU	Nakatsue	47.79	46	*e*P	P	18 12 10.3	+0.1
comp=Z,36nm,1.5s							
WR1	Warramunga Arr	47.91	120	*e*P	P	18 12 11.3	-0.1
comp=Z,21nm,1.4s							
WRA	Warramunga Arr	47.91	120	P	P	18 12 11.3	-0.1
comp=Z,2.5nm,1.0s,baz=298,slow=8.6,SNR=6.4							
WRAB	Tennant Creek	47.92	120	*e*P	P	18 12 11.4	0.0
comp=Z,55nm,1.4s							
WB2	Warramunga Arr	47.92	120	*e*P	P	18 12 11.5	0.0
comp=Z,45nm,1.8s							
KSRS	Korea Array	48.18	40	LR	LR	18 33 33.7	
comp=Z,30nm,20.6s,baz=270,slow=38							
FORT	Forrest	48.38	136	*e*P	P	18 12 16.7	+1.9
comp=Z,18nm,0.9s							
ABPO	Ambohimpanom	48.41	242	*e*P	P	18 12 16.8	+1.4
comp=Z,28nm,1.7s							
KURBB	Kurchatov Arra	48.89	349	P	P	18 12 18.9	+0.5
comp=Z,1.5nm,1.0s,baz=172,slow=7.2,SNR=9.6							
KURK	Kurchatov	48.97	349	*e*P	P	18 12 18.9	0.0
ZAA0	Zalesovo Array	51.30	355	*e*P	P	18 12 34.8	-1.7
comp=Z,3.6nm,0.7s							
ZALV	Zalesovo Beam	51.30	355	P	P	18 12 37.0	+0.4
comp=Z,0.4nm,0.3s,baz=182,slow=6.2,SNR=3.3							
ZALV				LR	LR	18 36 07.9	
comp=Z,46nm,20.5s,baz=236,slow=38							
ZALV	Zalesovo Beam	51.30	355	*e*P	P	18 12 36.0	-0.5
ZAA1	Zalesovo Array	51.30	355	*e*P	P	18 12 37.0	+0.4
BVAR	Borovoye Array	53.00	344	P	P	18 12 49.5	+0.3
comp=Z,0.7nm,0.8s,baz=142,slow=7.3,SNR=4.2							
BVAR				LR	LR	18 36 57.4	
comp=Z,44nm,19.2s,baz=160,slow=38							
BRVK	Borovoye	53.05	344	*e*P	P	18 12 49.3	-0.3
comp=Z,4.1nm,1.0s							
ABKAR	Akbulak array	53.47	335	*e*P	P	18 12 53.0	+0.2
GUMO	Guam	54.01	75	LR	LR	18 34 35.7	
comp=Z,14nm,21.7s,baz=286,slow=35							
KMBO	Kilima Mbogo	54.14	267	LR	LR	18 31 52.0	
comp=Z,53nm,21.1s,baz=93,slow=31							
MJAR	Mat

BKZ *e*Sn **Sn** **18 07 33.4 +1.1**
CTA Charters Tower 33.82 284 P **P** **18 11 06.8 +0.9**
3.4nm,0.8s,baz=110,slow=9.4,SNR=3.5
CTAO Charters Tower 33.82 284 *e*P **P** **18 11 05.4 -0.5**
66nm,1.8s
ASAR Alice Springs 42.53 270 P **P** **18 12 18.8 -0.4**
0.7nm,0.7s,baz=110,slow=7.8,SNR=11
WB2 Warramunga Arr 43.75 275 *e*P **P** **18 12 27.4 -1.7**
45nm,1.8s
WRAB Tennant Creek 43.76 275 P **P** **18 12 27.5 -1.6**
1.8nm,0.7s
WR1 Warramunga Arr 43.76 275 *e*P **P** **18 12 28.4 -0.7**
25nm,1.5s
WRA Warramunga Arr 43.76 275 P **P** **18 12 28.4 -0.7**
1.2nm,0.4s,baz=114,slow=7.9,SNR=9.0
FIA0 FINESS Array S 147.43 338 *e*PKPdf **PKPdf** **18 24 04.2 +0.5**
FINES FINESS Array B 147.43 338 PKPbc **PKPdf** **18 24 04.2 +0.5**
1.5nm,0.5s,baz=46,slow=4.8,SNR=14

*IDC **23** 18:07:17.7±1.2, 11°.91N×144°.77E, h0km, mb3.6/6, mb1 3.7/6, mb1mx3.5/62, mbtmp3.6/6, MS2.8/3, Ms1 2.9/3, ms1mx2.4/46, Error ellipse: s-maj=47.8km s-min=18.8km az=96.0*
*ISCJB **23** 18:07:18.4±1.1, 11°.91N±0°.08×144°.7E±0°.3, h16km, mb3.6/6, MS2.7/3, Error ellipse: s-maj=45.1km s-min=9.6km az=9.2*
ISC 23 18:07:20.2±1.3, 12°.0N±0°.1×144°.8E±0°.4, h16km, n16, σ0°69/8, mb3.7/6, MS2.7/3, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.63**	**2**	P	**Pn**	**18 07 47.9**	**-0.3**
	221nm,0.3s,baz=187,slow=16,SNR=223						
GUMO				Sn	**Sn**	**18 08 08.3**	**-0.7**
	843nm,0.3s,baz=346,slow=20,SNR=36						
GUMO				LR	LR	18 08 15.3	
	comp=Z,130nm,18.5s,baz=192,slow=34						
JHJ	**Hachijo jima 2**	**21.57**	**348**	LR	LR	18 19 26.5	
	comp=Z,28nm,19.8s,baz=74,slow=34						
H11S3	**WAKE ISLAND Hy**	**22.08**	**70**	T	T	18 33 21.1	
	baz=253,slow=75,SNR=29						
H11S1	**WAKE ISLAND Hy**	**22.09**	**70**	T	T	18 33 22.1	
	baz=253,slow=75,SNR=7.2						
H11S2	**WAKE ISLAND Hy**	**22.09**	**70**	T	T	18 33 13.0	
	baz=253,slow=75,SNR=7.2						
H11N1	**WAKE ISLAND Hy**	**22.59**	**67**	T	T	18 33 59.8	
	baz=250,slow=75,SNR=5.9						
H11N2	**WAKE ISLAND Hy**	**22.60**	**67**	T	T	18 34 00.4	
	baz=250,slow=75,SNR=5.2						
H11N3	**WAKE ISLAND Hy**	**22.61**	**67**	T	T	18 34 01.4	
	baz=250,slow=75,SNR=6.8						
MJAR	**Matsushiro Arr**	**25.20**	**347**	LR	LR	18 21 49.7	
	comp=Z,21nm,20.1s,baz=165,slow=35						
WRA	**Warramunga Arr**	**33.33**	**198**	P	**P**	**18 13 57.4**	**-0.2**
	0.5nm,0.7s,baz=22,slow=9.7,SNR=3.1						
ASAR	**Alice Springs**	**36.97**	**197**	P	**P**	**18 14 28.1**	**-0.9**
	0.3nm,0.6s,baz=20,slow=8.9,SNR=3.5						
CMAR	**Chiang Mai Arr**	**44.64**	**284**	LR	LR	18 33 53.7	
	comp=Z,9.7nm,20.8s,baz=180,slow=36						
MKAR	**Makanchi Array**	**62.63**	**317**	P	**P**	**18 17 44.6**	**+0.7**
	0.2nm,0.6s,baz=92,slow=4.9,SNR=3.1						
KURBB	**Kurchatov Arra**	**65.83**	**320**	P	**P**	**18 18 04.8**	**-0.1**
	0.5nm,0.6s,baz=104,slow=6.4,SNR=4.1						
ILAR	**Eielson Array**	**70.07**	**25**	P	**P**	**18 18 32.0**	**+0.7**
	0.5nm,0.5s,baz=256,slow=6.0,SNR=7.4						
BVAR	**Borovoye Array**	**71.17**	**322**	P	**P**	**18 18 38.2**	**0.0**
	0.7nm,0.6s,baz=100,slow=8.1,SNR=7.2						

*SJA **23** 18:14:19.5±0.5, 31°.59S×72°.20W, h40km±999km, ML3.9, MW4.1*
*IDC **23** 18:14:20.2±4.2, 31°.56S×72°.05W, h40km±36km, mb3.9/5, mb1 3.9/8, mb1mx3.7/36, mbtmp4.0/8, ML3.9/3, MS3.4/2, Ms1 3.4/2, ms1mx2.7/37, Error ellipse: s-maj=38.1km s-min=24.0km az=84.0*
*GUC **23** 18:14:25.34±1.0, 33°.58S×71°.39W, h13km±13km, ML3.9*
*NEIC **23** 18:14:21.0±0.9, 31°.58S×71°.86W, h42km±8km, mb4.7/1, Error ellipse: s-maj=19.9km s-min=6.8km az=90.0*
ISC 23 18:14:16.7±1.7, 31°.63S±0°.03×71°.98W±0°.07, h14km±10km, n55, σ1°71/71, mb4.3/5, 8C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROCH	**El Roble**	**1.57**	**149**	⇑*i*P	**Pg**	**18 14 46.7**	**-0.1**
ROCH				*i* S	**Sg**	**18 15 07.0**	**-0.3**
ROCH				IAML		18 15 10.5	
	comp=E,2μm,0.7s						
ROC1	**El Roble**	**1.57**	**149**	*e*Pn	**Pg**	**18 14 47.0**	**+0.1**
ROC1				*e*Sn	**Sg**	**18 15 07.3**	**+0.1**
ROC1	**El Roble**	**1.57**	**149**	*i* P	**Pg**	**18 14 48.4**	**+1.5**
GO04	**Tololo Observa**	**1.77**	**35**	*e*Pn	**Pb**	**18 14 48.6**	**-0.6**
GO04				*e*Sn	**Sb**	**18 15 09.7**	**-1.6**
GO04	**Tololo Observa**	**1.77**	**35**	⇑*i*P	**Pb**	**18 14 47.8**	**-1.4**
GO04				*e*P	**Pb**	**18 14 48.3**	**-0.8**
GO04				*i* S	**Sb**	**18 15 08.8**	**-2.6**
GO04				*i* S	**Sb**	**18 15 09.9**	**-1.5**
GO04				IAML		18 15 14.2	
	comp=E,6μm,0.4s						
TLL	**Tololo Astrono**	**1.77**	**35**	⇑*i*P	**Pb**	**18 14 48.3**	**-0.9**
TLL				*i* S	**Sn**	**18 15 09.2**	**-0.6**
TLL				IAML		18 15 13.4	
	comp=E,2μm,0.3s						
PEL	**Peldehue**	**1.86**	**144**	*e*Pn	**Pb**	**18 14 51.5**	**+0.9**
PEL				*e*Sn	**Sb**	**18 15 14.9**	**+1.1**
PEL	**Peldehue**	**1.86**	**144**	⇑*i*P	**Pb**	**18 14 51.3**	**+0.7**
PEL				*i* S	**Sb**	**18 15 14.6**	**+0.8**
PEL				IAML		18 15 16.3	
	comp=N,1μm,0.5s						
CLCH	**Cerro Calan**	**2.14**	**146**	⇑*i*P	**Pb**	**18 14 54.8**	**-0.5**
CLCH				*i* S	**Sb**	**18 15 21.4**	**-0.3**
CLCH				IAML		18 15 39.1	
	comp=E,2μm,0.8s						
FCH	**Farellones**	**2.21**	**140**	⇑*i*P	**Pb**	**18 14 56.1**	**-0.6**
FCH				*i* S	**Sb**	**18 15 23.5**	**-0.6**
AUSP	**Uspallata**	**2.28**	**106**	*i* P	**Pg**	**18 15 00.1**	**-0.3**
AUSP				*i* S	**Sg**	**18 15 29.8**	**-0.3**
RTLS	**Leoncito**	**2.29**	**95**	*i* P	**Pg**	**18 15 00.2**	**-0.4**
RTLS				*i* S	**Sg**	**18 15 30.1**	**-0.3**
RTLS				IAML		18 15 33.0	
	comp=Z,740nm,0.4s						
AROD	**Rodeo**	**2.60**	**56**	*i* P	**Pb**	**18 15 03.5**	**+0.2**
AROD				*i* S	**Sb**	**18 15 36.6**	**+1.2**
LMEL	**Las Melosas**	**2.67**	**146**	⇑*i*P	**Pb**	**18 15 02.8**	**-1.6**
LMEL				*i* S	**Sb**	**18 15 35.1**	**-2.0**
LMEL				IAML		18 15 36.1	
	comp=N,1μm,0.4s						
LCO	**Las Campanas**	**2.84**	**23**	*e*Pn	**Pn**	**18 15 02.6**	**+0.7**
LCO				*e*Sn	**Sn**	**18 15 35.5**	**-0.5**
LCO	**Las Campanas**	**2.84**	**23**	⇑*i*P	**Pn**	**18 15 02.4**	**+0.6**
LCO				*i* S	**Sn**	**18 15 34.2**	**-1.8**
LCO				IAML		18 15 36.9	
	comp=N,435nm,0.4s						
ARCO	**CERRO ARCO**	**2.85**	**116**	*i* P	**Pb**	**18 15 07.6**	**+0.1**
ARCO				IAML		18 15 48.5	
	comp=Z,228nm,0.5s						
ACDV	**Cuesta del Vie**	**2.86**	**60**	*i* P	**Pb**	**18 15 07.2**	**-0.3**
RTCV	**Cerro Valdivia**	**2.94**	**95**	*i* P	**Pb**	**18 15 08.9**	**0.0**
AAGR	**Agrelo**	**3.03**	**119**	*i* P	**Pb**	**18 15 09.8**	**-0.7**
GO05	**HualaæØ**	**3.37**	**179**	*e*Pn	**Pn**	**18 15 09.9**	**+0.9**
GO05				*e*Sn	**Sn**	**18 15 45.8**	**-3.0**
GO05	**HualaæØ**	**3.37**	**179**	*e*P	**Pn**	**18 15 07.5**	**-1.5**
GO05				*i* S	**Sn**	**18 15 44.5**	**-4.3**
AGUA	**GUANDACOL**	**3.69**	**55**	*i* P	**Pb**	**18 15 18.6**	**-3.1**
GO03	**Copiap**	**4.30**	**21**	*e*Pn	**Pn**	**18 15 22.3**	**+0.5**
GO03				*e*Sn	**Sn**	**18 16 09.8**	**-2.0**
GO03	**Copiap**	**4.30**	**21**	*e*P	**Pn**	**18 15 22.1**	**+0.2**
GO03				*i* S	Sn	18 15 56.7	-15
GO02	**Mina Guanaco**	**6.78**	**19**	*e*Pn	**Pn**	**18 15 54.7**	**-1.4**
GO02				*e*Sn	**Sn**	**18 17 09.4**	**-3.9**
PLCA	**Paso Flores**	**9.15**	**173**	Pn	**Pn**	**18 16 30.8**	**+2.3**
	comp=Z,0.4nm,0.3s,baz=0.3,slow=12,SNR=6.2						
TRQA	**Tornquist**	**10.41**	**131**	*e*Pn	**Pn**	**18 16 48.4**	**+2.7**
PB01	**IPOC Station P**	**10.78**	**13**	*e*Pn	**Pn**	**18 16 53.6**	**+2.8**
CPUP	**Villa Florida**	**13.86**	**71**	LR	LR	18 23 34.6	
	comp=Z,79nm,19.8s,baz=220,slow=40						
LPAZ	**La Paz**	**15.67**	**14**	Pn	**Pn**	**18 17 58.8**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=192,slow=6.3,SNR=3.9						
LPAZ				Sn	**Sn**	**18 20 56.6**	**+4.9**
	comp=Z,0.1nm,0.3s,baz=248,slow=12,SNR=1.9						
LPAZ	**La Paz**	**15.67**	**14**	*e*Pn	**Pn**	**18 17 58.9**	**+1.1**
LPAZ				*e*pP	**P**	**18 17 59.3**	**-2.6**
LPAZ				Sn	**Sn**	**18 20 56.6**	**+4.9**

SIV San Ignacio 18.47 35 P **Pn** **18 18 32.4 0.0**
comp=Z,0.2nm,0.3s,baz=220,slow=11,SNR=9.1
SNAA Sanae 53.76 158 P **P** **18 23 38.7 +0.4**
comp=Z,1.6nm,1.1s,baz=285,slow=7.3,SNR=6.5
SNAA Sanae 53.76 158 *e*P **P** **18 23 38.8 +0.6**
comp=Z,18nm,2.0s
TXAR Lajitas Array 67.70 330 P **P** **18 25 12.8 -1.0**
comp=Z,0.3nm,0.8s,baz=159,slow=5.4,SNR=2.8
DBIC Dimbokro 74.38 72 P **P** **18 25 54.6 +0.1**
comp=Z,5.2nm,0.9s,baz=218,slow=8.5,SNR=4.5
DBIC Dimbokro 74.38 72 *e*P **P** **18 25 52.8 -1.8**
comp=Z,88nm,1.8s
DGR Domenigoni Val 77.58 323 *e*P **P** **18 26 14.9 +2.5**
CCCA Chr Cany lake 79.24 324 *e*P **P** **18 26 24.1 +2.6**
KOWA Kowa 79.62 66 P **P** **18 26 23.9 -0.1**
comp=Z,5.4nm,1.1s,baz=315,slow=1.4,SNR=4.9
TOA1 Torodi Ar. Sit 83.36 70 *e*P **P** **18 26 43.2 -0.6**
TORD Torodi Ar. Bea 83.36 70 P **P** **18 26 43.2 -0.6**
comp=Z,1.5nm,0.9s,baz=261,slow=4.2,SNR=5.7
LSZ Lusaka 90.50 108 LR LR 19 05 01.9
comp=Z,34nm,20.4s,baz=124,slow=34
H11S2 WAKE ISLAND Hy 125.82 271 T T 20 52 17.0
baz=112
H11S1 WAKE ISLAND Hy 125.83 271 T T 20 52 19.5
baz=112
H11S3 WAKE ISLAND Hy 125.84 271 T T 20 52 19.3
baz=112
H11N3 WAKE ISLAND Hy 126.18 272 T T 20 52 44.3
baz=119
H11N1 WAKE ISLAND Hy 126.19 272 T T 20 52 45.0
baz=119
H11N2 WAKE ISLAND Hy 126.19 272 T T 20 52 37.3
baz=119
BVAR Borovoye Array 145.49 41 PKPbc **PKPdf** **18 33 53.3 -0.7**
comp=Z,1.0nm,0.4s,baz=313,slow=3.2,SNR=7.6
KURBB Kurchatov Arra 151.08 40 PKPbc **PKPbc** **18 34 08.4 -0.6**
comp=Z,0.5nm,0.7s,baz=301,slow=3.2,SNR=5.7
KURK Kurchatov 151.08 40 *e*PKPbc **PKPbc** **18 34 08.4 -0.6**
ZAA1 Zalesovo Array 152.18 30 *e*PKPbc **PKPbc** **18 34 10.6 -0.7**
ZALV Zalesovo Beam 152.18 30 PKPbc **PKPbc** **18 34 10.6 -0.8**
comp=Z,1.3nm,0.7s,baz=325,slow=4.3,SNR=5.1

IDC 23 18:19:54.0±3.1, 32°.79S×178°.59W, h0km, mb3.5/2, mb1 3.8/3, mb1mx3.5/48, mbtmp3.6/3, ML3.4/1, Error ellipse: s-maj=72.5km s-min=46.7km az=121.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.49**	**211**	Pn	Pn	18 21 30.0	-0.7
	0.9nm,0.3s,baz=270,slow=6.1,SNR=6.1						
URZ				Sn	Sn	18 22 41.0	-4.5
	0.3nm,0.3s,baz=127,slow=20,SNR=3.0						
ASAR	**Alice Springs**	**42.54**	**270**	P	P	18 27 51.2	-0.3
	0.7nm,0.9s,baz=114,slow=8.2,SNR=4.0						
WRA	**Warramunga Arr**	**43.74**	**275**	P	P	18 28 01.6	+0.2
	0.4nm,0.4s,baz=114,slow=7.8,SNR=9.4						
FINES	**FINESS Array B**	**147.19**	**338**	PKPbc	PKPbc	18 39 37.6	-0.8
	6.3nm,1.1s,baz=30,slow=3.7,SNR=5.1						

MEX 23 18:21:49.0±0.8, 28°.05N×112°.27W, h16km, MD3.7, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRIG	**Santa Rosalia**	**0.73**	**178**	*e*P	Pg	18 22 00.9	-2.3
SRIG				*i* P	Pg	18 22 00.9	-2.3
	baz=358,slow=6.2						
SRIG				*i* S	Sg	18 22 08.9	-4.0
HSIG		**1.51**	**50**	*i* P	Pg	18 22 26.0	+8.0

*ISCJB **23** 18:25:34.4±1.6, 32°.94S±0°.06×178°.0W±0°.2, h30km±15km, mb4.6/8, MS3.5/6, Error ellipse: s-maj=27.3km s-min=5.5km az=16.6*
*WEL **23** 18:25:34.3±1.0, 33°.5±5°.×17°.8W±1°.6, h33km, ML5.0/12*
*IDC **23** 18:25:40.3±0.8, 33°.03S×178°.30W, h46km±4km, mb4.4/6, mb1 4.5/9, mb1mx3.9/50, mbtmp4.6/9, MS3.5/6, Ms1 3.5/6, ms1mx3.0/52, Error ellipse: s-maj=23.2km s-min=14.7km az=146.0*
*NEIC **23** 18:25:40.3±1.2, 32°.99S×178°.31W, h47km±9km, mb4.6/2, Error ellipse: s-maj=14.8km s-min=9.1km az=113.0*
ISC 23 18:25:39.2±0.8, 33°.07S±0°.07×178°.0W±0°.1, h48km±5km, h48km:pP-P, n54, σ1°35/59, mb4.6/8, MS3.5/6, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.80**	**1**	P	Pn	18 26 28.2	-7.0
GLKZ				S	Sn	18 27 06.7	-12
RAO	**Raoul Island**	**3.81**	**1**	P	**Pn**	**18 26 36.2**	**+0.9**
	50nm,0.3s,baz=45,slow=19,SNR=3.0						
RAO				S	Sn	18 27 08.0	-11
	209nm,0.3s,baz=328,slow=23,SNR=6.5						
RIZ	**Raoul Island**	**3.81**	**1**	P	Pn	18 26 28.9	-6.4
RIZ				S	Sn	18 27 07.8	-11
MXZ	**Matakaoa Point**	**5.42**	**213**	P	**Pn**	**18 26 58.5**	**+1.2**
MXZ				S	**Sn**	**18 27 58.0**	**-0.3**
WMGZ	**Waiomatatini S**	**5.58**	**211**	P	**Pn**	**18 27 01.4**	**+1.9**
WMGZ				S	**Sn**	**18 28 05.3**	**+2.9**
PKGZ	**Pakihiroa**	**5.79**	**213**	P	**Pn**	**18 27 01.6**	**-0.9**
PKGZ				S	**Sn**	**18 28 08.5**	**+1.0**
HAZ	**Te Kaha**	**5.82**	**215**	P	**Pn**	**18 27 02.8**	**0.0**
HAZ				S	**Sn**	**18 28 10.2**	**+2.0**
PUZ	**Puketiti**	**5.86**	**211**	P	**Pn**	**18 27 01.7**	**-1.8**
PUZ				S	**Sn**	**18 28 10.9**	**+1.6**
RUGZ	**Raukumara Rang**	**6.03**	**215**	S	**Sn**	**18 28 14.3**	**+0.6**
TWGZ	**Tauwhareparae**	**6.07**	**212**	P	**Pn**	**18 27 05.8**	**-0.5**
CNGZ	**Carnagh Statio**	**6.23**	**209**	P	**Pn**	**18 27 07.2**	**-1.3**
TKGZ	**Te Karaka**	**6.34**	**211**	P	**Pn**	**18 27 10.3**	**+0.3**
MWZ	**Matawai**	**6.40**	**214**	P	**Pn**	**18 27 10.2**	**-0.6**
OPRZ	**Ohinepanea**	**6.53**	**222**	P	**Pn**	**18 27 13.2**	**+0.6**
URZ	**Urewera**	**6.54**	**216**	P	**Pn**	**18 27 11.8**	**-1.0**
	3.2nm,0.3s,baz=347,slow=2.4,SNR=19						
URZ				S	**Sn**	**18 28 24.4**	**-1.6**
	8.2nm,0.3s,baz=141,slow=17,SNR=4.4						
URZ	**Urewera**	**6.54**	**216**	P	**Pn**	**18 27 11.7**	**-1.0**
KNZ	**Kokohu**	**6.91**	**209**	P	**Pn**	**18 27 14.6**	**-3.1**
WCZ	**Waipu Caves**	**6.96**	**244**	P	**Pn**	**18 27 21.0**	**+2.6**
OUZ	**Omahuta**	**7.31**	**251**	P	**Pn**	**18 27 24.4**	**+1.2**
BKZ	**Black Stump Fm**	**7.55**	**215**	P	Pn	18 27 12.8	-14
BKZ	**Black Stump Fm**	**7.55**	**215**	P	Pn	18 27 12.8	-14
DZM	**Mont Dzumac**	**17.61**	**305**	P	**Pn**	**18 29 39.4**	**-1.8**
	0.1nm,0.3s,baz=127,slow=15,SNR=3.0						
DZM	**Mont Dzumac**	**17.61**	**305**	*e*P	**P**	**18 29 43.8**	**+2.1**
	40nm,1.3s						
DZM				*e*LR	LR	18 33 27.8	
	368nm,22.4s						
FUNA	**Funafuti**	**24.56**	**353**	*e*P	**P**	**18 30 53.3**	**-1.3**
PPT2	**Papeete2**	**29.82**	**66**	*e*LR	LR	18 39 21.3	
	114nm,25.8s						
PPT	**Papeete**	**29.83**	**66**	LR	LR	18 41 19.0	
	comp=Z,22nm,21.5s,baz=248,slow=31						
STKA	**Stephens Creek**	**33.98**	**261**	LR	LR	18 45 19.3	
	comp=Z,178nm,18.6s,baz=49,slow=35						
CTA	**Charters Tower**	**34.33**	**283**	P	**P**	**18 32 20.7**	**-0.7**
	9.1nm,0.6s,baz=118,slow=11,SNR=21						
CTA				pP	**pP**	**18 32 34.1**	**+0.2**
	7.2nm,0.6s,baz=113,slow=10,SNR=3.1						
CTAO	**Charters Tower**	**34.33**	**283**	*e*P	**P**	**18 32 20.9**	**-0.5**
	76nm,0.7s						
PMG	**Port Moresby**	**39.83**	**298**	P	**P**	**18 33 07.3**	**-0.7**
	9.5nm,0.9s,baz=116,slow=7.1,SNR=3.2						
TAOE	**Nuku Hiva Isla**	**42.40**	**64**	*e*LR	LR	18 45 13.2	
	50nm,24.1s						
ASAR	**Alice Springs**	**43.05**	**270**	P	**P**	**18 33 33.4**	**-1.1**
	5.7nm,0.7s,baz=111,slow=7.5,SNR=81						
ASAR				pP	**pP**	**18 33 47.1**	**-0.3**
	5.3nm,0.8s,baz=110,slow=7.9,SNR=8.2						
ASAR				S	**S**	**18 39 54.1**	**-3.0**
	0.5nm,0.9s,baz=107,slow=15,SNR=3.3						
WRAB	**Tennant Creek**	**44.27**	**275**	*e*P	**P**	**18 33 42.6**	**-1.7**
	22nm,1.1s						
WRA	**Warramunga Arr**	**44.28**	**275**	P	**P**	**18 33 42.6**	**-1.8**
	7.2nm,0.6s,baz=114,slow=7.7,SNR=91						
WRA				pP	**pP**	**18 33 56.5**	**-0.8**
	7.3nm,0.5s,baz=114,slow=7.7,SNR=8.5						
FITZ	**Fitzroy Crossi**	**52.42**	**272**	P	**P**	**18 34 45.2**	**-1.9**
	3.8nm,0.7s,baz=130,slow=7.9,SNR=8.2						
FITZ				LR	LR	18 56 18.1	
	comp=Z,101nm,18.8s,baz=84,slow=35						
CASY	**Casey**	**52.81**	**209**	*e*P	**P**	**18 34 51.2**	**+2.0**
	2.4nm,0.8s						

MJAR Matsushiro Arr 80.44 326 LR LR 19 09 28.2
comp=Z,20nm,20.7s,baz=140,slow=33
JNU Nakatsue 81.56 319 LR LR 19 08 37.6
comp=Z,20nm,21.6s,baz=303,slow=32
PETK Petropavlovsk- 88.40 346 P **P** **18 38 25.3 -0.2**
1.4nm,0.6s,baz=110,slow=6.9,SNR=4.7
KDAK Kodiak Island 92.99 13 LR LR 19 14 33.6
comp=Z,20nm,19.3s,baz=115,slow=32
MKAR Makanchi Array 119.48 309 PKP **PKPdf** **18 44 23.8 +0.7**
0.4nm,0.6s,baz=221,slow=2.4,SNR=4.7
MKAR pPKP **pPKPdf** **18 44 37.1 -0.6**
0.5nm,0.5s,baz=208,slow=0.6,SNR=4.1
ZALV Zalesovo Beam 120.02 317 PKP **PKPdf** **18 44 24.4 +0.5**
0.5nm,0.4s,baz=207,slow=0.6,SNR=3.5
KURK Kurchatov 122.89 313 PKP **PKPdf** **18 44 29.8 +0.3**
KURK pPKP **pPKPdf** **18 44 43.2 -0.9**
KURBB Kurchatov Arra 122.92 312 PKP **PKPdf** **18 44 29.8 +0.2**
1.0nm,0.7s,baz=113,slow=1.8,SNR=12
KURBB pPKP **pPKPdf** **18 44 43.2 -0.9**
1.6nm,0.8s,baz=112,slow=1.9,SNR=8.1
BVAR Borovoye Array 128.30 314 PKP **PKPdf** **18 44 41.6 +1.8**
1.0nm,0.6s,baz=97,slow=1.4,SNR=9.3
BVAR pPKP **pPKPdf** **18 44 54.2 -0.2**
0.9nm,0.5s,baz=146,slow=2.9,SNR=5.2
ARCES ARCESS Array B 141.19 347 PKhKP PKPpre 18 44 60.0
0.7nm,0.6s,baz=66,slow=3.0,SNR=4.3
KBZ Khabaz 146.55 301 PKPbc **PKPbc** **18 45 15.4 +0.3**
2.4nm,0.9s,baz=216,slow=2.4,SNR=4.9
FINES FINESS Array B 147.64 339 PKPbc **PKPbc** **18 45 18.1 +0.5**
6.4nm,0.6s,baz=58,slow=3.9,SNR=32
FINES pPKPbc **pPKPbc** **18 45 31.9 -0.1**
11nm,0.7s,baz=45,slow=4.3,SNR=7.3
ASF Jabal al Asfar 150.69 278 PKPbc **PKPbc** **18 45 26.9 +0.6**
2.0nm,0.7s,baz=77,slow=3.6,SNR=4.2
NB2 NORSAR Subarra 151.38 351 PKP **PKPbc** **18 45 27.6 +0.7**
comp=Z,1.0nm,0.6s,baz=16,slow=2.6
HFS Hagfors 151.85 348 PKPbc **PKPbc** **18 45 28.5 +0.5**
comp=Z,3.5nm,0.7s,baz=2.9,slow=2.9,SNR=8.1
MMAI Mount Meron Ar 152.08 279 PKPbc **PKPbc** **18 45 31.3 +1.9**
comp=Z,4.8nm,0.7s,baz=81,slow=5.3,SNR=15
MMAI pPKPbc **pPKPbc** **18 45 44.2 +0.2**
comp=Z,3.7nm,0.6s,baz=75,slow=6.3,SNR=7.6
AKASG Malin Array Be 153.39 320 PKPbc **PKPbc** **18 45 31.7 +0.1**
comp=Z,0.2nm,0.3s,baz=41,slow=1.2,SNR=6.7
AKASG pPKPbc **PKPab** **18 45 44.7 +0.8**
comp=Z,0.8nm,0.4s,baz=67,slow=1.7,SNR=3.3
BRTR Keskin Array B 153.79 294 PKPbc **PKPbc** **18 45 34.2 +1.1**
comp=Z,1.6nm,0.6s,baz=131,slow=3.8,SNR=12

WEL 23 18:26:38.1, 41°.3S±0°.5×175°.7E±0°.8, h17km, ML3.6/12, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRWZ	**Traveller**	**0.10**	**189**	P	Pg	18 26 42.3	+0.6
TRWZ				S	Sg	18 26 45.5	+1.4
MTW	**Mount Morrison**	**0.21**	**311**	P	Pb	18 26 43.5	+0.1
MTW				S	Sb	18 26 47.7	+0.7
PAWZ	**Paruwai Farm**	**0.23**	**248**	P	Pb	18 26 44.3	+0.5
PAWZ				S	Sb	18 26 49.0	+1.4
TMWZ	**Te Maipa**	**0.23**	**36**	P	Pb	18 26 44.1	+0.3
TMWZ				S	Sb	18 26 48.8	+1.1
MSWZ	**Moikau Station**	**0.37**	**251**	P	Pb	18 26 46.6	+0.4
MSWZ				S	Sb	18 26 53.3	+1.7
HOWZ	**Holdsworth Sta**	**0.42**	**340**	P	Pb	18 26 47.3	+0.2
HOWZ				S	Sb	18 26 54.1	+0.9
PLWZ	**Palliser**	**0.44**	**231**	P	Pb	18 26 47.9	+0.6
PLWZ				S	Sn	18 26 55.8	-1.4
CAW	**Cannon Point**	**0.52**	**291**	P	Pb	18 26 49.2	+0.4
CAW				S	Sb	18 26 57.5	+1.6
CPWZ	**Castlepoint**	**0.54**	**44**	P	Pb	18 26 49.6	+0.6
TIWZ	**Tintock**	**0.54**	**14**	P	Pb	18 26 49.6	+0.6
TIWZ				S	Sn	18 26 58.5	-1.1
OGWZ	**Otaki Gorge**	**0.63**	**319**	P	Pb	18 26 50.9	+0.4
BHW	**Baring Head**	**0.64**	**260**	P	Pb	18 26 51.0	+0.2
MRZ	**Mangatainoka R**	**0.64**	**351**	P	Pb	18 26 50.9	+0.1
BFZ	**Birch Farm**	**0.73**	**34**	P	Pb	18 26 52.3	-0.1
KIW	**Kapiti Island**	**0.74**	**305**	P	Pg	18 26 52.9	+0.3
PRWZ	**Pori Road**	**0.77**	**15**	P	Pg	18 26 53.2	+0.2
POWZ	**Post Office Ro**	**0.90**	**3**	P	Pg	18 26 55.5	-0.2
POWZ				P	Pb	18 26 55.4	+0.1
ANWZ	**Angora Road**	**1.02**	**35**	P	Pb	18 26 56.0	-1.2
DVHZ	**Dannevirke**	**1.05**	**19**	P	Pb	18 26 56.9	-0.9
TCW	**Tory Channel**	**1.08**	**274**	P	Pb	18 26 57.6	-0.8
OHWZ	**Ohakea**	**1.13**	**344**	P	Pg	18 26 59.8	-0.1
CMWZ	**Cape Campbell**	**1.21**	**248**	P	Pn	18 26 59.8	-0.5
PRHZ	**Porangahau**	**1.25**	**35**	P	Pn	18 26 59.0	-1.6
TSZ	**Takapari Road**	**1.25**	**9**	P	Pn	18 26 60.0	-0.8
TUWZ	**Tuamarina**	**1.34**	**264**	P	Pn	18 27 00.6	-1.4
WPHZ	**Waipukurau**	**1.35**	**25**	P	Pn	18 27 01.2	-0.9
PNHZ	**Pukenui**	**1.43**	**15**	P	Pn	18 27 02.5	-0.7
DUWZ	**D'Urville Isla**	**1.44**	**289**	P	Pn	18 27 03.3	-0.1
BSWZ	**Blackbirch Sta**	**1.44**	**252**	P	Pn	18 27 02.4	-1.0
PXZ	**Pawanui**	**1.54**	**35**	P	Pn	18 27 02.8	-1.9
WAZ	**Wanganui**	**1.64**	**340**	P	Pb

AFI	**Afiamalu**	10.13	45	*e*P	P	18 39 37.0	-3.0
AFI				*e*S	S	18 41 29.4	-5.9
AFI	**Afiamalu**	10.13	45	*e*P	P	18 39 37.0	-3.0
AFI				*e*S	S	18 41 29.4	-5.9
DZM	**Mont Dzumac**	13.47	264	P	P	18 40 11.5	-1.2
	3.0nm,0.3s,baz=100,slow=11,SNR=23						
DZM	**Mont Dzumac**	13.47	264	*e*P	P	18 40 11.9	-0.7
OUZ	**Omahuta**	15.28	203	*e*P	P	18 40 31.8	+2.6
	31nm,0.9s						
OUZ	**Omahuta**	15.28	203	P	P	18 40 31.4	+2.3
GRZ	**Great Barrier**	15.63	197	P	P	18 40 34.5	+2.1
WIAZ	**Waiheke Island**	16.23	197	P	P	18 40 40.9	+3.1
MXZ	**Matakaoa Point**	16.35	187	*e*P	P	18 40 37.7	-1.2
	75nm,1.0s						
MXZ	**Matakaoa Point**	16.35	187	P	P	18 40 40.1	+1.2
MXZ				S	S	18 43 16.1	-5.3
RVAZ	**Riverhead Bore**	16.36	198	P	P	18 40 41.5	+2.5
HBAZ	**Herne Bay Bore**	16.39	198	P	P	18 40 41.7	+2.4
ETAZ	**East Tamaki Re**	16.43	197	P	P	18 40 42.2	+2.5
MKAZ	**Moumakai**	16.51	196	P	P	18 40 42.6	+2.2
WTAZ	**Waiatarua**	16.52	198	P	P	18 40 43.1	+2.6
KBAZ	**Karaka Road Bo**	16.58	197	P	P	18 40 43.9	+3.0
WMGZ	**Waiomatatini S**	16.59	187	P	P	18 40 41.6	+0.4
WMGZ				S	S	18 43 20.2	-5.2
HAZ	**Te Kaha**	16.61	189	P	P	18 40 41.1	-0.1
HAZ				S	S	18 43 19.2	-6.4
AWAZ	**Awhitu Peninsu**	16.62	198	P	P	18 40 43.7	+2.3
PKGZ	**Pakihiroa**	16.70	188	P	P	18 40 41.9	-0.3
RUGZ	**Raukumara Rang**	16.83	189	P	P	18 40 43.5	+0.1
PUZ	**Puketiti**	16.86	187	P	P	18 40 43.1	-0.5
OPRZ	**Ohinepanea**	16.90	192	P	P	18 40 45.2	+1.3
TWGZ	**Tauwhareparae**	17.00	188	P	P	18 40 45.3	+0.4
TOZ	**Tahuroa Road**	17.02	195	P	P	18 40 45.0	-0.1
URZ	**Urewera**	17.21	190	P	P	18 40 44.8	-1.9
	14nm,0.3s,baz=257,slow=3.2,SNR=65						
URZ				S	S	18 43 29.5	-5.8
	1.7nm,0.3s,baz=177,slow=22,SNR=7.0						
URZ	**Urewera**	17.21	190	*e*P	P	18 40 44.4	-2.4
	26nm,0.8s						
URZ				*e*S	S	18 43 29.5	-5.8
URZ	**Urewera**	17.21	190	P	P	18 40 44.5	-2.2
MWZ	**Matawai**	17.22	189	P	P	18 40 45.7	-1.2
CNGZ	**Carnagh Statio**	17.27	187	P	P	18 40 47.1	-0.2
HRRZ	**Handcock Road**	17.48	192	P	P	18 40 39.9	-9.5
HIZ	**Hauiti**	17.92	196	*e*P	P	18 40 54.8	+1.6
	412nm,1.5s						
RAR	**Rarotonga**	18.00	93	P	P	18 40 55.5	+1.2
	1.5nm,0.3s,baz=282,slow=14,SNR=5.1						
RAR	**Rarotonga**	18.00	93	*e*P	P	18 40 55.9	+1.6
	235nm,1.8s						
RAR	**Rarotonga**	18.00	93	*e*P	P	18 40 55.9	+1.6
RAR				pmax	pmax		
	comp=Z,235nm,1.8s						
BKZ	**Black Stump Fm**	18.20	191	*e*P	P	18 40 54.1	-1.7
	comp=Z,126nm,1.9s						
BKZ				*e*S	S	18 43 48.5	-2.9
BFZ	**Birch Farm**	19.71	191	*e*P	P	18 41 08.8	-0.7
	comp=Z,50nm,1.0s						
BFZ				*e*S	S	18 44 13.6	-1.8
KNTN	**Kanton**	19.77	22	*e*P	P	18 41 09.2	-1.2
	comp=Z,98nm,0.8s						
SNZO	**South Karori**	20.62	193	*e*P	P	18 41 16.8	-0.8
	comp=Z,423nm,1.7s						
THZ	**Tophouse**	21.48	197	*e*P	P	18 41 24.4	-1.0
	comp=Z,215nm,1.9s						
THZ				*e*S	S	18 44 38.9	-4.5
KHZ	**Kahutara**	21.94	195	*e*P	P	18 41 28.1	-1.3
	comp=Z,319nm,2.0s						
LHI	**Lord Howe Isla**	22.02	238	*e*P	P	18 41 30.3	+0.1
	comp=Z,442nm,1.9s						
LTZ	**Lake Taylor**	22.60	197	*e*P	P	18 41 33.5	-1.8
	comp=Z,184nm,1.6s						
OXZ	**Oxford**	23.17	197	*e*P	P	18 41 39.4	-0.9
	comp=Z,200nm,1.8s						
MQZ	**McQueen's Vall**	23.37	195	*e*P	P	18 41 40.2	-1.8
	comp=Z,296nm,1.8s						
RPZ	**Rata Peaks**	23.80	198	P	P	18 41 46.8	+0.9
	comp=Z,7.1nm,0.5s,baz=354,slow=0.7,SNR=7.2						
RPZ	**Rata Peaks**	23.80	198	*e*P	P	18 41 46.5	+0.5
	comp=Z,189nm,1.8s						
TARA	**Tarawa**	23.84	340	*e*P	P	18 41 46.1	-0.5
	comp=Z,161nm,0.8s						
FOZ	**Fox Glacier**	24.01	200	*e*P	P	18 41 47.2	-0.5
	comp=Z,439nm,2.0s						
LBZ	**Lake Benmore**	24.67	199	*e*P	P	18 41 52.0	-1.5
	comp=Z,107nm,1.7s						
ODZ	**Otahua Downs**	25.14	197	*e*P	P	18 41 56.9	-0.8
	comp=Z,85nm,1.5s						
WKZ	**Wanaka**	25.43	200	*e*P	P	18 42 00.1	-0.2
	comp=Z,216nm,1.7s						
MLZ	**Mavora Lakes**	26.20	201	*e*P	P	18 42 07.2	+0.2
	comp=Z,36nm,0.8s						
DCZ	**Deep Cove**	26.61	202	*e*P	P	18 42 10.2	-0.3
	comp=Z,38nm,0.9s						
WHZ	**Wether Hill Ro**	26.72	200	*e*P	P	18 42 11.1	-0.4
	comp=Z,69nm,0.8s						
EIDS	**Eidsvold**	27.66	256	P	P	18 42 20.1	+0.1
	baz=28,SNR=15						
EIDS	**Eidsvold**	27.66	256	*e*P	P	18 42 19.8	-0.2
	comp=Z,20nm,0.6s						
ARMA	**Armidale**	27.80	245	P	P	18 42 22.3	+1.0
	baz=28,SNR=23						
ARMA	**Armidale**	27.80	245	*e*P	P	18 42 22.1	+0.8
	comp=Z,13nm,0.6s						
PPT	**Papeete**	28.06	88	*e*P	P	18 42 24.3	+0.7
PPT	**Papeete**	28.06	88	*e*P	P	18 42 24.3	+0.7
PPTF	**Pamatai, Papee**	28.06	88	*e*P	P	18 42 24.6	+1.0
	comp=Z,212nm,1.3s						
MGCD	**Mangrove Creek**	28.92	239	P	P	18 42 32.0	+1.2
	baz=29,SNR=5.2						
RMQ	**Roma**	29.80	254	P	P	18 42 40.0	+1.5
	baz=30,SNR=8.5						
CNB	**Canberra Magne**	30.93	236	P	P	18 42 49.1	+1.0
	baz=31,SNR=15						
CAN	**Canberra**	31.22	237	*e*P	P	18 42 51.0	+0.5
	comp=Z,102nm,2.0s						
CAN	**Canberra**	31.22	237	*e*P	P	18 42 51.1	+0.5
CAN				pmax	pmax		
	comp=Z,102nm,2.0s						
XMAS	**Kiritimati**	31.42	45	*e*P	P	18 42 53.6	+1.2
	comp=Z,85nm,1.3s						
CTA	**Charters Tower**	32.41	266	P	P	18 43 00.0	-0.7
	comp=Z,40nm,0.4s,baz=90,slow=11,SNR=124						
CTA				ScP	ScP	18 48 17.1	+1.9
	comp=Z,6.6nm,0.8s,baz=34,slow=3.6,SNR=4.2						
CTAO	**Charters Tower**	32.41	266	*e*P	P	18 43 00.4	-0.3
	comp=Z,45nm,0.9s						
CTAO	**Charters Tower**	32.41	266	*e*P	P	18 43 00.4	-0.3
CTAO				pmax	pmax		
	comp=Z,45nm,0.9s						
RABL	**Rabaul**	32.69	297	*e*P	P	18 43 01.5	-1.7
	comp=Z,36nm,0.6s						
CMSA	**Cobar Meteorol**	33.02	245	P	P	18 43 06.3	+0.5
	baz=33,SNR=7.6						
QLP	**Quilpie**	33.85	254	P	P	18 43 12.7	0.0
	baz=34,SNR=29						
MTSU	**Mount Surprise**	34.55	269	P	P	18 43 18.7	+0.1
	baz=34,SNR=72						
PMG	**Port Moresby**	34.55	285	P	P	18 43 17.6	-1.0
	comp=Z,94nm,0.8s,baz=83,slow=6.0,SNR=20						
PMG	**Port Moresby**	34.55	285	*e*P	P	18 43 18.3	-0.4
	comp=Z,101nm,0.8s						
PMG	**Port Moresby**	34.55	285	*e*P	P	18 43 18.3	-0.4
PMG				pmax	pmax		
	comp=Z,101nm,0.8s						
TOO	**Toolangi**	34.60	234	P	P	18 43 19.5	+0.7
	baz=35,SNR=8.7						
TAU	**Tasmania Unive**	35.34	225	*e*P	P	18 43 25.4	+0.6
	comp=Z,256nm,1.9s						
TAU	**Tasmania Unive**	35.34	225	*e*P	P	18 43 25.4	+0.6
TAU				pmax	pmax		
	comp=Z,256nm,1.9s						
PATS	**Pohnpei**	35.70	319	*e*P	P	18 43 28.4	+0.3
	comp=Z,46nm,0.8s						
STKA	**Stephens Creek**	36.52	245	P	P	18 43 34.5	-0.3
	comp=Z,10nm,0.5s,baz=90,slow=10,SNR=19						
STKA	**Stephens Creek**	36.52	245	*e*P	P	18 43 34.8	+0.1
	comp=Z,2.3nm,0.6s						
STKA	**Stephens Creek**	36.52	245	*e*P	P	18 43 34.8	+0.1
STKA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
COEN	**Coen**	36.63	275	P	P	18 43 36.3	+0.4
	baz=36,SNR=20						
COEN	**Coen**	36.63	275	*e*P	P	18 43 36.1	+0.3
	comp=Z,44nm,0.8s						
MCQ	**Macquarie Isla**	37.07	201	*e*P	P	18 43 40.8	+2.1
	comp=Z,252nm,1.5s						
MCQ	**Macquarie Isla**	37.07	201	*e*P	P	18 43 40.8	+2.1
MCQ				pmax	pmax		
	comp=Z,252nm,1.5s						
MANU	**Manus Island**	37.87	296	*e*P	P	18 43 45.9	+0.1
	comp=Z,144nm,1.3s						
QIS	**Mount Isa**	38.51	263	P	P	18 43 50.5	-0.6
	baz=38,SNR=7.9						
HTT	**Hallett**	38.95	243	P	P	18 43 54.6	+0.1
	baz=39,SNR=8.7						
TAOE	**Nuku Hiva Isla**	39.47	78	*e*P	P	18 43 59.9	+1.1
	comp=Z,36nm,0.6s						
BBOO	**Buckleboo**	41.28	244	P	P	18 44 12.6	-0.3
	baz=41,SNR=32						
BBOO	**Buckleboo**	41.28	244	*e*P	P	18 44 12.5	-0.3
	comp=Z,20nm,0.7s						
WAKE	**Wake Island**	42.69	340	*e*P	P	18 44 23.5	-0.4
	comp=Z,232nm,1.1s						
AS01	**Alice Springs**	43.31	258	*e*P	P	18 44 28.4	-0.4
AS01				*e*PcP	PcP	18 46 03.7	+0.3
AS31	**Alice Springs**	43.35	258	*e*P	P	18 44 28.7	-0.4
	comp=Z,9.2nm,0.6s						
AS31				*e*ScP	ScP	18 48 59.1	+2.1
AS31				*e*S	S	18 50 11.2	-2.6
AS31				*e*ScS	ScS	18 53 20.7	0.0
ASAR	**Alice Springs**	43.35	258	P	P	18 44 28.9	-0.3
	comp=Z,28nm,0.6s,baz=92,slow=7.6,SNR=590						
ASAR				PcP	PcP	18 46 03.7	+0.2
	comp=Z,4.0nm,0.7s,baz=96,slow=4.0,SNR=7.2						
ASAR				ScP	ScP	18 48 59.1	+2.1
	comp=Z,4.6nm,0.8s,baz=108,slow=4.2,SNR=12						
ASAR				S	S	18 50 10.8	-3.0
	comp=Z,7.4nm,0.8s,baz=95,slow=16,SNR=22						
ASAR				ScS	ScS	18 53 20.7	0.0
	comp=Z,2.9nm,0.9s,baz=90,slow=7.4,SNR=11						
JAY	**Jayapura**	43.35	290	P	P	18 44 28.9	-0.4
	comp=Z,125nm,0.7s,baz=138,slow=4.1,SNR=94						
WB2	**Warramunga Arr**	43.48	263	*e*P	P	18 44 29.5	-0.7
	comp=Z,43nm,0.9s						
WRAB	**Tennant Creek**	43.48	263	*e*P	P	18 44 29.2	-0.9
	comp=Z,36nm,0.9s						
WRAB	**Tennant Creek**	43.48	263	*d i*P	P	18 44 29.3	-0.9
WRAB				pmax	pmax		
	comp=Z,39nm,0.9s						
WR1	**Warramunga Arr**	43.49	263	*e*P	P	18 44 29.4	-0.8
	comp=Z,54nm,0.9s						
WR1				*e*ScP	ScP	18 48 59.1	+1.5
WR1				*e*S	S	18 50 11.6	-4.3
WRA	**Warramunga Arr**	43.49	263	P	P	18 44 29.4	-0.8
	comp=Z,20nm,0.5s,baz=97,slow=7.7,SNR=349						
WRA				ScP	ScP	18 48 59.1	+1.5
	comp=Z,2.9nm,0.8s,baz=99,slow=3.8,SNR=6.3						
WRA				S	S	18 50 11.6	-4.3
	comp=Z,2.6nm,0.9s,baz=97,slow=14,SNR=5.8						
KHU	**Kahuku**	46.39	31	*e*P	P	18 44 52.6	+0.1
	comp=Z,161nm,1.3s						
KHU	**Kahuku**	46.39	31	*e*P	P	18 44 52.6	+0.1
KHU				pmax	pmax		
	comp=Z,161nm,1.3s						
KHLU	**Kahalu'u**	46.56	31	*e*P	P	18 44 51.5	-2.1
	comp=Z,85nm,1.0s						
RIM	**Rim**	46.69	32	*e*P	P	18 44 55.0	+0.4
	comp=Z,272nm,0.9s						
KDU	**Kakadu**	46.96	272	P	P	18 44 55.9	-0.7
	baz=47,SNR=25						
MTN	**Manton Dam**	48.16	272	P	P	18 45 04.7	-0.9
	baz=48,SNR=10						
MTN	**Manton Dam**	48.16	272	*e*P	P	18 45 04.7	-0.9
	comp=Z,37nm,0.7s						
WRKA	**Warakurna**	48.27	255	P	P	18 45 06.0	-0.4
	baz=48,SNR=121						
GUMO	**Guam**	49.55	311	P	P	18 45 14.6	-1.1
	comp=Z,226nm,1.1s,baz=113,slow=7.7,SNR=5.4						
KNRA	**Kununurra**	49.60	267	P	P	18 45 15.9	-0.3
	baz=50,SNR=14						
FITZ	**Fitzroy Crossi**	51.92	263	P	P	18 45 32.5	-0.4
	comp=Z,5.7nm,0.4s,baz=110,slow=6.1,SNR=56						
SOEI	**Soe**	55.52	273	*e*P	P	18 45 59.3	+1.0
	comp=Z,104nm,0.9s						
BATI	**Baumata**	55.93	272	P	P	18 46 02.1	+1.0
	comp=Z,42nm,0.6s,baz=156,slow=10.0,SNR=9.0						
MEEK	**Meekatharra**	56.70	251	P	P	18 46 05.6	-0.6
	baz=57,SNR=6.4						
KLBR	**Kellerberrin**	56.80	246	P	P	18 46 06.5	-0.3
	baz=57,SNR=8.5						
SBA	**Scott Base**	57.00	184	*e*P	P	18 46 10.0	+2.7
	comp=Z,48nm,1.0s						
SBA	**Scott Base**	57.00	184	P	P	18 46 10.4	+3.1
SBA				pmax	pmax		
	comp=Z,48nm,1.0s						
VNDA	**Vanda**	57.02	185	P	P	18 46 08.7	+1.3
	comp=Z,7.8nm,0.8s,baz=353,slow=7.3,SNR=15						
VNDA	**Vanda**	57.02	185	*e*P	P	18 46 09.6	+2.2
	comp=Z,74nm,1.8s						
VNDA	**Vanda**	57.02	185	*e*P	P	18 46 09.6	+2.2
VNDA				pmax	pmax		
	comp=Z,74nm,1.8s						
BLDU	**Ballidu**	57.80	247	P	P	18 46 13.2	-0.4
	baz=58,SNR=9.4						
MORW	**Morawa**	58.58	248	P	P	18 46 18.6	-0.2
	baz=58,SNR=4.9						
CBIJ	**Chichi jima**	61.00	320	*e*P	P	18 46 33.4	-1.3
	comp=Z,66nm,0.6s						
JCJ	**Chichijima**	61.00	320	P	P	18 46 33.3	-1.4
	comp=Z,58nm,0.6s,baz=273,slow=21,SNR=5.9						
GIRL	**Giralia**	61.36	255	P	P	18 46 38.2	+1.0
	baz=61,SNR=3.0						
CTBH	**Cotabato--PC H**	62.40	291	‖ *i*P	P	18 46 43.8	-0.2
CASY	**Casey**	62.80	205	*e*P	P	18 46 46.2	+0.5
	comp=Z,36nm,1.0s						
JHJ	**Hachijo jima 2**	66.86	323	P	P	18 47 11.2	-0.5
	comp=Z,23nm,0.3s,baz=94,slow=17,SNR=3.5						
QSPA	**South Pole Qui**	68.76	180	P	P	18 47 23.5	+0.7
	comp=Z,59nm,0.9s,baz=34,slow=0.5,SNR=133						
MIR	**Mirnyy**	69.83	205	‖ *i*P	P	18 47 31.0	+2.0
MIR				*i*		18 47 51.0	
MIR				pmax	pmax		
	comp=Z,42nm,1.0s						
JOW	**Kunigami**	69.92	311	P	P	18 47 30.6	+0.3
	comp=Z,17nm,0.7s,baz=86,slow=26,SNR=3.5						
JOW	**Kunigami**	69.92	311	*e*P	P	18 47 30.5	+0.3
	comp=Z,30nm,0.9s						
MJAR	**Matsushiro Arr**	70.27	325	P	P	18 47 31.7	-0.3
	comp=Z,14nm,0.8s,baz=167,slow=6.0,SNR=12						
MAJO	**Matsushiro**	70.27	325	*e*P	P	18 47 31.8	-0.3
	comp=Z,17nm,0.8s						
MAJO	**Matsushiro**	70.27	325	*d i*P	P	18 47 31.2	-0.9
MAJO				pmax	pmax		
	comp=Z,22nm,0.9s						
MJB9	**Matsu-Tunnel**	70.27	325	*e*P	P	18 47 31.7	-0.4
	comp=Z,18nm,0.8s						
SBUM	**Sibu**	71.14	280	*e*P	P	18 47 38.5	+0.8
	comp=Z,7.4nm,1.0s						
LEM	**Lembang**	72.01	270	P	P	18 47 42.2	-0.7
	comp=Z,17nm,0.7s,baz=13,slow=16,SNR=4.7						
ERM	**Erimo**	72.03	331	‖ *e*P	P	18 47 40.7	-1.5
JNU	**Nakatsue**	72.17	317	P	P	18 47 42.2	-1.1
	comp=Z,19nm,1.0s,baz=71,slow=2.2,SNR=7.6						
JNU	**Nakatsue**	72.17	317	*e*P	P	18 47 42.9	-0.4
	comp=Z,32nm,1.1s						
KSM	**Kuching**	72.52	279	*e*P	P	18 47 46.0	+0.4
	comp=Z,16nm,0.8s						
KUR	**Kuril'sk**	72.74	336	‖ *e*P	P	18 47 44.1	-2.1
TPUB	**Ta-pu**	73.57	304	*e*P	P	18 47 50.5	-0.9
	comp=Z,54nm,0.9s						
SSLB	**Suanglung**	73.58	304	*e*P	P	18 47 50.1	-1.4
	comp=Z,20nm,0.7s						
ASAJ	**Asahikawa**	73.96	332	P	P	18 47 53.9	+0.8
	comp=Z,19nm,0.8s,baz=212,slow=8.2,SNR=24						
ASAJ	**Asahikawa**	73.96	332	*e*P	P	18 47 54.5	+1.4
	comp=Z,28nm,0.9s						
SKR	**Severo-Kuril's**	74.94	344	‖ *e*P	P	18 47 58.9	+0.5
YSS	**Yuzh-Sakhalins**	76.17	334	‖ *i*P	P	18 48 06.5	+1.2
YSS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PET	**Petropavlovsk**	76.50	346	‖ *e*P	P	18 48 05.3	-1.7
PET				pmax	pmax		
	comp=Z,12nm,0.8s						
PEA0B	**Petropavlovsk-**	76.80	346	*e*P	P	18 48 08.5	-0.1
	comp=Z,28nm,0.9s						
PETK	**Petropavlovsk-**	76.80	346	P	P	18 48 08.6	-0.1
	comp=Z,24nm,0.9s,baz=122,slow=5.0,SNR=39						
PETK				pP	pP	18 50 17.6	+1.6
	comp=Z,2.8nm,0.8s,baz=167,slow=7.2,SNR=3.7						
PEA1	**Petropavlovsk-**	76.80	346	*e*P	P	18 48 08.6	-0.1
PEA1				*e*pP	pP	18 50 17.6	+1.6
KSRS	**Korea Array**	76.83	319	P	P	18 48 09.9	+0.8
	comp=Z,4.1nm,1.0s,baz=140,slow=6.6,SNR=14						
KS15	**Wonju Array Si**	76.84	319	*e*P	P	18 48 09.3	+0.1
KSAR	**Wonju Array Be**	76.84	319	P	P	18 48 09.9	+0.7
KSAR	**Wonju Array Be**	76.84	319	P	P	18 48 09.9	+0.7
KS01	**Wonju Array Si**	76.86	319	*e*P	P	18 48 09.0	-0.3
MSHR	**Mys Shultsa**	78.38	325	*d e*P	P	18 48 18.0	+0.7
USRK	**Ussuriysk Ar.**	79.07	326	P	P	18 48 22.1	+1.1
	comp=Z,16nm,0.9s,baz=132,slow=3.8,SNR=25						
CHGN	**Chignik**	79.26	12	*e*P	P	18 48 21.3	-0.3
	comp=Z,26nm,1.0s						
NJ2	**Nanjing**	79.62	310	*e*P	P	18 48 26.0	+1.9
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KMRM	**Mail Ridge**	80.02	40	*e*P	P	18 48 28.3	+2.1
	comp=Z,20nm,0.8s						
CHFC	**Chilao Flat St**	80.18	47	*e*P	P	18 48 29.3	+2.0
PSRC	**Puddingstone R**	80.20	48	*e*P	P	18 48 26.9	-0.2
MAW	**Mawson**	80.46	200	P	P	18 48 28.5	+0.6
	comp=Z,9.3nm,0.8s,baz=101,slow=5.7,SNR=9.3						
MAW	**Mawson**	80.46	200	*e*P	P	18 48 28.8	+1.0
	comp=Z,3.2nm,0.9s						
MDJ	**Mudanjiang**	80.60	326	P	P	18 48 26.8	-2.1
MDJ				pmax	pmax		
	comp=Z,16nm,0.9s						
MDJ	**Mudanjiang**	80.60	326	*e*P	P	18 48 29.9	+0.9
	comp=Z,18nm,1.1s						
CMB	**Columbia Colle**	80.75	43	*e*P	P	18 48 31.3	+1.4
	comp=Z,7.2nm,1.2s						
PFO	**Pinyon Flats O**	80.87	49	*e*P	P	18 48 27.4	-3.4
PFO				*e*PcP	PcP	18 48 33.2	-1.9
PFO	**Pinyon Flats O**	80.87	49	*e*P	P	18 48 27.4	-3.4
WDC	**Whiskeytown Da**	80.94	40	*e*P	P	18 48 32.5	+1.8
	comp=Z,4.2nm,0.8s						
WDC	**Whiskeytown Da**	80.94	40	*e*P	P	18 48 32.6	+1.8
WDC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
PMSA	**Palmer Station**	80.95	157	P	P	18 48 31.3	+0.9
	comp=Z,21nm,0.6s,baz=258,slow=5.1,SNR=6.6						
GSC	**Goldstone, Bar**	81.55	47	*e*P	P	18 48 35.2	+1.0
	comp=Z,7.2nm,1.3s						
GSC	**Goldstone, Bar**	81.55	47	*e*P	P	18 48 35.2	+1.0
GSC				pmax	pmax		
	comp=Z,7.0nm,1.3s						
YBH	**Yreka Blue Hor**	81.56	39	P	P	18 48 35.3	+1.3
	comp=Z,5.3nm,0.6s,baz=194,slow=1.8,SNR=20						
YBH	**Yreka Blue Hor**	81.56	39	*e*P	P	18 48 35.4	+1.3
	comp=Z,5.5nm,0.6s						
WAKR	**Walker**	81.62	43	*e*P	P	18 48 36.5	+1.9
	comp=Z,7.1nm,0.6s						
GRNR	**Gornyy**	81.76	333	*e*P	P	18 48 36.2	+1.5
GRNR				pmax	pmax		
	comp=Z,39nm,1.0s						
KDAK	**Kodiak Island**	81.84	14	*i*P	P	18 48 37.7	+2.8
IPM	**Ipoh**	82.23	278	*e*P	P	18 48 38.5	+0.5
	comp=Z,14nm,0.7s						
NV01	**Mina Array Sit**	82.31	44	*e*P	P	18 48 39.2	+1.2
NVAR	**Mina Array Bea**	82.31	44	P	P	18 48 39.6	+1.5
	comp=Z,3.5nm,0.5s,baz=227,slow=7.9,SNR=28						
NVAR				pP	pP	18 50 50.0	+2.2
	comp=Z,0.9nm,0.8s,baz=223,slow=11,SNR=3.1						
113A	**Mohawk Valley,**	82.33	51	*e*P	P	18 48 40.1	+2.1
	comp=Z,7.3nm,0.9s						
NV11	**Mina Array Sit**	82.41	44	*e*P	P	18 48 39.7	+1.2
	comp=Z,0.9nm,1.3s						
KVN	**Kaiserville**	82.79	43	*e*P	P	18 48 41.8	+1.3
	comp=Z,4.9nm,0.6s						
KVN	**Kaiserville**	82.79	43	*e*P	P	18 48 41.8	+1.3
KVN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MOD	**Modoc Plateau**	83.09	40	*e*P	P	18 48 43.1	+1.3
	comp=Z,4.1nm,0.7s						
Y14A	**Wickenburg**	83.48	50	*e*P	P	18 48 44.9	+1.0
	comp=Z,4.0nm,0.6s						
PINE	**Pine Mountain**	83.84	38	*e*P	P	18 48 46.8	+1.2
	comp=Z,7.1nm,0.8s						
BRLK	**Bradley Lake**	84.02	14	*e*P	P	18 48 46.0	+0.2
	comp=Z,15nm,1.0s						
GSI	**Gunungsitoli**	84.26	274	*e*P	P	18 48 49.0	+0.9
	comp=Z,20nm,0.6s						
TUC	**Tucson**	84.28	52	*e*P	P	18 48 49.9	+2.1
	comp=Z,6.0nm,0.8s						
TUC	**Tucson**	84.28	52	*e*P	P	18 48 49.9	+2.1
TUC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MA2	**Magadan**	84.30	345	P	P	18 48 46.3	-0.8
	comp=Z,5.2nm,0.7s,baz=151,slow=4.7,SNR=5.8						
MA2	**Magadan**	84.30	345	‖ *i*P	P	18 48 46.8	-0.3
MA2				pmax	pmax		
	comp=Z,21nm,1.2s						

MNTX **Cornudas Mount** 88.05 55 *e*P P 18 49 07.2 +1.6
comp=Z,7.5nm,0.8s
MNTX *e*pP **pP** 18 51 21.1 +3.4
VNA1 Neumayer--Stat 88.06 177 P P 18 49 05.3 +0.4
TX31 Lajitas Ar. Si 88.35 58 *e*P P 18 49 08.6 +1.5
TXAR Lajitas Array 88.35 58 P P 18 49 09.1 +2.0
comp=Z,6.6nm,0.8s,baz=218,slow=5.9,SNR=78
TXAR pP **pP** 18 51 21.1 +1.7
comp=Z,0.7nm,1.0s,baz=213,slow=4.3,SNR=1.5
TXAR PKKPbc **PKKPbc** 19 06 47.0 +0.5
comp=Z,0.3nm,0.5s,baz=114,slow=4.2,SNR=4.8
HWUT Hardware Ranch 88.38 44 *e*P P 18 49 06.1 -1.0
comp=Z,4.4nm,0.6s
ANMO Albuquerque 88.70 52 P P 18 49 09.8 +1.0
comp=Z,3.4nm,0.9s,baz=239,slow=6.7,SNR=9.4
ANMO Albuquerque 88.70 52 *e*P P 18 49 09.7 +0.9
comp=Z,6.6nm,1.1s
ANMO Albuquerque 88.70 52 *ce*P P 18 49 10.0 +1.2
ANMO pmax pmax
comp=Z,7.0nm,1.2s
MLY Manley 88.78 12 *e*P P 18 49 07.1 -1.2
comp=Z,8.2nm,1.2s
WRH Wood River Hil 88.81 13 *e*P P 18 49 07.9 -0.5
comp=Z,12nm,1.0s
WRH *e*pP **pP** 18 51 23.0 +2.2
KMI Kunming 88.81 297 P P 18 49 11.0 +1.4
KMI pmax pmax
comp=Z,9.0nm,1.5s
RIDG Independ'e Rid 88.89 14 *e*P P 18 49 08.4 -0.4
comp=Z,5.5nm,1.0s
CCB Clear Creek Bu 89.03 13 *e*P P 18 49 08.6 -0.7
comp=Z,10nm,1.0s
CCB *e*pP **pP** 18 51 22.1 +0.3
HHC Hu-ho-hao-te 89.19 315 *e*P P 18 49 12.6 +1.8
HHC PP **PP** 18 52 56.8 +3.4
HHC S **S** 18 59 10.1 +1.0
HHC sS sS 19 03 00.9 -4.6
HHC SS **SS** 19 05 27.3 +3.9
HHC pmax pmax
comp=Z,24nm,1.0s
HHC pmax pmax
comp=Z,43nm,5.1s
MDM Murphy Dome 89.21 13 *e*P P 18 49 09.3 -0.9
comp=Z,9.7nm,1.0s
SCRK Sand Creek 89.30 15 *e*P P 18 49 10.9 +0.2
SCRK *e*pP **pP** 18 51 24.8 +1.4
IL1 Eielson Array 89.33 13 *e*P P 18 49 09.9 -0.9
IL1 *e*pP **pP** 18 51 23.1 -0.2
ILAR Eielson Array 89.33 13 P P 18 49 10.1 -0.6
comp=Z,1.2nm,0.3s,baz=216,slow=5.4,SNR=35
ILAR pP **pP** 18 51 23.4 +0.2
comp=Z,1.0nm,0.9s,baz=248,slow=4.8,SNR=5.1
ILB Eielson Array 89.33 13 *e*P P 18 49 09.7 -1.0
ILB *e*pP **pP** 18 51 23.5 +0.2
CM01 Chiang Mai Arr 89.40 290 *e*P P 18 49 13.3 +1.2
CM31 Chiang Mai Arr 89.43 290 *e*P P 18 49 13.3 +1.0
CMAR Chiang Mai Arr 89.43 290 P P 18 49 13.0 +0.7
comp=Z,4.7nm,0.9s,baz=124,slow=3.0,SNR=28
CMAR PP **PP** 18 52 54.9 -0.6
comp=Z,0.5nm,0.9s,baz=106,slow=4.8,SNR=4.8
CMAR PKKPbc **PKKPbc** 19 06 43.4 0.0
comp=Z,0.5nm,0.6s,baz=273,slow=4.2,SNR=5.1
PLCA Paso Flores 89.45 134 P P 18 49 13.9 +1.7
comp=Z,1.1nm,0.8s,baz=252,slow=4.8,SNR=11
PLCA Paso Flores 89.45 134 *e*P P 18 49 13.8 +1.6
comp=Z,22nm,1.0s
PLCA Paso Flores 89.45 134 *e*P P 18 49 13.8 +1.6
PLCA pmax pmax
comp=Z,22nm,1.0s
CHTO Chiang Mai 89.56 290 *e*P P 18 49 14.0 +1.1
comp=Z,5.2nm,0.8s
S22A 4UR Ranch, Cre 89.71 49 *e*P P 18 49 14.5 +1.0
comp=Z,6.0nm,1.0s
REDW Red Top Meadow 89.72 43 *e*P P 18 49 14.5 +1.1
comp=Z,7.6nm,1.0s
TPAW Teton Pass 89.72 42 *e*P P 18 49 14.6 +1.2
comp=Z,8.8nm,0.9s
BILL Bilibino 89.74 355⇓*e*P P 18 49 12.5 0.0
BILL *e**PP **pP** 18 51 21.8 -3.4
BILL *e* 18 52 55.7
BILL pmax pmax
comp=Z,7.0nm,0.9s
LNIG Linares 89.93 63 *e*P P 18 49 15.0 +0.5
comp=Z,9.6nm,0.7s
IMW Indian Meadow 89.93 42 *e*P P 18 49 15.2 +0.8
comp=Z,5.4nm,1.0s
PD31 Pinedale Array 90.25 44 *e*P P 18 49 16.4 +0.6
PDAR Pinedale Array 90.25 44 P P 18 49 16.6 +0.8
comp=Z,1.6nm,0.5s,baz=200,slow=3.4,SNR=24
PDAR Pinedale Array 90.25 44 *e*P P 18 49 16.0 +0.2
SMCO Snowmass 90.27 48 *e*P P 18 49 17.5 +1.2
comp=Z,10nm,1.5s
BOZ Bozeman (W) 90.36 40 *e*P P 18 49 17.7 +1.5
BOZ *e*pP **pP** 18 51 29.3 +0.3
BOZ Bozeman (W) 90.36 40 *e*P P 18 49 17.7 +1.5
BOZ *e**PP **pP** 18 51 29.3 +0.3
CD2 Chengdu 90.37 303 P P 18 49 16.3 -0.1
CD2 pmax pmax
comp=Z,30nm,0.8s
H17A Grant Village 90.40 42 *e*P P 18 49 17.7 +1.1
comp=Z,4.1nm,0.8s
DAWY Dawson 90.52 16 *e*P P 18 49 16.9 +0.5
comp=Z,4.9nm,1.1s
EGAK Eagle 90.65 15 *e*P P 18 49 17.0 +0.2
comp=Z,5.5nm,1.1s
EGAK *e*pP **pP** 18 51 31.6 +1.9
SDCO Great Sand Dun 90.65 50 *e*P P 18 49 18.8 +0.9
SDCO *e*pP **pP** 18 51 27.4 -3.3
MSTX Muleshoe 91.01 54 *e*P P 18 49 19.8 +0.4
comp=Z,4.6nm,0.8s
LZH Lanzhou 92.46 308 *e*P P 18 49 27.4 +1.3
LZH pP pP 18 51 38.3 -0.8
LZH sP sP 18 52 34.8 -5.3
LZH *e*PP **PP** 18 53 22.0 +3.1
LZH pmax pmax
comp=Z,29nm,1.0s
LZH pmax pmax
comp=Z,150nm,8.7s
YAK Yakutsk 92.48 338 P P 18 49 24.4 -0.9
comp=Z,4.6nm,0.5s,baz=34,slow=0.1,SNR=5.2
YAK Yakutsk 92.48 338 *e*P P 18 49 24.5 -0.9
comp=Z,28nm,0.5s
YAK Yakutsk 92.48 338⇑*i*P P 18 49 24.9 -0.4
YAK pmax pmax
comp=Z,16nm,1.0s
ULN Ulaanbaatar 95.31 319⇑*e*P P 18 49 38.6 -0.1
ULN pmax pmax
comp=Z,2.0nm,1.3s
SONA0 Songino Array 95.70 319 *e*P P 18 49 40.4 0.0
SONA0 *e*PP **PP** 18 53 41.7 -1.6
SONA0 *e*PKKPdf **PKKPbc** 19 06 28.4 -0.2
SONM Songino Array 95.70 319 P P 18 49 40.4 0.0
comp=Z,0.5nm,0.6s,baz=85,slow=3.2,SNR=2.4
SONM PP **PP** 18 53 41.7 -1.6
comp=Z,0.3nm,0.5s,baz=121,slow=7.1,SNR=4.6
SONM PKKPbc **PKKPbc** 19 06 28.4 -0.2
comp=Z,0.9nm,0.9s,baz=297,slow=1.3,SNR=3.8
TIXI Tiksi 99.27 345 PP PP 18 54 04.3 -5.1
comp=Z,2.4nm,1.0s,baz=120,slow=7.0,SNR=4.6
TIXI Tiksi 99.27 345 *i*P **Pdif** 18 49 54.1 -1.5
TIXI pmax pmax
comp=Z,4.0nm,1.4s
ZAA1 Zalesovo Array 110.48 321 *e*PKiKP **PKiKP** 18 54 40.9 -1.5
ZALV Zalesovo Beam 110.48 321 PKiKP **PKiKP** 18 54 40.9 -1.5
comp=Z,0.8nm,0.5s,baz=124,slow=1.7,SNR=4.0
MK32 Makanchi Array 111.01 313 *e*PKKPbc PKKPbc 19 05 43.2 -0.2
MK32 *e*PKKPab **PKKPab** 19 05 55.7 +1.6
MKAR Makanchi Array 111.01 313 PKKPbc PKKPbc 19 05 43.2 -0.2
comp=Z,2.3nm,0.8s,baz=266,slow=6.5,SNR=16
MKAR PKKPab **PKKPab** 19 05 55.7 +1.6
comp=Z,0.7nm,0.9s,baz=298,slow=2.6,SNR=4.7
KURK Kurchatov 113.90 317 *e*PKKPbc PKKPbc 19 05 32.2 -1.8
KURK *e*PKKPab **PKKPab** 19 05 42.5 +1.4
KURBB Kurchatov Arra 113.95 317 PKKPbc PKKPbc 19 05 32.2 -1.7
comp=Z,0.9nm,0.7s,baz=267,slow=4.0,SNR=12
KURBB PKKPab **PKKPab** 19 05 42.5 +1.6
comp=Z,1.5nm,0.8s,baz=278,slow=4.6,SNR=11
KSH Kashi 114.51 305 PKP PKPdf 18 54 52.3 +1.5
KSH PP **PP** 18 56 00.4 +0.4
KSH AMB AMB
comp=Z,220nm,4.8s
PTGA Pitinga 116.69 102 PKP **PKPdf** 18 54 55.0 -0.6
comp=Z,2.4nm,0.7s,baz=14,slow=4.2,SNR=3.6
BVAR Borovoye Array 119.04 320 PKP **PKPdf** 18 54 58.1 -0.8
comp=Z,3.0nm,0.3s,baz=107,slow=0.8,SNR=32
BVAR PP **PP** 18 56 31.1 +0.8
comp=Z,1.7nm,0.9s,baz=267,slow=2.9,SNR=3.7
BVAR PKKPbc **PKKPbc** 19 05 14.6 -1.7
comp=Z,0.4nm,0.5s,baz=308,slow=3.3,SNR=4.2
OPO Ambohidratompo119.80 232 PKP **PKPdf** 18 55 00.6 -1.0
comp=Z,1.9nm,0.6s,baz=153,slow=4.5,SNR=3.6
SPA0 Spitsbergen Ar 122.61 356 *e*PKPdf **PKPdf** 18 55 04.8 -0.3
SPITS Spitsbergen Ar 122.61 356 PKP **PKPdf** 18 55 04.0 -1.1
comp=Z,3.9nm,0.5s,baz=53,slow=5.6,SNR=20
SUR Sutherland 123.32 200 PKP **PKPdf** 18 55 08.3 +0.2
comp=Z,11nm,0.8s,baz=146,slow=4.2,SNR=5.8
SUR Sutherland 123.32 200 *e*PKPdf **PKPdf** 18 55 08.5 +0.4
SUMG Summit 124.17 13 *e*PKPdf **PKPdf** 18 55 08.8 +0.1
SUMG Summit 124.17 13 *e*PKIKP **PKPdf** 18 55 08.8 +0.1
BOSA Boshof 125.09 206 PKP **PKPdf** 18 55 11.7 +0.2
comp=Z,3.7nm,0.9s,baz=175,slow=3.8,SNR=4.4
ARU Arti 125.28 325 PKP **PKPdf** 18 55 10.6 -0.2
comp=Z,3.8nm,0.4s,baz=106,slow=7.4,SNR=6.7
LBTB Lobatse 128.08 209 PKP **PKPdf** 18 55 17.3 0.0
comp=Z,3.0nm,0.7s,baz=137,slow=3.3,SNR=6.4
LBTB Lobatse 128.08 209 *e*PKPdf **PKPdf** 18 55 17.4 +0.2
LBTB Lobatse 128.08 209 *e*PKIKP **PKPdf** 18 55 17.5 +0.2
GEYT Alibeck 128.35 302 PKP **PKPdf** 18 55 17.3 +0.1
comp=Z,139nm,1.1s,baz=216,slow=4.6,SNR=4.3
GEYT PP **PP** 18 57 30.1 -2.2
comp=Z,1.6nm,1.0s,baz=234,slow=1.3,SNR=5.0
GEYT pPKP **pPKPdf** 18 57 39.1 -0.1
comp=Z,2.9nm,1.0s,baz=48,slow=2.2,SNR=4.7
ARA0 ARCESS Array S 129.52 349 *e*PKPdf **PKPdf** 18 55 18.1 -0.4
ARA0 *e*PP **pPKPdf** 18 57 42.8 +2.2
ARCES ARCESS Array B 129.52 349 PKP **PKPdf** 18 55 18.1 -0.4
comp=Z,3.8nm,0.5s,baz=71,slow=1.7,SNR=14
ARCES pPKP **pPKPdf** 18 57 42.8 +2.2
comp=Z,18nm,0.9s,baz=40,slow=7.1,SNR=15
KLMR Klimovskoe 132.20 336 *e*PP PP 18 57 52.4 -3.2
KLMR AMP 18 57 55.5
comp=Z,23nm,1.3s
LSZ Lusaka 134.85 219 PKP **PKPdf** 18 55 30.5 +0.3
comp=Z,3.5nm,0.5s,baz=186,slow=2.6,SNR=10
LSZ SKP 18 58 09.8
comp=Z,0.8nm,0.4s,baz=225,slow=1.4,SNR=3.6
LSZ Lusaka 134.85 219 *e*PKPdf **PKPdf** 18 55 31.0 +0.7
LSZ SKP 18 58 09.8
RCBR Riachuelo 134.93 123 PKP **PKPdf** 18 55 29.9 -0.5
comp=Z,58nm,0.9s,baz=290,slow=1.2,SNR=5.3
RCBR SKPbc **SKPbc** 18 58 04.9 +0.8
comp=Z,28nm,0.5s,baz=214,slow=0.8,SNR=4.4
FIA0 FINESS Array S 136.25 343 *e*PKPdf **PKPdf** 18 55 31.6 +0.3
FIA0 *e*SKPbc **SKPbc** 18 58 06.9 +0.4
FIA0 FINESS Array S 136.25 343 *e*PKIKP **PKPdf** 18 55 31.6 +0.3
FINES FINESS Array B 136.25 343 PKP **PKPdf** 18 55 31.6 +0.3
comp=Z,1.4nm,0.3s,baz=50,slow=2.2,SNR=7.1
FINES SKPbc **SKPbc** 18 58 06.9 +0.4
comp=Z,5.3nm,0.9s,baz=56,slow=3.7,SNR=11
TSUM Tsumeb 136.56 203 PKP **PKPdf** 18 55 34.0 +0.6
comp=Z,4.3nm,0.7s,baz=125,slow=1.6,SNR=8.8
OBN Obninsk 136.97 331 *e*PKIKP PKPpre 18 55 28.5
KBZ Khabaz 138.71 313 SKPbc **SKPbc** 18 58 14.8 +0.8
comp=Z,1.0nm,0.7s,baz=135,slow=5.7,SNR=4.5
NB2 NORSAR Subarra139.65 352 PKP PKPpre 18 55 29.9
comp=Z,0.8nm,0.4s,baz=15,slow=4.0
HFS Hagfors 140.17 350 PKhKP PKPpre 18 55 31.7
comp=Z,2.3nm,0.3s,baz=58,slow=3.0,SNR=29
HFS SKPbc **SKPbc** 18 58 17.8 +0.4
comp=Z,3.7nm,0.9s,baz=56,slow=3.6,SNR=3.9
SHEL Horse Pasture 142.39 169 *e*PKPdf **PKPdf** 18 55 42.9 -1.0
SHEL Horse Pasture 142.39 169 *i*PKIKP **PKPdf** 18 55 43.3 -0.6
AKASG Malin Array Be 143.21 330 PKP PKPab 18 55 41.7 -0.8
comp=Z,2.5nm,0.3s,baz=43,slow=3.9,SNR=30
AKASG SKPbc **SKiKP** 18 58 25.8 -0.5
comp=Z,4.6nm,0.9s,baz=47,slow=2.3,SNR=14
AKBB Malin Array Si 143.21 330 *e*PKPdf PKPab 18 55 41.8 -0.7
KIEV Kiev 143.22 330 *e*PKPdf PKPab 18 55 41.7 -0.9
KIEV Kiev 143.22 330⇑*e*PKIKP PKPab 18 55 41.9 -0.6
AK11 Malin Array Si 143.25 330 *e*PKPdf PKPab 18 55 41.7 -0.9
MBAR Mbarara 143.62 237 *e*PKPbc **PKPdf** 18 55 46.2 -0.1
MBAR Mbarara 143.62 237 *e*PKIKP **PKPdf** 18 55 46.2 -0.1
SORM Soroca 145.35 327⇓*i*P **PKPdf** 18 55 48.6 +0.7
SORM Soroca 145.35 327⇓PKIKP **PKPdf** 18 55 48.6 +0.7
EKA Eskdalemuir Ar 145.89 4 PKPbc **PKPbc** 18 55 50.2 -0.5
comp=Z,2.7nm,0.5s,baz=350,slow=2.9,SNR=14
LVV L'vov 146.17 333 *e*PKP2 **PKPab** 18 55 54.3 +0.2
ASF Jabal al Asfar 146.24 296 pPKPbc pPKPbc 18 58 11.1 -0.8
comp=Z,0.8nm,0.6s,baz=96,slow=3.0,SNR=2.6
BR101 Keskin Array S 146.61 311 *e*PKPdf **PKPdf** 18 55 51.0 +0.4
BR101 *e*pPKPdf **pPKPdf** 18 58 13.6 +0.6
BR131 Keskin Array S 146.61 311 *e*PKPbc **PKPbc** 18 55 52.8 -0.5
BRTR Keskin Array B 146.61 311 PKPbc **PKPdf** 18 55 51.0 +0.4
comp=Z,1.7nm,0.5s,baz=138,slow=3.0,SNR=11
BRTR pPKPbc **pPKPdf** 18 58 13.6 +0.6
comp=Z,3.3nm,0.9s,baz=116,slow=2.9,SNR=12
BRTR Keskin Array B 146.61 311 PKIKP **PKPdf** 18 55 51.0 +0.4
ANTO Ankara 147.15 311⇑*i*P **PKPbc** 18 55 54.9 +0.2
ANTO Ankara 147.15 311⇑PKP2 **PKPbc** 18 55 54.9 +0.2
BUR08 Bucovina Ar. S 147.23 329 *e*PKPbc **PKPbc** 18 55 55.2 +0.5
BUR04 Bucovina Ar. S 147.25 329 *e*PKPbc **PKPbc** 18 55 54.7 0.0
BURAR Bucovina Array 147.25 329⇑*i*P **PKPbc** 18 55 55.1 +0.4
BURAR Bucovina Array 147.25 329⇑PKP2 **PKPbc** 18 55 55.1 +0.4
MMAI Mount Meron Ar 147.31 298 PKPbc **PKPbc** 18 55 54.9 -0.4
comp=Z,3.9nm,0.5s,baz=75,slow=6.3,SNR=11
MMAI pPKPbc **pPKPdf** 18 58 13.7 -0.5
comp=Z,1.8nm,0.6s,baz=83,slow=6.0,SNR=5.1
CFR Carcaliu 147.34 323⇓*i*P **PKPbc** 18 55 55.7 +0.9
CFR Carcaliu 147.34 323⇓PKP2 **PKPbc** 18 55 55.7 +0.9
VRI Vrincioaia 147.67 325⇑*i*P **PKPbc** 18 55 54.2 -1.5
VRI Vrincioaia 147.67 325⇑PKIKP **PKPbc** 18 55 54.2 -1.5
PLOR Plostina 147.72 325⇑*i*P **PKPab** 18 56 01.1 +0.5
PLOR Plostina 147.72 325⇑PKP2 **PKPab** 18 56 01.1 +0.5
TLB Topalu 147.75 322⇓*i*P **PKPbc** 18 55 56.1 +0.2
TLB Topalu 147.75 322⇓PKP2 **PKPbc** 18 55 56.1 +0.2
UZH Uzhgorod 147.82 333 *e*PKIKP **PKPbc** 18 55 54.1 -1.8
UZH *e* 18 56 00.5
CRVS Cervenica-Dubn 147.95 334 *e*PKP2 **PKPbc** 18 55 57.0 +0.7
CRVS Cervenica-Dubn 147.95 334 *e*PKP **PKPbc** 18 55 57.0 +0.7
CRVS *e* 18 56 01.9
CRVS *e* 18 58 23.0
TRPA Tarpa 148.10 332⇓*i*P **PKPbc** 18 55 56.9 +0.3
DOPR Dopca 148.30 327⇑*i*P **PKPbc** 18 55 57.9 +0.6
MLR Muntele Rosu 148.33 325 PKPbc **PKPbc** 18 55 57.2 -0.4
comp=Z,0.3nm,0.4s,baz=18,slow=5.4,SNR=4.7
MLR pPKPbc **pPKPbc** 18 58 17.6 -0.4
comp=Z,1.0nm,0.9s,baz=20,slow=2.4,SNR=5.0
MLR Muntele Rosu 148.33 325⇑*i*P **PKPbc** 18 55 57.8 +0.3
MLR Muntele Rosu 148.33 325⇑PKP2 **PKPbc** 18 55 57.8 +0.3
UPC Upice 148.53 341 *e*PKP **PKPbc** 18 55 58.3 +0.6
UPC *e*PKPAB **PKPab** 18 56 04.6 +0.9
UPC Upice 148.53 341 *e*PKP2 **PKPbc** 18 55 58.3 +0.6
LANS Liptovska Anna 148.53 336 *e*PKP2 **PKPbc** 18 55 59.0 +1.2
LANS Liptovska Anna 148.53 336 *e*PKP **PKPbc** 18 55 59.0 +1.2
DPC Dobruska-Polom 148.57 341⇑*e*PKP **PKPbc** 18 55 58.5 +0.6
DPC *e*PKPAB **PKPab** 18 56 04.5 +0.6
DPC Dobruska-Polom 148.57 341 *e*PKP2 **PKPbc** 18 55 58.5 +0.6
CLL Collm 148.60 345⇑*i*PKPbc **PKPbc** 18 55 58.0 +0.2
comp=Z,8.0nm,0.7s
CLL ⇓*i*PKPab **PKPab** 18 56 03.3 -0.6
comp=Z,9.0nm,1.0s
CLL *e*pPKPbc **pPKPab** 18 58 20.0 +0.4
CLL *e*pPKPab **pPKPbc** 18 58 22.0 +3.7
CLL *i* (SKPdf) 18 58 24.8
comp=Z,12nm,1.0s
CLL Collm 148.60 345 *e*PKPbc **PKPbc** 18 55 57.8 0.0
CLL Collm 148.60 345⇑*i*PKP2 **PKPbc** 18 55 58.0 +0.2
CLL pmax pmax
comp=Z,8.0nm,0.7s
CJR Cluj-Napoca 148.66 329⇑*i*P **PKPbc** 18 55 58.7 +0.5
CJR Cluj-Napoca 148.66 329⇑PKP2 **PKPbc** 18 55 58.7 +0.5
PLAR PLOIESTI 148.66 325⇑*i*P **PKPdf** 18 55 55.3 +1.8
MORC Moravsky Berou 148.68 339⇓*i*P **PKPbc** 18 55 58.9 +0.8
MORC Moravsky Berou 148.68 339 *e*PKPbc **PKPbc** 18 55 58.2 0.0
MORC Moravsky Berou 148.68 339⇓PKP2 **PKPbc** 18 55 58.9 +0.8
MORC Moravsky Berou 148.68 339 *e*PKP **PKPbc** 18 55 58.3 +0.2
MORC *e* 18 56 04.5
MORC *e* 18 58 22.8
BRG Berggiesshubel 148.77 344 *e*P **PKPbc** 18 55 58.6 +0.3
comp=Z,5.1nm,0.9s
BRG Berggiesshubel 148.77 344 *e*PKP2 **PKPbc** 18 55 58.6 +0.4
BRG pmax pmax
comp=Z,5.0nm,0.9s
BRG pmax pmax
comp=Z,7.0nm,1.1s
VOIR 148.84 326⇓*i*P **PKPbc** 18 55 59.5 +0.8
VOIR 148.84 326⇓PKP2 **PKPbc** 18 55 59.5 +0.8
PVCC Panska Ves 148.92 343⇑*e*PKP **PKPbc** 18 55 59.3 +0.7
PVCC Panska Ves 148.92 343 *e*PKP2 **PKPbc** 18 55 59.3 +0.7
DRGR 149.02 330⇓*i*P **PKPbc** 18 55 58.9 -0.2
DRGR 149.02 330⇓PKHKP **PKPbc** 18 55 58.9 -0.2
ARR Arges 149.10 326⇓*i*P **PKPbc** 18 56 00.6 +1.3
VYHS Vyhne 149.31 336 *e*PKP **PKPbc** 18 55 59.9 +0.2
VYHS *e* 18 56 06.9
VYHS *e* 18 58 19.2
GOPC GO Pecny, Ondr 149.41 342⇑*e*PKP **PKPbc** 18 56 00.4 +0.5
PRU Pruhonice 149.41 343⇑*e*PKP **PKPbc** 18 56 00.2 +0.4
JAVC Velka Javorina 149.42 338 *e*PKP **PKPbc** 18 56 01.3 +1.3
JAVC *e* 18 58 23.7
KRUC Moravsky 149.68 340 *e*PKP **PKPbc** 18 56 00.6 +0.1
KRUC *e* 18 56 08.2
KRUC *e* 18 58 24.9
NKC Novy Kostel 149.73 345⇑*e*PKP **PKPbc** 18 56 01.2 +0.6
MODS Modra-Piesok 149.97 338 *e*PKP **PKPbc** 18 56 01.0 -0.2
MODS *e* 18 56 09.9
BZS Buzias 150.41 330⇓*i*P **PKPbc** 18 56 02.3 0.0
BZS Buzias 150.41 330⇓PKIKP **PKPbc** 18 56 02.4 +0.1
KHC Kasperske Hory 150.46 343⇑*e*PKP **PKPbc** 18 56 02.7 +0.3
KHC *ep*PKP **pPKPab** 18 58 27.1 0.0
KHC Kasperske Hory 150.46 343 *e*PKPbc **PKPbc** 18 56 02.7 +0.3
KHC *e*PKPab **PKPab** 18 56 11.8 0.0
KHC Kasperske Hory 150.46 343 *e*PKIKP **PKPbc** 18 56 02.7 +0.3
MEM Membach 150.49 353⇓PKP **PKPbc** 18 56 02.7 +0.4
HERR Herculane 150.56 328⇓*i*P **PKPbc** 18 56 02.6 -0.1
GEC2 GERESS Array S 150.68 343 *e*PKPbc **PKPbc** 18 56 02.9 0.0
GEC2 *ep*PKPab **pPKPab** 18 58 27.3 -0.8
GERES GERESS Array B 150.68 343 PKPbc **PKPbc** 18 56 03.0 +0.1
comp=Z,2.8nm,0.5s,baz=29,slow=2.4,SNR=21
GERES pPKPbc **pPKPbc** 18 58 25.1 +1.2
comp=Z,3.5nm,0.9s,baz=17,slow=1.8,SNR=5.4
GEA0 GERESS Array S 150.69 343 *e*PKPdf **PKPdf** 18 55 56.7 -0.1
GEA0 *e*PKPbc **PKPbc** 18 56 02.7 -0.3
GEA0 *e*PKPab **PKPab** 18 56 12.9 0.0
CONA Conrad Observa 150.84 339 *i*PKiKP **PKPbc** 18 56 03.5 +0.1
comp=Z,4.9nm,0.6s
CONA *i*pPKPab **pPKPab** 18 58 28.8 +0.1
comp=Z,16nm,1.4s
MOA Molln 151.42 341 *i*PKPbc **PKPbc** 18 56 04.3 -0.2
comp=Z,1.8nm,0.5s
MOA *ep*PKPab **pPKPab** 18 58 29.7 -1.3
comp=Z,9.1nm,1.4s
VTS Vitosha 151.73 324 *e*PKPdf **PKPdf** 18 55 56.3 -2.3
VTS *e*PKPbc **PKPbc** 18 56 05.0 -0.6
VTS *e*PKPab **PKPab** 18 56 17.7 +0.1
VTS Vitosha 151.73 324 *e*PKIKP **PKPdf** 18 55 56.3 -2.3
VTS *e* 18 56 17.7
SOKA Soboth 152.21 339 *e*PKPbc **PKPbc** 18 56 05.7 -0.7
comp=Z,0.9nm,0.5s
SOKA *e*SKPdf **SKPdf** 18 58 31.1 -3.7
comp=Z,9.0nm,1.2s
PERS Pernice 152.22 339 *i*PKPbc **PKPbc** 18 56 05.7 -0.7
PERS *ep*PKPbc **pPKPab** 18 58 33.1 -1.2
OBKA Obir 152.52 339 *e*PKPbc **PKPbc** 18 56 06.6 -0.5
comp=Z,10nm,1.8s
WATA Walderalm 152.64 344 *i*PKPbc **PKPbc** 18 56 06.9 -0.5
comp=Z,1.7nm,0.4s
WATA *i*SKPdf **SKPdf** 18 58 33.4 -2.1
comp=Z,4.3nm,0.7s
WTTA Wattenberg 152.69 344 *i*SKPdf **SKPdf** 18 58 33.5 -2.1
comp=Z,5.5nm,1.0s
RETA Reutte 152.70 345 *i*SKPdf **SKPdf** 18 58 33.1 -2.3
comp=Z,5.4nm,0.9s
MOTA Moosalm 152.75 345 *i*PKPbc **PKPbc** 18 56 06.7 -0.9
comp=Z,2.7nm,0.6s
MOTA *i*pPKiKP **pPKiKP** 18 58 31.4 +2.0
comp=Z,7.5nm,1.1s
ABTA Abfaltersbach 152.93 342 *e*PKPbc **PKPbc** 18 56 07.2 -0.8
comp=Z,2.7nm,0.5s
ABTA *e*SKPdf **SKPdf** 18 58 32.3 -3.4
comp=Z,8.2nm,1.0s
VISS Visnje 153.03 338 *i*PKPbc **PKPbc** 18 56 08.1 0.0
VISS *i*pPKPbc **pPKPab** 18 58 35.0 -2.7
DAVA Damuels 153.09 346 *e*SKPdf **SKPdf** 18 58 34.8 -1.3
comp=Z,6.0nm,1.1s
BOJS Bojanci 153.15 337 *i*PKPbc **PKPbc** 18 56 08.6 +0.3
BOJS *ep*PKPbc **pPKPab** 18 58 35.6 -2.5
DAVOX Davos/Dischmat 153.56 346 PKPbc **PKPbc** 18 56 09.2 -0.3
comp=Z,3.9nm,0.6s,baz=230,slow=5.9,SNR=6.9
DAVOX pPKPbc **pPKPbc** 18 58 31.1 +0.1
comp=Z,4.7nm,0.7s,baz=207,slow=2.3,SNR=3.1
FUORN Ofenpass-Fuorn 153.63 345 *e*PKPdf **PKPdf** 18 56 00.7 -0.6
FUORN *e*PKPab **PKPab** 18 56 25.9 +0.3
LIT Litokhoron 153.75 320 *e*PKPdf **PKPdf** 18 56 01.6 +0.2
LIT *e*PKPab **PKPab** 18 56 25.9 -0.2
LIT Litokhoron 153.75 320 *e*PKIKP **PKPdf** 18 56 01.6 +0.2
LIT *e* 18 56 25.9
ESDC Sonseca Array 161.22 12 PKPab **PKPab** 18 56 58.0 -0.5
comp=Z,1.6nm,0.9s,baz=333,slow=5.2,SNR=5.2
KEST Kesra 163.84 335 PKPab **PKPab** 18 57 08.9 -1.3
comp=Z,2.4nm,0.8s,baz=316,slow=11,SNR=3.9
KEST Kesra 163.84 335 *e*PKPab **PKPab** 18 57 09.9 -0.3
LIC Lamto 163.94 158 *e*PKP2 **PKPab** 18 57 12.1 +1.2
comp=Z,149nm,2.1s
KIC Kosan Boka 164.16 159 *e*PKP2 **PKPab** 18 57 13.2 +1.3
comp=Z,16nm,0.6s
TIC Toumodi 164.33 158 *e*PKP2 **PKPab** 18 57 13.8 +1.1
DBIC Dimbokro 164.41 158 PKP **PKPdf** 18 56 13.6 -0.6
comp=Z,3.5nm,0.6s,baz=139,slow=7.4,SNR=6.0
DBIC PKPab **PKPab** 18 57 13.5 +0.5
comp=Z,8.2nm,0.8s,baz=190,slow=6.9,SNR=6.6
DBIC Dimbokro 164.41 158 *e*PKPdf **PKPdf** 18 56 13.2 -1.1
DBIC *e*PKPab **PKPab** 18 57 13.4 +0.4
DBIC Dimbokro 164.41 158 *e*PKIKP **PKPdf** 18 56 13.2 -1.1
DBIC *e* 18 57 13.4
KOWA Kowa 171.76 145 PKPab **PKPab** 18 57 45.2 -0.4
comp=Z,5.9nm,0.9s,baz=182,slow=7.3,SNR=6.0
TOA0 Torodi Ar. Sit 171.85 185 *e*PKPdf **PKPdf** 18 56 18.4 -0.8
TOA0 *e*PKPdf **PKPdf** 18 56 18.5 -0.6
TOA0 *e*PKPab **PKPab** 18 57 45.5 -0.3
TOA0 *e*PKPab **PKPab** 18 57 45.9 +0.1
TORD Torodi Ar. Bea 171.85 185 PKP **PKPdf** 18 56 17.9 -1.2
comp=Z,3.0nm,0.8s,baz=294,slow=1.2,SNR=7.7
TORD PKPab **PKPab** 18 57 45.1 -0.7
comp=Z,4.3nm,0.9s,baz=177,slow=3.5,SNR=11
TORD PP **PP** 19 01 37.4 +1.0
comp=Z,1.8nm,0.9s,baz=188,slow=5.4,SNR=5.2
TOA1 Torodi Ar. Sit 171.85 185 *e*PKPdf **PKPdf** 18 56 17.9 -1.2
TOA1 *e*PKPab **PKPab** 18 57 45.1 -0.8
TOA1 *e*PP **PP** 19 01 37.4 +1.0

DDA ***23*** *18:41:40.8, 38°.71N×43°.57E, h7km, Ml2.8*
ISK ***23*** *18:41:40.9, 38°.73N×43°.50E, h6km, ML2.8/5*
ISCJB ***23*** *18:41:41.9±0.5, 38°.74N±0°.03×43°.51E±0°.05, h14km±3km,*
Error ellipse: s-maj=7.4km s-min=3.7km az=23.4
CSEM ***23*** *18:41:41.5±0.2, 38°.74N×43°.51E, h10km, ML2.8, Error*
ellipse: s-maj=6.9km s-min=4.3km az=102.0
ISC 23 18:41:41.8±0.9, 38°.73N±0°.02×43°.52E±0°.03, h17km±7km,
n40, σ1°.08/54, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.17**	**216**	PG	**Pb**	**18 41 46.1**	**-0.5**
VANB				SG	**Sg**	**18 41 50.4**	**+1.1**
VANB	**Van**	**0.17**	**216**	*e*Pg	**Pb**	**18 41 46.1**	**-0.5**
VANB				*e*Sg	**Sg**	**18 41 50.4**	**+1.1**
TVAN	**Van**	**0.22**	**203**	*i* P	**Pb**	**18 41 46.2**	**-1.3**
TVAN				*i* S	**Sb**	**18 41 51.3**	**-0.1**
TVAN	**Van**	**0.22**	**203**	P	**Pb**	**18 41 46.2**	**-1.3**
TVAN				S	**Sb**	**18 41 51.3**	**-0.1**
VMUR	**Van-Muradiye**	**0.26**	**9**	*i* P	**Pg**	**18 41 47.0

AGRB	Hanur-Agry	0.94 334	PG	Pb	18 41 59.2	-0.5
AGRB	Hanur-Agry	0.94 334	*e*Pg	Pb	18 41 59.2	-0.5
GURO	Guroymak-BITLI	1.18 262	PN	Pn	18 42 03.0	-0.6
GURO	Guroymak-BITLI	1.18 262	*e*Pn	Pn	18 42 03.0	-0.6
HAKT	HAKKARI	1.18 173	*i* P	Pn	18 42 03.0	-0.8
HAKT	HAKKARI	1.18 173	P	Pn	18 42 03.0	-0.8
IGDI	IGDIR	1.21 21	*i* P	Pn	18 42 04.4	+0.3
EKAR	Karacoban	1.25 295	*i* P	Pn	18 42 04.0	-0.7
EKAR	Karacoban	1.25 295	P	Pn	18 42 04.0	-0.7
EATA	Eleskirt	1.38 325	*i* P	Pn	18 42 07.5	+0.9
EATA			*i* S	Sg	18 42 28.1	+1.6
EATA	Eleskirt	1.38 325	P	Pn	18 42 07.5	+0.9
EATA			S	Sg	18 42 28.1	+1.6
SRTM	Siirt_Merkez	1.46 240	*i* P	Pb	18 42 09.5	+1.0
SRTM	Siirt_Merkez	1.46 240	P	Pb	18 42 09.5	+1.0
CUKT	Cukurca	1.48 177	PN	Pn	18 42 08.7	+0.8
CUKT	Cukurca	1.48 177	*i* P	Pn	18 42 08.4	+0.5
CUKT	Cukurca	1.48 177	P	Pn	18 42 08.4	+0.5
CUKT	Cukurca	1.48 177	*e*Pn	Pn	18 42 08.7	+0.8
SIRT	Sirnak	1.50 215	PN	Pn	18 42 09.1	+1.1
SIRT	Sirnak	1.50 215	*e*Pn	Pn	18 42 09.1	+1.1
GNI	Garni	1.70 33	PN	Pn	18 42 12.0	+1.1
GNI	Garni	1.70 33	*e*Pn	Pn	18 42 12.0	+1.1
BTMN	Batman	1.96 245	*i* P	Pn	18 42 16.5	+2.2
BTMN	Batman	1.96 245	P	Pn	18 42 16.5	+2.2

DDA ***23*** *18:47:12.8,35°.77N×31°.07E,h19km,MI4.6*
ISK ***23*** *18:47:13.0,35°.77N×31°.05E,h5km,ML4.7/25*
MOS ***23*** *18:47:15.4±1.4,35°.66N×31°.01E,h52km,mb4.5/40,Error ellipse: s-maj=5.0km s-min=3.1km az=107.1*
NIC ***23*** *18:47:15.4±0.2,35°.92N×31°.03E,h38km,mb4.4,ML4.3*
ISCJB ***23*** *18:47:15.7±0.1,35°.72N±0°.01×31°.01E±0°.01,h56km±2km, mb4.3/65,MS3.4/8,Error ellipse: s-maj=2.4km s-min=1.5km az=22.5*
IDC ***23*** *18:47:17.4±1.4,35°.81N×31°.10E,h52km±13km,mb3.8/21, mb1 4.0/31,mb1mx3.8/76,mbtmp4.1/31,ML4.0/10, MS3.2/14,Ms1 3.2/14,ms1mx2.9/66,Error ellipse: s-maj=11.5km s-min=9.5km az=30.0*
NSSC ***23*** *18:47:17.9±1.3,37°.28N×32°.81E,h38km±999km,MD1.9, ML3.9*
CSEM ***23*** *18:47:17.2±0.1,35°.78N×31°.04E,h55km±1km,mb4.4/43, Error ellipse: s-maj=2.5km s-min=1.6km az=15.0*
THE ***23*** *18:47:17.7,35°.74N×31°.03E,h47km±4km,ML4.5/9,Error ellipse: s-maj=4.0km s-min=0.5km az=31.0*
NEIC ***23*** *18:47:17.2±0.4,35°.80N×31°.02E,h56km±3km,mb4.4/46, ML4.5(THE),Error ellipse: s-maj=4.6km s-min=2.9km az=178.0*
GII ***23*** *18:47:18.2±0.1,35°.73N×31°.03E,h32km,mb4.1/1, MD3.7/5*
ISC 23 18:47:17.6±0.6,35°.78N±0°.03×31°.04E±0°.02,h50km±6km, n777,σ1§48/856,mb4.4/65,MS3.2/8,26C-21D,Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNVG	Manavgat-Antal	1.05	17	PG	Pn	18 47 34.0	-2.0
MNVG				SG	Sn	18 47 48.0	-1.6
MNVG	Manavgat-Antal	1.05	17	*e*Pg	Pn	18 47 34.0	-2.0
MNVG				*e*Sg	Sn	18 47 48.0	-1.6
GAZI	Gazipasa	1.13	66	*i* P	Pn	18 47 34.5	-2.5
GAZI				*i* S	Sn	18 47 49.2	-2.2
GAZI	Gazipasa	1.13	66	P	Pn	18 47 34.5	-2.5
GAZI				S	Sn	18 47 49.2	-2.2
ANTB	Antalya	1.16	344	PN	Pn	18 47 36.1	-1.3
ANTB				SN	Sn	18 47 52.2	0.0
ANTB	Antalya	1.16	344	*e*Pn	Pn	18 47 36.1	-1.3
ANTB				*e*Sn	Sn	18 47 52.2	0.0
KEPZ	Antalya-Kepez	1.21	22	*i* P	Pn	18 47 36.1	-2.1
KEPZ				*i* S	Sn	18 47 50.6	-2.8
KEPZ	Antalya-Kepez	1.21	22	P	Pn	18 47 36.1	-2.1
KEPZ				S	Sn	18 47 50.6	-2.8
KSL	Kastellorizon	1.24	288	P	Pn	18 47 38.0	-0.5
KSL				S	Sn	18 47 53.7	-0.4
AKAS	Kas	1.25	291	PN	Pn	18 47 37.5	-1.3
AKAS	Kas	1.25	291	*i* P	Pn	18 47 36.6	-2.2
AKAS	Kas	1.25	291	P	Pn	18 47 36.6	-2.2
AKAS	Kas	1.25	291	*e*Pn	Pn	18 47 37.5	-1.3
AKMC	Akamas	1.29	125	P	Pn	18 47 38.3	-1.0
	baz=310						
AKMC	Akamas	1.29	125	P	Pn	18 47 38.3	-1.0
ELL	Elmali	1.33	317	PN	Pn	18 47 39.3	-0.6
ELL	Elmali	1.33	317	P	Pn	18 47 39.4	-0.5
ELL	Elmali	1.33	317	P	Pn	18 47 39.4	-0.5
KORT	Korkueli	1.34	336	PN	Pn	18 47 39.2	-0.8
KORT	Korkueli	1.34	336	*e*Pn	Pn	18 47 39.2	-0.8
PPCY	Paphos	1.39	130	P	Pn	18 47 40.2	-0.4
	baz=314						
PPCY	Paphos	1.39	130	P	Pn	18 47 40.2	-0.4
ALFC	Alefka	1.42	116	P	Pn	18 47 39.6	-1.4
	baz=301						
ALFC				S	Sn	18 47 58.9	+0.4
ALFC	Alefka	1.42	116	P	Pn	18 47 39.6	-1.4
ALFC				S	Sn	18 47 58.9	+0.4
BOZY	Bozyazi-Mersin	1.60	78	PN	Pn	18 47 42.3	-1.1
BOZY	Bozyazi-Mersin	1.60	78	*e*Pn	Pn	18 47 42.3	-1.1
LEF	Lefka	1.65	113	PN	Pn	18 47 42.5	-1.6
LEF	Lefka	1.65	113	*e*Pn	Pn	18 47 42.5	-1.6
LEF				S	Sn	18 48 05.7	+1.6
SUTC	Sutluce-Ispart	1.69	359	PN	Pn	18 47 43.9	-0.9
SUTC				SN	Sn	18 48 06.9	+1.5
SUTC	Sutluce-Ispart	1.69	359	*e*Pn	Pn	18 47 43.9	-0.9
SUTC				*e*Sn	Sn	18 48 06.9	+1.5
TEKE	Tekeli-Mersin	1.72	77	PN	Pn	18 47 43.8	-1.3
TEKE	Tekeli-Mersin	1.72	77	*e*Pn	Pn	18 47 43.8	-1.3
ERMK	Ermenek	1.74	60	*i* P	Pn	18 47 44.6	-0.9
ERMK	Ermenek	1.74	60	P	Pn	18 47 44.6	-0.9
FETY	Fethiye	1.80	299	PN	Pn	18 47 45.4	-0.8
FETY	Fethiye	1.80	299	*e*Pn	Pn	18 47 45.8	-0.4
FETY	Fethiye	1.80	299	P	Pn	18 47 45.8	-0.4
FETY				S	Sn	18 48 07.5	-0.4
FETY	Fethiye	1.80	299	*e*Pn	Pn	18 47 45.4	-0.8
FETY	Fethiye	1.80	299	P	Pn	18 47 45.8	-0.4
FETY				S	Sn	18 48 07.5	-0.4
SZAC	Souni	1.82	124	P	Pn	18 47 46.8	+0.3
	baz=307						
SZAC	Souni	1.82	124	P	Pn	18 47 46.8	+0.3
BERE	Bereket-Mersin	1.85	72	PN	Pn	18 47 46.1	-1.0
BERE	Bereket-Mersin	1.85	72	*e*Pn	Pn	18 47 46.1	-1.0
MAMC	Mammari	1.88	108	P	Pn	18 47 46.3	-0.9
	baz=293						
MAMC	Mammari	1.88	108	P	Pn	18 47 46.3	-0.9
GOLH	Golhisar	1.88	321	*i* P	Pn	18 47 47.6	+0.2
GOLH	Golhisar	1.88	321	P	Pn	18 47 47.6	+0.2
OREN	Orenkoy-Mersin	2.00	77	PN	Pn	18 47 48.6	-0.4
OREN	Orenkoy-Mersin	2.00	77	*e*Pn	Pn	18 47 48.6	-0.4
CSS	Mathiatis	2.04	113	PN	Pn	18 47 48.2	-1.2
CSS	Mathiatis	2.04	113	*e*Pn	Pn	18 47 48.0	-1.5
CSS				*e*Sn	Sn	18 48 13.9	+0.1
CSS	Mathiatis	2.04	113	P	Pn	18 47 48.3	-1.2
	baz=297						
CSS				S	Sn	18 48 14.2	+0.4
CSS	Mathiatis	2.04	113	P	Pn	18 47 47.8	-1.7
CSS				S	Sn	18 48 13.5	-0.3
CSS	Mathiatis	2.04	113	Pn	Pn	18 47 47.8	-1.7
CSS	Mathiatis	2.04	113	*e*Pn	Pn	18 47 48.0	-1.5
CSS	Mathiatis	2.04	113	P	Pn	18 47 48.3	-1.2
CSS				S	Sn	18 48 13.5	-0.3
TEVE	Tevekalti-Mers	2.05	71	PN	Pn	18 47 49.4	-0.3
TEVE	Tevekalti-Mers	2.05	71	*e*Pn	Pn	18 47 49.4	-0.3
AKK1	Akkuyu-Mersin	2.06	79	PN	Pn	18 47 48.9	-0.8
AKK1	Akkuyu-Mersin	2.06	79	*e*Pn	Pn	18 47 48.9	-0.8
AKK2	Akkuyu-Mersin	2.06	79	PN	Pn	18 47 49.4	-0.4
AKK2	Akkuyu-Mersin	2.06	79	*e*Pn	Pn	18 47 49.4	-0.4
BRDR	BURDUR-Merkez	2.07	338	*i* P	Pn	18 47 50.6	+0.7
BRDR	BURDUR-Merkez	2.07	338	P	Pn	18 47 50.6	+0.7
GULN	MERSIN_Gulnar	2.07	78	*i* P	Pn	18 47 49.4	-0.4
GULN	MERSIN_Gulnar	2.07	78	P	Pn	18 47 49.4	-0.4
AKKU	Akkuyu-Mersin	2.07	79	PN	Pn	18 47 49.3	-0.5
AKKU	Akkuyu-Mersin	2.07	79	*e*Pn	Pn	18 47 49.3	-0.5
ISP	Isparta	2.08	349	PN	Pn	18 47 50.2	+0.1
ISP	Isparta	2.08	349	‖ *i*P	Pn	18 47 52.3	+2.2
ISP				S	Sn	18 48 18.7	+3.8
ISP	Isparta	2.08	349	*e*Pn	Pn	18 47 50.2	+0.1
ISP	Isparta	2.08	349	P	Pn	18 47 50.5	+0.3
ISP				S	Sn	18 48 15.2	+0.3
ISP	Isparta	2.08	349	Pn	Pn	18 47 50.2	+0.1
ISP	Isparta	2.08	349 *d*	*i*P	Pn	18 47 50.4	+0.3
ISP	Isparta	2.08	349	*e*Pn	Pn	18 47 50.2	+0.1
ISP				S	Sn	18 48 15.2	+0.3
TEPE	Tepekoy-Mersin	2.09	77	PN	Pn	18 47 50.1	-0.1
TEPE	Tepekoy-Mersin	2.09	77	*e*Pn	Pn	18 47 50.1	-0.1
AKIN	Ak¨-nc¨-lar- K	2.12	110	PN	Pn	18 47 49.4	-1.2
AKIN	Ak¨-nc¨-lar- K	2.12	110	*e*Pn	Pn	18 47 49.4	-1.2
YESI	Yesilovacik-Me	2.15	78	PN	Pn	18 47 50.7	-0.2
YESI	Yesilovacik-Me	2.15	78	*e*Pn	Pn	18 47 50.7	-0.2
DALY	Dalyan (Mu¨la	2.19	299	PN	Pn	18 47 51.4	-0.1
DALY	Dalyan (Mu¨la	2.19	299	*i* P	Pn	18 47 51.7	+0.2
DALY	Dalyan (Mu¨la	2.19	299	*e*Pn	Pn	18 47 51.4	-0.1
DALY	Dalyan (Mu¨la	2.19	299	P	Pn	18 47 51.7	+0.2
IKL	Isikli	2.19	77	PN	Pn	18 47 51.5	0.0
IKL	Isikli	2.19	77	*e*Pn	Pn	18 47 51.5	0.0
BAGO	Egridir - ISPA	2.21	355	*i* P	Pn	18 47 52.0	0.0
KMER	Konya-Meram	2.25	28	*i* P	Pn	18 47 52.9	+0.4
KMER				*i* S	Sn	18 48 20.5	+1.4
KMER	Konya-Meram	2.25	28	P	Pn	18 47 52.9	+0.4
KMER				S	Sn	18 48 20.5	+1.4
TURN	Turunc	2.25	300	PN	Pn	18 47 55.3	+3.0
TURN	Turunc	2.25	300	*i* P	Pn	18 47 55.4	+3.1
TURN	Turunc	2.25	300	P	Pn	18 47 55.4	+3.1
KEBE	Keben-Mersin	2.26	72	PN	Pn	18 47 52.5	-0.1
KEBE	Keben-Mersin	2.26	72	*e*Pn	Pn	18 47 52.5	-0.1
DOGA	KONYA_Doganhis	2.37	12	*i* P	Pn	18 47 55.0	+0.8
DOGA	KONYA_Doganhis	2.37	12	P	Pn	18 47 55.0	+0.8
TAVA	DENIZLI_Tavas	2.40	315	*i* P	Pn	18 47 54.8	+0.3
TAVA	DENIZLI_Tavas	2.40	315	P	Pn	18 47 54.8	+0.3
KONT	Konya--Tatoy	2.40	26	PN	Pn	18 47 54.8	+0.3
KONT	Konya--Tatoy	2.40	26	*e*Pn	Pn	18 47 54.8	+0.3
ARG	Arkhangelos	2.41	281	PN	Pn	18 47 54.5	0.0
ARG	Arkhangelos	2.41	281	P	Pn	18 47 54.0	-0.5
ARG				S	Sn	18 48 20.9	-1.8
ARG	Arkhangelos	2.41	281	P	Pn	18 47 53.9	-0.5
ARG	Arkhangelos	2.41	281	P	Pn	18 47 54.0	-0.5
ARG	Arkhangelos	2.41	281	*e*Pn	Pn	18 47 54.5	0.0
ARG				S	Sn	18 48 20.9	-1.8
MRSB	Marmaris-Mugla	2.48	293	PN	Pn	18 47 55.6	0.0
MRSB	Marmaris-Mugla	2.48	293	*e*Pn	Pn	18 47 55.6	0.0
DENT	Denizli	2.54	321	PN	Pn	18 47 56.5	+0.1
DENT	Denizli	2.54	321	*e*Pn	Pn	18 47 56.5	+0.1
EREN	Erenkoy	2.56	95	PN	Pn	18 47 56.2	-0.4
EREN	Erenkoy	2.56	95	*e*Pn	Pn	18 47 56.2	-0.4
KZIL	AFYON_Kizioren	2.57	344	*i* P	Pn	18 47 55.7	-1.2
KZIL	AFYON_Kizioren	2.57	344	P	Pn	18 47 55.7	-1.2
YER	Yerkesik	2.60	302	PN	Pn	18 47 57.7	+0.5
YER	Yerkesik	2.60	302	P	Pn	18 47 57.4	+0.2
YER				S	Sn	18 48 27.8	+0.1
YER	Yerkesik	2.60	302	P	Pn	18 47 57.1	-0.1
YER	Yerkesik	2.60	302	P	Pn	18 47 57.1	-0.1
YER	Yerkesik	2.60	302	*e*Pn	Pn	18 47 57.7	+0.5
YER				S	Sn	18 48 27.8	+0.1
LADK	Ladik-KONYA	2.63	23	PN	Pn	18 47 57.1	-0.6
LADK	Ladik-KONYA	2.63	23	*e*Pn	Pn	18 47 57.1	-0.6
KHL	Karahalli	2.81	335	PN	Pn	18 48 00.1	0.0
KHL	Karahalli	2.81	335	*e*Pn	Pn	18 48 00.1	0.0
KDHN	Kadinhani	2.87	17	*i* P	Pn	18 48 01.5	+0.6
KDHN	Kadinhani	2.87	17	P	Pn	18 48 01.5	+0.6
DATC	Datca-Mugla	2.90	291	PN	Pn	18 48 00.7	-0.6
DATC	Datca-Mugla	2.90	291	*e*Pn	Pn	18 48 00.7	-0.6
BOLV	Bolvadin	2.93	359	*i* P	Pn	18 48 02.2	+0.4
BOLV	Bolvadin	2.93	359	P	Pn	18 48 02.2	+0.4
DAT	Datca	2.96	290	PN	Pn	18 48 01.8	-0.3
DAT	Datca	2.96	290	*i* P	Pn	18 48 02.8	+0.7
DAT	Datca	2.96	290	*e*Pn	Pn	18 48 01.8	-0.3
DAT	Datca	2.96	290	P	Pn	18 48 02.8	+0.7
KERG	Konya-Eregli	2.97	56	*i* P	Pn	18 48 02.7	+0.4
KERG	Konya-Eregli	2.97	56	P	Pn	18 48 02.7	+0.4
MERS	Mersin	3.01	68	PN	Pn	18 48 02.2	-0.6
MERS	Mersin	3.01	68	*e*Pn	Pn	18 48 02.2	-0.6
MLSB	Milas	3.03	301	PN	Pn	18 48 02.7	-0.4
MLSB	Milas	3.03	301	*e*Pn	Pn	18 48 02.7	-0.4
SULT	Sultanhani-AKS	3.12	39	PN	Pn	18 48 04.5	+0.1
SULT	Sultanhani-AKS	3.12	39	*e*Pn	Pn	18 48 04.5	+0.1
AYDN	Tasoluk	3.16	307	*i* P	Pn	18 48 05.3	+0.4
AYDN	Tasoluk	3.16	307	P	Pn	18 48 05.3	+0.4
CHBY	Cihanbeyli	3.16	27	PN	Pn	18 48 05.3	+0.4
CHBY	Cihanbeyli	3.16	27	*e*Pn	Pn	18 48 05.3	+0.4
KIZT	Kizilcal	3.16	12	PN	Pn	18 48 05.1	+0.1
KIZT	Kizilcal	3.16	12	*e*Pn	Pn	18 48 05.1	+0.1
KARP	Karpathos	3.17	267	PN	Pn	18 48 04.8	-0.2
KARP	Karpathos	3.17	267	P	Pn	18 48 04.5	-0.5
KARP				S	Sn	18 48 40.5	-1.1
KARP	Karpathos	3.17	267	P	Pn	18 48 04.5	-0.5
KARP	Karpathos	3.17	267	*e*Pn	Pn	18 48 04.8	-0.2
KARP				*e*Sn	Sn	18 48 40.5	-1.1
KARP				S	Sn	18 48 40.5	-1.1
BDRM	Kayabasi	3.17	295	*i* P	Pn	18 48 05.1	+0.1
BDRM	Kayabasi	3.17	295	P	Pn	18 48 05.1	+0.1
BODT	Bodrum	3.27	294	PN	Pn	18 48 05.1	-1.3
BODT	Bodrum	3.27	294	P	Pn	18 48 05.0	-1.3
BODT				S	Sn	18 48 41.9	-2.1
BODT	Bodrum	3.27	294	*e*Pn	Pn	18 48 05.1	-1.3
BODT				S	Sn	18 48 41.9	-2.1
NISR	Nisiros	3.27	286	*e*Pn	Pn	18 48 05.8	-0.5
NISR	Nisiros	3.27	286	P	Pn	18 48 05.8	-0.5
NISR				S	Sn	18 48 42.4	-1.6
NISR	Nisiros	3.27	286	P	Pn	18 48 05.8	-0.5
NISR				S	Sn	18 48 42.4	-1.6
AYDB	Zeytinkoy-Aydi	3.33	311	PN	Pn	18 48 06.9	-0.3
AYDB	Zeytinkoy-Aydi	3.33	311	*e*Pn	Pn	18 48 06.9	-0.3
KULA	Kula-Manisa	3.33	326	PN	Pn	18 48 06.9	-0.3
KULA	Kula-Manisa	3.33	326	*e*Pn	Pn	18 48 06.9	-0.3
MANT	Manisa	3.35	324	*i* P	Pn	18 48 06.7	-1.0
MANT	Manisa	3.35	324	*e*Pn	Pn	18 48 06.6	-1.1
MANT	Manisa	3.35	324	P	Pn	18 48 06.7	-1.0
GEDZ	Gediz	3.51	339	PN	Pn	18 48 09.7	+0.1
GEDZ	Gediz	3.51	339	*e*Pn	Pn	18 48 09.7	+0.1
SHAP	Saphane-Kutahy	3.54	336	PN	Pn	18 48 10.3	+0.1
SHAP	Saphane-Kutahy	3.54	336	*e*Pn	Pn	18 48 10.3	+0.1
KRTS	Karatas	3.59	76	PN	Pn	18 48 11.3	+0.6
KRTS	Karatas	3.59	76	*e*Pn	Pn	18 48 11.3	+0.6
GCAM	G?zelcaml?	3.61	303	PN	Pn	18 48 11.3	+0.3
GCAM	G?zelcaml?	3.61	303	*e*Pn	Pn	18 48 11.3	+0.3
KULU	Kulu	3.61	25	PN	Pn	18 48 11.4	+0.3
KULU	Kulu	3.61	25	*e*Pn	Pn	18 48 11.4	+0.3
GULA	Gulagac	3.61	44	PN	Pn	18 48 11.6	+0.5
GULA	Gulagac	3.61	44	*e*Pn	Pn	18 48 11.6	+0.5
KRTD	Karatas-Adana	3.63	76	PN	Pn	18 48 11.3	+0.1
KRTD	Karatas-Adana	3.63	76	*e*Pn	Pn	18 48 11.3	+0.1
AUSIV	SIVRIHISAR	3.67	6	PN	Pn	18 48 10.9	-1.1
AUSIV	SIVRIHISAR	3.67	6	*i* P	Pn	18 48 10.9	-1.1
AUSIV	SIVRIHISAR	3.67	6	P	Pn	18 48 10.9	-1.1
SIMA	Simav-Kutahya	3.68	334	PN	Pn	18 48 11.6	-0.5
SIMA	Simav-Kutahya	3.68	334	*e*Pn	Pn	18 48 11.6	-0.5
NIG	Nigde	3.68	50	PN	Pn	18 48 12.0	-0.2
NIG	Nigde	3.68	50	*e*Pn	Pn	18 48 12.0	-0.2
KKUL	Konya-Kulu	3.70	23	*i* P	Pn	18 48 11.7	-0.6
KKUL	Konya-Kulu	3.70	23	P	Pn	18 48 11.7	-0.6
KUTH	Kutahya	3.70	348	PN	Pn	18 48 12.6	+0.3
KUTH	Kutahya	3.70	348	*e*Pn	Pn	18 48 12.6	+0.3
ESKT	Eskisehir	3.73	358	PN	Pn	18 48 13.4	+0.6
ESKT	Eskisehir	3.73	358	*e*Pn	Pn	18 48 13.4	+0.6
SERE	Sereflikochisa	3.74	32	PN	Pn	18 48 13.4	+0.5
SERE	Sereflikochisa	3.74	32	*e*Pn	Pn	18 48 13.4	+0.5
YAYX	Yaylak	3.84	34	PN	Pn	18 48 14.4	+0.1
YAYX	Yaylak	3.84	34	*e*Pn	Pn	18 48 14.4	+0.1
YURE	YUREGIR	3.85	73	PN	Pn	18 48 15.0	+0.7
YURE	YUREGIR	3.85	73	*e*Pn	Pn	18 48 15.0	+0.7
TVSB	Tavsanli	3.87	342	PN	Pn	18 48 13.6	-1.1
TVSB	Tavsanli	3.87	342	*e*Pn	Pn	18 48 13.6	-1.1
SMG	Samos	3.89	301	*e*Pn	Pn	18 48 13.8	-1.0
SMG	Samos	3.89	301	P	Pn	18 48 13.8	-1.0
SMG				S	Sn	18 48 57.7	-1.5
SMG	Samos	3.89	301	P	Pn	18 48 13.8	-1.0
SMG				S	Sn	18 48 57.7	-1.5
CEYT	Ceyhan	3.99	71	PN	Pn	18 48 16.0	-0.2
CEYT	Ceyhan	3.99	71	*e*Pn	Pn	18 48 16.0	-0.2
AFSR	Af¨ar-Bala (A	4.00	23	PN	Pn	18 48 15.9	-0.5
AFSR	Af¨ar-Bala (A	4.00	23	*e*Pn	Pn	18 48 15.9	-0.5
ZKR	Zakros	4.00	262	P	Pn	18 48 15.7	-0.6
ZKR				S	Sn	18 49 00.8	-1.1
ZKR	Zakros	4.00	262	P	Pn	18 48 15.7	-0.6
ZKR				S	Sn	18 49 00.8	-1.1
YAYL	Yayladag	4.12	85	PN	Pn	18 48 18.5	+0.4
YAYL	Yayladag	4.12	85	*e*Pn	Pn	18 48 18.5	+0.4
TAHT	Tahtakopru-Hat	4.21	80	PN	Pn	18 48 20.1	+0.9
TAHT	Tahtakopru-Hat	4.21	80	*e*Pn	Pn	18 48 20.1	+0.9
BHL	Bhannes	4.23	115	*e*P	Pn	18 48 17.9	-1.7
DQRL	Deir Qamar	4.26	118	*e*P	Pn	18 48 19.3	-0.8
BR231	Keskin MP Arra	4.28	18	*e*Pn	Pn	18 48 18.1	-2.2
BR231	Keskin MP Arra	4.28	18	*e*Pn	Pn	18 48 18.1	-2.2
AMGA	Amorgos Island	4.29	286	P	Pn	18 48 20.2	-0.1
AMGA				S	Sn	18 49 06.9	-2.2
AMGA	Amorgos Island	4.29	286	P	Pn	18 48 20.2	-0.1
AMGA				S	Sn	18 49 06.9	-2.2
HWQ	Hawqa	4.29	109	*e*P	Pn	18 48 21.7	+1.2
ANTO	Ankara	4.31	18	*e*Pn	Pn	18 48 20.8	+0.1
ANTO	Ankara	4.31	18	*e*P	Pn	18 48 20.8	+0.1
ANTO	Ankara	4.31	18	*e*P	Pn	18 48 20.8	+0.1
HNTI	Hanita	4.35	127	Pn	Pn	18 48 20.8	-0.3
HNTI	Hanita	4.35	127	Pn	Pn	18 48 20.8	-0.3
URLA	Izmir	4.39	307	PN	Pn	18 48 22.3	+0.6
URLA	Izmir	4.39	307	*e*Pn	Pn	18 48 22.3	+0.6
BR101	Keskin Array S	4.44	27	*e*Pn	Pn	18 48 21.9	-0.7
BR101				*e*Sn	Sn	18 49 12.0	-1.0
BR101	Keskin Array S	4.44	27	*e*Pn	Pn	18 48 21.9	-0.7
BR101				*e*Sn	Sn	18 49 12.0	-1.0
BR131	Keskin Array S	4.44	27	*e*Pn	Pn	18 48 22.7	+0.2
BR131				*e*Sn	Sn	18 49 09.8	-3.2
BR131	Keskin Array S	4.44	27	*e*Pn	Pn	18 48 22.7	+0.2
BR131				*e*Sn	Sn	18 49 09.8	-3.2
BRTR	Keskin Array B	4.44	27	P	Pn	18 48 21.9	-0.7
	6.6nm,0.3s,baz=201,slow=15,SNR=129						
BRTR				S	Sn	18 49 12.0	-1.0
	13nm,0.3s,baz=206,slow=28,SNR=11						
BRTR				LR	LR	18 50 45.1	
	comp=Z,151nm,18.5s,baz=208,slow=47						
NPS	Neapolis	4.46	265	*e*Pn	Pn	18 48 22.6	-0.1
NPS				*e*Sn	Sn	18 49 11.3	-2.0
NPS	Neapolis	4.46	265	P	Pn	18 48 22.6	-0.1
NPS				S	Sn	18 49 11.3	-2.0
NPS	Neapolis	4.46	265	*e*P	Pn	18 48 22.6	-0.1
NPS				*e*		18 49 11.3	
NPS	Neapolis	4.46	265	P	Pn	18 48 22.6	-0.1
NPS				S	Sn	18 49 11.3	-2.0
MMA0B	Mount Meron ar	4.54	126	Pn	Pn	18 48 23.6	-0.2
MMA0B	Mount Meron ar	4.54	126	Pn	Pn	18 48 23.6	-0.2
MMAI	Mount Meron Ar	4.54	126	P	Pn	18 48 23.2	-0.7
	53nm,0.3s,baz=301,slow=12,SNR=275						
MMAI				S	Sn	18 49 14.3	-1.1
	81nm,0.3s,baz=305,slow=23,SNR=10.0						
OFRI	'Ofer	4.54	133	Pn	Pn	18 48 23.5	-0.3
OFRI				Sn	Sn	18 49 14.1	-1.2
OFRI	'Ofer	4.54	133	Pn	Pn	18 48 23.5	-0.3
OFRI				Sn	Sn	18 49 14.1	-1.2
THR8	Santorini-Mono

YTIR **Yattir** 5.57 141 Pn Pn 18 48 37.8 -0.1
VAM **Vamos** 5.59 268 P Pn 18 48 38.5 +0.3
VAM **Vamos** 5.59 268 P Pn 18 48 38.3 +0.1
VAM **Vamos** 5.59 268 P Pn 18 48 38.3 +0.1
KZIT **Kziot** 5.61 149 PN Pn 18 48 39.9 +1.4
KZIT **Kziot** 5.61 149 Pn Pn 18 48 38.5 0.0
KZIT **Kziot** 5.61 149 Pn Pn 18 48 38.5 0.0
ILGA **Ilgaz** 5.66 21 *e*Pn Pn 18 48 38.9 -0.5
ILGA **Ilgaz** 5.66 21 *e*Pn Pn 18 48 38.9 -0.5
MZDA **Masada** 5.74 140 Pn Pn 18 48 40.3 +0.2
MZDA **Masada** 5.74 140 Pn Pn 18 48 40.3 +0.2
GVDS **Gavdos** 5.76 263 P Pn 18 48 40.5 0.0
GVDS S Sn 18 49 43.9 -1.4
GVDS **Gavdos** 5.76 263 P Pn 18 48 40.5 0.0
GVDS S Sn 18 49 43.9 -1.4
IMMV **Iera Moni Meta** 5.76 269 P Pn 18 48 40.3 -0.2
IMMV **Iera Moni Meta** 5.76 269 P Pn 18 48 40.3 -0.2
GVD **Gavdhos** 5.76 263 *e*Pn Pn 18 48 40.3 -0.3
GVD **Gavdhos** 5.76 263 P Pn 18 48 40.3 -0.3
GVD **Gavdhos** 5.76 263 P Pn 18 48 40.3 -0.3
DARE **Darende-Malaty** 5.85 60 PN Pn 18 48 42.4 +0.6
DARE **Darende-Malaty** 5.85 60 *e*Pn Pn 18 48 42.4 +0.6
RMNI **Mount Ramon** 6.04 148 Pn Pn 18 48 44.3 -0.1
RMNI **Mount Ramon** 6.04 148 Pn Pn 18 48 44.3 -0.1
ASF **Jabal al Asfar** 6.05 125 P Pn 18 48 44.6 0.0
comp=E,2.8nm,0.3s,baz=273,slow=8.2,SNR=24
ASF S Sn 18 50 02.9 +10
comp=E,6.1nm,0.3s,baz=78,slow=19,SNR=4.0
ZFRI **Zfri** 6.26 145 Pn Pn 18 48 47.2 -0.2
ZFRI **Zfri** 6.26 145 Pn Pn 18 48 47.2 -0.2
ANKY **Antikythira Is** 6.29 273 *e*Pn Pn 18 48 46.8 -1.0
ANKY **Antikythira Is** 6.29 273 P Pn 18 48 46.8 -1.0
ANKY **Antikythira Is** 6.29 273 P Pn 18 48 46.8 -1.0
PRNI **Paran** 6.35 147 Pn Pn 18 48 48.6 -0.1
PRNI **Paran** 6.35 147 Pn Pn 18 48 48.6 -0.1
ALN **Alexandroupoli** 6.44 324 *e*Pn Pn 18 48 48.8 -1.0
ALN **Alexandroupoli** 6.44 324 *e*P Pn 18 48 48.8 -1.0
ALN **Alexandroupoli** 6.44 324 *e*P Pn 18 48 48.8 -1.0
KYTH **Kithira** 6.50 277 *e*Pn Pn 18 48 50.1 -0.5
KYTH **Kithira** 6.50 277 P Pn 18 48 50.1 -0.5
KTHR **Kythira** 6.53 277 P Pn 18 48 51.0 -0.1
KTHR **Kythira** 6.53 277 P Pn 18 48 51.0 -0.1
VLI **Veliai** 6.62 280 P Pn 18 48 51.2 -1.0
VLI **Veliai** 6.62 280 P Pn 18 48 51.2 -1.0
HRFI **Mount Harif** 6.64 149 PN Pn 18 48 52.9 +0.3
HRFI **Mount Harif** 6.64 149 Pn Pn 18 48 51.8 -0.8
HRFI **Mount Harif** 6.64 149 Pn Pn 18 48 51.8 -0.8
MBRI **Mt Berech** 6.80 150 Pn Pn 18 48 54.3 -0.6
MBRI **Mt Berech** 6.80 150 Pn Pn 18 48 54.3 -0.6
EIL **Elat** 6.93 151 P Pn 18 49 02.1 +5.6
comp=E,13nm,0.3s,baz=344,slow=15,SNR=148
EIL S Sn 18 50 17.3 +3.3
comp=E,4.7nm,0.3s,baz=67,slow=13,SNR=2.5
EIL LR LR 18 53 03.4
comp=E,135nm,19.1s,baz=320,slow=50
EIL **Elat** 6.93 151 Pn Pn 18 48 56.0 -0.5
EIL **Elat** 6.93 151 Pn Pn 18 48 56.0 -0.5
EIL *e*Sn Sn 18 50 17.3 +3.3
HQLS 7.30 151 P Pn 18 49 01.2 -0.5
HQLS S Sn 18 50 22.0 -1.2
KDZ **Kurdzhali** 7.32 325 P Pn 18 49 04.7 +2.8
HAQS **Haql** 7.47 153 P Pn 18 49 03.5 -0.5
ITM **Ithomi** 7.48 283 *e*Pn Pn 18 49 03.8 -0.2
ITM **Ithomi** 7.48 283 *e*Pn Pn 18 49 03.8 -0.2
JMB **Yambol** 7.52 334 P Pn 18 49 08.8 +4.2
AGG **Agios Georgios** 7.65 298 *e*Pn Pn 18 49 07.7 +1.3
AGG **Agios Georgios** 7.65 298 *e*P Pn 18 49 07.7 +1.3
AGG **Agios Georgios** 7.65 298 *e*P Pn 18 49 07.7 +1.3
RZN **Rozhen** 7.69 322 P Pn 18 49 11.2 +4.1
SRS **Serrai** 7.91 315 P Pn 18 49 11.8 +1.9
SRS pmax pmax
comp=Z,22nm,1.0s
SRS **Serrai** 7.91 315 P Pn 18 49 11.8 +1.9
comp=Z,22nm,1.0s
JLOS 7.97 151 P Pn 18 49 10.4 -0.6
LIT **Litokhoron** 8.01 305 *e*Pn Pn 18 49 09.6 -1.8
LIT **Litokhoron** 8.01 305 *e*P Pn 18 49 09.6 -1.8
LIT **Litokhoron** 8.01 305 *e*P Pn 18 49 09.6 -1.8
PLD **Plovdiv** 8.01 324 P Pn 18 49 16.4 +5.1
RSHS 8.11 156 P Pn 18 49 12.1 -0.6
PSN **Preselentsi** 8.19 345 P Pn 18 49 14.8 +1.0
SZH **Strazhica** 8.45 334 P Pn 18 49 21.5 +4.2
GRG **Griva** 8.53 310 P Pn 18 49 19.3 +0.9
GRG **Griva** 8.53 310 P Pn 18 49 20.0 +1.6
GRG pmax pmax
comp=Z,59nm,1.0s
GRG **Griva** 8.53 310 P Pn 18 49 19.3 +0.9
KKB **Krupnik** 8.69 317 P Pn 18 49 22.1 +1.5
TIRR **Tirgusor** 8.90 348 ||*i*P Pn 18 49 25.1 +1.7
TIRR **Tirgusor** 8.90 348 *e*Pn Pn 18 49 21.7 -1.7
TIRR *e*Sn Sn 18 50 58.5 -3.6
TIRR **Tirgusor** 8.90 348 *e*P Pn 18 49 21.7 -1.7
TIRR *e* 18 50 58.5
TIRR **Tirgusor** 8.90 348 *e*P Pn 18 49 21.7 -1.7
TIRR *e*Sn Sn 18 50 58.5 -3.6
SEV **Sevastopol'** 8.98 12 *e*P Pn 18 49 27.6 +3.1
SEV *e*S Sn 18 51 01.8 -2.4
YAL **Yalta** 9.01 14 *e*P Pn 18 49 29.4 +4.4
YAL *e*S Sn 18 51 03.9 -1.2
TLB **Topalu** 9.09 346 ||*i*P Pn 18 49 28.1 +2.1
FNA **Florina** 9.09 306 *e*Pn Pn 18 49 26.4 +0.2
FNA **Florina** 9.09 306 *e*P Pn 18 49 26.4 +0.2
FNA **Florina** 9.09 306 *e*P Pn 18 49 26.4 +0.2
VTS **Vitosha** 9.12 321 ||*i*P Pn 18 49 28.0 +1.4
VTS **Vitosha** 9.12 321 *e*Pn Pn 18 49 27.0 +0.4
VTS **Vitosha** 9.12 321 P Pn 18 49 28.5 +1.9
VTS **Vitosha** 9.12 321 *e*P Pn 18 49 27.0 +0.4
VTS **Vitosha** 9.12 321 *e*P Pn 18 49 27.0 +0.4
MPEP **Malo Peshtene** 9.43 326 P Pn 18 49 34.1 +3.4
SIM **Simferopol'** 9.45 13 P Pn 18 49 33.3 +2.3
SIM S Sn 18 51 15.0 -0.8
SIM pmax pmax
comp=Z,33nm,1.0s
SIM **Simferopol'** 9.45 13 P Pn 18 49 33.3 +2.3
comp=Z,33nm,1.0s
SIM S Sn 18 51 15.0 -0.8
SUDU **Sudak** 9.58 17 *e*P Pn 18 49 34.8 +2.0
SUDU *e*S Sn 18 51 16.2 -2.8
SUDU **Sudak** 9.58 17 *e*P Pn 18 49 34.8 +2.0
CFR **Carcaliu** 9.64 348 ||*i*P Pn 18 49 35.8 +2.2
CFR **Carcaliu** 9.64 348 P Pn 18 49 34.4 +0.8
CFR pmax pmax
comp=Z,18nm,0.9s
CFR **Carcaliu** 9.64 348 P Pn 18 49 34.4 +0.8
comp=Z,18nm,0.9s
ISR **Istrita** 9.93 341 *e*P Pn 18 49 41.4 +3.7
TIR **Tirane** 10.36 306 *e*Pn Pn 18 49 43.6 +0.1
TIR **Tirane** 10.36 306 *e*P Pn 18 49 43.6 +0.1
TIR **Tirane** 10.36 306 *e*P Pn 18 49 43.6 +0.1
MLR **Muntele Rosu** 10.44 340 P Pn 18 49 45.8 +1.2
comp=Z,0.1nm,0.3s,baz=143,slow=15,SNR=17
MLR LR LR 18 54 36.1
comp=Z,44nm,18.6s,baz=174,slow=42
MLR **Muntele Rosu** 10.44 340 ⇑*i*P Pn 18 49 47.4 +2.7
MLR **Muntele Rosu** 10.44 340 *e*Pn Pn 18 49 44.5 -0.2
MLR **Muntele Rosu** 10.44 340 *e*P Pn 18 49 47.2 +2.5
MLR **Muntele Rosu** 10.44 340 *e*Pn Pn 18 49 44.5 -0.2
VRI **Vrincioaia** 10.59 343 ⇑*i*P Pn 18 49 49.5 +2.9
VRI **Vrincioaia** 10.59 343 P Pn 18 49 48.8 +2.2
VRI pmax pmax
comp=Z,278nm,1.1s
VRI **Vrincioaia** 10.59 343 P Pn 18 49 48.8 +2.2
comp=Z,278nm,1.1s
PLOR **Plostina** 10.59 343 ⇑*i*P Pn 18 49 49.6 +2.9
PLOR **Plostina** 10.59 343 P Pn 18 49 49.5 +2.9
VOIR 10.66 337 ||*i*P Pn 18 49 49.2 +1.5
VOIR 10.66 337 P Pn 18 49 50.8 +3.1
VOIR pmax pmax
comp=Z,10.0nm,0.9s
VOIR 10.66 337 ||*i*P Pn 18 49 49.2 +1.5
ARR **Arges** 10.74 335 ⇑*i*P Pn 18 49 51.0 +2.3
CHVG **Ch'k'valeri** 11.01 48 ⇑*i*P Pn 18 49 56.2 +3.9
DOPR **Dopca** 11.03 339 ||*i*P Pn 18 49 54.8 +2.1
LOT **Lotru** 11.12 332 ⇑*i*P Pn 18 49 56.1 +2.2
HERR **Herculane** 11.21 327 ⇑*i*P Pn 18 49 56.8 +1.7
TESR **Tescani** 11.22 344 ||*i*P Pn 18 49 56.8 +1.6
AKH **Akhalkalaki** 11.24 56 ||*i*P Pn 18 50 00.4 +4.7
AKH **Akhalkalaki** 11.24 56 *e*Pn Pn 18 49 54.4 -1.3
AKH **Akhalkalaki** 11.24 56 *e*Pn Pn 18 49 54.4 -1.3
PDG **Podgorica** 11.30 310 ||*i*P Pn 18 50 01.8 +5.4
TTG **Podgorica** 11.30 310 *e*Pn Pn 18 49 53.5 -2.8
TTG **Podgorica** 11.30 310 *e*P Pn 18 49 53.5 -2.8
TTG **Podgorica** 11.30 310 *e*Pn Pn 18 49 53.5 -2.8
MDVR **Moldovita** 11.46 324 ⇑*i*P Pn 18 49 59.2 +0.6
GNI **Garni** 11.66 64 LR LR 18 54 37.8
comp=Z,61nm,20.6s,baz=257,slow=38
NEY **Neytrino** 11.69 47 ||*e*P Pn 18 50 03.6 +1.7
NEY pmax pmax
comp=Z,1.0nm,0.9s
NEY **Neytrino** 11.69 47 *e*P Pn 18 50 03.6 +1.7
comp=Z,1.0nm,0.9s
TIP **Timpagrande** 11.84 291 ⇑*i*P Pn 18 50 02.4 -1.4
TIP **Timpagrande** 11.84 291 *e*Pn Pn 18 50 00.5 -3.3
TIP **Timpagrande** 11.84 291 *e*Pn Pn 18 50 00.5 -3.3
TIP **Timpagrande** 11.84 291 ⇑*i*P Pn 18 50 02.4 -1.4
DIVS **Divibare** 11.86 318 *e*Pn Pn 18 50 04.6 +0.5
DIVS **Divibare** 11.86 318 *e*Pn Pn 18 50 04.6 +0.5
KBZ **Khabaz** 12.08 45 P Pn 18 50 06.5 -0.4
comp=Z,0.0nm,0.3s,baz=250,slow=12,SNR=3.5
KIV **Kislovodsk** 12.10 44 *e*Pn Pn 18 50 09.1 +1.8
KIV **Kislovodsk** 12.10 44 *e*P Pn 18 50 09.7 +2.4
KIV pmax pmax
comp=Z,29nm,1.1s
KIV MLR MLR
comp=Z,16nm,10.0s
KIV **Kislovodsk** 12.10 44 *e*Pn Pn 18 50 09.1 +1.8
KVAR **Kislovodsk Arr** 12.11 44 P Pn 18 50 08.2 +0.8
baz=215,slow=12,SNR=21
BZS **Buzias** 12.14 327 ||*i*P Pn 18 50 11.3 +3.5
BZS **Buzias** 12.14 327 ||P Pn 18 50 11.3 +3.5
ZEI **Tsey** 12.16 51 *e*P Pn 18 50 09.9 +1.6
TBLG **Delisi** 12.22 57 *e*Pn Pn 18 50 10.1 +1.2
TBLG **Delisi** 12.22 57 *e*P Pn 18 50 10.1 +1.2
TBLG **Delisi** 12.22 57 *e*P Pn 18 50 10.1 +1.2
CJR **Cluj-Napoca** 12.27 335 ||*i*P Pn 18 50 12.0 +2.5
NCK **Nalchik** 12.36 48 ||*e*P Pn 18 50 12.6 +1.8
NCK pmax pmax
comp=Z,4.0nm,0.2s
NCK **Nalchik** 12.36 48 *e*P Pn 18 50 12.6 +1.8
comp=Z,4.0nm,0.2s
BURAR **Bucovina Array** 12.59 342 ⇑*i*P Pn 18 50 17.2 +3.2
BURAR **Bucovina Array** 12.59 342 P Pn 18 50 17.2 +3.2
BUR04 **Bucovina Ar. S** 12.60 342 *e*Pn Pn 18 50 12.8 -1.3
BUR04 **Bucovina Ar. S** 12.60 342 *e*Pn Pn 18 50 12.8 -1.3
BUR08 **Bucovina Ar. S** 12.62 342 *e*Pn Pn 18 50 16.3 +1.8
BUR08 **Bucovina Ar. S** 12.62 342 *e*Pn Pn 18 50 16.3 +1.8
DRGR 12.65 333 ⇑*i*P Pn 18 50 18.3 +3.5
DRGR 12.65 333 ⇑P Pn 18 50 18.3 +3.5
CUC **Castrocucco** 12.74 294 *e*Pn Pn 18 50 13.6 -2.4
CUC **Castrocucco** 12.74 294 *e*Pn Pn 18 50 13.6 -2.4
GROC **Groznyy** 13.58 52 *e*P Pn 18 50 27.6 +0.2
GROC *e*S Sn 18 52 59.6 +2.9
GROC pmax pmax
comp=Z,6.0nm,0.3s
BLY **Banja Luka** 13.85 315 ⇑*i*P P 18 50 37.8 -0.2
BLY **Banja Luka** 13.85 315 *e*Pn Pn 18 50 29.4 -1.7
BLY **Banja Luka** 13.85 315 *e*Pn Pn 18 50 29.4 -1.7
BLY **Banja Luka** 13.85 315 ⇑*i*P P 18 50 37.8 -0.2
UZH **Uzhgorod** 14.37 336 *e*P P 18 50 42.1 -1.7
UZH **Uzhgorod** 14.37 336 *e*P P 18 50 42.1 -1.7
CLTB **Caltabellotta** 14.42 282 *e*Pn Pn 18 50 39.2 +0.3
CLTB **Caltabellotta** 14.42 282 *e*Pn Pn 18 50 39.2 +0.3
PSZ **Piszkesteto** 14.68 329 *e*Pn Pn 18 50 38.5 -3.7
PSZ **Piszkesteto** 14.68 329 *e*P Pn 18 50 38.5 -3.7
PSZ **Piszkesteto** 14.68 329 *e*Pn Pn 18 50 38.5 -3.7
CRVS **Cervenica-Dubn** 14.88 335 *e*P P 18 50 49.9 +0.3
CRVS **Cervenica-Dubn** 14.88 335 *e*P P 18 50 49.9 +0.3
CRVS **Cervenica-Dubn** 14.88 335 *e*P P 18 50 49.9 +0.3
LVV **L'vov** 14.93 342 *e*P P 18 50 49.1 -1.0
LVV **L'vov** 14.93 342 *e*P P 18 50 49.1 -1.0
AK11 **Malin Array Si** 14.95 355 *e*Pn Pn 18 50 42.9 -2.7
AK11 **Malin Array Si** 14.95 355 *e*Pn Pn 18 50 42.9 -2.7
KIEV **Kiev** 14.96 355 *e*Pn Pn 18 50 43.5 -2.3
KIEV **Kiev** 14.96 355 *c i*P P 18 50 48.9 -1.5
KIEV pmax pmax
comp=Z,28nm,1.2s
AKASG **Malin Array Be** 14.97 356 P Pn 18 50 45.9 0.0
comp=Z,1.5nm,0.3s,baz=178,slow=12,SNR=27
AKBB **Malin Array Si** 14.97 356 *e*Pn Pn 18 50 47.2 +1.3
AKBB **Malin Array Si** 14.97 356 *e*Pn Pn 18 50 47.2 +1.3
KWP **Kalwaria Pacla** 15.12 339 *e*PKP P 18 50 53.3 +1.1
KWP **Kalwaria Pacla** 15.12 339 *e*Pn P 18 50 50.7 -1.5
comp=Z,489nm,1.1s
KWP **Kalwaria Pacla** 15.12 339 *e*P P 18 50 53.3 +1.1
KWP **Kalwaria Pacla** 15.12 339 *e*Pn P 18 50 50.7 -1.5
comp=Z,489nm,1.1s
KWP **Kalwaria Pacla** 15.12 339 *e*P P 18 50 53.3 +1.1
AQU **L'Aquila** 15.18 301 *e*Pn Pn 18 50 46.0 -2.7
comp=Z,14nm,0.9s
AQU **L'Aquila** 15.18 301 *e*P Pn 18 50 46.0 -2.7
AQU pmax pmax
comp=Z,14nm,0.9s
AQU **L'Aquila** 15.18 301 *e*Pn Pn 18 50 46.0 -2.7
comp=Z,14nm,0.9s
BOJS **Bojanci** 15.40 314 *i* P P 18 50 56.3 +1.0
BOJS **Bojanci** 15.40 314 *i* P P 18 50 56.3 +1.0
VYHS **Vyhne** 15.57 328 *e*P P 18 51 00.3 +3.1
VYHS **Vyhne** 15.57 328 *e*P P 18 51 00.3 +3.1
NIE **Niedzica** 15.73 333 *e*PKP P 18 50 58.6 -0.3
NIE **Niedzica** 15.73 333 *e*P P 18 50 58.7 -0.3
NIE **Niedzica** 15.73 333 *e*P P 18 50 58.7 -0.3
VISS **Visnje** 15.81 314 *i* P P 18 50 59.7 -0.1
VISS **Visnje** 15.81 314 *i* P P 18 50 59.7 -0.1
LANS **Liptovska Anna** 15.83 331 *e*P P 18 51 00.7 +0.6
LANS **Liptovska Anna** 15.83 331 *e*P P 18 51 00.7 +0.6
LANS **Liptovska Anna** 15.83 331 *e*P P 18 51 00.7 +0.6
PERS **Pernice** 16.13 317 *i* P P 18 51 03.7 +0.3
PERS **Pernice** 16.13 317 *i* P P 18 51 03.7 +0.3
MODS **Modra-Piesok** 16.18 325 *e*P Pn 18 51 02.2 +0.8
MODS **Modra-Piesok** 16.18 325 *e*Pn Pn 18 51 02.2 +0.8
MODS **Modra-Piesok** 16.18 325 *e*Pn Pn 18 51 02.2 +0.8
SOKA **Soboth** 16.20 317 *e*P P 18 51 04.5 +0.2
comp=Z,6.8nm,0.9s
SOKA **Soboth** 16.20 317 P P 18 51 04.5 +0.2
comp=Z,6.8nm,0.9s
SMOL **Smolenice** 16.21 326 P P 18 51 05.6 +1.4
SMOL pmax pmax
comp=Z,21nm,0.8s
SMOL **Smolenice** 16.21 326 P P 18 51 05.6 +1.4
comp=Z,21nm,0.8s
ARSA **Arzberg** 16.29 319 *e*P P 18 51 04.4 -0.7
comp=Z,10nm,1.1s
ARSA **Arzberg** 16.29 319 P P 18 51 04.4 -0.7
comp=Z,10nm,1.1s
JAVS **Javornik** 16.31 313 *e*P P 18 51 04.6 -0.9
JAVS **Javornik** 16.31 313 *e*P P 18 51 04.6 -0.9
JAVC **Velka Javorina** 16.35 327 *e*PN P 18 51 06.2 +0.3
OBKA **Obir** 16.37 316 *e*P P 18 51 07.1 +0.9
comp=Z,11nm,1.4s
OBKA **Obir** 16.37 316 P P 18 51 07.1 +0.9
comp=Z,11nm,1.4s
TRI **Trieste** 16.39 312 *e*Pn Pn 18 51 03.1 -1.1
comp=Z,20nm,0.9s
TRI **Trieste** 16.39 312 *e*P Pn 18 51 03.1 -1.1
TRI pmax pmax
comp=Z,20nm,0.9s
TRI **Trieste** 16.39 312 *e*P Pn 18 51 03.1 -1.1
comp=Z,20nm,0.9s
VSR **Storozhevoye** 16.50 18 *e*P P 18 51 13.6 +6.2
VSR *e*S S 18 54 17.8 +0.6
VSR pmax pmax
comp=Z,5.0nm,0.5s
VSR smax smax
comp=E,70nm,2.1s
OJC **Ojcow** 16.58 334 *e*PKP P 18 51 08.1 -0.2
OJC **Ojcow** 16.58 334 *e*Pn Pn 18 51 06.8 +0.3
comp=E,20nm,1.1s
OJC **Ojcow** 16.58 334 *e*P P 18 51 08.1 -0.2
OJC **Ojcow** 16.58 334 *e*Pn Pn 18 51 06.8 +0.3
comp=E,20nm,1.1s
OJC **Ojcow** 16.58 334 *e*P P 18 51 08.1 -0.2
OKC **Ostrava-Krasne** 16.90 330 AMS AMS 18 58 50.0
comp=E,200nm,17.6s
MYKA **Terra Mystica** 16.96 315 *i* P P 18 51 13.5 +0.9
comp=E,9.4nm,0.9s
MYKA **Terra Mystica** 16.96 315 P P 18 51 13.5 +0.9
comp=E,9.4nm,0.9s
MORC **Moravsky Berou** 17.10 329 *e*Pn Pn 18 51 12.6 -0.4
comp=E,12nm,1.6s
MORC **Moravsky Berou** 17.10 329 *e*P Pn 18 51 12.6 -0.4
MORC pmax pmax
comp=Z,12nm,1.6s
MORC **Moravsky Berou** 17.10 329 *e*P Pn 18 51 12.6 -0.4
comp=Z,12nm,1.6s
VRAC **Vranov** 17.16 326 LR LR 18 58 58.7
comp=Z,98nm,18.4s,baz=140,slow=41
MOA **Molln** 17.33 319 *e*P P 18 51 17.7 +1.0
comp=Z,6.9nm,1.1s
MOA **Molln** 17.33 319 P P 18 51 17.7 +1.0
comp=Z,6.9nm,1.1s
KBA **Koelnbreinsper** 17.38 316 *e*P P 18 51 18.6 +1.2
comp=Z,16nm,0.7s,SNR=12
KBA **Koelnbreinsper** 17.38 316 P P 18 51 18.6 +1.2
KBA pmax pmax
comp=Z,24nm,1.2s
KBA **Koelnbreinsper** 17.38 316 P P 18 51 18.6 +1.2
comp=Z,24nm,1.2s
RAYN **Ar Rayn** 17.50 130 *e*Pn Pn 18 51 17.1 -1.1
comp=Z,13nm,1.6s
RAYN **Ar Rayn** 17.50 130 *e*Pn Pn 18 51 17.1 -1.1
comp=Z,13nm,1.6s
KEST **Kesra** 17.61 276 P Pn 18 51 19.1 -0.4
comp=Z,0.4nm,0.3s,baz=11,slow=4.2,SNR=12
KEST **Kesra** 17.61 276 *e*Pn Pn 18 51 16.9 -2.6
comp=Z,64nm,1.7s
KEST **Kesra** 17.61 276 *e*Pn Pn 18 51 16.9 -2.6
comp=Z,64nm,1.7s
ABTA **Abfaltersbach** 17.68 314 *e*P P 18 51 20.8 +0.2
comp=Z,8.6nm,0.8s,SNR=5.7
ABTA **Abfaltersbach** 17.68 314 P P 18 51 20.8 +0.2
comp=Z,8.6nm,0.8s,SNR=5.7
TAMR **Tamra** 17.70 281 *e*Pn Pn 18 51 18.9 -1.5
comp=Z,39nm,1.2s
TAMR **Tamra** 17.70 281 *e*Pn Pn 18 51 18.9 -1.5
comp=Z,39nm,1.2s
DPC **Dobruska-Polom** 18.05 328 *e*P Pn 18 51 24.8 +0.1
DPC **Dobruska-Polom** 18.05 328 *e*P Pn 18 51 24.8 +0.1
DPC **Dobruska-Polom** 18.05 328 *e*P Pn 18 51 24.8 +0.1
GEA0 **GERESS Array S** 18.24 321 *e*P P 18 51 25.8 -0.9
GEA0 **GERESS Array S** 18.24 321 *e*P P 18 51 25.8 -0.9
GEC2 **GERESS Array S** 18.24 321 *e*P P 18 51 26.2 -0.6
comp=Z,16nm,1.3s
GEC2 **GERESS Array S** 18.24 321 *e*P P 18 51 26.2 -0.6
GEC2 pmax pmax
comp=Z,16nm,1.3s
GEC2 **GERESS Array S** 18.24 321 *e*P P 18 51 26.2 -0.6
comp=Z,16nm,1.3s
GERES **GERESS Array B** 18.24 321 P P 18 51 26.9 +0.1
comp=Z,0.2nm,0.3s,baz=125,slow=12,SNR=28
GERES LR LR 18 59 50.8
comp=Z,109nm,19.1s,baz=130,slow=41
KSP **Ksiaz** 18.43 329 *e*PKP Pn 18 51 30.5 +1.2
KSP **Ksiaz** 18.43 329 *e*P Pn 18 51 30.5 +1.2
KSP **Ksiaz** 18.43 329 *e*P Pn 18 51 30.5 +1.2
WTTA **Wattenberg** 18.46 314 *i* Pn Pn 18 51 30.9 +1.1
comp=Z,17nm,1.0s
WTTA **Wattenberg** 18.46 314 P Pn 18 51 30.9 +1.1
comp=Z,17nm,1.0s
KHC **Kasperske Hory** 18.49 322 *e*P P 18 51 29.0 -0.4
KHC *e*x x 18 51 36.1
KHC AMS AMS 18 59 30.0
comp=Z,200nm,13.3s
KHC **Kasperske Hory** 18.49 322 *e*P P 18 51 28.4 -1.0
comp=Z,4.1nm,1.0s
KHC **Kasperske Hory** 18.49 322 *e*P P 18 51 29.0 -0.4
KHC MLR MLR
comp=Z,200nm,13.3s
WATA **Walderalm** 18.53 314 *e*Pn Pn 18 51 30.5 -0.1
comp=Z,8.7nm,0.7s
WATA **Walderalm** 18.53 314 P Pn 18 51 30.5 -0.1
comp=Z,8.7nm,0.7s
PRU **Pruhonice** 18.59 325 AMS AMS 18 59 00.0
comp=Z,100nm,17.8s
MOTA **Moosalm** 18.81 314 *e*Pn P 18 51 32.2 -0.9
comp=Z,24nm,1.0s,SNR=16
MOTA **Moosalm** 18.81 314 P P 18 51 32.2 -0.9
comp=Z,24nm,1.0s,SNR=16
WET **Wettzell** 18.85 321 P P 18 51 33.1 -0.3
WET **Wettzell** 18.85 321 P P 18 51 33.1 -0.3
FETA **Feichten** 18.87 313 *i* Pn Pn 18 51 34.8 +0.1
comp=Z,45nm,1.1s,SNR=24
FETA **Feichten** 18.87 313 P Pn 18 51 34.8 +0.1
comp=Z,45nm,1.1s,SNR=24
FUORN **Ofenpass-Fuorn** 18.96 311 *e*P P 18 51 34.0 -0.9
comp=Z,16nm,0.9s
FUORN **Ofenpass-Fuorn** 18.96 311 *e*P P 18 51 34.0 -0.9
comp=Z,16nm,0.9s
SUW **Suwalki** 19.04 346 *e*P P 18 51 32.6 -2.7
comp=Z,42nm,0.3s
SUW **Suwalki** 19.04 346 *e*P P 18 51 32.6 -2.7
SUW pmax pmax
comp=Z,42nm,0.3s
RETA **Reutte** 19.08 314 *e*Pn P 18 51 36.0 0.0
comp=Z,11nm,0.8s,SNR=6.8
RETA **Reutte** 19.08 314 P P 18 51 36.0 0.0
comp=Z,11nm,0.8s,SNR=6.8
DAVOX **Davos/Dischmat** 19.27 311 P P 18 51 38.7 +0.5
comp=Z,0.8nm,0.3s,baz=131,slow=12,SNR=18
DAVOX LR LR 19 00 30.2
comp=Z,148nm,18.5s,baz=92,slow=41
TUE **Stuetta** 19.46 310 *e*P P 18 51 40.4 +0.1
comp=Z,9.9nm,0.9s
TUE **Stuetta** 19.46 310 *e*P P 18 51 40.4 +0.1
comp=Z,9.9nm,0.9s
BRG **Berggiesshubel** 19.48 326 *e*P P 18 51 39.9 -0.4
comp=Z,9.1nm,1.2s
BRG **Berggiesshubel** 19.48 326 *e*P P 18 51 39.8 -0.4
BRG pmax pmax
comp=Z,9.0nm,1.2s
DAVA **Damuels** 19.50 313 *e*Pn P 18 51 40.7 0.0
comp=Z,26nm,0.9s,SNR=8.8
DAVA **Damuels** 19.50 313 P P 18 51 40.7 0.0
comp=Z,26nm,0.9s,SNR=8.8
OBN **Obninsk** 19.70 9 LR LR 19 00 06.7
comp=Z,170nm,21.2s,baz=196,slow=39
OBN **Obninsk** 19.70 9 *e*P P 18 51 41.0 -1.6
comp=Z,14nm,0.5s
OBN **Obninsk** 19.70 9 ||*e*P Pn 18 51 46.0 +1.6
NKC **Novy Kostel** 19.76 323 P Pn 18 51 45.8 +0.7
GRFO **Grafenberg** 20.05 320 *e*P P 18 51 43.6 -2.8
comp=Z,14nm,0.8s
GRFO **Grafenberg** 20.05 320 *e*P P 18 51 43.6 -2.8
GRFO pmax pmax
comp=Z,14nm,0.8s
GRFO **Grafenberg** 20.05 320 *e*P P 18 51 43.6 -2.8
comp=Z,14nm,0.8s
CLL **Collm** 20.21 326 *e*P P 18 51 47.0 -1.1
comp=Z,14nm,1.5s
CLL *e*sP sP 18 52 07.0 +1.2
CLL *e* 18 52 15.0
CLL *e*S Sn 18 55 37.0 +0.1
CLL LmH 18 58 00.0
comp=N,100nm,19.8s
CLL LmH 18 58 00.0
comp=E,100nm,20.9s
CLL LmV 19 00 00.0
comp=Z,100nm,18.0s
CLL **Collm** 20.21 326 *e*P P 18 51 46.7 -1.4
comp=Z,9.7nm,1.1s
CLL **Collm** 20.21 326 *e*P P 18 51 47.0 -1.1
CLL *e*S Sn 18 55 37.0 +0.1
CLL pmax pmax
comp=Z,14nm,1.5s
CLL **Collm** 20.21 326 *e*P P 18 51 46.7 -1.4
comp=Z,9.7nm,1.1s
MOX **Moxa** 20.43 323 P P 18 51 50.7 +0.1
MOX pmax pmax
comp=Z,29nm,1.0s
MOX **Moxa** 20.43 323 P P 18 51 50.7 +0.1
comp=Z,29nm,1.0s
MOS **Moscow** 20.46 11 *e*P Pn 18 51 53.7 +0.4
STU **Stuttgart** 20.64 316 *e*P P 18 51 51.2 -1.7
comp=Z,18nm,0.8s
STU **Stuttgart** 20.64 316 *e*P P 18 51 51.2 -1.7
STU pmax pmax
comp=Z,18nm,0.8s
STU **Stuttgart** 20.64 316 *e*P P 18 51 51.2 -1.7
comp=Z,18nm,0.8s
BNI **Bardonecchia** 20.67 304 *e*P P 18 51 53.7 +0.4
comp=Z,6.9nm,0.9s
BNI **Bardonecchia** 20.67 304 *e*P P 18 51 53.7 +0.4
BNI pmax pmax
comp=Z,7.0nm,0.9s
BNI **Bardonecchia** 20.67 304 *e*P P 18 51 53.7 +0.4
comp=Z,6.9nm,0.9s
SENIN **Lac Senin/Sane** 20.71 308 *e*P P 18 51 53.5 -0.4
comp=Z,20nm,0.7s
SENIN **Lac Senin/Sane** 20.71 308 *e*P P 18 51 53.5 -0.4
comp=Z,20nm,0.7s
LPG **La Plagne** 20.76 305 *e*P Pn 18 51 56.8 -0.6
LPG pmax pmax

comp=Z,11nm,0.8s
LPL La Plagne 20.78 305 *e*P Pn 18 51 56.4 -1.1
LPL pmax pmax
comp=Z,9.0nm,0.7s
ORIF Oris-en-Rattie 21.17 303 *e*P **P 18 51 59.7 +1.0**
ORIF pmax pmax
comp=Z,8.0nm,0.9s
ORIF Oris-en-Rattie 21.17 303 *e*P **P 18 51 59.7 +1.0**
comp=Z,8.0nm,0.9s
ECH Echery 21.56 313 *e*P **P 18 52 02.2 -0.6**
comp=Z,15nm,1.1s
ECH Echery 21.56 313 *e*P **P 18 52 02.2 -0.6**
ECH pmax pmax
comp=Z,15nm,1.1s
ECH Echery 21.56 313 *e*P **P 18 52 02.2 -0.6**
comp=Z,15nm,1.1s
HINF Hinteralfeld 21.57 311 *e*P **P 18 52 03.9 +1.0**
HINF pmax pmax
comp=Z,8.0nm,0.7s
HINF Hinteralfeld 21.57 311 *e*P **P 18 52 03.9 +1.0**
comp=Z,8.0nm,0.7s
GEYT Alibeck 21.75 76 P **P 18 52 03.8 -1.0**
comp=Z,82nm,0.8s,baz=264,slow=8.3,SNR=9.7
GYA0B ALIBECK ARRAY 21.75 76 *e*P **P 18 52 03.5 -1.3**
comp=Z,15nm,1.0s
GYA0B ALIBECK ARRAY 21.75 76 *e*P **P 18 52 03.5 -1.3**
comp=Z,15nm,1.0s
WLF Walferdange 22.82 315 *e*P **P 18 52 15.4 -0.7**
comp=Z,25nm,1.4s
WLF Walferdange 22.82 315 *e*P **P 18 52 15.4 -0.7**
WLF pmax pmax
comp=Z,25nm,1.4s
VSU Vasula 22.87 354‖ *e*P **P 18 52 19.9 +3.4**
VSU pmax pmax
comp=Z,39nm,0.9s
UOSS Minazif 24.18 110 *e*P **P 18 52 28.2 -1.2**
comp=Z,6.0nm,0.8s
DAMY Dhamar 24.28 147 *e*P **P 18 52 29.7 -1.0**
comp=Z,40nm,1.5s
AKTK Aktyubinsk 24.36 45 P **P 18 52 29.4 -1.4**
comp=Z,8.0nm,0.9s
AKTO Aktyubinsk 24.36 45 P **P 18 52 29.4 -1.4**
comp=Z,8.2nm,0.9s,baz=245,slow=11,SNR=16
UCC Uccle 24.37 316 *e*P **P 18 52 29.0 -1.8**
comp=Z,48nm,1.5s
UCC Uccle 24.37 316 *e*P **P 18 52 29.0 -1.8**
UCC pmax pmax
comp=Z,48nm,1.5s
ABKAR Akbulak array 25.02 48 *e*P **P 18 52 35.4 -1.4**
TAM Tamanrasset 25.66 247 *e*P **P 18 52 45.8 +2.8**
comp=Z,8.3nm,0.9s
KLMR Klimovskoe 25.67 10 *e*P **P 18 52 40.2 -2.3**
KLMR pmax pmax
comp=Z,10.0nm,0.9s
KLMR Klimovskoe 25.67 10 *e*P **P 18 52 40.2 -2.3**
KLMR AMP 18 52 45.9
comp=Z,10.0nm,0.9s
FIA0 FINESS Array S 25.88 355 *e*P **P 18 52 42.4 -2.0**
FIA0 FINESS Array S 25.88 355 *e*P **P 18 52 42.4 -2.0**
FINES FINESS Array B 25.88 355 P **P 18 52 42.4 -2.0**
comp=Z,1.9nm,0.4s,baz=160,slow=11,SNR=19
FINES LR LR 19 02 53.1
comp=Z,43nm,19.8s,baz=201,slow=36
FIA1 FINESS Array S 25.88 355 *e*P **P 18 52 42.1 -2.3**
comp=Z,54nm,1.6s
HFS Hagfors 26.82 341 P **P 18 52 51.6 -1.4**
comp=Z,1.3nm,0.5s,baz=143,slow=6.3,SNR=13
HFS LR LR 19 05 33.5
comp=Z,53nm,19.1s,baz=160,slow=41
PRGR Permogore 27.47 15 *e*P **P 18 53 00.0 +1.3**
PRGR pmax pmax
comp=Z,5.0nm,0.5s
ARU Arti 27.79 33 P **P 18 53 00.6 -1.1**
baz=165,slow=14
ARU LR LR 19 06 37.2
comp=Z,16nm,19.1s,baz=309,slow=42
ARU Arti 27.79 33 *e*P **P 18 52 59.8 -1.8**
comp=Z,5.8nm,0.9s
ARU Arti 27.79 33 *d i*P **P 18 53 03.9 +2.2**
ARU 18 53 47.1
ARU 18 56 19.9
ARU S **S 18 57 45.2 +4.3**
ARU SS **SnSn 18 58 57.8 +0.6**
ARU pmax pmax
comp=Z,5.0nm,0.8s
ES19 SONSECA Array 27.80 289 *e*P **P 18 53 01.8 -0.2**
ES19 SONSECA Array 27.80 289 *e*P **P 18 53 01.8 -0.2**
ESDC Sonseca Array 27.85 289 P **P 18 53 02.6 +0.1**
comp=Z,1.2nm,0.6s,baz=81,slow=9.3,SNR=11
ESLA Sonseca Array 27.85 289 *e*P **P 18 53 00.9 -1.6**
comp=Z,18nm,1.7s
ESLA Sonseca Array 27.85 289 *e*P **P 18 53 00.9 -1.6**
comp=Z,18nm,1.7s
NC602 NORSAR Array S 27.92 339 *e*P **P 18 53 01.3 -1.5**
PAB San Pablo 28.16 288 *e*P **P 18 53 06.8 +1.6**
comp=Z,14nm,1.5s
PAB San Pablo 28.16 288 *e*P **P 18 53 06.8 +1.6**
PAB pmax pmax
comp=Z,14nm,1.5s
PAB San Pablo 28.16 288 *e*P **P 18 53 06.8 +1.6**
comp=Z,14nm,1.5s
NC405 NORSAR Array S 28.18 340 *e*P **P 18 53 02.0 -3.1**
NAO01 NORSAR Array S 28.20 339 *e*P **P 18 53 04.3 -0.9**
NB201 NORSAR Array S 28.25 340 *e*P **P 18 53 01.9 -3.8**
NB2 NORSAR Subarra 28.26 340 P **P 18 53 04.6 -1.3**
comp=Z,0.8nm,0.7s,baz=156,slow=9.3
NC303 NORSAR Array S 28.37 340 *e*P **P 18 53 04.3 -2.4**
NBO00 NORSAR Array S 28.38 339 *e*P **P 18 53 04.4 -2.4**
SVE Sverdlovsk 28.96 34 *e*P **P 18 53 13.3 +1.2**
EKA Eskdalemuir Ar 30.46 321 P **P 18 53 23.8 -1.5**
comp=Z,0.4nm,0.4s,baz=125,slow=10,SNR=3.9
MTE Manteigas 30.55 290 *e*P **P 18 53 23.2 -3.2**
comp=Z,20nm,1.3s
MTE Manteigas 30.55 290 *e*P **P 18 53 23.2 -3.2**
comp=Z,20nm,1.3s
PESTR Estremoz 30.72 287 *e*P **P 18 53 26.7 -1.2**
comp=Z,9.3nm,1.3s
PESTR Estremoz 30.72 287 *e*P **P 18 53 26.7 -1.2**
comp=Z,9.3nm,1.3s
KK31 Karatay Array 31.12 64 *e*P **P 18 53 31.3 -0.1**
KK31 Karatay Array 31.12 64 *e*P **P 18 53 31.3 -0.1**
KK31 Karatay Array 31.12 64 *e*P **P 18 53 31.3 -0.1**
KKAR Karatay Array 31.12 64 *e*P **P 18 53 31.2 -0.2**
KKAR Karatay Array 31.12 64 *e*P **P 18 53 31.2 -0.2**
KKAR Karatay Array 31.12 64 *e*P **P 18 53 31.2 -0.2**
BRVK Borovoye 32.41 45 *e*P **P 18 53 42.7 +0.2**
comp=Z,2.3nm,0.8s
BRVK Borovoye 32.41 45‖ *e*P **P 18 53 44.2 +1.7**
BRVK pmax pmax
comp=Z,3.0nm,1.0s
BVAR Borovoye Array 32.46 46 P **P 18 53 42.0 -1.0**
comp=Z,1.6nm,0.7s,baz=227,slow=7.7,SNR=14
BVAR LR LR 19 08 39.6
comp=Z,40nm,20.8s,baz=332,slow=40
ARA0 ARCESS Array S 33.95 357 *e*P **P 18 53 54.6 -1.1**
ARCES ARCESS Array B 33.95 357 P **P 18 53 54.6 -1.1**
comp=Z,2.1nm,0.6s,baz=167,slow=8.2,SNR=17
AAK Ala-Archa 34.06 65 P **P 18 53 57.6 +0.3**
comp=Z,1.9nm,0.3s,baz=320,slow=2.3,SNR=4.4
KEV Kevo 34.10 357 *e*P **P 18 53 53.9 -3.1**
comp=Z,15nm,1.1s
KEV Kevo 34.10 357 *e*P **P 18 53 53.9 -3.1**
KEV pmax pmax
comp=Z,15nm,1.1s
NIL Nilore 34.57 81 *e*P **P 18 54 00.9 -0.6**
comp=Z,13nm,1.3s
NIL Nilore 34.57 81 *e*P **P 18 54 01.0 -0.6**
NIL pmax pmax
comp=Z,13nm,1.3s
NIL Nilore 34.57 81 *e*P **P 18 54 00.9 -0.6**
comp=Z,13nm,1.3s
TOA1 Torodi Ar. Sit 34.72 237 *e*P **P 18 54 03.4 +0.4**
TOA0 Torodi Ar. Sit 34.72 237 *e*P **P 18 54 02.9 -0.1**
comp=Z,14nm,1.5s
TORD Torodi Ar. Bea 34.72 237 P **P 18 54 03.4 +0.4**
comp=Z,1.7nm,0.9s,baz=34,slow=8.9,SNR=7.7
NRN Naryn 35.27 67 *e*P **P 18 54 07.3 -0.6**
comp=Z,8.4nm,1.1s
NRN Naryn 35.27 67 *e*P **P 18 54 07.3 -0.6**
NRN pmax pmax
comp=Z,8.0nm,1.1s
NRN Naryn 35.27 67 *e*P **P 18 54 07.3 -0.6**
comp=Z,8.4nm,1.1s
TARG Taragay, Kyrgy 36.59 66 *e*P **P 18 54 17.8 -1.5**
comp=Z,12nm,1.3s
KURBB Kurchatov Arra 36.99 51 P **P 18 54 21.0 -1.0**
comp=Z,4.9nm,0.8s,baz=272,slow=9.0,SNR=45
KURK Kurchatov 37.05 51 *e*P **P 18 54 21.0 -1.6**
KURK Kurchatov 37.05 51 *c e*P **P 18 54 24.5 +1.9**
KURK pmax pmax
comp=Z,6.0nm,0.7s
MAKZ Makanchi 39.19 58 *e*P **P 18 54 39.5 -1.2**
comp=Z,3.3nm,1.1s
MAKZ Makanchi 39.19 58 *e*P **P 18 54 39.5 -1.2**
MAKZ pmax pmax
comp=Z,3.0nm,1.1s
MK31 Makanchi Array 39.41 58 *e*P **P 18 54 41.3 -1.2**
MK31 Makanchi Array 39.41 58 *e*P **P 18 54 41.3 -1.2**
MK32 Makanchi Array 39.41 58 *e*P **P 18 54 41.6 -0.9**
MKAR Makanchi Array 39.41 58 P **P 18 54 41.6 -0.9**
comp=Z,2.2nm,0.6s,baz=270,slow=5.6,SNR=20
MKAR Makanchi Array 39.41 58 *e*P **P 18 54 41.1 -1.4**
comp=Z,17nm,0.6s
MK01 Makanchi Array 39.41 58 *e*P **P 18 54 41.4 -1.2**
NVS Novosibirsk 40.26 45 *e*P **P 18 54 51.3 +1.9**
ZAA0 Zalesovo Array 41.10 46 *e*P **P 18 54 54.9 -1.5**
comp=Z,2.8nm,0.6s
ZAA1 Zalesovo Array 41.10 46 *e*P **P 18 54 55.0 -1.4**
ZALV Zalesovo Beam 41.10 46 P **P 18 54 55.0 -1.4**
comp=Z,3.2nm,0.5s,baz=267,slow=7.7,SNR=5.2
ZALV Zalesovo Beam 41.10 46 *e*P **P 18 54 54.7 -1.6**
ZALV Zalesovo Beam 41.10 46 P **P 18 54 55.0 -1.4**
ZALV pmax pmax
comp=Z,3.0nm,0.5s
BORG Borgarnes 42.37 330 LR LR 19 14 24.6
comp=Z,37nm,18.7s,baz=118,slow=38
DGZ Jazzator, Alta 42.70 53‖ *e*P **P 18 55 12.3 +2.7**
DGZ pmax pmax
comp=Z,2.0nm,1.0s
WMQ Urumqi 43.52 61 P **P 18 55 18.0 +1.8**
DANN Dangsing 44.84 84 *e*P **P 18 55 27.6 +0.3**
comp=Z,26nm,0.3s
KOLN Koldanda 44.94 85 *e*P **P 18 55 28.1 +0.1**
comp=Z,8.4nm,0.6s
NRIK Noril'sk 45.30 25 P **P 18 55 30.0 0.0**
comp=Z,2.9nm,0.5s,baz=253,slow=4.5,SNR=4.9
NRIK Noril'sk 45.30 25 P **P 18 55 30.0 0.0**
NRIK pmax pmax
comp=Z,3.0nm,0.3s
GKN Gorkha 45.69 84 *e*P **P 18 55 33.9 0.0**
comp=Z,26nm,1.0s
DMN Daman 46.23 84 *e*P **P 18 55 38.3 +0.1**
KKN Kakani 46.29 84 *e*P **P 18 55 38.9 +0.2**
PKIN Phulchoki 46.47 84 *e*P **P 18 55 40.7 +0.5**
comp=Z,9.0nm,0.6s
PKIN Phulchoki 46.47 84 *e*P **P 18 55 41.1 +0.9**
RAMN Ramite 47.71 84 *e*P **P 18 55 48.8 -1.0**
GTA Gaotai 53.40 64 P **P 18 56 32.3 -0.2**
GTA pP pP 18 56 41.4 -4.6
GTA sP sP 18 56 45.6 -6.1
GTA pmax pmax
comp=Z,5.0nm,0.8s
SONA0 Songino Array 55.34 52 *e*P **P 18 56 45.7 -0.7**
SONM Songino Array 55.34 52 P **P 18 56 45.7 -0.7**
comp=Z,1.5nm,0.8s,baz=294,slow=7.8,SNR=5.5
SONM LR LR 19 23 15.9
comp=Z,35nm,21.5s,baz=244,slow=39
SONA1 Songino Array 55.34 52 *e*P **P 18 56 45.7 -0.7**
BOD Bodaibo 56.97 39 *e*P **P 18 56 55.8 -1.9**
BOD pmax pmax
comp=Z,4.0nm,1.4s
LZH Lanzhou 57.58 66 *e*P **P 18 57 02.4 -0.2**
LZH pP pP 18 57 11.4 -4.9
LZH sP sP 18 57 14.5 -7.4
LZH *e*PP **PP 18 59 10.6 +0.2**
LZH pmax pmax
comp=Z,12nm,1.1s
LZH pmax pmax
comp=Z,110nm,5.4s
LZH LR LR
comp=N,190nm,15.0s
LZH LR LR
comp=E,200nm,16.2s
LZH LR LR
comp=Z,280nm,18.6s
TIXI Tiksi 58.86 22 P **P 18 57 09.5 -1.2**
comp=Z,0.6nm,0.4s,baz=327,slow=8.7,SNR=3.3
TIXI Tiksi 58.86 22‖ *e*P **P 18 57 13.7 +3.0**
TIXI pmax pmax
comp=Z,1.0nm,0.6s
CD2 Chengdu 59.66 72 P **P 18 57 16.1 -0.8**
CD2 pmax pmax
comp=Z,3.0nm,0.5s
HHC Hu-ho-hao-te 61.26 59 *e*P **P 18 57 29.4 +1.6**
HHC PP **PP 18 59 46.1 +3.3**
HHC S **S 19 05 45.3 +1.0**
HHC sS pS 19 05 58.0 -2.6
HHC Hu-ho-hao-te 61.26 59 SS SS 19 09 46.8 +2.1
HHC pmax pmax
comp=Z,17nm,1.1s
HHC pmax pmax
comp=Z,52nm,5.3s
HHC LR LR
comp=N,140nm,15.7s
HHC LR LR
comp=E,61nm,16.1s
HHC LR LR
comp=Z,560nm,15.5s
KMI Kunming 61.49 78 P **P 18 57 32.6 +2.9**
KMI pmax pmax
comp=Z,7.0nm,1.2s
CM31 Chiang Mai Arr 61.73 87 *e*P **P 18 57 29.8 -1.4**
CMAR Chiang Mai Arr 61.73 87 P **P 18 57 30.2 -1.0**
comp=Z,1.2nm,0.7s,baz=296,slow=8.8,SNR=9.2
CM01 Chiang Mai Arr 61.77 87 *e*P **P 18 57 30.0 -1.4**
ENH Enshi 64.35 70 *e*P **P 18 57 46.4 -2.0**
comp=Z,17nm,1.3s
KULM Kulim 70.40 98 *e*P **P 18 58 25.6 -1.3**
comp=Z,45nm,1.8s
PSI Prapat 70.48 101 P **P 18 58 26.3 -1.2**
comp=Z,2.8nm,0.5s,baz=359,slow=6.1,SNR=2.7
PSI Prapat 70.48 101 *e*P **P 18 58 26.1 -1.4**
comp=Z,8.3nm,1.1s
SEY Seymchan 71.08 24‖ *e*P **P 18 58 34.5 +4.3**
EMMW East Machias 71.19 312 *e*P **P 18 58 30.3 -0.9**
comp=Z,34nm,1.4s
BILL Bilibino 71.20 16 *e*P **P 18 58 33.8 +3.0**
BILL *e* 18 58 48.3
BILL pmax pmax
comp=Z,3.0nm,1.1s
MA2 Magadan 72.79 28‖ *e*P **P 18 58 42.3 +1.8**
MA2 pmax pmax
comp=Z,9.0nm,1.3s
KS01 Wonju Array Si 74.01 55 *e*P **P 18 58 46.7 -1.4**
KS15 Wonju Array Si 74.02 55 *e*P **P 18 58 47.6 -0.5**
KSAR Wonju Array Be 74.02 55 P **P 18 58 47.8 -0.3**
KSAR Wonju Array Be 74.02 55 P **P 18 58 47.8 -0.3**
KSRS Korea Array 74.04 55 P **P 18 58 47.8 -0.4**
comp=Z,1.2nm,0.7s,baz=307,slow=4.3,SNR=7.6
YKA Yellowknife Ar 78.23 344 P **P 18 59 11.1 -0.5**
comp=Z,0.4nm,0.7s,baz=22,slow=6.7,SNR=3.1
MDM Murphy Dome 79.59 360 *e*P **P 18 59 18.3 -0.7**
comp=Z,7.1nm,1.5s
ILAR Eielson Array 79.76 359 P **P 18 59 19.3 -0.6**
comp=Z,0.4nm,0.7s,baz=338,slow=2.9,SNR=4.4
ILAR Eielson Array 79.76 359 P **P 18 59 19.3 -0.6**
ILAR pmax pmax
comp=Z,1.0nm,0.9s
SCRK Sand Creek 80.50 358 *e*P **P 18 59 24.2 +0.1**
comp=Z,2.7nm,1.0s
MAJO Matsushiro 81.27 51 *e*P **P 18 59 29.7 +1.2**
MAJO Matsushiro 81.27 51 *e*P **P 18 59 29.7 +1.2**
MJAR Matsushiro Arr 81.27 51 P **P 18 59 29.7 +1.2**
comp=Z,0.8nm,0.5s,baz=319,slow=3.7,SNR=7.2

MEX 23 18:58:21.8±0.3, 16°.18N×98°.56W, h14km±7km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.38**	**360**	*e*P	Pn	18 58 43.0	-3.8
TLIG				*e*S	Sn	18 58 59.7	-5.1
CAIG	**El Cayaco**	**1.85**	**298**	*e*P	Pn	18 58 49.9	-3.3
CAIG				*e*S	Sn	18 59 11.8	-4.6
VHO	**Vista Hermosa**	**1.96**	**63**	*e*P	Pn	18 58 51.6	-3.3
VHO				*e*S	Sn	18 59 14.7	-4.7

*NEIC **23** 19:03:06.3±0.4, 33°.01S×178°.19W, h10km, mb4.9/16, Error ellipse: s-maj=12.9km s-min=6.1km az=115.0*

*ISCJB **23** 19:03:08.8±0.4, 33°.05S±0°.05×178°.44W±0°.08, h32km, mb4.7/18, MS3.8/24, Error ellipse: s-maj=9.8km s-min=5.6km az=24.2*

*IDC **23** 19:03:12.3±1.9, 32°.82S×178°.50W, h42km±16km, mb4.0/9, mb1 4.3/13, mb1mx4.0/53, mbtmp4.3/13, ML4.1/4, MS3.8/27, Ms1 3.8/27, ms1mx3.7/46, Error ellipse: s-maj=16.5km s-min=14.4km az=136.0*

ISC 23 19:03:10.3±0.5, 32°.85S±0°.06×178°.42W±0°.09, h32km, n97, σ(t)91/83, mb4.8/18, MS3.9/24, 1D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.61**	**7**	P	**Pn**	**19 04 04.9**	**+0.9**
	48nm,0.3s,baz=328,slow=22,SNR=3.6						
RAO				S	**Sn**	**19 04 43.9**	**-1.6**
	97nm,0.3s,baz=30,slow=20,SNR=3.5						
RAO				LR	LR	19 04 51.1	
	comp=Z,216nm,19.8s,baz=185,slow=28						
RAO	**Raoul Island**	**3.61**	**7**	*e*Pn	**Pn**	**19 03 59.6**	**-4.4**
RAO				*e*Sn	**Sn**	**19 04 43.9**	**-1.6**
MXZ	**Matakaoa Point**	**5.42**	**209**	*e*Pn	**Pn**	**19 04 24.5**	**-4.3**
URZ	**Urewera**	**6.51**	**213**	P	**Pn**	**19 04 44.1**	**+0.2**
	5.9nm,0.3s,baz=256,slow=3.8,SNR=66						
URZ				S	**Sn**	**19 05 57.3**	**+0.2**
	10nm,0.3s,baz=103,slow=24,SNR=7.3						
URZ				LR	LR	19 07 32.8	
	comp=Z,756nm,18.6s,baz=29,slow=40						
URZ	**Urewera**	**6.51**	**213**	*e*Pn	**Pn**	**19 04 44.1**	**+0.2**
URZ				*e*Sn	**Sn**	**19 05 55.2**	**-1.9**
URZ				*e*Sn	**Sn**	**19 05 57.3**	**+0.2**
OUZ	**Omahuta**	**7.04**	**248**	*e*Pn	Pn	19 04 55.9	+4.8
BKZ	**Black Stump Fm**	**7.53**	**212**	*e*Pn	**Pn**	**19 04 58.0**	**+0.1**
HIZ	**Hauiti**	**7.87**	**222**	*e*Pn	**Pn**	**19 05 03.2**	**+0.8**
BFZ	**Birch Farm**	**8.91**	**207**	*e*Pn	**Pn**	**19 05 14.3**	**-2.5**
BFZ				*e*Sn	**Sn**	**19 06 48.2**	**-7.9**
SNZO	**South Karori**	**10.07**	**211**	*e*Pn	**Pn**	**19 05 30.3**	**-2.4**
SNZO				*e*Sn	Sn	19 07 14.6	-10
THZ	**Tophouse**	**11.26**	**215**	*e*Pn	**Pn**	**19 05 47.4**	**-1.6**
KHZ	**Kahutara**	**11.48**	**211**	*e*Pn	**Pn**	**19 05 49.5**	**-2.5**
LTZ	**Lake Taylor**	**12.34**	**214**	*e*Pn	**Pn**	**19 06 03.1**	**-0.6**
OXZ	**Oxford**	**12.87**	**213**	*e*Pn	**Pn**	**19 06 07.4**	**-3.6**
MQZ	**McQueen's Vall**	**12.90**	**210**	*e*Pn	**Pn**	**19 06 08.9**	**-2.4**
RPZ	**Rata Peaks**	**13.63**	**214**	P	**Pn**	**19 06 23.6**	**+2.3**
	1.2nm,0.3s,baz=20,slow=15,SNR=3.4						
RPZ				S	Sn	19 08 40.6	-11
	1.5nm,0.3s,baz=28,slow=15,SNR=6.1						
LBZ	**Lake Benmore**	**14.55**	**214**	*e*Pn	**Pn**	**19 06 29.6**	**-4.2**
ODZ	**Otahua Downs**	**14.84**	**212**	*e*Pn	**Pn**	**19 06 34.6**	**-3.2**
WKZ	**Wanaka**	**15.44**	**216**	*e*Pn	**Pn**	**19 06 43.5**	**-2.1**
	205nm,1.8s						
MLZ	**Mavora Lakes**	**16.27**	**216**	*e*Pn	**Pn**	**19 06 55.5**	**-0.9**
	171nm,1.9s						
WHZ	**Wether Hill Ro**	**16.73**	**215**	*e*Pn	**Pn**	**19 06 59.4**	**-2.8**
	119nm,1.8s						
DZM	**Mont Dzumac**	**17.17**	**305**	P	**P**	**19 07 09.5**	**+0.1**
	0.2nm,0.3s,baz=148,slow=14,SNR=5.8						
DZM				LR	LR	19 12 40.5	
	comp=Z,1μm,18.6s,baz=194,slow=33						
DZM	**Mont Dzumac**	**17.17**	**305**	*e*P	**P**	**19 07 13.4**	**+4.0**
	76nm,1.4s						
DZM				*e*LR	LR	19 11 06.7	
	1μm,23.2s						
DZM	**Mont Dzumac**	**17.17**	**305**	*e*Pn	**P**	**19 07 12.2**	**+2.8**
	42nm,1.3s						
RAR	**Rarotonga**	**20.22**	**60**	LR	LR	19 16 25.5	
	comp=Z,97nm,18.1s,baz=238,slow=39						
EIDS	**Eidsvold**	**27.60**	**278**	*e*P	**P**	**19 08 55.8**	**+1.0**
	103nm,1.9s						
PPT2	**Papeete2**	**30.07**	**67**	*e*LR	LR	19 16 57.9	
	222nm,24.2s						
PPT	**Papeete**	**30.08**	**67**	LR	LR	19 21 20.7	
	comp=Z,57nm,18.8s,baz=214,slow=36						
HNR	**Honiara**	**30.69**	**315**	LR	LR	19 20 36.1	
	comp=Z,141nm,18.7s,baz=76,slow=34						
STKA	**Stephens Creek**	**33.65**	**261**	LR	LR	19 22 48.3	
	comp=Z,304nm,18.2s,baz=57,slow=35						
CTA	**Charters Tower**	**33.92**	**283**	P	**P**	**19 09 52.6**	**+2.0**
	9.5nm,0.6s,baz=125,slow=10,SNR=12						
CTAO	**Charters Tower**	**33.92**	**283**	*e*P	**P**	**19 09 52.4**	**+1.7**
	68nm,1.7s						
PMG	**Port Moresby**	**39.39**	**298**	LR	LR	19 24 48.5	
	comp=Z,177nm,18.0s,baz=123,slow=33						
COEN	**Coen**	**39.66**	**289**	*e*P	**P**	**19 10 39.4**	**-0.1**
	51nm,1.8s						
TAOE	**Nuku Hiva Isla**	**42.64**	**65**	*e*S	**S**	**19 17 25.1**	**-0.2**
	43nm,24.9s						
TAOE				*e*LR	LR	19 22 43.5	
	130nm,26.8s						
AS01	**Alice Springs**	**42.64**	**270**	*e*P	**P**	**19 11 04.6**	**+0.6**
AS31	**Alice Springs**	**42.68**	**270**	*e*P	**P**	**19 11 04.5**	**+0.1**
	2.5nm,0.6s						
ASAR	**Alice Springs**	**42.68**	**270**	P	**P**	**19 11 05.0**	**+0.7**
	7.4nm,0.9s,baz=107,slow=7.6,SNR=33						
ASAR				S	**S**	**19 17 23.9**	**-1.9**
	0.9nm,0.9s,baz=116,slow=15,SNR=4.0						
ASAR				LR	LR	19 27 16.6	
	comp=Z,105nm,18.9s,baz=123,slow=34						
WB2	**Warramunga Arr**	**43.88**	**275**	*e*P	**P**	**19 11 14.3**	**+0.3**
	16nm,0.9s						
WRAB	**Tennant Creek**	**43.89**	**275**	*e*P	**P**	**19 11 14.2**	**+0.1**
	14nm,0.8s						
WR1	**Warramunga Arr**	**43.89**	**275**	*e*P	**P**	**19 11 14.2**	**+0.1**
	16nm,0.9s						
WR1				*e*S	**S**	**19 17 44.3**	**+0.8**
WRA	**Warramunga Arr**	**43.89**	**275**	P	**P**	**19 11 14.2**	**+0.1**
	7.7nm,0.4s,baz=115,slow=8.0,SNR=85						
WRA				S	**S**	**19 17 44.3**	**+0.8**
	1.0nm,0.9s,baz=113,slow=13,SNR=2.8						
FORT	**Forrest**	**45.12**	**258**	*e*P	**P**	**19 11 22.9**	**-0.9**
	21nm,1.0s						
VNDA	**Vanda**	**45.63**	**186**	P	**P**	**19 11 28.2**	**+1.0**
	0.5nm,0.7s,baz=29,slow=7.0,SNR=4.2						
VNDA				LR	LR	19 26 24.4	
	comp=Z,47nm,19.9s,baz=354,slow=30						
VNDA	**Vanda**	**45.63**	**186**	*e*P	**P**	**19 11 28.5**	**+1.3**
MTN	**Manton Dam**	**50.06**	**281**	*e*P	**P**	**19 12 01.8**	**-0.5**
	120nm,1.8s						
FITZ	**Fitzroy Crossi**	**52.04**	**272**	P	**P**	**19 12 16.9**	**-0.2**
	3.4nm,0.6s,baz=142,slow=9.5,SNR=13						
FITZ				LR	LR	19 34 07.4	
	comp=Z,214nm,18.0s,baz=106,slow=36						
CASY	**Casey**	**52.82**	**209**	*e*P	**P**	**19 12 23.6**	**+1.3**
	34nm,0.6s						
QSPA	**South Pole Qui**	**57.27**	**180**	P	**P**	**19 12 56.2**	**+1.6**
	3.3nm,1.0s,baz=53,slow=8.5,SNR=6.5						
QSPA	**South Pole Qui**	**57.27**	**180**	*e*P	**P**	**19 12 57.2**	**+2.6**
	15nm,1.0s						
BATI	**Baumata**	**57.65**	**279**	LR	LR	19 37 32.0	
	comp=Z,178nm,19.1s,baz=148,slow=36						
LEM	**Lembang**	**72.86**	**273**	LR	LR	19 46 55.4	
	comp=Z,106nm,19.4s,baz=149,slow=36						
SYO	**Syowa Base**	**74.66**	**193**‖ *e*P	**P**	**19 14 45.8**	**-0.3**
SNAA	**Sanae**	**75.73**	**179**	P	**P**	**19 14 53.7**	**+1.4**
	0.5nm,0.6s,baz=198,slow=9.6,SNR=3.6						
SNAA	**Sanae**	**75.73**	**179**	*e*P	**P**	**19 14 54.1**	**+1.8**
	6.6nm,1.0s						
MJAR	**Matsushiro Arr**	**80.05**	**326**	LR	LR	19 46 30.8	
	comp=Z,26nm,20.3s,baz=145,slow=32						
ASAJ	**Asahikawa**	**84.44**	**333**	LR	LR	19 52 33.1	
	comp=Z,37nm,18.3s,baz=168,slow=35						
PSI	**Prapat**	**85.34**	**276**	LR	LR	19 54 20.4	
	comp=Z,132nm,20.3s,baz=138,slow=36						
KSRS	**Korea Array**	**85.98**	**320**	LR	LR	19 52 32.4	
	comp=Z,31nm,18.7s,baz=186,slow=34						
LPIG	**La Paz**	**86.12**	**58**	LR	LR	19 47 08.6	
	comp=Z,49nm,18.3s,baz=191,slow=31						
PASC	**Pasadena Art C**	**87.44**	**46**	*e*P	**P**	**19 15 54.2**	**-0.3**
PETK	**Petropavlovsk-**	**88.09**	**346**	P	**P**	**19 15 57.3**	**+0.2**
	3.6nm,1.0s,baz=134,slow=6.2,SNR=3.7						
PETK				LR	LR	19 48 37.5	
	comp=Z,41nm,21.9s,baz=156,slow=31						
PEA1	**Petropavlovsk-**	**88.09**	**346**	*e*P	**P**	**19 15 57.3**	**+0.2**
BBRC	**Big Bear Solar**	**88.27**	**47**	*e*P	**P**	**19 15 55.8**	**-3.0**
KFPM	**Farley Peak**	**88.29**	**39**	*e*P	**P**	**19 16 01.4**	**+2.9**
USRK	**Ussuriysk Ar.**	**89.00**	**327**	LR	LR	19 49 15.0	
	comp=Z,35nm,21.9s,baz=67,slow=31						
YBH	**Yreka Blue Hor**	**90.17**	**38**	LR	LR	19 51 30.3	
	comp=Z,40nm,18.5s,baz=206,slow=32						
NV01	**Mina Array Sit**	**90.27**	**43**	*e*P	**P**	**19 16 07.8**	**-0.2**
NVAR	**Mina Array Bea**	**90.27**	**43**	P	**P**	**19 16 10.2**	**+2.2**
	0.3nm,0.6s,baz=228,slow=8.1,SNR=2.5						
NVAR				LR	LR	19 51 50.4	
	comp=Z,73nm,18.1s,baz=112,slow=32						
NNA	**Nana**	**93.09**	**106**	LR	LR	19 48 16.4	
	comp=Z,50nm,21.8s,baz=207,slow=29						

TXAR	Lajitas Array	94.00	58	LR	LR	19 51 09.3
	comp=Z,30nm,19.7s,baz=0.0,slow=31					
PAT2	Paterson 2	94.61	37	*e*P	P	19 16 28.9 +1.3
ANMO	Albuquerque	95.37	52	LR	LR	19 55 29.1
	comp=Z,35nm,18.7s,baz=238,slow=33					
PDAR	Pinedale Array	98.14	44	LR	LR	19 54 58.7
	comp=Z,49nm,19.5s,baz=242,slow=32					
CPUP	Villa Florida	98.74	129	LR	LR	19 52 13.2
	comp=Z,51nm,21.6s,baz=210,slow=30					
MK32	Makanchi Array	119.05	309	*e*PKPdf	PKPdf	19 21 54.8 -0.7
MKAR	Makanchi Array	119.05	309	PKP	PKPdf	19 21 54.8 -0.7
	0.5nm,0.6s,baz=182,slow=0.8,SNR=5.9					
KURK	Kurchatov	122.46	313	*e*PKPdf	PKPdf	19 22 01.7 -0.1
KURBB	Kurchatov Arra	122.49	313	PKP	PKPdf	19 22 01.7 -0.2
	0.7nm,0.5s,baz=110,slow=2.0,SNR=9.3					
BVAR	Borovoye Array	127.88	314	PKP	PKPdf	19 22 12.8 +0.6
	0.7nm,0.4s,baz=109,slow=0.9,SNR=7.9					
GEYT	Alibeck	134.23	293	PKP	PKPdf	19 22 25.4 +0.7
	377nm,1.0s,baz=102,slow=4.9,SNR=3.0					
ARA0	ARCESS Array S	140.89	347	*e*PKPpre	PKPpre	19 22 30.6
ARCES	ARCESS Array B	140.89	347	PKhKP	PKPpre	19 22 30.6
	1.4nm,0.8s,baz=50,slow=2.0,SNR=8.7					
KBZ	Khabaz	146.12	301	PKPbc	PKPdf	19 22 45.9 -0.1
	3.8nm,1.0s,baz=63,slow=2.3,SNR=3.7					
FIA0	FINESS Array S	147.30	338	*e*PKPbc	PKPbc	19 22 50.1 +0.4
FINES	FINESS Array B	147.30	338	PKPbc	PKPbc	19 22 50.1 +0.4
	16nm,0.9s,baz=39,slow=4.0,SNR=39					
ASF	Jabal al Asfar	150.29	278	PKPbc	PKPbc	19 22 57.9 -0.6
	2.8nm,0.8s,baz=124,slow=3.6,SNR=5.0					
NB2	NORSAR Subarra	151.10	350	PKP	PKPbc	19 22 59.4 0.0
	comp=Z,3.4nm,0.9s,baz=18,slow=4.1					
HFS	Hagfors	151.55	347	PKPbc	PKPbc	19 23 00.3 -0.1
	comp=Z,1.8nm,0.6s,baz=64,slow=2.3,SNR=13					
MMAI	Mount Meron Ar	151.68	280	PKPbc	PKPbc	19 23 02.3 +0.6
	comp=Z,5.0nm,0.6s,baz=89,slow=5.9,SNR=8.1					
AKASG	Malin Array Be	152.97	320	PKPbc	PKPbc	19 23 03.9 0.0
	comp=Z,1.2nm,0.5s,baz=56,slow=2.6,SNR=8.2					
AKBB	Malin Array Si	152.97	320	*e*PKPbc	PKPbc	19 23 02.4 -1.5
BR101	Keskin Array S	153.36	294	*e*PKPbc	PKPbc	19 23 04.7 -0.7
BRTR	Keskin Array B	153.36	294	PKPbc	PKPbc	19 23 04.7 -0.7
	comp=Z,1.6nm,0.6s,baz=138,slow=2.8,SNR=12					
TORD	Torodi Ar. Bea	160.39	180	PKPab	PKPab	19 23 49.2 +1.3
	baz=174,slow=4.3					
TOA1	Torodi Ar. Sit	160.40	180	*e*PKPab	PKPab	19 23 49.2 +1.2
GERES	GERESS Array B	161.61	334	PKPab	PKPab	19 23 50.3 -2.4
	comp=Z,0.5nm,0.7s,baz=66,slow=3.3,SNR=4.3					

*ISCJB **23** 19:03:43.9±0.3, 44°.15N±0°.02×10°.75E±0°.02, h70km±3km, Error ellipse: s-maj=3.2km s-min=2.9km az=176.6*
*ROM **23** 19:03:44.7±0.1, 44°.116N±0°.010×10°.72E±0°.01, h62km±1km, ML2.1/25*
*IASPEI **23** 19:03:45.9±1.3, 44°.06N±0°.03×10°.73E±0°.03, h55km±6km, Error ellipse: s-maj=4.9km s-min=3.7km az=20.2, GT5 selection from ISC bulletin GT5 identified by Bondár and McLaughlin (2009) selection criteria Bondár and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
*LDG **23** 19:03:45.1±0.3, 44°.08N×10°.72E, h60km, Ml2.9/9, Error ellipse: s-maj=7.9km s-min=5.3km az=116.0*
*CSEM **23** 19:03:45.0±0.1, 44°.16N×10°.78E, h60km, ML2.7/7, Error ellipse: s-maj=2.6km s-min=2.5km az=38.0*
*GEN **23** 19:03:45.5, 43°.96N×10°.73E, h57km, ML2.1*

ISC 23 19:03:44.0±1.2, 44°.13N±0°.02×10°.75E±0°.02, h69km±4km, n170, σ1$25/229, 5C-7D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
POPM	**Popiglio**	**0.09**	**175**	⇓*i*P	**Pn**	**19 03 53.9**	**-0.3**
POPM				S	**Sn**	**19 04 00.5**	**-1.1**
POPM	**Popiglio**	**0.09**	**175**	*i* P	**Pn**	**19 03 53.9**	**-0.3**
POPM				S	**Sn**	**19 04 00.5**	**-1.1**
POPM				AML	AML		
	comp=E,327μm,1.0s						
POPM				AML	AML		
	comp=N,606μm,0.1s						
POPM				AML	AML		
	comp=E,326μm,1.0s						
POPM				AML	AML		
	comp=N,606μm,0.1s						
POPM				AML	AML		
	comp=N,606μm,0.1s						
POPM				AML	AML		
	comp=E,326μm,1.0s						
BDI	**Bagni Di Lucca**	**0.13**	**238**	⇓*i*P	**Pn**	**19 03 53.9**	**-0.4**
BDI				S	**Sn**	**19 04 00.2**	**-1.7**
BDI	**Bagni Di Lucca**	**0.13**	**238**	*i* P	**Pn**	**19 03 53.9**	**-0.4**
BDI				S	**Sn**	**19 04 00.2**	**-1.7**
BDI				AML	AML		
	comp=E,210μm,0.5s						
BDI				AML	AML		
	comp=N,340μm,1.1s						
BDI				AML	AML		
	comp=E,250μm,0.5s						
BDI				AML	AML		
	comp=N,316μm,0.3s						
BDI				AML	AML		
	comp=E,210μm,0.5s						
BDI				AML	AML		
	comp=N,340μm,1.1s						
BDI				AML	AML		
	comp=E,250μm,0.5s						
BDI				AML	AML		
	comp=N,316μm,0.3s						
BDI				AML	AML		
	comp=N,316μm,0.3s						
BDI				AML	AML		
	comp=E,210μm,0.5s						
BDI				AML	AML		
	comp=E,250μm,0.5s						
BDI				AML	AML		
	comp=N,340μm,1.1s						
VLC	**Villacollemand**	**0.26**	**277**	⇓*i*P	**Pn**	**19 03 54.9**	**0.0**
VLC	**Villacollemand**	**0.26**	**277**	*i* P	**Pn**	**19 03 54.9**	**0.0**
VLC				AML	AML		
	comp=E,228μm,0.2s						
VLC				AML	AML		
	comp=N,123μm,0.2s						
VLC				AML	AML		
	comp=E,228μm,0.2s						
VLC				AML	AML		
	comp=N,123μm,0.2s						
VLC				AML	AML		
	comp=E,228μm,0.2s						
VLC				AML	AML		
	comp=N,123μm,0.2s						
FNVD	**Fontana Vidola**	**0.27**	**82**	P	**Pn**	**19 03 55.8**	**+0.7**
FNVD				S	**Sn**	**19 04 03.6**	**+0.5**
FNVD	**Fontana Vidola**	**0.27**	**82**	P	**Pn**	**19 03 55.8**	**+0.7**
FNVD				S	**Sn**	**19 04 03.6**	**+0.5**
FNVD				AML	AML		
	comp=E,362μm,1.0s						
FNVD				AML	AML		
	comp=N,296μm,1.3s						
FNVD				AML	AML		
	comp=E,362μm,1.0s						
FNVD				AML	AML		
	comp=N,296μm,1.3s						
FNVD				AML	AML		
	comp=E,362μm,1.0s						
FNVD				AML	AML		
	comp=N,296μm,1.3s						
ZCCA	**Zocca**	**0.28**	**37**	P	**Pn**	**19 03 56.5**	**+1.5**
ZCCA	**Zocca**	**0.28**	**37**	P	**Pn**	**19 03 56.5**	**+1.5**
ZCCA				AML	AML		
	comp=E,356μm,0.7s						
ZCCA				AML	AML		
	comp=N,260μm,1.4s						
ZCCA				AML	AML		
	comp=E,356μm,0.7s						
ZCCA				AML	AML		
	comp=N,260μm,1.4s						
ZCCA				AML	AML		
	comp=E,356μm,0.7s						
ZCCA				AML	AML		
	comp=N,260μm,1.4s						
MAIM	**Mastiano**	**0.28**	**220**	P	**Pn**	**19 03 54.9**	**-0.1**
MAIM				S	**Sn**	**19 04 01.6**	**-1.4**
MAIM	**Mastiano**	**0.28**	**220**	P	**Pn**	**19 03 54.9**	**-0.1**
MAIM				S	**Sn**	**19 04 01.6**	**-1.4**
MAIM				AML	AML		
	comp=E,148μm,1.2s						
MAIM				AML	AML		
	comp=N,164μm,0.3s						
MAIM				AML	AML		
	comp=E,148μm,1.2s						
MAIM				AML	AML		
	comp=N,164μm,0.3s						
MAIM				AML	AML		
	comp=E,148μm,1.2s						
MAIM				AML	AML		
	comp=N,164μm,0.3s						
MAIM				AML	AML		
	comp=N,164μm,0.3s						
MAIM				AML	AML		
	comp=E,148μm,1.2s						
PTF	**Prato**	**0.29**	**126**	P	**Pn**	**19 03 54.8**	**-0.3**
PTF				S	**Sn**	**19 04 01.8**	**-1.4**
PTF	**Prato**	**0.29**	**126**	P	**Pn**	**19 03 54.8**	**-0.3**
PTF				S	**Sn**	**19 04 01.8**	**-1.4**
ERBM	**Eremo**	**0.38**	**320**	P	**Pn**	**19 03 57.5**	**+1.7**
ERBM	**Eremo**	**0.38**	**320**	P	**Pn**	**19 03 57.5**	**+1.7**
ERBM				AML	AML		
	comp=E,91μm,1.4s						
ERBM				AML	AML		
	comp=N,93μm,1.4s						
ERBM				AML	AML		
	comp=E,91μm,1.4s						
ERBM				AML	AML		
	comp=N,93μm,1.4s						
ERBM				AML	AML		
	comp=E,91μm,1.4s						
ERBM				AML	AML		
	comp=N,93μm,1.4s						
ERBM				AML	AML		
	comp=E,91μm,1.4s						
ERBM				AML	AML		
	comp=N,93μm,1.4s						
CRMI	**Carmignano**	**0.38**	**155**	⇓*i*P	**Pn**	**19 03 55.8**	**+0.1**
CRMI				S	**Sn**	**19 04 03.2**	**-1.1**
CRMI	**Carmignano**	**0.38**	**155**	*i* P	**Pn**	**19 03 55.8**	**+0.1**
CRMI				S	**Sn**	**19 04 03.1**	**-1.1**
CRMI				AML	AML		
	comp=E,161μm,0.7s						
CRMI				AML	AML		
	comp=N,245μm,0.4s						
CRMI				AML	AML		
	comp=E,161μm,0.7s						
CRMI				AML	AML		
	comp=N,246μm,0.4s						
CRMI				AML	AML		
	comp=E,161μm,0.7s						
CRMI				AML	AML		
	comp=N,246μm,0.4s						
CRMI				AML	AML		
	comp=E,161μm,0.7s						
CRMI				AML	AML		
	comp=N,246μm,0.4s						
EQUI	**Equi**	**0.43**	**275**	P	**Pn**	**19 03 56.5**	**+0.4**
BRIS	**BRISIGHELLA**	**0.55**	**88**	P	**Pn**	**19 04 01.3**	**+4.0**
BRIS				AML	AML		
	comp=E,63μm,0.5s						
BRIS				AML	AML		
	comp=N,64μm,0.4s						
BRIS				AML	AML		
	comp=E,63μm,0.5s						
BRIS				AML	AML		
	comp=N,64μm,0.4s						
BRIS				AML	AML		
	comp=N,64μm,0.4s						
BRIS				AML	AML		
	comp=E,63μm,0.5s						
MTRZ	**Monterenzio**	**0.57**	**64**	P	**Pn**	**19 03 59.2**	**+1.6**
MTRZ	**Monterenzio**	**0.57**	**64**	P	**Pn**	**19 03 59.1**	**+1.6**
MTRZ				S	**Sn**	**19 04 08.6**	**+1.1**
GRAM	**Graiana**	**0.61**	**307**	P	**Pn**	**19 04 00.1**	**+2.2**
GRAM				S	**Sn**	**19 04 10.8**	**+2.6**
PLMA	**Palmaria, Port**	**0.65**	**263**	⇓*i*P	**Pn**	**19 03 58.6**	**+0.3**
PLMA				S	**Sn**	**19 04 08.1**	**-0.7**
PLMA	**Palmaria, Port**	**0.65**	**263**	*i* P	**Pn**	**19 03 58.6**	**+0.3**
PLMA				S	**Sn**	**19 04 08.1**	**-0.7**
PLMA				AML	AML		
	comp=E,106μm,0.5s						
PLMA				AML	AML		
	comp=N,254μm,0.3s						
PLMA				AML	AML		
	comp=E,106μm,0.5s						
PLMA				AML	AML		
	comp=N,254μm,0.3s						
PLMA				AML	AML		
	comp=E,106μm,0.5s						
PLMA				AML	AML		
	comp=N,254μm,0.3s						
PLMA				AML	AML		
	comp=N,254μm,0.3s						
PLMA				AML	AML		
	comp=E,106μm,0.5s						
NOVE	**Novellara**	**0.67**	**358**	P	**Pn**	**19 04 00.0**	**+1.5**
NOVE	**Novellara**	**0.67**	**358**	P	**Pn**	**19 04 00.0**	**+1.5**
NOVE				AML	AML		
	comp=E,190μm,1.1s						
NOVE				AML	AML		
	comp=N,144μm,0.4s						
NOVE				AML	AML		
	comp=E,191μm,1.1s						
NOVE				AML	AML		
	comp=N,144μm,0.4s						
NOVE				AML	AML		
	comp=E,191μm,1.1s						
NOVE				AML	AML		
	comp=N,144μm,0.4s						
CODM	**Codolo**	**0.69**	**292**	P	**Pn**	**19 04 00.2**	**+1.4**
CODM				S	**Sn**	**19 04 10.3**	**+0.5**
T0822	**Casumaru (Bond**	**0.82**	**31**	P	**Pn**	**19 04 01.1**	**+0.8**
T0822	**Casumaru (Bond**	**0.82**	**31**	P	**Pn**	**19 04 01.1**	**+0.8**
T0822				S	**Sn**	**19 04 13.7**	**+1.4**
ASQU	**Asqua**	**0.82**	**114**	⇑*i*P	**Pn**	**19 04 01.4**	**+1.0**
ASQU				S	**Sn**	**19 04 12.5**	**0.0**
ASQU	**Asqua**	**0.82**	**114**	*i* P	**Pn**	**19 04 01.4**	**+1.0**
ASQU				S	**Sn**	**19 04 12.5**	**0.0**
ASQU				AML	AML		
	comp=E,127μm,0.2s						
ASQU				AML	AML		
	comp=N,89μm,1.3s						
ASQU				AML	AML		
	comp=E,126μm,0.2s						
ASQU				AML	AML		
	comp=N,89μm,1.3s						
ASQU				AML	AML		
	comp=N,89μm,1.3s						
ASQU				AML	AML		
	comp=E,126μm,0.2s						
MSSA	**Maissana**	**0.90**	**282**	P	**Pn**	**19 04 02.4**	**+1.1**
MSSA				S	**Sn**	**19 04 14.5**	**+0.3**
MSSA	**Maissana**	**0.90**	**282**	P	**Pn**	**19 04 02.4**	**+1.1**
MSSA				S	**Sn**	**19 04 14.5**	**+0.3**
MSSA				AML	AML		
	comp=E,88μm,0.5s						
MSSA				AML	AML		
	comp=N,68μm,0.2s						
MSSA				AML	AML		
	comp=E,88μm,0.5s						
MSSA				AML	AML		
	comp=N,68μm,0.2s						
MSSA				AML	AML		
	comp=N,68μm,0.2s						
MSSA				AML	AML		
	comp=E,88μm,0.5s						
GROG	**Isola di Gorgo**	**0.94**	**222**	P	**Pn**	**19 04 02.3**	**+0.7**
GROG	**Isola di Gorgo**	**0.94**	**222**	P	**Pn**	**19 04 02.3**	**+0.7**
FROS	**Frosini**	**0.97**	**162**	P	**Pn**	**19 04 02.6**	**+0.5**
FROS	**Frosini**	**0.97**	**162**	P	**Pn**	**19 04 02.6**	**+0.5**
FROS				AML	AML		
	comp=E,54μm,1.2s						
FROS				AML	AML		
	comp=N,53μm,1.3s						
FROS				AML	AML		
	comp=E,54μm,1.3s						
FROS				AML	AML		
	comp=N,53μm,1.3s						
FROS				AML	AML		
	comp=E,54μm,1.3s						
FROS				AML	AML		
	comp=N,53μm,1.3s						
CRE	**Caprese Michel**	**1.01**	**120**	P	**Pn**	**19 04 03.7**	**+1.0**
CRE				S	**Sn**	**19 04 17.5**	**+0.9**
CRE	**Caprese Michel**	**1.01**	**120**	P	**Pn**	**19 04 03.7**	**+1.0**
CRE				S	**Sn**	**19 04 17.5**	**+0.9**
CRE				AML	AML		
	comp=E,190μm,0.5s						
CRE				AML	AML		
	comp=N,140μm,0.3s						
CRE				AML	AML		
	comp=E,190μm,0.5s						
CRE				AML	AML		
	comp=N,140μm,0.3s						
CRE				AML	AML		
	comp=N,140μm,0.3s						
CRE				AML	AML		
	comp=E,190μm,0.5s						
PARC	**Parchiule**	**1.18**	**114**	P	**Pn**	**19 04 06.9**	**+2.1**
PARC	**Parchiule**	**1.18**	**114**	P	**Pn**	**19 04 06.9**	**+2.1**
PARC				AML	AML		
	comp=E,35μm,1.6s						
PARC				AML	AML		
	comp=N,50μm,0.2s						
PARC				AML	AML		
	comp=E,35μm,1.6s						
PARC				AML	AML		
	comp=N,50μm,0.2s						
PARC				AML	AML		
	comp=N,50μm,0.2s						
PARC				AML	AML		
	comp=E,35μm,1.6s						
BADI	**Badiali**	**1.25**	**119**	P	**Pn**	**19 04 06.4**	**+0.7**
BADI				S	**Sn**	**19 04 22.2**	**+0.3**
BADI	**Badiali**	**1.25**	**119**	P	**Pn**	**19 04 06.4**	**+0.7**
BADI				S	**Sn**	**19 04 22.2**	**+0.3**
BADI				AML	AML		
	comp=E,88μm,1.4s						
BADI				AML	AML		
	comp=N,109μm,0.4s						
BADI				AML	AML		
	comp=E,88μm,1.4s						
BADI				AML	AML		
	comp=N,109μm,0.4s						
BADI				AML	AML		
	comp=E,88μm,1.4s						
BADI				AML	AML		
	comp=N,109μm,0.4s						
ATMC	**Monte Cedrone**	**1.25**	**123**	P	**Pn**	**19 04 06.4**	**+0.7**
ATMC	**Monte Cedrone**	**1.25**	**123**	P	**Pn**	**19 04 06.4**	**+0.7**
ATMC				AML	AML		
	comp=E,73μm,0.3s						
ATMC				AML	AML		
	comp=N,73μm,0.2s						
ATMC				AML	AML		
	comp=E,73μm,0.3s						
ATMC				AML	AML		
	comp=N,73μm,0.2s						
ATMC				AML	AML		
	comp=E,73μm,0.3s						
ATMC				AML	AML		
	comp=N,73μm,0.2s						
CASP	**Castiglione de**	**1.34**	**176**	P	**Pn**	**19 04 07.8**	**+0.9**
CASP				S	**Sn**	**19 04 23.9**	**-0.1**
CASP	**Castiglione de**	**1.34**	**176**	P	**Pn**	**19 04 07.8**	**+0.9**
CASP				S	**Sn**	**19 04 23.9**	**-0.1**
ATPI	**Pietralunga -**	**1.38**	**119**	P	**Pn**	**19 04 08.3**	**+0.9**
ATPI				S	**Sn**	**19 04 25.3**	**+0.4**
ATPI	**Pietralunga -**	**1.38**	**119**	P	**Pn**	**19 04 08.3**	**+0.9**
ATPI				S	**Sn**	**19 04 25.3**	**+0.4**
TEOL	**Teolo**	**1.40**	**28**	⇑*e*Pg	**Pn**	**19 04 07.1**	**-0.4**
TEOL	**Teolo**	**1.40**	**28**	*e*Pg	**Pn**	**19 04 07.1**	**-0.4**
TEOL	**Teolo**	**1.40**	**28**	P	**Pn**	**19 04 07.6**	**0.0**
TEOL	**Teolo**	**1.40**	**28**	P	**Pn**	**19 04 07.6**	**0.0**
TEOL				AML	AML		
	comp=E,86μm,0.5s						
TEOL				AML	AML		
	comp=N,94μm,1.3s						
TEOL				AML	AML		
	comp=E,86μm,0.5s						
TEOL				AML	AML		
	comp=N,93μm,1.3s						
TEOL				AML	AML		
	comp=N,93μm,1.3s						
TEOL				AML	AML		
	comp=E,86μm,0.5s						
ATPC	**Poggio Castell**	**1.40**	**117**	P	**Pn**	**19 04 08.8**	**+1.2**
ATPC	**Poggio Castell**	**1.40**	**117**	P	**Pn**	**19 04 08.8**	**+1.2**
ATPC				AML	AML		
	comp=E,60μm,0.2s						
ATPC				AML	AML		
	comp=N,48μm,0.5s						
ATPC				AML	AML		
	comp=E,60μm,0.2s						
ATPC				AML	AML		
	comp=N,48μm,0.5s						
ATPC				AML	AML		
	comp=N,48μm,0.5s						
ATPC				AML	AML		
	comp=E,60μm,0.2s						
ATVA	**AVT- Monte Val**	**1.40**	**127**	P	**Pn**	**19 04 08.6**	**+0.9**
ATVA	**AVT- Monte Val**	**1.40**	**127**	P	**Pn**	**19 04 08.6**	**+0.9**
PIEI	**Pieia**	**1.42**	**114**	P	**Pn**	**19 04 09.3**	**+1.3**
PIEI	**Pieia**	**1.42**	**114**	P	**Pn**	**19 04 09.3**	**+1.3**
PIEI				AML	AML		
	comp=E,25μm,1.4s						
PIEI				AML	AML		
	comp=N,19μm,1.5s						
PIEI				AML	AML		
	comp=E,25μm,1.4s						
PIEI				AML	AML		
	comp=N,19μm,1.5s						
ATBU	**Serra di Buran**	**1.46**	**116**	P	**Pn**	**19 04 09.8**	**+1.3**
ATBU	**Serra di Buran**	**1.46**	**116**	P	**Pn**	**19 04 09.8**	**+1.3**
SALO	**Salr**	**1.50**	**354**	P	**Pn**	**19 04 09.6**	**+0.7**
SALO	**Salr**	**1.50**	**354**	P	**Pn**	**19 04 09.6**	**+0.7**
ROVR	**Rover^¤ Verone**	**1.53**	**9**	P	**Pn**	**19 04 09.8**	**+0.3**
ROVR	**Rover^¤ Verone**	**1.53**	**9**	P	**Pn**	**19 04 09.8**	**+0.3**
ROVR				AML	AML		
	comp=E,61μm,0.2s						
ROVR				AML	AML		
	comp=N,92μm,0.7s						
ROVR				AML	AML		
	comp=E,61μm,0.2s						
ROVR				AML	AML		
	comp=N,92μm,0.7s						
ROVR				AML	AML		
	comp=E,61μm,0.2s						
ROVR				AML	AML		
	comp=N,92μm,0.7s						
MARN	**Marana (Italy)**	**1.54**	**12**	⇑*e*Pg	**Pn**	**19 04 09.0**	**-0.5**
MARN				*e*Sg	**Sn**	**19 04 27.1**	**-1.7**
MARN	**Marana (Italy)**	**1.54**	**12**	*e*Pg	**Pn**	**19 04 09.0**	**-0.5**
MARN				*e*Sg	**Sn**	**19 04 27.1**	**-1.7**
MURB	**Monte Urbino**	**1.55**	**123**	P	**Pn**	**19 04 10.8**	**+1.1**
MURB	**Monte Urbino**	**1.55**	**123**	P	**Pn**	**19 04 10.8**	**+1.1**
MURB				AML	AML		
	comp=E,125μm,0.3s						
MURB				AML	AML		
	comp=N,138μm,0.3s						
MURB				AML	AML		
	comp=E,124μm,0.3s						
MURB				AML	AML		
	comp=N,138μm,0.3s						
MURB				AML	AML		
	comp=E,124μm,0.3s						
MURB				AML	AML		
	comp=N,138μm,0.3s						
SSFR	**Montelago di S**	**1.63**	**114**	AML	AML		
	comp=N,68μm,0.2s						
SSFR				AML	AML		
	comp=E,56μm,0.2s						
SSFR				AML	AML		
	comp=N,68μm,0.2s						
SSFR				AML	AML		
	comp=E,56μm,0.2s						
ATCC	**AVT- Casa Cast**	**1.67**	**124**	P	**Pn**	**19 04 12.2**	**+1.0**
ATCC	**AVT- Casa Cast**	**1.67**	**124**	P	**Pn**	**19 04 12.2**	**+1.0**
QLNO	**Quiliano**	**1.74**	**277**	P	**Pn**	**19 04 12.9**	**+0.8**
QLNO	**Quiliano**	**1.74**	**277**	P	**Pn**	**19 04 12.9**	**+0.8**
QLNO				AML	AML		
	comp=E,37μm,1.6s						
QLNO				AML	AML		
	comp=N,40μm,0.9s						
QLNO				AML	AML		
	comp=N,40μm,0.9s						
QLNO				AML	AML		
	comp=E,37μm,1.6s						
DOSS	**Dosso del Somm**	**1.78**	**10**	⇑*e*Pg	**Pn**	**19 04 12.4**	**-0.4**

DOSS				*e*Sg	**Sn**	**19 04 32.3**	**-2.3**
DOSS	**Dosso del Somm**	**1.78**	**10**	*e*Pg	**Pn**	**19 04 12.4**	**-0.4**
DOSS				*e*Sg	**Sn**	**19 04 32.3**	**-2.3**
RNI	**Roncone**	**1.85**	**357**	*e*Pg	**Pn**	**19 04 13.7**	**-0.1**
RNI	**Roncone**	**1.85**	**357**	*e*Pg	**Pn**	**19 04 13.7**	**-0.1**
CGRP	**Cima Grappa**	**1.90**	**23⇓**	*e*Pg	**Pn**	**19 04 13.9**	**-0.6**
CGRP				*e*Sg	**Sn**	**19 04 35.6**	**-1.9**
CGRP	**Cima Grappa**	**1.90**	**23**	*e*Pg	**Pn**	**19 04 13.9**	**-0.6**
CGRP				*e*Sg	**Sn**	**19 04 35.7**	**-1.9**
MABI	**Malga Bissina**	**1.93**	**355**	P	**Pn**	**19 04 15.3**	**+0.4**
MABI	**Malga Bissina**	**1.93**	**355**	P	**Pn**	**19 04 15.3**	**+0.4**
MABI				AML	AML		
	comp=E,23μm,1.0s						
MABI				AML	AML		
	comp=N,19μm,1.0s						
MABI				AML	AML		
	comp=E,23μm,1.0s						
MABI				AML	AML		
	comp=N,19μm,1.0s						
PANI	**Panarotta**	**1.96**	**12⇓**	*e*Pg	**Pn**	**19 04 15.2**	**-0.2**
PANI	**Panarotta**	**1.96**	**12**	*e*Pg	**Pn**	**19 04 15.2**	**-0.2**
CTI	**Castel Tesino**	**2.02**	**18**	P	**Pn**	**19 04 15.8**	**-0.2**
CTI	**Castel Tesino**	**2.02**	**18**	P	**Pn**	**19 04 15.8**	**-0.2**
CTI				AML	AML		
	comp=E,155μm,1.1s						
CTI				AML	AML		
	comp=N,122μm,0.2s						
CTI				AML	AML		
	comp=E,155μm,1.1s						
CTI				AML	AML		
	comp=N,122μm,0.2s						
PGF	**Pioggiola**	**2.03**	**219**	*e*Pn	**Pn**	**19 04 17.5**	**+1.4**
PGF				*e*Sn	**Sn**	**19 04 40.5**	**-0.1**
	comp=N,10nm,0.3s						
PGF	**Pioggiola**	**2.03**	**219**	*e*Pn	**Pn**	**19 04 17.5**	**+1.4**
PGF				*e*Sn	**Sn**	**19 04 40.5**	**-0.1**
	comp=N,5.1nm,0.3s						
PGF	**Pioggiola**	**2.03**	**219**	P	**Pn**	**19 04 17.5**	**+1.4**
VARN	**Col Varnada, M**	**2.10**	**27**	*e*Pg	**Pn**	**19 04 16.6**	**-0.4**
VARN				*e*Sg	**Sn**	**19 04 41.1**	**-1.0**
VARN	**Col Varnada, M**	**2.10**	**27**	*e*Pg	**Pn**	**19 04 16.6**	**-0.4**
VARN				*e*Sg	**Sn**	**19 04 41.1**	**-1.0**
MUGIO	**Muggio**	**2.16**	**327**	P	**Pn**	**19 04 18.2**	**+0.3**
MUGIO	**Muggio**	**2.16**	**327**	P	**Pn**	**19 04 18.2**	**+0.3**
POLC	**Polcenigo**	**2.27**	**33**	AML	AML		
	comp=E,45μm,1.1s						
POLC				AML	AML		
	comp=N,77μm,1.1s						
POLC				AML	AML		
	comp=N,77μm,1.1s						
POLC				AML	AML		
	comp=E,45μm,1.1s						
OZOL	**Ozolo**	**2.28**	**5**	*e*Pg	**Pn**	**19 04 19.1**	**-0.5**
OZOL	**Ozolo**	**2.28**	**5**	*e*Pg	**Pn**	**19 04 19.1**	**-0.5**
CARE	**Lago del Cares**	**2.29**	**359**	*e*Pg	**Pn**	**19 04 19.9**	**0.0**
CARE	**Lago del Cares**	**2.29**	**359**	*e*Pg	**Pn**	**19 04 19.9**	**0.0**
SAOF	**Saorge**	**2.31**	**268**	⇑Pn	**Pn**	**19 04 21.4**	**+1.6**
SAOF	**Saorge**	**2.31**	**268**	P	**Pn**	**19 04 21.4**	**+1.6**
SAOF				AML	AML		
	comp=E,31μm,0.3s						
SAOF				AML	AML		
	comp=N,43μm,0.4s						
SAOF				AML	AML		
	comp=E,31μm,0.3s						
SAOF				AML	AML		
	comp=N,43μm,0.4s						
AGOR	**Agordo**	**2.34**	**23**	AML	AML		
	comp=N,30μm,1.6s						
AGOR				AML	AML		
	comp=E,30μm,0.3s						
AGOR				AML	AML		
	comp=E,30μm,0.3s						
AGOR				AML	AML		
	comp=N,30μm,1.6s						
APPI	**Appiano**	**2.37**	**8**	P	**Pn**	**19 04 21.5**	**+0.8**
APPI	**Appiano**	**2.37**	**8**	P	**Pn**	**19 04 21.5**	**+0.8**
APPI				AML	AML		
	comp=E,47μm,0.2s						
APPI				AML	AML		
	comp=N,35μm,0.3s						
APPI				AML	AML		
	comp=E,47μm,0.2s						
APPI				AML	AML		
	comp=N,35μm,0.3s						
KOSI	**Kohlern**	**2.38**	**11**	P	**Pn**	**19 04 21.5**	**+0.7**
KOSI	**Kohlern**	**2.38**	**11**	P	**Pn**	**19 04 21.5**	**+0.7**
ENR	**Entracque**	**2.40**	**273**	P	**Pn**	**19 04 22.6**	**+1.5**
ENR	**Entracque**	**2.40**	**273**	P	**Pn**	**19 04 22.6**	**+1.5**
ENR				AML	AML		
	comp=E,19μm,1.3s						
ENR				AML	AML		
	comp=N,29μm,0.1s						
ENR				AML	AML		
	comp=E,19μm,1.3s						
ENR				AML	AML		
	comp=N,29μm,0.1s						
SBF	**Sospel**	**2.40**	**265**	*e*Pn	**Pn**	**19 04 22.5**	**+1.4**
SBF				*e*Sn	**Sn**	**19 04 47.9**	**-1.7**
	comp=N,18nm,0.3s						
SBF	**Sospel**	**2.40**	**265**	*e*Pn	**Pn**	**19 04 22.5**	**+1.4**
SBF				*e*Sn	**Sn**	**19 04 47.9**	**-1.7**
	comp=N,9.2nm,0.3s						
TUE	**Stuetta**	**2.54**	**338**	P	**Pn**	**19 04 24.3**	**+1.2**
TUE	**Stuetta**	**2.54**	**338**	P	**Pn**	**19 04 24.4**	**+1.2**
TUE				AML	AML		
	comp=E,56μm,0.2s						
TUE				AML	AML		
	comp=N,47μm,1.3s						
TUE				AML	AML		
	comp=E,56μm,0.2s						
TUE				AML	AML		
	comp=N,47μm,1.3s						
STAL	**STALIGIAL**	**2.54**	**32**	P	**Pn**	**19 04 22.6**	**-0.4**
STAL	**STALIGIAL**	**2.54**	**32**	P	**Pn**	**19 04 22.6**	**-0.4**
STAL				AML	AML		
	comp=E,45μm,1.3s						
STAL				AML	AML		
	comp=N,67μm,0.2s						
STAL				AML	AML		
	comp=N,67μm,0.2s						
STAL				AML	AML		
	comp=E,45μm,1.3s						
ABSI	**Abersteuckl**	**2.63**	**9**	P	**Pn**	**19 04 24.7**	**+0.4**
ABSI	**Abersteuckl**	**2.63**	**9**	P	**Pn**	**19 04 24.7**	**+0.4**
SABO	**M.te Sabotino**	**2.74**	**47**	P	**Pn**	**19 04 25.4**	**-0.3**
SABO	**M.te Sabotino**	**2.74**	**47**	P	**Pn**	**19 04 25.4**	**-0.3**
FUSIO	**Fusio**	**2.75**	**328**	P	**Pn**	**19 04 26.7**	**+0.8**
FUSIO	**Fusio**	**2.75**	**328**	P	**Pn**	**19 04 26.7**	**+0.8**
VINO	**Villanova**	**2.78**	**39**	P	**Pn**	**19 04 25.8**	**-0.4**
VINO	**Villanova**	**2.78**	**39**	P	**Pn**	**19 04 25.8**	**-0.4**
ROSI	**Rosskopf**	**2.84**	**9**	P	**Pn**	**19 04 27.8**	**+0.6**
ROSI	**Rosskopf**	**2.84**	**9**	P	**Pn**	**19 04 27.8**	**+0.6**
ABTA	**Abfaltersbach**	**2.90**	**25**	*i* Pn	**Pn**	**19 04 29.3**	**+1.5**
	comp=E,2.4nm,0.2s						
ABTA				*e*Sn	**Sn**	**19 05 01.8**	**+0.2**
	comp=E,4.8nm,0.3s						
ABTA	**Abfaltersbach**	**2.90**	**25**	Pn	**Pn**	**19 04 29.3**	**+1.5**
	comp=E,2.4nm,0.2s						
ABTA				Sn	**Sn**	**19 05 01.8**	**+0.2**
	comp=E,4.8nm,0.3s						
MBDF	**Montbardon**	**2.91**	**283**	*e*Pn	**Pn**	**19 04 29.6**	**+1.5**
MBDF	**Montbardon**	**2.91**	**283**	*e*Pn	**Pn**	**19 04 29.6**	**+1.5**
VOJS	**Vojsko**	**2.92**	**48**	*i* Pn	**Pn**	**19 04 27.6**	**-0.7**
VOJS				*i* Sn	**Sn**	**19 05 00.5**	**-1.8**
	comp=Z,3.0nm,0.1s						
VOJS	**Vojsko**	**2.92**	**48**	Pn	**Pn**	**19 04 27.5**	**-0.7**
VOJS				*i* Sn	**Sn**	**19 05 00.5**	**-1.8**
	comp=Z,3.0nm,0.1s						
PTCC	**Patocco-Chiusa**	**2.93**	**38**	P	**Pn**	**19 04 27.8**	**-0.4**
PTCC	**Patocco-Chiusa**	**2.93**	**38**	P	**Pn**	**19 04 27.8**	**-0.4**
RISI	**Rein**	**2.97**	**18**	P	**Pn**	**19 04 30.4**	**+1.5**
RISI	**Rein**	**2.97**	**18**	P	**Pn**	**19 04 30.4**	**+1.5**
FRF	**La Foret Royal**	**3.02**	**261**	*e*Pn	**Pn**	**19 04 30.3**	**+0.9**
FRF				*e*Sn	**Sn**	**19 05 02.5**	**-2.0**
	comp=Z,11nm,0.4s						
FRF	**La Foret Royal**	**3.02**	**261**	*e*Pn	**Pn**	**19 04 30.3**	**+0.9**
FRF				*e*Sn	**Sn**	**19 05 02.5**	**-2.0**
	comp=Z,5.6nm,0.4s						
LPG	**La Plagne**	**3.15**	**297**	*e*Pn	**Pn**	**19 04 33.7**	**+2.2**
LPG	**La Plagne**	**3.15**	**297**	*e*Pn	**Pn**	**19 04 33.7**	**+2.2**
LMR	**La Mourre**	**3.17**	**257**	*e*Pn	**Pn**	**19 04 32.5**	**+1.0**
LMR				*e*Sn	**Sn**	**19 05 05.9**	**-2.3**
	comp=Z,6.4nm,0.2s						
LMR	**La Mourre**	**3.17**	**257**	*e*Pn	**Pn**	**19 04 32.5**	**+1.0**
LMR				*e*Sn	**Sn**	**19 05 05.9**	**-2.3**
	comp=Z,3.2nm,0.2s						
LPL	**La Plagne**	**3.17**	**297**	*e*Pn	**Pn**	**19 04 34.0**	**+2.3**
LPL				*e*Sn	**Sn**	**19 05 07.3**	**-1.3**
	comp=Z,3.6nm,0.3s						
LPL	**La Plagne**	**3.17**	**297**	*e*Pn	**Pn**	**19 04 34.0**	**+2.3**
LPL				*e*Sn	**Sn**	**19 05 07.3**	**-1.3**
	comp=Z,1.8nm,0.3s						
WTTA	**Wattenberg**	**3.19**	**11**	*i* Pn	**Pn**	**19 04 34.6**	**+2.6**
	comp=Z,1.8nm,0.2s,SNR=4.3						
WTTA	**Wattenberg**	**3.19**	**11**	Pn	**Pn**	**19 04 34.6**	**+2.6**
	comp=Z,1.8nm,0.2s,SNR=4.3						
DAVA	**Damuels**	**3.21**	**349**	*i* Pn	**Pn**	**19 04 34.5**	**+2.3**
	comp=Z,1.0nm,0.1s						
DAVA				*i* Sn	**Sn**	**19 05 11.3**	**+1.9**
	comp=Z,3.8nm,0.2s						
DAVA	**Damuels**	**3.21**	**349**	Pn	**Pn**	**19 04 34.5**	**+2.3**
	comp=Z,1.0nm,0.1s						
DAVA				Sn	**Sn**	**19 05 11.3**	**+1.9**
	comp=Z,3.8nm,0.2s						
MOTA	**Moosalm**	**3.23**	**4**	*i* Pn	**Pn**	**19 04 33.6**	**+1.2**
	comp=Z,1.4nm,0.2s,SNR=8.9						
MOTA				*i* Sn	**Sn**	**19 05 11.6**	**+1.9**
	comp=Z,1.0nm,0.3s						
MOTA	**Moosalm**	**3.23**	**4**	Pn	**Pn**	**19 04 33.6**	**+1.2**
	comp=Z,1.4nm,0.2s,SNR=8.9						
MOTA				Sn	**Sn**	**19 05 11.6**	**+1.9**
	comp=Z,1.0nm,0.3s						
MYKA	**Terra Mystica**	**3.23**	**38**	*i* Pn	**Pn**	**19 04 33.3**	**+1.0**
	comp=Z,0.7nm,0.1s						
MYKA	**Terra Mystica**	**3.23**	**38**	Pn	**Pn**	**19 04 33.3**	**+1.0**
	comp=Z,0.7nm,0.1s						
WATA	**Walderalm**	**3.26**	**10**	*i* Pn	**Pn**	**19 04 34.9**	**+2.1**
	comp=Z,4.4nm,0.2s,SNR=16						
WATA	**Walderalm**	**3.26**	**10**	Pn	**Pn**	**19 04 34.9**	**+2.1**
	comp=Z,4.4nm,0.2s,SNR=16						
KBA	**Koelnbreinsper**	**3.47**	**31**	*i* Pn	**Pn**	**19 04 37.0**	**+1.3**
	comp=Z,0.3nm,0.1s						
KBA	**Koelnbreinsper**	**3.47**	**31**	Pn	**Pn**	**19 04 37.0**	**+1.3**
	comp=Z,0.3nm,0.1s						
ORIF	**Oris-en-Rattie**	**3.57**	**284**	*e*Pn	**Pn**	**19 04 38.7**	**+1.7**
ORIF	**Oris-en-Rattie**	**3.57**	**284**	*e*Pn	**Pn**	**19 04 38.7**	**+1.7**
UDBI	**Udbina**	**3.62**	**82**	Sn	**Sn**	**19 05 17.2**	**-2.1**
UDBI	**Udbina**	**3.62**	**82**	Sn	**Sn**	**19 05 17.2**	**-2.1**
OZLJ	**Ozalj**	**3.67**	**64**	*e*Pn	**Pn**	**19 04 37.5**	**-0.8**
OZLJ				Sn	**Sn**	**19 05 17.8**	**-2.5**
OZLJ	**Ozalj**	**3.67**	**64**	*e*Pn	**Pn**	**19 04 37.4**	**-0.8**
OZLJ				Sn	**Sn**	**19 05 17.8**	**-2.5**
SMRF	**Simiane la Rot**	**3.73**	**269**	*e*Pn	**Pn**	**19 04 40.3**	**+1.1**
SMRF	**Simiane la Rot**	**3.73**	**269**	*e*Pn	**Pn**	**19 04 40.3**	**+1.1**
CABF	**La Chapelle**	**4.11**	**309**	*e*Pn	**Pn**	**19 04 45.1**	**+0.7**
CABF				*e*Sn	**Sn**	**19 05 30.4**	**-0.9**
	comp=Z,1.5nm,0.3s						
CABF	**La Chapelle**	**4.11**	**309**	*e*Pn	**Pn**	**19 04 45.1**	**+0.7**
CABF				*e*Sn	**Sn**	**19 05 30.4**	**-0.9**
	comp=Z,0.8nm,0.3s						
HINF	**Hinteralfeld**	**4.58**	**325**	*e*Pn	**Pn**	**19 04 51.0**	**+0.3**
HINF	**Hinteralfeld**	**4.58**	**325**	*e*Pn	**Pn**	**19 04 51.0**	**+0.3**
CDF	**Champ du Feu**	**4.91**	**332**	*e*Pn	**Pn**	**19 04 55.5**	**+0.2**
CDF				*e*Sn	**Sn**	**19 05 48.3**	**-2.5**
	comp=Z,4.1nm,0.3s						
CDF	**Champ du Feu**	**4.91**	**332**	*e*Pn	**Pn**	**19 04 55.5**	**+0.2**
CDF				*e*Sn	**Sn**	**19 05 48.3**	**-2.5**
	comp=Z,2.0nm,0.3s						
HAU	**Haudompre**	**4.94**	**323**	*e*Pn	**Pn**	**19 04 56.1**	**+0.5**
HAU	**Haudompre**	**4.94**	**323**	*e*Pn	**Pn**	**19 04 56.1**	**+0.5**

CSEM ***23*** *19:05:32.0,48˚.01N×7˚.09E,h2km,ML1.6/1*
LDG 23 19:05:32.0±0.1,48˚.01N×7˚.09E,h2km,Md1.5/3,Ml1.6/1,
Error ellipse: s-maj=2.4km s-min=1.4km az=127.0,
France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HINF	**Hinteralfeld**	**0.25**	**219**	*e*Pg	Pg	19 05 37.1	+0.3
HINF				*e*Sg	Sg	19 05 39.8	-0.3
	5.6nm,0.3s						
HINF	**Hinteralfeld**	**0.25**	**219**	*e*Pg	Pg	19 05 37.1	+0.3
HINF				*e*Sg	Sg	19 05 39.8	-0.3
	2.8nm,0.3s						
HINF	**Hinteralfeld**	**0.25**	**219**	*e*Sn	Sg	19 05 39.8	-0.3
	5.6nm,0.3s						
HINF	**Hinteralfeld**	**0.25**	**219**	*e*Sn	Sg	19 05 39.8	-0.3
	2.8nm,0.3s						
CDF	**Champ du Feu**	**0.42**	**18**	*e*Pg	Pg	19 05 40.2	+0.1
CDF				*e*Sg	Sg	19 05 45.6	+0.1
	3.8nm,0.3s						
CDF	**Champ du Feu**	**0.42**	**18**	*e*Pg	Pg	19 05 40.2	+0.1
CDF				*e*Sg	Sg	19 05 45.6	+0.1
	1.9nm,0.3s						
HAU	**Haudompre**	**0.49**	**269**	*e*Pg	Pg	19 05 41.4	-0.1
HAU				*e*Sg	Sg	19 05 48.2	+0.3
	6.6nm,0.2s						
HAU	**Haudompre**	**0.49**	**269**	*e*Pg	Pg	19 05 41.4	-0.1
HAU				*e*Sg	Sg	19 05 48.2	+0.3
	3.3nm,0.2s						
HAU	**Haudompre**	**0.49**	**269**	*e*Sn	Sg	19 05 48.4	+0.5
	5.1nm,0.4s						
HAU	**Haudompre**	**0.49**	**269**	*e*Sn	Sg	19 05 48.4	+0.5
	10nm,0.4s						
PAGF	**Fort de Pagny**	**1.06**	**301**	*e*Sg	Sg	19 06 05.7	-0.3
	1.4nm,0.2s						
PAGF	**Fort de Pagny**	**1.06**	**301**	*e*Sg	Sg	19 06 05.7	-0.3
	0.7nm,0.2s						

IDC ***23*** *19:12:22.8±0.7,35˚.33S×180˚.00E,h0km,mb4.3/10,*
mb1 4.4/11,mb1mx4.2/48,mbtmp4.3/11,ML4.2/1,MS3.5/1,
Ms1 3.5/1,ms1mx2.7/42,Error ellipse: s-maj=25.1km
s-min=21.1km az=63.0
NEIC ***23*** *19:12:24.1±0.5,35˚.49S×179˚.93E,h10km,mb4.7/9,Error*
ellipse: s-maj=13.4km s-min=7.7km az=112.0
ISCJB ***23*** *19:12:31.6±0.6,35˚.67S±0˚.03×179˚.63E±0˚.10,h76km,*
mb4.4/17,Error ellipse: s-maj=11.3km s-min=4.0km
az=13.6
WEL ***23*** *19:12:33.5±1.0,36˚S±13˚×18˚0E±1˚2,h149km±23km*
ISC 23 19:12:33.8±0.7,35˚.73S±0˚.06×179˚.54E±0˚.09,h76km,n114,
σ1ŝ77/124,mb4.4/17,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.08**	**208**	*e*Pn	**Pn**	**19 13 05.7**	**-1.0**
MXZ	**Matakaoa Point**	**2.08**	**208**	P	**Pn**	**19 13 07.9**	**+1.2**
WMGZ	**Waiomatatini S**	**2.28**	**203**	P	**Pn**	**19 13 10.4**	**+1.1**
WMGZ				S	**Sn**	**19 13 39.8**	**+3.4**
PKGZ	**Pakihiroa**	**2.46**	**208**	P	**Pn**	**19 13 12.4**	**+0.7**
PKGZ				S	**Sn**	**19 13 42.8**	**+1.9**
HAZ	**Te Kaha**	**2.47**	**214**	P	**Pn**	**19 13 13.1**	**+1.2**
PUZ	**Puketiti**	**2.56**	**203**	P	**Pn**	**19 13 13.6**	**+0.5**
PUZ				S	**Sn**	**19 13 44.8**	**+1.6**
RUGZ	**Raukumara Rang**	**2.69**	**213**	P	**Pn**	**19 13 15.5**	**+0.6**
RUGZ				S	**Sn**	**19 13 49.5**	**+2.9**
TWGZ	**Tauwhareparae**	**2.75**	**207**	P	**Pn**	**19 13 16.5**	**+0.8**
TWGZ				S	**Sn**	**19 13 50.4**	**+2.5**
CNGZ	**Carnagh Statio**	**2.95**	**201**	P	**Pn**	**19 13 18.9**	**+0.5**
CNGZ				S	**Sn**	**19 13 55.3**	**+2.6**
WHRZ	**Whale Island**	**2.96**	**223**	P	**Pn**	**19 13 19.9**	**+1.3**
WHRZ				S	**Sn**	**19 13 55.0**	**+2.0**
TKGZ	**Te Karaka**	**3.03**	**206**	P	**Pn**	**19 13 19.8**	**+0.4**
TKGZ				S	**Sn**	**19 13 55.1**	**+0.6**
MWZ	**Matawai**	**3.06**	**211**	P	**Pn**	**19 13 20.0**	**+0.1**
MWZ				S	**Sn**	**19 13 57.2**	**+1.7**
URZ	**Urewera**	**3.19**	**217**	Pn	**Pn**	**19 13 21.4**	**-0.2**
	20nm,0.3s,baz=256,slow=3.1,SNR=205						
URZ				Sn	**Sn**	**19 13 59.5**	**+1.0**
	27nm,0.3s,baz=16,slow=19,SNR=7.0						
URZ	**Urewera**	**3.19**	**217**	*e*Pn	**Pn**	**19 13 21.2**	**-0.4**
URZ	**Urewera**	**3.19**	**217**	P	**Pn**	**19 13 21.4**	**-0.2**
URZ				S	**Sn**	**19 13 59.6**	**+1.1**
OPRZ	**Ohinepanea**	**3.20**	**228**	P	**Pn**	**19 13 21.0**	**-0.7**
RIGZ	**Rimuhau**	**3.30**	**205**	P	**Pn**	**19 13 23.7**	**+0.6**
RIGZ				S	**Sn**	**19 14 01.0**	**-0.2**
PRGZ	**Paritu Road**	**3.45**	**202**	P	**Pn**	**19 13 24.9**	**-0.3**
OMRZ	**Omania**	**3.48**	**226**	P	**Pn**	**19 13 25.8**	**+0.2**
KARZ	**Kaharoa**	**3.50**	**228**	P	**Pn**	**19 13 25.7**	**-0.1**
SNGZ	**Shannon Statio**	**3.52**	**209**	P	**Pn**	**19 13 26.6**	**+0.5**
SNGZ				S	**Sn**	**19 14 07.3**	**+0.7**
MUGZ	**Murupara**	**3.53**	**218**	P	**Pn**	**19 13 26.2**	**-0.1**
RRRZ	**Republican Roa**	**3.56**	**222**	P	**Pn**	**19 13 27.6**	**+1.0**
HLRZ	**Highlands Stat**	**3.59**	**224**	P	**Pn**	**19 13 27.9**	**+0.9**
KNZ	**Kokohu**	**3.61**	**204**	P	**Pn**	**19 13 25.8**	**-1.5**
MHGZ	**Mahia Peninsul**	**3.66**	**200**	P	**Pn**	**19 13 27.2**	**-0.8**
HSRZ	**Hossack Road**	**3.69**	**225**	P	**Pn**	**19 13 29.9**	**+1.4**
HRRZ	**Handcock Road**	**3.72**	**223**	P	**Pn**	**19 13 29.9**	**+0.9**
RAHZ	**Arahi**	**3.74**	**211**	P	**Pn**	**19 13 29.8**	**+0.7**
PRRZ	**Plateau Road**	**3.74**	**221**	P	**Pn**	**19 13 29.2**	**0.0**
MTHZ	**Maungataniwha**	**3.79**	**214**	P	**Pn**	**19 13 29.7**	**-0.1**
ALRZ	**Allen Road**	**3.81**	**221**	P	**Pn**	**19 13 30.2**	**+0.1**
WHHZ	**Waihua**	**3.81**	**208**	P	**Pn**	**19 13 30.2**	**+0.1**
MRHZ	**Matea Rd**	**3.98**	**218**	P	**Pn**	**19 13 32.0**	**-0.5**
NMHZ	**Naumai**	**4.01**	**212**	P	**Pn**	**19 13 33.4**	**+0.5**
ARHZ	**Aropaoanui**	**4.07**	**209**	P	**Pn**	**19 13 32.5**	**-1.1**
TLZ	**Tolley Road**	**4.12**	**230**	P	**Pn**	**19 13 34.6**	**+0.3**
WTAZ	**Waiatarua**	**4.19**	**252**	P	**Pn**	**19 13 35.8**	**+0.6**
BKZ	**Black Stump Fm**	**4.20**	**214**	*e*Pn	**Pn**	**19 13 34.3**	**-1.2**
BKZ	**Black Stump Fm**	**4.20**	**214**	P	**Pn**	**19 13 34.3**	**-1.2**
RATZ	**Rangitukua**	**4.34**	**223**	P	**Pn**	**19 13 37.6**	**+0.2**
MCHZ	**McNeill Hill**	**4.34**	**210**	P	**Pn**	**19 13 36.7**	**-0.7**
RITZ	**Rihia Road**	**4.37**	**221**	P	**Pn**	**19 13 38.0**	**+0.2**
CKHZ	**Cape Kidnapper**	**4.38**	**206**	P	**Pn**	**19 13 35.7**	**-2.1**
KWHZ	**Kaweka Forest**	**4.45**	**213**	P	**Pn**	**19 13 38.2**	**-0.6**
KRVZ	**Karewarewa**	**4.58**	**222**	P	**Pn**	**19 13 40.6**	**0.0**
KAHZ	**Kahuranaki**	**4.58**	**207**	P	**Pn**	**19 13 39.0**	**-1.6**
WTVZ	**West Tongariro**	**4.62**	**222**	P	**Pn**	**19 13 41.9**	**+0.7**
KRHZ	**Kereru**	**4.65**	**212**	P	**Pn**	**19 13 39.5**	**-2.1**
NGZ	**Ngauruhoe**	**4.66**	**221**	P	**Pn**	**19 13 42.3**	**+0.6**
BHHZ	**Black Hill Sta**	**4.66**	**215**	P	**Pn**	**19 13 40.5**	**-1.3**
HIZ	**Hauiti**	**4.66**	**232**	*e*Pn	**Pn**	**19 13 42.6**	**+1.0**
HIZ	**Hauiti**	**4.66**	**232**	P	**Pn**	**19 13 42.7**	**+1.0**
TUVZ	**Tukino**	**4.70**	**220**	P	**Pn**	**19 13 44.3**	**+2.0**
FWVZ	**Far West T-bar**	**4.74**	**221**	P	**Pn**	**19 13 44.6**	**+1.7**
WHVZ	**Whangaehu Hut**	**4.74**	**220**	P	**Pn**	**19 13 44.2**	**+1.2**
MOVZ	**Moawhango**	**4.75**	**218**	P	**Pn**	**19 13 41.0**	**-1.9**
PXZ	**Pawanui**	**4.79**	**205**	P	**Pn**	**19 13 40.9**	**-2.5**
OUZ	**Omahuta**	**4.88**	**274**	*e*Pn	**Pn**	**19 13 43.4**	**-1.2**
OUZ	**Omahuta**	**4.88**	**274**	P	**Pn**	**19 13 43.4**	**-1.2**
TSZ	**Takapari Road**	**5.17**	**212**	P	**Pn**	**19 13 46.7**	**-2.0**
BFZ	**Birch Farm**	**5.59**	**207**	*e*Pn	**Pn**	**19 13 51.5**	**-2.8**
BFZ				*e*Sn	**Sn**	**19 14 53.5**	**-3.5**
BFZ	**Birch Farm**	**5.59**	**207**	P	**Pn**	**19 13 51.0**	**-3.3**
SNZO	**South Karori**	**6.74**	**213**	*e*Pn	**Pn**	**19 14 06.6**	**-3.4**
SNZO				*e*Sn	**Sn**	**19 15 18.5**	**-6.8**
THZ	**Tophouse**	**7.95**	**219**	*e*Pn	**Pn**	**19 14 23.0**	**-3.6**
THZ				*e*Sn	**Sn**	**19 15 47.0**	**-7.9**
KHZ	**Kahutara**	**8.15**	**213**	*e*Pn	**Pn**	**19 14 26.8**	**-2.5**
KHZ				*e*Sn	Sn	19 15 49.9	-10
LTZ	**Lake Taylor**	**9.02**	**216**	*e*Pn	**Pn**	**19 14 37.9**	**-3.3**
OXZ	**Oxford**	**9.54**	**215**	*e*Pn	**Pn**	**19 14 44.2**	**-4.1**
OXZ				*e*Sn	Sn	19 16 23.6	-10
MQZ	**McQueen's Vall**	**9.57**	**212**	*e*Pn	Pn	19 14 44.0	-4.6
MQZ				*e*Sn	Sn	19 16 21.4	-13
RPZ	**Rata Peaks**	**10.31**	**217**	*e*Pn	**Pn**	**19 14 55.2**	**-3.5**
LBZ	**Lake Benmore**	**11.23**	**217**	*e*Pn	Pn	19 15 06.8	-4.5
ODZ	**Otahua Downs**	**11.51**	**213**	*e*Pn	Pn	19 15 10.4	-4.7
DZM	**Mont Dzumac**	**17.77**	**316**	LR	LR	19 21 40.0	
	comp=Z,136nm,18.1s,baz=192,slow=31						
STKA	**Stephens Creek**	**31.64**	**266**	P	**P**	**19 18 50.9**	**+1.3**
	2.3nm,0.7s,baz=81,slow=7.8,SNR=5.2						
STKA	**Stephens Creek**	**31.64**	**266**	*e*P	**P**	**19 18 50.9**	**+1.3**
	5.7nm,1.8s						
CTA	**Charters Tower**	**33.09**	**289**	P	**P**	**19 19 02.3**	**-0.3**
	5.3nm,0.8s,baz=119,slow=10,SNR=3.0						
AS31	**Alice Springs**	**41.09**	**274**	*e*P	**P**	**19 20 11.5**	**+1.2**
	1.9nm,0.7s						
ASAR	**Alice Springs**	**41.09**	**274**	P	**P**	**19 20 11.5**	**+1.2**
	3.0nm,0.5s,baz=117,slow=7.6,SNR=51						
WB2	**Warramunga Arr**	**42.56**	**279**	*e*P	**P**	**19 20 22.7**	**+0.4**
	8.6nm,0.6s						
WRAB	**Tennant Creek**	**42.56**	**279**	*e*P	**P**	**19 20 20.6**	**-1.7**
	50nm,1

MTN	**Manton Dam**	**12.11**	**190**	*e*Pn	**Pn**	**19 29 18.1**	**-0.7**
MTN				*e*Sn	**Sn**	**19 31 27.4**	**-5.5**
SOEI	**Soe**	**12.61**	**225**	*e*Pn	**Pn**	**19 29 26.9**	**+1.2**
BATI	**Baumata**	**13.35**	**226**	Pn	**Pn**	**19 29 36.8**	**+1.0**
	4.6nm,0.3s,baz=191,slow=2.6,SNR=9.9						
BATI	**Baumata**	**13.35**	**226**	P	**Pn**	**19 29 35.9**	**+0.2**
PCI	**Palu**	**13.46**	**270**	P	**Pn**	**19 29 38.6**	**+1.4**
	21nm,1.0s						
MMRI	**Maumere**	**13.46**	**235**	*e*Pn	**Pn**	**19 29 40.3**	**+3.1**
TTSI	**Tana Toraja**	**13.64**	**261**	P	**Pn**	**19 29 39.5**	**-0.2**
SPSI	**Sidrap Palu**	**13.86**	**257**	P	**Pn**	**19 29 44.3**	**+1.6**
COEN	**Coen**	**16.29**	**144**	*e*Pn	**Pn**	**19 30 14.3**	**-0.6**
	46nm,1.7s						
FITZ	**Fitzroy Crossi**	**18.72**	**203**	P	**P**	**19 30 43.0**	**-1.4**
	0.6nm,0.3s,baz=47,slow=13,SNR=15						
FITZ				S	Sn	19 33 58.5	-15
	0.1nm,0.3s,baz=48,slow=15,SNR=2.5						
WRAB	**Tennant Creek**	**19.00**	**177**	*e*P	**P**	**19 30 47.0**	**-0.5**
	15nm,1.3s						
WRAB				*e*Sn	**Sn**	**19 34 16.8**	**-3.7**
WR1	**Warramunga Arr**	**19.01**	**177**	*e*P	**P**	**19 30 47.4**	**-0.3**
	7.4nm,0.8s						
WR1				*e*Sn	**Sn**	**19 34 13.6**	**-7.1**
WRA	**Warramunga Arr**	**19.01**	**177**	P	**P**	**19 30 47.4**	**-0.3**
	0.5nm,0.3s,baz=356,slow=12,SNR=18						
WRA				S	**Sn**	**19 34 13.6**	**-7.1**
	0.2nm,0.3s,baz=5.9,slow=22,SNR=4.7						
WB2	**Warramunga Arr**	**19.01**	**177**	*e*P	**P**	**19 30 46.5**	**-1.1**
	9.5nm,1.0s						
JAGI	**Jajag, Banyuwa**	**20.52**	**248**	*e*P	**P**	**19 31 04.0**	**-0.1**
	79nm,1.3s						
SBUM	**Sibu**	**21.32**	**279**	*e*P	**P**	**19 31 14.2**	**+1.3**
	6.0nm,1.1s						
AS31	**Alice Springs**	**22.69**	**179**	*e*P	**P**	**19 31 28.6**	**+1.1**
	2.1nm,0.8s						
AS01	**Alice Springs**	**22.69**	**178**	*e*P	**P**	**19 31 24.9**	**-2.6**
ASAR	**Alice Springs**	**22.69**	**179**	P	**P**	**19 31 27.9**	**+0.4**
	3.3nm,0.4s,baz=357,slow=12,SNR=51						
ASAR				S	**S**	**19 35 38.3**	**+4.1**
	0.9nm,0.9s,baz=351,slow=18,SNR=3.5						
STKA	**Stephens Creek**	**31.85**	**167**	P	**P**	**19 32 50.1**	**-0.4**
	2.2nm,0.8s,baz=351,slow=11,SNR=3.9						
STKA				LR	LR	19 48 35.3	
	comp=Z,49nm,19.6s,baz=209,slow=42						
STKA	**Stephens Creek**	**31.85**	**167**	*e*P	**P**	**19 32 49.5**	**-1.1**
	3.4nm,1.4s						
H11S3	**WAKE ISLAND Hy**	**38.04**	**58**	T	T	20 14 02.7	
	baz=246						
H11S2	**WAKE ISLAND Hy**	**38.05**	**58**	T	T	20 14 04.9	
	baz=246						
H11S1	**WAKE ISLAND Hy**	**38.05**	**58**	T	T	20 14 03.6	
	baz=246						
H11N1	**WAKE ISLAND Hy**	**38.76**	**56**	T	T	20 14 53.8	
	baz=242,slow=75,SNR=30						
H11N2	**WAKE ISLAND Hy**	**38.78**	**56**	T	T	20 14 55.2	
	baz=242,slow=75,SNR=14						
H11N3	**WAKE ISLAND Hy**	**38.78**	**56**	T	T	20 14 55.6	
	baz=242,slow=75,SNR=32						
PALK	**Pallekele**	**53.08**	**280**	LR	LR	19 59 24.9	
	comp=Z,117nm,19.8s,baz=115,slow=37						
SONM	**Songino Array**	**53.85**	**338**	LR	LR	19 58 58.3	
	comp=Z,27nm,20.7s,baz=109,slow=36						
MK01	**Makanchi Array**	**65.04**	**324**	*e*P	**P**	**19 37 05.4**	**-0.4**
MK31	**Makanchi Array**	**65.06**	**324**	*e*P	**P**	**19 37 05.9**	**+0.1**
MK32	**Makanchi Array**	**65.06**	**324**	*e*P	**P**	**19 37 05.7**	**-0.2**
MKAR	**Makanchi Array**	**65.06**	**324**	P	**P**	**19 37 05.7**	**-0.2**
	0.7nm,0.6s,baz=114,slow=8.2,SNR=11						
MKAR	**Makanchi Array**	**65.06**	**324**	*e*P	**P**	**19 37 05.8**	**0.0**
	11nm,1.2s						
KURK	**Kurchatov**	**69.13**	**326**	*e*P	**P**	**19 37 31.1**	**-0.5**
KURBB	**Kurchatov Arra**	**69.14**	**326**	P	**P**	**19 37 31.1**	**-0.5**
	1.0nm,0.7s,baz=122,slow=5.7,SNR=9.8						
BVAR	**Borovoye Array**	**74.73**	**326**	P	**P**	**19 38 03.8**	**-1.3**
	0.4nm,0.6s,baz=120,slow=5.7,SNR=4.0						
ILAR	**Eielson Array**	**86.42**	**25**	P	**P**	**19 39 05.7**	**-1.8**
	0.3nm,0.6s,baz=246,slow=3.8,SNR=4.4						
BRTR	**Keskin Array B**	**97.97**	**310**	LR	LR	20 30 09.0	
	comp=Z,11nm,19.0s,baz=86,slow=39						

MEX 23 19:41:13.3±0.3, 18°.02N×103°.46W, h2km±4km, MD3.5, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.29**	**22**	*i* P	Pg	19 41 18.8	-0.2
	baz=202,slow=4.6						
MMIG				*i* S	Sg	19 41 22.9	+0.2
R15V		**1.25**	**337**	*e*P	Pg	19 41 33.4	-3.8
R15V				*e*S	Sg	19 41 50.0	-3.5
EZ5V		**1.46**	**355**	*e*P	Pn	19 41 37.3	-3.6
EZ5V				*i* S	Sg	19 41 56.1	-4.2
ARIG	**Puente Sto Nin**	**2.97**	**84**	*e*P	Pn	19 42 03.9	+2.4

*ISCJB **23** 19:52:02.4±0.6, 51°.48N±0°.03×16°.17E±0°.03, h0km, Error ellipse: s-maj=4.5km s-min=2.7km az=17.2*
*CSEM **23** 19:52:03.8±0.4, 51°.49N×16°.15E, h2km, ML3.2/12, Error ellipse: s-maj=6.0km s-min=3.4km az=1.0*
*PRU **23** 19:52:04.1, 51°.53N×16°.14E, h0km*
*VIE **23** 19:52:08.0±0.8, 51°.23N×15°.95E, h0km, mb2.4/5, ml2.6/6, Error ellipse: s-maj=10.5km s-min=5.2km az=80.0 75 km WNW of Wroclaw Suspected Mining induced.*

ISC 23 19:52:03.7±1.1, 51°.52N±0°.04×16°.14E±0°.02, h0km, n50, σ0°.89/98, 1D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.68**	**172**	*e*Pg	**Pg**	**19 52 17.4**	**+0.6**
KSP				*e*Sg	**Sg**	**19 52 26.7**	**+1.1**
KSP	**Ksiaz**	**0.68**	**172**	⇓*i*Pg	**Pg**	**19 52 17.4**	**+0.6**
KSP				*e*Sg	**Sg**	**19 52 26.7**	**+1.1**
UPC	**Upice**	**1.02**	**185**	*e*PG	**Pb**	**19 52 23.7**	**-0.4**
UPC				*e*SG	**Sg**	**19 52 36.9**	**+0.6**
	comp=Z,77nm,0.4s						
UPC	**Upice**	**1.02**	**185**	Pg	**Pb**	**19 52 23.7**	**-0.4**
UPC				Sg	**Sg**	**19 52 36.9**	**+0.6**
	77nm,0.4s						
DPC	**Dobruska-Polom**	**1.18**	**174**	*e*PG	**Pg**	**19 52 26.2**	**0.0**
DPC				*e*SG	**Sg**	**19 52 41.7**	**+0.3**
	comp=Z,25nm,0.4s						
DPC	**Dobruska-Polom**	**1.18**	**174**	Pg	**Pg**	**19 52 26.2**	**0.0**
DPC				Sg	**Sg**	**19 52 41.7**	**+0.3**
	25nm,0.4s						
PVCC	**Panska Ves**	**1.41**	**226**	*e*PG	**Pn**	**19 52 30.3**	**-0.2**
PVCC				*e*SG	**Sn**	**19 52 50.4**	**+0.7**
	comp=Z,106nm,0.6s						
PVCC	**Panska Ves**	**1.41**	**226**	Pg	**Pn**	**19 52 30.3**	**-0.2**
PVCC				Sg	**Sn**	**19 52 50.4**	**+0.7**
	106nm,0.6s						
KRLC	**Kraliky**	**1.50**	**164**	*e*PG	**Pn**	**19 52 31.6**	**-0.3**
KRLC				*e*SG	**Sb**	**19 52 51.9**	**-0.1**
	comp=Z,6.6nm,0.3s						
KRLC	**Kraliky**	**1.50**	**164**	Pg	**Pn**	**19 52 31.6**	**-0.3**
KRLC				Sg	**Sb**	**19 52 51.9**	**-0.1**
	6.6nm,0.3s						
BRG	**Berggiesshubel**	**1.53**	**246**	PN	**Pn**	**19 52 32.1**	**-0.1**
BRG				PG	**Pg**	**19 52 33.1**	**+0.1**
BRG				SG	**Sg**	**19 52 53.5**	**+0.8**
	53nm,0.4s						
PRA	**Prague**	**1.81**	**217**	*e*PG	**Pn**	**19 52 36.1**	**0.0**
PRA				*e*SG	**Sg**	**19 53 02.2**	**+0.4**
	comp=Z,21nm,0.6s						
GOPC	**GO Pecny, Ondr**	**1.82**	**209**	*e*PN	**Pn**	**19 52 36.3**	**0.0**
GOPC				*e*PG	**Pb**	**19 52 38.0**	**+0.1**
GOPC	**GO Pecny, Ondr**	**1.82**	**209**	Pn	**Pn**	**19 52 36.3**	**0.0**
PRU	**Pruhonice**	**1.84**	**214**	*e*PN	**Pn**	**19 52 35.6**	**-0.9**
PRU				*e*PG	**Pb**	**19 52 37.9**	**-0.3**
PRU				*e*SG	**Sg**	**19 53 02.4**	**-0.3**
	comp=Z,27nm,0.4s						
PRU	**Pruhonice**	**1.84**	**214**	Pn	**Pn**	**19 52 35.6**	**-0.9**
MORC	**Moravsky Berou**	**1.96**	**152**	*e*Pn	**Pn**	**19 52 37.6**	**-0.6**
MORC				*e*Sg	**Sg**	**19 53 06.3**	**-0.2**
MORC	**Moravsky Berou**	**1.96**	**152**	*e*PN	**Pn**	**19 52 37.6**	**-0.6**
MORC				*e*SG	**Sg**	**19 53 06.3**	**-0.2**
CLL	**Collm**	**1.98**	**265**	*e*Pn	**Pn**	**19 52 37.0**	**-1.4**
CLL				*e*Pg	**Pb**	**19 52 41.0**	**+0.5**
CLL				*i*		19 52 44.0	
CLL				*i* Sg	**Sg**	**19 53 07.0**	**-0.2**
	comp=Z,21nm,0.7s						
CLL				*e*		19 53 12.0	
OKC	**Ostrava-Krasne**	**2.11**	**142**	*e*PG	**Pg**	**19 52 43.7**	**-0.4**
OKC				*e*SG	**Sb**	**19 53 10.0**	**+0.5**
	comp=Z,22nm,0.5s						
OKC	**Ostrava-Krasne**	**2.11**	**142**	Pg	**Pg**	**19 52 43.7**	**-0.4**
OKC				Sg	**Sb**	**19 53 10.0**	**+0.5**
	comp=Z,22nm,0.5s						
VRAC	**Vranov**	**2.23**	**172**	*e*Pn	**Pn**	**19 52 42.3**	**+0.4**
VRAC				*e*Sg	**Sg**	**19 53 14.5**	**-0.8**
VRAC	**Vranov**	**2.23**	**172**	*e*PN	**Pn**	**19 52 42.3**	**+0.4**
VRAC				*e*SG	**Sg**	**19 53 14.5**	**-0.8**
KRUC	**Moravsky**	**2.47**	**176**	*e*PN	**Pn**	**19 52 45.7**	**+0.6**
KRUC				*e*PG	**Pb**	**19 52 49.5**	**+0.7**
KRUC				*e*SG	**Sg**	**19 53 21.5**	**-1.3**
OJC	**Ojcow**	**2.66**	**118**	*e*Pg	**Pg**	**19 52 54.1**	**-0.4**
OJC				*e*Sg	**Sg**	**19 53 29.3**	**+0.4**
OJC	**Ojcow**	**2.66**	**118**	*e*Pg	**Pg**	**19 52 54.1**	**-0.4**
OJC				*e*Sg	**Sg**	**19 53 29.3**	**+0.4**
NKC	**Novy Kostel**	**2.67**	**243**	*e*PN	**Pn**	**19 52 48.3**	**+0.3**
NKC				*e*SG	**Sg**	**19 53 29.6**	**+0.1**
	comp=Z,82nm,1.1s						
NKC	**Novy Kostel**	**2.67**	**243**	Pn	**Pn**	**19 52 48.3**	**+0.3**
NKC				Sg	**Sg**	**19 53 29.6**	**+0.1**
	comp=Z,82nm,1.1s						
JAVC	**Velka Javorina**	**2.84**	**159**	*e*PN	**Pn**	**19 52 51.0**	**+0.7**
KHC	**Kasperske Hory**	**2.90**	**216**	*e*PN	**Pn**	**19 52 51.1**	**0.0**
KHC				*e*PG	**Pb**	**19 52 57.4**	**+1.1**
KHC				*e*SN	**Sn**	**19 53 26.5**	**-0.2**
KHC				*e*SG	**Sg**	**19 53 35.3**	**-1.5**
	comp=Z,12nm,0.5s						
KHC	**Kasperske Hory**	**2.90**	**216**	Pn	**Pn**	**19 52 51.1**	**0.0**
SMOL	**Smolenice**	**3.12**	**164**	*e*PG	**Pg**	**19 53 03.3**	**-0.1**
SMOL				*e*SG	**Sg**	**19 53 46.5**	**+2.6**
SMOL	**Smolenice**	**3.12**	**164**	*e*Pg	**Pg**	**19 53 03.3**	**-0.1**
SMOL				*e*Sg	**Sg**	**19 53 46.5**	**+2.6**
LANS	**Liptovska Anna**	**3.19**	**137**	*e*PG	**Pg**	**19 53 04.0**	**-0.7**
LANS				*e*SG	**Sg**	**19 53 44.4**	**-1.6**
LANS	**Liptovska Anna**	**3.19**	**137**	*e*Pg	**Pg**	**19 53 04.0**	**-0.7**
LANS				*e*Sg	**Sg**	**19 53 44.4**	**-1.6**
MODS	**Modra-Piesok**	**3.23**	**166**	*e*PG	**Pg**	**19 53 04.2**	**-1.4**
MODS				*e*SG	**Sg**	**19 53 48.8**	**+1.3**
MODS				*e*LG	Lg	19 53 57.2	
MODS	**Modra-Piesok**	**3.23**	**166**	*e*Pg	**Pg**	**19 53 04.2**	**-1.4**
MODS				*e*Sg	**Sg**	**19 53 48.8**	**+1.3**
NIE	**Niedzica**	**3.39**	**127**	*e*P	**Pg**	**19 53 07.5**	**-1.0**
NIE				*e*S	**Sg**	**19 53 52.7**	**+0.3**
VYHS	**Vyhne**	**3.49**	**149**	*e*PN	**Pn**	**19 52 58.2**	**-1.0**
VYHS				*e*PG	**Pg**	**19 53 10.6**	**+0.1**
VYHS				*e*SG	**Sg**	**19 53 55.2**	**-0.5**
VYHS				*e*LG	Lg	19 54 10.9	
VYHS	**Vyhne**	**3.49**	**149**	*e*Pn	**Pn**	**19 52 58.2**	**-1.0**
CONA	**Conrad Observa**	**3.60**	**183**	*i* Pn	**Pn**	**19 53 01.8**	**+1.0**
	comp=Z,0.7nm,0.2s						
CONA				*e*Sg	**Sg**	**19 53 58.2**	**-1.0**
	comp=Z,6.2nm,0.3s						
CONA	**Conrad Observa**	**3.60**	**183**	Pn	**Pn**	**19 53 01.8**	**+1.0**
	comp=Z,0.7nm,0.2s						
CONA				Sg	**Sg**	**19 53 58.2**	**-1.0**
	comp=Z,6.2nm,0.3s						
MOA	**Molln**	**3.87**	**199**	*i* Pn	**Pn**	**19 53 04.8**	**+0.3**
	comp=Z,2.3nm,0.3s						
MOA				Sg	**Sg**	**19 54 07.7**	**-0.3**
	comp=Z,12nm,0.6s						
MOA	**Molln**	**3.87**	**199**	Pn	**Pn**	**19 53 04.8**	**+0.3**
	comp=Z,2.3nm,0.3s						
MOA				Sg	**Sg**	**19 54 07.7**	**-0.3**
	comp=Z,12nm,0.6s						
ARSA	**Arzberg**	**4.29**	**186**	*e*Pg	**Pg**	**19 53 24.4**	**-1.5**
	comp=Z,1.5nm,0.4s						
ARSA				*e*Sg	**Sg**	**19 54 18.9**	**-2.6**
	comp=Z,8.8nm,0.5s						
ARSA	**Arzberg**	**4.29**	**186**	Pg	**Pg**	**19 53 24.4**	**-1.5**
	comp=Z,1.5nm,0.4s						
ARSA				Sg	**Sg**	**19 54 18.9**	**-2.6**
	comp=Z,8.8nm,0.5s						
CRVS	**Cervenica-Dubn**	**4.30**	**125**	*e*PG	**Pg**	**19 53 26.6**	**+0.5**
CRVS	**Cervenica-Dubn**	**4.30**	**125**	*e*Pg	**Pg**	**19 53 26.6**	**+0.5**
KBA	**Koelnbreinsper**	**4.81**	**203**	*i* Pn	**Pn**	**19 53 18.0**	**+0.5**
	comp=Z,1.3nm,0.3s						
KBA	**Koelnbreinsper**	**4.81**	**203**	Pn	**Pn**	**19 53 18.0**	**+0.5**
	comp=Z,1.3nm,0.3s						

*NEIC **23** 20:10:30.3±0.0, 39°.64S×174°.11E, h208km, ML4.1(WEL), After WEL.*

WEL 23 20:10:30.8, 40°.5±5°.×17°.4E±°., h205km±4km, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LREZ	**Lake Rotokare**	**0.23**	**46**	P	Pn	20 10 57.9	+0.1
LREZ				S	S	20 11 17.7	-1.1
PREZ	**Palmer Road**	**0.28**	**355**	Pn	Pn	20 10 57.4	-0.5
PREZ	**Palmer Road**	**0.28**	**355**	P	Pn	20 10 57.6	-0.3
PREZ				S	S	20 11 17.5	-1.6
KHEZ	**Kahui Hut**	**0.35**	**337**	Pn	Pn	20 10 57.9	-0.3
KHEZ				Sn	S	20 11 18.3	-1.2
KHEZ	**Kahui Hut**	**0.35**	**337**	P	Pn	20 10 58.0	-0.1
KHEZ				S	S	20 11 18.0	-1.4
NEZ	**North Egmont**	**0.36**	**348**	*e*Pn	Pn	20 10 58.1	-0.1
PKE	**Pukeiti**	**0.45**	**340**	P	Pn	20 10 58.3	-0.1
PKE				S	S	20 11 18.6	-1.2
MHEZ	**Mangahewa**	**0.55**	**11**	P	Pn	20 10 58.8	0.0
MHEZ				S	S	20 11 19.6	-0.8
WAZ	**Wanganui**	**0.63**	**103**	*e*Pn	Pn	20 10 59.6	+0.6
WAZ				*e*S	S	20 11 20.4	-0.5
WAZ	**Wanganui**	**0.63**	**103**	P	Pn	20 10 59.6	+0.6
VRZ	**Vera Road**	**0.66**	**42**	*e*Pn	Pn	20 10 58.6	-0.6
VRZ				*e*S	S	20 11 19.4	-1.8
VRZ	**Vera Road**	**0.66**	**42**	P	Pn	20 10 58.7	-0.5
PKVZ	**Pokaka**	**0.95**	**70**	*e*Pn	Pn	20 11 00.8	-0.1
PKVZ	**Pokaka**	**0.95**	**70**	P	Pn	20 11 00.8	-0.1
PKVZ				S	S	20 11 22.0	-2.0
MTVZ	**Mangateitei**	**1.02**	**77**	*e*Pn	Pn	20 11 01.1	-0.2
MTVZ	**Mangateitei**	**1.02**	**77**	P	Pn	20 11 01.1	-0.2
MTVZ				S	S	20 11 22.7	-2.1
OHWZ	**Ohakea**	**1.04**	**124**	P	Pn	20 11 02.0	+0.7
OHWZ				S	S	20 11 24.1	-0.9
TRVZ	**Turoa**	**1.10**	**73**	P	Pn	20 11 02.1	0.0
TRVZ				S	S	20 11 24.6	-1.4
TWVZ	**Taurewa**	**1.11**	**61**	*e*Pn	Pn	20 11 01.6	-0.4
TWVZ	**Taurewa**	**1.11**	**61**	P	Pn	20 11 01.6	-0.4
FWVZ	**Far West T-bar**	**1.12**	**71**	*e*Pn	Pn	20 11 02.1	-0.1
FWVZ	**Far West T-bar**	**1.12**	**71**	P	Pn	20 11 02.1	0.0
DRZ	**Dome Shelter**	**1.12**	**72**	*e*Pn	Pn	20 11 02.5	+0.3
DRZ	**Dome Shelter**	**1.12**	**72**	P	Pn	20 11 02.8	+0.5
WNVZ	**Wahianoa**	**1.13**	**75**	*e*Pn	Pn	20 11 02.2	+0.1
COVZ	**Chateau Observ**	**1.13**	**69**	P	Pn	20 11 02.1	0.0
WHVZ	**Whangaehu Hut**	**1.14**	**73**	Pn	Pn	20 11 02.3	0.0
WHVZ	**Whangaehu Hut**	**1.14**	**73**	P	Pn	20 11 02.4	+0.1
NGZ	**Ngauruhoe**	**1.18**	**68**	*e*Pn	Pn	20 11 02.6	+0.1
NGZ	**Ngauruhoe**	**1.18**	**68**	P	Pn	20 11 02.6	+0.1
TUVZ	**Tukino**	**1.19**	**73**	*e*Pn	Pn	20 11 02.9	+0.3
TUVZ	**Tukino**	**1.19**	**73**	P	Pn	20 11 03.0	+0.4
DUWZ	**D'Urville Isla**	**1.20**	**190**	*e*Pn	Pn	20 11 02.0	-0.5
DUWZ	**D'Urville Isla**	**1.20**	**190**	P	Pn	20 11 02.0	-0.5
WTVZ	**West Tongariro**	**1.20**	**66**	*e*Pn	Pn	20 11 02.5	-0.2
WTVZ	**West Tongariro**	**1.20**	**66**	P	Pn	20 11 02.5	-0.1
HIZ	**Hauiti**	**1.22**	**25**	*e*Pn	Pn	20 11 02.1	-0.6
HIZ	**Hauiti**	**1.22**	**25**	P	Pn	20 11 02.2	-0.5
MOVZ	**Moawhango**	**1.23**	**80**	*e*Pn	Pn	20 11 02.6	-0.2
MOVZ	**Moawhango**	**1.23**	**80**	P	Pn	20 11 02.6	-0.2
KRVZ	**Karewarewa**	**1.24**	**65**	*e*Pn	Pn	20 11 03.0	+0.1
KRVZ	**Karewarewa**	**1.24**	**65**	P	Pn	20 11 03.1	+0.1
KATZ	**Kakaramea**	**1.33**	**62**	*e*Pn	Pn	20 11 03.8	+0.1
KATZ	**Kakaramea**	**1.33**	**62**	P	Pn	20 11 03.9	+0.2
KIW	**Kapiti Island**	**1.36**	**156**	*e*Pn	Pn	20 11 03.5	-0.2
KIW				*e*S	S	20 11 27.5	-1.7
KIW	**Kapiti Island**	**1.36**	**156**	P	Pn	20 11 03.5	-0.2
OGWZ	**Otaki Gorge**	**1.41**	**148**	*e*Pn	Pn	20 11 04.2	+0.1
OGWZ	**Otaki Gorge**	**1.41**	**148**	P	Pn	20 11 04.2	+0.1
TSZ	**Takapari Road**	**1.43**	**108**	*e*Pn	Pn	20 11 04.5	+0.2
TSZ				*e*S	S	20 11 30.3	+0.1
TSZ	**Takapari Road**	**1.43**	**108**	P	Pn	20 11 04.5	+0.2
POWZ	**Post Office Ro**	**1.44**	**123**	*e*Pn	Pn	20 11 04.4	0.0
POWZ	**Post Office Ro**	**1.44**	**123**	P	Pn	20 11 04.4	0.0
POWZ	**Post Office Ro**	**1.44**	**123**	P	S	20 11 27.8	-2.4
RATZ	**Rangitukua**	**1.44**	**59**	*e*Pn	Pn	20 11 04.7	+0.2
RATZ	**Rangitukua**	**1.44**	**59**	P	Pn	20 11 04.8	+0.3
RITZ	**Rihia Road**	**1.45**	**64**	*e*Pn	Pn	20 11 05.0	+0.4
RITZ	**Rihia Road**	**1.45**	**64**	P	Pn	20 11 05.0	+0.5
BHHZ	**Black Hill Sta**	**1.46**	**85**	*e*Pn	Pn	20 11 04.2	-0.4
BHHZ	**Black Hill Sta**	**1.46**	**85**	P	Pn	20 11 04.3	-0.3
MRZ	**Mangatainoka R**	**1.49**	**135**	*e*Pn	Pn	20 11 04.7	-0.1
MRZ	**Mangatainoka R**	**1.49**	**135**	P	Pn	20 11 04.7	-0.1
MRZ	**Mangatainoka R**	**1.49**	**135**	P	S	20 11 23.8	-7.2
WATZ	**Wairara**	**1.51**	**53**	P	Pn	20 11 05.3	+0.2
PNHZ	**Pukenui**	**1.58**	**101**	*e*Pn	Pn	20 11 05.8	+0.2
PNHZ	**Pukenui**	**1.58**	**101**	P	Pn	20 11 05.9	+0.2
TCW	**Tory Channel**	**1.59**	**178**	*e*Pn	Pn	20 11 05.6	0.0
TCW				*e*S	S	20 11 30.5	-2.1
TCW	**Tory Channel**	**1.59**	**178**	P	Pn	20 11 05.6	0.0
CAW	**Cannon Point**	**1.63**	**156**	*e*Pn	Pn	20 11 05.8	-0.2
CAW				*e*S	S	20 11 32.5	-0.8
CAW	**Cannon Point**	**1.63**	**156**	P	Pn	20 11 05.9	-0.2
HOWZ	**Holdsworth Sta**	**1.63**	**142**	*e*Pn	Pn	20 11 05.9	-0.2
HOWZ	**Holdsworth Sta**	**1.63**	**142**	P	Pn	20 11 05.9	-0.2
HOWZ	**Holdsworth Sta**	**1.63**	**142**	P	S	20 11 27.8	-5.5
PRWZ	**Pori Road**	**1.66**	**125**	Pn	Pn	20 11 06.6	+0.3
PRWZ	**Pori Road**	**1.66**	**125**	P	Pn	20 11 06.6	+0.3
PRWZ	**Pori Road**	**1.66**	**125**	P	S	20 11 26.7	-6.9
DVHZ	**Dannevirke**	**1.66**	**115**	*e*Pn	Pn	20 11 06.5	+0.1
DVHZ	**Dannevirke**	**1.66**	**115**	P	Pn	20 11 06.6	+0.2
DVHZ	**Dannevirke**	**1.66**	**115**	P	S	20 11 28.0	-5.7
KRHZ	**Kereru**	**1.68**	**91**	P	Pn	20 11 06.8	+0.2
KUTZ	**Kaahu Road**	**1.70**	**49**	P	Pn	20 11 07.0	+0.2
NNZ	**Nelson**	**1.71**	**201**	*e*Pn	Pn	20 11 06.0	-0.8
NNZ	**Nelson**	**1.71**	**201**	P	Pn	20 11 06.0	-0.8
WEL	**Wellington**	**1.72**	**165**	*e*Pn	Pn	20 11 06.4	-0.4
WEL				*e*		20 11 33.0	
WEL				*e*S	S	20 11 35.0	+0.3
SNZO	**South Karori**	**1.73**	**167**	*e*Pn	Pn	20 11 06.4	-0.5
SNZO				*e*S	S	20 11 31.9	-3.0
TIWZ	**Tintock**	**1.74**	**132**	*e*Pn	Pn	20 11 06.8	-0.3
TIWZ				*e*S	S	20 11 34.2	-0.9
TIWZ	**Tintock**	**1.74**	**132**	P	Pn	20 11 07.1	0.0
TIWZ	**Tintock**	**1.74**	**132**	P	S	20 11 28.7	-6.4
KWHZ	**Kaweka Forest**	**1.74**	**84**	P	Pn	20 11 07.7	+0.5
QRZ	**Quartz Range**	**1.75**	**226**	*e*Pn	Pn	20 11 05.7	-1.5
QRZ	**Quartz Range**	**1.75**	**226**	P	Pn	20 11 05.7	-1.5
WPHZ	**Waipukurau**	**1.79**	**105**	*e*Pn	Pn	20 11 08.0	+0.4
WPHZ	**Waipukurau**	**1.79**	**105**	P	Pn	20 11 08.0	+0.4
WPHZ	**Waipukurau**	**1.79**	**105**	P	S	20 11 35.0	-0.7
TUWZ	**Tuamarina**	**1.82**	**186**	*e*Pn	Pn	20 11 08.3	+0.5
TUWZ	**Tuamarina**	**1.82**	**186**	P	Pn	20 11 07.2	-0.6
MTW	**Mount Morrison**	**1.83**	**147**	*e*Pn	Pn	20 11 07.6	-0.4
MTW				*e*S	S	20 11 36.3	-0.3
MTW	**Mount Morrison**	**1.83**	**147**	P	Pn	20 11 07.6	-0.4
MTW	**Mount Morrison**	**1.83**	**147**	P	S	20 11 29.5	-7.2
BKZ	**Black Stump Fm**	**1.84**	**76**	*e*Pn	Pn	20 11 08.1	-0.1
BKZ				*e*S	S	20 11 34.5	-2.2
BKZ	**Black Stump Fm**	**1.84**	**76**	P	Pn	20 11 08.1	0.0
BHW	**Baring Head**	**1.86**	**164**	*e*Pn	Pn	20 11 07.5	-0.6
BHW				*e*S	S	20 11 35.5	-1.6
BHW	**Baring Head**	**1.86**	**164**	P	Pn	20 11 07.6	-0.6
WPRZ	**Whakapapatarin**	**1.89**	**55**	P	Pn	20 11 08.5	-0.1
BFZ	**Birch Farm**	**1.90**	**125**	*e*Pn

FOZ				*e*S	S	20 12 38.1	-7.9
FOZ	**Fox Glacier**	**5.10**	**219**	P	Pn	20 11 44.5	-1.9
LBZ	**Lake Benmore**	**5.62**	**211**	*e*Pn	Pn	20 11 50.3	-2.8
ODZ	**Otahua Downs**	**6.02**	**205**	*e*Pn	Pn	20 11 56.0	-2.3
ODZ				*e*S	S	20 13 01.3	-6.1
WKZ	**Wanaka**	**6.46**	**215**	*e*Pn	Pn	20 12 00.5	-3.5
WKZ				*e*S	S	20 13 08.8	-9.0
MLZ	**Mavora Lakes**	**7.29**	**216**	*e*Pn	Pn	20 12 11.7	-2.9
MLZ				*e*S	S	20 13 28.8	-8.4
WHZ	**Wether Hill Ro**	**7.77**	**214**	*e*Pn	Pn	20 12 18.2	-2.7
DCZ	**Deep Cove**	**7.81**	**219**	*e*Pn	Pn	20 12 18.9	-2.6
MWC	**Mount Wilson**	**96.50**	**51**	*e*P	P	20 23 32.0	-5.0
FURC	**Furnace Creek,**	**98.75**	**50**	*e*P	Pdif	20 23 43.1	-3.6
V51A	**Loudon**	**119.65**	**66**	*e*PKPdf	PKPdf	20 28 52.4	-3.7

*IDC **23** 20:15:08.0±3.9, 36°.23N×70°.98E, h96km±34km, mb3.4/4, mb1 3.4/8, mb1mx3.1/75, mbtmp3.8/8, Error ellipse: s-maj=34.3km s-min=18.5km az=160.0*
*ISCJB **23** 20:15:08.1±0.4, 36°.28N±0°.03×70°.84E±0°.05, h100km, mb3.5/4, Error ellipse: s-maj=6.2km s-min=3.7km az=153.1*
*NNC **23** 20:15:14.0±3.7, 37°.09N×70°.42E, h0km, mb4.2, mpv4.0, Error ellipse: s-maj=41.0km s-min=23.2km az=142.0*
ISC 23 20:15:08.8±1.3, 36°.29N±0°.06×70°.9E±0°.1, h100km, n39, σ1§91/43, mb3.5/4, 4C-6D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan** 11nm,0.2s	**4.27**	**29**	⇓Pn	**Pn**	**20 16 14.2**	**+2.5**
SFK	56nm,0.4s			⇑Sn	**Sn**	**20 17 00.1**	**-0.4**
DHRM	**DHARAMSHALA**	**6.05**	**130**	*e*P	**Pn**	**20 16 39.2**	**+3.2**
DHRM				*e*S	**Sn**	**20 17 44.4**	**+0.4**
DHRM	comp=E,258nm,0.3s			IAML		20 17 48.9	
DHRM	comp=N,196nm,0.6s			IAML		20 17 49.2	
AML	**Almayashu** SNR=32	**6.24**	**20**	P	**Pn**	**20 16 39.4**	**+0.8**
MNAS	**Manas** comp=N,7.6nm,0.6s	**6.32**	**11**	⇓Pn	**Pn**	**20 16 40.1**	**+0.6**
MNAS	comp=N,42nm,0.9s			⇑Sn	**Sn**	**20 17 46.1**	**-4.2**
UCH	**Uchtor** SNR=11	**6.58**	**25**	P	**Pn**	**20 16 43.9**	**+0.7**
KZA	**Kyzart** SNR=11	**6.71**	**29**	P	**Pn**	**20 16 46.3**	**+1.2**
EKS2	**Erkin-Say** SNR=12	**6.75**	**19**	P	**Pn**	**20 16 46.5**	**+1.2**
AAK	**Ala-Archa** comp=N,2.2nm,0.3s,baz=180,slow=6.8,SNR=6.0	**6.94**	**23**	P	**Pn**	**20 16 49.0**	**+1.1**
AAK	comp=N,1.7nm,0.3s,baz=302,slow=21,SNR=2.5			S	**Sn**	**20 18 02.6**	**-2.7**
AAK	**Ala-Archa** comp=N,8.4nm,0.5s	**6.94**	**23**	⇑Pn	**Pn**	**20 16 49.7**	**+1.8**
AAK	comp=N,9.4nm,0.5s			⇓Sn	**Sn**	**20 18 01.9**	**-3.4**
KBK	**Karagaybulak** SNR=5.5	**7.10**	**25**	P	**Pn**	**20 16 53.5**	**+3.3**
CHMS	**Chumysh** SNR=16	**7.34**	**23**	P	**Pn**	**20 16 53.7**	**+0.4**
SMLA	**Simla**	**7.36**	**133**	*e*P	**Pn**	**20 16 57.0**	**+3.4**
SMLA				*e*S	**Sn**	**20 18 17.1**	**+1.5**
SMLA	comp=E,65nm,0.5s			IAML		20 18 20.9	
SMLA	comp=N,78nm,0.2s			IAML		20 18 21.6	
TKM2	**Tokmak 2** comp=N,3.8nm,0.5s	**7.57**	**28**	⇑Pn	**Pn**	**20 16 57.4**	**+0.9**
TKM2	comp=N,4.4nm,0.6s			⇓Sn	**Sn**	**20 18 23.0**	**+2.3**
TKM2	**Tokmak 2** SNR=7.1	**7.57**	**28**	P	**Pn**	**20 16 57.2**	**+0.7**
KKR	**Kurukshetra**	**8.06**	**140**	*e*S	**Sn**	**20 18 30.2**	**-2.3**
BHGR	**Bahadurgarh**	**9.16**	**144**	*e*S	**Sn**	**20 18 58.7**	**-0.6**
KHET	**Khetri**	**9.21**	**151**	*e*P	**Pn**	**20 17 20.2**	**+1.5**
KHET				*e*S	**Sn**	**20 18 57.4**	**-3.1**
KHET	comp=E,19nm,0.8s			IAML		20 19 00.3	
KHET				IAML		20 19 00.8	
JOSI	**Joshimath**	**9.26**	**126**	*e*P	**Pn**	**20 17 20.6**	**+1.1**
JOSI				*e*S	**Sn**	**20 18 59.0**	**-3.0**
KUDL	**Kundal**	**9.42**	**148**	*e*P	**Pn**	**20 17 22.3**	**+0.7**
KUDL				*e*S	**Sn**	**20 19 03.2**	**-2.5**
KUDL	comp=E,14nm,0.4s			IAML		20 19 05.4	
KUDL	comp=N,11nm,0.6s			IAML		20 19 09.4	
GEYT	**Alibeck** comp=N,1.6nm,0.3s,baz=115,slow=11,SNR=17	**10.30**	**283**	P	Pn	20 17 35.3	+1.8
GEYT	comp=N,1.1nm,0.3s,baz=174,slow=39,SNR=7.5			S	Sn	20 19 27.9	+1.0
DANN	**Dangsing** comp=N,23nm,0.4s	**13.48**	**122**	*e*P	**Pn**	**20 18 16.3**	**+0.1**
MKAR	**Makanchi Array** comp=N,0.1nm,0.3s,baz=221,slow=14,SNR=10	**13.53**	**36**	P	**Pn**	**20 18 15.3**	**-1.3**
KOLN	**Koldanda** comp=N,17nm,0.6s	**13.74**	**125**	*e*P	**Pn**	**20 18 19.8**	**+0.2**
GKN	**Gorkha** comp=N,84nm,0.8s	**14.30**	**121**	*e*P	**Pn**	**20 18 26.7**	**0.0**
DMN	**Daman** comp=N,21nm,0.6s	**14.87**	**122**	*e*P	**Pn**	**20 18 34.6**	**+0.5**
PKIN	**Phulchoki** comp=N,22nm,0.4s	**15.09**	**121**	*e*P	**Pn**	**20 18 37.0**	**+0.1**
AB31	**Akbulak array** comp=N,1.4nm,0.4s,baz=150,slow=12	**15.21**	**332**	⇓P	Pn	20 18 37.8	-0.1
KURBB	**Kurchatov Arra** comp=N,0.0nm,0.3s,baz=213,slow=13,SNR=3.3	**15.36**	**19**	P	**Pn**	**20 18 36.5**	**-3.3**
JIRN	**Jiri** comp=N,38nm,0.4s	**15.59**	**119**	*e*P	**Pn**	**20 18 44.1**	**+0.8**
RAMN	**Ramite** comp=N,27nm,0.5s	**16.32**	**120**	*e*P	**Pn**	**20 18 52.9**	**+0.7**
BVAR	**Borovoye Array** comp=N,0.2nm,0.3s,baz=171,slow=12,SNR=4.0	**16.74**	**359**	P	**Pn**	**20 18 57.0**	**+0.1**
AKTO	**Aktyubinsk** comp=N,0.4nm,0.3s,baz=144,slow=16,SNR=5.7	**16.90**	**331**	P	**Pn**	**20 19 00.4**	**+1.4**
AKTO	comp=N,0.5nm,0.3s,baz=20,slow=23,SNR=9.7			S	Sn	20 21 55.7	-11
AKTO	**Aktyubinsk** comp=N,1.3nm,0.5s	**16.90**	**331**	⇓P	**Pn**	**20 19 00.1**	**+1.1**
ODAN	**Odare** comp=N,42nm,0.9s	**16.93**	**119**	*e*P	**Pn**	**20 19 00.8**	**+1.1**
ZALV	**Zalesovo Beam** comp=N,5.8nm,0.5s,baz=221,slow=11,SNR=30	**20.16**	**24**	P	**P**	**20 19 34.5**	**-0.3**
HFS	**Hagfors** comp=N,1.6nm,0.7s,baz=114,slow=9.9,SNR=7.0	**43.15**	**322**	P	P	20 23 00.4	+1.3
NB2	**NORSAR Subarra** comp=Z,0.5nm,0.5s,baz=98,slow=7.9	**44.47**	**323**	P	P	20 23 10.4	+0.7
TORD	**Torodi Ar. Bea** comp=Z,0.3nm,0.6s,baz=40,slow=5.1,SNR=3.4	**65.59**	**269**	P	P	20 25 41.3	-1.0
ASAR	**Alice Springs** comp=Z,0.2nm,0.6s,baz=316,slow=3.9,SNR=4.6	**84.24**	**125**	P	P	20 27 28.5	-0.9

*SJA **23** 20:17:31.9±0.5, 29°.58S×67°.71W, h116km±4km, ML3.1, MW3.7*
*ISCJB **23** 20:17:32.0±0.9, 29°.55S±0°.04×67°.72W±0°.06, h122km±9km, Error ellipse: s-maj=8.6km s-min=7.2km az=168.0*
*GUC **23** 20:17:32.4±0.8, 29°.50S×67°.79W, h117km±7km, ML3.9*
ISC 23 20:17:32.5±1.6, 29°.55S±0°.05×67°.72W±0°.05, h119km±12km, n18, σ0§50/27, 2C-1D, La Rioja Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGUA	**GUANDACOL**	**0.68**	**275**	*i* P	**Pn**	**20 17 51.4**	**-0.3**
AGUA				*i* S	**Sn**	**20 18 06.2**	**0.0**
VCA	**Vinchina**	**0.92**	**332**	*i* P	**Pn**	**20 17 54.2**	**+0.3**
VCA				*i* S	**Sn**	**20 18 10.0**	**+0.1**
VCA	**Vinchina**	**0.92**	**332**	⇓*i*P	**Pn**	**20 17 54.2**	**+0.3**
VCA				*i* S	**Sn**	**20 18 09.8**	**-0.2**
ACDV	**Cuesta del Vie**	**1.37**	**243**	*i* P	**Pn**	**20 17 58.8**	**+0.3**
AMOG	**MOGNA**	**1.54**	**206**	*i* P	**Pn**	**20 18 00.4**	**0.0**
AMOG				*i* S	**Sn**	**20 18 21.1**	**-0.5**
AROD	**Rodeo**	**1.65**	**248**	*i* P	**Pn**	**20 18 02.4**	**+0.5**
CYA	**Choya**	**2.01**	**57**	*i* P	**Pn**	**20 18 06.3**	**+0.2**
CYA	comp=Z,138nm,0.3s			IAML		20 18 06.5	
CYA	**Choya**	**2.01**	**57**	⇑*i*P	**Pn**	**20 18 06.5**	**+0.4**
RTCV	**Cerro Valdivia**	**2.41**	**197**	*i* P	**Pn**	**20 18 11.3**	**+0.1**
RTLS	**Leoncito**	**2.62**	**211**	*i* P	**Pn**	**20 18 14.5**	**+0.3**
RTLS				*i* S	**Sn**	**20 18 46.1**	**0.0**
RTLS	comp=Z,87nm,0.4s			IAML		20 18 50.6	
LCO	**Las Campanas**	**2.66**	**281**	*e*P	**Pn**	**20 18 14.9**	**+0.3**
LCO				*i* S	**Sn**	**20 18 46.5**	**-0.5**
LCO	comp=E,430nm,0.3s			IAML		20 18 48.1	
GO04	**Tololo Observa**	**2.75**	**256**	*e*P	**Pn**	**20 18 16.4**	**+0.7**
GO04				*i* S	**Sn**	**20 18 49.3**	**+0.3**
TLL	**Tololo Astrono**	**2.75**	**256**	*e*P	**Pn**	**20 18 16.3**	**+0.6**
TLL				*e*S	**Sn**	**20 18 49.6**	**+0.6**
TLL	comp=N,391nm,0.3s			IAML		20 18 53.7	
GO03	**Copiap**	**2.95**	**311**	*e*P	**Pn**	**20 18 18.3**	**0.0**
GO03				*i* S	**Sn**	**20 18 52.4**	**-1.0**
AUSP	**Uspallata**	**3.03**	**208**	*i* P	**Pn**	**20 18 20.1**	**+0.6**
ASAL	**Salagasta**	**3.18**	**197**	*i* P	**Pn**	**20 18 21.6**	**+0.4**
MRA	**San Martin**	**3.34**	**150**	*i* P	**Pn**	**20 18 23.3**	**0.0**
MRA	comp=Z,21nm,0.4s			IAML		20 19 45.0	
ROCH	**El Roble**	**4.43**	**219**	⇑*i*P	**Pn**	**20 18 36.7**	**-1.2**

*ROM **23** 20:18:51.9±0.1, 44°.863N±0°.006×11°.273E±0°.006, h9km, ML3.1/35*
*ISCJB **23** 20:18:53.8±0.2, 44°.84N±0°.02×11°.21E±0°.02, h21km±2km, Error ellipse: s-maj=2.8km s-min=2.2km az=142.8*
*LDG **23** 20:18:53.5±0.1, 44°.87N×11°.39E, h2km, Ml2.9/25, Error ellipse: s-maj=2.4km s-min=2.3km az=67.0*
*CSEM **23** 20:18:53.6±0.1, 44°.90N×11°.25E, h10km, ML2.9/23, Error ellipse: s-maj=2.6km s-min=2.2km az=88.0*
*PRU **23** 20:18:53.9, 44°.91N×11°.47E, h0km*
*IASPEI **23** 20:18:53.4±0.8, 44°.87N±0°.02×11°.30E±0°.02, h14km±4km, Error ellipse: s-maj=2.9km s-min=2.5km az=91.8, GT5 selection from ISC bulletin GT5 identified by Bond˜¡r and McLaughlin (2009) selection criteria Bond˜¡r and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
*STR **23** 20:18:53.3±3.4, 45°N±14°×1°2E±2°9, h5km, M4.3/7, mb4.6/2, MLv4.1/7*
ISC 23 20:18:53.2±0.7, 44°.88N±0°.01×11°.30E±0°.01, h15km±3km, n220, σ1§17/274, 4C-8D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T0805	**Bondeno (FE)**	**0.04**	**25**	P	**Pg**	**20 18 56.1**	**+0.2**
T0805				S	**Sg**	**20 18 59.6**	**+1.9**
T0805	**Bondeno (FE)**	**0.04**	**25**	P	**Pg**	**20 18 56.1**	**+0.2**
T0805				S	**Sg**	**20 18 59.6**	**+1.9**
T0800	**Massa Finalese**	**0.05**	**227**	P	**Pg**	**20 18 55.2**	**-0.7**
T0800				S	**Sg**	**20 18 57.4**	**-0.3**
T0800	**Massa Finalese**	**0.05**	**227**	P	**Pg**	**20 18 55.2**	**-0.7**
T0800				S	**Sg**	**20 18 57.4**	**-0.3**
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0800				AML	AML		
T0822	**Casumaru (Bond**	**0.06**	**146**	P	**Pg**	**20 18 55.8**	**-0.2**
T0822				S	**Sg**	**20 18 58.5**	**+0.6**
T0822	**Casumaru (Bond**	**0.06**	**146**	P	**Pg**	**20 18 55.8**	**-0.2**
T0822				S	**Sg**	**20 18 58.5**	**+0.6**
T0822				AML	AML		
T0822				AML	AML		
T0822				AML	AML		
T0822				AML	AML		
T0822				AML	AML		
T0822				AML	AML		
T0802	**SanFelice sul**	**0.08**	**265**	P	**Pg**	**20 18 55.8**	**-0.5**
T0802				S	**Sg**	**20 18 58.3**	**+0.1**
T0802	**SanFelice sul**	**0.08**	**265**	P	**Pg**	**20 18 55.8**	**-0.5**
T0802				S	**Sg**	**20 18 58.3**	**+0.1**
SERM	**Sermide**	**0.13**	**359**	P	**Pb**	**20 18 57.6**	**+0.3**
SERM	**Sermide**	**0.13**	**359**	P	**Pb**	**20 18 57.6**	**+0.3**
T0821	**Loc. Casaglia**	**0.17**	**83**	P	**Pb**	**20 18 57.9**	**-0.2**
T0821				S	**Sb**	**20 19 01.9**	**+0.6**
T0821	**Loc. Casaglia**	**0.17**	**83**	P	**Pb**	**20 18 57.9**	**-0.2**
T0821				S	**Sb**	**20 19 01.9**	**+0.6**
T0821				AML	AML		
T0821	comp=E,9055μm,0.9s			AML	AML		
T0821	comp=N,11160μm,0.3s			AML	AML		
T0821	comp=E,9415μm,0.9s			AML	AML		
T0821	comp=N,11350μm,0.3s			AML	AML		
T0821	comp=N,11160μm,0.3s			AML	AML		
T0821	comp=N,11350μm,0.3s			AML	AML		
T0821	comp=E,9415μm,0.9s			AML	AML		
T0821	comp=E,9055μm,0.9s			AML	AML		
RAVA	**Ravarino**	**0.18**	**225**	P	**Pg**	**20 18 57.2**	**-0.3**
RAVA				S	**Sb**	**20 19 01.9**	**+0.4**
RAVA	**Ravarino**	**0.18**	**225**	P	**Pg**	**20 18 57.2**	**-0.3**
RAVA				S	**Sb**	**20 19 01.9**	**+0.4**
RAVA	comp=E,71150μm,0.3s			AML	AML		
RAVA				AML	AML		
RAVA	comp=E,71200μm,0.3s			AML	AML		
RAVA				AML	AML		
RAVA	comp=E,71150μm,0.3s			AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
RAVA	comp=E,71150μm,0.3s			AML	AML		
T0820	**Chiesuol del F**	**0.22**	**115**	P	**Pb**	**20 18 58.7**	**-0.1**
T0820	**Chiesuol del F**	**0.22**	**115**	P	**Pb**	**20 18 58.7**	**-0.1**
T0820	comp=E,20950μm,0.4s			AML	AML		
T0820	comp=N,19900μm,0.6s			AML	AML		
T0820	comp=E,25850μm,0.4s			AML	AML		
T0820	comp=N,16800μm,1.6s			AML	AML		
T0820	comp=E,20950μm,0.4s			AML	AML		
T0820	comp=N,19900μm,0.6s			AML	AML		
T0820	comp=E,25800μm,0.4s			AML	AML		
T0820	comp=N,16850μm,1.6s			AML	AML		
T0820	comp=N,16850μm,1.6s			AML	AML		
T0820	comp=E,25800μm,0.4s			AML	AML		
T0820	comp=E,20950μm,0.4s			AML	AML		
T0820	comp=N,19900μm,0.6s			AML	AML		
GAZZ	**Gazzo Veronese**	**0.27**	**328**	⇑*e*Pg	**Pb**	**20 19 00.6**	**+0.8**
GAZZ				*e*Sg	**Sn**	**20 19 06.8**	**-1.7**
FIU	**Minerbio Fiu**	**0.28**	**150**	P	**Pg**	**20 18 59.2**	**+0.1**
FIU				S	**Sb**	**20 19 04.5**	**+0.1**
FIU	**Minerbio Fiu**	**0.28**	**150**	P	**Pg**	**20 18 59.2**	**+0.1**
FIU				S	**Sb**	**20 19 04.5**	**+0.1**
FIU	comp=E,9185μm,0.5s			AML	AML		
FIU	comp=N,11360μm,0.7s			AML	AML		
FIU	comp=E,9170μm,0.5s			AML	AML		
FIU	comp=N,11325μm,0.7s			AML	AML		
FIU	comp=E,9175μm,0.5s			AML	AML		
FIU	comp=N,11325μm,0.7s			AML	AML		
FIU	comp=N,11325μm,0.7s			AML	AML		
FIU	comp=E,9175μm,0.5s			AML	AML		
NDIM	**Novi di Modena**	**0.28**	**271**	P	**Pg**	**20 18 58.9**	**-0.3**
NDIM				S	**Sb**	**20 19 04.5**	**0.0**
NDIM	comp=E,6625μm,0.7s			AML	AML		
NDIM	comp=N,4920μm,0.7s			AML	AML		
NDIM	comp=E,6815μm,0.7s			AML	AML		
NDIM	comp=N,4705μm,0.7s			AML	AML		
NDIM	comp=E,6625μm,0.7s			AML	AML		
NDIM	comp=N,4920μm,0.7s			AML	AML		
NDIM	comp=E,6810μm,0.7s			AML	AML		
NDIM	comp=N,4700μm,0.7s			AML	AML		
NDIM	comp=E,6810μm,0.7s			AML	AML		
NDIM	comp=E,6625μm,0.7s			AML	AML		
NDIM	comp=N,4920μm,0.7s			AML	AML		
NDIM	comp=N,4700μm,0.7s			AML	AML		
T0825	**Gonzaga (MN)**	**0.33**	**286**	P	**Pb**	**20 19 01.2**	**+0.4**
T0825	**Gonzaga (MN)**	**0.33**	**286**	P	**Pb**	**20 19 01.2**	**+0.4**
T0825				AML	AML		
T0825	comp=E,9195μm,0.3s			AML	AML		
T0825	comp=N,6570μm,1.0s			AML	AML		
T0825	comp=E,9200μm,0.3s			AML	AML		
T0825	comp=N,6570μm,1.0s			AML	AML		
T0825	comp=E,9220μm,0.3s			AML	AML		
T0825	comp=N,6570μm,1.0s			AML	AML		
T0825	comp=E,9220μm,0.3s			AML	AML		
T0825	comp=N,6570μm,1.0s			AML	AML		
MODE	**Modena**	**0.35**	**225**	P	**Pg**	**20 19 00.8**	**+0.4**
MODE	**Modena**	**0.35**	**225**	P	**Pg**	**20 19 00.8**	**+0.4**
MODE				AML	AML		
MODE	comp=E,24250μm,0.5s			AML	AML		
MODE	comp=N,14850μm,0.5s			AML	AML		
MODE	comp=E,24250μm,0.5s			AML	AML		
MODE	comp=N,14850μm,0.5s			AML	AML		
MODE	comp=E,24250μm,0.5s			AML	AML		
MODE	comp=N,14900μm,0.5s			AML	AML		
MODE	comp=N,14900μm,0.5s			AML	AML		
MODE	comp=E,24250μm,0.5s			AML	AML		
NOVE	**Novellara**	**0.42**	**259**	AML	AML		
NOVE	comp=N,2115μm,1.2s			AML	AML		
NOVE	comp=E,2045μm,0.3s			AML	AML		
NOVE	comp=N,2115μm,1.2s			AML	AML		
NOVE	comp=E,2045μm,0.3s			AML	AML		
NOVE	comp=N,2115μm,1.2s			AML	AML		
NOVE	comp=E,2050μm,0.3s			AML	AML		
NOVE	comp=N,2115μm,1.2s			AML	AML		
NOVE	comp=E,2050μm,0.3s			AML	AML		
CMPO	**Campotto Po**	**0.47**	**130**	P	**Pn**	**20 19 04.5**	**-0.9**
CMPO				S	**Sn**	**20 19 12.7**	**-0.7**
CMPO	**Campotto Po**	**0.47**	**130**	P	**Pn**	**20 19 04.5**	**-0.9**
CMPO				S	**Sn**	**20 19 12.7**	**-0.7**
CMPO	comp=E,3345μm,1.0s			AML	AML		
CMPO	comp=N,3080μm,0.4s			AML	AML		
CMPO	comp=E,3345μm,1.0s			AML	AML		
CMPO	comp=N,3080μm,0.4s			AML	AML		
CMPO	comp=N,3080μm,0.4s			AML	AML		
CMPO	comp=E,3345μm,1.0s			AML	AML		
ADRI	**Adria, Italy**	**0.53**	**73**	⇑*e*Pg	**Pn**	**20 19 05.7**	**-0.5**
ADRI				*e*Sg	**Sn**	**20 19 15.1**	**+0.2**
TEOL	**Teolo**	**0.55**	**29**	⇓*e*Pg	**Pb**	**20 19 05.2**	**+0.8**
TEOL				*e*Sg	**Sn**	**20 19 14.9**	**-0.4**
TEOL	**Teolo**	**0.55**	**29**	P	**Pb**	**20 19 05.2**	**+0.8**
TEOL	**Teolo**	**0.55**	**29**	P	**Pb**	**20 19 05.2**	**+0.8**
TEOL	comp=E,4575μm,0.6s			AML	AML		
TEOL	comp=N,4640μm,1.3s			AML	AML		
TEOL	comp=E,4575μm,0.6s			AML	AML		
TEOL	comp=N,4640μm,1.3s			AML	AML		
TEOL	comp=N,4640μm,1.3s			AML	AML		
TEOL	comp=E,4575μm,0.6s			AML	AML		
ZCCA	**Zocca**	**0.58**	**204**	P	**Pb**	**20 19 05.8**	**+0.7**
ZCCA	**Zocca**	**0.58**	**204**	P	**Pb**	**20 19 05.8**	**+0.7**
ZCCA	comp=E,1225μm,1.0s			AML	AML		
ZCCA	comp=N,1615μm,0.7s			AML	AML		
ZCCA	comp=E,1160μm,1.0s			AML	AML		
ZCCA	comp=N,1700μm,0.7s			AML	AML		
ZCCA	comp=E,1225μm,1.0s			AML	AML		
ZCCA	comp=N,1615μm,0.7s			AML	AML		
ZCCA	comp=E,1160μm,1.0s			AML	AML		
ZCCA	comp=N,1700μm,0.7s			AML	AML		
ZCCA	comp=E,1230μm,1.0s			AML	AML		
ZCCA	comp=N,1615μm,0.7s			AML	AML		
ZCCA	comp=E,1160μm,1.0s			AML	AML		
ZCCA	comp=N,1700μm,0.7s			AML	AML		
ZCCA	comp=E,1160μm,1.0s			AML	AML		
ZCCA	comp=E,1230μm,1.0s			AML	AML		
ZCCA	comp=N,1700μm,0.7s			AML	AML		
ZCCA	comp=N,1615μm,0.7s			AML	AML		
IMOL	**Imola, Italy**	**0.61**	**149**	P	**Pn**	**20 19 08.2**	**+0.9**
IMOL	**Imola, Italy**	**0.61**	**149**	P	**Pn**	**20 19 08.2**	**+0.9**
IMOL				AML	AML		
IMOL	comp=E,2710μm,0.2s			AML	AML		
IMOL	comp=N,3600μm,0.5s			AML	AML		
IMOL	comp=E,2710μm,0.2s			AML	AML		
IMOL	comp=N,3595μm,0.5s			AML	AML		
IMOL	comp=E,226μm,0.5s			AML	AML		
IMOL	comp=N,340μm,0.7s			AML	AML		
IMOL	comp=N,340μm,0.7s			AML	AML		
IMOL	comp=E,2710μm,0.2s			AML	AML		
IMOL	comp=E,226μm,0.5s			AML	AML		
IMOL	comp=N,3595μm,0.5s			AML	AML		
BRIS	**BRISIGHELLA**	**0.75**	**168**	P	**Pn**	**20 19 09.0**	**-0.2**
BRIS	**BRISIGHELLA**	**0.75**	**168**	P	**Pn**	**20 19 10.0**	**+0.8**
BRIS	comp=E,945μm,0.5s			AML	AML		
BRIS				AML	AML		

comp=N,931µm,0.3s
BRIS AML AML
comp=E,945µm,0.5s
BRIS AML AML
comp=N,931µm,0.3s
BRIS AML AML
comp=E,945µm,0.5s
BRIS AML AML
comp=N,931µm,0.3s
MARN Marana (Italy) 0.76 355⇓ *e*Pg **Pb 20 19 08.7 +0.6**
MARN *e*Sg **Sn 20 19 20.4 -0.3**
ROVR Rover¯¤ Verone 0.78 348 P **Pb 20 19 09.1 +0.5**
ROVR Rover¯¤ Verone 0.78 348 P **Pb 20 19 09.1 +0.5**
ROVR AML AML
comp=E,3960µm,0.2s
ROVR AML AML
comp=N,8725µm,1.5s
ROVR AML AML
comp=E,3960µm,0.2s
ROVR AML AML
comp=N,8725µm,1.5s
ROVR AML AML
comp=N,8725µm,1.5s
ROVR AML AML
comp=E,3960µm,0.2s
ERBM Eremo 0.78 234 P **Pn 20 19 09.5 -0.3**
ERBM Eremo 0.78 234 P **Pn 20 19 09.5 -0.3**
ERBM AML AML
comp=E,592µm,1.6s
ERBM AML AML
comp=N,673µm,1.2s
ERBM AML AML
comp=E,592µm,1.6s
ERBM AML AML
comp=N,674µm,1.2s
ERBM AML AML
comp=N,674µm,1.2s
ERBM AML AML
comp=E,592µm,1.6s
BALD Monte Baldo 0.87 337⇑ *e*Pg **Pn 20 19 11.4 +0.3**
BALD *e*Sg **Sn 20 19 24.9 +1.3**
SALO Salr 0.92 324 P **Pn 20 19 11.6 0.0**
SALO Salr 0.92 324 P **Pn 20 19 11.6 0.0**
SALO AML AML
comp=E,2405µm,0.8s
SALO AML AML
comp=N,3360µm,0.3s
SALO AML AML
comp=E,2405µm,0.8s
SALO AML AML
comp=N,3360µm,0.3s
SALO AML AML
comp=E,2405µm,0.8s
SALO AML AML
comp=N,3360µm,0.3s
POPM Popiglio 0.92 205 P **Pb 20 19 10.9 0.0**
POPM Popiglio 0.92 205 P **Pb 20 19 10.9 0.0**
POPM AML AML
comp=E,892µm,0.7s
POPM AML AML
comp=N,1190µm,0.7s
POPM AML AML
comp=E,892µm,0.7s
POPM AML AML
comp=N,1190µm,0.7s
POPM AML AML
comp=E,892µm,0.7s
POPM AML AML
comp=N,1190µm,0.7s
PTF Prato 0.94 190 P **Pb 20 19 11.0 -0.1**
PTF Prato 0.94 190 P **Pn 20 19 12.0 +0.1**
BDI Bagni Di Lucca 0.96 212 P **Pn 20 19 12.2 0.0**
BDI Bagni Di Lucca 0.96 212 P **Pn 20 19 12.2 0.0**
BDI AML AML
comp=E,1258µm,0.9s
BDI AML AML
comp=N,1152µm,0.4s
BDI AML AML
comp=E,1048µm,0.5s
BDI AML AML
comp=N,1315µm,0.6s
BDI AML AML
comp=N,1315µm,0.6s
BDI AML AML
comp=N,1152µm,0.4s
BDI AML AML
comp=E,1048µm,0.5s
BDI AML AML
comp=E,1258µm,0.9s
VLC Villacollemand 0.97 222 P **Pn 20 19 12.5 +0.1**
VLC Villacollemand 0.97 222 P **Pn 20 19 12.5 +0.1**
VLC AML AML
comp=E,577µm,0.6s
VLC AML AML
comp=N,365µm,0.8s
VLC AML AML
comp=E,577µm,0.6s
VLC AML AML
comp=N,365µm,0.8s
VLC AML AML
comp=E,577µm,0.6s
VLC AML AML
comp=N,365µm,0.8s
DOSS Dosso del Somm 1.00 356⇓ *e*Pg **Pn 20 19 13.0 +0.1**
DOSS *e*Sg **Sn 20 19 27.5 +0.7**
MAGA Magasa 1.01 332 P **Pn 20 19 13.5 +0.5**
MAGA Magasa 1.01 332 P **Pn 20 19 13.5 +0.5**
MAGA AML AML
comp=E,14950µm,0.5s
MAGA AML AML
comp=N,11100µm,0.4s
MAGA AML AML
comp=E,14950µm,0.5s
MAGA AML AML
comp=N,11100µm,0.4s
MAGA AML AML
comp=N,11100µm,0.4s
MAGA AML AML
comp=E,14950µm,0.5s
LEOD Capriano del C 1.01 305 AML AML
comp=N,1665µm,1.3s
LEOD AML AML
comp=E,1650µm,0.6s
LEOD AML AML
comp=N,1665µm,1.3s
LEOD AML AML
comp=E,1650µm,0.6s
CGRP Cima Grappa 1.06 19⇓ *e*Pg **Pn 20 19 14.2 +0.5**
CGRP *e*Sg **Sn 20 19 30.9 +2.7**
CGRP Cima Grappa 1.06 19 AML AML
comp=N,2065µm,0.7s
CGRP AML AML
comp=E,2340µm,1.5s
CGRP AML AML
comp=N,2065µm,0.7s
CGRP AML AML
comp=E,2340µm,1.5s
CGRP AML AML
comp=N,2065µm,0.7s
CGRP AML AML
comp=E,2340µm,1.5s
CRMI Carmignano 1.12 192 P **Pg 20 19 15.1 +0.4**
CRMI Carmignano 1.12 192 P **Pg 20 19 15.1 +0.4**
CRMI AML AML
comp=E,384µm,1.6s
CRMI AML AML
comp=N,326µm,1.2s
CRMI AML AML
comp=E,384µm,1.6s
CRMI AML AML
comp=N,326µm,1.2s
CRMI AML AML
comp=E,384µm,1.6s
CRMI AML AML
comp=N,326µm,1.2s
MAIM Mastiano 1.13 211 AML AML
comp=N,1066µm,0.9s
MAIM AML AML
comp=E,663µm,0.4s
MAIM AML AML
comp=N,1066µm,0.9s
MAIM AML AML
comp=E,663µm,0.4s
MAIM AML AML
comp=N,1066µm,0.9s
MAIM AML AML
comp=E,663µm,0.4s

ASQU Asqua 1.14 162 AML AML
comp=N,716µm,0.6s
ASQU AML AML
comp=E,645µm,0.3s
ASQU AML AML
comp=N,716µm,0.6s
ASQU AML AML
comp=E,645µm,0.3s
CTL8 Castelleone 1.16 290 AML AML
comp=N,1530µm,0.7s
CTL8 AML AML
comp=E,1470µm,1.2s
CTL8 AML AML
comp=E,447µm,0.5s
CTL8 AML AML
comp=N,358µm,0.3s
CTL8 AML AML
comp=E,1470µm,1.2s
CTL8 AML AML
comp=N,1535µm,0.7s
CTL8 AML AML
comp=E,447µm,0.5s
CTL8 AML AML
comp=N,358µm,0.3s
CTL8 AML AML
comp=N,1535µm,0.7s
CTL8 AML AML
comp=N,358µm,0.3s
CTL8 AML AML
comp=E,1470µm,1.2s
CTL8 AML AML
comp=E,447µm,0.5s
PANI Panarotta 1.17 1⇓ *e*Pg **Pg 20 19 16.1 +0.3**
PANI *e*Sg **Sn 20 19 32.9 +1.9**
CTI Castel Tesino 1.19 12 AML AML
comp=N,4520µm,0.2s
CTI AML AML
comp=E,3825µm,0.2s
CTI AML AML
comp=N,4520µm,0.2s
CTI AML AML
comp=E,3825µm,0.2s
CTI AML AML
comp=N,4520µm,0.2s
CTI AML AML
comp=E,3825µm,0.2s
RNI Roncone 1.20 337⇓ *e*Pg **Pn 20 19 15.4 -0.2**
RNI *e*Sg **Sg 20 19 33.4 +1.5**
VARN Col Varnada, M 1.25 27⇓ *e*Pg **Pg 20 19 17.1 -0.1**
VARN *e*Sg **Sg 20 19 37.1 +3.6**
MABI Malga Bissina 1.30 335 AML AML
comp=N,547µm,0.3s
MABI AML AML
comp=E,608µm,1.3s
MABI AML AML
comp=E,608µm,1.3s
MABI AML AML
comp=N,547µm,0.3s
MABI AML AML
comp=E,608µm,1.3s
MABI AML AML
comp=N,547µm,0.3s
BOB Bobbio (Coli) 1.32 266 AML AML
comp=E,442µm,0.6s
BOB AML AML
comp=E,442µm,0.6s
BOB AML AML
comp=N,642µm,0.5s
BOB AML AML
comp=N,642µm,0.5s
BOB AML AML
comp=N,642µm,0.5s
BOB AML AML
comp=E,442µm,0.6s
PLMA Palmaria, Port 1.33 232 AML AML
comp=N,484µm,1.2s
PLMA AML AML
comp=E,426µm,1.0s
PLMA AML AML
comp=N,484µm,1.2s
PLMA AML AML
comp=E,426µm,1.0s
CRE Caprese Michel 1.35 159 AML AML
comp=E,717µm,0.8s
CRE AML AML
comp=E,717µm,0.8s
CRE AML AML
comp=N,625µm,0.3s
CRE AML AML
comp=E,717µm,0.8s
CRE AML AML
comp=N,625µm,0.3s
CRE AML AML
comp=N,625µm,0.3s
CAE Caneva 1.38 35 *e*Pg **Pb 20 19 19.0 +0.2**
CAE *e*Sg **Sg 20 19 40.3 +2.5**
MSSA Maissana 1.39 247 AML AML
comp=N,818µm,0.9s
MSSA AML AML
comp=E,400µm,1.0s
MSSA AML AML
comp=E,400µm,1.0s
MSSA AML AML
comp=N,818µm,0.9s
MSSA AML AML
comp=E,400µm,1.0s
MSSA AML AML
comp=N,818µm,0.9s
PARC Parchiule 1.41 151 AML AML
comp=E,346µm,0.6s
PARC AML AML
comp=E,346µm,0.6s
PARC AML AML
comp=N,336µm,0.5s
PARC AML AML
comp=N,336µm,0.5s
POLC Polcenigo 1.42 36 AML AML
comp=N,2095µm,1.1s
POLC AML AML
comp=E,1320µm,1.2s
POLC AML AML
comp=N,2095µm,1.1s
POLC AML AML
comp=E,1320µm,1.2s
FAU Forcella Aurin 1.43 19⇑ *e*Pg **Pg 20 19 20.2 -0.5**
PESA Pesaro 1.45 130 AML AML
comp=N,478µm,1.1s
PESA AML AML
comp=E,658µm,0.2s
PESA AML AML
comp=N,478µm,1.1s
PESA AML AML
comp=E,658µm,0.2s
AGOR Agordo 1.50 20⇓ *e*Pg **Pb 20 19 21.0 +0.3**
AGOR Agordo 1.50 20 AML AML
comp=E,859µm,0.4s
AGOR AML AML
comp=E,859µm,0.4s
AGOR AML AML
comp=N,706µm,1.6s
AGOR AML AML
comp=N,706µm,1.6s
BADI Badiali 1.53 153 AML AML
comp=E,438µm,0.9s
BADI AML AML
comp=E,438µm,0.9s
BADI AML AML
comp=N,336µm,0.5s
BADI AML AML
comp=N,336µm,0.5s
OZOL Ozolo 1.53 354 *e*Pg **Pb 20 19 21.4 0.0**
CSO Casso 1.57 27 *e*Pg **Pb 20 19 22.4 +0.5**
MLNI Malnisio 1.57 36 *e*Pg **Pb 20 19 21.6 -0.3**
NARO Abbazia di Nar 1.57 144 AML AML
comp=N,209µm,0.4s
NARO AML AML
comp=E,166µm,0.8s
NARO AML AML
comp=N,209µm,0.4s
NARO AML AML
comp=E,166µm,0.8s
ATMC Monte Cedrone 1.57 156 AML AML
comp=E,474µm,1.0s
ATMC AML AML
comp=N,484µm,0.7s
ATMC AML AML
comp=E,474µm,1.0s
ATMC AML AML

comp=N,484µm,0.7s
CDCA Citt' di Caste 1.57 154 AML AML
comp=E,3182µm,1.4s
CDCA AML AML
comp=E,3182µm,1.4s
CDCA AML AML
comp=N,1245µm,0.9s
CDCA AML AML
comp=N,1245µm,0.9s
KOSI Kohlern 1.58 2 AML AML
comp=N,1300µm,0.5s
KOSI AML AML
comp=E,1670µm,0.5s
KOSI AML AML
comp=E,1670µm,0.5s
KOSI AML AML
comp=N,1300µm,0.5s
FSSB Fossombrone 1.59 138 AML AML
comp=N,782µm,0.8s
FSSB AML AML
comp=E,620µm,0.3s
FSSB AML AML
comp=N,782µm,0.8s
FSSB AML AML
comp=E,620µm,0.3s
APPI Appiano 1.60 358 AML AML
comp=N,777µm,1.5s
APPI AML AML
comp=E,1165µm,0.6s
APPI AML AML
comp=N,777µm,1.5s
APPI AML AML
comp=E,1165µm,0.6s
CARE Lago del Cares 1.60 345 *e*Pg **Pn 20 19 22.0 +0.8**
PIEI Pieia 1.61 146 AML AML
comp=N,218µm,0.2s
PIEI AML AML
comp=E,350µm,0.5s
PIEI AML AML
comp=N,218µm,0.2s
PIEI AML AML
comp=E,350µm,0.5s
CAFI Castiglion Fio 1.63 163 AML AML
comp=N,268µm,0.5s
CAFI AML AML
comp=E,231µm,0.6s
CAFI AML AML
comp=N,268µm,0.5s
CAFI AML AML
comp=E,231µm,0.6s
ATPC Poggio Castell 1.63 149 AML AML
comp=N,390µm,0.6s
ATPC AML AML
comp=E,474µm,0.7s
ATPC AML AML
comp=N,390µm,0.6s
ATPC AML AML
comp=E,474µm,0.7s
MPAG Monte Paganucc 1.64 140 AML AML
comp=N,310µm,1.2s
MPAG AML AML
comp=E,286µm,0.4s
MPAG AML AML
comp=N,310µm,1.2s
MPAG AML AML
comp=E,286µm,0.4s
ATPI Pietralunga - 1.64 151 AML AML
comp=E,278µm,1.1s
ATPI AML AML
comp=E,278µm,1.1s
ATPI AML AML
comp=N,259µm,1.0s
ATPI AML AML
comp=N,259µm,1.0s
CIMO Cimolais 1.64 29 *e*Pg **Pb 20 19 22.4 -0.7**
ATBU Serra di Buran 1.67 147 AML AML
comp=N,904µm,0.7s
ATBU AML AML
comp=E,553µm,1.6s
ATBU AML AML
comp=N,904µm,0.7s
ATBU AML AML
comp=E,553µm,1.6s
STAL STALIGIAL 1.70 35 AML AML
comp=E,858µm,1.3s
STAL AML AML
comp=E,858µm,1.3s
STAL AML AML
comp=N,1270µm,0.2s
STAL AML AML
comp=E,1094µm,1.3s
STAL AML AML
comp=N,1040µm,0.2s
STAL AML AML
comp=N,1040µm,0.2s
STAL AML AML
comp=E,1094µm,1.3s
STAL AML AML
comp=N,1270µm,0.2s
ATVO AVT- Monte Val 1.70 152 AML AML
comp=E,392µm,0.6s
ATVO AML AML
comp=N,325µm,0.7s
ATVO AML AML
comp=E,392µm,0.6s
ATVO AML AML
comp=N,325µm,0.7s
ATVA AVT- Monte Val 1.75 156 AML AML
comp=N,132µm,0.9s
ATVA AML AML
comp=E,137µm,1.1s
ATVA AML AML
comp=N,132µm,0.9s
ATVA AML AML
comp=E,137µm,1.1s
MOSI Grossmontoni 1.81 343 AML AML
comp=E,1365µm,1.1s
MOSI AML AML
comp=N,2070µm,0.4s
MOSI AML AML
comp=N,2070µm,0.4s
MOSI AML AML
comp=E,1365µm,1.1s
ARVD Arcevia 1.82 139 AML AML
comp=N,222µm,0.9s
ARVD AML AML
comp=E,185µm,0.6s
ARVD AML AML
comp=N,222µm,0.9s
ARVD AML AML
comp=E,185µm,0.6s
MURB Monte Urbino 1.84 151 AML AML
comp=N,509µm,1.1s
MURB AML AML
comp=E,502µm,1.4s
MURB AML AML
comp=N,509µm,1.1s
MURB AML AML
comp=E,502µm,1.4s
ABSI Aberstueckl 1.85 0 AML AML
comp=E,1920µm,0.5s
ABSI AML AML
comp=N,1380µm,0.4s
ABSI AML AML
comp=E,1920µm,0.5s
ABSI AML AML
comp=N,1380µm,0.4s
ATCC AVT- Casa Cast 1.95 150 AML AML
comp=N,266µm,1.0s
ATCC AML AML
comp=E,471µm,0.6s
ATCC AML AML
comp=N,266µm,1.0s
ATCC AML AML
comp=E,471µm,0.6s
SNTG Esanatoglia 2.01 143 AML AML
comp=E,174µm,0.6s
SNTG AML AML
comp=E,174µm,0.6s
SNTG AML AML
comp=N,243µm,0.3s
SNTG AML AML
comp=N,243µm,0.3s
SKDS Skadanscina 2.03 70 *i* Pn **Pn 20 19 27.1 +0.2**
SKDS *e*Sn **Sn 20 19 52.4 +0.3**
comp=Z,87nm,0.2s
ROSI Rosskopf 2.05 2 AML AML
comp=E,992µm,0.3s

ROSI				AML	AML		
	comp=E,992μm,0.3s						
ROSI				AML	AML		
	comp=N,818μm,0.4s						
ROSI				AML	AML		
	comp=N,818μm,0.4s						
ABTA	**Abfaltersbach**	**2.05**	**24**	*e*Pn	**Pb**	**20 19 29.5**	**-0.7**
	comp=N,0.2nm,0.1s,SNR=34						
ABTA				*e*Pg	**Pg**	**20 19 33.1**	**+0.6**
	comp=N,25nm,0.3s,SNR=24						
ABTA				*e*Sg	**Sg**	**20 20 01.9**	**+2.8**
	comp=N,46nm,0.4s						
MGAB	**Montegabbione**	**2.06**	**163**	AML	AML		
	comp=E,248μm,0.8s						
MGAB				AML	AML		
	comp=E,248μm,0.8s						
MGAB				AML	AML		
	comp=N,240μm,0.7s						
MGAB				AML	AML		
	comp=N,240μm,0.7s						
SACS	**San Casciano d**	**2.08**	**168**	AML	AML		
	comp=E,83μm,0.6s						
SACS				AML	AML		
	comp=E,83μm,0.6s						
SACS				AML	AML		
	comp=N,97μm,0.8s						
SACS				AML	AML		
	comp=N,97μm,0.8s						
ASSB	**Assisi San Ben**	**2.08**	**151**	AML	AML		
	comp=N,153μm,0.6s						
ASSB				AML	AML		
	comp=E,132μm,0.4s						
ASSB				AML	AML		
	comp=N,153μm,0.6s						
ASSB				AML	AML		
	comp=E,132μm,0.4s						
TUE	**Stuetta**	**2.10**	**320**	AML	AML		
	comp=N,219μm,0.4s						
TUE				AML	AML		
	comp=E,258μm,0.4s						
TUE				AML	AML		
	comp=N,219μm,0.4s						
TUE				AML	AML		
	comp=E,258μm,0.4s						
CASP	**Castiglione de**	**2.11**	**189**	AML	AML		
	comp=N,96μm,1.3s						
CASP				AML	AML		
	comp=E,68μm,1.6s						
CASP				AML	AML		
	comp=N,96μm,1.3s						
CASP				AML	AML		
	comp=E,68μm,1.6s						
AOI	**Ancona**	**2.12**	**128**	AML	AML		
	comp=E,128μm,1.0s						
AOI				AML	AML		
	comp=E,128μm,1.0s						
AOI				AML	AML		
	comp=N,137μm,1.1s						
AOI				AML	AML		
	comp=N,137μm,1.1s						
RISI	**Rein**	**2.14**	**14**	AML	AML		
	comp=N,1080μm,0.3s						
RISI				AML	AML		
	comp=E,1022μm,0.4s						
RISI				AML	AML		
	comp=N,1080μm,0.3s						
RISI				AML	AML		
	comp=E,1022μm,0.4s						
FETA	**Feichten**	**2.18**	**350**	*e*Pn	**Pb**	**20 19 32.3**	**-0.1**
	comp=E,2.1nm,0.2s,SNR=29						
FETA				*e*Pg	**Pg**	**20 19 34.8**	**-0.1**
	comp=E,14nm,0.4s,SNR=18						
FETA				*e*Sg	**Sg**	**20 20 03.0**	**-0.1**
	comp=E,40nm,0.4s						
FDMO	**Fiordimonte**	**2.25**	**144**	AML	AML		
	comp=E,106μm,1.5s						
FDMO				AML	AML		
	comp=E,106μm,1.5s						
FDMO				AML	AML		
	comp=N,118μm,0.6s						
FDMO				AML	AML		
	comp=N,118μm,0.6s						
MOMA	**Monte Martano**	**2.27**	**156**	AML	AML		
	comp=N,102μm,1.0s						
MOMA				AML	AML		
	comp=E,172μm,0.7s						
MOMA				AML	AML		
	comp=E,172μm,0.7s						
MOMA				AML	AML		
	comp=N,102μm,1.0s						
ACOM	**Acomizza, Ital**	**2.28**	**42**	AML	AML		
	comp=E,650μm,1.3s						
ACOM				AML	AML		
	comp=N,536μm,0.4s						
ACOM				AML	AML		
	comp=N,536μm,0.4s						
ACOM				AML	AML		
	comp=E,650μm,1.3s						
WTTA	**Wattenberg**	**2.39**	**6**	*e*Pn	**Pb**	**20 19 35.4**	**-0.6**
	comp=E,1.6nm,0.1s,SNR=21						
WTTA				*e*Sg	**Sg**	**20 20 10.4**	**+0.2**
	comp=E,76nm,0.2s						
WTTA	**Wattenberg**	**2.39**	**6**	Pn	**Pn**	**20 19 33.5**	**+1.5**
WTTA	**Wattenberg**	**2.39**	**6**	Pg	**Pg**	**20 19 38.7**	**-0.4**
MYKA	**Terra Mystica**	**2.40**	**42**	*e*Pn	**Pb**	**20 19 34.7**	**-1.4**
	comp=E,1.4nm,0.2s						
MYKA				*e*Pg	**Pg**	**20 19 39.4**	**+0.2**
	comp=E,6.4nm,0.2s,SNR=9.7						
MYKA				*e*Sg	**Sg**	**20 20 12.6**	**+2.4**
	comp=E,38nm,0.3s						
WATA	**Walderalm**	**2.46**	**4**	*e*Pn	**Pb**	**20 19 36.0**	**-1.2**
	comp=E,6.6nm,0.1s,SNR=28						
MOTA	**Moosalm**	**2.47**	**357**	*e*Pn	**Pb**	**20 19 35.4**	**-1.9**
	comp=E,22nm,0.3s,SNR=40						
DAVA	**Damuels**	**2.60**	**338**	*e*Pn	**Pb**	**20 19 38.2**	**-1.3**
	comp=E,7.4nm,0.4s						
DAVA				*e*Sn	**Sb**	**20 20 10.1**	**-1.2**
	comp=E,29nm,0.3s						
LNSS	**Leonessa**	**2.60**	**150**	AML	AML		
	comp=N,140μm,0.8s						
LNSS				AML	AML		
	comp=E,119μm,1.1s						
LNSS				AML	AML		
	comp=N,140μm,0.8s						
LNSS				AML	AML		
	comp=E,119μm,1.1s						
KBA	**Koelnbreinsper**	**2.62**	**32**	*e*Pn	**Pb**	**20 19 38.6**	**-1.3**
	comp=E,3.0nm,0.2s						
KBA				*e*Pg	**Pg**	**20 19 43.1**	**-0.2**
	comp=E,35nm,0.3s,SNR=25						
KBA				*e*Sg	**Sg**	**20 20 19.7**	**+2.3**
	comp=E,41nm,0.3s						
RETA	**Reutte**	**2.63**	**352**	*e*Pn	**Pb**	**20 19 38.7**	**-1.4**
	comp=E,6.1nm,0.2s,SNR=7.4						
RETA				*e*Sg	**Sg**	**20 20 20.4**	**+2.7**
	comp=E,31nm,0.4s						
SMA1	**SAN MARTINO**	**2.69**	**146**	AML	AML		
	comp=E,144μm,0.7s						
SMA1				AML	AML		
	comp=N,152μm,0.6s						
SMA1				AML	AML		
	comp=N,152μm,0.6s						
SMA1				AML	AML		
	comp=E,144μm,0.7s						
OBKA	**Obir**	**2.80**	**53**	*e*Pn	**Pn**	**20 19 39.2**	**+1.7**
	comp=E,2.2nm,0.2s,SNR=12						
OBKA				*e*Pg	**Pg**	**20 19 45.9**	**-0.9**
	comp=E,23nm,0.4s						
OBKA				Sg	**Sg**	**20 20 24.9**	**+1.8**
	comp=E,54nm,0.3s						
PGF	**Pioggiola**	**2.87**	**216**	*e*Pn	**Pn**	**20 19 38.9**	**+0.4**
	SNR=1.0						
PGF				*e*Sn	**Sn**	**20 20 12.3**	**-0.4**
	comp=E,19nm,0.3s,SNR=1.0						
PGF	**Pioggiola**	**2.87**	**216**	*e*Pn	**Pn**	**20 19 38.9**	**+0.4**
	SNR=1.0						
PGF				*e*Sn	**Sn**	**20 20 12.3**	**-0.4**
	comp=E,9.6nm,0.3s,SNR=1.0						
SBF	**Sospel**	**2.95**	**251**	*e*Pn	**Pn**	**20 19 40.2**	**+0.6**
	SNR=1.0						
SBF				*e*Sn	**Sn**	**20 20 15.2**	**+0.4**
	comp=E,21nm,0.4s						
SBF	**Sospel**	**2.95**	**251**	*e*Pn	**Pn**	**20 19 40.2**	**+0.6**
	SNR=1.0						
SBF				*e*Sn	**Sn**	**20 20 15.2**	**+0.4**
	comp=E,10nm,0.4s						
OZLJ	**Ozalj**	**3.03**	**75**	*e*Pn	**Pn**	**20 19 42.1**	**+1.5**
MVIF	**Mont Vial**	**3.13**	**253**	P	**Pn**	**20 19 43.5**	**+1.4**
MVIF	**Mont Vial**	**3.13**	**253**	P	**Pn**	**20 19 43.5**	**+1.4**
SOKA	**Soboth**	**3.17**	**54**	*i* Pn	**Pn**	**20 19 44.4**	**+1.8**
	comp=E,0.8nm,0.1s,SNR=4.3						
SOKA				*i* Pg	**Pg**	**20 19 52.3**	**-1.6**
	comp=E,3.1nm,0.2s						
SOKA				*e*Sg	**Sg**	**20 20 35.3**	**+0.3**
	comp=E,19nm,0.4s						
UDBI	**Udbina**	**3.20**	**95**	*i* Pn	**Pn**	**20 19 45.4**	**+2.4**
MBDF	**Montbardon**	**3.23**	**269**	*e*Pn	**Pn**	**20 19 44.4**	**+1.0**
	SNR=1.0						
MBDF				*e*Sn	**Sn**	**20 20 22.1**	**+0.4**
	comp=E,21nm,0.6s						
MBDF	**Montbardon**	**3.23**	**269**	*e*Pn	**Pn**	**20 19 44.4**	**+1.0**
	SNR=1.0						
MBDF				*e*Sn	**Sn**	**20 20 22.1**	**+0.4**
	comp=E,11nm,0.6s						
LPG	**La Plagne**	**3.27**	**282**	*e*Pn	**Pn**	**20 19 45.2**	**+1.0**
	SNR=1.0						
LPG				*e*Sn	**Sn**	**20 20 23.5**	**+0.5**
	comp=E,4.3nm,0.3s						
LPG	**La Plagne**	**3.27**	**282**	*e*Pn	**Pn**	**20 19 45.2**	**+1.0**
	SNR=1.0						
LPG				*e*Sn	**Sn**	**20 20 23.5**	**+0.5**
	comp=E,2.2nm,0.3s						
LPL	**La Plagne**	**3.29**	**283**	*e*Pn	**Pn**	**20 19 45.6**	**+1.2**
	SNR=1.0						
LPL				*e*Sn	**Sn**	**20 20 23.9**	**+0.6**
	SNR=1.0						
LPL				*e*Sg	**Sg**	**20 20 39.7**	**+0.9**
	comp=E,12nm,0.4s,SNR=1.0						
LPL	**La Plagne**	**3.29**	**283**	*e*Pn	**Pn**	**20 19 45.6**	**+1.2**
	SNR=1.0						
LPL				*e*Sn	**Sn**	**20 20 23.9**	**+0.6**
	SNR=1.0						
LPL				*e*Sg	**Sg**	**20 20 39.7**	**+0.9**
	comp=E,6.1nm,0.4s,SNR=1.0						
CALF	**Calern**	**3.34**	**252**	P	**Pn**	**20 19 45.9**	**+0.9**
CALF	**Calern**	**3.34**	**252**	P	**Pn**	**20 19 45.9**	**+0.9**
FRF	**La Foret Royal**	**3.60**	**250**	*e*Pn	**Pn**	**20 19 48.6**	**+0.2**
	SNR=1.0						
FRF				*e*Sn	**Sn**	**20 20 30.5**	**-0.1**
	comp=E,4.1nm,0.2s						
FRF	**La Foret Royal**	**3.60**	**250**	*e*Pn	**Pn**	**20 19 48.6**	**+0.2**
	SNR=1.0						
FRF				*e*Sn	**Sn**	**20 20 30.5**	**-0.1**
	comp=E,2.0nm,0.2s						
MOA	**Molln**	**3.61**	**34**	*i* Pn	**Pn**	**20 19 50.9**	**+2.3**
	comp=E,3.8nm,0.1s						
MOA				*e*Sn	**Sn**	**20 20 34.5**	**+3.6**
	comp=E,8.7nm,0.3s						
ARSA	**Arzberg**	**3.78**	**50**	*i* Pn	**Pn**	**20 19 52.2**	**+1.3**
	comp=E,1.8nm,0.2s,SNR=5.0						
LMR	**La Mourre**	**3.78**	**248**	*e*Pn	**Pn**	**20 19 51.6**	**+0.7**
	SNR=1.0						
LMR				*e*Sn	**Sn**	**20 20 34.3**	**-0.8**
	comp=E,11nm,0.4s,SNR=1.0						
LMR	**La Mourre**	**3.78**	**248**	*e*Pn	**Pn**	**20 19 51.6**	**+0.7**
	SNR=1.0						
LMR				*e*Sn	**Sn**	**20 20 34.3**	**-0.8**
	comp=E,5.7nm,0.4s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**3.85**	**272**	*e*Pn	**Pn**	**20 19 52.7**	**+0.7**
	SNR=1.0						
ORIF				*e*Sn	**Sn**	**20 20 36.9**	**-0.1**
	comp=E,12nm,0.5s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**3.85**	**272**	P	**Pn**	**20 19 54.5**	**+2.6**
ORIF	**Oris-en-Rattie**	**3.85**	**272**	*e*Pn	**Pn**	**20 19 52.7**	**+0.7**
	SNR=1.0						
ORIF				*e*Sn	**Sn**	**20 20 36.9**	**-0.1**
	comp=E,5.8nm,0.5s,SNR=1.0						
KIZ	**Kirchzarten**	**3.86**	**324**	P	**Pn**	**20 19 53.6**	**+1.6**
KIZ	**Kirchzarten**	**3.86**	**324**	P	**Pn**	**20 19 53.6**	**+1.6**
CABF	**La Chapelle**	**4.04**	**297**	*e*Pn	**Pn**	**20 19 55.2**	**+0.7**
	SNR=1.0						
CABF				*e*Sn	**Sn**	**20 20 41.6**	**0.0**
	comp=E,14nm,0.7s,SNR=1.0						
CABF	**La Chapelle**	**4.04**	**297**	*e*Pn	**Pn**	**20 19 55.2**	**+0.7**
	SNR=1.0						
CABF				*e*Sn	**Sn**	**20 20 41.6**	**0.0**
	comp=E,6.8nm,0.7s,SNR=1.0						
OG35	**Corcelles**	**4.19**	**288**	P	**Pn**	**20 19 59.0**	**+2.4**
OG35	**Corcelles**	**4.19**	**288**	P	**Pn**	**20 19 58.0**	**+1.4**
SMRF	**Simiane la Rot**	**4.20**	**260**	*e*Pn	**Pn**	**20 19 57.4**	**+0.7**
	SNR=1.0						
SMRF				*e*Sn	**Sn**	**20 20 44.4**	**-1.1**
	comp=E,2.8nm,0.4s						
SMRF	**Simiane la Rot**	**4.20**	**260**	*e*Pn	**Pn**	**20 19 57.4**	**+0.7**
	SNR=1.0						
SMRF				*e*Sn	**Sn**	**20 20 44.4**	**-1.1**
	comp=E,1.4nm,0.4s						
OPP	**Oppenau**	**4.20**	**330**	P	**Pn**	**20 19 58.7**	**+2.0**
OPP	**Oppenau**	**4.20**	**330**	P	**Pn**	**20 19 58.7**	**+2.0**
HINF	**Hinteralfeld**	**4.25**	**315**	*e*Pn	**Pn**	**20 19 58.0**	**+0.6**
	SNR=1.0						
HINF				*e*Sn	**Sn**	**20 20 46.3**	**-0.5**
	comp=E,6.5nm,0.3s,SNR=1.0						
HINF	**Hinteralfeld**	**4.25**	**315**	*e*Pn	**Pn**	**20 19 58.0**	**+0.6**
	SNR=1.0						
HINF				*e*Sn	**Sn**	**20 20 46.3**	**-0.5**
	comp=E,3.2nm,0.3s,SNR=1.0						
CONA	**Conrad Observa**	**4.39**	**44**	*i* Pn	**Pn**	**20 20 01.1**	**+1.8**
	comp=E,0.7nm,0.1s,SNR=7.5						
ECH	**Echery**	**4.39**	**321**	P	**Pn**	**20 20 00.9**	**+1.6**
ECH	**Echery**	**4.39**	**321**	P	**Pn**	**20 20 00.9**	**+1.6**
CDF	**Champ du Feu**	**4.49**	**323**	*e*Pn	**Pn**	**20 20 01.5**	**+0.8**
	SNR=1.0						
CDF				*e*Sn	**Sn**	**20 20 51.6**	**-1.1**
	comp=E,13nm,0.6s,SNR=1.0						
CDF	**Champ du Feu**	**4.49**	**323**	*e*Pn	**Pn**	**20 20 01.5**	**+0.8**
	SNR=1.0						
CDF				*e*Sn	**Sn**	**20 20 51.6**	**-1.1**
	comp=E,6.7nm,0.6s,SNR=1.0						
KHC	**Kasperske Hory**	**4.53**	**19**	*e*PN	**Pn**	**20 20 03.7**	**+2.5**
KHC				*e*PG	**Pg**	**20 20 18.0**	**-1.8**
KHC				*e*SN	**Sn**	**20 20 52.2**	**-1.4**
KHC				*e*SG	**Sg**	**20 21 16.3**	**-2.1**
	comp=E,22nm,0.6s						
KHC	**Kasperske Hory**	**4.53**	**19**	Pn	**Pn**	**20 20 03.7**	**+2.5**
HAU	**Haudompre**	**4.63**	**314**	*e*Pn	**Pn**	**20 20 03.5**	**+0.9**
	SNR=1.0						
HAU				*e*Sn	**Sn**	**20 20 55.4**	**-0.8**
	comp=E,4.6nm,0.2s						
HAU	**Haudompre**	**4.63**	**314**	*e*Pn	**Pn**	**20 20 03.5**	**+0.9**
	SNR=1.0						
HAU				*e*Sn	**Sn**	**20 20 55.4**	**-0.8**
	comp=E,2.3nm,0.2s						
VIVF	**Saint-Julien-l**	**4.71**	**272**	*e*Pn	**Pn**	**20 20 04.4**	**+0.7**
	SNR=1.0						
VIVF				*e*Sn	**Sn**	**20 20 57.5**	**-0.6**
	comp=E,0.6nm,0.2s						
VIVF	**Saint-Julien-l**	**4.71**	**272**	*e*Pn	**Pn**	**20 20 04.4**	**+0.7**
	SNR=1.0						
VIVF				*e*Sn	**Sn**	**20 20 57.5**	**-0.6**
	comp=E,0.3nm,0.2s						
STON	**Ston**	**5.04**	**111**	*e*Pn	**Pn**	**20 20 08.1**	**-0.1**
STON				Sn	**Sn**	**20 21 03.8**	**-2.4**
PAGF	**Fort de Pagny**	**5.31**	**316**	*e*Pn	**Pn**	**20 20 12.0**	**+0.1**
PAGF				*e*Sn	**Sn**	**20 21 11.5**	**-1.2**
	comp=E,0.7nm,0.2s						
PAGF	**Fort de Pagny**	**5.31**	**316**	*e*Pn	**Pn**	**20 20 12.0**	**+0.1**
PAGF				*e*Sn	**Sn**	**20 21 11.5**	**-1.2**
	comp=E,0.3nm,0.2s						
LASF	**Ste Croix**	**5.39**	**264**	*e*Pn	**Pn**	**20 20 13.3**	**+0.3**
	SNR=1.0						
LASF				*e*Sn	**Sn**	**20 21 13.7**	**-1.0**
	comp=E,1.0nm,0.3s						
LASF	**Ste Croix**	**5.39**	**264**	*e*Pn	**Pn**	**20 20 13.3**	**+0.3**
	SNR=1.0						
LASF				*e*Sn	**Sn**	**20 21 13.7**	**-1.0**
	comp=E,0.5nm,0.3s						
MODS	**Modra-Piesok**	**5.40**	**48**	*e*PN	**Pn**	**20 20 13.4**	**+0.3**
MODS				*e*SN	**Sn**	**20 21 13.6**	**-1.4**
NKC	**Novy Kostel**	**5.41**	**8**	*e*PN	**Pn**	**20 20 14.4**	**+1.1**
NKC				*e*SN	**Sn**	**20 21 13.7**	**-1.6**
NKC				*e*SG	**Sg**	**20 21 45.2**	**-1.5**
	comp=E,14nm,0.6s						
NKC	**Novy Kostel**	**5.41**	**8**	Pn	**Pn**	**20 20 14.4**	**+1.1**
NKC				Sn	**Sn**	**20 21 13.7**	**-1.6**
NKC				Sg	**Sg**	**20 21 45.2**	**-1.5**
	comp=E,14nm,0.6s						
KRUC	**Moravsky**	**5.44**	**38**	*e*PN	**Pn**	**20 20 14.4**	**+0.7**
SFTF	**Sexfontaines**	**5.45**	**310**	*e*Pn	**Pn**	**20 20 14.2**	**+0.4**
SFTF				*e*Sn	**Sn**	**20 21 14.5**	**-1.7**
	comp=E,1.3nm,0.2s						
SFTF	**Sexfontaines**	**5.45**	**310**	*e*Pn	**Pn**	**20 20 14.2**	**+0.4**
SFTF				*e*Sn	**Sn**	**20 21 14.5**	**-1.7**
	comp=E,0.6nm,0.2s						
SMF	**Signal de Mont**	**5.51**	**291**	*e*Pn	**Pn**	**20 20 15.3**	**+0.7**
	SNR=1.0						
SMF				*e*Sn	**Sn**	**20 21 16.5**	**-1.2**
	comp=E,1.8nm,0.3s						
SMF	**Signal de Mont**	**5.51**	**291**	*e*Pn	**Pn**	**20 20 15.3**	**+0.7**
	SNR=1.0						
SMF				*e*Sn	**Sn**	**20 21 16.5**	**-1.2**
	comp=E,0.9nm,0.3s						
PRU	**Pruhonice**	**5.56**	**22**	*e*PG	**Pg**	**20 20 36.6**	**-3.0**
PRU				*e*SG	**Sg**	**20 21 51.0**	**-0.6**
	comp=E,6.6nm,0.5s						
PRU	**Pruhonice**	**5.56**	**22**	Pg	**Pg**	**20 20 36.6**	**-3.0**
PRU				Sg	**Sg**	**20 21 51.0**	**-0.6**
	comp=E,6.6nm,0.5s						
GOPC	**GO Pecny, Ondr**	**5.56**	**24**	*e*PG	**Pg**	**20 20 36.5**	**-3.1**
GOPC	**GO Pecny, Ondr**	**5.56**	**24**	Pg	**Pg**	**20 20 36.5**	**-3.1**
SMOL	**Smolenice**	**5.56**	**47**	*e*PN	**Pn**	**20 20 18.1**	**+2.7**
ABH	**Alteburg**	**5.61**	**334**	P	**Pn**	**20 20 17.7**	**+1.6**
ABH	**Alteburg**	**5.61**	**334**	P	**Pn**	**20 20 17.7**	**+1.6**
MEZF	**Maizieres J'vi**	**5.62**	**312**	*e*Pn	**Pn**	**20 20 16.6**	**+0.5**
MEZF				*e*Sn	**Sn**	**20 21 18.9**	**-1.5**
	comp=E,1.7nm,0.3s,SNR=1.0						
MEZF	**Maizieres J'vi**	**5.62**	**312**	*e*Pn	**Pn**	**20 20 16.6**	**+0.5**
MEZF				*e*Sn	**Sn**	**20 21 18.9**	**-1.5**
	comp=E,0.9nm,0.3s,SNR=1.0						
LOR	**Lormes**	**5.70**	**297**	*e*Pn	**Pn**	**20 20 17.9**	**+0.6**
	SNR=1.0						
LOR				*e*Sn	**Sn**	**20 21 21.2**	**-1.2**
	comp=E,3.6nm,0.3s						
LOR	**Lormes**	**5.70**	**297**	P	**Pn**	**20 20 18.2**	**+1.0**
LOR	**Lormes**	**5.70**	**297**	*e*Pn	**Pn**	**20 20 17.9**	**+0.6**
	SNR=1.0						
LOR				*e*Sn	**Sn**	**20 21 21.2**	**-1.2**
	comp=E,1.8nm,0.3s						
SSF	**Saint Saulge**	**5.85**	**295**	*e*Pn	**Pn**	**20 20 19.9**	**+0.5**
	SNR=1.0						
SSF				*e*Sn	**Sn**	**20 21 24.4**	**-1.8**
	comp=E,1.2nm,0.2s,SNR=1.0						
SSF	**Saint Saulge**	**5.85**	**295**	*e*Pn	**Pn**	**20 20 19.9**	**+0.5**
	SNR=1.0						
SSF				*e*Sn	**Sn**	**20 21 24.4**	**-1.8**
	comp=E,0.6nm,0.2s,SNR=1.0						
AVF	**Avril sur Loir**	**5.87**	**292**	*e*Pn	**Pn**	**20 20 20.0**	**+0.4**
	SNR=1.0						
AVF				*e*Sn	**Sn**	**20 21 25.0**	**-1.6**
	comp=E,0.7nm,0.3s						
AVF	**Avril sur Loir**	**5.87**	**292**	*e*Pn	**Pn**	**20 20 20.0**	**+0.4**
	SNR=1.0						
AVF				*e*Sn	**Sn**	**20 21 25.0**	**-1.6**
	comp=E,0.3nm,0.3s						
BGF	**Bois d'Agland**	**6.15**	**289**	*e*Pn	**Pn**	**20 20 24.1**	**+0.6**
	SNR=1.0						
BGF	**Bois d'Agland**	**6.15**	**289**	*e*Pn	**Pn**	**20 20 24.1**	**+0.6**
	SNR=1.0						
BRG	**Berggiesshubel**	**6.25**	**16**	PG	**Pg**	**20 20 50.4**	**-2.4**
BRG				SG	**Sg**	**20 22 13.5**	**-0.2**
	comp=E,13nm,1.2s						
VYHS	**Vyhne**	**6.32**	**52**	*e*PN	**Pn**	**20 20 26.4**	**+0.6**
VYHS				*e*SN	**Sn**	**20 21 33.9**	**-3.7**
CLL	**Collm**	**6.53**	**9**	*e*Pn	Pn	20 20 35.0	+6.4
CLL				*e*Pg	**Pg**	**20 20 59.0**	**+0.9**
CLL				*e*		20 21 52.0	
CLL				*e*Sg	**Sg**	**20 22 23.0**	**+0.4**
	comp=Z,19nm,1.2s						
TCF	**Toulx Ste Croi**	**6.53**	**286**	*e*Pn	**Pn**	**20 20 29.3**	**+0.6**
	SNR=1.0						
TCF	**Toulx Ste Croi**	**6.53**	**286**	*e*Pn	**Pn**	**20 20 29.3**	**+0.6**
	SNR=1.0						
CAF	**Calviac**	**6.56**	**274**	*e*Pn	**Pn**	**20 20 29.6**	**+0.5**
CAF	**Calviac**	**6.56**	**274**	*e*Pn	**Pn**	**20 20 29.6**	**+0.5**

*NNC **23** 20:35:37.4±10.0, 38.°97N×70.°40E, h0km, mb3.9, mpv3.6, Error ellipse: s-maj=91.0km s-min=61.2km az=174.0*

ISC 23 20:35:32.1±3.9,**38.°3N**±0.°3×**70.°2E**±0.°1,**h10km,n11,**
σ2§43/12,**6C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.07**	**56**	⇓Pg	**Pn**	**20 36 22.1**	**+1.2**
	19nm,0.4s						
SFK				⇓Lg	Lg	20 37 00.5	
	24nm,0.3s						
MNAS	**Manas**	**4.52**	**22**	⇑Pg	**Pn**	**20 36 42.5**	**+1.8**
	5.0nm,0.4s						
MNAS				⇑Lg	Lg	20 37 39.0	
	4.2nm,0.4s						
AML	**Almayashu**	**4.65**	**34**	P	**Pn**	**20 36 44.6**	**+1.8**
	SNR=8.2						
UCH	**Uchtor**	**5.11**	**39**	P	**Pn**	**20 36 47.0**	**-2.1**
	SNR=7.4						
EKS2	**Erkin-Say**	**5.12**	**31**	P	**Pn**	**20 36 51.9**	**+2.9**
	SNR=7.9						
AAK	**Ala-Archa**	**5.41**	**36**	⇓Pn	**Pn**	**20 36 56.3**	**+3.3**
	3.9nm,0.4s						
AAK				⇑Lg	Lg	20 38 07.2	
	11nm,0.7s						
KBK	**Karagaybulak**	**5.64**	**38**	P	**Pn**	**20 36 58.1**	**+2.0**
	SNR=15						
CHMS	**Chumysh**	**5.81**	**35**	P	**Pn**	**20 37 01.5**	**+3.1**
	SNR=9.2						
TKM2	**Tokmak 2**	**6.16**	**40**	⇑Pn	**Pn**	**20 37 03.5**	**+0.2**
	4.8nm,0.6s						
TKM2				⇑Sn	**Sn**	**20 38 11.8**	**-2.1**
	3.1nm,0.6s						
TKM2	**Tokmak 2**	**6.16**	**40**	P	**Pn**	**20 37 04.4**	**+1.0**
	SNR=8.4						
AB31	**Akbulak array**	**13.19**	**329**	⇑P	**Pn**	**20 38 37.9**	**-1.5**
	0.4nm,0.3s,baz=138,slow=14						

*IDC **23** 20:37:58.5±3.1, 36.°31N×70.°92E, h171km±28km, mb3.6/17, mb1 3.7/22, mb1mx3.4/71, mbtmp4.1/22, Error ellipse: s-maj=18.3km s-min=11.4km az=166.0*

*ISCJB **23** 20:38:00.2±0.3, 36.°52N±0.°03×70.°84E±0.°04, h188km, mb3.7/17, Error ellipse: s-maj=5.0km s-min=3.4km az=154.5*

*NNC **23** 20:38:07.0±1.8, 36.°97N×70.°95E, h211km±16km, mb3.0, mpv4.2, Error ellipse: s-maj=17.3km s-min=11.2km az=14.0*

ISC 23 20:38:00.9±0.5,**36.°51N**±0.°05×**70.°89E**±0.°05,**h188km,n59,**
σ1§43/66,**mb3.7**/17,**9C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**4.06**	**30**	⇑P	**Pn**	**20 39 04.9**	**+1.8**
	21nm,0.4s						
SFK				⇓S	**Sn**	**20 39 51.1**	**-0.9**
	57nm,0.4s						
TAS	**Tashkent**	**4.97**	**346**	⇑S	**Sn**	**20 40 10.4**	**-2.3**
	406nm,0.7s						
AML	**Almayashu**	**6.02**	**20**	P	**Pn**	**20 39 29.5**	**+1.0**
	SNR=142					

TKM2	Tokmak 2	7.36	28	P	Pn	20 39 46.8	+0.9
	SNR=9.9						
SMLA	Simla	7.49	134	eP	Pn	20 39 48.2	+0.8
SMLA				eS	Sn	20 41 09.5	-2.4
SMLA				IAML		20 41 13.3	
	comp=E,55nm,0.6s						
SMLA				IAML		20 41 13.5	
	comp=N,42nm,0.5s						
KKR	Kurukshetra	8.20	141	eP	Pn	20 39 58.4	+1.6
KKR				ex	x	20 41 22.0	
BHGR	Bahadurgarh	9.32	145	eS	Sn	20 41 51.7	-3.7
JOSI	Joshimath	9.36	127	eP	Pn	20 40 18.1	+6.0
JOSI				eS	Sn	20 41 54.5	-2.2
KHET	Khetri	9.38	152	eP	Pn	20 40 14.1	+1.8
KHET				eS	Sn	20 41 50.3	-6.8
KHET				IAML		20 41 54.1	
	comp=N,15nm,0.7s						
KHET				IAML		20 41 54.3	
	comp=E,12nm,0.1s						
KUDL	Kundal	9.59	149	eP	Pn	20 40 14.1	-0.8
KUDL				eS	Sn	20 41 55.4	-6.6
GEYT	Alibeck	10.29	282	P	Pn	20 40 23.3	-0.8
	comp=E,0.2nm,0.3s,baz=102,slow=13,SNR=3.3						
GEYT				S	Sn	20 42 17.5	-1.1
	comp=E,0.8nm,0.3s,baz=15,slow=25,SNR=6.0						
MKAR	Makanchi Array	13.34	36	P	Pn	20 41 03.0	+0.1
	comp=E,0.7nm,0.3s,baz=212,slow=12,SNR=26						
DANN	Dangsing	13.57	123	eP	P	20 41 09.9	+0.9
	comp=E,24nm,0.6s						
KOLN	Koldanda	13.84	125	eP	P	20 41 12.5	+0.6
	comp=E,4.2nm,0.3s						
GKN	Gorkha	14.38	122	eP	Pn	20 41 17.5	+1.3
	comp=E,12nm,0.4s						
DMN	Daman	14.95	122	eP	P	20 41 26.2	+1.9
	comp=E,10nm,0.4s						
AB31	Akbulak array	15.03	331	⇑P	Pn	20 41 23.1	-0.8
	comp=E,0.3nm,0.4s,baz=145,slow=10						
KURBB	Kurchatov Arra	15.14	19	P	Pn	20 41 23.9	-1.2
	comp=E,0.5nm,0.3s,baz=214,slow=8.5,SNR=32						
KURBB	Kurchatov Arra	15.14	19	⇑P	Pn	20 41 23.6	-1.6
	comp=E,7.0nm,0.6s						
PKIN	Phulchoki	15.17	122	eP	P	20 41 28.1	+1.4
	comp=E,14nm,0.5s						
GUN	Gumba	15.30	120	eP	P	20 41 30.1	+1.9
JIRN	Jiri	15.67	120	eP	Pn	20 41 33.4	+1.2
	comp=E,24nm,0.4s						
RAMN	Ramite	16.39	121	eP	Pn	20 41 42.1	+1.3
BVA0	Borovoye Array	16.52	359	⇑P	Pn	20 41 41.8	0.0
	comp=E,4.3nm,0.6s,baz=163,slow=12,SNR=38						
BVAR	Borovoye Array	16.52	359	P	Pn	20 41 41.8	0.0
	comp=E,1.7nm,0.3s,baz=156,slow=13,SNR=28						
AKTO	Aktyubinsk	16.73	330	P	Pn	20 41 44.0	-0.4
	comp=E,0.8nm,0.3s,baz=134,slow=13,SNR=5.6						
AKTO	Aktyubinsk	16.73	330	⇓P	Pn	20 41 44.1	-0.2
	comp=E,1.5nm,0.5s						
WSAR	Wadi Sarin	16.95	222	P	Pn	20 41 48.2	+1.0
	comp=E,0.3nm,0.3s,baz=56,slow=7.3,SNR=4.4						
ODAN	Odare	17.00	120	eP	P	20 41 48.8	+1.9
	comp=E,11nm,0.6s						
ZALV	Zalesovo Beam	19.94	25	P	P	20 42 18.4	+0.2
	comp=E,18nm,0.6s,baz=220,slow=12,SNR=87						
SONM	Songino Array	28.40	55	P	P	20 43 38.7	+0.9
	comp=E,1.6nm,0.6s,baz=259,slow=8.7,SNR=9.7						
BRTR	Keskin Array B	29.35	288	P	P	20 43 46.2	-0.1
	comp=E,0.4nm,0.6s,baz=82,slow=8.9,SNR=3.5						
AKASG	Malin Array Be	32.87	309	P	P	20 44 17.7	+0.9
	comp=E,0.3nm,0.3s,baz=82,slow=7.0,SNR=4.2						
MLR	Muntele Rosu	34.70	299	P	P	20 44 34.8	+2.0
	comp=E,0.6nm,0.8s,baz=150,slow=1.3,SNR=7.7						
IDI	Anoyia	37.01	282	P	P	20 44 52.8	+0.2
	comp=E,2.9nm,0.7s,baz=69,slow=8.6,SNR=5.6						
ARCES	ARCESS Array B	41.10	338	P	P	20 45 26.9	+1.0
	comp=E,2.1nm,0.9s,baz=123,slow=9.8,SNR=4.1						
HFS	Hagfors	43.01	322	P	P	20 45 42.2	+0.9
	comp=E,1.1nm,0.5s,baz=99,slow=12,SNR=11						
NB2	NORSAR Subarra	44.32	323	P	P	20 45 51.6	-0.3
	comp=Z,0.3nm,0.5s,baz=99,slow=7.9						
TIXI	Tiksi	45.80	22	P	P	20 46 03.6	+0.3
	comp=Z,4.0nm,0.3s,baz=272,slow=6.8,SNR=23						
TORD	Torodi Ar. Bea	65.63	269	P	P	20 48 23.2	-2.0
	comp=Z,0.8nm,0.5s,baz=52,slow=6.3,SNR=8.8						
KOWA	Kowa	69.48	273	P	P	20 48 48.2	-1.0
	comp=Z,2.4nm,0.5s,baz=57,slow=8.4,SNR=8.0						
INK	Inuvik	73.91	9	P	P	20 49 15.6	+0.8
	comp=Z,0.7nm,0.4s,baz=343,slow=7.0,SNR=4.0						
ILAR	Eielson Array	74.79	16	P	P	20 49 19.6	-0.4
	comp=Z,0.2nm,0.6s,baz=342,slow=5.7,SNR=3.6						
BOSA	Boshof	77.70	220	P	P	20 49 36.5	-0.4
	comp=Z,3.0nm,0.8s,baz=134,slow=6.7,SNR=3.3						
YKA	Yellowknife Ar	81.24	3	P	P	20 49 56.0	+0.6
	comp=Z,0.2nm,0.3s,baz=350,slow=5.4,SNR=3.8						
WRA	Warramunga Arr	82.07	122	P	P	20 49 59.5	-0.9
	comp=Z,0.8nm,0.4s,baz=325,slow=4.8,SNR=16						
ASAR	Alice Springs	84.33	125	P	P	20 50 10.9	-1.0
	comp=Z,0.6nm,0.5s,baz=313,slow=5.1,SNR=18						

*SJA **23** 21:04:31.6±0.6, 31.°68S×69.°96W, h102^{km}±5^{km}, ML2.8, MW3.5*

*ISCJB **23** 21:04:32.1±1.1, 31.°72S±0.°04×69.°86W±0.°06, h118^{km}±10^{km}, Error ellipse: s-maj=8.3km s-min=6.3km az=167.0*

ISC 23 21:04:33.3±2.0, 31.°72S±0.°04×69.°88W±0.°06, h107^{km}±18^{km}, n14, σ0^{s}69/23, 1C-3D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLS	Leoncito	0.50	100	iP	Pn	21 04 49.9	-0.3
RTLS				iS	Sn	21 05 02.8	-0.1
RTLS				IAML		21 05 03.6	
	comp=Z,236nm,0.2s						
AUSP	Uspallata	0.66	141	iP	Pn	21 04 51.1	-0.3
AUSP				iS	Sn	21 05 05.2	+0.3
RTCV	Cerro Valdivia	1.15	98	iP	Pn	21 04 55.6	-0.4
RTCV				iS	Sn	21 05 13.7	+0.7
ASAL	Salagasta	1.25	135	iP	Pn	21 04 56.8	-0.3
ASAL				iS	Sn	21 05 15.6	+0.6
RTLL	Cerro Villicun	1.26	73	iP	Pn	21 04 56.5	-0.7
ARCO	CERRO ARCO	1.38	145	iP	Pn	21 04 58.5	-0.2
ARCO				iS	Sn	21 05 18.1	+0.1
ARCO				IAML		21 05 20.1	
	comp=Z,111nm,0.6s						
AMOG	MOGNA	1.42	57	iP	Pn	21 04 59.0	-0.1
ROCH	El Roble	1.58	217	⇑eP	Pn	21 05 00.1	-1.0
ROCH				eS	Sn	21 05 21.8	-0.4
ROCH				IAML		21 05 23.1	
	comp=N,75nm,0.5s						
AROD	Rodeo	1.58	13	iP	Pn	21 05 00.6	-0.7
ROC1	El Roble	1.58	217	iP	Pn	21 05 00.2	-1.0
FCH	Farellones	1.65	192	⇓eP	Pn	21 05 02.3	+0.3
FCH				eS	Sn	21 05 25.3	+1.4
FCH				IAML		21 05 27.0	
	comp=E,103nm,0.2s						
ACDV	Cuesta del Vie	1.67	23	iP	Pn	21 05 01.3	-1.0
GO04	Tololo Observa	1.73	333	⇓eP	Pn	21 05 03.1	+0.1
GO04				eS	Sn	21 05 26.0	+0.5
GO04				IAML		21 05 29.7	
	comp=E,225nm,0.5s						
TLL	Tololo Astrono	1.73	333	⇓eP	Pn	21 05 03.3	+0.2
TLL				eS	Sn	21 05 26.7	+1.0
TLL				IAML		21 05 27.9	
	comp=N,105nm,0.2s						

*BJI **23** 21:27:23.8, 2.°12N×90.°45E, h16^{km}, mb5.1/79, mB5.1/60, Ms5.3/84, Ms7 5.0/79*

*ISCJB **23** 21:27:25.8±0.6, 2.°59N±0.°02×90.°53E±0.°02, h5^{km}±3^{km}, mb5.1/239, MS4.9/196, Error ellipse: s-maj=3.7km s-min=2.5km az=18.1*

*IDC **23** 21:27:26.6±0.3, 2.°58N×90.°50E, h0^{km}, mb4.8/57, mb1 4.9/61, mb1mx4.8/83, mbtmp4.9/61, ML4.5/4, MS4.6/52, Ms1 4.6/52, ms1mx4.5/72, Error ellipse: s-maj=10.2km s-min=8.9km az=35.0*

*MOS **23** 21:27:27.6±0.9, 2.°63N×90.°53E, h16^{km}, mb5.4/116, MS4.7/56, Error ellipse: s-maj=5.9km s-min=3.5km az=116.1*

*NEIC **23** 21:27:28.0±0.0, 2.°61N×90.°39E, h11^{km}, Moment Tensor Solution. s22 Moment tensor: Scale 10^{17}Nm; Mrr0.02; Mθθ-0.61; Mφφ0.60; Mrθ 1.00; Mθφ-1.64; Mφr-0.02; Best double couple: M0 2.00000×10^{17} NP1:φs 280.00000°, δ88.00000°, λ-150.00000°. NP2:φs 189.00000°, δ61.00000°, λ-2.00000°. Principal axes: T 1.9400, Plg18.0000°, Azm50.0000°; N 0.1400, Plg60.0000°, Azm284.0000°; P -2.0800, Plg21.0000°, Azm148.0000°;*

*GCMT **23** 21:27:29.6±0.1, 2.°49N×90.°51E, h19^{km}, MW5.4/120, Moment Tensor Solution. s91,c163; s120,c246; Duration: 1s3 Moment tensor: Scale 10^{17}Nm; Mrr-0.07±.02; Mθθ-0.49±.02; Mφφ0.56±.02; Mrθ0.18±.04; Mθφ-1.53±.02; Mφr-0.81±.05; Best double couple: M0 1.80300×10^{17} NP1:φs 190.00000°, δ85.00000°, λ25.00000°. NP2:φs 98.00000°, δ66.00000°, λ174.00000°. Principal axes: T 1.9480, Plg21.0000°, Azm57.0000°; N -0.2910, Plg65.0000°, Azm202.0000°; P -1.6580, Plg13.0000°, Azm321.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **23** 21:27:29.6±1.7, 2.°63N×90.°51E, h16^{km}±10^{km}, mb5.3/93, MS5.0/116, MW5.5 Error ellipse: s-maj=3.9km s-min=2.9km az=214.0*

*DJA **23** 21:27:30.8±0.8, 3.°N±3.°×9.°1E±.°, h18^{km}±7^{km}, M5.5/44, mb5.5/44, mB5.8/36, MLv6.3/6, Mw(mB)5.4/36, Mwp5.3/2*

ISC 23 21:27:29.6±0.5, 2.°58N±0.°03×90.°54E±0.°03, h18^{km}±2^{km}, n828, σ1^{s}66/832, mb5.2/245, MS4.9/198, 34C-46D, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	Banda Aceh	5.56	58	P	Pn	21 28 51.6	+0.1
	2μm,1.0s,21μm						
BSI				S	Sn	21 29 54.1	-0.9
	2μm,1.0s,21μm						
SNSI	Sinabang, Aceh	5.78	92	P	Pn	21 28 53.8	-0.8
SNSI				S	Sn	21 29 54.9	-5.7
MLSI	Meulaboh, Aceh	6.09	74	P	Pn	21 28 59.1	+0.3
	1μm,0.9s,19μm16nm						
MLSI				S	Sn	21 30 05.1	-3.0
	1μm,0.9s,19μm16nm						
TPTI		6.66	84	P	Pn	21 29 06.4	-0.3
TPTI				S	Sn	21 30 12.5	-10
LHMI	Lhok Sumawe	6.91	67	P	Pn	21 29 11.5	+1.4
LHMI				S	Sn	21 30 29.4	+1.0
LHMI	Lhok Sumawe	6.91	67	ePn	Pn	21 29 11.4	+1.4
GSI	Gunungsitoli	7.14	100	P	Pn	21 29 12.4	-0.9
GSI				S	Sn	21 30 25.1	-9.0
GSI	Gunungsitoli	7.14	100	ePn	Pn	21 29 12.6	-0.7
KCSI	Kotacane, Aceh	7.28	82	P	Pn	21 29 16.3	+1.1
KCSI				S	Sn	21 30 39.6	+2.1
TSI	Tuntungan	8.06	83	P	Pn	21 29 26.7	+0.7
TSI				S	Sn	21 30 52.0	-4.8
PBSI	Pulau Batu	8.17	109	P	Pn	21 29 27.6	+0.2
PBSI				S	Sn	21 30 51.2	-8.1
PSI	Prapat	8.38	88	Pn	Pn	21 29 29.6	-0.7
	4.4nm,0.3s,baz=359,slow=2.8,SNR=29						
PSI				Sn	Sn	21 31 02.9	-1.8
	16nm,0.3s,baz=0.0,slow=20,SNR=6.3						
PSI				LR	LR	21 32 47.9	
	comp=Z,8μm,18.7s,baz=270,slow=38						
MNSI	Mandailing Nat	9.21	101	P	Pn	21 29 42.1	+0.4
	479nm,1.1s,6μm						
MNSI				S	Sn	21 31 16.8	-8.1
	479nm,1.1s,6μm						
PBA	Port Blair	9.28	14	eP	Pn	21 29 40.7	-1.9
PBA				eS	Sn	21 31 19.7	-6.9
PBA				AML	AML	21 31 30.1	
	comp=E,2μm,0.3s						
PBA				AML	AML	21 31 30.6	
	comp=N,2μm,0.3s						
PBA	Port Blair	9.28	14	ePn	Pn	21 29 42.0	-0.6
PKDT	Phuket	9.38	55	P	Pn	21 29 43.4	-0.7
	comp=N,654nm,1.4s,comp=N,8μm						
SISI	Saibi	9.39	114	P	Pn	21 29 43.6	-0.5
SISI				S	Sn	21 31 20.6	-8.7
SURT	Suratani	10.37	52	P	Pn	21 29 57.8	+0.2
	comp=N,0.9nm,1.1s,comp=N,12nm						
KULM	Kulim	10.44	75	ePn	Pn	21 29 58.4	-0.2
TRTT	Trang	10.50	60	P	Pn	21 29 58.0	-1.4
	comp=N,221nm,1.4s,comp=N,3μm						
PDSI	Padang	10.51	109	P	Pn	21 29 58.4	-1.1
IPM	Ipoh	10.63	80	ePn	Pn	21 29 60.0	-1.3
PALK	Pallekele	10.85	296	Pn	Pn	21 30 02.5	-1.7
	comp=N,15nm,0.3s,baz=116,slow=14,SNR=97						
PALK				Sn	Sn	21 31 53.0	-12
	comp=N,62nm,0.3s,baz=116,slow=8.2,SNR=13						
PALK				LR	LR	21 33 47.4	
	comp=N,1μm,20.2s,baz=120,slow=35						
PALK	Pallekele	10.85	296	ePn	Pn	21 30 03.5	-0.8
PALK				Sn	Sn	21 31 53.0	-12
PALK	Pallekele	10.85	296	P	Pn	21 30 03.4	-0.8
	SNR=7.1						
PALK	Pallekele	10.85	296	iP	Pn	21 30 03.2	-1.1
	SNR=85						
PALK	Pallekele	10.85	296	iP	Pn	21 30 03.5	-0.8
PPSI	Pulau Pagai	10.85	119	P	Pn	21 30 02.8	-1.4
PPSI				S	Sn	21 31 56.3	-9.0
KRJI	Kerinci	11.86	113	P	Pn	21 30 18.1	-0.1
	comp=N,1μm,1.1s,comp=N,11μm						
KRJI				S	Sn	21 32 25.3	-5.0
	comp=N,1μm,1.1s,comp=N,11μm						
MASI	Maura Aman, Be	13.00	116	P	Pn	21 30 32.3	-1.4
MYKOM	Kota Tinggi	13.32	93	ePn	Pn	21 30 38.3	+0.2
PHET	Kaeng Krachan	13.64	41	P	Pn	21 30 43.2	+0.8
	comp=N,57nm,1.3s,comp=N,707nm						
TPRI	Tanjung Pinang	14.07	96	P	P	21 30 58.1	+2.1
SRDT	SRDT	14.44	35	P	Pn	21 30 52.9	-0.4
	comp=N,293nm,1.3s,comp=N,4μm						
MDSI	Maura Dua	15.33	117	P	Pn	21 31 05.3	0.0
SKHT	Srikalahasti	15.41	317	eP	Pn	21 31 04.6	-1.7
SKHT				IAmb	IAmb	21 31 07.4	
	comp=Z,193nm,1.2s						
SKHT				IVMs_BB	IVMs_BB	21 37 10.6	
	comp=Z,1μm,17.4s						
LWLI	Liwa	15.47	119	P	Pn	21 31 08.8	+1.5
UTHA	Uthaitani	15.60	34	P	Pn	21 31 08.7	0.0
	comp=Z,74nm,1.3s,comp=Z,677nm						
UMPA	Umpang Tak	15.82	31	P	Pn	21 31 09.5	-2.2
	comp=Z,37nm,1.1s,comp=Z,368nm						
COCO	West Island	15.95	157	ePn	Pn	21 31 13.5	+0.1
	comp=Z,467nm,1.1s						
COCO	West Island	15.95	157	iP	Pn	21 31 15.2	+1.9
SRAK	Srakaew	16.06	44	P	P	21 31 22.0	+3.9
KASI	Kota Agung	16.10	120	P	Pn	21 31 16.6	+1.4
KLI	Kotabumi	16.10	117	P	P	21 31 21.4	+2.9
KLI	Kotabumi	16.10	117	P	P	21 31 21.4	+2.9
KLI				pmax	pmax		
	comp=Z,231nm,1.1s						
PPBI	Pangkal Pinang	16.29	107	P	P	21 31 24.0	+3.4
VIS	Vishakhapatnam	16.63	335	iP	P	21 31 23.1	-1.2
VIS				ix	x	21 34 11.1	
BLSI	Bandar Lampung	16.68	118	P	P	21 31 26.0	+1.1
ADKI	Addanki	16.80	322	eP	Pn	21 31 22.5	-1.6
ADKI				IAmb	IAmb	21 31 25.5	
	comp=Z,176nm,0.6s						
ADKI				IVMs_BB	IVMs_BB	21 42 58.7	
	comp=Z,1μm,15.5s						
PVM	Polavaram	17.00	330	eP	Pn	21 31 25.7	-1.0
PVM				IAmb	IAmb	21 31 33.5	
	comp=Z,149nm,1.1s						
PVM				IVMs_BB	IVMs_BB	21 42 36.7	
	comp=Z,812nm,13.8s						
CHLP	Challavanipeta	17.05	339	eP	Pn	21 31 26.4	-0.9
CHLP				IAmb	IAmb	21 31 29.6	
	comp=Z,558nm,1.3s						
CHLP				IVMs_BB	IVMs_BB	21 39 48.3	
	comp=Z,1μm,15.9s						
PBKT	Sadao Pong	17.27	36	P	Pn	21 31 28.8	-1.3
	comp=Z,478nm,1.3s,comp=Z,6μm						
SUKH	Sukhothai	17.29	30	P	Pn	21 31 30.4	+0.1
	comp=Z,78nm,1.3s,comp=Z,781nm						
PHIT	Phitsanulok	17.46	33	P	P	21 31 33.2	-0.3
	comp=Z,304nm,1.1s,comp=Z,3μm						
SRLM	Srisailam	17.66	320	eP	Pn	21 31 34.0	-1.0
SRLM				IAmb	IAmb	21 31 41.1	
	comp=Z,195nm,1.4s						
SRLM				IVMsBB		21 38 02.7	
	comp=Z,1μm,18.0s						
CGJI	Cibinong	17.67	121	P	Pn	21 31 34.2	-0.9
NJS	Nagarjunasagar	17.75	322	eP	Pn	21 31 34.9	-1.1
NJS				IAmb	IAmb	21 31 46.8	
	comp=Z,438nm,1.3s						
NJS				IVMs_BB	IVMs_BB	21 41 39.0	
	comp=Z,1μm,14.6s						
CM01	Chiang Mai Arr	17.77	27	ePn	Pn	21 31 34.5	-1.7
HMDM	Hanimaadhoo	17.79	284	ePn	Pn	21 31 35.8	-0.8
	comp=Z,243nm,1.1s						
CM31	Chiang Mai Arr	17.80	27	ePn	Pn	21 31 36.5	-0.1
CMAR	Chiang Mai Arr	17.80	27	P	Pn	21 31 36.0	-0.6
	comp=Z,0.2nm,0.3s,baz=220,slow=12,SNR=78						
CMAR				S	S	21 35 03.3	+1.9
	comp=Z,0.1nm,0.3s,baz=230,slow=21,SNR=2.7						
CMAR				LR	LR	21 39 07.7	
	comp=Z,2μm,18.6s,baz=217,slow=39						
CMAR	Chiang Mai Arr	17.80	27	P	Pn	21 31 36.0	-0.6
CMAR				MLR	MLR		
	comp=Z,2μm,18.6s						
SBJI	Serang	17.81	119	P	P	21 31 38.3	+0.9
URV	Uravakonda	17.96	314	eP	Pn	21 31 37.8	-0.9
URV				IAmb	IAmb	21 31 49.8	
	comp=Z,154nm,1.0s						
URV				IVMs_BB	IVMs_BB	21 37 43.7	
	comp=Z,901nm,21.4s						
CHTO	Chiang Mai	18.11	26	P	Pn	21 31 39.8	-0.6
	comp=Z,430nm,1.8s,comp=Z,11μm						
CHTO	Chiang Mai	18.11	26	ePn	Pn	21 31 39.5	-0.9
	comp=Z,472nm,1.9s						
CHTO	Chiang Mai	18.11	26	P	P	21 31 40.1	-0.6
	SNR=48						
CHTO	Chiang Mai	18.11	26	eP	Pn	21 31 39.5	-0.9
CHTO				pmax	pmax		
	comp=Z,472nm,1.9s						
DBJI	Dramaga	18.55	119	P	Pn	21 31 46.4	+0.5
SKJI	Sukabumi	18.61	121	P	Pn	21 31 46.9	+0.3
HYB	Hyderabad	18.87	322	iP	Pn	21 31 50.0	+0.3
	comp=Z,600nm,1.4s						
HYB				e		21 34 13.0	
HYB	Hyderabad	18.87	322	eP	P	21 31 48.8	-0.3
HYB				IAmb	IAmb	21 31 50.0	
	comp=Z,614nm,0.2s						
HYBB	Hyderabad (bro	18.87	322	eP	P	21 31 48.4	-0.7
HYBB				IAmb	IAmb	21 31 50.7	
	comp=Z,280nm,1.2s						
HYBB				IVMs_BB	IVMs_BB	21 44 08.6	
	comp=Z,1μm,4.9s						
CMAI	Chiengmai2	19.14	25	P	Pn	21 31 54.9	+1.8
	comp=Z,904nm,1.4s,comp=Z,148μm						
LEM	Lembang	19.44	119	P	Pn	21 31 56.9	+0.1
	comp=Z,1.4nm,0.3s,baz=293,slow=2.1,SNR=13						
LEM				S	Sn	21 35 33.4	-1.4
	comp=Z,2.1nm,0.3s,baz=345,slow=20,SNR=1.8						
LEM				LR	LR	21 38 36.0	
	comp=Z,1μm,18.4s,baz=285,slow=34						
LEM	Lembang	19.44	119	P	Pn	21 31 56.6	-0.2
SKNT	Sakolnakorn	19.47	42	P	P	21 31 55.6	-0.1
	comp=Z,115nm,0.9s,comp=Z,2μm						
RPR	Rampur	19.57	327	eP	Pn	21 31 57.1	-1.0
RPR				IAmb	IAmb	21 31 60.0	
	comp=Z,500nm,1.4s						
RPR				IVMs_BB	IVMs_BB	21 42 24.6	
	comp=Z,822nm,14.3s						
NONG	Nongkai	19.73	38	P	Pn	21 31 59.5	-0.6
	comp=Z,136nm,1.1s						
KSM	Kuching	19.79	93	eP	Pn	21 32 01.3	+0.6
	comp=Z,129nm,1.2s						
JCJI	Jatiwangi	19.86	117	P	Pn	21 32 04.0	+2.3
CISI	Cisompet, Garu	19.96	120	P	P	21 32 02.1	+0.9
CISI	Cisompet, Garu	19.96	120	eP	Pn	21 32 02.3	-0.6
	comp=Z,512nm,1.3s						
BRDH	Bariadhala	20.00	3	P	P	21 32 00.2	-1.2
	comp=Z,72nm,0.4s,baz=202,slow=10,SNR=2.8						
SRSP	Sriramsagar	20.16	325	eP	P	21 32 03.2	0.0
SRSP				IAmb	IAmb	21 32 14.5	
	comp=Z,430nm,1.4s						
SRSP				IVMsBB		21 37 28.8	
	comp=Z,569nm,7.4s						
BELO	BELONIA	20.56	2	eP	P	21 32 07.7	+0.2
BELO				IAmb	IAmb	21 32 16.5	
KLRI	Killari	20.59	319	eP	P	21 32 07.8	-0.1
KLRI				IAmb	IAmb	21 32 13.9	
	comp=Z,270nm,1.2s						
KLRI				IVMs_BB	IVMs_BB	21 41 11.5	
	comp=Z,2μm,15.6s						
DGAR	Diego Garcia	20.60	241	eP	Pn	21 32 10.8	+0.5
	comp=Z,993nm,1.7s						
DGAR				LR	LR		
	comp=Z,1μm,21.0s						
DGAR	Diego Garcia	20.60	241	eP	Pn	21 32 10.8	+0.5
DGAR				pmax	pmax		
	comp=Z,993nm,1.7s						
DGAR				MLR	MLR		
	comp=Z,1μm,21.0s						
CMJI	Cimerak	20.62	120	P	P	21 32 08.5	+0.3
H08S2	Diego Garcia H	20.68	240	T	T	21 53 11.2	
	baz=60,slow=75,SNR=998						
H08S3	Diego Garcia H	20.68	240	T	T	21 53 08.6	
	baz=60,slow=75,SNR=2313						
H08S1	Diego Carcia H	20.69	240	T	T	21 53 13.1	
	baz=60,slow=75,SNR=164						
KPJI	Karang Pucung	20.83	118	P	P	21 32 11.7	+1.2
STKI	Sintang	21.08	96	P	P	21 32 15.1	+1.9
BOK	Bokaro	21.56	348	eP	P	21 32 18.1	-0.2
NGP	Nagpur	21.58	330	eP	P	21 32 17.8	-0.8
NGP				ex	x	21 36 11.9	
SBUM	Sibu	21.66	90	eP	P	21 32 20.7	+1.2
	comp=Z,118nm,1.3s						
PBKI	Pangkalan Bun	21.76	104	P	P	21 32 25.1	+4.5
SMRI	Semarang	22.05	116	P	P	21 32 25.3	+1.7
SMRI	Semarang	22.05	116	eP	P	21 32 25.0	+1.3
	comp=Z,440nm,1.1s						
POO	Poona	22.77	315	eP	P	21 32 33.3	+1.9
WOJI	Wonogiri, Jawa	22.82	117	P	P	21 32 43.6	+12
SHL	Shillong	22.89	3	eP	P	21 32 33.2	+0.5
SHL				IAmb	IAmb	21 32 43.2	
	comp=Z,78nm,0.9s						
SHL				ex	x	21 36 52.0	
SHL	Shillong	22.89	3	eP	P	21 32 32.5	-0.2
	comp=Z,208nm,1.2s						
SHL				eSn	Sn	21 36 51.9	-5.5
SHL	Shillong	22.89	3	eP	P	21 32 32.5	-0.2
SHL				pmax	pmax		
	comp=Z,208nm,1.2s						
NGJI	Ngawi	23.10	115	P

comp=Z,182nm,1.2s
GUN Gumba 25.58 350 *e*P **P 21 32 59.4 +1.2**
comp=Z,335nm,1.1s
KKM Kota Kinabalu 25.83 82 *e*P **P 21 33 01.6 +1.2**
comp=Z,90nm,1.2s
GKN Gorkha 25.90 348 *e*P **P 21 33 02.3 +1.4**
comp=Z,239nm,1.1s
KOLN Koldanda 25.91 346 *e*P **P 21 33 02.4 +1.3**
comp=Z,451nm,1.3s
JAGI Jajag, Banyuwa 25.98 115 *e*P **P 21 33 03.3 +1.7**
comp=Z,51nm,0.9s
PYUN Piuthan 26.38 345 *e*P **P 21 33 06.5 +1.2**
comp=Z,586nm,1.0s
DANN Dangsing 26.43 346 *e*P **P 21 33 06.8 +0.9**
comp=Z,514nm,1.1s
LSA Lhasa 26.98 1 P **P 21 33 12.8 +1.8**
LSA pP **sP 21 33 18.4 -0.2**
LSA pmax pmax
comp=Z,59nm,1.1s
LSA pmax pmax
comp=Z,160nm,6.1s
LSA LR LR
comp=Z,2μm,18.1s
LSA LR LR
comp=Z,3μm,15.5s
LSA LR LR
comp=Z,4μm,18.1s
LSA Lhasa 26.98 1 *e*P **P 21 33 12.1 +1.1**
comp=Z,117nm,0.9s
LSA LR LR
comp=Z,4μm,19.0s
LSA Lhasa 26.98 1 *i* P **P 21 33 13.3 +2.3**
SNR=24
LSA Lhasa 26.98 1 *e*P **P 21 33 12.1 +1.1**
LSA pmax pmax
comp=Z,117nm,0.9s
LSA MLR MLR
comp=Z,4μm,19.0s
MYLDM Lahad Datu 28.01 84 *e*P **P 21 33 21.8 +1.8**
comp=Z,121nm,1.1s
GYA Guiyang 28.34 32⇑*i*P **P 21 33 23.6 +0.8**
GYA PP **PnPn 21 34 17.9 +6.1**
GYA S **S 21 38 09.3 +0.4**
GYA pmax pmax
comp=Z,40nm,1.0s
GYA pmax pmax
comp=Z,230nm,9.3s
GYA LR LR
comp=Z,3μm,18.0s
GYA LR LR
comp=Z,3μm,15.8s
GYA LR LR
comp=Z,2μm,20.2s
MPSI Mapaga 29.43 94 P **P 21 33 33.3 +0.7**
DDI Dehra Dun 30.02 338 *e*P **P 21 33 38.5 +0.8**
DDI IAmb IAmb 21 33 40.0
comp=Z,51nm,1.0s
GZH Guangzhou 30.06 45 P P 21 33 44.5 +6.5
GZH S S 21 38 49.5 +14
GZH LR LR
comp=N,4μm,16.5s
GZH LR LR
comp=E,2μm,16.3s
KAPI Kappang PFAKE 21 33 50.0 +11
KAPI LR LR
comp=Z,2μm,19.0s
CD2 Chengdu 30.82 23 P **P 21 33 45.3 +0.6**
CD2 pmax pmax
comp=Z,40nm,0.9s
SMLA Simla 31.08 337 *e*P **P 21 33 48.1 +1.2**
SMLA IAmb IAmb 21 33 57.7
comp=Z,415nm,0.1s
MRSI Marisa 31.46 93 P **P 21 33 50.7 +0.2**
TGY Tagaytay City 32.12 67 P **P 21 33 57.6 +1.2**
comp=Z,85nm,0.3s,baz=301,slow=3.5,SNR=6.6
TGY LR LR 21 48 02.4
comp=Z,846nm,18.9s,baz=286,slow=38
DHRM DHARAMSHALA 32.41 337 *e*P **P 21 33 57.5 -1.4**
ENH Enshi 32.87 31 *e*P **P 21 34 02.8 0.0**
comp=Z,53nm,0.8s
ENH LR LR
comp=Z,4μm,19.0s
KMSI Cibinong 33.48 93 P P 21 34 18.2 +10
NIL Nilore 34.88 334 *e*P **P 21 34 20.6 +0.4**
comp=Z,436nm,1.1s
NIL LR LR
comp=Z,497nm,20.0s
NIL Nilore 34.88 334 *e*P **P 21 34 20.6 +0.4**
NIL pmax pmax
comp=Z,436nm,1.1s
NIL MLR MLR
comp=Z,497nm,20.0s
QZH Quanzhou 35.00 48⇑*i*P **P 21 34 21.1 -0.2**
QZH S **S 21 39 56.3 +3.6**
QZH pmax pmax
comp=Z,340nm,6.2s
QZH LR LR
comp=Z,4μm,15.8s
QZH LR LR
comp=Z,2μm,16.2s
QZH LR LR
comp=Z,2μm,16.4s
DAV Davao City (W) 35.19 81 LR LR 21 49 57.9
comp=Z,1μm,18.8s,baz=14,slow=38
DAV Davao City (W) 35.19 81 PFAKE 21 34 40.0 +17
DAV LR LR
comp=Z,851nm,19.0s
BATI Baumata 35.34 112 LR LR 21 50 12.3
comp=Z,2μm,19.1s,baz=96,slow=39
LZH Lanzhou 35.54 19⇑P **P 21 34 25.9 -0.1**
LZH pP sP 21 34 31.9 -1.8
LZH sP pP 21 34 35.0 +3.5
LZH PP **PP 21 35 45.8 -1.0**
LZH S **S 21 39 57.5 -3.5**
LZH sS sS 21 40 11.0 +0.9
LZH SS **SnSn 21 42 21.9 +0.2**
LZH pmax pmax
comp=Z,75nm,1.3s
LZH pmax pmax
comp=Z,230nm,4.3s
LZH LR LR
comp=Z,3μm,14.0s
LZH LR LR
comp=Z,4μm,14.6s
LZH LR LR
comp=Z,4μm,15.6s
XAN Xi'an 35.69 27 P **P 21 34 26.3 -0.9**
XAN pP sP 21 34 37.0 +2.1
XAN sP pP 21 34 42.6 +10
XAN S **S 21 39 59.0 -4.2**
XAN SS **SnSn 21 42 25.3 0.0**
XAN pmax pmax
comp=Z,32nm,0.6s
XAN pmax pmax
comp=Z,220nm,5.3s
XAN LR LR
comp=Z,2μm,17.7s
XAN LR LR
comp=Z,3μm,17.7s
XAN LR LR
comp=Z,2μm,14.2s
SOEI Soe 35.76 111 *e*P **P 21 34 28.9 +0.8**
comp=Z,143nm,1.4s
MSEY Mahe Island 35.77 258 PFAKE 21 34 40.0 +12
MSEY LR LR
comp=Z,2μm,22.0s
TWG Pinlang 35.79 53 *e*P **P 21 34 29.3 +1.2**
TWG *ep*P **P 21 34 30.8 +2.7**
WHN Wuhan 35.79 37⇓P **P 21 34 29.4 +1.4**
WHN S **S 21 40 05.4 +0.7**
WHN pmax pmax
comp=Z,170nm,1.2s
WHN LR LR
comp=Z,1μm,10.1s
WHN LR LR
comp=Z,4μm,11.4s
WHN LR LR
comp=Z,4μm,13.1s
SSLB Suanglung 36.18 52 *e*P **P 21 34 33.7 +2.2**
comp=Z,75nm,1.3s
YULB Yu-li 36.25 53 *e*P **P 21 34 33.2 +1.1**
comp=Z,72nm,1.1s
MBWA Marble Bar 37.06 131 PFAKE 21 34 50.0 +11
MBWA LR LR
comp=Z,950nm,21.0s
LBMI Labuha 37.09 94 P **P 21 34 39.1 -0.2**

WSAR Wadi Sarin 37.10 306 P **P 21 34 40.0 +0.7**
comp=Z,24nm,1.2s,baz=154,slow=9.8,SNR=5.2
WSAR LR LR 21 47 30.5
comp=Z,1μm,21.2s,baz=142,slow=32
WSAR Wadi Sarin 37.10 306 P **P 21 34 39.9 +0.5**
TATO Taipei 37.21 51 PFAKE 21 34 50.0 +10
TATO LR LR
comp=Z,2μm,22.0s
KBL Kabul 37.58 330 *e*P **P 21 34 44.0 +0.6**
comp=Z,47nm,1.1s
KBL Kabul 37.58 330 *e*P **P 21 34 44.0 +0.6**
KBL pmax pmax
comp=Z,47nm,1.1s
GTA Gaotai 37.62 12 P **P 21 34 44.3 +0.7**
GTA pP sP 21 34 48.6 -2.7
GTA sP pP 21 34 51.8 +2.7
GTA S **S 21 40 30.4 -2.2**
GTA pmax pmax
comp=Z,44nm,1.2s
GTA pmax pmax
comp=Z,230nm,4.8s
GTA LR LR
comp=Z,1μm,19.1s
GTA LR LR
comp=Z,2μm,17.7s
GTA LR LR
comp=Z,2μm,19.6s
BIDO Bidbid 37.64 306 P **P 21 34 46.0 +2.1**
SNR=7.8
KSH Kashi 39.08 342 P **P 21 34 54.3 -1.6**
KSH pP sP 21 35 00.5 -3.2
KSH PP **PnPn 21 36 28.6 +0.4**
KSH S **S 21 40 51.6 -3.1**
KSH sS sS 21 41 03.4 -0.4
KSH SS **SnSn 21 43 39.8 -7.4**
KSH pmax pmax
comp=Z,97nm,1.2s
KSH LR LR
comp=Z,3μm,13.7s
KSH LR LR
comp=Z,5μm,14.0s
KSH LR LR
comp=Z,2μm,17.0s
SOHO SOHO 39.21 306 *i* P **P 21 34 58.2 +1.1**
SNR=8.1
NJ2 Nanjing 39.60 39 *e*P **P 21 35 01.4 +1.2**
NJ2 sP **sP 21 35 07.4 -0.6**
NJ2 PP **PnPn 21 36 40.5 +6.1**
NJ2 S **S 21 41 10.8 +8.3**
NJ2 pmax pmax
comp=Z,31nm,1.5s
NJ2 pmax pmax
comp=Z,340nm,4.6s
NJ2 LR LR
comp=Z,2μm,16.3s
NJ2 LR LR
comp=Z,3μm,16.8s
NJ2 LR LR
comp=Z,3μm,15.7s
ALNE Al Ain 39.81 305 *i* P **P 21 35 03.0 +0.8**
SNR=7.9
UOSS Minazif 39.86 307 *e*P **P 21 35 03.3 +0.8**
comp=Z,16nm,1.1s
UOSS Minazif 39.86 307 P **P 21 35 04.6 +2.0**
HATD Hatta, Dubai 39.86 307 P **P 21 35 03.8 +1.2**
MSFE Esma-Masafi 40.09 308 P **P 21 35 06.3 +1.8**
FITZ Fitzroy Crossi 40.22 122 LR LR 21 52 57.6
comp=Z,552nm,19.2s,baz=308,slow=38
SFK Sufi-Kurgan 40.34 340 *i* P **P 21 35 07.4 +0.9**
SFK pmax pmax
comp=Z,179nm,1.1s
ASUD Al Ashush, Dub 40.41 306 P **P 21 35 07.3 +0.2**
SSE Sheshan 40.51 42 P **P 21 35 09.4 +1.6**
SSE S **S 21 41 16.9 +0.8**
SSE pmax pmax
comp=Z,13nm,1.0s
SSE pmax pmax
comp=Z,230nm,3.0s
SSE LR LR
comp=Z,1μm,17.8s
SSE LR LR
comp=Z,710nm,18.7s
NRN Naryn 40.83 343 *e*P **P 21 35 11.5 +0.8**
comp=Z,48nm,1.1s
NRN Naryn 40.83 343 *e*P **P 21 35 11.5 +0.8**
NRN pmax pmax
comp=Z,48nm,1.1s
WMQ Urumqi 41.14 357 P **P 21 35 14.0 +1.1**
WMQ sP sP 21 35 22.1 +1.4
WMQ PP **PnPn 21 36 52.8 +0.3**
WMQ PcP **PcP 21 37 09.3 -2.9**
WMQ S **S 21 41 24.0 -1.3**
WMQ sS sS 21 41 36.3 +1.8
WMQ pmax pmax
comp=Z,140nm,1.3s
WMQ pmax pmax
comp=Z,560nm,3.8s
WMQ LR LR
comp=Z,4μm,18.7s
WMQ LR LR
comp=Z,4μm,17.1s
WMQ LR LR
comp=Z,4μm,22.9s
TIA Tai'an 41.51 33 P **P 21 35 16.5 +0.5**
TIA PP **PP 21 36 51.3 -0.8**
TIA S **S 21 41 33.1 +2.2**
TIA pmax pmax
comp=Z,16nm,1.2s
TIA pmax pmax
comp=Z,130nm,3.7s
TIA LR LR
comp=Z,640nm,17.7s
TIA LR LR
comp=Z,460nm,14.1s
TIA LR LR
comp=Z,460nm,18.6s
SHLS Shalkode 41.59 348⇓*i*P **P 21 35 16.3 -0.4**
comp=Z,18nm,1.0s
SHLS *e*S **S 21 41 32.1 -0.1**
KZA Kyzart 41.65 343 P **P 21 35 18.6 +1.1**
SNR=9.2
UZB Uzynbulak 41.67 347 *i* P **P 21 35 17.9 +0.5**
comp=Z,8.5nm,1.2s
UZB *e*S **S 21 41 35.0 +1.5**
SATY Saty 41.73 347 *e*P **P 21 35 18.6 +0.7**
comp=Z,18nm,0.9s
SATY *e*S **S 21 41 35.9 +1.7**
SATY LR LR 21 55 29.5
comp=Z,271nm,14.9s
BTO Baotou 41.75 22 *e*P **P 21 35 16.6 -1.4**
PDGK Podgornoye 41.75 348 *i* P **P 21 35 18.2 +0.2**
PDGK pmax pmax
comp=Z,107nm,1.4s
ZHN Zhinishke 41.83 347 *e*P **P 21 35 19.2 +0.6**
comp=Z,5.1nm,1.1s
KNRA Kununurra 41.93 117 P **P 21 35 19.6 -0.1**
baz=42,SNR=4.7
UCH Uchtor 42.00 342 P **P 21 35 21.2 +0.7**
SNR=28
KPKS Kokpek 42.05 347⇓*i*P **P 21 35 20.8 +0.3**
comp=Z,14nm,1.0s
MDOK Medeo 42.16 345 *i* P **P 21 35 22.2 +0.8**
comp=Z,356nm,2.6s
MDOK *e*S **S 21 41 42.0 +1.3**
MDOK LR LR 21 54 30.1
comp=Z,502nm,14.7s
AML Almaoashu 42.17 341 P **P 21 35 22.8 +1.0**
SNR=20
AAA Alma-Ata 42.23 345 LR LR 21 54 35.7
comp=Z,476nm,16.1s
AAA Alma-Ata 42.23 345 *e*P **P 21 35 21.6 -0.3**
AAA *e*S **S 21 41 40.8 -0.8**
AAA pmax pmax
comp=Z,200nm,2.7s
AAA smax smax
comp=E,600nm,6.3s
KBK Karagaybulak 42.26 343 P **P 21 35 23.8 +1.5**
SNR=29
TKM2 Tokmak 2 42.32 344 P **P 21 35 23.3 +0.5**
SNR=18
TKM2 Tokmak 2 42.32 344 *i* P **P 21 35 23.1 +0.3**
TKM2 pmax pmax
comp=Z,102nm,1.2s
AAK Ala-Archa 42.38 342 *i* P **P 21 35 23.5 +0.3**
AAK pmax pmax
comp=Z,91nm,1.2s

FRU Bishkek 42.52 343 *e*P **P 21 35 25.0 +0.8**
FRU *e* 21 35 35.0
FRU *e* 21 37 10.0
FRU *e* 21 37 31.0
FRU pmax pmax
comp=Z,150nm,1.8s
FRU MLR MLR
comp=E,3μm,16.0s
HHC Hu-ho-hao-te 42.56 24 *e*P **P 21 35 25.8 +1.2**
HHC pP sP 21 35 30.3 -2.1
HHC PP **PP 21 37 07.8 +4.3**
HHC S **S 21 41 48.6 +2.1**
HHC SS **SS 21 44 52.8 -3.9**
HHC ScS **ScS 21 45 24.4 -1.3**
HHC pmax pmax
comp=E,58nm,1.1s
HHC pmax pmax
comp=E,160nm,5.4s
HHC LR LR
comp=E,680nm,16.3s
HHC LR LR
comp=E,2μm,16.9s
HHC LR LR
comp=E,540nm,17.1s
EKS2 Erkin-Say 42.62 342 P **P 21 35 26.1 +0.9**
SNR=20
MNAS Manas 42.88 340 *i* P **P 21 35 27.7 +0.4**
MNAS pmax pmax
comp=Z,118nm,1.9s
USP Ospenovka 42.95 343 P **P 21 35 28.2 +0.5**
SNR=22
KUU Kurty 43.02 345⇓*i*P **P 21 35 28.0 -0.2**
comp=Z,40nm,1.1s
KUU *e*S **S 21 41 53.9 +0.8**
MTN Manton Dam 43.12 112 P **P 21 35 28.6 -0.7**
baz=43,SNR=3.8
H01W3 Cape Leeuwin H 43.35 151 T T 22 21 40.5
baz=326,slow=75,SNR=201
H01W2 Cape Leeuwin H 43.36 151 T T 22 21 29.5
baz=326,slow=75,SNR=384
H01W1 Cape Leeuwin H 43.37 151 T T 22 21 51.4
baz=326,slow=75,SNR=315
NWAO Narrogin (SRO) 43.41 147 P **P 21 35 31.5 0.0**
comp=Z,13nm,1.0s,baz=172,slow=8.6,SNR=3.8
NWAO Narrogin (SRO) 43.41 147 *e*P **P 21 35 32.3 +0.8**
comp=Z,71nm,1.4s
NWAO LR LR
comp=Z,1μm,21.0s
JOW Kunigami 43.44 53 *e*P **P 21 35 31.7 -0.1**
comp=Z,68nm,1.3s
IUG Iuzhnay 43.47 338⇓*i*P **P 21 35 32.7 +0.8**
comp=Z,17nm,1.0s
BJT Baijiatuau 43.91 29 *e*P **P 21 35 36.8 +1.4**
comp=Z,96nm,1.4s
BJT LR LR
comp=Z,2μm,19.0s
BJT Baijiatuau 43.91 29 *e*P **P 21 35 36.8 +1.4**
BJT pmax pmax
comp=Z,96nm,1.4s
BJT MLR MLR
comp=Z,2μm,19.0s
BJI Beijing 43.93 29⇑*i*P **P 21 35 37.0 +1.4**
BJI S **S 21 42 11.9 +5.5**
BJI pmax pmax
comp=Z,64nm,1.4s
BJI LR LR
comp=Z,3μm,20.5s
BJI LR LR
comp=Z,3μm,19.5s
BJI LR LR
comp=Z,1μm,23.0s
KK31 Karatay Array 44.12 339 *e*P **P 21 35 37.2 +0.2**
KK31 *ep*P **P 21 35 37.5 +0.4**
KK31 Karatay Array 44.12 339 *e*P **P 21 35 37.2 +0.2**
KK31 *e**PP **P 21 35 37.5 +0.4**
KKAR Karatay Array 44.12 339 *e*P **P 21 35 37.0 -0.1**
KKAR Karatay Array 44.12 339 *e*P **P 21 35 37.0 -0.1**
BRLS Borolday 44.30 338 *i* S **S 21 42 11.2 -0.7**
KDU Kakadu 44.31 111 P **P 21 35 39.4 +0.4**
baz=44,SNR=6.6
MK01 Makanchi Array 44.59 352 *e*P **P 21 35 40.3 -0.5**
MK31 Makanchi Array 44.62 352 *e*P **P 21 35 40.9 -0.1**
MK31 Makanchi Array 44.62 352 *i* P **P 21 35 40.7 -0.3**
MK31 pmax pmax
comp=Z,63nm,1.1s
MKAR Makanchi Array 44.62 352 P **P 21 35 40.9 -0.1**
comp=Z,18nm,0.8s,baz=170,slow=8.8,SNR=126
MKAR LR LR 21 57 57.5
comp=Z,670nm,18.6s,baz=162,slow=41
MKAR Makanchi Array 44.62 352 *e*P **P 21 35 40.9 -0.1**
MKAR *ep*P **P 21 35 41.0 0.0**
MAKZ Makanchi 44.68 352 *e*P **P 21 35 41.2 -0.3**
MAKZ *es*P **P 21 35 41.4 -0.1**
MAKZ Makanchi 44.68 352 *i* P **P 21 35 40.7 -0.8**
MAKZ pmax pmax
comp=Z,54nm,1.2s
BTLS Baital 44.71 343⇓*i*P **P 21 35 41.6 -0.1**
comp=Z,6.4nm,0.8s
BTLS LR LR 21 56 24.1
comp=Z,209nm,15.8s
ZSN Zaisan 44.96 355⇓*i*P **P 21 35 44.8 +1.1**
comp=Z,4.0nm,0.9s
ZSN *e*S **S 21 42 23.5 +2.2**
WRKA Warakurna 45.76 129 P **P 21 35 50.4 0.0**
baz=46,SNR=13
DL2 Dalian 45.93 34⇑*i*P **P 21 35 51.4 -0.1**
DL2 S **S 21 42 37.8 +2.4**
DL2 pmax pmax
comp=Z,69nm,1.3s
DL2 pmax pmax
comp=Z,230nm,6.4s
DL2 LR LR
comp=Z,950nm,16.6s
DL2 LR LR
comp=Z,1μm,16.6s
DL2 LR LR
comp=Z,740nm,19.6s
GEYT Alibeck 46.03 324 P **P 21 35 53.0 +0.6**
comp=Z,15nm,0.9s,baz=147,slow=8.5,SNR=57
GEYT LR LR 21 55 52.7
comp=Z,865nm,20.6s,baz=170,slow=37
GYA0B ALIBECK ARRAY 46.03 324 *e*P **P 21 35 52.7 +0.3**
GYA0B *ep*P **P 21 35 52.9 +0.5**
DGZ Jazzator, Alta 47.02 357 *i* P **P 21 36 00.9 +0.8**
DGZ pmax pmax
comp=Z,9.0nm,2.0s
DAMY Dhamar 47.05 287 *e*P **P 21 36 02.5 +1.4**
comp=Z,95nm,1.4s
SONM Songino Array 47.11 15 P **P 21 36 01.6 +0.8**
comp=Z,85nm,0.8s,baz=195,slow=8.7,SNR=352
SONM LR LR 21 58 34.4
comp=Z,690nm,19.8s,baz=198,slow=40
SONA1 Songino Array 47.13 15 *e*P **P 21 36 01.7 +0.8**
ULN Ulaanbaatar 47.31 15 *e*P **P 21 36 02.5 +0.2**
ULN *ep*P **P 21 36 02.9 +0.5**
ULN LR LR
comp=Z,1μm,22.0s
ULN Ulaanbaatar 47.31 15 P **P 21 36 03.2 +0.8**
SNR=23
ULN Ulaanbaatar 47.31 15*c i*P **P 21 36 02.7 +0.3**
ULN pmax pmax
comp=Z,84nm,1.7s
OPO Ambohidratompo 47.55 242 P **P 21 36 04.6 -0.2**
comp=Z,8.3nm,0.8s,baz=49,slow=5.9,SNR=9.0
OPO LR LR 21 51 16.9
comp=Z,336nm,21.4s,baz=45,slow=30
ABPO Ambohimpanom 47.69 241 *e*P **P 21 36 06.1 +0.3**
comp=Z,51nm,1.0s
ABPO LR LR
comp=Z,267nm,22.0s
ABPO Ambohimpanom 47.69 241 *e*P **P 21 36 06.1 +0.3**
ABPO pmax pmax
comp=Z,51nm,1.0s
ABPO MLR MLR
comp=Z,267nm,22.0s
TJN Taejon 47.79 41⇓*e*P **P 21 36 05.8 -0.3**
OTUK Ortayu 48.12 344 *i* P **P 21 36 08.7 +0.2**
OTUK pmax pmax
comp=Z,99nm,0.9s
RAYN Ar Rayn 48.26 299 *e*P **P 21 36 09.5 -0.5**
RAYN LR LR
comp=Z,2μm,20.0s
RAYN Ar Rayn 48.26 299 *i* P **P 21 36 09.8 -0.3**
SNR=16
RAYN Ar Rayn 48.26 299 P **P 21 36 09.5 -0.5**
JNU Nakatsue 48.44 47 P **P 21 36 11.4 +0.1**

comp=Z,14nm,0.9s,baz=167,slow=4.1,SNR=6.3
JNU LR LR 21 56 52.5
comp=Z,1μm,20.7s,baz=292,slow=36
JNU Nakatsue 48.44 47 *e*P **P 21 36 09.6 -1.7**
comp=Z,24nm,1.0s
SEM Semipalatinsk 48.45 351 LR LR 21 57 05.8
comp=Z,308nm,16.8s
HVS Khovu-Aksy 48.46 3⇑*i*P **P 21 36 12.4 +1.3**
HVS pmax pmax
comp=Z,70nm,0.9s
WRA Warramunga Arr 48.46 120 P **P 21 36 11.6 0.0**
comp=Z,29nm,0.7s,baz=296,slow=8.7,SNR=123
WRA Warramunga Arr 48.46 120 P **P 21 36 11.6 0.0**
WRA pmax pmax
comp=Z,33nm,0.9s
WRAB Tennant Creek 48.46 120 *e*P **P 21 36 11.9 +0.3**
comp=Z,70nm,1.1s
WRAB LR LR
comp=Z,528nm,22.0s
WRAB Tennant Creek 48.46 120⇓*i*P **P 21 36 11.6 0.0**
WRAB pmax pmax
comp=Z,55nm,1.0s
WB2 Warramunga Arr 48.47 120 *e*P **P 21 36 11.8 +0.1**
KS15 Wonju Array Si 48.76 40 *e*P **P 21 36 14.5 +0.9**
KSAR Wonju Array Be 48.76 40 P **P 21 36 13.6 0.0**
KSAR Wonju Array Be 48.76 40 P **P 21 36 13.6 0.0**
FORT Forrest 48.76 136 P **P 21 36 14.6 +1.0**
baz=49,SNR=20
FORT Forrest 48.76 136 *e*P **P 21 36 14.5 +0.8**
FORT *es*P **P 21 36 14.7 +1.0**
KS01 Wonju Array Si 48.78 40 *e*P **P 21 36 12.4 -1.4**
KS01 *es*P **P 21 36 13.6 -0.2**
KSRS Korea Array 48.79 40 P **P 21 36 13.6 -0.2**
comp=Z,19nm,1.1s,baz=229,slow=8.3,SNR=35
KSRS LR LR 21 59 07.5
comp=Z,770nm,18.5s,baz=240,slow=39
ZAK Zakamensk 48.84 11 *e*P **P 21 36 14.0 -0.1**
ZAK pmax pmax
comp=Z,15nm,1.2s
KURBB Kurchatov Arra 48.94 350 P **P 21 36 14.2 -0.5**
comp=Z,21nm,0.8s,baz=173,slow=7.3,SNR=184
KURK Kurchatov 49.01 350 *e*P **P 21 36 14.9 -0.4**
KURK *es*P **P 21 36 15.0 -0.2**
KURK LR LR
comp=Z,3μm,20.0s
KURK Kurchatov 49.01 350 P **P 21 36 15.4 +0.1**
SNR=34
KURK Kurchatov 49.01 350*de*P **P 21 36 14.8 -0.4**
KURK pmax pmax
comp=Z,30nm,0.8s
SNY Shenyang 49.03 33 ⇑P **P 21 36 15.5 -0.1**
SNY S **S 21 43 20.3 +0.9**
SNY pmax pmax
comp=Z,45nm,1.4s
SNY pmax pmax
comp=Z,280nm,5.7s
SNY LR LR
comp=Z,1μm,15.9s
SNY LR LR
comp=Z,2μm,15.9s
SNY LR LR
comp=Z,1μm,17.3s
ASAR Alice Springs 49.60 124 P **P 21 36 20.2 -0.1**
comp=Z,6.4nm,0.9s,baz=296,slow=8.0,SNR=37
ASAR LR LR 21 55 32.6
comp=Z,371nm,21.9s,baz=298,slow=34
AS31 Alice Springs 49.60 124 *e*P **P 21 36 20.5 +0.2**
comp=Z,3.1nm,0.8s
BRZS Berezniki 49.61 345⇓*i*P **P 21 36 19.8 -0.1**
comp=Z,15nm,1.0s
BRZS *e*S **S 21 43 28.7 +1.4**
AS01 Alice Springs 49.64 124 *e*P **P 21 36 19.8 -0.8**
AS01 *es*P **P 21 36 20.0 -0.6**
MOY Mondy 49.69 9 *e*P **P 21 36 21.8 +1.2**
MOY pmax pmax
comp=Z,39nm,2.2s
TLY Talaya 50.15 11 LR LR 22 01 02.9
comp=Z,712nm,19.2s,baz=192,slow=40
TLY Talaya 50.15 11 *e*P **P 21 36 25.1 +1.1**
comp=Z,37nm,1.4s
TLY LR LR
comp=Z,971nm,21.0s
TLY Talaya 50.15 11 P **P 21 36 25.7 +1.8**
SNR=8.2
TLY Talaya 50.15 11*c i*P **P 21 36 25.4 +1.4**
TLY *e*S **S 21 43 37.4 +2.6**
TLY *e*SS **SS 21 47 05.0 -3.4**
TLY pmax pmax
comp=Z,22nm,1.1s
TLY MLR MLR
comp=Z,656nm,16.0s
IRK Irkutsk 50.80 11 *e*P **P 21 36 29.4 +0.5**
IRK pmax pmax
comp=Z,51nm,1.8s
CN2 Changchun 51.39 32 *e*P **P 21 36 33.0 -0.4**
CN2 *es*P sP 21 36 40.0 -1.2
CN2 PP **PP 21 38 31.3 +0.6**
CN2 *e*S **S 21 43 52.0 -0.2**
CN2 SS **SS 21 47 26.1 -2.1**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=Z,960nm,21.0s
CN2 LR LR
comp=Z,440nm,21.0s
CN2 LR LR
comp=Z,290nm,22.0s
ZAA0 Zalesovo Array 51.41 356 *e*P **P 21 36 33.0 -0.5**
comp=Z,46nm,1.0s
ZALV Zalesovo Beam 51.41 356 P **P 21 36 32.9 -0.5**
comp=Z,8.4nm,0.5s,baz=183,slow=8.2,SNR=51
ZALV LR LR 21 59 58.9
comp=Z,2μm,20.8s,baz=230,slow=38
ZALV Zalesovo Beam 51.41 356 *e*P **P 21 36 33.1 -0.3**
ZALV Zalesovo Beam 51.41 356 *e*P **P 21 36 33.1 -0.3**
NVS Novosibirsk 52.43 355⇓*i*P **P 21 36 40.6 -0.4**
NVS *e*S S 21 43 55.5 -11
NVS pmax pmax
comp=Z,68nm,1.0s
NVS pmax pmax
comp=N,36nm,1.2s
NVS pmax pmax
comp=E,21nm,1.3s
NVS smax smax
comp=N,25nm,2.1s
NVS smax smax
comp=E,36nm,2.2s
HIA Hailar 52.77 24 *e*P **P 21 36 44.5 +0.9**
comp=E,45nm,1.0s
HIA LR LR
comp=Z,859nm,19.0s
BVAR Borovoye Array 52.98 345 P **P 21 36 44.3 -0.8**
comp=Z,10nm,0.8s,baz=142,slow=7.3,SNR=66
BRVK Borovoye 53.03 345 *e*P **P 21 36 44.4 -1.2**
BRVK *es*P **P 21 36 44.8 -0.7**
BRVK LR LR
comp=Z,484nm,19.0s
BRVK Borovoye 53.03 345 P **P 21 36 45.1 -0.4**
SNR=20
BRVK Borovoye 53.03 345*d i*P **P 21 36 44.3 -1.2**
BRVK pmax pmax
comp=Z,15nm,1.0s
AB31 Akbulak array 53.33 335 *i*P **P 21 36 50.0 +2.3**
AB31 pmax pmax
comp=Z,200nm,1.6s
ABKAR Akbulak array 53.33 335 *e*P **P 21 36 47.6 -0.1**
KMBO Kilima Mbogo 53.40 267 P **P 21 36 48.5 -0.7**
comp=Z,1.2nm,0.5s,baz=68,slow=24,SNR=3.9
KMBO LR LR 21 55 05.8
comp=Z,785nm,20.1s,baz=94,slow=31
KMBO Kilima Mbogo 53.40 267 P **P 21 36 48.5 -0.7**
KMBO LR LR
comp=Z,918nm,20.0s
MSHR Mys Shultsa 53.82 37*c i*P **P 21 36 51.9 +0.4**
INU Inuyama 53.97 47 *e*P **P 21 36 52.8 +0.1**
comp=Z,52nm,1.1s
MDJ Mudanjiang 54.17 34 P **P 21 36 52.3 -1.7**
MDJ PP **PP 21 38 54.0 -1.8**
MDJ S **S 21 44 30.1 -0.1**
MDJ ScS **ScS 21 46 41.5 -1.2**
MDJ SS **SS 21 48 13.1 +0.9**
MDJ pmax pmax
comp=Z,59nm,1.3s
MDJ LR LR
comp=Z,1μm,17.5s
MDJ LR LR
comp=Z,2μm,16.7s
MDJ LR LR
comp=Z,1μm,18.3s
MDJ Mudanjiang 54.17 34 *e*P **P 21 36 55.2 +1.2**
comp=Z,156nm,1.6s
MDJ LR LR
comp=Z,898nm,19.0s
AKT Akhty 54.54 321⇓*i*P **P 21 36 56.9 0.0**
AKT *e* 21 38 01.0
AKT *e* 21 39 06.0
AKT *e*S **S 21 44 34.3 -1.2**
AKT pmax pmax
comp=Z,122nm,1.3s
VLA Vladivostok 54.57 36*d i*P **P 21 36 58.2 +1.3**
VLA pmax pmax
comp=Z,47nm,1.2s
GUMO Guam 54.77 75 LR LR 22 00 41.1
comp=Z,326nm,20.1s,baz=251,slow=36
AKTO Aktyubinsk 55.04 335 P **P 21 36 59.6 -0.6**
comp=Z,10nm,0.9s,baz=138,slow=8.0,SNR=24
AKTO LR LR 22 00 19.3
comp=Z,306nm,21.1s,baz=138,slow=36
AKTO Aktyubinsk 55.04 335 *i* P **P 21 36 59.5 -0.7**
AKTO pmax pmax
comp=Z,87nm,1.7s
JHJ Hachijo jima 2 55.13 51 LR LR 22 03 03.2
comp=Z,408nm,18.2s,baz=261,slow=39
USRK Ussuriysk Ar. 55.27 35 P **P 21 37 02.1 +0.1**
comp=Z,12nm,0.9s,baz=239,slow=6.0,SNR=25
USRK LR LR 22 03 12.2
comp=Z,672nm,18.4s,baz=224,slow=39
MJB9 Matsu-Tunnel 55.36 46 *e*P **P 21 37 03.3 +0.5**
comp=Z,34nm,1.1s
MAJO Matsushiro 55.37 46 *e*P **P 21 37 03.3 +0.4**
comp=Z,32nm,1.1s
MAJO LR LR
comp=Z,949nm,20.0s
MAJO Matsushiro 55.37 46*c i*P **P 21 37 02.6 -0.2**
MAJO pmax pmax
comp=Z,36nm,1.1s
MAT Matsushiro 55.37 46 P **P 21 37 02.4 -0.4**
MAT S **S 21 44 45.8 -0.8**
MJAR Matsushiro Arr 55.37 46 P **P 21 37 02.7 -0.1**
comp=Z,19nm,1.0s,baz=237,slow=8.4,SNR=49
MJAR LR LR 22 02 03.3
comp=Z,752nm,20.0s,baz=230,slow=38
MAK Makhachkala 55.50 323 *e*P **P 21 36 59.7 -3.9**
MAK *e* 21 39 03.1
MAK *e*S **S 21 44 41.2 -6.9**
MAK *e*SS **SS 21 48 26.2 -7.0**
MAK pmax pmax
comp=Z,43nm,1.0s
MAK MLR MLR
comp=Z,580nm,15.0s
BBOO Buckleboo 55.57 133 P **P 21 37 04.7 +0.3**
baz=56,SNR=8.3
BBOO Buckleboo 55.57 133 *e*P **P 21 37 04.6 +0.2**
comp=Z,40nm,1.3s
GNI Garni 55.77 318 P **P 21 37 06.1 +0.3**
comp=Z,18nm,1.1s,baz=117,slow=2.3,SNR=12
GNI LR LR 22 02 20.1
comp=Z,393nm,21.6s,baz=127,slow=38
GNI Garni 55.77 318 *e*P **P 21 37 06.5 +0.7**
comp=Z,87nm,1.1s
GNI LR LR
comp=Z,750nm,21.0s
GNI Garni 55.77 318 P **P 21 37 07.2 +1.4**
SNR=12
GNI Garni 55.77 318 *i* P **P 21 37 07.3 +1.4**
SNR=6.9
GNI Garni 55.77 318*d i*P **P 21 37 05.8 0.0**
GNI pmax pmax
comp=Z,81nm,1.0s
TBLG Delisi 56.57 320 *e*P **P 21 37 12.0 +0.7**
comp=Z,83nm,1.0s
TBLG Delisi 56.57 320 *e*P **P 21 37 12.0 +0.7**
TBLG pmax pmax
comp=Z,83nm,1.0s
GROC Groznyy 56.68 322 *e*P **P 21 37 09.8 -2.3**
GROC *e* 21 38 04.9
GROC *e*S **S 21 45 02.8 -1.0**
GROC *e* 21 47 00.3
GROC pmax pmax
comp=Z,112nm,1.4s
MTSU Mount Surprise 56.80 114 P **P 21 37 14.6 +1.2**
baz=57,SNR=5.4
AKH Akhalkalaki 57.21 319 *e*P **P 21 37 16.9 +0.8**
comp=Z,46nm,1.3s
AKH Akhalkalaki 57.21 319 *e*P **P 21 37 17.0 +0.8**
AKH pmax pmax
comp=Z,46nm,1.3s
ZEI Tsey 57.64 321 *e*P **P 21 37 17.9 -1.3**
ZEI pmax pmax
comp=Z,21nm,0.8s
PMG Port Moresby 57.65 103 PFAKE 21 37 30.0 +11
PMG LR LR
comp=Z,531nm,20.0s
HTT Hallett 57.97 132 P **P 21 37 21.8 +0.4**
baz=58,SNR=4.2
NCK Nalchik 58.20 321⇓*e*P **P 21 37 23.1 +0.3**
NCK pmax pmax
comp=Z,23nm,1.0s
ASF Jabal al Asfar 58.27 307 P **P 21 37 23.7 +0.1**
comp=Z,9.6nm,1.0s,baz=102,slow=6.2,SNR=17
TEY Ternei 58.46 37 *e*P **P 21 37 25.0 +0.4**
NEY Neytrino 58.62 321⇓*e*P **P 21 37 26.7 +0.7**
NEY pmax pmax
comp=Z,6.0nm,1.9s
KBZ Khabaz 58.75 321 P **P 21 37 26.7 +0.1**
comp=Z,23nm,0.9s,baz=123,slow=4.7,SNR=39
KBZ LR LR 22 05 49.9
comp=Z,280nm,19.8s,baz=108,slow=39
KVAR Kislovodsk Arr 58.99 321 P **P 21 37 28.6 +0.1**
comp=Z,34nm,1.0s,baz=101,slow=0.4,SNR=30
KIV Kislovodsk 59.00 321 *e*P **P 21 37 28.2 -0.3**
comp=Z,97nm,1.1s
KIV LR LR
comp=Z,321nm,20.0s
KIV Kislovodsk 59.00 321 P **P 21 37 28.8 +0.3**
SNR=31
KIV Kislovodsk 59.00 321 *i* P **P 21 37 29.0 +0.5**
SNR=21
KIV Kislovodsk 59.00 321 *e*P **P 21 37 28.3 -0.2**
KIV *e*S **S 21 45 35.2 +0.8**
KIV *e*SS **SS 21 49 30.1 +1.6**
KIV pmax pmax
comp=Z,11nm,4.0s
KIV pmax pmax
comp=Z,71nm,1.0s
CTA Charters Tower 59.09 115 P **P 21 37 30.3 +0.8**
comp=Z,21nm,0.8s,baz=284,slow=9.5,SNR=11
CTAO Charters Tower 59.09 115 *e*P **P 21 37 30.8 +1.4**
comp=Z,47nm,1.1s
CTAO LR LR
comp=Z,1μm,19.0s
SVE Sverdlovsk 59.10 341⇓*e*P **P 21 37 28.6 -0.3**
SVE *e*S **S 21 45 33.5 -1.6**
SVE pmax pmax
comp=Z,96nm,1.5s
SVE MLR MLR
comp=Z,921nm,16.0s
ZEA Zeya 59.22 24 *e*P **P 21 37 29.8 +0.1**
ZEA pmax pmax
comp=N,35nm,1.0s
ZEA pmax pmax
comp=Z,38nm,1.0s
STKA Stephens Creek 59.29 130 P **P 21 37 31.1 +0.5**
comp=Z,21nm,0.9s,baz=309,slow=5.8,SNR=25
STKA Stephens Creek 59.29 130 *e*P **P 21 37 31.3 +0.7**
comp=Z,6.9nm,1.0s
STKA Stephens Creek 59.29 130 P **P 21 37 31.1 +0.5**
STKA pmax pmax
comp=Z,22nm,1.0s
ARU Arti 59.47 340 *e*P **P 21 37 30.1 -1.3**
comp=Z,52nm,1.2s
ARU LR LR
comp=Z,1μm,21.0s
ARU Arti 59.47 340*d i*P **P 21 37 30.2 -1.2**
ARU 21 38 16.5
ARU 21 39 40.8
ARU S **S 21 45 41.4 +1.5**
ARU 21 47 21.8
ARU SS **SS 21 49 37.1 +1.9**
ARU SSS SSS 21 52 09.7
ARU pmax pmax
comp=Z,29nm,1.7s
ARU MLR MLR
comp=Z,1μm,22.0s
MMAI Mount Meron Ar 59.73 307 P **P 21 37 34.3 +0.5**
comp=Z,5.0nm,0.9s,baz=106,slow=9.2,SNR=12
MMAI LR LR 22 03 32.3
comp=Z,501nm,18.9s,baz=105,slow=36
MBAR Mbarara 59.87 268 PFAKE 21 37 50.0 +15
MBAR LR LR
comp=Z,602nm,19.0s
CLNS Chul'man 60.61 21 *e*P **P 21 37 39.1 -0.2**
CLNS *e* 21 38 18.9
CLNS *e* 21 39 53.8
CLNS *e*PPP PPP 21 41 17.8
CLNS *e*S **S 21 45 54.9 +0.2**
CLNS *e*SS **SS 21 49 47.9 -5.3**
CLNS pmax pmax
comp=Z,57nm,0.9s
CLNS pmax pmax
comp=N,26nm,1.0s
CLNS pmax pmax
comp=E,30nm,1.1s
CLNS pmax pmax
comp=Z,8.0nm,1.4s
CLNS pmax pmax
comp=E,6.0nm,1.2s
CLNS pmax pmax
comp=N,13nm,1.3s
CLNS smax smax
comp=N,140nm,11.9s
CLNS smax smax
comp=E,159nm,11.9s
CLNS MLR MLR
comp=E,573nm,14.0s
CLNS MLR MLR
comp=Z,529nm,17.0s
CLNS MLR MLR
comp=N,682nm,17.0s
SOC Sochi 60.70 320 *e*P **P 21 37 38.1 -2.0**
SOC *e* 21 39 51.4
SOC *e*PPP PPP 21 41 17.7
SOC *e*S **S 21 45 55.1 -1.1**
SOC *e*SS **SS 21 49 47.6 -7.4**
SOC pmax pmax
comp=Z,32nm,0.9s
ERM Erimo 61.19 43 *e*P **P 21 37 43.7 +0.3**
comp=Z,25nm,1.2s
ERM LR LR
comp=Z,636nm,19.0s
ERM Erimo 61.19 43 *e*P **P 21 37 43.7 +0.3**
ERM pmax pmax
comp=Z,25nm,1.2s
ERM MLR MLR
comp=Z,636nm,19.0s
GRNR Gornyy 61.56 31 *e*P **P 21 37 47.0 +1.2**
GRNR pmax pmax
comp=Z,84nm,1.0s
ASAJ Asahikawa 61.74 40 P **P 21 37 47.3 +0.2**
comp=Z,10nm,0.9s,baz=271,slow=13,SNR=11
ASAJ LR LR 22 04 25.7
comp=Z,616nm,21.5s,baz=244,slow=36
ASAJ Asahikawa 61.74 40 *e*P **P 21 37 47.6 +0.5**
comp=Z,27nm,1.1s
CSS Mathiatis 61.97 309 *e*P **P 21 37 49.4 +0.5**
comp=Z,12nm,1.3s
CMSA Cobar Meteorol 62.35 128 P **P 21 37 52.2 +0.7**
baz=62,SNR=29
ANN Anapa 62.72 320 *e*P **P 21 37 53.5 -0.1**
ANN *e**PP **sP 21 37 57.6 -3.9**
ANN *e* 21 38 32.3
ANN *e*S **S 21 46 20.8 -0.8**
ANN pmax pmax
comp=Z,17nm,1.3s
YSS Yuzh-Sakhalins 63.13 37⇓*i*P **P 21 37 57.3 +0.9**
YSS *e* 21 40 17.0
YSS *e*S **S 21 46 28.2 +1.5**
YSS *e* 21 46 43.2
YSS pmax pmax
comp=Z,20nm,1.3s
YSS pmax pmax
comp=E,30nm,0.6s
YSS MLR MLR
comp=Z,400nm,14.1s
YSS MLR MLR
comp=N,500nm,16.8s
YSS MLR MLR
comp=E,500nm,14.0s
RMQ Roma 63.15 121 P **P 21 37 57.5 +0.6**
baz=63,SNR=4.9
BR131 Keskin Array S 63.31 314 *e*P **P 21 37 57.4 -0.5**
BRTR Keskin Array B 63.31 314 P **P 21 37 56.8 -1.1**
comp=E,8.9nm,1.0s,baz=131,slow=6.7,SNR=44
BRTR LR LR 22 06 02.6
comp=E,575nm,20.3s,baz=119,slow=37
YUK Yuzh-Kuril'sk 63.83 41 *e*P **P 21 37 58.7 -2.4**
YUK *i* 21 38 37.1
YUK 21 40 17.2
YUK *i* PPP PPP 21 41 51.5
YUK *e*S **S 21 46 36.1 +0.5**
YUK MLR MLR
comp=Z,618nm,17.0s
YUK MLR MLR
comp=N,556nm,15.0s
ANTO Ankara 63.97 314⇓*i*P **P 21 38 01.3 -0.9**
ANTO Ankara 63.97 314 *e*P **P 21 38 01.3 -0.9**
ANTO LR LR
comp=Z,726nm,20.0s
ANTO Ankara 63.97 314 P **P 21 38 01.9 -0.2**
SNR=8.7
ANTO Ankara 63.97 314 *e*P **P 21 38 01.3 -0.9**
ANTO MLR MLR
comp=Z,726nm,20.0s
LSZ Lusaka 64.17 252 P **P 21 38 02.7 -1.2**
comp=Z,3.6nm,0.9s,baz=83,slow=4.9,SNR=9.1
LSZ Lusaka 64.17 252 *e*P **P 21 38 03.4 -0.6**
comp=Z,31nm,1.3s
LSZ LR LR
comp=Z,489nm,19.0s
LSZ Lusaka 64.17 252 *e*P **P 21 38 03.4 -0.6**
LSZ pmax pmax
comp=Z,31nm,1.3s
LSZ MLR MLR
comp=Z,489nm,19.0s
VORD Divnogorie 64.53 327 *e*P **P 21 38 04.6 -0.9**
VORD pmax pmax
comp=Z,10.0nm,0.7s
VSR Storozhevoye 64.72 327 *e*P **P 21 38 05.5 -1.2**
VSR *e*S **S 21 46 45.8 -0.5**
VSR pmax pmax
comp=Z,20nm,0.9s
VSR smax smax
comp=N,120nm,2.8s
EIDS Eidsvold 64.82 119 P **P 21 38 09.3 +1.3**
baz=65,SNR=3.8
EIDS Eidsvold 64.82 119 *e*P **P 21 38 08.6 +0.7**
comp=N,87nm,1.7s
SIM Simferopol' 64.92 319 P **P 21 38 08.7 +0.5**
SIM S **S 21 46 46.0 -3.1**
SIM pmax pmax
comp=Z,116nm,1.5s
VORR Voronezh 64.93 328 *e*P **P 21 38 09.0 +0.9**
VORR pmax pmax
comp=Z,250nm,0.8s
NKL Nikolayevsk 65.08 31 *e*P **P 21 38 08.0 -1.0**
NKL *e* 21 51 05.0
NKL pmax pmax
comp=Z,52nm,1.0s
NKL pmax pmax
comp=Z,350nm,5.0s
NKL MLR MLR
comp=N,500nm,16.0s
NKL MLR MLR
comp=E,2μm,16.0s
NKL MLR MLR
comp=Z,2μm,16.0s
KUR Kuril'sk 65.62 41 *e*P **P 21 38 14.2 +1.5**
KUR S **S 21 47 01.4 +3.8**
KUR pmax pmax
comp=Z,160nm,1.4s
KUR MLR MLR
comp=Z,413nm,12.0s
KUR MLR MLR
comp=N,572nm,16.0s
YAK Yakutsk 66.12 19 P **P 21 38 15.3 -0.3**
comp=N,54nm,0.9s,baz=311,slow=4.0,SNR=30

YAK Yakutsk 66.12 19 *e*P **P 21 38 15.2 -0.4**
comp=N,95nm,1.0s
YAK LR LR
comp=Z,1µm,20.0s
YAK Yakutsk 66.12 19 *i* P **P 21 38 14.9 -0.7**
YAK pmax pmax
comp=Z,102nm,1.0s
NRIK Noril'sk 66.68 359 P **P 21 38 18.2 -0.8**
comp=Z,13nm,0.9s,baz=169,slow=7.1,SNR=11
NRIK LR LR 22 09 37.7
comp=Z,922nm,21.6s,baz=178,slow=38
ARMA Armidale 66.75 125 P **P 21 38 22.3 +1.9**
baz=67,SNR=7.4
ARMA Armidale 66.75 125 *e*P **P 21 38 21.3 +0.8**
comp=Z,51nm,1.3s
KARP Karpathos 66.99 308 *e*P **P 21 38 22.2 +0.5**
comp=Z,24nm,0.9s
PATS Pohnpei 67.63 84 P **P 21 38 27.9 +1.7**
baz=68,SNR=4.1
PATS Pohnpei 67.63 84 *e*P **P 21 38 25.5 -0.6**
comp=Z,146nm,1.5s
MOS Moscow 67.81 331 *e*P **P 21 38 24.8 -1.7**
MOS *i* 21 38 34.1
MOS *e*S **S 21 47 19.0 -4.8**
MOS pmax pmax
comp=Z,100nm,1.3s
MOS pmax pmax
comp=Z,96nm,1.2s
MOS smax smax
comp=E,500nm,3.2s
PRGR Permogore 67.84 339 *e*P **P 21 38 25.8 -0.7**
PRGR pmax pmax
comp=Z,54nm,1.3s
OBN Obninsk 68.02 330 P **P 21 38 27.0 -0.8**
comp=Z,40nm,0.4s,baz=129,slow=13,SNR=7.3
OBN Obninsk 68.02 330 *e*P **P 21 38 27.2 -0.6**
comp=Z,278nm,1.3s
OBN LR LR
comp=Z,316nm,20.0s
OBN Obninsk 68.02 330 *de*P **P 21 38 27.0 -0.8**
OBN *i* 21 38 35.5
OBN *e* 21 38 56.3
OBN *e* 21 40 58.4
OBN *e*PPP PPP 21 42 35.0
OBN *i* S **S 21 47 23.9 -2.3**
OBN *e*SS **SS 21 51 50.4 +1.8**
OBN pmax pmax
comp=Z,156nm,1.7s
NPS Neapolis 68.15 307 P **P 21 38 29.2 +0.1**
NPS Neapolis 68.15 307 P **P 21 38 29.2 +0.1**
NPS Neapolis 68.15 307 P **P 21 38 29.2 +0.1**
LAST Lasithi 68.24 307 P **P 21 38 29.6 -0.1**
LAST Lasithi 68.24 307 P **P 21 38 29.6 -0.1**
PSN Preselentsi 68.47 316 P **P 21 38 30.8 0.0**
TIRR Tirgusor 68.55 317 ||*i*P **P 21 38 31.0 -0.3**
TIRR Tirgusor 68.55 317 *e*P **P 21 38 30.7 -0.6**
comp=Z,24nm,1.2s
TIRR Tirgusor 68.55 317 *e*P **P 21 38 30.7 -0.6**
TIRR pmax pmax
comp=Z,24nm,1.2s
LBTB Lobatse 68.59 242 P **P 21 38 31.4 -0.7**
comp=Z,7.6nm,0.9s,baz=81,slow=7.3,SNR=1.8
LBTB Lobatse 68.59 242 *e*P **P 21 38 32.0 -0.1**
comp=Z,56nm,1.0s
IDI Anoyia 68.73 307 P **P 21 38 33.0 +0.2**
comp=Z,22nm,0.9s,baz=99,slow=8.7,SNR=14
IDI LR LR 22 12 50.0
comp=Z,197nm,18.3s,baz=96,slow=40
IDI Anoyia 68.73 307 ⇑*i*P **P 21 38 33.0 +0.2**
IDI Anoyia 68.73 307 *e*P **P 21 38 32.4 -0.4**
comp=Z,26nm,0.9s
TLB Topalu 68.84 317 ||*i*P **P 21 38 32.7 -0.5**
ICOR Ion Corvin 68.86 317 ||*i*P **P 21 38 33.4 +0.1**
HARR Harsova 68.95 317 ⇑*i*P **P 21 38 34.5 +0.6**
HARR Harsova 68.95 317 P **P 21 38 34.4 +0.6**
CFR Carcaliu 68.97 318 ⇑*i*P **P 21 38 33.3 -0.7**
CFR Carcaliu 68.97 318 P **P 21 38 33.2 -0.7**
MIR Mirnyy 69.00 179 *e*P **P 21 38 35.0 +1.4**
MIR pmax pmax
comp=Z,42nm,1.0s
KIS Kishinev 69.11 320 *e*P **P 21 38 34.0 -0.8**
KIS *e*S **S 21 47 36.0 -3.5**
KIS Kishinev 69.11 320 *e*P **P 21 38 34.0 -0.8**
KIS *e* 21 38 42.0
KIS *e*S **S 21 47 36.0 -3.5**
KIS MLR MLR
comp=Z,500nm,15.0s
KIS MLR MLR
comp=Z,500nm,16.0s
ALN Alexandroupoli 69.19 313 *e*P **P 21 38 35.3 -0.1**
comp=Z,27nm,1.3s
ALN Alexandroupoli 69.19 313 P **P 21 38 34.5 -0.9**
ALN Alexandroupoli 69.19 313 *e*P **P 21 38 35.3 -0.1**
ALN pmax pmax
comp=Z,27nm,1.3s
JMB Yambol 69.23 315 P **P 21 38 35.2 -0.4**
LEOM Leova 69.31 319 ||*i*P **P 21 38 36.1 0.0**
LEOM Leova 69.31 319 P **P 21 38 36.0 0.0**
VAM Vamos 69.31 307 P **P 21 38 36.3 0.0**
VAM Vamos 69.31 307 P **P 21 38 36.3 0.0**
VAM Vamos 69.31 307 P **P 21 38 36.3 0.0**
KLMR Klimovskoe 69.72 336 *e*P **P 21 38 36.9 -1.3**
KLMR pmax pmax
comp=Z,73nm,1.2s
KLMR Klimovskoe 69.72 336 *e*P **P 21 38 37.0 -1.3**
KLMR AMP 21 38 51.7
comp=Z,73nm,1.2s
KLMR LQ LQ 22 03 58.1
KLMR LR LR 22 10 16.8
BOSA Boshof 69.76 238 P **P 21 38 38.3 -1.1**
comp=Z,5.4nm,0.9s,baz=84,slow=3.5,SNR=8.0
BOSA LR LR 22 03 22.9
comp=Z,495nm,21.3s,baz=54,slow=31
BOSA Boshof 69.76 238 *e*P **P 21 38 38.5 -0.8**
comp=Z,126nm,1.8s
BOSA Boshof 69.76 238 *e*P **P 21 38 38.6 -0.8**
BOSA pmax pmax
comp=Z,125nm,1.8s
SORM Soroca 69.79 321 ||*i*P **P 21 38 38.4 -0.6**
SORM Soroca 69.79 321 P **P 21 38 38.3 -0.7**
KDZ Kurdzhali 69.84 314 P **P 21 38 38.8 -0.7**
DIM Dimitrovgrad 69.87 314 P **P 21 38 39.0 -0.6**
SZH Strazhica 69.91 315 P **P 21 38 38.7 -1.1**
ISR Istrita 70.02 317 ||*i*P **P 21 38 41.5 +1.0**
ISR Istrita 70.02 317 ||P **P 21 38 41.5 +1.0**
VRI Vrincioaia 70.12 318 ||*i*P **P 21 38 41.1 0.0**
VRI Vrincioaia 70.12 318 P **P 21 38 41.0 0.0**
SGRR Singureni 70.15 316 ⇑*i*P **P 21 38 41.7 +0.5**
AKASG Malin Array Be 70.16 324 P **P 21 38 40.0 -1.1**
comp=Z,1.9nm,0.6s,baz=94,slow=4.9,SNR=22
AKASG LR LR 22 11 10.1
comp=Z,457nm,21.5s,baz=100,slow=37
HNR Honiara 70.16 101 PFAKE 21 38 50.0 +8.1
HNR LR LR
comp=Z,492nm,19.0s
KIEV Kiev 70.16 324 PFAKE 21 38 50.0 +8.8
KIEV LR LR
comp=Z,579nm,20.0s
KIEV Kiev 70.16 324 ||*e*P **P 21 38 40.0 -1.2**
KIEV pmax pmax
comp=Z,12nm,1.1s
PLOR Plostina 70.17 318 ⇑*i*P **P 21 38 41.6 +0.1**
PLOR Plostina 70.17 318 P **P 21 38 41.5 +0.1**
CASY Casey 70.19 172 PFAKE 21 38 50.0 +9.0
CASY LR LR
comp=Z,99nm,19.0s
RZN Rozhen 70.36 313 P **P 21 38 42.1 -0.8**
TESR Tescani 70.37 319 ⇑*i*P **P 21 38 42.0 -0.6**
MLR Muntele Rosu 70.53 318 P **P 21 38 43.5 -0.2**
comp=Z,6.8nm,0.9s,baz=48,slow=3.1,SNR=66
MLR LR LR 22 11 54.0
comp=Z,150nm,21.8s,baz=99,slow=38
MLR Muntele Rosu 70.53 318 ||*i*P **P 21 38 43.7 -0.1**
MLR Muntele Rosu 70.53 318 *e*P **P 21 38 43.3 -0.5**
comp=Z,88nm,1.0s
MLR Muntele Rosu 70.53 318 *e*P **P 21 38 43.3 -0.5**
MLR pmax pmax
comp=Z,88nm,1.0s
PAIG Paliouri 70.70 311 P **P 21 38 43.7 -1.0**
PAIG Paliouri 70.70 311 P **P 21 38 43.7 -1.0**
PAIG Paliouri 70.70 311 P **P 21 38 43.7 -1.0**
PRAR RASCA 70.90 320 ⇑*i*P **P 21 38 45.8 0.0**
HUMR Humele 70.92 316 ⇑*i*P **P 21 38 46.0 0.0**
PGB Panagyurishte 70.97 314 P **P 21 38 45.7 -0.7**

DOPR Dopca 71.04 318 ||*i*P **P 21 38 46.7 0.0**
MMB Musomiste 71.06 313 P **P 21 38 45.4 -1.5**
VOIR 71.12 317 ⇑*i*P **P 21 38 46.8 -0.5**
VOIR 71.12 317 P **P 21 38 46.7 -0.5**
GUR Goura 71.29 309 P **P 21 38 46.8 -1.7**
GUR Goura 71.29 309 P **P 21 38 46.8 -1.7**
ARR Arges 71.38 317 ⇑*i*P **P 21 38 48.3 -0.6**
MPEP Malo Peshtene 71.48 315 P **P 21 38 48.9 -0.5**
AGG Agios Georgios 71.52 310 *e*P **P 21 38 48.3 -1.5**
comp=Z,28nm,1.0s
AGG Agios Georgios 71.52 310 P **P 21 38 47.3 -2.5**
AGG Agios Georgios 71.52 310 *e*P **P 21 38 48.3 -1.5**
AGG pmax pmax
comp=Z,28nm,1.0s
KNT Kendrikon 71.56 313 P **P 21 38 48.9 -1.1**
KNT Kendrikon 71.56 313 P **P 21 38 48.9 -1.1**
KNT Kendrikon 71.56 313 P **P 21 38 48.9 -1.1**
KKB Krupnik 71.59 313 P **P 21 38 48.7 -1.4**
BURAR Bucovina Array 71.63 320 ||*i*P **P 21 38 50.7 +0.3**
BURAR Bucovina Array 71.63 320 P **P 21 38 50.7 +0.3**
LIT Litokhoron 71.63 311 *e*P **P 21 38 49.1 -1.3**
comp=Z,13nm,0.9s
LIT Litokhoron 71.63 311 *e*P **P 21 38 49.1 -1.3**
LIT pmax pmax
comp=Z,13nm,0.9s
BUR04 Bucovina Ar. S 71.64 320 *e*P **P 21 38 50.5 +0.1**
BUR08 Bucovina Ar. S 71.65 320 *e*P **P 21 38 50.9 +0.4**
VTS Vitosha 71.67 314 ||*i*P **P 21 38 50.3 -0.5**
VTS Vitosha 71.67 314 *e*P **P 21 38 49.2 -1.6**
comp=Z,17nm,1.0s
VTS Vitosha 71.67 314 P **P 21 38 49.5 -1.3**
VTS Vitosha 71.67 314 *e*P **P 21 38 49.2 -1.6**
VTS pmax pmax
comp=Z,17nm,1.0s
ANX Ano Chora 71.75 310 P **P 21 38 49.6 -1.6**
GRG Griva 71.88 312 P **P 21 38 50.5 -1.4**
GRG Griva 71.88 312 P **P 21 38 50.5 -1.4**
GRG Griva 71.88 312 P **P 21 38 50.5 -1.4**
LOT Lotru 71.99 317 ⇑*i*P **P 21 38 51.8 -0.8**
TMCR Tamitsa 72.14 339 *e*P P 21 38 59.4 +6.5
TMCR pmax pmax
comp=Z,9.0nm,0.6s
MICGM Minsk 72.30 327 *e* **P 21 38 52.0 -2.1**
MNK Minsk 72.30 327 *e*P **P 21 38 52.0 -2.1**
PDO Prodromos 72.32 310 P **P 21 38 53.3 -1.2**
CJR Cluj-Napoca 72.44 318 ⇑*i*P **P 21 38 55.1 -0.1**
CJR Cluj-Napoca 72.44 318 P **P 21 38 55.1 -0.1**
MAW Mawson 72.68 191 P **P 21 38 55.0 -1.0**
comp=Z,5.5nm,0.8s,baz=271,slow=18,SNR=5.1
MAW LR LR 22 03 40.9
comp=Z,275nm,19.3s,baz=30,slow=30
MAW Mawson 72.68 191 *e*P **P 21 38 56.3 +0.3**
comp=Z,2.3nm,0.9s
MAW Mawson 72.68 191 *e*P **P 21 38 56.3 +0.3**
MAW pmax pmax
comp=Z,2.0nm,0.9s
DEV Deva 72.69 317 ⇑*i*P **P 21 38 57.3 +0.7**
DEV Deva 72.69 317 P **P 21 38 57.3 +0.7**
HERR Herculane 72.78 316 ⇑*i*P **P 21 38 56.9 -0.2**
KBN Korca 73.01 312 *i* P P 21 38 52.4 -6.4
LVV L'vov 73.02 322 *e*P **P 21 38 59.4 +0.9**
LVV *e*S **S 21 48 23.6 -1.2**
LVV MLR MLR
comp=Z,200nm,18.0s
NACGM Naroch 73.04 327 *e* **P 21 38 57.0 -1.5**
DRGR 73.05 318 ||*i*P **P 21 38 58.8 0.0**
MA2 Magadan 73.08 27 P **P 21 38 58.5 -0.1**
comp=Z,13nm,0.8s,baz=231,slow=6.2,SNR=9.2
MA2 Magadan 73.08 27 *e*P **P 21 38 58.5 -0.1**
comp=Z,19nm,0.9s
MA2 LR LR
comp=Z,572nm,20.0s
MA2 Magadan 73.08 27 *e*P **P 21 38 58.2 -0.4**
MA2 pmax pmax
comp=Z,39nm,2.5s
TIXI Tiksi 73.10 12 P **P 21 38 57.4 -1.1**
comp=Z,50nm,0.9s,baz=212,slow=2.3,SNR=57
TIXI Tiksi 73.10 12 *e*P **P 21 38 57.2 -1.3**
comp=Z,59nm,0.9s
TIXI LR LR
comp=Z,797nm,19.0s
TIXI Tiksi 73.10 12 *c i*P **P 21 38 57.0 -1.5**
TIXI pmax pmax
comp=Z,63nm,0.8s
IGT Igoumenitsa 73.14 311 P **P 21 38 58.2 -1.2**
IDID Didziasalis 73.21 328 *e*P **P 21 38 59.6 +0.2**
IDID IAmb IAmb 21 39 14.0
comp=Z,18nm,1.2s
MDVR Moldovita 73.24 316 ||*i*P **P 21 39 00.3 +0.4**
PHP Peshkopia 73.48 313 *i* P **P 21 38 59.8 -1.7**
BZS Buzias 73.50 317 ||*i*P **P 21 39 00.7 -0.7**
TRPA Tarpa 73.51 320 ⇑*i*P **P 21 39 01.2 -0.1**
KWP Kalwaria Pacla 73.79 321 *e*P **P 21 39 03.1 +0.1**
KWP Kalwaria Pacla 73.79 321 *e*P **P 21 39 02.5 -0.5**
comp=Z,356nm,1.2s
KWP Kalwaria Pacla 73.79 321 *e*P **P 21 39 02.6 -0.5**
KWP pmax pmax
comp=Z,356nm,1.2s
UZH Uzhgorod 73.79 320 *e*P **P 21 39 03.2 +0.2**
UZH *e* 21 39 09.8
UZH *e* 21 39 19.2
TIR Tirane 73.84 312 *i* P **P 21 38 59.7 -3.8**
PUK Puka 73.95 313 *i* P **P 21 39 02.6 -1.6**
DIVS Divibare 74.29 315 *e*P **P 21 39 04.8 -1.4**
comp=Z,13nm,1.0s
VSU Vasula 74.34 331 ⇑*e*P **P 21 39 05.1 -0.9**
VSU pmax pmax
comp=Z,116nm,1.7s
PETK Petropavlovsk- 74.36 35 P **P 21 39 05.3 -1.0**
comp=Z,1.9nm,0.5s,baz=221,slow=5.9,SNR=5.5
PETK Petropavlovsk- 74.36 35 P **P 21 39 05.3 -1.0**
PETK pmax pmax
comp=Z,1.0nm,0.4s
CRVS Cervenica-Dubn 74.39 320 *e*P **P 21 39 06.0 -0.6**
CRVS *e* 21 39 17.5
CRVS pmax pmax
comp=Z,17nm,1.4s
CRVS Cervenica-Dubn 74.39 320 *e*P **P 21 39 06.0 -0.6**
CRVS *e* 21 39 17.4
SUR Sutherland 74.40 235 P **P 21 39 06.5 -0.7**
comp=Z,9.3nm,1.1s,baz=63,slow=4.5,SNR=1.9
PDG Podgorica 74.49 313 ⇑*i*P **P 21 39 06.8 -0.4**
TTG Podgorica 74.49 313 *e*P **P 21 39 05.8 -1.4**
comp=Z,12nm,0.9s
TTG Podgorica 74.49 313 *e*P **P 21 39 05.8 -1.4**
TTG pmax pmax
comp=Z,12nm,0.9s
SUW Suwalki 74.75 326 *e*P **P 21 39 08.0 -0.5**
SUW Suwalki 74.75 326 *e*P **P 21 39 08.0 -0.5**
TSUM Tsumeb 74.81 249 *e*P **P 21 39 10.7 +1.0**
comp=Z,10nm,1.0s
TSUM LR LR
comp=Z,607nm,20.0s
PET Petropavlovsk 74.89 35 PFAKE 21 39 20.0 +11
PET LR LR
comp=Z,590nm,19.0s
PET Petropavlovsk 74.89 35 *e*P **P 21 39 07.8 -1.5**
PET *e* 21 39 21.9
PET *e*S **S 21 48 41.8 -3.9**
PET *e*PS **PnS 21 49 20.2 -1.3**
PET *e*SS **SS 21 53 32.2 -1.8**
PET pmax pmax
comp=Z,33nm,1.2s
PET MLR MLR
comp=Z,700nm,19.0s
KECS Kecovo 74.92 320 *e*P **P 21 39 09.2 -0.4**
KECS pmax pmax
comp=Z,8.0nm,0.9s
KECS Kecovo 74.92 320 *e*P **P 21 39 09.2 -0.4**
PSZ Piszkesteto 75.18 319 *e*P **P 21 39 10.8 -0.4**
comp=Z,16nm,1.2s
SEY Seymchan 75.20 25 P **P 21 39 10.2 -0.6**
comp=Z,9.1nm,1.0s,baz=255,slow=6.9,SNR=18
SEY Seymchan 75.20 25 *ce*P **P 21 39 10.0 -0.9**
NIE Niedzica 75.26 321 *e*P **P 21 39 11.9 +0.3**
NIE Niedzica 75.26 321 *e*P **P 21 39 11.9 +0.3**
APA Apatity 75.56 341 ||*i*P **P 21 39 12.0 -0.9**
APA pmax pmax
comp=Z,18nm,0.9s
APA MLR MLR
comp=Z,900nm,16.0s
LANS Liptovska Anna 75.73 320 *e*P **P 21 39 13.5 -0.8**
LANS *e* 21 39 23.1
LANS Liptovska Anna 75.73 320 *e*P **P 21 39 13.5 -0.8**

LANS *e* 21 39 23.1
LANS *e* 22 03 24.6
FIA1 FINESS Array S 75.75 333 *e*P **P 21 39 14.0 -0.1**
FINES FINESS Array B 75.75 333 P **P 21 39 13.6 -0.5**
comp=Z,10nm,0.9s,baz=101,slow=9.9,SNR=16
FINES LR LR 22 17 02.1
comp=Z,373nm,18.5s,baz=110,slow=39
OJC Ojcow 75.76 321 *e*P **P 21 39 14.7 +0.3**
OJC Ojcow 75.76 321 *e*P **P 21 39 14.7 +0.3**
comp=Z,50nm,1.6s
OJC Ojcow 75.76 321 *e*P **P 21 39 14.7 +0.3**
TIP Timpagrande 75.82 310 ||*i*P **P 21 39 15.9 +0.8**
TIP Timpagrande 75.82 310 *e*P **P 21 39 15.1 0.0**
comp=Z,20nm,1.3s
VYHS Vyhne 75.99 319 *e*P **P 21 39 15.7 -0.1**
VYHS pmax pmax
comp=Z,16nm,1.6s
VYHS Vyhne 75.99 319 *e*P **P 21 39 15.7 -0.1**
VYHS *e* 22 03 28.5
WAKE Wake Island 76.04 71 PFAKE 21 39 30.0 +13
WAKE LR LR
comp=Z,1µm,19.0s
MATE Matera 76.08 311 ⇑*i*P **P 21 39 16.4 0.0**
BLY Banja Luka 76.39 315 ||*i*P **P 21 39 18.7 +0.6**
CUC Castrocucco 76.65 310 *e*P **P 21 39 18.9 -0.9**
comp=Z,6.1nm,0.8s
OKC Ostrava-Krasne 76.72 321 *e*S **S 21 49 04.6 -1.4**
OKC *ex* x 21 54 22.8
OKC AMS AMS 22 19 10.0
comp=Z,300nm,18.9s
JAVC Velka Javorina 76.83 320 *e*P **P 21 39 21.0 +0.4**
SMOL Smolenice 76.92 319 P **P 21 39 22.2 +1.2**
MODS Modra-Piesok 76.99 319 *e*P **P 21 39 20.7 -0.7**
MODS pmax pmax
comp=Z,29nm,1.1s
MODS Modra-Piesok 76.99 319 *e*P **P 21 39 20.7 -0.7**
MORC Moravsky Berou 77.09 321 ||*i*P **P 21 39 22.1 +0.1**
MORC Moravsky Berou 77.09 321 *e*P **P 21 39 22.3 +0.3**
comp=Z,110nm,1.5s
MORC Moravsky Berou 77.09 321 *e*P **P 21 39 22.3 +0.3**
MORC pmax pmax
comp=Z,110nm,1.5s
MORC Moravsky Berou 77.09 321 *e*P **P 21 39 22.1 +0.1**
VAE Valguarnera 77.43 308 P **P 21 39 24.9 +0.7**
comp=Z,12nm,0.9s,baz=225,slow=4.3,SNR=4.4
VRAC Vranov 77.61 320 P **P 21 39 24.7 -0.1**
comp=Z,5.0nm,1.0s,baz=110,slow=8.2,SNR=6.6
VRAC Vranov 77.61 320 ||*i*P **P 21 39 25.0 +0.1**
VRAC Vranov 77.61 320 *e*P **P 21 39 24.6 -0.3**
KRLC Kraliky 77.63 321 *e*P **P 21 39 25.6 +0.6**
KRLC *ep*P **PcP 21 39 33.9 -1.3**
KRLC Kraliky 77.63 321 *e*P **P 21 39 25.6 +0.6**
KRLC *e* 21 39 33.9
KRUC Moravsky 77.69 320 *e*P **P 21 39 25.2 -0.1**
CONA Conrad Observa 77.84 318 *e*P **P 21 39 27.1 +0.8**
comp=Z,6.6nm,1.4s
BOJS Bojanci 77.86 316 *e*P **P 21 39 24.8 -1.6**
DZM Mont Dzumac 77.94 113 *e*P P 21 39 20.9 -6.5
comp=Z,48nm,1.5s
DZM *e*S **S 21 49 15.0 -5.5**
comp=Z,178nm,30.7s
DZM Mont Dzumac 77.94 113 *e*LR LR 22 03 26.3
comp=Z,624nm,29.8s
ARSA Arzberg 77.95 318 *e*P **P 21 39 27.4 +0.5**
comp=Z,13nm,1.0s,SNR=5.8
DPC Dobruska-Polom 77.97 321 *e*P **P 21 39 27.9 +1.0**
DPC *ep*P **PcP 21 39 36.0 -0.7**
DPC *e*S **S 21 49 18.6 -1.2**
DPC AMS AMS 22 22 30.0
comp=Z,400nm,16.7s
DPC Dobruska-Polom 77.97 321 *e*P **P 21 39 27.9 +1.0**
DPC *e* 21 39 36.0
DPC *e*S **S 21 49 18.6 -1.2**
DPC MLR MLR
comp=Z,400nm,16.7s
GKP Gorka Klasztor 77.98 324 *e*P **P 21 39 27.0 +0.1**
GKP Gorka Klasztor 77.98 324 *e*P **P 21 39 27.0 +0.1**
KSP Ksiaz 78.08 321 *e*P **P 21 39 28.4 +0.9**
KSP Ksiaz 78.08 321 *e*P **P 21 39 28.4 +0.9**
PERS Pernice 78.13 317 *e*P **P 21 39 27.7 -0.2**
UPC Upice 78.19 321 *e*S **S 21 49 23.1 +1.0**
UPC *ex* x 21 54 35.7
UPC AMS AMS 22 20 30.0
comp=Z,400nm,15.2s
SOKA Soboth 78.19 317 *e*P **P 21 39 28.3 0.0**
comp=Z,12nm,1.0s,SNR=7.8
VISS Visnje 78.20 316 *e*P **P 21 39 27.8 -0.4**
KEV Kevo 78.64 341 PFAKE 21 39 40.0 +10
KEV LR LR
comp=Z,1µm,21.0s
AQU L'Aquila 78.76 313 *e*P **P 21 39 31.5 0.0**
comp=Z,40nm,1.2s
AQU L'Aquila 78.76 313 *e*P **P 21 39 31.5 0.0**
AQU pmax pmax
comp=Z,40nm,1.2s
GOPC GO Pecny, Ondr 78.87 320 *e*P **P 21 39 32.4 +0.5**
GOPC *ep*P **PcP 21 39 40.6 +0.1**
GOPC *e*S **S 21 49 28.3 -1.1**
GOPC *e*SS **SS 21 54 43.6 +9.2**
GOPC AMS AMS 22 23 10.0
comp=Z,500nm,16.3s
GOPC GO Pecny, Ondr 78.87 320 *e*P **P 21 39 32.4 +0.5**
GOPC *e* 21 39 40.6
GOPC *e*S **S 21 49 28.3 -1.1**
GOPC MLR MLR
comp=Z,500nm,16.3s
MOA Molln 78.89 318 *i* P **P 21 39 31.8 -0.3**
comp=Z,8.2nm,1.6s
ARCES ARCESS Array B 79.04 341 P **P 21 39 32.1 -0.3**
comp=Z,6.9nm,0.8s,baz=112,slow=6.1,SNR=18
ARCES LR LR 22 17 53.8
comp=Z,547nm,19.1s,baz=110,slow=38
ARCES ARCESS Array B 79.04 341 *e*P **P 21 39 32.5 +0.1**
ARE0 ARCESS Array S 79.04 341 *e*P **P 21 39 32.5 +0.1**
comp=Z,52nm,1.3s
PRU Pruhonice 79.04 320 *e*P **P 21 39 33.3 +0.5**
PRU *ex* x 21 39 41.5
PRU *e*S **S 21 49 27.9 -3.2**
PRU *ex* x 21 54 52.0
PRU AMS AMS 22 23 20.0
comp=Z,500nm,18.2s
PRU Pruhonice 79.04 320 *e*P **P 21 39 33.3 +0.5**
PRU *e* 21 39 41.5
PRU *e*S **S 21 49 27.9 -3.2**
PRU MLR MLR
comp=Z,500nm,18.2s
PVCC Panska Ves 79.11 321 *e*P **P 21 39 34.3 +1.2**
PVCC *ex* x 21 39 42.4
PVCC AMS AMS 22 22 00.0
comp=Z,300nm,15.5s
PVCC Panska Ves 79.11 321 *e*P **P 21 39 34.3 +1.2**
PVCC *e* 21 39 42.4
PVCC MLR MLR
comp=Z,300nm,15.5s
MYKA Terra Mystica 79.14 317 *e*P **P 21 39 33.4 -0.1**
comp=Z,11nm,1.1s
SYO Syowa Base 79.34 197 ⇑*e*X **P 21 39 31.1 -2.8**
SYO Syowa Base 79.34 197 ||*e*PcP **PcP 21 39 46.4 +4.3**
KBA Koelnbreinsper 79.40 317 *i* P **P 21 39 34.3 -0.7**
comp=Z,14nm,1.3s,SNR=6.2
KBA Koelnbreinsper 79.40 317 P **P 21 39 34.5 -0.5**
GEA0 GERESS Array S 79.40 319 *e*P **P 21 39 34.3 -0.6**
GEC2 GERESS Array S 79.41 319 *e*P **P 21 39 35.1 +0.1**
comp=Z,38nm,1.0s
GEC2 GERESS Array S 79.41 319 *e*P **P 21 39 35.1 +0.1**
GEC2 pmax pmax
comp=Z,38nm,1.0s
GERES GERESS Array B 79.41 319 P **P 21 39 34.8 -0.2**
comp=Z,17nm,0.9s,baz=100,slow=5.5,SNR=97
GERES LR LR 22 19 54.4
comp=Z,161nm,19.0s,baz=106,slow=40
KHC Kasperske Hory 79.53 319 *e*P **P 21 39 35.8 +0.3**
KHC *ep*P **sP 21 39 41.6 -1.9**
KHC *e*S **S 21 49 31.9 -4.5**
KHC *e*SS **SS 21 54 51.2 +6.9**
KHC AMS AMS 22 25 00.0
comp=Z,300nm,16.0s
KHC Kasperske Hory 79.53 319 *e*P **P 21 39 35.5 0.0**
comp=Z,7.1nm,1.1s
KHC Kasperske Hory 79.53 319 *e*P **P 21 39 35.5 0.0**
KHC pmax pmax
comp=Z,7.0nm,1.1s
BRG Berggiesshubel 79.55 321 *i* P **P 21 39 36.9 +1.3**
comp=Z,33nm,1.5s

comp=N,326nm,16.2s
comp=E,189nm,16.2s
comp=Z,402nm,21.2s
BRG Berggiesshubel 79.55 321 *i* P **P 21 39 36.9 +1.3**
BRG pmax pmax
comp=Z,33nm,1.5s
BRG MLR MLR
comp=N,326nm,16.2s
BRG MLR MLR
comp=E,189nm,16.2s
BRG MLR MLR
comp=Z,402nm,21.2s
ABTA Abfaltersbach 79.92 317 *e*P **P 21 39 37.3 -0.5**
comp=Z,6.6nm,1.0s
CLL Collm 80.20 322⇓ *i*P **P 21 39 38.8 -0.3**
comp=Z,20nm,1.1s
CLL *i* sP **PcP 21 39 47.5 +1.2**
CLL *i* 21 39 53.0
CLL *e*PP **PP 21 42 42.0 +0.5**
CLL *e*PPPP 21 45 54.0
CLL *e*S **S 21 49 43.0 -0.4**
CLL *e*PS **PnS 21 50 36.0 +6.7**
CLL *e* 21 51 12.0
CLL *e*SS **SS 21 55 03.0 +8.8**
CLL *e*SSS SSS 21 58 24.0
CLL *e*SSSS 22 00 48.0
CLL *e* 22 03 12.0
CLL Lm MLR 22 20 00.0
comp=N,500nm,20.5s
CLL Lm MLR 22 20 00.0
comp=E,300nm,20.6s
CLL Lm MLR 22 20 00.0
comp=Z,200nm,18.6s
CLL Collm 80.20 322 *e*P **P 21 39 38.4 -0.7**
comp=Z,28nm,1.1s
CLL Collm 80.20 322 *e*P **P 21 39 38.4 -0.7**
CLL pmax pmax
comp=Z,28nm,1.1s
NKC Novy Kostel 80.41 320 *e*S **S 21 49 45.8 +0.2**
NKC *e*SS **SS 21 55 08.1 +11**
WTTA Wattenberg 80.58 317 *i* P **P 21 39 40.6 -0.8**
comp=Z,15nm,1.3s
WATA Walderalm 80.63 317 *i* P **P 21 39 40.9 -0.8**
comp=Z,7.2nm,0.9s
MOTA Moosalm 80.95 317 *e*P **P 21 39 41.3 -2.1**
comp=Z,7.5nm,0.7s,SNR=11
GRFO Grafenberg 81.13 320 *e*P **P 21 39 45.0 +1.0**
comp=Z,36nm,1.3s
FETA Feichten 81.17 317 *e*P **P 21 39 44.3 -0.2**
comp=Z,11nm,1.2s,SNR=6.5
RETA Reutte 81.19 318 *i* P **P 21 39 44.2 -0.4**
comp=Z,15nm,1.3s
HFS Hagfors 81.23 330 P **P 21 39 44.8 +0.4**
comp=Z,6.1nm,0.8s,baz=132,slow=6.0,SNR=10
HFS LR LR 22 19 13.0
comp=Z,209nm,18.3s,baz=81,slow=38
KEST Kesra 81.35 306 P **P 21 39 46.1 +0.5**
comp=Z,15nm,0.9s,baz=328,slow=2.0,SNR=16
KEST LR LR 22 20 19.1
comp=Z,191nm,18.2s,baz=18,slow=39
KEST Kesra 81.35 306 *e*P **P 21 39 46.5 +0.9**
comp=Z,27nm,1.0s
FUORN Ofenpass-Fuorn 81.45 317 *e*P **P 21 39 46.5 +0.3**
comp=Z,23nm,1.2s
DAVOX Davos/Dischmat 81.73 317 P **P 21 39 47.0 -0.6**
comp=Z,8.0nm,0.9s,baz=94,slow=5.6,SNR=14
DAVOX LR LR 22 20 19.2
comp=Z,212nm,18.8s,baz=94,slow=39
DAVOX Davos/Dischmat 81.73 317 P **P 21 39 47.0 -0.6**
DAVOX pmax pmax
comp=Z,8.0nm,0.9s
DAVOX MLR MLR
comp=Z,212nm,18.8s
DAVA Damuels 81.77 317 *e*P **P 21 39 47.8 0.0**
comp=Z,34nm,1.0s,SNR=11
THTN Thala 81.88 305 *e*P **P 21 39 49.4 +0.9**
comp=Z,30nm,1.1s
TUE Stuetta 82.06 316 *e*P **P 21 39 49.1 -0.3**
comp=Z,23nm,1.3s
BILL Bilibino 82.29 22 *e*P **P 21 39 50.2 +0.4**
comp=Z,11nm,1.1s
BILL LR LR
comp=Z,995nm,20.0s
BILL Bilibino 82.29 22 *e*P **P 21 39 49.2 -0.6**
BILL *e* 21 39 57.4
BILL *e* 21 42 52.8
BILL *e*PPP PPP 21 44 48.6
BILL *e*S **S 21 49 57.2 -7.3**
BILL pmax pmax
comp=Z,12nm,1.2s
NB2 NORSAR Subarra 82.58 331 P **P 21 39 50.4 -1.1**
comp=Z,11nm,1.0s,baz=96,slow=5.9
ABSA Djebel Ababsia 82.89 306 P **P 21 39 54.6 +0.9**
SBF Sospel 83.24 314 *e*P **P 21 39 54.8 -0.6**
SBF pmax pmax
comp=Z,26nm,1.1s
SENIN Lac Senin/Sane 83.47 316 *e*P **P 21 39 57.1 +0.4**
comp=Z,31nm,0.9s
CKFL Kef-Lekhel 83.50 306 P **P 21 39 56.0 -1.0**
CDF Champ du Feu 83.60 318 *e*P **P 21 39 56.6 -0.6**
CDF pmax pmax
comp=Z,16nm,1.5s
ECH Echery 83.67 318 *e*P **P 21 39 57.5 +0.1**
comp=Z,17nm,1.2s
ECH Echery 83.67 318 *e*P **P 21 39 57.5 +0.1**
ECH pmax pmax
comp=Z,17nm,1.2s
CTEI Djebel Teioual 83.75 306 P **P 21 39 59.0 +0.8**
MBDF Montbardon 83.76 315 *e*P **P 21 39 56.9 -1.2**
MBDF pmax pmax
comp=Z,9.0nm,1.0s
LPG La Plagne 83.81 315 *e*P **P 21 39 58.0 -0.6**
LPG pmax pmax
comp=Z,15nm,0.9s
LPL La Plagne 83.82 315 *e*P **P 21 39 58.1 -0.4**
LPL pmax pmax
comp=Z,14nm,1.0s
BNI Bardonecchia 83.84 315 *e*P **P 21 39 57.9 -0.6**
comp=Z,19nm,1.1s
BNI Bardonecchia 83.84 315 *e*P **P 21 39 57.9 -0.6**
BNI pmax pmax
comp=Z,19nm,1.1s
HINF Hinteralfeld 83.85 318 *e*P **P 21 39 57.5 -0.9**
HINF pmax pmax
comp=Z,17nm,1.6s
DFRA Djebel Bou Aff 84.18 306 P **P 21 40 02.0 +1.6**
SPITS Spitsbergen Ar 84.26 348 P **P 21 39 59.7 -0.1**
comp=Z,6.8nm,0.9s,baz=104,slow=4.9,SNR=2.8
SPITS LR LR 22 22 47.5
comp=Z,339nm,18.6s,baz=130,slow=39
CABF La Chapelle 84.32 316 *e*P **P 21 40 01.0 +0.1**
CABF pmax pmax
comp=Z,36nm,1.2s
WLF Walferdange 84.41 319 *e*P **P 21 40 01.8 +0.7**
comp=Z,55nm,1.6s
WLF Walferdange 84.41 319 *e*P **P 21 40 01.8 +0.7**
WLF pmax pmax
comp=Z,55nm,1.6s
TAM Tamanrasset 84.42 293 *e*P **P 21 40 02.8 +0.9**
TAM Tamanrasset 84.42 293 *e*P **P 21 40 02.8 +0.9**
VIVF Saint-Julien-l 85.26 315 *e*P **P 21 40 05.3 -0.3**
VIVF pmax pmax
comp=Z,10.0nm,1.2s
GIVF Givet 85.28 320 *e*P **P 21 40 05.1 -0.4**
GIVF pmax pmax
comp=Z,35nm,1.8s
KBS Kingsbay 85.29 349 PFAKE 21 40 20.0 +15
KBS LR LR
comp=Z,552nm,21.0s
BAIF Baives 85.68 320 *e*P **P 21 40 07.3 -0.2**
SMF Signal de Mont 85.87 316 *e*P **P 21 40 08.0 -0.5**
SMF pmax pmax
comp=Z,15nm,1.1s
SSF Saint Saulge 86.10 317 *e*P **P 21 40 10.6 +0.9**
SSF pmax pmax
comp=Z,29nm,1.4s
AVF Avril sur Loir 86.20 317 *e*P **P 21 40 09.7 -0.5**
AVF pmax pmax
comp=Z,15nm,1.3s
BGF Bois d'Agland 86.55 316 *e*P **P 21 40 11.9 0.0**
BGF pmax pmax
comp=Z,22nm,1.1s
MTLF Montolieu 87.02 313 *e*P **P 21 40 14.2 -0.1**
MTLF pmax pmax
comp=Z,16nm,1.5s
TORD Torodi Ar. Bea 88.30 283 P **P 21 40 20.9 -0.1**
comp=Z,0.9nm,0.8s,baz=90,slow=5.4,SNR=3.7
VNDA Vanda 88.51 168 P **P 21 40 20.6 -0.1**
comp=Z,2.1nm,0.9s,baz=316,slow=5.6,SNR=12
VNDA LR LR 22 16 34.4
comp=Z,277nm,18.2s,baz=292,slow=33
VNDA Vanda 88.51 168 *e*P **P 21 40 21.3 +0.6**
comp=Z,8.4nm,1.0s
NVL N'lazarevskaya 88.70 199⇑ *i*P P 21 40 27.9 +6.2
NVL pmax pmax
comp=Z,36nm,1.2s
NVL MLR MLR
comp=Z,584nm,16.0s
SBA Scott Base 89.62 168 *e*P **P 21 40 27.6 +1.8**
comp=Z,34nm,1.6s
SBA LR LR
comp=Z,284nm,22.0s
SBA Scott Base 89.62 168 *e*P **P 21 40 27.6 +1.8**
SBA pmax pmax
comp=Z,34nm,1.6s
SBA MLR MLR
comp=Z,284nm,22.0s
EKA Eskdalemuir Ar 90.01 325 P **P 21 40 28.4 +0.3**
comp=Z,1.7nm,0.7s,baz=81,slow=4.4,SNR=3.4
EKA LR LR 22 26 28.8
comp=Z,193nm,18.0s,baz=65,slow=39
ESK Eskdalemuir 90.03 325 PFAKE 21 40 40.0 +12
ESK LR LR
comp=Z,339nm,19.0s
JMIC Jan Mayen 90.53 341 LR LR 22 21 54.6
comp=Z,195nm,22.0s,baz=77,slow=36
ES19 SONSECA Array 91.79 310 *e*P **P 21 40 37.4 +0.5**
DAG Danmarks Havn 91.84 347 *i* P **P 21 40 36.0 -0.2**
comp=Z,9.2nm,0.9s
comp=Z,710nm,22.0s
DAG Danmarks Havn 91.84 347 *i* P **P 21 40 36.0 -0.2**
DAG pmax pmax
comp=Z,9.0nm,0.9s
DAG MLR MLR
comp=Z,720nm,22.0s
ESDC Sonseca Array 91.84 310 P **P 21 40 37.1 0.0**
comp=Z,2.6nm,0.9s,baz=67,slow=4.4,SNR=9.9
ESDC LR LR 22 25 07.5
comp=Z,73nm,19.6s,baz=75,slow=38
ESLA Sonseca Array 91.84 310 *e*P **P 21 40 36.8 -0.3**
PAB San Pablo 92.15 310 *e*P **P 21 40 37.8 -0.7**
comp=Z,11nm,1.0s
PAB LR LR
comp=Z,205nm,20.0s
PAB San Pablo 92.15 310 *e*P **P 21 40 37.8 -0.7**
PAB pmax pmax
comp=Z,11nm,1.0s
PAB MLR MLR
comp=Z,205nm,20.0s
QSPA South Pole Qui 92.52 180 P **P 21 40 40.3 +0.6**
comp=Z,2.1nm,1.0s,baz=309,slow=6.5,SNR=3.0
QSPA LR LR 22 18 37.2
comp=Z,486nm,18.2s,baz=272,slow=33
QSPA South Pole Qui 92.52 180 *e*P **P 21 40 40.6 +0.9**
comp=Z,49nm,1.1s
QSPA LR LR
comp=Z,571nm,19.0s
MDT Midelt 92.95 303 LR LR 22 22 55.6
comp=Z,377nm,21.4s,baz=102,slow=36
SNAA Sanae 93.50 198 P **P 21 40 42.8 -1.3**
SNAA Sanae 93.50 198 P **P 21 40 43.4 -0.7**
comp=Z,1.5nm,0.9s,baz=56,slow=5.7,SNR=4.8
SNAA LR LR 22 18 27.4
comp=Z,198nm,18.0s,baz=89,slow=33
SNAA Sanae 93.50 198 *e*P **P 21 40 44.3 +0.2**
comp=Z,8.1nm,1.2s
KOWA Kowa 93.77 285 LR LR 22 22 12.2
comp=Z,306nm,18.3s,baz=100,slow=35
DBIC Dimbokro 95.06 277 LR LR 22 19 50.7
comp=Z,331nm,22.0s,baz=69,slow=33
VNA1 Neumayer–Stat 95.35 199 P P 21 40 57.9 +5.6
VNA3 Neumayer Olymp 95.72 199 P **P 21 40 58.2 +4.0**
SHEL Horse Pasture 96.75 254 PFAKE 21 41 10.0 +10
SHEL LR LR
comp=Z,190nm,19.0s
BORG Borgarnes 96.84 336 LR LR 22 27 06.0
comp=Z,142nm,19.6s,baz=68,slow=37
BORG Borgarnes 96.84 336 PFAKE 21 41 10.0 +11
BORG LR LR
comp=Z,132nm,20.0s
TOLK Toolik Lake Re 98.09 19 P Pdif 21 41 05.2 +0.1
baz=299
TOLK Toolik Lake Re 98.09 19 *e*P **P 21 41 04.2 -0.8**
KDAK Kodiak Island 101.78 29 PFAKE 21 41 30.0 +8.4
KDAK LR LR
comp=Z,227nm,22.0s
EGAK Eagle 102.99 20 PFAKE 21 41 40.0 +13
EGAK LR LR
comp=Z,663nm,20.0s
ASCN Ascension 105.11 263 PFAKE 21 46 00.0
ASCN LR LR
comp=Z,1μm,20.0s
SFJD Kangerlussuaq 105.35 345 PFAKE 21 46 00.0
SFJD LR LR
comp=Z,306nm,21.0s
WRAK Wrangell Islan 111.69 24 PFAKE 21 46 20.0
WRAK LR LR
comp=Z,506nm,20.0s
SACV Santiago Islan 112.55 287 PFAKE 21 46 20.0
SACV LR LR
comp=Z,204nm,20.0s
PPT2 Papeete2 119.22 109 *e*LR LR 22 21 48.6
comp=Z,159nm,25.2s
NLWA Neilton Lookou 121.81 27 PFAKE 21 46 30.0 +7.0
NLWA LR LR
comp=Z,478nm,21.0s
FFC Flin Flon 121.96 9 PFAKE 21 46 30.0 +7.0
FFC LR LR
comp=Z,374nm,22.0s
NEW Newport 123.91 22 PFAKE 21 46 40.0 +13
NEW LR LR
comp=Z,369nm,20.0s
HAWA Hanford 124.48 25 PFAKE 21 46 40.0 +12
HAWA LR LR
comp=Z,240nm,19.0s
MSO Missoula 126.28 21 P **PKPdf 21 46 31.5 -0.2**
baz=329
EGMT Eagleton 126.57 17 P **PKPdf 21 46 32.2 +0.1**
baz=335
EGMT Eagleton 126.57 17 PFAKE 21 46 40.0 +7.8
EGMT LR LR
comp=Z,389nm,19.0s
BMO Blue Mountains 126.64 24 PFAKE 21 46 40.0 +7.6
BMO LR LR
comp=Z,281nm,20.0s
M02C Callahan 126.73 31 P **PKPdf 21 46 33.2 +0.6**
baz=317
DGMT Dagmar 127.56 12 PFAKE 21 46 50.0 +16
DGMT LR LR
comp=Z,546nm,20.0s
WVOR Wild Horse Val 128.00 27 PFAKE 21 46 50.0 +15
WVOR LR LR
comp=Z,231nm,19.0s
BOZ Bozeman (W) 128.15 20 PFAKE 21 46 50.0 +15
BOZ LR LR
comp=Z,452nm,21.0s
LAO LASA Array 128.76 15 PFAKE 21 46 50.0 +14
LAO LR LR
comp=Z,448nm,22.0s
HLID Hailey 128.88 23 PFAKE 21 46 50.0 +13
HLID LR LR
comp=Z,369nm,20.0s
AGMN Agassiz Nation 129.02 6 PFAKE 21 46 50.0 +13
AGMN LR LR
comp=Z,441nm,21.0s
PKME Peaks-Kenny Pk 129.09 342 PFAKE 21 46 50.0 +13
PKME LR LR
comp=Z,457nm,19.0s
TAOE Nuku Hiva Isla 129.22 99 *e*LR LR 22 27 35.6
comp=Z,232nm,24.5s
RLMT Red Lodge 129.33 18 PFAKE 21 46 50.0 +12
RLMT LR LR
comp=Z,367nm,20.0s
LKWY Lake 129.47 19 PFAKE 21 46 50.0 +12
LKWY LR LR
comp=Z,1μm,20.0s
EYMN Ely 129.65 2 PFAKE 21 46 50.0 +12
EYMN LR LR
comp=Z,547nm,21.0s
AHID Auburn Hatcher 130.81 21 PFAKE 21 46 50.0 +9.4
AHID LR LR
comp=Z,549nm,22.0s
LONY Lake Ozonia 131.16 346 PFAKE 21 46 50.0 +9.1
LONY LR LR
comp=Z,367nm,21.0s
NVAR Mina Array Bea 131.27 30 PKP **PKPdf 21 46 42.2 +0.6**
comp=Z,0.8nm,0.7s,baz=305,slow=2.0,SNR=4.2
BW06 Boulder Array 131.34 20 PFAKE 21 46 50.0 +8.4
BW06 LR LR
comp=Z,335nm,20.0s
PDAR Pinedale Array 131.34 20 PKP **PKPdf 21 46 40.4 -1.2**
comp=Z,0.8nm,0.8s,baz=110,slow=1.7,SNR=6.2
COWI Conover 131.53 360 PFAKE 21 46 50.0 +8.4
COWI LR LR
comp=Z,717nm,21.0s
HWUT Hardware Ranch 131.64 22 PFAKE 21 46 50.0 +7.8
HWUT LR LR
comp=Z,408nm,21.0s
DUG Dugway, Tooele 132.36 24 PFAKE 21 47 00.0 +17
DUG LR LR
comp=Z,308nm,19.0s
ECSD EROS Data Cent 133.45 7 PFAKE 21 47 00.0 +15
ECSD LR LR
comp=Z,407nm,21.0s
BINY Binghamton 133.78 346 PFAKE 21 47 00.0 +14
BINY LR LR
comp=Z,334nm,21.0s
JFWS Jewell Farm 134.71 1 PFAKE 21 47 00.0 +12
JFWS LR LR
comp=Z,573nm,22.0s
AAM Ann Arbor 135.02 354 PFAKE 21 47 00.0 +12
AAM LR LR
comp=Z,425nm,20.0s
OGNE Ogallala 135.18 14 PFAKE 21 47 00.0 +11
OGNE LR LR
comp=Z,430nm,21.0s
ISCO Idaho Springs 135.29 18 PFAKE 21 47 00.0 +11
ISCO LR LR
comp=Z,351nm,19.0s
SCIA State Center 135.59 4 PFAKE 21 47 00.0 +11
SCIA LR LR
comp=Z,587nm,20.0s
PFO Pinyon Flats O 135.90 33 PFAKE 21 47 00.0 +10
PFO LR LR
comp=Z,220nm,20.0s
MVCO Mesa Verde 136.63 22 PFAKE 21 47 00.0 +8.3
MVCO LR LR
comp=Z,385nm,20.0s
WUAZ Wupatki 136.90 26 PFAKE 21 47 00.0 +7.8
WUAZ LR LR
comp=Z,239nm,22.0s
ACSO Alum Creek Sta 136.98 353 PFAKE 21 47 00.0 +8.1
ACSO LR LR
comp=Z,274nm,19.0s
HDIL Hopedale 137.07 360 PFAKE 21 47 00.0 +7.9
HDIL LR LR
comp=Z,409nm,21.0s
SDCO Great Sand Dun 137.21 19 PFAKE 21 47 00.0 +7.2
SDCO LR LR
comp=Z,411nm,21.0s
CBKS Cedar Bluff 137.73 12 PFAKE 21 47 10.0 +17
CBKS LR LR
comp=Z,404nm,22.0s
CBN Corbin Frederi 137.90 346 PFAKE 21 47 10.0 +16
CBN LR LR
comp=Z,331nm,20.0s
KSU1 Kansas State U 138.00 8 PFAKE 21 47 10.0 +16
KSU1 LR LR
comp=Z,413nm,20.0s
BBSR BB Station 138.06 328 PFAKE 21 47 10.0 +16
BBSR LR LR
comp=Z,270nm,21.0s
TASM ASL Pad, Albuq 139.40 22 P **PKPdf 21 46 58.1 +1.3**
baz=334
ANMO Albuquerque 139.40 22 P **PKPdf 21 46 58.1 +1.3**
baz=334
ANMO Albuquerque 139.40 22 PFAKE 21 47 10.0 +13
ANMO LR LR
comp=Z,340nm,19.0s
ANMO Albuquerque 139.40 22⇑ *i*PKIKP **PKPdf 21 46 58.5 +1.7**
TASL Snake Pit, Alb 139.40 22 P **PKPdf 21 46 58.4 +1.5**
baz=334
BLA Blacksburg 139.53 349 PFAKE 21 47 10.0 +13
BLA LR LR
comp=Z,452nm,21.0s
TUC Tucson 139.84 29 PFAKE 21 47 10.0 +12
TUC LR LR
comp=Z,335nm,20.0s
CNNC Cliffs of the 140.84 345 PFAKE 21 47 10.0 +11
CNNC LR LR
comp=Z,389nm,19.0s
WMOK Wichita Mounta 141.86 12 PFAKE 21 47 10.0 +9.0
WMOK LR LR
comp=Z,423nm,19.0s
MNTX Cornudas Mount 142.70 23 *e*PKPdf **PKPdf 21 46 59.7 -2.9**
MNTX LR LR
comp=Z,312nm,19.0s
X39A Fountain Ranch 142.84 6 P **PKPdf 21 46 58.3 -4.5**
baz=352
MIAR Mount Ida 142.87 6 P **PKPdf 21 46 58.6 -4.2**
baz=353
MIAR Mount Ida 142.87 6 *e*PKPdf **PKPdf 21 46 59.0 -3.8**
MIAR LR LR
comp=Z,579nm,22.0s
MIAR Mount Ida 142.87 6 *e*PKIKP **PKPdf 21 46 59.0 -3.8**
MIAR MLR MLR
comp=Z,579nm,22.0s
NHSC New Hope 143.44 347 PFAKE 21 47 20.0 +16
NHSC LR LR
comp=Z,385nm,20.0s
GOGA Godfrey 143.75 352 PFAKE 21 47 20.0 +16
GOGA LR LR
comp=Z,432nm,21.0s
LRAL Lakeview Retre 144.50 356 P **PKPab 21 47 03.3 -0.7**
baz=4.3
WHTX Lake Whitney, 144.79 12 P **PKPab 21 47 04.4 -0.7**
baz=346
150A Eclectic 144.85 355 P **PKPab 21 47 04.5 -0.8**
baz=6.0
141A Papa Simpson, 144.85 5 P PKPbc 21 47 05.3 0.0
baz=354
151A Opelika 144.86 354 P **PKPab 21 47 04.8 -0.5**
baz=7.2
148A Greensboro 144.92 357 P **PKPab 21 47 04.9 -0.6**
baz=3.3
149A Jones 144.92 356 P **PKPab 21 47 05.2 -0.2**
baz=4.7
146A Union 144.97 359 P PKPbc 21 47 05.7 0.0
baz=0.8
255A Hazlehurst 145.05 350 P **PKPab 21 47 05.9 -0.1**
baz=12
254A Abbeville 145.16 351 P **PKPbc 21 47 06.1 -0.2**
baz=11
251A Midway 145.30 354 P **PKPbc 21 47 06.3 -0.4**
baz=7.1
252A Lumpkin 145.32 353 P **PKPbc 21 47 06.5 -0.4**
baz=8.3
241A Mo Tay, Goldon 145.43 5 P **PKPab 21 47 07.3 0.0**
baz=354
TXAR Lajitas Array 145.47 22 PKPbc **PKPbc 21 47 07.5 -0.1**
comp=Z,15nm,0.8s,baz=284,slow=1.7,SNR=137
248A Dixon Mills 145.47 357 P **PKPbc 21 47 07.3 0.0**
baz=3.1
NATX Nacogdoches 145.49 8 P **PKPbc 21 47 07.4 0.0**
baz=351
NATX Nacogdoches 145.49 8 *e*PKPbc **PKPab 21 47 07.9 +0.3**
NATX LR LR
comp=Z,542nm,20.0s
250A Grady 145.50 355 P **PKPbc 21 47 06.2 -1.2**
baz=5.7
244A Avery, Jackson 145.54 2 P **PKPbc 21 47 07.5 0.0**
baz=358
247A Quitman 145.54 359 P **PKPdf 21 47 07.6 +0.1**
baz=1.6
249A Camden 145.56 356 P **PKPbc 21 47 07.2 -0.4**
baz=4.2
245A Little AP, Sta 145.57 1 P **PKPdf 21 47 07.5 0.0**
baz=359
JCT Junction City 145.67 16 P **PKPdf 21 47 07.2 -0.6**
baz=342
JCT Junction City 145.67 16 *e*PKPdf **PKPdf 21 47 07.8 -0.1**
JCT LR LR
comp=Z,429nm,22.0s
JCT Junction City 145.67 16 *e*PKIKP **PKPdf 21 47 07.8 -0.1**
JCT MLR MLR
comp=Z,429nm,22.0s
243A Waterproof 145.67 3 P **PKPdf 21 47 07.5 -0.2**
baz=356

355A	**Pearson**	145.68	350	P	PKPdf	21 47 07.8	0.0
	baz=12						
352A	**Blakely**	145.85	353	P	PKPbc	21 47 08.3	-0.2
	baz=8.1						
353A	**Camilla**	145.89	352	P	PKPab	21 47 09.0	-0.1
	baz=9.4						
435B	**Jarrell**	145.93	13	P	PKPbc	21 47 08.7	-0.1
	baz=346						
ANWB	**Willy Bob**	146.10	307	PFAKE		21 47 20.0	+10
ANWB				LR	LR		
	comp=Z,267nm,22.0s						
349A	**Repton**	146.19	357	P	PKPbc	21 47 09.8	+0.3
	baz=4.1						
347A	**Saraland**	146.19	359	P	PKPab	21 47 10.3	+0.1
	baz=1.7						
346A	**Big Creek Wild**	146.22	0	P	PKPab	21 47 10.6	+0.2
	baz=0.1						
HKT	**Hockley**	147.08	10	*e*PKPbc	PKPbc	21 47 11.6	-0.5
HKT	**Hockley**	147.08	10	*e*PKP2	PKPbc	21 47 11.6	-0.5
GRGR	**Grenville**	148.74	298	PFAKE		21 47 20.0	-0.8
GRGR				LR	LR		
	comp=Z,203nm,21.0s						
KVTX	**Kingsville**	148.96	15	PFAKE		21 47 20.0	-1.2
KVTX				LR	LR		
	comp=Z,346nm,19.0s						
SIV	**San Ignacio**	149.04	243	PKPbc	PKPbc	21 47 16.6	-1.3
	comp=Z,3.0nm,0.8s,baz=135,slow=1.4,SNR=6.9						
SJG	**San Juan**	149.18	313	PFAKE		21 47 30.0	+7.6
SJG				LR	LR		
	comp=Z,285nm,22.0s						
GRTK	**Grand Turk**	150.08	324	PFAKE		21 47 30.0	+4.0
GRTK				LR	LR		
	comp=Z,409nm,20.0s						
SDDR	**Presa de Saban**	152.09	321	PFAKE		21 47 30.0	-4.5
SDDR				LR	LR		
	comp=Z,261nm,20.0s						
SAML	**Samuel**	153.12	255	PFAKE		21 47 30.0	+2.6
SAML				LR	LR		
	comp=Z,322nm,20.0s						
GTBY	**Guantanamo Bay**	153.56	328	PFAKE		21 47 30.0	+1.8
GTBY				LR	LR		
	comp=Z,213nm,19.0s						
LPAZ	**La Paz**	154.98	236	PKP	PKPdf	21 47 26.3	+2.9
	comp=Z,5.2nm,1.2s,baz=64,slow=1.7,SNR=7.8						
LPAZ				PKPbc	PKPbc	21 47 30.8	-1.3
	comp=Z,3.1nm,0.9s,baz=140,slow=2.5,SNR=6.3						
SDV	**Santo Domingo**	158.05	301	PFAKE		21 47 40.0	+13
SDV				LR	LR		
	comp=Z,276nm,22.0s						
NNA	**Nana**	164.39	233	PFAKE		21 47 40.0	+6.6
NNA				LR	LR		
	comp=Z,145nm,20.0s						
BCIP	**Isla Barro Col**	164.90	321	PFAKE		21 47 40.0	+6.2
BCIP				LR	LR		
	comp=Z,308nm,22.0s						
JTS	**JuntasAbangare**	166.45	341	PFAKE		21 47 50.0	+15
JTS				LR	LR		
	comp=Z,385nm,22.0s						
OTAV	**Otavalo**	168.65	284	*e*PKPdf	PKPdf	21 47 38.0	+0.7
OTAV				LR	LR		
	comp=Z,265nm,20.0s						

PGC 23 21:29:00.2±0.1, 66°.89N×135°.55W, h1km, ML3.5, ML3.8/2, 78km Wsw of Fort McPherson, Nt Northern Yukon Territory, Canada, Northern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INK	**Inuvik**	1.62	28	Pn	Pn	21 29 28.5	-1.4
INK				Sn	Sn	21 29 50.0	-1.3
DAWY	**Dawson**	3.25	211	Pn	Pn	21 29 52.1	-0.2
DAWY				Sn	Sn	21 30 29.5	-2.2
DAWY				Sg	Sb	21 30 39.7	+1.0
DOT	**Dot Lake**	4.83	232	Pn	Pn	21 30 12.5	-1.4
DOT				Pg	Pg	21 30 29.8	-2.8
COLD	**Coldfoot**	5.74	280	Pn	Pn	21 30 24.9	-1.4
PAX	**Paxson**	5.76	232	Pn	Pn	21 30 25.7	-1.1
PAX				Sn	Sn	21 31 28.8	-4.6
YUK5	**Granite Creek**	5.87	191	Pn	Pn	21 30 27.5	-0.8
HARP	**HAARP**	6.10	227	Pn	Pn	21 30 30.8	-0.5
HYT	**Haines Junctio**	6.15	189	Pn	Pn	21 30 31.9	-0.2
DLBC	**Dease Lake**	8.85	161	Pn	Pn	21 31 08.4	-0.7
YKW3	**Yellowknife Ar**	9.92	106	Pn	Pn	21 31 21.4	-2.2
YKW3				Sn	Sn	21 33 05.7	-10
YKW1	**Yellowknife Ar**	10.00	106	Pn	Pn	21 31 22.4	-2.3
YKW1				Sn	Sn	21 33 08.0	-9.4
RES	**Resolute Bay**	15.13	42	Sn	Sn	21 35 07.4	-15

IDC 23 21:44:46.2±56.0, 13°.40S×168°.16E, h0km, mb3.9/3, mb1 4.0/3, mb1mx3.5/52, mbtmp3.9/3, Error ellipse: s-maj=953.0km s-min=115.7km az=64.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	30.51	229	P	P	21 51 01.2	0.0
	0.7nm,0.5s,baz=56,slow=11,SNR=6.1						
WRA	**Warramunga Arr**	33.00	254	P	P	21 51 23.5	+0.2
	0.4nm,0.6s,baz=84,slow=8.9,SNR=6.8						
ASAR	**Alice Springs**	33.96	247	P	P	21 51 31.4	-0.3
	0.8nm,0.4s,baz=80,slow=9.1,SNR=25						

*ISCJB **23** 22:02:30.9±0.4, 51°.48N±0°.02×16°.13E±0°.02, h0km, Error ellipse: s-maj=3.0km s-min=1.8km az=8.6*
*CSEM **23** 22:02:32.5±0.1, 51°.51N×16°.13E, h2km, ML3.4/13, Error ellipse: s-maj=2.6km s-min=1.8km az=11.0*
*BGR **23** 22:02:33.6±0.4, 51°.50N×16°.12E, h1km, ML3.1/14, Error ellipse: s-maj=4.4km s-min=2.2km az=20.0*
*IDC **23** 22:02:33.7±0.8, 51°.54N×15°.93E, h0km, mb1 3.5/6, mb1mx3.2/69, mbtmp3.4/6, ML3.0/6, Error ellipse: s-maj=15.9km s-min=6.9km az=113.0*
*PRU **23** 22:02:33.8, 51°.49N×16°.11E, h0km*
*VIE **23** 22:02:35.9±1.0, 51°.30N×16°.19E, h0km, mb2.6/6, ml3.0/6, Error ellipse: s-maj=9.9km s-min=7.0km az=30.0 62 km WNW of Wroclaw Suspected Mining induced.*

ISC 23 22:02:31.1±0.6, 51°.58N±0°.03×16°.13E±0°.02, h0km, n101, σ1§16/186, 4C-10D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	0.75	172	*i* Pg	Pg	22 02 46.4	+0.9
KSP				*e*Sg	Sg	22 02 55.8	+0.6
KSP	**Ksiaz**	0.75	172	*e*Pg	Pg	22 02 46.4	+0.9
KSP				*e*Sg	Sg	22 02 56.1	+0.9
KSP	**Ksiaz**	0.75	172	Pg	Pg	22 02 46.4	+0.9
KSP				Sg	Sg	22 02 56.1	+0.9
UPC	**Upice**	1.08	184	*e*PG	Pg	22 02 52.4	+0.6
UPC				*e*SG	Sg	22 03 05.7	-0.1
	comp=Z,132nm,0.3s						
UPC	**Upice**	1.08	184	Pg	Pg	22 02 52.4	+0.6
UPC				Sg	Sg	22 03 05.7	-0.1
	132nm,0.3s						
DPC	**Dobruska-Polom**	1.24	174	*e*Pg	Pg	22 02 55.2	+0.3
DPC				*e*Sg	Sg	22 03 10.1	-0.9
DPC	**Dobruska-Polom**	1.24	174	*e*PG	Pg	22 02 55.3	+0.4
DPC				*e*SG	Sg	22 03 10.1	-0.9
	comp=Z,63nm,0.4s						
DPC	**Dobruska-Polom**	1.24	174	Pg	Pg	22 02 55.2	+0.3
DPC				Sg	Sg	22 03 10.1	-0.9
	63nm,0.4s						
PVCC	**Panska Ves**	1.44	224	*e*PG	Pg	22 02 59.4	+0.6
PVCC				*e*SG	Sb	22 03 18.1	+0.3
	comp=Z,200nm,0.5s						
PVCC	**Panska Ves**	1.44	224	Pg	Pg	22 02 59.4	+0.6
PVCC				Sg	Sb	22 03 18.1	+0.3
	200nm,0.5s						
BRG	**Berggiesshubel**	1.55	243	PN	Pn	22 03 00.5	+0.5
BRG				PG	Pg	22 03 02.1	+1.4
BRG				SG	Sn	22 03 21.9	+1.1
	108nm,0.4s						
BRG	**Berggiesshubel**	1.55	243	*e*Pn	Pn	22 03 00.4	+0.5
BRG				*e*Pg	Pg	22 03 01.9	+1.2
BRG				*e*Sg	Sn	22 03 21.8	+1.1
BRG	**Berggiesshubel**	1.55	243	Pn	Pn	22 03 00.4	+0.5
KRLC	**Kraliky**	1.57	164	*e*PG	Pn	22 03 00.3	+0.1
KRLC				*e*SG	Sg	22 03 20.7	-0.7
	comp=Z,23nm,0.4s						
KRLC	**Kraliky**	1.57	164	Pg	Pn	22 03 00.3	+0.1
KRLC				Sg	Sg	22 03 20.7	-0.7
	23nm,0.4s						

PRA	**Prague**	1.86	216	*e*PN	Pn	22 03 04.7	+0.5
PRA				*e*PG	Pb	22 03 06.6	+0.7
PRA				*e*SG	Sb	22 03 29.9	+0.2
	comp=Z,33nm,0.5s						
PRA	**Prague**	1.86	216	Pn	Pn	22 03 04.7	+0.5
FBE	**Freiberg**	1.86	250	*e*Pg	Pg	22 03 07.6	+0.7
FBE				*e*Sg	Sg	22 03 31.9	+0.9
FBE	**Freiberg**	1.86	250	Pg	Pg	22 03 07.6	+0.7
FBE				Sg	Sg	22 03 31.9	+0.9
GOPC	**GO Pecny, Ondr**	1.88	208	*e*PG	Pb	22 03 06.9	+0.6
GOPC				*e*SG	Sb	22 03 30.1	-0.2
	comp=Z,38nm,0.4s						
GOPC	**GO Pecny, Ondr**	1.88	208	Pg	Pb	22 03 06.9	+0.6
GOPC				Sg	Sb	22 03 30.1	-0.2
	38nm,0.4s						
PRU	**Pruhonice**	1.89	213	*e*PN	Pn	22 03 05.1	+0.5
PRU				*e*PG	Pb	22 03 06.3	-0.1
PRU				*e*SG	Sb	22 03 30.5	-0.1
	comp=Z,55nm,0.6s						
PRU	**Pruhonice**	1.89	213	Pn	Pn	22 03 05.1	+0.5
CLL	**Collm**	1.98	263	*e*Pn	Pn	22 03 06.6	+0.8
CLL				*e*Pg	Pg	22 03 09.5	+0.5
CLL				*e*Sg	Sg	22 03 35.9	+1.4
CLL	**Collm**	1.98	263	*e*Pn	Pn	22 03 07.0	+1.2
CLL				*e*Pg	Pb	22 03 09.0	+1.1
CLL				*e*		22 03 14.0	
CLL				*e*Sg	Sg	22 03 35.0	+0.5
	comp=Z,28nm,0.5s						
CLL				*e*		22 03 43.0	
CLL	**Collm**	1.98	263	Pn	Pn	22 03 06.6	+0.8
RAC	**Raciborz**	1.99	138	*e*Pg	Pg	22 03 09.5	+0.2
RAC				*e*Sg	Sb	22 03 33.9	+0.3
MORC	**Moravsky Berou**	2.02	153	*e*Pn	Pn	22 03 07.0	+0.5
MORC				*e*Sg	Sb	22 03 34.4	-0.1
MORC	**Moravsky Berou**	2.02	153 ⇓	*i*P	Pn	22 03 06.0	-0.5
MORC	**Moravsky Berou**	2.02	153 ⇓	*i*P	Pn	22 03 06.0	-0.5
MORC	**Moravsky Berou**	2.02	153	Pn	Pn	22 03 07.0	+0.5
MORC				Sg	Sb	22 03 34.4	-0.1
MORC	**Moravsky Berou**	2.02	153	*e*PN	Pn	22 03 06.9	+0.5
MORC				*e*SG	Sb	22 03 34.3	-0.1
OKC	**Ostrava-Krasne**	2.17	143	*e*Pn	Pn	22 03 08.4	+0.3
OKC				*e*Pg	Pg	22 03 12.9	+0.2
OKC				*e*Sg	Sb	22 03 39.9	+1.3
OKC	**Ostrava-Krasne**	2.17	143	Pn	Pn	22 03 08.8	+0.3
CHZP	**Chorzow**	2.23	124	*e*Pg	Pg	22 03 15.3	+1.5
CHZP				*e*Sg	Sg	22 03 43.4	+0.7
VRAC	**Vranov**	2.30	172 ⇓	*i*P	Pn	22 03 11.2	+0.9
VRAC	**Vranov**	2.30	172 ⇓	*i*P	Pn	22 03 11.2	+0.9
VRAC				*e*Sg	Sb	22 03 43.0	+0.6
VRAC	**Vranov**	2.30	172	*e*PN	Pn	22 03 11.2	+0.9
VRAC				*e*SG	Sb	22 03 43.0	+0.6
KRUC	**Moravsky**	2.53	176	*e*PN	Pn	22 03 14.7	+1.2
KRUC				*e*PG	Pb	22 03 18.2	+0.8
KRUC				*e*SG	Sb	22 03 50.7	+1.6
TANN	**Tannenbergstha**	2.59	245	*e*Pn	Pn	22 03 15.7	+1.3
TANN				*e*Pg	Pg	22 03 22.2	+1.3
TANN				*e*Sg	Sg	22 03 53.4	-1.0
TANN	**Tannenbergstha**	2.59	245	Pn	Pn	22 03 15.7	+1.3
WERD	**Werda**	2.67	246	*e*Pn	Pn	22 03 16.6	+1.2
WERD				*e*Sg	Sg	22 03 57.0	+0.2
WERD	**Werda**	2.67	246	Pn	Pn	22 03 16.6	+1.2
WERD				Sg	Sg	22 03 57.0	+0.2
NKC	**Novy Kostel**	2.69	241	*e*PN	Pn	22 03 16.8	+1.1
NKC				*e*PG	Pg	22 03 22.8	+0.1
NKC				*e*SG	Sg	22 03 58.2	+0.6
	comp=Z,43nm,0.4s						
NKC	**Novy Kostel**	2.69	241	Pn	Pn	22 03 16.8	+1.1
OJC	**Ojcow**	2.69	119	*e*Pn	Pn	22 03 15.3	-0.4
OJC				*e*Pg	Pg	22 03 22.7	0.0
OJC				*e*Sg	Sg	22 03 57.2	-0.4
OJC	**Ojcow**	2.69	119	*e*Pn	Pn	22 03 15.3	-0.4
JAVC	**Velka Javorina**	2.90	159	*e*PN	Pn	22 03 20.4	+1.8
KHC	**Kasperske Hory**	2.95	215	*e*PN	Pn	22 03 19.9	+0.7
KHC				*e*PG	Pb	22 03 26.3	+1.7
KHC				*e*SN	Sn	22 03 54.3	-1.0
KHC				*e*SG	Sg	22 04 05.2	-0.6
	comp=Z,29nm,0.7s						
KHC	**Kasperske Hory**	2.95	215	Pn	Pn	22 03 19.9	+0.7
MOX	**Moxa**	3.00	253	*e*Pn	Pn	22 03 20.9	+1.0
MOX				*e*Pg	Pg	22 03 29.1	+0.6
MOX				*e*Sg	Sg	22 04 07.7	+0.5
MOX	**Moxa**	3.00	253	Pn	Pn	22 03 20.9	+1.0
ROTZ	**Rotzenmuhle**	3.09	235	*e*Pn	Pn	22 03 22.1	+1.0
ROTZ				*e*Sg	Sg	22 04 10.0	-0.3
ROTZ	**Rotzenmuhle**	3.09	235	Pn	Pn	22 03 22.1	+1.0
ROTZ				Sg	Sg	22 04 10.0	-0.3
GEC2	**GERESS Array S**	3.15	211	*e*Pn	Pn	22 03 22.6	+0.5
GEC2				*e*Sg	Sg	22 04 11.3	-1.1
GEC2	**GERESS Array S**	3.15	211	Pn	Pn	22 03 22.6	+0.5
GEC2				Sg	Sg	22 04 11.3	-1.1
GERES	**GERESS Array B**	3.15	211	Pn	Pn	22 03 22.8	+0.6
	comp=Z,2.2nm,0.3s,baz=30,slow=12,SNR=61						
GERES				Pg	Pb	22 03 29.9	+1.8
	comp=Z,4.8nm,0.3s,baz=29,slow=17,SNR=35						
GERES				Sn	Sn	22 03 59.5	-0.9
	comp=Z,3.0nm,0.3s,baz=37,slow=28,SNR=6.4						
GERES				Lg	Lg	22 04 09.3	
	comp=Z,6.3nm,0.3s,baz=34,slow=30,SNR=12						
SMOL	**Smolenice**	3.19	164	*e*PG	Pg	22 03 32.0	-0.1
SMOL				*e*SG	Sg	22 04 13.9	+0.5
SMOL	**Smolenice**	3.19	164	*e*Pg	Pg	22 03 32.0	-0.1
SMOL				*e*Sg	Sg	22 04 13.9	+0.5
WET	**Wettzell**	3.21	222	*e*Pn	Pn	22 03 23.6	+0.8
WET				*e*Sg	Sg	22 04 13.2	-0.9
WET	**Wettzell**	3.21	222	Pn	Pn	22 03 23.6	+0.8
WET				Sg	Sg	22 04 13.2	-0.9
LANS	**Liptovska Anna**	3.24	137	*e*PG	Pg	22 03 33.7	+0.5
LANS				*e*SG	Sg	22 04 15.5	+0.3
LANS	**Liptovska Anna**	3.24	137	*e*Pg	Pg	22 03 33.7	+0.5
LANS				*e*Sg	Sg	22 04 15.5	+0.3
MODS	**Modra-Piesok**	3.30	167	*e*PG	Pg	22 03 33.4	-0.9
MODS				*e*SG	Sb	22 04 14.0	+2.8
MODS				*e*LG	Lg	22 04 19.5	
MODS	**Modra-Piesok**	3.30	167	*e*Pg	Pg	22 03 33.4	-0.9
MODS				*e*Sg	Sb	22 04 14.0	+2.8
NIE	**Niedzica**	3.43	128	*e*P	Pg	22 03 37.4	+0.5
NIE				*e*S	Sg	22 04 22.2	+0.8
VYHS	**Vyhne**	3.55	150	*e*PG	Pg	22 03 39.8	+0.6
VYHS				*e*SG	Sg	22 04 22.2	-3.0
VYHS				*e*LG	Lg	22 04 35.1	
VYHS	**Vyhne**	3.55	150	*e*Pg	Pg	22 03 39.8	+0.6
VYHS				*e*Sg	Sg	22 04 22.2	-3.0
BSD	**Bornholm Skovb**	3.61	349	*i* P	Pn	22 03 29.9	+1.6
BSD				*i* S	Sn	22 04 10.4	-1.1
BSD	**Bornholm Skovb**	3.61	349	*i* P	Pn	22 03 29.9	+1.6
BSD				*i* S	Sn	22 04 10.4	-1.1
GRA1	**Grafenberg Arr**	3.65	241	Pn	Pn	22 03 30.3	+1.4
GRA1				Sg	Sg	22 04 28.1	-0.3
GRF	**Grafenberg Arr**	3.65	241	*e*Pn	Pn	22 03 30.3	+1.4
GRF				*e*Sg	Sg	22 04 28.1	-0.3
CONA	**Conrad Observa**	3.66	183	*i* Pn	Pn	22 03 30.3	+1.2
	comp=Z,1.7nm,0.3s						
CONA				Sg	Sg	22 04 28.1	-0.7
	comp=Z,21nm,0.3s						
CONA	**Conrad Observa**	3.66	183	Pn	Pn	22 03 30.3	+1.2
	comp=Z,1.7nm,0.3s						
CONA				Sg	Sg	22 04 28.1	-0.7
	comp=Z,21nm,0.3s						
MOA	**Molln**	3.93	199	*i* Pn	Pn	22 03 33.9	+1.2
	comp=Z,4.9nm,0.4s						
MOA				Sg	Sg	22 04 37.2	0.0
	comp=Z,16nm,0.5s						
MOA	**Molln**	3.93	199	Pn	Pn	22 03 33.9	+1.2
	comp=Z,4.9nm,0.4s						
MOA				Sg	Sg	22 04 37.2	0.0
	comp=Z,16nm,0.5s						
KECS	**Kecovo**	4.19	136	*e*SG	Sg	22 04 46.5	+1.0
KECS	**Kecovo**	4.19	136	*e*Sg	Sg	22 04 46.6	+1.0
CRVS	**Cervenica-Dubn**	4.35	126	*e*PG	Pg	22 03 56.1	+1.7
CRVS				*e*SG	Sg	22 04 52.0	+1.2
CRVS	**Cervenica-Dubn**	4.35	126	*e*Pg	Pg	22 03 56.1	+1.7
CRVS				*e*Sg	Sg	22 04 52.0	+1.2
ARSA	**Arzberg**	4.36	185	*i* Pn	Pn	22 03 41.7	+3.1
	comp=Z,1.5nm,0.2s						
ARSA				Sg	Sg	22 04 48.2	-2.8
	comp=Z,18nm,0.7s						
ARSA	**Arzberg**	4.36	185	Pn	Pn	22 03 41.7	+3.1
	comp=Z,1.5nm,0.2s						
ARSA				Sg	Sg	22 04 48.2	-2.8
	comp=Z,18nm,0.7s						
PSZ	**Piszkesteto**	4.41	145 ⇑	*i*P	Pn	22 03 39.2	-0.1
PSZ	**Piszkesteto**	4.41	145 ⇑	*i*P	Pn	22 03 39.2	-0.1

KBA	**Koelnbreinsper**	4.86	203	*i* Pn	Pn	22 03 47.1	+1.4
	comp=Z,3.0nm,0.3s						
KBA				*e*Sg	Sg	22 05 04.6	-2.7
	comp=Z,3.1nm,0.3s						
KBA	**Koelnbreinsper**	4.86	203	Pn	Pn	22 03 47.1	+1.4
	comp=Z,3.0nm,0.3s						
KBA				Sg	Sg	22 05 04.6	-2.7
	comp=Z,3.1nm,0.3s						
DAVOX	**Davos/Dischmat**	6.31	223	Pn	Pn	22 04 06.8	+1.2
	comp=Z,0.4nm,0.3s,baz=356,slow=14,SNR=3.5						
DAVOX				Lg	Lg	22 05 51.8	
	comp=Z,0.7nm,0.3s,baz=329,slow=19,SNR=3.3						
DRGR		6.45	135 ⇓	*i*P	Pn	22 04 08.3	+0.9
DRGR		6.45	135 ⇓	*i*P	Pn	22 04 08.3	+0.9
BZS	**Buzias**	6.99	147 ⇓	*i*P	Pn	22 04 14.3	-0.4
BZS	**Buzias**	6.99	147 ⇓	*i*P	Pn	22 04 14.3	-0.4
BURAR	**Bucovina Array**	7.12	120 ⇑	*i*P	Pn	22 04 18.0	+1.5
BURAR	**Bucovina Array**	7.12	120 ⇑	*i*P	Pn	22 04 18.0	+1.5
AKASG	**Malin Array Be**	8.29	91	Pn	Pn	22 04 33.6	+1.2
	comp=Z,1.1nm,0.3s,baz=282,slow=12,SNR=3.9						
HFS	**Hagfors**	8.68	352	Pn	Pn	22 04 36.3	-1.5
	comp=Z,0.2nm,0.3s,baz=154,slow=14,SNR=3.7						
HFS				Sn	Sn	22 06 14.9	-1.3
	comp=Z,0.2nm,0.3s,baz=183,slow=29,SNR=4.0						
MLR	**Muntele Rosu**	8.92	129 ⇓	*i*P	Pn	22 04 42.2	+1.0
MLR	**Muntele Rosu**	8.92	129 ⇓	*i*P	Pn	22 04 42.2	+1.0
RAF	**Rauma**	9.96	16	*e*P	Pn	22 04 56.7	+1.4
	SNR=47						
FINES	**FINESS Array B**	11.29	25	Pn	Pn	22 05 13.2	-0.3
	comp=Z,0.1nm,0.3s,baz=216,slow=11,SNR=5.7						
FINES				Sn	Sn	22 07 15.2	-5.1
	comp=Z,0.2nm,0.3s,baz=210,slow=20,SNR=4.6						
EKA	**Eskdalemuir Ar**	12.08	296	Pn	Pn	22 05 22.5	-1.9
	baz=98,slow=14,SNR=2.9						
ARCES	**ARCESS Array B**	18.55	10	Pn	P	22 06 48.0	-1.0
	comp=Z,0.1nm,0.3s,baz=193,slow=12,SNR=5.8						

*CSEM **23** 22:11:17.1±0.3, 36°.92N×21°.48E, h5km, ML1.9, Error ellipse: s-maj=5.8km s-min=3.2km az=58.0*
*THE **23** 22:11:18.3, 36°.93N×21°.57E, h12km, ML1.9/7, Error ellipse: s-maj=1.4km s-min=0.7km az=67.0*

ATH 23 22:11:17.4, 36°.93N×21°.52E, h14km±1km, ML2.0/5, Error ellipse: s-maj=2.5km s-min=1.0km az=72.0, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	0.18	101	P	Pg	22 11 21.2	-0.5
PYL				S	Sg	22 11 24.6	+0.1
PYL				AML	AML	22 11 24.8	
	comp=E,2300μm,0.2s						
PYL				AML	AML	22 11 26.3	
	comp=N,706μm,0.2s						
PYL	**PYLOS**	0.18	101	P	Pg	22 11 21.5	-0.1
PYL				S	Sg	22 11 24.6	+0.1
PYL	**PYLOS**	0.18	101	P	Pg	22 11 21.5	-0.1
PYL				S	Sg	22 11 24.6	+0.1
MES2	**Methoni**	0.18	125	P	Pg	22 11 21.5	-0.1
MES2				S	Sg	22 11 24.8	+0.2
MES2	**Methoni**	0.18	125	P	Pg	22 11 21.6	-0.1
MES2				S	Sg	22 11 24.7	+0.1
MES3	**Kyparissia**	0.34	21	P	Pg	22 11 24.0	-0.4
MES3				S	Sb	22 11 29.8	-0.6
MES3	**Kyparissia**	0.34	21	P	Pg	22 11 24.1	-0.2
MES3				S	Sg	22 11 29.6	+0.5
ITM	**Ithomi**	0.41	53	P	Pg	22 11 25.2	-0.4
ITM				S	Sg	22 11 31.1	-0.1
ITM				AML	AML	22 11 33.5	
	comp=N,585μm,0.1s						
ITM				AML	AML	22 11 35.7	
	comp=E,502μm,0.2s						
ITM	**Ithomi**	0.41	53	P	Pg	22 11 25.2	-0.4
ITM				S	Sg	22 11 31.4	+0.2
ITM	**Ithomi**	0.41	53	P	Pg	22 11 25.3	-0.3
ITM				S	Sg	22 11 31.3	+0.1
AMT	**Artemida-Makis**	0.62	14	P	Pb	22 11 29.9	-0.1
AMT				S	Sb	22 11 38.9	+0.3
AMT				AML	AML	22 11 42.2	
	comp=N,388μm,0.3s						
AMT				AML	AML	22 11 44.1	
	comp=E,390μm,0.3s						
AMT	**Artemida-Makis**	0.62	14	P	Pb	22 11 29.8	-0.2
AMT				S	Sb	22 11 39.3	+0.8
AMT	**Artemida-Makis**	0.62	14	P	Pg	22 11 29.6	+0.1
AMT				S	Sb	22 11 38.4	-0.1
DYR	**Agios Nikonas**	0.68	104	P	Pg	22 11 30.6	0.0
DYR				S	Sb	22 11 39.9	-0.2
DYR				AML	AML	22 11 44.0	
	comp=E,188μm,0.3s						
DYR				AML	AML	22 11 44.8	
	comp=N,147μm,0.2s						
DYR	**Agios Nikonas**	0.68	104	P	Pg	22 11 30.6	+0.1
DYR				S	Sb	22 11 40.0	-0.1
DYR	**Agios Nikonas**	0.68	104	P	Pg	22 11 30.5	0.0
DYR				S	Sb	22 11 39.8	-0.3
VLX	**Vlachokerasia**	0.81	57	P	Pb	22 11 33.8	+0.5
VLX				S	Sg	22 11 43.7	-0.2
VLX				AML	AML	22 11 48.0	
	comp=N,360μm,0.4s						
VLX				AML	AML	22 11 48.0	
	comp=

AGG				AML	AML	22 11 45.3
	comp=E,127μm,0.2s					
AGG	**Agios Georgios**	**0.14**	**43**	P	Pb	22 11 40.9 +0.1
AGG				S	Sb	22 11 44.6 +0.2
ANX	**Ano Chora**	**0.39**	**215**	P	Pb	22 11 43.5 -0.6
ANX				S	Sb	22 11 49.0 -0.9
ANX				AML	AML	22 11 50.8
	comp=N,72μm,0.1s					
ANX				AML	AML	22 11 53.3
	comp=E,54μm,0.1s					
ANX	**Ano Chora**	**0.39**	**215**	P	Pb	22 11 43.8 -0.3
ANX				S	Sb	22 11 49.8 -0.2
SERG	**Sergoula**	**0.52**	**193**	P	Pb	22 11 45.9 -0.1
SERG				S	Sn	22 11 54.3 -0.6
SERG				AML	AML	22 11 55.9
	comp=E,54μm,0.2s					
SERG				AML	AML	22 11 57.0
	comp=N,56μm,0.3s					
SERG	**Sergoula**	**0.52**	**193**	P	Pb	22 11 46.0 0.0
SERG				S	Sn	22 11 54.2 -0.8
EFP	**Efpalio**	**0.54**	**206**	P	Pb	22 11 46.8 +0.3
EFP				S	Sn	22 11 56.0 +0.4
EFP				AML	AML	22 11 56.1
	comp=E,94μm,0.2s					
EFP				AML	AML	22 11 56.2
	comp=N,64μm,0.3s					
EFP	**Efpalio**	**0.54**	**206**	P	Pb	22 11 46.7 +0.3
EFP				S	Sn	22 11 55.4 -0.1
DSF	**Desfina**	**0.56**	**153**	P	Pb	22 11 46.9 0.0
DSF				S	Sn	22 11 55.5 -0.7
DSF				AML	AML	22 11 56.9
	comp=E,45μm,0.1s					
DSF				AML	AML	22 11 58.8
	comp=N,71μm,0.1s					
DSF	**Desfina**	**0.56**	**153**	P	Pb	22 11 46.9 +0.1
DSF				S	Sn	22 11 55.5 -0.7
THL	**Klokotos Trika**	**0.66**	**347**	P	Pb	22 11 48.5 0.0
THL				S	Sn	22 11 58.9 +0.3
THL	**Klokotos Trika**	**0.66**	**347**	P	Pb	22 11 48.6 +0.1
THL				S	Sn	22 11 58.7 +0.2

JMA 23 22:12:15.0±0.5, 37°.47N×142°.57E, h6km±3km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.35**	**266**	P	Pn	22 12 40.2	-0.3
JIO	**Ouri**	**1.38**	**316**	P	Pn	22 12 40.5	-0.3
ONAJ	**Iwakimizuishiy**	**1.46**	**256**	P	Pn	22 12 41.6	-0.4
JMM	**Marumori**	**1.46**	**286**	P	Pn	22 12 41.5	-0.5
JOU	**Okura**	**1.75**	**301**	P	Pn	22 12 46.5	+0.6
JOU				*e*S	Sn	22 13 09.2	+0.6
JFT	**Otama**	**1.78**	**272**	P	Pn	22 12 47.1	+0.8
JMK	**Ichinoseki**	**1.82**	**325**	P	Pn	22 12 47.7	+0.8
JYS	**Shiratake**	**2.12**	**291**	P	Pb	22 12 52.7	-1.1
JOM	**Ohasama**	**2.24**	**334**	P	Pn	22 12 54.2	+1.6
JYK	**Kaneyama**	**2.26**	**310**	P	Pn	22 12 53.8	+0.8
JAG	**Ashikaga**	**2.71**	**248**	P	Pn	22 13 00.3	+1.3

IDC 23 22:24:12.0±9.4, 17°.75S×172°.59W, h0km, mb4.2/3, mb1 4.3/4, mb1mx3.7/51, mbtmp4.1/4, ML3.5/1, Error ellipse: s-maj=267.8km s-min=35.7km az=122.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.90**	**12**	Pn	Pn	22 25 13.0	-0.3
	3.4nm,0.3s,baz=66,slow=3.3,SNR=4.5						
AFI				Sn	Sn	22 25 53.3	-6.5
	30nm,0.3s,baz=175,slow=21,SNR=14						
STKA	**Stephens Creek**	**43.59**	**242**	P	P	22 32 17.4	-0.7
	1.9nm,0.6s,baz=56,slow=11,SNR=3.9						
WRA	**Warramunga Arr**	**50.10**	**259**	P	P	22 33 09.1	-0.2
	0.6nm,0.3s,baz=97,slow=7.4,SNR=14						
ASAR	**Alice Springs**	**50.16**	**254**	P	P	22 33 10.2	+0.5
	4.9nm,0.7s,baz=90,slow=8.9,SNR=67						

*IDC **23** 22:26:02.4±1.9, 32°.89S×178°.53W, h0km, mb3.9/2, mb1 4.2/3, mb1mx3.7/43, mbtmp4.0/3, ML4.1/1, MS3.5/1, Ms1 3.4/1, ms1mx2.7/46, Error ellipse: s-maj=62.5km s-min=41.4km az=135.0*

*NEIC **23** 22:26:03.9±0.7, 32°.96S×178°.55W, h10km, mb4.2/4, Error ellipse: s-maj=18.0km s-min=14.7km az=73.0*

*ISCJB **23** 22:26:06.7±1.2, 33°.2S±0°.1×178°.7W±0°.2, h32km, mb4.0/6, MS3.4/1, Error ellipse: s-maj=22.3km s-min=13.9km az=16.8*

ISC 23 22:26:08.3±1.1, 33°.1S±0°.1×178°.7W±0°.2, h32km, n12, σ0°56/12, mb4.0/6, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.17**	**212**	Pn	**Pn**	**22 27 37.6**	**+0.4**
	4.0nm,0.3s,baz=269,slow=3.9,SNR=20						
URZ				Sn	**Sn**	**22 28 46.5**	**-0.2**
	4.6nm,0.3s,baz=197,slow=18,SNR=7.4						
STKA	**Stephens Creek**	**33.37**	**261**	LR	LR	22 44 29.6	
	comp=Z,72nm,20.0s,baz=3.7,slow=33						
ASAR	**Alice Springs**	**42.44**	**270**	P	**P**	**22 34 00.3**	**0.0**
	1.2nm,0.8s,baz=109,slow=7.8,SNR=4.6						
WRAB	**Tennant Creek**	**43.67**	**275**	P	**P**	**22 34 10.7**	**+0.4**
	3.0nm,0.9s						
WRA	**Warramunga Arr**	**43.67**	**275**	P	**P**	**22 34 10.3**	**0.0**
	0.6nm,0.5s,baz=114,slow=7.9,SNR=7.7						
CASY	**Casey**	**52.49**	**209**	P	**P**	**22 35 17.2**	**-0.6**
	1.6nm,0.9s						
NWAO	**Narrogin (SRO)**	**52.93**	**251**	P	**P**	**22 35 21.6**	**0.0**
QSPA	**South Pole Qui**	**57.02**	**180**	P	**P**	**22 35 51.1**	**+0.3**
	2.4nm,0.8s						
PMSA	**Palmer Station**	**70.06**	**156**	P	**P**	**22 37 16.7**	**0.0**
	3.4nm,0.4s						
FINES	**FINESS Array B**	**147.44**	**338**	PKPbc	**PKPdf**	**22 45 46.3**	**+0.8**
	4.6nm,1.0s,baz=56,slow=3.5,SNR=6.9						
MMAI	**Mount Meron Ar**	**151.48**	**279**	PKPbc	**PKPbc**	**22 45 59.3**	**0.0**
	0.6nm,0.6s,baz=29,slow=3.6,SNR=4.6						
BRTR	**Keskin Array B**	**153.24**	**294**	PKPbc	**PKPbc**	**22 46 01.9**	**-1.2**
	0.2nm,0.3s,baz=101,slow=3.1,SNR=4.0						

*DDA **23** 22:39:20.1, 36°.72N×27°.27E, h26km, Ml3.5*

*IDC **23** 22:39:21.1±1.3, 36°.89N×27°.32E, h0km, mb3.5/3, mb1 3.4/7, mb1mx3.2/60, mbtmp3.4/7, ML3.2/4, Error ellipse: s-maj=39.1km s-min=16.9km az=146.0*

*ATH **23** 22:39:21.9, 36°.82N×27°.36E, h26km, ML3.4/9, Error ellipse: s-maj=0.9km s-min=0.6km az=74.0*

*ISK **23** 22:39:21.6, 36°.83N×27°.38E, h12km, ML3.7/6*

*ISCJB **23** 22:39:22.0±0.3, 36°.81N±0°.02×27°.43E±0°.02, h15km±2km, mb3.5/3, Error ellipse: s-maj=2.7km s-min=2.1km az=18.2*

*CSEM **23** 22:39:22.5±0.1, 36°.81N×27°.39E, h10km, ML3.7, Error ellipse: s-maj=2.1km s-min=1.5km az=5.0*

*THE **23** 22:39:22.6, 36°.82N×27°.36E, h0km±1km, ML3.3/11, Error ellipse: s-maj=1.0km s-min=0.7km az=308.0*

*NIC **23** 22:39:25.3±0.2, 37°.60N×27°.95E, h25km, mb4.2, ML3.6*

ISC 23 22:39:22.5±0.7, 36°.82N±0°.02×27°.40E±0°.01, h14km±5km, n249, σ0°99/312, mb3.4/3, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**0.17**	**124**	PG	**Pg**	**22 39 26.7**	**0.0**
DAT				SG	**Sg**	**22 39 29.4**	**-0.1**
DAT	**Datca**	**0.17**	**124**	*i* P	**Pg**	**22 39 26.7**	**0.0**
DAT				*i* S	**Sg**	**22 39 29.7**	**+0.2**
DAT	**Datca**	**0.17**	**124**	P	**Pg**	**22 39 26.7**	**0.0**
DAT				*e*Sg	**Sg**	**22 39 29.4**	**-0.1**
DATC	**Datca-Mugla**	**0.22**	**107**	PG	**Pg**	**22 39 27.6**	**+0.3**
DATC				SG	**Sg**	**22 39 31.3**	**+0.7**
DATC	**Datca-Mugla**	**0.22**	**107**	*e*Pg	**Pg**	**22 39 27.6**	**+0.3**
DATC				*e*Sg	**Sg**	**22 39 31.3**	**+0.7**
BDRM	**Kayabasi**	**0.24**	**8**	*i* P	**Pg**	**22 39 27.8**	**0.0**
BDRM				*i* S	**Sg**	**22 39 31.6**	**+0.3**
BDRM	**Kayabasi**	**0.24**	**8**	P	**Pg**	**22 39 27.8**	**0.0**
BDRM				S	**Sg**	**22 39 31.6**	**+0.3**
BODT	**Bodrum**	**0.25**	**343**	PG	**Pg**	**22 39 26.9**	**-1.0**
BODT				SG	**Sg**	**22 39 31.1**	**-0.4**
BODT	**Bodrum**	**0.25**	**343**	P	**Pg**	**22 39 26.8**	**-1.1**
BODT				S	**Sg**	**22 39 31.1**	**-0.4**
BODT	**Bodrum**	**0.25**	**343**	*e*Pg	**Pg**	**22 39 26.9**	**-1.0**
BODT				S	**Sg**	**22 39 31.1**	**-0.4**
NISR	**Nisiros**	**0.30**	**226**	P	**Pg**	**22 39 28.9**	**0.0**
NISR				S	**Sg**	**22 39 33.7**	**+0.6**
NISR				AML	AML	22 39 35.4	
	comp=E,47869μm,0.2s						
NISR				AML	AML	22 39 37.1	
	comp=N,20563μm,0.3s						
NISR	**Nisiros**	**0.30**	**226**	P	**Pg**	**22 39 28.7**	**-0.1**
NISR				S	**Sg**	**22 39 33.7**	**+0.6**
NISR	**Nisiros**	**0.30**	**226**	P	**Pg**	**22 39 28.7**	**-0.1**
NISR				S	**Sg**	**22 39 33.6**	**+0.6**
MLSB	**Milas**	**0.56**	**32**	PG	**Pg**	**22 39 33.2**	**-0.3**
MLSB	**Milas**	**0.56**	**32**	*e*Pg	**Pg**	**22 39 33.2**	**-0.3**
DIDI	**Didim-Aydin**	**0.57**	**347**	PG	**Pg**	**22 39 33.2**	**-0.5**
DIDI	**Didim-Aydin**	**0.57**	**347**	*e*Pg	**Pg**	**22 39 33.2**	**-0.5**
MRSB	**Marmaris-Mugla**	**0.65**	**99**	PG	**Pg**	**22 39 34.8**	**-0.4**
MRSB	**Marmaris-Mugla**	**0.65**	**99**	*e*Pg	**Pg**	**22 39 34.8**	**-0.4**
YER	**Yerkesik**	**0.77**	**66**	P	**Pb**	**22 39 37.9**	**+0.1**
YER				S	**Sn**	**22 39 51.6**	**+1.1**
YER	**Yerkesik**	**0.77**	**66**	P	**Pb**	**22 39 37.9**	**+0.1**
YER				S	**Sn**	**22 39 51.6**	**+1.1**
ARG	**Arkhangelos**	**0.84**	**136**	PG	**Pg**	**22 39 38.4**	**-0.3**
ARG	**Arkhangelos**	**0.84**	**136**	P	**Pg**	**22 39 38.4**	**-0.3**
ARG				S	**Sb**	**22 39 50.1**	**0.0**
ARG				AML	AML	22 39 55.2	
	comp=N,5424μm,0.3s						
ARG				AML	AML	22 39 56.7	
	comp=E,5060μm,0.5s						
ARG	**Arkhangelos**	**0.84**	**136**	P	**Pg**	**22 39 38.5**	**-0.3**
ARG				S	**Sn**	**22 39 52.4**	**+0.3**
ARG	**Arkhangelos**	**0.84**	**136**	P	**Pg**	**22 39 38.5**	**-0.3**
ARG				S	**Sb**	**22 39 50.4**	**+0.3**
GCAM	**G?zelcaml?**	**0.89**	**351**	PG	**Pg**	**22 39 39.2**	**-0.5**
GCAM	**G?zelcaml?**	**0.89**	**351**	*i* P	**Pg**	**22 39 39.5**	**-0.2**
GCAM				*i* S	**Sn**	**22 39 53.7**	**+0.5**
GCAM	**G?zelcaml?**	**0.89**	**351**	*e*Pg	**Pg**	**22 39 39.2**	**-0.5**
GCAM	**G?zelcaml?**	**0.89**	**351**	P	**Pg**	**22 39 39.5**	**-0.2**
GCAM				S	**Sn**	**22 39 53.7**	**+0.5**
AYDN	**Tasoluk**	**0.92**	**24**	*i* P	**Pb**	**22 39 39.9**	**-0.4**
AYDN				*i* S	**Sn**	**22 39 55.1**	**+1.0**
AYDN	**Tasoluk**	**0.92**	**24**	P	**Pb**	**22 39 39.9**	**-0.4**
AYDN				S	**Sn**	**22 39 55.1**	**+1.0**
TURN	**Turunc**	**0.96**	**87**	PG	Pb	22 39 35.3	-5.7
TURN	**Turunc**	**0.96**	**87**	*i* P	Pb	22 39 35.3	-5.7
TURN				*i* S	**Sb**	**22 39 46.7**	**-6.9**
SMG	**Samos**	**0.99**	**333**	P	**Pb**	**22 39 41.5**	**0.0**
SMG				S	**Sb**	**22 39 53.3**	**-1.2**
SMG				AML	AML	22 40 00.1	
	comp=E,10414μm,0.3s						
SMG				AML	AML	22 40 00.3	
	comp=N,5259μm,0.2s						
SMG	**Samos**	**0.99**	**333**	P	**Pb**	**22 39 40.9**	**-0.6**
SMG				S	**Sn**	**22 39 56.4**	**+0.5**
SMG	**Samos**	**0.99**	**333**	P	**Pb**	**22 39 41.1**	**-0.4**
SMG				S	**Sb**	**22 39 53.9**	**-0.5**
DALY	**Dalyan (Mu¨la**	**1.00**	**90**	PG	**Pb**	**22 39 41.3**	**-0.4**
DALY	**Dalyan (Mu¨la**	**1.00**	**90**	*i* P	**Pb**	**22 39 41.4**	**-0.3**
DALY				*i* S	**Sn**	**22 39 57.8**	**+1.7**
DALY	**Dalyan (Mu¨la**	**1.00**	**90**	P	**Pb**	**22 39 41.4**	**-0.3**
DALY				S	**Sn**	**22 39 57.8**	**+1.7**
AYDB	**Zeytinkoy-Aydi**	**1.19**	**19**	PN	**Pn**	**22 39 44.6**	**-0.2**
AYDB	**Zeytinkoy-Aydi**	**1.19**	**19**	*e*Pn	**Pn**	**22 39 44.6**	**-0.2**
AMGA	**Amorgos Island**	**1.21**	**271**	P	**Pn**	**22 39 44.3**	**-0.7**
AMGA				S	**Sg**	**22 40 01.7**	**+0.1**
AMGA				AML	AML	22 40 04.3	
	comp=E,2749μm,0.4s						
AMGA				AML	AML	22 40 04.4	
	comp=N,3696μm,0.3s						
AMGA	**Amorgos Island**	**1.21**	**271**	P	**Pn**	**22 39 44.1**	**-0.9**
AMGA				S	**Sg**	**22 40 02.2**	**+0.6**
AMGA	**Amorgos Island**	**1.21**	**271**	P	**Pn**	**22 39 44.3**	**-0.7**
AMGA				S	**Sn**	**22 40 01.2**	**-0.1**
KARP	**Karpathos**	**1.29**	**189**	PN	**Pn**	**22 39 45.7**	**-0.4**
KARP	**Karpathos**	**1.29**	**189**	P	**Pn**	**22 39 45.3**	**-0.9**
KARP				S	**Sb**	**22 40 02.6**	**-0.4**
KARP				AML	AML	22 40 06.9	
	comp=E,2184μm,0.4s						
KARP				AML	AML	22 40 09.1	
	comp=N,1348μm,0.3s						
KARP	**Karpathos**	**1.29**	**189**	P	**Pn**	**22 39 45.5**	**-0.6**
KARP				S	**Sg**	**22 40 04.3**	**+0.2**
KARP	**Karpathos**	**1.29**	**189**	*e*Pn	**Pn**	**22 39 45.7**	**-0.4**
KARP				S	**Sn**	**22 40 03.1**	**-0.1**
DGB	**¨zmir**	**1.29**	**342**	*i* P	**Pn**	**22 39 45.8**	**-0.3**
FETY	**Fethiye**	**1.36**	**97**	PN	**Pn**	**22 39 46.9**	**-0.3**
FETY	**Fethiye**	**1.36**	**97**	P	**Pg**	**22 39 48.8**	**+0.1**
FETY				S	**Sg**	**22 40 06.9**	**+0.4**
FETY	**Fethiye**	**1.36**	**97**	*e*Pn	**Pn**	**22 39 46.9**	**-0.3**
FETY	**Fethiye**	**1.36**	**97**	P	**Pn**	**22 39 47.2**	**0.0**
FETY				S	**Sg**	**22 40 06.9**	**+0.4**
TAVA	**DENIZLI_Tavas**	**1.37**	**62**	*i* P	**Pb**	**22 39 48.1**	**+0.2**
TAVA	**DENIZLI_Tavas**	**1.37**	**62**	P	**Pb**	**22 39 48.1**	**+0.2**
ANAF	**Anafi Island**	**1.39**	**251**	P	**Pn**	**22 39 46.5**	**-1.0**
ANAF				S	**Sn**	**22 40 05.4**	**-0.3**
ANAF				AML	AML	22 40 11.5	
	comp=N,4487μm,0.3s						
ANAF				AML	AML	22 40 17.6	
	comp=E,3484μm,0.4s						
ANAF	**Anafi Island**	**1.39**	**251**	P	**Pn**	**22 39 47.6**	**+0.1**
ANAF				S	**Sg**	**22 40 06.9**	**-0.5**
ANAF	**Anafi Island**	**1.39**	**251**	P	**Pn**	**22 39 47.6**	**+0.1**
ANAF				S	**Sn**	**22 40 05.5**	**-0.3**
APE	**Apeiranthos**	**1.52**	**280**	PN	**Pn**	**22 39 48.9**	**-0.4**
APE	**Apeiranthos**	**1.52**	**280**	P	**Pn**	**22 39 48.5**	**-0.8**
APE				S	**Sb**	**22 40 09.4**	**-0.3**
APE				AML	AML	22 40 16.5	
	comp=N,1437μm,0.4s						
APE				AML	AML	22 40 18.8	
	comp=E,1140μm,0.3s						
APE	**Apeiranthos**	**1.52**	**280**	P	**Pn**	**22 39 48.8**	**-0.5**
APE				S	**Sb**	**22 40 10.3**	**+0.7**
APE	**Apeiranthos**	**1.52**	**280**	*e*Pn	**Pn**	**22 39 48.9**	**-0.4**
APE				S	**Sb**	**22 40 09.2**	**-0.4**
DNZL	**Cakiroluk**	**1.57**	**56**	*i* P	**Pb**	**22 39 51.7**	**+0.2**
DNZL	**Cakiroluk**	**1.57**	**56**	P	**Pb**	**22 39 51.7**	**+0.2**
ZEY	**¨zmir**	**1.58**	**333**	*i* P	**Pn**	**22 39 49.8**	**-0.4**
THR8	**Santorini-Mono**	**1.60**	**256**	P	**Pn**	**22 39 50.4**	**0.0**
THR8	**Santorini-Mono**	**1.60**	**256**	P	**Pn**	**22 39 50.4**	**0.0**
SANT	**Santorini**	**1.63**	**254**	PN	**Pn**	**22 39 50.9**	**+0.1**
SANT	**Santorini**	**1.63**	**254**	P	**Pn**	**22 39 51.1**	**+0.3**
SANT				S	**Sn**	**22 40 10.8**	**-0.8**
SANT				AML	AML	22 40 18.3	
	comp=N,607μm,0.3s						
SANT				AML	AML	22 40 19.3	
	comp=E,1454μm,0.5s						
SANT	**Santorini**	**1.63**	**254**	*e*Pn	**Pn**	**22 39 50.9**	**+0.1**
SANT				S	**Sn**	**22 40 11.1**	**-0.5**
SAP2K	**Karterados**	**1.63**	**256**	P	**Pn**	**22 39 49.4**	**-1.3**
CMBO	**Columbo, Santo**	**1.64**	**258**	P	**Pb**	**22 39 51.9**	**-0.7**
CMBO	**Columbo, Santo**	**1.64**	**258**	P	**Pn**	**22 39 51.3**	**+0.3**
THR3	**Thira Island,**	**1.66**	**256**	P	**Pn**	**22 39 50.6**	**-0.6**
THR3	**Thira Island,**	**1.66**	**256**	P	**Pn**	**22 39 50.6**	**-0.6**
URLA	**Izmir**	**1.66**	**338**	PN	**Pn**	**22 39 50.9**	**-0.4**
URLA	**Izmir**	**1.66**	**338**	*i* P	**Pn**	**22 39 50.8**	**-0.5**
URLA	**Izmir**	**1.66**	**338**	*e*Pn	**Pn**	**22 39 50.9**	**-0.4**
THR6	**Thira Island,**	**1.68**	**254**	P	**Pn**	**22 39 51.1**	**-0.4**
THR6	**Thira Island,**	**1.68**	**254**	P	**Pn**	**22 39 51.1**	**-0.4**
SAP1	**Santorini-Akro**	**1.68**	**255**	P	**Pn**	**22 39 50.3**	**-1.2**
SAP1	**Santorini-Akro**	**1.68**	**255**	P	**Pn**	**22 39 51.2**	**-0.3**
SAP1	**Santorini-Akro**	**1.68**	**255**	P	**Pn**	**22 39 51.2**	**-0.3**
SAP3	**Santorini-Thir**	**1.70**	**257**	P	**Pn**	**22 39 51.8**	**0.0**
THR5	**Thira Island,**	**1.70**	**257**	P	**Pn**	**22 39 52.0**	**+0.2**
THR5	**Thira Island,**	**1.70**	**257**	P	**Pn**	**22 39 52.0**	**+0.2**
THR9	**Santorini-Faro**	**1.71**	**255**	P	**Pn**	**22 39 51.2**	**-0.7**
THR9	**Santorini-Faro**	**1.71**	**255**	P	**Pn**	**22 39 51.2**	**-0.7**
GOLH	**Golhisar**	**1.78**	**76**	*i* P	**Pb**	**22 39 55.3**	**+0.4**
GOLH	**Golhisar**	**1.78**	**76**	P	**Pb**	**22 39 55.3**	**+0.4**
AKAS	**Kas**	**1.87**	**108**	PN	**Pn**	**22 39 54.6**	**+0.4**
AKAS	**Kas**	**1.87**	**108**	*i* P	**Pn**	**22 39 54.9**	**+0.7**
AKAS	**Kas**	**1.87**	**108**	*e*Pn	**Pn**	**22 39 54.6**	**+0.4**
AKAS	**Kas**	**1.87**	**108**	P	**Pn**	**22 39 54.9**	**+0.7**
KSL	**Kastellorizon**	**1.88**	**110**	P	**Pb**	**22 39 56.3**	**-0.4**
KSL	**Kastellorizon**	**1.88**	**110**	P	**Pb**	**22 39 55.7**	**-0.9**
KSL				S	**Sb**	**22 40 21.0**	**+1.0**
CHOS	**Chios island**	**1.89**	**326**	PN	**Pn**	**22 39 54.9**	**+0.4**
CHOS	**Chios island**	**1.89**	**326**	P	**Pn**	**22 39 54.1**	**-0.4**
CHOS	**Chios island**	**1.89**	**326**	P	**Pn**	**22 39 54.0**	**-0.5**
CHOS				S	**Sb**	**22 40 20.4**	**0.0**
CHOS	**Chios island**	**1.89**	**326**	P	**Pn**	**22 39 54.3**	**-0.2**
CHOS	**Chios island**	**1.89**	**326**	*e*Pn	**Pn**	**22 39 54.9**	**+0.4**
MANT	**Manisa**	**1.90**	**29**	*i* P	**Pn**	**22 39 55.0**	**+0.2**
MANT	**Manisa**	**1.90**	**29**	P	**Pn**	**22 39 55.0**	**+0.2**
ZKR	**Zakros**	**1.96**	**210**	P	**Pn**	**22 39 55.7**	**+0.3**
ZKR	**Zakros**	**1.96**	**210**	P	**Pn**	**22 39 55.6**	**+0.3**
ZKR				S	**Sn**	**22 40 20.4**	**+0.7**
ZKR	**Zakros**	**1.96**	**210**	P	**Pn**	**22 39 55.6**	**+0.3**
ZKR				S	**Sn**	**22 40 20.4**	**+0.7**
KULA	**Kula-Manisa**	**1.96**	**30**	PN	**Pn**	**22 39 55.6**	**+0.2**
KULA	**Kula-Manisa**	**1.96**	**30**	*e*Pn	**Pn**	**22 39 55.6**	**+0.2**
ELL	**Elmali**	**2.01**	**91**	PN	**Pn**	**22 39 56.9**	**+0.7**
ELL	**Elmali**	**2.01**	**91**	*e*Pn	**Pn**	**22 39 56.9**	**+0.7**
AKHS	**Akhisar**	**2.08**	**9**	*i* P	**Pg**	**22 40 01.9**	**-0.5**
AKHS	**Akhisar**	**2.08**	**9**	P	**Pg**	**22 40 01.9**	**-0.5**
NPS	**Neapolis**	**2.13**	**223**	P	**Pn**	**22 39 57.7**	**0.0**
NPS	**Neapolis**	**2.13**	**223**	P	**Pn**	**22 39 57.5**	**-0.2**
NPS				S	**Sn**	**22 40 25.2**	**+1.3**
NPS	**Neapolis**	**2.13**	**223**	P	**Pn**	**22 39 57.7**	**0.0**
NPS				S	**Sn**	**22 40 25.2**	**+1.3**
LAST	**Lasithi**	**2.28**	**224**	P	**Pn**	**22 40 00.3**	**+0.5**
LAST	**Lasithi**	**2.28**	**224**	P	**Pn**	**22 40 00.1**	**+0.3**
LAST				S	**Sn**	**22 40 28.7**	**+1.0**
LAST	**Lasithi**	**2.28**	**224**	P	**Pn**	**22 40 00.1**	**+0.3**
LAST				S	**Sn**	**22 40 28.7**	**+1.0**
DKL	**Dikili**	**2.28**	**350**	PN	**Pn**	**22 40 00.5**	**+0.8**
DKL	**Dikili**	**2.28**	**350**	*e*Pn	**Pn**	**22 40 00.5**	**+0.8**
BRDR	**BURDUR-Merkez**	**2.29**	**67**	*i* P	**Pb**	**22 40 02.4**	**-1.4**
BRDR	**BURDUR-Merkez**	**2.29**	**67**	P	**Pb**	**22 40 02.3**	**-1.4**
KORT	**Korkueli**	**2.37**	**85**	PN	**Pn**	**22 40 01.7**	**+0.6**
KORT	**Korkueli**	**2.37**	**85**	*i* P	**Pb**	**22 40 05.2**	**+0.1**
KORT	**Korkueli**	**2.37**	**85**	*e*Pn	**Pn**	**22 40 01.7**	**+0.6**
KORT	**Korkueli**	**2.37**	**85**	P	**Pb**	**22 40 05.2**	**+0.1**
MHLA	**Plaka, Milos I**	**2.39**	**269**	P	**Pn**	**22 40 01.0**	**-0.3**
MHLA				S	**Sn**	**22 40 30.9**	**+0.4**
MHLA				AML	AML	22 40 41.1	
	comp=N,1661μm,0.7s						
MHLA				AML	AML	22 40 45.8	
	comp=E,1088μm,0.5s						
MHLA	**Plaka, Milos I**	**2.39**	**269**	P	**Pn**	**22 40 01.1**	**-0.3**
MHLA				S	**Sn**	**22 40 30.5**	**+0.1**
MHLO	**Agia Marina, M**	**2.41**	**268**	P	**Pn**	**22 40 01.1**	**-0.5**
MHLO				S	**Sn**	**22 40 31.6**	**+0.7**
MHLO	**Agia Marina, M**	**2.41**	**268**	P	**Pn**	**22 40 01.3**	**-0.3**
MHLO				S	**Sn**	**22 40 31.1**	**+0.2**
IDI	**Anoyia**	**2.55**	**234**	Pn	**Pn**	**22 40 03.5**	**0.0**
	comp=E,1.8nm,0.3s,baz=49,slow=16,SNR=19						
IDI				Sn	**Sb**	**22 40 37.1**	**-2.2**
	comp=E,4.7nm,0.3s,baz=256,slow=19,SNR=6.7						
IDI	**Anoyia**	**2.55**	**234**	PN	**Pn**	**22 40 03.5**	**0.0**
PRK	**Paraskevi**	**2.58**	**340**	P	**Pn**	**22 40 03.6**	**-0.2**
PRK	**Paraskevi**	**2.58**	**340**	P	**Pn**	**22 40 04.0**	**+0.2**
PRK	**Paraskevi**	**2.58**	**340**	P	**Pn**	**22 40 04.0**	**+0.2**
SIMA	**Simav-Kutahya**	**2.58**	**28**	PN	**Pn**	**22 40 04.5**	**+0.6**
SIMA	**Simav-Kutahya**	**2.58**	**28**	*e*Pn	**Pn**	**22 40 04.5**	**+0.6**
ANTB	**Antalya**	**2.61**	**87**	PN	**Pn**	**22 40 05.3**	**+1.1**
ANTB	**Antalya**	**2.61**	**87**	*e*Pn	**Pn**	**22 40 05.3**	**+1.1**
KARY	**Karystos**	**2.65**	**298**	P	**Pn**	**22 40 05.1**	**+0.3**
KARY	**Karystos**	**2.65**	**298**	P	**Pn**	**22 40 05.1**	**+0.3**
SIGR	**SIGRI**	**2.68**	**333**	PN	**Pn**	**22 40 06.1**	**+0.9**
SIGR	**SIGRI**	**2.68**	**333**	P	**Pn**	**22 40 04.8**	**-0.4**
SIGR	**SIGRI**	**2.68**	**333**	P	**Pn**	**22 40 05.4**	**+0.2**
SIGR	**SIGRI**	**2.68**	**333**	P	**Pn**	**22 40 05.4**	**+0.2**
SIGR	**SIGRI**	**2.68**	**333**	*e*Pn	**Pn**	**22 40 06.1**	**+0.9**
SIVA	**Sivas**	**2.77**	**230**	P	**Pn**	**22 40 06.9**	**+0.4**
SIVA	**Sivas**	**2.77**	**230**	P	**Pn**	**22 40 07.1**	**+0.6**
SIVA	**Sivas**	**2.77**	**230**	P	**Pn**	**22 40 06.8**	**+0.4**
DURS	**Dursunbey**	**2.90**	**17**	*i* P	**Pn**	**22 40 08.7**	**+0.4**
DURS	**Dursunbey**	**2.90**	**17**	P	**Pn**	**22 40 08.7**	**+0.4**
VAM	**Vamos**	**2.95**	**242**	P	**Pn**	**22 40 07.7**	**-1.3**
VAM	**Vamos**	**

comp=E,4.9nm,0.3s,baz=308,slow=24,SNR=16
KSDI Kefar Szold 7.68 116 Pn **Pn 22 41 13.6 -0.4**
SLTI Sal'it 7.79 124 Pn **Pn 22 41 16.6 +1.2**
KSHT Keshet 7.90 117 Pn **Pn 22 41 17.7 +0.7**
MMLI Mount Malkishu 7.92 121 Pn **Pn 22 41 17.6 +0.2**
HMDT Nahal Hemdat 8.11 122 Pn **Pn 22 41 20.6 +0.8**
KZIT Kziot 8.28 133 Pn **Pn 22 41 21.6 -0.7**
YTIR Yattir 8.40 128 Pn **Pn 22 41 25.0 +1.1**
DSI Dead Sea 8.43 126 Pn **Pn 22 41 25.0 +0.7**
PRNI Paran 9.05 133 Pn **Pn 22 41 32.4 -0.3**
HRFI Mount Harif 9.30 135 Pn **Pn 22 41 35.5 -0.7**
MBRI Mt Berech 9.41 136 Pn **Pn 22 41 36.8 -1.0**
EIL Elat 9.53 136 Pn **Pn 22 41 42.5 +3.2**
comp=E,0.4nm,0.3s,baz=315,slow=7.1,SNR=7.7
EIL Sn **Sn 22 43 24.4 -1.8**
comp=E,1.2nm,0.3s,baz=292,slow=19,SNR=8.8
EIL Elat 9.53 136 Pn **Pn 22 41 37.6 -1.7**
TORD Torodi Ar. Bea 32.95 231 P **P 22 45 57.0 +0.1**
comp=E,0.4nm,0.4s,baz=33,slow=8.9,SNR=6.5
KURBB Kurchatov Arra 38.67 53 P **P 22 46 46.4 +0.9**
comp=E,0.5nm,0.7s,baz=275,slow=8.7,SNR=4.9
MKAR Makanchi Array 41.35 58 P **P 22 47 08.9 +1.0**
comp=E,0.4nm,0.5s,baz=269,slow=9.3,SNR=9.4

*ISN **23** 23:01:25.4±0.3, 32°.55N×46°.81E, h0km, ML2.5*
TEH 23 23:01:26.4, 32°.47N×46°.93E, h5km, ML2.5, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKFM	**Kafar-mosalman**	**1.30**	**36**	*e*Pg	Pn	23 01 49.2	-2.0
IKFM				*e*		23 01 50.0	
comp=Z,99nm,0.1s							
IKOM	**Komasi**	**1.76**	**16**	*e*Pn	Pn	23 01 57.3	-0.5
KCHF	**Cheshme Sefid,**	**1.80**	**3**	*e*Pn	Pn	23 01 57.3	-1.0
KCHF				*e*Sg	Sb	23 02 22.5	-0.4
KCHF				*e*		23 02 23.8	
comp=Z,99nm,0.2s							
IVIS	**Veis**	**2.05**	**358**	*e*Pn	Pn	23 02 02.2	+0.6
IVIS				*e*Sg	Sb	23 02 30.6	+0.6
IVIS				*e*		23 02 31.5	
comp=Z,261nm,0.3s							
HSAM	**Samen**	**2.23**	**38**	*e*		23 02 13.0	
comp=N,99nm,0.2s							
HSAM				*e*Pn	Pn	23 02 03.6	-0.6
ILIN	**Lien**	**2.44**	**1**	*e*		23 02 07.8	
comp=Z,322nm,0.1s							
ILIN				*e*Pn	Pn	23 02 06.7	-0.4
HKZM	**Kohzaman**	**3.33**	**29**	*e*		23 02 54.4	
comp=Z,99nm,0.0s							
IRAZ	**Razeghan**	**3.84**	**40**	*e*Pn	Pn	23 02 26.6	+0.2
IRAZ				*e*		23 02 27.5	
comp=Z,64nm,0.1s							
QAM	**Ghamsar**	**4.00**	**70**	*e*Pn	Pn	23 02 28.3	-0.2
QAM				*e*		23 02 30.5	
comp=Z,223nm,0.1s							
IZEF	**Zefreh**	**4.57**	**83**	*e*Pn	Pn	23 02 35.7	-0.8
IZEF				*e*		23 02 37.5	
comp=Z,51nm,0.1s							

*IDC **23** 23:13:42.5±1.2, 1°.88N×89°.59E, h0km, mb3.7/9, mb1 3.9/12, mb1mx3.6/67, mbtmp3.8/12, ML4.1/3, MS3.2/13, Ms1 3.3/13, ms1mx3.0/69, Error ellipse: s-maj=36.6km s-min=18.2km az=44.0*
*ISCJB **23** 23:13:47.6±0.7, 1°.5N±0°.1×90°.21E±0°.05, h10km, mb4.3/26, MS3.5/13, Error ellipse: s-maj=15.6km s-min=7.0km az=15.0*
*BJI **23** 23:13:47.0, 1°.20N×90°.30E, h9km, mb4.6/26, mB4.7/17, Ms4.3/5, Ms7 4.0/5*
*NEIC **23** 23:13:48.3±0.7, 1°.36N×90°.11E, h10km, mb4.5/10, Error ellipse: s-maj=17.8km s-min=7.7km az=199.0*
ISC 23 23:13:48.5±0.9, 1°.3N±0°.1×90°.14E±0°.07, h10km, n75, σ2°.20/59, mb4.4/26, MS3.4/13, 3C-8D, North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**7.43**	**90**	*e*Pn	Pn	**23 15 37.9**	**+0.8**
LHMI	**Lhok Sumawe**	**7.81**	**60**	*e*Pn	Pn	**23 15 41.8**	**-0.6**
PSI	**Prapat**	**8.89**	**80**	Pn	Pn	**23 15 58.1**	**+0.8**
0.9nm,0.3s,baz=360,slow=2.9,SNR=5.8							
PSI				Sn	**Sn**	**23 17 34.2**	**-3.5**
1.4nm,0.3s,baz=181,slow=4.8,SNR=3.5							
PSI				LR	LR	23 19 06.5	
comp=Z,132nm,19.5s,baz=94,slow=35							
PSI	**Prapat**	**8.89**	**80**	*e*Pn	**Pn**	**23 15 57.0**	**-0.2**
PSI				Sn	**Sn**	**23 17 34.2**	**-3.5**
PALK	**Pallekele**	**11.11**	**302**	Pn	Pn	23 16 12.3	-15
2.6nm,0.3s,baz=116,slow=14,SNR=28							
PALK				Sn	Sn	23 17 58.7	-33
9.0nm,0.3s,baz=294,slow=0.9,SNR=10.0							
PALK				LR	LR	23 19 45.1	
comp=Z,169nm,19.7s,baz=116,slow=35							
KULM	**Kulim**	**11.20**	**69**	*e*Pn	**Pn**	**23 16 28.9**	**+0.2**
IPM	**Ipoh**	**11.31**	**74**	*e*Pn	**Pn**	**23 16 29.8**	**-0.5**
CMAR	**Chiang Mai Arr**	**19.08**	**26**	P	P	23 18 03.6	-7.8
0.3nm,0.3s,baz=234,slow=12,SNR=5.0							
CMAR				LR	LR	23 25 15.3	
comp=Z,63nm,19.6s,baz=215,slow=37							
HYB	**Hyderabad**	**19.63**	**325**	*i*P	**P**	**23 18 16.5**	**-0.9**
HYB				*e*S	S	23 21 23.5	-36
H08S2	**Diego Garcia H**	**19.74**	**243**	T	T	23 38 31.5	
baz=60,slow=76,SNR=26							
H08S3	**Diego Garcia H**	**19.74**	**243**	T	T	23 38 21.0	
baz=60,slow=76,SNR=110							
H08S1	**Diego Carcia H**	**19.75**	**243**	T	T	23 38 41.9	
baz=60,slow=76,SNR=6.6							
BRDH	**Bariadhala**	**21.26**	**4**	LR	LR	23 26 43.7	
comp=Z,169nm,19.9s,baz=151,slow=38							
RAMN	**Ramite**	**25.69**	**353**	*e*P	**P**	**23 19 15.4**	**-3.8**
46nm,0.8s							
JIRN	**Jiri**	**26.45**	**352**	*e*P	**P**	**23 19 22.1**	**-4.1**
78nm,0.9s							
KMI	**Kunming**	**26.59**	**26**	P	**P**	**23 19 31.8**	**+4.5**
KMI				pmax	pmax		
comp=Z,5.0nm,1.9s							
GUN	**Gumba**	**26.74**	**352**	*e*P	**P**	**23 19 24.6**	**-4.1**
56nm,0.7s							
KOLN	**Koldanda**	**27.02**	**347**	*e*P	**P**	**23 19 24.9**	**-6.2**
17nm,0.7s							
LSA	**Lhasa**	**28.22**	**2**	*e*P	**P**	**23 19 42.6**	**+0.4**
8.0nm,0.9s							
CD2	**Chengdu**	**32.12**	**22**	P	**P**	**23 20 17.3**	**+1.1**
CD2				pmax	pmax		
comp=Z,10.0nm,0.5s							
DAV	**Davao City (W)**	**35.78**	**80**	LR	LR	23 39 55.6	
comp=Z,22nm,18.1s,baz=128,slow=43							
NIL	**Nilore**	**35.83**	**336**	*e*P	**P**	**23 20 47.7**	**-0.7**
41nm,0.9s							
LZH	**Lanzhou**	**36.84**	**19**	*e*P	**P**	**23 20 59.6**	**+2.5**
LZH				pP	sP	23 21 04.0	+2.5
LZH				sP	pP	23 21 07.3	+7.1
LZH				*e*PP	**PP**	**23 22 26.8**	**+5.7**
LZH				pmax	pmax		
comp=Z,21nm,1.0s							
LZH				pmax	pmax		
comp=Z,100nm,5.4s							
LZH				LR	LR		
comp=N,220nm,14.6s							
LZH				LR	LR		
comp=E,190nm,13.5s							
LZH				LR	LR		
comp=Z,270nm,15.8s							
KBL	**Kabul**	**38.46**	**331**	*e*P	**P**	**23 21 10.4**	**-0.6**
2.9nm,0.6s							
GTA	**Gaotai**	**38.91**	**12**	*e*P	**P**	**23 21 15.6**	**+1.1**
GTA				pP	sP	23 21 19.8	+0.9
GTA				sP	pP	23 21 23.0	+5.3
GTA				pmax	pmax		
comp=Z,4.0nm,0.8s							
KSH	**Kashi**	**40.14**	**343**	P	**P**	**23 21 22.5**	**-2.3**
KSH				pP	sP	23 21 29.6	+0.4
KSH				pmax	pmax		
comp=Z,17nm,0.9s							
KSH				pmax	pmax		
comp=Z,220nm,4.5s							
NJ2	**Nanjing**	**40.82**	**39**	*e*P	**P**	**23 21 30.5**	**+0.1**
NJ2				pmax	pmax		
comp=Z,10.0nm,0.5s							
WMQ	**Urumqi**	**42.36**	**357**	P	**P**	**23 21 44.3**	**+1.4**
WMQ				pP	sP	23 21 49.6	+2.3
WMQ				pmax	pmax		
comp=Z,14nm,0.7s							
WMQ				LR	LR		
comp=N,63nm,21.3s							
WMQ				LR	LR		
comp=E,44nm,21.3s							
WMQ				LR	LR		
comp=Z,60nm,16.5s							
H01W3	**Cape Leeuwin H**	**42.47**	**150**	T	T	00 08 06.6	
baz=324,slow=76,SNR=12							
H01W2	**Cape Leeuwin H**	**42.48**	**150**	T	T	00 08 09.3	
baz=324,slow=76,SNR=14							
H01W1	**Cape Leeuwin H**	**42.48**	**150**	T	T	00 08 07.8	
baz=324,slow=76,SNR=16							
HHC	**Hu-ho-hao-te**	**43.85**	**24**	*e*P	**P**	**23 21 57.3**	**+2.2**
HHC				PP	**PcP**	**23 23 41.8**	**+0.3**
HHC				S	**S**	**23 28 29.6**	**+3.3**
HHC				sS	sS	23 28 37.0	+5.5
HHC				SS	**SS**	**23 31 39.3**	**-3.4**
HHC				pmax	pmax		
comp=Z,26nm,1.1s							
HHC				pmax	pmax		
comp=Z,89nm,5.3s							
HHC				LR	LR		
comp=N,380nm,15.9s							
HHC				LR	LR		
comp=E,370nm,15.5s							
HHC				LR	LR		
comp=Z,380nm,15.1s							
KK31	**Karatay Array**	**45.14**	**340**	*e*P	**P**	**23 22 05.7**	**+0.4**
KKAR	**Karatay Array**	**45.14**	**340**	*e*P	**P**	**23 22 05.7**	**+0.4**
MK01	**Makanchi Array**	**45.77**	**352**	*e*P	**P**	**23 22 09.7**	**-0.5**
MKAR	**Makanchi Array**	**45.79**	**352**	P	P	23 22 00.8	-10
0.4nm,0.7s,baz=163,slow=6.1,SNR=2.6							
MKAR	**Makanchi Array**	**45.79**	**352**	*e*P	**P**	**23 22 10.2**	**-0.2**
22nm,0.8s							
MK31	**Makanchi Array**	**45.79**	**352**	*e*P	**P**	**23 22 10.2**	**-0.2**
MAKZ	**Makanchi**	**45.85**	**352**	*e*P	**P**	**23 22 10.6**	**-0.2**
3.8nm,1.0s							
WRA	**Warramunga Arr**	**48.21**	**118**	P	**P**	**23 22 30.8**	**+1.1**
1.7nm,0.6s,baz=296,slow=8.5,SNR=8.3							
SONM	**Songino Array**	**48.41**	**15**	P	P	23 22 23.6	-7.4
1.3nm,0.7s,baz=204,slow=9.2,SNR=6.8							
SONM				LR	LR	23 44 38.5	
comp=Z,37nm,18.9s,baz=192,slow=39							
ASAR	**Alice Springs**	**49.25**	**123**	P	**P**	**23 22 39.2**	**+1.5**
1.1nm,0.6s,baz=296,slow=7.7,SNR=14							
KSRS	**Korea Array**	**50.00**	**40**	LR	LR	23 44 32.7	
comp=Z,16nm,20.5s,baz=245,slow=37							
KURBB	**Kurchatov Arra**	**50.09**	**350**	P	P	23 22 33.8	-10
0.3nm,0.6s,baz=175,slow=7.2,SNR=3.5							
KURK	**Kurchatov**	**50.16**	**350**	*e*P	**P**	**23 22 43.2**	**-0.9**
8.4nm,1.0s							
ZAA0	**Zalesovo Array**	**52.62**	**356**	*e*P	**P**	**23 23 02.9**	**+0.4**
6.2nm,1.3s							
ZALV	**Zalesovo Beam**	**52.62**	**356**	P	P	23 22 55.6	-6.9
0.4nm,0.4s,baz=179,slow=7.1,SNR=2.8							
ZALV				LR	LR	23 46 16.8	
comp=Z,25nm,21.0s,baz=16,slow=38							
ZALV	**Zalesovo Beam**	**52.62**	**356**	*e*P	**P**	**23 23 02.4**	**-0.1**
BVAR	**Borovoye Array**	**54.07**	**345**	P	P	23 23 03.3	-10
0.2nm,0.4s,baz=145,slow=5.3,SNR=3.4							
BVAR				LR	LR	23 46 06.3	
comp=Z,35nm,21.0s,baz=218,slow=36							
ABKAR	**Akbulak array**	**54.29**	**336**	*e*P	**P**	**23 23 15.1**	**+0.2**
MJAR	**Matsushiro Arr**	**56.51**	**46**	LR	LR	23 47 33.5	
comp=Z,22nm,21.1s,baz=70,slow=36							
KIV	**Kislovodsk**	**59.72**	**322**	*e*P	**P**	**23 23 52.9**	**-0.7**
4.1nm,0.9s							
ARU	**Arti**	**60.50**	**340**	*e*P	**P**	**23 23 58.5**	**-0.1**
2.9nm,0.8s							
BRTR	**Keskin Array B**	**63.88**	**314**	P	P	23 24 11.8	-10
0.4nm,0.5s,baz=144,slow=6.4,SNR=4.3							
HNR	**Honiara**	**70.32**	**100**	LR	LR	23 58 44.2	
comp=Z,29nm,18.7s,baz=148,slow=38							
VRI	**Vrincioaia**	**70.78**	**319**	⇓*i*P	**P**	**23 25 06.9**	**+1.7**
PLOR	**Plostina**	**70.83**	**319**	⇑*i*P	**P**	**23 25 07.0**	**+1.5**
AKASG	**Malin Array Be**	**70.92**	**324**	LR	LR	23 59 23.3	
comp=Z,15nm,18.2s,baz=265,slow=39							
TESR	**Tescani**	**71.04**	**319**	⇓*i*P	**P**	**23 25 07.3**	**+0.5**
MLR	**Muntele Rosu**	**71.18**	**318**	⇑*i*P	**P**	**23 25 09.8**	**+2.0**
MLR	**Muntele Rosu**	**71.18**	**318**	*e*P	**P**	**23 25 06.3**	**-1.5**
6.6nm,0.9s							
MTUR	**Matau**	**71.69**	**318**	⇓*i*P	**P**	**23 25 11.6**	**+0.7**
DOPR	**Dopca**	**71.70**	**318**	⇑*i*P	**P**	**23 25 12.1**	**+1.3**
VOIR		**71.77**	**318**	⇓*i*P	**P**	**23 25 11.6**	**+0.3**
ARR	**Arges**	**72.03**	**318**	⇓*i*P	**P**	**23 25 12.9**	**+0.1**
BURAR	**Bucovina Array**	**72.32**	**320**	⇓*i*P	**P**	**23 25 15.6**	**+1.0**
BUR04	**Bucovina Ar. S**	**72.32**	**320**	*e*P	**P**	**23 25 15.3**	**+0.7**
BUR08	**Bucovina Ar. S**	**72.34**	**320**	*e*P	**P**	**23 25 14.4**	**-0.3**
LOT	**Lotru**	**72.63**	**317**	⇓*i*P	**P**	**23 25 17.0**	**+0.5**
BZS	**Buzias**	**74.14**	**317**	⇓*i*P	**P**	**23 25 24.4**	**-0.8**
GEA0	**GERESS Array S**	**80.08**	**319**	*e*P	**P**	**23 25 56.9**	**-1.8**
GERES	**GERESS Array B**	**80.08**	**319**	P	P	23 25 50.3	-8.4
0.5nm,0.8s,baz=57,slow=7.2,SNR=3.1							
NOA	**NORSAR Array B**	**83.47**	**331**	LR	LR	00 07 17.2	
comp=Z,8.1nm,18.2s,baz=50,slow=39							
TX31	**Lajitas Ar. Si**	**146.76**	**22**	*e*PKPdf	**PKPdf**	**23 33 26.1**	**-3.9**
TXAR	**Lajitas Array**	**146.76**	**22**	PKPbc	**PKPdf**	**23 33 25.5**	**-4.5**
1.1nm,1.0s,baz=276,slow=2.4,SNR=7.8							

*UPP **23** 23:18:24.4, 67°.83N×20°.20E, h0km, ML1.2, Mining explosion.*
*CSEM **23** 23:18:24.1±0.1, 67°.84N×20°.24E, h2km, ML1.2, Error ellipse: s-maj=4.3km s-min=3.0km az=163.0, Mining explosion.*
HEL 23 23:18:24.9±0.0, 67°.83N×20°.20E, h0km, ML1.4, ML1.2(UPP), Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.14**	**22**	*i*P	Pg	23 18 27.2	-0.3
KUA				*i*S	Sg	23 18 29.1	-0.2
KUA	**Kurravaara**	**0.14**	**22**	P	Pg	23 18 27.2	-0.3
KUA				S	Sg	23 18 29.1	-0.2
RATU	**Laukkuluspa**	**0.23**	**270**	*i*P	Pg	23 18 29.0	-0.3
RATU	**Laukkuluspa**	**0.23**	**270**	P	Pg	23 18 29.0	-0.3
NIKU	**Nikkaluokta**	**0.44**	**276**	*i*P	Pg	23 18 32.9	-0.5
NIKU	**Nikkaluokta**	**0.44**	**276**	P	Pg	23 18 32.9	-0.5
LANU	**Lannavaara**	**0.71**	**71**	*e*P	Pg	23 18 37.7	-0.8
LANU				*e*S	Sg	23 18 47.2	-0.5
LANU	**Lannavaara**	**0.71**	**71**	P	Pg	23 18 37.8	-0.7
LANU				*e*S	Sg	23 18 47.2	-0.5
SAU	**Saltoluokta**	**0.79**	**236**	*i*P	Pg	23 18 39.1	-0.8
SALU	**Saltoluokta**	**0.79**	**236**	P	Pg	23 18 39.2	-0.8
KIF	**Kilpisjarvi**	**1.21**	**10**	MSG		23 19 02.4	
comp=Z,2.4nm,0.2s							
KIF				*e*S	Sg	23 19 03.4	-0.2
PAJU	**Pajala**	**1.38**	**124**	*e*P	Pg	23 18 49.8	-1.6
PAJU	**Pajala**	**1.38**	**124**	P	Pg	23 18 49.8	-1.6
HEF	**Hetta**	**1.42**	**64**	*e*PG	Pn	23 18 50.4	-1.6
baz=247							
HEF				MSG		23 19 07.6	
comp=Z,2.2nm,0.2s							
HEF				*e*SB	Sg	23 19 09.2	-1.3
HEF	**Hetta**	**1.42**	**64**	*e*Pg	Pn	23 18 50.4	-1.6
HEF				*e*Sb	Sg	23 19 09.2	-1.3
ERTU	**Ertsjaerv**	**1.50**	**148**	*e*PN	Pn	23 18 52.3	-0.6
baz=330							
ERTU				*e*SN	Sg	23 19 12.4	-0.4
ERTU	**Ertsjaerv**	**1.50**	**148**	*e*Pn	Pn	23 18 52.3	-0.7
ERTU				*e*Sn	Sg	23 19 12.4	-0.4
TOF	**Tornio**	**2.39**	**135**	*e*PB	Pn	23 19 06.2	+1.0
TOF				MSG		23 19 34.8	
comp=Z,2.5nm,0.2s							
TOF	**Tornio**	**2.39**	**135**	*e*Pb	Pn	23 19 06.2	+1.0
SGF	**Sodankyl**	**2.45**	**96**	*e*PB	Pn	23 19 07.6	+1.5
baz=285							
SGF	**Sodankyl**	**2.45**	**96**	*e*Pb	Pn	23 19 07.6	+1.5
RNF	**Rovaniemi**	**2.57**	**116**	*e*PB	Pn	23 19 09.6	+1.9
RNF				*e*SG	Sb	23 19 43.4	-0.5
RNF	**Rovaniemi**	**2.57**	**116**	*e*Pb	Pn	23 19 09.6	+1.9
BURU	**Burvik**	**3.29**	**171**	*e*S	Sn	23 19 58.2	+0.9
BURU	**Burvik**	**3.29**	**171**	*e*S	Sn	23 19 58.2	+0.8
KU6	**Riekki**	**4.22**	**111**	*e*P	Pn	23 19 28.7	-1.7

*CSEM **23** 23:18:33.4±0.4, 67°.47N×21°.69E, h1km, ML0.9, Error ellipse: s-maj=29.6km s-min=9.1km az=30.0, Mining explosion.*
UPP 23 23:18:45.0, 67°.83N×20°.22E, h0km, ML0.9, Mining explosion., Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.13**	**20**	P	Pg	23 18 47.7	+0.2
RATU	**Laukkuluspa**	**0.24**	**268**	P	Pg	23 18 49.7	+0.2

*ISCJB **23** 23:25:14.5±0.3, 49°.85N±0°.02×18°.50E±0°.02, h0km, Error ellipse: s-maj=3.4km s-min=2.0km az=19.8*
*CSEM **23** 23:25:15.5±0.1, 49°.83N×18°.53E, h1km, ML2.9/10, Error ellipse: s-maj=3.7km s-min=2.1km az=21.0*
*IPEC **23** 23:25:16.1±0.2, 49°.84N×18°.57E, h0km, ML2.2/4, Error ellipse: s-maj=1.4km s-min=1.1km az=155.0*
*VIE **23** 23:25:16.5±0.8, 49°.62N×18°.52E, h0km, mb2.4/4, ml2.7/4, Error ellipse: s-maj=5.9km s-min=4.5km az=34.0 31 km SE of Ostrava Suspected Mining induced.*
*PRU **23** 23:25:16.6, 49°.82N×18°.49E, h0km*
ISC 23 23:25:15.2±0.7, 49°.83N±0°.02×18°.53E±0°.01, h0km, n72, σ0°.77/127, 8C-7D, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.25**	**273**	*e*PG	**Pb**	**23 25 22.0**	**+2.1**
OKC				*e*SG	**Sb**	**23 25 25.5**	**+2.3**
comp=Z,255nm,0.6s							
OKC	**Ostrava-Krasne**	**0.25**	**273**	Pg	**Pb**	**23 25 22.0**	**+2.1**
OKC				Sg	**Sb**	**23 25 25.5**	**+2.3**
255nm,0.6s							
RAC	**Raciborz**	**0.34**	**320**	*e*Pg	**Pb**	**23 25 24.0**	**-0.1**
RAC				*e*Sg	**Sb**	**23 25 29.5**	**-0.5**
CHZP	**Chorzow**	**0.55**	**32**	*e*Pg	**Pb**	**23 25 27.3**	**-0.5**
CHZP				*e*Sg	**Sb**	**23 25 36.6**	**+0.3**
MORC	**Moravsky Berou**	**0.64**	**266**	⇓*i*P	**Pb**	**23 25 29.1**	**-0.2**
MORC				S	**Sb**	**23 25 37.8**	**-1.0**
MORC	**Moravsky Berou**	**0.64**	**266**	*e*Pg	**Pb**	**23 25 28.8**	**-0.5**
baz=84							
MORC	**Moravsky Berou**	**0.64**	**266**	⇓*i*P	**Pb**	**23 25 29.1**	**-0.2**
MORC				*e*Sg	**Sg**	**23 25 37.0**	**+1.2**
52nm,0.2s,baz=84							
MORC				S	**Sb**	**23 25 37.8**	**-1.0**
MORC	**Moravsky Berou**	**0.64**	**266**	*e*PG	**Pb**	**23 25 28.9**	**-0.4**
MORC				*e*SG	**Sg**	**23 25 37.0**	**+1.2**
MORC	**Moravsky Berou**	**0.64**	**266**	*e*Pg	**Pb**	**23 25 28.8**	**-0.5**
baz=84							
MORC				*e*Sg	**Sg**	**23 25 37.0**	**+1.2**
52nm,0.2s,baz=84							
OJC	**Ojcow**	**0.91**	**64**	*e*Pg	**Pg**	**23 25 32.8**	**+0.2**
OJC				*e*Sg	**Sb**	**23 25 45.6**	**-0.8**
OJC	**Ojcow**	**0.91**	**64**	*e*Pg	**Pg**	**23 25 32.8**	**+0.2**
OJC				*e*Sg	**Sb**	**23 25 45.6**	**-0.8**
LANS	**Liptovska Anna**	**0.91**	**138**	*e*PG	**Pg**	**23 25 33.2**	**+0.6**
LANS				*e*SG	**Sb**	**23 25 46.6**	**0.0**
LANS	**Liptovska Anna**	**0.91**	**138**	*e*Pg	**Pg**	**23 25 33.2**	**+0.6**
LANS				*e*Sg	**Sb**	**23 25 46.7**	**+0.1**
JAVC	**Velka Javorina**	**1.12**	**210**	*e*Pg	**Pn**	**23 25 38.2**	**+0.1**
baz=31							
JAVC				*e*Sg	**Sb**	**23 25 52.1**	**-0.5**
27nm,0.6s,baz=31							
JAVC	**Velka Javorina**	**1.12**	**210**	*e*PG	**Pn**	**23 25 38.3**	**+0.1**
JAVC				*e*SG	**Sb**	**23 25 52.1**	**-0.5**
JAVC	**Velka Javorina**	**1.12**	**210**	*e*Pg	**Pn**	**23 25 38.2**	**+0.1**
baz=31							
JAVC				*e*Sg	**Sb**	**23 25 52.1**	**-0.5**
27nm,0.6s,baz=31							
KRLC	**Kraliky**	**1.16**	**283**	*e*PG	**Pg**	**23 25 37.3**	**-0.1**
KRLC				*e*SG	**Sb**	**23 25 53.9**	**+0.2**
comp=Z,16nm,0.3s							
KRLC	**Kraliky**	**1.16**	**283**	Pg	**Pg**	**23 25 37.3**	**-0.1**
KRLC				Sg	**Sb**	**23 25 53.9**	**+0.2**
16nm,0.3s							
NIE	**Niedzica**	**1.22**	**109**	*e*Pg	**Pb**	**23 25 39.1**	**-0.1**
NIE				*e*Sg	**Sn**	**23 25 57.0**	**+0.2**
NIE	**Niedzica**	**1.22**	**109**	*e*Pg	**Pb**	**23 25 39.1**	**-0.1**
NIE				*e*Sg	**Sn**	**23 25 57.0**	**+0.2**
VYHS	**Vyhne**	**1.35**	**171**	*e*PG	**Pg**	**23 25 40.8**	**-0.2**
VYHS				*e*SG	**Sn**	**23 25 59.7**	**-0.2**
VYHS				*e*LG	Lg	23 26 04.4	
VYHS	**Vyhne**	**1.35**	**171**	*e*Pg	**Pg**	**23 25 40.8**	**-0.2**
VYHS				*e*Sn	**Sn**	**23 25 59.7**	**-0.2**
VRAC	**Vranov**	**1.36**	**248**	⇑*i*P	**Pg**	**23 25 41.3**	**0.0**
VRAC	**Vranov**	**1.36**	**248**	⇑*i*P	**Pg**	**23 25 41.3**	**0.0**
VRAC	**Vranov**	**1.36**	**248**	*e*Pg	**Pb**	**23 25 41.8**	**+0.2**
baz=67							
VRAC				*e*Sg	**Sb**	**23 25 59.7**	**+0.2**
29nm,0.3s,baz=67							
VRAC				S	**Sn**	**23 26 00.8**	**+0.5**
VRAC	**Vranov**	**1.36**	**248**	*e*PG	**Pb**	**23 25 41.8**	**+0.2**
VRAC				*e*SG	**Sb**	**23 25 59.8**	**+0.2**
VRAC	**Vranov**	**1.36**	**248**	*e*Pg	**Pb**	**23 25 41.8**	**+0.2**
baz=67							
VRAC				*e*Sg	**Sb**	**23 25 59.7**	**+0.2**
29nm,0.3s,baz=67							
SMOL	**Smolenice**	**1.50**	**209**	*e*PN	**Pn**	**23 25 43.3**	**-0.1**
SMOL				*e*SN	**Sn**	**23 26 04.4**	**+0.8**
SMOL	**Smolenice**	**1.50**	**209**	*e*Pn	**Pn**	**23 25 43.3**	**-0.1**
SMOL				*e*Sn	**Sn**	**23 26 04.4**	**+0.8**
DPC	**Dobruska-Polom**	**1.52**	**291**	*e*PG	**Pg**	**23 25 44.2**	**0.0**
DPC				*e*SG	**Sn**	**23 26 04.8**	**+0.7**
comp=Z,15nm,0.3s							
DPC	**Dobruska-Polom**	**1.52**	**291**	Pg	**Pg**	**23 25 44.2**	**0.0**
DPC				Sg	**Sn**	**23 26 04.8**	**+0.7**
15nm,0.3s							
KRUC	**Moravsky**	**1.59**	**242**	*e*Pg	**Pb**	**23 25 45.3**	**-0.1**
baz=60							
KRUC				*e*Sg	**Sg**	**23 26 06.9**	**+0.7**
27nm,0.2s,baz=60							
KRUC	**Moravsky**	**1.59**	**242**	*e*PG	**Pb**	**23 25 45.3**

KHC				*e*SG	**Sg**	**23 26 59.3**	**-2.0**
	comp=Z,7.0nm,0.4s						
KHC	**Kasperske Hory**	**3.30 260**	Pn		**Pn**	**23 26 08.7**	**+0.5**
MOA	**Molln**	**3.44 237**	*i* Pn		**Pn**	**23 26 09.3**	**-0.8**
	0.4nm,0.2s						
MOA				*e*Sg	**Sg**	**23 27 05.2**	**-0.5**
	4.7nm,0.3s						
MOA	**Molln**	**3.44 237**	Pn		**Pn**	**23 26 09.3**	**-0.8**
	0.4nm,0.2s						
MOA				Sg	**Sg**	**23 27 05.2**	**-0.5**
	4.7nm,0.3s						
CLL	**Collm**	**3.82 295**	*e*(P)		Pn	23 26 05.0	-10
CLL	**Collm**	**3.82 295**	*e*Pg		**Pg**	**23 26 28.0**	**-0.4**
CLL				*e*Sg	**Sg**	**23 27 18.0**	**0.0**
	comp=Z,8.0nm,0.6s						
DRGR		**4.12 136⇑**	*i*P		**Pn**	**23 26 19.8**	**+0.3**
DRGR		**4.12 136⇑**	*i*P		**Pn**	**23 26 19.8**	**+0.3**
DRGR				S	**Sn**	**23 27 10.9**	**+2.5**
CJR	**Cluj-Napoca**	**4.60 131⇓**	*i*P		**Pn**	**23 26 26.1**	**+0.1**
CJR	**Cluj-Napoca**	**4.60 131⇓**	*i*P		**Pn**	**23 26 26.1**	**+0.1**
CJR				S	**Sn**	**23 27 21.5**	**+1.4**
BZS	**Buzias**	**4.70 153⇓**	*i*P		**Pn**	**23 26 27.6**	**+0.3**
BZS	**Buzias**	**4.70 153⇓**	*i*P		**Pn**	**23 26 27.6**	**+0.3**
BURAR	**Bucovina Array**	**4.95 114⇑**	*i*P		**Pn**	**23 26 29.9**	**-0.9**
BURAR	**Bucovina Array**	**4.95 114⇑**	*i*P		**Pn**	**23 26 29.9**	**-0.9**

SJA ***23*** *23:30:10.4±0.5,31°.52S×68°.71W,h105km±3km,ML2.7, MW3.7*

ISCJB ***23*** *23:30:11.0±1.1,31°.50S±0°.03×68°.71W±0°.07, h106km±10km, Error ellipse: s-maj=9.5km s-min=5.6km az=170.4*

GUC ***23*** *23:30:11.7±0.4,31°.50S×69°.13W,h147km±13km,ML2.9*

ISC 23 23:30:11.8±1.8,31°.51S±0°.04×68°.73W±0°.07, h101km±13km,n17,σ0°56/26,3C,San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJA	**San Juan**	**0.14**	**98**	*i* P	**Pn**	**23 30 25.7**	**-0.3**
SJA				IAML		23 30 40.2	
	comp=Z,158nm,0.1s						
RTLL	**Cerro Villicun**	**0.28**	**50**	*i* P	**Pn**	**23 30 25.9**	**-0.5**
RTCV	**Cerro Valdivia**	**0.39**	**156**	*i* P	**Pn**	**23 30 26.5**	**-0.5**
RTCV				*i* S	**Sn**	**23 30 38.9**	**+0.5**
RTLS	**Leoncito**	**0.57**	**239**	*i* P	**Pn**	**23 30 28.5**	**0.0**
RTLS				IAML		23 30 43.4	
	comp=Z,109nm,0.2s						
AMOG	**MOGNA**	**0.60**	**19**	*i* P	**Pn**	**23 30 28.6**	**0.0**
AUSP	**Uspallata**	**0.91**	**218**	*i* P	**Pn**	**23 30 31.4**	**-0.2**
ASAL	**Salagasta**	**1.08**	**185**	*i* P	**Pn**	**23 30 33.2**	**-0.1**
ASAL				*i* S	**Sn**	**23 30 49.7**	**+0.2**
ARCO	**CERRO ARCO**	**1.34**	**187**	*i* P	**Pn**	**23 30 36.1**	**-0.3**
ARCO				*i* S	**Sn**	**23 30 55.1**	**+0.2**
ARCO				IAML		23 30 56.4	
	comp=Z,137nm,0.4s						
ACDV	**Cuesta del Vie**	**1.38**	**346**	*i* P	**Pn**	**23 30 37.1**	**+0.4**
AROD	**Rodeo**	**1.48**	**334**	*i* P	**Pn**	**23 30 38.8**	**+0.6**
ACAN	**Cantantal**	**1.51**	**121**	*i* P	**Pn**	**23 30 37.8**	**-0.5**
AAGR	**Agrelo**	**1.57**	**183**	*i* P	**Pn**	**23 30 38.9**	**-0.2**
AAGR				*i* S	**Sn**	**23 31 00.4**	**+0.5**
GO04	**Tololo Observa**	**2.23**	**306⇑**	*i*P	**Pn**	**23 30 47.5**	**-0.1**
GO04				*i* S	**Sn**	**23 31 14.3**	**-0.6**
GO04				IAML		23 31 22.7	
	comp=E,180nm,0.6s						
TLL	**Tololo Astrono**	**2.23**	**306**	*e*P	**Pn**	**23 30 47.3**	**-0.4**
TLL				*i* S	**Sn**	**23 31 14.4**	**-0.7**
TLL				IAML		23 31 21.8	
	comp=N,72nm,0.8s						
FCH	**Farellones**	**2.25**	**216⇑**	*i*P	**Pn**	**23 30 48.1**	**+0.2**
FCH				*i* S	**Sn**	**23 31 16.9**	**+1.5**
FCH				IAML		23 31 19.2	
	comp=E,35nm,0.2s						
ROCH	**El Roble**	**2.43**	**232⇑**	*i*P	**Pn**	**23 30 49.7**	**-0.4**
ROCH				*i* S	**Sn**	**23 31 18.8**	**-0.7**
ROCH				IAML		23 31 23.5	
	comp=N,61nm,0.5s						
LCO	**Las Campanas**	**3.02**	**325**	*e*P	**Pn**	**23 30 57.7**	**-0.4**
LCO				*i* S	**Sn**	**23 31 34.5**	**+0.8**

ISCJB ***23*** *23:39:10.8±0.5,39°.16N±0°.04×42°.27E±0°.04,h11km±5km, Error ellipse: s-maj=7.1km s-min=4.8km az=151.0*

CSEM ***23*** *23:39:10.4±0.3,39°.19N×42°.20E,h12km,ML2.0, Error ellipse: s-maj=8.7km s-min=5.4km az=141.0*

DDA ***23*** *23:39:10.8,39°.17N×42°.28E,h7km,Md2.6*

ISK ***23*** *23:39:10.3,39°.18N×42°.25E,h5km,ML2.0/2*

ISC 23 23:39:10.6±0.9,39°.19N±0°.03×42°.23E±0°.03,h17km±6km, n19,σ0°78/29,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKAR	**Karacoban**	**0.15**	**298**	*i* P	**Pg**	**23 39 14.5**	**-0.4**
EKAR				*i* S	**Sg**	**23 39 18.6**	**+0.8**
EKAR	**Karacoban**	**0.15**	**298**	P	**Pg**	**23 39 14.5**	**-0.4**
EKAR				S	**Sg**	**23 39 18.6**	**+0.8**
TUTA	**Tutak**	**0.50**	**64**	*i* P	**Pg**	**23 39 20.5**	**-0.2**
TUTA				*i* S	**Sg**	**23 39 27.4**	**-0.1**
TUTA	**Tutak**	**0.50**	**64**	P	**Pg**	**23 39 20.5**	**-0.2**
TUTA				S	**Sg**	**23 39 27.4**	**-0.1**
ADCV	**BITLIS_Adilcev**	**0.54**	**134**	*i* P	**Pg**	**23 39 21.2**	**-0.2**
ADCV	**BITLIS_Adilcev**	**0.54**	**134**	P	**Pg**	**23 39 21.2**	**-0.2**
GURO	**Guroymak-BITLI**	**0.65**	**194**	PG	**Pg**	**23 39 23.4**	**-0.1**
GURO				SG	**Sb**	**23 39 32.4**	**-0.1**
GURO	**Guroymak-BITLI**	**0.65**	**194**	*e*Pg	**Pg**	**23 39 23.4**	**-0.1**
GURO				*e*Sg	**Sb**	**23 39 32.4**	**-0.1**
AGRB	**Hanur-Agry**	**0.70**	**56**	PG	**Pg**	**23 39 24.3**	**-0.2**
AGRB				SG	**Sb**	**23 39 34.4**	**+0.3**
AGRB	**Hanur-Agry**	**0.70**	**56**	*e*Pg	**Pg**	**23 39 24.3**	**-0.2**
AGRB				*e*Sg	**Sb**	**23 39 34.4**	**+0.3**
BNGL	**BINGOL**	**0.88**	**255**	*i* P	**Pb**	**23 39 27.8**	**+0.3**
BNGB	**Bing¶ll**	**1.23**	**261**	PN	**Pb**	**23 39 34.1**	**+0.7**
BNGB				SN	**Sn**	**23 39 51.7**	**+2.3**
CLDR	**Caldiran**	**1.31**	**91**	PN	**Pg**	**23 39 35.4**	**-0.5**
CLDR	**Caldiran**	**1.31**	**91**	*e*Pn	**Pg**	**23 39 35.4**	**-0.5**
SVAN	**Silvan-Diyarba**	**1.31**	**218**	PN	**Pg**	**23 39 35.8**	**-0.1**
SVAN	**Silvan-Diyarba**	**1.31**	**218**	*e*Pn	**Pg**	**23 39 35.8**	**-0.1**
SENK	**Senkaya-Erzuru**	**1.38**	**4**	PN	**Pg**	**23 39 37.0**	**-0.2**
SENK	**Senkaya-Erzuru**	**1.38**	**4**	*e*Pn	**Pg**	**23 39 37.0**	**-0.2**
BINT	**Bingol**	**1.39**	**258**	*e*Pn	**Pn**	**23 39 34.1**	**-1.3**
BINT				*e*Sn	**Sb**	**23 39 51.7**	**-2.2**

ISCJB ***23*** *23:39:56.7±0.8,39°.10N±0°.06×42°.33E±0°.05,h11km±6km, Error ellipse: s-maj=9.8km s-min=5.6km az=162.7*

CSEM ***23*** *23:39:56.7±0.3,39°.13N×42°.30E,h10km,ML2.3, Error ellipse: s-maj=9.0km s-min=5.8km az=146.0*

DDA ***23*** *23:39:57.0,39°.30N×42°.22E,h7km,Md2.8*

ISK ***23*** *23:39:56.4,39°.16N×42°.27E,h10km,ML2.3/2*

ISC 23 23:39:57.2±1.0,39°.15N±0°.04×42°.29E±0°.03,h14km±7km, n20,σ0°93/27,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKAR	**Karacoban**	**0.20**	**301**	*i* P	**Pg**	**23 40 00.5**	**-1.5**
EKAR				*i* S	**Sg**	**23 40 07.3**	**+2.1**
EKAR	**Karacoban**	**0.20**	**301**	P	**Pg**	**23 40 00.5**	**-1.5**
EKAR				S	**Sg**	**23 40 07.3**	**+2.1**
TUTA	**Tutak**	**0.48**	**58**	*i* P	**Pg**	**23 40 06.1**	**-0.7**
TUTA				*i* S	**Sg**	**23 40 13.6**	**+0.3**
TUTA	**Tutak**	**0.48**	**58**	P	**Pg**	**23 40 06.1**	**-0.7**
TUTA				S	**Sg**	**23 40 13.6**	**+0.3**
GURO	**Guroymak-BITLI**	**0.63**	**198**	PG	**Pg**	**23 40 09.4**	**-0.2**
GURO	**Guroymak-BITLI**	**0.63**	**198**	*e*Pg	**Pg**	**23 40 09.4**	**-0.2**
AGRB	**Hanur-Agry**	**0.69**	**52**	PG	**Pg**	**23 40 10.1**	**-0.6**
AGRB				SG	**Sb**	**23 40 20.6**	**0.0**
AGRB	**Hanur-Agry**	**0.69**	**52**	*e*Pg	**Pg**	**23 40 10.1**	**-0.6**
AGRB				*e*Sg	**Sb**	**23 40 20.6**	**0.0**
BNGL	**BINGOL**	**0.91**	**258**	*i* P	**Pg**	**23 40 13.6**	**-1.2**
ERZM	**Erzurum**	**1.04**	**317**	*i* P	**Pn**	**23 40 18.4**	**+0.9**
ERZM	**Erzurum**	**1.04**	**317**	P	**Pn**	**23 40 18.4**	**+0.9**
BNGB	**Bing¶ll**	**1.26**	**263**	PN	**Pn**	**23 40 20.2**	**-0.3**
BNGB				SN	**Sn**	**23 40 38.0**	**+0.7**
CLDR	**Caldiran**	**1.27**	**90**	PN	**Pn**	**23 40 20.9**	**+0.3**
CLDR	**Caldiran**	**1.27**	**90**	*e*Pn	**Pn**	**23 40 20.9**	**+0.3**
SVAN	**Silvan-Diyarba**	**1.31**	**221**	PN	**Pn**	**23 40 20.9**	**-0.2**
SVAN	**Silvan-Diyarba**	**1.31**	**221**	*e*Pn	**Pn**	**23 40 20.9**	**-0.2**
YEDI	**Yedisu-Bingol**	**1.38**	**282**	PN	**Pb**	**23 40 22.3**	**-0.6**
YEDI	**Yedisu-Bingol**	**1.38**	**282**	*e*Pn	**Pb**	**23 40 22.3**	**-0.6**
SENK	**Senkaya-Erzuru**	**1.41**	**2**	PN	**Pb**	**23 40 22.9**	**-0.5**
SENK	**Senkaya-Erzuru**	**1.41**	**2**	*e*Pn	**Pb**	**23 40 22.9**	**-0.5**

IDC ***23*** *23:40:58.4±2.0,23°.22N×142°.32E,h129km±16km, mb3.7/19,mb1 3.8/21,mb1mx3.5/65,mbtmp4.1/21, Error ellipse: s-maj=19.7km s-min=12.8km az=87.0*

ISCJB ***23*** *23:41:00.1±0.7,23°.44N±0°.05×142°.2E±0°.1,h150km, mb3.8/19, Error ellipse: s-maj=18.2km s-min=7.3km az=7.2*

JMA ***23*** *23:41:02.3±0.1,23°.59N×141°.98E,h170km±2km,M4.7*

ISC 23 23:41:01.3±0.7,23°.50N±0°.06×142°.2E±0°.2,h150km,n30, σ2°47/35,mb3.9/19,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**3.12**	**0**	P	**Pn**	**23 41 51.2**	**+1.0**
JHHJ				*e*S	**Sn**	**23 42 29.1**	**+1.1**
CBIJ	**Chichi jima**	**3.58**	**0**	P	**Pn**	**23 41 57.2**	**+1.1**
CBIJ				*e*S	**Sn**	**23 42 39.4**	**+0.7**
JCJ	**Chichijima**	**3.58**	**0**	P	**Pn**	**23 41 57.4**	**+1.3**
	74nm,0.3s,baz=278,slow=23,SNR=40						
JCJ				S	**Sn**	**23 42 40.7**	**+2.0**
	baz=307,slow=20						
BSO1	**Boso 1**	**11.16**	**355**	P	**Pn**	**23 43 36.5**	**+0.4**
BSO3	**Boso 3**	**11.35**	**353**	P	**Pn**	**23 43 38.8**	**0.0**
BSO4	**Boso 4**	**11.56**	**353**	P	**Pn**	**23 43 41.4**	**-0.3**
BSO4				*e*S	**Sn**	**23 45 46.1**	**-3.3**
JHU	**Hanno**	**12.56**	**349**	P	**Pn**	**23 43 53.1**	**-1.7**
JHU				*e*S	**Sn**	**23 46 06.5**	**-7.1**
JAG	**Ashikaga**	**13.09**	**350**	P	**Pn**	**23 44 00.7**	**-0.9**
JAG				*e*S	**Sn**	**23 46 18.3**	**-8.1**
JHO	**Hitachi**	**13.14**	**354**	*e*S	Sn	23 46 16.1	-11
KSRS	**Korea Array**	**18.51**	**322**	P	**Pn**	**23 45 10.0**	**+1.9**
	0.2nm,0.3s,baz=144,slow=10,SNR=3.0						
SONM	**Songino Array**	**37.35**	**320**	P	**P**	**23 48 01.3**	**+1.8**
	0.2nm,0.3s,baz=125,slow=7.6,SNR=4.1						
CMAR	**Chiang Mai Arr**	**40.55**	**271**	P	**P**	**23 48 26.6**	**+0.4**
	0.6nm,0.4s,baz=59,slow=8.7,SNR=3.9						
WRA	**Warramunga Arr**	**43.85**	**191**	P	**P**	**23 48 50.3**	**-2.5**
	1.1nm,0.5s,baz=14,slow=8.3,SNR=5.4						
ASAR	**Alice Springs**	**47.56**	**190**	P	**P**	**23 49 18.6**	**-3.3**
	0.3nm,0.4s,baz=16,slow=11,SNR=8.3						
ZALV	**Zalesovo Beam**	**52.22**	**321**	P	**P**	**23 49 57.9**	**+1.2**
	3.4nm,0.4s,baz=107,slow=7.0,SNR=13						
MKAR	**Makanchi Array**	**52.79**	**312**	P	**P**	**23 50 03.1**	**+2.0**
	1.5nm,0.5s,baz=87,slow=9.2,SNR=21						
STKA	**Stephens Creek**	**55.07**	**181**	P	**P**	**23 50 14.8**	**-2.8**
	0.7nm,0.4s,baz=20,slow=6.6,SNR=6.0						
KURBB	**Kurchatov Arra**	**55.57**	**316**	P	**P**	**23 50 22.7**	**+1.6**
	3.0nm,0.5s,baz=93,slow=7.7,SNR=37						
NRIK	**Noril'sk**	**55.98**	**340**	P	**P**	**23 50 24.8**	**+1.1**
	1.4nm,0.6s,baz=119,slow=13,SNR=3.6						
BVAR	**Borovoye Array**	**60.69**	**319**	P	**P**	**23 50 58.7**	**+2.0**
	4.8nm,0.4s,baz=91,slow=8.0,SNR=42						
ILAR	**Eielson Array**	**60.88**	**28**	P	**P**	**23 50 58.1**	**+0.4**
	0.5nm,0.6s,baz=247,slow=5.4,SNR=6.5						
INK	**Inuvik**	**66.31**	**24**	P	**P**	**23 51 34.5**	**+1.3**
	0.9nm,0.5s,baz=290,slow=5.9,SNR=2.9						
YKA	**Yellowknife Ar**	**75.31**	**28**	P	**P**	**23 52 28.7**	**+1.0**
	1.4nm,0.5s,baz=293,slow=5.8,SNR=8.3						
ARCES	**ARCESS Array B**	**76.92**	**341**	P	**P**	**23 52 38.1**	**+1.4**
	1.5nm,0.8s,baz=64,slow=8.4,SNR=7.3						
KBZ	**Khabaz**	**80.44**	**313**	P	**P**	**23 52 57.6**	**+1.2**
	1.5nm,0.7s,baz=62,slow=5.1,SNR=4.6						
FINES	**FINESS Array B**	**81.15**	**334**	P	**P**	**23 53 00.2**	**+0.4**
	1.5nm,0.5s,baz=63,slow=4.7,SNR=20						
NVAR	**Mina Array Bea**	**82.77**	**51**	P	**P**	**23 53 09.5**	**+0.5**
	0.2nm,0.3s,baz=285,slow=4.6,SNR=3.1						
HFS	**Hagfors**	**86.70**	**337**	P	**P**	**23 53 27.7**	**-0.4**
	2.2nm,1.0s,baz=89,slow=7.5,SNR=3.8						
BRTR	**Keskin Array B**	**88.42**	**313**	P	**P**	**23 53 36.5**	**-0.4**
	0.4nm,0.7s,baz=101,slow=3.9,SNR=4.2						
TORD	**Torodi Ar. Bea**	**126.87**	**309**	PKP	**PKPdf**	**23 59 47.9**	**-0.3**
	0.3nm,0.5s,baz=71,slow=2.2						

MEX 23 23:48:12.2±0.4,18°.15N×100°.36W,h61km±4km,MD3.6, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARIG	**Puente Sto Nin**	**0.13**	**6**	*i* P	Pn	23 48 19.9	-1.6
ARIG				*e*S	Sn	23 48 26.4	-1.8
PLIG	**Platanillo**	**0.85**	**74**	*e*P	Pn	23 48 26.9	-1.6
PLIG				*e*S	Sn	23 48 38.6	-1.8
ZIIG	**Zihuatanejo**	**1.18**	**243**	*e*P	Pn	23 48 31.3	-1.4
ZIIG				*e*S	Sn	23 48 46.1	-1.9
YAIG	**Yautepec**	**1.42**	**60**	*i* P	Pn	23 48 34.6	-1.3
YAIG				*e*S	Sn	23 48 51.9	-1.9
TLIG	**Tlapa**	**1.81**	**109**	*i* P	Pn	23 48 40.1	-1.1
TLIG				*e*S	Sn	23 49 01.0	-2.2
PPM	**Popocatepetl**	**1.88**	**61**	*i* P	Pn	23 48 41.7	-0.8

NIED ***23*** *23:57:00,38°.80N×142°.40E,h53km,Mw3.5 Best double couple: M_0=2.25000×10^14 NP1:ϕ_s=280.00000°,δ12.00000°, λ-150.00000°. NP2:ϕ_s=160.00000°,δ84.00000°, λ-80.00000°.*

JMA 23 23:57:10.5±0.1,38°.84N×142°.40E,h33km±2km,M3.5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.62**	**293**	P	Pn	23 57 22.8	-0.1
OFUJ				S	Sb	23 57 31.2	-0.3
JIO	**Ouri**	**0.91**	**245**	P	Pn	23 57 26.6	-0.3
JIO				S	Sn	23 57 37.8	-1.1
JMK	**Ichinoseki**	**0.93**	**277**	P	Pn	23 57 27.5	+0.3
JMK				S	Sn	23 57 39.3	0.0
JOM	**Ohasama**	**1.07**	**307**	P	Pn	23 57 29.7	+0.5
JOM				S	Sn	23 57 43.3	+0.4
JTH	**Tanohata**	**1.17**	**339**	P	Pn	23 57 30.8	+0.2
JTH				*e*S	Sn	23 57 46.2	+0.7
JOU	**Okura**	**1.44**	**251**	P	Pn	23 57 35.1	+0.8
JOU				S	Sn	23 57 52.9	+0.8
JRG	**Rokugo**	**1.48**	**293**	P	Pb	23 57 36.2	-1.2
JMM	**Marumori**	**1.59**	**233**	P	Pn	23 57 36.3	-0.1
JYK	**Kaneyama**	**1.59**	**273**	P	Pn	23 57 37.7	+1.3
JANG	**Nango**	**1.68**	**336**	P	Pn	23 57 38.5	+1.0
MAT	**Matsushiro**	**4.04**	**237**	P	Pn	23 58 14.0	+4.0

ISCJB ***24*** *00:03:12.2±0.2,69°.56N±0°.02×144°.03W±0°.08,h10km, mb4.1/31,MS3.4/17, Error ellipse: s-maj=3.9km s-min=3.0km az=1.8*

PGC ***24*** *00:03:12.4±3.4,69°.79N×143°.90W,h10km,mb4.2,ML4.0/1, Mw4.2, 176km east of Prudhoe Bay, Ak Northern Alaska*

IDC ***24*** *00:03:12.9±0.6,69°.70N×143°.97W,h0km,mb3.8/17, mb1 4.0/21,mb1mx3.8/80,mbtmp3.9/21,ML4.0/4,MS3.3/20, Ms1 3.3/20,ms1mx3.0/76, Error ellipse: s-maj=18.9km s-min=10.3km az=53.0*

NEIC ***24*** *00:03:15.2±0.0,69°.45N×144°.33W,h10km,mb4.2/14, MW4.3,ML4.2(AEIC),MW4.2(OTT),Moment Tensor Solution. s7 Moment tensor: Scale 10^15Nm; M_0=2.15; $M_{\theta\theta}$=1.70; $M_{\phi\phi}$=0.45; M_{rr}=1.86; $M_{\theta\phi}$=1.57; $M_{\theta r}$=1.45; Best double couple: M_0=3.50000×10^15 NP1:ϕ_s=53.00000°, δ67.00000°,λ87.00000°. NP2:ϕ_s=240.00000°,δ23.00000°, λ97.00000°. Principal axes: T 3.1100, Plg68.0000°, Azm317.0000°; N 0.6000, Plg3.0000°, Azm54.0000°; P -3.7100, Plg22.0000°, Azm145.0000°; After AEIC.*

ISC 24 00:03:14.1±0.4,69°.68N±0°.05×143°.94W±0°.04,h10km, n141,σ1°96/139,mb4.1/31,MS3.4/17,Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PS01	**TAPS Pump Stn**	**1.71**	**292**	P	**Pb**	**00 03 44.5**	**-1.0**
PS01				S	**Sg**	**00 04 07.1**	**-1.9**
TOLK	**Toolik Lake Re**	**2.27**	**245**	*e*Pn	**Pn**	**00 03 49.5**	**-2.1**
BM3	**Burnt Mountain**	**2.28**	**186**	P	**Pn**	**00 03 50.0**	**-1.8**
PS04	**TAPS Pump Stn4**	**2.32**	**240**	P	**Pn**	**00 03 50.3**	**-2.0**
PS04				S	**Sn**	**00 04 18.2**	**-2.7**
FYU	**Fort Yukon**	**3.17**	**189**	*e*Pn	**Pn**	**00 04 02.5**	**-1.4**
COLD	**Coldfoot**	**3.38**	**226**	Pn	**Pn**	**00 04 04.6**	**-2.1**
COLD	**Coldfoot**	**3.38**	**226**	*e*Pn	**Pn**	**00 04 04.6**	**-2.1**
PS05	**TAPS Pump Stn5**	**3.81**	**224**	P	**Pn**	**00 04 10.1**	**-2.7**
INK	**Inuvik**	**4.00**	**105**	Pn	**Pn**	**00 04 14.4**	**-0.8**
	2.2nm,0.3s,baz=302,slow=15,SNR=74						
INK				Sn	**Sn**	**00 05 00.9**	**-1.1**
	11nm,0.3s,baz=188,slow=8.4,SNR=11						
INK				Lg	Lg	00 05 20.1	
	12nm,0.3s,baz=354,slow=18,SNR=5.0						
INK	**Inuvik**	**4.00**	**105**	Pn	**Pn**	**00 04 13.8**	**-1.4**
INK				Sn	**Sn**	**00 04 58.9**	**-3.1**
PRP	**Porcupine Dome**	**4.22**	**189**	P	**Pn**	**00 04 16.6**	**-2.0**
PRP				S	**Sn**	**00 05 05.3**	**-2.6**
PS06	**TAPS Pump Stn6**	**4.43**	**213**	P	**Pn**	**00 04 18.6**	**-2.5**
GLM	**Gilmore Dome**	**4.90**	**197**	P	**Pn**	**00 04 25.3**	**-2.4**
MDM	**Murphy Dome**	**5.02**	**201**	*e*Pn	**Pn**	**00 04 27.4**	**-2.0**
EGAK	**Eagle**	**5.04**	**166**	*e*Pn	**Pn**	**00 04 27.5**	**-2.1**
COLA	**College**	**5.06**	**199**	*e*Pn	**Pn**	**00 04 29.5**	**-0.3**
IL1	**Eielson Array**	**5.06**	**194**	*e*Pn	**Pn**	**00 04 29.1**	**-0.8**
ILAR	**Eielson Array**	**5.06**	**194**	Pn	**Pn**	**00 04 27.6**	**-2.2**
	8.9nm,0.3s,baz=10,slow=13,SNR=210						
ILAR				Sn	**Sn**	**00 05 24.6**	**-3.8**
	8.5nm,0.3s,baz=16,slow=17,SNR=5.6						
ILAR				Lg	Lg	00 05 44.0	
	19nm,0.3s,baz=5.0,slow=32,SNR=8.1						
ILB	**Eielson Array**	**5.06**	**194**	*e*Pn	**Pn**	**00 04 28.8**	**-1.1**
IM01	**Indian Mountai**	**5.23**	**230**	P	**Pn**	**00 04 29.7**	**-2.5**
CCB	**Clear Creek Bu**	**5.27**	**198**	*e*Pn	**Pn**	**00 04 30.5**	**-2.3**
PS08	**TAPS Pump Stn8**	**5.28**	**194**	P	**Pn**	**00 04 32.0**	**-0.9**
MLY	**Manley**	**5.35**	**213**	*e*Pn	**Pn**	**00 04 31.9**	**-2.1**
HDA	**Harding Lake**	**5.42**	**194**	P	**Pn**	**00 04 34.2**	**-0.6**
WRH	**Wood River Hil**	**5.48**	**199**	*e*Pn	**Pn**	**00 04 33.4**	**-2.1**
NEA	**Nenana**	**5.50**	**204**	P	**Pn**	**00 04 34.0**	**-1.9**
SCRK	**Sand Creek**	**5.73**	**180**	*e*Pn	**Pn**	**00 04 38.0**	**-1.2**
DAWY	**Dawson**	**5.91**	**160**	Pn	**Pn**	**00 04 40.1**	**-1.5**
DAWY				Sn	**Sn**	**00 05 44.8**	**-4.6**
DAWY	**Dawson**	**5.91**	**160**	*e*Pn	**Pn**	**00 04 39.9**	**-1.7**
BWN	**Browne**	**5.94**	**204**	*e*Pn	**Pn**	**00 04 40.5**	**-1.4**
RIDG	**Independ'e Rid**	**5.98**	**184**	*e*Pn	**Pn**	**00 04 41.1**	**-1.4**
DOT	**Dot Lake**	**6.06**	**181**	Pn	**Pn**	**00 04 42.2**	**-1.4**
DOT				Sn	**Sn**	**00 05 48.0**	**-4.9**
DOT	**Dot Lake**	**6.06**	**181**	*e*Pn	**Pn**	**00 04 42.3**	**-1.3**
BPAW	**Bear Paw Mtn.**	**6.25**	**210**	*e*Pn	**Pn**	**00 04 44.4**	**-1.8**
MCK	**McKinley**	**6.29**	**201**	*e*Pn	**Pn**	**00 04 45.0**	**-1.8**
RND	**Reindeer**	**6.60**	**200**	*e*Pn	**Pn**	**00 04 50.2**	**-0.8**
CHUM	**Lake Minchumin**	**6.69**	**214**	P	**Pn**	**00 04 50.4**	**-1.8**
BCA3	**Beaver Creek A**	**6.70**	**172**	P	**Pn**	**00 04 50.8**	**-1.6**
TRF	**Thorofare Moun**	**6.74**	**205**	*e*Pn	**Pn**	**00 04 51.5**	**-1.6**
KTH	**Kantishna Hill**	**6.75**	**208**	*e*Pn	**Pn**	**00 04 51.7**	**-1.3**
PAX	**Paxson**	**6.77**	**186**	Pn	**Pn**	**00 04 52.2**	**-1.2**
PAX				Sn	**Sn**	**00 06 06.5**	**-3.9**
PAX	**Paxson**	**6.77**	**186**	*e*Pn	**Pn**	**00 04 52.3**	**-1.0**
DHY	**Denali Highway**	**6.77**	**193**	*e*Sn	**Sn**	**00 06 09.9**	**-0.8**
RDOG	**Red Dog Mine**	**7.04**	**266**	*e*Pn	**Pn**	**00 04 54.9**	**-2.1**
CAST	**Castle Rocks**	**7.07**	**211**	*e*Pn	**Pn**	**00 04 55.1**	**-2.4**
HARP	**HAARP**	**7.32**	**184**	Pn	**Pn**	**00 04 60.0**	**-0.9**
HARP	**HAARP**	**7.32**	**184**	*e*Pn	**Pn**	**00 05 00.9**	**0.0**
PPLA	**Purkeypile**	**7.57**	**210**	*e*Pn	**Pn**	**00 05 02.7**	**-1.8**
LDBN	**Lake De Bois**	**7.65**	**104**	Pn	**Pn**	**00 05 03.0**	**-2.4**
LDBN				Sn	**Sn**	**00 06 25.2**	**-6.7**
SCM	**Sheep Creek Mo**	**8.00**	**192**	*e*Pn	**Pn**	**00 05 10.6**	**+0.3**
GHO	**Glory Hole Cre**	**8.20**	**197**	*e*Pn	**Pn**	**00 05 13.5**	**+0.5**
KLU	**Klutina**	**8.26**	**187**	*e*Pn	**Pn**	**00 05 14.5**	**+0.6**
SKT	**Skwentna**	**8.33**	**206**	*e*Pn	**Pn**	**00 05 14.5**	**-0.2**
TT01	**Tatalina**	**8.34**	**221**	P	**Pn**	**00 05 12.1**	**-2.8**
PMR	**Palmer**	**8.40**	**197**	*e*Pn	**Pn**	**00 05 15.9**	**+0.4**
PMR				*e*Sn	**Sn**	**00 06 52.9**	**+2.6**
**

ASAJ	Asahikawa	43.81	274	LR	LR	00 30 46.2	
	comp=Z,58nm,18.2s,baz=325,slow=38						
WVT	Waverly	44.95	108	*e*P	P	00 11 30.2	+1.4
	5.7nm,0.9s						
TX31	Lajitas Ar. Si	46.41	129	*e*P	P	00 11 41.8	+1.3
TXAR	Lajitas Array	46.41	129	P	P	00 11 40.8	+0.2
	0.8nm,0.7s,baz=355,slow=8.6,SNR=10.0						
FINES	FINESS Array B	48.97	6	P	P	00 11 59.5	-0.3
	1.3nm,0.7s,baz=14,slow=7.1,SNR=8.1						
HFS	Hagfors	49.50	15	P	P	00 12 04.6	+0.6
	0.9nm,0.7s,baz=21,slow=8.4,SNR=4.0						
ZALV	Zalesovo Beam	51.71	326	P	P	00 12 20.6	-0.1
	0.7nm,0.5s,baz=15,slow=7.7,SNR=3.8						
ZALV				LR	LR	00 36 10.0	
	comp=Z,19nm,21.4s,baz=256,slow=38						
SONA1	Songino Array	52.17	307	*e*P	P	00 12 24.9	+0.5
SONM	Songino Array	52.18	307	P	P	00 12 24.7	+0.2
	1.0nm,0.8s,baz=17,slow=6.2,SNR=5.4						
SONM				LR	LR	00 38 24.2	
	comp=Z,63nm,19.8s,baz=24,slow=40						
ARU	Arti	53.15	345	P	P	00 12 32.7	+1.4
	1.2nm,0.5s,baz=288,slow=20,SNR=3.3						
KSRS	Korea Array	54.80	283	LR	LR	00 36 37.3	
	comp=Z,21nm,18.3s,baz=60,slow=37						
BVAR	Borovoye Array	55.08	335	P	P	00 12 44.8	-0.6
	0.2nm,0.4s,baz=63,slow=9.9,SNR=2.3						
BVAR				LR	LR	00 39 03.4	
	comp=Z,30nm,19.0s,baz=22,slow=39						
KURK	Kurchatov	55.97	329	P	P	00 12 52.5	+0.7
KURBB	Kurchatov Arra	56.07	329	P	P	00 12 52.5	-0.1
	1.5nm,0.2s,baz=11,slow=7.2,SNR=3.0						
BBSR	BB Station	56.33	87	*e*P	P	00 12 57.9	+3.2
	11nm,0.6s						
HHC	Hu-ho-hao-te	57.03	299	*e*P	P	00 13 01.4	+1.6
HHC				pmax	pmax		
	comp=Z,34nm,1.1s						
HHC				pmax	pmax		
	comp=Z,85nm,4.6s						
MKAR	Makanchi Array	59.02	325	P	P	00 13 14.1	+0.6
	comp=Z,0.5nm,0.6s,baz=50,slow=9.6,SNR=5.6						
MKAR				LR	LR	00 40 47.9	
	comp=Z,20nm,19.1s,baz=20,slow=38						
MK01	Makanchi Array	59.04	325	*e*P	P	00 13 14.5	+0.9
MAKZ	Makanchi	59.07	325	*e*P	P	00 13 14.6	+0.8
	comp=Z,2.9nm,1.0s						
AKTO	Aktyubinsk	59.13	344	LR	LR	00 41 08.9	
	comp=Z,13nm,18.1s,baz=6.7,slow=38						
AKASG	Malin Array Be	59.83	5	P	P	00 13 18.9	-0.1
	comp=Z,0.6nm,0.4s,baz=359,slow=6.9,SNR=3.0						
WMQ	Urumqi	60.69	319	P	P	00 13 29.6	+4.5
LZH	Lanzhou	63.74	303	*e*P	P	00 13 46.1	+0.4
LZH				pP	sP	00 13 50.9	+0.7
LZH				sP	pP	00 13 54.5	+5.6
LZH				*e*PP	PP	00 16 10.1	+4.7
LZH				pmax	pmax		
	comp=Z,13nm,0.9s						
LZH				pmax	pmax		
	comp=Z,120nm,4.3s						
LZH				LR	LR		
	comp=N,62nm,15.6s						
LZH				LR	LR		
	comp=E,90nm,16.5s						
LZH				LR	LR		
	comp=Z,100nm,17.4s						
ES19	SONSECA Array	67.07	33	*e*P	P	00 14 08.9	+1.8
ESDC	Sonseca Array	67.09	33	P	P	00 14 07.3	+0.2
	comp=Z,0.3nm,0.5s,baz=344,slow=6.7,SNR=4.9						
CD2	Chengdu	68.59	301	P	P	00 14 15.3	-1.5
CD2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BRTR	Keskin Array B	70.90	2	P	P	00 14 32.6	+1.6
	comp=Z,0.4nm,0.8s,baz=354,slow=6.7,SNR=3.2						
CMAR	Chiang Mai Arr	81.74	301	P	P	00 15 32.9	+0.3
	comp=Z,0.9nm,0.3s,baz=354,slow=5.9,SNR=4.2						

NEIC ***24*** *00:14:25.6±1.1, 33°.22S×177°.84W, h10km, mb4.9/7, Error ellipse: s-maj=23.9km s-min=9.6km az=109.0*
IDC ***24*** *00:14:27.5±0.7, 33°.06S×178°.51W, h0km, mb4.5/10, mb1 4.6/13, mb1mx4.3/46, mbtmp4.5/13, ML4.2/3, MS3.9/21, Ms1 3.9/21, ms1mx3.7/45, Error ellipse: s-maj=23.9km s-min=18.4km az=108.0*
ISCJB ***24*** *00:14:31.1±0.5, 33°.14S±0°.05×178°.57W±0°.10, h33km, mb4.9/25, MS4.0/22, Error ellipse: s-maj=12.5km s-min=6.5km az=21.3*
ISC 24 00:14:31.9±0.5, 33°.14S±0°.06×178°.26W±0°.09, h34km, n91, σ1°.74/74, mb4.9/24, MS4.0/22, 1D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	3.89	4	Pn	Pn	00 15 28.4	-0.9
	61nm,0.3s,baz=94,slow=22,SNR=2.7						
RAO				Sn	Sn	00 16 08.6	-5.2
	180nm,0.3s,baz=117,slow=22,SNR=11						
RAO	Raoul Island	3.89	4	*e*Pn	Pn	00 15 27.3	-2.0
RAO				*e*Sn	Sn	00 16 09.7	-4.0
MXZ	Matakaoa Point	5.22	211	*e*Pn	Pn	00 15 48.3	+0.8
URZ	Urewera	6.34	215	Pn	Pn	00 16 00.3	-2.6
	1.9nm,0.3s,baz=81,slow=23,SNR=6.9						
URZ				Sn	Sn	00 17 14.4	+0.3
	26nm,0.3s,baz=158,slow=21,SNR=15						
URZ	Urewera	6.34	215	*e*Pn	Pn	00 16 03.5	+0.6
URZ				Sn	Sn	00 17 14.4	+0.3
OUZ	Omahuta	7.06	251	*e*Pn	Pn	00 16 16.3	+3.5
BKZ	Black Stump Fm	7.35	214	*e*Pn	Pn	00 16 17.1	+0.2
BFZ	Birch Farm	8.71	209	*e*Sn	Sn	00 18 09.2	-3.2
LTZ	Lake Taylor	12.17	215	*e*Pn	Pn	00 17 20.8	-2.0
OXZ	Oxford	12.70	214	*e*Pn	Pn	00 17 29.8	-0.1
OXZ				*e*Sn	Sn	00 19 39.3	-11
RPZ	Rata Peaks	13.46	215	Pn	Pn	00 17 37.8	-2.6
	0.9nm,0.3s,baz=34,slow=14,SNR=1.8						
RPZ				Sn	Sn	00 19 56.9	-12
	1.5nm,0.3s,baz=333,slow=20,SNR=4.0						
DZM	Mont Dzumac	17.45	305	P	P	00 18 34.4	+0.6
	0.2nm,0.3s,baz=93,slow=14,SNR=5.2						
DZM				LR	LR	00 24 06.9	
	comp=Z,1μm,18.9s,baz=176,slow=34						
DZM	Mont Dzumac	17.45	305	*e*P	P	00 18 38.3	+4.5
	107nm,1.3s						
DZM				*e*LR	LR	00 22 46.7	
	1μm,22.6s						
DZM	Mont Dzumac	17.45	305	*e*Pn	P	00 18 35.0	+1.3
	41nm,1.1s						
RAR	Rarotonga	20.26	59	LR	LR	00 27 11.2	
	comp=Z,112nm,18.1s,baz=234,slow=38						
EIDS	Eidsvold	27.77	278	*e*P	P	00 20 17.9	+0.2
	21nm,1.0s						
PPT2	Papeete2	30.07	66	*e*LR	LR	00 28 16.8	
	210nm,24.5s,baz=233						
PPT	Papeete	30.08	66	LR	LR	00 33 05.5	
	comp=Z,131nm,18.6s,baz=226,slow=37						
STKA	Stephens Creek	33.73	261	LR	LR	00 34 19.4	
	comp=Z,530nm,18.4s,baz=59,slow=36						
CTA	Charters Tower	34.12	283	P	P	00 21 13.3	-0.3
	5.2nm,0.5s,baz=118,slow=12,SNR=7.2						
CTAO	Charters Tower	34.12	283	*e*P	P	00 21 13.7	0.0
	61nm,1.6s						
BBOO	Buckleboo	38.09	258	*e*P	P	00 21 46.6	-0.8
	35nm,1.3s						
PMG	Port Moresby	39.65	299	LR	LR	00 37 40.1	
	comp=Z,204nm,18.7s,baz=140,slow=35						
TAOE	Nuku Hiva Isla	42.65	64	*e*S	S	00 28 49.7	+3.1
	52nm,25.4s						
TAOE				*e*LR	LR	00 34 07.9	
	116nm,23.5s						
AS01	Alice Springs	42.77	270	*e*P	P	00 22 25.5	-0.8
ASAR	Alice Springs	42.81	270	P	P	00 22 26.2	-0.5
	8.4nm,0.8s,baz=109,slow=7.6,SNR=63						
WB2	Warramunga Arr	44.04	275	*e*P	P	00 22 36.1	-0.4
WRAB	Tennant Creek	44.04	275	*e*P	P	00 22 35.7	-0.9
	8.8nm,0.6s						
WRA	Warramunga Arr	44.05	275	P	P	00 22 36.1	-0.5
	10.0nm,0.7s,baz=115,slow=7.6,SNR=21						
FORT	Forrest	45.19	258	*e*P	P	00 22 44.2	-1.4
	25nm,0.7s						
VNDA	Vanda	45.35	186	LR	LR	00 41 57.2	
	comp=Z,59nm,18.1s,baz=2.0,slow=36						
FITZ	Fitzroy Crossi	52.18	272	P	P	00 23 36.7	-2.8
	9.6nm,0.9s,baz=143,slow=11,SNR=4.4						
CASY	Casey	52.62	209	*e*P	P	00 23 39.2	-2.9
	10nm,0.8s						
FAKI	Fak Fak	55.12	292	*e*P	P	00 23 59.5	-1.6
	97nm,1.5s						
QSPA	South Pole Qui	56.97	180	P	P	00 24 15.9	+2.1
	7.5nm,1.0s,baz=37,slow=3.6,SNR=5.3						
HON	Honolulu	57.51	23	*e*P	P	00 24 12.2	-5.6
	177nm,0.9s						
PMSA	Palmer Station	69.87	155	LR	LR	00 50 28.7	
	comp=Z,84nm,18.7s,baz=306,slow=31						
LEM	Lembang	73.01	273	LR	LR	00 58 58.1	
	comp=Z,132nm,19.6s,baz=184,slow=37						
SYO	Syowa Base	74.40	193	*e*P	P	00 25 59.1	-6.7
SNAA	Sanae	75.43	179	P	P	00 26 13.0	+1.2
SNAA	Sanae	75.43	179	P	P	00 26 15.0	+3.1
	3.5nm,1.0s,baz=246,slow=4.2,SNR=3.7						
SNAA				LR	LR	00 58 47.6	
	comp=Z,66nm,18.1s,baz=124,slow=35						
VNA3	Neumayer Olymp	75.59	176	P	P	00 26 13.6	+0.8
VNA2	Neumayer--Watz	76.02	177	P	P	00 26 17.6	+2.4
VNA1	Neumayer--Stat	76.25	177	P	P	00 26 24.9	+8.4
JHJ	Hachijo jima 2	76.84	325	LR	LR	00 55 47.7	
	comp=Z,38nm,18.9s,baz=74,slow=32						
MJAR	Matsushiro Arr	80.37	326	LR	LR	00 58 26.2	
	comp=Z,28nm,20.5s,baz=160,slow=33						
JNU	Nakatsue	81.46	319	LR	LR	01 03 02.9	
	comp=Z,34nm,18.2s,baz=122,slow=36						
ASAJ	Asahikawa	84.77	333	P	P	00 27 03.0	+0.7
	4.3nm,0.9s,baz=247,slow=9.8,SNR=3.8						
LPIG	La Paz	86.17	58	LR	LR	01 00 42.6	
	comp=Z,82nm,18.1s,baz=219,slow=32						
KSRS	Korea Array	86.29	320	P	P	00 27 09.6	-0.5
	1.3nm,0.8s,baz=143,slow=5.8,SNR=6.3						
KSAR	Wonju Array Be	86.30	320	P	P	00 27 09.6	-0.6
NJ2	Nanjing	87.86	311	*e*P	P	00 27 17.5	-0.3
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
PETK	Petropavlovsk-	88.41	346	P	P	00 27 20.9	+1.0
	3.9nm,0.6s,baz=145,slow=5.4,SNR=5.9						
YBH	Yreka Blue Hor	90.32	38	LR	LR	01 02 55.4	
	comp=Z,65nm,18.5s,baz=219,slow=32						
NVAR	Mina Array Bea	90.40	43	P	P	00 27 31.6	+1.7
	0.2nm,0.3s,baz=245,slow=5.8,SNR=3.7						
NVAR				LR	LR	01 03 55.0	
	comp=Z,50nm,18.1s,baz=107,slow=33						
W13A	Hualapai Mount	90.80	48	*e*P	P	00 27 24.2	-7.7
	10nm,1.1s						
CN2	Changchun	92.19	323	*e*P	P	00 27 38.1	+0.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA	Guiyang	92.72	300	*e*P	P	00 27 40.3	-0.5
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TXAR	Lajitas Array	94.05	58	LR	LR	01 05 21.7	
	comp=Z,58nm,18.0s,baz=0.0,slow=32						
KMI	Kunming	94.85	297	P	P	00 27 51.9	+1.1
KMI				pmax	pmax		
	comp=Z,7.0nm,1.9s						
ANMO	Albuquerque	95.46	52	LR	LR	01 05 55.7	
	comp=Z,55nm,18.3s,baz=248,slow=32						
LPAZ	La Paz	97.22	115	LR	LR	01 07 42.9	
	comp=Z,24nm,18.4s,baz=240,slow=33						
CD2	Chengdu	97.35	302	P	P	00 27 59.8	-2.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	Hu-ho-hao-te	97.97	314	*e*P	P	00 28 04.3	-0.1
HHC				pmax	pmax		
	comp=Z,36nm,1.1s						
HHC				pmax	pmax		
	comp=Z,80nm,4.7s						
HHC				LR	LR		
	comp=N,250nm,11.2s						
HHC				LR	LR		
	comp=E,190nm,11.2s						
HHC				LR	LR		
	comp=Z,150nm,11.2s						
PDAR	Pinedale Array	98.27	44	LR	LR	01 09 28.9	
	comp=Z,45nm,18.1s,baz=256,slow=34						
JTS	JuntasAbangare	98.29	83	LR	LR	01 05 56.6	
	comp=Z,43nm,18.1s,baz=352,slow=31						
CPUP	Villa Florida	98.45	129	LR	LR	01 07 56.4	
	comp=Z,65nm,18.4s,baz=220,slow=32						
LZH	Lanzhou	100.17	306	*e*P	**Pdif**	**00 28 13.8**	**-0.6**
LZH				pP	pPdif	00 28 23.3	-2.0
LZH				sP	pP	00 28 26.3	+0.9
LZH				*e*PP	PP	00 32 23.3	+2.4
LZH				pmax	pmax		
	comp=Z,12nm,1.1s						
LZH				pmax	pmax		
	comp=Z,150nm,4.8s						
LZH				LR	LR		
	comp=N,190nm,16.0s						
LZH				LR	LR		
	comp=E,200nm,17.2s						
LZH				LR	LR		
	comp=Z,280nm,19.6s						
WMQ	Urumqi	114.73	307	*e*PKP	PKPdf	00 33 04.8	-3.8
MKAR	Makanchi Array	119.34	309	PKP	**PKPdf**	**00 33 16.8**	**-0.5**
	0.2nm,0.6s,baz=90,slow=1.2,SNR=2.5						
KSH	Kashi	121.41	299	PKP	**PKPdf**	**00 33 19.5**	**-2.2**
KSH				PP	PP	00 34 58.1	+4.3
KSH				AMB	AMB		
	comp=Z,110nm,4.2s						
KURK	Kurchatov	122.76	313	PKP	**PKPdf**	**00 33 23.4**	**-0.2**
KURBB	Kurchatov Arra	122.79	312	PKP	**PKPdf**	**00 33 23.4**	**-0.3**
	0.2nm,0.4s,baz=21,slow=16,SNR=4.1						
ARCES	ARCESS Array B	141.21	347	PKhKP	PKPpre	00 33 54.6	
	1.7nm,0.6s,baz=84,slow=2.1,SNR=8.0						
KBZ	Khabaz	146.38	300	PKPbc	**PKPbc**	**00 34 08.7**	**-0.3**
	3.7nm,0.9s,baz=230,slow=2.7,SNR=8.0						
FINES	FINESS Array B	147.62	338	PKPbc	**PKPbc**	**00 34 11.8**	**-0.1**
	12nm,0.8s,baz=42,slow=3.3,SNR=36						
NB2	NORSAR Subarra	151.42	350	PKP	**PKPbc**	**00 34 21.8**	**+0.4**
	comp=Z,2.0nm,0.6s,baz=18,slow=2.6						
MMAI	Mount Meron Ar	151.86	279	PKPbc	**PKPbc**	**00 34 24.7**	**+1.3**
	comp=Z,13nm,0.8s,baz=87,slow=7.6,SNR=34						
HFS	Hagfors	151.87	347	PKPbc	**PKPbc**	**00 34 23.0**	**+0.6**
	comp=Z,6.9nm,0.8s,baz=62,slow=3.5,SNR=8.3						
AKASG	Malin Array Be	153.28	319	PKPbc	**PKPbc**	**00 34 25.6**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=60,slow=2.5,SNR=6.0						
BRTR	Keskin Array B	153.60	294	PKPbc	**PKPbc**	**00 34 27.4**	**+0.3**
	comp=Z,2.1nm,0.6s,baz=141,slow=3.7,SNR=18						
BRTR				PKPab	**PKPab**	**00 34 40.0**	**+0.1**
	comp=Z,1.6nm,0.7s,baz=158,slow=4.2,SNR=5.8						
MORC	Moravsky Berou	159.66	329	*e*PKP	**PKPab**	**00 35 05.0**	**-0.4**
DPC	Dobruska-Polom	159.72	332	*e*PKPAB	**PKPab**	**00 35 06.1**	**+0.5**
DPC				*ex*	x	00 35 18.3	
CLL	Collm	160.07	339	*i* PKPab	**PKPab**	**00 35 06.7**	**-0.2**
	comp=Z,6.0nm,0.9s						
CLL				*i* pPKPab	**pPKPab**	**00 35 18.6**	**+0.8**
TORD	Torodi Ar. Bea	160.09	180	PKPab	**PKPab**	**00 35 07.3**	**-0.6**
	comp=Z,0.7nm,0.8s,baz=176,slow=3.8,SNR=4.9						
BRG	Berggiesshubel	160.15	337	*e*PKP	**PKPab**	**00 35 07.1**	**-0.2**
	comp=Z,8.9nm,1.5s						
JAVC	Velka Javorina	160.29	327	*e*PKP	**PKPab**	**00 35 08.1**	**0.0**
VRAC	Vranov	160.42	330	*e*PKP	**PKPab**	**00 35 08.7**	**+0.1**
KRUC	Moravsky	160.69	330	*e*PKP	**PKPab**	**00 35 09.6**	**-0.2**
KRUC				*e*		00 35 22.6	
KHC	Kasperske Hory	161.74	335	*e*PKPAB	**PKPab**	**00 35 15.0**	**+0.6**
KHC				*ex*	x	00 35 26.8	
GERES	GERESS Array B	161.94	334	PKPab	**PKPab**	**00 35 14.1**	**-1.2**
	comp=Z,1.1nm,0.9s,baz=22,slow=4.7,SNR=6.7						

TIR ***24*** *01:01:48.2, 40°.79N×20°.31E, h13km, Md2.6/3*
ATH ***24*** *01:01:52.7, 40°.70N×20°.54E, h16km±2km, ML1.8/6, Error ellipse: s-maj=3.3km s-min=1.2km az=138.0*
CSEM ***24*** *01:01:54.1±0.5, 40°.66N×20°.59E, h15km, ML1.8, Error ellipse: s-maj=11.8km s-min=7.1km az=154.0*
ISCJB ***24*** *01:01:56.1±0.7, 40°.58N±0°.04×20°.60E±0°.05, h23km±7km, Error ellipse: s-maj=7.7km s-min=5.4km az=145.2*
SKO ***24*** *01:01:58.5, 40°.47N×20°.65E, h8km, M1.4, ML1.7*
ISC 24 01:01:54.3±1.0, 40°.61N±0°.03×20°.54E±0°.04, h11km±6km, n38, σ1°.64/53, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBN	Korca	0.18	87	*i* PG	Pg	01 01 55.8	-2.6
KBN				*i* SG	Sb	01 02 04.5	+3.3
KBN	Korca	0.18	87	*i* Pg	Pg	01 01 55.8	-2.6
KBN				*i* Sg	Sb	01 02 04.4	+3.3
	baz=114						
NEST	Nestorio	0.43	117	P	Pg	01 02 02.8	0.0
NEST				S	Sg	01 02 09.2	+0.6
NEST				AML	AML	01 02 12.0	
	comp=N,271μm,0.2s						
NEST				AML	AML	01 02 14.2	
	comp=E,301μm,0.2s						
NEST	Nestorio	0.43	117	P	Pg	01 02 02.5	-0.3
NEST				S	Sg	01 02 09.1	+0.6
OHR	Ohrid	0.53	21	*e*Pg	Pn	01 02 09.7	+1.8
OHR				*e*Sg	Sn	01 02 19.9	+2.9
OHR				*e*Lg	Lg	01 02 19.9	
	comp=N,18nm,0.5s						
OHR				*e*Lg	Lg	01 02 20.0	
	comp=E,47nm,0.4s						
PENT	Pentalofos	0.62	132	P	Pg	01 02 05.6	-0.7
PENT				S	Sg	01 02 15.3	+0.9
PENT				AML	AML	01 02 16.4	
	comp=N,357μm,0.2s						
PENT				AML	AML	01 02 17.4	
	comp=E,198μm,0.2s						
PENT	Pentalofos	0.62	132	P	Pg	01 02 05.7	-0.6
PENT				S	Sg	01 02 15.3	+0.9
FNA	Florina	0.66	75	P	Pg	01 02 06.0	-1.0
FNA				S	Sg	01 02 12.7	-2.9
FNA				AML	AML	01 02 20.9	
	comp=N,672μm,0.3s						
FNA				AML	AML	01 02 23.1	
	comp=E,301μm,0.3s						
FNA	Florina	0.66	75	P	Pg	01 02 05.6	-1.4
FNA				S	Sg	01 02 13.5	-2.1
BIA	Bitola	0.72	55	*e*Pg	Pn	01 02 12.7	+2.2
KPRO	Kipourio	0.91	136	P	Pb	01 02 11.8	-0.3
KPRO				AML	AML	01 02 25.5	
	comp=E,147μm,0.4s						
KPRO				S	Sg	01 02 25.5	+1.8
KPRO				AML	AML	01 02 29.6	
	comp=N,116μm,0.4s						
KPRO	Kipourio	0.91	136	P	Pb	01 02 11.5	-0.6
KPRO				S	Sg	01 02 25.1	+1.4
KRUS	Krusevo	0.92	35	*e*Pg	Pn	01 02 17.5	+4.2
KZN	Kozani	0.98	108	P	Pb	01 02 12.5	-0.9
KZN				S	Sn	01 02 26.7	-1.4
KZN				AML	AML	01 02 31.2	
	comp=N,69μm,0.3s						
KZN				AML	AML	01 02 34.6	
	comp=E,82μm,0.4s						
KZN	Kozani	0.98	108	P	Pb	01 02 12.3	-1.1
KZN				S	Sg	01 02 26.5	+0.4
SGD	Sagiada	1.03	193	P	Pb	01 02 10.3	-3.7
SGD	Sagiada	1.03	193	P	Pb	01 02 12.0	-2.1
KEK	Kerkira	1.07	213	P	Pn	01 02 14.4	-0.8
KEK				S	Sb	01 02 30.4	+1.7
KEK	Kerkira	1.07	213	P	Pn	01 02 14.3	-0.9
KEK				S	Sb	01 02 30.2	+1.5
IGT	Igoumenitsa	1.09	189	P	Pn	01 02 14.4	-1.1
IGT				S	Sb	01 02 30.8	+1.3
IGT				AML	AML	01 02 38.3	
	comp=E,29μm,0.6s						
IGT				AML	AML	01 02 41.4	
	comp=N,39μm,0.4s						
IGT	Igoumenitsa	1.09	189	P	Pn	01 02 14.7	-0.8
IGT				S	Sb	01 02 30.9	+1.4
GRG	Griva	1.45	76	P	Pn	01 02 17.6	-2.9
GRG	Griva	1.45	76	P	Pn	01 02 18.7	-1.8
DSL	Palaion Diasel	1.54	164	P	Pb	01 02 23.2	+0.4
DSL	Palaion Diasel	1.54	164	P	Pb	01 02 23.0	+0.2
THL	Klokotos Trika	1.54	132	P	Pn	01 02 20.2	-1.5
THL	Klokotos Trika	1.54	132	P	Pn	01 02 21.3	-0.4
LIT	Litokhoron	1.57	108	P	Pb	01 02 23.4	0.0
LIT	Litokhoron	1.57	108	P	Pb	01 02 23.0	-0.4
STIP	Stip	1.64	48	*e*Pn	Pg	01 02 30.5	+4.7
SCTE	Santa Cesarea	1.68	252	P	Pb	01 02 25.0	-0.2
SCTE	Santa Cesarea	1.68	252	P	Pn	01 02 24.5	+0.9
LKD2	Lefkada island	1.82	177	P	Pn	01 02 25.3	-0.3
LKD2	Lefkada island	1.82	177	P	Pn	01 02 26.1	+0.5
KNT	Kendrikon	1.87	72	P	Pb	01 02 27.3	-1.1
KNT	Kendrikon	1.87	72	P	Pb	01 02 26.7	-1.7
AGG	Agios Georgios	2.10	139	P	Pn	01 02 30.5	+1.0
AGG	Agios Georgios	2.10	139	P	Pn	01 02 30.5	+1.0

ISCJB ***24*** *01:12:20.0±0.4, 69°.64N±0°.03×143°.49W±0°.08, h10km, mb3.8/5, Error ellipse: s-maj=4.9km s-min=4.0km az=168.8*
IDC ***24*** *01:12:22.9±1.1, 69°.73N×143°.80W, h0km, mb3.7/5, mb1 4.0/8, mb1mx3.5/79, mbtmp3.7/8, ML3.4/3, MS2.7/1, Ms1 2.7/1, ms1mx2.2/79, Error ellipse: s-maj=23.5km s-min=18.7km az=57.0*
PGC ***24*** *01:12:23.4±4.2, 69°.86N×144°.14W, h30km, ML3.5/1, 165km east of Prudhoe Bay, Ak Northern Alaska*
NEIC ***24*** *01:12:25.0±0.0, 69°.49N×144°.14W, h14km, mb3.8/1, ML3.5(OTT), ML3.6(AEIC), After AEIC.*
ISC 24 01:12:20.4±0.6, 69°.78N±0°.05×143°.62W±0°.04, h10km, n59, σ2°.52/78, mb3.5/5, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PS01	TAPS Pump Stn	1.78	288	P	Pg	01 12 54.5	0.0
PS01				S	Sg	01 13 16.8	-0.7
BM3	Burnt Mountain	2.40	189	P	Pn	01 12 59.8	0.0
TOLK	Toolik Lake Re	2.41	244	P	Pn	01 13 00.3	+0.4
TOLK				S	Sn	01 13 27.9	-1.7
PS04	TAPS Pump Stn4	2.47	239	P	Pn	01 13 01.3	+0.6
PS04				S	Sn	01 13 29.8	-1.1
FYU	Fort Yukon	3.29	191	P	Pn	01 13 12.3	+0.5
FYU				S	Sn	01 13 49.1	-1.8
COLD	Coldfoot	3.53	226	Pn	Pn	01 13 14.4	-0.8
COLD	Coldfoot	3.53	226	P	Pn	01 13 14.8	-0.4
INK	Inuvik	3.92	107	Pn	Pn	01 13 23.4	+2.9
	0.6nm,0.3s,baz=302,slow=11,SNR=30						
INK				Sn	Sn	01 14 09.6	+3.2
	2.5nm,0.3s,baz=231,slow=8.3,SNR=7.6						
INK	Inuvik	3.92	107	Pn	Pn	01 13 23.8	+3.2
INK				Sn	Sn	01 14 07.8	+1.3
INK	Inuvik	3.92	107	*e*Pn	Pn	01 13 24.1	+3.6
INK				*e*Sn	Sn	01 14 08.8	+2.3
PS05

YKW3				S	Sn	01 17 53.2	-12
YKW3	**Yellowknife Ar**	**13.64**	**108**	P	**Pn**	**01 15 32.4**	**-1.2**
YKW3				S	Sn	01 17 53.2	-12
YKA	**Yellowknife Ar**	**13.69**	**108**	Pn	**Pn**	**01 15 33.8**	**-0.5**
	0.4nm,0.3s,baz=312,slow=13,SNR=14						
YKA				Sn	**Sn**	**01 17 58.5**	**-7.7**
	0.4nm,0.3s,baz=314,slow=23,SNR=9.3						
YKW1	**Yellowknife Ar**	**13.72**	**108**	P	**Pn**	**01 15 34.4**	**-0.3**
YKW1				S	Sn	01 17 55.5	-11
YKW1	**Yellowknife Ar**	**13.72**	**108**	P	**Pn**	**01 15 34.4**	**-0.3**
YKW1				S	Sn	01 17 55.5	-11
RES	**Resolute Bay**	**15.23**	**49**	Pn	**Pn**	**01 15 56.1**	**+1.0**
	0.6nm,0.3s,baz=297,slow=10.0,SNR=7.5						
RES				Sn	**Sn**	**01 18 37.8**	**-5.7**
	0.2nm,0.3s,baz=162,slow=20,SNR=3.6						
RES	**Resolute Bay**	**15.23**	**49**	P	**Pn**	**01 15 54.8**	**-0.4**
RES				S	**Sn**	**01 18 35.9**	**-7.6**
RES	**Resolute Bay**	**15.23**	**49**	*e*Pn	**Pn**	**01 15 56.6**	**+1.4**
	3.8nm,0.7s						
RES				S	**Sn**	**01 18 35.9**	**-7.6**
BBB	**Bella Bella**	**19.08**	**150**	LR	LR	01 23 51.8	
	comp=Z,27nm,21.2s,baz=198,slow=36						
PDAR	**Pinedale Array**	**32.17**	**129**	P	**P**	**01 18 52.2**	**+4.0**
	0.3nm,0.6s,baz=0.0,slow=4.6,SNR=3.9						
SCHQ	**Schefferville**	**35.83**	**74**	P	**P**	**01 19 24.0**	**+4.4**
	3.7nm,0.5s,baz=247,slow=16,SNR=5.4						
TXAR	**Lajitas Array**	**46.39**	**129**	P	P	01 20 52.0	+5.2
	0.2nm,0.5s,baz=356,slow=9.5,SNR=4.7						
FINES	**FINESS Array B**	**48.86**	**7**	P	P	01 21 10.9	+5.5
	1.9nm,0.9s,baz=344,slow=11,SNR=4.4						
KURBB	**Kurchatov Arra**	**56.04**	**329**	P	**P**	**01 22 01.9**	**+3.1**
	0.4nm,0.9s,baz=18,slow=6.2,SNR=3.3						

ISCJB ***24*** *01:20:45.0±0.2,7°.21S±0°.02×129°.23E±0°.02,h150km, mb4.3/34,Error ellipse: s-maj=3.5km s-min=3.1km az=152.4*
IDC ***24*** *01:20:46.8±1.8,7°.11S×129°.16E,h153km±16km,mb4.0/18, mb1 4.1/22,mb1mx3.9/53,mbtmp4.5/22,Error ellipse: s-maj=14.5km s-min=10.3km az=64.0*
NEIC ***24*** *01:20:46.9±0.5,7°.16S×129°.21E,h157km±5km,mb4.6/17, Error ellipse: s-maj=5.8km s-min=4.8km az=222.0*
DJA ***24*** *01:20:47.0±0.2,7°.S±2°.×12°.9E±°,h155km±8km,M5.1/18, mb5.2/18,mB5.5/12,MLv5.4/15,Mw(mB)5.0/12*
BJI ***24*** *01:20:51.8,6°.65S×128°.66E,h158km,mb4.6/15,mB4.7/8*
ISC 24 01:20:45.9±0.3,7°.26S±0°.04×129°.30E±0°.04,h150km,n139, σ2°.35/158,mb4.4/34,1D,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.11**	**110**	P	**Pn**	**01 21 25.2**	**+2.9**
SAUI				S	**Sn**	**01 21 54.3**	**+4.0**
SAUI	**Saumlaki**	**2.11**	**110**	*e*Pn	**Pn**	**01 21 25.5**	**+3.2**
SAUI				*e*Sn	**Sn**	**01 21 50.9**	**+0.6**
BNDI	**Bandanaira**	**2.79**	**12**	P	**Pn**	**01 21 32.6**	**+2.0**
AAI	**Ambon**	**3.72**	**343**	P	**Pn**	**01 21 44.4**	**+1.8**
MSAI	**Masohi**	**3.91**	**355**	P	**Pn**	**01 21 46.8**	**+1.8**
FAKI	**Fak Fak**	**5.22**	**34**	P	**Pn**	**01 22 00.6**	**-1.7**
FAKI				S	**Sn**	**01 22 55.1**	**-6.8**
FAKI	**Fak Fak**	**5.22**	**34**	*e*Pn	**Pn**	**01 22 01.4**	**-0.9**
FAKI				*e*Sn	Sn	01 22 52.8	-9.1
SOEI	**Soe**	**5.56**	**243**	P	**Pn**	**01 22 09.2**	**+2.3**
SOEI				S	**Sn**	**01 23 09.4**	**-0.7**
SOEI	**Soe**	**5.56**	**243**	*e*Pn	**Pn**	**01 22 08.2**	**+1.3**
SOEI				*e*Sn	**Sn**	**01 23 09.1**	**-1.1**
KMPI	**Kaimana, Papua**	**5.66**	**51**	P	**Pn**	**01 22 08.3**	**+0.2**
KMPI				S	**Sn**	**01 23 07.1**	**-5.2**
MTN	**Manton Dam**	**5.83**	**162**	P	**Pn**	**01 22 12.4**	**+2.0**
	baz=6.0,SNR=971						
MTN	**Manton Dam**	**5.83**	**162**	*e*Pn	**Pn**	**01 22 12.5**	**+2.1**
MTN				*e*Sn	**Sn**	**01 23 12.5**	**-4.0**
SANI	**Sanana**	**6.14**	**327**	P	**Pn**	**01 22 15.7**	**+1.2**
KDU	**Kakadu**	**6.23**	**150**	P	**Pn**	**01 22 17.6**	**+1.9**
	baz=6.4,SNR=104						
BATI	**Baumata**	**6.29**	**242**	P	**Pn**	**01 22 18.1**	**+1.5**
	89nm,0.3s,baz=120,slow=4.9,SNR=61						
BATI				S	**Sn**	**01 23 24.9**	**-2.6**
	243nm,0.3s,baz=27,slow=23,SNR=16						
BATI	**Baumata**	**6.29**	**242**	P	**Pn**	**01 22 18.0**	**+1.5**
	198nm,0.5s,4μm1.8nm						
BATI				S	**Sn**	**01 23 25.9**	**-1.6**
	198nm,0.5s,4μm1.8nm						
SIJI	**Sorong**	**6.65**	**17**	P	**Pn**	**01 22 20.0**	**-1.3**
	22nm,0.3s,baz=123,slow=20,SNR=42						
SIJI				S	**Sn**	**01 23 30.4**	**-5.7**
	33nm,0.3s,baz=73,slow=23,SNR=12						
LBMI	**Labuha**	**6.82**	**345**	P	**Pn**	**01 22 25.3**	**+1.7**
	314nm,0.8s,3μm1.3nm						
LBMI				S	**Sn**	**01 23 39.9**	**-0.4**
	314nm,0.8s,3μm1.3nm						
MMRI	**Maumere**	**7.13**	**258**	P	**Pn**	**01 22 29.2**	**+1.5**
	121nm,0.6s,0.6nm						
MMRI	**Maumere**	**7.13**	**258**	*e*Pn	**Pn**	**01 22 27.5**	**-0.2**
KDI	**Kendari**	**7.42**	**296**	P	Pn	01 22 38.0	+6.4
RKPI	**Ransiki, Papua**	**7.50**	**41**	P	**Pn**	**01 22 32.3**	**-0.4**
RKPI				S	**Sn**	**01 23 50.4**	**-6.2**
EDFI	**Ende, Flores**	**7.68**	**258**	P	**Pn**	**01 22 37.3**	**+2.1**
	38nm,0.4s,968nm						
EDFI				S	**Sn**	**01 23 59.3**	**-1.7**
	38nm,0.4s,968nm						
KNRA	**Kununurra**	**8.38**	**184**	P	**Pn**	**01 22 45.1**	**+0.7**
	baz=8.5,SNR=130						
BAKI	**Biak**	**9.08**	**49**	P	**Pn**	**01 22 53.4**	**-0.4**
BASI	**Baing, Sumba**	**9.11**	**251**	P	**Pn**	**01 22 53.7**	**-0.4**
WSI	**Waingapu**	**9.22**	**254**	P	**Pn**	**01 22 55.9**	**+0.3**
BKSI	**Bulukumba**	**9.32**	**281**	P	**Pn**	**01 22 58.5**	**+1.5**
WBSI	**Waikabubak, Su**	**10.08**	**256**	P	**Pn**	**01 23 06.8**	**-0.3**
WBSI				S	**Sn**	**01 24 53.3**	**-5.5**
TTSI	**Tana Toraja**	**10.33**	**293**	P	Pn	01 23 24.1	+14
FITZ	**Fitzroy Crossi**	**11.35**	**198**	P	**Pn**	**01 23 23.3**	**-0.4**
	7.0nm,0.3s,baz=27,slow=10,SNR=103						
FITZ				S	**Sn**	**01 25 23.4**	**-5.8**
	7.7nm,0.3s,baz=90,slow=22,SNR=6.5						
PCI	**Palu**	**11.35**	**303**	P	**P**	**01 23 36.0**	**+4.3**
PLAI	**Plampang**	**11.52**	**261**	P	**Pn**	**01 23 23.7**	**-2.3**
	196nm,0.6s,2μm						
GENI	**Genyem**	**11.78**	**67**	P	**P**	**01 23 35.1**	**-1.3**
JAY	**Jayapura**	**12.30**	**68**	P	**Pn**	**01 23 39.4**	**+3.2**
	1.6nm,0.3s,baz=222,slow=12,SNR=8.2						
JAY				S	**Sn**	**01 25 53.5**	**+1.2**
	1.0nm,0.3s,baz=344,slow=17,SNR=3.6						
TWSI	**Taliwang, Sumb**	**12.38**	**262**	P	**Pn**	**01 23 35.2**	**-2.1**
WRAB	**Tennant Creek**	**13.51**	**159**	*e*Pn	**Pn**	**01 23 50.7**	**-1.1**
WRAB				*e*Sn	**Sn**	**01 26 15.4**	**-6.0**
WRA	**Warramunga Arr**	**13.52**	**159**	P	**Pn**	**01 23 50.5**	**-1.3**
	10nm,0.3s,baz=333,slow=13,SNR=88						
WRA				S	**Sn**	**01 26 14.9**	**-6.7**
	13nm,0.3s,baz=333,slow=23,SNR=7.1						
WB2	**Warramunga Arr**	**13.52**	**159**	P	**Pn**	**01 23 50.6**	**-1.2**
	baz=14						
WB2	**Warramunga Arr**	**13.52**	**159**	*e*Pn	**Pn**	**01 23 50.3**	**-1.6**
KBKI	**Kotabaru**	**13.65**	**286**	P	**P**	**01 24 01.9**	**+4.6**
JAGI	**Jajag, Banyuwa**	**15.05**	**264**	P	**Pn**	**01 24 10.0**	**-1.1**
JAGI	**Jajag, Banyuwa**	**15.05**	**264**	*e*Pn	**Pn**	**01 24 10.3**	**-0.8**
	52nm,0.9s						
COEN	**Coen**	**15.17**	**117**	P	**P**	**01 24 15.6**	**+1.5**
	baz=15,SNR=11						
COEN	**Coen**	**15.17**	**117**	*e*Pn	**P**	**01 24 15.3**	**+1.2**
	32nm,1.1s						
COEN				*e*Sn	**Sn**	**01 26 53.6**	**-7.7**
BLJI	**Banyuglugur**	**15.58**	**267**	P	**P**	**01 24 19.7**	**+1.1**
MTKI	**Muara Teweh, K**	**15.67**	**293**	P	**P**	**01 24 22.4**	**+2.7**
MYLDM	**Lahad Datu**	**16.40**	**319**	*e*Pn	**P**	**01 24 28.8**	**+1.1**
	21nm,0.8s						
QIS	**Mount Isa**	**16.56**	**144**	P	**Pn**	**01 24 31.0**	**+1.4**
	baz=17,SNR=8.3						
MBWA	**Marble Bar**	**16.63**	**213**	*e*P	**Pn**	**01 24 31.2**	**+0.9**
	30nm,0.9s						
MBWA				*e*S	**S**	**01 27 26.4**	**-8.8**
AS31	**Alice Springs**	**16.90**	**165**	*e*P	**Pn**	**01 24 35.3**	**+1.7**
	19nm,0.5s						
ASPA	**Alice Springs**	**16.90**	**165**	P	**Pn**	**01 24 35.1**	**+1.5**
	baz=17						
ASAR	**Alice Springs**	**16.90**	**165**	P	**Pn**	**01 24 34.8**	**+1.1**
	5.6nm,0.3s,baz=340,slow=9.5,SNR=185						
ASAR				S	**S**	**01 27 34.6**	**-7.0**
	1.4nm,0.3s,baz=346,slow=21,SNR=6.0						
AS01	**Alice Springs**	**16.91**	**165**	*e*P	**Pn**	**01 24 34.5**	**+0.8**
PWJI	**Pagerwojo**	**17.36**	**266**	P	**Pn**	**01 24 39.9**	**+0.7**
WRKA	**Warakurna**	**17.70**	**183**	P	**Pn**	**01 24 44.6**	**+1.3**
	baz=18,SNR=66						
PMG	**Port Moresby**	**17.80**	**98**	P	**Pn**	**01 24 45.7**	**+1.2**
	2.3nm,0.3s,baz=160,slow=20,SNR=3.8						
MTSU	**Mount Surprise**	**18.19**	**128**	P	**Pn**	**01 24 50.6**	**+1.5**
	baz=18,SNR=15						
WOJI	**Wonogiri, Jawa**	**18.23**	**267**	P	**Pn**	**01 24 49.6**	**+0.1**
KKM	**Kota Kinabalu**	**18.58**	**315**	*e*P	**P**	**01 24 51.0**	**-0.7**
	36nm,1.1s						
STKI	**Sintang**	**19.21**	**292**	P	**Pn**	**01 25 00.4**	**-0.7**
KPJI	**Karang Pucung**	**20.20**	**269**	P	Pn	01 25 13.2	+0.4
CTA	**Charters Tower**	**20.80**	**129**	P	**P**	**01 25 18.8**	**+3.2**
	3.3nm,0.6s,baz=299,slow=12,SNR=5.2						
CTAO	**Charters Tower**	**20.80**	**129**	*e*P	**P**	**01 25 16.1**	**+0.5**
KSM	**Kuching**	**20.84**	**294**	*e*P	**P**	**01 25 16.5**	**+0.4**
	34nm,0.6s						
CISI	**Cisompet, Garu**	**21.31**	**268**	P	**P**	**01 25 23.9**	**+2.8**
LEM	**Lembang**	**21.52**	**270**	P	**P**	**01 25 22.3**	**-1.2**
	39nm,0.6s,baz=120,slow=11,SNR=6.4						
FORT	**Forrest**	**23.42**	**183**	P	**P**	**01 25 43.6**	**+2.1**
	baz=24,SNR=68						
QLP	**Quilpie**	**23.89**	**145**	P	**P**	**01 25 48.7**	**+2.8**
	baz=24,SNR=15						
BBOO	**Buckleboo**	**26.18**	**167**	P	**P**	**01 26 08.3**	**+1.7**
	baz=26,SNR=16						
STKA	**Stephens Creek**	**27.04**	**157**	P	**P**	**01 26 16.2**	**+2.0**
	5.6nm,0.5s,baz=325,slow=9.3,SNR=17						
STKA	**Stephens Creek**	**27.04**	**157**	*e*P	**P**	**01 26 17.0**	**+2.8**
	3.0nm,0.8s						
HTT	**Hallett**	**27.52**	**162**	P	**P**	**01 26 21.2**	**+2.6**
	baz=28,SNR=9.3						
NWAO	**Narrogin (SRO)**	**27.89**	**202**	*e*P	**P**	**01 26 23.0**	**+1.2**
CMSA	**Cobar Meteorol**	**28.59**	**150**	P	**P**	**01 26 30.6**	**+2.5**
	baz=29,SNR=7.0						
ARPS	**Mount Arapiles**	**31.52**	**161**	P	**P**	**01 26 56.6**	**+2.9**
	baz=32						
PSI	**Prapat**	**31.92**	**287**	P	**P**	**01 26 55.8**	**-2.0**
	27nm,0.8s,baz=148,slow=0.1,SNR=27						
GSI	**Gunungsitoli**	**32.77**	**284**	*e*P	**P**	**01 27 05.3**	**+0.2**
	23nm,1.0s						
TRTT	**Trang**	**33.12**	**296**	P	**P**	**01 27 08.8**	**+0.8**
	14nm,0.7s						
SUKH	**Sukhothai**	**38.26**	**310**	P	**P**	**01 27 52.3**	**+0.5**
	4.7nm,0.9s						
CM01	**Chiang Mai Arr**	**39.34**	**311**	*e*P	**P**	**01 28 00.6**	**-0.2**
CMAR	**Chiang Mai Arr**	**39.37**	**311**	P	**P**	**01 28 00.0**	**-1.1**
	5.4nm,0.7s,baz=143,slow=7.5,SNR=21						
CHTO	**Chiang Mai**	**39.59**	**311**	P	**P**	**01 28 03.0**	**+0.1**
	81nm,0.9s						
CHTO	**Chiang Mai**	**39.59**	**311**	*e*P	**P**	**01 28 03.0**	**+0.1**
	15nm,0.9s						
GYA	**Guiyang**	**40.08**	**328**	*e*P	**P**	**01 28 08.0**	**+1.1**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NJ2	**Nanjing**	**40.35**	**346**	*e*P	**P**	**01 28 10.3**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
MJAR	**Matsushiro Arr**	**44.37**	**10**	P	**P**	**01 28 39.0**	**-2.4**
	1.3nm,0.7s,baz=196,slow=9.6,SNR=4.6						
MAJO	**Matsushiro**	**44.37**	**10**	*e*P	**P**	**01 28 39.1**	**-2.3**
	2.3nm,0.5s						
KSAR	**Wonju Array Be**	**44.49**	**358**	P	**P**	**01 28 42.2**	**-0.1**
KSRS	**Korea Array**	**44.50**	**358**	P	**P**	**01 28 42.2**	**-0.2**
	0.6nm,0.5s,baz=166,slow=8.9,SNR=3.6						
CD2	**Chengdu**	**45.16**	**328**	P	**P**	**01 28 47.3**	**-0.5**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LZH	**Lanzhou**	**49.31**	**333**	*e*P	**P**	**01 29 20.4**	**+0.4**
LZH				pP	pP	01 29 57.4	+3.3
LZH				sP	sP	01 30 13.9	+3.1
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
LZH				pmax	pmax		
	comp=Z,220nm,8.1s						
LZH				LR	LR		
	comp=N,360nm,17.1s						
LZH				LR	LR		
	comp=E,540nm,17.9s						
LZH				LR	LR		
	comp=Z,700nm,17.3s						
HHC	**Hu-ho-hao-te**	**50.58**	**343**	*e*P	**P**	**01 29 32.0**	**+2.6**
HHC				pmax	pmax		
	comp=Z,20nm,0.9s						
CN2	**Changchun**	**50.94**	**356**	*e*P	**P**	**01 29 35.0**	**+3.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LSA	**Lhasa**	**51.91**	**317**	*e*P	**P**	**01 29 39.6**	**-0.4**
	7.2nm,0.6s						
ODAN	**Odare**	**52.91**	**312**	*e*P	**P**	**01 29 46.4**	**-0.7**
	40nm,0.5s						
TAPN	**Taplejung**	**52.95**	**312**	*e*P	**P**	**01 29 46.8**	**-0.6**
	31nm,0.4s						
RAMN	**Ramite**	**53.55**	**311**	*e*P	**P**	**01 29 51.4**	**-0.4**
	81nm,0.5s						
JIRN	**Jiri**	**54.24**	**312**	*e*P	**P**	**01 29 56.2**	**-0.7**
	29nm,0.4s						
GUN	**Gumba**	**54.60**	**312**	*e*P	**P**	**01 29 58.8**	**-0.8**
	58nm,0.5s						
KKN	**Kakani**	**54.98**	**311**	*e*P	**P**	**01 30 01.3**	**-0.8**
	22nm,0.5s						
DMN	**Daman**	**55.02**	**311**	*e*P	**P**	**01 30 01.7**	**-0.7**
	16nm,0.5s						
GKN	**Gorkha**	**55.58**	**311**	*e*P	**P**	**01 30 05.6**	**-0.7**
	32nm,0.2s						
KOLN	**Koldanda**	**56.24**	**310**	*e*P	**P**	**01 30 10.5**	**-0.6**
	25nm,0.4s						
DANN	**Dangsing**	**56.42**	**311**	*e*P	**P**	**01 30 11.6**	**-0.9**
PYUN	**Piuthan**	**56.87**	**310**	*e*P	**P**	**01 30 15.1**	**-0.4**
ULN	**Ulaanbaatar**	**58.30**	**343**	*e*P	**P**	**01 30 24.5**	**-0.6**
	1.7nm,0.4s						
SONM	**Songino Array**	**58.47**	**342**	P	**P**	**01 30 26.4**	**+0.1**
	1.2nm,0.5s,baz=159,slow=5.7,SNR=6.5						
WMQ	**Urumqi**	**63.24**	**327**	P	**P**	**01 30 59.8**	**+1.3**
WMQ				PcP	**PcP**	**01 31 34.8**	**+0.4**
WMQ				LR	LR		
	comp=N,120nm,22.3s						
WMQ				LR	LR		
	comp=E,510nm,37.1s						
WMQ				LR	LR		
	comp=Z,270nm,24.1s						
PETK	**Petropavlovsk-**	**64.79**	**18**	P	**P**	**01 31 08.5**	**+0.2**
	1.1nm,0.5s,baz=171,slow=2.5,SNR=4.3						
NIL	**Nilore**	**66.86**	**311**	*e*P	**P**	**01 31 21.0**	**-1.1**
KSH	**Kashi**	**67.75**	**318**	P	**P**	**01 31 29.5**	**+1.9**
KSH				pP	pP	01 32 08.1	+4.3
KSH				pmax	pmax		
	comp=Z,140nm,5.6s						
MK01	**Makanchi Array**	**68.05**	**327**	*e*P	**P**	**01 31 28.6**	**-0.6**
MK31	**Makanchi Array**	**68.07**	**327**	*e*P	**P**	**01 31 28.9**	**-0.5**
MKAR	**Makanchi Array**	**68.07**	**327**	P	**P**	**01 31 29.1**	**-0.2**
	2.6nm,0.4s,baz=120,slow=8.0,SNR=38						
MAKZ	**Makanchi**	**68.24**	**327**	*e*P	**P**	**01 31 30.2**	**-0.3**
	2.7nm,0.8s						
ZAA0	**Zalesovo Array**	**71.51**	**334**	*e*P	**P**	**01 31 47.8**	**-2.4**
ZALV	**Zalesovo Beam**	**71.51**	**334**	P	**P**	**01 31 49.1**	**-1.1**
	2.7nm,0.6s,baz=126,slow=5.1,SNR=13						
ZALV	**Zalesovo Beam**	**71.51**	**334**	*e*P	**P**	**01 31 48.3**	**-1.9**
VNDA	**Vanda**	**72.27**	**173**	P	**P**	**01 31 55.8**	**+1.4**
	1.0nm,0.8s,baz=295,slow=3.1,SNR=3.9						
KURBB	**Kurchatov Arra**	**72.37**	**329**	P	**P**	**01 31 55.2**	**-0.2**
	1.9nm,0.5s,baz=124,slow=5.0,SNR=28						
KURK	**Kurchatov**	**72.38**	**329**	*e*P	**P**	**01 31 54.5**	**-1.0**
WSAR	**Wadi Sarin**	**75.36**	**296**	P	**P**	**01 32 13.3**	**-0.1**
	4.0nm,0.5s,baz=124,slow=5.6,SNR=9.6						
BRVK	**Borovoye**	**77.99**	**328**	*e*P	**P**	**01 32 26.6**	**-0.9**
	3.1nm,0.3s						
NRIK	**Noril'sk**	**81.65**	**346**	P	**P**	**01 32 46.8**	**-0.1**
	3.6nm,0.5s,baz=147,slow=3.6,SNR=4.3						
ABKAR	**Akbulak array**	**82.28**	**322**	*e*P	**P**	**01 32 50.0**	**-0.6**
QSPA	**South Pole Qui**	**82.72**	**180**	P	**P**	**01 32 53.6**	**+0.9**
	2.1nm,0.8s,baz=166,slow=0.5,SNR=7.9						
SYO	**Syowa Base**	**83.17**	**201**	‖*e*P	**P**	**01 32 58.4**	**+3.6**
AKTO	**Aktyubinsk**	**83.86**	**322**	P	**P**	**01 32 58.0**	**-0.7**
	1.3nm,0.5s,baz=63,slow=9.0,SNR=5.5						
ARU	**Arti**	**85.56**	**328**	*e*P	**P**	**01 33 06.5**	**-0.6**
	4.6nm,0.6s						
RAYN	**Ar Rayn**	**87.22**	**294**	*e*P	**P**	**01 33 15.3**	**-0.7**
	2.5nm,0.6s						
SNAA	**Sanae**	**95.25**	**194**	P	**P**	**01 33 54.1**	**+1.8**
	0.9nm,0.9s,baz=207,slow=9.0,SNR=4.0						
ARCES	**ARCESS Array B**	**101.58**	**340**	P	**Pdif**	**01 34 18.8**	**-1.8**
	2.5nm,0.9s,baz=69,slow=6.6,SNR=7.8						
TXAR	**Lajitas Array**	**125.66**	**59**	PKP	**PKPdf**	**01 39 30.0**	**-0.4**
	0.1nm,0.6s,baz=208,slow=3.6,SNR=2.7						
TORD	**Torodi Ar. Bea**	**128.18**	**281**	PKP	**PKPdf**	**01 39 34.8**	**-0.7**
	1.0nm,0.5s,baz=75,slow=1.9,SNR=15						
KOWA	**Kowa**	**133.66**	**283**	PKP	**PKPdf**	**01 39 45.5**	**-0.3**
	1.0nm,0.3s,baz=69,slow=3.0,SNR=8.4						
DBIC	**Dimbokro**	**134.50**	**272**	PKP	**PKPdf**	**01 39 48.1**	**+0.7**
	1.9nm,0.4s,baz=132,slow=1.9,SNR=5.3						
CPUP	**Villa Florida**	**145.99**	**169**	PKPbc	**PKPbc**	**01 40 09.5**	**+0.7**
	2.4nm,0.8s,baz=80,slow=3.0,SNR=3.6						
LPAZ	**La Paz**	**150.93**	**144**	PKPbc	**PKPbc**	**01 40 24.1**	**+1.4**
	2.5nm,0.3s,baz=327,slow=1.6,SNR=28						

NIED ***24*** *01:29:00,38°.80N×142°.10E,h44km,Mw4.7 Best double couple: M0:1.32000×10^16 NP1:φs182.00000°,δ22.00000°, λ66.00000°. NP2:φs28.00000°,δ70.00000°,λ99.00000°.*
MOS ***24*** *01:29:13.4±0.9,38°.98N×142°.04E,h40km,mb5.2/72, MS4.1/15,Error ellipse: s-maj=5.9km s-min=3.7km az=100.0*
BJI ***24*** *01:29:13.8,38°.80N×142°.10E,h64km,mb5.0/64,mB4.9/41, Ms4.2/52,Ms7 4.0/45*
ISCJB ***24*** *01:29:13.8±0.3,38°.87N±0°.02×142°.08E±0°.02,h48km±2km, mb4.8/239,MS4.0/66,Error ellipse: s-maj=3.9km s-min=2.6km az=154.3*
GCMT ***24*** *01:29:14.7±0.6,38°.97N×142°.17E,h48km±1km,MW4.8/55, Moment Tensor Solution. s24,c29; s55,c76; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr1.71±.14; Mθθ-0.23±.09; Mφφ-1.48±.09; Mrθ0.64±.07; Mrφ-0.46±.06; Mθφ0.96±.07; Best double couple: M0:2.03100×10^16 NP1:φs27.00000°,δ62.00000°,λ97.00000°. NP2: φs191.00000°,δ29.00000°,λ76.00000°. Principal axes: T 2.0870, Plg72.0000°, Azm314.0000°; N -0.1100, Plg7.0000°, Azm203.0000°; P -1.9740, Plg17.0000°, Azm111.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***24*** *01:29:14.7±0.5,38°.86N×141°.95E,h41km±4km,mb4.8/132 Error ellipse: s-maj=3.6km s-min=2.7km az=149.0*
NEIC Recorded [3 JMA] in Iwate and Miyagi.
JMA ***24*** *01:29:14.5±0.1,38°.84N×142°.12E,h44km±1km,M4.8*
JMA Felt III J1.
IDC ***24*** *01:29:15.9±1.8,38°.84N×142°.04E,h55km±15km,mb4.5/42, mb1 4.6/48,mb1mx4.5/69,mbtmp4.8/48,ML4.2/6,MS3.8/49, Ms1 3.8/49,ms1mx3.7/68,Error ellipse: s-maj=11.6km s-min=9.7km az=96.0*
ISC 24 01:29:14.6±0.4,38°.85N±0°.03×142°.23E±0°.03,h47km±3km, h47km:pP-P,n828,σ1°.21/857,mb4.9/242,MS4.0/68, 39C-24D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.50**	**298**	P	**Pn**	**01 29 24.5**	**-1.1**
OFUJ				S	**Sn**	**01 29 31.4**	**-2.1**
JIO	**Ouri**	**0.79**	**241**	P	**Pn**	**01 29 28.0**	**-1.4**
JIO				S	**Sn**	**01 29 37.1**	**-3.1**
JMK	**Ichinoseki**	**0.80**	**278**	P	**Pn**	**01 29 28.2**	**-1.3**
JMK				S	**Sn**	**01 29 37.8**	**-2.5**
JOM	**Ohasama**	**0.96**	**311**	P	**Pn**	**01 29 31.0**	**-0.7**
JOM				S	**Sn**	**01 29 42.7**	**-1.6**
JOU	**Okura**	**1.32**	**249**	P	**Pn**	**01 29 35.3**	**-1.3**
JOU				S	**Sn**	**01 29 51.1**	**-1.9**
JRG	**Rokugo**	**1.36**	**294**	P	**Pn**	**01 29 36.3**	**-0.8**
JYK	**Kaneyama**	**1.46**	**273**	P	**Pn**	**01 29 37.5**	**-1.0**
JMM	**Marumori**	**1.50**	**230**	P	**Pn**	**01 29 37.5**	**-1.5**
JMM				S	**Sn**	**01 29 54.6**	**-2.7**
JANG	**Nango**	**1.62**	**340**	P	**Pn**	**01 29 40.3**	**-0.4**
JANG				S	**Sn**	**01 30 00.3**	**-0.2**
ERM	**Erimo**	**3.24**	**12**	*e*Pn	**Pn**	**01 30 02.3**	**-0.6**
ERM	**Erimo**	**3.24**	**12**	*e*P	**Pn**	**01 30 03.4**	**+0.5**
ERM				pmax	pmax		
	comp=Z,95nm,1.0s						
MJAR	**Matsushiro Arr**	**3.93**	**235**	P	**Pn**	**01 30 13.0**	**+0.6**
	comp=Z,32nm,0.3s,baz=34,slow=13,SNR=206						
MJAR				LR	LR	01 31 52.7	
	comp=Z,2μm,19.7s,baz=40,slow=41						
MAJO	**Matsushiro**	**3.93**	**235**	*e*Pn	**Pn**	**01 30 13.1**	**+0.6**
MAJO	**Matsushiro**	**3.93**	**235**	*e*P	**Pn**	**01 30 13.1**	**+0.6**
MAT	**Matsushiro**	**3.93**	**235**	P	**Pn**	**01 30 13.0**	**+0.5**
MAT				S	**Sn**	**01 31 01.3**	**+4.0**
MJB9	**Matsu-Tunnel**	**3.93**	**236**	*e*Pn	**

comp=Z,116nm,0.5s
KUR pmax pmax
comp=E,27nm,0.3s
KUR MLR MLR
comp=Z,363nm,17.0s
YSS Yuzh-Sakhalins 8.11 3 *j eP* **Pn 01 31 09.9 +0.2**
YSS *eS* **Sn 01 32 40.1 +0.1**
YSS pmax pmax
comp=N,100nm,4.0s
YSS pmax pmax
comp=Z,200nm,4.0s
YSS pmax pmax
comp=Z,60nm,0.8s
YSS MLR MLR
comp=N,200nm,12.0s
YSS MLR MLR
comp=Z,300nm,12.0s
USRK Ussuriysk Ar. 9.36 308 P **Pn 01 31 26.8 +0.1**
comp=Z,4.2nm,0.3s,baz=117,slow=15,SNR=100
USRK LR LR 01 34 52.9
comp=Z,952nm,19.4s,baz=121,slow=36
JNU Nakatsue 10.82 242 P **Pn 01 31 47.5 +0.6**
comp=Z,1.5nm,0.3s,baz=63,slow=5.0,SNR=11
JNU LR LR 01 36 12.6
comp=Z,855nm,20.7s,baz=305,slow=39
JNU Nakatsue 10.82 242 *e*Pn **Pn 01 31 47.1 +0.2**
MDJ Mudanjiang 11.06 305 P **Pn 01 31 50.9 +0.9**
MDJ pmax pmax
comp=Z,91nm,1.1s
MDJ pmax pmax
comp=Z,190nm,3.7s
MDJ LR LR
comp=Z,200nm,8.5s
MDJ LR LR
comp=Z,700nm,19.8s
MDJ LR LR
comp=Z,1μm,19.1s
MDJ Mudanjiang 11.06 305 *e*Pn **Pn 01 31 48.7 -1.4**
comp=Z,98nm,1.1s
KSRS Korea Array 11.35 267 P **Pn 01 31 55.7 +1.6**
comp=Z,1.7nm,0.3s,baz=82,slow=14,SNR=42
KSRS LR LR 01 35 51.8
comp=Z,648nm,20.4s,baz=77,slow=35
KS01 Wonju Array Si 11.37 268 *e*Pn **Pn 01 31 55.3 +1.0**
KS15 Wonju Array Si 11.39 267 *e*Pn **Pn 01 31 56.8 +2.3**
KSAR Wonju Array Be 11.39 267 P **Pn 01 31 55.7 +1.2**
KSAR Wonju Array Be 11.39 267 P **Pn 01 31 55.7 +1.2**
CBIJ Chichi jima 11.72 180 *e*Pn **Pn 01 31 57.5 -1.6**
JCJ Chichijima 11.72 180 P **Pn 01 31 57.3 -1.8**
comp=Z,14nm,0.3s,baz=268,slow=14,SNR=6.8
TJN Taejon 12.05 263‖ *e*P **Pn 01 32 05.5 +1.9**
GRNR Gornyy 12.61 343 *e*P **Pn 01 32 12.2 +1.0**
GRNR pmax pmax
comp=Z,42nm,1.0s
CN2 Changchun 13.54 297 *e*P **Pn 01 32 25.3 +1.3**
CN2 *ep*P P 01 32 37.4 +5.5
CN2 *eS* **Sn 01 34 52.0 -0.9**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=Z,300nm,16.0s
CN2 LR LR
comp=Z,400nm,16.0s
CN2 LR LR
comp=Z,400nm,18.0s
NKL Nikolayevsk 14.35 356 *e*P **Pn 01 32 32.0 -2.7**
NKL pmax pmax
comp=Z,34nm,1.0s
SNY Shenyang 14.54 288 ⇑P **P 01 32 42.0 -0.9**
SNY S **Sn 01 35 17.8 +0.8**
SNY pmax pmax
comp=Z,23nm,0.4s
SNY pmax pmax
comp=Z,190nm,4.7s
SNY LR LR
comp=E,520nm,17.3s
SNY LR LR
comp=Z,750nm,18.6s
DL2 Dalian 16.05 277 P **P 01 33 01.9 +2.2**
DL2 pP **pP 01 33 12.3 +1.8**
DL2 S **Sn 01 35 57.1 +3.3**
DL2 pmax pmax
comp=Z,65nm,0.7s
DL2 LR LR
comp=N,320nm,16.1s
DL2 LR LR
comp=E,520nm,16.1s
DL2 LR LR
comp=Z,560nm,18.9s
PETK Petropavlovsk- 17.80 32 P **Pn 01 33 17.3 -1.5**
comp=Z,0.2nm,0.3s,baz=219,slow=8.4,SNR=2.7
PETK LR LR 01 41 13.9
comp=Z,125nm,18.9s,baz=216,slow=40
ZEA Zeya 18.08 330 *e*P **P 01 33 18.8 -3.3**
ZEA pmax pmax
comp=N,52nm,0.8s
ZEA pmax pmax
comp=E,59nm,1.0s
ZEA pmax pmax
comp=Z,90nm,1.0s
TIA Tai'an 20.07 270 P **P 01 33 41.8 -2.2**
TIA S **S 01 37 27.3 +0.4**
TIA pmax pmax
comp=Z,18nm,0.8s
TIA LR LR
comp=Z,110nm,17.1s
TIA LR LR
comp=Z,140nm,30.3s
TIA LR LR
comp=Z,200nm,23.5s
BJI Beijing 20.14 282 P **P 01 33 44.6 -0.1**
BJI pmax pmax
comp=Z,26nm,0.6s
BJI LR LR
comp=Z,200nm,17.1s
BJI LR LR
comp=Z,650nm,13.9s
BJI LR LR
comp=Z,740nm,56.9s
BJT Baijiatuau 20.15 282 *e*P **P 01 33 42.5 -2.3**
comp=Z,20nm,0.6s
BJT Baijiatuau 20.15 282 *e*P **P 01 33 42.5 -2.3**
BJT pmax pmax
comp=Z,20nm,0.6s
NJ2 Nanjing 20.19 258 *e*P **P 01 33 44.9 -0.3**
NJ2 pmax pmax
comp=Z,50nm,1.1s
CLNS Chul'man 21.32 333 *e*P **P 01 33 55.1 -2.3**
CLNS *e* 01 34 11.5
CLNS *eS* **S 01 37 48.2 -3.3**
CLNS *e* 01 37 59.3
CLNS pmax pmax
comp=Z,61nm,0.9s
CLNS pmax pmax
comp=N,37nm,0.9s
CLNS pmax pmax
comp=E,25nm,0.8s
CLNS pmax pmax
comp=E,23nm,0.9s
CLNS pmax pmax
comp=Z,20nm,0.7s
CLNS pmax pmax
comp=N,20nm,1.1s
CLNS smax smax
comp=E,150nm,12.3s
CLNS smax smax
comp=N,191nm,11.4s
CLNS MLR MLR
comp=Z,355nm,16.0s
CLNS MLR MLR
comp=N,239nm,14.0s
CLNS MLR MLR
comp=E,183nm,15.0s
MA2 Magadan 21.45 12 P **P 01 33 58.6 -0.1**
comp=E,33nm,0.8s,baz=191,slow=9.2,SNR=28
MA2 LR LR 01 42 00.2
comp=E,126nm,20.7s,baz=198,slow=36
MA2 Magadan 21.45 12 *eP* **P 01 33 58.9 +0.3**
comp=E,47nm,0.9s
MA2 Magadan 21.45 12 *i* P **P 01 33 59.3 +0.7**
MA2 pmax pmax
comp=Z,74nm,1.3s
NACB Ninganchiao 22.80 236 *eP* **P 01 34 13.2 -0.2**
comp=Z,26nm,0.7s
TIY Taiyuan 23.37 277 *eP* **P 01 34 19.5 +0.4**

TIY pmax pmax
comp=Z,42nm,0.6s
TIY LR LR
comp=Z,330nm,15.6s
TIY LR LR
comp=Z,180nm,9.1s
TIY LR LR
comp=Z,360nm,16.2s
YULB Yu-li 23.55 235 *eP* **P 01 34 20.2 -0.6**
comp=Z,20nm,0.8s
WHN Wuhan 24.30 259 ‖P **P 01 34 25.8 -1.9**
WHN S **S 01 38 42.3 -1.2**
WHN LR LR
comp=Z,1μm,24.4s
YAK Yakutsk 24.46 346 P **P 01 34 27.1 -1.7**
comp=Z,57nm,0.6s,baz=186,slow=6.3,SNR=18
YAK S **S 01 38 42.5 -2.9**
comp=Z,9.7nm,0.4s,baz=359,slow=1.0,SNR=2.5
YAK LR LR 01 44 33.2
comp=Z,178nm,18.6s,baz=204,slow=38
YAK Yakutsk 24.46 346 *i* P **P 01 34 26.8 -2.0**
YAK pmax pmax
comp=Z,116nm,0.9s
SEY Seymchan 24.89 11 *c i*P **P 01 34 34.3 +1.6**
GUMO Guam 25.27 174 LR LR 01 44 29.5
comp=Z,75nm,21.7s,baz=0.5,slow=36
GUMO Guam 25.27 174 *eP* **P 01 34 38.3 +1.8**
GUMO Guam 25.27 174 *eP* **P 01 34 38.3 +1.8**
BOD Bodaibo 26.38 325 *eP* **P 01 34 45.2 -1.0**
BOD pmax pmax
comp=Z,37nm,1.2s
ULN Ulaanbaatar 26.92 301 *eP* **P 01 34 50.7 -0.8**
comp=Z,9.9nm,0.8s
ULN Ulaanbaatar 26.92 301 P **P 01 34 51.1 -0.3**
SNR=10
ULN Ulaanbaatar 26.92 301 *c eP* **P 01 34 50.9 -0.6**
ULN pmax pmax
comp=Z,14nm,1.0s
XAN Xi'an 27.13 270 P **P 01 34 51.9 -1.4**
XAN pP pP 01 35 02.8 -2.7
XAN S **S 01 39 20.1 -8.4**
XAN pmax pmax
comp=Z,9.0nm,0.7s
XAN pmax pmax
comp=Z,77nm,3.6s
XAN LR LR
comp=Z,260nm,14.4s
XAN LR LR
comp=Z,280nm,16.9s
XAN LR LR
comp=Z,250nm,14.1s
SONA1 Songino Array 27.36 301 *eP* **P 01 34 54.9 -0.5**
SONM Songino Array 27.36 301 P **P 01 34 54.3 -1.1**
comp=Z,9.0nm,0.8s,baz=97,slow=8.5,SNR=27
SONM LR LR 01 46 12.4
comp=Z,283nm,19.1s,baz=104,slow=37
ENH Enshi 28.17 262 *eP* **P 01 35 01.1 -1.6**
H11N2 WAKE ISLAND Hy 28.58 125 T T 02 05 32.2
baz=317,slow=75,SNR=5897
H11N1 WAKE ISLAND Hy 28.59 125 T T 02 05 33.7
baz=317,slow=75,SNR=6350
H11N3 WAKE ISLAND Hy 28.60 125 T T 02 05 34.2
baz=317,slow=75,SNR=5637
H11S1 WAKE ISLAND Hy 29.36 127 T T 02 06 30.4
baz=318,slow=76,SNR=1336
H11S3 WAKE ISLAND Hy 29.36 127 T T 02 06 24.2
baz=318,slow=76,SNR=2363
H11S2 WAKE ISLAND Hy 29.38 127 T T 02 06 32.1
baz=318,slow=76,SNR=1179
TLY Talaya 29.67 308 P **P 01 35 14.6 -1.2**
comp=Z,13nm,0.7s,baz=121,slow=3.6,SNR=20
TLY Talaya 29.67 308 *eP* **P 01 35 14.6 -1.2**
comp=Z,21nm,0.8s
TLY Talaya 29.67 308 P **P 01 35 15.8 0.0**
SNR=12
TLY Talaya 29.67 308 *eP* **P 01 35 15.3 -0.4**
TLY pmax pmax
comp=Z,29nm,1.0s
TLY MLR MLR
comp=Z,247nm,14.0s
ZAK Zakamensk 29.70 306 *eP* **P 01 35 14.7 -1.4**
ZAK pmax pmax
comp=Z,31nm,1.1s
LZH Lanzhou 30.45 277 *eP* **P 01 35 22.5 -0.4**
LZH pP sP 01 35 40.4 -0.3
LZH sP pP 01 35 44.3 +9.1
LZH *eS* **S 01 40 17.8 -3.0**
LZH sS sS 01 40 43.8 +2.4
LZH SS **SnSn 01 41 58.1 -1.4**
LZH pmax pmax
comp=Z,31nm,1.2s
LZH pmax pmax
comp=Z,220nm,6.0s
LZH LR LR
comp=Z,340nm,14.3s
LZH LR LR
comp=Z,480nm,14.1s
LZH LR LR
comp=Z,690nm,15.2s
MOY Mondy 31.30 308 *eP* **P 01 35 30.0 -0.2**
MOY pmax pmax
comp=Z,21nm,1.6s
BILL Bilibino 32.11 17 *eP* **P 01 35 37.9 +1.0**
comp=Z,12nm,1.0s
BILL Bilibino 32.11 17 *d i*P **P 01 35 37.7 +0.7**
BILL *e* 01 36 45.6
BILL pmax pmax
comp=Z,14nm,1.0s
GYA Guiyang 32.19 258⇑ *i*P **P 01 35 36.6 -1.7**
GYA pP sP 01 35 55.0 -1.2
GYA PP **PnPn 01 36 47.4 +1.9**
GYA S **S 01 40 44.0 -4.2**
GYA sS sS 01 41 12.3 +3.5
GYA pmax pmax
comp=Z,50nm,0.7s
GYA pmax pmax
comp=Z,140nm,5.0s
GYA LR LR
comp=Z,760nm,16.6s
GYA LR LR
comp=Z,680nm,16.8s
GYA LR LR
comp=Z,670nm,17.2s
CD2 Chengdu 32.35 268 P **P 01 35 37.1 -2.5**
CD2 pmax pmax
comp=Z,100nm,0.7s
CD2 LR LR
comp=Z,290nm,16.8s
CD2 LR LR
comp=Z,300nm,16.2s
GTA Gaotai 32.69 285 *eP* **P 01 35 41.5 -1.1**
GTA pP pP 01 35 55.8 +0.9
GTA sP sP 01 36 04.0 +3.6
GTA PcP **PcP 01 38 28.1 +0.7**
GTA S **S 01 40 54.3 -1.4**
GTA sS sS 01 41 20.4 +4.0
GTA SS **SnSn 01 42 55.4 +1.5**
GTA pmax pmax
comp=Z,13nm,1.1s
GTA pmax pmax
comp=Z,46nm,7.9s
GTA LR LR
comp=Z,140nm,17.2s
GTA LR LR
comp=Z,450nm,17.2s
GTA LR LR
comp=Z,600nm,17.7s
KNGR Kungurtug, Tuv 33.38 305 *eP* **P 01 35 48.4 -0.1**
TIXI Tiksi 33.58 352 *eP* **P 01 35 48.9 -0.9**
comp=Z,6.0nm,0.6s
TIXI Tiksi 33.58 352 *c i*P **P 01 35 49.0 -0.7**
TIXI pmax pmax
comp=Z,10.0nm,1.2s
DAV Davao City (W) 35.02 210 LR LR 01 50 12.8
comp=Z,63nm,21.2s,baz=344,slow=36
HVS Khovu-Aksy 35.81 306‖ *eP* **P 01 36 09.3 -0.1**
KMI Kunming 35.90 259 P **P 01 36 09.8 -0.8**
KMI pP pP 01 36 21.3 -1.7
KMI S **S 01 41 44.3 -1.4**
KMI sS sS 01 42 07.5 +1.0
KMI pmax pmax
comp=Z,33nm,1.2s
KMI pmax pmax
comp=Z,81nm,3.8s
KMI LR LR
comp=Z,230nm,21.0s

KMI LR LR
comp=Z,250nm,17.6s
KMI LR LR
comp=Z,320nm,19.1s
KRAR Krasnoyarsk 36.63 314‖ *i*P **P 01 36 11.5 -4.7**
MYLDM Lahad Datu 39.83 219 *eP* **P 01 36 45.6 +2.1**
comp=Z,19nm,0.9s
DGZ Jazzator, Alta 39.88 304 *i* P **P 01 36 44.5 +0.7**
DGZ pmax pmax
comp=Z,65nm,0.7s
WMQ Urumqi 40.63 295 P **P 01 36 50.3 +0.3**
WMQ pP sP 01 37 07.5 -0.5
WMQ sP pP 01 37 13.3 +11
WMQ pmax pmax
comp=Z,180nm,0.9s
WMQ pmax pmax
comp=Z,370nm,3.7s
WMQ LR LR
comp=Z,170nm,22.1s
WMQ LR LR
comp=Z,510nm,32.3s
WMQ LR LR
comp=Z,280nm,28.3s
ZAA0 Zalesovo Array 41.20 311 *eP* **P 01 36 53.9 -0.5**
comp=Z,35nm,0.6s
ZALV Zalesovo Beam 41.20 311 P **P 01 36 54.2 -0.2**
comp=Z,30nm,0.5s,baz=88,slow=7.6,SNR=101
ZALV PcP **PcP 01 38 52.2 -0.5**
comp=Z,4.5nm,0.6s,baz=126,slow=2.0,SNR=4.0
ZALV LR LR 01 54 43.2
comp=Z,292nm,19.0s,baz=62,slow=37
ZALV Zalesovo Beam 41.20 311 *eP* **P 01 36 53.0 -1.3**
ZALV *eP*cP **PcP 01 38 52.5 -0.1**
CMAI Chiengmai2 41.64 256 P P 01 37 04.2 +5.6
comp=Z,232nm,0.9s
NRIK Noril'sk 41.91 334 P **P 01 36 59.5 -0.5**
comp=Z,9.0nm,0.6s,baz=110,slow=9.5,SNR=11
NRIK LR LR 01 55 20.5
comp=Z,414nm,19.4s,baz=112,slow=37
NVS Novosibirsk 42.08 312 *eP* **P 01 37 01.2 -0.4**
NVS *eS* **S 01 43 22.2 +4.7**
NVS pmax pmax
comp=N,10.0nm,1.4s
NVS pmax pmax
comp=E,37nm,1.4s
NVS pmax pmax
comp=Z,43nm,1.4s
NVS smax smax
comp=N,6.0nm,1.6s
NVS smax smax
comp=E,10.0nm,1.6s
PBKT Sadao Pong 42.27 250 P **P 01 37 02.5 -1.1**
comp=E,8.8nm,1.1s
CHTO Chiang Mai 42.38 254 P **P 01 37 05.0 +0.5**
comp=E,70nm,0.7s
CHTO Chiang Mai 42.38 254 *eP* **P 01 37 04.4 -0.1**
comp=E,9.9nm,0.7s
CHTO Chiang Mai 42.38 254 *eP* **P 01 37 04.4 -0.1**
CHTO pmax pmax
comp=Z,10.0nm,0.7s
CMAR Chiang Mai Arr 42.60 254 P **P 01 37 05.2 -1.1**
comp=Z,1.2nm,0.5s,baz=55,slow=7.6,SNR=6.7
CMAR PcP **PcP 01 38 58.5 +0.6**
comp=Z,1.9nm,0.6s,baz=5.7,slow=2.3,SNR=4.9
CMAR LR LR 01 57 02.0
comp=Z,71nm,19.2s,baz=55,slow=39
SUKH Sukhothai 42.68 252 P **P 01 37 07.5 +0.6**
comp=Z,3.9nm,0.8s,comp=Z,81nm
LSA Lhasa 42.71 274 *eP* **P 01 37 06.9 -0.8**
comp=Z,6.8nm,0.4s
LSA Lhasa 42.71 274 P **P 01 37 08.4 +0.7**
LSA Lhasa 42.71 274 *eP* **P 01 37 06.9 -0.8**
LSA pmax pmax
comp=Z,7.0nm,0.4s
SVW2 Sparrevohn 43.70 38 *eP* **P 01 37 17.4 +2.7**
comp=Z,17nm,1.1s
MK01 Makanchi Array 43.73 301 *eP* **P 01 37 14.7 -0.4**
MK31 Makanchi Array 43.73 301 *eP* **P 01 37 14.9 -0.2**
MK31 Makanchi Array 43.73 301 *eP* **P 01 37 14.9 -0.2**
MKAR Makanchi Array 43.73 301 P **P 01 37 14.8 -0.3**
comp=Z,35nm,0.8s,baz=86,slow=9.9,SNR=158
MKAR LR LR 01 56 00.6
comp=Z,159nm,21.1s,baz=65,slow=37
MAKZ Makanchi 43.94 301 *eP* **P 01 37 16.5 -0.3**
comp=Z,31nm,0.8s
MAKZ Makanchi 43.94 301 *eP* **P 01 37 16.5 -0.3**
MAKZ pmax pmax
comp=Z,31nm,0.8s
SHL Shillong 44.09 268 *eP* **P 01 37 17.6 -0.9**
comp=Z,22nm,0.8s
SHL Shillong 44.09 268 *eP* **P 01 37 17.6 -0.9**
SHL pmax pmax
comp=Z,23nm,0.8s
RSO Redoubt South 45.09 39 *eP* **P 01 37 28.0 +2.0**
PPLA Purkeypile 45.32 36 *eP* **P 01 37 30.9 +3.1**
comp=Z,34nm,1.5s
KDAK Kodiak Island 45.33 43 *i* P **P 01 37 30.3 +2.6**
KURK Kurchatov 45.34 307 *eP* **P 01 37 27.4 -0.5**
KURK Kurchatov 45.34 307 P **P 01 37 27.7 -0.2**
SNR=44
KURK Kurchatov 45.34 307 P **P 01 37 28.3 +0.4**
KURK pmax pmax
comp=Z,92nm,0.6s
CAST Castle Rocks 45.37 35 *eP* **P 01 37 30.6 +2.7**
comp=Z,9.9nm,1.1s
SPU Mount Spurr 45.41 38 *eP* **P 01 37 30.2 +1.9**
KURBB Kurchatov Arra 45.42 307 P **P 01 37 28.3 -0.2**
comp=Z,92nm,0.6s,baz=81,slow=8.2,SNR=309
PHET Kaeng Krachan 45.64 247 P **P 01 37 31.4 +0.7**
comp=Z,9.1nm,0.9s
BRDH Bariadhala 45.78 265 LR LR 01 57 47.9
comp=Z,144nm,20.0s,baz=116,slow=38
BPAW Bear Paw Mtn. 45.86 34 *eP* **P 01 37 33.7 +1.8**
comp=Z,10nm,1.3s
KTH Kantishna Hill 45.89 35 *eP* **P 01 37 33.9 +1.8**
comp=Z,22nm,1.1s
MLY Manley 45.98 33 *eP* **P 01 37 35.3 +2.5**
comp=Z,6.3nm,0.7s
SUA Susitna One 46.03 38 *eP* **P 01 37 35.2 +1.9**
comp=Z,13nm,0.8s
SUA *eS* **S 01 44 13.2 -1.8**
TRF Thorofare Moun 46.18 35 *eP* **P 01 37 36.6 +2.1**
comp=Z,5.8nm,0.9s
COLD Coldfoot 46.26 30 *eP* **P 01 37 37.3 +2.4**
comp=Z,4.4nm,0.9s
TAPN Taplejung 46.48 273 *eP* **P 01 37 38.0 +0.5**
RC01 Rabbit Creek A 46.53 38 *eP* **P 01 37 38.9 +1.8**
comp=Z,11nm,0.9s
TOLK Toolik Lake Re 46.57 28 P **P 01 37 38.3 +0.9**
baz=267
TOLK Toolik Lake Re 46.57 28 *eP* **P 01 37 40.0 +2.6**
comp=Z,11nm,1.0s
MCK McKinley 46.77 35 *eP* **P 01 37 41.4 +2.4**
comp=Z,7.7nm,0.9s
PMR Palmer 46.79 38 *eP* **P 01 37 40.6 +1.5**
comp=Z,7.6nm,0.7s
PMR Palmer 46.79 38 *eP* **P 01 37 40.6 +1.5**
PMR pmax pmax
comp=Z,8.0nm,0.7s
ODAN Odare 46.97 272 *eP* **P 01 37 41.0 -0.3**
comp=Z,30nm,0.4s
MDM Murphy Dome 47.04 33 *eP* **P 01 37 43.4 +2.3**
comp=Z,21nm,1.3s
WRH Wood River Hil 47.12 34 *eP* **P 01 37 43.6 +2.0**
comp=Z,6.8nm,0.7s
SML Sawmill 47.16 37 *eP* **P 01 37 44.1 +2.1**
SML Sawmill 47.16 37 *eP* **P 01 37 44.1 +2.1**
CCB Clear Creek Bu 47.23 33 *eP* **P 01 37 44.4 +1.8**
comp=Z,4.4nm,0.6s
JIRN Jiri 47.52 274 *eP* **P 01 37 45.9 +0.2**
comp=Z,54nm,0.6s
RAMN Ramite 47.54 273 *eP* **P 01 37 45.2 -0.5**
comp=Z,114nm,0.9s
IL1 Eielson Array 47.62 33 *eP* **P 01 37 46.4 +0.8**
ILAR Eielson Array 47.62 33 P **P 01 37 46.9 +1.3**
comp=Z,6.6nm,0.6s,baz=265,slow=6.0,SNR=90
ILB Eielson Array 47.62 33 *eP* **P 01 37 47.1 +1.6**
GUN Gumba 47.64 274 *eP* **P 01 37 46.4 -0.2**
comp=Z,52nm,0.5s
KKN Kakani 48.16 275 *eP* **P 01 37 50.6 +0.1**
comp=Z,85nm,0.7s
PKIN Phulchoki 48.17 274 *eP* **P 01 37 50.5 -0.2**
comp=Z,53nm,0.8s
FYU Fort Yukon 48.22 31 *eP* **P 01 37 53.0 +2.9**
comp=Z,8.5nm,0.8s
KLU Klutina 48.33 38 *eP* **P 01 37 53.6 +2.3**
comp=Z,8.8nm,0.6s

DMN Daman 48.38 275 eP P 01 37 51.8 -0.5
DIV Divide 48.45 38 eP P 01 37 54.6 +2.5
comp=Z,11nm,0.7s
GKN Gorkha 48.56 275 eP P 01 37 52.9 -0.6
comp=Z,104nm,0.8s
SCRK Sand Creek 48.94 34 eP P 01 37 56.9 +0.9
comp=Z,9.3nm,0.6s
BMRM Bremner River 49.03 38 eP P 01 37 59.0 +2.5
comp=Z,12nm,0.7s
DANN Dangsing 49.08 276 eP P 01 37 57.6 -0.1
comp=Z,243nm,0.7s
TKM2 Tokmak 2 49.36 297 P P 01 37 59.8 +0.3
SNR=16
KOLN Koldanda 49.48 276 eP P 01 38 00.3 -0.3
comp=Z,37nm,0.6s
PYUN Piuthan 49.80 276 eP P 01 38 02.7 -0.3
comp=Z,154nm,0.9s
BVAR Borovoye Array 49.85 311 P P 01 38 02.8 0.0
comp=Z,22nm,0.5s,baz=67,slow=7.7,SNR=148
BVAR PcP PcP 01 39 23.1 +0.3
comp=Z,7.5nm,0.6s,baz=89,slow=3.1,SNR=5.2
BVAR LR LR 02 00 10.9
comp=Z,198nm,18.7s,baz=82,slow=37
KZA Kyzart 49.88 296 P P 01 38 04.5 +0.8
SNR=8.2
KBK Karagaybulak 49.89 297 P P 01 38 03.7 +0.1
SNR=20
BRVK Borovoye 49.90 311 eP P 01 38 02.9 -0.3
BRVK Borovoye 49.90 311 P P 01 38 03.2 0.0
SNR=14
BRVK Borovoye 49.90 311 c iP P 01 38 02.8 -0.4
BRVK pmax pmax
comp=Z,30nm,0.7s
OTUK Ortayu 49.91 305 P P 01 38 02.8 -0.6
OTUK pmax pmax
comp=Z,35nm,0.9s
USP Ospenovka 50.00 298 P P 01 38 04.0 -0.2
SNR=6.5
PKDT Phuket 50.01 244 P P 01 38 05.4 +0.9
comp=Z,16nm,0.9s,comp=Z,828nm
FRU Bishkek 50.06 297 eP P 01 38 04.0 -0.7
EGAK Eagle 50.07 33 eP P 01 38 04.9 +0.7
comp=Z,6.6nm,0.8s
BALM Baldy 50.11 38 eP P 01 38 05.9 +1.1
comp=Z,8.4nm,0.8s
BALM Baldy 50.11 38 eP P 01 38 05.9 +1.1
BALM pmax pmax
comp=Z,8.0nm,0.8s
KSH Kashi 50.28 293 P P 01 38 10.3 +3.9
KSH pP sP 01 38 26.1 +1.4
KSH PP PP 01 40 05.8 +3.9
KSH S S 01 45 17.8 +2.1
KSH sS sS 01 45 43.8 +6.6
KSH SS SS 01 48 52.9 +3.6
KSH pmax pmax
comp=Z,28nm,0.9s
KSH pmax pmax
comp=Z,190nm,6.0s
KSH LR LR
comp=Z,190nm,5.8s
KSH LR LR
comp=Z,220nm,4.9s
KSH LR LR
comp=Z,320nm,6.7s
KULM Kulim 50.29 239 eP P 01 38 05.9 -0.7
comp=Z,18nm,1.0s
IPM Ipoh 50.64 238 eP P 01 38 08.9 -0.4
comp=Z,32nm,1.1s
EKS2 Erkin-Say 50.70 298 P P 01 38 09.2 -0.4
SNR=8.4
HNR Honiara 50.78 157 LR LR 01 58 01.0
comp=Z,122nm,21.4s,baz=331,slow=34
AML Almayashu 50.95 297 P P 01 38 12.1 +0.3
SNR=9.1
MNAS Manas 51.65 298 P P 01 38 16.6 -0.1
MNAS pmax pmax
comp=Z,34nm,1.2s
SFK Sufi-Kurgan 51.86 294 P P 01 38 18.0 -0.4
SFK pmax pmax
comp=Z,14nm,1.0s
INK Inuvik 52.48 28 eP P 01 38 23.6 +1.3
comp=Z,8.6nm,0.9s
INK Inuvik 52.48 28 eP P 01 38 23.6 +1.3
INK pmax pmax
comp=Z,9.0nm,0.9s
KK31 Karatay Array 52.79 299 eP P 01 38 24.4 -0.6
KK31 Karatay Array 52.79 299 eP P 01 38 24.5 -0.6
KKAR Karatay Array 52.79 299 eP P 01 38 24.4 -0.6
KKAR Karatay Array 52.79 299 eP P 01 38 24.5 -0.6
PSI Prapat 53.28 239 P P 01 38 27.8 -1.2
comp=Z,6.5nm,0.6s,baz=0.2,slow=7.0,SNR=3.8
PSI LR LR 02 01 28.9
comp=Z,86nm,21.1s,baz=87,slow=36
PSI Prapat 53.28 239 eP P 01 38 28.5 -0.5
comp=Z,8.5nm,0.8s
PSI Prapat 53.28 239 eP P 01 38 28.5 -0.5
PSI pmax pmax
comp=Z,9.0nm,0.8s
SVE Sverdlovsk 54.23 318 d iP P 01 38 35.7 +0.4
SVE pmax pmax
comp=Z,86nm,0.9s
SVE MLR MLR
comp=Z,305nm,16.0s
NIL Nilore 54.68 287 eP P 01 38 39.0 0.0
NIL Nilore 54.68 287 eP P 01 38 39.0 0.0
ARU Arti 55.44 318 eP P 01 38 43.9 -0.2
ARU Arti 55.44 318 c iP P 01 38 43.8 -0.2
ARU *PP pP 01 38 59.0 +1.9
ARU 01 39 41.7
ARU 01 40 43.7
ARU PPP PPP 01 42 00.0
ARU S S 01 46 26.0 +0.7
ARU SS SS 01 50 11.8 +2.0
ARU pmax pmax
comp=Z,66nm,1.0s
ARU MLR MLR
comp=Z,328nm,18.0s
DLBC Dease Lake 56.81 39 eP P 01 38 54.8 +0.9
comp=Z,3.6nm,0.9s
ABKAR Akbulak array 57.28 309 eP P 01 38 56.6 -0.6
KBL Kabul 57.38 290 eP P 01 38 58.1 -0.4
comp=Z,16nm,0.9s
KBL Kabul 57.38 290 eP P 01 38 58.1 -0.4
KBL pmax pmax
comp=Z,16nm,0.9s
AKTO Aktyubinsk 57.95 311 P P 01 39 01.8 -0.2
comp=Z,19nm,0.8s,baz=70,slow=12,SNR=32
AKTO LR LR 02 05 18.6
comp=Z,139nm,19.0s,baz=64,slow=37
FITZ Fitzroy Crossi 58.74 199 P P 01 39 07.9 +0.2
comp=Z,4.3nm,0.5s,baz=76,slow=20,SNR=3.1
CTA Charters Tower 58.74 176 P P 01 39 08.7 +1.0
comp=Z,4.1nm,0.8s,baz=332,slow=18,SNR=1.9
CTAO Charters Tower 58.74 176 eP P 01 39 09.1 +1.4
SPITS Spitsbergen Ar 58.87 349 P P 01 39 08.3 +0.2
comp=Z,8.0nm,1.0s,baz=99,slow=11,SNR=2.5
SPITS LR LR 02 08 08.7
comp=Z,52nm,18.0s,baz=340,slow=40
HYB Hyderabad 58.91 268 i P P 01 39 08.0 -1.1
WRAB Tennant Creek 58.93 189 eP P 01 39 08.3 -0.7
comp=Z,19nm,1.0s
WRAB Tennant Creek 58.93 189 deP P 01 39 08.3 -0.7
WRAB pmax pmax
comp=Z,24nm,1.7s
WRA Warramunga Arr 58.94 189 P P 01 39 08.7 -0.4
comp=Z,14nm,0.6s,baz=6.5,slow=7.0,SNR=69
KBS Kingsbay 58.98 350 eP P 01 39 09.7 +0.9
KBS pmax pmax
comp=Z,134nm,2.5s
KBS Kingsbay 58.98 350 eP P 01 39 09.3 +0.5
PRGR Permogore 59.60 327 eP P 01 39 12.4 -0.8
PRGR e 01 41 23.4
PRGR pmax pmax
comp=Z,28nm,0.7s
RES Resolute Bay 60.69 15 eP P 01 39 20.7 +0.2
comp=Z,8.7nm,0.9s
RES Resolute Bay 60.69 15 eP P 01 39 20.7 +0.2
RES pmax pmax
comp=Z,9.0nm,0.9s
TMCR Tamitsa 61.47 331 eP P 01 39 25.4 -0.5
TMCR pmax pmax
comp=Z,15nm,0.6s
YKW3 Yellowknife Ar 61.88 31 eP P 01 39 29.9 +1.2
comp=Z,20nm,1.7s
YKA Yellowknife Ar 61.92 31 P P 01 39 30.0 +1.1
comp=Z,2.9nm,0.8s,baz=297,slow=6.6,SNR=14

ARCES ARCESS Array B 62.53 339 P P 01 39 33.0 0.0
comp=Z,2.9nm,0.6s,baz=53,slow=7.7,SNR=33
ARCES LR LR 02 09 57.3
comp=Z,55nm,20.0s,baz=44,slow=39
ARCES ARCESS Array B 62.53 339 eP P 01 39 32.4 -0.6
ARCES ARCESS Array B 62.53 339 P P 01 39 33.0 0.0
ARCES pmax pmax
comp=Z,3.0nm,0.6s
ARCES MLR MLR
comp=Z,55nm,20.0s
KLMR Klimovskoe 62.58 327 eP P 01 39 30.5 -2.8
KLMR e 01 41 48.8
KLMR pmax pmax
comp=Z,33nm,1.5s
KLMR Klimovskoe 62.58 327 eP P 01 39 30.6 -2.8
KLMR AMP 01 39 33.8
comp=Z,33nm,1.5s
KLMR ePP PP 01 41 48.9 -2.0
AS01 Alice Springs 62.66 189 eP P 01 39 34.1 -0.3
AS31 Alice Springs 62.67 189 eP P 01 39 34.5 0.0
comp=Z,2.1nm,0.6s
ASAR Alice Springs 62.67 189 P P 01 39 34.4 -0.1
comp=Z,6.4nm,0.6s,baz=4.2,slow=4.8,SNR=68
PALK Pallekele 63.39 257 LR LR 02 08 50.8
comp=Z,68nm,20.0s,baz=135,slow=38
GEYT Alibeck 63.53 299 P P 01 39 39.5 -0.7
comp=Z,33nm,0.7s,baz=31,slow=3.5,SNR=7.5
GEYT LR LR 02 09 09.3
comp=Z,88nm,18.8s,baz=55,slow=38
GYA0B ALIBECK ARRAY 63.53 299 eP P 01 39 40.2 0.0
comp=Z,12nm,0.8s
DAG Danmarks Havn 64.03 355 i P P 01 39 42.3 -0.5
comp=Z,13nm,1.0s
DAG Danmarks Havn 64.03 355 i P P 01 39 42.3 -0.5
DAG pmax pmax
comp=Z,13nm,1.0s
TRO Tromso 64.21 341 eP P 01 39 44.0 0.0
DZM Mont Dzumac 64.71 155 LR LR 02 04 52.2
comp=Z,101nm,21.6s,baz=23,slow=33
DZM Mont Dzumac 64.71 155 eLR LR 01 59 15.4
comp=Z,187nm,22.7s
B05A Bryant 65.60 47 P P 01 39 54.3 +0.9
baz=302
MOS Moscow 66.18 323 eP P 01 39 55.3 -1.8
MOS pmax pmax
comp=Z,54nm,1.4s
OBN Obninsk 67.03 323 eP P 01 40 02.0 -0.4
OBN Obninsk 67.03 323 c iP P 01 40 01.8 -0.7
OBN e 01 40 32.6
OBN e 01 42 29.8
OBN eS S 01 49 08.2 +16
OBN pmax pmax
comp=Z,113nm,1.7s
FIA1 FINESS Array S 67.51 332 eP P 01 40 05.6 +0.2
comp=Z,26nm,0.8s
FINES FINESS Array B 67.52 332 P P 01 40 05.2 -0.3
comp=Z,20nm,0.7s,baz=40,slow=8.7,SNR=63
FINES LR LR 02 11 25.4
comp=Z,127nm,21.2s,baz=21,slow=38
I04A Tendick Farm, 67.79 51 P P 01 40 08.4 +0.8
baz=303
MOR8 Moi Rana 67.89 340 eP P 01 40 06.2 -1.6
VSR Storozhevoye 68.00 319 eP P 01 40 07.3 -1.4
VSR pmax pmax
comp=Z,20nm,0.7s
NEW Newport 68.39 45 P P 01 40 12.0 +0.8
baz=305
PINE Pine Mountain 68.68 51 eP P 01 40 16.8 +3.4
comp=Z,12nm,0.8s
YBH Yreka Blue Hor 68.73 53 P P 01 40 15.4 +1.9
comp=Z,2.0nm,0.9s,baz=354,slow=2.9,SNR=4.1
YBH LR LR 02 03 19.0
comp=Z,22nm,21.7s,baz=294,slow=30
GROC Groznyy 68.77 309 eP P 01 40 13.0 -0.6
GROC pmax pmax
comp=Z,11nm,0.7s
J05D Fort Rock, OR 68.78 51 P P 01 40 14.3 +0.3
baz=304
SUMG Summit 68.88 0⇑ i P P 01 40 15.3 +1.0
comp=Z,16nm,0.6s
SUMG Summit 68.88 0 eP P 01 40 15.3 +1.0
comp=Z,28nm,1.1s
SUMG Summit 68.88 0⇑ i P P 01 40 15.3 +1.0
SUMG pmax pmax
comp=Z,16nm,0.6s
N02D Trinity Center 69.16 54 P P 01 40 17.0 +0.8
baz=304
VSU Vasula 69.22 330⇓ eP P 01 40 15.7 -0.4
VSU pmax pmax
comp=Z,69nm,0.8s
M04C Macdoel 69.25 53 P P 01 40 17.9 +1.1
baz=304
K05A Summer Lake 69.30 51 eP P 01 40 18.9 +1.7
comp=Z,27nm,1.5s
WDC Whiskeytown Da 69.48 54 eP P 01 40 20.1 +2.0
comp=Z,18nm,1.7s
WDC Whiskeytown Da 69.48 54 eP P 01 40 20.1 +2.0
WDC pmax pmax
comp=Z,19nm,1.7s
WALA Waterton Lakes 69.67 43 eP P 01 40 20.2 +0.9
comp=Z,4.3nm,0.8s
NCK Nalchik 69.93 310⇓ eP P 01 40 21.0 +0.1
NCK pmax pmax
comp=Z,18nm,0.9s
O03D Paynes Creek 70.10 54 P P 01 40 22.2 +0.2
baz=305
MOD Modoc Plateau 70.13 52 eP P 01 40 23.7 +1.4
comp=Z,2.5nm,0.7s
ZEI Tsey 70.15 309 eP P 01 40 20.9 -1.6
ZEI pmax pmax
comp=Z,10.0nm,0.6s
KIV Kislovodsk 70.21 311 eP P 01 40 23.0 +0.3
KIV Kislovodsk 70.21 311 P P 01 40 23.3 +0.6
SNR=23
KIV Kislovodsk 70.21 311 i P P 01 40 23.4 +0.8
SNR=10
KIV Kislovodsk 70.21 311 eP P 01 40 22.9 +0.3
KIV pmax pmax
comp=Z,83nm,1.1s
KIV MLR MLR
comp=Z,55nm,18.0s
KBZ Khabaz 70.22 311 P P 01 40 22.5 0.0
comp=Z,21nm,0.9s,baz=60,slow=4.4,SNR=42
KBZ LR LR 02 15 56.2
comp=Z,49nm,18.6s,baz=34,slow=40
BMO Blue Mountains 70.23 48 eP P 01 40 24.5 +1.7
comp=Z,3.3nm,0.8s
BMO Blue Mountains 70.23 48 eP P 01 40 24.5 +1.7
BMO pmax pmax
comp=Z,3.0nm,0.8s
TBLG Delisi 70.24 308 eP P 01 40 23.1 +0.3
comp=Z,18nm,1.1s
TBLG Delisi 70.24 308 eP P 01 40 23.1 +0.3
TBLG pmax pmax
comp=Z,18nm,1.1s
STKA Stephens Creek 70.36 181 P P 01 40 24.0 +0.7
comp=Z,1.3nm,0.7s,baz=2.8,slow=12,SNR=3.3
STKA LR LR 02 12 48.3
comp=Z,34nm,18.1s,baz=23,slow=37
MSO Missoula 70.97 45 P P 01 40 27.9 +0.7
baz=307
WSAR Wadi Sarin 71.03 285 P P 01 40 26.4 -1.4
GNI Garni 71.14 307 P P 01 40 29.1 +0.6
comp=Z,14nm,1.2s,baz=166,slow=12,SNR=4.4
GNI LR LR 02 14 54.5
comp=Z,104nm,18.9s,baz=52,slow=39
GNI Garni 71.14 307 eP P 01 40 27.5 -0.9
GNI Garni 71.14 307 P P 01 40 26.7 -1.8
GNI Garni 71.14 307 P P 01 40 28.5 0.0
AKH Akhalkalaki 71.19 308⇑ i P P 01 40 29.4 +0.6
BIDO Bidbid 71.25 285 P P 01 40 28.6 -0.6
BANOM Banah 71.25 288 P P 01 40 28.4 -0.8
BANOM Banah 71.25 288 P P 01 40 28.8 -0.3
CHVG Ch'k'valeri 71.28 310 ⇓ i P P 01 40 28.8 -0.3
SHME Shamm 71.29 289 P P 01 40 29.5 0.0
IDID Didziasalis 71.31 327 eP P 01 40 29.1 +0.2
IDID IAmb IAmb 01 40 30.6
comp=Z,9.7nm,1.0s
IIGN Ignalina 71.51 327 eP P 01 40 30.3 +0.1
IIGN IAmb IAmb 01 40 31.7
comp=Z,11nm,0.8s
FFC Flin Flon 71.84 33 eP P 01 40 32.8 +0.6
comp=Z,7.2nm,0.8s
FFC Flin Flon 71.84 33 eP P 01 40 32.8 +0.6
FFC pmax pmax
comp=Z,7.0nm,0.8s

UOSS Minazif 71.87 288 P P 01 40 32.4 -0.5
MFID Camas Ranch 71.94 49 eP P 01 40 34.6 +1.5
comp=Z,2.6nm,0.8s
HATD Hatta, Dubai 72.00 288 P P 01 40 33.3 -0.4
HATD Hatta, Dubai 72.00 288 i P P 01 40 34.0 +0.3
SNR=7.0
SOHO SOHO 72.09 287 i P P 01 40 33.7 -0.5
SNR=6.5
FCC Fort Churchill 72.09 27 eP P 01 40 33.8 +0.2
comp=Z,16nm,1.3s
FCC Fort Churchill 72.09 27 eP P 01 40 33.8 +0.2
FCC pmax pmax
comp=Z,17nm,1.3s
HRY Holter Researc 72.20 44 eP P 01 40 35.4 +0.7
LRM Limekiln Ridge 72.41 45 eP P 01 40 38.1 +2.1
NC405 NORSAR Array S 72.56 337 eP P 01 40 35.7 -0.7
DLMT Dillon 72.61 45 eP P 01 40 39.6 +2.5
comp=Z,7.1nm,0.9s
HLID Hailey 72.67 48 P P 01 40 37.2 -0.4
baz=308
HLID Hailey 72.67 48 eP P 01 40 39.0 +1.4
comp=Z,1.9nm,0.8s
HFS Hagfors 72.70 336 P P 01 40 37.7 +0.5
comp=Z,14nm,0.9s,baz=72,slow=4.8,SNR=22
HFS LR LR 02 15 29.9
comp=Z,203nm,18.6s,baz=39,slow=38
ASUD Al Ashush, Dub 72.71 288 P P 01 40 37.1 -0.7
NC204 NORSAR Array S 72.71 338 eP P 01 40 37.8 +0.4
ALNE Al Ain 72.72 287 P P 01 40 37.6 -0.4
NB201 NORSAR Array S 72.73 337 eP P 01 40 36.8 -0.7
NB2 NORSAR Subarra 72.77 337 P P 01 40 37.4 -0.3
comp=Z,23nm,1.2s,baz=38,slow=6.2
NB2 NORSAR Subarra 72.77 337 P P 01 40 37.4 -0.3
baz=38,slow=6.2
NOA NORSAR Array B 72.77 337 LR LR 02 15 01.7
comp=Z,152nm,22.0s,baz=40,slow=38
BMN Battle Mountai 72.88 52 eP P 01 40 41.4 +2.5
comp=Z,3.2nm,0.6s
NBO00 NORSAR Array S 72.90 338 eP P 01 40 39.1 +0.6
BOZ Bozeman (W) 73.00 45 P P 01 40 40.3 +0.8
baz=309
BOZ Bozeman (W) 73.00 45 eP P 01 40 41.5 +2.1
comp=Z,4.9nm,0.8s
NAO01 NORSAR Array S 73.02 337 eP P 01 40 39.1 0.0
KVN Kaiserville 73.15 53 eP P 01 40 43.0 +2.4
comp=Z,7.1nm,0.9s
KVN Kaiserville 73.15 53 eP P 01 40 43.0 +2.4
KVN pmax pmax
comp=Z,7.0nm,0.9s
AKASG Malin Array Be 73.26 322 P P 01 40 40.2 -0.5
comp=Z,10nm,0.6s,baz=44,slow=6.2,SNR=33
AKASG LR LR 02 15 46.6
comp=Z,150nm,18.5s,baz=35,slow=38
AKBB Malin Array Si 73.26 322 eP P 01 40 40.2 -0.5
comp=Z,27nm,1.1s
KIEV Kiev 73.27 322 eP P 01 40 39.5 -1.3
comp=Z,26nm,1.1s
KIEV Kiev 73.27 322 i P P 01 40 39.9 -0.8
SNR=15
KIEV Kiev 73.27 322 c iP P 01 40 40.2 -0.6
KIEV pmax pmax
comp=Z,26nm,1.1s
AK11 Malin Array Si 73.30 322 eP P 01 40 40.2 -0.7
NV01 Mina Array Sit 73.39 54 eP P 01 40 43.9 +1.9
NVAR Mina Array Bea 73.39 54 P P 01 40 43.1 +1.1
comp=Z,2.9nm,0.9s,baz=289,slow=7.6,SNR=8.3
NVAR LR LR 02 07 16.5
comp=Z,29nm,19.8s,baz=98,slow=31
NV11 Mina Array Sit 73.49 54 eP P 01 40 43.2 +0.8
comp=Z,0.3nm,1.0s
SUW Suwalki 73.71 327 eP P 01 40 42.9 -0.4
SUW Suwalki 73.71 327 eP P 01 40 42.9 -0.4
GCMT Greycliff 73.95 44 eP P 01 40 47.7 +2.7
SFJD Kangerlussuaq 74.03 5 LR LR 02 14 06.7
comp=Z,61nm,20.8s,baz=346,slow=36
H17A Grant Village 74.33 45 P P 01 40 48.4 +0.9
baz=310
SIM Simferopol' 74.49 316 eP P 01 40 47.7 -0.3
SIM e 01 41 03.0
SIM pmax pmax
comp=Z,30nm,1.5s
PKM Mcpherson Peak 74.52 58 P P 01 40 50.1 +1.5
baz=307
FXWY Fox Creek 74.56 46 eP P 01 40 51.5 +2.7
comp=Z,2.5nm,0.8s
RLMT Red Lodge 74.59 44 P P 01 40 48.8 -0.1
baz=310
RLMT Red Lodge 74.59 44 eP P 01 40 50.1 +1.2
comp=Z,19nm,1.9s
MOOW Moose Ponds 74.65 46 eP P 01 40 52.5 +3.3
comp=Z,4.7nm,1.3s
TPAW Teton Pass 74.69 46 eP P 01 40 52.8 +3.2
comp=Z,3.5nm,0.8s
HVU Hansel Valley 74.72 48 eP P 01 40 52.1 +2.5
comp=Z,4.4nm,0.9s
HVU Hansel Valley 74.72 48 eP P 01 40 52.1 +2.5
HVU pmax pmax
comp=Z,4.0nm,0.9s
REDW Red Top Meadow 74.83 46 eP P 01 40 53.0 +2.7
comp=Z,11nm,1.6s
ISA Isabella, Lake 74.94 56 P P 01 40 51.0 +0.1
baz=307
R11A Troy Canyon, C 75.14 53 P P 01 40 52.0 -0.2
baz=308
R11A Troy Canyon, C 75.14 53 eP P 01 40 53.2 +1.0
comp=Z,4.6nm,0.7s
MPMC Manual Prospec 75.34 56 P P 01 40 53.7 +0.3
baz=308
SORM Soroca 75.40 321⇑ i P P 01 40 52.7 -0.5
SORM Soroca 75.40 321 P P 01 40 52.6 -0.6
HWUT Hardware Ranch 75.53 48 eP P 01 40 56.1 +1.8
comp=Z,5.4nm,1.0s
DUG Dugway, Tooele 75.69 50 P P 01 40 55.8 +0.5
baz=309
DUG Dugway, Tooele 75.69 50 eP P 01 40 57.6 +2.4
comp=Z,4.9nm,0.8s
EDW2 Edwards Air Fo 75.72 57 P P 01 40 56.4 +1.0
baz=308
BORG Borgarnes 75.94 353 P P 01 40 57.6 +1.7
comp=Z,11nm,0.8s,baz=357,slow=5.3,SNR=7.0
BORG LR LR 02 17 18.2
comp=Z,24nm,18.5s,baz=24,slow=38
BORG Borgarnes 75.94 353 eP P 01 40 56.7 +0.8
comp=Z,16nm,0.7s
BW06 Boulder Array 75.94 46 P P 01 40 57.5 +0.8
baz=310
BW06 Boulder Array 75.94 46 eP P 01 40 58.0 +1.3
comp=Z,3.0nm,0.9s
PD31 Pinedale Array 75.94 46 eP P 01 40 58.0 +1.3
PDAR Pinedale Array 75.94 46 P P 01 40 58.2 +1.5
comp=Z,1.9nm,0.7s,baz=277,slow=2.4,SNR=17
PDAR Pinedale Array 75.94 46 eP P 01 40 57.8 +1.1
GSC Goldstone, Bar 76.24 56 P P 01 40 59.7 +1.3
baz=308
BEL Belsk 76.28 327 eP P 01 40 58.9 +0.7
BEL Belsk 76.28 327 eP P 01 40 58.9 +0.7
LVV L'vov 76.30 324 eP P 01 40 59.9 +1.6
IAS Iasi 76.43 320 P P 01 40 00.0 +0.9
TUQ Turquoise Moun 76.72 55 P P 01 41 02.1 +1.0
baz=308
HEC Hector,Ludlow 76.83 56 P P 01 41 03.1 +1.4
baz=308
CCUT Cedar City 77.02 52 eP P 01 41 05.5 +2.6
comp=Z,5.1nm,0.9s
KWP Kalwaria Pacla 77.03 325 eP P 01 41 03.1 +0.6
KWP Kalwaria Pacla 77.03 325 eP P 01 41 03.1 +0.6
TLCR 77.16 318⇑ i P P 01 41 03.6 +0.4
TLCR 77.16 318 P P 01 41 03.6 +0.4
BUR08 Bucovina Ar. S 77.28 322 eP P 01 41 04.3 +0.3
BUR04 Bucovina Ar. S 77.29 322 eP P 01 41 04.2 +0.1
BURAR Bucovina Array 77.29 322⇑ i P P 01 41 04.2 +0.1
BURAR Bucovina Array 77.29 322 P P 01 41 04.2 +0.1
GMRC Granite Mounta 77.30 56 P P 01 41 05.4 +1.0
baz=309
TESR Tescani 77.36 320⇑ i P P 01 41 03.6 -0.7
P17A Butcher Ranch, 77.38 49 eP P 01 41 07.2 +2.4
comp=Z,9.7nm,0.9s
LCMT Little Creek M 77.43 53 eP P 01 41 08.2 +3.1
comp=Z,7.4nm,0.9s
PFO Pinyon Flats O 77.50 57 P P 01 41 06.6 +1.0
baz=309
CFR Carcaliu 77.52 319⇑ i P P 01 41 04.7 -0.5
CFR Carcaliu 77.52 319 P P 01 41 04.6 -0.6
BELC Belle Mtn. Jos 77.56 56 P P 01 41 07.0 +1.1
baz=309
P18A Preston Nutter 77.57 49 eP P 01 41 06.2 +0.1

comp=Z,12nm,0.7s
ULM Lac du Bonnet 77.64 34 LR LR 02 15 35.8
comp=Z,17nm,21.1s,baz=346,slow=36
K22A Casper 77.71 45 P **P 01 41 07.4 +0.8**
baz=312
SRU San Rafael Swe 77.74 49 *e*P **P 01 41 09.4 +2.5**
comp=Z,10.0nm,0.8s
VRI Vrincioaia 77.76 320 ⇓*i*P **P 01 41 07.7 +1.1**
VRI Vrincioaia 77.76 320 P **P 01 41 07.6 +1.0**
PLOR Plostina 77.81 320 ⇑*i*P **P 01 41 06.4 -0.5**
PLOR Plostina 77.81 320 P **P 01 41 06.4 -0.5**
TIRR Tirgusor 77.87 318 ⇑*i*P **P 01 41 06.5 -0.7**
TIRR Tirgusor 77.87 318 P **P 01 41 06.4 -0.7**
OJC Ojcow 77.89 326 *e*P **P 01 41 07.7 +0.4**
OJC Ojcow 77.89 326 *e*P **P 01 41 07.2 -0.1**
comp=Z,31nm,1.1s
OJC Ojcow 77.89 326 *e*P **P 01 41 07.7 +0.4**
TLB Topalu 77.97 318 ⇑*i*P **P 01 41 07.4 -0.4**
MONP2 Monument Peak 77.97 58 P **P 01 41 09.1 +0.8**
baz=309
RSSD Black Hills 78.05 42 P **P 01 41 09.2 +0.7**
baz=313
RSSD Black Hills 78.05 42 *e*P **P 01 41 09.9 +1.4**
comp=Z,4.1nm,0.8s
ARCR ARCALIA 78.08 322 ⇑*i*P **P 01 41 07.9 -0.4**
CRVS Cervenica-Dubn 78.12 325 *e*P **P 01 41 09.1 +0.5**
CRVS pmax pmax
comp=Z,6.0nm,1.0s
CRVS Cervenica-Dubn 78.12 325 *e*P **P 01 41 09.1 +0.5**
BC3 Big Chuckawall 78.13 56 P **P 01 41 10.4 +1.3**
baz=309
BR131 Keskin Array S 78.13 312 *e*P **P 01 41 08.9 -0.1**
BR131 Keskin Array S 78.13 312 P **P 01 41 08.8 -0.1**
BRTR Keskin Array B 78.13 312 P **P 01 41 08.8 -0.1**
comp=Z,3.6nm,0.4s,baz=112,slow=3.2,SNR=67
BRTR PP **PP 01 44 06.2 +0.9**
comp=Z,3.3nm,1.1s,baz=90,slow=6.2,SNR=7.7
BRTR LR LR 02 19 05.8
comp=Z,41nm,18.8s,baz=60,slow=38
TRPA Tarpa 78.19 324 ⇑*i*P **P 01 41 09.4 +0.5**
TRPA Tarpa 78.19 324 ⇓*e*P **P 01 41 09.8 +0.9**
NIE Niedzica 78.27 326 *e*P **P 01 41 10.1 +0.7**
NIE Niedzica 78.27 326 *e*P **P 01 41 10.1 +0.7**
PGOR Pogoanele 78.30 319 ⇓*i*P **P 01 41 10.3 +0.8**
DOPR Dopca 78.36 321 ⇓*i*P **P 01 41 10.9 +0.9**
U15A North Rim 78.39 53 *e*P **P 01 41 13.2 +2.6**
comp=Z,6.9nm,1.1s
O20A White River Ci 78.41 48 P **P 01 41 10.5 0.0**
baz=312
MLR Muntele Rosu 78.42 320 LR LR 02 18 56.6
comp=Z,39nm,18.3s,baz=44,slow=38
MLR Muntele Rosu 78.42 320 ⇑*i*P **P 01 41 10.3 -0.1**
MLR Muntele Rosu 78.42 320 *e*P **P 01 41 09.8 -0.6**
comp=Z,13nm,1.2s
MLR Muntele Rosu 78.42 320 *e*P **P 01 41 09.8 -0.6**
MLR pmax pmax
comp=Z,13nm,1.2s
ICOR Ion Corvin 78.42 318 ⇑*i*P **P 01 41 10.8 +0.6**
ANTO Ankara 78.53 312 ⇑*i*P **P 01 41 11.3 +0.2**
ANTO Ankara 78.53 312 *e*P **P 01 41 11.7 +0.7**
ANTO Ankara 78.53 312 P **P 01 41 11.7 +0.7**
SNR=5.2
ANTO Ankara 78.53 312 *e*P **P 01 41 11.7 +0.7**
BR231 Keskin MP Arra 78.56 312 *e*P **P 01 41 11.9 +0.6**
PDMCI Parker Dam,Lak 78.57 55 P **P 01 41 12.7 +1.5**
baz=310
Y12C Blythe 78.68 56 P **P 01 41 13.7 +1.8**
baz=309
CJR Cluj-Napoca 78.71 322 ⇓*i*P **P 01 41 12.8 +0.9**
CJR Cluj-Napoca 78.71 322 P **P 01 41 12.8 +0.9**
LANS Liptovska Anna 78.83 326 *e*P **P 01 41 13.7 +1.2**
LANS Liptovska Anna 78.83 326 *e*P **P 01 41 13.7 +1.2**
OKC Ostrava-Krasne 78.89 327 AMS AMS 02 18 50.0
comp=Z,200nm,15.9s
KSP Ksiaz 78.90 328 *e*P **P 01 41 13.3 +0.5**
KSP Ksiaz 78.90 328 *e*P **P 01 41 13.3 +0.5**
VOIR 78.91 320 ⇑*i*P **P 01 41 14.0 +1.0**
DRGR 79.08 322 ⇑*i*P **P 01 41 13.8 -0.1**
DRGR 79.08 322 P **P 01 41 13.8 -0.1**
AGMN Agassiz Nation 79.08 35 P **P 01 41 13.9 +0.1**
baz=318
AGMN Agassiz Nation 79.08 35 *e*P **P 01 41 14.0 +0.1**
ARR Arges 79.16 320 ⇓*i*P **P 01 41 15.3 +0.9**
MORC Moravsky Berou 79.19 327 ⇑*i*P **P 01 41 14.9 +0.4**
MORC Moravsky Berou 79.19 327 *e*P **P 01 41 14.9 +0.4**
N23A Red Feather La 79.20 46 P **P 01 41 15.6 +0.5**
baz=313
N23A Red Feather La 79.20 46 *e*P **P 01 41 17.3 +2.3**
comp=Z,7.7nm,1.1s
DPC Dobruska-Polom 79.27 328 *e*P **P 01 41 15.7 +0.8**
DPC AMS AMS 02 18 40.0
comp=Z,100nm,16.2s
DPC Dobruska-Polom 79.27 328 *e*P **P 01 41 15.7 +0.8**
DPC MLR MLR
comp=Z,100nm,16.2s
UPC Upice 79.27 328 *e*P **P 01 41 15.8 +1.0**
UPC AMS AMS 02 18 50.0
comp=Z,200nm,13.6s
UPC Upice 79.27 328 *e*P **P 01 41 15.8 +1.0**
UPC MLR MLR
comp=Z,200nm,13.6s
KRLC Kraliky 79.28 328 *e*P **P 01 41 15.7 +0.7**
KRLC Kraliky 79.28 328 *e*P **P 01 41 15.7 +0.7**
B34A Aery, Baudette 79.48 35 P **P 01 41 15.4 -0.7**
baz=319
C33A Trail 79.52 36 P **P 01 41 16.9 +0.6**
baz=318
LOT Lotru 79.53 321 ⇓*i*P **P 01 41 16.4 -0.1**
WUAZ Wupatki 79.55 53 P **P 01 41 18.0 +1.1**
baz=311
WUAZ Wupatki 79.55 53 *e*P **P 01 41 19.3 +2.5**
comp=Z,4.0nm,0.8s
PSZ Piszkesteto 79.56 325 ⇑*i*P **P 01 41 17.3 +0.8**
PSZ Piszkesteto 79.56 325 ⇓*e*P **P 01 41 17.3 +0.8**
PSZ Piszkesteto 79.56 325 *e*P **P 01 41 17.5 +1.0**
comp=Z,18nm,1.1s
PSZ Piszkesteto 79.56 325 *e*P **P 01 41 17.5 +1.0**
PSZ pmax pmax
comp=Z,18nm,1.1s
VYHS Vyhne 79.60 326 *e*P **P 01 41 16.6 -0.1**
VYHS pmax pmax
comp=Z,6.0nm,1.2s
VYHS Vyhne 79.60 326 *e*P **P 01 41 16.6 -0.1**
BRG Berggiesshubel 79.82 330 *i*P **P 01 41 18.7 +0.9**
BRG pmax pmax
comp=Z,10.0nm,0.8s
BRG MLR MLR
comp=N,162nm,16.9s
BRG MLR MLR
comp=E,89nm,19.9s
BRG MLR MLR
comp=Z,222nm,16.1s
JAVC Velka Javorina 79.83 326 *e*P **P 01 41 19.4 +1.4**
PVCC Panska Ves 79.84 329 *e*P **P 01 41 18.9 +1.0**
PVCC *e*pP **pP 01 41 33.4 +1.8**
PVCC AMS AMS 02 19 10.0
comp=Z,200nm,21.0s
PVCC Panska Ves 79.84 329 *e*P **P 01 41 18.9 +1.0**
PVCC *e* 01 41 33.4
PVCC MLR MLR
comp=Z,200nm,21.0s
CLL Collm 79.85 330 ⇑*i*P **P 01 41 17.8 -0.1**
comp=Z,23nm,1.0s
CLL *e*sP **pP 01 41 34.0 +2.5**
CLL *e*PP **PP 01 44 16.0 -3.0**
CLL Collm 79.85 330 *e*P **P 01 41 17.9 0.0**
comp=Z,20nm,0.9s
CLL Collm 79.85 330 *e*P **P 01 41 17.9 0.0**
CLL pmax pmax
comp=Z,20nm,0.9s
VRAC Vranov 79.95 327 ⇑*i*P **P 01 41 19.2 +0.6**
VRAC Vranov 79.95 327 *e*P **P 01 41 19.1 +0.5**
SZH Strazhica 79.98 318 P **P 01 41 18.7 -0.1**
B35A Bob, Littlefor 79.99 34 P **P 01 41 19.1 +0.3**
baz=319
ISCO Idaho Springs 80.13 46 P **P 01 41 20.6 +0.5**
baz=313
ISCO Idaho Springs 80.13 46 *e*P **P 01 41 21.3 +1.2**
comp=Z,2.3nm,0.8s
ISCO Idaho Springs 80.13 46 *e*P **P 01 41 21.3 +1.2**
ISCO pmax pmax
comp=Z,2.0nm,0.8s
X16A Lo Mia Camp, P 80.21 54 *e*P **P 01 41 23.5 +3.0**
comp=Z,3.9nm,0.9s
KRUC Moravsky 80.22 327 *e*P **P 01 41 20.3 +0.3**

GOPC GO Pecny, Ondr 80.23 329 *e*P **P 01 41 20.7 +0.6**
GOPC *e*pP **pP 01 41 34.7 +1.0**
GOPC AMS AMS 02 19 20.0
comp=Z,200nm,17.3s
GOPC GO Pecny, Ondr 80.23 329 *e*P **P 01 41 20.7 +0.6**
GOPC *e* 01 41 34.7
GOPC MLR MLR
comp=Z,200nm,17.3s
PRA Prague 80.25 329 *e*P **P 01 41 21.2 +1.1**
PRA Prague 80.25 329 *e*P **P 01 41 21.2 +1.1**
PRU Pruhonice 80.27 329 *e*P **P 01 41 20.9 +0.6**
PRU *ex* x 01 41 36.9
PRU AMS AMS 02 19 20.0
comp=Z,200nm,15.1s
PRU Pruhonice 80.27 329 *e*P **P 01 41 20.9 +0.6**
PRU *e* 01 41 36.9
PRU MLR MLR
comp=Z,200nm,15.1s
E33A Westby DABS, E 80.34 37 P **P 01 41 20.8 +0.1**
baz=318
C35A Jirik Farms, M 80.37 35 P **P 01 41 21.1 +0.2**
baz=319
MODS Modra-Piesok 80.37 326 *e*P **P 01 41 20.7 -0.2**
MODS pmax pmax
comp=Z,18nm,1.3s
MODS Modra-Piesok 80.37 326 *e*P **P 01 41 20.7 -0.2**
BZS Buzias 80.45 322 ⇑*i*P **P 01 41 21.1 -0.2**
G32A Webster 80.55 38 P **P 01 41 22.0 +0.1**
baz=317
RAYN Ar Rayn 80.56 292 *e*P **P 01 41 21.3 -1.1**
comp=Z,17nm,1.3s
RAYN Ar Rayn 80.56 292 *i*P **P 01 41 21.6 -0.7**
SNR=10
HERR Herculane 80.60 321 ⇓*i*P **P 01 41 21.5 -0.6**
S22A 4UR Ranch, Cre 80.82 49 P **P 01 41 23.6 -0.2**
baz=313
C36A Pine Crest Far 80.83 34 P **P 01 41 23.5 +0.2**
baz=320
214A Organ Pipe Nat 80.93 56 P **P 01 41 23.8 -0.4**
baz=310
Q24A Divide 80.96 47 P **P 01 41 23.9 -0.7**
baz=313
MDVR Moldovita 81.02 322 ⇓*i*P **P 01 41 24.2 -0.2**
ASF Jabal al Asfar 81.03 304 P **P 01 41 25.2 +0.4**
comp=Z,6.1nm,0.9s,baz=243,slow=2.3,SNR=15
E35A Pequot Lakes 81.04 36 P **P 01 41 24.1 -0.4**
baz=319
MPEP Malo Peshtene 81.05 320 P **P 01 41 24.6 +0.1**
G33A Ortonville 81.11 38 P **P 01 41 24.2 -0.6**
baz=318
D36A Goodland 81.13 35 P **P 01 41 24.2 -0.7**
baz=320
H32A Carlson Farm, 81.13 39 P **P 01 41 24.8 -0.2**
baz=317
C37A Embarrass 81.14 34 P **P 01 41 24.5 -0.4**
baz=320
EYMN Ely 81.27 33 P **P 01 41 25.6 0.0**
baz=321
EYMN Ely 81.27 33 *e*P **P 01 41 25.5 -0.2**
comp=Z,10nm,1.3s
CONA Conrad Observa 81.32 327 *e*P **P 01 41 26.9 +0.9**
comp=Z,13nm,1.0s,SNR=7.3
KHC Kasperske Hory 81.33 329 *e*P **P 01 41 26.6 +0.6**
KHC *e*pP **pP 01 41 40.3 +0.6**
KHC AMS AMS 02 19 50.0
comp=Z,200nm,21.7s
KHC Kasperske Hory 81.33 329 *e*P **P 01 41 26.4 +0.4**
comp=Z,5.7nm,0.9s
KHC Kasperske Hory 81.33 329 *e*P **P 01 41 26.6 +0.6**
KHC *e* 01 41 40.3
KHC MLR MLR
comp=Z,200nm,21.7s
MMAI Mount Meron Ar 81.44 306 P **P 01 41 27.2 +0.3**
comp=Z,8.2nm,0.7s,baz=348,slow=6.3,SNR=33
MMAI LR LR 02 20 12.9
comp=Z,73nm,21.0s,baz=65,slow=38
G34A Benson 81.45 37 P **P 01 41 26.6 -0.1**
baz=318
CSS Mathiatis 81.45 308 *e*P **P 01 41 26.7 -0.2**
comp=Z,2.1nm,0.7s
GEC2 GERESS Array S 81.51 328 *e*P **P 01 41 27.1 +0.1**
comp=Z,6.8nm,1.0s
GEC2 GERESS Array S 81.51 328 *e*P **P 01 41 27.1 +0.1**
GEC2 pmax pmax
comp=Z,7.0nm,1.0s
GERES GERESS Array B 81.51 328 P **P 01 41 26.9 0.0**
comp=Z,4.9nm,0.8s,baz=36,slow=5.7,SNR=34
GERES LR LR 02 20 28.5
comp=Z,144nm,20.2s,baz=32,slow=38
GERES GERESS Array B 81.51 328 P **P 01 41 27.0 0.0**
GEA0 GERESS Array S 81.52 328 *e*P **P 01 41 26.9 -0.1**
C38A Sawbill Land. 81.54 33 P **P 01 41 26.9 -0.2**
baz=321,SNR=5.2
E36A McGregor 81.59 35 P **P 01 41 27.7 +0.3**
baz=320
SDCO Great Sand Dun 81.59 48 P **P 01 41 28.3 +0.4**
baz=313
SDCO Great Sand Dun 81.59 48 *e*P **P 01 41 29.1 +1.2**
comp=Z,1.9nm,0.9s
EKA Eskdalemuir Ar 81.64 341 P **P 01 41 27.9 +0.5**
comp=Z,2.7nm,0.9s,baz=212,slow=25,SNR=8.6
EKA LR LR 02 21 57.2
comp=Z,55nm,19.0s,baz=70,slow=39
RZN Rozhen 81.74 318 P **P 01 41 28.7 +0.2**
GRFO Grafenberg 81.82 330 *e*P **P 01 41 29.4 +0.8**
comp=Z,20nm,0.9s
VTS Vitosha 81.87 319 ⇑*i*P **P 01 41 29.5 +0.4**
VTS Vitosha 81.87 319 *e*P **P 01 41 29.0 -0.1**
comp=Z,17nm,0.7s
VTS Vitosha 81.87 319 P **P 01 41 29.5 +0.4**
VTS Vitosha 81.87 319 *e*P **P 01 41 29.0 -0.1**
VTS pmax pmax
comp=Z,17nm,0.7s
ARSA Arzberg 81.99 327 *e*P **P 01 41 29.8 +0.3**
comp=Z,9.8nm,1.2s
TUC Tucson 82.00 55 P **P 01 41 29.9 0.0**
baz=311
MOA Molln 82.06 328 *e*P **P 01 41 30.1 +0.3**
comp=Z,11nm,1.6s
ECSD EROS Data Cent 82.10 39 P **P 01 41 30.2 +0.1**
baz=318
ECSD EROS Data Cent 82.10 39 *e*P **P 01 41 30.1 0.0**
comp=Z,5.8nm,0.9s
H35A Sunnyside Ranc 82.24 37 P **P 01 41 31.3 +0.5**
baz=319
E38A The Farm, Brul 82.28 34 P **P 01 41 30.7 -0.3**
baz=321
MMB Musomiste 82.33 318 P **P 01 41 31.8 +0.4**
DIVS Divibare 82.35 322 *e*P **P 01 41 31.3 -0.2**
comp=Z,7.7nm,0.9s
KKB Krupnik 82.46 319 P **P 01 41 32.6 +0.6**
F38A Pierce - Schro 82.63 35 P **P 01 41 33.1 +0.3**
baz=321,SNR=7.5
T25A Trinidad 82.64 48 P **P 01 41 33.5 +0.2**
baz=314
T25A Trinidad 82.64 48 *e*P **P 01 41 34.9 +1.5**
comp=Z,5.0nm,0.8s
PERS Pernice 82.64 326 *e*P **P 01 41 32.9 0.0**
PERS Pernice 82.64 326 P **P 01 41 32.9 -0.1**
SOKA Soboth 82.65 326 *e*P **P 01 41 33.3 +0.3**
comp=Z,29nm,1.0s,SNR=8.9
SRS Serrai 82.74 318 P **P 01 41 33.4 -0.1**
H36A Jessenland, He 82.75 37 P **P 01 41 33.8 +0.4**
baz=319
SPMN Marine on St. 82.78 36 P **P 01 41 34.3 +0.8**
baz=320
E39A Mellen 82.89 34 P **P 01 41 34.2 0.0**
baz=322
TASM ASL Pad, Albuq 82.93 50 P **P 01 41 35.7 +0.8**
baz=313
ANMO Albuquerque 82.93 50 P **P 01 41 36.4 +1.5**
comp=Z,2.3nm,0.9s,baz=315,slow=17,SNR=7.0
ANMO LR LR 02 12 10.8
comp=Z,14nm,21.9s,baz=322,slow=31
ANMO Albuquerque 82.93 50 P **P 01 41 35.8 +1.0**
baz=313
ANMO Albuquerque 82.93 50 *e*P **P 01 41 36.0 +1.2**
comp=Z,2.9nm,0.9s
ANMO Albuquerque 82.93 50 ⇓*e*P **P 01 41 37.2 +2.4**
ANMO pmax pmax
comp=Z,4.0nm,1.2s
TASL Snake Pit, Alb 82.93 50 P **P 01 41 35.9 +1.1**
baz=313
MEM Membach 82.98 334 ⇑P **P 01 41 34.2 -0.3**
OBKA Obir 82.99 327 *e*P **P 01 41 34.8 0.0**
comp=Z,6.2nm,0.7s

STIP Stip 83.04 319 *i*P **P 01 41 33.7 -1.3**
KBA Koelnbreinsper 83.05 328 *e*PcP **P 01 41 36.0 +0.8**
comp=Z,15nm,0.9s,SNR=6.5
KBA Koelnbreinsper 83.05 328 P **P 01 41 36.4 +1.2**
F39A Loretta 83.09 34 P **P 01 41 34.9 -0.3**
baz=321
VAY Valandovo 83.12 319 *i*P **P 01 41 35.6 +0.2**
E40A Wakefield 83.12 33 P **P 01 41 35.5 +0.1**
baz=322,SNR=7.2
BLY Banja Luka 83.18 324 *e*P **P 01 41 36.5 +0.8**
comp=Z,10nm,1.2s
D41A Chassel 83.20 32 P **P 01 41 35.5 -0.2**
baz=323
SKO Skopje 83.22 320 *i*P **P 01 41 36.5 +0.6**
H37A Dierke Farm, C 83.22 36 P **P 01 41 36.7 +0.8**
baz=320
G38A Ridgeland 83.25 35 P **P 01 41 36.2 +0.1**
baz=321
MYKA Terra Mystica 83.28 327 *e*P **P 01 41 36.0 -0.3**
comp=Z,3.8nm,0.5s
STU Stuttgart 83.35 331 *e*P **P 01 41 36.6 +0.1**
comp=Z,12nm,0.7s
STU Stuttgart 83.35 331 *e*P **P 01 41 36.6 +0.1**
STU pmax pmax
comp=Z,12nm,0.7s
BCLA Clavier 83.38 334 ⇓P **P 01 41 36.7 +0.1**
VISS Visnje 83.42 326 *e*P **P 01 41 36.8 0.0**
VISS Visnje 83.42 326 *e*P **P 01 41 36.8 -0.1**
SCHQ Schefferville 83.42 16 P **P 01 41 37.1 +0.4**
comp=Z,5.8nm,0.6s,baz=209,slow=12,SNR=4.0
I37A Lemond, Waseca 83.43 37 P **P 01 41 37.2 +0.2**
baz=320,SNR=5.8
I37A Lemond, Waseca 83.43 37 *e*P **P 01 41 38.2 +1.2**
comp=Z,16nm,0.8s
F40A Park Falls 83.44 34 P **P 01 41 37.2 +0.2**
baz=322
BOJS Bojanci 83.47 326 *e*P **P 01 41 36.7 -0.4**
BOJS Bojanci 83.47 326 *e*P **P 01 41 36.7 -0.4**
J36A Seneca 1, Swea 83.50 38 P **P 01 41 37.6 +0.2**
baz=319
E41A Kenton 83.50 33 P **P 01 41 37.6 +0.2**
baz=322
WATA Walderalm 83.58 329 *e*P **P 01 41 38.0 +0.1**
comp=Z,4.1nm,0.7s
319A Douglas 83.58 55 *e*P **P 01 41 40.2 +2.1**
comp=Z,9.8nm,0.8s
WTTA Wattenberg 83.61 329 *e*P **P 01 41 38.2 +0.1**
comp=Z,7.4nm,1.0s
ABTA Abfaltersbach 83.66 328 *e*P **P 01 41 37.8 -0.4**
comp=Z,12nm,1.1s,SNR=6.0
JAVS Javornik 83.68 326 *e*P **P 01 41 36.7 -1.6**
JAVS Javornik 83.68 326 *e*P **P 01 41 36.7 -1.7**
121A Cookes Peak, D 83.75 53 P **P 01 41 39.8 +0.8**
baz=313
KRUS Krusevo 83.76 320 *i*P **P 01 41 39.0 +0.2**
MOTA Moosalm 83.76 329 *e*P **P 01 41 38.1 -0.7**
comp=Z,18nm,1.1s,SNR=13
RETA Reutte 83.78 329 *i*P **P 01 41 39.3 +0.5**
comp=Z,21nm,1.0s,SNR=12
GIVF Givet 83.82 334 *e*P **P 01 41 37.3 -1.5**
GIVF pmax pmax
comp=Z,23nm,1.4s
SQTA Sankt Quirin 83.82 329 *e*P **P 01 41 39.2 +0.2**
comp=Z,0.2nm,0.6s
H39A Augusta 83.89 35 P **P 01 41 39.0 -0.3**
baz=321
J37A Redenius Farm, 83.89 37 P **P 01 41 39.4 0.0**
baz=320
I38A Scanlan Farm, 83.90 36 P **P 01 41 39.3 -0.1**
baz=320
G40A Rib Lake 83.91 34 P **P 01 41 39.2 -0.3**
baz=322
PDG Podgorica 83.96 321 ⇑*i*P **P 01 41 39.5 -0.2**
K36A Gilmore City 83.97 38 P **P 01 41 39.7 -0.1**
baz=319
E42A Champion 83.97 32 P **P 01 41 39.9 +0.2**
baz=323
BIA Bitola 83.98 319 *i*P **P 01 41 40.1 +0.2**
F41A Three Lakes 84.02 33 P **P 01 41 39.9 -0.1**
baz=322,SNR=6.7
FNA Florina 84.12 319 *e*P **P 01 41 40.4 -0.3**
comp=Z,9.3nm,0.9s
FNA Florina 84.12 319 *e*P **P 01 41 40.4 -0.3**
FNA pmax pmax
comp=Z,9.0nm,0.9s
FETA Feichten 84.17 329 *e*P **P 01 41 41.1 +0.2**
comp=Z,11nm,0.9s,SNR=8.1
OHR Ohrid 84.18 320 *i*P **P 01 41 40.3 -0.6**
K37A Belmond 84.26 38 P **P 01 41 41.3 +0.1**
baz=320,SNR=5.1
DAVA Damuels 84.29 330 *e*P **P 01 41 41.7 +0.2**
comp=Z,19nm,0.9s,SNR=10
PMOR Pomariorio Ree 84.32 114 *e*T T 03 15 04.7
comp=Z,42nm,0.2s
H40A Chili 84.33 35 P **P 01 41 41.4 -0.2**
baz=322,SNR=5.3
CDF Champ du Feu 84.36 332 *e*P **P 01 41 41.5 -0.3**
E43A Lone Tree Farm 84.40 32 P **P 01 41 41.6 -0.2**
baz=324
E43A Lone Tree Farm 84.40 32 *e*P **P 01 41 42.5 +0.7**
comp=Z,19nm,1.5s
I39A Houston 84.42 36 P **P 01 41 41.9 -0.1**
baz=321
I39A Houston 84.42 36 *e*P **P 01 41 42.6 +0.6**
comp=Z,13nm,0.8s
TIR Tirane 84.47 320 ⇑*i*P **P 01 41 42.2 -0.1**
ECH Echery 84.57 332 *e*P **P 01 41 42.7 0.0**
comp=Z,14nm,1.0s
ECH Echery 84.57 332 *e*P **P 01 41 42.7 0.0**
ECH pmax pmax
comp=Z,14nm,1.0s
H41A Junction City 84.66 34 P **P 01 41 43.1 -0.2**
baz=322
M36A Felix, Anita 84.69 39 P **P 01 41 43.7 +0.2**
baz=319
L37A Phoenix Point, 84.69 38 P **P 01 41 43.8 +0.4**
baz=320
G42A Mountain 84.70 33 P **P 01 41 43.5 +0.1**
baz=323
DAVOX Davos/Dischmat 84.71 329 P **P 01 41 43.6 -0.1**
comp=Z,10nm,0.8s,baz=198,slow=20,SNR=16
DAVOX LR LR 02 22 55.9
comp=Z,140nm,18.4s,baz=39,slow=38
J39A Decorah 84.74 36 P **P 01 41 43.2 -0.4**
baz=321,SNR=6.3
F43A Flat Rock, Esc 84.76 32 P **P 01 41 43.8 +0.1**
baz=324
I40A Norwalk 84.80 35 P **P 01 41 44.2 +0.3**
baz=322
PPT Papeete 84.88 117 LR LR 02 09 56.6
comp=Z,66nm,21.9s,baz=358,slow=29
PPT2 Papeete2 84.89 117 *e*LR LR 02 08 33.6
comp=Z,178nm,25.0s
PPT2 Papeete2 84.89 117 *e*T T 03 15 46.3
comp=Z,13nm,0.3s
PAE Paea 84.94 117 *e*T T 03 15 49.0
comp=Z,2.6nm,0.3s
F44A Big Bay de Noc 84.96 32 P **P 01 41 44.3 -0.4**
baz=324
G43A Wallace 85.00 33 P **P 01 41 44.8 -0.2**
baz=323
G43A Wallace 85.00 33 *e*P **P 01 41 46.0 +1.1**
comp=Z,6.3nm,0.9s
I41A Arkdale 85.01 35 P **P 01 41 45.2 +0.2**
baz=322
HINF Hinteralfeld 85.02 332 *e*P **P 01 41 44.3 -0.7**
HINF pmax pmax
comp=Z,16nm,1.4s
TIAR Tiarei 85.03 117 *e*T T 03 15 56.0
comp=Z,7.1nm,0.3s
HAU Haudompre 85.04 332 *e*P **P 01 41 44.5 -0.6**
HAU pmax pmax
comp=Z,7.0nm,0.9s
L38A Oak Wood Farm, 85.06 38 P **P 01 41 45.1 -0.2**
baz=320
M37A Trindle Farm, 85.09 39 P **P 01 41 46.0 +0.5**
baz=320
J40A Soldiers Grove 85.13 36 P **P 01 41 45.3 -0.3**
baz=322
K39A Oelwein 85.14 37 P **P 01 41 45.4 -0.3**
baz=321
E45A Wooded Hills, 85.15 31 P **P 01 41 45.0 -0.7**
baz=325
TUE Stuetta 85.17 329 *e*P **P 01 41 46.0 -0.1**
comp=Z,12nm,0.9s
J41A Loganville 85.49 35 P **P 01 41 47.6 +0.2**
baz=322

K40A	Colesburg	85.49	36	P	P	01 41 47.4	0.0
	baz=321						
M38A	Pleasantville	85.50	38	P	P	01 41 47.7	+0.2
	baz=320						
KSU1	Kansas State U	85.53	42	P	P	01 41 47.8	+0.1
	baz=318						
L39A	Vinton	85.53	37	P	P	01 41 47.7	0.0
	baz=321,SNR=7.4						
F45A	CMU Biological	85.56	31	P	P	01 41 48.0	+0.3
	baz=325						
I42A	Draeger Farm,	85.56	34	P	P	01 41 48.4	+0.6
	baz=323						
I42A	Draeger Farm,	85.56	34	eP	P	01 41 48.8	+1.0
	comp=Z,8.0nm,0.8s						
IGT	Igoumenitsa	85.59	319	P	P	01 41 47.2	-0.8
H43A	Windswept, Lux	85.60	33	P	P	01 41 47.6	-0.3
	baz=323						
H43A	Windswept, Lux	85.60	33	eP	P	01 41 49.1	+1.2
	comp=Z,16nm,1.1s						
H43A				epP	sP	01 42 06.5	-0.4
JFWS	Jewell Farm	85.73	36	P	P	01 41 48.9	+0.3
	baz=322						
F46A	Macinaw City C	85.79	31	P	P	01 41 48.8	-0.1
	baz=325						
AMTX	Amarillo	85.80	48	P	P	01 41 49.6	+0.3
	baz=316						
MNTX	Cornudas Mount	85.81	52	P	P	01 41 49.6	+0.4
	baz=314						
MNTX	Cornudas Mount	85.81	52	eP	P	01 41 50.6	+1.4
	comp=Z,2.1nm,0.8s						
I43A	Langenfeld Bro	85.90	34	P	P	01 41 48.8	-0.6
	baz=323						
J42A	Columbus	85.92	35	P	P	01 41 49.4	-0.2
	baz=323						
L40A	Anamosa	85.95	37	P	P	01 41 49.3	-0.4
	baz=321						
K41A	Shullsburg	85.95	36	P	P	01 41 50.2	+0.5
	baz=322						
M39A	Webster	85.95	38	P	P	01 41 49.6	-0.1
	baz=321						
TAOE	Nuku Hiva Isla	85.99	105	eLR	LR	02 08 57.6	
	comp=Z,132nm,22.7s						
SENIN	Lac Senin/Sane	86.06	331	eP	P	01 41 50.5	+0.1
	comp=Z,7.3nm,0.8s						
J43A	Natural Harves	86.19	34	P	P	01 41 50.4	-0.5
	baz=323						
IDI	Anoyia	86.22	313	P	P	01 41 50.0	-1.3
	comp=Z,9.6nm,0.7s,baz=53,slow=7.4,SNR=17						
IDI				LR	LR	02 25 58.9	
	comp=Z,29nm,18.8s,baz=70,slow=40						
IDI	Anoyia	86.22	313	eP	P	01 41 50.4	-0.9
	comp=Z,14nm,1.0s						
K42A	Prairie Point,	86.25	35	P	P	01 41 50.6	-0.6
	baz=322						
N39A	Derby Farms, D	86.25	38	P	P	01 41 51.0	-0.2
	baz=321						
L41A	Preston	86.28	36	P	P	01 41 51.2	-0.1
	baz=322						
M40A	Post Highland	86.32	37	P	P	01 41 52.2	+0.7
	baz=321						
P37A	Lathrop	86.32	40	P	P	01 41 51.8	+0.2
	baz=320						
O38A	Galt	86.36	39	P	P	01 41 52.1	+0.4
	baz=320						
ITM	Ithomi	86.49	316	eP	P	01 41 51.9	-0.6
	comp=Z,18nm,0.7s						
N40A	Mertquake, Sal	86.69	38	P	P	01 41 53.7	+0.3
	baz=321						
P38A	Dawn	86.70	40	P	P	01 41 53.7	+0.2
	baz=320						
P38A	Dawn	86.70	40	eP	P	01 41 54.8	+1.3
	comp=Z,9.0nm,0.7s						
L42A	Oliver, Polo	86.71	36	P	P	01 41 53.8	+0.3
	baz=322						
M41A	Milan	86.80	37	P	P	01 41 53.8	-0.1
	baz=322						
LPL	La Plagne	86.98	330	eP	P	01 41 54.6	-0.4
LPL				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LPG	La Plagne	86.99	330	eP	P	01 41 54.8	-0.3
LPG				pmax	pmax		
	comp=Z,8.0nm,0.6s						
O40A	La Belle	87.14	38	P	P	01 41 55.6	+0.1
	baz=321						
AVF	Avril sur Loir	87.15	333	eP	P	01 41 55.2	-0.3
AVF				pmax	pmax		
	comp=Z,23nm,1.0s						
GRR	Gorron	87.16	336	eP	P	01 41 54.5	-1.0
GRR				pmax	pmax		
	comp=Z,36nm,1.2s						
Q38A	Cooks Store, C	87.17	40	P	P	01 41 55.7	-0.1
	baz=320,SNR=5.2						
P39B	Salisbury	87.20	39	P	P	01 41 56.5	+0.6
	baz=320						
Q39A	Willow Grove F	87.42	40	P	P	01 41 57.3	+0.4
	baz=320,SNR=13						
M43A	Waltham Townsh	87.49	36	P	P	01 41 57.2	0.0
	baz=323						
P40A	Paris	87.51	39	P	P	01 41 57.4	+0.1
	baz=321						
P40A	Paris	87.51	39	eP	P	01 41 58.8	+1.4
	comp=Z,9.9nm,0.9s						
R38A	Fenwick Farm,	87.61	41	P	P	01 41 57.8	-0.1
	baz=320						
O41A	Passleys Farm,	87.62	38	P	P	01 41 57.8	-0.1
	baz=322						
LPIG	La Paz	87.73	61	LR	LR	02 19 51.9	
	comp=Z,30nm,18.1s,baz=287,slow=35						
N43A	Stutzman Famil	87.78	36	P	P	01 41 58.5	-0.1
	baz=323						
ORIF	Oris-en-Rattie	87.81	331	eP	P	01 41 58.9	0.0
ORIF				pmax	pmax		
	comp=Z,3.0nm,0.8s						
P41A	Barry, Barry	87.88	38	P	P	01 41 59.5	+0.4
	baz=322						
Q40A	Laux Farm, Aux	87.91	39	P	P	01 41 59.6	+0.3
	baz=321						
R39A	Chumby, Stover	87.95	40	P	P	01 41 59.9	+0.3
	baz=320,SNR=5.1						
HDIL	Hopedale	88.03	37	P	P	01 42 00.0	+0.2
	baz=323						
HDIL	Hopedale	88.03	37	eP	P	01 42 00.1	+0.3
	comp=Z,11nm,0.8s						
S38A	Stockton	88.03	41	P	P	01 42 00.0	+0.1
	baz=320						
T38A	Diamond	88.28	42	P	P	01 42 01.4	+0.2
	baz=320,SNR=5.4						
S39A	Bolivar	88.29	41	eP	P	01 42 01.2	+0.1
S39A				epP	sP	01 42 19.5	-0.6
P42A	Winchester	88.30	38	P	P	01 42 01.3	+0.2
	baz=322						
P42A	Winchester	88.30	38	eP	P	01 42 02.3	+1.2
	comp=Z,8.6nm,0.7s						
Q41A	Truxton	88.36	39	P	P	01 42 01.9	+0.5
	baz=321,SNR=5.6						
R40A	Maddies Statio	88.36	40	P	P	01 42 01.6	+0.2
	baz=321,SNR=6.1						
R40A	Maddies Statio	88.36	40	eP	P	01 42 02.0	+0.6
R40A				epP	sP	01 42 19.3	-1.1
TX31	Lajitas Ar. Si	88.51	53	eP	P	01 42 03.9	+1.5
TX31				epP	sP	01 42 21.1	-0.3
TXAR	Lajitas Array	88.51	53	P	P	01 42 03.1	+0.6
	comp=Z,1.4nm,0.6s,baz=295,slow=2.9,SNR=24						
ABTX	Abilene, Hawle	88.59	48	P	P	01 42 03.0	+0.3
	baz=317						
O44A	Mansfield	88.73	36	P	P	01 42 03.5	+0.4
	baz=323						
T39A	Clever	88.77	41	P	P	01 42 04.1	+0.7
	baz=320						
S40A	Lebanon	88.77	40	P	P	01 42 04.0	+0.6
	baz=321						
R41A	Rosebud	88.80	39	P	P	01 42 04.0	+0.5
	baz=321,SNR=6.0						
TBI	Tubuai	88.91	121	eT	T	03 20 45.0	
	comp=Z,81nm,0.3s						
N46A	Monticello	88.93	35	P	P	01 42 04.3	+0.2
	baz=324						
O45A	Potomac	89.00	36	P	P	01 42 04.1	-0.3
	baz=324						
HHAR	Hobbs	89.04	42	eP	P	01 42 06.0	+1.3
	comp=Z,5.6nm,1.0s						
HHAR				epP	sP	01 42 23.9	+0.1
CCM	Cathedral Cave	89.05	39	P	P	01 42 05.0	+0.3
	baz=321						
CCM	Cathedral Cave	89.05	39	eP	P	01 42 04.6	-0.1
	comp=Z,10.0nm,0.8s						
CCM	Cathedral Cave	89.05	39	eP	P	01 42 04.6	-0.1
CCM				pmax	pmax		
	comp=Z,10.0nm,0.8s						
R42A	Luebbering	89.10	39	P	P	01 42 04.9	0.0
	baz=322						
AAM	Ann Arbor	89.10	32	P	P	01 42 05.5	+0.7
	baz=326						
T40A	Mansfield	89.11	41	P	P	01 42 05.1	0.0
	baz=321						
TRQ	Mont Tremblant	89.12	25	eP	P	01 42 05.5	+0.6
S41A	Jilco Farms,	89.16	40	P	P	01 42 05.4	+0.2
	baz=321						
U39A	Green Forest	89.20	42	P	P	01 42 05.9	+0.4
	baz=320,SNR=7.0						
P44A	Sand Creek, Wi	89.21	37	P	P	01 42 06.2	+0.8
	baz=323						
CAF	Calviac	89.22	333	eP	P	01 42 05.7	+0.3
CAF				pmax	pmax		
	comp=Z,6.0nm,0.8s						
PLVO	Plevna	89.31	27	eP	P	01 42 06.5	+0.7
	comp=Z,6.6nm,1.0s						
S42A	Caledonia	89.50	39	P	P	01 42 07.5	+0.7
	baz=322						
R43A	Red Bud	89.52	38	P	P	01 42 06.9	0.0
	baz=322						
V39A	Pettigrew	89.53	42	P	P	01 42 07.2	+0.2
	baz=320						
U40A	Yellville	89.55	41	P	P	01 42 07.1	+0.1
	baz=320,SNR=8.9						
P45A	Graceland, Par	89.57	36	P	P	01 42 07.3	+0.3
	baz=324						
T41A	Mountain View	89.58	40	P	P	01 42 07.8	+0.6
	baz=321						
LFF	La Frestale	89.67	334	eP	P	01 42 07.6	+0.2
LFF				pmax	pmax		
	comp=Z,8.0nm,0.7s						
O47A	Sheridan	89.71	35	P	P	01 42 08.2	+0.5
	baz=325						
P46A	Rosedale	89.74	36	P	P	01 42 08.1	+0.2
	baz=324						
Q45A	Warren Harvey,	89.88	37	P	P	01 42 08.5	0.0
	baz=323						
T42A	Van Buren	89.92	40	P	P	01 42 09.4	+0.6
	baz=322,SNR=5.6						
W39A	Magazine	89.95	43	P	P	01 42 09.2	+0.3
	baz=320						
R44A	Waltonville	89.96	38	P	P	01 42 08.8	-0.1
	baz=323						
OLIL	Olney	90.03	37	eP	P	01 42 11.1	+1.8
	comp=Z,14nm,1.0s						
U41A	Viola	90.04	41	P	P	01 42 09.7	+0.3
	baz=321						
JCT	Junction City	90.05	50	P	P	01 42 10.5	+0.9
	baz=317						
VAE	Valguarnera	90.14	321	LR	LR	02 27 40.7	
	comp=Z,76nm,18.4s,baz=128,slow=39						
P47A	Martinsville	90.27	35	P	P	01 42 11.1	+0.7
	baz=324						
T43A	Greenville	90.28	39	P	P	01 42 11.3	+0.8
	baz=322						
X39A	Fountain Ranch	90.29	43	P	P	01 42 11.3	+0.7
	baz=320						
S44A	Carbondale	90.31	38	P	P	01 42 10.9	+0.3
	baz=323						
SIUC	Southern Illin	90.31	38	eP	P	01 42 11.9	+1.3
SIUC				epP	sP	01 42 29.8	+0.2
W40A	Ferguson Farm,	90.33	42	P	P	01 42 11.2	+0.5
	baz=320						
V41A	Mountainview	90.35	41	P	P	01 42 11.2	+0.3
	baz=321						
LONY	Lake Ozonia	90.53	25	P	P	01 42 11.8	+0.3
	baz=332						
MIAR	Mount Ida	90.55	43	P	P	01 42 12.8	+1.0
	baz=320,SNR=5.8						
MIAR	Mount Ida	90.55	43	eP	P	01 42 13.2	+1.4
	comp=Z,10.0nm,1.1s						
MIAR	Mount Ida	90.55	43	eP	P	01 42 13.2	+1.4
MIAR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
Q47A	Bedord North L	90.65	36	P	P	01 42 12.8	+0.6
	baz=324						
WHAR	Wooly Hollow	90.66	42	eP	P	01 42 13.2	+1.0
WHAR				epP	sP	01 42 31.1	-0.2
V42A	Cord	90.72	41	P	P	01 42 12.7	+0.2
	baz=321						
O50A	Cable	90.90	33	P	P	01 42 13.2	-0.1
	baz=326						
X40A	Basin Creek Fa	90.99	43	P	P	01 42 14.3	+0.5
	baz=320						
MMNY	Mt. Morris Dam	91.00	28	eP	P	01 42 15.1	+1.4
	comp=Z,9.7nm,0.8s						
ACSO	Alum Creek Sta	91.10	33	P	P	01 42 15.1	+0.8
	baz=327						
ACSO	Alum Creek Sta	91.10	33	eP	P	01 42 15.5	+1.3
	comp=Z,8.1nm,0.8s						
P50A	Jamestown	91.27	34	P	P	01 42 15.9	+0.9
	baz=326						
T46A	Princeton	91.48	38	P	P	01 42 15.4	-0.7
	baz=324						
N54A	Moraine State	91.72	31	P	P	01 42 17.2	+0.1
	baz=329						
WVT	Waverly	92.24	38	P	P	01 42 19.9	+0.3
	baz=324						
V46A	Holladay	92.37	39	P	P	01 42 20.1	-0.1
	baz=323						
V47A	Nunnelly	92.64	38	P	P	01 42 21.7	+0.3
	baz=324						
U49A	Red Boiling Sp	92.91	37	P	P	01 42 22.7	0.0
	baz=325						
V48A	Smith Brothers	93.04	38	P	P	01 42 23.3	0.0
	baz=324						
S52A	Salyersville	93.18	34	P	P	01 42 23.3	-0.7
	baz=326						
N59A	State Game Lan	93.37	28	P	P	01 42 23.8	-0.9
	baz=332						
V49A	McMinnville	93.46	37	P	P	01 42 25.2	0.0
	baz=325						
W48A	Pulaski	93.47	38	P	P	01 42 25.0	-0.3
	baz=324						
W49A	Belvidere	93.81	38	P	P	01 42 26.7	-0.1
	baz=324						
TZTN	Tazewell	93.91	35	P	P	01 42 27.3	0.0
	baz=326						
KEST	Kesra	93.97	323	P	P	01 42 27.8	+0.2
	comp=Z,2.0nm,0.8s,baz=325,slow=5.5,SNR=4.0						
X48A	Hartselle	93.97	39	P	P	01 42 27.5	0.0
	baz=324						
X49A	Woodville	94.27	38	P	P	01 42 29.4	+0.5
	baz=324						
U53A	Fall Branch	94.50	35	P	P	01 42 30.2	+0.2
	baz=327						
TKL	Tuckaleechee C	94.54	36	P	P	01 42 30.9	+0.7
	comp=Z,2.7nm,0.7s,baz=217,slow=5.1,SNR=5.0						
TKL				LR	LR	02 27 27.2	
	comp=Z,23nm,19.3s,baz=334,slow=37						
Y50A	Piedmont	95.06	38	P	P	01 42 32.8	+0.2
	baz=325						
W53A	Cullowhee	95.22	36	P	P	01 42 33.3	-0.2
	baz=326						
Z50A	Ashland	95.49	39	P	P	01 42 34.5	-0.1
	baz=324						
ES19	SONSECA Array	95.90	334	eP	P	01 42 35.8	-0.6
ESDC	Sonseca Array	95.94	334	P	P	01 42 35.4	-1.2
	comp=Z,0.8nm,0.7s,baz=17,slow=3.8,SNR=7.0						
ESDC				PP	PP	01 46 31.0	+2.8
	comp=Z,1.3nm,1.0s,baz=23,slow=6.4,SNR=5.2						
ESDC				LR	LR	02 31 07.9	
	comp=Z,74nm,18.8s,baz=165,slow=39						
Y54A	Tignall	96.53	36	P	P	01 42 40.0	+0.8
	baz=327						
858A	St. Cloud	101.85	38	Pdiff	Pdif	01 43 03.0	-0.2
	baz=327						
859A	Kempfer Cattle	102.20	38	Pdiff	Pdif	01 43 04.4	-0.3
	baz=327						
060A	Indiantown	103.32	38	Pdiff	Pdif	01 43 09.2	-0.4
	baz=327						
TORD	Torodi Ar. Bea	116.49	316	PKP	PKPdf	01 47 52.5	-1.3
	comp=Z,0.6nm,0.6s,baz=42,slow=2.0,SNR=5.0						
LSZ	Lusaka	118.07	273	ePKPdf	PKPdf	01 47 56.7	-0.2
LSZ	Lusaka	118.07	273	ePKIKP	PKPdf	01 47 56.7	-0.2
KOWA	Kowa	118.26	322	PKP	PKPdf	01 47 56.6	-0.6
	comp=Z,2.2nm,0.5s,baz=76,slow=4.2,SNR=6.1						
DBIC	Dimbokro	125.39	319	PKP	PKPdf	01 48 10.9	0.0
	comp=Z,4.2nm,0.7s,baz=322,slow=1.7,SNR=4.7						
BOSA	Boshof	127.52	261	PKP	PKPdf	01 48 14.4	-0.3
	comp=Z,2.6nm,0.7s,baz=153,slow=3.9,SNR=5.9						
QSPA	South Pole Qui	128.59	180	PKP	PKPdf	01 48 15.1	-0.3
SAML	Samuel	142.50	44	ePKPdf	PKPdf	01 48 44.1	+1.3
SNAA	Sanae	142.67	197	PKP	PKPpre	01 48 36.7	
SNAA	Sanae	142.67	197	PKhKP	PKPpre	01 48 36.7	
	comp=Z,3.0nm,0.9s,baz=199,slow=5.8,SNR=16						
VNA2	Neumayer--Watz	144.24	197	PKP	PKPbc	01 48 42.5	0.0
	slow=2.1						
VNA3	Neumayer Olymp	144.48	195	PKP	PKPab	01 48 43.0	0.0
VNA1	Neumayer--Stat	144.63	196	PKP	PKPbc	01 48 43.8	+0.2
LPAZ	La Paz	145.21	58	PKPbc	PKPdf	01 48 48.5	+0.3
	comp=Z,2.4nm,0.6s,baz=337,slow=4.2,SNR=10						
LPAZ	La Paz	145.21	58	ePKPbc	PKPdf	01 48 48.3	+0.1
MNMC	Minye Minye	146.18	64	ePKPdf	PKPab	01 48 51.8	+0.7
LCO	Las Campanas	151.10	80	ePKPbc	PKPbc	01 49 03.8	+0.9

CSEM ***24*** *01:49:37.8, 46.°17N×15.°74E, h0km, ML0.4*

LJU 24 01:49:37.8, 46.°17N×15.°74E, h5km, ML0.4, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLS	Golise	0.18	207	i Pg	Pg	01 49 41.4	+0.1
GOLS				i Sg	Sg	01 49 44.3	+0.5
	comp=Z,9.0nm,0.1s						
GOLS	Golise	0.18	207	i Pg	Pg	01 49 41.4	0.0
GOLS				i Sg	Sg	01 49 44.3	+0.5
	comp=Z,9.0nm,0.1s						
DOBS	Dobrina	0.19	263	i Pg	Pg	01 49 41.7	+0.1
DOBS				i Sg	Sg	01 49 44.5	+0.4
	comp=Z,4.0nm,0.1s						
DOBS	Dobrina	0.19	263	i Pg	Pg	01 49 41.7	+0.1
DOBS				i Sg	Sg	01 49 44.5	+0.4
	comp=Z,4.0nm,0.1s						
CESS	Cesta pri Krsk	0.28	225	i Sg	Sg	01 49 47.4	+0.5
	comp=Z,3.0nm,0.1s						
CESS	Cesta pri Krsk	0.28	225	i Sg	Sg	01 49 47.4	+0.5
	comp=Z,3.0nm,0.1s						
GCIS	Gornji Cirnik	0.32	195	i Pg	Pg	01 49 44.1	+0.2
	comp=Z,2.0nm,0.1s						
GCIS	Gornji Cirnik	0.32	195	i Pg	Pg	01 49 44.1	+0.2
	comp=Z,2.0nm,0.1s						
LEGS	Legarje	0.37	233	i Pg	Pg	01 49 45.4	+0.4
LEGS				i Sg	Sg	01 49 50.5	+0.6
LEGS	Legarje	0.37	233	i Pg	Pg	01 49 45.4	+0.4
LEGS				i Sg	Sg	01 49 50.5	+0.7
CRES	Cresnjev	0.40	210	i Pg	Pg	01 49 45.5	0.0
CRES				i Sg	Sg	01 49 51.3	+0.6
	comp=Z,1.0nm,0.1s						
CRES	Cresnjev	0.40	210	i Pg	Pg	01 49 45.5	0.0
CRES				i Sg	Sg	01 49 51.3	+0.6
PDKS	Podkum	0.53	258	i Pg	Pg	01 49 48.2	+0.2
PDKS				i Sg	Sg	01 49 55.9	+1.0
	comp=Z,2.0nm,0.2s						
PDKS	Podkum	0.53	258	i Pg	Pg	01 49 48.2	+0.2
PDKS				i Sg	Sg	01 49 55.9	+1.0
	comp=Z,2.0nm,0.2s						

NIED ***24*** *01:57:00, 38.°00N×142.°50E, h41km, Mw3.6 Best double couple: M0 2.70000×10^14 NP1:φs 12.00000°, δ30.00000°, λ73.00000°. NP2:φs 211.00000°, δ61.00000°, λ100.00000°.*
JMA ***24*** *01:57:32.6± 0.2, 38.°02N×142.°48E, h43km±3km, M3.6*
IDC ***24*** *01:57:35.3± 1.7, 38.°59N×141.°73E, h0km, mb3.7/4, mb1 3.7/6, mb1mx3.4/68, mbtmp3.6/6, ML3.1/2, MS2.6/4, Ms1 2.6/4, ms1mx2.3/69, Error ellipse: s-maj=36.9km s-min=21.4km az=92.0*

ISC 24 01:57:32.3± 1.7, 38.°02N±0.°07×142.°6E±0.°1, h35km, n28, σ1 9/16/27, mb3.8/4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	Ouri	1.09	294	P	Pn	01 57 50.6	-0.5
JIO				S	Sn	01 58 03.1	-1.8
OFUJ	Ofunato	1.29	325	P	Pn	01 57 53.9	0.0
OFUJ				S	Sn	01 58 09.3	-0.6
JMK	Ichinoseki	1.44	311	P	Pn	01 57 55.9	0.0
JMM	Marumori	1.45	264	P	Pn	01 57 55.2	-0.9
JMM				S	Sn	01 58 11.6	-2.3
JFK	Kawauchi	1.53	245	P	Pn	01 57 55.9	-1.3
JFK				eS	Sn	01 58 13.4	-2.5
JOU	Okura	1.58	283	P	Pn	01 57 57.7	-0.1
JOU				eS	Sn	01 58 16.3	-0.7
JOM	Ohasama	1.78	325	P	Pn	01 58 01.1	+0.5
JFT	Otama	1.88	255	P	Pn	01 58 02.0	+0.1
JFT				S	Sn	01 58 23.2	-1.2
JYK	Kaneyama	1.99	297	P	Pn	01 58 03.8	+0.4
JYS	Shiratake	2.02	276	P	Pn	01 58 03.9	0.0
JYS				eS	Sn	01 58 27.7	-0.3
JRG	Rokugo	2.07	312	P	Pn	01 58 05.2	+0.6
JANG	Nango	2.50	340	P	Pn	01 58 10.6	+0.1
JAW	Awa shima	2.69	280	P	Pn	01 58 13.5	+0.4
MJAR	Matsushiro Arr	3.82	249	Pn	Pn	01 58 29.4	+0.8
	0.7nm,0.3s,baz=51,slow=9.8,SNR=6.8						
MJAR				Sn	Sn	01 59 14.9	+2.6
	0.7nm,0.3s,baz=54,slow=27,SNR=3.1						
MJAR				LR	LR	02 00 11.6	
	comp=Z,31nm,21.8s,baz=60,slow=45						
ASAJ	Asahikawa	6.09	360	Pn	Pn	01 58 58.6	-1.1
	0.8nm,0.3s,baz=194,slow=15,SNR=9.8						
ASAJ				Sn	Sn	02 00 07.1	-1.1
	0.3nm,0.3s,baz=270,slow=19,SNR=3.3						
JNU	Nakatsue	10.74	246	LR	LR	02 04 32.5	
	comp=Z,22nm,19.6s,baz=108,slow=40						
KSRS	Korea Array	11.65	272	LR	LR	02 04 26.9	
	comp=Z,17nm,20.2s,baz=230,slow=38						
H11N2	WAKE ISLAND Hy	27.87	124	T	T	02 33 16.2	
	baz=316,slow=76,SNR=19						
H11N1	WAKE ISLAND Hy	27.88	124	T	T	02 33 47.5	
	baz=316,slow=76,SNR=12						
H11N3	WAKE ISLAND Hy	27.89	124	T	T	02 33 38.3	
	baz=316,slow=76,SNR=11						
SONM	Songino Array	28.05	302	P	P	02 03 21.0	+0.7
	0.5nm,0.6s,baz=112,slow=6.6,SNR=4.1						
H11S1	WAKE ISLAND Hy	28.63	126	T	T	02 34 10.4	
	baz=321						
H11S3	WAKE ISLAND Hy	28.63	126	T	T	02 34 38.7	
	baz=321						
H11S2	WAKE ISLAND Hy	28.64	126	T	T	02 34 32.5	
	baz=321						
MKAR	Makanchi Array	44.41	301	P	P	02 05 40.5	+0.9
	0.7nm,0.7s,baz=86,slow=9.5,SNR=6.7						
KURBB	Kurchatov Arra	46.16	307	P	P	02 05 53.4	+0.2
	0.8nm,0.4s,baz=82,slow=8.5,SNR=6.1						
WRA	Warramunga Arr	58.18	189	P	P	02 07 34.4	+12
	0.9nm,0.7s,baz=9.2,slow=7.3,SNR=2.3						
GEYT	Alibeck	64.20	299	LR	LR	02 35 39.8	
	comp=Z,28nm,19.0s,baz=190,slow=36						

ISCJB ***24*** *02:09:54.7± 0.5, 38.°40N±0.°03×27.°96E±0.°04, h6km±7km, Error ellipse: s-maj=6.2km s-min=3.9km az=37.1*
ISK ***24*** *02:09:54.6, 38.°40N×27.°99E, h8km, ML1.8/6*
DDA ***24*** *02:09:54.9, 38.°42N×27.°97E, h7km, Ml2.5*
CSEM ***24*** *02:09:55.0± 0.1, 38.°40N×27.°97E, h10km, ML1.8, Error ellipse: s-maj=2.7km s-min=1.8km az=117.0*

ISC 24 02:09:55.2± 1.0, 38.°41N±0.°02×27.°96E±0.°03, h7km±14km, n25, σ0 9/28/39, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYDB	Zeytinkoy-Aydi	0.46	187	PG	Pg	02 10 03.9	-0.3
AYDB				SG	Sg	02 10 10.9	+0.6
AYDB	Zeytinkoy-Aydi	0.46	187	ePg	Pg	02 10 03.9	-0.3
AYDB				eSg	Sg	02 10 10.9	+0.6
MANT	Manisa	0.48	80	i P	Pg	02 10 04.8	+0.3

DGB	˜zmir	0.92	248	*i* P		Pg	02 10 12.4	-0.4
STEP	BALIKESIR_Sava	0.98	349	*i* P		Pb	02 10 14.6	0.0
STEP				*i* S		Sb	02 10 27.9	+0.1
STEP	BALIKESIR_Sava	0.98	349	P		Pb	02 10 14.6	0.0
STEP				S		Sb	02 10 27.9	+0.1
SIMA	Simav-Kutahya	1.05	50	PG		Pg	02 10 14.9	-0.4
SIMA	Simav-Kutahya	1.05	50	*e*Pg		Pg	02 10 14.9	-0.4
URLA	Izmir	1.07	268	PN		Pg	02 10 15.8	+0.1
URLA	Izmir	1.07	268	*e*Pn		Pg	02 10 15.8	+0.1
MLSB	Milas	1.12	187	PN		Pg	02 10 16.3	-0.4
MLSB	Milas	1.12	187	*e*Pn		Pg	02 10 16.3	-0.4
BALB	Balikesir	1.23	357	PN		Pg	02 10 19.0	+0.2
BALB	Balikesir	1.23	357	*e*Pn		Pg	02 10 19.0	+0.2

IDC 24 02:11:04.3±8.3, 36°.89N×71°.22E, h68km±50km, mb3.4/3, mb1 3.4/4, mb1mx2.9/63, mbtmp3.7/4, ML3.0/1, Error ellipse: s-maj=128.8km s-min=33.7km az=163.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEYT	Alibeck	10.48	280	P	Pn	02 13 33.6	+2.0
	baz=95,slow=16,SNR=1.8						
GEYT				S	Sn	02 15 24.6	-2.7
	baz=134,slow=28,SNR=1.5						
ZALV	Zalesovo Beam	19.49	25	P	P	02 15 24.5	-1.0
	0.2nm,0.3s,baz=216,slow=9.0,SNR=3.1						
FINES	FINESS Array B	37.26	326	P	P	02 18 09.2	+0.2
	0.9nm,0.5s,baz=120,slow=12,SNR=3.8						
ARCES	ARCESS Array B	40.85	337	P	P	02 18 38.7	-0.2
	0.3nm,0.6s,baz=114,slow=9.0,SNR=3.5						
HFS	Hagfors	42.87	322	P	P	02 18 55.6	+0.1
	1.9nm,0.9s,baz=91,slow=6.2,SNR=2.8						

*IDC **24** 02:26:33.6±4.0, 36°.99N×71°.78E, h80km±30km, mb3.6/14, mb1 3.8/19, mb1mx3.6/68, mbtmp4.1/19, Error ellipse: s-maj=37.8km s-min=15.7km az=163.0*
*BJI **24** 02:26:33.1, 37°.35N×71°.16E, h107km, mb4.4/13, mB4.3/7*
*ISCJB **24** 02:26:36.8±0.2, 37°.26N±0°.02×71°.71E±0°.04, h109km, mb4.0/27, Error ellipse: s-maj=4.3km s-min=3.5km az=7.1*
*MOS **24** 02:26:38.7±0.7, 37°.36N×71°.68E, h124km, mb4.0/14, Error ellipse: s-maj=10.7km s-min=5.2km az=86.3*
*NNC **24** 02:26:38.6±7.0, 37°.78N×70°.85E, h0km, mb4.5, mpv4.3, Error ellipse: s-maj=84.5km s-min=34.3km az=155.0*
*NEIC **24** 02:26:38.8±1.0, 37°.36N×71°.59E, h106km±9km, mb4.1/8, Error ellipse: s-maj=16.1km s-min=8.0km az=139.0*
ISC 24 02:26:37.7±0.5, 37°.31N±0°.04×71°.62E±0°.04, h109km, n123, σ2s19/134, mb4.2/27, 16C-8D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.07	28	⇑P	Pn	02 27 28.2	+3.3
	42nm,0.4s						
SFK				⇑S	Sn	02 28 04.5	+3.3
	174nm,0.2s						
SFK	Sufi-Kurgan	3.07	28	PN	Pn	02 27 28.2	+3.3
SFK				S	Sn	02 28 04.5	+3.3
SFK				pmax	pmax		
	comp=Z,42nm,0.4s						
SFK				smax	smax		
	comp=N,174nm,0.2s						
KBL	Kabul	3.47	218	*e*Pn	Pn	02 27 32.4	+2.2
KBL				*e*Sn	Sn	02 28 12.8	+2.2
KBL	Kabul	3.47	218	*e*PN	Pn	02 27 32.4	+2.2
CEP	Cherat	3.49	176	P	Pn	02 27 32.1	+1.7
CEP				S	Sn	02 28 12.0	+0.9
CHCP	Chirah Chowk	3.89	159	P	Pn	02 27 37.3	+1.7
KSH	Kashi	4.07	56	P	Pn	02 27 35.8	-2.2
KSH				S	Sn	02 28 17.8	-7.0
THW	Thamme Wali	4.51	179	P	Pn	02 27 44.3	+0.3
AML	Almayashu	5.07	18	P	Pn	02 27 54.1	+2.3
	SNR=53						
MNAS	Manas	5.21	7	⇑P	Pn	02 27 55.9	+2.4
	comp=N,14nm,0.4s						
MNAS				⇑S	Sn	02 28 51.8	-0.7
	comp=N,267nm,0.8s						
MNAS	Manas	5.21	7	PN	Pn	02 27 55.9	+2.4
MNAS				pmax	pmax		
	comp=Z,14nm,0.4s						
NRN	Naryn	5.33	38	*e*Pn	Pn	02 27 56.1	+0.9
NRN				*e*Sn	Sn	02 28 53.5	-2.2
NRN	Naryn	5.33	38	*e*PN	Pn	02 27 56.2	+0.9
UCH	Uchtor	5.39	24	P	Pn	02 27 58.5	+2.3
	SNR=50						
KZA	Kyzart	5.52	29	P	Pn	02 27 59.6	+1.7
	SNR=29						
EKS2	Erkin-Say	5.59	17	P	Pn	02 28 01.6	+3.0
	SNR=17						
AAK	Ala-Archa	5.76	22	⇓P	Pn	02 28 02.9	+2.0
	comp=Z,24nm,0.5s						
AAK				⇑S	Sn	02 29 02.9	-2.8
	comp=Z,196nm,1.1s						
AAK	Ala-Archa	5.76	22	P	Pn	02 28 03.8	+2.9
	SNR=8.7						
AAK	Ala-Archa	5.76	22	PN	Pn	02 28 02.9	+2.0
AAK				pmax	pmax		
	comp=Z,24nm,0.5s						
KK31	Karatay Array	5.84	352	*e*Pn	Pn	02 28 04.0	+2.1
KK31				*e*Sn	Sn	02 29 06.1	-1.5
KK31	Karatay Array	5.84	352	*e*PN	Pn	02 28 04.0	+2.1
KKAR	Karatay Array	5.84	352	*e*Pn	Pn	02 28 04.0	+2.1
KKAR				*e*Sn	Sn	02 29 07.0	-0.5
KKAR	Karatay Array	5.84	352	*e*PN	Pn	02 28 04.0	+2.1
KBK	Karagaybulak	5.92	25	P	Pn	02 28 05.6	+2.5
	SNR=9.7						
ULHL	Ulahol	6.08	34	P	Pn	02 28 06.9	+1.6
	SNR=20						
CHMS	Chumysh	6.16	22	P	Pn	02 28 08.7	+2.4
	SNR=20						
USP	Ospenovka	6.34	19	P	Pn	02 28 10.9	+2.2
	SNR=25						
DHRM	DHARAMSHALA	6.35	141	*e*P	Pn	02 28 06.9	-2.2
DHRM				*e*S	Sn	02 29 13.1	-7.3
DHRM				IAML		02 29 16.3	
	comp=E,616nm,1.0s						
DHRM				IAML		02 29 19.0	
	comp=N,308nm,0.4s						
TKM2	Tokmak 2	6.38	27	⇑Pn	Pn	02 28 11.6	+2.3
	comp=N,18nm,0.3s						
TKM2				⇓Lg	Lg	02 29 15.4	
	comp=N,29nm,0.6s						
TKM2	Tokmak 2	6.38	27	P	Pn	02 28 11.5	+2.2
	SNR=23						
TKM2	Tokmak 2	6.38	27	PN	Pn	02 28 11.6	+2.3
TKM2				pmax	pmax		
	comp=Z,18nm,0.4s						
MDOK	Medeo	7.17	34	⇓P	Pn	02 28 23.3	+3.3
	comp=Z,21nm,0.7s						
SMLA	Simla	7.69	142	*e*P	Pn	02 28 25.8	-1.2
SMLA				*e*S	Sn	02 29 43.0	-9.5
SMLA				IAML		02 29 48.1	
	comp=E,247nm,0.4s						
SMLA				IAML		02 29 48.7	
	comp=N,141nm,0.7s						
PDGK	Podgornoye	8.50	43	⇑Pn	Pn	02 28 38.2	+0.2
	comp=N,13nm,1.2s						
PDGK				⇑Sn	Sn	02 30 37.3	+25
	comp=N,20nm,1.0s						
PDGK	Podgornoye	8.50	43	PN	Pn	02 28 38.2	+0.2
PDGK				pmax	pmax		
	comp=Z,13nm,1.2s						
GEYT	Alibeck	10.73	277	P	Pn	02 29 06.2	-2.0
	comp=Z,1.5nm,0.3s,baz=122,slow=9.8,SNR=4.3						
GEYT				S	Sn	02 31 00.7	-5.5
	comp=Z,4.7nm,0.3s,baz=112,slow=22,SNR=5.4						
GYA0B	ALIBECK ARRAY	10.73	277	⇑P	Pn	02 29 06.3	-1.9
	comp=Z,8.4nm,0.7s						
GYA0B				⇑S	Sn	02 30 58.8	-7.5
	comp=Z,129nm,1.3s						
GYA0B	ALIBECK ARRAY	10.73	277	*e*Pn	Pn	02 29 06.3	-1.9
GYA0B				*e*Sn	Sn	02 31 00.5	-5.8
OTUK	Ortayu	10.94	3	⇓Pn	Pn	02 29 10.9	0.0
	comp=Z,1.9nm,0.6s						
OTUK	Ortayu	10.94	3	P	Pn	02 29 10.9	0.0
OTUK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MAKZ	Makanchi	12.21	36	*e*Pn	Pn	02 29 27.9	+0.1
MAKZ	Makanchi	12.21	36	*e*P	Pn	02 29 27.9	+0.1
MK01	Makanchi Array	12.33	37	*e*Pn	Pn	02 29 29.3	-0.2
MK31	Makanchi Array	12.34	37	P	Pn	02 29 29.5	-0.1
	comp=Z,4.3nm,0.8s,baz=222,slow=12,SNR=15						
MK31	Makanchi Array	12.34	37	*e*Pn	Pn	02 29 30.2	+0.7
MK31	Makanchi Array	12.34	37	*e*P	Pn	02 29 30.3	+0.7
MKAR	Makanchi Array	12.34	37	P	Pn	02 29 29.1	-0.6
	comp=Z,0.2nm,0.3s,baz=223,slow=14,SNR=19						
MKAR	Makanchi Array	12.34	37	*e*Pn	Pn	02 29 30.2	+0.6
PYUN	Piuthan	13.26	131	*e*P	Pn	02 29 37.5	-4.4
	comp=Z,27nm,0.3s						
DANN	Dangsing	13.56	128	*e*P	Pn	02 29 41.8	-4.1
	comp=Z,19nm,0.3s						
WMQ	Urumqi	13.83	57	P	Pn	02 29 50.8	+1.7
KOLN	Koldanda	13.87	130	*e*P	Pn	02 29 45.6	-4.2
	comp=Z,12nm,0.3s						
KURBB	Kurchatov Arra	14.20	18	P	Pn	02 29 54.4	+0.8
	comp=Z,0.0nm,0.3s,baz=206,slow=11,SNR=4.4						
KURK	Kurchatov	14.30	18	*e*Pn	Pn	02 29 55.4	+0.4
KURK	Kurchatov	14.30	18	*e*P	P	02 29 58.7	-0.2
GKN	Gorkha	14.36	127	*e*P	Pn	02 29 52.5	-3.5
	comp=Z,20nm,0.3s						
AB31	Akbulak array	14.63	328	P	Pn	02 29 58.2	-1.0
	comp=Z,8.7nm,0.7s,baz=154,slow=11,SNR=70						
AB31				⇓S	Sn	02 32 28.6	-12
	comp=Z,8.2nm,0.6s,baz=155,slow=23						
AB31	Akbulak array	14.63	328	P	Pn	02 29 58.2	-1.0
AB31				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ABKAR	Akbulak array	14.63	328	*e*Pn	Pn	02 29 58.4	-0.8
KKN	Kakani	14.92	126	*e*P	Pn	02 29 59.5	-3.7
	comp=Z,6.6nm,0.2s						
DMN	Daman	14.93	127	*e*P	Pn	02 29 59.4	-4.0
	comp=Z,14nm,0.4s						
PKIN	Phulchoki	15.14	126	*e*P	Pn	02 30 01.8	-4.2
	comp=Z,13nm,0.3s						
JIRN	Jiri	15.60	124	*e*P	Pn	02 30 08.1	-3.8
	comp=Z,37nm,0.3s						
BVA0	Borovoye Array	15.73	357	⇑P	Pn	02 30 13.3	+0.3
	comp=Z,2.5nm,0.6s,baz=175,slow=16,SNR=19						
BVA0	Borovoye Array	15.73	357	P	Pn	02 30 13.3	+0.3
BVA0				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BVAR	Borovoye Array	15.73	357	P	Pn	02 30 12.8	-0.3
	comp=Z,0.8nm,0.3s,baz=161,slow=11,SNR=14						
BRVK	Borovoye	15.77	357	⇑P	Pn	02 30 13.7	+0.3
	comp=Z,5.2nm,0.9s						
BRVK	Borovoye	15.77	357	*e*Pn	Pn	02 30 14.1	+0.6
	comp=Z,5.2nm,0.9s						
BRVK	Borovoye	15.77	357	⇓*e*P	Pn	02 30 13.4	-0.1
AKTO	Aktyubinsk	16.34	328	P	Pn	02 30 20.9	+0.4
	comp=Z,2.1nm,0.3s,baz=143,slow=12,SNR=40						
AKTO				S	Sn	02 33 13.8	-7.9
	comp=Z,0.3nm,0.3s,baz=157,slow=15,SNR=4.1						
AKTO	Aktyubinsk	16.34	328	⇑P	Pn	02 30 20.9	+0.4
	comp=Z,20nm,0.9s,baz=155,slow=23						
AKTO				⇑S	Sn	02 33 09.4	-12
	comp=Z,6.1nm,0.9s						
RAMN	Ramite	16.35	125	*e*P	Pn	02 30 16.5	-4.6
	comp=Z,12nm,0.3s						
ZALV	Zalesovo Beam	18.97	25	P	P	02 30 51.2	+0.9
	comp=Z,2.3nm,0.3s,baz=232,slow=11,SNR=6.6						
NVS	Novosibirsk	19.25	21	*e*P	P	02 30 54.2	+0.9
NVS				pmax	pmax		
	comp=N,5.0nm,0.6s						
NVS				pmax	pmax		
	comp=E,4.0nm,0.6s						
NVS				pmax	pmax		
	comp=Z,5.0nm,0.6s						
SVE	Sverdlovsk	20.85	343	*e*P	P	02 31 12.2	+1.6
SVE				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ARU	Arti	21.03	340	P	P	02 31 13.9	+1.4
	comp=Z,3.2nm,0.5s,baz=134,slow=7.7,SNR=7.6						
ARU	Arti	21.03	340	*e*P	P	02 31 14.3	+1.7
	comp=Z,5.1nm,0.6s						
ARU	Arti	21.03	340	*d i*P	P	02 31 14.0	+1.4
ARU						02 31 39.5	
ARU				S	S	02 34 59.6	-0.8
ARU				SS	Sn	02 35 34.5	+21
ARU				pmax	pmax		
	comp=Z,9.0nm,1.2s						
GNI	Garni	21.13	286	*e*P	P	02 31 12.6	-1.3
GNI	Garni	21.13	286	*e*P	P	02 31 12.6	-1.3
NCK	Nalchik	22.15	295	⇑*e*P	P	02 31 25.1	+0.5
GTA	Gaotai	22.18	76	*e*P	P	02 31 26.8	+1.8
GTA				pmax	pmax		
	comp=Z,15nm,1.0s						
KIV	Kislovodsk	22.86	296	*e*P	P	02 31 34.7	+2.9
KIV				*e*S	S	02 35 33.4	+0.4
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
LZH	Lanzhou	25.80	83	*e*P	P	02 31 56.6	-2.2
LZH				pP	pP	02 32 23.3	+0.7
LZH				sP	sP	02 32 35.5	+0.2
LZH				*e*PP	PnPn	02 32 43.3	+0.7
LZH				pmax	pmax		
	comp=Z,18nm,0.8s						
LZH				pmax	pmax		
	comp=Z,170nm,7.6s						
RAYN	Ar Rayn	26.28	246	*e*P	P	02 32 04.8	+1.7
	comp=Z,1.3nm,0.4s						
TLY	Talaya	26.72	47	⇓*e*P	P	02 32 17.2	+10
TLY				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CD2	Chengdu	27.28	94	P	P	02 32 12.1	+0.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SONM	Songino Array	27.47	56	P	P	02 32 14.0	+0.4
	comp=Z,0.5nm,0.6s,baz=238,slow=8.3,SNR=4.5						
BRTR	Keskin Array B	29.67	286	P	P	02 32 34.6	+1.4
	comp=Z,0.7nm,0.6s,baz=104,slow=9.0,SNR=6.2						
BRTR	Keskin Array B	29.67	286	*e*P	P	02 32 35.6	+2.4
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GYA	Guiyang	31.50	100	*e*P	P	02 32 50.6	+1.1
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MLR	Muntele Rosu	34.82	298	P	P	02 33 19.9	+1.8
	comp=Z,0.9nm,0.9s,baz=82,slow=14,SNR=8.1						
MLR	Muntele Rosu	34.82	298	*e*P	P	02 33 20.8	+2.7
	comp=Z,4.3nm,0.9s						
MLR	Muntele Rosu	34.82	298	*e*P	P	02 33 20.8	+2.7
MLR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BUR04	Bucovina Ar. S	35.27	302	*e*P	P	02 33 23.9	+2.0
FIA1	FINESS Array S	37.09	325	*e*P	P	02 33 38.1	+1.0
FINES	FINESS Array B	37.09	325	P	P	02 33 38.8	+1.7
	comp=Z,3.1nm,0.5s,baz=119,slow=9.5,SNR=22						
OJC	Ojcow	38.81	306	*e*P	P	02 33 52.8	+1.1
	comp=Z,6.3nm,1.1s						
OJC	Ojcow	38.81	306	*e*P	P	02 33 52.8	+1.1
OJC				pmax	pmax		
	comp=Z,6.0nm,1.1s						
PSZ	Piszkesteto	38.84	303	*e*P	P	02 33 53.6	+1.5
	comp=Z,2.6nm,0.6s						
PSZ	Piszkesteto	38.84	303	*e*P	P	02 33 53.6	+1.5
PSZ				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ARCES	ARCESS Array B	40.59	337	P	P	02 34 07.8	+1.7
	comp=Z,2.7nm,0.5s,baz=114,slow=8.4,SNR=35						
ARCES	ARCESS Array B	40.59	337	*e*P	P	02 34 07.4	+1.2
BRG	Berggiesshubel	42.51	308	*e*P	P	02 34 24.4	+2.3
	comp=Z,2.5nm,0.7s						
BRG	Berggiesshubel	42.51	308	*e*P	P	02 34 24.4	+2.3
BRG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
HFS	Hagfors	42.74	321	P	P	02 34 25.3	+1.5
	comp=Z,9.9nm,0.5s,baz=98,slow=10,SNR=60						
GERES	GERESS Array B	42.87	305	P	P	02 34 26.6	+1.5
	comp=Z,0.3nm,0.8s,baz=78,slow=7.1,SNR=3.7						
CUC	Castrocucco	43.06	291	*e*P	P	02 34 29.2	+2.5
	comp=Z,3.6nm,0.8s						
CLL	Collm	43.07	308	*e*P	P	02 34 28.0	+1.4
CLL				*e*PP	PP	02 36 08.0	-0.5
CLL	Collm	43.07	308	*e*P	P	02 34 28.0	+1.4
NC303	NORSAR Array S	43.97	323	*e*P	P	02 34 34.4	+0.7
NB201	NORSAR Array S	43.99	323	*e*P	P	02 34 33.9	0.0
NB2	NORSAR Subarra	44.03	322	P	P	02 34 35.2	+1.0
	comp=Z,2.5nm,0.6s,baz=93,slow=7.9						
DAVOX	Davos/Dischmat	45.74	302	P	P	02 34 49.1	+0.9
	comp=Z,2.4nm,0.6s,baz=48,slow=12,SNR=5.0						
EKA	Eskdalemuir Ar	52.05	316	P	P	02 35 36.9	+1.0
	comp=Z,1.6nm,0.6s,baz=91,slow=7.1,SNR=6.2						
ES19	SONSECA Array	57.46	298	*e*P	P	02 36 16.0	+0.7
ESDC	Sonseca Array	57.52	298	P	P	02 36 16.9	+1.2
	comp=Z,1.0nm,0.6s,baz=55,slow=7.4,SNR=13						
TORD	Torodi Ar. Bea	66.23	269	P	P	02 37 12.9	-1.4
	comp=Z,0.6nm,0.7s,baz=49,slow=6.1,SNR=6.3						
INK	Inuvik	73.02	10	*e*P	P	02 37 55.9	+0.8
	comp=Z,1.2nm,0.5s						
INK	Inuvik	73.02	10	*e*P	P	02 37 55.9	+0.8
INK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ILAR	Eielson Array	73.86	16	P	P	02 37 59.9	-0.2
	comp=Z,0.3nm,0.7s,baz=298,slow=3.8,SNR=3.7						
YKA	Yellowknife Ar	80.41	3	P	P	02 38 37.2	+0.5
	comp=Z,0.5nm,0.3s,baz=351,slow=5.6,SNR=9.8						
PDAR	Pinedale Array	100.29	1	P	Pdif	02 40 13.2	+1.1
	comp=Z,0.1nm,0.3s,baz=302,slow=1.7,SNR=3.4						

SJA 24 02:39:59.5±0.3, 29°.44S×71°.18W, h6km±6km, ML2.7, MW3.5, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AROD	Rodeo	1.65	117	*i* P	Pg	02 40 31.5	+0.3
AROD				*i* S	Sg	02 40 54.4	+1.8
ACDV	Cuesta del Vie	1.93	113	*i* P	Pb	02 40 35.4	+0.2
AGUA	GUANDACOL	2.34	92	*i* P	Pb	02 40 41.1	-1.1
VCA	Vinchina	2.69	76	IAML		02 40 49.5	
	comp=Z,30nm,0.3s						

*NIED **24** 02:40:00.27°.00N×129°.90E, h8km, Mw4.0 Best double couple: M0 1.05000×10^15 NP1:φs65.00000°, δ34.00000°, λ-55.00000°. NP2:φs204.00000°, δ63.00000°, λ-112.00000°.*
*IDC **24** 02:40:38.4±0.8, 27°.01N×129°.92E, h0km, mb3.7/13, mb1 3.8/15, mb1mx3.7/60, mbtmp3.7/15, ML3.6/2, MS2.9/6, Ms1 2.9/6, ms1mx2.7/67, Error ellipse: s-maj=28.2km s-min=17.7km az=75.0*
*JMA **24** 02:40:41.3±0.1, 27°.02N×129°.90E, h56km, M4.1*
ISC 24 02:40:39.4±1.7, 27°.03N±0°.04×129°.90E±0°.04, h8km±10km, n36, σ1s29/49, mb3.7/14, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	Tokunoshima	1.13	312	P	Pg	02 41 01.2	0.0
JTK				*e*S	Sg	02 41 16.7	+0.8
JOKE	Okinoerabujima	1.23	286	P	Pb	02 41 02.8	-0.2
JOKE				*e*S	Sg	02 41 18.5	-0.6
JZK	Kikaishima	1.28	3	P	Pn	02 41 04.0	+0.3
JZK				*e*S	Sn	02 41 21.5	+0.4
JAMN	Amaminishikomi	1.37	332	P	Pn	02 41 04.6	-0.3
JAMN				*e*S	Sb	02 41 20.8	-2.3
JAM	Amami Oshima	1.40	349	P	Pn	02 41 05.2	-0.1
JAM				*e*S	Sb	02 41 22.2	-1.8
JOW	Kunigami	1.47	263	P	Pn	02 41 06.2	0.0
JOW				*e*S	Sn	02 41 24.3	-1.3
JMZ	Minamidaito 2	1.69	135	P	Pn	02 41 08.7	-0.5
JMZ				*e*S	Sn	02 41 28.4	-2.6
JIH	Iheya	1.73	271	P	Pn	02 41 09.8	+0.1
JIH				*e*S	Sn	02 41 31.3	-0.7
JNTH	Nagotoyohara	1.75	254	P	Pn	02 41 09.9	-0.3
JNTH				*e*S	Sn	02 41 30.4	-2.3
JJT3	Tamagusuku3	2.09	246	P	Pn	02 41 14.9	+0.1
JJT3				*e*S	Sn	02 41 40.3	-0.7
JTAJ	Takarajima	2.21	344	P	Pn	02 41 15.9	-0.5
JTAJ				*e*S	Sn	02 41 42.1	-1.7
JAGN	Aguni-jima	2.42	260	P	Pn	02 41 19.2	-0.1
JAGN				*e*S	Sn	02 41 47.6	-1.4
JNN	Nakanoshima	2.80	360	P	Pn	02 41 25.6	+1.0
JNN				*e*S	Sn	02 41 57.3	-1.3
JKE	Kume jima 2	2.87	257	P	Pn	02 41 24.7	-0.9
JKE				*e*S	Sn	02 41 58.8	-1.5
JYAK	Yakushimahirau	3.24	9	P	Pn	02 41 30.8	+0.2
JYAK				*e*S	Sn	02 42 06.8	-2.6
JTN	Tanegashima 3	3.73	14	P	Pn	02 41 37.6	+0.2
JTN				*e*S	Sn	02 42 20.0	-1.6
JNU	Nakatsue	6.13	8	Pn	Pn	02 42 11.2	+0.9
	2.4nm,0.3s,baz=11,slow=21,SNR=13						
JNU				Sn	Sn	02 43 16.7	-4.1
	0.5nm,0.3s,baz=16,slow=19,SNR=3.6						
KSRS	Korea Array	10.53	351	LR	LR	02 47 38.3	
	comp=Z,32nm,19.3s,baz=135,slow=40						
MJAR	Matsushiro Arr	11.82	35	LR	LR	02 48 04.3	
	comp=Z,33nm,18.0s,baz=225,slow=38						
GUMO	Guam	19.36	131	LR	LR	02 50 43.3	
	comp=Z,48nm,20.4s,baz=96,slow=31						
ASAJ	Asahikawa	19.89	28	P	P	02 45 10.8	-0.4
	0.3nm,0.3s,baz=252,slow=12,SNR=4.7						
ASAJ				LR	LR	02 52 57.5	
	comp=Z,54nm,19.0s,baz=165,slow=37						
SONM	Songino Array	27.73	325	P	P	02 46 28.4	-0.1
	0.5nm,0.8s,baz=142,slow=12,SNR=2.7						
SONM				LR	LR	02 58 55.4	
	comp=Z,35nm,20.1s,baz=132,slow=40						
CMAR	Chiang Mai Arr	29.74	260	LR	LR	02 59 19.2	
	comp=Z,21nm,18.0s,baz=290,slow=38						
MKAR	Makanchi Array	42.13	311	P	P	02 48 33.4	+1.2
	0.4nm,0.5s,baz=120,slow=8.5,SNR=3.7						
ZALV	Zalesovo Beam	42.53	322	P	P	02 48 35.7	+0.4
	0.4nm,0.3s,baz=122,slow=10,SNR=2.3						
KURBB	Kurchatov Arra	45.32	316	P	P	02 48 56.8	-1.0
	0.5nm,0.4s,baz=101,slow=8.9,SNR=5.1						
WRA	Warramunga Arr	46.89	174	P	P	02 49 10.8	+0.4
	0.5nm,0.4s,baz=353,slow=8.5,SNR=3.8						
ASAR	Alice Springs	50.55	175	P	P	02 49 38.1	-0.5
	0.3nm,0.3s,baz=5.6,slow=14,SNR=7.9						
BVAR	Borovoye Array	50.69	318	P	P	02 49 39.4	+0.1
	0.4nm,0.6s,baz=93,slow=7.7,SNR=2.9						
ILAR	Eielson Array	63.03	29	P	P	02 51 07.0	+0.3
	0.3nm,0.8s,baz=240,slow=8.7,SNR=4.8						
KBZ	Khabaz	69.81	310	P	P	02 51 51.0	+0.5
	2.0nm,0.8s,baz=232,slow=3.6,SNR=

ANIL			*e*S	Sn	03 00 36.2	+0.4
ANIL			*i*		03 00 37.6	
	comp=Z,363nm,0.3s					
ZARC	**Zaragoza, Cauc**	**1.97 332**	*e*P	Pn	03 00 10.2	-1.2
ZARC			*e*S	Sn	03 00 35.5	-0.6
ZARC			*i*		03 00 43.5	
	comp=Z,149nm,0.4s					
PAMC	**Pamplona, Colo**	**1.99 37**	*e*P	Pn	03 00 11.5	-0.5
PAMC			*i*		03 00 13.5	
	comp=Z,48nm,0.2s					
PAMC			*e*S	Sn	03 00 36.3	-1.0
PRAC	**Prado**	**2.24 206**	*e*P	Pn	03 00 13.6	-1.3
PRAC			*i*		03 00 16.4	
	comp=Z,242nm,0.2s					
PRAC			*e*S	Sn	03 00 42.5	+0.1
SJAC	**San Juan de Ar**	**2.46 181**	*e*P	Pn	03 00 17.5	-0.3
PLMC	**San Jos¯ del**	**2.50 251**	*e*P	Pn	03 00 18.3	0.0
OCAC	**Ocana**	**2.54 13**	*e*P	Pn	03 00 18.2	-0.7
OCAC			*i*		03 00 54.6	
	comp=Z,190nm,0.2s					
DBBC	**Dabeiba**	**2.61 299**	*e*P	Pn	03 00 20.7	+1.0
HORQ	**Saladito**	**3.51 230**	*e*P	Pn	03 00 30.6	-1.4
MARP	**Paez Belalcaza**	**3.53 215**	*e*P	Pn	03 00 30.3	-1.9
MARP			*i*		03 00 32.4	
	comp=Z,14nm,0.3s					
CODC	**Agust¯n Codaz**	**4.19 6**	*e*P	Pn	03 00 40.1	-0.6
FLOC	**Florencia**	**4.49 203**	*e*P	Pn	03 00 43.2	-1.6
FLOC			*i*		03 00 44.2	
	comp=Z,22nm,0.3s					

BJI ***24*** *03:14:59.5,57˚.51N×163˚.36E,h18km,mb5.8/69,mB6.3/79, Ms6.4/92,Ms7 6.2/86*

IDC ***24*** *03:14:59.4±0.3,57˚.49N×163˚.33E,h0km,mb5.4/59, mb1 5.4/63,mb1mx5.4/77,mbtmp5.4/63,ML4.6/3,MS5.7/78, Ms1 5.7/78,ms1mx5.7/84,Error ellipse: s-maj=9.2km s-min=7.4km az=143.0*

KRSC ***24*** *03:15:00.2±1.3,57˚.59N×163˚.56E,h67km±20km,ML6.1, FELT [VI] at GMS cape Ozernoy; [IV-V] at Ust-Kamchatsk, Krutoberegovo; [II-III] at Ivashka.*

ISCJB ***24*** *03:15:01.9±0.5,57˚.57N±0˚.01×163˚.34E±0˚.02,h27km±3km, mb5.7/707,MS5.8/614,Error ellipse: s-maj=2.4km s-min=1.4km az=159.2*

NEIC ***24*** *03:15:01.3±0.1,57˚.60N×163˚.20E,h10km,mb5.8/298, ME5.8,MS5.8/297,MW6.0,MW6.1,MW6.0,Error ellipse: s-maj=3.0km s-min=1.7km az=170.0 Best double couple: NP1:φs193.00000°,δ19.00000°,λ83.00000°. NP2: φs20.00000°,δ71.00000°,λ92.00000°. Principal axes: T 0.9400, Plg64.0000°, Azm294.0000°; N 0.4100, Plg2.0000°, Azm199.0000°; P -1.3500, Plg26.0000°, Azm108.0000°; Broadband fault plane solution: P waves. NP1:φs205.00000°,δ10.00000°,λ90.00000°. NP2: φs25.00000°,δ80.00000°,λ90.00000°. Principal axes: T Plg55.0000°, Azm295.0000°; N Plg0.0000°, Azm0.0000°; P Plg35.0000°, Azm115.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt at Klyuchi and Mokhovaya.

GCMT ***24*** *03:15:01.3±0.1,57˚.55N×163˚.67E,h13km,MW6.0/145, Moment Tensor Solution. s138,c329; s145,c556; Duration: 2s6 Moment tensor: Scale 1018Nm; Mrr1.20±.01; Mθθ0.11±.01; Mφφ-1.31±.01; Mrθ0.17±.02; Mθφ-0.20±.01; Mφr0.67±.02; Best double couple: M0 1.44600×1018 NP1:φs11.00000°,δ59.00000°, λ94.00000°. NP2:φs184.00000°,δ31.00000°,λ84.00000°. Principal axes: T 1.3790, Plg75.0000°, Azm291.0000°; N 0.1350, Plg3.0000°, Azm189.0000°; P -1.5120, Plg14.0000°, Azm98.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

NEIC ***24*** *03:15:02.0±0.0,57˚.50N×163˚.59E,h15km Best double couple: NP1:φs34.00000°,δ72.00000°,λ97.00000°. NP2:φs192.00000°,δ19.00000°,λ69.00000°. Principal axes: T 1.5100, Plg62.0000°, Azm314.0000°; N -0.2100, Plg6.0000°, Azm211.0000°; P -1.3000, Plg26.0000°, Azm118.0000°;*

MOS ***24*** *03:15:03.4±0.8,57˚.58N×163˚.26E,h47km,mb5.9/161, MS5.8/130 Error ellipse: s-maj=6.1km s-min=2.8km az=74.3*

MOS Felt (IV-V) at Krutoberegovo, Ust'-Kamchatsk; (II-III) at Ivashka.

NEIC ***24*** *03:15:12.0±0.0,57˚.55N×163˚.39E,h10km,Moment Tensor Solution. s43 Moment tensor: Scale 1018Nm; Mrr1.12; Mθθ-0.01; Mφφ-1.11; Mrθ0.64; Mφφ-0.27; Mφr1.42; Best double couple: M0 1.90000×1018 NP1:φs184.00000°, δ19.00000°,λ73.00000°. NP2:φs22.00000°,δ72.00000°, λ96.00000°. Principal axes: T 1.9300, Plg63.0000°, Azm301.0000°; N 0.0200, Plg6.0000°, Azm200.0000°; P -1.9500, Plg27.0000°, Azm107.0000°;*

ISC 24 03:15:02.0±0.5, 57˚.50N±0˚.02×163˚.42E±0˚.02, h16km±2km, n2345, σ1°52/2489, mb5.8/742, MS5.8/627, 158C-18D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBG	**Krutoberegovo**	**1.31**	**198**	*e*P	**Pn**	**03 15 24.7**	**-0.8**
KBG				*e*S	**Sn**	**03 15 42.0**	**-0.6**
KBG	**Krutoberegovo**	**1.31**	**198**	PN	**Pn**	**03 15 24.7**	**-0.8**
KBG				S	**Sn**	**03 15 42.0**	**-0.6**
KBTR	**Krutoberegovo**	**1.34**	**194**	*i* P	**Pn**	**03 15 24.7**	**-1.2**
KBTR	**Krutoberegovo**	**1.34**	**194**	PN	**Pn**	**03 15 24.7**	**-1.2**
SMKR	**Semkarok**	**1.41**	**230**	*e*P	**Pn**	**03 15 26.7**	**-0.3**
SMKR	**Semkarok**	**1.41**	**230**	PN	**Pn**	**03 15 26.7**	**-0.3**
SRKR	**Sorokina**	**1.49**	**236**	*e*P	**Pn**	**03 15 28.0**	**-0.2**
SRKR	**Sorokina**	**1.49**	**236**	PN	**Pn**	**03 15 28.0**	**-0.2**
BDR	**Baidarnaya**	**1.53**	**233**	*e*P	**Pn**	**03 15 28.5**	**-0.1**
BDR	**Baidarnaya**	**1.53**	**233**	PN	**Pn**	**03 15 28.5**	**-0.1**
OSSR	**Ossora**	**1.76**	**354**	*e*P	**Pn**	**03 15 29.5**	**-2.3**
OSSR				*e*S	**Sn**	**03 15 50.3**	**-3.6**
OSSR	**Ossora**	**1.76**	**354**	PN	**Pn**	**03 15 29.5**	**-2.3**
OSSR				S	**Sn**	**03 15 50.3**	**-3.6**
KLY	**Klyuchi**	**1.93**	**233**	*e*P	**Pn**	**03 15 32.9**	**-1.1**
KLY	**Klyuchi**	**1.93**	**233**	PN	**Pn**	**03 15 32.9**	**-1.1**
CIRR	**Tsirk**	**2.02**	**228**	*e*P	**Pn**	**03 15 36.0**	**+0.5**
CIRR	**Tsirk**	**2.02**	**228**	PN	**Pn**	**03 15 36.0**	**+0.5**
KRSR	**Krestovskiy**	**2.03**	**232**	*e*P	**Pn**	**03 15 35.6**	**+0.1**
KRSR	**Krestovskiy**	**2.03**	**232**	PN	**Pn**	**03 15 35.6**	**+0.1**
LGNR	**Loginova**	**2.07**	**228**	*i* P	**Pn**	**03 15 36.9**	**+0.7**
LGNR	**Loginova**	**2.07**	**228**	PN	**Pn**	**03 15 36.9**	**+0.7**
ZLN	**Zelenaya**	**2.07**	**225**	*e*P	**Pn**	**03 15 36.7**	**+0.6**
ZLN	**Zelenaya**	**2.07**	**225**	PN	**Pn**	**03 15 36.7**	**+0.6**
BZGR	**Bezymyannyi-Gr**	**2.17**	**225**	*e*P	**Pn**	**03 15 38.2**	**+0.7**
BZGR	**Bezymyannyi-Gr**	**2.17**	**225**	PN	**Pn**	**03 15 38.2**	**+0.7**
BZWR	**Bezymyannyi-We**	**2.23**	**227**	*e*P	**Pn**	**03 15 39.0**	**+0.6**
BZWR	**Bezymyannyi-We**	**2.23**	**227**	PN	**Pn**	**03 15 39.0**	**+0.6**
BZMR	**Bezymyannaya**	**2.25**	**227**	*e*P	**Pn**	**03 15 39.4**	**+0.8**
BZMR	**Bezymyannaya**	**2.25**	**227**	PN	**Pn**	**03 15 39.4**	**+0.8**
KIRR	**Kirishev**	**2.30**	**229**	*e*P	**Pn**	**03 15 40.0**	**+0.7**
KIRR	**Kirishev**	**2.30**	**229**	PN	**Pn**	**03 15 40.0**	**+0.7**
KPT	**Kopyto**	**2.34**	**230**	*e*P	**Pn**	**03 15 40.7**	**+0.9**
KPT	**Kopyto**	**2.34**	**230**	PN	**Pn**	**03 15 40.7**	**+0.9**
SRDR	**Sredinnyy**	**2.35**	**241**	*e*P	**Pn**	**03 15 39.2**	**-0.7**
SRDR	**Sredinnyy**	**2.35**	**241**	PN	**Pn**	**03 15 39.2**	**-0.7**
PALN	**Palana**	**2.42**	**313**	*e*P	**Pn**	**03 15 39.8**	**-1.0**
PALN				*e*S	**Sn**	**03 16 09.1**	**-0.9**
PALN	**Palana**	**2.42**	**313**	PN	**Pn**	**03 15 39.8**	**-1.0**
PALN				S	**Sn**	**03 16 09.1**	**-0.9**
KOZ	**Kozyrevsk**	**2.43**	**235**	*e*P	**Pn**	**03 15 41.9**	**+0.9**
KOZ	**Kozyrevsk**	**2.43**	**235**	PN	**Pn**	**03 15 41.9**	**+0.9**
KMNR	**Kamenistaya**	**2.48**	**226**	*i* P	**Pn**	**03 15 42.9**	**+1.2**
KMNR	**Kamenistaya**	**2.48**	**226**	PN	**Pn**	**03 15 42.9**	**+1.2**
BKI	**Bering**	**2.71**	**147**	*e*P	**Pn**	**03 15 42.6**	**-2.2**
BKI	**Bering**	**2.71**	**147**	PN	**Pn**	**03 15 42.6**	**-2.2**
TUMD	**Tumrok D**	**2.85**	**217**	*e*P	**Pn**	**03 15 48.4**	**+1.6**
TUMD				*e*S	**Sn**	**03 16 23.2**	**+2.5**
TUMR	**Tumrok**	**2.87**	**221**	*i* P	**Pn**	**03 15 48.8**	**+1.6**
TUMR	**Tumrok**	**2.87**	**221**	PN	**Pn**	**03 15 48.4**	**+1.2**
TUMR				S	**Sn**	**03 16 23.2**	**+1.8**
KZV	**Kizimen**	**2.96**	**217**	*e*P	**Pn**	**03 15 49.5**	**+1.1**
KZV	**Kizimen**	**2.96**	**217**	PN	**Pn**	**03 15 49.5**	**+1.1**
ESO	**Esso**	**3.04**	**241**	*e*P	**Pn**	**03 15 50.9**	**+1.5**
ESO				*e*S	**Sn**	**03 16 28.2**	**+2.8**
ESO	**Esso**	**3.04**	**241**	PN	**Pn**	**03 15 50.9**	**+1.5**
ESO				S	**Sn**	**03 16 28.2**	**+2.8**
MKZ	**Mys Kozlova**	**3.10**	**198**	*e*P	**Pn**	**03 15 50.0**	**-0.1**
MKZ	**Mys Kozlova**	**3.10**	**198**	PN	**Pn**	**03 15 50.0**	**-0.1**
TILK	**Tilichiki**	**3.27**	**24**	*e*P	**Pn**	**03 15 50.9**	**-1.6**
TILK				*e*S	**Sn**	**03 16 28.1**	**-3.0**
TILK	**Tilichiki**	**3.27**	**24**	PN	**Pn**	**03 15 50.9**	**-1.6**
KII	**Karymskiy**	**4.13**	**214**	*e*P	**Pn**	**03 16 07.3**	**+2.9**
KII	**Karymskiy**	**4.13**	**214**	PN	**Pn**	**03 16 07.3**	**+2.9**
SPN	**Mys Shipunski**	**4.82**	**205**	*e*P	**Pn**	**03 16 12.8**	**-1.0**
SPN				*e*S	**Sn**	**03 17 05.3**	**-3.9**
SPN	**Mys Shipunski**	**4.82**	**205**	PN	**Pn**	**03 16 12.8**	**-1.0**
GNL	**Ganaly**	**4.92**	**221**	*i* P	**Pn**	**03 16 16.9**	**+1.7**
GNL	**Ganaly**	**4.92**	**221**	PN	**Pn**	**03 16 16.9**	**+1.7**
NLC	**Nalytchevo**	**4.92**	**210**	*e*P	**Pn**	**03 16 17.4**	**+2.2**
NLC				*e*S	**Sn**	**03 17 13.6**	**+1.9**
NLC	**Nalytchevo**	**4.92**	**210**	PN	**Pn**	**03 16 17.4**	**+2.2**
NLC				S	**Sn**	**03 17 13.6**	**+1.9**
SDLR	**Sedlovina**	**4.96**	**213**	*e*P	**Pn**	**03 16 17.3**	**+1.5**
SDLR	**Sedlovina**	**4.96**	**213**	PN	**Pn**	**03 16 17.3**	**+1.5**
KRX	**Arik**	**4.96**	**215**	*e*P	**Pn**	**03 16 17.5**	**+1.6**
KRX	**Arik**	**4.96**	**215**	PN	**Pn**	**03 16 17.5**	**+1.6**
KRER	**Koryakskii**	**4.98**	**214**	*e*P	**Pn**	**03 16 18.2**	**+2.1**
KRER	**Koryakskii**	**4.98**	**214**	PN	**Pn**	**03 16 18.2**	**+2.1**
AVH	**Avacha**	**5.01**	**214**	*e*P	**Pn**	**03 16 20.7**	**+4.2**
AVH	**Avacha**	**5.01**	**214**	PN	**Pn**	**03 16 20.7**	**+4.2**
KOK	**Koryaka**	**5.02**	**215**	*e*P	**Pn**	**03 16 19.0**	**+2.3**
KOK	**Koryaka**	**5.02**	**215**	PN	**Pn**	**03 16 19.0**	**+2.3**
UGLR	**Uglovaya**	**5.04**	**213**	*e*P	**Pn**	**03 16 19.0**	**+2.1**
UGLR	**Uglovaya**	**5.04**	**213**	PN	**Pn**	**03 16 19.0**	**+2.1**
KMSK	**Kamenskaya**	**5.17**	**15**	*e*P	**Pn**	**03 16 17.5**	**-1.1**
KMSK				*e*S	**Sn**	**03 17 13.6**	**-4.3**
KMSK	**Kamenskaya**	**5.17**	**15**	PN	**Pn**	**03 16 17.5**	**-1.1**
DALK	**Dalny**	**5.21**	**213**	*e*P	**Pn**	**03 16 20.5**	**+1.3**
DALK				*e*S	**Sn**	**03 17 19.0**	**+0.1**
DALK	**Dalny**	**5.21**	**213**	PN	**Pn**	**03 16 20.5**	**+1.3**
PET	**Petropavlovsk**	**5.25**	**213**	*e*Pn	**Pn**	**03 16 20.9**	**+1.3**
PET	**Petropavlovsk**	**5.25**	**213**	*e*P	**Pn**	**03 16 20.6**	**+0.9**
PET				*e*S	**Sn**	**03 17 18.3**	**-1.4**
PET	**Petropavlovsk**	**5.25**	**213**	*c i*PN	**Pn**	**03 16 21.3**	**+1.6**
PET				pmax	pmax		
	comp=Z,14μm,5.0s						
PET				pmax	pmax		
	comp=Z,10μm,6.6s						
PET				pmax	pmax		
	comp=Z,2μm,1.0s						
PET				MLR	MLR		
	comp=Z,446μm,13.0s						
PET				MLR	MLR		
	comp=Z,514μm,13.0s						
I44RU	**PETROPAVLOVSK-**	**5.48**	**219**	Pn	**Pb**	**03 16 34.1**	**-3.0**
	baz=54,slow=26,SNR=1.9						
I44RU				*i*		03 39 20.0	
	baz=33,slow=320,SNR=0.9						
PEA0B	**Petropavlovsk-**	**5.48**	**219**	*e*Pn	**Pn**	**03 16 24.3**	**+1.4**
PETK	**Petropavlovsk-**	**5.48**	**219**	Pn	**Pn**	**03 16 22.7**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=200,slow=30,SNR=6.0						
PETK				Lg	Lg	03 17 48.6	
	baz=90,slow=39,SNR=2.4						
PETK				LR	LR	03 18 54.3	
	comp=Z,46μm,20.3s,baz=75,slow=43						
PETK	**Petropavlovsk-**	**5.48**	**219**	*e*Pn	**Pn**	**03 16 23.7**	**+0.8**
PETK				Lg	Lg	03 17 48.6	
PETK	**Petropavlovsk-**	**5.48**	**219**	*e*PN	**Pn**	**03 16 23.7**	**+0.8**
KRMR	**Karymshinskiy**	**5.57**	**215**	*e*P	**Pn**	**03 16 25.6**	**+1.5**
KRMR				*e*S	**Sn**	**03 17 27.9**	**+0.1**
KRMR	**Karymshinskiy**	**5.57**	**215**	PN	**Pn**	**03 16 25.6**	**+1.5**
RUS	**Russkaya**	**5.81**	**211**	*e*P	**Pn**	**03 16 28.9**	**+1.5**
RUS	**Russkaya**	**5.81**	**211**	PN	**Pn**	**03 16 28.9**	**+1.5**
APC	**Apacha**	**5.82**	**221**	*e*P	**Pn**	**03 16 29.5**	**+2.0**
APC				*e*S	**Sn**	**03 17 35.1**	**+1.3**
APC	**Apacha**	**5.82**	**221**	PN	**Pn**	**03 16 29.5**	**+2.0**
GRL	**Gorelyy**	**5.83**	**214**	*e*P	**Pn**	**03 16 30.8**	**+3.0**
GRL	**Gorelyy**	**5.83**	**214**	PN	**Pn**	**03 16 30.8**	**+3.0**
MTVR	**Mutnovka**	**5.86**	**213**	*e*P	**Pn**	**03 16 31.6**	**+3.4**
MTVR	**Mutnovka**	**5.86**	**213**	PN	**Pn**	**03 16 31.6**	**+3.4**
ASAK	**Asacha**	**6.03**	**214**	*i* P	**Pn**	**03 16 33.5**	**+3.0**
ASAK	**Asacha**	**6.03**	**214**	PN	**Pn**	**03 16 33.5**	**+3.0**
KDTR	**Khodutka, Kamc**	**6.49**	**211**	*e*P	**Pn**	**03 16 36.9**	**+0.2**
MA2	**Magadan**	**6.94**	**293**	Pn	**Pn**	**03 16 42.6**	**-0.3**
	comp=Z,3.0nm,0.3s,baz=88,slow=11,SNR=12						
MA2				Lg	Lg	03 18 33.5	
	comp=Z,3.1nm,0.3s,baz=101,slow=16,SNR=3.2						
MA2				LR	LR	03 19 22.7	
	comp=Z,107μm,20.5s,baz=156,slow=38						
MA2	**Magadan**	**6.94**	**293**	*e*Pn	**Pn**	**03 16 41.3**	**-1.6**
MA2				Lg	Lg	03 18 33.5	
MA2	**Magadan**	**6.94**	**293**	*i* PN	**Pn**	**03 16 42.6**	**-0.3**
MA2				pmax	pmax		
	comp=Z,131nm,1.7s						
PAU	**Pauzhetka**	**7.16**	**215**	*e*P	**Pn**	**03 16 48.1**	**+2.2**
PAU	**Pauzhetka**	**7.16**	**215**	PN	**Pn**	**03 16 48.1**	**+2.2**
SEY	**Seymchan**	**7.73**	**319⇑**	*e*PN	**Pn**	**03 16 52.9**	**-0.8**
SMY	**Shemya**	**7.77**	**123**	*e*Pn	**Pn**	**03 16 54.0**	**-0.2**
SMY	**Shemya**	**7.77**	**123**	*e*PN	**Pn**	**03 16 54.0**	**-0.2**
SKR	**Severo-Kuril's**	**8.06**	**215**	*e*P	**Pn**	**03 17 00.9**	**+2.6**
SKR	**Severo-Kuril's**	**8.06**	**215⇓**	*i*PN	**Pn**	**03 17 00.9**	**+2.6**
SKR				pmax	pmax		
	comp=Z,6μm,7.0s						
SKR				pmax	pmax		
	comp=Z,812nm,1.0s						
SKR				pmax	pmax		
	comp=Z,12μm,4.3s						
SKR				MLR	MLR		
	comp=Z,470μm,12.0s						
SKR				MLR	MLR		
	comp=Z,454μm,12.0s						
BILL	**Bilibino**	**10.66**	**6**	*e*Pn	**Pn**	**03 17 33.3**	**-0.5**
BILL	**Bilibino**	**10.66**	**6⇑**	*e*PN	**Pn**	**03 17 34.2**	**+0.5**
BILL				*e*S	**Sn**	**03 19 39.7**	**+7.2**
BILL				pmax	pmax		
	comp=Z,96nm,1.7s						
BILL				MLR	MLR		
	comp=Z,27μm,13.0s						
OKH	**Okha**	**12.24**	**260⇑**	*i*PN	**Pn**	**03 17 59.0**	**+3.5**
OKH				*i* S	**Sn**	**03 20 14.9**	**+3.4**
OKH				pmax	pmax		
	comp=Z,17μm,9.5s						
NKL	**Nikolayevsk**	**13.63**	**261**	*i* P	**Pn**	**03 18 18.0**	**+3.7**
NKL				pmax	pmax		
	comp=N,10μm,9.0s						
NKL				pmax	pmax		
	comp=E,22μm,9.0s						
NKL				pmax	pmax		
	comp=Z,26μm,10.0s						
NKL				pmax	pmax		
	comp=E,3μm,1.4s						
NKL				pmax	pmax		
	comp=Z,2μm,1.4s						
NKL				MLR	MLR		
	comp=E,64μm,12.0s						
NKL				MLR	MLR		
	comp=Z,90μm,12.0s						
GAMB	**Gambell**	**13.66**	**52**	*e*Pn	**Pn**	**03 18 15.8**	**+1.0**
TYV	**Tymovskoe**	**13.82**	**250**	*e*P	**Pn**	**03 18 20.5**	**+3.5**
TYV				*e*S	**Sn**	**03 20 56.7**	**+6.8**
TYV				pmax	pmax		
	comp=Z,322nm,1.5s						
TYV				pmax	pmax		
	comp=Z,16μm,7.8s						
TYV				smax	smax		
	comp=N,40nm,2.3s						
TYV				smax	smax		
	comp=E,34μm,7.7s						
TYV				MLR	MLR		
	comp=N,15μm,15.0s						
TYV				MLR	MLR		
	comp=Z,44μm,15.0s						
ATKA	**Atka Island**	**13.91**	**103**	*e*Pn	**Pn**	**03 18 16.1**	**-2.1**
SPIA	**Saint Paul Isl**	**14.20**	**80**	*e*Pn	**Pn**	**03 18 24.3**	**+2.2**
UGL	**Uglegorsk**	**15.24**	**246**	*c i*P	**P**	**03 18 39.4**	**-1.7**
UGL				pmax	pmax		
	comp=Z,706nm,1.2s						
UGL				pmax	pmax		
	comp=E,21μm,10.0s						
UGL				pmax	pmax		
	comp=N,13μm,11.0s						
UGL				pmax	pmax		
	comp=Z,28μm,11.0s						
UGL				MLR	MLR		
	comp=N,61μm,13.0s						
UGL				MLR	MLR		
	comp=E,74μm,13.0s						
UGL				MLR	MLR		
	comp=Z,58μm,13.0s						
KUR	**Kuril'sk**	**15.61**	**225**	*e*P	**Pn**	**03 18 42.9**	**+1.9**
KUR				*e*S	**Sn**	**03 21 39.0**	**+5.6**
KUR				pmax	pmax		
	comp=N,267nm,1.4s						
KUR				pmax	pmax		
	comp=Z,628nm,1.4s						
KUR				pmax	pmax		
	comp=E,388nm,1.5s						
KUR				pmax	pmax		
	comp=Z,2μm,2.6s						
KUR				MLR	MLR		
	comp=N,91μm,13.0s						
KUR				MLR	MLR		
	comp=Z,92μm,13.0s						
KUR				MLR	MLR		
	comp=E,32μm,15.0s						
NIKH	**Nikolski High**	**16.39**	**94**	*e*Pn	**Pn**	**03 18 51.9**	**+0.8**
	comp=E,2μm,1.5s						
YSS	**Yuzh-Sakhalins**	**16.41**	**239**	*c i*P	**P**	**03 18 53.0**	**-1.1**
YSS				*e*S	**Sn**	**03 21 47.0**	**-5.9**
YSS				pmax	pmax		
	comp=Z,180nm,1.3s						
YSS				pmax	pmax		
	comp=N,11μm,7.0s						
YSS				pmax	pmax		
	comp=E,9μm,7.0s						
YSS				pmax	pmax		
	comp=Z,14μm,7.0s						
YSS				smax	smax		
	comp=N,34μm,12.0s						
YSS				smax	smax		
	comp=E,23μm,12.0s						
YSS				MLR	MLR		
	comp=Z,87μm,16.0s						
YSS				MLR	MLR		
	comp=N,78μm,14.0s						
YSS				MLR	MLR		
	comp=E,59μm,12.0s						
ANM	**Nome**	**16.54**	**52**	*e*Pn	**P**	**03 18 54.3**	**-1.2**
	comp=E,762nm,1.8s						
ANM	**Nome**	**16.54**	**52**	*e*P	**P**	**03 18 54.3**	**-1.2**
ANM				pmax	pmax		
	comp=Z,762nm,1.8s						
GRNR	**Gornyy**	**17.11**	**258⇑**	*i*P	**P**	**03 19 03.6**	**+1.7**
GRNR				pmax	pmax		
	comp=N,160nm,1.0s						
GRNR				pmax	pmax		
	comp=E,160nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,250nm,1.0s						
SHO	**Shikotan**	**17.15**	**224**	*i* P	**Pn**	**03 18 55.2**	**-5.6**
SHO				*e*S	**Sn**	**03 22 02.6**	**-8.4**
SHO				pmax	pmax		
	comp=Z,177nm,1.4s						
SHO				pmax	pmax		
	comp=E,32nm,0.8s						
SHO				pmax	pmax		
	comp=Z,1μm,5.7s						
SHO				MLR	MLR		
	comp=Z,65μm,16.0s						
SHO				MLR	MLR		
	comp=N,48μm,14.0s						
SHO				MLR	MLR		
	comp=E,38μm,11.0s						
UNV	**Unalaska Valle**	**17.28**	**89**	*e*Pn	**P**	**03 19 04.7**	**+1.0**
	comp=E,552nm,1.4s						
YUK	**Yuzh-Kuril'sk**	**17.39**	**227**	*e*P	**Pn**	**03 19 01.0**	**-2.7**
YUK				*i* S	**Sn**	**03 22 19.0**	**+2.3**
YUK				pmax	pmax		
	comp=Z,2μm,2.1s						
YUK				pmax	pmax		
	comp=Z,1μm,1.3s						
YUK				pmax	pmax		
	comp=N,857nm,1.4s						
YUK				pmax	pmax		
	comp=E,512nm,1.4s						
YUK				MLR	MLR		
	comp=N,134μm,14.0s						
YUK				MLR	MLR		
	comp=Z,117μm,14.0s						
YUK				MLR	MLR		
	comp=E,46μm,13.0s						
LAGR	**Lagunnoye**	**17.40**	**227**	*e*P	**Pn**	**03 19 03.1**	**-0.7**
LAGR				*e*S	**Sn**	**03 22 20.9**	**+3.9**
LAGR				pmax	pmax		
	comp=Z,2μm,1.6s						
LAGR				pmax	pmax		
	comp=E,609nm,1.3s						
LAGR				pmax	pmax		
	comp=Z,1μm,1.3s						
LAGR				pmax	pmax		
	comp=N,913nm,1.0s						
LAGR				MLR	MLR		
	comp=Z,43μm,12.0s						
LAGR				MLR	MLR		
	comp=N,132μm,14.0s						
YAK	**Yakutsk**	**17.45**	**299**	P	**P**	**03 19 05.1**	**-0.4**
	comp=N,0.0nm,0.3s,baz=83,slow=4.9,SNR=57						
YAK				LR	LR	03 25 55.8	
	comp=N,58μm,18.1s,baz=90,slow=38						
YAK	**Yakutsk**	**17.45**	**299**	*e*Pn	**Pn**	**03 19 04.4**	**+0.2**
	comp=N,912nm,1.1s						
YAK	**Yakutsk**	**17.45**	**299**	*c i*P	**P**	**03 19 05.7**	**+0.3**
YAK				pmax	pmax		
	comp=Z,769nm,1.3s						
YAK				pmax	pmax		
	comp=E,722nm,1.2s						
YAK				pmax	pmax		
	comp=N,128nm,1.4s						
YAK				pmax	pmax		
	comp=Z,2μm,1.5s						
YAK				pmax	pmax		
	comp=N,411nm,1.4s						
YAK				pmax	pmax		
	comp=E,1μm,1.4s						
YAK				MLR	MLR		
	comp=Z,76μm,12.0s						
YAK				MLR	MLR		
	comp=E,51μm,12.0s						
YAK				MLR	MLR		
	comp=N,26μm,13.0s						
GRPR	**Tuman**	**17.46**	**227**	*e*P	Pn	03 18 55.6	-9.0
GRPR				S	**Sn**	**03 22 18.2**	**-0.2**
GRPR				pmax	pmax		
	comp=Z,431nm,1.0s						
GRPR				pmax	pmax		
	comp=N,434nm,1.6s						
GRPR				pmax	pmax		
	comp=E,438nm,1.3s						
GRPR				pmax	pmax		
	comp=Z,1μm,2.4s						
GRPR				MLR	MLR		
	comp=N,93μm,12.0s						
GRPR				MLR	MLR		
	comp=E,24μm,12.0s						
GRPR				MLR	MLR		
	comp=Z,45μm,12.0s						
AKUT	**Akutan**	**17.56**	**88**	*e*Pn	**P**	**03 19 07.2**	**+0.5**
	comp=Z,823nm,1.4s						
GLVR	**Golovnino**	**17.77**	**227**	*e*P	**Pn**	**03 19 01.8**	**-6.6**
GLVR	

SDPT	**Sand Point**	**19.94**	**81**	*e*P		**P**	**03 19 33.4**	**+0.6**
	comp=E,1µm,1.8s							
SDPT				LR		LR		
	comp=Z,35µm,20.0s							
TIXI	**Tiksi**	**20.07**	**328**	P		**P**	**03 19 35.1**	**+0.9**
	comp=Z,141nm,0.8s,baz=116,slow=12,SNR=146							
TIXI				S		Sn	03 23 20.7	-0.5
	comp=Z,2.0nm,0.3s,baz=110,slow=17,SNR=0.8							
TIXI				LR		LR	03 26 56.6	
	comp=Z,7µm,18.0s,baz=112,slow=36							
TIXI	**Tiksi**	**20.07**	**328**	*e*P		**P**	**03 19 34.2**	**0.0**
	comp=Z,213nm,0.9s							
TIXI				S		Sn	03 23 20.7	-0.5
ERM	**Erimo**	**20.16**	**228**	*e*P		**P**	**03 19 33.6**	**-1.8**
	comp=Z,166nm,1.0s							
ERM				LR		LR		
	comp=Z,75µm,18.0s							
ERM	**Erimo**	**20.16**	**228**	*de*P		**P**	**03 19 35.3**	**0.0**
ERM				pmax		pmax		
	comp=Z,56nm,1.0s							
ERM				MLR		MLR		
	comp=Z,82µm,15.0s							
ZEA	**Zeya**	**20.60**	**275**	*c i*P		**P**	**03 19 40.1**	**0.0**
ZEA				*e*			03 20 08.0	
ZEA				pmax		pmax		
	comp=N,270nm,1.2s							
ZEA				pmax		pmax		
	comp=E,910nm,1.2s							
ZEA				pmax		pmax		
	comp=Z,2µm,1.0s							
ZEA				pmax		pmax		
	comp=E,12µm,12.0s							
ZEA				pmax		pmax		
	comp=Z,14µm,12.0s							
ZEA				pmax		pmax		
	comp=N,7µm,10.0s							
ZEA				MLR		MLR		
	comp=E,41µm,12.0s							
ZEA				MLR		MLR		
	comp=Z,41µm,12.0s							
CHGN	**Chignik**	**20.70**	**77**	*e*P		**P**	**03 19 41.3**	**+0.2**
	comp=Z,430nm,1.2s							
CHGN				LR		LR		
	comp=Z,21µm,21.0s							
CLNS	**Chul'man**	**20.71**	**285**	*e*P		**P**	**03 19 40.9**	**-0.4**
CLNS				*e*			03 19 58.1	
CLNS				*e*S		**S**	**03 23 26.4**	**-5.4**
CLNS				*e*			03 23 53.5	
CLNS				*e*SS		SnSn	03 24 13.0	+22
CLNS				pmax		pmax		
	comp=Z,660nm,1.3s							
CLNS				pmax		pmax		
	comp=E,629nm,1.1s							
CLNS				pmax		pmax		
	comp=N,386nm,1.2s							
CLNS				pmax		pmax		
	comp=Z,213nm,1.1s							
CLNS				pmax		pmax		
	comp=N,385nm,1.2s							
CLNS				pmax		pmax		
	comp=E,225nm,1.0s							
CLNS				smax		smax		
	comp=N,9µm,10.4s							
CLNS				smax		smax		
	comp=E,16µm,10.9s							
CLNS				MLR		MLR		
	comp=E,13µm,14.0s							
CLNS				MLR		MLR		
	comp=N,23µm,12.0s							
CLNS				MLR		MLR		
	comp=Z,17µm,13.0s							
TEY	**Ternei**	**20.74**	**245**	*e*P		**P**	**03 19 41.7**	**+0.1**
TEY				*e*			03 19 52.5	
TEY				*e*			03 20 06.5	
TEY				pmax		pmax		
	comp=N,7µm,4.0s							
TEY				pmax		pmax		
	comp=E,7µm,4.0s							
TEY				pmax		pmax		
	comp=Z,7µm,6.0s							
TEY				pmax		pmax		
	comp=N,160nm,1.2s							
TEY				pmax		pmax		
	comp=E,20nm,1.2s							
TEY				pmax		pmax		
	comp=Z,400nm,1.2s							
TEY				MLR		MLR		
	comp=E,29µm,14.0s							
TEY				MLR		MLR		
	comp=N,39µm,13.0s							
TEY				MLR		MLR		
	comp=Z,43µm,15.0s							
SVW2	**Sparrevohn**	**20.98**	**63**	*e*P		**P**	**03 19 45.3**	**+1.1**
	comp=Z,276nm,1.1s							
SVW2				LR		LR		
	comp=Z,13µm,19.0s							
CAST	**Castle Rocks**	**22.33**	**56**	*e*P		**P**	**03 19 59.1**	**+0.4**
	comp=Z,672nm,1.7s							
CAST				LR		LR		
	comp=Z,13µm,18.0s							
PPLA	**Purkeypile**	**22.34**	**57**	*e*P		**P**	**03 19 59.7**	**+0.9**
	comp=Z,479nm,1.2s							
PPLA				LR		LR		
	comp=Z,32µm,18.0s							
RSO	**Redoubt South**	**22.46**	**64**	*e*P		**P**	**03 20 01.8**	**+1.5**
SPU	**Mount Spurr**	**22.66**	**62**	*e*P		**P**	**03 20 02.3**	**+0.2**
BPAW	**Bear Paw Mtn.**	**22.76**	**54**	*e*P		**P**	**03 20 03.3**	**+0.1**
	comp=Z,851nm,1.6s							
BPAW				LR		LR		
	comp=Z,14µm,18.0s							
SKT	**Skwentna**	**22.77**	**60**	*e*P		**P**	**03 20 04.0**	**+0.8**
	comp=Z,1µm,1.8s							
SKT				LR		LR		
	comp=Z,22µm,18.0s							
MLY	**Manley**	**22.81**	**52**	*e*P		**P**	**03 20 04.2**	**+0.5**
	comp=Z,483nm,1.4s							
KTH	**Kantishna Hill**	**22.84**	**56**	*e*P		**P**	**03 20 04.1**	**0.0**
	comp=Z,671nm,1.6s							
COLD	**Coldfoot**	**23.03**	**46**	*e*P		**P**	**03 20 06.3**	**+0.4**
	comp=Z,137nm,1.1s							
COLD				LR		LR		
	comp=Z,10µm,18.0s							
OHAK	**Old Harbor**	**23.07**	**72**	*e*P		**P**	**03 20 05.9**	**-0.5**
	comp=Z,653nm,1.8s							
OHAK				LR		LR		
	comp=Z,37µm,21.0s							
TRF	**Thorofare Moun**	**23.13**	**56**	*e*P		**P**	**03 20 07.7**	**+0.5**
	comp=Z,898nm,1.5s							
TRF				LR		LR		
	comp=Z,11µm,22.0s							
HOM	**Homer**	**23.19**	**66**	*e*P		**P**	**03 20 08.0**	**+0.4**
	comp=Z,320nm,1.0s							
SUA	**Susitna One**	**23.23**	**61**	*e*P		**P**	**03 20 08.4**	**+0.3**
	comp=Z,441nm,1.4s							
SUA				LR		LR		
	comp=Z,13µm,20.0s							
KDAK	**Kodiak Island**	**23.25**	**71**	P		**P**	**03 20 07.7**	**-0.4**
	comp=Z,40nm,0.8s,baz=290,slow=6.5,SNR=25							
KDAK				S		**S**	**03 24 18.0**	**-1.3**
	comp=Z,4.2nm,0.8s,baz=337,slow=20,SNR=0.9							
KDAK				LR		LR	03 28 47.4	
	comp=Z,32µm,20.7s,baz=284,slow=36							
KDAK	**Kodiak Island**	**23.25**	**71**	*e*P		**P**	**03 20 07.1**	**-1.1**
	comp=Z,692nm,1.6s							
KDAK				S		**S**	**03 24 18.0**	**-1.3**
KDAK	**Kodiak Island**	**23.25**	**71**	*i*P		**P**	**03 20 09.0**	**+0.8**
TOLK	**Toolik Lake Re**	**23.35**	**43**	P		**P**	**03 20 09.1**	**-0.2**
	baz=265							
TOLK	**Toolik Lake Re**	**23.35**	**43**	*e*P		**P**	**03 20 09.2**	**0.0**
	comp=Z,2µm,1.9s							
TOLK				LR		LR		
	comp=Z,31µm,21.0s							
BWN	**Browne**	**23.42**	**54**	*e*P		**P**	**03 20 11.6**	**+1.7**
	comp=Z,730nm,1.2s							
BWN				LR		LR		
	comp=Z,13µm,19.0s							
CNPM	**China Poot**	**23.42**	**66**	*e*P		**P**	**03 20 09.8**	**-0.2**
	comp=Z,985nm,2.0s							
BRLK	**Bradley Lake**	**23.53**	**65**	*e*P		**P**	**03 20 11.5**	**+0.4**
	comp=Z,155nm,1.0s							
USRK	**Ussuriysk Ar.**	**23.63**	**249**	P		**P**	**03 20 11.4**	**-0.7**
	comp=Z,101nm,1.0s,baz=55,slow=8.0,SNR=43							
USRK				S		**S**	**03 24 28.4**	**+2.6**
	comp=Z,1.5nm,0.6s,baz=236,slow=46,SNR=1.5							
USRK				LR		LR	03 30 07.3	
	comp=Z,29µm,18.5s,baz=40,slow=38							
MCK	**McKinley**	**23.70**	**55**	*e*P		**P**	**03 20 13.0**	**+0.3**
	comp=Z,913nm,1.6s							
MCK				LR		LR		
	comp=Z,13µm,18.0s							
MCK	**McKinley**	**23.70**	**55**	*e*P		**P**	**03 20 13.0**	**+0.3**
MCK				pmax		pmax		
	comp=Z,913nm,1.6s							
MCK				MLR		MLR		
	comp=Z,13µm,18.0s							
RC01	**Rabbit Creek A**	**23.78**	**62**	*e*P		**P**	**03 20 14.1**	**+0.7**
	comp=Z,159nm,1.4s							
MDM	**Murphy Dome**	**23.88**	**52**	*e*P		**P**	**03 20 14.8**	**+0.4**
	comp=Z,492nm,1.6s							
PMR	**Palmer**	**23.96**	**60**	*e*P		**P**	**03 20 14.4**	**-0.7**
	comp=Z,276nm,1.6s							
PMR				LR		LR		
	comp=Z,15µm,19.0s							
PMR	**Palmer**	**23.96**	**60**	*e*P		**P**	**03 20 14.4**	**-0.7**
PMR				pmax		pmax		
	comp=Z,276nm,1.6s							
PMR				MLR		MLR		
	comp=Z,15µm,19.0s							
WRH	**Wood River Hil**	**23.99**	**53**	*e*P		**P**	**03 20 16.2**	**+0.9**
	comp=Z,614nm,1.2s							
WRH				LR		LR		
	comp=Z,19µm,20.0s							
GHO	**Glory Hole Cre**	**24.02**	**60**	*e*P		**P**	**03 20 16.0**	**+0.2**
	comp=Z,678nm,1.7s							
COLA	**College**	**24.05**	**52**	*e*P		**P**	**03 20 16.6**	**+0.7**
	comp=Z,256nm,1.3s							
COLA				LR		LR		
	comp=Z,1.0nm,20.0s							
COLA	**College**	**24.05**	**52**	*e*P		**P**	**03 20 16.6**	**+0.7**
COLA				pmax		pmax		
	comp=Z,256nm,1.3s							
CCB	**Clear Creek Bu**	**24.09**	**53**	*e*P		**P**	**03 20 16.6**	**+0.3**
	comp=Z,406nm,1.2s							
IL1	**Eielson Array**	**24.47**	**52**	*e*P		**P**	**03 20 19.3**	**-0.5**
ILAR	**Eielson Array**	**24.47**	**52**	P		**P**	**03 20 19.6**	**-0.2**
	comp=Z,50nm,0.8s,baz=260,slow=7.2,SNR=252							
ILAR				LR		LR	03 31 05.2	
	comp=Z,9µm,18.6s,baz=330,slow=39							
ILAR				P3KPbc			03 53 31.5	
	comp=Z,2.1nm,1.0s,baz=99,slow=3.8,SNR=12							
ILB	**Eielson Array**	**24.47**	**52**	*e*P		**P**	**03 20 19.6**	**-0.2**
MDJ	**Mudanjiang**	**24.56**	**253**	P		**P**	**03 20 16.3**	**-4.5**
MDJ				PP		**PnPn**	**03 20 59.9**	**+8.0**
MDJ				S		**S**	**03 24 34.8**	**-6.0**
MDJ				ScS		**ScS**	**03 31 21.5**	**-2.2**
MDJ				pmax		pmax		
	comp=Z,120nm,1.5s							
MDJ				pmax		pmax		
	comp=Z,9µm,10.2s							
MDJ				LR		LR		
	comp=Z,26µm,12.9s							
MDJ				LR		LR		
	comp=Z,62µm,13.9s							
MDJ				LR		LR		
	comp=Z,60µm,15.0s							
MDJ	**Mudanjiang**	**24.56**	**253**	*e*P		**P**	**03 20 19.0**	**-1.8**
	comp=Z,165nm,1.0s							
MDJ				LR		LR		
	comp=Z,23µm,21.0s							
SCM	**Sheep Creek Mo**	**24.75**	**59**	*e*P		**P**	**03 20 22.2**	**-0.2**
	comp=Z,599nm,1.2s							
SCM				LR		LR		
	comp=Z,16µm,20.0s							
SCM	**Sheep Creek Mo**	**24.75**	**59**	*e*P		**P**	**03 20 22.2**	**-0.2**
SCM				pmax		pmax		
	comp=Z,599nm,1.2s							
SCM				MLR		MLR		
	comp=Z,16µm,20.0s							
FYU	**Fort Yukon**	**25.00**	**48**	*e*P		**P**	**03 20 25.6**	**+1.1**
	comp=Z,230nm,1.1s							
PAX	**Paxson**	**25.36**	**56**	*e*P		**P**	**03 20 28.4**	**+0.4**
	comp=Z,152nm,1.1s							
PAX				LR		LR		
	comp=Z,14µm,19.0s							
PAX	**Paxson**	**25.36**	**56**	*e*P		**P**	**03 20 28.4**	**+0.4**
PAX				pmax		pmax		
	comp=Z,152nm,1.1s							
PAX				MLR		MLR		
	comp=Z,14µm,19.0s							
KLU	**Klutina**	**25.48**	**60**	*e*P		**P**	**03 20 29.1**	**0.0**
	comp=Z,347nm,1.4s							
KLU				LR		LR		
	comp=Z,21µm,20.0s							
RIDG	**Independ'e Rid**	**25.50**	**54**	*e*P		**P**	**03 20 28.3**	**-0.8**
	comp=Z,228nm,1.2s							
RIDG				LR		LR		
	comp=Z,15µm,19.0s							
HARP	**HAARP**	**25.62**	**57**	*e*P		**P**	**03 20 32.2**	**+2.0**
	comp=Z,280nm,1.2s							
HARP				LR		LR		
	comp=Z,27µm,18.0s							
DIV	**Divide**	**25.64**	**60**	*e*P		**P**	**03 20 31.7**	**+1.2**
	comp=Z,199nm,1.3s							
DIV				LR		LR		
	comp=Z,20µm,19.0s							
SCRK	**Sand Creek**	**25.83**	**54**	*e*P		**P**	**03 20 29.4**	**-2.9**
	comp=Z,123nm,0.9s							
SCRK				LR		LR		
	comp=Z,17µm,18.0s							
MID	**Middleton Isla**	**25.85**	**64**	*e*P		**P**	**03 20 32.3**	**0.0**
	comp=Z,408nm,1.2s							
MID	**Middleton Isla**	**25.85**	**64**	*e*P		**P**	**03 20 32.3**	**0.0**
MID				pmax		pmax		
	comp=Z,408nm,1.2s							
DOT	**Dot Lake**	**25.86**	**54**	*e*P		**P**	**03 20 32.4**	**0.0**
	comp=Z,480nm,1.3s							
DOT				LR		LR		
	comp=Z,39µm,19.0s							
BOD	**Bodaibo**	**25.97**	**292**	*e*P		**P**	**03 20 33.0**	**-0.4**
BOD				pmax		pmax		
	comp=Z,529nm,1.4s							
BMRM	**Bremner River**	**26.23**	**60**	*e*P		**P**	**03 20 36.4**	**+0.5**
	comp=Z,325nm,1.2s							
BMRM				LR		LR		
	comp=Z,16µm,19.0s							
RAGM	**Ragged Mountai**	**26.36**	**62**	*e*P		**P**	**03 20 38.7**	**+1.7**
	comp=Z,301nm,1.3s							
RAGM				LR		LR		
	comp=Z,32µm,18.0s							
MJB9	**Matsu-Tunnel**	**26.82**	**229**	*e*P		**P**	**03 20 40.9**	**-0.4**
	comp=Z,192nm,1.0s							
MJB9				LR		LR		
	comp=Z,56µm,18.0s							
MAJO	**Matsushiro**	**26.83**	**229**	*e*P		**P**	**03 20 40.6**	**-0.7**
	comp=Z,196nm,1.0s							
MAJO				LR		LR		
	comp=Z,52µm,18.0s							
MAJO	**Matsushiro**	**26.83**	**229**	*c i*P		**P**	**03 20 39.1**	**-2.3**
MAJO				pmax		pmax		
	comp=Z,93nm,0.9s							
MAJO				MLR		MLR		
	comp=Z,49µm,16.0s							
MAT	**Matsushiro**	**26.83**	**229**	P		**P**	**03 20 40.8**	**-0.6**
MAT				S		**S**	**03 25 14.0**	**-2.8**
MJAR	**Matsushiro Arr**	**26.83**	**229**	P		**P**	**03 20 40.9**	**-0.4**
	comp=Z,151nm,1.0s,baz=16,slow=7.7,SNR=122							
MJAR				LR		LR	03 32 44.9	
	comp=Z,47µm,18.1s,baz=45,slow=40							
EGAK	**Eagle**	**26.89**	**51**	*e*P		**P**	**03 20 41.0**	**-0.7**
	comp=Z,111nm,1.0s							
EGAK				LR		LR		
	comp=Z,8µm,18.0s							
HIA	**Hailar**	**26.90**	**271**	*e*P		**P**	**03 20 41.2**	**-0.8**
	comp=Z,122nm,1.4s							
HIA				LR		LR		
	comp=Z,14µm,19.0s							
CRQM	**Cirque**	**26.98**	**60**	*e*P		**P**	**03 20 44.0**	**+1.2**
	comp=Z,627nm,1.6s							
CRQM				LR		LR		
	comp=Z,19µm,22.0s							
TGL	**Tana Glacier**	**27.12**	**60**	*e*P		**P**	**03 20 46.1**	**+2.2**
	comp=Z,694nm,1.9s							
TGL				LR		LR		
	comp=Z,18µm,20.0s							
BALM	**Baldy**	**27.27**	**60**	PFAKE			03 21 00.0	+15
BALM				LR		LR		
	comp=Z,14µm,20.0s							
CN2	**Changchun**	**27.28**	**256**	*e*P		**P**	**03 20 43.3**	**-2.1**
CN2				*ep*P		pP	03 20 48.0	-2.3
CN2				*e*S		**S**	**03 25 19.3**	**-4.6**
CN2				pmax		pmax		
	comp=Z,4µm,8.0s							
CN2				LR		LR		
	comp=Z,53µm,15.0s							
CN2				LR		LR		
	comp=Z,19µm,15.0s							
CN2				LR		LR		
	comp=Z,53µm,16.0s							
DAWY	**Dawson**	**27.79**	**52**	*e*P		**P**	**03 20 50.1**	**+0.2**
	comp=Z,281nm,1.8s							
DAWY				LR		LR		
	comp=Z,20µm,20.0s							
INU	**Inuyama**	**28.34**	**230**	*e*P		**P**	**03 20 54.3**	**-0.6**
	comp=Z,118nm,1.3s							
INU				LR		LR		
	comp=Z,41µm,18.0s							
CIT	**Chita**	**28.73**	**281**	*e*P		**P**	**03 20 58.4**	**+0.1**
CIT				*e*			03 21 09.7	
CIT				*e*			03 21 16.5	
CIT				*e*			03 21 57.4	
CIT				pmax		pmax		
	comp=Z,225nm,1.7s							
YKU2	**Yakutat**	**29.03**	**62**	PFAKE			03 21 10.0	+9.2
YKU2				LR		LR		
	comp=Z,21µm,20.0s							
INK	**Inuvik**	**29.27**	**43**	P		**P**	**03 21 01.5**	**-1.3**
	comp=Z,27nm,0.9s,baz=288,slow=8.1,SNR=48							
INK				S		**S**	**03 25 56.5**	**+1.8**
	comp=Z,6.0nm,0.9s,baz=312,slow=18,SNR=2.0							
INK				LR		LR	03 34 02.1	
	comp=Z,8µm,19.3s,baz=277,slow=39							
INK	**Inuvik**	**29.27**	**43**	*e*P		**P**	**03 21 03.3**	**+0.5**
	comp=Z,238nm,1.4s							
INK				S		**S**	**03 25 56.5**	**+1.8**
INK	**Inuvik**	**29.27**	**43**	*e*P		**P**	**03 21 03.3**	**+0.5**
INK				S		**S**	**03 25 56.5**	**+1.8**
INK				pmax		pmax		
	comp=Z,238nm,1.4s							
SNY	**Shenyang**	**29.65**	**255**	⇑P		**P**	**03 21 04.9**	**-1.5**
SNY				PP		**PnPn**	**03 22 03.0**	**+1.7**
SNY				S		**S**	**03 26 04.8**	**+3.7**
SNY				pmax		pmax		
	comp=Z,44nm,1.2s							
SNY				pmax		pmax		
	comp=Z,4µm,10.4s							
SNY				LR		LR		
	comp=Z,53µm,13.9s							
SNY				LR		LR		
	comp=Z,29µm,15.5s							
SNY				LR		LR		
	comp=Z,81µm,14.3s							
KS01	**Wonju Array Si**	**30.73**	**245**	*e*P		**P**	**03 21 13.1**	**-2.9**
KSRS	**Korea Array**	**30.74**	**245**	P		**P**	**03 21 15.3**	**-0.8**
	comp=Z,26nm,1.0s,baz=40,slow=8.6,SNR=50							
KSRS				PcP		**PcP**	**03 24 14.6**	**+1.3**
	comp=Z,13nm,1.0s,baz=7.9,slow=2.3,SNR=8.5							
KSRS				LR		LR	03 32 37.6	
	comp=Z,14µm,21.3s,baz=56,slow=34							
KS15	**Wonju Array Si**	**30.77**	**245**	*e*P		**P**	**03 21 15.4**	**-1.0**
KSAR	**Wonju Array Be**	**30.77**	**245**	P		**P**	**03 21 15.3**	**-1.0**
KSAR				PcP		**PcP**	**03 24 14.6**	**+1.2**
KSAR	**Wonju Array Be**	**30.77**	**245**	P		**P**	**03 21 15.3**	**-1.0**
KSAR							03 24 14.6	
SKAG	**Skagway**	**31.10**	**60**	*e*P		**P**	**03 21 21.3**	**+2.3**
	comp=Z,560nm,2.0s							
SKAG				LR		LR		
	comp=Z,21µm,18.0s							
BESE	**Bessie Mountai**	**31.68**	**61**	*e*P		**P**	**03 21 26.4**	**+2.0**
	comp=Z,329nm,1.6s							
BESE				LR		LR		
	comp=Z,13µm,19.0s							
TJN	**Taejon**	**31.86**	**244**	*c i*P		**P**	**03 21 24.1**	**-1.9**
JIS	**Juneau Island**	**32.04**	**62**	*e*P		**P**	**03 21 29.3**	**+2.0**
	comp=Z,517nm,1.7s							
JIS				LR		LR		
	comp=Z,12µm,19.0s							
MIDW	**Midway**	**32.24**	**147**	PFAKE			03 21 40.0	+11
MIDW				LR		LR		
	comp=Z,11µm,22.0s							
DL2	**Dalian**	**32.80**	**254**	⇑*i*P		**P**	**03 21 32.4**	**-1.8**
DL2				S		**S**	**03 26 48.3**	**-2.1**
DL2				pmax		pmax		
	comp=Z,32nm,1.1s							
DL2				pmax		pmax		
	comp=Z,3µm,11.8s							
DL2				LR		LR		
	comp=Z,70µm,17.2s							
DL2				LR		LR		
	comp=Z,46µm,16.7s							
DL2				LR		LR		
	comp=Z,45µm,14.5s							
JNU	**Nakatsue**	**32.89**	**236**	P		**P**	**03 21 34.5**	**-0.7**
	comp=Z,19nm,0.9s,baz=75,slow=20,SNR=2.0							
JNU				LR		LR	03 35 17.5	
	comp=Z,23µm,19.7s,baz=50,slow=37							
IRK	**Irkutsk**	**33.48**	**287**	*e*P		**P**	**03 21 40.5**	**+0.4**
IRK				pmax		pmax		
	comp=Z,606nm,2.3s							
NRIK	**Noril'sk**	**33.51**	**321**	P		**P**	**03 21 40.3**	**+0.2**
	comp=Z,138nm,1.2s,baz=82,slow=8.7,SNR=95							
NRIK				LR		LR	03 36 37.1	
	comp=Z,22µm,18.0s,baz=73,slow=39							
NRIK	**Noril'sk**	**33.51**	**321**	P		**P**	**03 21 40.3**	**+0.2**
NRIK				pmax		pmax		
	comp=Z,138nm,1.2s							
NRIK				MLR		MLR		
	comp=Z,22µm,18.0s							
WRAK	**Wrangell Islan**	**33.88**	**64**	*e*P		**P**	**03 21 44.8**	**+1.4**
	comp=Z,121nm,1.1s							
WRAK				LR		LR		
	comp=Z,14µm,20.0s							
CBIJ	**Chichi jima**	**33.90**	**215**	*e*P		**P**	**03 21 44.5**	**+0.6**
	comp=Z,589nm,1.1s							
CBIJ				LR		LR		
	comp=Z,10µm,18.0s							
JCJ	**Chichijima**	**33.91**	**215**	P		**P**	**03 21 43.8**	**-0.1**
	comp=Z,399nm,1.0s,baz=21,slow=7.5							
CRAG	**Craig**	**33.97**	**66**	*e*P		**P**	**03 21 46.3**	**+2.0**
	comp=Z,292nm,1.6s							
CRAG				LR		LR		
	comp=Z,18µm,20.0s							
DLBC	**Dease Lake**	**34.02**	**60**	*e*P		**P**	**03 21 46.5**	**+1.8**
	comp=Z,258nm,1.3s							
DLBC				LR		LR		
	comp=Z,20µm,20.0s							
TLY	**Talaya**	**34.11**	**286**	*e*P		**P**	**03 21 45.8**	**+0.2**
	comp=Z,225nm,1.5s							
TLY				LR		LR		
	comp=Z,14µm,19.0s							
TLY	**Talaya**	**34.11**	**286**	P		**P**	**03 21 46.7**	**+1.1**
	SNR=53							
TLY	**Talaya**	**34.11**	**286**	*c i*P		**P**	**03 21 46.1**	**+0.5**
TLY				*e*PPP		PPP	03 23 06.3	
TLY				*e*S		**S**	**03 27 09.9**	**-0.7**
TLY				pmax		pmax		
	comp=Z,210nm,2.0s							
TLY				MLR		MLR		
	comp=Z,13µm,17.0s							
ULN	**Ulaanbaatar**	**34.54**	**279**	*e*P		**P**	**03 21 49.3**	**-0.3**
	comp=Z,91nm,1.2s							
ULN				LR		LR		
	comp=Z,26µm,18.0s							
ULN	**Ulaanbaatar**	**34.54**	**279**	P		**P**	**03 21 49.8**	**+0.3**
	SNR=75							
ULN	**Ulaanbaatar**	**34.54**	**279**	*c i*P		**P**	**03 21 49.6**	**+0.1**
ULN				pmax		pmax		
	comp=Z,102nm,1.3s							
ULN				MLR		MLR		
	comp=Z,23µm,17.0s							
BJI	**Beijing**	**34.84**	**261**	P		**P**	**03 21 51.3**	**-0.6**
BJI				S		**S**	**03 27 25.3**	**+3.4**
BJI				LR		LR		
	comp=Z,7µm,18.0s							
BJI				LR		LR		
	comp=Z,6µm,17.6s							
BJT	**Baijiatuau**	**34.86**	**261**	*e*P		**P**	**03 21 52.0**	**-0.1**
	comp=Z,212nm,1.0s							
BJT				LR		LR		
	comp=Z,24µm,19.0s							
BJT	**Baijiatuau**	**34.86**	**261**	*e*P		**P**	**03 21 52.0**	**-0.1**
BJT				pmax		pmax		
	comp=Z,212nm,1.0s							
BJT				MLR		MLR		
	comp=Z,24µm,19.0s							
SONA1	**Songino Array**	**34.90**	**279**	*e*P		**P**	**03 21 51.6**	**-1.0**
SONM	**Songino Array**	**34.91**	**279**	P		**P**	**03 21 52.9**	**+0.2**
	comp=Z,21nm,0.9s,baz=61,slow=8.3,SNR=91							
SONM				PcP		**PcP**	**03 24 24.2**	**-0.7**
	comp=Z,12nm,1.0s,baz=84,slow=1.9,SNR=4.7							
SONM				LR		LR	03 36 53.9	
	comp=Z,34µm,18.1s,baz=66,slow=38							
ZAK	**Zakamensk**	**35.04**	**285**	*e*P		**P**	**03 21 53.8**	**+0.1**

ZAK e 03 24 24.3
ZAK pmax pmax
comp=Z,86nm,1.3s
MOY Mondy 35.49 288 *e*P **P 03 21 58.1 +0.5**
MOY pmax pmax
comp=Z,21nm,2.1s
DIB Dawson Inlet, 35.49 69 *e*P **P 03 21 58.6 +1.3**
comp=Z,102nm,1.1s
DIB LR LR
comp=Z,10μm,19.0s
HHC Hu-ho-hao-te 36.73 266 *e*P **P 03 22 09.0 +0.7**
HHC pP pP 03 22 14.3 +1.0
HHC sP sP 03 22 17.5 +2.2
HHC PP **PnPn 03 23 30.1 -1.6**
HHC S **S 03 27 51.3 +0.1**
HHC sS sS 03 28 05.0 +5.6
HHC pmax pmax
comp=Z,140nm,1.2s
HHC pmax pmax
comp=Z,4μm,4.3s
HHC LR LR
comp=Z,26μm,17.2s
HHC LR LR
comp=Z,29μm,14.8s
HHC LR LR
comp=Z,25μm,12.5s
KRAR Krasnoyarsk 37.11 299⇑ *i*P P 03 22 04.8 -6.4
TIA Tai'an 37.17 255 P **P 03 22 10.9 -1.1**
TIA PP **PP 03 23 36.6 0.0**
TIA pmax pmax
comp=Z,2μm,11.0s
TIA LR LR
comp=Z,14μm,14.5s
TIA LR LR
comp=Z,9μm,20.2s
TIA LR LR
comp=Z,12μm,19.6s
BTO Baotou 37.74 267 *e*P **P 03 22 17.3 +0.5**
BTO pmax pmax
comp=Z,100nm,1.2s
H11N2 WAKE ISLAND Hy 37.80 175 T T 04 02 41.6
baz=358,slow=76
H11N3 WAKE ISLAND Hy 37.82 175 T T 04 02 42.7
baz=358,slow=76
H11N1 WAKE ISLAND Hy 37.82 175 T T 04 02 25.3
baz=358,slow=76,SNR=1422
KNGR Kungurtug, Tuv 37.89 289⇑ *e*P **P 03 22 18.8 +0.8**
WAKE Wake Island 38.24 175 *e*P **P 03 22 23.0 +2.0**
comp=Z,314nm,1.4s
WAKE LR LR
comp=Z,9μm,20.0s
BBB Bella Bella 38.26 68 *e*P **P 03 22 22.1 +1.2**
comp=Z,276nm,1.4s
BBB LR LR
comp=Z,8μm,19.0s
RES Resolute Bay 38.52 25 LR LR 03 39 02.7
comp=Z,11μm,20.7s,baz=293,slow=37
RES Resolute Bay 38.52 25 *e*P **P 03 22 22.7 -0.1**
comp=Z,75nm,1.4s
RES Resolute Bay 38.52 25 *e*P **P 03 22 22.7 -0.1**
RES pmax pmax
comp=Z,75nm,1.4s
TIY Taiyuan 38.53 262 *e*P **P 03 22 24.3 +0.8**
TIY PP **PP 03 23 51.5 0.0**
TIY S **S 03 28 23.8 +5.4**
TIY pmax pmax
comp=Z,820nm,1.7s
TIY pmax pmax
comp=Z,3μm,8.3s
TIY LR LR
comp=Z,46μm,17.2s
TIY LR LR
comp=Z,21μm,16.0s
TIY LR LR
comp=Z,27μm,15.0s
YKW3 Yellowknife Ar 38.65 47 *e*P **P 03 22 24.4 +0.3**
comp=Z,57nm,1.0s
YKW3 LR LR
comp=Z,8μm,19.0s
YKA Yellowknife Ar 38.69 47 P **P 03 22 24.7 +0.2**
comp=Z,23nm,0.9s,baz=300,slow=8.1,SNR=139
YKA PcP **PcP 03 24 36.3 +0.4**
comp=Z,7.1nm,1.0s,baz=312,slow=3.4,SNR=4.2
YKA LR LR 03 41 54.2
comp=Z,890nm,18.9s,baz=300,slow=42
SSE Sheshan 39.15 246 P **P 03 22 30.8 +2.2**
SSE PP **PP 03 23 57.9 -0.4**
SSE S **S 03 28 29.8 +2.1**
SSE pmax pmax
comp=Z,1μm,9.8s
JOW Kunigami 39.43 234 *e*P **P 03 22 29.3 -1.7**
comp=Z,124nm,1.3s
JOW LR LR
comp=Z,20μm,22.0s
HVS Khovu-Aksy 39.50 292*c i*P **P 03 22 31.8 +0.3**
HVS pmax pmax
comp=Z,317nm,1.2s
HVS MLR MLR
comp=Z,40μm,15.0s
NJ2 Nanjing 39.54 249 *e*P **P 03 22 32.4 +0.5**
NJ2 pP **pP 03 22 35.9 -0.9**
NJ2 PP **PP 03 24 03.0 +0.4**
NJ2 S **S 03 28 31.3 -2.2**
NJ2 pmax pmax
comp=Z,28nm,0.7s
NJ2 pmax pmax
comp=Z,3μm,10.7s
NJ2 LR LR
comp=Z,28μm,17.3s
NJ2 LR LR
comp=Z,20μm,13.6s
NJ2 LR LR
comp=Z,34μm,13.0s
ZAA0 Zalesovo Array 42.09 300 *e*P **P 03 22 51.8 -0.9**
comp=Z,100nm,1.7s
ZAA0 LR LR
comp=Z,18μm,18.0s
ZALV Zalesovo Beam 42.09 300 P **P 03 22 51.8 -0.9**
comp=Z,4.8nm,0.6s,baz=59,slow=7.1,SNR=21
ZALV PP **PP 03 24 28.9 -1.1**
comp=Z,25nm,1.0s,baz=49,slow=10.0,SNR=4.3
ZALV PcP **PcP 03 24 47.6 +0.6**
comp=Z,32nm,1.1s,baz=36,slow=4.0,SNR=3.8
ZALV LR LR 03 42 13.5
comp=Z,12μm,20.1s,baz=28,slow=39
ZALV Zalesovo Beam 42.09 300 *e*P **P 03 22 51.0 -1.7**
ZALV PP **PP 03 24 28.9 -1.1**
ZALV PcP **PcP 03 24 47.6 +0.6**
ZALV Zalesovo Beam 42.09 300 *e*P **P 03 22 51.0 -1.7**
ZALV 03 24 28.9
ZALV 03 24 47.6
TULEG Thule 42.19 16 *e*P **P 03 22 52.5 -0.8**
comp=Z,54nm,1.1s
TULEG LR LR
comp=Z,4062μm,20.0s
NVS Novosibirsk 42.28 302⇑ *i*P **P 03 22 53.9 -0.3**
NVS *e* 03 24 31.8
NVS *e* 03 25 05.5
NVS *e*S **S 03 29 18.6 +4.8**
NVS pmax pmax
comp=N,137nm,1.8s
NVS pmax pmax
comp=E,204nm,1.8s
NVS pmax pmax
comp=Z,352nm,1.8s
NVS pmax pmax
comp=N,131nm,1.9s
NVS pmax pmax
comp=E,152nm,1.9s
NVS pmax pmax
comp=Z,171nm,1.9s
NVS smax smax
comp=N,18nm,2.5s
NVS smax smax
comp=E,122nm,2.5s
LLLB Lilloоet 42.31 66 PFAKE 03 23 10.0 +15
LLLB LR LR
comp=Z,14μm,19.0s
KBS Kingsbay 42.76 352 *e*P **P 03 22 57.3 -0.6**
comp=Z,197nm,1.6s
KBS LR LR
comp=Z,8μm,19.0s
KBS Kingsbay 42.76 352 *e*P **P 03 22 57.3 -0.6**
KBS pmax pmax
comp=Z,197nm,1.6s
KBS MLR MLR
comp=Z,8μm,19.0s
KBS Kingsbay 42.76 352 *e*P **P 03 22 58.7 +0.8**
PGC Sidney 42.78 69 *e*P **P 03 22 58.9 +0.6**
comp=Z,226nm,1.5s
PGC LR LR
comp=Z,21μm,21.0s
WHN Wuhan 43.05 253 P **P 03 22 59.0 -1.7**
WHN PP **PcP 03 24 47.5 -3.1**
WHN S **S 03 29 25.3 -0.3**
WHN LR LR
comp=Z,60μm,13.5s
WHN LR LR
comp=Z,17μm,10.6s
WHN LR LR
comp=Z,54μm,12.1s
SPA0 Spitsbergen Ar 43.09 351 *e*P **P 03 23 00.6 0.0**
SPA0 Spitsbergen Ar 43.09 351⇑ *i*P **P 03 23 00.6 0.0**
SPITS Spitsbergen Ar 43.09 351 P **P 03 23 00.8 +0.2**
comp=Z,108nm,0.8s,baz=70,slow=8.1,SNR=63
SPITS S **S 03 29 26.2 +0.8**
comp=Z,6.0nm,1.1s,baz=37,slow=7.3,SNR=1.1
SPITS ScS **ScS 03 32 59.2 -0.2**
comp=Z,7.8nm,1.1s,baz=105,slow=17,SNR=1.8
SPITS LR LR 03 40 48.9
comp=Z,9μm,19.2s,baz=20,slow=36
A04D Lummi Island 43.11 69 P **P 03 23 01.9 +0.8**
baz=311
XAN Xi'an 43.17 261 P **P 03 23 01.5 -0.2**
XAN sP sP 03 23 14.5 +5.8
XAN S **S 03 29 23.0 -4.4**
XAN pmax pmax
comp=Z,130nm,1.3s
XAN pmax pmax
comp=Z,4μm,6.3s
XAN LR LR
comp=Z,36μm,15.8s
XAN LR LR
comp=Z,44μm,14.4s
XAN LR LR
comp=Z,41μm,11.5s
NLWA Neilton Lookou 43.40 71 *e*P **P 03 23 05.3 +1.9**
comp=Z,214nm,1.6s
NLWA LR LR
comp=Z,16μm,20.0s
DGZ Jazzator, Alta 43.52 294 *i* P **P 03 23 04.9 +0.3**
DGZ pmax pmax
comp=Z,102nm,1.1s
HOPEN Hopen 43.66 347 *e*P **P 03 23 04.3 -0.8**
B05A Bryant 43.72 69 P **P 03 23 07.1 +1.1**
baz=312,SNR=16
GNW Green Mountain 43.81 70 *e*P **P 03 23 07.7 +0.9**
YOJ Yonaguni jima 43.84 239 PFAKE 03 23 20.0 +13
YOJ LR LR
comp=Z,10μm,19.0s
B06A Marblemount 43.86 68 *e*P **P 03 23 08.3 +1.3**
comp=Z,434nm,1.9s
B06A LR LR
comp=Z,14μm,21.0s
TATO Taipei 44.11 241 PFAKE 03 23 20.0 +11
TATO LR LR
comp=Z,13μm,19.0s
E03A Lebam 44.12 71 *e*P **P 03 23 11.0 +1.9**
comp=Z,187nm,1.0s
E03A LR LR
comp=Z,16μm,20.0s
HSPB Hornsund (broa 44.24 350 *e*P **P 03 23 09.7 -0.1**
HSPB *e*S **S 03 29 42.0 -0.1**
HSPB *e*SS **ScS 03 33 09.8 +3.3**
HSPB MLR MLR
comp=Z,13μm,17.1s
HSPB Hornsund (broa 44.24 350 *e*P **P 03 23 10.4 +0.7**
LZH Lanzhou 44.35 268⇑P **P 03 23 12.3 +0.9**
LZH pP pP 03 23 15.6 -0.8
LZH sP sP 03 23 17.8 -0.5
LZH PP **PP 03 24 54.8 +0.2**
LZH S **S 03 29 43.8 -1.1**
LZH SS SS 03 32 52.3 -11
LZH pmax pmax
comp=Z,580nm,1.2s
LZH pmax pmax
comp=Z,4μm,7.3s
LZH LR LR
comp=Z,33μm,14.6s
LZH LR LR
comp=Z,44μm,17.4s
LZH LR LR
comp=Z,43μm,16.8s
YHNB Yeheng 44.42 240 PFAKE 03 23 20.0 +8.1
YHNB LR LR
comp=Z,17μm,20.0s
KEKH Kekaha 44.43 127 PFAKE 03 23 20.0 +8.1
KEKH LR LR
comp=Z,10μm,21.0s
D05A Enumclaw 44.49 70 *e*P **P 03 23 14.7 +2.6**
comp=Z,346nm,1.5s
D05A LR LR
comp=Z,14μm,21.0s
F03A Seaside 44.53 72 *e*P **P 03 23 14.8 +2.2**
comp=Z,627nm,1.7s
F03A LR LR
comp=Z,13μm,19.0s
C06D Leavenworth 44.55 68 P **P 03 23 13.4 +0.8**
baz=312
F04D Rainier, OR 44.71 72 P **P 03 23 14.9 +0.9**
baz=313
NACB Ninganchiao 44.75 240 PFAKE 03 23 30.0 +16
NACB LR LR
comp=Z,15μm,20.0s
LON Longmire 44.87 70 *e*P **P 03 23 16.5 +1.2**
comp=Z,189nm,1.8s
LON LR LR
comp=Z,10μm,21.0s
LON Longmire 44.87 70 *e*P **P 03 23 16.5 +1.2**
LON pmax pmax
comp=Z,189nm,1.8s
LON MLR MLR
comp=Z,10μm,21.0s
B08A Colville Reser 45.04 67 *e*P **P 03 23 17.3 +0.7**
comp=Z,142nm,1.4s
B08A LR LR
comp=Z,12μm,21.0s
LTY Liberty 45.11 69 *e*P **P 03 23 17.9 +0.8**
comp=Z,154nm,1.4s
LTY LR LR
comp=Z,13μm,21.0s
G03D McMinnville, O 45.18 73 P **P 03 23 18.6 +1.0**
baz=314
SSLB Suanglung 45.38 240 PFAKE 03 23 30.0 +11
SSLB LR LR
comp=Z,13μm,19.0s
OPA Opana 45.43 126 PFAKE 03 23 30.0 +10
OPA LR LR
comp=Z,9μm,21.0s
JOHN Johnston Islan 45.45 142 PFAKE 03 23 30.0 +10
JOHN LR LR
comp=Z,8μm,22.0s
KULLO Kullorsuaq 45.45 14⇑ *i*P **P 03 23 19.3 -0.2**
comp=Z,126nm,1.0s
KULLO Kullorsuaq 45.45 14⇑ *i*P **P 03 23 19.3 -0.2**
KULLO pmax pmax
comp=Z,130nm,1.0s
QZH Quanzhou 45.52 244⇑ *i*P **P 03 23 19.3 -1.2**
QZH PP **PP 03 25 09.4 +2.4**
QZH S **S 03 29 57.8 -3.9**
QZH SS **ScS 03 33 19.5 +3.3**
QZH pmax pmax
comp=Z,3μm,10.0s
QZH LR LR
comp=Z,7μm,11.8s
QZH LR LR
comp=Z,10μm,14.2s
QZH LR LR
comp=Z,13μm,14.2s
YULB Yu-li 45.55 240 PFAKE 03 23 30.0 +9.1
YULB LR LR
comp=Z,11μm,18.0s
COR Corvallis 45.59 73 *e*P **P 03 23 21.0 +0.1**
comp=Z,571nm,1.8s
COR LR LR
comp=Z,13μm,20.0s
COR Corvallis 45.59 73 *e*P **P 03 23 21.0 +0.1**
COR pmax pmax
comp=Z,571nm,1.8s
COR MLR MLR
comp=Z,13μm,20.0s
KIP Kipapa 45.66 126 PFAKE 03 23 30.0 +8.3
KIP LR LR
comp=Z,9μm,21.0s
HON Honolulu 45.75 126 PFAKE 03 23 40.0 +18
HON LR LR
comp=Z,10μm,22.0s
ENH Enshi 45.80 257 *e*P **P 03 23 21.9 -0.9**
comp=Z,139nm,1.0s
ENH LR LR
comp=Z,22μm,19.0s
C09A Chrisman Ranch 45.94 67 *e*P **P 03 23 24.9 +1.3**
comp=Z,99nm,1.4s
C09A LR LR
comp=Z,12μm,21.0s
TPUB Ta-pu 45.95 240 *e*P **P 03 23 22.9 -1.1**
TPUB *e*PcP **PcP 03 25 01.4 +0.8**
TPUB LR LR
comp=Z,13μm,21.0s
DAG Danmarks Havn 45.98 1⇑ *i*P **P 03 23 23.2 -0.4**
comp=Z,64nm,1.0s
DAG Danmarks Havn 45.98 1⇑ *i*P **P 03 23 23.2 -0.4**
DAG pmax pmax
comp=Z,65nm,1.0s
E07A Sunnyside 45.99 69 *e*P **P 03 23 26.2 +2.1**
comp=Z,147nm,1.3s
E07A LR LR
comp=Z,14μm,20.0s
GUMO Guam 46.04 205 LR LR 03 40 43.4
comp=Z,9μm,21.4s,baz=30,slow=34
H04A Detroit Lake 46.09 72 *e*P **P 03 23 26.8 +1.9**
comp=Z,265nm,1.5s
H04A LR LR
comp=Z,12μm,20.0s
D08A Wollman Farm, 46.12 68 *e*P **P 03 23 26.7 +1.6**
comp=Z,232nm,1.7s
D08A LR LR
comp=Z,8μm,20.0s
TWG Pinlang 46.15 240 PFAKE 03 23 40.0 +14
TWG LR LR
comp=Z,37μm,19.0s
G05D Wamic, OR 46.15 71 P **P 03 23 27.1 +1.6**
baz=314,SNR=7.3
G05D S **S 03 30 10.9 +0.4**
baz=314
I03D Drain, OR 46.18 74 P **P 03 23 27.2 +1.7**
baz=314,SNR=12
NEW Newport 46.19 66 P **P 03 23 26.5 +0.8**
baz=313,SNR=16
NEW Newport 46.19 66 *e*P **P 03 23 26.9 +1.2**
comp=Z,170nm,1.6s
NEW LR LR
comp=Z,13μm,18.0s
NEW Newport 46.19 66 *e*P **P 03 23 26.9 +1.2**
NEW pmax pmax
comp=Z,170nm,1.6s
NEW MLR MLR
comp=Z,13μm,18.0s
KEBM Edson Butte 46.24 76 *e*P **P 03 23 27.6 +1.4**
comp=Z,220nm,1.6s
KEBM LR LR
comp=Z,6μm,18.0s
HAWA Hanford 46.27 69 *e*P **P 03 23 27.4 +1.2**
comp=Z,232nm,1.6s
HAWA LR LR
comp=Z,13μm,20.0s
ZSN Zaisan 46.30 293⇑ *i*P **P 03 23 26.3 -0.2**
comp=Z,57nm,2.5s
ZSN *i* PP **PP 03 25 14.5 -0.4**
ZSN *e*S **S 03 30 11.8 -0.7**
ZSN *i* SS **SS 03 33 39.0 +1.5**
F07A Phinny Hill Vi 46.41 70 *e*P **P 03 23 29.6 +2.3**
comp=Z,88nm,0.9s
F07A LR LR
comp=Z,16μm,20.0s
E08A Dider Farm, El 46.44 69 *e*P **P 03 23 29.3 +1.7**
comp=Z,142nm,1.4s
E08A LR LR
comp=Z,10μm,20.0s
G06A Carlson Farm, 46.51 71 *e*P **P 03 23 29.9 +1.7**
comp=Z,171nm,1.8s
G06A LR LR
comp=Z,15μm,20.0s
I04A Tendick Farm, 46.60 74 P **P 03 23 29.6 +0.7**
baz=315,SNR=18
KBO Bosley Butte 46.76 76 *e*P **P 03 23 32.4 +2.1**
comp=Z,415nm,1.7s
KBO LR LR
comp=Z,8μm,20.0s
I05D Terrebonne, OR 46.77 72 P **P 03 23 31.1 +0.8**
baz=314,SNR=10
KHLH Kahului Airpor 46.82 124 PFAKE 03 23 40.0 +9.2
KHLH LR LR
comp=Z,9μm,20.0s
E09A Wood Farm, Sta 46.88 68 *e*P **P 03 23 32.4 +1.3**
comp=Z,101nm,1.0s
E09A LR LR
comp=Z,9μm,22.0s
HLK Haleakala 47.02 124 PFAKE 03 23 50.0 +17
HLK LR LR
comp=Z,8μm,20.0s
KURK Kurchatov 47.09 300 *e*P **P 03 23 32.1 -0.5**
comp=Z,273nm,1.2s
KURK LR LR
comp=Z,16μm,18.0s
KURK Kurchatov 47.09 300 P **P 03 23 32.4 -0.1**
SNR=129
KURK Kurchatov 47.09 300*c i*P **P 03 23 32.0 -0.5**
KURK pmax pmax
comp=Z,329nm,1.4s
KURK MLR MLR
comp=Z,12μm,15.0s
L02D Cave Junction, 47.13 76 P **P 03 23 34.5 +1.4**
baz=316,SNR=10
J04D Umpqua Nationa 47.14 74 P **P 03 23 34.4 +1.0**
baz=315,SNR=16
HUMO Hull Mountain 47.15 75 *e*P **P 03 23 34.5 +1.3**
comp=Z,202nm,1.9s
HUMO LR LR
comp=Z,11μm,22.0s
KURBB Kurchatov Arra 47.19 300 P **P 03 23 32.9 -0.5**
comp=Z,101nm,1.1s,baz=52,slow=8.0,SNR=152
WALA Waterton Lakes 47.21 63 *e*P **P 03 23 34.8 +1.0**
comp=Z,256nm,1.4s
WALA LR LR
comp=Z,14μm,21.0s
G08A Pilot Rock 47.32 70 *e*P **P 03 23 35.8 +1.1**
comp=Z,153nm,1.9s
G08A LR LR
comp=Z,14μm,22.0s
PINE Pine Mountain 47.36 73 *e*P **P 03 23 36.4 +1.3**
comp=Z,283nm,1.5s
PINE LR LR
comp=Z,13μm,20.0s
WMQ Urumqi 47.38 288 P **P 03 23 35.4 +0.4**
WMQ PcP **PcP 03 25 07.4 +1.9**
WMQ PP **PP 03 25 27.3 +1.3**
WMQ PcS **PcS 03 28 59.3 -1.4**
WMQ S **S 03 30 29.5 +1.4**
WMQ pmax pmax
comp=Z,280nm,1.3s
WMQ pmax pmax
comp=Z,13μm,5.9s
WMQ LR LR
comp=Z,49μm,19.1s
WMQ LR LR
comp=Z,32μm,16.1s
WMQ LR LR
comp=Z,24μm,23.5s
J05D Fort Rock, OR 47.56 73 P **P 03 23 37.9 +1.3**
baz=315,SNR=72
F10A Beach Ranch, E 47.72 68 *e*P **P 03 23 37.9 +0.2**
comp=Z,250nm,1.8s
F10A LR LR
comp=Z,7μm,20.0s
K04D Chiloquin, OR 47.76 74 P **P 03 23 39.1 +0.9**
baz=316
JCC Jacoby Creek, 47.86 78 PFAKE 03 23 50.0 +11
JCC LR LR
comp=Z,6μm,18.0s
I07A Izee 47.89 71 *e*P **P 03 23 41.1 +2.0**
comp=Z,113nm,1.8s
I07A LR LR
comp=Z,14μm,20.0s
YBH Yreka Blue Hor 47.90 76 LR LR 03 41 43.6
comp=Z,6μm,20.3s,baz=318,slow=34
YBH Yreka Blue Hor 47.90 76 *e*P **P 03 23 40.6 +1.4**
comp=Z,179nm,1.6s
HPAH Hawaii Prepara 47.91 124 PFAKE 03 23 50.0 +11

HPAH				LR	LR		
	comp=Z,10μm,22.0s						
JTMT	**Jette**	**47.94**	**64**	*e*P	**P**	**03 23 41.0**	**+1.5**
	comp=Z,509nm,1.9s						
JTMT				LR	LR		
	comp=Z,14μm,18.0s						
KHMM	**Horse Mountain**	**47.98**	**77**	*e*P	**P**	**03 23 42.7**	**+2.9**
	comp=Z,163nm,1.3s						
KHMM				LR	LR		
	comp=Z,8μm,19.0s						
MK31	**Makanchi Array**	**48.02**	**294**	*e*P	**P**	**03 23 38.7**	**-1.3**
MK31	**Makanchi Array**	**48.02**	**294**	*i* P	**P**	**03 23 38.3**	**-1.7**
MK31				pmax	pmax		
	comp=Z,32nm,1.0s						
MKAR	**Makanchi Array**	**48.02**	**294**	P	**P**	**03 23 38.7**	**-1.3**
	comp=Z,17nm,0.8s,baz=51,slow=7.2,SNR=99						
MKAR				LR	LR	03 46 09.1	
	comp=Z,10μm,18.3s,baz=38,slow=39						
MKAR	**Makanchi Array**	**48.02**	**294**	*e*P	**P**	**03 23 38.7**	**-1.3**
	comp=Z,441nm,1.6s						
MKAR	**Makanchi Array**	**48.02**	**294**	*e*P	**P**	**03 23 38.7**	**-1.3**
MKAR				pmax	pmax		
	comp=Z,441nm,1.6s						
MK01	**Makanchi Array**	**48.03**	**294**	*e*P	**P**	**03 23 37.4**	**-2.7**
M02C	**Callahan**	**48.07**	**76**	P	**P**	**03 23 42.1**	**+1.7**
	baz=316,SNR=18						
K05A	**Summer Lake**	**48.14**	**73**	*e*P	**P**	**03 23 42.4**	**+1.3**
	comp=Z,153nm,1.2s						
K05A				LR	LR		
	comp=Z,11μm,20.0s						
HUH	**Hualalai**	**48.15**	**124**	PFAKE		03 23 50.0	+8.5
HUH				LR	LR		
	comp=Z,11μm,22.0s						
MAKZ	**Makanchi**	**48.17**	**294**	*e*P	**P**	**03 23 39.8**	**-1.3**
	comp=Z,84nm,1.3s						
MAKZ				LR	LR		
	comp=Z,21μm,18.0s						
MAKZ	**Makanchi**	**48.17**	**294**	*e*P	**P**	**03 23 39.8**	**-1.3**
MAKZ				pmax	pmax		
	comp=Z,85nm,1.3s						
MAKZ				MLR	MLR		
	comp=Z,21μm,18.0s						
KHLU	**Kahalu'u**	**48.20**	**124**	PFAKE		03 24 00.0	+18
KHLU				LR	LR		
	comp=Z,9μm,22.0s						
POHA	**Pohakuloa**	**48.22**	**124**	PFAKE		03 24 00.0	+18
POHA				LR	LR		
	comp=Z,10μm,22.0s						
M04C	**Macdoel**	**48.32**	**75**	P	**P**	**03 23 43.5**	**+1.1**
	baz=316,SNR=22						
CD2	**Chengdu**	**48.34**	**263**	P	**P**	**03 23 42.8**	**+0.2**
CD2				sP	sP	03 23 51.8	+2.1
CD2				PcP	**PcP**	**03 25 10.0**	**+0.9**
CD2				PP	**PP**	**03 25 35.3**	**+0.3**
CD2				S	**S**	**03 30 38.8**	**-3.2**
CD2				sS	sS	03 30 52.0	+1.6
CD2				pmax	pmax		
	comp=Z,510nm,1.5s						
CD2				pmax	pmax		
	comp=Z,10μm,8.8s						
CD2				LR	LR		
	comp=Z,31μm,18.0s						
CD2				LR	LR		
	comp=Z,30μm,14.5s						
HMH	**Humu'ula Sheep**	**48.38**	**124**	PFAKE		03 24 00.0	+17
HMH				LR	LR		
	comp=Z,10μm,20.0s						
MLOA	**Mauna Loa Obse**	**48.39**	**124**	PFAKE		03 24 00.0	+16
MLOA				LR	LR		
	comp=Z,11μm,22.0s						
MWH	**Moku'aweowe**	**48.43**	**124**	PFAKE		03 24 00.0	+16
MWH				LR	LR		
	comp=Z,10μm,22.0s						
N02D	**Trinity Center**	**48.45**	**76**	P	**P**	**03 23 45.0**	**+1.6**
	baz=316,SNR=27						
KMRM	**Mail Ridge**	**48.46**	**78**	*e*P	**P**	**03 23 45.8**	**+2.3**
	comp=Z,322nm,1.9s						
KMRM				LR	LR		
	comp=Z,6μm,19.0s						
BMO	**Blue Mountains**	**48.46**	**69**	*e*P	**P**	**03 23 44.2**	**+0.7**
	comp=Z,131nm,1.4s						
BMO				LR	LR		
	comp=Z,15μm,21.0s						
BMO	**Blue Mountains**	**48.46**	**69**	*e*P	**P**	**03 23 44.2**	**+0.7**
BMO				pmax	pmax		
	comp=Z,131nm,1.4s						
BMO				MLR	MLR		
	comp=Z,15μm,21.0s						
MLH	**Mauna Loa**	**48.52**	**124**	PFAKE		03 24 00.0	+16
MLH				LR	LR		
	comp=Z,10μm,22.0s						
AIN	**Ainahou**	**48.59**	**124**	PFAKE		03 24 00.0	+15
AIN				LR	LR		
	comp=Z,11μm,22.0s						
UWE	**Uwekahuna**	**48.62**	**124**	PFAKE		03 24 00.0	+15
UWE				LR	LR		
	comp=Z,9μm,21.0s						
SBLHI	**Steaming Bluff**	**48.63**	**124**	PFAKE		03 24 00.0	+15
SBLHI				LR	LR		
	comp=Z,11μm,21.0s						
OBL	**Observatory Le**	**48.63**	**124**	PFAKE		03 24 00.0	+15
OBL				LR	LR		
	comp=Z,8μm,20.0s						
WRMHI	**West Rim**	**48.63**	**124**	PFAKE		03 24 00.0	+15
WRMHI				LR	LR		
	comp=Z,12μm,22.0s						
HATHI	**Halema'uma'u T**	**48.63**	**124**	PFAKE		03 24 00.0	+15
HATHI				LR	LR		
	comp=Z,8μm,21.0s						
NPH	**North Pit**	**48.63**	**124**	PFAKE		03 24 00.0	+15
NPH				LR	LR		
	comp=Z,8μm,21.0s						
SDHHI	**Sand Hill**	**48.65**	**124**	PFAKE		03 24 00.0	+15
SDHHI				LR	LR		
	comp=Z,9μm,20.0s						
RIM	**Rim**	**48.65**	**124**	PFAKE		03 24 00.0	+15
RIM				LR	LR		
	comp=Z,9μm,21.0s						
KKO	**Keanakako'i**	**48.65**	**124**	PFAKE		03 24 00.0	+15
KKO				LR	LR		
	comp=Z,11μm,22.0s						
FFC	**Flin Flon**	**48.66**	**50**	*e*P	**P**	**03 23 45.4**	**+0.7**
	comp=Z,115nm,1.2s						
FFC				LR	LR		
	comp=Z,10μm,22.0s						
FFC	**Flin Flon**	**48.66**	**50**	*e*P	**P**	**03 23 45.4**	**+0.7**
FFC				pmax	pmax		
	comp=Z,115nm,1.2s						
FFC				MLR	MLR		
	comp=Z,10μm,22.0s						
PUH	**Pauahi**	**48.70**	**124**	PFAKE		03 24 00.0	+14
PUH				LR	LR		
	comp=Z,9μm,21.0s						
HLP	**Hilina Pali**	**48.72**	**124**	PFAKE		03 24 00.0	+14
HLP				LR	LR		
	comp=Z,10μm,22.0s						
STCH	**Steam Cracks**	**48.73**	**124**	PFAKE		03 24 00.0	+14
STCH				LR	LR		
	comp=Z,12μm,22.0s						
JCUZ	**Jacuzzi**	**48.74**	**124**	PFAKE		03 24 00.0	+14
JCUZ				LR	LR		
	comp=Z,9μm,21.0s						
MSO	**Missoula**	**48.74**	**65**	P	**P**	**03 23 46.7**	**+1.1**
	baz=315,SNR=43						
MSO	**Missoula**	**48.74**	**65**	*e*P	**P**	**03 23 45.7**	**+0.1**
	comp=Z,156nm,1.6s						
MSO				LR	LR		
	comp=Z,18μm,21.0s						
HULD	**Heiheiahulu Di**	**48.77**	**124**	PFAKE		03 24 00.0	+14
HULD				LR	LR		
	comp=Z,10μm,22.0s						
WDC	**Whiskeytown Da**	**48.82**	**77**	*e*P	**P**	**03 23 47.6**	**+1.5**
	comp=Z,124nm,1.4s						
WDC				LR	LR		
	comp=Z,6μm,21.0s						
WDC	**Whiskeytown Da**	**48.82**	**77**	*e*P	**P**	**03 23 47.6**	**+1.5**
WDC				pmax	pmax		
	comp=Z,124nm,1.4s						
WDC				MLR	MLR		
	comp=Z,6μm,21.0s						
FCC	**Fort Churchill**	**48.89**	**42**	*e*P	**P**	**03 23 46.3**	**-0.1**
	comp=Z,286nm,1.6s						
FCC				LR	LR		
	comp=Z,10μm,19.0s						
FCC	**Fort Churchill**	**48.89**	**42**	*e*P	**P**	**03 23 46.3**	**-0.1**
FCC				pmax	pmax		
	comp=Z,286nm,1.6s						
FCC				MLR	MLR		
	comp=Z,10μm,19.0s						
KCPM	**Cahto Peak**	**48.92**	**78**	*e*P	**P**	**03 23 49.9**	**+2.9**
	comp=Z,218nm,1.9s						
J08A	**Circle Bar Ran**	**48.93**	**71**	*e*P	**P**	**03 23 48.0**	**+0.9**
	comp=Z,119nm,1.4s						
J08A				LR	LR		
	comp=Z,12μm,20.0s						
HAMF	**Hammerfest**	**48.99**	**343**	*e*P	**P**	**03 23 46.2**	**-0.8**
MOD	**Modoc Plateau**	**49.03**	**74**	*e*P	**P**	**03 23 48.0**	**0.0**
	comp=Z,138nm,1.4s						
MOD				LR	LR		
	comp=Z,12μm,22.0s						
BVA0	**Borovoye Array**	**49.18**	**307**	*i* P	**P**	**03 23 48.2**	**-0.6**
BVA0				pmax	pmax		
	comp=Z,135nm,1.0s						
BVAR	**Borovoye Array**	**49.18**	**307**	P	**P**	**03 23 48.6**	**-0.2**
	comp=Z,68nm,0.8s,baz=54,slow=7.9,SNR=267						
BVAR				LR	LR	03 46 41.6	
	comp=Z,42μm,18.8s,baz=44,slow=39						
BRVK	**Borovoye**	**49.21**	**307**	*e*P	**P**	**03 23 48.6**	**-0.3**
	comp=Z,122nm,0.9s						
BRVK				LR	LR		
	comp=Z,43μm,21.0s						
BRVK	**Borovoye**	**49.21**	**307**	P	**P**	**03 23 49.0**	**+0.1**
	SNR=78						
BRVK	**Borovoye**	**49.21**	**307**	*c i*P	**P**	**03 23 48.8**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,146nm,0.9s						
BRVK				MLR	MLR		
	comp=Z,43μm,18.0s						
KEV	**Kevo**	**49.23**	**342**	*e*P	**P**	**03 23 48.0**	**-0.9**
	comp=Z,179nm,1.6s						
KEV				LR	LR		
	comp=Z,12μm,18.0s						
KEV	**Kevo**	**49.23**	**342**	*e*P	**P**	**03 23 48.0**	**-0.9**
KEV				pmax	pmax		
	comp=Z,179nm,1.6s						
KEV				MLR	MLR		
	comp=Z,12μm,18.0s						
SUMG	**Summit**	**49.33**	**9**	*i* P	**P**	**03 23 50.1**	**0.0**
	comp=Z,106nm,1.0s						
SUMG	**Summit**	**49.33**	**9**	*e*P	**P**	**03 23 49.8**	**-0.3**
	comp=Z,269nm,1.5s						
SUMG				LR	LR		
	comp=Z,6μm,18.0s						
SUMG	**Summit**	**49.33**	**9**	*i* P	**P**	**03 23 50.1**	**0.0**
SUMG				pmax	pmax		
	comp=Z,110nm,1.0s						
O03D	**Paynes Creek**	**49.41**	**76**	P	**P**	**03 23 51.2**	**+0.4**
	baz=317,SNR=36						
WVOR	**Wild Horse Val**	**49.51**	**72**	*e*P	**P**	**03 23 52.9**	**+1.3**
	comp=Z,288nm,1.9s						
WVOR				LR	LR		
	comp=Z,8μm,20.0s						
WVOR	**Wild Horse Val**	**49.51**	**72**	*e*P	**P**	**03 23 52.9**	**+1.3**
WVOR				pmax	pmax		
	comp=Z,288nm,1.9s						
WVOR				MLR	MLR		
	comp=Z,8μm,20.0s						
ARCES	**ARCESS Array B**	**49.68**	**342**	P	**P**	**03 23 51.6**	**-0.8**
	comp=Z,38nm,0.8s,baz=26,slow=8.7,SNR=82						
ARCES				PcP	**PcP**	**03 25 13.4**	**+0.1**
	comp=Z,15nm,0.9s,baz=35,slow=4.8,SNR=4.1						
ARCES				LR	LR	03 49 00.2	
	comp=Z,8μm,18.6s,baz=44,slow=41						
ARCES	**ARCESS Array B**	**49.68**	**342**	*e*P	**P**	**03 23 51.0**	**-1.3**
ARCES				PcP	**PcP**	**03 25 13.4**	**+0.1**
ARE0	**ARCESS Array S**	**49.68**	**342**	*e*P	**P**	**03 23 51.6**	**-0.7**
	comp=Z,83nm,1.0s						
ARE0				LR	LR		
	comp=Z,8μm,18.0s						
ARE0	**ARCESS Array S**	**49.68**	**342**	*e*P	**P**	**03 23 51.6**	**-0.7**
HOPS	**Hopland Field**	**49.69**	**78**	*e*P	**P**	**03 23 53.7**	**+0.9**
	comp=Z,127nm,1.4s						
HOPS				LR	LR		
	comp=Z,5μm,19.0s						
HRY	**Holter Researc**	**49.85**	**64**	*e*P	**P**	**03 23 55.3**	**+1.2**
APA	**Apatity**	**49.90**	**337**	⇓*i*P	**P**	**03 23 51.6**	**-2.4**
APA				*i*		03 25 15.0	
APA				*i*		03 25 51.0	
APA				*i* S	**S**	**03 30 54.0**	**-8.9**
APA				*i*		03 33 41.0	
APA				*i* SS	**SS**	**03 34 31.0**	**-3.9**
APA				pmax	pmax		
	comp=Z,18nm,0.9s						
EGMT	**Eagleton**	**49.91**	**61**	P	**P**	**03 23 55.3**	**+0.8**
	baz=316						
EGMT	**Eagleton**	**49.91**	**61**	*e*P	**P**	**03 23 55.4**	**+0.8**
	comp=Z,169nm,1.2s						
EGMT				LR	LR		
	comp=Z,12μm,19.0s						
GDXM	**Geysers**	**49.98**	**78**	PFAKE		03 24 10.0	+15
GDXM				LR	LR		
	comp=Z,10μm,19.0s						
ORV	**Oroville**	**50.11**	**77**	*e*P	**P**	**03 23 57.9**	**+1.9**
	comp=Z,90nm,1.4s						
ORV				LR	LR		
	comp=Z,6μm,22.0s						
ORV	**Oroville**	**50.11**	**77**	*e*P	**P**	**03 23 57.9**	**+1.9**
ORV				pmax	pmax		
	comp=Z,90nm,1.4s						
ORV				MLR	MLR		
	comp=Z,6μm,22.0s						
LRM	**Limekiln Ridge**	**50.19**	**65**	*e*P	**P**	**03 23 57.8**	**+1.0**
MFID	**Camas Ranch**	**50.23**	**69**	*e*P	**P**	**03 23 58.1**	**+1.0**
	comp=Z,333nm,1.9s						
MFID				LR	LR		
	comp=Z,11μm,20.0s						
BRZS	**Berezniki**	**50.33**	**303**	⇑*i*P	**P**	**03 23 56.8**	**-0.7**
	comp=Z,147nm,1.3s						
BRZS				*i* PP	**PP**	**03 25 52.1**	**-0.6**
BRZS				*i* S	**S**	**03 31 08.3**	**-1.1**
BRZS				*i* SS	**SS**	**03 34 42.8**	**+0.4**
BRZS				LR	LR	03 46 13.4	
	comp=Z,5μm,12.4s						
GYA	**Guiyang**	**50.33**	**257**	⇑*i*P	**P**	**03 23 57.8**	**-0.1**
GYA				pP	pP	03 24 04.0	+1.0
GYA				PcP	**PcP**	**03 25 19.0**	**+2.5**
GYA				PP	**PP**	**03 25 54.5**	**+1.2**
GYA				ScP	**ScP**	**03 29 12.3**	**+0.9**
GYA				S	**S**	**03 31 09.8**	**-0.3**
GYA				ScS	**ScS**	**03 33 47.4**	**-1.0**
GYA				SS	**SS**	**03 34 39.8**	**-3.7**
GYA				pmax	pmax		
	comp=Z,110nm,1.0s						
GYA				pmax	pmax		
	comp=Z,4μm,9.6s						
GYA				LR	LR		
	comp=Z,28μm,17.7s						
GYA				LR	LR		
	comp=Z,25μm,20.5s						
GYA				LR	LR		
	comp=Z,10μm,20.8s						
SVE	**Sverdlovsk**	**50.39**	**316**	*d*P	**P**	**03 23 58.6**	**+0.7**
SVE				*e*		03 25 52.2	
SVE				*e*		03 26 50.9	
SVE				*e*S	**S**	**03 31 13.2**	**+3.1**
SVE				pmax	pmax		
	comp=Z,179nm,1.5s						
SVE				pmax	pmax		
	comp=Z,2μm,14.1s						
SVE				MLR	MLR		
	comp=Z,17μm,15.0s						
MCCM	**Marconi Confer**	**50.42**	**79**	*e*P	**P**	**03 24 01.8**	**+3.5**
	comp=Z,157nm,1.5s						
MCCM				LR	LR		
	comp=Z,4μm,20.0s						
DLMT	**Dillon**	**50.44**	**65**	*e*P	**P**	**03 23 59.8**	**+1.1**
	comp=Z,98nm,1.2s						
DLMT				LR	LR		
	comp=Z,9μm,20.0s						
BEKR	**Beckworth**	**50.48**	**76**	*e*P	**P**	**03 23 59.8**	**+0.8**
	comp=Z,104nm,1.4s						
BEKR				LR	LR		
	comp=Z,8μm,22.0s						
TRO	**Tromso**	**50.61**	**345**	*e*P	**P**	**03 23 58.8**	**-0.5**
PATS	**Pohnpei**	**50.69**	**187**	*e*P	**P**	**03 24 04.3**	**+3.7**
	comp=Z,299nm,1.6s						
PATS				LR	LR		
	comp=Z,10μm,18.0s						
MCMT	**McKenzie Canyo**	**50.70**	**66**	*e*P	**P**	**03 24 01.4**	**+0.6**
BOZ	**Bozeman (W)**	**50.75**	**65**	P	**P**	**03 24 02.1**	**+1.1**
	baz=316,SNR=45						
BOZ	**Bozeman (W)**	**50.75**	**65**	*e*P	**P**	**03 24 02.2**	**+1.3**
	comp=Z,66nm,1.4s						
BOZ				LR	LR		
	comp=Z,12μm,22.0s						
BOZ	**Bozeman (W)**	**50.75**	**65**	*e*P	**P**	**03 24 02.3**	**+1.3**
BOZ				pmax	pmax		
	comp=Z,66nm,1.4s						
BOZ				MLR	MLR		
	comp=Z,12μm,22.0s						
AFDM	**Forest Hills D**	**50.83**	**77**	*e*P	**P**	**03 24 02.7**	**+1.2**
	comp=Z,142nm,1.9s						
AFDM				LR	LR		
	comp=Z,4μm,22.0s						
HLID	**Hailey**	**50.84**	**68**	P	**P**	**03 24 02.5**	**+0.8**
	baz=317,SNR=43						
HLID	**Hailey**	**50.84**	**68**	*e*P	**P**	**03 24 02.4**	**+0.8**
	comp=Z,78nm,1.4s						
HLID				LR	LR		
	comp=Z,12μm,20.0s						
PAHR	**Pah Rah Range**	**51.11**	**75**	*e*P	**P**	**03 24 05.0**	**+1.3**
	comp=Z,95nm,1.4s						
PAHR				LR	LR		
	comp=Z,6μm,20.0s						
ILULI	**Ilulissat**	**51.13**	**15**	⇑*i*P	**P**	**03 24 02.3**	**-1.0**
	comp=Z,63nm,1.0s						
ILULI	**Ilulissat**	**51.13**	**15**	PFAKE		03 24 20.0	+17
ILULI				LR	LR		
	comp=Z,7μm,20.0s						
ILULI	**Ilulissat**	**51.13**	**15**	⇑*i*P	**P**	**03 24 02.3**	**-1.0**
ILULI				pmax	pmax		
	comp=Z,63nm,1.0s						
RUBR	**Rubicon Trail**	**51.19**	**76**	PFAKE		03 24 20.0	+16
RUBR				LR	LR		
	comp=Z,5μm,21.0s						
VCNR	**Virginia City**	**51.27**	**76**	*e*P	**P**	**03 24 06.7**	**+1.7**
	comp=Z,85nm,1.3s						
VCNR				LR	LR		
	comp=Z,4μm,20.0s						
SGF	**Sodankyl**	**51.35**	**340**	P	**P**	**03 24 04.5**	**-0.5**
SGF				pmax	pmax		
	comp=Z,66nm,1.5s						
QLMT	**Earthquake Lak**	**51.40**	**65**	*e*P	**P**	**03 24 07.4**	**+1.4**
PNTR	**Pine Nut**	**51.45**	**76**	*e*P	**P**	**03 24 08.4**	**+2.0**
	comp=Z,96nm,1.1s						
PNTR				LR	LR		
	comp=Z,5μm,20.0s						
ARU	**Arti**	**51.46**	**317**	LR	LR	03 48 51.4	
	comp=Z,14μm,18.1s,baz=42,slow=40						
ARU	**Arti**	**51.46**	**317**	*e*P	**P**	**03 24 05.7**	**-0.2**
	comp=Z,122nm,1.0s						
ARU	**Arti**	**51.46**	**317**	*c i*P	**P**	**03 24 05.7**	**-0.2**
ARU						03 25 21.0	
ARU				*e*		03 26 04.4	
ARU				PPP	PPP	03 27 03.2	
ARU				*e*S	**S**	**03 31 26.2**	**+1.3**
ARU						03 33 51.2	
ARU				SS	**SS**	**03 34 56.1**	**-3.9**
ARU				pmax	pmax		
	comp=Z,175nm,1.2s						
ARU				MLR	MLR		
	comp=Z,18μm,18.0s						
GCMT	**Greycliff**	**51.56**	**63**	*e*P	**P**	**03 24 08.7**	**+1.7**
YHB	**Horse Butte**	**51.57**	**65**	*e*P	**P**	**03 24 08.2**	**+1.0**
	comp=Z,60nm,1.0s						
YHB				LR	LR		
	comp=Z,10μm,21.0s						
JMIC	**Jan Mayen**	**51.68**	**357**	S	**S**	**03 31 31.5**	**+4.0**
	comp=Z,13nm,0.6s,baz=188,slow=4.9,SNR=1.9						
JMIC				ScS	**ScS**	**03 34 00.1**	**+4.1**
	comp=Z,18nm,0.9s,baz=13,slow=18,SNR=2.4						
JMIC				LR	LR	03 43 48.2	
	comp=Z,3μm,21.5s,baz=6.5,slow=33						
JMIC	**Jan Mayen**	**51.68**	**357**	*e*P	**P**	**03 24 08.2**	**+0.9**
BMN	**Battle Mountai**	**51.70**	**73**	*e*P	**P**	**03 24 09.2**	**+1.2**
	comp=Z,72nm,1.3s						
BMN				LR	LR		
	comp=Z,9μm,22.0s						
BMN	**Battle Mountai**	**51.70**	**73**	*e*P	**P**	**03 24 09.3**	**+1.2**
BMN				pmax	pmax		
	comp=Z,72nm,1.3s						
BMN				MLR	MLR		
	comp=Z,9μm,22.0s						
TMCR	**Tamitsa**	**51.71**	**333**	*e*P	**P**	**03 24 07.0**	**-0.6**
TMCR				pmax	pmax		
	comp=Z,71nm,0.9s						
YERR	**Yerington**	**51.71**	**76**	PFAKE		03 24 20.0	+12
YERR				LR	LR		
	comp=Z,5μm,20.0s						
PRGR	**Permogore**	**51.73**	**327**	⇑*i*P	**P**	**03 24 07.6**	**-0.2**
PRGR				pmax	pmax		
	comp=Z,139nm,1.5s						
OTUK	**Ortayu**	**51.73**	**302**	P	**P**	**03 24 07.6**	**-0.6**
OTUK				pmax	pmax		
	comp=Z,88nm,1.6s						
YMR	**Madison River**	**51.74**	**65**	*e*P	**P**	**03 24 10.6**	**+2.1**
	comp=Z,94nm,1.1s						
YMR				LR	LR		
	comp=Z,10μm,21.0s						
CMB	**Columbia Colle**	**51.82**	**77**	*e*P	**P**	**03 24 10.4**	**+1.5**
	comp=Z,102nm,1.7s						
CMB				LR	LR		
	comp=Z,5μm,18.0s						
CMB	**Columbia Colle**	**51.82**	**77**	*e*P	**P**	**03 24 10.4**	**+1.5**
CMB				pmax	pmax		
	comp=Z,102nm,1.7s						
CMB				MLR	MLR		
	comp=Z,5μm,18.0s						
YNR	**Norris Junctio**	**51.85**	**65**	*e*P	**P**	**03 24 12.5**	**+3.1**
	comp=Z,182nm,1.5s						
YNR				LR	LR		
	comp=Z,10μm,22.0s						
PDGK	**Podgornoye**	**51.88**	**293**	P	**P**	**03 24 08.9**	**-0.6**
PDGK				pmax	pmax		
	comp=Z,49nm,2.4s						
YFT	**Old Faithful**	**51.97**	**65**	*e*P	**P**	**03 24 13.1**	**+2.9**
	comp=Z,152nm,1.4s						
YFT				LR	LR		
	comp=Z,9μm,19.0s						
WAKR	**Walker**	**51.97**	**76**	*e*P	**P**	**03 24 12.1**	**+1.9**
	comp=Z,295nm,1.9s						
SHLS	**Shalkode**	**52.02**	**293**	⇑*i*P	**P**	**03 24 08.6**	**-1.9**
	comp=Z,209nm,1.8s						
SHLS				*i* PP	**PP**	**03 26 06.3**	**-2.0**
SHLS				*e*S	**S**	**03 31 29.3**	**-3.9**
SHLS				LR	LR	03 48 24.3	
	comp=Z,6μm,13.7s						
LKWY	**Lake**	**52.10**	**65**	PFAKE		03 24 20.0	+8.8
LKWY				LR	LR		
	comp=Z,600nm,20.0s						
YPP	**Pitchstone Pla**	**52.11**	**65**	*e*P	**P**	**03 24 13.8**	**+2.4**
	comp=Z,92nm,1.4s						
YPP				LR	LR		
	comp=Z,12μm,21.0s						
H17A	**Grant Village**	**52.13**	**65**	P	**P**	**03 24 13.0**	**+1.5**
	baz=317,SNR=30						
H17A	**Grant Village**	**52.13**	**65**	*e*P	**P**	**03 24 14.4**	**+2.9**
	comp=Z,98nm,1.1s						
H17A				LR	LR		
	comp=Z,20μm,22.0s						
DGMT	**Dagmar**	**52.17**	**57**	P	**P**	**03 24 11.6**	**+0.2**
	baz=317,SNR=9.1						
DGMT	**Dagmar**	**52.17**	**57**	*e*P	**P**	**03 24 11.6**	**+0.2**
	comp=Z,304nm,1.7s						
DGMT				LR	LR		
	comp=Z,13μm,21.0s						
KPKS	**Kokpek**	**52.19**	**293**	⇑*i*P	**P**	**03 24 11.5**	**-0.1**
	comp=Z,155nm,1.7s						
KPKS				*i* PP	**PP**	**03 26 09.6**	**-0.1**
KPKS				*e*S	**S**	**03 31 34.7**	**-0.6**
KPKS				LR	LR	03 46 31.2	
	comp=Z,6μm,11.6s						
SAO	**San Andreas Ge**	**52.21**	**79**	*e*P	**P**	**03 24 14.4**	**+2.6**
	comp=Z,112nm,1.4s						
SAO				LR	LR		
	comp=Z,4μm,19.0s						
MSF	**Maaselka**	**52.22**	**338**	P	**P**	**03 24 10.9**	**-0.6**
MSF				pmax	pmax		
	comp=Z,120nm,1.8s						
RLMT	**Red Lodge**	**52.24**	**63**	P	**P**	**03 24 13.1**	**+0.9**
	baz=317,SNR=68						
RLMT	**Red Lodge**	**52.24**	**63**	*e*P	**P**	**03 24 14.0**	**+1.8**
	comp=Z,110nm,1.1s						
RLMT				LR	LR		
	comp=Z,13μm,19.0s						
UZB	**Uzynbulak**	**52.25**	**293**	*i* P	**P**	**03 24 11.7**	**-0.6**
	comp=Z,42nm,1.3s						
UZB				*i* PP	**PP**	**03 26 10.4**	**0.0**
UZB				*e*S	**S**	**03 31 35.5**	**-0.9**

UZB LR LR 03 46 33.6
comp=Z,3μm,10.9s
KVN Kaiserville 52.26 75 *e*P **P 03 24 14.1 +1.7**
KVN LR LR
comp=Z,10μm,22.0s
KVN Kaiserville 52.26 75 *e*P **P 03 24 14.1 +1.7**
KVN pmax pmax
comp=Z,199nm,1.8s
KVN MLR MLR
comp=Z,10μm,22.0s
FLWY Flagg Ranch 52.30 65 *e*P **P 03 24 15.0 +2.3**
FLWY LR LR
comp=Z,193nm,1.4s
comp=Z,8μm,22.0s
IMW Indian Meadow 52.32 66 *e*P **P 03 24 14.9 +2.0**
IMW LR LR
comp=Z,124nm,1.3s
comp=Z,6μm,19.0s
RYN Ryan 52.35 75 *e*P **P 03 24 14.7 +1.6**
RYN LR LR
comp=Z,153nm,1.6s
comp=Z,6μm,21.0s
FXWY Fox Creek 52.47 66 *e*P **P 03 24 15.6 +1.6**
ZHN *e*S **S 03 31 38.7 -1.4**
comp=Z,74nm,1.1s
MOOW Moose Ponds 52.52 66 *e*P **P 03 24 16.1 +1.7**
MOOW LR LR
comp=Z,88nm,1.4s
comp=Z,6μm,20.0s
ZHN Zhinishke 52.53 293 *i* P **P 03 24 13.9 -0.3**
ZHN *e*SS **SS 03 35 18.3 +0.7**
ZHN *e*S **S 03 31 38.7 -1.4**
ZHN *i* SS SKiKP 03 35 18.5 -16
ZHN LR LR 03 46 38.1
comp=Z,3μm,11.4s
LAO LASA Array 52.54 60 P **P 03 24 14.9 +0.7**
baz=317
LAO LASA Array 52.54 60 *e*P **P 03 24 15.5 +1.3**
LAO LR LR
comp=Z,177nm,1.3s
comp=Z,16μm,19.0s
TPAW Teton Pass 52.61 66 *e*P **P 03 24 16.6 +1.5**
TPAW LR LR
comp=Z,161nm,1.4s
comp=Z,7μm,19.0s
NV01 Mina Array Sit 52.62 75 *e*P **P 03 24 15.7 +0.6**
NVAR Mina Array Bea 52.62 75 P **P 03 24 16.2 +1.2**
NVAR LR LR 03 45 59.5
comp=Z,14nm,0.9s,baz=299,slow=6.5,SNR=62
comp=Z,5μm,18.4s,baz=28,slow=35
SATY Saty 52.62 293⇑ *i* P **P 03 24 14.8 -0.2**
SATY *e*S **S 03 31 40.5 -0.9**
comp=Z,215nm,2.1s
SATY LR LR 03 46 40.0
comp=Z,4μm,11.5s
NV11 Mina Array Sit 52.69 75 *e*P **P 03 24 16.8 +1.3**
NV11 LR LR
comp=Z,25nm,1.9s
comp=Z,500nm,20.0s
LOHW Long Hollow 52.70 66 *e*P **P 03 24 17.5 +1.9**
LOHW LR LR
comp=Z,96nm,1.3s
comp=Z,7μm,20.0s
STEI Steigen 52.70 345 *e*P **P 03 24 14.5 -0.4**
FRB Frobisher Bay 52.70 26 LR LR 03 49 47.7
comp=Z,7μm,19.8s,baz=298,slow=40
SNOW Snow King Moun 52.73 66 *e*P **P 03 24 18.0 +2.1**
SNOW LR LR
comp=Z,133nm,1.4s
comp=Z,7μm,20.0s
LOF Lofoten 52.73 346 *e*P **P 03 24 15.1 -0.2**
REDW Red Top Meadow 52.76 66 *e*P **P 03 24 18.0 +1.9**
comp=Z,215nm,1.7s
MDPB Devils Postpil 52.80 77 PFAKE 03 24 30.0 +13
MDPB LR LR
comp=Z,5μm,20.0s
OMMB Old Mammoth Mi 52.86 77 *e*P **P 03 24 19.9 +2.8**
OMMB LR LR
comp=Z,179nm,1.6s
comp=Z,6μm,20.0s
PVCP Virac 52.91 230 *e*P **P 03 24 15.3 -1.9**
MLAC Mammoth, Mammo 52.93 76 P **P 03 24 19.3 +1.8**
baz=319
PMPB Monarch Peak 52.96 79 *e*P **P 03 24 20.1 +2.7**
PMPB LR LR
comp=Z,157nm,1.2s
comp=Z,4μm,20.0s
HVU Hansel Valley 52.97 69 *e*P **P 03 24 19.8 +2.3**
HVU LR LR
comp=Z,94nm,1.3s
comp=Z,9μm,20.0s
KUU Kurty 53.02 295⇑ *i* P **P 03 24 16.5 -1.3**
KUU *i* PP **PP 03 26 15.7 -1.5**
KUU *e*S **S 03 31 44.5 -2.2**
KUU *e*SS **SS 03 35 25.5 +0.3**
PRZ Przheval'sk 53.05 293 *e*P **P 03 24 19.2 +1.0**
PRZ LR LR
comp=Z,81nm,1.0s
comp=Z,11μm,18.0s
PRZ Przheval'sk 53.05 293 P **P 03 24 19.2 +1.0**
AHID Auburn Hatcher 53.07 67 *e*P **P 03 24 19.7 +1.4**
AHID LR LR
comp=Z,150nm,1.6s
comp=Z,11μm,19.0s
MDOK Medeo 53.22 294 *i* P **P 03 24 18.9 -0.5**
MDOK *i* PP **PP 03 26 18.8 -0.3**
MDOK *e*S **S 03 31 48.5 -1.1**
MDOK *e*SS **SS 03 35 29.1 +0.6**
MDOK LR LR 03 47 07.2
comp=Z,281nm,1.8s
comp=Z,9μm,11.4s
AAA Alma-Ata 53.25 294 *i* P **P 03 24 19.5 0.0**
AAA *e*S **S 03 31 49.6 -0.2**
AAA LR LR 03 47 19.6
comp=Z,46nm,1.4s
comp=Z,5μm,11.3s
AAA Alma-Ata 53.25 294 *e*P **P 03 24 16.4 -3.1**
AAA *e*S S 03 31 39.0 -11
AAA pmax pmax
comp=Z,2μm,9.8s
AAA MLR MLR
comp=Z,10μm,11.0s
SFJD Kangerlussuaq 53.26 16 P **P 03 24 18.3 -0.8**
comp=Z,20nm,0.6s,baz=339,slow=6.2,SNR=7.2
SFJD LR LR 03 48 21.0
comp=Z,3μm,19.6s,baz=334,slow=38
SFJD Kangerlussuaq 53.26 16⇑ *i* P **P 03 24 17.9 -1.2**
comp=Z,25nm,0.6s
comp=Z,6μm,15.0s
SFJD Kangerlussuaq 53.26 16 *e*P **P 03 24 18.0 -1.1**
comp=Z,105nm,1.4s
BTLS Baital 53.28 298⇑ *i* P **P 03 24 18.9 -0.7**
comp=Z,75nm,1.5s
BTLS *e*S **S 03 31 49.2 -0.9**
BTLS *e*SS **SS 03 35 29.9 +0.6**
BTLS LR LR 03 47 15.1
comp=Z,4μm,11.5s
BGU Big Grassy Mou 53.47 70 *e*P **P 03 24 23.2 +1.9**
comp=Z,88nm,1.5s
BGU LR LR
comp=Z,8μm,20.0s
KMI Kunming 53.48 260 P **P 03 24 21.8 +0.2**
KMI pP sP 03 24 30.3 +1.7
KMI sP pP 03 24 34.3 +7.6
KMI PP **PP 03 26 20.9 -1.0**
KMI S **S 03 31 54.4 +0.8**
KMI pmax pmax
comp=Z,180nm,1.2s
KMI pmax pmax
comp=Z,5μm,6.6s
KMI LR LR
comp=Z,27μm,14.5s
KMI LR LR
comp=Z,17μm,14.5s
KMI LR LR
comp=Z,18μm,12.4s
SPUT South Promonto 53.48 69 PFAKE 03 24 30.0 +8.7
SPUT LR LR
comp=Z,8μm,20.0s
PAGB Antelope Grade 53.62 79 *e*P **P 03 24 24.9 +2.7**
PAGB LR LR
comp=Z,160nm,1.6s
comp=Z,4μm,21.0s
TIN Tinemaha, Big 53.69 77 P **P 03 24 24.5 +1.6**
baz=319,SNR=5.8

HWUT Hardware Ranch 53.70 68 *e*P **P 03 24 24.4 +1.4**
comp=Z,188nm,1.6s
HWUT LR LR
comp=Z,10μm,21.0s
BW06 Boulder Array 53.84 66 P **P 03 24 24.6 +0.6**
baz=318,SNR=47
BW06 Boulder Array 53.84 66 *e*P **P 03 24 24.9 +0.9**
comp=Z,83nm,1.2s
BW06 LR LR
comp=Z,9μm,20.0s
PD31 Pinedale Array 53.84 66 *e*P **P 03 24 24.9 +0.9**
PDAR Pinedale Array 53.84 66 P **P 03 24 25.1 +1.1**
comp=Z,25nm,0.8s,baz=323,slow=3.7,SNR=111
PDAR S **S 03 31 59.3 +1.1**
comp=Z,0.1nm,0.4s,baz=77,slow=34,SNR=1.3
PDAR LR LR 03 47 33.2
comp=Z,8μm,20.4s,baz=344,slow=36
PDAR Pinedale Array 53.84 66 *e*P **P 03 24 24.3 +0.3**
PDAR S **S 03 31 59.3 +1.1**
TGY Tagaytay City 53.84 234 LR LR 03 50 17.6
comp=Z,6μm,18.1s,baz=18,slow=39
SMMC Simmler 54.07 79 P **P 03 24 27.2 +1.6**
baz=320,SNR=9.1
KLMR Klimovskoe 54.08 330 *e*P **P 03 24 23.3 -1.9**
KLMR *e*S **S 03 31 59.0 -1.4**
KLMR *e*SS **SS 03 35 42.6 +1.5**
KLMR pmax pmax
comp=Z,115nm,1.4s
KLMR MLR MLR
comp=Z,15μm,15.0s
KLMR Klimovskoe 54.08 330 *e*P **P 03 24 23.4 -1.8**
KLMR AMP 03 24 30.9
comp=Z,115nm,1.4s
KLMR *e*S **S 03 31 59.0 -1.4**
KLMR *e*SS **SS 03 35 42.7 +1.6**
KLMR LQ LQ 03 43 42.4
KLMR LR LR 03 47 18.9
KLMR AMP 03 51 15.6
comp=Z,15μm,15.1s
R11A Troy Canyon, C 54.09 74 P **P 03 24 26.9 +1.0**
baz=319,SNR=31
R11A Troy Canyon, C 54.09 74 *e*P **P 03 24 27.3 +1.5**
comp=Z,196nm,1.8s
R11A LR LR
comp=Z,9μm,22.0s
TKM2 Tokmak 2 54.11 295 P **P 03 24 25.7 -0.2**
SNR=10
DUG Dugway, Tooele 54.13 70 P **P 03 24 27.4 +1.3**
baz=319,SNR=28
DUG Dugway, Tooele 54.13 70 *e*P **P 03 24 27.7 +1.6**
comp=Z,276nm,2.0s
DUG LR LR
comp=Z,7μm,22.0s
DUG Dugway, Tooele 54.13 70 *e*P **P 03 24 27.7 +1.6**
DUG pmax pmax
comp=Z,276nm,2.0s
DUG MLR MLR
comp=Z,7μm,22.0s
TCUT Toone Canyon 54.15 68 *e*P **P 03 24 28.5 +2.2**
comp=Z,473nm,2.0s
TCUT LR LR
comp=Z,15μm,22.0s
VES Vestal, Richgr 54.15 78 P **P 03 24 26.8 +0.7**
baz=320,SNR=12
GRAC Grapevine Rang 54.18 76 P **P 03 24 27.9 +1.6**
baz=319
CWC Cottonwood Cre 54.23 77 P **P 03 24 28.4 +1.6**
baz=320
CTU Camp Tracy 54.29 69 *e*P **P 03 24 28.8 +1.5**
comp=Z,71nm,1.2s
CTU LR LR
comp=Z,9μm,20.0s
KONS Konsvik 54.33 346 *e*P **P 03 24 26.9 -0.1**
USP Ospenovka 54.38 296 P **P 03 24 27.6 -0.2**
SNR=31
CHMS Chumysh 54.46 296 P **P 03 24 28.1 -0.3**
SNR=23
MOR8 Moi Rana 54.46 345 *e*P **P 03 24 26.2 -1.8**
LUBP Lubang 54.47 235 *e*P P 03 24 22.8 -5.8
ULM Lac du Bonnet 54.48 51 P **P 03 24 28.6 +0.3**
comp=Z,52nm,1.0s,baz=321,slow=7.4,SNR=24
ULM LR LR 03 50 55.1
comp=Z,6μm,18.6s,baz=332,slow=40
ULM Lac du Bonnet 54.48 51 *e*P **P 03 24 28.7 +0.3**
comp=Z,159nm,1.4s
ULM Lac du Bonnet 54.48 51 *e*P **P 03 24 28.7 +0.4**
ULM pmax pmax
comp=Z,159nm,1.4s
PKM Mcpherson Peak 54.49 79 P **P 03 24 30.5 +1.6**
baz=320,SNR=14
JLU Jordanelle 54.51 69 *e*P **P 03 24 30.7 +1.8**
comp=Z,265nm,2.0s
JLU LR LR
comp=Z,10μm,20.0s
DAC Darwin (Calif) 54.61 77 *e*P **P 03 24 31.8 +2.1**
comp=Z,304nm,2.0s
DAC LR LR
comp=Z,4μm,19.0s
DAC Darwin (Calif) 54.61 77 *e*P **P 03 24 31.8 +2.1**
DAC pmax pmax
comp=Z,304nm,2.0s
DAC MLR MLR
comp=Z,4μm,19.0s
ISA Isabella, Lake 54.61 78 P **P 03 24 30.3 +0.7**
baz=320,SNR=20
ISA Isabella, Lake 54.61 78 *e*P **P 03 24 30.6 +1.1**
comp=Z,145nm,1.4s
ISA LR LR
comp=Z,4μm,21.0s
ISA Isabella, Lake 54.61 78 *e*P **P 03 24 30.6 +1.1**
ISA pmax pmax
comp=Z,145nm,1.4s
ISA MLR MLR
comp=Z,4μm,21.0s
KBK Karagaybulak 54.62 295 P **P 03 24 29.6 0.0**
SNR=32
FRU Bishkek 54.65 296⇑ *i* P **P 03 24 29.0 -0.7**
FRU *e* 03 24 49.0
FRU *e*S **S 03 32 07.0 -1.7**
FRU *e* 03 35 49.0
FRU pmax pmax
comp=Z,450nm,2.0s
FRU MLR MLR
comp=E,18μm,14.0s
NLU North Lily Min 54.68 70 *e*P **P 03 24 32.1 +1.9**
comp=E,167nm,1.6s
NLU LR LR
comp=Z,9μm,21.0s
MDND Maddock 54.69 55 P **P 03 24 30.9 +1.0**
baz=319,SNR=11
MDND Maddock 54.69 55 *e*P **P 03 24 31.4 +1.5**
comp=Z,281nm,1.4s
MDND LR LR
comp=Z,13μm,20.0s
TPNV Topopah Spring 54.80 75 P **P 03 24 32.4 +1.3**
baz=320,SNR=23
TPNV Topopah Spring 54.80 75 *e*P **P 03 24 33.3 +2.3**
comp=Z,440nm,1.9s
TPNV LR LR
comp=Z,6μm,19.0s
TPNV Topopah Spring 54.80 75 *e*P **P 03 24 33.3 +2.3**
TPNV pmax pmax
comp=Z,440nm,1.9s
TPNV MLR MLR
comp=Z,6μm,19.0s
QIZ Qiongzhong 54.82 249 P **P 03 24 32.1 +1.0**
QIZ S **S 03 32 12.8 +1.4**
QIZ pmax pmax
comp=Z,4μm,9.8s
QIZ LR LR
comp=Z,9μm,20.6s
QIZ LR LR
comp=Z,13μm,20.6s
QIZ LR LR
comp=Z,12μm,14.1s
QIZ Qiongzhong 54.82 249 *e*P **P 03 24 31.7 +0.6**
comp=Z,221nm,1.6s
QIZ LR LR
comp=Z,10μm,19.0s
MPMC Manual Prospec 54.83 77 P **P 03 24 32.5 +1.3**
baz=320,SNR=41
ARVC Arvin 54.83 79 P **P 03 24 31.5 +0.5**
baz=320
PSUT Pine Spring 54.84 72 *e*P **P 03 24 30.1 -1.3**
comp=Z,284nm,1.8s
FURC Furnace Creek, 54.85 76 P **P 03 24 32.8 +1.7**
baz=320,SNR=24

AAK Ala-Archa 54.86 296 P **P 03 24 31.5 +0.1**
SNR=12
AAK Ala-Archa 54.86 296 P **P 03 24 30.1 -1.3**
AAK pmax pmax
comp=Z,129nm,1.5s
MPU Maple Canyon 54.86 69 *e*P **P 03 24 33.4 +2.0**
comp=Z,256nm,1.7s
SBC Santa Barbara 54.88 80 P **P 03 24 32.5 +1.1**
baz=320
KZA Kyzart 54.91 295 P **P 03 24 32.1 0.0**
SNR=13
NRN Naryn 55.02 294 *e*P **P 03 24 32.9 +0.1**
comp=Z,59nm,1.2s
NRN LR LR
comp=Z,19μm,22.0s
NRN Naryn 55.02 294 *e*P **P 03 24 32.9 +0.1**
NRN pmax pmax
comp=Z,59nm,1.2s
NRN MLR MLR
comp=Z,19μm,22.0s
UCH Uchtor 55.16 295 P **P 03 24 33.8 0.0**
SNR=22
LRMC Laurel Mtn Rad 55.17 77 P **P 03 24 34.5 +0.9**
baz=320
EKS2 Erkin-Say 55.19 296 P **P 03 24 33.7 0.0**
SNR=31
SCZ2 Santa Cruz Isl 55.27 80 P **P 03 24 35.3 +1.1**
baz=320
OSI Osito Audit: C 55.28 79 P **P 03 24 35.4 +1.0**
baz=320
OSI Osito Audit: C 55.28 79 *e*P **P 03 24 35.4 +1.0**
comp=Z,143nm,1.4s
OSI LR LR
comp=Z,4μm,20.0s
K22A Casper 55.40 64 P **P 03 24 35.8 +0.5**
baz=319,SNR=43
K22A Casper 55.40 64 *e*P **P 03 24 35.9 +0.6**
comp=Z,121nm,1.3s
K22A LR LR
comp=Z,9μm,20.0s
EDW2 Edwards Air Fo 55.46 78 P **P 03 24 36.7 +1.0**
baz=320,SNR=26
RSSD Black Hills 55.48 61 P **P 03 24 36.4 +0.5**
baz=319
RSSD Black Hills 55.48 61 *e*P **P 03 24 36.5 +0.6**
comp=Z,220nm,1.7s
RSSD LR LR
comp=Z,15μm,18.0s
RSSD Black Hills 55.48 61 *e*P **P 03 24 36.5 +0.6**
RSSD pmax pmax
comp=Z,220nm,1.7s
RSSD MLR MLR
comp=Z,15μm,18.0s
BLG Laguna Peak, P 55.48 79 P **P 03 24 36.9 +1.1**
baz=320
TCRU Three Creeks R 55.51 71 PFAKE 03 24 50.0 +14
TCRU LR LR
comp=Z,9μm,21.0s
C31A Landman Farms, 55.56 54 P **P 03 24 36.5 +0.3**
baz=320,SNR=54
SHOC Shoshone, Teco 55.59 76 P **P 03 24 37.9 +1.3**
baz=320
TMUT Trail Mountain 55.62 70 *e*P **P 03 24 39.1 +2.1**
comp=Z,91nm,1.0s
TMUT LR LR
comp=Z,7μm,20.0s
AML Almayashu 55.63 296 P **P 03 24 37.3 +0.1**
SNR=14
A33A Warroad 55.69 52 P **P 03 24 37.3 +0.3**
baz=320,SNR=39
SHPR Sheep Range 55.71 75 *e*P **P 03 24 39.8 +2.2**
comp=Z,90nm,1.5s
SHPR LR LR
comp=Z,7μm,19.0s
MSU Marysvale 55.72 71 *e*P **P 03 24 40.2 +2.5**
P17A Butcher Ranch, 55.72 69 *e*P **P 03 24 39.6 +2.0**
comp=Z,65nm,1.1s
MSLP Maasin 55.75 228 *e*P **P 03 24 36.9 -0.9**
DECC Green Verdugo 55.76 79 P **P 03 24 38.8 +1.0**
baz=320,SNR=7.5
GSC Goldstone, Bar 55.76 77 P **P 03 24 39.2 +1.4**
baz=320,SNR=30
GSC Goldstone, Bar 55.76 77 *e*P **P 03 24 39.8 +1.9**
comp=Z,150nm,1.3s
GSC LR LR
comp=Z,3μm,20.0s
GSC Goldstone, Bar 55.76 77 *e*P **P 03 24 39.8 +1.9**
GSC pmax pmax
comp=Z,150nm,1.3s
GSC MLR MLR
comp=Z,3μm,20.0s
RWWY Rawlins 55.80 65 *e*P **P 03 24 39.2 +0.9**
comp=Z,99nm,1.3s
CCUT Cedar City 55.84 73 *e*P **P 03 24 40.8 +2.2**
comp=Z,159nm,1.5s
CCUT LR LR
comp=Z,11μm,22.0s
P18A Preston Nutter 55.85 69 *e*P **P 03 24 40.6 +1.9**
comp=Z,255nm,1.7s
P18A LR LR
comp=Z,7μm,20.0s
SNCC San Nicolas Is 55.90 81 P **P 03 24 39.9 +1.1**
baz=321
SNCC San Nicolas Is 55.90 81 PFAKE 03 24 50.0 +11
SNCC LR LR
comp=Z,4μm,20.0s
PASC Pasadena Art C 55.90 79 *e*P **P 03 24 40.7 +2.0**
comp=Z,99nm,1.3s
PASC LR LR
comp=Z,4μm,20.0s
MWC Mount Wilson 55.93 79 *e*P **P 03 24 41.8 +2.6**
comp=Z,173nm,1.3s
MWC LR LR
comp=Z,4μm,21.0s
SZCU Shurtz Canyon 55.95 72 *e*P **P 03 24 41.6 +2.2**
comp=Z,186nm,1.5s
SZCU LR LR
comp=Z,8μm,20.0s
AGMN Agassiz Nation 55.98 52 P **P 03 24 39.3 +0.2**
baz=320,SNR=36
AGMN Agassiz Nation 55.98 52 *e*P **P 03 24 38.9 -0.2**
comp=Z,173nm,1.4s
AGMN LR LR
comp=Z,6μm,20.0s
RRX Edison Barstow 55.99 77 P **P 03 24 40.4 +1.0**
baz=320
C32A Crookston 56.05 53 P **P 03 24 39.9 +0.3**
baz=320
MTPU Mount Pierson 56.07 71 PFAKE 03 24 50.0 +10
MTPU LR LR
comp=Z,10μm,21.0s
LSA Lhasa 56.08 273 P **P 03 24 41.5 +0.8**
LSA S **S 03 32 20.1 -8.9**
LSA pmax pmax
comp=Z,170nm,1.2s
LSA pmax pmax
comp=Z,3μm,11.9s
LSA LR LR
comp=Z,4μm,16.2s
LSA LR LR
comp=Z,5μm,13.9s
LSA LR LR
comp=Z,15μm,20.8s
LSA Lhasa 56.08 273 *e*P **P 03 24 40.4 -0.3**
comp=Z,259nm,1.3s
LSA LR LR
comp=Z,6μm,19.0s
LSA Lhasa 56.08 273 P **P 03 24 41.2 +0.6**
LSA Lhasa 56.08 273 *e*P **P 03 24 40.4 -0.3**
LSA pmax pmax
comp=Z,259nm,1.3s
LSA MLR MLR
comp=Z,6μm,19.0s
SRU San Rafael Swe 56.10 69 *e*P **P 03 24 42.0 +1.5**
comp=Z,132nm,1.0s
SRU LR LR
comp=Z,8μm,21.0s
SRU San Rafael Swe 56.10 69 P **P 03 24 41.9 +1.5**
SRU pmax pmax
comp=Z,130nm,1.0s
TUQ Turquoise Moun 56.12 76 P **P 03 24 41.7 +1.1**
baz=320
BFSC Mount Baldy Ra 56.13 78 P **P 03 24 41.9 +1.4**
baz=321,SNR=9.8
ANGG Ammassalik, Gr 56.18 10 *e*P **P 03 24 38.8 -1.4**
comp=Z,46nm,1.0s
ANGG LR LR
comp=Z,6μm,19.0s

FMP	**Fort Macarthur**	**56.20**	**79**	P	**P**	**03 24 41.6**	**+0.7**
	baz=321						
AKTO	**Aktyubinsk**	**56.26**	**312**	P	**P**	**03 24 40.7**	**-0.4**
	comp=Z,43nm,1.0s,baz=52,slow=7.8,SNR=75						
AKTO				S	**S**	**03 32 30.1**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=39,slow=20,SNR=1.6						
AKTO				LR	LR	03 49 17.2	
	comp=Z,14μm,19.7s,baz=24,slow=37						
AKTO	**Aktyubinsk**	**56.26**	**312**	P	**P**	**03 24 39.9**	**-1.2**
AKTO				pmax	pmax		
	comp=Z,131nm,1.3s						
LCMT	**Little Creek M**	**56.31**	**73**	*e*P	**P**	**03 24 44.4**	**+2.6**
	comp=Z,148nm,1.4s						
LCMT				LR	LR		
	comp=Z,10μm,22.0s						
B34A	**Aery, Baudette**	**56.35**	**51**	P	**P**	**03 24 41.8**	**+0.1**
	baz=321,SNR=39						
NSS	**Namsos**	**56.36**	**346**	*e*P	**P**	**03 24 41.1**	**-0.5**
CIS	**Catalina Islan**	**56.37**	**80**	P	**P**	**03 24 43.4**	**+1.2**
	baz=321						
HEC	**Hector,Ludlow**	**56.37**	**77**	P	**P**	**03 24 43.3**	**+1.0**
	baz=321,SNR=12						
AB31	**Akbulak array**	**56.39**	**310**	*i* P	**P**	**03 24 41.2**	**-0.8**
AB31				pmax	pmax		
	comp=Z,43nm,1.0s						
ABKAR	**Akbulak array**	**56.39**	**310**	*e*P	**P**	**03 24 41.7**	**-0.3**
KK31	**Karatay Array**	**56.42**	**299**	*e*P	**P**	**03 24 41.9**	**-0.5**
KK31	**Karatay Array**	**56.42**	**299**	*e*P	**P**	**03 24 41.9**	**-0.5**
KKAR	**Karatay Array**	**56.42**	**299**	*e*P	**P**	**03 24 41.9**	**-0.5**
KKAR	**Karatay Array**	**56.42**	**299**	*e*P	**P**	**03 24 41.9**	**-0.5**
C33A	**Trail**	**56.43**	**53**	P	**P**	**03 24 42.5**	**+0.1**
	baz=321,SNR=18						
E31A	**Nome**	**56.43**	**55**	P	**P**	**03 24 42.8**	**+0.4**
	baz=320,SNR=34						
PKCU	**Pink Cliffs**	**56.46**	**72**	*e*P	**P**	**03 24 46.5**	**+3.3**
	comp=Z,333nm,1.7s						
PKCU				LR	LR		
	comp=Z,9μm,18.0s						
O20A	**White River Ci**	**56.47**	**67**	P	**P**	**03 24 43.8**	**+0.8**
	baz=320,SNR=66						
O20A	**White River Ci**	**56.47**	**67**	*e*P	**P**	**03 24 44.3**	**+1.3**
	comp=Z,209nm,1.1s						
O20A				LR	LR		
	comp=Z,10μm,22.0s						
KSH	**Kashi**	**56.49**	**292⇑**	*i*P	**P**	**03 24 46.6**	**+3.5**
KSH				PP	PP	03 26 57.8	+9.4
KSH				S	**S**	**03 32 35.5**	**+2.0**
KSH				SS	**SS**	**03 36 30.4**	**+10**
KSH				pmax	pmax		
	comp=Z,260nm,1.4s						
KSH				pmax	pmax		
	comp=Z,8μm,6.7s						
KSH				LR	LR		
	comp=Z,21μm,12.0s						
KSH				LR	LR		
	comp=Z,18μm,12.7s						
KSH				LR	LR		
	comp=Z,55μm,14.2s						
TARA	**Tarawa**	**56.49**	**169**	PFAKE		03 25 00.0	+17
TARA				LR	LR		
	comp=Z,7μm,21.0s						
BBRC	**Big Bear Solar**	**56.50**	**78**	P	**P**	**03 24 44.6**	**+1.2**
	baz=321						
KNB	**Kanab**	**56.53**	**73**	*e*P	**P**	**03 24 46.1**	**+2.7**
	comp=Z,339nm,1.7s						
KNB				LR	LR		
	comp=Z,11μm,22.0s						
KNB	**Kanab**	**56.53**	**73**	P	**P**	**03 24 46.1**	**+2.7**
KNB				pmax	pmax		
	comp=Z,340nm,1.7s						
SCI2	**San Clemente I**	**56.63**	**80**	P	**P**	**03 24 44.6**	**+0.6**
	baz=321						
JORH	**JORHAT**	**56.74**	**268**	*e*P	**P**	**03 24 42.5**	**-2.3**
GMRC	**Granite Mounta**	**56.76**	**76**	P	**P**	**03 24 46.4**	**+1.4**
	baz=321,SNR=18						
BRLS	**Borolday**	**56.80**	**299**	*i* S	**S**	**03 32 40.7**	**+3.4**
FIA1	**FINESS Array S**	**56.80**	**337**	*e*P	**P**	**03 24 44.2**	**-0.6**
	comp=Z,121nm,1.1s						
FINES	**FINESS Array B**	**56.81**	**337**	P	**P**	**03 24 44.1**	**-0.6**
	comp=Z,39nm,0.8s,baz=38,slow=9.6,SNR=75						
FINES				LR	LR	03 52 38.4	
	comp=Z,10μm,19.4s,baz=29,slow=40						
LDFC	**Landfair**	**56.82**	**76**	*e*P	**P**	**03 24 48.1**	**+2.6**
	comp=Z,171nm,1.3s						
LDFC				LR	LR		
	comp=Z,6μm,21.0s						
B35A	**Bob, Littlefor**	**56.83**	**51**	P	**P**	**03 24 45.0**	**-0.2**
	baz=321,SNR=26						
B35A	**Bob, Littlefor**	**56.83**	**51**	*e*P	**P**	**03 24 45.2**	**0.0**
	comp=Z,58nm,1.1s						
B35A				LR	LR		
	comp=Z,8μm,20.0s						
MURC	**Murrieta**	**56.87**	**78**	P	**P**	**03 24 46.7**	**+1.0**
	baz=321						
C34A	**RKJ Ranch, Bem**	**56.88**	**52**	P	**P**	**03 24 45.4**	**-0.2**
	baz=321,SNR=10						
MOKO	**MOKOCHONG**	**56.93**	**268**	*e*P	**P**	**03 24 46.1**	**-0.2**
PHWY	**Pilot Hill**	**56.94**	**64**	*e*P	P	03 24 51.9	+5.5
	comp=Z,106nm,1.9s						
PHWY				LR	LR		
	comp=Z,7μm,19.0s						
N23A	**Red Feather La**	**57.02**	**65**	P	**P**	**03 24 47.6**	**+0.6**
	baz=320,SNR=59						
N23A	**Red Feather La**	**57.02**	**65**	*e*P	**P**	**03 24 48.4**	**+1.4**
	comp=Z,89nm,1.1s						
N23A				LR	LR		
	comp=Z,8μm,20.0s						
ENPP	**El Nido**	**57.07**	**234**	*e*P	**P**	**03 24 46.0**	**-1.2**
BELC	**Belle Mtn. Jos**	**57.19**	**77**	P	**P**	**03 24 48.8**	**+0.7**
	baz=321,SNR=10						
C35A	**Jirik Farms, M**	**57.24**	**52**	P	**P**	**03 24 47.9**	**-0.2**
	baz=322,SNR=32						
PFO	**Pinyon Flats O**	**57.24**	**78**	P	**P**	**03 24 49.2**	**+0.7**
	baz=321						
PFO	**Pinyon Flats O**	**57.24**	**78**	*e*P	**P**	**03 24 50.1**	**+1.6**
	comp=Z,131nm,1.8s						
PFO				LR	LR		
	comp=Z,5μm,20.0s						
PFO	**Pinyon Flats O**	**57.24**	**78**	*e*P	**P**	**03 24 50.1**	**+1.6**
PFO				pmax	pmax		
	comp=Z,131nm,1.8s						
PFO				MLR	MLR		
	comp=Z,5μm,20.0s						
XPFO	**Piæon Flat**	**57.25**	**78**	*e*P	**P**	**03 24 50.0**	**+1.5**
	comp=Z,112nm,1.8s						
XPFO				LR	LR		
	comp=Z,5μm,20.0s						
U15A	**North Rim**	**57.25**	**73**	*e*P	**P**	**03 24 51.0**	**+2.4**
	comp=Z,202nm,1.7s						
U15A				LR	LR		
	comp=Z,9μm,20.0s						
F32A	**Veblen**	**57.30**	**55**	P	**P**	**03 24 48.5**	**0.0**
	baz=321						
E33A	**Westby DABS, E**	**57.30**	**54**	P	**P**	**03 24 48.8**	**+0.3**
	baz=321,SNR=21						
G31A	**Conde**	**57.32**	**56**	P	**P**	**03 24 48.6**	**-0.1**
	baz=321,SNR=11						
NEE2	**Needles Airpor**	**57.32**	**76**	P	**P**	**03 24 50.0**	**+1.2**
	baz=321						
PUL	**Pulkovo**	**57.36**	**334⇓**	*i*P	**P**	**03 24 49.0**	**+0.3**
PUL				pmax	pmax		
	comp=Z,127nm,1.1s						
PUL				MLR	MLR		
	comp=Z,8μm,15.0s						
IUG	**Iuzhnay**	**57.38**	**298⇑**	*i*P	**P**	**03 24 49.5**	**+0.1**
	comp=Z,310nm,2.5s						
IUG				*i* PP	**PP**	**03 26 56.8**	**+0.5**
IUG				*i* S	**S**	**03 32 45.0**	**-0.2**
IUG				LR	LR	03 49 51.2	
	comp=Z,3μm,11.9s						
W13A	**Hualapai Mount**	**57.45**	**75**	*e*P	**P**	**03 24 51.4**	**+1.3**
	comp=Z,100nm,1.6s						
W13A				LR	LR		
	comp=Z,5μm,20.0s						
109C	**Camp Elliot, M**	**57.46**	**79**	P	**P**	**03 24 50.8**	**+1.0**
	baz=321						
CPE	**Camp Elliot**	**57.46**	**79**	*e*P	**P**	**03 24 53.5**	**+3.6**
	comp=Z,41nm,0.4s						
CPE				LR	LR		
	comp=Z,4μm,22.0s						
IRM	**Iron Mountain**	**57.52**	**76**	P	**P**	**03 24 51.7**	**+1.4**
	baz=321,SNR=26						
SUSD	**Miller**	**57.59**	**57**	P	**P**	**03 24 50.5**	**-0.1**
	baz=321						
G32A	**Webster**	**57.61**	**56**	P	**P**	**03 24 50.7**	**-0.1**
	baz=321,SNR=27						
G32A	**Webster**	**57.61**	**56**	*e*P	**P**	**03 24 51.0**	**+0.2**
	comp=Z,172nm,1.0s						
G32A				LR	LR		
	comp=Z,10μm,21.0s						
TEZP	**TEZPUR**	**57.62**	**269**	*e*P	**P**	**03 24 50.1**	**-0.9**
E34A	**Wadena**	**57.66**	**53**	P	**P**	**03 24 51.3**	**+0.2**
	baz=322						
C36A	**Pine Crest Far**	**57.68**	**51**	P	**P**	**03 24 51.1**	**-0.1**
	baz=322,SNR=14						
D35A	**Remer**	**57.69**	**52**	P	**P**	**03 24 51.2**	**-0.1**
	baz=322,SNR=12						
BC3	**Big Chuckawall**	**57.74**	**77**	P	**P**	**03 24 52.9**	**+1.0**
	baz=321,SNR=12						
TBLU	**Trondheim**	**57.81**	**346**	*e*P	**P**	**03 24 49.4**	**-2.5**
MONP2	**Monument Peak**	**57.82**	**78**	P	**P**	**03 24 53.6**	**+1.0**
	baz=321						
SMCO	**Snowmass**	**57.83**	**67**	*e*P	**P**	**03 24 51.5**	**-1.4**
	comp=Z,98nm,1.1s						
SMCO				LR	LR		
	comp=Z,14μm,22.0s						
BAR	**Barrett**	**57.85**	**79**	*e*P	**P**	**03 24 56.4**	**+3.7**
	comp=Z,40nm,0.5s						
BAR				LR	LR		
	comp=Z,4μm,22.0s						
PDMCI	**Parker Dam,Lak**	**57.93**	**76**	P	**P**	**03 24 53.9**	**+0.8**
	baz=321						
E35A	**Pequot Lakes**	**57.95**	**53**	P	**P**	**03 24 53.1**	**-0.1**
	baz=322						
C37A	**Embarrass**	**57.97**	**50**	P	**P**	**03 24 53.3**	**0.0**
	baz=322,SNR=27						
D36A	**Goodland**	**57.99**	**51**	P	**P**	**03 24 53.3**	**-0.2**
	baz=322,SNR=17						
D36A	**Goodland**	**57.99**	**51**	*e*P	**P**	**03 24 53.4**	**-0.1**
	comp=Z,114nm,1.4s						
D36A				LR	LR		
	comp=Z,6μm,21.0s						
ISCO	**Idaho Springs**	**58.02**	**65**	P	**P**	**03 24 55.7**	**+1.6**
	baz=321,SNR=81						
ISCO	**Idaho Springs**	**58.02**	**65**	*e*P	**P**	**03 24 55.7**	**+1.6**
	comp=Z,210nm,1.5s						
ISCO				LR	LR		
	comp=Z,10μm,20.0s						
ISCO	**Idaho Springs**	**58.02**	**65**	*e*P	**P**	**03 24 55.7**	**+1.6**
ISCO				pmax	pmax		
	comp=Z,210nm,1.5s						
ISCO				MLR	MLR		
	comp=Z,10μm,20.0s						
BORG	**Borgarnes**	**58.02**	**2**	P	**P**	**03 24 54.8**	**+1.5**
	comp=Z,33nm,1.0s,baz=358,slow=3.5,SNR=11						
BORG				LR	LR	03 50 00.4	
	comp=Z,4μm,19.5s,baz=353,slow=36						
BORG	**Borgarnes**	**58.02**	**2**	*e*P	**P**	**03 24 54.1**	**+0.8**
	comp=Z,97nm,1.3s						
BORG	**Borgarnes**	**58.02**	**2**	*e*P	**P**	**03 24 54.1**	**+0.8**
BORG				pmax	pmax		
	comp=Z,97nm,1.3s						
EYMN	**Ely**	**58.09**	**50**	P	**P**	**03 24 54.0**	**0.0**
	baz=322,SNR=47						
EYMN	**Ely**	**58.09**	**50**	*e*P	**P**	**03 24 54.0**	**0.0**
	comp=Z,100nm,1.0s						
EYMN				LR	LR		
	comp=Z,6μm,22.0s						
SWSC	**Sam W. Stewart**	**58.11**	**78**	P	**P**	**03 24 55.1**	**+0.7**
	baz=321						
G33A	**Ortonville**	**58.13**	**55**	P	**P**	**03 24 54.7**	**+0.3**
	baz=322,SNR=39						
Y12C	**Blythe**	**58.16**	**76**	P	**P**	**03 24 55.7**	**+1.0**
	baz=321,SNR=17						
Y12C	**Blythe**	**58.16**	**76**	*e*P	**P**	**03 24 56.6**	**+1.9**
	comp=Z,160nm,1.5s						
Y12C				LR	LR		
	comp=Z,5μm,20.0s						
IKP	**In-Ko-Pah, Jac**	**58.17**	**78**	P	**P**	**03 24 56.4**	**+1.4**
	baz=322						
F34A	**Alexandria**	**58.18**	**54**	P	**P**	**03 24 55.0**	**+0.3**
	baz=322,SNR=9.6						
H32A	**Carlson Farm,**	**58.22**	**56**	P	**P**	**03 24 54.8**	**-0.3**
	baz=321,SNR=45						
DAV	**Davao City (W)**	**58.26**	**226**	LR	LR	03 50 17.9	
	comp=Z,7μm,19.7s,baz=30,slow=36						
DAV	**Davao City (W)**	**58.26**	**226⇑**	*i*P	**P**	**03 24 55.0**	**-0.6**
DAV	**Davao City (W)**	**58.26**	**226**	P	**P**	**03 24 58.8**	**+3.2**
	SNR=6.6						
D37A	**Cotton**	**58.32**	**51**	P	**P**	**03 24 55.6**	**-0.1**
	baz=322,SNR=26						
C38A	**Sawbill Land.**	**58.36**	**50**	P	**P**	**03 24 55.9**	**-0.1**
	baz=323,SNR=50						
PAGZ	**Pagadian**	**58.42**	**228**	*e*P	**P**	**03 24 54.2**	**-2.5**
WUAZ	**Wupatki**	**58.43**	**73**	P	**P**	**03 24 57.6**	**+0.8**
	baz=321,SNR=14						
WUAZ	**Wupatki**	**58.43**	**73**	*e*P	**P**	**03 24 58.2**	**+1.4**
	comp=Z,279nm,1.9s						
WUAZ				LR	LR		
	comp=Z,9μm,21.0s						
F35A	**Swanville**	**58.43**	**53**	P	**P**	**03 24 56.6**	**+0.1**
	baz=322						
G34A	**Benson**	**58.45**	**54**	P	**P**	**03 24 56.8**	**+0.2**
	baz=322						
E36A	**McGregor**	**58.48**	**52**	P	**P**	**03 24 57.0**	**+0.2**
	baz=322,SNR=33						
GLA	**Glamis**	**58.54**	**77**	P	**P**	**03 24 58.5**	**+1.1**
	baz=322,SNR=9.1						
GLA	**Glamis**	**58.54**	**77**	*e*P	**P**	**03 24 58.9**	**+1.4**
	comp=Z,87nm,0.5s						
GLA				LR	LR		
	comp=Z,4μm,19.0s						
GLA	**Glamis**	**58.54**	**77**	*e*P	**P**	**03 24 58.9**	**+1.4**
GLA				pmax	pmax		
	comp=Z,87nm,0.5s						
GLA				MLR	MLR		
	comp=Z,4μm,19.0s						
GUWA	**GUWAHATI**	**58.56**	**270**	*e*P	**P**	**03 24 56.5**	**-1.1**
MVCO	**Mesa Verde**	**58.58**	**69**	P	**P**	**03 24 58.5**	**+0.5**
	baz=321,SNR=21						
MVCO	**Mesa Verde**	**58.58**	**69**	*e*P	**P**	**03 24 58.5**	**+0.5**
	comp=Z,144nm,1.6s						
MVCO				LR	LR		
	comp=Z,6μm,20.0s						
CTBH	**Cotabato--PC H**	**58.64**	**227⇓**	*i*P	**P**	**03 24 58.0**	**-0.2**
C39A	**Grand Marais**	**58.75**	**49**	P	**P**	**03 24 58.0**	**-0.7**
	baz=323,SNR=13						
E37A	**Wrenshall**	**58.80**	**51**	P	**P**	**03 24 58.9**	**-0.2**
	baz=322						
Y14A	**Wickenburg**	**58.80**	**75**	*e*P	**P**	**03 25 01.1**	**+1.7**
	comp=Z,136nm,1.8s						
Y14A				LR	LR		
	comp=Z,4μm,19.0s						
MOL	**Molde**	**58.81**	**347**	*e*P	**P**	**03 24 58.0**	**-0.8**
OGNE	**Ogallala**	**58.87**	**62**	P	**P**	**03 24 59.8**	**+0.1**
	baz=321						
OGNE	**Ogallala**	**58.87**	**62**	*e*P	**P**	**03 25 00.5**	**+0.8**
	comp=Z,510nm,1.8s						
OGNE				LR	LR		
	comp=Z,12μm,21.0s						
F36A	**Milaca**	**58.88**	**53**	P	**P**	**03 24 59.5**	**-0.1**
	baz=322,SNR=12						
F36A	**Milaca**	**58.88**	**53**	*e*P	**P**	**03 24 59.3**	**-0.3**
	comp=Z,54nm,1.4s						
F36A				LR	LR		
	comp=Z,11μm,18.0s						
Q24A	**Divide**	**58.89**	**66**	P	**P**	**03 25 01.1**	**+0.9**
	baz=321,SNR=14						
SHL	**Shillong**	**58.95**	**269**	*i* PCS	**P**	**03 24 59.0**	**-1.6**
SHL				*i* S	**S**	**03 33 08.0**	**+1.8**
SHL	**Shillong**	**58.95**	**269**	*e*P	**P**	**03 24 59.6**	**-1.0**
	comp=Z,358nm,1.5s						
SHL				LR	LR		
	comp=Z,26μm,18.0s						
SHL	**Shillong**	**58.95**	**269**	*e*P	**P**	**03 24 59.6**	**-1.0**
SHL				pmax	pmax		
	comp=Z,358nm,1.5s						
SHL				MLR	MLR		
	comp=Z,26μm,18.0s						
MOS	**Moscow**	**58.96**	**328***α*	*i*P	**P**	**03 24 58.8**	**-1.2**
MOS				*e*		03 25 12.6	
MOS				*e*		03 25 46.4	
MOS				*e*		03 27 07.8	
MOS				*e*PPP	PPP	03 28 30.4	
MOS				*e*S	**S**	**03 33 03.6**	**-1.5**
MOS				*e*		03 34 44.0	
MOS				*e*SS	**SS**	**03 37 01.5**	**+3.6**
MOS				pmax	pmax		
	comp=Z,208nm,1.6s						
MOS				pmax	pmax		
	comp=Z,2μm,3.4s						
MOS				pmax	pmax		
	comp=N,114nm,1.4s						
MOS				pmax	pmax		
	comp=N,1μm,3.4s						
MOS				MLR	MLR		
	comp=N,10μm,15.0s						
MOS				MLR	MLR		
	comp=Z,8μm,15.0s						
G35A	**Watkins**	**58.97**	**54**	P	**P**	**03 25 00.5**	**+0.3**
	baz=322						
G35A	**Watkins**	**58.97**	**54**	*e*P	**P**	**03 25 00.7**	**+0.5**
	comp=Z,80nm,1.0s						
G35A				LR	LR		
	comp=Z,12μm,20.0s						
S22A	**4UR Ranch, Cre**	**59.01**	**68**	P	**P**	**03 25 02.2**	**+1.2**
	baz=321,SNR=68						
S22A	**4UR Ranch, Cre**	**59.01**	**68**	*e*P	**P**	**03 25 03.0**	**+2.0**
	comp=Z,119nm,1.4s						
S22A				LR	LR		
	comp=Z,8μm,19.0s						
C40A	**Isle Royale Na**	**59.07**	**48**	P	**P**	**03 25 00.3**	**-0.6**
	baz=323						
C40A	**Isle Royale Na**	**59.07**	**48**	PFAKE		03 25 10.0	+9.1
C40A				LR	LR		
	comp=Z,10μm,20.0s						
IVI	**Ivigtut**	**59.08**	**17**	*e*P	**P**	**03 25 00.0**	**-0.7**
	comp=Z,54nm,0.8s						
IVI				LR	LR		
	comp=Z,7μm,19.0s						
E38A	**The Farm, Brul**	**59.12**	**51**	P	**P**	**03 25 01.0**	**-0.3**
	baz=323,SNR=45						
E38A	**The Farm, Brul**	**59.12**	**51**	*e*P	**P**	**03 25 01.0**	**-0.3**
	comp=Z,94nm,1.1s						
E38A				LR	LR		
	comp=Z,6μm,20.0s						
DOMB	**Dombas**	**59.13**	**346**	*e*P	**P**	**03 25 00.9**	**-0.2**
ECSD	**EROS Data Cent**	**59.20**	**56**	P	**P**	**03 25 01.8**	**0.0**
	baz=322,SNR=40						
ECSD	**EROS Data Cent**	**59.20**	**56**	*e*P	**P**	**03 25 01.8**	**0.0**
	comp=Z,278nm,2.0s						
ECSD				LR	LR		
	comp=Z,11μm,20.0s						
H35A	**Sunnyside Ranc**	**59.23**	**54**	P	**P**	**03 25 02.5**	**+0.4**
	baz=322,SNR=42						
X16A	**Lo Mia Camp, P**	**59.24**	**73**	*e*P	**P**	**03 25 04.8**	**+2.2**
	comp=Z,61nm,1.4s						
X16A				LR	LR		
	comp=Z,5μm,19.0s						
AKN	**Aaknes**	**59.25**	**347**	*e*P	**P**	**03 25 02.2**	**+0.2**
G36A	**St. Michael**	**59.27**	**53**	P	**P**	**03 25 02.4**	**0.0**
	baz=322						
113A	**Mohawk Valley,**	**59.32**	**76**	*e*P	**P**	**03 25 04.8**	**+1.9**
	comp=Z,48nm,1.2s						
113A				LR	LR		
	comp=Z,5μm,20.0s						
GTK	**Tadong**	**59.33**	**273**	*e*P	**P**	**03 25 01.5**	**-1.6**
VSU	**Vasula**	**59.36**	**335***c*	*i*P	**P**	**03 25 02.7**	**0.0**
VSU				pmax	pmax		
	comp=Z,344nm,1.0s						
VSU				MLR	MLR		
	comp=Z,18μm,16.0s						
F37A	**Hinrichs Farm,**	**59.37**	**52**	P	**P**	**03 25 02.9**	**-0.1**
	baz=323,SNR=12						
F38A	**Pierce - Schro**	**59.50**	**52**	P	**P**	**03 25 04.2**	**+0.2**
	baz=323,SNR=35						
SKNT	**Sakolnakorn**	**59.54**	**253**	P	**P**	**03 25 03.7**	**-0.8**
	comp=Z,80nm,1.9s,comp=Z,3μm						
NRS	**Narsarsuaq**	**59.54**	**16⇑**	*i*P	**P**	**03 25 02.5**	**-1.4**
	comp=Z,36nm,1.0s						
	comp=Z,7μm,16.0s						
NRS	**Narsarsuaq**	**59.54**	**16**	PFAKE		03 25 20.0	+16
NRS				LR	LR		
	comp=Z,7μm,19.0s						
NRS	**Narsarsuaq**	**59.54**	**16⇑**	*i*P	**P**	**03 25 02.5**	**-1.4**
NRS				pmax	pmax		
	comp=Z,36nm,1.0s						
NRS				MLR	MLR		
	comp=Z,7μm,16.0s						
W18A	**Petrified Fore**	**59.58**	**72**	P	**P**	**03 25 06.0**	**+1.2**
	baz=322						
W18A	**Petrified Fore**	**59.58**	**72**	*e*P	**P**	**03 25 07.4**	**+2.6**
	comp=Z,70nm,1.3s						
W18A				LR	LR		
	comp=Z,11μm,21.0s						
NC303	**NORSAR Array S**	**59.61**	**345**	*e*P	**P**	**03 25 04.1**	**-0.3**
NC204	**NORSAR Array S**	**59.64**	**345**	*e*P	**P**	**03 25 04.5**	**-0.2**
NC405	**NORSAR Array S**	**59.66**	**345**	*e*P	**P**	**03 25 03.6**	**-1.3**
SDCO	**Great Sand Dun**	**59.67**	**67**	P	**P**	**03 25 06.4**	**+0.9**
	baz=322,SNR=45						
SDCO	**Great Sand Dun**	**59.67**	**67**	*e*P	**P**	**03 25 07.2**	**+1.7**
	comp=Z,116nm,1.5s						
SDCO				LR	LR		
	comp=Z,11μm,22.0s						
CMAI	**Chiengmai2**	**59.67**	**259**	P	**P**	**03 25 06.8**	**+1.2**
	comp=Z,3μm,0.8s,comp=Z,43μm						
SPMN	**Marine on St.**	**59.69**	**53**	P	**P**	**03 25 05.1**	**-0.1**
	baz=323,SNR=19						
SPMN	**Marine on St.**	**59.69**	**53**	*e*P	**P**	**03 25 05.8**	**+0.5**
	comp=Z,53nm,0.9s						
SPMN				LR	LR		
	comp=Z,8μm,20.0s						
PAYA	**Payao**	**59.70**	**258**	P	**P**	**03 25 06.7**	**+1.0**
	comp=Z,39nm,1.0s,comp=Z,559nm						
H36A	**Jessenland, He**	**59.72**	**54**	P	**P**	**03 25 05.9**	**+0.5**
	baz=323,SNR=22						
E39A	**Mellen**	**59.72**	**50**	P	**P**	**03 25 05.0**	**-0.5**
	baz=323,SNR=39						
TAPN	**Taplejung**	**59.78**	**274**	*e*P	**P**	**03 25 05.9**	**-0.6**
	comp=Z,519nm,1.2s						
NB201	**NORSAR Array S**	**59.79**	**345**	*e*P	**P**	**03 25 04.5**	**-1.2**
OBN	**Obninsk**	**59.80**	**328**	*e*P	**P**	**03 25 04.8**	**-1.0**
	comp=Z,975nm,1.7s						
OBN				LR	LR		
	comp=Z,23μm,20.0s						
OBN	**Obninsk**	**59.80**	**328***c*	*i*P	**P**	**03 25 05.0**	**-0.8**
OBN				*e*		03 25 53.2	
OBN				*e*		03 27 18.3	
OBN				*i* S	**S**	**03 33 17.6**	**+1.6**
OBN				*e*SS	**SS**	**03 37 14.8**	**+3.7**
NB2	**NORSAR Subarra**	**59.81**	**345**	P	**P**	**03 25 05.1**	**-0.7**
	comp=Z,119nm,1.0s,baz=18,slow=6.9						
NB2	**NORSAR Subarra**	**59.81**	**345**	P	**P**	**03 25 05.1**	**-0.7**
	baz=18,slow=6.9						
NOA	**NORSAR Array B**	**59.81**	**345**	LR	LR	03 52 40.5	
	comp=Z,6μm,20.0s,baz=20,slow=38						
NBO00	**NORSAR Array S**	**59.88**	**345**	*e*P	**P**	**03 25 06.3**	**0.0**
X18A	**Snowflake**	**59.93**	**72**	*e*P	**P**	**03 25 09.3**	**+2.1**
	comp=Z,104nm,1.3s						
X18A				LR	LR		
	comp=Z,8μm,21.0s						
F39A	**Loretta**	**59.94**	**51**	P	**P**	**03 25 06.9**	**-0.1**
	baz=323,SNR=30						
E40A	**Wakefield**	**59.94**	**50**	P	**P**	**03 25 07.1**	**+0.2**
	baz=324,SNR=91						
D41A	**Chassel**	**59.99**	**49**	P	**P**	**03 25 06.8**	**-0.5**
	baz=324,SNR=18						
D41A	**Chassel**	**59.99**	**49**	*e*P	**P**	**03 25 07.3**	**+0.1**
	comp=Z,171nm,1.3s						
D41A				LR	LR		
	comp=Z,9μm,21.0s						
NAO01	**NORSAR Array S**	**60.04**	**345**	*e*P	**P**	**03 25 06.8**	**-0.6**
NC602	**NORSAR Array S**	**60.05**	**344**	*e*P	**P**	**03 25 06.8**	**-0.6**
NC602	**NORSAR Array S**	**60.05**	**344**	*e*P	**P**	**03 25 07.2**	**-0.3**
KSCO	**Kaye Shedlock'**	**60.09**	**64**	P	**P**	**03 25 08.7**	**+0.4**
	baz=322						
KSCO	**Kaye Shedlock'**	**60.09**	**64**	*e*P	**P**	**03 25 09.9**	**+1.7**
	comp=Z,435nm,1.

comp=Z,2μm,1.0s
HYA Hoyanger 60.33 348 *e*P **P 03 25 09.3 0.0**
G39A Holcombe 60.34 52 P **P 03 25 09.2 -0.4**
baz=324,SNR=17
ODAN Odare 60.35 274 *e*P **P 03 25 09.9 -0.4**
comp=Z,844nm,1.1s
H38A Maiden Rock 60.35 53 P **P 03 25 09.7 -0.1**
baz=323,SNR=27
JIRN Jiri 60.36 276 *e*P **P 03 25 10.0 -0.5**
comp=Z,1μm,1.4s
I37A Lemond, Waseca 60.40 54 P **P 03 25 10.4 +0.3**
baz=323,SNR=28
I37A Lemond, Waseca 60.40 54 *e*P **P 03 25 10.6 +0.5**
comp=Z,189nm,1.2s
I37A LR LR
comp=Z,7μm,18.0s
214A Organ Pipe Nat 60.45 76 P **P 03 25 12.0 +1.3**
baz=322,SNR=15
J36A Seneca 1, Swea 60.53 55 P **P 03 25 10.9 -0.1**
baz=323,SNR=22
J36A Seneca 1, Swea 60.53 55 *e*P **P 03 25 11.1 +0.1**
comp=Z,126nm,1.2s
J36A LR LR
comp=Z,13μm,19.0s
COWI Conover 60.53 50 *e*P **P 03 25 10.4 -0.6**
comp=Z,164nm,1.6s
COWI LR LR
comp=Z,5μm,18.0s
SUE Sulen 60.60 348 *e*P **P 03 25 11.4 +0.3**
AGT Agartala 60.64 269 *e*P **P 03 25 13.0 +1.0**
CHTO Chiang Mai 60.65 259 P **P 03 25 12.2 +0.1**
comp=Z,817nm,1.0s,comp=Z,28μm
CHTO Chiang Mai 60.65 259 *e*P **P 03 25 11.8 -0.2**
comp=Z,288nm,1.5s
CHTO LR LR
comp=Z,7μm,20.0s
CHTO Chiang Mai 60.65 259 P **P 03 25 13.0 +0.9**
SNR=74
CHTO Chiang Mai 60.65 259 *e*P **P 03 25 11.9 -0.2**
CHTO pmax pmax
comp=Z,288nm,1.5s
CHTO MLR MLR
comp=Z,7μm,20.0s
T25A Trinidad 60.68 66 P **P 03 25 12.8 +0.4**
baz=322,SNR=11
T25A Trinidad 60.68 66 *e*P **P 03 25 13.7 +1.3**
comp=Z,151nm,1.5s
T25A LR LR
comp=Z,8μm,18.0s
RAMN Ramite 60.70 275 *e*P **P 03 25 12.0 -0.7**
comp=Z,968nm,1.0s
KKN Kakani 60.74 276 *e*P **P 03 25 12.4 -0.5**
comp=Z,1μm,1.5s
MANU Manus Island 60.75 198 *e*P **P 03 25 13.5 +0.8**
comp=Z,155nm,1.3s
MANU LR LR
comp=Z,8μm,19.0s
G40A Rib Lake 60.76 51 P **P 03 25 12.2 -0.3**
baz=324,SNR=20
G40A Rib Lake 60.76 51 *e*P **P 03 25 12.3 -0.3**
comp=Z,230nm,2.0s
G40A LR LR
comp=Z,9μm,20.0s
E42A Champion 60.77 49 P **P 03 25 11.9 -0.7**
baz=324,SNR=14
H39A Augusta 60.78 52 P **P 03 25 12.3 -0.3**
baz=324,SNR=13
F41A Three Lakes 60.84 50 P **P 03 25 13.1 0.0**
baz=324,SNR=30
F41A Three Lakes 60.84 50 *e*P **P 03 25 12.9 -0.1**
comp=Z,196nm,1.6s
F41A LR LR
comp=Z,5μm,21.0s
I38A Scanlan Farm, 60.84 53 P **P 03 25 12.9 -0.2**
baz=324,SNR=14
PKIN Phulchoki 60.85 276 *e*P **P 03 25 13.1 -0.6**
comp=Z,419nm,0.9s
SCHQ Schefferville 60.87 31 P **P 03 25 12.4 -0.8**
comp=Z,41nm,0.8s,baz=350,slow=6.6,SNR=22
SCHQ S **S 03 33 29.6 -0.2**
comp=Z,4.5nm,0.6s,baz=239,slow=14,SNR=2.8
SCHQ ScS SKKSac 03 35 00.0 -2.9
comp=Z,1.9nm,0.7s,baz=18,slow=9.6,SNR=1.2
SCHQ LR LR 03 53 46.0
comp=Z,4μm,21.2s,baz=336,slow=38
SCHQ PKP2bc 03 54 41.0
comp=Z,8.0nm,1.0s,baz=193,slow=1.1,SNR=6.1
SCHQ Schefferville 60.87 31 *e*P **P 03 25 12.9 -0.3**
comp=Z,49nm,0.8s
SCHQ S **S 03 33 29.6 -0.2**
SCHQ ScS SKKSac 03 35 00.0 -2.9
SCHQ ⇑*e* 03 54 41.0
J37A Redenius Farm, 60.89 54 P **P 03 25 13.4 -0.1**
baz=323,SNR=23
GKN Gorkha 60.92 277 *e*P **P 03 25 13.5 -0.6**
comp=Z,1μm,1.1s
OSL Oslo 60.94 345 *e*P **P 03 25 13.9 +0.5**
CMAR Chiang Mai Arr 60.94 258 P **P 03 25 14.8 +0.7**
comp=Z,24nm,1.0s,baz=25,slow=6.2,SNR=64
CMAR PKP2bc 03 54 44.5
comp=Z,0.8nm,0.3s,baz=242,slow=3.3,SNR=5.4
CMAR LR LR 03 55 22.1
comp=Z,8μm,18.9s,baz=49,slow=40
CM01 Chiang Mai Arr 60.96 258 *e*P **P 03 25 13.9 -0.3**
DMN Daman 60.98 276 *e*P **P 03 25 14.1 -0.5**
comp=Z,1μm,1.5s
K36A Gilmore City 61.03 56 P **P 03 25 14.1 -0.3**
baz=323,SNR=12
BELO BELONIA 61.05 268 *e*P **P 03 25 14.9 +0.2**
DANN Dangsing 61.11 278 *e*P **P 03 25 15.2 -0.3**
comp=Z,617nm,1.1s
ASK Askoy 61.11 348 *e*P **P 03 25 15.1 +0.4**
E43A Lone Tree Farm 61.18 48 P **P 03 25 14.6 -0.7**
baz=325,SNR=11
E43A Lone Tree Farm 61.18 48 *e*P **P 03 25 14.7 -0.7**
comp=Z,41nm,1.1s
E43A LR LR
comp=Z,7μm,22.0s
BER Bergen 61.20 348 *e*P **P 03 25 15.7 +0.4**
H40A Chili 61.20 51 P **P 03 25 15.1 -0.4**
baz=324,SNR=17
PHIT Phitsanulok 61.21 256 P **P 03 25 17.6 +1.7**
comp=Z,52nm,1.2s,comp=Z,994nm
F42A Maple Grove Fa 61.22 49 P **P 03 25 15.4 -0.3**
baz=324,SNR=9.0
G41A Antigo 61.23 50 P **P 03 25 15.6 -0.2**
baz=324,SNR=12
TUC Tucson 61.23 74 P **P 03 25 16.5 +0.5**
baz=322
TUC Tucson 61.23 74 *e*P **P 03 25 17.8 +1.7**
comp=Z,94nm,1.8s
TUC LR LR
comp=Z,4μm,21.0s
TUC Tucson 61.23 74 *e*P **P 03 25 17.8 +1.7**
TUC pmax pmax
comp=Z,94nm,1.8s
TUC MLR MLR
comp=Z,4μm,21.0s
K37A Belmond 61.29 55 P **P 03 25 15.7 -0.5**
baz=323,SNR=16
I39A Houston 61.34 53 P **P 03 25 15.8 -0.7**
baz=324,SNR=12
I39A Houston 61.34 53 *e*P **P 03 25 16.4 -0.1**
comp=Z,46nm,1.0s
I39A LR LR
comp=Z,12μm,19.0s
J38A Wedel Dairy, R 61.35 54 P **P 03 25 16.1 -0.5**
baz=324,SNR=8.4
L36A Harm Buss Farm 61.36 56 P **P 03 25 16.5 -0.2**
baz=323
KONO Kongsberg 61.37 345 *e*P **P 03 25 16.4 0.0**
comp=Z,123nm,1.1s
KONO LR LR
comp=Z,7μm,19.0s
KONO Kongsberg 61.37 345 *e*P **P 03 25 16.4 0.0**
KONO pmax pmax
comp=Z,123nm,1.1s
KONO MLR MLR
comp=Z,7μm,19.0s
KONO Kongsberg 61.37 345 *e*P **P 03 25 16.4 0.0**
TASM ASL Pad, Albuq 61.38 69 P **P 03 25 18.0 +0.9**
baz=322,SNR=20
ANMO Albuquerque 61.38 69 P **P 03 25 18.6 +1.4**
comp=Z,8.7nm,0.9s,baz=311,slow=8.0,SNR=16
ANMO LR LR 03 52 21.1
comp=Z,4μm,19.7s,baz=336,slow=36
ANMO Albuquerque 61.38 69 P **P 03 25 17.8 +0.6**
baz=322
ANMO Albuquerque 61.38 69 *e*P **P 03 25 18.7 +1.6**
comp=Z,45nm,1.4s
ANMO Albuquerque 61.38 69 *i*P **P 03 25 18.2 +1.0**
ANMO pmax pmax
comp=Z,25nm,1.4s
ANMO MLR MLR
comp=Z,4μm,17.0s
TASL Snake Pit, Alb 61.38 69 P **P 03 25 17.8 +0.6**
baz=322,SNR=23
SUKH Sukhothai 61.38 257 P **P 03 25 18.4 +1.3**
comp=Z,16nm,1.3s,comp=Z,299nm
BRDH Bariadhala 61.40 268 LR LR 03 57 27.9
comp=Z,15μm,18.2s,baz=67,slow=42
E44A Grand Marais A 61.41 47 P **P 03 25 16.5 -0.5**
baz=325
E44A Grand Marais A 61.41 47 *e*P **P 03 25 16.9 -0.1**
comp=Z,113nm,1.1s
E44A LR LR
comp=Z,8μm,21.0s
PBKT Sadao Pong 61.44 255 P **P 03 25 16.6 -0.8**
comp=Z,220nm,1.3s,comp=Z,4μm
ODD1 Odda 61.50 347 *e*P **P 03 25 18.1 +0.7**
H41A Junction City 61.52 51 P **P 03 25 17.2 -0.5**
baz=324,SNR=14
H41A Junction City 61.52 51 *e*P **P 03 25 17.3 -0.4**
comp=Z,54nm,1.1s
H41A LR LR
comp=Z,9μm,19.0s
G42A Mountain 61.52 50 P **P 03 25 17.5 -0.2**
baz=325,SNR=21
G42A Mountain 61.52 50 *e*P **P 03 25 17.2 -0.5**
comp=Z,294nm,1.8s
G42A LR LR
comp=Z,7μm,20.0s
F43A Flat Rock, Esc 61.55 49 P **P 03 25 17.3 -0.6**
baz=325,SNR=16
CBKS Cedar Bluff 61.63 62 P **P 03 25 18.6 0.0**
baz=323,SNR=9.3
CBKS Cedar Bluff 61.63 62 *e*P **P 03 25 18.6 0.0**
comp=Z,122nm,1.0s
CBKS LR LR
comp=Z,11μm,19.0s
CBKS Cedar Bluff 61.63 62 *e*P **P 03 25 18.6 0.0**
CBKS pmax pmax
comp=Z,122nm,1.0s
CBKS MLR MLR
comp=Z,11μm,19.0s
KOLN Koldanda 61.66 278 *e*P **P 03 25 18.5 -0.6**
comp=Z,369nm,1.1s
J39A Decorah 61.67 53 P **P 03 25 17.9 -0.9**
baz=324,SNR=12
I40A Norwalk 61.69 52 P **P 03 25 18.4 -0.5**
baz=324
PYUN Piuthan 61.72 278 *e*P **P 03 25 19.0 -0.6**
comp=Z,934nm,1.0s
F44A Big Bay de Noc 61.74 48 P **P 03 25 18.3 -0.8**
baz=325,SNR=12
L37A Phoenix Point, 61.75 55 P **P 03 25 18.9 -0.4**
baz=324,SNR=14
K38A Parkersburg 61.76 54 P **P 03 25 18.8 -0.6**
baz=324,SNR=8.6
K38A Parkersburg 61.76 54 *e*P **P 03 25 19.0 -0.4**
comp=Z,255nm,1.8s
K38A *e*S **S 03 33 41.2 -0.2**
K38A LR LR
comp=Z,8μm,18.0s
G43A Wallace 61.81 49 P **P 03 25 19.3 -0.4**
baz=325,SNR=17
G43A Wallace 61.81 49 *e*P **P 03 25 19.3 -0.4**
comp=Z,279nm,1.8s
G43A LR LR
comp=Z,6μm,18.0s
M36A Felix, Anita 61.82 57 P **P 03 25 19.1 -0.7**
baz=323
Y22D IRIS PASSCAL I 61.83 70 P **P 03 25 21.9 +1.8**
baz=322
Y22E IRIS PASSCAL I 61.83 70 P **P 03 25 22.0 +1.9**
baz=322
I41A Arkdale 61.88 52 P **P 03 25 19.5 -0.6**
baz=324
I41A Arkdale 61.88 52 *e*P **P 03 25 20.1 0.0**
comp=Z,39nm,1.1s
I41A LR LR
comp=Z,9μm,22.0s
E45A Wooded Hills, 61.92 47 P **P 03 25 19.4 -0.9**
baz=326
IZAR Zarasai 61.94 334 *e*P **P 03 25 20.6 +0.3**
IZAR IAmb IAmb 03 25 23.7
comp=Z,74nm,1.1s
DHRM DHARAMSHALA 61.96 287 *e*P **P 03 25 19.0 -2.1**
VORR Voronezh 61.99 324 *e*P **P 03 25 21.0 +0.3**
VORR pmax pmax
comp=Z,450nm,2.4s
BLS5 Blasjo 62.00 347 *e*P **P 03 25 21.1 +0.4**
J40A Soldiers Grove 62.04 53 P **P 03 25 20.3 -1.0**
baz=324
H42A Shiocton 62.07 50 P **P 03 25 21.1 -0.4**
baz=325,SNR=18
H42A Shiocton 62.07 50 *e*P **P 03 25 21.1 -0.4**
comp=Z,136nm,1.4s
H42A LR LR
comp=Z,7μm,20.0s
L38A Oak Wood Farm, 62.09 55 P **P 03 25 20.9 -0.6**
baz=324,SNR=9.9
K39A Oelwein 62.10 54 P **P 03 25 20.5 -1.1**
baz=324,SNR=11
RABL Rabaul 62.16 193 *e*P **P 03 25 23.2 +0.9**
comp=Z,703nm,1.4s
RABL LR LR
comp=Z,6μm,20.0s
SCIA State Center 62.16 55 P **P 03 25 21.7 -0.4**
baz=324
SCIA State Center 62.16 55 *e*P **P 03 25 22.6 +0.5**
comp=Z,144nm,1.3s
SCIA LR LR
comp=Z,8μm,19.0s
M37A Trindle Farm, 62.19 56 P **P 03 25 22.4 +0.1**
baz=324,SNR=8.3
IDID Didziasalis 62.22 334 *e*P **P 03 25 22.5 +0.4**
IDID IAmb IAmb 03 25 25.6
comp=Z,96nm,1.1s
N36A Muff Farm, Cla 62.26 57 P **P 03 25 22.8 0.0**
baz=324
IIGN Ignalina 62.30 334 *e*P **P 03 25 23.1 +0.3**
IIGN IAmb IAmb 03 25 26.3
comp=Z,103nm,1.1s
F45A CMU Biological 62.34 48 P **P 03 25 22.2 -1.0**
baz=326,SNR=7.9
KMY Karmoy 62.35 348 *e*P **P 03 25 23.0 0.0**
J41A Loganville 62.38 52 P **P 03 25 23.0 -0.5**
baz=324,SNR=16
VSR Storozhevoye 62.40 324 *e*P **P 03 25 22.9 -0.6**
VSR *e*S **S 03 33 44.5 -4.7**
VSR pmax pmax
comp=Z,190nm,1.3s
VSR pmax pmax
comp=Z,920nm,2.8s
VSR smax smax
comp=N,4μm,10.1s
VSR MLR MLR
comp=Z,18μm,20.0s
SMLA Simla 62.40 285 *e*P **P 03 25 21.9 -1.9**
I42A Draeger Farm, 62.41 51 P **P 03 25 23.3 -0.4**
baz=325,SNR=18
I42A Draeger Farm, 62.41 51 *e*P **P 03 25 23.8 0.0**
comp=Z,44nm,1.0s
I42A LR LR
comp=Z,11μm,22.0s
H43A Windswept, Lux 62.42 50 P **P 03 25 23.3 -0.4**
baz=325,SNR=36
H43A Windswept, Lux 62.42 50 *e*P **P 03 25 23.9 +0.1**
comp=Z,169nm,1.2s
H43A LR LR
comp=Z,6μm,19.0s
NIL Nilore 62.42 290 *e*P **P 03 25 23.4 -0.6**
comp=Z,1μm,1.7s
NIL LR LR
comp=Z,9μm,19.0s
NIL Nilore 62.42 290 *e*P **P 03 25 23.4 -0.6**
NIL MLR MLR
comp=Z,9μm,19.0s
K40A Colesburg 62.43 53 P **P 03 25 22.7 -1.1**
baz=324,SNR=11
BAKI Biak 62.47 211 P **P 03 25 24.5 +0.1**
L39A Vinton 62.52 54 P **P 03 25 23.7 -0.8**
baz=324,SNR=18
JAY Jayapura 62.56 206 LR LR 03 49 25.9
comp=Z,5μm,21.8s,baz=9.0,slow=33
JAY Jayapura 62.56 206 P **P 03 25 25.0 0.0**
comp=Z,726nm,1.3s,comp=Z,26μm
F46A Macinaw City C 62.56 47 P **P 03 25 23.5 -1.2**
baz=326,SNR=8.7
M38A Pleasantville 62.56 56 P **P 03 25 24.5 -0.3**
baz=324,SNR=30
STAV Stavanger 62.57 347 *e*P **P 03 25 24.6 +0.1**
DDI Dehra Dun 62.57 284 *e*P **P 03 25 23.8 -1.3**
DDI IAmb IAmb 03 25 24.6
comp=Z,74nm,0.7s
VORD Divnogorie 62.57 324 *e*P **P 03 25 24.0 -0.6**
VORD pmax pmax
comp=Z,110nm,1.2s
NACGM Naroch 62.58 333 *e*P **P 03 25 24.0 -0.6**
NACGM *e*P **P 03 25 24.0 -0.6**
NACGM PM 03 25 28.0
comp=Z,0.4nm,1.0s
NACGM *e*PP **PP 03 27 34.0 -7.7**
NACGM *e*PPP PPP 03 29 16.0
NACGM *e*S **S 03 33 52.0 +0.7**
NACGM *e*PS **PnS 03 34 04.0 -2.9**
NACGM *e*ScS **SKKSac 03 35 14.0 -1.8**
NACGM *e*SS **SS 03 38 04.0 +9.5**
NACGM *e*SSS SSS 03 40 17.0
NACGM *e*LR LR 03 49 36.0
NACGM LRM MLR 03 55 43.0
comp=Z,9.0nm,16.0s
121A Cookes Peak, D 62.61 72 P **P 03 25 26.7 +1.3**
baz=323,SNR=21
N37A Lee Faris, Mou 62.64 57 P **P 03 25 25.3 -0.1**
baz=324,SNR=11
N37A Lee Faris, Mou 62.64 57 *e*P **P 03 25 25.9 +0.5**
comp=Z,158nm,1.0s
N37A LR LR
comp=Z,16μm,21.0s
JFWS Jewell Farm 62.64 53 P **P 03 25 24.4 -0.8**
baz=325
JFWS Jewell Farm 62.64 53 *e*P **P 03 25 24.7 -0.6**
comp=Z,92nm,1.7s
JFWS LR LR
comp=Z,10μm,19.0s
JFWS Jewell Farm 62.64 53 *e*P **P 03 25 24.7 -0.6**
JFWS pmax pmax
comp=Z,92nm,1.7s
JFWS MLR MLR
comp=Z,10μm,19.0s
MICGM Minsk 62.67 333⇑*i*P **P 03 25 25.0 -0.3**
MICGM PM 03 25 27.0
comp=N,0.6nm,1.0s
MICGM PM 03 25 28.0
comp=Z,0.7nm,1.1s
MICGM PM 03 25 28.0
comp=E,0.3nm,1.0s
MICGM *e*PP PP 03 27 34.0 -8.5
MICGM *e*PPP PPP 03 29 12.0
MICGM *e*S **S 03 33 54.0 +1.4**
MICGM *e*SS **SS 03 38 04.0 +8.0**
MICGM *e*SSS SSS 03 40 40.0
MICGM *e*LR LR 03 48 30.0
MICGM LRM MLR 03 55 34.0
comp=Z,15nm,18.0s
MNK Minsk 62.67 333⇑*i*P **P 03 25 25.0 -0.3**
MNK *e*PPP PPP 03 29 12.0
MNK *e*S **S 03 33 54.0 +1.4**
MNK *e*SSS SSS 03 40 40.0
I43A Langenfeld Bro 62.74 50 P **P 03 25 25.4 -0.5**
baz=325,SNR=12
319A Douglas 62.75 74 *e*P **P 03 25 28.1 +1.8**
comp=Z,135nm,1.6s
319A LR LR
comp=Z,5μm,19.0s
GENI Genyem 62.76 206 P **P 03 25 27.4 +1.1**
J42A Columbus 62.79 52 P **P 03 25 25.3 -0.9**
baz=325,SNR=14
UMPA Umpang Tak 62.85 257 P **P 03 25 29.0 +2.0**
comp=Z,37nm,1.3s,comp=Z,1μm
MYLDM Lahad Datu 62.85 232 *e*P **P 03 25 29.2 +2.2**
comp=Z,133nm,1.2s
K41A Shullsburg 62.87 53 P **P 03 25 25.8 -1.0**
baz=325,SNR=9.9
KSU1 Kansas State U 62.87 59 P **P 03 25 26.3 -0.6**
baz=324
KSU1 Kansas State U 62.87 59 *e*P **P 03 25 26.8 -0.1**
comp=Z,60nm,0.9s
KSU1 LR LR
comp=Z,12μm,20.0s
L40A Anamosa 62.91 54 P **P 03 25 26.1 -1.0**
baz=324,SNR=11
L40A Anamosa 62.91 54 *e*P **P 03 25 26.4 -0.6**
comp=Z,40nm,1.1s
L40A LR LR
comp=Z,8μm,22.0s
SNART Snartemo 62.96 346 *e*P **P 03 25 27.9 +0.7**
M39A Webster 62.97 55 P **P 03 25 26.9 -0.6**
baz=324,SNR=27
SRAK Srakaew 63.03 253 P **P 03 25 26.7 -1.4**
comp=Z,262nm,1.2s,comp=Z,4μm
J43A Natural Harves 63.04 51 P **P 03 25 27.2 -0.7**
baz=325
N38A Joes South For 63.05 56 P **P 03 25 27.7 -0.3**
baz=324
KKM Kota Kinabalu 63.07 235 *e*P **P 03 25 29.5 +0.9**
comp=Z,151nm,1.4s
KKM LR LR
comp=Z,6μm,22.0s
UTHA Uthaitani 63.08 256 P **P 03 25 29.7 +1.2**
comp=Z,24nm,1.4s,comp=Z,359nm
K42A Prairie Point, 63.14 52 P **P 03 25 27.5 -1.0**
baz=325,SNR=16
O37A Wolven Farm, M 63.15 57 P **P 03 25 28.4 -0.2**
baz=324
L41A Preston 63.22 53 P **P 03 25 28.0 -1.1**
baz=325,SNR=13
N39A Derby Farms, D 63.31 55 P **P 03 25 29.3 -0.4**
baz=324,SNR=19
N39A Derby Farms, D 63.31 55 *e*P **P 03 25 29.3 -0.4**
comp=Z,93nm,1.1s
N39A LR LR
comp=Z,11μm,19.0s
M40A Post Highland 63.32 54 P **P 03 25 28.9 -0.9**
baz=325,SNR=11
RKPI Ransiki, Papua 63.33 213 P **P 03 25 30.9 +0.8**
comp=Z,227nm,2.1s,comp=Z,8μm
KNTN Kanton 63.34 152 PFAKE 03 25 40.0 +10
KNTN LR LR
comp=Z,9μm,20.0s
TNTI Ternate 63.40 221 *e*P **P 03 25 31.2 +0.6**
comp=Z,340nm,1.6s
TNTI LR LR
comp=Z,3μm,22.0s
O38A Galt 63.49 57 P **P 03 25 30.6 -0.3**
baz=324
P37A Lathrop 63.52 58 P **P 03 25 30.8 -0.3**
baz=324,SNR=35
BOK Bokaro 63.61 273 *e*P **P 03 25 30.6 -1.4**
SIJI Sorong 63.62 216 LR LR 03 53 54.3
comp=Z,2μm,19.0s,baz=55,slow=37
K43A Burlington 63.63 51 P **P 03 25 30.8 -1.0**
baz=325
K43A Burlington 63.63 51 *e*P **P 03 25 31.4 -0.5**
comp=Z,41nm,1.1s
K43A LR LR
comp=Z,12μm,20.0s
L42A Oliver, Polo 63.63 53 P **P 03 25 30.6 -1.3**
baz=325
L42A Oliver, Polo 63.63 53 *e*P **P 03 25 31.1 -0.8**
comp=Z,136nm,1.8s
L42A LR LR
comp=Z,9μm,19.0s
N40A Mertquake, Sal 63.71 55 P **P 03 25 31.8 -0.6**
baz=325,SNR=23
HSIG 63.75 77 *e*P **P 03 25 36.3 +3.5**
comp=Z,224nm,2.0s
HSIG LR LR
comp=Z,3μm,19.0s
M41A Milan 63.77 54 P **P 03 25 31.8 -1.0**
baz=325,SNR=9.0
O39A Kirksville 63.80 56 P **P 03 25 32.4 -0.5**
baz=325
AMTX Amarillo 63.81 66 P **P 03 25 33.1 -0.2**
baz=323
AMTX Amarillo 63.81 66 *e*P **P 03 25 33.9 +0.6**
comp=Z,209nm,1.9s
AMTX LR LR
comp=Z,12μm,21.0s
KBL Kabul 63.82 293 *e*P **P 03 25 31.8 -1.7**
comp=Z,164nm,1.1s

KBL LR LR
comp=Z,7μm,18.0s
KBL Kabul 63.82 293 *e*P **P 03 25 31.8 -1.7**
KBL pmax pmax
comp=Z,164nm,1.1s
KBL MLR MLR
comp=Z,7μm,18.0s
P38A Dawn 63.86 57 P **P 03 25 33.0 -0.4**
baz=324,SNR=13
P38A Dawn 63.86 57 *e*P **P 03 25 33.4 0.0**
comp=Z,92nm,1.3s
P38A LR LR
comp=Z,11μm,19.0s
EPT El Paso 63.87 72 *e*P **P 03 25 35.7 +2.0**
comp=Z,169nm,1.8s
EPT LR LR
comp=Z,8μm,21.0s
L43A Garden Prairie 63.88 52 P **P 03 25 32.5 -1.0**
baz=325
MSTX Muleshoe 64.00 67 P **P 03 25 34.7 +0.1**
baz=324,SNR=18
MSTX Muleshoe 64.00 67 *e*P **P 03 25 35.3 +0.7**
comp=Z,111nm,1.4s
MSTX LR LR
comp=Z,7μm,19.0s
M42A Sheffield 64.04 53 P **P 03 25 33.6 -1.0**
baz=325
Q37A Longview Farm, 64.05 58 P **P 03 25 34.0 -0.6**
baz=324
MLA1 Latheron 64.06 352⇑ *e*P **P 03 25 34.1 -0.3**
N41A Harden Midland 64.18 54 P **P 03 25 34.9 -0.5**
baz=325
N41A Harden Midland 64.18 54 *e*P **P 03 25 35.2 -0.2**
comp=Z,147nm,1.3s
N41A LR LR
comp=Z,8μm,19.0s
O40A La Belle 64.20 55 P **P 03 25 35.2 -0.4**
baz=325,SNR=37
L44A Lake County Fo 64.24 51 P **P 03 25 35.2 -0.6**
baz=326
SUW Suwalki 64.24 335 *e*P **P 03 25 35.2 -0.4**
SUW *e*S **S 03 34 16.5 +4.4**
SUW LMZ LR 03 54 43.9
comp=Z,10μm,20.9s
SUW Suwalki 64.24 335 *e*P **P 03 25 35.3 -0.3**
comp=Z,313nm,1.2s
SUW LR LR
comp=Z,10μm,20.0s
SUW Suwalki 64.24 335⇑ *e*P **P 03 25 35.2 -0.4**
SUW *e*S **S 03 34 16.5 +4.4**
SUW MLR MLR
comp=Z,10μm,20.9s
SRDT SRDT 64.26 256 P **P 03 25 36.0 -0.3**
comp=Z,228nm,0.9s,comp=Z,6μm
P39B Salisbury 64.33 56 P **P 03 25 36.0 -0.5**
baz=325
Q38A Cooks Store, C 64.36 57 P **P 03 25 36.3 -0.4**
baz=325,SNR=42
WAMI Wamena 64.36 208 P **P 03 25 39.5 +2.7**
M43A Waltham Townsh 64.40 53 P **P 03 25 36.1 -0.8**
baz=326
SRIG Santa Rosalia 64.43 79 PFAKE 03 25 50.0 +13
SRIG LR LR
comp=Z,4μm,21.0s
N42A Yates City 64.44 54 P **P 03 25 36.2 -0.9**
baz=325,SNR=15
MNTX Cornudas Mount 64.50 71 P **P 03 25 38.6 +0.8**
baz=324,SNR=52
MNTX Cornudas Mount 64.50 71 *e*P **P 03 25 38.8 +1.0**
comp=Z,124nm,1.5s
MNTX LR LR
comp=Z,8μm,20.0s
MUD Monsted U'grnd 64.52 344⇑ *i*P **P 03 25 37.8 +0.4**
comp=Z,8μm,14.0s
MUD Monsted U'grnd 64.52 344⇑ *i*P **P 03 25 37.8 +0.4**
MUD MLR MLR
comp=Z,8μm,14.0s
Q39A Willow Grove F 64.58 57 P **P 03 25 37.5 -0.6**
baz=325,SNR=35
P40A Paris 64.61 56 P **P 03 25 37.9 -0.4**
baz=325,SNR=23
P40A Paris 64.61 56 *e*P **P 03 25 37.8 -0.4**
comp=Z,196nm,1.6s
P40A LR LR
comp=Z,13μm,20.0s
O41A Passleys Farm, 64.65 55 P **P 03 25 37.9 -0.7**
baz=325,SNR=12
LBMI Labuha 64.67 220 P **P 03 25 39.7 +0.8**
comp=Z,390nm,2.2s,comp=Z,8μm
N43A Stutzman Famil 64.72 53 P **P 03 25 38.2 -0.8**
baz=326
COP Copenhagen 64.76 342⇑ *i*P **P 03 25 39.1 +0.1**
comp=Z,3μm,17.0s
COP Copenhagen 64.76 342⇑ *i*P **P 03 25 39.1 +0.1**
COP MLR MLR
comp=Z,3μm,17.0s
MCD Coleburn Disti 64.77 352⇑ *e*P **P 03 25 39.1 0.0**
M44A Midewin, Midew 64.83 52 P **P 03 25 39.0 -0.7**
baz=326
M44A Midewin, Midew 64.83 52 *e*P **P 03 25 39.3 -0.4**
comp=Z,42nm,1.1s
M44A LR LR
comp=Z,9μm,20.0s
R38A Fenwick Farm, 64.86 58 P **P 03 25 38.6 -1.3**
baz=325,SNR=21
BSD Bornholm Skovb 64.88 341⇑ *i*P **P 03 25 39.4 -0.4**
comp=Z,162nm,1.3s
comp=Z,11μm,19.0s
BSD Bornholm Skovb 64.88 341⇑ *i*P **P 03 25 39.4 -0.4**
BSD pmax pmax
comp=Z,160nm,1.3s
BSD MLR MLR
comp=Z,11μm,19.0s
P41A Barry, Barry 64.93 55 P **P 03 25 40.0 -0.4**
baz=325,SNR=29
O42A Bath 64.93 54 P **P 03 25 39.7 -0.7**
baz=325
HDIL Hopedale 64.98 53 P **P 03 25 39.9 -0.8**
baz=326,SNR=7.9
HDIL Hopedale 64.98 53 *e*P **P 03 25 40.0 -0.8**
comp=Z,317nm,1.8s
HDIL LR LR
comp=Z,8μm,18.0s
MDO Dochfour 64.99 353⇑ *e*P **P 03 25 40.2 -0.2**
MME1 Meikle Cairn 65.01 352⇑ *e*P **P 03 25 40.0 -0.7**
Q40A Laux Farm, Aux 65.03 56 P **P 03 25 40.5 -0.5**
baz=325,SNR=10
LLD Lille Linde 65.13 342 *i*P **P 03 25 42.2 +0.8**
comp=Z,245nm,1.3s
LLD Lille Linde 65.13 342 *i*P **P 03 25 42.2 +0.8**
LLD pmax pmax
comp=Z,250nm,1.3s
R39A Chumby, Stover 65.15 57 P **P 03 25 41.2 -0.6**
baz=325,SNR=35
M45A Boilermakers S 65.17 51 P **P 03 25 41.0 -0.9**
baz=326
O43A Sugar Creek Fa 65.19 54 P **P 03 25 41.3 -0.8**
baz=326,SNR=14
PHET Kaeng Krachan 65.20 254 P **P 03 25 43.6 +1.2**
comp=Z,25nm,1.5s,comp=Z,335nm
FAKI Fak Fak 65.24 215 P **P 03 25 42.7 +0.1**
comp=Z,288nm,1.4s,comp=Z,8μm
FAKI Fak Fak 65.24 215 *e*P **P 03 25 43.1 +0.4**
comp=Z,225nm,1.0s
FAKI LR LR
comp=Z,6μm,19.0s
N44A Piper City 65.28 52 P **P 03 25 42.0 -0.6**
baz=326
S38A Stockton 65.31 58 P **P 03 25 41.5 -1.3**
baz=325,SNR=40
P42A Winchester 65.32 55 P **P 03 25 42.1 -0.8**
baz=326,SNR=22
P42A Winchester 65.32 55 *e*P **P 03 25 42.1 -0.8**
comp=Z,118nm,1.4s
P42A LR LR
comp=Z,10μm,18.0s
WMOK Wichita Mounta 65.35 64 P **P 03 25 43.5 +0.2**
baz=324,SNR=56
WMOK Wichita Mounta 65.35 64 *e*P **P 03 25 43.4 +0.2**
comp=Z,101nm,1.1s
WMOK LR LR
comp=Z,8μm,19.0s
WMOK Wichita Mounta 65.35 64 *e*P **P 03 25 43.4 +0.2**
WMOK pmax pmax
comp=Z,101nm,1.1s
WMOK MLR MLR
comp=Z,8μm,19.0s
Q41A Truxton 65.44 56 P **P 03 25 43.4 -0.3**
baz=325,SNR=31
N45A Kentland 65.50 52 P **P 03 25 43.4 -0.7**
baz=326
R40A Maddies Statio 65.52 57 P **P 03 25 43.3 -0.9**
baz=325,SNR=32
R40A Maddies Statio 65.52 57 *e*P **P 03 25 43.5 -0.7**
comp=Z,248nm,1.8s
R40A LR LR
comp=Z,10μm,19.0s
S39A Bolivar 65.53 58 P **P 03 25 43.1 -1.2**
baz=325,SNR=32
S39A Bolivar 65.53 58 *e*P **P 03 25 42.9 -1.4**
comp=Z,83nm,1.4s
S39A LR LR
comp=Z,13μm,18.0s
M46A Old House Fiel 65.53 51 P **P 03 25 43.5 -0.7**
baz=326
M46A Old House Fiel 65.53 51 *e*P **P 03 25 44.1 -0.2**
comp=Z,122nm,1.4s
M46A LR LR
comp=Z,8μm,18.0s
SADO Sadowa 65.57 44 *e*P **P 03 25 42.2 -2.3**
comp=Z,80nm,1.5s
SADO LR LR
comp=Z,9μm,18.0s
T38A Diamond 65.61 59 P **P 03 25 44.0 -0.9**
baz=325,SNR=19
P43A Skaggs, Pawnee 65.63 54 P **P 03 25 44.2 -0.7**
baz=326
O44A Mansfield 65.67 53 P **P 03 25 44.1 -1.0**
baz=326
RGN Rugen 65.70 341 *e*P **P 03 25 46.4 +1.3**
comp=Z,525nm,1.5s
RGN LR LR
comp=Z,8μm,19.0s
MRSI Marisa 65.70 227 P **P 03 25 44.9 -0.7**
comp=Z,184nm,1.4s,comp=Z,4μm
AKASG Malin Array Be 65.77 330 P **P 03 25 45.1 -0.5**
comp=Z,84nm,1.1s,baz=29,slow=6.8,SNR=45
AKASG LR LR 03 58 28.6
comp=Z,10μm,18.2s,baz=20,slow=40
AKBB Malin Array Si 65.77 330 *e*P **P 03 25 45.2 -0.4**
comp=Z,129nm,1.3s
AKBB LR LR
comp=Z,14μm,18.0s
KIEV Kiev 65.78 330 *e*P **P 03 25 45.2 -0.5**
comp=Z,138nm,1.3s
KIEV LR LR
comp=Z,12μm,18.0s
KIEV Kiev 65.78 330 *i*P **P 03 25 45.1 -0.5**
SNR=51
KIEV Kiev 65.78 330*c i*P **P 03 25 45.0 -0.7**
KIEV pmax pmax
comp=Z,109nm,1.2s
KIEV MLR MLR
comp=Z,11μm,17.0s
Q42A Golden Eagle 65.79 55 P **P 03 25 45.6 -0.4**
baz=326,SNR=19
N46A Monticello 65.80 51 P **P 03 25 45.0 -1.0**
baz=326
AK11 Malin Array Si 65.81 330 *e*P **P 03 25 45.1 -0.8**
TUL1 Leonard 65.83 61 P **P 03 25 45.9 -0.3**
baz=325,SNR=11
TUL1 Leonard 65.83 61 *e*P **P 03 25 46.4 +0.2**
comp=Z,55nm,1.1s
TUL1 LR LR
comp=Z,13μm,19.0s
AAM Ann Arbor 65.89 48 P **P 03 25 46.1 -0.5**
baz=327,SNR=9.3
AAM Ann Arbor 65.89 48 *e*P **P 03 25 45.6 -1.0**
comp=Z,71nm,1.0s
AAM LR LR
comp=Z,9μm,19.0s
AAM Ann Arbor 65.89 48 *e*P **P 03 25 45.6 -1.0**
AAM pmax pmax
comp=Z,71nm,1.0s
AAM MLR MLR
comp=Z,9μm,19.0s
O45A Potomac 65.91 53 P **P 03 25 45.9 -0.8**
baz=326,SNR=7.3
R41A Rosebud 65.91 56 P **P 03 25 46.1 -0.7**
baz=326,SNR=29
INVG Invergeldie, C 65.98 352 *e*P **P 03 25 46.2 -0.7**
S40A Lebanon 65.98 58 P **P 03 25 46.4 -0.8**
baz=325,SNR=60
TRQ Mont Tremblant 65.98 40 *e*P **P 03 25 46.0 -1.2**
T39A Clever 66.05 58 P **P 03 25 46.5 -1.1**
baz=325,SNR=17
SFIN Lafayette 66.07 52 P **P 03 25 46.8 -0.9**
baz=326
SFIN Lafayette 66.07 52 PFAKE 03 26 00.0 +12
SFIN LR LR
comp=Z,8μm,20.0s
PLVO Plevna 66.10 42 *e*P **P 03 25 47.0 -0.9**
comp=Z,108nm,1.4s
Q43A New Douglas 66.13 55 P **P 03 25 47.3 -0.8**
baz=326,SNR=14
SLM Saint Louis 66.15 55 *e*P **P 03 25 50.8 +2.6**
comp=Z,123nm,1.4s
SLM LR LR
comp=Z,10μm,19.0s
P44A Sand Creek, Wi 66.17 54 P **P 03 25 47.5 -0.9**
baz=326,SNR=16
CCM Cathedral Cave 66.17 56 P **P 03 25 47.8 -0.6**
baz=326
CCM Cathedral Cave 66.17 56 *e*P **P 03 25 46.9 -1.5**
comp=Z,113nm,1.4s
CCM LR LR
comp=Z,9μm,20.0s
CCM Cathedral Cave 66.17 56 *e*P **P 03 25 46.9 -1.5**
CCM pmax pmax
comp=Z,113nm,1.4s
CCM MLR MLR
comp=Z,9μm,20.0s
R42A Luebbering 66.19 56 P **P 03 25 48.1 -0.4**
baz=326,SNR=17
GKP Gorka Klasztor 66.19 339 *e*P **P 03 25 48.4 +0.1**
GKP *e*S **S 03 34 37.7 +1.7**
GKP LMZ LR 03 58 15.2
comp=Z,9μm,19.7s
GKP Gorka Klasztor 66.19 339⇑ *e*P **P 03 25 48.4 +0.1**
GKP *e*S **S 03 34 37.7 +1.7**
GKP MLR MLR
comp=Z,9μm,19.7s
EAB Aberfoyle 66.23 353⇑ *e*P **P 03 25 48.4 -0.1**
GEYT Alibeck 66.26 304 P **P 03 25 49.5 +0.4**
comp=Z,147nm,0.9s,baz=3.8,slow=4.5,SNR=11
GEYT LR LR 03 58 05.1
comp=Z,17μm,18.4s,baz=30,slow=39
GYA0B ALIBECK ARRAY 66.26 304 *e*P **P 03 25 49.4 +0.3**
comp=Z,313nm,1.4s
S41A Jillco Farms, 66.33 57 P **P 03 25 48.8 -0.7**
baz=326,SNR=54
T40A Mansfield 66.34 58 P **P 03 25 48.8 -0.8**
baz=325
ESY Stoneypath 66.37 351⇑ *e*P **P 03 25 48.9 -0.5**
HHAR Hobbs 66.39 59 *e*P **P 03 25 49.1 -0.8**
comp=Z,80nm,1.1s
HHAR LR LR
comp=Z,10μm,19.0s
Q44A Meyer Farm, Va 66.46 54 P **P 03 25 49.6 -0.7**
baz=326
P45A Graceland, Par 66.50 53 P **P 03 25 49.5 -0.9**
baz=326,SNR=9.2
P45A Graceland, Par 66.50 53 *e*P **P 03 25 49.6 -0.9**
comp=Z,38nm,1.0s
P45A LR LR
comp=Z,10μm,18.0s
SANI Sanana 66.51 221 P **P 03 25 49.9 -0.9**
comp=Z,160nm,1.5s,comp=Z,6μm
MAK Makhachkala 66.52 314*c i*P **P 03 25 51.0 +0.5**
MAK *e*PPP PPP 03 29 48.1
MAK *e*S **S 03 34 43.6 +3.3**
MAK *e*SS **SS 03 38 56.3 -0.1**
MAK pmax pmax
comp=Z,205nm,1.5s
U39A Green Forest 66.52 59 P **P 03 25 50.0 -0.7**
baz=325,SNR=58
R43A Red Bud 66.58 55 P **P 03 25 50.2 -0.8**
baz=326,SNR=12
O47A Sheridan 66.58 51 P **P 03 25 49.7 -1.3**
baz=327
FVM French Village 66.60 56 *e*P **P 03 25 50.7 -0.5**
comp=Z,48nm,0.9s
FVM LR LR
comp=Z,12μm,19.0s
FVM French Village 66.60 56 *e*P **P 03 25 50.7 -0.5**
FVM pmax pmax
comp=Z,48nm,0.9s
FVM MLR MLR
comp=Z,12μm,19.0s
S42A Caledonia 66.61 56 P **P 03 25 50.6 -0.6**
baz=326,SNR=15
PGBU Glenifferbraes 66.62 353⇑ *e*P **P 03 25 50.0 -1.0**
ABTX Abilene, Hawle 66.64 66 P **P 03 25 51.4 -0.1**
baz=325,SNR=24
ABTX Abilene, Hawle 66.64 66 *e*P **P 03 25 52.0 +0.5**
comp=Z,104nm,1.1s
ABTX LR LR
comp=Z,10μm,21.0s
MPSI Mapaga 66.65 229 P **P 03 25 51.6 -0.1**
P46A Rosedale 66.66 53 P **P 03 25 50.5 -1.0**
baz=327,SNR=14
HNR Honiara 66.76 184 LR LR 03 56 14.3
comp=Z,4μm,18.0s,baz=360,slow=37
T41A Mountain View 66.77 57 P **P 03 25 51.5 -0.8**
baz=326,SNR=33
LUWI Luwuk 66.77 225 P **P 03 25 51.3 -1.2**
LUWI Luwuk 66.77 225 *e*P **P 03 25 51.5 -1.0**
comp=Z,167nm,0.9s
BEL Belsk 66.80 336 *e*P **P 03 25 53.0 +0.8**
BEL *e*S **S 03 34 46.4 +2.9**
BEL LMZ LR 03 56 48.6
comp=Z,11μm,19.6s
BEL Belsk 66.80 336⇑ *e*P **P 03 25 53.0 +0.8**
BEL *e*S **S 03 34 46.4 +2.9**
BEL MLR MLR
comp=Z,11μm,19.6s
U40A Yellville 66.83 59 P **P 03 25 51.8 -0.9**
baz=326,SNR=32
Q45A Warren Harvey, 66.85 54 P **P 03 25 51.9 -0.9**
baz=326,SNR=24
V39A Pettigrew 66.89 59 P **P 03 25 52.3 -0.8**
baz=325,SNR=82
R44A Waltonville 66.98 55 P **P 03 25 52.7 -0.9**
baz=326,SNR=16
EKA Eskdalemuir Ar 67.00 352 P **P 03 25 53.8 +0.4**
comp=Z,23nm,0.7s,baz=13,slow=5.3,SNR=43
EKA LR LR 03 55 53.6
comp=Z,2μm,18.1s,baz=5.0,slow=37
OLIL Olney 67.00 54 *e*P **P 03 25 53.4 -0.4**
comp=Z,80nm,1.3s
OLIL LR LR
comp=Z,5μm,22.0s
ESK Eskdalemuir 67.02 352 *e*P **P 03 25 53.7 +0.2**
comp=Z,59nm,0.9s
ESK LR LR
comp=Z,4μm,18.0s
ESK Eskdalemuir 67.02 352 *e*P **P 03 25 53.7 +0.2**
ESK pmax pmax
comp=Z,59nm,0.9s
ESK MLR MLR
comp=Z,4μm,18.0s
FUNA Funafuti 67.06 163 PFAKE 03 26 10.0 +16
FUNA LR LR
comp=Z,8μm,20.0s
Q46A CEJHS Indians, 67.08 53 P **P 03 25 53.4 -0.9**
baz=327
T42A Van Buren 67.08 57 P **P 03 25 53.6 -0.7**
baz=326,SNR=29
T42A Van Buren 67.08 57 *e*P **P 03 25 53.5 -0.8**
comp=Z,185nm,1.8s
T42A LR LR
comp=Z,8μm,20.0s
APSI Ampana 67.09 226 P **P 03 25 54.3 -0.2**
S43A Fulton Ridge, 67.09 56 P **P 03 25 53.6 -0.7**
baz=326,SNR=17
P47A Martinsville 67.17 52 P **P 03 25 53.5 -1.2**
baz=327,SNR=16
BHH Howats Hill 67.24 352⇑ *e*P **P 03 25 54.4 -0.6**
AAI Ambon 67.27 219 P **P 03 25 55.7 +0.1**
U41A Viola 67.27 58 P **P 03 25 54.8 -0.7**
baz=326,SNR=24
TX31 Lajitas Ar. Si 67.28 71 *e*P **P 03 25 56.8 +1.0**
TXAR Lajitas Array 67.28 71 P **P 03 25 56.9 +1.2**
comp=Z,13nm,0.9s,baz=305,slow=4.4,SNR=66
TXAR LR LR 03 53 07.8
comp=Z,5μm,21.5s,baz=0.0,slow=34
TXAR PKP2bc 03 54 24.2
comp=Z,4.6nm,1.2s,baz=156,slow=4.6,SNR=8.1
R45A Skylar, Fairfi 67.29 54 P **P 03 25 54.7 -0.8**
baz=326
V40A Witts Springs 67.30 59 P **P 03 25 54.9 -0.8**
baz=326,SNR=42
V40A Witts Springs 67.30 59 *e*P **P 03 25 54.9 -0.8**
comp=Z,99nm,1.1s
V40A LR LR
comp=Z,11μm,20.0s
BLO Bloomington 67.32 52 *e*P **P 03 25 55.1 -0.6**
comp=Z,40nm,1.1s
BLO LR LR
comp=Z,8μm,22.0s
BLO Bloomington 67.32 52 *e*P **P 03 25 55.1 -0.6**
BLO pmax pmax
comp=Z,40nm,1.1s
BLO MLR MLR
comp=Z,8μm,22.0s
W39A Magazine 67.35 60 P **P 03 25 55.8 -0.2**
baz=326,SNR=30
W39A Magazine 67.35 60 *e*P **P 03 25 55.6 -0.4**
comp=Z,293nm,1.8s
W39A LR LR
comp=Z,12μm,19.0s
SIUC Southern Illin 67.36 55 *e*P **P 03 25 55.8 -0.2**
comp=Z,107nm,1.4s
SIUC LR LR
comp=Z,10μm,20.0s
S44A Carbondale 67.36 55 P **P 03 25 55.2 -0.8**
baz=326,SNR=8.3
LONY Lake Ozonia 67.36 41 P **P 03 25 54.4 -1.5**
baz=330,SNR=20
LONY Lake Ozonia 67.36 41 *e*P **P 03 25 54.2 -1.7**
comp=Z,65nm,1.3s
LONY LR LR
comp=Z,6μm,18.0s
N50A Nevada 67.39 49 P **P 03 25 55.3 -0.8**
baz=328,SNR=5.8
T43A Greenville 67.40 56 P **P 03 25 55.4 -0.8**
baz=326,SNR=11
KVAR Kislovodsk Arr 67.48 318 LR LR 03 58 01.9
comp=Z,9μm,22.0s,baz=7.0,slow=38
KIV Kislovodsk 67.48 318 *e*P **P 03 25 57.3 +0.5**
comp=Z,286nm,1.6s
KIV LR LR
comp=Z,10μm,21.0s
KIV Kislovodsk 67.48 318 P **P 03 25 57.6 +0.8**
SNR=65
KIV Kislovodsk 67.48 318 *i*P **P 03 25 57.3 +0.5**
SNR=49
KIV Kislovodsk 67.48 318 *e*P **P 03 25 57.2 +0.4**
KIV *e* 03 28 24.0
KIV *e*S **S 03 34 51.9 -0.2**
KIV *e*SS **SS 03 39 12.2 +0.8**
KIV pmax pmax
comp=Z,2μm,5.6s
KIV pmax pmax
comp=Z,81nm,1.1s
KIV MLR MLR
comp=Z,7μm,17.0s
ERPA Erie 67.50 46 P **P 03 25 56.0 -0.8**
baz=329,SNR=13
ERPA Erie 67.50 46 *e*P **P 03 25 56.0 -0.8**
comp=Z,185nm,1.3s
ERPA LR LR
comp=Z,6μm,20.0s
FRNY Flat Rock 67.52 40 *e*P **P 03 25 55.9 -1.0**
comp=Z,37nm,1.2s
FRNY LR LR
comp=Z,7μm,18.0s
NCK Nalchik 67.54 317⇑ *e*P **P 03 25 57.8 +0.7**
NCK pmax pmax
comp=Z,96nm,1.0s
NCK MLR MLR
comp=Z,17μm,17.0s
Q47A Bedord North L 67.56 52 P **P 03 25 56.3 -1.0**
baz=327,SNR=18
GAL1 Galloway 67.58 353⇑ *e*P **P 03 25 56.7 -0.4**
U42A Revenden 67.58 57 P **P 03 25 56.7 -0.7**
baz=326
PBMO Poplar Bluff 67.59 57 *e*P **P 03 25 57.3 -0.1**
comp=Z,115nm,1.5s
PBMO LR LR
comp=Z,9μm,19.0s
KBZ Khabaz 67.60 318 P **P 03 25 58.1 +0.8**

comp=Z,63nm,0.9s,baz=50,slow=4.0,SNR=129
KBZ S **S** **03 34 57.0 +3.8**
comp=Z,1.1nm,0.9s,baz=200,slow=15,SNR=1.8
KBZ LR LR 03 57 44.0
comp=Z,11μm,20.6s,baz=24,slow=38
V41A Mountainview 67.62 58 P **P** **03 25 56.9 -0.9**
baz=326,SNR=31
S45A Carrier Mills 67.67 55 P **P** **03 25 57.2 -0.7**
baz=327,SNR=12
AKT Akhty 67.69 313⇑ *i*P **P** **03 25 58.3 +0.1**
AKT *e* 03 26 19.8
AKT *e* 03 28 26.7
AKT *e*S **S** **03 34 59.5 +4.8**
AKT pmax pmax
comp=Z,184nm,1.1s
W40A Ferguson Farm, 67.69 59 P **P** **03 25 57.9 -0.3**
baz=326,SNR=34
W40A Ferguson Farm, 67.69 59 *e*P **P** **03 25 58.0 -0.1**
comp=Z,120nm,1.0s
W40A LR LR
comp=Z,10μm,18.0s
R46A Gibon Southern 67.69 54 P **P** **03 25 57.4 -0.6**
baz=327
T44A Benton 67.71 56 P **P** **03 25 57.7 -0.6**
baz=326,SNR=9.6
O50A Cable 67.72 50 P **P** **03 25 57.3 -0.9**
baz=328,SNR=33
KESW Keswick, Cumbr 67.73 352⇑ *e*P **P** **03 25 58.1 +0.1**
KESW IAmb IAmb 03 25 58.8
comp=Z,154nm,1.1s
X39A Fountain Ranch 67.76 61 P **P** **03 25 58.6 0.0**
baz=326,SNR=45
MMNY Mt. Morris Dam 67.78 44 *e*P **P** **03 25 57.6 -1.0**
comp=Z,123nm,1.2s
MMNY LR LR
comp=Z,7μm,21.0s
USIN University of 67.83 54 *e*P **P** **03 25 58.7 -0.3**
comp=Z,214nm,1.7s
USIN LR LR
comp=Z,7μm,22.0s
ALLY Alegheny Colle 67.84 46 *e*P **P** **03 25 58.3 -0.7**
comp=Z,157nm,1.1s
ALLY LR LR
comp=Z,7μm,20.0s
ACSO Alum Creek Sta 67.91 49 P **P** **03 25 58.7 -0.8**
baz=328,SNR=16
ACSO Alum Creek Sta 67.91 49 *e*P **P** **03 25 58.8 -0.6**
comp=Z,119nm,1.2s
ACSO LR LR
comp=Z,9μm,19.0s
LVV L'vov 67.92 333*d i*P **P** **03 26 00.7 +1.3**
LVV *i* S **S** **03 35 00.7 +3.7**
LVV pmax pmax
comp=Z,700nm,1.4s
U43A Rector 67.94 57 P **P** **03 25 59.5 -0.2**
baz=326
V42A Cord 67.96 58 P **P** **03 25 58.8 -1.0**
baz=326,SNR=7.3
WHAR Wooly Hollow 67.97 59 *e*P **P** **03 25 59.5 -0.3**
comp=Z,128nm,1.3s
WHAR LR LR
comp=Z,10μm,21.0s
MIAR Mount Ida 67.98 60 P **P** **03 26 00.1 +0.1**
baz=326,SNR=33
MIAR Mount Ida 67.98 60 *e*P **P** **03 25 60.0 0.0**
comp=Z,197nm,1.7s
MIAR LR LR
comp=Z,12μm,19.0s
PARMO Parma 67.99 56 *e*P **P** **03 26 00.3 +0.3**
comp=Z,139nm,1.1s
PARMO LR LR
comp=Z,10μm,19.0s
PMG Port Moresby 67.99 197 P **P** **03 26 00.9 +0.8**
comp=Z,58nm,1.0s,baz=28,slow=6.1,SNR=6.6
PMG S **S** **03 34 59.7 +1.3**
comp=Z,3.2nm,0.3s,baz=6.2,slow=21,SNR=1.2
PMG LR LR 03 52 39.1
comp=Z,1μm,20.2s,baz=332,slow=33
PMG Port Moresby 67.99 197 *e*P **P** **03 26 00.4 +0.3**
comp=Z,145nm,1.3s
PMG *e*PcP **PcP** **03 26 26.6 +0.3**
PMG S **S** **03 34 59.8 +1.3**
PMG Port Moresby 67.99 197 *e*P **P** **03 26 00.4 +0.3**
PMG *e* 03 26 26.6
PMG S **S** **03 34 59.8 +1.3**
PMG pmax pmax
comp=Z,145nm,1.3s
ZEI Tsey 68.04 316 *e*P **P** **03 25 55.9 -4.6**
ZEI pmax pmax
comp=Z,82nm,0.9s
S46A Don Dixon Farm 68.04 54 P **P** **03 25 59.4 -0.9**
baz=327,SNR=8.5
LPIG La Paz 68.05 79 P **P** **03 26 01.6 +1.2**
comp=Z,12nm,0.4s,baz=212,slow=4.5,SNR=1.6
LPIG LR LR 03 52 37.7
comp=Z,1μm,20.9s,baz=325,slow=33
R47A Wooly Knot Far 68.05 53 P **P** **03 25 59.4 -0.9**
baz=327,SNR=10.0
NCB Newcomb 68.05 41 *e*P **P** **03 25 59.5 -0.8**
comp=Z,40nm,1.2s
NCB LR LR
comp=Z,4μm,19.0s
SBUM Sibu 68.05 237 *e*P **P** **03 26 00.8 +0.2**
comp=Z,431nm,1.1s
SBUM LR LR
comp=Z,5μm,19.0s
NEY Neytrino 68.08 317*ce*P **P** **03 26 01.4 +0.7**
NEY pmax pmax
comp=Z,8.0nm,0.8s
NEY MLR MLR
comp=Z,4μm,16.0s
P50A Jamestown 68.10 50 P **P** **03 25 59.7 -1.0**
baz=328,SNR=23
M54A Oil Creek Stat 68.15 46 P **P** **03 25 59.9 -1.1**
baz=329,SNR=39
M54A Oil Creek Stat 68.15 46 *e*P **P** **03 25 60.0 -1.0**
comp=Z,176nm,1.4s
M54A LR LR
comp=Z,6μm,20.0s
U44A Portageville 68.15 56 P **P** **03 26 00.8 -0.2**
baz=326
T45A Paducah 68.19 55 P **P** **03 26 00.7 -0.5**
baz=327
T45A Paducah 68.19 55 *e*P **P** **03 26 01.1 -0.1**
comp=Z,83nm,1.1s
T45A LR LR
comp=Z,10μm,20.0s
HPIG 68.19 74 *e*P **P** **03 26 03.4 +1.7**
comp=Z,57nm,1.5s
WCI Wyandotte Cave 68.20 53 P **P** **03 26 00.7 -0.6**
baz=327
WCI Wyandotte Cave 68.20 53 *e*P **P** **03 26 00.5 -0.8**
comp=Z,51nm,1.1s
WCI LR LR
comp=Z,9μm,18.0s
WCI Wyandotte Cave 68.20 53 *e*P **P** **03 26 00.5 -0.8**
WCI pmax pmax
comp=Z,51nm,1.1s
WCI MLR MLR
comp=Z,9μm,18.0s
WHTX Lake Whitney, 68.22 65 P **P** **03 26 01.4 -0.1**
baz=325
WHTX Lake Whitney, 68.22 65 *e*P **P** **03 26 01.8 +0.3**
comp=Z,121nm,1.7s
WHTX LR LR
comp=Z,11μm,20.0s
PVMO Portageville 68.22 56 PFAKE 03 26 10.0 +8.6
PVMO LR LR
comp=Z,10μm,19.0s
HPK Haverah Park 68.23 351⇑ *e*P **P** **03 26 01.0 -0.2**
R48A Northridge Ran 68.24 52 P **P** **03 26 01.0 -0.6**
baz=327
VT1 Waterbury 68.25 40 *e*P **P** **03 26 01.3 -0.2**
comp=Z,228nm,1.9s
GMM Mts of Mourne 68.28 353⇑ *e*P **P** **03 26 01.2 -0.3**
WIM Isle of Man 68.29 352⇑ *e*P **P** **03 26 01.5 -0.1**
JCT Junction City 68.30 67 P **P** **03 26 01.9 -0.1**
baz=325,SNR=22
JCT Junction City 68.30 67 *e*P **P** **03 26 02.3 +0.2**
comp=Z,79nm,1.2s
JCT LR LR
comp=Z,7μm,18.0s
JCT Junction City 68.30 67 *e*P **P** **03 26 02.3 +0.2**
JCT pmax pmax
comp=Z,79nm,1.2s
JCT MLR MLR
comp=Z,7μm,18.0s

W42A Bald Knob 68.34 58 P **P** **03 26 02.0 -0.1**
baz=326
SORM Soroca 68.35 329⇑ *i*P **P** **03 26 01.8 -0.2**
SORM Soroca 68.35 329 P **P** **03 26 01.5 -0.5**
V43A Jonesboro 68.36 57 P **P** **03 26 02.6 +0.3**
baz=326
UALR University of 68.37 59 *e*P **P** **03 26 02.5 +0.1**
comp=Z,103nm,1.7s
X40A Basin Creek Fa 68.38 60 P **P** **03 26 02.2 -0.3**
baz=326,SNR=18
X40A Basin Creek Fa 68.38 60 *e*P **P** **03 26 02.6 +0.2**
comp=Z,76nm,1.4s
X40A LR LR
comp=Z,14μm,18.0s
KWP Kalwaria Pacla 68.42 334 *e*P **P** **03 26 03.4 +0.9**
KWP *e*S **S** **03 35 06.0 +3.0**
KWP LMZ LR 03 54 29.3
comp=Z,10μm,26.6s
KWP Kalwaria Pacla 68.42 334⇑ *e*P **P** **03 26 03.4 +0.9**
KWP *e*S **S** **03 35 06.0 +3.0**
U44B Burton Farm, H 68.44 56 P **P** **03 26 02.8 0.0**
baz=327,SNR=8.5
N54A Moraine State 68.49 47 P **P** **03 26 02.0 -1.1**
baz=329,SNR=30
N54A Moraine State 68.49 47 *e*P **P** **03 26 02.1 -1.0**
comp=Z,180nm,1.4s
N54A LR LR
comp=Z,6μm,22.0s
HBAR Harrisburg 68.50 57 *e*P **P** **03 26 04.4 +1.2**
comp=Z,117nm,1.2s
HBAR LR LR
comp=Z,9μm,21.0s
T46A Princeton 68.50 55 P **P** **03 26 02.7 -0.5**
baz=327,SNR=15
X41A Kaden, Bauxite 68.52 59 P **P** **03 26 03.1 -0.2**
baz=326
GLAT Glass 68.53 56 PFAKE 03 26 20.0 +17
GLAT LR LR
comp=Z,10μm,20.0s
OJC Ojcow 68.54 336 *e*P **P** **03 26 03.9 +0.7**
OJC *e*S **S** **03 35 08.4 +4.1**
OJC LMZ LR 03 57 30.0
comp=Z,10μm,20.1s
OJC Ojcow 68.54 336 *e*P **P** **03 26 03.9 +0.7**
comp=Z,187nm,1.1s
OJC Ojcow 68.54 336⇑ *e*P **P** **03 26 03.9 +0.7**
OJC *e*S **S** **03 35 08.4 +4.1**
OJC MLR MLR
comp=Z,10μm,20.1s
Y40A Okolona 68.56 60 P **P** **03 26 03.4 -0.2**
baz=326,SNR=15
ANN Anapa 68.57 322*c i*P **P** **03 26 03.0 -0.5**
ANN *i* 03 28 30.3
ANN *i* PPP PPP 03 30 10.6
ANN *e*S **S** **03 35 04.1 -0.8**
ANN *e*SS **SS** **03 39 29.3 +1.3**
ANN pmax pmax
comp=E,22nm,1.4s
ANN pmax pmax
comp=N,14nm,0.7s
ANN pmax pmax
comp=Z,157nm,1.3s
SLBS Sierra La Lagu 68.58 79 *e*P **P** **03 26 08.1 +4.1**
comp=Z,159nm,1.8s
SLBS LR LR
comp=Z,3μm,20.0s
PKME Peaks-Kenny Pk 68.59 37 P **P** **03 26 03.1 -0.5**
baz=333,SNR=18
PKME Peaks-Kenny Pk 68.59 37 *e*P **P** **03 26 03.6 0.0**
comp=Z,94nm,1.2s
PKME LR LR
comp=Z,9μm,18.0s
LBNH Lisbon 68.62 39 P **P** **03 26 03.6 -0.3**
baz=332,SNR=14
LBNH Lisbon 68.62 39 *e*P **P** **03 26 04.0 +0.2**
comp=Z,146nm,1.4s
LBNH LR LR
comp=Z,5μm,18.0s
LBNH Lisbon 68.62 39 *e*P **P** **03 26 04.0 +0.2**
LBNH pmax pmax
comp=Z,146nm,1.4s
LBNH MLR MLR
comp=Z,5μm,18.0s
V44A Blytheville 68.62 57 P **P** **03 26 04.4 +0.5**
baz=326
TBLG Delisi 68.64 315 *e*P **P** **03 26 04.6 +0.6**
comp=Z,155nm,0.9s
UTMT University of 68.66 56 *e*P **P** **03 26 04.5 +0.4**
comp=Z,192nm,1.3s
KSP Ksiaz 68.68 338 *e*P **P** **03 26 04.4 +0.3**
KSP *e*S **S** **03 35 11.3 +5.2**
KSP LMZ LR 04 00 01.6
comp=Z,11μm,18.0s
KSP Ksiaz 68.68 338⇑ *e*P **P** **03 26 04.4 +0.3**
KSP MLR MLR
comp=Z,11μm,18.0s
U45A Rockin P Farm, 68.69 56 P **P** **03 26 04.4 0.0**
baz=327
ACCN Adirondack Com 68.76 41 *e*P **P** **03 26 04.1 -0.6**
comp=Z,215nm,1.9s
ACCN LR LR
comp=Z,4μm,22.0s
CHVG Ch'k'valeri 68.77 318⇓ *i*P **P** **03 26 05.3 +0.5**
S48A Wiedeman Farm, 68.79 53 P **P** **03 26 04.3 -0.7**
baz=327,SNR=14
HALT Halls 68.80 56 *e*P **P** **03 26 05.7 +0.6**
comp=Z,207nm,1.4s
HALT LR LR
comp=Z,9μm,20.0s
SOC Sochi 68.86 320*c i*P **P** **03 26 05.2 -0.1**
SOC *i* PPP PPP 03 30 16.0
SOC *e*S **S** **03 35 10.4 +2.0**
SOC *e*SS **SS** **03 39 26.7 -5.8**
SOC *e*SSS SSS 03 42 27.7
SOC pmax pmax
comp=Z,111nm,1.1s
SOC MLR MLR
comp=Z,10μm,17.0s
CLL Collm 68.86 341⇑ *i*P **P** **03 26 04.8 -0.4**
comp=Z,230nm,1.7s
CLL *e* 03 26 21.0
CLL *e*PP **PP** **03 28 37.0 +0.4**
CLL *e*PPP PPP 03 30 24.0
CLL *e*S **S** **03 35 07.0 -1.1**
CLL *e*PS **PnS** **03 35 34.0 +1.3**
CLL *e*PPS PPS 03 35 48.0
CLL *e*SS **SS** **03 39 35.0 +2.9**
CLL *e* 03 40 24.0
CLL *e*SSS SSS 03 43 00.0
CLL *e*PKPPKPd **P'P'df** **03 54 18.0 -7.1**
CLL Lm MLR 03 57 00.0
comp=N,8μm,20.6s
CLL Lm MLR 03 57 00.0
comp=E,3μm,21.2s
CLL Lm MLR 03 57 00.0
comp=Z,9μm,20.9s
CLL Collm 68.86 341 *e*P **P** **03 26 04.3 -0.9**
comp=Z,336nm,1.9s
CLL LR LR
comp=Z,8μm,20.0s
CLL Collm 68.86 341 *e*P **P** **03 26 04.3 -0.9**
CLL pmax pmax
comp=Z,336nm,1.9s
CLL MLR MLR
comp=Z,8μm,20.0s
W43A Forest City 68.86 58 P **P** **03 26 05.3 -0.2**
baz=326
X42A Stuttgart 68.89 59 P **P** **03 26 05.6 0.0**
baz=326
CHLP Challavanipeta 68.89 271 *e*P **P** **03 26 05.7 -0.1**
CHLP IAmb IAmb 03 26 06.3
comp=Z,177nm,1.2s
CHLP *e*S **S** **03 35 10.1 +0.9**
CHLP IVMsBB 04 01 08.5
comp=Z,2μm,14.3s
T47A Sharon Grove 68.89 54 P **P** **03 26 05.2 -0.4**
baz=327,SNR=22
T47A Sharon Grove 68.89 54 *e*P **P** **03 26 05.2 -0.4**
comp=Z,125nm,1.4s
U46A Springville 68.95 55 P **P** **03 26 05.7 -0.3**
baz=327,SNR=8.0
BINY Binghamton 68.95 43 P **P** **03 26 04.7 -1.3**
baz=330,SNR=12
BINY Binghamton 68.95 43 *e*P **P** **03 26 04.6 -1.4**
comp=Z,55nm,1.2s
BINY LR LR

comp=Z,7μm,19.0s
Y41A Eaglette Beard 68.98 60 P **P** **03 26 06.3 +0.1**
baz=326,SNR=9.6
RAC Raciborz 69.01 337 *e*P **P** **03 26 07.3 +1.1**
RAC *e*S **S** **03 35 08.2 -1.7**
RAC MLR MLR
comp=Z,15μm,16.8s
UPC Upice 69.06 338 *e*P **P** **03 26 07.1 +0.6**
UPC *e*pP **pP** **03 26 12.6 +0.9**
UPC *e*S **S** **03 35 14.7 +4.2**
UPC *e*SS **SS** **03 39 37.3 +2.1**
UPC AMS AMS 04 00 20.0
comp=Z,10μm,16.0s
UPC Upice 69.06 338 *e*P **P** **03 26 07.1 +0.6**
UPC *e*S **S** **03 35 14.7 +4.2**
UPC *e*SS **SS** **03 39 37.3 +2.1**
UPC MLR MLR
comp=Z,10μm,16.0s
WVL Waterville 69.09 38 *e*P **P** **03 26 06.6 -0.1**
comp=Z,99nm,1.4s
T48A Bowling Green 69.10 53 P **P** **03 26 06.2 -0.7**
baz=327,SNR=13
BRG Berggiesshubel 69.11 340 *i* P **P** **03 26 06.4 -0.3**
comp=Z,152nm,1.7s
BRG *i* PCP **PcP** **03 26 29.4 -1.2**
comp=Z,74nm,1.4s
BRG PP **PP** **03 28 38.0 -0.7**
BRG S **S** **03 35 15.0 +3.9**
BRG SS **SS** **03 39 39.0 +3.1**
BRG *e*PKPPKP **P'P'df** **03 54 18.2 -6.4**
comp=Z,29nm,2.1s
comp=N,5μm,22.5s
comp=E,8μm,14.6s
comp=Z,10μm,17.3s
BRG Berggiesshubel 69.11 340 *i* P **P** **03 26 06.4 -0.3**
BRG *i* 03 26 29.4
BRG 03 28 38.0
BRG S **S** **03 35 15.0 +3.9**
BRG SS **SS** **03 39 39.0 +3.1**
BRG pmax pmax
comp=Z,152nm,1.7s
BRG MLR MLR
comp=N,5μm,22.5s
BRG MLR MLR
comp=E,8μm,14.6s
BRG MLR MLR
comp=Z,10μm,17.3s
V45A Humboldt 69.11 56 P **P** **03 26 06.8 -0.2**
baz=327
Z40A Long Farm, Mag 69.13 61 P **P** **03 26 07.9 +0.7**
baz=326
435B Jarrell 69.15 65 P **P** **03 26 07.5 +0.2**
baz=326
435B Jarrell 69.15 65 *e*P **P** **03 26 07.8 +0.5**
comp=Z,84nm,1.5s
435B LR LR
comp=Z,10μm,22.0s
DPC Dobruska-Polom 69.15 338 *e*P **P** **03 26 07.6 +0.5**
DPC *e*x x 03 26 22.9
DPC *e*PP **PP** **03 28 39.9 +0.8**
DPC *e*S **S** **03 35 15.5 +3.8**
DPC *e*SS **SS** **03 39 36.9 +0.2**
DPC AMS AMS 04 00 10.0
comp=Z,10μm,16.3s
DPC Dobruska-Polom 69.15 338 *e*P **P** **03 26 07.6 +0.5**
DPC *e* 03 26 22.9
DPC *e* 03 28 39.9
DPC *e*S **S** **03 35 15.5 +3.8**
DPC *e*SS **SS** **03 39 36.9 +0.2**
DPC MLR MLR
comp=Z,10μm,16.3s
NIE Niedzica 69.18 335 *e*P **P** **03 26 08.1 +0.8**
NIE *e*S **S** **03 35 15.5 +3.5**
NIE LMZ LR 03 58 55.5
comp=Z,5μm,19.4s
NIE Niedzica 69.18 335⇑ *e*P **P** **03 26 08.1 +0.8**
NIE *e*S **S** **03 35 15.5 +3.5**
NIE MLR MLR
comp=Z,5μm,19.4s
MET Memphis--Engin 69.19 57 PFAKE 03 26 20.0 +13
MET LR LR
comp=Z,9μm,21.0s
WTSB Winterswijk 69.22 345 *e*P **P** **03 26 07.4 0.0**
comp=Z,614nm,2.3s
W44A Shelby Farms P 69.23 57 P **P** **03 26 08.3 +0.6**
baz=327
KIS Kishinev 69.25 329⇑ *i*P **P** **03 26 07.0 -0.7**
comp=Z,500nm,1.5s
KIS Kishinev 69.25 329 *i* PcP **PcP** **03 26 26.0 -5.3**
KIS Kishinev 69.25 329 *i* PP PP 03 28 40.0 -0.1
comp=Z,1μm,12.0s
KIS *i* S **S** **03 35 11.0 -1.9**
comp=Z,3μm,12.0s
KIS Kishinev 69.25 329α *i*P **P** **03 26 07.0 -0.7**
KIS *i* 03 26 26.0
KIS *i* 03 28 40.0
KIS *i* S **S** **03 35 11.0 -1.9**
KIS *i* PS **PnS** **03 35 45.0 +6.9**
KIS pmax pmax
comp=Z,500nm,1.5s
KIS pmax pmax
comp=Z,3μm,8.0s
KIS pmax pmax
comp=N,2μm,10.0s
KIS pmax pmax
comp=Z,3μm,10.0s
KIS pmax pmax
comp=Z,1μm,12.0s
KIS pmax pmax
comp=Z,1μm,12.0s
KIS smax smax
comp=N,3μm,12.0s
KIS smax smax
comp=E,4μm,12.0s
KIS MLR MLR
comp=N,10μm,16.0s
KIS MLR MLR
comp=Z,14μm,16.0s
KIS MLR MLR
comp=E,6μm,16.0s
KIS MLR MLR
comp=Z,14μm,16.0s
OKC Ostrava-Krasne 69.25 337 *e*P **P** **03 26 08.6 +0.9**
OKC *e*S **S** **03 35 16.2 +3.4**
OKC *e*SS **SS** **03 39 41.2 +3.0**
OKC AMS AMS 04 00 00.0
comp=Z,10μm,15.8s
OKC Ostrava-Krasne 69.25 337 *e*P **P** **03 26 08.6 +0.9**
OKC *e*S **S** **03 35 16.2 +3.4**
OKC *e*SS **SS** **03 39 41.2 +3.0**
OKC MLR MLR
comp=Z,10μm,15.8s
X43A Marvell 69.26 58 P **P** **03 26 08.0 +0.2**
baz=326,SNR=11
X43A Marvell 69.26 58 *e*P **P** **03 26 08.1 +0.2**
comp=Z,109nm,1.1s
X43A LR LR
comp=Z,9μm,20.0s
U47A Clarksville 69.27 54 P **P** **03 26 07.6 -0.4**
baz=327,SNR=9.7
WVT Waverly 69.29 55 P **P** **03 26 08.1 -0.1**
baz=327
WVT Waverly 69.29 55 *e*P **P** **03 26 07.8 -0.3**
comp=Z,58nm,1.1s
WVT LR LR
comp=Z,8μm,19.0s
WVT Waverly 69.29 55 *e*P **P** **03 26 07.8 -0.3**
WVT pmax pmax
comp=Z,58nm,1.1s
WVT MLR MLR
comp=Z,8μm,19.0s
DSB Dublin 69.30 353 *e*P **P** **03 26 08.0 +0.1**
comp=Z,149nm,1.4s
DSB LR LR
comp=Z,2μm,20.0s
KRLC Kraliky 69.31 338 *e*P **P** **03 26 08.7 +0.6**
KRLC *e*x x 03 26 15.0
KRLC Kraliky 69.31 338 *e*P **P** **03 26 08.7 +0.6**
PVCC Panska Ves 69.32 339 *e*P **P** **03 26 09.1 +1.0**
PVCC *e*PP **PP** **03 28 40.1 -0.5**
PVCC *e*S **S** **03 35 16.8 +3.2**
PVCC AMS AMS 04 01 00.0
comp=Z,7μm,15.9s
PVCC Panska Ves 69.32 339 *e*P **P** **03 26 09.1 +1.0**
PVCC *e* 03 28 40.1
PVCC *e*S **S** **03 35 16.8 +3.2**

PVCC MLR MLR
comp=Z,7μm,15.9s
TRY Troy 69.33 41 *e*P **P 03 26 07.6 -0.7**
comp=Z,30nm,1.3s
CCAR Cane Creek 69.34 59 *e*P **P 03 26 09.5 +1.1**
comp=Z,167nm,1.3s
CCAR LR LR
comp=Z,9μm,20.0s
AKH Akhalkalaki 69.38 316⇑*i*P **P 03 26 09.6 +0.8**
AKH Akhalkalaki 69.38 316 *e*P **P 03 26 09.9 +1.0**
comp=Z,124nm,1.3s
AKH LR LR
comp=Z,17μm,19.0s
FFD Franklin Falls 69.39 40 *e*P **P 03 26 08.9 +0.3**
comp=Z,178nm,1.8s
CRVS Cervenica-Dubn 69.39 334 *e*P **P 03 26 09.3 +0.7**
CRVS pmax pmax
comp=Z,95nm,1.4s
CRVS Cervenica-Dubn 69.39 334 *e*P **P 03 26 09.3 +0.7**
CRVS *e*S **S 03 35 17.6 +3.1**
CRVS *e*L L 03 57 40.5
Y42A Garnett, Star 69.40 59 P **P 03 26 09.3 +0.4**
baz=326,SNR=11
IAS Iasi 69.42 330⇑*i*P **P 03 26 08.6 -0.1**
NGP Nagpur 69.42 277 *e*P **P 03 26 07.6 -1.6**
NGP IAmb IAmb 03 26 08.2
comp=Z,102nm,1.2s
NGP *e*x x 03 35 20.7
NGP *e*x x 03 58 34.3
comp=Z,5μm,18.0s
FOEL Foel Wylfa 69.43 351⇑*e*P **P 03 26 07.4 -1.3**
MORC Moravsky Berou 69.44 337⇑*i*P **P 03 26 09.4 +0.5**
MORC Moravsky Berou 69.44 337 *e*P **P 03 26 09.3 +0.4**
comp=Z,1μm,1.7s
MORC LR LR
comp=Z,35μm,19.0s
MORC Moravsky Berou 69.44 337⇑*i*P **P 03 26 09.3 +0.4**
MORC *e*S **S 03 35 16.5 +1.4**
V46A Holladay 69.44 55 P **P 03 26 08.7 -0.4**
baz=327,SNR=14
UZH Uzhgorod 69.45 334 *e*P **P 03 26 08.8 -0.1**
UZH *e* 03 26 21.6
UZH *e* 03 26 28.6
UZH *e* 03 26 33.2
UZH *e*PPP PPP 03 30 24.8
UZH *e*S **S 03 35 10.0 -5.1**
UZH *e*PS **PnS 03 35 35.8 -4.9**
TRTT Trang 69.46 252 P **P 03 26 08.7 -0.7**
comp=Z,33nm,1.3s,comp=Z,1μm
T49A Edmonton 69.47 53 P **P 03 26 08.7 -0.5**
baz=328,SNR=14
W45A Hickory Valley 69.50 57 P **P 03 26 09.3 -0.1**
baz=327,SNR=15
LLW Llanuwychllyn 69.50 352⇑*e*P **P 03 26 09.1 -0.1**
SIM Simferopol' 69.52 324*c i*P **P 03 26 09.7 +0.3**
SIM *e* 03 26 33.0
SIM *e* 03 28 41.0
SIM *e*S **S 03 35 17.0 +0.9**
SIM *e*PS **PnS 03 35 55.0 +13**
SIM *e*SS **SS 03 39 46.0 +3.4**
SIM *e*SSS SSS 03 42 44.0
SIM pmax pmax
comp=Z,296nm,1.5s
SIM MLR MLR
comp=N,10μm,15.8s
U48A Cassie Pea, Po 69.54 54 P **P 03 26 09.0 -0.7**
baz=328,SNR=8.9
140A Cam and Jess, 69.56 61 P **P 03 26 10.2 +0.4**
baz=326
140A Cam and Jess, 69.56 61 *e*P **P 03 26 11.0 +1.2**
comp=N,310nm,1.8s
140A LR LR
comp=Z,13μm,18.0s
SSPA Standing Stone 69.59 45 P **P 03 26 08.9 -0.9**
baz=330
SSPA Standing Stone 69.59 45 *e*P **P 03 26 08.5 -1.4**
comp=Z,237nm,1.9s
SSPA LR LR
comp=Z,10μm,19.0s
KSPA Keystone Colle 69.59 43 *e*P **P 03 26 08.9 -1.0**
comp=Z,47nm,1.2s
X44A Crenshaw 69.61 58 P **P 03 26 10.3 +0.2**
baz=327,SNR=21
LANS Liptovska Anna 69.61 336 *e*P **P 03 26 11.2 +1.2**
LANS *e*S **S 03 35 21.0 +3.8**
LANS Liptovska Anna 69.61 336 *e*P **P 03 26 11.2 +1.2**
LANS *e*S **S 03 35 21.0 +3.8**
PRAR RASCA 69.63 330⇓*i*P **P 03 26 10.1 0.0**
BUR08 Bucovina Ar. S 69.64 331 *e*P **P 03 26 10.5 +0.2**
O56A Blue Knob Stat 69.64 46 P **P 03 26 09.1 -1.2**
baz=330,SNR=18
O56A Blue Knob Stat 69.64 46 *e*P **P 03 26 09.1 -1.2**
comp=Z,188nm,1.7s
O56A LR LR
comp=Z,7μm,22.0s
BUR04 Bucovina Ar. S 69.66 331 *e*P **P 03 26 09.7 -0.7**
BURAR Bucovina Array 69.66 331⇑*i*P **P 03 26 10.4 +0.1**
BURAR Bucovina Array 69.66 331 P **P 03 26 10.5 +0.1**
MCWV Mont Chateau 69.66 47 P **P 03 26 09.7 -0.7**
baz=329,SNR=15
MCWV Mont Chateau 69.66 47 PFAKE 03 26 20.0 +10
MCWV LR LR
comp=Z,11μm,18.0s
EMMW East Machias 69.68 36 *e*P **P 03 26 09.6 -0.8**
comp=Z,207nm,1.9s
V47A Nunnelly 69.68 55 P **P 03 26 09.9 -0.6**
baz=327,SNR=17
Y43A Makayla and Ka 69.74 59 P **P 03 26 11.1 +0.2**
baz=327
MOX Moxa 69.75 341 P **P 03 26 10.6 -0.1**
NATX Nacogdoches 69.76 63 P **P 03 26 11.4 +0.3**
baz=326
NATX Nacogdoches 69.76 63 *e*P **P 03 26 12.0 +0.9**
comp=Z,81nm,1.1s
NATX LR LR
comp=Z,9μm,20.0s
HLM1 Long Mynd 69.77 351 *e*P **P 03 26 10.7 -0.1**
HLM1 IAmb IAmb 03 26 11.4
comp=Z,98nm,1.2s
PRA Prague 69.78 339 *e*P **P 03 26 11.8 +0.9**
PRA *e*PP **PP 03 28 47.1 +2.5**
PRA *e*S **S 03 35 22.6 +3.6**
PRA *e*SS **SS 03 39 42.3 -4.0**
PRA AMS AMS 04 01 10.0
comp=Z,9μm,15.3s
PRA Prague 69.78 339 *e*P **P 03 26 11.8 +0.9**
PRA *e* 03 28 47.1
PRA *e*S **S 03 35 22.6 +3.6**
PRA *e*SS **SS 03 39 42.3 -4.0**
PRA MLR MLR
comp=Z,9μm,15.3s
KSM Kuching 69.79 238 *e*P **P 03 26 12.1 +0.7**
comp=Z,225nm,1.1s
KSM LR LR
comp=Z,3μm,21.0s
Z42A Norrel Spur, H 69.80 60 P **P 03 26 11.6 +0.4**
baz=326
PRU Pruhonice 69.84 339 *e*P **P 03 26 11.6 +0.3**
PRU *e*pP **sP 03 26 18.5 0.0**
PRU *e*x x 03 26 27.3
PRU *e*PP **PP 03 28 47.5 +2.4**
PRU *e*S **S 03 35 22.4 +2.7**
PRU *e*SS **SS 03 39 42.2 -5.0**
PRU AMS AMS 04 01 10.0
comp=Z,9μm,16.0s
PRU Pruhonice 69.84 339 *e*P **P 03 26 11.6 +0.3**
PRU *e* 03 26 27.3
PRU *e* 03 28 47.5
PRU *e*S **S 03 35 22.4 +2.7**
PRU *e*SS **SS 03 39 42.2 -5.0**
PRU MLR MLR
comp=Z,9μm,16.0s
T50A Nancy 69.84 52 P **P 03 26 10.9 -0.7**
baz=328,SNR=16
S51A Beattyville 69.85 51 P **P 03 26 10.7 -0.8**
baz=328,SNR=13
TRPA Tarpa 69.86 333⇑*i*P **P 03 26 12.1 +0.7**
TRPA Tarpa 69.86 333⇑*e*P **P 03 26 12.2 +0.8**
GOPC GO Pecny, Ondr 69.86 339 *e*P **P 03 26 12.3 +0.8**
GOPC *e*PP **PP 03 28 50.3 +5.0**
GOPC *e*S **S 03 35 23.8 +3.7**
GOPC *e*SS **SS 03 39 41.6 -6.1**
GOPC AMS AMS 04 01 10.0
comp=Z,10μm,15.8s
GOPC GO Pecny, Ondr 69.86 339 *e*P **P 03 26 12.3 +0.8**
GOPC *e* 03 28 50.3
GOPC *e*S **S 03 35 23.8 +3.7**
GOPC *e*SS **SS 03 39 41.6 -6.1**
GOPC MLR MLR
comp=Z,10μm,15.8s
U49A Red Boiling Sp 69.87 53 P **P 03 26 11.1 -0.6**
baz=328,SNR=16
PBA Port Blair 69.88 260 *e*P P 03 26 13.0 +1.0
comp=Z,925nm,1.6s
W46A Michie 69.88 56 P **P 03 26 11.3 -0.5**
baz=327
LEOM Leova 69.89 329⇑*i*P **P 03 26 11.4 -0.2**
LEOM Leova 69.89 329 P **P 03 26 12.0 +0.4**
141A Papa Simpson, 69.90 61 P **P 03 26 12.3 +0.4**
baz=326
VIS Vishakhapatnam 69.92 272 *i* P **P 03 26 12.2 0.0**
VIS *i* x x 03 29 40.5
OXF Oxford 69.93 57 P **P 03 26 11.9 -0.2**
baz=327,SNR=36
OXF Oxford 69.93 57 *e*P **P 03 26 12.3 +0.2**
comp=Z,204nm,1.1s
OXF LR LR
comp=Z,9μm,21.0s
OXF Oxford 69.93 57 *e*P **P 03 26 12.3 +0.2**
OXF pmax pmax
comp=Z,204nm,1.1s
OXF MLR MLR
comp=Z,9μm,21.0s
240A Hunter Patters 69.96 62 P **P 03 26 12.7 +0.4**
baz=326
240A Hunter Patters 69.96 62 *e*P **P 03 26 13.2 +0.8**
comp=Z,128nm,1.4s
240A LR LR
comp=Z,10μm,19.0s
NKC Novy Kostel 69.99 341 *e*P **P 03 26 12.4 +0.1**
NKC *e*S **S 03 35 24.7 +3.1**
NKC *e*SS **SS 03 39 54.1 +4.4**
NKC AMS AMS 03 59 40.0
comp=Z,8μm,18.5s
NKC Novy Kostel 69.99 341 *e*P **P 03 26 12.4 +0.1**
NKC *e*S **S 03 35 24.7 +3.1**
NKC *e*SS **SS 03 39 54.1 +4.4**
NKC MLR MLR
comp=Z,8μm,18.5s
GNI Garni 70.00 314 P **P 03 26 13.9 +1.3**
comp=Z,121nm,1.2s,baz=348,slow=3.0
GNI LR LR 03 59 14.8
comp=Z,13μm,19.2s,baz=18,slow=38
GNI Garni 70.00 314 P **P 03 26 14.2 +1.6**
SNR=36
GNI Garni 70.00 314 *i* P **P 03 26 13.2 +0.5**
SNR=27
KECS Kecovo 70.01 335 *e*P **P 03 26 13.0 +0.6**
KECS pmax pmax
comp=Z,31nm,1.0s
KECS Kecovo 70.01 335 *e*P **P 03 26 13.0 +0.6**
X45A UM Field Stati 70.02 57 P **P 03 26 12.2 -0.4**
baz=327,SNR=8.5
Y44A Strider, Charl 70.03 58 P **P 03 26 13.0 +0.3**
baz=327,SNR=31
S52A Salyersville 70.03 51 P **P 03 26 12.0 -0.7**
baz=328,SNR=22
V48A Smith Brothers 70.06 55 P **P 03 26 12.4 -0.6**
baz=328,SNR=19
V48A Smith Brothers 70.06 55 *e*P **P 03 26 12.3 -0.6**
comp=Z,36nm,1.0s
V48A LR LR
comp=Z,10μm,21.0s
VRAC Vranov 70.08 338⇑*i*P **P 03 26 13.8 +1.0**
VRAC Vranov 70.08 338⇑*i*P **P 03 26 13.3 +0.5**
VRAC *e*S **S 03 35 25.6 +3.0**
PKDT Phuket 70.11 253 P **P 03 26 13.1 -0.3**
comp=Z,53nm,0.7s,comp=Z,2μm
W47A Westpoint 70.13 55 P **P 03 26 12.9 -0.4**
baz=327,SNR=17
PLAL Pickwick Lake 70.14 56 *e*P **P 03 26 12.7 -0.7**
comp=Z,52nm,1.0s
PLAL LR LR
comp=Z,10μm,20.0s
N59A State Game Lan 70.15 44 P **P 03 26 12.1 -1.3**
baz=331,SNR=15
N59A State Game Lan 70.15 44 *e*P **P 03 26 12.3 -1.0**
comp=Z,40nm,1.1s
N59A LR LR
comp=Z,5μm,19.0s
Z43A Armstrong Fami 70.18 59 P **P 03 26 14.0 +0.4**
baz=327
IWEX Carrickbyrne, 70.19 354⇑*e*P **P 03 26 13.5 +0.1**
833A Chaparral WMA, 70.26 68 P **P 03 26 14.7 +0.5**
baz=326
833A Chaparral WMA, 70.26 68 *e*P **P 03 26 15.7 +1.5**
comp=Z,46nm,1.3s
833A LR LR
comp=Z,6μm,19.0s
X46A Booneville 70.27 57 P **P 03 26 13.7 -0.5**
baz=327,SNR=16
HRV Adam Dziewonsk 70.27 40 P **P 03 26 13.7 -0.3**
baz=332
HRV Adam Dziewonsk 70.27 40 *e*P **P 03 26 14.0 0.0**
comp=Z,69nm,1.3s
HRV LR LR
comp=Z,5μm,18.0s
HRV Adam Dziewonsk 70.27 40 *e*P **P 03 26 14.0 0.0**
HRV pmax pmax
comp=Z,69nm,1.3s
HRV MLR MLR
comp=Z,5μm,18.0s
JAVC Velka Javorina 70.28 337⇑*i*P **P 03 26 15.7 +1.6**
JAVC *e*S **S 03 35 31.0 +5.9**
MCH1 Michaelchurch 70.30 351 *e*P **P 03 26 13.1 -0.9**
MCH1 IAmb IAmb 03 26 14.9
comp=Z,52nm,0.9s
TESR Tescani 70.30 330⇑*i*P **P 03 26 13.4 -0.8**
KRUC Moravsky 70.36 338⇑*i*P **P 03 26 15.0 +0.5**
KRUC *e*S **S 03 35 29.4 +3.6**
ARCR ARCALIA 70.37 332⇑*i*P **P 03 26 15.6 +1.0**
VYHS Vyhne 70.37 336 *e*P **P 03 26 15.5 +0.9**
VYHS pmax pmax
comp=Z,95nm,1.5s
VYHS Vyhne 70.37 336 *e*P **P 03 26 15.5 +0.9**
VYHS *e*PP **PP 03 28 50.1 +0.4**
VYHS *e*S **S 03 35 29.3 +3.2**
241A Mo Tay, Goldon 70.38 61 P **P 03 26 15.2 +0.4**
baz=326,SNR=6.3
241A Mo Tay, Goldon 70.38 61 *e*P **P 03 26 15.3 +0.4**
comp=Z,83nm,1.1s
241A LR LR
comp=Z,14μm,18.0s
PAGS Pennsylvania G 70.39 45 *e*P **P 03 26 13.3 -1.4**
comp=Z,86nm,1.3s
PAGS LR LR
comp=Z,7μm,20.0s
142A Monroe 70.40 60 P **P 03 26 15.6 +0.6**
baz=327
Y45A Yeager Farm, C 70.41 58 P **P 03 26 15.4 +0.4**
baz=327,SNR=31
ODNJ Ogdensburg 70.43 43 *e*P **P 03 26 13.8 -1.2**
comp=Z,88nm,1.8s
MONM Monmouth 70.44 351⇑*e*P **P 03 26 14.3 -0.6**
MONM IAmb IAmb 03 26 15.5
comp=Z,124nm,1.1s
V49A McMinnville 70.44 54 P **P 03 26 14.4 -0.8**
baz=328,SNR=5.5
STRD Stroud 70.44 351 *e*P **P 03 26 14.9 0.0**
STRD IAmb IAmb 03 26 20.9
comp=Z,157nm,1.1s
Z44A Pea Ridge, Bel 70.50 59 P **P 03 26 15.8 +0.2**
baz=327
HGN Heimansgroeve 70.52 345 *e*P **P 03 26 15.1 -0.3**
comp=Z,417nm,1.9s
HGN *e*S **S 03 35 31.1 +3.6**
HGN *e*SS SS 03 40 15.2 +18
W48A Pulaski 70.52 55 P **P 03 26 15.0 -0.6**
baz=328,SNR=15
BEBN Eben Emael 70.52 345⇑P **P 03 26 15.2 -0.2**
143A Socs Landing, 70.52 60 P **P 03 26 16.2 +0.5**
baz=327,SNR=9.8
143A Socs Landing, 70.52 60 *e*P **P 03 26 16.8 +1.1**
comp=Z,160nm,1.3s
143A LR LR
comp=Z,10μm,20.0s
T52A Hallie 70.56 51 P **P 03 26 15.6 -0.3**
baz=329,SNR=18
BCX Boston College 70.56 40 *e*P **P 03 26 18.4 +2.6**
comp=Z,50nm,1.4s
LUPA Lehigh Univers 70.57 44 *e*P **P 03 26 14.9 -1.1**
comp=Z,3.6nm,1.1s
LUPA LR LR
comp=Z,300nm,19.0s
OLDB Oldbury-Upon-S 70.59 351 *e*P **P 03 26 15.6 -0.2**
X47A Russelville 70.63 56 P **P 03 26 15.8 -0.6**
baz=328,SNR=22
MEM Membach 70.66 345⇑P **P 03 26 16.2 -0.1**
comp=Z,68nm,1.4s
MEM Membach 70.66 345 P **P 03 26 16.5 +0.2**
SMOL Smolenice 70.66 337 *e*P **P 03 26 17.7 +1.4**
SMOL Smolenice 70.66 337 *e*P **P 03 26 17.7 +1.4**
SWN1 Swindon 70.67 350⇑*e*P **P 03 26 15.2 -1.2**
PSZ Piszkesteto 70.68 335⇑*i*P **P 03 26 17.6 +1.0**
PSZ Piszkesteto 70.68 335 *e*P **P 03 26 17.4 +0.8**
comp=Z,136nm,1.3s
PSZ LR LR
comp=Z,10μm,18.0s
PSZ Piszkesteto 70.68 335 P **P 03 26 17.3 +0.8**
PSZ pmax pmax
comp=Z,140nm,1.3s
HKT Hockley 70.69 65 *e*P **P 03 26 16.2 -0.5**
comp=Z,77nm,1.8s
HKT LR LR
comp=Z,13μm,20.0s
HKT Hockley 70.69 65 *e*P **P 03 26 16.8 +0.1**
HKT pmax pmax
comp=Z,281nm,2.5s
UCC Uccle 70.69 346⇑P **P 03 26 16.0 -0.5**
UCC Uccle 70.69 346 *e*P **P 03 26 16.8 +0.3**
comp=Z,45nm,1.2s
UCC LR LR
comp=Z,6μm,19.0s
242A Grayson 70.70 61 P **P 03 26 17.7 +0.8**
baz=327
Y46A Houston 70.71 57 P **P 03 26 16.8 -0.1**
baz=327,SNR=25
MVL Millersville 70.72 45 *e*P **P 03 26 16.6 -0.3**
comp=Z,41nm,1.3s
GRF Grafenberg Arr 70.73 341 P **P 03 26 17.5 +0.7**
GRFO Grafenberg 70.73 341 *e*P **P 03 26 16.4 -0.4**
comp=Z,183nm,1.6s
GRFO LR LR
comp=Z,7μm,19.0s
PAL Palisades 70.75 42 P **P 03 26 15.8 -1.2**
baz=332,SNR=8.7
PAL Palisades 70.75 42 *e*P **P 03 26 16.2 -0.8**
comp=Z,50nm,1.0s
PAL LR LR
comp=Z,5μm,20.0s
PAL Palisades 70.75 42 *e*P **P 03 26 16.2 -0.8**
PAL pmax pmax
comp=Z,50nm,1.0s
PAL MLR MLR
comp=Z,5μm,20.0s
Z45A Winona 70.76 58 P **P 03 26 17.4 +0.2**
baz=327,SNR=13
Z45A Winona 70.76 58 *e*P **P 03 26 17.5 +0.3**
comp=Z,195nm,1.1s
Z45A LR LR
comp=Z,10μm,18.0s
BATH Bath 70.79 351 *e*P **P 03 26 16.4 -0.6**
BRNJ Basking Ridge 70.80 43 *e*P **P 03 26 16.4 -0.9**
comp=Z,45nm,1.3s
BRNJ LR LR
comp=Z,7μm,18.0s
TZTN Tazewell 70.80 52 P **P 03 26 17.0 -0.4**
baz=328,SNR=6.0
TZTN Tazewell 70.80 52 *e*P **P 03 26 16.6 -0.8**
comp=Z,114nm,1.8s
TZTN LR LR
comp=Z,8μm,19.0s
VAL Valentia 70.80 356⇓*i*P **P 03 26 16.4 -0.7**
VAL *i* S **S 03 35 33.1 +2.3**
BRYW Bryant College 70.80 40 *e*P **P 03 26 16.9 -0.4**
comp=Z,176nm,2.0s
MODS Modra-Piesok 70.83 337 *e*P **P 03 26 17.5 +0.1**
MODS pmax pmax
comp=Z,189nm,1.5s
MODS Modra-Piesok 70.83 337 *e*P **P 03 26 17.5 +0.1**
MODS *e*PP **PP 03 28 54.0 +0.4**
MODS *e*S **S 03 35 33.5 +2.1**
MODS *e*L L 03 59 54.6
341A Kurthwood 70.83 62 P **P 03 26 18.0 +0.4**
baz=326
341A Kurthwood 70.83 62 *e*P **P 03 26 18.4 +0.8**
comp=Z,152nm,1.8s
W49A Belvidere 70.83 54 P **P 03 26 16.8 -0.8**
baz=328,SNR=9.1
YLE Yale 70.83 42 PFAKE 03 26 30.0 +13
YLE LR LR
comp=Z,6μm,21.0s
KHC Kasperske Hory 70.84 340 *e*P **P 03 26 18.0 +0.5**
KHC *e*x x 03 26 34.4
KHC *e*PP **PP 03 28 56.3 +2.5**
KHC *e*S **S 03 35 35.5 +3.9**
KHC *e*SS **SS 03 40 01.2 -1.6**
KHC AMS AMS 04 01 30.0
comp=Z,8μm,16.0s
KHC Kasperske Hory 70.84 340 *e*P **P 03 26 18.0 +0.5**
comp=Z,81nm,1.8s
KHC LR LR
comp=Z,3μm,19.0s
KHC Kasperske Hory 70.84 340 *e*P **P 03 26 18.0 +0.5**
KHC *e* 03 26 34.4
KHC *e* 03 28 56.3
KHC *e*S **S 03 35 35.5 +3.9**
KHC *e*SS **SS 03 40 01.2 -1.6**
KHC MLR MLR
comp=Z,8μm,16.0s
PETR Petresti 70.86 329⇓*i*P **P 03 26 18.6 +1.0**
VRI Vrincioaia 70.87 330⇑*i*P **P 03 26 18.1 +0.4**
V50A Pikevile 70.87 53 P **P 03 26 17.0 -0.8**
baz=328,SNR=8.3
SWET Sewanee 70.89 54 *e*P **P 03 26 17.4 -0.6**
comp=Z,40nm,0.9s
SWET LR LR
comp=Z,11μm,21.0s
PLOR Plostina 70.91 330⇑*i*P **P 03 26 18.1 +0.2**
TLCR 70.91 328⇑*i*P **P 03 26 17.4 -0.5**
CJR Cluj-Napoca 70.91 332⇑*i*P **P 03 26 19.0 +1.0**
CJR Cluj-Napoca 70.91 332 P **P 03 26 17.1 -0.9**
CPNY Central Park 70.92 43 *e*P **P 03 26 17.3 -0.7**
comp=Z,125nm,1.5s
CPNY LR LR
comp=Z,7μm,20.0s
BCLA Clavier 70.94 345⇑P **P 03 26 17.7 -0.3**
comp=Z,35nm,1.8s
WET Wettzell 70.96 340 P **P 03 26 18.1 -0.1**
SNF Seneffe 70.99 346⇑P **P 03 26 17.7 -0.6**
144A Alexander Plac 71.04 59 P **P 03 26 19.4 +0.5**
baz=327
X48A Hartselle 71.05 55 P **P 03 26 18.1 -0.8**
baz=328,SNR=12
X48A Hartselle 71.05 55 *e*P **P 03 26 18.5 -0.4**
comp=Z,99nm,1.5s
SDMD Soldier's Deli 71.05 45 *e*P **P 03 26 17.9 -1.0**
comp=Z,46nm,1.3s
SDMD LR LR
comp=Z,4μm,19.0s
DRGR 71.06 333⇑*i*P **P 03 26 19.1 +0.2**
DRGR 71.06 333 P **P 03 26 19.2 +0.3**
V51A Loudon 71.08 53 P **P 03 26 18.6 -0.5**
baz=328,SNR=14
V51A Loudon 71.08 53 *e*P **P 03 26 18.9 -0.3**
comp=Z,53nm,1.0s
V51A LR LR
comp=Z,9μm,19.0s
GEC2 GERESS Array S 71.09 339 *e*P **P 03 26 19.3 +0.2**
comp=Z,65nm,1.3s
GEC2 GERESS Array S 71.09 339 *e*P **P 03 26 19.3 +0.2**
GEC2 pmax pmax
comp=Z,65nm,1.3s
GERES GERESS Array B 71.09 339 P **P 03 26 19.2 +0.2**
comp=Z,10.0nm,0.9s,baz=35,slow=4.9,SNR=83
GERES PP **PP 03 28 57.0 +1.0**
comp=Z,13nm,1.3s,baz=8.9,slow=7.0,SNR=3.4
GERES LR LR 04 01 51.6
comp=Z,9μm,18.1s,baz=23,slow=40
GEA0 GERESS Array S 71.10 339 *e*P **P 03 26 18.4 -0.7**
CFR Carcaliu 71.11 328 P **P 03 26 19.2 +0.1**
PSUB Penn St. - Bra 71.13 44 *e*P **P 03 26 18.0 -1.3**
comp=Z,29nm,1.1s
PSUB LR LR
comp=Z,6μm,18.0s
DOPR Dopca 71.14 330⇑*i*P **P 03 26 20.2 +0.9**
Y47A UCPARC, Winfie 71.15 56 P **P 03 26 18.8 -0.7**

baz=328,SNR=8.3
KULM Kulim 71.15 249 *e*P **P 03 26 19.8 +0.1**
comp=Z,192nm,1.3s
KULM LR LR
comp=Z,9µm,18.0s
SRO2 Moca 71.16 336 *e*P **P 03 26 19.2 -0.2**
SRO2 Moca 71.16 336 *e*P **P 03 26 19.2 -0.2**
RPR Rampur 71.17 276 *e*P **P 03 26 19.0 -0.8**
RPR IAmb IAmb 03 26 23.4
comp=Z,205nm,1.4s
RPR *e*S **S 03 35 34.5 -1.5**
RPR IVMs_BB IVMs_BB 03 59 46.5
comp=Z,4µm,15.4s
243A Waterproof 71.17 60 P **P 03 26 20.6 +0.9**
baz=327
W50A Signal Mountai 71.18 54 P **P 03 26 19.0 -0.7**
baz=328,SNR=13
W50A Signal Mountai 71.18 54 *e*P **P 03 26 19.4 -0.3**
comp=Z,47nm,1.1s
342A Flagon Creek P 71.19 61 P **P 03 26 20.5 +0.7**
baz=327
342A Flagon Creek P 71.19 61 *e*P **P 03 26 21.1 +1.3**
comp=Z,120nm,1.4s
342A LR LR
comp=Z,13µm,18.0s
PVM Polavaram 71.23 273 *e*P **P 03 26 19.7 -0.5**
PVM IAmb IAmb 03 26 24.2
comp=Z,291nm,1.6s
PVM *e*S **S 03 35 36.6 -0.1**
PVM IVMs_BB IVMs_BB 04 00 46.8
comp=Z,3µm,15.8s
Z46A Louisville 71.25 58 P **P 03 26 20.4 +0.3**
baz=327,SNR=8.0
145A Houston Renfro 71.29 59 P **P 03 26 20.9 +0.5**
baz=327,SNR=11
441A DeRidder 71.30 62 P **P 03 26 21.5 +1.0**
baz=327
CPCT Cooper Cave 71.31 53 *e*P **P 03 26 20.1 -0.3**
comp=Z,29nm,1.0s
CPCT LR LR
comp=Z,7µm,18.0s
X49A Woodville 71.31 55 P **P 03 26 20.0 -0.5**
baz=328,SNR=12
GIVF Givet 71.32 346 *e*P **P 03 26 19.3 -1.0**
GIVF pmax pmax
comp=Z,110nm,1.7s
VBMS Vicksburg 71.34 59 P **P 03 26 21.0 +0.3**
baz=327
VBMS Vicksburg 71.34 59 *e*P **P 03 26 21.8 +1.1**
comp=Z,175nm,1.3s
VBMS LR LR
comp=Z,10µm,20.0s
U53A Fall Branch 71.36 51 P **P 03 26 20.3 -0.5**
baz=329,SNR=12
V52A Sevierville 71.37 52 P **P 03 26 20.3 -0.6**
baz=329,SNR=8.1
V52A Sevierville 71.37 52 *e*P **P 03 26 20.7 -0.2**
comp=Z,35nm,1.2s
V52A LR LR
comp=Z,8µm,20.0s
244A Avery, Jackson 71.41 60 P **P 03 26 21.7 +0.6**
baz=327,SNR=7.0
M65A Busby, Falmout 71.42 40 P **P 03 26 20.6 -0.4**
baz=333
MLR Muntele Rosu 71.43 330 P **P 03 26 21.0 -0.3**
comp=Z,11nm,0.9s,baz=354,slow=6.3,SNR=56
MLR S **S 03 35 41.1 +2.5**
comp=Z,0.3nm,0.9s,baz=258,slow=22,SNR=1.3
MLR LR LR 03 58 59.6
comp=Z,2µm,18.9s,baz=30,slow=37
MLR Muntele Rosu 71.43 330 ⇓*i*P **P 03 26 21.7 +0.5**
MLR Muntele Rosu 71.43 330 *e*P **P 03 26 21.6 +0.4**
comp=Z,78nm,1.0s
MLR S **S 03 35 41.1 +2.5**
BAIF Baives 71.44 346 *e*P **P 03 26 20.2 -0.8**
BAIF pmax pmax
comp=Z,96nm,1.5s
Y48A Jasper 71.44 56 P **P 03 26 20.3 -1.1**
baz=328,SNR=14
TKL Tuckaleechee C 71.45 52 P **P 03 26 20.4 -1.0**
comp=Z,19nm,1.0s,baz=345,slow=4.9,SNR=9.1
TKL LR LR 03 58 31.1
comp=Z,8µm,21.8s,baz=336,slow=36
TKL Tuckaleechee C 71.45 52 *e*P **P 03 26 21.1 -0.3**
comp=Z,39nm,1.3s
TKL Tuckaleechee C 71.45 52 P **P 03 26 20.4 -1.0**
TKL pmax pmax
comp=Z,19nm,1.0s
TKL MLR MLR
comp=Z,8µm,21.8s
BLA Blacksburg 71.53 49 P **P 03 26 21.2 -0.7**
baz=330,SNR=13
BLA Blacksburg 71.53 49 *e*P **P 03 26 21.0 -0.8**
comp=Z,90nm,1.3s
BLA LR LR
comp=Z,8µm,19.0s
BLA Blacksburg 71.53 49 *e*P **P 03 26 21.0 -0.8**
BLA pmax pmax
comp=Z,90nm,1.3s
BLA MLR MLR
comp=Z,8µm,19.0s
CONA Conrad Observa 71.55 338 *e*pP **P 03 26 22.8 +1.0**
comp=Z,109nm,1.6s,SNR=43
WLF Walferdange 71.56 345 ⇓P **P 03 26 21.8 +0.1**
comp=Z,35nm,1.8s
WLF Walferdange 71.56 345 *e*P **P 03 26 22.0 +0.3**
comp=Z,80nm,1.4s
WLF LR LR
comp=Z,9µm,18.0s
KAPI Kappang 71.58 226 PFAKE 03 26 30.0 +7.8
KAPI LR LR
comp=Z,2µm,21.0s
343A Vidalia 71.60 61 P **P 03 26 22.9 +0.6**
baz=327
ISR Istrita 71.61 329 ⇓*i*P **P 03 26 23.0 +0.8**
SRSP Sriramsagar 71.62 276 *e*P **P 03 26 21.1 -1.4**
SRSP IAmb IAmb 03 26 22.3
comp=Z,242nm,1.3s
SRSP *e*S **S 03 35 37.2 -4.0**
SRSP IVMs_BB IVMs_BB 04 01 05.0
comp=Z,5µm,15.4s
Z47A Carrollton 71.64 57 P **P 03 26 22.0 -0.5**
baz=328,SNR=26
KVTX Kingsville 71.65 68 PFAKE 03 26 40.0 +17
KVTX LR LR
comp=Z,6µm,19.0s
IPM Ipoh 71.65 249 *e*P **P 03 26 22.4 -0.4**
comp=Z,144nm,1.1s
IPM LR LR
comp=Z,7µm,19.0s
X50B Fort Payne 71.66 54 P **P 03 26 21.9 -0.8**
baz=328,SNR=11
146A Union 71.66 58 P **P 03 26 23.1 +0.5**
baz=327,SNR=17
146A Union 71.66 58 *e*P **P 03 26 23.6 +1.0**
comp=Z,303nm,1.1s
146A LR LR
comp=Z,11µm,19.0s
VWCC Virginia Weste 71.68 49 *e*P **P 03 26 22.2 -0.5**
TLB Topalu 71.68 328 ⇓*i*P **P 03 26 22.6 +0.1**
TIRR Tirgusor 71.69 328 ⇑*i*P **P 03 26 22.9 +0.3**
TIRR Tirgusor 71.69 328 *e*P **P 03 26 22.8 +0.3**
comp=Z,119nm,1.2s
442A Mamou 71.69 62 P **P 03 26 23.6 +0.7**
baz=327
IP04 Greensprings 71.70 47 *e*P **P 03 26 22.8 0.0**
comp=Z,114nm,1.4s
IP04 LR LR
comp=Z,10µm,20.0s
VOIR 71.72 330 ⇑*i*P **P 03 26 23.8 +0.8**
VOIR 71.72 330 P **P 03 26 23.7 +0.8**
Z48A Northport 71.72 56 P **P 03 26 22.0 -1.0**
baz=328,SNR=15
245A Little AP, Sta 71.78 59 P **P 03 26 23.6 +0.3**
baz=327,SNR=11
IP03 Louisa 71.80 47 *e*P **P 03 26 23.2 -0.1**
comp=Z,93nm,1.3s
IP03 LR LR
comp=Z,12µm,18.0s
Y49A Blount Mountai 71.83 55 P **P 03 26 22.9 -0.8**
baz=328,SNR=15
Y49A Blount Mountai 71.83 55 *e*P **P 03 26 23.3 -0.4**
comp=Z,59nm,1.0s
Y49A LR LR
comp=Z,10µm,19.0s
CVRD Centerville Ro 71.83 47 *e*P **P 03 26 23.4 -0.2**
comp=Z,104nm,1.4s

SPRD Spring Road, M 71.85 47 *e*P **P 03 26 23.4 -0.2**
comp=Z,102nm,1.5s
SPRD LR LR
comp=Z,9µm,21.0s
V53A Saluda 71.85 52 P **P 03 26 23.2 -0.7**
baz=329,SNR=8.3
AMRR Amara 71.86 329 ⇑*i*P **P 03 26 24.4 +0.8**
W52A Murphy 71.87 53 P **P 03 26 23.4 -0.4**
baz=329,SNR=14
W52A Murphy 71.87 53 *e*P **P 03 26 23.5 -0.4**
comp=Z,50nm,1.0s
W52A LR LR
comp=Z,10µm,18.0s
541A Lake Charles 71.88 63 P **P 03 26 23.9 -0.1**
baz=327
344A Westbrook Farm 71.88 60 P **P 03 26 24.6 +0.6**
baz=327
344A Westbrook Farm 71.88 60 *e*P **P 03 26 25.5 +1.5**
comp=Z,141nm,1.3s
IP07 Quail 71.88 47 *e*P **P 03 26 23.4 -0.5**
comp=Z,65nm,1.2s
IP06 Yanceyville 71.88 47 *e*P **P 03 26 23.8 -0.1**
comp=Z,190nm,2.0s
IP06 LR LR
comp=Z,8µm,22.0s
CBN Corbin Frederi 71.89 46 P **P 03 26 23.2 -0.6**
baz=330
CBN Corbin Frederi 71.89 46 *e*P **P 03 26 23.3 -0.6**
comp=Z,74nm,1.1s
CBN LR LR
comp=Z,7µm,21.0s
IP01 Cuckoo 71.89 47 *e*P **P 03 26 23.3 -0.7**
comp=Z,137nm,1.6s
IP01 LR LR
comp=Z,11µm,18.0s
ARR Arges 71.89 331 ⇓*i*P **P 03 26 25.1 +1.2**
X51A Calhoun 71.91 54 P **P 03 26 23.7 -0.5**
baz=328
X51A Calhoun 71.91 54 *e*P **P 03 26 23.9 -0.2**
comp=Z,56nm,1.1s
X51A LR LR
comp=Z,10µm,20.0s
MOA Molln 71.94 339 *e*pP **P 03 26 24.6 +0.5**
comp=Z,61nm,1.6s,SNR=27
443A Delano Plantat 71.96 61 P **P 03 26 25.6 +1.1**
baz=327
STU Stuttgart 71.96 342 *e*P **P 03 26 23.9 -0.3**
comp=Z,44nm,1.2s
STU LR LR
comp=Z,5µm,20.0s
STU Stuttgart 71.96 342 *e*P **P 03 26 23.9 -0.3**
STU pmax pmax
comp=Z,44nm,1.2s
STU MLR MLR
comp=Z,5µm,20.0s
147A Livingston 71.99 57 P **P 03 26 24.4 -0.2**
baz=328,SNR=14
147A Livingston 71.99 57 *e*P **P 03 26 24.8 +0.2**
comp=Z,174nm,1.1s
LOT Lotru 72.05 331 ⇓*i*P **P 03 26 24.9 0.0**
IP05 Hopewell Churc 72.06 47 *e*P **P 03 26 24.7 -0.3**
comp=Z,106nm,1.4s
IP05 LR LR
comp=Z,11µm,21.0s
SULR 72.09 329 ⇑*i*P **P 03 26 25.2 +0.2**
Y50A Piedmont 72.10 55 P **P 03 26 24.4 -0.8**
baz=328,SNR=19
W53A Cullowhee 72.13 52 P **P 03 26 25.0 -0.6**
baz=329,SNR=12
246A Jackson Lee, B 72.15 58 P **P 03 26 26.3 +0.8**
baz=328
ICOR Ion Corvin 72.18 328 ⇑*i*P **P 03 26 26.2 +0.7**
ARSA Arzberg 72.26 338 *e*pP **P 03 26 27.1 +1.0**
comp=Z,57nm,1.5s,SNR=24
LRAL Lakeview Retre 72.26 56 P **P 03 26 25.3 -0.9**
baz=328,SNR=16
LRAL Lakeview Retre 72.26 56 *e*P **P 03 26 24.3 -1.9**
comp=Z,32nm,0.9s
LRAL LR LR
comp=Z,8µm,19.0s
X52A Dahlonega 72.30 53 P **P 03 26 25.8 -0.7**
baz=329,SNR=14
345A Thompson Farm, 72.33 59 P **P 03 26 27.3 +0.7**
baz=327
148A Greensboro 72.33 57 P **P 03 26 26.0 -0.6**
baz=328
Z49A Columbiana 72.33 56 P **P 03 26 25.8 -0.8**
baz=328,SNR=22
247A Quitman 72.36 58 P **P 03 26 27.6 +0.8**
baz=328
URVA University of 72.37 47 *e*P **P 03 26 26.1 -0.7**
BG3 Lake Jocassee 72.38 52 *e*P **P 03 26 26.5 -0.5**
comp=Z,80nm,1.2s
Y51A Rockmart 72.39 54 P **P 03 26 25.9 -1.1**
baz=328,SNR=14
BZS Buzias 72.43 333 ⇑*i*P **P 03 26 27.2 +0.2**
PSN Preselentsi 72.47 328 P **P 03 26 28.4 +1.1**
444A Pine Grove 72.49 60 P **P 03 26 27.1 -0.5**
baz=327
543A St. Martinvill 72.49 62 P **P 03 26 27.8 +0.2**
baz=327
346A Big Creek Wild 72.52 59 P **P 03 26 27.9 +0.1**
baz=328
346A Big Creek Wild 72.52 59 *e*P **P 03 26 28.9 +1.1**
comp=Z,188nm,1.3s
Z50A Ashland 72.56 55 P **P 03 26 27.3 -0.7**
baz=328,SNR=28
Z50A Ashland 72.56 55 *e*P **P 03 26 27.2 -0.7**
comp=Z,82nm,0.9s
Z50A LR LR
comp=Z,8µm,19.0s
MYKOM Kota Tinggi 72.58 245 *e*P **P 03 26 27.6 -0.7**
comp=Z,121nm,1.2s
HUMR Humele 72.58 330 ⇑*i*P **P 03 26 27.4 -0.6**
CDF Champ du Feu 72.61 344 *e*P **P 03 26 27.4 -0.8**
X53A Estanollee 72.64 53 P **P 03 26 28.1 -0.4**
baz=329,SNR=15
445A Amite 72.67 60 P **P 03 26 27.9 -0.8**
baz=327
248A Dixon Mills 72.72 57 P **P 03 26 28.8 -0.2**
baz=328
149A Jones 72.72 56 P **P 03 26 28.4 -0.6**
baz=328,SNR=12
BEHE Becsehely 72.74 337 ⇑*ex* **P 03 26 29.8 +0.9**
HYB Hyderabad 72.75 275 *i*P **P 03 26 28.5 -0.9**
comp=Z,375nm,1.4s
HYB *e*PP **PP 03 29 14.0 +3.0**
HYB *e* 03 30 58.0
HYB *e*S **S 03 35 56.0 +1.7**
HYB *e*SKS **SKSac 03 36 32.0 -2.0**
HYB *e*SS **SS 03 40 36.0 +2.4**
HYB Hyderabad 72.75 275 *e*P **P 03 26 27.0 -2.4**
HYB IAmb IAmb 03 26 27.8
comp=Z,101nm,1.0s
HYB IAMs_20 IAMs_20 04 00 37.8
comp=Z,8µm,17.9s
HYBB Hyderabad (bro 72.75 275 *e*P **P 03 26 28.2 -1.1**
HYBB IAmb IAmb 03 26 28.8
comp=Z,200nm,1.3s
HYBB *e*S **S 03 35 51.9 -2.3**
HYBB IVMs_BB IVMs_BB 04 02 27.5
comp=Z,3µm,13.4s
544A White Castle 72.80 61 P **P 03 26 30.2 +0.8**
baz=327
ECH Echery 72.83 344 *e*P **P 03 26 29.1 -0.3**
comp=Z,69nm,1.3s
ECH Echery 72.83 344 *e*P **P 03 26 29.1 -0.3**
ECH pmax pmax
comp=Z,69nm,1.3s
Z51A Franklin 72.83 55 P **P 03 26 28.8 -0.9**
baz=328,SNR=8.8
Y52A Lilburn 72.85 54 P **P 03 26 29.3 -0.5**
baz=329,SNR=9.6
Y52A Lilburn 72.85 54 *e*P **P 03 26 29.7 0.0**
comp=Z,37nm,1.0s
KBA Koelnbreinsper 72.86 339 *e*pP **P 03 26 30.9 +1.1**
comp=Z,130nm,1.6s,SNR=54
KBA Koelnbreinsper 72.86 339 P **P 03 26 30.9 +1.1**
SOKA Soboth 72.91 338 *e*pP **P 03 26 30.7 +0.7**
comp=Z,67nm,1.7s,SNR=38
HERR Herculane 72.92 332 ⇑*i*P **P 03 26 29.9 -0.1**
SRE Strehaia 72.92 331 ⇑*i*P **P 03 26 30.1 +0.1**
KMSC Kings Mountain 72.93 51 P **P 03 26 29.4 -0.8**
baz=330,SNR=19
KMSC Kings Mountain 72.93 51 *e*P **P 03 26 29.4 -0.8**
comp=Z,53nm,1.1s
PERS Pernice 72.93 338 *i*P **P 03 26 30.6 +0.5**

PERS *e*S **SKiKP 03 35 59.0 -2.9**
PERS *e* 03 36 22.0
347A Saraland 72.94 58 P **P 03 26 30.8 +0.5**
baz=328
RETA Reutte 72.94 341 *e*pP **P 03 26 30.4 +0.2**
comp=Z,36nm,1.4s,SNR=17
WATA Walderalm 72.94 340 *e*pP **P 03 26 30.6 +0.4**
comp=Z,48nm,1.2s,SNR=24
PAULI Pauline 73.00 51 *e*P **P 03 26 30.3 -0.3**
comp=Z,38nm,1.4s
WTTA Wattenberg 73.00 340 *e*pP **P 03 26 31.4 +0.7**
comp=Z,68nm,1.4s,SNR=22
MOTA Moosalm 73.02 341 *e*P **P 03 26 30.0 -0.7**
comp=Z,16nm,0.9s,SNR=18
LNIG Linares 73.04 70 *e*P **P 03 26 30.3 -0.7**
comp=Z,107nm,2.0s
NJS Nagarjunasagar 73.05 274 *e*P **P 03 26 30.2 -0.9**
NJS IAmb IAmb 03 26 31.4
comp=Z,183nm,1.3s
NJS *e*S **S 03 35 56.1 -1.6**
NJS IVMs_BB IVMs_BB 04 05 35.0
comp=Z,3µm,15.8s
SLE Schleitheim 73.06 343 P **P 03 26 30.5 -0.3**
150A Eclectic 73.06 56 P **P 03 26 30.1 -0.8**
baz=328,SNR=16
446A Poplarville 73.07 59 P **P 03 26 31.3 +0.2**
baz=328
Y53A Monroe 73.07 53 P **P 03 26 30.4 -0.7**
baz=329,SNR=11
LHMI Lhok Sumawe 73.09 253 *e*P **P 03 26 32.8 +1.5**
comp=Z,347nm,1.2s
249A Camden 73.10 57 P **P 03 26 31.3 +0.1**
baz=328,SNR=8.4
COEN Coen 73.14 201 *e*P **P 03 26 32.0 +0.5**
comp=Z,286nm,1.4s
ILGA Ilgaz 73.15 323 *e*P **P 03 26 33.0 +1.3**
comp=Z,253nm,1.2s
OBKA Obir 73.17 338 *e*pP **P 03 26 32.4 +0.9**
comp=Z,114nm,1.0s,SNR=44
MOF Molkenrain 73.18 344 *e*P **P 03 26 31.7 +0.1**
MDVR Moldovita 73.19 333 ⇑*i*P **P 03 26 31.6 0.0**
ZAIG Zacatecas 73.20 74 *e*P **P 03 26 33.4 +1.1**
comp=Z,54nm,1.4s
348A Jackson 73.22 58 P **P 03 26 32.0 0.0**
baz=328
348A Jackson 73.22 58 *e*P **P 03 26 33.5 +1.6**
comp=Z,313nm,1.6s
MYKA Terra Mystica 73.23 339 *e*pP **P 03 26 32.3 +0.5**
comp=Z,65nm,1.5s,SNR=20
HINF Hinteralfeld 73.26 344 *e*P **P 03 26 30.8 -1.2**
HINF pmax pmax
comp=Z,70nm,1.6s
KLRI Killari 73.26 277 *e*P **P 03 26 31.2 -1.2**
KLRI IAmb IAmb 03 26 32.4
comp=Z,418nm,1.4s
KLRI *e*S **S 03 35 56.6 -3.5**
KLRI IVMs_BB IVMs_BB 04 01 31.6
comp=Z,6µm,14.8s
FLN La Foliniere 73.27 349 *e*P **P 03 26 30.7 -1.2**
FLN pmax pmax
comp=Z,73nm,1.2s
Z52A Williamson 73.27 54 P **P 03 26 31.7 -0.6**
baz=329,SNR=12
ADKI Addanki 73.28 273 *e*P **P 03 26 32.1 -0.3**
ADKI IAmb IAmb 03 26 33.4
comp=Z,187nm,1.3s
ADKI *e*S **S 03 36 00.1 -0.1**
ADKI IVMs_BB IVMs_BB 04 01 58.7
comp=Z,3µm,16.2s
DAVA Damuels 73.29 342 *e*pP **P 03 26 32.5 +0.2**
comp=Z,26nm,1.3s,SNR=8.4
HODGE Hodges 73.32 52 *e*P **P 03 26 32.3 -0.2**
comp=Z,30nm,1.0s
ABTA Abfaltersbach 73.33 340 *e*pP **P 03 26 33.0 +0.5**
comp=Z,66nm,1.2s,SNR=28
546A Slidell 73.37 60 P **P 03 26 33.0 +0.1**
baz=328
447A Lucedale 73.39 59 P **P 03 26 33.0 0.0**
baz=328
LDF La Druitiere 73.39 349 *e*P **P 03 26 31.4 -1.3**
LDF pmax pmax
comp=Z,63nm,1.3s
FETA Feichten 73.40 341 *e*pP **P 03 26 33.3 +0.3**
comp=Z,54nm,1.2s,SNR=22
151A Opelika 73.44 55 P **P 03 26 32.3 -0.9**
baz=329,SNR=11
Y54A Tignall 73.45 53 P **P 03 26 32.8 -0.5**
baz=329,SNR=23
BEO Beograd 73.47 333 *e*P **P 03 26 32.5 -0.6**
250A Grady 73.48 56 P **P 03 26 32.8 -0.7**
baz=328
250A Grady 73.48 56 *e*P **P 03 26 33.4 -0.1**
comp=Z,207nm,1.7s
SZH Strazhica 73.49 329 P **P 03 26 33.2 -0.2**
GOGA Godfrey 73.50 53 P **P 03 26 32.7 -0.9**
baz=329
GOGA Godfrey 73.50 53 *e*P **P 03 26 31.5 -2.1**
comp=Z,30nm,1.3s
GOGA LR LR
comp=Z,12µm,21.0s
GOGA Godfrey 73.50 53 *e*P **P 03 26 31.5 -2.1**
GOGA pmax pmax
comp=Z,30nm,1.3s
GOGA MLR MLR
comp=Z,12µm,21.0s
Z53A Monticello 73.56 54 P **P 03 26 33.3 -0.6**
baz=329,SNR=9.0
152A Waverly Hall 73.58 55 P **P 03 26 33.4 -0.7**
baz=329,SNR=7.8
152A Waverly Hall 73.58 55 *e*P **P 03 26 33.1 -1.0**
comp=Z,41nm,1.1s
349A Repton 73.59 57 P **P 03 26 33.8 -0.3**
baz=328
448A Bay Minette 73.64 58 P **P 03 26 34.6 +0.1**
baz=328
SRLM Srisailam 73.65 274 *e*P **P 03 26 33.6 -1.1**
SRLM IAmb IAmb 03 26 34.8
comp=Z,161nm,1.2s
SRLM *e*S **SKiKP 03 36 02.8 -0.8**
SRLM IVMs_BB IVMs_BB 04 05 02.5
comp=Z,2µm,19.0s
GRR Gorron 73.67 349 *e*P **P 03 26 33.3 -1.0**
GRR pmax pmax
comp=Z,165nm,1.5s
JSC Jenkinsville 73.69 51 *e*P **P 03 26 34.3 -0.4**
comp=Z,40nm,1.1s
JSC Jenkinsville 73.69 51 *e*P **P 03 26 34.3 -0.4**
JSC pmax pmax
comp=Z,40nm,1.1s
251A Midway 73.77 56 P **P 03 26 34.5 -0.7**
baz=329,SNR=23
DAVOX Davos/Dischmat 73.78 341 P **P 03 26 34.8 -0.5**
comp=Z,24nm,1.0s,baz=354,slow=4.1,SNR=20
DAVOX S **S 03 36 05.8 +0.3**
comp=Z,0.5nm,0.3s,baz=156,slow=14,SNR=1.3
DAVOX LR LR 04 02 25.6
comp=Z,8µm,19.5s,baz=21,slow=39
VISS Visnje 73.78 338 *e*P **P 03 26 35.0 -0.1**
VISS *e*S **S 03 36 05.9 +0.6**
BRAL Brewton 73.81 57 P **P 03 26 34.5 -1.0**
baz=328
BRAL Brewton 73.81 57 PFAKE 03 26 50.0 +15
BRAL LR LR
comp=Z,5µm,20.0s
OZLJ Ozalj 73.83 337 P **P 03 26 35.1 -0.2**
JAVS Javornik 73.85 338 *e*P **P 03 26 35.0 -0.6**
JAVS *e*S **S 03 36 07.5 +1.3**
JAVS *e* 03 36 44.9
FUORN Ofenpass-Fuorn 73.87 341 *e*P **P 03 26 36.5 +0.6**
comp=Z,81nm,1.3s
Z54A Sparta 73.92 53 P **P 03 26 35.6 -0.4**
baz=329,SNR=20
350A Dozier 73.92 57 P **P 03 26 36.0 -0.1**
baz=328
MMRI Maumere 73.97 223 *e*P **P 03 26 36.1 -0.3**
comp=Z,387nm,1.2s
SGMF Saint Gilles 73.97 350 *e*P **P 03 26 35.1 -1.0**
SGMF pmax pmax
comp=Z,91nm,1.4s
BOJS Bojanci 73.98 337 *e*P **P 03 26 36.5 +0.3**
BOJS *e*S **S 03 36 10.1 +2.6**
BOJS *e* 03 36 45.3
153A Fort Valley 73.99 54 P **P 03 26 35.6 -0.9**
baz=329
MPEP Malo Peshtene 74.00 331 P **P 03 26 36.6 +0.2**
JMB Yambol 74.04 328 P **P 03 26 36.8 +0.2**

AFI Afiamalu 74.05 155 LR LR 03 55 22.8
comp=Z,4µm,19.5s,baz=344,slow=33
252A Lumpkin 74.15 55 P **P** **03 26 36.6 -0.8**
baz=329,SNR=9.5
PSI Prapat 74.15 250 P **P** **03 26 37.0 -0.7**
comp=Z,83nm,0.9s,baz=0.0,slow=5.1,SNR=21
PSI LR LR 04 03 07.7
comp=Z,3µm,18.1s,baz=89,slow=39
PSI Prapat 74.15 250 *e*P **P** **03 26 37.3 -0.5**
comp=Z,203nm,1.1s
TUE Stuetta 74.17 342 *e*P **P** **03 26 37.9 +0.4**
comp=Z,81nm,1.2s
Z55A Blythe 74.23 52 P **P** **03 26 37.4 -0.4**
baz=330
DIVS Divibare 74.25 334 *e*P **P** **03 26 37.5 -0.4**
comp=Z,40nm,1.0s
CNNC Cliffs of the 74.26 48 P **P** **03 26 37.7 -0.3**
baz=331,SNR=12
CNNC Cliffs of the 74.26 48 *e*P **P** **03 26 36.8 -1.2**
comp=Z,106nm,1.1s
CNNC LR LR
comp=Z,9µm,19.0s
SOEI Soe 74.28 220 *e*P **P** **03 26 38.0 -0.4**
comp=Z,693nm,1.3s
BLY Banja Luka 74.29 336⇑ *i*P **P** **03 26 37.9 -0.1**
BLY Banja Luka 74.29 336 *e*P **P** **03 26 38.0 -0.1**
comp=Z,140nm,2.0s
450A Crestview 74.33 57 P **P** **03 26 38.8 +0.4**
baz=328
154A Montrose 74.34 54 P **P** **03 26 38.1 -0.4**
baz=329,SNR=9.7
154A Montrose 74.34 54 *e*P **P** **03 26 38.3 -0.1**
comp=Z,131nm,1.1s
POO Poona 74.35 280 *e*P **P** **03 26 37.6 -1.1**
POO IAmb IAmb 03 26 38.3
comp=Z,158nm,1.2s
253A Americus 74.36 55 P **P** **03 26 37.8 -0.8**
baz=329,SNR=5.0
253A Americus 74.36 55 *e*P **P** **03 26 38.3 -0.3**
comp=Z,181nm,1.6s
BR131 Keskin Array S 74.37 322 *e*P **P** **03 26 39.0 +0.3**
BRTR Keskin Array B 74.37 322 P **P** **03 26 39.0 +0.3**
comp=Z,50nm,1.0s,baz=53,slow=3.2,SNR=149
BRTR LR LR 04 01 36.0
comp=Z,5µm,21.1s,baz=34,slow=38
351A Pinckard 74.38 56 P **P** **03 26 38.3 -0.4**
baz=329
352A Blakely 74.50 55 P **P** **03 26 38.8 -0.6**
baz=329
ANTO Ankara 74.52 323⇑ *i*P **P** **03 26 40.4 +0.9**
ANTO Ankara 74.52 323 *e*P **P** **03 26 39.6 +0.1**
ANTO LR LR
comp=Z,4µm,20.0s
ANTO Ankara 74.52 323 P **P** **03 26 40.7 +1.1**
SNR=81
ANTO Ankara 74.52 323 *e*P **P** **03 26 39.6 +0.1**
ANTO MLR MLR
comp=Z,4µm,20.0s
BR231 Keskin MP Arra 74.55 323 *e*P **P** **03 26 40.7 +0.9**
BOM Bombay 74.60 281 *e*P **P** **03 26 40.4 +0.2**
BOM *e*S **S** **03 36 16.9 +1.9**
155A Kite 74.61 53 P **P** **03 26 39.6 -0.4**
baz=330,SNR=10
SENIN Lac Senin/Sane 74.61 343 *e*P **P** **03 26 40.1 -0.1**
comp=Z,41nm,1.3s
PGB Panagyurishte 74.64 330 P **P** **03 26 36.8 -3.4**
DIM Dimitrovgrad 74.72 329 P **P** **03 26 40.7 +0.1**
AVF Avril sur Loir 74.76 346 *e*P **P** **03 26 39.7 -1.0**
AVF pmax pmax
comp=Z,90nm,1.3s
UDBI Udbina 74.81 337 P **P** **03 26 40.7 -0.4**
254A Abbeville 74.83 54 P **P** **03 26 41.0 -0.3**
baz=329,SNR=7.2
VTS Vitosha 74.85 331⇑ *i*P **P** **03 26 41.4 -0.1**
VTS Vitosha 74.85 331 *e*P **P** **03 26 40.6 -0.9**
comp=Z,36nm,1.0s
VTS Vitosha 74.85 331 P **P** **03 26 41.2 -0.3**
VTS Vitosha 74.85 331 P **P** **03 26 41.3 -0.3**
VTS Vitosha 74.85 331 *e*P **P** **03 26 40.6 -0.9**
VTS pmax pmax
comp=Z,36nm,1.0s
451A Vernon 74.87 57 P **P** **03 26 42.0 +0.4**
baz=329
PLD Plovdiv 74.90 329 P **P** **03 26 41.4 -0.2**
BATI Baumata 74.91 221 P **P** **03 26 41.5 -0.4**
comp=Z,241nm,1.0s,baz=335,slow=1.8,SNR=11
452A Marianna 74.92 56 P **P** **03 26 42.1 +0.2**
baz=329
353A Camilla 74.93 55 P **P** **03 26 41.5 -0.5**
baz=329
NVLJ Novalja 74.96 337 P **P** **03 26 40.7 -1.1**
MTN Manton Dam 74.98 213 *e*P **P** **03 26 43.1 +0.9**
comp=Z,381nm,1.4s
156A Sylvania 75.00 52 P **P** **03 26 42.3 0.0**
baz=330,SNR=8.7
PLE Pljevlja 75.12 334 *e*P **P** **03 26 43.5 +0.5**
KDZ Kurdzhali 75.13 329 P **P** **03 26 43.7 +0.7**
TIGA Tifton 75.13 54 P **P** **03 26 42.8 -0.2**
baz=329
TIGA Tifton 75.13 54 *e*P **P** **03 26 43.5 +0.4**
comp=Z,228nm,1.4s
SKHT Srikalahasti 75.16 272 *e*P **P** **03 26 43.3 -0.1**
SKHT IAmb IAmb 03 26 46.8
comp=Z,813nm,2.1s
SKHT *e*S **S** **03 36 21.9 +0.6**
SKHT IVMs_BB IVMs_BB 04 05 18.1
comp=Z,2µm,12.9s
NHSC New Hope 75.16 51 P **P** **03 26 43.0 -0.2**
baz=330,SNR=12
NHSC New Hope 75.16 51 *e*P **P** **03 26 41.9 -1.3**
comp=Z,219nm,1.3s
NHSC LR LR
comp=Z,9µm,20.0s
255A Hazlehurst 75.20 53 P **P** **03 26 43.5 0.0**
baz=330,SNR=14
255A Hazlehurst 75.20 53 *e*P **P** **03 26 43.4 0.0**
comp=Z,485nm,1.8s
BKNI Bangkinang 75.22 246 *e*P **P** **03 26 44.5 +0.7**
comp=Z,677nm,1.2s
RZN Rozhen 75.29 329 P **P** **03 26 44.2 +0.1**
453A Whigham 75.31 55 P **P** **03 26 44.2 +0.1**
baz=329
453A Whigham 75.31 55 *e*P **P** **03 26 45.2 +1.1**
comp=Z,604nm,1.8s
RGRS Roger Stewart 75.33 51 *e*P **P** **03 26 44.4 +0.2**
comp=Z,212nm,0.8s
UPM Unac-Piva 75.36 334 *e*P **P** **03 26 44.2 -0.3**
TCF Toulx Ste Croi 75.40 347 *e*P **P** **03 26 43.5 -1.0**
TCF pmax pmax
comp=Z,58nm,1.5s
256A Glennville 75.41 53 P **P** **03 26 44.1 -0.6**
baz=330
IVA Berane 75.43 333⇑ *i*P **P** **03 26 45.0 +0.2**
URV Uravakonda 75.48 275 *e*P **P** **03 26 44.1 -1.2**
URV IAmb IAmb 03 26 45.5
comp=Z,191nm,1.4s
URV *e*S **S** **03 36 23.2 -1.8**
URV IVMs_BB IVMs_BB 04 01 56.6
comp=Z,3µm,17.4s
552A Lynn Haven 75.49 56 P **P** **03 26 44.2 -0.9**
baz=329
LPL La Plagne 75.52 343 *e*P **P** **03 26 45.3 -0.1**
LPL pmax pmax
comp=Z,87nm,1.3s
355A Pearson 75.53 54 P **P** **03 26 45.4 0.0**
baz=330,SNR=9.0
LPG La Plagne 75.54 343 *e*P **P** **03 26 45.6 0.0**
LPG pmax pmax
comp=Z,101nm,1.2s
KOME Kolasin 75.55 333⇑ *i*P **P** **03 26 45.1 -0.3**
RDO Rodhopi 75.56 328 P **P** **03 26 45.9 +0.5**
RDO Rodhopi 75.56 328 P **P** **03 26 45.9 +0.5**
KKB Krupnik 75.56 331 P **P** **03 26 46.5 +1.0**
ALN Alexandroupoli 75.65 328 *e*P **P** **03 26 46.2 +0.3**
comp=Z,99nm,1.4s
ALN Alexandroupoli 75.65 328 P **P** **03 26 46.0 +0.1**
ALN Alexandroupoli 75.65 328 *e*P **P** **03 26 46.2 +0.3**
ALN pmax pmax
comp=Z,99nm,1.4s
MMB Musomiste 75.65 330 P **P** **03 26 46.5 +0.5**
PVY Plav 75.68 333 *e*P **P** **03 26 45.8 -0.4**
BRY Bratogost 75.73 334 *e*P **P** **03 26 45.9 -0.6**
454A Quitman 75.73 55 P **P** **03 26 46.7 +0.1**
baz=329
NKME Niksic 75.76 334⇑ *i*P **P** **03 26 46.1 -0.5**
257A Skidaway Islan 75.78 52 P **P** **03 26 46.6 -0.2**
baz=330
553A Crawfordville 75.82 56 P **P** **03 26 46.8 -0.2**
baz=329
NVR Nevrokopi 75.84 330 P **P** **03 26 47.4 +0.3**
NVR Nevrokopi 75.84 330 P **P** **03 26 47.4 +0.3**
356A Blackshear 75.86 53 P **P** **03 26 46.9 -0.4**
baz=330
SKO Skopje 75.89 332 P **P** **03 26 47.5 +0.2**
SKO Skopje 75.89 332 P **P** **03 26 47.5 +0.2**
SKO Skopje 75.89 332 *i*P **P** **03 26 47.5 +0.2**
SKO Skopje 75.89 332 P **P** **03 26 47.5 +0.2**
STON Ston 75.95 335 P **P** **03 26 45.1 -2.5**
STIP Stip 75.96 331 *i*P **P** **03 26 46.2 -1.5**
CEME Cevo 75.97 334⇑ *i*P **P** **03 26 47.0 -0.9**
BNI Bardonecchia 75.98 343 *e*P **P** **03 26 48.8 +0.8**
comp=Z,135nm,1.4s
KAVA Kavala 75.99 329 P **P** **03 26 48.2 +0.4**
KAVA Kavala 75.99 329 P **P** **03 26 48.2 +0.4**
PDG Podgorica 76.00 333⇑ *i*P **P** **03 26 47.8 -0.2**
PDG Podgorica 76.00 333 P **P** **03 26 47.7 -0.2**
TTG Podgorica 76.00 333⇑ *i*P **P** **03 26 47.6 -0.3**
TTG Podgorica 76.00 333 *e*P **P** **03 26 47.6 -0.3**
comp=Z,56nm,1.0s
TTG Podgorica 76.00 333 *e*P **P** **03 26 47.6 -0.3**
TTG pmax pmax
comp=Z,56nm,1.0s
357A Townsend 76.06 53 P **P** **03 26 48.1 -0.2**
baz=330
SSB Saint Sauveur 76.08 345 *e*P **P** **03 26 48.5 +0.1**
comp=Z,51nm,1.3s
SSB Saint Sauveur 76.08 345 *e*P **P** **03 26 48.5 +0.1**
SSB pmax pmax
comp=Z,51nm,1.3s
GSI Gunungsitoli 76.12 250 *e*P **P** **03 26 48.6 -0.3**
comp=Z,1µm,1.8s
SRS Serrai 76.13 330 P **P** **03 26 48.7 0.0**
SRS Serrai 76.13 330 P **P** **03 26 48.7 0.0**
SRS Serrai 76.13 330 P **P** **03 26 48.7 0.0**
HCY Herceg Novi 76.17 334⇑ *i*P **P** **03 26 48.1 -0.8**
SMTH Samothraki Isl 76.19 328 P **P** **03 26 48.9 -0.1**
SMTH Samothraki Isl 76.19 328 P **P** **03 26 48.9 -0.1**
VAY Valandovo 76.21 331 P **P** **03 26 49.5 +0.4**
VAY Valandovo 76.21 331 P **P** **03 26 49.5 +0.4**
VAY Valandovo 76.21 331 *i*P **P** **03 26 49.8 +0.6**
VAY Valandovo 76.21 331 P **P** **03 26 49.5 +0.4**
BUM Brajici-Budva 76.21 334⇑ *i*P **P** **03 26 48.7 -0.5**
PUK Puka 76.22 333 *i*P **P** **03 26 48.6 -0.7**
VLC Villacollemand 76.23 340 *e*P **P** **03 26 49.8 +0.6**
comp=Z,166nm,1.4s
554A Perry 76.25 55 P **P** **03 26 49.5 0.0**
baz=330
DRME Dracevica, Mon 76.25 333⇑ *i*P **P** **03 26 49.2 -0.2**
KNT Kendrikon 76.27 330 P **P** **03 26 50.0 +0.5**
KNT Kendrikon 76.27 330 P **P** **03 26 50.0 +0.5**
KNT Kendrikon 76.27 330 P **P** **03 26 50.0 +0.5**
GADA Gvkgeada 76.34 328 P **P** **03 26 49.9 0.0**
GADA Gvkgeada 76.34 328 P **P** **03 26 49.9 0.0**
PHP Peshkopia 76.42 332 P **P** **03 26 50.1 -0.3**
PHP Peshkopia 76.42 332 P **P** **03 26 50.1 -0.3**
PHP Peshkopia 76.42 332 *i*P **P** **03 26 50.1 -0.3**
PHP Peshkopia 76.42 332 P **P** **03 26 50.1 -0.3**
456A Hilliard 76.43 54 P **P** **03 26 50.5 0.0**
baz=330
ULC Ulcinj 76.45 333⇑ *i*P **P** **03 26 50.1 -0.4**
SOH Sokhos 76.47 330 P **P** **03 26 50.6 -0.1**
SOH Sokhos 76.47 330 P **P** **03 26 50.6 -0.1**
VIVF Saint-Julien-l 76.47 345 *e*P **P** **03 26 50.2 -0.4**
VIVF pmax pmax
comp=Z,63nm,1.7s
KRUS Krusevo 76.51 332 *i*P **P** **03 26 51.0 +0.1**
555A McAlpin 76.53 55 P **P** **03 26 51.0 -0.1**
baz=330
EZN Ezine 76.56 327 P **P** **03 26 50.6 -0.5**
EZN Ezine 76.56 327 P **P** **03 26 50.6 -0.5**
EZN Ezine 76.56 327 P **P** **03 26 50.6 -0.5**
GRG Griva 76.59 331 P **P** **03 26 52.0 +0.6**
GRG Griva 76.59 331 P **P** **03 26 52.0 +0.6**
457A Yulee 76.72 53 P **P** **03 26 52.4 +0.2**
baz=330
HORT Hortiatis 76.74 330 P **P** **03 26 52.0 -0.3**
HORT Hortiatis 76.74 330 P **P** **03 26 52.0 -0.3**
THE Thessaloniki 76.75 330 P **P** **03 26 51.8 -0.4**
THE Thessaloniki 76.75 330 P **P** **03 26 51.8 -0.4**
THE Thessaloniki 76.75 330 P **P** **03 26 51.8 -0.4**
OUR Ouranopolis 76.75 329 P **P** **03 26 52.0 -0.2**
OUR Ouranopolis 76.75 329 P **P** **03 26 52.0 -0.2**
OUR Ouranopolis 76.75 329 P **P** **03 26 52.0 -0.2**
CAF Calviac 76.76 347 *e*P **P** **03 26 51.9 -0.3**
CAF pmax pmax
comp=Z,64nm,1.5s
BIA Bitola 76.82 331 P **P** **03 26 52.9 +0.3**
BIA Bitola 76.82 331 P **P** **03 26 52.9 +0.3**
BIA Bitola 76.82 331 *i*P **P** **03 26 53.0 +0.3**
LIA Limnos Island 76.82 328 P **P** **03 26 52.5 -0.1**
LIA Limnos Island 76.82 328 P **P** **03 26 52.5 -0.1**
PLG Polygyros 76.86 330 P **P** **03 26 52.7 -0.2**
PLG Polygyros 76.86 330 P **P** **03 26 52.7 -0.2**
PLG Polygyros 76.86 330 P **P** **03 26 52.7 -0.2**
OHR Ohrid 76.86 332 *i*P **P** **03 26 52.6 -0.3**
TIR Tirane 76.88 333⇑ *i*P **P** **03 26 53.1 +0.2**
TIR Tirane 76.88 333 *e*P **P** **03 26 53.2 +0.3**
comp=Z,80nm,1.1s
TIR Tirane 76.88 333 P **P** **03 26 53.0 +0.2**
TIR Tirane 76.88 333 *i*P **P** **03 26 53.1 +0.2**
TIR Tirane 76.88 333 *e*P **P** **03 26 53.2 +0.3**
TIR pmax pmax
comp=Z,80nm,1.1s
556A Lake Butler 76.88 54 P **P** **03 26 53.5 +0.5**
baz=330
655A Horseshoe Beac 76.93 55 P **P** **03 26 53.6 +0.3**
baz=330
JAGI Jajag, Banyuwa 76.98 230 *e*P **P** **03 26 50.7 -3.0**
comp=Z,120nm,1.2s
FNA Florina 77.03 331 *e*P **P** **03 26 53.8 -0.1**
comp=Z,105nm,1.4s
FNA Florina 77.03 331 P **P** **03 26 53.2 -0.6**
SHME Shamm 77.09 298 *i*P **P** **03 26 53.1 -1.2**
SNR=10
PRK Paraskevi 77.11 327 P **P** **03 26 54.1 -0.1**
PRK Paraskevi 77.11 327 P **P** **03 26 54.1 -0.1**
PRK Paraskevi 77.11 327 P **P** **03 26 54.1 -0.1**
ISP Isparta 77.11 323 *e*P **P** **03 26 53.7 -0.7**
comp=Z,67nm,1.0s
ISP Isparta 77.11 323 P **P** **03 26 53.8 -0.7**
ISP Isparta 77.11 323 *c*P **P** **03 26 54.1 -0.3**
ISP pmax pmax
comp=Z,99nm,1.2s
ISP MLR MLR
comp=Z,9µm,19.0s
MANT Manisa 77.12 325 *e*P **P** **03 26 54.8 +0.2**
comp=Z,248nm,1.0s
BANOM Banah 77.12 298 P **P** **03 26 54.7 +0.1**
SNR=23
BANOM Banah 77.12 298 *i*P **P** **03 26 53.6 -1.0**
SNR=34
557A Orange Park 77.17 54 P **P** **03 26 54.9 +0.2**
baz=330,SNR=8.2
PAIG Paliouri 77.21 329 P **P** **03 26 54.4 -0.4**
PAIG Paliouri 77.21 329 P **P** **03 26 54.4 -0.4**
PAIG Paliouri 77.21 329 P **P** **03 26 54.4 -0.4**
SIGR SIGRI 77.26 327 P **P** **03 26 54.4 -0.7**
SIGR SIGRI 77.26 327 P **P** **03 26 54.4 -0.7**
KBN Korca 77.33 332 P **P** **03 26 55.6 +0.1**
KBN Korca 77.33 332 P **P** **03 26 55.6 +0.1**
KBN Korca 77.33 332 *i*P **P** **03 26 54.9 -0.6**
656A Willston 77.37 55 P **P** **03 26 55.9 +0.1**
baz=330
KZN Kozani 77.37 331 P **P** **03 26 55.4 -0.4**
KZN Kozani 77.37 331 P **P** **03 26 55.4 -0.4**
KZN Kozani 77.37 331 P **P** **03 26 55.4 -0.4**
LIT Litokhoron 77.37 330 *e*P **P** **03 26 55.2 -0.5**
comp=Z,31nm,1.1s
LIT Litokhoron 77.37 330 P **P** **03 26 55.1 -0.6**
LIT Litokhoron 77.37 330 *e*P **P** **03 26 55.2 -0.5**
LIT pmax pmax
comp=Z,31nm,1.1s
AQU L'Aquila 77.38 338 *e*P **P** **03 26 56.8 +1.0**
comp=Z,236nm,1.4s
AQU L'Aquila 77.38 338 *e*P **P** **03 26 56.8 +1.0**
AQU pmax pmax
comp=Z,236nm,1.4s
NEST Nestorio 77.46 331 P **P** **03 26 56.0 -0.3**
657A Interlachen 77.48 54 P **P** **03 26 56.2 -0.3**
baz=330
MDH Madha 77.65 298 *i*P **P** **03 26 55.8 -1.7**
SNR=11
MSFE Esma-Masafi 77.66 298 *i*P **P** **03 26 56.6 -1.0**
SNR=21
UMQ Umm Al-Quwin 77.76 298 *i*P **P** **03 26 58.0 0.0**
SNR=6.4
KPRO Kipourio 77.81 331 P **P** **03 26 57.8 -0.4**
XOR Xorichti 77.87 330 P **P** **03 26 57.6 -0.9**
XOR Xorichti 77.87 330 P **P** **03 26 57.6 -0.9**
658A Bunnell 77.88 54 P **P** **03 26 58.8 +0.1**
baz=330
658A Bunnell 77.88 54 *e*P **P** **03 27 02.8 +4.1**
comp=Z,111nm,1.3s
FYTO Fytoko, Volos 77.90 330 P **P** **03 26 58.2 -0.4**
FYTO Fytoko, Volos 77.90 330 P **P** **03 26 58.2 -0.4**
NEO Neokhori 77.92 329 P **P** **03 26 58.1 -0.7**
NEO Neokhori 77.92 329 P **P** **03 26 58.1 -0.7**
757A Oxford 77.94 55 P **P** **03 26 58.8 -0.2**
baz=330
CHOS Chios island 77.97 327 P **P** **03 26 58.4 -0.8**
CHOS Chios island 77.97 327 P **P** **03 26 58.4 -0.8**
SKIA Skiathos 77.98 329 P **P** **03 26 58.6 -0.5**
UOSS Minazif 77.99 298 *e*P **P** **03 26 57.9 -1.5**
comp=Z,362nm,1.5s
UOSS Minazif 77.99 298 *i*P **P** **03 26 58.0 -1.4**
SNR=35
THL Klokotos Trika 78.00 330 P **P** **03 26 58.0 -1.2**
PGF Pioggiola 78.03 341 *e*P **P** **03 27 01.4 +1.9**
HATD Hatta, Dubai 78.13 298 P **P** **03 26 60.0 -0.2**
SNR=42
HATD Hatta, Dubai 78.13 298 *i*P **P** **03 26 59.2 -1.0**
SNR=26
NAZ Nazwa, Dubai 78.21 298 P **P** **03 26 60.0 -0.6**
SNR=18
NAZ Nazwa, Dubai 78.21 298 *i*P **P** **03 26 59.7 -0.9**
SNR=16
JAN Janina 78.22 331 P **P** **03 27 01.1 +0.6**
JAN Janina 78.22 331 P **P** **03 27 01.1 +0.6**
WSAR Wadi Sarin 78.26 295 P **P** **03 27 00.2 -0.6**
comp=Z,22nm,0.8s,baz=71,slow=7.4,SNR=12
WSAR LR LR 04 05 23.1
comp=Z,6µm,20.2s,baz=48,slow=39
BIDO Bidbid 78.27 295 P **P** **03 27 01.0 +0.1**
SNR=16
MATE Matera 78.30 335⇑ *i*P **P** **03 27 00.8 0.0**
758A Lake Helen 78.31 54 P **P** **03 27 01.4 +0.3**
baz=330
LEM Lembang 78.35 237 P **P** **03 27 00.2 -1.4**
comp=Z,14nm,0.3s,baz=123,slow=24,SNR=2.5
LEM LR LR 04 04 34.2
comp=Z,2µm,18.0s,baz=345,slow=38
SMG Samos 78.36 326 P **P** **03 27 00.3 -1.0**
SMG Samos 78.36 326 P **P** **03 27 00.3 -1.0**
SGD Sagiada 78.42 332 P **P** **03 27 01.5 0.0**
AGG Agios Georgios 78.42 330 *e*P **P** **03 27 00.4 -1.2**
comp=Z,109nm,1.3s
AGG Agios Georgios 78.42 330 P **P** **03 26 59.0 -2.6**
KEK Kerkira 78.44 332 P **P** **03 27 01.4 -0.2**
KEK Kerkira 78.44 332 P **P** **03 27 01.4 -0.2**
857A Zephyrhills 78.45 55 P **P** **03 27 02.1 +0.2**
baz=330
IGT Igoumenitsa 78.47 332 P **P** **03 27 01.7 -0.1**
IGT Igoumenitsa 78.47 332 P **P** **03 27 01.7 -0.1**
SOHO SOHO 78.52 297 *i*P **P** **03 27 00.8 -1.5**
SNR=40
LKR Lokris 78.59 329 P **P** **03 27 01.4 -1.1**
LKR Lokris 78.59 329 P **P** **03 27 01.4 -1.1**
CTA Charters Tower 78.61 196 P **P** **03 27 02.1 -0.6**
comp=Z,27nm,1.0s,baz=353,slow=7.4,SNR=11
CTA S **S** **03 36 58.4 -0.2**
comp=Z,4.1nm,0.8s,baz=343,slow=15,SNR=1.9
CTAO Charters Tower 78.61 196 *e*P **P** **03 27 01.2 -1.4**
comp=Z,230nm,1.6s
CTAO LR LR
comp=Z,4µm,20.0s
CTAO Charters Tower 78.61 196 *e*P **P** **03 27 01.2 -1.4**
CTAO pmax pmax
comp=Z,230nm,1.6s
CTAO MLR MLR
comp=Z,4µm,20.0s
MAMC Mammari 78.62 320 P **P** **03 27 02.1 -0.6**
DSL Palaion Diasel 78.65 331 P **P** **03 27 03.0 +0.1**
DSL Palaion Diasel 78.65 331 P **P** **03 27 03.0 +0.1**
FETY Fethiye 78.66 324 P **P** **03 27 01.1 -1.8**
FETY Fethiye 78.66 324 P **P** **03 27 01.1 -1.8**
ASUD Al Ashush, Dub 78.68 298 P **P** **03 27 03.0 -0.2**
SNR=17
ASUD Al Ashush, Dub 78.68 298 *i*P **P** **03 27 02.3 -0.9**
SNR=17
SMDO Samad 78.69 295 P **P** **03 27 05.0 +1.6**
SNR=7.8
KARY Karystos 78.77 328 P **P** **03 27 02.8 -0.7**
CSS Mathiatis 78.77 320 *e*P **P** **03 27 02.2 -1.4**
comp=Z,80nm,1.6s
CSS Mathiatis 78.77 320 P **P** **03 27 03.1 -0.5**
CSS Mathiatis 78.77 320 P **P** **03 27 03.4 -0.2**
BODT Bodrum 78.82 326 P **P** **03 27 02.1 -1.7**
BODT Bodrum 78.82 326 P **P** **03 27 02.1 -1.7**
ALFC Alefka 78.85 321 P **P** **03 27 03.4 -0.6**
858A St. Cloud 78.88 54 P **P** **03 27 04.6 +0.4**
baz=330
AJN Ajban 78.90 298 *i*P **P** **03 27 03.1 -1.3**
SNR=9.2
BHL Bhannes 78.91 318 *e*P **P** **03 27 04.1 -0.3**
PTL Penteli 78.91 329 P **P** **03 27 03.3 -1.0**
PTL Penteli 78.91 329 P **P** **03 27 03.3 -1.0**
ANX Ano Chora 78.94 330 P **P** **03 27 03.8 -0.7**
DWPF Disney Wildern 78.94 55 P **P** **03 27 04.9 +0.3**
baz=330
KSL Kastellorizon 78.94 323 P **P** **03 27 03.7 -0.8**
KSL Kastellorizon 78.94 323 P **P** **03 27 03.7 -0.8**
DSF Desfina 78.94 330 P **P** **03 27 02.6 -1.9**
DSF Desfina 78.94 330 P **P** **03 27 02.6 -1.9**
VILL Villia 78.96 329 P **P** **03 27 03.4 -1.2**
ALNE Al Ain 78.96 297 *i*P **P** **03 27 03.8 -0.9**
SNR=23
957A Wimauma 78.96 55 P **P** **03 27 04.4 -0.3**
baz=330
PROD Prodromos 78.98 329 P **P** **03 27 03.1 -1.6**
ATHU Athens Univers 79.01 329 P **P** **03 27 03.8 -1.0**
ATHU Athens Univers 79.01 329 P **P** **03 27 03.8 -1.0**
PVO Paravola 79.02 330 P **P** **03 27 04.8 -0.1**
ATH Athens Observa 79.03 329 P **P** **03 27 03.9 -1.0**
ATH Athens Observa 79.03 329 P **P** **03 27 03.9 -1.0**
ATH Athens Observa 79.03 329 P **P** **03 27 03.9 -1.0**
AKMC Akamas 79.06 321 P **P** **03 27 03.8 -1.4**
LKD2 Lefkada island 79.09 331 P **P** **03 27 05.1 -0.2**
LKD2 Lefkada island 79.09 331 P **P** **03 27 05.1 -0.2**
EFP Efpalio 79.10 330 P **P** **03 27 04.8 -0.5**
TRIZ Trizonia 79.11 330 P **P** **03 27 04.4 -0.9**
DQRL Deir Qamar 79.11 318 *e*P **P** **03 27 05.7 +0.2**
VLY Voula,Athens 79.11 329 P **P** **03 27 04.1 -1.3**
VLY Voula,Athens 79.11 329 P **P** **03 27 04.1 -1.3**
SZAC Souni 79.12 320 P **P** **03 27 04.9 -0.6**
CUC Castrocucco 79.12 335 *e*P **P** **03 27 04.7 -0.7**
comp=Z,24nm,1.1s
PDO Prodromos 79.13 331 P **P** **03 27 05.4 -0.1**
PPCY Paphos 79.18 321 P **P** **03 27 04.5 -1.3**
LTK Loutraki 79.19 329 P **P** **03 27 04.0 -1.8**
LTK Loutraki 79.19 329 P **P** **03 27 04.0 -1.8**
859A Kempfer Cattle 79.22 54 P **P** **03 27 05.8 -0.3**
baz=331
JMDO Jabal Madar 79.25 295 P **P** **03 27 09.0 +2.7**
SNR=9.8
LAKA Lakka 79.25 330 P **P** **03 27 05.5 -0.7**
LAKA Lakka 79.25 330 P **P** **03 27 05.5 -0.7**
THAL Thalero 79.26 329 P **P** **03 27 04.6 -1.5**
NISR Nisiros 79.29 326 P **P** **03 27 04.2 -2.1**
NISR Nisiros 79.29 326 P **P** **03 27 04.2 -2.1**
DZM Mont Dzumac 79.31 177 P **P** **03 27 07.1 +0.6**
comp=Z,88nm,1.2s,baz=24,slow=5.8,SNR=11
DZM S **S** **03 37 05.2 -0.9**
comp=Z,3.3nm,0.7s,baz=147,slow=23,SNR=1.4
DZM LR LR 04 04 51.9
comp=Z,2µm,18.0s,baz=1.0,slow=38
DZM Mont Dzumac 79.31 177 *e*P **P** **03 27 07.9 +1.4**
comp=Z,309nm,1.4s
DZM *e*S **S** **03 37 03.9 -2.2**
comp=Z,2µm,23.9s
DZM *e*S **S** **03 37 03.9 -2.2**
comp=Z,8µm,24.9s
DZM Mont Dzumac 79.31 177 *e*LQ LQ 03 48 23.7
comp=Z,13µm,27.8s

DZM eLR LR 03 51 47.7
comp=Z,6µm,28.4s
DZM Mont Dzumac 79.31 177 eP **P 03 27 07.9 +1.4**
comp=Z,214nm,1.4s
DZM S **S 03 37 05.2 -0.9**
APE Apeiranthos 79.34 327 P **P 03 27 04.2 -2.5**
APE Apeiranthos 79.34 327 P **P 03 27 04.2 -2.5**
APE Apeiranthos 79.34 327 ceP **P 03 27 04.4 -2.3**
APE pmax pmax
comp=Z,65nm,1.2s
APE MLR MLR
comp=Z,4µm,19.0s
ARG Arkhangelos 79.34 325 P **P 03 27 05.7 -1.0**
ARG Arkhangelos 79.34 325 P **P 03 27 05.7 -1.0**
BSY Bisya 79.37 296 P **P 03 27 10.0 +2.9**
SNR=17
SHBL Chebaa 79.37 318 eP **P 03 27 06.4 -0.6**
KLV Kalavryta, Ach 79.39 330 P **P 03 27 06.1 -0.9**
KLV Kalavryta, Ach 79.39 330 P **P 03 27 06.1 -0.9**
FSK Fiskardo 79.42 331 P **P 03 27 06.1 -0.9**
GUR Goura 79.44 330 P **P 03 27 05.8 -1.5**
GUR Goura 79.44 330 P **P 03 27 05.8 -1.5**
AMGA Amorgos Island 79.46 327 P **P 03 27 05.0 -2.3**
RLS Riolos of Patr 79.56 330 P **P 03 27 07.8 0.0**
RLS Riolos of Patr 79.56 330 P **P 03 27 07.8 0.0**
DID Didima 79.59 329 P **P 03 27 05.9 -2.2**
DID Didima 79.59 329 P **P 03 27 05.9 -2.2**
TLIG Tlapa 79.59 74 eP **P 03 27 13.0 +4.5**
comp=Z,45nm,1.1s
DRO Drossia 79.60 330 P **P 03 27 08.0 0.0**
VLS Valsamata 79.68 331 P **P 03 27 08.0 -0.5**
VLS Valsamata 79.68 331 P **P 03 27 08.0 -0.5**
VLS Valsamata 79.68 331 P **P 03 27 08.0 -0.5**
TIP Timpagrande 79.68 334 ⅊iP **P 03 27 09.2 +0.6**
TIP Timpagrande 79.68 334 eP **P 03 27 09.2 +0.6**
comp=Z,166nm,1.3s
058A Arcadia 79.68 55 P **P 03 27 09.0 +0.3**
baz=330
959A Okeechobee 79.69 54 P **P 03 27 08.5 -0.2**
baz=331
KFL Anninata 79.69 331 P **P 03 27 08.3 -0.2**
KRND KRANIDI 79.73 329 P **P 03 27 06.5 -2.3**
MMAI Mount Meron Ar 79.80 318 P **P 03 27 09.6 +0.4**
comp=Z,48nm,1.0s,baz=76,slow=7.1,SNR=14
MMAI LR LR 04 05 17.2
comp=Z,5µm,18.2s,baz=35,slow=38
TRIP Tripoli 79.84 330 P **P 03 27 08.7 -0.8**
CMBO Columbo, Santo 79.94 327 P **P 03 27 05.9 -4.0**
VLX Vlachokerasia 79.96 329 P **P 03 27 08.8 -1.3**
VLX Vlachokerasia 79.96 329 P **P 03 27 08.8 -1.3**
AMT Artemida-Makis 79.99 330 P **P 03 27 09.7 -0.5**
PALK Pallekele 79.99 268 P **P 03 27 09.6 -0.9**
comp=Z,96nm,1.1s,baz=116,slow=0.9,SNR=13
PALK LR LR 04 08 56.0
comp=Z,3µm,19.9s,baz=205,slow=40
PALK Pallekele 79.99 268 eP **P 03 27 09.6 -0.9**
comp=Z,193nm,1.3s
PALK Pallekele 79.99 268 P **P 03 27 11.4 +0.9**
SNR=8.1
PALK Pallekele 79.99 268 *i* P **P 03 27 10.4 -0.1**
SNR=11
PALK Pallekele 79.99 268 eP **P 03 27 09.6 -0.9**
PALK pmax pmax
comp=Z,193nm,1.3s
ASF Jabal al Asfar 80.00 316 P **P 03 27 10.4 0.0**
comp=Z,49nm,1.1s,baz=324,slow=1.1,SNR=44
ASF LR LR 04 08 57.0
comp=Z,7µm,18.5s,baz=334,slow=40
059A Moore Haven 80.06 55 P **P 03 27 11.0 +0.3**
baz=331
KARP Karpathos 80.26 325 eP **P 03 27 10.0 -1.7**
comp=Z,31nm,0.8s
KARP Karpathos 80.26 325 P **P 03 27 09.8 -1.9**
ITM Ithomi 80.26 330 eP **P 03 27 10.8 -0.8**
comp=Z,321nm,1.8s
ITM Ithomi 80.26 330 P **P 03 27 10.7 -1.0**
060A Indiantown 80.34 54 P **P 03 27 12.3 +0.2**
baz=331
VLI Velial 80.42 329 P **P 03 27 10.1 -2.4**
VLI Velial 80.42 329 P **P 03 27 10.1 -2.4**
TAOE Nuku Hiva Isla 80.43 123 eS **S 03 37 19.4 +1.0**
comp=Z,3µm,29.6s
TAOE Nuku Hiva Isla 80.43 123 eLQ LQ 03 48 35.6
comp=Z,7µm,28.3s
TAOE eLR LR 03 52 27.4
comp=Z,14µm,23.0s
059Z Ave Maria 80.47 55 P **P 03 27 13.3 +0.4**
baz=331
DYR Agios Nikonas 80.54 329 P **P 03 27 12.3 -0.9**
PYL PYLOS 80.58 330 P **P 03 27 11.9 -1.4**
PYL PYLOS 80.58 330 P **P 03 27 11.9 -1.4**
PGAV Gavieira, Arco 80.65 354 eP **P 03 27 13.9 +0.1**
comp=Z,76nm,1.6s
PGAV Gavieira, Arco 80.65 354 ePP PP 03 30 23.0 +6.4
PGAV eS **S 03 37 20.7 +0.5**
PGAV Gavieira, Arco 80.65 354 eLR LR 03 59 42.8
comp=Z,3µm,20.0s
PBRG Braganca 80.72 353 eP **P 03 27 13.9 -0.2**
comp=Z,84nm,1.8s
060Z West Palm Beac 80.80 55 P **P 03 27 15.2 +0.6**
baz=331
KYTH Kithira 80.81 329 P **P 03 27 12.5 -2.1**
KYTH Kithira 80.81 329 P **P 03 27 12.5 -2.1**
KTHR Kythira 80.83 329 P **P 03 27 13.1 -1.6**
WRAB Tennant Creek 80.87 208 eP **P 03 27 14.2 -0.7**
comp=Z,285nm,1.3s
WRAB LR LR
comp=Z,4µm,21.0s
WRAB Tennant Creek 80.87 208 *c i* P **P 03 27 14.1 -0.8**
WRAB pmax pmax
comp=Z,276nm,1.4s
WRAB MLR MLR
comp=Z,2µm,19.0s
WB2 Warramunga Arr 80.88 208 eP **P 03 27 15.1 +0.1**
comp=Z,297nm,1.4s
WRA Warramunga Arr 80.88 208 P **P 03 27 15.1 +0.1**
comp=Z,122nm,1.2s,baz=17,slow=5.7,SNR=61
WRA S **S 03 37 24.1 +1.5**
comp=Z,0.9nm,1.0s,baz=27,slow=6.7,SNR=1.6
WRA LR LR 04 00 44.7
comp=Z,3µm,21.9s,baz=10.0,slow=34
PCAB Cabril 80.89 354 eP **P 03 27 15.0 0.0**
comp=Z,88nm,1.6s
MZR Muzera 80.94 299 *i* P **P 03 27 14.5 -0.9**
SNR=6.2
NPS Neapolis 81.00 326 P **P 03 27 13.1 -2.5**
NPS Neapolis 81.00 326 P **P 03 27 13.1 -2.5**
NPS Neapolis 81.00 326 P **P 03 27 13.1 -2.5**
ANKY Antikythira Is 81.11 328 P **P 03 27 14.2 -2.0**
ANKY Antikythira Is 81.11 328 P **P 03 27 14.2 -2.0**
061Z Ochoppi 81.11 55 P **P 03 27 16.9 +0.6**
baz=331
LAST Lasithi 81.13 326 P **P 03 27 14.8 -1.6**
LAST Lasithi 81.13 326 P **P 03 27 14.8 -1.6**
IDI Anoyia 81.19 327 P **P 03 27 14.8 -1.9**
comp=Z,18nm,0.9s,baz=17,slow=7.4,SNR=5.9
IDI LR LR 04 07 53.6
comp=Z,3µm,18.4s,baz=20,slow=39
IDI Anoyia 81.19 327 ⅊iP **P 03 27 14.7 -2.0**
IDI Anoyia 81.19 327 eP **P 03 27 14.3 -2.4**
comp=Z,33nm,1.0s
POLO Lamas de Olo 81.21 353 eP **P 03 27 16.7 -0.1**
comp=Z,43nm,1.7s
CHAN Chania 81.22 327 P **P 03 27 14.7 -2.1**
VAM Vamos 81.28 327 P **P 03 27 15.3 -1.8**
VAM Vamos 81.28 327 P **P 03 27 15.3 -1.8**
VAM Vamos 81.28 327 P **P 03 27 15.3 -1.8**
IMMV Iera Moni Meta 81.29 328 P **P 03 27 15.0 -2.2**
PVRL Vila Real 81.31 353 eP **P 03 27 17.4 +0.2**
comp=Z,100nm,1.3s
MVO Moncorvo 81.37 353 eP **P 03 27 17.5 -0.1**
comp=Z,89nm,2.0s
MVO Moncorvo 81.37 353 ePP PP 03 30 27.8 +5.2
MVO eS **S 03 37 27.3 -0.4**
MVO Moncorvo 81.37 353 eLR LR 04 00 15.8
comp=Z,3µm,20.0s
SIVA Sivas 81.46 327 P **P 03 27 17.0 -1.1**
SIVA Sivas 81.46 327 P **P 03 27 17.0 -1.1**
FITZ Fitzroy Crossi 81.61 216 P **P 03 27 17.7 -1.1**
comp=Z,51nm,1.1s,baz=14,slow=9.0,SNR=11
BBSR BB Station 81.75 40 eP **P 03 27 19.1 -0.5**
comp=Z,86nm,1.3s
BBSR LR LR
comp=Z,3µm,20.0s
GVD Gavdhos 81.84 327 P **P 03 27 18.6 -1.5**
GVD Gavdhos 81.84 327 P **P 03 27 18.6 -1.5**
VAE Valguarnera 81.84 336 LR LR 04 12 52.4
comp=Z,4µm,18.9s,baz=326,slow=42
PVIS Viseu 81.88 353 eP **P 03 27 20.3 +0.1**
comp=Z,78nm,1.4s
PVIS Viseu 81.88 353 ePP PP 03 30 28.5 +1.8
CLTB Caltabellotta 82.01 337 eP **P 03 27 21.9 +0.9**
comp=Z,135nm,1.9s
MTE Manteigas 82.17 353 eP **P 03 27 21.8 0.0**
comp=Z,64nm,1.4s
MTE Manteigas 82.17 353 ePP PP 03 30 29.7 +0.6
MTE eS **S 03 37 36.2 +0.3**
MTE Manteigas 82.17 353 eLR LR 03 57 23.4
comp=Z,4µm,18.0s
MTE Manteigas 82.17 353 eP **P 03 27 21.8 0.0**
comp=Z,61nm,1.4s
PCAS Casmilo, Conde 82.57 354 eP **P 03 27 23.9 +0.1**
comp=Z,83nm,2.3s
PCAS Casmilo, Conde 82.57 354 ePP PP 03 30 33.5 +1.1
ES19 SONSECA Array 82.58 350 eP **P 03 27 24.0 +0.1**
ESDC Sonseca Array 82.61 350 P **P 03 27 23.8 -0.3**
comp=Z,13nm,1.0s,baz=3.1,slow=5.0,SNR=59
ESLA Sonseca Array 82.61 350 eP **P 03 27 24.3 +0.2**
comp=Z,44nm,1.3s
PMOR Pomariorio Ree 82.66 133 eT T 04 58 25.2
comp=Z,5.7nm,0.2s
PCBR Castelo Branco 82.72 353 eP **P 03 27 24.6 0.0**
comp=Z,62nm,2.0s
PCBR Castelo Branco 82.72 353 ePP PP 03 30 39.2 +5.6
PAB San Pablo 82.77 350 eP **P 03 27 23.5 -1.5**
comp=Z,35nm,1.3s
PAB LR LR
comp=Z,4µm,20.0s
PAB San Pablo 82.77 350 eP **P 03 27 23.5 -1.5**
PAB pmax pmax
comp=Z,35nm,1.3s
PAB MLR MLR
comp=Z,4µm,20.0s
PTOM Tomar 83.00 354 eP **P 03 27 25.1 -0.9**
comp=Z,69nm,1.6s
PTOM Tomar 83.00 354 ePP PP 03 30 37.4 +1.5
PMRV Marv??o 83.12 353 eP **P 03 27 26.4 -0.3**
comp=Z,71nm,1.7s
PMRV Marv??o 83.12 353 ePP PP 03 30 38.1 +1.2
PMRV eS **S 03 37 46.9 +1.3**
PMRV Marv??o 83.12 353 eLR LR 04 01 21.3
comp=Z,4µm,16.0s
EIDS Eidsvold 83.20 191 eP **P 03 27 27.6 +0.6**
comp=Z,108nm,1.4s
TAMR Tamra 83.35 340 eP **P 03 27 28.8 +0.9**
comp=Z,339nm,1.8s
ALMR Almeirim 83.47 354 eP **P 03 27 28.5 0.0**
ALMR eS **S 03 37 49.7 +0.6**
ALMR AMS AMS 04 07 02.8
comp=E,3µm,22.3s
ALMR Almeirim 83.47 354 eP **P 03 27 28.1 -0.4**
comp=E,96nm,2.0s
ALMR Almeirim 83.47 354 ePP PP 03 30 41.3 +1.6
PMTG Montargil 83.53 353 eP **P 03 27 28.3 -0.5**
comp=E,89nm,1.9s
PMTG Montargil 83.53 353 ePP PP 03 30 42.8 +2.5
ROSA Rosais 83.64 9 eP **P 03 27 30.2 +0.8**
comp=E,390nm,1.0s
PESTR Estremoz 83.69 353 eP **P 03 27 29.3 -0.4**
comp=E,83nm,2.0s
PESTR Estremoz 83.69 353 ePP PP 03 30 43.2 +1.6
PESTR Estremoz 83.69 353 eP **P 03 27 29.3 -0.4**
comp=E,28nm,1.3s
PMAFR Mafra 83.71 354 eP **P 03 27 29.6 -0.1**
comp=E,226nm,1.7s
PSCM Serra do Cume 83.75 8 eP **P 03 27 27.6 -2.4**
comp=E,191nm,0.9s
ADH Angra Heroismo 83.79 8 eP **P 03 27 29.9 -0.2**
comp=E,274nm,1.1s
PMST Lisbon--Monsan 83.92 354 eP **P 03 27 30.8 0.0**
comp=E,156nm,1.4s
LIS Lisbon 83.94 354 eP **P 03 27 31.0 +0.2**
LIS eS **S 03 37 52.9 -0.9**
LIS AMS AMS 04 10 30.2
comp=E,5µm,18.5s
LIS Lisbon 83.94 354 eP **P 03 27 31.2 +0.3**
LIS Lisbon 83.94 354 ePP PP 03 30 50.0 +6.5
CCIG Comitan 83.96 69 eP **P 03 27 32.9 +1.4**
comp=E,82nm,1.1s
CAEH ʿAin El Ouahch 84.02 341 P **P 03 27 33.3 +1.9**
EVO Evora 84.06 353 eP **P 03 27 31.6 +0.1**
comp=E,122nm,1.9s
EVO Evora 84.06 353 ePP PP 03 30 46.1 +1.6
CMAH Djebel Manchou 84.07 341 P **P 03 27 33.3 +1.6**
RAYN Ar Rayn 84.14 305 eP **P 03 27 31.5 -0.7**
comp=E,321nm,1.4s
RAYN LR LR
comp=Z,12µm,20.0s
RAYN Ar Rayn 84.14 305 *i* P **P 03 27 31.5 -0.7**
SNR=86
RAR Rarotonga 84.23 146 LR LR 03 57 38.7
comp=Z,2µm,21.4s,baz=338,slow=30
PPT Papeete 84.34 135 LR LR 03 58 17.9
comp=Z,3µm,20.3s,baz=311,slow=31
PBAR Barrancos 84.35 352 eP **P 03 27 33.1 +0.1**
comp=Z,262nm,1.8s
PBAR Barrancos 84.35 352 ePP PP 03 30 49.1 +2.2
PPT2 Papete2 84.36 135 eS **S 03 37 57.3 -1.0**
comp=Z,2µm,25.2s
PPT2 eSS **SS 03 43 29.5 +0.6**
comp=Z,2µm,27.0s
PPT2 Papete2 84.36 135 eLR LR 03 54 11.0
comp=Z,16µm,24.8s,baz=339
CART Cartagena 84.36 348 eP **P 03 27 33.7 +0.7**
comp=Z,108nm,1.3s
ABSA Djebel Ababsia 84.40 341 P **P 03 27 35.2 +1.8**
CKFL Kef-Lekhel 84.41 341 P **P 03 27 35.2 +1.7**
DFRA Djebel Bou Aff 84.42 342 P **P 03 27 35.8 +2.3**
PNCL Nicolau / Gran 84.51 354 eP **P 03 27 33.7 -0.1**
comp=Z,81nm,1.7s
PNCL Nicolau / Gran 84.51 354 ePP PP 03 30 51.0 +2.8
AS01 Alice Springs 84.55 207 eP **P 03 27 33.3 -0.7**
PBEJ Beja 84.55 353 eP **P 03 27 34.0 0.0**
comp=Z,108nm,1.8s
PBEJ Beja 84.55 353 ePP PP 03 30 53.7 +5.1
AS31 Alice Springs 84.56 207 eP **P 03 27 34.9 +0.8**
comp=Z,35nm,1.5s
ASAR Alice Springs 84.56 207 P **P 03 27 34.4 +0.3**
comp=Z,29nm,1.0s,baz=13,slow=4.6,SNR=64
ASAR LR LR 04 03 00.1
comp=Z,4µm,21.8s,baz=11,slow=34
KEST Kesra 84.58 339 P **P 03 27 34.9 +0.6**
comp=Z,55nm,1.1s,baz=287,slow=0.4,SNR=41
KEST LR LR 04 09 56.7
comp=Z,6µm,18.9s,baz=330,slow=39
KEST Kesra 84.58 339 eP **P 03 27 35.0 +0.6**
comp=Z,87nm,1.1s
CASM Ain Smara 84.59 341 P **P 03 27 36.8 +2.5**
PSET Sete Cidades 84.72 7 eP **P 03 27 35.2 +0.3**
comp=Z,203nm,1.1s
MESJ Messejana 84.76 353 eP **P 03 27 35.1 +0.1**
MESJ eS **S 03 37 58.3 -3.7**
MESJ AMS AMS 04 09 12.7
comp=E,4µm,17.9s
MESJ Messejana 84.76 353 eP **P 03 27 34.9 -0.1**
comp=E,76nm,2.2s
MESJ Messejana 84.76 353 ePP PP 03 30 52.2 +2.0
CMLA Cha da Macela 84.80 7 eP **P 03 27 35.2 -0.1**
comp=E,103nm,0.9s
CMLA Cha da Macela 84.80 7 PFAKE 03 27 50.0 +15
CMLA LR LR
comp=Z,2µm,19.0s
CTEI Djebel Teioual 84.80 341 P **P 03 27 37.2 +1.7**
BART Pico Bartolome 84.81 7 eP **P 03 27 35.7 +0.3**
comp=Z,113nm,0.9s
THTN Thala 84.87 340 eP **P 03 27 36.6 +0.8**
comp=Z,197nm,1.5s
CKHR Kef el Ahmar 84.99 342 P **P 03 27 39.3 +2.8**
PVAQ Vaqueiros 85.16 353 eP **P 03 27 37.3 +0.2**
comp=Z,148nm,2.2s
PVAQ Vaqueiros 85.16 353 eS **S 03 38 05.0 -1.0**
PVAQ Vaqueiros 85.16 353 eLR LR 04 02 28.8
comp=Z,3µm,22.0s
EMHD Djebel Mahouad 85.21 344 P **P 03 27 38.7 +1.2**
MORF Marmelete 85.32 354 eP **P 03 27 37.9 0.0**
MORF eS **S 03 38 01.9 -5.8**
MORF AMS AMS 04 09 38.7
comp=E,4µm,15.6s
MORF Marmelete 85.32 354 eP **P 03 27 38.0 0.0**
comp=E,161nm,1.9s
EBNR Beni Rached 85.32 345 P **P 03 27 39.5 +1.5**
PBDV Barranco-do-Ve 85.33 353 eP **P 03 27 37.9 -0.1**
comp=E,155nm,1.8s
PBDV Barranco-do-Ve 85.33 353 ePP PP 03 31 00.0 +5.0
ECHA Ech Chlef 85.48 346 P **P 03 27 40.0 +1.3**
PFVI Vila Bisbo 85.50 354 eP **P 03 27 39.0 +0.2**
comp=E,150nm,1.7s
PSMN Pico do Norte, 85.58 7 eP **P 03 27 37.4 -1.8**
comp=E,100nm,1.3s
PSMA Santa Maria 85.59 7 eP **P 03 27 36.4 -2.8**
comp=E,91nm,1.6s
EANR ʿAin N'Sour 85.72 346 P **P 03 27 41.0 +1.0**
USTO Oran 86.14 347 P **P** 03 27 48.0 +6.0
ETRT Tiaret 86.24 345 P **P 03 27 43.5 +0.8**
MBWA Marble Bar 86.43 220 eP **P 03 27 43.3 -0.1**
MBWA LR LR
comp=Z,1µm,20.0s
MBWA Marble Bar 86.43 220 P **P 03 27 44.8 +1.5**
SNR=8.8
ODJA Bouhanifia 86.49 347 P **P 03 27 47.0 +3.2**
RAO Raoul Island 87.84 164 LR LR 04 01 17.3
comp=Z,4µm,21.0s,baz=16,slow=32
COCO West Island 88.10 244 PFAKE 03 28 00.0 +8.5
COCO LR LR
comp=Z,3µm,21.0s
ARMA Armidale 88.14 190 eP **P 03 27 53.2 +1.6**
comp=Z,320nm,1.5s
GTBY Guantanamo Bay 88.85 53 PFAKE 03 28 10.0 +15
GTBY LR LR
comp=Z,7µm,20.0s
GRTK Grand Turk 89.12 49 PFAKE 03 28 10.0 +14
GRTK LR LR
comp=Z,5µm,20.0s
MTDJ Mount Denham 89.28 56 PFAKE 03 28 10.0 +13
MTDJ LR LR
comp=Z,3µm,20.0s
MDT Midelt 89.47 350 P **P 03 27 58.3 +0.1**
comp=Z,14nm,0.8s,baz=22,slow=5.4,SNR=19
ESTN Estel 89.55 66 eP **P 03 27 58.8 +0.1**
comp=Z,114nm,1.6s
TBI Tubuai 89.66 138 eS **S 03 38 48.8 -0.3**
comp=Z,1µm,28.5s
TBI eSS **SS 03 44 46.0 -0.4**
comp=Z,2µm,26.8s
TBI Tubuai 89.66 138 eLR LR 03 56 26.8
comp=Z,6µm,29.8s,baz=336
PMOZ Porto Moniz, M 90.02 1 eP P 03 27 52.3 -8.4
PMOZ Porto Moniz, M 90.02 1 eS **S 03 39 01.4 +8.4**
PMOZ Porto Moniz, M 90.02 1 eLR LR 03 57 47.1
comp=Z,1µm,20.0s
STKA Stephens Creek 90.92 198 P **P 03 28 04.6 +0.2**
comp=Z,21nm,1.0s,baz=347,slow=7.5,SNR=18
STKA LR LR 04 12 57.1
comp=Z,2µm,18.0s,baz=355,slow=38
STKA Stephens Creek 90.92 198 eP **P 03 28 04.9 +0.5**
comp=Z,27nm,1.4s
STKA Stephens Creek 90.92 198 eP **P 03 28 04.9 +0.5**
STKA pmax pmax
comp=Z,27nm,1.4s
SDDR Presa de Saban 91.32 51 PFAKE 03 28 20.0 +13
SDDR LR LR
comp=Z,3µm,20.0s
DAMY Dhamar 92.47 302 eP **P 03 28 13.0 +0.4**
comp=Z,188nm,1.8s
JTS JuntasAbangare 92.66 66 LR LR 04 14 37.4
comp=Z,2µm,18.8s,baz=40,slow=39
FORT Forrest 92.85 210 eP **P 03 28 13.4 +0.1**
comp=Z,43nm,0.9s
BBOO Buckleboo 92.88 203 eP **P 03 28 13.7 +0.3**
comp=Z,115nm,1.8s
SJG San Juan 94.18 47 PFAKE 03 28 30.0 +10
SJG LR LR
comp=Z,3µm,19.0s
RKT Rikitea 95.30 126 eSKSac **SKSac 03 38 57.2 -2.5**
comp=Z,1µm,25.8s
RKT Rikitea 95.30 126 ePS PS 03 41 03.2 +4.3
comp=Z,4µm,26.2s
RKT eSS SS 03 46 07.5 +0.2
comp=Z,2µm,27.5s
RKT Rikitea 95.30 126 eLR LR 03 59 11.0
comp=Z,5µm,32.8s,baz=329
ATD Arta Tunnel 95.85 302 LR LR 04 16 39.3
comp=Z,3µm,18.9s,baz=13,slow=39
URZ Urewera 96.09 169 LR LR 04 05 54.6
comp=Z,2µm,19.9s,baz=12,slow=32
BCIP Isla Barro Col 96.12 62 PFAKE 03 28 40.0 +11
BCIP LR LR
comp=Z,2µm,19.0s
ANWB Willy Bob 96.24 43 PFAKE 03 28 40.0 +11
ANWB LR LR
comp=Z,3µm,20.0s
DGAR Diego Garcia 96.71 267 PFAKE 03 28 40.0 +8.5
DGAR LR LR
comp=Z,2µm,20.0s
TAM Tamanrasset 97.89 339 eP **P 03 28 36.0 -1.0**
comp=Z,14nm,1.5s
TAM Tamanrasset 97.89 339 eP **P 03 28 36.0 -1.0**
TAM pmax pmax
comp=Z,14nm,1.5s
NWAO Narrogin (SRO) 98.11 218 LR LR 04 19 28.7
comp=Z,2µm,18.5s,baz=258,slow=40
SNZO South Karori 98.90 171 PFAKE 03 28 50.0 +9.4
SNZO LR LR
comp=Z,4µm,21.0s
PAYG Puerto Ayora 99.28 77 PFAKE 03 29 00.0 +17
PAYG LR LR
comp=Z,2µm,20.0s
SDV Santo Domingo 100.60 54 PFAKE 03 29 00.0 +11
SDV LR LR
comp=Z,4µm,20.0s
TAU Tasmania Unive 100.95 192 PFAKE 03 29 00.0 +10
TAU LR LR
comp=Z,4µm,19.0s
BBGH Gun Hill 101.22 43 PFAKE 03 29 00.0 +8.2
BBGH LR LR
comp=Z,4µm,20.0s
GRGR Grenville 101.37 45 PFAKE 03 29 00.0 +7.6
GRGR LR LR
comp=Z,3µm,19.0s
MSEY Mahe Island 103.52 283 PFAKE 03 29 10.0 +8.0
MSEY LR LR
comp=Z,5µm,22.0s
OTAV Otavalo 104.54 66 PFAKE 03 29 20.0 +13
OTAV LR LR
comp=Z,1µm,20.0s
SACV Santiago Islan 107.56 7 PFAKE 03 33 40.0
SACV LR LR
comp=Z,760nm,19.0s
TORD Torodi Ar. Bea 108.00 341 PP PP 03 33 44.0 -6.1
comp=Z,6.1nm,1.0s,baz=7.7,slow=6.7,SNR=9.1
KMBO Kilima Mbogo 109.57 301 PFAKE 03 33 40.0
KMBO LR LR
comp=Z,4µm,20.0s
MBAR Mbarara 112.01 308 PFAKE 03 33 50.0
MBAR LR LR
comp=Z,981nm,20.0s
PTGA Pitinga 113.77 49 PFAKE 03 33 50.0
PTGA LR LR
comp=Z,12µm,20.0s
NNA Nana 115.83 71 PFAKE 03 34 00.0 +16
NNA LR LR
comp=Z,947nm,22.0s
SAML Samuel 119.77 56 ePKPdf **PKPdf 03 33 50.0 -1.2**
SAML ePP **PP 03 35 10.9 -3.3**
SAML LR LR
comp=Z,3µm,20.0s
ABPO Ambohimpanom 119.87 282 PFAKE 03 34 00.0 +8.5
ABPO LR LR
comp=Z,2µm,19.0s
LPAZ La Paz 123.85 65 PKP **PKPdf 03 33 59.0 -0.8**
comp=Z,3.3nm,0.8s,baz=7.5,slow=4.0,SNR=12
LPAZ PKKPab **PKKPab 03 43 46.2 -0.3**
comp=Z,1.3nm,0.8s,baz=152,slow=10,SNR=4.0
LPAZ La Paz 123.85 65 ePKPdf **PKPdf 03 33 59.6 -0.2**
LPAZ ePP **PP 03 35 36.3 -6.5**
LPAZ PKKPab **PKKPab 03 43 46.2 -0.3**
LPAZ La Paz 123.85 65 eP **PKPdf 03 33 59.1 -0.6**
LPAZ La Paz 123.85 65 PKIKP **PKPdf 03 33 59.0 -0.8**
LPAZ pmax pmax
comp=Z,3.0nm,0.8s
PB12 IPOC Station P 124.74 69 eP **PKPdf 03 34 01.1 +0.3**
MNMC Minye Minye 125.54 68 ePKPdf **PKPdf 03 34 03.2 +0.7**
PSGCX Pisagua 125.67 69 eP **PKPdf 03 34 02.0 -0.5**
LSZ Lusaka 126.18 303 ePKPdf **PKPdf 03 34 03.2 -0.4**
LSZ ePKPdf **PKiKP 03 34 04.0 0.0**
LSZ LR LR
comp=Z,3µm,19.0s

LSZ	Lusaka	126.18	303	ePKIKP	PKPdf	03 34 03.2	-0.4
LSZ				MLR	MLR		
	comp=Z,3μm,19.0s						
PB01	IPOC Station P	127.20	69	ePKPdf	PKPdf	03 34 05.2	-0.2
PB01	IPOC Station P	127.20	69	eP	PKPdf	03 34 05.5	+0.1
PB07	IPOC Station P	127.57	70	eP	PKPdf	03 34 06.1	-0.1
PB03	IPOC Station P	127.91	70	eP	PKPdf	03 34 07.0	+0.2
PB04	IPOC Station P	127.94	71	eP	PKPdf	03 34 07.1	+0.2
PB09	IPOC Station P	127.96	70	eP	PKPdf	03 34 07.2	+0.3
PB09				eP	PKPdf	03 34 07.3	+0.3
PB05	IPOC Station P	128.35	71	eP	PKPdf	03 34 08.3	+0.7
PB06	IPOC Station P	128.55	71	eP	PKPdf	03 34 08.2	+0.2
PB10	IPOC Station P	128.71	72	eP	PKPdf	03 34 08.6	+0.5
CASY	Casey	129.64	205	ePKPdf	PKPdf	03 34 08.4	0.0
CASY				LR	LR		
	comp=Z,275nm,20.0s						
PB14	IPOC Station P	129.71	73	eP	PKPdf	03 34 08.4	-1.9
ASCN	Ascension	130.52	357	ePKPdf	PKPdf	03 34 11.7	-0.2
ASCN				LR	LR		
	comp=Z,2μm,21.0s						
GO02	Mina Guanaco	130.57	72	ePKPdf	PKPdf	03 34 12.7	+0.8
GO02	Mina Guanaco	130.57	72	eP	PKPdf	03 34 13.0	+1.0
LCO	Las Campanas	133.10	76	PFAKE		03 34 30.0	+13
LCO				LR	LR		
	comp=Z,3μm,21.0s						
TSUM	Tsumeb	134.21	312	ePKPdf	PKPdf	03 34 17.6	-1.2
TSUM				LR	LR		
	comp=Z,5μm,21.0s						
VNDA	Vanda	134.77	180	PKP	PKPdf	03 34 17.5	-0.4
	comp=Z,1.6nm,0.9s,baz=326,slow=3.2,SNR=5.2						
VNDA	Vanda	134.77	180	ePKPdf	PKPdf	03 34 19.0	+1.1
SBA	Scott Base	135.11	179	ePKPdf	PKPdf	03 34 19.0	+0.5
SBA				LR	LR		
	comp=Z,2μm,20.0s						
SBA	Scott Base	135.11	179	ePKIKP	PKPdf	03 34 19.0	+0.5
SBA				MLR	MLR		
	comp=Z,2μm,20.0s						
CPUP	Villa Florida	137.60	60	PKP	PKPdf	03 34 24.7	0.0
	comp=Z,11nm,1.0s,baz=3.6,slow=2.0,SNR=7.1						
CPUP	Villa Florida	137.60	60	ePKPdf	PKPdf	03 34 25.2	+0.5
SHEL	Horse Pasture	137.74	344	PFAKE		03 34 40.0	+15
SHEL				LR	LR		
	comp=Z,945nm,21.0s						
PLCA	Paso Flores	142.04	88	PKP	PKPdf	03 34 30.5	-2.0
	comp=Z,19nm,1.1s,baz=345,slow=1.0,SNR=9.0						
PLCA	Paso Flores	142.04	88	ePKPdf	PKPdf	03 34 33.6	+1.2
SUR	Sutherland	144.25	298	ePKPdf	PKPbc	03 34 35.6	+0.6
SUR				LR	LR		
	comp=Z,8μm,20.0s						
MAW	Mawson	144.62	221	PKP	PKPdf	03 34 35.5	-0.4
	comp=Z,138nm,1.0s,baz=61,slow=3.8,SNR=108						
MAW	Mawson	144.62	221	ePKPdf	PKPbc	03 34 34.9	+0.1
MAW	Mawson	144.62	221	ePKIKP	PKPbc	03 34 34.9	+0.1
TRQA	Tornquist	144.69	76	ePKPdf	PKPbc	03 34 36.0	0.0
TRQA				LR	LR		
	comp=Z,2μm,20.0s						
CHRN	Cochrane	145.27	98	ePKPbc	PKPdf	03 34 38.1	+0.4
QSPA	South Pole Qui	147.26	180	PKPbc	PKPbc	03 34 42.7	-0.3
	comp=Z,245nm,1.1s,baz=357,slow=1.0,SNR=176						
QSPA	South Pole Qui	147.26	180	ePKPbc	PKPbc	03 34 42.4	-0.6
QSPA				LR	LR		
	comp=Z,2μm,19.0s						
SYO	Syowa Base	153.31	222⇑	ePKPdf	PKPdf	03 34 52.5	+2.6
SYO	Syowa Base	153.31	222⇓	epPKPdf	pPKPdf	03 34 55.2	-0.2
EFI	East Falkland	155.58	94	PFAKE		03 35 10.0	-10
EFI				LR	LR		
	comp=Z,4μm,20.0s						
PMSA	Palmer Station	156.49	128	PFAKE		03 35 10.0	-13
PMSA				LR	LR		
	comp=Z,3μm,21.0s						
NVL	N'lazarevskaya	162.09	211⇑	ePKP2	PKPab	03 35 45.9	-1.6
NVL				e		03 39 32.7	
SNAA	Sanae	164.67	197	PKP	PKPdf	03 35 07.1	+3.9
SNAA				x	x	03 35 58.2	
VNA3	Neumayer Olymp	165.90	189	PKP	PKPdf	03 35 01.5	-2.7
VNA3				x	x	03 36 03.2	
VNA2	Neumayer--Watz	165.97	193	PKP	PKPdf	03 35 03.5	-0.8
	baz=166,slow=2.8						
VNA1	Neumayer--Stat	166.33	192	PKP	PKPdf	03 35 03.8	-0.7
VNA1				x	x	03 36 05.5	
HOPE	Hope Point	168.38	82	PFAKE		03 35 20.0	+14
HOPE				LR	LR		
	comp=Z,4μm,22.0s						

*ISCJB **24** 03:17:38.9±0.3, 23°.92N±0°.02×121°.81E±0°.02, h50km±4km, Error ellipse: s-maj=3.3km s-min=2.1km az=140.9*
*TAP **24** 03:17:38.9, 23°.95N×121°.77E, h46km±1km, ML3.3, B*
*JMA **24** 03:17:38.2±0.1, 23°.89N×121°.75E, h53km±2km, M3.2*
ISC 24 03:17:39.6±1.2, 23°.92N±0°.02×121°.79E±0°.02, h47km±6km, n79, σ0°83/121, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENLB	Shoufeng	0.17	266	P	Pn	03 17 48.3	+0.9
	baz=254						
ENLB				eS	Sn	03 17 54.9	+2.1
	baz=254						
HWA	Hwalien	0.18	289	eP	Pn	03 17 48.1	+0.7
	baz=281						
HWA				eS	Sn	03 17 54.2	+1.3
	baz=281						
TWD	Chiawan	0.24	312	eP	Pn	03 17 47.2	-0.6
	baz=311						
TWD				eS	Sn	03 17 53.8	+0.1
	baz=311						
NACB	Ninganchiao	0.31	325	P	Pn	03 17 47.8	-0.8
	baz=324						
NACB				eS	Sn	03 17 54.6	-0.2
	baz=324						
ESL	Shilin	0.34	253	eP	Pn	03 17 47.8	-1.0
	baz=245						
EGFH	Guangfu	0.42	234	eP	Pn	03 17 48.6	-1.0
	baz=228						
EGFH				eS	Sn	03 17 55.7	-1.0
	baz=228						
NANB	Nanao	0.51	356	P	Pn	03 17 49.9	-0.8
	baz=357						
NANB				S	Sn	03 17 58.4	-0.3
	baz=357						
ENA	Nanau	0.51	355	eP	Pn	03 17 50.0	-0.8
	baz=357						
ENAH	Nanao	0.53	2	eP	Pn	03 17 50.5	-0.5
	baz=4.0						
ENAH				eS	Sn	03 17 59.5	+0.4
	baz=4.0						
HGSD	Ruisui	0.54	219	eP	Pn	03 17 50.6	-0.5
	baz=214						
HGSD				eS	Sn	03 18 00.5	+1.1
	baz=214						
CHGB	Renai	0.58	284	eP	Pn	03 17 51.2	-0.7
	baz=281						
CHGB				eS	Sn	03 18 00.1	-0.6
	baz=281						
VWDT	VWDT	0.62	255	P	Pn	03 17 51.4	-0.7
	baz=251						
VWDT				eS	Sn	03 18 00.9	-0.2
	baz=251						
NNSB	Datong	0.63	324	P	Pn	03 17 51.5	-0.9
	baz=323						
NNSB				eS	Sn	03 18 00.7	-1.0
	baz=323						
NNSH	Datong	0.63	324	P	Pn	03 17 51.4	-1.0
	baz=323						
NNSH				eS	Sn	03 18 00.5	-1.2
	baz=323						
NNS	Nan Shan	0.65	324	eP	Pn	03 17 51.6	-1.0
	baz=324						
NNS				eS	Sn	03 18 00.7	-1.2
	baz=324						
TWT	Tachien	0.66	301	eP	Pn	03 17 52.6	-0.2
	baz=298						
TWT				eS	Sn	03 18 01.9	-0.4
	baz=298						
TDCB	Techi	0.67	300	eP	Pn	03 17 52.3	-0.6
	baz=298						
TDCB				eS	Sn	03 18 01.3	-1.3
	baz=298						
TWC	Suao	0.69	4	P	Pn	03 17 52.7	-0.3
	baz=7.0						
TWC				S	Sn	03 18 03.0	+0.1
	baz=7.0						
YULB	Yu-li	0.69	221	eP	Pn	03 17 51.5	-1.6
	baz=218						
YULB				eS	Sn	03 18 01.3	-1.6
	baz=218						
EOS1	EOS1	0.70	26	eP	Pn	03 17 53.5	+0.4
	baz=28						
EOS1				eS	Sn	03 18 04.7	+1.7
	baz=28						
TWF1	Yuli	0.72	219	eP	Pn	03 17 52.1	-1.4
	baz=215						
ENTT	Nioudou	0.75	344	P	Pn	03 17 53.1	-0.7
	baz=345						
SSLB	Suanglung	0.78	261	eP	Pn	03 17 53.3	-1.0
	baz=258						
DPDB	Guoxing	0.80	278	eP	Pn	03 17 53.8	-0.8
	baz=276						
TWE	Neicheng	0.81	352	eP	Pn	03 17 54.2	-0.4
	baz=354						
SMLT	Sun Moon Lake	0.82	268	eP	Pn	03 17 54.2	-0.6
	baz=265						
SLBB	Yuanshan	0.84	350	eP	Pn	03 17 54.6	-0.6
	baz=351						
FULB	Fuli	0.85	213	eP	Pn	03 17 54.5	-0.8
	baz=210						
FULB				eS	Sn	03 18 07.4	+0.8
	baz=210						
NSK	Sanguang	0.85	332	P	Pn	03 17 54.5	-0.8
	baz=333						
NSK				eS	Sn	03 18 05.7	-1.0
	baz=333						
TYC	Yuchr	0.86	269	eP	Pn	03 17 54.8	-0.4
	baz=267						
TYC				eS	Sn	03 18 06.5	-0.2
	baz=267						
NWLT	Wulai	0.90	343	eS	Sn	03 18 07.2	-0.6
	baz=343						
CHKT	Chengkung	0.90	206	eP	Pn	03 17 54.6	-1.3
	baz=203						
CHKT				eS	Sn	03 18 06.5	-1.3
	baz=203						
WJS	Zhushan	0.98	265	eP	Pn	03 17 57.0	+0.1
	baz=262						
ALS	Alishan	0.99	246	eP	Pn	03 17 57.0	-0.3
	baz=243						
NSTT	Nanjuang	1.01	315	eP	Pn	03 17 57.7	+0.3
	baz=314						
NSTT				eS	Sn	03 18 10.6	0.0
	baz=314						
LIOB	Emei	1.01	316	eP	Pn	03 17 57.7	+0.3
	baz=315						
WNT	Mingjian	1.01	268	eP	Pn	03 17 57.5	+0.1
	baz=265						
ELDTW	Lidau	1.02	225	eP	Pn	03 17 56.1	-1.4
	baz=222						
TCU	Taichung	1.05	283	eP	Pn	03 17 57.9	+0.1
	baz=281						
TCU				eS	Sn	03 18 12.3	+0.9
	baz=281						
TIPB	Shuangxi	1.05	2	P	Pn	03 17 57.2	-0.8
	baz=2.0						
WLTB	Daxi	1.05	332	eP	Pn	03 17 58.1	+0.1
	baz=332						
NSY	Sanyi	1.06	298	eS	Sn	03 18 12.4	+0.6
	baz=297						
CHN5	Tsauling	1.07	253	eP	Pn	03 17 58.0	-0.3
	baz=250						
CHN5				eS	Sn	03 18 12.7	+0.6
	baz=250						
TWA	Mucha	1.07	350	eS	Sn	03 18 12.5	+0.4
	baz=351						
TATO	Taipei	1.09	345	eP	Pn	03 17 57.8	-0.6
	baz=346						
TWB1	Santiao Chiao	1.10	9	eP	Pn	03 17 58.3	-0.3
	baz=11						
NMLH	Miaoli	1.10	304	eS	Sn	03 18 12.3	-0.4
	baz=303						
WCHH	Zhanghua	1.14	278	eS	Sn	03 18 14.9	+1.3
	baz=276						
NWF	Wu-fen Shan	1.15	360	eS	Sn	03 18 14.9	+1.0
WDLH	Douliu	1.17	259	eP	Pn	03 17 59.6	+0.1
	baz=257						
JYNG	Yonaunjimaku	1.18	63	P	Pn	03 17 59.5	-0.1
JYNG				S	Sn	03 18 15.2	+0.6
NCU	National Centr	1.18	332	eP	Pn	03 17 59.7	0.0
	baz=332						
STYT	Tauyuan	1.21	232	eP	Pn	03 18 00.8	+0.6
	baz=229						
STYT				eS	Sn	03 18 17.1	+1.6
	baz=229						
TWS1	Kuangyinshan	1.23	344	eP	Pn	03 18 00.2	-0.1
	baz=344						
TPUB	Ta-pu	1.23	240	eP	Pn	03 18 00.7	+0.3
	baz=238						
TPUB				eS	Sn	03 18 16.6	+0.7
	baz=238						
CHN4	Tsaushan	1.24	243	eP	Pn	03 18 00.8	+0.3
	baz=241						
CHN4				eS	Sn	03 18 17.5	+1.5
	baz=241						
TWH	Lutao	1.24	194	eP	Pn	03 17 59.1	-1.3
	baz=191						
TWH				eS	Sn	03 18 14.7	-1.3
	baz=191						
YOJ	Yonaguni jima	1.24	64	eP	Pn	03 18 00.6	+0.2
	baz=65						
YOJ	Yonaguni jima	1.24	64	P	Pn	03 18 00.5	+0.1
YOJ				S	Sn	03 18 16.0	0.0
CHN2	Minshiung	1.27	253	eP	Pn	03 18 01.5	+0.7
	baz=250						
WTP	Ta-pu	1.27	239	eP	Pn	03 18 01.4	+0.4
	baz=236						
TWGBT	Beinan	1.27	211	eP	Pn	03 17 59.4	-1.6
	baz=209						
TWG	Pinlang	1.28	211	eP	Pn	03 17 59.3	-1.7
	baz=209						
RLNB	Erlin	1.31	269	eP	Pn	03 18 01.2	-0.2
	baz=267						
RLNB				eS	Sn	03 18 18.9	+1.2
	baz=267						
CHY	Chiayi	1.32	252	eP	Pn	03 18 01.7	+0.2
	baz=249						
TWK	Hsinying	1.36	242	eP	Pn	03 18 02.4	+0.2
	baz=239						
TWK				eS	Sn	03 18 19.9	+0.8
	baz=239						
CHN1	Nanshi	1.37	238	eP	Pn	03 18 02.5	+0.2
	baz=236						
SGST	Jiashian	1.39	233	eP	Pn	03 18 03.7	+1.2
	baz=231						
SGST				eS	Sn	03 18 21.0	+1.3
	baz=231						
SLGT	Liugui	1.40	229	eP	Pn	03 18 03.2	+0.6
	baz=227						
SLGT				eS	Sn	03 18 21.5	+1.5
	baz=227						
CHN8	Yiju	1.56	249	eS	Sn	03 18 24.4	+0.6
	baz=247						
SSD	Sandimen	1.58	223	eP	Pn	03 18 05.8	+0.7
	baz=220						
MASBT	Mashibuluo	1.68	220	eP	Pn	03 18 06.9	+0.4
	baz=218						
IRIF	Iriomote-Funau	1.82	76	P	Pn	03 18 08.5	+0.1
IRIF				eS	Sn	03 18 30.5	+0.3
HATJ	Hateruma jima	1.85	85	P	Pn	03 18 08.9	+0.1
HATJ				eS	Sn	03 18 31.5	+0.6
JKRS	Kuro-shima	2.05	81	P	Pn	03 18 11.9	+0.3
JKRS				S	Sn	03 18 36.9	+0.9
JIJ	Ishigaki jima	2.19	78	P	Pn	03 18 13.2	-0.3
JIJ				S	Sn	03 18 39.1	-0.4
JISG	Ishigakijimahi	2.39	73	P	Pn	03 18 16.0	-0.3
JISG				S	Sn	03 18 43.4	-1.0
JTJ	Tarama	2.75	74	P	Pn	03 18 21.0	-0.2
JTJ				eS	Sn	03 18 52.5	-0.7
JIRB	Irabujima	3.21	73	P	Pn	03 18 27.9	+0.4
JIRB				eS	Sn	03 19 04.0	-0.6

*IDC **24** 03:38:53.6±1.2, 32°.91S×178°.26W, h0km, mb4.3/4, mb1 4.4/5, mb1mx3.9/44, mbtmp4.3/5, ML3.9/1, MS4.7/1, Ms1 4.7/1, ms1mx3.6/43, Error ellipse: s-maj=44.5km s-min=27.1km az=147.0*
*NEIC **24** 03:38:54.9±0.6, 32°.90S×178°.24W, h10km, mb4.2/1, Error ellipse: s-maj=17.6km s-min=9.5km az=120.0*
ISC 24 03:38:58.4±1.4, 32°.9S±0°.1×178°.2W±0°.3, h34km, n18, σ0°77/19, mb4.3/5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	3.62	4	ePn	Pn	03 39 51.0	-1.1
URZ	Urewera	6.57	214	Pn	Pn	03 40 31.1	-1.6
	2.5nm,0.3s,baz=272,slow=4.6,SNR=26						
URZ				Sn	Sn	03 41 47.0	+0.6
	5.3nm,0.3s,baz=243,slow=19,SNR=11						
CTA	Charters Tower	34.07	283	P	P	03 45 40.2	+0.4
	3.6nm,0.6s,baz=117,slow=9.1,SNR=6.9						
CTAO	Charters Tower	34.07	283	eP	P	03 45 40.4	+0.6
ASAR	Alice Springs	42.83	270	P	P	03 46 53.5	+0.1
	1.7nm,0.6s,baz=107,slow=7.6,SNR=13						
WRAB	Tennant Creek	44.04	275	eP	P	03 47 02.3	-0.8
	2.1nm,0.5s						
WRA	Warramunga Arr	44.04	275	P	P	03 47 02.9	-0.3
	4.7nm,0.7s,baz=116,slow=7.6,SNR=12						
FITZ	Fitzroy Crossi	52.19	272	P	P	03 48 05.7	-0.5
	2.5nm,0.7s,baz=197,slow=10,SNR=4.0						
RPN	Rapa Nui	59.01	104	LR	LR	04 09 26.3	
	comp=Z,605nm,18.7s,baz=332,slow=31						
MKAR	Makanchi Array	119.19	309	PKP	PKPdf	03 57 43.9	+0.3
	0.2nm,0.5s,baz=82,slow=0.4,SNR=3.9						
KURK	Kurchatov	122.59	313	PKP	PKPdf	03 57 49.5	-0.4
KURBB	Kurchatov Arra	122.62	313	PKP	PKPdf	03 57 49.5	-0.5
	0.1nm,0.4s,baz=51,slow=4.7,SNR=3.8						
BVAR	Borovoye Array	128.01	314	PKP	PKPdf	03 58 00.9	+0.7
	0.6nm,0.5s,baz=115,slow=3.1,SNR=5.3						
FINES	FINESS Array B	147.38	338	PKPbc	PKPbc	03 58 38.4	+0.6
	4.7nm,0.8s,baz=61,slow=3.1,SNR=18						
NB2	NORSAR Subarra	151.15	350	PKP	PKPbc	03 58 48.0	+0.6
	comp=Z,0.4nm,0.6s,baz=18,slow=2.6						
HFS	Hagfors	151.61	347	PKPbc	PKPbc	03 58 48.9	+0.6
	comp=Z,2.1nm,0.8s,baz=9.5,slow=4.4,SNR=4.0						
MMAI	Mount Meron Ar	151.83	280	PKPbc	PKPbc	03 58 50.9	+1.0
	comp=Z,1.3nm,0.3s,baz=63,slow=6.6,SNR=4.0						
BRTR	Keskin Array B	153.51	294	PKPbc	PKPbc	03 58 53.6	+0.2
	comp=Z,0.8nm,0.6s,baz=135,slow=4.3,SNR=3.9						
BRTR				PKPab	PKPab	03 59 06.9	+0.9
	comp=Z,0.5nm,0.6s,baz=120,slow=3.9,SNR=3.7						

*IDC **24** 03:39:18.3±1.9, 2°.54N×128°.14E, h167km±17km, mb3.9/25, mb1 4.0/25, mb1mx3.9/61, mbtmp4.4/25, Error ellipse: s-maj=19.5km s-min=7.6km az=80.0*
*ISCJB **24** 03:39:19.8±0.2, 2°.44N±0°.03×128°.10E±0°.04, h200km, mb4.2/44, Error ellipse: s-maj=6.1km s-min=4.0km az=175.6*
*NEIC **24** 03:39:20.1±0.8, 2°.49N×128°.13E, h188km±8km, mb4.4/14, Error ellipse: s-maj=10.2km s-min=6.2km az=76.0*
*DJA **24** 03:39:21.9±0.6, 2°N±5°×12°8E±°, h156km±5km, M4.7/12, mB5.6/1, mb4.7/8, MLv4.8/12, Mw(mB)5.2/1*
ISC 24 03:39:21.5±0.4, 2°47N±0°05×128°06E±0°07, h200km, n89, σ1°66/99, mb4.3/44, 1C, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.83	202	ePn	Pn	03 39 55.8	-2.5
LBMI	Labuha	3.14	190	P	Pn	03 40 09.5	-3.3
LBMI				S	Sn	03 40 51.1	-2.0
KMSI	Cibinong	4.50	245	P	Pn	03 40 27.5	-2.0
KMSI				S	Sn	03 41 20.6	-2.4
SANI	Sanana	4.95	205	P	Pn	03 40 31.6	-3.7
NLAI	Namlea	5.76	190	P	Pn	03 40 43.8	-1.8
CTBH	Cotabato--PC H	6.06	321⇑	eP	Pn	03 40 46.4	-3.1
BUKP	Musuan	6.14	331	eP	Pn	03 40 48.1	-2.6
BUKP				eS	Sn	03 41 56.3	-5.1
LUWI	Luwuk	6.34	237	P	Pn	03 40 53.7	+0.5
MRSI	Marisa	6.43	252	P	Pn	03 40 55.1	+0.7
FAKI	Fak Fak	6.80	142	P	Pn	03 40 57.8	-1.3
	203nm,1.0s						
FAKI	Fak Fak	6.80	142	ePn	Pn	03 40 58.2	-1.0
BNDI	Bandanaira	7.19	165	P	Pn	03 41 04.3	+0.1
	232nm,1.0s						
RKPI	Ransiki, Papua	7.28	123	P	Pn	03 41 05.1	-0.3
MPSI	Mapaga	8.44	256	P	Pn	03 41 20.0	-0.5
TTSI	Tana Toraja	9.90	236	P	Pn	03 41 36.3	-3.2
JAY	Jayapura	13.57	111	P	P	03 42 27.4	-1.3
	0.6nm,0.3s,baz=319,slow=11,SNR=3.6						
MTN	Manton Dam	15.52	169	ePn	Pn	03 42 47.5	-2.7
	26nm,0.8s						
JAGI	Jajag, Banyuwa	17.62	232	eP	Pn	03 43 13.8	-1.4
	54nm,1.0s						
FITZ	Fitzroy Crossi	20.58	187	P	P	03 43 43.7	-1.5
	5.7nm,0.9s,baz=337,slow=7.7						
WRAB	Tennant Creek	23.11	165	eP	P	03 44 09.0	-0.9
	21nm,0.8s						
WRA	Warramunga Arr	23.11	165	P	P	03 44 09.3	-0.7
	19nm,0.6s,baz=345,slow=10,SNR=74						
WRA				S	S	03 48 12.4	+6.2
	6.7nm,0.9s,baz=343,slow=17,SNR=7.1						
WRA				ScP	ScP	03 51 14.7	+2.8
	2.1nm,0.8s,baz=340,slow=3.2,SNR=8.0						
WB2	Warramunga Arr	23.12	165	eP	P	03 44 09.9	-0.1
	22nm,0.8s						
ASAR	Alice Springs	26.60	168	P	P	03 44 41.2	-0.2
	0.8nm,0.4s,baz=353,slow=7.8,SNR=21						
ASAR				PcP	PcP	03 48 01.2	+0.7
	1.6nm,0.7s,baz=350,slow=2.2,SNR=8.1						
ASAR				ScP	ScP	03 51 23.8	+2.1
	3.1nm,0.9s,baz=342,slow=2.6,SNR=15						
AS01	Alice Springs	26.61	168	eP	P	03 44 40.7	-0.8
NJ2	Nanjing	30.67	345	eP	P	03 45 18.5	+1.1
NJ2				pmax	pmax		
	comp=Z,16nm,0.6s						
GYA	Guiyang	31.48	321	eP	P	03 45 27.9	+3.2
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CMAR	Chiang Mai Arr	32.66	301	P	P	03 45 36.9	+1.9
	comp=Z,1.7nm,0.7s,baz=117,slow=7.9,SNR=7.8						
CHTO	Chiang Mai	32.81	302	eP	P	03 45 38.0	+1.7
	comp=Z,2.6nm,0.6s						
KMI	Kunming	33.20	315	P	P	03 45 42.8	+2.9
KMI				pmax	pmax		
	comp=Z,9.0nm,1.4s						
KSAR	Wonju Array Be	34.80	360	P	P	03 45 53.1	0.0
KSRS	Korea Array	34.81	360	P	P	03 45 53.1	-0.1
	comp=Z,1.7nm,0.6s,baz=173,slow=9.3,SNR=6.3						
MAJO	Matsushiro	35.17	14	eP	P	03 45 54.5	-1.9
	comp=Z,7.1nm,0.6s						
MAT	Matsushiro	35.17	14	P	P	03 45 54.7	-1.7
MJAR	Matsushiro Arr	35.17	14	P	P	03 45 54.4	-1.9
	comp=Z,4.2nm,0.8s,baz=190,slow=9.6,SNR=14						
MJB9	Matsu-Tunnel	35.17	14	eP	P	03 45 54.3	-2.1
	comp=Z,7.1nm,0.7s						
CD2	Chengdu	36.44	323	P	P	03 46 06.9	-0.4
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
STKA	Stephens Creek	36.50	160	P	P	03 46 07.8	0.0
	comp=Z,5.7nm,0.3s,baz=337,slow=9.0,SNR=21						
STKA	Stephens Creek	36.50	160	eP	P	03 46 08.1	+0.4
	comp=Z,2.7nm,0.8s						
NWAO	Narrogin (SRO)	36.67	195	P	P	03 46 10.5	+1.4
	comp=Z,1.3nm,0.4s,baz=258,slow=9.3,SNR=2.8						
LZH	Lanzhou	40.26	329	eP	P	03 46 40.3	+1.1
LZH				pP	pP	03 47 18.8	-2.8
LZH				sP	sP	03 47 38.6	-5.7
LZH				ePP	PnPn	03 48 20.1	-1.8
LZH				pmax	pmax		
	comp=Z,22nm,1.0s						
LZH				pmax	pmax		
	comp=Z,13μm,8.1s						
LZH				LR	LR		
	comp=N,310nm,14.8s						
LZH				LR	LR		
	comp=E,300nm,15.2s						
LZH				LR	LR		
	comp=Z,370nm,18.6s						
HHC	Hu-ho-hao-te	41.01	341	eP	P	03 46 47.0	+1.8
HHC				pmax	pmax		
	comp=Z,28nm,1.1s						
CN2	Changchun	41.22

KKN	Kakani	47.97	306	*e*P	P	03 47 41.6	+1.0
	comp=Z,17nm,0.6s						
DMN	Daman	48.04	306	*e*P	P	03 47 42.4	+1.2
	comp=Z,17nm,0.7s						
ULN	Ulaanbaatar	48.72	341	*e*P	P	03 47 46.4	+0.4
	comp=Z,4.2nm,0.8s						
SONM	Songino Array	48.91	341	P	P	03 47 47.6	+0.3
	comp=Z,3.0nm,0.7s,baz=153,slow=8.6,SNR=13						
SONM				PcP	PcP	03 49 08.8	+0.3
	comp=Z,1.5nm,0.6s,baz=164,slow=3.9,SNR=7.1						
SONA1	Songino Array	48.92	341	*e*P	P	03 47 47.9	+0.5
KOLN	Koldanda	49.33	305	*e*P	P	03 47 52.5	+1.5
	comp=Z,39nm,0.7s						
DANN	Dangsing	49.43	306	*e*P	P	03 47 53.1	+1.3
	comp=Z,45nm,0.6s						
WMQ	Urumqi	54.51	325	P	P	03 48 30.9	+2.1
PETK	Petropavlovsk-	56.10	21	P	P	03 48 39.8	0.0
	comp=Z,4.6nm,0.8s,baz=195,slow=3.6,SNR=7.5						
PETK	Petropavlovsk-	56.10	21	*e*P	P	03 48 38.1	-1.8
MK01	Makanchi Array	59.32	325	*e*P	P	03 49 03.0	+0.6
MK31	Makanchi Array	59.34	325	*e*P	P	03 49 03.5	+0.9
MKAR	Makanchi Array	59.34	325	P	P	03 49 03.4	+0.8
	comp=Z,6.4nm,0.6s,baz=120,slow=8.5,SNR=64						
YAK	Yakutsk	59.43	1	*e*P	P	03 49 02.1	-0.7
MAKZ	Makanchi	59.53	325	*e*P	P	03 49 04.7	+0.9
	comp=Z,14nm,1.2s						
MA2	Magadan	59.60	13	P	P	03 49 03.9	-0.2
	comp=Z,8.4nm,0.7s,baz=190,slow=6.0,SNR=5.9						
ZALV	Zalesovo Beam	62.30	333	P	P	03 49 21.4	-0.9
	comp=Z,1.2nm,0.4s,baz=118,slow=8.6,SNR=6.4						
ZALV				PcP	PcP	03 49 59.7	-0.5
	comp=Z,1.1nm,0.6s,baz=79,slow=7.5,SNR=3.9						
KURBB	Kurchatov Arra	63.51	327	P	P	03 49 30.9	+0.5
	comp=Z,7.8nm,0.6s,baz=127,slow=6.0,SNR=31						
KURK	Kurchatov	63.51	327	*e*P	P	03 49 30.8	+0.5
KK31	Karatay Array	65.05	317	*e*P	P	03 49 39.6	-1.0
TIXI	Tiksi	69.08	0	*e*P	P	03 50 03.9	-1.4
	comp=Z,5.5nm,0.6s						
BVAR	Borovoye Array	69.09	327	P	P	03 50 05.9	+0.1
	comp=Z,7.5nm,0.9s,baz=130,slow=5.6,SNR=24						
BRVK	Borovoye	69.16	327	*e*P	P	03 50 06.7	+0.5
	comp=Z,13nm,1.1s						
CASY	Casey	69.75	187	*e*P	P	03 50 08.0	-1.4
	comp=Z,7.1nm,1.0s						
ABKAR	Akbulak array	73.96	321	*e*P	P	03 50 35.1	+0.3
AKTO	Aktyubinsk	75.46	322	P	P	03 50 44.0	+0.5
	comp=Z,3.0nm,0.6s,baz=110,slow=7.1,SNR=5.9						
ARU	Arti	76.70	328	P	P	03 50 49.6	-0.8
	comp=Z,3.8nm,0.6s,baz=74,slow=4.4,SNR=9.2						
ARU	Arti	76.70	328	*e*P	P	03 50 49.8	-0.6
	comp=Z,3.5nm,0.6s						
VNDA	Vanda	82.02	173	P	P	03 51 19.1	+0.4
	comp=Z,1.1nm,0.8s,baz=349,slow=7.2,SNR=6.0						
RAYN	Ar Rayn	82.20	293	*e*P	P	03 51 20.2	-0.6
	comp=Z,4.3nm,0.9s						
KIV	Kislovodsk	84.96	314	*e*P	P	03 51 34.4	-0.1
	comp=Z,8.2nm,0.8s						
ILAR	Eielson Array	85.66	25	P	P	03 51 37.8	+0.4
	comp=Z,0.3nm,0.5s,baz=252,slow=4.5,SNR=6.5						
INK	Inuvik	90.83	22	*e*P	P	03 52 00.5	-1.3
	comp=Z,0.9nm,0.6s						
SPITS	Spitsbergen Ar	91.96	349	P	P	03 52 06.7	-0.2
	comp=Z,1.5nm,0.6s,baz=79,slow=9.4,SNR=1.6						
ARCES	ARCESS Array B	92.08	340	P	P	03 52 07.0	-0.5
	comp=Z,3.4nm,0.7s,baz=77,slow=6.8,SNR=25						
FINES	FINESS Array B	93.56	332	P	P	03 52 13.9	-0.6
	comp=Z,1.9nm,0.9s,baz=196,slow=12,SNR=6.8						
YKA	Yellowknife Ar	100.08	25	P	Pdif	03 52 44.4	+0.5
	comp=Z,0.2nm,0.6s,baz=302,slow=4.4,SNR=3.2						
TXAR	Lajitas Array	121.29	53	PKP	PKPdf	03 57 52.3	+0.7
	comp=Z,0.3nm,0.8s,baz=121,slow=0.5,SNR=3.8						
TORD	Torodi Ar. Bea	124.57	288	PKP	PKPdf	03 57 58.2	+0.2
	comp=Z,1.5nm,0.8s,baz=103,slow=1.7,SNR=7.4						
TKL	Tuckaleechee C	131.78	35	PKP	PKPdf	03 58 12.9	+1.6
	comp=Z,2.4nm,0.8s,baz=312,slow=12,SNR=3.3						
JTS	JuntasAbangare	144.77	68	PKP	PKPdf	03 58 36.3	+0.7
	comp=Z,6.0nm,0.7s,baz=197,slow=19,SNR=4.8						

AZER ***24*** *03:49:53.4±1.8, 38°.44N×43°.34E, h0km, ml3.4/8, Error ellipse: s-maj=18.4km s-min=14.1km az=160.0*
ISN ***24*** *03:49:53.4±1.0, 38°.24N×43°.54E, h0km±4km, ML3.5*
ISK ***24*** *03:49:54.7, 38°.73N×43°.53E, h5km, ML3.4/20*
DDA ***24*** *03:49:55.6, 38°.70N×43°.54E, h22km, Ml3.5*
CSEM ***24*** *03:49:56.3±0.2, 38°.73N×43°.51E, h2km, ML3.4, Error ellipse: s-maj=5.9km s-min=3.6km az=130.0*
ISCJB ***24*** *03:49:57.0±0.4, 38°.74N±0°.02×43°.46E±0°.03, h8km±3km, Error ellipse: s-maj=4.5km s-min=3.1km az=39.8*
ISC 24 03:49:57.3±0.9, 38°.73N±0°.02×43°.51E±0°.02, h14km±7km, n102, σ1§26/122, 8C-12D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	Van	0.16	216	PG	Pg	03 50 00.9	-0.4
VANB				SG	Sb	03 50 05.2	-0.1
VANB	Van	0.16	216	*e*Pg	Pg	03 50 00.9	-0.4
VANB				*e*Sg	Sb	03 50 05.2	-0.1
TVAN	Van	0.21	202	*i* P	Pg	03 50 01.4	-0.7
TVAN				*i* S	Sb	03 50 06.3	-0.6
TVAN	Van	0.21	202	P	Pg	03 50 01.5	-0.7
TVAN				S	Sb	03 50 06.3	-0.6
VMUR	Van-Muradiye	0.27	10	*i* P	Pg	03 50 01.8	-1.3
VMUR				*i* S	Sg	03 50 07.4	+0.4
VMUR	Van-Muradiye	0.27	10	P	Pg	03 50 01.8	-1.3
VMUR				S	Sg	03 50 07.4	+0.4
ERCV	ERCIS-VAN	0.32	336	PG	Pg	03 50 02.4	-1.6
ERCV	ERCIS-VAN	0.32	336	*e*Pg	Pg	03 50 02.4	-1.6
CLDR	Caldiran	0.53	37	PG	Pg	03 50 05.2	-2.5
CLDR	Caldiran	0.53	37	*i* P	Pg	03 50 04.8	-2.9
CLDR				*i* S	Sg	03 50 14.9	+0.1
CLDR	Caldiran	0.53	37	P	Pg	03 50 04.8	-2.9
CLDR	Caldiran	0.53	37	*e*Pg	Pg	03 50 05.2	-2.5
CLDR				S	Sg	03 50 14.9	+0.1
GEVA	Gevas	0.54	221	*i* P	Pg	03 50 06.8	-1.2
GEVA	Gevas	0.54	221	P	Pg	03 50 06.8	-1.2
ADCV	BITLIS_Adilcev	0.62	278	*i* P	Pg	03 50 09.0	-0.5
ADCV	BITLIS_Adilcev	0.62	278	P	Pg	03 50 09.0	-0.5
DYDN	Diyadin	0.83	10	*i* P	Pg	03 50 11.6	-1.8
DYDN				*i* S	Sb	03 50 25.0	+0.3
DYDN	Diyadin	0.83	10	P	Pg	03 50 11.6	-1.8
DYDN				S	Sb	03 50 25.0	+0.3
TUTA	Tutak	0.87	322	*i* P	Pg	03 50 12.2	-1.9
AGRB	Hanur-Agry	0.94	335	PG	Pb	03 50 13.7	-1.8
AGRB	Hanur-Agry	0.94	335	*e*Pg	Pb	03 50 13.7	-1.8
GURO	Guroymak-BITLI	1.17	262	PN	Pb	03 50 18.1	-1.2
GURO	Guroymak-BITLI	1.17	262	*e*Pn	Pb	03 50 18.1	-1.2
HAKT	HAKKARI	1.18	172	*i* P	Pn	03 50 17.2	-2.3
IGDI	IGDIR	1.22	21	*i* P	Pn	03 50 19.1	-0.9
EKAR	Karacoban	1.25	296	*i* P	Pn	03 50 19.3	-1.2
EKAR	Karacoban	1.25	296	P	Pn	03 50 19.3	-1.2
YOVA	Hakkari_Y¨…kse	1.29	151	*i* P	Pn	03 50 19.7	-1.4
EATA	Eleskirt	1.38	326	*i* P	Pn	03 50 21.8	-0.7
EATA				*i* S	Sg	03 50 43.6	+1.7
EATA	Eleskirt	1.38	326	P	Pn	03 50 21.8	-0.7
EATA				S	Sg	03 50 43.6	+1.7
HYR	Heyderabad	1.44	46	⇑P	Pb	03 50 24.4	+0.5
HYR	Heyderabad	1.44	46	⇑P	Pb	03 50 24.4	+0.5
HYR				⇑S	Sg	03 50 48.0	+4.2
SRTM	Siirt_Merkez	1.45	240	*i* P	Pb	03 50 24.5	+0.4
SRTM	Siirt_Merkez	1.45	240	P	Pb	03 50 24.5	+0.4
CUKT	Cukurca	1.48	177	PN	Pn	03 50 22.7	-0.9
CUKT	Cukurca	1.48	177	*i* P	Pn	03 50 22.0	-1.5
CUKT	Cukurca	1.48	177	P	Pn	03 50 22.0	-1.5
CUKT	Cukurca	1.48	177	*e*Pn	Pn	03 50 22.7	-0.9
SIRT	Sirnak	1.48	215	PN	Pn	03 50 23.7	+0.1
SIRT	Sirnak	1.48	215	*e*Pn	Pn	03 50 23.7	+0.1
NAX	Nakhchivan	1.61	73	P	Pn	03 50 26.4	+1.0
	SNR=51						
NAX				⇓S	Sg	03 50 49.6	+0.4
NAX	Nakhchivan	1.61	73	P	Pn	03 50 26.4	+1.0
	SNR=51						
NAX				⇓S	Sg	03 50 49.6	+0.4
DIGO	Kars	1.69	357	*i* P	Pn	03 50 26.7	+0.1
DIGO	Kars	1.69	357	P	Pn	03 50 26.7	+0.1
GNI	Garni	1.71	33	PN	Pn	03 50 27.2	+0.3
GNI	Garni	1.71	33	*e*Pn	Pn	03 50 27.2	+0.3
SBZ	Shahbuz	1.73	66	⇓P	Pn	03 50 27.9	+0.9
SBZ				⇓S	Sg	03 50 54.3	+1.4
SBZ	Shahbuz	1.73	66	⇓P	Pn	03 50 27.9	+0.9
SBZ				⇓S	Sg	03 50 54.3	+1.4
HOMI	Horasan	1.81	317	*i* P	Pn	03 50 28.9	+0.6
BNGL	BINGOL	1.86	278	*i* P	Pb	03 50 30.2	-0.9
SVAN	Silvan-Diyarba	1.90	253	PN	Pn	03 50 29.6	+0.3
SVAN	Silvan-Diyarba	1.90	253	*i* P	Pb	03 50 31.3	-0.5
SVAN	Silvan-Diyarba	1.90	253	*e*Pn	Pn	03 50 29.6	+0.3
SVAN	Silvan-Diyarba	1.90	253	P	Pb	03 50 31.3	-0.5
KARS	Kars	1.93	350	PN	Pn	03 50 30.1	+0.3
KARS	Kars	1.93	350	*e*Pn	Pn	03 50 30.1	+0.3
BTMN	Batman	1.95	245	*i* P	Pn	03 50 31.1	+1.1
BTMN	Batman	1.95	245	P	Pn	03 50 31.1	+1.1
ORD	Ordubad	1.95	83	⇑P	Pn	03 50 30.8	+0.8
ORD				⇓S	Sb	03 50 58.9	+2.0
ORD	Ordubad	1.95	83	⇑P	Pn	03 50 30.8	+0.8
ORD				⇓S	Sb	03 50 58.9	+2.0
EAK	Akyaka	1.96	2	*i* P	Pb	03 50 32.7	-0.1
EAK	Akyaka	1.96	2	P	Pb	03 50 32.7	-0.1
ERZM	Erzurum	2.04	306	*i* P	Pn	03 50 32.5	+1.1
ERZM	Erzurum	2.04	306	P	Pn	03 50 32.5	+1.1
SENK	Senkaya-Erzuru	2.04	334	PN	Pn	03 50 31.5	+0.1
SENK	Senkaya-Erzuru	2.04	334	*e*Pn	Pn	03 50 31.5	+0.1
BNGB	Bing¨¶l	2.23	278	PN	Pn	03 50 34.4	+0.6
BINT	Bingol	2.36	275	*e*Pn	Pn	03 50 34.4	-1.4
HANI	Diyarbakir_Han	2.46	264	*i* P	Pn	03 50 38.8	+1.8
HANI	Diyarbakir_Han	2.46	264	P	Pn	03 50 38.8	+1.8
MARD	Mardin	2.58	238	*i* P	Pn	03 50 38.0	-0.7
GDB	GEDABAY	2.64	40	⇓P	Pn	03 50 41.6	+2.0
	SNR=3.1						
AKH	Akhalkalaki	2.68	360	PN	Pn	03 50 40.9	+0.7
AKH	Akhalkalaki	2.68	360	*e*Pn	Pn	03 50 40.9	+0.7
DIY	Diyarbakir	2.71	253	*e*Pn	Pn	03 50 42.1	+1.6
MAZI	Mazidag	2.73	243	PN	Pn	03 50 40.8	+0.1
MAZI	Mazidag	2.73	243	*e*Pn	Pn	03 50 40.8	+0.1
QZX	Qazax, Azerbai	2.73	31	⇓P	Pb	03 50 43.7	-2.3
	SNR=8.4						
QZX	Qazax, Azerbai	2.73	31	⇓P	Pb	03 50 43.7	-2.3
	SNR=8.4						
QZX				⇑S	Sb	03 51 20.9	+1.5
DYBB	Diyarbakir	2.76	255	PN	Pn	03 50 42.1	+1.0
DIYA	Diyarbakir	2.78	254	*i* P	Pn	03 50 42.8	+1.4
DIYA	Diyarbakir	2.78	254	P	Pn	03 50 42.8	+1.4
GANJ	Ganja	2.90	48	⇑P	Pn	03 50 45.4	+2.4
	SNR=6.9						
GANJ				⇓S	Sb	03 51 25.6	+1.6
ERZN	Erzincan	3.07	287	PN	Pn	03 50 46.2	+0.8
BCA	Borcka	3.08	333	PN	Pn	03 50 46.4	+0.9
BCA	Borcka	3.08	333	*e*Pn	Pn	03 50 46.4	+0.9
BAYT	Ayd¨–ntepe-Bay	3.09	304	PN	Pn	03 50 46.5	+0.7
BAYT	Ayd¨–ntepe-Bay	3.09	304	*e*Pn	Pn	03 50 46.5	+0.7
TBLG	Delisi	3.15	17	PN	Pn	03 50 47.5	+1.1
TBLG	Delisi	3.15	17	*e*Pn	Pn	03 50 47.5	+1.1
CHOM	Cayeli-Rize	3.17	319	PN	Pn	03 50 47.7	+0.9
CHOM	Cayeli-Rize	3.17	319	*e*Pn	Pn	03 50 47.7	+0.9
PTK	Pertek	3.22	274	PN	Pn	03 50 48.1	+0.5
PTK	Pertek	3.22	274	*e*Pn	Pn	03 50 48.1	+0.5
SVRC	Sivrice-ELAZID	3.31	265	PN	Pn	03 50 49.6	+0.7
SVRC	Sivrice-ELAZID	3.31	265	*e*Pn	Pn	03 50 49.6	+0.7
LRK	Lerik	3.78	90	⇑P	Pn	03 50 55.6	+0.3
	SNR=8.3						
URFA	Urfa	3.91	252	PN	Pn	03 50 58.1	+1.1
URFA	Urfa	3.91	252	*e*Pn	Pn	03 50 58.1	+1.1
MALT	Malatya	4.01	266	PN	Pn	03 50 59.5	+1.2
MALT	Malatya	4.01	266	*e*Pn	Pn	03 50 59.5	+1.2
RTB	Rutbah	6.25	206	*e*Pn	Pn	03 51 23.0	-6.1
	SNR=3.0						
RTB				*e*Sn	Sn	03 52 26.0	-14
	SNR=3.0						

ISCJB ***24*** *03:51:53.6±0.5, 35°.72N±0°.03×140°.16E±0°.06, h74km±4km, mb3.7/7, Error ellipse: s-maj=8.1km s-min=5.3km az=161.3*
JMA ***24*** *03:51:54.8±0.1, 35°.79N×140°.10E, h63km±1km, M3.2 Broadband fault plane solution: P waves. NP1: ϕ=4.0000°, δ70.0000°, λ88.0000°. NP2:ϕ=190.0000°, δ20.0000°, λ96.0000°. Principal axes: T Plg65.0000°, Azm271.0000°; N Plg2.0000°, Azm5.0000°; P Plg25.0000°, Azm96.0000°;*
JMA Felt I J1.
IDC ***24*** *03:51:54.0±4.1, 35°.68N×140°.27E, h66km±31km, mb3.5/7, mb1 3.5/8, mb1mx3.2/83, mbtmp3.8/8, ML3.5/1 Error ellipse: s-maj=52.0km s-min=7.3km az=65.0*
ISC 24 03:51:54.5±0.9, 35°.73N±0°.04×140°.14E±0°.05, h66km±8km, n19, σ0§88/29, mb3.8/7, 2C-4D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYT	Yasato	0.50	5	⇑P	Pn	03 52 06.6	-0.3
JYT				S	Sn	03 52 15.2	-0.8
BSO3	Boso 3	0.97	162	⇑P	Pn	03 52 12.9	+0.7
JOD2	Odawara 2	0.97	242	⇓P	Pn	03 52 12.7	+0.2
JOD2				S	Sn	03 52 25.6	-0.2
JRY	Ryogami san	1.04	286	⇓P	Pn	03 52 14.1	+0.7
JIM2	Oshima 3	1.16	210	P	Pn	03 52 14.5	-0.4
JIM2				S	Sn	03 52 29.9	-0.3
JKT	Katashina	1.26	325	P	Pn	03 52 16.2	-0.1
JKT				S	Sn	03 52 32.5	0.0
BSO1	Boso 1	1.27	147	P	Pn	03 52 16.4	+0.6
BSO1				S	Sn	03 52 34.3	+2.4
JYN	Shimob	1.32	260	⇓P	Pn	03 52 17.4	+0.4
JYN				S	Sn	03 52 34.0	+0.1
JIZS	Izushimoda	1.44	226	⇓P	Pn	03 52 18.7	+0.1
JIZS				S	Sn	03 52 36.3	-0.4
MJAR	Matsushiro Arr	1.76	298	P	Pn	03 52 23.2	+0.4
	18nm,0.3s,baz=100,slow=14,SNR=282						
MJAR				S	Sn	03 52 46.4	+2.0
	12nm,0.3s,baz=108,slow=22,SNR=7.9						
MAT	Matsushiro	1.76	298	P	Pn	03 52 23.7	+0.8
MAT				S	Sn	03 52 46.1	+1.8
JHJ	Hachijo jima 2	2.62	187	P	Pn	03 52 35.1	+0.6
	22nm,0.3s,baz=325,slow=20,SNR=27						
JHJ				S	Sn	03 53 03.9	-1.3
	49nm,0.3s,baz=256,slow=23,SNR=10						
KURBB	Kurchatov Arra	46.00	309	P	P	04 00 11.0	-0.1
	0.9nm,0.5s,baz=85,slow=7.8,SNR=8.5						
WRA	Warramunga Arr	55.64	187	P	P	04 01 23.8	0.0
	0.5nm,0.4s,baz=1.0,slow=7.6,SNR=10						
ASAR	Alice Springs	59.37	187	P	P	04 01 50.0	+0.1
	0.2nm,0.3s,baz=355,slow=5.9,SNR=5.4						
ARCES	ARCESS Array B	64.85	339	P	P	04 02 26.3	+0.1
	0.6nm,0.7s,baz=46,slow=5.2,SNR=3.6						
FINES	FINESS Array B	69.48	332	P	P	04 02 55.3	-0.2
	1.1nm,0.9s,baz=41,slow=7.4,SNR=3.9						
AKASG	Malin Array Be	74.69	322	P	P	04 03 26.9	0.0
	0.4nm,0.3s,baz=51,slow=5.9,SNR=3.2						
BRTR	Keskin Array B	78.94	311	P	P	04 03 50.3	-0.9
	0.7nm,0.9s,baz=61,slow=8.6,SNR=4.0						

IDC ***24*** *04:09:40.4±1.1, 32°.69S×178°.28W, h0km, mb4.3/5, mb1 4.5/6, mb1mx4.0/41, mbtmp4.3/6, ML3.8/1, Error ellipse: s-maj=34.0km s-min=27.4km az=50.0*
NEIC ***24*** *04:09:41.6±0.7, 32°.78S×178°.24W, h10km, mb4.1/2, Error ellipse: s-maj=19.3km s-min=11.9km az=102.0*
ISC 24 04:09:45.1±0.9, 32°.85S±0°.10×178°.4W±0°.2, h33km, n21, σ1§63/18, mb4.2/7, 1C, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	3.61	7	*e*Pn	Pn	04 10 36.1	-2.6
URZ	Urewera	6.52	213	Pn	Pn	04 11 18.3	-0.4
	1.7nm,0.3s,baz=45,slow=16,SNR=4.8						
URZ				Sn	Sn	04 12 28.3	-3.7
	7.8nm,0.3s,baz=62,slow=12,SNR=9.6						
CTA	Charters Tower	33.94	283	P	P	04 16 27.5	+2.0
	4.0nm,0.5s,baz=106,slow=14,SNR=6.5						
CTAO	Charters Tower	33.94	283	*e*P	P	04 16 27.5	+2.0
ASAR	Alice Springs	42.70	270	P	P	04 17 39.9	+0.6
	1.4nm,0.5s,baz=110,slow=7.7,SNR=20						
WRAB	Tennant Creek	43.91	275	*e*P	P	04 17 49.2	+0.3
	2.1nm,0.5s						
WRA	Warramunga Arr	43.91	275	P	P	04 17 49.3	+0.3
	4.1nm,0.6s,baz=114,slow=7.9,SNR=26						
CASY	Casey	52.83	209	*e*P	P	04 18 57.0	0.0
	1.0nm,0.5s						
QSPA	South Pole Qui	57.27	180	P	P	04 19 32.0	+2.7
	1.0nm,0.8s,baz=20,slow=4.5,SNR=2.6						
SYO	Syowa Base	74.66	193	*e*PcP	PcP	04 21 33.4	-1.5
SNAA	Sanae	75.72	179	P	P	04 21 37.3	+10
VNA3	Neumayer Olymp	75.89	176	P	P	04 21 38.4	+10
VNA2	Neumayer--Watz	76.32	177	P	P	04 21 41.4	+11
	baz=177,slow=4.2						
CMAR	Chiang Mai Arr	93.89	289	P	P	04 22 59.8	+0.2
	0.8nm,0.3s,baz=132,slow=5.3,SNR=3.7						

ARCES	ARCESS Array B	140.90	347	PKhKP	PKPpre	04 29 06.9	
	1.0nm,0.8s,baz=32,slow=3.5,SNR=2.5						
FINES	FINESS Array B	147.31	338	PKPbc	PKPbc	04 29 25.0	+0.6
	2.2nm,0.5s,baz=43,slow=4.0,SNR=24						
NB2	NORSAR Subarra	151.11	350	PKP	PKPbc	04 29 34.3	+0.2
	comp=Z,0.5nm,0.6s,baz=15,slow=2.5						
HFS	Hagfors	151.56	347	PKPbc	PKPbc	04 29 34.5	-0.6
	comp=Z,2.2nm,0.8s,baz=305,slow=5.1,SNR=4.6						
MMAI	Mount Meron Ar	151.70	280	PKPbc	PKPbc	04 29 36.2	-0.2
	comp=Z,0.7nm,0.3s,baz=131,slow=4.4,SNR=3.0						
BRTR	Keskin Array B	153.38	294	PKPbc	PKPbc	04 29 40.2	+0.2
	comp=Z,0.6nm,0.5s,baz=145,slow=4.5,SNR=4.6						
TORD	Torodi Ar. Bea	160.39	180	PKPab	PKPab	04 30 22.7	+0.1
	comp=Z,0.7nm,1.0s,baz=212,slow=5.1,SNR=2.7						

DDA ***24*** *04:11:42.0, 38°.72N×43°.58E, h7km, Ml2.7*
ISCJB ***24*** *04:11:42.9±0.6, 38°.71N±0°.03×43°.57E±0°.07, h18km±7km, Error ellipse: s-maj=8.9km s-min=4.5km az=12.4*
CSEM ***24*** *04:11:42.3±0.2, 38°.74N×43°.56E, h12km, ML2.2, Error ellipse: s-maj=6.3km s-min=3.9km az=102.0*
ISK ***24*** *04:11:42.1, 38°.74N×43°.49E, h9km, ML2.2/4*
ISC 24 04:11:42.5±1.0, 38°.74N±0°.02×43°.55E±0°.04, h18km±4km, n30, σ0§63/42, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	Van	0.19	222	PG	Pg	04 11 47.5	+0.1
VANB				SG	Sg	04 11 51.8	+1.1
VANB	Van	0.19	222	*e*Pg	Pg	04 11 47.5	+0.1
VANB				*e*Sg	Sg	04 11 51.8	+1.1
TVAN	Van	0.24	209	*i* P	Pg	04 11 47.5	-0.7
TVAN				*i* S	Sb	04 11 52.6	+0.6
TVAN	Van	0.24	209	P	Pg	04 11 47.5	-0.7
TVAN				S	Sb	04 11 52.6	+0.6
VMUR	Van-Muradiye	0.25	3	*i* P	Pg	04 11 48.0	-0.4
VMUR				*i* S	Sb	04 11 53.7	+1.2
VMUR	Van-Muradiye	0.25	3	P	Pg	04 11 48.0	-0.4
VMUR				S	Sb	04 11 53.7	+1.2
CLDR	Caldiran	0.50	35	PG	Pg	04 11 52.2	-0.4
CLDR				SG	Sb	04 12 00.6	+0.7
CLDR	Caldiran	0.50	35	*i* P	Pg	04 11 51.7	-0.9
CLDR	Caldiran	0.50	35	P	Pg	04 11 51.7	-0.9
CLDR	Caldiran	0.50	35	*e*Pg	Pg	04 11 52.2	-0.4
CLDR				*e*Sg	Sb	04 12 00.6	+0.7
GEVA	Gevas	0.57	223	*i* P	Pg	04 11 53.0	-1.0
GEVA	Gevas	0.57	223	P	Pg	04 11 53.0	-1.0
ADCV	BITLIS_Adilcev	0.65	277	*i* P	Pb	04 11 55.4	-0.1
ADCV	BITLIS_Adilcev	0.65	277	P	Pb	04 11 55.3	-0.1
TUTA	Tutak	0.88	319	*i* P	Pb	04 11 58.9	-0.5
TUTA				*i* S	Sg	04 12 12.1	+0.7
TUTA	Tutak	0.88	319	P	Pb	04 11 58.9	-0.5
TUTA				S	Sg	04 12 12.1	+0.7
AGRB	Hanur-Agry	0.94	333	PG	Pb	04 12 00.3	-0.2
AGRB				SG	Sg	04 12 13.5	+0.1
AGRB	Hanur-Agry	0.94	333	*e*Pg	Pb	04 12 00.3	-0.2
AGRB				*e*Sg	Sg	04 12 13.5	+0.1
HAKT	HAKKARI	1.18	174	*i* P	Pn	04 12 03.9	-0.5
HAKT	HAKKARI	1.18	174	P	Pn	04 12 03.9	-0.5
GURO	Guroymak-BITLI	1.21	262	PN	Pn	04 12 04.3	-0.3
GURO	Guroymak-BITLI	1.21	262	*e*Pn	Pn	04 12 04.3	-0.3
EATA	Eleskirt	1.39	324	*i* P	Pg	04 12 09.1	-0.3
EATA	Eleskirt	1.39	324	P	Pg	04 12 09.1	-0.3
CUKT	Cukurca	1.49	178	PN	Pb	04 12 09.7	0.0
CUKT	Cukurca	1.49	178

*IDC **24** 04:47:23.5±1.2, 1'.36N×98'.99E, h98km±9km, mb4.1/32, mb1 4.2/34, mb1mx4.0/74, mbtmp4.5/34, Error ellipse: s-maj=16.3km s-min=8.4km az=48.0*
*BJI **24** 04:47:23.1, 1'.30N×98'.90E, h94km, mb4.7/24, mB5.1/11*
*DJA **24** 04:47:24.1±0.2, 1'N±2'×9'9E±'', h74km±4km, M4.7/20, mb4.6/4, mB5.9/3, MLv4.7/20, Mw(mB)5.5/3*
*NEIC **24** 04:47:24.2±0.5, 1'.31N×98'.93E, h106km±4km, mb4.6/20, Error ellipse: s-maj=6.5km s-min=3.8km az=49.0*
ISC 24 04:47:23.8±0.7, **1'.39N**±0'.03×**98'.91E**±0'.03, **h99**km±6km, **n148**, σ1§29/164, **mb4.6**/56, **5C-3D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**0.89**	**131**	P	**Pn**	**04 47 43.1**	**+0.2**
MNSI				S	**Sn**	**04 47 57.6**	**+0.2**
GSI	**Gunungsitoli**	**1.33**	**266**	P	**Pn**	**04 47 48.2**	**+0.3**
GSI				S	**Sn**	**04 48 05.7**	**-0.5**
GSI	**Gunungsitoli**	**1.33**	**266**	*e*Pn	**Pn**	**04 47 48.7**	**+0.8**
GSI				*e*Sn	**Sn**	**04 48 05.3**	**-0.9**
PSI	**Prapat**	**1.41**	**1**	P	**Pn**	**04 47 48.2**	**-0.7**
PSI	236nm,0.3s,baz=359,slow=1.2,SNR=622			S	**Sn**	**04 48 05.4**	**-2.5**
PSI	**Prapat**	**1.41**	**1**	*e*Pn	**Pn**	**04 47 48.2**	**-0.7**
PSI	54nm,0.3s,baz=0.3,slow=17,SNR=4.0			*e*Sn	**Sn**	**04 48 07.0**	**-1.0**
TSI	**Tuntungan**	**2.13**	**351**	P	**Pn**	**04 47 59.5**	**+1.5**
TSI				S	**Sn**	**04 48 21.4**	**-2.7**
BKNI	**Bangkinang**	**2.38**	**116**	P	**Pn**	**04 48 01.7**	**+0.5**
BKNI				S	**Sn**	**04 48 29.7**	**-0.3**
BKNI	**Bangkinang**	**2.38**	**116**	*e*Pn	**Pn**	**04 48 01.9**	**+0.6**
KCSI	**Kotacane, Aceh**	**2.41**	**332**	P	**Pn**	**04 48 01.8**	**+0.2**
KCSI				S	**Sn**	**04 48 30.0**	**-0.6**
TPTI		**2.54**	**317**	P	**Pn**	**04 48 03.4**	**0.0**
TPTI				S	**Sn**	**04 48 32.2**	**-1.5**
SISI	**Saibi**	**2.70**	**176**	P	**Pn**	**04 48 04.7**	**-0.8**
SISI				S	**Sn**	**04 48 37.2**	**-0.4**
PDSI	**Padang**	**2.76**	**146**	P	**Pn**	**04 48 07.3**	**+0.9**
SNSI	**Sinabang, Aceh**	**2.77**	**292**	P	**Pn**	**04 48 07.3**	**+0.9**
SNSI				S	**Sn**	**04 48 37.3**	**-2.0**
IPM	**Ipoh**	**3.73**	**35**	*e*Pn	**Pn**	**04 48 21.4**	**+2.0**
MLSI	**Meulaboh, Aceh**	**3.80**	**319**	P	**Pn**	**04 48 20.9**	**+0.6**
MLSI				S	**Sn**	**04 49 00.7**	**-3.3**
RGRI	**Rengat**	**3.84**	**117**	P	**Pn**	**04 48 21.5**	**+0.8**
RGRI				S	**Sn**	**04 49 04.5**	**-0.4**
KULM	**Kulim**	**4.25**	**24**	*e*Pn	**Pn**	**04 48 27.6**	**+1.3**
KULM				*e*Sn	**Sn**	**04 49 13.5**	**-1.4**
PPSI	**Pulau Pagai**	**4.27**	**165**	P	**Pn**	**04 48 30.0**	**+3.4**
PPSI				S	**Sn**	**04 49 15.5**	**+0.2**
LHMI	**Lhok Sumawe**	**4.29**	**333**	P	**Pn**	**04 48 27.1**	**+0.2**
LHMI	**Lhok Sumawe**	**4.29**	**333**	*e*Pn	**Pn**	**04 48 27.4**	**+0.5**
KRJI	**Kerinci**	**4.30**	**144**	P	**Pn**	**04 48 29.6**	**+2.5**
MYKOM	**Kota Tinggi**	**4.96**	**85**	*e*Pn	**Pn**	**04 48 37.0**	**+1.1**
BSI	**Banda Aceh**	**5.45**	**319**	P	**Pn**	**04 48 41.9**	**-0.7**
MASI	**Maura Aman, Be**	**5.60**	**143**	P	**Pn**	**04 48 46.8**	**+2.1**
TPRI	**Tanjung Pinang**	**5.64**	**95**	P	**Pn**	**04 48 46.2**	**+1.0**
TRTT	**Trang**	**6.45**	**7**	P	**Pn**	**04 48 55.6**	**-0.7**
PKDT	**Phuket**	**6.49**	**355**	P	**Pn**	**04 48 55.8**	**-0.9**
MNAI	**Manna**	**7.00**	**145**	*e*Pn	**Pn**	**04 49 03.4**	**-0.3**
MNAI				*e*Sn	**Sn**	**04 50 18.0**	**-3.8**
PMBI	**Palembang**	**7.26**	**126**	P	Pn	04 49 18.1	+11
MDSI	**Maura Dua**	**7.86**	**138**	P	**Pn**	**04 49 15.6**	**+0.2**
UTHA	**Uthaitani**	**14.09**	**2**	P	**P**	**04 50 45.1**	**+1.5**
PBKT	**Sadao Pong**	**15.22**	**8**	P	**P**	**04 50 56.6**	**+0.4**
PHIT	**Phitsanulok**	**15.77**	**5**	P	**P**	**04 51 04.4**	**+2.1**
CM01	**Chiang Mai Arr**	**16.93**	**0**	*e*Pn	**P**	**04 51 15.9**	**+0.8**
CM31	**Chiang Mai Arr**	**16.96**	**0**	*e*Pn	**P**	**04 51 15.7**	**+0.2**
CMAR	**Chiang Mai Arr**	**16.96**	**0**	P	**P**	**04 51 15.8**	**+0.4**
CHTO	**Chiang Mai**	**17.32**	**0**	P	**Pn**	**04 51 24.0**	**+4.6**
CHTO	**Chiang Mai**	**17.32**	**0**	*e*P	**Pn**	**04 51 19.6**	**+0.2**
KKM	**Kota Kinabalu**	**17.88**	**75**	*e*P	**Pn**	**04 51 27.0**	**+0.7**
PAYA	**Payao**	**17.89**	**3**	P	**Pn**	**04 51 26.9**	**+0.6**
PALK	**Pallekele**	**19.06**	**288**	P	**Pn**	**04 51 40.3**	**-0.2**
PALK	**Pallekele**	**19.06**	**288**	*e*P	**Pn**	**04 51 40.0**	**-0.4**
MYLDM	**Lahad Datu**	**19.92**	**79**	*e*P	**Pn**	**04 51 49.8**	**-0.6**
BELO	**BELONIA**	**22.91**	**342**	*e*P	**P**	**04 52 17.4**	**-2.0**
AGT	**Agartala**	**23.56**	**342**	*e*P	**P**	**04 52 25.6**	**+0.1**
KMI	**Kunming**	**23.89**	**9**	P	**P**	**04 52 32.0**	**+3.3**
KMI				pmax	pmax		
SHL	**Shillong**	**24.98**	**345**	*e*P	**P**	**04 52 38.5**	**0.0**
SHL	**Shillong**	**24.98**	**345**	*e*P	**P**	**04 52 39.0**	**+0.5**
MOKO	**MOKOCHONG**	**25.15**	**351**	*e*P	**P**	**04 52 38.7**	**-1.3**
TURI	**Tura**	**25.41**	**342**	*e*P	**P**	**04 52 40.9**	**-1.3**
HYB	**Hyderabad**	**25.58**	**310**	*e*P	**P**	**04 52 44.2**	**+0.3**
HYB				IAmb	IAmb	04 52 48.4	
BOK	**Bokaro**	**25.60**	**331**	*e*P	**P**	**04 52 44.6**	**+0.6**
GUWA	**GUWAHATI**	**25.62**	**345**	*e*P	**P**	**04 52 42.7**	**-1.5**
GUWA				IAmb	IAmb	04 52 44.5	
TEZP	**TEZPUR**	**25.76**	**347**	*e*P	**P**	**04 52 45.3**	**-0.1**
BATI	**Baumata**	**27.20**	**116**	P	**P**	**04 52 57.8**	**-0.7**
H08S2	**Diego Garcia H**	**27.83**	**251**	T	T	05 20 48.5	
H08S3	**Diego Garcia H**	**27.84**	**251**	T	T	05 20 44.9	
H08S1	**Diego Carcia H**	**27.85**	**251**	T	T	05 20 49.4	
RAMN	**Ramite**	**28.03**	**336**	*e*P	**P**	**04 53 07.7**	**+1.6**
JIRN	**Jiri**	**28.83**	**336**	*e*P	**P**	**04 53 14.2**	**+0.9**
LSA	**Lhasa**	**29.11**	**346**	*e*P	**P**	**04 53 17.0**	**+1.2**
GUN	**Gumba**	**29.17**	**336**	*e*P	**P**	**04 53 17.3**	**+1.0**
KKN	**Kakani**	**29.32**	**335**	*e*P	**P**	**04 53 18.3**	**+0.9**
CD2	**Chengdu**	**29.72**	**8**	P	**P**	**04 53 22.8**	**+2.0**
CD2				pmax	pmax		
KOLN	**Koldanda**	**30.05**	**332**	*e*P	**P**	**04 53 25.0**	**+1.1**
BHPL	**Bhopal**	**30.11**	**318**	*e*P	**P**	**04 53 25.0**	**+0.7**
DANN	**Dangsing**	**30.47**	**333**	*e*P	**P**	**04 53 28.5**	**+0.8**
XAN	**Xi'an**	**33.81**	**15**	P	**P**	**04 53 55.3**	**-1.3**
XAN				pmax	pmax		
LZH	**Lanzhou**	**34.83**	**7**	*e*P	**P**	**04 54 08.9**	**+3.4**
LZH				pP	pP	04 54 30.4	+2.5
LZH				sP	sP	04 54 40.1	+0.8
LZH				*e*PP	**PP**	**04 55 28.8**	**+2.4**
NJ2	**Nanjing**	**35.84**	**30**	*e*P	**P**	**04 54 16.1**	**+2.1**
NJ2				pmax	pmax		
SMLA	**Simla**	**36.03**	**327**	*e*P	**P**	**04 54 16.4**	**+0.7**
DHRM	**DHARAMSHALA**	**37.37**	**328**	*e*P	**P**	**04 54 26.5**	**-0.7**
NWAO	**Narrogin (SRO)**	**38.27**	**155**	P	**P**	**04 54 34.9**	**+0.4**
NIL	**Nilore**	**40.10**	**326**	*e*P	**P**	**04 54 49.5**	**-0.3**
WRA	**Warramunga Arr**	**40.70**	**123**	P	**P**	**04 54 53.5**	**-1.5**
WRA				PcP	**PcP**	**04 56 54.4**	**-0.5**
WRAB	**Tennant Creek**	**40.70**	**123**	*e*P	**P**	**04 54 53.1**	**-1.9**
WB2	**Warramunga Arr**	**40.71**	**123**	*e*P	**P**	**04 54 53.8**	**-1.3**
HHC	**Hu-ho-hao-te**	**40.92**	**15**	*e*P	**P**	**04 55 00.6**	**+4.0**
HHC				pmax	pmax		
ASAR	**Alice Springs**	**42.16**	**128**	P	**P**	**04 55 05.2**	**-1.7**
ASAR				PcP	**PcP**	**04 56 59.3**	**-0.4**
AS01	**Alice Springs**	**42.20**	**128**	*e*P	**P**	**04 55 05.5**	**-1.8**
FORT	**Forrest**	**42.34**	**142**	*e*P	**P**	**04 55 06.8**	**-1.4**
WMQ	**Urumqi**	**43.41**	**348**	P	**P**	**04 55 19.1**	**+2.3**
WMQ				pmax	pmax		
WMQ				pmax	pmax		
TARG	**Taragay, Kyrgy**	**44.43**	**337**	*e*P	**P**	**04 55 25.5**	**+0.1**
KS15	**Wonju Array Si**	**44.71**	**33**	*e*P	**P**	**04 55 27.7**	**+0.6**
KSAR	**Wonju Array Be**	**44.71**	**33**	P	**P**	**04 55 27.4**	**+0.2**
KS01	**Wonju Array Si**	**44.74**	**33**	*e*P	**P**	**04 55 27.1**	**-0.3**
KSRS	**Korea Array**	**44.74**	**33**	P	**P**	**04 55 27.4**	**0.0**
NRN	**Naryn**	**44.91**	**336**	*e*P	**P**	**04 55 30.5**	**+1.5**
SONM	**Songino Array**	**46.72**	**7**	PcP	**PcP**	**04 57 14.9**	**-0.1**
SONM				ScP	**ScP**	**05 00 58.8**	**-0.9**
SONA1	**Songino Array**	**46.73**	**7**	*e*P	**P**	**04 55 43.2**	**+0.1**
MK01	**Makanchi Array**	**47.47**	**345**	*e*P	**P**	**04 55 48.9**	**+0.2**
MK31	**Makanchi Array**	**47.49**	**345**	*e*P	**P**	**04 55 49.6**	**+0.8**
MKAR	**Makanchi Array**	**47.49**	**345**	P	**P**	**04 55 49.6**	**+0.7**
MAKZ	**Makanchi**	**47.59**	**344**	*e*P	**P**	**04 55 50.5**	**+0.9**
KKAR	**Karatay Array**	**48.66**	**332**	*e*P	**P**	**04 55 59.8**	**+1.9**
PMG	**Port Moresby**	**49.24**	**104**	P	**P**	**04 56 01.9**	**-0.9**
TLY	**Talaya**	**50.27**	**4**	*e*P	**P**	**04 56 09.8**	**-0.2**
MJAR	**Matsushiro Arr**	**50.41**	**41**	P	**P**	**04 56 10.4**	**-1.0**
CTA	**Charters Tower**	**51.06**	**117**	P	**P**	**04 56 15.3**	**-1.2**
CTAO	**Charters Tower**	**51.06**	**117**	*e*P	**P**	**04 56 15.8**	**-0.7**
USRK	**Ussuriysk Ar.**	**51.74**	**30**	P	**P**	**04 56 21.9**	**+0.8**
KURBB	**Kurchatov Arra**	**52.01**	**344**	P	**P**	**04 56 23.4**	**+0.4**
KURK	**Kurchatov**	**52.07**	**344**	*e*P	**P**	**04 56 24.1**	**+0.7**
STKA	**Stephens Creek**	**52.23**	**133**	P	**P**	**04 56 24.2**	**-0.7**
STKA	**Stephens Creek**	**52.23**	**133**	*e*P	**P**	**04 56 23.7**	**-1.2**
ZAA0	**Zalesovo Array**	**53.66**	**350**	*e*P	**P**	**04 56 35.8**	**+0.8**
ZALV	**Zalesovo Beam**	**53.66**	**350**	P	**P**	**04 56 35.8**	**+0.7**
RAYN	**Ar Rayn**	**56.18**	**297**	*e*P	**P**	**04 56 54.4**	**+0.5**
BVAR	**Borovoye Array**	**56.65**	**340**	P	**P**	**04 56 56.7**	**0.0**
BRVK	**Borovoye**	**56.71**	**340**	*e*P	**P**	**04 56 56.3**	**-0.7**
ASAJ	**Asahikawa**	**57.50**	**36**	P	**P**	**04 57 01.3**	**-1.5**
ABKAR	**Akbulak array**	**58.17**	**331**	*e*P	**P**	**04 57 07.6**	**+0.3**
AKTO	**Aktyubinsk**	**59.88**	**331**	P	**P**	**04 57 18.8**	**-0.4**
ARU	**Arti**	**63.69**	**336**	*e*P	**P**	**04 57 44.0**	**-0.6**
YAK	**Yakutsk**	**64.78**	**15**	*e*P	**P**	**04 57 51.6**	**+0.1**
KBZ	**Khabaz**	**65.06**	**318**	P	**P**	**04 57 54.2**	**+0.5**
MMAI	**Mount Meron Ar**	**67.18**	**305**	P	**P**	**04 58 09.1**	**+1.4**
BR131	**Keskin Array S**	**70.25**	**312**	*e*P	**P**	**04 58 26.9**	**+0.1**
BRTR	**Keskin Array B**	**70.25**	**312**	P	**P**	**04 58 26.6**	**-0.2**
MA2	**Magadan**	**70.43**	**25**	*e*P	**P**	**04 58 26.3**	**-0.9**
PETK	**Petropavlovsk-**	**70.64**	**33**	P	**P**	**04 58 28.3**	**-0.3**
TIXI	**Tiksi**	**72.71**	**10**	P	**P**	**04 58 39.6**	**-1.0**
AKASG	**Malin Array Be**	**76.16**	**322**	P	**P**	**04 59 00.4**	**-0.7**
KIEV	**Kiev**	**76.16**	**322**	*e*P	**P**	**04 59 00.6**	**-0.4**
IDI	**Anoyia**	**76.17**	**306**	P	**P**	**04 59 01.2**	**-0.3**
TESR	**Tescani**	**76.83**	**318** ⇑	*i*P	**P**	**04 59 05.1**	**+0.1**
MLR	**Muntele Rosu**	**77.11**	**316**	P	**P**	**04 59 07.3**	**+0.6**
MLR	**Muntele Rosu**	**77.11**	**316** ⇓	*i*P	**P**	**04 59 07.5**	**+0.8**
ARR	**Arges**	**77.99**	**316** ⇑	*i*P	**P**	**04 59 11.9**	**+0.4**
BURAR	**Bucovina Array**	**78.02**	**318** ⇓	*i*P	**P**	**04 59 13.1**	**+1.4**
BUR04	**Bucovina Ar. S**	**78.02**	**318**	*e*P	**P**	**04 59 12.9**	**+1.2**
BUR08	**Bucovina Ar. S**	**78.03**	**318**	*e*P	**P**	**04 59 13.2**	**+1.4**
VTS	**Vitosha**	**78.55**	**313** ⇑	*i*P	**P**	**04 59 15.2**	**+0.4**
DRGR		**79.55**	**317** ⇑	*i*P	**P**	**04 59 20.7**	**+0.6**
BZS	**Buzias**	**80.12**	**316** ⇓	*i*P	**P**	**04 59 23.9**	**+0.8**
FINES	**FINESS Array B**	**80.62**	**332**	P	**P**	**04 59 24.9**	**-0.5**
PDG	**Podgorica**	**81.42**	**313** ⇑	*i*P	**P**	**04 59 30.3**	**+0.3**
URZ	**Urewera**	**81.60**	**129**	P	**P**	**04 59 29.9**	**-1.1**
ARCES	**ARCESS Array B**	**82.94**	**340**	P	**P**	**04 59 38.0**	**+0.6**
GERES	**GERESS Array B**	**85.80**	**319**	P	**P**	**04 59 51.9**	**-0.6**
HFS	**Hagfors**	**86.41**	**330**	P	**P**	**04 59 55.0**	**0.0**
SPITS	**Spitsbergen Ar**	**87.12**	**348**	P	**P**	**04 59 57.6**	**-0.6**
DAVOX	**Davos/Dischmat**	**88.33**	**317**	P	**P**	**05 00 04.9**	**+0.1**
QSPA	**South Pole Qui**	**91.33**	**180**	P	**P**	**05 00 18.4**	**+0.2**
NVAR	**Mina Array Bea**	**127.62**	**37**	PKP	**PKPdf**	**05 06 18.8**	**+0.6**
PDAR	**Pinedale Array**	**129.12**	**27**	PKP	**PKPdf**	**05 06 21.6**	**+0.6**
TXAR	**Lajitas Array**	**142.59**	**33**	PKP	**PKPdf**	**05 06 43.0**	**-3.2**
CPUP	**Villa Florida**	**146.28**	**221**	PKPbc	**PKPdf**	**05 06 51.1**	**-1.4**

*ISCJB **24** 04:47:22.7±0.2, 1'.39N±0'.02×98'.91E±0'.03, h103km±2km, mb4.5/54, Error ellipse: s-maj=5.4km s-min=3.1km az=143.3*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.58**	**111**	P	**Pn**	**04 53 56.2**	**+1.9**
RAO	baz=90,slow=20			S	**Sn**	**04 54 17.8**	**+2.3**
URZ	**Urewera**	**9.88**	**200**	P	Pn	04 55 37.2	-7.2
URZ	0.3nm,0.3s,baz=66,slow=20,SNR=2.4			S	Sn	04 57 23.8	-11
STKA	**Stephens Creek**	**34.35**	**255**	P	**P**	**04 59 54.2**	**-0.5**
ASAR	**Alice Springs**	**42.73**	**266**	P	**P**	**05 01 03.9**	**-0.8**
ASAR	1.4nm,0.5s,baz=100,slow=6.3,SNR=27			PcP	**PP**	**05 02 51.8**	**+3.8**
WRA	**Warramunga Arr**	**43.59**	**271**	P	**P**	**05 01 10.6**	**-0.9**
VNDA	**Vanda**	**49.39**	**186**	P	**P**	**05 01 56.1**	**+0.4**
QSPA	**South Pole Qui**	**61.06**	**180**	P	**P**	**05 03 18.9**	**-0.4**
MAW	**Mawson**	**73.41**	**201**	P	**P**	**05 04 35.4**	**-1.2**
MJAR	**Matsushiro Arr**	**76.87**	**325**	P	**P**	**05 04 56.2**	**-0.5**
NVAR	**Mina Array Bea**	**87.57**	**43**	P	**P**	**05 05 49.9**	**-2.6**
CMAR	**Chiang Mai Arr**	**92.51**	**290**	P	**P**	**05 06 15.1**	**-0.6**
KURBB	**Kurchatov Arra**	**119.81**	**314**	PKP	**PKPdf**	**05 11 50.7**	**-2.1**
BVAR	**Borovoye Array**	**125.11**	**316**	PKP	**PKPdf**	**05 12 01.6**	**-1.4**

*IDC **24** 04:53:26.6±0.5, 28'.98S×178'.42W, h210km±4km, mb3.6/9, mb1 3.8/9, mb1mx3.5/44, mbtmp4.1/9, Error ellipse: s-maj=19.8km s-min=18.1km az=76.0*
ISC 24 04:53:26.9±0.7, **29'.1S**±0'.2×**178'.5W**±0'.1, **h200**km, **n20**, σ2§16/20, **mb4.0**/9, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**34.83**	**7**	*e*P	**P**	**04 54 08.9**	**+3.4**
LZH				pP	pP	04 54 30.4	+2.5
LZH				sP	sP	04 54 40.1	+0.8
LZH				*e*PP	**PP**	**04 55 28.8**	**+2.4**
LZH				pmax	pmax		
LZH	comp=Z,18nm,1.0s			pmax	pmax		
LZH	comp=Z,290nm,4.9s			LR	LR		
LZH	comp=Z,310nm,14.8s			LR	LR		
LZH	comp=Z,300nm,15.2s			LR	LR		
LZH	comp=Z,370nm,18.6s			LR	LR		
NJ2	**Nanjing**	**35.84**	**30**	*e*P	**P**	**04 54 16.1**	**+2.1**
NJ2				pmax	pmax		
SMLA	**Simla**	**36.03**	**327**	*e*P	**P**	**04 54 16.4**	**+0.7**
DHRM	**DHARAMSHALA**	**37.37**	**328**	*e*P	**P**	**04 54 26.5**	**-0.7**
NWAO	**Narrogin (SRO)**	**38.27**	**155**	P	**P**	**04 54 34.9**	**+0.4**
NIL	**Nilore**	**40.10**	**326**	*e*P	**P**	**04 54 49.5**	**-0.3**
WRA	**Warramunga Arr**	**40.70**	**123**	P	**P**	**04 54 53.5**	**-1.5**
WRA				PcP	**PcP**	**04 56 54.4**	**-0.5**
WRAB	**Tennant Creek**	**40.70**	**123**	*e*P	**P**	**04 54 53.1**	**-1.9**
WB2	**Warramunga Arr**	**40.71**	**123**	*e*P	**P**	**04 54 53.8**	**-1.3**
HHC	**Hu-ho-hao-te**	**40.92**	**15**	*e*P	**P**	**04 55 00.6**	**+4.0**
HHC				pmax	pmax		
ASAR	**Alice Springs**	**42.16**	**128**	P	**P**	**04 55 05.2**	**-1.7**
ASAR				PcP	**PcP**	**04 56 59.3**	**-0.4**
AS01	**Alice Springs**	**42.20**	**128**	*e*P	**P**	**04 55 05.5**	**-1.8**
FORT	**Forrest**	**42.34**	**142**	*e*P	**P**	**04 55 06.8**	**-1.4**
WMQ	**Urumqi**	**43.41**	**348**	P	**P**	**04 55 19.1**	**+2.3**
WMQ				pmax	pmax		
WMQ				pmax	pmax		
TARG	**Taragay, Kyrgy**	**44.43**	**337**	*e*P	**P**	**04 55 25.5**	**+0.1**
KS15	**Wonju Array Si**	**44.71**	**33**	*e*P	**P**	**04 55 27.7**	**+0.6**
KSAR	**Wonju Array Be**	**44.71**	**33**	P	**P**	**04 55 27.4**	**+0.2**
KS01	**Wonju Array Si**	**44.74**	**33**	*e*P	**P**	**04 55 27.1**	**-0.3**
KSRS	**Korea Array**	**44.74**	**33**	P	**P**	**04 55 27.4**	**0.0**
NRN	**Naryn**	**44.91**	**336**	*e*P	**P**	**04 55 30.5**	**+1.5**
SONM	**Songino Array**	**46.72**	**7**	PcP	**PcP**	**04 57 14.9**	**-0.1**
SONM				ScP	**ScP**	**05 00 58.8**	**-0.9**
SONA1	**Songino Array**	**46.73**	**7**	*e*P	**P**	**04 55 43.2**	**+0.1**
MK01	**Makanchi Array**	**47.47**	**345**	*e*P	**P**	**04 55 48.9**	**+0.2**
MK31	**Makanchi Array**	**47.49**	**345**	*e*P	**P**	**04 55 49.6**	**+0.8**
MKAR	**Makanchi Array**	**47.49**	**345**	P	**P**	**04 55 49.6**	**+0.7**
MAKZ	**Makanchi**	**47.59**	**344**	*e*P	**P**	**04 55 50.5**	**+0.9**
KKAR	**Karatay Array**	**48.66**	**332**	*e*P	**P**	**04 55 59.8**	**+1.9**
PMG	**Port Moresby**	**49.24**	**104**	P	**P**	**04 56 01.9**	**-0.9**
TLY	**Talaya**	**50.27**	**4**	*e*P	**P**	**04 56 09.8**	**-0.2**
MJAR	**Matsushiro Arr**	**50.41**	**41**	P	**P**	**04 56 10.4**	**-1.0**
CTA	**Charters Tower**	**51.06**	**117**	P	**P**	**04 56 15.3**	**-1.2**
CTAO	**Charters Tower**	**51.06**	**117**	*e*P	**P**	**04 56 15.8**	**-0.7**
USRK	**Ussuriysk Ar.**	**51.74**	**30**	P	**P**	**04 56 21.9**	**+0.8**
KURBB	**Kurchatov Arra**	**52.01**	**344**	P	**P**	**04 56 23.4**	**+0.4**
KURK	**Kurchatov**	**52.07**	**344**	*e*P	**P**	**04 56 24.1**	**+0.7**
STKA	**Stephens Creek**	**52.23**	**133**	P	**P**	**04 56 24.2**	**-0.7**
STKA	**Stephens Creek**	**52.23**	**133**	*e*P	**P**	**04 56 23.7**	**-1.2**
ZAA0	**Zalesovo Array**	**53.66**	**350**	*e*P	**P**	**04 56 35.8**	**+0.8**
ZALV	**Zalesovo Beam**	**53.66**	**350**	P	**P**	**04 56 35.8**	**+0.7**
RAYN	**Ar Rayn**	**56.18**	**297**	*e*P	**P**	**04 56 54.4**	**+0.5**
BVAR	**Borovoye Array**	**56.65**	**340**	P	**P**	**04 56 56.7**	**0.0**
BRVK	**Borovoye**	**56.71**	**340**	*e*P	**P**	**04 56 56.3**	**-0.7**
ASAJ	**Asahikawa**	**57.50**	**36**	P	**P**	**04 57 01.3**	**-1.5**
ABKAR	**Akbulak array**	**58.17**	**331**	*e*P	**P**	**04 57 07.6**	**+0.3**
AKTO	**Aktyubinsk**	**59.88**	**331**	P	**P**	**04 57 18.8**	**-0.4**
ARU	**Arti**	**63.69**	**336**	*e*P	**P**	**04 57 44.0**	**-0.6**
YAK	**Yakutsk**	**64.78**	**15**	*e*P	**P**	**04 57 51.6**	**+0.1**
KBZ	**Khabaz**	**65.06**	**318**	P	**P**	**04 57 54.2**	**+0.5**
MMAI	**Mount Meron Ar**	**67.18**	**305**	P	**P**	**04 58 09.1**	**+1.4**
BR131	**Keskin Array S**	**70.25**	**312**	*e*P	**P**	**04 58 26.9**	**+0.1**
BRTR	**Keskin Array B**	**70.25**	**312**	P	**P**	**04 58 26.6**	**-0.2**
MA2	**Magadan**	**70.43**	**25**	*e*P	**P**	**04 58 26.3**	**-0.9**
PETK	**Petropavlovsk-**	**70.64**	**33**	P	**P**	**04 58 28.3**	**-0.3**
TIXI	**Tiksi**	**72.71**	**10**	P	**P**	**04 58 39.6**	**-1.0**
AKASG	**Malin Array Be**	**76.16**	**322**	P	**P**	**04 59 00.4**	**-0.7**
KIEV	**Kiev**	**76.16**	**322**	*e*P	**P**	**04 59 00.6**	**-0.4**
IDI	**Anoyia**	**76.17**	**306**	P	**P**	**04 59 01.2**	**-0.3**
TESR	**Tescani**	**76.83**	**318** ⇑	*i*P	**P**	**04 59 05.1**	**+0.1**
MLR	**Muntele Rosu**	**77.11**	**316**	P	**P**	**04 59 07.3**	**+0.6**
MLR	**Muntele Rosu**	**77.11**	**316** ⇓	*i*P	**P**	**04 59 07.5**	**+0.8**
ARR	**Arges**	**77.99**	**316** ⇑	*i*P	**P**	**04 59 11.9**	**+0.4**
BURAR	**Bucovina Array**	**78.02**	**318** ⇓	*i*P	**P**	**04 59 13.1**	**+1.4**
BUR04	**Bucovina Ar. S**	**78.02**	**318**	*e*P	**P**	**04 59 12.9**	**+1.2**
BUR08	**Bucovina Ar. S**	**78.03**	**318**	*e*P	**P**	**04 59 13.2**	**+1.4**
VTS	**Vitosha**	**78.55**	**313** ⇑	*i*P	**P**	**04 59 15.2**	**+0.4**
DRGR		**79.55**	**317** ⇑	*i*P	**P**	**04 59 20.7**	**+0.6**
BZS	**Buzias**	**80.12**	**316** ⇓	*i*P	**P**	**04 59 23.9**	**+0.8**
FINES	**FINESS Array B**	**80.62**	**332**	P	**P**	**04 59 24.9**	**-0.5**
PDG	**Podgorica**	**81.42**	**313** ⇑	*i*P	**P**	**04 59 30.3**	**+0.3**
URZ	**Urewera**	**81.60**	**129**	P	**P**	**04 59 29.9**	**-1.1**
ARCES	**ARCESS Array B**	**82.94**	**340**	P	**P**	**04 59 38.0**	**+0.6**
GERES	**GERESS Array B**	**85.80**	**319**	P	**P**	**04 59 51.9**	**-0.6**
HFS	**Hagfors**	**86.41**	**330**	P	**P**	**04 59 55.0**	**0.0**
SPITS	**Spitsbergen Ar**	**87.12**	**348**	P	**P**	**04 59 57.6**	**-0.6**
DAVOX	**Davos/Dischmat**	**88.33**	**317**	P	**P**	**05 00 04.9**	**+0.1**
QSPA	**South Pole Qui**	**91.33**	**180**	P	**P**	**05 00 18.4**	**+0.2**
NVAR	**Mina Array Bea**	**127.62**	**37**	PKP	**PKPdf**	**05 06 18.8**	**+0.6**
PDAR	**Pinedale Array**	**129.12**	**27**	PKP	**PKPdf**	**05 06 21.6**	**+0.6**
TXAR	**Lajitas Array**	**142.59**	**33**	PKP	**PKPdf**	**05 06 43.0**	**-3.2**
CPUP	**Villa Florida**	**146.28**	**221**	PKPbc	**PKPdf**	**05 06 51.1**	**-1.4**

FINES FINESS Array B 143.72 340 PKP PKPab 05 12 33.6 -0.9
3.1nm,0.7s,baz=79,slow=2.8,SNR=12
NB2 NORSAR Subarra147.35 351 PKP **PKPdf 05 12 44.5 +0.9**
comp=Z,0.9nm,0.7s,baz=15,slow=2.9
HFS Hagfors 147.83 349 PKPbc **PKPdf 05 12 45.7 +1.4**
comp=Z,2.9nm,0.8s,baz=343,slow=1.5,SNR=5.1
AKASG Malin Array Be 149.94 324 PKPbc **PKPdf 05 12 50.6 +2.7**
comp=Z,4.0nm,0.7s,baz=48,slow=2.8,SNR=4.2
MMAI Mount Meron Ar 150.72 286 PKPbc **PKPbc 05 12 55.1 -0.5**
comp=Z,1.7nm,0.4s,baz=69,slow=7.9,SNR=5.4
BRTR Keskin Array B 151.53 301 PKPbc **PKPdf 05 12 54.9 +3.8**
comp=Z,0.7nm,0.8s,baz=117,slow=4.3,SNR=3.6
TORD Torodi Ar. Bea 164.18 181 PKPab **PKPab 05 13 57.7 -3.7**
comp=Z,2.0nm,1.1s,baz=178,slow=4.1,SNR=5.7

IDC 24 04:54:28.5±1.1, 0.76N×129.31E, h0km, mb3.3/4, mb1 3.5/5, mb1mx3.3/54, mbtmp3.3/5, ML3.1/1, Error ellipse: s-maj=60.7km s-min=18.2km az=58.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.54**	**130**	Pn	Pn	04 55 11.2	0.0
	3.5nm,0.3s,baz=307,slow=20,SNR=3.6						
SIJI				Sn	Sn	04 55 43.2	+0.4
	4.0nm,0.3s,baz=221,slow=19,SNR=2.8						
WRA	**Warramunga Arr**	**21.16**	**167**	P	P	04 59 15.4	-0.1
	1.5nm,1.1s,baz=346,slow=10,SNR=3.2						
ASAR	**Alice Springs**	**24.69**	**170**	P	P	04 59 51.6	+0.1
	0.3nm,0.6s,baz=349,slow=9.5,SNR=2.9						
MKAR	**Makanchi Array**	**61.44**	**325**	P	P	05 04 47.0	+0.1
	0.2nm,0.5s,baz=125,slow=7.5,SNR=2.3						
KURBB	**Kurchatov Arra**	**65.61**	**327**	P	P	05 05 14.2	-0.1
	0.3nm,0.6s,baz=134,slow=5.4,SNR=4.0						

IDC 24 05:38:35.5±2.5, 16.10S×169.04E, h0km, mb4.1/2, mb1 4.3/3, mb1mx3.7/47, mbtmp4.1/3, ML4.0/1, Error ellipse: s-maj=67.1km s-min=42.5km az=128.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.43**	**202**	Pn	Pn	05 40 10.8	-0.9
	3.0nm,0.3s,baz=135,slow=17,SNR=30						
DZM				Sn	Sn	05 41 19.3	-6.5
	baz=135,slow=23,SNR=2.0						
WRA	**Warramunga Arr**	**33.19**	**258**	P	P	05 45 15.3	+1.1
	0.5nm,0.5s,baz=84,slow=8.3,SNR=8.0						
ASAR	**Alice Springs**	**33.83**	**251**	P	P	05 45 18.9	-0.9
	3.0nm,0.4s,baz=82,slow=8.9,SNR=55						
ARCES	**ARCESS Array B**	**121.99**	**346**	PKP	PKPdf	05 57 31.3	-0.1
	1.3nm,0.8s,baz=66,slow=2.9,SNR=6.4						

*ISCJB **24** 06:05:00.5±0.8, 6.57S±0.09×127.7E±0.1, h408km, mb3.4/4, Error ellipse: s-maj=15.2km s-min=10.9km az=155.2*
*IDC **24** 06:05:03.2±1.6, 6.68S×127.58E, h422km±21km, mb3.1/4, mb1 3.1/8, mb1mx2.9/48, mbtmp3.9/8, Error ellipse: s-maj=32.6km s-min=16.1km az=72.0*
ISC 24 06:05:02.7±0.9, 6.70S±0.09×127.6E±0.1, h408km, n8, σ1§15/11, mb3.5/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.22**	**228**	P	**P**	**06 06 28.2**	**+1.0**
	14nm,0.3s,baz=130,slow=2.7,SNR=7.0						
BATI				S	**S**	**06 07 35.9**	**-0.5**
	12nm,0.3s,baz=61,slow=23,SNR=9.3						
SIJI	**Sorong**	**6.85**	**32**	P	**P**	**06 06 46.2**	**+0.8**
	2.8nm,0.3s,baz=252,slow=19,SNR=3.8						
WRA	**Warramunga Arr**	**14.70**	**154**	P	**P**	**06 08 11.7**	**0.0**
	0.3nm,0.3s,baz=335,slow=12,SNR=16						
WRA				S	**S**	**06 10 46.4**	**-1.8**
	0.4nm,0.3s,baz=332,slow=20,SNR=8.9						
ASAR	**Alice Springs**	**17.93**	**161**	P	**P**	**06 08 46.1**	**0.0**
	0.4nm,0.3s,baz=342,slow=11,SNR=15						
ASAR				S	**S**	**06 11 52.5**	**+1.6**
	0.1nm,0.3s,baz=349,slow=24,SNR=6.1						
STKA	**Stephens Creek**	**28.25**	**154**	P	**P**	**06 10 20.8**	**+0.2**
	0.9nm,0.3s,baz=314,slow=9.5,SNR=5.4						
MKAR	**Makanchi Array**	**66.69**	**328**	P	**P**	**06 15 10.8**	**-0.5**
	0.3nm,0.5s,baz=130,slow=6.6,SNR=7.4						
ZALV	**Zalesovo Beam**	**70.28**	**335**	P	**P**	**06 15 31.6**	**-1.5**
	0.4nm,0.4s,baz=146,slow=7.7,SNR=2.3						
KURBB	**Kurchatov Arra**	**71.02**	**329**	P	**P**	**06 15 36.8**	**-0.8**
	0.9nm,0.6s,baz=132,slow=5.2,SNR=7.2						

*MOS **24** 06:08:45.2±2.2, 49.55N×157.12E, h48km, mb4.2/1, Error ellipse: s-maj=43.0km s-min=6.5km az=83.1*
KRSC 24 06:08:45.2±1.7, 49.55N×157.12E, h48km±25km, ML4.2, 1D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.30**	**331**	*e*P	Pn	06 09 06.9	0.0
SKR				*e*S	Sn	06 09 22.5	-0.6
SKR	**Severo-Kuril's**	**1.30**	**331**	||*i*PN	Pn	06 09 07.0	+0.1
SKR				*e*S	Sn	06 09 22.5	-0.6
SKR				pmax	pmax		
	comp=Z,534nm,0.4s						
SKR				smax	smax		
	comp=N,1μm,0.7s						
SKR				smax	smax		
	comp=E,1μm,0.5s						
PAU	**Pauzhetka**	**1.93**	**354**	*e*P	Pn	06 09 18.3	+2.9
PAU				*e*S	Sn	06 09 42.1	+3.7
PAU	**Pauzhetka**	**1.93**	**354**	PN	Pn	06 09 18.3	+2.9
PAU				S	Sn	06 09 42.1	+3.7
KDTR	**Khodutka, Kamc**	**2.34**	**15**	*e*P	Pn	06 09 23.9	+2.8
KDTR				*e*S	Sn	06 09 52.2	+3.7
ASAK	**Asacha**	**2.88**	**10**	*e*P	Pn	06 09 32.6	+4.1
ASAK	**Asacha**	**2.88**	**10**	PN	Pn	06 09 32.6	+4.1
MTVR	**Mutnovka**	**3.01**	**12**	*e*P	Pn	06 09 33.9	+3.5
MTVR				*e*S	Sn	06 10 09.9	+4.6
MTVR	**Mutnovka**	**3.01**	**12**	PN	Pn	06 09 33.9	+3.5
MTVR				S	Sn	06 10 09.9	+4.6
RUS	**Russkaya**	**3.01**	**16**	*e*P	Pn	06 09 33.2	+2.9
RUS				*e*S	Sn	06 10 08.6	+3.4
RUS	**Russkaya**	**3.01**	**16**	PN	Pn	06 09 33.2	+2.9
RUS				S	Sn	06 10 08.6	+3.4
KRMR	**Karymshinskiy**	**3.34**	**11**	*e*P	Pn	06 09 39.2	+4.4
KRMR	**Karymshinskiy**	**3.34**	**11**	PN	Pn	06 09 39.2	+4.4
APC	**Apacha**	**3.38**	**0**	*e*P	Pn	06 09 39.1	+3.8
APC	**Apacha**	**3.38**	**0**	PN	Pn	06 09 39.1	+3.8
DALK	**Dalny**	**3.63**	**16**	*e*P	Pn	06 09 42.5	+3.7
DALK	**Dalny**	**3.63**	**16**	PN	Pn	06 09 42.5	+3.7
UGLR	**Uglovaya**	**3.81**	**16**	*e*P	Pn	06 09 45.5	+4.1
UGLR	**Uglovaya**	**3.81**	**16**	PN	Pn	06 09 45.5	+4.1
AVH	**Avacha**	**3.85**	**15**	*e*P	Pn	06 09 45.8	+3.9
AVH				*e*S	Sn	06 10 29.8	+3.9
AVH	**Avacha**	**3.85**	**15**	PN	Pn	06 09 45.8	+3.9
AVH				S	Sn	06 10 29.8	+3.9
SDLR	**Sedlovina**	**3.89**	**16**	*e*P	Pn	06 09 46.2	+3.7
SDLR	**Sedlovina**	**3.89**	**16**	PN	Pn	06 09 46.2	+3.7
KRER	**Koryakskii**	**3.89**	**15**	*e*P	Pn	06 09 47.2	+4.6
KRER	**Koryakskii**	**3.89**	**15**	PN	Pn	06 09 47.2	+4.6
SPN	**Mys Shipunski**	**3.99**	**26**	*e*P	Pn	06 09 48.0	+4.3
SPN				*e*S	Sn	06 10 33.8	+4.7
SPN	**Mys Shipunski**	**3.99**	**26**	PN	Pn	06 09 48.0	+4.3
SPN				S	Sn	06 10 33.8	+4.7
GNL	**Ganaly**	**4.18**	**7**	*e*P	Pn	06 09 50.3	+3.9
GNL	**Ganaly**	**4.18**	**7**	PN	Pn	06 09 50.3	+3.9
MKZ	**Mys Kozlova**	**5.76**	**28**	*e*P	Pn	06 10 10.9	+2.9
MKZ	**Mys Kozlova**	**5.76**	**28**	PN	Pn	06 10 10.9	+2.9

KRSC 24 06:38:04.4±2.1, 52.99N×164.15E, h80km±38km, ML3.7, South of Aleutian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**2.12**	**318**	*e*P	Pn	06 38 40.1	+2.2
MKZ				*e*S	Sn	06 39 06.0	+2.6
BKI	**Bering**	**2.46**	**25**	*e*P	Pn	06 38 43.0	+0.6
BKI				*e*S	Sn	06 39 10.9	-0.6
SPN	**Mys Shipunski**	**2.49**	**274**	*e*P	Pn	06 38 45.2	+2.4
SPN				*e*S	Sn	06 39 13.5	+1.2
NLC	**Nalytchevo**	**2.90**	**275**	*e*P	Pn	06 38 50.8	+2.5
NLC				*e*S	Sn	06 39 22.9	+0.7
KII	**Karymskiy**	**2.99**	**292**	*e*P	Pn	06 38 53.0	+3.3
KII				*e*S	Sn	06 39 27.3	+2.7
KZV	**Kizimen**	**3.11**	**315**	*e*P	Pn	06 38 54.9	+3.6
KZV				*e*S	Sn	06 39 31.1	+3.6
TUMD	**Tumrok D**	**3.13**	**317**	*e*S	Sn	06 39 30.9	+3.2
SDLR	**Sedlovina**	**3.18**	**277**	*e*P	Pn	06 38 55.4	+3.1
UGLR	**Uglovaya**	**3.22**	**276**	*e*P	Pn	06 38 56.2	+3.5
UGLR				*e*S	Sn	06 39 33.1	+3.1
DALK	**Dalny**	**3.26**	**273**	*e*S	Sn	06 39 33.4	+2.6
KRER	**Koryakskii**	**3.27**	**278**	*e*P	Pn	06 38 57.1	+3.6
KRER				*e*S	Sn	06 39 35.2	+3.8
AVH	**Avacha**	**3.27**	**277**	*e*P	Pn	06 38 56.2	+2.8
TUMR	**Tumrok**	**3.29**	**316**	*e*P	Pn	06 38 57.5	+3.8
KBTR	**Krutoberegovo**	**3.31**	**347**	*e*P	Pn	06 38 55.9	+2.0
KBTR				*e*S	Sn	06 39 32.7	+0.6
PET	**Petropavlovsk**	**3.32**	**273**	*e*P	Pn	06 38 56.4	+2.4
PET				*e*S	Sn	06 39 33.3	+1.0
KRX	**Arik**	**3.33**	**278**	*e*P	Pn	06 38 57.6	+3.3
KRX				*e*S	Sn	06 39 35.7	+2.9
KOK	**Koryaka**	**3.33**	**277**	*e*S	Sn	06 39 35.7	+2.9
RUS	**Russkaya**	**3.47**	**263**	*e*P	Pn	06 38 58.6	+2.5
RUS				*e*S	Sn	06 39 36.7	+0.6
KMNR	**Kamenistaya**	**3.59**	**322**	*e*P	Pn	06 39 01.7	+3.9
KRMR	**Karymshinskiy**	**3.65**	**270**	*e*P	Pn	06 39 00.8	+2.3
KRMR				*e*S	Sn	06 39 41.6	+1.3
MTVR	**Mutnovka**	**3.66**	**264**	*e*P	Pn	06 39 01.6	+2.8
MTVR				*e*S	Sn	06 39 42.0	+1.1
GNL	**Ganaly**	**3.79**	**283**	*e*P	Pn	06 39 04.4	+3.9
ASAK	**Asacha**	**3.85**	**263**	*e*P	Pn	06 39 04.7	+3.4
ASAK				*e*S	Sn	06 39 47.5	+2.1
KDTR	**Khodutka, Kamc**	**3.90**	**255**	*e*P	Pn	06 39 04.1	+2.2
KDTR				*e*S	Sn	06 39 45.5	-1.0
BDR	**Baidarnaya**	**3.96**	**336**	*e*S	Sn	06 39 51.8	+3.7
APC	**Apacha**	**4.23**	**272**	*e*P	Pn	06 39 10.8	+4.5
APC				*e*S	Sn	06 39 58.6	+4.2

IDC 24 06:43:02.3±1.6, 1.98N×127.60E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.7/53, mbtmp3.9/6, Error ellipse: s-maj=159.6km s-min=17.4km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.77**	**163**	P	P	06 48 07.3	+0.8
	3.8nm,0.6s,baz=342,slow=10,SNR=22						
ASAR	**Alice Springs**	**26.22**	**167**	P	P	06 48 38.4	-0.7
	0.8nm,0.5s,baz=348,slow=7.5,SNR=11						
STKA	**Stephens Creek**	**36.20**	**160**	P	P	06 50 06.7	-0.2
	0.7nm,0.4s,baz=323,slow=8.2,SNR=3.3						
MKAR	**Makanchi Array**	**59.48**	**325**	P	P	06 53 07.8	+0.6
	0.7nm,0.4s,baz=113,slow=7.9,SNR=14						
KURBB	**Kurchatov Arra**	**63.67**	**328**	P	P	06 53 35.3	-0.1
	0.9nm,0.5s,baz=125,slow=6.6,SNR=8.1						
BVAR	**Borovoye Array**	**69.25**	**327**	P	P	06 54 10.7	-0.4
	0.4nm,0.4s,baz=101,slow=7.5,SNR=3.2						

IDC 24 06:52:54.4±5.6, 4.85S×147.61E, h0km, mb3.6/3, mb1 3.6/4, mb1mx3.3/46, mbtmp3.5/4, ML3.5/1, Error ellipse: s-maj=194.2km s-min=28.5km az=103.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.80**	**220**	P	P	06 57 26.9	+0.3
	0.1nm,0.3s,baz=46,slow=11,SNR=4.9						
ASAR	**Alice Springs**	**22.91**	**214**	P	P	06 58 00.0	0.0
	0.6nm,0.6s,baz=40,slow=9.6,SNR=7.9						
ZALV	**Zalesovo Beam**	**78.37**	**328**	P	P	07 04 57.7	+1.0
	0.6nm,0.4s,baz=134,slow=4.2,SNR=4.5						
KURBB	**Kurchatov Arra**	**80.69**	**323**	P	P	07 05 08.2	-1.1
	0.1nm,0.3s,baz=120,slow=6.4,SNR=2.9						

*ISCJB **24** 06:55:08.7±0.7, 36.65N±0.03×9.51W±0.05, h10km, Error ellipse: s-maj=5.8km s-min=4.1km az=142.2*
*SFS **24** 06:55:09.0, 36.48N×9.78W, h39km, ML2.9*
*CNRM **24** 06:55:10.4, 36.36N×9.55W, h40km*
*CSEM **24** 06:55:10.8±0.3, 36.63N×9.56W, h20km, mb3.9, Error ellipse: s-maj=6.4km s-min=4.2km az=49.0*
*MDD **24** 06:55:10.1±1.2, 36.48N×9.77W, h48km±34km, mb3.9/20, Error ellipse: s-maj=12.5km s-min=6.4km az=64.0, PRXIMO*
*INMG **24** 06:55:11.5±1.3, 36.56N×9.65W, h20km±4km, ML2.4, Error ellipse: s-maj=4.7km s-min=3.3km az=48.0*
*IGIL **24** 06:55:11.8, 36.56N×9.63W, h19km, ML2.5*
ISC 24 06:55:06.5±1.8, 36.53N±0.06×9.70W±0.07, h10km, n125, σ2§09/235, 8C-1D, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**0.93**	**49**	||*i*P	**Pn**	**06 55 27.3**	**+1.7**
PFVI				*e*S	**Sn**	**06 55 39.1**	**+0.1**
PFVI				A	A	06 55 39.7	
	50nm,0.2s						
PFVI	**Vila Bisbo**	**0.93**	**49**	||P	**Pn**	**06 55 27.3**	**+1.7**
	26nm,0.1s,SNR=18						
PFVI				S	**Sn**	**06 55 38.9**	**-0.1**
	68nm,0.1s,SNR=25						
PFVI	**Vila Bisbo**	**0.93**	**49**	P	**Pn**	**06 55 27.3**	**+1.7**
	26nm,0.1s,SNR=18						
PFVI				S	**Sn**	**06 55 38.9**	**-0.1**
	68nm,0.1s,SNR=25						
MORF	**Marmelete**	**1.15**	**47**	*e*P	**Pb**	**06 55 30.4**	**+1.9**
MORF				*e*S	**Sb**	**06 55 44.0**	**+0.5**
MORF				AML	AML	06 55 44.9	
	comp=N,89nm,0.3s						
MORF	**Marmelete**	**1.15**	**47**	||*e*P	**Pb**	**06 55 30.4**	**+1.9**
MORF				*e*S	**Sn**	**06 55 44.5**	**0.0**
MORF				A	A	06 55 47.6	
	comp=N,70nm,0.3s						
MORF	**Marmelete**	**1.15**	**47**	P	**Pb**	**06 55 30.4**	**+1.9**
MORF				S	**Sn**	**06 55 44.5**	**0.0**
	comp=N,70nm,0.3s						
MORF	**Marmelete**	**1.15**	**47**	||*e*P	**Pb**	**06 55 30.4**	**+1.9**
MORF				S	**Sn**	**06 55 44.5**	**0.0**
	comp=N,70nm,0.3s						
PTEO	**Sao Teotonio**	**1.28**	**37**	*e*P	**Pb**	**06 55 32.4**	**+1.6**
PTEO				*e*S	**Sn**	**06 55 48.1**	**+0.3**
PTEO				A	A	06 55 48.6	
	comp=N,36nm,0.1s						
PTEO	**Sao Teotonio**	**1.28**	**37**	P	**Pb**	**06 55 32.4**	**+1.6**
PTEO				S	**Sn**	**06 55 48.1**	**+0.3**
	comp=N,18nm,0.1s						
PTEO	**Sao Teotonio**	**1.28**	**37**	*e*P	**Pb**	**06 55 32.4**	**+1.6**
PTEO				S	**Sn**	**06 55 48.1**	**+0.3**
	comp=N,18nm,0.1s						
PBDV	**Barranco-do-Ve**	**1.59**	**63**	||*e*P	**Pn**	**06 55 36.5**	**+1.7**
PBDV				*e*S	**Sn**	**06 55 54.9**	**-0.5**
PBDV				A	A	06 55 56.1	
	comp=N,17nm,0.1s						
PBDV	**Barranco-do-Ve**	**1.59**	**63**	P	**Pn**	**06 55 36.5**	**+1.7**
PBDV				S	**Sn**	**06 55 54.9**	**-0.5**
	comp=N,17nm,0.1s						
PBDV	**Barranco-do-Ve**	**1.59**	**63**	||*e*P	**Pn**	**06 55 36.5**	**+1.7**
PBDV				S	**Sn**	**06 55 54.9**	**-0.5**
	comp=N,17nm,0.1s						
PCVE	**Castro Verde**	**1.73**	**50**	*e*Pn	**Pn**	**06 55 38.5**	**+1.8**
PCVE				*e*Sn	**Sn**	**06 55 59.3**	**+0.5**
PCVE				A	A	06 56 01.7	
	comp=N,13nm,0.2s						
PCVE	**Castro Verde**	**1.73**	**50**	P	**Pn**	**06 55 38.5**	**+1.8**
PCVE				S	**Sn**	**06 55 59.3**	**+0.5**
	comp=N,13nm,0.2s						
PCVE	**Castro Verde**	**1.73**	**50**	P	**Pn**	**06 55 38.5**	**+1.8**
PCVE				S	**Sn**	**06 55 59.3**	**+0.5**
	comp=N,13nm,0.2s						
MESJ	**Messejana**	**1.77**	**42**	*e*P	**Pn**	**06 55 38.9**	**+1.7**
MESJ				*e*S	**Sn**	**06 55 58.9**	**-0.8**
MESJ				AML	AML	06 56 00.1	
	comp=N,31nm,0.1s						
MESJ	**Messejana**	**1.77**	**42**	||*e*Pn	**Pn**	**06 55 38.9**	**+1.7**
MESJ				*e*Sn	**Sn**	**06 55 59.3**	**-0.4**
MESJ				A	A	06 56 01.2	
	comp=N,17nm,0.2s						
MESJ	**Messejana**	**1.77**	**42**	P	**Pn**	**06 55 38.9**	**+1.7**
MESJ				S	**Sn**	**06 55 59.3**	**-0.4**
	comp=N,17nm,0.2s						
MESJ	**Messejana**	**1.77**	**42**	P	**Pn**	**06 55 38.9**	**+1.7**
MESJ				S	**Sn**	**06 55 59.3**	**-0.4**
	comp=N,17nm,0.2s						
PVAQ	**Vaqueiros**	**1.82**	**61**	||P	**Pn**	**06 55 39.5**	**+1.6**
PVAQ				*e*Sn	**Sn**	**06 56 00.0**	**-0.9**
PVAQ				A	A	06 56 01.6	
	comp=N,30nm,0.1s						
PVAQ	**Vaqueiros**	**1.82**	**61**	P	**Pn**	**06 55 39.5**	**+1.6**
PVAQ				S	**Sn**	**06 56 00.0**	**-0.9**
	comp=N,30nm,0.1s						
PVAQ	**Vaqueiros**	**1.82**	**61**	P	**Pn**	**06 55 39.5**	**+1.6**
PVAQ				S	**Sn**	**06 56 00.0**	**-0.9**
	comp=N,30nm,0.1s						
PNCL	**Nicolau / Gran**	**1.84**	**30**	*e*Pn	**Pn**	**06 55 39.8**	**+1.6**
PNCL				*e*Sn	**Sn**	**06 56 00.8**	**-0.7**
PNCL				A	A	06 56 02.1	
	comp=N,22nm,0.2s						
PNCL	**Nicolau / Gran**	**1.84**	**30**	*e*Pn	**Pn**	**06 55 39.8**	**+1.6**
PNCL				*e*Sn	**Sn**	**06 56 00.8**	**-0.7**
EGRO	**El Granado**	**2.04**	**60**	P	**Pn**	**06 55 42.5**	**+1.5**
	comp=N,1.5nm,0.1s,SNR=15						
EGRO				S	**Sn**	**06 56 05.8**	**-0.7**
	comp=N,18nm,0.1s,SNR=21						
EGRO	**El Granado**	**2.04**	**60**	P	**Pn**	**06 55 42.5**	**+1.5**
	comp=N,1.5nm,0.1s,SNR=15						
EGRO				S	**Sn**	**06 56 05.8**	**-0.7**
	comp=N,18nm,0.1s,SNR=21						
PBEJ	**Beja**	**2.10**	**44**	*e*Pn	**Pn**	**06 55 43.2**	**+1.5**
PBEJ				*e*Sn	**Sn**	**06 56 06.8**	**-1.0**
PBEJ				A	A	06 56 08.9	
	comp=N,16nm,0.1s						
PBEJ	**Beja**	**2.10**	**44**	P	**Pn**	**06 55 43.2**	**+1.5**
PBEJ				S	**Sn**	**06 56 06.8**	**-1.0**
	comp=N,8.1nm,0.1s						
PBEJ	**Beja**	**2.10**	**44**	P	**Pn**	**06 55 43.2**	**+1.5**
PBEJ				S	**Sn**	**06 56 06.8**	**-1.0**
	comp=N,8.1nm,0.1s						
PMST	**Lisbon--Monsan**	**2.25**	**10**	*e*Sn	**Sn**	**06 56 11.3**	**-0.3**
PMST				A	A	06 56 11.7	
	comp=N,22nm,0.2s						
PMST	**Lisbon--Monsan**	**2.25**	**10**	*e*Sn	**Sn**	**06 56 11.3**	**-0.3**
EVO	**Evora**	**2.41**	**33**	*e*Pn	**Pn**	**06 55 47.4**	**+1.3**
EVO				*e*Sn	**Sn**	**06 56 14.5**	**-1.2**
EVO				A	A	06 56 15.6	
	comp=N,45nm,0.4s						
EVO	**Evora**	**2.41**	**33**	||P	**Pn**	**06 55 47.4**	**+1.3**
EVO				S	**Sn**	**06 56 14.2**	**-1.5**
EVO	**Evora**	**2.41**	**33**	P	**Pn**	**06 55 47.3**	**+1.2**
EVO				S	**Sn**	**06 56 14.1**	**-1.5**
PMAFR	**Mafra**	**2.45**	**8**	*e*Pn	**Pn**	**06 55 47.7**	**+1.1**
PMAFR				*e*Sn	**Sn**	**06 56 16.2**	**-0.4**
PMAFR				A	A	06 56 18.3	
	comp=N,36nm,0.2s						
PMAFR	**Mafra**	**2.45**	**8**	P	**Pn**	**06 55 47.7**	**+1.1**
	comp=N,7.3nm,0.1s,SNR=16						
PMAFR				S	**Sn**	**06 56 16.0**	**-0.6**
	comp=N,73nm,0.2s,SNR=15						
PMAFR	**Mafra**	**2.45**	**8**	P	**Pn**	**06 55 47.7**	**+1.1**
	comp=N,7.3nm,0.1s,SNR=16						
PMAFR				S	**Sn**	**06 56 16.0**	**-0.6**
	comp=N,73nm,0.2s,SNR=15						
PBAR	**Barrancos**	**2.69**	**51**	*e*Pn	**Pn**	**06 55 51.3**	**+1.5**
PBAR				*e*Sn	**Sn**	**06 56 21.6**	**-0.8**
PBAR				A	A	06 56 23.5	
	comp=N,8.3nm,0.1s						
PBAR	**Barrancos**	**2.69**	**51**	P	**Pn**	**06 55 51.3**	**+1.5**
PBAR				S	**Sn**	**06 56 21.6**	**-0.8**
	comp=N,8.3nm,0.1s						
PBAR	**Barrancos**	**2.69**	**51**	P	**Pn**	**06 55 51.3**	**+1.5**
PBAR				S	**Sn**	**06 56 21.6**	**-0.8**
	comp=N,8.3nm,0.1s						
EMIN	**Mina Concepcio**	**2.72**	**62**	P	**Pn**	**06 55 51.4**	**+1.1**
	comp=N,0.4nm,0.1s,SNR=8.4						
EMIN				S	**Sn**	**06 56 21.7**	**-1.6**
	comp=N,4.0nm,0.1s,SNR=14						
EMIN	**Mina Concepcio**	**2.72**	**62**	P	**Pn**	**06 55 51.4**	**+1.1**
	comp=N,0.4nm,0.1s,SNR=8.4						
EMIN				S	**Sn**	**06 56 21.7**	**-1.6**
	comp=N,4.0nm,0.1s,SNR=14						
ALMR	**Almeirim**	**2.77**	**18**	*e*S	**Sn**	**06 56 23.1**	**-1.4**
ALMR				AML	AML	06 56 25.6	
	comp=N,25nm,0.2s						
ALMR	**Almeirim**	**2.77**	**18**	*e*Pn	**Pn**	**06 55 53.1**	**+2.1**
ALMR				*e*Sn	**Sn**	**06 56 23.6**	**-0.9**
ALMR				A	A	06 56 27.2	
	comp=N,18nm,0.9s						
ALMR	**Almeirim**	**2.77**	**18**	P	**Pn**	**06 55 53.1**	**+2.1**
ALMR				S	**Sn**	**06 56 23.6**	**-0.9**
	comp=N,8.9nm,0.9s						
ALMR	**Almeirim**	**2.77**	**18**	P	**Pn**	**06 55 53.1**	**+2.1**
ALMR				S	**Sn**	**06 56 23.6**	**-0.9**
	comp=N,8.9nm,0.9s						
PMTG	**Montargil**	**2.80**	**24**	*e*Pn	**Pn**	**06 55 52.9**	**+1.6**
PMTG				*e*Sn	**Sn**	**06 56 24.0**	**-1.1**
PMTG				A	A	06 56 25.3	
	comp=N,14nm,0.1s						
PMTG	**Montargil**	**2.80**	**24**	*e*Pn	**Pn**	**06 55 52.9**	**+1.6**
PMTG				*e*Sn	**Sn**	**06 56 24.0**	**-1.1**
PESTR	**Estremoz**	**2.88**	**35**	*e*Pn	**Pn**	**06 55 53.5**	**+1.0**
PESTR				*e*Sn	**Sn**	**06 56 26.1**	**-1.0**
PESTR				A	A	06 56 27.6	
	comp=N,5.4nm,0.1s						
PESTR	**Estremoz**	**2.88**	**35**	*e*Pn	**Pn**	**06 55 53.5**	**+1.0**
PESTR	**Estremoz**	**2.88**	**35**	P	**Pn**	**06 55 57.0**	**+4.5**
PESTR				*e*Sn	**Sn**	**06 56 26.1**	**-1.0**
PESTR				S	**Sn**	**06 56 27.2**	**+0.1**
EBAD	**Badajoz**	**3.08**	**43**	P	**Pn**	**06 55 56.3**	**+1.0**
	comp=N,1.5nm,0.1s,SNR=9.0						

MTE	**Manteigas**	4.22	23	S		Sn	06 56 59.7 -0.7
	comp=N,3.5nm,0.2s						
EADA	**Adamuz**	4.40	67	P		Pn	06 56 14.9 +1.4
	comp=N,1.2nm,0.1s,SNR=12						
EADA				S		Sn	06 57 00.9 -3.8
	comp=N,2.4nm,0.1s						
EADA	**Adamuz**	4.40	67	P		Pn	06 56 14.9 +1.4
	comp=N,1.2nm,0.1s,SNR=12						
EADA				S		Sn	06 57 00.9 -3.8
	comp=N,2.4nm,0.1s						
PVIS	**Viseu**	4.42	18	*e*Pn		Pn	06 56 15.1 +1.4
PVIS				*e*Sn		Sn	06 57 02.7 -2.5
PVIS				A		A	06 57 05.9
	comp=N,7.3nm,0.1s						
PVIS	**Viseu**	4.42	18	P		Pn	06 56 15.1 +1.4
PVIS				S		Sn	06 57 02.7 -2.5
	comp=N,3.7nm,0.1s						
PVIS	**Viseu**	4.42	18	P		Pn	06 56 15.1 +1.4
PVIS				S		Sn	06 57 02.7 -2.5
	comp=N,3.7nm,0.1s						
EGOR	**Sierra Gorda,**	4.53	81	P		Pn	06 56 17.1 +1.9
	comp=N,0.1nm,0.1s,SNR=7.9						
EGOR				S		Sn	06 57 06.9 -1.1
	comp=N,1.6nm,0.3s,SNR=7.9						
EGOR	**Sierra Gorda,**	4.53	81	P		Pn	06 56 17.1 +1.9
	comp=N,0.1nm,0.1s,SNR=7.9						
EGOR				S		Sn	06 57 06.9 -1.1
	comp=N,1.6nm,0.3s,SNR=7.9						
EPLA	**Plasencia**	4.54	38	P		Pn	06 56 16.3 +1.0
	comp=N,0.5nm,0.1s,SNR=7.9						
EPLA				S		Sn	06 57 05.3 -2.8
	comp=N,11nm,0.1s,SNR=7.9						
EPLA	**Plasencia**	4.54	38	P		Pn	06 56 16.3 +1.0
	comp=N,0.5nm,0.1s,SNR=7.9						
EPLA				S		Sn	06 57 05.3 -2.8
	comp=N,11nm,0.1s,SNR=7.9						
MPAL	**Palemas**	4.85	104	P		Pn	06 56 20.5 +0.8
MPAL				S		Sn	06 57 14.2 -1.7
MPAL	**Palemas**	4.85	104	P		Pn	06 56 20.5 +0.8
MPAL				S		Sn	06 57 14.2 -1.7
ELGU	**Los Guajares,**	4.89	84	P		Pn	06 56 21.3 +1.1
	comp=N,0.6nm,0.2s,SNR=7.9						
ELGU				S		Sn	06 57 16.0 -1.0
	comp=N,3.2nm,0.3s,SNR=7.9						
ELGU	**Los Guajares,**	4.89	84	P		Pn	06 56 21.3 +1.1
	comp=N,0.6nm,0.2s,SNR=7.9						
ELGU				S		Sn	06 57 16.0 -1.0
	comp=N,3.2nm,0.3s,SNR=7.9						
PVRL	**Vila Real**	4.99	17	*e*Sn		Sn	06 57 15.8 -3.5
PVRL	**Vila Real**	4.99	17	S		Sn	06 57 15.8 -3.5
PVRL	**Vila Real**	4.99	17	S		Sn	06 57 15.8 -3.5
POLO	**Lamas de Olo**	5.07	16	*e*Pn		Pn	06 56 23.7 +1.1
POLO				*e*Sn		Sn	06 57 17.2 -4.0
POLO				A		A	06 57 20.8
	comp=N,1.7nm,0.5s						
POLO	**Lamas de Olo**	5.07	16	*e*Pn		Pn	06 56 23.7 +1.1
POLO				*e*Sn		Sn	06 57 17.2 -4.0
MVO	**Moncorvo**	5.08	23	*e*Pn		Pn	06 56 23.9 +1.1
MVO				*e*Sn		Sn	06 57 19.6 -2.0
MVO				A		A	06 57 21.1
	comp=N,4.2nm,0.5s						
MVO	**Moncorvo**	5.08	23	P		Pn	06 56 24.0 +1.2
	comp=N,1.3nm,0.1s,SNR=8.3						
MVO				S		Sn	06 57 19.1 -2.5
	comp=N,3.6nm,0.1s,SNR=7.1						
MVO	**Moncorvo**	5.08	23	*e*Pn		Pn	06 56 23.9 +1.1
MVO				S		Sn	06 57 19.1 -2.5
	comp=N,3.6nm,0.1s,SNR=7.1						
MVO				*e*Sn		Sn	06 57 19.6 -2.0
CZD	**Col de Zad**	5.18	131	S		Sn	06 57 20.3 -4.0
CZD	**Col de Zad**	5.18	131	S		Sn	06 57 20.3 -4.0
PAB	**San Pablo**	5.19	53	P		Pn	06 56 25.7 +1.4
	comp=N,0.3nm,0.1s,SNR=7.9						
PAB				S		Sn	06 57 20.6 -3.7
	comp=N,2.1nm,0.2s,SNR=7.9						
PAB	**San Pablo**	5.19	53	P		Pn	06 56 25.7 +1.4
	comp=N,0.3nm,0.1s,SNR=7.9						
PAB				S		Sn	06 57 20.6 -3.7
	comp=N,2.1nm,0.2s,SNR=7.9						
PCAB	**Cabril**	5.34	14	*e*Pn		Pn	06 56 27.5 +1.2
PCAB	**Cabril**	5.34	14	P		Pn	06 56 27.5 +1.2
PCAB	**Cabril**	5.34	14	P		Pn	06 56 27.5 +1.2
EQES	**Quesada**	5.45	74	P		Pn	06 56 29.1 +1.2
	comp=N,0.5nm,0.1s,SNR=7.9						
EQES				S		Sn	06 57 28.1 -2.7
	comp=N,3.8nm,0.2s,SNR=7.9						
EQES	**Quesada**	5.45	74	P		Pn	06 56 29.1 +1.2
	comp=N,0.5nm,0.1s,SNR=7.9						
EQES				S		Sn	06 57 28.0 -2.7
	comp=N,3.8nm,0.2s,SNR=7.9						
ELOB	**Lobios**	5.49	13	P		Pn	06 56 29.2 +0.8
	comp=N,0.5nm,0.1s,SNR=8.2						
ELOB				S		Sn	06 57 27.0 -4.6
	comp=N,2.1nm,0.1s,SNR=7.9						
ELOB	**Lobios**	5.49	13	P		Pn	06 56 29.2 +0.8
	comp=N,0.5nm,0.1s,SNR=8.2						
ELOB				S		Sn	06 57 27.0 -4.6
	comp=N,2.1nm,0.1s,SNR=7.9						
ESDC	**Sonseca Array**	5.51	53	P		Pn	06 56 30.0 +1.3
	comp=N,0.9nm,0.2s,baz=237,slow=13,SNR=6.0						
ESDC				S		Sn	06 57 29.8 -2.4
	comp=N,4.4nm,0.1s,baz=240,slow=24,SNR=22						
ESDC	**Sonseca Array**	5.51	53	P		Pn	06 56 30.0 +1.3
	comp=N,0.9nm,0.2s,SNR=6.0						
ESDC				S		Sn	06 57 29.8 -2.4
	comp=N,4.4nm,0.1s,SNR=22						
PGAV	**Gavieira, Arco**	5.54	11	*e*Pn		Pn	06 56 30.1 +0.9
PGAV				*e*Sn		Sn	06 57 29.6 -3.5
PGAV				A		A	06 57 32.6
	comp=N,3.9nm,0.6s						
PGAV	**Gavieira, Arco**	5.54	11	*e*Pn		Pn	06 56 30.1 +0.9
PGAV				*e*Sn		Sn	06 57 29.6 -3.5
PBRG	**Braganca**	5.75	23	*e*Pn		Pn	06 56 33.0 +1.0
PBRG				*e*Sn		Sn	06 57 34.3 -3.8
PBRG				A		A	06 57 38.2
	comp=N,2.2nm,0.2s						
PBRG	**Braganca**	5.75	23	P		Pn	06 56 33.0 +1.0
PBRG				S		Sn	06 57 34.3 -3.8
	comp=N,1.1nm,0.2s						
PBRG	**Braganca**	5.75	23	P		Pn	06 56 33.0 +1.0
PBRG				S		Sn	06 57 34.3 -3.8
	comp=N,1.1nm,0.2s						
SESP	**Santiago Espad**	5.92	72	P		Pn	06 56 35.3 +0.9
	comp=N,0.2nm,0.1s,SNR=7.9						
SESP				S		Sn	06 57 38.9 -3.5
	comp=N,2.7nm,0.1s,SNR=7.9						
SESP	**Santiago Espad**	5.92	72	P		Pn	06 56 35.3 +0.9
	comp=N,0.2nm,0.1s,SNR=7.9						
SESP				S		Sn	06 57 38.9 -3.5
	comp=N,2.7nm,0.1s,SNR=7.9						
EAGO	**Agolada(Pontev**	6.39	11	P		Pn	06 56 41.5 +0.7
	comp=N,0.9nm,0.1s,SNR=7.9						
EAGO				S		Sn	06 57 49.0 -4.8
	comp=N,1.0nm,0.1s,SNR=7.9						
EAGO	**Agolada(Pontev**	6.39	11	P		Pn	06 56 41.5 +0.7
	comp=N,0.9nm,0.1s,SNR=7.9						
EAGO				S		Sn	06 57 49.0 -4.8
	comp=N,1.0nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	6.44	5	P		Pn	06 56 41.7 +0.3
	comp=N,1.2nm,0.1s,SNR=7.9						
EMAZ				S		Sn	06 57 49.7 -5.3
	comp=N,1.0nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	6.44	5	P		Pn	06 56 41.7 +0.3
	comp=N,1.2nm,0.1s,SNR=7.9						
EMAZ				S		Sn	06 57 49.7 -5.3
	comp=N,1.0nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	6.81	69	P		Pn	06 56 47.1 +0.5
	comp=N,0.3nm,0.1s,SNR=7.9						
ETOB				S		Sn	06 58 00.2 -4.0
	comp=N,0.4nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	6.81	69	P		Pn	06 56 47.1 +0.5
	comp=N,0.3nm,0.1s,SNR=7.9						
ETOB				S		Sn	06 58 00.2 -4.0
	comp=N,0.4nm,0.1s,SNR=7.9						
EPON	**Pontenova**	7.07	15	P		Pn	06 56 49.1 -1.0
	SNR=7.9						
EPON				S		Sn	06 58 05.9 -4.6
	comp=N,0.6nm,0.2s,SNR=7.9						
EPON	**Pontenova**	7.07	15	P		Pn	06 56 49.1 -1.0
	SNR=7.9						
EPON				S		Sn	06 58 05.9 -4.6
	comp=N,0.6nm,0.2s,SNR=7.9						
ETOR	**Torete**	7.36	52	P		Pn	06 56 55.5 +1.4
	SNR=7.9						
ETOR				S		Sn	06 58 12.1 -5.6
	comp=N,0.3nm,0.1s,SNR=7.9						
ETOR	**Torete**	7.36	52	P		Pn	06 56 55.5 +1.4
	SNR=7.9						
ETOR				S		Sn	06 58 12.1 -5.6
	comp=N,0.3nm,0.1s,SNR=7.9						
EMOS	**Mosqueruela**	8.19	59	S		Sn	06 58 33.5 -4.9
	comp=N,0.5nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	8.19	59	S		Sn	06 58 33.5 -4.9
	comp=N,0.5nm,0.2s,SNR=7.9						

IDC 24 06:55:38.1±1.6, 13°.64S×179°.28E, h0km, mb3.8/5, mb1 4.1/5, mb1mx3.7/47, mbtmp3.8/5, MS3.5/16, Ms1 3.5/16, ms1mx3.3/50, Error ellipse: s-maj=158.7km s-min=25.3km az=151.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	8.70	93	LR	LR	06 59 34.3	
	comp=Z,248nm,20.0s,baz=169,slow=27						
DZM	**Mont Dzumac**	14.81	234	LR	LR	07 03 52.4	
	comp=Z,178nm,21.5s,baz=71,slow=33						
HNR	**Honiara**	19.39	280	LR	LR	07 07 11.6	
	comp=Z,617nm,19.0s,baz=132,slow=36						
RAR	**Rarotonga**	21.35	114	LR	LR	07 07 20.3	
	comp=Z,49nm,18.1s,baz=280,slow=33						
PPT	**Papeete**	30.23	102	LR	LR	07 13 07.0	
	comp=Z,54nm,18.5s,baz=278,slow=35						
PMG	**Port Moresby**	31.73	274	LR	LR	07 13 38.0	
	comp=Z,105nm,20.0s,baz=104,slow=34						
STKA	**Stephens Creek**	38.95	236	P	P	07 03 06.0	-0.2
	1.5nm,0.7s,baz=21,slow=8.6,SNR=3.2						
WRA	**Warramunga Arr**	43.38	255	P	P	07 03 42.0	-0.7
	1.6nm,0.9s,baz=90,slow=9.6,SNR=4.6						
GUMO	**Guam**	43.51	307	LR	LR	07 17 57.2	
	comp=Z,44nm,21.7s,baz=140,slow=31						
ASAR	**Alice Springs**	43.97	250	P	P	07 03 47.9	+0.4
	3.1nm,0.8s,baz=80,slow=8.9,SNR=23						
ASAR				LR	LR	07 20 58.2	
	comp=Z,134nm,19.7s,baz=94,slow=35						
DAV	**Davao City (W)**	57.14	288	LR	LR	07 27 56.5	
	comp=Z,27nm,18.9s,baz=154,slow=34						
KSRS	**Korea Array**	70.04	319	LR	LR	07 32 27.9	
	comp=Z,25nm,19.9s,baz=110,slow=32						
QSPA	**South Pole Qui**	76.39	180	LR	LR	07 35 14.2	
	comp=Z,53nm,21.4s,baz=36,slow=31						
YBH	**Yreka Blue Hor**	76.70	41	LR	LR	07 32 53.5	
	comp=Z,38nm,20.7s,baz=248,slow=29						
NVAR	**Mina Array Bea**	77.97	45	P	P	07 07 39.6	+0.9
	0.3nm,0.7s,baz=222,slow=6.6,SNR=2.9						
ILAR	**Eielson Array**	82.28	14	LR	LR	07 37 12.3	
	comp=Z,29nm,21.6s,baz=132,slow=30						
TXAR	**Lajitas Array**	85.64	59	P	P	07 08 18.2	-1.1
	0.3nm,0.9s,baz=232,slow=5.4,SNR=3.3						
PDAR	**Pinedale Array**	85.84	44	LR	LR	07 38 32.0	
	comp=Z,19nm,20.3s,baz=270,slow=30						
MAW	**Mawson**	87.09	200	LR	LR	07 44 11.7	
	comp=Z,45nm,18.9s,baz=43,slow=34						
JTS	**JuntasAbangare**	97.92	81	LR	LR	07 43 36.0	
	comp=Z,24nm,18.8s,baz=344,slow=29						

*NNC **24** 06:59:25.9±5.0, 38°.21N×72°.65E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=56.1km s-min=13.8km az=150.0*

ISC 24 06:59:25.5±3.7, 38°.00N±0°.3×72°.9E±0°.1, h127km, n10, σ0$71/12, 1C-5D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	2.06	13	⇓Pn		**07 00 00.6**	**+0.4**
	17nm,0.4s						
SFK				⇓Sn		**07 00 26.4**	**-0.4**
	50nm,0.3s						
DZET	**Dzherino**	3.29	285	⇑Pn		**07 00 16.4**	**+0.6**
	4.3nm,0.2s						
DZET				Sn		**07 00 53.8**	**-1.0**
	45nm,0.4s						
AML	**Almayashu**	4.17	8	P		**07 00 27.8**	**+0.1**
	SNR=20						
UCH	**Uchtor**	4.40	16	P		**07 00 31.2**	**+0.4**
	SNR=11						
KZA	**Kyzart**	4.45	23	P		**07 00 31.7**	**+0.2**
	SNR=10						
MNAS	**Manas**	4.49	356	⇓Pn		**07 00 32.0**	**+0.2**
	9.5nm,0.4s						
MNAS				⇓Lg		07 01 19.8	
	11nm,0.3s						
EKS2	**Erkin-Say**	4.70	8	P		**07 00 36.1**	**+1.6**
	SNR=15						
ULHL	**Ulahol**	4.95	30	P		**07 00 38.0**	**0.0**
	SNR=7.7						
TKM2	**Tokmak 2**	5.33	22	⇓Pn		**07 00 43.0**	**-0.1**
	1.7nm,0.9s						
USP	**Ospenovka**	5.39	13	P		**07 00 44.0**	**+0.2**
	SNR=5.5						

*IDC **24** 07:17:14.2±3.4, 2°.26N×89°.62E, h0km, mb3.7/5, mb1 3.9/7, mb1mx3.6/65, mbtmp3.7/7, ML4.0/2, Error ellipse: s-maj=71.6km s-min=44.9km az=173.0*

ISC 24 07:17:15.3±3.4, 2°.2N±0°.5×89°.7E±0°.2, h10km, n11, σ0$36/8, mb3.9/5, North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	**Pallekele**	10.25	300	Pn		**07 19 42.7**	**0.0**
	0.5nm,0.3s,baz=115,slow=14,SNR=2.5						
PALK				Sn		07 21 26.8	-11
	2.0nm,0.3s,baz=296,slow=1.8,SNR=7.7						
CMAR	**Chiang Mai Arr**	18.53	29	P		**07 21 32.0**	**-0.3**
	0.3nm,0.3s,baz=209,slow=9.2,SNR=3.2						
H08S3	**Diego Garcia H**	19.74	240	T		07 42 25.9	
	baz=58,slow=74,SNR=26						
H08S2	**Diego Garcia H**	19.74	240	T		07 42 29.1	
	baz=58,slow=74,SNR=5.2						
H08S1	**Diego Garcia H**	19.75	240	T		07 42 23.8	
	baz=58						
MKAR	**Makanchi Array**	44.86	353	P		**07 25 29.6**	**-0.3**
	0.2nm,0.6s,baz=169,slow=8.6,SNR=3.5						
SONM	**Songino Array**	47.69	15	P		**07 25 52.8**	**+0.6**
	0.7nm,0.5s,baz=216,slow=9.0,SNR=3.9						
KURBB	**Kurchatov Arra**	49.15	351	P		**07 26 03.3**	**0.0**
	0.2nm,0.5s,baz=173,slow=7.4,SNR=2.9						
ZALV	**Zalesovo Beam**	51.72	356	P		**07 26 22.6**	**0.0**
	0.4nm,0.2s,baz=182,slow=9.8,SNR=2.6						
ARCES	**ARCES Array B**	79.10	341	P		**07 29 19.4**	**-0.3**
	1.7nm,0.9s,baz=120,slow=5.7,SNR=3.8						
TXAR	**Lajitas Array**	146.13	21	PKPbc		**PKPbc 07 36 56.5**	**-0.1**
	0.5nm,0.8s,baz=56,slow=0.2,SNR=6.8						

IDC 24 07:21:21.8±1.3, 6°.85S×129°.01E, h0km, mb3.8/3, mb1 4.1/6, mb1mx3.7/52, mbtmp4.0/6, ML4.2/3, MS3.6/1, Ms1 3.6/1, ms1mx2.5/50, Error ellipse: s-maj=48.9km s-min=22.4km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	6.25	237	Pn	Pn	07 22 55.4	+0.1
	4.1nm,0.3s,baz=85,slow=11,SNR=3.7						
BATI				Sn	Sn	07 23 53.8	-14
	13nm,0.3s,baz=345,slow=20,SNR=4.3						
WRA	**Warramunga Arr**	14.01	159	Pn	Pn	07 24 40.0	-1.6
	1.9nm,0.3s,baz=342,slow=13,SNR=42						
WRA				Sn	Sn	07 27 02.9	-15
	1.1nm,0.3s,baz=339,slow=22,SNR=9.0						
ASAR	**Alice Springs**	17.37	165	P	Pn	07 25 23.9	-1.8
	0.6nm,0.3s,baz=335,slow=8.7,SNR=33						
ASAR				S	Sn	07 28 23.2	-17
	0.3nm,0.3s,baz=346,slow=26,SNR=5.0						
STKA	**Stephens Creek**	27.53	156	P	P	07 27 11.6	+1.2
	2.8nm,0.8s,baz=324,slow=9.1,SNR=4.3						
AFI	**Afiamalu**	58.55	102	LR	LR	07 52 34.8	
	comp=Z,55nm,20.9s,baz=154,slow=32						
MKAR	**Makanchi Array**	67.56	327	P	P	07 32 20.1	0.0
	0.2nm,0.5s,baz=141,slow=7.1,SNR=2.0						
KURBB	**Kurchatov Arra**	71.87	329	P	P	07 32 46.5	-0.1
	0.3nm,0.5s,baz=130,slow=4.7,SNR=4.2						

*ISCJB **24** 07:29:49.8±0.5, 69°.59N±0°.04×143°.53W±0°.09, h10km, mb3.0/1, Error ellipse: s-maj=5.2km s-min=4.6km az=162.7*

*IDC **24** 07:29:50.1±3.2, 69°.88N×144°.10W, h0km, mb3.2/1, mb1 3.7/5, mb1mx3.3/78, mbtmp3.4/5, ML3.3/4, Error ellipse: s-maj=40.2km s-min=23.1km az=154.0*

*PGC **24** 07:29:51.5±113.0, 69°.90N×144°.24W, h145km±2km, ML3.2/1, 160km east of Prudhoe Bay, Ak Northern Alaska*

*NEIC **24** 07:29:56.0±0.0, 69°.45N×144°.18W, h28km, ML3.2(AEIC), After AEIC.*

ISC 24 07:29:51.6±0.9, 69°.59N±0°.05×143°.82W±0°.04, h10km, n45, σ1$62/58, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PS01	**TAPS Pump Stn**	1.79	294	P		**07 30 24.5**	**+2.1**
PS01				S		**07 30 46.6**	**+1.5**
BM3	**Burnt Mountain**	2.20	188	P		**07 30 28.9**	**+0.8**
BM3				S		**07 30 54.2**	**-1.2**
TOLK	**Toolik Lake Re**	2.27	248	P		**07 30 29.5**	**+0.4**
TOLK				S		**07 30 57.0**	**-0.2**
FYU	**Fort Yukon**	3.08	191	P		**07 30 41.3**	**+1.1**
FYU				S		**07 31 15.1**	**-1.9**
COLD	**Coldfoot**	3.34	228	Pn		**07 30 43.7**	**-0.1**
COLD	**Coldfoot**	3.34	228	P		**07 30 44.5**	**+0.6**
INK	**Inuvik**	3.93	104	Pn		**07 30 53.6**	**+1.7**
	0.5nm,0.3s,baz=304,slow=12,SNR=46						
INK				Sn		**07 31 38.2**	**+0.2**
	2.3nm,0.3s,baz=49,slow=29,SNR=14						
INK				Lg	Lg	07 31 57.5	
	1.6nm,0.3s,baz=40,slow=24,SNR=4.2						
INK	**Inuvik**	3.93	104	Pn		**07 30 53.3**	**+1.4**
INK				Sn		**07 31 37.1**	**-0.9**
INK	**Inuvik**	3.93	104	*e*Pn		**07 30 56.3**	**+4.4**
PRP	**Porcupine Dome**	4.14	190	P		**07 30 55.7**	**+0.8**
EGAK	**Eagle**	4.94	167	P		**07 31 07.0**	**+1.2**
MDM	**Murphy Dome**	4.95	202	P		**07 31 07.0**	**+1.0**
IL1	**Eielson Array**	4.98	195	*e*Pn		**07 31 07.8**	**+1.4**
IL1				*e*Sn		**07 32 03.9**	**0.0**
ILAR	**Eielson Array**	4.98	195	Pn		**07 31 07.3**	**+1.0**
	1.0nm,0.3s,baz=8.8,slow=13,SNR=36						
ILAR				Sn		**07 32 05.3**	**+1.4**
	1.9nm,0.3s,baz=5.0,slow=25,SNR=12						
ILAR				Lg	Lg	07 32 23.4	
	3.4nm,0.3s,baz=7.7,slow=32,SNR=8.9						
ILB	**Eielson Array**	4.98	195	P		**07 31 07.2**	**+0.8**
COLA	**College**	4.99	200	*e*Pn		**07 31 08.0**	**+1.6**
COLA				*e*Sn		**07 32 04.0**	**+0.1**
CCB	**Clear Creek Bu**	5.20	199	P		**07 31 10.5**	**+1.2**
IM02	**Indian Mountai**	5.22	231	P		**07 31 09.1**	**-0.5**
MLY	**Manley**	5.30	214	P		**07 31 11.1**	**+0.3**
WRH	**Wood River Hil**	5.40	200	P		**07 31 13.5**	**+1.4**
SCRK	**Sand Creek**	5.64	181	P		**07 31 17.7**	**+2.2**
DAWY	**Dawson**	5.81	160	Pn		**07 31 19.0**	**+1.2**
DAWY				Sn		**07 32 24.3**	**-0.2**
DAWY	**Dawson**	5.81	160	*e*Pn		**07 31 19.8**	**+2.0**
DAWY				*e*Sn		**07 32 23.8**	**-0.6**
RIDG	**Independ'e Rid**	5.89	184	P		**07 31 21.0**	**+2.2**
DOT	**Dot Lake**	5.97	181	Pn		**07 31 21.3**	**+1.4**
DOT				Sn		**07 32 29.3**	**+1.1**
DOT	**Dot Lake**	5.97	181	*e*Pn		**07 31 20.9**	**+1.1**
DOT				*e*Sn		**07 32 29.3**	**+1.1**
BPAW	**Bear Paw Mtn.**	6.19	211	P		**07 31 23.5**	**+0.6**
MCK	**McKinley**	6.22	201	*e*Pn		**07 31 24.5**	**+1.1**
MCK				*e*Sn		**07 32 32.4**	**-2.0**
BCA3	**Beaver Creek A**	6.60	172	P		**07 31 29.7**	**+1.1**
CHUM	**Lake Minchumin**	6.63	214	P		**07 31 30.1**	**+1.1**
TRF	**Thorofare Moun**	6.68	206	*e*Pn		**07 31 31.8**	**+2.0**
KTH	**Kantishna Hill**	6.68	208	*e*Pn		**07 31 31.4**	**+1.6**
RDOG	**Red Dog Mine**	7.07	266	*e*Pn		**07 31 34.3**	**-0.7**
HARP	**HAARP**	7.23	185	Pn		**07 31 37.8**	**+0.5**
HARP	**HAARP**	7.23	185	*e*Pn		**07 31 39.1**	**+1.9**
PPLA	**Purkeypile**	7.51	211	*e*Pn		**07 31 42.3**	**+1.1**
HYT	**Haines Junctio**	9.18	160	Pn		**07 32 05.2**	**+1.1**
DHRN	**Dharma Camp**	9.32	94	P		**07 32 05.4**	**-0.5**
DHRN				S		07 33 40.2	-10
KUKN	**Kugluktuk,NWT**	10.54	86	P		**07 32 21.6**	**-0.9**
KUKN				S		07 34 11.1	-9.3
YKW3	**Yellowknife Ar**	13.65	107	P		**07 33 01.9**	**-3.0**
YKW3				S		07 35 24.5	-12
YKA	**Yellowknife Ar**	13.70	107	Pn		**07 33 02.8**	**-2.8**
	0.2nm,0.3s,baz=309,slow=13,SNR=16						
YKA				Sn		07 35 25.8	-12
	0.3nm,0.3s,baz=313,slow=22,SNR=10						
YKW1	**Yellowknife Ar**	13.73	107	P		07 33 01.6	-4.4
YKW1				S		07 35 25.7	-13
RES	**Resolute Bay**	15.42	49	Pn		**07 33 25.1**	**-3.7**
	0.4nm,0.3s,baz=288,slow=11,SNR=6.7						
RES				Sn		07 36 08.1	-11
	0.2nm,0.3s,baz=170,slow=17,SNR=3.2						
RES	**Resolute Bay**	15.42	49	P		**07 33 27.3**	**-1.4**
PDAR	**Pinedale Array**	32.11	129	P		**07 36 22.7**	**+3.8**
	0.1nm,0.4s,baz=355,slow=9.1,SNR=3.5						

*ISCJB **24** 07:59:31.6±0.6, 27°.75N±0°.02×100°.71E±0°.01, h0km±3km, mb5.5/344, MS5.3/198, Error ellipse: s-maj=2.7km s-min=2.1km az=1.6*

*IDC **24** 07:59:32.9±0.3, 27°.77N×100°.87E, h0km, mb5.1/60, mb1 5.2/61, mb1mx5.0/83, mbtmp5.1/61, ML4.4/1, MS5.1/55, Ms1 5.1/55, ms1mx5.0/70, Error ellipse: s-maj=9.2km s-min=7.4km az=48.0*

*BJI **24** 07:59:33.5, 27°.71N×100°.69E, h11km, mb5.2/58, mB5.4/47, ML5.4/7, Ms5.7/84, Ms7 5.6/74*

*MOS **24** 07:59:34.9±1.1, 27°.72N×100°.80E, h25km, mb5.6/130, MS5.3/50, Error ellipse: s-maj=5.3km s-min=3.2km az=121.1*

*GCMT **24** 07:59:34.9±0.1, 27°.72N×100°.75E, h12km, MW5.6/128, Moment Tensor Solution. s107,c161; s128,c263; Duration: 1s5 Moment tensor: Scale 10^{17}Nm; M_{rr}-2.24±.03; $M_{\theta\theta}$0.05±.03; $M_{\phi\phi}$2.19±.03; $M_{r\theta}$0.80±.08; $M_{\theta\phi}$-1.22±.02; $M_{r\phi}$0.79±.07; Best double couple

GYA				Sg	**Sg**	**08 02 33.3 +3.6**
GYA				LR	LR	
	comp=E,36μm,9.9s					
GYA				LR	LR	
	comp=Z,55μm,11.0s					
MOKO	**MOKOCHONG**	**5.74 257**	*e*P	**Pn**	**08 01 01.3 +1.1**	
MOKO			*ex*	**Sn**	**08 01 57.2 -8.5**	
JORH	**JORHAT**	**5.87 262**	*e*P	**Pn**	**08 01 00.7 -1.2**	
TEZP	**TEZPUR**	**7.17 263**	*e*P	**Pn**	**08 01 18.9 -0.8**	
CMAI	**Chiengmai2**	**7.92 192**	P	**Pn**	**08 01 33.4 +3.2**	
	538nm,1.2s,32μm19nm					
ENH	**Enshi**	**8.06 70**	*e*Pn	**Pn**	**08 01 32.4 +0.4**	
	906nm,1.0s					
ENH			*e*Sn	**Sn**	**08 03 01.2 -1.6**	
SHL	**Shillong**	**8.22 257**	*e*P	**Pn**	**08 01 34.8 +0.4**	
SHL			*i* x	**Sn**	**08 03 09.0 +2.0**	
SHL	**Shillong**	**8.22 257**	*e*Pn	**Pn**	**08 01 33.1 -1.3**	
SHL			*e*Sn	**Sn**	**08 03 05.8 -1.2**	
SHL	**Shillong**	**8.22 257**	*e*P	**Pn**	**08 01 33.1 -1.3**	
SHL			*e*		08 03 05.8	
GUWA	**GUWAHATI**	**8.23 261**	*e*P	**Pn**	**08 01 32.0 -2.2**	
GUWA			*ex*	x	08 02 47.0	
PAYA	**Payao**	**8.37 186**	P	**Pn**	**08 01 39.7 +3.4**	
	47nm,0.9s,1μm0.4nm					
LSA	**Lhasa**	**8.65 285**	P	**Pn**	**08 01 40.9 +0.4**	
LSA			pmax	pmax		
	comp=Z,50nm,1.4s					
LSA			pmax	pmax		
	comp=Z,640nm,7.0s					
LSA			LR	LR		
	comp=N,28μm,12.6s					
LSA			LR	LR		
	comp=E,9μm,12.6s					
LSA			LR	LR		
	comp=Z,34μm,8.4s					
LSA	**Lhasa**	**8.65 285**	*e*Pn	**Pn**	**08 01 41.0 +0.4**	
	187nm,0.9s					
LSA			*e*Sn	**Sn**	**08 03 17.5 -0.6**	
LSA	**Lhasa**	**8.65 285**	P	**Pn**	**08 01 42.0 +1.4**	
LSA	**Lhasa**	**8.65 285**	*e*P	**Pn**	**08 01 41.0 +0.4**	
LSA			*e*		08 03 17.5	
LSA			pmax	pmax		
	comp=Z,187nm,0.9s					
LZH	**Lanzhou**	**8.74 17**	⇑P	Pn	08 01 45.1 +3.7	
LZH			pP		08 01 49.3	
LZH			sP		08 01 51.4	
LZH			S	**Sn**	**08 03 24.9 +5.3**	
LZH			sS		08 03 28.8	
LZH			pmax	pmax		
	comp=Z,370nm,1.0s					
LZH			pmax	pmax		
	comp=Z,1μm,4.9s					
LZH			LR	LR		
	comp=Z,63μm,10.1s					
LZH			LR	LR		
	comp=Z,65μm,12.5s					
LZH			LR	LR		
	comp=Z,66μm,11.9s					
CHTO	**Chiang Mai**	**9.03 191**	P	Pn	08 01 49.8 +4.5	
	comp=Z,350nm,1.3s,comp=Z,13μm					
CHTO	**Chiang Mai**	**9.03 191**	*e*Pn	**Pn**	**08 01 48.0 +2.7**	
CHTO	**Chiang Mai**	**9.03 191**	P	Pn	08 01 50.3 +5.0	
	SNR=29					
CHTO	**Chiang Mai**	**9.03 191**	*e*P	**Pn**	**08 01 48.0 +2.7**	
AGT	**Agartala**	**9.38 248**	*ex*	Pn	08 01 44.4 -5.6	
CM31	**Chiang Mai Arr**	**9.38 191**	*e*Pn	**Pn**	**08 01 53.3 +3.2**	
CMAR	**Chiang Mai Arr**	**9.38 191**	Pn	**Pn**	**08 01 48.8 -1.4**	
	comp=Z,1.1nm,0.3s,baz=8.9,slow=14,SNR=5.0					
CMAR			Pg		08 02 26.1	
	comp=Z,1.0nm,0.3s,baz=3.7,slow=16,SNR=5.2					
CMAR			Lg	Lg	08 04 36.1	
	comp=Z,2.0nm,0.3s,baz=13,slow=27,SNR=7.1					
CMAR			LR	LR	08 06 07.4	
	comp=Z,6μm,21.9s,baz=10,slow=42					
CM01	**Chiang Mai Arr**	**9.41 190**	*e*Pn	Pn	08 01 55.2 +4.6	
XAN	**Xi'an**	**9.42 46**	P	**Pn**	**08 01 49.9 -0.8**	
XAN			S	**Sn**	**08 03 37.4 +1.1**	
XAN			pmax	pmax		
	comp=Z,41nm,0.8s					
XAN			LR	LR		
	comp=Z,63μm,13.7s					
XAN			LR	LR		
	comp=Z,33μm,13.3s					
XAN			LR	LR		
	comp=Z,55μm,15.8s					
BELO	**BELONIA**	**9.51 244**	*e*P	**Pn**	**08 01 47.2 -4.8**	
TURI	**Tura**	**9.57 259**	*e*P	**Pn**	**08 01 53.3 +0.6**	
NONG	**Nongkai**	**9.87 167**	P	Pn	08 02 01.7 +4.9	
	comp=Z,102nm,1.6s,comp=Z,4μm					
PHIT	**Phitsanulok**	**10.49 182**	P	Pn	08 02 11.4 +6.0	
	comp=Z,87nm,1.0s,comp=Z,2μm					
GTK	**Tadong**	**10.79 271**	*e*P	**Pn**	**08 02 09.6 0.0**	
PBKT	**Sadao Pong**	**11.11 179**	P	**Pn**	**08 02 17.1 +3.3**	
	comp=Z,50nm,1.2s,comp=Z,2μm					
SKNT	**Sakolnakorn**	**11.11 164**	P	**Pn**	**08 02 16.6 +2.7**	
	comp=Z,44nm,2.3s,comp=Z,2μm					
TAPN	**Taplejung**	**11.58 271**	*e*P	**Pn**	**08 02 20.4 -0.1**	
	comp=Z,215nm,0.5s					
UMPA	**Umpang Tak**	**11.60 189**	P	Pn	08 02 29.0 +8.4	
	comp=Z,13nm,1.0s,comp=Z,1μm					
GTA	**Gaotai**	**11.68 356**	⇑P	**Pn**	**08 02 23.4 +1.8**	
GTA			pP		08 02 27.5	
GTA			sP		08 02 31.1	
GTA			S	**Sn**	**08 04 37.4 +5.8**	
GTA			sS		08 04 43.3	
GTA			pmax	pmax		
	comp=Z,200nm,7.6s					
GTA			LR	LR		
	comp=Z,15μm,9.6s					
GTA			LR	LR		
	comp=Z,21μm,11.2s					
ODAN	**Odare**	**11.91 269**	*e*P	**Pn**	**08 02 23.1 -1.9**	
	comp=Z,302nm,0.6s					
QIZ	**Qiongzhong**	**12.02 134**	P	**Pn**	**08 02 27.8 +1.5**	
QIZ			S	**Sn**	**08 04 45.4 +5.3**	
QIZ			pmax	pmax		
	comp=Z,400nm,8.0s					
QIZ			LR	LR		
	comp=Z,28μm,13.9s					
QIZ			LR	LR		
	comp=Z,27μm,14.9s					
QIZ			LR	LR		
	comp=Z,17μm,12.8s					
QIZ	**Qiongzhong**	**12.02 134**	*e*Pn	**Pn**	**08 02 26.1 -0.2**	
	comp=Z,85nm,1.6s					
UTHA	**Uthaitani**	**12.17 186**	P	Pn	08 02 33.9 +5.5	
	comp=Z,14nm,1.1s,comp=Z,228nm					
WHN	**Wuhan**	**12.21 73**	⇑P	**Pn**	**08 02 30.3 +1.4**	
WHN			S	**Sn**	**08 04 43.1 -1.6**	
WHN			LR	LR		
	comp=Z,35μm,9.0s					
WHN			LR	LR		
	comp=Z,66μm,11.1s					
WHN			LR	LR		
	comp=Z,127μm,13.6s					
GZH	**Guangzhou**	**12.28 109**	P	**Pn**	**08 02 30.1 +0.3**	
GZH			PP	**P**	**08 02 39.9 -2.2**	
GZH			S	**Sn**	**08 04 44.0 -2.4**	
GZH			LR	LR		
	comp=Z,16μm,10.1s					
GZH			LR	LR		
	comp=Z,33μm,10.1s					
RAMN	**Ramite**	**12.61 270**	*e*P	**Pn**	**08 02 32.7 -1.8**	
	comp=Z,568nm,0.8s					
MCO	**Taipa Grande**	**12.89 113**	P	**Pn**	**08 02 40.0 +1.9**	
GUN	**Gumba**	**13.16 274**	*e*P	**Pn**	**08 02 39.6 -2.6**	
	comp=Z,401nm,0.6s					
SRDT	**SRDT**	**13.40 187**	P	**Pn**	**08 02 49.0 +3.9**	
	comp=Z,88nm,1.6s,comp=Z,6μm					
PKIN	**Phulchoki**	**13.61 273**	*e*P	**Pn**	**08 02 45.5 -2.7**	
	comp=Z,386nm,0.6s					
PKIN	**Phulchoki**	**13.61 273**	*e*P	**Pn**	**08 02 46.7 -1.5**	
	comp=Z,327nm,0.6s					
KKN	**Kakani**	**13.70 274**	*e*P	**Pn**	**08 02 47.1 -2.3**	
	comp=Z,482nm,0.7s					
SRAK	**Srakaew**	**13.70 175**	P	**P**	**08 02 58.0 +0.1**	
DMN	**Daman**	**13.87 273**	*e*P	**Pn**	**08 02 48.9 -2.8**	
	comp=Z,280nm,0.8s					
BOK	**Bokaro**	**13.95 257**	*e*P	**Pn**	**08 02 49.6 -3.0**	
BOK			IAmb	IAmb	08 02 56.6	
	comp=Z,80nm,1.1s					
TIY	**Taiyuan**	**13.98 42**	*e*P	**Pn**	**08 02 52.0 -1.0**	
TIY			S	Sn	08 05 36.1 +8.2	
TIY			pmax	pmax		
	comp=Z,62nm,0.7s					
TIY			pmax	pmax		
	comp=Z,440nm,5.1s					
TIY			LR	LR		
	comp=Z,12μm,9.8s					
TIY			LR	LR		
	comp=Z,14μm,9.1s					
TIY			LR	LR		
	comp=Z,26μm,14.2s					
GKN	**Gorkha**	**14.26 275**	*e*P	**Pn**	**08 02 54.6 -2.4**	
	comp=Z,281nm,0.7s					
PHET	**Kaeng Krachan**	**14.78 184**	P	**P**	**08 03 08.8 -1.1**	
	comp=Z,44nm,0.9s,comp=Z,408nm					
BTO	**Baotou**	**14.95 28**	*e*P	**Pn**	**08 03 04.3 -1.9**	
DANN	**Dangsing**	**15.02 276**	*e*P	**Pn**	**08 03 04.1 -3.4**	
	comp=Z,713nm,0.9s					
KOLN	**Koldanda**	**15.19 274**	*e*P	**Pn**	**08 03 06.5 -3.1**	
	comp=Z,173nm,0.6s					
BWNR	**Bhubaneshwar**	**15.52 245**	*ex*	Pn	08 03 05.3 -8.5	
BWNR			IAmb	IAmb	08 03 07.2	
	comp=Z,89nm,0.4s					
PYUN	**Piuthan**	**15.71 275**	*e*P	**Pn**	**08 03 12.3 -4.1**	
	comp=Z,733nm,0.9s					
HHC	**Hu-ho-hao-te**	**15.83 31**	*e*P	**Pn**	**08 03 17.1 -0.7**	
HHC			S	**Sn**	**08 06 14.0 +1.1**	
HHC			pmax	pmax		
	comp=Z,440nm,5.5s					
HHC			LR	LR		
	comp=Z,14μm,8.2s					
HHC			LR	LR		
	comp=Z,18μm,8.2s					
QZH	**Quanzhou**	**16.23 96**	⇑*i*P	**P**	**08 03 23.6 -2.4**	
QZH			S	**S**	**08 06 29.9 -5.6**	
QZH			pmax	pmax		
	comp=Z,1μm,5.1s					
QZH			LR	LR		
	comp=Z,66μm,11.8s					
QZH			LR	LR		
	comp=Z,19μm,11.8s					
QZH			LR	LR		
	comp=Z,31μm,15.2s					
TIA	**Tai'an**	**16.25 55**	P	**P**	**08 03 24.8 -1.3**	
TIA			pmax	pmax		
	comp=Z,82nm,2.0s					
TIA			pmax	pmax		
	comp=Z,770nm,9.0s					
TIA			LR	LR		
	comp=Z,5μm,14.5s					
TIA			LR	LR		
	comp=Z,11μm,14.1s					
TIA			LR	LR		
	comp=Z,18μm,15.1s					
NJ2	**Nanjing**	**16.28 70**	*e*P	**P**	**08 03 24.4 -2.0**	
NJ2			sP	**sP**	**08 03 31.6 -1.8**	
NJ2			PP	**PnPn**	**08 03 35.8 +3.4**	
NJ2			S	**Sn**	**08 06 27.0 +3.2**	
NJ2			pmax	pmax		
	comp=Z,58nm,0.9s					
NJ2			pmax	pmax		
	comp=Z,630nm,4.1s					
NJ2			LR	LR		
	comp=Z,20μm,10.3s					
NJ2			LR	LR		
	comp=Z,30μm,10.0s					
NJ2			LR	LR		
	comp=Z,42μm,12.5s					
PBA	**Port Blair**	**17.67 207**	*e*Pn	P	08 03 42.5 +0.6	
	comp=Z,296nm,1.2s					
BJT	**Baijiatuau**	**17.69 42**	*e*Pn	**P**	**08 03 40.2 -1.8**	
	comp=Z,369nm,1.5s					
BJT			*e*S	**S**	**08 07 00.6 -4.5**	
BJT	**Baijiatuau**	**17.69 42**	*e*P	**P**	**08 03 40.2 -1.8**	
BJT			*e*S	**S**	**08 07 00.6 -4.5**	
BJT			pmax	pmax		
	comp=Z,369nm,1.5s					
BJI	**Beijing**	**17.71 42**	P	**P**	**08 03 41.8 -0.4**	
BJI			S	**Sn**	**08 06 59.8 +1.4**	
BJI			LR	LR		
	comp=Z,6μm,16.2s					
BJI			LR	LR		
	comp=Z,4μm,13.7s					
BJI			LR	LR		
	comp=Z,6μm,5.5s					
CHLP	**Challavanipeta**	**17.87 243**	*e*Pn	Pn	08 03 31.4 -12	
SSE	**Sheshan**	**18.12 74**	P	**P**	**08 03 47.0 +0.2**	
SSE			S	**S**	**08 07 10.1 -3.7**	
SSE			pmax	pmax		
	comp=Z,18nm,0.7s					
SSE			pmax	pmax		
	comp=Z,460nm,5.5s					
SSE			LR	LR		
	comp=Z,2μm,15.9s					
SSE			LR	LR		
	comp=Z,3μm,15.9s					
TPUB	**Ta-pu**	**18.47 99**	*e*P	**Pn**	**08 03 51.8 +0.8**	
	comp=Z,231nm,1.4s					
SSLB	**Suanglung**	**18.61 98**	*e*P	**Pn**	**08 03 56.5 +3.8**	
	comp=Z,108nm,1.2s					
YHNB	**Yeheng**	**18.76 95**	*e*P	**Pn**	**08 03 58.4 +4.0**	
	comp=Z,88nm,0.9s					
VIS	**Vishakhapatnam**	**18.89 242**	*i* P	**P**	**08 03 53.2 -2.1**	
VIS			*i* S	**S**	**08 07 30.3 +0.8**	
TWG	**Pinlang**	**19.01 100**	*e*P	**Pn**	**08 03 57.8 +0.3**	
	comp=Z,1μm,1.6s					
YULB	**Yu-li**	**19.03 99**	*e*P	**Pn**	**08 03 58.7 +1.0**	
	comp=Z,122nm,1.2s					
NACB	**Ninganchiao**	**19.07 96**	*e*P	**Pn**	**08 03 58.2 0.0**	
	comp=Z,343nm,1.6s					
WMQ	**Urumqi**	**19.20 330**	P	**Pn**	**08 03 59.4 -0.2**	
WMQ			pP	sP	08 04 06.1 +0.5	
WMQ			S	**S**	**08 07 34.8 -0.8**	
WMQ			SS	**SnSn**	**08 07 54.5 +5.9**	
WMQ			pmax	pmax		
	comp=Z,170nm,1.3s					
WMQ			pmax	pmax		
	comp=Z,1μm,3.7s					
WMQ			LR	LR		
	comp=Z,22μm,17.5s					
WMQ			LR	LR		
	comp=Z,15μm,11.7s					
WMQ			LR	LR		
	comp=Z,6μm,14.5s					
TRTT	**Trang**	**19.81 183**	P	**Pn**	**08 04 07.1 0.0**	
	comp=Z,29nm,1.5s,comp=Z,889nm					
PKDT	**Phuket**	**19.86 187**	P	**Pn**	**08 04 08.2 +0.5**	
	comp=Z,52nm,1.8s,comp=Z,7μm					
DDI	**Dehra Dun**	**20.01 283**	*e*P	Pn	08 04 08.0 -1.4	
DDI			IAmb	IAmb	08 04 18.6	
	comp=Z,2μm,1.5s					
YOJ	**Yonaguni jima**	**20.25 94**	*e*P	Pn	08 04 11.9 -0.3	
	comp=Z,274nm,1.1s					
YOJ	**Yonaguni jima**	**20.25 94**	*e*P	Pn	08 04 11.9 -0.3	
YOJ			pmax	pmax		
	comp=Z,274nm,1.1s					
PVM	**Polavaram**	**20.49 243**	*e*P	**P**	**08 04 07.5 -5.4**	
SONM	**Songino Array**	**20.55 11**	P	Pn	08 04 13.6 -2.1	
	comp=Z,32nm,1.1s,baz=197,slow=11,SNR=46					
SONM			LR	LR	08 12 57.9	
	comp=Z,16μm,18.1s,baz=191,slow=39					
SONA1	**Songino Array**	**20.56 11**	*e*P	Pn	08 04 13.9 -1.9	
DL2	**Dalian**	**20.65 52**	⇓*i*P	Pn	08 04 15.1 -1.7	
DL2			S	Sn	08 08 09.6 +0.1	
DL2			pmax	pmax		
	comp=Z,39nm,1.4s					
DL2			pmax	pmax		
	comp=Z,1μm,8.6s					
DL2			LR	LR		
	comp=Z,7μm,15.6s					
DL2			LR	LR		
	comp=Z,12μm,15.2s					
DL2			LR	LR		
	comp=Z,16μm,16.9s					
ULN	**Ulaanbaatar**	**20.70 12**	*e*P	Pn	08 04 15.2 -2.2	
	comp=Z,148nm,1.1s					
ULN			LR	LR		
	comp=Z,18μm,20.0s					
ULN	**Ulaanbaatar**	**20.70 12**	P	Pn	08 04 15.5 -1.9	
	SNR=100					
ULN	**Ulaanbaatar**	**20.70 12**	*de*P	Pn	08 04 15.0 -2.4	
ULN			pmax	pmax		
	comp=Z,121nm,1.2s					
NGP	**Nagpur**	**20.80 256**	*e*P	**P**	**08 04 15.6 -0.6**	
NGP			IAmb	IAmb	08 04 27.8	
	comp=Z,112nm,0.7s					
NGP			*e*S	Sn	08 08 11.4 -1.9	
SMLA	**Simla**	**20.81 285**	*e*P	**P**	**08 04 15.8 -0.4**	
BOLP	**Bolinao**	**21.02 119**	*e*P	**P**	**08 04 23.1 +4.5**	
APYP	**Conner**	**21.26 113**	*e*P	**P**	**08 04 24.8 +3.6**	
SCZP	**Santa Cruz**	**21.37 120**	*e*P	**P**	**08 04 28.2 +5.8**	
BHPL	**Bhopal**	**21.52 263**	*e*P	**P**	**08 04 22.0 -2.0**	
BHPL			IAmb	IAmb	08 04 33.4	
	comp=Z,442nm,1.3s					
RPR	**Rampur**	**21.57 250**	*e*P	P	08 04 16.2 -8.3	
DHRM	**DHARAMSHALA**	**21.64 288**	*e*P	**P**	**08 04 23.0 -2.4**	
KULM	**Kulim**	**22.32 180**	*e*P	**P**	**08 04 35.9 +3.3**	
	comp=Z,65nm,1.2s					
SRSP	**Sriramsagar**	**22.34 252**	*e*P	P	08 04 23.8 -9.0	
ADKI	**Addanki**	**22.59 243**	*e*P	**P**	**08 04 33.4 -2.1**	
ZAK	**Zakamensk**	**22.70 4**	*e*P	**P**	**08 04 36.8 +0.3**	
ZAK			pmax	pmax		
	comp=Z,204nm,1.5s					
NJS	**Nagarjunasagar**	**22.73 245**	*e*P	P	08 04 29.1 -7.8	
HYB	**Hyderabad**	**22.89 248**	*i* P	**P**	**08 04 39.0 +0.3**	
	comp=Z,350nm,1.4s					
HYB			*e*		08 04 43.0	
HYB			*e*S	**S**	**08 08 44.0 -3.9**	
HYB	**Hyderabad**	**22.89 248**	*e*P	**P**	**08 04 36.4 -2.2**	
HYBB	**Hyderabad (bro**	**22.89 248**	*e*P	**P**	**08 04 32.3 -6.3**	
LUBP	**Lubang**	**22.89 124**	*e*P	**P**	**08 04 39.3 +0.6**	
KNGR	**Kungurtug, Tuv**	**22.98 355**	*i* P	**P**	**08 04 40.2 +0.8**	
SHLS	**Shalkode**	**23.09 317**	*e*P	**P**	**08 04 38.7 -2.0**	
	comp=Z,608nm,1.6s					
SHLS			*e*S	**S**	**08 08 47.0 -4.2**	
SHLS			LR	LR	08 16 03.8	
	comp=Z,1μm,8.5s					
IPM	**Ipoh**	**23.12 179**	*e*P	**P**	**08 04 39.5 -1.5**	
	comp=Z,69nm,1.0s					
PDGK	**Podgornoye**	**23.18 318**	P	**P**	**08 04 42.1 +0.6**	
PDGK			pmax	pmax		
	comp=Z,167nm,1.6s					
TGY	**Tagaytay City**	**23.18 122**	P	**P**	**08 04 43.9 +2.2**	
	comp=Z,462nm,0.7s,baz=220,slow=4.1,SNR=6.7					
TGY			LR	LR	08 13 41.5	
	comp=Z,4μm,18.4s,baz=294,slow=37					
ZSN	**Zaisan**	**23.28 332**	*e*P	**P**	**08 04 42.8 +0.4**	
	comp=Z,46nm,1.8s					
ZSN			*e*S	**S**	**08 08 54.0 0.0**	
ZSN			LR	LR	08 14 43.1	
	comp=Z,608nm,6.6s					
SRLM	**Srisailam**	**23.31 245**	*e*P	**P**	**08 04 39.8 -3.2**	
SNY	**Shenyang**	**23.34 47**	⇓P	**P**	**08 04 42.3 -0.8**	
SNY			S	**S**	**08 08 48.5 -6.6**	
SNY			pmax	pmax		
	comp=Z,71nm,0.9s					
SNY			pmax	pmax		
	comp=Z,2μm,5.5s					
SNY			LR	LR		
	comp=Z,5μm,14.2s					
SNY			LR	LR		
	comp=Z,15μm,17.2s					
SNY			LR	LR		
	comp=Z,17μm,16.2s					
UZB	**Uzynbulak**	**23.35 317**	*e*P	**P**	**08 04 43.5 +0.1**	
	comp=Z,72nm,1.2s					
UZB			LR	LR	08 15 08.3	
	comp=Z,1μm,8.4s					
TARG	**Taragay, Kyrgy**	**23.37 313**	*e*P	**P**	**08 04 45.1 +1.2**	
	comp=Z,180nm,1.1s					
PRZ	**Przheval'sk**	**23.38 315**	*e*P	**P**	**08 04 45.9 +2.2**	
	comp=Z,199nm,0.9s					
PRZ	**Przheval'sk**	**23.38 315**	*e*P	**P**	**08 04 45.9 +2.2**	
PRZ			pmax	pmax		
	comp=Z,199nm,0.9s					
RCLA	**Racherla**	**23.61 243**	*e*P	**P**	**08 04 44.0 -2.0**	
KSH	**Kashi**	**23.67 306**	⇑*i*P	**P**	**08 04 49.5 +3.1**	
KSH			sP	sP	08 04 55.3 +1.7	
KSH			PP	PnPn	08 05 24.4 +11	
KSH			S	**S**	**08 09 03.5 +2.9**	
KSH			sS	sS	08 09 06.3 -2.8	
KSH			PcS	**PcS**	**08 12 10.4 +0.2**	
KSH			ScS	**ScS**	**08 15 53.5 -1.5**	
KSH			LR	LR		
	comp=Z,7μm,13.3s					
KSH			LR	LR		
	comp=Z,9μm,9.4s					
KSH			LR	LR		
	comp=Z,6μm,9.1s					
SATY	**Saty**	**23.68 316**	*e*P	**P**	**08 04 47.1 +0.5**	
	comp=Z,356nm,1.9s					
SATY			LR	LR	08 15 11.1	
	comp=Z,1μm,8.6s					
MLSI	**Meulaboh, Aceh**	**23.70 191**	P	**P**	**08 04 47.6 +0.9**	
	comp=Z,106nm,0.7s,comp=Z,4μm					
ZHN	**Zhinishke**	**23.72 316**	*e*P	**P**	**08 04 47.7 +0.7**	
	comp=Z,177nm,2.4s					
ZHN			LR	LR	08 16 06.7	
	comp=Z,1μm,9.6s					
KPKS	**Kokpek**	**23.74 317**	*e*P	**P**	**08 04 47.4 +0.3**	
	comp=Z,269nm,1.7s					
MOY	**Mondy**	**23.91 0**	*e*P	**P**	**08 04 49.4 +0.8**	
MOY			pmax	pmax		
	comp=Z,534nm,2.1s					
MK01	**Makanchi Array**	**23.91 328**	*e*P	**P**	**08 04 49.5 +0.9**	
MK31	**Makanchi Array**	**23.93 328**	*e*P	**P**	**08 04 49.8 +1.0**	
MK31	**Makanchi Array**	**23.93 328**	*e*P	**P**	**08 04 49.8 +1.0**	
MKAR	**Makanchi Array**	**23.93 328**	P	**P**	**08 04 49.0 +0.2**	
	comp=Z,61nm,0.8s,baz=129,slow=9.6,SNR=120					
MKAR			PcP	**PcP**	**08 08 30.9 0.0**	
	comp=Z,7.7nm,0.9s,baz=117,slow=5.0,SNR=4.5					
MKAR			ScP	**ScP**	**08 12 10.2 +1.5**	
	comp=Z,5.1nm,1.1s,baz=107,slow=4.2,SNR=4.9					
MKAR			LR	LR	08 14 26.0	
	comp=Z,1μm,21.7s,baz=140,slow=37					
MKAR			PKiKP	**PKiKP**	**08 16 10.9 -3.0**	
	comp=Z,0.4nm,0.7s,baz=108,slow=1.5,SNR=5.7					
MKAR	**Makanchi Array**	**23.93 328**	*e*P	**P**	**08 04 49.7 +0.8**	
	comp=Z,408nm,0.8s					
MKAR			PcP	**PcP**	**08 08 30.9 0.0**	
MKAR			ScP	**ScP**	**08 12 10.2 +1.5**	
MKAR			PKiKP	**PKiKP**	**08 16 10.9 -3.0**	
HVS	**Khovu-Aksy**	**23.98 349**	*c i* P	**P**	**08 04 49.3 +0.1**	
TLY	**Talaya**	**24.02 4**	P	**P**	**08 04 49.8 +0.2**	
	comp=Z,11nm,0.9s,baz=206,slow=8.1,SNR=30					
TLY	**Talaya**	**24.02 4**	*e*P	**P**	**08 04 50.6 +1.1**	
	comp=Z,124nm,1.4s					
TLY			LR	LR		
	comp=Z,2μm,19.0s					
TLY	**Talaya**	**24.02 4**	P	**P**	**08 04 50.8 +1.2**	
	SNR=62					
TLY	**Talaya**	**24.02 4**	*d i* P	**P**	**08 04 50.1 +0.5**	
TLY			*e*S	**S**	**08 09 01.7 -4.1**	
TLY			*e*SSS	SSS	08 09 46.6	
TLY			pmax	pmax		
	comp=Z,117nm,1.6s					
TLY			MLR	MLR		
	comp=Z,4μm,10.0s					
ENPP	**El Nido**	**24.03 130**	*e*P	**P**	**08 04 48.8 -1.1**	
SKHT	**Srikalahasti**	**24.05 239**	*e*P	**P**	**08 04 46.0 -4.1**	
TJN	**Taejon**	**24.09 62**	*ce*P	**P**	**08 04 50.2 -0.1**	
MAKZ	**Makanchi**	**24.09 327**	*e*P	**P**	**08 04 50.9 +0.6**	
	comp=Z,222nm,1.4s					
MAKZ	**Makanchi**	**24.09 327**	*e*P	**P**	**08 04 50.9 +0.6**	
MAKZ			pmax	pmax		
	comp=Z,222nm,1.4s					
TSI	**Tuntungan**	**24.18 185**	P	P	08 05 06.3 +15	
KLRI	**Killari**	**24.20 252**	*e*P	**P**	**08 04 46.9 -4.6**	
DGZ	**Jazzator, Alta**	**24.20 339**	*i* P	**P**	**08 04 51.9 +0.5**	
DGZ			pmax	pmax		
	comp=Z,53nm,1.2s					
KCSI	**Kotacane, Aceh**	**24.24 187**	P	**P**	**08 04 52.2 +0.3**	
	comp=Z,130nm,1.6s,comp=Z,2μm					
NIL	**Nilore**	**24.33 291**	*e*P	**P**	**08 04 52.0 -0.6**	
	comp=Z,167nm,0.9s					
NIL			LR	LR		
	comp=Z,6μm,20.0s					
NIL	**Nilore**	**24.33 291**	*e*P	**P**	**08 04 52.1 -0.6**	
NIL			pmax	pmax		
	comp=Z,167nm,0.9s					
NIL			MLR	MLR		
	comp=Z,6μm,20.0s					
NRN	**Naryn**	**24.43 310**	*e*P	**P**	**08 04 54.8 +1.0**	
	comp=Z,191nm,1.4s					
NRN	**Naryn**	**24.43 310**	*e*P	**P**	**08 04 54.8 +1.0**	
NRN			pmax	pmax		
	comp=Z,191nm,1.4s					
JOW	**Kunigami**	**24.46 86**	*e*P	**P**	**08 04 53.9 0.0**	
	comp=Z,56nm,0.8s					
TPTI		**24.57 189**	P	**P**	**08 04 56.4 +1.6**	
	comp=Z,73nm,1.1s,comp=Z,1μm					
MDOK	**Medeo**	**24.58 315**	*e*P	**P**	**08 04 56.3 +1.3**	
	comp=Z,3μm,1.8s					
MDOK			*e*S	**S**	**08 09 16.2 +0.9**	

MDOK				LR	LR	08 15 08.3
	comp=Z,6μm,12.0s					
IRK	**Irkutsk**	**24.63**	**5**	*e*P	**P**	**08 04 57.7 +2.6**
IRK				pmax	pmax	
	comp=Z,746nm,1.9s					
AAA	**Alma-Ata**	**24.69**	**315**	*e*P	**P**	**08 04 57.9 +2.1**
	comp=Z,374nm,1.2s					
AAA				LR	LR	08 15 42.3
	comp=Z,4μm,13.3s					
AAA	**Alma-Ata**	**24.69**	**315**	*e*P	**P**	**08 04 58.6 +2.8**
AAA				pmax	pmax	
	comp=Z,700nm,2.0s					
AAA				MLR	MLR	
	comp=Z,5μm,12.0s					
KS15	**Wonju Array Si**	**24.76**	**60**	*e*P	**P**	**08 04 56.4 0.0**
KSAR	**Wonju Array Be**	**24.76**	**60**	P	**P**	**08 04 55.5 -0.9**
KSAR				PcP	**PcP**	**08 08 32.2 -0.6**
KSAR	**Wonju Array Be**	**24.76**	**60**	P	**P**	**08 04 55.5 -0.9**
KSAR						08 08 32.3
KS01	**Wonju Array Si**	**24.77**	**60**	*e*P	**P**	**08 04 55.7 -0.9**
KSRS	**Korea Array**	**24.79**	**60**	P	**P**	**08 04 55.5 -1.2**
	comp=Z,33nm,0.9s,baz=255,slow=9.7,SNR=26					
KSRS				PcP	**PcP**	**08 08 32.2 -0.7**
	comp=Z,2.9nm,0.7s,baz=260,slow=2.6,SNR=4.4					
KSRS				LR	LR	08 15 43.2
	comp=Z,11μm,20.2s,baz=267,slow=39					
PSI	**Prapat**	**24.85**	**184**	P	**P**	**08 05 00.1 +2.6**
	comp=Z,22nm,0.8s,baz=0.1,slow=7.2,SNR=19					
PSI				Lg	Lg	08 12 52.4
	comp=Z,0.8nm,0.3s,baz=180,slow=7.6,SNR=2.5					
PSI				LR	LR	08 14 32.4
	comp=Z,4μm,20.0s,baz=271,slow=36					
PSI	**Prapat**	**24.85**	**184**	*e*P	**P**	**08 04 57.8 +0.3**
	comp=Z,71nm,1.0s					
PSI				Lg	Lg	08 12 52.4
PSI	**Prapat**	**24.85**	**184**	*e*P	**P**	**08 04 57.8 +0.3**
PSI				pmax	pmax	
	comp=Z,71nm,1.0s					
KZA	**Kyzart**	**25.22**	**311**	P	**P**	**08 05 02.5 +1.5**
	SNR=67					
URV	**Uravkonda**	**25.25**	**245**	*e*P	**P**	**08 04 54.2 -6.9**
TKM2	**Tokmak 2**	**25.38**	**313**	P	**P**	**08 05 03.1 +0.8**
	SNR=43					
KUU	**Kurty**	**25.40**	**316**	*e*P	**P**	**08 05 03.1 +0.9**
	comp=Z,105nm,1.3s					
KUU				*e*S	**S**	**08 09 28.6 +0.5**
KUU				LR	LR	08 17 08.1
	comp=Z,2μm,8.9s					
CN2	**Changchun**	**25.53**	**45**	⇑P	**P**	**08 05 05.6 +2.3**
CN2				*e*sP	sP	08 05 12.1 +1.6
CN2				*e*S	**S**	**08 09 30.8 +0.7**
CN2				pmax	pmax	
	comp=Z,40nm,0.7s					
CN2				pmax	pmax	
	comp=Z,900nm,5.0s					
CN2				LR	LR	
	comp=Z,9μm,14.0s					
CN2				LR	LR	
	comp=Z,11μm,14.0s					
CN2				LR	LR	
	comp=Z,14μm,16.0s					
SFK	**Sufi-Kurgan**	**25.62**	**306**	P	**P**	**08 05 06.3 +1.8**
SFK				pmax	pmax	
	comp=Z,288nm,1.5s					
KBK	**Karagaybulak**	**25.68**	**312**	P	**P**	**08 05 06.9 +1.9**
	SNR=54					
UCH	**Uchtor**	**25.78**	**311**	P	**P**	**08 05 07.6 +1.4**
	SNR=45					
PVCP	**Virac**	**25.96**	**118**	*e*P	**P**	**08 05 07.1 -0.4**
MYKOM	**Kota Tinggi**	**25.96**	**173**	*e*P	**P**	**08 05 08.2 +0.7**
	comp=Z,62nm,1.0s					
CHMS	**Chumysh**	**25.97**	**313**	P	**P**	**08 05 09.9 +2.6**
	SNR=36					
AAK	**Ala-Archa**	**25.97**	**312**	P	**P**	**08 05 05.9 -1.7**
	SNR=21					
FRU	**Bishkek**	**25.98**	**312**	*e*P	**P**	**08 05 10.0 +2.5**
FRU				*e*S	**S**	**08 09 37.0 -0.4**
FRU				*e*		08 09 51.0
FRU				pmax	pmax	
	comp=Z,600nm,1.9s					
FRU				MLR	MLR	
	comp=E,11μm,16.0s					
HIA	**Hailar**	**26.00**	**29**	*e*P	**P**	**08 05 07.7 +0.1**
	comp=E,40nm,0.8s					
HIA				*e*S	S	08 09 54.4 +17
HIA				LR	LR	
	comp=Z,2μm,19.0s					
HIA	**Hailar**	**26.00**	**29**	*e*P	**P**	**08 05 07.7 +0.1**
HIA				pmax	pmax	
	comp=Z,40nm,0.8s					
HIA				MLR	MLR	
	comp=Z,2μm,19.0s					
KKM	**Kota Kinabalu**	**26.09**	**143**	*e*P	**P**	**08 05 09.7 +0.9**
	comp=Z,264nm,1.0s					
CIT	**Chita**	**26.10**	**18**	*e*P	**P**	**08 05 11.3 +2.8**
CIT				*e*		08 05 17.4
RCP	**Roxas**	**26.15**	**124**	⇑*e*P	**P**	**08 05 11.4 +2.2**
USP	**Ospenovka**	**26.25**	**313**	P	**P**	**08 05 11.0 +1.0**
	SNR=60					
AML	**Almayashu**	**26.29**	**310**	P	**P**	**08 05 11.7 +0.9**
	SNR=40					
POO	**Poona**	**26.33**	**255**	*e*P	**P**	**08 05 07.1 -3.8**
GSI	**Gunungsitoli**	**26.45**	**187**	P	**P**	**08 05 11.7 -0.2**
	comp=Z,33nm,1.3s					
GSI	**Gunungsitoli**	**26.45**	**187**	*e*P	**P**	**08 05 11.2 -0.7**
	comp=Z,60nm,0.9s					
EKS2	**Erkin-Say**	**26.46**	**311**	P	**P**	**08 05 13.3 +1.4**
	SNR=45					
JNU	**Nakatsue**	**26.48**	**71**	LR	LR	08 17 11.5
	comp=Z,13μm,18.1s,baz=300,slow=40					
MNSI	**Mandailing Nat**	**26.80**	**183**	P	**P**	**08 05 14.8 -0.3**
MNAS	**Manas**	**27.24**	**310**	P	**P**	**08 05 20.5 +1.5**
BKNI	**Bangkinang**	**27.25**	**179**	*e*P	**P**	**08 05 19.9 +0.9**
	comp=Z,176nm,1.2s					
BTLS	**Baital**	**27.40**	**316**	*e*P	**P**	**08 05 20.4 +0.3**
	comp=Z,37nm,2.3s					
BTLS				LR	LR	08 17 22.9
	comp=Z,859nm,9.5s					
SBUM	**Sibu**	**27.43**	**154**	*e*P	**P**	**08 05 21.4 +0.7**
	comp=Z,115nm,1.3s					
SEM	**Semipalatinsk**	**27.50**	**331**	*e*P	**P**	**08 05 22.5 +1.1**
	comp=Z,58nm,1.8s					
SEM				LR	LR	08 16 19.4
	comp=Z,786nm,9.9s					
KSM	**Kuching**	**27.67**	**159**	*e*P	**P**	**08 05 22.9 +0.1**
	comp=Z,72nm,1.0s					
PALK	**Pallekele**	**27.83**	**227**	P	**P**	**08 05 25.6 +1.2**
	comp=Z,14nm,0.7s,baz=113,slow=2.8,SNR=6.2					
PALK				LR	LR	08 17 36.3
	comp=Z,5μm,20.6s,baz=81,slow=39					
PALK	**Pallekele**	**27.83**	**227**	*e*P	**P**	**08 05 25.4 +1.0**
	comp=Z,81nm,1.4s					
PALK	**Pallekele**	**27.83**	**227**	P	**P**	**08 05 27.4 +3.0**
PALK	**Pallekele**	**27.83**	**227**	*e*P	**P**	**08 05 25.4 +1.0**
PALK				pmax	pmax	
	comp=Z,81nm,1.4s					
KBL	**Kabul**	**27.90**	**292**	*e*P	**P**	**08 05 26.1 +1.0**
	comp=Z,91nm,0.9s					
KBL	**Kabul**	**27.90**	**292**	*e*P	**P**	**08 05 26.1 +1.0**
KBL				pmax	pmax	
	comp=Z,91nm,0.9s					
MYLDM	**Lahad Datu**	**28.07**	**140**	*e*P	**P**	**08 05 27.8 +1.3**
MYLDM				*e*pP	**P**	**08 05 28.3 +1.8**
DSRI	**Dabo**	**28.29**	**172**	P	**P**	**08 05 29.4 +1.0**
BHJ	**Bhuj**	**28.38**	**268**	*e*P	**P**	**08 05 27.0 -2.1**
KURBB	**Kurchatov Arra**	**28.42**	**330**	P	**P**	**08 05 29.3 +0.1**
	comp=Z,17nm,0.7s,baz=141,slow=9.2,SNR=63					
KURBB				PcP	**PcP**	**08 08 42.1 +0.9**
	comp=Z,6.1nm,1.0s,baz=121,slow=1.9,SNR=5.1					
KURBB				PKiKP	**PKiKP**	**08 16 14.3 -2.0**
	comp=Z,1.1nm,0.7s,baz=268,slow=0.2,SNR=10					
KURK	**Kurchatov**	**28.44**	**330**	*e*P	**P**	**08 05 29.6 +0.2**
	comp=Z,48nm,0.7s					
KURK				PcP	**PcP**	**08 08 42.1 +0.9**
KURK				PKiKP	**PKiKP**	**08 16 14.3 -2.0**
KURK				LR	LR	
	comp=Z,3μm,21.0s					
KURK	**Kurchatov**	**28.44**	**330**	P	**P**	**08 05 30.0 +0.5**
	SNR=49					
KURK	**Kurchatov**	**28.44**	**330**	P	**P**	**08 05 29.3 -0.1**
KURK						08 08 42.2
KURK				*i*		08 16 14.3
KURK				pmax	pmax	
	comp=Z,17nm,0.7s					
MDJ	**Mudanjiang**	**28.54**	**46**	*e*P	**P**	**08 05 29.9 -0.4**
MDJ				*e*PP	**PP**	**08 06 32.3 -2.5**
MDJ				LR	LR	
	comp=Z,5μm,19.0s					
ZAA0	**Zalesovo Array**	**28.70**	**340**	*e*P	**P**	**08 05 31.7 +0.1**
	comp=Z,145nm,1.2s					
ZALV	**Zalesovo Beam**	**28.70**	**340**	P	**P**	**08 05 31.6 0.0**
	comp=Z,38nm,0.9s,baz=147,slow=8.5,SNR=44					
ZALV				PKiKP	**PKiKP**	**08 16 13.6 -2.8**
	comp=Z,0.5nm,0.4s,baz=197,slow=1.5,SNR=3.8					
ZALV				LR	LR	08 17 51.8
	comp=Z,1μm,21.2s,baz=291,slow=38					
ZALV	**Zalesovo Beam**	**28.70**	**340**	*e*P	**P**	**08 05 31.5 -0.2**
ZALV				*e*pP	**P**	**08 05 31.7 0.0**
ZALV				PKiKP	**PKiKP**	**08 16 13.6 -2.8**
IUG	**Iuzhnay**	**28.82**	**308**	*e*P	**P**	**08 05 34.4 +1.3**
	comp=Z,75nm,1.6s					
KK31	**Karatay Array**	**28.83**	**310**	*e*P	**P**	**08 05 33.5 +0.4**
KK31	**Karatay Array**	**28.83**	**310**	*e*P	**P**	**08 05 33.5 +0.4**
KKAR	**Karatay Array**	**28.83**	**310**	*e*P	**P**	**08 05 33.5 +0.4**
KKAR	**Karatay Array**	**28.83**	**310**	*e*P	**P**	**08 05 33.5 +0.4**
PAGZ	**Pagadian**	**29.14**	**128**	*e*P	**P**	**08 05 35.4 -0.6**
USRK	**Ussuriysk Ar.**	**29.92**	**48**	P	**P**	**08 05 42.4 -0.3**
	comp=Z,25nm,0.8s,baz=253,slow=7.1,SNR=27					
USRK				PcP	**PcP**	**08 08 44.0 -1.2**
	comp=Z,5.6nm,0.6s,baz=247,slow=1.9,SNR=6.1					
USRK				LR	LR	08 18 58.7
	comp=Z,8μm,19.5s,baz=239,slow=39					
NVS	**Novosibirsk**	**29.94**	**340**	⇑*i*P	**P**	**08 05 42.2 -0.5**
NVS				*e*S	**S**	**08 10 39.0 -0.4**
NVS				pmax	pmax	
	comp=N,122nm,2.0s					
NVS				pmax	pmax	
	comp=E,70nm,2.0s					
NVS				pmax	pmax	
	comp=Z,160nm,2.0s					
NVS				smax	smax	
	comp=N,13nm,2.0s					
NVS				smax	smax	
	comp=E,63nm,2.0s					
BUKP	**Musuan**	**30.31**	**126**	*e*P	**P**	**08 05 47.0 +0.6**
BRZS	**Berezniki**	**30.86**	**324**	*e*P	**P**	**08 05 52.0 +1.1**
	comp=E,77nm,1.7s					
BRZS				*e*S	**S**	**08 10 54.9 +0.9**
DAV	**Davao City (W)**	**31.23**	**127**	LR	LR	08 20 06.3
	comp=E,7μm,19.2s,baz=2.0,slow=40					
DAV	**Davao City (W)**	**31.23**	**127**	⇓*i*P	**P**	**08 05 55.2 +0.6**
BOD	**Bodaibo**	**31.49**	**14**	*e*P	**P**	**08 05 56.4 +0.1**
BOD				*e*		08 16 33.4
BOD				pmax	pmax	
	comp=Z,26nm,1.4s					
INU	**Inuyama**	**31.70**	**67**	*e*P	**P**	**08 05 56.3 -2.1**
	comp=Z,27nm,1.0s					
ZEA	**Zeya**	**32.48**	**30**	*e*P	**P**	**08 06 05.7 +0.6**
ZEA				*e*S	**S**	**08 11 20.0 +0.9**
ZEA				*e*SS	**SnSn**	**08 13 12.0 -0.6**
ZEA				*e*SSS	SSS	08 13 38.0
ZEA				pmax	pmax	
	comp=E,200nm,5.0s					
ZEA				pmax	pmax	
	comp=Z,200nm,5.0s					
ZEA				pmax	pmax	
	comp=E,25nm,0.7s					
ZEA				pmax	pmax	
	comp=Z,41nm,0.9s					
ZEA				smax	smax	
	comp=N,600nm,16.0s					
ZEA				MLR	MLR	
	comp=Z,5μm,15.0s					
ZEA				MLR	MLR	
	comp=N,8μm,13.0s					
MJB9	**Matsu-Tunnel**	**32.74**	**65**	*e*P	**P**	**08 06 06.9 -0.7**
	comp=N,27nm,0.8s					
MAJO	**Matsushiro**	**32.75**	**65**	*e*P	**P**	**08 06 07.2 -0.5**
	comp=N,27nm,0.8s					
MAJO				LR	LR	
	comp=Z,5μm,20.0s					
MAJO	**Matsushiro**	**32.75**	**65**	*i* P	**P**	**08 06 07.4 -0.3**
MAJO				pmax	pmax	
	comp=Z,14nm,0.8s					
MAT	**Matsushiro**	**32.75**	**65**	P	**P**	**08 06 06.4 -1.3**
MJAR	**Matsushiro Arr**	**32.75**	**65**	P	**P**	**08 06 06.9 -0.8**
	comp=Z,11nm,0.8s,baz=269,slow=10,SNR=32					
MJAR				PcP	**PcP**	**08 08 52.8 -0.2**
	comp=Z,11nm,0.8s,baz=265,slow=2.7,SNR=19					
MJAR				LR	LR	08 20 13.6
	comp=Z,5μm,20.8s,baz=270,slow=38					
TEY	**Ternei**	**33.30**	**49**	*e*P	**P**	**08 06 12.0 -0.3**
TEY				*e*		08 08 56.2
TEY				MLR	MLR	
	comp=E,7μm,16.0s					
TEY				MLR	MLR	
	comp=Z,6μm,16.0s					
TEY				MLR	MLR	
	comp=N,11μm,16.0s					
CLNS	**Chul'man**	**33.77**	**24**	*e*P	P	08 06 22.2 +5.8
CLNS				*e**PP	sP	08 06 32.0 +8.3
CLNS				*e*PPP	PPP	08 07 47.2
CLNS				*e*		08 08 56.8
CLNS				*e*S	S	08 11 47.6 +8.4
CLNS				*e*SS	**SS**	**08 14 09.4 +4.2**
CLNS				pmax	pmax	
	comp=Z,20nm,1.0s					
CLNS				pmax	pmax	
	comp=E,5.0nm,1.0s					
CLNS				pmax	pmax	
	comp=N,9.0nm,0.9s					
CLNS				smax	smax	
	comp=E,352nm,12.6s					
CLNS				smax	smax	
	comp=N,267nm,13.1s					
CLNS				MLR	MLR	
	comp=Z,5μm,17.0s					
CLNS				MLR	MLR	
	comp=E,2μm,14.0s					
CLNS				MLR	MLR	
	comp=N,4μm,17.0s					
BVAR	**Borovoye Array**	**33.81**	**327**	P	**P**	**08 06 16.8 0.0**
	comp=N,9.1nm,0.8s,baz=120,slow=8.8,SNR=36					
BVAR				PcP	**PcP**	**08 08 55.3 -0.2**
	comp=N,6.3nm,0.8s,baz=116,slow=3.4,SNR=6.2					
BVAR				PKiKP	**PKiKP**	**08 16 19.8 -0.2**
	comp=N,0.7nm,0.6s,baz=106,slow=3.2,SNR=4.2					
BVAR				LR	LR	08 20 15.9
	comp=N,2μm,20.6s,baz=126,slow=37					
PCI	**Palu**	**33.87**	**144**	P	**P**	**08 06 18.8 +1.2**
PCI				pmax	pmax	
	comp=Z,152nm,1.4s					
BRVK	**Borovoye**	**33.88**	**327**	*e*P	**P**	**08 06 17.7 +0.4**
	comp=Z,89nm,1.5s					
BRVK				LR	LR	
	comp=Z,1μm,22.0s					
BRVK	**Borovoye**	**33.88**	**327**	P	**P**	**08 06 17.9 +0.6**
	SNR=36					
BRVK	**Borovoye**	**33.88**	**327**	*ce*P	**P**	**08 06 17.8 +0.4**
BRVK				pmax	pmax	
	comp=Z,75nm,1.7s					
JHJ	**Hachijo jima 2**	**33.95**	**71**	LR	LR	08 21 35.0
	comp=Z,6μm,18.8s,baz=274,slow=39					
GRNR	**Gornyy**	**35.43**	**40**	*e*P	**P**	**08 06 30.0 -0.8**
LUWI	**Luwuk**	**35.58**	**140**	*e*P	**P**	**08 06 32.8 +0.3**
	comp=Z,269nm,0.9s					
SMRI	**Semarang**	**35.82**	**163**	*e*P	**P**	**08 06 35.2 +0.8**
	comp=Z,179nm,1.0s					
GEYT	**Alibeck**	**36.96**	**297**	P	**P**	**08 06 45.4 +1.3**
	comp=Z,32nm,0.6s,baz=108,slow=3.3,SNR=3.5					
GEYT				LR	LR	08 24 39.8
	comp=Z,9μm,19.8s,baz=55,slow=41					
GYA0B	**ALIBECK ARRAY**	**36.96**	**297**	*e*P	**P**	**08 06 46.4 +2.3**
	comp=Z,176nm,1.6s					
TNTI	**Ternate**	**37.00**	**132**	*e*P	**P**	**08 06 45.0 +0.4**
	comp=Z,116nm,0.9s					
ASAJ	**Asahikawa**	**37.18**	**53**	P	**P**	**08 06 45.6 -0.2**
	comp=Z,27nm,0.9s,baz=276,slow=4.8,SNR=19					
ASAJ				PcP	**PcP**	**08 09 06.3 +0.6**
	comp=Z,10nm,0.8s,baz=180,slow=3.0,SNR=5.6					
ASAJ				LR	LR	08 22 43.5
	comp=Z,3μm,18.4s,baz=264,slow=38					
ASAJ	**Asahikawa**	**37.18**	**53**	*e*P	**P**	**08 06 45.6 -0.2**
	comp=Z,155nm,1.5s					
ASAJ				PcP	**PcP**	**08 09 06.3 +0.6**
ERM	**Erimo**	**37.21**	**56**	*e*P	**P**	**08 06 47.8 +1.7**
	comp=Z,28nm,0.9s					
ERM				LR	LR	
	comp=Z,4μm,21.0s					
ERM	**Erimo**	**37.21**	**56**	*i* P	**P**	**08 06 45.9 -0.2**
ERM				pmax	pmax	
	comp=Z,30nm,1.0s					
KAPI	**Kappang**	**37.37**	**148**	PFAKE		08 07 00.0 +12
KAPI				LR	LR	
	comp=Z,936nm,19.0s					
ABKAR	**Akbulak array**	**37.88**	**316**	*e*P	**P**	**08 06 52.2 +0.6**
YSS	**Yuzh-Sakhalins**	**37.96**	**48**	*e*P	**P**	**08 06 52.3 -0.1**
	comp=Z,38nm,0.9s					
YSS				LR	LR	
	comp=Z,4μm,21.0s					
YSS	**Yuzh-Sakhalins**	**37.96**	**48**	*ke*P	**P**	**08 06 52.0 -0.3**
YSS				*e**SP	**sP**	**08 06 57.9 -1.7**
YSS				*e*		08 08 26.0
YSS				*e*		08 09 08.0
YSS				*e*S	**S**	**08 12 39.0 -4.5**
YSS				pmax	pmax	
	comp=Z,40nm,1.0s					
YSS				pmax	pmax	
	comp=Z,600nm,5.0s					
YSS				pmax	pmax	
	comp=N,100nm,6.0s					
YSS				pmax	pmax	
	comp=E,300nm,8.0s					
YSS				MLR	MLR	
	comp=Z,9μm,16.0s					
YSS				MLR	MLR	
	comp=N,3μm,15.0s					
YSS				MLR	MLR	
	comp=E,8μm,15.0s					
WSAR	**Wadi Sarin**	**38.15**	**273**	P	**P**	**08 06 55.2 +0.9**
	comp=E,15nm,0.8s,baz=97,slow=11,SNR=10.0					
WSAR				PcP	**PcP**	**08 09 09.8 +0.8**
	comp=E,14nm,0.8s,baz=34,slow=7.3,SNR=6.8					
WSAR				LR	LR	08 24 47.7
	comp=E,2μm,18.9s,baz=100,slow=40					
BIDO	**Bidbid**	**38.52**	**274**	P	**P**	**08 07 01.0 +3.6**
	SNR=12					
NKL	**Nikolayevsk**	**38.84**	**38**	*e*P	**P**	**08 06 59.0 -0.6**
NKL				*e*		08 08 36.0
NKL				*e*S	**S**	**08 12 56.0 -0.6**
NKL				pmax	pmax	
	comp=N,23nm,0.9s					
NKL				pmax	pmax	
	comp=E,25nm,0.9s					
NKL				pmax	pmax	
	comp=Z,56nm,0.9s					
NKL				pmax	pmax	
	comp=E,250nm,4.0s					
NKL				pmax	pmax	
	comp=Z,500nm,5.0s					
NKL				smax	smax	
	comp=N,600nm,11.0s					
NKL				smax	smax	
	comp=E,1μm,11.0s					
NKL				MLR	MLR	
	comp=N,6μm,13.0s					
TYV	**Tymovskoe**	**39.09**	**42**	*e*P	**P**	**08 07 02.2 +0.4**
TYV				*e*S	**S**	**08 13 01.3 +0.8**
TYV				pmax	pmax	
	comp=Z,200nm,3.0s					
TYV				pmax	pmax	
	comp=Z,26nm,1.3s					
TYV				smax	smax	
	comp=E,400nm,9.2s					
TYV				MLR	MLR	
	comp=E,7μm,14.0s					
TYV				MLR	MLR	
	comp=Z,9μm,14.0s					
YAK	**Yakutsk**	**39.29**	**21**	P	**P**	**08 07 02.6 -0.7**
	comp=Z,24nm,0.5s,baz=319,slow=0.7,SNR=4.8					
YAK				LR	LR	08 25 26.8
	comp=Z,3μm,19.1s,baz=274,slow=40					
YAK	**Yakutsk**	**39.29**	**21**	*e*P	**P**	**08 07 03.2 -0.1**
	comp=Z,29nm,0.6s					
YAK	**Yakutsk**	**39.29**	**21**	*e*P	**P**	**08 07 01.7 -1.6**
YAK				*e**PP	**sP**	**08 07 11.2 +0.6**
YAK				*e*		08 09 11.3
YAK				*e*S	**S**	**08 13 01.9 -1.3**
YAK				*e**SS	sS	08 13 16.6 +4.8
YAK				*e*		08 17 07.8
YAK				pmax	pmax	
	comp=Z,24nm,0.9s					
YAK				pmax	pmax	
	comp=E,6.0nm,1.0s					
YAK				pmax	pmax	
	comp=N,2.0nm,1.1s					
YAK				smax	smax	
	comp=N,101nm,3.3s					
YAK				smax	smax	
	comp=E,153nm,4.3s					
YAK				MLR	MLR	
	comp=Z,3μm,12.0s					
YAK				MLR	MLR	
	comp=N,3μm,11.0s					
YAK				MLR	MLR	
	comp=E,2μm,12.0s					
AKTO	**Aktyubinsk**	**39.45**	**317**	P	**P**	**08 07 05.8 +1.0**
	comp=E,24nm,0.7s,baz=100,slow=12,SNR=45					
YUK	**Yuzh-Kuril'sk**	**39.48**	**53**	*e*P	P	08 06 51.9 -13
YUK				*i*		08 08 36.7
YUK				*e*S	**S**	**08 13 10.9 +4.4**
YUK				*i* SS	**SS**	**08 15 58.8 -2.2**
YUK				*i* SSS	SSS	08 16 21.8
YUK				pmax	pmax	
	comp=Z,177nm,1.0s					
YUK				pmax	pmax	
	comp=Z,253nm,1.7s					
YUK				MLR	MLR	
	comp=Z,4μm,18.0s					
YUK				MLR	MLR	
	comp=E,2μm,16.0s					
YUK				MLR	MLR	
	comp=N,2μm,14.0s					
BANOM	**Banah**	**39.55**	**278**	P	P	08 07 10.7 +4.7
	SNR=5.5					
BANOM	**Banah**	**39.55**	**278**	P	**P**	**08 07 08.0 +2.0**
BANOM				*i* P	**P**	**08 07 08.0 +2.0**
	SNR=5.4					
SHME	**Shamm**	**39.66**	**278**	*i* P	**P**	**08 07 08.3 +1.4**
	SNR=7.1					
MDH	**Madha**	**39.69**	**277**	P	**P**	**08 07 07.1 -0.1**
SOHO	**SOHO**	**39.77**	**275**	*i* P	**P**	**08 07 08.7 +0.9**
	SNR=6.7					
MSFE	**Esma-Masafi**	**39.80**	**277**	*i* P	**P**	**08 07 09.6 +1.5**
	SNR=5.1					
UOSS	**Minazif**	**39.86**	**276**	*e*P	**P**	**08 07 11.3 +2.7**
	comp=N,50nm,1.3s					
UOSS	**Minazif**	**39.86**	**276**	P	**P**	**08 07 09.5 +0.9**
COCO	**West Island**	**39.86**	**186**	PFAKE		08 07 20.0 +11
COCO				LR	LR	
	comp=Z,3μm,19.0s					
HATD	**Hatta, Dubai**	**39.95**	**276**	P	**P**	**08 07 13.0 +3.6**
	SNR=16					
HATD	**Hatta, Dubai**	**39.95**	**276**	*i* P	**P**	**08 07 11.2 +1.9**
	SNR=19					
NAZ	**Nazwa, Dubai**	**40.33**	**277**	P	**P**	**08 07 16.0 +3.6**
	SNR=9.4					
NAZ	**Nazwa, Dubai**	**40.33**	**277**	*i* P	**P**	**08 07 14.3 +1.9**
	SNR=9.6					
ALNE	**Al Ain**	**40.48**	**275**	*i* P	**P**	**08 07 15.9 +2.1**
	SNR=7.7					
SVE	**Sverdlovsk**	**40.59**	**327**	*ce*P	**P**	**08 07 15.0 +0.8**
SVE				*e*S	**S**	**08 13 25.0 +2.1**
SVE				pmax	pmax	
	comp=Z,185nm,1.8s					
SVE				MLR	MLR	
	comp=Z,2μm,11.0s					
ASUD	**Al Ashush, Dub**	**40.71**	**276**	P	**P**	**08 07 19.0 +3.4**
	SNR=7.4					
ASUD	**Al Ashush, Dub**	**40.71**	**276**	*i* P	**P**	**08 07 17.2 +1.6**
	SNR=6.4					
SIJI	**Sorong**	**40.84**	**129**	LR	LR	08 23 46.5
	comp=Z,957nm,21.8s,baz=230,slow=36					
AJN	**Ajban**	**41.03**	**276**	*i* P	**P**	**08 07 19.5 +1.3**
	SNR=8.7					
ARU	**Arti**	**41.43**	**326**	P	**P**	**08 07 21.1 -0.1**
	comp=Z,29nm,0.8s,baz=116,slow=7.5,SNR=50					
ARU	**Arti**	**41.43**	**326**	*e*P	**P**	**08 07 21.3 +0.2**
	comp=Z,280nm,1.5s					
ARU				LR	LR	
	comp=Z,3μm,20.0s					
ARU	**Arti**	**41.43**	**326**	*d i*P	**P**	**08 07 21.2 +0.1**
ARU						08 08 58.7
ARU						08 09 16.6
ARU				PPP	PPP	08 09 26.6
ARU				*e*S	**S**	**08 13 36.2 +0.9**
ARU				SS	**SS**	**08 16 39.3 -0.2**
ARU				pmax	pmax	

comp=Z,178nm,1.2s
ARU MLR MLR
comp=Z,4μm,18.0s
MMRI Maumere 41.71 147 *e*P **P 08 07 22.7 -1.1**
comp=Z,165nm,0.9s
NRIK Noril'sk 42.35 353 P **P 08 07 28.1 -0.4**
comp=Z,13nm,1.0s,baz=147,slow=5.2,SNR=24
NRIK LR LR 08 25 59.1
comp=Z,4μm,21.4s,baz=162,slow=38
MZR Muzera 42.77 275 *i* P **P 08 07 33.3 +0.8**
SNR=9.0
GUMO Guam 43.38 100 P **P 08 07 35.6 -1.8**
comp=Z,62nm,0.8s,baz=12,slow=19,SNR=2.5
GUMO LR LR 08 25 52.9
comp=Z,2μm,20.2s,baz=292,slow=36
SOEI Soe 43.67 145 *e*P **P 08 07 39.4 -0.6**
comp=Z,230nm,0.9s
BATI Baumata 43.76 146 P **P 08 07 39.9 -0.6**
comp=Z,138nm,0.6s,baz=334,slow=2.7,SNR=13
DGAR Diego Garcia 44.38 222 PFAKE 08 08 00.0 +15
DGAR LR LR
comp=Z,877nm,19.0s
AKT Akhty 45.08 302 *e*P **P 08 07 51.1 +0.1**
AKT *e* 08 09 40.0
AKT pmax pmax
comp=Z,49nm,0.8s
MAK Makhachkala 45.28 304 *e*P **P 08 07 50.4 -1.9**
MAK *e* 08 09 37.1
MAK *e*S **S 08 14 29.5 -2.5**
MAK *e*SSS SSS 08 18 41.6
MAK pmax pmax
comp=Z,29nm,0.4s
MAK MLR MLR
comp=Z,3μm,13.0s
MA2 Magadan 46.50 33 P **P 08 08 01.1 -0.7**
comp=Z,37nm,0.8s,baz=240,slow=9.4,SNR=15
MA2 PcP **PcP 08 09 35.6 -0.4**
comp=Z,24nm,0.7s,baz=190,slow=2.2,SNR=7.5
MA2 LR LR 08 29 08.0
comp=Z,3μm,18.6s,baz=238,slow=38
MA2 Magadan 46.50 33 *e*P **P 08 08 01.6 -0.2**
comp=Z,48nm,0.9s
MA2 PcP **PcP 08 09 35.6 -0.4**
MA2 Magadan 46.50 33 *e*P **P 08 08 01.1 -0.7**
MA2 pmax pmax
comp=Z,61nm,1.0s
GROC Groznyy 46.53 304 *e*P **P 08 08 02.9 +0.6**
GROC *e* 08 09 36.5
GROC *e* 08 09 51.3
GROC *e*S **S 08 14 50.8 +0.7**
GROC pmax pmax
comp=Z,125nm,1.1s
TIXI Tiksi 46.63 12 P **P 08 08 01.2 -1.5**
comp=Z,9.2nm,0.5s,baz=220,slow=5.9,SNR=14
TIXI LR LR 08 29 01.7
comp=Z,6μm,19.8s,baz=232,slow=38
TIXI Tiksi 46.63 12 *e*P **P 08 08 01.5 -1.1**
comp=Z,14nm,0.9s
TIXI Tiksi 46.63 12 *de*P **P 08 08 00.8 -1.8**
TIXI pmax pmax
comp=Z,92nm,2.5s
TBLG Delisi 47.33 302 *e*P **P 08 08 09.9 +1.4**
TBLG Delisi 47.33 302 *e*P P 08 08 12.3 +3.7
comp=Z,53nm,1.5s
SKR Severo-Kuril's 47.34 45 *e*P P 08 07 55.6 -13
SKR *e*S **S 08 14 57.2 -4.2**
SKR pmax pmax
comp=Z,400nm,4.0s
SKR MLR MLR
comp=Z,6μm,17.0s
GNI Garni 47.38 300 P **P 08 08 11.2 +2.1**
comp=Z,24nm,0.8s,baz=125,slow=12,SNR=32
GNI LR LR 08 32 30.4
comp=Z,2μm,19.7s,baz=88,slow=42
GNI Garni 47.38 300 *e*P **P 08 08 12.4 +3.2**
GNI Garni 47.38 300 *e*P **P 08 08 10.6 +1.5**
comp=Z,125nm,1.4s
GNI Garni 47.38 300 P **P 08 08 11.3 +2.1**
SNR=19
GNI Garni 47.38 300 *i* P **P 08 08 10.4 +1.2**
SNR=11
GNI Garni 47.38 300 P **P 08 08 11.2 +2.1**
GNI pmax pmax
comp=Z,24nm,0.9s
GNI MLR MLR
comp=Z,2μm,19.7s
ZEI Tsey 47.92 304 *e*P **P 08 08 12.6 -0.8**
ZEI pmax pmax
comp=Z,23nm,0.6s
CLDR Caldiran 48.08 299 *e*P **P 08 08 16.2 +1.5**
BGD Bogdanovka 48.20 302 *e*P **P 08 08 15.5 0.0**
AKH Akhalkalaki 48.27 302 *e*P **P 08 08 19.7 +3.6**
AKH Akhalkalaki 48.27 302 ⇑*i*P **P 08 08 17.4 +1.3**
AKH Akhalkalaki 48.27 302 *e*P **P 08 08 17.9 +1.9**
comp=Z,66nm,1.0s
AKH Akhalkalaki 48.27 302 *e*P **P 08 08 17.9 +1.9**
AKH pmax pmax
comp=Z,66nm,1.0s
SEY Seymchan 48.45 29 *ce*P **P 08 08 16.6 -0.3**
CUKT Cukurca 48.49 296 *e*P **P 08 08 18.3 +0.5**
VANB Van 48.53 298 *e*P **P 08 08 20.1 +2.0**
KBZ Khabaz 48.64 305 P **P 08 08 20.5 +1.8**
comp=Z,6.4nm,0.8s,baz=75,slow=9.4,SNR=18
KBZ LR LR 08 31 24.9
comp=Z,2μm,18.0s,baz=93,slow=39
PEA0B Petropavlovsk- 48.64 42 *e*P **P 08 08 18.6 +0.1**
comp=Z,32nm,1.0s
PEA0B *e*S **S 08 15 23.8 +4.0**
PETK Petropavlovsk- 48.64 42 P **P 08 08 18.2 -0.3**
comp=Z,18nm,1.0s,baz=323,slow=2.2,SNR=12
PETK LR LR 08 31 09.6
comp=Z,4μm,18.2s,baz=251,slow=39
PETK Petropavlovsk- 48.64 42 *e*P **P 08 08 18.0 -0.5**
PETK Petropavlovsk- 48.64 42 *e*P **P 08 08 18.0 -0.5**
NEY Neytrino 48.78 305 *c i*P **P 08 08 22.2 +2.2**
NEY pmax pmax
comp=Z,5.0nm,0.8s
KVAR Kislovodsk Arr 48.79 305 P **P 08 08 21.8 +1.9**
comp=Z,49nm,1.0s,baz=204,slow=1.4,SNR=48
KIV Kislovodsk 48.79 305 *e*P **P 08 08 21.8 +1.8**
comp=Z,149nm,1.3s
KIV LR LR
comp=Z,2μm,21.0s
KIV Kislovodsk 48.79 305 P **P 08 08 20.4 +0.4**
SNR=43
KIV Kislovodsk 48.79 305 *i* P **P 08 08 20.6 +0.7**
SNR=21
KIV Kislovodsk 48.79 305 *e*P **P 08 08 20.1 +0.2**
KIV *e*S **S 08 15 21.7 -0.7**
KIV *e*SS **SS 08 18 54.3 +1.6**
KIV pmax pmax
comp=Z,42nm,3.0s
KIV pmax pmax
comp=Z,116nm,5.6s
KIV MLR MLR
comp=Z,2μm,16.0s
PET Petropavlovsk 49.20 43 PFAKE 08 08 30.0 +7.2
PET LR LR
comp=Z,3μm,20.0s
PET Petropavlovsk 49.20 43 *e*P **P 08 08 21.4 -1.4**
PET *e* 08 10 18.1
PET *e*S **S 08 15 23.5 -4.1**
PET pmax pmax
comp=Z,100nm,6.7s
PET pmax pmax
comp=Z,300nm,3.4s
PET MLR MLR
comp=Z,5μm,17.0s
PRGR Permogore 49.55 329 *e*P **P 08 08 24.8 -0.5**
PRGR pmax pmax
comp=Z,31nm,0.8s
GURO Guroymak-BITLI 49.60 298 *e*P **P 08 08 27.6 +1.4**
RAYN Ar Rayn 49.65 278 *e*P **P 08 08 26.2 -0.5**
comp=Z,105nm,1.4s
RAYN LR LR
comp=Z,2μm,19.0s
RAYN Ar Rayn 49.65 278 *i* P **P 08 08 26.4 -0.3**
SNR=29
RAYN Ar Rayn 49.65 278 P **P 08 08 26.2 -0.5**
RAYN pmax pmax
comp=Z,110nm,1.3s
BCA Borcka 49.67 302 *e*P **P 08 08 27.1 +0.5**
MTN Manton Dam 49.94 140 *e*P **P 08 08 29.4 +0.6**
comp=Z,35nm,0.9s
SVAN Silvan-Diyarba 50.29 298 *e*P **P 08 08 33.3 +1.9**
BNGB Bing¶ll 50.60 299 *e*P **P 08 08 36.0 +2.2**

YEDI Yedisu-Bingol 50.66 300 *e*P **P 08 08 35.8 +1.5**
BAYT Ayd¨–ntepe-Bay 50.87 301 *e*P **P 08 08 35.3 -0.6**
SOC Sochi 50.95 305 *c i*P **P 08 08 36.5 +0.2**
SOC *e**PP **sP 08 08 43.9 +0.2**
SOC *e* 08 10 28.8
SOC *e*PPP PPP 08 11 27.6
SOC *e*S **S 08 15 52.6 +0.2**
SOC pmax pmax
comp=Z,43nm,1.1s
SOC MLR MLR
comp=Z,1μm,18.0s
DYBB Diyarbakir 51.15 298 *e*P **P 08 08 39.8 +1.9**
VORD Divnogorie 51.22 315 *e*P **P 08 08 38.8 +0.7**
VORD pmax pmax
comp=Z,40nm,1.2s
VORR Voronezh 51.30 315 *e*P **P 08 08 39.0 +0.3**
VORR pmax pmax
comp=Z,400nm,1.4s
VSR Storozhevoye 51.31 315 *e*P **P 08 08 38.8 0.0**
VSR pmax pmax
comp=Z,80nm,1.5s
VSR MLR MLR
comp=Z,4μm,23.0s
SVRC Sivrice-ELAZID 51.74 298 *e*P **P 08 08 44.1 +1.6**
ESPY Espiye-Giresun 51.89 302 *e*P **P 08 08 44.5 +1.1**
MBWA Marble Bar 51.95 157 *e*P **P 08 08 44.2 +0.3**
comp=Z,88nm,0.8s
MBWA LR LR
comp=Z,1μm,20.0s
KLMR Klimovskoe 52.23 327 *e*P **P 08 08 44.8 -0.7**
KLMR pmax pmax
comp=Z,92nm,1.2s
KLMR Klimovskoe 52.23 327 *e*P **P 08 08 44.8 -0.7**
KLMR AMP 08 08 47.7
comp=Z,92nm,1.2s
KLMR LQ LQ 08 27 35.7
KLMR LR LR 08 29 49.2
URFA Urfa 52.25 297 *e*P **P 08 08 46.8 +0.6**
MALT Malatya 52.44 298 *e*P **P 08 08 48.4 +0.8**
ANN Anapa 52.52 307 *e*P **P 08 08 47.9 0.0**
ANN *e*S **S 08 16 12.8 -1.1**
ANN pmax pmax
comp=Z,94nm,1.6s
ANN MLR MLR
comp=Z,4μm,19.0s
MOS Moscow 52.53 321 *e*P **P 08 08 47.3 -0.5**
MOS *e* 08 09 57.2
MOS *e* 08 10 47.9
MOS *e*S **S 08 16 16.1 +2.4**
MOS pmax pmax
comp=Z,600nm,1.8s
MOS pmax pmax
comp=Z,321nm,1.6s
MOS pmax pmax
comp=E,80nm,0.9s
RSDY Resadiye-TOKAT 53.01 301 *e*P **P 08 08 51.8 +0.1**
OBN Obninsk 53.08 320 P **P 08 08 53.0 +1.1**
comp=E,62nm,0.4s,baz=348,slow=14,SNR=24
OBN Obninsk 53.08 320 *e*P **P 08 08 52.5 +0.6**
comp=E,414nm,1.4s
OBN LR LR
comp=Z,2μm,21.0s
OBN Obninsk 53.08 320 *d i*P **P 08 08 51.4 -0.5**
OBN *e* 08 10 00.6
OBN *e* 08 10 50.5
OBN *i* S **S 08 16 18.2 -3.0**
OBN pmax pmax
comp=Z,405nm,1.7s
DARE Darende-Malaty 53.13 299 *e*P **P 08 08 53.5 +0.8**
TMCR Tamitsa 53.55 331 *e*P **P 08 08 55.7 +0.5**
TMCR pmax pmax
comp=Z,30nm,0.6s
GAZ Gaziantep 53.56 297 *e*P **P 08 08 57.2 +1.4**
TOKT Tokat 53.61 301 *e*P **P 08 08 57.1 +1.0**
MANU Manus Island 53.69 116 *e*P **P 08 08 58.2 +1.3**
comp=Z,95nm,0.6s
KMRS Kahramanmaras 53.75 298 *e*P **P 08 08 58.3 +1.1**
DAMY Dhamar 53.76 268 *e*P **P 08 08 59.9 +2.1**
comp=Z,58nm,1.0s
KVT Kavak 53.89 302 *e*P **P 08 08 59.1 +0.9**
SARI SarD1z-Kayseri 53.98 299 *e*P **P 08 08 58.7 -0.3**
MSEY Mahe Island 54.24 241 PFAKE 08 09 10.0 +9.0
MSEY LR LR
comp=Z,3μm,19.0s
BNN Bunyan 54.36 300 *e*P **P 08 09 02.4 +0.7**
YAYL Yayladag 54.63 296 *e*P **P 08 09 04.2 +0.4**
CEYT Ceyhan 54.74 297 *e*P **P 08 09 04.6 +0.3**
ASF Jabal al Asfar 54.79 291 P **P 08 09 05.2 +0.3**
comp=Z,72nm,1.2s,baz=10,slow=1.8,SNR=69
ASF LR LR 08 36 48.7
comp=Z,1μm,18.0s,baz=32,slow=41
SIM Simferopol' 54.86 307 *e*P **P 08 09 06.2 +1.1**
SIM *e*S **S 08 16 45.0 -0.6**
SIM *e*SS **SS 08 20 26.0 -2.8**
SIM *e*SSS SSS 08 22 33.0
SIM pmax pmax
comp=Z,19nm,0.9s
SIM MLR MLR
comp=Z,1μm,16.0s
YURE YUREGIR 54.87 297 *e*P **P 08 09 07.1 +1.8**
CORM Corum 55.08 301 *e*P **P 08 09 03.9 -3.0**
BILL Bilibino 55.46 25 *e*P **P 08 09 08.5 -0.5**
comp=Z,31nm,1.0s
BILL LR LR
comp=Z,4μm,19.0s
BILL Bilibino 55.46 25 *d i*P **P 08 09 08.0 -1.0**
BILL *e* 08 10 09.7
BILL *e* 08 11 14.6
BILL pmax pmax
comp=Z,86nm,2.5s
BILL MLR MLR
comp=Z,4μm,15.0s
ILGA Ilgaz 55.64 302 *e*P **P 08 09 13.2 +2.2**
comp=Z,124nm,1.3s
GULA Gulagac 55.69 299 *e*P **P 08 09 11.5 +0.2**
MERS Mersin 55.73 297 *e*P **P 08 09 12.7 +1.1**
CANT Cankiri 55.78 302 *e*P **P 08 09 11.5 -0.4**
MMAI Mount Meron Ar 55.83 293 P **P 08 09 12.6 +0.2**
comp=Z,26nm,1.0s,baz=191,slow=31,SNR=35
MMAI LR LR 08 38 11.3
comp=Z,3μm,19.6s,baz=65,slow=42
BR131 Keskin Array S 55.91 301 *e*P **P 08 09 14.1 +1.2**
BRTR Keskin Array B 55.91 301 P **P 08 09 12.6 -0.3**
comp=Z,6.8nm,0.7s,baz=114,slow=7.7,SNR=20
BRTR LR LR 08 37 03.7
comp=Z,1μm,21.6s,baz=85,slow=40
YAYX Yaylak 55.91 300 *e*P **P 08 09 13.4 +0.5**
MMLI Mount Malkishu 55.95 292 *e*P **P 08 09 15.6 +2.4**
APA Apatity 56.05 335 ⇑*i*P **P 08 09 12.9 -0.4**
APA pmax pmax
comp=Z,11nm,1.3s
SULT Sultanhani-AKS 56.27 299 *e*P **P 08 09 15.9 +0.5**
EREN Erenkoy 56.28 296 *e*P **P 08 09 16.2 +0.8**
JOF Joensuu 56.36 329 P **P 08 09 17.4 +1.9**
JOF pmax pmax
comp=Z,24nm,0.7s
AFSR Af´ar-Bala (A 56.39 301 *e*P **P 08 09 14.4 -1.9**
ATD Arta Tunnel 56.39 266 LR LR 08 31 51.9
comp=Z,867nm,21.6s,baz=50,slow=34
ATD Arta Tunnel 56.39 266 *e*P **P 08 09 17.1 +0.6**
comp=Z,100nm,1.2s
KEBE Keben-Mersin 56.45 297 *e*P **P 08 09 16.8 0.0**
KULU Kulu 56.51 300 *e*P **P 08 09 15.9 -1.3**
IKL Isikli 56.52 297 *e*P **P 08 09 16.4 -0.7**
ANTO Ankara 56.52 301 *e*P **P 08 09 17.7 +0.5**
ANTO Ankara 56.52 301 ⇑*i*P **P 08 09 17.5 +0.3**
ANTO Ankara 56.52 301 *e*P **P 08 09 19.3 +2.1**
ANTO LR LR
comp=Z,1μm,21.0s
ANTO Ankara 56.52 301 P **P 08 09 18.9 +1.7**
SNR=38
ANTO Ankara 56.52 301 *e*P **P 08 09 19.3 +2.1**
ANTO MLR MLR
comp=Z,1μm,21.0s
LOD Lodumlu 56.54 301 *e*P **P 08 09 16.6 -0.8**
KKUL Konya-Kulu 56.55 300 *i*P **P 08 09 18.0 +0.5**
AKKU Akkuyu-Mersin 56.64 297 *e*P **P 08 09 17.8 -0.2**
CHBY Cihanbeyli 56.68 300 *e*P **P 08 09 18.1 -0.3**
BERE Bereket-Mersin 56.86 297 *e*P **P 08 09 19.9 +0.1**
HRFI Mount Harif 56.86 289 *e*P **P 08 09 19.6 -0.1**
BCAM Yenicaga 56.91 302 *i*P **P 08 09 21.6 +1.6**
TEKE Tekeli-Mersin 56.99 297 *e*P **P 08 09 19.3 -1.2**
EIL Elat 57.03 289 P **P 08 09 22.2 +1.4**
comp=Z,60nm,1.0s,baz=56,slow=4.4,SNR=45

EIL Elat 57.03 289 *e*P **P 08 09 20.6 -0.3**
CSS Mathiatis 57.07 295 *e*P **P 08 09 19.7 -1.4**
CSS Mathiatis 57.07 295 *e*P **P 08 09 22.4 +1.3**
comp=Z,19nm,1.2s
LADK Ladik-KONYA 57.16 299 *e*P **P 08 09 20.0 -1.8**
KONT Konya--Tatoy 57.21 299 *e*P **P 08 09 21.1 -1.0**
KDHN Kadinhani 57.29 300 *i*P **P 08 09 21.5 -1.2**
LEF Lefka 57.39 296 *e*P **P 08 09 23.5 +0.2**
KIZT Kizilcal 57.40 300 *e*P **P 08 09 21.2 -2.3**
WRAB Tennant Creek 57.47 142 *e*P **P 08 09 24.0 +0.1**
comp=Z,222nm,0.8s
WRAB LR LR
comp=Z,830nm,19.0s
WRAB Tennant Creek 57.47 142 *d i*P **P 08 09 24.0 +0.1**
WRAB pmax pmax
comp=Z,203nm,0.9s
WRA Warramunga Arr 57.47 142 P **P 08 09 24.0 0.0**
comp=Z,213nm,0.9s,baz=330,slow=7.8,SNR=173
WRA PKPPKP **P'P'df 08 39 10.6 +4.2**
comp=Z,1.4nm,1.0s,baz=172,slow=2.0,SNR=3.8
WRA Warramunga Arr 57.47 142 P **P 08 09 24.0 0.0**
WRA pmax pmax
comp=Z,187nm,0.9s
WB2 Warramunga Arr 57.48 142 *e*P **P 08 09 24.2 +0.2**
AUMIH MIHALICIK 57.52 301 *e*P **P 08 09 24.2 -0.1**
AKASG Malin Array Be 57.60 314 P **P 08 09 23.6 -0.9**
comp=Z,2.4nm,0.5s,baz=72,slow=7.1,SNR=9.6
AKASG LR LR 08 38 37.2
comp=Z,2μm,18.4s,baz=85,slow=41
AKBB Malin Array Si 57.60 314 *e*P **P 08 09 24.1 -0.5**
comp=Z,47nm,1.3s
GAZI Gazipasa 57.60 297 *i*P **P 08 09 26.0 +1.2**
KIEV Kiev 57.61 314 *e*P **P 08 09 23.7 -0.9**
comp=Z,45nm,1.3s
KIEV LR LR
comp=Z,2μm,19.0s
KIEV Kiev 57.61 314 *i*P **P 08 09 23.8 -0.7**
SNR=16
KIEV Kiev 57.61 314 *d i*P **P 08 09 22.9 -1.7**
KIEV pmax pmax
comp=Z,9.0nm,0.8s
MDUB Mudurnu 57.62 302 *e*P **P 08 09 23.5 -1.5**
AK11 Malin Array Si 57.64 314 *e*P **P 08 09 24.1 -0.7**
KEPZ Antalya-Kepez 58.02 298 *i*P **P 08 09 27.6 -0.2**
MICGM Minsk 58.11 319⇓*e*P **P 08 09 30.0 +2.0**
MICGM PM 08 09 32.0
comp=Z,0.3nm,2.0s
MICGM *e*LQ LQ 08 34 36.0
MICGM *e*LR LR 08 37 10.0
MICGM LRM MLR 08 41 24.0
comp=E,2.3nm,12.0s
MICGM LRM MLR 08 41 30.0
comp=Z,3.5nm,12.0s
MNK Minsk 58.11 319⇓*e*P **P 08 09 30.0 +2.0**
PMG Port Moresby 58.13 123 P **P 08 09 28.2 -0.5**
comp=Z,134nm,0.7s,baz=352,slow=6.8,SNR=17
PMG LR LR 08 36 28.2
comp=Z,350nm,18.7s,baz=320,slow=38
PMG Port Moresby 58.13 123 *e*P **P 08 09 28.4 -0.4**
comp=Z,146nm,0.8s
GULT Gulveren 58.14 302 *e*P **P 08 09 27.8 -0.8**
BOLV Bolvadin 58.15 300 *i*P **P 08 09 30.1 +1.4**
PATS Pohnpei 58.21 100 *e*P **P 08 09 30.1 +0.8**
comp=Z,153nm,1.0s
SAUV Serdivan-Sakar 58.22 303 *e*P **P 08 09 28.3 -0.8**
KIS Kishinev 58.29 310 *e*P **P 08 09 29.0 -0.4**
comp=Z,200nm,1.9s
KIS Kishinev 58.29 310 *e*PP PP 08 11 45.0 +6.7
KIS *e*S **S 08 17 26.0 -4.9**
KIS Kishinev 58.29 310 *e*PS 08 17 45.0
KIS *e*SS SS 08 21 28.0 +5.4
KIS *e*SSS SSS 08 23 44.0
KIS *e*LQ LQ 08 30 00.0
KIS LRM MLR 08 39 46.0
comp=Z,1μm,16.0s
KIS Kishinev 58.29 310 *e*P **P 08 09 29.0 -0.4**
KIS *e* 08 09 38.0
KIS *e* 08 11 45.0
KIS *e*S **S 08 17 26.0 -4.9**
KIS *e*PS **PnS 08 17 45.0 +2.1**
KIS *e*SS **SS 08 21 28.0 +5.4**
KIS *e*SSS SSS 08 23 44.0
KIS pmax pmax
comp=Z,200nm,1.9s
KIS pmax pmax
comp=Z,200nm,1.9s
KIS MLR MLR
comp=E,700nm,16.0s
KIS MLR MLR
comp=Z,1μm,16.0s
KIS MLR MLR
comp=Z,1μm,16.0s
BORA Eskisehir 58.29 302 *e*P **P 08 09 28.8 -0.9**
BORA Eskisehir 58.29 302 *i*P **P 08 09 30.4 +0.7**
SUTC Sutluce-Ispart 58.37 299 *e*P **P 08 09 29.7 -0.6**
COEN Coen 58.38 130 *e*P **P 08 09 31.6 +1.2**
comp=Z,47nm,1.0s
SORM Soroca 58.45 311⇓*i*P **P 08 09 29.8 -0.7**
SORM Soroca 58.45 311 P **P 08 09 29.8 -0.7**
VSU Vasula 58.53 324 *e*P **P 08 09 30.5 -0.4**
VSU pmax pmax
comp=Z,276nm,1.6s
AUBOZ BOZOYUK 58.60 302 *e*P **P 08 09 31.9 0.0**
KEV Kevo 58.65 337 *e*P **P 08 09 31.5 0.0**
comp=Z,208nm,1.5s
KEV LR LR
comp=Z,2μm,20.0s
KEV Kevo 58.65 337 *e*P **P 08 09 31.5 0.0**
KEV pmax pmax
comp=Z,208nm,1.5s
KEV MLR MLR
comp=Z,2μm,20.0s
SGF Sodankyl 58.67 334 *e*P **P 08 09 32.1 +0.4**
SGF pmax pmax
comp=Z,58nm,1.7s
CAVI Cavuskoy 58.69 302 *e*P **P 08 09 31.6 -0.8**
HRT Hereke 58.70 303 *e*P **P 08 09 31.4 -1.1**
IDID Didziasalis 58.71 320 *e*P **P 08 09 32.5 +0.2**
IDID IAmb IAmb 08 09 35.6
comp=Z,32nm,1.4s
NACGM Naroch 58.72 319 *e* **P 08 09 31.0 -1.3**
NACGM *e*LQ LQ 08 29 44.0
NACGM *e*LR LR 08 39 39.0
ADVT Abdulvahap 58.72 302 *e*P **P 08 09 30.9 -1.7**
FIA1 FINESS Array S 58.77 327 *e*P **P 08 09 33.2 +0.7**
FINES FINESS Array B 58.77 327 P **P 08 09 32.2 -0.3**
comp=Z,7.3nm,0.7s,baz=86,slow=6.4,SNR=17
RABL Rabaul 58.81 114 *e*P **P 08 09 35.1 +1.5**
comp=Z,355nm,0.7s
OUL Oulu 58.84 331 *e*P **P 08 09 35.1 +2.1**
YLV Yalova 58.97 303 *e*P **P 08 09 32.9 -1.5**
KORT Korkueli 58.98 298 *e*P **P 08 09 32.5 -2.1**
KORT Korkueli 58.98 298 *i*P **P 08 09 35.2 +0.6**
IIGN Ignalina 59.00 320 *e*P **P 08 09 34.8 +0.6**
IIGN IAmb IAmb 08 09 36.7
comp=Z,12nm,0.7s
CFR Carcaliu 59.03 308⇑*i*P **P 08 09 34.5 -0.1**
CFR Carcaliu 59.03 308 *e*P **P 08 09 35.2 +0.6**
CFR pmax pmax
comp=Z,20nm,1.5s
KLYT Kilyos 59.08 303 *e*P **P 08 09 33.1 -1.9**
ISK Istanbul-Kandi 59.11 303 *e*P **P 08 09 35.4 +0.2**
TVSB Tavsanli 59.13 301 *e*P **P 08 09 32.6 -3.0**
ARCES ARCESS Array B 59.16 337 P **P 08 09 35.2 0.0**
comp=Z,20nm,1.1s,baz=92,slow=3.9,SNR=22
ARCES ARCESS Array B 59.16 337 *e*P **P 08 09 34.7 -0.4**
ARCES ARCESS Array B 59.16 337 *e*P **P 08 09 34.7 -0.4**
ARE0 ARCESS Array S 59.16 337 *e*P **P 08 09 37.0 +1.8**
comp=Z,108nm,1.6s
ARE0 ARCESS Array S 59.16 337 *e*P **P 08 09 35.0 -0.1**
ELL Elmali 59.38 298 *e*P **P 08 09 37.0 -0.3**
AKAS Kas 59.73 298 *e*P **P 08 09 36.4 -3.4**
HEF Hetta 59.78 335 *e*P **P 08 09 40.3 +0.9**
KCTX Karacabey (Bur 59.79 302 *e*P **P 08 09 40.1 +0.1**
HAMF Hammerfest 59.83 338 *e*P **P 08 09 41.5 +1.8**
TESR Tescani 59.84 310⇑*i*P **P 08 09 40.2 0.0**
VRI Vrincioaia 59.89 309⇓*i*P **P 08 09 41.1 +0.5**
VRI Vrincioaia 59.89 309 P **P 08 09 41.6 +1.0**
VRI pmax pmax
comp=Z,648nm,1.5s
KULA Kula-Manisa 59.94 300 *e*P **P 08 09 40.9 -0.3**
PLOR Plostina 59.95 309⇓*i*P **P 08 09 41.9 +0.9**
PLOR Plostina 59.95 309 P **P 08 09 41.8 +0.8**
FETY Fethiye 60.05 298 *e*P **P 08 09 40.1 -1.7**

FETY Fethiye 60.05 298 P **P 08 09 40.1 -1.7**
EDC Edincik 60.14 303 *e*P **P 08 09 41.9 -0.5**
ISR Istrita 60.15 308 P **P 08 09 43.0 +0.5**
ISR pmax pmax
comp=Z,54nm,1.1s
BALB Balikesir 60.28 302 *e*P **P 08 09 41.8 -1.6**
AS31 Alice Springs 60.28 145 *e*P **P 08 09 43.7 +0.2**
comp=Z,16nm,0.6s
ASAR Alice Springs 60.28 145 P **P 08 09 43.6 +0.2**
comp=Z,51nm,0.7s,baz=326,slow=6.0,SNR=170
ASAR PKP2bc 08 39 13.3
comp=Z,2.2nm,1.0s,baz=139,slow=3.0,SNR=4.7
VAF Ylistaro 60.30 329 *e*P **P 08 09 43.4 +0.4**
VAF pmax pmax
comp=Z,24nm,1.0s
AS01 Alice Springs 60.31 145 *e*P **P 08 09 42.1 -1.5**
DALY Dalyan (Mu¨la 60.34 299 *e*P **P 08 09 43.1 -0.7**
TURN Turunc 60.37 299 *e*P **P 08 09 46.2 +2.2**
WAKE Wake Island 60.41 83 PFAKE 08 10 00.0 +16
WAKE LR LR
comp=Z,2μm,19.0s
MLR Muntele Rosu 60.50 309 LR LR 08 40 22.7
comp=Z,581nm,21.0s,baz=76,slow=40
MLR Muntele Rosu 60.50 309 ||*i*P **P 08 09 45.6 +0.7**
MLR Muntele Rosu 60.50 309 *e*P **P 08 09 45.3 +0.4**
comp=Z,171nm,1.6s
MLR Muntele Rosu 60.50 309 *e*P **P 08 09 45.3 +0.4**
MLR pmax pmax
comp=Z,171nm,1.6s
KRBG Karabiga-Canak 60.55 303 *e*P **P 08 09 45.4 +0.2**
BURAR Bucovina Array 60.62 311 ||*i*P **P 08 09 45.6 0.0**
BURAR Bucovina Array 60.62 311 P **P 08 09 45.6 0.0**
BUR04 Bucovina Ar. S 60.62 311 *e*P **P 08 09 44.5 -1.1**
BUR08 Bucovina Ar. S 60.62 311 *e*P **P 08 09 45.5 -0.2**
AYDB Zeytinkoy-Aydi 60.66 300 *e*P **P 08 09 46.2 +0.1**
DOPR Dopca 60.80 309 ⇑*i*P **P 08 09 47.3 +0.5**
KIF Kilpisjarvi 60.82 336 *e*P **P 08 09 47.4 +0.9**
ARG Arkhangelos 60.90 298 *e*P **P 08 09 46.6 -1.0**
ARG Arkhangelos 60.90 298 P **P 08 09 47.9 +0.3**
ARG pmax pmax
comp=Z,50nm,1.5s
MLSB Milas 60.91 299 *e*P **P 08 09 47.3 -0.4**
SUW Suwalki 60.91 319 *e*P **P 08 09 46.9 -0.5**
SUW Suwalki 60.91 319 *e*P **P 08 09 46.5 -0.8**
comp=Z,104nm,1.1s
SUW Suwalki 60.91 319 *e*P **P 08 09 46.5 -0.8**
SUW pmax pmax
comp=Z,104nm,1.1s
VOIR 61.13 309 ||*i*P **P 08 09 49.2 +0.1**
VOIR 61.13 309 P **P 08 09 48.8 -0.3**
VOIR pmax pmax
comp=Z,10.0nm,1.1s
DAT Datca 61.20 299 *e*P **P 08 09 48.8 -1.0**
GCAM G?zelcaml? 61.23 300 *e*P **P 08 09 50.1 +0.3**
BODT Bodrum 61.32 299 *e*P **P 08 09 48.6 -1.9**
ALN Alexandroupoli 61.37 304 *e*P **P 08 09 50.6 -0.1**
comp=Z,64nm,1.6s
ALN Alexandroupoli 61.37 304 P **P 08 09 50.2 -0.5**
ALN Alexandroupoli 61.37 304 *e*P **P 08 09 50.7 -0.1**
ALN pmax pmax
comp=Z,64nm,1.6s
ARR Arges 61.43 309 ⇑*i*P **P 08 09 51.3 +0.1**
TRO Tromso 61.46 337 *e*P **P 08 09 50.7 -0.2**
SMG Samos 61.53 300 P **P 08 09 51.4 -0.5**
KDZ Kurdzhali 61.66 305 *e*P **P 08 09 53.5 +0.8**
RDO Rodhopi 61.69 304 P **P 08 09 52.3 -0.6**
BMR Baia Mare 61.75 312 ⇑*i*P **P 08 09 54.4 +1.2**
KARP Karpathos 61.83 297 *e*P **P 08 09 54.2 +0.2**
KARP Karpathos 61.83 297 *e*P **P 08 09 54.1 +0.2**
comp=Z,95nm,1.4s
CJR Cluj-Napoca 61.87 310 ||*i*P **P 08 09 55.3 +1.2**
CJR Cluj-Napoca 61.87 310 P **P 08 09 55.3 +1.2**
KWP Kalwaria Pacla 61.90 314 *e*P **P 08 09 54.6 +0.4**
KWP Kalwaria Pacla 61.90 314 *e*P **P 08 09 52.6 -1.6**
comp=Z,2μm,1.6s
KWP Kalwaria Pacla 61.90 314 *e*P **P 08 09 52.6 -1.6**
SPA0 Spitsbergen Ar 61.91 347 *e*P **P 08 09 55.8 +2.0**
SPA0 Spitsbergen Ar 61.91 347 *e*P **P 08 09 53.1 -0.8**
SPITS Spitsbergen Ar 61.91 347 P **P 08 09 53.0 -0.8**
comp=Z,6.3nm,0.6s,baz=91,slow=6.1,SNR=7.4
SPITS LR LR 08 40 58.7
comp=Z,4μm,18.8s,baz=60,slow=40
SPITS Spitsbergen Ar 61.91 347 P **P 08 09 53.0 -0.8**
SPITS pmax pmax
comp=Z,6.0nm,0.6s
SPITS MLR MLR
comp=Z,4μm,18.8s
CHOS Chios island 61.96 301 P **P 08 09 54.4 -0.5**
LOT Lotru 62.01 309 ||*i*P **P 08 09 55.4 +0.3**
PLD Plovdiv 62.08 305 *e*P **P 08 09 56.6 +1.1**
PLD Plovdiv 62.08 305 P **P 08 09 57.4 +1.9**
TRPA Tarpa 62.29 312 ⇑*i*P **P 08 09 57.8 +1.0**
NWAO Narrogin (SRO) 62.33 164 P **P 08 09 57.5 +0.4**
comp=Z,70nm,0.9s,baz=214,slow=8.0,SNR=35
NWAO LR LR 08 36 52.7
comp=Z,937nm,21.9s,baz=206,slow=36
NWAO Narrogin (SRO) 62.33 164 *e*P **P 08 09 57.8 +0.8**
comp=Z,67nm,0.8s
UZH Uzhgorod 62.35 313 ||*i*P **P 08 09 58.0 +0.8**
UZH *e* 08 10 02.6
UZH *e* 08 10 09.4
DRGR 62.45 311 ||*i*P **P 08 09 58.7 +0.7**
DRGR 62.45 311 P **P 08 09 58.2 +0.2**
DRGR pmax pmax
comp=Z,80nm,1.8s
AMGA Amorgos Island 62.48 299 P P 08 09 44.9 -13
DEV Deva 62.51 310 P **P 08 09 58.9 +0.6**
DEV pmax pmax
comp=Z,40nm,0.8s
BEL Belsk 62.69 317 *e*P **P 08 09 59.0 -0.4**
BEL Belsk 62.69 317 *e*P **P 08 09 59.0 -0.4**
KBS Kingsbay 62.76 347 PFAKE 08 10 10.0 +11
KBS LR LR
comp=Z,2μm,20.0s
KBS Kingsbay 62.76 347 ⇑*e*P **P 08 10 02.0 +2.5**
KBS pmax pmax
comp=Z,325nm,2.5s
CRVS Cervenica-Dubn 62.84 313 *e*P **P 08 10 01.2 +0.7**
CRVS *e* 08 10 14.0
CRVS *e*S **S 08 18 30.7 +1.5**
CRVS *e*S S 08 18 32.9 +3.7
CRVS pmax pmax
comp=Z,44nm,1.6s
CRVS MLR MLR
comp=Z,1μm,20.3s
CRVS Cervenica-Dubn 62.84 313 *e*P **P 08 10 01.2 +0.7**
CRVS *e* 08 10 14.0
CRVS *e*S **S 08 18 30.7 +1.5**
CRVS *e*L L 08 41 21.2
NVR Nevrokopi 62.87 305 P **P 08 10 01.4 +0.5**
SANT Santorini 62.94 299 ||*i*P **P 08 10 00.8 -0.6**
SANT Santorini 62.94 299 *e*P **P 08 10 00.3 -1.1**
comp=Z,597nm,1.6s
HERR Herculane 63.07 309 ||*i*P **P 08 10 02.7 +0.6**
SRS Serrai 63.12 304 P **P 08 10 01.5 -1.0**
SRS pmax pmax
comp=Z,20nm,1.6s
PAIG Paliouri 63.36 303 P **P 08 10 03.1 -1.0**
PAIG Paliouri 63.36 303 P **P 08 10 03.2 -0.9**
PAIG pmax pmax
comp=Z,47nm,1.6s
SOH Sokhos 63.37 304 P **P 08 10 04.0 -0.2**
SOH pmax pmax
comp=Z,10.0nm,2.1s
BZS Buzias 63.45 310 ||*i*P **P 08 10 04.3 -0.3**
NIE Niedzica 63.48 314 *e*P **P 08 10 05.8 +1.1**
NIE Niedzica 63.48 314 *e*P **P 08 10 05.8 +1.1**
MOR8 Moi Rana 63.51 333 *e*P **P 08 10 02.8 -1.8**
KECS Kecovo 63.56 313 *e*P **P 08 10 06.1 +0.8**
KECS Kecovo 63.56 313 *e*P **P 08 10 06.1 +0.8**
MDVR Moldovita 63.58 309 ||*i*P **P 08 10 05.9 +0.4**
OJC Ojcow 63.62 315 *e*P **P 08 10 05.9 +0.3**
OJC Ojcow 63.62 315 *e*P **P 08 10 05.6 -0.1**
comp=Z,52nm,1.3s
OJC Ojcow 63.62 315 *e*P **P 08 10 05.6 -0.1**
OJC pmax pmax
comp=Z,52nm,1.3s
IDI Anoyia 63.68 298 P **P 08 10 06.9 +0.5**
comp=Z,22nm,0.7s,baz=135,slow=2.9,SNR=14
IDI LR LR 08 44 36.1
comp=Z,588nm,18.7s,baz=81,slow=42
IDI Anoyia 63.68 298 ||*i*P **P 08 10 05.3 -1.1**
IDI Anoyia 63.68 298 *e*P **P 08 10 05.4 -1.0**
comp=Z,50nm,0.9s
THE Thessaloniki 63.71 304 P **P 08 10 04.5 -1.8**
THE pmax pmax
comp=Z,28nm,1.6s
FORT Forrest 63.76 154 *e*P **P 08 10 07.6 +1.0**
comp=Z,165nm,1.0s
XOR Xorichti 63.87 303 P **P 08 10 07.0 -0.5**
GRG Griva 64.03 304 P **P 08 10 07.1 -1.5**
GRG Griva 64.03 304 P **P 08 10 06.4 -2.2**
PSZ Piszkesteto 64.07 312 ||*i*P **P 08 10 09.2 +0.5**
PSZ Piszkesteto 64.07 312 ||*e*P **P 08 10 08.7 0.0**
PSZ Piszkesteto 64.07 312 *e*P **P 08 10 10.7 +1.9**
comp=Z,55nm,1.5s
LIT Litokhoron 64.19 303 *e*P **P 08 10 08.6 -1.0**
comp=Z,56nm,1.3s
LIT Litokhoron 64.19 303 P **P 08 10 08.1 -1.5**
LIT Litokhoron 64.19 303 *e*P **P 08 10 08.6 -1.0**
LIT pmax pmax
comp=Z,56nm,1.3s
IMMV Iera Moni Meta 64.34 298 P **P 08 10 09.6 -1.1**
GVD Gavdhos 64.44 297 P **P 08 10 11.3 0.0**
AGG Agios Georgios 64.61 302 *e*P **P 08 10 10.8 -1.5**
comp=Z,190nm,1.2s
AGG Agios Georgios 64.61 302 P **P 08 10 10.2 -2.1**
AGG Agios Georgios 64.61 302 *e*P **P 08 10 10.8 -1.5**
AGG pmax pmax
comp=Z,190nm,1.2s
VYHS Vyhne 64.62 313 *e*P **P 08 10 12.1 -0.2**
VYHS *e* 08 10 25.4
VYHS *e*S **S 08 18 58.8 +7.4**
VYHS pmax pmax
comp=Z,43nm,1.9s
VYHS Vyhne 64.62 313 *e*P **P 08 10 12.1 -0.2**
VYHS *e* 08 10 25.4
VYHS *e*S **S 08 18 58.8 +7.4**
OKC Ostrava-Krasne 64.75 315 *e*S **S 08 18 53.7 +0.9**
OKC AMS AMS 08 40 00.0
comp=Z,1μm,15.6s
CTA Charters Tower 64.79 132 P **P 08 10 13.3 -0.4**
comp=Z,92nm,0.9s,baz=321,slow=10.0,SNR=36
CTAO Charters Tower 64.79 132 *e*P **P 08 10 14.0 +0.3**
comp=Z,100nm,0.8s
CTAO LR LR
comp=Z,907nm,19.0s
NSS Namsos 64.82 331 *e*P **P 08 10 12.5 -0.7**
FNA Florina 64.83 304 *e*P **P 08 10 13.0 -0.8**
FNA Florina 64.83 304 P **P 08 10 11.9 -1.9**
FNA Florina 64.83 304 *e*P **P 08 10 13.0 -0.8**
GUR Goura 64.90 301 P **P 08 10 11.5 -2.9**
DIVS Divibare 64.94 308 *e*P **P 08 10 14.1 -0.4**
comp=Z,20nm,1.0s
HFS Hagfors 64.94 327 P **P 08 10 13.9 -0.2**
comp=Z,7.3nm,0.6s,baz=101,slow=7.5,SNR=15
EVR Evrytania 65.03 302 P **P 08 10 12.6 -2.6**
MORC Moravsky Berou 65.14 315 ||*i*P **P 08 10 16.3 +0.6**
MORC Moravsky Berou 65.14 315 *e*P **P 08 10 15.8 +0.2**
comp=Z,122nm,1.3s
MORC Moravsky Berou 65.14 315 *e*P **P 08 10 15.8 +0.2**
MORC pmax pmax
comp=Z,122nm,1.3s
MORC Moravsky Berou 65.14 315 *e*P **P 08 10 15.9 +0.2**
JAVC Velka Javorina 65.28 314 *e*P **P 08 10 18.3 +1.7**
ITM Ithomi 65.43 301 *e*P **P 08 10 16.1 -1.6**
comp=Z,74nm,1.3s
DSL Palaion Diasel 65.50 303 P **P 08 10 17.0 -1.1**
KRLC Kraliky 65.54 315 *e*P **P 08 10 21.4 +3.1**
KRLC Kraliky 65.54 315 *e*P **P 08 10 21.4 +3.1**
KSP Ksiaz 65.66 316 *e*P **P 08 10 19.3 +0.4**
KSP Ksiaz 65.66 316 *e*P **P 08 10 19.3 +0.4**
PYL PYLOS 65.66 300 P **P 08 10 16.5 -2.7**
MODS Modra-Piesok 65.66 313 *e*P **P 08 10 20.7 +1.7**
MODS pmax pmax
comp=Z,71nm,1.9s
MODS Modra-Piesok 65.66 313 *e*P **P 08 10 20.6 +1.6**
MODS *e*S **S 08 19 07.0 +2.9**
MODS *e*L L 08 40 26.1
NC405 NORSAR Array S 65.68 328 *e*P **P 08 10 17.9 -1.0**
DPC Dobruska-Polom 65.76 316 *e*P **P 08 10 20.3 +0.6**
DPC *e*S **S 08 19 09.6 +4.3**
DPC AMS AMS 08 40 50.0
comp=Z,2μm,14.5s
DPC Dobruska-Polom 65.76 316 *e*P **P 08 10 20.3 +0.6**
DPC *e*S **S 08 19 09.6 +4.3**
DPC MLR MLR
comp=Z,2μm,14.5s
NC303 NORSAR Array S 65.81 328 *e*P **P 08 10 19.5 -0.2**
VRAC Vranov 65.86 314 P **P 08 10 20.7 +0.5**
comp=Z,8.4nm,0.7s,baz=73,slow=8.3,SNR=23
VRAC Vranov 65.86 314 ||*i*P **P 08 10 21.2 +0.9**
VRAC Vranov 65.86 314 *e*P **P 08 10 20.9 +0.6**
NB201 NORSAR Array S 65.89 328 *e*P **P 08 10 19.1 -1.2**
PDG Podgorica 65.91 307 ⇑*i*P **P 08 10 20.4 -0.3**
TTG Podgorica 65.91 307 *e*P **P 08 10 20.2 -0.5**
comp=Z,55nm,1.4s
TTG Podgorica 65.91 307 *e*P **P 08 10 20.2 -0.5**
TTG pmax pmax
comp=Z,55nm,1.4s
UPC Upice 65.91 316 *e*P **P 08 10 22.0 +1.4**
UPC *e*S **S 08 19 07.1 0.0**
UPC AMS AMS 08 41 00.0
comp=Z,3μm,14.1s
UPC Upice 65.91 316 *e*P **P 08 10 22.0 +1.4**
UPC *e*S **S 08 19 07.1 0.0**
UPC MLR MLR
comp=Z,3μm,14.1s
NB2 NORSAR Subarra 65.93 328 P **P 08 10 19.4 -1.2**
comp=Z,20nm,1.0s,baz=76,slow=6.5
NB2 NORSAR Subarra 65.93 328 P **P 08 10 19.4 -1.2**
baz=76,slow=6.5
IGT Igoumenitsa 65.95 303 P **P 08 10 18.4 -2.6**
IGT Igoumenitsa 65.95 303 P **P 08 10 20.3 -0.7**
KRUC Moravsky 66.05 314 *e*P **P 08 10 22.2 +0.7**
NC204 NORSAR Array S 66.09 328 *e*P **P 08 10 21.6 0.0**
NAO01 NORSAR Array S 66.13 328 *e*P **P 08 10 21.5 -0.3**
BEHE Becsehely 66.50 311 ||*e*P **P 08 10 24.4 0.0**
CONA Conrad Observa 66.69 313 *e*P **P 08 10 26.0 +0.2**
comp=Z,44nm,1.4s,SNR=23
BLY Banja Luka 66.70 310 ||*i*P **P 08 10 25.9 +0.2**
BLY Banja Luka 66.70 310 *e*P **P 08 10 27.7 +2.0**
comp=Z,17nm,1.2s
PVCC Panska Ves 66.80 316 *e*P **P 08 10 29.3 +3.1**
PVCC AMS AMS 08 41 30.0
comp=Z,2μm,15.4s
PVCC Panska Ves 66.80 316 *e*P **P 08 10 29.3 +3.1**
PVCC MLR MLR
comp=Z,2μm,15.4s
GOPC GO Pecny, Ondr 66.83 315 *e*P **P 08 10 28.1 +1.6**
GOPC *e*S **S 08 19 23.0 +4.7**
GOPC AMS AMS 08 41 30.0
comp=Z,2μm,14.8s
GOPC GO Pecny, Ondr 66.83 315 *e*P **P 08 10 28.1 +1.6**
GOPC *e*S **S 08 19 23.0 +4.7**
GOPC MLR MLR
comp=Z,2μm,14.8s
RDOG Red Dog Mine 66.92 24 *e*P **P 08 10 26.4 -0.3**
comp=Z,15nm,0.9s
ANM Nome 66.95 28 *e*P **P 08 10 27.5 +0.6**
comp=Z,32nm,1.0s
ANM Nome 66.95 28 *e*P **P 08 10 27.5 +0.6**
ANM pmax pmax
comp=Z,32nm,1.0s
PRU Pruhonice 66.96 316 *e*P **P 08 10 27.8 +0.5**
PRU *e*S **S 08 19 20.3 +0.5**
PRU AMS AMS 08 41 30.0
comp=Z,2μm,14.7s
PRU Pruhonice 66.96 316 *e*P **P 08 10 27.8 +0.5**
PRU *e*S **S 08 19 20.3 +0.5**
PRU MLR MLR
comp=Z,2μm,14.7s
PRA Prague 67.01 316 AMS AMS 08 41 40.0
comp=Z,3μm,14.2s
BRG Berggiesshubel 67.08 317 *i* P **P 08 10 28.4 +0.4**
comp=Z,102nm,1.9s
BRG *i* PCP **PcP 08 10 55.6 -0.6**
comp=Z,27nm,1.3s
BRG *e*PP **PP 08 12 55.5 -0.1**
comp=Z,20nm,1.5s
BRG S **S 08 19 22.0 +0.7**
BRG SS **SS 08 23 35.0 -4.7**
comp=N,3μm,18.1s
comp=E,1μm,19.3s
comp=Z,1μm,18.4s
BRG Berggiesshubel 67.08 317 *i* P **P 08 10 28.4 +0.4**
BRG *i* 08 10 55.6
BRG *e* 08 12 55.5
BRG S **S 08 19 22.0 +0.7**
BRG SS **SS 08 23 35.0 -4.7**
BRG pmax pmax
comp=Z,102nm,1.9s
BRG MLR MLR
comp=N,3μm,18.1s
BRG MLR MLR
comp=E,1μm,19.3s
BRG MLR MLR
comp=Z,1μm,18.4s
ARSA Arzberg 67.10 313 *e*P **P 08 10 28.6 +0.3**
comp=Z,12nm,1.3s,SNR=10
KMBO Kilima Mbogo 67.27 256 LR LR 08 39 38.5
comp=Z,979nm,21.6s,baz=68,slow=36
KMBO Kilima Mbogo 67.27 256 PFAKE 08 10 40.0 +10
KMBO LR LR
comp=Z,12μm,21.0s
CLL Collm 67.53 317 *e*P **P 08 10 30.0 -0.9**
comp=Z,10.0nm,1.2s
CLL *i* Pmax 08 10 32.7
comp=Z,50nm,1.4s
CLL *i* 08 10 39.4
CLL *e*PcP **PcP 08 10 58.0 -0.1**
CLL *e*(PP) 08 12 53.0
CLL *e*PPP PPP 08 14 38.0
CLL *e*S **S 08 19 24.0 -2.6**
CLL *e* 08 20 18.0
CLL *e*SS **SS 08 23 42.0 -4.6**
CLL *e* 08 24 48.0
CLL *e*SSS SSS 08 27 00.0
CLL Lm MLR 08 44 00.0
comp=Z,2μm,19.8s
CLL Collm 67.53 317 *e*P **P 08 10 30.7 -0.2**
comp=Z,73nm,1.6s
CLL Collm 67.53 317 *e*P **P 08 10 30.0 -0.9**
CLL *i* 08 10 39.4
CLL *e*S **S 08 19 24.0 -2.6**
CLL pmax pmax
comp=Z,50nm,1.4s
CLL MLR MLR
comp=Z,2μm,19.8s
PERS Pernice 67.55 312 *e*P **P 08 10 30.8 -0.3**
SOKA Soboth 67.59 312 *e*P **P 08 10 31.4 0.0**
comp=Z,34nm,1.3s,SNR=15
MOA Molln 67.75 313 *e*P **P 08 10 32.7 +0.3**
comp=Z,30nm,1.4s,SNR=9.1
BOJS Bojanci 67.79 311 *e*P **P 08 10 32.5 -0.1**
BOJS *e* 08 11 10.1
KHC Kasperske Hory 67.81 315 *e*P **P 08 10 32.7 0.0**
KHC *e*pP **sP 08 10 39.2 -1.0**
KHC *e*S **S 08 19 36.2 +6.1**
KHC AMS AMS 08 45 00.0
comp=Z,2μm,17.4s
KHC Kasperske Hory 67.81 315 *e*P **P 08 10 33.3 +0.5**
comp=Z,11nm,1.4s
KHC Kasperske Hory 67.81 315 *e*P **P 08 10 32.7 0.0**
KHC *e* 08 10 39.2
KHC *e*S **S 08 19 36.2 +6.1**
KHC MLR MLR
comp=Z,2μm,17.4s
GEC2 GERESS Array S 67.81 315 *e*P **P 08 10 33.1 +0.3**
comp=Z,44nm,1.4s
GEC2 GERESS Array S 67.81 315 *e*P **P 08 10 33.1 +0.3**
GEC2 pmax pmax
comp=Z,44nm,1.4s
GERES GERESS Array B 67.81 315 P **P 08 10 32.9 +0.1**
comp=Z,3.7nm,0.8s,baz=70,slow=5.8,SNR=26
GERES LR LR 08 45 20.1
comp=Z,1μm,18.4s,baz=88,slow=40
GEA0 GERESS Array S 67.81 315 *e*P **P 08 10 32.5 -0.4**
OBKA Obir 67.96 312 *e*P **P 08 10 34.1 +0.3**
comp=Z,14nm,1.1s
VISS Visnje 67.98 311 *e*P **P 08 10 33.8 0.0**
HNR Honiara 68.13 114 LR LR 08 38 21.5
comp=Z,697nm,20.7s,baz=310,slow=34
HNR Honiara 68.13 114 PFAKE 08 10 50.0 +15
HNR LR LR
comp=Z,103μm,22.0s
NKC Novy Kostel 68.18 316 AMS AMS 08 42 20.0
comp=Z,2μm,15.6s
MUD Monsted U'grnd 68.20 323 *i* P **P 08 10 35.8 +0.9**
comp=Z,44nm,1.1s
MUD Monsted U'grnd 68.20 323 *e*P **P 08 10 35.8 +0.9**
MUD pmax pmax
comp=Z,44nm,1.1s
WET Wettzell 68.24 315 P **P 08 10 36.1 +0.7**
MATE Matera 68.27 305 ⇑*i*P **P 08 10 36.4 +0.7**
JAVS Javornik 68.47 311 *e*P **P 08 10 36.3 -0.7**
JAVS *e* 08 11 05.6
MYKA Terra Mystica 68.52 312 *e*pP **P 08 10 38.4 +1.1**
comp=Z,7.3nm,0.9s
MOX Moxa 68.56 317 P **P 08 10 39.2 +1.8**
MOX pmax pmax
comp=Z,24nm,2.0s
KBA Koelnbreinsper 68.57 313 *e*pP **P 08 10 39.1 +1.3**
comp=Z,16nm,1.2s,SNR=8.1
KBA Koelnbreinsper 68.57 313 P **P 08 10 40.0 +2.3**
KBA pmax pmax
comp=Z,24nm,1.2s
TIP Timpagrande 68.69 304 ||*i*P **P 08 10 37.1 -1.4**
TIP Timpagrande 68.69 304 *e*P **P 08 10 37.2 -1.4**
comp=Z,57nm,1.3s
TRI Trieste 68.72 311 *e*P **P 08 10 40.0 +1.6**
comp=Z,70nm,1.3s
TRI Trieste 68.72 311 *e*P **P 08 10 40.0 +1.6**
TRI pmax pmax
comp=Z,70nm,1.3s
BBOO Buckleboo 68.93 149 *e*P **P 08 10 39.6 -0.1**
comp=Z,132nm,1.2s
GRF Grafenberg Arr 69.10 316 P **P 08 10 43.4 +2.6**
GRF pmax pmax
comp=Z,49nm,2.0s
GRFO Grafenberg 69.10 316 *e*P **P 08 10 43.5 +2.7**
comp=Z,112nm,1.5s
GRFO Grafenberg 69.10 316 *e*P **P 08 10 43.5 +2.7**
GRFO pmax pmax
comp=Z,112nm,1.5s
CUC Castrocucco 69.12 305 *e*P **P 08 10 40.2 -0.9**
comp=Z,36nm,1.5s
ABTA Abfaltersbach 69.22 313 *e*P **P 08 10 41.0 -0.6**
comp=Z,18nm,1.1s,SNR=8.9
OPO Ambohidratompo 69.34 235 P **P 08 10 44.2 +1.5**
comp=Z,27nm,0.8s,baz=47,slow=6.5,SNR=27
OPO LR LR 08 39 00.0
comp=Z,2μm,21.6s,baz=40,slow=34
DAG Danmarks Havn 69.50 348 *i* P **P 08 10 41.1 -1.6**
comp=Z,78nm,1.5s
DAG Danmarks Havn 69.50 348 *i* P **P 08 10 41.1 -1.6**
DAG pmax pmax
comp=Z,78nm,1.5s
FUR Furstenfeldbru 69.56 314 P **P 08 10 46.4 +2.8**
ABPO Ambohimpanom 69.59 234 *e*P **P 08 10 45.6 +1.2**
comp=Z,23nm,0.9s
ABPO LR LR
comp=Z,840nm,22.0s
ABPO Ambohimpanom 69.59 234 *e*P **P 08 10 45.6 +1.2**
ABPO pmax pmax
comp=Z,23nm,0.9s
ABPO MLR MLR
comp=Z,840nm,22.0s
WTTA Wattenberg 69.62 313 *e*P **P 08 10 44.2 0.0**
comp=Z,0.2nm,0.2s,SNR=9.4
WATA Walderalm 69.64 313 *e*P **P 08 10 43.6 -0.7**
comp=Z,89nm,1.9s,SNR=9.9
CEL Celeste 69.64 303 *e*P **P 08 10 43.9 -0.4**
comp=Z,66nm,1.1s
MOTA Moosalm 69.94 314 *e*P **P 08 10 44.8 -1.4**
comp=Z,34nm,1.1s,SNR=15
JMIC Jan Mayen 70.03 341 P **P 08 10 47.5 +1.4**
comp=Z,20nm,0.8s,baz=180,slow=5.1,SNR=3.3
AQU L'Aquila 70.06 308 *e*P **P 08 10 47.2 +0.3**
comp=Z,70nm,1.3s
AQU L'Aquila 70.06 308 *e*P **P 08 10 47.2 +0.3**
AQU pmax pmax
comp=Z,70nm,1.3s
RETA Reutte 70.11 314 *e*P **P 08 10 46.8 -0.3**
comp=Z,31nm,1.4s,SNR=12
FETA Feichten 70.28 313 *e*P **P 08 10 48.3 0.0**
comp=Z,48nm,1.1s,SNR=24
STU Stuttgart 70.66 316 *e*P **P 08 10 52.4 +2.0**
comp=Z,69nm,1.3s
FUORN Ofenpass-Fuorn 70.72 313 *e*P **P 08 10 51.1 0.0**
comp=Z,67nm,1.4s
DAVA Damuels 70.74 314 *e*P **P 08 10 50.4 -0.6**
comp=Z,20nm,1.1s,SNR=8.2

MIDW Midway 70.84 68 PFAKE 08 11 00.0 +8.2
MIDW LR LR
comp=Z,2µm,21.0s
BUG Bochum--Univer 70.89 319 P **P 08 10 51.9 +0.2**
STKA Stephens Creek 70.90 144 P **P 08 10 52.0 +0.1**
comp=Z,69nm,0.9s,baz=328,slow=7.5,SNR=46
STKA Stephens Creek 70.90 144 *e*P **P 08 10 52.0 +0.1**
comp=Z,14nm,0.8s
STKA Stephens Creek 70.90 144 *e*P **P 08 10 52.0 +0.1**
STKA pmax pmax
comp=Z,14nm,0.8s
DAVOX Davos/Dischmat 70.91 313 P **P 08 10 51.9 -0.3**
comp=Z,16nm,0.8s,baz=104,slow=11,SNR=28
DAVOX LR LR 08 44 38.0
comp=Z,2µm,20.0s,baz=76,slow=38
VAE Valguarnera 71.01 303 LR LR 08 46 57.2
comp=Z,238nm,18.1s,baz=70,slow=40
TOLK Toolik Lake Re 71.26 21 P **P 08 10 53.8 +0.1**
baz=298
TOLK Toolik Lake Re 71.26 21 *e*P **P 08 10 53.7 +0.1**
comp=Z,55nm,0.8s
TUE Stuetta 71.37 313 *e*P **P 08 10 55.9 +0.9**
comp=Z,26nm,1.1s
SLE Schleitheim 71.45 315 P **P 08 10 54.7 -0.5**
VLC Villacollemand 71.50 311 *e*P **P 08 10 56.9 +1.3**
comp=Z,60nm,1.3s
EIDS Eidsvold 71.66 133 *e*P **P 08 10 57.4 +0.8**
comp=Z,127nm,1.2s
COLD Coldfoot 71.72 23 *e*P **P 08 10 56.5 +0.1**
comp=Z,36nm,1.0s
MEM Membach 71.94 318 ⇓P **P 08 11 00.0 +2.0**
comp=Z,22nm,1.6s
MEM Membach 71.94 318 P **P 08 10 59.2 +1.2**
MEM pmax pmax
comp=Z,30nm,1.4s
CDF Champ du Feu 71.98 316 *e*P **P 08 10 57.5 -1.0**
CDF pmax pmax
comp=Z,140nm,1.8s
BEBN Eben Emael 72.06 318 ⇑P **P 08 11 00.4 +1.6**
ECH Echery 72.12 315 *e*P **P 08 10 58.6 -0.6**
comp=Z,41nm,1.4s
ECH Echery 72.12 315 *e*P **P 08 10 58.6 -0.6**
ECH pmax pmax
comp=Z,41nm,1.4s
WLF Walferdange 72.20 317 ⇓P **P 08 10 57.9 -1.7**
comp=Z,118nm,1.6s
WLF Walferdange 72.20 317 *e*P **P 08 11 00.1 +0.4**
comp=Z,134nm,1.2s
WLF Walferdange 72.20 317 *e*P **P 08 11 00.1 +0.4**
WLF pmax pmax
comp=Z,134nm,1.2s
SVW2 Sparrevohn 72.37 30 *e*P **P 08 11 01.0 +0.5**
comp=Z,38nm,0.8s
BCLA Clavier 72.43 318 ⇑P **P 08 11 02.5 +1.6**
comp=Z,29nm,1.6s
HINF Hinteralfeld 72.46 315 *e*P **P 08 11 00.1 -1.2**
HINF pmax pmax
comp=Z,133nm,2.0s
MLY Manley 72.56 25 *e*P **P 08 11 02.0 +0.4**
comp=Z,64nm,0.8s
MBAR Mbarara 72.65 260 *e*P **P 08 11 05.1 +2.0**
comp=Z,72nm,1.6s
MBAR LR LR
comp=Z,981nm,21.0s
MBAR Mbarara 72.65 260 *e*P **P 08 11 05.1 +2.0**
MBAR pmax pmax
comp=Z,72nm,1.6s
MBAR MLR MLR
comp=Z,981nm,21.0s
HAU Haudompre 72.71 315 *e*P **P 08 11 02.8 +0.1**
HAU pmax pmax
comp=Z,78nm,1.6s
SENIN Lac Senin/Sane 72.72 314 *e*P **P 08 11 02.8 -0.3**
comp=Z,37nm,1.3s
CAST Castle Rocks 72.80 27 *e*P **P 08 11 03.4 +0.4**
comp=Z,55nm,1.0s
GIVF Givet 72.83 318 *e*P **P 08 11 02.7 -0.7**
GIVF pmax pmax
comp=Z,66nm,1.4s
UCC Uccle 72.84 319 ⇑P **P 08 11 04.8 +1.5**
PGF Pioggiola 73.03 309 *e*P **P 08 11 06.5 +1.6**
PGF pmax pmax
comp=Z,117nm,1.5s
CHGN Chignik 73.06 35 *e*P **P 08 11 06.8 +2.2**
comp=Z,68nm,1.0s
BAIF Baives 73.21 318 *e*P **P 08 11 05.1 -0.5**
BAIF pmax pmax
comp=Z,81nm,1.4s
CABF La Chapelle 73.40 314 *e*P **P 08 11 06.0 -1.0**
CABF pmax pmax
comp=Z,90nm,1.8s
LPG La Plagne 73.41 313 *e*P **P 08 11 06.8 -0.5**
LPG pmax pmax
comp=Z,38nm,0.8s
LPL La Plagne 73.41 313 *e*P **P 08 11 06.7 -0.5**
LPL pmax pmax
comp=Z,74nm,1.1s
BWN Browne 73.46 25 *e*P **P 08 11 09.1 +2.2**
comp=Z,120nm,1.1s
TRF Thorofare Moun 73.50 26 *e*P **P 08 11 07.3 0.0**
comp=Z,29nm,0.8s
MDM Murphy Dome 73.53 24 *e*P **P 08 11 07.4 +0.1**
comp=Z,116nm,0.8s
TARA Tarawa 73.61 97 PFAKE 08 11 20.0 +11
TARA LR LR
comp=Z,34nm,19.0s
BNI Bardonecchia 73.63 313 *e*P **P 08 11 07.9 -0.5**
comp=Z,103nm,1.6s
BNI Bardonecchia 73.63 313 *e*P **P 08 11 07.9 -0.5**
BNI pmax pmax
comp=Z,103nm,1.6s
MBDF Montbardon 73.69 312 *e*P **P 08 11 10.6 +1.8**
MBDF pmax pmax
comp=Z,33nm,1.3s
SKT Skwentna 73.70 28 *e*P **P 08 11 08.2 -0.2**
comp=Z,52nm,1.0s
COLA College 73.71 24 *e*P **P 08 11 08.3 0.0**
comp=Z,77nm,0.8s
COLA College 73.71 24 *e*P **P 08 11 08.3 0.0**
COLA pmax pmax
comp=Z,77nm,0.8s
FYU Fort Yukon 73.74 22 *e*P **P 08 11 09.0 +0.6**
comp=Z,130nm,1.5s
WRH Wood River Hil 73.83 25 *e*P **P 08 11 08.5 -0.5**
comp=Z,24nm,0.8s
CCB Clear Creek Bu 73.84 25 *e*P **P 08 11 08.3 -0.8**
comp=Z,26nm,0.9s
MCK McKinley 73.88 26 *e*P **P 08 11 08.3 -1.1**
comp=Z,43nm,0.8s
MCK McKinley 73.88 26 *e*P **P 08 11 08.3 -1.1**
MCK pmax pmax
comp=Z,43nm,0.8s
RSO Redoubt South 73.90 30 *e*P **P 08 11 10.4 +0.6**
IL1 Eielson Array 74.12 24 *e*P **P 08 11 08.6 -2.1**
ILAR Eielson Array 74.12 24 P **P 08 11 09.4 -1.3**
comp=Z,20nm,1.1s,baz=295,slow=4.5,SNR=90
ILAR LR LR 08 46 46.5
comp=Z,3µm,18.7s,baz=314,slow=38
ILB Eielson Array 74.12 24 *e*P **P 08 11 09.8 -0.9**
ORIF Oris-en-Rattie 74.20 313 *e*P **P 08 11 11.9 +0.2**
ORIF pmax pmax
comp=Z,122nm,1.8s
SUA Susitna One 74.28 28 *e*P **P 08 11 11.8 -0.1**
comp=Z,77nm,0.8s
SSF Saint Saulge 74.85 315 *e*P **P 08 11 14.2 -1.1**
SSF pmax pmax
comp=Z,79nm,1.3s
PMR Palmer 74.89 28 *e*P **P 08 11 14.1 -1.1**
comp=Z,61nm,0.8s
PMR Palmer 74.89 28 *e*P **P 08 11 14.1 -1.1**
PMR pmax pmax
comp=Z,61nm,0.8s
RC01 Rabbit Creek A 74.89 28 *e*P **P 08 11 15.1 -0.2**
comp=Z,47nm,0.9s
SSB Saint Sauveur 74.92 313 *e*P **P 08 11 15.9 +0.1**
comp=Z,30nm,1.2s
VIVF Saint-Julien-l 75.01 313 *e*P **P 08 11 15.5 -0.8**
VIVF pmax pmax
comp=Z,74nm,1.5s
CNPM China Poot 75.02 30 *e*P **P 08 11 17.5 +1.5**
comp=Z,30nm,1.0s
EKA Eskdalemuir Ar 75.04 325 P **P 08 11 15.6 -0.7**
comp=Z,8.1nm,0.8s,baz=60,slow=5.2,SNR=15
AVF Avril sur Loir 75.06 315 *e*P **P 08 11 15.5 -1.0**
AVF pmax pmax
comp=Z,107nm,1.4s
BRLK Bradley Lake 75.06 30 *e*P **P 08 11 15.6 -0.7**
comp=Z,36nm,0.8s
ESK Eskdalemuir 75.07 325 *e*P **P 08 11 16.4 0.0**
comp=Z,81nm,1.5s
ESK *e*PP **PP 08 14 04.6 +0.6**
ESK LR LR
comp=Z,2µm,20.0s
ESK Eskdalemuir 75.07 325 *e*P **P 08 11 16.4 0.0**
ESK *e* 08 14 04.6
ESK pmax pmax
comp=Z,81nm,1.5s
ESK MLR MLR
comp=Z,2µm,20.0s
TAMR Tamra 75.09 304 *e*P **P 08 11 18.8 +2.0**
comp=Z,67nm,1.2s
SML Sawmill 75.11 27 *e*P **P 08 11 16.6 +0.1**
comp=Z,133nm,1.0s
SML Sawmill 75.11 27 *e*P **P 08 11 16.6 +0.1**
SML pmax pmax
comp=Z,133nm,1.0s
OHAK Old Harbor 75.18 33 *e*P **P 08 11 16.7 -0.3**
comp=Z,31nm,0.6s
KDAK Kodiak Island 75.25 32 P **P 08 11 17.1 -0.2**
comp=Z,28nm,0.6s,baz=288,slow=5.6,SNR=27
KDAK Kodiak Island 75.25 32 *e*P **P 08 11 17.2 -0.1**
comp=Z,32nm,0.6s
KDAK LR LR
comp=Z,749nm,19.0s
KDAK Kodiak Island 75.25 32 *i*P **P 08 11 17.0 -0.3**
RIDG Independ'e Rid 75.43 25 *e*P **P 08 11 17.4 -1.0**
comp=Z,47nm,0.8s
KEST Kesra 75.44 303 P **P 08 11 20.8 +1.8**
comp=Z,12nm,1.1s,baz=34,slow=2.5,SNR=20
KEST LR LR 08 49 24.2
comp=Z,453nm,20.4s,baz=11,slow=40
KEST Kesra 75.44 303 *e*P **P 08 11 19.1 +0.1**
comp=Z,93nm,1.6s
BGF Bois d'Agland 75.47 315 *e*P **P 08 11 20.7 +1.8**
BGF pmax pmax
comp=Z,87nm,1.8s
SCM Sheep Creek Mo 75.50 27 *e*P **P 08 11 19.3 +0.4**
comp=Z,50nm,0.8s
SCM Sheep Creek Mo 75.50 27 *e*P **P 08 11 19.3 +0.4**
SCM pmax pmax
comp=Z,50nm,0.8s
ARMA Armidale 75.53 136 *e*P **P 08 11 21.0 +1.6**
comp=Z,92nm,0.9s
PAX Paxson 75.62 26 *e*P **P 08 11 20.1 +0.6**
comp=Z,48nm,1.4s
PAX Paxson 75.62 26 *e*P **P 08 11 20.1 +0.6**
PAX pmax pmax
comp=Z,48nm,1.4s
DOT Dot Lake 75.77 25 *e*P **P 08 11 21.7 +1.4**
comp=Z,130nm,1.5s
TULEG Thule 75.78 357 *e*P **P 08 11 19.8 -0.2**
comp=Z,64nm,1.0s
THTN Thala 76.00 303 *e*P **P 08 11 24.2 +1.9**
comp=Z,49nm,1.6s
HARP HAARP 76.05 26 *e*P **P 08 11 22.7 +0.8**
comp=Z,125nm,1.4s
EGAK Eagle 76.15 23 *e*P **P 08 11 22.4 0.0**
comp=Z,32nm,1.2s
EGAK LR LR
comp=Z,3µm,22.0s
SUMG Summit 76.16 348 ⇓*i*P **P 08 11 21.9 -0.9**
SUMG Summit 76.16 348 *e*P **P 08 11 21.4 -1.4**
comp=Z,94nm,1.5s
SUMG Summit 76.16 348 *e*P **P 08 11 21.4 -1.4**
SUMG pmax pmax
comp=Z,94nm,1.5s
KLU Klutina 76.25 27 *e*P **P 08 11 23.4 +0.3**
comp=Z,86nm,0.7s
INK Inuvik 76.28 18 P **P 08 11 23.0 0.0**
comp=Z,60nm,0.7s,baz=324,slow=6.1,SNR=67
INK Inuvik 76.28 18 *e*P **P 08 11 23.1 +0.1**
comp=Z,79nm,0.8s
LDF La Druitiere 76.40 318 *e*P **P 08 11 25.4 +1.3**
LDF pmax pmax
comp=Z,125nm,2.0s
CMAH Djebel Manchou 76.50 304 P **P 08 11 26.5 +1.5**
DIV Divide 76.51 27 *e*P **P 08 11 24.7 +0.1**
comp=Z,52nm,1.1s
ABSA Djebel Ababsia 76.60 304 P **P 08 11 25.5 -0.1**
CAF Calviac 76.66 314 *e*P **P 08 11 25.5 -0.2**
CAF pmax pmax
comp=Z,53nm,1.2s
GRR Gorron 76.93 318 *e*P **P 08 11 27.5 +0.4**
GRR pmax pmax
comp=Z,84nm,1.4s
BMRM Bremner River 77.07 27 *e*P **P 08 11 28.0 +0.2**
comp=Z,97nm,0.8s
CKFL Kef-Lekhel 77.10 304 P **P 08 11 29.8 +1.3**
DAWY Dawson 77.19 23 *e*P **P 08 11 27.9 -0.4**
comp=Z,30nm,0.8s
MFF Saint Martin d 77.31 316 *e*P **P 08 11 30.7 +1.4**
MFF pmax pmax
comp=Z,25nm,1.6s
RES Resolute Bay 77.33 4 P **P 08 11 28.8 -0.1**
comp=Z,22nm,0.9s,baz=342,slow=5.8,SNR=25
RES Resolute Bay 77.33 4 *e*P **P 08 11 29.2 +0.4**
comp=Z,45nm,1.0s
TOO Toolangi 77.33 145 P **P 08 11 30.1 +0.7**
TOO pmax pmax
comp=Z,88nm,1.2s
RAGM Ragged Mountai 77.37 28 *e*P **P 08 11 30.0 +0.6**
comp=Z,68nm,1.4s
CAN Canberra 77.51 141 *e*P **P 08 11 31.7 +1.2**
comp=Z,153nm,1.6s
CAN Canberra 77.51 141 *e*P **P 08 11 31.7 +1.2**
CAN pmax pmax
comp=Z,153nm,1.6s
BORG Borgarnes 77.52 338 PFAKE 08 11 40.0 +10
BORG LR LR
comp=Z,245nm,19.0s
DFRA Djebel Bou Aff 77.66 305 P **P 08 11 28.3 -3.3**
TGL Tana Glacier 77.90 27 *e*P **P 08 11 33.6 +1.2**
comp=Z,45nm,1.0s
ROSF Rostrenen 78.38 319 *e*P **P 08 11 34.9 -0.3**
ETSF Etsaut 79.27 313 *e*P **P 08 11 40.4 +0.1**
ETSF pmax pmax
comp=Z,210nm,0.9s
SJPF Ste Jean 79.60 313 *e*P **P 08 11 42.6 +0.6**
SJPF pmax pmax
comp=Z,110nm,1.8s
EMHD Djebel Mahouad 79.93 306 P **P 08 11 46.5 +2.4**
DZM Mont Dzumac 80.47 121 P **P 08 11 48.7 +1.7**
comp=Z,19nm,1.0s,baz=16,slow=12,SNR=7.7
DZM LR LR 08 45 26.6
comp=Z,543nm,21.2s,baz=318,slow=34
DZM Mont Dzumac 80.47 121 *e*P **P 08 11 49.3 +2.2**
comp=Z,85nm,1.6s
DZM Mont Dzumac 80.47 121 *e*LR LR 08 37 00.2
comp=Z,882nm,21.6s
DZM Mont Dzumac 80.47 121 *e*P **P 08 11 48.4 +1.4**
comp=Z,57nm,1.4s
SKAG Skagway 81.64 25 *e*P **P 08 11 53.8 +1.2**
comp=Z,61nm,1.0s
CART Cartagena 82.08 308 *e*P **P 08 11 57.1 +1.7**
comp=Z,155nm,1.6s
LSZ Lusaka 82.23 248 P **P 08 11 56.9 +0.3**
baz=47,slow=7.5
LSZ Lusaka 82.23 248 *e*P **P 08 11 56.3 -0.2**
comp=Z,64nm,0.9s
LSZ LR LR
comp=Z,992nm,20.0s
LSZ Lusaka 82.23 248 P **P 08 11 56.8 +0.3**
SNR=15
LSZ Lusaka 82.23 248 *e*P **P 08 11 56.3 -0.2**
LSZ pmax pmax
comp=Z,64nm,0.9s
LSZ MLR MLR
comp=Z,992nm,20.0s
BESE Bessie Mountai 82.42 26 *e*P **P 08 11 57.8 +1.0**
comp=Z,58nm,1.5s
JIS Juneau Island 82.81 26 *e*P **P 08 11 59.9 +1.2**
comp=Z,34nm,1.1s
ES19 SONSECA Array 83.02 311 *e*P **P 08 12 00.4 +0.1**
ESDC Sonseca Array 83.08 311 P **P 08 12 00.6 0.0**
comp=Z,9.0nm,0.9s,baz=49,slow=4.9,SNR=37
ESDC LR LR 08 55 42.7
comp=Z,432nm,18.2s,baz=295,slow=40
ESLA Sonseca Array 83.08 311 *e*P **P 08 12 00.8 +0.2**
comp=Z,37nm,1.3s
SFJD Kangerlussuaq 83.12 349 LR LR 08 52 43.0
comp=Z,2µm,19.6s,baz=18,slow=38
SFJD Kangerlussuaq 83.12 349 *e*P **P 08 12 01.2 +1.0**
comp=Z,23nm,0.9s
SFJD Kangerlussuaq 83.12 349 *e*P **P 08 12 01.2 +1.0**
SFJD pmax pmax
comp=Z,23nm,0.9s
PAB San Pablo 83.40 311 *e*P **P 08 12 02.7 +0.4**
comp=Z,11nm,0.8s
PAB LR LR
comp=Z,434nm,20.0s
PAB San Pablo 83.40 311 *e*P **P 08 12 02.7 +0.4**
PAB pmax pmax
comp=Z,11nm,0.8s
PAB MLR MLR
comp=Z,434nm,20.0s
PBRG Braganca 83.79 314 *e*P **P 08 12 04.6 +0.4**
comp=Z,31nm,2.0s
TAM Tamanrasset 84.04 292 *e*P **P 08 12 05.9 -0.1**
comp=Z,23nm,1.3s
TAM Tamanrasset 84.04 292 *e*P **P 08 12 05.9 -0.1**
TAM pmax pmax
comp=Z,23nm,1.3s
MVO Moncorvo 84.31 314 *e*P **P 08 12 07.4 +0.5**
comp=Z,44nm,1.5s
MVO Moncorvo 84.31 314 *e*S **S 08 22 36.0 +3.9**
MVO Moncorvo 84.31 314 *e*LQ LQ 08 39 32.1
MVO *e*LR LR 08 44 26.6
comp=Z,487nm,22.0s
DLBC Dease Lake 84.33 24 P **P 08 12 06.6 0.0**
comp=Z,5.6nm,0.7s,baz=312,slow=6.2,SNR=10
DLBC Dease Lake 84.33 24 *e*P **P 08 12 08.0 +1.3**
comp=Z,64nm,1.5s
PCAB Cabril 84.65 315 *e*P **P 08 12 09.4 +0.8**
comp=Z,61nm,1.8s
PGAV Gavieira, Arco 84.67 315 *e*P **P 08 12 09.0 +0.2**
comp=Z,97nm,1.6s
PGAV Gavieira, Arco 84.67 315 *e*S S 08 22 44.7 +9.0
PGAV Gavieira, Arco 84.67 315 *e*LR LR 08 45 30.5
comp=Z,589nm,20.0s
POLO Lamas de Olo 84.69 314 *e*P **P 08 12 09.6 +0.7**
comp=Z,20nm,1.8s
POLO Lamas de Olo 84.69 314 *e*S **S 08 22 43.7 +7.8**
POLO Lamas de Olo 84.69 314 *e*LR LR 08 44 21.9
comp=Z,288nm,20.0s
PVRL Vila Real 84.69 314 *e*P **P 08 12 09.5 +0.7**
comp=Z,27nm,1.9s
WRAK Wrangell Islan 84.89 26 PFAKE 08 12 20.0 +11
WRAK LR LR
comp=Z,2µm,19.0s
MTE Manteigas 85.05 313 *e*P **P 08 12 11.2 +0.5**
comp=Z,65nm,1.4s
MTE Manteigas 85.05 313 *e*S **S 08 22 47.4 +8.0**
MTE Manteigas 85.05 313 *e*LR LR 08 44 27.4
comp=Z,553nm,20.0s
MTE Manteigas 85.05 313 *e*P **P 08 12 11.3 +0.7**
comp=Z,43nm,1.1s
PVIS Viseu 85.10 314 *e*P **P 08 12 11.9 +1.0**
comp=Z,57nm,1.7s
PCBR Castelo Branco 85.30 313 *e*P **P 08 12 12.5 +0.7**
comp=Z,31nm,1.9s
PMRV Marv??o 85.47 312 *e*P **P 08 12 12.9 +0.2**
comp=Z,62nm,1.5s
PMRV Marv??o 85.47 312 *e*S **S 08 22 41.6 -1.9**
PMRV Marv??o 85.47 312 *e*LQ LQ 08 41 23.9
PMRV *e*LR LR 08 46 48.9
comp=Z,511nm,18.0s
YKW3 Yellowknife Ar 85.68 16 *e*P **P 08 12 12.7 -0.5**
YKA Yellowknife Ar 85.74 16 P **P 08 12 13.0 -0.6**
comp=Z,14nm,0.8s,baz=326,slow=4.6,SNR=54
YKA LR LR 08 52 51.4
comp=Z,120nm,21.1s,baz=324,slow=37
YKA Yellowknife Ar 85.74 16 P **P 08 12 13.0 -0.6**
PCAS Casmilo, Conde 85.85 313 *e*P **P 08 12 16.5 +1.9**
comp=Z,33nm,1.5s
PCAS Casmilo, Conde 85.85 313 *e*S **S 08 22 42.7 -4.5**
PESTR Estremoz 85.90 312 *e*P **P 08 12 14.7 -0.2**
comp=Z,48nm,1.5s
PESTR Estremoz 85.90 312 *e*S **S 08 22 44.4 -3.4**
PESTR Estremoz 85.90 312 *e*P **P 08 12 17.0 +2.1**
comp=Z,20nm,1.4s
PBAR Barrancos 85.90 311 *e*P **P 08 12 15.1 +0.2**
comp=Z,122nm,1.6s
PBAR Barrancos 85.90 311 *e*S **S 08 22 45.4 -2.4**
PTOM Tomar 86.03 313 *e*P **P 08 12 16.5 +1.0**
comp=Z,87nm,1.5s
PMTG Montargil 86.21 312 *e*P **P 08 12 17.2 +0.9**
comp=Z,46nm,1.4s
PMTG Montargil 86.21 312 *e*S **S 08 22 47.5 -3.2**
EVO Evora 86.36 312 *e*P **P 08 12 18.0 +0.9**
comp=Z,57nm,1.8s
ALMR Almeirim 86.39 313 *e*P **P 08 12 17.9 +0.6**
ALMR AMS AMS 08 50 20.6
comp=N,1µm,22.1s
PBEJ Beja 86.53 311 *e*P **P 08 12 19.0 +1.0**
comp=N,50nm,1.6s
PVAQ Vaqueiros 86.77 311 *e*P **P 08 12 19.3 +0.1**
comp=N,58nm,1.7s
PVAQ Vaqueiros 86.77 311 *e*S **S 08 22 52.9 -3.4**
PVAQ Vaqueiros 86.77 311 *e*LQ LQ 08 41 13.6
PVAQ *e*LR LR 08 46 16.2
comp=N,451nm,20.0s
PCVE Castro Verde 86.86 311 *e*P **P 08 12 20.1 +0.5**
comp=N,62nm,1.6s
PCVE Castro Verde 86.86 311 *e*S **S 08 22 55.4 -1.8**
MESJ Messejana 86.87 311 *e*P **P 08 12 20.2 +0.6**
MESJ *e*SKS **SKSac 08 22 46.5 +0.3**
MESJ AMS AMS 08 57 50.8
comp=Z,661nm,15.4s
MESJ Messejana 86.87 311 *e*P **P 08 12 20.4 +0.8**
comp=Z,73nm,1.3s
PNCL Nicolau / Gran 86.93 312 *e*P **P 08 12 21.4 +1.5**
comp=Z,92nm,1.8s
PNCL Nicolau / Gran 86.93 312 *e*S **S 08 22 55.6 -2.1**
PMAFR Mafra 86.96 313 *e*S **S 08 22 52.3 -5.8**
PBDV Barranco-do-Ve 87.00 311 *e*P **P 08 12 21.9 +1.6**
comp=Z,101nm,1.6s
PBDV Barranco-do-Ve 87.00 311 *e*S **S 08 22 59.3 +0.7**
MDT Midelt 87.03 306 P **P 08 12 21.1 +0.4**
comp=Z,18nm,1.2s,baz=86,slow=9.1,SNR=9.5
MDT LR LR 08 57 37.5
comp=Z,420nm,20.2s,baz=57,slow=40
MORF Marmelete 87.45 311 *e*P **P 08 12 23.1 +0.6**
MORF *e*SKS **SKSac 08 22 50.1 +0.3**
MORF AMS AMS 08 54 43.7
comp=E,681nm,22.6s
MORF Marmelete 87.45 311 *e*S **S 08 22 59.2 -3.7**
LBTB Lobatse 89.34 241 *e*P **P 08 12 33.5 +1.9**
comp=E,34nm,1.5s
LBTB Lobatse 89.34 241 *e*P **P 08 12 33.5 +1.9**
LBTB pmax pmax
comp=Z,34nm,1.5s
BOSA Boshof 91.45 238 P **P 08 12 40.8 -0.6**
comp=Z,5.7nm,0.8s,baz=56,slow=3.3,SNR=5.5
BOSA LR LR 08 50 50.6
comp=Z,1µm,21.9s,baz=54,slow=34
TOA0 Torodi Ar. Sit 91.79 286 *e*P **P 08 12 43.1 -0.1**
TORD Torodi Ar. Bea 91.79 286 P **P 08 12 42.9 -0.3**
comp=Z,11nm,1.1s,baz=59,slow=3.0,SNR=23
TORD PP **PP 08 16 21.8 -0.2**
comp=Z,10nm,1.2s,baz=45,slow=3.9,SNR=12
TORD LR LR 08 59 47.7
comp=Z,622nm,19.4s,baz=45,slow=39
POHA Pohakuloa 92.43 66 PFAKE 08 13 00.0 +14
POHA LR LR
comp=Z,1µm,19.0s
FCC Fort Churchill 92.95 8 *e*P **P 08 12 47.8 +0.1**
FCC Fort Churchill 92.95 8 *e*P **P 08 12 47.8 +0.1**
TSUM Tsumeb 92.96 250 *e*P **P 08 12 49.5 +1.0**
comp=Z,33nm,1.6s
TSUM LR LR
comp=Z,705nm,20.0s
LLLB Lillooet 93.37 26 *e*P **P 08 12 53.4 +3.5**
CASY Casey 94.01 176 *e*P **P 08 12 53.3 +1.2**
comp=Z,9.3nm,1.0s
CASY LR LR
comp=Z,188nm,21.0s
AFI Afiamalu 94.16 103 LR LR 08 52 07.9
comp=Z,579nm,18.6s,baz=270,slow=34
NLWA Neilton Lookou 95.11 29 PFAKE 08 13 10.0 +12
NLWA LR LR
comp=Z,1µm,20.0s
FFC Flin Flon 95.58 13 *e*P **P 08 12 59.1 -0.8**
comp=Z,14nm,1.1s
FFC LR LR
comp=Z,1µm,20.0s
FFC Flin Flon 95.58 13 *e*P **P 08 12 59.1 -0.8**
FFC pmax pmax
comp=Z,14nm,1.1s
FFC MLR MLR
comp=Z,1µm,20.0s

KOWA	**Kowa**	95.95	290		LR	LR	09 02 00.5	
	comp=Z,1μm,18.8s,baz=56,slow=39							
LTY	**Liberty**	96.54	27	*e*P		**P**	**08 13 06.3**	**+1.8**
	comp=Z,12nm,1.3s							
SUR	**Sutherland**	96.64	237		PFAKE		08 13 20.0	+15
SUR					LR	LR		
	comp=Z,3μm,20.0s							
SNZO	**South Karori**	96.88	133		PFAKE		08 13 20.0	+14
SNZO					LR	LR		
	comp=Z,644nm,19.0s							
NEW	**Newport**	97.08	24		PFAKE		08 13 20.0	+13
NEW					LR	LR		
	comp=Z,1μm,20.0s							
SCHQ	**Schefferville**	97.08	353		LR	LR	08 59 52.8	
	comp=Z,843nm,18.5s,baz=358,slow=37							
CMLA	**Cha da Macela**	97.67	320		PFAKE		08 13 20.0	+10
CMLA					LR	LR		
	comp=Z,621nm,19.0s							
HAWA	**Hanford**	97.70	27		PFAKE		08 13 20.0	+10
HAWA					LR	LR		
	comp=Z,2μm,20.0s							
MAW	**Mawson**	99.17	194		LR	LR	08 55 16.4	
	comp=Z,407nm,18.2s,baz=40,slow=34							
PINE	**Pine Mountain**	99.22	29	*e*P		**Pdif**	**08 13 19.9**	**+3.1**
EGMT	**Eagleton**	99.77	20		PFAKE		08 13 30.0	+11
EGMT					LR	LR		
	comp=Z,1μm,21.0s							
BMO	**Blue Mountains**	99.85	26		PFAKE		08 13 30.0	+11
BMO					LR	LR		
	comp=Z,1μm,20.0s							
DGMT	**Dagmar**	100.92	17		PFAKE		08 13 40.0	+16
DGMT					LR	LR		
	comp=Z,2μm,19.0s							
MOD	**Modoc Plateau**	101.01	30	*e*Pdif		**Pdif**	**08 13 27.8**	**+3.1**
	comp=Z,4.0nm,1.0s							
BOZ	**Bozeman (W)**	101.30	23		PFAKE		08 13 40.0	+14
BOZ					LR	LR		
	comp=Z,2μm,20.0s							
WVOR	**Wild Horse Val**	101.30	29		PFAKE		08 13 40.0	+14
WVOR					LR	LR		
	comp=Z,961nm,20.0s							
LAO	**LASA Array**	102.01	19		PFAKE		08 13 40.0	+11
LAO					LR	LR		
	comp=Z,1μm,20.0s							
HLID	**Hailey**	102.06	25	*e*Pdif		**Pdif**	**08 13 32.1**	**+2.7**
	comp=Z,30nm,2.3s							
HLID					LR	LR		
	comp=Z,2μm,21.0s							
RLMT	**Red Lodge**	102.50	21		PFAKE		08 13 40.0	+8.6
RLMT					LR	LR		
	comp=Z,2μm,21.0s							
LKWY	**Lake**	102.62	22		PFAKE		08 13 40.0	+8.0
LKWY					LR	LR		
	comp=Z,610nm,21.0s							
AGMN	**Agassiz Nation**	102.86	11		PFAKE		08 13 40.0	+7.3
AGMN					LR	LR		
	comp=Z,2μm,20.0s							
EYMN	**Ely**	103.87	8		PFAKE		08 13 50.0	+13
EYMN					LR	LR		
	comp=Z,1μm,20.0s							
AHID	**Auburn Hatcher**	103.97	24		PFAKE		08 13 50.0	+12
AHID					LR	LR		
	comp=Z,2μm,21.0s							
BW06	**Boulder Array**	104.50	23		PFAKE		08 13 50.0	+10
BW06					LR	LR		
	comp=Z,1μm,22.0s							
PDAR	**Pinedale Array**	104.50	23		Pdiff	**Pdif**	**08 13 41.7**	**+1.3**
	comp=Z,0.1nm,0.4s,baz=205,slow=4.0,SNR=2.5							
PDAR					PP	**PKiKP**	**08 17 54.0**	**-2.4**
	comp=Z,0.3nm,0.6s,baz=304,slow=6.4,SNR=3.6							
NVAR	**Mina Array Bea**	104.72	31		Pdiff	**Pdif**	**08 13 42.4**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=240,slow=24,SNR=3.5							
NVAR					PP	**PKiKP**	**08 17 56.5**	**-0.4**
	comp=Z,0.6nm,0.7s,baz=316,slow=5.0,SNR=3.5							
NVAR					PKKPbc	**PKKPbc**	**08 29 25.5**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=141,slow=3.9,SNR=6.4							
HWUT	**Hardware Ranch**	104.81	24		PFAKE		08 13 50.0	+8.3
HWUT					LR	LR		
	comp=Z,2μm,21.0s							
DUG	**Dugway, Tooele**	105.56	26		PFAKE		08 18 10.0	
DUG					LR	LR		
	comp=Z,2μm,21.0s							
COWI	**Conover**	105.97	7		PFAKE		08 18 10.0	
COWI					LR	LR		
	comp=Z,1μm,19.0s							
PKME	**Peaks-Kenny Pk**	106.79	353		PFAKE		08 18 10.0	
PKME					LR	LR		
	comp=Z,1μm,20.0s							
ECSD	**EROS Data Cent**	107.12	13		PFAKE		08 18 10.0	
ECSD					LR	LR		
	comp=Z,2μm,19.0s							
LONY	**Lake Ozonia**	107.87	356		PFAKE		08 18 10.0	
LONY					LR	LR		
	comp=Z,971nm,20.0s							
ISCO	**Idaho Springs**	108.47	21		PFAKE		08 18 20.0	
ISCO					LR	LR		
	comp=Z,2μm,21.0s							
OGNE	**Ogallala**	108.48	18		PFAKE		08 18 20.0	
OGNE					LR	LR		
	comp=Z,1μm,21.0s							
JFWS	**Jewell Farm**	108.98	9		PFAKE		08 18 20.0	
JFWS					LR	LR		
	comp=Z,1μm,20.0s							
PFO	**Pinyon Flats O**	109.52	32		PKiKP	**PKiKP**	**08 18 04.8**	**-1.1**
	comp=Z,3.6nm,0.3s,baz=92,slow=4.0,SNR=8.4							
PFO	**Pinyon Flats O**	109.52	32		PKiKP	**PKiKP**	**08 18 04.8**	**-1.1**
PFO					LR	LR		
	comp=Z,774nm,20.0s							
SCIA	**State Center**	109.52	11		PFAKE		08 18 20.0	
SCIA					LR	LR		
	comp=Z,1μm,19.0s							
MVCO	**Mesa Verde**	109.80	24		PFAKE		08 18 20.0	
MVCO					LR	LR		
	comp=Z,829nm,21.0s							
WUAZ	**Wupatki**	110.17	28		PFAKE		08 18 20.0	
WUAZ					LR	LR		
	comp=Z,1μm,20.0s							
AAM	**Ann Arbor**	110.20	3		PFAKE		08 18 20.0	
AAM					LR	LR		
	comp=Z,2μm,20.0s							
BINY	**Binghamton**	110.36	357		PFAKE		08 18 20.0	
BINY					LR	LR		
	comp=Z,1μm,21.0s							
SDCO	**Great Sand Dun**	110.37	22		PFAKE		08 18 20.0	
SDCO					LR	LR		
	comp=Z,1μm,21.0s							
CBKS	**Cedar Bluff**	111.09	17		PFAKE		08 18 20.0	
CBKS					LR	LR		
	comp=Z,893nm,22.0s							
SACV	**Santiago Islan**	111.39	301		PFAKE		08 18 20.0	
SACV					LR	LR		
	comp=Z,284nm,21.0s							
HDIL	**Hopedale**	111.42	8		PFAKE		08 18 20.0	
HDIL					LR	LR		
	comp=Z,855nm,20.0s							
P37A	**Lathrop**	111.56	12		P	**PKiKP**	**08 18 09.3**	**-0.1**
	baz=346							
KSU1	**Kansas State U**	111.57	14		PFAKE		08 18 20.0	
KSU1					LR	LR		
	comp=Z,1μm,19.0s							
SHEL	**Horse Pasture**	111.63	263		PFAKE		08 18 20.0	
SHEL					LR	LR		
	comp=Z,242nm,20.0s							
P38A	**Dawn**	111.68	12		P	**PKiKP**	**08 18 09.5**	**-0.1**
	baz=346							
SBA	**Scott Base**	112.09	168		PFAKE		08 18 20.0	
SBA					LR	LR		
	comp=Z,366nm,19.0s							
ACSO	**Alum Creek Sta**	112.30	3		P	**PKiKP**	**08 18 11.0**	**+0.3**
	baz=356							
ACSO	**Alum Creek Sta**	112.30	3		PFAKE		08 18 20.0	
ACSO					LR	LR		
	comp=Z,820nm,20.0s							
Q39A	**Willow Grove F**	112.34	12		P	**PKiKP**	**08 18 10.7**	**-0.2**
	baz=347							
O56A	**Blue Knob Stat**	112.35	359		P	**PKiKP**	**08 18 10.5**	**-0.4**
	baz=0.6							
O50A	**Cable**	112.35	4		P	**PKiKP**	**08 18 10.6**	**-0.3**
	baz=356							
TASM	**ASL Pad, Albuq**	112.56	24		P	**PKiKP**	**08 18 11.5**	**-0.2**
	baz=334							
ANMO	**Albuquerque**	112.56	24		PKiKP	**PKiKP**	**08 18 11.2**	**-0.4**
	comp=Z,1.9nm,0.7s,baz=201,slow=2.5,SNR=9.9							
ANMO	**Albuquerque**	112.56	24		P	**PKiKP**	**08 18 11.2**	**-0.4**
	baz=334							
ANMO	**Albuquerque**	112.56	24	*e*PKPdf		**PKiKP**	**08 18 11.1**	**-0.5**
	comp=Z,721nm,19.0s							
TASL	**Snake Pit, Alb**	112.56	24		P	**PKiKP**	**08 18 11.1**	**-0.6**
	baz=334							
P47A	**Martinsville**	112.81	6		P	**PKiKP**	**08 18 11.0**	**-0.7**
	baz=353							
R39A	**Chumby, Stover**	113.04	12		P	**PKiKP**	**08 18 12.1**	**-0.2**
	baz=347							
TUC	**Tucson**	113.18	29		P	**PKiKP**	**08 18 13.9**	**+1.1**
	baz=330							
TUC	**Tucson**	113.18	29		PFAKE		08 18 20.0	
TUC					LR	LR		
	comp=Z,2μm,20.0s							
R40A	**Maddies Statio**	113.20	11		P	**PKiKP**	**08 18 10.9**	**-1.7**
	baz=348							
S38A	**Stockton**	113.54	13		P	**PKiKP**	**08 18 12.9**	**-0.3**
	baz=346							
S39A	**Bolivar**	113.60	12		P	**PKiKP**	**08 18 11.8**	**-1.6**
	baz=346							
R47A	**Wooly Knot Far**	113.97	6		P	**PKiKP**	**08 18 13.6**	**-0.4**
	baz=353							
S41A	**Jillco Farms,**	113.98	11		P	**PKiKP**	**08 18 13.9**	**-0.1**
	baz=348							
T40A	**Mansfield**	114.27	12		P	PKPdf	08 18 14.2	-0.4
	baz=347							
CBN	**Corbin Frederi**	114.39	358		PFAKE		08 18 30.0	+15
CBN					LR	LR		
	comp=Z,988nm,19.0s							
T42A	**Van Buren**	114.63	10		P	PKPdf	08 18 15.1	-0.2
	baz=348							
T43A	**Greenville**	114.70	10		P	PKPdf	08 18 15.0	-0.4
	baz=349							
MSTX	**Muleshoe**	114.71	21		P	PKPdf	08 18 15.4	-0.3
	baz=337							
S50A	**Richmond**	114.76	4		P	PKPdf	08 18 15.3	-0.3
	baz=355							
T44A	**Benton**	114.80	9		P	PKPdf	08 18 15.7	+0.1
	baz=350							
U40A	**Yellville**	114.98	12		P	PKPdf	08 18 14.5	-1.5
	baz=347							
PPT2	**Papeete2**	115.07	97	*e*PS		PS	08 28 56.4	+0.3
	comp=Z,379nm,26.0s							
PPT2	**Papeete2**	115.07	97	*e*LR		LR	08 52 53.2	
	comp=Z,1μm,22.8s							
WMOK	**Wichita Mounta**	115.18	18		PFAKE		08 18 30.0	+14
WMOK					LR	LR		
	comp=Z,870nm,19.0s							
U42A	**Revenden**	115.27	11		P	**PKPdf**	**08 18 14.8**	**-1.7**
	baz=348							
T50A	**Nancy**	115.38	5		P	**PKPdf**	**08 18 14.4**	**-2.4**
	baz=354							
BLA	**Blacksburg**	115.39	1		PFAKE		08 18 30.0	+13
BLA					LR	LR		
	comp=Z,1μm,20.0s							
V41A	**Mountainview**	115.66	12		P	**PKPdf**	**08 18 15.2**	**-2.1**
	baz=347							
U47A	**Clarksville**	115.72	7		P	**PKPdf**	**08 18 16.0**	**-1.4**
	baz=352							
MNTX	**Cornudas Mount**	115.87	25	*e*PKPdf		**PKPdf**	**08 18 17.7**	**-0.1**
MNTX				*e*PP		**PP**	**08 19 21.0**	**+0.8**
MNTX					LR	LR		
	comp=Z,1μm,22.0s							
W39A	**Magazine**	115.92	13		P	**PKPdf**	**08 18 17.4**	**-0.5**
	baz=346							
U50A	**Jamestown**	115.98	5		P	**PKPdf**	**08 18 16.5**	**-1.5**
	baz=354							
X39A	**Fountain Ranch**	116.52	14		P	**PKPdf**	**08 18 18.2**	**-0.8**
	baz=345							
MIAR	**Mount Ida**	116.59	13		P	**PKPdf**	**08 18 19.3**	**+0.2**
	baz=346							
MIAR	**Mount Ida**	116.59	13	*e*PKPdf		**PKPdf**	**08 18 18.4**	**-0.8**
MIAR				*e*PP		**PP**	**08 19 26.0**	**+0.9**
MIAR					LR	LR		
	comp=Z,2μm,19.0s							
MIAR	**Mount Ida**	116.59	13	*e*PKIKP		**PKPdf**	**08 18 18.4**	**-0.8**
MIAR				*e*			08 19 26.0	
MIAR					MLR	MLR		
	comp=Z,2μm,19.0s							
V51A	**Loudon**	116.62	5		P	**PKPdf**	**08 18 17.4**	**-1.8**
	baz=355							
V53A	**Saluda**	116.85	3		P	**PKPdf**	**08 18 19.9**	**+0.2**
	baz=356							
W47A	**Westpoint**	116.86	8		P	**PKPdf**	**08 18 19.3**	**-0.3**
	baz=352							
W49A	**Belvidere**	117.14	6		P	**PKPdf**	**08 18 18.2**	**-2.0**
	baz=353							
TBI	**Tubuai**	117.27	103	*e*LR		LR	08 53 51.0	
	comp=Z,1μm,30.8s							
W53A	**Cullowhee**	117.33	4		P	**PKPdf**	**08 18 19.6**	**-1.1**
	baz=356							
CNNC	**Cliffs of the**	117.36	359		PFAKE		08 18 30.0	+9.4
CNNC					LR	LR		
	comp=Z,1μm,20.0s							
QSPA	**South Pole Qui**	117.52	180		PKP	**PKPdf**	**08 18 18.3**	**-1.5**
	comp=Z,3.0nm,0.6s,baz=293,slow=1.3,SNR=26							
QSPA	**South Pole Qui**	117.52	180	*e*PKPdf		**PKPdf**	**08 18 18.4**	**-1.4**
QSPA				*e*PP		**PP**	**08 19 33.2**	**+0.8**
QSPA					LR	LR		
	comp=Z,949nm,19.0s							
X49A	**Woodville**	117.73	7		P	**PKPdf**	**08 18 19.5**	**-1.9**
	baz=353							
Y47A	**UCPARC, Winfie**	118.16	8		P	**PKPdf**	**08 18 21.5**	**-0.7**
	baz=351							
Y48A	**Jasper**	118.23	7		P	**PKPdf**	**08 18 21.7**	**-0.6**
	baz=352							
Y49A	**Blount Mountai**	118.37	7		P	**PKPdf**	**08 18 22.4**	**-0.3**
	baz=353							
Z44A	**Pea Ridge, Bel**	118.41	11		P	**PKPdf**	**08 18 21.8**	**-0.8**
	baz=349							
TXAR	**Lajitas Array**	118.63	24		PKP	**PKPdf**	**08 18 22.4**	**-0.9**
	comp=Z,1.9nm,0.6s,baz=217,slow=1.1,SNR=27							
TXAR					PKKPbc	**PKKPbc**	**08 28 39.8**	**+0.3**
	comp=Z,1.0nm,0.8s,baz=176,slow=4.5,SNR=7.5							
BBSR	**BB Station**	118.65	346		PFAKE		08 18 30.0	+6.9
BBSR					LR	LR		
	comp=Z,483nm,20.0s							
JCT	**Junction City**	118.88	20		P	**PKPdf**	**08 18 22.4**	**-1.4**
	baz=339							
JCT	**Junction City**	118.88	20	*e*PKPdf		**PKPdf**	**08 18 22.0**	**-1.7**
JCT					LR	LR		
	comp=Z,1μm,21.0s							
JCT	**Junction City**	118.88	20	*e*PKIKP		**PKPdf**	**08 18 22.0**	**-1.7**
JCT					MLR	MLR		
	comp=Z,1μm,21.0s							
Z50A	**Ashland**	119.02	6		P	**PKPdf**	**08 18 23.8**	**-0.1**
	baz=353							
NATX	**Nacogdoches**	119.05	15		PFAKE		08 18 40.0	+16
NATX					LR	LR		
	comp=Z,1μm,21.0s							
GOGA	**Godfrey**	119.06	4		PFAKE		08 18 40.0	+16
GOGA					LR	LR		
	comp=Z,1μm,21.0s							
NHSC	**New Hope**	119.49	1		PFAKE		08 18 40.0	+15
NHSC					LR	LR		
	comp=Z,1μm,20.0s							
TAOE	**Nuku Hiva Isla**	119.79	84	*e*PP		PP	08 19 45.8	-3.5
	comp=Z,58nm,27.8s							
TAOE				*e*SP		SP	08 29 35.9	-1.1
	comp=Z,164nm,25.7s							
TAOE	**Nuku Hiva Isla**	119.79	84	*e*LQ		LQ	08 50 05.3	
	comp=Z,579nm,38.7s							
TAOE				*e*LR		LR	08 54 58.4	
	comp=Z,887nm,21.4s							
SNAA	**Sanae**	120.33	201		PKP	**PKPdf**	**08 18 25.4**	**+0.2**
BRAL	**Brewton**	120.96	8		PFAKE		08 18 40.0	+12
BRAL					LR	LR		
	comp=Z,2μm,20.0s							
833A	**Chaparral WMA,**	121.01	21		P	**PKPdf**	**08 18 27.4**	**-0.4**
	baz=339							
VNA2	**Neumayer--Watz**	121.86	202		PKP	**PKPdf**	**08 18 27.7**	**-0.3**
	baz=86,slow=1.7							
VNA1	**Neumayer--Stat**	122.19	202		PKP	**PKPdf**	**08 18 28.2**	**-0.4**
KVTX	**Kingsville**	122.20	20		PFAKE		08 18 40.0	+10
KVTX					LR	LR		
	comp=Z,1μm,21.0s							
VNA3	**Neumayer Olymp**	122.55	201		PKP	**PKPdf**	**08 18 28.3**	**-1.0**
GRTK	**Grand Turk**	130.42	350		PFAKE		08 19 00.0	+14
GRTK					LR	LR		
	comp=Z,658nm,19.0s							
ANWB	**Willy Bob**	131.80	337		PFAKE		08 19 00.0	+11
ANWB					LR	LR		
	comp=Z,409nm,20.0s							
GTBY	**Guantanamo Bay**	132.46	355		PFAKE		08 19 00.0	+10
GTBY					LR	LR		
	comp=Z,985nm,20.0s							
SJG	**San Juan**	132.69	343		PFAKE		08 19 00.0	+10
SJG					LR	LR		
	comp=Z,670nm,22.0s							
SDDR	**Presa de Saban**	132.93	350		PFAKE		08 19 00.0	+9.2
SDDR					LR	LR		
	comp=Z,871nm,22.0s							
CMIG	**Matias Romero**	132.94	21		PKP	**PKPdf**	**08 18 48.7**	**-2.1**
	comp=Z,3.0nm,0.7s,baz=54,slow=3.3,SNR=3.0							
MTDJ	**Mount Denham**	134.29	358		PFAKE		08 19 10.0	+17
MTDJ					LR	LR		
	comp=Z,868nm,20.0s							
GRGR	**Grenville**	136.86	334		PFAKE		08 19 10.0	+12
GRGR					LR	LR		
	comp=Z,411nm,19.0s							
PMSA	**Palmer Station**	141.70	190	*e*PKPdf		**PKPdf**	**08 19 10.2**	**+4.8**
JTS	**JuntasAbangare**	141.80	9		PFAKE		08 19 20.0	+13
JTS					LR	LR		
	comp=Z,588nm,21.0s							
SDV	**Santo Domingo**	142.66	346		PKP	**PKPdf**	**08 19 06.5**	**-2.5**
	comp=Z,6.6nm,0.5s,baz=209,slow=0.5,SNR=9.1							
SDV	**Santo Domingo**	142.66	346	*e*PKPdf		PKPpre	08 19 03.8	
SDV					LR	LR		
	comp=Z,638nm,22.0s							
BCIP	**Isla Barro Col**	143.32	1		PFAKE		08 19 20.0	+10
BCIP					LR	LR		
	comp=Z,507nm,21.0s							
MOTC	**Monteria, Cord**	143.54	354	*e*P		PKPbc	08 19 07.0	-0.5
PAMC	**Pamplona, Colo**	144.57	349	*e*P		**PKPab**	**08 19 09.1**	**-2.0**
ZARC	**Zaragoza, Cauc**	144.73	352	*e*P		**PKPab**	**08 19 09.6**	**-1.5**
BRRC	**Barranca, Sant**	144.96	350	*e*P		**PKPab**	**08 19 10.6**	**-1.3**
DBBC	**Dabeiba**	145.33	355	*e*P		**PKPdf**	**08 19 13.1**	**-0.4**
BARC	**Barichara**	145.38	349	*e*P		**PKPbc**	**08 19 11.3**	**-2.3**
PTBC	**PUERTO BERRIO**	145.62	352	*e*P		**PKPdf**	**08 19 12.6**	**-1.3**
RUSC	**La Rusia**	146.05	349	*e*P		**PKPdf**	**08 19 14.2**	**-1.1**
HELC	**Santa Helena**	146.09	353	*e*P		**PKPbc**	**08 19 14.7**	**-1.3**
SOLC	**Bahia Solano**	146.20	357	*e*P		**PKPab**	**08 19 16.2**	**-0.3**
YOPC	**Yopal, Colombi**	146.46	348	*e*P		**PKPbc**	**08 19 15.2**	**-1.6**
NORC	**Norcasia**	146.63	352	*e*P		**PKPbc**	**08 19 16.2**	**-1.0**
ROSC	**El Rosal**	147.27	351	PKPbc		**PKPdf**	**08 19 16.6**	**-0.6**
	comp=Z,21nm,0.5s,baz=137,slow=4.2,SNR=27							
ROSC	**El Rosal**	147.27	351	*e*P		**PKPbc**	**08 19 17.7**	**-1.7**
CHIC	**Chingaza**	147.39	350	*e*P		**PKPdf**	**08 19 17.2**	**-0.2**
PTGA	**Pitinga**	147.41	322	PKPbc		**PKPbc**	**08 19 17.7**	**-1.7**
	comp=Z,20nm,0.7s,baz=32,slow=3.4,SNR=18							
PTGA	**Pitinga**	147.41	322	PKPbc		**PKPbc**	**08 19 17.7**	**-1.7**
PTGA					LR	LR		
	comp=Z,12μm,20.0s							
PLMC	**San Jos'' del**	147.43	355	*e*P		**PKPbc**	**08 19 18.4**	**-1.2**
TOLC	**Tolima**	147.65	353	*e*P		**PKPbc**	**08 19 19.3**	**-1.2**
ANIL	**Santa Ana**	147.75	353	*e*P		**PKPdf**	**08 19 15.5**	**-2.4**
VILC	**Villavicencio,**	147.89	350	*e*P		**PKPbc**	**08 19 18.8**	**-2.1**
YOTC	**Yotoco, Valle**	148.35	354	*e*P		**PKPdf**	**08 19 16.7**	**-2.0**
PRAC	**Prado**	148.46	352	*e*P		**PKPbc**	**08 19 19.8**	**-2.5**
SJAC	**San Juan de Ar**	148.76	350	*e*P		**PKPdf**	**08 19 19.8**	**+0.5**
HORQ	**Saladito**	148.87	355	*e*P		**PKPdf**	**08 19 18.3**	**-1.4**
MARP	**Paez Belalcaza**	149.44	354	*e*P		**PKPdf**	**08 19 19.8**	**-0.8**
BETC	**Betania**	149.54	352	*e*P		PKPpre	08 19 11.4	
PCON	**Cinco Dias**	149.99	354	*e*P		**PKPbc**	**08 19 25.4**	**-1.4**
SOTA	**Rioblanco**	150.20	355	*e*P		**PKPbc**	**08 19 23.9**	**-3.3**
FLOC	**Florencia**	150.65	353	*e*P		**PKPdf**	**08 19 21.8**	**-0.4**
OTAV	**Otavalo**	152.18	358	*e*PKPdf		**PKPdf**	**08 19 25.1**	**0.0**
OTAV					LR	LR		
	comp=Z,433nm,22.0s							
OTAV	**Otavalo**	152.18	358	*e*P		**PKPdf**	**08 19 25.9**	**+0.8**
SAML	**Samuel**	155.94	318	*e*PKPdf		**PKPdf**	**08 19 28.8**	**-1.0**
SAML				*e*PKPab		**PKPab**	**08 19 57.3**	**+0.7**
SAML					LR	LR		
	comp=Z,754nm,22.0s							
SIV	**San Ignacio**	159.51	301	PKP		**PKPdf**	**08 19 32.9**	**-1.2**
	comp=Z,4.8nm,0.9s,baz=90,slow=1.3,SNR=23							
SIV				PKPab		**PKPab**	**08 20 11.3**	**-0.8**
	comp=Z,4.0nm,0.6s,baz=52,slow=8.3,SNR=12							
CPUP	**Villa Florida**	160.42	269	PKP		**PKPdf**	**08 19 32.5**	**-2.4**
	comp=Z,6.9nm,1.0s,baz=48,slow=5.6,SNR=4.5							
CPUP				PKPab		**PKPab**	**08 20 15.8**	**-0.2**
	comp=Z,2.4nm,0.9s,baz=330,slow=8.1,SNR=2.7							
TRQA	**Tornquist**	162.24	230	PFAKE			08 19 50.0	+14
TRQA					LR	LR		
	comp=Z,1μm,22.0s							
NNA	**Nana**	164.18	351	PFAKE			08 19 50.0	+11
NNA					LR	LR		
	comp=Z,283nm,20.0s							
LPAZ	**La Paz**	164.65	316	PKP		**PKPdf**	**08 19 39.0**	**-1.0**
	comp=Z,5.8nm,0.9s,baz=94,slow=1.0,SNR=17							
LPAZ				PKPab		**PKPab**	**08 20 33.7**	**-1.6**
	comp=Z,3.4nm,0.7s,baz=112,slow=17,SNR=4.7							
PLCA	**Paso Flores**	165.18	207	PKP		**PKPdf**	**08 19 39.7**	**+0.5**
	comp=Z,8.9nm,1.2s,baz=31,slow=8.4,SNR=3.7							
PLCA				PKPab		**PKPab**	**08 20 36.1**	**-0.2**
	comp=Z,7.0nm,0.9s,baz=212,slow=14,SNR=7.6							

JMA 24 08:04:58.9, 33.°13N×131.°19E, h6^{km}±1^{km}, M2.5, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNU	**Nakatsue**	0.26	268	*e*P		Pg	08 05 04.3	+0.3
	463nm,0.6s							
JNU	**Nakatsue**	0.26	268	P		Pg	08 05 04.2	+0.2
JNU				S		Sg	08 05 08.0	+0.5
JBEP	**Beppuamama**	0.28	41	P		Pg	08 05 04.7	+0.4
JBEP				S		Sg	08 05 09.1	+1.1
JUS	**Usuki**	0.47	98	P		Pg	08 05 07.9	-0.2
JUS				S		Sg	08 05 14.8	+0.5
JTA	**Tamana**	0.58	253	P		Pg	08 05 09.9	-0.1
JTA				S		Sg	08 05 18.0	+0.5
JIU2	**Izumi 2**	0.66	209	P		Pg	08 05 11.9	+0.2

BJI ***24*** *08:12:03.8, 52.°32N×178.°46W, h153^{km}, mb4.7/17, mB5.2/4*
MOS ***24*** *08:12:06.8±1.1, 52.°19N×178.°99W, h150^{km}, mb4.6/38, Error ellipse: s-maj=9.3km s-min=6.6km az=60.4*
ISCJB ***24*** *08:12:07.6±0.2, 52.°20N±0.°04×178.°99W±0.°03, h167^{km}±1

OKAK Okmok 6.62 73 P Pn 08 13 43.2 -0.4
OKTU Okmok Mt. Tuli 6.78 75 P Pn 08 13 46.4 +0.7
SPIA Saint Paul Isl 7.20 41 P Pn 08 13 53.5 +2.3
MREP Makushin Rep't 7.60 72 P Pn 08 13 57.4 +0.7
MTBL Makushin Table 7.67 71 P Pn 08 13 58.3 +0.8
UNV Unalaska Valle 7.75 72 P Pn 08 13 59.2 +0.6
AKUT Akutan 8.22 70 ePn Pn 08 14 05.8 +1.0
DRIA Deer Island 10.37 67 P Pn 08 14 33.6 +0.3
SDPT Sand Point 11.45 66 ePn Pn 08 14 46.0 -1.3
CHGN Chignik 12.76 63 ePn Pn 08 15 03.1 -1.0
PET Petropavlovsk 13.63 283 eP P 08 15 20.0 +1.2
PET pmax pmax
comp=Z,98nm,0.8s
PET MLR MLR
comp=Z,800nm,18.0s
PEA0B Petropavlovsk- 14.20 283 ePn Pn 08 15 22.4 0.0
PETK Petropavlovsk- 14.20 283 P Pn 08 15 22.3 -0.2
comp=Z,2.6nm,0.3s,baz=90,slow=16,SNR=23
PETK S Sn 08 17 54.2 -5.7
comp=Z,0.3nm,0.3s,baz=8.5,slow=20,SNR=3.3
PETK ScP ScP 08 23 45.2 -1.6
comp=Z,0.1nm,0.3s,baz=130,slow=5.8,SNR=5.5
PETK Petropavlovsk- 14.20 283 ePn Pn 08 15 22.8 +0.4
PETK S Sn 08 17 54.2 -5.7
PETK ScP ScP 08 23 45.2 -1.6
PETK Petropavlovsk- 14.20 283 eP Pn 08 15 22.8 +0.4
PETK S Sn 08 17 54.2 -5.7
PETK Petropavlovsk- 14.20 283 eS Pn 08 15 22.4 0.0
PETK Petropavlovsk- 14.20 283 eS Pn 08 15 22.5 0.0
ANM Nome 14.37 24 ePn P 08 15 26.6 -0.4
ANM Nome 14.37 24 eP P 08 15 26.6 -0.4
SVW2 Sparrevohn 15.66 46 ePn P 08 15 42.1 +0.9
comp=Z,14nm,0.7s
OHAK Old Harbor 15.69 61 ePn Pn 08 15 38.8 -2.1
comp=Z,18nm,0.6s
KDAK Kodiak Island 16.15 59 P Pn 08 15 44.1 -2.4
comp=Z,5.5nm,0.3s,baz=181,slow=1.7,SNR=95
KDAK S S 08 18 33.7 -12
comp=Z,0.8nm,0.3s,baz=238,slow=22,SNR=6.7
KDAK Kodiak Island 16.15 59 ePn Pn 08 15 44.1 -2.4
comp=Z,15nm,0.6s
KDAK S S 08 18 33.7 -12
KDAK Kodiak Island 16.15 59 eP Pn 08 15 44.1 -2.4
KDAK S S 08 18 33.7 -12
KDAK pmax pmax
comp=Z,15nm,0.6s
RSO Redoubt South 16.72 50 eP Pn 08 15 55.9 +2.4
CNPM China Poot 17.19 53 eP P 08 15 57.9 -0.3
comp=Z,24nm,1.2s
SPU Mount Spurr 17.28 48 eP Pn 08 16 01.1 +1.0
BRLK Bradley Lake 17.42 53 eP Pn 08 16 01.4 -0.4
comp=Z,18nm,0.9s
BILL Bilibino 17.53 341 eP Pn 08 16 04.1 +1.1
comp=Z,15nm,0.7s
BILL Bilibino 17.53 341 eP Pn 08 16 04.1 +1.1
BILL pmax pmax
comp=Z,15nm,0.7s
SKT Skwentna 17.79 45 eP Pn 08 16 06.9 +0.8
comp=Z,70nm,0.7s
RDOG Red Dog Mine 17.82 20 eP Pn 08 16 07.7 +1.3
comp=Z,49nm,0.6s
PPLA Purkeypile 17.87 42 eP Pn 08 16 08.1 +0.8
comp=Z,40nm,1.0s
SUA Susitna One 17.97 47 eP Pn 08 16 07.9 -0.5
comp=Z,29nm,0.7s
CAST Castle Rocks 18.14 41 eP Pn 08 16 10.5 +0.2
comp=Z,42nm,0.8s
RC01 Rabbit Creek A 18.32 49 eP Pn 08 16 11.1 -1.2
comp=Z,23nm,1.2s
KTH Kantishna Hill 18.67 41 eP Pn 08 16 16.1 -0.4
comp=Z,114nm,0.8s
PMR Palmer 18.74 48 eP P 08 16 14.4 -0.6
comp=Z,7.6nm,0.6s
PMR Palmer 18.74 48 eP P 08 16 14.4 -0.6
PMR pmax pmax
comp=Z,8.0nm,0.6s
BPAW Bear Paw Mtn. 18.88 40 eP Pn 08 16 18.4 -0.5
comp=Z,33nm,0.7s
TRF Thorofare Moun 18.89 42 eP Pn 08 16 17.8 -1.3
comp=Z,36nm,0.8s
GHO Glory Hole Cre 18.89 47 eP Pn 08 16 17.3 -1.8
comp=Z,16nm,0.6s
SML Sawmill 19.17 48 eP P 08 16 18.3 -1.4
comp=Z,22nm,0.6s
SML Sawmill 19.17 48 eP P 08 16 18.3 -1.4
SML pmax pmax
comp=Z,22nm,0.6s
MLY Manley 19.41 37 eP Pn 08 16 24.0 -1.1
comp=Z,30nm,0.8s
BWN Browne 19.52 40 eP Pn 08 16 24.7 -1.7
comp=Z,78nm,1.1s
MCK McKinley 19.55 42 eP P 08 16 24.2 +0.4
comp=Z,16nm,0.8s
MCK McKinley 19.55 42 eP P 08 16 24.2 +0.4
MCK pmax pmax
comp=Z,16nm,0.8s
SCM Sheep Creek Mo 19.63 48 eP P 08 16 24.7 -0.1
comp=Z,41nm,0.6s
SCM Sheep Creek Mo 19.63 48 eP P 08 16 24.7 -0.1
SCM pmax pmax
comp=Z,41nm,0.6s
WRH Wood River Hil 20.18 40 eP P 08 16 29.9 -0.6
comp=Z,20nm,0.6s
DIV Divide 20.20 50 eP P 08 16 30.9 +0.1
comp=Z,16nm,0.8s
KLU Klutina 20.20 49 eP P 08 16 30.9 +0.1
comp=Z,16nm,0.6s
MDM Murphy Dome 20.33 39 eP P 08 16 32.5 +0.4
comp=Z,35nm,1.0s
CCB Clear Creek Bu 20.37 40 eP P 08 16 32.1 -0.3
comp=Z,11nm,0.7s
COLA College 20.44 39 eP P 08 16 34.2 +1.0
comp=Z,28nm,1.0s
COLA College 20.44 39 eP P 08 16 34.2 +1.0
COLA pmax pmax
comp=Z,28nm,1.0s
RAGM Ragged Mountai 20.59 53 eP P 08 16 35.4 +0.4
comp=Z,24nm,0.7s
COLD Coldfoot 20.72 32 eP P 08 16 36.8 +0.6
comp=Z,11nm,0.9s
BMRM Bremner River 20.72 51 eP P 08 16 35.8 -0.6
comp=Z,18nm,0.8s
HARP HAARP 20.77 47 eP P 08 16 36.1 -0.7
PAX Paxson 20.78 45 eP P 08 16 36.5 -0.5
comp=Z,28nm,1.0s
PAX Paxson 20.78 45 eP P 08 16 36.5 -0.5
PAX pmax pmax
comp=Z,28nm,1.0s
ILAR Eielson Array 20.78 40 P P 08 16 35.2 -1.6
comp=Z,4.0nm,0.5s,baz=235,slow=8.8,SNR=53
ILAR PcP PcP 08 20 37.9 -1.0
comp=Z,0.5nm,0.5s,baz=276,slow=3.4,SNR=4.9
ILAR ScP ScP 08 23 58.0 -2.2
comp=Z,1.1nm,0.7s,baz=278,slow=3.6,SNR=12
ILB Eielson Array 20.78 40 eP P 08 16 36.5 -0.3
IL1 Eielson Array 20.78 40 eP P 08 16 36.5 -0.3
RIDG Independ'e Rid 21.27 44 eP P 08 16 41.5 -0.7
comp=Z,19nm,0.9s
CRQM Cirque 21.40 52 eP P 08 16 44.6 +0.8
comp=Z,30nm,1.1s
TGL Tana Glacier 21.55 52 eP P 08 16 45.3 0.0
comp=Z,17nm,0.8s
DOT Dot Lake 21.57 44 eP P 08 16 44.9 -0.5
comp=Z,71nm,0.8s
SCRK Sand Creek 21.70 43 eP P 08 16 46.7 -0.1
comp=Z,25nm,0.8s
TOLK Toolik Lake Re 21.71 29 P P 08 16 47.4 +0.6
baz=235,SNR=38
TOLK Toolik Lake Re 21.71 29 eP P 08 16 47.5 +0.6
comp=Z,49nm,0.6s
FYU Fort Yukon 22.12 36 eP P 08 16 51.4 +0.5
EGAK Eagle 23.10 42 eP P 08 17 00.0 -0.1
comp=Z,28nm,0.9s
DAWY Dawson 23.68 44 eP P 08 17 05.3 -0.2
comp=Z,14nm,0.8s
YSS Yuzh-Sakhalins 25.15 274 eP P 08 17 18.6 -0.2
comp=Z,22nm,0.3s
YSS Yuzh-Sakhalins 25.15 274 eP P 08 17 18.6 -0.2
YSS pmax pmax
comp=Z,22nm,0.3s
ASAJ Asahikawa 26.60 268 P P 08 17 32.8 +0.9
comp=Z,6.8nm,0.7s,baz=78,slow=6.8,SNR=8.3
ASAJ Asahikawa 26.60 268 eP P 08 17 32.6 +0.6
comp=Z,38nm,1.7s
INK Inuvik 26.96 36 P P 08 17 35.1 +0.3
comp=Z,1.7nm,0.3s,baz=234,slow=9.6,SNR=28
INK Inuvik 26.96 36 eP P 08 17 35.3 +0.4
comp=Z,7.7nm,0.9s
INK eSP pP 08 18 14.2 +6.4
USRK Ussuriysk Ar. 33.10 276 P P 08 18 29.0 -0.2
comp=Z,7.8nm,0.7s,baz=56,slow=7.8,SNR=12
MJAR Matsushiro Arr 33.78 260 P P 08 18 36.1 +0.9
comp=Z,3.7nm,0.7s,baz=44,slow=6.3,SNR=16
MJAR ScP ScP 08 24 40.5 +0.4
comp=Z,2.6nm,0.7s,baz=61,slow=2.0,SNR=7.9
MAJO Matsushiro 33.78 260 eP P 08 18 35.2 0.0
comp=Z,4.3nm,0.6s
MAJO Matsushiro 33.78 260 eP P 08 18 35.2 0.0
MAJO pmax pmax
comp=Z,4.0nm,0.6s
MAT Matsushiro 33.78 260 P P 08 18 36.2 +1.0
MJB9 Matsu-Tunnel 33.78 260 eP P 08 18 35.1 -0.2
comp=Z,8.6nm,0.8s
H11N2 WAKE ISLAND Hy 34.12 204 T T 08 55 33.1
baz=18,slow=76,SNR=70
H11N3 WAKE ISLAND Hy 34.12 204 T T 08 55 40.3
baz=18,slow=76,SNR=145
H11N1 WAKE ISLAND Hy 34.13 204 T T 08 55 39.4
baz=18,slow=76,SNR=93
YKW3 Yellowknife Ar 34.82 47 eP P 08 18 43.8 0.0
YKW3 epP pP 08 19 17.5 -0.1
YKA Yellowknife Ar 34.84 47 P P 08 18 43.9 -0.1
comp=Z,4.7nm,0.6s,baz=66,slow=5.4,SNR=45
YKA pP pP 08 19 18.0 +0.2
comp=Z,3.8nm,1.0s,baz=282,slow=9.0,SNR=3.5
YKA PcP PcP 08 21 13.0 -0.1
comp=Z,0.5nm,0.3s,baz=285,slow=3.1,SNR=11
YKA ScP ScP 08 24 41.2 -2.1
comp=Z,1.0nm,0.7s,baz=287,slow=3.7,SNR=8.9
A04D Lummi Island 35.27 73 P P 08 18 49.0 +1.2
baz=297
H11S1 WAKE ISLAND Hy 35.34 204 T T 08 56 39.4
baz=17,slow=76,SNR=191
H11S2 WAKE ISLAND Hy 35.35 204 T T 08 56 40.6
baz=17,slow=76,SNR=100
H11S3 WAKE ISLAND Hy 35.35 204 T T 08 56 39.5
baz=17,slow=76,SNR=82
G03D McMinnville, O 36.66 78 P P 08 19 01.1 +1.5
baz=302
COR Corvallis 36.96 79 P P 08 19 03.8 +1.6
KEBM Edson Butte 37.26 82 eP P 08 19 06.9 +2.0
comp=Z,44nm,1.3s
I03D Drain, OR 37.41 80 P P 08 19 07.9 +1.9
baz=303
H04A Detroit Lake 37.59 78 eP P 08 19 09.7 +2.1
comp=Z,17nm,0.8s
G05D Wamic, OR 37.81 77 P P 08 19 10.8 +1.3
baz=302
I04A Tendick Farm, 37.93 80 P P 08 19 11.9 +1.5
baz=303,SNR=8.6
L02D Cave Junction, 38.11 83 P P 08 19 14.1 +2.2
baz=305,SNR=6.9
HUMO Hull Mountain 38.25 81 eP P 08 19 15.3 +2.1
comp=Z,9.2nm,0.8s
I05D Terrebonne, OR 38.28 78 P P 08 19 14.6 +1.2
baz=303,SNR=5.1
J04D Umpqua Nationa 38.42 80 P P 08 19 16.6 +1.9
baz=304,SNR=14
NEW Newport 38.76 70 P P 08 19 18.3 +1.0
comp=Z,2.1nm,0.4s,baz=287,slow=13,SNR=5.9
NEW Newport 38.76 70 P P 08 19 18.0 +0.7
baz=300
KHMM Horse Mountain 38.77 84 eP P 08 19 19.4 +1.7
comp=Z,16nm,0.8s
PINE Pine Mountain 38.82 79 eP P 08 19 19.8 +1.7
comp=Z,9.2nm,1.0s
PINE ePcP PcP 08 21 27.3 +1.4
YBH Yreka Blue Hor 38.90 82 P P 08 19 21.0 +2.3
comp=Z,18nm,0.8s,baz=328,slow=5.6,SNR=65
YBH PcP PcP 08 21 26.5 +0.5
comp=Z,1.0nm,0.5s,baz=44,slow=6.2,SNR=5.4
YBH Yreka Blue Hor 38.90 82 eP P 08 19 20.5 +1.8
comp=Z,17nm,0.8s
YBH PcP PcP 08 21 26.5 +0.5
J05D Fort Rock, OR 38.92 79 P P 08 19 20.8 +1.9
baz=304,SNR=19
K04D Chiloquin, OR 38.98 81 P P 08 19 20.8 +1.5
baz=305,SNR=6.1
M02C Callahan 39.01 83 P P 08 19 21.6 +2.0
baz=306,SNR=11
RES Resolute Bay 39.16 25 P P 08 19 20.6 +0.4
comp=Z,1.8nm,0.4s,baz=256,slow=8.0,SNR=12
RES PcP PcP 08 21 26.0 -0.1
comp=Z,1.6nm,0.5s,baz=225,slow=2.9,SNR=3.2
RES Resolute Bay 39.16 25 eP P 08 19 20.0 -0.2
comp=Z,11nm,1.4s
RES PcP PcP 08 21 26.0 -0.1
KMRM Mail Ridge 39.17 85 eP P 08 19 23.1 +2.2
comp=Z,11nm,1.0s
N02D Trinity Center 39.34 83 P P 08 19 24.1 +1.8
baz=306,SNR=8.6
M04C Macdoel 39.41 82 P P 08 19 24.9 +2.0
baz=305,SNR=26
K05A Summer Lake 39.44 80 eP P 08 19 25.1 +1.8
comp=Z,26nm,0.9s
KSRS Korea Array 39.52 270 P P 08 19 24.8 +1.1
comp=Z,4.2nm,0.7s,baz=54,slow=7.8,SNR=16
KS01 Wonju Array Si 39.52 270 eP P 08 19 24.4 +0.7
KSAR Wonju Array Be 39.55 270 P P 08 19 24.8 +0.9
KSAR Wonju Array Be 39.55 270 P P 08 19 24.8 +0.9
WDC Whiskeytown Da 39.68 84 eP P 08 19 26.4 +1.4
comp=Z,10nm,0.8s
WDC Whiskeytown Da 39.68 84 eP P 08 19 26.4 +1.4
WDC pmax pmax
comp=Z,10.0nm,0.8s
MOD Modoc Plateau 40.27 81 eP P 08 19 31.6 +1.5
comp=Z,20nm,0.6s
O03D Paynes Creek 40.30 84 P P 08 19 31.4 +1.2
baz=307,SNR=17
J08A Circle Bar Ran 40.55 78 eP P 08 19 33.7 +1.4
comp=Z,3.4nm,0.6s
GDXM Geysers 40.59 86 eP P 08 19 34.9 +2.2
comp=Z,7.1nm,1.0s
WVOR Wild Horse Val 40.98 79 eP P 08 19 37.0 +1.2
comp=Z,13nm,0.8s
WVOR Wild Horse Val 40.98 79 eP P 08 19 37.0 +1.2
WVOR pmax pmax
comp=Z,13nm,0.8s
MSO Missoula 41.34 70 P P 08 19 39.0 +0.3
baz=302
BEKR Beckworth 41.44 83 eP P 08 19 41.0 +1.3
comp=Z,9.2nm,0.7s
AFDM Forest Hills D 41.63 85 eP P 08 19 43.1 +2.1
comp=Z,9.2nm,1.2s
PAHR Pah Rah Range 42.14 83 eP P 08 19 46.3 +1.0
comp=Z,19nm,0.9s
VCNR Virginia City 42.22 83 eP P 08 19 47.6 +1.5
comp=Z,18nm,0.9s
PNTR Pine Nut 42.38 84 eP P 08 19 48.9 +1.5
comp=Z,32nm,0.8s
CMB Columbia Colle 42.55 85 eP P 08 19 49.2 +0.6
comp=Z,5.6nm,0.6s
CMB Columbia Colle 42.55 85 eP P 08 19 49.2 +0.6
CMB pmax pmax
comp=Z,6.0nm,0.6s
YERR Yerington 42.67 83 eP P 08 19 50.8 +1.1
comp=Z,16nm,0.9s
WAKR Walker 42.84 84 eP P 08 19 50.3 -0.8
comp=Z,19nm,1.2s
HLID Hailey 42.87 75 P P 08 19 51.4 +0.2
baz=305
HLID Hailey 42.87 75 eP P 08 19 51.8 +0.6
comp=Z,2.8nm,0.8s
HLID epP pP 08 20 24.2 -1.8
BMN Battle Mountai 43.02 80 eP P 08 19 53.6 +1.2
comp=Z,20nm,0.6s
BMN Battle Mountai 43.02 80 eP P 08 19 53.6 +1.2
BMN pmax pmax
comp=Z,20nm,0.6s
MCMT McKenzie Canyo 43.08 72 eP P 08 19 52.6 -0.3
KVN Kaiserville 43.32 83 eP P 08 19 56.2 +1.4
comp=Z,42nm,1.6s
KVN Kaiserville 43.32 83 eP P 08 19 56.3 +1.4
KVN pmax pmax
comp=Z,42nm,1.6s
RYN Ryan 43.33 83 eP P 08 19 56.7 +1.8
comp=Z,16nm,0.9s
BOZ Bozeman (W) 43.36 71 P P 08 19 54.5 -0.5
baz=304,SNR=9.1
BOZ Bozeman (W) 43.36 71 eP P 08 19 54.6 -0.5
comp=Z,8.2nm,1.3s
BOZ Bozeman (W) 43.36 71 eP P 08 19 54.6 -0.4
BOZ pmax pmax
comp=Z,8.0nm,1.3s
PMPB Monarch Peak 43.45 88 eP P 08 19 58.4 +2.6
comp=Z,40nm,1.5s
NV01 Mina Array Sit 43.59 83 eP P 08 19 58.2 +1.2
NVAR Mina Array Bea 43.59 83 P P 08 19 58.4 +1.4
comp=Z,13nm,0.8s,baz=296,slow=7.7,SNR=70
NVAR PcP PcP 08 21 42.4 +0.8
comp=Z,0.7nm,0.5s,baz=290,slow=4.2,SNR=3.4
NVAR ScP ScP 08 25 16.8 -1.0
comp=Z,0.6nm,0.5s,baz=290,slow=4.8,SNR=6.8
MDPB Devils Postpil 43.61 85 eP P 08 19 59.4 +2.1
comp=Z,11nm,0.8s
OMMB Old Mammoth Mi 43.67 85 eP P 08 19 59.9 +2.1
comp=Z,7.6nm,0.6s
NV11 Mina Array Sit 43.67 83 eP P 08 19 59.1 +1.4
comp=Z,0.8nm,0.9s
NRIK Noril'sk 43.75 329 P P 08 19 59.0 +1.4
comp=Z,1.3nm,0.6s,baz=90,slow=5.1,SNR=2.9
ELK Elko 44.03 79 P P 08 20 03.7 +3.1
comp=Z,8.4nm,0.6s,baz=344,slow=9.0,SNR=27
YHB Horse Butte 44.09 71 eP P 08 20 01.0 0.0
comp=Z,6.5nm,0.9s
PAGB Antelope Grade 44.11 88 eP P 08 20 02.9 +1.9
comp=Z,17nm,0.7s
TIN Tinemaha, Big 44.50 85 P P 08 20 05.4 +1.2
baz=310
SMMC Simmler 44.54 88 P P 08 20 05.7 +1.3
baz=311
H17A Grant Village 44.66 72 P P 08 20 06.1 +0.6
baz=305,SNR=6.0
H17A Grant Village 44.66 72 eP P 08 20 07.0 +1.4
comp=Z,6.3nm,0.9s
VES Vestal, Richgr 44.76 87 P P 08 20 06.6 +0.6
baz=311,SNR=20
PKM Mcpherson Peak 44.93 88 P P 08 20 08.6 +0.9
baz=312
CWC Cottonwood Cre 44.99 85 P P 08 20 09.0 +0.9
baz=310
RLMT Red Lodge 45.00 70 P P 08 20 08.0 -0.2
baz=305,SNR=5.8
RLMT Red Lodge 45.00 70 eP P 08 20 08.4 +0.2
comp=Z,15nm,1.3s
ISA Isabella, Lake 45.25 87 P P 08 20 10.5 +0.5
baz=311,SNR=5.7
ISA Isabella, Lake 45.25 87 eP P 08 20 10.8 +0.8
comp=Z,3.8nm,0.8s
ISA Isabella, Lake 45.25 87 eP P 08 20 10.8 +0.8
ISA pmax pmax
comp=Z,4.0nm,0.8s
R11A Troy Canyon, C 45.30 82 P P 08 20 11.4 +0.8
baz=309,SNR=34
R11A Troy Canyon, C 45.30 82 eP P 08 20 11.5 +1.0
comp=Z,19nm,0.8s
DAC Darwin (Calif) 45.39 85 eP P 08 20 14.1 +2.8
comp=Z,5.5nm,0.6s
DAC Darwin (Calif) 45.39 85 eP P 08 20 14.1 +2.8
DAC pmax pmax
comp=Z,6.0nm,0.6s
MPMC Manual Prospec 45.60 85 P P 08 20 14.0 +1.1
baz=311,SNR=9.7
FURC Furnace Creek, 45.72 84 P P 08 20 15.0 +1.4
baz=311
OSI Osito Audit: C 45.78 88 P P 08 20 15.4 +1.1
baz=312
OSI Osito Audit: C 45.78 88 eP P 08 20 16.3 +2.1
comp=Z,16nm,0.7s
TPNV Topopah Spring 45.78 84 P P 08 20 15.5 +1.1
baz=310,SNR=45
TPNV Topopah Spring 45.78 84 eP P 08 20 15.5 +1.1
comp=Z,33nm,0.8s
DUG Dugway, Tooele 45.83 78 P P 08 20 15.5 +0.8
baz=308,SNR=16
DUG Dugway, Tooele 45.83 78 eP P 08 20 15.5 +0.8
comp=Z,16nm,0.9s
DUG Dugway, Tooele 45.83 78 eP P 08 20 15.5 +0.8
DUG pmax pmax
comp=Z,16nm,0.9s
EDW2 Edwards Air Fo 46.06 87 P P 08 20 17.1 +0.8
baz=312
BW06 Boulder Array 46.21 73 P P 08 20 17.2 -0.5
baz=307,SNR=7.9
BW06 Boulder Array 46.21 73 eP P 08 20 16.1 -1.6
comp=Z,12nm,1.3s
PD31 Pinedale Array 46.21 73 eP P 08 20 17.5 -0.3
PDAR Pinedale Array 46.21 73 P P 08 20 17.4 -0.3
comp=Z,3.9nm,0.7s,baz=301,slow=4.0,SNR=30
PDAR pP pP 08 20 51.9 -1.2
comp=Z,1.1nm,0.6s,baz=298,slow=3.3,SNR=3.0
SONM Songino Array 46.23 296 ScP ScP 08 25 26.8 -1.7
comp=Z,0.2nm,0.3s,baz=92,slow=4.3,SNR=3.8
PSUT Pine Spring 46.24 80 eP P 08 20 18.9 +1.0
comp=Z,25nm,0.7s
DECC Green Verdugo 46.26 88 P P 08 20 18.7 +0.8
baz=312
JLU Jordanelle 46.40 76 eP P 08 20 20.1 +0.8
comp=Z,8.3nm,1.3s
SHOC Shoshone, Teco 46.45 85 P P 08 20 20.4 +1.0
baz=311,SNR=15
MWC Mount Wilson 46.45 88 eP P 08 20 21.0 +1.3
comp=Z,8.3nm,0.8s
MWC Mount Wilson 46.45 88 eP P 08 20 21.0 +1.3
MWC pmax pmax
comp=Z,8.0nm,0.8s
GSC Goldstone, Bar 46.51 86 P P 08 20 21.0 +1.0
baz=311,SNR=16
GSC Goldstone, Bar 46.51 86 eP P 08 20 21.2 +1.2
comp=Z,18nm,0.6s
GSC Goldstone, Bar 46.51 86 eP P 08 20 21.2 +1.2
GSC pmax pmax
comp=Z,18nm,0.6s
BFSC Mount Baldy Ra 46.69 87 P P 08 20 22.2 +0.8
baz=312
SHPR Sheep Range 46.74 83 eP P 08 20 23.1 +1.3
comp=Z,5.1nm,0.8s
TUQ Turquoise Moun 46.97 85 P P 08 20 24.1 +0.6
baz=311,SNR=8.9
HEC Hector,Ludlow 47.11 86 P P 08 20 25.2 +0.6
baz=312,SNR=6.3
CCUT Cedar City 47.16 81 eP P 08 20 26.3 +1.1
comp=Z,12nm,0.7s
MSU Marysvale 47.27 79 eP P 08 20 27.3 +1.3
MSU Marysvale 47.27 79 eP P 08 20 27.3 +1.3
TMUT Trail Mountain 47.36 78 eP P 08 20 27.7 +0.9
comp=Z,19nm,0.8s
HHC Hu-ho-hao-te 47.39 285 eP P 08 20 27.3 +0.6
HHC pmax pmax
comp=Z,21nm,0.9s
HHC pmax pmax
comp=Z,300nm,4.4s
MURC Murrieta 47.40 88 P P 08 20 27.8 +0.9
baz=313
P17A Butcher Ranch, 47.53 77 eP P 08 20 28.9 +1.0
comp=Z,6.8nm,0.8s
GMRC Granite Mounta 47.56 85 P P 08 20 29.0 +0.9
baz=312,SNR=12
MTPU Mount Pierson 47.56 80 eP P 08 20 30.1 +1.7
comp=Z,13nm,0.8s
LCMT Little Creek M 47.58 81 eP P 08 20 29.7 +1.4
comp=Z,21nm,0.8s
LDFC Landfair 47.70 85 eP P 08 20 30.2 +0.9
comp=Z,21nm,0.6s
P18A Preston Nutter 47.73 77 eP P 08 20 30.6 +1.0
comp=Z,5.4nm,0.7s
KNB Kanab 47.84 81 eP P 08 20 31.7 +1.4
comp=Z,18nm,0.6s
PFO Pinyon Flats O 47.85 87 P P 08 20 30.8 +0.5
baz=313
BELC Belle Mtn. Jos 47.87 86 P P 08 20 30.9 +0.4
baz=312,SNR=10
SRU San Rafael Swe 47.89 77 eP P 08 20 31.6 +1.0
comp=Z,12nm,1.0s
SRU San Rafael Swe 47.89 77 eP P 08 20 31.7 +1.0
SRU pmax pmax
comp=Z,13nm,1.0s
109C Camp Elliot, M 47.94 88 P P 08 20 32.0 +1.1
baz=313
K22A Casper 48.06 71 P P 08 20 31.7 -0.3
baz=308
NEE2 Needles Airpor 48.21 85 P P 08 20 33.5 +0.5
baz=312
RWWY Rawlins 48.25 72 eP P 08 20 33.1 -0.4
comp=Z,6.2nm,1.1s
IRM Iron Mountain 48.29 86 P P 08 20 34.4 +0.8
baz=312,SNR=8.7
BAR Barrett 48.35 88 eP P 08 20 35.4 +1.3
comp=Z,9.1nm,0.7s
MONP2 Monument Peak 48.36 88 P P 08 20 34.9 +0.5
baz=313

BC3	**Big Chuckawall**	48.44	86	P	P	08 20 35.0 +0.1
	baz=313,SNR=5.3					
W13A	**Hualapai Mount**	48.44	84	eP	P	08 20 35.8 +0.7
	comp=Z,8.8nm,0.8s					
U15A	**North Rim**	48.54	81	eP	P	08 20 37.2 +1.4
	comp=Z,33nm,0.8s					
RSSD	**Black Hills**	48.60	68	P	P	08 20 35.1 -1.1
	baz=308					
O20A	**White River Ci**	48.61	75	P	P	08 20 36.0 -0.2
	baz=309,SNR=8.2					
O20A	**White River Ci**	48.61	75	eP	P	08 20 36.0 -0.2
	comp=Z,8.0nm,0.5s					
NJ2	**Nanjing**	48.67	271	eP	P	08 20 35.8 -0.7
NJ2				pmax	pmax	
	comp=Z,18nm,0.5s					
IKP	**In-Ko-Pah, Jac**	48.71	88	P	P	08 20 37.7 +0.7
	baz=313					
PDMCI	**Parker Dam,Lak**	48.81	85	P	P	08 20 38.5 +0.9
	baz=312					
YUH	**Yuha Desert**	48.83	88	eP	P	08 20 38.5 +0.8
Y12C	**Blythe**	48.95	86	P	P	08 20 39.4 +0.8
	baz=313,SNR=5.9					
Y12C	**Blythe**	48.95	86	eP	P	08 20 39.8 +1.2
	comp=Z,7.2nm,0.7s					
KBS	**Kingsbay**	49.09	357	P	P	08 20 40.1 +1.0
PV09	**Paradox Valley**	49.12	77	eP	P	08 20 40.7 +0.5
GLA	**Glamis**	49.23	86	P	P	08 20 41.7 +0.8
	baz=313,SNR=7.6					
GLA	**Glamis**	49.23	86	eP	P	08 20 41.8 +1.0
	comp=Z,13nm,0.7s					
GLA	**Glamis**	49.23	86	eP	P	08 20 41.8 +1.0
GLA				pmax	pmax	
	comp=Z,13nm,0.7s					
PV10	**Paradox Valley**	49.25	77	eP	P	08 20 42.5 +1.3
	comp=Z,17nm,0.8s					
PV04	**Paradox Valley**	49.32	77	eP	P	08 20 42.1 +0.5
	comp=Z,14nm,0.9s					
PV05	**Paradox Valley**	49.41	77	eP	P	08 20 43.1 +0.8
	comp=Z,18nm,1.1s					
PV03	**Paradox Valley**	49.44	77	eP	P	08 20 42.8 +0.2
	comp=Z,16nm,0.9s					
PV07	**Paradox Valley**	49.45	77	eP	P	08 20 42.9 +0.3
	comp=Z,7.6nm,0.8s					
N23A	**Red Feather La**	49.49	73	P	P	08 20 43.1 +0.1
	baz=309					
PV02	**Paradox Valley**	49.54	77	eP	P	08 20 44.0 +0.6
	comp=Z,20nm,0.8s					
PV15	**Paradox Valley**	49.61	77	eP	P	08 20 44.6 +0.7
	comp=Z,13nm,1.0s					
SPA0	**Spitsbergen Ar**	49.67	356	eP	P	08 20 44.0 +0.4
SPITS	**Spitsbergen Ar**	49.67	356	P	P	08 20 43.6 0.0
	comp=Z,8.8nm,0.4s,baz=48,slow=6.4,SNR=83					
PV01	**Paradox Valley**	49.69	77	eP	P	08 20 44.9 +0.5
	comp=Z,11nm,0.8s					
WUAZ	**Wupatki**	49.70	82	P	P	08 20 45.5 +1.0
	baz=312,SNR=19					
WUAZ	**Wupatki**	49.70	82	eP	P	08 20 45.7 +1.2
	comp=Z,20nm,0.8s					
Y14A	**Wickenburg**	49.76	84	eP	P	08 20 45.8 +1.0
	comp=Z,5.8nm,0.6s					
113A	**Mohawk Valley,**	50.08	86	eP	P	08 20 47.9 +0.7
	comp=Z,2.6nm,0.8s					
MVCO	**Mesa Verde**	50.33	78	P	P	08 20 49.6 +0.2
	baz=311,SNR=8.6					
MVCO	**Mesa Verde**	50.33	78	eP	P	08 20 49.9 +0.6
	comp=Z,16nm,1.3s					
ISCO	**Idaho Springs**	50.38	73	P	P	08 20 50.2 +0.4
	baz=310					
ISCO	**Idaho Springs**	50.38	73	P	P	08 20 50.5 +0.7
ISCO				pmax	pmax	
	comp=Z,4.0nm,2.1s					
X16A	**Lo Mia Camp, P**	50.39	83	eP	P	08 20 51.0 +1.3
	comp=Z,11nm,0.8s					
E31A	**Nome**	50.55	62	P	P	08 20 49.0 -1.6
	baz=308					
DAG	**Danmarks Havn**	50.82	6	i P	P	08 20 51.7 -0.4
	comp=Z,3.3nm,0.7s					
DAG	**Danmarks Havn**	50.82	6	i P	P	08 20 51.7 -0.4
DAG				pmax	pmax	
	comp=Z,3.0nm,0.7s					
W18A	**Petrified Fore**	50.96	81	P	P	08 20 55.0 +0.9
	baz=312,SNR=17					
W18A	**Petrified Fore**	50.96	81	eP	P	08 20 55.1 +1.1
	comp=Z,22nm,0.8s					
S22A	**4UR Ranch, Cre**	50.99	76	P	P	08 20 54.5 +0.2
	baz=311,SNR=8.2					
S22A	**4UR Ranch, Cre**	50.99	76	eP	P	08 20 55.0 +0.7
	comp=Z,9.0nm,1.3s					
B34A	**Aery, Baudette**	51.10	58	P	P	08 20 52.9 -1.7
	baz=308					
214A	**Organ Pipe Nat**	51.22	86	P	P	08 20 56.5 +0.7
	baz=314					
X18A	**Snowflake**	51.23	81	eP	P	08 20 57.6 +1.6
	comp=Z,21nm,0.6s					
SUSD	**Miller**	51.28	65	P	P	08 20 54.7 -1.3
	baz=309					
G32A	**Webster**	51.58	63	P	P	08 20 56.7 -1.5
	baz=309					
G32A	**Webster**	51.58	63	eP	P	08 20 57.0 -1.2
	comp=Z,11nm,0.9s					
E33A	**Westby DABS, E**	51.61	61	P	P	08 20 57.6 -0.9
	baz=309					
B35A	**Bob, Littlefor**	51.67	58	P	P	08 20 57.6 -1.3
	baz=308					
SDCO	**Great Sand Dun**	51.78	75	P	P	08 21 00.5 +0.3
	baz=311,SNR=9.4					
SDCO	**Great Sand Dun**	51.78	75	eP	P	08 21 00.6 +0.4
	comp=Z,7.7nm,1.1s					
C35A	**Jirik Farms, M**	51.95	59	P	P	08 20 59.6 -1.3
	baz=309					
H32A	**Carlson Farm,**	52.09	64	P	P	08 21 00.3 -1.7
	baz=310					
G33A	**Ortonville**	52.20	63	P	P	08 21 01.2 -1.7
	baz=309					
TUC	**Tucson**	52.23	84	P	P	08 21 04.0 +0.7
	baz=314					
TUC	**Tucson**	52.23	84	eP	P	08 21 04.5 +1.2
	comp=Z,7.7nm,0.9s					
TUC	**Tucson**	52.23	84	P	P	08 21 04.4 +1.2
D35A	**Remer**	52.29	59	P	P	08 21 02.2 -1.3
	baz=309					
E35A	**Pequot Lakes**	52.44	60	P	P	08 21 03.3 -1.3
	baz=309					
F34A	**Alexandria**	52.46	61	P	P	08 21 03.2 -1.5
	baz=310					
FRB	**Frobisher Bay**	52.49	32	P	P	08 21 04.2 -0.4
	comp=Z,9.6nm,0.5s,baz=314,slow=10,SNR=15					
C36A	**Pine Crest Far**	52.51	58	P	P	08 21 03.5 -1.5
	baz=309					
G34A	**Benson**	52.60	62	P	P	08 21 04.0 -1.8
	baz=310					
SUMG	**Summit**	52.65	14	i P	P	08 21 06.6 +0.4
	comp=Z,10nm,1.0s					
SUMG	**Summit**	52.65	14	eP	P	08 21 06.6 +0.4
	comp=Z,8.9nm,0.9s					
SUMG	**Summit**	52.65	14	i P	P	08 21 06.6 +0.4
SUMG				pmax	pmax	
	comp=Z,10.0nm,1.0s					
KSCO	**Kaye Shedlock'**	52.65	72	P	P	08 21 06.1 -0.3
	baz=311					
KSCO	**Kaye Shedlock'**	52.65	72	eP	P	08 21 07.5 +1.1
	comp=Z,9.7nm,0.9s					
D36A	**Goodland**	52.70	59	P	P	08 21 05.4 -1.1
	baz=310					
F35A	**Swanville**	52.79	61	P	P	08 21 05.5 -1.7
	baz=310					
T25A	**Trinidad**	52.83	75	P	P	08 21 08.2 +0.3
	baz=312,SNR=7.8					
T25A	**Trinidad**	52.83	75	eP	P	08 21 08.4 +0.6
	comp=Z,20nm,1.3s					
C37A	**Embarrass**	52.87	58	P	P	08 21 06.4 -1.4
	baz=310					
ECSD	**EROS Data Cent**	53.03	64	P	P	08 21 07.3 -1.7
	baz=310					
TASM	**ASL Pad, Albuq**	53.07	79	P	P	08 21 09.7 +0.1
	baz=313,SNR=8.2					
ANMO	**Albuquerque**	53.07	79	P	P	08 21 10.0 +0.4
	comp=Z,4.4nm,0.8s,baz=313,slow=9.8,SNR=17					
ANMO				PcP	PcP	08 22 16.7 +0.9
	comp=Z,1.5nm,0.9s,baz=296,slow=2.8,SNR=2.7					
ANMO	**Albuquerque**	53.07	79	P	P	08 21 09.8 +0.2
	baz=313					
ANMO	**Albuquerque**	53.07	79	eP	P	08 21 10.1 +0.4
	comp=Z,7.9nm,1.0s					
ANMO				PcP	PcP	08 22 16.7 +0.9
ANMO	**Albuquerque**	53.07	79	eP	P	08 21 10.1 +0.5
ANMO						08 22 16.7
ANMO				pmax	pmax	
	comp=Z,8.0nm,1.0s					
TASL	**Snake Pit, Alb**	53.07	79	P	P	08 21 09.9 +0.3
	baz=313,SNR=7.9					
E36A	**McGregor**	53.08	59	P	P	08 21 07.9 -1.3
	baz=310					
EYMN	**Ely**	53.09	57	P	P	08 21 08.0 -1.3
	baz=310					
EYMN	**Ely**	53.09	57	eP	P	08 21 08.8 -0.5
	comp=Z,5.5nm,0.8s					
D37A	**Cotton**	53.10	58	P	P	08 21 08.6 -0.9
	baz=310					
C38A	**Sawbill Land.**	53.35	57	P	P	08 21 09.9 -1.4
	baz=310					
F36A	**Milaca**	53.35	60	P	P	08 21 09.8 -1.4
	baz=310					
H35A	**Sunnyside Ranc**	53.39	62	P	P	08 21 09.8 -1.8
	baz=310					
ZALV	**Zalesovo Beam**	53.47	313	PcP	PcP	08 22 15.5 -1.3
	comp=Z,0.9nm,0.7s,baz=53,slow=5.6,SNR=3.3					
319A	**Douglas**	53.79	84	eP	P	08 21 16.6 +1.8
	comp=Z,12nm,1.0s					
C39A	**Grand Marais**	53.88	57	P	P	08 21 13.6 -1.5
	baz=310					
121A	**Cookes Peak, D**	53.91	82	P	P	08 21 16.5 +0.8
	baz=314,SNR=10					
E38A	**The Farm, Brul**	53.92	58	P	P	08 21 13.8 -1.6
	baz=310					
E38A	**The Farm, Brul**	53.92	58	eP	P	08 21 14.1 -1.2
	comp=Z,16nm,1.1s					
F37A	**Hinrichs Farm,**	53.92	60	P	P	08 21 14.1 -1.3
	baz=310					
H36A	**Jessenland, He**	53.96	62	P	P	08 21 14.9 -0.9
	baz=311					
F38A	**Pierce - Schro**	54.17	59	P	P	08 21 16.4 -0.8
	baz=311,SNR=12					
CBKS	**Cedar Bluff**	54.48	71	P	P	08 21 19.3 -0.3
	baz=312					
J36A	**Seneca 1, Swea**	54.55	63	P	P	08 21 19.1 -0.9
	baz=311					
E39A	**Mellen**	54.59	58	P	P	08 21 18.7 -1.6
	baz=311					
I37A	**Lemond, Waseca**	54.62	62	P	P	08 21 19.2 -1.3
	baz=311					
G38A	**Ridgeland**	54.69	60	P	P	08 21 19.5 -1.5
	baz=311					
F39A	**Loretta**	54.70	59	P	P	08 21 19.9 -1.2
	baz=311,SNR=7.7					
H38A	**Maiden Rock**	54.79	61	P	P	08 21 20.6 -1.1
	baz=311					
E40A	**Wakefield**	54.89	58	P	P	08 21 21.6 -0.8
	baz=311,SNR=6.2					
K36A	**Gilmore City**	54.95	64	P	P	08 21 21.5 -1.4
	baz=312					
G39A	**Holcombe**	54.98	59	P	P	08 21 21.5 -1.5
	baz=311					
J37A	**Redenius Farm,**	55.00	63	P	P	08 21 21.8 -1.4
	baz=312					
LZH	**Lanzhou**	55.08	286	eP	P	08 21 23.8 -0.3
LZH				pP	pP	08 22 00.8 +0.2
LZH				sP	sP	08 22 19.9 +1.8
LZH				ePP	PP	08 23 30.8 +2.1
LZH				pmax	pmax	
	comp=Z,25nm,1.0s					
LZH				pmax	pmax	
	comp=Z,1μm,8.7s					
LZH				LR	LR	
	comp=Z,230nm,17.5s					
LZH				LR	LR	
	comp=Z,240nm,17.4s					
LZH				LR	LR	
	comp=Z,300nm,18.7s					
F40A	**Park Falls**	55.12	58	P	P	08 21 22.9 -1.1
	baz=311					
EPT	**El Paso**	55.22	81	eP	P	08 21 26.0 +0.9
	comp=Z,27nm,0.8s					
K37A	**Belmond**	55.31	63	P	P	08 21 24.1 -1.3
	baz=312					
H39A	**Augusta**	55.32	60	P	P	08 21 24.2 -1.3
	baz=312					
E41A	**Kenton**	55.36	57	P	P	08 21 24.2 -1.6
	baz=312					
G40A	**Rib Lake**	55.51	59	P	P	08 21 25.5 -1.3
	baz=312					
COWI	**Conover**	55.51	58	eP	P	08 21 25.8 -1.1
	comp=Z,3.8nm,0.6s					
J38A	**Wedel Dairy, R**	55.58	62	P	P	08 21 26.2 -1.1
	baz=312					
L37A	**Phoenix Point,**	55.67	64	P	P	08 21 26.7 -1.3
	baz=312					
I39A	**Houston**	55.74	61	P	P	08 21 26.9 -1.6
	baz=312					
F41A	**Three Lakes**	55.77	58	P	P	08 21 27.6 -1.1
	baz=312,SNR=6.1					
F41A	**Three Lakes**	55.77	58	eP	P	08 21 28.0 -0.7
	comp=Z,7.1nm,0.6s					
H40A	**Chili**	55.84	60	P	P	08 21 27.9 -1.3
	baz=312					
N36A	**Muff Farm, Cla**	55.87	66	P	P	08 21 28.4 -1.0
	baz=312					
E42A	**Champion**	55.93	57	P	P	08 21 28.9 -1.0
	baz=312					
MNTX	**Cornudas Mount**	55.95	81	P	P	08 21 31.1 +0.9
	baz=315,SNR=31					
MNTX	**Cornudas Mount**	55.95	81	eP	P	08 21 31.0 +0.8
	comp=Z,17nm,0.8s					
MSTX	**Muleshoe**	55.96	77	P	P	08 21 30.4 0.0
	baz=314,SNR=8.6					
MSTX	**Muleshoe**	55.96	77	eP	P	08 21 30.5 +0.2
	comp=Z,14nm,0.9s					
AMTX	**Amarillo**	55.98	75	P	P	08 21 30.6 +0.1
	baz=314					
AMTX	**Amarillo**	55.98	75	eP	P	08 21 30.8 +0.3
	comp=Z,8.9nm,0.6s					
M37A	**Trindle Farm,**	55.99	65	P	P	08 21 29.4 -0.9
	baz=312					
J39A	**Decorah**	55.99	62	P	P	08 21 28.7 -1.5
	baz=312,SNR=9.4					
G41A	**Antigo**	56.08	58	P	P	08 21 29.8 -1.2
	baz=312					
KSU1	**Kansas State U**	56.09	68	P	P	08 21 29.8 -1.3
	baz=313					
L38A	**Oak Wood Farm,**	56.10	63	P	P	08 21 29.8 -1.3
	baz=312					
H41A	**Junction City**	56.23	59	P	P	08 21 30.9 -1.1
	baz=312					
F42A	**Maple Grove Fa**	56.26	57	P	P	08 21 31.1 -1.0
	baz=312					
K39A	**Oelwein**	56.31	62	P	P	08 21 31.2 -1.3
	baz=312					
N37A	**Lee Faris, Mou**	56.33	65	P	P	08 21 32.3 -0.4
	baz=313					
E43A	**Lone Tree Farm**	56.44	56	P	P	08 21 32.2 -1.2
	baz=312					
M38A	**Pleasantville**	56.46	64	P	P	08 21 32.5 -1.1
	baz=313					
G42A	**Mountain**	56.46	58	P	P	08 21 32.6 -1.0
	baz=312					
J40A	**Soldiers Grove**	56.47	61	P	P	08 21 32.4 -1.3
	baz=312					
I41A	**Arkdale**	56.49	60	P	P	08 21 32.8 -1.0
	baz=312					
L39A	**Vinton**	56.64	63	P	P	08 21 33.5 -1.4
	baz=313					
F43A	**Flat Rock, Esc**	56.72	57	P	P	08 21 34.5 -0.9
	baz=313					
K40A	**Colesburg**	56.72	62	P	P	08 21 33.9 -1.6
	baz=313					
O37A	**Wolven Farm, M**	56.77	66	P	P	08 21 34.6 -1.2
	baz=313					
G43A	**Wallace**	56.83	58	P	P	08 21 35.2 -1.0
	baz=313					
N38A	**Joes South For**	56.86	65	P	P	08 21 35.2 -1.3
	baz=313					
J41A	**Loganville**	56.88	61	P	P	08 21 35.3 -1.3
	baz=313					
H42A	**Shiocton**	56.90	59	P	P	08 21 35.4 -1.3
	baz=313					
M39A	**Webster**	56.98	63	P	P	08 21 36.2 -1.1
	baz=313,SNR=6.6					
F44A	**Big Bay de Noc**	57.00	56	P	P	08 21 36.4 -0.9
	baz=313					
P37A	**Lathrop**	57.05	66	P	P	08 21 36.3 -1.5
	baz=313,SNR=5.0					
JFWS	**Jewell Farm**	57.06	61	P	P	08 21 36.3 -1.5
	baz=313					
JFWS	**Jewell Farm**	57.06	61	eP	P	08 21 36.5 -1.3
	comp=Z,13nm,1.3s					
JFWS	**Jewell Farm**	57.06	61	eP	P	08 21 36.5 -1.3
JFWS				pmax	pmax	
	comp=Z,13nm,1.3s					
L40A	**Anamosa**	57.11	62	P	P	08 21 36.6 -1.6
	baz=313					
I42A	**Draeger Farm,**	57.11	59	P	P	08 21 36.8 -1.4
	baz=313					
I42A	**Draeger Farm,**	57.11	59	eP	P	08 21 36.5 -1.6
	comp=Z,5.4nm,0.6s					
N39A	**Derby Farms, D**	57.21	64	P	P	08 21 37.8 -1.1
	baz=313					
N39A	**Derby Farms, D**	57.21	64	eP	P	08 21 38.1 -0.8
	comp=Z,15nm,1.1s					
K41A	**Shullsburg**	57.24	61	P	P	08 21 37.6 -1.5
	baz=313,SNR=8.0					
H43A	**Windswept, Lux**	57.32	58	P	P	08 21 38.6 -1.1
	baz=313					
H43A	**Windswept, Lux**	57.32	58	eP	P	08 21 39.0 -0.6
	comp=Z,9.8nm,0.8s					
E45A	**Wooded Hills,**	57.38	55	P	P	08 21 38.8 -1.2
	baz=313					
ARCES	**ARCESS Array B**	57.38	350	P	P	08 21 39.4 -0.4
	comp=Z,1.7nm,0.4s,baz=21,slow=7.7,SNR=26					
J42A	**Columbus**	57.39	60	P	P	08 21 38.8 -1.3
	baz=313					
M40A	**Post Highland**	57.40	63	P	P	08 21 39.0 -1.2
	baz=313					
Q37A	**Longview Farm,**	57.48	67	P	P	08 21 39.0 -1.8
	baz=313					
P38A	**Dawn**	57.48	66	P	P	08 21 39.5 -1.4
	baz=313,SNR=7.8					
P38A	**Dawn**	57.48	66	eP	P	08 21 39.5 -1.4
	comp=Z,13nm,0.9s					
L41A	**Preston**	57.49	62	P	P	08 21 39.3 -1.6
	baz=313					
I43A	**Langenfeld Bro**	57.52	59	P	P	08 21 40.0 -1.1
	baz=313,SNR=6.6					
O39A	**Kirksville**	57.61	65	P	P	08 21 40.4 -1.3
	baz=313					
K42A	**Prairie Point,**	57.64	61	P	P	08 21 40.4 -1.5
	baz=313					
N40A	**Mertquake, Sal**	57.71	64	P	P	08 21 41.5 -0.9
	baz=313					
J43A	**Natural Harves**	57.72	60	P	P	08 21 41.2 -1.3
	baz=313					
WMOK	**Wichita Mounta**	57.81	74	P	P	08 21 43.2 +0.1
	baz=314,SNR=6.5					
WMOK	**Wichita Mounta**	57.81	74	eP	P	08 21 43.3 +0.1
	comp=Z,4.6nm,0.6s					
WMOK	**Wichita Mounta**	57.81	74	eP	P	08 21 43.3 +0.1
WMOK				pmax	pmax	
	comp=Z,5.0nm,0.6s					
Q38A	**Cooks Store, C**	57.89	67	P	P	08 21 41.9 -1.8
	baz=314					
M41A	**Milan**	57.95	63	P	P	08 21 42.6 -1.4
	baz=314					
L42A	**Oliver, Polo**	57.99	62	P	P	08 21 42.9 -1.5
	baz=314					
P39B	**Salisbury**	58.02	66	P	P	08 21 43.2 -1.3
	baz=314,SNR=15					
O40A	**La Belle**	58.07	64	P	P	08 21 43.7 -1.2
	baz=314,SNR=10					
Q39A	**Willow Grove F**	58.20	66	P	P	08 21 44.2 -1.6
	baz=314,SNR=15					
K43A	**Burlington**	58.23	60	P	P	08 21 44.8 -1.2
	baz=314					
N41A	**Harden Midland**	58.23	63	P	P	08 21 44.8 -1.3
	baz=314					
R38A	**Fenwick Farm,**	58.26	67	P	P	08 21 44.0 -2.3
	baz=314					
L43A	**Garden Prairie**	58.37	61	P	P	08 21 45.4 -1.6
	baz=314					
P40A	**Paris**	58.38	65	P	P	08 21 45.9 -1.2
	baz=314,SNR=14					
P40A	**Paris**	58.38	65	eP	P	08 21 46.0 -1.1
	comp=Z,18nm,0.6s					
KURK	**Kurchatov**	58.45	313	P	P	08 21 47.2 -0.2
KURK	**Kurchatov**	58.45	313	P	P	08 21 47.2 -0.2
KURBB	**Kurchatov Arra**	58.56	313	P	P	08 21 47.2 -0.9
	comp=Z,0.8nm,0.5s,baz=42,slow=6.5,SNR=9.9					
N42A	**Yates City**	58.60	63	P	P	08 21 47.3 -1.3
	baz=314					
O41A	**Passleys Farm,**	58.63	64	P	P	08 21 47.5 -1.3
	baz=314,SNR=5.9					
S38A	**Stockton**	58.64	68	P	P	08 21 46.9 -2.0
	baz=314,SNR=15					
R39A	**Chumby, Stover**	58.66	67	P	P	08 21 46.9 -2.2
	baz=314					
TX31	**Lajitas Ar. Si**	58.66	81	eP	P	08 21 49.8 +0.5
TXAR	**Lajitas Array**	58.67	81	P	P	08 21 49.8 +0.4
	comp=Z,9.1nm,0.6s,baz=311,slow=5.5,SNR=82					
TXAR				PcP	PcP	08 22 38.0 +0.5
	comp=Z,1.3nm,0.6s,baz=222,slow=1.3,SNR=6.3					
TXAR				ScP	ScP	08 26 21.8 -0.8
	comp=Z,0.3nm,0.8s,baz=285,slow=2.4,SNR=5.3					
CD2	**Chengdu**	58.72	281	P	P	08 21 48.3 -1.3
CD2				pmax	pmax	
	comp=Z,20nm,0.5s					
Q40A	**Laux Farm, Aux**	58.74	66	P	P	08 21 48.1 -1.5
	baz=314,SNR=6.0					
TUL1	**Leonard**	58.75	71	P	P	08 21 48.8 -0.9
	baz=314					
TUL1	**Leonard**	58.75	71	eP	P	08 21 49.3 -0.4
	comp=Z,6.5nm,0.8s					
M43A	**Waltham Townsh**	58.77	62	P	P	08 21 48.5 -1.3
	baz=314					
ABTX	**Abilene, Hawle**	58.77	76	P	P	08 21 50.2 +0.2
	baz=315,SNR=6.0					
ABTX	**Abilene, Hawle**	58.77	76	eP	P	08 21 50.6 +0.6
	comp=Z,20nm,1.1s					
L44A	**Lake County Fo**	58.82	60	P	P	08 21 48.9 -1.2
	baz=314					
P41A	**Barry, Barry**	58.83	64	P	P	08 21 48.7 -1.5
	baz=314,SNR=6.4					
T38A	**Diamond**	58.84	69	P	P	08 21 48.6 -1.6
	baz=314					
WMQ	**Urumqi**	58.87	302	P	P	08 21 53.4 +2.9
S39A	**Bolivar**	58.94	67	P	P	08 21 48.5 -2.5
	baz=314					
N43A	**Stutzman Famil**	59.00	62	P	P	08 21 49.9 -1.4
	baz=314					
O42A	**Bath**	59.02	63	P	P	08 21 50.1 -1.3
	baz=314					
R40A	**Maddies Statio**	59.12	66	P	P	08 21 50.2 -1.9
	baz=314,SNR=16					
R40A	**Maddies Statio**	59.12	66	eP	P	08 21 50.3 -1.9
	comp=Z,11nm,0.4s					
HDIL	**Hopedale**	59.20	63	P	P	08 21 51.4 -1.3
	baz=314,SNR=6.1					
HDIL	**Hopedale**	59.20	63	eP	P	08 21 51.1 -1.6
	comp=Z,19nm,0.4s					
Q41A	**Truxton**	59.24	65	P	P	08 21 51.7 -1.3
	baz=314,SNR=6.8					
M44A	**Midewin, Midew**	59.30	61	P	P	08 21 52.1 -1.3
	baz=314,SNR=5.1					
M44A	**Midewin, Midew**	59.30	61	eP	P	08 21 52.6 -0.8
	comp=Z,20nm,0.8s					
T39A	**Clever**	59.37	68	P	P	08 21 52.0 -2.0
	baz=314,SNR=9.5					
S40A	**Lebanon**	59.47	67	P	P	08 21 52.3 -2.3
	baz=314					
MKAR	**Makanchi Array**	59.51	308	P	P	08 21 53.2 -1.5
	comp=Z,0.3nm,0.4s,baz=64,slow=5.7,SNR=7.0					
SCHQ	**Schefferville**	59.53	38	P	P	08 21 53.5 -1.3
	comp=Z,3.2nm,0.4s,baz=261,slow=18,SNR=4.3					
HHAR	**Hobbs**	59.56	69	eP	P	08 21 54.1 -1.2
	comp=Z,5.9nm,0.5s					
R41A	**Rosebud**	59.61	66	P	P	08 21 54.0 -1.6
	baz=315,SNR=9.3					
Q42A	**Golden Eagle**	59.66	65	P	P	08 21 54.8 -1.1
	baz=315					
N44A	**Piper City**	59.66	62	P	P	08 21 54.7 -1.2
	baz=314					
P43A	**Skaggs, Pawnee**	59.71	63	P	P	08 21 55.1 -1.1
	baz=315					
M45A	**Boilermakers S**	59.73	61	P	P	08 21 55.0 -1.3
	baz=315					
U39A	**Green Forest**	59.76	69	P	P	08 21 55.0 -1.6
	baz=315,SNR=5.7					
T40A	**Mansfield**	59.77	67	P	P	08 21 54.8 -1.9
	baz=315					
CCM	**Cathedral Cave**	59.86	66	P	P	08 21 55.3 -2.0
	baz=315					
CCM	**Cathedral Cave**	59.86

baz=315
O44A Mansfield 59.93 62 P P 08 21 56.6 -1.1
baz=315,SNR=6.1
R42A Luebbering 59.95 65 P P 08 21 56.4 -1.5
baz=315,SNR=6.4
N45A Kentland 59.96 61 P P 08 21 57.1 -0.8
baz=315,SNR=6.4
V39A Pettigrew 60.04 69 P P 08 21 57.0 -1.7
baz=315
Q43A New Douglas 60.10 64 P P 08 21 58.0 -0.9
baz=315
GYA Guiyang 60.13 276 eP P 08 22 01.0 +1.5
GYA pmax pmax
comp=Z,10.0nm,1.0s
U40A Yellville 60.13 68 P P 08 21 57.5 -1.7
baz=315,SNR=9.7
M46A Old House Fiel 60.19 60 P P 08 21 58.5 -1.0
baz=315
JCT Junction City 60.20 78 P P 08 21 59.4 -0.4
baz=316,SNR=8.6
JCT Junction City 60.20 78 eP P 08 21 59.5 -0.2
comp=Z,24nm,1.4s
JCT Junction City 60.20 78 eP P 08 21 59.5 -0.2
JCT pmax pmax
comp=Z,24nm,1.4s
O45A Potomac 60.27 62 P P 08 21 59.3 -0.7
baz=315,SNR=20
T41A Mountain View 60.27 67 P P 08 21 58.3 -1.9
baz=315
BVAR Borovoye Array 60.28 319 P P 08 22 00.0 +0.1
comp=Z,0.7nm,0.4s,baz=62,slow=6.2,SNR=7.2
BVAR PcP PcP 08 22 42.7 -0.8
comp=Z,0.7nm,0.4s,baz=75,slow=4.3,SNR=4.7
S42A Caledonia 60.31 66 P P 08 21 58.9 -1.5
baz=315,SNR=12
P44A Sand Creek, Wi 60.33 63 P P 08 21 59.5 -0.9
baz=315
N46A Monticello 60.35 61 P P 08 21 59.5 -1.1
baz=315,SNR=7.8
MSF Maaselka 60.40 347 P P 08 22 07.5 +7.0
W39A Magazine 60.42 70 P P 08 22 00.4 -0.6
baz=315,SNR=5.1
W39A Magazine 60.42 70 eP P 08 22 00.5 -0.6
comp=Z,6.0nm,0.6s
R43A Red Bud 60.44 65 P P 08 21 59.9 -1.3
baz=315
Q44A Meyer Farm, Va 60.51 64 P P 08 22 00.2 -1.4
baz=315
SFIN Lafayette 60.52 61 P P 08 22 00.9 -0.8
baz=315,SNR=13
SFIN Lafayette 60.52 61 eP P 08 22 01.3 -0.4
comp=Z,27nm,0.4s
WHTX Lake Whitney, 60.53 75 P P 08 22 02.0 +0.1
baz=316,SNR=6.6
WHTX Lake Whitney, 60.53 75 eP P 08 22 02.2 +0.3
comp=Z,11nm,0.6s
V40A Witts Springs 60.54 69 P P 08 22 00.5 -1.5
baz=315,SNR=11
V40A Witts Springs 60.54 69 eP P 08 22 00.7 -1.3
comp=Z,18nm,1.2s
T42A Van Buren 60.66 67 P P 08 22 00.6 -2.1
baz=315
U41A Viola 60.68 68 P P 08 22 01.2 -1.7
baz=315,SNR=9.7
X39A Fountain Ranch 60.71 71 P P 08 22 02.8 -0.4
baz=315,SNR=13
P45A Graceland, Par 60.77 62 P P 08 22 02.4 -1.0
baz=315
W40A Ferguson Farm, 60.83 69 P P 08 22 03.1 -0.8
baz=315,SNR=6.0
W40A Ferguson Farm, 60.83 69 eP P 08 22 03.3 -0.6
comp=Z,14nm,0.6s
S43A Fulton Ridge, 60.85 65 P P 08 22 02.7 -1.3
baz=315,SNR=5.2
R44A Waltonville 60.93 64 P P 08 22 03.2 -1.4
baz=315
V41A Mountainview 60.94 68 P P 08 22 03.1 -1.6
baz=315,SNR=13
Q45A Warren Harvey, 60.99 63 P P 08 22 04.0 -0.9
baz=315
MIAR Mount Ida 61.00 70 P P 08 22 04.6 -0.4
baz=316,SNR=9.6
MIAR Mount Ida 61.00 70 eP P 08 22 05.0 0.0
comp=Z,9.9nm,0.8s
MIAR Mount Ida 61.00 70 eP P 08 22 05.0 0.0
MIAR pmax pmax
comp=Z,10.0nm,0.8s
P46A Rosedale 61.00 62 P P 08 22 04.3 -0.6
baz=315
U42A Revenden 61.06 67 P P 08 22 03.4 -2.0
baz=315,SNR=5.3
T43A Greenville 61.08 66 P P 08 22 04.2 -1.4
baz=315,SNR=19
O47A Sheridan 61.12 61 P P 08 22 04.2 -1.6
baz=315,SNR=11
OLIL Olney 61.13 63 eP P 08 22 05.1 -0.8
comp=Z,21nm,1.1s
WHAR Wooly Hollow 61.21 69 eP P 08 22 05.6 -0.9
comp=Z,10nm,1.1s
PBMO Poplar Bluff 61.22 66 eP P 08 22 05.1 -1.4
comp=Z,14nm,0.9s
S44A Carbondale 61.23 65 P P 08 22 05.4 -1.1
baz=315
SIUC Southern Illin 61.23 65 eP P 08 22 04.9 -1.7
comp=Z,7.2nm,0.8s
435B Jarrell 61.31 76 P P 08 22 07.4 +0.2
baz=316
435B Jarrell 61.31 76 eP P 08 22 08.0 +0.8
comp=Z,31nm,1.4s
R45A Skylar, Fairfi 61.34 64 P P 08 22 06.3 -1.0
baz=316
V42A Cord 61.36 68 P P 08 22 05.5 -2.0
baz=316
X40A Basin Creek Fa 61.47 70 P P 08 22 07.5 -0.7
baz=316
X40A Basin Creek Fa 61.47 70 eP P 08 22 07.9 -0.3
comp=Z,5.1nm,0.7s
T44A Benton 61.47 66 P P 08 22 07.1 -1.1
baz=316
SADO Sadowa 61.51 53 P P 08 22 07.3 -1.0
comp=Z,3.5nm,0.5s,baz=346,slow=8.8,SNR=6.6
U43A Rector 61.52 67 P P 08 22 07.1 -1.4
baz=316
Y40A Okolona 61.55 70 P P 08 22 08.0 -0.7
baz=316
P47A Martinsville 61.60 61 P P 08 22 07.9 -1.1
baz=316,SNR=16
OUL Oulu 61.60 348 P P 08 22 08.1 -0.5
S45A Carrier Mills 61.62 64 P P 08 22 08.0 -1.1
baz=316
X41A Kaden, Bauxite 61.65 70 P P 08 22 08.7 -0.7
baz=316
W42A Bald Knob 61.66 68 P P 08 22 08.5 -1.0
baz=316
BLO Bloomington 61.69 62 eP P 08 22 08.7 -0.9
comp=Z,9.0nm,0.5s
BLO Bloomington 61.69 62 eP P 08 22 08.7 -0.9
BLO pmax pmax
comp=Z,9.0nm,0.5s
R46A Gibon Southern 61.83 63 P P 08 22 09.7 -0.9
baz=316
Q47A Bedord North L 61.91 62 P P 08 22 10.0 -1.0
baz=316
USIN University of 61.92 64 eP P 08 22 10.6 -0.6
comp=Z,22nm,0.6s
833A Chaparral WMA, 61.99 79 P P 08 22 12.2 +0.4
baz=317
833A Chaparral WMA, 61.99 79 eP P 08 22 12.7 +0.9
comp=Z,20nm,1.4s
Z40A Long Farm, Mag 62.02 71 P P 08 22 11.6 -0.3
baz=316
Y41A Eaglette Beard 62.03 70 P P 08 22 11.5 -0.5
baz=316
T45A Paducah 62.05 65 P P 08 22 11.4 -0.7
baz=316
S46A Don Dixon Farm 62.09 64 P P 08 22 11.1 -1.2
baz=316
U44B Burton Farm, H 62.14 66 P P 08 22 12.2 -0.4
baz=316
R47A Wooly Knot Far 62.31 63 P P 08 22 13.3 -0.5
baz=316
PLVO Plevna 62.32 52 eP P 08 22 12.9 -0.8
comp=Z,6.3nm,0.6s
N50A Nevada 62.35 59 P P 08 22 13.3 -0.7
baz=316
NATX Nacogdoches 62.35 73 P P 08 22 14.2 +0.1
baz=316
140A Cam and Jess, 62.36 72 P P 08 22 14.1 0.0
baz=316
T46A Princeton 62.45 64 P P 08 22 14.1 -0.7
baz=316,SNR=6.5
U45A Rockin P Farm, 62.46 66 P P 08 22 14.0 -0.8
baz=316
WCI Wyandotte Cave 62.48 63 P P 08 22 14.0 -0.9
baz=316
WCI Wyandotte Cave 62.48 63 eP P 08 22 14.4 -0.5
comp=Z,8.0nm,0.6s
WCI Wyandotte Cave 62.48 63 eP P 08 22 14.4 -0.5
WCI pmax pmax
comp=Z,8.0nm,0.6s
CCAR Cane Creek 62.49 69 eP P 08 22 15.4 +0.4
comp=Z,19nm,0.6s
Y42A Garnett, Star 62.54 70 P P 08 22 15.2 -0.1
baz=316
O50A Cable 62.55 59 P P 08 22 14.5 -0.8
baz=316,SNR=8.5
X43A Marvell 62.57 68 P P 08 22 15.0 -0.5
baz=316
TRQ Mont Tremblant 62.65 49 eP P 08 22 14.3 -1.7
V45A Humboldt 62.79 66 P P 08 22 16.1 -0.8
baz=316
ACSO Alum Creek Sta 62.82 59 P P 08 22 16.1 -1.0
baz=317
P50A Jamestown 62.84 60 P P 08 22 16.3 -1.0
baz=316,SNR=5.9
Z42A Norrel Spur, H 62.85 70 P P 08 22 17.1 -0.3
baz=316
T47A Sharon Grove 62.93 64 P P 08 22 17.2 -0.7
baz=316,SNR=9.5
T47A Sharon Grove 62.93 64 eP P 08 22 17.5 -0.4
comp=Z,17nm,0.8s
HKT Hockley 62.96 75 eP P 08 22 19.0 +1.0
comp=Z,9.2nm,1.5s
EBZ Ebenezer Churc 63.00 67 eP P 08 22 18.4 0.0
S48A Wiedeman Farm, 63.02 63 P P 08 22 17.6 -0.9
baz=316
W45A Hickory Valley 63.08 67 P P 08 22 18.2 -0.7
baz=316,SNR=5.2
WVT Waverly 63.14 65 P P 08 22 18.6 -0.7
baz=316
WVT Waverly 63.14 65 eP P 08 22 18.6 -0.7
comp=Z,6.0nm,0.7s
WVT Waverly 63.14 65 eP P 08 22 18.6 -0.7
WVT pmax pmax
comp=Z,6.0nm,0.7s
241A Mo Tay, Goldon 63.19 72 P P 08 22 19.6 0.0
baz=317,SNR=7.6
241A Mo Tay, Goldon 63.19 72 eP P 08 22 20.3 +0.7
comp=Z,22nm,0.6s
V46A Holladay 63.22 66 P P 08 22 19.0 -0.8
baz=316
U47A Clarksville 63.22 65 P P 08 22 19.1 -0.7
baz=316
T48A Bowling Green 63.23 63 P P 08 22 19.2 -0.7
baz=316
ALLY Alegheny Colle 63.27 56 eP P 08 22 19.9 -0.2
comp=Z,13nm,0.8s
Y44A Strider, Charl 63.36 68 P P 08 22 20.1 -0.6
baz=316
OXF Oxford 63.42 67 P P 08 22 20.5 -0.7
baz=317,SNR=11
OXF Oxford 63.42 67 eP P 08 22 20.7 -0.4
comp=Z,81nm,1.2s
OXF Oxford 63.42 67 eP P 08 22 20.7 -0.4
OXF pmax pmax
comp=Z,81nm,1.2s
X45A UM Field Stati 63.49 67 P P 08 22 20.7 -0.9
baz=317,SNR=6.4
KMI Kunming 63.52 277 P P 08 22 22.9 +0.7
KMI pmax pmax
comp=Z,14nm,0.7s
V47A Nunnelly 63.53 65 P P 08 22 21.0 -0.9
baz=317
341A Kurthwood 63.54 72 P P 08 22 22.0 +0.1
baz=317,SNR=7.0
341A Kurthwood 63.54 72 eP P 08 22 22.6 +0.6
comp=Z,18nm,0.6s
W46A Michie 63.55 66 P P 08 22 21.0 -1.0
baz=317,SNR=5.8
143A Socs Landing, 63.58 70 P P 08 22 22.0 -0.2
baz=317
U48A Cassie Pea, Po 63.59 64 P P 08 22 21.8 -0.4
baz=317,SNR=8.5
242A Grayson 63.61 71 P P 08 22 22.1 -0.3
baz=317
MMNY Mt. Morris Dam 63.61 54 eP P 08 22 21.9 -0.3
comp=Z,17nm,0.8s
M54A Oil Creek Stat 63.62 56 P P 08 22 21.4 -0.9
baz=317
T49A Edmonton 63.71 63 P P 08 22 22.3 -0.7
baz=317,SNR=7.2
Z44A Pea Ridge, Bel 63.72 69 P P 08 22 22.6 -0.5
baz=317
Y45A Yeager Farm, C 63.81 68 P P 08 22 23.2 -0.5
baz=317
LONY Lake Ozonia 63.83 50 P P 08 22 21.7 -2.0
baz=318
PLAL Pickwick Lake 63.83 66 eP P 08 22 23.0 -0.9
comp=Z,15nm,0.6s
N54A Moraine State 63.85 56 P P 08 22 23.1 -0.8
baz=317,SNR=6.1
N54A Moraine State 63.85 56 eP P 08 22 23.1 -0.8
comp=Z,13nm,0.4s
X46A Booneville 63.85 67 P P 08 22 23.2 -0.8
baz=317,SNR=11
W47A Westpoint 63.91 66 P P 08 22 23.4 -0.9
baz=317,SNR=7.4
V48A Smith Brothers 63.99 65 P P 08 22 23.9 -0.9
baz=317
V48A Smith Brothers 63.99 65 eP P 08 22 24.4 -0.5
comp=Z,6.9nm,0.8s
U49A Red Boiling Sp 64.01 63 P P 08 22 24.2 -0.7
baz=317,SNR=7.2
Z45A Winona 64.08 68 P P 08 22 25.0 -0.5
baz=317
243A Waterproof 64.13 71 P P 08 22 25.5 -0.3
baz=317
T50A Nancy 64.16 62 P P 08 22 25.2 -0.8
baz=317,SNR=8.4
Y46A Houston 64.19 68 P P 08 22 25.6 -0.6
baz=317,SNR=7.3
144A Alexander Plac 64.20 70 P P 08 22 26.0 -0.3
baz=317
X47A Russelville 64.30 66 P P 08 22 25.6 -1.3
baz=317,SNR=5.3
W48A Pulaski 64.36 65 P P 08 22 26.6 -0.7
baz=317,SNR=9.0
S51A Beattyville 64.38 61 P P 08 22 26.4 -1.0
baz=317
442A Mamou 64.42 72 P P 08 22 28.6 +0.9
baz=317
VBMS Vicksburg 64.44 70 P P 08 22 27.3 -0.5
baz=317
244A Avery, Jackson 64.47 70 P P 08 22 28.1 +0.1
baz=317,SNR=7.6
V49A McMinnville 64.48 64 P P 08 22 27.2 -0.8
baz=317,SNR=5.5
145A Houston Renfro 64.50 69 P P 08 22 27.9 -0.4
baz=317
S52A Salyersville 64.63 61 P P 08 22 28.5 -0.6
baz=317
Z46A Louisville 64.64 68 P P 08 22 28.7 -0.4
baz=317
Y47A UCPARC, Winfie 64.75 67 P P 08 22 28.8 -1.0
baz=317,SNR=5.8
W49A Belvidere 64.75 65 P P 08 22 28.8 -1.0
baz=317
X48A Hartselle 64.80 66 P P 08 22 28.9 -1.2
baz=317
344A Westbrook Farm 64.88 71 P P 08 22 30.9 +0.2
baz=317
MCWV Mont Chateau 64.89 57 P P 08 22 29.8 -0.9
baz=318
245A Little AP, Sta 64.94 70 P P 08 22 30.8 -0.2
baz=317
BINY Binghamton 64.95 53 P P 08 22 30.3 -0.7
baz=319,SNR=6.3
BINY Binghamton 64.95 53 eP P 08 22 30.4 -0.7
comp=Z,9.9nm,0.5s
146A Union 64.98 69 P P 08 22 31.3 -0.1
baz=317,SNR=7.6
146A Union 64.98 69 eP P 08 22 31.6 +0.3
comp=Z,48nm,0.6s
V50A Pikevile 65.00 64 P P 08 22 30.5 -0.9
baz=317
FINES FINESS Array B 65.08 347 P P 08 22 30.7 -0.8
comp=Z,1.9nm,0.6s,baz=16,slow=7.1,SNR=16
O56A Blue Knob Stat 65.09 56 P P 08 22 31.0 -1.1
baz=318
T52A Hallie 65.10 61 P P 08 22 31.9 -0.2
baz=318
Y48A Jasper 65.12 66 P P 08 22 30.9 -1.4
baz=317
Z47A Carrollton 65.14 68 P P 08 22 31.6 -0.7
baz=317,SNR=18
X49A Woodville 65.16 65 P P 08 22 31.5 -0.9
baz=317,SNR=6.7
SSPA Standing Stone 65.17 55 P P 08 22 31.7 -0.7
baz=318
SSPA Standing Stone 65.17 55 eP P 08 22 31.7 -0.7
comp=Z,18nm,1.3s
TZTN Tazewell 65.21 62 P P 08 22 32.2 -0.6
baz=318
W50A Signal Mountai 65.22 64 P P 08 22 32.0 -1.0
baz=318
W50A Signal Mountai 65.22 64 eP P 08 22 32.1 -0.8
comp=Z,15nm,1.3s
Z48A Northport 65.30 67 P P 08 22 32.2 -1.1
baz=317,SNR=5.6
V51A Loudon 65.31 63 P P 08 22 32.6 -0.8
baz=318
V51A Loudon 65.31 63 eP P 08 22 32.7 -0.7
comp=Z,32nm,1.6s
LBNH Lisbon 65.36 49 P P 08 22 32.4 -1.2
baz=320
345A Thompson Farm, 65.39 70 P P 08 22 33.7 -0.3
baz=318
147A Livingston 65.41 68 P P 08 22 33.6 -0.5
baz=318
147A Livingston 65.41 68 eP P 08 22 34.0 -0.1
comp=Z,24nm,0.6s
KSPA Keystone Colle 65.54 53 eP P 08 22 34.4 -0.4
comp=Z,7.4nm,0.7s
X50B Fort Payne 65.58 65 P P 08 22 34.2 -1.0
baz=318,SNR=5.2
Y49A Blount Mountai 65.59 66 P P 08 22 34.2 -1.1
baz=318
346A Big Creek Wild 65.66 70 P P 08 22 35.3 -0.4
baz=318
247A Quitman 65.67 69 P P 08 22 35.7 -0.1
baz=318
V52A Sevierville 65.70 63 P P 08 22 35.2 -0.7
baz=318
TKL Tuckaleechee C 65.74 63 P P 08 22 35.3 -0.9
comp=Z,5.4nm,0.7s,baz=277,slow=0.9,SNR=11
148A Greensboro 65.83 68 P P 08 22 36.2 -0.5
baz=318
LRAL Lakeview Retre 65.87 67 P P 08 22 35.6 -1.4
baz=318
U53A Fall Branch 65.87 62 P P 08 22 36.4 -0.6
baz=318
X51A Calhoun 65.94 64 P P 08 22 36.5 -1.0
baz=318
Z49A Columbiana 66.01 66 P P 08 22 36.8 -1.2
baz=318
N59A State Game Lan 66.02 54 P P 08 22 37.3 -0.7
baz=319,SNR=11
N59A State Game Lan 66.02 54 eP P 08 22 37.5 -0.5
comp=Z,20nm,1.0s
545A Edgard 66.05 72 P P 08 22 38.1 -0.1
baz=318
W52A Murphy 66.07 63 P P 08 22 37.4 -1.0
baz=318
248A Dixon Mills 66.14 68 P P 08 22 38.4 -0.4
baz=318
347A Saraland 66.18 69 P P 08 22 39.1 0.0
baz=318
V53A Saluda 66.25 62 P P 08 22 39.1 -0.5
baz=318
149A Jones 66.30 67 P P 08 22 38.9 -0.9
baz=318
Z50A Ashland 66.31 66 P P 08 22 38.6 -1.3
baz=318,SNR=6.6
Z50A Ashland 66.31 66 eP P 08 22 38.9 -1.1
comp=Z,14nm,0.6s
Y51A Rockmart 66.32 65 P P 08 22 38.6 -1.4
baz=318
BLA Blacksburg 66.40 59 P P 08 22 39.6 -0.8
baz=318
W53A Cullowhee 66.43 63 P P 08 22 40.7 -0.1
baz=318
X52A Dahlonega 66.45 64 P P 08 22 40.1 -0.7
baz=318
LUPA Lehigh Univers 66.46 54 eP P 08 22 40.5 -0.2
comp=Z,1.4nm,0.7s
249A Camden 66.58 68 P P 08 22 41.2 -0.3
baz=318
150A Eclectic 66.73 67 P P 08 22 41.7 -0.8
baz=318
PAL Palisades 66.88 53 P P 08 22 42.4 -0.9
baz=320
Y52A Lilburn 66.90 64 P P 08 22 42.8 -0.8
baz=318
NB2 NORSAR Subarra 66.94 355 P P 08 22 43.0 -0.4
comp=Z,1.5nm,0.7s,baz=7.2,slow=6.5
NB2 NORSAR Subarra 66.94 355 P P 08 22 43.0 -0.4
349A Repton 67.00 68 P P 08 22 44.0 -0.2
baz=318
AKTO Aktyubinsk 67.05 324 P P 08 22 45.1 +0.9
comp=Z,1.2nm,0.5s,baz=73,slow=11,SNR=3.8
250A Grady 67.06 67 P P 08 22 43.9 -0.7
baz=318
IP07 Quail 67.13 57 eP P 08 22 44.9 -0.1
comp=Z,15nm,0.7s
Y53A Monroe 67.18 64 P P 08 22 44.6 -0.8
baz=318,SNR=5.2
151A Opelika 67.19 66 P P 08 22 43.9 -1.5
baz=318
Z52A Williamson 67.21 65 P P 08 22 44.3 -1.2
baz=318
152A Waverly Hall 67.42 66 P P 08 22 45.4 -1.5
baz=318
350A Dozier 67.44 68 P P 08 22 46.4 -0.6
baz=318
KMSC Kings Mountain 67.45 62 P P 08 22 46.3 -0.7
baz=319,SNR=6.4
KMSC Kings Mountain 67.45 62 eP P 08 22 46.0 -1.0
comp=Z,17nm,1.0s
251A Midway 67.46 67 P P 08 22 46.0 -1.1
baz=318
GOGA Godfrey 67.57 64 P P 08 22 46.7 -1.1
baz=319
GOGA Godfrey 67.57 64 P P 08 22 46.3 -1.5
GOGA pmax pmax
comp=Z,9.0nm,1.1s
Z53A Monticello 67.61 64 P P 08 22 46.9 -1.1
baz=319,SNR=6.7
Y54A Tignall 67.67 63 P P 08 22 47.5 -0.9
baz=319,SNR=7.9
HFS Hagfors 67.68 353 P P 08 22 47.6 -0.4
comp=Z,2.1nm,0.4s,baz=5.7,slow=2.9,SNR=23
153A Fort Valley 67.94 65 P P 08 22 49.0 -1.1
baz=319
351A Pinckard 67.96 67 P P 08 22 49.6 -0.6
baz=319
Z54A Sparta 68.05 64 P P 08 22 49.9 -0.9
baz=319
JSC Jenkinsville 68.14 62 eP P 08 22 50.8 -0.5
comp=Z,13nm,0.5s
JSC Jenkinsville 68.14 62 eP P 08 22 50.8 -0.5
JSC pmax pmax
comp=Z,13nm,0.5s
253A Americus 68.21 66 P P 08 22 50.6 -1.2
baz=319
154A Montrose 68.37 65 P P 08 22 51.8 -1.0
baz=319
Z55A Blythe 68.45 63 P P 08 22 52.7 -0.6
baz=319,SNR=5.1
155A Kite 68.72 64 P P 08 22 54.1 -0.8
baz=319
254A Abbeville 68.77 65 P P 08 22 54.6 -0.7
baz=319
CNNC Cliffs of the 69.23 59 P P 08 22 57.5 -0.5
baz=320
156A Sylvania 69.23 63 P P 08 22 57.8 -0.3
baz=319
255A Hazlehurst 69.24 65 P P 08 22 57.5 -0.6
baz=319
MYLDM Lahad Datu 69.25 251 eP P 08 23 01.2 +2.7
comp=Z,16nm,0.6s
355A Pearson 69.46 65 P P 08 22 58.9 -0.7
baz=319
NHSC New Hope 69.61 62 P P 08 23 00.1 -0.3
baz=320

356A	Blackshear	69.88	65	P	P	08 23 01.6	-0.5
	baz=320						
TLIG	Tlapa	70.49	86	eP	P	08 23 09.0	+2.8
	comp=Z,22nm,0.5s						
CMAR	Chiang Mai Arr	70.82	276	P	P	08 23 08.0	0.0
	comp=Z,1.6nm,0.4s,baz=26,slow=7.0,SNR=9.2						
EKA	Eskdalemuir Arr	72.90	2	P	P	08 23 19.9	+0.1
	comp=Z,2.2nm,0.6s,baz=356,slow=5.0,SNR=15						
CMIG	Matias Romero	73.12	84	P	P	08 23 22.3	+0.6
	comp=Z,5.1nm,0.8s,baz=311,slow=4.7,SNR=6.8						
AKASG	Malin Array Be	74.85	342	P	P	08 23 30.8	-0.4
	comp=Z,1.4nm,0.3s,baz=20,slow=6.8,SNR=4.2						
KIEV	Kiev	74.86	342	eP	P	08 23 30.9	-0.4
	comp=Z,4.3nm,0.9s						
KIEV	Kiev	74.86	342	eP	P	08 23 30.9	-0.4
KIEV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KBZ	Khabaz	77.94	330	P	P	08 23 48.9	+0.2
	comp=Z,0.4nm,0.3s,baz=349,slow=5.2,SNR=3.7						
BUR08	Bucovina Ar. S	78.52	344	eP	P	08 23 52.6	+0.6
BUR04	Bucovina Ar. S	78.55	344	eP	P	08 23 52.4	+0.2
GERES	GERESS Array B	78.88	351	P	P	08 23 53.4	-0.6
	comp=Z,0.6nm,0.5s,baz=21,slow=5.7,SNR=6.0						
BATI	Baumata	79.09	238	P	P	08 23 55.8	+0.4
	comp=Z,17nm,0.4s,baz=68,slow=5.4,SNR=2.9						
MLR	Muntele Rosu	80.47	342	P	P	08 24 03.8	+1.2
	comp=Z,0.7nm,0.5s,baz=333,slow=9.0,SNR=7.9						
KBA	Koelnbreinsper	80.66	351	P	P	08 24 04.4	+0.7
KBA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BZS	Buzias	81.08	346	P	P	08 24 05.7	0.0
BZS				pmax	pmax		
	comp=Z,3.0nm,2.1s						
WRA	Warramunga Arr	82.44	224	P	P	08 24 12.8	-0.1
	comp=Z,2.4nm,0.7s,baz=34,slow=6.3,SNR=15						
PSI	Prapat	82.93	265	P	P	08 24 16.0	+0.1
	comp=Z,11nm,0.7s,baz=0.2,slow=4.6,SNR=15						
PSI	Prapat	82.93	265	eP	P	08 24 16.0	+0.1
	comp=Z,11nm,0.6s						
VTS	Vitosha	83.77	344	P	P	08 24 19.7	-0.2
VTS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRTR	Keskin Array B	84.26	335	P	P	08 24 22.6	+0.1
	comp=Z,1.5nm,0.7s,baz=67,slow=2.4,SNR=8.0						
AS01	Alice Springs	85.90	222	eP	P	08 24 30.4	0.0
AS01				epP	pP	08 25 08.9	-1.2
ASAR	Alice Springs	85.92	222	P	P	08 24 30.9	+0.4
	comp=Z,1.6nm,0.7s,baz=25,slow=5.4,SNR=24						
ASAR				pP	pP	08 25 09.8	-0.5
	comp=Z,0.9nm,0.8s,baz=36,slow=4.7,SNR=3.0						
ASAR				sP	sP	08 25 26.9	0.0
	comp=Z,0.9nm,0.9s,baz=30,slow=3.4,SNR=3.0						
MDRS	Chennai	86.30	286	ex	P	08 24 33.8	+1.1
ESDC	Sonseca Array	88.52	4	P	P	08 24 42.0	-1.0
	comp=Z,0.3nm,0.4s,baz=22,slow=3.4,SNR=4.3						
STKA	Stephens Creek	90.45	213	P	P	08 24 53.0	+1.3
	comp=Z,1.6nm,0.6s,baz=318,slow=4.2,SNR=7.2						
PLCA	Paso Flores	131.28	106	PKP	PKPdf	08 31 01.9	+0.6
	comp=Z,1.2nm,0.5s,baz=315,slow=5.7,SNR=3.9						
PLCA				SKPbc	SKPbc	08 34 10.4	-0.7
	comp=Z,5.9nm,0.7s,baz=319,slow=4.0,SNR=11						
MAW	Mawson	146.96	218	PKPbc	PKPbc	08 31 31.6	+0.7
	comp=Z,3.0nm,0.6s,baz=122,slow=3.9,SNR=7.2						
BOSA	Boshof	150.42	313	PKPbc	PKPbc	08 31 40.4	-0.7
	comp=Z,1.6nm,0.5s,baz=60,slow=3.4,SNR=7.9						

*ISK **24** 08:35:35.6, 38°.95N×29°.68E, h5km, ML2.1/8*
*ISCJB **24** 08:35:36.1±0.6, 38°.94N±0°.04×29°.69E±0°.04, h9km, Error ellipse: s-maj=6.4km s-min=4.1km az=156.7*
*CSEM **24** 08:35:36.0±0.2, 38°.94N×29°.71E, h5km, ML2.1, Error ellipse: s-maj=5.0km s-min=3.4km az=151.0*
*DDA **24** 08:35:36.6, 38°.98N×29°.67E, h7km, Ml2.5*
ISC 24 08:35:36.5±0.9, 38°.94N±0°.03×29°.70E±0°.03, h9km, n37, σ0°66/42, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEDZ	Gediz	0.25	295	PG	Pg	08 35 40.8	-0.8
GEDZ				SG	Sg	08 35 44.7	-0.3
GEDZ	Gediz	0.25	295	ePg	Pg	08 35 40.8	-0.8
GEDZ				eSg	Sg	08 35 44.7	-0.3
SHAP	Saphane-Kutahy	0.39	283	PG	Pg	08 35 43.4	-0.7
SHAP				SG	Sg	08 35 48.6	-0.6
SHAP	Saphane-Kutahy	0.39	283	ePg	Pg	08 35 43.4	-0.7
SHAP				eSg	Sg	08 35 48.6	-0.6
KUTH	Kutahya	0.52	28	PG	Pg	08 35 46.2	-0.4
KUTH				SG	Sg	08 35 53.9	+0.5
KUTH	Kutahya	0.52	28	ePg	Pg	08 35 46.2	-0.4
KUTH				eSg	Sg	08 35 53.9	+0.5
TVSB	Tavsanli	0.54	340	PG	Pg	08 35 46.4	-0.6
TVSB	Tavsanli	0.54	340	ePg	Pg	08 35 46.4	-0.6
SIMA	Simav-Kutahya	0.58	285	PG	Pg	08 35 47.0	-0.7
SIMA	Simav-Kutahya	0.58	285	ePg	Pg	08 35 47.0	-0.7
KHL	Karahalli	0.63	193	PG	Pg	08 35 48.2	-0.5
KHL	Karahalli	0.63	193	ePg	Pg	08 35 48.2	-0.5
DEMI	Demirci	0.78	278	i P	Pg	08 35 51.2	-0.2
DEMI	Demirci	0.78	278	P	Pg	08 35 51.2	-0.2
KULA	Kula-Manisa	0.92	243	PG	Pg	08 35 53.5	-0.7
KULA	Kula-Manisa	0.92	243	ePg	Pg	08 35 53.5	-0.7
BOLV	Bolvadin	1.00	102	i P	Pb	08 35 56.4	+0.4
BOLV	Bolvadin	1.00	102	P	Pb	08 35 56.4	+0.4
AUBOZ	BOZOYUK	1.00	15	PG	Pg	08 35 55.2	-0.6
AUBOZ	BOZOYUK	1.00	15	i P	Pb	08 35 56.3	+0.2
AUBOZ	BOZOYUK	1.00	15	ePg	Pg	08 35 55.2	-0.6
AUBOZ	BOZOYUK	1.00	15	P	Pb	08 35 56.3	+0.2
AUKUT	KUTAHYA	1.04	13	i P	Pg	08 35 46.8	-10
AUKUT				i S	Sg	08 35 53.9	-16
ESKT	Eskisehir	1.06	57	i P	Pg	08 35 55.7	-1.2
SEYT	Eskypehyr	1.06	57	P	Pg	08 35 55.7	-1.2
BORA	Eskisehir	1.10	31	PN	Pg	08 35 57.2	-0.5
BORA	Eskisehir	1.10	31	i P	Pg	08 35 57.0	-0.7
BORA	Eskisehir	1.10	31	P	Pg	08 35 57.0	-0.7
BORA	Eskisehir	1.10	31	ePn	Pg	08 35 57.2	-0.5
DURS	Dursunbey	1.16	305	i P	Pn	08 36 00.4	+1.4
DURS	Dursunbey	1.16	305	P	Pn	08 36 00.4	+1.4
CAVI	Cavuskoy	1.27	5	PN	Pn	08 36 00.1	-0.3
CAVI	Cavuskoy	1.27	5	ePn	Pn	08 36 00.1	-0.3
YLV	Yalova	1.65	351	PN	Pn	08 36 06.0	+0.4
YLV	Yalova	1.65	351	ePn	Pn	08 36 06.0	+0.4
AYDB	Zeytinkoy-Aydi	1.73	236	PN	Pn	08 36 07.2	+0.3
AYDB	Zeytinkoy-Aydi	1.73	236	ePn	Pn	08 36 07.2	+0.3

MEX 24 08:55:16.9±0.3, 15°.62N×93°.82W, h79km±4km, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		0.59	81	eP	Pn	08 55 30.0	-1.3
PCIG				eS	Sn	08 55 40.3	-1.6
TGIG		1.34	30	eP	Pn	08 55 39.0	-1.1
TGIG				eS	Sn	08 55 55.9	-1.7
CCIG	Comitan	1.75	67	eP	Pn	08 55 44.1	-1.5
CCIG				eS	Sn	08 56 05.8	-1.6

*ISCJB **24** 08:55:57.5±0.5, 28°.41N±0°.04×98°.32W±0°.04, h10km, mb3.8/4, Error ellipse: s-maj=6.4km s-min=3.9km az=154.7*
*IDC **24** 08:55:57.7±4.9, 28°.10N×98°.55W, h0km, mb3.3/1, mb1 3.9/4, mb1mx3.5/53, mbtmp3.5/4, ML4.6/2, Error ellipse: s-maj=86.0km s-min=28.7km az=172.0*
*NEIC **24** 08:55:58.6±0.4, 28°.43N×98°.38W, h5km, MN3.4, Error ellipse: s-maj=6.5km s-min=4.8km az=149.0*
NEIC Felt at Kerrville and Pleasanton.
ISC 24 08:55:59.0±1.0, 28°.40N±0°.06×98°.41W±0°.05, h10km, n59, σ2°01/65, mb3.8/4, Southern Texas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
833A	Chaparral WMA,	0.87	265	P	Pn	08 56 17.0	-0.4
	baz=76						
833A				S	Sn	08 56 30.2	+0.1
	baz=76						
833A	Chaparral WMA,	0.87	265	ePn	Pn	08 56 17.4	+0.1
833A				eSn	Sg	08 56 25.6	-1.6
KVTX	Kingsville	0.97	152	ePg	Pn	08 56 19.4	+0.8
JCT	Junction City	2.40	330	P	Pn	08 56 38.5	+0.1
	baz=148						
JCT				S	Sn	08 57 08.1	+0.1
	baz=148						
JCT	Junction City	2.40	330	ePn	Pn	08 56 38.6	+0.1
				eSn	Sn	08 57 08.2	+0.2
435B	Jarrell	2.48	17	P	Pb	08 56 40.5	-3.2
	baz=198						
435B				Sb	Sb	08 57 15.2	+0.9
	baz=198						
435B	Jarrell	2.48	17	ePn	Pb	08 56 40.4	-3.2
HKT	Hockley	2.73	55	ePn	Pn	08 56 42.3	-0.6
LNIG	Linares	3.62	195	ePn	Pn	08 56 53.8	-1.3
WHTX	Lake Whitney,	3.67	13	P	Pn	08 56 56.5	+0.6
	baz=194						
WHTX	Lake Whitney,	3.67	13	ePn	Pn	08 56 56.6	+0.7
ABTX	Abilene, Hawle	4.34	346	P	Pn	08 57 05.5	+0.4
	baz=165						
ABTX				S	Sn	08 57 53.6	-2.2
	baz=165						
ABTX	Abilene, Hawle	4.34	346	ePn	Pn	08 57 05.5	+0.4
NATX	Nacogdoches	4.66	43	ePn	Pn	08 57 08.6	-0.9
TXAR	Lajitas Array	4.71	283	Pn	Pn	08 57 10.3	+0.1
	7.5nm,0.3s,baz=110,slow=14,SNR=248						
TXAR				Sn	Sn	08 58 04.9	0.0
	8.7nm,0.3s,baz=137,slow=27,SNR=4.0						
TXAR				Lg	Lg	08 58 27.8	
	16nm,0.3s,baz=316,slow=8.8,SNR=6.6						
TX31	Lajitas Ar. Si	4.71	283	ePn	Pn	08 57 10.6	+0.4
341A	Kurthwood	5.41	56	ePn	Pn	08 57 18.6	-1.1
240A	Hunter Patters	5.41	47	ePn	Pn	08 57 20.4	+0.6
140A	Cam and Jess,	5.94	43	ePn	Pn	08 57 26.3	-0.7
241A	Mo Tay, Goldon	5.96	51	ePn	Pn	08 57 22.8	-4.6
WMOK	Wichita Mounta	6.33	357	P	Pn	08 57 31.7	-0.7
	baz=177						
WMOK	Wichita Mounta	6.33	357	ePn	Pn	08 57 31.7	-0.7
WMOK				eSn	Sn	08 58 45.9	+1.2
HPIG		6.60	259	ePn	Pn	08 57 36.3	0.0
MSTX	Muleshoe	6.69	327	ePn	Pn	08 57 37.6	+0.1
MNTX	Cornudas Mount	6.88	300	ePn	Pn	08 57 41.9	+1.9
MNTX				eSg	Sg	08 59 38.4	-1.6
AMTX	Amarillo	7.04	337	ePn	Pn	08 57 42.0	-0.2
AMTX				eSg	Sg	08 59 41.0	-4.0
MIAR	Mount Ida	7.38	33	ePn	Pn	08 57 45.4	-1.5
X40A	Basin Creek Fa	7.71	37	ePn	Pn	08 57 50.5	-0.9
TUL1	Leonard	7.81	16	ePb	Pb	08 58 14.4	-0.1
W39A	Magazine	7.83	29	ePn	Pn	08 57 53.1	+0.1
CCAR	Cane Creek	7.91	44	ePn	Pn	08 57 53.7	-0.3
W40A	Ferguson Farm,	8.15	33	ePn	Pn	08 57 58.0	+0.6
UALR	University of	8.19	38	ePn	Pn	08 57 56.9	-1.0
WHAR	Wooly Hollow	8.62	36	ePn	Pn	08 58 06.6	+2.8
HHAR	Hobbs	8.72	25	ePn	Pn	08 58 08.3	+3.1
V40A	Witts Springs	8.77	31	ePn	Pn	08 58 05.0	-0.9
ANMO	Albuquerque	9.46	316	Pn	Pn	08 58 22.0	+6.4
	0.1nm,0.3s,baz=117,slow=19,SNR=3.1						
ANMO				Pg		08 58 52.4	
	0.4nm,0.3s,baz=119,slow=18,SNR=10						
ANMO				Lg	Lg	09 00 52.6	
	1.9nm,0.3s,baz=30,slow=8.3,SNR=4.1						
ANMO	Albuquerque	9.46	316	Pn	Pn	08 58 16.9	+1.3
	15nm,0.8s						
ANMO				Pg		08 58 52.4	
ANMO				Lg	Lg	09 00 52.6	
T25A	Trinidad	10.07	331	ePn	Pn	08 58 30.1	+6.2
S39A	Bolivar	10.20	23	ePn	Pn	08 58 29.4	+4.0
PBMO	Poplar Bluff	10.72	37	ePn	Pn	08 58 31.2	-1.4
KSU1	Kansas State U	10.78	7	ePn	Pn	08 58 34.0	+0.6
SDCO	Great Sand Dun	11.05	329	Pn	Pn	08 58 44.2	+6.8
	8.7nm,0.8s						
R40A	Maddies Statio	11.11	26	ePn	Pn	08 58 37.2	-0.8
R40A				eSn	Sn	09 00 45.4	+3.0
KSCO	Kaye Shedlock'	11.15	343	ePn	Pn	08 58 43.0	+4.4
CCM	Cathedral Cave	11.34	30	ePn	Pn	08 58 38.7	-2.3
P40A	Paris	12.29	24	ePn	Pn	08 58 51.9	-2.1
ECSD	EROS Data Cent	15.37	5	ePn	Pn	08 59 32.4	-3.6
	4.1nm,0.6s						
JFWS	Jewell Farm	15.91	22	ePn	Pn	08 59 42.8	-0.2
	6.7nm,0.7s						
PDAR	Pinedale Array	16.94	331	P	P	08 59 58.9	+0.6
	0.2nm,0.3s,baz=130,slow=12,SNR=8.3						
PDAR	Pinedale Array	16.94	331	ePn	P	08 59 59.9	+1.5
AHID	Auburn Hatcher	17.63	328	ePn	P	09 00 10.6	+4.6
	3.5nm,0.8s						
SNOW	Snow King Moun	18.02	330	ePn	P	09 00 14.5	+4.2
	3.0nm,1.0s						
TPAW	Teton Pass	18.13	329	ePn	P	09 00 14.6	+3.1
	2.5nm,0.8s						
NVAR	Mina Array Bea	19.35	306	P	Pn	09 00 26.6	+0.6
	baz=124,slow=11,SNR=7.0						
WVOR	Wild Horse Val	21.56	316	eP	P	09 00 53.9	+5.2
	2.2nm,0.8s						
MOD	Modoc Plateau	22.32	313	eP	P	09 00 59.2	+2.2
	3.6nm,0.8s						
D08A	Wollman Farm,	24.57	325	eP	P	09 01 23.8	+4.7
	6.9nm,0.8s						
ILAR	Eielson Array	47.33	334	P	P	09 04 34.5	+1.8
	0.3nm,0.7s,baz=133,slow=5.6,SNR=6.9						

*CSEM **24** 09:12:00.5±0.2, 33°.87N×27°.90E, h10km, ML3.9, Error ellipse: s-maj=9.5km s-min=5.0km az=90.0*
*ISCJB **24** 09:12:01.2±0.4, 33°.84N±0°.03×27°.94E±0°.05, h33km, Error ellipse: s-maj=6.4km s-min=3.7km az=158.2*
*HLW **24** 09:12:02.6, 33°.84N×27°.94E, h26km±10km, Md4.0, Ml3.9*
*GII **24** 09:12:09.1±0.0, 33°.69N×28°.38E, h30km*
*DDA **24** 09:12:23.0, 35°.56N×28°.56E, h24km, Ml3.1*
ISC 24 09:12:02.1±1.2, 33°.87N±0°.05×27°.89E±0°.05, h35km, n65, σ1°30/68, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	Karpathos	1.78	341	eP	Pn	09 12 30.7	+0.3
ARG	Arkhangelos	2.35	5	eP	Pn	09 12 38.4	+0.2
AKAS	Kas	2.75	30	eP	Pn	09 12 43.7	-0.1
IDI	Anoyia	2.85	301	eP	Pn	09 12 46.6	+1.5
DAT	Datca	2.87	355	eP	Pn	09 12 45.9	+0.5
DAT	Datca	2.87	355	i P	Pn	09 12 46.5	+1.1
DAT	Datca	2.87	355	P	Pn	09 12 46.5	+1.1
FETY	Fethiye	2.93	19	eP	Pn	09 12 46.4	+0.2
TURN	Turunc	3.06	11	eP	Pn	09 12 46.4	-1.5
TURN	Turunc	3.06	11	i P	Pn	09 12 46.7	-1.2
TURN	Turunc	3.06	11	P	Pn	09 12 46.7	-1.2
SANT	Santorini	3.19	322	eP	Pn	09 12 51.2	+1.4
BODT	Bodrum	3.22	352	eP	Pn	09 12 50.9	+0.7
SLUM	Salum	3.27	224	P	Pn	09 12 52.0	+1.1
	baz=226						
SLUM	Salum	3.27	224	P	Pn	09 12 52.0	+1.1
ELL	Elmali	3.31	29	eP	Pn	09 12 51.8	+0.2
MLSB	Milas	3.42	358	eP	Pn	09 12 53.8	+0.8
GOLH	Golhisar	3.63	22	i P	Pn	09 12 57.3	+1.4
GOLH	Golhisar	3.63	22	P	Pn	09 12 57.3	+1.4
TAVA	DENIZLI_Tavas	3.69	13	i P	Pn	09 12 57.1	+0.5
TAVA	DENIZLI_Tavas	3.69	13	P	Pn	09 12 57.1	+0.5
KORT	Korkueli	3.72	32	eP	Pn	09 12 57.6	+0.5
KORT	Korkueli	3.72	32	i P	Pn	09 12 59.0	+1.9
KORT	Korkueli	3.72	32	P	Pn	09 12 59.0	+1.9
APE	Apeiranthos	3.73	330	eP	Pn	09 12 57.7	+0.5
AYDN	Tasoluk	3.79	360	i P	Pn	09 12 58.9	+0.9
AYDN	Tasoluk	3.79	360	P	Pn	09 12 58.9	+0.9
GCAM	G?zelcaml?	3.86	352	eP	Pn	09 13 00.3	+1.4
DNZL	Cakiroluk	3.93	14	i P	Pn	09 13 01.2	+1.1
DNZL	Cakiroluk	3.93	14	P	Pn	09 13 01.2	+1.1
AYDB	Zeytinkoy-Aydi	4.07	0	eP	Pn	09 13 02.9	+0.9
KEPZ	Antalya-Kepez	4.29	44	i P	Pn	09 13 05.7	+0.9
KEPZ	Antalya-Kepez	4.29	44	P	Pn	09 13 05.7	+0.9
GAZI	Gazipasa	4.33	56	i P	Pn	09 13 08.0	+2.5
GAZI	Gazipasa	4.33	56	P	Pn	09 13 08.0	+2.5
SUTC	Sutluce-Ispart	4.40	34	eP	Pn	09 13 07.3	+0.8
CSS	Mathiatis	4.63	75	Pn	Pn	09 13 11.7	+2.2
KULA	Kula-Manisa	4.68	7	eP	Pn	09 13 11.5	+1.2
SWA2		5.06	205	P	Pn	09 13 16.9	+1.5
	baz=206						
SWA2				AMP		09 14 00.0	
	baz=206						
SWA2				S	Sn	09 14 10.5	-2.0
	baz=206						
SWA2		5.06	205	P	Pn	09 13 16.9	+1.5
GULN	MERSIN_Gulnar	5.18	62	i P	Pn	09 13 16.6	-0.5
GULN	MERSIN_Gulnar	5.18	62	P	Pn	09 13 16.6	-0.5
HSAF	As Saff	5.26	143	P	Pn	09 13 19.1	+0.8
	baz=142						
HSAF	As Saff	5.26	143	P	Pn	09 13 19.1	+0.8
HHAG	Hagoal	5.29	136	P	Pn	09 13 20.1	+1.4
	baz=136						
HHAG	Hagoal	5.29	136	P	Pn	09 13 20.1	+1.4
GLL	Jalalah	5.37	142	P	Pn	09 13 20.2	+0.4
	baz=141						
GLL	Jalalah	5.37	142	P	Pn	09 13 20.2	+0.4
RSH		5.72	119	P	Pn	09 13 25.4	+0.8
	baz=118						
RSH		5.72	119	P	Pn	09 13 25.3	+0.8
KIZT	Kizilcal	5.95	32	eP	Pn	09 13 29.4	+1.7
NBNS	Bani Suef	5.99	150	P	Pn	09 13 29.0	+0.8
	baz=150						
NBNS	Bani Suef	5.99	150	P	Pn	09 13 29.0	+0.8
YTIR	Yattir	6.59	110	Pn	Pn	09 13 37.8	+1.3
HMDT	Nahal Hemdat	6.61	102	Pn	Pn	09 13 37.9	+1.2
HFRF	Wahat Farafira	6.71	177	P	Pn	09 13 39.1	+1.0
	baz=177						
HFRF	Wahat Farafira	6.71	177	P	Pn	09 13 39.1	+1.0
DSI	Dead Sea	6.71	108	Pn	Pn	09 13 39.4	+1.2
DSI				Sn	Sn	09 14 51.4	-2.0
KRMI	Paran Flat	6.90	121	Pn	Pn	09 13 41.8	+1.0
PRNI	Paran	6.98	118	Pn	Pn	09 13 43.4	+1.6
HRFI	Mount Harif	7.17	120	Pn	Pn	09 13 46.9	+2.4
MBRI	Mt Berech	7.22	122	Pn	Pn	09 13 46.1	+0.8
MBRI				Sn	Sn	09 15 02.7	-3.4
EIL	Elat	7.32	123	Pn	Pn	09 13 47.6	+1.1
HBST	Basata	7.46	127	P	Pn	09 13 48.9	+0.6
	baz=126						
HBST	Basata	7.46	127	P	Pn	09 13 48.9	+0.6

*IDC **24** 09:15:36.7±1.8, 32°.70S×178°.06W, h0km, mb4.3/3, mb1 4.5/4, mb1mx3.9/40, mbtmp4.3/4, ML3.9/1, Error ellipse: s-maj=54.7km s-min=36.7km az=151.0*
ISC 24 09:15:41.2±2.1, 32°.8S±0°.2×178°.0W±0°.3, h35km, n7, σ0°59/8, mb4.4/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	6.72	215	Pn	Pn	09 17 17.8	+0.4
	2.3nm,0.3s,baz=238,slow=4.1,SNR=19						
URZ				Sn	Sn	09 18 32.2	-0.6
	5.1nm,0.3s,baz=145,slow=21,SNR=13						
CTA	Charters Tower	34.26	283	P	P	09 22 24.2	+0.2
	2.4nm,0.5s,baz=113,slow=5.6,SNR=4.4						
ASAR	Alice Springs	43.03	270	P	P	09 23 37.9	+0.2
	2.2nm,0.6s,baz=108,slow=7.6,SNR=30						
WRA	Warramunga Arr	44.24	275	P	P	09 23 47.2	-0.1
	2.3nm,0.3s,baz=112,slow=8.1,SNR=122						
KURBB	Kurchatov Arra	122.74	313	PKP	PKPdf	09 34 33.3	+0.5
	0.5nm,0.7s,baz=119,slow=2.1,SNR=6.0						
FINES	FINESS Array B	147.41	339	PKPbc	PKPab	09 35 21.6	-0.9
	1.8nm,0.5s,baz=50,slow=3.9,SNR=12						
BRTR	Keskin Array B	153.67	294	PKPbc	PKPbc	09 35 36.5	0.0
	0.2nm,0.3s,baz=140,slow=7.0,SNR=3.7						

MEX 24 09:28:40.8±0.6, 14°.54N×94°.09W, h20km±202km, MD4.0, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		1.43	36	i S	Sn	09 29 19.5	-4.3
TGIG		2.41	23	eP	Pn	09 29 15.7	-3.5
TGIG				i S	Sn	09 29 43.8	-4.4
CCIG	Comitan	2.56	47	eP	Pn	09 29 19.6	-1.7
CCIG				eS	Sn	09 29 48.5	-3.4

WEL 24 09:29:02.3, 39°S±1°×17°8E±°, h14km±8km, ML4.0/10, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MHGZ	Mahia Peninsul	0.39	32	P	Pn	09 29 12.6	-0.9
KNZ	Kokohu	0.46	4	P	Pb	09 29 12.4	+0.3
KNZ				S	Sb	09 29 20.3	+1.5
CKHZ	Cape Kidnapper	0.47	248	P	Pb	09 29 13.1	+0.9
CKHZ				S	Sn	09 29 21.4	-1.1
WHHZ	Waihua	0.51	322	P	Pb	09 29 12.9	-0.1
ARHZ	Aropaoanui	0.54	294	P	Pb	09 29 13.4	-0.1
ARHZ				S	Sb	09 29 22.2	+1.1
PRGZ	Paritu Road	0.59	19	P	Pb	09 29 15.1	+0.7
PRGZ				S	Sn	09 29 25.9	+0.2
KAHZ	Kahuranaki	0.66	242	P	Pn	09 29 16.6	-0.6
RAHZ	Arahi	0.71	323	P	Pg	09 29 16.1	-0.1
RAHZ				S	Sb	09 29 27.2	+1.2
MCHZ	McNeill Hill	0.73	273	P	Pb	09 29 16.9	+0.3
MCHZ				S	Sn	09 29 28.1	-0.9
SNGZ	Shannon Statio	0.74	342	P	Pb	09 29 16.8	-0.1
NMHZ	Naumai	0.75	301	P	Pg	09 29 16.9	0.0
RIGZ	Rimuhau	0.78	7	P	Pb	09 29 17.8	+0.2
RIGZ				S	Sn	09 29 29.9	-0.5
PXZ	Pawanui	0.81	227	P	Pb	09 29 18.2	+0.1
PXZ				S	Sn	09 29 30.5	-0.4
MTHZ	Maungataniwha	0.88	315	P	Pb	09 29 18.5	-0.8
KWHZ	Kaweka Forest	0.94	273	P	Pb	09 29 19.8	-0.6
BKZ	Black Stump Fm	0.94	289	P	Pb	09 29 19.6	-0.8
KRHZ	Kereru	0.99	260	P	Pb	09 29 20.6	-0.6

KIW	Kapiti Island	2.50 236	P	Pn	09 29 41.0	-1.4
PAWZ	Paruwai Farm	2.54 221	P	Pn	09 29 40.2	-2.8
CAW	Cannon Point	2.55 230	P	Pn	09 29 40.9	-2.2
MSWZ	Moikau Station	2.65 223	P	Pn	09 29 41.6	-3.0
PLWZ	Palliser	2.76 220	P	Pn	09 29 42.6	-3.4

*IDC **24** 10:05:11.9±3.5, 11°.27N×125°.99E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/61, mbtmp3.4/3, Error ellipse: s-maj=274.0km s-min=27.7km az=65.0*
*ISCJB **24** 10:05:12.8±1.9, 11°.43N±0°.09×126°.25E±0°.07, h22km±11km, mb3.5/3, Error ellipse: s-maj=15.1km s-min=11.5km az=26.5*
*MAN **24** 10:05:18.9, 11°.53N×125°.85E, h10km, mb5.0, ML4.0, MS4.0*
ISC 24 10:05:12.5±2.4, 11°.55N±0°.08×126°.2E±0°.1, h28km±16km, n8, σ0.9±51/11, mb3.5/3, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BESP	**Borongan**	**0.79**	**274**	*e*P	**Pb**	**10 05 27.9**	**+0.3**
BESP				*e*S	**Sn**	**10 05 38.6**	**+0.1**
PLP	**Palo**	**1.29**	**253⇑**	*e*P	**Pb**	**10 05 35.8**	**-0.4**
PLP				*i* S	**Sb**	**10 05 53.0**	**+0.6**
OCLP	**Ormoc**	**1.67**	**253**	*e*P	**Pb**	**10 05 42.3**	**-0.3**
OCLP				*e*S	**Sn**	**10 06 00.7**	**+0.3**
CNP	**Catarman**	**1.81**	**302**	*e*P	**Pb**	**10 05 45.3**	**+0.3**
CNP				*e*S	**Sb**	**10 06 06.4**	**-0.8**
PVCP	**Virac**	**2.88**	**315**	*e*P	**Pn**	**10 05 56.0**	**-0.4**
PVCP				*e*S	**Sb**	**10 06 38.2**	**+0.3**
WRA	**Warramunga Arr**	**32.30**	**166**	P	**P**	**10 11 39.3**	**+0.2**
	0.5nm,0.9s,baz=345,slow=9.4,SNR=3.5						
ASAR	**Alice Springs**	**35.80**	**168**	P	P	10 12 12.6	+3.1
	0.4nm,0.8s,baz=352,slow=7.0,SNR=8.4						
MKAR	**Makanchi Array**	**51.00**	**322**	P	P	10 14 16.0	+4.2
	0.8nm,0.9s,baz=111,slow=6.8,SNR=4.7						

*SCB **24** 10:25:53.6±1.0, 22°.04S×66°.24W, h240km, Ml5.1/1, Error ellipse: s-maj=28.1km s-min=15.2km az=19.0*
*NEIC **24** 10:25:54.8±0.4, 22°.45S×66°.70W, h190km±3km, mb5.4/298, Error ellipse: s-maj=4.0km s-min=2.6km az=66.0*
NEIC Felt [III] at Maria Elena and [II] at Tocopilla, Chile. Also felt at Calama.
*SJA **24** 10:25:54.7, 22°.55S×66°.97W, h185km, ML4.4, MW5.0*
*GCMT **24** 10:25:54.8±0.2, 22°.52S×66°.94W, h220km±1km, MW5.4/110, Moment Tensor Solution. s87,c126; s110,c179; Duration: 1ꝏ2 Moment tensor: Scale 10^{17} Nm; M_{rr}=1.03±.02; $M_{\theta\theta}$0.43±.03; $M_{\phi\phi}$0.60±.03; $M_{r\theta}$0.38±.02; $M_{\theta\phi}$-0.56±.02; $M_{\phi r}$=1.08±.02; Best double couple: M_0=1.55600×10^{17} NP1:ϕ_s335.00000°, δ69.00000°, λ=78.00000°. NP2:ϕ_s125.00000°, δ24.00000°, λ=118.00000°. Principal axes: T 1.5410, Plg23.0000°, Azm56.0000°; N 0.0340, Plg11.0000°, Azm151.0000°; P =1.5720, Plg64.0000°, Azm264.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*ISCJB **24** 10:25:55.1±0.1, 22°.36S±0°.02×66°.77W±0°.03, h208km, mb5.2/468 Error ellipse: s-maj=3.9km s-min=3.0km az=144.9*
*IDC **24** 10:25:55.0±0.7, 22°.45S×66°.60W, h194km±5km, mb4.9/30, mb1 4.9/35, mb1mx4.9/43, mbtmp5.4/35, MS3.9/9, Ms1 3.9/9, ms1mx3.5/39, Error ellipse: s-maj=8.9km s-min=6.7km az=86.0*
*MOS **24** 10:25:55.0±1.3, 22°.32S×66°.71W, h199km, mb5.3/58, Error ellipse: s-maj=12.6km s-min=5.5km az=113.9*
*BJI **24** 10:25:55.3, 22°.40S×66°.70W, h187km, mB5.1/15*
*GUC **24** 10:25:56.1±0.5, 22°.63S×67°.09W, h170km, ML5.8*
ISC 24 10:25:55.5±0.3, 22°.53S±0°.03×66°.89W±0°.03, h200km±2km, h201km:pP-P, n1399, σ1.9±31/1523, mb5.3/475, 11C-5D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YJA	**Yavi**	**1.32**	**75**	*e*P	**Pn**	**10 26 28.5**	**+0.3**
YJA				*e*S	**S**	**10 26 51.9**	**-1.3**
YJA				⇑*e*S	S	10 26 52.2	-1.0
YJA				IAML		10 26 55.4	
	comp=Z,2μm,0.5s						
MOCB	**Mochara**	**1.73**	**42**	*e*Pn	**Pn**	**10 26 31.6**	**-0.3**
PB03	**IPOC Station P**	**2.70**	**280**	*e*P	**Pn**	**10 26 40.5**	**-1.3**
PB03				*i* S	**S**	**10 27 14.6**	**-2.6**
PB03				IAML		10 27 15.6	
	comp=N,56μm,0.5s						
PB01	**IPOC Station P**	**2.83**	**301**	*e*Pn	**Pn**	**10 26 42.6**	**-0.7**
PB01				*e*Sn	**S**	**10 27 18.6**	**-1.4**
PB01	**IPOC Station P**	**2.83**	**301**	*e*P	**Pn**	**10 26 42.5**	**-0.9**
PB01				*i* S	**S**	**10 27 18.0**	**-1.9**
PB01				IAML		10 27 20.2	
	comp=E,17μm,0.7s						
PB07	**IPOC Station P**	**2.89**	**286**	*e*P	**Pn**	**10 26 43.0**	**-1.1**
PB07				*i* S	**S**	**10 27 18.4**	**-2.9**
PB07				IAML		10 27 19.4	
	comp=N,35μm,0.3s						
PB04	**IPOC Station P**	**3.02**	**273**	*e*P	**Pn**	**10 26 44.1**	**-1.5**
PB04				*i* S	**S**	**10 27 20.5**	**-3.5**
PB04				IAML		10 27 22.7	
	comp=N,24μm,0.4s						
PB02	**IPOC Station P**	**3.04**	**293**	*e*P	**Pn**	**10 26 44.6**	**-1.2**
PB02				*i* S	**S**	**10 27 21.1**	**-3.2**
PB02				IAML		10 27 22.1	
	comp=N,38μm,0.4s						
PB05	**IPOC Station P**	**3.08**	**263**	*e*P	**Pn**	**10 26 44.4**	**-1.8**
PB05				*i* S	**S**	**10 27 21.1**	**-4.0**
PB05				IAML		10 27 25.5	
	comp=N,9μm,0.4s						
PB08	**IPOC Station P**	**3.18**	**318**	*e*P	**Pn**	**10 26 48.1**	**+0.4**
PB08				*i* S	**S**	**10 27 27.4**	**-0.4**
PB08				IAML		10 27 31.9	
	comp=N,5μm,0.5s						
PB10	**IPOC Station P**	**3.52**	**253**	*e*P	**Pn**	**10 26 49.5**	**-1.8**
PB10				*e*S	**S**	**10 27 30.5**	**-3.9**
PB10	**IPOC Station P**	**3.52**	**253**	*e*P	**Pn**	**10 26 49.5**	**-1.8**
PB10				*i* S	**S**	**10 27 29.7**	**-4.7**
PB10				IAML		10 27 35.8	
	comp=N,6μm,0.4s						
GO02	**Mina Guanaco**	**3.60**	**223**	*e*Pn	**Pn**	**10 26 51.4**	**-1.3**
GO02				*e*Sn	**S**	**10 27 33.9**	**-2.9**
GO02	**Mina Guanaco**	**3.60**	**223**	*e*P	**Pn**	**10 26 51.2**	**-1.5**
GO02				*i* S	**S**	**10 27 33.8**	**-3.0**
PB14	**IPOC Station P**	**3.84**	**236**	*e*P	**Pn**	**10 26 54.1**	**-1.5**
PB14	**IPOC Station P**	**3.84**	**236**	*e*P	**Pn**	**10 26 53.5**	**-2.1**
PB14				*i* S	**S**	**10 27 37.2**	**-4.9**
PB14				IAML		10 27 40.0	
	comp=E,15μm,0.4s						
PSGC	**Pisagua**	**4.20**	**313**	*e*P	**Pn**	**10 26 57.4**	**-2.6**
MNMC	**Minye Minye**	**4.23**	**323**	*e*Pn	**Pn**	**10 26 59.8**	**-0.7**
MNMC				*e*Sn	**S**	**10 27 48.9**	**-1.9**
MNMC	**Minye Minye**	**4.23**	**323**	*e*P	**Pn**	**10 26 59.7**	**-0.7**
AHML	**Horco Molle**	**4.46**	**162**	*e*P	**Pn**	**10 27 02.8**	**-0.3**
AHML				*e*S	**S**	**10 27 53.5**	**-2.3**
AHML				IAML		10 27 57.2	
	comp=Z,328nm,0.8s						
BBOJ	**La Paz, Jacaqu**	**5.67**	**347**	*e*Pn	**Pn**	**10 27 20.3**	**+1.3**
GO03	**Copiap**	**5.88**	**210**	*e*Pn	**Pn**	**10 27 17.6**	**-3.7**
GO03				*e*Sn	**S**	**10 28 23.6**	**-5.2**
CYA	**Choya**	**5.96**	**171**	*e*P	**Pn**	**10 27 21.8**	**-0.5**
CYA				IAML		10 27 22.9	
	comp=Z,93nm,0.6s						
BBOD	**La Paz, Gloria**	**6.08**	**344**	*e*Pn	**Pn**	**10 27 25.1**	**+0.7**
VCA	**Vinchina**	**6.29**	**191**	*i* P	**Pn**	**10 27 25.4**	**-1.3**
VCA				*e*P	**Pn**	**10 27 25.4**	**-1.3**
LPAZ	**La Paz**	**6.32**	**349**	P	**Pn**	**10 27 28.1**	**+0.4**
	comp=Z,42nm,0.3s,baz=156,slow=5.7,SNR=1010						
LPAZ				S	**S**	**10 28 36.9**	**-3.3**
	comp=Z,5.7nm,0.3s,baz=242,slow=16,SNR=5.7						
LPAZ	**La Paz**	**6.32**	**349**	*e*Pn	**Pn**	**10 27 28.0**	**+0.4**
LPAZ				*e*Sn	**S**	**10 28 38.6**	**-1.5**
BBOB	**La Paz, Bander**	**6.47**	**349**	*e*Pn	**Pn**	**10 27 29.4**	**0.0**
BBOB				*e*Sn	**S**	**10 28 41.6**	**-1.8**
LCO	**Las Campanas**	**7.31**	**207**	*e*Pn	**Pn**	**10 27 35.4**	**-4.6**
LCO				*e*Sn	**S**	**10 28 55.7**	**-7.1**
GO04	**Tololo Observa**	**8.38**	**204**	*e*Pn	Pn	10 27 49.0	-4.8
GO04				*e*Sn	**S**	**10 29 20.3**	**-8.0**
SIV	**San Ignacio**	**8.51**	**41**	P	**Pn**	**10 27 53.1**	**-2.4**
	comp=Z,107nm,0.3s,baz=233,slow=14,SNR=1346						
SIV				S	S	10 29 16.9	-15
	comp=Z,16nm,0.3s,baz=234,slow=16,SNR=7.5						
SIV	**San Ignacio**	**8.51**	**41**	*e*Pn	**Pn**	**10 27 51.0**	**-4.6**
SIV				*e*Sn	S	10 29 16.0	-15
	comp=Z,555nm,1.1s						
CPUP	**Villa Florida**	**9.49**	**115**	P	**Pn**	**10 28 06.0**	**-2.2**
	comp=Z,0.5nm,0.3s,baz=294,slow=12,SNR=22						
CPUP	**Villa Florida**	**9.49**	**115**	*e*Pn	**Pn**	**10 28 06.1**	**-2.1**
CPUP	**Villa Florida**	**9.49**	**115**	*e*P	**Pn**	**10 28 06.1**	**-2.1**
ROC1	**El Roble**	**11.02**	**198**	*e*Pn	Pn	10 28 23.2	-4.9
PEL	**Peldehue**	**11.09**	**197**	*e*Pn	**Pn**	**10 28 24.3**	**-4.5**
PEL	**Peldehue**	**11.09**	**197**	*e*P	**Pn**	**10 28 24.3**	**-4.5**
GO05	**HualaæØ**	**13.19**	**198**	*e*Pn	**Pn**	**10 28 51.2**	**-4.1**
GO05				*e*Sn	**S**	**10 31 30.9**	**+8.6**
SAML	**Samuel**	**13.97**	**15**	*e*Pn	**Pn**	**10 29 04.1**	**-1.0**
SAML				*e*S	**S**	**10 31 39.1**	**-1.6**
NNA	**Nana**	**14.15**	**316**	P	**Pn**	**10 29 07.6**	**+0.2**
	comp=Z,9.3nm,0.3s,baz=164,slow=12,SNR=35						
NNA				S	**S**	**10 31 43.1**	**-1.9**
	comp=Z,2.9nm,0.3s,baz=234,slow=8.7,SNR=3.4						
NNA	**Nana**	**14.15**	**316**	*e*Pn	**Pn**	**10 29 08.1**	**+0.7**
NNA				*e*S	**S**	**10 31 45.2**	**+0.3**
NNA	**Nana**	**14.15**	**316**	*e*P	**Pn**	**10 29 08.1**	**+0.7**
NNA				*e*S	**S**	**10 31 45.2**	**+0.3**
TRQA	**Tornquist**	**16.04**	**166**	*e*P	**P**	**10 29 26.9**	**-2.9**
	comp=Z,67nm,0.9s						
SPB	**Sao Paulo**	**17.94**	**97**	*e*P	**P**	**10 29 50.2**	**-0.4**
	comp=Z,360nm,0.8s						
PLCA	**Paso Flores**	**18.41**	**189**	P	**P**	**10 29 55.3**	**-0.4**
	comp=Z,6.3nm,0.3s,baz=32,slow=13,SNR=250						
PLCA				PcP	**PcP**	**10 34 17.7**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=327,slow=0.3,SNR=5.4						
PLCA				ScP	**ScP**	**10 37 35.0**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=16,slow=2.9,SNR=5.0						
PLCA	**Paso Flores**	**18.41**	**189**	*e*P	**P**	**10 29 55.1**	**-0.6**
	comp=Z,197nm,0.8s						
PLCA				*e*PcP	**PcP**	**10 34 18.1**	**+0.8**
PLCA				ScP	**ScP**	**10 37 35.0**	**+1.1**
PTGA	**Pitinga**	**22.70**	**18**	P	**P**	**10 30 38.1**	**-2.1**
	comp=Z,57nm,0.3s,baz=199,slow=11,SNR=191						
PTGA				S	**S**	**10 34 29.6**	**-3.7**
	comp=Z,30nm,1.0s,baz=79,slow=18,SNR=3.8						
PTGA	**Pitinga**	**22.70**	**18**	*e*P	**P**	**10 30 38.4**	**-1.8**
	comp=Z,372nm,1.4s						
PTGA				S	**S**	**10 34 29.6**	**-3.7**
CHRN	**Cochrane**	**25.08**	**189**	*e*P	**P**	**10 31 01.0**	**-0.5**
	comp=Z,29nm,0.8s						
OTAV	**Otavalo**	**25.28**	**332**	*e*P	**P**	**10 31 06.2**	**+2.0**
	comp=Z,34nm,1.0s						
OTAV				*e*PcP	**PcP**	**10 34 33.6**	**+1.6**
OTAV	**Otavalo**	**25.28**	**332**	*e*P	**P**	**10 31 04.6**	**+0.5**
OTAV	**Otavalo**	**25.28**	**332**	P	**P**	**10 31 06.1**	**+2.0**
OTAV				pmax	pmax		
	comp=Z,34nm,1.0s						
FLOC	**Florencia**	**25.45**	**339**	*e*P	**P**	**10 31 03.8**	**-1.4**
GCUF	**Volcan Galeras**	**25.72**	**335**	*e*P	**P**	**10 31 11.9**	**+3.7**
CRUC	**La Cruz**	**25.89**	**336**	*e*P	P	10 31 17.1	+7.6
SJAC	**San Juan de Ar**	**26.56**	**344**	*e*P	**P**	**10 31 13.2**	**-2.0**
MARP	**Paez Belalcaza**	**26.73**	**340**	*e*P	**P**	**10 31 16.8**	**-0.1**
PRAC	**Prado**	**27.23**	**342**	*e*P	**P**	**10 31 20.2**	**-0.9**
	comp=Z,119nm,1.8s						
PRAC	**Prado**	**27.23**	**342**	*e*P	**P**	**10 31 20.4**	**-0.7**
VILC	**Villavicencio,**	**27.31**	**345**	*e*P	**P**	**10 31 23.1**	**+1.2**
HORQ	**Saladito**	**27.55**	**339**	*e*P	**P**	**10 31 24.4**	**+0.1**
CHIC	**Chingaza**	**27.81**	**345**	*e*P	**P**	**10 31 26.4**	**-0.3**
YOTC	**Yotoco, Valle**	**27.93**	**340**	*e*P	**P**	**10 31 26.4**	**-1.0**
ROSC	**El Rosal**	**28.16**	**344**	P	**P**	**10 31 29.6**	**-0.1**
	comp=Z,5.7nm,0.5s,baz=245,slow=19,SNR=3.5						
ROSC				ScP	**ScP**	**10 38 00.7**	**+0.1**
	comp=Z,11nm,0.6s,baz=264,slow=10,SNR=5.5						
ROSC				LR	LR	10 43 09.8	
	comp=Z,340nm,18.4s,baz=244,slow=37						
ROSC	**El Rosal**	**28.16**	**344**	*e*P	**P**	**10 31 29.9**	**+0.1**
	comp=Z,27nm,0.8s						
ROSC				ScP	**ScP**	**10 38 00.7**	**+0.1**
ROSC	**El Rosal**	**28.16**	**344**	*e*P	**P**	**10 31 32.5**	**+2.7**
TOLC	**Tolima**	**28.19**	**342**	*e*P	P	10 31 41.7	+12
YOPC	**Yopal, Colombi**	**28.24**	**348**	*e*P	**P**	**10 31 29.1**	**-1.1**
PLMC	**San Jos¨ del**	**28.78**	**340**	*e*P	**P**	**10 31 33.3**	**-1.6**
GUYC	**Guyana, Colomb**	**28.81**	**342**	*e*P	**P**	**10 31 37.7**	**+2.0**
RUSC	**La Rusia**	**28.89**	**347**	*e*P	**P**	**10 31 36.2**	**-0.2**
	comp=Z,40nm,1.2s						
RUSC	**La Rusia**	**28.89**	**347**	*e*P	**P**	**10 31 35.8**	**-0.6**
NORC	**Norcasia**	**29.00**	**343**	*e*P	**P**	**10 31 37.2**	**+0.5**
BARC	**Barichara**	**29.60**	**347**	*e*P	**P**	**10 31 39.7**	**-2.6**
HELC	**Santa Helena**	**29.77**	**342**	*e*P	**P**	**10 31 42.5**	**-1.5**
	comp=Z,74nm,0.8s						
HELC	**Santa Helena**	**29.77**	**342**	*e*P	**P**	**10 31 41.0**	**-3.0**
PTBC	**PUERTO BERRIO,**	**29.83**	**345**	*e*P	**P**	**10 31 40.5**	**-3.6**
EFI	**East Falkland**	**29.88**	**169**	*e*P	**P**	**10 31 43.7**	**-0.4**
	comp=Z,345nm,1.3s						
EFI				*e*PcP	**PcP**	**10 34 42.6**	**+0.7**
EFI	**East Falkland**	**29.88**	**169**	*d* P	**P**	**10 31 43.6**	**-0.5**
EFI				pmax	pmax		
	comp=Z,131nm,0.6s						
PAMC	**Pamplona, Colo**	**30.23**	**348**	*e*P	**P**	**10 31 45.9**	**-2.3**
ZARC	**Zaragoza, Cauc**	**30.84**	**344**	*e*P	**P**	**10 31 48.3**	**-4.7**
OCAC	**Ocana**	**31.23**	**348**	*e*P	**P**	**10 31 53.4**	**-3.1**
UREC	**San Jos¨ de U**	**31.27**	**343**	*e*P	**P**	**10 31 54.3**	**-2.4**
SDV	**Santo Domingo**	**31.44**	**353**	P	**P**	**10 31 57.8**	**-0.6**
	comp=Z,19nm,0.3s,baz=8.7,slow=8.5,SNR=4.4						
SDV				LR	LR	10 47 09.0	
	comp=Z,901nm,20.4s,baz=194,slow=41						
SDV	**Santo Domingo**	**31.44**	**353**	*e*P	**P**	**10 32 00.1**	**+1.7**
	comp=Z,104nm,1.3s						
SDV	**Santo Domingo**	**31.44**	**353**	*e*P	**P**	**10 31 57.3**	**-1.1**
PAYG	**Puerto Ayora**	**31.47**	**310**	*e*P	**P**	**10 31 57.5**	**-1.1**
	comp=Z,84nm,0.9s						
MOTC	**Monteria, Cord**	**32.29**	**344**	*e*P	**P**	**10 32 03.8**	**-1.8**
PCRV	**Puerto La Cruz**	**32.58**	**4**	P	**P**	**10 32 08.2**	**0.0**
	comp=Z,90nm,0.9s,baz=343,slow=0.9,SNR=31						
CODC	**Agust¨n Codaz**	**32.90**	**348**	*e*P	**P**	**10 32 12.2**	**+1.3**
SJCC	**San Jacinto, C**	**33.24**	**345**	*e*P	**P**	**10 32 11.6**	**-2.4**
TBH	**Brigand Hill**	**33.31**	**10**	*e*P	**P**	**10 32 15.7**	**+1.2**
BCIP	**Isla Barro Col**	**33.97**	**337**	*e*P	**P**	**10 32 21.4**	**+1.3**
	comp=Z,63nm,1.0s						
BCIP	**Isla Barro Col**	**33.97**	**337**	*e*P	**P**	**10 32 20.9**	**+0.7**
TOSP	**Speyside**	**34.20**	**11**	*e*P	**P**	**10 32 22.5**	**+0.4**
RCBR	**Riachuelo**	**34.21**	**66**	*e*P	**P**	**10 32 21.7**	**-0.7**
	comp=Z,279nm,1.0s						
GRGR	**Grenville**	**34.83**	**9**	*e*P	**P**	**10 32 27.5**	**-0.1**
	comp=Z,612nm,0.6s						
GRGR	**Grenville**	**34.83**	**9**	*e*P	**P**	**10 32 27.5**	**-0.1**
GRHS	**Sauteurs**	**34.92**	**9**	*e*P	**P**	**10 32 29.4**	**+1.1**
GRSS	**Sisters**	**35.00**	**9**	*e*P	**P**	**10 32 30.7**	**+1.7**
SVB	**Belmont**	**36.01**	**9**	*e*P	**P**	**10 32 36.9**	**-0.7**
	comp=Z,209nm,0.8s						
SVB	**Belmont**	**36.01**	**9**	*e*P	**P**	**10 32 36.4**	**-1.2**
SVCV	**St. Vincent, C**	**36.03**	**10**	*e*P	**P**	**10 32 37.6**	**-0.1**
SVV	**Soufriere Volc**	**36.06**	**9**	*e*P	**P**	**10 32 39.0**	**+1.0**
BBGH	**Gun Hill**	**36.18**	**12**	*e*P	**P**	**10 32 38.0**	**-1.1**
	comp=Z,752nm,1.3s						
HDC	**Heredia**	**36.48**	**331**	*e*P	**P**	**10 32 44.3**	**+2.6**
	comp=Z,109nm,0.9s						
JTS	**JuntasAbangare**	**37.12**	**330**	P	**P**	**10 32 49.1**	**+2.1**
	comp=Z,74nm,1.0s,baz=229,slow=5.9,SNR=32						
JTS				PcP	**PcP**	**10 35 02.8**	**-0.2**
	comp=Z,7.7nm,0.8s,baz=158,slow=5.4,SNR=4.3						
JTS				ScP	**ScP**	**10 38 31.3**	**+0.2**
	comp=Z,4.4nm,0.8s,baz=80,slow=6.1,SNR=3.7						
JTS	**JuntasAbangare**	**37.12**	**330**	*e*P	**P**	**10 32 49.1**	**+2.1**
	comp=Z,102nm,1.1s						
JTS				PcP	**PcP**	**10 35 02.8**	**-0.2**
JTS				ScP	**ScP**	**10 38 31.3**	**+0.2**
FDF	**Fort de France**	**37.46**	**9**	*e*P	**P**	**10 32 48.8**	**-1.1**
	comp=Z,424nm,0.7s						
FDF	**Fort de France**	**37.46**	**9**	*e*P	**P**	**10 32 47.0**	**-2.9**
FDF	**Fort de France**	**37.46**	**9**	*e*P	**P**	**10 32 48.8**	**-1.1**
FDF				pmax	pmax		
	comp=Z,424nm,0.7s						
BBL	**Barber's Block**	**38.20**	**8**	*e*P	**P**	**10 32 55.6**	**-0.4**
MDPO	**Dominica; Chan**	**38.25**	**8**	*e*P	**P**	**10 32 56.2**	**-0.2**
MDVC	**Dominica, Viel**	**38.29**	**9**	*e*P	**P**	**10 32 56.7**	**0.0**
TBG	**Guadaloupe-3**	**38.49**	**8**	*e*P	**P**	**10 32 58.5**	**+0.1**
ESPN	**Las Esperanzas**	**38.50**	**332**	*e*P	**P**	**10 32 59.8**	**+1.3**
	comp=Z,224nm,1.6s						
MGG	**Marie-Galante**	**38.60**	**9**	*e*P	**P**	**10 32 58.5**	**-0.9**
RPN	**Rapa Nui**	**38.66**	**254**	P	**P**	**10 33 01.7**	**+1.8**
	comp=Z,138nm,0.8s,baz=180,slow=3.0,SNR=4.6						
RPN				PcP	**PcP**	**10 35 08.3**	**+0.6**
	comp=Z,66nm,0.8s,baz=0.0,slow=2.0,SNR=3.1						
DEG	**La Desirade**	**39.03**	**9**	*e*P	**P**	**10 33 01.4**	**-1.5**
HOPE	**Hope Point**	**39.08**	**152**	*e*P	**P**	**10 33 04.3**	**+1.4**
	comp=Z,112nm,1.0s						
SABA	**Saba**	**40.07**	**5**	*e*P	**P**	**10 33 09.8**	**-1.7**
CDVI	**St. Croix**	**40.09**	**3**	*e*P	**P**	**10 33 12.2**	**+0.5**
	comp=Z,126nm,0.9s						
ICMP	**Isla Caja de M**	**40.17**	**1**	*e*P	**P**	**10 33 11.1**	**-1.2**
ESTN	**Estel**	**40.23**	**330**	*e*P	**P**	**10 33 13.0**	**0.0**
	comp=Z,90nm,0.9s						
ANWB	**Willy Bob**	**40.27**	**8**	*e*P	**P**	**10 33 10.9**	**-2.2**
	comp=Z,276nm,0.8s						
ANWB	**Willy Bob**	**40.27**	**8**	*e*P	**P**	**10 33 09.6**	**-3.4**
CRPR	**Cabo Rojo, PR**	**40.29**	**360**	*e*P	**P**	**10 33 11.6**	**-1.6**
	comp=Z,183nm,0.9s						
OBIP	**Obispado Ponce**	**40.33**	**0**	*e*P	**P**	**10 33 11.7**	**-1.9**
	comp=Z,79nm,0.8s						
MTP	**Monte Pirata**	**40.40**	**2**	*e*P	**P**	**10 33 11.5**	**-2.7**
	comp=Z,51nm,0.9s						
SJG	**San Juan**	**40.40**	**1**	*e*P	**P**	**10 33 12.1**	**-2.1**
	comp=Z,139nm,0.8s						
SJG	**San Juan**	**40.40**	**1**	*e*P	**P**	**10 33 12.7**	**-1.5**
SJG	**San Juan**	**40.40**	**1**	*e*P	**P**	**10 33 12.1**	**-2.1**
SJG				pmax	pmax		
	comp=Z,139nm,0.8s						
HUMP	**Col San Antoni**	**40.44**	**2**	*e*P	**P**	**10 33 14.2**	**-0.3**
	comp=Z,52nm,0.9s						
MPR	**Mayaguez**	**40.50**	**360**	*e*P	**P**	**10 33 13.1**	**-1.8**
	comp=Z,58nm,0.7s						
SMRT	**St. Maarten**	**40.51**	**6**	*e*P	**P**	**10 33 11.8**	**-3.2**
	comp=Z,187nm,1.0s						
SMRT	**St. Maarten**	**40.51**	**6**	*e*P	**P**	**10 33 12.0**	**-3.1**
CBYP	**Canovanas**	**40.57**	**2**	*e*P	**P**	**10 33 13.5**	**-2.1**
	comp=Z,43nm,0.8s						
AOPR	**Arecibo Observ**	**40.63**	**0**	*e*P	**P**	**10 33 13.8**	**-2.3**
	comp=Z,73nm,0.7s						
AGP	**Aguadilla**	**40.69**	**360**	*e*P	**P**	**10 33 14.8**	**-1.7**
	comp=Z,298nm,1.7s						
ABVI	**Anegada Island**	**41.09**	**4**	*e*P	**P**	**10 33 17.2**	**-2.5**
	comp=Z,167nm,1.0s						
LGNH	**LØogne**	**41.17**	**352**	*e*P	**P**	**10 33 18.6**	**-1.8**
	comp=Z,104nm,1.1s						
SDDR	**Presa de Saban**	**41.49**	**354**	*e*P	**P**	**10 33 21.7**	**-1.4**
	comp=Z,32nm,0.6s						
MTDJ	**Mount Denham**	**41.83**	**345**	*e*P	**P**	**10 33 25.1**	**-0.8**
	comp=Z,86nm,1.3s						
SNET	**Serv Nac Est T**	**42.13**	**327**	*e*P	**P**	**10 33 30.0**	**+1.6**
	comp=Z,217nm,1.4s						
PMSA	**Palmer Station**	**42.27**	**178**	P	**P**	**10 33 29.8**	**+1.0**
	comp=Z,14nm,0.5s,baz=61,slow=7.8,SNR=8.5						
PMSA				PcP	**PcP**	**10 35 19.6**	**+1.0**
	comp=Z,36nm,1.0s,baz=0.0,slow=1.0,SNR=2.5						
PMSA				LR	LR	10 51 23.6	
	comp=Z,231nm,18.7s,baz=6.5,slow=36						
PMSA	**Palmer Station**	**42.27**	**178**	*e*P	**P**	**10 33 29.8**	**+1.0**
	comp=Z,109nm,1.4s						
PMSA				PcP	**PcP**	**10 35 19.6**	**+1.0**
WBCY	**West Bay, Gran**	**44.00**	**340**	*e*P	**P**	**10 33 43.6**	**+0.4**
	comp=Z,433nm,1.2s						
CCIG	**Comitan**	**45.82**	**325**	*e*P	**P**	**10 33 58.0**	**+0.2**
	comp=Z,106nm,1.0s						
061Z	**Ochoppi**	**49.99**	**343**	P	**P**	**10 34 30.0**	**+0.5**
	baz=163						
TLIG	**Tlapa**	**50.48**	**320**	*e*P	**P**	**10 34 34.5**	**+1.1**
	comp=Z,103nm,1.1s						
059Z	**Ave Maria**	**50.59**	**343**	P	**P**	**10 34 34.8**	**+0.9**
	baz=162						
LVIG	**Laguna Verde**	**50.95**	**323**	*e*P	**P**	**10 34 36.9**	**+0.2**
	comp=Z,74nm,1.0s						
060A	**Indiantown**	**50.97**	**344**	P	**P**	**10 34 38.3**	**+1.5**
	baz=164						
059A	**Moore Haven**	**51.11**	**344**	P	**P**	**10 34 38.9**	**+1.2**
	baz=163						
058A	**Arcadia**	**51.37**	**343**	P	**P**	**10 34

baz=154
447A **Lucedale** 56.99 338 P P 10 35 19.8 -0.5
baz=156
349A **Repton** 57.00 339 P P 10 35 19.8 -0.6
baz=157,SNR=6.4
251A **Midway** 57.14 341 P P 10 35 20.5 -0.7
baz=159,SNR=14
153A **Fort Valley** 57.21 343 P P 10 35 21.3 -0.5
baz=161
446A **Poplarville** 57.24 337 P P 10 35 22.0 0.0
baz=155
250A **Grady** 57.29 340 P P 10 35 21.8 -0.6
baz=158,SNR=9.2
250A **Grady** 57.29 340 eP P 10 35 21.7 -0.6
comp=Z,219nm,1.4s
348A **Jackson** 57.30 339 P P 10 35 22.4 0.0
baz=157
348A **Jackson** 57.30 339 eP P 10 35 22.6 +0.2
comp=Z,142nm,1.1s
Z55A **Blythe** 57.32 345 P P 10 35 22.0 -0.5
baz=163
152A **Waverly Hall** 57.48 342 P P 10 35 22.7 -0.8
baz=160,SNR=11
152A **Waverly Hall** 57.48 342 eP P 10 35 22.8 -0.8
comp=Z,47nm,1.1s
347A **Saraland** 57.51 338 P P 10 35 23.6 -0.2
baz=156,SNR=6.9
Z54A **Sparta** 57.51 344 P P 10 35 23.1 -0.7
baz=162,SNR=9.4
151A **Opelika** 57.52 342 P P 10 35 23.0 -0.9
baz=160,SNR=6.4
445A **Amite** 57.55 336 P P 10 35 23.8 -0.3
baz=154
249A **Camden** 57.56 340 P P 10 35 23.9 -0.3
baz=158,SNR=8.8
543A **St. Martinvill** 57.56 334 P P 10 35 25.9 +1.7
baz=152,SNR=5.0
543A **St. Martinvill** 57.56 334 eP P 10 35 25.9 +1.7
comp=Z,189nm,0.9s
444A **Pine Grove** 57.69 336 P P 10 35 25.5 +0.4
baz=154,SNR=5.6
Z53A **Monticello** 57.74 343 P P 10 35 24.6 -0.8
baz=162,SNR=6.8
SHEL **Horse Pasture** 57.77 95 eP P 10 35 24.8 -1.3
comp=Z,131nm,1.1s
SHEL **Horse Pasture** 57.77 95 eP P 10 35 24.8 -1.3
SHEL pmax pmax
comp=Z,131nm,1.1s
150A **Eclectic** 57.80 341 P P 10 35 25.1 -0.7
baz=159,SNR=18
346A **Big Creek Wild** 57.82 337 P P 10 35 25.7 -0.3
baz=155,SNR=6.5
346A **Big Creek Wild** 57.82 337 eP P 10 35 25.8 -0.3
comp=Z,118nm,1.0s
GOGA **Godfrey** 57.84 344 P P 10 35 25.5 -0.6
baz=162,SNR=8.6
GOGA **Godfrey** 57.84 344 eP P 10 35 25.0 -1.1
comp=Z,33nm,1.0s
GOGA **Godfrey** 57.84 344 eP P 10 35 25.0 -1.1
GOGA pmax pmax
comp=Z,33nm,1.0s
248A **Dixon Mills** 57.87 339 P P 10 35 25.8 -0.5
baz=157,SNR=8.4
542A **Morse** 57.88 334 P P 10 35 26.3 -0.1
baz=152,SNR=9.4
Z52A **Williamson** 57.88 343 P P 10 35 25.9 -0.5
baz=161,SNR=7.6
345A **Thompson Farm,** 57.95 337 P P 10 35 26.7 -0.2
baz=154,SNR=6.0
149A **Jones** 58.03 340 P P 10 35 26.4 -1.0
baz=158,SNR=6.2
Y54A **Tignall** 58.07 345 P P 10 35 27.3 -0.4
baz=163,SNR=11
541A **Lake Charles** 58.08 333 P P 10 35 29.6 +1.7
baz=151,SNR=6.8
541A **Lake Charles** 58.08 333 eP P 10 35 29.0 +1.2
comp=Z,287nm,0.9s
KVTX **Kingsville** 58.11 327 eP P 10 35 27.6 -0.5
comp=Z,332nm,1.4s
247A **Quitman** 58.12 338 P P 10 35 27.9 -0.2
baz=156,SNR=7.8
443A **Delano Plantat** 58.13 335 P P 10 35 28.3 +0.1
baz=153
JSC **Jenkinsville** 58.13 346 eP P 10 35 28.1 0.0
comp=Z,38nm,1.0s
JSC **Jenkinsville** 58.13 346 eP P 10 35 28.1 0.0
JSC pmax pmax
comp=Z,39nm,1.0s
Z51A **Franklin** 58.21 342 P P 10 35 28.1 -0.6
baz=160,SNR=5.2
246A **Jackson Lee, B** 58.27 338 P P 10 35 28.2 -0.9
baz=156
Y53A **Monroe** 58.29 344 P P 10 35 28.5 -0.7
baz=162,SNR=7.7
HODGE **Hodges** 58.31 345 eP P 10 35 29.5 +0.1
comp=Z,18nm,1.3s
148A **Greensboro** 58.32 340 P P 10 35 28.6 -0.9
baz=157
344A **Westbrook Farm** 58.34 336 P P 10 35 29.6 0.0
baz=154,SNR=14
344A **Westbrook Farm** 58.34 336 eP P 10 35 29.3 -0.3
comp=Z,102nm,0.9s
442A **Mamou** 58.34 334 P P 10 35 30.7 +1.0
baz=152,SNR=7.7
Z50A **Ashland** 58.37 341 P P 10 35 29.2 -0.6
baz=159,SNR=21
Z50A **Ashland** 58.37 341 eP P 10 35 29.3 -0.6
comp=Z,68nm,0.9s
CNNC **Cliffs of the** 58.40 349 P P 10 35 29.3 -0.6
baz=168
CNNC **Cliffs of the** 58.40 349 eP P 10 35 29.8 -0.2
comp=Z,28nm,1.0s
Y52A **Lilburn** 58.42 343 P P 10 35 29.4 -0.7
baz=161,SNR=11
Y52A **Lilburn** 58.42 343 eP P 10 35 29.6 -0.5
comp=Z,46nm,1.0s
LRAL **Lakeview Retre** 58.50 340 P P 10 35 29.9 -0.8
baz=158,SNR=12
LRAL **Lakeview Retre** 58.50 340 eP P 10 35 29.9 -0.8
comp=Z,40nm,1.0s
Z49A **Columbiana** 58.50 341 P P 10 35 29.9 -0.8
baz=158,SNR=13
VNA3 **Neumayer Olymp** 58.50 161 P P 10 35 30.7 +0.4
VNA3 S S 10 43 20.9 +3.3
VNA3 **Neumayer Olymp** 58.50 161 pP pP 10 36 18.6 +2.7
343A **Vidalia** 58.53 335 P P 10 35 31.0 0.0
baz=153
245A **Little AP, Sta** 58.55 337 P P 10 35 30.6 -0.5
baz=155,SNR=24
147A **Livingston** 58.58 339 P P 10 35 30.4 -0.8
baz=157,SNR=6.5
147A **Livingston** 58.58 339 eP P 10 35 30.3 -1.0
comp=Z,74nm,1.2s
441A **DeRidder** 58.69 333 P P 10 35 33.2 +1.2
baz=151,SNR=18
VNA1 **Neumayer--Stat** 58.69 161 P P 10 35 32.5 +1.0
VNA1 **Neumayer--Stat** 58.69 161 pP pP 10 36 20.0 +2.9
Y51A **Rockmart** 58.73 342 P P 10 35 31.5 -0.8
baz=160,SNR=18
PAULI **Pauline** 58.77 346 eP P 10 35 32.7 +0.1
comp=Z,68nm,1.9s
146A **Union** 58.81 338 P P 10 35 32.6 -0.3
baz=156,SNR=8.8
146A **Union** 58.81 338 eP P 10 35 32.0 -0.8
comp=Z,99nm,1.0s
X53A **Estanollee** 58.83 344 P P 10 35 32.5 -0.4
baz=162,SNR=15
244A **Avery, Jackson** 58.85 336 P P 10 35 32.7 -0.5
baz=154,SNR=14
342A **Flagon Creek P** 58.89 335 P P 10 35 34.2 +0.8
baz=152,SNR=34
342A **Flagon Creek P** 58.89 335 eP P 10 35 33.9 +0.5
comp=Z,216nm,0.9s
Y50A **Piedmont** 58.91 342 P P 10 35 32.7 -0.8
baz=159,SNR=17
VBMS **Vicksburg** 58.95 337 P P 10 35 33.5 -0.3
baz=154
VBMS **Vicksburg** 58.95 337 eP P 10 35 33.5 -0.3
comp=Z,112nm,1.3s
KMSC **Kings Mountain** 58.98 346 P P 10 35 33.9 0.0
baz=164,SNR=18
KMSC **Kings Mountain** 58.98 346 eP P 10 35 33.8 -0.2
comp=Z,47nm,0.9s
Z48A **Northport** 58.99 340 P P 10 35 33.1 -0.9
baz=158,SNR=14
Z47A **Carrollton** 58.99 339 P P 10 35 33.3 -0.8
baz=157,SNR=11
243A **Waterproof** 59.01 336 P P 10 35 34.3 +0.1
baz=153,SNR=5.0
VNA2 **Neumayer--Watz** 59.06 161 P P 10 35 34.9 +0.8
baz=279,slow=8.1
VNA2 S S 10 43 28.5 +3.8
VNA2 **Neumayer--Watz** 59.06 161 pP pP 10 36 20.1 +0.3
X52A **Dahlonega** 59.08 344 P P 10 35 34.1 -0.6
baz=162,SNR=11
Y49A **Blount Mountai** 59.08 341 P P 10 35 33.8 -0.9
baz=159,SNR=9.1
Y49A **Blount Mountai** 59.08 341 eP P 10 35 34.0 -0.8
comp=Z,36nm,0.8s
145A **Houston Renfro** 59.08 337 P P 10 35 34.6 -0.1
baz=155,SNR=13
HKT **Hockley** 59.14 331 eP P 10 35 35.7 +0.6
comp=Z,69nm,1.1s
HKT **Hockley** 59.14 331 eP P 10 35 35.7 +0.6
HKT pmax pmax
comp=Z,69nm,1.1s
341A **Kurthwood** 59.19 334 P P 10 35 35.8 +0.3
baz=151
BG3 **Lake Jocassee** 59.20 345 eP P 10 35 35.4 -0.2
comp=Z,51nm,1.0s
Z46A **Louisville** 59.28 339 P P 10 35 35.7 -0.3
baz=156,SNR=9.7
144A **Alexander Plac** 59.28 337 P P 10 35 36.0 -0.1
baz=154,SNR=6.5
X51A **Calhoun** 59.30 343 P P 10 35 35.7 -0.4
baz=160,SNR=21
X51A **Calhoun** 59.30 343 eP P 10 35 35.8 -0.4
comp=Z,106nm,1.0s
Y48A **Jasper** 59.36 340 P P 10 35 35.5 -1.1
baz=158,SNR=7.9
X50B **Fort Payne** 59.42 342 P P 10 35 36.2 -0.8
baz=160,SNR=17
242A **Grayson** 59.43 335 P P 10 35 37.4 +0.3
baz=153,SNR=19
W53A **Cullowhee** 59.43 345 P P 10 35 36.9 -0.3
baz=162,SNR=20
833A **Chaparral WMA,** 59.50 327 P P 10 35 38.1 +0.4
baz=145,SNR=54
833A **Chaparral WMA,** 59.50 327 eP P 10 35 38.2 +0.6
comp=Z,310nm,0.9s
W52A **Murphy** 59.55 344 P P 10 35 37.5 -0.4
baz=162,SNR=13
W52A **Murphy** 59.55 344 eP P 10 35 37.7 -0.2
comp=Z,56nm,1.1s
Y47A **UCPARC, Winfie** 59.57 340 P P 10 35 37.4 -0.6
baz=157,SNR=23
X49A **Woodville** 59.66 341 P P 10 35 38.0 -0.7
baz=159,SNR=14
241A **Mo Tay, Goldon** 59.70 334 P P 10 35 39.8 +0.9
baz=152,SNR=46
241A **Mo Tay, Goldon** 59.70 334 eP P 10 35 39.4 +0.5
comp=Z,299nm,1.0s
Z45A **Winona** 59.70 338 P P 10 35 38.8 -0.1
baz=155,SNR=12
Z45A **Winona** 59.70 338 eP P 10 35 38.9 -0.1
comp=Z,146nm,1.0s
143A **Socs Landing,** 59.71 336 P P 10 35 38.8 -0.2
baz=154,SNR=8.8
143A **Socs Landing,** 59.71 336 eP P 10 35 38.8 -0.2
comp=Z,106nm,1.1s
142A **Monroe** 59.78 336 P P 10 35 39.7 +0.2
baz=153
V53A **Saluda** 59.82 345 P P 10 35 39.5 -0.3
baz=163,SNR=12
X48A **Hartselle** 59.82 341 P P 10 35 39.2 -0.5
baz=158,SNR=46
X48A **Hartselle** 59.82 341 eP P 10 35 39.0 -0.7
comp=Z,100nm,0.9s
Z44A **Pea Ridge, Bel** 59.87 337 P P 10 35 39.9 -0.2
baz=155,SNR=7.1
Y46A **Houston** 59.88 339 P P 10 35 39.1 -1.0
baz=156,SNR=13
W50A **Signal Mountai** 60.02 343 P P 10 35 40.7 -0.5
baz=160,SNR=30
W50A **Signal Mountai** 60.02 343 eP P 10 35 40.7 -0.5
comp=Z,72nm,0.9s
CPCT **Cooper Cave** 60.04 343 eP P 10 35 40.8 -0.4
comp=Z,58nm,1.1s
TKL **Tuckaleechee C** 60.05 344 P P 10 35 40.6 -0.7
comp=Z,42nm,1.0s,baz=161,slow=11,SNR=33
TKL LR LR 11 05 33.0
comp=Z,179nm,19.0s,baz=168,slow=40
TKL **Tuckaleechee C** 60.05 344 eP P 10 35 40.8 -0.5
comp=Z,46nm,0.8s
TKL **Tuckaleechee C** 60.05 344 eP P 10 35 40.8 -0.5
TKL pmax pmax
comp=Z,46nm,0.8s
240A **Hunter Patters** 60.05 334 P P 10 35 42.2 +0.8
baz=151,SNR=6.2
240A **Hunter Patters** 60.05 334 eP P 10 35 42.4 +1.1
comp=Z,225nm,1.0s
Y45A **Yeager Farm, C** 60.09 338 P P 10 35 41.2 -0.4
baz=156,SNR=14
Z43A **Armstrong Fami** 60.11 336 P P 10 35 41.1 -0.6
baz=154
X47A **Russelville** 60.14 340 P P 10 35 41.0 -0.9
baz=157,SNR=24
V52A **Sevierville** 60.17 344 P P 10 35 41.5 -0.6
baz=162,SNR=19
V52A **Sevierville** 60.17 344 eP P 10 35 41.6 -0.6
comp=Z,67nm,1.0s
NATX **Nacogdoches** 60.18 333 P P 10 35 43.1 +0.9
baz=150,SNR=27
NATX **Nacogdoches** 60.18 333 eP P 10 35 42.8 +0.5
comp=Z,203nm,0.9s
141A **Papa Simpson,** 60.20 335 P P 10 35 43.1 +0.8
baz=152,SNR=27
SWET **Sewanee** 60.21 342 eP P 10 35 41.8 -0.6
comp=Z,104nm,0.9s
W49A **Belvidere** 60.21 342 P P 10 35 41.8 -0.6
baz=159,SNR=18
V51A **Loudon** 60.33 344 P P 10 35 42.4 -0.8
baz=161,SNR=9.4
V51A **Loudon** 60.33 344 eP P 10 35 42.5 -0.7
comp=Z,28nm,1.0s
V50A **Pikevile** 60.40 343 P P 10 35 43.2 -0.5
baz=160,SNR=19
X46A **Boonville** 60.41 339 P P 10 35 42.6 -1.1
baz=157,SNR=16
Y44A **Strider, Charl** 60.41 338 P P 10 35 43.1 -0.7
baz=155,SNR=7.4
Z42A **Norrel Spur, H** 60.42 336 P P 10 35 43.4 -0.5
baz=153
U53A **Fall Branch** 60.43 345 P P 10 35 43.3 -0.5
baz=163,SNR=13
W48A **Pulaski** 60.43 341 P P 10 35 43.3 -0.5
baz=158,SNR=26
140A **Cam and Jess,** 60.50 334 P P 10 35 45.4 +1.0
baz=151,SNR=22
140A **Cam and Jess,** 60.50 334 eP P 10 35 44.9 +0.6
comp=Z,258nm,0.9s
X45A **UM Field Stati** 60.55 339 P P 10 35 43.5 -1.2
baz=156,SNR=19
Y43A **Makayla and Ka** 60.62 337 P P 10 35 44.8 -0.4
baz=154,SNR=7.2
PLAL **Pickwick Lake** 60.63 340 eP P 10 35 44.1 -1.1
comp=Z,65nm,1.0s
OXF **Oxford** 60.64 339 P P 10 35 44.0 -1.3
baz=156,SNR=28
OXF **Oxford** 60.64 339 eP P 10 35 44.1 -1.2
comp=Z,136nm,0.9s
OXF **Oxford** 60.64 339 eP P 10 35 44.1 -1.2
OXF pmax pmax
comp=Z,136nm,0.9s
435B **Jarrell** 60.65 330 P P 10 35 45.6 +0.1
baz=147,SNR=8.7
435B **Jarrell** 60.65 330 eP P 10 35 45.2 -0.3
comp=Z,74nm,0.8s
SNAA **Sanae** 60.69 161 P P 10 35 45.6 +0.3
SNAA S S 10 43 52.5 +6.9
SNAA **Sanae** 60.69 161 pP pP 10 36 27.7 -3.5
SNAA **Sanae** 60.69 161 eP P 10 35 45.6 +0.3
comp=Z,131nm,1.0s
SNAA **Sanae** 60.69 161 dP P 10 35 45.4 +0.1
V49A **McMinnville** 60.72 342 P P 10 35 44.9 -0.9
baz=160,SNR=20
VWCC **Virginia Weste** 60.73 348 eP P 10 35 45.9 0.0
W47A **Westpoint** 60.73 341 P P 10 35 45.0 -0.9
baz=158,SNR=25
BLA **Blacksburg** 60.78 348 P P 10 35 46.2 0.0
baz=166,SNR=5.5
BLA **Blacksburg** 60.78 348 eP P 10 35 46.8 +0.6
comp=Z,33nm,0.9s
BLA **Blacksburg** 60.78 348 eP P 10 35 46.8 +0.6
BLA pmax pmax
comp=Z,33nm,0.9s
JSRW **J. Sargeant Re** 60.79 350 eP P 10 35 47.6 +1.3
TZTN **Tazewell** 60.83 345 P P 10 35 45.5 -1.0
baz=162,SNR=5.8
TZTN **Tazewell** 60.83 345 eP P 10 35 45.9 -0.6
comp=Z,15nm,0.8s
Y42A **Garnett, Star** 60.87 336 P P 10 35 46.8 0.0
baz=153
W46A **Michie** 60.87 340 P P 10 35 45.3 -1.5
baz=157,SNR=10.0
X44A **Crenshaw** 60.88 338 P P 10 35 45.9 -1.0
baz=155,SNR=10
IP05 **Hopewell Churc** 60.91 350 eP P 10 35 47.2 +0.2
comp=Z,12nm,1.0s
CCAR **Cane Creek** 60.93 336 eP P 10 35 47.5 +0.3
comp=Z,120nm,1.0s
V48A **Smith Brothers** 60.95 342 P P 10 35 46.7 -0.6
baz=159,SNR=30
V48A **Smith Brothers** 60.95 342 eP P 10 35 46.8 -0.6
comp=Z,61nm,0.9s
Z40A **Long Farm, Mag** 60.97 335 P P 10 35 48.5 +0.9
baz=152,SNR=80
IP07 **Quail** 61.04 350 eP P 10 35 47.7 -0.2
comp=Z,22nm,0.9s
IP06 **Yanceyville** 61.04 350 eP P 10 35 47.9 -0.1
comp=Z,12nm,0.9s
IP01 **Cuckoo** 61.06 350 eP P 10 35 47.8 -0.2
comp=Z,14nm,0.9s
SPRD **Spring Road, M** 61.12 350 eP P 10 35 48.4 -0.1
comp=Z,14nm,0.8s
IP03 **Louisa** 61.13 350 eP P 10 35 48.4 -0.2
comp=Z,29nm,1.0s
CVRD **Centerville Ro** 61.15 350 eP P 10 35 49.1 +0.5
comp=Z,22nm,0.9s
X43A **Marvell** 61.15 337 P P 10 35 48.5 -0.2
baz=154,SNR=20
X43A **Marvell** 61.15 337 eP P 10 35 48.8 0.0
comp=Z,166nm,0.9s
W45A **Hickory Valley** 61.15 339 P P 10 35 47.8 -0.9
baz=156,SNR=30
CBN **Corbin Frederi** 61.21 351 eP P 10 35 49.2 +0.1
comp=Z,48nm,0.3s
Y41A **Eaglette Beard** 61.22 336 P P 10 35 49.3 +0.1
baz=153,SNR=42
IP04 **Greensprings** 61.22 350 eP P 10 35 48.4 -0.7
comp=Z,29nm,1.2s
T52A **Hallie** 61.23 345 P P 10 35 48.6 -0.7
baz=163,SNR=5.2
V47A **Nunnelly** 61.24 341 P P 10 35 48.3 -1.1
baz=158,SNR=20
W44A **Shelby Farms P** 61.34 339 P P 10 35 49.1 -0.9
baz=156
MET **Memphis--Engin** 61.37 339 eP P 10 35 49.8 -0.4
comp=Z,245nm,1.3s
U49A **Red Boiling Sp** 61.38 343 P P 10 35 49.2 -1.1
baz=160,SNR=12
V46A **Holladay** 61.40 340 P P 10 35 48.9 -1.5
baz=158,SNR=13
X42A **Stuttgart** 61.45 337 P P 10 35 50.1 -0.6
baz=154
JCT **Junction City** 61.46 328 P P 10 35 50.9 0.0
baz=145,SNR=108
JCT **Junction City** 61.46 328 eP P 10 35 51.0 0.0
comp=Z,123nm,0.8s
Y40A **Okolona** 61.59 335 P P 10 35 51.8 +0.1
baz=152,SNR=11
U48A **Cassie Pea, Po** 61.59 342 P P 10 35 50.9 -0.8
baz=159,SNR=17
W43A **Forest City** 61.60 338 P P 10 35 50.5 -1.2
baz=155
WHTX **Lake Whitney,** 61.61 331 P P 10 35 51.9 0.0
baz=148,SNR=25
WHTX **Lake Whitney,** 61.61 331 eP P 10 35 52.0 +0.2
comp=Z,108nm,0.9s
T50A **Nancy** 61.61 344 P P 10 35 50.8 -0.9
baz=161,SNR=10
V45A **Humboldt** 61.61 340 P P 10 35 50.6 -1.2
baz=157
WVT **Waverly** 61.62 341 P P 10 35 50.8 -1.0
baz=158
WVT **Waverly** 61.62 341 eP P 10 35 50.6 -1.2
comp=Z,116nm,0.9s
WVT **Waverly** 61.62 341 eP P 10 35 50.6 -1.2
WVT pmax pmax
comp=Z,116nm,0.9s
X41A **Kaden, Bauxite** 61.73 336 P P 10 35 51.9 -0.6
baz=153,SNR=9.9
U47A **Clarksville** 61.74 341 P P 10 35 51.7 -0.9
baz=158,SNR=50
S52A **Salyersville** 61.80 345 P P 10 35 52.3 -0.7
baz=163,SNR=6.8
X40A **Basin Creek Fa** 61.84 336 P P 10 35 52.5 -0.9
baz=153,SNR=7.7
X40A **Basin Creek Fa** 61.84 336 eP P 10 35 52.5 -0.9
comp=Z,11nm,1.0s
HPIG 61.85 321 eP P 10 35 54.3 +0.5
comp=Z,63nm,1.0s
T49A **Edmonton** 61.87 343 P P 10 35 52.5 -1.0
baz=160,SNR=24
S51A **Beattyville** 61.88 345 P P 10 35 52.8 -0.8
baz=162,SNR=7.0
HALT **Halls** 61.89 339 eP P 10 35 52.7 -0.9
comp=Z,178nm,1.5s
UALR **University of** 61.91 336 eP P 10 35 53.3 -0.5
comp=Z,63nm,1.1s
U46A **Springville** 61.94 341 P P 10 35 53.0 -0.9
baz=158,SNR=14
V44A **Blytheville** 62.00 339 P P 10 35 53.2 -1.1
baz=156
HBAR **Harrisburg** 62.01 338 eP P 10 35 53.9 -0.6
comp=Z,52nm,0.9s
W42A **Bald Knob** 62.06 337 P P 10 35 54.1 -0.7
baz=154,SNR=8.9
U45A **Rockin P Farm,** 62.11 340 P P 10 35 54.2 -0.8
baz=157,SNR=21
T48A **Bowling Green** 62.11 342 P P 10 35 53.9 -1.2
baz=159,SNR=9.8
UTMT **University of** 62.13 340 eP P 10 35 54.7 -0.6
comp=Z,208nm,0.9s
SLBS **Sierra La Lagu** 62.15 315 eP P 10 35 56.8 +1.0
comp=Z,125nm,1.1s
MIAR **Mount Ida** 62.17 335 P P 10 35 55.3 -0.3
baz=152,SNR=52
MIAR **Mount Ida** 62.17 335 eP P 10 35 55.2 -0.3
comp=Z,84nm,1.0s
MIAR **Mount Ida** 62.17 335 eP P 10 35 55.2 -0.3
MIAR pmax pmax
comp=Z,84nm,1.0s
V43A **Jonesboro** 62.18 338 P P 10 35 54.9 -0.7
baz=155
T47A **Sharon Grove** 62.20 342 P P 10 35 54.7 -1.0
baz=159,SNR=36
T47A **Sharon Grove** 62.20 342 eP P 10 35 54.8 -1.0
comp=Z,84nm,0.9s
GLAT **Glass** 62.20 340 eP P 10 35 55.0 -0.7
comp=Z,154nm,0.9s
U44B **Burton Farm, H** 62.29 340 P P 10 35 55.7 -0.6
baz=156,SNR=17
SDMD **Soldier's Deli** 62.32 351 eP P 10 35 55.9 -0.5
comp=Z,6.8nm,0.7s
WHAR **Wooly Hollow** 62.35 337 eP P 10 35 56.5 -0.2
comp=Z,45nm,1.1s
X39A **Fountain Ranch** 62.35 335 P P 10 35 57.1 +0.3
baz=151,SNR=85
PVMO **Portageville** 62.47 339 eP P 10 35 57.8 +0.3
comp=Z,333nm,1.1s
PVMO ePcP PcP 10 36 36.7 +1.9
T46A **Princeton** 62.48 341 P P 10 35 56.6 -1.0
baz=158,SNR=20
V42A **Cord** 62.49 338 P P 10 35 56.4 -1.2
baz=154,SNR=7.3
S48A **Wiedeman Farm,** 62.53 343 P P 10 35 56.3 -1.5
baz=160,SNR=17
U44A **Portageville** 62.55 339 P P 10 35 57.7 -0.3
baz=156
W40A **Ferguson Farm,** 62.55 336 P P 10 35 58.2 +0.1
baz=152,SNR=44
W40A **Ferguson Farm,** 62.55 336 eP P 10 35 58.2 +0.1
comp=Z,170nm,1.1s
TXAR **Lajitas Array** 62.55 324 P P 10 35 58.4 +0.1
comp=Z,9.2nm,0.8s,baz=151,slow=8.6,SNR=135
TXAR PcP PcP 10 36 36.1 +0.6
comp=Z,3.7nm,0.8s,baz=170,slow=8.4,SNR=5.1
TXAR PKPPKP P'P'df 11 04 48.8 -10
comp=Z,0.2nm,0.7s,baz=290,slow=2.6,SNR=2.7
TX31 **Lajitas Ar. Si** 62.56 324 eP P 10 35 58.5 +0.1
U43A **Rector** 62.66 339 P P 10 35 58.2 -0.6
baz=155,SNR=6.6
LPIG **La Paz** 62.68 315 P P 10 36 00.3 +1.2

comp=Z,88nm,1.0s,baz=4.5,slow=2.1,SNR=11
T45A **Paducah** 62.69 340 P P 10 35 58.0 -0.9
baz=157,SNR=7.5
T45A **Paducah** 62.69 340 eP P 10 35 58.0 -0.9
comp=Z,176nm,0.4s
PARMO **Parma** 62.71 339 eP P 10 35 59.0 -0.1
comp=Z,336nm,1.0s
V41A **Mountainview** 62.74 337 P P 10 35 58.4 -0.9
baz=154,SNR=33
W39A **Magazine** 62.83 335 P P 10 35 60.0 +0.1
baz=152,SNR=59
W39A **Magazine** 62.83 335 eP P 10 36 00.1 +0.3
comp=Z,88nm,0.9s
MVL **Millersville** 62.83 352 eP P 10 35 60.0 +0.2
comp=Z,13nm,0.8s
U42A **Revenden** 62.93 338 P P 10 35 59.7 -0.8
baz=154,SNR=22
V40A **Witts Springs** 63.00 336 P P 10 36 00.4 -0.7
baz=153,SNR=17
V40A **Witts Springs** 63.00 336 eP P 10 36 00.2 -0.9
comp=Z,28nm,0.8s
S46A **Don Dixon Farm** 63.02 342 P P 10 35 59.6 -1.5
baz=158,SNR=17
PBMO **Poplar Bluff** 63.04 339 eP P 10 36 00.6 -0.6
comp=Z,161nm,0.6s
MCWV **Mont Chateau** 63.04 349 P P 10 36 01.4 +0.2
baz=166,SNR=8.4
MCWV **Mont Chateau** 63.04 349 eP P 10 36 00.9 -0.3
comp=Z,24nm,0.8s
T44A **Benton** 63.05 340 P P 10 36 00.4 -0.8
baz=156,SNR=14
PAGS **Pennsylvania G** 63.11 352 eP P 10 36 01.0 -0.6
comp=Z,8.0nm,0.8s
WCI **Wyandotte Cave** 63.13 343 P P 10 36 00.4 -1.4
baz=160
WCI **Wyandotte Cave** 63.13 343 eP P 10 36 00.6 -1.2
comp=Z,33nm,0.7s
WCI **Wyandotte Cave** 63.13 343 eP P 10 36 00.6 -1.2
WCI pmax pmax
comp=Z,33nm,0.7s
ABTX **Abilene, Hawle** 63.15 329 P P 10 36 01.9 -0.2
baz=146,SNR=36
ABTX **Abilene, Hawle** 63.15 329 eP P 10 36 01.8 -0.3
comp=Z,135nm,1.1s
U41A **Viola** 63.16 337 P P 10 36 01.2 -0.9
baz=154,SNR=35
R48A **Northridge Ran** 63.18 343 P P 10 36 01.0 -1.2
baz=160,SNR=6.5
R47A **Wooly Knot Far** 63.26 343 P P 10 36 01.1 -1.5
baz=160,SNR=11
USIN **University of** 63.27 342 eP P 10 36 01.0 -1.7
comp=Z,59nm,1.1s
T43A **Greenville** 63.27 339 P P 10 36 02.0 -0.7
baz=156,SNR=66
S45A **Carrier Mills** 63.27 341 P P 10 36 01.6 -1.1
baz=157,SNR=32
V39A **Pettigrew** 63.34 336 P P 10 36 03.0 -0.3
baz=152,SNR=67
O56A **Blue Knob Stat** 63.42 350 P P 10 36 03.9 +0.2
baz=168,SNR=5.8
O56A **Blue Knob Stat** 63.42 350 eP P 10 36 03.5 -0.3
comp=Z,17nm,0.9s
R46A **Gibon Southern** 63.45 342 P P 10 36 02.1 -1.9
baz=158,SNR=5.4
T42A **Van Buren** 63.49 338 P P 10 36 03.0 -1.2
baz=155
S44A **Carbondale** 63.50 340 P P 10 36 03.1 -1.1
baz=157,SNR=10
SIUC **Southern Illin** 63.51 340 eP P 10 36 03.4 -0.9
comp=Z,45nm,1.0s
U40A **Yellville** 63.51 337 P P 10 36 03.7 -0.7
baz=153,SNR=35
PAL **Palisades** 63.55 354 eP P 10 36 04.4 0.0
comp=Z,16nm,1.0s
PAL **Palisades** 63.55 354 eP P 10 36 04.4 0.0
PAL pmax pmax
comp=Z,16nm,1.0s
S43A **Fulton Ridge,** 63.65 340 P P 10 36 04.2 -1.1
baz=156,SNR=41
N59A **State Game Lan** 63.66 352 P P 10 36 05.3 0.0
baz=171
N59A **State Game Lan** 63.66 352 eP P 10 36 04.8 -0.4
comp=Z,15nm,1.0s
SSPA **Standing Stone** 63.67 351 P P 10 36 05.3 -0.1
baz=168
SSPA **Standing Stone** 63.67 351 eP P 10 36 04.9 -0.4
comp=Z,14nm,1.0s
ODNJ **Ogdensburg** 63.70 353 eP P 10 36 05.8 +0.3
comp=Z,14nm,1.1s
T41A **Mountain View** 63.73 338 P P 10 36 05.0 -0.8
baz=154,SNR=31
R45A **Skylar, Fairfi** 63.75 341 P P 10 36 04.5 -1.4
baz=158,SNR=20
U39A **Green Forest** 63.76 336 P P 10 36 05.3 -0.8
baz=152,SNR=47
YLE **Yale** 63.77 355 eP P 10 36 10.4 +4.5
comp=Z,29nm,0.9s
P50A **Jamestown** 63.81 345 P P 10 36 05.3 -0.9
baz=162,SNR=13
Q47A **Bedord North L** 63.83 343 P P 10 36 05.1 -1.3
baz=160,SNR=11
HHAR **Hobbs** 63.84 336 eP P 10 36 05.9 -0.7
comp=Z,80nm,1.0s
R44A **Waltonville** 63.95 341 P P 10 36 05.8 -1.3
baz=157,SNR=8.0
S42A **Caledonia** 64.06 339 P P 10 36 06.7 -1.2
baz=155,SNR=42
BLO **Bloomington** 64.08 343 eP P 10 36 06.5 -1.5
comp=Z,54nm,0.8s
BLO **Bloomington** 64.08 343 eP P 10 36 06.5 -1.5
BLO pmax pmax
comp=Z,54nm,0.8s
T40A **Mansfield** 64.09 337 P P 10 36 07.4 -0.8
baz=154
OLIL **Olney** 64.11 342 eP P 10 36 05.3 -2.9
comp=Z,32nm,1.1s
FVM **French Village** 64.14 339 eP P 10 36 07.5 -0.9
comp=Z,101nm,0.9s
FVM **French Village** 64.14 339 eP P 10 36 07.5 -0.9
FVM pmax pmax
comp=Z,101nm,0.9s
S41A **Jillco Farms,** 64.22 338 P P 10 36 08.3 -0.6
baz=154
ACSO **Alum Creek Sta** 64.22 346 P P 10 36 08.1 -0.8
baz=163,SNR=16
ACSO **Alum Creek Sta** 64.22 346 eP P 10 36 08.2 -0.7
comp=Z,51nm,0.8s
R43A **Red Bud** 64.24 340 P P 10 36 07.8 -1.3
baz=156,SNR=9.6
TUL1 **Leonard** 64.24 334 P P 10 36 08.9 -0.2
baz=150,SNR=40
TUL1 **Leonard** 64.24 334 eP P 10 36 08.9 -0.2
comp=Z,126nm,1.1s
BRYW **Bryant College** 64.27 356 eP P 10 36 08.1 -1.1
comp=Z,36nm,1.1s
Q45A **Warren Harvey,** 64.27 342 P P 10 36 07.7 -1.6
baz=158,SNR=19
O50A **Cable** 64.28 346 P P 10 36 08.3 -1.1
baz=163,SNR=9.2
T39A **Clever** 64.29 337 P P 10 36 08.8 -0.6
baz=153,SNR=21
KSPA **Keystone Colle** 64.29 353 eP P 10 36 08.8 -0.6
comp=Z,13nm,0.7s
P47A **Martinsville** 64.30 343 P P 10 36 08.2 -1.3
baz=160,SNR=14
N54A **Moraine State** 64.33 349 P P 10 36 09.7 0.0
baz=166,SNR=7.3
N54A **Moraine State** 64.33 349 eP P 10 36 09.3 -0.3
comp=Z,50nm,1.4s
CCM **Cathedral Cave** 64.47 339 P P 10 36 09.7 -0.9
baz=155
CCM **Cathedral Cave** 64.47 339 eP P 10 36 09.5 -1.1
comp=Z,97nm,0.8s
CCM **Cathedral Cave** 64.47 339 eP P 10 36 09.5 -1.1
CCM pmax pmax
comp=Z,97nm,0.8s
S40A **Lebanon** 64.49 338 P P 10 36 10.2 -0.5
baz=154,SNR=33
WMOK **Wichita Mounta** 64.51 331 P P 10 36 10.2 -0.8
baz=147,SNR=35
WMOK **Wichita Mounta** 64.51 331 eP P 10 36 09.8 -1.1
comp=Z,88nm,1.6s
WMOK **Wichita Mounta** 64.51 331 eP P 10 36 09.8 -1.1
WMOK pmax pmax
comp=Z,88nm,1.6s
R42A **Luebbering** 64.52 339 P P 10 36 10.1 -0.8
baz=155,SNR=28
Q44A **Meyer Farm, Va** 64.54 341 P P 10 36 09.3 -1.7
baz=157,SNR=11
T38A **Diamond** 64.64 336 P P 10 36 11.4 -0.3
baz=152,SNR=69
SLM **Saint Louis** 64.67 340 eP P 10 36 11.1 -0.7
comp=Z,39nm,1.1s
SLM **Saint Louis** 64.67 340 eP P 10 36 11.1 -0.7
SLM pmax pmax
comp=Z,39nm,1.1s
P46A **Rosedale** 64.68 343 P P 10 36 10.2 -1.6
baz=159,SNR=6.5
R41A **Rosebud** 64.73 339 P P 10 36 11.5 -0.8
baz=155,SNR=79
P45A **Graceland, Par** 64.74 342 P P 10 36 10.6 -1.6
baz=158,SNR=19
P45A **Graceland, Par** 64.74 342 eP P 10 36 10.7 -1.6
comp=Z,60nm,0.9s
N50A **Nevada** 64.77 346 P P 10 36 11.4 -1.1
baz=163,SNR=7.6
Q43A **New Douglas** 64.78 340 P P 10 36 11.3 -1.3
baz=156,SNR=14
M54A **Oil Creek Stat** 64.81 349 P P 10 36 12.5 -0.2
baz=167,SNR=8.4
M54A **Oil Creek Stat** 64.81 349 eP P 10 36 12.5 -0.2
comp=Z,32nm,0.9s
HRV **Adam Dziewonsk** 64.86 356 P P 10 36 12.8 -0.2
baz=175
HRV **Adam Dziewonsk** 64.86 356 eP P 10 36 12.6 -0.4
comp=Z,21nm,0.8s
HRV **Adam Dziewonsk** 64.86 356 eP P 10 36 12.6 -0.4
HRV pmax pmax
comp=Z,21nm,0.8s
S39A **Bolivar** 64.86 337 P P 10 36 12.8 -0.4
baz=153,SNR=79
S39A **Bolivar** 64.86 337 eP P 10 36 12.7 -0.4
comp=Z,90nm,0.9s
P44A **Sand Creek, Wi** 64.94 342 P P 10 36 12.0 -1.6
baz=158,SNR=7.8
BINY **Binghamton** 64.95 353 P P 10 36 13.9 +0.2
baz=171,SNR=14
BINY **Binghamton** 64.95 353 eP P 10 36 13.5 -0.1
comp=Z,30nm,0.8s
O47A **Sheridan** 64.98 344 P P 10 36 12.4 -1.5
baz=160,SNR=20
Q42A **Golden Eagle** 65.02 340 P P 10 36 13.0 -1.0
baz=156,SNR=11
S38A **Stockton** 65.02 337 P P 10 36 13.7 -0.5
baz=152,SNR=48
R40A **Maddies Statio** 65.03 338 P P 10 36 13.3 -0.8
baz=154,SNR=35
R40A **Maddies Statio** 65.03 338 eP P 10 36 13.4 -0.7
comp=Z,55nm,1.0s
ALLY **Alegheny Colle** 65.03 349 eP P 10 36 13.2 -0.9
comp=Z,41nm,0.9s
NVL **N'lazarevskaya** 65.20 159⇑ iP P 10 36 14.9 0.0
NVL eS S 10 44 38.4 -3.0
NVL eSS ScS 10 45 54.0 +3.9
NVL pmax pmax
comp=Z,143nm,0.9s
TRY **Troy** 65.24 355 eP P 10 36 15.8 +0.4
comp=Z,22nm,0.8s
Q41A **Truxton** 65.28 339 P P 10 36 14.9 -0.9
baz=155,SNR=25
R39A **Chumby, Stover** 65.32 338 P P 10 36 15.5 -0.5
baz=153,SNR=49
MNTX **Cornudas Mount** 65.32 324 P P 10 36 15.7 -0.5
baz=141,SNR=120
MNTX **Cornudas Mount** 65.32 324 eP P 10 36 15.8 -0.5
comp=Z,77nm,1.1s
SFIN **Lafayette** 65.36 343 P P 10 36 14.5 -1.8
baz=159,SNR=8.6
SFIN **Lafayette** 65.36 343 eP P 10 36 14.5 -1.8
comp=Z,45nm,0.8s
P43A **Skaggs, Pawnee** 65.37 341 P P 10 36 14.9 -1.4
baz=157,SNR=13
O45A **Potomac** 65.41 343 P P 10 36 14.7 -1.9
baz=159
ERPA **Erie** 65.46 349 P P 10 36 16.7 -0.1
baz=166,SNR=7.2
ERPA **Erie** 65.46 349 eP P 10 36 16.3 -0.6
comp=Z,48nm,0.8s
R38A **Fenwick Farm,** 65.52 337 P P 10 36 16.9 -0.4
baz=152,SNR=78
O44A **Mansfield** 65.53 342 P P 10 36 15.5 -1.8
baz=158,SNR=7.2
P42A **Winchester** 65.57 340 P P 10 36 16.1 -1.5
baz=156,SNR=8.2
P42A **Winchester** 65.57 340 eP P 10 36 16.5 -1.1
comp=Z,39nm,0.9s
Q40A **Laux Farm, Aux** 65.59 339 P P 10 36 16.9 -0.9
baz=154,SNR=21
MMNY **Mt. Morris Dam** 65.73 351 eP P 10 36 17.4 -1.1
comp=Z,76nm,1.6s
N46A **Monticello** 65.75 344 P P 10 36 17.2 -1.5
baz=160,SNR=19
MSTX **Muleshoe** 65.76 328 P P 10 36 19.0 -0.1
baz=143,SNR=151
MSTX **Muleshoe** 65.76 328 eP P 10 36 19.1 0.0
comp=Z,275nm,0.9s
P41A **Barry, Barry** 65.88 340 P P 10 36 18.3 -1.2
baz=155,SNR=19
ACCN **Adirondack Com** 65.89 355 eP P 10 36 20.0 +0.5
comp=Z,25nm,1.5s
O43A **Sugar Creek Fa** 65.90 341 P P 10 36 18.2 -1.5
baz=157,SNR=7.1
N45A **Kentland** 65.91 343 P P 10 36 18.1 -1.7
baz=159,SNR=9.8
Q39A **Willow Grove F** 65.95 338 P P 10 36 19.5 -0.5
baz=153,SNR=11
AMTX **Amarillo** 65.97 329 P P 10 36 19.9 -0.4
baz=145
AMTX **Amarillo** 65.97 329 eP P 10 36 20.0 -0.4
comp=Z,110nm,1.2s
EPT **El Paso** 65.99 324 eP P 10 36 20.3 -0.4
comp=Z,62nm,1.0s
N44A **Piper City** 66.03 342 P P 10 36 18.8 -1.7
baz=158,SNR=21
O42A **Bath** 66.05 341 P P 10 36 19.1 -1.5
baz=156
P40A **Paris** 66.07 339 P P 10 36 19.9 -0.9
baz=154,SNR=13
P40A **Paris** 66.07 339 eP P 10 36 19.8 -1.0
comp=Z,73nm,1.0s
Q38A **Cooks Store, C** 66.10 337 P P 10 36 20.7 -0.3
baz=153,SNR=51
M46A **Old House Fiel** 66.13 344 P P 10 36 19.8 -1.3
baz=160,SNR=7.9
M46A **Old House Fiel** 66.13 344 eP P 10 36 19.9 -1.3
comp=Z,50nm,1.0s
HDIL **Hopedale** 66.14 341 P P 10 36 19.9 -1.3
baz=157,SNR=14
HDIL **Hopedale** 66.14 341 eP P 10 36 19.9 -1.3
comp=Z,48nm,0.8s
SRIG **Santa Rosalia** 66.17 316 eP P 10 36 22.6 +0.9
comp=Z,66nm,1.0s
O41A **Passleys Farm,** 66.22 340 P P 10 36 20.2 -1.5
baz=156,SNR=15
P39B **Salisbury** 66.27 338 P P 10 36 21.3 -0.8
baz=154,SNR=19
Q37A **Longview Farm,** 66.32 337 P P 10 36 22.0 -0.5
baz=152,SNR=33
M45A **Boilermakers S** 66.34 343 P P 10 36 20.6 -1.9
baz=159
AAM **Ann Arbor** 66.35 346 P P 10 36 21.3 -1.2
baz=163
AAM **Ann Arbor** 66.35 346 eP P 10 36 21.4 -1.0
comp=Z,23nm,1.0s
AAM **Ann Arbor** 66.35 346 eP P 10 36 21.5 -1.0
AAM pmax pmax
comp=Z,23nm,1.0s
N43A **Stutzman Famil** 66.46 342 P P 10 36 22.2 -1.0
baz=157,SNR=17
NCB **Newcomb** 66.52 354 eP P 10 36 23.4 -0.2
comp=Z,10nm,0.8s
O40A **La Belle** 66.55 339 P P 10 36 22.7 -1.1
baz=155,SNR=20
HSIG 66.55 318 eP P 10 36 24.6 +0.5
comp=Z,110nm,1.2s
M44A **Midewin, Midew** 66.56 343 P P 10 36 22.2 -1.7
baz=158,SNR=6.4
M44A **Midewin, Midew** 66.56 343 eP P 10 36 21.9 -2.0
comp=Z,26nm,1.0s
LBNH **Lisbon** 66.61 356 P P 10 36 24.4 +0.3
baz=175,SNR=5.0
LBNH **Lisbon** 66.61 356 eP P 10 36 22.9 -1.2
comp=Z,16nm,0.8s
LBNH **Lisbon** 66.61 356 eP P 10 36 22.9 -1.2
LBNH pmax pmax
comp=Z,16nm,0.8s
N42A **Yates City** 66.61 341 P P 10 36 22.9 -1.3
baz=157,SNR=18
P38A **Dawn** 66.66 338 P P 10 36 24.0 -0.6
baz=153,SNR=21
P38A **Dawn** 66.66 338 eP P 10 36 24.0 -0.6
comp=Z,79nm,0.8s
N41A **Harden Midland** 66.75 340 P P 10 36 23.7 -1.4
baz=156
WVL **Waterville** 66.82 358 eP P 10 36 26.0 +0.6
comp=Z,33nm,1.4s
M43A **Waltham Townsh** 66.86 342 P P 10 36 24.5 -1.2
baz=158,SNR=40
O39A **Kirksville** 66.89 339 P P 10 36 25.1 -0.9
baz=154
LIC **Lamto** 66.89 72 eP P 10 36 24.9 -1.7
comp=Z,102nm,0.7s
P37A **Lathrop** 66.92 337 P P 10 36 25.5 -0.7
baz=152,SNR=53
EMMW **East Machias** 66.92 360 eP P 10 36 26.2 +0.2
comp=Z,22nm,1.1s
O38A **Galt** 67.08 338 P P 10 36 26.5 -0.7
baz=153,SNR=18
TIC **Toumodi** 67.09 72 eP P 10 36 26.2 -1.7
M42A **Sheffield** 67.11 342 P P 10 36 25.8 -1.5
baz=157
N40A **Mertquake, Sal** 67.14 340 P P 10 36 26.5 -1.0
baz=155,SNR=14
LONY **Lake Ozonia** 67.20 354 P P 10 36 28.0 +0.1
baz=172,SNR=15
LONY **Lake Ozonia** 67.20 354 eP P 10 36 26.9 -0.9
comp=Z,27nm,0.8s
KIC **Kosan Boka** 67.21 72 eP P 10 36 27.1 -1.5
comp=Z,170nm,0.8s
DBIC **Dimbokro** 67.25 72 P P 10 36 27.6 -1.2
comp=Z,78nm,0.8s,baz=215,slow=7.0,SNR=50
DBIC pP pP 10 37 15.1 -0.6
comp=Z,39nm,1.1s,baz=227,slow=7.4,SNR=2.9
DBIC LR LR 11 04 11.0
comp=Z,166nm,21.3s,baz=178,slow=34
DBIC **Dimbokro** 67.25 72 eP P 10 36 27.6 -1.2
comp=Z,87nm,0.8s
DBIC epP pP 10 37 19.0 +3.3
DBIC **Dimbokro** 67.25 72 eP P 10 36 27.6 -1.2
DBIC e*PP pP 10 37 19.0 +3.3
DBIC pmax pmax
comp=Z,87nm,0.8s
319A **Douglas** 67.26 321 eP P 10 36 29.3 +0.6
comp=Z,78nm,0.9s
L44A **Lake County Fo** 67.26 343 P P 10 36 27.0 -1.3
baz=159,SNR=5.1
M41A **Milan** 67.27 341 P P 10 36 27.0 -1.3
baz=156,SNR=20
121A **Cookes Peak, D** 67.27 323 P P 10 36 30.2 +1.5
baz=139,SNR=84
FRNY **Flat Rock** 67.32 355 eP P 10 36 28.4 -0.2
comp=Z,12nm,0.8s
KSU1 **Kansas State U** 67.33 335 P P 10 36 28.2 -0.6
baz=150,SNR=17
KSU1 **Kansas State U** 67.33 335 eP P 10 36 28.2 -0.6
comp=Z,108nm,0.9s
O37A **Wolven Farm, M** 67.36 338 P P 10 36 28.2 -0.7
baz=153,SNR=12
N39A **Derby Farms, D** 67.43 339 P P 10 36 28.4 -1.0
baz=154,SNR=22
N39A **Derby Farms, D** 67.43 339 eP P 10 36 28.4 -1.0
comp=Z,60nm,0.8s
L43A **Garden Prairie** 67.49 343 P P 10 36 28.9 -0.8
baz=158,SNR=47
PKME **Peaks-Kenny Pk** 67.51 358 eP P 10 36 29.6 -0.1
comp=Z,24nm,0.8s
L42A **Oliver, Polo** 67.58 342 P P 10 36 29.1 -1.2
baz=157,SNR=11
L42A **Oliver, Polo** 67.58 342 eP P 10 36 29.0 -1.3
comp=Z,44nm,0.9s
M40A **Post Highland** 67.59 340 P P 10 36 29.3 -1.1
baz=155,SNR=31
N38A **Joes South For** 67.60 339 P P 10 36 29.3 -1.1
baz=154
QSPA **South Pole Qui** 67.66 180 P P 10 36 31.7 +1.0
comp=Z,135nm,0.8s,baz=155,slow=3.1,SNR=414
QSPA S S 10 45 14.0 +2.5
comp=Z,1.5nm,0.8s,baz=0.0,slow=19,SNR=6.6
K43A **Burlington** 67.86 343 P P 10 36 31.0 -1.0
baz=158,SNR=29
K43A **Burlington** 67.86 343 eP P 10 36 31.1 -1.0
comp=Z,94nm,0.9s
M39A **Webster** 67.87 340 P P 10 36 31.0 -1.1
baz=155,SNR=22
PLVO **Plevna** 67.89 352 eP P 10 36 31.8 -0.3
comp=Z,33nm,0.9s
L41A **Preston** 67.89 341 P P 10 36 31.0 -1.2
baz=156,SNR=41
N37A **Lee Faris, Mou** 67.90 338 P P 10 36 31.8 -0.6
baz=153,SNR=6.0
N37A **Lee Faris, Mou** 67.90 338 eP P 10 36 31.7 -0.6
comp=Z,152nm,0.8s
SADO **Sadowa** 67.91 351 eP P 10 36 31.8 -0.5
comp=Z,29nm,0.8s
Y22E **IRIS PASSCAL I** 67.97 325 P P 10 36 34.2 +1.1
baz=140
L40A **Anamosa** 68.10 341 P P 10 36 32.5 -1.0
baz=156,SNR=39
L40A **Anamosa** 68.10 341 eP P 10 36 32.6 -1.0
comp=Z,115nm,1.0s
M38A **Pleasantville** 68.15 339 P P 10 36 32.9 -0.9
baz=154,SNR=43
K42A **Prairie Point,** 68.21 342 P P 10 36 33.3 -0.9
baz=158,SNR=46
N36A **Muff Farm, Cla** 68.22 337 P P 10 36 33.9 -0.4
baz=152,SNR=9.5
K41A **Shullsburg** 68.33 342 P P 10 36 34.2 -0.7
baz=157,SNR=20
CBKS **Cedar Bluff** 68.35 333 P P 10 36 35.7 +0.4
baz=147,SNR=24
CBKS **Cedar Bluff** 68.35 333 eP P 10 36 35.8 +0.6
comp=Z,237nm,0.9s
CBKS **Cedar Bluff** 68.35 333 eP P 10 36 35.8 +0.6
CBKS pmax pmax
comp=Z,237nm,0.9s
ANMO **Albuquerque** 68.39 326 P P 10 36 36.8 +1.0
comp=Z,59nm,0.9s,baz=145,slow=9.1
ANMO **Albuquerque** 68.39 326 P P 10 36 36.8 +1.0
baz=141
ANMO **Albuquerque** 68.39 326 eP P 10 36 36.8 +1.0
comp=Z,83nm,0.9s
ANMO **Albuquerque** 68.39 326 ceP P 10 36 36.6 +0.8
ANMO pmax pmax
comp=Z,97nm,1.0s
TASL **Snake Pit, Alb** 68.39 326 P P 10 36 36.8 +1.0
baz=141,SNR=131
TASM **ASL Pad, Albuq** 68.40 326 P P 10 36 36.8 +1.0
baz=141,SNR=130
L39A **Vinton** 68.40 340 P P 10 36 34.5 -0.9
baz=155,SNR=36
M37A **Trindle Farm,** 68.42 338 P P 10 36 35.2 -0.3
baz=153,SNR=23
J43A **Natural Harves** 68.51 343 P P 10 36 35.4 -0.7
baz=158,SNR=22
JFWS **Jewell Farm** 68.59 342 P P 10 36 35.9 -0.7
baz=157,SNR=39
JFWS **Jewell Farm** 68.59 342 eP P 10 36 36.0 -0.6
comp=Z,76nm,0.8s
JFWS **Jewell Farm** 68.59 342 eP P 10 36 36.0 -0.6
JFWS pmax pmax
comp=Z,76nm,0.8s
SCIA **State Center** 68.59 339 P P 10 36 35.9 -0.7
baz=154,SNR=8.6
SCIA **State Center** 68.59 339 eP P 10 36 35.9 -0.7
comp=Z,80nm,0.8s
J42A **Columbus** 68.65 343 P P 10 36 36.2 -0.7
baz=158,SNR=25
K40A **Colesburg** 68.66 341 P P 10 36 36.1 -0.8
baz=156,SNR=60
L38A **Oak Wood Farm,** 68.72 339 P P 10 36 36.4 -0.9
baz=154,SNR=14
M36A **Felix, Anita** 68.73 338 P P 10 36 36.9 -0.5
baz=152,SNR=6.5
TRQ **Mont Tremblant** 68.78 354 eP P 10 36 37.4 -0.3
TRQ epP pP 10 37 28.3 +3.5
TUC **Tucson** 68.81 321 P P 10 36 39.3 +1.0
baz=136
TUC **Tucson** 68.81 321 eP P 10 36 39.2 +0.9
comp=Z,92nm,1.3s
TUC **Tucson** 68.81 321 eP P 10 36 39.2 +0.9
TUC pmax pmax
comp=Z,92nm,1.3s
K39A **Oelwein** 68.89 340 P P 10 36 37.4 -1.0
baz=155,SNR=57

I43A	Langenfeld Bro	68.91 344	P	P	10 36 37.7	-0.9
	baz=159,SNR=22					
J41A	Loganville	68.94 342	P	P	10 36 38.0	-0.7
	baz=157,SNR=46					
L37A	Phoenix Point,	68.97 339	P	P	10 36 38.0	-0.9
	baz=153,SNR=16					
T25A	Trinidad	69.09 329	P	P	10 36 41.1	+1.0
	baz=143,SNR=62					
T25A	Trinidad	69.09 329	eP	P	10 36 41.0	+1.0
	comp=Z,74nm,0.9s					
K38A	Parkersburg	69.11 340	P	P	10 36 39.0	-0.7
	baz=154,SNR=6.6					
K38A	Parkersburg	69.11 340	eP	P	10 36 39.1	-0.7
	comp=Z,92nm,1.1s					
I42A	Draeger Farm,	69.12 343	P	P	10 36 39.2	-0.6
	baz=158,SNR=28					
I42A	Draeger Farm,	69.12 343	eP	P	10 36 39.1	-0.6
	comp=Z,50nm,0.9s					
J40A	Soldiers Grove	69.18 342	P	P	10 36 39.4	-0.8
	baz=156,SNR=42					
L36A	Harm Buss Farm	69.25 338	P	P	10 36 40.2	-0.5
	baz=152,SNR=7.3					
H43A	Windswept, Lux	69.36 344	P	P	10 36 40.4	-0.9
	baz=159,SNR=12					
H43A	Windswept, Lux	69.36 344	eP	P	10 36 40.1	-1.2
	comp=Z,53nm,0.9s					
J39A	Decorah	69.41 341	P	P	10 36 40.7	-0.9
	baz=155,SNR=62					
K37A	Belmond	69.50 339	P	P	10 36 41.1	-1.1
	baz=154,SNR=20					
I41A	Arkdale	69.54 343	P	P	10 36 41.6	-0.8
	baz=157,SNR=14					
I41A	Arkdale	69.54 343	eP	P	10 36 41.2	-1.1
	comp=Z,44nm,0.9s					
H42A	Shiocton	69.59 344	P	P	10 36 42.0	-0.7
	baz=158,SNR=10.0					
H42A	Shiocton	69.59 344	eP	P	10 36 41.8	-0.9
	comp=Z,60nm,1.1s					
I40A	Norwalk	69.59 342	P	P	10 36 41.9	-0.8
	baz=156,SNR=8.9					
J38A	Wedel Dairy, R	69.63 340	P	P	10 36 42.0	-1.0
	baz=155,SNR=28					
K36A	Gilmore City	69.66 339	P	P	10 36 42.7	-0.5
	baz=153,SNR=19					
214A	Organ Pipe Nat	69.76 319	P	P	10 36 45.5	+1.5
	baz=135,SNR=43					
KSCO	Kaye Shedlock'	69.77 331	P	P	10 36 44.9	+0.9
	baz=145,SNR=27					
KSCO	Kaye Shedlock'	69.77 331	eP	P	10 36 45.0	+0.9
	comp=Z,128nm,1.0s					
I39A	Houston	69.82 341	P	P	10 36 43.4	-0.8
	baz=156,SNR=35					
I39A	Houston	69.82 341	eP	P	10 36 43.3	-0.8
	comp=Z,83nm,1.0s					
F46A	Macinaw City C	69.90 347	P	P	10 36 43.8	-0.7
	baz=162					
BGNE	Belgrade	69.92 335	P	P	10 36 44.9	+0.1
	baz=149,SNR=24					
BGNE	Belgrade	69.92 335	eP	P	10 36 44.8	+0.1
	comp=Z,618nm,1.1s					
X18A	Snowflake	69.96 323	eP	P	10 36 46.8	+1.4
	comp=Z,47nm,1.0s					
J37A	Redenius Farm,	69.96 340	P	P	10 36 44.2	-0.7
	baz=154,SNR=17					
F45A	CMU Biological	69.97 346	P	P	10 36 43.8	-1.2
	baz=162					
H41A	Junction City	69.99 343	P	P	10 36 44.3	-0.8
	baz=158,SNR=9.9					
H41A	Junction City	69.99 343	eP	P	10 36 44.4	-0.8
	comp=Z,50nm,1.0s					
G43A	Wallace	70.08 345	P	P	10 36 44.5	-1.1
	baz=159,SNR=6.0					
G43A	Wallace	70.08 345	eP	P	10 36 44.6	-1.0
	comp=Z,28nm,1.0s					
MACI	Morro de la Ar	70.08 46	eP	P	10 36 44.7	-1.6
	comp=Z,159nm,1.0s					
SDCO	Great Sand Dun	70.10 328	P	P	10 36 47.4	+1.1
	baz=142,SNR=221					
SDCO	Great Sand Dun	70.10 328	eP	P	10 36 47.4	+1.1
	comp=Z,116nm,1.0s					
H40A	Chili	70.20 342	P	P	10 36 45.7	-0.7
	baz=157,SNR=38					
J36A	Seneca 1, Swea	70.23 339	P	P	10 36 46.0	-0.7
	baz=153,SNR=21					
J36A	Seneca 1, Swea	70.23 339	eP	P	10 36 45.6	-1.1
	comp=Z,66nm,1.0s					
I38A	Scanlan Farm,	70.24 341	P	P	10 36 45.9	-0.7
	baz=155,SNR=57					
G42A	Mountain	70.25 344	P	P	10 36 45.8	-0.9
	baz=159,SNR=13					
G42A	Mountain	70.25 344	eP	P	10 36 45.9	-0.8
	comp=Z,38nm,1.0s					
W18A	Petrified Fore	70.28 324	P	P	10 36 48.5	+1.2
	baz=138,SNR=10					
W18A	Petrified Fore	70.28 324	eP	P	10 36 48.2	+0.9
	comp=Z,94nm,0.9s					
G41A	Antigo	70.42 343	P	P	10 36 47.0	-0.8
	baz=158,SNR=21					
F44A	Big Bay de Noc	70.45 346	P	P	10 36 47.0	-0.8
	baz=161,SNR=7.3					
F43A	Flat Rock, Esc	70.49 345	P	P	10 36 47.2	-0.9
	baz=160,SNR=7.1					
H39A	Augusta	70.51 342	P	P	10 36 47.4	-0.9
	baz=156,SNR=17					
E45A	Wooded Hills,	70.54 347	P	P	10 36 48.0	-0.4
	baz=162,SNR=12					
I37A	Lemond, Waseca	70.55 340	P	P	10 36 47.9	-0.6
	baz=154,SNR=18					
I37A	Lemond, Waseca	70.55 340	eP	P	10 36 47.9	-0.6
	comp=Z,86nm,0.9s					
F42A	Maple Grove Fa	70.66 344	P	P	10 36 48.4	-0.7
	baz=159					
X16A	Lo Mia Camp, P	70.72 322	eP	P	10 36 51.5	+1.5
	comp=Z,70nm,1.0s					
G40A	Rib Lake	70.74 343	P	P	10 36 49.0	-0.7
	baz=157,SNR=14					
G40A	Rib Lake	70.74 343	eP	P	10 36 49.0	-0.7
	comp=Z,56nm,1.5s					
I36A	Fitzsimmons Fa	70.75 340	P	P	10 36 49.0	-0.7
	baz=153,SNR=14					
S22A	4UR Ranch, Cre	70.75 327	P	P	10 36 51.2	+0.9
	baz=141,SNR=73					
S22A	4UR Ranch, Cre	70.75 327	eP	P	10 36 50.9	+0.6
	comp=Z,33nm,0.9s					
H38A	Maiden Rock	70.80 341	P	P	10 36 49.2	-0.8
	baz=155,SNR=11					
F41A	Three Lakes	70.89 344	P	P	10 36 50.0	-0.5
	baz=158,SNR=49					
F41A	Three Lakes	70.89 344	eP	P	10 36 50.1	-0.5
	comp=Z,75nm,1.0s					
Q24A	Divide	70.89 329	P	P	10 36 52.1	+1.0
	baz=143,SNR=65					
Q24A	Divide	70.89 329	eP	P	10 36 52.0	+0.9
	comp=Z,126nm,0.9s					
113A	Mohawk Valley,	70.90 319	eP	P	10 36 51.9	+1.0
	comp=Z,26nm,0.9s					
H37A	Dierke Farm, C	70.91 341	P	P	10 36 50.1	-0.6
	baz=154,SNR=11					
E44A	Grand Marais A	70.95 346	P	P	10 36 50.8	-0.1
	baz=161					
E43A	Lone Tree Farm	70.96 345	P	P	10 36 50.2	-0.7
	baz=160,SNR=17					
E43A	Lone Tree Farm	70.96 345	eP	P	10 36 50.0	-1.0
	comp=Z,37nm,0.9s					
G39A	Holcombe	71.03 342	P	P	10 36 50.5	-0.9
	baz=156,SNR=25					
OGNE	Ogallala	71.10 333	P	P	10 36 52.7	+0.7
	baz=146,SNR=31					
OGNE	Ogallala	71.10 333	eP	P	10 36 52.8	+0.8
	comp=Z,96nm,0.9s					
OGNE			ePcP	PcP	10 37 10.9	0.0
G38A	Ridgeland	71.12 342	P	P	10 36 51.0	-0.9
	baz=156,SNR=25					
MVCO	Mesa Verde	71.19 326	P	P	10 36 53.9	+1.0
	baz=140,SNR=104					
MVCO	Mesa Verde	71.19 326	eP	P	10 36 53.9	+1.0
	comp=Z,128nm,1.0s					
H36A	Jessenland, He	71.22 340	P	P	10 36 52.3	-0.2
	baz=154,SNR=56					
COWI	Conover	71.23 344	eP	P	10 36 52.2	-0.4
	comp=Z,41nm,1.2s					
E42A	Champion	71.23 345	P	P	10 36 52.0	-0.6
	baz=159,SNR=15					
TAOE	Nuku Hiva Isla	71.25 268	eP	P	10 36 55.4	+1.8
	comp=Z,310nm,1.2s					
TAOE	Nuku Hiva Isla	71.25 268	eP	P	10 36 55.1	+1.5
	comp=Z,208nm,1.2s					
Y14A	Wickenburg	71.27 321	eP	P	10 36 54.2	+1.0
	comp=Z,58nm,1.1s					
F40A	Park Falls	71.32 343	P	P	10 36 52.9	-0.3
	baz=157,SNR=71					
ECSD	EROS Data Cent	71.37 338	P	P	10 36 53.0	-0.5
	baz=151,SNR=56					
ECSD	EROS Data Cent	71.37 338	eP	P	10 36 52.9	-0.5
	comp=Z,72nm,1.2s					
SPMN	Marine on St.	71.45 341	P	P	10 36 53.1	-0.8
	baz=155,SNR=21					
SPMN	Marine on St.	71.45 341	eP	P	10 36 52.5	-1.4
	comp=Z,57nm,1.0s					
WUAZ	Wupatki	71.47 323	P	P	10 36 56.1	+1.6
	baz=137,SNR=70					
WUAZ	Wupatki	71.47 323	eP	P	10 36 56.0	+1.6
	comp=Z,110nm,1.0s					
E41A	Kenton	71.53 344	P	P	10 36 53.4	-0.9
	baz=158,SNR=10					
F39A	Loretta	71.54 343	P	P	10 36 53.9	-0.5
	baz=156,SNR=29					
H35A	Sunnyside Ranc	71.61 339	P	P	10 36 54.4	-0.5
	baz=153,SNR=57					
KOWA	Kowa	71.73 65	P	P	10 36 55.1	-1.1
	comp=Z,38nm,0.6s,baz=242,slow=6.3,SNR=77					
KOWA			pP	pP	10 37 44.0	+0.3
	comp=Z,18nm,0.8s,baz=253,slow=11,SNR=2.8					
KOWA			S	S	10 45 56.3	-3.8
	comp=Z,4.6nm,0.9s,baz=83,slow=17,SNR=12					
KOWA	Kowa	71.73 65	eP	P	10 36 54.1	-2.1
	comp=Z,52nm,0.8s					
KOWA			pP	pP	10 37 44.0	+0.3
KOWA			S	S	10 45 56.3	-3.8
GLA	Glamis	71.74 319	P	P	10 36 57.2	+1.2
	baz=134,SNR=15					
GLA	Glamis	71.74 319	eP	P	10 36 57.2	+1.2
	comp=Z,48nm,0.9s					
GLA	Glamis	71.74 319	eP	P	10 36 57.2	+1.2
GLA			pmax	pmax		
	comp=Z,48nm,0.9s					
E40A	Wakefield	71.75 343	P	P	10 36 55.7	0.0
	baz=158,SNR=69					
G36A	St. Michael	71.75 340	P	P	10 36 55.2	-0.5
	baz=154,SNR=11					
ISCO	Idaho Springs	71.78 330	P	P	10 36 57.4	+1.0
	baz=142,SNR=111					
ISCO	Idaho Springs	71.78 330	eP	P	10 36 57.2	+0.8
	comp=Z,71nm,1.0s					
ISCO	Idaho Springs	71.78 330	eP	P	10 36 57.2	+0.8
ISCO			pmax	pmax		
	comp=Z,71nm,1.0s					
F38A	Pierce - Schro	71.85 342	P	P	10 36 55.9	-0.4
	baz=156,SNR=26					
F37A	Hinrichs Farm,	71.85 341	P	P	10 36 55.8	-0.4
	baz=155,SNR=24					
F37A			S	S	10 45 57.3	-2.9
	baz=155					
E39A	Mellen	71.86 343	P	P	10 36 56.1	-0.3
	baz=157,SNR=51					
PV01	Paradox Valley	71.93 327	eP	P	10 36 58.5	+1.2
	comp=Z,96nm,1.1s					
SMCO	Snowmass	71.94 328	eP	P	10 36 58.9	+1.4
	comp=Z,78nm,0.9s					
G35A	Watkins	71.97 340	P	P	10 36 56.5	-0.5
	baz=153,SNR=7.7					
G35A	Watkins	71.97 340	eP	P	10 36 56.5	-0.5
	comp=Z,45nm,0.9s					
D41A	Chassel	71.98 345	P	P	10 36 57.0	-0.1
	baz=159,SNR=17					
D41A	Chassel	71.98 345	eP	P	10 36 57.2	+0.2
	comp=Z,130nm,0.9s					
Y12C	Blythe	72.04 320	P	P	10 36 59.1	+1.4
	baz=134,SNR=25					
Y12C	Blythe	72.04 320	eP	P	10 36 59.2	+1.5
	comp=Z,95nm,1.1s					
PV15	Paradox Valley	72.04 327	eP	P	10 36 59.1	+1.2
	comp=Z,156nm,1.1s					
PV02	Paradox Valley	72.07 326	eP	P	10 36 59.3	+1.2
	comp=Z,74nm,1.2s					
PV05	Paradox Valley	72.16 326	eP	P	10 36 59.4	+0.8
	comp=Z,90nm,1.0s					
PV03	Paradox Valley	72.16 326	eP	P	10 36 59.2	+0.6
	comp=Z,103nm,1.5s					
PDMCI	Parker Dam,Lak	72.20 320	P	P	10 36 59.7	+1.1
	baz=134,SNR=9.7					
PV07	Paradox Valley	72.20 327	eP	P	10 37 00.0	+1.2
	comp=Z,71nm,1.0s					
F36A	Milaca	72.25 341	P	P	10 36 57.9	-0.7
	baz=154,SNR=41					
F36A	Milaca	72.25 341	eP	P	10 36 57.9	-0.7
	comp=Z,61nm,0.9s					
IKP	In-Ko-Pah, Jac	72.25 318	P	P	10 37 00.5	+1.4
	baz=133,SNR=14					
SWSC	Sam W. Stewart	72.26 318	P	P	10 37 00.4	+1.4
	baz=133,SNR=6.6					
PV04	Paradox Valley	72.30 326	eP	P	10 37 00.4	+1.0
	comp=Z,50nm,1.0s					
H32A	Carlson Farm,	72.33 338	P	P	10 36 58.9	-0.3
	baz=150,SNR=31					
E38A	The Farm, Brul	72.35 342	P	P	10 36 58.5	-0.7
	baz=156,SNR=22					
E38A	The Farm, Brul	72.35 342	eP	P	10 36 58.5	-0.7
	comp=Z,53nm,1.0s					
PV10	Paradox Valley	72.35 326	eP	P	10 37 00.4	+0.6
	comp=Z,74nm,1.0s					
G34A	Benson	72.36 339	P	P	10 36 58.6	-0.7
	baz=152,SNR=9.0					
PV09	Paradox Valley	72.49 326	eP	P	10 37 01.8	+1.2
BC3	Big Chuckawall	72.53 319	P	P	10 37 02.0	+1.2
	baz=133,SNR=48					
E37A	Wrenshall	72.55 342	P	P	10 36 59.9	-0.5
	baz=155					
F35A	Swanville	72.57 340	P	P	10 36 59.8	-0.7
	baz=153,SNR=16					
G33A	Ortonville	72.59 339	P	P	10 36 60.0	-0.7
	baz=151,SNR=15					
W13A	Hualapai Mount	72.61 321	eP	P	10 37 02.7	+1.4
	comp=Z,27nm,0.9s					
MONP2	Monument Peak	72.61 318	P	P	10 37 02.6	+1.2
	baz=132,SNR=16					
BAR	Barrett	72.62 318	eP	P	10 37 02.2	+1.0
	comp=Z,63nm,1.0s					
U15A	North Rim	72.65 323	eP	P	10 37 03.3	+1.7
	comp=Z,87nm,0.9s					
PMOZ	Porto Moniz, M	72.66 42	eP	P	10 37 01.1	-0.4
	comp=Z,166nm,1.2s					
IRM	Iron Mountain	72.69 320	P	P	10 37 03.0	+1.4
	baz=134,SNR=39					
F34A	Alexandria	72.73 340	P	P	10 37 00.9	-0.6
	baz=152,SNR=7.1					
E36A	McGregor	72.76 341	P	P	10 37 01.1	-0.5
	baz=154,SNR=32					
N23A	Red Feather La	72.80 330	P	P	10 37 03.4	+1.0
	baz=142,SNR=76					
N23A	Red Feather La	72.80 330	eP	P	10 37 03.4	+1.0
	comp=Z,76nm,0.9s					
NEE2	Needles Airpor	72.80 320	P	P	10 37 03.2	+1.0
	baz=134					
SUSD	Miller	72.82 337	P	P	10 37 01.6	-0.5
	baz=149					
PHWY	Pilot Hill	72.90 331	eP	P	10 37 03.7	+0.7
	comp=Z,72nm,1.1s					
C40A	Isle Royale Na	72.92 345	P	P	10 37 02.1	-0.5
	baz=158,SNR=6.4					
C40A	Isle Royale Na	72.92 345	eP	P	10 37 01.6	-0.9
	comp=Z,68nm,1.4s					
G32A	Webster	73.00 338	P	P	10 37 02.3	-0.8
	baz=150,SNR=7.5					
G32A	Webster	73.00 338	eP	P	10 37 02.4	-0.8
	comp=Z,52nm,0.9s					
109C	Camp Elliot, M	73.03 317	P	P	10 37 04.6	+1.1
	baz=132					
CPE	Camp Elliot	73.03 317	eP	P	10 37 04.7	+1.2
	comp=Z,44nm,1.3s					
C39A	Grand Marais	73.08 344	P	P	10 37 02.8	-0.7
	baz=157,SNR=19					
D37A	Cotton	73.09 342	P	P	10 37 03.2	-0.4
	baz=155,SNR=24					
BELC	Belle Mtn. Jos	73.10 319	P	P	10 37 05.5	+1.4
	baz=133,SNR=22					
XPFO	Piæon Flat	73.11 318	eP	P	10 37 05.6	+1.4
	comp=Z,53nm,1.2s					
PFO	Pinyon Flats O	73.12 318	P	P	10 37 05.6	+1.4
	baz=133,SNR=15					
PFO	Pinyon Flats O	73.12 318	eP	P	10 37 05.6	+1.4
	comp=Z,61nm,1.2s					
PFO	Pinyon Flats O	73.12 318	eP	P	10 37 05.6	+1.4
PFO			pmax	pmax		
	comp=Z,61nm,1.2s					
E35A	Pequot Lakes	73.14 341	P	P	10 37 03.2	-0.6
	baz=153,SNR=12					
G31A	Conde	73.23 337	P	P	10 37 03.8	-0.7
	baz=150,SNR=7.9					
C38A	Sawbill Land.	73.29 343	P	P	10 37 03.8	-1.0
	baz=156,SNR=27					
O20A	White River Ci	73.30 328	P	P	10 37 06.4	+1.1
	baz=140,SNR=107					
O20A	White River Ci	73.30 328	eP	P	10 37 06.3	+1.1
	comp=Z,149nm,0.9s					
LDFC	Landfair	73.31 320	eP	P	10 37 07.3	+2.0
	comp=Z,94nm,1.0s					
D36A	Goodland	73.33 342	P	P	10 37 04.3	-0.7
	baz=155,SNR=8.2					
D36A	Goodland	73.33 342	eP	P	10 37 04.2	-0.7
	comp=Z,28nm,1.2s					
E34A	Wadena	73.34 340	P	P	10 37 04.5	-0.6
	baz=153					
KNB	Kanab	73.37 323	eP	P	10 37 07.6	+1.9
	comp=Z,223nm,1.0s					
KNB	Kanab	73.37 323	eP	P	10 37 07.6	+1.9
KNB			pmax	pmax		
	comp=Z,223nm,1.0s					
PKCU	Pink Cliffs	73.39 324	eP	P	10 37 07.4	+1.4
	comp=Z,22nm,0.9s					
F32A	Veblen	73.41 338	P	P	10 37 04.7	-0.8
	baz=151					
GMRC	Granite Mounta	73.43 320	P	P	10 37 07.6	+1.5
	baz=133,SNR=72					
D35A	Remer	73.50 341	P	P	10 37 05.1	-0.9
	baz=154,SNR=10					
C37A	Embarrass	73.55 342	P	P	10 37 05.7	-0.5
	baz=156,SNR=17					
EYMN	Ely	73.56 343	P	P	10 37 05.5	-0.8
	baz=156,SNR=19					
EYMN	Ely	73.56 343	eP	P	10 37 05.5	-0.8
	comp=Z,40nm,1.1s					
MURC	Murrieta	73.56 318	P	P	10 37 08.1	+1.4
	baz=132,SNR=16					
E33A	Westby DABS, E	73.60 339	P	P	10 37 05.6	-0.9
	baz=152					
LCMT	Little Creek M	73.60 323	eP	P	10 37 08.4	+1.4
	comp=Z,50nm,0.9s					
SRU	San Rafael Swe	73.67 326	eP	P	10 37 08.4	+1.0
	comp=Z,113nm,0.9s					
SRU	San Rafael Swe	73.67 326	eP	P	10 37 08.4	+1.0
SRU			pmax	pmax		
	comp=Z,113nm,0.9s					
C36A	Pine Crest Far	73.76 342	P	P	10 37 07.0	-0.4
	baz=155,SNR=30					
MTPU	Mount Pierson	73.76 324	eP	P	10 37 09.4	+1.3
	comp=Z,46nm,0.9s					
BBRC	Big Bear Solar	73.84 319	P	P	10 37 10.0	+1.5
	baz=132					
HEC	Hector,Ludlow	73.87 319	P	P	10 37 10.2	+1.7
	baz=133,SNR=30					
P18A	Preston Nutter	73.91 327	eP	P	10 37 10.4	+1.4
	comp=Z,102nm,0.8s					
SZCU	Shurtz Canyon	73.93 323	eP	P	10 37 10.0	+1.0
	comp=Z,144nm,1.7s					
SCI2	San Clemente I	74.00 317	P	P	10 37 10.3	+1.1
	baz=131					
RWWY	Rawlins	74.01 330	eP	P	10 37 10.4	+1.0
	comp=Z,97nm,0.9s					
C35A	Jirik Farms, M	74.04 341	P	P	10 37 08.4	-0.7
	baz=154,SNR=23					
TUQ	Turquoise Moun	74.04 320	P	P	10 37 10.9	+1.4
	baz=133,SNR=20					
CCUT	Cedar City	74.05 323	eP	P	10 37 11.7	+2.0
	comp=Z,114nm,0.9s					
P17A	Butcher Ranch,	74.05 326	eP	P	10 37 10.7	+1.1
	comp=Z,128nm,1.0s					
MSU	Marysvale	74.10 325	eP	P	10 37 11.6	+1.6
MSU	Marysvale	74.10 325	eP	P	10 37 11.6	+1.6
TMUT	Trail Mountain	74.16 326	eP	P	10 37 11.1	+0.7
	comp=Z,29nm,0.9s					
CIS	Catalina Islan	74.19 317	P	P	10 37 11.4	+1.0
	baz=131					
C34A	RKJ Ranch, Bem	74.27 341	P	P	10 37 09.9	-0.6
	baz=153,SNR=6.2					
E31A	Nome	74.27 338	P	P	10 37 10.3	-0.2
	baz=150,SNR=12					
BFSC	Mount Baldy Ra	74.28 318	P	P	10 37 12.0	+1.1
	baz=132,SNR=24					
RRX	Edison Barstow	74.30 319	P	P	10 37 12.6	+1.6
	baz=132,SNR=5.1					
TCRU	Three Creeks R	74.31 324	eP	P	10 37 12.7	+1.5
	comp=Z,42nm,0.9s					
FMP	Fort Macarthur	74.32 317	P	P	10 37 12.5	+1.5
	baz=131					
SHPR	Sheep Range	74.33 321	eP	P	10 37 12.4	+1.2
	comp=Z,47nm,1.0s					
K22A	Casper	74.45 331	P	P	10 37 12.8	+1.0
	baz=142,SNR=40					
K22A	Casper	74.45 331	eP	P	10 37 12.7	+0.9
	comp=Z,82nm,1.0s					
GSC	Goldstone, Bar	74.47 319	P	P	10 37 13.5	+1.4
	baz=133,SNR=34					
GSC	Goldstone, Bar	74.47 319	eP	P	10 37 13.4	+1.4
	comp=Z,91nm,1.3s					
MWC	Mount Wilson	74.51 318	eP	P	10 37 13.3	+0.9
	comp=Z,122nm,1.4s					
MWC	Mount Wilson	74.51 318	eP	P	10 37 13.3	+0.9
MWC			pmax	pmax		
	comp=Z,122nm,1.4s					
RSSD	Black Hills	74.55 333	P	P	10 37 13.0	+0.5
	baz=144					
RSSD	Black Hills	74.55 333	eP	P	10 37 12.9	+0.5
	comp=Z,55nm,0.9s					
RSSD	Black Hills	74.55 333	eP	P	10 37 12.9	+0.5
RSSD			pmax	pmax		
	comp=Z,55nm,0.9s					
B35A	Bob, Littlefor	74.56 342	P	P	10 37 11.5	-0.6
	baz=154,SNR=41					
B35A	Bob, Littlefor	74.56 342	eP	P	10 37 11.5	-0.6
	comp=Z,56nm,0.9s					
PASC	Pasadena Art C	74.56 318	eP	P	10 37 13.7	+1.3
	comp=Z,111nm,1.2s					
SHOC	Shoshone, Teco	74.56 320	P	P	10 37 13.7	+1.2
	baz=133,SNR=8.9					
C33A	Trail	74.63 340	P	P	10 37 12.0	-0.5
	baz=152,SNR=8.6					
DECC	Green Verdugo	74.70 318	P	P	10 37 14.7	+1.4
	baz=131,SNR=18					
SYO	Syowa Base	74.87 159⇑	iP	P	10 37 12.6	-1.1
EDW2	Edwards Air Fo	74.91 318	P	P	10 37 15.4	+1.0
	baz=132,SNR=21					
MPU	Maple Canyon	74.91 326	eP	P	10 37 15.6	+1.0
	comp=Z,72nm,1.0s					
C32A	Crookston	74.93 340	P	P	10 37 13.7	-0.5
	baz=152					
B34A	Aery, Baudette	74.94 341	P	P	10 37 13.7	-0.5
	baz=153,SNR=17					
PSUT	Pine Spring	75.02 324	eP	P	10 37 16.8	+1.6
	comp=Z,62nm,0.9s					
BLG	Laguna Peak, P	75.06 317	P	P	10 37 16.2	+0.8
	baz=131					
LRMC	Laurel Mtn Rad	75.12 319	P	P	10 37 16.6	+0.9
	baz=132					
AGMN	Agassiz Nation	75.14 340	P	P	10 37 15.0	-0.4
	baz=152,SNR=18					
AGMN	Agassiz Nation	75.14 340	eP	P	10 37 15.1	-0.3
	comp=Z,38nm,0.9s					
SBA	Scott Base	75.15 190	eP	P	10 37 16.2	+1.1
	comp=Z,119nm,1.4s					
SBA	Scott Base	75.15 190	eP	P	10 37 16.2	+1.1
SBA			pmax	pmax		
	comp=Z,119nm,1.4s					
OSI	Osito Audit: C	75.18 318	P	P	10 37 16.9	+0.9
	baz=131,SNR=8.2					
OSI	Osito Audit: C	75.18 318	eP	P	10 37 17.2	+1.2
	comp=Z,58nm,1.0s					
JLU	Jordanelle	75.25 326	eP	P	10 37 17.8	+1.3
	comp=Z,84nm,1.1s					
TPNV	Topopah Spring	75.27 321	P	P	10 37 18.4	+1.8
	baz=133,SNR=75					
TPNV	Topopah Spring	75.27 321	eP	P	10 37 18.3	+1.7
	comp=Z,87nm,1.0s					
TPNV	Topopah Spring	75.27 321	eP	P	10 37 18.3	+1.7
TPNV			pmax	pmax		
	comp=Z,87nm,1.0s					
C31A	Landman Farms,	75.30 339	P	P	10 37 15.9	-0.4
	baz=150,SNR=10					
FURC	Furnace Creek,	75.30 320	P	P	10 37 18.2	+1.6
	baz=133,SNR=23					
SCZ2	Santa Cruz Isl	75.35 317	P	P	10 37 18.1	+1.2
	baz=130,SNR=5.2					
MPMC	Manual Prospec	75.39 320	P	P	10 37 18.4	+1.0
	baz=132,SNR=37					

CTU **Camp Tracy** 75.47 326 eP P 10 37 18.5 +0.8
comp=Z,28nm,1.1s
A33A **Warroad** 75.56 341 P P 10 37 17.6 -0.2
baz=153,SNR=29
ARVC **Arvin** 75.59 318 P P 10 37 19.4 +1.2
baz=131,SNR=6.8
DAC **Darwin (Calif)** 75.60 320 eP P 10 37 21.9 +3.3
comp=Z,69nm,1.0s
DAC **Darwin (Calif)** 75.60 320 P P 10 37 21.8 +3.3
TCUT **Toone Canyon** 75.61 327 eP P 10 37 19.6 +1.0
comp=Z,370nm,2.0s
DUG **Dugway, Tooele** 75.66 325 P P 10 37 20.1 +1.3
baz=137,SNR=50
DUG **Dugway, Tooele** 75.66 325 eP P 10 37 19.4 +0.6
comp=Z,64nm,1.0s
DUG **Dugway, Tooele** 75.66 325 eP P 10 37 19.4 +0.6
DUG pmax pmax
comp=Z,64nm,1.0s
SBC **Santa Barbara** 75.69 317 P P 10 37 19.8 +1.0
baz=130
ISA **Isabella, Lake** 75.72 319 P P 10 37 20.7 +1.5
baz=132,SNR=48
ISA **Isabella, Lake** 75.72 319 eP P 10 37 20.6 +1.5
comp=Z,73nm,1.0s
ISA **Isabella, Lake** 75.72 319 eP P 10 37 20.6 +1.5
ISA pmax pmax
comp=Z,73nm,1.0s
R11A **Troy Canyon, C** 75.86 322 P P 10 37 21.6 +1.7
baz=134,SNR=81
R11A **Troy Canyon, C** 75.86 322 eP P 10 37 21.2 +1.3
comp=Z,81nm,1.3s
VAH **Vaihoa** 75.93 259 eP P 10 37 22.6 +2.0
comp=Z,233nm,1.1s
BW06 **Boulder Array** 75.95 329 P P 10 37 20.9 +0.4
baz=140,SNR=32
BW06 **Boulder Array** 75.95 329 eP P 10 37 20.8 +0.3
comp=Z,25nm,1.0s
PD31 **Pinedale Array** 75.95 329 eP P 10 37 20.7 +0.3
PDAR **Pinedale Array** 75.95 329 P P 10 37 20.8 +0.3
comp=Z,12nm,0.8s,baz=141,slow=7.3,SNR=92
TOA0 **Torodi Ar. Sit** 75.95 69 eP P 10 37 19.4 -1.3
comp=Z,106nm,0.9s
TORD **Torodi Ar. Bea** 75.95 69 P P 10 37 19.6 -1.1
comp=Z,53nm,0.5s,baz=254,slow=5.5,SNR=534
TORD pP pP 10 38 07.2 -1.5
comp=Z,34nm,0.8s,baz=253,slow=5.4,SNR=2.5
TORD S S 10 46 41.9 -5.4
comp=Z,7.5nm,1.1s,baz=245,slow=13,SNR=7.4
GRAC **Grapevine Rang** 75.95 320 P P 10 37 22.0 +1.7
baz=133,SNR=6.6
MDND **Maddock** 75.98 338 P P 10 37 20.7 +0.6
baz=149,SNR=19
MDND **Maddock** 75.98 338 eP P 10 37 20.6 +0.4
comp=Z,250nm,0.9s
CWC **Cottonwood Cre** 76.00 320 P P 10 37 22.0 +1.2
baz=132
PKM **Mcpherson Peak** 76.04 317 P P 10 37 22.5 +1.4
baz=130,SNR=24
HWUT **Hardware Ranch** 76.06 327 eP P 10 37 21.6 +0.6
comp=Z,56nm,1.0s
VNDA **Vanda** 76.16 190 P P 10 37 22.4 +1.5
comp=Z,21nm,0.8s,baz=136,slow=5.0,SNR=91
VNDA PP PP 10 40 15.3 +1.1
comp=Z,4.5nm,0.9s,baz=143,slow=11,SNR=3.2
VNDA PKKPbc PKKPbc 10 56 37.4 +1.5
comp=Z,0.3nm,0.5s,baz=297,slow=4.5,SNR=3.1
VNDA **Vanda** 76.16 190 eP P 10 37 22.3 +1.4
comp=Z,30nm,0.9s
VNDA PP PP 10 40 15.3 +1.1
VNDA PKKPbc PKKPbc 10 56 37.4 +1.5
VES **Vestal, Richgr** 76.21 319 P P 10 37 23.0 +1.2
baz=131,SNR=38
PMOR **Pomariorio Ree** 76.25 259 eP P 10 37 24.5 +2.0
comp=Z,211nm,1.2s
SPUT **South Promonto** 76.28 326 eP P 10 37 23.5 +1.2
comp=Z,89nm,1.0s
BGU **Big Grassy Mou** 76.31 326 eP P 10 37 23.3 +0.9
comp=Z,66nm,1.1s
SMMC **Simmler** 76.43 318 P P 10 37 24.7 +1.6
baz=130,SNR=20
TIN **Tinemaha, Big** 76.50 320 P P 10 37 25.1 +1.6
baz=132,SNR=10
TVO **Taravao** 76.54 256 eP P 10 37 26.0 +1.8
comp=Z,63nm,1.4s
AHID **Auburn Hatcher** 76.69 328 eP P 10 37 25.4 +0.9
comp=Z,123nm,0.9s
HVU **Hansel Valley** 76.80 327 eP P 10 37 25.8 +0.7
comp=Z,69nm,1.1s
PAGB **Antelope Grade** 76.86 318 eP P 10 37 26.9 +1.4
comp=Z,98nm,1.1s
ULM **Lac du Bonnet** 76.88 341 P P 10 37 24.7 -0.5
comp=Z,34nm,0.7s,baz=150,slow=5.7,SNR=50
ULM S S 10 46 51.8 -4.2
comp=Z,6.8nm,1.0s,baz=314,slow=17,SNR=7.0
ULM **Lac du Bonnet** 76.88 341 eP P 10 37 24.7 -0.5
comp=Z,48nm,0.8s
ULM S S 10 46 51.8 -4.2
ULM **Lac du Bonnet** 76.88 341 eP P 10 37 24.7 -0.5
ULM S S 10 46 51.8 -4.2
ULM pmax pmax
comp=Z,49nm,0.8s
PAE **Paea** 76.88 256 eP P 10 37 27.8 +1.8
comp=Z,30nm,1.2s
PPT2 **Papeete2** 76.90 256 eP P 10 37 28.3 +2.1
comp=Z,172nm,1.3s
PPT **Papeete** 76.91 256 P P 10 37 28.8 +2.6
comp=Z,93nm,0.9s,baz=131,slow=5.0,SNR=4.9
PPT LR LR 11 00 57.2
comp=Z,19nm,21.4s,baz=168,slow=27
REDW **Red Top Meadow** 77.02 329 eP P 10 37 27.4 +0.9
comp=Z,64nm,0.9s
SNOW **Snow King Moun** 77.05 329 eP P 10 37 27.7 +1.1
comp=Z,61nm,0.9s
SCHQ **Schefferville** 77.05 0 P P 10 37 25.9 -0.2
comp=Z,6.8nm,0.8s,baz=162,slow=4.1,SNR=12
SCHQ **Schefferville** 77.05 0 eP P 10 37 25.6 -0.5
comp=Z,13nm,0.7s
LOHW **Long Hollow** 77.09 329 eP P 10 37 27.4 +0.6
comp=Z,216nm,1.8s
TPAW **Teton Pass** 77.16 329 eP P 10 37 28.2 +1.0
comp=Z,66nm,1.0s
MLAC **Mammoth, Mammo** 77.25 320 P P 10 37 29.2 +1.4
baz=132,SNR=12
MOOW **Moose Ponds** 77.26 329 eP P 10 37 28.4 +0.7
comp=Z,138nm,1.8s
FXWY **Fox Creek** 77.31 329 eP P 10 37 28.4 +0.3
comp=Z,30nm,1.0s
OMMB **Old Mammoth Mi** 77.33 320 eP P 10 37 29.4 +1.0
comp=Z,67nm,1.0s
NV11 **Mina Array Sit** 77.38 321 eP P 10 37 29.5 +1.0
comp=Z,3.7nm,1.1s
MDPB **Devils Postpil** 77.39 320 eP P 10 37 29.9 +1.2
comp=Z,47nm,1.0s
IMW **Indian Meadow** 77.46 329 eP P 10 37 30.0 +1.1
comp=Z,86nm,0.9s
NV01 **Mina Array Sit** 77.47 321 eP P 10 37 29.8 +0.8
NVAR **Mina Array Bea** 77.47 321 P P 10 37 30.1 +1.1
comp=Z,24nm,0.9s,baz=151,slow=6.1,SNR=116
NVAR PP PP 10 40 23.7 -3.2
comp=Z,1.0nm,0.8s,baz=148,slow=7.1,SNR=3.8
FLWY **Flagg Ranch** 77.49 329 eP P 10 37 30.4 +1.4
comp=Z,116nm,1.0s
PMPB **Monarch Peak** 77.51 318 eP P 10 37 30.4 +1.2
comp=Z,91nm,1.1s
LAO **LASA Array** 77.53 333 P P 10 37 29.6 +0.6
baz=143,SNR=7.7
LAO **LASA Array** 77.53 333 eP P 10 37 29.6 +0.6
comp=Z,93nm,1.0s
RLMT **Red Lodge** 77.62 331 P P 10 37 30.6 +0.9
baz=140,SNR=53
RLMT **Red Lodge** 77.62 331 eP P 10 37 30.6 +0.9
comp=Z,60nm,0.9s
H17A **Grant Village** 77.67 330 P P 10 37 31.6 +1.6
baz=139,SNR=27
H17A **Grant Village** 77.67 330 eP P 10 37 31.2 +1.2
comp=Z,26nm,0.9s
YPP **Pitchstone Pla** 77.68 329 eP P 10 37 31.6 +1.5
comp=Z,17nm,1.0s
RYN **Ryan** 77.73 321 eP P 10 37 31.5 +1.1
comp=Z,46nm,1.0s
KVN **Kaiserville** 77.77 322 eP P 10 37 31.6 +1.0
comp=Z,90nm,0.9s
KVN **Kaiserville** 77.77 322 eP P 10 37 31.6 +1.0
KVN pmax pmax
comp=Z,90nm,0.9s
YFT **Old Faithful** 77.83 329 eP P 10 37 32.9 +2.0
comp=Z,54nm,1.0s
TSUM **Tsumeb** 77.95 106 eP P 10 37 31.7 -0.4
comp=Z,51nm,0.9s
YNR **Norris Junctio** 77.96 330 eP P 10 37 33.4 +1.8
comp=Z,34nm,1.0s
YMR **Madison River** 78.06 330 eP P 10 37 33.9 +1.8
comp=Z,447nm,1.8s
DGMT **Dagmar** 78.17 336 P P 10 37 33.5 +1.0
baz=145,SNR=30
DGMT **Dagmar** 78.17 336 eP P 10 37 33.4 +1.0
comp=Z,186nm,1.0s
WAKR **Walker** 78.18 320 eP P 10 37 34.6 +1.6
comp=Z,66nm,1.2s
BMN **Battle Mountai** 78.21 323 eP P 10 37 32.9 -0.1
comp=Z,22nm,1.1s
BMN **Battle Mountai** 78.21 323 eP P 10 37 32.9 -0.1
BMN pmax pmax
comp=Z,23nm,1.1s
YHB **Horse Butte** 78.22 329 eP P 10 37 34.6 +1.6
comp=Z,72nm,0.9s
SAO **San Andreas Ge** 78.26 318 eP P 10 37 33.8 +0.7
comp=Z,28nm,1.0s
SAO **San Andreas Ge** 78.26 318 eP P 10 37 33.8 +0.7
SAO pmax pmax
comp=Z,28nm,1.0s
GCMT **Greycliff** 78.31 331 eP P 10 37 34.2 +0.8
YERR **Yerington** 78.38 321 eP P 10 37 35.5 +1.4
comp=Z,179nm,1.6s
QLMT **Earthquake Lak** 78.39 329 eP P 10 37 35.6 +1.7
CMB **Columbia Colle** 78.44 320 eP P 10 37 34.9 +0.7
comp=Z,17nm,1.0s
CMB **Columbia Colle** 78.44 320 eP P 10 37 34.9 +0.7
CMB pmax pmax
comp=Z,17nm,1.0s
PNTR **Pine Nut** 78.66 321 eP P 10 37 37.2 +1.6
comp=Z,122nm,0.8s
VCNR **Virginia City** 78.83 321 eP P 10 37 37.9 +1.5
comp=Z,70nm,1.1s
HLID **Hailey** 78.92 327 P P 10 37 38.5 +1.6
baz=136,SNR=186
HLID **Hailey** 78.92 327 eP P 10 37 37.9 +1.1
comp=Z,115nm,0.9s
PAHR **Pah Rah Range** 78.94 321 eP P 10 37 38.5 +1.5
comp=Z,165nm,0.9s
BOZ **Bozeman (W)** 79.06 330 P P 10 37 38.2 +0.7
baz=138,SNR=48
BOZ **Bozeman (W)** 79.06 330 eP P 10 37 38.1 +0.7
comp=Z,70nm,1.5s
BOZ **Bozeman (W)** 79.06 330 eP P 10 37 38.2 +0.7
BOZ pmax pmax
comp=Z,70nm,1.5s
MCMT **McKenzie Canyo** 79.07 329 eP P 10 37 39.2 +1.5
DLMT **Dillon** 79.34 329 eP P 10 37 40.2 +1.1
comp=Z,105nm,1.4s
AFDM **Forest Hills D** 79.38 320 eP P 10 37 39.9 +0.7
comp=Z,50nm,1.0s
MFID **Camas Ranch** 79.54 326 eP P 10 37 40.9 +0.8
comp=Z,108nm,1.4s
LRM **Limekiln Ridge** 79.61 329 eP P 10 37 41.6 +1.0
BEKR **Beckworth** 79.61 321 eP P 10 37 41.6 +1.0
comp=Z,78nm,1.2s
HRY **Holter Researc** 79.99 330 eP P 10 37 43.7 +1.3
MCCM **Marconi Confer** 80.02 318 eP P 10 37 43.5 +0.9
comp=Z,91nm,1.0s
EGMT **Eagleton** 80.07 332 P P 10 37 43.0 +0.2
baz=140,SNR=45
EGMT **Eagleton** 80.07 332 eP P 10 37 42.8 0.0
comp=Z,110nm,1.0s
ORV **Oroville** 80.08 320 eP P 10 37 43.9 +1.0
comp=Z,137nm,1.2s
ORV **Oroville** 80.08 320 eP P 10 37 43.9 +1.0
ORV pmax pmax
comp=Z,137nm,1.2s
RTC **Rabat Centre** 80.11 47 eP P 10 37 44.1 +0.9
comp=Z,584nm,0.8s
WVOR **Wild Horse Val** 80.35 324 eP P 10 37 45.2 +0.7
comp=Z,18nm,1.1s
WVOR **Wild Horse Val** 80.35 324 eP P 10 37 45.2 +0.7
WVOR pmax pmax
comp=Z,18nm,1.1s
GDXM **Geysers** 80.38 319 eP P 10 37 45.8 +1.1
comp=Z,25nm,1.1s
HOPS **Hopland Field** 80.67 319 eP P 10 37 47.6 +1.5
comp=Z,84nm,1.4s
PFVI **Vila Bisbo** 80.69 43 eP P 10 37 46.3 +0.1
comp=Z,86nm,2.1s
PFVI eS S 10 47 38.3 +1.4
O03D **Paynes Creek** 80.73 321 P P 10 37 46.3 -0.2
baz=130,SNR=36
J08A **Circle Bar Ran** 80.89 325 eP P 10 37 48.5 +1.2
comp=Z,174nm,1.4s
MORF **Marmelete** 80.90 43 eP P 10 37 47.2 -0.2
MORF AMb AMB 10 37 50.4
comp=Z,77nm,1.5s
MORF eS S 10 47 39.7 +0.5
MORF **Marmelete** 80.90 43 eP P 10 37 48.3 +0.9
comp=Z,77nm,1.6s
MORF eS S 10 47 41.6 +2.4
MOD **Modoc Plateau** 80.92 323 eP P 10 37 48.5 +1.0
comp=Z,76nm,1.1s
MDT **Midelt** 80.99 49 P P 10 37 47.8 -0.3
comp=Z,75nm,0.8s,baz=241,slow=5.8,SNR=22
PTEO **Sao Teotonio** 81.00 43 eP P 10 37 49.3 +1.4
comp=Z,130nm,1.3s
MSO **Missoula** 81.06 329 P P 10 37 49.1 +1.0
baz=137,SNR=29
MSO **Missoula** 81.06 329 eP P 10 37 48.7 +0.6
comp=Z,44nm,1.1s
BMO **Blue Mountains** 81.30 326 eP P 10 37 50.3 +0.8
comp=Z,112nm,1.3s
BOSA **Boshof** 81.31 117 P P 10 37 49.6 -0.4
comp=Z,10nm,0.6s,baz=265,slow=4.9,SNR=17
BOSA **Boshof** 81.31 117 eP P 10 37 49.0 -1.0
comp=Z,15nm,0.8s
PBDV **Barranco-do-Ve** 81.32 44 eP P 10 37 50.5 +0.9
comp=Z,89nm,1.2s
PBDV eS S 10 47 45.4 +1.9
WDC **Whiskeytown Da** 81.35 320 eP P 10 37 48.9 -0.7
comp=Z,30nm,0.8s
WDC **Whiskeytown Da** 81.35 320 eP P 10 37 48.9 -0.7
WDC pmax pmax
comp=Z,31nm,0.8s
KCPM **Cahto Peak** 81.41 319 eP P 10 37 51.0 +0.9
comp=Z,223nm,1.7s
PMST **Lisbon--Monsan** 81.44 42 eP P 10 37 51.3 +1.2
comp=Z,82nm,1.4s
PNCL **Nicolau / Gran** 81.47 43 eP P 10 37 51.3 +1.0
comp=Z,37nm,2.2s
PNCL eS S 10 47 46.3 +1.4
PCVE **Castro Verde** 81.49 43 eP P 10 37 51.4 +1.0
comp=Z,37nm,0.8s
PCVE eS S 10 47 47.1 +2.0
MESJ **Messejana** 81.50 43 eP P 10 37 50.4 -0.1
MESJ AMb AMB 10 37 52.5
comp=Z,50nm,1.5s
MESJ eS S 10 47 45.8 +0.6
MESJ **Messejana** 81.50 43 eP P 10 37 51.5 +1.0
comp=Z,50nm,1.4s
PMAFR **Mafra** 81.51 42 eS S 10 47 47.1 +1.8
PVAQ **Vaqueiros** 81.56 44 eP P 10 37 51.5 +0.7
comp=Z,58nm,1.5s
PVAQ eS S 10 47 45.8 0.0
LGBM **Gray Butte** 81.64 321 eP P 10 37 51.8 +0.3
N02D **Trinity Center** 81.70 321 P P 10 37 51.3 -0.2
baz=129,SNR=21
M04C **Macdoel** 81.71 322 P P 10 37 52.3 +0.6
baz=130,SNR=70
K05A **Summer Lake** 81.79 323 eP P 10 37 53.4 +1.2
comp=Z,152nm,0.9s
KMRM **Mail Ridge** 81.82 320 eP P 10 37 53.3 +1.1
comp=Z,109nm,1.2s
PBEJ **Beja** 81.83 43 eP P 10 37 53.3 +1.1
comp=Z,38nm,1.1s
JTMT **Jette** 81.88 330 eP P 10 37 53.2 +0.8
comp=Z,57nm,0.8s
I07A **Izee** 81.93 325 eP P 10 37 54.0 +1.3
comp=Z,35nm,1.0s
SFS **San Fernando** 81.98 45 eP P 10 37 53.6 +0.5
comp=Z,69nm,1.0s
SFS **San Fernando** 81.98 45 P P 10 37 53.5 +0.5
SFS pmax pmax
comp=Z,69nm,1.0s
F10A **Beach Ranch, E** 82.04 327 eP P 10 37 54.0 +0.8
comp=Z,65nm,0.8s
EVO **Evora** 82.04 43 eP P 10 37 54.1 +0.8
comp=Z,36nm,1.8s
M02C **Callahan** 82.05 321 P P 10 37 53.5 +0.2
baz=129,SNR=17
ALMR **Almeirim** 82.07 42 eP P 10 37 53.3 -0.1
ALMR AMb AMB 10 37 56.8
comp=Z,159nm,1.0s
ALMR **Almeirim** 82.07 42 eP P 10 37 54.7 +1.3
comp=Z,159nm,1.3s
YBH **Yreka Blue Hor** 82.18 321 P P 10 37 53.9 -0.1
comp=Z,15nm,0.8s,baz=76,slow=9.5,SNR=63
YBH **Yreka Blue Hor** 82.18 321 eP P 10 37 53.5 -0.5
comp=Z,20nm,0.9s
K04D **Chiloquin, OR** 82.21 322 P P 10 37 55.0 +0.8
baz=130,SNR=6.6
PMTG **Montargil** 82.23 42 eP P 10 37 54.9 +0.6
comp=Z,72nm,1.7s
PMTG eS S 10 47 52.0 -0.7
KHMM **Horse Mountain** 82.24 320 eP P 10 37 55.0 +0.5
comp=Z,48nm,1.1s
J05D **Fort Rock, OR** 82.34 323 P P 10 37 55.9 +1.0
baz=131,SNR=58
JCC **Jacoby Creek,** 82.38 320 eP P 10 37 56.2 +1.2
comp=Z,63nm,1.1s
PBAR **Barrancos** 82.44 43 eP P 10 37 56.0 +0.6
comp=Z,84nm,1.2s
PBAR **Barrancos** 82.44 43 eS S 10 47 56.3 +1.4
PTOM **Tomar** 82.45 42 eP P 10 37 55.9 +0.5
comp=Z,104nm,1.2s
G08A **Pilot Rock** 82.46 326 eP P 10 37 55.7 +0.2
comp=Z,94nm,1.7s
PESTR **Estremoz** 82.51 43 eP P 10 37 56.4 +0.7
comp=Z,57nm,1.4s
PESTR **Estremoz** 82.51 43 eS S 10 47 57.2 +1.7
PESTR **Estremoz** 82.51 43 eP P 10 37 56.1 +0.4
comp=Z,43nm,1.5s
PINE **Pine Mountain** 82.52 324 eP P 10 37 57.2 +1.3
comp=Z,97nm,0.9s
FFC **Flin Flon** 82.62 340 eP P 10 37 55.7 -0.2
comp=Z,38nm,1.2s
FFC **Flin Flon** 82.62 340 eP P 10 37 55.7 -0.2
FFC pmax pmax
comp=Z,38nm,1.2s
PCAS **Casmilo, Conde** 82.66 41 eP P 10 37 57.2 +0.7
comp=Z,64nm,1.9s
PCAS **Casmilo, Conde** 82.66 41 eS S 10 47 58.2 +1.2
WALA **Waterton Lakes** 82.67 331 eP P 10 37 56.7 +0.2
comp=Z,57nm,0.9s
MAW **Mawson** 82.80 163 P P 10 37 57.4 +0.6
comp=Z,66nm,0.8s,baz=217,slow=6.1,SNR=121
MAW **Mawson** 82.80 163 eP P 10 37 57.4 +0.6
comp=Z,17nm,0.8s
MAW **Mawson** 82.80 163 eP P 10 37 57.4 +0.6
MAW pmax pmax
comp=Z,17nm,0.8s
J04D **Umpqua Nationa** 82.80 323 P P 10 37 58.1 +0.7
baz=130,SNR=30
E09A **Wood Farm, Sta** 82.88 327 eP P 10 37 57.6 +0.1
comp=Z,106nm,1.7s
HUMO **Hull Mountain** 82.88 322 eP P 10 37 57.4 -0.1
comp=Z,24nm,1.2s
LBTB **Lobatse** 82.89 114 eP P 10 37 57.1 -1.2
comp=Z,24nm,1.0s
LBTB **Lobatse** 82.89 114 eP P 10 37 57.1 -1.2
LBTB pmax pmax
comp=Z,24nm,1.0s
L02D **Cave Junction,** 82.97 321 P P 10 37 59.0 +0.9
baz=129,SNR=13
PMRV **Marv??o** 82.97 42 eP P 10 37 58.1 0.0
comp=Z,25nm,1.5s
PMRV **Marv??o** 82.97 42 eS S 10 48 00.2 +0.1
I05D **Terrebonne, OR** 83.09 324 P P 10 37 59.8 +1.2
baz=131,SNR=29
PCBR **Castelo Branco** 83.16 42 eP P 10 37 59.0 0.0
comp=Z,31nm,1.8s
G06A **Carlson Farm,** 83.30 325 eP P 10 38 00.8 +1.1
comp=Z,49nm,1.3s
E08A **Dider Farm, El** 83.32 327 eP P 10 37 60.0 +0.3
comp=Z,96nm,1.9s
I04A **Tendick Farm,** 83.33 323 P P 10 37 59.9 0.0
baz=130,SNR=12
KBO **Bosley Butte** 83.36 321 eP P 10 38 01.4 +1.3
comp=Z,90nm,1.2s
F07A **Phinny Hill Vi** 83.37 326 eP P 10 38 01.2 +1.3
comp=Z,98nm,1.4s
PVIS **Viseu** 83.43 41 eP P 10 38 01.1 +0.6
comp=Z,33nm,1.8s
MTE **Manteigas** 83.45 41 eP P 10 38 01.1 +0.5
comp=Z,46nm,1.9s
MTE **Manteigas** 83.45 41 eS S 10 48 06.3 +1.2
MTE **Manteigas** 83.45 41 eP P 10 38 01.2 +0.6
comp=Z,23nm,1.0s
HAWA **Hanford** 83.50 326 eP P 10 38 01.6 +1.0
comp=Z,67nm,0.9s
NEW **Newport** 83.59 329 P P 10 38 00.6 -0.5
baz=134,SNR=12
NEW **Newport** 83.59 329 eP P 10 38 00.5 -0.6
comp=Z,19nm,0.8s
NEW **Newport** 83.59 329 eP P 10 38 00.5 -0.6
NEW pmax pmax
comp=Z,19nm,0.8s
TAM **Tamanrasset** 83.62 62 eP P 10 38 02.3 +0.3
comp=Z,85nm,1.0s
D08A **Wollman Farm,** 83.64 327 eP P 10 38 02.0 +0.7
comp=Z,85nm,1.3s
G05D **Wamic, OR** 83.67 325 P P 10 38 02.8 +1.3
baz=131,SNR=11
E07A **Sunnyside** 83.77 326 eP P 10 38 03.0 +1.0
comp=Z,44nm,0.7s
I03D **Drain, OR** 83.79 323 P P 10 38 02.8 +0.6
baz=129,SNR=17
C09A **Chrisman Ranch** 83.83 328 eP P 10 38 02.8 +0.5
comp=Z,88nm,0.8s
KEBM **Edson Butte** 83.83 321 eP P 10 38 03.5 +1.0
comp=Z,153nm,1.1s
PVRL **Vila Real** 83.87 41 eP P 10 38 03.5 +0.8
comp=Z,64nm,1.6s
POLO **Lamas de Olo** 83.89 40 eP P 10 38 03.1 +0.3
comp=Z,26nm,1.6s
POLO epP pP 10 38 52.5 +0.8
POLO eS S 10 48 06.3 -3.1
PCAB **Cabril** 83.95 40 eP P 10 38 04.0 +0.9
comp=Z,42nm,1.6s
PGAV **Gavieira, Arco** 83.96 40 eP P 10 38 03.2 0.0
comp=Z,32nm,1.8s
PGAV **Gavieira, Arco** 83.96 40 eS S 10 48 07.2 -3.0
FCC **Fort Churchill** 84.07 346 eP P 10 38 03.3 +0.2
comp=Z,52nm,0.8s
FCC **Fort Churchill** 84.07 346 eP P 10 38 03.3 +0.2
FCC pmax pmax
comp=Z,52nm,0.8s
MVO **Moncorvo** 84.22 41 eP P 10 38 04.9 +0.4
comp=Z,50nm,1.4s
MVO **Moncorvo** 84.22 41 eS S 10 48 09.6 -3.1
COR **Corvallis** 84.33 323 eP P 10 38 05.3 +0.5
comp=Z,116nm,1.3s
COR **Corvallis** 84.33 323 eP P 10 38 05.3 +0.5
COR pmax pmax
comp=Z,116nm,1.3s
LTY **Liberty** 84.66 326 eP P 10 38 07.0 +0.4
comp=Z,54nm,0.9s
G03D **McMinnville, O** 84.70 324 P P 10 38 07.4 +0.7
baz=129,SNR=6.3
B08A **Colville Reser** 84.72 328 eP P 10 38 06.2 -0.6
comp=Z,51nm,1.3s
PBRG **Braganca** 84.78 41 eP P 10 38 07.9 +0.7
comp=Z,41nm,1.3s
PBRG epP pP 10 38 57.2 +1.0
LON **Longmire** 84.91 326 eP P 10 38 07.8 0.0
comp=Z,24nm,0.9s
LON **Longmire** 84.91 326 eP P 10 38 07.8 0.0
LON pmax pmax
comp=Z,25nm,0.9s
PAB **San Pablo** 84.95 44 eP P 10 38 08.4 +0.2
comp=Z,111nm,1.7s
F04D **Rainier, OR** 85.12 325 P P 10 38 09.5 +0.8
baz=130
C06D **Leavenworth** 85.21 327 P P 10 38 09.1 -0.1
baz=131
ESDC **Sonseca Array** 85.27 44 P P 10 38 10.2 +0.5
comp=Z,9.6nm,0.7s,baz=241,slow=4.8,SNR=60
ESLA **Sonseca Array** 85.27 44 eP P 10 38 09.9 +0.2
comp=Z,23nm,0.9s
D05A **Enumclaw** 85.29 326 eP P 10 38 09.8 +0.2
comp=Z,92nm,0.9s
ES19 **SONSECA Array** 85.32 44 eP P 10 38 09.9 -0.1
E03A **Lebam** 85.71 325 eP P 10 38 12.2 +0.6
comp=Z,84nm,1.0s
B06A **Marblemount** 85.90 327 eP P 10 38 12.2 -0.3
comp=Z,90nm,0.8s
B05A **Bryant** 86.04 327 P P 10 38 13.0 -0.2
baz=130,SNR=22

NLWA Neilton Lookou 86.40 325 *eP* **P 10 38 15.8 +0.7**
comp=Z,62nm,1.1s
A04D Lummi Island 86.65 327 P **P 10 38 16.5 +0.4**
baz=130,SNR=41
PGC Sidney 86.98 326 *eP* **P 10 38 18.2 +0.5**
comp=Z,92nm,1.0s
LLLB Lillooet 87.46 329 *eP* **P 10 38 20.0 -0.1**
comp=Z,78nm,1.0s
LSZ Lusaka 88.81 106 *eP* **P 10 38 29.1 +1.7**
comp=Z,26nm,1.1s
LSZ Lusaka 88.81 106 *eP* **P 10 38 29.1 +1.7**
LSZ pmax pmax
comp=Z,26nm,1.1s
CASY Casey 91.44 179 *eP* **P 10 38 39.7 +1.1**
comp=Z,153nm,0.9s
BBB Bella Bella 91.50 327 *eP* **P 10 38 39.6 +0.7**
comp=Z,32nm,0.8s
ILULI Ilulissat 92.20 6 *eP* **P 10 38 41.6 -0.1**
comp=Z,30nm,1.2s
ILULI Ilulissat 92.20 6 *eP* **P 10 38 41.6 -0.1**
ILULI pmax pmax
comp=Z,30nm,1.2s
KEST Kesra 92.44 52 P **P 10 38 43.3 -0.4**
comp=Z,9.8nm,0.8s,baz=343,slow=2.1,SNR=14
KEST Kesra 92.44 52 *eP* **P 10 38 44.1 +0.3**
comp=Z,11nm,0.9s
YKA Yellowknife Ar 92.79 340 P **P 10 38 44.6 0.0**
comp=Z,13nm,0.8s,baz=131,slow=4.5,SNR=132
YKA pP **pP 10 39 38.4 +4.2**
comp=Z,4.0nm,0.8s,baz=129,slow=4.5,SNR=2.6
YKA PP **PP 10 42 27.1 -2.8**
comp=Z,0.8nm,0.8s,baz=120,slow=8.0,SNR=4.4
YKA PKKP **PKKPdf 10 55 54.6 -1.2**
comp=Z,0.3nm,0.7s,baz=336,slow=1.5,SNR=4.2
YKA LR LR 11 25 42.7
comp=Z,7.2nm,18.9s,baz=125,slow=39
YKW3 Yellowknife Ar 92.84 340 *eP* **P 10 38 44.8 0.0**
comp=Z,30nm,1.1s
BORG Borgarnes 93.81 18 LR LR 11 17 51.9
comp=Z,58nm,20.4s,baz=218,slow=33
EKA Eskdalemuir Ar 94.52 31 P **P 10 38 53.6 +0.9**
comp=Z,0.9nm,0.6s,baz=255,slow=2.7,SNR=4.7
EKA LR LR 11 18 45.0
comp=Z,61nm,20.2s,baz=310,slow=34
DLBC Dease Lake 95.99 332 *eP* **P 10 39 00.0 +0.6**
comp=Z,17nm,0.9s
SUMG Summit 96.80 8 *i* P **P 10 39 03.0 -0.2**
SUMG Summit 96.80 8 *eP* **P 10 39 03.7 +0.5**
comp=Z,12nm,1.0s
SUMG Summit 96.80 8 *eP* **P 10 39 03.7 +0.5**
SUMG pmax pmax
comp=Z,12nm,1.0s
DAVOX Davos/Dischmat 97.55 42 P Pdif 10 39 06.9 -0.1
comp=Z,3.2nm,0.8s,baz=169,slow=5.2,SNR=4.7
DAVA Damuels 97.76 42 *epP* pP 10 40 00.1 +2.6
comp=Z,4.9nm,1.1s
FETA Feichten 98.18 42 *epP* pP 10 40 02.0 +2.6
comp=Z,6.7nm,1.2s
RETA Reutte 98.39 42 *epP* pP 10 40 02.6 +2.3
comp=Z,9.1nm,1.4s
MOTA Moosalm 98.54 42 *epP* pP 10 40 02.3 +1.2
comp=Z,8.7nm,1.3s
RES Resolute Bay 98.65 353 *eP* Pdif 10 39 11.8 +0.9
comp=Z,6.8nm,1.1s
RES Resolute Bay 98.65 353 *eP* Pdif 10 39 11.8 +0.9
RES pmax pmax
comp=Z,7.0nm,1.1s
WATA Walderalm 98.83 42 *epP* pP 10 40 03.9 +1.6
comp=Z,2.7nm,0.9s
WTTA Wattenberg 98.84 42 *epP* pP 10 40 04.9 +2.5
comp=Z,14nm,1.9s
ABTA Abfaltersbach 99.19 43 *epPdiff* pP 10 40 06.3 +2.4
comp=Z,10nm,1.4s
MYKA Terra Mystica 99.86 44 *epPdiff* **pP 10 40 09.8 +2.9**
comp=Z,3.2nm,1.0s
MYKA *i* pPdiff pP 10 40 09.8 +2.9
OBKA Obir 100.40 44 *epPdiff* pP 10 40 12.2 +2.9
comp=Z,9.4nm,1.3s
MOA Molln 100.71 43 *epPdiff* pP 10 40 13.1 +2.5
comp=Z,2.1nm,0.6s
GERES GERESS Array B 100.73 42 PKKPbc PKKPbc 10 55 30.6 -4.8
comp=Z,1.0nm,0.8s,baz=115,slow=4.7,SNR=3.6
SOKA Soboth 100.77 44 *epPdiff* pP 10 40 11.9 +0.9
comp=Z,4.4nm,1.3s
CLL Collm 101.23 39 *ePP* PP 10 43 29.0 -5.9
CLL *ePPPP* 10 47 36.0
CLL *eSP* SP 10 52 12.0 -5.1
CLL *eSS* **SS 10 57 54.0 +4.2**
CLL *eSSS* SSS 11 02 12.0
ARSA Arzberg 101.29 44 *epPdiff* pP 10 40 16.1 +2.9
comp=Z,4.8nm,1.4s
CONA Conrad Observa 101.74 43 *epPdiff* pP 10 40 17.0 +1.7
comp=Z,3.4nm,1.1s
INK Inuvik 102.56 340 PKKPbc PKKPbc 10 55 25.9 -4.7
comp=Z,4.0nm,0.8s,baz=16,slow=1.0,SNR=6.4
DAWY Dawson 102.71 335 *ePdif* **Pdif 10 39 29.2 -0.1**
EGAK Eagle 103.70 335 *ePdif* **Pdif 10 39 33.8 +0.2**
ILAR Eielson Array 105.99 334 Pdiff **Pdif 10 39 43.1 -0.7**
comp=Z,0.8nm,0.8s,baz=142,slow=3.4,SNR=7.9
ILAR PKiKP **PKiKP 10 43 56.3 +1.4**
comp=Z,1.3nm,0.9s,baz=115,slow=4.3,SNR=8.4
ILAR PKKPbc **PKKPbc 10 55 15.6 -4.6**
comp=Z,0.8nm,0.9s,baz=299,slow=2.8,SNR=7.9
SPITS Spitsbergen Ar 110.52 13 PKKPab PKKPab 10 55 14.0 +1.1
comp=Z,9.7nm,1.1s,baz=219,slow=1.8,SNR=3.5
KIEV Kiev 110.89 43 *i* PKIKP **PKiKP 10 44 03.7 -0.7**
AKASG Malin Array Be 110.90 43 PKiKP **PKiKP 10 44 03.0 -1.4**
comp=Z,0.5nm,0.2s,baz=264,slow=2.6,SNR=5.5
AKASG PP **PP 10 44 39.7 -6.2**
comp=Z,0.5nm,0.3s,baz=256,slow=8.0,SNR=5.7
AKASG PKKPbc **PKKPbc 10 55 03.0 -1.0**
comp=Z,0.4nm,0.2s,baz=70,slow=3.8,SNR=4.9
AKASG PKKPab **PKKPab 10 55 13.4 +1.5**
comp=Z,0.7nm,0.2s,baz=65,slow=4.6,SNR=7.5
FINES FINESS Array B 110.92 31 PP PP 10 44 40.7 -5.1
comp=Z,7.4nm,1.0s,baz=241,slow=3.5,SNR=9.5
FINES PKKPbc **PKKPbc 10 55 02.3 -2.0**
comp=Z,1.4nm,0.6s,baz=94,slow=4.2,SNR=9.0
ARCES ARCESS Array B 111.73 22 PKKPbc PKKPbc 10 54 57.5 -4.4
comp=Z,1.7nm,0.8s,baz=29,slow=2.8,SNR=5.2
ARCES PKKPab **PKKPab 10 55 08.9 +1.2**
comp=Z,6.1nm,0.8s,baz=74,slow=5.2,SNR=12
BRTR Keskin Array B 111.89 55 PKiKP **PKiKP 10 44 06.7 -0.2**
comp=Z,2.3nm,0.8s,baz=188,slow=3.6,SNR=7.5
BRTR PP PP 10 44 45.1 -8.4
comp=Z,2.5nm,1.0s,baz=244,slow=6.3,SNR=5.3
BRTR PKKPab **PKKPab 10 55 08.4 +0.2**
comp=Z,2.4nm,0.7s,baz=100,slow=5.0,SNR=6.3
OBN Obninsk 115.82 38 *i* PKIKP **PKPdf 10 44 13.4 -0.3**
OBN *e* 10 44 59.6
OBN *e* 10 45 16.5
OBN *e* 10 51 07.7
OBN pmax pmax
comp=Z,61nm,1.7s
SOC Sochi 116.98 51 *i* PKIKP **PKPdf 10 44 15.9 -0.4**
SOC *e* 10 45 31.6
SOC *ePPP* PPP 10 48 00.4
SOC pmax pmax
comp=Z,15nm,0.4s
VSR Storozhevoye 117.20 43 *ePKIKP* **PKPdf 10 44 15.6 -0.9**
VSR *e* 10 50 48.8
VSR pmax pmax
comp=Z,10.0nm,0.9s
VORD Divnogorie 117.27 43 *ePKIKP* **PKPdf 10 44 15.4 -1.2**
VORD pmax pmax
comp=Z,10.0nm,0.7s
KLMR Klimovskoe 117.39 32 *ePKIKP* **PKPdf 10 44 14.8 -1.8**
KLMR *e* 10 45 23.6
KLMR pmax pmax
comp=Z,16nm,0.9s
KLMR Klimovskoe 117.39 32 *ePKPdf* **PKPdf 10 44 14.9 -1.7**
KLMR AMP 10 44 16.8
comp=Z,16nm,0.9s
KLMR *ePP* **sPKPdf 10 45 23.6 -5.3**
KLMR *ePKKPbc* **PKKPbc 10 54 39.6 -2.6**
NEY Neytrino 119.14 52 *ePKIKP* **PKPdf 10 44 21.9 +1.1**
KIV Kislovodsk 119.16 51 *ePKPdf* **PKPdf 10 44 20.8 +0.1**
KIV Kislovodsk 119.16 51 *ePKIKP* **PKPdf 10 44 20.4 -0.3**
KIV pmax pmax
comp=Z,21nm,1.1s
KBZ Khabaz 119.30 51 PKP **PKPdf 10 44 21.2 +0.5**
comp=Z,15nm,0.9s,baz=170,slow=0.5,SNR=37
KBZ SKP 10 47 37.4
comp=Z,3.1nm,0.8s,baz=214,slow=1.7,SNR=4.6
STKA Stephens Creek 119.42 208 PKP **PKPdf 10 44 21.5 -0.1**
comp=Z,7.6nm,0.8s,baz=127,slow=1.8,SNR=14
STKA Stephens Creek 119.42 208 *ePKPdf* **PKPdf 10 44 21.6 +0.1**
STKA Stephens Creek 119.42 208 *ePKIKP* **PKPdf 10 44 21.6 +0.1**
AKH Akhalkalaki 119.56 54 *ePKPdf* **PKPdf 10 44 22.3 +0.6**
NCK Nalchik 119.79 52 *i PKIKP* **PKPdf 10 44 21.9 +0.1**
ZEI Tsey 119.97 53 *i PKIKP* **PKPdf 10 44 22.1 -0.3**
PRGR Permogore 120.25 31 *ePKIKP* **PKPdf 10 44 21.6 -0.4**
PRGR pmax pmax
comp=Z,25nm,0.9s
GNI Garni 120.39 56 *ePKPdf* **PKPdf 10 44 23.6 +0.3**
TBLG Delisi 120.51 54 *ePKPdf* **PKPdf 10 44 23.2 0.0**
BILL Bilibino 124.17 339 *ePKPdf* **PKPdf 10 44 29.6 +0.2**
BILL Bilibino 124.17 339 *d PKIKP* **PKPdf 10 44 29.4 0.0**
BILL *e* 10 45 17.7
BILL *e* 10 46 13.6
BILL *eSS* SS 11 02 51.7 +0.3
BILL pmax pmax
comp=Z,9.0nm,1.2s
NWAO Narrogin (SRO) 124.71 184 PKP **PKPdf 10 44 31.5 -0.2**
comp=Z,12nm,0.7s,baz=34,slow=3.1,SNR=13
NWAO PP **PP 10 46 20.4 +0.4**
comp=Z,4.8nm,0.8s,baz=352,slow=7.1,SNR=3.6
FORT Forrest 125.08 196 *ePKPdf* **PKPdf 10 44 31.8 -0.7**
CTA Charters Tower 126.69 220 PKP **PKPdf 10 44 36.1 +0.4**
comp=Z,18nm,0.8s,baz=122,slow=1.9,SNR=9.2
CTAO Charters Tower 126.69 220 *ePKPdf* **PKPdf 10 44 36.2 +0.4**
ARU Arti 127.93 35 SKPbc SKPbc 10 47 38.0
comp=Z,1.8nm,0.3s,baz=265,slow=3.2,SNR=10
ARU Arti 127.93 35 *ePKPdf* **PKPdf 10 44 38.0 +1.0**
ARU SKPbc SKPbc 10 47 38.0
ARU Arti 127.93 35 *i PKIKP* **PKPdf 10 44 37.1 +0.1**
ARU 10 46 39.2
ARU 10 51 31.6
ARU SP SP 10 56 23.7 -3.6
SVE Sverdlovsk 128.89 34 *ePKIKP* **PKPdf 10 44 39.0 +0.2**
AKTO Aktyubinsk 129.14 43 PKP **PKPdf 10 44 40.0 +0.6**
comp=Z,10nm,0.9s,baz=281,slow=3.3,SNR=28
AKTO PP **PP 10 46 44.0 -6.4**
comp=Z,1.5nm,0.8s,baz=284,slow=11,SNR=2.8
AKTO SKPbc SKPbc 10 47 42.5 +0.9
comp=Z,24nm,0.9s,baz=290,slow=3.3,SNR=27
AS01 Alice Springs 129.81 205 *ePKPdf* **PKPdf 10 44 41.3 -0.4**
AS31 Alice Springs 129.82 205 *ePKPdf* **PKPdf 10 44 41.4 -0.3**
ASAR Alice Springs 129.82 205 PKhKP PKPpre 10 44 22.6
comp=Z,0.8nm,0.8s,baz=151,slow=2.4,SNR=4.8
ASAR PKP **PKPdf 10 44 41.4 -0.4**
comp=Z,31nm,0.8s,baz=148,slow=2.2,SNR=118
ASAR PP **PP 10 46 51.0 -3.1**
comp=Z,4.8nm,0.9s,baz=152,slow=6.3,SNR=8.1
ASAR SKPbc SKPab 10 47 44.8 -0.3
comp=Z,12nm,0.9s,baz=145,slow=3.1,SNR=20
TIXI Tiksi 130.04 354 PKP **PKPdf 10 44 40.0 -0.6**
comp=Z,6.2nm,0.9s,baz=35,slow=3.4,SNR=7.6
TIXI SKPbc **SKPbc 10 47 44.1 -0.2**
comp=Z,33nm,0.8s,baz=40,slow=3.5,SNR=35
TIXI Tiksi 130.04 354 *c PKIKP* **PKPdf 10 44 40.5 0.0**
TIXI pmax pmax
comp=Z,18nm,2.5s
WSAR Wadi Sarin 130.06 78 PKP **PKPdf 10 44 42.5 +0.5**
comp=Z,16nm,0.9s,baz=270,slow=5.4,SNR=6.9
ABKAR Abkulak array 130.62 44 *ePKPdf* **PKPdf 10 44 43.1 +0.8**
NRIK Noril'sk 130.71 12 PKP **PKPdf 10 44 41.8 -0.1**
comp=Z,5.4nm,0.7s,baz=41,slow=1.8,SNR=5.8
NRIK SKPbc **SKPbc 10 47 46.1 -0.8**
comp=Z,5.8nm,0.8s,baz=39,slow=1.8,SNR=9.1
GEYT Alibeck 130.74 59 SKPbc **SKPbc 10 47 46.6 -1.6**
comp=Z,41nm,1.1s,baz=252,slow=8.5,SNR=5.6
GYA0B ALIBECK ARRAY 130.74 59 *ePKPdf* **PKPdf 10 44 43.9 +0.9**
SEY Seymchan 131.78 337 *c PKIKP* **PKPdf 10 44 45.0 +0.9**
WC3 Warramunga Arr 132.94 208 *ePKPdf* **PKPdf 10 44 47.8 +0.1**
WB2 Warramunga Arr 132.96 208 *ePKPdf* **PKPdf 10 44 47.8 +0.1**
WRA Warramunga Arr 132.97 208 PKhKP PKPpre 10 44 34.8
comp=Z,3.2nm,0.8s,baz=179,slow=1.7,SNR=12
WRA PKP **PKPdf 10 44 47.8 +0.1**
comp=Z,25nm,0.8s,baz=158,slow=1.7,SNR=77
WRA PP **PP 10 47 11.7 -2.7**
comp=Z,6.1nm,1.3s,baz=157,slow=5.7,SNR=5.7
WRA SKPbc **SKPbc 10 47 56.2 -0.4**
comp=Z,25nm,0.9s,baz=154,slow=3.2,SNR=28
WRAB Tennant Creek 132.97 208 *ePKPdf* **PKPdf 10 44 47.5 -0.2**
WRAB Tennant Creek 132.97 208 *c PKIKP* **PKPdf 10 44 48.1 +0.4**
WRAB pmax pmax
comp=Z,67nm,1.7s
COEN Coen 133.28 222 *ePKPdf* **PKPdf 10 44 49.2 +0.8**
PATS Pohnpei 133.79 257 *ePKPdf* **PKPdf 10 44 49.5 +0.2**
MA2 Magadan 134.47 334 SKPbc **SKPbc 10 47 59.8 -0.4**
comp=Z,10nm,0.9s,baz=351,slow=2.4,SNR=5.1
MA2 Magadan 134.47 334 *i PKIKP* **PKPdf 10 44 50.0 +0.8**
PEA0B Petropavlovsk- 134.51 324 *ePKPpre* PKPpre 10 44 39.6
PEA0B *ePKPdf* **PKiKP 10 44 50.4 -0.6**
PETK Petropavlovsk- 134.51 324 PKhKP PKPpre 10 44 40.0
comp=Z,5.0nm,0.8s,baz=116,slow=3.4,SNR=10.0
PETK PKP **PKiKP 10 44 50.2 -0.7**
comp=Z,6.3nm,0.8s,baz=83,slow=8.2,SNR=9.3
PETK PP **PP 10 47 23.9 -0.7**
comp=Z,4.1nm,0.9s,baz=80,slow=10,SNR=4.4
PETK SKPbc **SKPbc 10 48 01.0 +0.5**
comp=Z,13nm,0.9s,baz=80,slow=11,SNR=11
PETK Petropavlovsk- 134.51 324 *ePKPpre* PKPpre 10 44 40.8
PETK *ePKPdf* **PKiKP 10 44 50.3 -0.7**
PETK PP **PP 10 47 23.9 -0.7**
PETK SKPbc **SKPbc 10 48 01.0 +0.5**
BRVK Borovoye 135.49 36 *ePKPdf* **PKPdf 10 44 52.2 +0.9**
BRVK Borovoye 135.49 36 *c PKIKP* **PKPdf 10 44 52.3 +0.9**
BRVK pmax pmax
comp=Z,5.0nm,0.7s
BVAR Borovoye Array 135.56 36 PKP **PKPdf 10 44 52.3 +0.9**
comp=Z,8.7nm,0.8s,baz=300,slow=2.9,SNR=49
BVAR PP **PP 10 47 34.1 +2.9**
comp=Z,0.9nm,0.8s,baz=297,slow=9.5,SNR=2.9
BVAR SKPbc **SKPbc 10 48 05.4 +1.5**
comp=Z,3.8nm,0.8s,baz=316,slow=4.1,SNR=9.3
MBWA Marble Bar 136.09 189 *ePKPdf* **PKPdf 10 44 53.1 -0.4**
FITZ Fitzroy Crossi 137.80 198 PKP **PKPdf 10 44 56.3 -0.4**
comp=Z,13nm,0.7s,baz=189,slow=5.2,SNR=17
FITZ SKPbc **SKPbc 10 48 11.6 -0.1**
comp=Z,12nm,1.0s,baz=216,slow=6.2,SNR=6.2
YAK Yakutsk 138.92 348 SKPbc **SKPbc 10 48 13.3 -0.1**
comp=Z,10nm,0.4s,baz=325,slow=0.4,SNR=7.2
YAK Yakutsk 138.92 348 *ePKIKP* **PKPdf 10 44 55.7 -1.7**
YAK *e* 10 45 45.7
YAK *e* 10 51 49.6
YAK pmax pmax
comp=Z,17nm,1.0s
YAK pmax pmax
comp=E,2.0nm,0.9s
YAK pmax pmax
comp=Z,25nm,1.3s
YAK pmax pmax
comp=N,18nm,1.5s
YAK pmax pmax
comp=E,9.0nm,1.4s
KK31 Karatay Array 139.28 49 *ePKPdf* **PKPdf 10 44 59.5 +0.8**
KKAR Karatay Array 139.28 49 *ePKPdf* **PKPdf 10 44 59.5 +0.8**
MTN Manton Dam 140.65 208 *ePKPpre* PKPpre 10 44 53.9
NVS Novosibirsk 140.76 27 *ePKIKP* **PKPdf 10 45 01.2 +0.3**
NVS pmax pmax
comp=N,3.0nm,1.2s
NVS pmax pmax
comp=E,12nm,1.2s
NVS pmax pmax
comp=Z,35nm,1.2s
KURK Kurchatov 141.13 35 *ePKPdf* **PKPdf 10 45 02.5 +0.8**
KURK PP **PP 10 48 08.8 +3.3**
KURK SKPbc **SKPbc 10 48 18.8 -0.9**
KURK SKKPbc **SKKPab 10 56 46.2 0.0**
KURK Kurchatov 141.13 35 *c PKIKP* **PKPdf 10 45 02.7 +1.0**
KURK pmax pmax
comp=Z,11nm,0.8s
KURBB Kurchatov Arra 141.13 35 PKhKP PKPpre 10 44 57.9
comp=Z,8.5nm,0.8s,baz=302,slow=2.7,SNR=5.5
KURBB PKP **PKPdf 10 45 02.8 +1.0**
comp=Z,7.3nm,0.7s,baz=299,slow=2.7,SNR=27
KURBB PP **PP 10 48 08.8 +3.3**
comp=Z,7.7nm,0.9s,baz=291,slow=7.4,SNR=5.6
KURBB SKPbc **SKPbc 10 48 18.8 -0.9**
comp=Z,4.1nm,0.8s,baz=295,slow=3.2,SNR=8.4
KURBB SKKPbc **SKKPab 10 56 46.2 0.0**
comp=Z,0.9nm,0.4s,baz=122,slow=4.0,SNR=6.5
ZAA0 Zalesovo Array 142.05 27 *ePKPpre* PKPpre 10 44 57.6
ZALV Zalesovo Beam 142.05 27 PKP **PKPdf 10 45 00.4 -2.9**
comp=Z,28nm,0.8s,baz=299,slow=3.1,SNR=31
ZALV PP **PP 10 48 14.3 +3.5**
comp=Z,1.1nm,0.4s,baz=328,slow=5.2,SNR=2.5
ZALV SKPbc **SKPbc 10 48 20.3 -1.6**
comp=Z,15nm,0.9s,baz=283,slow=1.7,SNR=8.3
ZALV Zalesovo Beam 142.05 27 *ePKPpre* PKPpre 10 44 59.4
ZALV PP **PP 10 48 14.3 +3.5**
ZALV SKPbc **SKPbc 10 48 20.3 -1.6**
ZALV Zalesovo Beam 142.05 27 *ePKIKP* **PKPdf 10 44 59.4 -3.9**
ZALV 10 48 14.4
FRU Bishkek 142.22 48 *ePKIKP* **PKPdf 10 45 05.0 +1.0**
FRU *e* 10 48 09.0
NKL Nikolayevsk 142.92 332 *ePKIKP* **PKPdf 10 45 02.0 -2.8**
NKL pmax pmax
comp=E,13nm,1.0s
NKL pmax pmax
comp=Z,55nm,1.0s
NIL Nilore 143.34 64 *ePKPdf* PKPbc 10 45 04.1 +0.1
NIL Nilore 143.34 64 *ePKIKP* PKPbc 10 45 04.1 +0.1
TYV Tymovskoe 143.56 328 *ePKIKP* PKPbc 10 45 03.7 -0.3
TYV pmax pmax
comp=Z,40nm,0.9s
TYV pmax pmax
comp=Z,200nm,2.4s
NRN Naryn 143.67 50 *ePKPdf* PKPbc 10 45 05.8 +0.8
NRN Naryn 143.67 50 *ePKIKP* PKPbc 10 45 05.9 +0.8
KSH Kashi 144.25 53 PKP PKPbc 10 45 07.1 +0.5
KSH AMB AMB
comp=Z,250nm,3.8s
KSH LR LR
comp=Z,920nm,12.0s
KSH LR LR
comp=Z,440nm,9.8s
KSH LR LR
comp=Z,210nm,5.0s
CLNS Chul'man 144.66 349 *ePKIKP* **PKPab 10 45 06.2 -0.9**
CLNS pmax pmax
comp=Z,46nm,0.9s
CLNS pmax pmax
comp=N,18nm,0.9s
CLNS pmax pmax
comp=E,10.0nm,1.0s
BOD Bodaibo 144.75 359 *ePKIKP* **PKPab 10 45 05.7 -1.6**
BOD pmax pmax
comp=Z,126nm,1.1s
SAUI Saumlaki 144.82 212 *ePKPbc* **PKPdf 10 45 10.8 +1.4**
TARG Taragay, Kyrgy 144.83 49 *ePKPbc* **PKPdf 10 45 09.8 +0.7**
PRZ Przheval'sk 144.94 47 *ePKPbc* **PKPdf 10 45 10.1 +1.0**
PRZ Przheval'sk 144.94 47 PKIKP **PKPdf 10 45 10.0 +1.0**
MAKZ Makanchi 145.14 38 *ePKPbc* **PKPab 10 45 09.4 +0.2**
MAKZ Makanchi 145.14 38 *ePKIKP* **PKPab 10 45 09.4 +0.2**
PALK Pallekele 145.31 111 PKPbc **PKPdf 10 45 10.1 -0.2**
comp=Z,41nm,1.0s,baz=295,slow=2.3,SNR=8.0
PALK Pallekele 145.31 111 *ePKPdf* **PKPab 10 45 11.1 +0.3**
PALK Pallekele 145.31 111 *ePKP2* **PKPab 10 45 11.1 +0.3**
MK31 Makanchi Array 145.32 38 *ePKPdf* **PKPab 10 45 10.1 +0.2**
MK31 Makanchi Array 145.32 38 *ePKIKP* **PKPab 10 45 10.1 +0.2**
MKAR Makanchi Array 145.32 38 PKPbc **PKPbc 10 45 09.7 +0.1**
comp=Z,39nm,0.9s,baz=316,slow=3.3,SNR=196
MKAR pPKPbc **pPKPdf 10 46 03.4 +2.1**
comp=Z,13nm,1.0s,baz=330,slow=2.0,SNR=2.0
MKAR SKP 10 48 23.9
comp=Z,1.8nm,1.0s,baz=298,slow=3.1,SNR=2.6
MKAR SKPbc **SKPbc 10 48 30.1 +0.2**
comp=Z,10nm,0.9s,baz=302,slow=2.3,SNR=8.0
MKAR Makanchi Array 145.32 38 *ePKPdf* **PKPab 10 45 10.0 0.0**
MKAR pPKPbc **pPKPdf 10 46 03.4 +2.1**
MKAR SKP 10 48 23.9
MKAR SKPbc **SKPbc 10 48 30.1 +0.2**
MK01 Makanchi Array 145.34 38 *ePKPdf* **PKPab 10 45 09.8 -0.2**
BATI Baumata 145.86 199 PKPbc **PKPbc 10 45 12.0 -0.1**
comp=Z,106nm,0.9s,baz=200,slow=2.9,SNR=9.7
BATI Baumata 145.86 199 PKP **PKPbc 10 45 12.4 +0.3**
BATI PKP **PKiKP 10 45 14.4 -1.0**
YSS Yuzh-Sakhalins 145.90 323 *ePKPdf* **PKPbc 10 45 11.2 0.0**
YSS Yuzh-Sakhalins 145.90 323 *kePKIKP* **PKPdf 10 45 10.6 +0.4**
YSS *e* 10 45 59.0
YSS *e* 10 48 35.0
YSS pmax pmax
comp=Z,1.0nm,3.0s
YSS pmax pmax
comp=N,100nm,5.0s
YSS pmax pmax
comp=Z,80nm,0.8s
SOEI Soe 146.10 200 PKP **PKPab 10 45 13.7 -0.1**
SOEI PKP **PKPbc 10 45 14.4 +1.5**
SOEI Soe 146.10 200 *ePKPdf* **PKPab 10 45 13.8 0.0**
DGZ Jazzator, Alta 146.18 30 *i PKP2* **PKPdf 10 45 11.5 +0.6**
GRNR Gornyy 146.46 333 *ePKP2* **PKPbc 10 45 13.0 +0.2**
GRNR pmax pmax
comp=Z,160nm,1.0s
ZEA Zeya 147.05 345 *ePKIKP* **PKPdf 10 45 12.8 +0.9**
ZEA pmax pmax
comp=Z,75nm,1.2s
JMP Maruseppu 147.15 318 P **PKPdf 10 45 13.3 +0.8**
HYB Hyderabad 147.17 93 *i PKP* **PKPdf 10 45 14.0 +0.7**
HYB *ePKPAB* **PKPab 10 45 20.0 +2.0**
HYB *e* 10 46 10.5
BAKI Biak 147.46 227 PKP **PKPbc 10 45 16.6 -0.1**
BAKI PKP **PKiKP 10 45 18.2 -0.5**
ASAJ Asahikawa 147.57 319 PKPbc **PKPdf 10 45 13.8 +0.7**
comp=Z,72nm,0.9s,baz=261,slow=8.1,SNR=24
ASAJ Asahikawa 147.57 319 *ePKPdf* **PKPdf 10 45 13.4 +0.3**
ASAJ Asahikawa 147.57 319 P **PKPdf 10 45 13.6 +0.5**
HVS Khovu-Aksy 147.70 23 *i PKIKP* **PKPdf 10 45 12.2 -1.1**
MMRI Maumere 147.76 197 PKP **PKPdf 10 45 14.3 -0.1**
MMRI PKP **PKPbc 10 45 17.7 +0.3**
MMRI Maumere 147.76 197 *ePKPbc* **PKPbc 10 45 16.8 -0.7**
JEM Erimo 148.26 315 P **PKPbc 10 45 19.1 +1.2**
ERM Erimo 148.27 315 *ePKPbc* **PKPbc 10 45 19.6 +1.7**
ERM Erimo 148.27 315 *i PKIKP* **PKPbc 10 45 16.3 -1.6**
ERM pmax pmax
comp=Z,180nm,1.2s
RKPI Ransiki, Papua 148.49 223 PKP **PKPbc 10 45 19.5 +0.1**
RKPI PKP **PKiKP 10 45 20.4 -0.4**
PLAI Plampang 148.50 189 PKP **PKPbc 10 45 18.7 -0.7**
PLAI PKP **PKiKP 10 45 19.5 -1.3**
FAKI Fak Fak 148.55 219 PKP **PKPbc 10 45 19.5 0.0**
FAKI PKP **PKiKP 10 45 20.6 -0.3**
FAKI Fak Fak 148.55 219 *ePKPbc* **PKPbc 10 45 20.2 +0.7**
GUMO Guam 148.58 259 PKPbc **PKPbc 10 45 19.5 0.0**
comp=Z,390nm,0.8s,baz=179,slow=6.9,SNR=23
GUMO Guam 148.58 259 *ePKPbc* **PKPbc 10 45 19.2 -0.3**
IGBI Denpasar 148.78 184 PKP **PKPbc 10 45 18.3 -1.7**
IGBI PKP **PKiKP 10 45 21.9 +0.5**
JEW Eniwo 148.95 317 P **PKPbc 10 45 19.3 -0.4**
JAGI Jajag, Banyuwa 149.17 182 PKP **PKPbc 10 45 19.5 -1.6**
JAGI PKP **PKPbc 10 45 21.2 +0.1**
JAGI Jajag, Banyuwa 149.17 182 *ePKPbc* **PKPbc 10 45 21.2 +0.1**
GMJI Gumukmas 149.38 181 PKP **PKPbc 10 45 21.1 -0.5**
GMJI PKP **PKiKP 10 45 22.6 0.0**
MOY Mondy 149.44 15 *ePKP2* **PKPbc 10 45 21.7 +0.9**
KNGR Kungurtug, Tuv 149.44 20 *i PKIKP* **PKPdf 10 45 15.1 -1.0**
UGM Wanagama 149.64 175 *ePKPbc* **PKPbc 10 45 22.5 +0.3**
CISI Cisompet, Garu 149.65 170 PKP **PKPbc 10 45 21.9 -0.4**
CISI PKP **PKiKP 10 45 22.3 -1.0**
CISI Cisompet, Garu 149.65 170 *ePKPbc* **PKPbc 10 45 20.9 -1.4**
JSH Shimam 149.93 318 P **PKPbc 10 45 22.0 0.0**
JOT Ohata 149.95 315 P **PKPbc 10 45 22.8 +0.7**
TLY Talaya 149.99 12 PKP **PKPdf 10 45 18.1 +1.3**
comp=Z,6.0nm,0.7s,baz=141,slow=2.1,SNR=6.8
TLY PKPbc **PKiKP 10 45 23.0 +0.3**
comp=Z,11nm,0.7s,baz=352,slow=3.8,SNR=27
TLY Talaya 149.99 12 *ePKPdf* **PKPdf 10 45 18.0 +1.2**
TLY *ePKPbc* **PKiKP 10 45 22.5 -0.3**
WMQ Urumqi 150.15 39 *ePKPbc* **PKPdf 10 45 18.3 +0.9**
WMQ LR LR
comp=Z,150nm,22.7s
WMQ LR LR
comp=Z,120nm,30.3s
WMQ LR LR
comp=Z,120nm,26.5s
JTM Tenmabayashi 150.23 314 P **PKPbc 10 45 23.1 +0.3**
LEM Lembang 150.33 169 PKPbc **PKPbc 10 45 25.3 +1.2**
comp=Z,349nm,0.8s,baz=118,slow=7.7,SNR=55
TEY Ternei 150.45 325 *ePKIKP* **PKPbc 10 45 23.9 +0.7**
TEY pmax pmax
comp=Z,80nm,0.8s
SMRI Semarang 150.48 175 PKP **PKPbc 10 45 24.5 +0.2**
SMRI PKP **PKiKP 10 45 25.4 +0.5**
SMRI Semarang 150.48 175 *ePKPbc* **PKPbc 10 45 25.2 +0.9**
ZAK Zakamensk 151.16 13 *ePKIKP* **PKPdf 10 45 18.6 -0.2**
ZAK pmax pmax
comp=Z,21nm,1.0s
JMM Marumori 151.75 309 P **PKPbc 10 45 26.2 -0.3**
MDSI Maura Dua 151.76 161 PKP **PKPdf 10 45 19.9 -0.8**
MDSI PKP **PKPdf 10 45 20.3 -0.4**
JYA Atsumi 152.19 311 P **PKPbc 10 45 28.0 +0.6**
USRK Ussuriysk Ar. 153.37 329 PKP **PKPdf 10 45 22.0 -0.1**

comp=Z,2.8nm,0.8s,baz=73,slow=2.6,SNR=6.7
USRK PKPbc **PKPbc** **10 45 29.8 -0.1**
comp=Z,13nm,0.8s,baz=0.0,slow=1.9,SNR=20
USRK PKPab **PKPab** **10 45 42.6 -0.1**
comp=Z,5.7nm,0.7s,baz=79,slow=3.2,SNR=5.6
JRY Ryogami san 153.89 307 P **PKPbc** **10 45 31.3 0.0**
GSI Gunungsitoli 154.05 142 *e*PKPbc **PKPbc** **10 45 32.9 +0.6**
SONA1 Songino Array 154.18 10 *e*PKPdf **PKPdf** **10 45 24.0 +0.6**
SONA1 *e*PKPbc **PkiKP** **10 45 31.9 +0.2**
MJAR Matsushiro Arr 154.18 308 PKP **PKPdf** **10 45 24.2 +0.7**
comp=Z,2.6nm,0.9s,baz=281,slow=0.1,SNR=9.9
MJAR PKPbc **PkiKP** **10 45 32.0 +0.1**
comp=Z,17nm,0.8s,baz=148,slow=1.0,SNR=28
MJAR PKPab **PKPab** **10 45 46.6 +0.1**
comp=Z,14nm,1.0s,baz=40,slow=1.1,SNR=9.7
MAJO Matsushiro 154.18 308 *e*PKPdf **PKPdf** **10 45 23.9 +0.4**
MAJO *e*PKPbc **PKPbc** **10 45 31.8 -0.1**
MAJO Matsushiro 154.18 308 *e*PKIKP **PKPdf** **10 45 23.9 +0.4**
MAT Matsushiro 154.18 308 P **PKPbc** **10 45 31.9 0.0**
MAT Matsushiro 154.18 308 PKP **PKPdf** **10 45 23.7 +0.2**
MJB9 Matsu-Tunnel 154.18 308 *e*PKPdf **PKPdf** **10 45 24.2 +0.7**
MJB9 *e*PKPbc **PkiKP** **10 45 31.9 0.0**
SONM Songino Array 154.19 10 PKP **PKPdf** **10 45 24.0 +0.6**
comp=Z,8.3nm,0.9s,baz=297,slow=0.3,SNR=39
SONM PKPbc **PkiKP** **10 45 32.0 +0.3**
comp=Z,12nm,0.9s,baz=340,slow=1.3,SNR=25
SONM PKPab **PKPab** **10 45 44.6 -1.6**
comp=Z,9.8nm,0.8s,baz=286,slow=1.6,SNR=9.8
JHJ Hachijo jima 2 154.23 300 PKPbc **PKPbc** **10 45 31.7 -0.3**
comp=Z,79nm,0.8s,baz=248,slow=20,SNR=4.9
ULN Ulaanbaatar 154.26 9 *e*PKPdf **PKPdf** **10 45 24.1 +0.6**
ULN Ulaanbaatar 154.26 9c *i*PKIKP **PKPbc** **10 45 33.2 +1.3**
ULN pmax pmax
comp=Z,6.0nm,1.2s
MYKOM Kota Tinggi 157.50 155 *e*PKPab **PKPab** **10 46 01.9 +0.8**
KSM Kuching 158.89 172 *e*PKPab **PKPab** **10 46 07.9 +0.9**
KULM Kulim 159.05 143 *e*PKPab **PKPab** **10 46 08.0 +0.2**
GTA Gaotai 159.72 31 *e*PKP **PKPdf** **10 45 30.4 -0.2**
SBUM Sibu 160.02 177 *e*PKPab **PKPab** **10 46 13.3 +1.3**
KS01 Wonju Array Si 160.40 323 *e*PKPdf **PKPdf** **10 45 32.0 +0.7**
KS01 *e*PKPab **PKPab** **10 46 13.2 0.0**
KSRS Korea Array 160.40 323 PKP **PKPdf** **10 45 32.0 +0.8**
comp=Z,13nm,1.1s,baz=60,slow=1.1,SNR=30
KSRS PKPab **PKPab** **10 46 14.1 +0.8**
comp=Z,14nm,1.1s,baz=47,slow=3.9,SNR=19
KSRS PP **PP** **10 49 58.5 +2.8**
comp=Z,2.2nm,1.1s,baz=39,slow=7.9,SNR=4.3
KSAR Wonju Array Be 160.43 323 PKP **PKPdf** **10 45 32.0 +0.7**
KSAR PKPab **PKPab** **10 46 14.1 +0.7**
KSAR PP **PP** **10 49 58.5 +2.6**
KSAR Wonju Array Be 160.43 323 PKIKP **PKPdf** **10 45 32.0 +0.7**
KSAR 10 46 14.1
KSAR 10 49 58.5
HHC Hu-ho-hao-te 161.69 4 *e*PKP **PKPdf** **10 45 28.5 -4.2**
HHC pPKP pPKPdf 10 46 23.3 -1.7
HHC sPKP 10 46 43.8
LZH Lanzhou 164.27 29 *e*PKP **PKPdf** **10 45 36.3 +0.9**
LZH LR LR
comp=Z,230nm,18.2s
LZH LR LR
comp=Z,240nm,18.1s
LZH LR LR
comp=Z,270nm,20.2s
CMAR Chiang Mai Arr 166.12 104 PKP **PKPdf** **10 45 37.5 +0.3**
comp=Z,5.6nm,0.9s,baz=270,slow=2.0,SNR=26
CMAR PKPab **PKPab** **10 46 39.2 +0.2**
comp=Z,2.8nm,0.6s,baz=255,slow=6.6,SNR=10.0
CM01 Chiang Mai Arr 166.12 105 *e*PKPdf **PKPdf** **10 45 37.0 -0.2**
CM01 *e*PKPab **PKPab** **10 46 38.9 -0.1**
CHTO Chiang Mai 166.23 103 *e*PKPdf **PKPdf** **10 45 36.7 -0.6**
CHTO Chiang Mai 166.23 103 *e*PKIKP **PKPdf** **10 45 36.7 -0.6**
XAN Xi'an 167.96 17 PKP **PKPdf** **10 45 38.3 +0.1**
CD2 Chengdu 168.19 43 PKP **PKPdf** **10 45 37.8 -0.7**
NJ2 Nanjing 169.24 333 *e*PKP **PKPdf** **10 45 38.8 -0.2**
KMI Kunming 170.16 73 PKP **PKPdf** **10 45 39.4 -0.7**
GYA Guiyang 172.95 55 *e*PKP **PKPdf** **10 45 40.3 -0.9**
GYA pPKP pPKPdf 10 46 31.0 -2.6
GYA sPKP 10 46 50.5
GYA PKPab **PKPab** **10 47 08.9 -0.3**
GYA PKS **PKSdf** **10 49 11.8 -1.9**
GYA PP **PP** **10 51 02.0 +1.0**
GYA AMB AMB
comp=Z,130nm,8.3s

*DJA **24** 10:26:45.5±0.8, 2°N±4°×9°3E±°, h47km, M4.4/8, mB5.2/1, mb4.4/5, MLv4.4/8, Mw(mB)4.5/1*
ISC 24 10:26:39.7±2.9, 2°.20N±0°.09×92°.9E±0°.2, h35km, n12, σ1s77/19, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNSI	**Sinabang, Aceh**	**3.44**	**86**	P	**Pn**	**10 27 31.3**	**+0.5**
SNSI				S	**Sn**	**10 28 11.7**	**+1.3**
BSI	**Banda Aceh**	**4.06**	**36**	P	**Pn**	**10 27 38.7**	**-0.7**
BSI				S	**Sn**	**10 28 23.4**	**-2.4**
MLSI	**Meulaboh, Aceh**	**4.07**	**60**	P	**Pn**	**10 27 40.0**	**+0.6**
MLSI				S	**Sn**	**10 28 26.9**	**+1.0**
TPTI		**4.42**	**76**	P	**Pn**	**10 27 44.7**	**+0.5**
TPTI				S	**Sn**	**10 28 32.2**	**-2.2**
GSI	**Gunungsitoli**	**4.77**	**101**	P	**Pn**	**10 27 49.6**	**+0.5**
GSI				S	**Sn**	**10 28 41.7**	**-1.5**
KCSI	**Kotacane, Aceh**	**5.05**	**75**	P	**Pn**	**10 27 55.2**	**+2.2**
KCSI				S	**Sn**	**10 28 50.1**	**-0.1**
PBSI	**Pulau Batu**	**5.84**	**112**	P	**Pn**	**10 28 03.4**	**-0.4**
PBSI				S	**Sn**	**10 29 05.9**	**-3.6**
MNSI	**Mandailing Nat**	**6.83**	**102**	P	**Pn**	**10 28 19.0**	**+1.5**
MNSI				S	**Sn**	**10 29 31.6**	**-2.5**
PKDT	**Phuket**	**7.84**	**44**	P	**Pn**	**10 28 30.6**	**-0.7**
KRAB	**Krabi**	**8.68**	**46**	P	Pn	10 28 51.3	+8.5
	17μm,1.4s,379μm77nm						
TRTT	**Trang**	**8.79**	**50**	P	**Pn**	**10 28 43.3**	**-1.1**
	13nm,0.7s,0.1nm						
SRAK	**Srakaew**	**14.82**	**37**	P	**P**	**10 30 14.5**	**+2.3**
	63nm,0.5s,5μm						

*ISCJB **24** 10:37:49.3±0.4, 50°.19N±0°.03×18°.94E±0°.03, h0km, Error ellipse: s-maj=3.9km s-min=2.7km az=7.5*
*CSEM **24** 10:37:49.5±0.2, 50°.24N×18°.99E, h2km, ML2.5/7, Error ellipse: s-maj=5.0km s-min=2.3km az=10.0*
*IPEC **24** 10:37:50.0±0.2, 50°.21N×19°.04E, h2km±1km, ML1.6/3, Error ellipse: s-maj=2.5km s-min=1.1km az=168.0*
*PRU **24** 10:37:50.3, 50°.20N×18°.97E, h0km*
*WAR **24** 10:37:50.2, 50°.22N×18°.98E, h1km, Mw2.4*
ISC 24 10:37:49.8±0.8, 50°.16N±0°.03×19°.03E±0°.02, h0km, n37, σ0s59/66, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHZP	**Chorzow**	**0.14**	**351**	*e*Pg	**Pg**	**10 37 52.7**	**+0.2**
CHZP				*e*Sg	**Sg**	**10 37 54.0**	**-0.2**
CHZP	**Chorzow**	**0.14**	**351**	*e*Pg	**Pg**	**10 37 52.7**	**+0.2**
CHZP				*e*Sg	**Sg**	**10 37 54.0**	**-0.2**
OJC	**Ojcow**	**0.50**	**82**	*e*Pg	**Pg**	**10 37 59.4**	**0.0**
OJC				*e*Sg	**Sg**	**10 38 06.0**	**+0.1**
OJC	**Ojcow**	**0.50**	**82**	*e*Pg	**Pg**	**10 37 59.4**	**0.0**
OJC				*e*Sg	**Sg**	**10 38 06.0**	**+0.1**
OJC	**Ojcow**	**0.50**	**82**	*e*Pg	**Pg**	**10 37 59.4**	**0.0**
OJC				*e*Sg	**Sg**	**10 38 06.0**	**+0.1**
OKC	**Ostrava-Krasne**	**0.65**	**241**	*e*PG	**Pg**	**10 38 03.1**	**+0.8**
OKC				*e*SG	**Sg**	**10 38 11.2**	**+0.5**
	comp=Z,11nm,0.4s						
OKC	**Ostrava-Krasne**	**0.65**	**241**	Pg	**Pg**	**10 38 03.1**	**+0.8**
OKC				Sg	**Sg**	**10 38 11.2**	**+0.5**
	11nm,0.4s						
MORC	**Moravsky Berou**	**1.03**	**249**	*e*Pg	**Pb**	**10 38 10.6**	**0.0**
MORC				*e*Sg	**Sg**	**10 38 23.0**	**+0.1**
	16nm,0.3s,baz=65						
MORC	**Moravsky Berou**	**1.03**	**249**	*e*PG	**Pb**	**10 38 10.3**	**-0.3**
MORC				*e*SG	**Sg**	**10 38 23.0**	**+0.1**
MORC	**Moravsky Berou**	**1.03**	**249**	*e*Pg	**Pb**	**10 38 10.3**	**-0.3**
	baz=65						
MORC				*e*Sg	**Sg**	**10 38 23.0**	**+0.1**
	16nm,0.3s,baz=65						
LANS	**Liptovska Anna**	**1.05**	**164**	*e*PG	**Pb**	**10 38 11.2**	**+0.3**
LANS				*e*SG	**Sn**	**10 38 26.2**	**-0.9**
LANS	**Liptovska Anna**	**1.05**	**164**	*e*Pg	**Pb**	**10 38 11.2**	**+0.3**
LANS				*e*Sg	**Sn**	**10 38 26.2**	**-0.9**
NIE	**Niedzica**	**1.11**	**131**	*e*Pg	**Pb**	**10 38 12.3**	**+0.4**
NIE				*e*Sg	**Sn**	**10 38 28.2**	**-0.4**
NIE	**Niedzica**	**1.11**	**131**	*e*Pg	**Pb**	**10 38 12.3**	**+0.4**
NIE				*e*Sg	**Sn**	**10 38 28.2**	**-0.4**
NIE	**Niedzica**	**1.11**	**131**	*e*Pg	**Pb**	**10 38 12.3**	**+0.4**
NIE				*e*Sg	**Sn**	**10 38 28.2**	**-0.4**
KRLC	**Kraliky**	**1.45**	**268**	*e*PG	**Pn**	**10 38 16.7**	**-0.6**
KRLC				*e*SG	**Sg**	**10 38 35.7**	**-0.6**
	comp=Z,6.5nm,1.2s						
KRLC	**Kraliky**	**1.45**	**268**	Pg	**Pn**	**10 38 16.7**	**-0.6**
KRLC				Sg	**Sg**	**10 38 35.7**	**-0.6**
	6.5nm,1.2s						
JAVC	**Velka Javorina**	**1.57**	**215**	*e*Pn	**Pb**	**10 38 19.4**	**-0.4**
	baz=33						
JAVC	**Velka Javorina**	**1.57**	**215**	*e*PN	**Pb**	**10 38 19.5**	**-0.4**
JAVC	**Velka Javorina**	**1.57**	**215**	*e*Pn	**Pb**	**10 38 19.4**	**-0.4**
	baz=33						
VYHS	**Vyhne**	**1.67**	**184**	*e*PN	**Pn**	**10 38 20.4**	**+0.1**
VYHS				*e*SN	**Sb**	**10 38 43.0**	**0.0**
VYHS				*e*LG	Lg	10 38 48.7	
VYHS	**Vyhne**	**1.67**	**184**	*e*Pg	**Pn**	**10 38 20.4**	**+0.1**
VYHS				*e*Sn	**Sb**	**10 38 43.0**	**0.0**
DPC	**Dobruska-Polom**	**1.75**	**277**	*e*PG	**Pn**	**10 38 21.1**	**-0.3**
DPC				*e*SG	**Sn**	**10 38 44.7**	**+0.3**
	comp=Z,12nm,0.5s						
DPC	**Dobruska-Polom**	**1.75**	**277**	Pg	**Pn**	**10 38 21.1**	**-0.3**
DPC				Sg	**Sn**	**10 38 44.7**	**+0.3**
	12nm,0.5s						
VRAC	**Vranov**	**1.79**	**243**	*e*Pn	**Pn**	**10 38 22.3**	**+0.3**
VRAC				*e*Sg	**Sg**	**10 38 47.1**	**-0.3**
	3.3nm,0.2s,baz=59						
VRAC	**Vranov**	**1.79**	**243**	*e*PN	**Pn**	**10 38 22.4**	**+0.4**
VRAC				*e*SG	**Sg**	**10 38 47.2**	**-0.2**
VRAC	**Vranov**	**1.79**	**243**	*e*Pn	**Pn**	**10 38 22.3**	**+0.3**
	baz=59						
VRAC				*e*Sg	**Sg**	**10 38 47.1**	**-0.3**
	3.3nm,0.2s,baz=59						
KSP	**Ksiaz**	**1.88**	**293**	*e*Pg	**Pb**	**10 38 25.2**	**+0.2**
KSP				*e*Sg	**Sg**	**10 38 50.2**	**+0.1**
KSP	**Ksiaz**	**1.88**	**293**	*e*Pg	**Pb**	**10 38 25.2**	**+0.2**
KSP				*e*Sg	**Sg**	**10 38 50.2**	**+0.1**
UPC	**Upice**	**1.96**	**281**	*e*SG	**Sb**	**10 38 51.6**	**+0.1**
	comp=Z,4.4nm,0.3s						
UPC	**Upice**	**1.96**	**281**	Sg	**Sb**	**10 38 51.6**	**+0.1**
	4.4nm,0.3s						
KRUC	**Moravsky**	**2.03**	**238**	*e*Pn	**Pn**	**10 38 25.6**	**+0.3**
	baz=55						
KRUC				*e*Sg	**Sg**	**10 38 54.6**	**-0.5**
	2.7nm,0.3s,baz=55						
KRUC	**Moravsky**	**2.03**	**238**	*e*PN	**Pn**	**10 38 25.7**	**+0.4**
KRUC				*e*SG	**Sg**	**10 38 54.6**	**-0.5**
KRUC	**Moravsky**	**2.03**	**238**	*e*Pn	**Pn**	**10 38 25.6**	**+0.3**
	baz=55						
KRUC				*e*Sg	**Sg**	**10 38 54.6**	**-0.5**
	2.7nm,0.3s,baz=55						
PRU	**Pruhonice**	**2.89**	**268**	*e*SG	**Sb**	**10 39 19.7**	**+1.5**
	comp=Z,2.2nm,0.4s						
BRG	**Berggiesshubel**	**3.32**	**284**	SG	**Sg**	**10 39 36.1**	**-0.5**
	3.2nm,0.4s						
KHC	**Kasperske Hory**	**3.69**	**256**	*e*SG	**Sg**	**10 39 45.0**	**-3.2**
	comp=Z,2.6nm,0.6s						

JMA 24 10:41:33.4±0.1, 36°.23N×141°.10E, h44km±2km, M2.3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.56**	**200**	P	Pn	10 41 44.9	-0.2
CHOJ				*e*S	Sn	10 41 53.2	-0.2
JHO	**Hitachi**	**0.57**	**312**	P	Pn	10 41 45.1	-0.2
JHO				S	Sn	10 41 53.8	+0.1
JYT	**Yasato**	**0.73**	**270**	P	Pn	10 41 47.5	+0.2
JYT				S	Sn	10 41 57.3	-0.1
JAG	**Ashikaga**	**1.34**	**279**	P	Pn	10 41 56.5	+0.8
JAG				S	Sn	10 42 12.7	+0.3

*CSEM **24** 10:52:17.7±0.1, 40°.81N×27°.89E, h8km, ML3.4, Error ellipse: s-maj=2.6km s-min=2.2km az=178.0*
*ISK **24** 10:52:17.2, 40°.82N×27°.89E, h16km, ML3.4/39*
*ISCJB **24** 10:52:17.1±0.3, 40°.84N±0°.02×27°.89E±0°.02, h7km±2km, Error ellipse: s-maj=2.8km s-min=2.5km az=166.2*
*DDA **24** 10:52:17.2, 40°.83N×27°.89E, h26km, Ml3.6*
*THE **24** 10:52:18.9, 40°.91N×27°.77E, h2km±7km, ML2.9/6, Error ellipse: s-maj=11.6km s-min=1.5km az=66.0*
*SOF **24** 10:52:19.7, 40°.94N×27°.61E, h5km, MD3.3*
ISC 24 10:52:18.0±0.9, 40°.82N±0°.02×27°.90E±0°.02, h12km±6km, n178, σ0s99/213, 10C-12D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBT3	**Marmara-Eregli**	**0.09**	**40**	PG	**Pg**	**10 52 20.7**	**+0.1**
SBT3	**Marmara-Eregli**	**0.09**	**40**	*e*Pg	**Pg**	**10 52 20.7**	**+0.1**
TKR	**Tekirdag**	**0.33**	**302**	PG	**Pg**	**10 52 24.6**	**0.0**
TKR	**Tekirdag**	**0.33**	**302**	*e*Pg	**Pg**	**10 52 24.6**	**0.0**
CRLT	**Corlu**	**0.34**	**338**	PG	**Pb**	**10 52 25.5**	**-0.4**
CRLT	**Corlu**	**0.34**	**338**	*e*Pg	**Pb**	**10 52 25.5**	**-0.4**
EDC	**Edincik**	**0.47**	**183**	PG	**Pg**	**10 52 27.1**	**-0.1**
EDC				SG	**Sg**	**10 52 34.3**	**+0.8**
EDC	**Edincik**	**0.47**	**183**	*e*Pg	**Pg**	**10 52 27.1**	**-0.1**
EDC				*e*Sg	**Sg**	**10 52 34.3**	**+0.8**
SLVT	**Silivri**	**0.47**	**30**	PG	**Pg**	**10 52 27.5**	**+0.1**
SLVT				SG	**Sb**	**10 52 34.3**	**-0.9**
SLVT	**Silivri**	**0.47**	**30**	P	**Pg**	**10 52 24.9**	**-2.5**
SLVT	**Silivri**	**0.47**	**30**	*e*Pg	**Pg**	**10 52 27.5**	**+0.1**
SLVT				S	**Sg**	**10 52 29.8**	**-3.9**
SLVT				*e*Sg	**Sb**	**10 52 34.3**	**-0.9**
SART	**Tekirdag**	**0.56**	**257**	*i* P	**Pg**	**10 52 27.4**	**-1.6**
SART				*i* S	**Sg**	**10 52 35.4**	**-1.1**
SART	**Tekirdag**	**0.56**	**257**	P	**Pg**	**10 52 27.4**	**-1.6**
SART				S	**Sg**	**10 52 35.3**	**-1.1**
RKY	**Sarkoy-Tekirda**	**0.56**	**257**	PG	**Pg**	**10 52 28.7**	**-0.3**
RKY	**Sarkoy-Tekirda**	**0.56**	**257**	*e*Pg	**Pg**	**10 52 28.7**	**-0.3**
KNL	**Bal¨–kesir**	**0.61**	**208**	*i* P	**Pb**	**10 52 30.3**	**-0.3**
CTKS	**Kestanelik-??a**	**0.62**	**47**	PG	**Pg**	**10 52 29.8**	**-0.3**
CTKS	**Kestanelik-??a**	**0.62**	**47**	*e*Pg	**Pg**	**10 52 29.8**	**-0.3**
KRBG	**Karabiga-Canak**	**0.62**	**227**	PG	**Pg**	**10 52 29.9**	**-0.2**
KRBG	**Karabiga-Canak**	**0.62**	**227**	*e*Pg	**Pg**	**10 52 29.9**	**-0.2**
KCTX	**Karacabey (Bur**	**0.65**	**147**	PG	**Pg**	**10 52 30.4**	**-0.3**
KCTX	**Karacabey (Bur**	**0.65**	**147**	*e*Pg	**Pg**	**10 52 30.4**	**-0.3**
CTYL	**Yalikoy Yolu**	**0.72**	**24**	PG	**Pg**	**10 52 31.6**	**-0.4**
CTYL	**Yalikoy Yolu**	**0.72**	**24**	*e*Pg	**Pg**	**10 52 31.6**	**-0.4**
SBT5	**Esenkoy-Cinarc**	**0.77**	**104**	PG	**Pb**	**10 52 33.3**	**+0.1**
SBT5	**Esenkoy-Cinarc**	**0.77**	**104**	*e*Pg	**Pb**	**10 52 33.3**	**+0.1**
GONE	**Gonen-Balikesi**	**0.79**	**192**	PG	**Pg**	**10 52 33.2**	**0.0**
GONE	**Gonen-Balikesi**	**0.79**	**192**	*e*Pg	**Pg**	**10 52 33.2**	**0.0**
PHSR	**Pinarhisar**	**0.86**	**341**	PG	**Pg**	**10 52 34.1**	**-0.5**
PHSR	**Pinarhisar**	**0.86**	**341**	*e*Pg	**Pg**	**10 52 34.1**	**-0.5**
ISK	**Istanbul-Kandi**	**0.91**	**74**	PG	**Pg**	**10 52 35.0**	**-0.6**
ISK	**Istanbul-Kandi**	**0.91**	**74**	*e*Pg	**Pg**	**10 52 35.0**	**-0.6**
KAVV	**Kandilli-Istan**	**0.91**	**74**	PG	**Pg**	**10 52 35.1**	**-0.5**
KAVV	**Kandilli-Istan**	**0.91**	**74**	*e*Pg	**Pg**	**10 52 35.1**	**-0.5**
KESN	**Edirne-Kesan**	**0.93**	**271**	*i* P	**Pb**	**10 52 35.8**	**-0.3**
KESN				*i* S	**Sb**	**10 52 48.4**	**-0.1**
KESN	**Edirne-Kesan**	**0.93**	**271**	P	**Pb**	**10 52 35.8**	**-0.3**
KESN				S	**Sb**	**10 52 48.4**	**-0.1**
KLYT	**Kilyos**	**0.97**	**63**	PG	**Pg**	**10 52 36.3**	**-0.4**
KLYT	**Kilyos**	**0.97**	**63**	*e*Pg	**Pg**	**10 52 36.3**	**-0.4**
LPK	**Lapseki**	**0.97**	**243**	PG	**Pg**	**10 52 35.6**	**-1.2**
LPK	**Lapseki**	**0.97**	**243**	*e*Pg	**Pg**	**10 52 35.6**	**-1.2**
ERIK	**Erikli-Kesan**	**1.06**	**263**	PG	**Pg**	**10 52 37.8**	**-0.7**
ERIK	**Erikli-Kesan**	**1.06**	**263**	*e*Pg	**Pg**	**10 52 37.8**	**-0.7**
YLV	**Yalova**	**1.15**	**102**	PN	**Pg**	**10 52 39.3**	**-0.8**
YLV	**Yalova**	**1.15**	**102**	*e*Pn	**Pg**	**10 52 39.3**	**-0.8**
GELI	**Tayfur-Gelibol**	**1.16**	**249**	PN	**Pg**	**10 52 39.1**	**-1.3**
GELI	**Tayfur-Gelibol**	**1.16**	**249**	*e*Pn	**Pg**	**10 52 39.1**	**-1.3**
BALB	**Balikesir**	**1.18**	**181**	PN	**Pb**	**10 52 39.5**	**-0.7**
BALB	**Balikesir**	**1.18**	**181**	*e*Pn	**Pb**	**10 52 39.5**	**-0.7**
IZI	**Iznik**	**1.29**	**111**	PN	**Pn**	**10 52 41.3**	**-0.6**
IZI	**Iznik**	**1.29**	**111**	*e*Pn	**Pn**	**10 52 41.3**	**-0.6**
DURS	**Dursunbey**	**1.29**	**160**	*i* P	**Pn**	**10 52 41.7**	**-0.2**
DURS				*i* S	**Sb**	**10 52 59.1**	**+0.3**
DURS	**Dursunbey**	**1.29**	**160**	P	**Pn**	**10 52 41.7**	**-0.2**
DURS				S	**Sb**	**10 52 59.1**	**+0.3**
ENEZ	**Enez**	**1.33**	**267**	PN	**Pn**	**10 52 41.7**	**-0.6**
ENEZ	**Enez**	**1.33**	**267**	*e*Pn	**Pn**	**10 52 41.7**	**-0.6**
DST	**Dursunbey**	**1.33**	**155**	PN	**Pn**	**10 52 41.9**	**-0.5**
DST	**Dursunbey**	**1.33**	**155**	*e*Pn	**Pn**	**10 52 41.9**	**-0.5**
HRT	**Hereke**	**1.34**	**89**	PN	**Pn**	**10 52 42.1**	**-0.5**
HRT	**Hereke**	**1.34**	**89**	*e*Pn	**Pn**	**10 52 42.1**	**-0.5**
EDRB	**Edirne**	**1.35**	**320**	PN	**Pn**	**10 52 42.1**	**-0.5**
EDRB	**Edirne**	**1.35**	**320**	*e*Pn	**Pn**	**10 52 42.1**	**-0.5**
SILT	**Sile**	**1.36**	**75**	PN	**Pn**	**10 52 42.3**	**-0.5**
SILT	**Sile**	**1.36**	**75**	*e*Pn	**Pn**	**10 52 42.3**	**-0.5**
ALN	**Alexandroupoli**	**1.41**	**274**	PN	**Pn**	**10 52 42.8**	**-0.6**
ALN	**Alexandroupoli**	**1.41**	**274**	P	**Pn**	**10 52 43.3**	**-0.1**
ALN				S	**Sb**	**10 53 02.0**	**-0.1**
ALN	**Alexandroupoli**	**1.41**	**274**	*e*Pn	**Pn**	**10 52 42.8**	**-0.6**
ALN	**Alexandroupoli**	**1.41**	**274**	P	**Pn**	**10 52 43.3**	**-0.1**
ALN				S	**Sb**	**10 53 02.0**	**-0.1**
STEP	**BALIKESIR_Sava**	**1.45**	**186**	*i* P	**Pn**	**10 52 43.9**	**-0.1**
STEP				*i* S	**Sg**	**10 53 05.3**	**+0.8**
STEP	**BALIKESIR_Sava**	**1.45**	**186**	P	**Pn**	**10 52 43.9**	**-0.1**
STEP				S	**Sg**	**10 53 05.3**	**+0.8**
ADVT	**Abdulvahap**	**1.45**	**105**	PN	**Pn**	**10 52 43.7**	**-0.3**
ADVT	**Abdulvahap**	**1.45**	**105**	*e*Pn	**Pn**	**10 52 43.7**	**-0.3**
BAYC	**CANAKKALE_Bayr**	**1.49**	**224**	*i* P	**Pn**	**10 52 44.0**	**-0.6**
BAYC				*i* S	**Sn**	**10 53 03.1**	**-0.8**
BAYC	**CANAKKALE_Bayr**	**1.49**	**224**	P	**Pn**	**10 52 44.0**	**-0.6**
BAYC				S	**Sn**	**10 53 03.1**	**-0.8**
EZN	**Ezine**	**1.56**	**231**	PN	**Pn**	**10 52 45.1**	**-0.3**
EZN	**Ezine**	**1.56**	**231**	P	**Pb**	**10 52 46.4**	**-0.3**
EZN				S	**Sg**	**10 53 07.3**	**-0.8**
EZN	**Ezine**	**1.56**	**231**	*e*Pn	**Pn**	**10 52 45.1**	**-0.3**
EZN	**Ezine**	**1.56**	**231**	P	**Pb**	**10 52 46.4**	**-0.3**
EZN				S	**Sg**	**10 53 07.3**	**-0.8**
CAVI	**Cavuskoy**	**1.60**	**112**	PN	**Pn**	**10 52 45.8**	**-0.3**
CAVI	**Cavuskoy**	**1.60**	**112**	*e*Pn	**Pn**	**10 52 45.8**	**-0.3**
GADA	**Gvkgeada**	**1.65**	**248**	PN	**Pn**	**10 52 46.3**	**-0.4**
GADA	**Gvkgeada**	**1.65**	**248**	P	**Pn**	**10 52 46.4**	**-0.3**
GADA				S	**Sn**	**10 53 08.6**	**+0.8**
GADA	**Gvkgeada**	**1.65**	**248**	P	**Pn**	**10 52 46.4**	**-0.3**
GADA				S	**Sn**	**10 53 08.6**	**+0.8**
BOZC	**Bozcaada**	**1.71**	**236**	*i* P	**Pn**	**10 52 47.3**	**-0.3**
BOZC				*i* S	**Sg**	**10 53 13.2**	**0.0**
KAND	**Kocaeli-Kandir**	**1.76**	**80**	*i* P	**Pn**	**10 52 49.1**	**+0.9**
KAND	**Kocaeli-Kandir**	**1.76**	**80**	P	**Pn**	**10 52 49.1**	**+0.9**
AYVA	**Ayvalik**	**1.77**	**212**	*i* P	**Pb**	**10 52 50.9**	**+0.6**
AYVA				*i* S	**Sb**	**10 53 13.3**	**+0.9**
AYVA	**Ayvalik**	**1.77**	**212**	P	**Pb**	**10 52 50.9**	**+0.6**
AYVA				S	**Sb**	**10 53 13.3**	**+0.9**
TVSB	**Tavsanli**	**1.82**	**138**	PN	**Pn**	**10 52 48.9**	**-0.2**
TVSB	**Tavsanli**	**1.82**	**138**	*e*Pn	**Pn**	**10 52 48.9**	**-0.2**
RDO	**Rodhopi**	**1.82**	**281**	PN	**Pn**	**10 52 48.7**	**-0.3**
RDO	**Rodhopi**	**1.82**	**281**	P	**Pn**	**10 52 49.0**	**0.0**
RDO				S	**Sn**	**10 53 11.4**	**-0.6**
RDO	**Rodhopi**	**1.82**	**281**	*e*Pn	**Pn**	**10 52 48.7**	**-0.3**
RDO	**Rodhopi**	**1.82**	**281**	P	**Pn**	**10 52 49.0**	**0.0**
RDO				S	**Sn**	**10 53 11.4**	**-0.6**
SMTH	**Samothraki Isl**	**1.83**	**260**	P	**Pn**	**10 52 48.8**	**-0.5**
SMTH				S	**Sn**	**10 53 13.5**	**+1.1**
SMTH	**Samothraki Isl**	**1.83**	**260**	P	**Pn**	**10 52 48.8**	**-0.5**
SMTH				S	**Sn**	**10 53 13.5**	**+1.1**
SPNC	**Sapanca-Adapaz**	**1.83**	**93**	PN	**Pn**	**10 52 49.1**	**-0.2**
SPNC	**Sapanca-Adapaz**	**1.83**	**93**	*e*Pn	**Pn**	**10 52 49.1**	**-0.2**
SAUV	**Serdivan-Sakar**	**1.85**	**92**	PN	**Pn**	**10 52 49.3**	**-0.1**
SAUV	**Serdivan-Sakar**	**1.85**	**92**	*e*Pn	**Pn**	**10 52 49.3**	**-0.1**
GEYV	**SAKARYA_Geyve**	**1.85**	**100**	*i* P	**Pb**	**10 52 51.7**	**-0.1**
GEYV	**SAKARYA_Geyve**	**1.85**	**100**	P	**Pb**	**10 52 51.7**	**-0.1**
AUBOZ	**BOZOYUK**	**1.86**	**118**	PN	**Pn**	**10 52 49.5**	**-0.3**
AUBOZ	**BOZOYUK**	**1.86**	**118**	*i* P	**Pb**	**10 52 52.4**	**+0.3**
AUBOZ	**BOZOYUK**	**1.86**	**118**	*e*Pn	**Pn**	**10 52 49.5**	**-0.3**
AUBOZ	**BO

CEDA IAML 11 12 34.0
comp=Z,3μm,0.3s
SNET Serv Nac Est T 0.71 45 *eP* **Pn 11 12 17.4 +0.6**
SNET *eS* **Sn 11 12 27.6 +0.6**
SNET IAML 11 12 29.2
comp=Z,3μm,0.5s
BOQS Boqueron 0.72 39⇑*iP* **Pn 11 12 17.9 +0.8**
BOQS *eS* **Sn 11 12 28.5 +1.2**
RTR El Retiro 0.72 8⇓*iP* **Pn 11 12 18.2 +1.1**
SANM San Marcos 0.73 49 *eP* **Pn 11 12 17.5 +0.4**
SANM IAML 11 12 28.3
comp=Z,1μm,0.1s
LOMA San Marcos 0.73 50 *eP* **Pn 11 12 17.7 +0.7**
UEES San Salvador 0.74 42 *eP* **Pn 11 12 17.7 +0.6**
UEES *eS* **Sn 11 12 28.1 +0.6**
UEES IAML 11 12 28.9
comp=Z,2μm,0.4s
UTEC San Salvador 0.74 46 *eP* **Pn 11 12 17.8 +0.6**
UTEC *eS* **Sn 11 12 28.4 +0.7**
UTEC IAML 11 12 32.2
comp=Z,2μm,0.2s
UESS San Salvador 0.75 45 *eP* **Pn 11 12 18.3 +1.0**
UESS IAML 11 12 32.0
comp=Z,2μm,0.2s
OPAM San Salvador 0.76 45 *eP* **Pn 11 12 18.1 +0.7**
OPAM IAML 11 12 32.1
comp=Z,2μm,0.4s
UDBS Soyapango 0.79 47 *eP* **Pn 11 12 18.6 +0.7**
UDBS IAML 11 12 33.0
comp=Z,5μm,0.3s
LFRS El Faro 0.80 56⇓⇓*iP* **Pn 11 12 18.8 +0.6**
UNIC Santa Ana 0.83 13 *eP* **Pn 11 12 19.3 +0.9**
UNIC *eS* **Sn 11 12 30.9 +1.1**
LFU La Fuente 0.84 47⇓*iP* **Pn 11 12 19.6 +1.0**
LFU *eS* **Sn 11 12 30.6 +0.5**
LBRS Las Brisas 0.89 51 *eP* **Pn 11 12 20.1 +0.9**
UESV Ojushtada 0.96 78 *eP* **Pn 11 12 22.1 +2.0**
UESV *eS* **Sn 11 12 36.0 +3.1**
UESV IAML 11 12 37.6
comp=Z,3μm,0.2s
SNVI San Vicente 0.99 64 *eP* **Pn 11 12 21.5 +0.8**
TECA Tecapa 1.25 75 *eP* **Pb 11 12 24.9 -0.8**
LLGN La Laguna 1.26 38 *eP* **Pb 11 12 25.3 -0.4**
MTO3 Montecristo 1.27 17⇓⇓*iP* **Pb 11 12 26.0 0.0**
LCY Lacayo 1.44 80 *eP* **Pb 11 12 28.0 -0.7**
VSM San Miguel 1.46 80 *eP* **Pb 11 12 28.4 -0.8**
CAHU Cacacuatique 1.61 68 *eP* **Pb 11 12 30.4 -1.3**
COPN Copaltepe 3.24 107 *eP* **Pn 11 12 52.4 +0.9**
ESTN Estel 3.29 91 *eP* **Pn 11 12 53.2 +0.9**
ESTN IAML 11 13 33.1
comp=N,32nm,0.9s
RCON San Juan de Ri 3.51 85 *eP* **Pn 11 12 56.4 +1.0**
MATN Matagalpa 3.73 93 *eP* **Pn 11 12 58.9 +0.4**
JTS JuntasAbangare 5.50 121 P **Pn 11 13 25.6 +2.8**
comp=N,0.8nm,0.3s,baz=12,slow=20,SNR=7.7
JTS S **Sn 11 14 26.1 +1.0**
comp=N,0.6nm,0.3s,baz=0.0,slow=19,SNR=1.8
CMIG Matias Romero 6.30 309 P **Pn 11 13 38.0 +4.3**
comp=N,0.3nm,0.3s,baz=108,slow=13,SNR=2.2
CMIG S **Sn 11 14 44.9 +0.1**
comp=N,0.5nm,0.3s,baz=140,slow=17,SNR=3.3
TXAR Lajitas Array 20.62 323 P Pn 11 16 42.5 +0.3
comp=N,0.6nm,0.5s,baz=146,slow=10.0,SNR=9.0
NVAR Mina Array Bea 35.69 320 P **P 11 19 00.2 +1.3**
comp=N,0.7nm,0.7s,baz=143,slow=7.9,SNR=5.0
YKA Yellowknife Ar 52.34 346 P **P 11 21 09.8 -1.8**
comp=N,0.1nm,0.4s,baz=131,slow=7.5,SNR=4.3
TORD Torodi Ar. Bea 88.44 77 P **P 11 24 50.7 -2.2**
comp=N,0.4nm,0.9s,baz=292,slow=4.4,SNR=3.0

*IDC **24** 11:22:27.2±0.9, 35°.66N×70°.51E, h0km, mb3.8/9, mb1 3.9/12, mb1mx3.6/69, mbtmp3.8/12, ML3.5/2, MS2.8/1, Ms1 2.8/1, ms1mx2.2/65, Error ellipse: s-maj=24.0km s-min=20.9km az=66.0*
*ISCJB **24** 11:22:39.4±0.3, 36°.13N±0°.03×70°.68E±0°.05, h110km, mb3.8/11, Error ellipse: s-maj=5.7km s-min=4.4km az=5.5*
*NEIC **24** 11:22:40.5±0.8, 36°.16N×70°.59E, h102km±9km, mb4.4/5, Error ellipse: s-maj=10.7km s-min=8.8km az=111.0*
*NNC **24** 11:22:43.6±3.0, 36°.67N×70°.51E, h0km, mb4.3, mpv3.9, Error ellipse: s-maj=23.5km s-min=11.5km az=3.0*
ISC 24 11:22:40.7±0.6, 36°.16N±0°.05×70°.65E±0°.05, h110km, n52, σ1§67/54, mb3.8/11, 9C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.08**	**220**	*eP*	**Pn**		**11 23 15.1**	**+0.2**
KBL				*eS*	**Sn**		**11 23 41.1**	**+0.2**
DZET	**Dzherino**	**3.02**	**332**	⇑P	**Pn**		**11 23 25.9**	**-1.0**
14nm,0.5s								
DZET				⇓Sn	**Sn**		**11 23 58.6**	**-4.0**
70nm,0.6s								
NIL	**Nilore**	**3.29**	**139**	*eP*	**Pn**		**11 23 32.1**	**+1.6**
SFK	**Suri-Kurgan**	**4.46**	**29**	⇑P	**Pn**		**11 23 48.6**	**+2.2**
28nm,0.4s								
SFK				⇑S	**Sn**		**11 24 38.3**	**+0.9**
14nm,0.2s								
DHRM	**DHARAMSHALA**	**6.09**	**128**	*eP*	**Pn**		**11 24 08.0**	**-0.5**
DHRM				*eS*	**Sn**		**11 25 14.4**	**-2.5**
AML	**Almayashu**	**6.42**	**21**	P	**Pn**		**11 24 13.4**	**+0.4**
SNR=22								
MNAS	**Manas**	**6.48**	**12**	⇑P	**Pn**		**11 24 14.0**	**+0.3**
5.1nm,0.5s								
MNAS				⇓S	**Sn**		**11 25 24.6**	**-1.6**
12nm,0.7s								
NRN	**Naryn**	**6.72**	**37**	*eP*	**Pn**		**11 24 16.2**	**-0.9**
UCH	**Uchtor**	**6.76**	**25**	P	**Pn**		**11 24 18.3**	**+0.6**
SNR=13								
KZA	**Kyzart**	**6.91**	**30**	P	**Pn**		**11 24 19.9**	**+0.2**
SNR=8.8								
EKS2	**Erkin-Say**	**6.93**	**19**	P	**Pn**		**11 24 20.7**	**+1.0**
SNR=11								
KK31	**Karatay Array**	**6.94**	**359**	⇑P	**Pn**		**11 24 19.2**	**-0.5**
5.8nm,0.3s,baz=175,slow=13								
KK31				⇑S	**Sn**		**11 25 33.2**	**-3.9**
3.0nm,0.4s								
KK31	**Karatay Array**	**6.94**	**359**	*eP*	**Pn**		**11 24 19.2**	**-0.5**
KKAR	**Karatay Array**	**6.94**	**359**	*eP*	**Pn**		**11 24 19.2**	**-0.5**
SMLA	**Simla**	**7.39**	**131**	*eP*	**Pn**		**11 24 26.3**	**+0.5**
SMLA				*eS*	**Sn**		**11 25 44.7**	**-3.5**
SMLA				IAML			11 25 47.5	
comp=E,38nm,0.8s								
SMLA				IAML			11 25 49.4	
comp=N,533nm,0.0s								
CHMS	**Chumysh**	**7.53**	**24**	P	**Pn**		**11 24 28.2**	**+0.5**
SNR=9.0								
USP	**Ospenovka**	**7.70**	**21**	P	**Pn**		**11 24 31.1**	**+1.2**
SNR=9.4								
TKM2	**Tokmak 2**	**7.76**	**28**	⇑P	**Pn**		**11 24 30.7**	**-0.3**
comp=N,6.6nm,0.9s								
TKM2	**Tokmak 2**	**7.76**	**28**	P	**Pn**		**11 24 30.9**	**-0.1**
SNR=13								
BHGR	**Bahadurgarh**	**9.15**	**143**	*eS*	Sn		11 26 21.8	-9.0
KHET	**Khetri**	**9.17**	**150**	*eS*	Sn		11 26 21.9	-9.5
JASL	**Jaisalmer**	**9.21**	**179**	*eS*	Sn		11 26 10.9	-21
JOSI	**Joshimath**	**9.31**	**124**	*eS*	**Sn**		**11 26 30.7**	**-4.4**
JOSI				IAML			11 26 35.5	
comp=N,2μm,1.3s								
JOSI				IAML			11 26 39.4	
comp=E,62nm,0.4s								
MK01	**Makanchi Array**	**13.72**	**36**	*eP*n	**Pn**		**11 25 50.4**	**-0.1**
MK31	**Makanchi Array**	**13.74**	**36**	*eP*n	**Pn**		**11 25 50.8**	**+0.1**
MKAR	**Makanchi Array**	**13.74**	**36**	*eP*n	**Pn**		**11 25 50.9**	**+0.3**
AB31	**Akbulak array**	**15.25**	**332**	⇑P	**Pn**		**11 26 07.9**	**-2.0**
comp=E,4.1nm,0.6s								
ABKAR	**Akbulak array**	**15.25**	**332**	*eP*n	**Pn**		**11 26 09.1**	**-0.8**
KURBB	**Kurchatov Arra**	**15.54**	**19**	Pn	**Pn**		**11 26 12.5**	**-1.0**
baz=200,slow=10,SNR=2.4								
KURK	**Kurchatov**	**15.65**	**19**	*eP*n	**Pn**		**11 26 12.5**	**-2.4**
BVAR	**Borovoye Array**	**16.87**	**359**	P	**P**		**11 26 30.2**	**+0.1**
comp=E,0.2nm,0.3s,baz=165,slow=13,SNR=4.5								
AKTO	**Aktyubinsk**	**16.94**	**331**	P	**P**		**11 26 31.7**	**+0.8**
comp=E,0.2nm,0.3s,baz=182,slow=5.9,SNR=11								
AKTO	**Aktyubinsk**	**16.94**	**331**	⇑P	**P**		**11 26 32.0**	**+1.0**
comp=E,5.0nm,0.8s								
ZAA0	**Zalesovo Array**	**20.34**	**25**	*eP*	Pn		11 27 09.6	-1.5
comp=E,7.4nm,0.6s								
ZALV	**Zalesovo Beam**	**20.34**	**25**	P	**P**		**11 27 09.4**	**+1.4**
comp=E,6.8nm,0.5s,baz=218,slow=11,SNR=32								
ZAA1	**Zalesovo Array**	**20.35**	**25**	*eP*	**P**		**11 27 09.4**	**+1.4**
TBLG	**Delisi**	**20.87**	**293**	*eP*	**P**		**11 27 11.3**	**-2.6**
comp=E,12nm,0.3s								
KIV	**Kislovodsk**	**22.70**	**299**	*eP*	**P**		**11 27 32.1**	**-1.0**
comp=E,5.4nm,1.0s								

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
TLY	**Talaya**	**28.08**	**46**	LR	LR		11 39 47.7	
comp=E,19nm,20.3s,baz=320,slow=36								
FIA0	**FINESS Array S**	**37.61**	**326**	*eP*	**P**		**11 29 46.3**	**+2.0**
FINES	**FINESS Array B**	**37.61**	**326**	P	**P**		**11 29 46.3**	**+2.0**
comp=E,3.1nm,1.0s,baz=99,slow=9.8,SNR=4.4								
ARA0	**ARCESS Array S**	**41.35**	**338**	*eP*	**P**		**11 30 17.5**	**+2.2**
ARCES	**ARCESS Array B**	**41.35**	**338**	P	**P**		**11 30 17.5**	**+2.2**
comp=E,0.9nm,0.8s,baz=98,slow=7.5,SNR=4.5								
HFS	**Hagfors**	**43.16**	**322**	P	**P**		**11 30 32.1**	**+2.0**
comp=E,1.2nm,0.7s,baz=81,slow=9.1,SNR=5.1								
TOA1	**Torodi Ar. Sit**	**65.42**	**269**	*eP*	**P**		**11 33 11.4**	**-0.5**
TOA0	**Torodi Ar. Sit**	**65.42**	**269**	*eP*	**P**		**11 33 11.7**	**-0.3**
comp=E,5.6nm,1.4s								
TORD	**Torodi Ar. Bea**	**65.42**	**269**	P	**P**		**11 33 11.4**	**-0.5**
comp=E,0.6nm,0.6s,baz=48,slow=5.3,SNR=10								
KOWA	**Kowa**	**69.30**	**273**	P	**P**		**11 33 36.2**	**-0.3**
comp=E,1.1nm,0.5s,baz=38,slow=12,SNR=3.4								
YKA	**Yellowknife Ar**	**81.60**	**2**	P	**P**		**11 34 48.8**	**+2.9**
comp=E,0.2nm,0.5s,baz=350,slow=5.3,SNR=3.0								
WR1	**Warramunga Arr**	**82.05**	**122**	*eP*	**P**		**11 34 48.9**	**0.0**
comp=E,14nm,1.4s								
WRA	**Warramunga Arr**	**82.05**	**122**	P	**P**		**11 34 48.9**	**0.0**
comp=E,1.0nm,1.2s,baz=325,slow=5.1,SNR=2.8								
ASAR	**Alice Springs**	**84.29**	**125**	P	**P**		**11 35 00.4**	**0.0**
comp=E,0.2nm,0.8s,baz=314,slow=5.1,SNR=3.2								

*JMA **24** 11:30:57.9±0.2, 43°.27N×146°.85E, h42km±3km, M3.2*
*ISCJB **24** 11:30:58.3±1.1, 43°.38N±0°.07×146°.83E±0°.07, h46km±13km, Error ellipse: s-maj=13.2km s-min=6.2km az=146.3*
*SKHL **24** 11:30:58.6±0.5, 43°.35N×146°.91E, h36km±5km, mb4.4/6*
ISC 24 11:30:59.2±2.3, 43°.4N±0°.1×146°.76E±0°.08, h30km±12km, n15, σ0§99/20, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.47**	**6**	*i* P		**Pb**	**11 31 09.0**	**-0.1**
SHO				AMB		AMB	11 31 10.3	
227nm,0.2s								
SHO				*i* S		**Sb**	**11 31 17.0**	**+1.2**
SHO				A		A	11 31 17.0	
3μm,0.3s								
SHO				A		A	11 31 17.0	
2μm,0.3s								
NEM2	**Nemuro 2**	**0.74**	**267**	P		**Pb**	**11 31 12.9**	**-0.7**
NEM2				*eS*		**Sn**	**11 31 24.4**	**+0.4**
YUK	**Yuzh-Kuril'sk**	**0.91**	**314**	*eP*		**Pn**	**11 31 15.0**	**-0.9**
YUK				AMB		AMB	11 31 16.0	
276nm,0.4s								
YUK				*eS*		**Sb**	**11 31 27.7**	**-0.4**
YUK				A		A	11 31 28.0	
941nm,0.4s								
YUK				A		A	11 31 28.0	
2μm,0.4s								
GRPR	**Tuman**	**0.93**	**310**	*eP*		**Pn**	**11 31 16.0**	**-0.2**
GRPR				AMB		AMB	11 31 16.0	
43nm,0.3s								
GRPR				AMB		AMB	11 31 16.0	
19nm,0.3s								
GRPR				AMB		AMB	11 31 16.0	
118nm,0.3s								
GRPR				*i* S		**Sn**	**11 31 29.0**	**+0.5**
GRPR				A		A	11 31 29.0	
2μm,0.3s								
GRPR				A		A	11 31 29.0	
212nm,0.3s								
LAGR	**Lagunnoye**	**0.96**	**313**	*eP*		**Pn**	**11 31 16.0**	**-0.7**
LAGR				AMB		AMB	11 31 18.0	
213nm,0.3s								
LAGR				*i* S		**Sb**	**11 31 29.0**	**-0.6**
LAGR				A		A	11 31 30.0	
220nm,0.3s								
LAGR				A		A	11 31 30.0	
2μm,0.3s								
GLVR	**Golovnino**	**0.96**	**291**	*eP*		**Pn**	**11 31 17.4**	**+0.7**
GLVR				AMB		AMB	11 31 17.9	
107nm,0.3s								
GLVR				*eS*		**Sb**	**11 31 29.0**	**-0.7**
GLVR				A		A	11 31 30.0	
1μm,0.3s								
GLVR				A		A	11 31 30.0	
489nm,0.3s								
JRA	**Rausu**	**1.30**	**295**	P		Pn	11 31 21.8	+0.4
JRA				*eS*		**Sb**	**11 31 39.2**	**-0.2**
JNK	**Nakash**	**1.50**	**278**	P		Pn	11 31 24.3	+0.2
JNK				*eS*		**Sn**	**11 31 42.7**	**+0.1**
JAK	**Akkeshi**	**1.56**	**256**	P		Pn	11 31 24.3	-0.7
JAK				*eS*		**Sn**	**11 31 43.3**	**-0.9**
KUR	**Kuril'sk**	**1.99**	**23**	*eP*		Pn	11 31 30.0	-0.8
KUR				AMB		AMB	11 31 31.0	
9.0nm,0.2s								
KUR				AMB		AMB	11 31 31.0	
5.0nm,0.2s								
KUR				AMB		AMB	11 31 31.0	
26nm,0.2s								
KUR				*eS*		**Sn**	**11 31 53.0**	**-1.8**
KUR				A		A	11 31 56.6	
167nm,0.2s								
KUR				A		A	11 31 56.6	
180nm,0.2s								
JTKR	**Abashiri--Toko**	**2.15**	**286**	P		Pn	11 31 34.1	+1.1
JAR	**Ashorobuto**	**2.19**	**268**	P		Pn	11 31 33.8	+0.3
JAR				*eS*		**Sn**	**11 32 00.4**	**+0.8**
JMP	**Maruseppu**	**2.54**	**285**	P		**Pn**	**11 31 39.6**	**+1.2**
JCH	**Churui**	**2.62**	**254**	*eS*		**Sn**	**11 32 09.7**	**-0.5**
YSS	**Yuzh-Sakhalins**	**4.54**	**323**	*eP*		**Pn**	**11 32 07.9**	**+2.0**

UCR 24 11:35:36.2±2.3, 9°.35N×82°.79W, h12km±11km, MD3.8, 5C-3D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
EDSV	**San Vito**	**0.56**	**199**	*eP*		Pg	11 35 45.6	-1.5
EDSV				*eS*		Sb	11 35 56.3	+0.4
BRU2	**Volcan**	**0.56**	**170**	⇓*iP*		Pg	11 35 47.4	+0.2
BRU2				*eS*		Sb	11 35 55.7	-0.4
TBS2		**0.57**	**167**	⇑*iP*		Pg	11 35 45.3	-2.0
TBS2				*eS*		Sg	11 35 52.9	-2.0
ACR	**Cerro Adams**	**0.79**	**208**	*eP*		Pg	11 35 50.8	-0.7
ACR				*eS*		Sb	11 36 02.3	-0.2
EDLM	**Las Mercedes**	**0.79**	**265**	*eP*		Pg	11 35 50.7	-0.8
EDLM				*eS*		Sg	11 36 02.1	+0.2
BUS	**Buena Vista**	**0.98**	**282**	⇑*iP*		Pg	11 35 54.4	-0.8
BUS				*eS*		Sg	11 36 08.1	+0.1
EDDO	**Dominical**	**1.06**	**265**	*eP*		Pb	11 35 55.7	-0.9
EDDO				*eS*		Sn	11 36 11.6	-0.1
URSC	**Urasca**	**1.09**	**296**	⇑*eP*		Pb	11 35 55.2	-1.9
URSC				*eS*		Sb	11 36 08.9	-2.5
VTR0	**Volcan Turrial**	**1.17**	**305**	*eP*		Pb	11 35 56.1	-2.5
VTR0				*eS*		Sb	11 36 12.6	-1.2
CVTR	**Volcan Turrial**	**1.17**	**305**	⇑*eP*		Pb	11 35 56.9	-1.7
CVTR				*eS*		Sb	11 36 13.1	-0.7
LCR2	**La Lucha 2**	**1.26**	**288**	⇑*eP*		Pn	11 35 58.5	-1.3
LCR2				*eS*		Sb	11 36 16.1	-0.3
QCR1	**Quepos**	**1.36**	**273**	⇓*iP*		Pn	11 36 00.7	-0.4
QCR1				*eS*		Sg	11 36 20.0	-0.1
SJS	**Escuela Geolog**	**1.38**	**295**	*eP*		Pn	11 36 01.7	+0.3
SJS				*eS*		Sb	11 36 19.5	-0.1
HDC	**Heredia**	**1.46**	**297**	*eP*		Pn	11 36 01.9	-0.6
HDC				*eS*		Sb	11 36 22.1	+0.1
CGA2	**Cerro Gallo 2**	**1.78**	**292**	⇓*eP*		Pn	11 36 07.0	0.0
CGA2				*eS*		Sn	11 36 29.6	0.0
SRA1	**San Ram°‡n**	**1.82**	**294**	*eP*		Pn	11 36 07.3	-0.2
SRA1				*eS*		Sb	11 36 31.6	-0.8
JTS	**JuntasAbangare**	**2.33**	**294**	*eP*		Pn	11 36 14.7	+0.3

*IDC **24** 11:36:48.3±2.8, 30°.36S×177°.34W, h0km, mb4.0/4, mb1 4.1/5, mb1mx3.7/41, mbtmp4.0/5, ML3.1/1, Error ellipse: s-maj=56.6km s-min=26.5km az=102.0*
ISC 24 11:36:52.6±2.5, 30°.32S±0°.08×177°.4W±0°.3, h33km, n7, σ2§26/9, mb4.2/4, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.15**	**339**	Pn		**Pn**	**11 37 11.9**	**-0.4**
129nm,0.3s,baz=202,slow=23,SNR=22								
RAO				Sn		**Sn**	**11 37 23.6**	**-3.3**
1μm,0.3s,baz=72,slow=20,SNR=21								
URZ	**Urewera**	**9.11**	**208**	Pn		**Pn**	**11 38 59.3**	**-2.4**
0.2nm,0.3s,baz=166,slow=8.3,SNR=5.0								
URZ				Sn		**Sn**	**11 40 41.6**	**-1.5**
1.1nm,0.3s,baz=118,slow=16,SNR=7.4								
CTA	**Charters Tower**	**34.27**	**279**	P		**P**	**11 43 38.0**	**+2.1**
3.4nm,0.8s,baz=110,slow=10,SNR=2.7								
STKA	**Stephens Creek**	**34.97**	**257**	P		**P**	**11 43 44.2**	**+2.4**
2.6nm,0.8s,baz=95,slow=11,SNR=3.5								
ASAR	**Alice Springs**	**43.60**	**267**	P		**P**	**11 44 54.0**	**0.0**
0.3nm,0.4s,baz=105,slow=7.3,SNR=17								
WRA	**Warramunga Arr**	**44.58**	**272**	P		**P**	**11 45 02.6**	**+0.8**
0.9nm,0.3s,baz=110,slow=8.1,SNR=41								
FINES	**FINESS Array B**	**145.24**	**340**	PKPbc		**PKPdf**	**11 56 26.6**	**+0.5**
1.9nm,0.7s,baz=52,slow=3.4,SNR=12								

UCR 24 11:46:15.3±1.9, 12°.11N×87°.77W, h27km±21km, MD3.8, ML3.1, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**1.16**	**86**	*eP*		Pn	11 46 34.4	-1.3
COPN				*eS*		Sb	11 46 52.5	+1.3
CNCH	**Conchagua**	**1.17**	**357**	*eP*		Pn	11 46 35.8	-0.2
CNCH				*eS*		Sb	11 46 52.0	+0.3
MOMN	**Momotombo**	**1.24**	**76**	*eP*		Pn	11 46 35.5	-1.3
XAVN	**Gruta Xavier**	**1.41**	**88**	*eP*		Pn	11 46 39.3	+0.1
MGAN	**Managua**	**1.49**	**88**	*eP*		Pn	11 46 40.4	+0.1
MGAN				*eS*		Sn	11 46 58.5	-0.3
BRAN	**Las Pilas**	**1.52**	**66**	*eP*		Pn	11 46 38.7	-1.9
TECA	**Tecapa**	**1.55**	**333**	*eP*		Pn	11 46 41.8	+0.4
TECA				*eS*		Sn	11 47 01.5	+0.8
UESV	**Ojushtada**	**1.61**	**322**	IAML			11 47 11.8	
comp=Z,180nm,0.4s								
ESTN	**Estel**	**1.69**	**54**	*eP*		Pn	11 46 43.2	+0.1
LFRS	**El Faro**	**1.96**	**320**	*eP*		Pn	11 46 47.8	+0.9
LFRS				*eS*		Sn	11 47 11.7	+1.0
MATN	**Matagalpa**	**1.98**	**65**	*eP*		Pn	11 46 46.6	-0.5
MATN				*eS*		Sn	11 47 11.9	+0.8
LOMA	**San Marcos**	**2.06**	**318**	*eP*		Pn	11 46 47.9	-0.3
LOMA				*eS*		Sn	11 47 14.0	+1.1
BOAB	**BOACO BROADBAN**	**2.08**	**80**	*eP*		Pn	11 46 49.6	+1.1

GUC 24 11:54:28.2±0.6, 37°.71S×73°.97W, h36km±6km, ML3.7, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CCSP	**San Pedro de C**	**1.10**	**39**	*eP*		Pn	11 54 47.2	+0.2
CCSP				*i* S		Sn	11 55 01.1	+0.1
CCSP				IAML			11 55 03.9	
comp=N,4μm,0.3s								
TMU	**Temuco**	**1.49**	**134**	*eP*		Pn	11 54 54.4	+2.0
TMU				*i* S		Sn	11 55 12.8	+2.3
TMU				IAML			11 55 18.0	
comp=N,644nm,0.3s								
CCHI	**Chillan**	**1.87**	**55**	*eP*		Pn	11 54 59.0	+1.4
CCHI				*i* S		Sn	11 55 22.2	+2.2
CCHI				IAML			11 55 30.5	
comp=N,1μm,0.7s								
GO05	**HualaæØ**	**3.16**	**32**	*eP*		Pn	11 55 16.4	+1.0
GO05				*i* S		Sn	11 56 01.7	+10
GO05				IAML			11 56 09.4	
comp=E,216nm,0.7s								

*IDC **24** 12:12:56.2±0.6, 34°.26N×80°.38E, h0km, mb4.0/20, mb1 4.1/23, mb1mx3.9/71, mbtmp4.0/23, ML3.5/3, MS3.2/14, Ms1 3.2/14, ms1mx2.9/70, Error ellipse: s-maj=16.4km s-min=13.6km az=30.0*
*BJI **24** 12:12:59.5, 34°.15N×80°.42E, h15km, mb4.2/13, mB4.3/6, ML3.9/3, Ms3.5/4, Ms7 3.3/4*
*ISCJB **24** 12:13:00.0±0.3, 34°.34N±0°.04×80°.21E±0°.04, h33km, mb4.2/40, MS3.3/11, Error ellipse: s-maj=6.0km s-min=4.9km az=167.6*
*MOS **24** 12:13:00.2±1.4, 34°.30N×80°.24E, h38km, mb4.4/8, Error ellipse: s-maj=10.1km s-min=5.8km az=103.9*
*NEIC **24** 12:13:02.5±0.8, 34°.32N×80°.25E, h41km±6km, mb4.3/23, Error ellipse: s-maj=7.5km s-min=6.4km az=191.0*
ISC 24 12:13:02.4±0.5, 34°.39N±0°.06×80°.24E±0°.05, h35km, n113, σ1§41/97, mb4.2/40, MS3.2/11, Xizang

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CHCP	**Chirah Chowk**	**5.83**	**265**	P		**Pn**	**12 14 26.6**	**+0.2**
CHCP				S		**Sn**	**12 15 38.0**	**+5.9**
NIL	**Nilore**	**5.85**	**265**	*eP*n		**Pn**	**12 14 26.0**	**-0.6**
NIL	**Nilore**	**5.85**	**265**	*eP*		**Pn**	**12 14 26.0**	**-0.6**
CEP	**Cherat**	**6.93**	**268**	P		**Pn**	**12 14 41.0**	**-0.6**
THW	**Thamme Wali**	**7.26**	**260**	P		**Pn**	**12 14 45.3**	**-0.8**
TARG	**Taragay, Kyrgy**	**7.57**	**346**	*eP*n		Pn	12 14 54.4	+3.8
NRN	**Naryn**	**7.78**	**336**	*eP*n		Pn	12 14 57.5	+4.0
NRN	**Naryn**	**7.78**	**336**	*eP*		Pn	12 14 57.5	+4.0
PRZ	**Przheval'sk**	**8.21**	**350**	*eP*n		Pn	12 15 02.6	+3.5
PRZ	**Przheval'sk**	**8.21**	**350**	*eP*		Pn	12 15 02.6	+3.5
KBL	**Kabul**	**9.24**	**274**	*eP*n		**Pn**	**12 15 12.2**	**-1.2**
KBL	**Kabul**	**9.24**	**274**	*eP*		**Pn**	**12 15 12.2**	**-1.2**
FRU	**Bishkek**	**9.50**	**334**	*eP*		Pn	12 15 21.0	+4.3
FRU				*eS*		**Sn**	**12 17 00.0**	**-2.3**
FRU				pmax		pmax		
comp=E,160nm,2.0s								
LSA	**Lhasa**	**10.37**	**114**	P		**Pn**	**12 15 30.0**	**+0.9**
LSA	**Lhasa**	**10.37**	**114**	*eP*n		**Pn**	**12 15 30.2**	**+1.2**
LSA	**Lhasa**	**10.37**	**114**	*eP*		**Pn**	**12 15 30.3**	**+1.2**
WMQ	**Urumqi**	**11.05**	**29**	P		**Pn**	**12 15 38.6**	**+0.7**
WMQ				S		Sn	12 17 51.9	+12
WMQ				LR		LR		
comp=E,280nm,16.5s								
WMQ				LR

comp=E,4.0nm,0.8s
NVS pmax pmax
comp=Z,9.0nm,0.8s
ABKAR Akbulak array 21.10 321 *e*P **P 12 17 44.2 +0.5**
KMI Kunming 21.57 109 P P 12 17 55.3 +6.1
KMI pP sP 12 18 03.3 +0.3
KMI pmax pmax
comp=Z,13nm,0.9s
KMI pmax pmax
comp=Z,83nm,4.1s
WSAR Wadi Sarin 21.90 245 P **P 12 17 52.4 -0.2**
comp=Z,5.4nm,0.5s,baz=104,slow=8.2,SNR=6.9
AKTO Aktyubinsk 22.80 321 P **P 12 18 02.4 +0.4**
comp=Z,1.8nm,0.5s,baz=140,slow=7.2,SNR=5.2
AKTO LR LR 12 28 04.1
comp=Z,54nm,19.7s,baz=133,slow=40
CMAR Chiang Mai Arr 23.01 129 P **P 12 18 03.0 -1.4**
comp=Z,1.6nm,0.7s,baz=311,slow=10,SNR=12
CMAR LR LR 12 27 42.3
comp=Z,54nm,20.8s,baz=344,slow=39
CMAR Chiang Mai Arr 23.01 129 P **P 12 18 03.0 -1.4**
CM01 Chiang Mai Arr 23.05 129 *e*P **P 12 18 05.9 +1.1**
SONM Songino Array 23.71 48 P **P 12 18 10.6 -0.5**
comp=Z,1.3nm,0.6s,baz=246,slow=11,SNR=8.9
SONA1 Songino Array 23.72 48 *e*P **P 12 18 12.0 +0.7**
GYA Guiyang 24.07 102 *e*P **P 12 18 15.0 +0.3**
GYA pmax pmax
comp=Z,10.0nm,1.0s
ULN Ulaanbaatar 24.13 48 *e*P **P 12 18 15.6 +0.6**
comp=Z,2.5nm,0.7s
ULN Ulaanbaatar 24.13 48 *i* P **P 12 18 14.5 -0.5**
ULN pmax pmax
comp=Z,3.0nm,1.0s
PALK Pallekele 26.99 179 LR LR 12 29 49.1
comp=Z,72nm,19.9s,baz=118,slow=38
KBZ Khabaz 30.24 299 LR LR 12 32 53.7
comp=Z,47nm,20.9s,baz=58,slow=39
NRIK Noril'sk 35.24 4 P **P 12 19 54.0 +0.9**
comp=Z,2.7nm,0.5s,baz=186,slow=5.0,SNR=4.7
NRIK Noril'sk 35.24 4 P **P 12 19 54.0 +0.9**
NRIK pmax pmax
comp=Z,3.0nm,0.5s
CN2 Changchun 35.94 61 *e*P P 12 20 03.0 +3.6
CN2 pmax pmax
comp=Z,10.0nm,0.5s
MMAI Mount Meron Ar 37.09 281 LR LR 12 38 41.8
comp=Z,33nm,18.2s,baz=155,slow=42
BRTR Keskin Array B 37.24 292 P **P 12 20 12.3 +1.6**
comp=Z,1.0nm,0.7s,baz=106,slow=7.9,SNR=5.1
KS15 Wonju Array Si 38.39 71 *e*P **P 12 20 19.8 -0.5**
KSAR Wonju Array Be 38.39 71 P **P 12 20 19.1 -1.2**
KSAR Wonju Array Be 38.39 71 P **P 12 20 19.1 -1.2**
KSRS Korea Array 38.42 71 P **P 12 20 19.1 -1.4**
comp=Z,1.1nm,0.5s,baz=282,slow=7.1,SNR=7.3
AKASG Malin Array Be 40.11 310 P **P 12 20 35.0 +0.5**
comp=Z,0.4nm,0.4s,baz=79,slow=8.1,SNR=4.2
KIEV Kiev 40.12 310 *e*P **P 12 20 34.8 +0.2**
comp=Z,2.5nm,0.7s
KIEV Kiev 40.12 310 *e*P **P 12 20 34.8 +0.2**
KIEV pmax pmax
comp=Z,3.0nm,0.7s
MLR Muntele Rosu 42.34 302 LR LR 12 41 51.7
comp=Z,8.2nm,19.9s,baz=66,slow=41
FINES FINESS Array B 43.47 326 P **P 12 21 02.3 +0.6**
comp=Z,0.8nm,0.5s,baz=116,slow=10,SNR=13
TIXI Tiksi 45.05 20 P **P 12 21 13.7 -0.7**
comp=Z,1.9nm,0.5s,baz=223,slow=4.5,SNR=5.4
TIXI Tiksi 45.05 20 *e*P **P 12 21 14.5 +0.2**
comp=Z,1.8nm,0.5s
TIXI Tiksi 45.05 20 *e*P **P 12 21 14.5 +0.2**
TIXI pmax pmax
comp=Z,2.0nm,0.5s
ARCES ARCESS Array B 46.03 336 P **P 12 21 20.9 -1.2**
comp=Z,0.9nm,0.6s,baz=98,slow=9.1,SNR=7.2
ARCES ARCESS Array B 46.03 336 *e*P **P 12 21 23.0 +0.9**
ARCES ARCESS Array B 46.03 336 *e*P **P 12 21 23.0 +0.9**
TIR Tirane 47.32 297 *e*P **P 12 21 31.2 -1.4**
comp=Z,33nm,0.5s
TIR Tirane 47.32 297 *e*P **P 12 21 31.2 -1.4**
TIR pmax pmax
comp=Z,33nm,0.5s
ASAJ Asahikawa 48.21 59 LR LR 12 43 43.2
comp=Z,516nm,18.7s,baz=178,slow=38
HFS Hagfors 49.34 323 P **P 12 21 49.0 +1.1**
comp=Z,1.5nm,0.7s,baz=92,slow=5.0,SNR=2.9
HFS Hagfors 49.34 323 P **P 12 21 49.0 +1.1**
GERES GERESS Array B 50.23 308 LR LR 12 47 17.6
comp=Z,20nm,20.1s,baz=350,slow=41
NOA NORSAR Array B 50.56 324 LR LR 12 44 44.0
comp=Z,26nm,18.1s,baz=80,slow=38
DAVOX Davos/Discbmat 53.16 306 LR LR 12 46 45.7
comp=Z,28nm,20.5s,baz=266,slow=38
PETK Petropavlovsk- 56.16 45 P **P 12 22 37.3 -1.1**
comp=Z,1.8nm,1.0s,baz=352,slow=4.4,SNR=3.4
ILULI Ilulissat 70.72 344 *e*P **P 12 24 14.9 +0.6**
comp=Z,10.0nm,0.7s
ILULI Ilulissat 70.72 344 *e*P **P 12 24 14.9 +0.6**
ILULI pmax pmax
comp=Z,10.0nm,0.7s
TOLK Toolik Lake Re 70.87 17 *e*P **P 12 24 15.5 +0.1**
comp=Z,4.3nm,0.6s
COLD Coldfoot 71.77 18 *e*P **P 12 24 21.1 +0.4**
comp=Z,2.2nm,1.0s
TOA0 Torodi Ar. Sit 73.31 275 *e*P **P 12 24 30.4 -0.4**
comp=Z,3.5nm,0.8s
TORD Torodi Ar. Bea 73.31 275 P **P 12 24 29.9 -0.9**
comp=Z,2.6nm,0.6s,baz=44,slow=5.2,SNR=23
BPAW Bear Paw Mtn. 73.88 21 *e*P **P 12 24 33.5 +0.2**
comp=Z,6.8nm,1.5s
MDM Murphy Dome 74.01 19 *e*P **P 12 24 33.9 -0.2**
comp=Z,1.3nm,0.6s
CAST Castle Rocks 74.05 22 *e*P **P 12 24 34.8 +0.4**
comp=Z,3.4nm,1.0s
WRH Wood River Hil 74.43 20 *e*P **P 12 24 35.8 -0.7**
comp=Z,2.5nm,1.1s
IL1 Eielson Array 74.52 19 *e*P **P 12 24 36.6 -0.4**
ILAR Eielson Array 74.52 19 P **P 12 24 36.6 -0.4**
comp=Z,14nm,0.7s,baz=314,slow=5.0,SNR=19
INK Inuvik 74.55 12 *e*P **P 12 24 36.9 -0.2**
comp=Z,3.4nm,1.3s
INK Inuvik 74.55 12 *e*P **P 12 24 36.9 -0.2**
INK pmax pmax
comp=Z,3.0nm,1.3s
WRA Warramunga Arr 74.60 128 P **P 12 24 35.9 -2.2**
comp=Z,0.7nm,0.8s,baz=328,slow=5.4,SNR=4.3
SKT Skwentna 75.29 23 *e*P **P 12 24 41.1 -0.4**
comp=Z,4.6nm,1.2s
RIDG Independ'e Rid 75.89 19 *e*P **P 12 24 44.3 -0.7**
comp=Z,7.2nm,1.1s
PMR Palmer 76.33 22 *e*P **P 12 24 46.8 -0.6**
comp=Z,3.3nm,1.0s
PMR Palmer 76.33 22 *e*P **P 12 24 46.8 -0.6**
PMR pmax pmax
comp=Z,3.0nm,1.0s
SCM Sheep Creek Mo 76.69 21 *e*P **P 12 24 49.7 +0.1**
comp=Z,12nm,1.4s
HARP HAARP 76.87 20 *e*P **P 12 24 51.6 +1.1**
comp=Z,7.9nm,0.6s
DAWY Dawson 77.00 17 *e*P **P 12 24 51.1 -0.2**
comp=Z,4.4nm,1.4s
ASAR Alice Springs 77.01 131 P **P 12 24 49.5 -2.3**
comp=Z,0.4nm,0.7s,baz=319,slow=5.2,SNR=11
KOWA Kowa 77.29 279 P **P 12 24 54.0 +0.4**
comp=Z,2.3nm,0.5s,baz=57,slow=6.3,SNR=4.9
KOWA Kowa 77.29 279 *e*P **P 12 24 53.9 +0.3**
comp=Z,8.8nm,1.4s
DBIC Dimbokro 82.23 273 LR LR 13 05 14.5
comp=Z,30nm,18.6s,baz=82,slow=38
YKA Yellowknife Ar 82.71 7 P **P 12 25 21.1 -0.9**
comp=Z,1.2nm,0.6s,baz=338,slow=5.4,SNR=12
RAR Rarotonga 126.01 92 *e*PKPdf **PKPdf 12 32 00.2 -1.0**
RAR Rarotonga 126.01 92 *e*PKIKP **PKPdf 12 32 00.2 -1.0**

IDC 24 12:14:39.4±4.5,29°.97S×178°.26W,h0km,mb3.6/3, mb1 3.8/3,mb1mx3.5/42,mbtmp3.6/3,Error ellipse: s-maj=202.9km s-min=67.2km az=160.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**34.35**	**256**	P	P	12 21 28.1	+0.1
	1.2nm,0.5s,baz=110,slow=13,SNR=5.3						
ASAR	**Alice Springs**	**42.90**	**267**	P	P	12 22 39.4	-0.6
	0.4nm,0.9s,baz=102,slow=6.9,SNR=4.5						
WRA	**Warramunga Arr**	**43.85**	**272**	P	P	12 22 47.8	+0.1
	0.3nm,0.4s,baz=111,slow=8.1,SNR=5.0						
FINES	**FINESS Array B**	**144.67**	**340**	PKP	PKPdf	12 34 16.8	-0.6
	1.8nm,0.9s,baz=60,slow=5.5,SNR=7.6						

NIED ***24*** *12:37:00,36°.70N×142°.20E,h17km,Mw4.3 Best double couple: M₀3.61000×10¹⁵ NP1:φ₀s181.00000°,δ22.00000°, λ59.00000°. NP2:φ₀s34.00000°,δ71.00000°,λ102.00000°.*
IDC ***24*** *12:37:54.5±0.5,36°.74N×142°.17E,h0km,mb4.3/29, mb1 4.4/34,mb1mx4.2/76,mbtmp4.3/34,ML4.4/3,MS3.7/33, Ms1 3.7/33,ms1mx3.5/66,Error ellipse: s-maj=14.4km s-min=10.7km az=102.0*
BJI ***24*** *12:37:54.2,36°.67N×142°.05E,h6km,mb4.6/40,mB4.7/23, Ms4.1/23,Ms7 4.0/24*
ISCJB ***24*** *12:37:56.0±0.2,36°.71N±0°.03×142°.21E±0°.03,h19km, mb4.4/76,MS3.8/37,Error ellipse: s-maj=4.1km s-min=3.2km az=151.9*
JMA ***24*** *12:37:56.1±0.2,36°.73N×142°.24E,h24km,M4.4*
JMA Felt I J1.
NEIC ***24*** *12:37:57.3±1.9,36°.75N×142°.13E,h14km±11km,mb4.5/29, Error ellipse: s-maj=5.6km s-min=4.0km az=136.0*
NEIC Recorded [1 JMA] in Fukushima.
MOS ***24*** *12:37:57.2±0.9,37°.09N×142°.11E,h14km,mb4.7/32,Error ellipse: s-maj=8.3km s-min=5.3km az=102.9*
ISC 24 12:37:57.4±0.4,36°.78N±0°.04×142°.21E±0°.04,h19km,n202, σ1§68/199,mb4.5/76,MS3.9/37,10C-4D,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**1.18**	**286**	P	**Pn**	**12 38 17.5**	**-1.4**
JFK	**Kawauchi**	**1.22**	**299**	P	**Pn**	**12 38 18.1**	**-1.3**
JFK				*e*S	**Sg**	**12 38 34.8**	**-2.1**
JHO	**Hitachi**	**1.33**	**263**	P	**Pn**	**12 38 19.6**	**-1.3**
JHO				*e*S	**Sg**	**12 38 37.7**	**-2.8**
JMM	**Marumori**	**1.56**	**314**	P	**Pb**	**12 38 23.7**	**-2.0**
JFT	**Otama**	**1.67**	**297**	P	**Pb**	**12 38 25.8**	**-1.7**
JFT				*e*S	**Sg**	**12 38 47.6**	**-3.6**
JIO	**Ouri**	**1.80**	**338**	P	**Pb**	**12 38 27.6**	**-2.2**
JOU	**Okura**	**2.00**	**323**	P	**Pb**	**12 38 30.8**	**-2.4**
JAG	**Ashikaga**	**2.25**	**262**	P	**Pn**	**12 38 33.2**	**-0.3**
JAG				*e*S	**Sn**	**12 38 59.7**	**-1.1**
JMK	**Ichinoseki**	**2.30**	**340**	P	**Pn**	**12 38 34.9**	**+0.6**
BSO1	**Boso 1**	**2.35**	**206**	P	**Pn**	**12 38 33.6**	**-0.8**
JNS	**Sasagawa**	**2.53**	**295**	P	**Pn**	**12 38 37.6**	**+0.2**
JYK	**Kaneyama**	**2.59**	**326**	P	**Pn**	**12 38 39.0**	**+0.8**
JRY	**Ryogami san**	**2.78**	**255**	P	**Pn**	**12 38 40.5**	**-0.4**
JOM	**Ohasama**	**2.78**	**345**	P	**Pn**	**12 38 41.4**	**+0.5**
MJAR	**Matsushiro Arr**	**3.23**	**267**	Pn	**Pn**	**12 38 46.5**	**-0.5**
	30nm,0.3s,baz=298,slow=16,SNR=338						
MJAR				Sn	**Sb**	**12 39 29.8**	**-3.2**
	20nm,0.3s,baz=65,slow=4.1,SNR=7.0						
MJAR				LR	LR	12 40 15.5	
	comp=Z,1μm,18.1s,baz=120,slow=44						
MAJO	**Matsushiro**	**3.23**	**267**	*e*Pn	**Pn**	**12 38 47.9**	**+0.8**
MAJO	**Matsushiro**	**3.23**	**267**	*c i*P	**Pn**	**12 38 48.2**	**+1.2**
MAT	**Matsushiro**	**3.23**	**267**	P	**Pn**	**12 38 48.0**	**+1.0**
MAT				*e*S	**Sn**	**12 39 25.1**	**+0.1**
MJB9	**Matsu-Tunnel**	**3.23**	**267**	*e*Pn	**Pn**	**12 38 48.0**	**+0.9**
JHJ2	**Mitsune**	**4.16**	**209**	*e*Pn	**Pn**	**12 38 58.6**	**-1.2**
JHJ2				*e*Sn	**Sn**	**12 39 45.1**	**-2.7**
JHJ	**Hachijo jima 2**	**4.16**	**209**	Pn	**Pn**	**12 38 58.8**	**-1.1**
	48nm,0.3s,baz=92,slow=23,SNR=41						
JHJ				Sn	**Sn**	**12 39 43.2**	**-4.8**
	129nm,0.3s,baz=99,slow=22,SNR=11						
INU	**Inuyama**	**4.44**	**253**	*e*Pn	**Pn**	**12 39 05.1**	**+1.4**
ERM	**Erimo**	**5.28**	**8**	*e*Pn	**Pn**	**12 39 14.7**	**-0.4**
ERM				*e*Sn	**Sn**	**12 40 18.5**	**+3.1**
ERM	**Erimo**	**5.28**	**8**	*e*P	**Pn**	**12 39 14.7**	**-0.4**
ERM				*e*		12 40 18.5	
ASAJ	**Asahikawa**	**7.33**	**2**	Pn	**Pn**	**12 39 43.1**	**-0.3**
	9.0nm,0.3s,baz=214,slow=11,SNR=64						
ASAJ				Sn	**Sn**	**12 41 05.2**	**-0.8**
	baz=252,slow=20,SNR=2.4						
YUK	**Yuzh-Kuril'sk**	**7.76**	**20**	*e*P	**Pn**	**12 39 47.7**	**-1.5**
YUK				*e*S	**Sn**	**12 41 10.6**	**-5.9**
YUK				pmax	pmax		
	comp=Z,97nm,0.3s						
YUK				pmax	pmax		
	comp=N,58nm,0.2s						
YUK				pmax	pmax		
	comp=E,47nm,0.2s						
YUK				MLR	MLR		
	comp=Z,407nm,14.0s						
SHO	**Shikotan**	**7.91**	**25**	*e*P	**Pn**	**12 39 48.7**	**-2.6**
SHO				*i* S	**Sn**	**12 41 12.9**	**-7.3**
SHO				pmax	pmax		
	comp=Z,29nm,0.3s						
SHO				pmax	pmax		
	comp=N,8.0nm,0.2s						
SHO				pmax	pmax		
	comp=E,9.0nm,0.2s						
TEY	**Ternei**	**9.27**	**335**	*e*P	**Pn**	**12 40 07.8**	**-2.1**
KUR	**Kuril'sk**	**9.46**	**25**	*e*P	**Pn**	**12 40 11.2**	**-1.3**
KUR				*i* S	**Sn**	**12 41 52.7**	**-5.6**
KUR				pmax	pmax		
	comp=Z,16nm,0.4s						
KUR				pmax	pmax		
	comp=N,10.0nm,0.3s						
KUR				pmax	pmax		
	comp=E,6.0nm,0.2s						
CBIJ	**Chichi jima**	**9.66**	**180**	*e*Pn	**Pn**	**12 40 14.7**	**-0.6**
CBIJ				Sn	Sn	12 41 52.1	-11
JCJ	**Chichijima**	**9.66**	**180**	Pn	**Pn**	**12 40 12.9**	**-2.4**
	baz=90,slow=20						
JCJ				Sn	Sn	12 41 52.1	-11
	comp=E,9.6nm,0.3s,baz=294,slow=20,SNR=4.0						
JNU	**Nakatsue**	**9.99**	**252**	LR	LR	12 44 28.8	
	comp=E,317nm,18.3s,baz=125,slow=40						
YSS	**Yuzh-Sakhalins**	**10.17**	**2**	*e*Pn	**Pn**	**12 40 22.8**	**+0.5**
YSS	**Yuzh-Sakhalins**	**10.17**	**2**	‖*e*P	**Pn**	**12 40 22.6**	**+0.3**
YSS				*e*S	**Sn**	**12 42 15.5**	**-0.2**
YSS				pmax	pmax		
	comp=Z,20nm,0.5s						
YSS				MLR	MLR		
	comp=Z,200nm,15.0s						
YSS				MLR	MLR		
	comp=N,300nm,14.0s						
YSS				MLR	MLR		
	comp=E,400nm,15.0s						
USRK	**Ussuriysk Ar.**	**10.74**	**317**	Pn	**Pn**	**12 40 33.2**	**+3.2**
	comp=E,0.3nm,0.3s,baz=106,slow=14,SNR=4.3						
USRK				LR	LR	12 44 30.8	
	comp=E,670nm,18.4s,baz=122,slow=37						
KSRS	**Korea Array**	**11.43**	**278**	Pn	Pn	12 40 43.4	+3.9
	comp=E,0.1nm,0.3s,baz=85,slow=14,SNR=11						
KSRS				LR	LR	12 44 55.4	
	comp=E,501nm,19.1s,baz=93,slow=37						
KSAR	**Wonju Array Be**	**11.46**	**278**	Pn	**Pn**	**12 40 43.4**	**+3.4**
KSAR	**Wonju Array Be**	**11.46**	**278**	P	**Pn**	**12 40 43.4**	**+3.4**
TYV	**Tymovskoe**	**14.08**	**1**	*e*P	**Pn**	**12 41 14.1**	**-1.6**
TYV				*e*		12 43 46.4	
TYV				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CN2	**Changchun**	**14.57**	**304**	*e*P	**Pn**	**12 41 24.0**	**+1.5**
CN2				*es*P	P	12 41 32.0	+3.1
CN2				*e*S	**Sn**	**12 44 05.5**	**+2.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,400nm,14.0s						
CN2				LR	LR		
	comp=Z,400nm,14.0s						
CN2				LR	LR		
	comp=Z,600nm,15.0s						
PEA0B	**Petropavlovsk-**	**19.59**	**29**	*e*P	**Pn**	**12 42 26.4**	**+0.8**
	comp=Z,21nm,1.1s						
PETK	**Petropavlovsk-**	**19.59**	**29**	P	**Pn**	**12 42 25.3**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=204,slow=8.2,SNR=14						
PETK				LR	LR	12 50 37.5	
	comp=Z,77nm,18.8s,baz=203,slow=39						
PETK	**Petropavlovsk-**	**19.59**	**29**	*e*P	**Pn**	**12 42 25.9**	**+0.4**
PETK	**Petropavlovsk-**	**19.59**	**29**	*e*P	**Pn**	**12 42 26.0**	**+0.4**
NJ2	**Nanjing**	**19.82**	**263**	*e*P	**Pn**	**12 42 27.3**	**-1.2**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
ZEA	**Zeya**	**19.89**	**333**	*e*P	**Pn**	**12 42 27.7**	**-1.4**
ZEA				pmax	pmax		
	comp=Z,26nm,0.8s						
ZEA				MLR	MLR		
	comp=Z,500nm,16.0s						
ZEA				MLR	MLR		
	comp=E,200nm,15.0s						
ZEA				MLR	MLR		
	comp=N,400nm,16.0s						
BJI	**Beijing**	**20.64**	**287**	P	Pn	12 42 36.3	-1.7
BJI				pmax	pmax		
	comp=N,10.0nm,1.1s						
MA2	**Magadan**	**23.47**	**11**	P	**P**	**12 43 05.9**	**+0.4**
	comp=N,7.2nm,0.8s,baz=208,slow=8.3,SNR=7.8						
MA2				LR	LR	12 53 52.5	
	comp=N,65nm,18.1s,baz=204,slow=41						
MA2	**Magadan**	**23.47**	**11**	*e*P	**P**	**12 43 06.1**	**+0.5**
	comp=N,15nm,1.0s						
MA2	**Magadan**	**23.47**	**11**	*i* P	**P**	**12 43 05.5**	**0.0**
MA2				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC	**Hu-ho-hao-te**	**24.16**	**289**	*e*P	**P**	**12 43 12.9**	**+0.5**
HHC				PP	**PnPn**	**12 43 42.5**	**+0.7**
HHC				S	**S**	**12 47 26.8**	**-2.7**
HHC				sS	sS	12 47 37.6	-1.4
HHC				SS	**SnSn**	**12 48 17.3**	**+6.0**
HHC				pmax	pmax		
	comp=Z,31nm,1.1s						
HHC				pmax	pmax		
	comp=Z,100nm,3.6s						
HHC				LR	LR		
	comp=Z,310nm,7.2s						
HHC				LR	LR		
	comp=Z,340nm,7.9s						
HHC				LR	LR		
	comp=Z,310nm,10.1s						
YAK	**Yakutsk**	**26.46**	**347**	P	**P**	**12 43 33.2**	**+0.4**
	comp=Z,28nm,0.7s,baz=174,slow=2.0,SNR=13						
YAK				LR	LR	12 54 12.4	
	comp=Z,99nm,20.2s,baz=118,slow=37						
YAK	**Yakutsk**	**26.46**	**347**	*e*P	**P**	**12 43 33.2**	**+0.4**
	comp=Z,40nm,0.8s						
YAK	**Yakutsk**	**26.46**	**347**	*e*P	**P**	**12 43 32.3**	**-0.5**
YAK				*e*		12 44 11.1	
YAK				*e*S	**S**	**12 48 03.6**	**-1.9**
YAK				*e*		12 54 25.9	
YAK				pmax	pmax		
	comp=Z,38nm,0.9s						
YAK				pmax	pmax		
	comp=N,17nm,1.3s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,20nm,1.3s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.5s						
YAK				smax	smax		
	comp=E,37nm,3.5s						
YAK				MLR	MLR		
	comp=Z,422nm,14.0s						
YAK				MLR	MLR		
	comp=E,88nm,12.0s						
YAK				MLR	MLR		
	comp=N,355nm,14.0s						
SEY	**Seymchan**	**26.92**	**10**	*c e*P	**P**	**12 43 39.3**	**+2.3**
XAN	**Xi'an**	**27.19**	**274**	P	**P**	**12 43 39.6**	**-0.3**
XAN				pmax	pmax		
	comp=N,9.0nm,0.7s						
XAN				LR	LR		
	comp=N,220nm,15.8s						
XAN				LR	LR		
	comp=N,160nm,15.8s						
XAN				LR	LR		
	comp=N,180nm,13.7s						
H11N2	**WAKE ISLAND Hy**	**27.47**	**121**	T	T	13 12 44.6	
	baz=313,slow=75,SNR=44						
H11N1	**WAKE ISLAND Hy**	**27.48**	**122**	T	T	13 12 30.2	
	baz=313,slow=75,SNR=36						
H11N3	**WAKE ISLAND Hy**	**27.49**	**121**	T	T	13 12 38.9	
	baz=313,slow=75,SNR=38						
ULN	**Ulaanbaatar**	**28.02**	**304**	*e*P	**P**	**12 43 48.1**	**+0.7**
	comp=N,9.5nm,1.0s						
ULN	**Ulaanbaatar**	**28.02**	**304**	*c e*P	**P**	**12 43 48.2**	**+0.9**
ULN				pmax	pmax		
	comp=Z,13nm,1.2s						
BOD	**Bodaibo**	**28.08**	**327**	*e*P	**P**	**12 43 47.1**	**-0.4**
BOD				pmax	pmax		
	comp=Z,14nm,1.1s						
H11S1	**WAKE ISLAND Hy**	**28.19**	**124**	T	T	13 13 35.5	
	baz=316,slow=75,SNR=23						
H11S3	**WAKE ISLAND Hy**	**28.19**	**124**	T	T	13 14 07.0	
	baz=316,slow=75,SNR=26						
H11S2	**WAKE ISLAND Hy**	**28.20**	**124**	T	T	13 13 58.0	
	baz=316,slow=75,SNR=22						
SONA1	**Songino Array**	**28.45**	**304**	*e*P	**P**	**12 43 51.4**	**+0.3**
SONM	**Songino Array**	**28.45**	**304**	P	**P**	**12 43 51.6**	**+0.5**
	comp=Z,9.9nm,0.8s,baz=104,slow=9.2,SNR=46						
SONM				LR	LR	12 55 23.2	
	comp=Z,105nm,19.8s,baz=72,slow=37						
TGY	**Tagaytay City**	**29.52**	**226**	P	**P**	**12 44 00.8**	**+0.1**
	comp=Z,246nm,0.4s,baz=130,slow=3.1,SNR=4.1						
LZH	**Lanzhou**	**30.74**	**280**	‖P	**P**	**12 44 11.9**	**+0.4**
LZH				pP	sP	12 44 18.8	-0.9
LZH				sP	pP	12 44 20.9	+3.6
LZH				*e*S	**S**	**12 49 11.5**	**-2.2**
LZH				sS	sS	12 49 24.1	+0.8
LZH				SS	**SnSn**	**12 50 53.4**	**+1.2**
LZH				pmax	pmax		
	comp=Z,30nm,1.0s						
LZH				pmax	pmax		
	comp=Z,170nm,4.9s						
LZH				LR	LR		
	comp=Z,430nm,15.2s						
LZH				LR	LR		
	comp=Z,780nm,15.2s						
LZH				LR	LR		
	comp=Z,980nm,15.6s						
ZAK	**Zakamensk**	**30.93**	**308**	*e*P	**P**	**12 44 10.5**	**-2.4**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TLY	**Talaya**	**30.98**	**311**	P	**P**	**12 44 12.8**	**-0.5**
	comp=Z,2.3nm,0.6s,baz=114,slow=10,SNR=7.1						
TLY				LR	LR	12 57 23.6	
	comp=Z,239nm,18.1s,baz=101,slow=38						
TLY	**Talaya**	**30.98**	**311**	*e*P	**P**	**12 44 13.7**	**+0.4**
	comp=Z,6.3nm,1.0s						
TLY	**Talaya**	**30.98**	**311**	*e*P	**P**	**12 44 13.7**	**+0.4**
TLY				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TLY				MLR	MLR		
	comp=Z,253nm,17.0s						
GYA	**Guiyang**	**31.81**	**261**	‖*i*P	P	12 44 29.4	+8.4
GYA				PP	**PnPn**	**12 45 27.0**	**+1.5**
GYA				S	**S**	**12 49 30.5**	**-0.1**
GYA				SS	**SnSn**	**12 51 19.8**	**+1.4**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,110nm,5.0s						
GYA				LR	LR		
	comp=N,460nm,16.9s						
GYA				LR	LR		
	comp=E,480nm,17.0s						
GYA				LR	LR		
	comp=Z,470nm,17.2s						
CD2	**Chengdu**	**32.31**	**271**	P	**P**	**12 44 24.6**	**-0.7**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
DAV	**Davao City (W)**	**33.24**	**211**	LR	LR	12 57 45.1	
	comp=Z,38nm,21.1s,baz=72,slow=36						
GTA	**Gaotai**	**33.25**	**288**	*e*P	**P**	**12 44 34.4**	**+0.9**
GTA				pP	pP	12 44 38.8	-0.5
GTA				sP	sP	12 44 41.8	+0.1
GTA				S	**S**	**12 49 53.4**	**+0.7**
GTA				sS	sS	12 50 03.3	+1.0
GTA				SS	**SnSn**	**12 51 55.9**	**+2.9**
GTA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
GTA				pmax	pmax		
	comp=Z,43nm,5.3s						
GTA				LR	LR		
	comp=Z,160nm,15.8s						
GTA				LR	LR		
	comp=Z,110nm,14.1s						
GTA				LR	LR		
	comp=Z,130nm,17.3s						
BILL	**Bilibino**	**34.09**	**16**	‖*e*P	**P**	**12 44 41.1**	**+0.8**
BILL				*e*		12 45 57.0	
BILL				*e*S	**S**	**12 49 59.7**	**-5.2**

BILL pmax pmax
comp=Z,5.0nm,1.2s
BILL MLR MLR
comp=Z,86nm,17.0s
KMI Kunming 35.56 262 P P 12 44 59.0 +5.3
KMI pP sP 12 45 02.9 +1.0
KMI pmax pmax
comp=Z,5.0nm,1.2s
KMI pmax pmax
comp=Z,76nm,4.3s
KMI LR LR
comp=N,160nm,15.8s
KMI LR LR
comp=E,210nm,14.9s
KMI LR LR
comp=Z,200nm,16.1s
TIXI Tiksi 35.62 353 P **P 12 44 53.3 -0.1**
comp=Z,1.4nm,0.5s,baz=153,slow=4.8,SNR=4.1
TIXI Tiksi 35.62 353 *eP* **P 12 44 53.7 +0.3**
comp=Z,6.3nm,1.4s
TIXI Tiksi 35.62 353 *ceP* **P 12 44 53.9 +0.5**
TIXI pmax pmax
comp=Z,5.0nm,1.2s
SIJI Sorong 38.82 198 P **P 12 45 21.9 +0.8**
comp=Z,17nm,0.7s,baz=195,slow=20,SNR=2.4
DGZ Jazzator, Alta 41.06 306 *i* P **P 12 45 41.1 +1.4**
DGZ pmax pmax
comp=Z,10.0nm,0.9s
WMQ Urumqi 41.52 297 P **P 12 45 45.5 +2.0**
WMQ pP sP 12 45 49.9 -1.8
WMQ sP pP 12 45 54.1 +4.7
WMQ pmax pmax
comp=Z,21nm,1.1s
WMQ pmax pmax
comp=Z,100nm,3.8s
WMQ LR LR
comp=Z,130nm,19.3s
WMQ LR LR
comp=Z,170nm,27.3s
WMQ LR LR
comp=Z,220nm,19.3s
CMAR Chiang Mai Arr 42.05 256 P **P 12 45 48.4 +0.4**
comp=Z,0.4nm,0.3s,baz=46,slow=7.7,SNR=4.0
CMAR LR LR 13 06 11.4
comp=Z,71nm,18.0s,baz=140,slow=40
CM01 Chiang Mai Arr 42.06 256 *eP* **P 12 45 48.2 +0.1**
ZAA0 Zalesovo Array 42.55 313 *eP* **P 12 45 52.1 +0.4**
comp=Z,8.3nm,1.0s
ZALV Zalesovo Beam 42.55 313 P **P 12 45 52.3 +0.7**
comp=Z,6.7nm,0.9s,baz=90,slow=7.4,SNR=22
ZALV LR LR 13 04 12.3
comp=Z,142nm,19.2s,baz=66,slow=37
ZALV Zalesovo Beam 42.55 313 *eP* **P 12 45 52.0 +0.4**
ZALV Zalesovo Beam 42.55 313 *eP* **P 12 45 52.0 +0.4**
NVS Novosibirsk 43.48 314 *eP* **P 12 45 59.9 +0.8**
NRIK Noril'sk 43.76 335 P **P 12 46 02.2 +1.0**
comp=Z,1.5nm,0.3s,baz=157,slow=4.2,SNR=4.6
NRIK LR LR 13 05 12.3
comp=Z,137nm,19.0s,baz=75,slow=37
MK01 Makanchi Array 44.79 302 *eP* **P 12 46 09.5 -0.3**
MK31 Makanchi Array 44.79 302 *eP* **P 12 46 09.7 -0.1**
MK31 Makanchi Array 44.79 302 *eP* **P 12 46 09.7 -0.1**
MKAR Makanchi Array 44.79 302 P **P 12 46 10.1 +0.2**
comp=Z,3.5nm,0.7s,baz=88,slow=9.8,SNR=34
MKAR LR LR 13 05 10.2
comp=Z,68nm,21.3s,baz=46,slow=36
MKAR Makanchi Array 44.79 302 *eP* **P 12 46 10.0 +0.2**
comp=Z,25nm,0.8s
MAKZ Makanchi 45.00 303 *eP* **P 12 46 11.4 -0.1**
comp=Z,4.5nm,0.9s
MAKZ Makanchi 45.00 303 *eP* **P 12 46 11.4 -0.1**
MAKZ pmax pmax
comp=Z,5.0nm,0.9s
BRDH Bariadhala 45.61 267 LR LR 13 08 24.9
comp=Z,172nm,18.7s,baz=107,slow=40
KURK Kurchatov 46.59 308 *eP* **P 12 46 24.0 +0.1**
comp=Z,9.8nm,0.8s
KURK Kurchatov 46.59 308 *ceP* **P 12 46 24.2 +0.3**
KURK pmax pmax
comp=Z,15nm,1.0s
KURBB Kurchatov Arra 46.66 308 P **P 12 46 24.5 +0.1**
comp=Z,5.3nm,0.7s,baz=82,slow=8.0,SNR=52
KDAK Kodiak Island 46.86 42 *ceP* **P 12 46 30.4 +4.5**
CAST Castle Rocks 47.07 34 *eP* **P 12 46 29.9 +2.3**
comp=Z,5.3nm,1.4s
PDGK Podgornoye 47.46 298 P **P 12 46 31.3 +0.3**
PDGK pmax pmax
comp=Z,5.0nm,1.1s
BPAW Bear Paw Mtn. 47.58 33 *eP* **P 12 46 33.5 +2.0**
comp=Z,2.6nm,1.1s
MDM Murphy Dome 48.79 32 *eP* **P 12 46 43.0 +2.2**
comp=Z,5.7nm,0.9s
WRH Wood River Hil 48.85 33 *eP* **P 12 46 42.9 +1.7**
comp=Z,2.2nm,0.9s
TARG Taragay, Kyrgy 49.09 297 *eP* **P 12 46 45.2 +1.3**
comp=Z,4.4nm,0.7s
IL1 Eielson Array 49.36 32 *eP* **P 12 46 46.2 +1.0**
ILAR Eielson Array 49.36 32 P **P 12 46 46.1 +0.9**
comp=Z,2.6nm,0.8s,baz=267,slow=6.4,SNR=34
ILB Eielson Array 49.36 32 *eP* **P 12 46 46.1 +0.9**
SCRK Sand Creek 50.66 33 *eP* **P 12 46 56.9 +1.7**
comp=Z,8.0nm,1.3s
OTUK Ortayu 51.09 306 P **P 12 46 58.9 +0.4**
OTUK pmax pmax
comp=Z,9.0nm,1.0s
KSH Kashi 51.09 295 P P 12 47 03.9 +5.1
KSH pP sP 12 47 10.9 +3.7
KSH pmax pmax
comp=Z,260nm,4.5s
BVAR Borovoye Array 51.21 313 P **P 12 46 59.6 +0.2**
comp=Z,0.8nm,0.4s,baz=64,slow=6.6,SNR=9.8
BVAR LR LR 13 09 50.1
comp=Z,157nm,18.6s,baz=87,slow=37
BRVK Borovoye 51.27 313 *eP* **P 12 47 00.6 +0.8**
comp=Z,4.1nm,1.0s
BRVK Borovoye 51.27 313 *ceP* **P 12 47 00.5 +0.8**
BRVK pmax pmax
comp=Z,2.0nm,0.8s
EGAK Eagle 51.81 32 *eP* **P 12 47 05.0 +1.3**
comp=Z,7.2nm,1.5s
MNAS Manas 52.62 299 P **P 12 47 11.2 +1.1**
MNAS pmax pmax
comp=Z,6.0nm,0.8s
SFK Sufi-Kurgan 52.72 296 P **P 12 47 12.0 +0.9**
SFK pmax pmax
comp=Z,6.0nm,1.0s
KK31 Karatay Array 53.80 300 *eP* **P 12 47 20.2 +1.5**
KK31 Karatay Array 53.80 300 *eP* **P 12 47 20.2 +1.5**
KKAR Karatay Array 53.80 300 *eP* **P 12 47 20.1 +1.4**
KKAR Karatay Array 53.80 300 *eP* **P 12 47 20.1 +1.4**
INK Inuvik 54.32 27 P **P 12 47 22.4 +0.3**
comp=Z,1.8nm,0.7s,baz=287,slow=4.7,SNR=6.6
INK Inuvik 54.32 27 *eP* **P 12 47 23.5 +1.5**
comp=Z,3.3nm,0.9s
INK Inuvik 54.32 27 *eP* **P 12 47 23.5 +1.5**
INK pmax pmax
comp=Z,3.0nm,0.9s
SVE Sverdlovsk 55.76 319 ⇓ *eP* **P 12 47 33.5 +0.9**
SVE pmax pmax
comp=Z,14nm,1.1s
FITZ Fitzroy Crossi 56.78 199 P **P 12 47 40.2 -0.1**
comp=Z,1.8nm,0.7s,baz=27,slow=1.9,SNR=4.0
WRAB Tennant Creek 56.90 189 *ceP* P 12 47 51.0 +10
WRAB pmax pmax
comp=Z,20nm,2.5s
WRA Warramunga Arr 56.91 189 P **P 12 47 40.0 -1.2**
comp=Z,0.7nm,0.4s,baz=6.2,slow=7.2,SNR=23
WRA Warramunga Arr 56.91 189 P **P 12 47 40.0 -1.2**
ARU Arti 56.97 319 P **P 12 47 41.7 +0.4**
comp=Z,2.8nm,0.5s,baz=66,slow=4.3,SNR=9.0
ARU Arti 56.97 319 *eP* **P 12 47 41.8 +0.4**
comp=Z,18nm,1.4s
ARU Arti 56.97 319 *c i P* **P 12 47 41.5 +0.2**
ARU 12 48 36.4
ARU 12 49 44.2
ARU S **S 12 55 31.6 -2.7**
ARU pmax pmax
comp=Z,13nm,1.2s
ARU MLR MLR
comp=Z,184nm,18.0s
ABKAR Akbulak array 58.59 310 *eP* **P 12 47 52.8 +0.1**
AKTO Aktyubinsk 59.32 312 P **P 12 47 57.7 -0.1**
comp=Z,2.7nm,0.7s,baz=78,slow=9.9,SNR=8.8
AKTO LR LR 13 14 47.9
comp=Z,114nm,18.2s,baz=65,slow=37
ASAR Alice Springs 60.63 189 P **P 12 48 06.5 -0.6**
comp=Z,1.0nm,0.8s,baz=18,slow=12,SNR=17
SPITS Spitsbergen Ar 60.89 349 LR LR 13 17 29.9
comp=Z,59nm,19.0s,baz=180,slow=39
DZM Mont Dzumac 62.85 155 LR LR 13 12 36.7
comp=Z,63nm,21.2s,baz=38,slow=33
DZM Mont Dzumac 62.85 155 *e*LR LR 13 07 10.5
comp=Z,102nm,21.6s
YKA Yellowknife Ar 63.70 30 P **P 12 48 27.4 +0.2**
comp=Z,0.5nm,0.6s,baz=304,slow=6.7,SNR=4.7
GEYT Alibeck 64.52 299 LR LR 13 19 43.0
comp=Z,39nm,20.7s,baz=175,slow=39
FINES FINESS Array B 69.33 333 P **P 12 49 03.5 +0.3**
comp=Z,2.1nm,0.7s,baz=63,slow=8.8,SNR=8.1
FINES LR LR 13 21 41.1
comp=Z,78nm,18.4s,baz=25,slow=38
KVAR Kislovodsk Arr 71.55 311 P **P 12 49 17.2 0.0**
comp=Z,4.1nm,0.6s,baz=246,slow=2.5,SNR=6.4
KBZ Khabaz 71.55 311 P **P 12 49 17.8 +0.8**
comp=Z,3.7nm,0.8s,baz=82,slow=2.4,SNR=10
KBZ LR LR 13 25 26.8
comp=Z,69nm,18.5s,baz=70,slow=40
KIV Kislovodsk 71.55 311 *eP* **P 12 49 18.8 +1.6**
KIV pmax pmax
comp=Z,14nm,1.1s
GNI Garni 72.37 307 LR LR 13 23 56.2
comp=Z,61nm,18.0s,baz=76,slow=38
LRM Limekiln Ridge 73.88 45 *eP* **P 12 49 32.8 +1.6**
BOZ Bozeman (W) 74.47 44 *eP* **P 12 49 35.8 +1.2**
comp=Z,1.8nm,0.7s
BOZ Bozeman (W) 74.47 44 *eP* **P 12 49 35.8 +1.2**
BOZ pmax pmax
comp=Z,2.0nm,0.7s
HFS Hagfors 74.58 336 LR LR 13 25 19.7
comp=Z,169nm,18.7s,baz=24,slow=38
NVAR Mina Array Bea 74.62 53 P **P 12 49 37.1 +1.4**
comp=Z,0.9nm,0.8s,baz=284,slow=6.0,SNR=6.4
NB2 NORSAR Subarra 74.66 338 P **P 12 49 35.6 +0.4**
comp=Z,0.6nm,0.7s,baz=39,slow=6.2
NOA NORSAR Array B 74.66 338 LR LR 13 26 03.5
comp=Z,80nm,18.6s,baz=45,slow=39
AKASG Malin Array Be 74.89 323 P **P 12 49 36.7 +0.1**
comp=Z,3.0nm,0.7s,baz=47,slow=6.9,SNR=5.7
AKASG LR LR 13 26 09.0
comp=Z,57nm,18.6s,baz=40,slow=39
AKASG Malin Array Be 74.89 323 P **P 12 49 36.7 +0.1**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKASG MLR MLR
comp=Z,57nm,18.6s
AKBB Malin Array Si 74.89 323 *eP* **P 12 49 36.5 -0.1**
comp=Z,4.5nm,0.8s
KIEV Kiev 74.90 323 *eP* **P 12 49 36.4 -0.3**
comp=Z,4.1nm,0.8s
KIEV Kiev 74.90 323 *eP* **P 12 49 36.6 -0.1**
KIEV pmax pmax
comp=Z,5.0nm,0.9s
H17A Grant Village 75.80 45 *eP* **P 12 49 45.4 +3.0**
comp=Z,4.4nm,1.0s
SFJD Kangerlussuaq 76.08 5 LR LR 13 24 04.3
comp=Z,26nm,20.2s,baz=338,slow=36
PDAR Pinedale Array 77.38 46 P **P 12 49 52.2 +0.9**
comp=Z,0.7nm,0.6s,baz=281,slow=3.8,SNR=7.6
BORG Borgarnes 77.98 353 LR LR 13 27 17.5
comp=Z,16nm,18.3s,baz=145,slow=38
BUR08 Bucovina Ar. S 78.89 322 *eP* **P 12 50 00.7 +1.2**
BUR04 Bucovina Ar. S 78.90 322 *eP* **P 12 50 00.2 +0.7**
CTCC Cactus City 78.93 56 *eP* **P 12 50 01.8 +1.9**
SRU San Rafael Swe 79.09 49 *eP* **P 12 50 02.3 +1.5**
comp=Z,3.0nm,0.7s
SRU San Rafael Swe 79.09 49 *eP* **P 12 50 02.3 +1.5**
SRU pmax pmax
comp=Z,3.0nm,0.7s
BRTR Keskin Array B 79.50 312 P **P 12 50 02.5 -0.4**
comp=Z,2.1nm,1.0s,baz=102,slow=5.2,SNR=7.5
OJC Ojcow 79.60 327 P **P 12 50 05.0 +1.9**
OJC pmax pmax
comp=Z,10.0nm,1.2s
NIE Niedzica 79.96 326 P **P 12 50 06.9 +1.8**
NIE pmax pmax
comp=Z,6.0nm,1.4s
MLR Muntele Rosu 79.99 320 LR LR 13 28 40.2
comp=Z,26nm,18.3s,baz=42,slow=38
PV05 Paradox Valley 80.61 49 *eP* **P 12 50 11.4 +2.3**
comp=Z,5.5nm,0.8s
MORC Moravsky Berou 80.92 327 *eP* **P 12 50 11.3 +1.1**
comp=Z,20nm,1.1s
MORC Moravsky Berou 80.92 327 *eP* **P 12 50 11.3 +1.1**
MORC pmax pmax
comp=Z,20nm,1.1s
PSZ Piszkesteto 81.23 325 P **P 12 50 12.9 +0.9**
PSZ pmax pmax
comp=Z,5.0nm,1.1s
VYHS Vyhne 81.29 326 *eP* **P 12 50 13.3 +1.0**
VYHS Vyhne 81.29 326 *eP* **P 12 50 13.3 +1.0**
BRG Berggiesshubel 81.59 330 *eP* **P 12 50 14.3 +0.6**
comp=Z,3.7nm,0.9s
BRG Berggiesshubel 81.59 330 *eP* **P 12 50 14.3 +0.6**
BRG pmax pmax
comp=Z,4.0nm,1.0s
CLL Collm 81.63 331 *eP* **P 12 50 14.0 +0.1**
comp=Z,6.0nm,1.0s
CLL Collm 81.63 331 *eP* **P 12 50 14.0 +0.1**
CLL pmax pmax
comp=Z,6.0nm,1.0s
MMAI Mount Meron Ar 82.63 306 LR LR 13 30 58.1
comp=Z,65nm,18.2s,baz=50,slow=38
KHC Kasperske Hory 83.09 329 *eP* **P 12 50 22.6 +0.9**
KHC Kasperske Hory 83.09 329 *eP* **P 12 50 22.9 +1.2**
comp=Z,1.5nm,0.9s
KHC Kasperske Hory 83.09 329 *eP* **P 12 50 22.6 +0.9**
comp=Z,35nm,22.2s
GERES GERESS Array B 83.26 329 P **P 12 50 22.1 -0.6**
comp=Z,1.3nm,0.8s,baz=44,slow=6.5,SNR=7.0
GERES LR LR 13 33 06.0
comp=Z,33nm,18.2s,baz=292,slow=40
GEA0 GERESS Array S 83.27 329 *eP* **P 12 50 23.0 +0.3**
PMOR Pomariorio Ree 83.49 114 *eT* T 14 22 18.0
comp=Z,2.2nm,0.2s
PPT2 Papeete2 83.96 117 *e*LR LR 13 16 43.0
comp=Z,35nm,22.2s
ANMO Albuquerque 84.26 50 *eP* **P 12 50 29.7 +1.5**
comp=Z,2.2nm,1.1s
ANMO Albuquerque 84.26 50 *eP* **P 12 50 29.7 +1.5**
ANMO pmax pmax
comp=Z,2.0nm,1.1s
SCHQ Schefferville 85.40 16 LR LR 13 32 24.7
comp=Z,26nm,18.2s,baz=359,slow=38
TAOE Nuku Hiva Isla 85.49 104 *e*LR LR 13 17 34.6
comp=Z,71nm,24.8s
DAVOX Davos/Dischmat 86.47 329 LR LR 13 32 44.8
comp=Z,92nm,18.2s,baz=266,slow=38
TXAR Lajitas Array 89.77 53 P **P 12 50 56.0 +1.1**
comp=Z,0.8nm,0.8s,baz=304,slow=3.6,SNR=9.8
TXAR Lajitas Array 89.77 53 P **P 12 50 56.0 +1.1**
LPAZ La Paz 146.26 61 PKPbc **PKPbc 12 57 37.6 -0.2**
comp=Z,1.5nm,0.7s,baz=356,slow=8.7,SNR=6.5

IDC 24 12:45:52.6±7.2, 5°.16S×151°.64E, h101km±50km, mb3.5/3, mb1 3.6/4, mb1mx3.2/47, mbtmp3.8/4, Error ellipse: s-maj=96.4km s-min=47.5km az=128.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.12**	**226**	P	Pn	12 47 20.6	-0.1
PMG	0.8nm,0.3s,baz=329,slow=12,SNR=2.9			S	Sn	12 48 31.5	+2.1
	0.8nm,0.3s,baz=323,slow=19,SNR=3.7						
WRA	**Warramunga Arr**	**22.34**	**227**	P	P	12 50 41.2	-1.2
	1.6nm,0.6s,baz=52,slow=10,SNR=11						
ASAR	**Alice Springs**	**25.11**	**221**	P	P	12 51 08.0	-0.3
	1.1nm,0.7s,baz=56,slow=8.9,SNR=9.3						
FITZ	**Fitzroy Crossi**	**28.47**	**241**	P	P	12 51 38.6	+0.2
	2.0nm,0.7s,baz=69,slow=6.4,SNR=8.1						
TORD	**Torodi Ar. Bea**	**149.31**	**287**	PKPbc	PKPbc	13 05 30.9	+0.1
	0.8nm,0.4s,baz=105,slow=2.9,SNR=7.0						

*SOME **24** 13:19:16.5, 40°.72N×78°.38E, h0km*
*KRNET **24** 13:19:18.4±0.1, 40°.78N×78°.33E, mb2.6*
ISC 24 13:19:17.0±2.6, 40°.7N±0°.1×78°.32E±0°.06, h14km±14km, n16, σ1°.21/32, 11C-4D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.08**	**339**	⇓ *i P*	**Pn**	**13 19 38.3**	**+0.2**
	baz=37						
TARG				⇓ *i S*	**Sb**	**13 19 52.7**	**+0.8**
	baz=37						
NRN	**Naryn**	**1.89**	**293**	⇑ *i P*	**Pg**	**13 19 53.6**	**+0.3**
	baz=91						
NRN				⇑ *i S*	**Sg**	**13 20 19.6**	**+1.7**
	baz=91						
ULHL	**Ulahol**	**2.18**	**315**	⇑ *i P*	**Pg**	**13 19 58.0**	**-0.8**
	baz=14						
ULHL				⇑ *i S*	**Sg**	**13 20 26.5**	**-0.6**
	baz=14						
SATY	**Saty**	**2.34**	**2**	*eP*	**Pg**	**13 20 01.3**	**-0.6**
	3.3nm,0.2s						
SATY				⇓ *i S*	**Sg**	**13 20 33.3**	**+1.2**
	18nm,0.4s						
ZHN	**Zhinishke**	**2.45**	**2**	*eP*	**Pg**	**13 20 03.1**	**-0.8**
	1.3nm,0.1s						
ZHN				*eS*	**Sg**	**13 20 36.9**	**+1.2**
	5.9nm,0.3s						
UZB	**Uzynbulak**	**2.48**	**12**	*eP*	**Pg**	**13 20 03.2**	**-1.4**
	0.3nm,0.1s						
UZB				*eS*	**Sg**	**13 20 36.7**	**0.0**
	6.8nm,0.3s						
BOOM	**Boomskoye usch**	**2.51**	**316**	⇑ *i P*	**Pb**	**13 20 02.2**	**+0.2**
	baz=14						
BOOM				⇑ *i S*	**Sb**	**13 20 34.4**	**+1.6**
	baz=14						
TNSS	**Tian-Shan**	**2.53**	**337**	⇓ *i P*	**Pg**	**13 20 05.3**	**-0.2**
	3.4nm,0.6s						
TNSS				⇑ *i S*	**Sg**	**13 20 40.5**	**+2.1**
	7.7nm,0.5s						
SHLS	**Shalkode**	**2.58**	**19**	*eP*	**Pg**	**13 20 06.3**	**-0.2**
	1.6nm,0.3s						
SHLS				*eS*	**Sg**	**13 20 42.3**	**+2.4**
	21nm,0.5s						
MDOK	**Medeo**	**2.62**	**339**	*eP*	**Pg**	**13 20 06.2**	**-0.9**
	3.6nm,0.4s						
MDOK				*eS*	**Sg**	**13 20 42.1**	**+1.0**
	14nm,0.6s						
KOTS	**Kotyrbulak**	**2.67**	**341**	*eP*	**Pg**	**13 20 07.3**	**-0.8**
	1.4nm,0.4s						
KOTS				*eS*	**Sg**	**13 20 44.1**	**+1.4**
	7.6nm,0.6s						
KZA	**Kyzart**	**2.68**	**301**	⇑ *i P*	**Pb**	**13 20 04.9**	**0.0**
	baz=0.0						
KZA				⇑ *i S*	**Sb**	**13 20 38.7**	**+0.9**
	baz=0.0						
KPKS	**Kokpek**	**2.76**	**6**	*eP*	**Pg**	**13 20 08.7**	**-1.2**
	3.9nm,0.2s						
KPKS				*eS*	**Sg**	**13 20 46.1**	**+0.5**
	32nm,0.6s						
KST	**Kastek**	**2.91**	**324**	*eP*	**Pg**	**13 20 11.5**	**-1.3**
	3.5nm,0.2s						
KST				*eS*	**Sg**	**13 20 51.0**	**+0.5**
	3.8nm,0.5s						
TKM2	**Tokmak 2**	**3.00**	**318**	⇑ *i P*	**Pb**	**13 20 08.4**	**-1.8**
	baz=17						
TKM2				⇑ *i S*	**Sb**	**13 20 45.3**	**-1.5**
	baz=17						
DGS	**Degeres**	**3.15**	**324**	*eP*	**Pg**	**13 20 15.7**	**-1.7**
	1.6nm,0.6s						
DGS				*eS*	**Sg**	**13 20 58.0**	**-0.3**
	4.1nm,0.5s						

*NIED **24** 13:23:00, 30°.00N×131°.30E, h35km, Mw4.4 Best double couple: M0 3.98000×10^15 NP1:φ0±25.00000°, δ38.00000°, λ99.00000°. NP2:φ0±193.00000°, δ53.00000°, λ83.00000°.*
*JMA **24** 13:23:32.1±0.2, 30°.00N×131°.29E, h23km±2km, M4.0*
JMA Felt I J1.
*ISCJB **24** 13:23:33.9±0.7, 30°.06N±0°.03×131°.22E±0°.05, h48km±5km, mb3.9/23, MS3.4/15, Error ellipse: s-maj=8.6km s-min=4.5km az=30.0*
*IDC **24** 13:23:36.0±2.0, 30°.15N×131°.13E, h48km±17km, mb3.7/22, mb1 3.8/28, mb1mx3.7/70, mbtmp3.9/28, ML3.2/6, MS3.4/18, Ms1 3.4/18, ms1mx3.1/66, Error ellipse: s-maj=17.1km s-min=14.5km az=63.0*

ISC 24 13:23:35.0±1.3, 30°.07N±0°.05×131°.17E±0°.07, h41km±11km, n53, σ0°.87/54, mb3.8/23, MS3.4/15, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYAK	**Yakushimahirau**	**0.59**	**286**	P	**Pn**	**13 23 45.6**	**-1.4**
JYAK				*eS*	**Sn**	**13 23 55.2**	**-0.4**
JTN	**Tanegashima 3**	**0.60**	**344**	P	**Pn**	**13 23 45.7**	**-1.5**
JTN				S	**Sn**	**13 23 55.3**	**-0.5**
JKC	**Kuchinoerabu**	**0.93**	**295**	P	**Pn**	**13 23 51.5**	**0.0**
JKC				*eS*	**Sn**	**13 24 06.3**	**+2.6**
JTSR	**Tashiro 2**	**1.11**	**349**	P	**Pn**	**13 23 53.6**	**-0.5**
JTSR				*eS*	**Sn**	**13 24 09.4**	**+1.1**
JNN	**Nakanoshima**	**1.15**	**259**	P	**Pn**	**13 23 54.8**	**+0.2**
JNN				*eS*	**Sn**	**13 24 10.0**	**+0.9**
JNAR	**Kushima--Naru**	**1.45**	**3**	P	**Pn**	**13 23 58.5**	**-0.3**
JNAR				*eS*	**Sn**	**13 24 17.2**	**+0.6**
JSU	**Suzuyama**	**1.56**	**337**	P	**Pn**	**13 23 59.8**	**-0.4**
JSU				*eS*	**Sn**	**13 24 20.2**	**+1.0**
JTZ	**Takazaki**	**1.82**	**358**	P	**Pn**	**13 24 03.9**	**0.0**
JTZ				*eS*	**Sn**	**13 24 26.7**	**+0.9**
JTAJ	**Takarajima**	**1.94**	**242**	P	**Pn**	**13 24 06.4**	**+0.9**
JTAJ				*eS*	**Sn**	**13 24 30.0**	**+1.4**
JSJ	**Shimokoshiki**	**2.03**	**322**	P	**Pn**	**13 24 05.5**	**-1.2**
JSJ				*eS*	**Sn**	**13 24 30.8**	**-0.1**
JZO	**Okuchi**	**2.12**	**347**	P	**Pn**	**13 24 08.3**	**+0.3**
JAM	**Amami Oshima**	**2.15**	**220**	P	**Pn**	**13 24 08.2**	**-0.1**
JAM				*eS*	**Sn**	**13 24 33.5**	**-0.2**
JNU	**Nakatsue**	**3.05**	**355**	P	**Pn**	**13 24 20.8**	**+0.1**
	8.7nm,0.3s,baz=360,slow=22,SNR=16						
JNU				S	**Sn**	**13 24 55.5**	**-0.6**
	7.0nm,0.3s,baz=108,slow=7.1,SNR=3.6						
KSRS	**Korea Array**	**7.84**	**341**	P	**Pn**	**13 25 27.9**	**+1.4**
	0.4nm,0.3s,baz=159,slow=14,SNR=10						
JHJ	**Hachijo jima 2**	**7.95**	**65**	P	**Pn**	**13 25 28.0**	**0.0**
	2.7nm,0.3s,baz=260,slow=18,SNR=4.0						
JHJ				LR	LR	13 28 10.0	
	comp=Z,101nm,19.9s,baz=252,slow=34						
MJAR	**Matsushiro Arr**	**8.73**	**41**	P	**Pn**	**13 25 39.3**	**+0.5**
	0.4nm,0.3s,baz=235,slow=15,SNR=6.7						
USRK	**Ussuriysk Ar.**	**14.12**	**2**	P	**Pn**	**13 26 53.7**	**+1.5**
	0.2nm,0.3s,baz=193,slow=12,SNR=3.4						
USRK				LR	LR	13 32 08.5	
	comp=Z,127nm,19.3s,baz=173,slow=36						
ASAJ	**Asahikawa**	**16.70**	**30**	P	**P**	**13 27 27.3**	**-0.4**
	0.1nm,0.3s,baz=128,slow=19,SNR=4.5						
ASAJ				LR	LR	13 33 59.1	
	comp=Z,138nm,20.3s,baz=237,slow=37						
GUMO	**Guam**	**20.72**	**139**	LR	LR	13 34 54.8	
	comp=Z,31nm,20.2s,baz=265,slow=33						
SONM	**Songino Array**	**26.01**	**320**	P	**P**	**13 29 03.5**	**-0.7**
	1.4nm,0.6s,baz=136,slow=10,SNR=6.6						
SONM				LR	LR	13 40 12.6	
	comp=Z,79nm,21.4s,baz=72,slow=38						
PETK	**Petropavlovsk-**	**30.08**	**33**	LR	LR	13 41 36.1	
	comp=Z,47nm,21.1s,baz=238,slow=36						
CMAR	**Chiang Mai Arr**	**31.46**	**256**	P	**P**	**13 29 52.6**	**-0.3**
	0.7nm,0.6s,baz=46,slow=8.4,SNR=4.8						
CMAR				LR	LR	13 44 27.5	
	comp=Z,92nm,18.0s,baz=71,slow=40						
JAY	**Jayapura**	**33.66**	**163**	LR	LR	13 41 54.3	
	comp=Z,38nm,18.4s,baz=321,slow=32						
H11N2	**WAKE ISLAND Hy**	**33.88**	**99**	T	T	14 06 25.0	
	baz=296,slow=75,SNR=36						
H11N1	**WAKE ISLAND Hy**	**33.88**	**99**	T	T	14 06 17.3	
	baz=296,slow=75,SNR=18						
H11N3	**WAKE ISLAND Hy**	**33.90**	**99**	T	T	14 06 18.7	
	baz=296,slow=75,SNR=29						
ZALV	**Zalesovo Beam**	**40.90**	**319**	P	**P**	**13 31 12.4**	**-0.6**
	0.5nm,0.5s,baz=134,slow=6.2,SNR=2.8						
ZALV				LR	LR	13 48 14.9	
	comp=Z,28nm,21.9s,baz=68,slow=36						
MKAR	**Makanchi Array**	**41.07**	**308**	P	**P**	**13 31 14.4**	**-0.2**
	0.8nm,0.5s,baz=89,slow=11,SNR=15						
MKAR				PcP	**PcP**	**13 33 14.4**	**+0.7**
	0.5nm,0.7s,baz=111,slow=3.5,SNR=4.3						
KURBB	**Kurchatov Arra**	**43.99**	**313**	P	**P**	**13 31 37.1**	**-1.1**
	0.9nm,0.6s,baz=99,slow=8.9,SNR=8.1						
NRIK	**Noril'sk**	**46.46**	**340**	LR	LR	13 53 14.7	
	comp=Z,89nm,18.2s,baz=90,slow=38						
BVAR	**Borovoye Array**	**49.23**	**316**	P	**P**	**13 32 19.2**	**-0.1**
	3.3nm,0.6s,baz=96,slow=9.2,SNR=22						
WRA	**Warramunga Arr**	**49.82**	**176**	P	**P**	**13 32 24.5**	**+0.5**
	1.0nm,0.9s,baz=354,slow=8.4,SNR=3.5						
ASAR	**Alice Springs**	**53.50**	**177**	P	**P**	**13 32 52.4**	**+0.9**
	0.7nm,0.9s,baz=8.9,slow=14,SNR=6.0						
AKTO	**Aktyubinsk**	**57.05**	**313**	LR	LR	13 59 32.1	
	comp=Z,109nm,20.5s,baz=83,slow=38						
GEYT	**Alibeck**	**59.67**	**299**	LR	LR	14 03 00.7	

comp=Z,29nm,18.6s,baz=205,slow=40
ILAR Eielson Array 59.83 29 P **P 13 33 36.4 +0.4**
0.2nm,0.7s,baz=295,slow=6.5,SNR=3.5
INK Inuvik 64.34 24 P **P 13 34 04.7 -1.4**
0.6nm,0.5s,baz=306,slow=3.7,SNR=7.3
SPITS Spitsbergen Ar 65.61 348 P **P 13 34 13.3 -1.0**
3.1nm,0.6s,baz=51,slow=12,SNR=4.0
ARCES ARCESS Array B 67.39 338 P **P 13 34 25.8 0.0**
0.9nm,0.4s,baz=58,slow=7.2,SNR=16
ARCES LR LR 14 09 12.7
comp=Z,70nm,18.4s,baz=356,slow=41
KBZ Khabaz 68.75 309 P **P 13 34 35.1 +0.4**
2.8nm,0.8s,baz=3.3,slow=5.5,SNR=6.7
FINES FINESS Array B 70.80 331 P **P 13 34 45.7 -1.3**
2.2nm,0.4s,baz=70,slow=6.1,SNR=44
YKA Yellowknife Ar 73.95 26 P **P 13 35 05.5 -0.2**
0.3nm,0.7s,baz=291,slow=5.9,SNR=2.9
AKASG Malin Array Be 74.29 320 P **P 13 35 07.7 -0.2**
0.2nm,0.3s,baz=57,slow=6.5,SNR=3.2
AKASG LR LR 14 10 01.2
comp=Z,30nm,18.0s,baz=80,slow=38
HFS Hagfors 76.62 333 P **P 13 35 21.1 0.0**
1.2nm,0.4s,baz=77,slow=7.6,SNR=15
BRTR Keskin Array B 76.72 308 P **P 13 35 22.6 +0.3**
1.4nm,0.6s,baz=96,slow=4.0,SNR=6.3
BRTR LR LR 14 14 10.5
comp=Z,20nm,19.8s,baz=90,slow=40
NB2 NORSAR Subarra 77.00 334 P **P 13 35 23.3 0.0**
comp=Z,0.6nm,0.5s,baz=49,slow=5.6
NOA NORSAR Array B 77.00 334 LR LR 14 14 27.3
comp=Z,29nm,18.9s,baz=45,slow=40
MLR Muntele Rosu 78.80 316 LR LR 14 12 14.0
comp=Z,8.4nm,18.4s,baz=36,slow=37
GERES GERESS Array B 83.67 324 P **P 13 35 58.7 -0.9**
comp=Z,0.4nm,0.7s,baz=7,0,slow=8.9,SNR=2.3
NVAR Mina Array Bea 85.99 48 P **P 13 36 12.4 +0.9**
comp=Z,0.4nm,0.6s,baz=272,slow=5.4,SNR=3.6
EKA Eskdalemuir Ar 86.38 336 P **P 13 36 13.9 +1.1**
comp=Z,0.5nm,0.4s,baz=46,slow=6.1,SNR=7.2
PDAR Pinedale Array 88.56 40 P **P 13 36 24.8 +0.9**
comp=Z,0.3nm,0.6s,baz=300,slow=1.2,SNR=3.7
SCHQ Schefferville 94.03 10 LR LR 14 24 27.2
comp=Z,14nm,18.0s,baz=352,slow=39

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*ISCJB **24** 13:29:17.0±0.8, 4°.96S±0°.10×144°.7E±0°.1, h82km, mb3.7/5, Error ellipse: s-maj=19.7km s-min=7.4km az=140.8*
*IDC **24** 13:29:19.2±2.0, 4°.97S×144°.66E, h88km±18km, mb3.5/5, mb1 3.8/8, mb1mx3.4/43, mbtmp4.0/8, MS2.7/3, Ms1 2.7/3, ms1mx2.5/35, Error ellipse: s-maj=30.7km s-min=11.4km az=50.0*
ISC 24 13:29:18.4±0.9, 4°.9S±0°.1×144°.7E±0°.1, h82km, n10, σ1°20/11, mb3.8/5, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**4.66**	**301**	P	**Pn**	**13 30 26.5**	**0.0**
	2.9nm,0.3s,baz=108,slow=4.1,SNR=23						
JAY				S	**Sn**	**13 31 21.1**	**+1.7**
	2.2nm,0.3s,baz=326,slow=17,SNR=4.4						
JAY				LR	LR	13 32 34.8	
	comp=Z,69nm,18.9s,baz=48,slow=42						
PMG	**Port Moresby**	**5.07**	**152**	P	**Pn**	**13 30 31.3**	**-0.6**
	2.2nm,0.3s,baz=346,slow=4.8,SNR=8.5						
PMG				S	**Sn**	**13 31 31.4**	**+2.2**
	5.2nm,0.3s,baz=134,slow=23,SNR=11						
PMG				LR	LR	13 33 10.3	
	comp=Z,79nm,19.4s,baz=314,slow=46						
WRA	**Warramunga Arr**	**18.03**	**213**	P	**P**	**13 33 22.1**	**-1.0**
	0.7nm,0.3s,baz=36,slow=12,SNR=37						
ASAR	**Alice Springs**	**21.35**	**208**	P	**P**	**13 33 58.4**	**-0.8**
	3.1nm,0.7s,baz=32,slow=12,SNR=39						
KSRS	**Korea Array**	**44.97**	**341**	LR	LR	13 54 53.4	
	comp=Z,13nm,18.6s,baz=200,slow=34						
CMAR	**Chiang Mai Arr**	**50.74**	**299**	P	**P**	**13 38 09.4**	**-1.1**
	0.6nm,0.5s,baz=130,slow=6.0,SNR=4.5						
MKAR	**Makanchi Array**	**75.23**	**321**	P	**P**	**13 40 52.3**	**-0.1**
	0.3nm,0.4s,baz=97,slow=8.0,SNR=7.0						
BVAR	**Borovoye Array**	**84.57**	**324**	P	**P**	**13 41 43.1**	**+0.5**
	1.0nm,0.7s,baz=126,slow=6.8,SNR=4.7						
ILAR	**Eielson Array**	**85.40**	**24**	P	**P**	**13 41 46.3**	**-0.2**
	0.4nm,0.7s,baz=255,slow=5.2,SNR=6.2						
KOWA	**Kowa**	**147.79**	**289**	PKPbc	**PKPbc**	**13 48 55.6**	**+0.6**
	1.2nm,0.5s,baz=73,slow=4.2,SNR=4.5						

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*ISCJB **24** 13:33:34.0±1.2, 10°.9S±0°.1×164°.9E±0°.1, h46km, mb3.4/4, MS2.9/1, Error ellipse: s-maj=19.1km s-min=9.1km az=138.6*
*IDC **24** 13:33:38.8±3.6, 10°.71S×164°.84E, h77km±30km, mb3.2/4, mb1 3.6/6, mb1mx3.3/47, mbtmp3.8/6, MS3.0/3, Ms1 3.0/3, ms1mx2.6/20, Error ellipse: s-maj=33.6km s-min=22.3km az=41.0*
ISC 24 13:33:35.8±1.3, 10°.7S±0°.1×165°.0E±0°.1, h46km, n8, σ1°91/8, mb3.3/4, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.14**	**284**	P	**Pn**	**13 34 51.4**	**+1.2**
	15nm,0.3s,baz=191,slow=12,SNR=3.7						
HNR				S	**Sn**	**13 35 48.3**	**0.0**
	15nm,0.3s,baz=198,slow=20,SNR=3.5						
HNR				LR	LR	13 36 54.2	
	comp=Z,153nm,20.8s,baz=11,slow=39						
DZM	**Mont Dzumac**	**11.37**	**173**	P	**Pn**	**13 36 18.3**	**+2.6**
	0.4nm,0.3s,baz=309,slow=14,SNR=33						
DZM				S	**Sn**	**13 38 19.5**	**-2.0**
	0.2nm,0.3s,baz=343,slow=20,SNR=3.1						
PMG	**Port Moresby**	**17.62**	**273**	LR	LR	13 43 15.7	
	comp=Z,51nm,19.3s,baz=88,slow=33						
WRA	**Warramunga Arr**	**30.91**	**249**	P	**P**	**13 39 47.6**	**-0.8**
	0.6nm,0.9s,baz=78,slow=7.8,SNR=3.2						
GUMO	**Guam**	**31.34**	**320**	LR	LR	13 50 43.7	
	comp=Z,27nm,21.5s,baz=146,slow=33						
ASAR	**Alice Springs**	**32.29**	**242**	P	**P**	**13 39 58.3**	**-2.3**
	0.3nm,0.7s,baz=63,slow=10,SNR=3.7						
QSPA	**South Pole Qui**	**79.28**	**180**	P	**P**	**13 45 36.3**	**0.0**
	1.3nm,0.8s,baz=346,slow=6.6,SNR=3.5						
ILAR	**Eielson Array**	**83.44**	**19**	P	**P**	**13 45 57.4**	**-0.7**
	0.1nm,0.5s,baz=236,slow=4.2,SNR=4.1						

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*IDC **24** 13:45:37.5±1.0, 17°.19S×173°.43W, h0km, mb4.1/7, mb1 4.3/8, mb1mx3.9/46, mbtmp4.2/8, ML4.2/1, MS3.4/6, Ms1 3.4/6, ms1mx2.9/41, Error ellipse: s-maj=45.3km s-min=19.7km az=127.0*
*NEIC **24** 13:45:38.3±0.5, 17°.32S×173°.28W, h10km, mb4.5/1, Error ellipse: s-maj=18.2km s-min=14.2km az=173.0*
*ISCJB **24** 13:45:39.6±0.7, 17°.24S±0°.09×173°.2W±0°.1, h39km, mb4.2/8, MS3.4/6, Error ellipse: s-maj=16.3km s-min=11.6km az=33.7*
ISC 24 13:45:41.8±0.6, 17°.18S±0°.09×173°.1W±0°.1, h39km, n36, σ2°22/30, mb4.3/8, MS3.4/6, 1C, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.49**	**21**	**Pn**	**Pn**	**13 46 33.1**	**-0.6**
	21nm,0.3s,baz=169,slow=2.3,SNR=18						
AFI				Sn	**Sn**	**13 47 09.6**	**-4.3**
	56nm,0.3s,baz=21,slow=22,SNR=11						
AFI	**Afiamalu**	**3.49**	**21**	*e*Pn	**Pn**	**13 46 32.3**	**-1.4**
AFI				Sn	**Sn**	**13 47 09.6**	**-4.3**
RAR	**Rarotonga**	**13.20**	**110**	*e*P	**Pn**	**13 48 46.7**	**-0.1**
DZM	**Mont Dzumac**	**19.88**	**253**	*e*LR	LR	13 54 59.0	
	246nm,25.8s						
PAE	**Paea**	**22.44**	**95**	*e*T	T	14 13 41.7	
	2.4nm,0.3s						
PPT2	**Papeete2**	**22.44**	**95**	*e*LR	LR	13 55 51.1	
	153nm,27.5s						
PPT2	**Papeete2**	**22.44**	**95**	*e*T	T	14 13 44.0	
	2.1nm,0.3s						
URZ	**Urewera**	**22.69**	**200**	P	**P**	**13 50 39.7**	**-0.4**
	11nm,0.3s,baz=311,slow=1.9,SNR=26						
URZ				S	**S**	**13 54 38.5**	**-7.2**
	6.4nm,0.8s,baz=108,slow=20,SNR=5.2						
HNR	**Honiara**	**27.32**	**283**	LR	LR	14 00 39.1	
	comp=Z,56nm,18.7s,baz=120,slow=33						
TAOE	**Nuku Hiva Isla**	**33.10**	**80**	*e*LR	LR	14 00 56.2	
	75nm,27.0s						
STKA	**Stephens Creek**	**43.43**	**242**	LR	LR	14 10 21.6	
	comp=Z,61nm,18.3s,baz=205,slow=34						
WRAB	**Tennant Creek**	**49.74**	**258**	*e*P	**P**	**13 54 28.4**	**-2.4**
	4.8nm,1.0s						
WRA	**Warramunga Arr**	**49.75**	**258**	P	**P**	**13 54 28.5**	**-2.3**
	1.0nm,0.5s,baz=97,slow=7.2,SNR=19						

ASAR	**Alice Springs**	**49.87**	**253**	P	**P**	**13 54 29.9**	**-1.8**
	3.4nm,0.6s,baz=88,slow=8.6,SNR=62						
ASAR				PcP	**PcP**	**13 55 52.2**	**+0.4**
	1.3nm,0.8s,baz=88,slow=4.7,SNR=4.7						
GUMO	**Guam**	**51.55**	**304**	LR	LR	14 15 28.7	
	comp=Z,14nm,18.1s,baz=128,slow=35						
PETK	**Petropavlovsk-**	**74.41**	**342**	P	**P**	**13 57 17.2**	**+1.6**
	3.2nm,0.7s,baz=123,slow=9.1,SNR=8.4						
YBH	**Yreka Blue Hor**	**74.84**	**37**	LR	LR	14 21 58.8	
	comp=Z,34nm,21.1s,baz=262,slow=29						
KSRS	**Korea Array**	**77.63**	**316**	LR	LR	14 28 03.2	
	comp=Z,14nm,18.7s,baz=189,slow=33						
PDAR	**Pinedale Array**	**83.39**	**42**	P	**P**	**13 58 07.9**	**+2.6**
	0.2nm,0.6s,baz=253,slow=2.7,SNR=3.0						
PDAR				LR	LR	14 29 39.0	
	comp=Z,27nm,20.0s,baz=18,slow=32						
ILAR	**Eielson Array**	**84.13**	**11**	P	**P**	**13 58 09.8**	**+1.5**
	0.4nm,0.7s,baz=241,slow=7.5,SNR=6.0						
CMAR	**Chiang Mai Arr**	**93.45**	**288**	P	**P**	**13 58 55.5**	**+1.7**
	0.9nm,0.8s,baz=103,slow=2.7,SNR=6.2						
MKAR	**Makanchi Array**	**112.28**	**314**	PKiKP	**PKiKP**	**14 04 12.9**	**-0.6**
	0.4nm,0.7s,baz=64,slow=3.4,SNR=4.2						
BVAR	**Borovoye Array**	**119.46**	**322**	PKP	**PKPdf**	**14 04 28.4**	**+1.3**
	3.1nm,1.2s,baz=158,slow=1.6,SNR=6.6						
CLL	**Collm**	**145.61**	**353**	⇑*i*PKPbc	**PKPab**	**14 05 17.4**	**+1.0**
	comp=Z,8.0nm,1.1s						
MORC	**Moravsky Berou**	**146.37**	**348**	*e*PKP	**PKPab**	**14 05 19.8**	**+0.4**
VRAC	**Vranov**	**147.00**	**348**	*e*PKP	**PKPab**	**14 05 21.9**	**+0.1**
JAVC	**Velka Javorina**	**147.21**	**347**	*e*PKP	**PKPab**	**14 05 23.4**	**+0.7**
KRUC	**Moravsky**	**147.28**	**348**	*e*PKP	**PKPbc**	**14 05 22.4**	**+1.3**
MLR	**Muntele Rosu**	**147.60**	**335**	PKPbc	**PKPbc**	**14 05 23.3**	**+1.0**
	comp=Z,1.2nm,0.9s,baz=297,slow=2.3,SNR=4.6						
BRTR	**Keskin Array B**	**147.71**	**320**	PKPbc	**PKPbc**	**14 05 24.3**	**+1.5**
	comp=Z,3.7nm,0.8s,baz=122,slow=2.4,SNR=17						
GERES	**GERESS Array B**	**147.94**	**352**	PKPbc	**PKPbc**	**14 05 24.6**	**+1.5**
	comp=Z,0.8nm,0.7s,baz=28,slow=3.2,SNR=7.3						
CONA	**Conrad Observa**	**148.47**	**348**	*i* PKiKP	**PKPab**	**14 05 26.9**	**-0.9**
	comp=Z,3.5nm,0.9s						
KBA	**Koelnbreinsper**	**149.72**	**351**	*i* PKiKP	**PKiKP**	**14 05 29.5**	**+0.8**
	comp=Z,1.4nm,0.4s						
MOTA	**Moosalm**	**149.72**	**354**	*i* PKPbc	**PKPbc**	**14 05 28.5**	**+0.8**
	comp=Z,0.5nm,0.5s						
SOKA	**Soboth**	**149.83**	**349**	*e*PKPbc	**PKPbc**	**14 05 28.5**	**+0.6**
	comp=Z,4.1nm,1.1s						
ABTA	**Abfaltersbach**	**150.15**	**352**	*e*PKPbc	**PKPbc**	**14 05 28.7**	**0.0**
	comp=Z,1.3nm,0.6s						

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*ISCJB **24** 14:10:10.9±0.8, 43°.28N±0°.05×145°.34E±0°.05, h75km±7km, Error ellipse: s-maj=10.1km s-min=4.4km az=150.2*
*SKHL **24** 14:10:10.7±0.2, 43°.07N×145°.40E, h56km±6km, mb4.1/4*
*JMA **24** 14:10:11.2±0.1, 43°.31N×145°.32E, h75km±1km, M2.7*
ISC 24 14:10:11.7±1.6, 43°.29N±0°.06×145°.33E±0°.04, h70km±10km, n15, σ0°60/29, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.31**	**75**	P	**Pn**	**14 10 23.1**	**+0.1**
NEM2				*e*S	**Sn**	**14 10 31.7**	**+0.5**
GLVR	**Golovnino**	**0.47**	**17**	*i* P	**Pn**	**14 10 24.0**	**-0.3**
GLVR				AMB	AMB	14 10 25.0	
	66nm,0.3s						
GLVR				AMB	AMB	14 10 25.0	
	61nm,0.3s						
GLVR				AMB	AMB	14 10 25.0	
	302nm,0.3s						
GLVR				*i* S	**Sn**	**14 10 34.0**	**+0.5**
GLVR				A	A	14 10 34.0	
	281nm,0.3s						
GLVR				A	A	14 10 34.0	
	1μm,0.3s						
JNK	**Nakash**	**0.54**	**304**	P	**Pn**	**14 10 24.2**	**-0.7**
JNK				*e*S	**Sn**	**14 10 34.0**	**-0.6**
JAK	**Akkeshi**	**0.55**	**238**	P	**Pn**	**14 10 25.0**	**0.0**
JAK				*e*S	**Sn**	**14 10 35.4**	**+0.7**
JRA	**Rausu**	**0.67**	**347**	P	**Pn**	**14 10 26.1**	**-0.2**
JRA				*e*S	**Sn**	**14 10 37.1**	**+0.1**
GRPR	**Tuman**	**0.78**	**24**	*i* P	**Pn**	**14 10 27.0**	**-0.5**
GRPR				AMB	AMB	14 10 29.0	
	88nm,0.3s						
GRPR				*i* S	**Sn**	**14 10 39.0**	**-0.2**
GRPR				A	A	14 10 39.0	
	938nm,0.4s						
GRPR				A	A	14 10 39.0	
	646nm,0.4s						
LAGR	**Lagunnoye**	**0.84**	**23**	*i* P	**Pn**	**14 10 28.0**	**-0.2**
LAGR				*i* S	**Sn**	**14 10 41.0**	**+0.6**
LAGR				A	A	14 10 43.0	
	493nm,0.2s						
LAGR				A	A	14 10 43.0	
	703nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**0.84**	**27**	*i* P	**Pn**	**14 10 28.0**	**-0.3**
YUK				AMB	AMB	14 10 29.0	
	14nm,0.4s						
YUK				AMB	AMB	14 10 29.0	
	22nm,0.4s						
YUK				AMB	AMB	14 10 29.0	
	128nm,0.4s						
YUK				*i* S	**Sn**	**14 10 41.0**	**+0.5**
YUK				A	A	14 10 42.0	
	320nm,0.4s						
YUK				A	A	14 10 42.0	
	1μm,0.4s						
JAR	**Ashorobuto**	**1.14**	**271**	P	**Pn**	**14 10 31.9**	**-0.1**
JAR				*e*S	**Sn**	**14 10 47.5**	**+0.4**
JOB	**Onbets**	**1.16**	**251**	P	**Pn**	**14 10 32.3**	**+0.1**
JOB				*e*S	**Sn**	**14 10 47.8**	**+0.3**
SHO	**Shikotan**	**1.24**	**61**	*i* P	**Pn**	**14 10 32.0**	**-1.2**
SHO				AMB	AMB	14 10 34.0	
	10.0nm,0.2s						
SHO				AMB	AMB	14 10 34.0	
	12nm,0.2s						
SHO				AMB	AMB	14 10 34.0	
	20nm,0.2s						
SHO				*i* S	**Sn**	**14 10 48.0**	**-1.3**
SHO				A	A	14 10 50.0	
	145nm,0.2s						
SHO				A	A	14 10 50.0	
	197nm,0.2s						
JTKR	**Abashiri--Toko**	**1.24**	**304**	P	**Pn**	**14 10 33.0**	**-0.2**
JTKR				*e*S	**Sn**	**14 10 49.4**	**+0.1**
JCH	**Churui**	**1.59**	**246**	P	**Pn**	**14 10 37.7**	**-0.2**
JCH				*e*S	**Sn**	**14 10 57.0**	**-0.7**
JMP	**Maruseppu**	**1.60**	**297**	P	**Pn**	**14 10 37.9**	**-0.1**
KUR	**Kuril'sk**	**2.67**	**42**	*i* P	**Pn**	**14 10 53.1**	**+0.8**
KUR				*e*S	**Sn**	**14 11 24.8**	**+1.3**
KUR				A	A	14 11 29.4	
	21nm,0.2s						
KUR				A	A	14 11 29.4	
	70nm,0.2s						

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*NIED **24** 14:10:00, 38°.00N×141°.90E, h56km, Mw3.6 Best double couple: M0=2.56000×10^14 NP1:φ=321.00000°, δ=22.00000°, λ=21.00000°. NP2:φ=212.00000°, δ=82.00000°, λ=111.00000°.*
*IDC **24** 14:10:26.3±2.2, 38°.15N×142°.45E, h0km, mb3.5/4, mb1 3.6/6, mb1mx3.4/69, mbtmp3.5/6, ML3.1/2, MS2.4/1, Ms1 2.4/1, ms1mx1.9/53, Error ellipse: s-maj=56.7km s-min=25.6km az=70.0*
*JMA **24** 14:10:34.8±0.1, 38°.05N×141°.89E, h50km±1km, M3.5*
ISC 24 14:10:31.9±2.0, 37°.97N±0°.05×142°.13E±0°.09, h29km±13km, n27, σ1°38/32, mb3.6/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIO	**Ouri**	**0.78**	**308**	P	**Pb**	**14 10 47.2**	**+0.2**
JIO				*e*S	**Sb**	**14 10 55.9**	**-1.3**
JMM	**Marumori**	**1.06**	**265**	P	**Pn**	**14 10 50.9**	**+0.1**
JMM				*e*S	**Sn**	**14 11 02.8**	**-1.8**
JFK	**Kawauchi**	**1.16**	**239**	P	**Pn**	**14 10 53.1**	**+0.8**
JFK				*e*S	**Sn**	**14 11 06.3**	**-0.9**
JMK	**Ichinoseki**	**1.21**	**324**	P	**Pn**	**14 10 53.4**	**+0.5**
JMK				*e*S	**Sn**	**14 11 07.0**	**-1.3**
JOU	**Okura**	**1.22**	**289**	P	**Pn**	**14 10 53.2**	**+0.2**
JOU				*e*S	**Sn**	**14 11 06.8**	**-1.8**
JFT	**Otama**	**1.49**	**253**	P	**Pn**	**14 10 57.9**	**+1.1**
JFT				*e*S	**Sn**	**14 11 15.4**	**+0.2**
JOM	**Ohasama**	**1.64**	**337**	P	**Pn**	**14 10 59.9**	**+1.2**
JYS	**Shiratake**	**1.65**	**279**	P	**Pn**	**14 10 59.3**	**+0.4**
JYK	**Kaneyama**	**1.68**	**305**	P	**Pn**	**14 10 59.7**	**+0.4**
JYK				*e*S	**Sn**	**14 11 18.3**	**-1.6**
JRG	**Rokugo**	**1.84**	**321**	P	**Pn**	**14 11 02.6**	**+1.0**
JRG				*e*S	**Sn**	**14 11 24.2**	**+0.3**
JYA	**Atsumi**	**2.00**	**289**	P	**Pn**	**14 11 04.0**	**+0.3**
JYA				*e*S	**Sn**	**14 11 26.8**	**-1.0**
JFY	**Yanaizu**	**2.00**	**254**	P	**Pn**	**14 11 05.1**	**+1.3**
JFY				*e*S	**Sn**	**14 11 27.1**	**-0.8**
MJAR	**Matsushiro Arr**	**3.44**	**247**	Pn	**Pn**	**14 11 25.8**	**+2.3**
	1.1nm,0.3s,baz=66,slow=10,SNR=16						
MAT	**Matsushiro**	**3.44**	**247**	P	**Pn**	**14 11 26.0**	**+2.5**
MAT				*e*S	**Sn**	**14 12 05.8**	**+2.5**
JHJ	**Hachijo jima 2**	**5.21**	**202**	Pn	**Pn**	**14 11 47.6**	**-0.2**
	2.8nm,0.3s,baz=50,slow=17,SNR=3.2						
JHJ				Sn	**Sn**	**14 12 44.3**	**-2.6**
	2.9nm,0.3s,baz=90,slow=20,SNR=2.5						
USRK	**Ussuriysk Ar.**	**9.86**	**312**	Pn	**Pn**	**14 12 54.2**	**+2.6**
	0.2nm,0.3s,baz=130,slow=12,SNR=4.3						
KSRS	**Korea Array**	**11.27**	**272**	LR	LR	14 17 30.9	
	comp=Z,18nm,18.1s,baz=225,slow=37						
H11N2	**WAKE ISLAND Hy 28.16 123**			T	T	14 47 13.0	
	baz=317,slow=75,SNR=16						
H11N1	**WAKE ISLAND Hy 28.17 123**			T	T	14 46 52.9	
	baz=317,slow=75,SNR=4.9						
H11N3	**WAKE ISLAND Hy 28.18 123**			T	T	14 47 03.9	
	baz=317,slow=75,SNR=5.1						
H11S1	**WAKE ISLAND Hy 28.91 125**			T	T	14 48 08.1	
	baz=324,slow=76,SNR=2.3						
H11S3	**WAKE ISLAND Hy 28.92 125**			T	T	14 48 08.4	
	baz=324,slow=76,SNR=2.2						
H11S2	**WAKE ISLAND Hy 28.93 125**			T	T	14 48 09.0	
	baz=324,slow=76,SNR=2.0						
MKAR	**Makanchi Array**	**44.11**	**301**	P	**P**	**14 18 37.2**	**-0.3**
	0.3nm,0.5s,baz=87,slow=8.6,SNR=3.7						
KURBB	**Kurchatov Arra**	**45.88**	**307**	P	**P**	**14 18 50.5**	**-1.0**
	0.8nm,0.7s,baz=82,slow=7.7,SNR=6.8						
WRA	**Warramunga Arr**	**58.07**	**189**	P	**P**	**14 20 22.6**	**+0.1**
	0.8nm,0.8s,baz=8.4,slow=7.7,SNR=4.7						
ASAR	**Alice Springs**	**61.80**	**189**	P	**P**	**14 20 48.8**	**+0.8**
	0.3nm,0.8s,baz=9.4,slow=6.3,SNR=5.3						

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*ISCJB **24** 14:34:48.4±1.1, 54°.3S±0°.2×131°.9W±0°.3, h10km, mb4.1/6, MS3.5/4, Error ellipse: s-maj=30.9km s-min=25.5km az=157.1*
*IDC **24** 14:34:48.4±1.1, 54°.24S×131°.93W, h0km, mb4.0/5, mb1 4.2/5, mb1mx3.9/37, mbtmp4.0/5, MS3.4/4, Ms1 3.4/4, ms1mx3.0/33, Error ellipse: s-maj=43.0km s-min=29.3km az=154.0*
*NEIC **24** 14:34:50.0±0.8, 54°.24S×131°.92W, h10km, mb4.7/1, Error ellipse: s-maj=24.1km s-min=21.3km az=133.0*
ISC 24 14:34:50.0±1.1, 54°.2S±0°.2×131°.9W±0°.2, h10km, n15, σ0°96/9, mb4.1/6, MS3.5/4, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**32.69**	**202**	P	**P**	**14 41 23.2**	**+1.3**
	1.0nm,0.8s,baz=58,slow=7.6,SNR=4.8						
VNDA				LR	LR	14 51 43.1	
	comp=Z,42nm,21.3s,baz=86,slow=31						
QSPA	**South Pole Qui**	**35.94**	**180**	*e*P	**P**	**14 41 50.3**	**0.0**
PPT	**Papeete**	**39.06**	**333**	LR	LR	14 52 56.5	
	comp=Z,34nm,19.4s,baz=164,slow=28						
MAW	**Mawson**	**57.98**	**187**	P	**P**	**14 44 40.6**	**-1.4**
	1.0nm,0.6s,baz=195,slow=12,SNR=3.9						
LPAZ	**La Paz**	**61.66**	**78**	P	**P**	**14 45 08.9**	**+0.2**
	1.1nm,0.6s,baz=218,slow=5.2,SNR=4.6						
ASAR	**Alice Springs**	**73.51**	**252**	P	**P**	**14 46 22.9**	**0.0**
	1.7nm,0.8s,baz=137,slow=6.8,SNR=15						
H01W1	**Cape Leeuwin H**	**74.62**	**231**	T	T	16 09 08.2	
	baz=145,slow=76,SNR=17						
H01W2	**Cape Leeuwin H**	**74.62**	**231**	T	T	16 09 02.0	
	baz=145,slow=76,SNR=19						
H01W3	**Cape Leeuwin H**	**74.64**	**231**	T	T	16 09 14.1	
	baz=145,slow=76,SNR=18						
JTS	**JuntasAbangare**	**75.48**	**48**	LR	LR	15 11 22.5	
	comp=Z,46nm,19.1s,baz=252,slow=29						
WRA	**Warramunga Arr**	**76.21**	**255**	P	**P**	**14 46 38.7**	**+0.2**
	1.3nm,0.8s,baz=140,slow=5.4,SNR=6.6						
WRAB	**Tennant Creek**	**76.21**	**255**	*e*P	**P**	**14 46 38.6**	**+0.1**
	8.9nm,1.3s						
PDAR	**Pinedale Array**	**98.50**	**16**	LR	LR	15 24 04.8	
	comp=Z,28nm,21.8s,baz=249,slow=30						
ILAR	**Eielson Array**	**119.23**	**353**	PKP	**PKPdf**	**14 53 38.4**	**+0.7**
	0.5nm,0.7s,baz=191,slow=1.8,SNR=4.6						
MKAR	**Makanchi Array**	**157.19**	**265**	PKPab	**PKPab**	**14 55 14.9**	**-1.1**
	0.6nm,0.8s,baz=120,slow=4.3,SNR=4.9						

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*ISCJB **24** 15:02:25.9±0.5, 24°.17N±0°.01×122°.31E±0°.01, h13km±3km, Error ellipse: s-maj=2.0km s-min=1.9km az=41.6*
*JMA **24** 15:02:26.5, 24°.11N×122°.27E, h39km±2km, M2.7*
*TAP **24** 15:02:27.1, 24°.25N×122°.24E, h30km, ML3.2, C*
ISC 24 15:02:24.0±1.0, 24°.16N±0°.02×122°.34E±0°.02, h9km±9km, n96, σ0°86/180, 1C-4D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EOS1	**EOS1**	**0.44**	**334**	⇓*i* P	**Pb**	**15 02 34.7**	**+0.8**
	baz=335						
EOS1				*i* S	**Sb**	**15 02 40.7**	**+0.1**
	baz=335						
ENAH	**Nanao**	**0.56**	**301**	P	**Pb**	**15 02 36.2**	**+0.1**
	baz=303						
ENAH				S	**Sg**	**15 02 43.1**	**+0.7**
	baz=303						
NANB	**Nanao**	**0.60**	**297**	⇓*i* P	**Pb**	**15 02 36.8**	**0.0**
	baz=296						
NANB				S	**Sg**	**15 02 44.5**	**+0.9**
	baz=296						
ENA	**Nanau**	**0.61**	**296**	⇓*i*

	baz=282							
NNSB				*e*S		**Sb**	**15 02 55.6**	**+1.1**
	baz=282							
NNSH	**Datong**	**0.91**	**287**	P		**Pb**	**15 02 42.8**	**+0.6**
	baz=282							
NNSH				S		**Sn**	**15 02 55.9**	**-0.7**
	baz=282							
NNS	**Nan Shan**	**0.93**	**288**	*e*P		**Pn**	**15 02 43.0**	**-0.4**
	baz=282							
NNS				*e*S		**Sb**	**15 02 55.6**	**+0.7**
	baz=282							
TIPB	**Shuangxi**	**0.94**	**330**	⇑P		**Pb**	**15 02 42.2**	**-0.3**
	baz=331							
TIPB				*e*S		**Sg**	**15 02 52.3**	**-2.0**
	baz=331							
EGFH	**Guangfu**	**0.97**	**240**	*e*P		**Pg**	**15 02 42.8**	**+0.2**
	baz=220							
EGFH				*e*S		**Sg**	**15 02 55.6**	**+0.4**
	baz=220							
NWLT	**Wulai**	**0.98**	**309**	*e*P		**Pn**	**15 02 43.9**	**-0.2**
	baz=307							
NWLT				*e*S		**Sg**	**15 02 55.7**	**0.0**
	baz=307							
YHNB	**Yeheng**	**1.02**	**300**	*e*P		**Pn**	**15 02 44.3**	**-0.3**
	baz=296							
YHNB				*e*S		**Sg**	**15 02 56.9**	**+0.1**
	baz=296							
NSK	**Sanguang**	**1.03**	**300**	*e*P		**Pn**	**15 02 44.8**	**0.0**
	baz=282							
NSK				*e*S		**Sg**	**15 02 57.3**	**-0.1**
	baz=282							
NWF	**Wu-fen Shan**	**1.04**	**331**	*e*P		**Pn**	**15 02 44.7**	**-0.3**
	baz=331							
NWF				*e*S		**Sb**	**15 02 57.9**	**-0.3**
	baz=331							
WFSB	**Wu-fen Shan**	**1.04**	**331**	*e*P		**Pn**	**15 02 44.5**	**-0.4**
	baz=331							
WFSB				*e*S		**Sb**	**15 02 57.9**	**-0.1**
	baz=331							
TWT	**Tachien**	**1.07**	**275**	*e*P		**Pn**	**15 02 47.7**	**+2.3**
	baz=259							
HGSD	**Ruisui**	**1.07**	**232**	*e*P		**Pn**	**15 02 46.1**	**+0.8**
	baz=214							
CHGB	**Renai**	**1.07**	**265**	*e*P		**Pg**	**15 02 44.9**	**+0.2**
	baz=245							
CHGB				*e*S		**Sb**	**15 02 59.7**	**+0.6**
	baz=245							
TWA	**Mucha**	**1.07**	**320**	*e*P		**Pn**	**15 02 45.6**	**+0.4**
	baz=326							
TWA				*e*S		**Sb**	**15 02 58.4**	**-0.5**
	baz=326							
TDCB	**Techi**	**1.08**	**275**	*e*P		**Pn**	**15 02 46.2**	**+0.6**
	baz=260							
TDCB				*e*S		**Sb**	**15 03 00.4**	**+1.0**
	baz=260							
TATO	**Taipei**	**1.12**	**317**	*e*P		**Pn**	**15 02 46.6**	**+0.6**
	baz=326							
TATO				*e*S		**Sg**	**15 02 59.6**	**-0.7**
	baz=326							
EHY	**Hungye**	**1.14**	**235**	*e*P		**Pg**	**15 02 45.4**	**-0.5**
	baz=228							
EHY				*e*S		**Sg**	**15 02 58.9**	**-1.7**
	baz=228							
TAP1	**Taipei**	**1.15**	**320**	*e*P		**Pn**	**15 02 46.9**	**+0.5**
	baz=318							
TAP1				*e*S		**Sn**	**15 03 01.7**	**-0.5**
	baz=318							
TAP	**Taipei**	**1.16**	**319**	*e*S		**Sn**	**15 03 02.1**	**-0.3**
	baz=318							
VWDT	**VWDT**	**1.17**	**250**	*e*P		**Pg**	**15 02 46.5**	**0.0**
	baz=231							
VWDT				*e*S		**Sg**	**15 03 00.4**	**-1.2**
	baz=231							
YM07	**YM07**	**1.21**	**327**	*e*P		**Pg**	**15 02 45.6**	**-1.6**
	baz=327							
YM07				*e*S		**Sg**	**15 03 01.1**	**-1.9**
	baz=327							
WLTB	**Daxi**	**1.21**	**305**	*e*P		**Pn**	**15 02 48.7**	**+1.5**
	baz=289							
WLTB				*e*S		**Sn**	**15 03 03.4**	**-0.2**
	baz=289							
YM10	**YM10**	**1.22**	**325**	*e*P		**Pn**	**15 02 47.4**	**0.0**
	baz=324							
YM10				*e*S		**Sn**	**15 03 03.5**	**-0.6**
	baz=324							
YULB	**Yu-li**	**1.22**	**232**	*e*P		**Pn**	**15 02 46.5**	**-0.8**
	baz=216							
YM11	**YM11**	**1.22**	**325**	*e*P		**Pn**	**15 02 47.9**	**+0.4**
	baz=325							
YM11				*e*S		**Sn**	**15 03 03.8**	**-0.4**
	baz=325							
YM04	**YM04**	**1.23**	**324**	*e*S		**Sg**	**15 03 02.4**	**-1.4**
	baz=323							
YM08	**YM08**	**1.23**	**327**	*e*P		**Pn**	**15 02 47.6**	**+0.1**
	baz=326							
YM08				*e*S		**Sb**	**15 03 03.4**	**-0.1**
	baz=326							
YM12	**YM12**	**1.24**	**326**	*e*P		**Pn**	**15 02 48.4**	**+0.8**
	baz=325							
YM12				*e*S		**Sg**	**15 03 02.5**	**-1.4**
	baz=325							
TWF1	**Yuli**	**1.25**	**230**	*e*P		**Pn**	**15 02 47.0**	**-0.7**
	baz=237							
TWF1				*e*S		**Sb**	**15 03 01.9**	**-2.0**
	baz=237							
YM03	**YM03**	**1.25**	**325**	*e*P		**Pg**	**15 02 48.6**	**+0.5**
	baz=324							
YM03				*e*S		**Sg**	**15 03 03.2**	**-1.1**
	baz=324							
TWS1	**Kuangyinshan**	**1.26**	**318**	*e*P		**Pg**	**15 02 48.8**	**+0.6**
	baz=327							
TWS1				*e*S		**Sg**	**15 03 04.2**	**-0.4**
	baz=327							
IRIF	**Iriomote-Funau**	**1.28**	**82**	P		**Pg**	**15 02 50.0**	**+1.3**
IRIF				*e*S		**Sn**	**15 03 07.6**	**+2.1**
NTST	**Danshui**	**1.29**	**321**	*e*P		**Pg**	**15 02 49.7**	**+0.9**
	baz=336							
DPDB	**Guoxing**	**1.30**	**265**	*e*P		**Pn**	**15 02 48.5**	**0.0**
	baz=249							
DPDB				*e*S		**Sn**	**15 03 06.5**	**+0.5**
	baz=249							
LIOB	**Emei**	**1.30**	**292**	*e*P		**Pg**	**15 02 49.1**	**+0.1**
	baz=288							
LIOB				*e*S		**Sg**	**15 03 06.0**	**+0.1**
	baz=288							
TWY	**Chenhua**	**1.30**	**329**	*e*P		**Pg**	**15 02 49.2**	**+0.2**
	baz=339							
TWY				*e*S		**Sg**	**15 03 05.5**	**-0.5**
	baz=339							
NSTT	**Nanjuang**	**1.31**	**291**	*e*P		**Pg**	**15 02 49.2**	**+0.1**
	baz=287							
NSTT				*e*S		**Sb**	**15 03 04.9**	**-0.8**
	baz=287							
SSLB	**Suanglung**	**1.32**	**254**	*e*P		**Pg**	**15 02 50.3**	**+0.9**
	baz=248							
SSLB				*e*S		**Sb**	**15 03 06.9**	**+0.8**
	baz=248							
NCUH	**Zhongli**	**1.33**	**308**	*e*P		**Pg**	**15 02 50.0**	**+0.5**
	baz=304							
NCUH				*e*S		**Sn**	**15 03 07.1**	**+0.5**
	baz=304							
HATJ	**Hateruma jima**	**1.34**	**94**	P		**Pg**	**15 02 50.2**	**+0.4**
HATJ				*e*S		**Sn**	**15 03 08.0**	**+1.0**
SMLT	**Sun Moon Lake**	**1.34**	**259**	*e*P		**Pn**	**15 02 49.1**	**0.0**
	baz=244							
SMLT				*e*S		**Sb**	**15 03 05.8**	**-1.1**
	baz=244							
FULB	**Fuli**	**1.35**	**225**	*e*P		**Pn**	**15 02 49.0**	**-0.1**
	baz=207							
FULB				*e*S		**Sb**	**15 03 07.5**	**+0.5**
	baz=207							
TYC	**Yuchr**	**1.38**	**260**	*e*P		**Pn**	**15 02 49.4**	**-0.1**
	baz=243							
TYC				*e*S		**Sb**	**15 03 08.3**	**+0.5**
	baz=243							
SBCB	**Hsinchu**	**1.39**	**297**	*e*P		**Pg**	**15 02 51.0**	**+0.3**
	baz=293							
SBCB				*e*S		**Sb**	**15 03 07.3**	**-0.7**
	baz=293							
HSN	**Hsinchu**	**1.40**	**298**	*e*S		**Sg**	**15 03 09.1**	**-0.1**
	baz=295							
NMLH	**Miaoli**	**1.46**	**285**	*e*S		**Sg**	**15 03 11.1**	**0.0**
	baz=280							
NSY	**Sanyi**	**1.46**	**280**	*e*P		**Pg**	**15 02 52.1**	**0.0**
	baz=275							
NSY				*e*S		**Sb**	**15 03 10.8**	**+0.5**
	baz=275							
WJS	**Zhushan**	**1.51**	**258**	*e*P		**Pg**	**15 02 53.6**	**+0.6**
	baz=252							
WJS				*e*S		**Sb**	**15 03 12.1**	**+0.6**
	baz=252							
JKRS	**Kuro-shima**	**1.53**	**87**	P		**Pg**	**15 02 54.3**	**+1.0**
JKRS				*e*S		**Sg**	**15 03 14.1**	**+0.9**
WNT	**Mingjian**	**1.54**	**260**	*e*P		**Pb**	**15 02 53.1**	**+0.4**
	baz=254							
WNT				*e*S		**Sn**	**15 03 12.2**	**+0.4**
	baz=254							
ALS	**Alishan**	**1.55**	**246**	*e*P		**Pn**	**15 02 52.8**	**+0.7**
	baz=228							
ALS				*e*S		**Sn**	**15 03 12.6**	**+0.1**
	baz=228							
ELDTW	**Lidau**	**1.55**	**232**	*e*P		**Pn**	**15 02 51.3**	**-0.7**
	baz=226							
ELDTW				*e*S		**Sn**	**15 03 10.1**	**-2.2**
	baz=226							
CHN5	**Tsauling**	**1.62**	**250**	*e*P		**Pb**	**15 02 54.5**	**+0.3**
	baz=232							
CHN5				*e*S		**Sn**	**15 03 14.7**	**+0.7**
	baz=232							
TWH	**Lutao**	**1.64**	**209**	*e*P		**Pn**	**15 02 52.9**	**-0.2**
	baz=204							
TWH				*e*S		**Sn**	**15 03 11.5**	**-2.9**
	baz=204							
JIJ	**Ishigaki jima**	**1.66**	**83**	P		**Pg**	**15 02 55.4**	**-0.5**
JIJ				S		**Sg**	**15 03 16.0**	**-1.4**
WGK	**Gukeng**	**1.69**	**254**	*e*P		**Pb**	**15 02 55.9**	**+0.5**
	baz=249							
WGK				*e*S		**Sb**	**15 03 17.1**	**+0.3**
	baz=249							
WDLH	**Douliu**	**1.71**	**255**	*e*P		**Pb**	**15 02 55.9**	**+0.2**
	baz=249							
WDLH				*e*S		**Sb**	**15 03 17.9**	**+0.5**
	baz=249							
STYT	**Tauyuan**	**1.76**	**236**	*e*P		**Pb**	**15 02 56.5**	**-0.1**
	baz=222							
STYT				*e*S		**Sn**	**15 03 17.3**	**0.0**
	baz=222							
TWGBT	**Beinan**	**1.77**	**221**	*e*P		**Pn**	**15 02 53.8**	**-1.1**
	baz=217							
TWGBT				*e*S		**Sn**	**15 03 15.2**	**-2.3**
	baz=217							
TWG	**Pinlang**	**1.77**	**221**	*e*P		**Pn**	**15 02 54.1**	**-0.8**
	baz=217							
TWG				*e*S		**Sn**	**15 03 15.3**	**-2.2**
	baz=217							
TTN	**Taitung**	**1.77**	**218**	*e*S		**Sn**	**15 03 19.1**	**+1.5**
	baz=205							
TPUB	**Ta-pu**	**1.78**	**242**	*e*P		**Pb**	**15 02 56.5**	**-0.4**
	baz=227							
TPUB				*e*S		**Sn**	**15 03 18.6**	**+0.7**
	baz=227							
CHN4	**Tsaushan**	**1.79**	**244**	*e*P		**Pb**	**15 02 56.8**	**-0.3**
	baz=229							
CHN4				*e*S		**Sn**	**15 03 18.8**	**+0.7**
	baz=229							
WTP	**Ta-pu**	**1.82**	**241**	*e*P		**Pb**	**15 02 57.4**	**-0.2**
	baz=235							
WTP				*e*S		**Sn**	**15 03 19.9**	**+0.9**
	baz=235							
RLNB	**Erlin**	**1.83**	**262**	*e*P		**Pb**	**15 02 57.2**	**-0.5**
	baz=257							
RLNB				*e*S		**Sn**	**15 03 19.1**	**+0.1**
	baz=257							
JISG	**Ishigakijimahi**	**1.85**	**76**	P		**Pb**	**15 02 58.0**	**0.0**
JISG				S		**Sb**	**15 03 20.9**	**-0.4**
CHY	**Chiayi**	**1.87**	**250**	*e*S		**Sb**	**15 03 22.6**	**+0.6**
	baz=245							
TWK	**Hsinying**	**1.92**	**243**	*e*P		**Pn**	**15 02 58.3**	**+1.3**
	baz=237							
TWK				*e*S		**Sn**	**15 03 21.9**	**+0.7**
	baz=237							
CHN1	**Nanshi**	**1.92**	**240**	*e*P		**Pb**	**15 02 58.9**	**-0.4**
	baz=235							
CHN1				*e*S		**Sn**	**15 03 22.5**	**+1.1**
	baz=235							
SGST	**Jiashian**	**1.93**	**237**	*e*P		**Pb**	**15 02 59.1**	**-0.4**
	baz=223							
SGST				*e*S		**Sn**	**15 03 23.1**	**+1.5**
	baz=223							
SLGT	**Liugui**	**1.94**	**234**	*e*P		**Pn**	**15 02 58.3**	**+1.1**
	baz=229							
SLGT				*e*S		**Sn**	**15 03 23.0**	**+1.3**
	baz=229							
SSD	**Sandimen**	**2.10**	**228**	*e*P		**Pb**	**15 03 01.8**	**-0.6**
	baz=216							
SSD				*e*S		**Sn**	**15 03 27.0**	**+1.2**
	baz=216							
MASBT	**Mashibuluo**	**2.20**	**226**	*e*P		**Pb**	**15 03 02.9**	**-1.1**
	baz=214							
MASBT				*e*S		**Sn**	**15 03 29.5**	**+1.4**
	baz=214							
JTJ	**Tarama**	**2.21**	**77**	P		**Pb**	**15 03 02.9**	**-1.2**
JTJ				*e*S		**Sb**	**15 03 30.9**	**-0.7**
EAST	**Anshuo**	**2.24**	**218**	*e*P		**Pb**	**15 03 04.0**	**-0.7**
	baz=213							
SCZT	**Fangliau**	**2.38**	**222**	*e*P		**Pb**	**15 03 05.7**	**-1.4**
	baz=213							
SCZT				*e*S		**Sn**	**15 03 34.5**	**+1.9**
	baz=213							
PHUB	**P'eng-hu**	**2.61**	**256**	*e*S		**Sn**	**15 03 37.3**	**-1.1**
	baz=252							

MEX 24 15:02:38.1±0.5, 16°.49N×98°.62W, h16km±11km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.07**	**3**	*e*P	Pb	15 02 54.7	-3.6
TLIG				*e*S	Sb	15 03 07.3	-4.8
ACX	**Acapulco**	**1.25**	**288**	*i* P	Pn	15 02 58.2	-2.7
ACX				*i* S	Sb	15 03 13.6	-3.6
ACP2	**Acapulco**	**1.28**	**288**	*i* P	Pn	15 02 57.3	-4.0
ACP2				*e*S	Sb	15 03 12.7	-5.3
VHO	**Vista Hermosa**	**1.89**	**72**	*i* P	Pn	15 03 06.2	-3.8
VHO				*e*S	Sn	15 03 28.2	-5.4

TRN 24 15:27:20.5, 14°.69N×60°.31W, h80km, MD3.6, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MVM	**Montagne Vaucl**	**0.58**	**257**	*e*P	Pn	15 27 35.6	+0.6
MVM				*e*S	Sn	15 27 49.0	+3.2
LPMF	**Morne Lapointe**	**0.64**	**260**	*e*P	Pn	15 27 36.0	+0.5
ZAM	**Aeronautique**	**0.70**	**261**	*e*P	Pn	15 27 36.8	+0.6
TRMF	**Trois Ilets**	**0.73**	**258**	*e*P	Pn	15 27 37.6	+1.1
BIM	**Bigot**	**0.75**	**257**	*e*P	Pn	15 27 38.6	+1.8
BIM				*e*S	Sn	15 27 55.0	+6.1
FDF	**Fort de France**	**0.81**	**274**	*e*P	Pn	15 27 38.0	+0.6
FDF				*e*S	Sn	15 27 52.4	+2.3
BAMF	**Morne Balai**	**0.82**	**279**	*e*P	Pn	15 27 38.6	+1.1
GBMF	**Grand Be**	**0.83**	**278**	*e*P	Pn	15 27 38.7	+1.0
CXM	**Morne La Croix**	**0.84**	**279**	*e*P	Pn	15 27 39.0	+1.2
PML	**Morne Lenard**	**0.85**	**277**	*e*P	Pn	15 27 39.2	+1.4
PCM	**Pelee Case Pet**	**0.88**	**279**	*e*P	Pn	15 27 38.7	+0.6
PCM	**Pelee Case Pet**	**0.88**	**279**	*e*P	Pn	15 27 39.2	+1.1
SLB	**Belfond**	**1.11**	**220**	*e*P	Pn	15 27 42.1	+1.2
SLB				*e*S	Sn	15 27 58.1	+1.9
MCLT	**Moule a Chique**	**1.15**	**212**	*e*P	Pn	15 27 42.2	+0.9
MCLT				*e*S	Sn	15 28 00.2	+3.3
DBCT	**Belle View Cho**	**1.16**	**300**	*e*S	Sn	15 27 59.4	+2.2
BBL	**Barber's Block**	**1.40**	**307**	*e*P	Pn	15 27 45.8	+1.3
BBL				*e*S	Sn	15 28 04.4	+1.8
MGG	**Marie-Galante**	**1.56**	**322**	*e*P	Pn	15 27 48.8	+2.2
SSV	**Crater Summit**	**1.60**	**212**	*e*P	Pn	15 27 49.1	+1.9
SVV	**Soufriere Volc**	**1.62**	**213**	*e*P	Pn	15 27 49.2	+1.9
SVV				*e*S	Sn	15 28 09.3	+1.5
SVB	**Belmont**	**1.67**	**213**	*e*P	Pn	15 27 50.1	+1.9
SVB				*e*S	Sn	15 28 10.4	+1.3
TBG	**Guadaloupe-3**	**1.73**	**312**	*e*P	Pn	15 27 50.4	+1.5
FCV	**Fort Charlotte**	**1.77**	**211**	*e*P	Pn	15 27 51.7	+2.3
FCV				*e*S	Sn	15 28 12.5	+1.2
GRGR	**Grenville**	**2.85**	**207**	*e*P	Pn	15 28 05.3	+1.5

*DJA **24** 15:40:09.9±0.5, 7°.S±.3°×10°.6E±°, h16km±5km, M4.8/25, mb4.9/23, mB5.3/9, MLv4.9/25, Mw(mB)4.7/9*
*ISCJB **24** 15:40:11.5±0.5, 7°.24S±0°.05×106°.01E±0°.03, h74km±3km, mb4.7/84, Error ellipse: s-maj=8.6km s-min=3.5km az=30.7*
*BJI **24** 15:40:11.0, 7°.20S×106°.00E, h62km, mb4.9/33, mB4.8/20, Ms4.2/11, Ms7 4.1/8*
*NEIC **24** 15:40:13.3±0.7, 7°.11S×106°.08E, h70km±5km, mb4.9/28, Error ellipse: s-maj=10.3km s-min=4.3km az=219.0*
NEIC Felt [II] at Cisarua and Jakarta.
*MOS **24** 15:40:13.8±1.1, 6°.88S×106°.18E, h82km, mb4.9/29, Error ellipse: s-maj=11.4km s-min=5.8km az=120.1*
*IDC **24** 15:40:14.8±2.3, 6°.95S×106°.20E, h76km±19km, mb4.4/32, mb1 4.4/33, mb1mx4.2/59, mbtmp4.7/33, MS3.5/31, Ms1 3.5/31, ms1mx3.4/56, Error ellipse: s-maj=19.2km s-min=9.9km az=45.0*

ISC 24 15:40:13.1±0.8, 7°.23S±0°.05×106°.04E±0°.05, h71km±6km, n465, σ1$24/452, mb4.8/83, 14C-10D, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.56**	**67**	P	**Pn**	**15 40 24.3**	**-2.3**
SKJI				S	**Sn**	**15 40 33.6**	**-2.9**
CGJI	**Cibinong**	**0.70**	**331**	P	**Pn**	**15 40 25.7**	**-2.4**
DBJI	**Dramaga**	**0.97**	**47**	P	**Pn**	**15 40 31.2**	**-0.2**
DBJI				S	**Sn**	**15 40 46.2**	**+1.3**
SBJI	**Serang**	**1.10**	**5**	P	**Pn**	**15 40 32.9**	**-0.1**
TNG	**Tangerang**	**1.21**	**30**	P	**Pn**	**15 40 34.9**	**+0.5**
TNG				P	**Pn**	**15 40 34.6**	**+0.2**
TNG				S	**Sn**	**15 40 51.9**	**+1.7**
TNG				S	**Sn**	**15 40 54.4**	**+4.2**
LEM	**Lembang**	**1.62**	**76**	P	**Pn**	**15 40 40.2**	**+0.4**
	620nm,0.3s,baz=168,slow=2.5,SNR=317						
LEM				S	**Sn**	**15 41 01.9**	**+1.8**
	602nm,0.3s,baz=211,slow=16,SNR=17						
LEM				LR	LR	15 41 29.0	
	comp=Z,2μm,19.2s,baz=264,slow=53						
CISI	**Cisompet, Garu**	**1.79**	**101**	P	**Pn**	**15 40 39.8**	**-2.3**
CISI				S	**Sn**	**15 41 01.7**	**-2.3**
CISI	**Cisompet, Garu**	**1.79**	**101**	*e*Pn	**Pn**	**15 40 40.0**	**-2.0**
CISI				*e*Sn	**Sn**	**15 41 01.0**	**-3.0**
BLSI	**Bandar Lampung**	**2.01**	**337**	P	**Pn**	**15 40 45.1**	**+0.1**
KASI	**Kota Agung**	**2.28**	**318**	P	**Pn**	**15 40 47.6**	**-1.1**
KASI				S	**Sn**	**15 41 15.7**	**-0.1**
JCJI	**Jatiwangi**	**2.33**	**72**	P	**Pn**	**15 40 48.9**	**-0.4**
CMJI	**Cimerak**	**2.45**	**103**	P	**Pn**	**15 40 49.3**	**-1.6**
KLI	**Kotabumi**	**2.63**	**333**	P	**Pn**	**15 40 54.0**	**+0.6**
KLI	**Kotabumi**	**2.63**	**333**	P	**Pn**	**15 40 53.9**	**+0.6**
KPJI	**Karang Pucung**	**2.87**	**92**	P	**Pn**	**15 40 57.1**	**+0.5**
LWLI	**Liwa**	**2.95**	**318**	P	**Pn**	**15 40 57.1**	**-0.7**
MDSI	**Maura Dua**	**3.29**	**326**	P	**Pn**	**15 41 02.8**	**+0.4**
MNAI	**Manna**	**4.19**	**313**	*e*Pn	**Pn**	**15 41 13.4**	**-1.2**
SMRI	**Semarang**	**4.37**	**88**	P	**Pn**	**15 41 19.4**	**+2.3**
PMBI	**Palembang**	**4.46**	**343**	P	Pn	15 41 29.2	+11
UGM	**Wanagama**	**4.50**	**99**	P	**Pn**	**15 41 17.7**	**-1.2**
UGM	**Wanagama**	**4.50**	**99**	*e*Pn	**Pn**	**15 41 17.9**	**-1.0**
WOJI	**Wonogiri, Jawa**	**4.88**	**97**	P	**Pn**	**15 41 23.9**	**-0.2**
	66nm,0.9s,0.8nm						
PPBI	**Pangkal Pinang**	**5.04**	**1**	P	**Pn**	**15 41 27.6**	**+1.4**
PCJI	**Pacitan**	**5.18**	**101**	P	**Pn**	**15 41 27.2**	**-1.0**
MASI	**Maura Aman, Be**	**5.55**	**317**	P	**Pn**	**15 41 37.4**	**+4.1**
PWJI	**Pagerwojo**	**5.77**	**98**	P	**Pn**	**15 41 35.7**	**-0.5**
GRJI	**Gresik**	**6.40**	**88**	P	**Pn**	**15 41 45.9**	**+1.1**
DSRI	**Dabo**	**6.86**	**348**	P	**Pn**	**15 41 52.3**	**+1.1**
PBKI	**Pangkalan Bun**	**7.19**	**52**	P	**Pn**	**15 41 56.8**	**+1.2**
GMJI	**Gumukmas**	**7.41**	**99**	P	**Pn**	**15 42 00.4**	**+1.7**
	52nm,0.9s,0.4nm						
PPSI	**Pulau Pagai**	**7.47**	**306**	P	**Pn**	**15 41 56.2**	**-3.2**
	289nm,0.7s,1.2nm						
BLJI	**Banyuglugur**	**7.51**	**94**	P	**Pn**	**15 42 03.1**	**+3.1**
JAGI	**Jajag, Banyuwa**	**8.13**	**99**	P	**Pn**	**15 42 10.5**	**+1.9**
JAGI	**Jajag, Banyuwa**	**8.13**	**99**	*e*Pn	**Pn**	**15 42 09.1**	**+0.5**
PDSI	**Padang**	**8.38**	**318**	P	**Pn**	**15 42 10.6**	**-1.4**
STKI	**Sintang**	**9.05**	**37**	P	**Pn**	**15 42 23.3**	**+2.2**
	37nm,0.9s,4μm						
SISI	**Saibi**	**9.07**	**310**	P	**Pn**	**15 42 18.1**	**-3.3**
	42nm,0.9s						
SRBI	**Singaraja**	**9.13**	**96**	P	**Pn**	**15 42 23.8**	**+1.6**
	63nm,0.8s						
MYKOM	**Kota Tinggi**	**9.22**	**346**	*e*Pn	**Pn**	**15 42 23.9**	**+0.4**
KSM	**Kuching**	**9.64**	**26**	*e*Pn	**Pn**	**15 42 29.8**	**+0.7**
MNSI	**Mandailing Nat**	**10.25**	**321**	P	**Pn**	**15 42 35.4**	**-2.1**
	15nm,0.6s						
PBSI	**Pulau Batu**	**10.52**	**312**	P	**Pn**	**15 42 41.0**	**-0.2**
	54nm,0.6s						
GSI	**Gunungsitoli**	**11.96**	**315**	P	Pn	15 42 54.7	-6.2
GSI	**Gunungsitoli**	**11.96**	**315**	*e*Pn	Pn	15 42 54.6	-6.3
PSI	**Prapat**	**12.23**	**324**	*e*Pn	**Pn**	**15 43 01.5**	**-3.2**
PSI	**Prapat**	**12.23**	**324**	*e*P	**Pn**	**15 43 01.5**	**-3.2**
MPSI	**Mapaga**	**15.74**	**62**	P	**P**	**15 43 55.2**	**+1.9**
	10nm,0.5s,192nm						
MMRI	**Maumere**	**16.11**	**96**	P	**P**	**15 43 57.0**	**-0.4**
MMRI	**Maumere**	**16.11**	**96**	*e*Pn	**P**	**15 43 56.7**	**-0.7**
	93nm,0.7s						
KKM	**Kota Kinabalu**	**16.64**	**38**	*e*Pn	**Pn**	**15 44 01.7**	**-0.4**
	18nm,0.6s						
BATI	**Baumata**	**17.67**	**101**	P	**P**	**15 44 15.0**	**+0.2**
	16nm,0.3s,baz=356,slow=3.6,SNR=18						
BATI				S	**Sn**	**15 47 24.6**	**-6.7**
	1.8nm,0.3s,baz=288,slow=20,SNR=3.0						
SOEI	**Soe**	**18.20**	**99**	P	**Pn**	**15 44 22.9**	**+1.6**
	101nm,0.9s						
SOEI	**Soe**	**18.20**	**99**	*e*Pn	**P**	**15 44 20.4**	**-0.4**
	69nm,0.6s						
MBWA	**Marble Bar**	**19.16**	**138**	*e*P	**P**	**15 44 29.7**	**-1.3**
	136nm,1.9s						
TNTI	**Ternate**	**22.71**	**70**	*e*P	**P**	**15 45 08.5**	**-0.9**
	82nm,1.1s						
CTBH	**Cotabato--PC H**	**23.15**	**52**	⇓*i*P	**P**	**15 45 15.6**	**+1.9**
DAV	**Davao City (W)**	**24.12**	**54**	LR	LR	15 55 03.8	
	comp=Z,58nm,21.2s,baz=262,slow=37						
PBKT	**Sadao Pong**	**24.17**	**348**	P	**P**	**15 45 22.7**	**-0.3**
	7.7nm,1.0s						
TGY	**Tagaytay City**	**25.84**	**35**	LR	LR	15 55 58.6	
	comp=Z,62nm,21.6s,baz=222,slow=37						
SIJI	**Sorong**	**25.93**	**77**	P	**P**	**15 45 38.7**	**-0.4**
	40nm,0.8s,baz=293,slow=9.0,SNR=9.3						
CM01	**Chiang Mai Arr**	**26.43**	**345**	*e*P	**P**	**15 45 42.1**	**-1.4**
CMAR	**Chiang Mai Arr**

comp=Z,8.6nm,0.4s
LSA Lhasa 39.41 339 *e*P **P 15 47 34.8 -2.0**
comp=Z,4.7nm,0.4s
LSA Lhasa 39.41 339 *e*P **P 15 47 34.8 -2.0**
LSA pmax pmax
comp=Z,5.0nm,0.4s
JIRN Jiri 39.64 332 *e*P **P 15 47 37.5 -1.2**
comp=Z,20nm,0.3s
GUN Gumba 40.00 332 *e*P **P 15 47 40.4 -1.2**
comp=Z,18nm,0.4s
DMN Daman 40.12 331 *e*P **P 15 47 41.7 -0.8**
KKN Kakani 40.19 331 *e*P **P 15 47 41.4 -1.6**
GKN Gorkha 40.67 330 *e*P **P 15 47 45.6 -1.4**
comp=Z,22nm,0.3s
PMG Port Moresby 40.73 96 P **P 15 47 47.4 0.0**
comp=Z,23nm,0.8s,baz=239,slow=3.0,SNR=4.8
PMG Port Moresby 40.73 96 P **P 15 47 47.8 +0.3**
PMG Port Moresby 40.73 96 P **P 15 47 47.8 +0.3**
NJ2 Nanjing 40.93 17 *e*P **P 15 47 50.3 +1.5**
NJ2 pmax pmax
comp=Z,18nm,0.5s
CTA Charters Tower 40.99 112 P **P 15 47 50.1 +0.6**
comp=Z,9.9nm,0.9s,baz=258,slow=6.6,SNR=4.6
KOLN Koldanda 41.00 329 *e*P **P 15 47 48.5 -1.2**
comp=Z,29nm,0.6s
STKA Stephens Creek 41.20 131 P **P 15 47 52.4 +1.3**
comp=Z,9.3nm,0.6s,baz=307,slow=8.4,SNR=51
STKA PcP **PcP 15 49 50.5 +1.3**
comp=Z,3.8nm,0.6s,baz=347,slow=3.7,SNR=3.7
STKA Stephens Creek 41.20 131 *e*P **P 15 47 52.2 +1.1**
comp=Z,2.3nm,0.6s
STKA PcP **PcP 15 49 50.5 +1.3**
STKA Stephens Creek 41.20 131 *e*P **P 15 47 52.2 +1.1**
STKA 15 49 50.5
STKA pmax pmax
comp=Z,2.0nm,0.6s
DANN Dangsing 41.40 330 *e*P **P 15 47 51.6 -1.5**
PYUN Piuthan 41.59 329 *e*P **P 15 47 53.7 -0.8**
comp=Z,18nm,0.4s
LZH Lanzhou 43.13 357 *e*P **P 15 48 09.4 +2.5**
LZH pP pP 15 48 23.4 -1.0
LZH sP sP 15 48 31.5 -1.0
LZH *e*PP **PP 15 49 50.5 +2.1**
LZH pmax pmax
comp=Z,28nm,1.0s
LZH pmax pmax
comp=Z,99nm,4.3s
LZH LR LR
comp=Z,310nm,14.8s
LZH LR LR
comp=Z,300nm,15.2s
LZH LR LR
comp=Z,370nm,17.6s
GUMO Guam 43.75 62 LR LR 16 07 49.2
comp=Z,18nm,19.5s,baz=218,slow=38
GTA Gaotai 46.76 353 *e*P **P 15 48 35.1 -0.5**
GTA pP pP 15 48 50.3 -3.0
GTA sP sP 15 48 57.3 -4.1
GTA PcP **PcP 15 50 08.8 +0.8**
GTA S **S 15 55 19.8 -0.8**
GTA sS sS 15 55 47.3 -3.4
GTA SS **SS 15 58 40.0 -8.0**
GTA pmax pmax
comp=Z,9.0nm,0.8s
GTA pmax pmax
comp=Z,36nm,6.2s
GTA LR LR
comp=Z,94nm,14.9s
GTA LR LR
comp=Z,97nm,17.0s
GTA LR LR
comp=Z,120nm,17.2s
HHC Hu-ho-hao-te 48.11 6 *e*P **P 15 48 50.5 +4.5**
HHC S **S 15 55 39.3 -0.3**
HHC pmax pmax
comp=Z,26nm,0.9s
HHC pmax pmax
comp=Z,51nm,3.9s
HHC LR LR
comp=Z,500nm,11.2s
HHC LR LR
comp=Z,490nm,9.5s
HHC LR LR
comp=Z,470nm,11.2s
KSAR Wonju Array Be 48.91 23 P **P 15 48 52.4 +0.3**
KSAR Wonju Array Be 48.91 23 P **P 15 48 52.4 +0.3**
KSRS Korea Array 48.93 23 P **P 15 48 52.4 +0.1**
comp=Z,3.4nm,0.7s,baz=216,slow=8.0,SNR=17
KSRS LR LR 16 10 40.4
comp=Z,24nm,19.6s,baz=230,slow=38
NIL Nilore 51.18 325 *e*P **P 15 49 07.7 -1.8**
comp=Z,32nm,0.8s
NIL Nilore 51.18 325 *e*P **P 15 49 07.7 -1.8**
NIL pmax pmax
comp=Z,32nm,0.8s
JHJ Hachijo jima 2 51.36 37 LR LR 16 13 40.8
comp=Z,15nm,18.2s,baz=277,slow=39
MAJO Matsushiro 52.97 32 *i* P **P 15 49 21.4 -1.2**
MAJO pmax pmax
comp=Z,4.0nm,1.1s
MJAR Matsushiro Arr 52.97 32 P **P 15 49 20.1 -2.5**
comp=Z,2.3nm,0.9s,baz=208,slow=8.8,SNR=5.9
WMQ Urumqi 53.46 344 P **P 15 49 27.1 +1.0**
WMQ sP sP 15 49 51.3 -0.9
WMQ pmax pmax
comp=Z,13nm,0.9s
WMQ pmax pmax
comp=Z,43nm,4.3s
WMQ LR LR
comp=Z,75nm,20.1s
WMQ LR LR
comp=Z,110nm,26.7s
WMQ LR LR
comp=Z,85nm,23.5s
CN2 Changchun 53.75 17 *e*P **P 15 49 31.5 +3.3**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
KSH Kashi 54.20 331 P **P 15 49 30.3 -1.4**
KSH pP pP 15 49 50.5 +0.7
KSH PP **PP 15 51 39.3 +5.1**
KSH S **S 15 56 59.3 -4.5**
KSH sS sS 15 57 33.3 -1.2
KSH pmax pmax
comp=Z,21nm,0.8s
KSH pmax pmax
comp=Z,240nm,4.8s
KSH LR LR
comp=Z,160nm,4.4s
KSH LR LR
comp=Z,170nm,4.4s
KSH LR LR
comp=Z,180nm,5.7s
KBL Kabul 54.30 322 *e*P **P 15 49 30.6 -2.0**
comp=Z,22nm,1.1s
KBL Kabul 54.30 322 *e*P **P 15 49 30.6 -2.0**
KBL pmax pmax
comp=Z,22nm,1.1s
SONM Songino Array 54.83 0 P **P 15 49 35.8 -0.3**
comp=Z,3.0nm,0.6s,baz=178,slow=9.0,SNR=9.6
SONM PcP **PcP 15 50 37.9 +0.3**
comp=Z,2.9nm,0.6s,baz=181,slow=3.6,SNR=7.6
SONM LR LR 16 15 15.9
comp=Z,156nm,21.0s,baz=224,slow=38
SONA1 Songino Array 54.84 0 *e*P **P 15 49 35.0 -1.2**
ULN Ulaanbaatar 54.86 1 *e*P **P 15 49 35.5 -0.9**
comp=Z,3.8nm,0.7s
ULN Ulaanbaatar 54.86 1 *ce*P **P 15 49 34.6 -1.8**
ULN pmax pmax
comp=Z,3.0nm,0.7s
WSAR Wadi Sarin 55.35 305 LR LR 16 10 56.6
comp=Z,93nm,21.6s,baz=136,slow=33
NRN Naryn 55.71 333 *e*P **P 15 49 41.8 -1.0**
comp=Z,8.2nm,1.0s
NRN Naryn 55.71 333 *e*P **P 15 49 41.8 -1.0**
NRN pmax pmax
comp=Z,8.0nm,1.0s
SFK Sufi-Kurgan 55.78 330 P **P 15 49 42.5 -0.8**
SFK pmax pmax
comp=Z,21nm,0.8s
PDGK Podgornoye 55.79 337 P **P 15 49 42.1 -1.0**
PDGK pmax pmax
comp=Z,9.0nm,0.8s
USRK Ussuriysk Ar. 56.30 22 P **P 15 49 45.6 -0.9**
comp=Z,3.1nm,0.5s,baz=210,slow=5.9,SNR=6.5
FRU Bishkek 57.44 333 *e*P **P 15 49 54.0 -0.8**
MK01 Makanchi Array 57.76 341 *e*P **P 15 49 55.2 -1.7**
MK31 Makanchi Array 57.78 341 *e*P **P 15 49 55.1 -1.9**
MK31 Makanchi Array 57.78 341 *e*P **P 15 49 55.1 -1.9**
MKAR Makanchi Array 57.78 341 P **P 15 49 55.9 -1.1**
comp=Z,5.6nm,0.5s,baz=150,slow=8.8,SNR=100
MKAR LR LR 16 18 55.0
comp=Z,51nm,18.4s,baz=228,slow=40
MKAR Makanchi Array 57.78 341 *e*P **P 15 49 55.0 -2.0**
comp=Z,40nm,0.4s
MKAR Makanchi Array 57.78 341 *e*P **P 15 49 55.0 -2.0**
MKAR pmax pmax
comp=Z,40nm,0.4s
MAKZ Makanchi 57.90 341 *e*P **P 15 49 56.1 -1.7**
comp=Z,6.6nm,1.4s
MAKZ Makanchi 57.90 341 *e*P **P 15 49 56.2 -1.7**
MAKZ pmax pmax
comp=Z,7.0nm,1.4s
MNAS Manas 58.16 331 P **P 15 49 59.3 -0.6**
MNAS pmax pmax
comp=Z,19nm,0.7s
DGZ Jazzator, Alta 58.97 346 *i* P **P 15 50 05.0 -0.4**
DGZ pmax pmax
comp=Z,10.0nm,0.6s
KK31 Karatay Array 59.58 330 *e*P **P 15 50 08.1 -1.5**
KK31 Karatay Array 59.58 330 *e*P **P 15 50 08.1 -1.5**
KKAR Karatay Array 59.58 330 *e*P **P 15 50 08.1 -1.5**
KKAR Karatay Array 59.58 330 *e*P **P 15 50 08.1 -1.5**
ASAJ Asahikawa 60.84 29 P **P 15 50 16.4 -1.7**
comp=Z,3.3nm,0.5s,baz=354,slow=1.7,SNR=9.7
ASAJ LR LR 16 16 07.0
comp=Z,22nm,21.5s,baz=210,slow=36
KURBB Kurchatov Arra 62.34 341 P **P 15 50 27.2 -0.9**
comp=Z,7.0nm,0.7s,baz=158,slow=5.9,SNR=30
KURK Kurchatov 62.39 341 *e*P **P 15 50 27.1 -1.3**
comp=Z,11nm,0.9s
KURK Kurchatov 62.39 341 *de*P **P 15 50 27.7 -0.7**
KURK pmax pmax
comp=Z,12nm,1.0s
OTUK Ortayu 62.69 335 P **P 15 50 29.6 -1.0**
YSS Yuzh-Sakhalins 63.02 27 *e*P **P 15 50 31.7 -0.9**
comp=Z,16nm,1.1s
YSS Yuzh-Sakhalins 63.02 27 ⇓ *i*P **P 15 50 32.1 -0.6**
YSS pmax pmax
comp=Z,10.0nm,1.4s
GEYT Alibeck 63.30 319 P **P 15 50 35.0 +0.2**
comp=Z,11nm,0.8s,baz=134,slow=6.4,SNR=27
GEYT LR LR 16 19 50.2
comp=Z,45nm,21.9s,baz=225,slow=38
GYA0B ALIBECK ARRAY 63.30 319 *e*P **P 15 50 34.3 -0.5**
comp=Z,14nm,0.8s
ZEA Zeya 63.33 14 *e*P **P 15 50 34.2 -0.4**
ZEA pmax pmax
comp=Z,12nm,1.0s
ZAA0 Zalesovo Array 63.52 346 *e*P **P 15 50 34.3 -1.6**
comp=Z,4.4nm,0.4s
ZALV Zalesovo Beam 63.52 346 P **P 15 50 34.1 -1.8**
comp=Z,4.8nm,0.3s,baz=158,slow=6.5,SNR=14
ZALV LR LR 16 21 00.4
comp=Z,69nm,18.7s,baz=76,slow=39
ZALV Zalesovo Beam 63.52 346 *e*P **P 15 50 34.5 -1.4**
ZALV Zalesovo Beam 63.52 346 *e*P **P 15 50 34.5 -1.4**
RAYN Ar Rayn 66.53 299 *e*P **P 15 50 56.1 0.0**
comp=Z,12nm,1.2s
RAYN Ar Rayn 66.53 299 *e*P **P 15 50 56.1 0.0**
RAYN pmax pmax
comp=Z,12nm,1.2s
MAW Mawson 66.87 197 LR LR 16 13 51.3
comp=Z,38nm,20.5s,baz=356,slow=30
RPZ Rata Peaks 67.05 134 LR LR 16 20 10.2
comp=Z,71nm,21.4s,baz=280,slow=36
BVAR Borovoye Array 67.21 338 P **P 15 50 59.0 -0.7**
comp=Z,14nm,0.5s,baz=144,slow=8.9,SNR=82
BRVK Borovoye 67.28 338 *e*P **P 15 50 58.5 -1.7**
comp=Z,11nm,0.6s
BRVK Borovoye 67.28 338 *de*P **P 15 50 59.6 -0.6**
BRVK pmax pmax
comp=Z,11nm,0.8s
ABKAR Akbulak array 69.12 330 *e*P **P 15 51 11.3 -0.5**
URZ Urewera 70.70 128 LR LR 16 21 09.5
comp=Z,43nm,20.2s,baz=268,slow=35
AKTO Aktyubinsk 70.84 330 P **P 15 51 22.3 0.0**
comp=Z,3.9nm,0.6s,baz=115,slow=9.3,SNR=17
AKTO LR LR 16 26 37.4
comp=Z,19nm,18.4s,baz=140,slow=39
YAK Yakutsk 71.44 12 *e*P **P 15 51 24.2 -1.4**
comp=Z,16nm,0.5s
YAK Yakutsk 71.44 12 *e*P **P 15 51 23.5 -2.2**
YAK pmax pmax
comp=Z,12nm,0.9s
YAK pmax pmax
comp=E,2.0nm,1.4s
YAK pmax pmax
comp=N,2.0nm,1.1s
GNI Garni 73.44 315 LR LR 16 27 50.8
comp=N,9.8nm,18.7s,baz=110,slow=39
SVE Sverdlovsk 73.83 336 *d i*P **P 15 51 40.6 +0.7**
SVE pmax pmax
comp=Z,40nm,1.0s
GROC Groznyy 74.05 319 *e*P **P 15 51 40.7 -0.9**
GROC *e* 15 51 59.4
GROC pmax pmax
comp=Z,17nm,0.6s
PETK Petropavlovsk- 74.26 29 P **P 15 51 41.8 -0.8**
comp=Z,1.5nm,0.5s,baz=158,slow=2.2,SNR=16
ARU Arti 74.42 335 *e*P **P 15 51 42.9 -0.5**
comp=Z,30nm,1.1s
ARU Arti 74.42 335 *c i*P **P 15 51 43.4 0.0**
ARU *PP **PcP 15 51 57.1 -0.6**
ARU S **S 16 01 15.8 +3.4**
ARU SS **SS 16 05 57.6 -2.7**
ARU pmax pmax
comp=Z,27nm,1.0s
PET Petropavlovsk 74.68 30 ⇑ *e*P **P 15 51 45.8 +0.9**
PET pmax pmax
comp=Z,18nm,1.7s
SYO Syowa Base 74.96 200 ⇑ *e*P **P 15 51 50.2 +3.8**
ZEI Tsey 75.12 318 *e*P **P 15 51 47.7 -0.4**
NCK Nalchik 75.62 318 *i* P **P 15 51 51.3 +0.6**
NCK pmax pmax
comp=Z,12nm,0.9s
VNDA Vanda 75.92 169 P **P 15 51 53.4 +1.6**
comp=Z,0.7nm,0.7s,baz=300,slow=7.3,SNR=3.9
VNDA LR LR 16 19 34.9
comp=Z,28nm,21.6s,baz=322,slow=31
NEY Neytrino 76.10 318 *i* P **P 15 51 54.5 +0.9**
NEY pmax pmax
comp=Z,2.0nm,0.9s
KBZ Khabaz 76.18 318 P **P 15 51 53.9 +0.1**
comp=Z,7.8nm,0.8s,baz=133,slow=5.0,SNR=21
KBZ LR LR 16 30 16.4
comp=Z,16nm,18.3s,baz=92,slow=40
KIV Kislovodsk 76.41 318 *e*P **P 15 51 55.9 +0.6**
KIV pmax pmax
comp=Z,11nm,1.1s
KIV MLR MLR
comp=Z,22nm,18.0s
ASF Jabal al Asfar 76.50 305 P **P 15 51 57.5 +1.5**
comp=Z,9.1nm,0.9s,baz=80,slow=2.3,SNR=12
NRIK Noril'sk 77.46 353 P **P 15 52 00.3 -0.2**
comp=Z,6.9nm,0.3s,baz=147,slow=4.5,SNR=20
NRIK LR LR 16 30 07.2
comp=Z,67nm,18.1s,baz=131,slow=39
MMAI Mount Meron Ar 77.96 306 P **P 15 52 06.5 +2.3**
comp=Z,6.4nm,0.6s,baz=99,slow=8.9,SNR=12
MMAI LR LR 16 25 43.9
comp=Z,30nm,21.7s,baz=70,slow=35
SEY Seymchan 78.34 20 *ce*P **P 15 52 05.7 +0.3**
TIXI Tiksi 80.15 7 *e*P **P 15 52 13.5 -1.7**
comp=Z,6.8nm,0.8s
TIXI Tiksi 80.15 7 *ce*P **P 15 52 14.1 -1.0**
TIXI pmax pmax
comp=Z,6.0nm,0.7s
CSS Mathiatis 80.16 307 *e*P **P 15 52 16.5 +0.5**
comp=Z,8.7nm,0.9s
BR131 Keskin Array S 81.27 312 *e*P **P 15 52 21.5 -0.5**
BRTR Keskin Array B 81.27 312 P **P 15 52 22.4 +0.4**
comp=Z,7.2nm,0.8s,baz=135,slow=7.4,SNR=37
BRTR LR LR 16 30 10.5
comp=Z,22nm,19.9s,baz=89,slow=37
VORD Divnogorie 81.32 324 *e*P **P 15 52 21.6 -0.2**
VORD pmax pmax
comp=Z,10.0nm,0.8s
VSR Storozhevoye 81.49 324 *e*P **P 15 52 22.4 -0.3**
VSR pmax pmax
comp=Z,50nm,1.1s
PRGR Permogore 82.87 335 *e*P **P 15 52 29.0 -0.7**
PRGR pmax pmax
comp=Z,11nm,0.6s
OBN Obninsk 84.40 327 *ce*P **P 15 52 37.8 +0.2**
OBN *e* 15 55 49.7
OBN *e*S **SPn 16 03 51.8 +1.0**
OBN pmax pmax
comp=Z,63nm,1.7s
KLMR Klimovskoe 85.15 333 *e*P **P 15 52 40.4 -0.9**
KLMR pmax pmax
comp=Z,8.0nm,0.9s
KLMR Klimovskoe 85.15 333 *e*P **P 15 52 40.5 -0.9**
KLMR AMP 15 52 41.6
comp=Z,8.0nm,0.9s
BILL Bilibino 86.02 19 *e*P **P 15 52 44.1 -1.4**
comp=Z,2.6nm,0.9s
BILL Bilibino 86.02 19 *c i*P **P 15 52 44.5 -1.0**
BILL *e* 15 56 02.8
BILL pmax pmax
comp=Z,9.0nm,2.5s
BILL MLR MLR
comp=Z,40nm,18.0s
LEOM Leova 86.87 317 ⇓ *i*P **P 15 52 51.1 +1.0**
IDI Anoyia 86.96 306 P **P 15 52 52.6 +1.6**
comp=Z,16nm,1.1s,baz=101,slow=10,SNR=7.6
IDI Anoyia 86.96 306 ⇑ *i*P **P 15 52 52.7 +1.7**
TMCR Tamitsa 87.11 336 *e*P **P 15 52 50.8 -0.1**
TMCR pmax pmax
comp=Z,18nm,0.5s
SORM Soroca 87.20 319 ⇑ *i*P **P 15 52 52.1 +0.4**
AKASG Malin Array Be 87.28 322 P **P 15 52 51.8 -0.3**
comp=Z,2.1nm,0.5s,baz=81,slow=5.1,SNR=5.6
KIEV Kiev 87.29 322 *e*P **P 15 52 51.4 -0.6**
comp=Z,2.5nm,0.8s
KIEV Kiev 87.29 322 *i* P **P 15 52 51.9 -0.2**
KIEV pmax pmax
comp=Z,4.0nm,0.7s
VRI Vrincioaia 87.76 317 ⇓ *i*P **P 15 52 56.4 +1.9**
VRI Vrincioaia 87.76 317 P **P 15 52 55.9 +1.4**
PLOR Plostina 87.81 317 ⇑ *i*P **P 15 52 55.8 +1.1**
TESR Tescani 87.95 317 ⇑ *i*P **P 15 52 55.9 +0.5**
MLR Muntele Rosu 88.21 316 P **P 15 52 57.9 +1.1**
comp=Z,2.4nm,0.8s,baz=45,slow=7.1,SNR=12
MLR Muntele Rosu 88.21 316 ⇓ *i*P **P 15 52 58.2 +1.4**
MLR Muntele Rosu 88.21 316 *e*P **P 15 52 57.5 +0.7**
comp=Z,29nm,1.3s
MLR Muntele Rosu 88.21 316 *e*P **P 15 52 57.5 +0.7**
MLR pmax pmax
comp=Z,29nm,1.3s
VOIR 88.82 316 ⇑ *i*P **P 15 52 59.9 +0.3**
BURAR Bucovina Array 89.14 318 ⇓ *i*P **P 15 53 03.0 +1.9**
BUR04 Bucovina Ar. S 89.14 318 *e*P **P 15 53 01.4 +0.3**
BUR08 Bucovina Ar. S 89.16 318 *e*P **P 15 53 02.3 +1.2**
JOF Joensuu 89.51 334 P **P 15 53 03.5 +1.2**
VTS Vitosha 89.59 313 ⇑ *i*P **P 15 53 04.5 +1.1**
VTS Vitosha 89.59 313 *e*P **P 15 53 03.8 +0.4**
comp=Z,8.4nm,1.1s
VTS Vitosha 89.59 313 *e*P **P 15 53 03.8 +0.4**
VTS pmax pmax
comp=Z,8.0nm,1.1s
LIT Litokhoron 89.70 310 *e*P **P 15 53 03.9 +0.1**
comp=Z,49nm,0.6s
LIT Litokhoron 89.70 310 *e*P **P 15 53 03.9 +0.1**
LIT pmax pmax
comp=Z,49nm,0.6s
VSU Vasula 90.55 329 *i* P **P 15 53 06.7 -0.5**
VSU pmax pmax
comp=Z,18nm,0.9s
BZS Buzias 91.22 316 ⇓ *i*P **P 15 53 11.7 +1.0**
FINES FINESS Array B 91.52 332 P **P 15 53 12.0 +0.3**
comp=Z,2.9nm,0.8s,baz=81,slow=3.1,SNR=8.6
FINES LR LR 16 38 21.1
comp=Z,27nm,21.6s,baz=62,slow=38
FINES FINESS Array B 91.52 332 P **P 15 53 12.0 +0.3**
KECS Kecovo 92.42 318 *e*P **P 15 53 15.8 -0.4**
KECS Kecovo 92.42 318 *e*P **P 15 53 15.8 -0.4**
ARCES ARCESS Array B 93.42 340 P **P 15 53 20.1 -0.2**
comp=Z,1.3nm,0.6s,baz=98,slow=7.0,SNR=11
ARCES LR LR 16 41 06.1
comp=Z,41nm,19.3s,baz=76,slow=39
GERES GERESS Array B 96.92 318 LR LR 16 42 26.8
comp=Z,14nm,21.0s,baz=306,slow=38
SPITS Spitsbergen Ar 96.96 348 LR LR 16 44 38.1
comp=Z,36nm,18.6s,baz=190,slow=40
HFS Hagfors 97.39 330 P Pdif 15 53 38.8 +0.1
comp=Z,2.6nm,0.9s,baz=352,slow=8.7,SNR=3.3
HFS LR LR 16 42 06.2
comp=Z,16nm,20.2s,baz=108,slow=38
CLL Collm 97.49 321 *e*P **P 15 53 38.0 -1.2**
CLL Collm 97.49 321 *e*P **P 15 53 38.0 -1.2**
NOA NORSAR Array B 98.62 331 LR LR 16 45 03.8
comp=Z,15nm,18.7s,baz=70,slow=40
TOLK Toolik Lake Re 101.92 21 P **Pdif 15 53 58.4 -0.4**
baz=281
B05A Bryant 122.37 36 P **PKPdf 15 59 00.1 -0.3**
baz=299
J04D Umpqua Nationa 124.69 41 P **PKPdf 15 59 05.0 -0.2**
baz=296
NVAR Mina Array Bea 129.40 45 PKP **PKPdf 15 59 16.8 +2.4**
comp=Z,0.7nm,0.9s,baz=318,slow=1.8,SNR=3.9
PDAR Pinedale Array 132.74 36 PKP **PKPdf 15 59 21.1 +0.4**
comp=Z,0.4nm,0.5s,baz=252,slow=0.5,SNR=4.3
CPUP Villa Florida 142.94 205 PKhKP PKPpre 15 59 37.3
comp=Z,2.1nm,0.8s,baz=188,slow=7.1,SNR=4.4
P38A Dawn 143.26 26 P PKPbc 15 59 36.6 -0.3
baz=326
O40A La Belle 143.53 23 P PKPab 15 59 36.9 +0.2
baz=329
N42A Yates City 143.60 21 P PKPbc 15 59 37.3 -0.5
baz=332
M44A Midewin, Midew 143.75 18 P PKPab 15 59 37.6 +0.2
baz=336
Q38A Cooks Store, C 143.78 26 P PKPab 15 59 37.7 +0.1
baz=326
N43A Stutzman Famil 143.79 20 P PKPab 15 59 37.6 0.0
baz=334
O41A Passleys Farm, 143.91 22 P PKPab 15 59 38.2 +0.1
baz=331
P40A Paris 143.96 24 P PKPab 15 59 38.5 +0.2
baz=329
P40A Paris 143.96 24 *e*PKPpre PKPpre 15 59 38.1
P41A Barry, Barry 144.23 23 P **PKPab 15 59 39.3 0.0**
baz=330
R38A Fenwick Farm, 144.28 27 P **PKPab 15 59 39.0 -0.5**
baz=325
WMOK Wichita Mounta 144.34 36 P PKPbc 15 59 40.4 +0.1
baz=315,SNR=8.2
WMOK Wichita Mounta 144.34 36 *e*PKPdf PKPbc 15 59 40.1 -0.1
WMOK Wichita Mounta 144.34 36 *e*PKIKP PKPbc 15 59 40.1 -0.2
N45A Kentland 144.41 18 P PKPbc 15 59 40.4 +0.1
baz=336
Q40A Laux Farm, Aux 144.41 25 P PKPbc 15 59 40.3 0.0
baz=328,SNR=9.1
TX31 Lajitas Ar. Si 144.43 48 *e*PKPdf PKPbc 15 59 41.0 +0.2
TX31 *e*PKPdf **PKPdf 15 59 42.4 +0.2**
TXAR Lajitas Array 144.43 48 PKP **PKPdf 15 59 42.6 +0.4**
comp=Z,3.4nm,0.6s,baz=277,slow=1.3,SNR=40
R39A Chumby, Stover 144.57 26 P **PKPab 15 59 40.5 -0.1**
baz=326,SNR=10
P42A Winchester 144.58 22 P **PKPab 15 59 40.5 -0.1**
baz=331,SNR=5.1
P42A Winchester 144.58 22 *e*PKPdf **PKPab 15 59 40.6 0.0**
N46A Monticello 144.59 17 P PKPbc 15 59 40.9 +0.1
baz=338
S38A Stockton 144.73 28 P **PKPab 15 59 40.8 -0.5**
baz=324,SNR=9.8
Q41A Truxton 144.78 24 P **PKPab 15 59 41.4 0.0**
baz=329,SNR=7.9
HRV Adam Dziewonsk 144.80 357 P **PKPab 15 59 41.3 0.0**
baz=4.0
P43A Skaggs, Pawnee 144.83 21 P **PKPab 15 59 41.4 -0.1**
baz=333
ERPA Erie 144.85 8 P **PKPab 15 59 41.0 -0.5**
baz=350
ERPA Erie 144.85 8 *e*PKPdf **PKPab 15 59 41.0 -0.5**
O45A Potomac 144.89 18 P PKPbc 15 59 42.0 +0.3
baz=336,SNR=5.2
R40A Maddies Statio 144.92 25 P **PKPab 15 59 41.9 0.0**
baz=327,SNR=29
R40A Maddies Statio 144.92 25 *e*PKPdf **PKPab 15 59 41.4 -0.5**
S39A Bolivar 144.95 27 P **PKPab 15 59 41.5 -0.5**
baz=325,SNR=9.7
S39A Bolivar 144.95 27 *e*PKPbc **PKPab 15 59 41.2 -0.9**
SFIN Lafayette 144.96 18 P PKPbc 15 59 42.1 +0.1
baz=337
SFIN Lafayette 144.96 18 *e*PKPbc **PKPab 15 59 41.4 -0.6**
T38A Diamond 145.03 29 P **PKPbc 15 59 42.1 -0.3**
baz=323,SNR=16

QUA2	Belchertown	145.06	358	*e*PKPbc	PKPbc	15 59 42.1	-0.2
Q42A	Golden Eagle	145.09	23	P	PKPab	15 59 42.5	0.0
	baz=330						
BINY	Binghamton	145.13	3	P	PKPab	15 59 42.5	0.0
	baz=356,SNR=6.6						
BINY	Binghamton	145.13	3	*e*PKPbc	PKPbc	15 59 42.1	-0.4
TUL1	Leonard	145.15	32	P	PKPab	15 59 42.8	-0.1
	baz=320						
TUL1	Leonard	145.15	32	*e*PKPbc	PKPbc	15 59 42.5	-0.3
R41A	Rosebud	145.29	24	P	PKPbc	15 59 43.0	-0.2
	baz=329,SNR=19						
P44A	Sand Creek, Wi	145.30	20	P	PKPab	15 59 43.2	-0.1
	baz=334						
O47A	Sheridan	145.36	17	P	PKPbc	15 59 43.1	-0.2
	baz=338						
Q43A	New Douglas	145.38	22	P	PKPab	15 59 43.5	-0.1
	baz=332						
S40A	Lebanon	145.40	26	P	PKPbc	15 59 43.3	-0.2
	baz=326,SNR=24						
T39A	Clever	145.47	28	P	PKPbc	15 59 43.8	0.0
	baz=325,SNR=14						
M54A	Oil Creek Stat	145.49	8	P	PKPdf	15 59 43.4	-0.2
	baz=350,SNR=9.0						
M54A	Oil Creek Stat	145.49	8	*e*PKPdf	PKPdf	15 59 43.3	-0.2
P45A	Graceland, Par	145.54	19	P	PKPab	15 59 44.0	-0.1
	baz=335,SNR=6.8						
P45A	Graceland, Par	145.54	19	*e*PKPdf	PKPdf	15 59 43.7	0.0
R42A	Luebbering	145.54	24	P	PKPdf	15 59 43.5	-0.2
	baz=330,SNR=22						
CCM	Cathedral Cave	145.55	24	P	PKPdf	15 59 43.8	0.0
	baz=329						
CCM	Cathedral Cave	145.55	24	*e*PKPdf	PKPdf	15 59 43.5	-0.3
CCM				*e*PKPbc	PKPab	15 59 44.8	+0.5
CCM	Cathedral Cave	145.55	24	*e*PKIKP	PKPdf	15 59 43.5	-0.3
Q44A	Meyer Farm, Va	145.66	21	P	PKPbc	15 59 44.1	-0.1
	baz=333						
KSPA	Keystone Colle	145.78	2	*e*PKPdf	PKPbc	15 59 44.4	-0.2
HHAR	Hobbs	145.80	29	*e*PKPdf	PKPdf	15 59 44.3	0.0
R43A	Red Bud	145.88	23	P	PKPdf	15 59 44.5	+0.2
	baz=331,SNR=12						
FVM	French Village	145.94	24	*e*PKPdf	PKPdf	15 59 44.7	+0.3
FVM	French Village	145.94	24	*e*PKP2	PKPdf	15 59 44.7	+0.3
U39A	Green Forest	145.94	29	P	PKPbc	15 59 45.4	+0.2
	baz=324,SNR=11						
Q45A	Warren Harvey,	145.97	20	P	PKPbc	15 59 45.3	+0.1
	baz=334,SNR=12						
S42A	Caledonia	145.98	24	P	PKPbc	15 59 45.0	-0.2
	baz=329,SNR=16						
N54A	Moraine State	145.98	8	P	PKPbc	15 59 45.0	-0.2
	baz=349						
N54A	Moraine State	145.98	8	*e*PKPdf	PKPdf	15 59 43.8	-0.6
P47A	Martinsville	146.03	17	P	PKPbc	15 59 45.1	-0.2
	baz=338,SNR=14						
O50A	Cable	146.10	13	P	PKPbc	15 59 45.4	-0.2
	baz=343						
Q46A	CEJHS Indians,	146.12	19	P	PKPbc	15 59 45.4	-0.3
	baz=336						
OLIL	Olney	146.14	20	*e*PKPdf	PKPdf	15 59 44.8	+0.1
OLIL				*e*PKPbc	PKiKP	15 59 47.7	-1.3
ACSO	Alum Creek Sta	146.16	12	P	PKPbc	15 59 45.6	-0.1
	baz=344						
ACSO	Alum Creek Sta	146.16	12	*e*PKPdf	PKPbc	15 59 45.3	-0.4
T41A	Mountain View	146.18	26	P	PKPbc	15 59 45.8	-0.1
	baz=327,SNR=17						
R44A	Waltonville	146.22	22	P	PKPbc	15 59 45.8	-0.2
	baz=332						
BLO	Bloomington	146.24	18	*e*PKPdf	PKPdf	15 59 45.5	+0.6
BLO	Bloomington	146.24	18	*e*PKP2	PKPdf	15 59 45.5	+0.6
U40A	Yellville	146.26	28	P	PKPbc	15 59 45.8	-0.4
	baz=325,SNR=19						
ODNJ	Ogdensburg	146.28	1	*e*PKPdf	PKPbc	15 59 45.7	-0.4
V39A	Pettigrew	146.30	30	P	PKPbc	15 59 45.9	-0.5
	baz=323						
PAL	Palisades	146.37	360	P	PKPbc	15 59 45.9	-0.4
N59A	State Game Lan	146.42	2	P	PKPbc	15 59 46.5	0.0
	baz=357,SNR=14						
N59A	State Game Lan	146.42	2	*e*PKPdf	PKPbc	15 59 46.6	0.0
S43A	Fulton Ridge,	146.44	24	P	PKPbc	15 59 46.7	0.0
	baz=330						
R45A	Skylar, Fairfi	146.47	21	P	PKPbc	15 59 46.9	+0.2
	baz=334,SNR=13						
T42A	Van Buren	146.48	25	P	PKPbc	15 59 46.8	0.0
	baz=328,SNR=48						
T42A	Van Buren	146.48	25	*e*PKPdf	PKPbc	15 59 46.5	-0.3
Q47A	Bedord North L	146.49	18	P	PKPbc	15 59 46.7	0.0
	baz=337						
JCT	Junction City	146.51	43	P	PKPbc	15 59 47.1	-0.1
	baz=309						
JCT	Junction City	146.51	43	*e*PKPdf	PKPdf	15 59 46.4	+0.7
JCT	Junction City	146.51	43	*e*PKP2	PKPdf	15 59 46.4	+0.7
SSPA	Standing Stone	146.55	5	P	PKPbc	15 59 46.8	-0.1
	baz=353						
SSPA	Standing Stone	146.55	5	*e*PKPdf	PKPbc	15 59 46.4	-0.5
P50A	Jamestown	146.57	14	P	PKPbc	15 59 46.8	-0.2
	baz=342,SNR=15						
S44A	Carbondale	146.65	22	P	PKPbc	15 59 47.3	+0.1
	baz=332,SNR=6.7						
U41A	Viola	146.70	27	P	PKPbc	15 59 47.1	-0.3
	baz=326,SNR=10						
V40A	Witts Springs	146.72	29	P	PKPbc	15 59 47.2	-0.4
	baz=324						
W39A	Magazine	146.74	30	P	PKPbc	15 59 47.2	-0.4
	baz=322						
LUPA	Lehigh Univers	146.75	2	*e*PKPdf	PKPbc	15 59 47.0	-0.5
T43A	Greenville	146.77	24	P	PKPbc	15 59 47.3	-0.3
	baz=330,SNR=7.5						
R46A	Gibon Southern	146.81	20	P	PKPbc	15 59 47.6	0.0
	baz=335,SNR=12						
O56A	Blue Knob Stat	146.84	6	P	PKPbc	15 59 47.7	-0.1
	baz=352,SNR=15						
O56A	Blue Knob Stat	146.84	6	*e*PKPdf	PKPbc	15 59 47.2	-0.6
S45A	Carrier Mills	146.91	22	P	PKPbc	15 59 47.9	-0.1
	baz=333						
PBMO	Poplar Bluff	146.97	25	*e*PKPdf	PKPbc	15 59 47.4	-0.8
U42A	Revenden	146.99	26	P	PKPbc	15 59 48.3	0.0
	baz=327,SNR=13						
WHTX	Lake Whitney,	147.04	39	P	PKPbc	15 59 48.2	-0.4
	baz=314						
R47A	Wooly Knot Far	147.05	18	P	PKPbc	15 59 48.2	-0.1
	baz=337,SNR=7.1						
V41A	Mountainview	147.05	28	P	PKPbc	15 59 48.3	-0.2
	baz=325,SNR=6.2						
W40A	Ferguson Farm,	147.09	30	P	PKPbc	15 59 48.5	-0.1
	baz=323						
W40A	Ferguson Farm,	147.09	30	*e*PKPbc	PKPab	15 59 50.6	+0.4
X39A	Fountain Ranch	147.10	32	P	PKPbc	15 59 49.1	+0.4
	baz=321,SNR=9.7						
R48A	Northridge Ran	147.15	17	P	PKPbc	15 59 48.8	+0.1
	baz=338						
WCI	Wyandotte Cave	147.18	18	P	PKPbc	15 59 48.3	-0.4
	baz=337						
WCI	Wyandotte Cave	147.18	18	*e*PKPbc	PKPbc	15 59 48.8	0.0
WCI	Wyandotte Cave	147.18	18	*e*PKP2	PKPbc	15 59 48.8	0.0
S46A	Don Dixon Farm	147.21	20	P	PKPbc	15 59 48.3	-0.5
	baz=334						
MCWV	Mont Chateau	147.28	8	P	PKPbc	15 59 48.7	-0.3
	baz=349						
MCWV	Mont Chateau	147.28	8	*e*PKPdf	PKPdf	15 59 47.3	+0.6
MIAR	Mount Ida	147.35	31	P	PKPbc	15 59 49.8	+0.4
	baz=322,SNR=10						
MIAR	Mount Ida	147.35	31	*e*PKPbc	PKPbc	15 59 49.2	-0.2
MIAR	Mount Ida	147.35	31	*e*PKP2	PKPbc	15 59 49.2	-0.2
V42A	Cord	147.38	27	P	PKPbc	15 59 50.1	+0.7
	baz=327,SNR=10						
PSUB	Penn St. - Bra	147.41	2	*e*PKPbc	PKPbc	15 59 49.7	+0.3
W41B	Gary Mavity, V	147.50	29	P	PKPbc	15 59 49.9	+0.1
	baz=325						
T46A	Princeton	147.72	21	P	PKPbc	15 59 50.3	0.0
	baz=334,SNR=12						
X40A	Basin Creek Fa	147.77	30	P	PKPbc	15 59 50.3	-0.2
	baz=323						
S48A	Wiedeman Farm,	147.78	18	P	PKPbc	15 59 50.4	0.0
	baz=337,SNR=8.7						
T47A	Sharon Grove	148.05	20	P	PKPbc	15 59 51.2	0.0
	baz=335						
T47A	Sharon Grove	148.05	20	*e*PKPbc	PKPbc	15 59 51.6	+0.4
833A	Chaparral WMA,	148.09	46	P	PKPbc	15 59 52.3	+0.7
	baz=306						
T48A	Bowling Green	148.17	19	P	PKPbc	15 59 51.6	+0.2
	baz=336						
U46A	Springville	148.23	22	P	PKPbc	15 59 51.9	+0.3
	baz=333						
Y41A	Eaglette Beard	148.37	30	P	PKPbc	15 59 52.5	+0.4
	baz=323						
T49A	Edmonton	148.45	18	P	PKPbc	15 59 52.4	+0.2
	baz=338,SNR=6.6						
U47A	Clarksville	148.48	21	P	PKPbc	15 59 52.7	+0.4
	baz=334,SNR=12						
S51A	Beattyville	148.49	15	P	PKPbc	15 59 52.1	-0.2
	baz=342						
WVT	Waverly	148.56	22	P	PKPbc	15 59 52.9	+0.4
	baz=333						
WVT	Waverly	148.56	22	*e*PKPbc	PKPbc	15 59 52.7	+0.1
S52A	Salyersville	148.58	14	P	PKPbc	15 59 52.6	0.0
	baz=342						
U48A	Cassie Pea, Po	148.67	20	P	PKPbc	15 59 53.0	+0.2
	baz=336,SNR=8.0						
T50A	Nancy	148.73	17	P	PKPbc	15 59 52.5	-0.4
	baz=339						
V46A	Holladay	148.74	23	P	PKPbc	15 59 53.0	0.0
	baz=332						
W45A	Hickory Valley	148.88	25	P	PKPbc	15 59 53.7	+0.3
	baz=330						
U49A	Red Boiling Sp	148.92	19	P	PKPbc	15 59 53.7	+0.3
	baz=337						
V47A	Nunnelly	148.94	22	P	PKPbc	15 59 53.4	-0.1
	baz=333,SNR=8.4						
IP04	Greensprings	149.05	6	*e*PKPbc	PKPbc	15 59 53.6	-0.1
T52A	Hallie	149.14	14	P	PKPbc	15 59 53.9	-0.1
	baz=342						
Y43A	Makayla and Ka	149.16	28	P	PKPbc	15 59 54.2	+0.1
	baz=326						
W46A	Michie	149.23	24	P	PKPbc	15 59 53.8	-0.4
	baz=331						
V48A	Smith Brothers	149.27	21	P	PKPbc	15 59 54.2	-0.2
	baz=334,SNR=6.5						
OXF	Oxford	149.34	26	P	PKPbc	15 59 54.2	-0.3
	baz=329						
OXF	Oxford	149.34	26	*e*PKPbc	PKPbc	15 59 52.6	-1.9
OXF	Oxford	149.34	26	*e*PKP2	PKPbc	15 59 52.6	-1.9
W47A	Westpoint	149.43	22	P	PKPbc	15 59 54.6	-0.1
	baz=333,SNR=16						
Y44A	Strider, Charl	149.45	27	P	PKPbc	15 59 54.7	-0.1
	baz=327,SNR=6.8						
JSRW	J. Sargeant Re	149.47	6	*e*PKPbc	PKPbc	15 59 54.4	-0.4
PLAL	Pickwick Lake	149.48	23	*e*PKPbc	PKPbc	15 59 54.3	-0.6
TZTN	Tazewell	149.53	15	P	PKPbc	15 59 54.9	-0.1
	baz=341						
TZTN	Tazewell	149.53	15	*e*PKPbc	PKPbc	15 59 55.0	+0.1
V49A	McMinnville	149.56	19	P	PKPbc	15 59 55.0	-0.1
	baz=336						
BLA	Blacksburg	149.58	10	P	PKPbc	15 59 55.1	-0.1
	baz=347						
X46A	Booneville	149.65	24	P	PKPbc	15 59 55.2	-0.1
	baz=330						
W48A	Pulaski	149.77	21	P	PKPbc	15 59 55.5	-0.1
	baz=334,SNR=12						
Y45A	Yeager Farm, C	149.83	26	P	PKPbc	15 59 55.6	-0.1
	baz=328,SNR=7.5						
V50A	Pikevile	149.91	18	P	PKPbc	15 59 55.9	0.0
	baz=338,SNR=5.8						
LNIG	Linares	149.94	51	*e*PKPbc	PKPbc	15 59 56.5	+0.2
X47A	Russelville	149.97	23	P	PKPbc	15 59 55.7	-0.4
	baz=332						
V51A	Loudon	150.01	17	P	PKPbc	15 59 56.2	0.0
	baz=339						
W49A	Belvidere	150.03	20	P	PKPbc	15 59 56.3	+0.1
	baz=335						
341A	Kurthwood	150.04	34	P	PKPbc	15 59 56.4	0.0
	baz=319						
SWET	Sewanee	150.05	20	*e*PKPbc	PKPbc	15 59 56.0	-0.3
Y46A	Houston	150.11	25	P	PKPbc	15 59 56.6	+0.2
	baz=329						
V52A	Sevierville	150.18	16	P	PKPbc	15 59 57.1	+0.5
	baz=341,SNR=7.8						
V52A	Sevierville	150.18	16	*e*PKPbc	PKPbc	15 59 56.6	0.0
CPCT	Cooper Cave	150.29	18	*e*PKPbc	PKPbc	15 59 56.9	0.0
TKL	Tuckaleechee C	150.31	16	PKPbc	PKPbc	15 59 57.4	+0.5
	comp=Z,6.8nm,0.5s,baz=198,slow=3.2,SNR=18						
TKL	Tuckaleechee C	150.31	16	*e*PKPbc	PKPbc	15 59 57.1	+0.3
TKL	Tuckaleechee C	150.31	16	*e*PKP2	PKPbc	15 59 57.2	+0.3
X48A	Hartselle	150.34	22	P	PKPbc	15 59 57.0	+0.1
	baz=333,SNR=9.1						
X48A	Hartselle	150.34	22	*e*PKPbc	PKPbc	15 59 56.7	-0.3
X48A				*e*PKPab	PKPab	16 00 02.8	-0.6
Y47A	UCPARC, Winfie	150.51	24	P	PKPbc	15 59 57.5	+0.1
	baz=331,SNR=5.8						
X49A	Woodville	150.55	21	P	PKPbc	15 59 57.5	0.0
	baz=334						
V53A	Saluda	150.55	15	P	PKPbc	15 59 57.3	-0.2
	baz=342						
145A	Houston Renfro	150.71	28	P	PKPbc	15 59 57.5	-0.4
	baz=326						
Y48A	Jasper	150.77	23	P	PKPbc	15 59 57.7	-0.3
	baz=332						
W52A	Murphy	150.79	17	P	PKPbc	15 59 58.1	0.0
	baz=340						
W52A	Murphy	150.79	17	*e*PKPbc	PKPbc	15 59 58.5	+0.4
W53A	Cullowhee	150.93	16	P	PKPbc	15 59 58.9	+0.4
	baz=341						
X51A	Calhoun	151.00	19	P	PKPbc	15 59 59.0	+0.4
	baz=337						
Z47A	Carrollton	151.03	25	P	PKPbc	15 59 59.2	+0.6
	baz=330						
Z48A	Northport	151.09	24	P	PKPbc	15 59 58.8	0.0
	baz=331						
Y49A	Blount Mountai	151.11	22	P	PKPbc	15 59 58.8	-0.1
	baz=334						
Y49A	Blount Mountai	151.11	22	*e*PKPbc	PKPbc	15 59 58.7	-0.1
X52A	Dahlonega	151.26	17	P	PKPbc	15 59 59.5	+0.3
	baz=339						
Y50A	Piedmont	151.32	21	P	PKPbc	15 59 59.2	-0.1
	baz=335,SNR=7.3						
147A	Livingston	151.40	26	*e*PKPab	PKPab	16 00 08.1	+0.3
KMSC	Kings Mountain	151.41	13	P	PKPbc	15 59 59.7	+0.3
	baz=345						
X53A	Estanollee	151.52	16	P	PKPbc	16 00 00.1	+0.4
	baz=340						
Y51A	Rockmart	151.54	20	P	PKPbc	15 59 59.6	-0.3
	baz=336,SNR=5.7						
LRAL	Lakeview Retre	151.61	23	P	PKPbc	15 59 59.7	-0.3
	baz=332						
LRAL	Lakeview Retre	151.61	23	*e*PKPbc	PKPbc	15 59 60.0	0.0
Z50A	Ashland	151.83	22	P	PKPbc	16 00 00.2	-0.3
	baz=334,SNR=9.7						
Z50A	Ashland	151.83	22	*e*PKPab	PKPab	16 00 09.5	-0.1
Y52A	Lilburn	151.90	18	P	PKPbc	16 00 01.7	+1.0
	baz=338						
Y52A	Lilburn	151.90	18	*e*PKPbc	PKPbc	16 00 01.3	+0.7
Y53A	Monroe	152.05	17	P	PKPbc	16 00 01.2	+0.2
	baz=339						
149A	Jones	152.08	24	P	PKPbc	16 00 01.5	+0.4
	baz=332						
Y54A	Tignall	152.29	16	P	PKPbc	16 00 01.3	-0.2
	baz=341						
347A	Saraland	152.36	28	P	PKPbc	16 00 01.9	+0.2
	baz=328						
150A	Eclectic	152.37	22	P	PKPbc	16 00 01.7	0.0
	baz=334						
Z52A	Williamson	152.41	19	P	PKPbc	16 00 02.2	+0.4
	baz=337						
249A	Camden	152.49	25	P	PKPbc	16 00 02.6	+0.6
	baz=331						
GOGA	Godfrey	152.50	17	P	PKPbc	16 00 02.5	+0.6
	baz=339						
GOGA	Godfrey	152.50	17	*e*PKPbc	PKPbc	16 00 01.5	-0.5
GOGA	Godfrey	152.50	17	*e*PKIKP	PKPbc	16 00 01.5	-0.5
Z53A	Monticello	152.59	18	P	PKPbc	16 00 02.5	+0.3
	baz=339						
152A	Waverly Hall	152.78	20	P	PKPbc	16 00 02.8	+0.1
	baz=336						
Z54A	Sparta	152.84	16	P	PKPbc	16 00 03.1	+0.3
	baz=340						
251A	Midway	153.06	22	P	PKPbc	16 00 03.9	+0.6
	baz=334						
448A	Bay Minette	153.07	27	P	PKPbc	16 00 02.9	-0.3
	baz=328						

IDC 24 15:40:56.9±8.7, 30°.93S×179°.10W, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.5/41, mbtmp3.7/2, Error ellipse: s-maj=370.1km s-min=60.1km az=157.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.14	268	P	P	15 48 50.0	-1.3
	1.0nm,0.8s,baz=110,slow=8.2,SNR=4.2						
WRA	Warramunga Arr	43.18	273	P	P	15 49 00.5	+0.8
	0.8nm,0.8s,baz=113,slow=7.9,SNR=3.3						
FINES	FINESS Array B	145.30	339	PKPbc	PKPbc	16 00 34.7	-0.9
	2.9nm,0.9s,baz=50,slow=4.3,SNR=5.3						

IDC 24 16:24:59.5±1.9, 2°.60N×127°.04E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.3/53, mbtmp3.4/4, MS2.8/1, Ms1 2.8/1, ms1mx2.2/30, Error ellipse: s-maj=178.7km s-min=20.4km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.52	163	P	P	16 30 10.5	-1.0
	0.7nm,0.6s,baz=341,slow=10.0,SNR=8.8						
ASAR	Alice Springs	26.95	166	P	P	16 30 42.5	-0.4
	0.1nm,0.3s,baz=343,slow=6.8,SNR=7.0						
MJAR	Matsushiro Arr	35.31	16	LR	LR	16 47 22.5	
	comp=Z,14nm,18.5s,baz=245,slow=38						
MKAR	Makanchi Array	58.65	326	P	P	16 34 59.4	+0.7
	0.1nm,0.4s,baz=123,slow=7.9,SNR=4.0						
KURBB	Kurchatov Arra	62.85	328	P	P	16 35 27.2	+0.1
	0.3nm,0.6s,baz=138,slow=6.9,SNR=5.4						

TAP 24 16:55:05.2, 24°.86N×121°.93E, h12km, ML1.2, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		0.01	173	P	Pg	16 55 07.9	+0.6
	baz=145						
EGS				*i* S	Sg	16 55 09.6	+0.8
	baz=145						
TIPB	Shuangxi	0.15	320	*i* P	Pb	16 55 09.6	-0.4
	baz=319						
TIPB				S	Sg	16 55 12.4	+1.1
	baz=319						
TWB1	Santiao Chiao	0.16	20	P	Pb	16 55 09.9	-0.3
	baz=22						
TWB1				S	Sg	16 55 12.2	+0.7
	baz=22						
ILA	Ilan	0.19	240	*e*P	Pg	16 55 09.7	+0.3
	baz=238						
TWC	Suao	0.26	196	*e*P	Pb	16 55 11.6	-0.3
	baz=194						
TWE	Neicheng	0.28	240	*e*P	Pb	16 55 12.3	+0.2
	baz=237						
TWE				*e*S	Sb	16 55 16.0	-0.7
	baz=237						
NWLT	Wulai	0.40	258	*e*P	Pg	16 55 12.5	-0.6
	baz=257						
NWLT				*e*S	Sb	16 55 20.2	-0.1
	baz=257						

*ISCJB **24** 17:00:20.4±1.0, 31°.84S±0°.03×69°.21W±0°.05, h112km±8km, Error ellipse: s-maj=7.6km s-min=4.8km az=13.3*
*GUC **24** 17:00:20.4±0.6, 31°.89S×69°.89W, h160km±11km, ML3.3*
*SJA **24** 17:00:20.3±0.8, 31°.81S×69°.15W, h109km±4km, ML3.4, MW3.6*

ISC 24 17:00:20.6±2.0, 31°.84S±0°.04×69°.22W±0°.07, h111km±15km, n16, σ0°.81/31, 5C-1D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLS	Leoncito	0.08	301	*e*P	Pn	17 00 36.6	+0.3
RTLS				IAML		17 00 37.3	
	comp=Z,986nm,0.2s						
RTLS				*e*S	Sn	17 00 49.2	+1.3
ZON	Zonda	0.55	58	*e*P	Pn	17 00 37.8	-0.2
ZON				*e*S	Sn	17 00 50.2	-0.7
RTCV	Cerro Valdivia	0.58	92	*e*P	Pn	17 00 38.2	0.0
RTCV				*e*S	Sn	17 00 50.5	-0.8
SJA	San Juan	0.64	61	*e*P	Pn	17 00 37.9	-0.8
SJA				*e*S	Sn	17 00 51.7	-0.5
RTLL	Cerro Villicun	0.81	52	*e*P	Pn	17 00 40.1	0.0
RTLL				*e*S	Sn	17 00 53.9	-0.9
ASAL	Salagasta	0.82	157	*e*P	Pn	17 00 40.5	+0.3
ASAL				*e*S	Sn	17 00 55.7	+0.7
AMOG	MOGNA	1.09	35⇓	*e*P	Pn	17 00 43.0	+0.1
AMOG				*e*S	Sn	17 00 59.1	-0.6
AAGR	Agrelo	1.29	165	*e*P	Pn	17 00 45.3	+0.2
AAGR				*e*S	Sn	17 01 04.5	+0.9
ACDV	Cuesta del Vie	1.67	3	*e*P	Pn	17 00 50.2	+0.5
ACDV				IAML		17 01 13.9	
	comp=Z,292nm,0.5s						
AROD	Rodeo	1.68	352	*e*P	Pn	17 00 51.0	+1.0
AROD				*e*S	Sn	17 01 12.9	+0.6
FCH	Farellones	1.74	211⇑	*i*P	Pn	17 00 51.5	+0.9
FCH				*i* S	Sn	17 01 15.4	+1.9
FCH				IAML		17 01 21.5	
	comp=N,143nm,0.2s						
PEL	Peldehue	1.80	223⇑	*i*P	Pn	17 00 50.7	-0.4
PEL				*i* S	Sn	17 01 12.8	-1.6
PEL				IAML		17 01 18.6	
	comp=E,177nm,0.6s						
ROCH	El Roble	1.89	233	*e*P	Pn	17 00 52.2	-0.3
ROCH				*i* S	Sn	17 01 15.3	-1.4
ROCH				IAML		17 01 18.4	
	comp=E,506nm,0.3s						
CLCH	Cerro Calan	1.91	215	*e*P	Pn	17 00 52.1	-0.5
CLCH				*i* S	Sn	17 01 16.4	-0.6
CLCH				IAML		17 01 19.4	
	comp=E,474nm,0.3s						
GO04	Tololo Observa	2.15	320⇑	*i*P	Pn	17 00 55.6	-0.1
GO04				⇑*i*P		17 00 55.7	
GO04				*i* S	Sn	17 01 22.8	+0.3
GO04				*i* S		17 01 23.0	
TLL	Tololo Astrono	2.15	320⇑	*i*P	Pn	17 00 55.8	0.0
TLL				*i* S	Sn	17 01 22.4	-0.3
TLL				IAML		17 01 26.0	
	comp=N,468nm,0.3s						

*ISCJB **24** 17:09:59.6±0.3, 41°.13N±0°.03×140°.08E±0°.07, h166km±2km, mb3.6/19, Error ellipse: s-maj=9.0km s-min=4.7km az=5.0*
*IDC **24** 17:10:00.1±1.2, 41°.19N×140°.05E, h153km±11km, mb3.5/18, mb1 3.6/22, mb1mx3.4/73, mbtmp3.9/22, Error ellipse: s-maj=13.7km s-min=9.6km az=126.0*
*JMA **24** 17:10:01.0±0.1, 41°.17N×140°.13E, h161km±1km, M3.4*

ISC 24 17:10:00.6±0.6, 41°.11N±0°.04×140°.08E±0°.06, h162km±5km, n48, σ1°.34/57, mb3.6/19, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSI2	Shiura 2	0.26	100	P	Pn	17 10 22.8	+0.3
JSI2				S	Sn	17 10 39.2	0.0
JSR	Shiriuchi	0.50	31	P	Pn	17 10

MA2	Magadan	19.66	16	P	P	17 14 15.5	-1.2
	0.2nm,0.3s,baz=201,slow=17,SNR=3.7						
H11N2	WAKE ISLAND Hy 31.23	125		T	T	17 48 44.0	
	baz=328,slow=76,SNR=8.4						
H11N1	WAKE ISLAND Hy 31.24	125		T	T	17 48 45.2	
	baz=328,slow=76,SNR=5.0						
H11N3	WAKE ISLAND Hy 31.25	125		T	T	17 48 46.3	
	baz=328,slow=76,SNR=6.8						
H11S1	WAKE ISLAND Hy 32.04	127		T	T	17 49 51.6	
	baz=328,slow=76,SNR=6.9						
H11S3	WAKE ISLAND Hy 32.04	127		T	T	17 49 52.4	
	baz=328,slow=76,SNR=3.5						
H11S2	WAKE ISLAND Hy 32.05	127		T	T	17 49 52.6	
	baz=328,slow=76,SNR=5.1						
ZALV	Zalesovo Beam	38.48	309	P	P	17 17 06.2	-0.4
	0.5nm,0.5s,baz=98,slow=6.8,SNR=2.6						
MKAR	Makanchi Array	41.18	298	P	P	17 17 28.9	-0.2
	0.4nm,0.6s,baz=82,slow=11,SNR=5.3						
CMAR	Chiang Mai Arr	41.73	250	P	P	17 17 34.4	+0.7
	0.7nm,0.6s,baz=40,slow=7.7,SNR=5.0						
KURBB	Kurchatov Arra	42.76	304	P	P	17 17 41.4	-0.2
	0.8nm,0.5s,baz=90,slow=7.8,SNR=9.9						
ILAR	Eielson Array	46.67	34	P	P	17 18 12.9	+0.5
	1.9nm,0.6s,baz=274,slow=6.6,SNR=23						
BVAR	Borovoye Array	47.13	309	P	P	17 18 16.5	+0.4
	0.9nm,0.3s,baz=58,slow=8.7,SNR=8.2						
INK	Inuvik	51.27	28	P	P	17 18 48.0	+0.7
	2.6nm,0.5s,baz=300,slow=8.8,SNR=8.7						
AKTO	Aktyubinsk	55.23	310	P	P	17 19 15.8	-0.7
	0.5nm,0.5s,baz=63,slow=9.0,SNR=3.3						
ARCES	ARCESS Array B	59.83	338	P	P	17 19 47.2	-1.1
	1.9nm,1.0s,baz=58,slow=8.6,SNR=5.1						
YKA	Yellowknife Ar	60.83	31	P	P	17 19 55.5	+0.3
	0.5nm,0.5s,baz=305,slow=6.5,SNR=3.5						
WRA	Warramunga Arr	60.97	186	P	P	17 19 56.5	-0.2
	0.6nm,0.5s,baz=3.6,slow=7.1,SNR=15						
ASAR	Alice Springs	64.69	186	P	P	17 20 21.5	+0.3
	0.4nm,0.8s,baz=0.0,slow=4.7,SNR=3.8						
FINES	FINESS Array B	64.74	331	P	P	17 20 20.7	-0.4
	2.7nm,0.6s,baz=28,slow=12,SNR=17						
HFS	Hagfors	69.96	335	P	P	17 20 53.3	-0.6
	1.7nm,0.3s,baz=57,slow=5.3,SNR=26						
NB2	NORSAR Subarra	70.04	336	P	P	17 20 54.1	-0.3
	comp=Z,0.7nm,0.4s,baz=38,slow=6.5						
NVAR	Mina Array Bea	73.39	53	P	P	17 21 16.1	+1.1
	comp=Z,0.8nm,0.7s,baz=298,slow=5.5,SNR=5.3						
PDAR	Pinedale Array	75.56	45	P	P	17 21 28.0	+0.5
	comp=Z,0.6nm,0.5s,baz=266,slow=0.5,SNR=7.4						
EKA	Eskdalemuir Ar	78.96	340	P	P	17 21 45.9	0.0
	comp=Z,0.2nm,0.3s,baz=17,slow=5.2,SNR=4.8						
TXAR	Lajitas Array	88.44	52	P	P	17 22 35.2	+0.6
	comp=Z,0.1nm,0.5s,baz=323,slow=1.4,SNR=3.4						
LPAZ	La Paz	145.30	53	PKPbc	PKPdf	17 29 19.8	-0.3
	comp=Z,0.3nm,0.4s,baz=27,slow=4.5,SNR=2.9						

*NEIC **24** 17:12:23.2±1.2, 23°.61S×177°.02W, h75km±12km, mb4.1/1, Error ellipse: s-maj=13.5km s-min=9.5km az=132.0*
*ISCJB **24** 17:12:24.9±0.5, 23°.84S±0°.06×177°.06W±0°.09, h100km, mb4.2/14, Error ellipse: s-maj=11.6km s-min=8.9km az=10.1*
*IDC **24** 17:12:25.2±3.1, 23°.79S×177°.01W, h92km±26km, mb4.0/13, mb1 4.2/16, mb1mx4.0/46, mbtmp4.4/16, MS3.0/5, Ms1 3.0/5, ms1mx2.7/52, Error ellipse: s-maj=18.7km s-min=15.3km az=5.0*

ISC 24 17:12:25.8±0.5, 23°.83S±0°.08×176°.9W±0°.1, h100km, n35, σ1§26/33, mb4.2/14, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	5.48	189	P	Pn	17 13 44.6	-0.4
	14nm,0.3s,baz=171,slow=20,SNR=2.2						
RAO				S	Sn	17 14 46.2	-0.5
	28nm,0.3s,baz=90,slow=20,SNR=3.2						
AFI	Afiamalu	10.99	27	P	Pn	17 14 53.8	-6.3
	3.6nm,0.3s,baz=175,slow=12,SNR=5.0						
AFI				S	Sn	17 16 41.1	-20
	2.3nm,0.3s,baz=16,slow=18,SNR=2.6						
URZ	Urewera	15.27	198	P	P	17 15 57.3	-1.1
	0.7nm,0.3s,baz=251,slow=4.1,SNR=8.9						
URZ				S	Sn	17 18 29.1	-15
	0.6nm,0.3s,baz=131,slow=20,SNR=4.0						
DZM	Mont Dzumac	15.44	273	LR	LR	17 19 56.2	
	comp=Z,59nm,19.4s,baz=218,slow=29						
DZM	Mont Dzumac	15.44	273	eP	P	17 16 04.7	+4.1
	56nm,1.1s						
DZM				eLR	LR	17 19 31.4	
	120nm,30.1s						
RAR	Rarotonga	16.04	84	P	P	17 16 07.2	0.0
	2.3nm,0.3s,baz=236,slow=8.5,SNR=3.3						
RAR				S	Sn	17 18 48.5	-15
	3.7nm,0.3s,baz=82,slow=18,SNR=5.1						
RAR				LR	LR	17 21 29.4	
	comp=Z,60nm,20.5s,baz=282,slow=34						
PPT2	Papeete2	26.28	82	eLR	LR	17 24 12.5	
	94nm,26.8s						
PPT	Papeete	26.28	81	LR	LR	17 25 51.4	
	comp=Z,31nm,19.8s,baz=344,slow=31						
HNR	Honiara	26.34	299	LR	LR	17 26 10.4	
	comp=Z,53nm,21.1s,baz=156,slow=32						
CTA	Charters Tower	34.31	269	P	P	17 19 02.9	-0.1
	11nm,0.3s,baz=92,slow=12,SNR=55						
PMG	Port Moresby	37.17	287	P	P	17 19 27.3	-0.1
	11nm,0.8s,baz=143,slow=5.1,SNR=5.5						
STKA	Stephens Creek	37.38	248	P	P	17 19 29.4	+0.4
	1.6nm,0.4s,baz=101,slow=11,SNR=9.9						
ASAR	Alice Springs	44.84	260	P	P	17 20 29.0	-1.4
	1.4nm,0.4s,baz=91,slow=7.5,SNR=49						
ASAR				PcP	PcP	17 22 11.0	+0.4
	0.4nm,0.6s,baz=115,slow=3.8,SNR=2.5						
WRAB	Tennant Creek	45.23	265	eP	P	17 20 31.8	-1.6
	1.2nm,0.4s						
WRA	Warramunga Arr	45.24	265	P	P	17 20 31.9	-1.6
	2.8nm,0.4s,baz=92,slow=8.5,SNR=79						
WRA				PcP	PcP	17 22 11.3	-0.7
	0.6nm,0.5s,baz=98,slow=3.0,SNR=2.6						
JAY	Jayapura	46.12	291	P	P	17 20 39.7	-0.8
	5.3nm,0.8s,baz=62,slow=1.3,SNR=4.2						
VNDA	Vanda	54.71	186	P	P	17 21 46.0	+1.7
	0.5nm,0.5s,baz=12,slow=4.0,SNR=4.6						
QSPA	South Pole Qui	66.26	180	P	P	17 23 03.6	+0.5
	3.5nm,0.7s,baz=2.0,slow=1.6,SNR=10						
MAW	Mawson	78.79	200	P	P	17 24 17.6	+0.4
	1.2nm,0.4s,baz=143,slow=5.7,SNR=4.9						
KSRS	Korea Array	80.04	318	LR	LR	17 56 06.0	
	comp=Z,6.9nm,20.8s,baz=230,slow=33						
NVAR	Mina Array Bea	82.76	43	P	P	17 24 39.9	+0.8
	0.9nm,0.6s,baz=225,slow=7.1,SNR=9.5						
TXAR	Lajitas Array	88.00	57	P	P	17 25 06.2	+1.1
	1.3nm,0.8s,baz=211,slow=7.7,SNR=18						
PDAR	Pinedale Array	90.69	43	P	P	17 25 17.6	0.0
	0.7nm,0.8s,baz=257,slow=4.0,SNR=5.8						
CMAR	Chiang Mai Arr	92.17	289	P	P	17 25 25.7	+1.0
	0.6nm,0.5s,baz=147,slow=3.5,SNR=6.0						
BVAR	Borovoye Array	122.26	319	PKP	PKPdf	17 31 08.0	-0.7
	0.2nm,0.3s,baz=112,slow=3.3,SNR=5.2						
ARCES	ARCESS Array B	132.36	350	PKhKP	PKPpre	17 31 23.5	
	1.0nm,0.8s,baz=22,slow=5.1,SNR=2.4						
ARCES				PKP	PKiKP	17 31 29.7	+1.0
	1.2nm,0.8s,baz=36,slow=4.7,SNR=5.0						
FINES	FINESS Array B	139.24	343	PKhKP	PKPpre	17 31 29.8	
	2.3nm,0.9s,baz=81,slow=2.5,SNR=4.5						
FINES				PKP	PKiKP	17 31 41.5	-1.4
	1.5nm,0.8s,baz=106,slow=4.2,SNR=7.5						
HFS	Hagfors	142.97	351	PKhKP	PKPpre	17 31 43.5	
	1.7nm,0.4s,baz=57,slow=5.3,SNR=25						
AKASG	Malin Array Be	146.40	330	PKPbc	PKPbc	17 31 53.6	-1.3
	2.7nm,0.4s,baz=41,slow=4.5,SNR=14						
EKA	Eskdalemuir Ar	148.19	7	PKPbc	PKPbc	17 31 58.7	-1.0
	1.4nm,0.8s,baz=353,slow=3.6,SNR=3.8						
BRTR	Keskin Array B	149.77	309	PKPbc	PKPbc	17 32 02.5	-2.0
	0.6nm,0.5s,baz=151,slow=4.7,SNR=4.4						
MMAI	Mount Meron Ar	150.25	295	PKPbc	PKPbc	17 32 05.5	-0.2
	1.7nm,0.4s,baz=85,slow=6.4,SNR=9.2						
CLL	Collm	151.52	347	ePKPdf	PKPdf	17 32 03.0	+1.3
CLL				ePKPbc	PKiKP	17 32 08.0	-0.4
CLL				iPKPab	PKPab	17 32 15.0	-1.7
	comp=Z,6.0nm,0.8s						
CLL				LmV		19 55 00.0	
	comp=Z,200nm,21.4s						
CLL				LmV		20 04 00.0	
	comp=Z,200nm,18.2s						
GERES	GERESS Array B	153.66	344	PKPbc	PKPbc	17 32 13.3	+0.3
	comp=Z,0.2nm,0.5s,baz=354,slow=1.0,SNR=3.4						
TORD	Torodi Ar. Bea	169.29	173	PKPab	PKPab	17 33 34.4	-0.3
	comp=Z,0.6nm,0.7s,baz=185,slow=5.2,SNR=2.8						

*ISK **24** 17:17:45.9, 38°.62N×43°.30E, h31km, MD2.5/1*
*ISCJB **24** 17:17:46.6±1.0, 38°.66N±0°.06×43°.23E±0°.08, h29km±9km, Error ellipse: s-maj=10.8km s-min=8.8km az=31.0*
*CSEM **24** 17:17:46.1±0.2, 38°.66N×43°.25E, h30km, MD2.5, Error ellipse: s-maj=6.8km s-min=6.4km az=94.0*
*DDA **24** 17:17:47.1, 38°.71N×43°.19E, h7km, Ml2.6*

ISC 24 17:17:46.3±1.1, 38°.66N±0°.04×43°.23E±0°.04, h30km±9km, n16, σ0§45/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	Van	0.14	119	PG	Pn	17 17 52.2	-0.4
VANB				SG	Sb	17 17 56.4	+0.4
VANB	Van	0.14	119	ePg	Pn	17 17 52.2	-0.4
VANB				eSg	Sb	17 17 56.4	+0.4
TVAN	Van	0.19	135	iP	Pb	17 17 52.4	-0.3
TVAN	Van	0.19	135	P	Pb	17 17 52.4	-0.3
GEVA	Gevas	0.38	201	iP	Pb	17 17 55.2	+0.2
GEVA	Gevas	0.38	201	P	Pb	17 17 55.2	+0.2
VMUR	Van-Muradiye	0.42	39	iP	Pb	17 17 55.5	-0.1
VMUR	Van-Muradiye	0.42	39	P	Pb	17 17 55.5	-0.1
ADCV	BITLIS_Adilcev	0.42	290	iP	Pb	17 17 55.0	-0.6
ADCV	BITLIS_Adilcev	0.42	290	P	Pb	17 17 55.0	-0.6
TUTA	Tutak	0.81	336	iP	Pn	17 18 01.4	-0.4
TUTA	Tutak	0.81	336	P	Pn	17 18 01.4	-0.4
AGRB	Hanur-Agry	0.93	348	PG	Pb	17 18 04.1	+0.1
AGRB				SG	Sb	17 18 16.8	+0.8
AGRB	Hanur-Agry	0.93	348	ePg	Pb	17 18 04.1	+0.1
AGRB				eSg	Sb	17 18 16.8	+0.8
GURO	Guroymak-BITLI	0.95	263	PG	Pb	17 18 04.2	0.0
GURO				SG	Sb	17 18 17.0	+0.5
GURO	Guroymak-BITLI	0.95	263	ePg	Pb	17 18 04.2	0.0
GURO				eSg	Sb	17 18 17.0	+0.5

*ISCJB **24** 17:21:12.1±0.6, 25°.2S±0°.1×179°.3E±0°.1, h507km, mb3.5/10, Error ellipse: s-maj=16.0km s-min=11.1km az=44.7*
*IDC **24** 17:21:12.7±1.3, 25°.18S×179°.42E, h504km±15km, mb3.2/10, mb1 3.5/11, mb1mx3.2/41, mbtmp4.1/11, Error ellipse: s-maj=19.3km s-min=13.7km az=171.0*

ISC 24 17:21:12.8±0.6, 25°.3S±0°.1×179°.5E±0°.1, h507km, n24, σ1§41/23, mb3.6/10, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	4.58	150	P	P	17 22 37.9	+1.6
	34nm,0.3s,baz=104,slow=19,SNR=2.9						
RAO				S	S	17 23 46.2	+1.6
	32nm,0.3s,baz=41,slow=20,SNR=3.3						
DZM	Mont Dzumac	12.37	282	P	P	17 23 58.7	+3.2
	1.0nm,0.3s,baz=73,slow=16,SNR=8.2						
URZ	Urewera	13.09	188	P	P	17 24 00.0	-2.6
	2.3nm,0.3s,baz=40,slow=2.3,SNR=18						
CTA	Charters Tower	31.04	273	P	P	17 26 47.5	-1.4
	2.9nm,0.5s,baz=78,slow=9.3,SNR=3.6						
ASAR	Alice Springs	41.37	262	P	P	17 28 15.3	+1.0
	0.4nm,0.4s,baz=90,slow=6.7,SNR=25						
ASAR				S	S	17 33 52.6	+0.4
	0.6nm,0.8s,baz=101,slow=14,SNR=5.7						
WRA	Warramunga Arr	41.87	268	P	P	17 28 16.0	-2.3
	0.9nm,0.4s,baz=102,slow=8.3,SNR=11						
QSPA	South Pole Qui	64.80	180	P	P	17 31 01.6	+0.7
	2.0nm,0.6s,baz=68,slow=4.2,SNR=8.6						
MJAR	Matsushiro Arr	72.78	326	P	P	17 31 48.4	-0.9
	0.4nm,0.6s,baz=159,slow=3.4,SNR=4.0						
KSRS	Korea Array	79.01	321	P	P	17 32 23.5	-0.2
	0.6nm,0.6s,baz=149,slow=4.6,SNR=3.0						
PETK	Petropavlovsk-	80.33	347	P	P	17 32 31.1	+0.7
	1.4nm,0.8s,baz=94,slow=7.5,SNR=4.9						
NVAR	Mina Array Bea	86.07	44	P	P	17 32 59.9	+0.1
	1.0nm,0.7s,baz=225,slow=8.4,SNR=8.4						
TXAR	Lajitas Array	91.56	58	P	P	17 33 25.5	0.0
	1.0nm,0.8s,baz=214,slow=6.2,SNR=11						
ILAR	Eielson Array	93.48	14	P	P	17 33 32.0	-1.3
	0.4nm,0.9s,baz=198,slow=5.5,SNR=3.2						
KURBB	Kurchatov Arra	115.92	316	PKP	PKPdf	17 38 55.7	-1.6
	0.4nm,0.8s,baz=82,slow=2.0,SNR=4.0						
BVAR	Borovoye Array	121.16	318	PKP	PKPdf	17 39 07.0	-0.4
	0.7nm,0.5s,baz=162,slow=0.9,SNR=6.7						
ARCES	ARCESS Array B	133.14	348	PKP	PKPdf	17 39 29.8	+0.1
	0.9nm,0.7s,baz=42,slow=2.0,SNR=4.5						
FINES	FINESS Array B	139.60	341	PKhKP	PKPpre	17 39 33.5	
	2.4nm,1.0s,baz=89,slow=6.3,SNR=4.0						
NB2	NORSAR Subarra	143.37	350	PKP	PKPab	17 39 46.1	-0.6
	comp=Z,3.4nm,0.8s,baz=15,slow=3.2						
HFS	Hagfors	143.80	348	PKP	PKPbc	17 39 47.6	-0.7
	comp=Z,7.0nm,0.6s,baz=72,slow=4.7,SNR=27						
AKASG	Malin Array Be	145.86	326	PKPbc	PKPdf	17 39 53.9	+0.7
	comp=Z,1.0nm,0.5s,baz=40,slow=4.9,SNR=4.3						
MMAI	Mount Meron Ar	147.82	292	PKPbc	PKPbc	17 40 02.0	+1.2
	comp=Z,2.6nm,0.5s,baz=73,slow=5.0,SNR=6.5						
BRTR	Keskin Array B	148.01	305	PKPbc	PKPbc	17 40 01.3	+0.1
	comp=Z,0.7nm,0.7s,baz=148,slow=6.2,SNR=5.1						
EKA	Eskdalemuir Ar	149.92	3	PKPbc	PKPbc	17 40 04.3	-0.8
	comp=Z,0.5nm,0.5s,baz=348,slow=3.2,SNR=6.9						
TORD	Torodi Ar. Bea	167.75	190	PKPab	PKPab	17 41 31.0	-0.2
	comp=Z,0.8nm,0.7s,baz=202,slow=3.2,SNR=3.2						

*ISCJB **24** 17:46:42.9±0.6, 32°.53N±0°.02×97°.28W±0°.02, h7km±5km, mb3.7/5, MS2.7/1, Error ellipse: s-maj=3.3km s-min=3.0km az=164.7*
*NEIC **24** 17:46:44.5±0.2, 32°.47N×97°.29W, h5km, MN3.5, Error ellipse: s-maj=4.1km s-min=3.3km az=161.0*
NEIC Felt [IV] at Alvarado, Cleburne, Joshua and Keene; [III] at Burleson, Crowley, Grandview and Venus; [II] at Mansfield. Also felt at Covington, Flower Mound, Fort Worth, Godley, Hico, Itasca, Rio Vista and The Colony.
*IDC **24** 17:46:44.3±0.8, 32°.58N×97°.35W, h0km, mb3.8/5, mb1 4.1/10, mb1mx3.7/62, mbtmp3.7/10, ML3.8/5, MS2.8/5, Ms1 2.8/5, ms1mx2.5/58, Error ellipse: s-maj=17.7km s-min=8.6km az=153.0*

ISC 24 17:46:43.3±1.5, 32°.49N±0°.04×97°.26W±0°.04, h3km±11km, n152, σ1§54/192, mb3.8/5, Central Texas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHTX	Lake Whitney,	0.52	198	P	Pg	17 46 53.6	+0.3
	baz=17						
WHTX				S	Sg	17 46 60.0	-0.1
	baz=17						
WHTX	Lake Whitney,	0.52	198	ePg	Pg	17 46 53.6	+0.3
WHTX				eSg	Sg	17 46 57.7	-2.3
435B	Jarrell	1.72	189	P	Pn	17 47 14.5	+0.3
	baz=8.6						
435B				S	Sn	17 47 37.7	+0.9
	baz=8.6						
435B	Jarrell	1.72	189	ePn	Pn	17 47 14.7	+0.5
435B				eSn	Sn	17 47 38.0	+1.2
ABTX	Abilene, Hawle	2.01	274	P	Pn	17 47 18.8	+0.6
	baz=94						
ABTX				S	Sb	17 47 46.1	0.0
	baz=94						
ABTX	Abilene, Hawle	2.01	274	ePn	Pn	17 47 19.5	+1.3
ABTX				eSn	Sb	17 47 46.4	+0.3
NATX	Nacogdoches	2.33	108	P	Pn	17 47 23.7	+1.2
	baz=288						
NATX				S	Sn	17 47 53.2	+1.6
	baz=288						
NATX	Nacogdoches	2.33	108	ePn	Pn	17 47 24.8	+2.4
WMOK	Wichita Mounta	2.57	331	P	Pn	17 47 27.4	+1.4
	baz=151						
WMOK				S	Sn	17 47 58.9	+1.1
	baz=151						
WMOK	Wichita Mounta	2.57	331	ePn	Pn	17 47 27.6	+1.6
WMOK				eSn	Sb	17 48 03.0	+0.8
HKT	Hockley	2.81	154	ePn	Pn	17 47 31.0	+1.9
JCT	Junction City	2.95	228	P	Pn	17 47 31.2	+0.1
	baz=47						
JCT				S	Sn	17 48 06.5	-0.6
	baz=47						
JCT	Junction City	2.95	228	ePn	Pn	17 47 31.6	+0.5
JCT				eSn	Sn	17 48 04.4	-2.8
240A	Hunter Patters	3.00	98	P	Pn	17 47 32.7	+1.0
	baz=279						
240A				S	Sn	17 48 09.8	+1.5
	baz=279						
240A	Hunter Patters	3.00	98	ePn	Pn	17 47 33.2	+1.4
140A	Cam and Jess,	3.12	86	P	Pn	17 47 34.8	+1.4
	baz=268						
140A				S	Sn	17 48 12.6	+1.4
	baz=268						
140A	Cam and Jess,	3.12	86	ePn	Pn	17 47 35.0	+1.6
140A				eSn	Sn	17 48 11.4	+0.2
X39A	Fountain Ranch	3.31	52	P	Pn	17 47 37.9	+1.8
	baz=233,SNR=74						
X39A				S	Sn	17 48 17.4	+1.3
	baz=233						
Z40A	Long Farm, Mag	3.34	76	P	Pn	17 47 37.9	+1.5
	baz=257						
Z40A				S	Sn	17 48 17.7	+1.1
	baz=257						
TUL1	Leonard	3.62	19	P	Pn	17 47 41.6	+1.3
	baz=200						
TUL1	Leonard	3.62	19	ePn	Pn	17 47 42.1	+1.7
Y40A	Okolona	3.67	64	P	Pn	17 47 42.6	+1.7
	baz=246,SNR=30						
Y40A				S	Sn	17 48 24.6	-0.1
	baz=246						
341A	Kurthwood	3.67	107	P	Pn	17 47 42.1	+1.1
	baz=289						
341A				S	Sn	17 48 26.5	+1.7
	baz=289						
341A	Kurthwood	3.67	107	ePn	Pn	17 47 42.5	+1.6
341A				eSn	Sn	17 48 24.9	+0.1
141A	Papa Simpson,	3.68	87	P	Pn	17 47 42.0	+0.8
	baz=269						
141A				S	Sn	17 48 25.6	+0.5
	baz=269						
MIAR	Mount Ida	3.70	55	P	Pn	17 47 42.8	+1.5
	baz=237,SNR=32						
MIAR				S	Sn	17 48 26.6	+1.1
	baz=237						
MIAR	Mount Ida	3.70	55	ePn	Pn	17 47 42.9	+1.5
MIAR				eSn	Sn	17 48 26.3	+0.8
241A	Mo Tay, Goldon	3.71	96	P	Pn	17 47 42.5	+1.0
	baz=278						
241A				S	Sn	17 48 26.7	+0.9
	baz=278						
241A	Mo Tay, Goldon	3.71	96	ePn	Pn	17 47 42.5	+1.0
441A	DeRidder	3.88	115	P	Pn	17 47 44.4	+0.5
	baz=297						
441A				S	Sn	17 48 31.7	+1.7
	baz=297						
W39A	Magazine	3.96	46	P	Pn	17 47 47.1	+2.2
	baz=228						
W39A	Magazine	3.96	46	ePn	Pn	17 47 47.9	+3.0
Y41A	Eaglette Beard	4.14	69	P	Pn	17 47 48.7	+1.3
	baz=251						
X40A	Basin Creek Fa	4.20	61	P	Pn	17 47 49.7	+1.4
	baz=243,SNR=20						
X40A	Basin Creek Fa	4.20	61	ePn	Pn	17 47 49.7	+1.4
X40A				eSn	Sn	17 48 38.5	+0.6
541A	Lake Charles	4.25	124	P	Pn	17 47 49.7	+0.8
	baz=306						
541A	Lake Charles	4.25	124	eSn	Sn	17 48 32.9	-6.1
342A	Flagon Creek P	4.34	104	P	Pn	17 47 51.0	+0.8
	baz=286						
342A				S	Sn	17 48 42.8	+1.4
	baz=286						
342A	Flagon Creek P	4.34	104	ePn	Pn	17 47 51.9	+1.6
242A	Grayson	4.35	94	S	Sn	17 48 42.5	+1.0
	baz=277						
AMTX	Amarillo	4.39	304	P	Pn	17 47 52.2	+1.2
	baz=122						
AMTX	Amarillo	4.39	304	ePn	Pn	17 47 52.9	+2.0
W40A	Ferguson Farm,	4.41	51	P	Pn	17 47 53.3	+2.2
	baz=233						
W40A				S	Sn	17 48 45.1	+2.1
	baz=233						
W40A	Ferguson Farm,	4.41	51	ePn	Pn	17 47 53.6	+2.4
W40A				eSn	Sn	17 48 45.3	+2.3
X41A	Kaden, Bauxite	4.44	62	P	Pn	17 47 53.3	+1.7
	baz=244,SNR=21						
V39A	Pettigrew	4.49	41	P	Pn	17 47 54.2	+1.9
	baz=223						
142A	Monroe	4.49	88	S	Sn	17 48 44.7	-0.4
	baz=270						
Z42A	Norrel Spur, H	4.54	79	P	Pn	17 47 54.1	+1.2
	baz=261						
833A	Chaparral WMA,	4.54	204	P	Pn	17 47 53.7	+0.7
	baz=23						
833A	Chaparral WMA,	4.54	204	ePn	Pn	17 47 53.7	+0.7
HHAR	Hobbs	4.67	35	ePn	Pn	17 47 56.2	+1.4
HHAR				eSn	Sn	17 48 50.5	+0.9
UALR	University of	4.70	60	ePn	Pn	17 47 56.9	+1.8
Y42A	Garnett, Star	4.79	72	P	Pn	17 47 57.7	+1.5
	baz=255						
CCAR	Cane Creek	4.82	71	ePn	Pn	17 47 58.0	+1.2
MSTX	Muleshoe	4.85	289	P	Pn	17 47 58.6	+1.4
	baz=107						
MSTX	Muleshoe	4.85	289	ePn	Pn	17 47 58.9	+1.6
V40A	Witts Springs	4.95	47	P	Pn	17 48 01.1	+2.5
	baz=229,SNR=17						
V40A	Witts Springs	4.95	47	ePn	Pn	17 48 01.4	+2.8
143A	Socs Landing,	4.95	86	ePn	Pn	17 47 57.6	-0.9
W41B	Gary Mavity, V	4.96	56	P	Pn	17 48 00.6	+2.0
	baz=238,SNR=24						
W41B				S	Sn	17 48 57.8	+1.3
	baz=238						
W41B	Gary Mavity, V	4.96	56	ePn	Pn	17 48 00.7	+2.0
443A	Delano Plantat	4.98	109	P	Pn	17 48 00.2	+1.2
	baz=291						
U39A	Green Forest	4.98	38	P	Pn	17 48 00.7	+1.7
	baz=220,SNR=13						
WHAR	Wooly Hollow	4.99	55	ePn	Pn	17 48 01.

	baz=162							
CBKS	Cedar Bluff	6.62	343	*e*Pn		Pn	17 48 22.3	+0.7
R39A	Chumby, Stover	6.76	30	P		Pn	17 48 23.9	+0.5
	baz=212							
Q37A	Longview Farm,	6.77	19	P		Pn	17 48 23.8	+0.2
	baz=201							
T42A	Van Buren	6.80	47	P		Pn	17 48 25.4	+1.4
	baz=230,SNR=30							
T42A	Van Buren	6.80	47	*e*Pn		Pn	17 48 25.7	+1.7
T42A				*e*Sn		Sn	17 49 41.4	-0.6
X45A	UM Field Stati	6.86	72	P		Pn	17 48 25.3	+0.6
	baz=256							
U43A	Rector	6.86	54	P		Pn	17 48 25.6	+0.8
	baz=238							
OXF	Oxford	6.86	71	P		Pn	17 48 24.8	0.0
	baz=255							
OXF	Oxford	6.86	71	*e*Pn		Pn	17 48 27.3	+2.5
OXF				*e*Sn		Sn	17 49 41.7	-1.8
MNTX	Cornudas Mount	6.93	266	P		Pn	17 48 26.2	+0.3
	baz=82							
MNTX	Cornudas Mount	6.93	266	*e*Pn		Pn	17 48 27.1	+1.3
R40A	Maddies Statio	7.08	34	P		Pn	17 48 29.7	+1.9
	baz=217,SNR=8.5							
R40A	Maddies Statio	7.08	34	*e*Pn		Pn	17 48 29.9	+2.1
R40A				*e*Sn		Sn	17 49 46.9	-1.9
Q38A	Cooks Store, C	7.10	24	P		Pn	17 48 28.2	+0.1
	baz=206							
Y46A	Houston	7.18	77	P		Pn	17 48 29.6	+0.4
	baz=261							
W45A	Hickory Valley	7.23	66	P		Pn	17 48 29.3	-0.5
	baz=250							
CCM	Cathedral Cave	7.42	40	P		Pn	17 48 33.0	+0.5
	baz=223							
CCM	Cathedral Cave	7.42	40	*e*Pn		Pn	17 48 33.3	+0.8
CCM				*e*Sn		Sn	17 49 54.5	-2.6
P37A	Lathrop	7.47	18	P		Pn	17 48 32.4	-0.7
	baz=199							
S42A	Caledonia	7.47	43	P		Pn	17 48 32.9	-0.2
	baz=227							
T25A	Trinidad	7.49	310	P		Pn	17 48 33.3	-0.3
	baz=126							
T25A	Trinidad	7.49	310	*e*Pn		Pn	17 48 35.1	+1.5
R41A	Rosebud	7.53	38	P		Pn	17 48 34.9	+1.0
	baz=221,SNR=11							
U44B	Burton Farm, H	7.58	57	P		Pn	17 48 35.5	+0.8
	baz=242							
V45A	Humboldt	7.61	63	P		Pn	17 48 35.9	+0.8
	baz=247							
P38A	Dawn	7.73	22	P		Pn	17 48 36.9	+0.1
	baz=204							
P38A	Dawn	7.73	22	*e*Pn		Pn	17 48 36.9	+0.1
P38A				*e*Sn		Sn	17 50 01.3	-3.6
Q40A	Laux Farm, Aux	7.74	32	P		Pn	17 48 37.4	+0.5
	baz=214							
S43A	Fulton Ridge,	7.77	47	P		Pn	17 48 38.0	+0.6
	baz=231							
LNIG	Linares	7.81	195	*e*Pn		Pn	17 48 36.0	-1.9
R42A	Luebbering	7.83	41	P		Pn	17 48 38.8	+0.7
	baz=224							
W46A	Michie	7.85	68	P		Pn	17 48 38.6	+0.2
	baz=253							
P39B	Salisbury	7.88	26	P		Pn	17 48 40.0	+1.2
	baz=209							
348A	Jackson	8.03	95	P		Pn	17 48 40.7	-0.1
	baz=280							
ANMO	Albuquerque	8.04	290	Pn		Pn	17 48 41.2	0.0
	0.1nm,0.3s,baz=113,slow=18,SNR=3.5							
ANMO				Pg		Pg	17 49 11.0	-6.3
	4.2nm,0.3s,baz=110,slow=19,SNR=41							
ANMO				Lg		Lg	17 50 50.6	
	4.8nm,0.3s,baz=344,slow=7.6,SNR=9.0							
ANMO				LR		LR	17 52 02.9	
	comp=Z,112nm,18.9s,baz=112,slow=40							
P40A	Paris	8.20	30	*e*Pn		Pn	17 48 44.0	+0.9
P40A				*e*Sn		Sn	17 50 13.2	-3.0
SDCO	Great Sand Dun	8.54	310	*e*Pn		Pn	17 48 50.5	+2.3
WVT	Waverly	8.61	62	*e*Pn		Pn	17 48 49.8	+1.0
WVT				*e*Sn		Sn	17 50 23.7	-2.6
SWET	Sewanee	9.81	71	*e*Pn		Pn	17 49 05.7	+0.4
HDIL	Hopedale	10.29	36	*e*Pn		Pn	17 49 09.8	-2.0
L40A	Anamosa	10.70	25	*e*Pn		Pn	17 49 16.4	-1.0
N23A	Red Feather La	10.90	323	*e*Pn		Pn	17 49 22.1	+1.7
ECSD	EROS Data Cent	11.24	2	*e*Pn		Pn	17 49 22.2	-2.6
L42A	Oliver, Polo	11.26	30	*e*Pn		Pn	17 49 24.8	-0.3
TKL	Tuckaleechee C	11.62	71	Pn		Pn	17 49 29.2	-0.9
	0.1nm,0.3s,baz=231,slow=13,SNR=2.4							
TKL				Sn		Sn	17 51 36.7	-3.8
	0.2nm,0.3s,baz=164,slow=18,SNR=2.5							
JFWS	Jewell Farm	11.79	26	*e*Pn		Pn	17 49 31.9	-0.5
	9.1nm,0.5s							
JFWS				*e*Sn		Sn	17 51 45.2	+0.7
RSSD	Black Hills	12.77	337	*e*Pn		Pn	17 49 45.1	-0.8
PDAR	Pinedale Array	14.13	320	Pn		Pn	17 50 05.5	+0.9
	0.1nm,0.3s,baz=120,slow=13,SNR=3.9							
PDAR				Lg		Lg	17 54 00.5	
	0.1nm,0.3s,baz=104,slow=22,SNR=2.7							
PDAR				LR		LR	17 54 54.2	
	comp=Z,19nm,21.0s,baz=115,slow=35							
LPIG	La Paz	14.20	237	LR		LR	17 55 25.1	
	comp=Z,23nm,21.5s,baz=30,slow=37							
CMIG	Matias Romero	15.48	171	Pn		Pn	17 50 23.7	+1.0
	0.4nm,0.3s,baz=4.0,slow=11,SNR=4.9							
CMIG				Sn		Sn	17 53 01.4	-13
	0.3nm,0.3s,baz=232,slow=19,SNR=3.5							
AGMN	Agassiz Nation	15.83	3	*e*Pn		Pn	17 50 21.6	-5.4
NVAR	Mina Array Bea	18.12	295	P		P	17 50 58.0	+1.3
	baz=106,slow=12,SNR=6.1							
NVAR				LR		LR	17 57 56.2	
	comp=Z,43nm,18.3s,baz=204,slow=38							
NEW	Newport	21.75	322	P		P	17 51 34.2	-1.6
	3.7nm,0.9s,baz=130,slow=8.5,SNR=4.3							
YBH	Yreka Blue Hor	22.23	302	LR		LR	18 00 23.5	
	comp=Z,32nm,21.8s,baz=68,slow=37							
YKA	Yellowknife Ar	32.00	345	P		P	17 53 10.7	+0.2
	0.9nm,0.7s,baz=146,slow=9.0,SNR=4.5							
ILAR	Eielson Array	44.14	332	P		P	17 54 54.4	+1.6
	1.6nm,0.9s,baz=126,slow=6.2,SNR=14							
GERES	GERESS Array B	78.37	39	P		P	17 58 45.7	+0.5
	0.6nm,0.7s,baz=329,slow=7.4,SNR=2.3							
BVAR	Borovoye Array	94.17	7	P		P	18 00 04.3	+1.0
	0.2nm,0.5s,baz=20,slow=4.6,SNR=2.9							

MAN 24 17:51:22.0, 10°.02N×123°.22E, h1km, mb3.7, ML2.4, MS1.9, Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBP	Tagbilaran	0.71	117	*e*P	Pg	17 51 36.2	+0.4
LLP	Lapu-Lapu	0.79	68	*e*P	Pg	17 51 37.5	+0.2
LLP				*e*S	Sb	17 51 49.1	-0.7
GUIM	Jordan	0.86	314	*e*P	Pg	17 51 39.2	+0.6
GUIM				*e*S	Sg	17 51 50.8	+1.0
MSLP	Maasin	1.62	86	*e*P	Pn	17 51 51.2	-0.5
MSLP				*e*S	Sg	17 52 15.3	+1.2

*IDC **24** 18:19:47.8±3.3, 3°.73N×92°.66E, h0km, mb3.8/5, mb1 3.9/8, mb1mx3.6/64, mbtmp3.9/8, ML3.6/3, Error ellipse: s-maj=67.6km s-min=32.3km az=16.0*
*ISCJB **24** 18:19:48.3±0.9, 3°.5N±0°.1×92°.75E±0°.07, h33km, mb3.8/5, Error ellipse: s-maj=16.7km s-min=6.2km az=31.7*
*DJA **24** 18:19:53.9±1.2, 4°.1N±7°.9×9°.3E±1°.0, h10km, M4.1/9, mB5.7/1, mb4.1/6, MLv4.1/9, Mw(mB)5.2/1*
ISC 24 18:19:50.5±1.0, 3°.6N±0°.1×92.76E±0°.09, h35km, n17, σ19°37/19, mb3.9/5, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	Banda Aceh	3.18	52	P	Pn	18 20 37.2	-0.9
SNSI	Sinabang, Aceh	3.73	108	P	Pn	18 20 45.2	-0.5
SNSI				S	Sn	18 21 26.5	-2.0
TPTI		4.42	94	P	Pn	18 20 55.2	+0.1
LHMI	Lhok Sumawe	4.49	68	P	Pn	18 20 56.5	+0.4
KCSI	Kotacane, Aceh	5.00	90	P	Pn	18 21 05.0	+1.9
GSI	Gunungsitoli	5.30	115	P	Pn	18 21 06.8	-0.4
GSI				S	Sn	18 22 07.0	-0.1
TSI	Tuntungan	5.79	90	P	Pn	18 21 13.7	-0.3
PSI	Prapat	6.20	97	Pn	Pn	18 21 22.5	+2.9
	2.1nm,0.3s,baz=358,slow=0.5,SNR=5.9						
PBSI	Pulau Batu	6.57	123	P	Pn	18 21 25.1	+0.4
MNSI	Mandailing Nat	7.34	112	P	Pn	18 21 34.9	-0.3
PALK	Pallekele	12.56	288	Pn	Pn	18 22 46.4	-0.6
	0.5nm,0.3s,baz=115,slow=12,SNR=8.1						
PALK				Sn	Sn	18 24 50.7	-15
	0.2nm,0.3s,baz=116,slow=6.1,SNR=2.5						
CMAR	Chiang Mai Arr	16.01	22	Pn	Pn	18 23 31.2	-1.9
	0.1nm,0.3s,baz=217,slow=14,SNR=8.7						
MKAR	Makanchi Array	44.03	350	P	P	18 27 55.8	+1.0
	1.2nm,0.6s,baz=166,slow=8.5,SNR=16						
SONM	Songino Array	45.66	13	P	P	18 28 09.4	+1.6
	0.3nm,0.5s,baz=209,slow=8.1,SNR=2.4						
KURBB	Kurchatov Arra	48.42	348	P	P	18 28 30.8	+1.5
	0.8nm,0.6s,baz=146,slow=6.5,SNR=10.0						
ZALV	Zalesovo Beam	50.66	354	P	P	18 28 47.8	+1.5
	2.1nm,0.5s,baz=185,slow=9.4,SNR=6.6						
BVAR	Borovoye Array	52.66	343	P	P	18 29 00.7	-0.6
	0.4nm,0.6s,baz=172,slow=4.4,SNR=3.0						

*ISCJB **24** 18:22:55.7±0.6, 32°.40N±0°.04×115°.19W±0°.03, h10km±3km, Error ellipse: s-maj=6.7km s-min=4.3km az=159.8*
*MEX **24** 18:22:56.9±1.4, 32°.42N×115°.12W, h5km, MD3.7*
*ECX **24** 18:22:57.3±0.4, 32°.39N×115°.19W, h3km, MD2.3, ML2.5*
ISC 24 18:22:55.0±0.9, 32°.43N±0°.04×115°.16W±0°.03, h14km±6km, n28, σ0°76/40, 4C-1D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MBIG	Mexicali	0.04	236	*e*P	Pg	18 22 57.5	0.0
MBIG	Mexicali	0.04	236	*e*P	Pg	18 22 57.2	-0.3
MBIG				*e*S	Sg	18 22 59.5	+0.3
CPBX	Cerro Prieto	0.13	263	⇑*e*P	Pb	18 22 58.4	-0.9
CPBX				*e*S	Sb	18 23 00.1	-2.0
CPBX				⇑*e*		18 23 01.6	
CPBX				IAML		18 23 01.6	
	comp=N,8μm,0.1s						
COA	Coachella	0.43	4	*e*P	Pn	18 23 06.0	-0.9
SGL	Mount Signal	0.53	294	*e*P	Pb	18 23 06.4	+0.3
YMD	Yuma Desert	0.53	77	*e*P	Pn	18 23 07.7	-0.5
BTCC	Brunts Corner	0.58	355	*e*P	Pn	18 23 08.3	-0.6
WESC	Westside Schoo	0.59	304	*e*P	Pg	18 23 07.6	+1.1
COK	Cook Ranch	0.64	311	*e*P	Pg	18 23 08.8	+1.3
GLA	Glamis	0.68	24	P	Pn	18 23 10.0	-0.3
	baz=207,SNR=52						
GLA				S	Sn	18 23 19.9	-0.8
	baz=207						
YUH	Yuha Desert	0.68	288	*e*P	Pb	18 23 08.9	+0.2
SWSC	Sam W. Stewart	0.75	313	P	Pg	18 23 10.0	+0.5
	baz=137,SNR=14						
SWSC				S	Sg	18 23 20.5	+1.1
	baz=137						
RMX	La Rumorosa	0.80	282	⇑*e*P	Pb	18 23 10.2	-0.7
RMX				IAML		18 23 20.4	
	comp=E,127nm,0.3s						
RMX				*e*		18 23 20.4	
IKP	In-Ko-Pah, Jac	0.83	285	P	Pb	18 23 11.6	+0.2
	baz=108,SNR=29						
IKP				S	Sb	18 23 22.5	0.0
	baz=108						
IKP	In-Ko-Pah, Jac	0.83	285	⇑*e*P	Pb	18 23 11.8	+0.4
MONP2	Monument Peak	1.16	294	P	Pn	18 23 16.4	-0.7
	baz=115,SNR=12						
MONP2				S	Sb	18 23 31.6	-0.6
	baz=115						
BC3	Big Chuckawall	1.25	348	P	Pb	18 23 18.2	-0.2
	baz=171,SNR=18						
BC3				S	Sn	18 23 33.8	-1.0
	baz=171						
CBX	Cerro Bola	1.28	265	*e*P	Pb	18 23 19.3	+0.3
CBX				*e*S	Sb	18 23 36.0	+0.5
CBX				IAML		18 23 40.5	
	comp=N,121nm,0.6s						
CBX	Cerro Bola	1.28	265	*e*P	Pn	18 23 18.9	+0.2
CBX				*e*S	Sn	18 23 34.4	-1.4
TJIG	Tijuana	1.28	270	*e*P	Pn	18 23 18.9	+0.3
TJIG				*e*S	Sn	18 23 35.1	-0.5
BAR	Barrett	1.30	281	⇓*e*P	Pb	18 23 19.9	+0.6
SPIG	San Pedro Mart	1.41	191	*e*P	Pn	18 23 21.2	+0.6
Y12C	Blythe	1.42	22	Pb	Pg	18 23 22.9	+0.6
	baz=203,SNR=7.3						
Y12C				Sb	Sg	18 23 41.9	+1.2
	baz=203						
SDRC	San Diego Road	1.54	282	*e*P	Pb	18 23 23.6	+0.3
PFO	Pinyon Flats O	1.61	317	P	Pn	18 23 22.4	-0.8
	baz=139,SNR=12						
109C	Camp Elliot, M	1.71	286	Pb	Pb	18 23 26.5	+0.3
	baz=106						
109C				Sb	Sb	18 23 47.7	+0.1
	baz=106						
214A	Organ Pipe Nat	2.04	103	P	Pn	18 23 29.5	+0.4
	baz=283,SNR=7.7						
214A	Organ Pipe Nat	2.04	103	*e*P	Pn	18 23 29.4	+0.3

IDC 24 19:00:16.4±4.0, 23°.06N×11°.36W, h0km, mb3.7/2, mb1 3.8/4, mb1mx3.3/63, mbtmp3.7/4, ML3.5/2, MS2.9/1, Ms1 2.9/1, ms1mx2.1/57, Error ellipse: s-maj=116.3km s-min=32.4km az=74.0, Mauritania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOWA	Kowa	10.99	140	Pn	Pn	19 02 55.2	+0.2
	1.1nm,0.3s,baz=319,slow=12,SNR=13						
KOWA				Sn	Sn	19 04 50.5	-8.3
	0.3nm,0.3s,baz=288,slow=3.2,SNR=2.2						
TORD	Torodi Ar. Bea	15.83	126	Pn	Pn	19 04 00.3	-0.5
	0.1nm,0.3s,baz=316,slow=13,SNR=3.4						
GERES	GERESS Array B	32.48	31	P	P	19 06 49.2	+0.5
	0.2nm,0.5s,baz=216,slow=8.2,SNR=2.0						
HFS	Hagfors	40.99	19	P	P	19 08 00.3	-0.6
	1.4nm,0.7s,baz=201,slow=7.7,SNR=2.4						
GNI	Garni	49.91	56	LR	LR	19 32 29.3	
	comp=Z,13nm,19.3s,baz=146,slow=39						
ASAR	Alice Springs	148.15	98	PKPbc	PKPbc	19 20 04.3	-0.6
	0.4nm,0.8s,baz=266,slow=1.3,SNR=5.9						

TAP 24 19:05:13.8, 24°.93N×121°.98E, h14km, ML1.2, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.08	9	*e*P	Pg	19 05 17.2	+0.4
	baz=14						
TWB1				*i* S	Sg	19 05 19.6	+0.9
	baz=14						
EGS		0.09	205	*e*P	Pg	19 05 17.4	+0.5
	baz=198						
EGS				*e*S	Sg	19 05 19.8	+0.9
	baz=198						
TIPB	Shuangxi	0.14	288	P	Pb	19 05 18.0	-0.3
	baz=287						
TIPB				S	Sb	19 05 21.2	0.0
	baz=287						

JMA 24 19:05:17.1, 24°.59N×123°.74E, h60km±1km, M3.4, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.25	182	P	Pn	19 05 26.8	-0.1
IRIF				S	Sn	19 05 33.9	0.0
JKRS	Kuro-shima	0.43	145	P	Pn	19 05 28.4	+0.1
JKRS				S	Sn	19 05 36.9	+0.4
JIJ	Ishigaki jima	0.43	121	P	Pn	19 05 28.2	-0.2
JIJ				S	Sn	19 05 36.3	-0.2
JISG	Ishigakijimahi	0.52	90	P	Pn	19 05 29.4	+0.1
JISG				S	Sn	19 05 38.5	+0.4
HATJ	Hateruma jima	0.53	174	P	Pn	19 05 29.3	-0.1
HATJ				S	Sn	19 05 38.4	0.0
YOJ	Yonaguni jima	0.68	259	P	Pn	19 05 31.1	+0.1
YOJ				S	Sn	19 05 40.8	-0.5
JYNG	Yonagunijimaku	0.74	259	P	Pn	19 05 31.9	+0.1
JYNG				S	Sn	19 05 42.7	+0.2
JTJ	Tarama	0.88	86	P	Pn	19 05 33.9	+0.4
JTJ				S	Sn	19 05 46.2	+0.5
JIRB	Irabujima	1.32	79	P	Pn	19 05 39.7	+0.3
JIRB				*e*S	Sn	19 05 56.1	0.0
JIKM	Ikemajima	1.41	76	P	Pn	19 05 41.1	+0.5
JIKM				*e*S	Sn	19 05 58.8	+0.6
JMJ	Miyako jima 2	1.43	81	P	Pn	19 05 41.4	+0.6
JMJ				*e*S	Sn	19 05 59.4	+0.7
JOGS	Gusukube	1.52	83	P	Pn	19 05 42.8	+0.7
JOGS				*e*S	Sn	19 06 02.4	+1.4

GUC 24 19:27:23.4±0.6, 34°.05S×72°.20W, h30km±16km, ML3.6, 5C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO05	HualaæØ	0.99	167	*e*P	Pb	19 27 42.0	0.0
GO05				*e*P	Pn	19 27 42.3	+1.0
GO05				*i* S	Sb	19 27 55.8	+1.2
GO05				*i* S	Sn	19 27 55.9	+1.7
GO05				IAML		19 27 58.8	
	comp=E,3μm,0.3s						
ANTU	Antumapu	1.39	70	*e*P	Pb	19 27 48.7	-0.1
ANTU				*i* S	Sb	19 28 07.4	+1.2
ANTU				IAML		19 28 12.5	
	comp=E,1μm,0.3s						
ROCH	El Roble	1.46	43	*e*P	Pn	19 27 48.9	+0.9
ROCH				*i* S	Sb	19 28 09.6	+1.1
ROCH				IAML		19 28 15.9	
	comp=N,1μm,0.4s						
CLCH	Cerro Calan	1.53	65	⇑*i*P	Pb	19 27 50.7	-0.5
CLCH				⇑*i*P	Pn	19 27 50.8	+2.0
CLCH				*i* S	Sb	19 28 11.5	+1.2
CLCH				*i* S	Sb	19 28 11.5	+1.2
CLCH				IAML		19 28 19.3	
	comp=N,1μm,0.7s						
PEL	Peldehue	1.56	55	⇑*i*P	Pb	19 27 50.9	-0.7
PEL				*i* S	Sb	19 28 12.1	+1.2
PEL				IAML		19 28 17.4	
	comp=E,2μm,0.4s						
LMEL	Las Melosas	1.67	84	⇑*i*P	Pb	19 27 53.3	-0.3
LMEL				*i* S	Sb	19 28 15.6	+1.2
LMEL				IAML		19 28 20.7	
	comp=N,2μm,0.1s						
FCH	Farellones	1.75	66	⇑*i*P	Pb	19 27 53.9	-1.1
FCH				*i* S	Sn	19 28 14.6	+1.2
FCH				IAML		19 28 23.6	
	comp=E,916nm,0.2s						

*IDC **24** 19:27:59.6±0.6, 60°.05S×27°.58W, h64km±5km, mb4.5/15, mb1 4.5/15, mb1mx4.3/34, mbtmp4.8/15, MS3.7/8, Ms1 3.7/8, ms1mx3.5/30, Error ellipse: s-maj=17.0km s-min=12.2km az=41.0*
*ISCJB **24** 19:28:01.1±0.3, 60°.24S±0°.07×27°.5W±0°.2, h100km, mb4.9/31, Error ellipse: s-maj=13.3km s-min=6.4km az=138.0*
*NEIC **24** 19:28:04.1±1.5, 60°.23S×27°.61W, h112km±13km, mb5.1/22, Error ellipse: s-maj=13.4km s-min=7.4km az=224.0*
*BJI **24** 19:28:05.7, 60°.30S×27°.80W, h122km, mB5.0/4*
ISC 24 19:28:02.5±0.3, 60°.34S±0°.07×27°.50W±0°.09, h100km, n83, σ2°53/89, mb5.0/31, 1D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	7.77	317	*e*Pn	Pn	19 29 53.0	+0.3
VNA1	Neumayer--Stat	12.98	151	P	Pn	19 31 03.7	+1.0
VNA1				S	Sn	19 33 21.9	-3.2
VNA3	Neumayer Olymp	13.08	154	P	Pn	19 31 03.8	-0.2
VNA3				S	Sn	19 33 20.9	-6.7
SNAA	Sanae	14.99	149	P	Pn	19 31 29.5	+0.8
SNAA				S	Sn	19 34 06.6	-7.2
SNAA	Sanae	14.99	149	*e*Pn	P	19 31 30.7	-1.0
	194nm,1.3s						
SYO	Syowa Base	28.48	136	⇓*e*P	P	19 33 48.0	+0.5
QSPA	South Pole Qui	29.90	180	*e*P	P	19 34 01.9	+1.5
	101nm,1.1s						
PLCA	Paso Flores	32.85	287	P	P	19 34 26.7	+0.3
	2.3nm,0.5s,baz=160,slow=6.7,SNR=9.5						
PLCA				PcP	PcP	19 37 09.3	+0.6
	2.9nm,0.8s,baz=146,slow=3.0,SNR=4.9						
PLCA				LR	LR	19 47 19.3	
	comp=Z,164nm,18.5s,baz=170,slow=35						
MAW	Mawson	36.86	140	P	P	19 35 03.6	+3.1
	9.7nm,1.0s,baz=234,slow=8.1,SNR=11						
MAW				LR	LR	19 48 11.9	
	comp=Z,151nm,21.4s,baz=239,slow=33						
MAW	Mawson	36.86	140	*e*P	P	19 34 59.1	-1.4
	2.9nm,1.0s						
GO05	HualaæØ	38.09	291	*e*P	P	19 35 11.3	0.0
	60nm,1.4s						
PEL	Peldehue	39.07	294	*e*P	P	19 35 20.2	+0.7
	135nm,0.5s						
ROC1	El Roble	39.36	294	*e*P	P	19 35 23.6	+1.4
	80nm,0.6s						
CPUP	Villa Florida	39.65	316	P	P	19 35 23.9	-0.4
	8.3nm,0.3s,baz=142,slow=5.8,SNR=35						
CPUP				LR	LR	19 50 02.2	
	comp=Z,157nm,21.8s,baz=165,slow=34						
CPUP	Villa Florida	39.65	316	*e*P	P	19 35 23.9	-0.4
	13nm,0.5s						
VNDA	Vanda	42.27	183	P	P	19 35 49.6	+4.4
	5.8nm,0.7s,baz=186,slow=6.8,SNR=31						
VNDA				LR	LR	19 53 23.0	
	comp=Z,34nm,20.2s,baz=178,slow=36						
VNDA	Vanda	42.27	183	*e*P	P	19 35 48.0	+2.8
	6.2nm,0.8s						
LCO	Las Campanas	42.59	298	*e*P	P	19 35 44.0	-4.7
	16nm,0.7s						
GO02	Mina Guanaco	45.47	302	*e*P	P	19 36 11.4	-0.3
	80nm,1.1s						
BOSA	Boshof	47.32	72	P	P	19 36 26.9	+0.9
	4.4nm,0.6s,baz=211,slow=6.9,SNR=18						
BOSA				LR	LR	19 52 25.3	
	comp=Z,58nm,21.2s,baz=204,slow=31						
PB04	IPOC Station P	48.20	303	*e*P	P	19 36 30.6	-2.3
	74nm,0.8s						
PB01	IPOC Station P	49.08	304	*e*P	P	19 36 39.2	-0.3
	51nm,0.7s						
CASY	Casey	49.93	159	*e*P	P	19 36 47.7	+2.4
	6.6nm,0.8s						
SIV	San Ignacio	50.50	316	P	P	19 36 49.4	-0.8
	7.4nm,0.5s,baz=182,slow=8.7,SNR=36						
MNMC	Minye Minye	50.84	305	*e*P	P	19 36 52.2	-0.8
	81nm,0.7s						
TSUM	Tsumeb	52.01	58	P	P	19 37 02.6	+1.0
	3.5nm,0.9s,baz=230,slow=14,SNR=4.2						
TSUM				pP	pP	19 37 18.0	-7.6
	4.3nm,0.9s,baz=216,slow=7.6,SNR=3.4						
H10S2	ASCENSION HYDR	52.17	16	T	T	20 33 49.3	
	baz=188,slow=75						
H10S3	ASCENSION HYDR	52.18	16	T	T	20 33 50.6	
	baz=188,slow=75						
H10S1	ASCENSION HYDR	52.19	16	T	T	20 33 52.9	
	baz=188,slow=75						
LPAZ	La Paz	52.82	308	P	P	19 37 08.5	+0.4
	14nm,0.6s,baz=142,slow=4.9,SNR=70						
LPAZ				PcP	PcP	19 38 16.5	+0.3
	3.5nm,0

STKA	Stephens Creek	87.68	171		LR	LR	20 16 39.8
	comp=Z,96nm,21.4s,baz=204,slow=33						
ASAR	Alice Springs	94.93	163		P	P	19 41 15.6 +2.2
	1.0nm,0.6s,baz=181,slow=3.9,SNR=13						
ASAR					pP	pP	19 41 33.6 -6.1
	0.9nm,0.9s,baz=190,slow=3.8,SNR=2.7						
ASAR					LR	LR	20 20 47.5
	comp=Z,122nm,21.5s,baz=184,slow=33						
AS01	Alice Springs	94.94	163	eP	P		19 41 12.1 -1.4
AKASG	Malin Array Be	119.74	38	PKP	PKPdf		19 46 39.2 -0.2
	0.3nm,0.3s,baz=243,slow=1.2,SNR=5.6						
PDAR	Pinedale Array	122.43	300	PKP	PKPdf		19 46 44.8 -0.5
	0.5nm,0.5s,baz=132,slow=2.2,SNR=5.1						
NVAR	Mina Array Bea	122.85	291	PKP	PKPdf		19 46 47.5 +1.3
	1.9nm,0.7s,baz=135,slow=3.4,SNR=9.4						
ULM	Lac du Bonnet	123.19	315	PKP	PKPdf		19 46 44.4 -1.7
	2.9nm,0.6s,baz=283,slow=2.3,SNR=3.2						
CMAR	Chiang Mai Arr	123.61	114	PKP	PKPdf		19 46 49.6 +1.7
	2.0nm,0.8s,baz=230,slow=3.6,SNR=14						
HFS	Hagfors	124.32	24	PKP	PKPdf		19 46 48.0 +0.1
	4.3nm,0.8s,baz=126,slow=4.0,SNR=6.2						
NB2	NORSAR Subarra	124.68	22	PKPdf	PKPdf		19 46 49.2 +0.5
	comp=Z,3.7nm,1.0s,baz=202,slow=1.9						
FRB	Frobisher Bay	127.60	338	PKP	PKPdf		19 46 52.5 -1.5
	comp=Z,8.0nm,0.9s,baz=104,slow=8.3,SNR=2.5						
FINES	FINESS Array B	128.24	29	PKP	PKPdf		19 46 56.1 +0.8
	comp=Z,12nm,0.8s,baz=113,slow=4.4,SNR=27						
FINES				pPKP	pPKPdf		19 47 14.2 -8.5
	comp=Z,2.3nm,0.8s,baz=204,slow=3.0,SNR=2.2						
AKTO	Aktyubinsk	129.95	56	PKhKP	PKPpre		19 46 52.9
	comp=Z,2.1nm,0.8s,baz=304,slow=3.6,SNR=7.4						
AKTO				PKP	PKiKP		19 47 00.2 +0.4
	comp=Z,7.9nm,1.0s,baz=168,slow=2.5,SNR=10						
KMI	Kunming	131.12	113	PKP	PKPdf		19 47 00.6 -1.8
KMI				sPKP			19 47 50.4
KMI				LR	LR		
	comp=Z,170nm,15.9s						
KMI				LR	LR		
	comp=Z,120nm,15.4s						
KMI				LR	LR		
	comp=Z,190nm,30.1s						
GYA	Guiyang	134.04	117	ePdif	Pdif		19 44 08.0 +0.6
GYA				PKP	PKiKP		19 47 08.0 -1.0
GYA				sPKP			19 47 55.8
GYA				PP	PP		19 49 45.3 +5.9
GYA				AMB	AMB		
	comp=Z,120nm,7.8s						
ARCES	ARCESS Array B	134.98	23	PKP	PKPdf		19 47 09.2 +1.2
	comp=Z,6.8nm,0.8s,baz=90,slow=0.1,SNR=17						
CD2	Chengdu	136.50	110	PKP	PKPdf		19 47 12.8 +0.7
BVAR	Borovoye Array	137.11	62	PKhKP	PKPpre		19 47 05.1
	comp=Z,0.4nm,0.4s,baz=328,slow=5.1,SNR=4.3						
BVAR				PKP	PKiKP		19 47 13.6 -0.7
	comp=Z,1.9nm,0.5s,baz=188,slow=2.8,SNR=16						
MKAR	Makanchi Array	138.25	76	PKhKP	PKPpre		19 47 04.2
	comp=Z,0.2nm,0.7s,baz=214,slow=1.6,SNR=3.5						
MKAR				PKP	PKiKP		19 47 15.7 -1.2
	comp=Z,0.6nm,0.6s,baz=212,slow=1.5,SNR=6.2						
WMQ	Urumqi	138.75	83	ePKP	PKPdf		19 47 13.7 +1.5
KURBB	Kurchatov Arra	139.14	69	PKhKP	PKPpre		19 47 10.3
	comp=Z,0.7nm,0.5s,baz=229,slow=3.8,SNR=7.2						
YKA	Yellowknife Ar	139.17	315	PKP	PKPdf		19 47 16.0 +0.2
	comp=Z,5.4nm,0.9s,baz=123,slow=1.8,SNR=18						
YKA				PP	PP		19 50 07.4 -3.8
	comp=Z,1.1nm,0.8s,baz=114,slow=7.0,SNR=3.8						
KURK	Kurchatov	139.24	69	PKPpre	PKPpre		19 47 10.3
LZH	Lanzhou	140.79	106	ePKP	PKPdf		19 47 25.1 +5.2
LZH				LR	LR		
	comp=Z,150nm,18.3s						
LZH				LR	LR		
	comp=Z,140nm,18.0s						
LZH				LR	LR		
	comp=Z,190nm,20.1s						
SPITS	Spitsbergen Ar	140.80	13	PKhKP	PKPpre		19 47 12.2
	comp=Z,1.1nm,0.3s,baz=183,slow=1.7,SNR=8.8						
NJ2	Nanjing	144.07	127	ePKP	PKPdf		19 47 27.4 +1.8
ZALV	Zalesovo Beam	144.23	69	PKP	PKPdf		19 47 24.4 -0.8
	comp=Z,8.2nm,0.4s,baz=230,slow=4.3,SNR=21						
HHC	Hu-ho-hao-te	148.24	109	ePKPbc	PKPab		19 47 37.6 -1.8
INK	Inuvik	148.91	316	PKPbc	PKPbc		19 47 36.5 -0.2
	comp=Z,12nm,0.7s,baz=114,slow=5.9,SNR=16						
SONM	Songino Array	150.86	94	PKPbc	PKPbc		19 47 43.7 +1.4
SONM				pPKPbc	pPKPdf		19 48 01.8 -2.2
	comp=Z,2.3nm,0.5s,baz=230,slow=2.9,SNR=4.5						
KSAR	Wonju Array Be	152.26	135	PKPbc	PKPbc		19 47 47.2 +1.6
KSRS	Korea Array	152.29	135	PKPbc	PKPbc		19 47 47.2 +1.5
	comp=Z,1.8nm,0.9s,baz=195,slow=2.5,SNR=5.5						
NRIK	Noril'sk	152.35	44	PKPbc	PKPbc		19 47 45.6 +0.8
	comp=Z,3.1nm,0.5s,baz=272,slow=4.8,SNR=4.4						
ILAR	Eielson Array	152.68	306	PKP	PKPdf		19 47 37.9 -0.6
	comp=Z,0.7nm,0.9s,baz=13,slow=2.1,SNR=6.5						
ILAR				PKPbc	PKiKP		19 47 45.8 -0.1
	comp=Z,8.2nm,0.7s,baz=137,slow=1.0,SNR=80						
PETK	Petropavlovsk-	172.21	204	PKP	PKPdf		19 47 58.1 +0.1
	comp=Z,1.8nm,0.9s,baz=112,slow=6.6,SNR=4.3						
PETK				PKPab	PKPab		19 49 24.7 +2.1
	comp=Z,1.4nm,0.8s,baz=129,slow=3.9,SNR=3.6						

*ISCJB **24** 19:36:56.8±0.6, 41°.11N±0°.05×29°.3W±0°.1, h10km, mb3.8/15, Error ellipse: s-maj=13.2km s-min=4.7km az=150.9*
*IDC **24** 19:36:57.5±0.8, 41°.39N×29°.45W, h0km, mb3.8/14, mb1 3.9/15, mb1mx3.7/65, mbtmp3.7/15, ML3.7/1, Error ellipse: s-maj=22.1km s-min=16.7km az=175.0*
*PDA **24** 19:36:58.3±0.5, 41°.11N×30°.01W, h15km, ML4.2, Error ellipse: s-maj=21.2km s-min=3.5km az=52.0*
*CSEM **24** 19:37:00.1±1.2, 40°.68N×29°.74W, h10km, ML4.2, Error ellipse: s-maj=34.0km s-min=12.5km az=74.0*
ISC 24 19:36:58.3±0.8, 41°.12N±0°.08×29°.47W±0°.10, h10km, n42, σ2§47/53, mb3.8/15, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADH	Angra Heroismo	3.00	144	eP	Pn	19 37 44.8	-1.1
ADH				eS	Sn	19 38 19.5	-2.4
ADH				A	A	19 38 20.1	
	17nm,0.2s						
ADH	Angra Heroismo	3.00	144	eP	Pn	19 37 44.8	-1.1
ADH				eS	Sn	19 38 19.5	-2.4
PDA	Ponta Delgada	4.47	138	eP	Pn	19 38 05.7	-0.4
PDA				eS	Sn	19 38 56.2	-2.0
PDA				A	A	19 39 01.3	
	33nm,0.1s						
PDA	Ponta Delgada	4.47	138	eP	Pn	19 38 05.7	-0.4
PDA				eS	Sn	19 38 56.2	-2.0
GRON	Grota Negra	4.52	136	eP	Pn	19 38 07.5	+0.6
GRON				eS	Sn	19 38 59.5	0.0
GRON				A	A	19 39 01.5	
	10nm,0.1s						
CMLA	Cha da Macela	4.53	136	eP	Pn	19 38 06.6	-0.4
CMLA				eS	Sn	19 38 57.7	-2.0
CMLA				A	A	19 39 01.2	
	68nm,0.3s						
CMLA	Cha da Macela	4.53	136	eP	Pn	19 38 06.6	-0.4
CMLA				eS	Sn	19 38 57.7	-2.0
BART	Pico Bartolome	4.71	134	eP	Pn	19 38 09.1	-0.4
BART				eS	Sn	19 39 02.8	-1.4
BART				A	A	19 39 04.4	
	29nm,0.2s						
BART	Pico Bartolome	4.71	134	eP	Pn	19 38 09.1	-0.4
BART				eS	Sn	19 39 02.8	-1.4
PSMA	Santa Maria	5.32	139	eP	Pn	19 38 17.6	-0.2
PSMA				eS	Sn	19 39 16.6	-2.6
PSMA				A	A	19 39 20.0	
	15nm,0.2s						
PSMN	Pico do Norte,	5.35	139	eP	Pn	19 38 17.9	-0.3
PSMN				eS	Sn	19 39 17.4	-2.4
PSMN				A	A	19 39 20.8	
	9.8nm,0.2s						
PSMN	Pico do Norte,	5.35	139	eP	Pn	19 38 17.9	-0.3
PSMN				eS	Sn	19 39 17.4	-2.4
PMOZ	Porto Moniz, M	12.83	126	eP	Pn	19 40 05.3	+4.5
	102nm,1.3s						
PCAS	Casmilo, Conde	15.96	87	eP	Pn	19 40 44.0	+1.0
	34nm,2.0s						
PVRL	Vila Real	16.37	82	eP	P	19 40 53.3	+2.2
	23nm,1.5s						
PVRL	Vila Real	16.37	82	eP	P	19 40 53.3	+2.2
PMTG	Montargil	16.38	90	eP	P	19 40 54.9	+3.8
	30nm,1.2s						
PMTG	Montargil	16.38	90	eP	P	19 40 54.9	+3.8
PCBR	Castelo Branco	16.78	87	eP	P	19 41 01.2	+5.7
	26nm,1.7s						
PCBR	Castelo Branco	16.78	87	eP	P	19 41 01.2	+5.7
PCVE	Castro Verde	16.92	95	eP	P	19 41 03.1	+6.0
	32nm,1.7s						
PCVE	Castro Verde	16.92	95	eP	P	19 41 03.1	+6.0
PBRG	Braganca	17.04	80	eP	P	19 41 00.8	+2.3
	19nm,1.7s						
PBAR	Barrancos	17.51	92	eP	P	19 41 08.0	+4.3
	66nm,1.5s						
PBAR	Barrancos	17.51	92	eP	P	19 41 08.0	+4.3
ESDC	Sonseca Array	19.46	86	P	P	19 41 26.0	+0.9
	0.1nm,0.3s,baz=288,slow=11,SNR=3.8						
MDT	Midelt	21.46	105	P	P	19 41 49.9	+2.9
	4.9nm,1.0s,baz=297,slow=12,SNR=4.4						
EKA	Eskdalemuir Ar	22.39	42	P	P	19 41 56.4	-0.2
	1.1nm,0.6s,baz=238,slow=6.6,SNR=4.6						
GERES	GERESS Array B	31.15	61	P	P	19 43 15.3	-1.9
	0.2nm,0.6s,baz=263,slow=6.8,SNR=2.6						
FINES	FINESS Array B	38.75	39	P	P	19 44 21.8	-0.6
	1.8nm,0.8s,baz=283,slow=14,SNR=3.0						
TORD	Torodi Ar. Bea	38.93	127	P	P	19 44 26.8	+2.3
	3.6nm,1.0s,baz=299,slow=8.0,SNR=8.0						
AKASG	Malin Array Be	40.95	56	P	P	19 44 39.5	-1.4
	0.5nm,0.5s,baz=275,slow=8.9,SNR=3.8						
RES	Resolute Bay	44.35	340	P	P	19 45 06.0	-2.2
	2.0nm,0.9s,baz=104,slow=4.2,SNR=2.8						
BRTR	Keskin Array B	47.11	70	P	P	19 45 29.4	-1.2
	0.8nm,0.8s,baz=311,slow=7.5,SNR=5.1						
KBZ	Khabaz	51.89	61	P	P	19 46 07.3	+0.5
	0.4nm,0.3s,baz=280,slow=11,SNR=2.4						
TXAR	Lajitas Array	60.07	284	P	P	19 47 06.7	+0.9
	0.3nm,0.6s,baz=83,slow=6.9,SNR=6.4						
ILAR	Eielson Array	63.72	335	P	P	19 47 30.0	+0.4
	0.2nm,0.6s,baz=34,slow=6.6,SNR=3.9						
GEYT	Alibeck	64.77	61	P	P	19 47 37.2	+0.1
	18nm,0.3s,baz=297,slow=9.5,SNR=4.0						
LPAZ	La Paz	67.42	221	P	P	19 47 56.5	+1.6
	0.6nm,0.8s,baz=50,slow=9.5,SNR=2.2						
KURBB	Kurchatov Arra	69.12	40	P	P	19 48 03.6	-0.8
	2.2nm,0.9s,baz=312,slow=6.5,SNR=12						
MKAR	Makanchi Array	73.53	42	P	P	19 48 30.3	-0.9
	1.4nm,0.8s,baz=326,slow=5.0,SNR=8.2						
ASAR	Alice Springs	157.71	44	PKPab	PKPab	19 57 26.6	-1.0
	0.9nm,0.9s,baz=352,slow=5.6,SNR=5.6						

*SKO **24** 19:38:13.1, 40°.68N×21°.34E, h15km, M2.0, ML2.2*
*CSEM **24** 19:38:16.9±0.1, 40°.66N×21°.35E, h10km, ML2.4, Error ellipse: s-maj=3.2km s-min=2.4km az=97.0*
*ATH **24** 19:38:16.3, 40°.65N×21°.36E, h19km±1km, ML2.4/7, Error ellipse: s-maj=1.8km s-min=1.2km az=340.0*
*TIR **24** 19:38:16.2, 40°.64N×21°.33E, h18km, Md2.8/4*
*THE **24** 19:38:17.3, 40°.66N×21°.37E, h9km±1km, ML2.4/9, Error ellipse: s-maj=1.4km s-min=0.7km az=291.0*
*ISCJB **24** 19:38:17.0±0.3, 40°.67N±0°.02×21°.33E±0°.03, h10km±3km, Error ellipse: s-maj=3.6km s-min=2.7km az=12.9*
ISC 24 19:38:16.6±0.8, 40°.64N±0°.01×21°.33E±0°.02, h13km±6km, n57, σ1§02/99, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FNA	Florina	0.15	13	P	Pb	19 38 20.5	-0.7
FNA				S	Sb	19 38 23.1	-1.1
FNA				AML	AML	19 38 23.6	
	comp=N,5667μm,0.2s						
FNA				AML	AML	19 38 24.9	
	comp=E,8483μm,0.3s						
FNA	Florina	0.15	13	P	Pb	19 38 20.5	-0.7
FNA				S	Sg	19 38 22.8	-0.1
FNA	Florina	0.15	13	P	Pb	19 38 20.5	-0.7
FNA				S	Sg	19 38 22.8	-0.1
NEST	Nestorio	0.31	224	P	Pg	19 38 23.0	-0.1
NEST				S	Sb	19 38 28.9	-0.2
NEST				AML	AML	19 38 30.8	
	comp=N,2886μm,0.2s						
NEST				AML	AML	19 38 30.9	
	comp=E,1725μm,0.2s						
NEST	Nestorio	0.31	224	P	Pg	19 38 23.2	+0.1
NEST				S	Sb	19 38 29.7	+0.6
NEST	Nestorio	0.31	224	P	Pg	19 38 23.2	+0.1
NEST				S	Sb	19 38 28.8	-0.2
BIA	Bitola	0.38	359	P	Pb	19 38 24.4	-0.8
BIA				S	Sb	19 38 30.0	-0.9
BIA	Bitola	0.38	359	*i* Pg	Pb	19 38 24.6	-0.6
BIA				*e*Sg	Sb	19 38 30.7	-0.3
BIA	Bitola	0.38	359	P	Pb	19 38 24.4	-0.8
BIA				S	Sb	19 38 30.0	-0.9
KBN	Korca	0.41	268	P	Pg	19 38 25.3	+0.4
KBN				S	Sb	19 38 32.1	+0.1
KBN	Korca	0.41	268	*i* PG	Pg	19 38 25.3	+0.4
KBN				*i* SG	Sg	19 38 30.4	-0.1
KBN	Korca	0.41	268	P	Pg	19 38 25.3	+0.4
KBN				*i* Sg	Sg	19 38 30.4	-0.1
KBN				S	Sb	19 38 32.1	+0.1
PENT	Pentalofos	0.47	198	P	Pg	19 38 26.1	+0.2
PENT				S	Sb	19 38 33.9	+0.2
PENT				AML	AML	19 38 37.1	
	comp=E,749μm,0.4s						
PENT				AML	AML	19 38 37.6	
	comp=N,698μm,0.2s						
PENT	Pentalofos	0.47	198	P	Pg	19 38 26.0	+0.2
PENT				S	Sb	19 38 33.8	+0.2
PENT	Pentalofos	0.47	198	P	Pg	19 38 26.1	+0.2
PENT				S	Sb	19 38 33.5	-0.1
KZN	Kozani	0.47	135	P	Pb	19 38 26.5	-0.3
KZN				S	Sb	19 38 34.2	+0.5
KZN				AML	AML	19 38 36.1	
	comp=E,1695μm,0.3s						
KZN				AML	AML	19 38 36.2	
	comp=N,1808μm,0.5s						
KZN	Kozani	0.47	135	P	Pg	19 38 26.0	0.0
KZN				S	Sb	19 38 34.0	+0.3
KZN	Kozani	0.47	135	P	Pb	19 38 26.2	-0.6
KZN				S	Sb	19 38 33.5	-0.2
OHR	Ohrid	0.62	319	*i* Pg	Pg	19 38 28.3	-0.5
OHR				*i* Sg	Sb	19 38 38.0	+0.2
OHR				*e*Lg	Lg	19 38 39.1	
	comp=N,166nm,0.3s						
OHR				*e*Lg	Lg	19 38 39.2	
	comp=E,181nm,0.3s						
KPRO	Kipourio	0.69	178	P	Pg	19 38 28.6	-1.3
KPRO	Kipourio	0.69	178	P	Pg	19 38 29.8	-0.2
KPRO				S	Sn	19 38 41.6	-0.9
KPRO	Kipourio	0.69	178	P	Pg	19 38 29.8	-0.2
KPRO				S	Sn	19 38 41.6	-0.9
KRUS	Krusevo	0.73	355	*i* Pg	Pg	19 38 29.9	-0.9
KRUS				*i* Sg	Sb	19 38 40.9	-0.2
LIT	Litokhoron	1.04	121	P	Pn	19 38 36.7	-0.1
LIT	Litokhoron	1.04	121	P	Pg	19 38 36.2	-0.4
LIT				S	Sn	19 38 50.8	-0.3
LIT	Litokhoron	1.04	121	P	Pg	19 38 36.2	-0.4
LIT				S	Sn	19 38 50.8	-0.3
VAY	Valandovo	1.16	54	P	Pg	19 38 38.7	-0.2
VAY				S	Sg	19 38 54.6	+0.7
VAY	Valandovo	1.16	54	*e*Pg	Pg	19 38 39.1	+0.2
VAY				*i* Sg	Sg	19 38 55.9	+2.0
VAY				*e*Lg	Lg	19 38 57.7	
	comp=E,39nm,0.7s						
VAY				*e*Lg	Lg	19 38 58.2	
	comp=N,24nm,0.6s						
VAY	Valandovo	1.16	54	P	Pg	19 38 38.7	-0.2
VAY				S	Sg	19 38 54.6	+0.7
THL	Klokotos Trika	1.20	154	P	Pn	19 38 37.5	-1.4
THL				S	Sn	19 38 54.5	-0.5
THL				AML	AML	19 39 01.3	
	comp=N,130μm,0.3s						
THL				AML	AML	19 39 03.6	
	comp=E,117μm,0.4s						
THL	Klokotos Trika	1.20	154	P	Pn	19 38 38.3	-0.6
THL				S	Sg	19 38 56.9	+1.7
THL	Klokotos Trika	1.20	154	P	Pn	19 38 38.3	-0.6
THL				S	Sg	19 38 55.0	-0.2
STIP	Stip	1.23	31	*i* Pg	Pg	19 38 41.5	+1.1
STIP				*i* Sg	Sg	19 39 02.4	+6.0
PHP	Peshkopia	1.24	327	*i* PN	Pn	19 38 38.4	-1.2
PHP				*i* SN	Sg	19 38 56.2	-0.4
PHP	Peshkopia	1.24	327	*i* Pn	Pn	19 38 38.4	-1.2
PHP				*i* Sn	Sg	19 38 56.2	-0.4
KNT	Kendrikon	1.30	66	P	Pb	19 38 40.2	-0.5
KNT	Kendrikon	1.30	66	P	Pb	19 38 40.0	-0.8
KNT				S	Sg	19 38 57.8	-0.6
KNT	Kendrikon	1.30	66	P	Pb	19 38 40.3	-0.5
KNT				S	Sg	19 38 57.8	-0.6
IGT	Igoumenitsa	1.35	215	P	Pg	19 38 43.0	+0.5
IGT	Igoumenitsa	1.35	215	P	Pg	19 38 42.7	+0.2
IGT				S	Sg	19 39 01.8	+1.8
IGT	Igoumenitsa	1.35	215	P	Pg	19 38 42.6	+0.1
IGT				S	Sg	19 39 01.8	+1.8
KEK	Kerkira	1.50	232	P	Pg	19 38 45.2	-0.2
KEK				S	Sb	19 39 04.1	+1.0
KEK				AML	AML	19 39 09.7	
	comp=E,112μm,0.4s						
KEK				AML	AML	19 39 12.3	
	comp=N,110μm,0.5s						
KEK	Kerkira	1.50	232	P	Pg	19 38 44.9	-0.4
KEK				S	Sg	19 39 04.8	0.0
DSL	Palaion Diasel	1.52	187	P	Pg	19 38 45.7	0.0
DSL	Palaion Diasel	1.52	187	P	Pg	19 38 45.2	-0.5
AGG	Agios Georgios	1.79	154	P	Pn	19 38 47.5	+0.3
AGG				S	Sb	19 39 12.4	+0.9
AGG				AML	AML	19 39 21.4	
	comp=E,115μm,0.2s						
AGG				AML	AML	19 39 23.3	
	comp=N,205μm,0.5s						
AGG	Agios Georgios	1.79	154	P	Pb	19 38 48.0	-1.2
AGG				S	Sb	19 39 12.2	+0.6
XOR	Xorichti	1.91	131	P	Pn	19 38 49.4	+0.6
XOR	Xorichti	1.91	131	P	Pb	19 38 49.7	-1.6
LKD2	Lefkada island	1.92	196	P	Pn	19 38 51.5	+0.1
LKD2	Lefkada island	1.92	196	P	Pb	19 38 51.0	-0.5
BARS	Barje	2.20	9	eP	Pn	19 38 53.5	+0.7
BOVS	Bovan	3.00	5	eP	Pn	19 39 04.2	+0.4
ZAGS	Zajecar	3.24	12	eP	Pn	19 39 07.5	+0.5
GRUS	Gruza	3.28	352	eP	Pn	19 39 08.5	+0.9
DIVS	Divibare	3.59	344	eP	Pn	19 39 12.4	+0.4
TEKS	Tekeris	4.13	342	eP	Pn	19 39 23.3	+4.1

*ISCJB **24** 19:39:59.3±0.5, 41°.09N±0°.05×29°.36W±0°.09, h10km, mb4.0/21, MS3.8/27, Error ellipse: s-maj=11.5km s-min=4.8km az=149.4*
*IDC **24** 19:40:00.3±0.7, 41°.36N×29°.29W, h0km, mb3.9/19, mb1 4.0/20, mb1mx3.9/67, mbtmp3.9/20, ML4.3/1, MS3.9/27, Ms1 3.9/27, ms1mx3.7/66, Error ellipse: s-maj=21.2km s-min=14.1km az=0.0*
*GCMT **24** 19:40:00.0±0.3, 41°.48N×29°.33W, h12km, MW4.8/75, Moment Tensor Solution. s15,c15; s75,c98; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=1.70±.07; Mθθ0.35±.08; Mφφ1.35±.06; Mrθ0.76±.31; Mrφ0.28±.06; Mθφ1.15±.29; Best double couple: M0=2.07900×10^16 NP1:φs=206.00000°, δ66.00000°, λ-82.00000°. NP2: φs=8.00000°, δ25.00000°, λ-107.00000°. Principal axes: T 1.9140, Plg20.0000°, Azm291.0000°; N 0.3320, Plg7.0000°, Azm23.0000°; P -2.2440, Plg68.0000°, Azm131.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*PDA **24** 19:40:02.5±1.1, 41°.21N×29°.71W, h15km, ML4.0 Error ellipse: s-maj=18.8km s-min=7.2km az=63.0*
*CSEM **24** 19:40:03.9±1.3, 40°.97N×29°.29W, h15km, ML4.0, Error ellipse: s-maj=34.8km s-min=10.4km az=89.0*
ISC 24 19:40:01.2±0.6, 41°.11N±0°.07×29°.33W±0°.08, h10km, n73, σ1§67/60, mb4.2/21, MS3.9/27, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSA	Rosais	2.54	160	eS	Sn	19 41 11.2	-2.1
ROSA				A	A	19 41 20.0	
	36nm,0.6s						
ROSA	Rosais	2.54	160	eS	Sn	19 41 11.2	-2.1
ADH	Angra Heroismo	2.94	146	eP	Pn	19 40 47.0	-0.9
ADH	Angra Heroismo	2.94	146	eP	Pn	19 40 47.0	-0.9
PSET	Sete Cidades	4.31	138	eP	Pn	19 41 07.3	+0.4
PSET	Sete Cidades	4.31	138	eP	Pn	19 41 07.3	+0.4
PDA	Ponta Delgada	4.40	139	eP	Pn	19 41 08.6	+0.6
PDA	Ponta Delgada	4.40	139	eP	Pn	19 41 08.6	+0.6
CMLA	Cha da Macela	4.46	137	eP	Pn	19 41 09.5	+0.7
CMLA				eS	Sn	19 41 59.5	-1.3
CMLA				A	A	19 42 03.4	
	40nm,0.3s						
CMLA	Cha da Macela	4.46	137	eP	Pn	19 41 09.5	+0.7
CMLA				eS	Sn	19 41 59.5	-1.3
BART	Pico Bartolome	4.63	135	eP	Pn	19 41 12.2	+0.9
BART				eS	Sn	19 42 04.2	-1.0
BART				A	A	19 42 08.1	
	21nm,0.2s						
BART	Pico Bartolome	4.63	135	eP	Pn	19 41 12.2	+0.9
BART				eS	Sn	19 42 04.2	-1.0
PSMA	Santa Maria	5.25	140	eP	Pn	19 41 20.4	+0.6
PSMA				eS	Sn	19 42 18.6	-1.8
PSMA				A	A	19 42 20.8	
	4.1nm,0.1s						
PSMN	Pico do Norte,	5.28	140	eP	Pn	19 41 20.8	+0.7
PSMN				eS	Sn	19 42 18.9	-2.1
PSMN				A	A	19 42 25.6	
	24nm,0.3s						
PSMN	Pico do Norte,	5.28	140	eP	Pn	19 41 20.8	+0.7
PSMN				eS	Sn	19 42 18.9	-2.1
PGAV	Gavieira, Arco	15.79	80	eP	P	19 43 47.8	+0.2
	33nm,1.6s						
PGAV	Gavieira, Arco	15.79	80	eP	P	19 43 47.8	+0.2
PVRL	Vila Real	16.27	82	eP	P	19 43 56.5	+3.7
	31nm,1.6s						
PVRL	Vila Real	16.27	82	eP	P	19 43 56.5	+3.7
MTE	Manteigas	16.52	85	eP	P	19 44 01.9	+6.3
	23nm,1.2s						
MVO	Moncorvo	16.80	82	eP	P	19 44 02.1	+3.4
	27nm,1.9s						
MVO	Moncorvo	16.80	82	eP	P	19 44 02.1	+3.4
PCVE	Castro Verde	16.82	95	eP	P	19 43 59.3	+0.4
	39nm,1.7s						
PCVE	Castro Verde	16.82	95	eP	P	19 43 59.3	+0.4
PBRG	Braganca	16.94	80	eP	P	19 44 01.8	+1.5

1.1nm,0.8s,baz=275,slow=5.5,SNR=6.1
KBZ Khabaz 51.80 61 P **P 19 49 10.2 +1.1**
2.6nm,0.9s,baz=298,slow=8.2,SNR=3.7
YKA Yellowknife Ar 52.48 324 P **P 19 49 13.4 -0.4**
1.0nm,0.8s,baz=68,slow=6.7,SNR=3.1
YKA LR LR 20 09 57.6
comp=Z,7.9nm,18.3s,baz=58,slow=34
PDAR Pinedale Array 57.48 301 P **P 19 49 50.0 -0.6**
1.3nm,0.9s,baz=64,slow=6.8,SNR=9.1
PDAR LR LR 20 14 15.2
comp=Z,232nm,18.3s,baz=73,slow=36
JTS JuntasAbangare 57.58 254 LR LR 20 10 20.9
comp=Z,106nm,21.4s,baz=91,slow=32
AKTO Aktyubinsk 58.27 49 P **P 19 49 55.9 +0.1**
4.8nm,0.9s,baz=1.1,slow=2.6,SNR=14
ANMO Albuquerque 59.22 291 LR LR 20 15 20.9
comp=Z,167nm,18.2s,baz=71,slow=36
TXAR Lajitas Array 60.17 284 P **P 19 50 09.7 +0.3**
1.1nm,0.8s,baz=67,slow=7.2,SNR=12
TXAR LR LR 20 16 56.7
comp=Z,95nm,18.5s,baz=0.0,slow=37
BVAR Borovoye Array 63.58 42 P **P 19 50 31.4 -0.3**
3.4nm,0.9s,baz=316,slow=4.0,SNR=18
ILAR Eielson Array 63.77 335 P **P 19 50 32.0 -0.8**
0.2nm,0.6s,baz=63,slow=4.2,SNR=2.3
GEYT Ålibeck 64.69 61 P **P 19 50 39.6 +0.3**
2.0nm,0.9s,baz=289,slow=9.2,SNR=7.1
NVAR Mina Array Bea 65.41 300 LR LR 20 19 27.6
comp=Z,204nm,18.5s,baz=297,slow=36
YBH Yreka Blue Hor 66.36 305 LR LR 20 18 08.5
comp=Z,83nm,19.8s,baz=52,slow=34
LPAZ La Paz 67.48 221 P **P 19 51 00.1 +2.0**
1.9nm,0.9s,baz=1.8,slow=6.3,SNR=4.9
LPAZ LR LR 20 16 44.5
comp=Z,79nm,20.8s,baz=22,slow=33
MBAR Mbarara 68.28 111 LR LR 20 20 31.8
comp=Z,142nm,20.0s,baz=323,slow=36
KURBB Kurchatov Arra 69.06 40 P **P 19 51 06.4 -0.5**
4.3nm,0.9s,baz=314,slow=6.4,SNR=29
ZALV Zalesovo Beam 69.78 35 P **P 19 51 10.4 -0.9**
0.9nm,0.3s,baz=309,slow=7.5,SNR=5.7
CPUP Villa Florida 71.96 206 LR LR 20 18 59.7
comp=Z,32nm,19.6s,baz=34,slow=32
MKAR Makanchi Array 73.46 42 P **P 19 51 33.2 -0.4**
3.4nm,0.8s,baz=319,slow=5.3,SNR=19
TSUM Tsumeb 74.12 134 LR LR 20 20 53.1
comp=Z,170nm,21.2s,baz=336,slow=33
SONM Songino Array 83.13 28 P **P 19 52 27.1 -0.2**
1.6nm,1.0s,baz=328,slow=6.7,SNR=8.1
GTA Gaotai 87.44 37 *eP* **P 19 52 49.3 +0.3**
GTA pP sP 19 52 53.3 -0.2
GTA sP pP 19 52 56.4 +4.1
GTA pmax pmax
comp=Z,3.0nm,0.8s
QSPA South Pole Qui 131.00 180 PKP **PKPdf 19 59 13.8 +1.9**
comp=Z,4.2nm,1.0s,baz=248,slow=1.8,SNR=8.3
VNDA Vanda 143.19 184 PKP **PKPdf 19 59 33.7 -0.4**
comp=Z,0.5nm,0.5s,baz=286,slow=7.6,SNR=3.1
ASAR Alice Springs 157.64 44 PKP **PKPdf 19 59 58.1 +0.1**
comp=Z,0.5nm,0.9s,baz=354,slow=5.5,SNR=4.2
ASAR PKPab **PKPab 20 00 29.4 -0.8**
comp=Z,1.6nm,0.9s,baz=335,slow=4.8,SNR=8.1

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*ISCJB **24** 19:45:45.8±1.0, 42°.0N±0°.2×29°.4W±0°.2, h10km, mb3.5/8, Error ellipse: s-maj=33.2km s-min=17.7km az=10.7*
*IDC **24** 19:45:46.2±1.2, 42°.03N×29°.36W, h0km, mb3.6/8, mb1 3.6/9, mb1mx3.4/67, mbtmp3.5/9, Error ellipse: s-maj=39.6km s-min=22.5km az=5.0*
ISC 24 19:45:47.6±1.1, 42°.0N±0°.3×29°.3W±0°.1, h10km, n9, σ0.9 60/9, mb3.7/8, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESDC	**Sonseca Array**	**19.32**	**88**	P	**Pn**	**19 50 13.5**	**-0.4**
	baz=286,slow=9.1,SNR=2.4						
TORD	**Torodi Ar. Bea**	**39.39**	**128**	P	**P**	**19 53 17.9**	**+0.3**
	2.7nm,1.2s,baz=326,slow=7.2,SNR=4.0						
PDAR	**Pinedale Array**	**57.03**	**300**	P	**P**	**19 55 34.6**	**+0.8**
	0.1nm,0.3s,baz=89,slow=6.4,SNR=2.4						
AKTO	**Aktyubinsk**	**57.68**	**49**	P	**P**	**19 55 38.2**	**+0.2**
	0.6nm,0.6s,baz=281,slow=5.2,SNR=3.7						
TXAR	**Lajitas Array**	**59.96**	**284**	P	**P**	**19 55 53.5**	**-0.8**
	0.3nm,0.8s,baz=54,slow=6.4,SNR=3.6						
BVAR	**Borovoye Array**	**62.91**	**42**	P	**P**	**19 56 14.4**	**+0.6**
	0.2nm,0.5s,baz=316,slow=4.0,SNR=3.5						
KURBB	**Kurchatov Arra**	**68.39**	**41**	P	**P**	**19 56 49.3**	**+0.2**
	0.5nm,0.7s,baz=321,slow=5.6,SNR=5.2						
MKAR	**Makanchi Array**	**72.80**	**42**	P	**P**	**19 57 15.9**	**-0.3**
	0.5nm,0.7s,baz=325,slow=5.9,SNR=6.7						
SONM	**Songino Array**	**82.35**	**28**	P	**P**	**19 58 09.4**	**-0.2**
	0.2nm,0.5s,baz=308,slow=7.0,SNR=2.3						

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*ISCJB **24** 19:48:41.4±0.6, 41°.4N±0°.1×29°.3W±0°.1, h12km, mb3.9/16, MS3.9/1, Error ellipse: s-maj=16.6km s-min=13.2km az=14.7*
*IDC **24** 19:48:41.2±0.7, 41°.42N×29°.32W, h0km, mb3.9/16, mb1 4.0/17, mb1mx3.8/68, mbtmp3.9/17, MS3.9/1, Ms1 3.9/1, ms1mx2.9/60, Error ellipse: s-maj=20.4km s-min=16.5km az=174.0*
ISC 24 19:48:43.1±0.8, 41°.4N±0°.1×29°.3W±0°.1, h12km, n19, σ0.9 74/18, mb4.0/16, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESDC	**Sonseca Array**	**19.30**	**87**	P	**Pn**	**19 53 09.4**	**+0.4**
	baz=270,slow=12,SNR=3.8						
MDT	**Midelt**	**21.41**	**106**	P	**P**	**19 53 31.7**	**+0.8**
	3.1nm,0.9s,baz=297,slow=14,SNR=3.2						
TORD	**Torodi Ar. Bea**	**39.00**	**127**	P	**P**	**19 56 08.6**	**-0.9**
	2.1nm,1.1s,baz=299,slow=6.4,SNR=4.9						
ARCES	**ARCESS Array B**	**39.70**	**27**	P	**P**	**19 56 14.4**	**-0.3**
	2.2nm,1.0s,baz=272,slow=6.8,SNR=3.9						
AKASG	**Malin Array Be**	**40.67**	**56**	P	**P**	**19 56 21.9**	**-1.1**
	0.9nm,0.7s,baz=278,slow=8.4,SNR=3.8						
DBIC	**Dimbokro**	**40.86**	**141**	P	**P**	**19 56 25.4**	**+0.4**
	3.9nm,0.8s,baz=301,slow=9.0,SNR=3.1						
RES	**Resolute Bay**	**44.12**	**340**	P	**P**	**19 56 52.1**	**+1.3**
	4.6nm,1.0s,baz=93,slow=9.3,SNR=4.2						
BRTR	**Keskin Array B**	**46.88**	**70**	P	**P**	**19 57 13.5**	**+0.2**
	1.1nm,0.8s,baz=278,slow=7.9,SNR=6.1						
AKTO	**Aktyubinsk**	**58.04**	**49**	P	**P**	**19 58 36.3**	**+0.6**
	3.2nm,0.8s,baz=270,slow=7.1,SNR=8.5						
ANMO	**Albuquerque**	**59.14**	**291**	P	**P**	**19 58 43.3**	**-0.6**
	0.5nm,0.5s,baz=72,slow=9.6,SNR=3.2						
NEW	**Newport**	**59.38**	**309**	LR	LR	20 22 59.1	
	comp=Z,90nm,18.6s,baz=55,slow=35						
TXAR	**Lajitas Array**	**60.13**	**284**	P	**P**	**19 58 50.1**	**-0.5**
	1.2nm,1.0s,baz=62,slow=7.4,SNR=6.3						
BVAR	**Borovoye Array**	**63.33**	**42**	P	**P**	**19 59 12.5**	**+0.8**
	2.3nm,0.9s,baz=313,slow=8.6,SNR=9.8						
LPAZ	**La Paz**	**67.74**	**221**	P	**P**	**19 59 41.7**	**+0.4**
	0.9nm,0.8s,baz=51,slow=6.8,SNR=3.2						
KURBB	**Kurchatov Arra**	**68.81**	**41**	P	**P**	**19 59 46.9**	**-0.1**
	2.4nm,0.8s,baz=310,slow=6.5,SNR=10						
ZALV	**Zalesovo Beam**	**69.51**	**35**	P	**P**	**19 59 51.9**	**+0.6**
	1.4nm,0.7s,baz=297,slow=6.5,SNR=4.6						
MKAR	**Makanchi Array**	**73.21**	**42**	P	**P**	**20 00 13.9**	**+0.2**
	1.6nm,0.7s,baz=323,slow=5.7,SNR=12						
SONM	**Songino Array**	**82.85**	**28**	P	**P**	**20 01 06.7**	**-0.7**
	0.5nm,0.7s,baz=317,slow=6.3,SNR=3.6						
ASAR	**Alice Springs**	**157.40**	**44**	PKPab	**PKPab**	**20 09 09.7**	**-0.9**
	0.9nm,1.0s,baz=318,slow=2.6,SNR=4.1						

IDC 24 20:04:57.8±25.0, 18°.99S×173°.43W, h0km, mb4.1/4, mb1 4.3/4, mb1mx3.7/49, mbtmp4.1/4, Error ellipse: s-maj=465.7km s-min=146.5km az=74.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**37.95**	**261**	P	P	20 12 17.9	+0.5
	2.3nm,0.5s,baz=90,slow=11,SNR=4.1						
STKA	**Stephens Creek**	**42.31**	**243**	P	P	20 12 53.2	-0.3
	1.5nm,0.8s,baz=84,slow=18,SNR=2.2						
ASAR	**Alice Springs**	**49.06**	**255**	P	P	20 13 46.8	-0.3
	1.9nm,0.5s,baz=97,slow=7.6,SNR=37						
WRA	**Warramunga Arr**	**49.09**	**260**	P	P	20 13 47.1	-0.2
	0.8nm,0.3s,baz=96,slow=7.4,SNR=25						

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*NEIC **24** 20:07:20.7±0.0, 38°.71N×43°.65E, h5km, mb4.9/60, ML5.0(ISK), After ISK.*
NEIC Felt at Van.
*AZER **24** 20:07:20.0±0.3, 38°.64N×43°.29E, h8km±6km, ml5.0/27, Error ellipse: s-maj=7.1km s-min=2.0km az=58.0*
*BJI **24** 20:07:20.0, 38°.70N×43°.60E, h5km, mb4.9/63, mB5.0/37, Ms4.4/34, Ms7 4.2/32*
*DDA **24** 20:07:21.8, 38°.73N×43°.67E, h24km, Ml5.0*
*ISK **24** 20:07:21.9, 38°.75N×43°.61E, h9km, ML4.5/26*
*ISCJB **24** 20:07:21.9±0.1, 38°.70N±0°.01×43°.59E±0°.01, h10km, mb4.8/177, MS4.1/44, Error ellipse: s-maj=1.8km s-min=1.3km az=175.9*
*ISN **24** 20:07:21.5±1.1, 38°.63N×43°.65E, h6km±4km, ML4.9*
*GCMT **24** 20:07:22.0±0.3, 38°.61N×43°.63E, h19km, MW4.9/82, Moment Tensor Solution. s35,c46; s82,c121; Duration: 0 Moment tensor: Scale 10^16Nm; M_rr2.58±.14; M_θθ-2.57±.09; M_φφ-0.01±.09; M_rθ0.13±.16; M_θφ-0.74±.06; M_φr0.71±.21; Best double couple: M_0 2.77500×10^16 NP1:φ_s61.00000°, δ50.00000°, λ71.00000°. NP2: φ_s269.00000°, δ43.00000°, λ111.00000°. Principal axes: T 2.7610, Plg76.0000°, Azm267.0000°; N 0.0200, Plg14.0000°, Azm73.0000°; P -2.7880, Plg3.0000°, Azm164.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*TEH **24** 20:07:23.0, 38°.94N×43°.75E, h10km, ML4.5*
*CSEM **24** 20:07:23.3±0.1, 38°.72N×43°.61E, h10km, mb4.9/66, Error ellipse: s-maj=2.6km s-min=2.0km az=177.0*
*DSN **24** 20:07:23.6±0.6, 38°.55N×43°.42E, h15km, mb4.9/13, Error ellipse: s-maj=13.7km s-min=5.0km az=70.0*
*MOS **24** 20:07:23.0±1.3, 38°.68N×43°.58E, h19km, mb5.1/63, MS4.1/23, Error ellipse: s-maj=4.5km s-min=2.9km az=110.8*
*IDC **24** 20:07:26.6±1.5, 38°.75N×43°.59E, h33km±11km, mb4.6/49, mb1 4.7/60, mb1mx4.6/87, mbtmp4.8/60, ML3.9/9, MS3.9/31, Ms1 3.9/31, ms1mx3.7/68, Error ellipse: s-maj=8.9km s-min=5.9km az=141.0*
*CNRM **24** 20:07:45.3, 40°.67N×40°.91E, h15km, ML5.1*
*GII **24** 20:07:49.4±0.0, 37°.49N×42°.26E, h20km*
ISC 24 20:07:23.3±0.8, 38°.73N±0°.01×43°.63E±0°.01, h11km±4km, n1086, σ1.975/1203, mb4.9/177, MS4.1/45, 111C-98D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.23**	**234**	PG	**Pb**	**20 07 28.7**	**-0.8**
VANB	**Van**	**0.23**	**234**	*e*Pg	**Pb**	**20 07 28.7**	**-0.8**
VMUR	**Van-Muradiye**	**0.26**	**351**	⇓*i*P	**Pg**	**20 07 28.0**	**-0.8**
VMUR				*i* S	**Sg**	**20 07 33.3**	**+0.8**
VMUR	**Van-Muradiye**	**0.26**	**351**	*i* P	**Pg**	**20 07 28.2**	**-0.6**
VMUR				*e*S	**Sg**	**20 07 33.3**	**+0.8**
VMUR	**Van-Muradiye**	**0.26**	**351**	*i* P	**Pg**	**20 07 28.2**	**-0.6**
VMUR				S	**Sg**	**20 07 33.3**	**+0.8**
TVAN	**Van**	**0.26**	**221**	⇓*i*P	**Pg**	**20 07 28.5**	**-0.3**
TVAN				*i* S	**Sb**	**20 07 34.1**	**-0.7**
TVAN	**Van**	**0.26**	**221**	*i* P	**Pb**	**20 07 29.0**	**-1.2**
TVAN	**Van**	**0.26**	**221**	*i* P	**Pb**	**20 07 29.0**	**-1.2**
TVAN				S	**Sb**	**20 07 34.1**	**-0.7**
ERCV	**ERCIS-VAN**	**0.37**	**322**	PG	**Pg**	**20 07 29.7**	**-0.9**
ERCV	**ERCIS-VAN**	**0.37**	**322**	*e*Pg	**Pg**	**20 07 29.7**	**-0.9**
CLDR	**Caldiran**	**0.47**	**29**	PG	**Pg**	**20 07 30.9**	**-1.7**
CLDR				SG	**Sg**	**20 07 37.7**	**-1.2**
CLDR	**Caldiran**	**0.47**	**29**	⇓*i*P	**Pg**	**20 07 30.8**	**-1.7**
CLDR				*i* S	**Sg**	**20 07 38.8**	**-0.1**
CLDR	**Caldiran**	**0.47**	**29**	*i* P	**Pg**	**20 07 31.1**	**-1.5**
CLDR	**Caldiran**	**0.47**	**29**	*i* P	**Pg**	**20 07 31.1**	**-1.5**
CLDR				S	**Sg**	**20 07 38.8**	**-0.1**
GEVA	**Gevas**	**0.61**	**227**	⇓*i*P	**Pg**	**20 07 34.1**	**-1.1**
GEVA				*i* S	**Sb**	**20 07 44.3**	**-0.4**
GEVA	**Gevas**	**0.61**	**227**	P	**Pg**	**20 07 34.1**	**-1.1**
GEVA				S	**Sb**	**20 07 44.3**	**-0.4**
ADCV	**BITLIS_Adilcev**	**0.71**	**277**	⇑*i*P	**Pg**	**20 07 36.2**	**-0.8**
ADCV				*i* S	**Sb**	**20 07 47.8**	**+0.2**
ADCV	**BITLIS_Adilcev**	**0.71**	**277**	P	**Pg**	**20 07 36.2**	**-0.8**
ADCV				S	**Sb**	**20 07 47.8**	**+0.2**
DYDN	**Diyadin**	**0.81**	**3**	⇓*i*P	**Pg**	**20 07 37.5**	**-1.5**
DYDN				*i* S	**Sg**	**20 07 49.1**	**-0.6**
DYDN	**Diyadin**	**0.81**	**3**	P	**Pg**	**20 07 37.5**	**-1.5**
DYDN				S	**Sg**	**20 07 49.1**	**-0.6**
TUTA	**Tutak**	**0.92**	**317**	⇓*i*P	**Pb**	**20 07 39.4**	**-2.1**
TUTA				*i* S	**Sg**	**20 07 53.7**	**+0.5**
TUTA	**Tutak**	**0.92**	**317**	P	**Pb**	**20 07 39.4**	**-2.1**
TUTA				S	**Sg**	**20 07 53.7**	**+0.5**
AGRB	**Hanur-Agry**	**0.98**	**330**	PG	**Pb**	**20 07 40.7**	**-1.7**
AGRB				SG	**Sb**	**20 07 54.3**	**-1.1**
AGRB	**Hanur-Agry**	**0.98**	**330**	*e*Pg	**Pb**	**20 07 40.7**	**-1.7**
AGRB				*e*Sg	**Sb**	**20 07 54.3**	**-1.1**
HAKT	**HAKKARI**	**1.17**	**177**	⇓*i*P	**Pb**	**20 07 44.1**	**-1.6**
HAKT				*i* S	**Sn**	**20 08 05.6**	**+3.6**
HAKT	**HAKKARI**	**1.17**	**177**	P	**Pb**	**20 07 44.1**	**-1.6**
IGDI	**IGDIR**	**1.19**	**17**	⇓*i*P	**Pn**	**20 07 44.7**	**-1.3**
IGDI				*i* S	**Sg**	**20 08 03.9**	**+2.2**
YOVA	**Hakkari_Y¨…kse**	**1.25**	**155**	⇓*i*P	**Pn**	**20 07 45.9**	**-1.1**
YOVA				*i* S	**Sg**	**20 08 07.8**	**+4.1**
YOVA	**Hakkari_Y¨…kse**	**1.25**	**155**	P	**Pn**	**20 07 45.9**	**-1.1**
YOVA				S	**Sg**	**20 08 07.8**	**+4.1**
GURO	**Guroymak-BITLI**	**1.26**	**262**	PN	**Pn**	**20 07 45.4**	**-1.6**
GURO				SN	**Sg**	**20 08 03.1**	**-0.8**
GURO	**Guroymak-BITLI**	**1.26**	**262**	*e*Pn	**Pn**	**20 07 45.4**	**-1.6**
GURO				*e*Sn	**Sg**	**20 08 03.1**	**-0.8**
EKAR	**Karacoban**	**1.32**	**294**	⇓*i*P	**Pn**	**20 07 46.7**	**-1.3**
EKAR				*i* S	**Sg**	**20 08 07.1**	**+1.1**
EKAR	**Karacoban**	**1.32**	**294**	P	**Pn**	**20 07 46.7**	**-1.3**
EKAR				S	**Sg**	**20 08 07.1**	**+1.1**
HYR	**Heyderabad**	**1.37**	**44**	⇓P	**Pb**	**20 07 48.6**	**-0.5**
HYR				⇓S	**Sg**	**20 08 11.5**	**+4.0**
HYR	**Heyderabad**	**1.37**	**44**	⇓P	**Pb**	**20 07 48.6**	**-0.5**
HYR				⇓S	**Sg**	**20 08 11.5**	**+4.0**
EATA	**Eleskirt**	**1.43**	**323**	⇓*i*P	**Pn**	**20 07 48.8**	**-0.8**
EATA				*i* S	**Sg**	**20 08 10.8**	**+1.3**
EATA	**Eleskirt**	**1.43**	**323**	P	**Pn**	**20 07 48.8**	**-0.8**
EATA				S	**Sg**	**20 08 10.8**	**+1.3**
CUKT	**Cukurca**	**1.48**	**181**	PN	**Pn**	**20 07 48.9**	**-1.1**
CUKT	**Cukurca**	**1.48**	**181**	⇓*i*P	**Pn**	**20 07 48.7**	**-1.3**
CUKT				*i* S	**Sg**	**20 08 12.7**	**+1.8**
CUKT	**Cukurca**	**1.48**	**181**	*e*Pn	**Pn**	**20 07 48.9**	**-1.1**
CUKT				S	**Sg**	**20 08 12.7**	**+1.8**
NAX	**Nakhchivan**	**1.52**	**72**	P	**Pb**	**20 07 51.7**	**+0.1**
	SNR=1000						
NAX				⇓S	**Sg**	**20 08 15.7**	**+3.4**
NAX	**Nakhchivan**	**1.52**	**72**	P	**Pb**	**20 07 51.7**	**+0.1**
	SNR=1391						
NAX				⇓S	**Sg**	**20 08 15.7**	**+3.4**
SRTM	**Siirt_Merkez**	**1.53**	**242**	⇑*i*P	**Pb**	**20 07 50.6**	**-1.1**
SRTM				*i* S	**Sg**	**20 08 13.6**	**+1.2**
SRTM	**Siirt_Merkez**	**1.53**	**242**	P	**Pb**	**20 07 50.6**	**-1.1**
SRTM				S	**Sg**	**20 08 13.6**	**+1.2**
SIRT	**Sirnak**	**1.54**	**218**	PN	**Pb**	**20 07 50.9**	**-1.0**
SIRT	**Sirnak**	**1.54**	**218**	*e*Pn	**Pb**	**20 07 50.9**	**-1.0**
SIRN	**S¨–rnak**	**1.56**	**218**	⇓*i*P	**Pb**	**20 07 51.0**	**-1.2**
SIRN				*i* S	**Sg**	**20 08 15.8**	**+2.4**
SIRN	**S¨–rnak**	**1.56**	**218**	P	**Pb**	**20 07 51.0**	**-1.2**
ISHB	**Shabestar**	**1.62**	**105**	*e*Pn	**Pb**	**20 07 52.3**	**-1.1**
ISHB				*e*		20 08 01.1	
	comp=Z,17μm,0.3s						
SBZ	**Shahbuz**	**1.64**	**65**	⇑P	**Pb**	**20 07 53.4**	**-0.3**
SBZ				⇑S	**Sg**	**20 08 18.9**	**+2.8**
SBZ	**Shahbuz**	**1.64**	**65**	⇑P	**Pb**	**20 07 53.4**	**-0.3**
SBZ				⇑S	**Sg**	**20 08 18.9**	**+2.8**
GNI	**Garni**	**1.66**	**31**	Pn	**Pb**	**20 07 53.6**	**-0.4**
	comp=Z,667nm,0.3s,baz=245,slow=2.4,SNR=1119						
GNI				Sn	**Sg**	**20 08 16.8**	**+0.1**
	comp=Z,568nm,0.3s,baz=108,slow=20,SNR=16						
GNI				LR	LR	20 08 38.1	
	comp=Z,5μm,20.0s,baz=218,slow=43						
GNI	**Garni**	**1.66**	**31**	PN	**Pn**	**20 07 52.5**	**0.0**
GNI	**Garni**	**1.66**	**31**	P	**Pb**	**20 07 53.6**	**-0.4**
	SNR=390						
GNI	**Garni**	**1.66**	**31**	*e*P	**Pb**	**20 07 53.9**	**-0.1**
	SNR=995						
GNI	**Garni**	**1.66**	**31**	*de*P	**Pb**	**20 07 53.4**	**-0.6**
GNI	**Garni**	**1.66**	**31**	*e*P	**Pb**	**20 07 53.4**	**-0.6**
DIGO	**Kars**	**1.69**	**354**	⇓*i*P	**Pn**	**20 07 53.1**	**0.0**
DIGO				*i* S	**Sg**	**20 08 18.2**	**+0.4**
DIGO	**Kars**	**1.69**	**354**	P	**Pn**	**20 07 53.1**	**0.0**
DIGO				S	**Sg**	**20 08 18.2**	**+0.4**
ORD	**Ordubad**	**1.86**	**83**	⇑P	**Pb**	**20 07 56.5**	**-0.9**
ORD				⇓S	**Sg**	**20 08 23.8**	**+0.7**
ORD	**Ordubad**	**1.86**	**83**	⇑P	**Pb**	**20 07 56.5**	**-0.9**
ORD				⇓S	**Sg**	**20 08 23.8**	**+0.7**
HOMI	**Horasan**	**1.87**	**315**	⇑*i*P	**Pn**	**20 07 54.9**	**-0.6**
HOMI				*i* S	**Sg**	**20 08 26.7**	**+3.2**
KARS	**Kars**	**1.94**	**348**	PN	**Pn**	**20 07 55.8**	**-0.6**
KARS	**Kars**	**1.94**	**348**	*e*Pn	**Pn**	**20 07 55.8**	**-0.6**
BNGL	**BINGOL**	**1.94**	**277**	⇑*i*P	**Pn**	**20 07 56.5**	**0.0**
BNGL				*i* S	**Sg**	**20 08 26.6**	**+0.8**
EAK	**Akyaka**	**1.95**	**360**	⇓*i*P	**Pb**	**20 07 57.4**	**-1.6**
EAK				*i* S	**Sg**	**20 08 27.9**	**+1.8**
EAK	**Akyaka**	**1.95**	**360**	P	**Pb**	**20 07 57.4**	**-1.6**
SVAN	**Silvan-Diyarba**	**1.99**	**254**	PN	**Pb**	**20 07 57.4**	**-2.2**
SVAN	**Silvan-Diyarba**	**1.99**	**254**	⇑*i*P	**Pn**	**20 07 57.1**	**+0.2**
SVAN				*i* S	**Sb**	**20 08 24.0**	**-0.4**
SVAN	**Silvan-Diyarba**	**1.99**	**254**	P	**Pn**	**20 07 57.2**	**+0.2**
SVAN				S	**Sb**	**20 08 24.0**	**-0.4**
BTMN	**Batman**	**2.03**	**246**	⇑*i*P	**Pn**	**20 07 57.9**	**+0.3**
BTMN				*i* S	**Sg**	**20 08 26.8**	**-1.8**
BTMN	**Batman**	**2.03**	**246**	P	**Pn**	**20 07 57.9**	**+0.3**
BTMN				S	**Sg**	**20 08 26.8**	**-1.8**
ITBZ	**Tabriz**	**2.04**	**103**	*e*Pn	**Pb**	**20 07 59.6**	**-0.9**
ITBZ				*e*		20 08 07.3	
	comp=Z,34μm,0.4s						
ITBZ				*e*Sg	**Sg**	**20 08 30.4**	**+1.5**
ITBZ	**Tabriz**	**2.04**	**103**	*e*Pn	**Pb**	**20 07 59.6**	**-0.9**
ITBZ				*e*Sg	**Sg**	**20 08 30.4**	**+1.5**
SENK	**Senkaya-Erzuru**	**2.08**	**332**	PN	**Pn**	**20 07 57.8**	**-0.5**
SENK	**Senkaya-Erzuru**	**2.08**	**332**	*e*Pn	**Pn**	**20 07 57.8**	**-0.5**
ERZM	**Erzurum**	**2.11**	**305**	⇑*i*P	**Pn**	**20 07 58.6**	**-0.2**
ERZM				*i* S	**Sg**	**20 08 32.3**	**+1.2**
ERZM	**Erzurum**	**2.11**	**305**	P	**Pn**	**20 07 58.6**	**-0.2**
ECAT	**Cat-ERZURUM**	**2.24**	**294**	⇑*i*P	**Pn**	**20 08 00.9**	**+0.4**
ECAT				*i* S	**Sg**	**20 08 35.0**	**-0.3**
ECAT	**Cat-ERZURUM**	**2.24**	**294**	P	**Pn**	**20 08 00.9**	**+0.4**
BNGB	**Bing¨¶l**	**2.31**	**277**	PN	**Pn**	**20 08 01.0**	**-0.5**
BGOL	**Bingol**	**2.32**	**277**	*i* P	**Pn**	**20 08 01.5**	**-0.1**
BGOL				*i* S	**Sb**	**20 08 34.0**	**0.0**
BGOL	**Bingol**	**2.32**	**277**	P	**Pn**	**20 08 01.5**	**-0.1**
BGOL				S	**Sb**	**20 08 34.0**	**0.0**
BINT	**Bingol**	**2.45**	**274**	P	**Pn**	**20 08 00.6**	**-2.8**
BINT	**Bingol**	**2.45**	**274**	P	**Pn**	**20 08 00.6**	**-2.8**
YEDI	**Yedisu-Bingol**	**2.50**	**287**	PN	**Pn**	**20 08 03.7**	**-0.4**
YEDI	**Yedisu-Bingol**	**2.50**	**287**	*e*Pn	**Pn**	**20 08 03.7**	**-0.4**
BGD	**Bogdanovka**	**2.53**	**360**	P	**Pn**	**20 08 05.1**	**+0.5**
HANI	**Diyarbakir_Han**	**2.55**	**264**	*i* P	**Pn**	**20 08 04.7**	**0.0**
HANI				*i* S	**Sb**	**20 08 40.5**	**+0.1**
HANI	**Diyarbakir_Han**	**2.55**	**264**	P	**Pn**	**20 08 04.7**	**0.0**
GDB	**GEDABAY**	**2.58**	**39**	⇑P	**Pn**	**20 08 05.7**	**+0.5**
	SNR=636						
GDB				⇑S	**Sb**	**20 08 41.4**	**-0.1**
GDB	**GEDABAY**	**2.58**	**39**	⇑P	**Pn**	**20 08 05.7**	**+0.5**
	SNR=636						
GDB				⇑S	**Sb**	**20 08 41.4**	**-0.1**
DDEM	**Demirkent**	**2.60**	**327**	⇓*i*P	**Pn**	**20 08 06.3**	**+0.9**
DDEM				*i* S	**Sb**	**20 08 44.1**	**+2.2**
DDEM	**Demirkent**	**2.60**	**327**	P	**Pn**	**20 08 06.3**	**+0.9**
MARD	**Mardin**	**2.66**	**239**	⇑*i*P	**Pn**	**20 08 05.2**	**-0.9**
MARD				*i* S	**Sg**	**20 08 51.6**	**+3.1**
AKH	**Akhalkalaki**	**2.68**	**358**	P	**Pb**	**20 08 11.9**	**+0.6**
AKH				S	**Sb**	**20 08 46.1**	**+1.7**
AKH	**Akhalkalaki**	**2.68**	**358**	*e*Pn	**Pb**	**20 08 10.9**	**-0.5**
AKH	**Akhalkalaki**	**2.68**	**358**	*e*P	**Pb**	**20 08 10.9**	**-0.5**
AKH	**Akhalkalaki**	**2.68**	**358**	*e*P	**Pb**	**20 08 10.9**	**-0.5**
QZX	**Qazax, Azerbai**	**2.69**	**29**	⇑P	**Pn**	**20 08 06.6**	**+0.1**
	SNR=450						
QZX				⇑S	**Sb**	**20 08 42.5**	**-1.9**
QZX	**Qazax, Azerbai**	**2.69**	**29**	⇑P	**Pn**	**20 08 06.6**	**+0.1**
	SNR=450						
QZX				⇑S	**Sb**	**20 08 42.5**	**-1.9**
IHRS	**Heris**	**2.71**	**98**	*e*		20 08 19.9	
	comp=Z,29μm,0.3s						
IHRS				*e*Pn	**Pb**	**20 08 09.1**	**-2.9**
IHRS				*e*Sg	**Sg**	**20 08 51.4**	**+1.0**
KOPT	**Kop Dagi**	**2.74**	**299**	⇓*i*P	**Pb**	**20 08 12.7**	**+0.1**
KOPT				*i* S	**Sg**	**20 08 55.0**	**+3.5**
IBST	**Bostanabad**	**2.77**	**111**	*e*		20 08 58.1	
	comp=Z,12μm,

MACK Trabzon 3.70 308 *i* P **Pb 20 08 28.9 +0.2**
MACK *i* S **Sg 20 09 20.0 -2.2**
ZKTA Zakatala 3.70 37 ⇑P **Pn 20 08 21.0 +0.5**
SNR=3.6
ZKTA ⇓S **Sn 20 09 08.5 +4.4**
GLBA Clilabad 3.75 81 ⇓P **Pn 20 08 21.9 +0.8**
SNR=17
GLBA ⇑S **Sb 20 09 10.5 -4.5**
GLBA Clilabad 3.75 81 ⇓P **Pn 20 08 21.9 +0.8**
SNR=17
GLBA ⇑S **Sb 20 09 10.5 -4.5**
GUDG Gudauri 3.79 10 P **Pb 20 08 27.1 -3.2**
GUDG S **Sg 20 09 28.0 +3.1**
REFA Refahiye_ERZ˜ 3.84 281 *i* P **Pb 20 08 27.2 -3.9**
REFA *i* S **Sg 20 09 32.3 +5.7**
REFA Refahiye_ERZ˜ 3.84 281 P **Pb 20 08 27.2 -3.9**
KDMR Kurdemir 3.89 64 ⇑S **Sb 20 09 13.8 -5.1**
KDMR Kurdemir 3.89 64 ⇑S **Sb 20 09 13.8 -5.1**
SAAT Saatly 3.89 72 ⇓P **Pn 20 08 23.6 +0.6**
SNR=7.7
SAAT ⇑S **Sn 20 09 13.2 +4.5**
SAAT Saatly 3.89 72 ⇓P **Pn 20 08 23.6 +0.6**
SNR=7.7
SAAT ⇑S **Sn 20 09 13.2 +4.5**
QBL Gabala 3.93 54 ⇓P **Pn 20 08 24.3 +0.7**
SNR=22
QBL ⇓S **Sb 20 09 14.6 -5.5**
QBL Gabala 3.93 54 ⇓P **Pn 20 08 24.3 +0.7**
SNR=22
QBL ⇓S **Sb 20 09 14.6 -5.5**
SANL SANLIURFA_Merk 3.98 248 *i* P **Pn 20 08 24.1 -0.2**
SANL *i* S **Sg 20 09 28.0 -3.1**
SANL SANLIURFA_Merk 3.98 248 P **Pn 20 08 24.1 -0.2**
ILIC ilic-Erzincan 4.00 282 PN **Pn 20 08 25.6 +0.9**
ILIC ilic-Erzincan 4.00 282 *e*Pn **Pn 20 08 25.6 +0.9**
URFA Urfa 4.00 253 PN **Pn 20 08 25.3 +0.6**
URFA Urfa 4.00 253 *e*Pn **Pn 20 08 25.3 +0.6**
KEMA Kemaliye 4.03 279 *i* P **Pn 20 08 25.4 +0.3**
KEMA *i* S **Sg 20 09 31.3 -1.5**
KEMA Kemaliye 4.03 279 P **Pn 20 08 25.4 +0.3**
ASTR Astara 4.05 91 ⇓P **Pn 20 08 25.9 +0.7**
SNR=162
ASTR ⇑S **Sn 20 09 17.3 +4.7**
ASTR Astara 4.05 91 ⇓P **Pn 20 08 25.9 +0.7**
SNR=162
ASTR ⇑S **Sn 20 09 17.3 +4.7**
ZEI Tsey 4.06 3 *e*P **Pn 20 08 27.8 +2.2**
ZEI pmax pmax
comp=Z,278nm,0.6s
IML Ismayilli 4.07 58 ⇓P **Pn 20 08 26.4 +0.8**
SNR=12
IML ⇑S **Sn 20 09 18.3 +5.0**
IML Ismayilli 4.07 58 ⇓P **Pn 20 08 26.4 +0.8**
SNR=12
IML ⇑S **Sn 20 09 18.3 +5.0**
MALT Malatya 4.10 266 PN **Pn 20 08 26.4 +0.4**
MALT Malatya 4.10 266 *e*Pn **Pn 20 08 26.4 +0.4**
CHVG Ch'k'valeri 4.15 344 P **Pb 20 08 38.5 +2.1**
CHVG S **Sb 20 09 30.3 +3.7**
AKT Akhty 4.18 48 *e*P **Pn 20 08 29.1 +2.0**
AKT *e*S **Sn 20 09 16.8 +0.8**
AKT pmax pmax
comp=Z,79nm,0.6s
AKT smax smax
comp=N,102nm,0.5s
AKT smax smax
comp=E,417nm,0.9s
AKT smax smax
comp=E,277nm,0.8s
AKT Akhty 4.18 48 *e*P **Pn 20 08 29.1 +2.0**
comp=E,79nm,0.6s
AKT *e*S **Sn 20 09 16.8 +0.8**
comp=E,102nm,0.5s
XNQ Khinaliq 4.24 53 ⇓P **Pn 20 08 28.7 +0.7**
SNR=12
XNQ ⇓S **Sn 20 09 22.5 +4.8**
XNQ Khinaliq 4.24 53 ⇓P **Pn 20 08 28.7 +0.7**
SNR=12
XNQ ⇓S **Sn 20 09 22.5 +4.8**
PQL Pirkuli 4.35 60 ⇑P **Pn 20 08 30.2 +0.8**
PQL ⇓S **Sn 20 09 25.2 +5.0**
PQL Pirkuli 4.35 60 ⇑P **Pn 20 08 30.2 +0.8**
PQL ⇓S **Sn 20 09 25.2 +5.0**
ALIB Äli-Bayra 4.35 72 ⇑P **Pn 20 08 30.1 +0.8**
ALIB ⇓S **Sn 20 09 25.1 +5.1**
ALIB Äli-Bayra 4.35 72 ⇑P **Pn 20 08 30.1 +0.8**
ALIB ⇓S **Sn 20 09 25.1 +5.1**
SUSE Susehri 4.45 291 *i* P Pn 20 08 34.9 +4.0
SUSE *i* S **Sg 20 09 51.6 +5.5**
SUSE Susehri 4.45 291 P Pn 20 08 34.9 +4.0
GBS Qobustan 4.48 65 ⇓P **Pn 20 08 32.1 +0.8**
SNR=11
GBS ⇑S **Sn 20 09 28.4 +4.9**
GBS Qobustan 4.48 65 ⇓P **Pn 20 08 32.1 +0.8**
SNR=11
GBS ⇑S **Sn 20 09 28.4 +4.9**
QSAR Qusar 4.51 50 ⇓P **Pn 20 08 32.3 +0.7**
SNR=9.8
QSAR ⇓S **Sn 20 09 28.9 +4.7**
QSAR Qusar 4.51 50 ⇓P **Pn 20 08 32.3 +0.7**
SNR=9.8
QSAR ⇓S **Sn 20 09 28.9 +4.7**
QUBA Quba, Azerbaij 4.56 53 ⇓P **Pn 20 08 33.1 +0.8**
SNR=71
QUBA ⇑S **Sn 20 09 30.1 +4.7**
QUBA Quba, Azerbaij 4.56 53 ⇓P **Pn 20 08 33.1 +0.8**
SNR=71
QUBA ⇑S **Sn 20 09 30.1 +4.7**
NEY Neytrino 4.57 352 *i* P **Pn 20 08 32.5 0.0**
NEY Neytrino 4.57 352 *i* P **Pn 20 08 32.5 0.0**
ATGJ Altiaghaj 4.61 61 ⇑P **Pn 20 08 33.8 +0.8**
SNR=35
ATGJ ⇓S **Sn 20 09 31.5 +4.8**
ATGJ Altiaghaj 4.61 61 ⇑P **Pn 20 08 33.9 +0.8**
SNR=35
ATGJ ⇓S **Sn 20 09 31.5 +4.8**
ILIN Lien 4.65 144 *e*Pn Pn 20 08 38.2 +4.5
ILIN *e* 20 10 12.2
comp=Z,5µm,0.3s
ILIN Lien 4.65 144 *e*Pn Pn 20 08 38.2 +4.5
SIZA Siyzn 4.68 58 ⇑P **Pn 20 08 34.8 +0.8**
SNR=18
SIZA Siyzn 4.68 58 ⇑P **Pn 20 08 34.8 +0.8**
SNR=18
GROC Groznyy 4.76 19 *e*P **Pn 20 08 33.9 -1.1**
GROC *e*S **Sn 20 09 27.8 -2.4**
GROC pmax pmax
comp=Z,56nm,1.2s
GROC smax smax
comp=E,621nm,1.8s
GROC smax smax
comp=E,1631µm,1.6s
GROC Groznyy 4.76 19 *e*P **Pn 20 08 33.9 -1.1**
comp=E,56nm,1.2s
GROC *e*S **Sn 20 09 27.8 -2.4**
NCK Nalchik 4.76 360 *i* P **Pn 20 08 34.3 -0.7**
NCK Nalchik 4.76 360 *i* P **Pn 20 08 34.3 -0.7**
DARE Darende-Malaty 4.81 270 PN **Pn 20 08 36.5 +0.7**
DARE Darende-Malaty 4.81 270 *e*Pn **Pn 20 08 36.5 +0.7**
IVIS Veis 4.93 147 *e*Pn Pn 20 08 41.8 +4.3
IVIS *e* 20 09 13.0
comp=Z,5µm,0.4s
IVIS Veis 4.93 147 *e*Pn Pn 20 08 41.8 +4.3
KBZ Khabaz 5.03 354 Pn **Pn 20 08 42.4 +3.8**
comp=Z,0.3nm,0.3s,baz=199,slow=10,SNR=15
MAK Makhachkala 5.15 34 *e*P **Pn 20 08 43.7 +3.4**
MAK *e*S **Sn 20 09 46.6 +6.9**
MAK pmax pmax
comp=Z,194nm,1.0s
MAK MLR MLR
comp=Z,8µm,11.0s
MAK Makhachkala 5.15 34 *e*P **Pn 20 08 43.7 +3.4**
comp=Z,194nm,1.0s
KVAR Kislovodsk Arr 5.27 353 Pn **Pn 20 08 46.2 +4.1**
baz=50,slow=0.8,SNR=27
KVAR LR LR 20 11 17.3
comp=Z,1µm,20.2s,baz=96,slow=44
KIV Kislovodsk 5.27 353 *e*Pn **Pn 20 08 45.8 +3.8**
KIV Kislovodsk 5.27 353 P Pn 20 08 46.6 +4.6
SNR=26
KIV Kislovodsk 5.27 353 *i* P **Pn 20 08 44.7 +2.7**
SNR=18
KIV Kislovodsk 5.27 353 *e*P **Pn 20 08 44.1 +2.0**
KIV pmax pmax
comp=Z,44nm,1.0s
KIV MLR MLR
comp=Z,435nm,8.0s
KIV Kislovodsk 5.27 353 *e*P **Pn 20 08 44.1 +2.0**
comp=Z,435nm,8.0s
KIV Kislovodsk 5.27 353 *e*Pn **Pn 20 08 45.8 +3.8**
GAZ Gaziantep 5.30 255 PN **Pn 20 08 43.6 +1.1**
GAZ Gaziantep 5.30 255 *e*Pn **Pn 20 08 43.6 +1.1**
KMRS Kahramanmaras 5.44 259 PN **Pn 20 08 44.9 +0.5**
KMRS Kahramanmaras 5.44 259 *e*Pn **Pn 20 08 44.9 +0.5**
BHD Baghdad 5.48 173 *e*Pn **Pn 20 08 44.0 -0.9**
SNR=4.0
SARI SarD1z-Kayseri 5.66 269 PN **Pn 20 08 47.9 +0.4**
SOC Sochi 5.67 330 *e*P **Pn 20 08 49.8 +2.3**
SOC *e* 20 09 56.8
SOC pmax pmax
comp=Z,28nm,0.7s
SOC MLR MLR
comp=Z,1µm,10.0s
SOC Sochi 5.67 330 *e*P **Pn 20 08 49.8 +2.3**
comp=Z,28nm,0.7s
TOKT Tokat 5.70 288 PN **Pn 20 08 49.9 +2.0**
TOKT Tokat 5.70 288 *e*Pn **Pn 20 08 49.9 +2.0**
IGZV Ghazvin 5.74 112 *e*Pn **Pn 20 08 51.2 +2.6**
IGZV *e* 20 09 22.6
comp=Z,3µm,0.4s
IGZV Ghazvin 5.74 112 *e*Pn **Pn 20 08 51.2 +2.6**
IRAZ Razeghan 6.03 121 *e*Pn **Pn 20 08 55.6 +2.9**
IRAZ *e* 20 09 22.0
comp=Z,3µm,0.5s
IRAZ Razeghan 6.03 121 *e*Pn **Pn 20 08 55.6 +2.9**
BNN Bunyan 6.08 274 PN **Pn 20 08 55.2 +2.0**
BNN Bunyan 6.08 274 *e*Pn **Pn 20 08 55.2 +2.0**
KVT Kavak 6.28 294 PN **Pn 20 08 57.9 +2.0**
KVT Kavak 6.28 294 *e*Pn **Pn 20 08 57.9 +2.0**
RTB Rutbah 6.29 206 *e*Pn **Pn 20 08 56.0 -0.1**
SNR=4.0
RTB *e*Sn **Sn 20 10 05.0 -3.0**
SNR=4.0
TAHT Tahtakopru-Hat 6.36 251 PN **Pn 20 08 58.9 +1.9**
TAHT Tahtakopru-Hat 6.36 251 *e*Pn **Pn 20 08 58.9 +1.9**
IMHD Mahdasht 6.39 116 *e*Pn **Pn 20 09 00.3 +2.8**
IMHD *e* 20 09 36.5
comp=Z,2µm,0.4s
IMHD Mahdasht 6.39 116 *e*Pn **Pn 20 09 00.3 +2.8**
CEYT Ceyhan 6.46 257 PN **Pn 20 09 00.1 +1.7**
CEYT Ceyhan 6.46 257 *e*Pn **Pn 20 09 00.1 +1.7**
YAYL Yayladag 6.56 248 PN **Pn 20 09 01.4 +1.5**
YAYL Yayladag 6.56 248 *e*Pn **Pn 20 09 01.4 +1.5**
IAFJ Afjeh 7.06 111 *e*Pn Pn 20 09 12.1 +5.3
IAFJ *e* 20 09 52.4
comp=Z,684nm,0.3s
FKH Fakeheh 7.33 235 *e*P **Pn 20 09 11.6 +1.1**
IPRN Peran 7.36 107 *e*Pn **Pn 20 09 13.7 +2.9**
IPRN *e* 20 09 43.4
comp=Z,2µm,0.4s
IDMV Damavand 7.41 113 *e*Pn **Pn 20 09 15.0 +3.3**
IDMV *e* 20 12 01.7
comp=Z,5µm,1.0s
HWQ Hawqa 7.61 237 *e*P **Pn 20 09 14.8 +0.6**
ANN Anapa 7.63 325 *e*P Pn 20 09 19.7 +5.4
ANN *e*S **Sn 20 10 47.5 +6.8**
ANN pmax pmax
comp=Z,164nm,1.2s
ANN MLR MLR
comp=Z,1µm,15.0s
IALA Alasht 7.77 107 *e*Pn **Pn 20 09 20.1 +3.5**
IALA *e* 20 09 27.0
comp=Z,809nm,0.3s
BR131 Keskin Array S 7.81 280 *e*Pn **Pn 20 09 20.6 +3.5**
BR131 Keskin Array S 7.81 280 *e*Pn **Pn 20 09 20.6 +3.5**
BRTR Keskin Array B 7.81 280 Pn **Pn 20 09 20.2 +3.2**
comp=Z,0.2nm,0.3s,baz=107,slow=10,SNR=51
BRTR LR LR 20 12 11.8
comp=Z,183nm,21.5s,baz=94,slow=37
ILGA Ilgaz 7.96 290 *e*Pg Pb 20 09 46.5 +5.1
ILGA Ilgaz 7.96 290 *e*Pg Pb 20 09 46.5 +5.1
NSR Nassriya 7.97 164 *e*Pn **Pn 20 09 19.0 -0.1**
SNR=4.0
BHL Bhannes 8.03 236 *e*P **Pn 20 09 20.8 +0.8**
RCY Rachaya 8.18 233 *e*P **Pn 20 09 23.6 +1.5**
DQRL Deir Qamar 8.21 235 *e*P **Pn 20 09 24.0 +1.5**
QRWL Qaraoun 8.24 234 *e*P **Pn 20 09 24.8 +1.9**
SHBL Chebaa 8.34 232 *e*P **Pn 20 09 25.5 +1.3**
ANTO Ankara 8.47 281 *i*P **Pn 20 09 27.6 +1.5**
ANTO Ankara 8.47 281 *e*Pn Pn 20 09 31.2 +5.1
ANTO Ankara 8.47 281 P Pn 20 09 36.0 +10
SNR=5.9
ANTO Ankara 8.47 281 *i*P **Pn 20 09 27.6 +1.5**
ANTO Ankara 8.47 281 *e*Pn Pn 20 09 31.2 +5.1
KSDI Kefar Szold 8.50 232 Pn **Pn 20 09 28.2 +1.9**
ASF Jabal al Asfar 8.54 222 Pn **Pn 20 09 27.7 +0.8**
comp=Z,0.5nm,0.3s,baz=346,slow=8.7,SNR=36
ASF Lg Lg 20 11 58.8
comp=Z,0.7nm,0.3s,baz=323,slow=20,SNR=4.1
KSHT Keshet 8.55 230 Pn **Pn 20 09 28.7 +1.6**
MMA0 Mount Meron ar 8.77 232 Pn **Pn 20 09 31.4 +1.2**
MMA0B Mount Meron ar 8.77 232 Pn **Pn 20 09 32.4 +2.2**
MMAI Mount Meron Ar 8.77 232 Pn **Pn 20 09 32.6 +2.5**
comp=Z,11nm,0.3s,baz=66,slow=15,SNR=52
MMAI Lg Lg 20 12 07.0
comp=Z,1.2nm,0.3s,baz=83,slow=18,SNR=3.6
MMAI LR LR 20 13 01.6
comp=Z,625nm,18.6s,baz=50,slow=38
SUDU Sudak 8.90 316 *e*P Pn 20 09 37.0 +5.2
BLGI Bet Lehem HaGe 9.10 231 Pn **Pn 20 09 37.6 +3.1**
ALU Alushta 9.10 314 *e*P **Pn 20 09 38.6 +4.1**
YAL Yalta 9.13 312 *e*P **Pn 20 09 37.8 +2.9**
YAL Yalta 9.13 312 *e*P **Pn 20 09 37.8 +2.9**
MMLI Mount Malkishu 9.16 229 Pn **Pn 20 09 37.5 +2.0**
HMDT Nahal Hemdat 9.23 228 Pn **Pn 20 09 38.1 +1.7**
OFRI 'Ofer 9.30 232 Pn **Pn 20 09 40.1 +2.8**
SIM Simferopol' 9.43 314 *e*P Pn 20 09 49.4 +10
SIM pmax pmax
comp=Z,37nm,1.3s
SLTI Sal'it 9.53 230 Pn Pn 20 09 44.4 +3.9
ISP Isparta 10.34 269 *e*Pn **Pn 20 09 55.3 +3.6**
ISP Isparta 10.34 269 *c*P **Pn 20 09 53.2 +1.5**
ISP Isparta 10.34 269 *i* P **Pn 20 09 53.2 +1.5**
ISP Isparta 10.34 269 *e*Pn **Pn 20 09 55.3 +3.6**
GEYT Alibeck 11.41 89 Pn **Pn 20 10 08.9 +2.6**
comp=Z,0.4nm,0.3s,baz=288,slow=12,SNR=14
GYA0B ALIBECK ARRAY 11.41 89 *e*Pn **Pn 20 10 06.4 +0.1**
GYA0B ALIBECK ARRAY 11.41 89 *e*Pn **Pn 20 10 06.4 +0.1**
EIL Elat 11.54 221 LR LR 20 14 57.1
comp=Z,765nm,19.9s,baz=44,slow=39
TIRR Tirgusor 12.74 302 ⇑*i*P **Pn 20 10 26.1 +1.8**
TIRR Tirgusor 12.74 302 *e*Pn Pn 20 10 19.1 -5.2
TIRR Tirgusor 12.74 302 *e*P Pn 20 10 19.1 -5.2
TIRR Tirgusor 12.74 302 *e*Pn Pn 20 10 19.1 -5.2
TIRR Tirgusor 12.74 302 ⇑*i*P **Pn 20 10 26.1 +1.8**
TLCR 12.76 305 ⇑*i*P **Pn 20 10 27.1 +2.5**
VSR Storozhevoye 12.88 347 *e*P **Pn 20 10 27.2 +1.1**
VSR pmax pmax
comp=Z,10.0nm,0.8s
VSR MLR MLR
comp=Z,2µm,13.0s
VSR Storozhevoye 12.88 347 *e*P **Pn 20 10 27.2 +1.1**
comp=Z,2µm,13.0s
TLB Topalu 13.03 302 ⇓*i*P **Pn 20 10 30.5 +2.2**
HARR Harsova 13.14 302 ⇓*i*P **Pn 20 10 32.8 +2.9**
HARR Harsova 13.14 302 P **Pn 20 10 32.7 +2.9**
HARR Harsova 13.14 302 P **Pn 20 10 32.7 +2.9**
CFR Carcaliu 13.20 304 ⇑*i*P **Pn 20 10 33.0 +2.5**
CFR Carcaliu 13.20 304 P **Pn 20 10 32.8 +2.3**
CFR pmax pmax
comp=Z,20nm,1.0s
CFR Carcaliu 13.20 304 P **Pn 20 10 32.8 +2.3**
comp=Z,20nm,1.0s
VORR Voronezh 13.31 348 *e*P **Pn 20 10 35.0 +3.0**
VORR pmax pmax
comp=Z,300nm,1.8s
VORR Voronezh 13.31 348 *e*P **Pn 20 10 35.0 +3.0**
comp=Z,300nm,1.8s
KIS Kishinev 13.63 312 *e*P **P 20 10 44.0 -1.4**
KIS Kishinev 13.63 312 *e*PP P 20 10 52.0 +6.6
KIS *e*S S 20 13 20.0 -11
KIS *e*L L 20 15 08.0
KIS LRM MLR 20 17 52.0
comp=Z,700nm,12.0s
KIS Kishinev 13.63 312 *e*P **P 20 10 44.0 -1.4**
KIS MLR MLR
comp=Z,700nm,12.0s
KIS MLR MLR
comp=N,300nm,14.0s
KIS MLR MLR
comp=E,400nm,10.0s
KIS MLR MLR
comp=Z,700nm,12.0s
KIS Kishinev 13.63 312 *e*P **P 20 10 44.0 -1.4**
KIS *e*S S 20 13 20.0 -11
LEOM Leova 13.70 309 ⇓*i*P **Pn 20 10 40.4 +3.0**
LEOM Leova 13.70 309 P **Pn 20 10 40.3 +2.9**
LEOM Leova 13.70 309 P **Pn 20 10 40.3 +2.9**
SZH Strazhica 14.11 294 *e*P **P 20 10 52.4 +1.7**
DIM Dimitrovgrad 14.18 289 *e*P **P 20 10 52.7 +1.1**
KDZ Kurdzhali 14.22 288 *e*P **P 20 10 54.3 +2.3**
SULR 14.26 300 ⇑*i*P **P 20 10 48.1 -4.3**
SGRR Singureni 14.32 298 ⇑*i*P **P 20 10 55.4 +2.4**
VRI Vrincioaia 14.38 305 ⇑*i*P **Pn 20 10 48.7 +1.9**
PLOR Plostina 14.42 305 ⇓*i*P **Pn 20 10 49.3 +1.9**
IAS Iasi 14.47 311 ⇑*i*P **P 20 10 50.9 -3.8**
SECR 14.51 301 ⇓*i*P **P 20 10 58.0 +2.8**
SECR 14.51 301 ⇓*i*P **P 20 10 58.0 +2.8**
SORM Soroca 14.52 315 ⇓*i*P **Pn 20 10 49.2 +0.6**
ZIMR 14.60 296 ⇑*i*P **P 20 10 57.7 +1.6**
TESR Tescani 14.70 307 ⇓*i*P **P 20 10 54.5 -2.8**
MLR Muntele Rosu 14.74 303 Pn **Pn 20 10 53.4 +1.6**
baz=110,slow=14
MLR Muntele Rosu 14.74 303 ⇑*i*P **P 20 10 54.1 -3.9**
MLR Muntele Rosu 14.74 303 *e*Pn **Pn 20 10 48.6 -3.2**
MLR Muntele Rosu 14.74 303 *e*P **Pn 20 10 48.6 -3.2**
MLR Muntele Rosu 14.74 303 *e*Pn **Pn 20 10 48.6 -3.2**
RAYN Ar Rayn 15.24 173 *e*Pn **Pn 20 10 54.0 -4.6**
comp=Z,93nm,0.9s
RAYN Ar Rayn 15.24 173 *i* P **Pn 20 10 55.3 -3.3**
SNR=11
RAYN Ar Rayn 15.24 173 *e*Pn **Pn 20 10 54.0 -4.6**
comp=Z,93nm,0.9s
PGB Panagyurishte 15.25 291 *e*P **P 20 11 05.3 +1.8**
DOPR Dopca 15.28 304 ⇑*i*P **P 20 11 02.4 -1.4**
DOPR Dopca 15.28 304 ⇑*i*P **P 20 11 02.4 -1.4**
VOIR 15.32 302 ⇓*i*P **P 20 11 01.5 -2.8**
VOIR 15.32 302 P **P 20 11 01.1 -3.2**
PRAR RASCA 15.34 310 ⇓*i*P **P 20 11 04.3 -0.2**
PRAR RASCA 15.34 310 ⇓*i*P **P 20 11 04.3 -0.2**
IDI Anoyia 15.36 263 Pn **Pn 20 11 00.7 +0.7**
comp=Z,1.1nm,0.3s,baz=80,slow=11,SNR=9.5
IDI LR LR 20 17 03.2
comp=Z,130nm,22.0s,baz=64,slow=38
IDI Anoyia 15.36 263 ⇑*i*P **Pn 20 11 01.1 +1.1**
PAIG Paliouri 15.48 281 P **P 20 11 08.4 +2.4**
PAIG pmax pmax
comp=Z,34nm,1.0s
PAIG Paliouri 15.48 281 P **P 20 11 08.4 +2.4**
comp=Z,34nm,1.0s
AKTO Aktyubinsk 15.53 36 Pn **Pn 20 11 00.6 -1.4**
comp=Z,0.3nm,0.3s,baz=230,slow=13,SNR=28
AKTO LR LR 20 18 50.2
comp=Z,915nm,18.4s,baz=225,slow=44
SRS Serrai 15.55 285 P **P 20 11 08.6 +1.8**
SRS pmax pmax
comp=Z,54nm,1.1s
SRS Serrai 15.55 285 P **P 20 11 08.6 +1.8**
comp=Z,54nm,1.1s
AKASG Malin Array Be 15.71 324 Pn **Pn 20 11 03.7 -0.8**
comp=Z,0.6nm,0.3s,baz=131,slow=12,SNR=38
AKASG LR LR 20 18 44.5
comp=Z,358nm,19.7s,baz=120,slow=43
AKBB Malin Array Si 15.71 324 *e*Pn **Pn 20 11 03.6 -0.9**
comp=Z,42nm,1.0s
AKBB Malin Array Si 15.71 324 *e*P **Pn 20 11 03.6 -0.9**
AKBB pmax pmax
comp=Z,42nm,1.0s
AKBB Malin Array Si 15.71 324 *e*Pn **Pn 20 11 03.6 -0.9**
comp=Z,42nm,1.0s
KIEV Kiev 15.72 324 *e*Pn **Pn 20 11 03.6 -0.9**
comp=Z,40nm,1.0s
KIEV Kiev 15.72 324 *i* P **Pn 20 11 05.2 +0.7**
SNR=31
KIEV Kiev 15.72 324 *i* P **Pn 20 11 04.8 +0.3**
KIEV pmax pmax
comp=Z,3.0nm,0.7s
KIEV Kiev 15.72 324 *e*Pn **Pn 20 11 03.6 -0.9**
comp=Z,40nm,1.0s
AK11 Malin Array Si 15.72 324 *e*Pn **Pn 20 11 04.9 +0.3**
AK11 Malin Array Si 15.72 324 *e*Pn **Pn 20 11 04.9 +0.3**
ABKAR Akbulak array 15.73 43 *e*Pn **Pn 20 11 03.5 -1.3**
ABKAR Akbulak array 15.73 43 *e*Pn **Pn 20 11 03.5 -1.3**
VTS Vitosha 15.96 290 ⇑*i*P **P 20 11 10.6 -0.9**
VTS Vitosha 15.96 290 *e*Pn **P 20 11 09.4 -2.1**
comp=Z,46nm,1.1s
VTS Vitosha 15.96 290 *e*P **P 20 11 09.8 -1.7**
VTS Vitosha 15.96 290 *e*P **P 20 11 09.4 -2.1**
VTS pmax pmax
comp=Z,46nm,1.1s
VTS Vitosha 15.96 290 *e*P **P 20 11 09.4 -2.1**
comp=Z,46nm,1.1s
KKB Krupnik 15.98 288 *e*P **P 20 11 10.3 -1.3**
THE Thessaloniki 16.02 283 P **P 20 11 13.5 +1.5**
THE pmax pmax
comp=Z,23nm,1.2s
THE Thessaloniki 16.02 283 P **P 20 11 13.5 +1.5**
comp=Z,23nm,1.2s
BURAR Bucovina Array 16.07 309 ⇓*i*P **P 20 11 11.9 -0.7**
BURAR Bucovina Array 16.07 309 P **P 20 11 11.8 -0.8**
BURAR Bucovina Array 16.07 309 ⇓*i*P **P 20 11 11.9 -0.7**
BUR04 Bucovina Ar. S 16.07 309 *e*Pn **Pn 20 11 08.7 -0.6**
BUR08 Bucovina Ar. S 16.09 310 *e*Pn **Pn 20 11 09.7 +0.2**
LOT Lotru 16.18 301 ⇑*i*P **P 20 11 13.1 -0.7**
LOT Lotru 16.18 301 ⇑*i*P **P 20 11 13.1 -0.7**
VAY Valandovo 16.33 286 *e*P **Pn 20 11 12.9 +0.3**
ARCR ARCALIA 16.37 307 ⇓*i*P **P 20 11 16.5 +0.6**
SHME Shamm 16.46 137 *i* P **Pn 20 11 13.5 -0.7**
SNR=7.3
SHME Shamm 16.46 137 P **P 20 11 16.3 -0.7**
SNR=9.0
STIP Stip 16.64 287 *e*P **Pn 20 11 15.7 -0.7**
BANOM Banah 16.64 136 P **P 20 11 17.7 -1.3**
SNR=13
BANOM Banah 16.64 136 *i* P **Pn 20 11 16.4 -0.3**
SNR=9.7
BANOM Banah 16.64 136 P **P 20 11 17.7 -1.3**
SNR=13
CJR Cluj-Napoca 16.71 305 ⇑*i*P **P 20 11 20.5 +0.8**
CJR Cluj-Napoca 16.71 305 ⇑*i*P **P 20 11 20.5 +0.8**
ZAGS Zajecar 16.85 294 *e*P **P 20 11 21.4 +0.2**
HERR Herculane 16.94 298 ⇑*i*P **P 20 11 22.8 +0.6**
MSFE Esma-Masafi 17.02 138 *i* P **Pn 20 11 21.3 -0.1**
SNR=14
OBN Obninsk 17.07 346 P **Pn 20 11 20.3 -1.4**
comp=Z,3.1nm,0.3s,baz=169,slow=14,SNR=2.1
OBN LR LR 20 17 51.6
comp=Z,721nm,21.7s,baz=165,slow=37
OBN Obninsk 17.07 346 *e*Pn **Pn 20 11 20.8 -0.9**
comp=Z,444nm,1.1s
OBN Obninsk 17.07 346*c i*P **Pn 20 11 19.7 -2.0**
OBN *e*S **Sn 20 14 27.7 -3.6**
OBN pmax pmax
comp=Z,275nm,1.2s
OBN Obninsk 17.07 346 *e*Pn **Pn 20 11 20.8 -0.9**
comp=Z,444nm,1.1s
NAZ Nazwa, Dubai 17.07 140 P **P 20 11 28.0 +4.2**
SNR=6.8
NAZ Nazwa, Dubai 17.07 140 P **P 20 11 22.2 -1.5**
NAZ Nazwa, Dubai 17.07 140 P **P 20 11 22.2 -1.5**
MDH Madha 17.14 138 *i* P **P 20 11 23.3 -1.2**
SNR=13
MDH Madha 17.14 138 P **P 20 11 25.1 +0.6**
SNR=14
ITM Ithomi 17.18 272 *e*Pn **P 20 11 24.9 0.0**
comp=Z,32nm,0.9s
ITM Ithomi 17.18 272 *e*Pn **P 20 11 24.9 0.0**
comp=Z,32nm,0.9s
BOVS Bovan 17.20 294 *e*P **P 20 11 26.0 +1.0**
ASUD Al Ashush, Dub 17.21 141 P **Pn 20 11 22.7 -1.0**
SKO Skopje 17.21 288 *e*P **P 20 11 26.3 +1.1**
BIA Bitola 17.27 285 *e*P **P 20 11 29.6 +3.8**
DRGR 17.31 304 ⇑*i*P **P 20 11 27.8 +1.5**
DRGR 17.31 304 ⇑*i*P **P 20 11 27.8 +1.5**
UOSS Minazif 17.38 139 *e*Pn **Pn 20 11 25.2 -0.7**
comp=Z,54nm,0.8s
UOSS Minazif 17.38 139 *i* P **Pn 20 11 24.9 -1.0**
SNR=10
UOSS Minazif 17.38 139 P **Pn 20 11 24.9 -1.0**
SNR=10
UOSS Minazif 17.38 139 *e*Pn **Pn 20 11 25.2 -0.7**
comp=Z,54nm,0.8s

MDVR Moldovita 17.41 297 ⇓ iP P 20 11 28.8 +1.4
MDVR Moldovita 17.41 297 ⇓ iP P 20 11 28.8 +1.4
HATD Hatta, Dubai 17.45 139 P P 20 11 30.0 +2.2
SNR=18
HATD Hatta, Dubai 17.45 139 i P P 20 11 27.1 -0.8
SNR=8.0
HATD Hatta, Dubai 17.45 139 P P 20 11 27.1 -0.8
SNR=8.0
MOS Moscow 17.48 349 eP Pn 20 11 25.6 -1.3
MOS eS Sn 20 14 34.2 -7.2
MOS pmax pmax
comp=Z,45nm,0.7s
MOS MLR MLR
comp=Z,1μm,13.0s
MOS MLR MLR
comp=N,1μm,12.0s
SELS Selova 17.56 292 eP P 20 11 29.9 +0.8
OHR Ohrid 17.66 285 eP Pn 20 11 14.9 -14
BZS Buzias 17.68 300 ⇓ iP P 20 11 30.4 +0.1
BZS Buzias 17.68 300 ⇓ iP P 20 11 30.4 +0.1
KBN Korca 17.68 283 i P P 20 11 34.0 +3.6
MZR Muzera 17.79 149 i P P 20 11 30.6 -1.1
SNR=25
LVV L'vov 17.82 315 eP P 20 11 31.0 -0.9
LVV eS Sn 20 14 51.0 +1.3
LVV MLR MLR
comp=Z,3μm,12.0s
LVV L'vov 17.82 315 eP P 20 11 31.0 -0.9
comp=Z,3μm,12.0s
ALNE Al Ain 17.89 141 i P P 20 11 31.9 -0.9
SNR=25
TRPA Tarpa 17.92 308 ⇓ iP P 20 11 32.9 0.0
TRPA Tarpa 17.92 308 ePn Pn 20 11 31.7 -0.6
TRPA Tarpa 17.92 308 eP Pn 20 11 31.7 -0.6
PHP Peshkopia 17.94 287 i P P 20 11 35.6 +2.3
PHP Peshkopia 17.94 287 i P P 20 11 35.6 +2.3
LTVH L"tav"rtes, 18.03 306 ePn P 20 11 34.4 +0.2
TRUS Trudelj 18.22 295 eP P 20 11 37.9 +1.6
SOHO SOHO 18.22 139 i P P 20 11 36.5 +0.1
SNR=6.2
SOHO SOHO 18.22 139 P P 20 11 36.5 +0.1
SNR=6.2
BCI Bajram Curri 18.25 289 i P Pn 20 11 34.6 -2.0
BCI Bajram Curri 18.25 289 i P Pn 20 11 34.6 -2.0
UZH Uzhgorod 18.27 310 eP P 20 11 36.0 -0.9
UZH eS S 20 15 03.0 -2.7
UZH MLR MLR
comp=Z,60nm,14.0s
UZH Uzhgorod 18.27 310 eP P 20 11 36.0 -0.9
comp=Z,60nm,14.0s
PUK Puka 18.36 288 i P Pn 20 11 36.9 -1.2
PUK Puka 18.36 288 i P Pn 20 11 36.8 -1.2
KWP Kalwaria Pacla 18.48 313 eP Pn 20 11 39.3 +0.1
KWP Kalwaria Pacla 18.48 313 eP Pn 20 11 38.9 -0.3
comp=Z,714nm,0.9s
KWP Kalwaria Pacla 18.48 313 eP Pn 20 11 39.3 +0.1
KWP Kalwaria Pacla 18.48 313 eP Pn 20 11 39.3 +0.1
DIVS Divibare 18.49 294 eP P 20 11 38.4 -1.0
comp=Z,48nm,1.2s
DIVS Divibare 18.49 294 eP P 20 11 38.4 -1.0
comp=Z,48nm,1.2s
FGSL Fruska Gora 18.81 298 eP Pn 20 11 44.1 +0.8
PDG Podgorica 18.86 289 ⇓ iP Pn 20 11 44.5 +0.6
ARQ Araqi 18.88 141 P Pn 20 11 52.0 +7.7
SNR=7.5
BBLS Lazići 18.88 294 eP Pn 20 11 44.4 +0.2
CRVS Cervenica-Dubn 18.89 310 eP Pn 20 11 44.0 -0.2
CRVS pmax pmax
comp=Z,57nm,1.1s
CRVS Cervenica-Dubn 18.89 310 eP Pn 20 11 44.0 -0.2
CRVS eS S 20 15 24.4 +6.2
CRVS Cervenica-Dubn 18.89 310 eP Pn 20 11 44.0 -0.2
comp=Z,57nm,1.1s
TEKS Tekeris 18.89 296 eP Pn 20 11 45.2 +0.9
DRME Dracevica, Mon 18.90 288 eP Pn 20 11 44.3 -0.1
MICGM Minsk 19.05 331 eP P 20 11 44.0 -1.4
MICGM eLR LR 21 03 44.0
MNK Minsk 19.05 331 eP P 20 11 44.0 -1.4
MNK Minsk 19.05 331 eP P 20 11 44.0 -1.4
HOQ Hoqain 19.07 138 P Pn 20 11 54.0 +7.3
SNR=9.1
HAPS Han Pijesak,BI 19.23 294 eP Pn 20 11 48.0 -0.5
KECS Kecovo 19.32 308 eP Pn 20 11 49.8 +0.4
KECS Kecovo 19.32 308 eP Pn 20 11 49.8 +0.4
KECS Kecovo 19.32 308 eP Pn 20 11 49.8 +0.4
BRY Bratogost 19.41 290 eP Pn 20 11 50.4 -0.3
PSZ Piszkesteto 19.49 306 ⇑ iP Pn 20 11 53.1 +1.6
PSZ Piszkesteto 19.49 306 eP Pn 20 11 51.8 +0.3
PSZ Piszkesteto 19.49 306 eP Pn 20 11 51.5 -0.1
comp=Z,67nm,1.1s
PSZ Piszkesteto 19.49 306 eP Pn 20 11 51.5 -0.1
PSZ pmax pmax
comp=Z,67nm,1.1s
PSZ Piszkesteto 19.49 306 eP Pn 20 11 51.5 -0.1
comp=Z,67nm,1.1s
TREB Trebinje 19.54 290 eP Pn 20 11 50.9 -1.2
BIDO Bidbid 19.55 137 P Pn 20 11 58.2 +5.8
SNR=6.1
BSY Bisya 19.71 140 P Pn 20 11 58.0 +3.7
SNR=18
NACGM Naroch 19.78 330 e P 20 11 52.0 -1.3
NIE Niedzica 19.80 310 eP Pn 20 11 54.7 -0.4
NIE Niedzica 19.80 310 eP Pn 20 11 54.7 -0.4
TAS Tashkent 19.80 74 eP Pn 20 11 55.9 +0.7
SMDO Samad 19.89 138 P Pn 20 12 02.0 +5.5
SNR=9.2
BUD Budapest 19.91 304 P Pn 20 11 57.8 +1.3
STON Ston 20.03 290 eP P 20 11 53.9 -2.2
CHM Chimkent 20.04 71 eP Pn 20 11 57.4 -0.8
comp=Z,31nm,0.9s
CHM eS Sn 20 15 44.1 +0.6
WSAR Wadi Sarin 20.05 136 P **P 20 11 56.3 -0.3**
comp=Z,6.0nm,0.5s,baz=319,slow=9.1,SNR=14
IDID Didziasalis 20.10 331 eP P 20 11 56.4 -0.4
IDID IAmb IAmb 20 12 03.1
comp=Z,19nm,1.1s
LANS Liptovska Anna 20.19 309 eP Pn 20 11 59.1 -0.7
LANS Liptovska Anna 20.19 309 eP Pn 20 11 59.1 -0.7
ARU Arti 20.29 24 P P 20 11 59.1 +0.2
comp=Z,38nm,0.8s,baz=236,slow=6.0,SNR=73
ARU Arti 20.29 24 eP P 20 11 58.5 -0.4
comp=Z,196nm,1.5s
ARU Arti 20.29 24c iP P 20 11 59.0 +0.1
ARU PPP PPP 20 12 23.5
ARU S Sn 20 15 48.3 -0.9
ARU SS **SnSn 20 16 08.7 +5.0**
ARU pmax pmax
comp=Z,121nm,1.2s
ARU MLR MLR
comp=Z,596nm,17.0s
ARU Arti 20.29 24 i P P 20 11 59.0 +0.1
comp=Z,121nm,1.2s
ARU S Sn 20 15 48.3 -0.9
comp=Z,596nm,17.0s
IIGN Ignalina 20.33 331 eP P 20 11 58.7 -0.5
IIGN IAmb IAmb 20 12 06.1
comp=Z,14nm,0.9s
VYHS Vyhne 20.35 307 eP Pn 20 12 00.8 -0.9
VYHS pmax pmax
comp=Z,52nm,1.3s
VYHS Vyhne 20.35 307 eP Pn 20 12 00.8 -0.9
VYHS eS Sn 20 15 52.2 +1.4
VYHS Vyhne 20.35 307 eP Pn 20 12 00.8 -0.9
comp=Z,52nm,1.3s
IUG Iuzhnay 20.36 72 ⇑ iP Pn 20 12 01.2 -0.7
comp=Z,48nm,1.2s
CSKK Cs^‡kako 20.38 303 eP Pn 20 12 01.4 -0.6
CSKK Cs^‡kako 20.38 303 eP Pn 20 12 01.4 -0.6
OJC Ojcow 20.42 312 eP Pn 20 12 01.1 -1.4
OJC Ojcow 20.42 312 eP Pn 20 12 01.4 -1.1
comp=Z,54nm,1.0s
OJC Ojcow 20.42 312 eP Pn 20 12 01.4 -1.1
OJC pmax pmax
comp=Z,55nm,1.0s
BLY Banja Luka 20.58 295 ⇓ iP Pn 20 12 03.2 -1.1
BLY Banja Luka 20.58 295 eP Pn 20 12 03.0 -1.3
comp=Z,29nm,1.2s
BLY Banja Luka 20.58 295 eP Pn 20 12 03.0 -1.3
comp=Z,29nm,1.2s
IZAR Zarasai 20.61 331 eP P 20 12 02.0 -0.4
IZAR IAmb IAmb 20 12 15.4
comp=Z,37nm,1.1s
IZAR Zarasai 20.61 331 eP P 20 12 02.0 -0.4
SNR=55

BEL Belsk 20.62 317 eP Pn 20 12 03.2 -1.6
BEL Belsk 20.62 317 eP Pn 20 12 03.2 -1.6
SUW Suwalki 20.68 324 eP P 20 12 03.5 +0.3
SUW Suwalki 20.68 324 eP P 20 12 03.4 +0.3
comp=Z,472nm,1.0s
SUW Suwalki 20.68 324 eP P 20 12 03.4 +0.3
SUW pmax pmax
comp=Z,472nm,1.0s
SUW Suwalki 20.68 324 eP P 20 12 03.4 +0.3
comp=Z,472nm,1.0s
KK31 Karatay Array 20.75 69 eP Pn 20 12 05.2 -1.1
KK31 Karatay Array 20.75 69 eP Pn 20 12 05.2 -1.1
KK31 Karatay Array 20.75 69 eP Pn 20 12 05.2 -1.1
KKAR Karatay Array 20.75 69 eP Pn 20 12 05.2 -1.1
KKAR Karatay Array 20.75 69 eP Pn 20 12 05.2 -1.1
KKAR Karatay Array 20.75 69 eP Pn 20 12 05.2 -1.1
MATE Matera 20.78 284 ⇑ iP P 20 12 04.1 -0.2
MATE Matera 20.78 284 ⇑ iP P 20 12 04.1 -0.2
KBL Kabul 20.80 94 eP Pn 20 12 06.8 -0.4
comp=Z,28nm,1.1s
KBL Kabul 20.80 94 eP Pn 20 12 06.9 -0.3
KBL pmax pmax
comp=Z,28nm,1.1s
KBL Kabul 20.80 94 eP Pn 20 12 06.8 -0.4
comp=Z,28nm,1.1s
TIP Timpagrande 20.88 280 ⇓ iP Pn 20 12 05.8 -2.1
TIP Timpagrande 20.88 280 eP P 20 12 05.0 -0.5
comp=Z,36nm,0.8s
TIP Timpagrande 20.88 280 eP P 20 12 05.0 -0.5
comp=Z,36nm,0.8s
JAVC Velka Javorina 21.20 307 eP P 20 12 10.7 +1.9
SMOL Smolenice 21.24 306 eP P 20 12 10.3 +1.0
SMOL Smolenice 21.24 306 eP P 20 12 10.3 +1.0
OKC Ostrava-Krasne 21.25 310 eP P 20 12 12.9 +3.6
OKC ex x 20 12 17.1
OKC eS Sn 20 16 08.8 -3.5
OKC AMS AMS 20 23 10.0
comp=Z,400nm,11.4s
OKC Ostrava-Krasne 21.25 310 eP P 20 12 12.9 +3.6
OKC e 20 12 17.1
OKC eS Sn 20 16 08.8 -3.5
OKC MLR MLR
comp=Z,400nm,11.4s
MODS Modra-Piesok 21.30 305 eP P 20 12 10.1 +0.2
MODS pmax pmax
comp=Z,62nm,1.2s
MODS Modra-Piesok 21.30 305 eP P 20 12 10.1 +0.2
MODS eS Sn 20 16 11.2 -2.4
MODS Modra-Piesok 21.30 305 eP P 20 12 10.1 +0.2
comp=Z,62nm,1.2s
SVE Sverdlovsk 21.31 26c iP P 20 12 11.1 +1.3
SVE eS S 20 16 07.2 +1.0
SVE pmax pmax
comp=Z,118nm,1.5s
SVE MLR MLR
comp=Z,2μm,16.0s
PABE Paberze 21.34 328 eP P 20 12 09.4 -0.7
SNR=55
DZA Taraz 21.34 70 eP P 20 12 11.7 +1.4
comp=Z,21nm,0.9s
CUC Castrocucco 21.51 282 eP P 20 12 11.5 -0.7
comp=Z,18nm,0.8s
CUC Castrocucco 21.51 282 eP P 20 12 11.5 -0.7
comp=Z,18nm,0.8s
MORC Moravsky Berou 21.59 309 ⇓ iP P 20 12 14.1 +1.1
MORC Moravsky Berou 21.59 309 eP P 20 12 13.6 +0.6
comp=Z,97nm,1.1s
MORC Moravsky Berou 21.59 309 eP P 20 12 13.6 +0.6
MORC pmax pmax
comp=Z,97nm,1.1s
MORC Moravsky Berou 21.59 309 eP P 20 12 13.6 +0.6
comp=Z,97nm,1.1s
MORC Moravsky Berou 21.59 309 eP P 20 12 12.7 -0.3
CRES Cresnjev 21.94 298 eP P 20 12 17.7 +0.9
VRAC Vranov 22.02 307 P **P 20 12 18.6 +1.1**
comp=Z,45nm,0.9s,baz=103,slow=9.5,SNR=7.4
VRAC Vranov 22.02 307 ⇓ iP P 20 12 19.9 +2.4
VRAC Vranov 22.02 307 eP P 20 12 19.5 +2.0
BOJS Bojanci 22.04 297 eP P 20 12 17.9 +0.2
KRUC Moravsky 22.06 307 eP P 20 12 18.6 +0.6
CONA Conrad Observa 22.09 304 eP P 20 12 19.0 +0.6
comp=Z,41nm,1.8s,SNR=20
CONA Conrad Observa 22.09 304 P **P 20 12 19.0 +0.6**
comp=Z,41nm,1.8s,SNR=20
ARSA Arzberg 22.16 302 eP P 20 12 20.2 +1.1
comp=Z,14nm,0.9s,SNR=14
KLMR Klimovskoe 22.30 355 eP P 20 12 18.2 -2.2
KLMR eS S 20 16 24.7 -0.6
KLMR pmax pmax
comp=Z,394nm,1.2s
KLMR Klimovskoe 22.30 355 eP P 20 12 18.2 -2.2
KLMR AMP 20 12 29.7
comp=Z,394nm,1.2s
KLMR eS S 20 16 24.8 -0.6
KLMR LQ LQ 20 19 21.5
KLMR LR LR 20 20 15.6
PERS Pernice 22.31 300 eP P 20 12 20.6 -0.1
PERS Pernice 22.31 300 eP P 20 12 20.6 -0.1
VISS Visnje 22.36 298 eP P 20 12 21.5 +0.2
VISS Visnje 22.36 298 eP P 20 12 21.5 +0.2
SOKA Soboth 22.37 300 eP P 20 12 21.7 +0.2
comp=Z,15nm,1.1s
SOKA Soboth 22.37 300 P **P 20 12 21.7 +0.2**
comp=Z,15nm,1.1s
DPC Dobruska-Polom 22.53 310 eP P 20 12 24.9 +1.8
DPC ex x 20 12 28.9
DPC AMS AMS 20 24 00.0
comp=Z,400nm,13.4s
DPC Dobruska-Polom 22.53 310 eP P 20 12 24.9 +1.8
DPC e 20 12 28.9
DPC MLR MLR
comp=Z,400nm,13.4s
DPC Dobruska-Polom 22.53 310 P **P 20 12 24.9 +1.8**
VSU Vasula 22.56 337 ceP P 20 12 22.7 -0.6
VSU pmax pmax
comp=Z,97nm,1.2s
LJU Ljubljana 22.61 298 eP P 20 12 22.4 -1.6
CEY Cerknica 22.64 297 eP P 20 12 25.7 +1.4
OBKA Obir 22.67 299 eP P 20 12 25.1 +0.4
comp=Z,15nm,1.3s
OBKA Obir 22.67 299 P **P 20 12 25.1 +0.4**
comp=Z,15nm,1.3s
PUL Pulkovo 22.69 342 ceP P 20 12 26.2 +1.6
PUL pmax pmax
comp=Z,153nm,0.7s
KSP Ksiaz 22.72 311 eP P 20 12 24.8 -0.3
KSP Ksiaz 22.72 311 eP P 20 12 24.8 -0.3
UPC Upice 22.77 310 eP P 20 12 27.3 +1.7
UPC ex x 20 12 34.0
UPC eS S 20 16 39.1 +4.8
UPC AMS AMS 20 24 10.0
comp=Z,500nm,13.8s
UPC Upice 22.77 310 eP P 20 12 27.3 +1.7
UPC e 20 12 34.0
UPC MLR MLR
comp=Z,500nm,13.8s
UPC Upice 22.77 310 P **P 20 12 27.3 +1.7**
JAVS Javornik 22.91 298 eP P 20 12 27.1 -0.2
JAVS Javornik 22.91 298 eP P 20 12 27.0 -0.2
PRGR Permogore 22.97 2 ⇑ iP P 20 12 25.7 -1.8
PRGR eS S 20 16 40.7 +3.2
PRGR pmax pmax
comp=Z,46nm,1.1s
VAE Valguarnera 22.98 276 P **P 20 12 28.4 +0.4**
comp=Z,9.0nm,0.8s,baz=143,slow=8.3,SNR=4.7
AML Almayashu 23.08 72 P **P 20 12 31.9 +2.5**
SNR=14
MOA Molln 23.12 303 eP P 20 12 29.4 +0.2
comp=Z,39nm,1.1s,SNR=18
EKS2 Erkin-Say 23.13 71 P **P 20 12 30.9 +1.4**
SNR=56
AQU L'Aquila 23.19 289 eP P 20 12 30.0 -0.1
comp=Z,139nm,1.2s
AQU L'Aquila 23.19 289 eP P 20 12 30.0 -0.1
AQU pmax pmax
comp=Z,139nm,1.2s
AQU L'Aquila 23.19 289 eP P 20 12 29.2 -0.9
BRVK Borovoye 23.26 43 eP P 20 12 32.0 +1.4
comp=Z,15nm,0.8s
BRVK Borovoye 23.26 43 P **P 20 12 32.2 +1.5**
SNR=12
BRVK Borovoye 23.26 43 ceP P 20 12 32.2 +1.5
BRVK pmax pmax
comp=Z,19nm,1.0s

BVAR Borovoye Array 23.30 43 P **P 20 12 31.5 +0.4**
comp=Z,9.1nm,0.7s,baz=236,slow=8.0,SNR=44
BVAR PcP **PcP 20 16 17.8 -0.2**
comp=Z,1.1nm,0.6s,baz=256,slow=0.6,SNR=3.1
MYKA Terra Mystica 23.31 299 eP P 20 12 32.0 +0.7
comp=Z,4.2nm,0.8s
MYKA Terra Mystica 23.31 299 P **P 20 12 32.0 +0.7**
comp=Z,4.2nm,0.8s
GOPC GO Pecny, Ondr 23.32 308 eP P 20 12 32.5 +1.2
GOPC eS S 20 16 46.7 +3.0
GOPC AMS AMS 20 24 20.0
comp=Z,400nm,13.6s
GOPC GO Pecny, Ondr 23.32 308 eP P 20 12 32.5 +1.2
GOPC eS S 20 16 46.7 +3.0
GOPC MLR MLR
comp=Z,400nm,13.6s
GOPC GO Pecny, Ondr 23.32 308 P **P 20 12 32.5 +1.2**
GOPC S S 20 16 46.7 +3.0
BTLS Baital 23.42 65 eP P 20 12 32.8 +0.5
comp=Z,22nm,1.2s
BTLS LR LR 20 23 22.3
comp=Z,57nm,11.4s
BRZS Berezniki 23.47 52 eP P 20 12 32.9 +0.1
comp=Z,34nm,1.4s
BRZS LR LR 20 23 13.1
comp=Z,153nm,10.9s
PRU Pruhonice 23.49 308 eP P 20 12 33.8 +0.8
PRU eS S 20 16 49.4 +2.9
PRU AMS AMS 20 24 20.0
comp=Z,400nm,14.2s
PRU Pruhonice 23.49 308 eP P 20 12 33.8 +0.8
PRU eS S 20 16 49.4 +2.9
PRU MLR MLR
comp=Z,400nm,14.2s
KBA Koelnbreinsper 23.58 301 eP P 20 12 34.6 +0.5
comp=Z,42nm,1.1s,SNR=22
KBA Koelnbreinsper 23.58 301 P **P 20 12 34.5 +0.5**
KBA Koelnbreinsper 23.58 301 P **P 20 12 34.6 +0.5**
comp=Z,42nm,1.1s,SNR=22
PVCC Panska Ves 23.64 309 eP P 20 12 34.9 +0.4
PVCC ex x 20 12 39.6
PVCC AMS AMS 20 24 30.0
comp=Z,500nm,17.0s
PVCC Panska Ves 23.64 309 eP P 20 12 34.9 +0.4
PVCC e 20 12 39.6
PVCC MLR MLR
comp=Z,500nm,17.0s
USP Ospenovka 23.66 69 P **P 20 12 35.4 +0.6**
SNR=13
UCH Uchtor 23.69 72 P **P 20 12 37.5 +2.0**
SNR=7.0
GEA0 GERESS Array S 23.71 305 eP P 20 12 34.9 -0.4
GEA0 GERESS Array S 23.71 305 eP P 20 12 34.8 -0.4
GEC2 GERESS Array S 23.71 305 eP P 20 12 35.7 +0.4
comp=Z,60nm,1.4s
GEC2 GERESS Array S 23.71 305 eP P 20 12 35.7 +0.5
GEC2 pmax pmax
comp=Z,60nm,1.4s
GEC2 GERESS Array S 23.71 305 eP P 20 12 35.7 +0.5
comp=Z,60nm,1.4s
GERES GERESS Array B 23.71 305 P **P 20 12 35.6 +0.4**
comp=Z,7.4nm,0.8s,baz=120,slow=8.0,SNR=50
GERES PcP **PcP 20 16 18.4 -0.6**
comp=Z,0.8nm,0.7s,baz=207,slow=0.6,SNR=4.0
FRU Bishkek 23.75 70 eP P 20 12 38.0 +2.4
FRU pmax pmax
comp=Z,180nm,2.0s
CHMS Chumysh 23.85 70 P **P 20 12 37.6 +1.1**
SNR=37
KHC Kasperske Hory 23.86 306 eP P 20 12 37.2 +0.6
KHC ex x 20 12 41.2
KHC eS S 20 16 53.3 +0.9
KHC AMS AMS 20 24 40.0
comp=Z,400nm,12.3s
KHC Kasperske Hory 23.86 306 eP P 20 12 36.6 0.0
comp=Z,45nm,1.5s
KHC Kasperske Hory 23.86 306 eP P 20 12 37.2 +0.6
KHC e 20 12 41.2
KHC eS S 20 16 53.3 +0.9
KHC MLR MLR
comp=Z,400nm,12.3s
KHC Kasperske Hory 23.86 306 P **P 20 12 37.2 +0.6**
KHC S S 20 16 53.3 +0.9
KBK Karagaybulak 24.00 71 P **P 20 12 40.6 +2.5**
SNR=29
ABTA Abfaltersbach 24.09 300 eP P 20 12 39.0 +0.1
comp=Z,15nm,1.0s,SNR=15
BRG Berggiesshubel 24.13 310 eP P 20 12 39.1 0.0
comp=Z,57nm,1.9s
BRG i 20 12 44.3
comp=Z,32nm,1.3s
BRG S **S 20 17 00.0 +3.4**
comp=N,319nm,12.2s
comp=E,318nm,13.4s
comp=Z,563nm,13.6s
BRG Berggiesshubel 24.13 310 eP P 20 12 39.1 0.0
BRG i 20 12 44.3
BRG S **S 20 17 00.0 +3.4**
BRG pmax pmax
comp=Z,57nm,1.9s
BRG pmax pmax
comp=Z,32nm,1.3s
BRG MLR MLR
comp=N,319nm,12.2s
BRG MLR MLR
comp=E,318nm,13.4s
BRG MLR MLR
comp=Z,563nm,13.6s
KZA Kyzart 24.24 72 P **P 20 12 42.7 +2.0**
SNR=25
NIL Nilore 24.39 93 eP P 20 12 40.9 -0.7
comp=Z,46nm,0.9s
NIL Nilore 24.39 93 eP P 20 12 40.9 -0.7
NIL pmax pmax
comp=Z,46nm,0.9s
NIL Nilore 24.39 93 eP P 20 12 40.9 -0.7
comp=Z,46nm,0.9s
TKM2 Tokmak 2 24.47 70 P **P 20 12 43.8 +1.3**
SNR=42
WTTA Wattenberg 24.76 301 eP P 20 12 44.5 -0.6
comp=Z,34nm,1.1s,SNR=21
WTTA Wattenberg 24.76 301 P **P 20 12 44.5 -0.6**
comp=Z,34nm,1.1s,SNR=21
WATA Walderalm 24.81 301 eP P 20 12 45.2 -0.3
comp=Z,37nm,1.1s,SNR=25
CLL Collm 24.83 310 i P P 20 12 45.3 -0.1
comp=Z,53nm,1.0s
CLL i 20 12 50.0
CLL eS S **20 17 13.0 +5.1**
comp=N,200nm,24.1s
CLL eS S **20 17 13.0 +5.1**
comp=E,400nm,21.4s
CLL eS S **20 17 13.0 +5.1**
comp=Z,200nm,22.0s
CLL eSSS SSS 20 18 12.0
CLL Collm 24.83 310 eP P 20 12 45.9 +0.4
comp=Z,47nm,0.9s
CLL Collm 24.83 310 eP P 20 12 45.9 +0.4
CLL pmax pmax
comp=Z,47nm,0.9s
NRN Naryn 24.84 73 eP P 20 12 48.0 +2.0
comp=Z,22nm,0.8s
NRN Naryn 24.84 73 P **P 20 12 48.0 +2.0**
NRN pmax pmax
comp=Z,22nm,0.9s
NRN Naryn 24.84 73 eP P 20 12 48.0 +2.0
comp=Z,22nm,0.8s
NKC Novy Kostel 24.86 308 eP P 20 12 46.1 +0.4
NKC AMS AMS 20 25 20.0
comp=Z,400nm,13.9s
NKC Novy Kostel 24.86 308 eP P 20 12 46.1 +0.4
NKC MLR MLR
comp=Z,400nm,13.9s
ULHL Ulahol 24.97 71 P **P 20 12 49.4 +2.4**
SNR=11
KUU Kurty 25.01 68 ⇑ iP P 20 12 48.5 +1.4
comp=Z,38nm,1.1s
KUU eS S **20 17 14.0 +3.1**
KUU LR LR 20 25 11.1
comp=Z,124nm,10.0s
KSH Kashi 25.04 78 P **P 20 12 47.1 -0.5**
KSH pP pP 20 12 50.5 -0.3
KSH PP **PnPn 20 13 23.5 +2.7**
KSH S **S 20 17 07.8 -4.0**
KSH sS pS 20 17 13.1 -2.1
KSH SS **SnSn 20 18 03.8 +3.4**

KSH pmax pmax
comp=Z,17nm,0.8s
KSH pmax pmax
comp=Z,490nm,6.0s
KSH LR LR
comp=Z,510nm,6.5s
KSH LR LR
comp=Z,460nm,9.2s
KSH LR LR
comp=Z,820nm,18.8s
MOTA Moosalm 25.13 301 *e*P **P 20 12 46.8 -1.6**
comp=Z,42nm,1.1s,SNR=31
FIA1 FINESS Array S 25.21 340 *e*P **P 20 12 48.5 -0.2**
FINES FINESS Array B 25.21 340 P **P 20 12 48.3 -0.4**
comp=Z,6.1nm,0.6s,baz=148,slow=11,SNR=23
FINES PcP **PcP 20 16 20.9 -1.0**
comp=Z,4.7nm,1.0s,baz=130,slow=3.0,SNR=3.8
FETA Feichten 25.34 300 *e*P **P 20 12 50.1 -0.2**
comp=Z,15nm,0.9s,SNR=15
RETA Reutte 25.38 301 *e*P **P 20 12 49.9 -0.6**
comp=Z,12nm,0.9s,SNR=8.1
RETA Reutte 25.38 301 P **P 20 12 49.9 -0.6**
comp=Z,12nm,0.9s,SNR=8.1
AAA Alma-Ata 25.43 69 *e*P **P 20 12 53.0 +2.0**
comp=Z,14nm,0.8s
AAA LR LR 20 26 52.9
comp=Z,91nm,13.1s
GRFO Grafenberg 25.49 306 *e*P **P 20 12 51.1 -0.2**
comp=Z,100nm,1.2s
GRFO Grafenberg 25.49 306 *e*P **P 20 12 51.2 -0.2**
GRFO pmax pmax
comp=Z,100nm,1.2s
GRFO Grafenberg 25.49 306 *e*P **P 20 12 51.2 -0.2**
comp=Z,100nm,1.2s
MDOK Medeo 25.53 69 *i* P **P 20 12 53.4 +1.4**
comp=Z,244nm,1.7s
MDOK LR LR 20 26 53.3
comp=Z,184nm,12.2s
FUORN Ofenpass-Fuorn 25.62 299 *e*P **P 20 12 53.3 +0.4**
comp=Z,19nm,0.8s
TMCR Tamitsa 25.69 354 *e*P **P 20 12 52.8 -0.2**
TMCR pmax pmax
comp=Z,36nm,0.6s
DAVOX Davos/Dischmat 25.90 299 P **P 20 12 55.0 -0.3**
comp=Z,21nm,0.9s,baz=106,slow=6.7,SNR=31
DAVA Damuels 25.95 300 *e*P **P 20 12 55.3 -0.5**
comp=Z,45nm,1.1s,SNR=14
DAVA Damuels 25.95 300 P **P 20 12 55.3 -0.5**
comp=Z,45nm,1.1s,SNR=14
TUE Stuetta 26.23 298 *e*P **P 20 12 58.0 -0.4**
comp=Z,29nm,1.2s
TUE Stuetta 26.23 298 *e*P **P 20 12 58.0 -0.4**
comp=Z,29nm,1.2s
SATY Saty 26.53 69⇑ *i*P **P 20 13 02.7 +1.6**
comp=Z,26nm,1.6s
KPKS Kokpek 26.71 68⇑ *e*P **P 20 13 03.8 +1.1**
comp=Z,14nm,1.0s
KPKS *e*S **S 20 17 40.5 +2.4**
UZB Uzynbulak 26.97 69 *e*P **P 20 13 06.0 +0.9**
comp=Z,12nm,2.3s
KURBB Kurchatov Arra 27.26 53 P **P 20 13 08.8 +1.4**
comp=Z,27nm,0.7s,baz=263,slow=9.1,SNR=172
KURBB PcP **PcP 20 16 26.6 -0.3**
comp=Z,2.6nm,0.8s,baz=260,slow=3.3,SNR=6.4
SHLS Shalkode 27.29 69⇑ *i*P **P 20 13 11.9 +4.0**
comp=Z,35nm,4.2s
SHLS LR LR 20 26 45.2
comp=Z,58nm,11.6s
KURK Kurchatov 27.34 53 P **P 20 13 08.8 +0.7**
KURK PcP **PcP 20 16 26.6 -0.5**
KURK Kurchatov 27.34 53 P **P 20 13 09.8 +1.7**
SNR=17
KURK Kurchatov 27.34 53*ce*P **P 20 13 09.3 +1.2**
KURK pmax pmax
comp=Z,61nm,1.2s
KEST Kesra 27.36 274 P **P 20 13 09.2 +0.6**
comp=Z,13nm,0.9s,baz=338,slow=2.3,SNR=19
SBF Sospel 27.52 292 *e*P **P 20 13 09.9 0.0**
SENIN Lac Senin/Sane 27.64 298 *e*P **P 20 13 10.5 -0.6**
comp=Z,24nm,1.2s
CDF Champ du Feu 27.83 302 P **P 20 13 14.7 +2.1**
CDF pmax pmax
comp=Z,16nm,1.5s
ECH Echery 27.88 302 *e*P **P 20 13 11.4 -1.6**
comp=Z,15nm,1.2s
ECH Echery 27.88 302 *e*P **P 20 13 11.4 -1.6**
ECH pmax pmax
comp=Z,15nm,1.2s
ECH Echery 27.88 302 *e*P **P 20 13 11.4 -1.6**
comp=Z,15nm,1.2s
LPG La Plagne 27.99 296 *e*P **P 20 13 12.9 -1.5**
LPG pmax pmax
comp=Z,25nm,1.1s
LPL La Plagne 28.01 296 *e*P **P 20 13 13.9 -0.5**
LPL pmax pmax
comp=Z,36nm,1.4s
BNI Bardonecchia 28.04 295 *e*P **P 20 13 14.7 0.0**
comp=Z,34nm,1.3s
BNI Bardonecchia 28.04 295 *e*P **P 20 13 14.7 0.0**
BNI pmax pmax
comp=Z,34nm,1.3s
BNI Bardonecchia 28.04 295 *e*P **P 20 13 14.7 0.0**
comp=Z,34nm,1.3s
HINF Hinteralfeld 28.05 301 *e*P **P 20 13 13.3 -1.2**
HINF pmax pmax
comp=Z,19nm,1.5s
SEM Semipalatinsk 28.30 54⇑ *i*P **P 20 13 18.4 +1.4**
comp=Z,8.4nm,1.1s
SEM LR LR 20 26 04.6
comp=Z,190nm,15.5s
HFS Hagfors 28.52 328 P **P 20 13 18.1 -0.4**
comp=Z,11nm,0.8s,baz=140,slow=9.7,SNR=24
HFS LR LR 20 26 36.3
comp=Z,207nm,19.1s,baz=122,slow=40
ORIF Oris-en-Rattie 28.61 295 *e*P **P 20 13 18.8 -0.9**
ORIF pmax pmax
comp=Z,17nm,1.3s
WLF Walferdange 28.72 305 ⇓P **P 20 13 19.9 -0.5**
MEM Membach 28.96 307 ⇑P **P 20 13 23.4 +0.8**
MAKZ Makanchi 29.05 61 *e*P **P 20 13 24.7 +1.2**
comp=Z,16nm,1.3s
MAKZ Makanchi 29.05 61 *e*P **P 20 13 24.7 +1.2**
MAKZ pmax pmax
comp=Z,17nm,1.3s
BEBN Eben Emael 29.20 307 ⇓P **P 20 13 25.7 +1.0**
MK31 Makanchi Array 29.27 61 *e*P **P 20 13 26.6 +1.3**
MK31 Makanchi Array 29.27 61 *e*P **P 20 13 26.7 +1.3**
MKAR Makanchi Array 29.27 61 P **P 20 13 26.6 +1.2**
comp=Z,4.9nm,0.7s,baz=270,slow=6.6,SNR=54
MKAR Makanchi Array 29.27 61 *e*P **P 20 13 26.6 +1.2**
comp=Z,36nm,0.8s
MKAR Makanchi Array 29.27 61 *e*P **P 20 13 26.7 +1.3**
MKAR pmax pmax
comp=Z,36nm,0.8s
MK01 Makanchi Array 29.28 61 *e*P **P 20 13 26.4 +1.0**
APA Apatity 29.45 352⇑ *i*P **P 20 13 25.4 -1.3**
APA pmax pmax
comp=Z,7.0nm,1.1s
APA MLR MLR
comp=Z,700nm,14.0s
VIVF Saint-Julien-l 29.47 295 *e*P **P 20 13 26.2 -1.0**
VIVF pmax pmax
comp=Z,7.0nm,1.0s
NC405 NORSAR Array S 29.88 329 *e*P **P 20 13 29.2 -1.4**
NB2 NORSAR Subarra 30.04 329 P **P 20 13 30.9 -1.2**
comp=Z,7.2nm,0.9s,baz=126,slow=9.3
NOA NORSAR Array B 30.04 329 LR LR 20 27 14.2
comp=Z,209nm,18.6s,baz=125,slow=40
AVF Avril sur Loir 30.37 299 *e*P **P 20 13 34.2 -0.9**
AVF pmax pmax
comp=Z,13nm,0.9s
NVS Novosibirsk 31.04 46⇑ *i*P **P 20 13 42.3 +1.4**
NVS *e*S **S 20 18 41.8 -3.8**
NVS pmax pmax
comp=N,7.0nm,0.6s
NVS pmax pmax
comp=E,9.0nm,0.6s
NVS pmax pmax
comp=Z,20nm,0.6s
NVS smax smax
comp=N,5.0nm,1.3s
NVS smax smax
comp=E,6.0nm,1.3s
ZSN Zaisan 31.04 60 *e*P **P 20 13 41.9 +0.8**
comp=E,8.4nm,3.2s
CAF Calviac 31.32 295 *e*P **P 20 13 43.0 -0.6**
CAF pmax pmax
comp=Z,9.0nm,1.0s
RJF Les Rejaudoux 31.68 296 P **P 20 13 45.8 -0.9**
ZAA0 Zalesovo Array 31.74 48 *e*P **P 20 13 47.5 +0.4**
comp=Z,29nm,1.4s
ZALV Zalesovo Beam 31.74 48 P **P 20 13 47.5 +0.4**
comp=Z,8.1nm,0.6s,baz=258,slow=9.4,SNR=38
ZALV PcP **PcP 20 16 37.3 -1.0**
comp=Z,0.9nm,0.6s,baz=249,slow=4.0,SNR=2.3
ARCES ARCESS Array B 32.36 348 P **P 20 13 52.1 -0.3**
comp=Z,13nm,1.0s,baz=159,slow=7.8,SNR=24
ARCES LR LR 20 27 53.2
comp=Z,409nm,21.5s,baz=146,slow=38
ARCES ARCESS Array B 32.36 348 *e*P **P 20 13 51.7 -0.6**
EPF Esparros 32.74 292 *e*P **P 20 13 54.1 -1.9**
EPF pmax pmax
comp=Z,4.0nm,0.8s
DGZ Jazzator, Alta 32.82 56 *i* P **P 20 13 58.1 +1.3**
DGZ pmax pmax
comp=Z,13nm,0.9s
WMQ Urumqi 33.21 67 P **P 20 14 02.0 +1.8**
WMQ pP sP 20 14 06.3 +1.5
WMQ sP pP 20 14 10.8 +7.3
WMQ PP **PnPn 20 15 06.4 -3.7**
WMQ pmax pmax
comp=Z,66nm,1.1s
WMQ pmax pmax
comp=Z,240nm,3.7s
WMQ LR LR
comp=Z,390nm,28.1s
WMQ LR LR
comp=Z,280nm,22.5s
WMQ LR LR
comp=Z,260nm,22.5s
GRR Gorron 33.23 302 *e*P **P 20 13 59.1 -1.1**
GRR pmax pmax
comp=Z,40nm,1.2s
SJPF Ste Jean 33.86 292 *e*P **P 20 14 06.1 +0.3**
DANN Dangsing 34.78 95 *e*P **P 20 14 15.3 +1.1**
comp=Z,46nm,0.5s
QUIF Quistinic 34.79 301 *e*P **P 20 14 12.7 -1.0**
QUIF pmax pmax
comp=Z,43nm,1.2s
KOLN Koldanda 34.92 96 *e*P **P 20 14 17.0 +1.6**
comp=Z,26nm,0.7s
EKA Eskdalemuir Ar 35.18 314 P **P 20 14 16.5 -0.5**
comp=Z,7.2nm,0.6s,baz=102,slow=9.4,SNR=19
EKA PcP **PcP 20 16 47.4 -0.5**
comp=Z,1.3nm,0.7s,baz=111,slow=3.9,SNR=3.9
GKN Gorkha 35.62 95 *e*P **P 20 14 22.0 +0.7**
comp=Z,27nm,0.6s
TAM Tamanrasset 36.10 255 *e*P **P 20 14 26.0 +0.5**
comp=Z,18nm,0.9s
TAM Tamanrasset 36.10 255 *e*P **P 20 14 26.0 +0.5**
TAM pmax pmax
comp=Z,18nm,0.9s
TAM Tamanrasset 36.10 255 *e*P **P 20 14 26.0 +0.5**
comp=Z,18nm,0.9s
DMN Daman 36.17 95 *e*P **P 20 14 27.2 +1.0**
comp=Z,62nm,0.9s
KKN Kakani 36.22 95 *e*P **P 20 14 27.6 +1.0**
comp=Z,20nm,0.7s
PKIN Phulchoki 36.42 95 *e*P **P 20 14 29.3 +1.0**
comp=Z,34nm,0.8s
ES19 SONSECA Array 36.49 287 *e*P **P 20 14 27.6 -1.0**
ES19 SONSECA Array 36.49 287 *e*P **P 20 14 27.6 -1.0**
ESDC Sonseca Array 36.55 287 P **P 20 14 27.8 -1.2**
comp=Z,12nm,0.8s,baz=66,slow=8.8,SNR=74
ESDC PcP **PcP 20 16 51.5 -0.9**
comp=Z,2.5nm,0.9s,baz=36,slow=3.1,SNR=6.1
ESLA Sonseca Array 36.55 287 *e*P **P 20 14 28.3 -0.8**
comp=Z,14nm,0.8s
GUN Gumba 36.63 94 *e*P **P 20 14 31.0 +0.8**
comp=Z,96nm,0.9s
HVS Khovu-Aksy 36.86 54*c i*P **P 20 14 33.1 +1.5**
HVS pmax pmax
comp=Z,35nm,1.0s
PAB San Pablo 36.87 287 *e*P **P 20 14 31.0 -0.8**
comp=Z,15nm,1.0s
PAB San Pablo 36.87 287 *e*P **P 20 14 31.0 -0.8**
PAB pmax pmax
comp=Z,15nm,1.0s
HYB Hyderabad 37.10 115 *i* P **P 20 14 34.0 +0.1**
RAMN Ramite 37.66 95 *e*P **P 20 14 39.0 +0.2**
comp=Z,54nm,0.6s
HORN Hornachuelos 38.01 284 P **P 20 14 40.2 -1.2**
PBRG Braganca 38.11 291 *e*P **P 20 14 41.4 -0.9**
comp=Z,18nm,1.3s
ODAN Odare 38.31 95 *e*P **P 20 14 45.3 +0.9**
comp=Z,171nm,1.3s
TAPN Taplejung 38.33 94 *e*P **P 20 14 45.6 +1.1**
MVO Moncorvo 38.47 290 *e*P **P 20 14 44.3 -1.0**
comp=Z,18nm,1.1s
NRIK Noril'sk 38.52 23 P **P 20 14 44.6 -0.6**
comp=Z,22nm,1.1s,baz=240,slow=5.7,SNR=15
NRIK LR LR 20 33 59.0
comp=Z,299nm,18.4s,baz=201,slow=41
PVRL Vila Real 38.95 291 *e*P **P 20 14 48.4 -0.9**
comp=Z,24nm,1.8s
PVRL Vila Real 38.95 291 *e*P **P 20 14 48.4 -0.9**
POLO Lamas de Olo 38.98 291 *e*P **P 20 14 46.4 -3.2**
comp=Z,9.7nm,1.6s
MTE Manteigas 39.03 289 *e*P **P 20 14 49.6 -0.4**
comp=Z,43nm,1.1s
MTE Manteigas 39.03 289 *e*P **P 20 14 49.6 -0.4**
comp=Z,30nm,0.8s
PCBR Castelo Branco 39.13 288 *e*P **P 20 14 50.1 -0.6**
comp=Z,24nm,1.5s
PMRV Marv??o 39.17 288 *e*P **P 20 14 50.4 -0.8**
comp=Z,28nm,1.8s
PMRV Marv??o 39.17 288 *e*P **P 20 14 50.4 -0.8**
PGAV Gavieira, Arco 39.19 292 *e*P **P 20 14 50.9 -0.5**
comp=Z,29nm,1.4s
PVIS Viseu 39.21 290 *e*P **P 20 14 51.1 -0.4**
comp=Z,37nm,2.0s
MDT Midelt 39.22 277 P **P 20 14 51.3 -0.4**
comp=Z,9.2nm,0.9s,baz=91,slow=10.0,SNR=13
MDT LR LR 20 33 11.2
comp=Z,86nm,19.0s,baz=30,slow=39
PBAR Barrancos 39.26 286 *e*P **P 20 14 50.9 -1.0**
comp=Z,43nm,1.7s
KNGR Kungurtug, Tuv 39.29 54 *i* P **P 20 14 53.9 +1.7**
PESTR Estremoz 39.48 287 *e*P **P 20 14 52.7 -1.0**
comp=Z,30nm,1.2s
PESTR Estremoz 39.48 287 *e*P **P 20 14 52.8 -0.9**
comp=Z,13nm,0.9s
PTOM Tomar 39.88 288 *e*P **P 20 14 56.9 -0.1**
comp=Z,49nm,1.2s
PMTG Montargil 39.90 287 *e*P **P 20 14 56.0 -1.2**
comp=Z,24nm,1.0s
PMTG Montargil 39.90 287 *e*P **P 20 14 56.0 -1.2**
PBEJ Beja 39.93 286 *e*P **P 20 14 56.7 -0.8**
comp=Z,19nm,1.8s
LSA Lhasa 39.94 88 P **P 20 14 59.6 +1.4**
LSA pmax pmax
comp=Z,25nm,0.8s
LSA Lhasa 39.94 88 *e*P **P 20 14 57.9 -0.3**
comp=Z,21nm,0.9s
LSA Lhasa 39.94 88 P **P 20 14 59.1 +0.9**
LSA Lhasa 39.94 88 *e*P **P 20 14 57.9 -0.3**
LSA pmax pmax
comp=Z,21nm,0.9s
LSA Lhasa 39.94 88 P **P 20 14 59.2 +0.9**
PVAQ Vaqueiros 40.01 285 *e*P **P 20 14 56.0 -2.1**
comp=Z,41nm,1.5s
KMBO Kilima Mbogo 40.09 190 LR LR 20 31 15.3
comp=Z,293nm,18.2s,baz=276,slow=36
ALMR Almeirim 40.13 288 *e*P **P 20 14 58.3 -0.8**
comp=Z,50nm,1.2s
PCVE Castro Verde 40.18 285 *e*P **P 20 14 58.9 -0.7**
comp=Z,24nm,1.5s
MBAR Mbarara 40.90 200 P **P 20 15 05.7 -0.1**
comp=Z,2.9nm,0.3s,baz=22,slow=12,SNR=17
SPITS Spitsbergen Ar 41.14 352 P **P 20 15 07.2 +0.1**
comp=Z,36nm,1.2s,baz=175,slow=7.2,SNR=3.2
SPITS LR LR 20 33 46.0
comp=Z,155nm,18.5s,baz=165,slow=38
MOY Mondy 41.40 52 *e*P **P 20 15 11.5 +1.9**
MOY pmax pmax
comp=Z,23nm,1.5s
ZAK Zakamensk 42.98 54 *e*P **P 20 15 23.8 +1.3**
ZAK *e* 20 17 11.0
ZAK pmax pmax
comp=Z,9.0nm,1.6s
ZAK pmax pmax
comp=Z,5.0nm,1.2s
GTA Gaotai 43.02 71 *e*P **P 20 15 24.3 +1.4**
GTA pP sP 20 15 28.8 +1.2
GTA sP pP 20 15 31.9 +5.6
GTA PcP **PcP 20 17 12.8 -0.3**
GTA S **S 20 21 47.8 -0.7**
GTA sS sS 20 21 55.8 +1.8
GTA SS **SS 20 24 52.3 -7.9**
GTA pmax pmax
comp=Z,8.0nm,1.2s
GTA pmax pmax
comp=Z,130nm,5.0s
GTA LR LR
comp=Z,160nm,10.7s
GTA LR LR
comp=Z,140nm,11.2s
GTA LR LR
comp=Z,180nm,15.5s
TLY Talaya 43.03 52 P **P 20 15 24.1 +1.3**
comp=Z,5.1nm,0.7s,baz=265,slow=12,SNR=4.2
TLY Talaya 43.03 52 *e*P **P 20 15 24.8 +2.0**
TLY *e*PPP PPP 20 17 45.5
TLY pmax pmax
comp=Z,20nm,1.5s
TLY MLR MLR
comp=Z,282nm,16.0s
TORD Torodi Ar. Bea 44.95 247 P **P 20 15 37.0 -1.6**
comp=Z,22nm,1.0s,baz=47,slow=8.0,SNR=65
TORD LR LR 20 39 21.2
comp=Z,108nm,18.4s,baz=35,slow=43
BORG Borgarnes 45.18 327 LR LR 20 35 50.5
comp=Z,74nm,18.2s,baz=102,slow=38
BORG Borgarnes 45.18 327 *e*P **P 20 15 42.5 +2.7**
comp=Z,30nm,1.1s
BORG Borgarnes 45.18 327 *i* P **P 20 15 43.1 +3.4**
SONM Songino Array 45.45 57 P **P 20 15 42.4 +0.1**
comp=Z,1.1nm,0.8s,baz=260,slow=8.9,SNR=4.1
SONM PcP **PcP 20 17 21.0 -0.3**
comp=Z,2.8nm,0.9s,baz=270,slow=3.3,SNR=8.3
PALK Pallekele 45.78 123 LR LR 20 35 30.0
comp=Z,141nm,18.5s,baz=276,slow=37
ULN Ulaanbaatar 45.87 57 *e*P **P 20 15 47.1 +1.3**
comp=Z,25nm,1.3s
ULN Ulaanbaatar 45.87 57 P **P 20 15 47.2 +1.5**
SNR=12
ULN Ulaanbaatar 45.87 57*ce*P **P 20 15 46.8 +1.1**
ULN pmax pmax
comp=Z,28nm,1.7s
DAG Danmarks Havn 46.36 344⇑ *i*P **P 20 15 48.6 -0.3**
comp=Z,13nm,1.2s
DAG Danmarks Havn 46.36 344⇑ *i*P **P 20 15 48.6 -0.3**
DAG pmax pmax
comp=Z,13nm,1.2s
LZH Lanzhou 47.15 74 *e*P **P 20 15 57.6 +1.7**
LZH pP pP 20 16 00.3 +1.0
LZH sP sP 20 16 02.8 +2.2
LZH *e*PP **PP 20 17 47.9 +1.3**
LZH pmax pmax
comp=Z,52nm,1.0s
LZH pmax pmax
comp=Z,170nm,6.0s
LZH LR LR
comp=Z,360nm,17.4s
LZH LR LR
comp=Z,280nm,16.8s
LZH LR LR
comp=Z,250nm,16.8s
BOD Bodaibo 48.17 43 *e*P **P 20 16 03.4 +0.1**
BOD pmax pmax
comp=Z,21nm,0.8s
KOWA Kowa 48.28 253 P **P 20 16 03.7 -0.9**
comp=Z,23nm,0.9s,baz=50,slow=5.1,SNR=25
KOWA LR LR 20 39 49.8
comp=Z,178nm,18.4s,baz=52,slow=40
KOWA Kowa 48.28 253 *e*P **P 20 16 03.8 -0.9**
comp=Z,50nm,1.2s
CD2 Chengdu 49.21 80 P **P 20 16 10.9 -0.9**
CD2 pmax pmax
comp=Z,30nm,0.5s
BTO Baotou 50.03 66 *e*P **P 20 16 16.8 -1.1**
HHC Hu-ho-hao-te 51.04 65 *e*P **P 20 16 27.3 +1.8**
HHC pP sP 20 16 31.9 +1.6
HHC sP pP 20 16 35.3 +6.4
HHC PP **PP 20 18 23.9 +2.0**
HHC pmax pmax
comp=Z,26nm,1.2s
HHC pmax pmax
comp=Z,120nm,3.8s
HHC LR LR
comp=Z,430nm,14.7s
HHC LR LR
comp=Z,420nm,10.4s
HHC LR LR
comp=Z,410nm,10.4s
KMI Kunming 51.17 87 P **P 20 16 27.5 +0.6**
KMI pP pP 20 16 31.6 +1.3
KMI sP sP 20 16 33.1 +1.5
KMI pmax pmax
comp=Z,20nm,1.0s
KMI pmax pmax
comp=Z,150nm,5.1s
KMI LR LR
comp=Z,150nm,16.6s
KMI LR LR
comp=Z,150nm,15.6s
KMI LR LR
comp=Z,190nm,16.6s
SUMG Summit 51.20 337 *i* P **P 20 16 27.1 +0.5**
comp=Z,18nm,1.0s
SUMG Summit 51.20 337 *e*P **P 20 16 26.4 -0.2**
comp=Z,22nm,1.1s
SUMG Summit 51.20 337 *e*P **P 20 16 26.4 -0.2**
SUMG pmax pmax
comp=Z,22nm,1.1s
CHTO Chiang Mai 51.59 96 P **P 20 16 29.8 0.0**
comp=Z,73nm,1.0s
CHTO Chiang Mai 51.59 96 *e*P **P 20 16 29.8 0.0**
comp=Z,11nm,0.8s
CHTO Chiang Mai 51.59 96 *e*P **P 20 16 29.8 0.0**
CHTO pmax pmax
comp=Z,11nm,0.8s
XAN Xi'an 51.79 74 P **P 20 16 31.5 +0.3**
XAN pP pP 20 16 35.9 +1.3
XAN pmax pmax
comp=Z,37nm,1.1s
XAN pmax pmax
comp=Z,140nm,3.6s
XAN LR LR
comp=Z,200nm,17.3s
XAN LR LR
comp=Z,150nm,13.2s
XAN LR LR
comp=Z,160nm,16.7s
CMAR Chiang Mai Arr 51.79 97 P **P 20 16 31.1 -0.3**
comp=Z,8.5nm,0.8s,baz=299,slow=8.5,SNR=55
CMAR PcP **PcP 20 17 44.4 0.0**
comp=Z,2.6nm,0.9s,baz=299,slow=5.0,SNR=2.8
CMAR LR LR 20 44 44.9
comp=Z,60nm,18.1s,baz=295,slow=43
TIXI Tiksi 52.30 24 P **P 20 16 34.4 +0.1**
comp=Z,10nm,1.0s,baz=270,slow=16,SNR=10
TIXI Tiksi 52.30 24 *e*P **P 20 16 34.7 +0.4**
comp=Z,14nm,1.1s
TIXI Tiksi 52.30 24*ce*P **P 20 16 34.3 0.0**
TIXI pmax pmax
comp=Z,14nm,1.2s
GYA Guiyang 53.56 83⇑ *i*P **P 20 16 44.0 -0.5**
GYA pP sP 20 16 50.3 +1.1
GYA PP **PP 20 18 47.4 +2.4**
GYA S **S 20 24 16.5 -1.2**
GYA pmax pmax
comp=Z,20nm,0.7s
GYA pmax pmax
comp=Z,120nm,5.6s
PHIT Phitsanulok 53.67 97 P **P 20 16 46.6 +1.4**
comp=Z,20nm,1.0s
UTHA Uthaitani 53.87 99 P **P 20 16 47.5 +0.8**
comp=Z,5.3nm,1.0s
DBIC Dimbokro 54.06 247 P **P 20 16 46.6 -1.4**
comp=Z,16nm,0.9s,baz=32,slow=9.6,SNR=9.7
DBIC LR LR 20 42 00.0
comp=Z,86nm,20.6s,baz=36,slow=38
KIC Kosan Boka 54.19 246 *e*P **P 20 16 47.4 -1.7**
comp=Z,88nm,1.0s
TIC Toumodi 54.20 247 *e*P **P 20 16 47.4 -1.7**
PBKT Sadao Pong 54.46 97 P **P 20 16 50.1 -0.8**
comp=Z,16nm,1.1s
LIC Lamto 54.49 246 *e*P **P 20 16 49.3 -1.9**
comp=Z,124nm,1.0s

YAK	Yakutsk	54.91	35	eP	P	20 16 52.3	-1.3
YAK				pmax	pmax		
comp=Z,14nm,0.9s							
YAK				pmax	pmax		
comp=N,2.0nm,0.9s							
YAK				pmax	pmax		
comp=E,3.0nm,1.1s							
YAK				MLR	MLR		
comp=Z,265nm,14.0s							
YAK				MLR	MLR		
comp=E,148nm,19.0s							
YAK				MLR	MLR		
comp=N,83nm,17.0s							
LSZ	Lusaka	55.63	198	P	P	20 17 00.3	+0.8
comp=N,10nm,0.8s,baz=27,slow=7.9,SNR=27							
ZEA	Zeya	56.44	45	eP	P	20 17 16.1	+11
ZEA				pmax	pmax		
comp=Z,14nm,1.2s							
TIA	Tai'an	56.90	68	P	P	20 17 08.8	+0.5
TIA				pmax	pmax		
comp=Z,6.0nm,1.3s							
OPO	Ambohidratompo	57.09	176	P	P	20 17 11.0	+1.1
comp=Z,7.7nm,0.8s,baz=357,slow=7.0,SNR=7.1							
WHN	Wuhan	57.47	75	⇓P	P	20 17 13.1	+0.7
ABPO	Ambohimpanom	57.54	176	eP	P	20 17 14.5	+1.5
comp=Z,30nm,1.1s							
ABPO	Ambohimpanom	57.54	176	eP	P	20 17 14.5	+1.5
ABPO				pmax	pmax		
comp=Z,30nm,1.1s							
CN2	Changchun	59.32	56	eP	P	20 17 28.0	+2.9
CN2				pmax	pmax		
comp=Z,10.0nm,0.8s							
NJ2	Nanjing	60.11	71	eP	P	20 17 30.4	-0.3
NJ2				pmax	pmax		
comp=Z,27nm,0.7s							
PSI	Prapat	61.64	111	P	P	20 17 38.4	-3.1
comp=Z,2.8nm,0.5s,baz=359,slow=6.5,SNR=5.7							
PSI				LR	LR	20 44 49.0	
comp=Z,168nm,20.4s,baz=250,slow=36							
GSI	Gunungsitoli	61.69	113	eP	P	20 17 40.8	-0.9
comp=Z,16nm,0.8s							
TSUM	Tsumeb	62.59	208	P	P	20 17 47.7	+0.1
comp=Z,6.8nm,0.8s,baz=7.2,slow=7.1,SNR=12							
TSUM	Tsumeb	62.59	208	eP	P	20 17 47.9	+0.3
comp=Z,9.3nm,1.0s							
GRNR	Gornyy	62.80	45	eP	P	20 17 50.0	+1.3
GRNR				pmax	pmax		
comp=Z,26nm,1.0s							
USRK	Ussuriysk Ar.	63.32	54	P	P	20 17 51.5	-0.7
comp=Z,5.5nm,0.9s,baz=297,slow=4.7,SNR=9.0							
USRK				LR	LR	20 48 32.7	
comp=Z,177nm,18.2s,baz=277,slow=39							
KS01	Wonju Array Si	63.92	62	eP	P	20 17 56.0	-0.2
KS15	Wonju Array Si	63.93	62	eP	P	20 17 56.8	+0.4
KSAR	Wonju Array Be	63.93	62	P	P	20 17 56.5	+0.1
KSAR	Wonju Array Be	63.93	62	P	P	20 17 56.5	+0.1
KSRS	Korea Array	63.95	62	P	P	20 17 56.5	0.0
comp=Z,10nm,0.9s,baz=290,slow=6.6,SNR=28							
KSRS				LR	LR	20 48 14.3	
comp=Z,103nm,18.8s,baz=286,slow=38							
KSRS	Korea Array	63.95	62	P	P	20 17 56.5	0.0
KSRS				pmax	pmax		
comp=Z,11nm,0.9s							
KSRS				MLR	MLR		
comp=Z,103nm,18.8s							
SEY	Seymchan	63.96	29	ceP	P	20 17 57.5	+1.4
FRB	Frobisher Bay	64.73	333	P	P	20 18 01.0	-0.1
comp=Z,20nm,0.9s,baz=59,slow=11,SNR=6.8							
MA2	Magadan	65.23	32	P	P	20 18 05.0	+0.6
comp=Z,15nm,0.9s,baz=308,slow=9.2,SNR=11							
MA2	Magadan	65.23	32	eP	P	20 18 04.7	+0.2
comp=Z,25nm,1.1s							
MA2	Magadan	65.23	32	⇓eP	P	20 18 05.5	+1.0
MA2				pmax	pmax		
comp=Z,29nm,1.3s							
BILL	Bilibino	65.25	20	eP	P	20 18 05.0	+0.5
comp=Z,14nm,1.0s							
BILL	Bilibino	65.25	20	c iP	P	20 18 04.7	+0.2
BILL				e		20 18 36.4	
BILL				e		20 20 32.8	
BILL				pmax	pmax		
comp=Z,18nm,1.2s							
LBTB	Lobatse	65.62	198	P	P	20 18 08.0	+0.6
comp=Z,8.7nm,0.7s,baz=39,slow=6.5,SNR=18							
LBTB	Lobatse	65.62	198	eP	P	20 18 08.6	+1.1
comp=Z,12nm,0.8s							
LBTB	Lobatse	65.62	198	P	P	20 18 08.0	+0.6
LBTB				pmax	pmax		
comp=Z,9.0nm,0.7s							
JNU	Nakatsue	68.27	64	P	P	20 18 24.4	0.0
comp=Z,6.5nm,0.6s,baz=346,slow=8.3,SNR=3.4							
JNU				LR	LR	20 50 58.0	
comp=Z,74nm,18.3s,baz=304,slow=38							
YSS	Yuzh-Sakhalins	68.35	47	eP	P	20 18 25.3	+0.7
YSS				e		20 18 35.6	
YSS				pmax	pmax		
comp=Z,20nm,1.0s							
YSS				pmax	pmax		
comp=Z,100nm,5.0s							
YSS				MLR	MLR		
comp=Z,200nm,13.0s							
BOSA	Boshof	69.16	197	P	P	20 18 29.9	+0.1
comp=Z,18nm,0.6s,baz=7.3,slow=6.1,SNR=53							
ASAJ	Asahikawa	69.86	49	P	P	20 18 33.5	-0.5
comp=Z,7.1nm,0.9s,baz=300,slow=20,SNR=5.1							
MAT	Matsushiro	71.39	58	P	P	20 18 42.6	-0.9
MJAR	Matsushiro Arr	71.39	58	P	P	20 18 43.0	-0.6
comp=Z,8.8nm,1.0s,baz=307,slow=5.2,SNR=17							
MJAR				LR	LR	20 52 53.1	
comp=Z,200nm,18.4s,baz=280,slow=38							
MJAR	Matsushiro Arr	71.39	58	P	P	20 18 43.0	-0.6
PETK	Petropavlovsk-	72.26	35	P	P	20 18 46.8	-1.6
comp=Z,7.9nm,0.9s,baz=338,slow=3.2,SNR=9.7							
TOLK	Toolik Lake Re	72.49	5	P	P	20 18 50.2	+0.6
baz=349							
INK	Inuvik	73.26	359	P	P	20 18 53.7	-0.4
comp=Z,4.5nm,0.7s,baz=17,slow=6.8,SNR=4.0							
SUR	Sutherland	73.86	200	P	P	20 18 58.8	+0.6
comp=Z,14nm,0.6s,baz=27,slow=8.7,SNR=19							
LEM	Lembang	74.52	112	LR	LR	20 53 45.5	
comp=Z,70nm,20.9s,baz=322,slow=37							
ILAR	Eielson Array	76.50	5	P	P	20 19 12.8	-0.2
comp=Z,2.5nm,1.0s,baz=330,slow=4.3,SNR=21							
FCC	Fort Churchill	76.69	339	eP	P	20 19 12.9	-1.1
comp=Z,16nm,1.0s							
FCC	Fort Churchill	76.69	339	eP	P	20 19 12.9	-1.1
FCC				pmax	pmax		
comp=Z,16nm,1.0s							
PKME	Peaks-Kenny Pk	76.94	318	P	P	20 19 16.0	+0.3
baz=48							
DAWY	Dawson	77.52	1	eP	P	20 19 16.7	-2.0
comp=Z,17nm,0.9s							
YKA	Yellowknife Ar	77.61	350	P	P	20 19 19.0	-0.1
comp=Z,6.3nm,0.9s,baz=17,slow=6.3,SNR=20							
LBNH	Lisbon	79.00	319	P	P	20 19 27.8	+0.6
baz=46,SNR=5.8							
LONY	Lake Ozonia	80.09	320	P	P	20 19 33.1	0.0
baz=44,SNR=10.0							
LONY	Lake Ozonia	80.09	320	P	P	20 19 31.3	-1.8
comp=Z,16nm,1.0s							
PAL	Palisades	82.32	317	P	P	20 19 44.6	-0.4
baz=44							
FFC	Flin Flon	82.35	341	eP	P	20 19 44.4	-0.5
comp=Z,14nm,0.9s							
FFC	Flin Flon	82.35	341	eP	P	20 19 44.4	-0.5
FFC				pmax	pmax		
comp=Z,14nm,0.9s							
BINY	Binghamton	82.54	319	P	P	20 19 46.1	-0.1
baz=43							
BINY	Binghamton	82.54	319	eP	P	20 19 43.6	-2.6
comp=Z,12nm,0.9s							
KDAK	Kodiak Island	82.89	9	P	P	20 19 47.2	-0.5
comp=Z,19nm,0.7s,baz=355,slow=5.0,SNR=23							
KDAK	Kodiak Island	82.89	9	i P	P	20 19 48.0	+0.4
DLBC	Dease Lake	83.05	357	P	P	20 19 49.0	+0.4
comp=Z,8.0nm,1.0s,baz=4.4,slow=13,SNR=11							
DLBC				LR	LR	21 01 03.6	
comp=Z,90nm,19.2s,baz=357,slow=39							
N59A	State Game Lan	83.36	318	P	P	20 19 50.4	-0.1
baz=43							
E45A	Wooded Hills,	83.69	327	P	P	20 19 52.0	0.0
baz=38							
E44A	Grand Marais A	83.79	328	P	P	20 19 52.0	-0.5
baz=37							
F46A	Macinaw City C	83.97	327	P	P	20 19 53.4	0.0
baz=38							
C40A	Isle Royale Na	84.05	330	P	P	20 19 53.6	-0.2
baz=35							
F45A	CMU Biological	84.36	327	P	P	20 19 55.3	-0.2
baz=37							
E43A	Lone Tree Farm	84.43	328	P	P	20 19 55.7	-0.1
baz=36,SNR=5.0							
ULM	Lac du Bonnet	84.50	335	P	P	20 19 55.5	-0.6
comp=Z,11nm,0.7s,baz=38,slow=4.2,SNR=15							
C39A	Grand Marais	84.50	331	P	P	20 19 55.4	-0.7
baz=34							
D41A	Chassel	84.52	329	P	P	20 19 56.1	-0.1
baz=36							
F44A	Big Bay de Noc	84.52	328	P	P	20 19 56.3	+0.1
baz=37							
ERPA	Erie	84.60	322	P	P	20 19 56.3	-0.4
baz=41							
SSPA	Standing Stone	84.66	319	P	P	20 19 56.7	-0.4
baz=42							
E42A	Champion	84.76	329	P	P	20 19 57.4	-0.1
baz=36							
M54A	Oil Creek Stat	84.90	321	P	P	20 19 57.9	-0.4
baz=41							
EYMN	Ely	84.91	332	P	P	20 19 58.0	-0.3
baz=34							
EYMN	Ely	84.91	332	eP	P	20 19 57.2	-1.0
comp=Z,9.2nm,1.1s							
F43A	Flat Rock, Esc	84.94	328	P	P	20 19 58.4	0.0
baz=36							
C38A	Sawbill Land.	85.02	331	P	P	20 19 58.0	-0.8
baz=34							
E41A	Kenton	85.16	329	P	P	20 19 59.1	-0.4
baz=35							
O56A	Blue Knob Stat	85.28	319	P	P	20 19 59.7	-0.5
baz=42							
C37A	Embarrass	85.35	332	P	P	20 20 00.1	-0.4
baz=33,SNR=8.5							
B35A	Bob, Littlefor	85.38	333	P	P	20 20 00.0	-0.5
baz=32,SNR=13							
A33A	Warroad	85.46	334	P	P	20 20 00.2	-0.7
baz=31,SNR=12							
N54A	Moraine State	85.47	321	P	P	20 20 00.7	-0.5
baz=41							
E40A	Wakefield	85.55	330	P	P	20 20 01.3	-0.1
baz=34,SNR=9.8							
C36A	Pine Crest Far	85.57	332	P	P	20 20 01.0	-0.5
baz=33							
B34A	Aery, Baudette	85.59	334	P	P	20 20 01.0	-0.6
baz=31,SNR=12							
G43A	Wallace	85.62	328	P	P	20 20 01.2	-0.6
baz=36							
F41A	Three Lakes	85.81	329	P	P	20 20 02.1	-0.6
baz=35,SNR=7.8							
E39A	Mellen	85.86	330	P	P	20 20 02.6	-0.4
baz=34,SNR=12							
D37A	Coon	85.92	332	P	P	20 20 02.7	-0.5
baz=33							
G42A	Mountain	85.94	328	P	P	20 20 02.8	-0.6
baz=36							
C35A	Jirik Farms, M	86.03	333	P	P	20 20 02.9	-0.9
baz=32							
E38A	The Farm, Brul	86.05	331	P	P	20 20 03.3	-0.6
baz=33							
F40A	Park Falls	86.07	330	P	P	20 20 03.3	-0.7
baz=34,SNR=5.4							
AGMN	Agassiz Nation	86.17	334	P	P	20 20 04.0	-0.5
baz=30							
AGMN	Agassiz Nation	86.17	334	eP	P	20 20 03.2	-1.3
comp=Z,12nm,1.0s							
D36A	Goodland	86.18	332	P	P	20 20 03.8	-0.7
baz=32							
F39A	Loretta	86.38	330	P	P	20 20 05.0	-0.6
baz=34,SNR=7.7							
MCWV	Mont Chateau	86.38	320	P	P	20 20 05.2	-0.5
baz=41							
C34A	RKJ Ranch, Bem	86.40	333	P	P	20 20 04.8	-0.9
baz=31							
D35A	Remer	86.58	333	P	P	20 20 05.8	-0.7
baz=32							
C33A	Trail	86.61	334	P	P	20 20 05.9	-0.8
baz=31							
G40A	Rib Lake	86.64	329	P	P	20 20 06.3	-0.6
baz=34,SNR=7.8							
F38A	Pierce - Schro	86.72	331	P	P	20 20 07.1	-0.1
baz=33,SNR=5.2							
E36A	McGregor	86.77	332	P	P	20 20 07.2	-0.3
baz=32							
I43A	Langenfeld Bro	86.92	327	P	P	20 20 07.6	-0.6
baz=36							
H41A	Junction City	86.95	329	P	P	20 20 07.7	-0.7
baz=35							
G39A	Holcombe	87.00	330	P	P	20 20 08.1	-0.5
baz=34,SNR=7.3							
E35A	Pequot Lakes	87.15	332	P	P	20 20 08.7	-0.6
baz=32							
F37A	Hinrichs Farm,	87.20	331	P	P	20 20 09.0	-0.5
baz=33							
C31A	Landman Farms,	87.24	335	P	P	20 20 08.9	-0.8
baz=29,SNR=5.6							
I42A	Draeger Farm,	87.24	328	P	P	20 20 09.1	-0.6
baz=35							
H40A	Chili	87.24	329	P	P	20 20 09.3	-0.5
baz=34							
G38A	Ridgeland	87.37	330	P	P	20 20 09.6	-0.8
baz=33,SNR=7.2							
F36A	Milaca	87.42	332	P	P	20 20 09.9	-0.8
baz=32,SNR=8.8							
J43A	Natural Harves	87.45	327	P	P	20 20 10.1	-0.7
baz=35							
ACSO	Alum Creek Sta	87.49	322	P	P	20 20 10.7	-0.3
baz=39							
H39A	Augusta	87.55	330	P	P	20 20 10.9	-0.3
baz=34							
SPMN	Marine on St.	87.69	331	P	P	20 20 11.5	-0.4
baz=32							
MDND	Maddock	87.79	336	P	P	20 20 11.7	-0.7
baz=28							
J42A	Columbus	87.80	328	P	P	20 20 11.6	-0.9
baz=35							
F35A	Swanville	87.81	332	P	P	20 20 11.5	-1.0
baz=31							
O50A	Cable	87.86	322	P	P	20 20 11.8	-1.0
baz=38							
H38A	Maiden Rock	87.95	330	P	P	20 20 12.4	-0.7
baz=33							
J41A	Loganville	88.13	328	P	P	20 20 13.1	-1.0
baz=34							
I39A	Houston	88.33	329	P	P	20 20 14.2	-0.9
baz=33							
I38A	Scanlan Farm,	88.50	330	P	P	20 20 14.9	-0.9
baz=33							
L43A	Garden Prairie	88.56	327	P	P	20 20 15.2	-0.9
baz=35							
JFWS	Jewell Farm	88.60	328	P	P	20 20 15.1	-1.1
baz=34							
N46A	Monticello	88.72	325	P	P	20 20 16.0	-0.8
baz=36							
J39A	Decorah	88.84	329	P	P	20 20 16.3	-1.1
baz=33							
K41A	Shullsburg	88.87	328	P	P	20 20 16.3	-1.3
baz=34							
M44A	Midewin, Midew	88.90	326	P	P	20 20 16.7	-1.0
baz=36							
I37A	Lemond, Waseca	88.94	331	P	P	20 20 17.3	-0.5
baz=32							
O47A	Sheridan	88.99	324	P	P	20 20 17.2	-0.9
baz=37							
L42A	Oliver, Polo	89.10	327	P	P	20 20 17.9	-0.8
baz=35							
K40A	Colesburg	89.14	328	P	P	20 20 17.8	-1.1
baz=34							
J38A	Wedel Dairy, R	89.16	330	P	P	20 20 17.8	-1.1
baz=33							
BBB	Bella Bella	89.17	355	LR	LR	21 03 48.0	
comp=Z,48nm,19.7s,baz=160,slow=38							
M43A	Waltham Townsh	89.26	326	P	P	20 20 18.5	-0.9
baz=35							
SFIN	Lafayette	89.30	325	P	P	20 20 18.7	-0.9
baz=36							
L41A	Preston	89.39	328	P	P	20 20 18.9	-1.1
baz=34							
N44A	Piper City	89.42	326	P	P	20 20 19.3	-0.9
baz=36							
K39A	Oelwein	89.44	329	P	P	20 20 19.1	-1.1
baz=33							
S52A	Salyersville	89.52	320	P	P	20 20 20.1	-0.6
baz=39							
J37A	Redenius Farm,	89.59	330	P	P	20 20 20.3	-0.6
baz=32							
P47A	Martinsville	89.63	324	P	P	20 20 20.6	-0.6
baz=37							
O45A	Potomac	89.68	325	P	P	20 20 20.5	-0.9
baz=36							
L40A	Anamosa	89.70	328	P	P	20 20 20.8	-0.7
baz=34							
S51A	Beattyville	89.81	321	P	P	20 20 21.3	-0.7
baz=38							
J36A	Seneca 1, Swea	89.88	331	P	P	20 20 21.9	-0.4
baz=32							
T52A	Hallie	89.92	320	P	P	20 20 22.3	-0.3
baz=39							
L39A	Vinton	89.97	329	P	P	20 20 21.6	-1.2
baz=33							
K37A	Belmond	90.08	330	P	P	20 20 22.8	-0.5
baz=32							
HDIL	Hopedale	90.13	326	P	P	20 20 22.4	-1.1
baz=35							
GUMO	Guam	90.16	72	LR	LR	21 04 45.5	
comp=Z,35nm,19.3s,baz=258,slow=38							
P45A	Graceland, Par	90.28	325	P	P	20 20 23.0	-1.2
baz=36							
U53A	Fall Branch	90.29	319	P	P	20 20 23.5	-0.9
baz=39							
L38A	Oak Wood Farm,	90.35	329	P	P	20 20 23.5	-1.0
baz=32							
WALA	Waterton Lakes	90.35	345	eP	P	20 20 23.4	-1.1
comp=Z,5.7nm,1.0s							
ECSD	EROS Data Cent	90.38	332	P	P	20 20 24.0	-0.7
baz=30							
EGMT	Eagleton	90.43	342	P	P	20 20 24.4	-0.6
baz=20							
M39A	Webster	90.58	328	P	P	20 20 24.6	-1.0
baz=33							
KMSC	Kings Mountain	90.59	318	P	P	20 20 25.1	-0.7
baz=40							
TZTN	Tazewell	90.64	320	P	P	20 20 25.8	-0.2
baz=38							
SCIA	State Center	90.64	329	P	P	20 20 25.2	-0.7
baz=32							
L37A	Phoenix Point,	90.67	330	P	P	20 20 25.1	-1.0
baz=32							
N41A	Harden Midland	90.68	327	P	P	20 20 25.7	-0.4
baz=34							
R47A	Wooly Knot Far	90.70	323	P	P	20 20 25.6	-0.6
baz=37							
T50A	Nancy	90.91	321	P	P	20 20 26.5	-0.7
baz=38							
V53A	Saluda	90.95	319	P	P	20 20 27.3	-0.2
baz=39							
Q45A	Warren Harvey,	90.98	324	P	P	20 20 26.6	-0.8
baz=36							
S48A	Wiedeman Farm,	90.99	322	P	P	20 20 27.0	-0.6
baz=37							
M38A	Pleasantville	91.05	329	P	P	20 20 27.0	-0.8
baz=32							
O41A	Passleys Farm,	91.18	327	P	P	20 20 27.6	-0.8
baz=34							
T49A	Edmonton	91.18	322	P	P	20 20 27.5	-0.9
baz=37							
V52A	Sevierville	91.21	320	P	P	20 20 28.1	-0.6
baz=38							
N39A	Derby Farms, D	91.22	328	P	P	20 20 27.8	-0.8
baz=33							
R46A	Gibon Southern	91.23	324	P	P	20 20 27.6	-1.1
baz=36							
Q44A	Meyer Farm, Va	91.36	325	P	P	20 20 28.6	-0.7
baz=35							
P42A	Winchester	91.39	326	P	P	20 20 28.4	-0.9
baz=34							
M37A	Trindle Farm,	91.41	330	P	P	20 20 28.7	-0.7
baz=32							
TKL	Tuckaleechee C	91.45	320	P	P	20 20 29.5	-0.2
comp=Z,17nm,0.9s,baz=82,slow=6.9,SNR=16							
W53A	Cullowhee	91.52	319	P	P	20 20 29.5	-0.7
baz=39							
NHSC	New Hope	91.52	316	P	P	20 20 29.6	-0.4
baz=40							
R45A	Skylar, Fairfi	91.52	324	P	P	20 20 29.0	-1.0
baz=36							
T48A	Bowling Green	91.59	322	P	P	20 20 29.6	-0.8
baz=37							
N38A	Joes South For	91.59	329	P	P	20 20 29.5	-0.8
baz=32							
O40A	La Belle	91.59	327	P	P	20 20 29.3	-1.0
baz=33							
V51A	Loudon	91.62	320	P	P	20 20 29.9	-0.6
baz=38							
Q43A	New Douglas	91.63	325	P	P	20 20 29.7	-0.9
baz=35							
M36A	Felix, Anita	91.66	330	P	P	20 20 29.7	-0.9
baz=31							
NEW	Newport	91.71	347	P	P	20 20 31.6	+0.8
comp=Z,6.5nm,0.8s,baz=28,slow=6.5,SNR=12							
NEW				LR	LR	21 02 03.8	
comp=Z,37nm,21.1s,baz=14,slow=36							
NEW	Newport	91.71	347	P	P	20 20 30.7	0.0
baz=15							
S46A	Don Dixon Farm	91.75	323	P	P	20 20 29.8	-1.3
baz=36							
U49A	Red Boiling Sp	91.77	321	P	P	20 20 29.9	-1.3
baz=37							
R44A	Waltonville	91.92	325	P	P	20 20 31.0	-0.9
baz=35							
T47A	Sharon Grove	92.03	323	P	P	20 20 31.9	-0.5
baz=36							
V50A	Pikevile	92.10	321	P	P	20 20 32.0	-0.8
baz=38							
X53A	Estanollee	92.11	319	P	P	20 20 31.8	-1.0
baz=39							
U48A	Cassie Pea, Po	92.14	322	P	P	20 20 31.8	-1.1
baz=37							
S45A	Carrier Mills	92.16	324	P	P	20 20 31.8	-1.1
baz=35							
P40A	Paris	92.16	327	P	P	20 20 31.9	-1.0
baz=33							
R43A	Red Bud	92.28	325	P	P	20 20 32.4	-1.1
baz=34							
Y54A	Tignall	92.28	318	P	P	20 20 33.2	-0.4
baz=39							
Q41A	Truxton	92.29	326	P	P	20 20 32.6	-1.0
baz=34							
X52A	Dahlonega	92.33	319	P	P	20 20 33.4	-0.5
baz=38							
T46A	Princeton	92.36	323	P	P	20 20 32.9	-1.0
baz=36							
V49A	McMinnville	92.42	321	P	P	20 20 33.3	-1.0
baz=37							
S44A	Carbondale	92.45	324	P	P	20 20 33.4	-0.9
baz=35							
B05A	Bryant	92.46	351	P	P	20 20 33.1	-1.0
baz=11							
MSO	Missoula	92.49	345	P	P	20 20 33.5	-1.0
baz=17							
O37A	Wolven Farm, M	92.49	329	P	P	20 20 33.6	-0.9
baz=32							
P39B	Salisbury	92.50	328	P	P	20 20 33.5	-1.0
baz=33							
U47A	Clarksville	92.55	322	P	P	20 20 34.0	-0.9
baz=36							
W50A	Signal Mountai	92.58	320	P	P	20 20 34.7	-0.4
baz=37							
Q40A	Laux Farm, Aux	92.62	327	P	P	20 20 34.1	-1.0
baz=33							
P38A	Dawn	92.70	328	P	P	20 20 34.6	-0.9
baz=32							
Y53A	Monroe	92.76	318	P	P	20 20 35.1	-0.7
baz=38							
X51A	Calhoun	92.85	320	P	P	20 20 35.9	-0.3
baz=38							
V48A	Smith Brothers	92.89	322	P	P	20 20 35.5	-1.0
baz=36							
R41A	Rosebud	92.90	326	P	P	20 20 35.6	-0.8
baz=34							
S43A	Fulton Ridge,	92.93	325	P	P	20 20 35.5	-1.0
baz=34							
Q39A	Willow Grove F	92.96	328	P	P	20 20 35.5	-1.1
baz=32							
Y52A	Lilburn	93.00	319	P	P	20 20 36.3	-0.6
baz=38							
CCM	Cathedral Cave	93.05	326	P	P	20 20 36.0	-1.1
baz=34							
P37A	Lathrop	93.07	329	P	P	20 20 35.9	-1.2
baz=32							
S42A	Caledonia	93.08	325	P	P	20 20 36.2	-1.1
baz=34							
R40A	Maddies Statio	93.29	327	P	P	20 20 37.2	-1.0
baz=33							
Q38A	Cooks Store, C	93.30	328	P	P	20 20 37.1	-1.1
baz=32							

X50B	**Fort Payne**	**93.33 320**	P	**P**	**20 20 37.4 -1.1**
	baz=37				
T43A	**Greenville**	**93.42 325**	P	**P**	**20 20 38.2 -0.7**
	baz=34				
W48A	**Pulaski**	**93.43 321**	P	**P**	**20 20 38.0 -0.9**
	baz=36				
Y51A	**Rockmart**	**93.48 319**	P	**P**	**20 20 38.3 -0.9**
	baz=38				
R39A	**Chumby, Stover**	**93.60 327**	P	**P**	**20 20 38.8 -0.8**
	baz=32				
X49A	**Woodville**	**93.63 321**	P	**P**	**20 20 39.0 -0.8**
	baz=37				
W47A	**Westpoint**	**93.66 322**	P	**P**	**20 20 39.1 -0.8**
	baz=36				
Z52A	**Williamson**	**93.71 319**	P	**P**	**20 20 39.4 -0.9**
	baz=38				
T42A	**Van Buren**	**93.83 325**	P	**P**	**20 20 39.7 -1.0**
	baz=34				
Y50A	**Piedmont**	**93.83 320**	P	**P**	**20 20 39.7 -1.0**
	baz=37				
S40A	**Lebanon**	**93.97 327**	P	**P**	**20 20 40.2 -1.2**
	baz=33				
X48A	**Hartselle**	**94.03 321**	P	**P**	**20 20 40.6 -1.0**
	baz=36				
R38A	**Fenwick Farm,**	**94.07 328**	P	**P**	**20 20 40.6 -1.2**
	baz=32				
T41A	**Mountain View**	**94.11 326**	P	**P**	**20 20 40.9 -1.1**
	baz=33				
Y49A	**Blount Mountai**	**94.19 320**	P	**P**	**20 20 41.1 -1.3**
	baz=37				
S39A	**Bolivar**	**94.25 327**	P	**P**	**20 20 41.1 -1.5**
	baz=32				
Z50A	**Ashland**	**94.43 320**	P	**P**	**20 20 42.4 -1.1**
	baz=37				
U42A	**Revenden**	**94.46 325**	P	**P**	**20 20 42.7 -0.9**
	baz=34				
S38A	**Stockton**	**94.55 327**	P	**P**	**20 20 42.5 -1.5**
	baz=32				
Z49A	**Columbiana**	**94.78 320**	P	**P**	**20 20 43.7 -1.5**
	baz=37				
252A	**Lumpkin**	**94.81 318**	P	**P**	**20 20 44.3 -1.0**
	baz=38				
T39A	**Clever**	**94.83 327**	P	**P**	**20 20 43.8 -1.5**
	baz=32				
LRAL	**Lakeview Retre**	**95.15 320**	P	**P**	**20 20 45.9 -0.9**
	baz=36				
T38A	**Diamond**	**95.21 327**	P	**P**	**20 20 45.6 -1.4**
	baz=32				
PDAR	**Pinedale Array**	**95.31 341**	P	**P**	**20 20 47.1 -0.6**
	comp=Z,0.5nm,0.6s,baz=52,slow=7.3,SNR=3.6				
149A	**Jones**	**95.39 320**	P	**P**	**20 20 46.7 -1.3**
	baz=37				
U39A	**Green Forest**	**95.42 327**	P	**P**	**20 20 46.5 -1.5**
	baz=32				
X44A	**Crenshaw**	**95.48 323**	P	**P**	**20 20 46.9 -1.4**
	baz=34				
Z47A	**Carrollton**	**95.55 321**	P	**P**	**20 20 47.6 -1.0**
	baz=36				
COR	**Corvallis**	**96.23 351**	P	**P**	**20 20 52.3 +0.8**
COR			pmax	pmax	
	comp=Z,132nm,2.5s				
NNA	**Nana**	**121.11 280**	PKIKP	**PKPdf**	**20 26 16.0 -0.6**
QSPA	**South Pole Qui**	**128.56 180**	PKP	**PKPdf**	**20 26 27.8 -1.6**
	comp=Z,2.8nm,0.7s,baz=299,slow=3.0,SNR=7.6				
PLCA	**Paso Flores**	**130.42 246**	PKIKP	**PKPdf**	**20 26 34.6 +0.9**

*IDC **24** 20:11:56.2±2.2,4°.21N×92°.63E, h0km, mb3.8/7, mb1 3.9/10, mb1mx3.6/79, mbtmp3.8/10, ML3.5/3, Error ellipse: s-maj=49.7km s-min=29.8km az=2.0*
*ISCJB **24** 20:11:58.4±1.0,4°.1N±0°.2×92°.70E±0°.08, h33km, mb4.0/8, Error ellipse: s-maj=23.9km s-min=8.4km az=18.8*
ISC 24 20:12:00.9±1.2,4°.2N±0°.2×92°.68E±0°.10, h35km, n14, σ0§87/12, mb3.7/8, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**6.38**	**102**	Pn	**Pn**	**20 13 32.9**	**+0.2**
	1.3nm,0.3s,baz=0.0,slow=9.1,SNR=3.2						
PSI				Sn	**Sn**	**20 14 43.7**	**-0.8**
	2.1nm,0.3s,baz=180,slow=20,SNR=4.5						
PALK	**Pallekele**	**12.30**	**285**	Pn	**Pn**	**20 14 52.7**	**-1.1**
	0.9nm,0.3s,baz=116,slow=14,SNR=8.3						
PALK				Sn	Sn	20 16 57.3	-13
	1.1nm,0.3s,baz=117,slow=4.7,SNR=5.9						
CMAR	**Chiang Mai Arr**	**15.45**	**23**	Pn	**Pn**	**20 15 35.0**	**-1.4**
	0.0nm,0.3s,baz=221,slow=14,SNR=7.1						
H08S3	**Diego Garcia H**	**23.32**	**240**	T	T	20 42 42.3	
	baz=62,slow=74						
H08S2	**Diego Garcia H**	**23.32**	**240**	T	T	20 42 24.6	
	baz=62,slow=74						
H08S1	**Diego Garcia H**	**23.33**	**240**	T	T	20 42 43.9	
	baz=62						
MKAR	**Makanchi Array**	**43.39**	**350**	P	**P**	**20 19 59.5**	**-0.6**
	0.6nm,0.7s,baz=175,slow=8.7,SNR=4.0						
SONM	**Songino Array**	**45.06**	**13**	P	**P**	**20 20 14.7**	**+1.1**
	0.7nm,0.7s,baz=195,slow=9.3,SNR=3.7						
GEYT	**Alibeck**	**46.06**	**321**	P	**P**	**20 20 22.4**	**+0.8**
	165nm,0.8s,baz=139,slow=7.0,SNR=4.5						
KURBB	**Kurchatov Arra**	**47.79**	**348**	P	**P**	**20 20 34.6**	**-0.1**
	0.7nm,0.6s,baz=171,slow=6.6,SNR=7.4						
ZALV	**Zalesovo Beam**	**50.03**	**354**	P	**P**	**20 20 52.2**	**+0.4**
	1.3nm,0.4s,baz=179,slow=7.6,SNR=5.6						
BRTR	**Keskin Array B**	**63.78**	**313**	P	**P**	**20 22 29.8**	**0.0**
	0.5nm,0.7s,baz=85,slow=5.1,SNR=3.5						
MLR	**Muntele Rosu**	**70.81**	**317**	P	**P**	**20 23 15.0**	**+0.7**
	0.3nm,0.7s,baz=80,slow=18,SNR=4.0						
GERES	**GERESS Array B**	**79.61**	**319**	P	**P**	**20 24 04.8**	**0.0**
	0.6nm,0.7s,baz=110,slow=4.6,SNR=4.9						

*IDC **24** 20:13:47.2±2.6,33°.34S×179°.90W, h0km, mb3.4/2, mb1 3.8/3, mb1mx3.6/50, mbtmp3.6/3, ML4.2/1, Error ellipse: s-maj=63.9km s-min=43.5km az=114.0*
*ISCJB **24** 20:14:02.8±1.3,34°.43S±0°.07×179°.9E±0°.2, h150km, mb3.2/2, Error ellipse: s-maj=27.5km s-min=8.8km az=11.2*
*WEL **24** 20:14:06.3±1.4,35°.S±24°.×18°.0E±2°.8, h237km±33km*
ISC 24 20:14:02.2±2.1,34°.4S±0°.1×179°.9W±0°.3, h150km, n24, σ1§18/33, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAZ	**Te Kaha**	**3.83**	**209**	P	**Pn**	**20 15 01.3**	**+1.0**
HAZ				S	**Sn**	**20 15 47.6**	**+2.3**
PUZ	**Puketiti**	**3.95**	**202**	P	**Pn**	**20 15 02.9**	**+1.1**
PUZ				S	**Sn**	**20 15 47.7**	**-0.4**
RUGZ	**Raukumara Rang**	**4.06**	**208**	P	**Pn**	**20 15 04.6**	**+1.4**
RUGZ				S	**Sn**	**20 15 51.2**	**+0.5**
TWGZ	**Tauwhareparae**	**4.13**	**204**	P	**Pn**	**20 15 05.6**	**+1.4**
TWGZ				S	**Sn**	**20 15 54.0**	**+1.5**
CNGZ	**Carnagh Statio**	**4.35**	**200**	P	**Pn**	**20 15 07.7**	**+0.8**
TKGZ	**Te Karaka**	**4.42**	**204**	P	**Pn**	**20 15 09.0**	**+1.1**
TKGZ				S	**Sn**	**20 15 58.3**	**-0.7**
MWZ	**Matawai**	**4.44**	**207**	P	**Pn**	**20 15 07.8**	**-0.4**
MWZ				S	**Sn**	**20 15 58.9**	**-0.7**
OPRZ	**Ohinepanea**	**4.47**	**219**	P	**Pn**	**20 15 09.9**	**+1.3**
URZ	**Urewera**	**4.54**	**211**	Pn	**Pn**	**20 15 09.3**	**-0.2**
	7.8nm,0.3s,baz=9.5,slow=6.1,SNR=55						
URZ				Sn	**Sn**	**20 15 59.3**	**-2.6**
	7.0nm,0.3s,baz=313,slow=19,SNR=4.4						
URZ	**Urewera**	**4.54**	**211**	P	**Pn**	**20 15 09.2**	**-0.2**
URZ				S	**Sn**	**20 15 59.6**	**-2.3**
RAGZ	**Rawiri**	**4.62**	**207**	P	**Pn**	**20 15 11.8**	**+1.1**
RIGZ	**Rimuhau**	**4.69**	**203**	P	**Pn**	**20 15 10.3**	**-1.1**
PRGZ	**Paritu Road**	**4.85**	**201**	P	**Pn**	**20 15 14.7**	**+1.1**
SNGZ	**Shannon Statio**	**4.90**	**206**	P	**Pn**	**20 15 14.6**	**+0.4**
SNGZ				S	**Sn**	**20 16 09.0**	**-1.5**
KNZ	**Kokohu**	**5.00**	**202**	P	**Pn**	**20 15 15.8**	**+0.2**
MHGZ	**Mahia Peninsul**	**5.05**	**200**	P	**Pn**	**20 15 16.2**	**-0.1**
RAHZ	**Arahi**	**5.11**	**207**	P	**Pn**	**20 15 17.4**	**+0.3**
MTHZ	**Maungataniwha**	**5.16**	**210**	P	**Pn**	**20 15 18.0**	**+0.4**
MRHZ	**Matea Rd**	**5.32**	**213**	P	**Pn**	**20 15 19.8**	**-0.1**
ARHZ	**Aropaoanui**	**5.45**	**206**	P	**Pn**	**20 15 21.4**	**-0.1**
MCHZ	**McNeill Hill**	**5.72**	**207**	P	**Pn**	**20 15 24.8**	**-0.3**
ASAR	**Alice Springs**	**41.48**	**272**	P	**P**	**20 21 35.1**	**+0.6**
	0.5nm,0.7s,baz=119,slow=8.0,SNR=4.3						
WRA	**Warramunga Arr**	**42.83**	**278**	P	**P**	**20 21 46.5**	**+1.0**
	0.2nm,0.3s,baz=114,slow=8.0,SNR=5.3						
FINES	**FINESS Array B**	**148.26**	**336**	PKPbc	**PKPab**	**20 33 31.3**	**-1.9**
	0.9nm,0.5s,baz=26,slow=3.5,SNR=15						

*MDD **24** 20:16:36.3±1.4,36°.59N×9°.73W, h50km±30km, mb3.8/3, Error ellipse: s-maj=12.9km s-min=12.1km az=53.0, PRXIMO*
*INMG **24** 20:16:36.8±1.3,36°.63N×9°.67W, h20km±4km, ML1.9, Error ellipse: s-maj=5.1km s-min=3.9km az=53.0*
*CSEM **24** 20:16:37.4±0.4,36°.74N×9°.61W, h30km, mb3.8, Error ellipse: s-maj=6.3km s-min=5.1km az=49.0*
*IGIL **24** 20:16:37.1,36°.63N×9°.66W, h21km, ML1.7*
ISC 24 20:16:33.2±2.4,36°.63N±0°.09×9°.72W±0°.07, h10km, n80, σ1§97/137, 5C-3D, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**0.87**	**55**	⇑*iP*	**Pg**	**20 16 52.1**	**+2.1**
PFVI				*e*S	**Sg**	**20 17 03.4**	**+2.0**
PFVI				A	A	20 17 03.8	
	13nm,0.1s						
PFVI	**Vila Bisbo**	**0.87**	**55**	⇑P	**Pg**	**20 16 52.1**	**+2.1**
	13nm,0.1s,SNR=18						
PFVI				S	**Sg**	**20 17 03.3**	**+2.0**
	27nm,0.1s,SNR=7.6						
PFVI	**Vila Bisbo**	**0.87**	**55**	P	**Pg**	**20 16 52.1**	**+2.1**
	13nm,0.1s,SNR=18						
PFVI				*e*S	**Sg**	**20 17 03.4**	**+2.0**
MORF	**Marmelete**	**1.09**	**51**	*e*P	**Pg**	**20 16 55.1**	**+1.0**
MORF				*e*S	**Sg**	**20 17 08.4**	**+0.2**
MORF				AML	AML	20 17 09.0	
	comp=N,19nm,0.1s						
MORF	**Marmelete**	**1.09**	**51**	*e*P	**Pg**	**20 16 55.1**	**+1.0**
MORF				*e*S	**Sg**	**20 17 08.6**	**+0.4**
MORF				A	A	20 17 10.5	
	comp=N,13nm,0.1s						
MORF	**Marmelete**	**1.09**	**51**	P	**Pg**	**20 16 55.1**	**+1.0**
MORF				S	**Sg**	**20 17 08.6**	**+0.4**
	comp=N,13nm,0.1s						
MORF	**Marmelete**	**1.09**	**51**	*e*P	**Pg**	**20 16 55.1**	**+1.0**
MORF				S	**Sg**	**20 17 08.6**	**+0.4**
	comp=N,13nm,0.1s						
PTEO	**Sao Teotonio**	**1.21**	**41**	*e*P	**Pb**	**20 16 57.0**	**+0.9**
PTEO				*e*S	**Sb**	**20 17 11.7**	**-0.1**
PTEO				A	A	20 17 13.6	
	comp=N,6.6nm,0.3s						
PTEO	**Sao Teotonio**	**1.21**	**41**	P	**Pb**	**20 16 57.0**	**+0.9**
PTEO				S	**Sb**	**20 17 11.7**	**-0.1**
	comp=N,3.3nm,0.3s						
PTEO	**Sao Teotonio**	**1.21**	**41**	*e*P	**Pb**	**20 16 57.0**	**+0.9**
PTEO				S	**Sb**	**20 17 11.7**	**-0.1**
	comp=N,3.3nm,0.3s						
PBDV	**Barranco-do-Ve**	**1.56**	**66**	⇑*iP*	**Pn**	**20 17 01.6**	**+0.7**
PBDV				*e*S	**Sn**	**20 17 19.6**	**-1.6**
PBDV				A	A	20 17 28.4	
	comp=N,3.1nm,0.6s						
PBDV	**Barranco-do-Ve**	**1.56**	**66**	P	**Pn**	**20 17 01.6**	**+0.7**
PBDV				S	**Sn**	**20 17 19.6**	**-1.6**
	comp=N,3.1nm,0.6s						
PBDV	**Barranco-do-Ve**	**1.56**	**66**	⇑*iP*	**Pn**	**20 17 01.6**	**+0.7**
PBDV				S	**Sn**	**20 17 19.6**	**-1.6**
	comp=N,3.1nm,0.6s						
PCVE	**Castro Verde**	**1.67**	**53**	*e*P	**Pn**	**20 17 03.4**	**+0.9**
PCVE				*e*S	**Sn**	**20 17 23.1**	**-0.9**
PCVE				A	A	20 17 24.5	
	comp=N,3.1nm,0.3s						
PCVE	**Castro Verde**	**1.67**	**53**	P	**Pn**	**20 17 03.4**	**+0.9**
PCVE				S	**Sn**	**20 17 23.1**	**-0.9**
	comp=N,3.1nm,0.3s						
PCVE	**Castro Verde**	**1.67**	**53**	*e*P	**Pn**	**20 17 03.4**	**+0.9**
PCVE				S	**Sn**	**20 17 23.1**	**-0.9**
	comp=N,3.1nm,0.3s						
MESJ	**Messejana**	**1.70**	**44**	*e*P	**Pn**	**20 17 03.5**	**+0.6**
MESJ				*e*S	**Sn**	**20 17 22.9**	**-1.8**
MESJ				AML	AML	20 17 23.8	
	comp=N,5.2nm,0.1s						
MESJ	**Messejana**	**1.70**	**44**	⇓*e*Pn	**Pn**	**20 17 03.5**	**+0.6**
MESJ				*e*Sn	**Sn**	**20 17 23.2**	**-1.4**
MESJ				A	A	20 17 24.8	
	comp=N,5.1nm,0.3s						
MESJ	**Messejana**	**1.70**	**44**	P	**Pn**	**20 17 03.5**	**+0.6**
MESJ				S	**Sn**	**20 17 23.2**	**-1.4**
	comp=N,5.1nm,0.3s						
MESJ	**Messejana**	**1.70**	**44**	P	**Pn**	**20 17 03.5**	**+0.6**
MESJ				S	**Sn**	**20 17 23.2**	**-1.4**
	comp=N,5.1nm,0.3s						
PNCL	**Nicolau / Gran**	**1.75**	**32**	⇓*e*Pn	**Pn**	**20 17 04.2**	**+0.6**
PNCL				*e*Sn	**Sn**	**20 17 24.5**	**-1.5**
PNCL				A	A	20 17 26.4	
	comp=N,5.4nm,0.3s						
PNCL	**Nicolau / Gran**	**1.75**	**32**	⇓*e*Pn	**Pn**	**20 17 04.2**	**+0.6**
PNCL				*e*Sn	**Sn**	**20 17 24.5**	**-1.5**
PVAQ	**Vaqueiros**	**1.78**	**64**	⇑*e*Pn	**Pn**	**20 17 04.5**	**+0.6**
PVAQ				*e*Sn	**Sn**	**20 17 24.8**	**-1.8**
PVAQ				A	A	20 17 26.1	
	comp=N,5.1nm,0.3s						
PVAQ	**Vaqueiros**	**1.78**	**64**	P	**Pn**	**20 17 04.5**	**+0.6**
PVAQ				S	**Sn**	**20 17 24.8**	**-1.8**
	comp=N,5.1nm,0.3s						
PVAQ	**Vaqueiros**	**1.78**	**64**	P	**Pn**	**20 17 04.5**	**+0.6**
PVAQ				S	**Sn**	**20 17 24.8**	**-1.8**
	comp=N,5.1nm,0.3s						
EGRO	**El Granado**	**2.00**	**63**	P	**Pn**	**20 17 07.5**	**+0.4**
	comp=N,1.1nm,0.1s,SNR=10						
EGRO				S	**Sn**	**20 17 30.6**	**-1.5**
	comp=N,5.5nm,0.2s,SNR=11						
EGRO	**El Granado**	**2.00**	**63**	P	**Pn**	**20 17 07.4**	**+0.4**
	comp=N,1.1nm,0.1s,SNR=10						
EGRO				S	**Sn**	**20 17 30.6**	**-1.5**
	comp=N,5.5nm,0.2s,SNR=11						
PBEJ	**Beja**	**2.03**	**46**	*e*Sn	**Sn**	**20 17 31.3**	**-1.5**
PBEJ				A	A	20 17 32.3	
	comp=N,3.4nm,0.1s						
PBEJ	**Beja**	**2.03**	**46**	S	**Sn**	**20 17 31.3**	**-1.5**
	comp=N,1.7nm,0.1s						
PBEJ	**Beja**	**2.03**	**46**	S	**Sn**	**20 17 31.3**	**-1.5**
	comp=N,1.7nm,0.1s						
PMST	**Lisbon--Monsan**	**2.14**	**11**	*e*Sn	**Sn**	**20 17 34.6**	**-1.0**
PMST	**Lisbon--Monsan**	**2.14**	**11**	*e*Sn	**Sn**	**20 17 34.6**	**-1.0**
EVO	**Evora**	**2.33**	**35**	*e*Pn	**Pn**	**20 17 12.0**	**+0.4**
EVO				*e*Sn	**Sn**	**20 17 38.2**	**-2.1**
EVO				A	A	20 17 39.3	
	comp=N,9.4nm,0.1s						
EVO	**Evora**	**2.33**	**35**	P	**Pn**	**20 17 12.0**	**+0.4**
EVO				Sn	**Sn**	**20 17 38.2**	**-2.1**
	comp=N,9.4nm,0.1s						
EVO	**Evora**	**2.33**	**35**	P	**Pn**	**20 17 12.0**	**+0.4**
EVO				Sn	**Sn**	**20 17 38.2**	**-2.1**
	comp=N,9.4nm,0.1s						
PMAFR	**Mafra**	**2.34**	**8**	*e*Pn	**Pn**	**20 17 12.1**	**+0.3**
PMAFR				*e*Sn	**Sn**	**20 17 39.3**	**-1.3**
PMAFR				A	A	20 17 41.5	
	comp=N,16nm,0.8s						
PMAFR	**Mafra**	**2.34**	**8**	P	**Pn**	**20 17 12.1**	**+0.3**
	comp=N,4.5nm,0.1s,SNR=5.7						
PMAFR				S	**Sn**	**20 17 39.1**	**-1.6**
	comp=N,14nm,0.1s						
PMAFR	**Mafra**	**2.34**	**8**	P	**Pn**	**20 17 12.1**	**+0.3**
	comp=N,4.5nm,0.1s,SNR=5.7						
PMAFR				S	**Sn**	**20 17 39.1**	**-1.6**
	comp=N,14nm,0.1s						
PBAR	**Barrancos**	**2.63**	**53**	*e*Pn	**Pn**	**20 17 16.0**	**+0.3**
PBAR				*e*Sn	**Sn**	**20 17 45.5**	**-2.2**
PBAR				A	A	20 17 47.3	
	comp=N,3.8nm,0.2s						
PBAR	**Barrancos**	**2.63**	**53**	P	**Pn**	**20 17 16.0**	**+0.3**
PBAR				S	**Sn**	**20 17 45.5**	**-2.2**
	comp=N,3.8nm,0.2s						
PBAR	**Barrancos**	**2.63**	**53**	P	**Pn**	**20 17 16.0**	**+0.3**
PBAR				S	**Sn**	**20 17 45.5**	**-2.2**
	comp=N,3.8nm,0.2s						
ALMR	**Almeirim**	**2.68**	**19**	*e*Sn	**Sn**	**20 17 46.7**	**-2.1**
ALMR	**Almeirim**	**2.68**	**19**	S	**Sn**	**20 17 46.7**	**-2.1**
ALMR	**Almeirim**	**2.68**	**19**	S	**Sn**	**20 17 46.7**	**-2.1**
EMIN	**Mina Concepcio**	**2.68**	**64**	P	**Pn**	**20 17 16.3**	**-0.1**
	comp=N,0.4nm,0.2s,SNR=7.9						
EMIN				S	**Sn**	**20 17 46.6**	**-2.4**
	comp=N,0.5nm,0.1s,SNR=9.2						
EMIN	**Mina Concepcio**	**2.68**	**64**	P	**Pn**	**20 17 16.3**	**-0.1**
	comp=N,0.4nm,0.2s,SNR=7.9						
EMIN				S	**Sn**	**20 17 46.6**	**-2.4**
	comp=N,0.5nm,0.1s,SNR=9.2						
PMTG	**Montargil**	**2.71**	**25**	*e*Pn	**Pn**	**20 17 17.4**	**+0.7**
PMTG				*e*Sn	**Sn**	**20 17 47.3**	**-2.2**
PMTG				A	A	20 17 49.2	
	comp=N,3.1nm,0.1s						
PMTG	**Montargil**	**2.71**	**25**	*e*Pn	**Pn**	**20 17 17.4**	**+0.7**
PMTG				*e*Sn	**Sn**	**20 17 47.3**	**-2.2**
PESTR	**Estremoz**	**2.80**	**36**	*e*Pn	**Pn**	**20 17 18.2**	**+0.2**
PESTR				*e*Sn	**Sn**	**20 17 49.8**	**-2.0**
PESTR				A	A	20 17 52.0	
	comp=N,1.3nm,0.3s						
PESTR	**Estremoz**	**2.80**	**36**	*e*Pn	**Pn**	**20 17 18.2**	**+0.2**
PESTR				*e*Sn	**Sn**	**20 17 49.8**	**-2.0**
EBAD	**Badajoz**	**3.02**	**45**	P	**Pn**	**20 17 21.0**	**0.0**
	comp=N,0.2nm,0.1s,SNR=4.6						
EBAD				S	**Sn**	**20 17 54.5**	**-2.7**
	comp=N,1.7nm,0.1s,SNR=8.4						
EBAD	**Badajoz**	**3.02**	**45**	P	**Pn**	**20 17 21.0**	**0.0**
	comp=N,0.2nm,0.1s,SNR=4.6						
EBAD				S	**Sn**	**20 17 54.5**	**-2.7**
	comp=N,1.7nm,0.1s,SNR=8.4						
PMRV	**Marv??o**	**3.34**	**33**	*e*Pn	**Pn**	**20 17 25.9**	**+0.4**
PMRV				*e*Sn	**Sn**	**20 18 01.9**	**-3.3**
PMRV				A	A	20 18 04.0	
	comp=N,6.2nm,0.2s						
PMRV	**Marv??o**	**3.34**	**33**	P	**Pn**	**20 17 25.9**	**+0.4**
PMRV				S	**Sn**	**20 18 01.9**	**-3.3**
	comp=N,6.2nm,0.2s						
PMRV	**Marv??o**	**3.34**	**33**	P	**Pn**	**20 17 25.9**	**+0.4**
PMRV				S	**Sn**	**20 18 01.9**	**-3.3**
	comp=N,6.2nm,0.2s						
PCAS	**Casmilo, Conde**	**3.55**	**15**	*e*Sn	**Sn**	**20 18 08.4**	**-1.9**
PCAS				A	A	20 18 14.6	
	comp=N,2.8nm,0.5s						
PCAS	**Casmilo, Conde**	**3.55**	**15**	*e*Sn	**Sn**	**20 18 08.4**	**-1.9**
PCBR	**Castelo Branco**	**3.66**	**28**	*e*Sn	**Sn**	**20 18 11.0**	**-2.0**
PCBR	**Castelo Branco**	**3.66**	**28**	S	**Sn**	**20 18 11.0**	**-2.0**
PCBR	**Castelo Branco**	**3.66**	**28**	S	**Sn**	**20 18 11.0**	**-2.0**
ECAB	**El Cabril**	**3.72**	**66**	P	**Pn**	**20 17 31.0**	**+0.4**
	comp=N,0.2nm,0.1s,SNR=7.9						
ECAB				S	**Sn**	**20 18 10.8**	**-3.7**
	comp=N,1.1nm,0.2s,SNR=6.2						
ECAB	**El Cabril**	**3.72**	**66**	P	**Pn**	**20 17 31.0**	**+0.4**
	comp=N,0.2nm,0.1s,SNR=7.9						
ECAB				S	**Sn**	**20 18 10.8**	**-3.7**
	comp=N,1.1nm,0.2s,SNR=6.2						
EADA	**Adamuz**	**4.37**	**68**	P	**Pn**	**20 17 39.2**	**-0.4**
	comp=N,0.2nm,0.2s,SNR=7.9						
EADA				S	**Sn**	**20 18 26.1**	**-4.5**
	comp=N,0.8nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**4.37**	**68**	P	**Pn**	**20 17 39.2**	**-0.4**
	comp=N,0.2nm,0.2s,SNR=7.9						
EADA				S	**Sn**	**20 18 26.1**	**-4.5**
	comp=N,0.8nm,0.1s,SNR=7.9						
EPLA	**Plasencia**	**4.46**	**39**	S	**Sn**	**20 18 29.8**	**-3.1**
	comp=N,0.9nm,0.1s,SNR=7.9						
EPLA	**Plasencia**	**4.46**	**39**	S	**Sn**	**20 18 29.8**	**-3.1**
	comp=N,0.9nm,0.1s,SNR=7.9						
POLO	**Lamas de Olo**	**4.97**	**17**	*e*Pn	**Pn**	**20 17 48.0**	**+0.1**
POLO				*e*Sn	**Sn**	**20 18 41.9**	**-3.5**
POLO				A	A	20 18 44.3	
	comp=N,0.8nm,0.5s						
POLO	**Lamas de Olo**	**4.97**	**17**	*e*Pn	**Pn**	**20 17 48.0**	**+0.1**
POLO				*e*Sn	**Sn**	**20 18 41.9**	**-3.5**
MVO	**Moncorvo**	**4.99**	**24**	S	**Sn**	**20 18 42.5**	**-3.4**
	comp=N,0.4nm,0.1s,SNR=4.0						
MVO	**Moncorvo**	**4.99**	**24**	S	**Sn**	**20 18 42.5**	**-3.4**
	comp=N,0.4nm,0.1s,SNR=4.0						
PAB	**San Pablo**	**5.14**	**54**	P	**Pn**	**20 17 50.3**	**+0.1**
	comp=N,0.2nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**20 18 44.9**	**-4.7**
	comp=N,0.2nm,0.1s,SNR=7.9						
PAB	**San Pablo**	**5.14**	**54**	P	**Pn**	**20 17 50.3**	**+0.1**
	comp=N,0.2nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**20 18 44.9**	**-4.7**
	comp=N,0.2nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.38**	**13**	P	**Pn**	**20 17 53.4**	**-0.2**
	comp=N,0.5nm,0.2s,SNR=7.9						
ELOB				S	**Sn**	**20 18 50.9**	**-4.8**
	comp=N,0.6nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.38**	**13**	P	**Pn**	**20 17 53.4**	**-0.2**
	comp=N,0.5nm,0.2s,SNR=7.9						
ELOB				S	**Sn**	**20 18 50.9**	**-4.8**
	comp=N,0.6nm,0.1s,SNR=7.9						
EQES	**Quesada**	**5.43**	**76**	S	**Sn**	**20 18 53.2**	**-3.7**
	comp=N,0.7nm,0.2s,SNR=7.9						
EQES	**Quesada**	**5.43**	**76**	S	**Sn**	**20 18 53.2**	**-3.7**
	comp=N,0.7nm,0.2s,SNR=7.9						
PGAV	**Gavieira, Arco**	**5.44**	**11**	*e*Sn	**Sn**	**20 18 53.2**	**-4.0**
PGAV				A	A	20 18 56.6	
	comp=N,2.1nm,0.5s						
PGAV	**Gavieira, Arco**	**5.44**	**11**	*e*Sn	**Sn**	**20 18 53.2**	**-4.0**
ESDC	**Sonseca Array**	**5.46**	**54**	P	**Pn**	**20 17 54.8**	**+0.2**
	comp=N,0.7nm,0.1s,baz=240,slow=13,SNR=5.2						
ESDC	**Sonseca Array**	**5.46**	**54**	P	**Pn**	**20 17 54.8**	**+0.2**
	comp=N,0.7nm,0.1s,SNR=5.2						

IDC 24 20:31:44.1±3.1,32°.70S×178°.41W, h0km, mb3.6/2, mb1 3.8/3, mb1mx3.6/41, mbtmp3.6/3, ML3.3/1, MS2.6/1, Ms1 2.6/1, ms1mx2.3/32, Error ellipse: s-maj=71.5km s-min=36.4km az=114.0, South of Kermadec Islands

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

CMLA Cha da Macela 4.47 138 P **Pn** **20 42 04.2 -0.2**
CMLA *e* 20 42 57.1
CMLA Cha da Macela 4.47 138 *e*P **Pn** **20 42 03.9 -0.5**
CMLA Cha da Macela 4.47 138 Pn **Pn** **20 42 04.2 -0.2**
CMLA *e*S **Sn** **20 42 56.1 -0.4**
CMLA *e*Sn **Sn** **20 42 57.1 +0.6**
BART Pico Bartolome 4.65 135 *e*P **Pn** **20 42 06.3 -0.6**
BART *e*S **Sn** **20 43 00.1 -0.8**
BART A A 20 43 04.5
32nm,0.4s
BART Pico Bartolome 4.65 135 *e*P **Pn** **20 42 06.3 -0.6**
BART *e*S **Sn** **20 43 00.1 -0.8**
PSMA Santa Maria 5.27 141 *e*P **Pn** **20 42 15.2 -0.2**
PSMA *e*S **Sn** **20 43 13.9 -2.3**
PSMA A A 20 43 17.9
14nm,0.1s
PSMN Pico do Norte, 5.30 140 *e*P **Pn** **20 42 15.8 +0.1**
PSMN *e*S **Sn** **20 43 15.0 -1.8**
PSMN A A 20 43 17.8
11nm,0.3s
PSMN Pico do Norte, 5.30 140 *e*P **Pn** **20 42 15.8 +0.1**
PSMN *e*S **Sn** **20 43 15.0 -1.8**
PMAR Madeira 12.99 126 *e*P **Pn** **20 44 03.5 +2.2**
123nm,2.0s
PMAR Madeira 12.99 126 *e*P **Pn** **20 44 03.5 +2.2**
FUL Funchal 13.05 127 *e*P **Pn** **20 44 04.2 +2.2**
111nm,1.4s
FUL Funchal 13.05 127 *e*P **Pn** **20 44 04.2 +2.2**
PGAV Gavieira, Arco 15.76 80 *e*P **Pn** **20 44 38.9 +0.4**
44nm,1.5s
PGAV Gavieira, Arco 15.76 80 *e*P **Pn** **20 44 38.9 +0.4**
PCAS Casmilo, Conde 15.83 87 *e*P **Pn** **20 44 40.6 +1.2**
63nm,1.9s
PCAS Casmilo, Conde 15.83 87 *e*P **Pn** **20 44 40.6 +1.2**
POLO Lamas de Olo 16.16 82 *e*P **Pn** **20 44 44.1 +0.3**
20nm,1.5s
POLO Lamas de Olo 16.16 82 *e*P **Pn** **20 44 44.1 +0.3**
PMTG Montargil 16.25 90 *e*P **Pn** **20 44 45.9 +1.1**
26nm,1.5s
PMTG Montargil 16.25 90 *e*P **Pn** **20 44 45.9 +1.1**
MORF Marmelete 16.44 97 *e*P **P** **20 44 49.9 -0.2**
47nm,2.3s
MORF Marmelete 16.44 97 *e*P **P** **20 44 49.9 -0.2**
MTE Manteigas 16.49 85 *e*P **Pn** **20 44 49.1 +1.2**
43nm,1.4s
MTE Manteigas 16.49 85 *e*P **Pn** **20 44 49.1 +1.2**
EVO Evora 16.55 92 *e*P **Pn** **20 44 49.2 +0.6**
40nm,1.6s
EVO Evora 16.55 92 *e*P **Pn** **20 44 49.2 +0.6**
MESJ Messejana 16.59 95 *e*P **Pn** **20 44 50.2 +1.0**
45nm,1.8s
MESJ Messejana 16.59 95 *e*P **Pn** **20 44 50.2 +1.0**
MVO Moncorvo 16.76 83 *e*P **P** **20 44 53.0 -0.6**
53nm,1.7s
MVO Moncorvo 16.76 83 *e*P **P** **20 44 53.0 -0.6**
PMRV Marv??o 16.80 89 *e*P **Pn** **20 44 51.9 +0.1**
44nm,1.6s
PMRV Marv??o 16.80 89 *e*P **Pn** **20 44 51.9 +0.1**
PCVE Castro Verde 16.80 95 *e*P **Pn** **20 44 51.7 -0.1**
49nm,2.1s
PCVE Castro Verde 16.80 95 *e*P **Pn** **20 44 51.7 -0.1**
PBRG Braganca 16.91 80 *e*P **Pn** **20 44 50.1 -3.1**
25nm,1.7s
PBRG Braganca 16.91 80 *e*P **Pn** **20 44 50.1 -3.1**
PVAQ Vaqueiros 17.11 96 *e*P **Pn** **20 44 49.3 -6.4**
28nm,1.7s
PVAQ Vaqueiros 17.11 96 *e*P **Pn** **20 44 49.3 -6.4**
PBAR Barrancos 17.38 93 *e*P **Pn** **20 44 54.9 -4.2**
61nm,1.5s
PBAR Barrancos 17.38 93 *e*P **Pn** **20 44 54.9 -4.2**
PAB San Pablo 19.07 87 P **P** **20 45 18.9 -0.1**
PAB San Pablo 19.07 87 P **P** **20 45 18.9 -0.1**
PAB San Pablo 19.07 87 P **P** **20 45 18.9 -0.1**
ESDC Sonseca Array 19.33 86 P **Pn** **20 45 23.1 +0.2**
0.3nm,0.3s,baz=289,slow=12,SNR=8.9
MDT Midelt 21.35 105 P **P** **20 45 46.0 +2.1**
5.2nm,0.8s,baz=306,slow=11,SNR=6.3
GRR Gorron 21.35 61 *e*P **P** **20 45 49.6 +5.9**
GRR pmax pmax
comp=Z,137nm,2.1s
ETSF Etsaut 21.37 76 *e*P **P** **20 45 45.3 +1.2**
ETSF pmax pmax
comp=Z,80nm,1.6s
FLN La Foliniere 21.66 60 *e*P **P** **20 45 50.7 +3.7**
FLN pmax pmax
comp=Z,57nm,1.7s
LFF La Frestale 22.20 70 *e*P **P** **20 45 55.8 +2.9**
LFF pmax pmax
comp=Z,87nm,1.9s
EKA Eskdalemuir Ar 22.27 42 P **P** **20 45 53.3 -0.2**
comp=Z,1.7nm,0.7s,baz=237,slow=8.4,SNR=6.0
CAF Calviac 23.14 70 *e*P **P** **20 46 02.5 -0.4**
CAF pmax pmax
comp=Z,30nm,1.5s
TCF Toulx Ste Croi 23.24 67 *e*P **P** **20 46 05.1 +1.2**
TCF pmax pmax
comp=Z,75nm,1.7s
BGF Bois d'Agland 23.69 66 *e*P **P** **20 46 08.0 -0.3**
BGF pmax pmax
comp=Z,21nm,0.8s
AVF Avril sur Loir 24.04 65 *e*P **P** **20 46 13.7 +2.1**
AVF pmax pmax
comp=Z,41nm,1.9s
SSF Saint Saulge 24.16 65 *e*P **P** **20 46 11.8 -0.9**
SSF pmax pmax
comp=Z,93nm,2.1s
VIVF Saint-Julien-l 25.00 70 *e*P **P** **20 46 21.7 +1.3**
VIVF pmax pmax
comp=Z,27nm,1.6s
ORIF Oris-en-Rattie 25.85 70 *e*P **P** **20 46 32.0 +3.8**
ORIF pmax pmax
comp=Z,42nm,1.8s
CABF La Chapelle 25.92 66 *e*P **P** **20 46 29.7 +0.9**
CABF pmax pmax
comp=Z,49nm,1.6s
HAU Haudompre 26.11 63 *e*P **P** **20 46 30.0 -0.5**
HAU pmax pmax
comp=Z,51nm,1.9s
BNI Bardonecchia 26.41 69 P **P** **20 46 37.2 +3.9**
BNI pmax pmax
comp=Z,17nm,1.9s
LPG La Plagne 26.43 68 *e*P **P** **20 46 36.3 +2.7**
LPG pmax pmax
comp=Z,9.0nm,1.2s
MBDF Montbardon 26.50 70 *e*P **P** **20 46 36.9 +2.8**
MBDF pmax pmax
comp=Z,11nm,1.4s
FRF La Foret Royal 26.54 73 *e*P **P** **20 46 41.0 +6.7**
FRF pmax pmax
comp=Z,52nm,1.7s
ECH Echery 26.66 62 P **P** **20 46 36.6 +1.2**
ECH pmax pmax
comp=Z,10.0nm,1.4s
CDF Champ du Feu 26.75 62 *e*P **P** **20 46 36.5 +0.2**
CDF pmax pmax
comp=Z,16nm,1.3s
FETA Feichten 29.10 65 *e*P **P** **20 46 57.9 +0.5**
comp=Z,5.8nm,1.7s
MOTA Moosalm 29.33 64 *e*P **P** **20 46 59.2 -0.2**
comp=Z,5.9nm,1.3s
WATA Walderalm 29.66 64 P **P** **20 47 02.0 -0.3**
comp=Z,0.2nm,0.4s
WTTA Wattenberg 29.70 64 *e*P **P** **20 47 02.3 -0.4**
comp=Z,9.4nm,1.7s
KONO Kongsberg 30.31 39 *i*P **P** **20 47 08.7 +1.0**
KONO pmax pmax
comp=Z,5.0nm,1.0s
ABTA Abfaltersbach 30.34 65 *e*P **P** **20 47 08.3 +0.1**
comp=Z,16nm,1.6s
WET Wettzell 30.46 60 P **P** **20 47 09.9 +0.7**
WET pmax pmax
comp=Z,6.0nm,1.7s
KEST Kesra 30.56 87 P **P** **20 47 09.8 -0.6**
comp=Z,1.1nm,0.5s,baz=274,slow=5.6,SNR=5.1
CLL Collm 30.57 56 *i*P **P** **20 47 09.9 -0.2**
comp=Z,15nm,1.7s
CLL Lm MLR 20 59 00.0
comp=Z,600nm,19.4s
CLL Collm 30.57 56 *i*P **P** **20 47 09.9 -0.2**
CLL pmax pmax
comp=Z,15nm,1.7s
CLL MLR MLR
comp=Z,600nm,19.4s
KBA Koelnbreinsper 30.88 64 *e*P **P** **20 47 13.2 +0.1**
comp=Z,30nm,1.5s
KBA Koelnbreinsper 30.88 64 P **P** **20 47 13.5 +0.4**
KBA pmax pmax
comp=Z,21nm,1.4s
KHC Kasperske Hory 30.92 60 P **P** **20 47 14.1 +0.8**
KHC pmax pmax
comp=Z,3.0nm,1.5s
GERES GERESS Array B 31.01 61 P **P** **20 47 13.4 -0.8**
comp=Z,0.6nm,0.9s,baz=254,slow=6.0,SNR=4.2
BRG Berggiesshubel 31.15 57 *e*P P 20 47 05.6 -10
comp=Z,3.1nm,0.9s
BRG Berggiesshubel 31.15 57 *e*P P 20 47 05.6 -10
BRG pmax pmax
comp=Z,3.0nm,0.9s
MOA Molln 31.44 63 *e*P **P** **20 47 17.5 -0.4**
comp=Z,9.6nm,1.5s
PRU Pruhonice 31.53 59 P **P** **20 47 19.9 +1.3**
PRU pmax pmax
comp=Z,3.0nm,1.8s
OBKA Obir 31.75 65 *e*P **P** **20 47 20.5 -0.3**
comp=Z,8.4nm,0.8s
SOKA Soboth 32.07 65 *e*P **P** **20 47 22.3 -1.2**
comp=Z,7.4nm,1.4s
ARSA Arzberg 32.34 64 *e*P **P** **20 47 24.5 -1.3**
comp=Z,7.4nm,1.3s
OJC Ojcow 34.90 58 P **P** **20 47 49.5 +1.5**
OJC pmax pmax
comp=Z,7.0nm,1.7s
NIE Niedzica 35.29 59 P **P** **20 47 53.7 +2.2**
NIE pmax pmax
comp=Z,3.0nm,1.7s
BZS Buzias 36.75 66 P **P** **20 48 04.3 +0.3**
BZS pmax pmax
comp=Z,5.0nm,1.2s
FINES FINESS Array B 38.63 39 P **P** **20 48 17.1 -2.5**
comp=Z,1.8nm,0.7s,baz=291,slow=12,SNR=4.0
TORD Torodi Ar. Bea 38.86 127 P **P** **20 48 22.7 +0.7**
comp=Z,8.4nm,1.2s,baz=319,slow=8.4,SNR=9.1
ARCES ARCESS Array B 39.92 27 P **P** **20 48 27.9 -2.4**
comp=Z,1.8nm,0.8s,baz=249,slow=6.4,SNR=5.5
ARCES ARCESS Array B 39.92 27 P **P** **20 48 28.0 -2.4**
DBIC Dimbokro 40.67 141 P **P** **20 48 39.4 +2.3**
comp=Z,7.2nm,0.9s,baz=324,slow=8.9,SNR=4.6
KIEV Kiev 40.81 56 *i*P **P** **20 48 35.5 -2.4**
KIEV pmax pmax
comp=Z,2.0nm,1.0s
AKASG Malin Array Be 40.82 56 P **P** **20 48 36.8 -1.2**
comp=Z,2.0nm,0.7s,baz=275,slow=9.0,SNR=8.6
JOF Joensuu 41.18 37 P **P** **20 48 42.0 +1.2**
RES Resolute Bay 44.36 340 P **P** **20 49 07.2 +0.8**
comp=Z,3.9nm,0.9s,baz=90,slow=6.5,SNR=5.8
OBN Obninsk 44.43 48 *c*e**P** **P** **20 49 06.2 -1.0**
OBN *e* 20 50 51.2
OBN *e*S **S** **20 55 42.6 +0.9**
OBN *e*SS SS 20 58 45.7 -15
OBN pmax pmax
comp=Z,61nm,1.7s
VSR Storozhevoye 46.83 53 *e*P **P** **20 49 24.6 -1.7**
VSR pmax pmax
comp=Z,10.0nm,1.4s
BRTR Keskin Array B 46.97 70 P **P** **20 49 27.9 +0.2**
comp=Z,1.3nm,0.8s,baz=284,slow=6.0,SNR=9.2
BRTR Keskin Array B 46.97 70 P **P** **20 49 28.0 +0.2**
VORD Divnogorie 46.98 54 *e*P **P** **20 49 24.9 -2.5**
VORD pmax pmax
comp=Z,10.0nm,1.3s
ANN Anapa 47.71 62 *e*P **P** **20 49 29.9 -3.3**
ANN *e* 20 51 18.0
ANN *e*S **S** **20 56 29.0 -0.2**
ANN pmax pmax
comp=Z,52nm,1.6s
ANN MLR MLR
comp=Z,403nm,18.0s
FFC Flin Flon 48.36 312 P **P** **20 49 37.8 -0.3**
FFC Flin Flon 48.36 312 P **P** **20 49 37.8 -0.3**
ECSD EROS Data Cent 48.49 297 *e*P **P** **20 49 40.1 +0.7**
comp=Z,0.9nm,0.7s
SDV Santo Domingo 48.64 240 LR LR 21 10 05.2
comp=Z,113nm,18.1s,baz=22,slow=36
MMAI Mount Meron Ar 51.19 77 P **P** **20 50 01.6 +1.5**
comp=Z,0.2nm,0.3s,baz=269,slow=8.6,SNR=4.1
KIV Kislovodsk 51.52 61 *e*P **P** **20 50 03.1 +0.7**
KIV pmax pmax
comp=Z,4.0nm,1.1s
KBZ Khabaz 51.75 62 P **P** **20 50 04.6 +0.6**
comp=Z,2.8nm,0.9s,baz=272,slow=7.9,SNR=10.0
ZEI Tsey 52.81 62 *e*P **P** **20 50 11.6 -0.5**
ZEI pmax pmax
comp=Z,6.0nm,0.3s
GROC Groznyy 53.89 61 *e*P **P** **20 50 22.9 +3.1**
GROC *e* 20 51 26.1
GROC *e* 20 52 19.5
GROC pmax pmax
comp=Z,28nm,1.4s
GNI Garni 54.53 65 LR LR 21 17 22.5
comp=Z,132nm,18.4s,baz=312,slow=40
AMTX Amarillo 55.87 289 *e*P **P** **20 50 35.5 +1.1**
ARU Arti 55.88 42 P **P** **20 50 33.2 -0.8**
comp=Z,5.5nm,0.7s,baz=279,slow=6.0,SNR=21
ARU Arti 55.88 42 *d i*P **P** **20 50 33.1 -0.9**
ARU 20 51 30.6
ARU 20 52 40.1
ARU S **S** **20 58 22.6 +1.3**
ARU 21 00 15.1
ARU SS **SS** **21 02 07.7 +1.4**
ARU pmax pmax
comp=Z,42nm,1.7s
ARU MLR MLR
comp=Z,315nm,17.0s
SVE Sverdlovsk 56.75 41 ǁ *e*P **P** **20 50 40.0 -0.2**
SVE pmax pmax
comp=Z,32nm,1.6s
WALA Waterton Lakes 57.29 309 *e*P **P** **20 50 40.6 -3.7**
PDAR Pinedale Array 57.48 301 P **P** **20 50 47.7 +1.8**
comp=Z,0.4nm,0.7s,baz=35,slow=8.0,SNR=3.7
AKTO Aktyubinsk 58.21 49 P **P** **20 50 50.5 -0.2**
comp=Z,4.6nm,0.8s,baz=299,slow=7.9,SNR=14
NEW Newport 59.54 309 P **P** **20 51 00.3 +0.3**
comp=Z,4.1nm,0.8s,baz=70,slow=7.4,SNR=6.9
TXAR Lajitas Array 60.19 284 P **P** **20 51 04.7 -0.1**
comp=Z,0.6nm,0.7s,baz=67,slow=6.9,SNR=8.6
TXAR LR LR 21 17 59.4
comp=Z,122nm,19.1s,baz=0.0,slow=37
NRIK Noril'sk 60.53 21 P **P** **20 51 07.3 +0.9**
comp=Z,1.7nm,0.4s,baz=302,slow=6.2,SNR=7.3
DAWY Dawson 61.65 332 *e*P **P** **20 51 12.4 -1.8**
ELK Elko 62.17 301 P **P** **20 51 20.1 +1.8**
comp=Z,0.3nm,0.3s,baz=130,slow=5.5,SNR=6.5
BRVK Borovoye 63.45 42 *e*P **P** **20 51 25.3 -0.9**
BRVK Borovoye 63.45 42 *c*e**P** **P** **20 51 26.5 +0.3**
BRVK pmax pmax
comp=Z,24nm,1.6s
BVAR Borovoye Array 63.52 42 P **P** **20 51 26.5 -0.2**
comp=Z,2.7nm,0.8s,baz=300,slow=4.5,SNR=21
BVAR LR LR 21 19 07.3
comp=Z,182nm,19.6s,baz=304,slow=36
ILAR Eielson Array 63.73 335 P **P** **20 51 26.9 -1.1**
comp=Z,0.3nm,0.7s,baz=41,slow=8.4,SNR=4.9
ILAR LR LR 21 17 11.6
comp=Z,164nm,18.8s,baz=58,slow=34
GEYT Alibeck 64.64 61 P **P** **20 51 34.5 +0.2**
comp=Z,25nm,0.6s,baz=302,slow=8.5,SNR=7.7
TIXI Tiksi 66.42 7 *i*P **P** **20 51 45.2 -0.1**
TIXI pmax pmax
comp=Z,4.0nm,1.1s
LPAZ La Paz 67.54 221 P **P** **20 51 56.4 +2.6**
comp=Z,1.8nm,1.0s,baz=24,slow=8.3,SNR=8.8
NVS Novosibirsk 68.43 35 *e*P **P** **20 51 58.6 +0.3**
NVS pmax pmax
comp=N,7.0nm,1.8s
NVS pmax pmax
comp=E,7.0nm,1.8s
NVS pmax pmax
comp=Z,32nm,1.8s
KURK Kurchatov 68.99 40 P **P** **20 52 01.2 -0.5**
KURK Kurchatov 68.99 40 *c*e**P** **P** **20 52 01.1 -0.7**
KURK pmax pmax
comp=Z,3.0nm,0.8s
KURBB Kurchatov Arra 69.00 41 P **P** **20 52 01.2 -0.6**
comp=Z,3.3nm,0.9s,baz=314,slow=6.5,SNR=26
ATD Arta Tunnel 69.07 93 LR LR 21 23 21.6
comp=Z,156nm,20.1s,baz=335,slow=37
ZALV Zalesovo Beam 69.72 35 P **P** **20 52 06.0 -0.2**
comp=Z,1.2nm,0.7s,baz=298,slow=6.2,SNR=7.1
BILL Bilibino 70.49 354 ǁ *e*P **P** **20 52 09.6 -1.2**
BILL *e* 20 54 42.4
BILL pmax pmax
comp=Z,9.0nm,1.9s
BILL MLR MLR
comp=Z,256nm,18.0s
MKAR Makanchi Array 73.40 42 P **P** **20 52 28.0 -0.7**
comp=Z,2.2nm,0.8s,baz=312,slow=4.4,SNR=18
MKAR Makanchi Array 73.40 42 P **P** **20 52 28.0 -0.7**
DGZ Jazzator, Alta 73.84 37 *i*P **P** **20 52 31.2 -0.2**
DGZ pmax pmax
comp=Z,7.0nm,1.5s
SEY Seymchan 76.24 359 *c*e**P** **P** **20 52 44.4 -0.3**
BOD Bodaibo 76.70 19 *e*P **P** **20 52 46.0 -1.4**
BOD pmax pmax
comp=Z,20nm,1.7s
KNGR Kungurtug, Tuv 77.46 32 *i*P **P** **20 52 52.1 +0.1**
MOY Mondy 77.94 29 *e*P **P** **20 52 55.1 +0.5**
MOY pmax pmax
comp=Z,34nm,1.9s
ZAK Zakamensk 79.82 29 *e*P **P** **20 53 03.7 -1.3**
ZAK pmax pmax
comp=Z,5.0nm,1.7s
SONM Songino Array 83.08 28 P **P** **20 53 21.3 -1.0**
comp=Z,1.4nm,0.9s,baz=335,slow=6.7,SNR=7.5
SONM LR LR 21 32 19.2
comp=Z,94nm,19.1s,baz=301,slow=37
ULN Ulaanbaatar 83.28 28 P **P** **20 53 22.8 -0.7**
ULN Ulaanbaatar 83.28 28 *c*e**P** **P** **20 53 21.9 -1.5**
ULN pmax pmax
comp=Z,12nm,1.7s
ZEA Zeya 83.34 14 *e*P **P** **20 53 24.2 +0.8**
BOSA Boshof 85.83 134 LR LR 21 31 24.5
comp=Z,278nm,19.8s,baz=337,slow=35
HIA Hailar 85.91 20 *i*P **P** **20 53 36.5 0.0**
HIA pmax pmax
comp=Z,12nm,0.8s
PALK Pallekele 100.00 71 *c*e**P** **Pdif** **20 54 40.3 -2.0**
PALK Pallekele 100.00 71 *e*P **Pdif** **20 54 40.3 -2.0**
QSPA South Pole Qui 131.05 180 PKP **PKPdf** **21 00 08.9 +1.5**
comp=Z,1.6nm,0.8s,baz=170,slow=6.1,SNR=3.1
ASAR Alice Springs 157.58 44 PKPab **PKPab** **21 01 25.0 -0.2**
comp=Z,1.2nm,0.9s,baz=335,slow=4.1,SNR=4.7

ISCJB ***24*** *20:43:44.6±0.3, 41°.15N±0°.03×29°.31W±0°.04, h10km, mb4.4/102, MS4.2/41, Error ellipse: s-maj=5.4km s-min=3.5km az=141.7*
PDA ***24*** *20:43:45.4±1.4, 41°.51N×29°.44W, h5km, ML4.5, Error ellipse: s-maj=18.5km s-min=8.0km az=36.0*
IDC ***24*** *20:43:45.2±0.6, 41°.29N×29°.30W, h0km, mb4.1/29, mb1 4.2/30, mb1mx4.0/78, mbtmp4.1/30, ML4.4/1, MS4.2/35, Ms1 4.2/35, ms1mx4.0/60, Error ellipse: s-maj=17.7km s-min=11.6km az=0.0*
BJI ***24*** *20:43:45.5, 41°.32N×28°.87W, h5km, mb5.0/20, mB5.4/9, Ms5.0/4, Ms7 4.8/4*
NEIC ***24*** *20:43:46.8±0.3, 41°.31N×29°.28W, h10km, mb4.6/11, Error ellipse: s-maj=6.9km s-min=5.2km az=198.0*
CSEM ***24*** *20:43:46.1±0.1, 41°.20N×29°.28W, h10km, mb4.5/27, Error ellipse: s-maj=6.7km s-min=4.7km az=48.0*
MOS ***24*** *20:43:48.2±0.9, 41°.30N×29°.20W, h28km, mb4.7/50, MS4.3/4, Error ellipse: s-maj=11.0km s-min=5.8km az=45.9*

ISC 24 20:43:46.6±0.4,**41°.25N**±0°.06×**29°.26W**±0°.05,**h10km**,**n214**, σ1.**970**/208,**mb4.5**/104,**MS4.2**/41,**8C-6D, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H07S1	**FLORES T-PHASE**	**2.39**	**219**	*e*P	**Pn**	**20 44 22.6**	**-3.2**
H07S1	**FLORES T-PHASE**	**2.39**	**219**	*e*P	**Pn**	**20 44 22.6**	**-3.2**
ROSA	**Rosais**	**2.65**	**162**	*e*Pn	**Pn**	**20 44 29.1**	**-0.2**
ROSA	**Rosais**	**2.65**	**162**	*e*Pn	**Pn**	**20 44 29.1**	**-0.2**
ADH	**Angra Heroismo**	**3.02**	**148**	*e*P	**Pn**	**20 44 32.6**	**-1.9**
ADH	**Angra Heroismo**	**3.02**	**148**	*e*P	**Pn**	**20 44 32.6**	**-1.9**
PDA	**Ponta Delgada**	**4.47**	**140**	*e*P	**Pn**	**20 44 53.3**	**-1.1**
PDA				*e*S	**Sn**	**20 45 43.8**	**-2.7**
PDA				A	A	20 45 48.3	
33nm,0.2s							
PDA	**Ponta Delgada**	**4.47**	**140**	*e*P	**Pn**	**20 44 53.3**	**-1.1**
PDA				*e*S	**Sn**	**20 45 43.8**	**-2.7**
CMLA	**Cha da Macela**	**4.53**	**139**	*e*P	**Pn**	**20 44 54.5**	**-0.7**
CMLA				*e*S	**Sn**	**20 45 46.0**	**-1.9**
CMLA				A	A	20 45 49.8	
72nm,0.2s							
CMLA	**Cha da Macela**	**4.53**	**139**	*e*Pn	**Pn**	**20 44 55.0**	**-0.2**
CMLA	**Cha da Macela**	**4.53**	**139**	*e*P	**Pn**	**20 44 55.0**	**-0.2**
CMLA	**Cha da Macela**	**4.53**	**139**	*e*P	**Pn**	**20 44 54.5**	**-0.7**
CMLA	**Cha da Macela**	**4.53**	**139**	*e*Pn	**Pn**	**20 44 55.0**	**-0.2**
CMLA				*e*S	**Sn**	**20 45 46.0**	**-1.9**
BART	**Pico Bartolome**	**4.70**	**136**	*e*P	**Pn**	**20 44 56.8**	**-0.8**
BART				*e*S	**Sn**	**20 45 50.4**	**-1.8**
BART				A	A	20 45 51.7	
24nm,0.3s							
BART	**Pico Bartolome**	**4.70**	**136**	*e*P	**Pn**	**20 44 56.8**	**-0.8**
BART				*e*S	**Sn**	**20 45 50.4**	**-1.8**
PSMA	**Santa Maria**	**5.33**	**142**	*e*P	**Pn**	**20 45 05.3**	**-0.9**
PSMA				*e*S	**Sn**	**20 46 05.0**	**-2.6**
PSMA				A	A	20 46 08.4	
17nm,0.2s							
PSMN	**Pico do Norte,**	**5.35**	**141**	*e*P	**Pn**	**20 45 05.1**	**-1.4**
PSMN				*e*S	**Sn**	**20 46 05.6**	**-2.6**
PSMN				A	A	20 46 10.7	
19nm,0.4s							
PSMN	**Pico do Norte,**	**5.35**	**141**	*e*P	**Pn**	**20 45 05.1**	**-1.4**
PSMN				*e*S	**Sn**	**20 46 05.6**	**-2.6**
PCAS	**Casmilo, Conde**	**15.81**	**88**	*e*P	**Pn**	**20 47 31.1**	**+1.9**
48nm,1.8s							
PCAS	**Casmilo, Conde**	**15.81**	**88**	*e*P	**Pn**	**20 47 31.1**	**+1.9**
ALMR	**Almeirim**	**15.94**	**91**	*e*P	**Pn**	**20 47 32.2**	**+1.3**
85nm,1.4s							
ALMR	**Almeirim**	**15.94**	**91**	*e*P	**Pn**	**20 47 32.2**	**+1.3**
PVIS	**Viseu**	**16.15**	**85**	*e*P	**Pn**	**20 47 33.0**	**-0.6**
32nm,1.6s							
PVIS	**Viseu**	**16.15**	**85**	*e*P	**Pn**	**20 47 33.0**	**-0.6**
PMTG	**Montargil**	**16.23**	**91**	*e*P	**Pn**	**20 47 35.8**	**+1.2**
39nm,1.5s							
PMTG	**Montargil**	**16.23**	**91**	*e*P	**Pn**	**20 47 35.8**	**+1.2**
EVO	**Evora**	**16.53**	**92**	*e*P	**P**	**20 47 40.4**	**-0.7**
38nm,1.9s							
EVO	**Evora**	**16.53**	**92**	*e*P	**P**	**20 47 40.4**	**-0.7**
MESJ	**Messejana**	**16.58**	**95**	*e*P	**P**	**20 47 41.7**	**+0.1**
53nm,1.8s							
MESJ	**Messejana**	**16.58**	**95**	*e*P	**P**	**20 47 41.7**	**+0.1**
MVO	**Moncorvo**	**16.73**	**83**	*e*P	**Pn**	**20 47 39.8**	**-1.3**
36nm,1.6s							
MVO	**Moncorvo**	**16.73**	**83**	*e*P	**Pn**	**20 47 39.8**	**-1.3**
PMRV	**Marv??o**	**16.77**	**89**	*e*P	**Pn**	**20 47 42.1**	**+0.6**
36nm,1.7s							
PMRV	**Marv??o**	**16.77**	**89**	*e*P	**Pn**	**20 47 42.1**	**+0.6**
PBEJ	**Beja**	**16.79**	**94**	*e*P	**P**	**20 47 44.1**	**+0.2**
29nm,1.5s							
PBEJ	**Beja**	**16.79**	**94**	*e*P	**P**	**20 47 44.1**	**+0.2**
VAL	**Valentia**	**16.83**	**44**	*e*P	**P**	**20 47 44.2**	**-0.1**
PBRG	**Braganca**	**16.87**	**81**	*e*P	**Pn**	**20 47 41.6**	**-1.2**
31nm,1.4s							
PBRG	**Braganca**	**16.87**	**81**	*e*P	**Pn**	**20 47 41.6**	**-1.2**
PBDV	**Barranco-do-Ve**	**17.00**	**97**	*e*P	**P**	**20 47 47.2**	**+1.0**
66nm,1.8s							
PBDV	**Barranco-do-Ve**	**17.00**	**97**	*e*P	**P**	**20 47 47.2**	**+1.0**
PBAR	**Barrancos**	**17.37**	**93**	*e*P	**P**	**20 47 51.5**	**+1.2**
41nm,1.4s							
PBAR	**Barrancos**	**17.37**	**93**	*e*P	**P**	**20 47 51.5**	**+1.2**
ESDC	**Sonseca Array**	**19.30**	**86**	P	**Pn**	**20 48 12.8**	**+0.2**
0.2nm,0.3s,baz=289,slow=8.3,SNR=4.2							
ESDC				LR	LR	20 54 13.2	
comp=Z,1μm,19.4s,baz=290,slow=32							
ES19	**SONSECA Array**	**19.34**	**86**	*e*P	**Pn**	**20 48 15.4**	**+2.2**
ES19	**SONSECA Array**	**19.34**	**86**	*e*P	**Pn**	**20 48 15.4**	**+2.2**
SJPF	**Ste Jean**	**20.83**	**76**	*e*P	**P**	**20 48 29.5**	**+1.3**
SJPF				pmax	pmax		
comp=Z,72nm,1.6s							
MDT	**Midelt**	**21.35**	**105**	P	**P**	**20 48 35.4**	**+1.3**
comp=Z,3.3nm,0.9s,baz=305,slow=13,SNR=5.4							
MFF	**Saint Martin d**	**21.57**	**66**	*e*P	**P**	**20 48 38.2**	**+2.0**
MFF				pmax	pmax		
comp=Z,51nm,1.5s							
FLN	**La Foliniere**	**21.60**	**60**	*e*P	**P**	**20 48 41.3**	**+4.9**
FLN				pmax	pmax		
comp=Z,15nm,1.1s							
LDF	**La Druitiere**	**21.81**	**60**	*e*P	**P**	**20 48 43.6**	**+4.9**
LDF				pmax	pmax		
comp=Z,68nm,1.7s							
EKA	**Eskdalemuir Ar**	**22.19**	**42**	P	**P**	**20 48 43.3**	**+0.6**
comp=Z,2.0nm,0.7s,baz=238,slow=8.0,SNR=6.1							

RJF Les Rejaudoux 22.70 69 *e*P **P 20 48 49.3 +1.0**
RJF pmax pmax
comp=Z,28nm,1.4s
CAF Calviac 23.10 70 *e*P **P 20 48 51.9 -0.6**
CAF pmax pmax
comp=Z,39nm,1.6s
BGF Bois d'Agland 23.64 66 *e*P **P 20 48 58.8 +1.0**
BGF pmax pmax
comp=Z,21nm,0.9s
BORG Borgarnes 23.98 8 LR LR 20 55 42.6
comp=Z,501nm,21.0s,baz=190,slow=30
AVF Avril sur Loir 23.99 66 *e*P **P 20 49 01.2 0.0**
AVF pmax pmax
comp=Z,9.0nm,1.1s
SSF Saint Saulge 24.10 65 *e*P **P 20 49 01.5 -0.7**
SSF pmax pmax
comp=Z,71nm,1.8s
BAIF Baives 24.82 58 *e*P **P 20 49 08.7 -0.1**
BAIF pmax pmax
comp=Z,22nm,1.2s
SNF Seneffe 24.94 57 ⇓P **P 20 49 09.1 -0.6**
VIVF Saint-Julien-l 24.95 70 *e*P **P 20 49 12.4 +2.4**
VIVF pmax pmax
comp=Z,18nm,1.5s
BCLA Clavier 25.57 57 ⇑P **P 20 49 15.5 0.0**
comp=Z,17nm,1.3s
ORIF Oris-en-Rattie 25.80 70 *e*P **P 20 49 21.4 +3.6**
ORIF pmax pmax
comp=Z,24nm,1.7s
BEBN Eben Emael 25.86 56 ⇑P **P 20 49 18.2 +0.1**
CABF La Chapelle 25.87 66 *e*P **P 20 49 19.1 +0.7**
CABF pmax pmax
comp=Z,34nm,1.5s
MEM Membach 26.04 57 ⇑P **P 20 49 19.9 +0.1**
HAU Haudompre 26.06 63 *e*P **P 20 49 19.0 -1.0**
HAU pmax pmax
comp=Z,24nm,1.4s
BNI Bardonecchia 26.36 70 P **P 20 49 27.9 +5.0**
BNI pmax pmax
comp=Z,11nm,1.9s
LPL La Plagne 26.36 69 *e*P **P 20 49 26.5 +3.5**
LPL pmax pmax
comp=Z,20nm,1.5s
LPG La Plagne 26.38 69 *e*P **P 20 49 27.0 +3.8**
LPG pmax pmax
comp=Z,12nm,1.2s
ECH Echery 26.61 62 *e*P **P 20 49 25.6 +0.7**
comp=Z,20nm,1.3s
ECH Echery 26.61 62 *e*P **P 20 49 25.6 +0.7**
ECH pmax pmax
comp=Z,21nm,1.3s
CDF Champ du Feu 26.69 62 *e*P **P 20 49 25.9 +0.1**
CDF pmax pmax
comp=Z,42nm,1.7s
SBF Sospel 27.02 72 *e*P **P 20 49 33.6 +4.8**
SBF pmax pmax
comp=Z,25nm,1.5s
TUE Stuetta 28.12 66 *e*P **P 20 49 40.2 +1.4**
comp=Z,9.1nm,1.2s
SFJD Kangerlussuaq 28.36 342 LR LR 20 58 32.2
comp=Z,377nm,19.3s,baz=150,slow=31
DAVOX Davos/Dischmat 28.47 66 LR LR 20 59 08.9
comp=Z,769nm,19.5s,baz=276,slow=32
FETA Feichten 29.04 65 *e*P **P 20 49 45.2 -1.7**
comp=Z,5.2nm,1.2s
MOTA Moosalm 29.28 64 *e*P **P 20 49 48.5 -0.5**
comp=Z,2.5nm,0.9s
WATA Walderalm 29.60 64 pP **P 20 49 53.2 +1.3**
comp=Z,2.1nm,0.8s
KONO Kongsberg 30.23 39 *i*P **P 20 49 55.0 -2.1**
KONO pmax pmax
comp=Z,8.0nm,1.4s
ABTA Abfaltersbach 30.28 65 *e*pP **P 20 49 58.7 +0.9**
comp=Z,11nm,1.5s
CLL Collm 30.51 56 *i*P **P 20 50 00.1 +0.5**
comp=Z,6.0nm,1.0s
CLL Collm 30.51 56 *i*P **P 20 50 00.1 +0.5**
CLL pmax pmax
comp=Z,6.0nm,1.0s
KEST Kesra 30.54 88 LR LR 21 02 11.0
comp=Z,684nm,18.3s,baz=254,slow=36
KBA Koelnbreinsper 30.82 65 *e*pP **P 20 50 03.7 +1.0**
comp=Z,24nm,1.2s
KBA Koelnbreinsper 30.82 65 P **P 20 50 03.8 +1.1**
KBA pmax pmax
comp=Z,18nm,1.5s
KHC Kasperske Hory 30.86 61 *e*P **P 20 50 02.1 -0.7**
comp=Z,4.6nm,1.3s
KHC Kasperske Hory 30.86 61 *e*P **P 20 50 02.1 -0.7**
KHC pmax pmax
comp=Z,5.0nm,1.3s
GERES GERESS Array B 30.95 61 P **P 20 50 03.9 +0.2**
comp=Z,0.6nm,0.8s,baz=271,slow=9.7,SNR=4.8
GERES LR LR 21 00 52.0
comp=Z,466nm,19.6s,baz=270,slow=33
GEA0 GERESS Array S 30.95 61 *e*P **P 20 50 04.0 +0.3**
BRG Berggiesshubel 31.09 57 *e*P **P 20 50 05.0 +0.2**
comp=Z,11nm,1.5s
comp=N,391nm,17.8s
comp=E,412nm,15.5s
comp=Z,695nm,19.2s
BRG Berggiesshubel 31.09 57 *e*P **P 20 50 04.9 +0.2**
BRG pmax pmax
comp=Z,11nm,1.5s
BRG MLR MLR
comp=N,391nm,17.8s
BRG MLR MLR
comp=E,412nm,15.5s
BRG MLR MLR
comp=Z,695nm,19.2s
MOA Molln 31.38 63 *e*P **P 20 50 06.9 -0.5**
comp=Z,4.6nm,1.1s
NOA NORSAR Array B 31.47 37 LR LR 21 00 24.9
comp=Z,276nm,20.7s,baz=245,slow=32
JMIC Jan Mayen 31.61 13 LR LR 20 59 52.8
comp=Z,288nm,18.1s,baz=249,slow=31
OBKA Obir 31.70 65 *e*P **P 20 50 10.0 -0.3**
comp=Z,7.3nm,0.9s
ARSA Arzberg 32.28 64 *e*P **P 20 50 14.6 -0.8**
comp=Z,5.6nm,0.9s
HFS Hagfors 32.34 40 LR LR 21 01 35.1
comp=Z,454nm,19.9s,baz=249,slow=33
VAE Valguarnera 33.71 82 LR LR 21 02 06.3
comp=Z,876nm,21.0s,baz=329,slow=33
CUC Castrocucco 33.95 77 *e*P **P 20 50 30.3 +0.2**
comp=Z,8.2nm,1.1s
OJC Ojcow 34.84 58 *e*P **P 20 50 35.1 -2.4**
comp=Z,9.2nm,1.1s
OJC Ojcow 34.84 58 *e*P **P 20 50 35.2 -2.4**
OJC pmax pmax
comp=Z,9.0nm,1.1s
NIE Niedzica 35.23 59 P **P 20 50 43.2 +2.2**
NIE pmax pmax
comp=Z,2.0nm,1.5s
BZS Buzias 36.70 66 P **P 20 50 54.5 +0.9**
BZS pmax pmax
comp=Z,8.0nm,1.3s
FINES FINESS Array B 38.55 39 P **P 20 51 08.5 -0.5**
comp=Z,2.6nm,1.0s,baz=248,slow=7.4,SNR=4.9
FINES LR LR 21 05 37.7
comp=Z,316nm,19.1s,baz=257,slow=34
BUR08 Bucovina Ar. S 38.72 62 *e*P **P 20 51 10.8 +0.1**
BUR04 Bucovina Ar. S 38.73 62 *e*P **P 20 51 07.7 -3.2**
TOA0 Torodi Ar. Sit 38.89 127 *e*P **P 20 51 13.6 +1.2**
TORD Torodi Ar. Bea 38.89 127 P **P 20 51 13.0 +0.7**
comp=Z,6.1nm,1.1s,baz=324,slow=6.2,SNR=8.9
MLR Muntele Rosu 39.69 65 P **P 20 51 18.2 -0.7**
comp=Z,0.5nm,0.9s,baz=252,slow=6.4
MLR LR LR 21 06 07.2
comp=Z,75nm,21.4s,baz=288,slow=34
ARCES ARCESS Array B 39.84 27 P **P 20 51 19.4 -0.3**
comp=Z,3.9nm,0.8s,baz=281,slow=8.5,SNR=7.7
ARCES LR LR 21 04 33.5
comp=Z,199nm,21.6s,baz=258,slow=31
DBIC Dimbokro 40.73 141 P **P 20 51 28.5 +0.9**
comp=Z,8.2nm,0.9s,baz=332,slow=8.8,SNR=5.4
KIEV Kiev 40.74 56 *i*P **P 20 51 26.1 -1.3**
KIEV pmax pmax
comp=Z,3.0nm,0.9s
AKASG Malin Array Be 40.75 56 P **P 20 51 26.8 -0.6**
comp=Z,3.5nm,0.9s,baz=280,slow=7.7,SNR=5.9
AKASG LR LR 21 07 53.9
comp=Z,613nm,18.0s,baz=285,slow=36
JOF Joensuu 41.10 37 P **P 20 51 31.2 +1.0**
JOF pmax pmax
comp=Z,14nm,1.3s
SPITS Spitsbergen Ar 41.28 13 LR LR 21 04 08.2
comp=Z,128nm,21.4s,baz=240,slow=30
APA Apatity 42.32 30⇓*i*P **P 20 51 39.5 -0.6**
APA pmax pmax
comp=Z,5.0nm,0.9s
APA MLR MLR
comp=Z,200nm,15.0s
IDI Anoyia 42.35 80 LR LR 21 08 45.2
comp=Z,204nm,19.8s,baz=278,slow=35
TKL Tuckaleechee C 42.46 281 LR LR 21 08 18.9
comp=Z,524nm,18.7s,baz=68,slow=35
PCRV Puerto La Cruz 43.90 235 LR LR 21 08 13.1
comp=Z,239nm,20.0s,baz=42,slow=34
RES Resolute Bay 44.28 340 P **P 20 51 56.1 +0.2**
comp=Z,5.1nm,0.9s,baz=103,slow=14,SNR=4.5
RES LR LR 21 06 44.3
comp=Z,166nm,19.9s,baz=123,slow=31
OBN Obninsk 44.36 49*c i*P **P 20 51 56.6 -0.1**
OBN *e* 20 53 40.7
OBN *e*SS SS 21 01 39.2 -10
OBN pmax pmax
comp=Z,17nm,0.6s
KLMR Klimovskoe 45.06 40 *e*P **P 20 51 58.9 -3.3**
KLMR *e* 20 53 40.9
KLMR pmax pmax
comp=Z,10.0nm,1.2s
KLMR Klimovskoe 45.06 40 *e*P **P 20 51 59.0 -3.3**
KLMR AMP 20 52 02.1
comp=Z,10.0nm,1.2s
KLMR *e*PcP **PcP 20 53 41.0 -1.8**
ULM Lac du Bonnet 45.91 305 LR LR 21 09 40.6
comp=Z,880nm,18.6s,baz=83,slow=34
VSR Storozhevoye 46.76 53 *e*P **P 20 52 14.6 -1.2**
VSR pmax pmax
comp=Z,8.0nm,1.1s
VORD Divnogorie 46.91 54 *e*P **P 20 52 14.2 -2.7**
VORD pmax pmax
comp=Z,10.0nm,1.3s
BRTR Keskin Array B 46.92 70 P **P 20 52 17.7 +0.3**
comp=Z,1.6nm,0.9s,baz=287,slow=5.4,SNR=7.7
BRTR PcP **PcP 20 53 47.0 -2.9**
comp=Z,1.0nm,1.0s,baz=278,slow=4.2,SNR=3.9
ANN Anapa 47.65 62 *e*P **P 20 52 21.0 -1.8**
ANN *e*S **S 20 59 13.8 -4.6**
ANN pmax pmax
comp=Z,26nm,0.8s
ANN MLR MLR
comp=Z,499nm,21.0s
PRGR Permogore 47.86 38 *e*P **P 20 52 24.1 -0.1**
PRGR pmax pmax
comp=Z,10.0nm,0.7s
FFC Flin Flon 48.32 312⇑*e*P **P 20 52 30.0 +2.1**
PTGA Pitinga 50.21 222 LR LR 21 10 12.9
comp=Z,240nm,19.1s,baz=26,slow=32
MMAI Mount Meron Ar 51.15 77 LR LR 21 15 22.5
comp=Z,51nm,18.4s,baz=295,slow=37
KIV Kislovodsk 51.46 61 *e*P **P 20 52 51.6 -0.4**
KIV pmax pmax
comp=Z,5.0nm,1.1s
KBZ Khabaz 51.69 62 P **P 20 52 54.1 +0.5**
comp=Z,4.2nm,0.9s,baz=306,slow=5.1,SNR=8.1
KBZ LR LR 21 14 42.0
comp=Z,169nm,20.2s,baz=314,slow=36
NEY Neytrino 51.77 62 *i*P **P 20 52 56.4 +1.9**
NEY pmax pmax
comp=Z,1.0nm,1.0s
NCK Nalchik 52.25 62 *i*P **P 20 52 58.6 +0.8**
NCK pmax pmax
comp=Z,3.0nm,1.0s
YKA Yellowknife Ar 52.40 324 P **P 20 52 56.7 -1.9**
comp=Z,0.5nm,0.6s,baz=51,slow=4.0,SNR=2.9
YKA LR LR 21 12 44.5
comp=Z,16nm,19.7s,baz=56,slow=33
ZEI Tsey 52.75 62 *e*P **P 20 53 02.7 +0.9**
ZEI pmax pmax
comp=Z,18nm,0.9s
GROC Groznyy 53.83 61 *e*P **P 20 53 06.8 -2.6**
GROC *e* 20 55 07.5
GROC pmax pmax
comp=Z,24nm,1.2s
HKT Hockley 54.09 281 *i*P **P 20 53 14.8 +3.3**
HKT pmax pmax
comp=Z,7.0nm,1.0s
GNI Garni 54.47 65 *i*P **P 20 53 14.3 -0.1**
GNI pmax pmax
comp=Z,23nm,1.0s
ARU Arti 55.80 42 P **P 20 53 23.6 +0.1**
comp=Z,6.9nm,0.8s,baz=293,slow=5.7,SNR=15
ARU Arti 55.80 42 *e*P **P 20 53 23.4 -0.1**
ARU Arti 55.80 42*d i*P **P 20 53 23.5 -0.1**
ARU 20 54 20.3
ARU 20 55 24.2
ARU PPP PPP 20 56 40.9
ARU S **S 21 01 10.6 +0.3**
ARU SS **SS 21 04 54.2 -1.0**
ARU pmax pmax
comp=Z,41nm,1.7s
SVE Sverdlovsk 56.67 41⇓*e*P **P 20 53 30.2 +0.4**
SVE pmax pmax
comp=Z,33nm,1.7s
WALA Waterton Lakes 57.25 309 *e*P **P 20 53 34.5 +0.4**
PDAR Pinedale Array 57.45 301 P **P 20 53 34.5 -1.4**
comp=Z,0.3nm,0.6s,baz=69,slow=4.9,SNR=3.8
PDAR LR LR 21 18 00.9
comp=Z,437nm,18.1s,baz=70,slow=36
JTS JuntasAbangare 57.66 254 LR LR 21 13 55.3
comp=Z,255nm,21.6s,baz=99,slow=31
AKTO Aktyubinsk 58.14 49 P **P 20 53 40.5 +0.2**
comp=Z,10.0nm,1.0s,baz=297,slow=7.7,SNR=10
AKTO LR LR 21 17 13.3
comp=Z,226nm,21.8s,baz=299,slow=34
ANMO Albuquerque 59.21 291 P **P 20 53 49.2 +1.0**
comp=Z,0.8nm,0.7s,baz=66,slow=10.0,SNR=3.7
ANMO Albuquerque 59.21 291*c e*P **P 20 53 51.0 +2.8**
ANMO pmax pmax
comp=Z,4.0nm,1.7s
NEW Newport 59.50 309 P **P 20 53 49.4 -0.3**
comp=Z,9.9nm,1.0s,baz=53,slow=6.5,SNR=6.1
TXAR Lajitas Array 60.19 284 P **P 20 53 55.0 +0.2**
comp=Z,0.9nm,0.7s,baz=81,slow=4.3,SNR=12
TXAR Lajitas Array 60.19 284 P **P 20 53 55.0 +0.2**
NRIK Noril'sk 60.44 21 P **P 20 53 57.3 +1.5**
comp=Z,3.5nm,0.4s,baz=314,slow=5.3,SNR=4.7
ELK Elko 62.14 301 P **P 20 54 08.9 +0.9**
comp=Z,0.7nm,0.6s,baz=72,slow=20,SNR=2.0
ELK Elko 62.14 301 P **P 20 54 09.0 +0.9**
CCUT Cedar City 62.60 297 *e*P P 20 54 16.3 +5.1
comp=Z,3.9nm,1.2s
OBSR Observation Ro 62.93 310 *e*P **P 20 54 13.1 -0.2**
BRVK Borovoye 63.37 42 *e*P **P 20 54 16.5 +0.7**
BRVK Borovoye 63.37 42*de*P **P 20 54 16.2 +0.4**
BRVK pmax pmax
comp=Z,24nm,1.7s
BVAR Borovoye Array 63.44 42 P **P 20 54 16.9 +0.6**
comp=Z,5.2nm,1.0s,baz=291,slow=4.6,SNR=21
ILAR Eielson Array 63.66 335 P **P 20 54 17.9 +0.4**
comp=Z,0.6nm,0.9s,baz=48,slow=5.5,SNR=4.3
ILAR Eielson Array 63.66 335 P **P 20 54 18.0 +0.4**
GEYT Alibeck 64.58 61 P **P 20 54 24.5 +0.5**
comp=Z,155nm,1.1s,baz=308,slow=7.3,SNR=9.9
GEYT LR LR 21 24 20.4
comp=Z,76nm,19.0s,baz=185,slow=38
TIN Tinemaha, Big 66.11 299 *e*P **P 20 54 33.9 -0.2**
TIN Tinemaha, Big 66.11 299 *e*P **P 20 54 33.9 -0.2**
YBH Yreka Blue Hor 66.32 305 LR LR 21 21 08.2
comp=Z,264nm,21.7s,baz=40,slow=34
TIXI Tiksi 66.34 7 *e*P **P 20 54 35.2 +0.4**
TIXI pmax pmax
comp=Z,4.0nm,1.5s
RCWM Renegade Canyo 66.35 298 *e*P **P 20 54 34.9 -0.7**
PFO Pinyon Flats O 66.88 295 P **P 20 54 39.2 +0.1**
comp=Z,3.1nm,0.4s,baz=107,slow=3.6,SNR=5.3
OTUK Ortayu 67.22 45 P **P 20 54 42.1 +1.2**
OTUK pmax pmax
comp=Z,10.0nm,1.4s
LPAZ La Paz 67.62 221 P **P 20 54 44.2 -0.1**
comp=Z,2.1nm,1.0s,baz=19,slow=4.2,SNR=5.7
LPAZ LR LR 21 20 29.6
comp=Z,207nm,21.9s,baz=20,slow=33
LPAZ La Paz 67.62 221 *e*P **P 20 54 46.8 +2.4**
comp=Z,8.8nm,1.4s
LPAZ La Paz 67.62 221 *e*P **P 20 54 46.8 +2.4**
LPAZ pmax pmax
comp=Z,9.0nm,1.4s
NNA Nana 68.77 231 LR LR 21 22 37.5
comp=Z,118nm,20.1s,baz=28,slow=34
KURK Kurchatov 68.91 40 *e*P **P 20 54 51.5 +0.1**
comp=Z,11nm,1.0s
KURK Kurchatov 68.91 40*de*P **P 20 54 51.2 -0.2**
KURK pmax pmax
comp=Z,19nm,1.7s
KURBB Kurchatov Arra 68.93 41 P **P 20 54 51.7 +0.2**
comp=Z,4.9nm,0.9s,baz=313,slow=6.5,SNR=24
ZAA0 Zalesovo Array 69.64 35 *e*P **P 20 54 56.0 +0.1**
comp=Z,8.7nm,1.3s
ZALV Zalesovo Beam 69.64 35 P **P 20 54 54.9 -1.0**
comp=Z,3.3nm,1.0s,baz=298,slow=9.5,SNR=7.8
ZALV LR LR 21 25 53.8
comp=Z,115nm,18.4s,baz=30,slow=36
BILL Bilibino 70.41 354⇑*e*P **P 20 55 02.3 +2.0**
BILL *e* 20 57 37.4
BILL *e*S **SKSac 21 04 54.1 -7.5**
BILL pmax pmax
comp=Z,2.0nm,1.3s
BILL MLR MLR
comp=Z,256nm,18.0s
UOSS Minazif 70.76 73 *e*P **P 20 55 03.3 +0.1**
comp=Z,17nm,1.1s
MNAS Manas 70.84 50 P **P 20 55 05.4 +1.8**
MNAS pmax pmax
comp=Z,14nm,1.5s
MAKZ Makanchi 73.16 42 *e*P **P 20 55 17.7 +0.4**
comp=Z,6.3nm,1.2s
MAKZ Makanchi 73.16 42 *e*P **P 20 55 17.7 +0.4**
MAKZ pmax pmax
comp=Z,6.0nm,1.2s
KMBO Kilima Mbogo 73.29 107 LR LR 21 27 07.1
comp=Z,275nm,19.0s,baz=282,slow=36
MK31 Makanchi Array 73.33 42 *e*P **P 20 55 18.4 +0.1**
MK31 Makanchi Array 73.33 42 *e*P **P 20 55 18.4 +0.1**
MKAR Makanchi Array 73.33 42 P **P 20 55 18.2 0.0**
comp=Z,3.3nm,0.8s,baz=311,slow=6.0,SNR=19
MKAR LR LR 21 27 02.8
comp=Z,373nm,19.2s,baz=252,slow=35
MK01 Makanchi Array 73.35 42 *e*P **P 20 55 18.3 -0.1**
DGZ Jazzator, Alta 73.76 37 *i*P **P 20 55 21.5 +0.5**
DGZ pmax pmax
comp=Z,6.0nm,1.2s
KSH Kashi 74.75 51 P **P 20 55 28.8 +1.9**
KSH pP sP 20 55 32.8 +1.4
KSH S **S 21 05 02.3 -1.1**
KSH sS pS 21 05 07.9 +0.4
KSH SS **SS 21 09 48.3 -1.8**
KSH pmax pmax
comp=Z,17nm,0.7s
KSH pmax pmax
comp=Z,190nm,4.6s
KSH LR LR
comp=Z,320nm,7.9s
KSH LR LR
comp=Z,200nm,5.6s
KSH LR LR
comp=Z,460nm,8.6s
SEY Seymchan 76.16 359 *i*P **P 20 55 34.3 0.0**
BOD Bodaibo 76.62 19 *e*P **P 20 55 36.5 -0.5**
BOD pmax pmax
comp=Z,16nm,1.7s
KNGR Kungurtug, Tuv 77.38 32 *i*P **P 20 55 42.3 +0.7**
WMQ Urumqi 78.12 41 P **P 20 55 47.1 +1.3**
WMQ pP sP 20 55 51.9 +1.6
WMQ sP PcP 20 55 54.8 -0.6
WMQ pmax pmax
comp=Z,20nm,1.5s
WMQ pmax pmax
comp=Z,170nm,3.9s
WMQ LR LR
comp=Z,290nm,18.5s
WMQ LR LR
comp=Z,390nm,24.3s
WMQ LR LR
comp=Z,390nm,22.9s
TLY Talaya 78.79 28 *e*P **P 20 55 49.6 +0.3**
TLY pmax pmax
comp=Z,6.0nm,1.7s
ZAK Zakamensk 79.74 29 *e*P **P 20 55 54.2 -0.4**
ZAK pmax pmax
comp=Z,4.0nm,1.8s
SONA1 Songino Array 82.98 28 *e*P **P 20 56 11.3 -0.6**
SONM Songino Array 82.99 28 P **P 20 56 11.9 0.0**
comp=Z,1.5nm,0.9s,baz=329,slow=5.2,SNR=8.3
ULN Ulaanbaatar 83.20 28*ce*P **P 20 56 11.7 -1.4**
ULN pmax pmax
comp=Z,9.0nm,1.7s
GTA Gaotai 87.30 37 *e*P **P 20 56 33.9 +0.2**
GTA pP sP 20 56 38.4 +0.2
GTA sP pP 20 56 41.6 +4.6
GTA pmax pmax
comp=Z,5.0nm,1.7s
PLCA Paso Flores 89.79 210 LR LR 21 36 42.4
comp=Z,52nm,18.4s,baz=62,slow=35
HHC Hu-ho-hao-te 90.89 29 *e*P **P 20 56 50.3 -0.2**
HHC S **S 21 07 41.1 -6.5**
HHC pmax pmax
comp=Z,30nm,0.9s
HHC pmax pmax
comp=Z,61nm,4.8s
HHC LR LR
comp=Z,120nm,9.5s
HHC LR LR
comp=Z,160nm,9.5s
HHC LR LR
comp=Z,310nm,13.0s
LZH Lanzhou 91.84 36 *e*P **P 20 56 55.8 +0.7**
LZH pP sP 20 57 01.8 +2.1
LZH sP pP 20 57 03.8 +5.3
LZH pmax pmax
comp=Z,26nm,1.0s
LZH pmax pmax
comp=Z,130nm,5.4s
ASAJ Asahikawa 94.70 6 LR LR 21 37 11.3
comp=Z,26nm,19.0s,baz=1.5,slow=34
CD2 Chengdu 96.11 39 P **P 20 57 13.8 -0.9**
CD2 pmax pmax
comp=Z,1.0nm,0.6s
KMI Kunming 100.37 43 P **Pdif 20 57 37.6 +3.5**
KMI pmax pmax
comp=Z,8.0nm,1.4s
NJ2 Nanjing 101.35 27 *e*P **Pdif 20 57 39.6 +1.6**
NJ2 pmax pmax
comp=Z,12nm,0.5s
PPT2 Papeete2 124.08 276 *e*LR LR 21 41 15.6
comp=Z,179nm,24.5s
DZM Mont Dzumac 156.74 321 *e*LR LR 21 56 41.2
comp=Z,133nm,26.9s

ISCJB ***24*** *20:54:29.3±0.4,30°.91N±0°.05×138°.03E±0°.07,h506km, mb3.2/9,Error ellipse: s-maj=8.3km s-min=6.1km az=171.9*
JMA ***24*** *20:54:30.4±0.3,31°.04N×137°.88E,h506km,M3.4*
IDC ***24*** *20:54:30.6±0.9,30°.86N×137°.71E,h486km±12km,mb2.9/9, mb1 3.0/16,mb1mx2.8/79,mbtmp3.8/16,Error ellipse: s-maj=23.7km s-min=13.1km az=76.0*
ISC 24 20:54:30.4±0.7,30°.89N±0°.07×137°.97E±0°.09,h506km,n27, *σ*2º**02/35,mb3.2/9,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**2.71**	**34**	P	**P**	**20 55 40.3**	**+0.5**
	35nm,0.3s,baz=265,slow=11,SNR=26						
JHJ				S	**S**	**20 56 31.9**	**-4.7**
	17nm,0.3s,baz=270,slow=19,SNR=2.9						
JHJ2	**Mitsune**	**2.72**	**35**	P	**P**	**20 55 40.5**	**+0.6**
JWZ	**Kozaga**	**3.25**	**325**	P	**P**	**20 55 42.6**	**-0.9**
JKN2	**Miekihoku**	**3.64**	**337**	P	**P**	**20 55 46.1**	**-0.1**
JIE	**Ise**	**3.65**	**343**	P	**P**	**20 55 46.7**	**+0.3**
BSO3	**Boso 3**	**4.45**	**28**	P	**P**	**20 55 52.4**	**-0.1**
BSO3				S	**S**	**20 56 57.4**	**-2.3**
BSO1	**Boso 1**	**4.53**	**33**	P	**P**	**20 55 53.1**	**+0.3**
BSO1				S	**S**	**20 56 58.8**	**-1.6**
BSO4	**Boso 4**	**4.55**	**25**	P	**P**	**20 55 52.9**	**-0.6**
BSO4				*e*S	**S**	**20 56 57.3**	**-4.2**
JTO	**Tosashimizu**	**4.81**	**295**	P	**P**	**20 55 54.4**	**-1.6**
JHU	**Hanno**	**5.07**	**12**	P	**P**	**20 55 58.0**	**-0.2**
JHU				S	**S**	**20 57 06.1**	**-4.0**
JRY	**Ryogami san**	**5.18**	**8**	P	**P**	**20 55 59.8**	**+0.6**
JRY				S	**S**	**20 57 10.0**	**-1.8**
CBIJ	**Chichi jima**	**5.28**	**135**	*e*S	**S**	**20 57 09.7**	**-4.0**
JCJ	**Chichijima**	**5.28**	**135**	P	**P**	**20 56 00.9**	**+0.6**
	2.3nm,0.3s,baz=286,slow=20,SNR=5.5						
JCJ				S	**S**	**20 57 10.8**	**-2.9**

baz=270,slow=20
MJAR Matsushiro Arr 5.64 2 P P 20 56 03.1 -0.4
0.6nm,0.3s,baz=189,slow=7.8,SNR=6.0
MJAR S **S 20 57 16.9 -2.8**
0.2nm,0.3s,baz=81,slow=40,SNR=3.1
JNU Nakatsue 6.42 292 P **P 20 56 08.7 -2.4**
2.1nm,0.3s,baz=174,slow=3.3,SNR=7.4
KSRS Korea Array 10.59 311 P **P 20 56 52.5 -1.3**
0.2nm,0.3s,baz=124,slow=11,SNR=7.0
ASAJ Asahikawa 13.70 14 P **P 20 57 29.1 +2.4**
0.6nm,0.3s,baz=238,slow=6.5,SNR=5.9
USRK Ussuriysk Ar. 14.10 342 P **P 20 57 31.9 +1.0**
1.3nm,0.3s,baz=171,slow=11,SNR=19
CMAR Chiang Mai Arr 37.37 260 P **P 21 00 59.4 -0.4**
0.8nm,0.8s,baz=54,slow=6.2,SNR=5.3
MKAR Makanchi Array 45.23 307 P **P 21 02 01.9 0.0**
0.3nm,0.3s,baz=91,slow=9.9,SNR=13
KURBB Kurchatov Arra 47.76 312 P **P 21 02 21.4 +0.5**
0.7nm,0.3s,baz=92,slow=7.4,SNR=5.2
WRA Warramunga Arr 50.66 184 P **P 21 02 43.5 +0.8**
0.4nm,0.5s,baz=1.6,slow=7.7,SNR=5.6
BVAR Borovoye Array 52.76 315 P **P 21 02 58.4 +0.9**
0.2nm,0.3s,baz=86,slow=7.0,SNR=4.4
ASAR Alice Springs 54.38 185 P **P 21 03 10.6 +1.2**
0.2nm,0.5s,baz=14,slow=12,SNR=3.7
ARCES ARCESS Array B 68.74 340 P **P 21 04 44.8 +2.1**
2.0nm,1.0s,baz=58,slow=8.6,SNR=6.2
FINES FINESS Array B 72.91 332 P **P 21 05 08.9 +1.6**
0.4nm,0.5s,baz=90,slow=4.2,SNR=6.8
HFS Hagfors 78.47 335 P **P 21 05 39.3 +1.0**
1.3nm,0.8s,baz=71,slow=6.4,SNR=6.3

MEX 24 20:55:32.4±0.3, 15°.73N×93°.84W, h90km±4km, MD4.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.60**	**92**	*i* P	Pn	20 55 46.8	-1.2
PCIG				*e*S	Sn	20 55 57.9	-1.7
TGIG		**1.25**	**33**	*i* P	Pn	20 55 54.0	-1.3
TGIG				*i* S	Sn	20 56 10.3	-2.0
TGBT	**Tuxtla Gutierr**	**1.27**	**35**	*e*S	Sn	20 56 09.4	-3.1
CCIG	**Comitan**	**1.73**	**71**	*e*P	Pn	20 55 58.2	-3.1
CCIG				*e*S	Sn	20 56 19.8	-3.4

*DDA **24** 20:56:05.0, 38°.74N×43°.69E, h7km, Ml2.5*
*CSEM **24** 20:56:04.8±0.2, 38°.73N×43°.68E, h16km±1km, ML1.9, Error ellipse: s-maj=6.2km s-min=3.4km az=110.0*
*ISK **24** 20:56:04.3, 38°.72N×43°.68E, h17km, ML1.9/4*
*ISCJB **24** 20:56:05.1±1.0, 38°.71N±0°.04×43°.71E±0°.08, h21km±9km, Error ellipse: s-maj=11.4km s-min=5.6km az=27.3*
ISC 24 20:56:04.8±1.3, 38°.73N±0°.04×43°.68E±0°.06, h16km±10km, n19, σ0°.21/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.27**	**239**	PG	**Pb**	**20 56 11.3**	**0.0**
VANB				SG	**Sb**	**20 56 15.9**	**+0.3**
VANB	**Van**	**0.27**	**239**	*e*Pg	**Pb**	**20 56 11.3**	**0.0**
VANB				*e*Sg	**Sb**	**20 56 15.9**	**+0.3**
VMUR	**Van-Muradiye**	**0.27**	**342**	*i* P	**Pb**	**20 56 11.1**	**-0.3**
VMUR	**Van-Muradiye**	**0.27**	**342**	P	**Pb**	**20 56 11.1**	**-0.3**
TVAN	**Van**	**0.29**	**226**	*i* P	**Pg**	**20 56 11.3**	**+0.1**
TVAN				*i* S	**Sb**	**20 56 16.5**	**-0.1**
TVAN	**Van**	**0.29**	**226**	P	**Pg**	**20 56 11.3**	**+0.1**
TVAN				S	**Sb**	**20 56 16.5**	**-0.1**
CLDR	**Caldiran**	**0.45**	**24**	PG	**Pg**	**20 56 13.8**	**-0.1**
CLDR				SG	**Sb**	**20 56 21.0**	**-0.1**
CLDR	**Caldiran**	**0.45**	**24**	*i* P	**Pg**	**20 56 14.0**	**+0.1**
CLDR	**Caldiran**	**0.45**	**24**	P	**Pg**	**20 56 14.0**	**+0.1**
CLDR				*e*Sg	**Sb**	**20 56 21.0**	**-0.1**
GEVA	**Gevas**	**0.64**	**229**	*i* P	**Pg**	**20 56 17.1**	**-0.3**
GEVA	**Gevas**	**0.64**	**229**	P	**Pg**	**20 56 17.1**	**-0.3**
TUTA	**Tutak**	**0.95**	**315**	*i* P	**Pb**	**20 56 22.8**	**-0.2**
TUTA	**Tutak**	**0.95**	**315**	P	**Pb**	**20 56 22.8**	**-0.2**
AGRB	**Hanur-Agry**	**1.00**	**328**	PG	**Pn**	**20 56 24.6**	**+0.3**
AGRB				SG	**Sn**	**20 56 38.4**	**+0.2**
AGRB	**Hanur-Agry**	**1.00**	**328**	*e*Pg	**Pn**	**20 56 24.6**	**+0.3**
AGRB				*e*Sg	**Sn**	**20 56 38.4**	**+0.2**
HAKT	**HAKKARI**	**1.17**	**179**	*i* P	**Pg**	**20 56 27.4**	**0.0**
HAKT	**HAKKARI**	**1.17**	**179**	P	**Pg**	**20 56 27.4**	**0.0**
GURO	**Guroymak-BITLI**	**1.30**	**262**	PN	**Pn**	**20 56 28.2**	**-0.2**
GURO				SN	**Sn**	**20 56 45.7**	**+0.1**
GURO	**Guroymak-BITLI**	**1.30**	**262**	*e*Pn	**Pn**	**20 56 28.2**	**-0.2**
GURO				*e*Sn	**Sn**	**20 56 45.7**	**+0.1**

*ISCJB **24** 20:58:02.0±0.6, 41°.20N±0°.05×29°.30W±0°.07, h10km, mb3.8/9, MS3.4/13, Error ellipse: s-maj=8.0km s-min=6.0km az=141.6*
*IDC **24** 20:58:02.7±1.1, 41°.41N×29°.40W, h0km, mb3.8/9, mb1 3.8/10, mb1mx3.5/70, mbtmp3.7/10, ML4.0/1, MS3.5/14, Ms1 3.5/14, ms1mx3.2/57, Error ellipse: s-maj=34.9km s-min=19.4km az=11.0*
ISC 24 20:58:03.6±0.8, 41°.20N±0°.09×29°.38W±0°.06, h10km, n29, σ0°.98/23, mb3.9/9, MS3.5/13, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H07S1	**FLORES T-PHASE**	**2.29**	**218**	*e*P	**Pn**	**20 58 40.3**	**-1.2**
H07S1				*e*S	**Sn**	**20 59 10.8**	**+1.0**
ADH	**Angra Heroismo**	**3.03**	**146**	*e*P	**Pn**	**20 58 51.1**	**-0.5**
PSET	**Sete Cidades**	**4.41**	**139**	*e*P	**Pn**	**20 59 10.3**	**-0.2**
PDA	**Ponta Delgada**	**4.49**	**139**	*e*P	**Pn**	**20 59 11.2**	**-0.5**
PDA				*e*S	**Sn**	**21 00 03.8**	**-0.2**
PDA				A	A	21 00 06.0	
13nm,0.2s
CMLA Cha da Macela 4.55 138 *e*P **Pn 20 59 12.9 +0.4**
CMLA *e*S **Sn 21 00 05.3 -0.1**
CMLA A A 21 00 07.1
36nm,0.2s
BART Pico Bartolome 4.72 135 *e*P **Pn 20 59 14.3 -0.7**
PSMA Santa Maria 5.35 140 *e*P **Pn 20 59 23.9 +0.5**
PSMA *e*S **Sn 21 00 23.5 -1.6**
PSMA A A 21 00 27.3
25nm,0.3s
PSMN Pico do Norte, 5.37 140 *e*P **Pn 20 59 23.9 +0.1**
PSMN *e*S **Sn 21 00 24.2 -1.5**
PSMN A A 21 00 29.1
14nm,0.5s
ESDC Sonseca Array 19.39 86 P **Pn 21 02 30.6 -0.2**
0.1nm,0.3s,baz=291,slow=9.9,SNR=3.9
ESDC LR LR 21 08 30.7
comp=Z,116nm,20.4s,baz=325,slow=32
MDT Midelt 21.43 105 P **P 21 02 54.2 +2.4**
6.9nm,1.2s,baz=304,slow=14,SNR=4.1
MDT LR LR 21 09 23.5
comp=Z,116nm,19.2s,baz=342,slow=32
SCHQ Schefferville 28.14 312 LR LR 21 13 13.1
comp=Z,81nm,20.4s,baz=76,slow=32
SFJD Kangerlussuaq 28.38 343 LR LR 21 12 17.9
comp=Z,57nm,20.7s,baz=157,slow=30
DAVOX Davos/Dischmat 28.57 65 LR LR 21 14 04.9
comp=Z,100nm,19.2s,baz=264,slow=34
GERES GERESS Array B 31.05 61 LR LR 21 15 56.1
comp=Z,59nm,18.2s,baz=284,slow=35
NOA NORSAR Array B 31.56 37 LR LR 21 14 50.0
comp=Z,43nm,19.4s,baz=215,slow=32
HFS Hagfors 32.44 40 LR LR 21 15 59.9
comp=Z,89nm,19.2s,baz=220,slow=33
KOWA Kowa 34.55 133 LR LR 21 17 00.4
comp=Z,128nm,21.2s,baz=21,slow=33
TORD Torodi Ar. Bea 38.94 127 P **P 21 05 31.1 +1.3**
1.5nm,0.9s,baz=317,slow=7.4,SNR=5.3
TORD LR LR 21 18 57.0
comp=Z,94nm,20.4s,baz=270,slow=32
AKASG Malin Array Be 40.85 56 LR LR 21 21 31.6
comp=Z,67nm,19.5s,baz=310,slow=35
TKL Tuckaleechee C 42.38 281 LR LR 21 22 27.2
comp=Z,72nm,20.4s,baz=196,slow=35
ULM Lac du Bonnet 45.86 305 LR LR 21 24 18.9
comp=Z,105nm,19.8s,baz=46,slow=34
BRTR Keskin Array B 47.02 70 P **P 21 06 33.5 -1.7**
0.5nm,0.8s,baz=294,slow=6.1,SNR=4.4
PDAR Pinedale Array 57.40 301 P **P 21 07 52.1 -0.3**
0.6nm,0.8s,baz=64,slow=7.1,SNR=4.9
JTS JuntasAbangare 57.57 254 LR LR 21 28 22.7
comp=Z,53nm,21.2s,baz=89,slow=32
AKTO Aktyubinsk 58.24 49 P **P 21 07 57.9 0.0**
0.9nm,0.6s,baz=296,slow=9.4,SNR=3.8
TXAR Lajitas Array 60.11 284 P **P 21 08 11.7 +0.3**
0.8nm,0.9s,baz=66,slow=7.2,SNR=8.8
BVAR Borovoye Array 63.54 42 P **P 21 08 34.0 +0.1**
0.5nm,0.6s,baz=319,slow=5.7,SNR=4.4
KURBB Kurchatov Arra 69.02 40 P **P 21 09 08.9 -0.2**
0.8nm,0.8s,baz=308,slow=7.5,SNR=5.0
MKAR Makanchi Array 73.42 42 P **P 21 09 35.9 0.0**
0.7nm,0.7s,baz=326,slow=5.5,SNR=9.1

*ISCJB **24** 21:00:54.7±0.8, 41°.02N±0°.09×29°.5W±0°.2, h10km, mb3.6/7, Error ellipse: s-maj=20.7km s-min=7.1km az=143.3*
*IDC **24** 21:00:56.2±1.2, 41°.49N×29°.57W, h0km, mb3.7/7, mb1 3.8/8, mb1mx3.5/66, mbtmp3.6/8, ML4.1/1, Error ellipse: s-maj=37.3km s-min=21.1km az=6.0*
*PDA **24** 21:00:57.6±1.2, 40°.97N×30°.05W, h5km, ML4.4, Error ellipse: s-maj=98.5km s-min=10.9km az=53.0*
*CSEM **24** 21:00:57.6, 40°.97N×30°.05W, h5km, ML4.4*
ISC 24 21:00:56.7±0.9, 41°.0N±0°.1×29°.5W±0°.1, h10km, n17, σ1°.52/22, mb3.6/7, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDA	**Ponta Delgada**	**4.45**	**136**	*e*P	**Pn**	**21 02 04.6**	**+0.5**
PDA	**Ponta Delgada**	**4.45**	**136**	*e*P	**Pn**	**21 02 04.6**	**+0.5**
CMLA	**Cha da Macela**	**4.51**	**135**	*e*P	**Pn**	**21 02 05.6**	**+0.6**
CMLA				*e*S	**Sn**	**21 02 56.7**	**-0.8**
CMLA				A	A	21 02 59.9	
22nm,0.3s
CMLA Cha da Macela 4.51 135 *e*P **Pn 21 02 05.6 +0.6**
CMLA *e*S **Sn 21 02 56.7 -0.8**
BART Pico Bartolome 4.69 132 *e*P **Pn 21 02 07.7 +0.1**
BART Pico Bartolome 4.69 132 *e*P **Pn 21 02 07.7 +0.1**
PSMA Santa Maria 5.29 138 *e*P **Pn 21 02 16.1 +0.3**
PSMA *e*S **Sn 21 03 15.3 -1.6**
PSMA A A 21 03 19.0
15nm,0.3s
PSMN Pico do Norte, 5.32 138 *e*P **Pn 21 02 16.6 +0.4**
PSMN *e*S **Sn 21 03 14.9 -2.6**
PSMN A A 21 03 18.2
14nm,0.3s
PSMN Pico do Norte, 5.32 138 *e*P **Pn 21 02 16.6 +0.4**
PSMN *e*S **Sn 21 03 14.9 -2.6**
ESDC Sonseca Array 19.52 86 P **P 21 05 27.0 +2.8**
0.1nm,0.3s,baz=294,slow=11,SNR=4.5
TORD Torodi Ar. Bea 38.93 127 P **P 21 08 25.5 +2.7**
1.0nm,0.9s,baz=330,slow=9.3
AKASG Malin Array Be 41.04 56 P **P 21 08 40.2 +0.2**
0.5nm,0.5s,baz=276,slow=9.0,SNR=3.0
PDAR Pinedale Array 57.39 301 P **P 21 10 44.2 -1.2**
0.3nm,0.7s,baz=70,slow=8.8,SNR=3.2
TXAR Lajitas Array 60.04 284 P **P 21 11 05.2 +1.2**
0.3nm,0.6s,baz=75,slow=8.1,SNR=5.7
BVAR Borovoye Array 63.74 42 P **P 21 11 27.3 -1.0**
0.6nm,0.8s,baz=343,slow=4.5,SNR=3.4
KURBB Kurchatov Arra 69.22 40 P **P 21 12 02.0 -1.4**
1.1nm,0.8s,baz=314,slow=6.5,SNR=8.5
MKAR Makanchi Array 73.62 42 P **P 21 12 28.2 -1.9**
0.9nm,0.8s,baz=310,slow=5.7,SNR=9.9

*ISCJB **24** 21:12:21.5±0.7, 38°.82N±0°.05×43°.45E±0°.10, h13km, Error ellipse: s-maj=12.6km s-min=4.7km az=31.6*
*CSEM **24** 21:12:22.2, 38°.80N×43°.36E, h7km, ML2.6*
*DDA **24** 21:12:22.2, 38°.80N×43°.36E, h7km, Ml2.6*
ISC 24 21:12:22.0±1.3, 38°.81N±0°.04×43°.44E±0°.05, h13km, n12, σ1°.18/17, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VMUR	**Van-Muradiye**	**0.21**	**30**	*i* P	**Pg**	**21 12 27.0**	**+0.3**
VMUR				*i* S	**Sg**	**21 12 32.1**	**+2.1**
VMUR	**Van-Muradiye**	**0.21**	**30**	P	**Pg**	**21 12 27.0**	**+0.3**
VMUR				S	**Sg**	**21 12 32.1**	**+2.1**
VANB	**Van**	**0.22**	**191**	PG	**Pg**	**21 12 27.1**	**+0.2**
TVAN	**Van**	**0.28**	**186**	*i* P	**Pg**	**21 12 27.2**	**-0.8**
TVAN				*i* S	**Sg**	**21 12 32.3**	**+0.3**
TVAN	**Van**	**0.28**	**186**	P	**Pg**	**21 12 27.2**	**-0.8**
TVAN				S	**Sg**	**21 12 32.3**	**+0.3**
CLDR	**Caldiran**	**0.50**	**48**	PG	**Pg**	**21 12 30.9**	**-1.0**
CLDR				SG	**Sg**	**21 12 37.6**	**-1.0**
CLDR	**Caldiran**	**0.50**	**48**	*i* P	**Pg**	**21 12 30.6**	**-1.3**
CLDR	**Caldiran**	**0.50**	**48**	P	**Pg**	**21 12 30.6**	**-1.3**
ADCV	**BITLIS_Adilcev**	**0.56**	**270**	*i* P	**Pg**	**21 12 31.9**	**-1.2**
ADCV	**BITLIS_Adilcev**	**0.56**	**270**	P	**Pg**	**21 12 31.9**	**-1.2**
GEVA	**Gevas**	**0.58**	**211**	*i* P	**Pg**	**21 12 33.8**	**+0.4**
GEVA	**Gevas**	**0.58**	**211**	P	**Pg**	**21 12 33.8**	**+0.4**

IDC 24 21:28:26.5±9.6, 2°.33S×144°.49E, h0km, mb3.1/3, mb1 3.3/3, mb1mx3.1/44, mbtmp3.2/3, Error ellipse: s-maj=336.9km s-min=33.9km az=94.0, Ninigo Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.12**	**209**	P	P	21 33 02.3	+0.1
0.2nm,0.4s,baz=28,slow=10,SNR=6.3
ASAR Alice Springs 23.56 205 P P 21 33 39.0 +0.2
0.3nm,0.6s,baz=42,slow=9.9,SNR=3.2
MKAR Makanchi Array 73.10 321 P P 21 39 58.7 -0.1
0.2nm,0.4s,baz=106,slow=7.8,SNR=4.3

*ISCJB **24** 21:41:50.7±0.7, 6°.10S±0°.05×129°.44E±0°.08, h209km, mb3.2/1, Error ellipse: s-maj=10.8km s-min=6.8km az=12.9*
*IDC **24** 21:41:51.3±1.4, 6°.08S×129°.38E, h191km±19km, mb3.1/1, mb1 3.6/6, mb1mx3.2/59, mbtmp4.1/6, Error ellipse: s-maj=22.3km s-min=12.8km az=118.0*
ISC 24 21:41:51.2±0.9, 6°.19S±0°.07×129°.50E±0°.10, h209km, n6, σ1°.64/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.57**	**18**	P	**Pn**	**21 43 13.8**	**+0.7**
4.2nm,0.3s,baz=272,slow=22,SNR=20
SIJI S **S 21 44 14.8 -3.0**
10nm,0.3s,baz=252,slow=23,SNR=14
BATI Baumata 7.02 235 P **Pn 21 43 32.0 +0.1**
2.8nm,0.3s,baz=94,slow=14,SNR=3.2
BATI S **S 21 44 51.0 -0.9**
10nm,0.3s,baz=64,slow=21,SNR=9.6
WRA Warramunga Arr 14.46 161 P **Pn 21 45 07.3 +0.8**
0.3nm,0.3s,baz=341,slow=12,SNR=11
WRA S **S 21 47 44.6 -2.3**
0.6nm,0.3s,baz=349,slow=24,SNR=7.6
PMG Port Moresby 17.78 101 P **Pn 21 45 47.6 +1.2**
1.4nm,0.3s,baz=270,slow=4.0,SNR=3.0
ASAR Alice Springs 17.89 167 P **Pn 21 45 48.1 +0.5**
1.3nm,0.3s,baz=342,slow=9.5,SNR=88
ASAR S **S 21 48 59.3 -0.7**
0.1nm,0.3s,baz=343,slow=17,SNR=5.5
MKAR Makanchi Array 67.28 327 P **P 21 52 24.4 +0.9**
0.4nm,0.6s,baz=113,slow=7.7,SNR=5.0

*JMA **24** 21:42:41.8±0.3, 21°.34N×121°.62E, h0km, M4.1*
*TAP **24** 21:42:42.8, 21°.16N×121°.39E, h94km, ML3.8, D*
ISC 24 21:42:42.3±2.8, 21°.1N±0°.1×121°.43E±0°.05, h98km±13km, n53, σ1°.15/77, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.90**	**7**	*e*P	**Pn**	**21 43 01.8**	**+0.2**
baz=10.0
LAY *e*S **Sn 21 43 15.6 -0.3**
baz=10.0
TSEB Hengchuen, Pin 0.90 327 *e*P **Pn 21 43 02.1 +0.6**
baz=320
TSEB *e*S **Sn 21 43 16.7 +0.8**
baz=320
TWKBT Hengchun 0.98 324 *e*P **Pn 21 43 02.4 +0.1**
baz=321
TWKBT *e*S **Sn 21 43 17.2 -0.1**
baz=321
TWK1 Hengchun 0.98 324 *e*P **Pn 21 43 02.4 0.0**
baz=321
TWK1 *e*S **Sn 21 43 17.8 +0.3**
baz=321
HEN Hengchun 1.07 323 P **Pn 21 43 03.9 +0.5**
baz=318
HEN S **Sn 21 43 19.4 +0.3**
baz=318
TAW Tawu 1.30 338 *e*P **Pn 21 43 05.2 -0.8**
baz=348
TAW S **Sn 21 43 23.9 -0.1**
baz=348
EAST Anshuo 1.34 337 *e*P **Pn 21 43 06.2 -0.5**
baz=345
SCZT Fangliau 1.43 329 *e*P **Pn 21 43 08.8 +1.2**
baz=324
SCZT *e*S **Sn 21 43 26.7 -0.1**
baz=324
ECL Taimali 1.51 343 P **Pn 21 43 08.6 0.0**
baz=350
ECL *e*S **Sn 21 43 27.5 -1.0**
baz=350
TWH Lutao 1.56 2 *e*P **Pn 21 43 07.9 -1.3**
baz=3.0
TWH *e*S **Sn 21 43 27.3 -2.3**
baz=3.0
TTN Taitung 1.62 351 *e*P **Pn 21 43 11.4 +1.4**
baz=356
MASBT Mashibuluo 1.64 333 *e*P **Pn 21 43 10.8 +0.7**
baz=340
MASBT *e*S **Sn 21 43 30.9 -0.4**
baz=340
TWGBT Beinan 1.70 349 P **Pn 21 43 10.7 -0.3**
baz=345
TWG Pinlang 1.70 349 *e*P **Pn 21 43 11.2 +0.2**
baz=345
SSD Sandimen 1.76 335 P **Pn 21 43 11.9 +0.2**
baz=342
SSD *e*S **Sn 21 43 34.2 +0.2**
baz=342
CHKT Chengkung 1.95 358 *e*P **Pn 21 43 14.7 +0.6**
baz=352
CHKT *e*S **Sn 21 43 38.2 -0.1**
baz=352
FULB Fuli 2.05 357 *e*P **Pn 21 43 16.7 +1.2**
baz=348
ELDTW Lidau 2.07 350 *e*P **Pn 21 43 15.8 -0.1**
baz=354
SGST Jiashian 2.08 338 *e*P **Pn 21 43 17.6 +1.7**
baz=339
STYT Tauyuan 2.10 343 *e*P **Pn 21 43 17.4 +1.2**
baz=344
CHN1 Nanshi 2.19 338 *e*P **Pn 21 43 18.5 +1.1**
baz=348
TWF1 Yuli 2.20 357 *e*P **Pn 21 43 18.1 +0.7**
baz=352
WTP Ta-pu 2.22 340 *e*P **Pn 21 43 18.9 +1.1**
baz=341
YULB Yu-li 2.24 357 *e*P **Pn 21 43 17.8 -0.2**
baz=352
TPUB Ta-pu 2.27 341 *e*P **Pn 21 43 18.9 +0.5**
baz=342
TWK Hsinying 2.28 338 *e*P **Pn 21 43 19.6 +1.0**
baz=339
HGSD Ruisui 2.34 360 *e*P **Pn 21 43 20.0 +0.8**
baz=7.0
EHY Hungye 2.35 358 *e*P **Pn 21 43 20.1 +0.7**
baz=359
ALS Alishan 2.42 346 *e*P **Pn 21 43 21.8 +1.2**
baz=347
CHN5 Tsauling 2.54 344 *e*P **Pn 21 43 22.9 +1.0**
baz=345
VWDT VWDT 2.61 354 *e*P **Pn 21 43 24.2 +1.4**
baz=347
ESL Shilin 2.66 0 *e*P **Pn 21 43 23.6 +0.2**
baz=355
ESL *e*S **Sn 21 43 53.6 -1.4**
baz=355
SSLB Suanglung 2.67 351 *e*P **Pn 21 43 24.5 +0.9**
baz=351
WDGT Dungji 2.67 322 *e*P **Pn 21 43 23.1 -0.5**
baz=330
WDGT *e*S **Sn 21 43 54.1 -1.1**
baz=330
SMLT Sun Moon Lake 2.77 350 *e*P **Pn 21 43 26.2 +1.1**
baz=351
CHGB Renai 2.91 355 *e*P **Pn 21 43 28.4 +1.3**
baz=346
PHUB P'eng-hu 2.92 324 *e*P **Pn 21 43 26.2 -0.7**
baz=330
PHUB *e*S **Sn 21 43 59.1 -2.1**
baz=330
PNG Penghu 2.97 325 P **Pn 21 43 27.6 +0.1**
baz=331
PNG *e*S **Sn 21 44 00.6 -1.9**
baz=331
ENAH Nanao 3.31 6 *e*P **Pn 21 43 33.9 +1.7**
baz=6.0
ENTT Nioudou 3.48 2 *e*P **Pn 21 43 35.9 +1.4**
baz=3.0
YHNB Yeheng 3.51 359 *e*P **Pn 21 43 38.6 +3.7**
baz=351
NSK Sanguang 3.52 359 *e*P **Pn 21 43 37.3 +2.3**
baz=350
JYNG Yonaguni jima 3.58 23 P **Pn 21 43 36.9 +1.2**
JYNG S **Sn 21 44 17.1 0.0**
YOJ Yonaguni jima 3.61 24 *e*P **Pn 21 43 36.8 +0.6**
baz=24
YOJ Yonaguni jima 3.61 24 P **Pn 21 43 37.3 +1.1**
YOJ S **Sn 21 44 17.0 -0.9**
HATJ Hateruma jima 3.64 37 P **Pn 21 43 37.0 +0.4**
HATJ S **Sn 21 44 16.6 -1.9**
IRIF Iriomote-Funau 3.82 33 P **Pn 21 43 39.9 +0.9**
IRIF *e*S **Sn 21 44 23.4 +0.4**
JKRS Kuro-shima 3.89 37 P **Pn 21 43 41.3 +1.3**
JKRS S **Sn 21 44 23.7 -1.0**
JIJ Ishigaki jima 4.07 38 P **Pn 21 43 42.9 +0.5**
JIJ *e*S **Sn 21 44 28.1 -0.9**
JISG Ishigakijimahi 4.34 37 P **Pn 21 43 46.6 +0.6**
JISG S **Sn 21 44 35.6 +0.1**
JTJ Tarama 4.61 40 P **Pn 21 43 51.3 +1.6**
JTJ S **Sn 21 44 39.6 -2.4**
JIRB Irabujima 5.04 43 *e*S **Sn 21 44 50.6 -1.8**
JOGS Gusukube 5.14 45 *e*S **Sn 21 44 54.0 -0.9**

*IDC **24** 21:49:27.6±1.9, 36°.35N×71°.34E, h52km±17km, mb3.9/30, mb1 4.1/35, mb1mx3.9/87, mbtmp4.3/35, ML4.5/6, MS3.0/5, Ms1 3.0/5, ms1mx2.5/70, Error ellipse: s-maj=13.7km s-min=9.1km az=17.0*
*MOS **24** 21:49:32.4±1.0, 36°.57N×71°.39E, h102km, mb4.6/33, Error ellipse: s-maj=5.8km s-min=3.7km az=97.0*
*ISCJB **24** 21:49:32.5±0.1, 36°.47N±0°.02×71°.46E±0°.02, h114km, mb4.3/97, Error ellipse: s-maj=2.5km s-min=2.4km az=169.2*
*NEIC **24** 21:49:33.1±0.5, 36°.54N×71°.36E, h98km±5km, mb4.4/38, Error ellipse: s-maj=4.9km s-min=4.0km az=170.0*
*BJI **24** 21:49:35.8, 36°.61N×71°.75E, h106km, mb4.5/29, mB4.5/18*
*NNC **24** 21:49:36.7±2.2, 36°.84N×71°.10E, h151km±20km, mb4.3, mpv5.1, Error ellipse: s-maj=19.9km s-min=13.5km az=16.0*
ISC 24 21:49:33.8±0.3, 36°.51N±0°.03×71°.37E±0°.03, h114km, n320, σ2°.09/355, mb4.3/97, 28C-28D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.71**	**171**	P	**Pn**	**21 50 16.0**	**-0.3**
KBL	**Kabul**	**2.73**	**225**	*e*Pn	**Pn**	**21 50 15.1**	**-1.5**
KBL				*e*Sn	**Sn**	**21 50 47.5**	**-1.9**
KBL	**Kabul**	**2.73**	**225**	*e*PN	**Pn**	**21 50 15.1**	**-1.5**
CHCP	**Chirah Chowk**	**3.24**	**151**	P	**Pn**	**21 50 23.4**	**+0.3**
NIL	**Nilore**	**3.24**	**151**	*e*Pn	**Pn**	**21 50 23.4**	**+0.3**
NIL				*e*Sn	**Sn**	**21 50 59.5**	**-1.7**
NIL	**Nilore**	**3.24**	**151**	*e*PN	**Pn**	**21 50 23.4**	**+0.3**
THW	**Thamme Wali**	**3.72**	**175**	P	**Pn**	**21 50 28.1**	**-1.4**
SFK	**Sufi-Kurgan**	**3.88**	**25**	⇓P	**Pn**	**21 50 33.2**	**+1.4**
64nm,0.3s
SFK ⇓S **Sn 21 51 18.7 +2.0**
365nm,0.5s
SFK Sufi-Kurgan 3.88 25 *i* PN **Pn 21 50 33.4 +1.6**
SFK pmax pmax
comp=Z,64nm,0.3s
SARP Sargodha 4.70 166 P **Pn 21 50 41.5 -1.1**
KSH Kashi 4.71 49 P **Pn 21 50 38.8 -4.0**
KSH S Sn 21 51 26.0 -11
KSH smax smax
comp=Z,8μm,0.5s
KSH smax smax
comp=Z,5μm,0.7s
TAS Tashkent 5.08 342 ⇑P **Pn 21 50 45.9 -1.8**
comp=Z,181nm,0.4s
TAS ⇑S **Sn 21 51 41.4 -3.8**
comp=Z,168nm,0.3s

TAS	Tashkent	5.08	342	*i* PN	Pn	21 50 45.9	-1.8
TAS				pmax	pmax		
comp=Z,181nm,0.3s							
DHRM	DHARAMSHALA	5.88	135	*e*P	Pn	21 50 56.8	-2.0
DHRM				*e*S	Sn	21 51 59.7	-5.4
DHRM				IAML		21 52 03.8	
AML	Almayashu	5.89	17	P	Pn	21 50 59.0	0.0
SNR=203							
MNAS	Manas	6.03	8	⇓P	Pn	21 51 00.1	-0.6
comp=Z,102nm,0.5s							
MNAS				⇑S	Sn	21 52 06.7	-1.8
comp=Z,140nm,0.5s							
MNAS	Manas	6.03	8	*i* PN	Pn	21 51 00.1	-0.6
MNAS				pmax	pmax		
comp=Z,102nm,0.5s							
NRN	Naryn	6.10	35	*e*Pn	Pn	21 51 01.0	-0.7
NRN				*e*Sn	Sn	21 52 07.5	-2.7
NRN	Naryn	6.10	35	*e*PN	Pn	21 51 01.0	-0.7
UCH	Uchtor	6.21	22	P	Pn	21 51 03.3	0.0
SNR=179							
KZA	Kyzart	6.32	27	P	Pn	21 51 04.4	-0.4
SNR=85							
EKS2	Erkin-Say	6.42	16	P	Pn	21 51 05.9	+0.1
SNR=328							
AAK	Ala-Archa	6.58	21	⇓P	Pn	21 51 08.2	+0.2
comp=Z,93nm,0.4s							
AAK				⇑S	Sn	21 52 19.5	-2.2
comp=Z,323nm,0.8s							
AAK	Ala-Archa	6.58	21	P	Pn	21 51 08.5	+0.4
SNR=38							
AAK	Ala-Archa	6.58	21	*i* PN	Pn	21 51 08.2	+0.2
AAK				pmax	pmax		
comp=Z,87nm,0.4s							
KK31	Karatay Array	6.62	355	⇓P	Pn	21 51 07.2	-1.3
comp=Z,327nm,0.4s							
KK31				⇓S	Sn	21 52 16.5	-6.0
comp=Z,49nm,0.3s							
KK31	Karatay Array	6.62	355	*e*Pn	Pn	21 51 07.2	-1.3
KK31				*e*Sn	Sn	21 52 18.2	-4.2
KK31	Karatay Array	6.62	355	*e*PN	Pn	21 51 07.2	-1.3
KKAR	Karatay Array	6.62	355	*e*Pn	Pn	21 51 07.2	-1.3
KKAR				*e*Sn	Sn	21 52 17.1	-5.3
KKAR	Karatay Array	6.62	355	*e*PN	Pn	21 51 07.2	-1.3
KBK	Karagaybulak	6.73	23	P	Pn	21 51 10.5	+0.4
SNR=40							
FRU	Bishkek	6.79	21	⇓*i* PN	Pn	21 51 11.0	+0.2
FRU				pmax	pmax		
comp=Z,160nm,1.4s							
FRU				pmax	pmax		
comp=N,480nm,1.6s							
ULHL	Ulahol	6.86	32	P	Pn	21 51 12.2	+0.3
SNR=48							
CHMS	Chumysh	6.98	21	P	Pn	21 51 13.4	0.0
SNR=274							
USP	Ospenovka	7.16	19	P	Pn	21 51 15.2	-0.7
SNR=158							
TKM2	Tokmak 2	7.18	26	⇑P	Pn	21 51 16.2	-0.1
comp=N,58nm,0.5s							
TKM2	Tokmak 2	7.18	26	P	Pn	21 51 16.4	+0.2
SNR=251							
TKM2	Tokmak 2	7.18	26	*i* PN	Pn	21 51 16.2	-0.1
TKM2				pmax	pmax		
comp=Z,58nm,0.4s							
SMLA	Simla	7.21	136	*e*P	Pn	21 51 14.4	-2.1
SMLA				*e*S	Sn	21 52 30.4	-6.5
SMLA				IAML		21 52 34.9	
comp=E,855nm,0.6s							
SMLA				IAML		21 52 35.1	
comp=N,961nm,0.5s							
TARG	Taragay, Kyrgy	7.22	42	*e*Pn	Pn	21 51 17.3	+0.3
TARG				*e*Sn	Sn	21 52 36.4	-1.3
AAA	Alma-Ata	7.93	31	*e*PN	Pn	21 51 27.0	+0.7
AAA				pmax	pmax		
comp=Z,100nm,0.9s							
MDOK	Medeo	7.95	32	⇑P	Pn	21 51 26.6	0.0
comp=Z,30nm,0.6s							
PRZ	Przheval'sk	8.07	40	*e*Pn	Pn	21 51 29.1	+0.8
PRZ	Przheval'sk	8.07	40	*e*PN	Pn	21 51 29.1	+0.8
DDI	Dehra Dun	8.32	136	*e*P	Pn	21 51 30.6	-1.0
DDI				*ex*	x	21 52 55.7	
NDI	New Delhi	9.23	146	*e*P	Pn	21 51 42.0	-1.9
PDGK	Podgornoye	9.23	40	⇑P	Pn	21 51 29.6	-14
comp=Z,45nm,0.7s							
PDGK	Podgornoye	9.23	40	*i* P	Pn	21 51 43.3	-0.6
PDGK				pmax	pmax		
comp=Z,45nm,0.7s							
GEYT	Alibeck	10.67	282	P	Pn	21 51 57.6	-5.7
comp=Z,2.6nm,0.3s,baz=97,slow=9.9,SNR=61							
GEYT				S	Sn	21 53 49.6	-11
comp=Z,19nm,0.3s,baz=99,slow=9.3,SNR=12							
GYA0B	ALIBECK ARRAY	10.67	282	*e*Pn	Pn	21 51 57.8	-5.5
GYA0B				*e*Sn	Sn	21 53 47.7	-13
OTUK	Ortayu	11.75	3	⇓P	Pn	21 52 14.7	-3.0
comp=Z,44nm,0.6s							
OTUK	Ortayu	11.75	3	*i* P	Pn	21 52 14.7	-3.0
OTUK				pmax	pmax		
comp=Z,44nm,0.5s							
PYUN	Piuthan	12.91	127	*e*P	Pn	21 52 29.0	-4.2
comp=Z,66nm,0.5s							
MAKZ	Makanchi	12.98	34	⇑P	Pn	21 52 31.9	-1.9
comp=Z,33nm,0.9s							
MAKZ	Makanchi	12.98	34	*e*Pn	Pn	21 52 32.1	-1.6
MAKZ	Makanchi	12.98	34	*i* P	Pn	21 52 31.8	-1.9
MAKZ				pmax	pmax		
comp=Z,33nm,0.9s							
MK01	Makanchi Array	13.10	35	*e*Pn	Pn	21 52 33.4	-2.0
MK31	Makanchi Array	13.11	35	⇑P	Pn	21 52 34.1	-1.5
comp=Z,20nm,0.7s							
MK31	Makanchi Array	13.11	35	*e*Pn	Pn	21 52 34.4	-1.1
MK31	Makanchi Array	13.11	35	*i* P	Pn	21 52 34.0	-1.5
MK31				pmax	pmax		
comp=Z,20nm,0.7s							
MK32	Makanchi Array	13.11	35	*e*Pn	Pn	21 52 33.7	-1.8
MKAR	Makanchi Array	13.11	35	P	Pn	21 52 33.7	-1.8
comp=Z,0.7nm,0.3s,baz=219,slow=11,SNR=68							
MKAR	Makanchi Array	13.11	35	*e*Pn	Pn	21 52 34.4	-1.1
MKAR	Makanchi Array	13.11	35	*e*P	Pn	21 52 34.4	-1.1
DANN	Dangsing	13.24	124	*e*P	Pn	21 52 33.7	-3.9
comp=Z,29nm,0.3s							
BHJ	Bhuj	13.29	187	*e*P	Pn	21 52 34.1	-3.9
BHJ				*ex*	x	21 54 48.0	
BHJ				IAML		21 54 59.6	
comp=E,44nm,0.6s							
BHJ				IAML		21 54 59.6	
comp=N,37nm,0.3s							
KOLN	Koldanda	13.53	127	*e*P	Pn	21 52 38.0	-3.2
comp=N,46nm,0.4s							
GKN	Gorkha	14.06	123	*e*P	Pn	21 52 44.1	-3.9
comp=N,95nm,0.4s							
BHPL	Bhopal	14.22	157	*ex*	Pn	21 52 43.9	-6.1
WMQ	Urumqi	14.45	55	P	Pn	21 52 51.6	-1.2
WMQ				S	Sn	21 55 34.1	+1.9
WMQ				pmax	pmax		
comp=N,40nm,1.3s							
WMQ				pmax	pmax		
comp=N,140nm,3.7s							
WMQ				LR	LR		
comp=N,190nm,5.3s							
WMQ				LR	LR		
comp=N,220nm,5.9s							
WMQ				LR	LR		
comp=N,35nm,17.1s							
DMN	Daman	14.63	123	*e*P	Pn	21 52 51.9	-3.5
comp=N,25nm,0.3s							
KKN	Kakani	14.63	123	*e*P	Pn	21 52 50.9	-4.5
comp=N,49nm,0.4s							
PKIN	Phulchoki	14.84	123	*e*P	Pn	21 52 54.7	-3.4
comp=N,58nm,0.5s							
GUN	Gumba	14.96	121	*e*P	Pn	21 52 56.6	-3.1
comp=N,32nm,0.3s							
KURBB	Kurchatov Arra	15.02	18	P	Pn	21 52 56.8	-3.1
comp=N,0.8nm,0.3s,baz=206,slow=11,SNR=24							
KURBB				S	S	21 55 52.9	-2.5
comp=N,0.0nm,0.3s,baz=197,slow=9.7,SNR=4.2							
KURBB	Kurchatov Arra	15.02	18	⇑P	Pn	21 52 55.4	-4.5
comp=N,18nm,0.5s							
KURK	Kurchatov	15.13	18	⇑P	Pn	21 52 57.3	-4.0
comp=N,14nm,0.7s							
KURK	Kurchatov	15.13	18	*e*Pn	Pn	21 52 57.4	-3.8
KURK				*e*Sn	S	21 55 52.9	-4.6
KURK	Kurchatov	15.13	18	*de*P	Pn	21 52 56.9	-4.3
KURK				pmax	pmax		
comp=Z,4.0nm,1.0s							
AB31	Akbulak array	15.22	330	⇓P	Pn	21 52 58.7	-3.7
comp=Z,11nm,0.3s							
AB31				⇑S	Sn	21 55 35.6	-15
comp=Z,9.2nm,0.4s							
AB31	Akbulak array	15.22	330	*i* P	Pn	21 52 58.7	-3.7
AB31				pmax	pmax		
comp=Z,11nm,0.3s							
ABKAR	Akbulak array	15.22	330	*e*Pn	Pn	21 52 58.5	-3.9
ABKAR				*e*Sn	Sn	21 55 35.4	-15
JIRN	Jiri	15.33	121	*e*P	Pn	21 53 01.5	-2.9
comp=Z,100nm,0.3s							
JIRN				*e*S	Sn	21 55 40.5	-14
RAMN	Ramite	16.06	122	*e*P	Pn	21 53 10.1	-3.3
comp=Z,64nm,0.5s							
BVA0	Borovoye Array	16.53	358	⇓P	Pn	21 53 15.8	-2.8
comp=Z,12nm,0.7s,baz=164,slow=14,SNR=147							
BVA0	Borovoye Array	16.53	358	P	Pn	21 53 15.8	-2.8
BVA0				pmax	pmax		
comp=Z,12nm,0.7s							
BVAR	Borovoye Array	16.53	358	P	Pn	21 53 16.3	-2.3
comp=Z,2.8nm,0.3s,baz=158,slow=14,SNR=54							
BVAR				S	S	21 56 24.6	-1.0
comp=Z,0.2nm,0.3s,baz=165,slow=24,SNR=3.0							
BRVK	Borovoye	16.57	358	⇑P	Pn	21 53 16.2	-2.9
comp=Z,13nm,0.6s							
BRVK	Borovoye	16.57	358	*e*Pn	Pn	21 53 16.7	-2.4
comp=Z,18nm,0.6s							
BRVK				*e*Sn	Sn	21 56 15.9	-7.0
BRVK	Borovoye	16.57	358	*ce*P	Pn	21 53 16.8	-2.3
BRVK				pmax	pmax		
comp=Z,48nm,1.7s							
TAPN	Taplejung	16.59	119	*e*P	Pn	21 53 16.4	-3.4
comp=Z,52nm,0.4s							
BANOM	Banah	16.64	235	P	Pn	21 53 18.9	-1.3
SHME	Shamm	16.66	236	P	Pn	21 53 19.8	-0.7
ODAN	Odare	16.66	121	*e*P	Pn	21 53 18.4	-2.3
comp=Z,47nm,0.5s							
NGP	Nagpur	16.70	154	⇓*e*P	Pn	21 53 21.1	+0.1
NGP				*ex*	x	21 56 08.8	
AKTO	Aktyubinsk	16.92	330	P	Pn	21 53 21.1	-2.4
comp=Z,6.0nm,0.3s,baz=142,slow=9.1,SNR=54							
AKTO				S	Sn	21 56 18.8	-13
comp=Z,1.0nm,0.3s,baz=73,slow=19,SNR=5.4							
AKTO				LR	LR	22 01 05.9	
comp=Z,13nm,18.5s,baz=150,slow=41							
AKTO	Aktyubinsk	16.92	330	⇑P	Pn	21 53 21.5	-2.0
comp=Z,26nm,0.6s							
AKTO				⇓S	Sn	21 56 15.2	-16
comp=Z,15nm,0.6s							
AKTO	Aktyubinsk	16.92	330	*i* P	Pn	21 53 21.4	-2.0
AKTO				pmax	pmax		
comp=Z,27nm,0.6s							
MSFE	Esma-Masafi	17.12	234	P	P	21 53 25.7	-0.2
WSAR	Wadi Sarin	17.21	223	P	Pn	21 53 28.3	+1.1
comp=Z,0.5nm,0.3s,baz=65,slow=6.8,SNR=7.1							
GTK	Tadong	17.24	117	*e*P	P	21 53 24.7	-2.7
UOSS	Minazif	17.38	233	*e*P	Pn	21 53 30.5	+1.3
comp=Z,8.8nm,1.1s							
UOSS	Minazif	17.38	233	P	Pn	21 53 29.4	+0.2
HATD	Hatta, Dubai	17.51	233	P	Pn	21 53 30.9	+0.1
DGZ	Jazzator, Alta	17.59	36	*i* P	P	21 53 30.6	-0.5
SOHO	SOHO	17.75	230	P	Pn	21 53 33.8	+0.1
BOK	Bokaro	17.81	131	*e*P	P	21 53 33.3	-0.3
LSA	Lhasa	17.89	107	*e*P	P	21 53 35.3	+0.4
comp=Z,11nm,0.9s							
LSA				*e*S	S	21 56 37.1	-18
LSA	Lhasa	17.89	107	P	P	21 53 35.2	+0.4
LSA	Lhasa	17.89	107	*e*P	P	21 53 35.3	+0.4
LSA				pmax	pmax		
comp=Z,11nm,0.9s							
ASUD	Al Ashush, Dub	18.17	234	P	P	21 53 38.2	+0.8
ALNE	Al Ain	18.30	232	P	Pn	21 53 40.0	-0.3
AKT	Akhty	19.02	292	*e*P	P	21 53 47.0	+0.3
AKT				*e*S	S	21 57 15.3	-1.2
AKT				pmax	pmax		
comp=Z,7.0nm,0.4s							
AKT				smax	smax		
comp=E,47nm,0.6s							
AKT				smax	smax		
comp=N,42nm,0.6s							
ZAA0	Zalesovo Array	19.78	24	⇓P	P	21 53 54.8	0.0
comp=N,35nm,0.7s							
ZAA0	Zalesovo Array	19.78	24	*e*P	P	21 53 54.8	0.0
comp=N,32nm,0.6s							
ZALV	Zalesovo Beam	19.78	24	P	P	21 53 54.8	+0.1
comp=N,8.8nm,0.3s,baz=228,slow=11,SNR=125							
ZALV				S	S	21 57 27.4	-3.9
baz=225,slow=14,SNR=2.4							
ZALV	Zalesovo Beam	19.78	24	*e*P	P	21 53 54.5	-0.2
ZAA1	Zalesovo Array	19.79	24	*e*P	P	21 53 54.8	0.0
ZAA1				*e*S	S	21 57 27.4	-3.9
HYB	Hyderabad	20.05	160	*i* P	Pn	21 54 00.0	-0.8
HYB				*e*S	S	21 57 31.0	-6.2
HYB	Hyderabad	20.05	160	*e*P	P	21 53 56.2	-1.8
NVS	Novosibirsk	20.07	20	⇑*i* P	P	21 53 57.8	0.0
NVS				*e*S	S	21 57 33.5	-3.4
NVS				pmax	pmax		
comp=N,21nm,0.5s							
NVS				pmax	pmax		
comp=E,8.0nm,0.5s							
NVS				pmax	pmax		
comp=Z,30nm,0.5s							
NVS				smax	smax		
comp=N,8.0nm,1.3s							
NVS				smax	smax		
comp=E,13nm,1.3s							
GROC	Groznyy	20.70	297	*e*P	P	21 54 05.7	+1.0
GROC				*e**SP	sP	21 54 38.4	-1.8
GROC				*e*S	S	21 57 49.5	0.0
GROC				*e**SS	sS	21 58 23.0	-1.8
GROC				pmax	pmax		
comp=Z,22nm,0.9s							
GNI	Garni	21.18	288	P	P	21 54 09.8	-0.3
comp=Z,17nm,0.7s,baz=6.9,slow=6.6,SNR=14							
GNI	Garni	21.18	288	*e*P	P	21 54 11.8	+1.7
GNI	Garni	21.18	288	*i* P	P	21 54 12.3	+2.3
SNR=11							
GNI	Garni	21.18	288	*de*P	P	21 54 12.4	+2.3
GNI				pmax	pmax		
comp=Z,133nm,1.2s							
TBLG	Delisi	21.27	292	*e*P	P	21 54 13.0	+2.0
comp=Z,16nm,0.9s							
TBLG	Delisi	21.27	292	*e*P	P	21 54 13.0	+2.0
TBLG				pmax	pmax		
comp=Z,16nm,0.9s							
SVE	Sverdlovsk	21.57	344	*ce*P	P	21 54 13.8	-0.1
SVE				pmax	pmax		
comp=Z,23nm,0.6s							
HVS	Khovu-Aksy	21.64	40	*i* P	P	21 54 15.9	+1.1
HVS				pmax	pmax		
comp=Z,15nm,0.9s							
ARU	Arti	21.72	341	P	P	21 54 15.5	0.0
comp=Z,11nm,0.4s,baz=124,slow=5.1,SNR=23							
ARU				S	S	21 58 07.7	-1.2
comp=Z,1.4nm,0.5s,baz=131,slow=20,SNR=2.0							
ARU				LR	LR	22 03 34.6	
comp=Z,44nm,18.1s,baz=88,slow=39							
ARU	Arti	21.72	341	*e*P	P	21 54 14.6	-0.9
comp=Z,21nm,0.9s							
ARU				*e*S	S	21 58 07.7	-1.2
ARU	Arti	21.72	341	*d i* P	P	21 54 15.2	-0.3
ARU				S	S	21 58 08.9	+0.1
ARU				SS	SnSn	21 58 43.6	-1.0
ARU				pmax	pmax		
comp=Z,35nm,1.2s							
MOKO	MOKOCHONG	22.16	111	*e*P	P	21 54 21.0	+0.5
AKH	Akhalkalaki	22.18	291	*e*P	P	21 54 23.2	+2.5
comp=Z,18nm,1.1s							
AKH	Akhalkalaki	22.18	291	*e*P	P	21 54 23.2	+2.5
AKH				pmax	pmax		
comp=Z,18nm,1.1s							
NCK	Nalchik	22.33	297	*i* P	P	21 54 22.4	+0.4
NCK				pmax	pmax		
comp=Z,12nm,1.0s							
GTA	Gaotai	22.57	74	*e*P	P	21 54 27.6	+2.9
GTA				pmax	pmax		
comp=Z,34nm,0.8s							
KBZ	Khabaz	22.86	297	P	P	21 54 27.0	-0.3
comp=Z,2.1nm,0.6s,baz=76,slow=7.8,SNR=6.8							
KBZ				S	S	21 58 33.7	+5.7
comp=Z,3.1nm,0.8s,baz=100,slow=11,SNR=3.5							
NEY	Neytrino	22.92	296	*i* P	P	21 54 29.6	+1.5
KVAR	Kislovodsk Arr	23.04	298	P	P	21 54 29.3	+0.2
comp=Z,2.9nm,0.6s,baz=75,slow=20,SNR=5.9							
KVAR				S	S	21 58 38.8	+7.7
comp=Z,4.8nm,0.8s,baz=41,slow=20,SNR=5.1							
KVAR				LR	LR	22 05 44.3	
comp=Z,23nm,20.1s,baz=292,slow=42							
KIV	Kislovodsk	23.05	298	*e*P	P	21 54 29.1	-0.1
comp=Z,16nm,0.6s							
KIV				*e*S	S	21 58 38.8	+7.6
KIV	Kislovodsk	23.05	298	*e*P	P	21 54 30.5	+1.3
KIV				*e*S	S	21 58 33.0	+1.8
KIV				pmax	pmax		
comp=Z,6.0nm,0.7s							
KIV				MLR	MLR		
comp=Z,13nm,14.0s							
KNGR	Kungurtug, Tuv	23.45	45	⇑*i* P	P	21 54 35.2	+2.3
SOC	Sochi	25.14	296	*e*P	P	21 54 50.2	+2.1
SOC				*e*S	S	21 59 09.5	+5.0
SOC				pmax	pmax		
comp=Z,10.0nm,0.5s							
RAYN	Ar Rayn	25.78	247	*e*P	P	21 54 56.6	+2.5
comp=Z,4.1nm,0.6s							
RAYN	Ar Rayn	25.78	247	*i* P	P	21 54 54.1	0.0
SNR=6.2							
RAYN	Ar Rayn	25.78	247	P	P	21 54 56.6	+2.5
RAYN				pmax	pmax		
comp=Z,5.0nm,0.8s							
MOY	Mondy	25.89	45	*e*P	P	21 54 59.8	+4.9
LZH	Lanzhou	26.11	81	*e*P	P	21 54 58.8	+1.6
LZH				pP	pP	21 55 24.1	+2.3
LZH				sP	sP	21 55 35.3	+0.2
LZH				*e*PP	PnPn	21 55 44.5	+1.9
LZH				pmax	pmax		
comp=Z,68nm,1.1s							
LZH				pmax	pmax		
comp=Z,180nm,5.4s							
LZH				LR	LR		
comp=Z,260nm,13.0s							
LZH				LR	LR		
comp=Z,270nm,13.3s							
LZH				LR	LR		
comp=Z,320nm,15.7s							
ZAK	Zakamensk	26.76	49	*e*P	P	21 55 03.8	+1.1
ZAK				pmax	pmax		
comp=Z,5.0nm,0.8s							
VORD	Divnogorie	27.06	312	*e*P	P	21 55 05.3	+0.1
VORD				pmax	pmax		
comp=Z,4.0nm,0.5s							
VSR	Storozhevoye	27.22	313	*e*P	P	21 55 07.1	+0.4
VSR				pmax	pmax		
comp=Z,10.0nm,1.0s							
TLY	Talaya	27.42	46	*i* P	P	21 55 10.2	+1.7
CD2	Chengdu	27.43	92	P	P	21 55 09.4	+0.5
CD2				pmax	pmax		
comp=Z,10.0nm,0.6s							
SONA0	Songino Array	28.08	55	*e*P	P	21 55 16.3	+1.7
SONM	Songino Array	28.08	55	P	P	21 55 16.3	+1.7
comp=Z,1.5nm,0.6s,baz=266,slow=8.8,SNR=10							
SONA1	Songino Array	28.09	55	*e*P	P	21 55 16.6	+1.9
ULN	Ulaanbaatar	28.52	55	*ce*P	P	21 55 20.4	+1.8
ULN				pmax	pmax		
comp=Z,4.0nm,2.5s							
KMI	Kunming	29.11	104	P	P	21 55 28.4	+4.4
KMI				pmax	pmax		
comp=Z,6.0nm,1.3s							
BR101	Keskin Array S	29.72	288	*e*P	P	21 55 30.4	+1.1
BRTR	Keskin Array B	29.72	288	P	P	21 55 30.4	+1.1
comp=Z,0.5nm,0.6s,baz=103,slow=8.1,SNR=4.7							
PRGR	Permogore	29.89	335	*e*P	P	21 55 30.5	+0.3
PRGR				pmax	pmax		
comp=Z,20nm,0.8s							
OBN	Obninsk	30.13	319	P	P	21 55 33.2	+0.8
comp=Z,73nm,0.5s,baz=135,slow=1.4,SNR=8.5							
OBN	Obninsk	30.13	319	*e*P	P	21 55 33.4	+1.0
comp=Z,20nm,0.5s							
OBN	Obninsk	30.13	319	*d i* P	P	21 55 33.2	+0.8
OBN				*e**PP	pP	21 55 53.6	-3.8
OBN				*e*S	S	22 00 16.6	-6.1
OBN				*e*SS	SnSn	22 02 07.6	-0.9
OBN				pmax	pmax		
comp=Z,20nm,0.6s							
CM31	Chiang Mai Arr	30.20	119	*e*P	P	21 55 34.2	+0.8
CMAR	Chiang Mai Arr	30.20	119	P	P	21 55 34.2	+0.8
comp=Z,0.6nm,0.3s,baz=301,slow=8.2,SNR=5.1							
XAN	Xi'an	30.63	83	P	P	21 55 38.6	+1.4
XAN				pmax	pmax		
comp=Z,5.0nm,1.0s							
XAN				pmax	pmax		
comp=Z,140nm,3.9s							
HHC	Hu-ho-hao-te	31.48	70	*e*P	P	21 55 46.3	+1.6
HHC				S	S	22 00 48.6	+4.2
HHC				pmax	pmax		
comp=Z,14nm,1.0s							
HHC				pmax	pmax		
comp=Z,77nm,3.8s							
HHC				LR	LR		
comp=Z,370nm,10.4s							
HHC				LR	LR		
comp=Z,370nm,10.4s							
HHC				LR	LR		
comp=Z,440nm,9.5s							
GYA	Guiyang	31.57	98	*e*P	P	21 55 47.8	+2.2
GYA				pmax	pmax		
comp=Z,10.0nm,0.8s							
KLMR	Klimovskoe	31.62	330	*e*P	P	21 55 45.5	0.0
KLMR				pmax	pmax		
comp=Z,14nm,0.9s							
KLMR	Klimovskoe	31.62	330	*e*P	P	21 55 45.5	0.0
KLMR				AMP		21 55 46.6	
comp=Z,14nm,0.9s							
AKASG	Malin Array Be	33.17	309	P	P	21 55 59.7	+0.5
comp=Z,3.3nm,0.5s,baz=81,slow=7.2,SNR=18							
AKBB	Malin Array Si	33.17	309	*e*P	P	21 55 59.9	+0.7
comp=Z,6.1nm,0.6s							
AKBB	Malin Array Si	33.17	309	*e*P	P	21 55 59.9	+0.7
AKBB				pmax	pmax		
comp=Z,6.0nm,0.6s							
KIEV	Kiev	33.18	309	*e*P	P	21 55 59.8	+0.5
comp=Z,6.0nm,0.6s							
KIEV	Kiev	33.18	309	*i* P	P	21 55 59.7	+0.4
SNR=7.3							
KIEV	Kiev	33.18	309	*i* P	P	21 55 59.0	-0.3
KIEV				pmax	pmax		
comp=Z,2.0nm,0.8s							
AK11	Malin Array Si	33.21	309	*e*P	P	21 56 00.1	+0.6
SORM	Soroca	33.45	304	⇓*i* P	P	21 56 02.5	+0.9
SORM	Soroca	33.45	304	⇓P	P	21 56 02.5	+0.9
TMCR	Tamitsa	34.17	335	*e*P	P	21 56 08.9	+1.3
TMCR				pmax	pmax		
comp=Z,26nm,0.6s							
TESR	Tescani	34.54	301	⇑*i* P	P	21 56 12.1	+1.0
MLR	Muntele Rosu	35.04	299	P	P	21 56 17.2	+1.6
comp=Z,2.1nm,0.9s,baz=80,slow=17,SNR=15							
MLR	Muntele Rosu	35.04	299	⇓*i* P	P	21 56 18.6	+3.0
MLR	Muntele Rosu	35.04	299	⇓P	P	21 56 18.7	+3.1
DOPR	Dopca	35.42	300	⇑*i* P	P	21 56 20.6	+1.9
BURAR	Bucovina Array	35.53	303	⇓*i* P	P	21 56 21.4	+1.7
BURAR	Bucovina Array	35.53	303	⇓P	P	21 56 21.4	+1.7
BUR04	Bucovina Ar. S	35.54	303	*e*P	P

NIE	Niedzica	38.81 306	*e*P		P		21 56 49.8 +2.4
NIE	Niedzica	38.81 306	*e*P		P		21 56 49.8 +2.4
OUL	Oulu	39.11 331	P		P		21 56 51.1 +1.6
OUL			pmax	pmax			
	comp=Z,15nm,0.7s						
OJC	Ojcow	39.14 307	*e*P		P		21 56 50.9 +0.9
	comp=Z,4.3nm,0.9s						
OJC	Ojcow	39.14 307	*e*P		P		21 56 50.9 +0.9
OJC			pmax	pmax			
	comp=Z,4.0nm,0.9s						
NJ2	Nanjing	39.17 82	*e*P		P		21 56 51.3 +0.8
NJ2			pmax	pmax			
	comp=Z,13nm,0.5s						
DIVS	Divibare	39.37 297	*e*P		P		21 56 52.4 +0.3
	comp=Z,3.7nm,1.0s						
VAF	Ylistaro	39.68 328	P		P		21 56 56.3 +2.0
VAF			pmax	pmax			
	comp=Z,12nm,0.8s						
SGF	Sodankyl	39.92 335	P		P		21 56 58.2 +1.9
SGF			pmax	pmax			
	comp=Z,14nm,0.8s						
MORC	Moravsky Berou	40.60 306	‖ *i*P		P		21 57 03.8 +1.7
MORC	Moravsky Berou	40.60 306	*e*P		P		21 57 03.2 +1.1
	comp=Z,2.7nm,0.7s						
MORC	Moravsky Berou	40.60 306	‖P		P		21 57 03.8 +1.7
MORC	Moravsky Berou	40.60 306	*e*P		P		21 57 03.9 +1.8
KEV	Kevo	40.91 338	*e*P		P		21 57 05.0 +0.7
	comp=Z,10nm,0.8s						
KEV	Kevo	40.91 338	*e*P		P		21 57 05.0 +0.7
KEV			pmax	pmax			
	comp=Z,10.0nm,0.8s						
VRAC	Vranov	41.24 306	P		P		21 57 09.4 +2.0
	comp=Z,2.1nm,0.6s,baz=89,slow=11,SNR=4.4						
VRAC	Vranov	41.24 306	*e*P		P		21 57 09.2 +1.9
ARA0	ARCESS Array S	41.25 337	*e*P		P		21 57 08.6 +1.4
ARCES	ARCESS Array B	41.25 337	P		P		21 57 08.6 +1.4
	comp=Z,12nm,0.7s,baz=111,slow=8.4,SNR=63						
ARE0	ARCESS Array S	41.25 337	*e*P		P		21 57 08.7 +1.5
	comp=Z,13nm,0.8s						
CN2	Changchun	41.34 63	*e*P		P		21 57 10.5 +2.3
CN2			pmax	pmax			
	comp=Z,10.0nm,0.6s						
DPC	Dobruska-Polom	41.37 307	*e*P		P		21 57 10.5 +2.1
DPC			*ex*	x			21 57 17.4
DPC			*ex*	x			21 57 21.2
DPC	Dobruska-Polom	41.37 307	*e*P		P		21 57 10.5 +2.1
CONA	Conrad Observa	41.82 304	*e*P		P		21 57 13.9 +1.7
	comp=Z,7.6nm,1.4s						
SOKA	Soboth	42.52 302	*e*P		P		21 57 19.5 +1.6
	comp=Z,3.8nm,0.6s						
BRG	Berggiesshubel	42.85 308	*e*P		P		21 57 22.2 +1.8
	comp=Z,3.6nm,0.6s						
BRG	Berggiesshubel	42.85 308	*e*P		P		21 57 22.2 +1.8
BRG			pmax	pmax			
	comp=Z,4.0nm,0.6s						
MOA	Molln	42.90 304	*e*P		P		21 57 22.2 +1.4
	comp=Z,2.8nm,0.8s						
GEC2	GERESS Array S	43.17 305	*e*P		P		21 57 24.3 +1.2
	comp=Z,4.5nm,1.4s						
GERES	GERESS Array B	43.17 305	P		P		21 57 24.3 +1.2
	comp=Z,0.6nm,0.7s,baz=134,slow=7.6,SNR=5.4						
GEA0	GERESS Array S	43.17 305	*e*P		P		21 57 24.2 +1.1
KHC	Kasperske Hory	43.22 306	*e*P		P		21 57 25.5 +2.0
KHC	Kasperske Hory	43.22 306	*e*P		P		21 57 24.2 +0.7
	comp=Z,1.4nm,1.2s						
KHC	Kasperske Hory	43.22 306	*e*P		P		21 57 25.5 +2.0
HFS	Hagfors	43.24 322	P		P		21 57 24.2 +0.8
	comp=Z,5.8nm,0.4s,baz=96,slow=12,SNR=47						
CLL	Collm	43.42 309	*e*P		P		21 57 26.0 +1.1
CLL			*e*				21 57 31.0
CLL	Collm	43.42 309	*e*P		P		21 57 26.0 +1.1
MOR8	Moi Rana	43.96 331	*e*P		P		21 57 29.7 +0.6
STEI	Steigen	44.10 333	*e*P		P		21 57 30.6 +0.5
ABTA	Abfaltersbach	44.23 302	*e*P		P		21 57 32.1 +0.5
	comp=Z,1.4nm,0.7s						
NC405	NORSAR Array S	44.32 323	*e*P		P		21 57 32.1 +0.1
NC602	NORSAR Array S	44.37 323	*e*P		P		21 57 32.5 +0.1
NC303	NORSAR Array S	44.50 323	*e*P		P		21 57 34.5 +1.1
NB201	NORSAR Array S	44.52 323	*e*P		P		21 57 33.9 +0.3
KONS	Konsvik	44.55 331	*e*P		P		21 57 34.3 +0.6
NB2	NORSAR Subarra	44.55 323	P		P		21 57 34.4 +0.5
	comp=Z,4.3nm,0.6s,baz=94,slow=7.9						
NB2	NORSAR Subarra	44.55 323	P		P		21 57 34.4 +0.5
	baz=94,slow=7.9						
KS01	Wonju Array Si	44.56 71	*e*P		P		21 57 35.6 +1.4
KS15	Wonju Array Si	44.57 71	*e*P		P		21 57 35.6 +1.3
KSAR	Wonju Array Be	44.57 71	P		P		21 57 35.6 +1.3
KSAR	Wonju Array Be	44.57 71	P		P		21 57 35.6 +1.3
KSRS	Korea Array	44.59 71	P		P		21 57 35.6 +1.1
	comp=Z,2.8nm,1.0s,baz=287,slow=8.4,SNR=5.4						
NAO01	NORSAR Array S	44.70 323	*e*P		P		21 57 35.9 +0.9
NBO00	NORSAR Array S	44.77 323	*e*P		P		21 57 36.4 +0.8
NC204	NORSAR Array S	44.79 323	*e*P		P		21 57 36.8 +0.9
MOTA	Moosalm	45.09 304	*e*P		P		21 57 37.2 -1.3
	comp=Z,1.5nm,0.6s						
KONO	Kongsberg	45.27 321	*e*P		P		21 57 39.1 -0.4
	comp=Z,20nm,1.3s						
KONO	Kongsberg	45.27 321	*e*P		P		21 57 39.1 -0.4
KONO			pmax	pmax			
	comp=Z,20nm,1.3s						
RETA	Reutte	45.30 304	*e*P		P		21 57 40.0 0.0
	comp=Z,1.0nm,0.4s						
FETA	Feichten	45.39 303	*e*P		P		21 57 41.2 +0.3
	comp=Z,0.8nm,0.5s						
TIXI	Tiksi	45.65 22	P		P		21 57 43.2 +0.8
	comp=Z,3.4nm,0.3s,baz=257,slow=5.1,SNR=8.7						
TIXI	Tiksi	45.65 22	*e*P		P		21 57 42.4 0.0
	comp=Z,6.0nm,0.9s						
FUORN	Ofenpass-Fuorn	45.78 303	*e*P		P		21 57 44.5 +0.4
	comp=Z,7.6nm,1.4s						
DAVA	Damuels	45.92 304	*e*P		P		21 57 46.1 +1.0
	comp=Z,6.7nm,0.5s						
DAVOX	Davos/Dischmat	46.01 303	P		P		21 57 46.3 +0.5
	comp=Z,4.0nm,0.8s,baz=96,slow=9.2,SNR=6.6						
SPA0	Spitsbergen Ar	47.55 347	*e*P		P		21 57 59.1 +1.9
SPITS	Spitsbergen Ar	47.55 347	P		P		21 57 59.1 +1.9
	comp=Z,1.7nm,0.5s,baz=79,slow=7.5,SNR=5.1						
SPITS			LR	LR			22 23 11.5
	comp=Z,25nm,19.1s,baz=175,slow=42						
SENIN	Lac Senin/Sane	47.84 303	*e*P		P		21 58 01.0 +1.0
	comp=Z,5.0nm,1.0s						
JOW	Kunigami	48.77 84	*e*P		P		21 58 07.7 +0.5
	comp=Z,45nm,1.2s						
EKA	Eskdalemuir Ar	52.49 316	P		P		21 58 35.2 +0.5
	comp=Z,0.7nm,0.5s,baz=59,slow=6.8,SNR=8.7						
MAJO	Matsushiro	52.67 69	*e*P		P		21 58 38.3 +1.9
MAJO	Matsushiro	52.67 69	*e*P		P		21 58 38.3 +1.9
MJAR	Matsushiro Arr	52.67 69	P		P		21 58 38.3 +1.9
	comp=Z,1.6nm,0.9s,baz=287,slow=12,SNR=4.2						
DAG	Danmarks Havn	54.81 344	*i* P		P		21 58 52.9 +1.6
	comp=Z,4.6nm,0.7s						
DAG	Danmarks Havn	54.81 344	*i* P		P		21 58 52.9 +1.6
DAG			pmax	pmax			
	comp=Z,5.0nm,0.7s						
ESDC	Sonseca Array	57.72 298	P		P		21 59 13.5 +0.9
	comp=Z,0.4nm,0.5s,baz=49,slow=7.6,SNR=5.6						
BILL	Bilibino	58.47 26	‖ *e*P		P		21 59 19.1 +1.8
BILL			*e**PP		pP		21 59 42.9 -1.9
BILL			*e*				22 01 25.6
BILL			pmax	pmax			
	comp=Z,1.0nm,0.8s						
SUMG	Summit	61.15 341	*i* P		P		21 59 38.2 +2.1
	comp=Z,8.4nm,0.6s						
SUMG	Summit	61.15 341	*e*P		P		21 59 37.9 +1.8
	comp=Z,8.8nm,0.6s						
SUMG	Summit	61.15 341	*i* P		P		21 59 38.2 +2.1
SUMG			pmax	pmax			
	comp=Z,8.0nm,0.6s						
TOA1	Torodi Ar. Sit	66.02 269	*e*P		P		22 00 07.1 -1.3
TOA0	Torodi Ar. Sit	66.02 269	*e*P		P		22 00 07.2 -1.3
TORD	Torodi Ar. Bea	66.02 269	P		P		22 00 07.1 -1.3
	comp=Z,2.2nm,0.5s,baz=50,slow=6.1,SNR=43						
KOWA	Kowa	69.87 273	*e*P		P		22 00 30.9 -1.7
	comp=Z,5.2nm,1.1s						
TOLK	Toolik Lake Re	70.84 15	*e*P		P		22 00 39.6 +1.9
	comp=Z,5.1nm,0.9s						
COLD	Coldfoot	71.88 16	*e*P		P		22 00 45.8 +1.9
	comp=Z,4.4nm,1.0s						
MLY	Manley	73.58 17	*e*P		P		22 00 55.9 +1.9
	comp=Z,3.1nm,1.0s						
INK	Inuvik	73.85 9	P		P		22 00 57.0 +1.6
	comp=Z,2.6nm,0.6s,baz=333,slow=8.2,SNR=5.7						
INK	Inuvik	73.85 9	*e*P		P		22 00 57.0 +1.6
INK			pmax	pmax			
	comp=Z,3.0nm,0.8s						
CAST	Castle Rocks	74.58 19	*e*P		P		22 01 01.6 +1.7
	comp=Z,7.9nm,0.9s						
CCB	Clear Creek Bu	74.59 16	*e*P		P		22 01 01.4 +1.6
	comp=Z,1.5nm,0.9s						
IL1	Eielson Array	74.69 16	*e*P		P		22 01 00.7 +0.3
ILAR	Eielson Array	74.69 16	P		P		22 01 01.1 +0.7
	comp=Z,1.3nm,0.7s,baz=320,slow=5.6,SNR=19						
ILB	Eielson Array	74.69 16	*e*P		P		22 01 01.1 +0.7
LBTB	Lobatse	74.89 222	P		P		22 01 03.0 +0.8
	comp=Z,1.8nm,0.5s,baz=54,slow=5.0,SNR=5.1						
LBTB	Lobatse	74.89 222	*e*P		P		22 01 03.0 +0.8
	comp=Z,15nm,1.4s						
LBTB	Lobatse	74.89 222	*e*P		P		22 01 03.0 +0.8
LBTB			pmax	pmax			
	comp=Z,15nm,1.4s						
DAWY	Dawson	76.84 13	*e*P		P		22 01 14.1 +1.3
	comp=Z,3.0nm,0.8s						
BOSA	Boshof	77.95 220	P		P		22 01 19.4 0.0
	comp=Z,3.3nm,0.8s,baz=56,slow=0.7,SNR=4.2						
KDAK	Kodiak Island	79.08 22	*i* P		P		22 01 27.2 +2.1
YKA	Yellowknife Ar	81.22 3	P		P		22 01 37.6 +1.0
	comp=Z,3.0nm,0.6s,baz=349,slow=5.1,SNR=13						
WRA	Warramunga Arr	81.74 122	P		P		22 01 40.6 +0.7
	comp=Z,0.5nm,0.5s,baz=323,slow=5.0,SNR=11						
WR1	Warramunga Arr	81.74 122	*e*P		P		22 01 40.6 +0.7
	comp=Z,8.3nm,1.1s						
AS31	Alice Springs	84.01 125	*e*P		P		22 01 51.8 +0.2
	comp=Z,1.9nm,1.3s						
ASAR	Alice Springs	84.01 125	P		P		22 01 51.8 +0.2
	comp=Z,0.5nm,0.7s,baz=314,slow=5.1,SNR=6.4						
FFC	Flin Flon	88.95 356	*e*P		P		22 02 16.7 +1.5
	comp=Z,1.8nm,0.8s						
FFC	Flin Flon	88.95 356	*e*P		P		22 02 16.7 +1.5
FFC			pmax	pmax			
	comp=Z,2.0nm,0.8s						
ULM	Lac du Bonnet	92.88 352	LR		LR		22 48 35.2
	comp=Z,22nm,18.7s,baz=309,slow=38						
PLCA	Paso Flores	150.11 250	PKPbc		PKPbc		22 09 11.5 +0.5
	comp=Z,2.4nm,0.9s,baz=215,slow=3.8,SNR=3.2						

*ISCJB **24** 22:00:34.5±0.5, 5°.50S±0°.06×154°.46E±0°.07, h118km, mb4.1/21, Error ellipse: s-maj=9.5km s-min=8.8km az=18.9*
*NEIC **24** 22:00:37.4±1.1, 5°.50S×154°.32E, h128km±9km, mb4.6/11, Error ellipse: s-maj=10.8km s-min=7.5km az=88.0*
*IDC **24** 22:00:41.1±3.6, 5°.56S×154°.32E, h162km±31km, mb3.5/12, mb1 3.7/14, mb1mx3.5/50, mbtmp4.1/14, MS3.8/1, Ms1 3.7/1, ms1mx2.5/32, Error ellipse: s-maj=24.0km s-min=16.9km az=69.0*

ISC 24 22:00:36.1±0.7, 5°.45S±0°.08×154°.45E±0°.09, h118km, n39, σ1§08/37, mb4.1/21, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	2.59	299	*e*Pn	Pn	22 01 17.2	+0.2
RABL				*e*Sn	Sn	22 01 49.8	+1.2
PMG	Port Moresby	8.23	241	P	Pn	22 02 35.4	+2.7
	7.3nm,0.3s,baz=58,slow=8.9,SNR=15						
PMG				S	Sn	22 04 04.6	+0.6
	1.3nm,0.3s,baz=90,slow=13,SNR=2.9						
PMG	Port Moresby	8.23	241	*e*Pn	Pn	22 02 38.1	+5.4
PMG				*e*Sn	Sn	22 04 04.7	+0.6
JAY	Jayapura	14.01	281	P	P	22 03 53.6	-0.1
	0.7nm,0.3s,baz=133,slow=3.3,SNR=5.6						
DZM	Mont Dzumac	20.20	146	P	P	22 05 03.3	+1.6
	1.7nm,0.4s,baz=270,slow=19,SNR=5.3						
DZM	Mont Dzumac	20.20	146	*e*P	P	22 05 03.3	+1.6
	9.1nm,0.9s						
MTN	Manton Dam	24.14	251	*e*P	P	22 05 41.6	+0.2
	51nm,1.3s						
WB2	Warramunga Arr	24.28	232	*e*P	P	22 05 41.6	-1.1
	13nm,1.4s						
WR1	Warramunga Arr	24.29	232	*e*P	P	22 05 42.4	-0.4
	7.4nm,1.1s						
WRA	Warramunga Arr	24.29	232	P	P	22 05 42.4	-0.4
	3.6nm,0.7s,baz=56,slow=9.8,SNR=14						
H11S3	WAKE ISLAND Hy	26.68	27	T	T	22 34 11.4	
	baz=207,slow=74,SNR=7.8						
H11S2	WAKE ISLAND Hy	26.68	27	T	T	22 34 12.2	
	baz=207,slow=74,SNR=4.3						
H11S1	WAKE ISLAND Hy	26.70	27	T	T	22 34 13.1	
	baz=207,slow=74,SNR=3.7						
AS31	Alice Springs	26.82	225	*e*P	P	22 06 04.5	-1.1
	0.8nm,0.8s						
ASAR	Alice Springs	26.82	225	P	P	22 06 04.5	-1.1
	0.5nm,0.4s,baz=57,slow=9.6,SNR=7.8						
STKA	Stephens Creek	28.92	203	LR	LR	22 17 23.3	
	comp=Z,213nm,21.6s,baz=209,slow=35						
FORT	Forrest	35.36	221	*e*P	P	22 07 17.4	-3.0
	30nm,1.4s						
KKM	Kota Kinabalu	39.84	286	*e*P	P	22 07 58.5	+0.1
	11nm,0.8s						
TPUB	Ta-pu	43.67	312	*e*P	P	22 08 29.7	+0.3
	46nm,1.5s						
JNU	Nakatsue	44.40	331	*e*P	P	22 08 35.9	+0.7
	22nm,1.2s						
KSM	Kuching	44.62	278	*e*P	P	22 08 35.9	-1.2
	10nm,0.7s						
CISI	Cisompet, Garu	46.36	265	*e*P	P	22 08 49.1	-1.9
	19nm,0.7s						
CM31	Chiang Mai Arr	59.63	295	*e*P	P	22 10 28.9	+0.6
CMAR	Chiang Mai Arr	59.63	295	P	P	22 10 28.9	+0.6
	1.0nm,0.3s,baz=122,slow=5.8,SNR=6.5						
SONA0	Songino Array	67.75	327	*e*P	P	22 11 21.9	+0.7
SONM	Songino Array	67.75	327	P	P	22 11 21.9	+0.7
	0.6nm,0.4s,baz=143,slow=5.4,SNR=7.6						
MK32	Makanchi Array	81.89	319	*e*P	P	22 12 42.0	-0.6
MKAR	Makanchi Array	81.89	319	P	P	22 12 42.0	-0.6
	0.5nm,0.6s,baz=95,slow=6.9,SNR=5.3						
ILAR	Eielson Array	82.14	22	P	P	22 12 44.0	+0.6
	0.2nm,0.5s,baz=253,slow=4.7,SNR=4.1						
ILB	Eielson Array	82.14	22	*e*P	P	22 12 44.0	+0.6
ZALV	Zalesovo Beam	82.60	326	P	P	22 12 46.4	+0.4
	0.8nm,0.4s,baz=130,slow=6.0,SNR=2.6						
ZAA1	Zalesovo Array	82.60	326	*e*P	P	22 12 46.4	+0.4
QSPA	South Pole Qui	84.52	180	P	P	22 12 55.7	-0.1
	2.5nm,0.7s,baz=340,slow=1.5,SNR=9.2						
KURK	Kurchatov	85.28	322	*e*P	P	22 12 59.9	+0.1
KURBB	Kurchatov Arra	85.32	322	P	P	22 12 59.8	0.0
	0.3nm,0.5s,baz=95,slow=5.4,SNR=7.5						
MAW	Mawson	85.61	203	P	P	22 13 00.7	-0.3
	1.3nm,0.6s,baz=90,slow=10,SNR=5.1						
BVAR	Borovoye Array	90.74	323	P	P	22 13 25.1	-0.6
	0.3nm,0.4s,baz=260,slow=32,SNR=3.1						
TORD	Torodi Ar. Bea	152.06	288	PKPbc	PKPbc	22 20 17.4	-1.2
	0.2nm,0.3s,baz=64,slow=2.9,SNR=7.4						
TOA1	Torodi Ar. Sit	152.07	288	*e*PKPbc	PKPbc	22 20 17.4	-1.2

*ISCJB **24** 22:27:05.5±0.6, 69°.61N±0°.04×143°.5W±0°.1, h10km, mb3.6/3, MS3.0/6, Error ellipse: s-maj=6.0km s-min=5.2km az=20.5*
*NEIC **24** 22:27:06.6±0.0, 69°.62N×143°.52W, h9km, ML3.8(AEIC), After AEIC.*
*IDC **24** 22:27:07.4±1.5, 69°.81N×143°.76W, h0km, mb3.5/3, mb1 3.9/9, mb1mx3.5/85, mbtmp3.8/9, ML3.6/6, MS2.9/8, Ms1 2.9/8, ms1mx2.5/62, Error ellipse: s-maj=20.9km s-min=18.9km az=134.0*

ISC 24 22:27:06.7±0.7, 69°.70N±0°.06×143°.74W±0°.04, h10km, n36, σ2§01/39, mb3.6/3, MS3.0/6, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PS01	TAPS Pump Stn	1.77	291	P	Pb	22 27 38.7	-0.5
PS01				S	Sb	22 28 01.8	+0.5
BM3	Burnt Mountain	2.31	188	P	Pn	22 27 44.6	-0.2
TOLK	Toolik Lake Re	2.34	246	P	Pn	22 27 46.1	+0.9
TOLK				S	Sn	22 28 15.8	+1.8
PS04	TAPS Pump Stn4	2.39	240	P	Pn	22 27 45.8	-0.1
FYU	Fort Yukon	3.20	191	P	Pn	22 27 56.0	-0.9
FYU				S	Sn	22 28 35.4	+0.4
COLD	Coldfoot	3.44	227	P	Pn	22 28 00.0	-0.3
PS05	TAPS Pump Stn5	3.88	225	P	Pn	22 28 07.2	+1.0
INK	Inuvik	3.94	106	Pn	Pn	22 28 09.5	+2.5
	1.4nm,0.3s,baz=309,slow=17,SNR=38						
INK				Sn	Sn	22 28 54.8	+1.6
	5.7nm,0.3s,baz=26,slow=30,SNR=8.1						
INK				Lg	Lg	22 29 11.7	
	4.9nm,0.3s,baz=344,slow=21,SNR=4.6						
INK	Inuvik	3.94	106	*e*Pn	Pn	22 28 09.4	+2.5
INK				*e*Sn	Sn	22 28 50.8	-2.4
PRP	Porcupine Dome	4.25	190	P	Pn	22 28 11.6	0.0
PS06	TAPS Pump Stn6	4.48	213	P	Pn	22 28 14.4	-0.1
GLM	Gilmore Dome	4.94	198	P	Pn	22 28 20.8	-0.1
EGAK	Eagle	5.04	167	P	Pn	22 28 21.9	-0.4
MDM	Murphy Dome	5.07	202	P	Pn	22 28 22.6	0.0
ILAR	Eielson Array	5.10	195	Pn	Pn	22 28 23.9	+0.8
	2.7nm,0.3s,baz=13,slow=14,SNR=43						
ILAR				Sn	Sn	22 29 21.1	-0.8
	5.5nm,0.3s,baz=6.4,slow=23,SNR=16						
ILAR				Lg	Lg	22 29 40.6	
	6.6nm,0.3s,baz=8.4,slow=31,SNR=6.6						
ILAR				LR	LR	22 30 46.4	
	comp=Z,16nm,20.2s,baz=60,slow=42						
COLA	College	5.10	200	P	Pn	22 28 22.9	-0.2
IM05	Indian Mountai	5.31	230	P	Pn	22 28 24.8	-1.2
MLY	Manley	5.41	213	P	Pn	22 28 27.3	-0.1
WRH	Wood River Hil	5.52	200	P	Pn	22 28 28.5	-0.3
SCRK	Sand Creek	5.75	181	P	Pn	22 28 31.8	-0.3
DAWY	Dawson	5.91	161	*e*Pn	Pn	22 28 34.8	+0.5
	1.8nm,0.5s						
DAWY				*e*Sn	Sn	22 29 39.3	-2.7
RIDG	Independ'e Rid	6.00	185	P	Pn	22 28 35.0	-0.5
BCA3	Beaver Creek A	6.71	172	P	Pn	22 28 45.3	+0.1
CHUM	Lake Minchumin	6.74	214	P	Pn	22 28 45.9	+0.4
KDAK	Kodiak Island	12.56	202	Pn	Pn	22 30 02.5	-2.7
	0.1nm,0.3s,baz=130,slow=7.9,SNR=4.6						
DLBC	Dease Lake	12.75	146	Pn	Pn	22 30 08.9	+1.1
	0.3nm,0.3s,baz=323,slow=5.1,SNR=2.6						
YKA	Yellowknife Ar	13.71	107	Pn	Pn	22 30 18.5	-2.2
	0.3nm,0.3s,baz=309,slow=13,SNR=6.0						
YKA				Sn	Sn	22 32 39.4	-13
	0.5nm,0.3s,baz=309,slow=22,SNR=7.4						
RES	Resolute Bay	15.32	49	Pn	Pn	22 30 42.0	-0.6
	0.7nm,0.3s,baz=273,slow=10.0,SNR=8.8						
RES				Sn	Sn	22 33 23.2	-8.8
	0.4nm,0.3s,baz=299,slow=19,SNR=7.9						
RES				LR	LR	22 39 44.9	
	comp=Z,31nm,18.1s,baz=198,slow=50						
NEW	Newport	25.08	135	LR	LR	22 42 54.5	
	comp=Z,43nm,20.9s,baz=288,slow=38						
FRB	Frobisher Bay	28.48	64	LR	LR	22 46 25.9	
	comp=Z,43nm,19.4s,baz=202,slow=41						
SPITS	Spitsbergen Ar	31.86	8	LR	LR	22 45 55.1	
	comp=Z,17nm,18.8s,baz=130,slow=36						
PDAR	Pinedale Array	32.15	129	P	P	22 33 38.1	+3.7
	0.7nm,0.8s,baz=345,slow=5.8,SNR=3.1						
SCHQ	Schefferville	35.90	74	LR	LR	22 51 43.1	
	comp=Z,24nm,19.5s,baz=22,slow=41						
TXAR	Lajitas Array	46.37	129	P	P	22 35 33.8	+0.9
	0.2nm,0.6s,baz=347,slow=7.5,SNR=2.0						
TXAR				LR	LR	22 57 30.6	
	comp=Z,25nm,19.0s,baz=0.0,slow=39						
HFS	Hagfors	49.46	15	P	P	22 35 58.0	+1.7
	1.3nm,0.8s,baz=354,slow=5.8,SNR=6.9						
BRTR	Keskin Array B	70.87	2	LR	LR	23 11 23.7	
	comp=Z,7.0nm,19.5s,baz=147,slow=38						

*IDC **24** 22:41:50.9±1.1, 10°.44N×126°.18E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.4/56, mbtmp3.5/5, MS2.7/3, Ms1 2.7/3, ms1mx2.4/40, Error ellipse: s-maj=61.5km s-min=22.0km az=72.0*
*MAN **24** 22:41:57.2, 10°.46N×126°.08E, h21km, mb4.9, ML3.8, MS3.8*

ISC 24 22:41:52.9±1.4, 10°.46N±0°.03×126°.26E±0°.06, h14km±9km, n28, σ1§23/31, mb3.5/5, 3C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	Surigao	1.02	228	‖ *e*P	Pn	22 42 13.4	+0.7
SCPH				*e*S	Sb	22 42 25.5	0.0
BESP	Borongan	1.39	325	*e*P	Pg	22 42 19.6	-0.1
BESP				*e*S	Sg	22 42 39.6	+1.9
MSLP	Maasin	1.42	257	*e*P	Pb	22 42 18.8	-0.3
MSLP				*e*S	Sb	22 42 36.1	-0.9
PLP	Palo	1.44	299	‖ *e*P	Pg	22 42 19.4	-1.2
PLP				*i* S	Sb	22 42 37.5	-0.2
BUTP	Butuan	1.61	203	*e*P	Pg	22 42 23.7	-0.2
BUTP				*e*S	Sg	22 42 46.5	+1.6
OCLP	Ormoc	1.72	290	*e*P	Pb	22 42 23.6	-0.8
OCLP				*e*S	Sn	22 42 44.4	+0.1
LLP	Lapu-Lapu	2.26	267	*e*P	Pb	22 42 31.6	-2.0
LLP				*e*S	Sn	22 42 57.2	-0.4
BIPH	Bislig	2.27	177	‖ *i*P	Pb	22 42 33.0	-0.6
BIPH				*i* S	Sb	22 43 00.5	-1.0
TBP	Tagbilaran	2.48	252	*e*P	Pb	22 42 35.9	-1.4
CGP	Cagayan de Oro	2.52	218	‖ *e*P	Pb	22 42 37.0	-0.9
CGP				*e*S	Sn	22 43 05.7	+1.6
CNP	Catarman	2.57	323	*e*P	Pn	22 42 32.4	-1.7
CNP				*e*S	Sn	22 43 04.5	-0.6
BUKP	Musuan	2.83	205	*e*P	Pb	22 42 41.0	-2.1
BUKP				*e*S	Sb	22 43 16.0	-1.7
RCP	Roxas	3.62	288	‖ *e*P	Pn	22 42

0.6nm,0.7s,baz=114,slow=14,SNR=2.8
VNDA Vanda 57.03 185 P **P 23 06 14.7 +1.9**
1.5nm,0.5s,baz=354,slow=6.2,SNR=12
QSPA South Pole Qui 68.78 180 P **P 23 07 29.3 +0.9**
9.0nm,0.8s,baz=46,slow=2.1,SNR=27
MJAR Matsushiro Arr 70.18 325 P **P 23 07 36.5 -0.5**
1.9nm,0.6s,baz=173,slow=5.0,SNR=6.6
PETK Petropavlovsk- 76.75 346 P **P 23 08 13.4 -0.3**
2.9nm,0.9s,baz=92,slow=4.5,SNR=4.6
USRK Ussuriysk Ar. 78.99 327 P **P 23 08 27.2 +1.2**
1.8nm,0.6s,baz=191,slow=7.2,SNR=4.3
YBH Yreka Blue Hor 81.62 39 P **P 23 08 41.3 +1.4**
1.0nm,0.6s,baz=226,slow=4.3,SNR=4.9
NVAR Mina Array Bea 82.38 44 P **P 23 08 44.0 +0.1**
0.5nm,0.4s,baz=225,slow=11,SNR=3.9
SNAA Sanae 87.25 179 P **P 23 09 05.7 -1.1**
VNA3 Neumayer Olymp 87.42 177 P **P 23 09 06.9 -0.6**
VNA1 Neumayer--Stat 88.09 177 P **P 23 09 09.5 -1.0**
TXAR Lajitas Array 88.44 58 P **P 23 09 14.2 +1.1**
1.2nm,0.8s,baz=214,slow=6.1,SNR=13
CMAR Chiang Mai Arr 89.31 290 P **P 23 09 18.3 +1.1**
0.5nm,0.3s,baz=121,slow=4.6,SNR=4.4
PDAR Pinedale Array 90.32 44 P **P 23 09 21.9 +0.2**
0.4nm,0.7s,baz=182,slow=5.0,SNR=5.3
BVAR Borovoye Array 118.95 320 PKP **PKPdf 23 15 03.5 -0.9**
0.4nm,0.5s,baz=112,slow=3.6,SNR=3.9
ARCES ARCESS Array B 129.49 349 PKP **PKPdf 23 15 24.2 +0.1**
0.7nm,0.6s,baz=7.8,slow=2.7,SNR=4.2
AKASG Malin Array Be 143.14 330 PKP PKPab 23 15 47.3 -0.5
1.4nm,0.5s,baz=43,slow=4.7,SNR=7.2
GERES GERESS Array B 150.63 342 PKPbc **PKPbc 23 16 08.0 -0.5**
0.2nm,0.4s,baz=46,slow=2.8,SNR=3.3
TORD Torodi Ar. Bea 171.85 186 PKP **PKPdf 23 16 23.4 -1.5**
0.5nm,0.8s,baz=132,slow=2.1
TORD PKPab **PKPab 23 17 51.3 -0.1**
baz=173,slow=2.9

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*ISCJB **24** 23:13:07.9±0.7, 27°.7N±0°.1×101°.0E±0°.1, h10km, mb3.8/8, MS3.2/2, Error ellipse: s-maj=21.0km s-min=8.4km az=140.1*
*BJI **24** 23:13:09.2, 27°.73N×100°.65E, h10km, ML3.4/10*
*IDC **24** 23:13:13.3±7.0, 27°.81N×100°.91E, h30km±53km, mb3.6/9, mb1 3.8/9, mb1mx3.5/68, mbtmp3.8/9, MS3.2/2, Ms1 3.3/2, ms1mx2.5/54, Error ellipse: s-maj=42.9km s-min=15.3km az=65.0*
ISC 24 23:13:10.1±0.8, 27°.7N±0°.1×100°.8E±0°.1, h10km, n13, σ1.9°77/14, mb3.7/8, 1D, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**3.12**	**145**	⇓Pg	**Pb**	**23 14 03.4**	**-2.4**
KMI				Sg	**Sb**	**23 14 45.5**	**+1.6**
KMI				smax	smax		
	comp=N,110nm,0.9s						
KMI				smax	smax		
	comp=E,120nm,1.1s						
GYA	**Guiyang**	**5.39**	**102**	Pn	**Pn**	**23 14 34.8**	**+4.1**
GYA				Pg	**Pg**	**23 14 50.9**	**-2.4**
GYA				smax	smax		
	comp=N,50nm,0.8s						
GYA				smax	smax		
	comp=E,50nm,0.8s						
CMAR	**Chiang Mai Arr**	**9.37**	**191**	Pg	Pn	23 16 06.3	+41
	0.3nm,0.3s,baz=3.3,slow=17,SNR=6.9						
CMAR				Lg	Lg	23 18 05.5	
	0.2nm,0.3s,baz=85,slow=30,SNR=3.0						
WMQ	**Urumqi**	**19.23**	**330**	*e*P	**Pn**	**23 17 34.6**	**-0.8**
SONM	**Songino Array**	**20.56**	**11**	P	**P**	**23 17 49.0**	**0.0**
	1.6nm,0.9s,baz=195,slow=11,SNR=6.8						
SONM				LR	LR	23 26 27.7	
	comp=Z,34nm,19.4s,baz=232,slow=39						
MKAR	**Makanchi Array**	**23.97**	**328**	P	**P**	**23 18 24.6**	**0.0**
	0.9nm,0.6s,baz=134,slow=11,SNR=8.7						
KURBB	**Kurchatov Arra**	**28.45**	**330**	P	**P**	**23 19 04.2**	**-0.8**
	0.5nm,0.7s,baz=132,slow=10,SNR=4.2						
ZALV	**Zalesovo Beam**	**28.72**	**340**	P	**P**	**23 19 07.2**	**-0.2**
	0.7nm,0.4s,baz=148,slow=12,SNR=4.6						
BRTR	**Keskin Array B**	**55.95**	**301**	P	**P**	**23 22 50.0**	**+1.2**
	0.3nm,0.6s,baz=90,slow=8.6,SNR=2.7						
WRA	**Warramunga Arr**	**57.44**	**142**	P	**P**	**23 22 59.3**	**0.0**
	2.9nm,0.7s,baz=330,slow=7.8,SNR=16						
ASAR	**Alice Springs**	**60.25**	**145**	P	**P**	**23 23 19.2**	**+0.4**
	1.1nm,0.5s,baz=327,slow=6.8,SNR=14						
STKA	**Stephens Creek**	**70.86**	**144**	P	**P**	**23 24 27.2**	**0.0**
	2.2nm,0.6s,baz=306,slow=8.6,SNR=7.0						
ILAR	**Eielson Array**	**74.12**	**24**	P	**P**	**23 24 45.7**	**-0.6**
	0.6nm,0.9s,baz=293,slow=5.7,SNR=6.4						
ILAR				LR	LR	23 58 07.1	
	comp=Z,29nm,19.1s,baz=168,slow=36						

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*ISCJB **24** 23:23:01.9±0.7, 38°.74N±0°.03×43°.68E±0°.07, h15km±4km, Error ellipse: s-maj=9.5km s-min=4.0km az=28.1*
*CSEM **24** 23:23:01.4±0.2, 38°.74N×43°.68E, h12km, ML2.4, Error ellipse: s-maj=6.6km s-min=3.7km az=106.0*
*DDA **24** 23:23:01.2, 38°.70N×43°.68E, h7km, Ml2.7*
*ISK **24** 23:23:01.3, 38°.76N×43°.62E, h15km, ML2.4/7*
ISC 24 23:23:01.5±1.2, 38°.74N±0°.02×43°.68E±0°.03, h15km±10km, n44, σ0.9°47/54, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VMUR	**Van-Muradiye**	**0.27**	**341**	*i* P	**Pg**	**23 23 07.2**	**-0.1**
VMUR				*i* S	**Sb**	**23 23 12.8**	**+0.2**
VMUR	**Van-Muradiye**	**0.27**	**341**	P	**Pg**	**23 23 07.2**	**-0.1**
VMUR				S	**Sb**	**23 23 12.8**	**+0.2**
VANB	**Van**	**0.27**	**239**	PG	**Pb**	**23 23 08.0**	**-0.1**
VANB				SG	**Sb**	**23 23 13.3**	**+0.7**
VANB	**Van**	**0.27**	**239**	*e*Pg	**Pb**	**23 23 08.0**	**-0.1**
VANB				*e*Sg	**Sb**	**23 23 13.3**	**+0.7**
TVAN	**Van**	**0.30**	**226**	*i* P	**Pg**	**23 23 08.0**	**+0.1**
TVAN				*i* S	**Sb**	**23 23 13.4**	**-0.1**
TVAN	**Van**	**0.30**	**226**	P	**Pg**	**23 23 08.0**	**+0.1**
TVAN				S	**Sb**	**23 23 13.4**	**-0.1**
ERCV	**ERCIS-VAN**	**0.39**	**317**	PG	**Pg**	**23 23 09.1**	**-0.4**
ERCV	**ERCIS-VAN**	**0.39**	**317**	*e*Pg	**Pg**	**23 23 09.1**	**-0.4**
CLDR	**Caldiran**	**0.45**	**24**	PG	**Pg**	**23 23 10.2**	**-0.3**
CLDR				SG	**Sb**	**23 23 17.6**	**-0.2**
CLDR	**Caldiran**	**0.45**	**24**	*i* P	**Pg**	**23 23 10.0**	**-0.5**
CLDR				*i* S	**Sb**	**23 23 18.4**	**+0.6**
CLDR	**Caldiran**	**0.45**	**24**	*e*Pg	**Pg**	**23 23 10.2**	**-0.3**
CLDR				*e*Sg	**Sb**	**23 23 17.6**	**-0.2**
CLDR				S	**Sb**	**23 23 18.4**	**+0.6**
GEVA	**Gevas**	**0.65**	**229**	*i* P	**Pg**	**23 23 13.8**	**-0.4**
GEVA	**Gevas**	**0.65**	**229**	P	**Pg**	**23 23 13.8**	**-0.4**
TUTA	**Tutak**	**0.95**	**315**	*i* P	**Pg**	**23 23 19.3**	**-0.6**
TUTA	**Tutak**	**0.95**	**315**	P	**Pg**	**23 23 19.3**	**-0.6**
AGRB	**Hanur-Agry**	**0.99**	**328**	PG	**Pg**	**23 23 19.7**	**-1.1**
AGRB	**Hanur-Agry**	**0.99**	**328**	*e*Pg	**Pg**	**23 23 19.7**	**-1.1**
IGDI	**IGDIR**	**1.17**	**15**	*i* P	**Pg**	**23 23 24.5**	**+0.4**
HAKT	**HAKKARI**	**1.18**	**179**	*i* P	**Pb**	**23 23 23.2**	**-0.4**
HAKT	**HAKKARI**	**1.18**	**179**	P	**Pb**	**23 23 23.2**	**-0.4**
GURO	**Guroymak-BITLI**	**1.30**	**262**	PN	**Pn**	**23 23 24.8**	**-0.5**
GURO	**Guroymak-BITLI**	**1.30**	**262**	*e*Pn	**Pn**	**23 23 24.8**	**-0.5**
EKAR	**Karacoban**	**1.36**	**293**	P	**Pb**	**23 23 26.9**	**0.0**
EKAR	**Karacoban**	**1.36**	**293**	P	**Pb**	**23 23 26.9**	**0.0**
EATA	**Eleskirt**	**1.46**	**321**	*i* P	**Pb**	**23 23 28.6**	**+0.1**
EATA	**Eleskirt**	**1.46**	**321**	P	**Pb**	**23 23 28.6**	**+0.1**
CUKT	**Cukurca**	**1.49**	**182**	PN	**Pn**	**23 23 28.1**	**+0.3**
CUKT	**Cukurca**	**1.49**	**182**	*i* P	**Pn**	**23 23 27.8**	**0.0**
CUKT	**Cukurca**	**1.49**	**182**	P	**Pn**	**23 23 27.8**	**0.0**
CUKT	**Cukurca**	**1.49**	**182**	*e*Pn	**Pn**	**23 23 28.1**	**+0.3**
SRTM	**Siirt_Merkez**	**1.57**	**242**	*i* P	**Pb**	**23 23 30.7**	**+0.4**
SRTM	**Siirt_Merkez**	**1.57**	**242**	P	**Pb**	**23 23 30.7**	**+0.4**
SIRT	**Sirnak**	**1.57**	**219**	PN	**Pn**	**23 23 29.4**	**+0.4**
SIRT	**Sirnak**	**1.57**	**219**	*e*Pn	**Pn**	**23 23 29.4**	**+0.4**
GNI	**Garni**	**1.63**	**30**	PN	**Pb**	**23 23 31.1**	**-0.3**
GNI	**Garni**	**1.63**	**30**	*e*Pn	**Pb**	**23 23 31.1**	**-0.3**
EAK	**Akyaka**	**1.95**	**358**	*i* P	**Pg**	**23 23 38.5**	**-0.4**
EAK	**Akyaka**	**1.95**	**358**	P	**Pg**	**23 23 38.5**	**-0.4**
SVAN	**Silvan-Diyarba**	**2.04**	**254**	PN	**Pn**	**23 23 34.6**	**-0.7**
SVAN	**Silvan-Diyarba**	**2.04**	**254**	*e*Pn	**Pn**	**23 23 34.6**	**-0.7**
SENK	**Senkaya-Erzuru**	**2.09**	**331**	PN	**Pn**	**23 23 36.9**	**+0.7**
SENK	**Senkaya-Erzuru**	**2.09**	**331**	*e*Pn	**Pn**	**23 23 36.9**	**+0.7**
YEDI	**Yedisu-Bingol**	**2.54**	**287**	PN	**Pn**	**23 23 42.9**	**+0.6**
YEDI	**Yedisu-Bingol**	**2.54**	**287**	*e*Pn	**Pn**	**23 23 42.9**	**+0.6**

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*ISCJB **24** 23:27:38.4±0.5, 8°.61S±0°.07×118°.77E±0°.05, h156km, mb3.5/3, Error ellipse: s-maj=10.7km s-min=5.9km az=24.5*
*DJA **24** 23:27:41.2±0.6, 9°.S±4°×11°.9E±°, h118km±6km, M3.5/8, MLv3.5/8*
*IDC **24** 23:27:44.4±3.4, 8°.25S×119°.31E, h187km±27km, mb3.1/4, mb1 3.2/6, mb1mx2.9/54, mbtmp3.7/6, Error ellipse: s-maj=77.3km s-min=13.8km az=48.0*
ISC 24 23:27:39.0±1.0, 8°.66S±0°.08×118.76E±0°.05, h156km, n13, σ0.9°96/18, mb3.6/3, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.98**	**260**	P	**Pn**	**23 28 04.1**	**-0.1**
PLAI				S	**Sn**	**23 28 22.3**	**-1.2**
WBSI	**Waikabubak, Su**	**1.16**	**147**	P	**Pn**	**23 28 05.7**	**-0.2**
WBSI				S	**Sn**	**23 28 25.3**	**-1.2**
TWSI	**Taliwang, Sumb**	**1.85**	**267**	P	**Pn**	**23 28 13.1**	**+0.2**
BASI	**Baing, Sumba**	**2.38**	**131**	P	**Pn**	**23 28 20.0**	**+1.0**
BASI				S	**Sn**	**23 28 50.1**	**+0.3**
EDFI	**Ende, Flores**	**2.90**	**92**	P	**Pn**	**23 28 26.2**	**+0.6**
EDFI				S	**Sn**	**23 29 00.4**	**-1.1**
MMRI	**Maumere**	**3.44**	**90**	P	**Pn**	**23 28 32.7**	**+0.4**
BKSI	**Bulukumba**	**3.58**	**22**	P	**Pn**	**23 28 33.6**	**-0.5**
BATI	**Baumata**	**5.08**	**108**	P	**Pn**	**23 28 54.0**	**+0.3**
	8.3nm,0.3s,baz=26,slow=0.9,SNR=6.1						
BATI				S	**Sn**	**23 29 51.0**	**-1.0**
	12nm,0.3s,baz=331,slow=20,SNR=7.6						
WRA	**Warramunga Arr**	**18.79**	**128**	P	**Pn**	**23 31 48.6**	**-0.4**
	0.2nm,0.3s,baz=302,slow=12,SNR=6.5						
WRA				S	**S**	**23 35 10.8**	**-1.6**
	0.1nm,0.3s,baz=306,slow=20,SNR=2.4						
ASAR	**Alice Springs**	**20.81**	**138**	P	Pn	23 32 11.2	-1.7
	0.6nm,0.3s,baz=312,slow=9.6,SNR=9.6						
MKAR	**Makanchi Array**	**64.04**	**333**	P	**P**	**23 37 57.8**	**+1.7**
	0.4nm,0.5s,baz=150,slow=6.0,SNR=6.1						
KURBB	**Kurchatov Arra**	**68.56**	**334**	P	**P**	**23 38 25.6**	**+0.9**
	0.2nm,0.5s,baz=137,slow=5.7,SNR=4.4						
ZALV	**Zalesovo Beam**	**68.64**	**339**	P	**P**	**23 38 25.7**	**+0.6**
	0.5nm,0.3s,baz=150,slow=6.1,SNR=3.1						

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*DDA **24** 23:44:09.7, 38°.71N×43°.39E, h7km, Ml2.5*
*CSEM **24** 23:44:09.7±0.2, 38°.71N×43°.38E, h12km, ML2.2, Error ellipse: s-maj=5.6km s-min=3.9km az=102.0*
*ISK **24** 23:44:09.3, 38°.71N×43°.37E, h7km, ML2.2/4*
*ISCJB **24** 23:44:10.1±0.5, 38°.71N±0°.02×43°.37E±0°.06, h14km±4km, Error ellipse: s-maj=7.5km s-min=4.0km az=9.3*
ISC 24 23:44:10.1±0.9, 38°.70N±0°.03×43°.39E±0°.03, h18km±5km, n27, σ0.9°90/43, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.10**	**182**	PG	**Pg**	**23 44 13.6**	**-0.3**
VANB				SG	**Sg**	**23 44 17.4**	**+0.9**
VANB	**Van**	**0.10**	**182**	*e*Pg	**Pg**	**23 44 13.6**	**-0.3**
VANB				*e*Sg	**Sg**	**23 44 17.4**	**+0.9**
TVAN	**Van**	**0.17**	**177**	*i* P	**Pg**	**23 44 13.5**	**-1.3**
TVAN				*i* S	**Sg**	**23 44 17.7**	**-0.3**
TVAN	**Van**	**0.17**	**177**	P	**Pg**	**23 44 13.5**	**-1.3**
TVAN				S	**Sg**	**23 44 17.7**	**-0.3**
VMUR	**Van-Muradiye**	**0.32**	**25**	*i* P	**Pb**	**23 44 17.1**	**-0.5**
VMUR				*i* S	**Sb**	**23 44 23.3**	**+0.8**
VMUR	**Van-Muradiye**	**0.32**	**25**	P	**Pb**	**23 44 17.0**	**-0.5**
VMUR				S	**Sb**	**23 44 23.3**	**+0.8**
ERCV	**ERCIS-VAN**	**0.32**	**352**	PG	**Pg**	**23 44 16.2**	**-1.0**
ERCV	**ERCIS-VAN**	**0.32**	**352**	*e*Pg	**Pg**	**23 44 16.2**	**-1.0**
GEVA	**Gevas**	**0.47**	**214**	*i* P	**Pg**	**23 44 18.1**	**-1.6**
GEVA				*i* S	**Sb**	**23 44 26.4**	**-0.3**
GEVA	**Gevas**	**0.47**	**214**	P	**Pg**	**23 44 18.1**	**-1.6**
GEVA				S	**Sb**	**23 44 26.4**	**-0.3**
ADCV	**BITLIS_Adilcev**	**0.54**	**282**	*i* P	**Pg**	**23 44 20.1**	**-0.8**
ADCV				*i* S	**Sb**	**23 44 29.0**	**+0.4**
ADCV	**BITLIS_Adilcev**	**0.54**	**282**	P	**Pg**	**23 44 20.1**	**-0.8**
ADCV				S	**Sb**	**23 44 29.0**	**+0.4**
CLDR	**Caldiran**	**0.60**	**42**	PG	**Pg**	**23 44 21.1**	**-1.1**
CLDR				SG	**Sb**	**23 44 30.6**	**0.0**
CLDR	**Caldiran**	**0.60**	**42**	*i* P	**Pg**	**23 44 21.1**	**-1.1**
CLDR	**Caldiran**	**0.60**	**42**	P	**Pg**	**23 44 21.1**	**-1.1**
CLDR				*e*Sg	**Sb**	**23 44 30.6**	**0.0**
TUTA	**Tutak**	**0.83**	**327**	*i* P	**Pg**	**23 44 25.3**	**-1.2**
TUTA				*i* S	**Sb**	**23 44 37.2**	**-0.1**
TUTA	**Tutak**	**0.83**	**327**	P	**Pg**	**23 44 25.3**	**-1.2**
TUTA				S	**Sb**	**23 44 37.2**	**-0.1**
AGRB	**Hanur-Agry**	**0.93**	**340**	PG	**Pg**	**23 44 27.4**	**-0.9**
AGRB				SG	**Sb**	**23 44 40.3**	**+0.3**
AGRB	**Hanur-Agry**	**0.93**	**340**	*e*Pg	**Pg**	**23 44 27.4**	**-0.9**
AGRB				*e*Sg	**Sb**	**23 44 40.3**	**+0.3**
GURO	**Guroymak-BITLI**	**1.08**	**263**	PG	**Pg**	**23 44 29.7**	**-1.3**
GURO	**Guroymak-BITLI**	**1.08**	**263**	*e*Pg	**Pg**	**23 44 29.7**	**-1.3**
SRTM	**Siirt_Merkez**	**1.36**	**239**	*i* P	**Pb**	**23 44 35.4**	**+0.3**
SRTM	**Siirt_Merkez**	**1.36**	**239**	P	**Pb**	**23 44 35.4**	**+0.3**
SIRT	**Sirnak**	**1.41**	**213**	PN	**Pn**	**23 44 36.1**	**+1.0**
SIRT	**Sirnak**	**1.41**	**213**	*e*Pn	**Pn**	**23 44 36.1**	**+1.0**
CUKT	**Cukurca**	**1.46**	**173**	PN	**Pn**	**23 44 36.7**	**+1.0**
CUKT	**Cukurca**	**1.46**	**173**	*e*Pn	**Pn**	**23 44 36.7**	**+1.0**

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*IDC **25** 00:05:25.2±0.8, 41°.90N×29°.42W, h0km, mb3.7/14, mb1 3.8/15, mb1mx3.6/67, mbtmp3.7/15, ML3.9/1, MS4.3/54, Ms1 4.3/54, ms1mx4.3/60, Error ellipse: s-maj=19.5km s-min=18.5km az=168.0*
*BJI **25** 00:05:27.0, 41°.00N×29°.10W, h10km, mb5.1/14, mB5.3/7, Ms5.1/4, Ms7 4.8/4*
*IGIL **25** 00:05:29.9, 41°.15N×29°.10W, h10km, mb4.9*
*GCMT **25** 00:05:30.6±0.2, 41°.30N×29°.27W, h12km, MW5.1/125, Moment Tensor Solution. s51,c63; s125,c206; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=5.88±.10; Mθθ0.44±.10; Mφφ5.44±.08; Mrθ0.72±.38; Mrφ0.88±.08; Mθφ0.75±.29; Best double couple: M0=5.82700×10^16 NP1:φs4.00000°, δ51.00000°, λ-83.00000°. NP2: φs4.00000°, δ41.00000°, λ-98.00000°. Principal axes: T 5.6560, Plg4.0000°, Azm280.0000°; N 0.3450, Plg5.0000°, Azm11.0000°; P -5.9990, Plg83.0000°, Azm151.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*PDA **25** 00:05:30.2±1.6, 41°.35N×29°.51W, h0km±19km, ML4.0 Error ellipse: s-maj=21.8km s-min=5.5km az=175.0*
*NEIC **25** 00:05:30.6±0.2, 40°.99N×29°.11W, h10km, mb4.7/49, Error ellipse: s-maj=7.3km s-min=4.0km az=193.0*
*MOS **25** 00:05:31.6±1.2, 41°.01N×29°.02W, h33km, mb4.8/30, MS4.4/4, Error ellipse: s-maj=12.0km s-min=8.7km az=51.7*
*CSEM **25** 00:05:31.0±0.1, 41°.20N×29°.10W, h10km, mb4.7/57, Error ellipse: s-maj=5.5km s-min=3.3km az=33.0*
*ISCJB **25** 00:05:31.8±1.3, 41°.15N±0°.02×29°.14W±0°.03, h27km±9km, mb4.5/81, MS4.4/70, Error ellipse: s-maj=4.7km s-min=3.4km az=144.6*
ISC 25 00:05:33.0±1.6, 41°.12N±0°.05×29°.32W±0°.04, h27km±11km, n266, σ2.9°06/237, mb4.6/81, MS4.4/70, 6C-2D, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H07N1	**FLORES T-PHASE**	**1.98**	**224**	*e*P	**Pn**	**00 06 01.3**	**-3.5**
H07N1				*e*S	**Sn**	**00 06 25.0**	**-3.8**
H07S1	**FLORES T-PHASE**	**2.26**	**220**	*e*P	**Pn**	**00 06 05.1**	**-3.6**
H07S1				*e*S	**Sn**	**00 06 32.3**	**-3.4**
PGRA	**Graciosa**	**2.33**	**153**	*e*P	**Pn**	**00 06 08.6**	**-1.0**
PGRA				*e*S	**Sn**	**00 06 37.6**	**+0.3**
PGRA				A	A	00 06 39.3	
	89nm,0.5s						
PGRA	**Graciosa**	**2.33**	**153**	*e*P	**Pn**	**00 06 08.6**	**-1.0**
PGRA				*e*S	**Sn**	**00 06 37.6**	**+0.3**
PCED	**Cedros**	**2.53**	**169**	*e*P	**Pn**	**00 06 12.3**	**-0.1**
PCED				*e*S	**Sn**	**00 06 42.3**	**-0.1**
PCED				A	A	00 06 47.7	
	129nm,0.5s						
PCED	**Cedros**	**2.53**	**169**	*e*P	**Pn**	**00 06 12.3**	**-0.1**
PCED				*e*S	**Sn**	**00 06 42.3**	**-0.1**
ROSA	**Rosais**	**2.54**	**161**	*e*Pn	**Pn**	**00 06 08.1**	**-4.4**
ROSA	**Rosais**	**2.54**	**161**	*e*Pn	**Pn**	**00 06 08.1**	**-4.4**
HOR	**Horta**	**2.65**	**168**	*e*S	**Sn**	**00 06 44.6**	**-0.5**
HOR				A	A	00 06 46.3	
	82nm,0.2s						
HOR	**Horta**	**2.65**	**168**	*e*S	**Sn**	**00 06 44.6**	**-0.5**
PMAN	**Manadas**	**2.66**	**159**	*e*S	**Sn**	**00 06 45.2**	**-0.3**
PMAN				A	A	00 06 47.2	
	112nm,0.5s						
PMAN	**Manadas**	**2.66**	**159**	*e*S	**Sn**	**00 06 45.2**	**-0.3**
PCAN	**Candelaria**	**2.73**	**166**	*e*S	**Sn**	**00 06 47.1**	**-0.2**
PCAN				A	A	00 06 50.3	
	99nm,0.3s						
PCAN	**Candelaria**	**2.73**	**166**	*e*S	**Sn**	**00 06 47.1**	**-0.2**
ADH	**Angra Heroismo**	**2.94**	**146**	*e*P	**Pn**	**00 06 16.4**	**-1.6**
ADH				*e*S	**Sn**	**00 06 52.2**	**-0.2**
ADH				A	A	00 06 52.7	
	29nm,0.2s						
ADH	**Angra Heroismo**	**2.94**	**146**	*e*P	**Pn**	**00 06 16.4**	**-1.6**
ADH				*e*S	**Sn**	**00 06 52.2**	**-0.2**
PSET	**Sete Cidades**	**4.31**	**139**	*e*P	**Pn**	**00 06 36.6**	**-0.3**
PSET				*e*S	**Sn**	**00 07 26.1**	**-0.3**
PSET				A	A	00 07 26.6	
	53nm,0.4s						
PSET	**Sete Cidades**	**4.31**	**139**	*e*P	**Pn**	**00 06 36.6**	**-0.3**
PSET				*e*S	**Sn**	**00 07 26.1**	**-0.3**
PDA	**Ponta Delgada**	**4.40**	**139**	*e*P	**Pn**	**00 06 38.0**	**-0.1**
PDA				*e*S	**Sn**	**00 07 28.3**	**-0.1**
PDA				A	A	00 07 30.6	
	54nm,0.3s						
PDA	**Ponta Delgada**	**4.40**	**139**	*e*P	**Pn**	**00 06 38.0**	**-0.1**
PDA				*e*S	**Sn**	**00 07 28.3**	**-0.1**
GRON	**Grota Negra**	**4.45**	**138**	*e*P	**Pn**	**00 06 39.5**	**+0.7**
CMLA	**Cha da Macela**	**4.46**	**138**	*e*P	**Pn**	**00 06 38.4**	**-0.5**
CMLA				*e*S	**Sn**	**00 07 29.9**	**0.0**
CMLA				A	A	00 07 35.3	
	101nm,0.3s						
CMLA	**Cha da Macela**	**4.46**	**138**	*e*Pn	Pn	00 06 33.9	-5.0
CMLA	**Cha da Macela**	**4.46**	**138**	*e*P	Pn	00 06 33.9	-5.0
CMLA	**Cha da Macela**	**4.46**	**138**	*e*Pn	Pn	00 06 33.9	-5.0
CMLA	**Cha da Macela**	**4.46**	**138**	*e*P	**Pn**	**00 06 38.4**	**-0.5**
CMLA				*e*S	**Sn**	**00 07 29.9**	**0.0**
BART	**Pico Bartolome**	**4.63**	**135**	*e*P	**Pn**	**00 06 39.6**	**-1.8**
BART				*e*S	**Sn**	**00 07 34.0**	**-0.4**
BART				A	A	00 07 37.5	
	36nm,0.2s						
BART	**Pico Bartolome**	**4.63**	**135**	*e*P	**Pn**	**00 06 39.6**	**-1.8**
BART				*e*S	**Sn**	**00 07 34.0**	**-0.4**
PSMA	**Santa Maria**	**5.25**	**140**	*e*P	**Pn**	**00 06 48.9**	**-0.9**
PSMA				*e*S	**Sn**	**00 07 49.3**	**-0.2**
PSMA				A	A	00 07 49.7	
	8.7nm,0.1s						
PSMN	**Pico do Norte,**	**5.28**	**140**	*e*P	**Pn**	**00 06 49.4**	**-0.8**
PSMN				*e*S	**Sn**	**00 07 49.2**	**-0.9**
PSMN				A	A	00 07 51.5	
	13nm,0.3s						
PSMN	**Pico do Norte,**	**5.28**	**140**	*e*P	**Pn**	**00 06 49.4**	**-0.8**
PSMN				*e*S	**Sn**	**00 07 49.2**	**-0.9**
PMAR	**Madeira**	**12.98**	**126**	*e*P	**Pn**	**00 08 37.5**	**+1.6**
	197nm,1.7s						
PMAR	**Madeira**	**12.98**	**126**	*e*P	**Pn**	**00 08 37.5**	**+1.6**
FUL	**Funchal**	**13.05**	**126**	*e*P	**Pn**	**00 08 37.6**	**+1.0**
	119nm,1.6s						
FUL	**Funchal**	**13.05**	**126**	*e*P	**Pn**	**00 08 37.6**	**+1.0**
PMPS	**Porto Santo**	**13.12**	**124**	*e*P	**Pn**	**00 08 38.9**	**+1.4**
	164nm,1.3s						
PMPS	**Porto Santo**	**13.12**	**124**	*e*P	**Pn**	**00 08 38.9**	**+1.4**
PMST	**Lisbon--Monsan**	**15.63**	**92**	*e*P	**Pn**	**00 09 11.7**	**+0.3**
PMST	**Lisbon--Monsan**	**15.63**	**92**	*e*P	**Pn**	**00 09 11.7**	**+0.3**
LIS	**Lisbon**	**15.66**	**92**	*e*P	**Pn**	**00 09 08.6**	**-3.2**
LIS				AMb	AMB	00 09 10.3	
	comp=Z,98nm,1.6s						
ALMR	**Almeirim**	**15.99**	**90**	*e*P	**Pn**	**00 09 12.6**	**-3.4**
ALMR				AMb	AMB	00 09 14.6	
	comp=Z,38nm,1.4s						
POLO	**Lamas de Olo**	**16.19**	**82**	*e*P	**Pn**	**00 09 12.5**	**-6.2**
	comp=Z,11nm,1.4s						
PVIS	**Viseu**	**16.20**	**84**	*e*P	**P**	**00 09 23.2**	**+1.4**
	comp=Z,18nm,1.6s						
PVRL	**Vila Real**	**16.26**	**82**	*e*P	**P**	**00 09 21.7**	**-0.7**
	comp=Z,18nm,1.7s						
PVRL	**Vila Real**	**16.26**	**82**	*e*P	**P**	**00 09 21.7**	**-0.7**
PMTG	**Montargil**	**16.27**	**90**	*e*P	**Pn**	**00 09 19.1**	**-0.6**
	comp=Z,23nm,1.3s						
PMTG	**Montargil**	**16.27**	**90**	*e*P	**Pn**	**00 09 19.1**	**-0.6**
PNCL	**Nicolau / Gran**	**16.30**	**94**	*e*P	**Pn**	**00 09 17.5**	**-2.5**
	comp=Z,35nm,1.4s						
PFVI	**Vila Bisbo**	**16.39**	**97**	*e*P	**Pn**	**00 09 22.2**	**+1.0**
	comp=Z,71nm,1.6s						
PFVI	**Vila Bisbo**	**16.39**	**97**	*e*P	**Pn**	**00 09 22.2**	**+1.0**
MORF	**Marmelete**	**16.46**	**97**	*e*P

comp=Z,9.1nm,2.0s
SCHQ Schefferville 28.23 312 LR LR 00 20 41.2
comp=Z,967nm,20.7s,baz=102,slow=33
SFJD Kangerlussuaq 28.47 343 LR LR 00 20 16.4
comp=Z,627nm,18.6s,baz=149,slow=32
DAVOX Davos/Dischmat 28.57 65 LR LR 00 21 03.6
comp=Z,990nm,21.1s,baz=282,slow=33
NKC Novy Kostel 30.23 58 AMS AMS 00 22 30.0
comp=Z,2μm,18.3s
CLL Collm 30.61 56 *e*P **P** **00 11 42.0 -2.7**
CLL *e*S **S** **00 16 46.0 +1.0**
CLL *e* 00 18 06.0
CLL *e*SSS SSS 00 18 36.0
CLL Collm 30.61 56 *e*P **P** **00 11 42.0 -2.7**
CLL *e*S **S** **00 16 46.0 +1.0**
KHC Kasperske Hory 30.96 60 *e*P **P** **00 11 45.6 -2.2**
KHC AMS AMS 00 22 00.0
comp=Z,900nm,18.8s
KHC Kasperske Hory 30.96 60 *e*P **P** **00 11 45.6 -2.2**
KHC MLR MLR
comp=Z,900nm,18.8s
GERES GERESS Array B 31.05 61 LR LR 00 22 46.3
comp=Z,786nm,19.8s,baz=270,slow=34
BRG Berggiesshubel 31.19 57 PP PP 00 12 42.0 -18
BRG S **S** **00 17 03.0 +8.9**
comp=N,686nm,13.9s
comp=E,912nm,24.4s
comp=Z,1μm,16.5s
PRA Prague 31.50 59 AMS AMS 00 23 10.0
comp=Z,2μm,16.6s
PRU Pruhonice 31.57 59 *e*S **S** **00 17 08.0 +7.9**
PRU AMS AMS 00 23 10.0
comp=Z,1μm,17.0s
PVCC Panska Ves 31.59 58 AMS AMS 00 23 20.0
comp=Z,2μm,17.8s
NOA NORSAR Array B 31.60 37 LR LR 00 22 31.0
comp=Z,328nm,21.4s,baz=245,slow=33
GOPC GO Pecny, Ondr 31.73 59 *e*S **S** **00 17 09.3 +6.7**
GOPC AMS AMS 00 23 20.0
comp=Z,1μm,17.9s
HFS Hagfors 32.47 39 LR LR 00 23 30.3
comp=Z,664nm,20.3s,baz=254,slow=34
UPC Upice 32.51 58 AMS AMS 00 24 00.0
comp=Z,2μm,17.4s
DPC Dobruska-Polom 32.71 58 AMS AMS 00 24 20.0
comp=Z,2μm,17.0s
TRQ Mont Tremblant 32.77 294 *e*P **P** **00 12 05.0 +1.3**
VAE Valguarnera 33.77 82 LR LR 00 24 24.1
comp=Z,1μm,21.4s,baz=328,slow=34
OKC Ostrava-Krasne 33.91 59 AMS AMS 00 24 50.0
comp=Z,1μm,17.2s
KOWA Kowa 34.46 133 LR LR 00 24 47.8
comp=Z,495nm,20.4s,baz=344,slow=33
PLVO Plevna 34.70 293 *e*P **P** **00 12 21.6 +1.2**
comp=Z,18nm,1.4s
N59A State Game Lan 34.72 285 *e*P **P** **00 12 22.5 +1.8**
comp=Z,19nm,1.4s
OJC Ojcow 34.94 58 *e*P **P** **00 12 21.3 -1.2**
comp=Z,4.5nm,0.9s
OJC Ojcow 34.94 58 *e*P **P** **00 12 21.3 -1.2**
OJC pmax pmax
comp=Z,5.0nm,0.9s
DIVS Divibare 35.98 68 *e*P **P** **00 12 30.0 -1.7**
comp=Z,5.7nm,1.4s
FINES FINESS Array B 38.68 39 LR LR 00 27 01.7
comp=Z,561nm,21.1s,baz=266,slow=34
BUR08 Bucovina Ar. S 38.82 61 *e*P **P** **00 12 55.8 +0.2**
BUR04 Bucovina Ar. S 38.83 61 *e*P **P** **00 12 55.3 -0.4**
TOA0 Torodi Ar. Sit 38.85 127 *e*P **P** **00 12 55.9 -0.1**
TORD Torodi Ar. Bea 38.85 127 P **P** **00 12 55.3 -0.7**
comp=Z,4.7nm,1.1s,baz=323,slow=5.8,SNR=11
TORD LR LR 00 27 14.6
comp=Z,570nm,21.4s,baz=330,slow=33
LIT Litokhoron 38.87 74 *e*P **P** **00 12 54.7 -1.3**
comp=Z,19nm,1.3s
LIT Litokhoron 38.87 74 *e*P **P** **00 12 54.7 -1.3**
LIT pmax pmax
comp=Z,19nm,1.3s
MLR Muntele Rosu 39.79 65 LR LR 00 29 18.5
comp=Z,139nm,19.1s,baz=285,slow=36
ARCES ARCESS Array B 39.97 27 P P 00 12 57.3 -7.6
comp=Z,2.0nm,1.0s,baz=252,slow=8.4,SNR=3.3
ARCES LR LR 00 26 19.0
comp=Z,405nm,22.0s,baz=261,slow=32
DBIC Dimbokro 40.65 141 P **P** **00 13 12.2 +1.2**
comp=Z,10nm,1.1s,baz=306,slow=8.7,SNR=3.4
DBIC LR LR 00 28 21.1
comp=Z,507nm,20.5s,baz=311,slow=33
KIEV Kiev 40.85 56 *i* P **P** **00 13 10.0 -2.3**
KIEV pmax pmax
comp=Z,2.0nm,1.0s
AKASG Malin Array Be 40.86 56 LR LR 00 29 47.6
comp=Z,838nm,18.4s,baz=280,slow=36
SPITS Spitsbergen Ar 41.42 13 LR LR 00 26 22.4
comp=Z,231nm,18.2s,baz=215,slow=31
IDI Anoyia 42.42 80 LR LR 00 28 58.7
comp=Z,113nm,19.7s,baz=286,slow=33
TKL Tuckaleechee C 42.45 281 LR LR 00 30 03.1
comp=Z,830nm,18.8s,baz=68,slow=35
M44A Midewin, Midew 43.39 291 *e*P **P** **00 13 34.7 +1.6**
comp=Z,11nm,0.8s
EYMN Ely 43.77 301 *e*P **P** **00 13 37.6 +1.4**
comp=Z,12nm,1.3s
PCRV Puerto La Cruz 43.79 235 LR LR 00 28 41.5
comp=Z,437nm,21.6s,baz=56,slow=32
RES Resolute Bay 44.39 340 *e*P **P** **00 13 42.6 +1.9**
comp=Z,21nm,1.5s
RES Resolute Bay 44.39 340 *e*P **P** **00 13 42.6 +1.9**
RES pmax pmax
comp=Z,21nm,1.5s
OBN Obninsk 44.48 48 *e*P **P** **00 13 40.2 -1.4**
OBN *e* 00 15 31.7
OBN *e*S **S** **00 20 18.1 +3.2**
OBN *e*SS **SS** **00 23 32.1 -2.2**
KLMR Klimovskoe 45.19 40 *e*P **P** **00 13 44.0 -3.3**
KLMR pmax pmax
comp=Z,7.0nm,1.5s
KLMR Klimovskoe 45.19 40 *e*P **P** **00 13 44.0 -3.3**
KLMR AMP 00 13 51.1
comp=Z,7.0nm,1.5s
KLMR LQ LQ 00 27 32.1
KLMR LR LR 00 29 09.5
VSR Storozhevoye 46.88 53 *e*P **P** **00 13 58.3 -2.4**
VSR pmax pmax
comp=Z,10.0nm,1.4s
BRTR Keskin Array B 47.01 70 P P 00 13 55.6 -6.5
comp=Z,0.2nm,0.8s,baz=276,slow=6.5,SNR=2.1
BRTR LR LR 00 32 51.1
comp=Z,127nm,21.3s,baz=273,slow=35
T42A Van Buren 47.25 286 *e*P **P** **00 14 04.7 +0.9**
comp=Z,7.4nm,1.1s
R40A Maddies Statio 47.57 288 *e*P **P** **00 14 07.8 +1.5**
comp=Z,15nm,1.4s
PRGR Permogore 47.99 38 *e*P **P** **00 14 08.7 -0.5**
PRGR pmax pmax
comp=Z,6.0nm,0.5s
FFC Flin Flon 48.37 312 *e*P **P** **00 14 14.2 +2.0**
comp=Z,3.0nm,0.8s
FFC Flin Flon 48.37 312 *e*P **P** **00 14 14.3 +2.0**
FFC pmax pmax
comp=Z,3.0nm,0.8s
ECSD EROS Data Cent 48.49 297 *e*P **P** **00 14 14.9 +1.5**
comp=Z,6.7nm,1.1s
S39A Bolivar 48.58 288 *e*P **P** **00 14 15.5 +1.4**
comp=Z,9.2nm,1.1s
SDV Santo Domingo 48.60 240 LR LR 00 32 47.2
comp=Z,106nm,20.2s,baz=20,slow=34
V40A Witts Springs 49.03 286 *e*P **P** **00 14 19.0 +1.3**
comp=Z,11nm,1.0s
W40A Ferguson Farm, 49.49 285 *e*P **P** **00 14 23.4 +2.3**
comp=Z,40nm,1.5s
W39A Magazine 50.01 285 *e*P **P** **00 14 26.6 +1.6**
comp=Z,16nm,1.1s
MIAR Mount Ida 50.16 284 *e*P **P** **00 14 27.8 +1.6**
comp=Z,28nm,1.8s
MIAR Mount Ida 50.16 284 *e*P **P** **00 14 27.8 +1.6**
MIAR pmax pmax
comp=Z,28nm,1.8s
MMAI Mount Meron Ar 51.22 77 LR LR 00 36 56.3
comp=Z,75nm,19.6s,baz=315,slow=37
KIV Kislovodsk 51.56 61 *e*P **P** **00 14 37.0 +0.2**
KIV *e*S **S** **00 21 57.6 +1.9**
KIV pmax pmax
comp=Z,4.0nm,1.1s
KIV MLR MLR
comp=Z,199nm,17.0s

KVAR Kislovodsk Arr 51.57 61 LR LR 00 36 28.6
comp=Z,259nm,20.0s,baz=305,slow=36
KBZ Khabaz 51.79 61 LR LR 00 36 47.1
comp=Z,254nm,19.6s,baz=318,slow=36
NEY Neytrino 51.87 62 *i* P **P** **00 14 37.9 -1.3**
NCK Nalchik 52.35 61 *i* P **P** **00 14 43.1 +0.6**
NCK pmax pmax
comp=Z,2.0nm,0.9s
YKA Yellowknife Ar 52.48 324 LR LR 00 35 36.8
comp=Z,19nm,18.1s,baz=72,slow=35
WMOK Wichita Mounta 53.85 287 *e*P **P** **00 14 54.9 +1.2**
comp=Z,14nm,2.0s
WMOK Wichita Mounta 53.85 287 *e*P **P** **00 14 54.9 +1.2**
WMOK pmax pmax
comp=Z,15nm,2.0s
GROC Groznyy 53.93 61 *e*P P 00 14 47.5 -6.6
GROC *e* 00 16 52.0
GROC *e*S S 00 22 19.7 -8.2
GROC pmax pmax
comp=Z,4.0nm,0.4s
ROSC El Rosal 54.03 241 LR LR 00 34 14.3
comp=Z,234nm,21.8s,baz=60,slow=32
HKT Hockley 54.07 281 *i* P **P** **00 14 55.7 +0.4**
HKT pmax pmax
comp=Z,6.0nm,1.2s
HKT Hockley 54.07 281 *i* P **P** **00 14 55.7 +0.4**
comp=Z,6.0nm,1.2s
WHTX Lake Whitney, 54.23 284 *e*P **P** **00 14 57.5 +1.0**
comp=Z,26nm,1.4s
WHTX Lake Whitney, 54.23 284 *e*P **P** **00 14 57.5 +1.0**
comp=Z,26nm,1.4s
GNI Garni 54.57 65 LR LR 00 38 39.6
comp=Z,153nm,21.4s,baz=300,slow=37
GNI Garni 54.57 65 *i* P **P** **00 14 57.6 -1.4**
MAK Makhachkala 55.16 61 *e*P P 00 14 57.6 -5.5
MAK *e* 00 17 03.2
MAK *e*PPP PPP 00 18 13.5
MAK *e*S **S** **00 22 39.0 -5.4**
MAK *e*SS **SS** **00 26 24.7 -3.4**
MAK *e*SSS SSS 00 28 29.8
MAK pmax pmax
comp=Z,23nm,0.9s
MAK MLR MLR
comp=Z,305nm,16.0s
EGMT Eagleton 55.26 306 *e*P **P** **00 15 06.2 +2.3**
comp=Z,13nm,1.2s
ABTX Abilene, Hawle 55.51 285 *e*P **P** **00 15 07.2 +1.4**
comp=Z,18nm,1.7s
ARU Arti 55.93 42 *e*P **P** **00 15 07.5 -0.9**
comp=Z,13nm,1.1s
ARU Arti 55.93 42 *d i*P **P** **00 15 06.3 -2.1**
ARU 00 16 05.9
ARU 00 17 13.1
ARU S **S** **00 22 53.8 -0.5**
ARU SS **SS** **00 26 34.6 -5.1**
ARU pmax pmax
comp=Z,20nm,1.7s
ARU MLR MLR
comp=Z,399nm,18.0s
N23A Red Feather La 55.96 297 *e*P **P** **00 15 10.8 +1.5**
comp=Z,17nm,1.5s
GCMT Greycliff 56.17 304 *e*P **P** **00 15 12.5 +2.0**
RLMT Red Lodge 56.22 303 *e*P **P** **00 15 13.7 +2.8**
comp=Z,18nm,1.6s
SVE Sverdlovsk 56.80 41 *e*P **P** **00 15 14.2 -0.4**
SVE pmax pmax
comp=Z,23nm,1.7s
WALA Waterton Lakes 57.30 309 *e*P **P** **00 15 18.7 +0.3**
comp=Z,12nm,1.1s
PD31 Pinedale Array 57.48 301 *e*P **P** **00 15 21.1 +1.2**
PDAR Pinedale Array 57.48 301 *e*P **P** **00 15 19.9 0.0**
JTS JuntasAbangare 57.59 254 LR LR 00 35 39.0
comp=Z,538nm,21.7s,baz=97,slow=31
MOOW Moose Ponds 57.78 302 *e*P **P** **00 15 23.4 +1.3**
comp=Z,14nm,1.8s
LRM Limekiln Ridge 57.89 305 *e*P **P** **00 15 23.6 +0.8**
FXWY Fox Creek 58.02 302 *e*P **P** **00 15 25.9 +2.2**
comp=Z,7.4nm,1.6s
REDW Red Top Meadow 58.04 302 *e*P **P** **00 15 26.0 +2.2**
comp=Z,12nm,1.3s
TPAW Teton Pass 58.04 302 *e*P **P** **00 15 26.9 +3.0**
comp=Z,12nm,1.6s
DLMT Dillon 58.20 305 *e*P **P** **00 15 27.3 +2.5**
comp=Z,19nm,1.6s
AKTO Aktyubinsk 58.26 49 LR LR 00 39 44.3
comp=Z,397nm,21.8s,baz=295,slow=36
MSO Missoula 58.34 307 *e*P **P** **00 15 27.9 +2.1**
comp=Z,8.2nm,1.3s
SAML Samuel 58.76 220 *e*P **P** **00 15 30.1 +1.3**
comp=Z,4.3nm,1.2s
SAML Samuel 58.76 220 *e*P **P** **00 15 30.1 +1.3**
SAML pmax pmax
comp=Z,4.0nm,1.2s
ANMO Albuquerque 59.22 291 LR LR 00 41 01.0
comp=Z,546nm,18.1s,baz=70,slow=36
ANMO Albuquerque 59.22 291 *i* P **P** **00 15 32.2 +0.1**
ANMO pmax pmax
comp=Z,9.0nm,3.4s
HWUT Hardware Ranch 59.34 300 *e*P **P** **00 15 34.9 +2.0**
comp=Z,6.8nm,1.2s
NEW Newport 59.55 309 *e*P **P** **00 15 36.1 +2.1**
comp=Z,9.7nm,1.1s
NEW Newport 59.55 309 *e*P **P** **00 15 36.1 +2.1**
NEW pmax pmax
comp=Z,10.0nm,1.1s
TXAR Lajitas Array 60.18 284 P P 00 15 32.6 -6.1
comp=Z,0.3nm,0.6s,baz=74,slow=6.7,SNR=2.6
TXAR LR LR 00 40 55.7
comp=Z,292nm,19.5s,baz=0.0,slow=36
TX31 Lajitas Ar. Si 60.18 284 *e*P **P** **00 15 39.5 +0.9**
NRIK Noril'sk 60.58 21 LR LR 00 41 57.3
comp=Z,97nm,19.4s,baz=332,slow=37
DUG Dugway, Tooele 60.87 299 *e*P **P** **00 15 44.8 +1.4**
comp=Z,7.1nm,1.1s
DUG Dugway, Tooele 60.87 299 *e*P **P** **00 15 44.8 +1.4**
DUG pmax pmax
comp=Z,7.0nm,1.1s
BMO Blue Mountains 61.35 306 *e*P **P** **00 15 49.2 +2.7**
comp=Z,6.0nm,1.5s
BMO Blue Mountains 61.35 306 *e*P **P** **00 15 49.2 +2.7**
BMO pmax pmax
comp=Z,6.0nm,1.5s
J08A Circle Bar Ran 62.85 305 *e*P **P** **00 15 57.8 +1.2**
X16A Lo Mia Camp, P 62.98 293 *e*P **P** **00 15 59.7 +2.1**
comp=Z,3.5nm,1.1s
WVOR Wild Horse Val 63.44 304 *e*P **P** **00 16 01.4 +0.9**
comp=Z,33nm,1.8s
WVOR Wild Horse Val 63.44 304 *e*P **P** **00 16 01.4 +0.9**
WVOR pmax pmax
comp=Z,33nm,1.8s
BRVK Borovoye 63.50 42 *e*P **P** **00 16 00.0 -0.5**
comp=Z,10nm,1.1s
BRVK Borovoye 63.50 42 *ce*P **P** **00 15 57.9 -2.6**
BRVK pmax pmax
comp=Z,17nm,1.7s
BVAR Borovoye Array 63.57 42 P P 00 15 53.9 -7.1
comp=Z,0.3nm,0.5s,baz=335,slow=6.5,SNR=2.8
BVAR LR LR 00 43 42.8
comp=Z,268nm,19.4s,baz=301,slow=36
R11A Troy Canyon, C 63.67 299 *e*P **P** **00 16 03.2 +1.0**
comp=Z,2.0nm,1.1s
IL1 Eielson Array 63.76 335 *e*P **P** **00 16 03.2 +1.1**
ILAR Eielson Array 63.76 335 P P 00 15 52.8 -9.3
comp=Z,0.1nm,0.5s,baz=39,slow=5.8,SNR=2.7
ILAR LR LR 00 40 52.1
comp=Z,141nm,21.1s,baz=72,slow=34
GEYT Alibeck 64.68 61 LR LR 00 46 04.5
comp=Z,128nm,19.6s,baz=245,slow=38
K05A Summer Lake 64.68 305 *e*P **P** **00 16 10.4 +1.7**
comp=Z,15nm,1.4s
KVN Kaiserville 64.94 301 *e*P **P** **00 16 12.2 +1.7**
comp=Z,6.6nm,1.1s
KVN Kaiserville 64.94 301 *e*P **P** **00 16 12.2 +1.7**
KVN pmax pmax
comp=Z,7.0nm,1.1s
YBH Yreka Blue Hor 66.36 305 LR LR 00 45 16.7
comp=Z,291nm,18.2s,baz=49,slow=36
LPAZ La Paz 67.49 221 P **P** **00 16 28.4 +0.9**
comp=Z,2.8nm,1.1s,baz=21,slow=7.0,SNR=4.9
LPAZ LR LR 00 42 35.4
comp=Z,456nm,21.8s,baz=26,slow=33
LPAZ La Paz 67.49 221 *e*P **P** **00 16 27.5 +0.1**
comp=Z,6.5nm,1.2s
LPAZ La Paz 67.49 221 *e*P **P** **00 16 27.5 +0.1**
LPAZ pmax pmax
comp=Z,7.0nm,1.2s

LPIG La Paz 68.02 283 LR LR 00 45 12.4
comp=Z,444nm,20.2s,baz=42,slow=35
NVS Novosibirsk 68.48 35 *e*P **P** **00 16 30.4 -2.1**
NNA Nana 68.65 231 LR LR 00 44 30.6
comp=Z,172nm,20.6s,baz=26,slow=34
KURK Kurchatov 69.04 40 *e*P **P** **00 16 35.6 -0.5**
comp=Z,4.8nm,1.0s
KURK Kurchatov 69.04 40 *ce*P **P** **00 16 33.6 -2.5**
KURK pmax pmax
comp=Z,10.0nm,1.7s
KURBB Kurchatov Arra 69.05 40 P P 00 16 29.2 -6.9
comp=Z,0.5nm,0.3s,baz=317,slow=5.3,SNR=5.6
ATD Arta Tunnel 69.09 93 LR LR 00 48 40.3
comp=Z,187nm,18.2s,baz=344,slow=38
ZALV Zalesovo Beam 69.77 35 P P 00 16 33.6 -6.9
comp=Z,0.3nm,0.3s,baz=308,slow=7.1,SNR=2.2
ZALV LR LR 00 46 28.2
comp=Z,128nm,21.5s,baz=246,slow=36
ZALV Zalesovo Beam 69.77 35 *e*P **P** **00 16 39.0 -1.5**
ZALV Zalesovo Beam 69.77 35 *e*P **P** **00 16 39.0 -1.5**
BILL Bilibino 70.53 354 *i* P **P** **00 16 44.5 -0.5**
BILL *i* 00 16 51.6
BILL *i* 00 17 05.4
BILL *i* 00 19 21.8
BILL pmax pmax
comp=Z,1.0nm,1.1s
FRU Bishkek 71.95 49 *e*P **P** **00 16 54.0 0.0**
CPUP Villa Florida 71.97 206 LR LR 00 46 01.0
comp=Z,99nm,18.1s,baz=20,slow=34
KMBO Kilima Mbogo 73.29 107 LR LR 00 50 13.1
comp=Z,428nm,19.0s,baz=320,slow=36
MK31 Makanchi Array 73.45 42 *e*P **P** **00 17 02.4 -0.5**
MK31 Makanchi Array 73.45 42 *e*P **P** **00 17 02.4 -0.5**
MKAR Makanchi Array 73.45 42 P P 00 16 55.3 -7.6
comp=Z,1.0nm,0.8s,baz=322,slow=6.8,SNR=5.5
MKAR LR LR 00 48 46.9
comp=Z,416nm,21.5s,baz=282,slow=36
MKAR Makanchi Array 73.45 42 *e*P **P** **00 17 02.4 -0.5**
comp=Z,11nm,0.8s
MKAR Makanchi Array 73.45 42 *e*P **P** **00 17 02.4 -0.5**
MKAR pmax pmax
comp=Z,11nm,0.8s
WSAR Wadi Sarin 73.63 73 LR LR 00 52 32.5
comp=Z,157nm,20.4s,baz=337,slow=38
DGZ Jazzator, Alta 73.89 37 *i* P **P** **00 17 05.1 -0.5**
DGZ pmax pmax
comp=Z,4.0nm,1.0s
KSH Kashi 74.87 51 P **P** **00 17 12.5 +1.1**
KSH pmax pmax
comp=Z,400nm,4.5s
SEY Seymchan 76.28 359 *ce*P **P** **00 17 19.3 +0.4**
BOD Bodaibo 76.75 19 *e*P **P** **00 17 18.8 -2.8**
BOD pmax pmax
comp=Z,15nm,1.9s
WMQ Urumqi 78.25 41 P **P** **00 17 31.4 +1.0**
WMQ pmax pmax
comp=Z,20nm,0.7s
WMQ pmax pmax
comp=Z,86nm,3.7s
WMQ LR LR
comp=Z,600nm,15.7s
WMQ LR LR
comp=Z,670nm,19.1s
WMQ LR LR
comp=Z,680nm,24.3s
SONA1 Songino Array 83.12 28 *e*P **P** **00 17 55.6 -0.9**
SONM Songino Array 83.12 28 P P 00 17 49.5 -7.0
comp=Z,0.3nm,0.3s,baz=316,slow=8.0,SNR=2.1
SONM LR LR 00 55 31.2
comp=Z,79nm,18.3s,baz=296,slow=36
ULN Ulaanbaatar 83.33 28 *ce*P **P** **00 17 58.5 +0.9**
ULN pmax pmax
comp=Z,7.0nm,1.7s
BOSA Boshof 85.82 134 LR LR 00 52 48.7
comp=Z,423nm,22.0s,baz=332,slow=33
GTA Gaotai 87.43 37 *e*P **P** **00 18 21.0 +2.8**
GTA pP pP 00 18 25.3 -1.5
GTA sP sP 00 18 27.9 -2.0
GTA S **S** **00 29 00.3 +3.0**
GTA pmax pmax
comp=Z,3.0nm,1.1s
GTA pmax pmax
comp=Z,59nm,4.7s
GTA LR LR
comp=Z,150nm,21.0s
GTA LR LR
comp=Z,150nm,19.2s
GTA LR LR
comp=Z,240nm,19.6s
PLCA Paso Flores 89.66 210 LR LR 00 57 29.2
comp=Z,105nm,19.5s,baz=50,slow=35
HHC Hu-ho-hao-te 91.02 29 *e*P **P** **00 18 32.6 -2.4**
HHC S **S** **00 29 23.3 -7.6**
HHC SS **SS** **00 35 31.0 -1.9**
HHC pmax pmax
comp=Z,22nm,0.7s
HHC pmax pmax
comp=Z,150nm,7.2s
HHC LR LR
comp=Z,330nm,14.7s
HHC LR LR
comp=Z,220nm,15.6s
HHC LR LR
comp=Z,360nm,16.4s
LZH Lanzhou 91.98 36 *e*P **P** **00 18 37.6 -2.0**
LZH pP PcP 00 18 42.8 +2.4
LZH sP pP 00 18 46.1 -2.1
LZH *e*PP **PP** **00 22 16.9 -1.4**
LZH pmax pmax
comp=Z,19nm,1.1s
LZH pmax pmax
comp=Z,110nm,6.5s
LZH LR LR
comp=Z,230nm,17.5s
LZH LR LR
comp=Z,240nm,17.4s
LZH LR LR
comp=Z,300nm,19.7s
OPO Ambohidratompo 92.31 113 LR LR 01 00 16.9
comp=Z,312nm,19.6s,baz=349,slow=36
BRDH Bariadhala 96.19 53 LR LR 01 08 09.3
comp=Z,307nm,18.3s,baz=324,slow=39
CD2 Chengdu 96.24 39 P **P** **00 18 57.0 -2.1**
CD2 pmax pmax
comp=Z,6.0nm,0.5s
KSRS Korea Array 99.08 18 LR LR 01 03 39.8
comp=Z,49nm,21.7s,baz=326,slow=36
PALK Pallekele 100.04 71 LR LR 01 08 13.6
comp=Z,108nm,18.1s,baz=295,slow=38
NJ2 Nanjing 101.49 27 *e*P **Pdif** **00 19 20.3 -2.2**
PPT2 Papeete2 124.05 276 *e*LR LR 01 02 54.4
comp=Z,276nm,25.0s

MEX 25 00:09:35.9±0.3, **16°.12N**×**97°.53W, h16**km±999km, **MD3.6, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**1.22**	**39**	*e*P	Pn	00 09 54.9	-3.7
VHO				*e*S	Sb	00 10 09.7	-4.7
TLIG	**Tlapa**	**1.75**	**326**	*e*P	Pn	00 10 02.4	-3.4
TLIG				*e*S	Sn	00 10 22.6	-5.2

ISK ***25*** *00:36:37.3, 38°.70N×43°.65E, h3km, ML2.9/11*
ISCJB ***25*** *00:36:38.7±0.6, 38°.72N±0°.02×43°.69E±0°.04, h8km±4km, Error ellipse: s-maj=5.5km s-min=3.4km az=16.5*
DDA ***25*** *00:36:38.6, 38°.73N×43°.68E, h7km, Ml3.1*
CSEM ***25*** *00:36:38.4±0.2, 38°.72N×43°.68E, h8km, ML2.9, Error ellipse: s-maj=4.8km s-min=3.2km az=105.0*
ISC 25 00:36:38.6±1.1, **38°.73N**±0°.02×**43°.67E**±0°.03, **h5**km±9km, **n47**, **o0°.99/77, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.26**	**239**	PG	**Pg**	**00 36 44.2**	**+0.5**
VANB				SG	**Sg**	**00 36 47.2**	**0.0**
VANB	**Van**	**0.26**	**239**	*e*Pg	**Pg**	**00 36 44.2**	**+0.5**
VANB				*e*Sg	**Sg**	**00 36 47.2**	**0.0**
VMUR	**Van-Muradiye**	**0.27**	**343**	*i* P	**Pg**	**00 36 44.5**	**+0.6**
VMUR				*i* S	**Sb**	**00 36 49.7**	**-1.5**
VMUR	**Van-Muradiye**	**0.27**	**343**	P	**Pg**	**00 36 44.5**	**+0.6**
VMUR				S	**Sb**	**00 36 49.7**	**-1.5**
TVAN	**Van**	**0.29**	**226**	*i* P	**Pb**	**00 36 45.3**	**-1.2**

TVAN			*i* S		**Sb**	**00 36 50.6**	**-1.1**
TVAN	**Van**	**0.29 226**	P		**Pb**	**00 36 45.3**	**-1.2**
TVAN			S		**Sb**	**00 36 50.6**	**-1.1**
ERCV	**ERCIS-VAN**	**0.39 318**	PG		**Pg**	**00 36 45.9**	**-0.3**
ERCV			SG		**Sg**	**00 36 52.9**	**+1.5**
ERCV	**ERCIS-VAN**	**0.39 318**	*e*Pg		**Pg**	**00 36 45.9**	**-0.3**
ERCV			*e*Sg		**Sg**	**00 36 52.9**	**+1.5**
CLDR	**Caldiran**	**0.45 25**	PG		**Pg**	**00 36 46.9**	**-0.5**
CLDR			SG		**Sb**	**00 36 55.1**	**-1.4**
CLDR	**Caldiran**	**0.45 25**	*i* P		**Pg**	**00 36 47.1**	**-0.2**
CLDR			*i* S		**Sb**	**00 36 54.8**	**-1.7**
CLDR	**Caldiran**	**0.45 25**	*e*Pg		**Pg**	**00 36 46.9**	**-0.5**
CLDR	**Caldiran**	**0.45 25**	P		**Pg**	**00 36 47.2**	**-0.2**
CLDR			S		**Sb**	**00 36 54.8**	**-1.7**
CLDR			*e*Sg		**Sb**	**00 36 55.1**	**-1.4**
GEVA	**Gevas**	**0.64 229**	*i* P		**Pg**	**00 36 50.5**	**-0.4**
GEVA			*i* S		**Sb**	**00 37 01.9**	**+0.2**
GEVA	**Gevas**	**0.64 229**	P		**Pg**	**00 36 50.5**	**-0.4**
GEVA			S		**Sb**	**00 37 01.9**	**+0.2**
ADCV	**BITLIS_Adilcev**	**0.75 276**	*i* P		**Pg**	**00 36 53.0**	**+0.1**
ADCV			*i* S		**Sb**	**00 37 04.2**	**-0.6**
ADCV	**BITLIS_Adilcev**	**0.75 276**	P		**Pg**	**00 36 53.0**	**+0.1**
ADCV			S		**Sb**	**00 37 04.2**	**-0.6**
DYDN	**Diyadin**	**0.81 1**	*i* P		**Pg**	**00 36 54.1**	**-0.1**
DYDN			*i* S		**Sb**	**00 37 06.2**	**-0.5**
DYDN	**Diyadin**	**0.81 1**	P		**Pg**	**00 36 54.1**	**-0.1**
DYDN			S		**Sb**	**00 37 06.2**	**-0.5**
TUTA	**Tutak**	**0.95 315**	*i* P		**Pg**	**00 36 56.0**	**-0.8**
TUTA			*i* S		**Sg**	**00 37 09.3**	**+0.3**
TUTA	**Tutak**	**0.95 315**	P		**Pg**	**00 36 56.0**	**-0.8**
TUTA			S		**Sg**	**00 37 09.4**	**+0.3**
AGRB	**Hanur-Agry**	**1.00 328**	PG		**Pg**	**00 36 57.1**	**-0.6**
AGRB			SG		**Sb**	**00 37 12.0**	**0.0**
AGRB	**Hanur-Agry**	**1.00 328**	*e*Pg		**Pg**	**00 36 57.1**	**-0.6**
AGRB			*e*Sg		**Sb**	**00 37 12.0**	**0.0**
HAKT	**HAKKARI**	**1.17 179**	*i* P		**Pg**	**00 37 00.7**	**-0.4**
HAKT			*i* S		**Sn**	**00 37 19.9**	**+1.5**
HAKT	**HAKKARI**	**1.17 179**	P		**Pg**	**00 37 00.7**	**-0.4**
HAKT			S		**Sn**	**00 37 19.9**	**+1.5**
IGDI	**IGDIR**	**1.18 15**	*i* P		**Pg**	**00 37 00.9**	**-0.3**
IGDI			*i* S		**Sn**	**00 37 19.5**	**+1.1**
YOVA	**Hakkari_Y¨...kse**	**1.24 157**	*i* P		**Pn**	**00 37 02.4**	**-0.4**
YOVA			*i* S		**Sn**	**00 37 24.1**	**+4.0**
YOVA	**Hakkari_Y¨...kse**	**1.24 157**	P		**Pn**	**00 37 02.4**	**-0.4**
GURO	**Guroymak-BITLI**	**1.30 263**	PN		**Pn**	**00 37 01.9**	**-1.7**
GURO	**Guroymak-BITLI**	**1.30 263**	*e*Pn		**Pn**	**00 37 01.9**	**-1.7**
EKAR	**Karacoban**	**1.36 293**	*i* P		**Pn**	**00 37 03.7**	**-0.8**
EKAR			*i* S		**Sn**	**00 37 24.0**	**+0.9**
EKAR	**Karacoban**	**1.36 293**	P		**Pn**	**00 37 03.7**	**-0.8**
EKAR			S		**Sn**	**00 37 24.0**	**+0.9**
EATA	**Eleskirt**	**1.46 321**	*i* P		**Pn**	**00 37 05.8**	**-0.1**
EATA			*i* S		**Sg**	**00 37 26.8**	**+1.4**
EATA	**Eleskirt**	**1.46 321**	P		**Pn**	**00 37 05.8**	**-0.1**
EATA			S		**Sg**	**00 37 26.8**	**+1.4**
CUKT	**Cukurca**	**1.48 182**	PN		**Pn**	**00 37 05.3**	**-0.8**
CUKT	**Cukurca**	**1.48 182**	*e*Pn		**Pn**	**00 37 05.3**	**-0.8**
SIRT	**Sirnak**	**1.57 219**	PN		**Pn**	**00 37 06.9**	**-0.3**
SIRT	**Sirnak**	**1.57 219**	*e*Pn		**Pn**	**00 37 06.9**	**-0.3**
GNI	**Garni**	**1.64 30**	PN		**Pb**	**00 37 09.3**	**-0.2**
GNI	**Garni**	**1.64 30**	*e*Pn		**Pb**	**00 37 09.3**	**-0.2**
SVAN	**Silvan-Diyarba**	**2.03 254**	PN		**Pn**	**00 37 13.4**	**-0.1**
SVAN	**Silvan-Diyarba**	**2.03 254**	*e*Pn		**Pn**	**00 37 13.4**	**-0.1**
SENK	**Senkaya-Erzuru**	**2.10 331**	PN		**Pn**	**00 37 15.0**	**+0.4**
SENK	**Senkaya-Erzuru**	**2.10 331**	*e*Pn		**Pn**	**00 37 15.0**	**+0.4**
BNGB	**Bing¨¶l**	**2.35 277**	PN		**Pn**	**00 37 17.9**	**-0.2**
BINT	**Bingol**	**2.49 274**	*e*Pn		**Pn**	**00 37 17.9**	**-2.1**
PTK	**Pertek**	**3.35 274**	PN		**Pn**	**00 37 32.4**	**+0.6**
PTK	**Pertek**	**3.35 274**	*e*Pn		**Pn**	**00 37 32.4**	**+0.6**

NIED ***25*** *01:38:00, 36°.80N×141°.10E, h47km, Mw3.9 Best double couple: M0=7.47000×10^14 NP1:φ=195.00000°, δ=4.00000°, λ=79.00000°. NP2:φ=25.00000°, δ=86.00000°, λ=91.00000°.*
ISCJB ***25*** *01:38:27.5±0.7, 36°.79N×0°.04×141°.17E±0°.07, h50km±5km, mb3.9/15, Error ellipse: s-maj=10.2km s-min=5.4km az=15.4*
JMA ***25*** *01:38:29.1±0.1, 36°.79N×141°.03E, h49km±1km, M3.8*
JMA Felt II J1.
IDC ***25*** *01:38:32.8±2.3, 36°.68N×140°.92E, h82km±20km, mb3.6/15, mb1 3.7/19, mb1mx3.5/80, mbtmpg3.9/19, MS2.7/3, Ms1 2.7/3, ms1mx2.3/67, Error ellipse: s-maj=22.0km s-min=10.9km az=60.0*

ISC 25 01:38:28.7±1.2, 36°.80N±0°.04×141°.14E±0°.07, h43km±9km, n30, σ1°.02/39, mb3.8/15, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.41 318**		P	**Pn**	**01 38 38.6**	**+0.2**
ONAJ				S	**Sn**	**01 38 45.0**	**-0.3**
JHO	**Hitachi**	**0.50 248**		P	**Pn**	**01 38 39.2**	**-0.3**
JHO				S	**Sn**	**01 38 46.2**	**-1.0**
JFK	**Kawauchi**	**0.60 339**		P	**Pn**	**01 38 41.0**	**+0.1**
JFK				S	**Sn**	**01 38 49.3**	**-0.4**
JYT	**Yasato**	**0.95 233**		P	**Pn**	**01 38 44.9**	**-0.7**
JYT				S	**Sn**	**01 38 56.5**	**-1.5**
JFT	**Otama**	**0.96 318**		P	**Pn**	**01 38 46.3**	**+0.6**
JFT				S	**Sn**	**01 38 58.2**	**-0.1**
JMM	**Marumori**	**1.10 345**		P	**Pn**	**01 38 47.8**	**+0.2**
JMM				S	**Sn**	**01 39 01.4**	**-0.2**
JFY	**Yanaizu**	**1.30 298**		P	**Pn**	**01 38 50.1**	**-0.2**
JFY				S	**Sn**	**01 39 05.9**	**-0.6**
MJAR	**Matsushiro Arr**	**2.37 265**		P	**Pn**	**01 39 05.2**	**+0.2**
	17nm,0.3s,baz=49,slow=29,SNR=78						
MJAR				S	**Sn**	**01 39 34.1**	**+1.2**
	18nm,0.3s,baz=231,slow=28,SNR=8.1						
MJAR				LR	LR	01 40 20.2	
	comp=Z,136nm,21.7s,baz=90,slow=50						
MAT	**Matsushiro**	**2.37 265**		P	**Pn**	**01 39 05.6**	**+0.5**
MAT				S	**Sn**	**01 39 35.4**	**+2.4**
JHJ	**Hachijo jima 2**	**3.84 197**		P	**Pn**	**01 39 26.6**	**+1.4**
	17nm,0.3s,baz=73,slow=19,SNR=6.1						
JHJ				S	**Sn**	**01 40 09.0**	**-0.1**
	35nm,0.3s,baz=270,slow=20,SNR=4.3						
ASAJ	**Asahikawa**	**7.39**	**8**	P		01 40 22.7	+8.8
	1.3nm,0.3s,baz=262,slow=21,SNR=4.2						
ASAJ				S	**Sn**	**01 41 36.2**	**-0.2**
	0.7nm,0.3s,baz=223,slow=16,SNR=3.1						
JNU	**Nakatsue**	**9.19 249**		LR	LR	01 44 51.4	
	comp=Z,30nm,19.3s,baz=312,slow=42						
USRK	**Ussuriysk Ar.**	**10.15 320**		P		01 40 56.6	+4.9
	0.3nm,0.3s,baz=133,slow=12,SNR=9.4						
KSRS	**Korea Array**	**10.57 277**		P	**Pn**	**01 41 01.0**	**+3.5**
	baz=99,slow=15,SNR=5.1						
KSRS				LR	LR	01 44 49.2	
	comp=Z,63nm,19.8s,baz=80,slow=36						
SONM	**Songino Array**	**27.73 304**		P	**P**	**01 44 13.2**	**+0.2**
	1.4nm,0.6s,baz=110,slow=9.9,SNR=7.6						
ZALV	**Zalesovo Beam**	**41.91 313**		P	**P**	**01 46 14.3**	**-0.3**
	2.3nm,0.7s,baz=94,slow=6.7,SNR=6.0						
MKAR	**Makanchi Array**	**44.06 302**		P	**P**	**01 46 31.9**	**-0.3**
	0.9nm,0.7s,baz=87,slow=9.3,SNR=7.5						
KURBB	**Kurchatov Arra**	**45.97 308**		P	**P**	**01 46 46.5**	**-0.8**
	1.1nm,0.5s,baz=83,slow=7.9,SNR=14						
ILAR	**Eielson Array**	**49.81 32**		P	**P**	**01 47 18.5**	**+1.7**
	0.2nm,0.6s,baz=262,slow=6.3,SNR=3.3						
BVAR	**Borovoye Array**	**50.57 312**		P	**P**	**01 47 21.9**	**-0.7**
	0.4nm,0.5s,baz=92,slow=7.2,SNR=2.8						
BVAR				PcP	**PcP**	**01 48 39.5**	**-0.4**
	0.7nm,0.5s,baz=27,slow=3.5,SNR=4.8						
ARU	**Arti**	**56.39 319**		P	**P**	**01 48 04.4**	**-0.9**
	1.8nm,0.3s,baz=66,slow=6.7,SNR=4.5						
WRA	**Warramunga Arr**	**56.80 188**		P	**P**	**01 48 08.4**	**-0.2**
	1.3nm,0.6s,baz=4.0,slow=7.4,SNR=13						
FINES	**FINESS Array B**	**68.92 332**		P	**P**	**01 49 27.9**	**-0.8**
	0.7nm,0.7s,baz=32,slow=8.2,SNR=3.5						
KBZ	**Khabaz**	**70.89 311**		P	**P**	**01 49 40.9**	**-0.1**
	1.5nm,0.7s,baz=337,slow=4.3,SNR=5.4						
HFS	**Hagfors**	**74.21 336**		P	**P**	**01 50 00.5**	**0.0**
	5.7nm,1.2s,baz=90,slow=2.1,SNR=6.2						
AKASG	**Malin Array Be**	**74.34 322**		P	**P**	**01 50 00.7**	**-0.8**
	0.7nm,0.3s,baz=46,slow=6.1,SNR=6.4						
BRTR	**Keskin Array B**	**78.84 311**		P	**P**	**01 50 26.6**	**-0.8**
	0.6nm,0.7s,baz=51,slow=7.3,SNR=3.1						
GERES	**GERESS Array B**	**82.79 328**		P	**P**	**01 50 47.5**	**-0.6**
	0.3nm,0.4s,baz=37,slow=6.7,SNR=5.1						
TXAR	**Lajitas Array**	**90.44 52**		P	**P**	**01 51 27.2**	**+1.3**
	0.2nm,0.7s,baz=322,slow=3.8,SNR=3.4						
LPAZ	**La Paz**	**147.00 60**		PKPbc	**PKPab**	**01 58 08.7**	**-0.6**
	1.2nm,0.9s,baz=315,slow=2.9,SNR=5.5						

IDC ***25*** *01:42:51.4±4.5, 27°.19S×177°.40W, h70km±37km, mb3.8/5, mb1 4.0/6, mb1mx3.6/47, mbtmpd4.1/6, ML4.8/1, Error ellipse: s-maj=39.2km s-min=29.0km az=31.0*
ISCJB ***25*** *01:42:52.8±0.5, 27°.36S±0°.07×177°.4W±0°.1, h100km, mb4.2/10, Error ellipse: s-maj=14.8km s-min=8.4km az=27.6*
NEIC ***25*** *01:42:53.2±1.9, 27°.39S×177°.33W, h92km±18km, mb4.6/7, Error ellipse: s-maj=24.3km s-min=11.7km az=160.0*

ISC 25 01:42:54.3±0.6, 27°.44S±0°.08×177°.4W±0°.2, h100km, n42, σ1°.52/42, mb4.2/10, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.87 195**		P	**Pn**	**01 43 24.2**	**-1.0**
	331nm,0.3s,baz=87,slow=7.4,SNR=27						
RAO				S	**Sn**	**01 43 49.7**	**+0.9**
	210nm,0.3s,baz=95,slow=19,SNR=4.1						
RAO	**Raoul Island**	**1.87 195**		*e*Pn	**Pn**	**01 43 24.7**	**-0.6**
RAO				*e*Sn	**Sn**	**01 43 49.4**	**+0.6**
URZ	**Urewera**	**11.74 202**		S	Sn	01 47 37.9	-10
	0.5nm,0.3s,baz=104,slow=18,SNR=3.9						
KHZ	**Kahutara**	**16.68 204**		*e*Pn	**Pn**	**01 46 37.8**	**-4.1**
	42nm,1.4s						
OXZ	**Oxford**	**18.03 206**		*e*P	**P**	**01 46 56.7**	**-0.7**
	37nm,1.4s						
CTA	**Charters Tower**	**33.99 274**		P	**P**	**01 49 29.8**	**+1.1**
	2.3nm,0.5s,baz=102,slow=10,SNR=3.7						
STKA	**Stephens Creek**	**35.78 253**		*e*P	**P**	**01 49 44.8**	**+0.9**
AS31	**Alice Springs**	**43.90 264**		*e*P	**P**	**01 50 50.9**	**-0.4**
	2.2nm,1.3s						
ASAR	**Alice Springs**	**43.90 264**		P	**P**	**01 50 50.9**	**-0.4**
	0.8nm,0.5s,baz=96,slow=6.6,SNR=11						
WR1	**Warramunga Arr**	**44.62 269**		*e*P	**P**	**01 50 56.5**	**-0.6**
	26nm,1.5s						
WRA	**Warramunga Arr**	**44.62 269**		P	**P**	**01 50 56.5**	**-0.6**
	2.0nm,0.6s,baz=108,slow=7.6,SNR=10.0						
VNDA	**Vanda**	**51.09 186**		P	**P**	**01 51 49.0**	**+2.9**
	0.4nm,0.5s,baz=351,slow=7.9,SNR=4.0						
MAW	**Mawson**	**75.27 200**		P	**P**	**01 54 27.1**	**+1.2**
	1.9nm,0.7s,baz=143,slow=4.1,SNR=4.6						
MAW	**Mawson**	**75.27 200**		*e*P	**P**	**01 54 27.1**	**+1.2**
	0.5nm,0.8s						
JHUM	**Huhtala Lane,**	**82.59 41**		*e*P	**P**	**01 55 06.6**	**+0.3**
RPV	**Rancho Palos V**	**82.63 46**		*e*P	**P**	**01 55 05.1**	**-1.5**
DPP	**Dos Picos Cty**	**83.10 47**		*e*P	**P**	**01 55 06.1**	**-3.0**
CHFC	**Chilao Flat St**	**83.24 46**		*e*P	**P**	**01 55 06.3**	**-3.7**
DGR	**Domenigoni Val**	**83.47 47**		*e*P	**P**	**01 55 09.3**	**-1.7**
BBSC	**Beaumont Base**	**83.65 47**		*e*P	**P**	**01 55 10.8**	**-1.2**
BBRC	**Big Bear Solar**	**83.91 46**		*e*P	**P**	**01 55 12.8**	**-0.6**
R11A	**Troy Canyon, C**	**87.30 44**		*e*P	**P**	**01 55 32.2**	**+2.1**
	1.6nm,0.6s						
RSO	**Redoubt South**	**89.87 12**		*e*P	**P**	**01 55 42.2**	**+0.5**
SVW2	**Sparrevohn**	**89.98 10**		*e*P	P	01 55 46.6	+4.6
	6.9nm,0.6s						
T25A	**Trinidad**	**93.87 50**		*e*P	**P**	**01 56 01.7**	**+0.9**
	4.9nm,0.6s						
MK32	**Makanchi Array**	**116.27 311**		*e*PKPdf	**PKPdf**	**02 01 25.4**	**-0.4**
MKAR	**Makanchi Array**	**116.27 311**		PKP	**PKPdf**	**02 01 25.4**	**-0.4**
	0.3nm,0.9s,baz=197,slow=3.0,SNR=2.6						
KURK	**Kurchatov**	**119.38 315**		*e*PKPdf	**PKPdf**	**02 01 30.3**	**-1.3**
KURBB	**Kurchatov Arra**	**119.42 315**		PKP	**PKPdf**	**02 01 30.3**	**-1.4**
	0.3nm,0.7s,baz=93,slow=1.7,SNR=3.6						
BVAR	**Borovoye Array**	**124.64 317**		PKP	**PKPdf**	**02 01 41.2**	**-0.5**
	0.5nm,0.6s,baz=90,slow=0.4,SNR=3.6						
ARA0	**ARCESS Array S**	**135.81 349**		*e*PKPdf	**PKPdf**	**02 02 03.0**	**+0.6**
ARCES	**ARCESS Array B**	**135.81 349**		PKP	**PKPdf**	**02 02 03.0**	**+0.6**
	1.3nm,0.8s,baz=43,slow=1.6,SNR=5.4						
FIA0	**FINESS Array S**	**142.54 342**		*e*PKPdf	**PKPdf**	**02 02 12.9**	**-1.9**
FINES	**FINESS Array B**	**142.54 342**		PKP	**PKPdf**	**02 02 12.9**	**-1.9**
	1.4nm,0.8s,baz=353,slow=3.4,SNR=4.2						
NB2	**NORSAR Subarra**	**145.91 353**		PKP	**PKPab**	**02 02 21.1**	**-1.2**
	comp=Z,0.5nm,0.6s,baz=21,slow=4.1						
HFS	**Hagfors**	**146.45 350**		PKPbc	**PKPbc**	**02 02 22.1**	**-1.1**
	comp=Z,1.5nm,0.5s,baz=46,slow=4.2,SNR=7.5						
AKASG	**Malin Array Be**	**149.22 326**		PKPbc	**PKPbc**	**02 02 30.2**	**-0.7**
	comp=Z,2.3nm,0.7s,baz=44,slow=3.8,SNR=6.7						
AKBB	**Malin Array Si**	**149.22 326**		*e*PKPbc	**PKPbc**	**02 02 30.2**	**-0.7**
MMAI	**Mount Meron Ar**	**151.21 289**		PKPbc	**PKPbc**	**02 02 36.7**	**+0.3**
	comp=Z,2.3nm,0.6s,baz=90,slow=2.9,SNR=4.3						
BR101	**Keskin Array S**	**151.55 303**		*e*PKPbc	**PKPbc**	**02 02 38.1**	**+1.1**
BRTR	**Keskin Array B**	**151.55 303**		PKPbc	**PKPbc**	**02 02 38.1**	**+1.1**
	comp=Z,0.4nm,0.7s,baz=140,slow=3.8,SNR=3.5						
EKA	**Eskdalemuir Ar**	**151.81 7**		PKPbc	**PKPbc**	**02 02 38.5**	**+1.5**
	comp=Z,0.3nm,0.4s,baz=320,slow=1.9,SNR=3.5						

AZER ***25*** *01:42:56.2±2.9, 38°.50N×43°.22E, h5km, ml3.1/7, Error ellipse: s-maj=32.0km s-min=23.3km az=127.0*
ISK ***25*** *01:42:59.5, 38°.74N×43°.62E, h8km, ML3.0/19*
DDA ***25*** *01:42:59.9, 38°.75N×43°.65E, h7km, Ml3.3*
CSEM ***25*** *01:43:00.3±0.2, 38°.73N×43°.60E, h5km, ML3.0, Error ellipse: s-maj=4.6km s-min=3.9km az=117.0*
ISCJB ***25*** *01:43:00.8±0.4, 38°.76N±0°.02×43°.59E±0°.03, h8km±3km, Error ellipse: s-maj=3.7km s-min=3.0km az=22.7*
TEH ***25*** *01:43:00.6, 38°.69N×43°.75E, h10km, ML2.7*

ISC 25 01:43:01.0±0.9, 38°.74N±0°.02×43°.61E±0°.02, h13km±7km, n82, σ1°.44/119, 14C-6D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.22 230**		PG	**Pg**	**01 43 06.1**	**+0.2**
VANB	**Van**	**0.22 230**		*e*Pg	**Pg**	**01 43 06.1**	**+0.2**
VMUR	**Van-Muradiye**	**0.25 354**		*i* P	**Pg**	**01 43 05.4**	**-1.0**
VMUR				*i* S	**Sb**	**01 43 11.4**	**-0.5**
VMUR	**Van-Muradiye**	**0.25 354**		P	**Pg**	**01 43 05.4**	**-1.0**
VMUR				S	**Sb**	**01 43 11.4**	**-0.5**
TVAN	**Van**	**0.26 217**		*i* P	**Pg**	**01 43 06.0**	**-0.6**
TVAN				*i* S	**Sb**	**01 43 11.4**	**-0.8**
TVAN	**Van**	**0.26 217**		P	**Pg**	**01 43 06.0**	**-0.6**
TVAN				S	**Sb**	**01 43 11.4**	**-0.8**
ERCV	**ERCIS-VAN**	**0.35 323**		PG	**Pg**	**01 43 07.2**	**-1.0**
ERCV	**ERCIS-VAN**	**0.35 323**		*e*Pg	**Pg**	**01 43 07.2**	**-1.0**
CLDR	**Caldiran**	**0.47 31**		PG	**Pg**	**01 43 07.9**	**-2.4**
CLDR				SG	**Sg**	**01 43 16.4**	**-0.3**
CLDR	**Caldiran**	**0.47 31**		*i* P	**Pg**	**01 43 08.0**	**-2.4**
CLDR				*i* S	**Sg**	**01 43 16.5**	**-0.2**
CLDR	**Caldiran**	**0.47 31**		P	**Pg**	**01 43 08.0**	**-2.4**
CLDR				*e*Sg	**Sg**	**01 43 16.4**	**-0.3**
GEVA	**Gevas**	**0.60 226**		*i* P	**Pg**	**01 43 11.4**	**-1.4**
GEVA				*i* S	**Sb**	**01 43 23.2**	**+1.2**
GEVA	**Gevas**	**0.60 226**		P	**Pg**	**01 43 11.4**	**-1.4**
GEVA				S	**Sb**	**01 43 23.2**	**+1.2**
ADCV	**BITLIS_Adilcev**	**0.69 276**		*i* P	**Pb**	**01 43 14.1**	**-0.9**
ADCV				*i* S	**Sb**	**01 43 25.4**	**+0.8**
ADCV	**BITLIS_Adilcev**	**0.69 276**		P	**Pb**	**01 43 14.1**	**-0.9**
ADCV				S	**Sb**	**01 43 25.4**	**+0.8**
DYDN	**Diyadin**	**0.81 4**		*i* P	**Pg**	**01 43 15.3**	**-1.3**
DYDN				*i* S	**Sb**	**01 43 27.8**	**-0.1**
DYDN	**Diyadin**	**0.81 4**		P	**Pg**	**01 43 15.3**	**-1.3**
DYDN				S	**Sb**	**01 43 27.8**	**-0.1**
TUTA	**Tutak**	**0.91 317**		*i* P	**Pg**	**01 43 16.7**	**-1.9**
TUTA				*i* S	**Sg**	**01 43 29.8**	**-0.7**
TUTA	**Tutak**	**0.91 317**		P	**Pg**	**01 43 16.7**	**-1.9**
TUTA				S	**Sg**	**01 43 29.8**	**-0.7**
AGRB	**Hanur-Agry**	**0.96 330**		PG	**Pg**	**01 43 18.0**	**-1.6**
AGRB				SG	**Sb**	**01 43 32.4**	**0.0**
AGRB	**Hanur-Agry**	**0.96 330**		*e*Pg	**Pg**	**01 43 18.0**	**-1.6**
AGRB				*e*Sg	**Sb**	**01 43 32.4**	**0.0**
HAKT	**HAKKARI**	**1.18 176**		*i* P	**Pg**	**01 43 21.5**	**-2.2**
HAKT				*i* S	**Sn**	**01 43 40.1**	**+0.7**
HAKT	**HAKKARI**	**1.18 176**		P	**Pg**	**01 43 21.5**	**-2.2**
HAKT				S	**Sn**	**01 43 40.1**	**+0.7**
IGDI	**IGDIR**	**1.19 18**		*i* P	**Pg**	**01 43 21.9**	**-1.9**
IGDI				*i* S	**Sn**	**01 43 41.1**	**+1.7**
GURO	**Guroymak-BITLI**	**1.25 262**		PN	**Pg**	**01 43 23.0**	**-2.0**
GURO				SN	**Sn**	**01 43 40.9**	**-0.1**
GURO	**Guroymak-BITLI**	**1.25 262**		*e*Pn	**Pg**	**01 43 23.0**	**-2.0**
GURO				*e*Sn	**Sn**	**01 43 40.9**	**-0.1**
YOVA	**Hakkari_Y¨...kse**	**1.27 155**		*i* P	**Pg**	**01 43 23.2**	**-2.2**
YOVA				*i* S	**Sn**	**01 43 43.0**	**+1.4**
YOVA	**Hakkari_Y¨...kse**	**1.27 155**		P	**Pg**	**01 43 23.2**	**-2.2**
YOVA				S	**Sn**	**01 43 43.0**	**+1.4**
EKAR	**Karacoban**	**1.31 294**		*i* P	**Pn**	**01 43 24.9**	**-0.3**
EKAR				*i* S	**Sn**	**01 43 45.1**	**+2.4**
EKAR	**Karacoban**	**1.31 294**		P	**Pn**	**01 43 24.9**	**-0.3**
EKAR				S	**Sn**	**01 43 45.1**	**+2.4**
HYR	**Heyderabad**	**1.38 44**		⇓P	**Pg**	**01 43 26.8**	**-0.6**
HYR	**Heyderabad**	**1.38 44**		⇓P	**Pg**	**01 43 26.8**	**-0.6**
HYR				⇓S	**Sg**	**01 43 51.2**	**+5.8**
EATA	**Eleskirt**	**1.42 323**		*i* P	**Pn**	**01 43 26.8**	**0.0**
EATA				*i* S	**Sg**	**01 43 48.3**	**+1.6**
EATA	**Eleskirt**	**1.42 323**		P	**Pn**	**01 43 26.8**	**0.0**
EATA				S	**Sg**	**01 43 48.3**	**+1.6**
CUKT	**Cukurca**	**1.49 180**		PN	**Pn**	**01 43 26.2**	**-1.3**
CUKT	**Cukurca**	**1.49 180**		*e*Pn	**Pn**	**01 43 26.2**	**-1.3**
SRTM	**Siirt_Merkez**	**1.52 241**		*i* P	**Pb**	**01 43 28.6**	**-0.5**
SRTM				*i* S	**Sg**	**01 43 50.7**	**+0.8**
SRTM	**Siirt_Merkez**	**1.52 241**		P	**Pb**	**01 43 28.6**	**-0.5**
SRTM				S	**Sg**	**01 43 50.7**	**+0.8**
NAX	**Nakhchivan**	**1.54 73**		⇑P	**Pb**	**01 43 28.9**	**-0.4**
NAX	**Nakhchivan**	**1.54 73**		⇑P	**Pb**	**01 43 28.9**	**-0.4**
NAX				⇓S	**Sg**	**01 43 55.0**	**+4.6**
SIRT	**Sirnak**	**1.54 217**		PN	**Pn**	**01 43 28.2**	**0.0**
SIRT	**Sirnak**	**1.54 217**		*e*Pn	**Pn**	**01 43 28.2**	**0.0**
ISHB	**Shabestar**	**1.64 105**		*e*Pn	**Pb**	**01 43 29.9**	**-1.3**
ISHB				*e*		01 43 34.6	
	comp=Z,2μm,0.2s						
ISHB				*e*Sg	**Sg**	**01 43 52.7**	**-1.1**
SBZ	**Shahbuz**	**1.65 66**		⇑P	**Pg**	**01 43 31.4**	**-1.3**
SBZ	**Shahbuz**	**1.65 66**		⇑P	**Pg**	**01 43 31.4**	**-1.3**
GNI	**Garni**	**1.66 32**		PN	**Pn**	**01 43 30.3**	**+0.3**
GNI	**Garni**	**1.66 32**		*e*Pn	**Pn**	**01 43 30.3**	**+0.3**
ORD	**Ordubad**	**1.87 83**		⇓P	**Pb**	**01 43 34.1**	**-1.0**
ORD				⇑S	**Sg**	**01 44 03.0**	**+1.8**
ORD	**Ordubad**	**1.87 83**		⇓P	**Pb**	**01 43 34.1**	**-1.0**
ORD				⇑S	**Sg**	**01 44 03.0**	**+1.8**
KARS	**Kars**	**1.93 348**		PN	**Pn**	**01 43 33.4**	**-0.3**
KARS	**Kars**	**1.93 348**		*e*Pn	**Pn**	**01 43 33.4**	**-0.3**
SVAN	**Silvan-Diyarba**	**1.98 254**		PN	**Pn**	**01 43 34.1**	**-0.1**
SVAN	**Silvan-Diyarba**	**1.98 254**		*e*Pn	**Pn**	**01 43 34.1**	**-0.1**
ITBZ	**Tabriz**	**2.06 103**		*e*Pn	**Pb**	**01 43 36.8**	**-1.4**
ITBZ				*e*		01 43 47.9	
	comp=Z,346nm,0.3s						
SENK	**Senkaya-Erzuru**	**2.06 332**		PN	**Pn**	**01 43 35.9**	**+0.4**
SENK	**Senkaya-Erzuru**	**2.06 332**		*e*Pn	**Pn**	**01 43 35.9**	**+0.4**
BNGB	**Bing¨¶l**	**2.30 277**		PN	**Pn**	**01 43 38.5**	**-0.2**
BINT	**Bingol**	**2.44 274**		*e*Pn	**Pn**	**01 43 38.5**	**-2.1**
YEDI	**Yedisu-Bingol**	**2.48 287**		PN	**Pn**	**01 43 41.6**	**+0.3**
YEDI	**Yedisu-Bingol**	**2.48 287**		*e*Pn	**Pn**	**01 43 41.6**	**+0.3**
GDB	**GEDABAY**	**2.58 39

comp=Z,37nm,21.4s,baz=72,slow=28
ASAR Alice Springs 42.57 270 P P 02 48 57.9 +0.1
0.9nm,0.8s,baz=103,slow=7.3,SNR=7.8
WRA Warramunga Arr 43.78 275 P P 02 49 07.3 -0.3
1.0nm,0.7s,baz=115,slow=7.6,SNR=7.2
FINES FINESS Array B 147.23 338 PKPbc PKPbc 03 00 43.6 -0.8
1.0nm,0.5s,baz=66,slow=4.6,SNR=9.1

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*ISCJB **25** 02:49:30.8±1.2,20°.6S±0°.4×178°.8W±0°.2,h650km, mb3.8/10, Error ellipse: s-maj=56.3km s-min=13.1km az=153.3*
*IDC **25** 02:49:31.4±3.8,20°.56S×178°.79W,h644km±46km, mb3.3/10,mb1 3.5/11,mb1mx3.2/45,mbtmp4.2/11,Error ellipse: s-maj=56.1km s-min=20.5km az=153.0*
ISC 25 02:49:31.7±1.3,20°.6S±0°.4×178°.7W±0°.2,h650km,n17, σ0°94/16,mb3.8/10,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**13.89**	**261**	P	**P**	**02 52 29.1**	**+1.1**
	0.5nm,0.3s,baz=89,slow=5.3,SNR=3.5						
CTA	**Charters Tower**	**32.80**	**265**	P	**P**	**02 55 14.6**	**-0.1**
	4.0nm,0.5s,baz=90,slow=11,SNR=7.1						
STKA	**Stephens Creek**	**37.13**	**244**	P	**P**	**02 55 50.1**	**-0.1**
	1.5nm,0.4s,baz=101,slow=10,SNR=5.3						
ASAR	**Alice Springs**	**43.83**	**257**	P	**P**	**02 56 42.9**	**-0.4**
	5.9nm,0.6s,baz=94,slow=7.6,SNR=66						
WRA	**Warramunga Arr**	**43.91**	**262**	P	**P**	**02 56 43.4**	**-0.5**
	3.7nm,0.3s,baz=97,slow=7.6,SNR=87						
PETK	**Petropavlovsk-**	**76.21**	**346**	P	**P**	**03 00 15.4**	**+0.3**
	2.4nm,0.8s,baz=116,slow=13,SNR=3.9						
YBH	**Yreka Blue Hor**	**80.81**	**39**	P	**P**	**03 00 40.7**	**+0.9**
	1.4nm,0.6s,baz=249,slow=3.6,SNR=7.9						
NVAR	**Mina Array Bea**	**81.58**	**44**	P	**P**	**03 00 44.4**	**+0.4**
	0.8nm,0.6s,baz=227,slow=8.2,SNR=7.7						
TXAR	**Lajitas Array**	**87.69**	**58**	P	**P**	**03 01 14.2**	**+0.5**
	0.8nm,0.8s,baz=233,slow=6.0,SNR=6.2						
ILAR	**Eielson Array**	**88.58**	**13**	P	**P**	**03 01 16.2**	**-0.6**
	0.5nm,0.4s,baz=217,slow=5.1,SNR=15						
PDAR	**Pinedale Array**	**89.51**	**43**	P	**P**	**03 01 22.1**	**+0.1**
	0.8nm,0.6s,baz=222,slow=4.5,SNR=9.7						
ARCES	**ARCESS Array B**	**128.91**	**349**	PKP	**PKPdf**	**03 07 26.6**	**0.0**
	2.5nm,1.1s,baz=33,slow=2.9,SNR=5.9						
HFS	**Hagfors**	**139.54**	**350**	PKhKP	PKPpre	03 07 40.1	
	0.9nm,0.5s,baz=45,slow=0.4,SNR=5.7						
AKASG	**Malin Array Be**	**142.78**	**330**	PKP	**PKPdf**	**03 07 50.5**	**-2.1**
	1.7nm,0.4s,baz=42,slow=4.1,SNR=9.5						
BRTR	**Keskin Array B**	**146.41**	**312**	PKPbc	**PKPbc**	**03 08 00.7**	**-1.4**
	0.3nm,0.5s,baz=156,slow=6.4,SNR=4.1						
MMAI	**Mount Meron Ar**	**147.28**	**299**	PKPbc	**PKPbc**	**03 08 05.8**	**+1.3**
	0.8nm,0.4s,baz=75,slow=1.6,SNR=2.7						
GERES	**GERESS Array B**	**150.12**	**343**	PKPbc	**PKPbc**	**03 08 11.0**	**+0.1**
	0.5nm,0.6s,baz=8.5,slow=2.7,SNR=5.7						

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*ISCJB **25** 03:09:03.0±0.1,27°.57S±0°.02×177°.91W±0°.03,h180km, mb5.1/263,Error ellipse: s-maj=3.7km s-min=2.0km az=33.6*
*BJI **25** 03:09:03.4,27°.23S×177°.40W,h186km,mb5.0/32, mB5.1/23*
*WEL **25** 03:09:04.0,27°.42S×177°.88W,h179km*
*GCMT **25** 03:09:04.3±0.1,27°.30S×177°.54W,h188km,MW5.4/131, Moment Tensor Solution. s110,c174; s131,c227; Duration: 1±2 Moment tensor: Scale 10^{17}Nm; M_{rr}0.74±.02; $M_{\theta\theta}$-0.96±.03; $M_{\phi\phi}$0.21±.03; $M_{r\theta}$-1.27±.02; $M_{\theta\phi}$-0.43±.02; $M_{r\phi}$0.40±.02; Best double couple: $M_0$1.64800×10^{17} NP1:φs281.00000°,δ75.00000°, λ113.00000°. NP2:φs42.00000°,δ27.00000°,λ34.00000°. Principal axes: T 1.6410, Plg54.0000°, Azm219.0000°; N 0.0130, Plg22.0000°, Azm95.0000°; P -1.6540, Plg27.0000°, Azm353.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*MOS **25** 03:09:04.4±1.0,27°.22S×177°.89W,h182km,mb5.1/37 Error ellipse: s-maj=9.6km s-min=7.9km az=67.0*
*NEIC **25** 03:09:04.3±0.1,27°.42S×177°.88W,mb5.0/198,Error ellipse: s-maj=5.4km s-min=3.1km az=140.0*
*IDC **25** 03:09:05.7±0.3,27°.22S×177°.87W,h186km±2km,mb4.7/27, mb1 4.8/29,mb1mx4.7/42,mbtmp5.2/29,MS4.0/17, Ms1 4.0/17,ms1mx3.7/46,Error ellipse: s-maj=8.4km s-min=7.9km az=106.0*
ISC 25 03:09:05.0±0.2,27°.36S±0°.04×177°.70W±0°.04, h188km±1km,h188km:pP-P,n850,σ1°64/1020,mb5.0/264, 21C-10D,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**1.89**	**186**	P	**Pn**	**03 09 42.7**	**+1.3**
RAO	**Raoul Island**	**1.90**	**186**	P	**Pn**	**03 09 42.5**	**+1.0**
	2μm,0.3s,baz=170,slow=0.3,SNR=189						
RAO				S	**Sn**	**03 10 12.4**	**+2.3**
	3μm,0.3s,baz=0.0,slow=20,SNR=4.2						
RAO				LR	LR	03 10 33.8	
	comp=Z,3μm,19.8s,baz=127,slow=44						
RAO	**Raoul Island**	**1.90**	**186**	*e*Pn	**Pn**	**03 09 42.2**	**+0.7**
RAO				*e*Sn	**Sn**	**03 10 14.2**	**+4.2**
GLKZ	**Green Lake**	**1.91**	**186**	P	**Pn**	**03 09 42.9**	**+1.3**
MXZ	**Matakaoa Point**	**10.72**	**197**	*e*Pn	**Pn**	**03 11 31.5**	**-2.1**
MXZ				*e*Sn	Sn	03 13 21.4	-11
MXZ	**Matakaoa Point**	**10.72**	**197**	P	Pn	03 11 28.4	-5.2
OUZ	**Omahuta**	**10.80**	**221**	*e*Pn	**Pn**	**03 11 31.1**	**-3.7**
OUZ	**Omahuta**	**10.80**	**221**	P	**P**	**03 11 40.0**	**-1.9**
NIUE	**Niue**	**10.91**	**43**	P	**Pn**	**03 11 32.1**	**-4.2**
	baz=11,SNR=24						
WMGZ	**Waiomatatini S**	**10.93**	**196**	P	Pn	03 11 30.1	-6.3
HAZ	**Te Kaha**	**11.04**	**199**	P	Pn	03 11 31.7	-6.2
PKGZ	**Pakihiroa**	**11.08**	**198**	P	Pn	03 11 32.5	-5.9
PUZ	**Puketiti**	**11.21**	**197**	P	Pn	03 11 33.1	-6.9
PUZ				S	Sn	03 13 33.1	-12
RUGZ	**Raukumara Rang**	**11.27**	**199**	P	Pn	03 11 33.7	-7.2
RUGZ				S	Sn	03 13 37.2	-9.1
TWGZ	**Tauwhareparae**	**11.38**	**198**	P	Pn	03 11 35.6	-6.7
TWGZ				S	**Sn**	**03 13 40.6**	**-8.2**
WHRZ	**Whale Island**	**11.39**	**202**	S	**Sn**	**03 13 45.4**	**-3.5**
OPRZ	**Ohinepanea**	**11.52**	**203**	S	**Sn**	**03 13 45.0**	**-7.1**
CNGZ	**Carnagh Statio**	**11.61**	**196**	S	**Sn**	**03 13 46.1**	**-8.2**
MWZ	**Matawai**	**11.65**	**199**	S	Sn	03 13 46.1	-9.3
TKGZ	**Te Karaka**	**11.66**	**198**	S	Sn	03 13 46.1	-9.4
URZ	**Urewera**	**11.71**	**201**	P	Pn	03 11 38.7	-7.7
	1.3nm,0.3s,baz=268,slow=4.2,SNR=31						
URZ				S	Sn	03 13 46.0	-11
	57nm,0.3s,baz=153,slow=23,SNR=20						
URZ	**Urewera**	**11.71**	**201**	*e*Pn	Pn	03 11 41.1	-5.3
URZ				*e*Sn	Sn	03 13 46.0	-11
URZ	**Urewera**	**11.71**	**201**	S	Sn	03 13 46.5	-10
NMHZ	**Naumai**	**12.57**	**200**	P	Pn	03 11 50.1	-7.4
ARHZ	**Aropaoanui**	**12.67**	**199**	P	Pn	03 11 53.2	-5.4
BKZ	**Black Stump Fm**	**12.73**	**201**	*e*Pn	**Pn**	**03 11 55.1**	**-4.4**
BKZ	**Black Stump Fm**	**12.73**	**201**	P	**Pn**	**03 11 56.4**	**-3.1**
HIZ	**Hauiti**	**12.75**	**207**	P	**Pn**	**03 12 00.0**	**+0.3**
NFK	**Norfolk Island**	**12.78**	**259**	P	**P**	**03 12 04.0**	**0.0**
	baz=13,SNR=7.6						
MCHZ	**McNeill Hill**	**12.93**	**200**	P	**Pn**	**03 11 57.9**	**-3.9**
TWVZ	**Taurewa**	**13.01**	**204**	P	**Pn**	**03 12 00.7**	**-2.3**
CKHZ	**Cape Kidnapper**	**13.01**	**198**	P	**Pn**	**03 11 59.3**	**-3.7**
COVZ	**Chateau Observ**	**13.09**	**204**	P	**P**	**03 12 06.9**	**-0.6**
FWVZ	**Far West T-bar**	**13.13**	**204**	P	**Pn**	**03 12 01.9**	**-2.7**
BHHZ	**Black Hill Sta**	**13.17**	**202**	P	**Pn**	**03 12 00.7**	**-4.2**
MOVZ	**Moawhango**	**13.20**	**203**	P	Pn	03 12 00.4	-5.0
PKVZ	**Pokaka**	**13.23**	**204**	P	**Pn**	**03 12 03.0**	**-2.8**
VRZ	**Vera Road**	**13.31**	**206**	P	**Pn**	**03 12 06.0**	**-0.7**
PXZ	**Pawanui**	**13.42**	**198**	P	**Pn**	**03 12 03.6**	**-4.5**
PNHZ	**Pukenui**	**13.51**	**200**	P	**Pn**	**03 12 04.9**	**-4.3**
TSZ	**Takapari Road**	**13.71**	**201**	P	Pn	03 12 06.3	-5.5
PRWZ	**Pori Road**	**14.16**	**200**	P	Pn	03 12 12.0	-5.3
BFZ	**Birch Farm**	**14.20**	**199**	*e*Pn	Pn	03 12 12.1	-5.7
BFZ	**Birch Farm**	**14.20**	**199**	P	Pn	03 12 11.0	-6.8
MRZ	**Mangatainoka R**	**14.38**	**201**	P	Pn	03 12 12.7	-7.4
CPWZ	**Castlepoint**	**14.42**	**199**	P	Pn	03 12 15.1	-5.4
AFI	**Afiamalu**	**14.48**	**24**	P	Pn	03 12 13.7	-7.8
	98nm,0.3s,baz=182,slow=11,SNR=15						
AFI				S	Sn	03 14 39.1	-24
	64nm,0.3s,baz=49,slow=22,SNR=10						
AFI	**Afiamalu**	**14.48**	**24**	*e*Pn	Pn	03 12 12.0	-10
HOWZ	**Holdsworth Sta**	**14.62**	**201**	P	Pn	03 12 14.6	-8.4
OGWZ	**Otaki Gorge**	**14.66**	**202**	P	Pn	03 12 15.6	-7.8
TMWZ	**Te Maipa**	**14.70**	**199**	P	Pn	03 12 17.7	-6.2
KIW	**Kapiti Island**	**14.78**	**202**	P	**Pn**	**03 12 20.2**	**-4.8**
MTW	**Mount Morrison**	**14.86**	**200**	P	Pn	03 12 19.4	-6.5
CAW	**Cannon Point**	**14.95**	**202**	P	Pn	03 12 19.4	-7.6
TRWZ	**Traveller**	**15.02**	**200**	P	**Pn**	**03 12 22.7**	**-5.2**
PAWZ	**Paruwai Farm**	**15.09**	**200**	P	**Pn**	**03 12 27.0**	**-1.7**
DUWZ	**D'Urville Isla**	**15.09**	**205**	P	**Pn**	**03 12 23.0**	**-5.8**
MSWZ	**Moikau Station**	**15.17**	**201**	P	**Pn**	**03 12 23.5**	**-6.3**
SNZO	**South Karori**	**15.26**	**202**	*e*Pn	**Pn**	**03 12 24.4**	**-6.3**
	217nm,1.4s						
TCW	**Tory Channel**	**15.31**	**203**	P	Pn	03 12 23.8	-7.7
DZM	**Mont Dzumac**	**15.34**	**287**	P	**P**	**03 12 34.8**	**+2.3**
	3.0nm,0.3s,baz=85,slow=16,SNR=33						
DZM				S	**Sn**	**03 15 28.2**	**+4.5**
	baz=15,slow=20,SNR=1.4						
DZM				LR	LR	03 16 48.3	
	comp=Z,785nm,19.2s,baz=96,slow=30						
DZM	**Mont Dzumac**	**15.34**	**287**	*e*P	**P**	**03 12 34.9**	**+2.4**
	872nm,1.1s						
DZM				*e*LR	LR	03 15 45.0	
	1μm,24.8s						
DZM	**Mont Dzumac**	**15.34**	**287**	*e*Pn	**P**	**03 12 35.2**	**+2.7**
	316nm,0.7s						
DZM				*e*S	**Sn**	**03 15 28.2**	**+4.5**
TUWZ	**Tuamarina**	**15.63**	**204**	P	**Pn**	**03 12 28.8**	**-6.4**
NNZ	**Nelson**	**15.65**	**206**	P	**Pn**	**03 12 30.8**	**-4.8**
NNZ	**Nelson**	**15.65**	**206**	P	**Pn**	**03 12 30.8**	**-4.8**
CMWZ	**Cape Campbell**	**15.81**	**203**	P	**P**	**03 12 38.1**	**+0.5**
BSWZ	**Blackbirch Sta**	**15.90**	**204**	P	**P**	**03 12 32.2**	**-6.3**
THZ	**Tophouse**	**16.30**	**206**	*e*P	**P**	**03 12 40.3**	**-2.7**
	96nm,1.4s						
THZ	**Tophouse**	**16.30**	**206**	P	**P**	**03 12 38.4**	**-4.6**
KHZ	**Kahutara**	**16.64**	**203**	*e*P	**P**	**03 12 40.2**	**-6.3**
	68nm,0.8s						
KHZ	**Kahutara**	**16.64**	**203**	P	**P**	**03 12 40.6**	**-6.0**
DSZ	**Denniston Nort**	**16.73**	**208**	P	**P**	**03 12 44.0**	**-3.7**
LTZ	**Lake Taylor**	**17.42**	**205**	*e*P	**P**	**03 12 51.1**	**-4.1**
	39nm,0.8s						
LTZ	**Lake Taylor**	**17.42**	**205**	P	**P**	**03 12 51.6**	**-3.6**
RAR	**Rarotonga**	**17.45**	**73**	P	**P**	**03 12 56.0**	**+0.4**
	0.1nm,0.3s,baz=212,slow=7.1,SNR=4.4						
RAR				S	**S**	**03 16 04.2**	**-3.2**
	1.2nm,0.3s,baz=87,slow=19,SNR=2.4						
RAR				LR	LR	03 17 37.8	
	comp=Z,226nm,21.2s,baz=274,slow=29						
RAR	**Rarotonga**	**17.45**	**73**	*e*P	**P**	**03 12 56.0**	**+0.4**
	106nm,1.1s						
RAR				*e*S	**S**	**03 16 04.2**	**-3.2**
RAR	**Rarotonga**	**17.45**	**73**	*e*P	**P**	**03 12 56.0**	**+0.4**
RAR				*e*S	**S**	**03 16 04.2**	**-3.2**
RAR				pmax	pmax		
	comp=Z,106nm,1.1s						
INZ	**Inchbonnie**	**17.70**	**207**	P	**P**	**03 12 53.4**	**-4.8**
OKCZ	**Okains Bay**	**17.96**	**202**	P	**P**	**03 12 58.4**	**-2.7**
OXZ	**Oxford**	**17.97**	**205**	*e*P	**P**	**03 12 57.5**	**-3.7**
	comp=Z,54nm,0.6s						
OXZ	**Oxford**	**17.97**	**205**	P	**P**	**03 12 57.0**	**-4.3**
MQZ	**McQueen's Vall**	**18.08**	**203**	P	**P**	**03 12 58.0**	**-4.3**
RPZ	**Rata Peaks**	**18.68**	**206**	P	**P**	**03 13 05.8**	**-3.1**
	comp=Z,2.9nm,0.3s,baz=336,slow=1.7,SNR=16						
RPZ				S	S	03 16 17.7	-14
	comp=Z,7.9nm,0.3s,baz=129,slow=22,SNR=13						
RPZ	**Rata Peaks**	**18.68**	**206**	*e*P	**P**	**03 13 05.8**	**-3.1**
	comp=Z,25nm,0.7s						
RPZ	**Rata Peaks**	**18.68**	**206**	P	**P**	**03 13 06.5**	**-2.4**
FUNA	**Funafuti**	**18.96**	**351**	*e*P	**P**	**03 13 05.8**	**-6.4**
	comp=Z,602nm,1.2s						
FOZ	**Fox Glacier**	**19.04**	**209**	*e*P	**P**	**03 13 13.0**	**+0.2**
	comp=Z,80nm,0.9s						
LBZ	**Lake Benmore**	**19.59**	**207**	*e*P	**P**	**03 13 15.9**	**-2.8**
	comp=Z,22nm,0.8s						
ODZ	**Otahua Downs**	**19.96**	**205**	*e*P	**P**	**03 13 21.3**	**-1.4**
	comp=Z,35nm,0.9s						
WKZ	**Wanaka**	**20.42**	**208**	*e*P	**P**	**03 13 25.0**	**-2.7**
	comp=Z,79nm,1.4s						
LHI	**Lord Howe Isla**	**20.65**	**253**	P	Pn	03 13 34.5	-0.9
	baz=21,SNR=26						
LHI	**Lord Howe Isla**	**20.65**	**253**	*e*P	Pn	03 13 33.7	-1.7
	comp=Z,393nm,0.8s						
MLZ	**Mavora Lakes**	**21.23**	**208**	*e*P	**P**	**03 13 36.3**	**0.0**
	comp=Z,32nm,0.7s						
MLZ				*e*S	**S**	**03 17 22.5**	**+1.7**
WHZ	**Wether Hill Ro**	**21.73**	**208**	*e*P	**P**	**03 13 38.3**	**-3.0**
	comp=Z,61nm,1.1s						
KNTN	**Kanton**	**25.11**	**14**	*e*P	**P**	**03 14 09.8**	**-2.9**
	comp=Z,556nm,0.8s						
TBI	**Tubuai**	**25.81**	**87**	*e*LQ	LQ	03 19 32.2	
	comp=Z,2μm,28.5s						
TBI				*e*LR	LR	03 20 35.4	
	comp=Z,435nm,32.2s						
TBI	**Tubuai**	**25.81**	**87**	*e*T	T	03 40 57.3	
	comp=Z,37nm,0.3s						
ARMA	**Armidale**	**26.99**	**256**	P	**P**	**03 14 31.6**	**+2.0**
	baz=27,SNR=3.9						
ARMA	**Armidale**	**26.99**	**256**	*e*P	**P**	**03 14 31.1**	**+1.6**
	comp=Z,24nm,1.0s						
MGCD	**Mangrove Creek**	**27.50**	**250**	P	**P**	**03 14 36.3**	**+2.4**
	baz=28,SNR=19						
HNR	**Honiara**	**27.62**	**306**	LR	LR	03 24 58.3	
	comp=Z,294nm,18.3s,baz=186,slow=35						
PAE	**Paea**	**27.66**	**76**	*e*T	T	03 43 12.3	
	comp=Z,16nm,0.3s						
PPT2	**Papeete2**	**27.69**	**75**	*e*LR	LR	03 21 31.9	
	comp=Z,567nm,31.8s						
PPT2	**Papeete2**	**27.69**	**75**	*e*T	T	03 43 15.7	
	comp=Z,9.4nm,0.3s						
PPT	**Papeete**	**27.70**	**75**	LR	LR	03 23 26.8	
	comp=Z,150nm,19.4s,baz=262,slow=31						
EIDS	**Eidsvold**	**28.01**	**267**	P	**P**	**03 14 39.5**	**+0.9**
	baz=28,SNR=14						
EIDS	**Eidsvold**	**28.01**	**267**	*e*P	**P**	**03 14 39.0**	**+0.4**
	comp=Z,43nm,0.8s						
CAN	**Canberra**	**29.43**	**246**	*e*P	**P**	**03 14 51.2**	**+0.1**
	comp=Z,47nm,1.0s						
CAN	**Canberra**	**29.43**	**246**	*e*P	**P**	**03 14 51.2**	**+0.1**
CAN				pmax	pmax		
	comp=Z,47nm,1.0s						
TOO	**Toolangi**	**32.50**	**242**	P	**P**	**03 15 19.3**	**+1.3**
TOO				pmax	pmax		
	comp=Z,77nm,1.2s						
CTA	**Charters Tower**	**33.70**	**275**	P	**P**	**03 15 28.9**	**+0.3**
	comp=Z,92nm,0.9s,baz=104,slow=10,SNR=46						
CTAO	**Charters Tower**	**33.70**	**275**	*e*P	**P**	**03 15 28.5**	**0.0**
	comp=Z,140nm,1.1s						
CTAO	**Charters Tower**	**33.70**	**275**	*e*P	**P**	**03 15 28.5**	**0.0**
CTAO				pmax	pmax		
	comp=Z,140nm,1.1s						
STKA	**Stephens Creek**	**35.52**	**253**	P	**P**	**03 15 44.5**	**+0.4**
	comp=Z,39nm,1.0s,baz=96,slow=9.9,SNR=34						
STKA	**Stephens Creek**	**35.52**	**253**	*e*P	**P**	**03 15 44.0**	**-0.1**
	comp=Z,13nm,1.0s						
STKA	**Stephens Creek**	**35.52**	**253**	*e*P	**P**	**03 15 44.0**	**-0.1**
STKA				pmax	pmax		
	comp=Z,13nm,1.0s						
PMG	**Port Moresby**	**37.64**	**292**	P	**P**	**03 16 01.7**	**-0.4**
	comp=Z,29nm,0.8s,baz=109,slow=7.8,SNR=6.6						
PMG				LR	LR	03 28 06.1	
	comp=Z,554nm,18.3s,baz=141,slow=30						
PMG	**Port Moresby**	**37.64**	**292**	*e*P	**P**	**03 16 02.5**	**+0.4**
	comp=Z,30nm,0.8s						
PMG	**Port Moresby**	**37.64**	**292**	*e*P	**P**	**03 16 02.5**	**+0.4**
PMG				pmax	pmax		
	comp=Z,30nm,0.8s						
RKT	**Rikitea**	**38.74**	**93**	*e*T	T	03 57 08.3	
	comp=Z,4.6nm,0.3s						
COEN	**Coen**	**38.79**	**282**	*e*P	**P**	**03 16 12.8**	**+1.1**
	comp=Z,72nm,1.3s						
COEN				*e*pP	**pP**	**03 16 55.5**	**+3.9**
TAOE	**Nuku Hiva Isla**	**39.94**	**70**	*e*LR	LR	03 26 16.8	
	comp=Z,369nm,29.9s						
BBOO	**Buckleboo**	**40.13**	**251**	*e*P	**P**	**03 16 21.9**	**-0.7**
	comp=Z,130nm,1.0s						
PATS	**Pohnpei**	**41.16**	**322**	*e*P	**P**	**03 16 30.1**	**-1.1**
	comp=Z,92nm,1.0s						
AS01	**Alice Springs**	**43.58**	**264**	*e*P	**P**	**03 16 49.3**	**-1.4**
AS31	**Alice Springs**	**43.62**	**264**	*e*P	**P**	**03 16 50.4**	**-0.6**
	comp=Z,22nm,1.2s						
AS31				*e*pP	**pP**	**03 17 32.7**	**+1.0**
ASAR	**Alice Springs**	**43.62**	**264**	P	**P**	**03 16 50.4**	**-0.7**
	comp=Z,36nm,0.8s,baz=114,slow=8.0,SNR=153						
ASAR				pP	**pP**	**03 17 32.7**	**+1.0**
	comp=Z,36nm,1.1s,baz=115,slow=8.3,SNR=3.1						
ASAR				PcP	**PcP**	**03 18 34.8**	**-0.3**
	comp=Z,9.7nm,0.8s,baz=100,slow=4.5,SNR=2.8						
ASAR				ScP	**ScP**	**03 22 07.7**	**-1.1**
	comp=Z,3.7nm,0.9s,baz=106,slow=5.0,SNR=4.2						
ASAR				S	**S**	**03 23 03.1**	**-3.4**
	comp=Z,3.9nm,1.0s,baz=98,slow=16,SNR=5.5						
WB2	**Warramunga Arr**	**44.32**	**269**	*e*P	**P**	**03 16 56.0**	**-0.7**
	comp=Z,186nm,1.3s						
WB2				*e*S	**S**	**03 23 12.7**	**-4.0**
WRAB	**Tennant Creek**	**44.33**	**269**	*e*P	**P**	**03 16 54.8**	**-1.9**
	comp=Z,98nm,1.0s						
WRAB	**Tennant Creek**	**44.33**	**269**	*c*eP	**P**	**03 16 55.7**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,140nm,1.2s						
WR1	**Warramunga Arr**	**44.33**	**269**	*e*P	**P**	**03 16 55.8**	**-0.9**
	comp=Z,200nm,1.3s						
WR1				*e*PcP	**PcP**	**03 18 37.8**	**+0.3**
WR1				*e*ScP	**ScP**	**03 22 12.9**	**+1.2**
WR1				*e*S	**S**	**03 23 12.9**	**-3.9**
WRA	**Warramunga Arr**	**44.33**	**269**	P	**P**	**03 16 55.8**	**-1.0**
	comp=Z,75nm,0.9s,baz=109,slow=7.5,SNR=151						
WRA				PcP	**PcP**	**03 18 37.8**	**+0.2**
	comp=Z,26nm,0.9s,baz=98,slow=4.1,SNR=6.6						
WRA				ScP	**ScP**	**03 22 12.9**	**+1.2**
	comp=Z,4.7nm,1.1s,baz=120,slow=3.7,SNR=3.0						
WRA				S	**S**	**03 23 12.9**	**-3.9**
	comp=Z,14nm,1.3s,baz=108,slow=15,SNR=5.4						
WRA				LR	LR	03 33 36.9	
	comp=Z,209nm,18.2s,baz=175,slow=33						
JAY	**Jayapura**	**46.81**	**295**	P	**P**	**03 17 15.1**	**-1.1**
	comp=Z,13nm,0.6s,baz=183,slow=4.2,SNR=8.1						
JAY	**Jayapura**	**46.81**	**295**	P	**P**	**03 17 15.3**	**-0.9**
	comp=Z,136nm,0.6s						
FORT	**Forrest**	**47.15**	**252**	*e*P	**P**	**03 17 17.1**	**-1.5**
	comp=Z,189nm,0.9s						
GENI	**Genyem**	**47.20**	**294**	P	**P**	**03 17 17.8**	**-1.4**
WAKE	**Wake Island**	**48.78**	**340**	*e*P	**P**	**03 17 29.1**	**-2.0**
MTN	**Manton Dam**	**49.84**	**276**	*e*P	**P**	**03 17 38.4**	**-1.0**
	comp=Z,51nm,0.8s						
SBA	**Scott Base**	**51.08**	**184**	*e*P	**P**	**03 17 51.8**	**+4.1**
	comp=Z,248nm,0.9s						
SBA	**Scott Base**	**51.08**	**184**	P	**P**	**03 17 51.8**	**+4.1**
VNDA	**Vanda**	**51.14**	**186**	P	**P**	**03 17 51.3**	**+3.1**
	comp=Z,29nm,0.6s,baz=0.4,slow=8.6,SNR=185						
VNDA	**Vanda**	**51.14**	**186**	*e*P	**P**	**03 17 51.2**	**+3.1**
	comp=Z,42nm,0.8s						
VNDA	**Vanda**	**51.14**	**186**	*e*P	**P**	**03 17 51.2**	**+3.1**
VNDA				pmax	pmax		
	comp=Z,42nm,0.8s						
PUH	**Pauahi**	**51.31**	**28**	*e*P	**P**	**03 17 51.0**	**+0.7**
	comp=Z,220nm,0.9s						
STCH	**Steam Cracks**	**51.36**	**28**	*e*P	**P**	**03 17 51.0**	**+0.4**
	comp=Z,208nm,0.8s						
HMH	**Humu'ula Sheep**	**51.41**	**27**	*e*P	**P**	**03 17 51.8**	**+0.6**
	comp=Z,323nm,0.9s						
HULD	**Heiheiahulu Di**	**51.45**	**28**	*e*P	**P**	**03 17 51.7**	**+0.5**
	comp=Z,124nm,0.8s						
HPAH	**Hawaii Prepara**	**51.71**	**27**	*e*P	**P**	**03 17 53.5**	**+0.3**
	comp=Z,243nm,0.8s						
MHA	**Mahukona**	**51.77**	**26**	*e*P	**P**	**03 17 54.6**	**+1.1**
MHA	**Mahukona**	**51.77**	**26**	*e*P	**P**	**03 17 54.6**	**+1.1**
KIP	**Kipapa**	**52.10**	**23**	*e*P	**P**	**03 17 56.7**	**+0.7**
	comp=Z,191nm,0.9s						
KIP	**Kipapa**	**52.10**	**23**	*e*P	**P**	**03 17 56.7**	**+0.7**
KIP				pmax	pmax		
	comp=Z,191nm,0.9s						
RKPI	**Ransiki, Papua**	**52.74**	**291**	P	**P**	**03 17 59.4**	**-1.5**
FAKI	**Fak Fak**	**53.59**	**288**	P	**P**	**03 18 06.5**	**-0.6**
GUMO	**Guam**	**54.55**	**313**	LR	LR	03 38 07.4	
	comp=Z,59nm,21.5s,baz=173,slow=32						
BNDI	**Bandanaira**	**54.77**	**285**	P	**P**	**03 18 14.8**	**-0.8**
SIJI	**Sorong**	**55.52**	**289**	P	**P**	**03 18 20.4**	**-0.5**
	comp=Z,237nm,0.8s,baz=73,slow=7.4,SNR=33						
NWAO	**Narrogin (SRO)**	**55.76**	**247**	P	**P**	**03 18 20.0**	**-2.5**
	comp=Z,10nm,0.7s,baz=341,slow=7.3,SNR=7.4						
NWAO	**Narrogin (SRO)**	**55.76**	**247**	*e*P	**P**	**03 18 20.0**	**-2.5**
MSAI	**Masohi**	**56.20**	**285**	P	**P**	**03 18 25.0**	**-0.8**

comp=Z,522nm,0.9s,comp=Z,4µm
DBJI Dramaga 74.20 271 P **P** 03 20 21.3 -0.3
comp=Z,608nm,1.0s,comp=Z,9µm
KSM Kuching 74.74 280 *e*P **P** 03 20 24.7 -0.1
comp=Z,174nm,0.8s
SBJI Serang 74.94 271 P **P** 03 20 24.9 -1.0
CGJI Cibinong 75.11 270 P **P** 03 20 25.9 -1.0
comp=Z,538nm,0.9s
MAW Mawson 75.24 200 P **P** 03 20 28.4 +1.7
comp=Z,225nm,0.8s,baz=121,slow=7.0,SNR=452
MAW Mawson 75.24 200 *e*P **P** 03 20 28.2 +1.6
comp=Z,54nm,0.8s
MAW Mawson 75.24 200 *e*P **P** 03 20 28.2 +1.6
MAW pmax pmax
comp=Z,54nm,0.8s
INU Inuyama 75.62 323 *e*P **P** 03 20 29.4 +0.2
comp=Z,16nm,0.9s
MJAR Matsushiro Arr 75.91 325 P **P** 03 20 30.3 -0.6
comp=Z,14nm,0.8s,baz=166,slow=5.7,SNR=29
MAJO Matsushiro 75.91 325 *e*P **P** 03 20 30.8 -0.1
comp=Z,21nm,0.9s
MAJO Matsushiro 75.91 325 *c i*P **P** 03 20 30.5 -0.4
MAJO pmax pmax
comp=Z,17nm,0.9s
MAT Matsushiro 75.91 325 P **P** 03 20 30.4 -0.5
MAT S **S** 03 29 54.2 -3.7
MJB9 Matsu-Tunnel 75.92 325 *e*P **P** 03 20 30.8 -0.1
comp=Z,22nm,0.9s
BLSI Bandar Lampung 76.06 271 P **P** 03 20 31.8 -0.5
KLI Kotabumi 76.63 271 P **P** 03 20 34.0 -1.5
comp=Z,393nm,1.0s,comp=Z,5µm
KASI Kota Agung 76.66 271 P **P** 03 20 34.5 -1.1
comp=Z,435nm,1.1s,comp=Z,3µm
PPBI Pangkal Pinang 76.72 274 P **P** 03 20 35.5 -0.5
LWLI Liwa 77.27 271 P **P** 03 20 38.6 -0.6
comp=Z,285nm,0.8s,comp=Z,8µm
MDSI Maura Dua 77.41 271 P **P** 03 20 38.5 -1.3
comp=Z,491nm,0.8s,comp=Z,4µm
JNU Nakatsue 77.48 318 P **P** 03 20 39.7 -0.1
comp=Z,9.4nm,0.7s,baz=158,slow=11,SNR=3.9
JNU Nakatsue 77.48 318 *e*P **P** 03 20 39.7 -0.1
comp=Z,24nm,1.1s
MNAI Manna 78.55 271 P **P** 03 20 44.4 -1.7
MASI Maura Aman, Be 79.73 272 P **P** 03 20 51.9 -0.7
comp=Z,1µm,0.9s,comp=Z,10µm
CHRN Cochrane 79.82 138 *e*P **P** 03 20 55.1 +2.7
comp=Z,9.7nm,0.8s
ASAJ Asahikawa 79.88 332 P **P** 03 20 53.9 +1.3
comp=Z,15nm,0.8s,baz=138,slow=6.4,SNR=11
ASAJ pP **pP** 03 21 38.2 0.0
comp=Z,19nm,0.8s,baz=162,slow=3.2,SNR=3.4
ASAJ LR LR 03 51 55.3
comp=Z,106nm,20.6s,baz=149,slow=32
ASAJ Asahikawa 79.88 332 *e*P **P** 03 20 54.2 +1.7
comp=Z,16nm,0.8s
ASAJ *e*pP **pP** 03 21 38.2 0.0
SYO Syowa Base 80.13 193 ||*i*P **P** 03 20 51.9 -1.7
NIKH Nikolski High 80.36 5 *e*P **P** 03 20 55.0 +0.1
comp=Z,122nm,0.8s
NIKH *e*pP **pP** 03 21 41.4 +0.8
COCO West Island 80.52 261 *e*P **P** 03 20 58.7 +2.0
comp=Z,540nm,1.2s
COCO West Island 80.52 261 *i* P **P** 03 20 59.0 +2.3
MYKOM Kota Tinggi 80.57 277 *e*P **P** 03 20 57.2 +0.2
comp=Z,145nm,0.8s
KRJI Kerinci 80.90 272 P **P** 03 20 58.3 -0.6
comp=Z,298nm,0.9s
SNAA Sanae 81.18 178 P **P** 03 21 00.4 +1.1
SNAA Sanae 81.18 178 *e*P **P** 03 21 00.1 +0.8
comp=Z,197nm,1.5s
SNAA Sanae 81.18 178 *c i*P **P** 03 20 59.4 +0.1
VNA3 Neumayer Olymp 81.31 176 P **P** 03 21 01.0 +1.0
SNCC San Nicolas Is 81.75 46 P **P** 03 21 03.7 +1.0
baz=230
TJN Taejon 81.81 318 *i* P **P** 03 21 03.9 +0.9
PPSI Pulau Pagai 81.89 271 P **P** 03 21 03.3 -0.7
NVL N'lazarevskaya 81.92 183 ||*i*P **P** 03 21 03.1 0.0
NVL *e**PP **pP** 03 21 46.3 -2.6
NVL *e*S **S** 03 31 04.2 +3.7
NVL pmax pmax
comp=Z,77nm,1.2s
VNA1 Neumayer–Stat 81.98 176 P **P** 03 21 04.8 +1.4
YSS Yuzh-Sakhalins 82.14 334 *e*P **P** 03 21 05.8 +1.5
comp=Z,23nm,0.6s
YSS Yuzh-Sakhalins 82.14 334 ||*e*P **P** 03 21 05.3 +0.9
YSS *i* *PP **pP** 03 21 50.4 +0.1
YSS *e* 03 24 18.1
YSS *e*PPP PPP 03 26 09.9
YSS *e*S **S** 03 31 04.8 +1.6
YSS *e*SS **SS** 03 36 31.0 +3.1
YSS *e*SSS SSS 03 39 58.1
YSS pmax pmax
comp=Z,60nm,1.5s
YSS smax smax
comp=E,370nm,6.2s
SCZ2 Santa Cruz Isl 82.16 45 P **P** 03 21 06.4 +1.5
baz=230
SCI2 San Clemente I 82.20 47 P **P** 03 21 06.2 +1.1
baz=230
KSRS Korea Array 82.22 319 P **P** 03 21 06.1 +1.1
comp=E,4.8nm,0.7s,baz=134,slow=5.7,SNR=16
KSRS pP **pP** 03 21 52.0 +1.1
comp=E,2.5nm,0.7s,baz=136,slow=6.3,SNR=2.1
KSRS LR LR 03 51 18.8
comp=E,64nm,21.8s,baz=142,slow=31
KS15 Wonju Array Si 82.23 319 *e*P **P** 03 21 06.1 +1.0
KS15 *e*pP **pP** 03 21 52.0 +1.0
KSAR Wonju Array Be 82.23 319 P **P** 03 21 06.1 +1.0
KSAR Wonju Array Be 82.23 319 P **P** 03 21 06.1 +1.0
KS01 Wonju Array Si 82.25 319 *e*P **P** 03 21 05.5 +0.3
KS01 *e*pP **pP** 03 21 53.5 +2.4
PDSI Padang 82.33 273 P **P** 03 21 04.7 -1.6
comp=E,115nm,1.0s,comp=E,90µm
BKNI Bangkinang 82.38 274 P **P** 03 21 06.4 -0.1
comp=E,149nm,0.4s,comp=E,5µm
BKNI Bangkinang 82.38 274 *e*P **P** 03 21 05.6 -1.0
SBC Santa Barbara 82.40 45 P **P** 03 21 07.4 +1.3
baz=230
CIS Catalina Islan 82.56 46 P **P** 03 21 08.2 +1.2
baz=230
BLG Laguna Peak, P 82.59 46 P **P** 03 21 08.2 +1.0
baz=230
PPI Padang Panjang 82.59 273 P **P** 03 21 07.4 -0.2
PKM Mcpherson Peak 82.62 45 P **P** 03 21 09.0 +1.5
baz=229
PET Petropavlovsk 82.66 346 *e*P **P** 03 21 10.3 +3.4
PET *e**PP **pP** 03 21 56.2 +3.3
PET *e**SP **sP** 03 22 16.0 +3.4
PET *i* S **S** 03 31 06.7 -1.4
PET *e*SP **SPn** 03 31 56.0 -2.8
PET *e**SS **sS** 03 32 25.9 -2.3
PET pmax pmax
comp=Z,35nm,1.4s
PAF Port-aux-Franc 82.69 218 *e*P **P** 03 21 10.3 +2.9
comp=Z,638nm,1.2s
LPIG La Paz 82.72 58 LR LR 03 50 38.2
comp=Z,139nm,18.4s,baz=214,slow=30
SLBS Sierra La Lagu 82.76 59 *e*P **P** 03 21 10.0 +1.7
comp=Z,20nm,1.4s
SMMC Simmler 82.79 44 P **P** 03 21 09.8 +1.6
baz=229
FMP Fort Macarthur 82.83 46 P **P** 03 21 09.5 +1.2
baz=230
PAGB Antelope Grade 82.90 44 *e*P **P** 03 21 10.8 +2.1
comp=Z,15nm,1.1s
PAGB *e*pP **pP** 03 21 55.2 +0.5
PETK Petropavlovsk- 82.94 345 P **P** 03 21 08.3 -0.1
comp=Z,17nm,0.8s,baz=124,slow=7.5,SNR=18
PETK pP **pP** 03 21 55.0 +0.5
comp=Z,4.7nm,0.4s,baz=123,slow=5.9,SNR=2.6
PETK Petropavlovsk- 82.94 345 *e*P **P** 03 21 08.1 -0.4
PETK *e*pP **pP** 03 21 56.3 +1.9
PETK Petropavlovsk- 82.94 345 *e*P **P** 03 21 08.1 -0.4
PETK *e**PP **pP** 03 21 56.3 +1.9
PEA1 Petropavlovsk- 82.95 345 *e*P **P** 03 21 08.3 -0.2
PEA1 *e*pP **pP** 03 21 55.0 +0.5
109C Camp Elliot, M 83.09 48 P **P** 03 21 10.8 +1.2
baz=231
OSI Osito Audit: C 83.13 45 P **P** 03 21 11.2 +1.2
baz=230
DECC Green Verdugo 83.15 46 P **P** 03 21 10.7 +0.6
baz=230
MWC Mount Wilson 83.31 46 *e*P **P** 03 21 12.3 +1.3
comp=Z,18nm,1.0s
MWC *e*pP **pP** 03 21 56.8 -0.2
MWC Mount Wilson 83.31 46 *e*P **P** 03 21 12.3 +1.3
MWC *e**PP **pP** 03 21 56.8 -0.2
MWC pmax pmax
comp=Z,18nm,1.0s
SISI Saibi 83.36 272 P **P** 03 21 10.6 -0.9
ARVC Arvin 83.39 45 P **P** 03 21 12.5 +1.3
baz=230
HOPS Hopland Field 83.41 40 *e*P **P** 03 21 12.9 +1.7
comp=Z,41nm,1.1s
HOPS *e*pP **pP** 03 21 57.4 +0.2
GDXM Geysers 83.44 40 *e*P **P** 03 21 13.6 +2.2
comp=Z,15nm,1.0s
GDXM *e*pP **pP** 03 21 58.7 +1.2
MURC Murrieta 83.47 47 P **P** 03 21 12.9 +1.2
baz=231,SNR=6.8
MONP2 Monument Peak 83.54 48 P **P** 03 21 13.6 +1.3
baz=232,SNR=9.1
BFSC Mount Baldy Ra 83.57 46 P **P** 03 21 13.1 +0.8
baz=231
HMR Hamilton Ranch 83.58 41 *e*P **P** 03 21 10.5 -1.5
IKP In-Ko-Pah, Jac 83.60 48 P **P** 03 21 13.8 +1.4
baz=232,SNR=6.5
KCPM Cahto Peak 83.60 39 *e*P **P** 03 21 14.2 +1.9
comp=Z,28nm,1.0s
KCPM *e*pP **pP** 03 21 59.2 +0.9
VES Vestal, Richgr 83.69 44 P **P** 03 21 13.6 +0.9
baz=230
EDW2 Edwards Air Fo 83.77 46 P **P** 03 21 14.4 +1.2
baz=230
MNSI Mandailing Nat 83.89 274 P **P** 03 21 12.7 -1.5
comp=Z,108nm,0.9s
KMRM Mail Ridge 83.90 39 *e*P **P** 03 21 15.8 +2.1
comp=Z,35nm,0.9s
KMRM *e*pP **pP** 03 22 00.5 +0.7
ISA Isabella, Lake 83.96 45 P **P** 03 21 15.5 +1.3
baz=230
ISA Isabella, Lake 83.96 45 *e*P **P** 03 21 15.4 +1.3
comp=Z,18nm,1.0s
ISA *e*pP **pP** 03 21 59.9 -0.3
ISA Isabella, Lake 83.96 45 *e*P **P** 03 21 15.4 +1.3
ISA *e**PP **pP** 03 21 59.9 -0.3
ISA pmax pmax
comp=Z,18nm,1.0s
PFO Pinyon Flats O 83.96 47 P **P** 03 21 15.5 +1.2
baz=232,SNR=5.8
PFO Pinyon Flats O 83.96 47 *e*P **P** 03 21 15.5 +1.2
comp=Z,16nm,1.2s
PFO *e*pP **pP** 03 21 59.9 -0.5
PFO Pinyon Flats O 83.96 47 *e*P **P** 03 21 15.5 +1.2
PFO *e**PP **pP** 03 21 59.9 -0.5
PFO pmax pmax
comp=Z,16nm,1.2s
XPFO Piæon Flat 83.96 47 *e*P **P** 03 21 15.5 +1.3
comp=Z,15nm,1.1s
XPFO *e*pP **pP** 03 21 59.9 -0.5
SWSC Sam W. Stewart 83.98 48 P **P** 03 21 15.5 +1.2
baz=232
VTV Victorville 83.99 46 *e*P **P** 03 21 17.3 +2.9
BBRC Big Bear Solar 84.06 47 P **P** 03 21 16.4 +1.5
baz=231
IPM Ipoh 84.31 278 *e*P **P** 03 21 16.4 0.0
comp=Z,67nm,1.0s
CMB Columbia Colle 84.33 42 *e*P **P** 03 21 16.1 +0.2
comp=Z,19nm,0.9s
CMB Columbia Colle 84.33 42 *e*P **P** 03 21 16.1 +0.2
CMB pmax pmax
comp=Z,19nm,0.9s
KHMM Horse Mountain 84.33 38 *e*P **P** 03 21 18.0 +2.0
comp=Z,34nm,1.2s
KHMM *e*pP **pP** 03 22 02.7 +0.5
LRMC Laurel Mtn Rad 84.34 45 P **P** 03 21 17.4 +1.2
baz=231
PLCA Paso Flores 84.39 133 P **P** 03 21 18.3 +1.9
comp=Z,41nm,1.0s,baz=256,slow=4.8,SNR=35
PLCA Paso Flores 84.39 133 *e*P **P** 03 21 18.4 +1.9
comp=Z,50nm,0.9s
RRX Edison Barstow 84.40 46 P **P** 03 21 17.7 +1.4
baz=231
NJ2 Nanjing 84.48 310 *e*P **P** 03 21 16.4 -0.3
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
BELC Belle Mtn. Jos 84.50 47 P **P** 03 21 18.5 +1.5
baz=232,SNR=16
AFDM Forest Hills D 84.59 41 *e*P **P** 03 21 18.4 +1.2
comp=Z,19nm,1.1s
AFDM *e*pP **pP** 03 22 02.7 -0.6
BC3 Big Chuckawall 84.65 48 P **P** 03 21 19.3 +1.6
baz=232,SNR=12
PBSI Pulau Batu 84.66 273 P **P** 03 21 18.0 -0.1
comp=Z,120nm,1.1s
GLA Glamis 84.70 49 P **P** 03 21 19.7 +1.8
baz=233,SNR=7.5
GLA Glamis 84.70 49 *e*P **P** 03 21 20.1 +2.2
comp=Z,22nm,0.9s
GLA *e*pP **pP** 03 22 04.7 +0.7
CWC Cottonwood Cre 84.70 44 P **P** 03 21 19.2 +1.2
baz=230
USRK Ussuriysk Ar. 84.78 326 P **P** 03 21 18.4 +0.4
comp=Z,4.3nm,0.6s,baz=146,slow=3.7,SNR=8.6
GSC Goldstone, Bar 84.79 46 P **P** 03 21 19.6 +1.2
baz=231,SNR=13
GSC Goldstone, Bar 84.79 46 *e*P **P** 03 21 19.4 +1.0
comp=Z,24nm,1.1s
GSC *e*pP **pP** 03 22 04.1 -0.4
GSC Goldstone, Bar 84.79 46 *e*P **P** 03 21 19.4 +1.0
GSC *e**PP **pP** 03 22 04.1 -0.4
GSC pmax pmax
comp=Z,24nm,1.1s
WDC Whiskeytown Da 84.79 39 *e*P **P** 03 21 19.1 +1.0
comp=Z,32nm,1.0s
WDC Whiskeytown Da 84.79 39 *e*P **P** 03 21 19.1 +1.0
WDC pmax pmax
comp=Z,32nm,1.0s
HEC Hector,Ludlow 84.80 46 P **P** 03 21 19.7 +1.3
baz=232,SNR=7.7
MPMC Manual Prospec 84.83 45 P **P** 03 21 19.8 +1.2
baz=231,SNR=11
OMMB Old Mammoth Mi 84.89 43 *e*P **P** 03 21 20.6 +1.5
comp=Z,9.2nm,1.2s
OMMB *e*pP **pP** 03 22 04.7 -0.5
DAC Darwin (Calif) 84.90 45 *e*P **P** 03 21 22.0 +3.0
comp=Z,5.2nm,0.8s
DAC *e*pP **pP** 03 22 06.2 +0.9
CHGN Chignik 84.93 11 *e*P **P** 03 21 18.4 +0.1
comp=Z,119nm,1.4s
CHGN *e*pP **pP** 03 22 04.0 -0.6
N02D Trinity Center 84.97 39 P **P** 03 21 20.7 +1.6
baz=227,SNR=16
MLAC Mammoth, Mammo 85.00 43 P **P** 03 21 21.0 +1.5
baz=230
TIN Tinemaha, Big 85.00 44 P **P** 03 21 20.6 +1.2
baz=230
O03D Payes Creek 85.01 39 P **P** 03 21 20.0 +0.7
baz=228,SNR=19
HSIG 85.02 54 *e*P **P** 03 21 20.5 +1.0
comp=Z,13nm,1.0s
HSIG *e*pP **pP** 03 22 05.9 +0.2
KULM Kulim 85.02 279 *e*P **P** 03 21 20.4 +0.5
comp=Z,116nm,1.4s
IRM Iron Mountain 85.16 48 P **P** 03 21 21.8 +1.7
baz=232,SNR=17
M02C Callahan 85.17 38 P **P** 03 21 21.7 +1.6
baz=227,SNR=19
EFI East Falkland 85.19 147 *e*P **P** 03 21 21.8 +1.7
comp=Z,101nm,0.8s
EFI East Falkland 85.19 147 *c i*P **P** 03 21 21.0 +0.9
EFI pmax pmax
comp=Z,78nm,0.8s
WAKR Walker 85.20 42 *e*P **P** 03 21 21.8 +1.3
comp=Z,25nm,1.1s
WAKR *e*pP **pP** 03 22 06.3 -0.4
GMRC Granite Mounta 85.20 47 P **P** 03 21 21.6 +1.1
baz=232,SNR=9.5
113A Mohawk Valley, 85.24 49 *e*P **P** 03 21 22.0 +1.5
comp=Z,12nm,1.0s
113A *e*pP **pP** 03 22 05.5 -1.3
L02D Cave Junction, 85.29 37 P **P** 03 21 22.1 +1.5
baz=226
Y12C Blythe 85.32 48 P **P** 03 21 22.5 +1.6
baz=233,SNR=5.5
Y12C Blythe 85.32 48 *e*P **P** 03 21 22.2 +1.3
comp=Z,11nm,0.9s
Y12C *e*pP **pP** 03 22 07.6 +0.5
PSI Prapat 85.39 276 P **P** 03 21 20.5 -1.4
comp=Z,74nm,1.0s,baz=180,slow=5.9,SNR=48
PSI LR LR 04 01 24.7
comp=Z,107nm,18.1s,baz=263,slow=37
PSI Prapat 85.39 276 *e*P **P** 03 21 20.7 -1.2
comp=Z,119nm,1.1s
PSI Prapat 85.39 276 *e*P **P** 03 21 20.7 -1.2
PSI pmax pmax
comp=Z,119nm,1.1s
KEBM Edson Butte 85.40 36 *e*P **P** 03 21 23.7 +2.5
comp=Z,52nm,1.4s
KEBM *e*pP **pP** 03 22 07.9 +0.5
214A Organ Pipe Nat 85.41 51 P **P** 03 21 23.0 +1.6
baz=234
TUQ Turquoise Moun 85.43 46 P **P** 03 21 23.0 +1.3
baz=232,SNR=5.2
FURC Furnace Creek, 85.48 45 P **P** 03 21 22.8 +1.2
baz=231
YBH Yreka Blue Hor 85.48 38 P **P** 03 21 22.8 +1.2
comp=Z,11nm,0.9s,baz=181,slow=3.5,SNR=36
YBH pP **pP** 03 22 07.8 -0.1
comp=Z,15nm,0.8s,baz=243,slow=4.5,SNR=6.5
YBH LR LR 03 52 11.2
comp=Z,44nm,21.7s,baz=220,slow=30
YBH Yreka Blue Hor 85.48 38 *e*P **P** 03 21 22.9 +1.3
comp=Z,16nm,1.0s
YBH Yreka Blue Hor 85.48 38 *e*P **P** 03 21 22.9 +1.3
YBH pmax pmax
comp=Z,16nm,1.0s
PNTR Pine Nut 85.49 42 *e*P **P** 03 21 23.3 +1.4
comp=Z,24nm,1.0s
PNTR *e*pP **pP** 03 22 08.1 -0.1
SHOC Shoshone, Teco 85.50 46 P **P** 03 21 22.7 +0.9
baz=232
BEKR Beckworth 85.55 41 *e*P **P** 03 21 23.3 +1.1
comp=Z,12nm,1.1s
BEKR *e*pP **pP** 03 22 07.5 -0.9
VCNR Virginia City 85.59 41 *e*P **P** 03 21 24.2 +1.9
comp=Z,12nm,0.6s
VCNR *e*pP **pP** 03 22 08.7 0.0
YERR Yerington 85.63 42 *e*P **P** 03 21 23.5 +0.9
comp=Z,19nm,1.2s
YERR *e*pP **pP** 03 22 07.9 -1.0
LDFC Landfair 85.74 47 *e*P **P** 03 21 25.0 +1.9
comp=Z,78nm,1.4s
RYN Ryan 85.83 42 *e*P **P** 03 21 24.4 +0.9
comp=Z,7.8nm,0.9s
RYN *e*pP **pP** 03 22 09.2 -0.6
NV01 Mina Array Sit 85.83 43 *e*P **P** 03 21 23.9 +0.3
NV01 *e*pP **pP** 03 22 08.7 -1.2
NVAR Mina Array Bea 85.83 43 P **P** 03 21 24.2 +0.6
comp=Z,10nm,0.8s,baz=222,slow=8.6,SNR=69
NVAR pP **pP** 03 22 08.7 -1.2
comp=Z,35nm,0.9s,baz=222,slow=5.8,SNR=18
NVAR LR LR 03 54 23.3
comp=Z,52nm,18.4s,baz=126,slow=32
NEE2 Needles Airpor 85.87 47 P **P** 03 21 25.4 +1.8
baz=233
GSI Gunungsitoli 85.90 274 P **P** 03 21 24.8 +0.5
GSI Gunungsitoli 85.90 274 *e*P **P** 03 21 24.5 +0.2
comp=Z,334nm,1.1s
PDMCI Parker Dam,Lak 85.91 48 P **P** 03 21 25.1 +1.3
baz=233,SNR=6.2
NV11 Mina Array Sit 85.92 43 *e*P **P** 03 21 24.9 +0.9
comp=Z,1.2nm,1.1s
HUMO Hull Mountain 85.95 37 *e*P **P** 03 21 25.7 +1.9
comp=Z,27nm,1.5s
HUMO *e*pP **pP** 03 22 09.1 -1.1
M04C Macdoel 86.00 38 P **P** 03 21 25.2 +1.0
baz=228,SNR=5.7
PAHR Pah Rah Range 86.02 41 *e*P **P** 03 21 25.5 +1.1
comp=Z,7.6nm,0.9s
PAHR *e*pP **pP** 03 22 09.9 -0.8
TSI Tuntungan 86.03 276 P **P** 03 21 24.6 -0.3
TPNV Topopah Spring 86.16 45 P **P** 03 21 26.4 +1.2
baz=232,SNR=8.8
TPNV Topopah Spring 86.16 45 *e*P **P** 03 21 26.5 +1.3
comp=Z,10nm,0.9s
TPNV *e*pP **pP** 03 22 11.1 -0.4
TPNV Topopah Spring 86.16 45 *e*P **P** 03 21 26.5 +1.3
TPNV *e**PP **pP** 03 22 11.1 -0.4
TPNV pmax pmax
comp=Z,10.0nm,0.9s
KVN Kaiserville 86.35 42 *e*P **P** 03 21 26.8 +0.7
comp=Z,12nm,0.8s
KVN Kaiserville 86.35 42 *e*P **P** 03 21 26.8 +0.7
KVN pmax pmax
comp=Z,12nm,0.8s
Y14A Wickenburg 86.44 49 *e*P **P** 03 21 28.0 +1.5
comp=Z,12nm,0.8s
I03D Drain, OR 86.49 36 P **P** 03 21 27.8 +1.4
baz=226
W13A Hualapai Mount 86.55 47 *e*P **P** 03 21 28.9 +1.7
comp=Z,6.9nm,0.8s
W13A *e*pP **pP** 03 22 12.8 -0.8
SHPR Sheep Range 86.58 46 *e*P **P** 03 21 29.1 +1.8
comp=Z,15nm,1.3s
SHPR *e*pP **pP** 03 22 13.4 -0.2
KCSI Kotacane, Aceh 86.75 276 P **P** 03 21 27.3 -1.1
J04D Umpqua Nationa 86.83 37 P **P** 03 21 29.5 +1.2
baz=227
MOD Modoc Plateau 86.93 39 *e*P **P** 03 21 29.5 +0.7
comp=Z,9.7nm,0.8s
MOD *e*pP **pP** 03 22 14.4 -0.8
TUC Tucson 87.01 51 P **P** 03 21 31.2 +1.9
baz=235
TUC Tucson 87.01 51 *e*P **P** 03 21 30.8 +1.4
comp=Z,16nm,0.9s
TUC Tucson 87.01 51 *e*P **P** 03 21 30.8 +1.4
TUC pmax pmax
comp=Z,16nm,0.9s
I04A Tendick Farm, 87.05 37 P **P** 03 21 29.8 +0.6
baz=227
TRTT Trang 87.05 280 P **P** 03 21 29.7 -0.1
comp=Z,36nm,0.9s
K05A Summer Lake 87.15 38 *e*P **P** 03 21 31.0 +1.1
comp=Z,16nm,1.0s
TPTI 87.15 275 P **P** 03 21 29.8 -0.5
J05D Fort Rock, OR 87.33 38 P **P** 03 21 31.6 +0.9
baz=228
KDAK Kodiak Island 87.40 13 P **P** 03 21 32.1 +1.7
comp=Z,14nm,1.0s,baz=316,slow=4.6,SNR=4.2
KDAK Kodiak Island 87.40 13 *e*P **P** 03 21 32.1 +1.7
comp=Z,28nm,1.1s
KDAK Kodiak Island 87.40 13 *e*P **P** 03 21 32.1 +1.7
KDAK pmax pmax
comp=Z,28nm,1.1s
R11A Troy Canyon, C 87.44 44 P **P** 03 21 32.0 +0.6
baz=232
SNSI Sinabang, Aceh 87.52 274 P **P** 03 21 31.9 -0.2
319A Douglas 87.54 53 *e*P **P** 03 21 34.3 +2.4
comp=Z,14nm,1.0s
319A *e*pP **pP** 03 22 18.8 +0.4
G03D McMinnville, O 87.58 35 P **P** 03 21 32.9 +1.3
baz=226
GRNR Gornyy 87.70 333 *e*P **P** 03 21 34.0 +1.9
GRNR pmax pmax
comp=Z,42nm,1.0s
SKNT Sakolnakorn 87.72 290 P **P** 03 21 33.0 +0.1
comp=Z,36nm,1.1s
BMN Battle Mountai 87.75 42 *e*P **P** 03 21 33.6 +0.8
comp=Z,13nm,1.1s
BMN *e*pP **pP** 03 22 17.7 -1.5
BMN Battle Mountai 87.75 42 *e*P **P** 03 21 33.6 +0.8
BMN *e**PP **pP** 03 22 17.7 -1.5
BMN pmax pmax
comp=Z,13nm,1.1s
H04A Detroit Lake 87.77 36 *e*P **P** 03 21 31.1 -1.5
comp=Z,7.1nm,0.8s
H04A *e*pP **pP** 03 22 19.3 +0.2
X16A Lo Mia Camp, P 87.78 49 *e*P **P** 03 21 35.0 +1.9
comp=Z,18nm,0.8s
PINE Pine Mountain 87.83 37 *e*P **P** 03 21 34.4 +1.3
comp=Z,20nm,1.0s
CN2 Changchun 87.89 323 *e*P **P** 03 21 31.5 -1.6
CN2 *e*pP pP 03 22 18.6 -1.0
CN2 *e*S **S** 03 31 57.0 -2.9
CN2 pmax pmax
comp=Z,10.0nm,0.7s
SRAK Srakaew 87.93 287 P **P** 03 21 33.2 -0.7
comp=Z,90nm,1.1s,comp=Z,769nm
NKL Nikolayevsk 87.96 336 *e*P **P** 03 21 33.0 -0.1
I05D Terrebonne, OR 87.99 37 P **P** 03 21 34.5 +0.9
baz=228
TIA Tai'an 88.10 313 P **P** 03 21 35.5 +1.2
TIA pmax pmax
comp=Z,5.0nm,0.8s
LCMT Little Creek M 88.11 46 *e*P **P** 03 21 36.1 +1.6
comp=Z,5.0nm,0.9s
LCMT *e*pP **pP** 03 22 20.8 -0.3
WVOR Wild Horse Val 88.21 39 *e*P **P** 03 21 36.1 +1.3

comp=Z,8.6nm,1.0s
WVOR epP **pP** **03 22 20.6 -0.8**
WVOR Wild Horse Val 88.21 39 *e*P **P** **03 21 36.1 +1.3**
WVOR *e**PP **pP** **03 22 20.6 -0.8**
WVOR pmax pmax
comp=Z,9.0nm,1.0s
LHMI Lhok Sumawe 88.26 277 P **P** **03 21 34.9 -0.7**
MLSI Meulaboh, Aceh 88.30 276 P **P** **03 21 34.9 -0.9**
F04D Rainier, OR 88.31 35 P **P** **03 21 36.5 +1.5**
baz=227
E03A Lebam 88.35 34 *e*P **P** **03 21 37.0 +1.8**
comp=Z,38nm,1.0s
E03A epP **pP** **03 22 22.5 +0.8**
CCUT Cedar City 88.36 46 *e*P **P** **03 21 37.4 +1.7**
comp=Z,5.3nm,1.0s
CCUT epP **pP** **03 22 21.9 -0.4**
U15A North Rim 88.38 47 *e*P **P** **03 21 37.8 +1.8**
comp=Z,13nm,0.6s
KNB Kanab 88.39 46 *e*P **P** **03 21 37.5 +1.7**
comp=Z,6.6nm,0.8s
KNB Kanab 88.39 46 *e*P **P** **03 21 37.5 +1.7**
KNB pmax pmax
comp=Z,7.0nm,0.8s
WUAZ Wupatki 88.46 48 P **P** **03 21 37.7 +1.5**
baz=234
WUAZ Wupatki 88.46 48 *e*P **P** **03 21 38.2 +2.0**
comp=Z,14nm,1.1s
WUAZ epP **pP** **03 22 22.7 -0.1**
SZCU Shurtz Canyon 88.56 46 *e*P **P** **03 21 38.6 +1.9**
comp=Z,6.7nm,1.1s
SZCU epP **pP** **03 22 23.1 -0.2**
G05D Wamic, OR 88.61 36 P **P** **03 21 37.4 +0.9**
baz=228
PSUT Pine Spring 88.63 45 *e*P **P** **03 21 38.5 +1.4**
comp=Z,5.2nm,0.8s
PSUT epP **pP** **03 22 23.4 -0.2**
NLWA Neilton Lookou 88.78 33 *e*P **P** **03 21 38.7 +1.4**
comp=Z,18nm,0.9s
NLWA epP **pP** **03 22 26.4 +2.6**
I07A Izee 88.80 38 *e*P **P** **03 21 39.1 +1.5**
comp=Z,8.5nm,1.0s
X18A Snowflake 88.85 50 *e*P **P** **03 21 40.0 +1.9**
comp=Z,15nm,0.9s
X18A epP **pP** **03 22 23.6 -1.1**
J08A Circle Bar Ran 88.90 39 *e*P **P** **03 21 39.3 +1.3**
comp=Z,15nm,1.2s
J08A epP **pP** **03 22 23.8 -0.8**
G06A Carlson Farm, 88.96 36 *e*P **P** **03 21 39.5 +1.3**
comp=Z,20nm,1.0s
G06A epP **pP** **03 22 25.7 +0.9**
PKCU Pink Cliffs 88.97 46 *e*P **P** **03 21 41.4 +2.6**
comp=Z,19nm,1.5s
PKCU epP **pP** **03 22 26.6 +1.2**
ELK Elko 89.13 42 P **P** **03 21 42.5 +3.2**
comp=Z,1.1nm,0.5s,baz=261,slow=6.0,SNR=5.8
ELK pP **pP** **03 22 27.2 +1.3**
comp=Z,13nm,1.0s,baz=280,slow=2.2,SNR=11
121A Cookes Peak, D 89.24 53 P **P** **03 21 41.9 +1.9**
baz=237,SNR=5.1
CNPM China Poot 89.28 13 *e*P **P** **03 21 40.1 +0.8**
comp=Z,39nm,0.9s
HOM Homer 89.32 13 *e*P **P** **03 21 40.4 +1.0**
comp=Z,188nm,1.0s
W18A Petrified Fore 89.33 49 P **P** **03 21 41.9 +1.5**
baz=236
DIB Dawson Inlet, 89.33 25 *e*P **P** **03 21 41.1 +1.5**
comp=Z,28nm,1.0s
LON Longmire 89.37 35 *e*P **P** **03 21 40.7 +0.7**
comp=Z,6.6nm,0.8s
LON epP **pP** **03 22 27.8 +1.1**
LON Longmire 89.37 35 *e*P **P** **03 21 40.7 +0.7**
LON *e**PP **pP** **03 22 27.8 +1.1**
LON pmax pmax
comp=Z,7.0nm,0.8s
MTPU Mount Pierson 89.40 46 *e*P **P** **03 21 42.9 +2.1**
comp=Z,18nm,1.3s
MTPU epP **pP** **03 22 27.7 +0.2**
PHET Kaeng Krachan 89.47 285 P **P** **03 21 43.4 +2.2**
comp=Z,25nm,1.0s,comp=Z,230nm
BRLK Bradley Lake 89.57 13 *e*P **P** **03 21 41.3 +0.6**
comp=Z,33nm,1.0s
D05A Enumclaw 89.57 34 *e*P **P** **03 21 42.8 +1.9**
comp=Z,57nm,1.0s
D05A epP **pP** **03 22 27.3 -0.3**
MSU Marysvale 89.68 46 *e*P **P** **03 21 43.8 +1.8**
MSU epP **pP** **03 22 28.1 -0.5**
MSU Marysvale 89.68 46 *e*P **P** **03 21 43.8 +1.8**
MSU *e**PP **pP** **03 22 28.1 -0.5**
RSO Redoubt South 89.86 12 *e*P **P** **03 21 42.6 +0.5**
PGC Sidney 89.86 33 *e*P **P** **03 21 43.7 +1.5**
comp=Z,26nm,0.8s
G08A Pilot Rock 89.89 37 *e*P **P** **03 21 43.7 +1.1**
comp=Z,29nm,1.0s
G08A epP **pP** **03 22 28.9 -0.3**
ENH Enshi 90.11 304 *e*P **P** **03 21 45.0 +1.1**
comp=Z,69nm,1.3s
ENH epP **pP** **03 22 34.0 +3.5**
B05A Bryant 90.25 33 P **P** **03 21 45.1 +1.1**
baz=227,SNR=12
A04D Lummi Island 90.27 33 P **P** **03 21 45.4 +1.3**
baz=227
DUG Dugway, Tooele 90.27 44 P **P** **03 21 45.4 +0.8**
baz=234
GYA Guiyang 90.27 300 *e*P **P** **03 21 46.0 +1.2**
GYA pP pP 03 22 33.4 +1.9
GYA sP sP 03 22 53.0 +1.9
GYA PP **PP** **03 25 24.5 +2.7**
GYA SKS **SKSac** **03 31 57.8 -0.6**
GYA S **S** **03 32 21.0 -2.1**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,130nm,6.2s
LTY Liberty 90.29 35 *e*P **P** **03 21 45.4 +1.0**
comp=Z,8.6nm,0.8s
LTY epP **pP** **03 22 30.0 -1.0**
MFID Camas Ranch 90.43 40 *e*P **P** **03 21 46.1 +0.9**
comp=Z,12nm,1.0s
MFID epP **pP** **03 22 31.0 -0.9**
MNTX Cornudas Mount 90.50 54 P **P** **03 21 46.8 +1.1**
baz=238
MNTX Cornudas Mount 90.50 54 *e*P **P** **03 21 46.9 +1.2**
comp=Z,4.7nm,0.8s
MNTX epP **pP** **03 22 32.5 +0.1**
BMO Blue Mountains 90.50 38 *e*P **P** **03 21 46.3 +0.9**
comp=Z,5.2nm,0.8s
BMO epP **pP** **03 22 30.8 -1.3**
BMO Blue Mountains 90.50 38 *e*P **P** **03 21 46.3 +0.9**
BMO *e**PP **pP** **03 22 30.8 -1.3**
BMO pmax pmax
comp=Z,5.0nm,0.8s
TX31 Lajitas Ar. Si 90.53 57 *e*P **P** **03 21 47.1 +1.1**
TX31 epP **pP** **03 22 30.3 -2.3**
TX31 epP **pP** **03 22 33.2 +0.6**
TXAR Lajitas Array 90.53 57 P **P** **03 21 47.0 +1.1**
comp=Z,2.0nm,0.9s,baz=216,slow=6.2,SNR=12
TXAR pP **pP** **03 22 30.2 -2.3**
comp=Z,8.2nm,1.2s,baz=215,slow=6.1,SNR=5.5
TXAR PKKPbc **PKKPbc** **03 39 13.8 +1.0**
comp=Z,0.7nm,0.9s,baz=66,slow=5.0,SNR=4.0
TXAR LR LR 03 54 04.0
comp=Z,101nm,21.8s,baz=0.0,slow=30
SRDT SRDT 90.58 286 P **P** **03 21 47.9 +1.6**
comp=Z,35nm,1.4s
TMUT Trail Mountain 90.75 45 *e*P **P** **03 21 48.7 +1.7**
comp=Z,15nm,0.6s
PHIT Phitsanulok 90.81 289 P **P** **03 21 50.7 +3.3**
comp=Z,34nm,0.9s,comp=Z,2um
UTHA Uthaitani 90.87 287 P **P** **03 21 50.2 +2.5**
comp=Z,6.5nm,1.2s
MPU Maple Canyon 90.90 45 *e*P **P** **03 21 49.1 +1.6**
comp=Z,6.0nm,1.0s
MPU epP **pP** **03 22 33.6 -0.6**
BJI Beijing 90.95 315 P **P** **03 21 48.4 +0.9**
BJI pmax pmax
comp=Z,7.0nm,1.0s
D08A Wollman Farm, 91.05 36 *e*P **P** **03 21 48.9 +1.1**
comp=Z,17nm,0.9s
D08A epP **pP** **03 22 33.7 -0.8**
SRU San Rafael Swe 91.08 46 *e*P **P** **03 21 49.7 +1.3**
comp=Z,8.6nm,0.8s
SRU epP **pP** **03 22 33.8 -1.3**
SRU San Rafael Swe 91.08 46 *e*P **P** **03 21 49.7 +1.3**
SRU *e**PP **pP** **03 22 33.8 -1.3**
SRU pmax pmax
comp=Z,9.0nm,0.8s

E09A Wood Farm, Sta 91.11 37 *e*P **P** **03 21 49.2 +1.1**
comp=Z,15nm,0.9s
E09A epP **pP** **03 22 33.4 -1.3**
P17A Butcher Ranch, 91.15 45 *e*P **P** **03 21 50.4 +1.7**
comp=Z,4.7nm,0.8s
P17A epP **pP** **03 22 34.9 -0.5**
SUA Susitna One 91.16 13 *e*P **P** **03 21 48.4 +0.3**
comp=Z,15nm,0.7s
F10A Beach Ranch, E 91.26 37 *e*P **P** **03 21 49.3 +0.4**
comp=Z,18nm,0.8s
MVCO Mesa Verde 91.33 48 P **P** **03 21 50.2 +0.5**
baz=236
MVCO Mesa Verde 91.33 48 *e*P **P** **03 21 50.8 +1.1**
comp=Z,7.2nm,1.3s
MVCO epP **pP** **03 22 36.0 -0.4**
HLID Hailey 91.33 41 P **P** **03 21 50.4 +1.0**
baz=233
HLID Hailey 91.33 41 *e*P **P** **03 21 50.5 +1.1**
comp=Z,9.3nm,1.1s
NANT Nan 91.34 290 P **P** **03 21 51.5 +1.7**
comp=Z,7.7nm,1.3s
JLU Jordanelle 91.35 44 *e*P **P** **03 21 50.9 +1.2**
comp=Z,6.4nm,1.2s
JLU epP **pP** **03 22 36.1 -0.2**
TASM ASL Pad, Albuq 91.47 51 P **P** **03 21 51.4 +1.1**
baz=237,SNR=6.3
ANMO Albuquerque 91.47 51 P **P** **03 21 51.7 +1.4**
comp=Z,3.8nm,0.9s,baz=212,slow=6.2,SNR=14
ANMO pP **pP** **03 22 36.6 -0.4**
comp=Z,31nm,1.0s,baz=214,slow=5.2,SNR=18
ANMO Albuquerque 91.47 51 P **P** **03 21 51.2 +0.9**
baz=237
ANMO Albuquerque 91.47 51 *e*P **P** **03 21 51.5 +1.2**
comp=Z,5.4nm,0.9s
ANMO epP **pP** **03 22 36.0 -1.0**
ANMO Albuquerque 91.47 51 *ce*P **P** **03 21 51.8 +1.5**
ANMO pmax pmax
comp=Z,8.0nm,1.3s
TASL Snake Pit, Alb 91.47 51 P **P** **03 21 51.4 +1.1**
baz=237,SNR=6.5
LNIG Linares 91.53 63 *e*P **P** **03 21 52.6 +2.0**
comp=Z,3.3nm,0.9s
LNIG epP **pP** **03 22 37.1 -0.1**
P18A Preston Nutter 91.55 46 *e*P **P** **03 21 51.9 +1.2**
comp=Z,4.4nm,0.8s
P18A epP **pP** **03 22 37.1 -0.3**
PMR Palmer 91.60 13 *e*P **P** **03 21 49.8 -0.1**
comp=Z,12nm,1.0s
PMR epP **pP** **03 22 35.7 -0.9**
PMR Palmer 91.60 13 *e*P **P** **03 21 49.8 -0.1**
PMR *e**PP **pP** **03 22 35.7 -0.9**
PMR pmax pmax
comp=Z,12nm,1.0s
SUKH Sukhothai 91.61 289 P **P** **03 21 54.3 +3.2**
comp=Z,6.1nm,0.7s
PV09 Paradox Valley 91.63 47 *e*P **P** **03 21 52.4 +1.3**
PV09 epP **pP** **03 22 36.0 -1.8**
PV13 Radium Mtn., P 91.64 47 *e*P **P** **03 21 52.2 +1.1**
comp=Z,4.7nm,1.1s
PV13 epP **pP** **03 22 36.8 -0.9**
PV03 Paradox Valley 91.68 47 *e*P **P** **03 21 52.7 +1.5**
TCUT Toone Canyon 91.68 44 *e*P **P** **03 21 52.6 +1.4**
comp=Z,48nm,1.4s
TCUT epP **pP** **03 22 37.3 -0.6**
PV02 Paradox Valley 91.72 47 *e*P **P** **03 21 52.6 +1.1**
comp=Z,15nm,1.5s
PV02 epP **pP** **03 22 37.1 -1.0**
PV12 Saucer Basin, 91.74 47 *e*P **P** **03 21 52.7 +1.1**
comp=Z,7.5nm,0.9s
PV12 epP **pP** **03 22 37.5 -0.7**
PV01 Paradox Valley 91.79 47 *e*P **P** **03 21 51.2 -0.6**
GHO Glory Hole Cre 91.81 13 *e*P **P** **03 21 51.6 +0.6**
comp=Z,21nm,0.8s
HWUT Hardware Ranch 91.87 43 *e*P **P** **03 21 52.7 +0.8**
comp=Z,3.8nm,0.7s
HWUT epP **pP** **03 22 37.8 -0.8**
PV22 Blue Mesa, Par 91.87 47 *e*P **P** **03 21 53.3 +1.2**
comp=Z,3.8nm,1.0s
PV22 epP **pP** **03 22 37.9 -0.9**
DIV Divide 91.91 15 *e*P **P** **03 21 52.1 +0.6**
comp=Z,28nm,1.2s
DIV epP **pP** **03 22 39.6 +1.4**
BMRM Bremner River 92.04 15 *e*P **P** **03 21 52.9 +0.8**
comp=Z,26nm,1.0s
SCM Sheep Creek Mo 92.19 14 *e*P **P** **03 21 53.4 +0.6**
comp=Z,20nm,0.7s
SCM epP **pP** **03 22 40.9 +1.4**
SCM Sheep Creek Mo 92.19 14 *e*P **P** **03 21 53.4 +0.6**
SCM *e**PP **pP** **03 22 40.9 +1.4**
SCM pmax pmax
comp=Z,20nm,0.7s
KLU Klutina 92.20 15 *e*P **P** **03 21 53.6 +0.7**
comp=Z,8.4nm,1.0s
KLU epP **pP** **03 22 41.0 +1.4**
XAN Xi'an 92.49 307 sS sS 03 34 08.0 +3.6
XAN pmax pmax
comp=Z,21nm,1.2s
XAN pmax pmax
comp=Z,74nm,3.9s
CM01 Chiang Mai Arr 92.62 289 *e*P **P** **03 21 57.1 +1.4**
CM31 Chiang Mai Arr 92.65 289 *e*P **P** **03 21 57.3 +1.4**
CMAR Chiang Mai Arr 92.65 289 P **P** **03 21 57.3 +1.4**
comp=Z,4.4nm,0.6s,baz=135,slow=3.3,SNR=16
KMI Kunming 92.69 297 P **P** **03 21 58.4 +2.2**
KMI pP pP 03 22 42.8 -0.1
KMI sP sP 03 23 01.3 -1.2
KMI pmax pmax
comp=Z,26nm,1.0s
CAST Castle Rocks 92.72 11 *e*P **P** **03 21 54.2 -1.0**
comp=Z,14nm,0.8s
S22A 4UR Ranch, Cre 92.73 49 P **P** **03 21 57.2 +1.1**
baz=237,SNR=11
S22A 4UR Ranch, Cre 92.73 49 *e*P **P** **03 21 57.3 +1.1**
comp=Z,4.3nm,0.8s
S22A epP **pP** **03 22 43.9 +1.0**
NEW Newport 92.76 36 pP pP 03 22 40.6 -1.8
comp=Z,6.1nm,1.0s,baz=165,slow=8.3,SNR=3.1
CHTO Chiang Mai 92.81 290 P **P** **03 21 58.2 +1.6**
comp=Z,82nm,1.3s
CHTO Chiang Mai 92.81 290 *e*P **P** **03 21 58.3 +1.7**
comp=Z,32nm,1.4s
CHTO Chiang Mai 92.81 290 *e*P **P** **03 21 58.3 +1.7**
CHTO pmax pmax
comp=Z,32nm,1.4s
AHID Auburn Hatcher 92.82 43 *e*P **P** **03 21 57.4 +1.1**
comp=Z,12nm,0.8s
AHID epP **pP** **03 22 42.2 -0.9**
MCMT McKenzie Canyo 92.99 40 *e*P **P** **03 21 57.9 +0.8**
MCMT epP **pP** **03 22 42.7 -1.2**
TRF Thorofare Moun 93.07 12 *e*P **P** **03 21 56.3 -0.6**
comp=Z,22nm,0.8s
SEY Seymchan 93.09 347 *ce*P **P** **03 21 57.1 +0.3**
O20A White River Ci 93.11 46 P **P** **03 21 58.6 +0.9**
baz=236
O20A White River Ci 93.11 46 *e*P **P** **03 21 58.6 +0.9**
comp=Z,4.3nm,0.8s
O20A epP **pP** **03 22 43.4 -1.1**
CMAI Chiengmai2 93.25 291 P **P** **03 22 00.1 +1.3**
REDW Red Top Meadow 93.31 42 *e*P **P** **03 21 59.5 +0.8**
comp=Z,11nm,1.0s
TPAW Teton Pass 93.32 42 *e*P **P** **03 22 00.1 +1.3**
comp=Z,16nm,1.5s
TPAW epP **pP** **03 22 44.7 -0.8**
FXWY Fox Creek 93.36 42 *e*P **P** **03 22 00.8 +2.0**
comp=Z,4.5nm,0.8s
FXWY epP **pP** **03 22 44.9 -0.7**
SMCO Snowmass 93.41 47 *e*P **P** **03 22 00.5 +1.1**
comp=Z,5.8nm,1.0s
SMCO epP **pP** **03 22 45.0 -1.1**
SNOW Snow King Moun 93.42 42 *e*P **P** **03 22 00.6 +1.4**
comp=Z,12nm,0.8s
SNOW epP **pP** **03 22 45.2 -0.7**
DLMT Dillon 93.45 40 *e*P **P** **03 22 00.4 +1.3**
comp=Z,6.3nm,1.1s
DLMT epP **pP** **03 22 44.9 -1.0**
MSTX Muleshoe 93.56 54 P **P** **03 22 00.3 +0.4**
baz=239
MSTX Muleshoe 93.56 54 *e*P **P** **03 22 00.8 +0.9**
comp=Z,7.8nm,0.8s
MSTX epP **pP** **03 22 45.7 -0.9**
IMW Indian Meadow 93.56 42 *e*P **P** **03 22 00.7 +0.8**
comp=Z,6.7nm,0.9s
IMW epP **pP** **03 22 45.9 -0.7**
MCK McKinley 93.58 12 *e*P **P** **03 21 59.6 +0.5**
comp=Z,12nm,0.9s
MCK McKinley 93.58 12 *e*P **P** **03 21 59.6 +0.5**

MCK pmax pmax
comp=Z,12nm,0.9s
MOOW Moose Ponds 93.59 42 *e*P **P** **03 22 01.0 +1.1**
comp=Z,2.6nm,0.9s
MOOW epP **pP** **03 22 45.8 -0.9**
SDCO Great Sand Dun 93.62 49 P **P** **03 22 00.6 +0.3**
baz=238
SDCO Great Sand Dun 93.62 49 *e*P **P** **03 22 01.2 +0.9**
comp=Z,3.4nm,1.1s
SDCO epP **pP** **03 22 45.3 -1.7**
BW06 Boulder Array 93.75 43 P **P** **03 22 01.0 +0.3**
baz=236,SNR=9.2
BW06 Boulder Array 93.75 43 *e*P **P** **03 22 01.1 +0.4**
comp=Z,5.0nm,0.9s
BW06 epP **pP** **03 22 45.8 -1.6**
PD31 Pinedale Array 93.75 43 *e*P **P** **03 22 01.1 +0.5**
PD31 epP **pP** **03 22 45.8 -1.6**
PDAR Pinedale Array 93.75 43 P **P** **03 22 00.8 +0.1**
comp=Z,3.6nm,0.8s,baz=213,slow=3.0,SNR=28
PDAR pP **pP** **03 22 45.5 -2.0**
comp=Z,8.9nm,0.9s,baz=234,slow=5.5,SNR=9.9
PDAR Pinedale Array 93.75 43 *e*P **P** **03 21 60.0 -0.7**
PDAR epP **pP** **03 22 43.9 -3.5**
FLWY Flagg Ranch 93.81 42 *e*P **P** **03 22 02.5 +1.6**
comp=Z,12nm,1.0s
FLWY epP **pP** **03 22 47.1 -0.5**
JCT Junction City 94.00 58 P **P** **03 22 02.3 +0.4**
baz=241
BOZ Bozeman (W) 94.14 40 P **P** **03 22 02.9 +0.6**
baz=235,SNR=6.6
BOZ Bozeman (W) 94.14 40 *e*P **P** **03 22 02.9 +0.6**
comp=Z,2.6nm,0.9s
BOZ epP **pP** **03 22 48.2 -0.9**
BOZ Bozeman (W) 94.14 40 *e*P **P** **03 22 02.9 +0.6**
BOZ *e**PP **pP** **03 22 48.2 -0.9**
BOZ pmax pmax
comp=Z,3.0nm,0.9s
HHC Hu-ho-hao-te 94.31 314 *e*P **P** **03 22 05.1 +2.0**
HHC pP pP 03 22 49.3 -0.6
HHC SKS **SKSac** **03 32 19.6 -0.6**
HHC S **ScS** **03 33 03.0 +3.6**
HHC sS sS 03 34 20.8 +0.3
HHC pmax pmax
comp=Z,38nm,1.0s
HHC pmax pmax
comp=Z,71nm,6.7s
WRH Wood River Hil 94.41 12 *e*P **P** **03 22 02.8 -0.1**
comp=Z,18nm,1.1s
WRH epP **pP** **03 22 51.0 +1.4**
RIDG Independ'e Rid 94.42 14 *e*P **P** **03 22 03.0 0.0**
comp=Z,12nm,1.2s
CCB Clear Creek Bu 94.62 12 *e*P **P** **03 22 03.1 -0.7**
comp=Z,6.8nm,0.8s
ISCO Idaho Springs 94.63 47 P **P** **03 22 05.3 +0.4**
baz=238
HRY Holter Researc 94.67 39 *e*P **P** **03 22 09.1 +4.4**
CD2 Chengdu 94.69 302 P **P** **03 22 04.4 -0.6**
CD2 pmax pmax
comp=Z,10.0nm,0.6s
AMTX Amarillo 94.80 53 P **P** **03 22 06.0 +0.5**
baz=240
SCRK Sand Creek 94.81 14 *e*P **P** **03 22 05.4 +0.5**
comp=Z,4.9nm,0.9s
COLA College 94.82 12 *e*P **P** **03 22 04.5 -0.1**
comp=Z,10nm,0.6s
ILAR Eielson Array 94.91 13 P **P** **03 22 04.5 -0.7**
comp=Z,3.9nm,0.8s,baz=221,slow=5.7,SNR=48
ILAR pP **pP** **03 22 49.2 -2.7**
comp=Z,1.6nm,0.9s,baz=224,slow=5.0,SNR=1.8
ILAR PP **PP** **03 25 53.5 -3.7**
comp=Z,4.7nm,1.0s,baz=211,slow=6.6,SNR=7.9
ILAR PKKPbc **PKKPbc** **03 38 59.8 -3.1**
comp=Z,0.5nm,0.8s,baz=318,slow=1.2,SNR=6.3
ILB Eielson Array 94.91 13 *e*P **P** **03 22 04.8 -0.4**
ILB epP **pP** **03 22 49.2 -2.7**
ILB *e*PP **PP** **03 25 53.5 -3.7**
ILB *e*PKKPdf **PKKPbc** **03 38 59.8 -3.1**
IL1 Eielson Array 94.91 13 *e*P **P** **03 22 04.2 -0.9**
N23A Red Feather La 94.99 46 P **P** **03 22 07.1 +0.6**
baz=238
N23A Red Feather La 94.99 46 *e*P **P** **03 22 07.5 +1.0**
comp=Z,4.6nm,0.9s
N23A epP **pP** **03 22 52.6 -0.6**
ABTX Abilene, Hawle 95.16 56 P **P** **03 22 08.1 +1.0**
baz=241
RLMT Red Lodge 95.24 41 P **P** **03 22 08.5 +1.1**
baz=236
K22A Casper 95.56 45 P **P** **03 22 09.6 +0.8**
baz=238
BILL Bilibino 95.86 354 *i* P **P** **03 22 08.5 -0.9**
BILL *i* *PP **pP** **03 22 53.9 -2.3**
BILL *i* 03 25 59.7
BILL pmax pmax
comp=Z,4.0nm,1.2s
DAWY Dawson 95.95 16 *e*P **P** **03 22 10.7 +0.7**
comp=Z,5.3nm,0.9s
EGAK Eagle 96.13 15 *e*P **P** **03 22 11.3 +0.6**
comp=Z,7.7nm,0.9s
MNMC Minye Minye 96.45 115 *e*P **P** **03 22 15.8 +2.1**
comp=Z,31nm,1.5s
COLD Coldfoot 96.54 10 *e*P **P** **03 22 15.3 +2.8**
comp=Z,3.7nm,0.9s
HKT Hockley 96.77 60 *i* P **P** **03 22 15.1 +0.8**
HKT pmax pmax
comp=Z,5.0nm,1.0s
LZH Lanzhou 97.12 307 *e*P Pdif 03 22 18.0 +1.9
LZH pP pP 03 23 04.6 +1.7
LZH sP sP 03 23 23.0 +0.5
LZH *e*PP PP 03 26 23.1 +8.0
LZH pmax pmax
comp=Z,21nm,1.2s
LZH pmax pmax
comp=Z,140nm,6.0s
LZH LR LR
comp=Z,250nm,18.5s
LZH LR LR
comp=Z,260nm,18.4s
LZH LR LR
comp=Z,310nm,19.7s
RSSD Black Hills 97.87 44 Pdiff Pdif 03 22 20.1 +0.8
baz=240
RSSD Black Hills 97.87 44 *e*P Pdif 03 22 20.1 +0.7
comp=Z,7.2nm,1.0s
RSSD *e*pP pP 03 23 04.4 -1.8
RSSD Black Hills 97.87 44 *e*P Pdif 03 22 20.1 +0.7
RSSD *e**PP pP 03 23 04.4 -1.8
RSSD pmax pmax
comp=Z,7.0nm,1.0s
LPAZ La Paz 99.13 114 P **Pdif** **03 22 28.2 +2.0**
comp=Z,4.1nm,0.9s,baz=284,slow=1.1,SNR=7.7
LPAZ La Paz 99.13 114 *e*Pdif **Pdif** **03 22 29.1 +2.9**
comp=Z,5.8nm,1.0s
SONA0 Songino Array 101.06 318 *e*PKKPbc PKKPbc 03 38 45.6 +0.4
SONM Songino Array 101.06 318 PP PP 03 26 40.3 -4.4
comp=Z,1.2nm,0.9s,baz=132,slow=4.3,SNR=3.7
SONM PKKPbc **PKKPbc** **03 38 45.6 +0.4**
comp=Z,2.5nm,0.8s,baz=262,slow=2.7,SNR=12
YKA Yellowknife Ar 102.59 25 P **Pdif** **03 22 39.7 +0.2**
comp=Z,0.6nm,0.8s,baz=227,slow=3.7,SNR=4.3
YKA PP **PP** **03 26 52.6 -3.0**
comp=Z,0.9nm,0.9s,baz=243,slow=6.8,SNR=2.9
YKA PKKPbc **PKKPbc** **03 38 37.6 -3.4**
comp=Z,1.3nm,0.8s,baz=38,slow=3.2,SNR=6.0
YKB5 Yellowknife Ar 102.59 25 *e*Pdif **Pdif** **03 22 39.7 +0.2**
YKB5 *e*PP **PP** **03 26 52.6 -3.0**
YKB5 *e*PKKPbc **PKKPbc** **03 38 37.6 -3.4**
TLY Talaya 104.41 321 *e*P **Pdif** **03 22 49.6 +1.6**
TLY pmax pmax
comp=Z,11nm,0.9s
BLA Blacksburg 111.42 58 PKiKP **PKiKP** **03 27 16.1 -0.8**
baz=251
WMQ Urumqi 111.54 309 *e*PKP **PKiKP** **03 27 15.9 -1.0**
WMQ LR LR
comp=Z,120nm,25.9s
WMQ LR LR
comp=Z,56nm,25.9s
N54A Moraine State 112.89 55 PKiKP **PKiKP** **03 27 18.9 -0.6**
baz=253
ERPA Erie 113.22 53 PKiKP **PKiKP** **03 27 19.1 -0.9**
baz=254
M54A Oil Creek Stat 113.28 54 PKiKP **PKiKP** **03 27 19.7 -0.6**
baz=254
SSPA Standing Stone 114.33 55 PKiKP PKPdf 03 27 22.0 -0.2
baz=254
ZAA1 Zalesovo Array 115.92 319 *e*PKPdf **PKPdf** **03 27 23.6 -1.3**
ZAA1 *ep*PKPdf **pPKiKP** **03 28 12.0 -1.8**

ZALV Zalesovo Beam 115.92 319 PKP **PKPdf 03 27 23.6 -1.3**
comp=Z,2.8nm,0.7s,baz=176,slow=1.2,SNR=9.5
ZALV pPKP **pPKiKP 03 28 12.0 -1.8**
comp=Z,0.9nm,0.4s,baz=132,slow=2.1,SNR=2.4
ZALV Zalesovo Beam 115.92 319 *e*PKPdf **PKPdf 03 27 23.4 -1.5**
MK01 Makanchi Array 115.99 311 *e*PKPdf **PKPdf 03 27 24.1 -1.1**
MK31 Makanchi Array 116.00 311 *e*PKPdf **PKPdf 03 27 24.5 -0.8**
MK31 Makanchi Array 116.00 311 *e*PKIKP **PKPdf 03 27 24.5 -0.8**
MK32 Makanchi Array 116.00 311 *e*PKPdf **PKPdf 03 27 24.1 -1.2**
MK32 *ep*PKPdf **pPKiKP 03 28 12.4 -1.8**
MK32 *e*PKKPbc **PKKPbc 03 37 58.0 +0.6**
MKAR Makanchi Array 116.00 311 PKP **PKPdf 03 27 24.1 -1.2**
comp=Z,5.6nm,0.8s,baz=74,slow=2.7,SNR=32
MKAR pPKP **pPKiKP 03 28 12.4 -1.8**
comp=Z,2.1nm,0.9s,baz=105,slow=0.8,SNR=3.1
MKAR PKKPbc **PKKPbc 03 37 58.0 +0.6**
comp=Z,2.3nm,0.7s,baz=279,slow=3.9,SNR=16
MKAR Makanchi Array 116.00 311 *e*PKPdf **PKPdf 03 27 24.5 -0.8**
MKAR Makanchi Array 116.00 311 *e*PKIKP **PKPdf 03 27 24.5 -0.8**
MAKZ Makanchi 116.21 311 *e*PKPdf **PKPdf 03 27 24.8 -0.9**
MAKZ Makanchi 116.21 311 *e*PKIKP **PKPdf 03 27 24.8 -0.9**
PAL Palisades 117.34 56 PKiKP **PKPdf 03 27 27.2 -0.8**
baz=256
LONY Lake Ozonia 117.66 52 PKiKP **PKPdf 03 27 27.8 -0.8**
baz=258
KSH Kashi 118.89 302 PKP **PKPdf 03 27 32.1 +0.8**
KSH sPKP 03 28 33.8
KSH PP **PP 03 28 59.9 +6.6**
KSH SKS **SKSdf 03 34 28.0 +2.4**
KSH AMB AMB
comp=Z,180nm,4.7s
KSH LR LR
comp=Z,210nm,6.3s
KSH LR LR
comp=Z,220nm,4.9s
KSH LR LR
comp=Z,410nm,5.3s
KURK Kurchatov 119.11 315 *e*PKPdf **PKPdf 03 27 30.2 -0.9**
KURK *e*PKPdf **PKiKP 03 27 30.4 -0.8**
KURK Kurchatov 119.11 315*c i*PKIKP **PKPdf 03 27 30.3 -0.9**
KURK pmax pmax
comp=Z,16nm,1.0s
KURBB Kurchatov Arra 119.16 315 PKP **PKPdf 03 27 30.2 -1.0**
comp=Z,7.5nm,0.8s,baz=106,slow=1.7,SNR=64
NRN Naryn 119.28 304 *e*PKPdf **PKPdf 03 27 32.4 +0.2**
NRN Naryn 119.28 304 *e*PKIKP **PKPdf 03 27 32.4 +0.2**
HRV Adam Dziewonsk 119.38 55 PKiKP **PKPdf 03 27 31.3 -0.6**
baz=259
LBNH Lisbon 119.45 53 PKiKP **PKiKP 03 27 32.4 +0.3**
baz=259
BOSA Boshof 120.15 203 PKP **PKPdf 03 27 34.3 +0.1**
comp=Z,11nm,1.1s,baz=165,slow=3.7,SNR=7.8
KBL Kabul 123.22 295 *e*PKPdf **PKPdf 03 27 40.3 +0.5**
LBTB Lobatse 123.29 205 *e*PKPdf **PKPdf 03 27 41.1 +0.8**
KK31 Karatay Array 123.57 305 *e*PKPdf **PKPdf 03 27 39.7 -0.3**
KK31 Karatay Array 123.57 305 *e*PKIKP **PKPdf 03 27 39.7 -0.3**
KKAR Karatay Array 123.57 305 *e*PKPdf **PKPdf 03 27 39.7 -0.3**
KKAR Karatay Array 123.57 305 *e*PKIKP **PKPdf 03 27 39.7 -0.3**
BVA0 Borovoye Array 124.39 317 *i* PKIKP **PKPdf 03 27 40.5 -0.7**
BVA0 pmax pmax
comp=Z,16nm,1.0s
BVAR Borovoye Array 124.39 317 PKP **PKPdf 03 27 40.7 -0.5**
comp=Z,12nm,0.8s,baz=105,slow=1.5,SNR=40
BRVK Borovoye 124.45 317 *e*PKPdf **PKPdf 03 27 41.1 -0.2**
BRVK Borovoye 124.45 317*c i*PKIKP **PKPdf 03 27 41.4 +0.1**
BRVK pmax pmax
comp=Z,14nm,1.0s
SPA0 Spitsbergen Ar 128.70 356 *e*PKPdf **PKPdf 03 27 48.5 -0.3**
SPA0 *ep*PKPdf **pPKPdf 03 28 37.9 +0.2**
SPITS Spitsbergen Ar 128.70 356 PKP **PKPdf 03 27 48.5 -0.3**
comp=Z,16nm,1.0s,baz=4.3,slow=5.8,SNR=5.9
SPITS pPKP **pPKPdf 03 28 37.9 +0.2**
comp=Z,20nm,1.0s,baz=36,slow=6.1,SNR=3.7
SUMG Summit 129.71 15 *e*PKPdf **PKPdf 03 27 52.9 +1.6**
LSZ Lusaka 130.73 214 *e*PKPdf **PKPdf 03 27 55.5 +0.9**
ARU Arti 130.88 322 *e*PKPdf **PKPdf 03 27 52.9 -0.6**
ARU Arti 130.88 322 *i* PKIKP **PKPdf 03 27 53.5 0.0**
ARU 03 30 10.1
AB31 Akbulak array 131.09 313 *i* PKIKP **PKPdf 03 27 53.5 -0.6**
AB31 pmax pmax
comp=Z,3.0nm,0.9s
ABKAR Akbulak array 131.09 313 *e*PKPdf **PKPdf 03 27 53.8 -0.3**
TSUM Tsumeb 131.40 199 *e*PKPdf **PKPdf 03 27 56.5 +0.6**
UOSS Minazif 131.87 280 *e*PKPdf **PKPdf 03 27 55.9 -0.4**
AKTO Aktyubinsk 132.21 314 PKP **PKPdf 03 27 56.4 +0.2**
comp=Z,7.2nm,0.9s,baz=52,slow=1.4,SNR=18
AKTO SKPbc **SKPbc 03 31 04.7 -0.4**
comp=Z,10nm,1.1s,baz=110,slow=7.0,SNR=17
PRGR Permogore 135.28 332 *e*PKIKP **PKPdf 03 28 00.4 -1.2**
PRGR pmax pmax
comp=Z,9.0nm,1.0s
ARA0 ARCESS Array S 135.68 349 *e*PKPdf **PKPdf 03 28 01.4 -0.7**
ARA0 *ep*PKPdf **pPKPdf 03 28 51.2 +0.1**
ARA0 *e*SKPbc **SKPbc 03 31 16.3 +0.4**
ARCES ARCESS Array B 135.68 349 PKP **PKPdf 03 28 01.4 -0.7**
comp=Z,7.2nm,0.7s,baz=46,slow=3.5,SNR=12
ARCES pPKP **pPKPdf 03 28 51.2 +0.1**
comp=Z,14nm,0.9s,baz=5.2,slow=2.0,SNR=7.1
ARCES SKPbc **SKPbc 03 31 16.3 +0.4**
comp=Z,17nm,0.9s,baz=23,slow=2.9,SNR=14
ARCES ARCESS Array B 135.68 349 *e*PKPdf **PKPdf 03 28 01.9 -0.3**
ARCES ARCESS Array B 135.68 349 *e*PKIKP **PKPdf 03 28 01.9 -0.3**
ARE0 ARCESS Array S 135.68 349 *e*PKPdf **PKPdf 03 28 01.9 -0.3**
KLMR Klimovskoe 138.19 334 *e*PKIKP **PKPdf 03 28 03.8 -3.2**
KLMR pmax pmax
comp=Z,15nm,1.0s
KLMR Klimovskoe 138.19 334 *e*PKPdf **PKPdf 03 28 03.9 -3.1**
KLMR AMP 03 28 08.4
comp=Z,15nm,1.0s
KLMR *ep*PKPdf **pPKPdf 03 28 59.2 +3.3**
KLMR *e*SKP 03 31 21.5
H10S3 ASCENSION HYDR 140.34 153 T T 06 05 41.0
baz=206,slow=74,SNR=3.8
H10S2 ASCENSION HYDR 140.34 153 T T 06 05 40.7
baz=206,slow=74,SNR=4.1
H10S1 ASCENSION HYDR 140.35 153 T T 06 05 43.3
baz=206,slow=74,SNR=4.9
AKT Akhty 140.41 303 *i* PKIKP **PKPdf 03 28 14.0 +2.2**
AKT *e* 03 31 11.1
AKT pmax pmax
comp=Z,17nm,0.9s
RAYN Ar Rayn 140.94 274 *e*PKPpre PKPpre 03 28 07.8
H10N3 ASCENSION HYDR 141.41 153 T T 06 07 07.5
baz=205,slow=75,SNR=11
H10N1 ASCENSION HYDR 141.41 153 T T 06 07 09.9
baz=205,slow=75,SNR=2.7
H10N2 ASCENSION HYDR 141.43 153 T T 06 07 08.8
baz=205,slow=75,SNR=3.2
GROC Groznyy 141.59 306 *e*PKIKP **PKPdf 03 28 13.5 -0.2**
GROC *e* 03 29 02.6
GROC *e* 03 29 21.2
GROC *e* 03 31 19.2
GROC *e* 03 35 05.3
GROC pmax pmax
comp=Z,11nm,0.5s
FIA1 FINESS Array S 142.37 341 *e*PKPpre PKPpre 03 28 09.9
FIA0 FINESS Array S 142.37 341 *e*PKPpre PKPpre 03 28 09.9
FIA0 *e*PKPdf **PKiKP 03 28 16.1 -1.5**
FIA0 FINESS Array S 142.37 341 *e*PKHKP PKPpre 03 28 09.9
FIA0 *e* 03 28 16.1
FINES FINESS Array B 142.37 341 PKhKP PKPpre 03 28 09.9
comp=Z,3.6nm,0.6s,baz=51,slow=3.7,SNR=15
FINES PKP **PKiKP 03 28 16.1 -1.5**
comp=Z,6.2nm,0.6s,baz=45,slow=2.6,SNR=15
TBLG Delisi 142.60 304 *e*PKPpre **PKPdf 03 28 13.0 -2.6**
TBLG Delisi 142.60 304 *e*PKIKP **PKPdf 03 28 13.0 -2.6**
OBN Obninsk 142.79 328 *e*PKIKP **PKPdf 03 28 15.7 +0.3**
OBN *e* 03 31 26.5
OBN *e* 03 35 04.1
OBN *e*SS SS 03 49 48.8 +0.8
NCK Nalchik 143.11 307 *e*PKHKP PKPpre 03 28 12.1
NCK *i* 03 28 16.2
VSR Storozhevoye 143.41 321 *e*PKIKP PKPbc 03 28 15.3 +0.8
VSR pmax pmax
comp=Z,20nm,1.3s
KBZ Khabaz 143.56 307 PKhKP PKPpre 03 28 14.8
comp=Z,7.2nm,0.9s,baz=139,slow=2.1,SNR=19
KIV Kislovodsk 143.65 308 *e*PKPpre PKPpre 03 28 15.2
KIV Kislovodsk 143.65 308 *i* PKHKP PKPpre 03 28 13.9
KIV pmax pmax
comp=Z,21nm,1.1s
NEY Neytrino 143.79 307 *i* PKIKP **PKPdf 03 28 17.4 -0.5**
VSU Vasula 144.54 338 *i* PKIKP **PKPab 03 28 16.0 -1.4**
NC303 NORSAR Array S 145.59 352 *e*PKPdf **PKPdf 03 28 20.1 -0.1**
NC405 NORSAR Array S 145.66 352 *e*PKPdf **PKPdf 03 28 20.1 -0.2**
NB201 NORSAR Array S 145.77 352 *e*PKPdf **PKPdf 03 28 19.6 -1.0**
NB2 NORSAR Subarra 145.79 352 PKP **PKPdf 03 28 20.4 -0.2**
comp=Z,12nm,1.1s,baz=17,slow=2.6
NB2 NORSAR Subarra 145.79 352 PKP pPKPdf 03 29 07.1 -2.5
comp=Z,59nm,1.0s,baz=12,slow=2.5
SOC Sochi 145.83 308 *e*PKP2 **PKPdf 03 28 21.5 +0.4**
SOC *e* 03 31 46.2
SOC *e*PPP PPP 03 35 07.4
SOC pmax pmax
comp=Z,36nm,0.8s
SOC pmax pmax
comp=Z,16nm,0.7s
NBO00 NORSAR Array S 145.85 353 *e*PKPdf **PKPdf 03 28 20.6 -0.1**
NAO01 NORSAR Array S 146.02 352 *e*PKPdf **PKPdf 03 28 21.0 +0.1**
HFS Hagfors 146.32 350 PKPbc **PKPbc 03 28 22.3 -0.7**
comp=Z,18nm,0.7s,baz=45,slow=2.2,SNR=32
HFS pPKPbc pPKPbc 03 29 11.2 0.0
comp=Z,19nm,0.6s,baz=45,slow=2.4,SNR=6.9
ANN Anapa 147.02 311*c i*PKP2 **PKPbc 03 28 24.9 -0.5**
ANN pmax pmax
comp=Z,82nm,0.9s
MNK Minsk 147.06 332 *e*PKP2 **PKPbc 03 28 25.0 -0.2**
KONO Kongsberg 147.33 353*c i*PKP2 **PKPbc 03 28 25.2 -0.6**
KONO pmax pmax
comp=Z,53nm,2.5s
AKASG Malin Array Be 148.99 326 PKP **PKPdf 03 28 25.4 -0.7**
comp=Z,18nm,0.6s,baz=42,slow=3.3,SNR=9.5
AKASG PKPbc **PKPbc 03 28 29.6 -0.7**
comp=Z,18nm,0.6s,baz=42,slow=3.3,SNR=30
AKASG pPKPbc **pPKPbc 03 29 19.4 +0.5**
comp=Z,23nm,0.9s,baz=42,slow=3.0,SNR=5.8
AKBB Malin Array Si 148.99 326 *e*PKPdf **PKPdf 03 28 25.6 -0.5**
AKBB *ep*PKPab **pPKPbc 03 29 19.4 +0.5**
KIEV Kiev 149.00 326 *e*PKPdf **PKPdf 03 28 25.6 -0.5**
KIEV Kiev 149.00 326 *i* PKHKP PKPpre 03 28 24.0
AK11 Malin Array Si 149.03 326 *e*PKPdf **PKPdf 03 28 25.6 -0.6**
SIM Simferopol' 149.15 313 *e*PKP2 **PKPbc 03 28 31.4 +0.4**
SIM pmax pmax
comp=Z,37nm,0.7s
SUW Suwalki 149.26 336 *e*PKPdf **PKPdf 03 28 27.4 +1.0**
SUW *e*PKPab **pPKPbc 03 29 18.4 -1.1**
SUW Suwalki 149.26 336 *e*PKPbc **PKPbc 03 28 30.2 -0.7**
SUW Suwalki 149.26 336 *e*PKHKP PKPpre 03 28 27.4
ASF Jabal al Asfar 149.67 288 PKPbc **PKPbc 03 28 33.9 +1.1**
comp=Z,22nm,0.8s,baz=10,slow=1.0,SNR=32
ASF pPKPbc **pPKPbc 03 29 21.0 -0.4**
comp=Z,18nm,1.0s,baz=75,slow=1.8,SNR=3.2
MUD Monsted U'grnd 150.51 352 *i* PKIKP **PKPbc 03 28 34.1 +0.3**
MUD pmax pmax
comp=Z,40nm,1.0s
ILGA Ilgaz 150.82 306 *e*PKPbc **PKPbc 03 28 36.0 +0.6**
MMAI Mount Meron Ar 150.91 289 PKPbc **PKPbc 03 28 36.2 +0.5**
comp=Z,49nm,0.6s,baz=72,slow=4.7,SNR=86
MMAI pPKPbc **pPKPbc 03 29 23.6 -0.8**
comp=Z,49nm,0.9s,baz=79,slow=3.1,SNR=4.6
SORM Soroca 151.00 323 ⇓PKIKP **PKPbc 03 28 35.2 -0.1**
BR101 Keskin Array S 151.26 303 *e*PKPbc **PKPbc 03 28 35.9 -0.6**
BR101 *ep*PKPdf **pPKPbc 03 29 23.1 -2.0**
BR131 Keskin Array S 151.26 303 *e*PKPdf **PKPdf 03 28 29.9 -0.3**
BRTR Keskin Array B 151.26 303 PKPbc **PKPbc 03 28 35.9 -0.6**
comp=Z,11nm,0.8s,baz=66,slow=1.5,SNR=8.8
BRTR pPKPbc **pPKPbc 03 29 23.1 -2.0**
comp=Z,4.8nm,0.8s,baz=91,slow=4.0,SNR=2.4
KIS Kishinev 151.40 320 *e*PKIKP **PKPbc 03 28 35.0 -1.3**
KIS *e* 03 29 23.0
KIS *e* 03 29 39.0
EKA Eskdalemuir Ar 151.77 7 PKPbc **PKPbc 03 28 36.5 -0.4**
comp=Z,3.5nm,0.6s,baz=334,slow=1.7,SNR=16
EKA pPKPbc **pPKPbc 03 29 24.6 -1.0**
comp=Z,2.8nm,0.5s,baz=338,slow=2.0,SNR=3.9
GKP Gorka Klasztor 151.84 341 *e*PKP **PKPbc 03 28 36.9 -0.1**
GKP Gorka Klasztor 151.84 341 *e*PKIKP **PKPbc 03 28 36.9 -0.1**
ANTO Ankara 151.85 304 *e*PKPdf **PKPdf 03 28 30.6 -0.4**
ANTO *e*PKPbc **PKPbc 03 28 37.8 +0.1**
ANTO Ankara 151.85 304 *e*PKIKP **PKPdf 03 28 30.6 -0.4**
BEL Belsk 151.87 335 *e*PKPdf **PKPbc 03 28 37.8 +0.6**
BEL *e*PKPab **pPKPbc 03 29 26.6 +0.7**
BEL Belsk 151.87 335 *e*PKIKP **PKPbc 03 28 37.8 +0.6**
BR231 Keskin MP Arra 151.87 304 *e*PKPbc **PKPbc 03 28 38.1 +0.4**
LVV L'vov 152.06 329 *e*PKIKP **PKPbc 03 28 38.3 +0.6**
TLCR 152.38 317 ⇓PKIKP **PKPbc 03 28 39.1 +0.6**
CSS Mathiatis 152.46 294 *e*PKPbc **PKPbc 03 28 39.1 0.0**
KWP Kalwaria Pacla 152.79 330 *e*PKP **PKPbc 03 28 39.6 +0.3**
KWP Kalwaria Pacla 152.79 330 *e*PKPdf **PKPdf 03 28 32.1 +0.1**
KWP Kalwaria Pacla 152.79 330 *e*PKIKP **PKPdf 03 28 32.1 +0.1**
CFR Carcaliu 152.79 318 ⇓PKIKP **PKPbc 03 28 39.7 +0.3**
BUR08 Bucovina Ar. S 152.97 325 *e*PKPbc **PKPbc 03 28 39.9 0.0**
BUR04 Bucovina Ar. S 152.98 325 *e*PKPdf **PKPdf 03 28 32.2 -0.3**
BURAR Bucovina Array 152.98 325 ⇓PKIKP **PKPdf 03 28 35.6 +3.1**
TLB Topalu 153.16 317 ⇑PKIKP **PKPbc 03 28 40.8 +0.6**
VRI Vrincioaia 153.23 320 ⇓PKIKP **PKPbc 03 28 40.2 -0.2**
PLOR Plostina 153.29 320 ⇓PKIKP **PKPbc 03 28 40.1 -0.5**
OJC Ojcow 153.54 334 *e*PKP **PKPdf 03 28 32.3 -0.8**
OJC Ojcow 153.54 334 *e*PKPdf **PKPdf 03 28 33.1 0.0**
OJC *e*PKPbc **PKiKP 03 28 41.2 +0.2**
OJC Ojcow 153.54 334 *e*PKIKP **PKPdf 03 28 33.1 0.0**
UZH Uzhgorod 153.70 329 *e*PKIKP **PKPdf 03 28 30.7 -2.6**
UZH *e* 03 26 37.3
UZH *i* 03 29 23.1
CRVS Cervenica-Dubn 153.88 331 *e*PKIKP **PKPdf 03 28 34.9 +1.3**
CRVS Cervenica-Dubn 153.88 331 *e*PKP **PKPdf 03 28 34.9 +1.3**
MLR Muntele Rosu 153.90 320 *e*PKPdf **PKPdf 03 28 34.0 +0.1**
MLR *e*PKPbc **PKPbc 03 28 41.9 -0.2**
MLR Muntele Rosu 153.90 320 *e*PKIKP **PKPdf 03 28 34.0 +0.1**
NIE Niedzica 153.97 333 *e*PKP **PKPdf 03 28 34.0 +0.2**
NIE Niedzica 153.97 333 *e*PKIKP **PKPdf 03 28 34.0 +0.2**
KSP Ksiaz 154.24 339 *e*PKP **PKPdf 03 28 34.0 -0.1**
KSP Ksiaz 154.24 339 *e*PKIKP **PKPdf 03 28 34.0 -0.1**
VOIR 154.44 321 ⇑PKIKP **PKPbc 03 28 41.1 -2.0**
LANS Liptovska Anna 154.52 333 *e*PKIKP **PKPdf 03 28 34.6 0.0**
LANS Liptovska Anna 154.52 333 *e*PKP **PKPdf 03 28 34.6 0.0**
LANS *e* 03 28 43.8
UPC Upice 154.62 339 *e*PKPDF **PKPdf 03 28 35.1 +0.5**
UPC ⇑*e*PKP **PKiKP 03 28 43.4 +0.1**
UPC Upice 154.62 339 *e*PKIKP **PKPdf 03 28 35.1 +0.5**
DPC Dobruska-Polom 154.66 339 *e*PKPDF **PKPdf 03 28 35.0 +0.3**
DPC ⇑*e*PKP **PKiKP 03 28 44.1 +0.7**
DPC Dobruska-Polom 154.66 339 *e*PKIKP **PKPdf 03 28 35.0 +0.3**
MORC Moravsky Berou 154.74 336 *e*PKPdf **PKPdf 03 28 34.6 -0.2**
MORC Moravsky Berou 154.74 336 ⇓PKIKP **PKPdf 03 28 35.1 +0.3**
MORC Moravsky Berou 154.74 336 *e*PKP **PKPdf 03 28 34.3 -0.5**
MORC *e* 03 28 43.6
CLL Collm 154.74 344 *e*PKPdf **PKPdf 03 28 34.0 -0.7**
comp=Z,8.0nm,1.1s
CLL ⇑*i*PKPbc **PKiKP 03 28 43.5 +0.1**
comp=Z,16nm,0.8s
CLL *e*PKPab **PKPab 03 28 58.0 -1.2**
CLL *ep*PKPbc **pPKPbc 03 29 32.0 -0.2**
comp=Z,20nm,0.9s
CLL *ep*PKPab **pPKPab 03 29 45.0 -1.3**
CLL *es*PKPab **sPKPab 03 30 05.0 -0.8**
CLL *ep*PP 03 33 30.0
CLL *e*PPP PPP 03 36 06.0
CLL *e*SKKSac SKKSac 03 39 04.0 -2.6
CLL *e*SKSP 03 42 38.0
CLL *e*PSKS 03 42 57.0
CLL *e*SPP SPP 03 45 30.0
CLL *e* 03 47 30.0
CLL *e*PSS PSS 03 53 06.0
CLL *e*SSS SSS 03 58 00.0
CLL Collm 154.74 344 *e*PKPdf **PKPdf 03 28 34.3 -0.4**
CLL Collm 154.74 344⇑*e*PKIKP **PKPdf 03 28 34.0 -0.7**
CLL *e* 03 28 58.0
CLL pmax pmax
comp=Z,8.0nm,1.1s
CLL pmax pmax
comp=Z,16nm,0.8s
DRGR 154.81 326 ⇑PKIKP **PKPdf 03 28 35.0 -0.1**
BRG Berggiesshubel 154.90 342 *e*PKP **PKPdf 03 28 35.0 0.0**
comp=Z,17nm,1.2s
BRG Berggiesshubel 154.90 342 *i* PKP **PKPbc 03 28 44.1 +0.3**
comp=Z,11nm,0.9s
BRG Berggiesshubel 154.90 342 *e*PKP **PKPab 03 29 03.8 +3.9**
comp=Z,6.7nm,1.1s
BRG *ep*PKP **pPKPbc 03 29 32.8 +0.2**
comp=Z,15nm,1.1s
BRG Berggiesshubel 154.90 342 *e*PKIKP **PKPdf 03 28 35.0 0.0**
BRG pmax pmax
comp=Z,17nm,1.2s
BRG pmax pmax
comp=Z,11nm,0.9s
BRG pmax pmax
comp=Z,7.0nm,1.1s
BRG pmax pmax
comp=Z,15nm,1.1s
VYHS Vyhne 155.29 333 *e*PKP2 **PKPab 03 29 01.7 0.0**
VYHS Vyhne 155.29 333 *e*PKP **PKPab 03 29 01.7 0.0**
JAVC Velka Javorina 155.45 335 *e*PKP **PKPdf 03 28 36.2 +0.3**
VRAC Vranov 155.47 337 *e*PKP **PKPdf 03 28 35.1 -0.7**
PRU Pruhonice 155.53 341⇑*e*PKP PKPdf 03 28 45.7 +10
KRUC Moravsky 155.74 337 *e*PKP **PKPdf 03 28 35.6 -0.6**
NKC Novy Kostel 155.87 344 *ep*PKP pPKPab 03 29 49.7 -1.5
KHC Kasperske Hory 156.58 341⇑*e*PKP PKPdf 03 28 47.6 +10
KHC *e*PKPAB pPKPab 03 29 54.6 +0.3
KHC *e*SKKS 03 42 46.8
KHC Kasperske Hory 156.58 341 *e*PKPdf **PKPdf 03 28 35.9 -1.4**
KHC Kasperske Hory 156.58 341 *e*PKIKP **PKPdf 03 28 35.9 -1.4**
GEC2 GERESS Array S 156.80 341 *e*PKPdf **PKPdf 03 28 37.9 +0.2**
GEC2 *e*PKPab **PKPab 03 29 06.8 -1.4**
GEC2 GERESS Array S 156.80 341 *e*PKIKP **PKPdf 03 28 37.9 +0.2**
GERES GERESS Array B 156.80 341 PKP **PKPdf 03 28 37.2 -0.5**
comp=Z,1.3nm,0.9s,baz=88,slow=3.3,SNR=10
GERES PKPab **PKPab 03 29 06.8 -1.4**
comp=Z,1.1nm,0.7s,baz=17,slow=4.1,SNR=3.6
GEA0 GERESS Array S 156.81 341 *e*PKPdf **PKPdf 03 28 36.8 -0.8**
CONA Conrad Observa 156.89 336 *e*PKPdf **PKPdf 03 28 37.7 -0.2**
comp=Z,6.9nm,1.6s
CONA pPKPab **pPKPab 03 29 55.8 +0.1**
comp=Z,11nm,1.0s
VTS Vitosha 157.19 317 *e*PKPab **PKPab 03 29 11.1 +0.8**
VTS Vitosha 157.19 317 ⇓PKP2 **PKPab 03 29 11.0 +0.8**
MOA Molln 157.51 339 *e*PKPdf **PKPdf 03 28 38.5 0.0**
comp=Z,5.2nm,1.8s
MOA *ep*PKPab **pPKPab 03 29 58.2 -0.1**
comp=Z,15nm,1.3s
ARSA Arzberg 157.59 336 pPKPab pPKPab 03 29 57.3 -1.3
comp=Z,6.4nm,1.1s
LIC Lamto 157.86 160 *e*PKIKP **PKPdf 03 28 40.1 +0.2**
comp=Z,89nm,1.1s
DIVS Divibare 158.05 324 *e*PKPdf **PKPdf 03 28 38.6 -0.7**
KIC Kosan Boka 158.07 161 *e*PKIKP **PKPdf 03 28 40.3 +0.1**
comp=Z,91nm,1.2s
SOKA Soboth 158.25 336 PKPdf **PKPdf 03 28 39.1 -0.5**
comp=Z,7.6nm,1.2s
SOKA *ep*PKPab **pPKPab 03 30 01.4 -0.2**
comp=Z,13nm,1.3s
TIC Toumodi 158.26 160 *e*PKIKP **PKPdf 03 28 40.7 +0.2**
PERS Pernice 158.26 336 *i* PKPdf pPKPab 03 30 00.4 -1.2
DBIC Dimbokro 158.33 160 PKP **PKPdf 03 28 40.5 0.0**
comp=Z,18nm,1.0s,baz=198,slow=3.8,SNR=9.3
DBIC PKPab **pPKPab 03 29 16.9 +1.4**
comp=Z,22nm,0.8s,baz=172,slow=6.9,SNR=10
DBIC Dimbokro 158.33 160 *e*PKPdf **PKPdf 03 28 41.4 +0.9**
DBIC *e*PKPab **PKPab 03 29 17.0 +1.4**
KBA Koelnbreinsper 158.48 339 *e*PKPdf **PKPdf 03 28 40.1 +0.2**
comp=Z,3.9nm,1.1s
KBA *ep*PKPab **pPKPab 03 30 00.4 -2.3**
comp=Z,6.0nm,1.2s
OBKA Obir 158.57 336 *e*PKPdf **PKPdf 03 28 39.7 -0.2**
comp=Z,2.1nm,0.7s
OBKA *ep*PKPab **pPKPab 03 30 00.9 -2.1**
comp=Z,4.2nm,0.7s
WATA Walderalm 158.77 342 *i* pPKPab pPKPab 03 30 03.3 -0.6
comp=Z,5.6nm,0.8s
MYKA Terra Mystica 158.78 338 *ep*PKPab pPKPab 03 30 02.8 -1.1
comp=Z,7.8nm,1.1s
WTTA Wattenberg 158.82 342 *i* PKPdf **PKPdf 03 28 41.2 +0.9**
comp=Z,10nm,1.6s
WTTA *i* pPKPab **pPKPab 03 30 03.4 -0.7**
comp=Z,9.2nm,0.7s
RETA Reutte 158.84 344 *i* PKPdf **PKPdf 03 28 41.3 +1.1**
comp=Z,5.4nm,1.2s
RETA *i* pPKPab **pPKPab 03 30 03.1 -1.0**
comp=Z,4.0nm,0.7s
MOTA Moosalm 158.88 343 *e*PKPdf **PKPdf 03 28 40.5 +0.1**
comp=Z,5.1nm,0.9s
MOTA *ep*PKPab **pPKPab 03 30 02.7 -1.7**
comp=Z,14nm,1.1s
LIT Litokhoron 159.00 312 *e*PKPab **PKPab 03 29 18.3 +0.3**
ABTA Abfaltersbach 159.03 340 *e*PKPdf **PKPdf 03 28 39.8 -0.6**
comp=Z,5.3nm,0.9s
ABTA *ep*PKPab **pPKPab 03 30 03.8 -1.2**
comp=Z,16nm,1.1s
VISS Visnje 159.06 335 *e*PKPdf pPKPab 03 30 03.1 -1.9
BOJS Bojanci 159.16 334 *i* PKPdf pPKPab 03 30 03.6 -1.8
DAVA Damuels 159.23 345 *e*PKPdf **PKPdf 03 28 40.6 -0.2**
comp=Z,7.2nm,1.0s
JAVS Javornik 159.27 336 *e*PKPdf pPKPab 03 30 03.3 -2.8
FETA Feichten 159.28 344 *e*PKPdf **PKPdf 03 28 40.6 -0.2**
comp=Z,11nm,0.9s
DAVOX Davos/Dischmat 159.71 345 pPKPab pPKPab 03 30 06.9 -1.1
comp=Z,8.0nm,1.0s,baz=27,slow=9.0,SNR=3.9
TUE Stuetta 160.12 346 *e*PKPdf **PKPdf 03 28 41.1 -0.8**
ITM Ithomi 160.76 305 *e*PKPab **PKPab 03 29 25.6 -0.2**
BNI Bardonecchia 162.00 350 *e*PKPdf **PKPdf 03 28 44.3 +0.5**
BNI Bardonecchia 162.00 350 *e*PKIKP **PKPdf 03 28 44.3 +0.5**
TIP Timpagrande 163.14 318 *e*PKPdf **PKPdf 03 28 44.6 -0.5**
PCAB Cabril 163.37 28 *e*PKPdf **PKPdf 03 28 46.9 +1.8**
POLO Lamas de Olo 163.74 28 *e*PKPdf **PKPdf 03 28 46.8 +1.2**
POLO Lamas de Olo 163.74 28 *e*PKPab **PKPab 03 29 39.0 +0.3**
PBRG Braganca 163.80 25 *e*PKPdf **PKPdf 03 28 46.6 +1.1**
PBRG Braganca 163.80 25 *e*PKPab **PKPab 03 29 38.9 0.0**
MVO Moncorvo 164.23 27 *e*PKPdf **PKPdf 03 28 47.1 +1.1**
MVO Moncorvo 164.23 27 *e*PKPab **PKPab 03 29 41.3 +0.4**
PVIS Viseu 164.24 30 *e*PKPdf **PKPdf 03 28 44.1 -1.9**
PCAS Casmilo, Conde 164.49 33 *e*PKPdf **PKPdf 03 28 46.9 +0.7**
PCBR Castelo Branco 165.14 31 *e*PKPdf **PKPdf 03 28 47.7 +1.0**
ALMR Almeirim 165.14 35 *e*PKP **PKPdf 03 28 46.9 +0.1**
ALMR Almeirim 165.14 35 *e*PKPdf **PKPdf 03 28 47.9 +1.2**
PMTG Montargil 165.39 34 *e*PKPdf **PKPdf 03 28 46.5 -0.4**
PMRV Marv??o 165.51 31 *e*PKPdf **PKPdf 03 28 47.7 +0.6**
PMRV Marv??o 165.51 31 *e*PKPab **PKPab 03 29 46.8 +0.3**
TOA0 Torodi Ar. Sit 165.85 178 *e*PKPdf **PKPdf 03 28 47.7 -0.3**
TOA0 *e*PKPdf **PKPdf 03 28 48.2 +0.2**
TORD Torodi Ar. Bea 165.85 178 PKP **PKPdf 03 28 47.9 -0.1**
comp=Z,12nm,0.8s,baz=310,slow=0.8,SNR=53
TORD pPKP **pPKPdf 03 29 38.1 +0.9**
comp=Z,3.2nm,0.6s,baz=92,slow=0.3,SNR=4.7
TORD PKPab **PKPab 03 29 49.2 +0.9**
comp=Z,26nm,0.9s,baz=180,slow=3.3,SNR=27
TORD pPKPab **pPKPab 03 30 36.0 +0.7**
comp=Z,7.7nm,0.8s,baz=174,slow=3.6,SNR=2.9
TORD PP **PP 03 33 36.0 +1.5**
comp=Z,5.5nm,1.0s,baz=160,slow=5.4,SNR=5.3
TOA1 Torodi Ar. Sit 165.85 178 *e*PKPdf **PKPdf 03 28 47.9 -0.1**
TOA1 *ep*PKPdf **pPKPdf 03 29 38.1 +0.9**
TOA1 *e*PKPab **PKPab 03 29 49.2 +0.8**
TOA1 *ep*PKPab **pPKPab 03 30 36.0 +0.7**
TOA1 *e*PP **PP 03 33 36.0 +1.4**
PESTR Estremoz 165.86 33 *e*PKPdf **PKPdf 03 28 48.6 +1.2**
EVO Evora 165.90 35 *e*PKPdf **PKPdf 03 28 48.6 +1.2**
KOWA Kowa 165.91 154 *e*PKPdf **PKPdf 03 28 48.0 -0.1**
KOWA *e*PKPab **PKPab 03 29 50.3 +1.6**
PNCL Nicolau / Gran 165.94 38 *e*PKPdf **PKPdf 03 28 48.5 +1.1**
PTEO Sao Teotonio 166.24 40 *e*PKPdf **PKPdf 03 28 49.4 +1.7**
MESJ Messejana 166.31 38 *e*PKP **PKPdf 03 28 47.9 +0.2**
MESJ Messejana 166.31 38 *e*PKPab **PKPab 03 29 47.0 -3.0**
PBEJ Beja 166.36 36 *e*PKPdf **PKPdf 03 28 49.4 +1.6**
MORF Marmelete 166.44 40 *e*PKP **PKPdf 03 28 47.9 0.0**
MORF Marmelete 166.44 40 *e*PKPdf **PKPdf 03 28 49.1 +1.2**
PAB San Pablo 166.65 23 *e*PKPdf **PKPdf 03 28 49.3 +1.3**
PAB San Pablo 166.65 23 *e*PKIKP **PKPdf 03 28 49.3 +1.3**
ES19 SONSECA Array 166.66 21 *e*PKPdf **PKPdf 03 28 48.7 +0.7**
ES19 *e*PKPab **PKPab 03 29

MAN 25 03:11:34.4, 10°37N×125°12E, h5km, mb4.6, ML3.4, MS3.3, 3C, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**0.34**	**228**	*e*P	Pb	03 11 42.1	-0.9
MSLP				*e*S	Sg	03 11 46.8	+1.2
SCPH	**Surigao**	**0.69**	**148**	*e*P	Pb	03 11 48.4	-0.5
SCPH				*e*S	Sn	03 12 00.8	-1.1
PLP	**Palo**	**0.81**	**350**	*e*P	Pg	03 11 49.9	-0.1
PLP				*e*S	Sg	03 12 01.2	+0.8
LLP	**Lapu-Lapu**	**1.13**	**268**	*e*P	Pg	03 11 55.3	-0.9
LLP				*e*S	Sn	03 12 12.6	-0.3
BUKP	**Musuan**	**2.47**	**181**	*e*P	Pn	03 12 16.9	+1.4
BUKP				*e*S	Sb	03 12 50.7	+0.5
RCP	**Roxas**	**2.61**	**297**	*e*P	Pn	03 12 18.3	+0.9

ISCJB ***25*** *03:17:58.9±0.5, 32°.10S±0°.03×68°.53W±0°.06, h131km±4km, mb3.7/2, Error ellipse: s-maj=8.1km s-min=5.2km az=10.0*
IDC ***25*** *03:17:58.8±3.1, 32°.13S×68°.45W, h112km±28km, mb3.6/2, mb1 3.6/6, mb1mx3.3/42, mbtmp3.8/6, MS4.5/1, Ms1 4.5/1, ms1mx2.9/25, Error ellipse: s-maj=45.0km s-min=20.2km az=100.0*
SJA ***25*** *03:17:59.3±0.5, 32°.13S×68°.57W, h122km±3km, ML3.9, MW4.1*
GUC ***25*** *03:18:00.1±0.6, 32°.05S×68°.70W, h130km, ML3.6*

ISC 25 03:17:59.6±0.8, 32°.10S±0°.04×68°.51W±0°.06, h124km±6km, n27, σ0°69/39, 1C, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTCV	**Cerro Valdivia**	**0.24**	**354**	*i* P	Pn	03 18 16.9	0.0
ASAL	**Salagasta**	**0.56**	**209**	*i* P	Pn	03 18 18.2	-0.3
ASAL				*i* S	Sn	03 18 32.6	-0.1
RTLS	**Leoncito**	**0.73**	**294**	*i* P	Pn	03 18 20.4	+0.5
RTLS				*i* S	Sn	03 18 35.5	+0.2
RTLS				IAML		03 18 36.5	
	comp=Z,1μm,0.3s						
AUSP	**Uspallata**	**0.75**	**261**	*i* P	Pn	03 18 20.3	+0.3
AUSP				*i* S	Sn	03 18 35.9	+0.3
RTLL	**Cerro Villicun**	**0.77**	**2**	*i* P	Pn	03 18 20.2	+0.2
RTLL				*i* S	Sn	03 18 36.2	+0.9
ARCO	**CERRO ARCO**	**0.82**	**206**	*i* P	Pn	03 18 20.6	+0.1
ARCO				IAML		03 18 20.7	
	comp=Z,3μm,0.2s						
ARCO				*i* S	Sn	03 18 35.8	-0.5
AAGR	**Agrelo**	**1.02**	**195**	*i* P	Pn	03 18 22.3	+0.1
AVIZ	**Vizcacheras**	**1.37**	**180**	*i* P	Pn	03 18 26.0	+0.1
FCH	**Farellones**	**1.94**	**230**	*e*P	Pn	03 18 33.3	+0.6
FCH				*i* S	Sn	03 18 58.8	+0.7
FCH				IAML		03 19 04.3	
	comp=N,355nm,0.3s						
ACDV	**Cuesta del Vie**	**2.00**	**345**	*i* P	Pn	03 18 34.2	+0.8
AROD	**Rodeo**	**2.10**	**337**	*i* P	Pn	03 18 36.1	+1.3
PEL	**Peldehue**	**2.11**	**240**	*e*P	Pn	03 18 34.6	0.0
PEL				*i* S	Sn	03 19 01.1	-0.3
PEL				IAML		03 19 04.7	
	comp=N,425nm,0.4s						
CLCH	**Cerro Calan**	**2.14**	**232**	*e*P	Pn	03 18 35.4	+0.4
CLCH				*i* S	Sn	03 19 02.4	+0.1
CLCH				IAML		03 19 04.2	
	comp=N,810nm,0.6s						
LMEL	**Las Melosas**	**2.25**	**219**	*e*P	Pn	03 18 37.0	+0.5
LMEL				*i* S	Sn	03 19 05.5	+0.8
LMEL				IAML		03 19 13.4	
	comp=N,214nm,0.3s						
ROCH	**El Roble**	**2.28**	**247**	*e*P	Pn	03 18 36.6	-0.4
ROCH				*i* S	Sn	03 19 04.6	-1.0
GO04	**Tololo Observa**	**2.75**	**314**	*e*P	Pn	03 18 43.2	+0.2
GO04				*i* S	Sn	03 19 15.3	-1.0
TLL	**Tololo Astrono**	**2.75**	**314**	*e*P	Pn	03 18 43.7	+0.6
TLL				*i* S	Sn	03 19 15.6	-0.8
LCO	**Las Campanas**	**3.61**	**328**	*e*P	Pn	03 18 54.7	+0.3
LCO				*i* S	Sn	03 19 35.0	-1.6
PLCA	**Paso Flores**	**8.77**	**190**	P	Pn	03 20 01.7	-1.7
	comp=N,0.3nm,0.3s,baz=31,slow=12,SNR=4.5						
CPUP	**Villa Florida**	**11.33**	**62**	P	Pn	03 20 37.1	-0.8
	comp=N,0.1nm,0.3s,baz=233,slow=15,SNR=3.1						
LPAZ	**La Paz**	**15.75**	**1**	P	P	03 21 36.8	+0.2
	comp=N,0.5nm,0.3s,baz=185,slow=9.2,SNR=18						
SIV	**San Ignacio**	**17.41**	**25**	P	P	03 21 53.7	-0.7
	comp=N,0.1nm,0.3s,baz=215,slow=12,SNR=5.5						
CMIG	**Matias Romero**	**55.06**	**329**	LR	LR	03 46 12.1	
	comp=N,400nm,18.9s,baz=94,slow=31						
QSPA	**South Pole Qui**	**58.13**	**180**	P	P	03 27 40.5	+0.5
	comp=N,1.2nm,0.4s,baz=127,slow=8.0,SNR=5.5						
TXAR	**Lajitas Array**	**69.63**	**328**	P	P	03 28 56.1	+0.5
	comp=N,0.5nm,0.7s,baz=152,slow=8.2,SNR=3.9						
KURBB	**Kurchatov Arra**	**149.46**	**43**	PKPbc	PKPbc	03 37 33.8	+0.1
	comp=N,0.6nm,0.5s,baz=304,slow=3.0,SNR=6.3						
ZALV	**Zalesovo Beam**	**151.03**	**33**	PKPbc	PKPbc	03 37 37.5	+0.1
	comp=N,1.9nm,0.5s,baz=296,slow=2.4,SNR=7.1						

ISCJB ***25*** *03:30:05.5±0.5, 32°.82S±0°.04×178°.0W±0°.1, h10km, mb5.0/22, Error ellipse: s-maj=13.5km s-min=3.3km az=22.0*
IDC ***25*** *03:30:07.1±0.7, 32°.44S×178°.08W, h0km, mb4.5/7, mb1 4.6/8, mb1mx4.2/42, mbtmp4.5/8, ML4.5/1, MS3.7/7, Ms1 3.7/7, ms1mx3.2/49, Error ellipse: s-maj=25.8km s-min=18.6km az=88.0*
WEL ***25*** *03:30:07.0, 32°.63S×178°.05W, h10km, ML5.5/8*
NEIC ***25*** *03:30:07.7±0.4, 32°.63S×178°.05W, h10km, mb5.1/11, Error ellipse: s-maj=12.0km s-min=7.2km az=121.0*

ISC 25 03:30:09.2±0.5, 32°.60S±0°.05×178°.08W±0°.09, h20km, n97, σ2°81/111, mb5.1/22, 1D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.33**	**2**	P	Pn	03 30 57.9	-2.2
GLKZ				S	Sn	03 31 36.3	-2.8
RAO	**Raoul Island**	**3.34**	**2**	Pn	Pn	03 30 59.1	-1.1
	52nm,0.3s,baz=123,slow=18,SNR=5.1						
RAO				Sn	Sn	03 31 36.9	-2.4
	195nm,0.3s,baz=38,slow=21,SNR=7.4						
RAO	**Raoul Island**	**3.34**	**2**	*e*Pn	Pn	03 30 58.5	-1.8
RAO				*e*Sn	Sn	03 31 36.8	-2.4
RAO				*e*Sg	Sb	03 31 41.1	-6.8
RIZ	**Raoul Island**	**3.34**	**2**	P	Pn	03 30 59.9	-0.5
RIZ				S	Sn	03 31 35.7	-3.8
MXZ	**Matakaoa Point**	**5.77**	**210**	*e*Pn	Pn	03 31 30.8	-2.9
MXZ				*e*Sn	Sn	03 32 35.1	-4.1
MXZ	**Matakaoa Point**	**5.77**	**210**	P	Pn	03 31 31.6	-2.1
MXZ				S	Sn	03 32 36.8	-2.4
WMGZ	**Waiomatatini S**	**5.95**	**208**	P	Pn	03 31 34.8	-1.3
WMGZ				S	Sn	03 32 41.3	-2.3
PKGZ	**Pakihiroa**	**6.14**	**210**	P	Pn	03 31 36.8	-2.0
PKGZ				S	Sn	03 32 45.6	-3.0
HAZ	**Te Kaha**	**6.16**	**212**	P	Pn	03 31 38.2	-0.8
HAZ				S	Sn	03 32 49.1	+0.2
PUZ	**Puketiti**	**6.23**	**208**	P	Pn	03 31 39.0	-1.0
PUZ				S	Sn	03 32 48.9	-1.6
URZ	**Urewera**	**6.88**	**213**	Pn	Pn	03 31 47.5	-1.3
	6.5nm,0.3s,baz=72,slow=5.6,SNR=28						
URZ				Sn	Sn	03 33 03.8	-2.7
	25nm,0.3s,baz=88,slow=23,SNR=14						
URZ	**Urewera**	**6.88**	**213**	*e*Pn	Pn	03 31 48.4	-0.5
URZ				*e*Sn	Sn	03 33 04.1	-2.4
OUZ	**Omahuta**	**7.40**	**247**	*e*Pn	Pn	03 31 58.4	+2.4
NMHZ	**Naumai**	**7.70**	**211**	P	Pn	03 31 59.8	-0.4
NMHZ				S	Sn	03 33 24.8	-2.1
ARHZ	**Aropaoanui**	**7.76**	**210**	P	Pn	03 31 59.5	-1.4
ARHZ				S	Sn	03 33 25.2	-3.0
BKZ	**Black Stump Fm**	**7.89**	**212**	*e*Pn	Pn	03 32 01.2	-1.6
BKZ				*e*Sn	Sn	03 33 29.1	-2.6
BKZ	**Black Stump Fm**	**7.89**	**212**	P	Pn	03 32 01.1	-1.7
BKZ				S	Sn	03 33 28.2	-3.5
MCHZ	**McNeill Hill**	**8.03**	**210**	P	Pn	03 32 03.1	-1.7
MCHZ				S	Sn	03 33 30.9	-4.1
CKHZ	**Cape Kidnapper**	**8.06**	**208**	P	Pn	03 32 00.9	-4.2
CKHZ				S	Sn	03 33 30.4	-5.3
KWHZ	**Kaweka Forest**	**8.14**	**212**	S	Sn	03 33 33.8	-3.8
KAHZ	**Kahuranaki**	**8.26**	**208**	S	Sn	03 33 36.3	-4.2
KRHZ	**Kereru**	**8.34**	**211**	P	Pn	03 32 05.9	-3.0
KRHZ				S	Sn	03 33 37.0	-5.5
BHHZ	**Black Hill Sta**	**8.35**	**213**	P	Pn	03 32 09.3	+0.1
BHHZ				S	Sn	03 33 38.6	-4.3
WHVZ	**Whangaehu Hut**	**8.41**	**216**	S	Sn	03 33 39.6	-5.0
MOVZ	**Moawhango**	**8.43**	**215**	P	Pn	03 32 08.5	-1.7
MOVZ				S	Sn	03 33 38.5	-6.4
PXZ	**Pawanui**	**8.46**	**207**	S	Sn	03 33 40.2	-5.3
PNHZ	**Pukenui**	**8.64**	**211**	P	Pn	03 32 10.6	-2.5
PNHZ				S	Sn	03 33 42.6	-7.2
BFZ	**Birch Farm**	**9.26**	**208**	*e*Pn	Pn	03 32 17.6	-4.0
BFZ				*e*Sn	Sn	03 33 59.5	-5.8
THZ	**Tophouse**	**11.63**	**216**	*e*Pn	Pn	03 32 52.8	-1.2
THZ				*e*Sn	Sn	03 34 54.9	-8.3
KHZ	**Kahutara**	**11.84**	**212**	*e*Pn	Pn	03 32 52.7	-4.1
KHZ				*e*Sn	Sn	03 34 59.5	-8.8
RPZ	**Rata Peaks**	**13.99**	**214**	Pn	Pn	03 33 22.1	-4.2
	1.7nm,0.3s,baz=45,slow=16,SNR=5.9						
RPZ				Sn	Sn	03 35 45.3	-16
	2.6nm,0.3s,baz=134,slow=23,SNR=7.9						
DZM	**Mont Dzumac**	**17.27**	**304**	P	P	03 34 14.5	+3.8
	0.6nm,0.3s,baz=114,slow=18,SNR=7.6						
DZM				LR	LR	03 39 36.4	
	comp=Z,394nm,18.2s,baz=166,slow=33						
DZM	**Mont Dzumac**	**17.27**	**304**	*e*Pn	Pn	03 34 08.9	-0.4
	44nm,1.2s						
HNR	**Honiara**	**30.72**	**314**	LR	LR	03 47 20.8	
	comp=Z,101nm,18.8s,baz=170,slow=34						
STKA	**Stephens Creek**	**33.97**	**260**	P	P	03 36 53.1	+1.7
	2.6nm,0.8s,baz=98,slow=14,SNR=5.0						
STKA				LR	LR	03 50 51.2	
	comp=Z,157nm,18.5s,baz=32,slow=37						
STKA	**Stephens Creek**	**33.97**	**260**	*e*P	P	03 36 53.1	+1.7
	0.7nm,0.8s						
CTA	**Charters Tower**	**34.14**	**282**	P	P	03 36 54.7	+1.7
	12nm,0.5s,baz=117,slow=10,SNR=27						
PMG	**Port Moresby**	**39.53**	**298**	LR	LR	03 52 13.5	
	comp=Z,91nm,19.2s,baz=152,slow=34						
AS01	**Alice Springs**	**42.93**	**269**	*e*P	P	03 38 06.7	-0.1
AS31	**Alice Springs**	**42.97**	**269**	*e*P	P	03 38 07.5	+0.3
	4.7nm,0.6s						
ASAR	**Alice Springs**	**42.97**	**269**	P	P	03 38 07.2	0.0
	12nm,0.6s,baz=107,slow=7.6,SNR=143						
WB2	**Warramunga Arr**	**44.14**	**274**	*e*P	P	03 38 16.7	+0.1
	18nm,0.6s						
WRAB	**Tennant Creek**	**44.15**	**274**	*e*P	P	03 38 17.0	+0.3
	17nm,0.6s						
WR1	**Warramunga Arr**	**44.15**	**274**	*e*P	P	03 38 16.8	0.0
	18nm,0.6s						
WRA	**Warramunga Arr**	**44.16**	**274**	P	P	03 38 16.8	0.0
	17nm,0.6s,baz=113,slow=8.0,SNR=112						
FORT	**Forrest**	**45.46**	**257**	*e*P	P	03 38 26.6	-0.3
	29nm,0.7s						
VNDA	**Vanda**	**45.91**	**186**	P	P	03 38 31.8	+1.8
	0.5nm,0.9s,baz=333,slow=3.6,SNR=2.3						
CASY	**Casey**	**53.18**	**209**	*e*P	P	03 39 25.5	+0.1
	14nm,1.3s						
UWE	**Uwekahuna**	**56.13**	**26**	*e*P	P	03 39 46.2	-1.4
	348nm,1.2s						
MLOA	**Mauna Loa Obse**	**56.13**	**26**	*e*P	P	03 39 47.1	-0.8
	158nm,1.2s						
BYL	**Byron's Ledge**	**56.14**	**26**	*e*P	P	03 39 47.0	-0.6
	283nm,1.1s						
QSPA	**South Pole Qui**	**57.52**	**180**	P	P	03 39 59.5	+2.6
	1.1nm,0.7s,baz=305,slow=5.5,SNR=3.8						
MAW	**Mawson**	**70.23**	**201**	P	P	03 41 23.3	+3.0
	1.5nm,0.7s,baz=131,slow=6.9,SNR=3.5						
MAW	**Mawson**	**70.23**	**201**	*e*P	P	03 41 23.3	+3.0
	1.2nm,1.1s						
SYO	**Syowa Base**	**74.97**	**193**	*e*P	P	03 41 50.3	+1.8
SNAA	**Sanae**	**75.97**	**178**	P	P	03 42 06.5	+12
VNA3	**Neumayer Olymp**	**76.12**	**176**	P	P	03 42 07.4	+12
VNA1	**Neumayer--Stat**	**76.79**	**177**	P	P	03 42 11.5	+13
JNU	**Nakatsue**	**81.15**	**319**	LR	LR	04 14 46.4	
	comp=Z,18nm,18.5s,baz=120,slow=33						
LPIG	**La Paz**	**85.75**	**58**	LR	LR	04 15 23.6	
	comp=Z,43nm,18.3s,baz=96,slow=32						
PASC	**Pasadena Art C**	**87.06**	**46**	*e*P	P	03 42 52.4	-1.0
FTR	**Fort Ross**	**87.25**	**40**	*e*P	P	03 42 58.1	+3.9
PETK	**Petropavlovsk-**	**87.92**	**346**	P	P	03 42 58.0	+1.0
	1.4nm,0.6s,baz=107,slow=8.5,SNR=4.7						
PETK	**Petropavlovsk-**	**87.92**	**346**	*e*P	P	03 42 57.0	+0.1
PEA1	**Petropavlovsk-**	**87.92**	**346**	*e*P	P	03 42 58.0	+1.0
MDPB	**Devils Postpil**	**88.90**	**43**	*e*P	P	03 42 56.8	-5.6
	5.9nm,0.9s						
LGPM	**Granite Peak**	**89.15**	**39**	*e*P	P	03 43 04.2	+0.9
BJT	**Baijiatuan**	**94.43**	**315**	*e*P	P	03 43 27.9	+0.3
	16nm,0.4s						
ANMO	**Albuquerque**	**95.00**	**51**	LR	LR	04 21 21.8	
	comp=Z,33nm,18.0s,baz=50,slow=32						
PV01	**Paradox Valley**	**95.55**	**48**	*e*P	P	03 43 35.2	+2.1
	17nm,1.6s						
CD2	**Chengdu**	**97.19**	**302**	P	P	03 43 39.8	-0.7
CD2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**97.70**	**314**	*e*P	Pdif	03 43 43.3	+0.6
HHC				pmax	pmax		
	comp=Z,23nm,0.7s						
HHC				pmax	pmax		
	comp=Z,59nm,7.0s						
MK32	**Makanchi Array**	**119.12**	**309**	*e*PKPdf	**PKPdf**	**03 48 56.7**	**+0.3**
MKAR	**Makanchi Array**	**119.12**	**309**	PKP	**PKPdf**	**03 48 56.7**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=85,slow=1.3,SNR=7.5						
ZALV	**Zalesovo Beam**	**119.61**	**318**	PKP	**PKPdf**	**03 48 56.2**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=98,slow=2.9,SNR=2.2						
ZAA1	**Zalesovo Array**	**119.61**	**318**	*e*PKPdf	**PKPdf**	**03 48 56.1**	**-0.9**
QUA2	**Belchertown**	**121.95**	**57**	*e*PKPdf	**PKPdf**	**03 49 00.3**	**-1.6**
KURK	**Kurchatov**	**122.50**	**313**	*e*PKPdf	**PKPdf**	**03 49 03.3**	**+0.6**
KURBB	**Kurchatov Arra**	**122.54**	**313**	PKP	**PKPdf**	**03 49 03.3**	**+0.6**
	comp=Z,2.0nm,0.7s,baz=114,slow=2.3,SNR=23						
BVAR	**Borovoye Array**	**127.91**	**315**	PKP	**PKPdf**	**03 49 14.1**	**+1.1**
	comp=Z,1.6nm,0.7s,baz=108,slow=0.5,SNR=7.1						
ARA0	**ARCESS Array S**	**140.71**	**347**	*e*PKPpre	PKPpre	03 49 31.9	
ARCES	**ARCESS Array B**	**140.71**	**347**	PKhKP	PKPpre	03 49 31.9	
	comp=Z,1.2nm,0.8s,baz=349,slow=1.8,SNR=4.7						
KBZ	**Khabaz**	**146.23**	**301**	PKPbc	**PKPab**	**03 49 48.9**	**+0.2**
	comp=Z,4.6nm,0.9s,baz=242,slow=1.8,SNR=11						
FIA0	**FINESS Array S**	**147.17**	**339**	*e*PKPbc	**PKPab**	**03 49 51.1**	**-0.7**
FINES	**FINESS Array B**	**147.17**	**339**	PKPbc	**PKPab**	**03 49 51.1**	**-0.7**
	comp=Z,7.5nm,0.6s,baz=44,slow=4.0,SNR=27						
NB2	**NORSAR Subarra**	**150.91**	**351**	PKP	**PKPbc**	**03 50 00.5**	**+0.8**
	comp=Z,2.7nm,0.8s,baz=17,slow=2.6						
HFS	**Hagfors**	**151.38**	**348**	PKPbc	**PKPbc**	**03 50 01.1**	**+0.4**
	comp=Z,2.7nm,0.7s,baz=59,slow=3.7,SNR=8.8						
MMAI	**Mount Meron Ar**	**151.92**	**280**	PKPbc	**PKPbc**	**03 50 04.7**	**+1.8**
	comp=Z,9.0nm,0.8s,baz=103,slow=3.1,SNR=9.2						
AKASG	**Malin Array Be**	**152.97**	**320**	PKPbc	**PKPbc**	**03 50 05.5**	**+0.9**
	comp=Z,1.2nm,0.6s,baz=47,slow=1.8,SNR=5.9						
AKBB	**Malin Array Si**	**152.97**	**320**	*e*PKPbc	**PKPbc**	**03 50 05.5**	**+0.9**
AK11	**Malin Array Si**	**153.01**	**320**	*e*PKPbc	**PKPbc**	**03 50 05.7**	**+1.0**
BR101	**Keskin Array S**	**153.52**	**295**	*e*PKPbc	**PKPbc**	**03 50 06.7**	**+0.2**
BR131	**Keskin Array S**	**153.52**	**295**	*e*PKPbc	**PKPbc**	**03 50 07.6**	**+1.2**
BRTR	**Keskin Array B**	**153.52**	**295**	PKPbc	**PKPbc**	**03 50 06.7**	**+0.2**
	comp=Z,2.5nm,0.9s,baz=144,slow=3.6,SNR=12						
TOA0	**Torodi Ar. Sit**	**160.64**	**179**	*e*PKPab	**PKPab**	**03 50 50.8**	**+1.1**
TORD	**Torodi Ar. Bea**	**160.64**	**179**	PKPab	**PKPab**	**03 50 50.7**	**+1.0**
	comp=Z,0.8nm,0.5s,baz=180,slow=3.9,SNR=14						
TOA1	**Torodi Ar. Sit**	**160.64**	**179**	*e*PKPab	**PKPab**	**03 50 50.7**	**+1.0**

GUC 25 03:41:09.1±0.6, 25°.87S×70°.32W, h49km±284km, ML3.6, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO02	**Mina Guanaco**	**0.97**	**43**	*e*P	Pn	03 41 27.7	+1.1
GO02				*i* S	Sn	03 41 41.2	+1.6
GO02				IAML		03 41 43.5	
	comp=E,5μm,0.0s						
PB14	**IPOC Station P**	**1.24**	**357**	*e*P	Pn	03 41 31.4	+1.0
PB14				*i* S	Sn	03 41 48.0	+1.8
PB14				IAML		03 41 51.7	
	comp=E,1μm,0.7s						
GO03	**Copiap**	**1.72**	**177**	*e*P	Pn	03 41 37.7	+1.1
GO03				*i* S	Sn	03 41 58.6	+1.2
GO03				IAML		03 42 05.3	
	comp=E,702nm,0.6s						
PB10	**IPOC Station P**	**2.36**	**355**	*e*P	Pn	03 41 45.3	-0.1
PB15	**IPOC Station P**	**2.76**	**16**	*e*P	Pn	03 41 52.4	+1.3
PB05	**IPOC Station P**	**3.01**	**2**	*e*P	Pn	03 41 53.7	-0.7
LCO	**Las Campanas**	**3.14**	**186**	*e*P	Pn	03 41 56.3	-0.1
LCO				*i* S	Sn	03 42 35.2	+2.4
LCO				IAML		03 42 51.0	
	comp=E,221nm,0.9s						

IDC ***25*** *03:42:41.7±0.9, 13°.31N×91°.70W, h0km, mb4.3/14, mb1 4.6/16, mb1mx4.3/50, mbtmp4.3/16, ML4.4/2, MS3.5/16, Ms1 3.5/16, ms1mx3.3/46, Error ellipse: s-maj=34.7km s-min=12.8km az=47.0*
ISCJB ***25*** *03:42:46.2±0.2, 13°.57N±0°.03×91°.57W±0°.02, h28km, mb4.6/218, MS3.6/16, Error ellipse: s-maj=4.3km s-min=2.4km az=29.2*
NEIC ***25*** *03:42:49.7±0.6, 13°.55N×91°.52W, h42km±5km, mb4.6/237, MD4.3(MEX), Error ellipse: s-maj=5.3km s-min=3.2km az=210.0*
UCR ***25*** *03:43:00.2±0.7, 13°.66N×90°.74W, h16km±10km, ML3.4, mb4.6(NEIC)*

ISC 25 03:42:47.0±0.5, 13°.49N±0°.07×91°.69W±0°.05, h28km, n604, σ1°27/587, mb4.7/220, MS3.6/16, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**1.38**	**60**	*e*P	Pb	03 43 11.6	-0.6
THIG		**1.52**	**338**	P	Pn	03 43 11.6	-0.8
SBLS	**San Blas**	**2.04**	**80**	*e*P	Pn	03 43 20.1	+0.4
CEDA	**San Andres**	**2.25**	**82**	*e*P	Pn	03 43 23.6	+1.2
BOQS	**Boqueron**	**2.35**	**84**	*e*P	Pn	03 43 25.6	+1.6
SNET	**Serv Nac Est T**	**2.40**	**85**	*e*Pn	Pn	03 43 25.4	+1.0
SNET				*e*Sn	Sn	03 43 51.5	-1.5
MTO3	**Montecristo**	**2.43**	**68**	*e*P	Pn	03 43 27.1	+2.0
MTO3				IAML		03 43 38.8	
	comp=Z,139nm,0.4s						
LOMA	**San Marcos**	**2.45**	**86**	*e*P	Pn	03 43 26.3	+1.2
LOMA				IAML		03 43 39.7	
	comp=Z,444nm,0.2s						
LFU	**La Fuente**	**2.52**	**84**	*e*P	Pn	03 43 27.6	+1.5
LFRS	**El Faro**	**2.56**	**87**	*e*P	Pn	03 43 28.3	+1.6
LBRS	**Las Brisas**	**2.58**	**84**	*e*P	Pn	03 43 28.6	+1.6
PCIG		**2.66**	**326**	P	Pn	03 43 25.7	-2.2
CCIG	**Comitan**	**2.81**	**351**	*e*Pn	Pn	03 43 33.3	+3.0
CCIG				*e*Sn	Sn	03 43 59.9	-3.5
CNCH	**Conchagua**	**3.75**	**93**	*e*P	Pn	03 43 45.1	+1.9
CNCH				IAML		03 43 56.2	
	comp=Z,1μm,0.3s						
TGUH	**Tegucigalpa,Un**	**4.33**	**82**	*e*Pn	Pn	03 43 51.7	+0.8
TGUH	**Tegucigalpa,Un**	**4.33**	**82**	*e*Pn	Pn	03 43 48.3	-2.6
TGUH				*e*Sn	Sn	03 44 37.7	-2.8
CMIG	**Matias Romero**	**4.73**	**320**	Pn	Pn	03 43 54.3	-2.1
	comp=Z,6.2nm,0.3s,baz=147,slow=11,SNR=67						
CMIG				Sn	Sn	03 44 46.7	-3.7
	comp=Z,2.0nm,0.3s,baz=72,slow=20,SNR=4.0						
ESTN	**Estel**	**5.19**	**94**	*e*Pn	Pn	03 44 03.2	+0.3
ESTN				*e*Sn	Sn	03 45 00.1	-1.8
VHO	**Vista Hermosa**	**6.04**	**307**	P	Pn	03 44 11.0	-3.7
JTS	**JuntasAbangare**	**7.32**	**115**	Pn	Pn	03 44 33.0	+0.9
	comp=Z,4.6nm,0.3s,baz=17,slow=8.4,SNR=24						
JTS				Sn	Sn	03 45 54.2	0.0
	comp=Z,3.4nm,0.3s,baz=315,slow=23,SNR=5.2						
JTS				LR	LR	03 47 05.9	
	comp=Z,239nm,19.6s,baz=346,slow=36						
ESPN	**Las Esperanzas**	**7.32**	**99**	*e*Pn	Pn	03 44 31.6	-0.5
MYIG	**MOrida**	**7.66**	**14**	*e*Pn	Pn	03 44 38.2	+1.5
TLIG	**Tlapa**	**7.77**	**302**	*e*Pn	Pn	03 44 37.6	-0.8
MOIG	**Morelia**	**10.99**	**305**	*e*Pn	Pn	03 45 23.6	+0.9
JRQG	**Juriquilla Cam**	**11.03**	**312**	*e*Pn	Pn	03 45 25.2	+2.1
LNIG	**Linares**	**13.52**	**328**	*e*Pn	Pn	03 45 58.3	+1.4
ZAIG	**Zacatecas**	**13.86**	**313**	*e*Pn	Pn	03 46 01.9	+0.1
833A	**Chaparral WMA,**	**16.41**	**335**	P	Pn	03 46 35.5	0.0
	baz=152						
833A	**Chaparral WMA,**	**16.41**	**335**	*e*Pn	Pn	03 46 36.0	+0.6
	comp=Z,32nm,0.8s						
SJCC	**San Jacinto, C**	**16.55**	**101**	*e*P	P	03 46 41.2	+1.5
HKT	**Hockley**	**16.83**	**347**	*e*Pn	P	03 46 42.3	-0.2
	comp=Z,17nm,1.4s						
HELC	**Santa Helena**	**17.48**	**113**	*e*Pn	P	03 46 50.8	+0.4
	comp=Z,42nm,1.1s						
HELC	**Santa Helena**	**17.48**	**113**	*e*P	P	03 46 50.3	0.0
ZARC	**Zaragoza, Cauc**	**17.58**	**108**	*e*P	Pn	03 46 49.5	-0.7

	baz=194							
Z43A	Armstrong Fami	19.64	1	P		P	03 47 14.2	+0.7
	baz=181							
150A	Eclectic	19.72	14	P		Pn	03 47 16.5	+0.5
	baz=196							
Z44A	Pea Ridge, Bel	19.73	3	P		P	03 47 15.5	+0.9
	baz=183							
Z40A	Long Farm, Mag	19.74	356	P		P	03 47 15.1	+0.5
	baz=175							
Z46A	Louisville	19.78	7	P		Pn	03 47 17.0	+0.4
	baz=187							
CHIC	Chingaza	19.78	115	eP		Pn	03 47 16.9	-0.3
FLOC	Florencia	19.79	125	eP		P	03 47 15.6	+0.2
RUSC	La Rusia	19.82	111	eP		Pn	03 47 17.2	-0.6
	comp=Z,12nm,1.3s							
RUSC	La Rusia	19.82	111	eP		Pn	03 47 17.2	-0.6
151A	Opelika	19.82	16	P		Pn	03 47 17.2	0.0
	baz=198							
Z45A	Winona	19.88	5	P		Pn	03 47 17.2	-0.6
	baz=185							
Z45A	Winona	19.88	5	eP		Pn	03 47 17.9	+0.1
	comp=Z,54nm,1.0s							
Z47A	Carrollton	19.90	9	P		Pn	03 47 18.2	+0.1
	baz=190							
LRAL	Lakeview Retre	19.92	12	P		Pn	03 47 18.9	+0.5
	baz=193							
LRAL	Lakeview Retre	19.92	12	eP		Pn	03 47 18.4	0.0
	comp=Z,15nm,0.8s							
152A	Waverly Hall	20.13	17	P		Pn	03 47 20.4	-0.4
	baz=200							
152A	Waverly Hall	20.13	17	eP		Pn	03 47 20.4	-0.4
	comp=Z,61nm,0.8s							
Z48A	Northport	20.15	10	P		Pn	03 47 21.4	+0.3
	baz=191							
Z49A	Columbiana	20.17	13	P		Pn	03 47 21.3	0.0
	baz=194							
Y42A	Garnett, Star	20.26	360	P		P	03 47 20.5	+0.3
	baz=179							
Y41A	Eaglette Beard	20.32	358	P		P	03 47 21.1	+0.2
	baz=177							
CCAR	Cane Creek	20.34	360	eP		Pn	03 47 22.5	-0.8
	comp=Z,52nm,1.0s							
Y43A	Makayla and Ka	20.34	2	P		P	03 47 20.9	-0.3
	baz=182							
Z50A	Ashland	20.37	14	P		Pn	03 47 22.9	-0.7
	baz=196							
Z50A	Ashland	20.37	14	eP		Pn	03 47 23.0	-0.6
	comp=Z,20nm,0.7s							
Y45A	Yeager Farm, C	20.38	5	P		P	03 47 22.8	+1.2
	baz=186							
153A	Fort Valley	20.38	19	P		P	03 47 22.7	+1.2
	baz=202							
ABTX	Abilene, Hawle	20.39	340	P		P	03 47 22.7	+1.0
	baz=157							
ABTX	Abilene, Hawle	20.39	340	eP		P	03 47 22.9	+1.2
	comp=Z,79nm,0.8s							
Y46A	Houston	20.47	7	P		P	03 47 23.8	+1.3
	baz=187							
Y40A	Okolona	20.48	356	P		P	03 47 22.7	0.0
	baz=175							
154A	Montrose	20.59	21	P		Pn	03 47 25.2	-1.0
	baz=204							
154A	Montrose	20.59	21	eP		Pn	03 47 25.6	-0.6
	comp=Z,35nm,0.8s							
Z51A	Franklin	20.61	16	P		Pn	03 47 25.7	-0.8
	baz=198							
Y47A	UCPARC, Winfie	20.62	9	P		P	03 47 25.4	+1.2
	baz=190							
Z52A	Williamson	20.70	17	P		Pn	03 47 26.7	-0.8
	baz=200							
Y48A	Jasper	20.75	11	P		Pn	03 47 27.2	-0.8
	baz=192							
Y49A	Blount Mountai	20.84	12	P		Pn	03 47 28.6	-0.5
	baz=194							
Y49A	Blount Mountai	20.84	12	eP		Pn	03 47 28.6	-0.6
	comp=Z,35nm,1.1s							
X41A	Kaden, Bauxite	20.93	358	P		P	03 47 28.5	+1.0
	baz=177							
X40A	Basin Creek Fa	20.93	357	P		P	03 47 28.0	+0.5
	baz=176							
X40A	Basin Creek Fa	20.93	357	eP		P	03 47 28.4	+0.9
	comp=Z,11nm,1.0s							
X45A	UM Field Stati	20.95	5	P		P	03 47 27.8	+0.1
	baz=186							
X43A	Marvell	20.95	2	eP		Pn	03 47 29.8	-0.6
	comp=Z,40nm,0.8s							
Y50A	Piedmont	21.02	14	P		P	03 47 29.7	+1.2
	baz=196							
OXF	Oxford	21.03	5	P		P	03 47 28.3	-0.3
	baz=186							
OXF	Oxford	21.03	5	eP		P	03 47 28.5	-0.1
	comp=Z,50nm,0.8s							
MIAR	Mount Ida	21.04	356	P		P	03 47 28.0	-0.7
	baz=174							
MIAR	Mount Ida	21.04	356	eP		P	03 47 28.3	-0.3
	comp=Z,12nm,0.8s							
X39A	Fountain Ranch	21.05	354	P		P	03 47 29.0	+0.2
	baz=173							
Z53A	Monticello	21.05	19	P		P	03 47 29.9	+1.1
	baz=202							
SDV	Santo Domingo	21.15	100	P		P	03 47 30.6	+0.4
	comp=Z,9.1nm,0.6s,baz=278,slow=7.0,SNR=5.3							
SDV	Santo Domingo	21.15	100	eP		P	03 47 30.7	+0.4
	comp=Z,20nm,0.6s							
X46A	Booneville	21.16	7	P		P	03 47 30.4	+0.4
	baz=188							
Y51A	Rockmart	21.19	15	P		P	03 47 31.4	+1.1
	baz=198							
GOGA	Godfrey	21.20	19	P		P	03 47 31.5	+1.1
	baz=202							
GOGA	Godfrey	21.20	19	eP		P	03 47 31.8	+1.3
	comp=Z,19nm,0.9s							
UALR	University of	21.20	359	eP		P	03 47 30.5	+0.1
	comp=Z,29nm,0.6s							
X47A	Russelville	21.22	9	P		P	03 47 31.2	+0.5
	baz=190							
X48A	Hartselle	21.29	11	P		P	03 47 31.6	+0.2
	baz=192							
X48A	Hartselle	21.29	11	eP		P	03 47 32.0	+0.7
	comp=Z,31nm,0.8s							
Y52A	Lilburn	21.44	18	P		P	03 47 34.0	+1.0
	baz=200							
Y52A	Lilburn	21.44	18	eP		P	03 47 34.5	+1.5
	comp=Z,47nm,0.7s							
X49A	Woodville	21.49	12	P		P	03 47 35.1	+1.6
	baz=194							
Y53A	Monroe	21.57	19	P		P	03 47 35.6	+1.1
	baz=201							
X50B	Fort Payne	21.59	14	P		P	03 47 35.7	+1.1
	baz=196							
W41B	Gary Mavity, V	21.60	359	P		P	03 47 36.1	+1.4
	baz=178							
W41B	Gary Mavity, V	21.60	359	eP		P	03 47 36.2	+1.6
	comp=Z,13nm,0.8s							
W40A	Ferguson Farm,	21.65	357	P		P	03 47 36.4	+1.2
	baz=176							
W40A	Ferguson Farm,	21.65	357	eP		P	03 47 36.8	+1.6
	comp=Z,18nm,0.8s							
PLAL	Pickwick Lake	21.65	8	eP		P	03 47 34.9	-0.3
	comp=Z,15nm,0.8s							
W42A	Bald Knob	21.69	0	P		P	03 47 35.3	-0.3
	baz=180							
W45A	Hickory Valley	21.69	6	P		P	03 47 34.8	-0.9
	baz=186							
W39A	Magazine	21.70	355	P		P	03 47 37.3	+1.5
	baz=174							
W39A	Magazine	21.70	355	eP		P	03 47 35.9	+0.1
	comp=Z,14nm,0.8s							
WHAR	Wooly Hollow	21.71	359	eP		P	03 47 35.6	-0.3
	comp=Z,25nm,0.8s							
W46A	Michie	21.76	7	P		P	03 47 36.1	-0.2
	baz=188							
Y54A	Tignall	21.87	20	P		P	03 47 38.9	+1.2
	baz=204							
X51A	Calhoun	21.88	15	P		P	03 47 38.8	+1.1
	baz=198							
X51A	Calhoun	21.88	15	eP		P	03 47 38.6	+0.9
	comp=Z,20nm,0.9s							
W48A	Pulaski	21.98	10	P		P	03 47 38.8	0.0
	baz=192							
W47A	Westpoint	21.98	9	P		P	03 47 38.5	-0.3
	baz=190							
HBAR	Harrisburg	21.99	2	eP		P	03 47 38.9	0.0
	comp=Z,111nm,0.8s							
MNTX	Cornudas Mount	22.06	327	P		P	03 47 39.8	+0.1
	baz=142							
MNTX	Cornudas Mount	22.06	327	eP		P	03 47 39.8	+0.1
	comp=Z,20nm,0.8s							
W49A	Belvidere	22.09	12	P		P	03 47 40.4	+0.5
	baz=194							
WMOK	Wichita Mounta	22.11	344	P		P	03 47 39.6	-0.6
	baz=161							
WMOK	Wichita Mounta	22.11	344	eP		P	03 47 39.5	-0.6
	comp=Z,21nm,1.1s							
NHSC	New Hope	22.17	26	eP		P	03 47 43.3	+2.5
	comp=Z,50nm,0.8s							
X52A	Dahlonega	22.18	17	P		P	03 47 41.5	+0.6
	baz=200							
V41A	Mountainview	22.21	359	P		P	03 47 40.1	-1.2
	baz=178							
V42A	Cord	22.23	1	P		P	03 47 40.1	-1.3
	baz=180							
V40A	Witts Springs	22.25	358	P		P	03 47 40.9	-0.8
	baz=177							
V40A	Witts Springs	22.25	358	eP		P	03 47 41.1	-0.6
	comp=Z,28nm,0.7s							
SWET	Seanee	22.25	13	eP		P	03 47 42.2	+0.4
	comp=Z,26nm,0.8s							
X53A	Estanollee	22.26	19	P		P	03 47 42.2	+0.4
	baz=202							
V45A	Humboldt	22.29	6	P		P	03 47 41.0	-1.1
	baz=187							
V39A	Pettigrew	22.33	356	P		P	03 47 41.4	-1.2
	baz=175							
W50A	Signal Mountai	22.37	14	P		P	03 47 41.9	-1.1
	baz=196							
W50A	Signal Mountai	22.37	14	eP		P	03 47 43.7	+0.6
	comp=Z,13nm,0.8s							
HALT	Halls	22.43	5	eP		P	03 47 43.8	+0.3
	comp=Z,89nm,0.8s							
V46A	Holladay	22.45	8	P		P	03 47 42.5	-1.3
	baz=189							
V47A	Nunnelly	22.56	9	P		P	03 47 44.0	-1.0
	baz=190							
V48A	Smith Brothers	22.59	10	P		P	03 47 44.8	-0.5
	baz=192							
V48A	Smith Brothers	22.59	10	eP		P	03 47 44.8	-0.5
	comp=Z,34nm,0.6s							
W52A	Murphy	22.63	17	P		P	03 47 46.8	+1.1
	baz=200							
W52A	Murphy	22.63	17	eP		P	03 47 46.5	+0.7
	comp=Z,29nm,0.7s							
TUL1	Leonard	22.63	351	eP		P	03 47 44.6	-1.1
	comp=Z,18nm,1.0s							
MSTX	Muleshoe	22.74	336	P		P	03 47 46.3	-0.8
	baz=151							
MSTX	Muleshoe	22.74	336	eP		P	03 47 45.8	-1.3
	comp=Z,22nm,0.7s							
JSC	Jenkinsville	22.76	23	eP		P	03 47 47.8	+0.7
	comp=Z,16nm,1.1s							
U41A	Viola	22.76	360	P		P	03 47 45.9	-1.2
	baz=179							
U42A	Sevenden	22.77	1	P		P	03 47 45.8	-1.4
	baz=181							
V49A	McMinnville	22.79	12	P		P	03 47 47.0	-0.4
	baz=194							
GLAT	Glass	22.79	5	eP		P	03 47 47.1	-0.3
	comp=Z,229nm,0.9s							
HHAR	Hobbs	22.79	355	eP		P	03 47 46.5	-0.9
	comp=Z,9.4nm,1.0s							
U40A	Yellville	22.80	358	P		P	03 47 46.2	-1.3
	baz=177							
CPCT	Cooper Cave	22.80	15	eP		P	03 47 48.2	+0.6
	comp=Z,15nm,0.7s							
WVT	Waverly	22.81	8	P		P	03 47 46.9	-0.7
	baz=189							
WVT	Waverly	22.81	8	eP		P	03 47 46.4	-1.3
	comp=Z,27nm,0.6s							
U43A	Rector	22.81	3	P		P	03 47 46.3	-1.4
	baz=183							
BG3	Lake Jocassee	22.83	19	eP		P	03 47 49.0	+1.1
	comp=Z,25nm,0.7s							
U44B	Burton Farm, H	22.85	5	P		P	03 47 47.2	-0.8
	baz=185							
U39A	Green Forest	22.86	356	P		P	03 47 46.6	-1.6
	baz=175							
V50A	Pikevile	22.87	14	P		P	03 47 49.6	+1.3
	baz=196							
UTMT	University of	22.90	6	eP		P	03 47 48.2	-0.3
	comp=Z,135nm,0.8s							
U45A	Rockin P Farm,	22.91	6	P		P	03 47 47.5	-1.2
	baz=187							
W53A	Cullowhee	22.92	18	P		P	03 47 49.5	+0.6
	baz=201							
U46A	Springville	22.99	7	P		P	03 47 48.4	-1.2
	baz=188							
AMTX	Amarillo	23.14	339	P		P	03 47 50.4	-0.7
	baz=154							
AMTX	Amarillo	23.14	339	eP		P	03 47 51.0	-0.2
	comp=Z,79nm,1.1s							
PARMO	Parma	23.14	4	eP		P	03 47 50.7	-0.3
	comp=Z,281nm,0.7s							
V51A	Loudon	23.18	15	P		P	03 47 51.9	+0.5
	baz=198							
V51A	Loudon	23.18	15	eP		P	03 47 52.1	+0.6
	comp=Z,29nm,1.0s							
U47A	Clarksville	23.20	9	P		P	03 47 50.6	-1.0
	baz=190							
TKL	Tuckaleechee C	23.20	17	P		P	03 47 52.5	+0.8
	comp=Z,44nm,0.8s,baz=183,slow=11,SNR=67							
TKL	Tuckaleechee C	23.20	17	eP		P	03 47 52.6	+0.9
	comp=Z,53nm,0.8s							
PBMO	Poplar Bluff	23.22	3	eP		P	03 47 50.7	-1.1
	comp=Z,45nm,0.6s							
U48A	Cassie Pea, Po	23.39	10	P		P	03 47 52.5	-1.0
	baz=192							
V52A	Sevierville	23.42	17	P		P	03 47 54.2	+0.4
	baz=200							
V52A	Sevierville	23.42	17	eP		P	03 47 54.5	+0.7
	comp=Z,25nm,0.9s							
T42A	Van Buren	23.45	1	P		P	03 47 52.5	-1.5
	baz=181							
T42A	Van Buren	23.45	1	eP		P	03 47 52.7	-1.4
	comp=Z,89nm,1.5s							
T41A	Mountain View	23.46	360	P		P	03 47 53.1	-1.1
	baz=179							
T39A	Clever	23.49	357	P		P	03 47 53.5	-1.0
	baz=176							
V53A	Saluda	23.49	18	P		P	03 47 55.2	+0.6
	baz=202							
KMSC	Kings Mountain	23.50	22	P		P	03 47 54.7	+0.1
	baz=206							
KMSC	Kings Mountain	23.50	22	eP		P	03 47 55.2	+0.6
	comp=Z,33nm,1.1s							
T43A	Greenville	23.53	3	P		P	03 47 53.6	-1.3
	baz=183							
U49A	Red Boiling Sp	23.53	12	P		P	03 47 54.5	-0.4
	baz=194							
T38A	Diamond	23.57	355	P		P	03 47 53.8	-1.5
	baz=173							
T44A	Benton	23.57	4	P		P	03 47 54.3	-1.0
	baz=185							
T40A	Mansfield	23.58	358	P		P	03 47 54.3	-1.1
	baz=178							
T45A	Paducah	23.59	6	P		P	03 47 54.8	-0.7
	baz=187							
T45A	Paducah	23.59	6	eP		P	03 47 55.5	0.0
	comp=Z,80nm,0.8s							
U50A	Jamestown	23.64	14	P		P	03 47 55.7	-0.4
	baz=196							
T46A	Princeton	23.70	8	P		P	03 47 55.7	-0.8
	baz=189							
T47A	Sharon Grove	23.76	9	P		P	03 47 56.2	-0.8
	baz=191							
T47A	Sharon Grove	23.76	9	eP		P	03 47 56.7	-0.4
	comp=Z,84nm,0.9s							
U51A	La Follette	23.81	15	P		P	03 47 57.6	0.0
	baz=198							
U52A	Thorn Hill	24.00	17	P		P	03 47 59.2	-0.2
	baz=200							
121A	Cookes Peak, D	24.00	325	P		P	03 48 00.8	+1.2
	baz=138							
S41A	Jillco Farms,	24.00	360	P		P	03 47 58.2	-1.2
	baz=180							
S40A	Lebanon	24.02	358	P		P	03 47 58.3	-1.3
	baz=178							
S43A	Fulton Ridge,	24.03	3	P		P	03 47 58.2	-1.4
	baz=183							
319A	Douglas	24.05	321	eP		P	03 48 01.9	+1.9
	comp=Z,18nm,1.1s							
TZTN	Tazewell	24.09	16	P		P	03 48 00.1	-0.2
	baz=199							
TZTN	Tazewell	24.09	16	eP		P	03 48 00.6	+0.3
	comp=Z,29nm,0.8s							
S38A	Stockton	24.13	356	P		P	03 47 59.3	-1.3
	baz=174							
S39A	Bolivar	24.15	357	P		P	03 47 59.7	-1.1
	baz=176							
S39A	Bolivar	24.15	357	eP		P	03 47 60.0	-0.8
	comp=Z,55nm,0.7s							
T49A	Edmonton	24.16	12	P		P	03 48 00.1	-0.7
	baz=194							
S42A	Caledonia	24.20	2	P		P	03 47 59.6	-1.6
	baz=182							
S44A	Carbondale	24.20	5	P		P	03 48 01.1	-0.2
	baz=185							
U53A	Fall Branch	24.20	18	P		P	03 48 01.3	0.0
	baz=202							
T50A	Nancy	24.22	13	P		P	03 48 00.8	-0.6
	baz=196							
SIUC	Southern Illin	24.23	5	eP		P	03 48 01.0	-0.4
	comp=Z,134nm,0.8s							
S45A	Carrier Mills	24.25	6	P		P	03 48 00.7	-0.9
	baz=187							
S46A	Don Dixon Farm	24.36	8	P		P	03 48 01.7	-0.9
	baz=189							
T51A	Gray	24.39	15	P		P	03 48 02.6	-0.3
	baz=198							
S47A	Hartford	24.39	9	P		P	03 48 03.5	+0.6
	baz=191							
FVM	French Village	24.42	2	eP		P	03 48 02.7	-0.6
	comp=Z,21nm,0.6s							
CCM	Cathedral Cave	24.47	1	P		P	03 48 02.6	-1.0
	baz=181							
CCM	Cathedral Cave	24.47	1	eP		P	03 48 02.7	-0.9
	comp=Z,61nm,0.8s							
S48A	Wiedeman Farm,	24.59	11	P		P	03 48 03.8	-1.0
	baz=193							
USIN	University of	24.64	8	eP		P	03 48 06.1	+0.9
	comp=Z,34nm,0.8s							
R38A	Fenwick Farm,	24.68	356	P		P	03 48 04.5	-1.1
	baz=174							
R42A	Luebbering	24.71	2	P		P	03 48 05.0	-0.8
	baz=182							
R40A	Maddies Statio	24.71	359	P		P	03 48 04.8	-1.0
	baz=178							
R40A	Maddies Statio	24.71	359	eP		P	03 48 05.0	-0.9
	comp=Z,26nm,0.8s							
R41A	Rosebud	24.71	1	P		P	03 48 05.0	-0.8
	baz=180							
R43A	Red Bud	24.74	3	P		P	03 48 05.1	-1.0
	baz=184							
R39A	Chumby, Stover	24.76	357	P		P	03 48 05.0	-1.3
	baz=176							
R44A	Waltonville	24.77	5	P		P	03 48 05.7	-0.6
	baz=186							
T52A	Hallie	24.78	17	P		P	03 48 06.6	+0.1
	baz=200							
S49A	Springfield	24.86	12	P		P	03 48 06.7	-0.5
	baz=194							
R45A	Skylar, Fairfi	24.89	6	P		P	03 48 06.7	-0.7
	baz=188							
R46A	Gibon Southern	24.90	8	P		P	03 48 07.0	-0.6
	baz=189							
S50A	Richmond	24.95	14	P		P	03 48 07.8	-0.3
	baz=197							
SLM	Saint Louis	25.08	3	eP		P	03 48 09.6	+0.5
	comp=Z,151nm,0.6s							
WCI	Wyandotte Cave	25.10	10	P		P	03 48 08.5	-0.9
	baz=192							
WCI	Wyandotte Cave	25.10	10	eP		P	03 48 09.0	-0.4
	comp=Z,17nm,0.7s							
S51A	Beattyville	25.11	15	P		P	03 48 09.1	-0.4
	baz=198							
R47A	Wooly Knot Far	25.13	10	P		P	03 48 09.4	-0.3
	baz=192							
ANMO	Albuquerque	25.19	331	P		P	03 48 11.6	+1.1
	comp=Z,5.8nm,0.8s,baz=150,slow=12,SNR=19							
ANMO	Albuquerque	25.19	331	P		P	03 48 11.7	+1.1
	baz=144							
ANMO	Albuquerque	25.19	331	eP		P	03 48 11.8	+1.3
	comp=Z,6.3nm,0.9s							
TASL	Snake Pit, Alb	25.19	331	P		P	03 48 11.6	+1.1
	baz=144							
TASM	ASL Pad, Albuq	25.20	331	P		P	03 48 11.7	+1.2
	baz=144							
S52A	Salyersville	25.29	16	P		P	03 48 10.9	-0.2
	baz=200							
Q42A	Golden Eagle	25.34	2	P		P	03 48 10.7	-0.8
	baz=182							
R48A	Northridge Ran	25.34	11	P		P	03 48 10.8	-0.8
	baz=193							
OLIL	Olney	25.35	7	eP		P	03 48 10.9	-0.7
	comp=Z,73nm,0.8s							
Q41A	Truxton	25.37	1	P		P	03 48 11.6	-0.2
	baz=181							
R49A	Shelbyville	25.37	12	P		P	03 48 11.5	-0.3
	baz=194							
Q37A	Longview Farm,	25.41	355	P		P	03 48 11.2	-0.9
	baz=173							
Q40A	Laux Farm, Aux	25.41	359	P		P	03 48 11.7	-0.5
	baz=179							
Q43A	New Douglas	25.41	4	P		P	03 48 11.9	-0.3
	baz=184							
Q44A	Meyer Farm, Va	25.43	5	P		P	03 48 12.0	-0.3
	baz=186							
Q38A	Cooks Store, C	25.43	356	P		P	03 48 12.1	-0.2
	baz=175							
Q39A	Willow Grove F	25.48	358	P		P	03 48 12.1	-0.7
	baz=177							
Q45A	Warren Harvey,	25.50	6	P		P	03 48 12.8	-0.2
	baz=188							
R50A	Paris	25.55	14	P		P	03 48 12.6	-0.8
	baz=196							
TUC	Tucson	25.62	320	P		P	03 48 14.9	+0.6
	baz=132							
TUC	Tucson	25.62	320	eP		P	03 48 16.9	+2.6
	comp=Z,9.2nm,1.1s							
BLA	Blacksburg	25.68	21	P		P	03 48 14.8	+0.1
	baz=206							
Q47A	Bedord North L	25.77	9	P		P	03 48 15.6	+0.1
	baz=191							
VWCC	Virginia Weste	25.87	22	eP		P	03 48 16.8	+0.5
KSU1	Kansas State U	25.88	351	P		P	03 48 16.3	-0.1
	baz=169							
KSU1	Kansas State U	25.88	351	eP		P	03 48 16.5	+0.1
P39B	Salisbury	25.92	358	P		P	03 48 16.5	-0.3
	baz=177							
P40A	Paris	25.94	359	P		P	03 48 15.9	-1.0
	baz=179							
P40A	Paris	25.94	359	eP		P	03 48 16.0	-1.0
	comp=Z,28nm,0.6s							
BLO	Bloomington	25.99	9	eP		P	03 48 16.8	-0.6
	comp=Z,20nm,0.6s							
P44A	Sand Creek, Wi	26.02	5	P		P	03 48 17.5	-0.2
	baz=186							
P42A	Winchester	26.02	2	P		P	03 48 17.0	-0.7
	baz=183							
P42A	Winchester	26.02	2	eP		P	03 48 16.6	-1.1
	comp=Z,26nm,0.6s							
P38A	Dawn	26.09	357	eP		P	03 48 18.8	+0.5
	comp=Z,12nm,0.8s							
P41A	Barry, Barry	26.09	1	P		P	03 48 17.5	-0.9
	baz=181							
P43A	Skaggs, Pawnee	26.12	4	P		P	03 48 18.3	-0.3
	baz=184							
T25A	Trinidad	26.16	336	P		P	03 48 20.6	+1.4
	baz=151							
T25A	Trinidad	26.16	336	eP		P	03 48 21.2	+2.0
	comp=Z,10nm,0.8s							
P45A	Graceland, Par	26.17	7	P		P	03 48 18.0	-1.1
	baz=188							
P45A	Graceland, Par	26.17	7	eP		P	03 48 18.9	-0.1
	comp=Z,17nm,0.7s							
P46A	Rosedale	26.33	8	P		P	03 48 20.4	-0.1
	baz=190							
P47A	Martinsville	26.34	9	P		P	03 48 20.1	-0.4
	baz=192							
O40A	La Belle	26.53	360	P		P	03 48 22.1	-0.2
	baz=179							
O41A	Passleys Farm,	26.54	1	P		P	03 48 21.2	-1.1
	baz=181							
O38A	Galt	26.58	357	P		P	03 48 22.4	-0.3
	baz=176							
X18A	Snowflake	26.69	325	eP		P	03 48 25.9	+1.9
	comp=Z,4.6nm,0.8s							
214A	Organ Pipe Nat	26.70	317	P		P	03 48 24.4	+0.4
	baz=128							

P50A	Jamestown	26.93	14	P		P	03 48 25.1	-0.8
	baz=197							
W18A	Petrified Fore	27.01	326	eP		P	03 48 29.7	+2.8
	comp=Z,12nm,1.1s							
HDIL	Hopedale	27.05	4	P		P	03 48 26.2	-0.8
	baz=185							
HDIL	Hopedale	27.05	4	eP		P	03 48 26.8	-0.2
	comp=Z,24nm,0.8s							
O47A	Sheridan	27.08	9	P		P	03 48 25.9	-1.4
	baz=192							
SFIN	Lafayette	27.09	8	P		P	03 48 26.7	-0.6
	baz=190							
SFIN	Lafayette	27.09	8	eP		P	03 48 27.3	0.0
	comp=Z,23nm,0.6s							
SDCO	Great Sand Dun	27.11	335	P		P	03 48 29.9	+1.9
	baz=149							
SDCO	Great Sand Dun	27.11	335	eP		P	03 48 29.3	+1.4
	comp=Z,13nm,1.4s							
IP07	Quail	27.20	24	eP		P	03 48 29.0	+0.6
	comp=Z,24nm,1.4s							
IP05	Hopewell Churc	27.23	25	eP		P	03 48 29.4	+0.7
	comp=Z,19nm,1.2s							
N37A	Lee Faris, Mou	27.26	356	eP		P	03 48 32.0	+3.2
	comp=Z,12nm,0.6s							
IP01	Cuckoo	27.28	24	eP		P	03 48 29.6	+0.5
	comp=Z,29nm,1.4s							
IP03	Louisa	27.29	24	eP		P	03 48 29.8	+0.6
	comp=Z,12nm,1.1s							
N40A	Mertquake, Sal	27.29	0	P		P	03 48 28.4	-0.7
	baz=180							
N39A	Derby Farms, D	27.30	359	P		P	03 48 28.2	-1.0
	baz=178							
N39A	Derby Farms, D	27.30	359	eP		P	03 48 29.0	-0.2
	comp=Z,8.8nm,0.6s							
SPRD	Spring Road, M	27.35	24	eP		P	03 48 30.4	+0.8
	comp=Z,8.3nm,1.1s							
N44A	Piper City	27.38	6	P		P	03 48 29.1	-0.9
	baz=187							
N43A	Stutzman Famil	27.44	4	P		P	03 48 30.1	-0.3
	baz=185							
X16A	Lo Mia Camp, P	27.47	323	eP		P	03 48 32.6	+1.5
	comp=Z,3.4nm,0.9s							
O50A	Cable	27.49	13	P		P	03 48 30.9	-0.1
	baz=197							
N45A	Kentland	27.50	7	P		P	03 48 30.6	-0.4
	baz=188							
N46A	Monticello	27.65	8	P		P	03 48 31.5	-0.8
	baz=190							
S22A	4UR Ranch, Cre	27.67	334	P		P	03 48 34.7	+1.8
	baz=147							
S22A	4UR Ranch, Cre	27.67	334	eP		P	03 48 34.4	+1.5
	comp=Z,16nm,1.3s							
ACSO	Alum Creek Sta	27.72	14	P		P	03 48 32.4	-0.5
	baz=198							
ACSO	Alum Creek Sta	27.72	14	eP		P	03 48 32.6	-0.3
	comp=Z,21nm,0.8s							
M41A	Milan	27.80	2	P		P	03 48 33.4	-0.3
	baz=182							
M39A	Webster	27.89	359	P		P	03 48 34.0	-0.5
	baz=179							
M43A	Waltham Townsh	27.95	4	P		P	03 48 35.1	+0.1
	baz=185							
MVCO	Mesa Verde	27.99	331	P		P	03 48 37.2	+1.5
	baz=143							
MVCO	Mesa Verde	27.99	331	eP		P	03 48 37.3	+1.5
	comp=Z,15nm,0.8s							
Y14A	Wickenburg	28.09	320	eP		P	03 48 37.5	+1.1
	comp=Z,6.3nm,1.3s							
WUAZ	Wupatki	28.21	324	eP		P	03 48 39.9	+2.3
	comp=Z,4.1nm,0.8s							
L42A	Oliver, Polo	28.47	3	P		P	03 48 39.0	-0.6
	baz=184							
L42A	Oliver, Polo	28.47	3	eP		P	03 48 39.1	-0.5
	comp=Z,18nm,0.8s							
L40A	Anamosa	28.47	1	P		P	03 48 39.9	+0.2
	baz=181							
L40A	Anamosa	28.47	1	eP		P	03 48 40.4	+0.7
	comp=Z,14nm,0.8s							
L41A	Preston	28.50	2	P		P	03 48 39.8	-0.1
	baz=182							
PV01	Paradox Valley	28.77	332	eP		P	03 48 44.9	+2.2
	comp=Z,12nm,1.1s							
PV15	Paradox Valley	28.90	332	eP		P	03 48 46.8	+3.0
	comp=Z,11nm,1.0s							
PV02	Paradox Valley	28.91	331	eP		P	03 48 46.1	+2.3
	comp=Z,14nm,1.0s							
PV13	Radium Mtn., P	28.91	331	eP		P	03 48 46.0	+2.1
	comp=Z,17nm,0.9s							
SMCO	Snowmass	28.94	335	eP		P	03 48 46.1	+1.8
	comp=Z,3.8nm,1.0s							
ISCO	Idaho Springs	28.94	337	P		P	03 48 46.1	+1.8
	baz=151							
ISCO	Idaho Springs	28.94	337	eP		P	03 48 47.1	+2.9
	comp=Z,3.2nm,1.0s							
SDMD	Soldier's Deli	28.95	24	eP		P	03 48 44.2	+0.2
	comp=Z,5.5nm,0.7s							
PV05	Paradox Valley	28.97	331	eP		P	03 48 46.3	+1.8
	comp=Z,16nm,0.8s							
PV03	Paradox Valley	29.00	331	eP		P	03 48 46.7	+2.0
	comp=Z,16nm,0.9s							
PV18	Skein Mesa, Pa	29.02	331	eP		P	03 48 46.8	+2.0
	comp=Z,18nm,1.0s							
PV12	Saucer Basin,	29.03	332	eP		P	03 48 46.9	+2.0
	comp=Z,27nm,0.8s							
PV11	David Mesa, Pa	29.04	331	eP		P	03 48 47.0	+2.0
	comp=Z,17nm,1.0s							
PDMCI	Parker Dam,Lak	29.05	319	P		P	03 48 45.9	+1.0
	baz=130							
PV07	Paradox Valley	29.05	332	eP		P	03 48 47.4	+2.3
	comp=Z,13nm,0.8s							
O56A	Blue Knob Stat	29.06	21	P		P	03 48 44.7	-0.3
	baz=207							
O56A	Blue Knob Stat	29.06	21	eP		P	03 48 45.2	+0.2
	comp=Z,17nm,0.9s							
PV17	East Wray Mesa	29.07	331	eP		P	03 48 47.2	+1.9
	comp=Z,18nm,0.8s							
PV16	Nyswonger Mesa	29.07	331	eP		P	03 48 47.4	+2.0
	comp=Z,13nm,0.8s							
PV19	Morning Glory	29.10	331	eP		P	03 48 47.6	+2.0
	comp=Z,9.9nm,0.9s							
K39A	Oelwein	29.11	360	P		P	03 48 44.4	-1.0
	baz=179							
PV20	West Nyswonger	29.12	331	eP		P	03 48 47.5	+1.8
	comp=Z,11nm,0.8s							
PV04	Paradox Valley	29.14	331	eP		P	03 48 48.0	+2.1
	comp=Z,19nm,0.8s							
PV22	Blue Mesa, Par	29.20	332	eP		P	03 48 48.2	+1.8
	comp=Z,12nm,0.7s							
N54A	Moraine State	29.22	18	P		P	03 48 46.0	-0.3
	baz=204							
N54A	Moraine State	29.22	18	eP		P	03 48 46.2	-0.2
	comp=Z,17nm,0.8s							
N54A				eP		pP	03 48 55.9	+1.3
PV23	Carpenter Ridg	29.23	331	eP		P	03 48 48.7	+1.9
	comp=Z,18nm,0.8s							
NNA	Nana	29.28	149	LR		LR	03 57 59.2	
	comp=Z,76nm,20.0s,baz=291,slow=32							
PV09	Paradox Valley	29.33	331	eP		P	03 48 49.5	+1.8
JFWS	Jewell Farm	29.35	2	eP		P	03 48 47.4	0.0
	comp=Z,8.3nm,0.8s							
U15A	North Rim	29.38	325	eP		P	03 48 50.1	+1.9
	comp=Z,4.5nm,1.0s							
W13A	Hualapai Mount	29.40	321	eP		P	03 48 50.0	+1.6
	comp=Z,6.3nm,1.2s							
BC3	Big Chuckawall	29.49	317	P		P	03 48 49.7	+0.7
	baz=127							
IRM	Iron Mountain	29.60	318	P		P	03 48 50.7	+0.8
	baz=128							
SSPA	Standing Stone	29.62	22	P		P	03 48 49.6	-0.3
	baz=208							
SSPA	Standing Stone	29.62	22	eP		P	03 48 49.8	-0.2
SSPA	Standing Stone	29.62	22	eP		P	03 48 49.8	-0.2
	comp=Z,11nm,0.8s							
J39A	Decorah	29.74	360	P		P	03 48 51.4	+0.4
	baz=180							
EML	El Monte Cty P	30.00	314	eP		P	03 48 56.5	+3.2
KNB	Kanab	30.10	325	eP		P	03 48 56.4	+2.0
	comp=Z,5.4nm,0.8s							
LDFC	Landfair	30.15	320	eP		P	03 48 57.1	+2.3
	comp=Z,7.0nm,0.6s							
PHWY	Pilot Hill	30.20	339	eP		P	03 48 56.3	+0.9
	comp=Z,3.4nm,0.8s							
O20A	White River Ci	30.27	334	eP		P	03 48 57.7	+1.8
	comp=Z,7.1nm,0.9s							
GMRC	Granite Mounta	30.32	319	P		P	03 48 57.3	+1.0
	baz=128							
LCMT	Little Creek M	30.33	324	eP		P	03 48 58.8	+2.3
	comp=Z,2.6nm,0.9s							
I42A	Draeger Farm,	30.39	4	P		P	03 48 55.9	-0.8
	baz=185							
I42A	Draeger Farm,	30.39	4	eP		P	03 48 56.0	-0.7
	comp=Z,11nm,0.6s							
I38A	Scanlan Farm,	30.45	359	P		P	03 48 56.3	-0.9
	baz=178							
SRU	San Rafael Swe	30.47	330	eP		P	03 48 59.5	+1.8
	comp=Z,7.9nm,1.1s							
MTPU	Mount Pierson	30.50	327	eP		P	03 49 00.8	+2.7
	comp=Z,7.8nm,0.9s							
LUPA	Lehigh Univers	30.56	25	eP		P	03 48 58.6	+0.4
	comp=Z,1.5nm,0.7s							
SZCU	Shurtz Canyon	30.66	325	eP		P	03 49 01.6	+2.1
	comp=Z,10.0nm,1.3s							
N59A	State Game Lan	30.67	24	P		P	03 48 59.1	-0.1
	baz=211							
P18A	Preston Nutter	30.75	331	eP		P	03 49 02.0	+1.8
	comp=Z,4.2nm,1.0s							
CCUT	Cedar City	30.78	325	eP		P	03 49 02.9	+2.3
	comp=Z,6.5nm,1.1s							
MSU	Marysvale	30.84	328	eP		P	03 49 03.8	+2.8
P17A	Butcher Ranch,	30.86	330	eP		P	03 49 03.0	+1.9
	comp=Z,11nm,0.9s							
TMUT	Trail Mountain	30.95	330	eP		P	03 49 03.8	+1.8
	comp=Z,7.7nm,1.2s							
SHPR	Sheep Range	31.11	322	eP		P	03 49 05.1	+1.8
	comp=Z,2.6nm,1.0s							
RWWY	Rawlins	31.18	337	eP		P	03 49 05.6	+1.6
	comp=Z,6.3nm,0.8s							
ODNJ	Ogdensburg	31.28	25	eP		P	03 49 04.8	+0.2
	comp=Z,16nm,1.3s							
BREC	Barre Substati	31.30	315	eP		P	03 49 01.4	-3.4
MMNY	Mt. Morris Dam	31.48	20	eP		P	03 49 06.0	-0.3
	comp=Z,20nm,1.0s							
G38A	Ridgeland	31.58	360	P		P	03 49 05.7	-1.5
	baz=179							
SPMN	Marine on St.	31.65	358	P		P	03 49 06.7	-1.1
	baz=178							
SPMN	Marine on St.	31.65	358	eP		P	03 49 07.1	-0.7
	comp=Z,7.7nm,0.8s							
BINY	Binghamton	31.68	23	P		P	03 49 07.8	-0.4
	baz=210							
BINY	Binghamton	31.68	23	eP		P	03 49 08.2	0.0
	comp=Z,20nm,0.9s							
G39A	Holcombe	31.70	1	P		P	03 49 07.2	-1.0
	baz=181							
MPU	Maple Canyon	31.71	330	eP		P	03 49 10.6	+1.9
	comp=Z,7.7nm,0.9s							
PSUT	Pine Spring	31.75	326	eP		P	03 49 11.2	+2.1
	comp=Z,4.7nm,1.1s							
K22A	Casper	31.77	339	P		P	03 49 09.7	+0.6
	baz=152							
K22A	Casper	31.77	339	eP		P	03 49 10.0	+1.0
	comp=Z,8.2nm,0.8s							
NLU	North Lily Min	31.88	330	eP		P	03 49 12.4	+2.3
	comp=Z,9.1nm,1.0s							
MPMC	Manual Prospec	32.28	319	P		P	03 49 14.4	+0.7
	baz=127							
CTU	Camp Tracy	32.30	331	eP		P	03 49 16.1	+2.4
	comp=Z,5.2nm,0.9s							
RSSD	Black Hills	32.31	343	P		P	03 49 14.1	+0.2
	baz=157							
RSSD	Black Hills	32.31	343	eP		P	03 49 14.8	+0.9
	comp=Z,2.9nm,0.8s							
F38A	Pierce - Schro	32.37	360	P		P	03 49 12.9	-1.2
	baz=179							
DUG	Dugway, Tooele	32.43	329	eP		P	03 49 17.1	+2.2
	comp=Z,3.9nm,1.1s							
TCUT	Toone Canyon	32.47	332	eP		P	03 49 17.4	+2.1
	comp=Z,19nm,0.7s							
DAC	Darwin (Calif)	32.48	319	eP		P	03 49 18.5	+3.0
	comp=Z,7.6nm,1.3s							
COWI	Conover	32.58	3	eP		P	03 49 14.6	-1.4
	comp=Z,10nm,0.7s							
R11A	Troy Canyon, C	32.60	324	P		P	03 49 16.7	+0.3
	baz=133							
R11A	Troy Canyon, C	32.60	324	eP		P	03 49 17.2	+0.8
	comp=Z,2.0nm,0.8s							
E40A	Wakefield	32.89	2	P		P	03 49 17.1	-1.5
	baz=183							
HWUT	Hardware Ranch	32.93	332	eP		P	03 49 20.4	+1.1
	comp=Z,6.2nm,1.0s							
SADO	Sapowa	32.96	17	eP		P	03 49 18.3	-0.9
	comp=Z,10nm,0.8s							
BW06	Boulder Array	33.01	335	P		P	03 49 20.3	+0.3
	baz=147							
BW06	Boulder Array	33.01	335	eP		P	03 49 20.6	+0.6
	comp=Z,6.7nm,1.4s							
PD31	Pinedale Array	33.01	335	eP		P	03 49 20.7	+0.6
PDAR	Pinedale Array	33.01	335	P		P	03 49 20.4	+0.4
	comp=Z,2.3nm,0.9s,baz=130,slow=8.0,SNR=16							
PDAR				LR		LR	04 04 44.2	
	comp=Z,49nm,19.3s,baz=199,slow=40							
PDAR	Pinedale Array	33.01	335	eP		P	03 49 19.5	-0.5
E38A	The Farm, Brul	33.01	0	P		P	03 49 18.5	-1.2
	baz=180							
E38A	The Farm, Brul	33.01	0	eP		P	03 49 18.6	-1.1
	comp=Z,6.8nm,0.6s							
TRY	Troy	33.04	25	eP		P	03 49 20.2	+0.2
	comp=Z,20nm,0.8s							
BGU	Big Grassy Mou	33.09	330	eP		P	03 49 23.0	+2.3
	comp=Z,5.5nm,0.9s							
VES	Vestal, Richgr	33.19	317	P		P	03 49 22.7	+1.3
	baz=125							
QUA2	Belchertown	33.22	27	eP		P	03 49 21.2	-0.4
	comp=Z,13nm,0.8s							
GATR	Gnd/Air Tx Cnt	33.45	314	eP		P	03 49 22.2	-1.6
GATR				esP		sP	03 49 38.7	+3.3
D37A	Cotton	33.57	359	P		P	03 49 23.4	-1.1
	baz=178							
ACCN	Adirondack Com	33.59	24	eP		P	03 49 24.4	-0.4
	comp=Z,11nm,0.9s							
HVU	Hansel Valley	33.63	331	eP		P	03 49 27.2	+1.9
	comp=Z,7.7nm,1.0s							
AHID	Auburn Hatcher	33.65	334	eP		P	03 49 27.4	+1.8
	comp=Z,22nm,1.5s							
HRV	Adam Dziewonsk	33.76	27	P		P	03 49 25.9	-0.3
	baz=217							
HRV	Adam Dziewonsk	33.76	27	eP		P	03 49 25.9	-0.3
	comp=Z,12nm,0.8s							
NCB	Newcomb	33.87	23	eP		P	03 49 26.7	-0.5
	comp=Z,9.8nm,0.8s							
REDW	Red Top Meadow	34.03	335	eP		P	03 49 29.9	+1.0
	comp=Z,30nm,0.9s							
SNOW	Snow King Moun	34.08	335	eP		P	03 49 30.7	+1.4
	comp=Z,36nm,0.8s							
LOHW	Long Hollow	34.14	335	eP		P	03 49 31.0	+1.2
	comp=Z,9.7nm,0.8s							
C35A	Jirik Farms, M	34.16	357	P		P	03 49 28.0	-1.7
	baz=176							
NV11	Mina Array Sit	34.17	321	eP		P	03 49 31.8	+1.7
	comp=Z,0.6nm,1.0s							
C36A	Pine Crest Far	34.18	359	P		P	03 49 29.2	-0.7
	baz=178							
TPAW	Teton Pass	34.18	335	eP		P	03 49 31.9	+1.6
	comp=Z,30nm,1.3s							
MDPB	Devils Postpil	34.25	320	eP		P	03 49 32.6	+1.8
	comp=Z,7.1nm,1.1s							
NV01	Mina Array Sit	34.26	321	eP		P	03 49 32.2	+1.3
NVAR	Mina Array Bea	34.26	321	P		P	03 49 32.5	+1.6
	comp=Z,6.7nm,0.7s,baz=136,slow=8.2,SNR=40							
NVAR				LR		LR	04 04 54.6	
	comp=Z,140nm,20.0s,baz=262,slow=39							
LONY	Lake Ozonia	34.29	22	P		P	03 49 29.8	-1.1
	baz=210							
LONY	Lake Ozonia	34.29	22	eP		P	03 49 30.4	-0.4
	comp=Z,18nm,1.0s							
MOOW	Moose Ponds	34.31	335	eP		P	03 49 32.6	+1.3
	comp=Z,5.2nm,0.9s							
FXWY	Fox Creek	34.33	335	eP		P	03 49 32.3	+0.8
	comp=Z,4.7nm,0.8s							
C40A	Isle Royale Na	34.39	3	P		P	03 49 29.8	-1.8
	baz=184							
PTGA	Pitinga	34.47	112	P		P	03 49 31.6	-1.2
	comp=Z,4.3nm,0.8s,baz=312,slow=12,SNR=6.3							
PTGA	Pitinga	34.47	112	eP		P	03 49 33.5	+0.8
PTGA				epP		sP	03 49 44.2	-0.3
IMW	Indian Meadow	34.51	335	eP		P	03 49 34.5	+1.3
	comp=Z,6.4nm,0.8s							
KVN	Kaiserville	34.53	322	eP		P	03 49 34.9	+1.7
	comp=Z,4.4nm,1.0s							
FLWY	Flagg Ranch	34.57	336	eP		P	03 49 35.1	+1.6
	comp=Z,4.7nm,0.8s							
VT1	Waterbury	34.74	24	eP		P	03 49 34.0	-0.8
	comp=Z,11nm,1.0s							
H17A	Grant Village	34.78	336	eP		P	03 49 37.6	+2.3
	comp=Z,5.8nm,1.1s							
B35A	Bob, Littlefor	34.81	358	P		P	03 49 33.9	-1.4
	baz=176							
B35A	Bob, Littlefor	34.81	358	eP		P	03 49 34.5	-0.8
	comp=Z,3.9nm,1.1s							
FRNY	Flat Rock	34.84	23	eP		P	03 49 35.2	-0.4
	comp=Z,10nm,1.0s							
RLMT	Red Lodge	34.90	338	P		P	03 49 36.6	+0.3
	baz=149							
BMN	Battle Mountai	34.94	325	eP		P	03 49 40.6	+3.8
	comp=Z,5.4nm,0.8s							
B34A	Aery, Baudette	34.98	357	P		P	03 49 35.4	-1.4
	baz=175							
LBNH	Lisbon	35.00	25	P		P	03 49 36.9	-0.1
	baz=215							
WAKR	Walker	35.00	320	eP		P	03 49 39.7	+2.3
	comp=Z,7.7nm,1.3s							
YMR	Madison River	35.16	336	eP		P	03 49 41.3	+2.6
	comp=Z,11nm,0.9s							
YERR	Yerington	35.18	321	eP		P	03 49 40.5	+1.7
	comp=Z,4.3nm,0.7s							
CMB	Columbia Colle	35.32	319	eP		P	03 49 40.8	+1.0
	comp=Z,3.3nm,1.0s							
YHB	Horse Butte	35.32	336	eP		P	03 49 42.0	+1.9
	comp=Z,4.4nm,0.8s							
PNTR	Pine Nut	35.46	321	eP		P	03 49 44.7	+3.4
	comp=Z,7.9nm,0.8s							
A33A	Warroad	35.48	356	P		P	03 49 39.9	-1.1
	baz=174							
QLMT	Earthquake Lak	35.48	336	eP		P	03 49 43.8	+2.4
GCMT	Greycliff	35.61	338	eP		P	03 49 43.1	+0.7
TRQ	Mont Tremblant	35.69	21	eP		P	03 49 42.5	-0.5
PAHR	Pah Rah Range	35.72	322	eP		P	03 49 45.1	+1.7
	comp=Z,3.9nm,1.0s							
HLID	Hailey	35.77	331	P		P	03 49 45.2	+1.3
	baz=140							
HLID	Hailey	35.77	331	eP		P	03 49 45.5	+1.6
	comp=Z,5.3nm,0.9s							
SAML	Samuel	36.02	127	eP		P	03 49 43.2	-2.9
	comp=Z,7.5nm,0.8s							
MCMT	McKenzie Canyo	36.06	334	eP		P	03 49 48.5	+2.1
BOZ	Bozeman (W)	36.19	336	P		P	03 49 48.7	+1.3
	baz=146							
BOZ	Bozeman (W)	36.19	336	eP		P	03 49 49.0	+1.6
	comp=Z,7.0nm,1.1s							
MFID	Camas Ranch	36.34	330	eP		P	03 49 50.0	+1.4
	comp=Z,8.7nm,1.1s							
DLMT	Dillon	36.39	335	eP		P	03 49 51.1	+2.0
	comp=Z,14nm,1.0s							
BEKR	Beckworth	36.40	322	eP		P	03 49 51.1	+1.7
	comp=Z,3.7nm,0.8s							
LRM	Limekiln Ridge	36.70	335	eP		P	03 49 53.2	+1.3
PKME	Peaks-Kenny Pk	36.94	27	P		P	03 49 53.1	-0.5
	baz=218							
PKME	Peaks-Kenny Pk	36.94	27	eP		P	03 49 53.3	-0.3
	comp=Z,11nm,0.8s							
O03D	Paynes Creek	37.54	321	P		P	03 49 58.7	-0.2
	baz=127							
EGMT	Eagleton	37.57	340	P		P	03 49 59.5	+0.5
	baz=150							
EGMT	Eagleton	37.57	340	eP		P	03 50 00.1	+1.0
	comp=Z,8.7nm,0.7s							
J08A	Circle Bar Ran	37.63	327	eP		P	03 50 00.2	+0.5
	comp=Z,18nm,0.9s							
LPAZ	La Paz	37.65	141	P		P	03 49 57.5	-3.1
	comp=Z,1.8nm,0.9s,baz=320,slow=8.8,SNR=7.4							
MOD	Modoc Plateau	37.66	324	eP		P	03 50 00.8	+0.9
	comp=Z,6.9nm,1.3s							
BMO	Blue Mountains	38.11	330	eP		P	03 50 04.0	+0.3
	comp=Z,4.8nm,1.0s							
MSO	Missoula	38.13	335	P		P	03 50 04.3	+0.6
	baz=143							
MSO	Missoula	38.13	335	eP		P	03 50 04.5	+0.7
	comp=Z,21nm,1.5s							
I07A	Izee	38.67	327	eP		P	03 50 12.6	+4.1
	comp=Z,2.5nm,0.8s							
KMRM	Mail Ridge	38.69	319	eP		P	03 50 10.4	+1.9
	comp=Z,28nm,1.3s							
F10A	Beach Ranch, E	38.90	331	eP		P	03 50 11.1	+0.8
	comp=Z,10nm,0.8s							
YBH	Yreka Blue Hor	38.95	322	P		P	03 50 09.1	-1.7
	comp=Z,1.3nm,0.6s,baz=146,slow=7.3,SNR=6.8							
YBH				LR		LR	04 08 21.1	
	comp=Z,69nm,20.6s,baz=166,slow=39							
JTMT	Jette	39.00	336	eP		P	03 50 12.3	+1.2
	comp=Z,15nm,1.1s							
MNMC	Minye Minye	39.04	146	eP		P	03 50 10.0	-1.9
	comp=Z,14nm,0.9s							
KHMM	Horse Mountain	39.07	320	eP		P	03 50 13.1	+1.2
	comp=Z,9.6nm,0.9s							
PINE	Pine Mountain	39.25	326	eP		P	03 50 15.2	+1.9
	comp=Z,9.9nm,1.0s							
WALA	Waterton Lakes	39.92	337	eP		P	03 50 20.1	+1.3
	comp=Z,7.7nm,1.0s							
I04A	Tendick Farm,	40.06	325	P		P	03 50 19.9	0.0
	baz=129							
H04A	Detroit Lake	40.51	326	eP		P	03 50 24.1	+0.5
	comp=Z,17nm,0.7s							
I03D	Drain, OR	40.53	324	P		P	03 50 24.4	+0.7
	baz=128							
NEW	Newport	40.59	334	LR		LR	04 10 47.6	
	comp=Z,50nm,18.4s,baz=135,slow=41							
LTY	Liberty	41.47	330	eP		P	03 50 32.5	+1.0
	comp=Z,10nm,1.3s							
LON	Longmire	41.68	329	eP		P	03 50 34.1	+0.9
	comp=Z,7.4nm,0.9s							
D05A	Enumclaw	42.07	329	eP		P	03 50 37.8	+1.5
	comp=Z,17nm,1.1s							
SIV	San Ignacio	42.12	133	P		P	03 50 34.9	-2.3
	comp=Z,4.5nm,0.6s,baz=308,slow=8.8,SNR=31							
E03A	Lebam	42.45	327	eP		P	03 50 41.0	+1.6
	comp=Z,13nm,0.8s							
NLWA	Neilton Lookou	43.16	328	eP		P	03 50 46.5	+1.3
	comp=Z,27nm,1.4s							
RPN	Rapa Nui	43.86	203	LR		LR	04 03 47.4	
	comp=Z,105nm,20.9s,baz=316,slow=29							
FCC	Fort Churchill	45.23	358	eP		P	03 51 01.1	-0.4
	comp=Z,12nm,0.8s							
SCHQ	Schefferville	45.60	20	P		P	03 51 03.9	-0.7
	comp=Z,6.4nm,0.6s,baz=243,slow=4.5,S

KURK	Kurchatov	115.51	7	ePKPdf	PKPdf	04 01 26.2	-0.2
KURBB	Kurchatov Arra	115.59	7	PKP	PKPdf	04 01 26.2	-0.4
	comp=Z,0.2nm,0.5s,baz=196,slow=0.7,SNR=2.4						
LZH	Lanzhou	128.56	344	ePKP	PKPdf	04 01 53.3	+1.2
LZH				pPKP	sPKPdf	04 02 03.6	-1.0
LZH				sPKP		04 02 07.8	
LZH				LR	LR		
	comp=N,150nm,18.3s						
LZH				LR	LR		
	comp=E,140nm,18.0s						
LZH				LR	LR		
	comp=Z,190nm,20.1s						
CD2	Chengdu	133.43	342	PKP	PKPdf	04 02 00.4	-0.9
CM31	Chiang Mai Arr	146.57	341	ePKPdf	PKPbc	04 02 26.7	-0.1
CMAR	Chiang Mai Arr	146.57	341	PKPbc	PKPbc	04 02 26.7	-0.1
	comp=Z,2.6nm,0.3s,baz=349,slow=3.7,SNR=11						

DDA ***25*** *03:47:27.8, 40°.74N×29°.96E, h7km, Ml2.5*
ISK ***25*** *03:47:27.8, 40°.74N×29°.95E, h8km, ML2.4/12*
ISCJB ***25*** *03:47:28.1±0.3, 40°.74N±0°.03×29°.95E±0°.03, h4km±5km, Error ellipse: s-maj=4.6km s-min=3.1km az=19.0*
CSEM ***25*** *03:47:28.3±0.1, 40°.74N×29°.95E, h8km, ML2.4, Error ellipse: s-maj=2.0km s-min=1.5km az=28.0*

ISC 25 03:47:28.1±0.9**, 40°.74N**±0°.02×**29°.95E**±0°.02**, h12**km±7km**, n47**, σ0s41/67**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HRT	**Hereke**	**0.23**	**291**	PG	**Pg**	**03 47 32.8**	**-0.2**
HRT				SG	**Sg**	**03 47 36.3**	**0.0**
HRT	**Hereke**	**0.23**	**291**	*e*Pg	**Pg**	**03 47 32.8**	**-0.2**
HRT				*e*Sg	**Sg**	**03 47 36.3**	**0.0**
SPNC	**Sapanca-Adapaz**	**0.28**	**101**	PG	**Pg**	**03 47 34.1**	**+0.2**
SPNC	**Sapanca-Adapaz**	**0.28**	**101**	*e*Pg	**Pg**	**03 47 34.1**	**+0.2**
SAUV	**Serdivan-Sakar**	**0.29**	**90**	PG	**Pg**	**03 47 34.0**	**0.0**
SAUV				SG	**Sg**	**03 47 38.3**	**+0.4**
SAUV	**Serdivan-Sakar**	**0.29**	**90**	*e*Pg	**Pg**	**03 47 34.0**	**0.0**
SAUV				*e*Sg	**Sg**	**03 47 38.3**	**+0.4**
ADVT	**Abdulvahap**	**0.35**	**208**	PG	**Pg**	**03 47 34.9**	**-0.2**
ADVT	**Abdulvahap**	**0.35**	**208**	*e*Pg	**Pg**	**03 47 34.9**	**-0.2**
GEYV	**SAKARYA_Geyve**	**0.37**	**134**	*i* P	**Pg**	**03 47 35.4**	**-0.1**
GEYV				*i* S	**Sg**	**03 47 40.7**	**+0.3**
GEYV	**SAKARYA_Geyve**	**0.37**	**134**	P	**Pg**	**03 47 35.4**	**-0.1**
GEYV				S	**Sg**	**03 47 40.7**	**+0.3**
KAND	**Kocaeli-Kandir**	**0.40**	**27**	*i* P	**Pg**	**03 47 36.3**	**+0.3**
KAND				*i* S	**Sg**	**03 47 41.7**	**+0.3**
KAND	**Kocaeli-Kandir**	**0.40**	**27**	P	**Pg**	**03 47 36.3**	**+0.3**
KAND				S	**Sg**	**03 47 41.7**	**+0.3**
SILT	**Sile**	**0.47**	**331**	PG	**Pg**	**03 47 37.6**	**+0.2**
SILT				SG	**Sb**	**03 47 44.4**	**-1.0**
SILT	**Sile**	**0.47**	**331**	*e*Pg	**Pg**	**03 47 37.6**	**+0.2**
SILT				*e*Sg	**Sb**	**03 47 44.4**	**-1.0**
YLV	**Yalova**	**0.47**	**249**	PG	**Pg**	**03 47 37.5**	**+0.1**
YLV				SG	**Sb**	**03 47 44.5**	**-0.9**
YLV	**Yalova**	**0.47**	**249**	*e*Pg	**Pg**	**03 47 37.5**	**+0.1**
YLV				*e*Sg	**Sb**	**03 47 44.5**	**-0.9**
CAVI	**Cavuskoy**	**0.55**	**189**	PG	**Pg**	**03 47 38.8**	**0.0**
CAVI	**Cavuskoy**	**0.55**	**189**	*e*Pg	**Pg**	**03 47 38.8**	**0.0**
BUY	**Buyukada**	**0.64**	**280**	PG	**Pg**	**03 47 40.6**	**0.0**
BUY	**Buyukada**	**0.64**	**280**	*i* P	**Pg**	**03 47 40.6**	**0.0**
BUY				*i* S	**Sg**	**03 47 49.4**	**+0.3**
BUY	**Buyukada**	**0.64**	**280**	P	**Pg**	**03 47 40.6**	**0.0**
BUY				S	**Sg**	**03 47 49.4**	**+0.3**
SAHE	**Sakarya_HENDEK**	**0.69**	**80**	*i* P	**Pg**	**03 47 41.2**	**-0.4**
SAHE				*i* S	**Sb**	**03 47 51.1**	**-0.7**
SAHE	**Sakarya_HENDEK**	**0.69**	**80**	P	**Pg**	**03 47 41.2**	**-0.4**
SAHE				S	**Sb**	**03 47 51.1**	**-0.7**
KAVV	**Kandilli-Istan**	**0.75**	**296**	PG	**Pg**	**03 47 42.4**	**-0.2**
KAVV	**Kandilli-Istan**	**0.75**	**296**	*e*Pg	**Pg**	**03 47 42.4**	**-0.2**
ISK	**Istanbul-Kandi**	**0.75**	**296**	PG	**Pg**	**03 47 42.4**	**-0.2**
ISK	**Istanbul-Kandi**	**0.75**	**296**	*e*Pg	**Pg**	**03 47 42.4**	**-0.2**
SBT5	**Esenkoy-Cinarc**	**0.82**	**263**	PG	**Pb**	**03 47 44.4**	**+0.1**
SBT5	**Esenkoy-Cinarc**	**0.82**	**263**	*e*Pg	**Pb**	**03 47 44.4**	**+0.1**
AUBOZ	**BOZOYÜK**	**0.83**	**176**	PG	**Pb**	**03 47 45.6**	**-0.2**
AUBOZ	**BOZOYUK**	**0.83**	**176**	*i* P	**Pn**	**03 47 45.6**	**-0.2**
AUBOZ				*i* S	**Sn**	**03 47 59.0**	**+1.0**
AUBOZ	**BOZOYUK**	**0.83**	**176**	*e*Pg	**Pb**	**03 47 44.4**	**-0.2**
AUBOZ	**BOZOYUK**	**0.83**	**176**	P	**Pn**	**03 47 45.6**	**-0.2**
AUBOZ				S	**Sn**	**03 47 59.0**	**+1.0**
KLYT	**Kilyos**	**0.86**	**307**	PG	**Pg**	**03 47 44.6**	**-0.1**
KLYT	**Kilyos**	**0.86**	**307**	*e*Pg	**Pg**	**03 47 44.6**	**-0.1**
BORA	**Eskisehir**	**0.94**	**156**	PG	**Pb**	**03 47 46.2**	**-0.3**
BORA	**Eskisehir**	**0.94**	**156**	*i* P	**Pg**	**03 47 45.6**	**-0.7**
BORA				*i* S	**Sb**	**03 47 59.3**	**+0.3**
BORA	**Eskisehir**	**0.94**	**156**	P	**Pg**	**03 47 45.6**	**-0.7**
BORA	**Eskisehir**	**0.94**	**156**	*e*Pg	**Pb**	**03 47 46.2**	**-0.3**
BORA				S	**Sb**	**03 47 59.3**	**+0.3**
CTKS	**Kestanelik-??a**	**1.20**	**295**	PN	**Pn**	**03 47 50.9**	**+0.1**
CTKS	**Kestanelik-??a**	**1.20**	**295**	*e*Pn	**Pn**	**03 47 50.9**	**+0.1**
KCTX	**Karacabey (Bur**	**1.30**	**249**	PN	**Pg**	**03 47 53.6**	**+0.4**
KCTX	**Karacabey (Bur**	**1.30**	**249**	*e*Pn	**Pg**	**03 47 53.6**	**+0.4**
SLVT	**Silivri**	**1.41**	**291**	PN	**Pb**	**03 47 54.3**	**0.0**
SLVT	**Silivri**	**1.41**	**291**	*e*Pn	**Pb**	**03 47 54.3**	**0.0**
AUMIH	**MIHALICIK**	**1.46**	**126**	PN	**Pb**	**03 47 55.2**	**-0.2**
AUMIH	**MIHALICIK**	**1.46**	**126**	*e*Pn	**Pb**	**03 47 55.2**	**-0.2**

ISCJB ***25*** *04:04:31.0±0.5, 47°.35N±0°.03×113°.19W±0°.04, h29km±4km, Error ellipse: s-maj=6.7km s-min=3.0km az=32.6*
NEIC ***25*** *04:04:31.3±0.0, 47°.35N×113°.14W, h25km, ML3.1(BUT), After BUT.*
BUT ***25*** *04:04:31.0, 47°.35N×113°.14W, h25km, ML3.8/2, ML3.1, Montana*

ISC 25 04:04:31.2±1.1**, 47°.35N**±0°.03×**113°.16W**±0°.03**, h24**km±11km**, n68**, σ0s76/78**, Montana**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLMT	**Seeley Lake**	**0.25**	**245**	P	**Pb**	**04 04 37.4**	**-0.1**
OVMT	**Ovando**	**0.31**	**159**	P	**Pb**	**04 04 37.8**	**-0.5**
CHMT	**Chamberlain Mo**	**0.44**	**189**	*e*Pg	**Pb**	**04 04 40.3**	**-0.2**
SWMT	**Swartz Lake**	**0.59**	**286**	P	**Pb**	**04 04 42.7**	**-0.3**
LYMT	**Lyon Mountain**	**0.70**	**122**	P	**Pb**	**04 04 44.1**	**-0.8**
LYMT				S	**Sb**	**04 04 54.1**	**-0.2**
MSO	**Missoula**	**0.75**	**226**	*e*Pg	**Pb**	**04 04 45.6**	**0.0**
MSO				*e*Sn	**Sb**	**04 04 55.8**	**+0.4**
MSO	**Missoula**	**0.75**	**226**	P	**Pb**	**04 04 45.5**	**-0.1**
	baz=46						
MSO				S	**Sb**	**04 04 55.7**	**+0.3**
	baz=46						
YBMT	**Yellow Bay**	**0.77**	**312**	P	**Pb**	**04 04 45.9**	**-0.1**
JTMT	**Jette**	**0.86**	**298**	P	**Pb**	**04 04 47.4**	**-0.2**
JTMT	**Jette**	**0.86**	**298**	*e*Pg	**Pb**	**04 04 47.3**	**-0.2**
JTMT				*e*Sg	**Sb**	**04 04 58.1**	**-0.6**
FBMT	**Ferry Basin**	**0.86**	**274**	P	**Pb**	**04 04 47.2**	**-0.3**
BPMT	**Black Pine Rid**	**0.93**	**192**	P	**Pb**	**04 04 48.6**	**-0.3**
HRY	**Holter Researc**	**1.11**	**125**	P	**Pn**	**04 04 51.4**	**0.0**
HRY				S	**Sn**	**04 05 06.2**	**+0.2**
HRY	**Holter Researc**	**1.11**	**125**	*e*Pn	**Pn**	**04 04 51.1**	**-0.2**
BSMT	**Bassoo Peak**	**1.21**	**295**	P	**Pb**	**04 04 53.7**	**+0.1**
BSMT				S	**Sb**	**04 05 09.3**	**+0.5**
BSMT	**Bassoo Peak**	**1.21**	**295**	*e*Pn	**Pb**	**04 04 53.6**	**+0.1**
BHMT	**Big Hole Peak**	**1.30**	**281**	P	**Pb**	**04 04 55.0**	**0.0**
BHMT				S	**Sb**	**04 05 12.3**	**+1.1**
HBMT	**Mount Humbug**	**1.60**	**166**	Pn	**Pn**	**04 04 58.3**	**0.0**
LRM	**Limekiln Ridge**	**1.60**	**162**	Pn	**Pn**	**04 04 58.5**	**+0.2**
LRM				Sn	**Sb**	**04 05 19.6**	**-0.6**
LRM	**Limekiln Ridge**	**1.60**	**162**	*e*Pn	**Pn**	**04 04 58.6**	**+0.4**
WALA	**Waterton Lakes**	**1.78**	**344**	Pg	**Pb**	**04 05 03.1**	**-0.1**
WALA	**Waterton Lakes**	**1.78**	**344**	*e*Pn	**Pb**	**04 05 03.0**	**-0.2**
DLMT	**Dillon**	**2.02**	**169**	*e*Pn	**Pn**	**04 05 04.3**	**+0.3**
BOZ	**Bozeman (W)**	**2.05**	**148**	*e*Pn	**Pn**	**04 05 04.5**	**+0.2**
BOZ	**Bozeman (W)**	**2.05**	**148**	P	**Pn**	**04 05 04.6**	**+0.3**
BOZ	baz=330			Sb	**Sb**	**04 05 34.3**	**+1.5**
	baz=330						
EGMT	**Eagleton**	**2.40**	**72**	*e*Pn	**Pn**	**04 05 09.9**	**+0.9**
EGMT	**Eagleton**	**2.40**	**72**	P	**Pn**	**04 05 10.0**	**+0.9**
	baz=255						
MCMT	**McKenzie Canyo**	**2.53**	**175**	*e*Pn	**Pn**	**04 05 11.3**	**+0.3**
QLMT	**Earthquake Lak**	**2.79**	**154**	*e*Pn	**Pn**	**04 05 14.8**	**+0.2**
MOMT	**Monida**	**2.81**	**169**	Pn	**Pn**	**04 05 15.5**	**+0.7**
NEW	**Newport**	**2.83**	**290**	*e*Pn	**Pn**	**04 05 15.0**	**+0.1**
NEW	**Newport**	**2.83**	**290**	P	**Pn**	**04 05 15.0**	**+0.1**
	baz=107						
GCMT	**Greycliff**	**2.87**	**122**	*e*Pn	**Pn**	**04 05 16.9**	**+1.3**
YHB	**Horse Butte**	**2.94**	**152**	*e*Pn	**Pn**	**04 05 17.2**	**+0.7**
YMR	**Madison River**	**3.09**	**150**	*e*Pn	**Pn**	**04 05 19.6**	**+1.0**
F10A	**Beach Ranch, E**	**3.12**	**245**	*e*Pn	**Pn**	**04 05 20.2**	**+1.2**
YNR	**Norris Junctio**	**3.15**	**146**	*e*Pn	**Pn**	**04 05 20.1**	**+0.6**
DPW	**Davenport**	**3.45**	**281**	*e*Pn	**Pn**	**04 05 23.7**	**+0.2**
YPP	**Pitchstone Pla**	**3.49**	**151**	*e*Pn	**Pn**	**04 05 22.5**	**-1.6**
C09A	**Chrisman Ranch**	**3.49**	**279**	Pn	**Pn**	**04 05 23.9**	**0.0**
C09A	**Chrisman Ranch**	**3.49**	**279**	*e*Pn	**Pn**	**04 05 24.1**	**0.0**
RLMT	**Red Lodge**	**3.50**	**128**	*e*Pn	**Pn**	**04 05 25.2**	**+0.9**
RLMT	**Red Lodge**	**3.50**	**128**	P	**Pn**	**04 05 25.5**	**+1.2**
	baz=311						
E09A	**Wood Farm, Sta**	**3.52**	**258**	*e*Pn	**Pn**	**04 05 25.0**	**+0.7**
FLWY	**Flagg Ranch**	**3.69**	**151**	*e*Pn	**Pn**	**04 05 26.9**	**0.0**
IMW	**Indian Meadow**	**3.79**	**155**	*e*Pn	**Pn**	**04 05 29.8**	**+1.4**
BMO	**Blue Mountains**	**3.82**	**231**	*e*Pn	**Pn**	**04 05 29.7**	**+1.1**
HLID	**Hailey**	**3.89**	**194**	*e*Pn	**Pn**	**04 05 30.2**	**+0.6**
HLID	**Hailey**	**3.89**	**194**	P	**Pn**	**04 05 30.0**	**+0.4**
	baz=13						
MOOW	**Moose Ponds**	**3.98**	**154**	*e*Pn	**Pn**	**04 05 30.9**	**0.0**
FXWY	**Fox Creek**	**4.00**	**157**	*e*Pn	**Pn**	**04 05 29.7**	**-1.5**
E08A	**Dider Farm, El**	**4.13**	**260**	*e*Pn	**Pn**	**04 05 31.7**	**-1.1**
B08A	**Colville Reser**	**4.28**	**286**	Pn	**Pn**	**04 05 34.2**	**-0.7**
B08A	**Colville Reser**	**4.28**	**286**	*e*Pn	**Pn**	**04 05 34.1**	**-0.8**
HAWA	**Hanford**	**4.48**	**260**	*e*Pn	**Pn**	**04 05 38.3**	**+0.8**
G08A	**Pilot Rock**	**4.52**	**245**	*e*Pn	**Pn**	**04 05 39.8**	**+1.6**
WTV	**Waterville**	**4.62**	**277**	*e*Pn	**Pn**	**04 05 39.4**	**-0.2**
E07A	**Sunnyside**	**4.66**	**263**	*e*Pn	**Pn**	**04 05 40.4**	**+0.4**
CBSW	**Chelan Butte S**	**4.68**	**278**	*e*Pn	**Pn**	**04 05 40.3**	**-0.1**
PNT	**Penticton**	**4.74**	**297**	Pn	**Pn**	**04 05 41.7**	**+0.6**
F07A	**Phinny Hill Vi**	**4.89**	**255**	*e*Pn	**Pn**	**04 05 44.3**	**+1.1**
EBG	**Ellensburg**	**5.08**	**268**	*e*Pn	**Pn**	**04 05 47.8**	**+1.9**
LTY	**Liberty**	**5.11**	**272**	Pn	**Pn**	**04 05 46.3**	**0.0**
LTY				Sn	**Sn**	**04 06 42.5**	**-2.1**
LTY	**Liberty**	**5.11**	**272**	*e*Pn	**Pn**	**04 05 46.4**	**+0.1**
GPW	**Glacier Peak**	**5.44**	**281**	Pn	**Pn**	**04 05 50.6**	**-0.3**
J08A	**Circle Bar Ran**	**5.47**	**225**	*e*Pn	**Pn**	**04 05 51.1**	**-0.2**
FMW	**Mount Fremont**	**5.83**	**269**	Pn	**Pn**	**04 05 56.8**	**+0.6**
JCW	**Jim Creek**	**5.97**	**281**	Pn	**Pn**	**04 05 58.3**	**+0.2**

ISCJB ***25*** *04:04:53.4±0.4, 47°.40N±0°.03×113°.19W±0°.04, h15km, mb2.6/1, Error ellipse: s-maj=4.4km s-min=3.2km az=27.3*
NEIC ***25*** *04:04:56.3±0.0, 47°.35N×113°.14W, h24km, MW3.4, ML3.7(BUT), Moment Tensor Solution. s21 Moment tensor: Scale 10^14Nm; Mrr=1.77; Mθθ0.19; Mφφ1.58; Mrθ0.31; Mφθ-0.08; Mφr0.38; Best double couple: M0 1.80000×10^14 NP1:φs186.00000°, δ52.00000°, λ-79.00000°. NP2:φs348.00000°, δ40.00000°, λ-104.00000°. Principal axes: T 1.6300, Plg6.0000°, Azm268.0000°; N 0.2400, Plg9.0000°, Azm359.0000°; P -1.8600, Plg79.0000°, Azm144.0000°; After BUT.*
NEIC Felt [III] at Seeley Lake and [II] at Ovando. Also felt at East Helena, Helena, Lincoln, Missoula and Ronan.
BUT ***25*** *04:04:56.0, 47°.35N×113°.14W, h24km, ML3.6/1, ML3.7, Montana*
IDC ***25*** *04:04:56.1±0.8, 47°.41N×113°.13W, h0km, mb3.1/1, mb1 3.5/7, mb1mx3.3/70, mbtmp3.2/7, ML2.9/5, Error ellipse: s-maj=10.3km s-min=7.3km az=43.0*

ISC 25 04:04:52.5±0.6**, 47°.39N**±0°.02×**113°.03W**±0°.02**, h15**km**, n83,** σ2s32/100**, Montana**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LYMT	**Lyon Mountain**	**0.66**	**129**	P	**Pn**	**04 05 09.1**	**+1.6**
YBMT	**Yellow Bay**	**0.82**	**306**	P	**Pn**	**04 05 10.9**	**+1.3**
MSO	**Missoula**	**0.83**	**228**	P	**Pn**	**04 05 10.4**	**+0.6**
	baz=46						
MSO				S	**Sb**	**04 05 20.4**	**+0.6**
	baz=46						
MSO	**Missoula**	**0.83**	**228**	*e*Pg	**Pn**	**04 05 10.5**	**+0.6**
JTMT	**Jette**	**0.92**	**294**	P	**Pn**	**04 05 12.2**	**+1.2**
JTMT	**Jette**	**0.92**	**294**	*e*Pg	**Pn**	**04 05 12.1**	**+1.1**
FBMT	**Ferry Basin**	**0.94**	**272**	P	**Pn**	**04 05 12.3**	**+0.9**
BSMT	**Bassoo Peak**	**1.27**	**292**	P	**Pg**	**04 05 18.5**	**+1.4**
BHMT	**Big Hole Peak**	**1.37**	**279**	P	**Pg**	**04 05 19.8**	**+0.8**
LRM	**Limekiln Ridge**	**1.61**	**165**	Pn	**Pg**	**04 05 22.7**	**-0.9**
LRM	**Limekiln Ridge**	**1.61**	**165**	*e*Sn	**Sn**	**04 05 41.5**	**+0.2**
WALA	**Waterton Lakes**	**1.77**	**341**	Pn	**Pg**	**04 05 26.3**	**-0.3**
WALA				Sn	**Sg**	**04 05 51.5**	**+1.8**
WALA	**Waterton Lakes**	**1.77**	**341**	*e*Sn	**Sn**	**04 05 45.8**	**+0.6**
WALA	**Waterton Lakes**	**1.77**	**341**	Sg	**Pg**	**04 05 26.5**	**-0.1**
BOZ	**Bozeman (W)**	**2.04**	**151**	S	**Sg**	**04 05 59.6**	**+1.6**
	baz=329						
BOZ	**Bozeman (W)**	**2.04**	**151**	*e*Sn	**Sn**	**04 05 49.9**	**-1.7**
DLMT	**Dillon**	**2.05**	**171**	*e*Sn	**Sn**	**04 05 52.8**	**+1.0**
EGMT	**Eagleton**	**2.30**	**73**	P	**Pg**	**04 05 36.9**	**+0.2**
	baz=255						
EGMT				S	**Sg**	**04 06 08.4**	**+1.8**
	baz=255						
NEW	**Newport**	**2.89**	**289**	Pn	**Pb**	**04 05 44.0**	**+0.2**
	14nm,0.3s,baz=108,slow=14,SNR=10.0						
NEW				Pg	**Pg**	**04 05 47.0**	**-0.9**
	25nm,0.3s,baz=112,slow=16,SNR=20						
NEW				Lg	Lg	04 06 22.7	
	37nm,0.3s,baz=7.3,slow=21,SNR=8.7						
NEW	**Newport**	**2.89**	**289**	P	**Pn**	**04 05 39.8**	**+1.8**
	baz=107						
NEW				Sb	**Sg**	**04 06 22.4**	**-3.0**
	baz=107						
RLMT	**Red Lodge**	**3.46**	**130**	Sb	**Sg**	**04 06 45.3**	**+1.8**
	baz=311						
C09A	**Chrisman Ranch**	**3.57**	**279**	Pn	**Pn**	**04 05 49.2**	**+1.8**
C09A				Sn	**Sn**	**04 06 28.4**	**-0.9**
C09A	**Chrisman Ranch**	**3.57**	**279**	*e*Sn	**Sn**	**04 06 29.9**	**+0.7**
HLID	**Hailey**	**3.94**	**195**	P	**Pn**	**04 05 55.1**	**+2.5**
	baz=13						
HLID				Sb	**Sg**	**04 06 56.3**	**-2.8**
	baz=13						
HLID	**Hailey**	**3.94**	**195**	*e*Sn	**Sn**	**04 06 34.9**	**-3.8**
D08A	**Wollman Farm,**	**4.03**	**267**	*e*Sn	**Sn**	**04 06 37.5**	**-3.0**
E08A	**Dider Farm, El**	**4.22**	**260**	*e*Pn	**Pn**	**04 05 58.5**	**+2.2**
E08A				*e*Sn	**Sn**	**04 06 44.1**	**-1.3**
REDW	**Red Top Meadow**	**4.31**	**158**	*e*Pn	**Pn**	**04 05 58.5**	**+0.8**
SAW	**Saint Andrews**	**4.33**	**277**	*e*Pn	**Pn**	**04 05 59.1**	**+1.4**
B08A	**Colville Reser**	**4.35**	**285**	Pn	**Pn**	**04 05 59.3**	**+1.3**
B08A				Sn	**Sn**	**04 06 46.3**	**-2.2**
B08A	**Colville Reser**	**4.35**	**285**	*e*Pn	**Pn**	**04 05 59.4**	**+1.3**
MFID	**Camas Ranch**	**4.43**	**207**	*e*Sn	**Sn**	**04 06 51.0**	**+0.3**
GBL	**Gable Mountain**	**4.47**	**262**	*e*Pn	**Pn**	**04 06 02.5**	**+2.9**
HAWA	**Hanford**	**4.57**	**260**	*e*Sn	**Sn**	**04 06 53.9**	**+0.1**
G08A	**Pilot Rock**	**4.61**	**245**	*e*Pn	**Pn**	**04 06 05.0**	**+3.3**
MDW	**Midway**	**4.67**	**263**	*e*Pn	**Pn**	**04 06 05.2**	**+2.8**
E07A	**Sunnyside**	**4.74**	**262**	*e*Pn	**Pn**	**04 06 05.7**	**+2.2**
E07A				*e*Sn	**Sn**	**04 06 58.3**	**+0.1**
CBSW	**Chelan Butte S**	**4.76**	**278**	*e*Pn	**Pn**	**04 06 05.0**	**+1.2**
AHID	**Auburn Hatcher**	**4.82**	**163**	*e*Pn	**Pn**	**04 06 04.4**	**-0.3**
F07A	**Phinny Hill Vi**	**4.98**	**255**	*e*Pn	**Pn**	**04 06 09.2**	**+2.5**
F07A				*e*Sn	**Sn**	**04 07 03.3**	**-0.6**
MXC	**Moxie City**	**5.03**	**263**	*e*Pn	**Pn**	**04 06 10.2**	**+2.7**
BLTW	**Bickleton**	**5.13**	**256**	*e*Pg	**Pb**	**04 06 20.6**	**-1.4**
LTY	**Liberty**	**5.20**	**271**	*e*Pn	**Pn**	**04 06 11.6**	**+1.8**
LTY				*e*Sn	**Sn**	**04 07 08.3**	**-1.1**
BW06	**Boulder Array**	**5.23**	**151**	*e*Pn	**Pn**	**04 06 09.7**	**-0.7**
PD31	**Pinedale Array**	**5.23**	**151**	*e*Pn	**Pb**	**04 06 19.4**	**-4.4**
PD31				*e*Lg	Lg	04 07 39.4	
PDAR	**Pinedale Array**	**5.23**	**151**	Pn	**Pb**	**04 06 19.4**	**-4.4**
	0.3nm,0.3s,baz=344,slow=13,SNR=3.8						
PDAR				Pg	Pg	04 06 26.5	-6.2
	0.4nm,0.3s,baz=346,slow=13,SNR=10						
PDAR				Lg	Lg	04 07 39.4	
	0.3nm,0.3s,baz=337,slow=23,SNR=4.5						
PDAR	**Pinedale Array**	**5.23**	**151**	*e*Pn	**Pn**	**04 06 11.2**	**+0.8**
TRW	**Toppenish Ridg**	**5.27**	**261**	*e*Pn	**Pn**	**04 06 13.4**	**+2.7**
WRW	**Wenatchee Ridg**	**5.33**	**278**	*e*Pn	**Pn**	**04 06 12.8**	**+1.3**
C06D	**Leavenworth**	**5.34**	**279**	S	**Sn**	**04 07 12.3**	**-0.5**
	baz=93						
J08A	**Circle Bar Ran**	**5.56**	**226**	*e*Pn	**Pn**	**04 06 17.7**	**+3.0**
I07A	**Izee**	**5.61**	**236**	*e*Pn	**Pn**	**04 06 15.3**	**-0.1**
G06A	**Carlson Farm,**	**5.69**	**251**	*e*Pn	**Pn**	**04 06 17.8**	**+1.3**
G06A				*e*Sn	**Sn**	**04 07 20.4**	**-1.1**
C05A	**Tolt Reservoir**	**5.87**	**276**	Sn	**Sn**	**04 07 23.9**	**-2.1**
MNB	**Mounoet Dainar**	**5.93**	**326**	Sg	**Sg**	**04 08 01.3**	**-1.5**
LON	**Longmire**	**6.03**	**267**	*e*Pn	**Pn**	**04 06 23.0**	**+1.8**
LON				*e*Sn	**Sn**	**04 07 30.3**	**+0.4**
DGMT	**Dagmar**	**6.04**	**76**	P	Pn	04 06 26.8	+5.5
	baz=263						
DGMT				Sb	**Sg**	**04 08 02.3**	**-3.9**
	baz=263						
DGMT	**Dagmar**	**6.04**	**76**	*e*Pn	**Pn**	**04 06 21.1**	**-0.1**
D05A	**Enumclaw**	**6.10**	**271**	*e*Pn	**Pn**	**04 06 23.4**	**+1.4**
D05A				*e*Sn	**Sn**	**04 07 31.5**	**0.0**
G05D	**Wamic, OR**	**6.12**	**253**	P	**Pn**	**04 06 24.5**	**+2.0**
	baz=67,SNR=9.7						
G05D				S	**Sn**	**04 07 31.9**	**-0.3**
	baz=67						
B05A	**Bryant**	**6.17**	**282**	S	**Sn**	**04 07 32.8**	**-0.4**
	baz=95						
TDH	**Tom, Dick, Har**	**6.42**	**254**	*e*Pn	**Pn**	**04 06 28.7**	**+2.1**
I05D	**Terrebonne, OR**	**6.55**	**245**	P	**Pn**	**04 06 31.6**	**+3.2**
	baz=59,SNR=8.3						
I05D				S	**Sn**	**04 07 43.5**	**+0.7**
	baz=59						
K22A	**Casper**	**6.61**	**133**	*e*Pn	**Pn**	**04 06 30.3**	**+1.1**
PINE	**Pine Mountain**	**6.61**	**240**	*e*Pn	**Pn**	**04 06 33.0**	**+3.8**
LLLB	**Lillooet**	**6.66**	**302**	*e*Pn	**Pn**	**04 06 31.9**	**+2.2**
LLLB				*e*Sg	**Sg**	**04 08 20.7**	**-5.3**
ELK	**Elko**	**6.83**	**194**	Pn	Pn	04 06 40.6	+8.3
	0.1nm,0.3s,baz=17,slow=17,SNR=3.1						
ELK				Lg	Lg	04 08 27.8	
	0.7nm,0.3s,baz=174,slow=13,SNR=3.4						
H04A	**Detroit Lake**	**6.92**	**250**	*e*Pn	**Pn**	**04 06 35.3**	**+1.9**
H04A				*e*Sn	**Sn**	**04 07 51.3**	**-0.5**
J05D	**Fort Rock, OR**	**7.08**	**238**	P	**Pn**	**04 06 39.8**	**+4.1**
	baz=52						
RSSD	**Black Hills**	**7.09**	**114**	*e*Pn	**Pn**	**04 06 37.4**	**+1.6**
I03D	**Drain, OR**	**8.12**	**247**	P	**Pn**	**04 06 53.4**	**+3.6**
	baz=59,SNR=7.1						
NV01	**Mina Array Sit**	**9.75**	**205**	*e*Pn	Pn	04 07 18.9	+6.6
NV01				*e*Lg	Lg	04 10 02.7	
NVAR	**Mina Array Bea**	**9.75**	**205**	Pn	Pn	04 07 19.0	+6.6
	baz=21,slow=15,SNR=2.2						
NVAR				Lg	Lg	04 10 02.7	
	baz=204,slow=39,SNR=3.4						
Q24A	**Divide**	**10.19**	**143**	*e*Pn	**Pn**	**04 07 17.7**	**-0.8**
AGMN	**Agassiz Nation**	**11.58**	**79**	*e*Pn	**Pn**	**04 07 39.8**	**+2.7**
	9.4nm,0.5s						
ULM	**Lac du Bonnet**	**11.67**	**69**	Pn	**Pn**	**04 07 41.2**	**+2.9**
	0.3nm,0.3s,baz=267,slow=8.3,SNR=1.9						
ULM				Pg		04 08 28.5	
	0.5nm,0.3s,baz=259,slow=14,SNR=5.8						
ULM				Lg	Lg	04 10 57.0	
	1.0nm,0.3s,baz=9.4,slow=14,SNR=3.9						
ARVC	**Arvin**	**12.99**	**202**	*e*Pn	Pn	04 08 01.3	+4.8
**CAR

0.4nm,0.4s,baz=93,slow=11,SNR=7.6
MKAR PcP **PcP** **05 03 14.6 -0.1**
0.2nm,0.4s,baz=94,slow=4.2,SNR=3.6
KURK Kurchatov 43.58 313 *eP* **P** **05 01 36.5 -0.2**
4.7nm,0.6s
KURBB Kurchatov Arra 43.63 312 P **P** **05 01 36.5 -0.6**
3.4nm,0.7s,baz=99,slow=9.0,SNR=24
NRIK Noril'sk 45.66 340 LR LR 05 22 32.7
comp=Z,63nm,19.5s,baz=104,slow=38
BVAR Borovoye Array 48.82 315 P **P** **05 02 17.8 -0.1**
5.5nm,0.5s,baz=99,slow=8.0,SNR=23
BVAR LR LR 05 24 43.6
comp=Z,76nm,18.2s,baz=74,slow=38
KK31 Karatay Array 49.24 302 *eP* **P** **05 02 21.9 +0.6**
KKAR Karatay Array 49.24 302 *eP* **P** **05 02 21.9 +0.6**
ARU Arti 55.56 320 P **P** **05 03 06.7 -1.1**
8.7nm,0.2s,baz=100,slow=16,SNR=4.7
ABKAR Akbulak array 55.65 311 *eP* **P** **05 03 08.4 -0.1**
AKTO Aktyubinsk 56.68 313 LR LR 05 29 21.0
comp=Z,80nm,18.4s,baz=100,slow=38
ILAR Eielson Array 58.74 30 P **P** **05 03 31.1 +0.9**
0.4nm,0.7s,baz=265,slow=6.2,SNR=5.0
ILB Eielson Array 58.74 30 *eP* **P** **05 03 31.1 +0.9**
GEYT Alibeck 59.57 298 LR LR 05 32 59.5
comp=Z,32nm,20.0s,baz=210,slow=40
ARA0 ARCESS Array S 66.62 338 *eP* **P** **05 04 22.5 -0.2**
ARCES ARCESS Array B 66.62 338 P **P** **05 04 22.5 -0.2**
0.4nm,0.5s,baz=60,slow=6.3,SNR=4.7
KBZ Khabaz 68.46 309 P **P** **05 04 34.8 +0.1**
0.7nm,0.4s,baz=61,slow=1.6,SNR=3.1
KBZ LR LR 05 39 15.0
comp=Z,31nm,18.2s,baz=88,slow=40
FIA0 FINESS Array S 70.14 331 *eP* **P** **05 04 44.0 -0.8**
FINES FINESS Array B 70.14 331 P **P** **05 04 44.0 -0.8**
0.8nm,0.3s,baz=63,slow=5.7,SNR=16
FINES LR LR 05 38 39.2
comp=Z,61nm,18.1s,baz=57,slow=38
AKASG Malin Array Be 73.81 320 P **P** **05 05 07.1 +0.1**
0.4nm,0.3s,baz=54,slow=7.0,SNR=2.9
AKBB Malin Array Si 73.81 320 *eP* **P** **05 05 07.1 +0.1**
2.3nm,0.6s
HFS Hagfors 75.92 333 P **P** **05 05 18.4 -0.5**
1.0nm,0.6s,baz=57,slow=5.3,SNR=3.1
NOA NORSAR Array B 76.28 334 LR LR 05 42 14.1
comp=Z,20nm,18.2s,baz=50,slow=38
BR101 Keskin Array S 76.44 308 *eP* **P** **05 05 21.3 -1.2**
BR131 Keskin Array S 76.44 308 *eP* **P** **05 05 23.1 +0.6**
BRTR Keskin Array B 76.44 308 P **P** **05 05 21.3 -1.2**
1.5nm,0.8s,baz=78,slow=5.6,SNR=9.0
MLR Muntele Rosu 78.37 316 LR LR 05 43 26.4
comp=Z,15nm,19.1s,baz=71,slow=38
EKA Eskdalemuir Ar 85.64 336 P **P** **05 06 10.0 -1.0**
0.5nm,0.6s,baz=46,slow=4.1,SNR=2.8
DAVOX Davos/Dischmat 86.42 324 LR LR 05 48 29.9
comp=Z,40nm,18.4s,baz=76,slow=38
BFSC Mount Baldy Ra 87.89 51 *eP* **P** **05 06 21.8 -0.8**
BBSC Beaumont Base 88.53 51 *eP* **P** **05 06 22.1 -3.4**
BBSC *e*PcP **PcP** **05 06 25.7 -1.4**
PFO Pinyon Flats O 89.06 51 *eP* **P** **05 06 25.6 -2.5**
G35A Watkins 93.24 31 *eP* **P** **05 06 50.0 +2.8**
6.1nm,0.4s
TOA1 Torodi Ar. Sit 114.89 305 *e*PKiKP **PKiKP** **05 12 12.4 -1.5**
TORD Torodi Ar. Bea 114.89 305 PKP PKPdf 05 12 12.4 -1.5
0.5nm,1.0s,baz=44,slow=1.7

IDC 25 04:53:56.8±2.0, 4°.23S×134°.59E, h0km, mb4.3/3, mb1 4.3/6, mb1mx3.9/56, mbtmp4.2/6, ML4.0/3, MS2.9/1, Ms1 2.9/1, ms1mx2.3/46, Error ellipse: s-maj=95.0km s-min=25.5km az=75.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.71**	**315**	Pn	Pn	04 55 09.0	-0.2
	12nm,0.3s,baz=136,slow=3.5,SNR=12						
SIJI				Sn	Sn	04 55 53.1	-11
	5.5nm,0.3s,baz=234,slow=23,SNR=2.6						
WRA	**Warramunga Arr**	**15.62**	**181**	Pn	Pn	04 57 36.7	-1.8
	0.5nm,0.3s,baz=0.7,slow=13,SNR=13						
WRA				Sn	Sn	05 00 15.8	-17
	0.3nm,0.3s,baz=345,slow=24,SNR=5.1						
ASAR	**Alice Springs**	**19.33**	**182**	P	Pn	04 58 24.6	-0.3
	0.7nm,0.3s,baz=351,slow=10,SNR=26						
KSRS	**Korea Array**	**41.93**	**352**	LR	LR	05 17 00.4	
	comp=Z,17nm,20.8s,baz=158,slow=33						
MKAR	**Makanchi Array**	**68.55**	**324**	P	P	05 05 01.3	-0.1
	3.9nm,0.4s,baz=115,slow=8.0,SNR=52						
KURBB	**Kurchatov Arra**	**72.65**	**326**	P	P	05 05 26.1	-0.2
	1.2nm,0.5s,baz=125,slow=4.9,SNR=11						
BVAR	**Borovoye Array**	**78.24**	**326**	P	P	05 05 58.9	+0.5
	1.0nm,0.7s,baz=126,slow=7.3,SNR=5.8						

*TIR **25** 05:00:24.4, 41°.39N×19°.93E, h14km, Md3.4/8*
*SKO **25** 05:00:25.1, 41°.38N×19°.87E, h14km, M2.9, ML3.5*
*PDG **25** 05:00:25.9±0.5, 41°.46N×19°.90E, h4km, MD3.4/2, ML3.4/9, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*
*CSEM **25** 05:00:25.7±0.1, 41°.39N×19°.90E, h2km, ML3.1, Error ellipse: s-maj=3.7km s-min=2.6km az=43.0*
*BEO **25** 05:00:25.1±0.5, 41°.27N×19°.86E, h6km±1km*
*THE **25** 05:00:25.5, 41°.44N×19°.92E, h0km±2km, ML3.1/3, Error ellipse: s-maj=2.4km s-min=0.8km az=303.0*

ISC 25 05:00:26.3±0.8, 41°.41N±0°.02×19°.91E±0°.02, h7km±5km, n179, σ1§29/284, 21C-28D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.07**	**207**	*e*Pg	**Pg**	**05 00 27.4**	**-0.7**
TIR				*e*Sg	**Sg**	**05 00 29.7**	**+0.3**
TIR	**Tirane**	**0.07**	**207**	‖ *i*P	**Pg**	**05 00 27.3**	**-0.8**
TIR				S	**Sg**	**05 00 29.3**	**-0.1**
TIR	**Tirane**	**0.07**	**207**	P	**Pg**	**05 00 27.4**	**-0.7**
TIR				S	**Sg**	**05 00 29.4**	**0.0**
TIR	**Tirane**	**0.07**	**207**	*i* PG	**Pg**	**05 00 27.4**	**-0.7**
TIR				*i* SG	**Sg**	**05 00 29.5**	**0.0**
TIR	**Tirane**	**0.07**	**207**	P	**Pg**	**05 00 27.4**	**-0.7**
TIR				S	**Sg**	**05 00 29.4**	**0.0**
PHP	**Peshkopia**	**0.49**	**55**	P	**Pg**	**05 00 34.3**	**-1.5**
PHP				S	**Sg**	**05 00 41.9**	**-0.3**
PHP	**Peshkopia**	**0.49**	**55**	*i* PG	**Pg**	**05 00 34.4**	**-1.5**
PHP				*i* SG	**Sg**	**05 00 41.9**	**-0.3**
PHP	**Peshkopia**	**0.49**	**55**	P	**Pg**	**05 00 34.3**	**-1.5**
PHP				S	**Sg**	**05 00 41.9**	**-0.3**
PUK	**Puka**	**0.64**	**359**	*i* PG	**Pg**	**05 00 37.0**	**-1.6**
PUK				*i* SG	**Sg**	**05 00 47.5**	**+0.6**
PUK	**Puka**	**0.64**	**359**	*i* Pg	**Pg**	**05 00 37.0**	**-1.6**
PUK				*i* Sg	**Sg**	**05 00 47.5**	**+0.6**
OHR	**Ohrid**	**0.74**	**113**	‖ *i*Pg	**Pg**	**05 00 38.6**	**-1.9**
OHR				*i* Sg	**Sg**	**05 00 50.0**	**0.0**
OHR				*e*Lg	Lg	05 00 53.1	
	comp=N,2μm,0.5s						
OHR				*e*Lg	Lg	05 00 54.4	
	comp=E,1μm,0.6s						
ULC	**Ulcinj**	**0.74**	**319**	‖ *i*Pg	**Pg**	**05 00 39.4**	**-1.2**
ULC				*e*Sg	**Sg**	**05 00 49.6**	**-0.7**
ULC	**Ulcinj**	**0.74**	**319**	P	**Pg**	**05 00 39.6**	**-1.0**
ULC				*e*Sg	**Sg**	**05 00 49.6**	**-0.7**
DRME	**Dracevica, Mon**	**0.95**	**326**	‖ *i*Pg	**Pg**	**05 00 42.6**	**-1.9**
DRME				*e*Sg	**Sg**	**05 00 55.9**	**-0.9**
DRME	**Dracevica, Mon**	**0.95**	**326**	‖ *i*Pg	**Pg**	**05 00 42.6**	**-1.9**
DRME				*e*Sg	**Sg**	**05 00 55.9**	**-0.9**
BCI	**Bajram Curri**	**0.97**	**7**	*i* PN	**Pg**	**05 00 43.4**	**-1.5**
BCI				*i* SN	**Sg**	**05 00 57.9**	**+0.5**
BCI	**Bajram Curri**	**0.97**	**7**	*i* Pn	**Pg**	**05 00 43.4**	**-1.5**
	baz=5.0						
BCI				*i* Sn	**Sg**	**05 00 57.9**	**+0.5**
	baz=5.0						
PRZK	**Prizren**	**1.02**	**38**	P	**Pg**	**05 00 44.2**	**-1.8**
PRZK				S	**Sg**	**05 00 54.8**	**-4.5**
KBN	**Korca**	**1.03**	**139**	P	**Pg**	**05 00 44.8**	**-1.3**
KBN				S	**Sn**	**05 01 01.2**	**-0.7**
KBN	**Korca**	**1.03**	**139**	*i* PN	**Pg**	**05 00 44.7**	**-1.4**
KBN				*i* SN	**Sg**	**05 00 59.3**	**-0.1**
KBN	**Korca**	**1.03**	**139**	P	**Pg**	**05 00 44.8**	**-1.3**
KBN				*i* Sn	**Sg**	**05 00 59.3**	**-0.1**
KBN				S	**Sn**	**05 01 01.2**	**-0.7**
PDG	**Podgorica**	**1.13**	**335**	*e*Pg	**Pg**	**05 00 45.7**	**-2.3**
PDG				*e*Sg	**Sn**	**05 01 05.3**	**+1.0**
PDG	**Podgorica**	**1.13**	**335**	‖ *i*P	**Pg**	**05 00 45.1**	**-2.9**
PDG				S	**Sn**	**05 01 04.8**	**+0.5**
PDG	**Podgorica**	**1.13**	**335**	P	**Pg**	**05 00 45.8**	**-2.3**
PDG				S	**Sg**	**05 01 02.6**	**-0.1**
PDG	**Podgorica**	**1.13**	**335**	P	**Pg**	**05 00 45.8**	**-2.3**
PDG				S	**Sg**	**05 01 02.6**	**-0.1**
TTG	**Podgorica**	**1.13**	**335**	‖ *i*Pg	**Pg**	**05 00 45.7**	**-2.3**
TTG				*e*Sg	**Sb**	**05 01 02.9**	**-0.1**
BIA	**Bitola**	**1.14**	**109**	P	**Pg**	**05 00 46.2**	**-2.0**
BIA				S	**Sg**	**05 01 03.1**	**+0.2**
BIA	**Bitola**	**1.14**	**109**	*i* Pg	**Pg**	**05 00 45.7**	**-2.5**
BIA				*i* Sg	**Sg**	**05 01 02.9**	**0.0**
BIA	**Bitola**	**1.14**	**109**	P	**Pg**	**05 00 46.2**	**-2.0**
BIA				S	**Sg**	**05 01 03.1**	**+0.2**
BUM	**Brajici-Budva**	**1.17**	**320**	⇑ *i*Pg	**Pg**	**05 00 46.6**	**-2.2**
BUM				*e*Sg	**Sg**	**05 01 03.8**	**-0.1**
BUM	**Brajici-Budva**	**1.17**	**320**	⇑ *i*Pg	**Pg**	**05 00 46.6**	**-2.2**
BUM				*e*Sg	**Sg**	**05 01 03.8**	**-0.1**
ZATK	**Zatriq**	**1.17**	**27**	P	**Pg**	**05 00 47.3**	**-1.5**
PVY	**Plav**	**1.19**	**2**	‖ *i*Pg	**Pg**	**05 00 46.9**	**-2.2**
PVY				*e*Sg	**Sg**	**05 01 04.6**	**+0.1**
PVY	**Plav**	**1.19**	**2**	‖ *i*Pg	**Pg**	**05 00 46.9**	**-2.2**
PVY				*e*Sg	**Sg**	**05 01 04.6**	**+0.1**
FNA	**Florina**	**1.27**	**119**	P	**Pn**	**05 00 49.3**	**-1.2**
FNA				S	**Sn**	**05 01 08.7**	**+0.8**
FNA	**Florina**	**1.27**	**119**	P	**Pn**	**05 00 49.3**	**-1.2**
FNA				S	**Sn**	**05 01 08.7**	**+0.8**
SKO	**Skopje**	**1.28**	**63**	*e*Pg	**Pn**	**05 00 50.3**	**-0.3**
SKO				*e*Sg	**Sn**	**05 01 07.9**	**-0.1**
SKO	**Skopje**	**1.28**	**63**	P	**Pn**	**05 00 49.1**	**-1.5**
SKO	**Skopje**	**1.28**	**63**	*i* Pg	**Pn**	**05 00 49.0**	**-1.6**
SKO				*i* Sg	**Sb**	**05 01 07.1**	**-0.3**
SKO	**Skopje**	**1.28**	**63**	P	**Pn**	**05 00 49.1**	**-1.5**
SKO	**Skopje**	**1.28**	**63**	*e*Pg	**Pn**	**05 00 50.3**	**-0.3**
SKO				*e*Sg	**Sn**	**05 01 07.9**	**-0.1**
NEST	**Nestorio**	**1.32**	**138**	P	**Pn**	**05 00 50.5**	**-0.7**
NEST				S	**Sn**	**05 01 10.4**	**+1.4**
NEST	**Nestorio**	**1.32**	**138**	P	**Pn**	**05 00 50.5**	**-0.7**
NEST				S	**Sn**	**05 01 10.4**	**+1.4**
CEME	**Cevo**	**1.36**	**327**	*e*Pg	**Pn**	**05 00 49.5**	**-2.2**
CEME				*e*Sg	**Sn**	**05 01 09.8**	**-0.1**
CEME	**Cevo**	**1.36**	**327**	*e*Pg	**Pn**	**05 00 49.5**	**-2.2**
CEME				*e*Sg	**Sn**	**05 01 09.8**	**-0.1**
BEY	**Berane**	**1.46**	**360**	⇑ *i*Pg	**Pn**	**05 00 51.9**	**-1.3**
BEY	**Berane**	**1.46**	**360**	P	**Pn**	**05 00 52.9**	**-0.3**
BEY				*e*Sg	**Sg**	**05 01 13.9**	**+0.5**
IVA	**Berane**	**1.46**	**360**	⇑ *i*Pg	**Pn**	**05 00 51.9**	**-1.3**
IVA				*e*Sg	**Sg**	**05 01 13.9**	**+0.5**
KOME	**Kolasin**	**1.47**	**349**	*e*Pg	**Pn**	**05 00 52.0**	**-1.3**
KOME				*e*Sg	**Sg**	**05 01 13.7**	**+0.1**
KOME	**Kolasin**	**1.47**	**349**	*e*Pg	**Pn**	**05 00 52.0**	**-1.3**
KOME				*e*Sg	**Sg**	**05 01 13.7**	**+0.1**
HCY	**Herceg Novi**	**1.48**	**315**	⇑ *i*Pg	**Pn**	**05 00 52.4**	**-0.9**
HCY				*e*Sg	**Sg**	**05 01 14.2**	**+0.3**
HCY	**Herceg Novi**	**1.48**	**315**	*e*Pn	**Pn**	**05 00 52.2**	**-1.1**
HCY				*e*Sg	**Sg**	**05 01 14.2**	**+0.3**
NKME	**Niksic**	**1.53**	**333**	⇑ *i*Pg	**Pn**	**05 00 53.2**	**-0.9**
NKME				*e*Sg	**Sg**	**05 01 16.3**	**+0.7**
NKME	**Niksic**	**1.53**	**333**	⇑ *i*Pg	**Pn**	**05 00 53.2**	**-0.9**
NKME				*e*Sg	**Sg**	**05 01 16.3**	**+0.7**
NKY	**Niksic**	**1.56**	**335**	‖ *i*Pg	**Pn**	**05 00 53.6**	**-0.9**
NKY				*e*Sg	**Sg**	**05 01 17.2**	**+0.7**
NKY	**Niksic**	**1.56**	**335**	‖ *i*Pg	**Pn**	**05 00 53.6**	**-0.9**
NKY				*e*Sg	**Sg**	**05 01 17.2**	**+0.7**
KEK	**Kerkira**	**1.69**	**183**	P	**Pn**	**05 00 56.5**	**+0.2**
KEK	**Kerkira**	**1.69**	**183**	P	**Pn**	**05 00 56.5**	**+0.2**
STIP	**Stip**	**1.74**	**80**	*i* Pn	**Pn**	**05 00 57.6**	**+0.8**
STIP				*e*Pn	**Pb**	**05 00 58.1**	**-0.4**
STIP				*i* Pg	**Pg**	**05 00 59.5**	**-0.1**
TREB	**Trebinje**	**1.75**	**319**	*e*Pn	**Pn**	**05 00 56.6**	**-0.4**
KZN	**Kozani**	**1.79**	**127**	P	**Pn**	**05 00 57.6**	**-0.1**
KZN				S	**Sb**	**05 01 21.9**	**-0.3**
KZN	**Kozani**	**1.79**	**127**	P	**Pn**	**05 00 57.6**	**-0.1**
KZN				S	**Sb**	**05 01 21.9**	**-0.3**
BRY	**Bratogost**	**1.81**	**326**	‖ *i*Pn	**Pn**	**05 00 57.9**	**0.0**
BRY				*e*Sn	**Sg**	**05 01 23.8**	**-0.6**
BRY	**Bratogost**	**1.81**	**326**	‖ *i*Pn	**Pn**	**05 00 57.9**	**0.0**
BRY				*e*Sn	**Sg**	**05 01 23.8**	**-0.6**
KPRO	**Kipourio**	**1.83**	**142**	P	**Pn**	**05 00 58.0**	**-0.1**
KPRO	**Kipourio**	**1.83**	**142**	P	**Pn**	**05 00 58.0**	**-0.1**
SJES	**Sjenica**	**1.85**	**2**	*e*Pn	**Pn**	**05 00 59.1**	**+0.5**
SJES				*e*Sn	**Sg**	**05 01 25.1**	**-0.8**
SJES	**Sjenica**	**1.85**	**2**	*e*Pn	**Pn**	**05 00 59.1**	**+0.5**
SJES				*e*Sn	**Sg**	**05 01 25.1**	**-0.8**
IGT	**Igoumenitsa**	**1.90**	**170**	P	**Pn**	**05 00 59.3**	**+0.2**
IGT	**Igoumenitsa**	**1.90**	**170**	P	**Pn**	**05 00 59.3**	**+0.2**
UPM	**Unac-Piva**	**1.94**	**338**	⇑ *i*Pn	**Pn**	**05 01 00.2**	**+0.4**
UPM				*e*Sn	**Sb**	**05 01 27.1**	**+0.5**
UPM	**Unac-Piva**	**1.94**	**338**	⇑ *i*Pn	**Pn**	**05 01 00.2**	**+0.4**
UPM	**Unac-Piva**	**1.94**	**338**	P	**Pb**	**05 01 02.0**	**-0.1**
UPM				*e*Sn	**Sb**	**05 01 27.1**	**+0.5**
PLE	**Pljevlja**	**1.96**	**349**	‖ *i*Pn	**Pn**	**05 01 00.6**	**+0.6**
PLE				*e*Sn	**Sb**	**05 01 27.1**	**+0.1**
PLE	**Pljevlja**	**1.96**	**349**	‖ *i*Pn	**Pn**	**05 01 00.6**	**+0.6**
PLE				*e*Sn	**Sb**	**05 01 27.1**	**+0.1**
BARS	**Barje**	**2.00**	**45**	*e*Pn	**Pn**	**05 01 01.1**	**+0.6**
BARS				*e*Sn	**Sb**	**05 01 28.4**	**+0.3**
BARS	**Barje**	**2.00**	**45**	*e*Pn	**Pn**	**05 01 01.1**	**+0.6**
BARS				*e*Sn	**Sb**	**05 01 28.4**	**+0.3**
VAY	**Valandovo**	**2.01**	**92**	*e*Pn	**Pn**	**05 01 00.1**	**-0.5**
VAY				*e*Sn	**Sn**	**05 01 26.7**	**+0.8**
VAY	**Valandovo**	**2.01**	**92**	P	**Pn**	**05 00 59.8**	**-0.8**
VAY	**Valandovo**	**2.01**	**92**	*e*Sg	**Sb**	**05 01 29.1**	**+0.8**
VAY				*e*Lg	Lg	05 01 33.9	
	comp=N,191nm,1.0s						
VAY				*e*Lg	Lg	05 01 34.0	
	comp=E,100nm,0.6s						
VAY	**Valandovo**	**2.01**	**92**	P	**Pn**	**05 00 59.8**	**-0.8**
VAY	**Valandovo**	**2.01**	**92**	*e*Pn	**Pn**	**05 01 00.1**	**-0.5**
VAY				*e*Sn	**Sn**	**05 01 26.7**	**+0.8**
SELS	**Selova**	**2.02**	**26**	*e*Pn	**Pn**	**05 01 01.2**	**+0.4**
SELS				*e*Sn	**Sb**	**05 01 28.9**	**+0.2**
STON	**Ston**	**2.20**	**312**	*e*Pn	**Pn**	**05 01 03.0**	**-0.2**
STON				*e*Sn	**Sn**	**05 01 31.9**	**+1.3**
STON	**Ston**	**2.20**	**312**	*i* Pn	**Pn**	**05 01 02.8**	**-0.4**
STON				Sn	**Sn**	**05 01 31.6**	**+1.0**
STON	**Ston**	**2.20**	**312**	*e*Pn	**Pn**	**05 01 03.0**	**-0.2**
STON				*e*Sn	**Sn**	**05 01 31.9**	**+1.3**
KKB	**Krupnik**	**2.43**	**78**	P	**Pn**	**05 01 07.3**	**+1.0**
BBLS	**Lazići**	**2.48**	**352**	*e*Pn	**Pn**	**05 01 08.2**	**+1.0**
BBLS				*e*Sn	**Sb**	**05 01 40.9**	**-1.2**
BBLS	**Lazići**	**2.48**	**352**	*e*Pn	**Pn**	**05 01 08.2**	**+1.0**
BBLS				*e*Sn	**Sb**	**05 01 40.9**	**-1.2**
MATE	**Matera**	**2.54**	**254**	‖ *i*P	**Pn**	**05 01 08.1**	**+0.3**
MATE	**Matera**	**2.54**	**254**	S	**Sn**	**05 01 40.0**	**+1.1**
MATE	**Matera**	**2.54**	**254**	‖ *i*P	**Pn**	**05 01 08.1**	**+0.3**
MATE				S	**Sn**	**05 01 40.0**	**+1.1**
GRUS	**Gruza**	**2.55**	**13**	*e*Pn	**Pn**	**05 01 09.1**	**+1.1**
GRUS				*e*Sn	**Sb**	**05 01 42.2**	**-1.7**
GRUS	**Gruza**	**2.55**	**13**	*e*Pn	**Pn**	**05 01 09.1**	**+1.1**
GRUS				*e*Sn	**Sb**	**05 01 42.2**	**-1.7**
BOVS	**Bovan**	**2.59**	**30**	*e*Pn	**Pn**	**05 01 09.1**	**+0.5**
BOVS				*e*Sn	**Sn**	**05 01 41.9**	**+1.5**
BOVS	**Bovan**	**2.59**	**30**	*e*Pn	**Pn**	**05 01 09.1**	**+0.5**
BOVS				*e*Sn	**Sn**	**05 01 41.9**	**+1.5**
DIVS	**Divibare**	**2.69**	**1**	*e*Pn	**Pn**	**05 01 10.9**	**+0.9**
DIVS				*e*Sn	**Sn**	**05 01 44.5**	**+1.6**
DIVS	**Divibare**	**2.69**	**1**	*e*Pn	**Pn**	**05 01 10.9**	**+0.9**
DIVS				*e*Sn	**Sn**	**05 01 44.5**	**+1.6**
VTS	**Vitosha**	**2.73**	**63**	*e*Pn	**Pn**	**05 01 10.7**	**0.0**
VTS				*e*Sn	**Sn**	**05 01 45.1**	**+1.1**
VTS	**Vitosha**	**2.73**	**63**	‖ *i*P	**Pn**	**05 01 11.1**	**+0.4**
VTS	**Vitosha**	**2.73**	**63**	S	**Sn**	**05 01 45.5**	**+1.5**
VTS	**Vitosha**	**2.73**	**63**	P	**Pn**	**05 01 10.5**	**-0.2**
VTS	**Vitosha**	**2.73**	**63**	*e*Pn	**Pn**	**05 01 10.7**	**0.0**
VTS	**Vitosha**	**2.73**	**63**	‖ *i*P	**Pn**	**05 01 11.1**	**+0.4**
VTS				*e*Sn	**Sn**	**05 01 45.1**	**+1.1**
ZAPS	**Zavoj**	**2.75**	**46**	*e*Pn	**Pn**	**05 01 12.0**	**+1.2**
ZAPS				*e*Sn	**Sn**	**05 01 46.2**	**+1.9**
ZAPS	**Zavoj**	**2.75**	**46**	*e*Pn	**Pn**	**05 01 12.0**	**+1.2**
ZAPS				*e*Sn	**Sn**	**05 01 46.2**	**+1.9**
HAPS	**Han Pijesak,BI**	**2.77**	**346**	*e*Pn	**Pn**	**05 01 11.2**	**+0.1**
HAPS				*e*Sn	**Sb**	**05 01 47.8**	**-2.5**
HAPS	**Han Pijesak,BI**	**2.77**	**346**	*e*Pn	**Pn**	**05 01 11.2**	**+0.1**
HAPS				*e*Sn	**Sb**	**05 01 47.8**	**-2.5**
TRUS	**Trudelj**	**2.84**	**7**	*e*Pn	**Pn**	**05 01 12.9**	**+0.9**
TRUS				*e*Sn	**Sn**	**05 01 48.1**	**+1.7**
TRUS	**Trudelj**	**2.84**	**7**	*e*Pn	**Pn**	**05 01 12.9**	**+0.9**
TRUS				*e*Sn	**Sn**	**05 01 48.1**	**+1.7**
MMB	**Musomiste**	**2.88**	**85**	P	**Pn**	**05 01 12.3**	**-0.3**
ZAGS	**Zajecar**	**2.95**	**35**	*e*Pn	**Pn**	**05 01 14.3**	**+0.7**
ZAGS				*e*Sn	**Sn**	**05 01 51.9**	**+2.6**
ZAGS	**Zajecar**	**2.95**	**35**	*e*Pn	**Pn**	**05 01 14.3**	**+0.7**
ZAGS				*e*Sn	**Sn**	**05 01 51.9**	**+2.6**
TEKS	**Tekeris**	**3.15**	**355**	*e*Pn	**Pn**	**05 01 17.0**	**+0.7**
TEKS	**Tekeris**	**3.15**	**355**	*e*Pn	**Pn**	**05 01 17.0**	**+0.7**
TIP	**Timpagrande**	**3.28**	**228**	‖ *i*P	**Pn**	**05 01 17.4**	**-0.7**
TIP	**Timpagrande**	**3.28**	**228**	S	**Sn**	**05 01 59.0**	**+1.6**
TIP	**Timpagrande**	**3.28**	**228**	‖ *i*P	**Pn**	**05 01 17.4**	**-0.7**
TIP				S	**Sn**	**05 01 59.0**	**+1.6**
PGB	**Panagyurishte**	**3.38**	**69**	P	**Pn**	**05 01 20.2**	**+0.8**
MDVR	**Moldovita**	**3.62**	**21**	‖ *i*P	**Pn**	**05 01 23.2**	**+0.4**
MDVR	**Moldovita**	**3.62**	**21**	S	**Sn**	**05 02 08.3**	**+2.5**
MDVR	**Moldovita**	**3.62**	**21**	‖ *i*P	**Pn**	**05 01 23.2**	**+0.4**
MDVR				S	**Sn**	**05 02 08.3**	**+2.5**
FGSL	**Fruska Gora**	**3.75**	**359**	*e*Pn	**Pn**	**05 01 24.9**	**+0.4**
FGSL				*e*Sn	**Sn**	**05 02 09.7**	**+0.8**
FRGS	**Fruska Gora**	**3.75**	**359**	*e*Pn	**Pn**	**05 01 24.9**	**+0.4**
FRGS				*e*Sn	**Sn**	**05 02 09.7**	**+0.8**
BLY	**Banja Luka**	**3.89**	**330**	‖ *i*P	**Pn**	**05 01 27.8**	**+1.4**
BLY	**Banja Luka**	**3.89**	**330**	‖ *i*P	**Pn**	**05 01 27.8**	**+1.4**
HERR	**Herculane**	**3.93**	**27**	⇑ *i*P	**Pn**	**05 01 27.4**	**+0.4**
HERR	**Herculane**	**3.93**	**27**	⇑ *i*P	**Pn**	**05 01 27.4**	**+0.4**
UDBI	**Udbina**	**4.35**	**317**	*i* Pn	**Pn**	**05 01 34.5**	**+1.6**
UDBI				Sn	**Sn**	**05 02 26.5**	**+2.6**
UDBI	**Udbina**	**4.35**	**317**	*i* Pn	**Pn**	**05 01 34.4**	**+1.6**
UDBI				Sn	**Sn**	**05 02 26.5**	**+2.6**
BZS	**Buzias**	**4.39**	**16**	*e*Pn	**Pn**	**05 01 34.5**	**+1.2**
BZS				*e*Sn	**Sn**	**05 02 24.8**	**+0.2**
BZS	**Buzias**	**4.39**	**16**	⇑ *i*P	**Pn**	**05 01 34.7**	**+1.4**
BZS	**Buzias**	**4.39**	**16**	S	**Sn**	**05 02 26.2**	**+1.6**
BZS	**Buzias**	**4.39**	**16**	*e*Pn	**Pn**	**05 01 34.5**	**+1.2**
BZS				*e*Sn	**Sn**	**05 02 24.8**	**+0.2**
BZS				S	**Sn**	**05 02 26.2**	**+1.6**
NVLJ	**Novalja**	**4.86**	**312**	*i* Pn	**Pn**	**05 01 39.7**	**0.0**
NVLJ				Sn	**Sn**	**05 02 37.1**	**+1.0**
NVLJ	**Novalja**	**4.86**	**312**	*i* Pn	**Pn**	**05 01 39.7**	**0.0**
NVLJ				Sn	**Sn**	**05 02 37.1**	**+1.0**
ARR	**Arges**	**5.25**	**39**	⇑ *i*P	**Pn**	**05 01 46.3**	**+1.1**
ARR	**Arges**	**5.25**	**39**	⇑ *i*P	**Pn**	**05 01 46.3**	**+1.1**
BOJS	**Bojanci**	**5.31**	**322**	*e*Pn	**Pn**	**05 01 46.6**	**+0.6**
BOJS	**Bojanci**	**5.31**	**322**	Pn	**Pn**	**05 01 46.6**	**+0.6**
CRES	**Cresnjev**	**5.47**	**325**	⇑ *i*Pn	**Pn**	**05 01 48.5**	**+0.3**
VOIR		**5.50**	**41**	‖ *i*P	**Pn**	**05 01 49.5**	**+0.9**
VOIR		**5.50**	**41**	‖ *i*P	**Pn**	**05 01 49.5**	**+0.9**
DRGR		**5.75**	**20**	⇑ *i*P	**Pn**	**05 01 53.5**	**+1.5**
DRGR		**5.75**	**20**	⇑ *i*P	**Pn**	**05 01 53.5**	**+1.5**
CEY	**Cerknica**	**5.88**	**319**	⇑ *i*Pn	**Pn**	**05 01 54.2**	**+0.4**
MLR	**Muntele Rosu**	**6.00**	**45**	‖ *i*P	**Pn**	**05 01 55.7**	**+0.2**
MLR	**Muntele Rosu**	**6.00**	**45**	‖ *i*P	**Pn**	**05 01 55.7**	**+0.2**
DOPR	**Dopca**	**6.05**	**39**	‖ *

140nm,0.3s,baz=55,slow=22,SNR=12
AFI Afiamalu 3.88 55 *e*Pn **Pn 05 31 26.6 +2.1**
AFI *e*S **S 05 32 16.3 +0.7**
KNTN Kanton 13.72 14 *e*P **P 05 33 26.4 +1.5**
URZ Urewera 23.05 196 *e*P **P 05 35 02.6 +0.8**
7.9nm,0.7s,baz=324,slow=19,SNR=5.0
URZ S **S 05 38 52.3 +0.8**
17nm,1.1s,baz=312,slow=23,SNR=1.3
URZ Urewera 23.05 196 *e*P **P 05 35 01.5 -0.4**
21nm,1.2s
URZ *e*S **S 05 38 52.3 +0.8**
WKZ Wanaka 31.56 202 *e*P **P 05 36 16.5 -1.0**
26nm,1.0s
MLZ Mavora Lakes 32.35 202 *e*P **P 05 36 24.7 +0.4**
8.3nm,0.9s
ARMA Armidale 33.58 239 *e*P **P 05 36 35.6 +0.3**
5.3nm,0.9s
TAOE Nuku Hiva Isla 34.80 82 *e*P **P 05 36 44.4 -1.4**
61nm,1.2s
WAKE Wake Island 39.57 332 *e*P **P 05 37 26.1 +0.6**
50nm,0.6s
COEN Coen 40.35 267 *e*P **P 05 37 34.0 +1.9**
12nm,1.1s
STKA Stephens Creek 42.27 240 P **P 05 37 47.6 +0.1**
2.2nm,0.5s,baz=90,slow=4.4,SNR=7.1
STKA Stephens Creek 42.27 240 *e*P **P 05 37 48.2 +0.8**
1.4nm,1.0s
MCQ Macquarie Isla 43.22 202 *e*P **P 05 37 56.0 +1.4**
30nm,0.7s
BBOO Buckleboo 47.05 240 *e*P **P 05 38 25.0 0.0**
11nm,1.0s
WB2 Warramunga Arr 48.11 258 *e*P **P 05 38 33.0 -0.2**
15nm,0.8s
WRAB Tennant Creek 48.11 258 *e*P **P 05 38 33.4 +0.1**
14nm,0.9s
WR1 Warramunga Arr 48.12 258 *e*P **P 05 38 33.2 -0.1**
17nm,0.8s
WRA Warramunga Arr 48.12 258 P **P 05 38 33.2 -0.1**
5.3nm,0.4s,baz=96,slow=6.5,SNR=96
AS01 Alice Springs 48.32 253 *e*P **P 05 38 34.8 0.0**
AS31 Alice Springs 48.36 253 *e*P **P 05 38 35.3 +0.1**
6.1nm,0.8s
ASAR Alice Springs 48.36 253 P **P 05 38 35.3 +0.1**
22nm,0.7s,baz=86,slow=8.0,SNR=227
MTN Manton Dam 52.09 266 *e*P **P 05 39 03.2 +0.2**
13nm,0.7s
FORT Forrest 53.65 244 *e*P **P 05 39 14.0 -0.2**
12nm,0.6s
SBA Scott Base 62.35 184 *e*P **P 05 40 15.3 +1.8**
6.0nm,0.8s
VNDA Vanda 62.44 186 P **P 05 40 14.9 +0.8**
3.1nm,0.9s,baz=6.8,slow=7.0,SNR=16
VNDA Vanda 62.44 186 *e*P **P 05 40 14.9 +0.8**
4.2nm,0.9s
MJAR Matsushiro Arr 68.53 321 P **P 05 40 53.1 -0.4**
2.5nm,0.8s,baz=180,slow=7.7,SNR=4.3
MAJO Matsushiro 68.53 321 *e*P **P 05 40 53.1 -0.4**
PETK Petropavlovsk- 72.90 343 P **P 05 41 18.4 -1.0**
3.8nm,0.6s,baz=110,slow=8.8,SNR=4.0
PEA1 Petropavlovsk- 72.91 343 *e*P **P 05 41 18.4 -1.0**
PMPB Monarch Peak 73.08 43 *e*P **P 05 41 21.5 +0.6**
6.5nm,0.9s
GSNM Snow Mountain 73.17 40 *e*P **P 05 41 23.0 +1.6**
KMRM Mail Ridge 73.65 39 *e*P **P 05 41 24.6 +0.4**
11nm,0.8s
MWC Mount Wilson 73.82 46 *e*P **P 05 41 25.2 -0.2**
6.4nm,0.8s
QSPA South Pole Qui 73.86 180 P **P 05 41 24.6 -0.4**
6.7nm,0.7s,baz=57,slow=2.7,SNR=23
QSPA South Pole Qui 73.86 180 *e*P **P 05 41 25.1 0.0**
8.0nm,0.8s
CMB Columbia Colle 74.40 42 *e*P **P 05 41 28.1 -0.4**
4.3nm,0.9s
AFDM Forest Hills D 74.56 41 *e*P **P 05 41 28.9 -0.5**
4.9nm,1.1s
WDC Whiskeytown Da 74.58 39 *e*P **P 05 41 29.5 +0.1**
3.4nm,0.9s
KBO Bosley Butte 74.60 37 *e*P **P 05 41 30.1 +0.5**
10nm,1.2s
KEBM Edson Butte 74.96 36 *e*P **P 05 41 31.6 0.0**
21nm,1.2s
MDPB Devils Postpil 75.02 43 *e*P **P 05 41 32.1 -0.2**
4.1nm,0.8s
OMMB Old Mammoth Mi 75.06 43 *e*P **P 05 41 32.6 0.0**
2.7nm,0.8s
YBH Yreka Blue Hor 75.18 38 P **P 05 41 33.2 +0.3**
4.5nm,0.6s,baz=242,slow=3.6,SNR=23
YBH Yreka Blue Hor 75.18 38 *e*P **P 05 41 33.5 +0.6**
4.4nm,0.8s
WAKR Walker 75.28 42 *e*P **P 05 41 33.8 +0.1**
4.1nm,0.7s
BEKR Beckworth 75.48 40 *e*P **P 05 41 34.5 -0.3**
4.1nm,1.1s
PNTR Pine Nut 75.51 41 *e*P **P 05 41 34.9 -0.1**
6.6nm,0.8s
HUMO Hull Mountain 75.58 37 *e*P **P 05 41 35.6 +0.5**
1.8nm,0.8s
YERR Yerington 75.68 42 *e*P **P 05 41 35.6 -0.3**
4.4nm,0.7s
RYN Ryan 75.94 42 *e*P **P 05 41 36.4 -1.0**
2.3nm,0.9s
NV01 Mina Array Sit 75.97 43 *e*P **P 05 41 37.5 -0.2**
NVAR Mina Array Bea 75.97 43 P **P 05 41 37.4 -0.3**
2.6nm,0.7s,baz=226,slow=9.1,SNR=26
NV11 Mina Array Sit 76.07 43 *e*P **P 05 41 37.6 -0.5**
0.2nm,0.8s
KVN Kaiserville 76.45 42 *e*P **P 05 41 39.9 -0.4**
2.3nm,0.7s
TPNV Topopah Spring 76.53 45 *e*P **P 05 41 40.6 -0.1**
3.8nm,0.8s
MOD Modoc Plateau 76.72 39 *e*P **P 05 41 41.5 -0.2**
2.9nm,0.8s
K05A Summer Lake 76.86 38 *e*P **P 05 41 42.4 -0.1**
8.4nm,1.0s
SHPR Sheep Range 77.04 46 *e*P **P 05 41 43.3 -0.2**
3.3nm,0.9s
Y14A Wickenburg 77.26 49 *e*P **P 05 41 44.2 -0.5**
8.8nm,1.1s
PINE Pine Mountain 77.47 37 *e*P **P 05 41 46.1 +0.3**
10nm,1.1s
BMN Battle Mountai 77.78 41 *e*P **P 05 41 47.2 -0.3**
2.9nm,0.6s
TUC Tucson 78.11 51 *e*P **P 05 41 49.9 +0.4**
6.6nm,0.9s
X16A Lo Mia Camp, P 78.62 49 *e*P **P 05 41 52.9 +0.5**
5.8nm,1.0s
J08A Circle Bar Ran 78.66 38 *e*P **P 05 41 51.9 -0.4**
3.9nm,1.1s
CCUT Cedar City 78.81 46 *e*P **P 05 41 53.8 +0.5**
1.7nm,0.8s
319A Douglas 78.82 53 *e*P **P 05 41 53.5 +0.1**
8.6nm,0.8s
KNB Kanab 78.91 46 *e*P **P 05 41 54.2 +0.3**
2.5nm,0.8s
PSUT Pine Spring 78.97 44 *e*P **P 05 41 54.0 -0.2**
2.1nm,0.8s
U15A North Rim 78.99 47 *e*P **P 05 41 54.6 +0.2**
6.9nm,1.0s
PGC Sidney 79.13 32 *e*P **P 05 41 54.7 +0.3**
7.2nm,0.8s
MTPU Mount Pierson 79.86 46 *e*P **P 05 41 60.0 +0.8**
2.7nm,0.9s
MFID Camas Ranch 80.29 39 *e*P **P 05 42 00.7 -0.3**
3.0nm,1.0s
TMUT Trail Mountain 81.14 45 *e*P **P 05 42 06.0 +0.2**
5.6nm,1.0s
HLID Hailey 81.24 40 *e*P **P 05 42 05.8 -0.2**
3.3nm,1.0s
SRU San Rafael Swe 81.52 45 *e*P **P 05 42 07.3 -0.3**
3.3nm,1.0s
TCUT Toone Canyon 81.90 43 *e*P **P 05 42 09.8 +0.1**
12nm,0.9s
MNTX Cornudas Mount 81.97 54 *e*P **P 05 42 09.8 -0.2**
3.6nm,0.6s
PV09 Paradox Valley 82.19 46 *e*P **P 05 42 10.8 -0.5**
PV13 Radium Mtn., P 82.25 47 *e*P **P 05 42 10.7 -0.8**
4.1nm,0.9s
PV23 Carpenter Ridg 82.25 46 *e*P **P 05 42 11.4 -0.2**
9.2nm,0.7s
PV21 Cone Mtn., Par 82.32 46 *e*P **P 05 42 11.7 -0.3**
7.2nm,0.7s
PV12 Saucer Basin, 82.33 47 *e*P **P 05 42 11.8 -0.1**
5.7nm,0.7s
TX31 Lajitas Ar. Si 82.36 57 *e*P **P 05 42 12.4 +0.2**
TXAR Lajitas Array 82.36 57 P **P 05 42 12.3 +0.1**
1.2nm,0.7s,baz=218,slow=8.9,SNR=18
PV22 Blue Mesa, Par 82.44 46 *e*P **P 05 42 11.9 -0.6**
3.5nm,0.8s

ANMO Albuquerque 82.52 50 P **P 05 42 12.5 -0.5**
3.6nm,0.8s,baz=245,slow=5.3,SNR=15
ANMO Albuquerque 82.52 50 *e*P **P 05 42 12.6 -0.4**
5.2nm,0.9s
MCMT McKenzie Canyo 82.86 39 *e*P **P 05 42 14.4 -0.1**
DLMT Dillon 83.29 39 *e*P **P 05 42 16.6 0.0**
2.7nm,0.7s
REDW Red Top Meadow 83.36 41 *e*P **P 05 42 16.6 -0.6**
3.8nm,0.9s
TPAW Teton Pass 83.36 41 *e*P **P 05 42 17.1 -0.1**
4.6nm,0.8s
FXWY Fox Creek 83.39 41 *e*P **P 05 42 17.0 -0.2**
1.9nm,0.8s
S22A 4UR Ranch, Cre 83.47 48 *e*P **P 05 42 18.1 +0.2**
6.4nm,1.1s
SNOW Snow King Moun 83.47 41 *e*P **P 05 42 17.5 -0.2**
6.1nm,0.8s
ILAR Eielson Array 83.52 12 P **P 05 42 16.1 -1.0**
0.4nm,0.6s,baz=217,slow=5.6,SNR=5.7
IMW Indian Meadow 83.57 41 *e*P **P 05 42 18.0 -0.2**
4.7nm,0.8s
PD31 Pinedale Array 83.91 42 *e*P **P 05 42 19.0 -0.9**
PDAR Pinedale Array 83.91 42 P **P 05 42 19.0 -0.9**
1.8nm,0.6s,baz=209,slow=3.7,SNR=22
PDAR Pinedale Array 83.91 42 *e*P **P 05 42 19.2 -0.7**
BOZ Bozeman (W) 83.99 39 *e*P **P 05 42 19.9 -0.2**
2.9nm,1.0s
SMCO Snowmass 84.00 46 *e*P **P 05 42 20.0 -0.6**
3.0nm,1.0s
LNIG Linares 84.19 62 *e*P **P 05 42 20.3 -1.1**
2.9nm,0.7s
SDCO Great Sand Dun 84.41 48 *e*P **P 05 42 22.4 -0.2**
1.5nm,0.8s
MAW Mawson 86.55 199 P **P 05 42 31.7 -0.4**
3.7nm,0.6s,baz=143,slow=8.8,SNR=11
MAW Mawson 86.55 199 *e*P **P 05 42 32.1 0.0**
0.9nm,0.8s
GYA Guiyang 87.01 298 *e*P **P 05 42 35.0 -0.4**
GYA pP pP 05 43 45.4 +3.7
GYA PP **PP 05 46 05.4 +2.2**
GYA SKS **SKSac 05 52 31.3 -4.7**
GYA Guiyang 87.01 298 S **S 05 52 47.0 -3.5**
GYA pmax pmax
comp=Z,10.0nm,1.0s
HHC Hu-ho-hao-te 88.40 313 *e*P **P 05 42 41.1 -0.5**
HHC pmax pmax
comp=Z,26nm,0.8s
HHC pmax pmax
comp=Z,120nm,6.0s
CD2 Chengdu 90.87 302 P **P 05 42 52.4 -0.8**
CD2 pmax pmax
comp=Z,10.0nm,0.7s
TGUH Tegucigalpa,Un 91.76 76 *e*P **P 05 42 56.6 -1.0**
comp=Z,11nm,1.1s
SNAA Sanae 92.20 178 *e*P **P 05 42 57.7 -1.0**
LZH Lanzhou 92.41 307 *e*P **P 05 43 01.8 +1.4**
LZH pP pP 05 44 10.6 +3.4
LZH sP sP 05 44 38.6 +2.4
LZH *e*PP **PP 05 46 47.8 +2.0**
LZH pmax pmax
comp=Z,12nm,0.9s
LZH pmax pmax
comp=Z,190nm,7.1s
ARA0 ARCESS Array S 125.15 351 *e*PKPdf **PKPdf 05 48 46.2 -1.3**
ARCES ARCESS Array B 125.15 351 PKP **PKPdf 05 48 46.2 -1.3**
comp=Z,1.4nm,0.8s,baz=22,slow=3.2,SNR=4.4
ARCES ARCESS Array B 125.15 351 *e*PKPdf **PKPdf 05 48 47.0 -0.5**
BR101 Keskin Array S 145.73 319 *e*PKPdf **PKPdf 05 49 26.7 +0.1**
BRTR Keskin Array B 145.73 319 PKPbc **PKPdf 05 49 26.7 +0.1**
comp=Z,0.9nm,0.6s,baz=49,slow=3.9,SNR=4.5
FUORN Ofenpass-Fuorn 149.33 353 *e*PKPbc **PKPbc 05 49 37.4 +0.3**
TORD Torodi Ar. Bea 175.64 133 PKPab **PKPab 05 51 36.5 -1.3**
comp=Z,1.9nm,0.9s,baz=249,slow=4.5,SNR=6.6
TOA1 Torodi Ar. Sit 175.64 133 *e*PKPab **PKPab 05 51 36.5 -1.3**

NIED ***25*** *05:33:00,38°.70N×143°.10E,h23km,Mw3.6 Best double couple: M0=2.39000×10^14 NP1:φ=201.00000°,δ=25.00000°, λ=-147.00000°. NP2:φ=81.00000°,δ=77.00000°, λ=-69.00000°.*

JMA 25 05:33:55.3±0.2,38°.70N×143°.13E,h17km±4km,M3.5,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**1.20**	**289**	P	Pn	05 34 17.1	-0.2
OFUJ				*e*S	Sn	05 34 33.2	0.0
MIYJ	**Miyakonagasawa**	**1.34**	**311**	P	Pn	05 34 19.0	-0.3
JIO	**Ouri**	**1.42**	**261**	P	Pn	05 34 20.5	+0.2
JIO				*e*S	Sn	05 34 38.6	+0.1
JMK	**Ichinoseki**	**1.51**	**280**	P	Pn	05 34 21.9	+0.3
JOM	**Ohasama**	**1.62**	**299**	P	Pn	05 34 23.8	+0.6
JOM				*e*S	Sb	05 34 44.8	-0.2
JOU	**Okura**	**1.96**	**261**	P	Pn	05 34 28.9	+1.1
JMM	**Marumori**	**2.02**	**246**	P	Pn	05 34 29.2	+0.7
JRG	**Rokugo**	**2.06**	**290**	P	Pn	05 34 30.6	+1.4
JANG	**Nango**	**2.09**	**324**	P	Pn	05 34 29.5	0.0
JYK	**Kaneyama**	**2.18**	**277**	P	Pn	05 34 32.1	+1.4
JFK	**Kawauchi**	**2.22**	**234**	P	Pn	05 34 31.5	+0.1
JFK				*e*S	Sn	05 34 57.7	-0.8
JAH	**Hinai**	**2.44**	**308**	P	Pn	05 34 36.0	+1.7
JFT	**Otama**	**2.50**	**243**	P	Pn	05 34 35.5	+0.3
JFT				*e*S	Sn	05 35 05.6	+0.3

IDC 25 05:57:17.8±4.5,19°.36S×176°.59W,h0km,mb4.0/4, mb1 4.3/4,mb1mx3.7/45,mbtmp4.0/4,Error ellipse: s-maj=188.4km s-min=38.0km az=140.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.48**	**243**	P	P	06 04 49.9	-0.2
	2.0nm,0.6s,baz=78,slow=9.3,SNR=3.7						
ASAR	**Alice Springs**	**46.08**	**255**	P	P	06 05 44.0	0.0
	4.5nm,0.6s,baz=94,slow=8.2,SNR=54						
WRA	**Warramunga Arr**	**46.08**	**261**	P	P	06 05 43.7	-0.2
	1.1nm,0.5s,baz=96,slow=7.4,SNR=26						
ILAR	**Eielson Array**	**86.92**	**12**	P	P	06 10 04.2	0.0
	0.1nm,0.3s,baz=212,slow=3.2,SNR=3.5						

DDA ***25*** *05:59:55.5,38°.60N×39°.65E,h11km,MI3.6*
ISK ***25*** *05:59:55.8,38°.63N×39°.65E,h8km,ML3.5/22*
ISN ***25*** *05:59:56.9±1.5,38°.57N×39°.95E,h40km±10km,ML3.6*
CSEM ***25*** *05:59:56.9±0.2,38°.60N×39°.65E,h10km,ML3.5,Error ellipse: s-maj=4.7km s-min=3.9km az=15.0*

ISC 25 05:59:56.0±1.0,38°.64N±0°.02×39°.67E±0°.02,h10km±9km, n98,σ0=82/118,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTK	**Pertek**	**0.33**	**320**	PG	**Pg**	**06 00 03.2**	**+0.5**
PTK				SG	**Sb**	**06 00 08.6**	**-0.9**
SVRC	**Sivrice-ELAZID**	**0.39**	**227**	PG	**Pg**	**06 00 03.1**	**-0.5**
SVRC				SG	**Sg**	**06 00 09.4**	**+0.6**
TNCL	**Tunceli-Merkez**	**0.48**	**349**	*i* P	**Pb**	**06 00 05.9**	**-0.8**
TNCL				*i* S	**Sb**	**06 00 13.2**	**-0.7**
TNCL	**Tunceli-Merkez**	**0.48**	**349**	P	**Pb**	**06 00 05.9**	**-0.8**
TNCL				S	**Sb**	**06 00 13.1**	**-0.7**
ELZG	**Elazig**	**0.55**	**255**	*i* P	**Pg**	**06 00 06.1**	**-0.7**
ELZG				*i* S	**Sg**	**06 00 14.9**	**+0.8**
ELZG	**Elazig**	**0.55**	**255**	P	**Pg**	**06 00 06.1**	**-0.7**
ELZG				S	**Sg**	**06 00 14.9**	**+0.8**
HANI	**Diyarbakir_Han**	**0.62**	**111**	*i* P	**Pg**	**06 00 08.0**	**0.0**
HANI	**Diyarbakir_Han**	**0.62**	**111**	P	**Pg**	**06 00 08.0**	**0.0**
BINT	**Bingol**	**0.69**	**70**	*e*Pg	**Pn**	**06 00 12.3**	**+0.5**
DYBB	**Diyarbakir**	**0.78**	**151**	PG	**Pg**	**06 00 10.9**	**-0.2**
DYBB				SG	**Sb**	**06 00 23.0**	**+0.7**
DIYA	**Diyarbakir**	**0.80**	**153**	*i* P	**Pb**	**06 00 12.0**	**0.0**
DIYA				*i* S	**Sb**	**06 00 22.9**	**+0.1**
DIYA	**Diyarbakir**	**0.80**	**153**	P	**Pb**	**06 00 12.0**	**0.0**
DIYA				S	**Sb**	**06 00 23.0**	**+0.1**
BGOL	**Bingol**	**0.86**	**66**	*i* P	**Pg**	**06 00 12.0**	**-0.6**
BGOL	**Bingol**	**0.86**	**66**	P	**Pg**	**06 00 12.0**	**-0.6**
DIY	**Diyarbakir**	**0.86**	**149**	*e*Sg	**Sg**	**06 00 23.0**	**-0.9**
BNGB	**Bing¶ll**	**0.87**	**66**	PG	**Pg**	**06 00 12.3**	**-0.4**
ERZN	**Erzincan**	**0.94**	**3**	PG	**Pg**	**06 00 13.8**	**-0.4**
ERZN				SG	**Sn**	**06 00 28.0**	**-1.1**
MALT	**Malatya**	**1.02**	**252**	PG	**Pg**	**06 00 14.8**	**-0.9**
MALT	**Malatya**	**1.02**	**252**	*e*Pg	**Pg**	**06 00 14.8**	**-0.9**
YEDI	**Yedisu-Bingol**	**1.05**	**40**	PG	**Pb**	**06 00 16.0**	**-0.3**
EUZM	**Uzumlu**	**1.06**	**1**	*i* P	**Pn**	**06 00 16.8**	**-0.3**
EUZM	**Uzumlu**	**1.06**	**1**	P	**Pn**	**06 00 16.8**	**-0.3**
KEMA	**Kemaliye**	**1.11**	**305**	*i* P	**Pb**	**06 00 16.1**	**-1.2**
KEMA				*i* S	**Sn**	**06 00 33.4**	**+0.4**
KEMA	**Kemaliye**	**1.11**	**305**	P	**Pb**	**06 00 16.1**	**-1.2**
KEMA				S	**Sn**	**06 00 33.4**	**+0.4**
ILIC	**ilic-Erzincan**	**1.18**	**314**	PN	**Pb**	**06 00 18.4**	**-0.1**
ILIC	**ilic-Erzincan**	**1.18**	**314**	*e*Pn	**Pb**	**06 00 18.4**	**-0.1**
BNGL	**BINGOL**	**1.20**	**75**	*i* P	**Pg**	**06 00 19.4**	**+0.4**
SVAN	**Silvan-Diyarba**	**1.30**	**112**	PN	**Pg**	**06 00 20.8**	**-0.1**
SVAN	**Silvan-Diyarba**	**1.30**	**112**	*i* P	**Pb**	**06 00 20.4**	**-0.1**
SVAN				*i* S	**Sg**	**06 00 38.2**	**+0.4**
SVAN	**Silvan-Diyarba**	**1.30**	**112**	P	**Pb**	**06 00 20.4**	**-0.1**
SVAN	**Silvan-Diyarba**	**1.30**	**112**	*e*Pn	**Pg**	**06 00 20.8**	**-0.1**
SVAN				S	**Sg**	**06 00 38.2**	**+0.4**
MAZI	**Mazidag**	**1.33**	**152**	PN	**Pn**	**06 00 20.9**	**+0.2**
MAZI	**Mazidag**	**1.33**	**152**	*e*Pn	**Pn**	**06 00 20.9**	**+0.2**
HEKM	**Malatya_Hekimh**	**1.35**	**281**	*i* P	**Pn**	**06 00 20.3**	**-0.8**
HEKM	**Malatya_Hekimh**	**1.35**	**281**	P	**Pn**	**06 00 20.3**	**-0.8**
URFA	**Urfa**	**1.37**	**209**	PN	**Pn**	**06 00 20.4**	**-0.8**
URFA	**Urfa**	**1.37**	**209**	*e*Pn	**Pn**	**06 00 20.4**	**-0.8**
AKCD	**Akcadag**	**1.41**	**256**	*i* P	**Pn**	**06 00 21.1**	**-0.7**
AKCD	**Akcadag**	**1.41**	**256**	P	**Pn**	**06 00 21.1**	**-0.7**
BTMN	**Batman**	**1.47**	**120**	*i* P	**Pb**	**06 00 23.2**	**-0.2**
BTMN				*i* S	**Sg**	**06 00 42.9**	**-0.3**
BTMN	**Batman**	**1.47**	**120**	P	**Pb**	**06 00 23.2**	**-0.2**
BTMN				S	**Sg**	**06 00 42.9**	**-0.3**
KOPT	**Kop Dagi**	**1.52**	**25**	*i* P	**Pg**	**06 00 25.0**	**-0.1**
KOPT	**Kop Dagi**	**1.52**	**25**	P	**Pg**	**06 00 25.0**	**-0.1**
KELT	**Kelkit**	**1.54**	**348**	*i* P	**Pg**	**06 00 25.5**	**0.0**
KELT	**Kelkit**	**1.54**	**348**	P	**Pg**	**06 00 25.5**	**0.0**
SANL	**SANLIURFA_Merk**	**1.56**	**200**	*i* P	**Pb**	**06 00 24.7**	**-0.2**
SANL				*i* S	**Sb**	**06 00 45.0**	**+0.2**
SANL	**SANLIURFA_Merk**	**1.56**	**200**	P	**Pb**	**06 00 24.7**	**-0.2**
SANL				S	**Sb**	**06 00 45.0**	**+0.2**
MARD	**Mardin**	**1.59**	**146**	*i* P	**Pn**	**06 00 23.2**	**-1.1**
ATAB	**Bozova**	**1.59**	**223**	*i* P	**Pn**	**06 00 24.5**	**+0.3**
ATAB	**Bozova**	**1.59**	**223**	P	**Pn**	**06 00 24.5**	**+0.3**
DARE	**Darende-Malaty**	**1.71**	**268**	PN	**Pn**	**06 00 26.8**	**+0.9**
DARE	**Darende-Malaty**	**1.71**	**268**	*e*Pn	**Pn**	**06 00 26.8**	**+0.9**
BAYT	**Ayd¨–ntepe-Bay**	**1.79**	**12**	PN	**Pb**	**06 00 28.1**	**-0.8**
BAYT	**Ayd¨–ntepe-Bay**	**1.79**	**12**	*e*Pn	**Pb**	**06 00 28.1**	**-0.8**
ERZM	**Erzurum**	**1.83**	**46**	*i* P	**Pg**	**06 00 30.2**	**-0.8**
ERZM	**Erzurum**	**1.83**	**46**	P	**Pg**	**06 00 30.2**	**-0.8**
GURO	**Guroymak-BITLI**	**1.86**	**92**	PN	**Pb**	**06 00 29.7**	**-0.4**
GURO	**Guroymak-BITLI**	**1.86**	**92**	*e*Pn	**Pb**	**06 00 29.7**	**-0.4**
CUGUR	**Gurin_S¨VAS**	**1.88**	**273**	*i* P	**Pb**	**06 00 31.1**	**+0.7**
CUGUR	**Gurin_S¨VAS**	**1.88**	**273**	P	**Pb**	**06 00 31.1**	**+0.7**
SRTM	**Siirt_Merkez**	**1.89**	**109**	*i* P	**Pn**	**06 00 29.0**	**+0.6**
SRTM				*i* S	**Sg**	**06 00 56.2**	**-0.6**
SRTM	**Siirt_Merkez**	**1.89**	**109**	P	**Pn**	**06 00 29.0**	**+0.6**
SRTM				S	**Sg**	**06 00 56.2**	**-0.6**
CUZAR	**Zara_SIVAS**	**1.93**	**311**	*i* P	**Pb**	**06 00 31.8**	**+0.5**
CUZAR	**Zara_SIVAS**	**1.93**	**311**	P	**Pb**	**06 00 31.8**	**+0.5**
SUSE	**Susehri**	**1.93**	**325**	*i* P	**Pb**	**06 00 31.4**	**0.0**
SUSE	**Susehri**	**1.93**	**325**	P	**Pb**	**06 00 31.4**	**0.0**
SURC	**SANLIURFA_SURC**	**1.95**	**206**	*i* P	**Pn**	**06 00 29.5**	**+0.4**
SURC	**SANLIURFA_SURC**	**1.95**	**206**	P	**Pn**	**06 00 29.5**	**+0.4**
EKAR	**Karacoban**	**1.97**	**71**	*i* P	**Pg**	**06 00 32.6**	**-1.1**
EKAR	**Karacoban**	**1.97**	**71**	P	**Pg**	**06 00 32.6**	**-1.1**
SCER	**sogukcermik**	**2.32**	**303**	*i* P	**Pb**	**06 00 37.6**	**-0.3**
SCER	**sogukcermik**	**2.32**	**303**	P	**Pb**	**06 00 37.6**	**-0.3**
ESPY	**Espiye-Giresun**	**2.38**	**343**	PN	**Pn**	**06 00 36.7**	**+1.6**
ESPY	**Espiye-Giresun**	**2.38**	**343**	*e*Pn	**Pn**	**06 00 36.7**	**+1.6**
SVSK	**Karacayir**	**2.43**	**302**	PN	**Pn**	**06 00 37.3**	**+1.6**
SVSK	**Karacayir**	**2.43**	**302**	*e*Pn	**Pn**	**06 00 37.3**	**+1.6**
GAZ	**Gaziantep**	**2.43**	**234**	PN	**Pn**	**06 00 36.6**	**+0.8**
GAZ	**Gaziantep**	**2.43**	**234**	*e*Pn	**Pn**	**06 00 36.6**	**+0.8**
KMRS	**Kahramanmaras**	**2.46**	**243**	PN	**Pn**	**06 00 37.4**	**+1.3**
KMRS	**Kahramanmaras**	**2.46**	**243**	*e*Pn	**Pn**	**06 00 37.4**	**+1.3**
SIRT	**Sirnak**	**2.47**	**117**	PN	**Pn**	**06 00 37.2**	**+0.9**
SIRT	**Sirnak**	**2.47**	**117**	*e*Pn	**Pn**	**06 00 37.2**	**+0.9**
GRSN	**GIRESUNGRSN**	**2.52**	**335**	*i* P	**Pb**	**06 00 40.4**	**-1.0**
GRSN	**GIRESUNGRSN**	**2.52**	**335**	P	**Pb**	**06 00 40.4**	**-1.0**
SARI	**SarD1z-Kayseri**	**2.56**	**266**	PN	**Pn**	**06 00 37.9**	**+0.3**
GEVA	**Gevas**	**2.68**	**96**	*i* P	**Pb**	**06 00 43.7**	**-0.5**
GEVA	**Gevas**	**2.68**	**96**	P	**Pb**	**06 00 43.7**	**-0.5**
AGRB	**Hanur-Agry**	**2.75**	**69**	PN	**Pn**	**06 00 42.2**	**+1.9**
AGRB	**Hanur-Agry**	**2.75**	**69**	*e*Pn	**Pn**	**06 00 42.2**	**+1.9**
ANDN	**Andirin**	**2.83**	**249**	*i* P	**Pb**	**06 00 45.8**	**-0.8**
ANDN	**Andirin**	**2.83**	**249**	P	**Pb**	**06 00 45.8**	**-0.8**
CUKT	**Cukurca**	**3.41**	**113**	PN	**Pn**	**06 00 51.5**	**+2.2**
CUKT	**Cukurca**	**3.41**	**113**	*e*Pn	**Pn**	**06 00 51.5**	**+2.2**
YOZ	**Yozgat**	**3.52**	**288**	PN	**Pn**	**06 00 52.4**	**+1.5**
YOZ	**Yozgat**	**3.52**	**288**	*e*Pn	**Pn**	**06 00 52.4**	**+1.5**
YAYL	**Yayladag**	**3.85**	**229**	PN	**Pn**	**06 00 56.6**	**+1.3**
YAYL	**Yayladag**	**3.85**	**229**	*e*Pn	**Pn**	**06 00 56.6**	**+1.3**
RTB	**Rutbah**	**5.62**	**174**	*e*Pn	**Pn**	**06 01 19.0**	**-0.7**
	SNR=5.0						

IDC ***25*** *06:09:56.3±1.6,25°.05N×92°.37E,h0km,mb3.2/3, mb1 3.5/4,mb1mx3.3/71,mbtmp3.3/4,ML3.4/1,Error ellipse: s-maj=55.2km s-min=28.7km az=77.0*
NDI ***25*** *06:10:00.1±2.2,24°.82N×91°.88E,h24km±8km,ML3.6*

ISC 25 06:09:58.8±1.4,24°.87N±0°.03×91°.83E±0°.07,h19km±5km, n12,σ0=98/20,mb3.5/3,India-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**0.70**	**4**	*e*P	**Pn**	**06 10 13.9**	**+0.1**
SHL				*e*S	**Sn**	**06 10 24.2**	**+0.1**
SHL				IAML		06 10 26.4	
	comp=E,2μm,0.1s						
SHL				IAML		06 10 26.4	
	comp=N,5μm,0.1s						
AGT	**Agartala**	**1.11**	**208**	*e*P	**Pg**	**06 10 20.4**	**0.0**
AGT				*e*S	**Sg**	**06 10 36.4**	**+1.3**
AGT				IAML		06 10 37.7	
	comp=N,5μm,0.3s						
AGT				IAML		06 10 37.8	
	comp=E,3μm,0.3s						
GUWA	**GUWAHATI**	**1.32**	**355**	*e*P	**Pg**	**06 10 23.9**	**-0.5**
GUWA				*e*S	**Sg**	**06 10 41.1**	**-0.7**
GUWA				IAML		06 10 43.3	
	comp=N,774nm,0.1s						
BELO	**BELONIA**	**1.65**	**192**	*e*P	**Pn**	**06 10 27.3**	**+0.6**
BELO				*e*S	**Sn**	**06 10 45.9**	**-1.4**
TEZP	**TEZPUR**	**1.95**	**27**	*e*P	**Pn**	**06 10 31.8**	**+0.9**
TEZP				*e*S	**Sn**	**06 10 56.0**	**+1.2**
TEZP				IAML		06 11 01.5	
	comp=E,488nm,0.1s						
TEZP				IAML		06 11 01.5	
	comp=N,680nm,0.1s						
BRDH	**Bariadhala**	**2.19**	**184**	Pn	**Pb**	**06 10 37.0**	**-0.7**
	comp=N,8.3nm,0.3s,baz=62,slow=20,SNR=3.8						
BRDH				Sn	**Sn**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMAA	**Simav-Kutahya**	**0.09**	**224**	PG	**Pb**	**06 13 18.9**	**+1.0**
SMAA	**Simav-Kutahya**	**0.09**	**224**	*e*Pg	**Pb**	**06 13 18.9**	**+1.0**
SIMA	**Simav-Kutahya**	**0.10**	**217**	PG	**Pb**	**06 13 19.1**	**+1.1**
SIMA				SG	**Sb**	**06 13 21.2**	**+0.8**
SIMA	**Simav-Kutahya**	**0.10**	**217**	*e*Pg	**Pb**	**06 13 19.1**	**+1.1**
SIMA				*e*Sg	**Sb**	**06 13 21.2**	**+0.8**
SHAP	**Saphane-Kutahy**	**0.19**	**137**	PG	**Pg**	**06 13 18.5**	**-0.7**
SHAP				SG	**Sg**	**06 13 20.8**	**-1.5**
SHAP	**Saphane-Kutahy**	**0.19**	**137**	*e*Pg	**Pg**	**06 13 18.5**	**-0.7**
SHAP				*e*Sg	**Sg**	**06 13 20.8**	**-1.5**
DEMI	**Demirci**	**0.29**	**246**	*i* P	**Pg**	**06 13 18.9**	**-1.9**
DEMI	**Demirci**	**0.29**	**246**	P	**Pg**	**06 13 18.9**	**-1.9**
GEDZ	**Gediz**	**0.30**	**113**	PG	**Pg**	**06 13 20.1**	**-0.8**
GEDZ	**Gediz**	**0.30**	**113**	*e*Pg	**Pg**	**06 13 20.1**	**-0.8**
TVSB	**Tavsanli**	**0.43**	**47**	PG	**Pg**	**06 13 22.1**	**-1.1**
TVSB				SG	**Sg**	**06 13 28.3**	**-0.8**
TVSB	**Tavsanli**	**0.43**	**47**	*e*Pg	**Pg**	**06 13 22.1**	**-1.1**
TVSB				*e*Sg	**Sg**	**06 13 28.3**	**-0.8**
DURS	**Dursunbey**	**0.63**	**314**	*i* P	**Pb**	**06 13 28.2**	**+1.0**
DURS	**Dursunbey**	**0.63**	**314**	P	**Pb**	**06 13 28.2**	**+1.0**
KULA	**Kula-Manisa**	**0.72**	**206**	PG	**Pb**	**06 13 28.9**	**+0.3**
KULA				SG	**Sb**	**06 13 38.8**	**+0.6**
KULA	**Kula-Manisa**	**0.72**	**206**	*e*Pg	**Pb**	**06 13 28.9**	**+0.3**
KULA				*e*Sg	**Sb**	**06 13 38.8**	**+0.6**
MANT	**Manisa**	**0.77**	**210**	*i* P	**Pn**	**06 13 31.5**	**+0.6**
MANT				*i* S	**Sg**	**06 13 39.9**	**0.0**
MANT	**Manisa**	**0.77**	**210**	P	**Pn**	**06 13 31.5**	**+0.6**
MANT				S	**Sg**	**06 13 39.9**	**0.0**

IDC 25 06:14:55.0±2.9, 53°.33N×87°.28E, h0km, mb1 2.7/2, mb1mx2.7/70, mbtmp2.7/2, ML2.6/2, Error ellipse: s-maj=27.1km s-min=15.1km az=65.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.59**	**294**	*i*		06 25 21.3	
	baz=113,slow=340,SNR=1.9						
ZALV	**Zalesovo Beam**	**1.59**	**294**	Pg	Pn	06 15 22.9	-1.4
	1.5nm,0.3s,baz=111,slow=14,SNR=7.6						
ZALV				Lg	Lg	06 15 45.8	
	1.3nm,0.3s,baz=113,slow=26,SNR=4.0						
KURBB	**Kurchatov Arra**	**6.04**	**247**	Pn	Pn	06 16 26.2	+0.7
	0.1nm,0.3s,baz=62,slow=14,SNR=7.1						
KURBB				Lg	Lg	06 18 05.9	
	0.0nm,0.3s,baz=63,slow=32,SNR=2.9						
MKAR	**Makanchi Array**	**7.28**	**208**	Pn	Pn	06 16 43.8	+1.3
	0.2nm,0.3s,baz=29,slow=16,SNR=6.7						
MKAR				Lg	Lg	06 18 46.8	
	baz=25,slow=30,SNR=4.2						

*IDC **25** 06:25:58.7±1.5, 1°.76N×99°.37E, h171km±4km, mb3.7/9, mb1 3.7/9, mb1mx3.3/63, mbtmp4.2/9, Error ellipse: s-maj=65.2km s-min=18.3km az=54.0*
*ISCJB **25** 06:25:59.0±0.6, 1°.85N±0°.05×99°.40E±0°.07, h150km, mb3.9/9, Error ellipse: s-maj=11.1km s-min=4.7km az=147.2*
*DJA **25** 06:25:59.8±0.4, 2°.N±3°.×9°.9E±°, h157km±5km, M3.6/13, MLv3.6/13*
ISC 25 06:25:57.9±0.8, 1°.82N±0°.05×99°.36E±0°.07, h150km, n24, σ2°.46/30, mb3.9/9, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBSI	**Sibolga**	**0.54**	**241**	P	**Pn**	**06 26 22.3**	**+2.8**
MNSI	**Mandailing Nat**	**1.03**	**168**	P	**Pn**	**06 26 27.2**	**+4.2**
PSI	**Prapat**	**1.07**	**336**	P	**Pn**	**06 26 26.8**	**+3.3**
	19nm,0.3s,baz=180,slow=13,SNR=39						
PSI				S	**Sn**	**06 26 47.0**	**+3.9**
	2.9nm,0.3s,baz=180,slow=20,SNR=14						
TSI	**Tuntungan**	**1.85**	**335**	P	**Pn**	**06 26 34.2**	**+2.8**
GSI	**Gunungsitoli**	**1.86**	**254**	P	**Pn**	**06 26 34.1**	**+2.7**
PBSI	**Pulau Batu**	**2.15**	**210**	P	**Pn**	**06 26 36.3**	**+1.5**
BKNI	**Bangkinang**	**2.23**	**131**	P	**Pn**	**06 26 38.8**	**+3.0**
KCSI	**Kotacane, Aceh**	**2.33**	**317**	P	**Pn**	**06 26 39.3**	**+2.4**
KCSI				S	**Sn**	**06 27 09.8**	**+2.8**
PPI	**Padang Panjang**	**2.48**	**155**	P	**Pn**	**06 26 41.1**	**+2.3**
TPTI		**2.61**	**303**	P	**Pn**	**06 26 43.3**	**+2.9**
TPTI				S	**Sn**	**06 27 15.8**	**+2.6**
PDSI	**Padang**	**2.92**	**158**	P	**Pn**	**06 26 46.9**	**+2.5**
PDSI				S	**Sn**	**06 27 23.1**	**+2.8**
SNSI	**Sinabang, Aceh**	**3.09**	**281**	P	**Pn**	**06 26 48.2**	**+1.8**
SNSI				S	**Sn**	**06 27 25.8**	**+1.8**
SISI	**Saibi**	**3.13**	**185**	P	**Pn**	**06 26 47.6**	**+0.6**
SISI				S	**Sn**	**06 27 27.4**	**+2.4**
MLSI	**Meulaboh, Aceh**	**3.83**	**310**	P	**Pn**	**06 26 58.1**	**+2.1**
BSI	**Banda Aceh**	**5.46**	**312**	P	**Pn**	**06 27 18.6**	**+1.1**
WRA	**Warramunga Arr**	**40.55**	**124**	P	**P**	**06 33 21.0**	**-1.9**
	0.7nm,0.4s,baz=302,slow=9.0,SNR=8.2						
SONM	**Songino Array**	**46.24**	**7**	P	**P**	**06 34 06.9**	**-1.3**
	0.7nm,0.4s,baz=188,slow=8.7,SNR=4.4						
MKAR	**Makanchi Array**	**47.21**	**344**	P	**P**	**06 34 14.9**	**-0.7**
	3.0nm,0.4s,baz=157,slow=8.6,SNR=59						
KURBB	**Kurchatov Arra**	**51.74**	**343**	P	**P**	**06 34 49.0**	**-0.8**
	1.5nm,0.6s,baz=164,slow=7.2,SNR=11						
ZALV	**Zalesovo Beam**	**53.33**	**349**	P	**P**	**06 35 00.6**	**-0.8**
	4.4nm,0.4s,baz=182,slow=6.7,SNR=19						
BVAR	**Borovoye Array**	**56.41**	**339**	P	**P**	**06 35 21.7**	**-1.9**
	0.6nm,0.5s,baz=156,slow=7.7,SNR=2.8						
FINES	**FINESS Array B**	**80.46**	**332**	P	**P**	**06 37 51.1**	**-1.7**
	3.3nm,1.1s,baz=100,slow=7.6,SNR=5.4						
ARCES	**ARCESS Array B**	**82.69**	**340**	P	**P**	**06 38 02.7**	**-1.7**
	0.5nm,0.6s,baz=101,slow=4.7,SNR=4.1						
HFS	**Hagfors**	**86.27**	**330**	P	**P**	**06 38 21.3**	**-1.3**
	2.0nm,0.8s,baz=133,slow=6.1,SNR=5.7						

*ISK **25** 06:28:43.5, 39°.10N×29°.16E, h19km±2km, ML1.9/3*
*ISCJB **25** 06:28:44.4±0.9, 39°.12N±0°.05×29°.18E±0°.05, h16km±8km, Error ellipse: s-maj=9.2km s-min=7.0km az=172.2*
*CSEM **25** 06:28:44.0±0.2, 39°.09N×29°.20E, h17km±1km, ML1.9, Error ellipse: s-maj=4.0km s-min=3.1km az=147.0*
*DDA **25** 06:28:44.7, 39°.10N×29°.16E, h7km, Ml2.7*
ISC 25 06:28:43.9±1.2, 39°.11N±0°.04×29°.20E±0°.03, h18km±4km, n18, σ0°.43/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHAP	**Saphane-Kutahy**	**0.09**	**168**	PG	**Pg**	**06 28 48.3**	**+0.7**
SHAP				SG	**Sg**	**06 28 50.5**	**+0.4**
SHAP	**Saphane-Kutahy**	**0.09**	**168**	*e*Pg	**Pg**	**06 28 48.3**	**+0.7**
SHAP				*e*Sg	**Sg**	**06 28 50.5**	**+0.4**
SIMA	**Simav-Kutahya**	**0.17**	**262**	PG	**Pg**	**06 28 48.8**	**+0.3**
SIMA				SG	**Sg**	**06 28 51.1**	**-0.6**
SIMA	**Simav-Kutahya**	**0.17**	**262**	*e*Pg	**Pg**	**06 28 48.8**	**+0.3**
SIMA				*e*Sg	**Sg**	**06 28 51.1**	**-0.6**
SMAA	**Simav-Kutahya**	**0.17**	**268**	PG	**Pg**	**06 28 48.4**	**-0.1**
SMAA				SG	**Sg**	**06 28 51.1**	**-0.5**
SMAA	**Simav-Kutahya**	**0.17**	**268**	*e*Pg	**Pg**	**06 28 48.4**	**-0.1**
SMAA				*e*Sg	**Sg**	**06 28 51.1**	**-0.5**
GEDZ	**Gediz**	**0.18**	**111**	PG	**Pg**	**06 28 48.1**	**-0.5**
GEDZ	**Gediz**	**0.18**	**111**	*e*Pg	**Pg**	**06 28 48.1**	**-0.5**
DEMI	**Demirci**	**0.38**	**260**	*i* P	**Pg**	**06 28 52.0**	**+0.1**
DEMI				*i* S	**Sg**	**06 28 56.9**	**-0.4**
DEMI	**Demirci**	**0.38**	**260**	P	**Pg**	**06 28 52.0**	**+0.1**
DEMI				S	**Sg**	**06 28 56.9**	**-0.4**
TVSB	**Tavsanli**	**0.40**	**31**	PG	**Pg**	**06 28 52.5**	**+0.3**
TVSB	**Tavsanli**	**0.40**	**31**	*e*Pg	**Pg**	**06 28 52.5**	**+0.3**
KULA	**Kula-Manisa**	**0.73**	**216**	PG	**Pb**	**06 28 57.8**	**-0.3**
KULA				SG	**Sg**	**06 29 07.9**	**0.0**
KULA	**Kula-Manisa**	**0.73**	**216**	*e*Pg	**Pb**	**06 28 57.8**	**-0.3**
KULA				*e*Sg	**Sg**	**06 29 07.9**	**0.0**
DURS	**Dursunbey**	**0.75**	**312**	*i* P	**Pg**	**06 28 59.1**	**+0.5**
DURS	**Dursunbey**	**0.75**	**312**	P	**Pg**	**06 28 59.1**	**+0.5**
MANT	**Manisa**	**0.79**	**219**	*i* P	**Pb**	**06 28 59.5**	**+0.2**
MANT	**Manisa**	**0.79**	**219**	P	**Pb**	**06 28 59.5**	**+0.2**

IDC 25 06:34:21.9±14.0, 13°.54N×93°.01E, h0km, mb3.5/2, mb1 4.0/3, mb1mx3.4/67, mbtmp3.7/3, ML3.9/1, Error ellipse: s-maj=310.9km s-min=47.3km az=108.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**7.51**	**49**	Pn	Pn	06 36 12.9	+0.2
	0.5nm,0.3s,baz=236,slow=16,SNR=3.0						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S3	**Diego Garcia H**	**29.29**	**225**	T	T	07 11 48.0	
	baz=42						
H08S2	**Diego Garcia H**	**29.30**	**225**	T	T	07 11 35.7	
	baz=42						
H08S1	**Diego Garcia H**	**29.31**	**225**	T	T	07 11 45.2	
	baz=42						
WRA	**Warramunga Arr**	**52.54**	**128**	P	P	06 43 36.9	-0.5
	0.6nm,0.7s,baz=312,slow=8.8,SNR=3.3						
ASAR	**Alice Springs**	**54.46**	**132**	P	P	06 43 51.8	+0.3
	0.5nm,0.5s,baz=312,slow=7.0,SNR=6.7						

*NIED **25** 06:37:00, 38°.50N×141°.90E, h56km, Mw3.6 Best double couple: M=2.46000×10^14 NP1:φ=14.00000°, δ=49.00000°, λ=148.00000°. NP2:φ=126.00000°, δ=67.00000°, λ=46.00000°.*
*ISCJB **25** 06:37:40.0±1.2, 38°.47N±0°.04×142°.0E±0°.1, h48km±10km, mb3.5/2, Error ellipse: s-maj=17.8km s-min=6.7km az=9.4*
*JMA **25** 06:37:40.9±0.1, 38°.51N×141°.93E, h44km±1km, M3.5*
JMA Felt I J1.
*IDC **25** 06:37:42.7±6.1, 38°.53N×142°.16E, h72km±49km, mb3.1/2, mb1 3.4/4, mb1mx3.0/65, mbtmp3.4/4, ML2.7/2, MS2.6/1, Ms1 2.6/1, ms1mx2.0/22, Error ellipse: s-maj=51.1km s-min=24.3km az=90.0*
ISC 25 06:37:39.2±2.6, 38°.48N±0°.05×142°.1E±0°.1, h30km±15km, n21, σ2°.07/22, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**0.57**	**267**	P	**Pn**	**06 37 51.2**	**-0.1**
JIO				S	**Sb**	**06 37 58.2**	**-0.5**
OFUJ	**Ofunato**	**0.68**	**332**	P	**Pn**	**06 37 53.2**	**+0.4**
OFUJ				S	**Sb**	**06 38 01.6**	**-0.1**
JMK	**Ichinoseki**	**0.82**	**305**	P	**Pn**	**06 37 54.7**	**0.0**
JMK				S	**Sb**	**06 38 04.4**	**-1.2**
JOU	**Okura**	**1.12**	**264**	P	**Pn**	**06 37 58.6**	**-0.3**
JOM	**Ohasama**	**1.16**	**329**	P	**Pn**	**06 37 59.8**	**+0.3**
JOM				*e*S	**Sn**	**06 38 14.1**	**-0.3**
JMM	**Marumori**	**1.19**	**239**	P	**Pn**	**06 37 59.3**	**-0.5**
JMM				S	**Sn**	**06 38 12.9**	**-2.0**
JYK	**Kaneyama**	**1.41**	**288**	P	**Pn**	**06 38 02.9**	**0.0**
JYK				S	**Sn**	**06 38 19.3**	**-1.2**
JRG	**Rokugo**	**1.45**	**309**	P	**Pn**	**06 38 03.7**	**+0.3**
JFK	**Kawauchi**	**1.47**	**221**	P	**Pn**	**06 38 03.9**	**+0.2**
JFK				S	**Sn**	**06 38 20.1**	**-1.8**
MJAR	**Matsushiro Arr**	**3.63**	**239**	P	**Pn**	**06 38 35.6**	**+2.1**
	2.4nm,0.3s,baz=42,slow=10,SNR=12						
MJAR				S	**Sn**	**06 39 20.8**	**+5.3**
	0.1nm,0.3s,baz=86,slow=26,SNR=3.3						
MAT	**Matsushiro**	**3.64**	**239**	P	**Pn**	**06 38 36.7**	**+3.2**
USRK	**Ussuriysk Ar.**	**9.49**	**310**	P	**Pn**	**06 39 58.4**	**+4.6**
	0.2nm,0.3s,baz=108,slow=9.3,SNR=4.3						
JNU	**Nakatsue**	**10.55**	**243**	LR	LR	06 44 34.3	
	comp=Z,36nm,20.3s,baz=126,slow=39						
H11N2	**WAKE ISLAND Hy**	**28.48**	**124**	T	T	07 13 52.0	
	baz=316,slow=75,SNR=7.5						
H11N1	**WAKE ISLAND Hy**	**28.49**	**124**	T	T	07 13 50.6	
	baz=316,slow=75,SNR=20						
H11N3	**WAKE ISLAND Hy**	**28.50**	**124**	T	T	07 13 51.4	
	baz=316,slow=75,SNR=13						
H11S1	**WAKE ISLAND Hy**	**29.24**	**126**	T	T	07 14 58.6	
	baz=319						
H11S3	**WAKE ISLAND Hy**	**29.25**	**126**	T	T	07 14 49.0	
	baz=319,slow=74						
H11S2	**WAKE ISLAND Hy**	**29.26**	**126**	T	T	07 14 44.7	
	baz=319,slow=74						
KURBB	**Kurchatov Arra**	**45.54**	**307**	P	**P**	**06 45 54.8**	**-1.2**
	0.3nm,0.4s,baz=79,slow=8.4,SNR=2.8						
WRA	**Warramunga Arr**	**58.57**	**189**	P	**P**	**06 47 32.5**	**-0.6**
	0.2nm,0.4s,baz=5.2,slow=7.3,SNR=3.3						

*ISCJB **25** 06:43:53.5±0.8, 6°.74S±0°.05×112°.48E±0°.02, h11km±4km, mb4.1/9, MS3.3/2, Error ellipse: s-maj=7.7km s-min=3.9km az=4.4*
*NEIC **25** 06:43:54.6±0.5, 6°.72S×112°.55E, h10km, mb3.7/4, Error ellipse: s-maj=12.4km s-min=6.5km az=195.0*
NEIC Felt [III] at Lamongan.
*DJA **25** 06:43:55.6±0.3, 7°.S±3°.×11°.2E±°, h10km, M3.8/19, MLv3.8/19*
*IDC **25** 06:44:03.6±9.6, 7°.67S×113°.32E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.5/56, mbtmp3.8/3, MS3.3/2, Ms1 3.3/2, ms1mx2.5/53, Error ellipse: s-maj=160.1km s-min=127.9km az=162.0*
ISC 25 06:43:54.9±1.1, 6°.83S±0°.07×112°.45E±0°.03, h11km±6km, n32, σ0°.82/41, mb3.9/9, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRJI	**Gresik**	**0.09**	**163**	P	**Pg**	**06 43 57.1**	**-0.4**
GRJI				S	**Sg**	**06 43 59.8**	**+0.4**
TBJI	**Tambak Boyo**	**0.60**	**271**	P	**Pg**	**06 44 05.7**	**-0.9**
TBJI				Sg	**Sg**	**06 44 14.7**	**+0.1**
TBJI				S	**Sb**	**06 44 15.4**	**-0.6**
NGJI	**Ngawi**	**1.12**	**241**	P	**Pb**	**06 44 17.2**	**+0.9**
NGJI				S	**Sb**	**06 44 31.5**	**+0.6**
NGJI				Sg	**Sn**	**06 44 32.4**	**+0.4**
PWJI	**Pagerwojo**	**1.35**	**208**	P	**Pn**	**06 44 18.9**	**-0.8**
PWJI				S	**Sn**	**06 44 36.5**	**-1.1**
BLJI	**Banyuglugur**	**1.45**	**129**	P	**Pn**	**06 44 21.2**	**0.0**
BLJI				S	**Sb**	**06 44 41.3**	**+0.8**
GMJI	**Gumukmas**	**1.74**	**146**	P	**Pn**	**06 44 25.2**	**+0.1**
GMJI				S	**Sn**	**06 44 48.2**	**+0.9**
WOJI	**Wonogiri, Jawa**	**1.82**	**236**	P	**Pn**	**06 44 25.6**	**-0.6**
WOJI				S	**Sn**	**06 44 50.3**	**+1.1**
PCJI	**Pacitan**	**1.85**	**223**	P	**Pn**	**06 44 26.2**	**-0.5**
PCJI				S	**Sn**	**06 44 50.2**	**0.0**
SMRI	**Semarang**	**2.01**	**264**	P	**Pn**	**06 44 29.7**	**+0.9**
SMRI				Sg	**Sg**	**06 45 02.0**	**+2.4**
SMRI	**Semarang**	**2.01**	**264**	*e*Pn	**Pn**	**06 44 30.2**	**+1.3**
UGM	**Wanagama**	**2.20**	**241**	P	**Pb**	**06 44 33.6**	**-1.1**
UGM	**Wanagama**	**2.20**	**241**	*e*Pn	**Pn**	**06 44 33.0**	**+1.6**
JAGI	**Jajag, Banyuwa**	**2.34**	**134**	P	**Pn**	**06 44 33.8**	**+0.4**
JAGI	**Jajag, Banyuwa**	**2.34**	**134**	*e*Pn	**Pn**	**06 44 34.0**	**+0.5**
SRBI	**Singaraja**	**3.01**	**115**	P	**Pn**	**06 44 42.9**	**+0.3**
IGBI	**Denpasar**	**3.32**	**127**	P	**Pn**	**06 44 47.4**	**+0.5**
KPJI	**Karang Pucung**	**3.53**	**262**	P	**Pn**	**06 44 50.3**	**+0.5**
CMJI	**Cimerak**	**4.08**	**256**	P	**Pn**	**06 44 56.9**	**-0.5**
TWSI	**Taliwang, Sumb**	**4.78**	**114**	P	**Pn**	**06 45 07.3**	**+0.3**
WRA	**Warramunga Arr**	**24.92**	**124**	P	**P**	**06 49 17.7**	**-0.6**
	1.9nm,0.9s,baz=299,slow=12,SNR=9.9						
WR1	**Warramunga Arr**	**24.92**	**124**	*e*P	**P**	**06 49 17.7**	**-0.6**
	2.6nm,0.8s						
WRAB	**Tennant Creek**	**24.92**	**124**	*e*P	**P**	**06 49 19.0**	**+0.6**
	7.4nm,0.9s						
WB2	**Warramunga Arr**	**24.93**	**124**	*e*P	**P**	**06 49 17.9**	**-0.5**
	0.3nm,0.9s						
AS31	**Alice Springs**	**26.55**	**131**	*e*P	**P**	**06 49 32.5**	**-0.6**
	1.1nm,1.1s						
ASAR	**Alice Springs**	**26.55**	**131**	P	**P**	**06 49 32.5**	**-0.6**
	1.8nm,0.6s,baz=303,slow=8.8,SNR=17						
AS01	**Alice Springs**	**26.58**	**131**	*e*P	**P**	**06 49 33.3**	**-0.1**
YHNB	**Yeheng**	**32.49**	**15**	*e*P	**P**	**06 50 24.7**	**-1.2**
	87nm,0.3s						
PMG	**Port Moresby**	**34.44**	**97**	LR	LR	07 08 17.4	
	comp=Z,64nm,20.1s,baz=87,slow=43						
STKA	**Stephens Creek**	**36.88**	**136**	P	**P**	**06 51 04.0**	**+0.3**
	0.9nm,0.4s,baz=316,slow=14,SNR=5.1						
STKA	**Stephens Creek**	**36.88**	**136**	*e*P	**P**	**06 51 04.0**	**+0.3**
	0.3nm,1.0s						
HMDM	**Hanimaadhoo**	**41.44**	**288**	*e*P	**P**	**06 51 42.4**	**+0.3**
	118nm,1.1s						
DZM	**Mont Dzumac**	**54.15**	**112**	LR	LR	07 16 15.9	
	comp=Z,24nm,19.2s,baz=65,slow=36						

*IGQ **25** 06:46:52.4±0.7, 1°.N±5°.×8°.0W±°, h12km, MLv4.1/6*
*ISCJB **25** 06:46:53.0±0.8, 0°.79N±0°.03×79°.62W±0°.06, h20km, Error ellipse: s-maj=8.5km s-min=4.3km az=11.3*
ISC 25 06:46:48.0±1.5, 0°.96N±0°.04×79°.73W±0°.07, h20km, n54, σ1°.49/54, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAG1	**Magdalena**	**1.02**	**183**	P	**Pb**	**06 47 07.0**	**-0.1**
ASDO	**Santo Domingo**	**1.35**	**153**	P	**Pn**	**06 47 11.5**	**-0.4**
ASDO				S	**Sn**	**06 47 27.9**	**-1.4**
LITE1	**Lita**	**1.38**	**97**	P	**Pb**	**06 47 13.0**	**-0.2**
LITE1				S	**Sb**	**06 47 31.3**	**+0.9**
OTAV	**Otavalo**	**1.46**	**119**	*e*P	**Pb**	**06 47 14.8**	**-0.1**
OTAV	**Otavalo**	**1.46**	**119**	P	**Pb**	**06 47 14.8**	**-0.1**
OTAV				S	**Sb**	**06 47 33.8**	**+0.6**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CUIC	**Cuicocha-Domo**	**1.51**	**115**	P	**Pb**	**06 47 15.5**	**-0.2**
URCU	**Urcuqui**	**1.56**	**109**	P	**Pb**	**06 47 16.4**	**-0.1**
YANA	**Yana**	**1.57**	**133**	P	**Pb**	**06 47 16.5**	**-0.2**
ACOT	**Cotacachi (Cas**	**1.59**	**114**	P	**Pb**	**06 47 17.4**	**+0.4**
GGPC	**Guagua Pichinc**	**1.60**	**135**	P	**Pn**	**06 47 16.7**	**+1.1**
GGPC				S	**Sb**	**06 47 37.1**	**0.0**
IMBA	**Imbabura, San**	**1.67**	**114**	P	**Pb**	**06 47 19.1**	**+0.7**
NINA	**Atacazo Ninahu**	**1.74**	**140**	P	**Pb**	**06 47 19.4**	**-0.1**
YAHU	**Yahuarcocha**	**1.76**	**109**	P	**Pb**	**06 47 20.2**	**+0.4**
CAYA	**Cayambe**	**1.95**	**117**	P	**Pb**	**06 47 23.3**	**+0.2**
PAST	**Pastocalle**	**1.97**	**146**	P	**Pn**	**06 47 22.1**	**+1.5**
PITA	**Cotopaxi Volc**	**1.98**	**139**	P	**Pb**	**06 47 23.4**	**-0.3**
NAS2	**Nasa**	**2.03**	**142**	P	**Pb**	**06 47 24.0**	**-0.5**
CAMI	**Rancho Maria**	**2.03**	**143**	P	**Pb**	**06 47 24.1**	**-0.4**
BNAS	**Cotopaxi Volca**	**2.04**	**142**	P	**Pb**	**06 47 24.3**	**-0.4**
BREF	**Cotopaxi Volca**	**2.06**	**141**	P	**Pb**	**06 47 24.8**	**-0.4**
ANTG	**Antisana-Guama**	**2.07**	**134**	P	**Pb**	**06 47 24.6**	**-0.5**
VC1	**Cotopaxi 1**	**2.07**	**140**	P	**Pb**	**06 47 24.8**	**-0.4**
BVC2	**Cotopaxi Volca**	**2.07**	**141**	P	**Pb**	**06 47 24.9**	**-0.4**
BTAM	**Cotopaxi Volca**	**2.10**	**141**	P	**Pb**	**06 47 25.3**	**-0.4**
BMOR	**Cotopaxi Volca**	**2.10**	**143**	P	**Pb**	**06 47 25.0**	**-0.8**
ANTM	**Antisana-La Mi**	**2.11**	**135**	P	**Pb**	**06 47 25.3**	**-0.7**
COV1	**Cotopaxi Volc**	**2.12**	**139**	P	**Pn**	**06 47 24.9**	**+2.0**
ANTS	**Antisana-Sarah**	**2.12**	**133**	P	**Pb**	**06 47 25.8**	**-0.4**
CONE	**Cono NE Rev Vo**	**2.32**	**116**	P	**Pb**	**06 47 30.7**	**+1.3**
GCUF	**Volcan Galeras**	**2.40**	**84**	*e*P	**Pb**	**06 47 30.6**	**-0.2**
PISA	**Pisayambo**	**2.41**	**146**	P	**Pb**	**06 47 29.7**	**-1.3**
CPAS2	**Pasto**	**2.49**	**84**	*e*P	**Pb**	**06 47 32.3**	**0.0**
GRGC	**Isla de Gorgon**	**2.56**	**37**	*e*P	**Pb**	**06 47 36.7**	**+3.4**
RUN5	**Runtun**	**2.69**	**151**	P	**Pb**	**06 47 34.4**	**-1.3**
BRUN	**Tungurahua Vol**	**2.70**	**151**	P	**Pb**	**06 47 34.4**	**-1.5**
RETU	**Refugio**	**2.71**	**152**	P	**Pb**	**06 47 35.0**	**-1.2**
BULB	**Ulba Tungurahu**	**2.72**	**151**	P	**Pb**	**06 47 34.8**	**-1.4**
BMAS	**Trigal station**	**2.74**	**153**	P	**Pb**	**06 47 35.1**	**-1.6**
ARRY	**Arrayan**	**2.76**	**152**	P	**Pb**	**06 47 35.0**	**-1.8**
BPAT	**Tungurahua Vol**	**2.76**	**152**	P	**Pb**	**06 47 36.8**	**-0.2**
CRUC	**La Cruz**	**2.84**	**78**	*e*P	**Pb**	**06 47 37.7**	**-0.6**
RIOE1	**Riobamba**	**2.90**	**158**	P	**Pn**	**06 47 36.9**	**+3.5**
MILO	**Milagro-Astudi**	**3.22**	**177**	P	**Pn**	**06 47 37.5**	**0.0**
SOTA	**Rioblanco**	**3.33**	**69**	*e*P	**Pb**	**06 47 44.7**	**-2.0**
COHC	**Cochancay**	**3.43**	**172**	P	**Pn**	**06 47 40.9**	**+0.5**
POPC	**Popayan, Colom**	**3.43**	**63**	*e*P	**Pb**	**06 47 46.1**	**-2.2**
PCON	**Cinco Dias**	**3.60**	**68**	*e*P	**Pb**	**06 47 49.2**	**-2.1**
MALC	**Bahia Malaga**	**3.87**	**38**	*e*P	**Pb**	**06 47 56.0**	**+0.4**
HORQ	**Saladito**	**3.99**	**51**	*e*P	**Pb**	**06 47 53.2**	**-4.6**
FLOC	**Florencia**	**4.12**	**81**	*e*P	Pn	06 47 54.9	+5.0
MARP	**Paez Belalcaza**	**4.21**	**64**	*e*P	**Pb**	**06 47 56.9**	**-4.7**
YOTC	**Yotoco, Valle**	**4.53**	**48**	*e*P	Pb	06 48 01.9	-5.0
TOLC	**Tolima**	**5.69**	**51**	*e*P	Pb	06 48 20.2	-6.7
SJAC	**San Juan de Ar**	**6.21**	**68**	*e*P	Pn	06 48 25.5	+6.7

*ISCJB **25** 06:48:39.8±0.8, 38°.38N±0°.05×26°.47E±0°.06, h14km±5km, Error ellipse: s-maj=7.8km s-min=7.3km az=145.4*
*ISK **25** 06:48:39.6, 38°.37N×26°.48E, h12km±1km, ML1.6/1*
*CSEM **25** 06:48:39.3±0.1, 38°.34N×26°.51E, h15km, ML2.5, Error ellipse: s-maj=3.4km s-min=1.8km az=154.0*
*DDA **25** 06:48:41.5, 38°.34N×26°.57E, h8km, Ml2.5*
ISC 25 06:48:39.3±1.0, 38°.39N±0°.04×26°.46E±0°.04, h15km±7km, n11, σ0°.22/19, Aegean Sea

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

ANX	**Ano Chora**	**0.20**	**358**	P	**Pg**	**06 49 04.2**	**-0.2**
ANX				S	**Sg**	**06 49 07.6**	**+0.2**
ANX	**Ano Chora**	**0.20**	**358**	P	**Pg**	**06 49 04.2**	**-0.2**
ANX				S	**Sg**	**06 49 07.3**	**-0.1**
PVO	**Paravola**	**0.39**	**305**	P	**Pg**	**06 49 07.6**	**-0.3**
PVO				S	**Sg**	**06 49 12.6**	**-0.4**
PVO				AML	AML	06 49 17.7	
	comp=N,12034μm,0.3s						
PVO				AML	AML	06 49 20.8	
	comp=E,13311μm,0.6s						
PVO	**Paravola**	**0.39**	**305**	P	**Pg**	**06 49 07.4**	**-0.4**
PVO				S	**Sg**	**06 49 12.8**	**-0.2**
PVO	**Paravola**	**0.39**	**305**	P	**Pg**	**06 49 07.5**	**-0.3**
PVO				S	**Sg**	**06 49 12.8**	**-0.2**
KLV	**Kalavryta, Ach**	**0.39**	**153**	P	**Pg**	**06 49 07.5**	**-0.4**
KLV				S	**Sg**	**06 49 13.6**	**+0.6**
KLV				AML	AML	06 49 15.0	
	comp=E,10066μm,0.3s						
KLV				AML	AML	06 49 15.4	
	comp=N,7033μm,0.1s						
KLV	**Kalavryta, Ach**	**0.39**	**153**	P	**Pg**	**06 49 07.4**	**-0.4**
KLV				S	**Sb**	**06 49 14.5**	**-0.7**
KLV	**Kalavryta, Ach**	**0.39**	**153**	P	**Pg**	**06 49 07.5**	**-0.4**
KLV				S	**Sg**	**06 49 13.3**	**+0.3**
DLFA	**Delphi**	**0.45**	**79**	P	**Pg**	**06 49 08.2**	**-0.9**
DLFA				S	**Sg**	**06 49 15.0**	**0.0**
DLFA	**Delphi**	**0.45**	**79**	P	**Pg**	**06 49 08.4**	**-0.6**
DLFA				S	**Sg**	**06 49 15.1**	**0.0**
DSF	**Desfina**	**0.47**	**88**	P	**Pg**	**06 49 08.5**	**-0.8**
DSF				S	**Sg**	**06 49 16.5**	**+0.9**
DSF				AML	AML	06 49 17.1	
	comp=N,12180μm,0.2s						
DSF				AML	AML	06 49 18.6	
	comp=E,5381μm,0.1s						
DSF	**Desfina**	**0.47**	**88**	P	**Pg**	**06 49 08.6**	**-0.8**
DSF				S	**Sb**	**06 49 16.9**	**-0.7**
DSF	**Desfina**	**0.47**	**88**	P	**Pg**	**06 49 08.7**	**-0.7**
DSF				S	**Sg**	**06 49 16.1**	**+0.5**
DRO	**Drossia**	**0.47**	**201**	P	**Pg**	**06 49 09.3**	**0.0**
DRO				S	**Sg**	**06 49 15.1**	**-0.5**
DRO				AML	AML	06 49 17.1	
	comp=N,36339μm,0.3s						
DRO				AML	AML	06 49 17.4	
	comp=E,44554μm,0.2s						
DRO	**Drossia**	**0.47**	**201**	P	**Pg**	**06 49 09.1**	**-0.3**
DRO				S	**Sg**	**06 49 16.4**	**+0.8**
DRO	**Drossia**	**0.47**	**201**	P	**Pg**	**06 49 09.1**	**-0.3**
DRO				S	**Sg**	**06 49 15.3**	**-0.3**
AXS	**Araxos**	**0.48**	**246**	P	**Pg**	**06 49 09.6**	**+0.1**
AXS				S	**Sg**	**06 49 16.4**	**+0.7**
AXS				AML	AML	06 49 17.9	
	comp=N,10022μm,0.4s						
AXS				AML	AML	06 49 18.6	
	comp=E,8445μm,0.2s						
AXS	**Araxos**	**0.48**	**246**	P	**Pg**	**06 49 09.2**	**-0.3**
AXS				S	**Sg**	**06 49 16.1**	**+0.4**
RLS	**Riolos of Patr**	**0.49**	**228**	P	**Pg**	**06 49 09.8**	**0.0**
RLS				S	**Sg**	**06 49 15.7**	**-0.6**
RLS				AML	AML	06 49 19.2	
	comp=N,9715μm,0.4s						
RLS				AML	AML	06 49 19.7	
	comp=E,9467μm,0.3s						
RLS	**Riolos of Patr**	**0.49**	**228**	P	**Pg**	**06 49 09.5**	**-0.3**
RLS				S	**Sg**	**06 49 17.1**	**+0.8**
RLS	**Riolos of Patr**	**0.49**	**228**	P	**Pg**	**06 49 09.5**	**-0.3**
RLS				S	**Sg**	**06 49 16.0**	**-0.3**
EVR	**Evrytania**	**0.53**	**350**	P	**Pg**	**06 49 10.2**	**-0.4**
EVR				S	**Sg**	**06 49 16.9**	**-0.7**
EVR				AML	AML	06 49 20.1	
	comp=N,7488μm,0.3s						
EVR				AML	AML	06 49 23.4	
	comp=E,8349μm,0.5s						
EVR	**Evrytania**	**0.53**	**350**	P	**Pg**	**06 49 10.0**	**-0.5**
EVR	**Evrytania**	**0.53**	**350**	P	**Pg**	**06 49 10.1**	**-0.4**
EVR				S	**Sg**	**06 49 17.2**	**-0.4**
GUR	**Goura**	**0.56**	**144**	P	**Pg**	**06 49 10.2**	**-0.9**
GUR				S	**Sb**	**06 49 19.4**	**-0.8**
GUR				AML	AML	06 49 24.0	
	comp=E,16286μm,0.4s						
GUR				AML	AML	06 49 24.8	
	comp=N,22016μm,0.4s						
GUR	**Goura**	**0.56**	**144**	P	**Pg**	**06 49 10.3**	**-0.8**
GUR				S	**Sg**	**06 49 18.7**	**+0.3**
GUR	**Goura**	**0.56**	**144**	P	**Pg**	**06 49 10.3**	**-0.8**
GUR				S	**Sg**	**06 49 18.7**	**+0.3**
PDO	**Prodromos**	**0.62**	**290**	P	**Pg**	**06 49 11.2**	**-1.0**
PDO				S	**Sg**	**06 49 20.5**	**+0.1**
PDO				AML	AML	06 49 24.4	
	comp=E,7585μm,0.3s						
PDO				AML	AML	06 49 27.4	
	comp=N,11418μm,0.4s						
PDO	**Prodromos**	**0.62**	**290**	P	**Pg**	**06 49 11.2**	**-1.0**
PDO	**Prodromos**	**0.62**	**290**	P	**Pg**	**06 49 11.4**	**-0.8**
PDO				S	**Sg**	**06 49 20.4**	**+0.1**
THAL	**Thalero**	**0.68**	**121**	P	**Pb**	**06 49 14.1**	**+0.1**
THAL				S	**Sb**	**06 49 23.0**	**-0.5**
THAL				AML	AML	06 49 30.2	
	comp=E,13646μm,0.6s						
THAL				AML	AML	06 49 31.5	
	comp=N,10194μm,0.3s						
THAL	**Thalero**	**0.68**	**121**	P	**Pg**	**06 49 13.4**	**+0.1**
THAL				S	**Sg**	**06 49 22.6**	**+0.5**
AGG	**Agios Georgios**	**0.70**	**26**	*i* PG	**Pg**	**06 49 13.2**	**-0.6**
AGG				*i* SG	**Sb**	**06 49 25.6**	**+1.3**
AGG	**Agios Georgios**	**0.70**	**26**	P	**Pg**	**06 49 12.8**	**-1.0**
AGG				S	**Sb**	**06 49 23.6**	**-0.7**
AGG				AML	AML	06 49 29.2	
	comp=E,14004μm,0.6s						
AGG				AML	AML	06 49 29.7	
	comp=N,21101μm,0.4s						
AGG	**Agios Georgios**	**0.70**	**26**	P	**Pg**	**06 49 12.7**	**-1.0**
AGG				S	**Sb**	**06 49 24.3**	**0.0**
AGG	**Agios Georgios**	**0.70**	**26**	P	**Pg**	**06 49 13.0**	**-0.8**
AGG				S	**Sg**	**06 49 23.4**	**+0.4**
VTN	**Vitineika**	**0.75**	**231**	P	**Pg**	**06 49 12.9**	**-1.8**
VTN	**Vitineika**	**0.75**	**231**	P	**Pg**	**06 49 14.9**	**+0.2**
VTN	**Vitineika**	**0.75**	**231**	P	**Pg**	**06 49 14.9**	**+0.2**
PROD	**Prodromos**	**0.78**	**100**	P	**Pg**	**06 49 14.6**	**-0.5**
PROD				S	**Sg**	**06 49 25.2**	**0.0**
PROD				AML	AML	06 49 32.9	
	comp=N,3318μm,0.4s						
PROD				AML	AML	06 49 35.9	
	comp=E,4448μm,0.4s						
PROD	**Prodromos**	**0.78**	**100**	P	**Pg**	**06 49 14.5**	**-0.6**
PROD				S	**Sg**	**06 49 25.3**	**0.0**
AMT	**Artemida-Makis**	**0.88**	**192**	P	**Pg**	**06 49 16.7**	**-0.3**
AMT				S	**Sg**	**06 49 26.9**	**-1.5**
AMT				AML	AML	06 49 33.7	
	comp=E,7992μm,0.5s						
AMT				AML	AML	06 49 36.9	
	comp=N,10756μm,0.4s						
AMT	**Artemida-Makis**	**0.88**	**192**	P	**Pg**	**06 49 16.1**	**-0.9**
AMT	**Artemida-Makis**	**0.88**	**192**	P	**Pg**	**06 49 16.5**	**-0.5**
AMT				S	**Sg**	**06 49 27.6**	**-0.8**
LKR	**Lokris**	**0.88**	**73**	P	**Pg**	**06 49 15.8**	**-1.3**
LKR				S	**Sb**	**06 49 29.1**	**-0.2**
LKR				AML	AML	06 49 32.8	
	comp=E,2627μm,0.2s						
LKR				AML	AML	06 49 33.2	
	comp=N,2870μm,0.3s						
LKR	**Lokris**	**0.88**	**73**	P	**Pg**	**06 49 16.3**	**-0.8**
LKR	**Lokris**	**0.88**	**73**	P	**Pg**	**06 49 16.3**	**-0.8**
LKR				S	**Sg**	**06 49 28.8**	**+0.3**
LTK	**Loutraki**	**0.90**	**114**	P	**Pb**	**06 49 18.3**	**+0.5**
LTK				S	**Sg**	**06 49 28.1**	**-1.0**
LTK				AML	AML	06 49 35.0	
	comp=N,3359μm,0.4s						
LTK				AML	AML	06 49 41.5	
	comp=E,4229μm,0.5s						
LTK	**Loutraki**	**0.90**	**114**	P	**Pg**	**06 49 17.4**	**0.0**
LTK	**Loutraki**	**0.90**	**114**	P	**Pg**	**06 49 17.4**	**0.0**
LTK				S	**Sg**	**06 49 28.6**	**-0.5**
TRIP	**Tripoli**	**0.90**	**163**	P	**Pg**	**06 49 16.5**	**-1.0**
TRIP				S	**Sg**	**06 49 29.6**	**+0.3**
TRIP				AML	AML	06 49 34.1	
	comp=E,5078μm,0.5s						
TRIP				AML	AML	06 49 36.2	
	comp=N,4219μm,0.6s						
TRIP	**Tripoli**	**0.90**	**163**	P	**Pg**	**06 49 16.6**	**-1.0**
TRIP				S	**Sg**	**06 49 29.4**	**0.0**
LOUT	**Loutraki**	**0.92**	**116**	P	**Pg**	**06 49 17.5**	**-0.3**
LOUT	**Loutraki**	**0.92**	**116**	P	**Pg**	**06 49 17.5**	**-0.3**
MGNA	**Meganis**	**0.93**	**287**	P	**Pg**	**06 49 18.0**	**0.0**
MGNA				S	**Sg**	**06 49 29.2**	**-1.0**
MGNA	**Meganis**	**0.93**	**287**	P	**Pg**	**06 49 17.6**	**-0.5**
MGNA				S	**Sg**	**06 49 29.7**	**-0.5**
KFL	**Anninata**	**0.94**	**253**	P	**Pg**	**06 49 17.6**	**-0.6**
KFL				S	**Sg**	**06 49 30.3**	**-0.2**
KFL				AML	AML	06 49 41.1	
	comp=E,8409μm,0.4s						
KFL				AML	AML	06 49 41.6	
	comp=N,6601μm,0.5s						
KFL	**Anninata**	**0.94**	**253**	P	**Pg**	**06 49 17.5**	**-0.8**
KFL	**Anninata**	**0.94**	**253**	P	**Pg**	**06 49 17.5**	**-0.8**
KFL				S	**Sg**	**06 49 30.4**	**-0.2**
DSL	**Palaion Diasel**	**0.99**	**319**	P	**Pg**	**06 49 18.8**	**-0.3**
DSL				S	**Sg**	**06 49 31.6**	**-0.4**
DSL				AML	AML	06 49 36.8	
	comp=E,2889μm,0.7s						
DSL				AML	AML	06 49 51.8	
	comp=N,2959μm,0.9s						
DSL	**Palaion Diasel**	**0.99**	**319**	P	**Pg**	**06 49 18.1**	**-1.0**
DSL	**Palaion Diasel**	**0.99**	**319**	P	**Pg**	**06 49 18.6**	**-0.5**
DSL				S	**Sg**	**06 49 31.7**	**-0.3**
VIL2	**Platees**	**1.07**	**99**	P	**Pn**	**06 49 21.3**	**+0.1**
VIL2				S	**Sb**	**06 49 34.9**	**+0.2**
VIL2				AML	AML	06 49 46.2	
	comp=N,6141μm,0.7s						
VIL2				AML	AML	06 49 46.8	
	comp=E,4437μm,0.6s						
LKD2	**Lefkada island**	**1.07**	**292**	P	**Pg**	**06 49 20.2**	**-0.6**
LKD2	**Lefkada island**	**1.07**	**292**	P	**Pg**	**06 49 20.0**	**-0.8**
FSK	**Fiskardo**	**1.07**	**274**	P	**Pg**	**06 49 19.3**	**-1.5**
FSK				S	**Sb**	**06 49 35.4**	**+0.5**
FSK	**Fiskardo**	**1.07**	**274**	P	**Pg**	**06 49 19.6**	**-1.2**
VLS	**Valsamata**	**1.08**	**259**	P	**Pg**	**06 49 18.7**	**-2.1**
VLS				S	**Sb**	**06 49 35.2**	**+0.3**
VLS				AML	AML	06 49 37.8	
	comp=E,2067μm,0.2s						
VLS				AML	AML	06 49 44.4	
	comp=N,4531μm,0.4s						
VLS	**Valsamata**	**1.08**	**259**	P	**Pg**	**06 49 19.3**	**-1.5**
VLS	**Valsamata**	**1.08**	**259**	P	**Pg**	**06 49 19.3**	**-1.5**
VLS				S	**Sb**	**06 49 35.0**	**0.0**
VLX	**Vlachokerasia**	**1.08**	**161**	P	**Pg**	**06 49 20.3**	**-0.6**
VLX				S	**Sg**	**06 49 34.8**	**-0.2**
VLX				AML	AML	06 49 40.1	
	comp=E,8432μm,0.5s						
VLX				AML	AML	06 49 40.3	
	comp=N,5653μm,0.6s						
VLX	**Vlachokerasia**	**1.08**	**161**	P	**Pg**	**06 49 19.4**	**-1.5**
VLX	**Vlachokerasia**	**1.08**	**161**	P	**Pg**	**06 49 20.1**	**-0.8**
VLX				S	**Sg**	**06 49 34.8**	**-0.2**
VILL	**Villia**	**1.11**	**101**	P	**Pb**	**06 49 20.9**	**-0.6**
VILL				S	**Sg**	**06 49 35.5**	**-0.5**
SMIA	**Simia**	**1.11**	**64**	P	**Pb**	**06 49 21.3**	**-0.2**
SMIA	**Simia**	**1.11**	**64**	P	**Pb**	**06 49 21.3**	**-0.2**
MES3	**Kyparissia**	**1.16**	**190**	P	**Pg**	**06 49 22.5**	**+0.1**
MES3				S	**Sn**	**06 49 38.5**	**+0.3**
MES3	**Kyparissia**	**1.16**	**190**	P	**Pb**	**06 49 21.9**	**-0.4**
MES3				S	**Sn**	**06 49 38.0**	**-0.3**
THL	**Klokotos Trika**	**1.17**	**3**	P	**Pb**	**06 49 21.6**	**-0.9**
THL				S	**Sg**	**06 49 38.2**	**+0.2**
THL				AML	AML	06 49 41.6	
	comp=E,4500μm,0.8s						
THL				AML	AML	06 49 41.8	
	comp=N,1849μm,0.7s						
THL	**Klokotos Trika**	**1.17**	**3**	P	**Pb**	**06 49 22.0**	**-0.5**
THL	**Klokotos Trika**	**1.17**	**3**	P	**Pb**	**06 49 22.0**	**-0.5**
THL				S	**Sg**	**06 49 38.1**	**+0.2**
ITM	**Ithomi**	**1.21**	**180**	*i* PG	**Pn**	**06 49 21.9**	**-1.3**
ITM				*i* SG	**Sn**	**06 49 41.9**	**+2.3**
ITM	**Ithomi**	**1.21**	**180**	P	**Pn**	**06 49 21.9**	**-1.3**
ITM				S	**Sb**	**06 49 38.1**	**-0.7**
ITM				AML	AML	06 49 43.2	
	comp=E,2263μm,0.4s						
ITM				AML	AML	06 49 43.8	
	comp=N,2111μm,0.5s						
ITM	**Ithomi**	**1.21**	**180**	P	**Pn**	**06 49 21.9**	**-1.3**
ITM	**Ithomi**	**1.21**	**180**	P	**Pn**	**06 49 22.1**	**-1.0**
ITM				S	**Sb**	**06 49 38.6**	**-0.2**
FYTO	**Fytoko, Volos**	**1.28**	**38**	P	**Pg**	**06 49 25.6**	**+0.8**
FYTO	**Fytoko, Volos**	**1.28**	**38**	P	**Pg**	**06 49 24.7**	**-0.1**
DID	**Didima**	**1.36**	**130**	P	**Pb**	**06 49 25.9**	**+0.2**
DID				AML	AML	06 49 48.6	
	comp=E,3912μm,0.6s						
DID				AML	AML	06 49 52.4	
	comp=N,2955μm,0.6s						
DID	**Didima**	**1.36**	**130**	P	**Pb**	**06 49 25.6**	**-0.1**
DID	**Didima**	**1.36**	**130**	P	**Pb**	**06 49 25.6**	**-0.1**
NEO	**Neokhori**	**1.36**	**48**	P	**Pb**	**06 49 26.0**	**+0.3**
NEO				S	**Sb**	**06 49 42.0**	**-1.3**
NEO				AML	AML	06 49 54.4	
	comp=N,1797μm,0.6s						
NEO				AML	AML	06 49 54.7	
	comp=E,1188μm,0.5s						
NEO	**Neokhori**	**1.36**	**48**	P	**Pb**	**06 49 25.6**	**-0.2**
NEO				S	**Sb**	**06 49 43.0**	**-0.2**
XOR	**Xorichti**	**1.39**	**45**	P	**Pb**	**06 49 26.1**	**-0.1**
XOR	**Xorichti**	**1.39**	**45**	P	**Pb**	**06 49 25.9**	**-0.2**
KRND	**KRANIDI**	**1.40**	**136**	P	**Pn**	**06 49 25.8**	**+0.1**
KRND				S	**Sg**	**06 49 45.7**	**+0.6**
KRND				AML	AML	06 49 50.3	
	comp=E,2895μm,0.6s						
KRND				AML	AML	06 49 53.4	
	comp=N,2640μm,0.6s						
KRND	**KRANIDI**	**1.40**	**136**	P	**Pn**	**06 49 25.8**	**+0.1**
KRND				S	**Sg**	**06 49 45.4**	**+0.3**
SKIA	**Skiathos**	**1.43**	**57**	P	**Pn**	**06 49 26.1**	**-0.1**
SKIA	**Skiathos**	**1.43**	**57**	P	**Pn**	**06 49 26.3**	**+0.2**
ATH	**Athens Observa**	**1.47**	**106**	P	**Pb**	**06 49 27.2**	**-0.3**
ATH				S	**Sg**	**06 49 47.4**	**0.0**
ATH				AML	AML	06 49 51.6	
	comp=E,2663μm,0.8s						
ATH				AML	AML	06 49 53.8	
	comp=N,1529μm,1.1s						
ATH	**Athens Observa**	**1.47**	**106**	P	**Pb**	**06 49 27.2**	**-0.3**
ATH				S	**Sg**	**06 49 47.4**	**0.0**
PYL	**PYLOS**	**1.50**	**186**	P	**Pn**	**06 49 26.1**	**-0.7**
PYL				AML	AML	06 49 57.9	
	comp=E,1595μm,0.7s						
PYL				AML	AML	06 49 59.0	
	comp=N,1126μm,0.3s						
PYL	**PYLOS**	**1.50**	**186**	P	**Pn**	**06 49 27.1**	**0.0**
JAN	**Janina**	**1.52**	**327**	P	**Pg**	**06 49 30.2**	**+0.9**
JAN	**Janina**	**1.52**	**327**	P	**Pg**	**06 49 29.1**	**-0.2**
ATHU	**Athens Univers**	**1.52**	**106**	P	**Pn**	**06 49 27.6**	**+0.2**
ATHU				AML	AML	06 49 50.3	
	comp=N,681μm,0.5s						
ATHU				AML	AML	06 49 54.6	
	comp=E,324μm,0.9s						
ATHU	**Athens Univers**	**1.52**	**106**	P	**Pn**	**06 49 27.9**	**+0.5**
PTL	**Penteli**	**1.56**	**102**	P	**Pn**	**06 49 28.2**	**+0.2**
PTL	**Penteli**	**1.56**	**102**	P	**Pn**	**06 49 28.5**	**+0.5**
VLY	**Voula,Athens**	**1.57**	**110**	P	**Pn**	**06 49 27.8**	**-0.2**
VLY	**Voula,Athens**	**1.57**	**110**	P	**Pn**	**06 49 28.3**	**+0.3**
MES2	**Methoni**	**1.57**	**186**	P	**Pn**	**06 49 27.6**	**-0.5**
MES2	**Methoni**	**1.57**	**186**	P	**Pn**	**06 49 28.3**	**+0.2**
DION	**Dionisos Attik**	**1.61**	**101**	P	**Pb**	**06 49 29.4**	**-0.5**
DION				S	**Sb**	**06 49 50.1**	**-0.3**
DION				AML	AML	06 49 57.5	
	comp=N,921μm,0.5s						
DION				AML	AML	06 49 58.2	
	comp=E,1403μm,0.4s						
DION	**Dionisos Attik**	**1.61**	**101**	P	**Pb**	**06 49 29.5**	**-0.5**
DION				S	**Sb**	**06 50 0.7**	**+0.4**
KPRO	**Kipourio**	**1.62**	**344**	P	**Pg**	**06 49 31.9**	**+0.6**
KPRO	**Kipourio**	**1.62**	**344**	P	**Pg**	**06 49 30.8**	**-0.5**
DYR	**Agios Nikonas**	**1.66**	**169**	P	**Pn**	**06 49 29.1**	**-0.2**
DYR	**Agios Nikonas**	**1.66**	**169**	P	**Pn**	**06 49 29.6**	**+0.3**
LIT	**Litokhoron**	**1.76**	**14**	P	**Pb**	**06 49 31.8**	**-0.7**
LIT	**Litokhoron**	**1.76**	**14**	P	**Pb**	**06 49 31.7**	**-0.9**
SGD	**Sagiada**	**1.80**	**313**	P	**Pg**	**06 49 34.0**	**-0.7**
SGD	**Sagiada**	**1.80**	**313**	P	**Pb**	**06 49 33.0**	**-0.1**
VLI	**Veliai**	**1.85**	**154**	P	**Pn**	**06 49 32.9**	**+0.9**
VLI				AML	AML	06 50 04.2	
	comp=E,956μm,0.7s						
VLI				AML	AML	06 50 06.7	
	comp=N,1958μm,0.7s						
VLI	**Veliai**	**1.85**	**154**	P	**Pn**	**06 49 32.9**	**+0.9**
KZN	**Kozani**	**1.92**	**356**	P	**Pb**	**06 49 34.8**	**-0.5**
KZN	**Kozani**	**1.92**	**356**	P	**Pb**	**06 49 34.3**	**-0.9**
KEK	**Kerkira**	**2.12**	**309**	P	**Pb**	**06 49 38.7**	**0.0**
KEK	**Kerkira**	**2.12**	**309**	P	**Pb**	**06 49 37.7**	**-0.9**
PLG	**Polygyros**	**2.30**	**30**	P	**Pn**	**06 49 37.5**	**-0.7**
PLG	**Polygyros**	**2.30**	**30**	P	**Pn**	**06 49 38.4**	**+0.2**
KYTH	**Kithira**	**2.30**	**157**	P	**Pb**	**06 49 41.9**	**+0.1**
HORT	**Hortiatis**	**2.38**	**22**	*e*PG	**Pn**	**06 49 39.7**	**+0.4**
HORT	**Hortiatis**	**2.38**	**22**	P	**Pn**	**06 49 38.5**	**-0.8**
HORT	**Hortiatis**	**2.38**	**22**	P	**Pn**	**06 49 39.4**	**+0.1**
FNA	**Florina**	**2.43**	**350**	*e*PG	**Pn**	**06 49 41.6**	**+1.7**
FNA	**Florina**	**2.43**	**350**	P	**Pb**	**06 49 43.0**	**-0.9**
FNA	**Florina**	**2.43**	**350**	P	**Pb**	**06 49 42.0**	**-1.9**
OUR	**Ouranopolis**	**2.51**	**39**	*e*PG	**Pn**	**06 49 39.4**	**-1.6**
MHLO	**Agia Marina, M**	**2.60**	**130**	P	**Pn**	**06 49 41.4**	**-0.8**
MHLO	**Agia Marina, M**	**2.60**	**130**	P	**Pn**	**06 49 42.4**	**+0.2**
ANKY	**Antikythira Is**	**2.75**	**156**	P	**Pn**	**06 49 45.7**	**+1.5**
ANKY	**Antikythira Is**	**2.75**	**156**	P	**Pn**	**06 49 45.6**	**+1.3**
OHR	**Ohrid**	**2.85**	**343**	*e*Pn	**Pb**	**06 49 52.8**	**+1.7**
KNT	**Kendrikon**	**2.87**	**15**	P	**Pn**	**06 49 46.9**	**+1.0**
KNT	**Kendrikon**	**2.87**	**15**	P	**Pn**	**06 49 47.0**	**+1.1**
APE	**Apeiranthos**	**3.15**	**114**	*e*PG	**Pn**	**06 49 49.0**	**-0.8**
APE	**Apeiranthos**	**3.15**	**114**	‖*i*P	**Pn**	**06 49 48.7**	**-1.1**
APE	**Apeiranthos**	**3.15**	**114**	P	**Pn**	**06 49 50.4**	**+0.6**
APE	**Apeiranthos**	**3.15**	**114**	P	**Pn**	**06 49 50.7**	**+0.9**
APE				S	**Sn**	**06 50 28.1**	**+0.7**
CHOS	**Chios island**	**3.24**	**89**	*e*PG	**Pn**	**06 49 49.9**	**-1.2**
CHOS	**Chios island**	**3.24**	**89**	P	**Pn**	**06 49 51.9**	**+0.8**
CHOS	**Chios island**	**3.24**	**89**	P	**Pn**	**06 49 52.2**	**+1.1**
STIP	**Stip**	**3.30**	**3**	*e*Pn	**Pn**	**06 49 54.2**	**+2.3**
MMB	**Musomiste**	**3.48**	**23**	P	**Pn**	**06 49 55.5**	**+1.1**
GADA	**Gvkgeada**	**3.56**	**59**	*e*PG	**Pn**	**06 49 55.5**	**0.0**
KKB	**Krupnik**	**3.58**	**14**	P	**Pn**	**06 49 55.5**	**-0.2**
IDI	**Anoyia**	**3.90**	**142**	Pn	**Pn**	**06 50 02.3**	**+2.0**
	comp=N,1.3nm,0.3s,baz=318,slow=16,SNR=7.8						
IDI				Sn	**Sn**	**06 50 44.8**	**-1.4**
	comp=N,1.8nm,0.3s,baz=308,slow=19,SNR=3.9						
IDI	**Anoyia**	**3.90**	**142**	*e*PG	**Pn**	**06 50 01.5**	**+1.3**
IDI	**Anoyia**	**3.90**	**142**	‖*i*P	**Pn**	**06 49 58.3**	**-1.9**
IDI	**Anoyia**	**3.90**	**142**	‖*i*P	**Pn**	**06 49 58.3**	**-1.9**
ALN	**Alexandroupoli**	**4.04**	**51**	*e*PG	**Pn**	**06 50 00.7**	**-1.4**
TIP	**Timpagrande**	**4.12**	**283**	‖*i*P	**Pn**	**06 50 03.7**	**+0.6**
TIP	**Timpagrande**	**4.12**	**283**	‖*i*P	**Pn**	**06 50 03.7**	**+0.6**
TIP				S	**Sn**	**06 50 53.3**	**+1.9**
LAST	**Lasithi**	**4.30**	**137**	P	**Pn**	**06 50 06.2**	**+0.5**
LAST	**Lasithi**	**4.30**	**137**	P	**Pn**	**06 50 06.8**	**+1.1**
VTS	**Vitosha**	**4.31**	**13**	⅊*i*P	**Pn**	**06 50 08.9**	**+3.1**
VTS	**Vitosha**	**4.31**	**13**	P	**Pn**	**06 50 07.0**	**+1.2**
VTS	**Vitosha**	**4.31**	**13**	⅊*i*P	**Pn**	**06 50 08.9**	**+3.1**
BARS	**Barje**	**4.42**	**359**	*e*Pn	**Pn**	**06 50 09.8**	**+2.5**
BODT	**Bodrum**	**4.47**	**106**	*e*PG	**Pn**	**06 50 06.7**	**-1.2**
PDG	**Podgorica**	**4.52**	**334**	‖*i*P	**Pn**	**06 50 12.3**	**+3.7**
PDG	**Podgorica**	**4.52**	**334**	‖*i*P	**Pn**	**06 50 12.3**	**+3.7**
MATE	**Matera**	**4.63**	**301**	‖*i*P	**Pn**	**06 50 11.9**	**+1.9**
MATE	**Matera**	**4.63**	**301**	‖*i*P	**Pn**	**06 50 11.9**	**+1.9**
BOVS	**Bovan**	**5.24**	**358**	*e*Pn	**Pn**	**06 50 21.6**	**+3.1**
STON	**Ston**	**5.51**	**326**	*e*Pn	**Pn**	**06 50 22.2**	**0.0**
STON				Sn	**Sn**	**06 51 25.5**	**-0.1**
STON	**Ston**	**5.51**	**326**	*e*Pn	**Pn**	**06 50 22.2**	**0.0**
STON				Sn	**Sn**	**06 51 25.4**	**-0.1**
BBLS	**Lazići**	**5.79**	**342**	*e*Pn	**Pn**	**06 50 26.6**	**+0.5**
DIVS	**Divibare**	**5.88**	**346**	*e*Pn	**Pn**	**06 50 28.9**	**+1.5**
TEKS	**Tekeris**	**6.41**	**344**	*e*Pn	**Pn**	**06 50 36.3**	**+1.7**
VOIR		**7.41**	**17**	⅊*i*P	**Pn**	**06 50 52.2**	**+3.8**
UDBI	**Udbina**	**7.68**	**325**	Sn	**Sn**	**06 52 16.6**	**-2.5**
MLR	**Muntele Rosu**	**7.70**	**22**	Pn	**Pn**	**06 50 56.2**	**+3.9**
	comp=N,0.0nm,0.3s,baz=155,slow=19,SNR=2.6						
MLR				LR	LR	06 54 35.6	
	comp=N,16nm,20.7s,baz=200,slow=44						
MLR	**Muntele Rosu**	**7.70**	**22**	‖*i*P	**Pn**	**06 50 56.6**	**+4.2**
PLOR	**Plostina**	**8.24**	**24**	⅊*i*P	**Pn**	**06 51 03.0**	**+3.3**
PLOR	**Plostina**	**8.24**	**24**	⅊*i*P	**Pn**	**06 51 03.0**	**+3.3**
VRI	**Vrincioaia**	**8.27**	**24**	⅊*i*P	**Pn**	**06 51 04.3**	**+4.1**
BRTR	**Keskin Array B**	**9.21**	**78**	Pn	**Pn**	**06 51 15.6**	**+2.4**
	comp=N,0.3nm,0.3s,baz=260,slow=13,SNR=4.6						
DAVOX	**Davos/Dischmat**	**12.20**	**317**	LR	LR	06 58 05.6	
	comp=N,20nm,18.4s,baz=264,slow=45						
EIL	**Elat**

KTHR	Kythira	0.17	241	P	Pg	07 46 16.6	+0.2
KTHR				S	Sg	07 46 19.4	+0.1
MNVA	Monemvasia	0.36	341	P	Pb	07 46 20.8	+0.7
MNVA				S	Sg	07 46 24.9	+0.2
MNVA				AML	AML	07 46 25.8	
	comp=E,16601μm,0.5s						
MNVA				AML	AML	07 46 26.2	
	comp=N,6828μm,0.2s						
MNVA	Monemvasia	0.36	341	P	Pb	07 46 20.3	+0.2
MNVA				S	Sg	07 46 25.2	+0.5
VLI	Veliai	0.43	332	P	Pb	07 46 21.6	+0.4
VLI				S	Sg	07 46 26.2	-0.3
VLI				AML	AML	07 46 27.3	
	comp=N,14013μm,0.5s						
VLI				AML	AML	07 46 27.5	
	comp=E,14548μm,0.3s						
VLI	Veliai	0.43	332	P	Pb	07 46 21.1	-0.1
VLI				S	Sg	07 46 26.7	+0.2
VLI	Veliai	0.43	332	P	Pb	07 46 21.1	-0.1
VLI				S	Sg	07 46 26.7	+0.2
ANKY	Antikythira Is	0.48	169	P	Pb	07 46 22.8	+0.7
ANKY				S	Sg	07 46 28.1	-0.2
ANKY				AML	AML	07 46 29.3	
	comp=N,10704μm,0.4s						
ANKY				AML	AML	07 46 31.9	
	comp=E,9952μm,0.3s						
ANKY	Antikythira Is	0.48	169	P	Pb	07 46 22.3	+0.2
ANKY				S	Sg	07 46 28.7	+0.5
ANKY	Antikythira Is	0.48	169	P	Pb	07 46 22.3	+0.2
ANKY				S	Sg	07 46 28.7	+0.5
DYR	Agios Nikonas	0.81	302	P	Pg	07 46 26.9	-0.8
DYR				S	Sg	07 46 35.8	-2.6
DYR				AML	AML	07 46 42.1	
	comp=N,2373μm,0.4s						
DYR				AML	AML	07 46 43.7	
	comp=E,2439μm,0.4s						
DYR	Agios Nikonas	0.81	302	P	Pg	07 46 27.1	-0.6
DYR				S	Sb	07 46 40.0	+1.7
DYR	Agios Nikonas	0.81	302	P	Pg	07 46 27.1	-0.6
DYR				S	Sg	07 46 37.3	-1.1
MHLO	Agia Marina, M	1.04	70	P	Pn	07 46 33.2	+1.4
MHLO	Agia Marina, M	1.04	70	P	Pb	07 46 32.0	+0.4
MHLO				S	Sn	07 46 46.7	+0.7
MHLO	Agia Marina, M	1.04	70	P	Pb	07 46 32.0	+0.4
MHLO				S	Sn	07 46 46.7	+0.7
KRND	KRANIDI	1.04	358	P	Pb	07 46 32.1	+0.4
KRND				S	Sg	07 46 45.5	-0.2
KRND				AML	AML	07 46 47.3	
	comp=E,4166μm,0.6s						
KRND				AML	AML	07 46 50.2	
	comp=N,3466μm,0.3s						
KRND	KRANIDI	1.04	358	P	Pg	07 46 31.7	-0.5
KRND	KRANIDI	1.04	358	P	Pg	07 46 31.7	-0.5
KRND				S	Sb	07 46 45.8	+0.8
MHLA	Plaka, Milos I	1.07	68	P	Pn	07 46 33.6	+1.3
MHLA	Plaka, Milos I	1.07	68	P	Pn	07 46 32.9	+0.5
CHAN	Chania	1.07	140	P	Pb	07 46 32.1	-0.1
CHAN				S	Sn	07 46 47.9	+1.0
CHAN	Chania	1.07	140	P	Pb	07 46 32.1	-0.1
CHAN				S	Sn	07 46 47.9	+1.0
IMMV	Iera Moni Meta	1.09	144	P	Pb	07 46 32.6	+0.1
IMMV	Iera Moni Meta	1.09	144	P	Pb	07 46 32.6	+0.1
IMMV				S	Sg	07 46 47.3	-0.1
IMMV	Iera Moni Meta	1.09	144	P	Pb	07 46 32.6	+0.1
IMMV				S	Sg	07 46 47.3	-0.1
DID	Didima	1.16	2	P	Pb	07 46 33.6	-0.2
DID				S	Sg	07 46 49.4	-0.3
DID				AML	AML	07 46 57.0	
	comp=E,2508μm,0.3s						
DID				AML	AML	07 46 58.5	
	comp=N,2512μm,0.3s						
DID	Didima	1.16	2	P	Pb	07 46 33.5	-0.2
DID	Didima	1.16	2	P	Pb	07 46 33.7	-0.1
DID				S	Sg	07 46 49.7	0.0
VLX	Vlachokerasia	1.21	328	P	Pg	07 46 35.4	-0.1
VLX				S	Sb	07 46 50.7	+0.6
VLX				AML	AML	07 46 53.2	
	comp=N,2561μm,0.3s						
VLX				AML	AML	07 46 58.1	
	comp=E,2640μm,0.6s						
VLX	Vlachokerasia	1.21	328	P	Pn	07 46 34.8	+0.4
VLX				S	Sn	07 46 51.5	+0.9
VLX	Vlachokerasia	1.21	328	P	Pn	07 46 35.1	+0.7
VLX				S	Sg	07 46 51.1	-0.3
VAM	Vamos	1.24	138	P	Pn	07 46 34.0	-0.7
VAM	Vamos	1.24	138	P	Pn	07 46 34.7	0.0
VAM				S	Sb	07 46 51.8	+0.9
VAM	Vamos	1.24	138	P	Pn	07 46 34.7	0.0
VAM				S	Sb	07 46 51.8	+0.9
MES2	Methoni	1.28	292	P	Pn	07 46 34.6	-0.7
MES2				S	Sg	07 46 55.0	+1.4
MES2	Methoni	1.28	292	P	Pn	07 46 35.3	0.0
MES2				S	Sg	07 46 54.3	+0.7
PYL	PYLOS	1.29	296	P	Pn	07 46 35.1	-0.2
PYL				S	Sg	07 46 54.2	+0.6
PYL				AML	AML	07 46 55.5	
	comp=E,5559μm,0.4s						
PYL				AML	AML	07 46 56.2	
	comp=N,3656μm,0.4s						
PYL	PYLOS	1.29	296	P	Pn	07 46 35.4	+0.1
PYL				S	Sg	07 46 53.9	+0.2
PYL	PYLOS	1.29	296	P	Pn	07 46 35.5	+0.1
PYL				S	Sg	07 46 53.9	+0.2
ITM	Ithomi	1.31	310	P	Pb	07 46 36.8	+0.5
ITM				S	Sg	07 46 55.7	+1.2
ITM				AML	AML	07 46 60.0	
	comp=N,1392μm,0.4s						
ITM				AML	AML	07 47 00.7	
	comp=E,2295μm,0.3s						
ITM	Ithomi	1.31	310	P	Pn	07 46 36.4	+0.8
ITM	Ithomi	1.31	310	P	Pn	07 46 36.5	+0.8
ITM				S	Sg	07 46 54.9	+0.4
SERI	Serifos	1.32	52	P	Pn	07 46 35.9	0.0
SERI				S	Sb	07 46 53.5	+0.3
SERI	Serifos	1.32	52	P	Pn	07 46 35.9	0.0
SERI				S	Sb	07 46 53.5	+0.3
MES3	Kyparissia	1.52	307	P	Pg	07 46 41.3	+0.1
MES3	Kyparissia	1.52	307	P	Pb	07 46 40.2	+0.5
VLY	Voula,Athens	1.58	18	P	Pn	07 46 39.6	+0.2
VLY	Voula,Athens	1.58	18	P	Pn	07 46 39.6	+0.2
AMT	Artemida-Makis	1.68	316	P	Pg	07 46 43.9	-0.4
AMT	Artemida-Makis	1.68	316	P	Pb	07 46 42.7	+0.2
ATH	Athens Observa	1.68	14	P	Pn	07 46 40.8	0.0
ATH	Athens Observa	1.68	14	P	Pn	07 46 41.2	+0.5
LTK	Loutraki	1.69	354	P	Pn	07 46 41.4	+0.5
LTK	Loutraki	1.69	354	P	Pn	07 46 41.5	+0.7
ATHU	Athens Univers	1.69	16	P	Pn	07 46 40.7	-0.1
ATHU	Athens Univers	1.69	16	P	Pn	07 46 41.2	+0.3
GUR	Goura	1.73	337	P	Pn	07 46 41.9	+0.4
GUR	Goura	1.73	337	P	Pn	07 46 41.7	+0.2
GUR	Goura	1.73	337	P	Pn	07 46 42.0	+0.5
IDI	Anoyia	1.74	127	Pn	Pn	07 46 41.0	-0.6
	comp=E,4.7nm,0.3s,baz=308,slow=7.2,SNR=34						
IDI				Sn	Sn	07 47 02.7	-0.7
	comp=E,33nm,0.3s,baz=258,slow=20,SNR=14						
THAL	Thalero	1.74	346	P	Pn	07 46 42.5	+0.9
THAL	Thalero	1.74	346	P	Pn	07 46 42.4	+0.9
THR5	Thira Island,	1.75	87	P	Pn	07 46 42.6	+1.0
THR5	Thira Island,	1.75	87	P	Pn	07 46 42.6	+1.0
PTL	Penteli	1.79	17	P	Pn	07 46 42.8	+0.6
PTL				S	Sn	07 47 03.4	-1.2
PTL				AML	AML	07 47 07.6	
	comp=N,904μm,0.4s						
PTL				AML	AML	07 47 14.2	
	comp=E,809μm,0.4s						
PTL	Penteli	1.79	17	P	Pn	07 46 42.9	+0.7
PTL				S	Sn	07 47 04.7	+0.1
VILL	Villia	1.82	3	P	Pn	07 46 43.0	+0.3
VILL	Villia	1.82	3	P	Pn	07 46 43.0	+0.3
DION	Dionisos Attik	1.83	19	P	Pn	07 46 43.5	+0.6
DION	Dionisos Attik	1.83	19	P	Pn	07 46 43.6	+0.8
SANT	Santorini	1.83	88	P	Pn	07 46 44.0	+1.2
SANT	Santorini	1.83	88	P	Pn	07 46 43.9	+1.0
VIL2	Platees	1.87	2	P	Pn	07 46 42.4	-1.0
KLV	Kalavryta, Ach	1.89	334	P	Pn	07 46 44.9	+1.2
KLV	Kalavryta, Ach	1.89	334	P	Pn	07 46 44.6	+0.9
PROD	Prodromos	1.93	353	P	Pn	07 46 44.3	+0.2
PROD	Prodromos	1.93	353	P	Pn	07 46 44.6	+0.5
KARY	Karystos	1.96	30	P	Pn	07 46 45.0	+0.4
KARY	Karystos	1.96	30	P	Pn	07 46 45.2	+0.6
TNSA	Tinos	1.98	52	P	Pn	07 46 44.3	-0.6
TNSA	Tinos	1.98	52	P	Pn	07 46 45.1	+0.2
APE	Apeiranthos	2.02	68	P	Pn	07 46 46.2	+0.8
APE	Apeiranthos	2.02	68	P	Pn	07 46 46.2	+0.8
ANAF	Anafi Island	2.09	89	P	Pn	07 46 48.3	+2.0
ANAF	Anafi Island	2.09	89	P	Pn	07 46 47.8	+1.5
DSF	Desfina	2.13	346	P	Pn	07 46 47.5	+0.5
DSF	Desfina	2.13	346	P	Pn	07 46 47.7	+0.7
LAST	Lasithi	2.21	122	P	Pn	07 46 47.5	-0.6
LAST	Lasithi	2.21	122	P	Pn	07 46 48.3	+0.3
TRIZ	Trizonia	2.21	337	P	Pn	07 46 49.5	+1.6
TRIZ	Trizonia	2.21	337	P	Pn	07 46 49.2	+1.3
AMGA	Amorgos Island	2.23	77	P	Pn	07 46 49.1	+0.8
AMGA	Amorgos Island	2.23	77	P	Pn	07 46 49.3	+1.0
LKR	Lokris	2.31	356	P	Pn	07 46 49.4	0.0
LKR	Lokris	2.31	356	P	Pn	07 46 49.8	+0.4
SMIA	Simia	2.53	0	P	Pn	07 46 53.1	+0.7
SMIA	Simia	2.53	0	P	Pn	07 46 53.3	+0.8
AGG	Agios Georgios	2.76	346	P	Pn	07 46 56.7	+1.1
AGG	Agios Georgios	2.76	346	P	Pn	07 46 56.7	+1.1
EVR	Evrytania	2.79	337	P	Pn	07 46 57.9	+1.7
EVR	Evrytania	2.79	337	P	Pn	07 46 57.5	+1.4
SKIA	Skiathos	2.83	4	P	Pn	07 46 56.5	-0.1
SKIA	Skiathos	2.83	4	P	Pn	07 46 57.1	+0.6
CHOS	Chios island	3.06	47	P	Pn	07 46 59.4	-0.4
CHOS	Chios island	3.06	47	P	Pn	07 47 00.2	+0.4
KEK	Kerkira	4.30	323	P	Pn	07 47 18.5	+1.8
KEK	Kerkira	4.30	323	P	Pn	07 47 18.4	+1.7
BRTR	Keskin Array B	8.91	65	Pn	Pn	07 48 21.1	+0.9
	baz=250,slow=16,SNR=2.4						
MMAI	Mount Meron Ar	10.59	105	Pn	Pn	07 48 43.9	+0.7
	comp=E,1.8nm,0.3s,baz=292,slow=15,SNR=3.2						
HFS	Hagfors	24.58	349	P	P	07 51 28.7	-2.3
	comp=E,2.7nm,0.8s,baz=149,slow=12,SNR=2.5						
EKA	Eskdalemuir Ar	26.15	325	P	P	07 51 44.3	-0.9
	comp=E,0.6nm,0.5s,baz=127,slow=9.2,SNR=4.1						
TORD	Torodi Ar. Bea	30.10	225	P	P	07 52 21.2	+0.3
	comp=E,0.5nm,1.0s,baz=37,slow=9.9						
KURBB	Kurchatov Arra	41.64	52	P	P	07 53 58.5	-0.8
	comp=E,0.5nm,0.5s,baz=274,slow=8.7,SNR=5.4						
MKAR	Makanchi Array	44.47	57	P	P	07 54 21.6	-0.7
	comp=E,0.6nm,0.4s,baz=271,slow=8.2,SNR=12						

GUC ***25*** *07:59:29.5±0.5, 32°.17S×71°.68W, h20km, ML2.8*
SJA ***25*** *07:59:29.0±0.5, 32°.27S×71°.80W, h4km±39km, ML2.8, MW3.0*

ISC 25 07:59:23.7±2.3, 32°.19S±0°.04×72°.2W±0°.1, h0km±13km, n17, σ1§57/30, 2D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROC1	El Roble	1.25	129	eP	Pg	07 59 48.4	+0.7
ROC1				eS	Sg	08 00 03.0	-0.9
ROCH	El Roble	1.25	129	eP	Pn	07 59 48.6	0.0
ROCH				i S	Sg	08 00 03.3	-0.6
ROCH				IAML		08 00 05.4	
	comp=N,653nm,1.0s						
PEL	Peldehue	1.57	128	eP	Pb	07 59 53.4	-0.3
PEL				i S	Sn	08 00 11.3	-2.7
PEL				IAML		08 00 14.9	
	comp=N,375nm,0.3s						
CLCH	Cerro Calan	1.83	132	eP	Pb	07 59 57.7	-0.3
CLCH				i S	Sn	08 00 19.3	-1.0
FCH	Farellones	1.95	126	eP	Pb	07 59 59.6	-0.7
FCH				i S	Sn	08 00 22.6	-1.0
FCH				IAML		08 00 23.8	
	comp=E,150nm,0.3s						
TLL	Tololo Astrono	2.33	30	eP	Pb	08 00 06.9	+0.2
TLL				i S	Sb	08 00 35.8	-0.4
LMEL	Las Melosas	2.34	136	eP	Pb	08 00 06.0	-0.8
LMEL				i S	Sn	08 00 33.9	+0.8
LMEL				IAML		08 00 41.4	
	comp=N,135nm,0.4s						
AUSP	Uspallata	2.36	92	eP	Pb	08 00 07.4	+0.1
AUSP				eS	Sn	08 00 34.7	+1.0
RTLS	Leoncito	2.47	82	eP	Pb	08 00 09.0	-0.2
RTLS				eS	Sb	08 00 38.8	-1.5
RTLS				IAML		08 00 44.4	
	comp=Z,48nm,0.4s						
ARCO	CERRO ARCO	2.81	104	eP	Pb	08 00 15.3	+0.4
ARCO				eS	Sb	08 00 49.1	-0.8
ARCO				IAML		08 00 53.8	
	comp=Z,33nm,0.5s						
ASAL	Salagasta	2.85	99	eP	Pb	08 00 15.4	-0.1
ASAL				⇓eS	Sb	08 00 52.2	+1.2
AAGR	Agrelo	2.96	108	eP	Pb	08 00 16.0	-1.3
AROD	Rodeo	3.07	50	eP	Pb	08 00 19.0	-0.3
AGUA	GUANDACOL	4.15	51	eP	Pb	08 00 35.0	-2.8
AGUA				⇓eS	Sb	08 01 28.0	-0.6
VCA	Vinchina	4.85	46	eP	Pb	08 00 46.2	-3.5
VCA				eS	Sb	08 01 47.0	-1.8
VCA				IAML		08 01 59.0	
	comp=Z,17nm,0.6s						
APLL	PUNTA DE LOS L	5.15	71	eP	Pn	08 00 45.3	+3.2
ACLC	CERRO LA CRUZ	5.26	60	eP	Pn	08 00 47.0	+3.2

IDC ***25*** *08:00:25.1±1.8, 3°.45N×92°.82E, h0km, mb3.7/5, mb1 3.9/6, mb1mx3.5/66, mbtmp3.7/6, ML3.8/2, MS3.6/3, Ms1 3.6/3, ms1mx2.7/70, Error ellipse: s-maj=58.8km s-min=23.6km az=45.0*
ISCJB ***25*** *08:00:29.0±1.3, 3°.6N±0°.2×93°.1E±0°.1, h33km, mb3.7/5, MS3.6/3, Error ellipse: s-maj=26.8km s-min=10.0km az=26.8*

ISC 25 08:00:31.0±1.5, 3°.6N±0°.2×93°.1E±0°.1, h35km, n16, σ0§97/8, mb3.8/5, MS3.6/3, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	5.90	98	Pn	Pn	08 01 57.2	+1.1
	1.2nm,0.3s,baz=0.1,slow=13,SNR=4.4						
PSI				Sn	Sn	08 03 01.1	-1.5
	1.9nm,0.3s,baz=180,slow=20,SNR=7.2						
CMAR	Chiang Mai Arr	15.83	21	Pn	Pn	08 04 11.6	+0.2
	0.2nm,0.3s,baz=220,slow=14,SNR=5.0						
H08S2	Diego Garcia H	23.38	241	T	T	08 31 00.0	
	baz=61,slow=74						
H08S3	Diego Garcia H	23.38	241	T	T	08 31 00.6	
	baz=61,slow=74						
H08S1	Diego Carcia H	23.40	241	T	T	08 30 57.2	
	baz=61						
H01W3	Cape Leeuwin H	43.12	154	T	T	08 54 51.9	
	baz=329						
H01W2	Cape Leeuwin H	43.13	154	T	T	08 54 56.6	
	baz=329						
H01W1	Cape Leeuwin H	43.13	154	T	T	08 54 57.9	
	baz=329						
MKAR	Makanchi Array	44.02	349	P	P	08 08 35.8	+0.6
	0.9nm,0.7s,baz=164,slow=8.3,SNR=10						
JNU	Nakatsue	45.91	46	LR	LR	08 27 00.2	
	comp=Z,119nm,20.7s,baz=124,slow=34						
KSRS	Korea Array	46.39	39	LR	LR	08 28 43.5	
	comp=Z,55nm,21.6s,baz=155,slow=36						
WRA	Warramunga Arr	46.81	122	P	P	08 08 57.9	+0.2
	1.2nm,1.1s,baz=295,slow=8.7,SNR=2.5						
KURBB	Kurchatov Arra	48.42	348	P	P	08 09 09.7	0.0
	0.5nm,0.6s,baz=167,slow=6.3,SNR=5.0						
BVAR	Borovoye Array	52.69	343	P	P	08 09 41.4	-0.5
	0.4nm,0.3s,baz=152,slow=9.4,SNR=3.5						
MA2	Magadan	71.01	27	LR	LR	08 46 43.2	
	comp=Z,33nm,18.3s,baz=197,slow=39						
GERES	GERESS Array B	80.29	319	P	P	08 12 37.9	-0.7
	0.3nm,0.3s,baz=87,slow=5.1,SNR=3.9						

NNC ***25*** *08:07:57.4±4.1, 38°.48N×71°.66E, h0km, mb4.1, mpv3.8, Error ellipse: s-maj=31.1km s-min=20.0km az=178.0*
IDC ***25*** *08:07:57.4±3.5, 38°.01N×72°.45E, h88km±30km, mb3.3/6, mb1 3.4/9, mb1mx3.2/67, mbtmp3.6/9, Error ellipse: s-maj=29.3km s-min=23.9km az=17.0*
ISCJB ***25*** *08:08:00.4±0.9, 38°.40N±0°.07×72°.09E±0°.07, h113km, mb3.5/6, Error ellipse: s-maj=10.2km s-min=7.2km az=144.7*

ISC 25 08:08:00.9±1.0, 38°.28N±0°.09×72°.14E±0°.08, h113km, n26, σ1§61/31, mb3.6/6, 6C-6D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	2.03	31	⇑P	Pn	08 08 33.0	-1.6
	14nm,0.2s						
SFK				⇓S	Sn	08 09 03.6	+3.2
	96nm,0.4s						
AML	Almayashu	4.03	17	P	Pn	08 09 00.1	-0.9
	SNR=26						
MNAS	Manas	4.21	4	⇓P	Pn	08 09 02.8	-0.5
	17nm,0.4s						
MNAS				⇑S	Sn	08 09 49.4	-2.3
	54nm,0.6s						
UCH	Uchtor	4.34	24	P	Pn	08 09 04.1	-1.2
	SNR=42						
KZA	Kyzart	4.48	31	P	Pn	08 09 05.3	-1.8
	SNR=40						
EKS2	Erkin-Say	4.55	15	P	Pn	08 09 07.6	-0.2
	SNR=10						
AAK	Ala-Archa	4.71	22	⇑P	Pn	08 09 09.1	-0.9
	8.1nm,0.3s						
AAK				⇓S	Sn	08 10 03.2	-0.4
	65nm,0.8s						
AAK	Ala-Archa	4.71	22	P	Pn	08 09 09.5	-0.5
	SNR=5.4						
KBK	Karagaybulak	4.87	25	P	Pn	08 09 11.2	-0.9
	SNR=8.1						
KK31	Karatay Array	4.98	346	⇓P	Pn	08 09 11.5	-1.9
	2.3nm,0.3s,baz=139,slow=11,SNR=12						
KK31				⇓S	Sn	08 10 07.1	-2.7
	15nm,0.5s,baz=171,slow=24,SNR=13						
ULHL	Ulahol	5.05	37	P	Pn	08 09 12.5	-2.1
	SNR=11						
CHMS	Chumysh	5.12	22	P	Pn	08 09 14.3	-1.0
	SNR=12						
USP	Ospenovka	5.29	19	P	Pn	08 09 16.7	-1.0
	SNR=5.3						
TKM2	Tokmak 2	5.33	28	⇑P	Pn	08 09 16.8	-1.6
	5.2nm,0.5s						
TKM2				⇑S	Sn	08 10 19.4	+0.7
	12nm,0.8s						
TKM2	Tokmak 2	5.33	28	P	Pn	08 09 16.9	-1.6
	SNR=18						
GEYT	Alibeck	11.06	273	P	Pn	08 10 35.8	0.0
	3.0nm,0.3s,baz=112,slow=15,SNR=4.3						
GEYT				S	Sn	08 12 32.5	-5.0
	1.8nm,0.3s,baz=109,slow=20,SNR=4.1						
MKAR	Makanchi Array	11.32	38	P	Pn	08 10 36.9	-2.3
	0.2nm,0.3s,baz=222,slow=12,SNR=8.7						
AB31	Akbulak array	14.05	325	⇑P	Pn	08 11 13.7	-1.1
	0.5nm,0.5s,baz=136,slow=12,SNR=8.4						
AB31				⇓S	Sn	08 13 43.7	-6.0
	0.9nm,0.5s,baz=132,slow=23,SNR=5.4						
BVAR	Borovoye Array	14.80	356	P	Pn	08 11 25.6	+1.3
	0.1nm,0.3s,baz=156,slow=11,SNR=2.1						
AKTO	Aktyubinsk	15.77	325	P	P	08 11 38.8	+0.8
	0.4nm,0.3s,baz=120,slow=15,SNR=3.9						
AKTO				S	Sn	08 14 20.9	-10
	0.1nm,0.3s,baz=218,slow=20,SNR=2.2						
FINES	FINESS Array B	36.54	324	P	P	08 14 57.1	+1.9
	0.6nm,0.5s,baz=98,slow=10.0,SNR=4.2						
ARCES	ARCESS Array B	39.87	336	P	P	08 15 24.1	+1.0
	0.6nm,0.8s,baz=104,slow=7.5,SNR=3.8						
HFS	Hagfors	42.25	321	P	P	08 15 44.6	+2.0
	0.8nm,0.4s,baz=101,slow=15,SNR=3.4						
TORD	Torodi Ar. Bea	66.67	269	P	P	08 18 40.5	+0.6
	0.4nm,0.4s,baz=53,slow=5.0,SNR=5.4						
YKA	Yellowknife Ar	79.43	3	P	P	08 19 54.8	+0.7
	0.3nm,0.5s,baz=350,slow=5.4,SNR=6.2						
WRA	Warramunga Arr	82.17	123	P	P	08 20 07.0	-2.4
	0.1nm,0.3s,baz=332,slow=5.2,SNR=3.8						

SJA ***25*** *08:10:01.1±0.8, 32°.39S×72°.13W, h40km±999km, ML3.2, MW3.5*
GUC ***25*** *08:10:02.2±0.7, 32°.11S×71°.52W, h16km±8km, ML3.0*

ISC 25 08:09:53.7±2.4, 32°.05S±0°.04×72°.3W±0°.1, h15km±13km, n20, σ1§17/28, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROC1	El Roble	1.41	131	eP	Pg	08 10 21.5	+0.6
ROC1				eS	Sb	08 10 35.7	-2.1
ROCH	El Roble	1.41	131	eP	Pg	08 10 21.3	+0.4
ROCH				i S	Sb	08 10 35.7	-2.0
ROCH				IAML		08 10 38.0	
	comp=N,987nm,0.4s						
PEL	Peldehue	1.73	130	eP	Pg	08 10 26.2	-0.7
PEL				i S	Sn	08 10 44.5	-0.7
PEL				IAML		08 10 49.7	
	comp=E,631nm,0.4s						
CLCH	Cerro Calan	1.99	133	eP	Pb	08 10 30.4	+0.7
CLCH				i S	Sn	08 10 51.1	-0.4
FCH	Farellones	2.10	128	eP	Pb	08 10 32.0	+0.3
FCH				i S	Sn	08 10 54.7	-0.1
FCH				IAML		08 10 57.2	
	comp=E,248nm,0.3s						
GO04	Tololo Observa	2.26	34	i S	Sg	08 11 06.1	-0.3
TLL	Tololo Astrono	2.26	34	eP	Pg	08 10 37.2	+0.1
TLL				i S	Sg	08 11 06.5	0.0
AUSP	Uspallata	2.46	95	eP	Pg	08 10 39.6	-1.3
AUSP				eS	Sb	08 11 08.0	+0.1
LMEL	Las Melosas	2.50	136	eP	Pb	08 10 38.8	+0.4
LMEL				i S	Sn	08 11 05.8	+1.5
LMEL				IAML		08 11 14.0	
	comp=N,139nm,0.3s						
RTLS	Leoncito	2.54	85	eP	Pg	08 10 41.6	-0.9
RTLS				eS	Sb	08 11 11.6	+1.1
RTLS				IAML		08 11 17.4	
	comp=Z,138nm,0.5s						
ARCO	CERRO ARCO	2.94	106	eP	Pb	08 10 47.8	+2.0
ARCO				eS	Sb	08 11 20.2	-1.3
ARCO				IAML		08 11 26.3	
	comp=Z,68nm,0.7s						
ASAL	Salagasta	2.96	101	eP	Pb	08 10 48.1	+1.8
ASAL				eS	Sb	08 11 23.2	+0.9
AROD	Rodeo	3.05	53	eP	Pg	08 10 51.5	-0.7
AAGR	Agrelo	3.09	110	eP	Pb	08 10 50.2	+1.8
LCO	Las Campanas	3.32	25	IAML		08 12 36.6	
RTLL	Cerro Villicun	3.32	79	eP	Pb	08 10 53.3	+1.0
RTLL				IAML		08 11 41.9	
	comp=Z,38nm,0.4s						
AGUA	GUANDACOL	4.14	53	eP	Pb	08 11 06.3	0.0
VCA	Vinchina	4.82	48	IAML		08 12 36.1	
	comp=Z,33nm,0.5s						
ACLC	CERRO LA CRUZ	5.28	62	eP	Pb	08

JNU	Nakatsue	3.09	355	Pn		Pn	08 23 44.7 +0.2
	4.6nm,0.3s,baz=218,slow=19,SNR=24						
JNU				Sn		Sn	08 24 17.9 -2.8
	3.4nm,0.3s,baz=212,slow=19,SNR=4.8						
JOW	Kunigami	4.09	219	ePn		Pn	08 23 58.2 +0.1
INU	Inuyama	7.23	41	ePn		Pn	08 24 43.5 +2.1
KSAR	Wonju Array Be	7.88	341	Pn		Pn	08 24 50.3 0.0
KSRS	Korea Array	7.88	341	Pn		Pn	08 24 50.3 +0.1
	0.1nm,0.3s,baz=165,slow=15,SNR=3.1						
MAJO	Matsushiro	8.76	40	ePn		Pn	08 25 02.8 +0.4
MJAR	Matsushiro Arr	8.76	40	Pn		Pn	08 25 02.8 +0.4
	0.4nm,0.3s,baz=232,slow=16,SNR=3.2						
ASAJ	Asahikawa	16.73	30	LR		LR	08 34 11.2
	comp=Z,89nm,18.4s,baz=254,slow=40						
GUMO	Guam	20.68	139	LR		LR	08 34 46.3
	comp=Z,61nm,19.1s,baz=274,slow=34						
DAV	Davao City (W)	23.44	194	LR		LR	08 37 19.3
	comp=Z,34nm,20.0s,baz=163,slow=37						
SONA0	Songino Array	26.05	320	eP		P	08 28 27.7 -1.0
SONM	Songino Array	26.05	320	P		P	08 28 27.7 -1.0
	0.9nm,0.6s,baz=114,slow=7.0,SNR=4.1						
CMAR	Chiang Mai Arr	31.46	256	LR		LR	08 43 33.4
	comp=Z,60nm,18.5s,baz=24,slow=40						
JAY	Jayapura	33.62	163	LR		LR	08 41 35.0
	comp=Z,29nm,19.7s,baz=200,slow=33						
MANU	Manus Island	35.45	151	eP		P	08 29 52.7 +1.0
	8.2nm,0.8s						
ZALV	Zalesovo Beam	40.94	319	LR		LR	08 48 55.1
	comp=Z,55nm,19.5s,baz=72,slow=38						
MK01	Makanchi Array	41.09	308	eP		P	08 30 38.2 -0.8
MK32	Makanchi Array	41.10	308	eP		P	08 30 38.2 -0.9
MKAR	Makanchi Array	41.10	308	P		P	08 30 38.2 -0.9
	0.6nm,0.8s,baz=99,slow=11,SNR=5.7						
MKAR				PcP		PcP	08 32 38.0 -0.4
	0.3nm,0.7s,baz=85,slow=3.0,SNR=3.9						
TIXI	Tiksi	41.69	359	LR		LR	08 48 33.1
	comp=Z,55nm,21.9s,baz=194,slow=37						
BILL	Bilibino	43.26	18	eP		P	08 30 56.7 +0.4
	4.7nm,0.3s						
KURK	Kurchatov	43.98	313	eP		P	08 31 01.0 -1.4
KURBB	Kurchatov Arra	44.03	313	P		P	08 31 01.0 -1.7
	0.2nm,0.3s,baz=98,slow=9.4,SNR=3.6						
NRIK	Noril'sk	46.50	340	P		P	08 31 20.8 -1.4
	2.8nm,0.3s,baz=130,slow=18,SNR=3.0						
NRIK				LR		LR	08 53 02.0
	comp=Z,113nm,20.4s,baz=107,slow=39						
BVAR	Borovoye Array	49.27	316	P		P	08 31 43.2 -0.6
	1.5nm,0.7s,baz=68,slow=13,SNR=7.4						
BRVK	Borovoye	49.34	316	eP		P	08 31 44.0 -0.3
	4.7nm,0.7s						
KK31	Karatay Array	49.44	303	eP		P	08 31 45.4 0.0
KKAR	Karatay Array	49.44	303	eP		P	08 31 45.6 +0.3
ABKAR	Akbulak array	56.02	312	eP		P	08 32 33.5 -0.3
AKTO	Aktyubinsk	57.08	313	LR		LR	08 58 45.7
	comp=Z,49nm,20.4s,baz=103,slow=38						
ILAR	Eielson Array	59.86	29	P		P	08 33 01.2 +0.7
	0.2nm,0.6s,baz=297,slow=6.0,SNR=3.2						
FUNA	Funafuti	59.97	122	eP		P	08 33 02.6 +0.7
	58nm,1.1s						
DZM	Mont Dzumac	61.92	143	eP		P	08 33 16.2 +1.1
	7.8nm,1.0s						
ARCES	ARCESS Array B	67.43	338	eP		P	08 33 50.3 -0.1
KBZ	Khabaz	68.79	309	P		P	08 33 59.5 +0.2
	2.8nm,0.9s,baz=59,slow=3.7,SNR=6.8						
FIA1	FINESS Array S	70.84	331	eP		P	08 34 11.3 -0.3
FIA0	FINESS Array S	70.84	331	eP		P	08 34 10.3 -1.3
FINES	FINESS Array B	70.84	331	P		P	08 34 10.3 -1.3
	0.9nm,0.5s,baz=72,slow=6.2,SNR=4.7						
FINES				LR		LR	09 08 45.7
	comp=Z,66nm,18.1s,baz=27,slow=39						
BR101	Keskin Array S	76.75	308	eP		P	08 34 47.4 +0.5
BR131	Keskin Array S	76.75	308	eP		P	08 34 47.3 +0.5
BRTR	Keskin Array B	76.75	308	P		P	08 34 47.4 +0.5
	1.4nm,0.7s,baz=89,slow=6.4,SNR=7.2						
BORG	Borgarnes	83.12	348	LR		LR	09 13 04.7
	comp=Z,10nm,18.7s,baz=345,slow=36						
SFJD	Kangerlussuaq	83.27	1	LR		LR	09 14 46.4
	comp=Z,12nm,18.6s,baz=324,slow=37						
NVAR	Mina Array Bea	86.01	48	P		P	08 35 36.2 +0.1
	0.2nm,0.7s,baz=258,slow=4.5,SNR=2.4						
SYP	Santa Ynez Pea	87.15	51	eP		P	08 35 40.8 -0.8

*ISCJB **25** 08:24:25.3±0.3,5°.90S±0°.03×147°.19E±0°.04,h100km, mb4.5/31,Error ellipse: s-maj=5.9km s-min=4.3km az=20.6*
*IDC **25** 08:24:27.0±2.2,5°.91S×147°.30E,h106km±19km,mb4.0/11, mb1 4.2/16,mb1mx3.9/50,mbtmp4.5/16,MS3.4/1, Ms1 3.4/1,ms1mx2.5/45,Error ellipse: s-maj=20.3km s-min=11.5km az=85.0*
*NEIC **25** 08:24:28.6±0.7,5°.94S×147°.22E,h119km±6km,mb4.7/26, Error ellipse: s-maj=7.9km s-min=5.4km az=112.0*

ISC 25 08:24:26.7±0.3,5°.98S±0°.05×147°.19E±0°.06,h100km,n108, σ1°32/114,mb4.5/32,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.41	181	P	Pn	08 25 18.2	+0.2
	115nm,0.3s,baz=355,slow=5.8,SNR=146						
PMG				S	Sn	08 25 55.7	-1.9
	180nm,0.3s,baz=29,slow=18,SNR=13						
PMG	Port Moresby	3.41	181	ePn	Pn	08 25 18.1	+0.1
PMG				eSn	Sn	08 25 57.8	+0.2
MANU	Manus Island	3.91	3	ePn	Pn	08 25 27.5	+2.7
RABL	Rabaul	5.26	71	ePn	Pn	08 25 43.7	+0.6
JAY	Jayapura	7.32	298	P	Pn	08 26 12.8	+1.6
	6.9nm,0.3s,baz=145,slow=3.0,SNR=28						
JAY				S	Sn	08 27 31.2	-1.5
	baz=198,slow=20,SNR=1.6						
COEN	Coen	8.86	206	P	Pn	08 26 32.4	+0.3
	baz=8.7,SNR=150						
COEN	Coen	8.86	206	ePn	Pn	08 26 32.8	+0.8
MTSU	Mount Surprise	12.41	193	P	Pn	08 27 20.9	+1.0
	baz=12,SNR=40						
CTA	Charters Towe	14.06	184	P	P	08 27 45.4	-0.7
	1.6nm,0.3s,baz=352,slow=14,SNR=14						
CTAO	Charters Tower	14.06	184	eP	P	08 27 45.5	-0.6
KDU	Kakadu	15.97	244	P	Pn	08 28 05.5	-0.3
	baz=16,SNR=86						
QIS	Mount Isa	16.26	206	P	Pn	08 28 10.3	+0.9
	baz=16,SNR=37						
SIJI	Sorong	16.68	287	P	Pn	08 28 15.8	+1.2
	1.0nm,0.3s,baz=131,slow=19,SNR=2.5						
PATS	Pohnpei	16.89	41	P	P	08 28 18.1	+0.6
	baz=17,SNR=3.2						
PATS	Pohnpei	16.89	41	ePn	P	08 28 19.6	+2.1
	21nm,0.7s						
MTN	Manton Dam	17.24	246	P	P	08 28 22.2	+0.7
	baz=17,SNR=24						
MTN	Manton Dam	17.24	246	eP	P	08 28 21.9	+0.5
	28nm,0.8s						
WRAB	Tennant Creek	18.66	221	eP	P	08 28 37.6	+0.6
	38nm,0.8s						
WB2	Warramunga Arr	18.67	221	eP	P	08 28 37.7	+0.7
	36nm,0.8s						
WR1	Warramunga Arr	18.68	221	eP	P	08 28 37.7	+0.6
	36nm,0.7s						
WRA	Warramunga Arr	18.68	221	P	P	08 28 37.7	+0.5
	5.5nm,0.3s,baz=44,slow=11,SNR=192						
WRA				S	S	08 31 59.5	-5.3
	0.4nm,0.3s,baz=49,slow=21,SNR=4.3						
GUMO	Guam	19.57	353	P	Pn	08 28 48.1	-1.1
	2.0nm,0.3s,baz=160,slow=16,SNR=4.1						
GUMO	Guam	19.57	353	eP	Pn	08 28 48.5	-0.6
	58nm,1.0s						
EIDS	Eidsvold	19.64	169	P	Pn	08 28 49.8	-0.2
	baz=20,SNR=3.4						
EIDS	Eidsvold	19.64	169	eP	Pn	08 28 49.9	0.0
	15nm,1.0s						
KNRA	Kununurra	20.49	240	P	P	08 28 57.7	+0.8
	baz=20,SNR=22						
QLP	Quilpie	20.69	188	P	P	08 29 00.5	+1.6
	baz=21,SNR=11						
AS01	Alice Springs	21.72	215	eP	P	08 29 10.9	+0.9
AS31	Alice Springs	21.74	215	eP	P	08 29 11.4	+1.1
	22nm,0.9s						
ASAR	Alice Springs	21.75	215	P	P	08 29 11.4	+1.1
	33nm,0.4s,baz=58,slow=8.9,SNR=304						
ASAR				S	S	08 33 01.9	-3.3
	3.1nm,0.9s,baz=36,slow=17,SNR=6.3						
ASAR				LR	LR	08 38 54.8	
	comp=Z,101nm,18.4s,baz=86,slow=40						
SOEI	Soe	23.01	259	eP	P	08 29 25.6	+2.1
	39nm,0.8s						
BATI	Baumata	23.66	258	P	P	08 29 30.7	+1.3
	40nm,0.4s,baz=84,slow=7.6,SNR=4.5						
DZM	Mont Dzumac	24.54	133	P	P	08 29 36.8	-0.5
	3.0nm,0.5s,baz=319,slow=19,SNR=4.6						
DZM	Mont Dzumac	24.54	133	eP	P	08 29 37.1	-0.3
	19nm,1.4s						
ARMA	Armidale	24.67	171	P	P	08 29 39.8	+1.4
	baz=25,SNR=4.7						
ARMA	Armidale	24.67	171	eP	P	08 29 39.5	+1.1
	12nm,1.4s						
WRKA	Warakurna	26.21	222	P	P	08 29 53.3	+0.9
	baz=26,SNR=104						
STKA	Stephens Creek	26.30	191	P	P	08 29 53.6	+0.5
	2.7nm,0.4s,baz=360,slow=8.1,SNR=14						
STKA	Stephens Creek	26.30	191	eP	P	08 29 53.9	+0.8
	1.3nm,1.1s						
LHI	Lord Howe Isla	27.74	158	P	P	08 30 10.1	+4.1
	baz=28,SNR=3.6						
LHI	Lord Howe Isla	27.74	158	eP	P	08 30 04.1	-1.9
	125nm,1.4s						
HTT	Hallett	28.38	195	P	P	08 30 14.4	+2.7
	baz=28,SNR=6.3						
BBOO	Buckleboo	28.64	200	P	P	08 30 15.6	+1.6
	baz=28,SNR=11						
BBOO	Buckleboo	28.64	200	eP	P	08 30 15.3	+1.3
	7.7nm,0.6s						
FORT	Forrest	30.52	214	P	P	08 30 31.6	+1.0
	baz=30,SNR=20						
FORT	Forrest	30.52	214	eP	P	08 30 31.3	+0.7
	14nm,0.6s						
MBWA	Marble Bar	30.58	238	eP	P	08 30 32.0	+0.7
	42nm,1.5s						
FUNA	Funafuti	31.84	97	eP	P	08 30 41.2	-1.3
	99nm,1.2s						
CBIJ	Chichi jima	33.23	352	P	P	08 30 52.9	-1.5
JCJ	Chichijima	33.23	352	P	P	08 30 52.9	-1.5
	52nm,0.8s,baz=149,slow=19						
MEEK	Meekatharra	34.11	230	P	P	08 31 03.3	+1.1
	baz=34,SNR=11						
KMBL	Kambalda	34.64	220	P	P	08 31 07.7	+1.0
	baz=34,SNR=12						
MORW	Morawa	37.33	228	P	P	08 31 30.8	+1.2
	baz=37,SNR=4.9						
KLBR	Kellerberrin	37.52	224	P	P	08 31 31.7	+0.5
	baz=37,SNR=18						
BLDU	Ballidu	37.69	226	P	P	08 31 33.4	+0.9
	baz=38,SNR=8.9						
NWAO	Narrogin (SRO)	38.67	222	P	P	08 31 41.1	+0.3
	5.8nm,0.8s,baz=38,slow=17,SNR=3.0						
CISI	Cisompet, Garu	39.12	265	eP	P	08 31 45.1	+0.2
	55nm,1.1s						
KNTN	Kanton	41.09	87	eP	P	08 32 02.0	+0.9
	132nm,1.4s						
URZ	Urewera	42.06	144	eP	P	08 32 07.9	-0.8
	64nm,1.5s						
KSRS	Korea Array	46.80	339	P	P	08 32 46.2	-0.1
	0.7nm,0.4s,baz=164,slow=8.2,SNR=4.1						
KSAR	Wonju Array Be	46.80	339	P	P	08 32 46.2	-0.1
CMAR	Chiang Mai Arr	53.41	298	pP	pP	08 33 59.7	-1.1
	1.2nm,0.3s,baz=130,slow=8.4,SNR=1.4						
PETK	Petropavlovsk-	59.53	7	P	P	08 34 19.4	0.0
	3.9nm,0.8s,baz=141,slow=5.0,SNR=5.8						
PETK	Petropavlovsk-	59.53	7	eP	P	08 34 20.0	+0.6
PEA1	Petropavlovsk-	59.53	7	eP	P	08 34 19.4	0.0
VNDA	Vanda	71.92	177	P	P	08 35 39.4	+0.7
	0.9nm,0.8s,baz=321,slow=8.0,SNR=6.5						
VNDA	Vanda	71.92	177	eP	P	08 35 39.7	+0.9
VNDA				ePcP	P	08 35 40.0	+1.2
MK01	Makanchi Array	77.58	320	eP	P	08 36 11.6	-0.4
MK32	Makanchi Array	77.60	320	eP	P	08 36 11.2	-0.8
MKAR	Makanchi Array	77.60	320	P	P	08 36 11.2	-0.8
	0.4nm,0.6s,baz=98,slow=6.7,SNR=5.5						
SVW2	Sparrevohn	80.14	24	eP	P	08 36 26.2	+0.6
	4.5nm,1.2s						
CNPM	China Poot	81.24	27	eP	P	08 36 30.7	-0.8
	17nm,1.2s						
KURK	Kurchatov	81.30	323	eP	P	08 36 30.9	-1.1
KURBB	Kurchatov Arra	81.33	323	P	P	08 36 30.9	-1.2
	0.2nm,0.5s,baz=103,slow=5.1,SNR=2.9						
RDOG	Red Dog Mine	81.66	17	eP	P	08 36 33.5	0.0
	11nm,1.2s						
PPLA	Purkeypile	82.44	24	eP	P	08 36 38.2	+0.3
	7.4nm,1.2s						
CAST	Castle Rocks	82.74	23	eP	P	08 36 39.5	+0.2
	2.0nm,0.6s						
SML	Sawmill	83.54	26	eP	P	08 36 42.4	-1.0
	6.3nm,1.0s						
QSPA	South Pole Qui	83.99	180	P	P	08 36 46.0	+0.2
	0.8nm,0.4s,baz=312,slow=3.0,SNR=5.2						
QSPA				pP	pP	08 37 14.1	+2.2
	2.6nm,0.7s,baz=22,slow=3.5,SNR=5.1						
CCB	Clear Creek Bu	84.97	23	eP	P	08 36 48.7	-1.9
	2.7nm,0.7s						
IL1	Eielson Array	85.38	23	eP	P	08 36 50.1	-2.5
ILAR	Eielson Array	85.38	23	P	P	08 36 50.2	-2.4
	0.3nm,0.6s,baz=251,slow=4.6,SNR=38						
ILB	Eielson Array	85.38	23	eP	P	08 36 50.3	-2.4
CARC	Carrizo Plain	95.83	55	eP	P	08 37 43.9	+1.5
BREC	Barre Substati	97.30	57	eP	Pdif	08 37 49.3	+0.3
C40A	Isle Royale Na	116.57	39	ePKPdf	PKPdf	08 42 58.5	-0.7
W40A	Ferguson Farm,	117.61	53	ePKPdf	PKPdf	08 42 58.6	-3.0
GEC2	GERESS Array S	121.99	326	ePKPdf	PKPdf	08 43 09.4	-0.3
GERES	GERESS Array B	121.99	326	PKP	PKPdf	08 43 09.2	-0.6
	0.8nm,0.5s,baz=157,slow=1.0,SNR=6.0						
GEA0	GERESS Array S	122.00	326	ePKPdf	PKPdf	08 43 09.1	-0.7
PLCA	Paso Flores	122.04	147	PKP	PKPdf	08 43 09.7	-0.4
	1.7nm,0.7s,baz=159,slow=1.4,SNR=5.7						
GRFO	Grafenberg	122.89	327	ePKPdf	PKPdf	08 43 11.1	-0.2
V52A	Sevierville	124.83	50	ePKPdf	PKPdf	08 43 15.3	-0.2
EKA	Eskdalemuir Ar	125.36	340	PKP	PKPdf	08 43 15.0	-0.9
	0.4nm,0.4s,baz=30,slow=4.4,SNR=3.1						
LPAZ	La Paz	138.64	123	PKhKP	PKPpre	08 43 34.1	
	1.1nm,0.7s,baz=239,slow=7.2,SNR=6.3						
LPAZ				PKP	PKPdf	08 43 41.9	-0.9
	1.8nm,0.8s,baz=242,slow=3.4,SNR=6.1						
GRTK	Grand Turk	139.85	64	ePKPdf	PKPdf	08 43 42.9	-1.1
AGP	Aguadilla	144.32	67	ePKPdf	PKPab	08 43 49.1	-1.2
CRPR	Cabo Rojo, PR	144.46	67	ePKPdf	PKPab	08 43 50.1	-0.7
TOA0	Torodi Ar. Sit	145.27	284	ePKPdf	PKPdf	08 43 52.7	-1.2
TORD	Torodi Ar. Bea	145.27	284	PKPbc	PKPdf	08 43 52.5	-1.3
	1.3nm,0.5s,baz=66,slow=3.5,SNR=19						
TORD				pPKPbc	pPKPdf	08 44 21.8	+0.4
	2.3nm,0.7s,baz=66,slow=3.8,SNR=5.9						
TOA1	Torodi Ar. Sit	145.27	284	ePKPdf	PKPdf	08 43 52.5	-1.3
MTP	Monte Pirata	145.86	66	ePKPdf	PKPab	08 43 56.6	+0.5
SAML	Samuel	146.29	116	ePKPdf	PKPdf	08 43 56.1	+0.5
STVI	Saint Thomas	146.33	66	ePKPdf	PKPdf	08 43 55.9	+0.4
CMLA	Cha da Macela	147.67	349	ePKPdf	PKPdf	08 43 58.4	+1.0
SMRT	St. Maarten	148.12	65	ePKPbc	PKPbc	08 44 00.9	-1.0
KOWA	Kowa	150.46	289	PKPbc	PKPbc	08 44 07.4	-0.4
	1.2nm,0.4s,baz=58,slow=4.2,SNR=3.9						
PTGA	Pitinga	152.08	103	ePKPbc	PKPbc	08 44 11.3	-0.3

*IDC **25** 08:31:32.5±0.9,2°.28N×127°.74E,h0km,mb4.2/7, mb1 4.3/7,mb1mx3.8/61,mbtmp4.2/7,Error ellipse: s-maj=78.6km s-min=15.8km az=70.0*
*ISCJB **25** 08:31:35.6±0.8,2°.3N±0°.2×127°.8E±0°.5,h35km,mb4.1/7, Error ellipse: s-maj=76.9km s-min=14.6km az=161.7*

ISC 25 08:31:37.5±1.0,2°.3N±0°.2×127°.9E±0°.6,h35km,n7,σ0°78/7, mb4.1/7,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.99	164	P	P	08 36 39.9	+0.6
	1.9nm,0.3s,baz=342,slow=11,SNR=29						
ASAR	Alice Springs	26.46	168	P	P	08 37 12.2	+0.6
	1.6nm,0.5s,baz=353,slow=7.8,SNR=21						
KSRS	Korea Array	34.99	0	P	P	08 38 26.7	+0.2
	0.4nm,0.4s,baz=182,slow=10,SNR=4.4						
STKA	Stephens Creek	36.39	160	P	P	08 38 38.0	-0.6
	1.7nm,0.3s,baz=342,slow=7.2,SNR=8.2						
MKAR	Makanchi Array	59.38	325	P	P	08 41 37.1	+0.7
	1.2nm,0.4s,baz=118,slow=8.2,SNR=25						
KURBB	Kurchatov Arra	63.56	327	P	P	08 42 04.3	-0.2
	3.7nm,0.6s,baz=127,slow=6.0,SNR=12						
BVAR	Borovoye Array	69.14	327	P	P	08 42 39.4	-0.9
	0.8nm,0.5s,baz=111,slow=11,SNR=3.0						

*CSEM **25** 08:38:48.5±2.7,39°.12N×29°.54E,h1km,ML2.5,Error ellipse: s-maj=52.7km s-min=20.5km az=174.0,Suspected Mining explosion.*
*ISK **25** 08:38:53.3,39°.64N×29°.44E,h5km±2km,ML2.5/4, Suspected Mining explosion.*
*ISCJB **25** 08:38:54.1±0.6,39°.67N±0°.04×29°.43E±0°.04,h0km,Error ellipse: s-maj=6.0km s-min=4.5km az=164.3*
*DDA **25** 08:38:54.1,39°.92N×29°.38E,h7km,Ml2.4*

ISC 25 08:38:54.4±0.8,39°.65N±0°.03×29°.49E±0°.03,h0km,n17, σ0°73/26,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVSB	Tavsanli	0.20	186	PG	Pg	08 38 57.6	-0.6
TVSB				SG	Sg	08 39 01.9	+1.0
TVSB	Tavsanli	0.20	186	ePg	Pg	08 38 57.6	-0.6
TVSB				eSg	Sg	08 39 01.9	+1.0
BORA	Eskisehir	0.78	73	PG	Pg	08 39 09.3	+0.1
BORA				SG	Sn	08 39 23.4	-1.7
BORA	Eskisehir	0.78	73	iP	Pg	08 39 09.0	-0.3
BORA				iS	Sb	08 39 23.1	+1.1
BORA	Eskisehir	0.78	73	P	Pg	08 39 09.0	-0.3
BORA	Eskisehir	0.78	73	ePg	Pg	08 39 09.3	+0.1
BORA				S	Sb	08 39 23.1	+1.1
DURS	Dursunbey	0.79	267	iP	Pg	08 39 08.8	-0.6
DURS				iS	Sg	08 39 20.3	+0.7
DURS	Dursunbey	0.79	267	P	Pg	08 39 08.8	-0.6
DURS				S	Sg	08 39 20.3	+0.7
DEMI	Demirci	0.85	225	iP	Pg	08 39 10.7	0.0
DEMI				iS	Sn	08 39 27.2	+0.2
YLV	Yalova	0.92	354	PG	Pg	08 39 11.9	-0.1
YLV	Yalova	0.92	354	ePg	Pg	08 39 11.9	-0.1
ESKT	Eskisehir	1.06	97	iP	Pg	08 39 13.9	-0.7
ESKT				iS	Sn	08 39 32.6	+0.5
SEYT	Eskypehyr	1.06	97	P	Pg	08 39 13.9	-0.7
SBT5	Esenkoy-Cinarc	1.08	335	PN	Pb	08 39 15.6	-0.3
SBT5	Esenkoy-Cinarc	1.08	335	ePn	Pb	08 39 15.6	-0.3
GULT	Gulveren	1.11	45	PN	Pn	08 39 16.8	-0.4
GULT	Gulveren	1.11	45	ePn	Pn	08 39 16.8	-0.4

IDC 25 08:41:17.6±1.9,27°.15N×99°.96E,h0km,mb3.5/3, mb1 3.7/3,mb1mx3.3/68,mbtmp3.5/3,MS2.5/1,Ms1 2.5/1, ms1mx2.1/55,Error ellipse: s-maj=379.0km s-min=26.9km az=56.0,Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRDH	Bariadhala	8.77	241	LR	LR	08 47 17.2	
	comp=Z,28nm,20.4s,baz=138,slow=41						
MKAR	Makanchi Array	24.06	329	P	P	08 46 34.5	0.0
	0.3nm,0.7s,baz=129,slow=11,SNR=3.1						
WRA	Warramunga Arr	57.46	141	P	P	08 51 08.3	-0.2
	0.7nm,0.7s,baz=331,slow=7.7,SNR=7.8						
ASAR	Alice Springs	60.23	144	P	P	08 51 27.7	0.0
	0.4nm,0.4s,baz=327,slow=6.8,SNR=9.6						

*ISCJB **25** 08:42:03.7±0.7,37°.80N±0°.04×26°.75E±0°.05,h5km±9km, Error ellipse: s-maj=8.6km s-min=4.7km az=45.0*
*CSEM **25** 08:42:03.9±0.3,37°.80N×26°.76E,h10km,ML2.7,Error ellipse: s-maj=8.3km s-min=4.8km az=47.0*
*DDA **25** 08:42:03.8,37°.81N×26°.76E,h7km,Ml2.7*
*ISK **25** 08:42:03.4,37°.80N×26°.75E,h10km±1km,ML2.5/5*

ISC 25 08:42:03.9±1.0,37°.81N±0°.03×26°.77E±0°.03,h12km±9km, n23,σ0°72/38,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGB	¨zmir	0.26	21	iP	Pg	08 42 09.2	0.0
DGB				iS	Sg	08 42 13.3	+0.4
GCAM	G?zelcaml?	0.39	106	PG	Pg	08 42 11.8	+0.2
GCAM				SG	Sb	08 42 18.1	-0.4
GCAM	G?zelcaml?	0.39	106	iP	Pg	08 42 11.7	+0.2
GCAM				iS	Sb	08 42 17.9	-0.6
GCAM	G?zelcaml?	0.39	106	ePg	Pg	08 42 11.8	+0.2
GCAM				S	Sb	08 42 17.9	-0.6
ZEY	¨zmir	0.48	334	iP	Pg	08 42 13.4	+0.2
ZEY				iS	Sb	08 42 21.0	-0.2
URLA	Izmir	0.57	346	PG	Pg	08 42 14.8	-0.1
URLA				SG	Sg	08 42 23.1	+0.6
URLA	Izmir	0.57	346	iP	Pg	08 42 14.1	-0.8
URLA				iS	Sg	08 42 22.9	+0.4
URLA	Izmir	0.57	346	P	Pg	08 42 14.1	-0.8
URLA				S	Sg	08 42 22.9	+0.4
KRBN	Karaburun	0.80	348	PG	Pg	08 42 18.9	-0.5
KRBN				SG	Sb	08 42 31.6	+1.1
CHOS	Chios island	0.81	316	PG	Pb	08 42 20.1	+0.2
CHOS	Chios island	0.81	316	ePg	Pb	08 42 20.1	+0.2
BODT	Bodrum	0.86	150	PG	Pg	08 42 19.7	-0.8
AYDN	Tasoluk	0.89	99	iP	Pg	08 42 20.9	-0.2
AYDN				iS	Sg	08 42 32.6	-0.2
AYDN	Tasoluk	0.89	99	P	Pg	08 42 20.9	-0.2
AYDN				S	Sg	08 42 32.6	-0.2
AYDB	Zeytinkoy-Aydi	0.90	81	PG	Pb	08 42 21.8	+0.3
AYDB	Zeytinkoy-Aydi	0.90	81	ePg	Pb	08 42 21.8	+0.3
FOCM	Fo¨§a	0.90	358	PG	Pg	08 42 20.7	-0.6
BDRM	Kayabasi	0.92	144	iP	Pb	08 42 22.2	+0.5
BDRM				iS	Sb	08 42 34.5	+0.6
BDRM	Kayab

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CJUL	**El Julon, El H**	**0.01**	**343**	P	Pg	09 03 48.2	-0.3
	5μm,0.1s,SNR=18						
CJUL				S	Sg	09 03 50.8	-0.1
	11μm,0.1s,SNR=7.9						
CTAN	**El Hierro**	**0.04**	**29**	P	Pg	09 03 48.2	-0.2
	4μm,0.1s,SNR=18						
CTAN				S	Sg	09 03 50.6	-0.1
	5μm,0.1s,SNR=7.9						
CMCL	**Mercadel, El H**	**0.05**	**94**	P	Pg	09 03 48.4	-0.1
	5μm,0.1s,SNR=18						
CCUM	**Cumbre, El Hie**	**0.05**	**55**	P	Pg	09 03 48.3	-0.1
	2μm,0.1s,SNR=18						
CCUM				S	Sg	09 03 50.8	0.0
	13μm,0.1s,SNR=7.9						
CHIE	**El Hierro**	**0.10**	**84**	P	Pg	09 03 48.5	-0.3
	80nm,0.1s,SNR=7.9						
CRST	**La Restinga, E**	**0.11**	**131**	P	Pg	09 03 48.4	-0.4
	2μm,0.1s,SNR=7.9						
CRST				S	Sg	09 03 51.3	-0.2
	22μm,0.2s,SNR=7.9						
CTIG	**El Hierro**	**0.16**	**62**	P	Pg	09 03 49.1	-0.3
	325nm,0.1s,SNR=18						
CTIG				S	Sg	09 03 52.2	-0.2
	2μm,0.1s,SNR=7.9						
EHIG	**Higuera**	**0.87**	**16**	P	Pb	09 03 59.7	-1.8
	249nm,0.3s,SNR=27						

IDC 25 09:07:02.6±47.0, 15°.91S×177°.24W, h0km, mb4.0/3, mb1 4.1/3, mb1mx3.6/46, mbtmp4.0/3, MS3.4/1, Ms1 3.4/1, ms1mx2.5/44, Error ellipse: s-maj=883.1km s-min=169.4km az=77.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.59**	**239**	P	P	09 14 43.9	-0.4
	2.5nm,1.0s,baz=84,slow=10,SNR=3.6						
WRA	**Warramunga Arr**	**46.13**	**257**	P	P	09 15 29.1	-0.1
	0.3nm,0.4s,baz=90,slow=7.8,SNR=12						
ASAR	**Alice Springs**	**46.44**	**252**	P	P	09 15 31.6	0.0
	3.0nm,0.6s,baz=89,slow=8.1,SNR=63						
SIJI	**Sorong**	**52.91**	**281**	LR	LR	09 38 44.7	
	comp=Z,36nm,19.1s,baz=240,slow=36						

IDC 25 09:20:29.9±1.5, 32°.13S×179°.79E, h344km±16km, mb3.2/5, mb1 3.4/8, mb1mx3.2/44, mbtmp4.1/8, Error ellipse: s-maj=23.1km s-min=20.0km az=72.0
WEL 25 09:20:35.6±0.7, 32°.5±10°×17°.9E±2°.3, h228km±28km
ISC 25 09:20:33.1±1.4, 32°.38S±0°.09×179°.4E±0°.2, h350km, n57, σ1°56/73, mb3.5/5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.87**	**37**	P	Pn	09 21 35.6	-5.2
GLKZ				S	S	09 22 25.1	-10
RAO	**Raoul Island**	**3.88**	**37**	P	Pn	09 21 34.1	-6.9
	53nm,0.3s,baz=239,slow=19,SNR=3.5						
RAO				S	S	09 22 20.5	-15
	29nm,0.3s,baz=142,slow=19,SNR=2.0						
MXZ	**Matakaoa Point**	**5.25**	**190**	P	**Pn**	**09 21 58.9**	**+3.6**
MXZ				S	**S**	**09 23 01.7**	**-0.1**
WMGZ	**Waiomatatini S**	**5.49**	**188**	P	**Pn**	**09 21 59.5**	**+1.6**
WMGZ				S	**S**	**09 23 08.2**	**+1.5**
HAZ	**Te Kaha**	**5.52**	**193**	P	**Pn**	**09 21 60.0**	**+1.6**
HAZ				S	**S**	**09 23 07.7**	**+0.2**
PKGZ	**Pakihiroa**	**5.60**	**191**	P	**Pn**	**09 22 01.5**	**+2.2**
PKGZ				S	**S**	**09 23 09.2**	**0.0**
PUZ	**Puketiti**	**5.75**	**189**	P	**Pn**	**09 22 02.7**	**+1.7**
PUZ				S	**S**	**09 23 11.2**	**-1.1**
MWZ	**Matawai**	**6.13**	**194**	P	**Pn**	**09 22 07.1**	**+1.8**
MWZ				P	**S**	**09 23 20.4**	**+0.2**
URZ	**Urewera**	**6.16**	**197**	P	Pn	09 22 04.8	-0.8
	8.2nm,0.3s,baz=106,slow=12,SNR=82						
URZ				S	**S**	**09 23 20.4**	**-0.2**
	16nm,0.3s,baz=75,slow=23,SNR=26						
URZ	**Urewera**	**6.16**	**197**	P	**Pn**	**09 22 06.6**	**+1.0**
URZ				S	**S**	**09 23 20.7**	**+0.1**
RTZ	**Ruatahuna**	**6.53**	**197**	P	**Pn**	**09 22 12.7**	**+2.8**
RTZ				S	**S**	**09 23 29.4**	**+0.9**
KNZ	**Kokohu**	**6.77**	**191**	P	**Pn**	**09 22 13.4**	**+0.7**
KNZ				S	**S**	**09 23 33.5**	**-0.1**
HIZ	**Hauiti**	**7.15**	**210**	P	Pn	09 22 23.3	+6.1
NGZ	**Ngauruhoe**	**7.45**	**203**	P	**Pn**	**09 22 23.7**	**+2.9**
NGZ				S	**S**	**09 23 49.8**	**+1.4**
FWVZ	**Far West T-bar**	**7.54**	**203**	P	**Pn**	**09 22 24.3**	**+2.4**
FWVZ				S	**S**	**09 23 51.1**	**+0.6**
WHVZ	**Whangaehu Hut**	**7.55**	**203**	P	**Pn**	**09 22 24.3**	**+2.3**
WHVZ				S	**S**	**09 23 50.9**	**+0.2**
BHHZ	**Black Hill Sta**	**7.59**	**200**	P	**Pn**	**09 22 23.6**	**+1.3**
BHHZ				S	**S**	**09 23 49.2**	**-2.1**
MOVZ	**Moawhango**	**7.61**	**202**	P	**Pn**	**09 22 24.0**	**+1.5**
MOVZ				S	**S**	**09 23 49.0**	**-2.7**
PKVZ	**Pokaka**	**7.64**	**204**	P	**Pn**	**09 22 25.0**	**+2.1**
PKVZ				S	**S**	**09 23 53.9**	**+1.5**
VRZ	**Vera Road**	**7.71**	**208**	P	**Pn**	**09 22 27.7**	**+4.0**
PXZ	**Pawanui**	**7.90**	**194**	P	**Pn**	**09 22 27.4**	**+1.4**
PXZ				S	**S**	**09 23 55.5**	**-2.5**
PNHZ	**Pukenui**	**7.95**	**198**	P	**Pn**	**09 22 27.0**	**+0.4**
PNHZ				S	**S**	**09 23 56.7**	**-2.4**
TSZ	**Takapari Road**	**8.15**	**199**	P	**Pn**	**09 22 29.5**	**+0.6**
TSZ				S	**S**	**09 24 00.4**	**-3.0**
PRHZ	**Porangahau**	**8.18**	**195**	P	**Pn**	**09 22 30.6**	**+1.4**
PRHZ				S	**S**	**09 24 02.0**	**-2.0**
WAZ	**Wanganui**	**8.18**	**205**	P	**Pn**	**09 22 31.3**	**+2.1**
WAZ				S	**S**	**09 24 05.0**	**+0.9**
DVHZ	**Dannevirke**	**8.32**	**197**	P	**Pn**	**09 22 30.4**	**-0.5**
DVHZ				S	**S**	**09 24 04.0**	**-3.1**
ANWZ	**Angora Road**	**8.40**	**195**	P	**Pn**	**09 22 33.2**	**+1.4**
PRWZ	**Pori Road**	**8.61**	**198**	P	**Pn**	**09 22 35.8**	**+1.5**
MRZ	**Mangatainoka R**	**8.82**	**199**	P	**Pn**	**09 22 36.4**	**-0.4**
TIWZ	**Tintock**	**8.84**	**198**	P	**Pn**	**09 22 37.5**	**+0.4**
HOWZ	**Holdsworth Sta**	**9.05**	**199**	P	**Pn**	**09 22 38.9**	**-0.7**
OGWZ	**Otaki Gorge**	**9.08**	**201**	P	**Pn**	**09 22 39.3**	**-0.6**
TMWZ	**Te Maipa**	**9.15**	**197**	P	**Pn**	**09 22 40.9**	**+0.1**
KIW	**Kapiti Island**	**9.20**	**202**	P	**Pn**	**09 22 41.2**	**-0.1**
MTW	**Mount Morrison**	**9.30**	**199**	P	**Pn**	**09 22 42.6**	**0.0**
CAW	**Cannon Point**	**9.38**	**201**	P	**Pn**	**09 22 42.9**	**-0.6**
TRWZ	**Traveller**	**9.48**	**197**	P	**Pn**	**09 22 45.2**	**+0.5**
DUWZ	**D'Urville Isla**	**9.48**	**206**	P	**Pn**	**09 22 44.1**	**-0.7**
PAWZ	**Paruwai Farm**	**9.53**	**198**	P	**Pn**	**09 22 45.0**	**-0.3**
MSWZ	**Moikau Station**	**9.61**	**199**	P	**Pn**	**09 22 46.5**	**+0.2**
TCW	**Tory Channel**	**9.72**	**204**	P	**Pn**	**09 22 46.9**	**-0.7**
PLWZ	**Palliser**	**9.75**	**199**	P	**Pn**	**09 22 47.6**	**-0.4**
TUWZ	**Tuamarina**	**10.03**	**204**	P	Pn	09 22 49.7	-1.5
NNZ	**Nelson**	**10.05**	**207**	P	**Pn**	**09 22 50.2**	**-1.3**
QRZ	**Quartz Range**	**10.07**	**211**	P	**Pn**	**09 22 51.7**	**0.0**
CMWZ	**Cape Campbell**	**10.22**	**202**	P	**Pn**	**09 22 54.2**	**+0.7**
BSWZ	**Blackbirch Sta**	**10.31**	**204**	P	**Pn**	**09 22 53.8**	**-0.7**
THZ	**Tophouse**	**10.70**	**207**	P	**Pn**	**09 22 58.2**	**-1.1**
KHZ	**Kahutara**	**11.04**	**203**	P	Pn	09 23 02.2	-1.1
DSZ	**Denniston Nort**	**11.14**	**211**	P	**Pn**	**09 23 03.4**	**-1.1**
RPZ	**Rata Peaks**	**13.08**	**208**	P	**P**	**09 23 27.5**	**+1.0**
	1.6nm,0.3s,baz=24,slow=10.0,SNR=4.1						
RPZ				S	S	09 25 44.5	-5.6
	0.7nm,0.3s,baz=120,slow=20,SNR=3.5						
STKA	**Stephens Creek**	**31.91**	**261**	P	**P**	**09 26 28.6**	**+1.3**
	1.0nm,0.7s,baz=114,slow=10.0,SNR=2.7						
CTA	**Charters Tower**	**32.02**	**284**	P	**P**	**09 26 28.8**	**+0.4**
	1.8nm,0.4s,baz=117,slow=14,SNR=2.4						
ASAR	**Alice Springs**	**40.84**	**270**	P	**P**	**09 27 41.5**	**-0.6**
	0.5nm,0.9s,baz=110,slow=7.8,SNR=6.4						
WRA	**Warramunga Arr**	**42.01**	**276**	P	**P**	**09 27 50.4**	**-1.2**
	1.0nm,0.3s,baz=113,slow=8.0,SNR=36						
QSPA	**South Pole Qui**	**57.73**	**180**	P	**P**	**09 29 47.5**	**-0.7**
	1.6nm,0.9s,baz=21,slow=8.6,SNR=3.4						
FINES	**FINESS Array B**	**146.17**	**337**	PKPbc	**PKPdf**	**09 39 27.8**	**-2.4**
	2.1nm,0.8s,baz=46,slow=4.0,SNR=8.0						

IDC 25 10:08:23.9±3.1, 28°.96S×177°.66W, h0km, mb3.2/2, mb1 3.5/2, mb1mx3.3/40, mbtmp3.2/2, Error ellipse: s-maj=121.1km s-min=46.3km az=22.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.50**	**265**	P	P	10 16 29.1	-0.3
	0.2nm,0.5s,baz=104,slow=7.8,SNR=2.9						
WRA	**Warramunga Arr**	**44.36**	**271**	P	P	10 16 36.4	+0.1
	0.3nm,0.5s,baz=109,slow=8.4,SNR=5.1						
FINES	**FINESS Array B**	**143.89**	**341**	PKP	PKPdf	10 27 59.7	-0.9
	3.6nm,1.0s,baz=61,slow=3.5,SNR=8.1						
TORD	**Torodi Ar. Bea**	**164.25**	**178**	PKPab	PKPab	10 29 23.3	-0.4
	baz=188,slow=5.5						

DDA 25 10:17:39.6, 40°.65N×33°.49E, h20km, MI2.9
ISCJB 25 10:17:40.3±0.5, 40°.66N±0°.03×33°.49E±0°.04, h8km±4km, Error ellipse: s-maj=5.6km s-min=4.8km az=176.7
CSEM 25 10:17:40.1±0.2, 40°.65N×33°.52E, h8km, ML2.7, Error ellipse: s-maj=5.6km s-min=4.0km az=177.0
ISK 25 10:17:40.3, 40°.61N×33°.52E, h6km, ML2.7/8
ISC 25 10:17:40.2±0.9, 40°.65N±0°.03×33°.52E±0°.02, h11km±6km, n35, σ0°87/47, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CANT	**Cankiri**	**0.09**	**122**	PG	**Pg**	**10 17 42.7**	**-0.2**
CANT				SG	**Sg**	**10 17 44.5**	**-0.4**
ELDT	**Eldivan**	**0.18**	**204**	*i* P	**Pg**	**10 17 43.9**	**-0.4**
ELDT				*i* S	**Sg**	**10 17 48.2**	**+1.1**
ELDT	**Eldivan**	**0.18**	**204**	P	**Pg**	**10 17 43.9**	**-0.4**
ELDT				S	**Sg**	**10 17 48.2**	**+1.1**
ILGA	**Ilgaz**	**0.43**	**20**	*i* P	**Pg**	**10 17 49.1**	**+0.4**
ILGA				*i* S	**Sb**	**10 17 55.7**	**-0.7**
ILGA	**Ilgaz**	**0.43**	**20**	P	**Pg**	**10 17 49.1**	**+0.4**
ILGA				S	**Sb**	**10 17 55.7**	**-0.7**
CMDR	**Camlidere-ANKA**	**0.81**	**259**	*i* P	**Pg**	**10 17 55.5**	**-0.4**
CMDR				*i* S	**Sn**	**10 18 12.6**	**+2.8**
CMDR	**Camlidere-ANKA**	**0.81**	**259**	P	**Pg**	**10 17 55.5**	**-0.4**
LOD	**Lodumlu**	**0.96**	**217**	PG	**Pb**	**10 17 58.7**	**-0.2**
LOD	**Lodumlu**	**0.96**	**217**	*e*Pg	**Pb**	**10 17 58.7**	**-0.2**
ANTO	**Ankara**	**0.96**	**216**	PG	**Pb**	**10 17 58.9**	**0.0**
ANTO	**Ankara**	**0.96**	**216**	*e*Pg	**Pb**	**10 17 58.9**	**0.0**
CTAK	**Corum_Osmancik**	**0.97**	**90**	*i* P	**Pb**	**10 17 59.2**	**+0.1**
CTAK	**Corum_Osmancik**	**0.97**	**90**	P	**Pb**	**10 17 59.2**	**+0.1**
CORM	**Corum**	**0.97**	**119**	PG	**Pg**	**10 17 58.6**	**-0.3**
CORM	**Corum**	**0.97**	**119**	*e*Pg	**Pg**	**10 17 58.6**	**-0.3**
BCAM	**Yenicaga**	**1.12**	**279**	*i* P	**Pg**	**10 18 00.2**	**-1.5**
BCAM				*i* S	**Sg**	**10 18 15.8**	**-0.5**
BCAM	**Yenicaga**	**1.12**	**279**	P	**Pg**	**10 18 00.2**	**-1.5**
BCAM				S	**Sg**	**10 18 15.8**	**-0.5**
COAL	**Corum-Alaca**	**1.19**	**109**	*i* P	**Pg**	**10 18 02.2**	**-0.8**
COAL				*i* S	**Sn**	**10 18 19.4**	**+0.4**
COAL	**Corum-Alaca**	**1.19**	**109**	P	**Pg**	**10 18 02.2**	**-0.8**
COAL				S	**Sn**	**10 18 19.4**	**+0.4**
CDAG	**Cicekdag**	**1.22**	**147**	*i* P	**Pb**	**10 18 01.6**	**-1.8**
CDAG				*i* S	**Sn**	**10 18 21.0**	**+1.3**
CDAG	**Cicekdag**	**1.22**	**147**	P	**Pb**	**10 18 01.5**	**-1.8**
CDAG				S	**Sn**	**10 18 21.0**	**+1.3**
AFSR	**Af`ar-Bala (A**	**1.25**	**196**	PN	**Pn**	**10 18 03.5**	**-0.2**
AFSR	**Af`ar-Bala (A**	**1.25**	**196**	*e*Pn	**Pn**	**10 18 03.5**	**-0.2**
KULU	**Kulu**	**1.66**	**194**	PN	**Pb**	**10 18 10.6**	**-0.2**
KULU	**Kulu**	**1.66**	**194**	*e*Pn	**Pb**	**10 18 10.6**	**-0.2**
SERE	**Sereflikochisa**	**1.70**	**179**	PN	**Pb**	**10 18 11.3**	**-0.3**
SERE	**Sereflikochisa**	**1.70**	**179**	*e*Pn	**Pb**	**10 18 11.3**	**-0.3**
YAYX	**Yaylak**	**1.73**	**172**	PN	**Pn**	**10 18 10.7**	**+0.5**
YAYX	**Yaylak**	**1.73**	**172**	*e*Pn	**Pn**	**10 18 10.7**	**+0.5**
MDUB	**Mudurnu**	**1.78**	**265**	PN	**Pb**	**10 18 12.2**	**-0.7**
MDUB	**Mudurnu**	**1.78**	**265**	*e*Pn	**Pb**	**10 18 12.2**	**-0.7**
AUSIV	**SIVRIHISAR**	**1.94**	**232**	PN	**Pn**	**10 18 14.1**	**+0.9**
AUSIV	**SIVRIHISAR**	**1.94**	**232**	*e*Pn	**Pn**	**10 18 14.1**	**+0.9**
KIZT	**Kizilcal**	**2.18**	**216**	PN	**Pn**	**10 18 16.5**	**+0.1**
KIZT	**Kizilcal**	**2.18**	**216**	*e*Pn	**Pn**	**10 18 16.5**	**+0.1**

ISCJB 25 10:42:13.0±0.8, 5°.17N±0°.05×125°.14E±0°.09, h33km, mb3.6/5, MS2.7/2, Error ellipse: s-maj=13.7km s-min=6.6km az=167.2
MAN 25 10:42:16.0, 5°.46N×125°.26E, h48km, mb4.9, ML3.8, MS3.8
IDC 25 10:42:17.8±2.3, 5°.38N×125°.33E, h82km±24km, mb3.3/5, mb1 3.5/5, mb1mx3.3/56, mbtmp3.6/5, MS2.7/2, Ms1 2.7/2, ms1mx2.3/31, Error ellipse: s-maj=53.9km s-min=15.7km az=81.0
ISC 25 10:42:13.8±1.0, 5°.25N±0°.08×125°.33E±0°.08, h35km, n13, σ2°40/16, mb3.6/5, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKMP	**Bagumbayan, Su**	**1.48**	**328**	*e*P	**Pn**	**10 42 38.2**	**+0.2**
SKMP				*e*S	**Sn**	**10 42 54.7**	**-1.5**
DAV	**Davao City (W)**	**1.82**	**8**	P	**Pn**	**10 42 45.0**	**+2.4**
	43nm,0.3s,baz=201,slow=8.6,SNR=2.9						
DAV				S	**Sn**	**10 43 07.2**	**+2.6**
	52nm,0.3s,baz=294,slow=20,SNR=5.6						
MATI	**Mati**	**1.92**	**29**	*e*P	**Pn**	**10 42 45.1**	**+1.1**
MATI				*e*S	**Sn**	**10 43 02.4**	**-4.5**
CTBH	**Cotabato--PC H**	**2.23**	**331**	||*i*P	**Pn**	**10 42 50.9**	**+2.6**
BUKP	**Musuan**	**2.62**	**354**	*e*P	**Pn**	**10 42 54.2**	**+0.5**
BUKP				*e*S	**Sn**	**10 43 28.6**	**+4.2**
PAGZ	**Pagadian**	**3.23**	**323**	*e*P	**Pn**	**10 43 02.6**	**+0.6**
PAGZ				*e*S	**Sn**	**10 43 37.8**	**-1.4**
FITZ	**Fitzroy Crossi**	**23.20**	**179**	P	**P**	**10 47 19.6**	**+1.8**
	1.7nm,0.8s,baz=340,slow=8.5,SNR=7.6						
WRA	**Warramunga Arr**	**26.56**	**161**	P	**P**	**10 47 49.0**	**+0.4**
	0.7nm,0.4s,baz=339,slow=10,SNR=17						
JNU	**Nakatsue**	**28.21**	**10**	LR	LR	11 00 59.6	
	comp=Z,14nm,18.2s,baz=48,slow=40						
ASAR	**Alice Springs**	**29.93**	**164**	P	**P**	**10 48 19.6**	**+0.8**
	0.3nm,0.3s,baz=341,slow=7.1,SNR=23						
MJAR	**Matsushiro Arr**	**33.31**	**19**	LR	LR	11 02 39.8	
	comp=Z,14nm,18.9s,baz=235,slow=37						
MKAR	**Makanchi Array**	**55.52**	**325**	P	**P**	**10 51 43.8**	**-1.7**
	0.4nm,0.4s,baz=125,slow=7.4,SNR=5.5						
ILAR	**Eielson Array**	**84.34**	**25**	P	**P**	**10 54 39.8**	**-2.2**
	0.2nm,0.4s,baz=250,slow=4.3,SNR=3.2						

CSEM 25 10:46:38.9±0.2, 37°.68N×36°.24E, h5km, ML2.7, Error ellipse: s-maj=5.7km s-min=3.9km az=31.0
DDA 25 10:46:38.8, 37°.64N×36°.18E, h8km, ML2.7
ISK 25 10:46:38.9, 37°.66N×36°.26E, h12km, ML2.2/7
ISCJB 25 10:46:39.2±0.6, 37°.67N±0°.04×36°.23E±0°.04, h9km±5km, Error ellipse: s-maj=7.1km s-min=4.5km az=45.0
ISC 25 10:46:38.0±1.1, 37°.70N±0°.03×36°.16E±0°.04, h9km±9km, n23, σ0°60/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANDN	**Andirin**	**0.19**	**129**	*i* P	**Pg**	**10 46 42.2**	**+0.1**
ANDN				*i* S	**Sg**	**10 46 45.0**	**+0.2**
ANDN	**Andirin**	**0.19**	**129**	P	**Pg**	**10 46 42.2**	**+0.1**
ANDN				S	**Sg**	**10 46 45.0**	**+0.2**
SAIM	**ADANA**	**0.28**	**348**	*i* P	**Pb**	**10 46 45.1**	**-0.2**
SAIM				*i* S	**Sb**	**10 46 52.3**	**+2.2**
SAIM	**ADANA**	**0.28**	**348**	P	**Pb**	**10 46 45.1**	**-0.2**
KMRS	**Kahramanmaras**	**0.62**	**108**	PG	**Pg**	**10 46 48.9**	**-1.1**
KMRS				SG	**Sg**	**10 46 57.9**	**-0.3**
KMRS	**Kahramanmaras**	**0.62**	**108**	*e*Pg	**Pg**	**10 46 48.9**	**-1.1**
KMRS				*e*Sg	**Sg**	**10 46 57.9**	**-0.3**
SARI	**SarD1z-Kayseri**	**0.73**	**16**	PG	**Pn**	**10 46 54.1**	**-0.6**
YAHY	**KAYSERI_Yahyal**	**0.74**	**302**	*i* P	**Pn**	**10 46 54.1**	**-0.6**
YAHY				*i* S	**Sn**	**10 47 06.0**	**-0.2**
YAHY	**KAYSERI_Yahyal**	**0.74**	**302**	P	**Pn**	**10 46 54.1**	**-0.6**
YAHY				S	**Sn**	**10 47 06.0**	**-0.2**
CEYT	**Ceyhan**	**0.76**	**205**	PG	**Pn**	**10 46 54.7**	**-0.2**
CEYT	**Ceyhan**	**0.76**	**205**	*e*Pg	**Pn**	**10 46 54.7**	**-0.2**
GAZ	**Gaziantep**	**0.99**	**122**	PG	**Pg**	**10 46 56.7**	**-0.3**
GAZ	**Gaziantep**	**0.99**	**122**	*e*Pg	**Pg**	**10 46 56.7**	**-0.3**
KUZU	**Kuzuini**	**1.18**	**141**	*i* P	**Pn**	**10 47 00.6**	**-0.1**
KUZU				*i* S	**Sg**	**10 47 16.2**	**+0.2**
KUZU	**Kuzuini**	**1.18**	**141**	P	**Pn**	**10 47 00.6**	**-0.1**
KUZU				S	**Sg**	**10 47 16.2**	**+0.2**
TAHT	**Tahtakopru-Hat**	**1.32**	**179**	PN	**Pb**	**10 47 02.9**	**-0.1**
TAHT	**Tahtakopru-Hat**	**1.32**	**179**	*e*Pn	**Pb**	**10 47 02.9**	**-0.1**
DARE	**Darende-Malaty**	**1.36**	**50**	PN	**Pb**	**10 47 03.6**	**0.0**
AKCD	**Akcadag**	**1.52**	**66**	*i* P	**Pg**	**10 47 07.1**	**0.0**
AKCD				*i* S	**Sn**	**10 47 25.2**	**-0.1**
AKCD	**Akcadag**	**1.52**	**66**	P	**Pg**	**10 47 07.1**	**0.0**
AKCD				S	**Sn**	**10 47 25.2**	**-0.1**
MALT	**Malatya**	**1.89**	**71**	PN	**Pb**	**10 47 11.7**	**-1.0**
URFA	**Urfa**	**2.13**	**96**	PN	**Pn**	**10 47 14.4**	**+0.6**
URFA	**Urfa**	**2.13**	**96**	*e*Pn	**Pn**	**10 47 14.4**	**+0.6**

IDC 25 10:52:14.9±2.5, 4°.89N×94°.29E, h0km, mb3.7/4, mb1 3.9/5, mb1mx3.5/67, mbtmp3.7/5, ML4.4/1, Error ellipse: s-maj=104.0km s-min=22.2km az=59.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.23**	**18**	Pn	Pn	10 55 38.0	+0.1
	0.6nm,0.3s,baz=213,slow=9.7,SNR=2.7						
H08S2	**Diego Garcia H**	**25.06**	**240**	T	T	11 23 31.4	
	baz=59,slow=74						
H08S3	**Diego Garcia H**	**25.06**	**240**	T	T	11 23 30.0	
	baz=59,slow=74						
H08S1	**Diego Garcia H**	**25.07**	**240**	T	T	11 23 31.6	
	baz=59						
MKAR	**Makanchi Array**	**43.01**	**348**	P	P	11 00 15.8	-0.3
	0.9nm,0.8s,baz=171,slow=8.8,SNR=7.7						
WRA	**Warramunga Arr**	**46.47**	**123**	P	P	11 00 43.9	-0.2
	1.4nm,0.7s,baz=302,slow=9.3,SNR=9.3						
KURBB	**Kurchatov Arra**	**47.46**	**346**	P	P	11 00 51.3	0.0
	0.3nm,0.2s,baz=168,slow=6.7,SNR=2.4						
ASAR	**Alice Springs**	**47.94**	**128**	P	P	11 00 55.5	0.0
	0.4nm,0.7s,baz=301,slow=7.1,SNR=7.2						

IDC 25 11:07:55.4±0.9, 27°.95N×101°.23E, h0km, mb3.9/8, mb1 4.1/8, mb1mx3.7/72, mbtmp3.9/8, MS3.3/2, Ms1 3.3/2, ms1mx2.6/60, Error ellipse: s-maj=39.3km s-min=16.4km az=68.0
BJI 25 11:07:57.0, 27°.80N×100°.68E, h9km, ML3.4/10
ISC 25 11:07:56.6±0.9, 27°.84N±0°.08×100°.78E±0°.09, h10km, n15, σ2°26/16, mb3.9/8, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**3.23**	**147**	Pn	**Pn**	**11 08 47.3**	**-0.3**
KMI				Pg	**Pb**	**11 08 55.0**	**+0.9**
KMI				Sn	**Sn**	**11 09 26.3**	**+0.1**
KMI				Sg	**Sg**	**11 09 40.8**	**+0.5**
KMI				smax	smax		
	comp=N,150nm,1.0s						
KMI				smax	smax		
	comp=E,130nm,0.8s						
GYA	**Guiyang**	**5.42**	**103**	*e*Pn	Pn	11 09 11.8	-5.8
GYA				Pg	**Pb**	**11 09 35.3**	**+3.8**
GYA				Sn	**Sn**	**11 10 14.3**	**-5.8**
GYA				Sg	**Sb**	**11 10 38.0**	**+1.4**
GYA				smax	smax		
	comp=N,20nm,0.9s						
GYA				smax	smax		
	comp=E,30nm,0.9s						
XAN	**Xi'an**	**9.33**	**47**	Pg	Pn	11 10 58.5	+47
XAN				Sg	Sn	11 12 51.8	+56
XAN				smax	smax		
	comp=N,18nm,1.4s						
XAN				smax	smax		
	comp=E,15nm,1.5s						
CMAR	**Chiang Mai Arr**	**9.49**	**191**	Pg	Pn	11 10 51.9	+38
	comp=E,0.4nm,0.3s,baz=1.9,slow=18,SNR=7.1						
CMAR				Lg	Lg	11 13 04.2	
	baz=7.5,slow=28,SNR=3.6						
GTA	**Gaotai**	**11.57**	**356**	*e*P	Pn	11 10 37.3	-4.7
GTA				pP		11 10 42.3	
GTA				sP		11 10 45.3	
GTA				pmax	pmax		
	comp=Z,4.0nm,1.3s						
WMQ	**Urumqi**	**19.11**	**330**	*e*P	**P**	**11 12 19.0**	**-0.7**
MKAR	**Makanchi Array**	**23.86**	**327**	P	**P**	**11 13 10.7**	**+0.5**
	comp=Z,1.6nm,0.9s,baz=132,slow=10,SNR=13						
KSRS	**Korea Array**	**24.71**	**60**	LR	LR	11 23 58.7	
	comp=Z,121nm,20.2s,baz=160,slow=40						
KURBB	**Kurchatov Arra**	**28.34**	**329**	P	**P**	**11 13 52.3**	**+1.7**
	comp=Z,0.9nm,0.3s,baz=133,slow=9.0,SNR=4.5						
ZALV	**Zalesovo Beam**	**28.60**	**340**	P	**P**	**11 13 53.1**	**+0.2**
	comp=Z,0.9nm,0.4s,baz=134,slow=10,SNR=3.4						
BVAR	**Borovoye Array**	**33.73**	**327**	P	**P**	**11 14 40.3**	**+2.1**
	comp=Z,0.3nm,0.5s,baz=168,slow=7.4,SNR=3.4						
BVAR				LR	LR	11 29 36.7	
	comp=Z,29nm,21.0s,baz=144,slow=38						
WRA	**Warramunga Arr**	**57.54**	**142**	P	**P**	**11 17 45.5**	**-1.1**
	comp=Z,3.2nm,0.8s,baz=331,slow=7.8,SNR=14						
ASAR	**Alice Springs**	**60.36**	**145**	P	**P**	**11 18 05.5**	**-0.6

CMB	Columbia Colle	78.02	43	eP	P	11 20 07.5 +0.2
	6.0nm,0.9s					
WDC	Whiskeytown Da	78.11	40	eP	P	11 20 08.0 +0.3
	2.7nm,0.9s					
AFDM	Forest Hills D	78.15	42	eP	P	11 20 08.0 0.0
	5.5nm,0.9s					
MDPB	Devils Postpil	78.65	44	eP	P	11 20 11.3 +0.3
	7.4nm,0.8s					
YBH	Yreka Blue Hor	78.69	39	eP	P	11 20 10.9 0.0
	5.0nm,0.8s					
OMMB	Old Mammoth Mi	78.70	44	eP	P	11 20 11.5 +0.2
	7.2nm,1.2s					
WAKR	Walker	78.90	43	eP	P	11 20 12.7 +0.4
	6.8nm,0.9s					
BEKR	Beckworth	79.06	42	eP	P	11 20 13.2 +0.1
	5.2nm,0.6s					
HUMO	Hull Mountain	79.06	38	eP	P	11 20 13.3 +0.6
	9.2nm,1.1s					
PNTR	Pine Nut	79.11	43	eP	P	11 20 13.8 +0.4
	14nm,0.9s					
YERR	Yerington	79.29	43	eP	P	11 20 14.5 +0.2
	8.1nm,0.6s					
RYN	Ryan	79.56	44	eP	P	11 20 15.9 +0.2
	6.5nm,1.2s					
NV01	Mina Array Sit	79.60	44	eP	P	11 20 16.0 +0.1
NVAR	Mina Array Bea	79.60	44	P	P	11 20 16.1 +0.2
	4.5nm,0.8s,baz=224,slow=8.8,SNR=39					
NV11	Mina Array Sit	79.70	44	eP	P	11 20 16.7 +0.3
	0.7nm,1.1s					
LDFC	Landfair	80.05	48	eP	P	11 20 18.8 +0.6
	15nm,1.0s					
KVN	Kaiserville	80.07	43	eP	P	11 20 18.5 +0.2
	4.4nm,0.7s					
TPNV	Topopah Spring	80.20	46	eP	P	11 20 19.6 +0.6
	6.0nm,1.1s					
MOD	Modoc Plateau	80.25	40	eP	P	11 20 19.3 +0.2
	7.7nm,0.7s					
K05A	Summer Lake	80.36	39	eP	P	11 20 20.4 +0.6
	15nm,1.0s					
SHPR	Sheep Range	80.73	47	eP	P	11 20 22.4 +0.7
	3.2nm,1.0s					
H04A	Detroit Lake	80.75	37	eP	P	11 20 21.4 -0.2
	6.3nm,0.6s					
W13A	Hualapai Mount	80.93	49	eP	P	11 20 23.2 +0.3
	3.0nm,1.0s					
PINE	Pine Mountain	80.95	38	eP	P	11 20 23.5 +0.7
	12nm,0.9s					
R11A	Troy Canyon, C	81.37	45	eP	P	11 20 25.3 +0.2
	2.1nm,0.9s					
BMN	Battle Mountai	81.38	43	eP	P	11 20 25.4 +0.4
	8.1nm,1.0s					
WVOR	Wild Horse Val	81.58	40	eP	P	11 20 26.3 +0.3
	12nm,1.0s					
TUC	Tucson	81.89	52	eP	P	11 20 28.8 +1.1
	7.2nm,1.0s					
J08A	Circle Bar Ran	82.19	40	eP	P	11 20 29.6 +0.6
	6.3nm,0.7s					
LCMT	Little Creek M	82.31	47	eP	P	11 20 30.1 +0.3
	4.7nm,0.8s					
D05A	Enumclaw	82.36	35	eP	P	11 20 30.6 +1.0
	13nm,1.0s					
X16A	Lo Mia Camp, P	82.37	50	eP	P	11 20 31.2 +0.9
	7.6nm,0.9s					
CCUT	Cedar City	82.50	47	eP	P	11 20 31.6 +0.7
	5.2nm,0.9s					
KNB	Kanab	82.61	47	eP	P	11 20 32.1 +0.8
	5.5nm,0.9s					
319A	Douglas	82.62	54	eP	P	11 20 32.9 +1.4
	11nm,1.1s					
PSUT	Pine Spring	82.64	46	eP	P	11 20 31.9 +0.4
	4.8nm,0.8s					
U15A	North Rim	82.70	48	eP	P	11 20 32.9 +0.9
	12nm,0.8s					
SZCU	Shurtz Canyon	82.71	47	eP	P	11 20 32.1 +0.2
	5.0nm,1.1s					
WUAZ	Wupatki	82.93	49	eP	P	11 20 33.2 +0.2
	7.8nm,1.0s					
MTPU	Mount Pierson	83.55	47	eP	P	11 20 35.3 -1.0
	5.2nm,1.0s					
CAST	Castle Rocks	83.71	12	eP	P	11 20 34.3 -1.7
	12nm,0.7s					
BMO	Blue Mountains	83.71	39	eP	P	11 20 36.5 -0.1
	3.1nm,0.9s					
MAW	Mawson	83.75	200	P	P	11 20 36.5 +0.3
	0.9nm,0.5s,baz=212,slow=4.9,SNR=4.3					
MSU	Marysvale	83.78	46	eP	P	11 20 37.5 +0.3
MFID	Camas Ranch	83.84	41	eP	P	11 20 37.7 +0.4
	5.8nm,1.0s					
D08A	Wollman Farm,	83.99	36	eP	P	11 20 37.9 +0.1
	8.6nm,0.8s					
TRF	Thorofare Moun	84.09	12	eP	P	11 20 36.6 -1.4
	17nm,0.8s					
F10A	Beach Ranch, E	84.36	38	eP	P	11 20 39.5 -0.2
	12nm,1.1s					
MCK	McKinley	84.62	13	eP	P	11 20 39.2 -1.3
	13nm,1.0s					
HLID	Hailey	84.80	41	eP	P	11 20 42.4 +0.4
	5.0nm,0.9s					
TMUT	Trail Mountain	84.82	46	eP	P	11 20 43.0 +0.6
	3.6nm,0.8s					
GYA	Guiyang	84.86	300	eP	P	11 20 43.3 +0.6
GYA				pP	pP	11 22 50.0 +3.1
GYA				PP	PP	11 24 13.3 +3.0
GYA				SKS	SKSac	11 30 10.8 -1.8
GYA				S	S	11 30 23.3 -0.6
GYA				pmax	pmax	
	comp=Z,10.0nm,1.0s					
SRU	San Rafael Swe	85.20	46	eP	P	11 20 44.1 0.0
	comp=Z,4.5nm,0.7s					
WRH	Wood River Hil	85.45	13	eP	P	11 20 43.5 -1.0
	comp=Z,8.4nm,1.0s					
TCUT	Toone Canyon	85.54	44	eP	P	11 20 45.3 -0.4
	comp=Z,5.2nm,0.6s					
CCB	Clear Creek Bu	85.67	13	eP	P	11 20 44.1 -1.3
	comp=Z,4.6nm,0.8s					
MNTX	Cornudas Mount	85.78	55	eP	P	11 20 47.2 +0.4
	comp=Z,1.9nm,0.6s					
MDM	Murphy Dome	85.85	12	eP	P	11 20 45.1 -1.3
	comp=Z,5.5nm,0.8s					
COLA	College	85.86	13	eP	P	11 20 45.3 -1.0
	comp=Z,8.7nm,0.8s					
IL1	Eielson Array	85.97	13	eP	P	11 20 45.2 -1.7
ILAR	Eielson Array	85.97	13	P	P	11 20 45.5 -1.5
	comp=Z,2.4nm,0.5s,baz=221,slow=5.1,SNR=38					
ILB	Eielson Array	85.97	13	eP	P	11 20 45.7 -1.2
XAN	Xi'an	86.11	307	P	P	11 20 49.5 +1.2
XAN				pP	PcP	11 20 55.5 +5.5
XAN				pmax	pmax	
	comp=Z,11nm,1.2s					
TX31	Lajitas Ar. Si	86.20	58	eP	P	11 20 50.1 +1.1
TX31				eP	PcP	11 20 50.2 -0.4
TXAR	Lajitas Array	86.20	58	P	P	11 20 50.2 +1.3
	comp=Z,4.6nm,0.8s,baz=217,slow=5.9,SNR=65					
ANMO	Albuquerque	86.29	52	eP	P	11 20 49.6 +0.2
	comp=Z,2.2nm,0.9s					
MCMT	McKenzie Canyo	86.41	41	eP	P	11 20 50.5 +0.8
DLMT	Dillon	86.83	40	eP	P	11 20 52.0 +0.4
	comp=Z,6.0nm,0.9s					
TPAW	Teton Pass	86.96	42	eP	P	11 20 52.6 +0.1
	comp=Z,3.7nm,0.9s					
REDW	Red Top Meadow	86.96	43	eP	P	11 20 52.8 +0.4
	comp=Z,8.4nm,1.0s					
FXWY	Fox Creek	86.98	42	eP	P	11 20 52.9 +0.4
	comp=Z,3.1nm,0.9s					
SNOW	Snow King Moun	87.07	42	eP	P	11 20 53.5 +0.5
	comp=Z,10.0nm,1.1s					
HHC	Hu-ho-hao-te	87.14	315	eP	P	11 20 53.5 +0.4
HHC				pmax	pmax	
	comp=Z,20nm,0.8s					
HHC				pmax	pmax	
	comp=Z,170nm,6.1s					
IMW	Indian Meadow	87.16	42	eP	P	11 20 54.1 +0.7
	comp=Z,7.4nm,0.8s					
S22A	4UR Ranch, Cre	87.20	49	eP	P	11 20 54.5 +0.8
	comp=Z,2.5nm,0.9s					
MOOW	Moose Ponds	87.21	42	eP	P	11 20 53.9 +0.4
	comp=Z,2.9nm,1.0s					
LOHW	Long Hollow	87.24	42	eP	P	11 20 53.9 +0.2
	comp=Z,2.9nm,0.8s					
EGAK	Eagle	87.30	15	eP	P	11 20 52.9 -0.3
	comp=Z,3.3nm,0.8s					
FLWY	Flagg Ranch	87.40	42	eP	P	11 20 54.9 +0.5
	comp=Z,7.1nm,0.9s					
YHB	Horse Butte	87.40	41	eP	P	11 20 55.1 +0.7
	comp=Z,8.8nm,1.1s					
COLD	Coldfoot	87.49	11	eP	P	11 20 53.9 -0.1
	comp=Z,4.2nm,0.9s					
BW06	Boulder Array	87.53	44	eP	P	11 20 54.8 -0.2
	comp=Z,3.4nm,0.7s					
PD31	Pinedale Array	87.53	44	eP	P	11 20 54.9 -0.2
PDAR	Pinedale Array	87.53	44	P	P	11 20 55.1 0.0
	comp=Z,2.4nm,0.5s,baz=219,slow=3.7,SNR=37					
PDAR	Pinedale Array	87.53	44	eP	P	11 20 54.2 -0.8
BOZ	Bozeman (W)	87.53	40	eP	P	11 20 54.9 0.0
	comp=Z,2.9nm,1.1s					
H17A	Grant Village	87.62	42	eP	P	11 20 55.8 +0.3
	comp=Z,4.9nm,0.8s					
LNIG	Linares	88.04	63	eP	P	11 20 58.0 +0.4
	comp=Z,7.1nm,1.0s					
CMAR	Chiang Mai Arr	88.69	290	P	P	11 21 01.4 +0.6
	comp=Z,0.4nm,0.3s,baz=129,slow=2.5,SNR=5.6					
CD2	Chengdu	88.90	303	P	P	11 21 02.0 +0.5
CD2				pmax	pmax	
	comp=Z,1.0nm,0.6s					
N23A	Red Feather La	89.14	46	eP	P	11 21 02.7 0.0
	comp=Z,4.9nm,1.0s					
JCT	Junction City	89.74	58	eP	P	11 21 05.8 +0.4
	comp=Z,3.5nm,0.7s					
ABTX	Abilene, Hawle	90.63	56	eP	P	11 21 09.9 +0.4
	comp=Z,4.3nm,0.7s					
LZH	Lanzhou	90.74	308	eP	P	11 21 10.8 +0.8
LZH				pP	pP	11 23 19.3 +3.2
LZH				sP	sP	11 24 19.0 +5.2
LZH				ePP	PP	11 24 56.3 -0.2
LZH				pmax	pmax	
	comp=Z,18nm,1.1s					
LZH				pmax	pmax	
	comp=Z,170nm,4.9s					
RSSD	Black Hills	91.74	44	eP	P	11 21 14.2 -0.3
	comp=Z,3.9nm,0.9s					
INK	Inuvik	91.98	15	eP	P	11 21 13.9 -0.8
	comp=Z,4.0nm,0.8s					
YKA	Yellowknife Ar	94.45	25	P	P	11 21 25.3 -0.8
	comp=Z,1.3nm,0.8s,baz=236,slow=4.6,SNR=9.4					
MKAR	Makanchi Array	109.00	314	PKiKP	PKiKP	11 26 31.2 -1.0
	comp=Z,0.5nm,0.5s,baz=151,slow=3.3,SNR=6.5					
BVAR	Borovoye Array	116.73	321	PKP	PKPdf	11 26 46.0 -0.7
	comp=Z,1.4nm,0.4s,baz=4.2,slow=1.5,SNR=8.0					
ARCES	ARCESS Array B	126.31	350	PKP	PKPdf	11 27 04.8 +0.2
	comp=Z,1.0nm,0.5s,baz=34,slow=1.0,SNR=7.5					
FINES	FINESS Array B	133.16	344	PKP	PKPdf	11 27 17.2 -0.6
	comp=Z,1.0nm,0.6s,baz=107,slow=2.0,SNR=4.9					
AKASG	Malin Array Be	140.49	332	PKP	PKPdf	11 27 33.6 +1.9
	comp=Z,0.6nm,0.4s,baz=46,slow=4.0,SNR=4.0					
BURAR	Bucovina Array	144.54	332	‖ iP	PKPab	11 27 39.8 -0.1
BR131	Keskin Array S	144.65	315	ePKPdf	PKPbc	11 27 40.1 +0.2
BRTR	Keskin Array B	144.65	315	PKP	PKPbc	11 27 40.1 +0.2
	comp=Z,2.8nm,0.5s,baz=106,slow=2.7,SNR=18					
CFR	Carcaliu	144.84	326	‖ iP	PKPdf	11 27 39.0 -0.4
NIE	Niedzica	145.08	338	ePKP	PKPab	11 27 41.4 -0.4
KSP	Ksiaz	145.08	343	ePKP	PKPab	11 27 41.3 -0.4
CRVS	Cervenica-Dubn	145.08	337	ePKP	PKPab	11 27 43.1 +1.3
TIRR	Tirgusor	145.17	325	‖ iP	PKPab	11 27 41.8 -0.5
TRPA	Tarpa	145.28	335	‖ iP	PKPbc	11 27 41.5 +0.2
TLB	Topalu	145.29	326	‖ iP	PKPab	11 27 42.2 -0.5
CLL	Collm	145.45	347	‖ iPKPbc	PKPbc	11 27 41.7 0.0
	comp=Z,21nm,1.1s					
CLL	Collm	145.45	347	ePKPdf	PKPbc	11 27 41.5 -0.2
DPC	Dobruska-Polom	145.52	343	ePKP	PKPbc	11 27 42.5 +0.5
LANS	Liptovska Anna	145.59	339	ePKP	PKPab	11 27 43.5 -0.3
BRG	Berggiesshubel	145.65	346	ePKP	PKPbc	11 27 42.4 +0.2
	comp=Z,12nm,1.2s					
MORC	Moravsky Berou	145.67	341	ePKP	PKPbc	11 27 42.7 +0.2
MLR	Muntele Rosu	145.75	329	PKPbc	PKPbc	11 27 42.5 -0.4
	comp=Z,0.7nm,0.5s,baz=180,slow=1.0,SNR=7.0					
MLR	Muntele Rosu	145.75	329	‖ iP	PKPbc	11 27 42.6 -0.4
MLR	Muntele Rosu	145.75	329	ePKPdf	PKPdf	11 27 42.0 +0.8
MMAI	Mount Meron Ar	145.98	303	PKPbc	PKPbc	11 27 43.9 0.0
	comp=Z,4.4nm,0.5s,baz=73,slow=4.8,SNR=5.0					
DRGR		146.27	333	‖ iP	PKPbc	11 27 44.3 0.0
PRU	Pruhonice	146.32	345	ePKP	PKPbc	11 27 43.8 -0.4
GOPC	GO Pecny, Ondr	146.32	344	ePKP	PKPbc	11 27 44.6 +0.4
VYHS	Vyhne	146.37	339	ePKP	PKPbc	11 27 45.0 +0.6
JAVC	Velka Javorina	146.44	340	ePKP	PKPab	11 27 46.0 -1.2
ARR	Arges	146.47	330	‖ iP	PKPbc	11 27 46.1 +1.2
KRUC	Moravsky	146.65	342	ePKP	PKPbc	11 27 45.3 +0.2
MODS	Modra-Piesok	146.99	340	ePKP	PKPbc	11 27 46.1 0.0
KHC	Kasperske Hory	147.35	345	ePKP	PKPbc	11 27 47.4 +0.3
KHC				ex	x	11 27 50.3
KHC	Kasperske Hory	147.35	345	ePKPdf	PKPbc	11 27 47.3 +0.3
GEC2	GERESS Array S	147.59	345	ePKPdf	PKPbc	11 27 47.9 +0.2
GERES	GERESS Array B	147.59	345	PKPbc	PKPbc	11 27 47.9 +0.2
	comp=Z,6.7nm,0.6s,baz=29,slow=3.0,SNR=30					
GEA0	GERESS Array S	147.59	345	ePKPbc	PKPbc	11 27 47.7 0.0
CONA	Conrad Observa	147.83	342	i PKPbc	PKPbc	11 27 48.6 +0.2
	comp=Z,7.0nm,0.6s					
HERR	Herculane	147.88	331	‖ iP	PKPbc	11 27 48.2 -0.2
MOA	Molln	148.36	343	PKiKP	PKiKP	11 27 50.5 -0.2
	comp=Z,3.0nm,0.7s					
SOKA	Soboth	149.20	341	ePKPbc	PKPbc	11 27 50.6 -1.1
	comp=Z,4.2nm,1.0s					
KBA	Koelnbreinsper	149.31	344	ePKPbc	PKPbc	11 27 51.8 -0.3
	comp=Z,4.8nm,0.5s					
OBKA	Obir	149.50	342	ePKPbc	PKPbc	11 27 50.5 -1.9
	comp=Z,6.0nm,1.3s					
WATA	Walderalm	149.51	346	ePKPbc	PKPbc	11 27 52.0 -0.6
	comp=Z,5.2nm,0.6s					
RETA	Reutte	149.54	347	ePKPbc	PKPbc	11 27 52.8 +0.2
	comp=Z,2.2nm,0.4s					
WTTA	Wattenberg	149.56	346	ePKPbc	PKPbc	11 27 51.6 -1.1
	comp=Z,7.1nm,0.6s					
DIVS	Divibare	149.57	333	ePKPbc	PKPbc	11 27 53.1 +0.4
MOTA	Moosalm	149.60	347	ePKPbc	PKPbc	11 27 51.5 -1.3
	comp=Z,3.7nm,0.5s					
MYKA	Terra Mystica	149.64	343	ePKPbc	PKPbc	11 27 51.6 -1.1
	comp=Z,5.0nm,0.5s					
ABTA	Abfaltersbach	149.83	345	ePKPbc	PKPbc	11 27 52.7 -0.5
	comp=Z,9.1nm,0.6s					
DAVA	Damuels	149.91	348	ePKPbc	PKPbc	11 27 51.9 -1.6
	comp=Z,4.8nm,0.8s					
FETA	Feichten	149.99	347	ePKPbc	PKPbc	11 27 53.9 +0.2
	comp=Z,9.9nm,1.2s					
VISS	Visnje	150.04	341	i PKPbc	PKPbc	11 27 53.6 0.0
VISS				ePKPab	PKPab	11 28 01.5 -0.5
BOJS	Bojanci	150.18	340	ePKPdf	PKPdf	11 27 48.6 +0.4
BOJS				i PKPbc	PKiKP	11 27 54.3 -0.2
JAVS	Javornik	150.19	342	ePKPbc	PKPbc	11 27 53.9 -0.2
DAVOX	Davos/Dischmat	150.39	348	PKPbc	PKPbc	11 27 54.7 0.0
	comp=Z,14nm,0.6s,baz=214,slow=7.3,SNR=16					
TUE	Stuetta	150.79	349	ePKPbc	PKPbc	11 27 56.1 +0.5
ESDC	Sonseca Array	157.86	11	PKPab	PKPab	11 28 35.5 -0.3
	comp=Z,0.2nm,0.3s,baz=13,slow=3.6,SNR=5.3					

NIED ***25*** *11:18:00,29.°90N×131.°40E,h20km,Mw4.0 Best double couple: M₀1.08000×10¹⁵ NP1:φ₀217.00000°,δ27.00000°, λ96.00000°. NP2:φ₀30.00000°,δ63.00000°,λ87.00000°.*
JMA ***25*** *11:18:11.2±0.2,29.°94N×131.°41E,h27km±2km,M3.7*
ISCJB ***25*** *11:18:12.4±0.9,29.°97N±0.°04×131.°38E±0.°07,h46km±8km, mb3.7/8,MS3.0/4,Error ellipse: s-maj=11.9km s-min=4.6km az=27.4*
IDC ***25*** *11:18:17.9±3.0,30.°29N×131.°27E,h66km±31km,mb3.5/8, mb1 3.5/11,mb1mx3.3/66,mbtmp3.7/11,ML3.2/3,MS3.0/5, Ms1 3.1/5,ms1mx2.6/47,Error ellipse: s-maj=49.9km s-min=17.8km az=67.0*

ISC 25 11:18:14.6±1.5,30.°03N±0.°05×131.°25E±0.°08,h41km±14km, n30,σ1°35/36,mb3.8/8,MS2.9/4,Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTN	Tanegashima 3	0.67	340	P	Pn	11 18 26.2	-1.4
JTN				eS	Sn	11 18 36.6	-0.3
JYAK	Yakushimahirau	0.67	288	P	Pn	11 18 26.5	-1.1
JYAK				eS	Sn	11 18 37.5	+0.5
JKC	Kuchinoerabu	1.01	296	P	Pn	11 18 31.9	-0.3
JKC				eS	Sn	11 18 47.4	+2.2
JTSR	Tashiro 2	1.17	346	P	Pn	11 18 33.8	-0.7
JTSR				eS	Sn	11 18 51.6	+2.4
JNN	Nakanoshima	1.21	261	P	Pn	11 18 34.8	-0.2
JNN				eS	Sn	11 18 52.7	+2.6
JNAR	Kushima--Naru	1.49	1	P	Pn	11 18 38.3	-0.6
JNAR				eS	Sn	11 18 58.3	+1.1
JSU	Suzuyama	1.62	335	P	Pn	11 18 39.9	-0.8
JTZ	Takazaki	1.87	356	P	Pn	11 18 43.8	-0.3
JTZ				eS	Sn	11 19 08.7	+2.2
JTAJ	Takarajima	1.98	244	P	Pn	11 18 45.9	+0.3
JTAJ				eS	Sn	11 19 11.1	+1.9
JSJ	Shimokoshiki	2.11	322	P	Pn	11 18 45.9	-1.4
JAM	Amami Oshima	2.16	222	P	Pn	11 18 47.3	-0.7
JAM				eS	Sn	11 19 13.1	-0.4
JZO	Okuchi	2.18	345	P	Pn	11 18 48.4	+0.1
JTSN	Tsuno	2.22	6	eS	Sn	11 19 15.6	+0.5
JAMN	Amaminishikomi	2.54	226	P	Pn	11 18 52.5	-0.8
JAMN				S	Sn	11 19 22.4	-0.6
JNU	Nakatsue	3.10	354	P	Pn	11 19 00.4	-0.6
	4.9nm,0.3s,baz=32,slow=2.4,SNR=30						
KSRS	Korea Array	7.91	340	P	Pn	11 20 08.4	+1.5
	0.2nm,0.3s,baz=179,slow=16,SNR=2.7						
MJAR	Matsushiro Arr	8.72	40	P	Pn	11 20 18.4	+0.2
	0.6nm,0.3s,baz=250,slow=13,SNR=7.8						
USRK	Ussurisk Ar.	14.16	2	P	P	11 21 38.3	-0.8
	baz=169,slow=8.5						
USRK				LR	LR	11 26 11.8	
	comp=Z,32nm,18.3s,baz=214,slow=34						
GUMO	Guam	20.64	139	LR	LR	11 29 55.7	
	comp=Z,30nm,19.5s,baz=317,slow=34						
CMAR	Chiang Mai Arr	31.52	256	LR	LR	11 40 10.1	
	comp=Z,23nm,18.4s,baz=225,slow=42						
ZALV	Zalesovo Beam	40.98	319	LR	LR	11 43 01.9	
	comp=Z,15nm,18.2s,baz=64,slow=36						
MKAR	Makanchi Array	41.15	308	P	P	11 25 54.0	-0.8
	0.3nm,0.4s,baz=92,slow=9.1,SNR=4.8						
BVAR	Borovoye Array	49.31	316	P	P	11 26 57.9	-1.6
	0.6nm,0.3s,baz=86,slow=10,SNR=4.8						
WRA	Warramunga Arr	49.77	176	P	P	11 27 04.8	+1.6
	0.3nm,0.8s,baz=354,slow=8.4,SNR=2.5						
ASAR	Alice Springs	53.45	177	P	P	11 27 34.0	+3.4
	0.5nm,0.9s,baz=14,slow=11,SNR=3.0						
AKTO	Aktyubinsk	57.13	313	LR	LR	11 54 25.0	
	comp=Z,46nm,18.6s,baz=119,slow=38						
KBZ	Khabaz	68.83	309	P	P	11 29 15.2	+0.4
	0.8nm,0.6s,baz=91,slow=2.2,SNR=4.1						
FINES	FINESS Array B	70.88	331	P	P	11 29 26.1	-0.9
	2.0nm,0.8s,baz=49,slow=4.4,SNR=7.1						
HFS	Hagfors	76.69	333	P	P	11 30 00.6	-0.4
	2.0nm,0.7s,baz=77,slow=7.8,SNR=4.0						
BRTR	Keskin Array B	76.80	308	P	P	11 30 01.8	-0.5
	0.3nm,0.3s,baz=58,slow=11,SNR=3.2						

ATH ***25*** *11:27:03.9,40.°66N×21.°37E,h19km,ML2.5/12,Error ellipse: s-maj=1.6km s-min=1.0km az=332.0*
ISCJB ***25*** *11:27:04.3±0.3,40.°67N±0.°02×21.°37E±0.°03,h8km±4km, Error ellipse: s-maj=3.9km s-min=2.9km az=26.8*
CSEM ***25*** *11:27:04.4±0.1,40.°65N×21.°38E,h5km,ML2.5,Error ellipse: s-maj=3.3km s-min=2.7km az=121.0*
THE ***25*** *11:27:04.7,40.°64N×21.°36E,h10km±1km,ML2.7/4,Error ellipse: s-maj=1.3km s-min=0.5km az=296.0*
SKO ***25*** *11:27:04.0,40.°61N×21.°35E,h7km,M2.0,ML2.5*

ISC 25 11:27:04.4±0.8,40.°65N±0.°01×21.°36E±0.°02,h12km±5km, n71,σ0°83/108,1D,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FNA	Florina	0.14	6	P	Pg	11 27 08.2	+0.4
FNA				S	Sg	11 27 10.6	+0.3
FNA				AML	AML	11 27 10.8	
	comp=E,13658μm,0.5s						
FNA				AML	AML	11 27 10.9	
	comp=N,11400μm,0.2s						
FNA	Florina	0.14	6	P	Pg	11 27 08.0	+0.1
FNA				S	Sg	11 27 10.2	-0.1
FNA	Florina	0.14	6	P	Pg	11 27 08.0	+0.1
FNA				S	Sg	11 27 10.2	-0.1
NEST	Nestorio	0.33	225	P	Pg	11 27 10.2	-0.9
NEST				S	Sb	11 27 17.3	-0.3
NEST				AML	AML	11 27 18.2	
	comp=N,5452μm,0.3s						
NEST				AML	AML	11 27 18.3	
	comp=E,3121μm,0.2s						
NEST	Nestorio	0.33	225	P	Pg	11 27 10.7	-0.5
NEST				S	Sg	11 27 16.4	+0.7
NEST	Nestorio	0.33	225	P	Pg	11 27 10.7	-0.5
NEST				S	Sg	11 27 16.4	+0.7
BIA	Bitola	0.37	356	P	Pg	11 27 12.0	+0.1
BIA				S	Sb	11 27 18.1	-0.7
BIA	Bitola	0.37	356	i Pg	Pg	11 27 12.0	+0.1
BIA				i Sg	Sb	11 27 18.2	-0.5
BIA	Bitola	0.37	356	P	Pg	11 27 12.0	+0.1
BIA				S	Sb	11 27 18.1	-0.7
KBN	Korca	0.43	267	P	Pg	11 27 12.7	-0.3
KBN				S	Sg	11 27 19.4	+0.6
KBN	Korca	0.43	267	P	Pg	11 27 12.7	-0.3
KBN				S	Sg	11 27 19.4	+0.6
KZN	Kozani	0.47	137	P	Pg	11 27 13.7	+0.1
KZN				S	Sb	11 27 21.3	-0.1
KZN				AML	AML	11 27 21.9	
	comp=N,2206μm,0.2s						
KZN				AML	AML	11 27 23.2	
	comp=E,1964μm,0.3s						
KZN	Kozani	0.47	137	P	Pg	11 27 13.6	0.0
KZN				S	Sb	11 27 21.1	-0.3
KZN	Kozani	0.47	137	P	Pg	11 27 13.6	0.0
KZN				S	Sb	11 27 20.9	-0.5
PENT	Pentalofos	0.48	200	P	Pg	11 27 13.5	-0.4
PENT				S	Sg	11 27 20.1	-0.3
PENT				AML	AML	11 27 24.4	
	comp=E,2589μm,0.4s						
PENT				AML	AML	11 27 26.6	
	comp=N,1510μm,0.4s						
PENT	Pentalofos	0.48	200	P	Pg	11 27 13.6	-0.3
PENT				S	Sg	11 27 21.1	+0.8
PENT	Pentalofos	0.48	200	P	Pg	11 27 13.7	-0.2
PENT				S	Sg	11 27 20.6	+0.3
OHR	Ohrid	0.63	318	i Pg	Pg	11 27 15.5	-1.2
OHR				i Sg	Sg	11 27 25.6	+0.6

comp=N,114μm,0.3s
KNT AML AML 11 27 51.1
comp=E,58μm,0.3s
KNT Kendrikon 1.28 66 P **Pn 11 27 27.8 -0.3**
KNT Kendrikon 1.28 66 P **Pn 11 27 27.8 -0.3**
KNT S **Sn 11 27 45.2 +0.1**
SKO Skopje 1.32 3 *i* Pg **Pn 11 27 29.1 +0.3**
SKO *i* Sg **Sg 11 27 47.6 +0.5**
HORT Hortiatis 1.33 92 P **Pn 11 27 28.4 -0.5**
HORT Hortiatis 1.33 92 P **Pn 11 27 28.6 -0.2**
SGD Sagiada 1.35 220 P **Pn 11 27 29.3 +0.3**
SGD Sagiada 1.35 220 P **Pn 11 27 29.3 +0.3**
KEK Kerkira 1.52 232 P **Pb 11 27 32.6 +0.1**
KEK S **Sg 11 27 53.4 +0.2**
KEK AML AML 11 27 59.4
comp=N,114μm,0.4s
KEK AML AML 11 28 04.0
comp=E,155μm,0.7s
KEK Kerkira 1.52 232 P **Pb 11 27 32.5 +0.1**
KEK S **Sg 11 27 53.3 +0.1**
DSL Palaion Diasel 1.53 188 P **Pb 11 27 32.3 -0.3**
DSL S **Sg 11 27 54.2 +0.7**
DSL AML AML 11 27 58.9
comp=N,260μm,0.7s
DSL AML AML 11 28 02.5
comp=E,254μm,0.5s
DSL Palaion Diasel 1.53 188 P **Pb 11 27 32.4 -0.2**
DSL S **Sg 11 27 53.8 +0.3**
EVR Evrytania 1.77 168 P **Pb 11 27 36.7 0.0**
EVR AML AML 11 28 07.8
comp=N,117μm,0.2s
EVR AML AML 11 28 08.6
comp=E,103μm,0.4s
EVR Evrytania 1.77 168 P **Pb 11 27 36.3 -0.4**
AGG Agios Georgios 1.79 155 P **Pn 11 27 34.6 -0.6**
AGG Agios Georgios 1.79 155 P **Pn 11 27 35.4 +0.3**
XOR Xorichti 1.91 132 P **Pn 11 27 36.9 +0.2**
XOR Xorichti 1.91 132 P **Pn 11 27 37.3 +0.6**
PAIG Paliouri 1.92 111 P **Pn 11 27 36.0 -0.9**
PAIG Paliouri 1.92 111 P **Pn 11 27 36.9 +0.1**
LKD2 Lefkada island 1.93 196 P **Pb 11 27 39.6 0.0**
LKD2 Lefkada island 1.93 196 P **Pb 11 27 38.9 -0.7**
PVO Paravola 2.03 176 P **Pb 11 27 41.4 +0.1**
PVO Paravola 2.03 176 P **Pb 11 27 40.5 -0.8**
ANX Ano Chora 2.10 168 P **Pb 11 27 41.3 -1.1**
ANX Ano Chora 2.10 168 P **Pb 11 27 40.9 +1.5**
SERG Sergoula 2.30 166 P **Pn 11 27 42.6 +0.5**
SERG Sergoula 2.30 166 P **Pn 11 27 43.0 +0.9**
VTS Vitosha 2.39 35 ⇓ *i* P **Pg 11 27 50.1 -0.1**
VTS Vitosha 2.39 35 *e*PKPdf **Pg 11 27 50.5 +0.3**
DSF Desfina 2.41 158 P **Pn 11 27 42.9 -0.8**
DSF Desfina 2.41 158 P **Pn 11 27 43.9 +0.2**
BOVS Bovan 3.00 5 *e*P **Pn 11 27 51.4 -0.3**
GRUS Gruza 3.27 352 *e*P **Pn 11 27 52.6 -2.9**

IDC 25 11:27:10.2±1.2, 5°.96S×128°.81E, h298km±18km, mb2.9/1, mb1 3.0/5, mb1mx2.8/50, mbtmp3.7/5, Error ellipse: s-maj=25.1km s-min=12.7km az=113.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.62**	**26**	P	Pn	11 28 36.9	+1.8
	3.5nm,0.3s,baz=174,slow=23,SNR=23						
SIJI				S	S	11 29 42.2	-1.0
	5.7nm,0.3s,baz=70,slow=23,SNR=11						
BATI	**Baumata**	**6.61**	**230**	P	Pn	11 28 48.0	+1.1
	21nm,0.3s,baz=68,slow=4.2,SNR=12						
BATI				S	S	11 30 05.0	-0.1
	8.5nm,0.3s,baz=356,slow=23,SNR=11						
FITZ	**Fitzroy Crossi**	**12.46**	**194**	P	Pn	11 29 56.6	-1.7
	0.2nm,0.3s,baz=31,slow=10,SNR=8.7						
WRA	**Warramunga Arr**	**14.91**	**159**	P	P	11 30 25.2	-1.2
	0.2nm,0.3s,baz=333,slow=13,SNR=14						
WRA				S	S	11 33 15.3	+5.9
	0.1nm,0.3s,baz=337,slow=21,SNR=3.3						
ASAR	**Alice Springs**	**18.28**	**165**	P	P	11 31 02.9	-0.2
	0.1nm,0.3s,baz=346,slow=12,SNR=16						
MKAR	**Makanchi Array**	**66.71**	**327**	P	P	11 37 29.6	-0.1
	0.2nm,0.3s,baz=125,slow=6.4,SNR=3.8						

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*IDC **25** 11:36:31.4±2.4, 10°.55N×126°.27E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/63, mbtmp3.6/5, MS2.9/3, Ms1 2.9/3, ms1mx2.5/51, Error ellipse: s-maj=160.7km s-min=20.1km az=69.0*
*ISCJB **25** 11:36:38.2±0.9, 10°.45N±0°.04×126°.13E±0°.08, h68km±9km, mb3.5/5, Error ellipse: s-maj=13.7km s-min=5.9km az=177.9*
*MAN **25** 11:36:38.8, 10°.45N×126°.04E, h16km, mb4.8, ML3.7, MS3.7*
ISC 25 11:36:39.8±1.4, 10°.47N±0°.04×126°.07E±0°.10, h58km±14km, n20, σ1§78/27, mb3.6/5, 3C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.89**	**220**	⇑ *e*P	**Pn**	**11 36 54.6**	**-1.8**
SCPH				*e*S	**Sn**	**11 37 06.8**	**-1.8**
MSLP	**Maasin**	**1.24**	**254**	*e*P	**Pn**	**11 37 00.1**	**-0.9**
MSLP				*e*S	**Sn**	**11 37 16.6**	**-0.1**
PLP	**Palo**	**1.27**	**303**	⇓ *e*P	**Pn**	**11 37 00.7**	**-0.7**
PLP				*i* S	**Sn**	**11 37 19.0**	**+1.5**
BESP	**Borongan**	**1.28**	**331**	*e*P	**Pn**	**11 37 01.7**	**+0.2**
BESP				*e*S	**Sn**	**11 37 19.4**	**+1.7**
BUTP	**Butuan**	**1.56**	**196**	*e*P	**Pn**	**11 37 05.0**	**-0.2**
BUTP				*e*S	**Sn**	**11 37 29.2**	**+4.7**
LLP	**Lapu-Lapu**	**2.08**	**266**	*e*P	**Pn**	**11 37 12.2**	**-0.1**
LLP				*e*S	**Sn**	**11 37 39.6**	**+2.6**
TBP	**Tagbilaran**	**2.31**	**250**	*e*P	**Pn**	**11 37 16.6**	**+1.1**
CGP	**Cagayan de Oro**	**2.42**	**214**	⇑ *e*P	**Pn**	**11 37 17.7**	**+0.7**
CGP				*i* S	**Sn**	**11 37 46.6**	**+1.1**
CNP	**Catarman**	**2.45**	**326**	*e*P	**Pn**	**11 37 17.5**	**+0.1**
CNP				*e*S	**Sn**	**11 37 45.6**	**-0.6**
BUKP	**Musuan**	**2.76**	**201**	*e*P	**Pn**	**11 37 22.5**	**+0.8**
BUKP				*e*S	**Sn**	**11 37 57.2**	**+3.2**
RCP	**Roxas**	**3.44**	**289**	⇑ *e*P	**Pn**	**11 37 32.8**	**+1.9**
PAGZ	**Pagadian**	**3.72**	**226**	*e*P	**Pn**	**11 37 32.6**	**-2.2**
PAGZ				*e*S	**Sn**	**11 38 16.2**	**-1.2**
TGY	**Tagaytay City**	**6.18**	**306**	LR	LR	11 40 56.4	
	comp=Z,153nm,19.2s,baz=74,slow=42						
GUMO	**Guam**	**18.64**	**79**	LR	LR	11 47 55.7	
	comp=Z,17nm,18.1s,baz=268,slow=37						
JAY	**Jayapura**	**19.46**	**131**	LR	LR	11 47 59.0	
	comp=Z,42nm,19.3s,baz=250,slow=36						
FITZ	**Fitzroy Crossi**	**28.39**	**181**	P	**P**	**11 42 28.6**	**-0.2**
	2.0nm,0.8s,baz=0.0,slow=10,SNR=4.3						
WRA	**Warramunga Arr**	**31.30**	**165**	P	**P**	**11 42 52.7**	**-1.9**
	0.4nm,0.7s,baz=344,slow=9.0,SNR=3.7						
ASAR	**Alice Springs**	**34.79**	**167**	P	**P**	**11 43 24.6**	**-0.4**
	0.3nm,0.5s,baz=348,slow=7.3,SNR=11						
MKAR	**Makanchi Array**	**51.75**	**323**	P	**P**	**11 45 39.8**	**-1.6**
	0.3nm,0.5s,baz=118,slow=8.8,SNR=4.9						
KURBB	**Kurchatov Arra**	**55.79**	**325**	P	**P**	**11 46 11.5**	**+0.6**
	0.3nm,0.5s,baz=126,slow=7.3,SNR=2.7						

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*IGQ **25** 11:49:52.8±1.0, 1°.N±8°.×8°.0W±°, h12km, MLv4.2/2*
ISC 25 11:49:49.4±2.3, 1°.01N±0°.09×79°.8W±0°.1, h20km, n38, σ1§18/42, 1D, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAG1	**Magdalena**	**1.08**	**177**	P	**Pn**	**11 50 09.9**	**+0.5**
LITE1	**Lita**	**1.49**	**98**	P	**Pb**	**11 50 16.2**	**-0.3**
LITE1				S	**Sb**	**11 50 34.6**	**-0.5**
OTAV	**Otavalo**	**1.58**	**119**	⇓ *i* P	**Pb**	**11 50 17.9**	**-0.4**
OTAV				*e*S	**Sn**	**11 50 35.1**	**-1.8**
OTAV	**Otavalo**	**1.58**	**119**	P	**Pb**	**11 50 17.9**	**-0.4**
OTAV				S	**Sb**	**11 50 37.1**	**-1.0**
CUIC	**Cuicocha-Domo**	**1.63**	**115**	P	**Pb**	**11 50 18.7**	**-0.4**
CUIC				S	**Sb**	**11 50 39.9**	**+0.5**
URCU	**Urcuqui**	**1.68**	**110**	P	**Pb**	**11 50 19.4**	**-0.5**
PINO	**Pino**	**1.69**	**133**	P	**Pb**	**11 50 19.5**	**-0.7**
YANA	**Yana**	**1.69**	**132**	P	**Pb**	**11 50 19.6**	**-0.6**
GGPC	**Guagua Pichinc**	**1.71**	**134**	P	**Pb**	**11 50 19.8**	**-0.7**
IMBA	**Imbabura, San**	**1.79**	**114**	P	**Pb**	**11 50 21.9**	**0.0**
NINA	**Atacazo Ninahu**	**1.85**	**139**	P	**Pb**	**11 50 22.3**	**-0.6**
YAHU	**Yahuarcocha**	**1.88**	**110**	P	**Pb**	**11 50 23.5**	**+0.3**
CMBC	**Cumbal**	**2.01**	**92**	*e*P	**Pb**	**11 50 25.3**	**-0.3**
CAYA	**Cayambe**	**2.07**	**117**	P	**Pb**	**11 50 26.4**	**-0.2**
PAST	**Pastocalle**	**2.07**	**145**	P	**Pn**	**11 50 25.0**	**+1.5**
PITA	**Cotopaxi Volc**	**2.10**	**138**	P	**Pb**	**11 50 26.2**	**-0.9**
NAS2	**Nasa**	**2.14**	**140**	P	**Pb**	**11 50 27.0**	**-0.8**
CAMI	**Rancho Maria**	**2.14**	**142**	P	**Pb**	**11 50 27.0**	**-0.8**
BNAS	**Cotopaxi Volca**	**2.15**	**141**	P	**Pb**	**11 50 27.3**	**-0.7**
BREF	**Cotopaxi Volca**	**2.17**	**140**	P	**Pb**	**11 50 27.8**	**-0.7**
VC1	**Cotopaxi 1**	**2.18**	**139**	P	**Pb**	**11 50 28.5**	**0.0**
ANTG	**Antisana-Guama**	**2.18**	**134**	P	**Pb**	**11 50 27.8**	**-0.7**
BVC2	**Cotopaxi Volca**	**2.18**	**139**	P	**Pb**	**11 50 28.0**	**-0.6**
BTAM	**Cotopaxi Volca**	**2.21**	**139**	P	**Pb**	**11 50 28.3**	**-0.7**
BMOR	**Cotopaxi Volca**	**2.21**	**141**	P	**Pb**	**11 50 27.9**	**-1.1**
ANTM	**Antisana-La Mi**	**2.23**	**134**	P	**Pb**	**11 50 28.5**	**-0.8**
COV1	**Cotopaxi Volc**	**2.23**	**138**	P	**Pb**	**11 50 27.8**	**-1.6**
ANTS	**Antisana-Sarah**	**2.24**	**132**	P	**Pb**	**11 50 28.8**	**-0.8**
CONE	**Cono NE Rev Vo**	**2.44**	**116**	P	**Pb**	**11 50 32.7**	**-0.2**
GCUF	**Volcan Galeras**	**2.50**	**85**	*e*P	**Pb**	**11 50 33.4**	**-0.6**
GCUF				*i*		11 51 20.1	
	comp=Z,50nm,0.7s						
PISA	**Pisayambo**	**2.52**	**145**	P	**Pb**	**11 50 33.0**	**-1.3**
BULB	**Ulba Tungurahu**	**2.82**	**150**	P	**Pb**	**11 50 37.7**	**-1.6**
BMAS	**Trigal station**	**2.84**	**151**	P	**Pn**	**11 50 37.1**	**+3.1**
BPAT	**Tungurahua Vol**	**2.86**	**151**	P	**Pn**	**11 50 37.1**	**+2.7**
CRUC	**La Cruz**	**2.94**	**79**	*e*P	**Pb**	**11 50 41.1**	**-0.3**
MILO	**Milagro-Astudi**	**3.28**	**175**	P	**Pn**	**11 50 40.4**	**+0.8**
COHC	**Cochancay**	**3.50**	**170**	P	**Pn**	**11 50 45.0**	**+2.2**
FLOC	**Florencia**	**4.22**	**82**	*e*P	**Pb**	**11 51 00.2**	**-2.8**
FLOC				*i*		11 51 05.8	
	comp=Z,23nm,0.4s						

MAN 25 11:52:57.0, 10°.38N×126°.08E, h29km, mb3.6, ML2.3, MS1.7, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.83**	**224**	⇑ *e*P	Pn	11 53 12.5	-0.3
SCPH				*e*S	Sn	11 53 24.7	+0.6
MSLP	**Maasin**	**1.22**	**258**	*e*P	Pn	11 53 18.7	+0.5
MSLP				*e*S	Sn	11 53 34.1	+0.4
BESP	**Borongan**	**1.36**	**333**	*e*P	Pn	11 53 19.9	-0.2
BESP				*e*S	Sb	11 53 39.7	+0.7

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*NEIC **25** 12:03:34.0±0.0, 13°.88N×92°.26W, h20km, MD4.0(MEX), After MEX.*
MEX 25 12:03:34.0±0.3, 13°.88N×92°.26W, h20km±168km, MD4.0, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**2.04**	**333**	*e*Pg	Pn	12 04 04.5	-2.8
PCIG				*e*Sn	Sn	12 04 28.3	-3.8
PCIG		**2.04**	**333**	*e*P	Pn	12 04 04.5	-2.8
PCIG				*i* S	Sn	12 04 28.3	-3.8
CCIG	**Comitan**	**2.40**	**3**	*e*Pn	Pn	12 04 13.2	+0.9
CCIG				*e*Sn	Sn	12 04 37.7	-3.5
CCIG	**Comitan**	**2.40**	**3**	*i* P	Pn	12 04 09.7	-2.6
CCIG				*e*S	Sn	12 04 37.7	-3.5
TGIG		**3.00**	**344**	*e*Pn	Pn	12 04 17.8	-2.7
TGIG				*e*Sn	Sn	12 04 52.4	-3.7
TGIG		**3.00**	**344**	*e*P	Pn	12 04 17.8	-2.7
TGIG				*i* S	Sn	12 04 52.4	-3.7
146A	**Union**	**18.90**	**8**	*e*Pn	Pn	12 07 53.8	-0.3
PFO	**Pinyon Flats O**	**29.48**	**316**	*e*P	P	12 09 37.2	+0.2
CRY	**Cary Ranch**	**29.64**	**316**	*e*P	P	12 09 47.2	+8.8
MWC	**Mount Wilson**	**30.91**	**315**	*e*P	P	12 09 57.6	+7.8
PASC	**Pasadena Art C**	**30.97**	**315**	*e*P	P	12 09 55.6	+5.6
GATR	**Gnd/Air Tx Cnt**	**32.78**	**314**	*e*P	P	12 10 12.2	+6.2

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*SJA **25** 12:28:20.7±0.4, 21°.43S×66°.25W, h430km±27km, ML4.1, MW3.0*
*ISCJB **25** 12:28:27.3±0.5, 21°.50S±0°.04×66°.71W±0°.04, h200km, mb3.9/2, Error ellipse: s-maj=5.6km s-min=5.1km az=160.3*
*IDC **25** 12:28:29.0±6.0, 21°.47S×66°.47W, h214km±47km, mb3.7/2, mb1 3.7/4, mb1mx3.1/41, mbtmp4.3/4, Error ellipse: s-maj=64.1km s-min=24.7km az=2.0*
*GUC **25** 12:28:29.1±0.5, 21°.45S×67°.46W, h262km±10km, ML4.0*
ISC 25 12:28:27.1±0.8, 21°.54S±0°.06×66°.70W±0°.06, h200km, n22, σ1§85/32, 4C-1D, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**2.64**	**280**	⇑ *e*P	**Pn**	**12 29 14.0**	**+1.3**
PB01				*i* S	**Sn**	**12 29 48.0**	**-0.2**
PB01				IAML		12 29 50.3	
	comp=N,592nm,0.2s						
PB08	**IPOC Station P**	**2.68**	**301**	⇓ *e*P	**Pn**	**12 29 15.3**	**+1.9**
PB08				*i* S	**Sn**	**12 29 50.9**	**+1.4**
PB08				IAML		12 29 53.3	
	comp=E,230nm,0.2s						
PB03	**IPOC Station P**	**2.88**	**259**	*e*P	**Pn**	**12 29 16.5**	**+1.0**
PB03				*e*S	**Sn**	**12 29 52.6**	**-0.6**
PB03				IAML		12 29 54.3	
	comp=N,143nm,0.2s						
PB04	**IPOC Station P**	**3.30**	**255**	*e*P	**Pn**	**12 29 21.4**	**+1.0**
PB04				*i* S	**Sn**	**12 30 01.0**	**-1.1**
PB04				IAML		12 30 04.3	
	comp=N,122nm,0.2s						
PB05	**IPOC Station P**	**3.50**	**247**	*e*P	**Pn**	**12 29 24.0**	**+1.3**
PB05				*i* S	**Sn**	**12 30 04.9**	**-1.5**
PB05				IAML		12 30 05.4	
	comp=N,127nm,0.3s						
MNMC	**Minye Minye**	**3.62**	**311**	⇑ *e*P	**Pn**	**12 29 25.8**	**+1.3**
MNMC				*i* S	**Sn**	**12 30 08.9**	**-0.5**
PSGC	**Pisagua**	**3.74**	**300**	*e*P	**Pn**	**12 29 26.0**	**+0.2**
PSGC				*i* S	**Sn**	**12 30 09.0**	**-2.7**
PSGC				IAML		12 30 12.5	
	comp=N,198nm,0.4s						
PB16	**IPOC Station P**	**4.14**	**320**	⇑ *e*P	**Pn**	**12 29 31.3**	**+0.1**
PB16				IAML		12 30 25.5	
	comp=E,119nm,0.4s						
AHML	**Horco Molle**	**5.37**	**167**	*i* P	**Pn**	**12 29 50.0**	**+3.7**
AHML				IAML		12 29 51.5	
	comp=Z,7.4nm,0.4s						
LPAZ	**La Paz**	**5.39**	**345**	P	**Pn**	**12 29 49.0**	**+1.8**
	comp=Z,6.5nm,0.3s,baz=149,slow=8.0,SNR=121						
LPAZ				S	**Sn**	**12 30 53.6**	**+3.3**
	baz=60,slow=20,SNR=1.4						
CYA	**Choya**	**6.92**	**173**	*i* P	**Pn**	**12 30 09.2**	**+2.9**
CYA				IAML		12 30 09.4	
	comp=Z,7.9nm,0.4s						
VCA	**Vinchina**	**7.29**	**190**	*e*P	**Pn**	**12 30 13.6**	**+2.4**
VCA				IAML		12 30 15.3	
	comp=Z,17nm,0.3s						
VCA				*e*S	**Sn**	**12 31 37.2**	**+3.2**
SIV	**San Ignacio**	**7.67**	**45**	P	**Pn**	**12 30 15.6**	**-0.6**
	comp=Z,3.0nm,0.3s,baz=235,slow=14,SNR=45						
SIV				S	**Sn**	**12 31 41.3**	**-1.6**
	comp=Z,0.4nm,0.3s,baz=323,slow=20,SNR=3.7						
ACLC	**CERRO LA CRUZ**	**7.86**	**182**	⇑ *e*P	**Pn**	**12 30 19.6**	**+1.0**
AGUA	**GUANDACOL**	**8.08**	**191**	*e*P	**Pn**	**12 30 22.4**	**+1.0**
APLL	**PUNTA DE LOS L**	**8.82**	**179**	*e*P	**Pn**	**12 30 30.7**	**-0.3**
APLL				IAML		12 30 32.6	
	comp=Z,40nm,0.1s						
APLL				*e*S	**Sn**	**12 32 06.2**	**-3.8**
AROD	**Rodeo**	**8.95**	**196**	*e*P	**Pn**	**12 30 34.0**	**+1.1**
KOWA	**Kowa**	**71.16**	**65**	P	**P**	**12 39 23.0**	**-1.4**
	comp=Z,0.6nm,0.3s,baz=288,slow=3.2,SNR=2.8						
TORD	**Torodi Ar. Bea**	**75.44**	**69**	P	**P**	**12 39 48.9**	**-0.6**
	comp=Z,2.0nm,0.5s,baz=257,slow=5.4,SNR=27						
ASAR	**Alice Springs**	**130.79**	**205**	PKP	**PKPdf**	**12 47 15.3**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=129,slow=1.7,SNR=5.7						
WRA	**Warramunga Arr**	**133.92**	**208**	PKP	**PKPdf**	**12 47 21.6**	**+0.5**
	comp=Z,0.5nm,0.9s,baz=153,slow=2.0,SNR=7.1						
MKAR	**Makanchi Array**	**144.44**	**37**	PKP	PKPbc	12 47 39.0	+0.6
	comp=Z,1.4nm,0.7s,baz=314,slow=3.6,SNR=17						

IDC 25 13:02:08.8±2.7, 5°.71S×147°.09E, h109km±23km, mb3.5/3, mb1 3.7/6, mb1mx3.4/60, mbtmp3.9/6, Error ellipse: s-maj=29.4km s-min=20.1km az=74.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.67**	**179**	P	Pn	13 03 04.8	+1.0
	7.8nm,0.3s,baz=22,slow=5.7,SNR=26						
PMG				S	Sn	13 03 46.5	+0.1
	28nm,0.3s,baz=184,slow=21,SNR=20						
JAY	**Jayapura**	**7.11**	**296**	P	Pn	13 03 50.2	-0.1
	2.7nm,0.3s,baz=151,slow=6.9,SNR=17						
WRA	**Warramunga Arr**	**18.81**	**220**	P	P	13 06 19.8	-0.2
	0.4nm,0.3s,baz=41,slow=12,SNR=25						
ASAR	**Alice Springs**	**21.90**	**214**	P	P	13 06 53.9	+0.5
	1.0nm,0.5s,baz=51,slow=9.0,SNR=60						
FITZ	**Fitzroy Crossi**	**24.29**	**238**	P	P	13 07 16.3	+0.1
	2.2nm,0.6s,baz=46,slow=11,SNR=8.9						
ILAR	**Eielson Array**	**85.18**	**23**	P	P	13 14 32.7	+0.1
	0.8nm,0.8s,baz=258,slow=5.6,SNR=7.1						
SIV	**San Ignacio**	**144.76**	**128**	PKP	PKPdf	13 21 34.4	+0.5
	2.9nm,0.5s,baz=261,slow=3.8,SNR=19						
TORD	**Torodi Ar. Bea**	**145.10**	**285**	PKPbc	PKPbc	13 21 32.3	-1.9
	baz=66,slow=3.5						

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*SFS **25** 13:05:25.0, 36°.22N×28°.98E, h0km, ML4.8*
*HLW **25** 13:05:27.0, 36°.37N×29°.08E, h10km±11km, Md4.8, Ml5.1*
*BJI **25** 13:05:26.7, 36°.44N×28°.78E, h48km, mb4.7/36, mB5.0/24, Ms4.6/15, Ms7 4.3/14*
*NIC **25** 13:05:27.8±0.3, 36°.32N×28°.80E, h50km, mb4.8, ML4.5*
*ISK **25** 13:05:28.6, 36°.44N×28°.94E, h27km, ML5.3/45*
*DDA **25** 13:05:28.9, 36°.48N×28°.93E, h34km, Ml5.3*
*NEIC **25** 13:05:28.0±0.0, 36°.44N×28°.94E, h26km, mb4.8/67, MD5.3(ISK), ML5.0(THE), MW5.0(CSEM), After ISK.*
NEIC Felt [IV] at Fethiye and [II] at Dalaman, Turkey. Also felt at Izmir, Koycegiz, Marmaris and Tire.
*GCMT **25** 13:05:28.0±0.3, 36°.42N×28°.95E, h24km±1km, MW5.0/91, Moment Tensor Solution. s33,c35; s91,c143; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.35±.13; $M_{\theta\theta}$-2.40±.09; $M_{\phi\phi}$2.75±.10; $M_{r\theta}$4.15±.41; $M_{\theta\phi}$0.61±.08; $M_{\phi r}$-0.82±.21; Best double couple: M_0=4.45600×10^{16} NP1:ϕ_s124.00000°, δ90.00000°, λ119.00000°. NP2: ϕ_s215.00000°, δ29.00000°, λ1.00000°. Principal axes: T 3.1490, Plg38.0000°, Azm60.0000°; N 2.6140, Plg29.0000°, Azm304.0000°; P -5.7640, Plg38.0000°, Azm188.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*ISCJB **25** 13:05:28.6±0.1, 36°.36N±0°.01×28°.962E±0°.010, h51km±1km, mb4.7/128, MS4.1/45 Error ellipse: s-maj=1.8km s-min=1.3km az=10.7*
*MOS **25** 13:05:29.1±1.0, 36°.43N×28°.94E, h51km, mb4.9/46, MS4.0/22, Error ellipse: s-maj=4.1km s-min=2.8km az=108.6*
*IDC **25** 13:05:29.7±1.2, 36°.43N×28°.91E, h40km±11km, mb4.3/36, mb1 4.4/46, mb1mx4.2/86, mbtmp4.5/46, ML4.3/10, MS4.1/49, Ms1 4.1/49, ms1mx4.0/68, Error ellipse: s-maj=9.3km s-min=6.4km az=141.0*
*CSEM **25** 13:05:29.4±0.1, 36°.39N×28°.97E, h30km, mb4.8/68, Mw5.0, Error ellipse: s-maj=2.4km s-min=1.7km az=8.0*
*ATH **25** 13:05:29.1, 36°.45N×28°.91E, h39km±1km, ML4.9/21, Error ellipse: s-maj=1.7km s-min=0.6km az=136.0*
*PDG **25** 13:05:29.0±0.7, 36°.43N×28°.98E, h28km±1km, ML4.9/11, Error ellipse: s-maj=1.1km s-min=1.2km az=0.0*
*THE **25** 13:05:30.1, 36°.44N×28°.89E, h12km, ML4.8/20, Error ellipse: s-maj=0.9km s-min=0.4km az=102.0*
*GII **25** 13:05:30.8±0.2, 36°.23N×29°.29E, h10km*
ISC 25 13:05:29.5±0.3, 36°.36N±0°.03×28°.95E±0°.02, h35km±1km, n1261, σ1§46/1422, mb4.8/128, MS4.1/45, 66C-36D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.29**	**22**	PG	**Pn**	**13 05 34.9**	**-2.5**
FETY				SG	**Sn**	**13 05 40.6**	**-2.2**
FETY	**Fethiye**	**0.29**	**22**	P	**Pn**	**13 05 34.9**	**-2.5**
FETY	**Fethiye**	**0.29**	**22**	P	**Pn**	**13 05 34.9**	**-2.5**
FETY				S	**Sn**	**13 05 40.2**	**-2.6**
FETY	**Fethiye**	**0.29**	**22**	P	**Pn**	**13 05 34.9**	**-2.5**
FETY				*e*Sg	**Sn**	**13 05 40.6**	**-2.2**
DALY	**Dalyan (Mu¨la**	**0.51**	**333**	PG	**Pn**	**13 05 39.0**	**-1.3**
DALY				SG	**Sn**	**13 05 45.9**	**-1.9**
DALY	**Dalyan (Mu¨la**	**0.51**	**333**	⇓ *i* P	**Pn**	**13 05 38.9**	**-1.4**
DALY				*i* S	**Sn**	**13 05 45.7**	**-2.1**
DALY	**Dalyan (Mu¨la**	**0.51**	**333**	*e*Pg	**Pn**	**13 05 39.0**	**-1.3**
DALY				*e*Sg	**Sn**	**13 05 45.9**	**-1.9**
AKAS	**Kas**	**0.55**	**104**	PG	**Pn**	**13 05 40.7**	**-0.3**
AKAS	**Kas**	**0.55**	**104**	⇑ *i* P	**Pn**	**13 05 40.7**	**-0.3**
AKAS				*i* S	**Sn**	**13 05 51.2**	**+2.2**
AKAS	**Kas**	**0.55**	**104**	P	**Pn**	**13 05 40.7**	**-0.3**
AKAS				S	**Sn**	**13 05 51.2**	**+2.2**
KSL	**Kastellorizon**	**0.56**	**112**	P	**Pn**	**13 05 41.5**	**+0.5**
KSL				S	**Sn**	**13 05 53.3**	**+4.3**
KSL				AML	AML	13 05 53.7	
KSL				AML	AML	13 05 55.4	
KSL	**Kastellorizon**	**0.56**	**112**	P	**Pn**	**13 05 41.8**	**+0.8**
KSL	**Kastellorizon**	**0.56**	**112**	P	**Pn**	**13 05 41.8**	**+0.8**
KSL				S	**Sn**	**13 05 51.9**	**+2.9**
TURN	**Turunc**	**0.58**	**332**	PG	**Pn**	**13 05 42.2**	**+1.0**
TURN				SG	**Sn**	**13 05 51.9**	**+2.4**
TURN	**Turunc**	**0.58**	**332**	⇑ *i* P	**Pn**	**13 05 42.2**	**+1.0**
TURN				*i* S	**Sn**	**13 05 51.9**	**+2.4**
TURN	**Turunc**	**0.58**	**332**	P	**Pn**	**13 05 42.2**	**+1.0**
TURN				S	**Sn**	**13 05 51.9**	**+2.4**
ARG	**Arkhangelos**	**0.68**	**258**	PG	**Pn**	**13 05 43.2**	**+0.6**
ARG				SG	**Sn**	**13 05 53.9**	**+1.9**
ARG	**Arkhangelos**	**0.68**	**258**	P	**Pn**	**13 05 42.9**	**+0.4**
ARG				S	**Sn**	**13 05 53.8**	**+1.9**
ARG				AML	AML	13 05 54.4	
ARG				AML	AML	13 05 58.5	
ARG	**Arkhangelos**	**0.68**	**258**	P	**Pn**	**13 05 43.0**	**+

BODT	Bodrum	1.49	298	P	Pn	13 05 53.5 -0.3
BODT	Bodrum	1.49	298	P	Pn	13 05 53.5 -0.3
BODT				S	Sn	13 06 12.0 0.0
BODT	Bodrum	1.49	298	P	Pn	13 05 53.5 -0.3
BODT				S	Sn	13 06 12.0 0.0
AYDN	Tasoluk	1.55	327⇑	iP	Pn	13 05 55.0 +0.3
AYDN				i S	Sn	13 06 16.1 +2.5
AYDN	Tasoluk	1.55	327	P	Pn	13 05 55.0 +0.3
AYDN				S	Sn	13 06 16.1 +2.5
BRDR	BURDUR-Merkez	1.60	34⇑	iP	Pn	13 05 56.5 +1.1
BRDR				i S	Sn	13 06 17.2 +2.3
BRDR	BURDUR-Merkez	1.60	34	P	Pn	13 05 56.5 +1.1
BRDR				S	Sn	13 06 17.2 +2.3
KARP	Karpathos	1.66	241	PN	Pn	13 05 57.3 +1.1
KARP	Karpathos	1.66	241	P	Pn	13 05 58.1 +2.0
KARP				S	Sn	13 06 17.5 +1.2
KARP				AML	AML	13 06 27.8
	comp=E,31893µm,0.5s					
KARP				AML	AML	13 06 29.6
	comp=N,44811µm,0.6s					
KARP	Karpathos	1.66	241	ePn	Pn	13 05 57.7 +1.6
KARP	Karpathos	1.66	241	P	Pn	13 05 57.8 +1.6
KARP				S	Sn	13 06 18.1 +1.8
KARP	Karpathos	1.66	241	ePn	Pn	13 05 57.7 +1.6
KARP				S	Sn	13 06 18.1 +1.8
DIDI	Didim-Aydin	1.70	307	PN	Pn	13 05 56.2 -0.5
DIDI	Didim-Aydin	1.70	307	ePn	Pn	13 05 56.2 -0.5
AYDB	Zeytinkoy-Aydi	1.79	332	PN	Pn	13 05 57.9 -0.1
AYDB	Zeytinkoy-Aydi	1.79	332	ePn	Pn	13 05 57.9 -0.1
GCAM	G?zelcaml?	1.91	315	PN	Pn	13 05 59.4 -0.2
GCAM	G?zelcaml?	1.91	315⇑	iP	Pn	13 05 59.9 +0.3
GCAM				i S	Sn	13 06 23.8 +1.4
GCAM	G?zelcaml?	1.91	315	ePn	Pn	13 05 59.4 -0.2
GCAM	G?zelcaml?	1.91	315	P	Pn	13 05 59.9 +0.3
GCAM				S	Sn	13 06 23.8 +1.4
ISP	Isparta	1.93	40	PN	Pn	13 05 59.6 -0.3
ISP	Isparta	1.93	40	⇓iP	Pn	13 06 01.0 +1.1
ISP	Isparta	1.93	40	S	Sn	13 06 26.4 +3.4
ISP	Isparta	1.93	40	ePn	Pn	13 06 00.8 +0.9
ISP				S	Sn	13 06 26.0 +3.0
ISP	Isparta	1.93	40	P	Pn	13 06 00.8 +0.9
ISP				S	Sn	13 06 26.0 +3.0
ISP	Isparta	1.93	40	Pn	Pn	13 06 00.6 +0.7
ISP	Isparta	1.93	40	c iP	Pn	13 06 00.6 +0.7
ISP	Isparta	1.93	40	ePn	Pn	13 05 59.6 -0.3
ISP	Isparta	1.93	40	i P	Pn	13 06 00.6 +0.7
ISP				S	Sn	13 06 26.0 +3.0
SUTC	Sutluce-Ispart	1.99	55	PN	Pn	13 06 01.1 +0.4
SUTC	Sutluce-Ispart	1.99	55	ePn	Pn	13 06 01.1 +0.4
KHL	Karahalli	2.01	13	PN	Pn	13 06 00.6 -0.4
KHL	Karahalli	2.01	13	ePn	Pn	13 06 00.6 -0.4
KZIL	AFYON_Kizioren	2.12	26	i P	Pn	13 06 01.3 -1.2
KZIL				i S	Sn	13 06 29.3 +1.6
KZIL	AFYON_Kizioren	2.12	26	P	Pn	13 06 01.3 -1.2
KZIL				S	Sn	13 06 29.3 +1.6
MANT	Manisa	2.15	352⇑	iP	Pn	13 06 02.4 -0.7
MANT				i S	Sn	13 06 27.2 -1.3
MANT	Manisa	2.15	352	ePn	Pn	13 06 02.3 -0.7
MANT	Manisa	2.15	352	P	Pn	13 06 02.4 -0.7
MANT				S	Sn	13 06 27.2 -1.3
SMG	Samos	2.16	309	P	Pn	13 06 04.1 +1.2
SMG				S	Sn	13 06 29.2 +0.7
SMG				AML	AML	13 06 30.9
	comp=E,76612µm,0.3s					
SMG				AML	AML	13 06 31.5
	comp=N,84337µm,0.3s					
SMG	Samos	2.16	309	P	Pn	13 06 02.7 -0.3
SMG	Samos	2.16	309	P	Pn	13 06 02.7 -0.3
SMG				S	Sn	13 06 28.9 +0.4
SMG	Samos	2.16	309	P	Pn	13 06 03.7 +0.7
SMG				S	Sn	13 06 28.8 +0.3
KULA	Kula-Manisa	2.16	354	PN	Pn	13 06 02.7 -0.4
KULA	Kula-Manisa	2.16	354	ePn	Pn	13 06 02.7 -0.4
BAGO	Egridir - ISPA	2.19	42⇑	iP	Pn	13 06 04.4 +0.9
BAGO				i S	Sn	13 06 36.2 +6.7
KEPZ	Antalya-Kepez	2.21	75⇑	iP	Pn	13 06 05.9 +2.3
KEPZ				i S	Sn	13 06 34.0 +4.3
KEPZ	Antalya-Kepez	2.21	75	P	Pn	13 06 05.9 +2.3
DGB	˜zmir	2.36	316⇑	iP	Pn	13 06 05.5 -0.2
DGB				i S	Sn	13 06 33.4 0.0
AMGA	Amorgos Island	2.50	282	P	Pn	13 06 08.9 +1.2
AMGA				AML	AML	13 06 58.9
	comp=E,7156µm,0.5s					
AMGA				AML	AML	13 07 00.5
	comp=N,15120µm,0.7s					
AMGA	Amorgos Island	2.50	282	P	Pn	13 06 08.0 +0.3
AMGA	Amorgos Island	2.50	282	P	Pn	13 06 08.8 +1.2
ZKR	Zakros	2.54	241	P	Pn	13 06 10.9 +2.6
ZKR				S	Sn	13 06 41.9 +3.8
ZKR	Zakros	2.54	241	P	Pn	13 06 10.5 +2.2
ZKR	Zakros	2.54	241	P	Pn	13 06 10.5 +2.2
ZKR				S	Sn	13 06 40.6 +2.5
ZKR	Zakros	2.54	241	P	Pn	13 06 10.5 +2.2
ZKR				S	Sn	13 06 40.6 +2.5
ANAF	Anafi Island	2.56	271	P	Pn	13 06 10.0 +1.5
ANAF				S	Sn	13 06 39.0 +0.5
ANAF				AML	AML	13 06 56.9
	comp=N,35654µm,0.7s					
ANAF				AML	AML	13 06 57.2
	comp=E,40256µm,0.5s					
ANAF	Anafi Island	2.56	271	P	Pn	13 06 09.1 +0.6
ANAF	Anafi Island	2.56	271	P	Pn	13 06 09.9 +1.4
ANAF				S	Sn	13 06 39.2 +0.7
SHAP	Saphane-Kutahy	2.66	5	PN	Pn	13 06 09.9 -0.1
SHAP	Saphane-Kutahy	2.66	5	ePn	Pn	13 06 09.9 -0.1
AKHS	Akhisar	2.67	341⇑	iP	Pn	13 06 09.3 -0.7
AKHS				i S	Sn	13 06 37.3 -3.8
AKHS	Akhisar	2.67	341	P	Pn	13 06 09.3 -0.7
AKS	Akhisar	2.67	341	PN	Pn	13 06 10.1 +0.1
AKS	Akhisar	2.67	341	ePn	Pn	13 06 10.1 +0.1
DEMI	Demirci	2.68	356⇑	iP	Pn	13 06 09.8 -0.4
DEMI				i S	Sn	13 06 39.5 -2.1
DEMI	Demirci	2.68	356	P	Pn	13 06 09.8 -0.4
DEMI				S	Sn	13 06 39.5 -2.1
ZEY	˜zmir	2.70	315⇑	iP	Pn	13 06 10.1 -0.3
ZEY				i S	Sn	13 06 41.8 0.0
GEDZ	Gediz	2.70	8	PN	Pn	13 06 10.7 +0.2
GEDZ	Gediz	2.70	8	ePn	Pn	13 06 10.7 +0.2
SIMA	Simav-Kutahya	2.72	1	PN	Pn	13 06 10.5 -0.2
SIMA	Simav-Kutahya	2.72	1	ePn	Pn	13 06 10.5 -0.2
GAZI	Gazipasa	2.73	92⇑	iP	Pn	13 06 10.9 +0.1
GAZI				i S	Sn	13 06 42.4 -0.2
GAZI	Gazipasa	2.73	92	P	Pn	13 06 10.9 +0.1
GAZI				S	Sn	13 06 42.4 -0.2
SMAA	Simav-Kutahya	2.73	1	PN	Pn	13 06 11.4 +0.5
SMAA	Simav-Kutahya	2.73	1	ePn	Pn	13 06 11.4 +0.5
URLA	Izmir	2.73	318	PN	Pn	13 06 11.6 +0.7
URLA	Izmir	2.73	318⇑	iP	Pn	13 06 09.5 -1.4
URLA				i S	Sn	13 06 54.4 +12
URLA	Izmir	2.73	318	P	Pn	13 06 09.5 -1.4
URLA	Izmir	2.73	318	ePn	Pn	13 06 11.6 +0.7
DOGA	KONYA_Doganhis	2.78	51⇑	iP	Pn	13 06 13.0 +1.3
DOGA				i S	Sn	13 06 44.9 +0.8
DOGA	KONYA_Doganhis	2.78	51	P	Pn	13 06 13.0 +1.3
DOGA				S	Sn	13 06 44.9 +0.8
THR8	Santorini-Mono	2.80	272	P	Pn	13 06 12.5 +0.8
THR8	Santorini-Mono	2.80	272	P	Pn	13 06 12.5 +0.8
THR8	Santorini-Mono	2.80	272	P	Pn	13 06 12.8 +1.1
SANT	Santorini	2.81	271	PN	Pn	13 06 13.1 +1.0
SANT	Santorini	2.81	271⇑	iP	Pn	13 06 13.0 +1.0
SANT	Santorini	2.81	271	P	Pn	13 06 13.0 +1.0
SANT				AML	AML	13 07 05.5
	comp=E,11165µm,0.7s					
SANT				AML	AML	13 07 06.4
	comp=N,8974µm,1.1s					
SANT	Santorini	2.81	271	ePn	Pn	13 06 12.2 +0.2
SANT	Santorini	2.81	271	P	Pn	13 06 12.9 +0.9
SANT	Santorini	2.81	271	ePn	Pn	13 06 12.2 +0.2
SAP2K	Karterados	2.82	272	P	Pn	13 06 13.2 +1.1
SAP2K	Karterados	2.82	272	P	Pn	13 06 13.2 +1.1
APE	Apeiranthos	2.83	285	PN	Pn	13 06 14.1 +1.8
APE	Apeiranthos	2.83	285⇑	iP	Pn	13 06 12.7 +0.5
APE	Apeiranthos	2.83	285	S	Sn	13 06 46.2 +1.1
APE	Apeiranthos	2.83	285	P	Pn	13 06 12.3 +0.1
APE	Apeiranthos	2.83	285	P	Pn	13 06 12.8 +0.5
APE				S	Sn	13 06 46.3 +1.1
APE	Apeiranthos	2.83	285	P	Pn	13 06 12.8 +0.5
APE				S	Sn	13 06 46.3 +1.1
APE	Apeiranthos	2.83	285	c iP	Pn	13 06 12.6 +0.3
APE	Apeiranthos	2.83	285	P	Pn	13 06 12.9 +0.6
APE	Apeiranthos	2.83	285	ePn	Pn	13 06 14.1 +1.8
APE				S	Sn	13 06 46.3 +1.1
THR2	Thira island,	2.83	273	P	Pn	13 06 13.2 +1.0
THR2	Thira island,	2.83	273	P	Pn	13 06 13.5 +1.3
THR2	Thira island,	2.83	273	P	Pn	13 06 13.5 +1.3
THR2	Thira island,	2.83	273	P	Pn	13 06 13.5 +1.3
THR7	Fira-Santorini	2.84	272	P	Pn	13 06 13.6 +1.3
THR7	Fira-Santorini	2.84	272	P	Pn	13 06 13.6 +1.3
BOLV	Bolvadin	2.84	34⇑	iP	Pn	13 06 13.4 +0.9
BOLV				i S	Sn	13 06 45.0 -0.5
BOLV	Bolvadin	2.84	34	P	Pn	13 06 13.4 +0.9
BOLV				S	Sn	13 06 45.0 -0.5
THT2	Imerovigli	2.84	272	P	Pn	13 06 14.0 +1.6
THT2				AML	AML	13 07 07.1
	comp=E,27073µm,0.7s					
THT2				AML	AML	13 07 09.9
	comp=N,28000µm,0.6s					
THT2	Imerovigli	2.84	272	P	Pn	13 06 13.8 +1.4
CMBO	Columbo, Santo	2.86	273	P	Pn	13 06 11.8 -0.7
CMBO				AML	AML	13 06 48.9
	comp=N,14139µm,0.6s					
CMBO				AML	AML	13 06 52.0
	comp=E,10990µm,0.6s					
CMBO	Columbo, Santo	2.86	273	P	Pn	13 06 12.8 +0.2
CMBO	Columbo, Santo	2.86	273	P	Pn	13 06 12.9 +0.3
STAX	Taxiarchis Har	2.86	272	P	Pn	13 06 13.4 +0.8
STAX	Taxiarchis Har	2.86	272	P	Pn	13 06 13.6 +1.0
STAX	Taxiarchis Har	2.86	272	P	Pn	13 06 13.6 +1.0
THR3	Thira Island,	2.86	272	P	Pn	13 06 13.4 +0.8
THR3	Thira Island,	2.86	272	P	Pn	13 06 13.7 +1.1
THR3	Thira Island,	2.86	272	P	Pn	13 06 13.7 +1.1
THR3	Thira Island,	2.86	272	P	Pn	13 06 13.7 +1.1
THR6	Thira Island,	2.86	271	P	Pn	13 06 13.9 +1.2
THR6	Thira Island,	2.86	271	P	Pn	13 06 13.7 +1.0
THR6	Thira Island,	2.86	271	P	Pn	13 06 13.7 +1.0
THR6	Thira Island,	2.86	271	P	Pn	13 06 13.9 +1.2
SAP1	Santorini-Akro	2.87	271	P	Pn	13 06 13.9 +1.2
SAP1	Santorini-Akro	2.87	271	P	Pn	13 06 13.9 +1.2
CESE	˜e˜me	2.88	314	PN	Pn	13 06 13.4 +0.5
CESE	˜e˜me	2.88	314	ePn	Pn	13 06 13.4 +0.5
THR9	Santorini-Faro	2.90	271	P	Pn	13 06 14.2 +1.1
THR9	Santorini-Faro	2.90	271	P	Pn	13 06 14.2 +1.1
THR9	Santorini-Faro	2.90	271	P	Pn	13 06 14.3 +1.2
THR5	Thira Island,	2.90	272	P	Pn	13 06 14.7 +1.4
THR5	Thira Island,	2.90	272	P	Pn	13 06 14.6 +1.4
NPS	Neapolis	2.92	249	P	Pn	13 06 15.0 +1.5
NPS				S	Sn	13 06 49.1 +1.7
NPS				AML	AML	13 06 49.6
	comp=E,29494µm,0.5s					
NPS				AML	AML	13 06 50.2
	comp=N,18108µm,0.4s					
NPS	Neapolis	2.92	249	P	Pn	13 06 14.4 +0.9
NPS				S	Sn	13 06 47.9 +0.5
NPS	Neapolis	2.92	249	P	Pn	13 06 14.4 +0.9
NPS				S	Sn	13 06 47.9 +0.5
NPS	Neapolis	2.92	249	P	Pn	13 06 14.4 +0.9
NPS				S	Sn	13 06 47.9 +0.5
NPS	Neapolis	2.92	249	P	Pn	13 06 15.2 +1.7
NPS				S	Sn	13 06 49.1 +1.7
KRBN	Karaburun	2.93	320	PN	Pn	13 06 13.4 -0.1
KRBN	Karaburun	2.93	320	ePn	Pn	13 06 13.4 -0.1
FOCM	Fo˜ça	2.93	324	PN	Pn	13 06 13.6 0.0
FOCM	Fo˜ça	2.93	324	ePn	Pn	13 06 13.6 0.0
IOSP	Ios island	2.97	278	P	Pn	13 06 15.3 +1.3
IOSP	Ios island	2.97	278	P	Pn	13 06 15.3 +1.3
AKMC	Akamas	3.06	115	P	Pn	13 06 15.5 +0.1
	baz=295					
AKMC	Akamas	3.06	115	P	Pn	13 06 15.5 +0.1
CHOS	Chios island	3.06	312	PN	Pn	13 06 16.2 +0.7
CHOS	Chios island	3.06	312	P	Pn	13 06 15.3 -0.1
CHOS				S	Sn	13 06 49.8 -1.1
CHOS				AML	AML	13 06 54.1
	comp=N,18067µm,0.4s					
CHOS				AML	AML	13 06 54.9
	comp=E,33520µm,0.3s					
CHOS	Chios island	3.06	312	P	Pn	13 06 15.8 +0.3
CHOS	Chios island	3.06	312	P	Pn	13 06 15.8 +0.3
CHOS				S	Sn	13 06 50.9 0.0
CHOS	Chios island	3.06	312	P	Pn	13 06 15.8 +0.3
CHOS	Chios island	3.06	312	ePn	Pn	13 06 16.2 +0.7
CHOS				S	Sn	13 06 50.9 0.0
LAST	Lasithi	3.06	248	P	Pn	13 06 17.3 +1.8
LAST				S	Sn	13 06 52.0 +1.1
LAST				AML	AML	13 07 03.1
	comp=E,6818µm,0.6s					
LAST				AML	AML	13 07 03.5
	comp=N,6556µm,0.5s					
LAST	Lasithi	3.06	248	P	Pn	13 06 16.4 +0.9
LAST				S	Sn	13 06 52.5 +1.5
LAST	Lasithi	3.06	248	P	Pn	13 06 16.4 +0.9
LAST				S	Sn	13 06 52.5 +1.5
LAST	Lasithi	3.06	248	P	Pn	13 06 17.3 +1.8
LAST				S	Sn	13 06 52.5 +1.5
KMER	Konya-Meram	3.08	62⇑	iP	Pn	13 06 17.6 +1.9
KMER				i S	Sn	13 06 52.9 +1.6
KMER	Konya-Meram	3.08	62	P	Pn	13 06 17.6 +1.9
KMER				S	Sn	13 06 52.9 +1.6
TVSB	Tavsanli	3.11	7	PN	Pn	13 06 14.9 -1.2
TVSB	Tavsanli	3.11	7	ePn	Pn	13 06 14.9 -1.2
PPCY	Paphos	3.14	117	P	Pn	13 06 17.1 +0.7
	baz=297					
PPCY	Paphos	3.14	117	P	Pn	13 06 17.1 +0.7
KUTH	Kutahya	3.15	15	PN	Pn	13 06 16.2 -0.5
KUTH	Kutahya	3.15	15	ePn	Pn	13 06 16.2 -0.5
DKL	Dikili	3.15	330	PN	Pn	13 06 16.4 -0.2
DKL	Dikili	3.15	330	ePn	Pn	13 06 16.4 -0.2
KONT	Konya--Tatoy	3.15	59	PN	Pn	13 06 18.7 +2.0
KONT	Konya--Tatoy	3.15	59	ePn	Pn	13 06 18.7 +2.0
ALFC	Alefka	3.21	111	P	Pn	13 06 17.7 +0.3
	baz=291					
ALFC				S	Sn	13 06 56.6 +2.2
ALFC	Alefka	3.21	111	P	Pn	13 06 17.7 +0.3
ALFC				S	Sn	13 06 56.6 +2.2
DST	Dursunbey	3.25	356	PN	Pn	13 06 17.5 -0.5
DST	Dursunbey	3.25	356	ePn	Pn	13 06 17.5 -0.5
BOZY	Bozyazi-Mersin	3.27	93	PN	Pn	13 06 20.5 +2.3
BOZY	Bozyazi-Mersin	3.27	93	ePn	Pn	13 06 20.5 +2.3
LADK	Ladik-KONYA	3.29	55	PN	Pn	13 06 18.9 +0.3
LADK	Ladik-KONYA	3.29	55	ePn	Pn	13 06 18.9 +0.3
IACM	Heraklion	3.32	253	P	Pn	13 06 19.8 +0.9
IACM				S	Sn	13 07 00.3 +3.2
IACM	Heraklion	3.32	253	P	Pn	13 06 20.1 +1.2
IACM				S	Sn	13 06 59.0 +1.9
IACM	Heraklion	3.32	253	P	Pn	13 06 20.3 +1.4
IACM				S	Sn	13 06 59.0 +1.9
KSTL	Kastelli Herak	3.32	253	P	Pn	13 06 18.0 -0.9
KSTL				S	Sn	13 06 54.7 -2.5
KSTL	Kastelli Herak	3.32	253	P	Pn	13 06 18.0 -0.9
KSTL				S	Sn	13 06 54.7 -2.5
TEKE	Tekeli-Mersin	3.38	93	PN	Pn	13 06 20.8 +1.1
TEKE	Tekeli-Mersin	3.38	93	ePn	Pn	13 06 20.8 +1.1
BALB	Balikesir	3.38	346	PN	Pn	13 06 20.2 +0.5
BALB	Balikesir	3.38	346	ePn	Pn	13 06 20.2 +0.5
KIZT	Kizilcal	3.43	42	PN	Pn	13 06 21.4 +0.9
KIZT	Kizilcal	3.43	42	ePn	Pn	13 06 21.4 +0.9
AKDN	Akdeniz- K¯–br	3.44	107	PN	Pn	13 06 22.0 +1.5
AKDN	Akdeniz- K¯–br	3.44	107	ePn	Pn	13 06 22.0 +1.5
LEF	Lefka	3.44	110	PN	Pn	13 06 20.8 +0.2
LEF	Lefka	3.44	110	ePn	Pn	13 06 20.8 +0.2
BERE	Bereket-Mersin	3.45	89	PN	Pn	13 06 22.1 +1.2
BERE	Bereket-Mersin	3.45	89	ePn	Pn	13 06 22.1 +1.2
IDI	Anoyia	3.46	253	P	Pn	13 06 21.8 +0.9
	comp=N,172nm,0.3s,baz=355,slow=7.1,SNR=290					
IDI				S	Sn	13 07 00.2 -0.7
	comp=N,250nm,0.3s,baz=355,slow=10,SNR=11					
IDI				LR	LR	13 08 06.7
	comp=N,3µm,18.9s,baz=94,slow=45					
IDI	Anoyia	3.46	253	PN	Pn	13 06 22.2 +1.2
IDI	Anoyia	3.46	253	⇑iP	Pn	13 06 21.9 +0.9
IDI	Anoyia	3.46	253	S	Sn	13 07 01.2 +0.3
IDI	Anoyia	3.46	253	ePn	Pn	13 06 21.5 +0.5
IDI				S	Sn	13 07 00.2 -0.7
IDI	Anoyia	3.46	253	ePn	Pn	13 06 21.5 +0.5
ESKT	Eskisehir	3.49	25	PN	Pn	13 06 22.5 +1.1
ESKT	Eskisehir	3.49	25	ePn	Pn	13 06 22.5 +1.1
PRK	Paraskevi	3.57	324	P	Pn	13 06 24.4 +2.0
PRK				AML	AML	13 07 27.8
	comp=N,19973µm,0.7s					
PRK				AML	AML	13 07 28.8
	comp=E,24058µm,0.8s					
PRK	Paraskevi	3.57	324	P	Pn	13 06 22.3 -0.1
PRK	Paraskevi	3.57	324	P	Pn	13 06 22.3 -0.1
PRK	Paraskevi	3.57	324	P	Pn	13 06 22.3 -0.1
SZAC	Souni	3.59	115	P	Pn	13 06 22.8 +0.1
	baz=296					
SZAC				S	Sn	13 07 05.7 +1.9
SZAC	Souni	3.59	115	P	Pn	13 06 22.8 +0.1
SZAC				S	Sn	13 07 05.7 +1.9
SIVA	Sivas	3.62	249	P	Pn	13 06 25.9 +2.8
SIVA				S	Sn	13 07 06.0 +1.3
SIVA				AML	AML	13 07 12.7
	comp=E,14686µm,0.4s					
SIVA				AML	AML	13 07 12.7
	comp=N,8949µm,0.6s					
SIVA	Sivas	3.62	249	P	Pn	13 06 25.3 +2.2
SIVA	Sivas	3.62	249	P	Pn	13 06 25.3 +2.2
SIVA				S	Sn	13 07 06.2 +1.6
SIVA	Sivas	3.62	249	P	Pn	13 06 25.3 +2.2
SIVA				S	Sn	13 07 06.2 +1.6
TEVE	Tevekalti-Mers	3.63	88	PN	Pn	13 06 24.9 +1.6
TEVE	Tevekalti-Mers	3.63	88	ePn	Pn	13 06 24.9 +1.6
AUBOZ	BOZOYUK	3.64	13	PN	Pn	13 06 24.0 +0.5
AUBOZ	BOZOYUK	3.64	13	ePn	Pn	13 06 24.0 +0.5
OREN	Orenkoy-Mersin	3.65	91	PN	Pn	13 06 25.0 +1.5
OREN	Orenkoy-Mersin	3.65	91	ePn	Pn	13 06 25.0 +1.5
MHLA	Plaka, Milos I	3.66	277	P	Pn	13 06 24.7 +1.1
MHLA	Plaka, Milos I	3.66	277	P	Pn	13 06 24.9 +1.3
SERI	Serifos	3.67	284	P	Pn	13 06 24.4 +0.6
SERI	Serifos	3.67	284	P	Pn	13 06 24.4 +0.6
MAMC	Mammari	3.67	108	P	Pn	13 06 24.5 +0.7
	baz=289					
MAMC	Mammari	3.67	108	P	Pn	13 06 24.5 +0.7
MHLO	Agia Marina, M	3.67	276	P	Pn	13 06 26.2 +2.4
MHLO	Agia Marina, M	3.67	276	P	Pn	13 06 25.1 +1.3
MHLO	Agia Marina, M	3.67	276	P	Pn	13 06 25.1 +1.3
AUSIV	SIVRIHISAR	3.69	33	PN	Pn	13 06 24.6 +0.4
AUSIV	SIVRIHISAR	3.69	33	ePn	Pn	13 06 24.6 +0.4
BORA	Eskisehir	3.71	18	PN	Pn	13 06 25.0 +0.7
BORA	Eskisehir	3.71	18	ePn	Pn	13 06 25.0 +0.7
AKK2	Akkuyu-Mersin	3.73	92	PN	Pn	13 06 25.5 +1.0
AKK2	Akkuyu-Mersin	3.73	92	ePn	Pn	13 06 25.5 +1.0
AKKU	Akkuyu-Mersin	3.73	92	PN	Pn	13 06 25.7 +1.2
AKKU	Akkuyu-Mersin	3.73	92	ePn	Pn	13 06 25.7 +1.2
TEPE	Tepekoy-Mersin	3.73	91	PN	Pn	13 06 26.6 +2.0
TEPE	Tepekoy-Mersin	3.73	91	ePn	Pn	13 06 26.6 +2.0
YESI	Yesilovacik-Me	3.80	91	PN	Pn	13 06 27.5 +2.0
YESI	Yesilovacik-Me	3.80	91	ePn	Pn	13 06 27.5 +2.0
GONE	Gonen-Balikesi	3.81	345	PN	Pn	13 06 25.0 -0.6
GONE	Gonen-Balikesi	3.81	345	ePn	Pn	13 06 25.0 -0.6
IKL	Isikli	3.83	90	PN	Pn	13 06 27.8 +1.8
IKL	Isikli	3.83	90	ePn	Pn	13 06 27.8 +1.8
CSS	Mathiatis	3.83	110	PN	Pn	13 06 26.5 +0.5
CSS	Mathiatis	3.83	110	ePn	Pn	13 06 25.2 -0.9
CSS	Mathiatis	3.83	110	P	Pn	13 06 25.9 -0.1
	baz=291					
CSS	Mathiatis	3.83	110	P	Pn	13 06 25.2 -0.9
CSS	Mathiatis	3.83	110	Pn	Pn	13 06 25.3 -0.7
CSS	Mathiatis	3.83	110	P	Pn	13 06 25.9 -0.1
CSS	Mathiatis	3.83	110	ePn	Pn	13 06 26.5 +0.5
CHBY	Cihanbeyli	3.84	54	PN	Pn	13 06 27.5 +1.3
CHBY	Cihanbeyli	3.84	54	ePn	Pn	13 06 27.5 +1.3
KEBE	Keben-Mersin	3.85	87	PN	Pn	13 06 27.5 +1.2
KEBE	Keben-Mersin	3.85	87	ePn	Pn	13 06 27.5 +1.2
CAVI	Cavuskoy	3.90	10	PN	Pn	13 06 27.1 +0.2
CAVI	Cavuskoy	3.90	10	ePn	Pn	13 06 27.1 +0.2
AKIN	Ak¯–nc¯–lar- K	3.92	109	PN	Pn	13 06 28.6 +1.4
AKIN	Ak¯–nc¯–lar- K	3.92	109	ePn	Pn	13 06 28.6 +1.4
KCTX	Karacabey (Bur	3.92	353	PN	Pn	13 06 27.9 +0.6
KCTX	Karacabey (Bur	3.92	353	ePn	Pn	13 06 27.9 +0.6
KARY	Karystos	3.97	296	P	Pn	13 06 28.8 +1.0
KARY				S	Sn	13 07 13.8 +0.7
KARY	Karystos	3.97	296	P	Pn	13 06 28.8 +1.0
KARY				S	Sn	13 07 13.8 +0.7
VAM	Vamos	3.97	257	P	Pn	13 06 28.9 +1.0
VAM				AML	AML	13 07 25.4
	comp=N,6636µm,0.4s					
VAM				AML	AML	13 07 25.6
	comp=E,5303µm,0.6s					
VAM	Vamos	3.97	257	P	Pn	13 06 28.8 +0.9
VAM	Vamos	3.97	257	P	Pn	13 06 29.4 +1.5
EZN	Ezine	4.03	330

GELI	Tayfur-Gelibol	4.47 335	ePn	Pn	13 06 34.9	+0.2
ATH	Athens Observa	4.47 293	P	Pn	13 06 37.4	+2.6
ATH			AML	AML	13 07 28.9	
	comp=N,2827µm,0.4s					
ATH			AML	AML	13 07 29.2	
	comp=E,1928µm,0.4s					
ATH	Athens Observa	4.47 293	P	Pn	13 06 36.4	+1.6
ATH			S	Sn	13 07 26.1	+0.5
ATH	Athens Observa	4.47 293	P	Pn	13 06 36.4	+1.6
ATH			S	Sn	13 07 26.1	+0.5
ATH	Athens Observa	4.47 293	P	Pn	13 06 36.4	+1.6
ATH			S	Sn	13 07 26.1	+0.5
ATH	Athens Observa	4.47 293	P	Pn	13 06 36.4	+1.6
ATH			S	Sn	13 07 26.1	+0.5
SERE	Sereflikochisa	4.48 53	PN	Pn	13 06 36.0	+1.0
SERE	Sereflikochisa	4.48 53	ePn	Pn	13 06 36.0	+1.0
AFSR	Af´ar-Bala (A	4.49 45	PN	Pn	13 06 35.2	+0.1
AFSR	Af´ar-Bala (A	4.49 45	ePn	Pn	13 06 35.2	+0.1
HRT	Hereke	4.49 7	PN	Pn	13 06 35.8	+0.8
HRT	Hereke	4.49 7	ePn	Pn	13 06 35.8	+0.8
SAUV	Serdivan-Sakar	4.50 14	PN	Pn	13 06 35.6	+0.4
SAUV	Serdivan-Sakar	4.50 14	ePn	Pn	13 06 35.6	+0.4
GOKC	Gokceada-Canak	4.51 329	PN	Pn	13 06 36.5	+1.2
GOKC	Gokceada-Canak	4.51 329	ePn	Pn	13 06 36.5	+1.2
GADA	Gvkgeada	4.51 329	PN	Pn	13 06 35.4	+0.1
GADA	Gvkgeada	4.51 329	P	Pn	13 06 35.1	-0.2
GADA	Gvkgeada	4.51 329	P	Pn	13 06 35.1	-0.2
GADA	Gvkgeada	4.51 329	P	Pn	13 06 35.1	-0.2
GADA	Gvkgeada	4.51 329	ePn	Pn	13 06 35.4	+0.1
MERS	Mersin	4.51 82	PN	Pn	13 06 38.0	+2.6
MERS	Mersin	4.51 82	ePn	Pn	13 06 38.0	+2.6
RKY	Sarkoy-Tekirda	4.53 343	PN	Pn	13 06 36.5	+0.8
RKY	Sarkoy-Tekirda	4.53 343	ePn	Pn	13 06 36.5	+0.8
SBT3	Marmara-Eregli	4.58 351	PN	Pn	13 06 37.5	+1.4
SBT3	Marmara-Eregli	4.58 351	ePn	Pn	13 06 37.5	+1.4
ANKY	Antikythira Is	4.60 265	P	Pn	13 06 37.1	+0.7
ANKY			S	Sn	13 07 29.8	+1.2
ANKY			AML	AML	13 07 34.5	
	comp=N,2861µm,0.5s					
ANKY			AML	AML	13 07 34.9	
	comp=E,3302µm,0.5s					
ANKY	Antikythira Is	4.60 265	P	Pn	13 06 37.6	+1.1
ANKY	Antikythira Is	4.60 265	P	Pn	13 06 37.6	+1.1
ANKY	Antikythira Is	4.60 265	P	Pn	13 06 37.6	+1.1
ANKY			S	Sn	13 07 29.5	+0.9
BR231	Keskin MP Arra	4.60 40	ePn	Pn	13 06 37.0	+0.3
BR231	Keskin MP Arra	4.60 40	ePn	Pn	13 06 37.0	+0.3
LIA	Limnos Island	4.61 321	P	Pn	13 06 36.4	-0.2
LIA	Limnos Island	4.61 321	P	Pn	13 06 37.0	+0.4
LIA	Limnos Island	4.61 321	P	Pn	13 06 37.0	+0.4
LIA	Limnos Island	4.61 321	P	Pn	13 06 37.1	+0.4
ANTO	Ankara	4.63 40	PN	Pn	13 06 38.2	+1.2
ANTO	Ankara	4.63 40	⇓iP	Pn	13 06 37.2	+0.2
ANTO	Ankara	4.63 40	ePn	Pn	13 06 36.8	-0.2
ANTO	Ankara	4.63 40	eP	Pn	13 06 36.8	-0.2
ANTO	Ankara	4.63 40	eP	Pn	13 06 36.8	-0.2
LOD	Lodumlu	4.63 39	PN	Pn	13 06 39.1	+2.1
LOD	Lodumlu	4.63 39	ePn	Pn	13 06 39.1	+2.1
GULA	Gulagac	4.66 63	PN	Pn	13 06 39.2	+1.8
GULA	Gulagac	4.66 63	ePn	Pn	13 06 39.2	+1.8
KAVV	Kandilli-Istan	4.69 1	PN	Pn	13 06 38.2	+0.4
KAVV	Kandilli-Istan	4.69 1	ePn	Pn	13 06 38.2	+0.4
ISK	Istanbul-Kandi	4.70 1	PN	Pn	13 06 39.1	+1.3
ISK	Istanbul-Kandi	4.70 1	ePn	Pn	13 06 39.1	+1.3
ERIK	Erikli-Kesan	4.71 337	PN	Pn	13 06 37.9	0.0
ERIK	Erikli-Kesan	4.71 337	ePn	Pn	13 06 37.9	0.0
DID	Didima	4.71 286	P	Pn	13 06 39.2	+1.1
DID	Didima	4.71 286	P	Pn	13 06 39.4	+1.3
DID	Didima	4.71 286	P	Pn	13 06 39.4	+1.3
DID	Didima	4.71 286	P	Pn	13 06 39.4	+1.3
KRND	KRANIDI	4.76 284	P	Pn	13 06 40.5	+1.8
KRND	KRANIDI	4.76 284	P	Pn	13 06 40.5	+1.8
KYTH	Kithira	4.76 271	P	Pn	13 06 40.8	+1.9
KYTH	Kithira	4.76 271	P	Pn	13 06 40.6	+1.8
KYTH	Kithira	4.76 271	P	Pn	13 06 40.6	+1.8
KYTH	Kithira	4.76 271	P	Pn	13 06 40.6	+1.8
KTHR	Kythira	4.80 271	P	Pn	13 06 40.9	+1.6
KTHR	Kythira	4.80 271	P	Pn	13 06 40.9	+1.6
VILL	Villia	4.84 293	P	Pn	13 06 41.1	+1.2
VILL			S	Sn	13 07 36.1	+1.4
VILL	Villia	4.84 293	P	Pn	13 06 41.1	+1.2
VILL			S	Sn	13 07 36.1	+1.4
VLI	Veliai	4.85 276	P	Pn	13 06 41.4	+1.5
VLI	Veliai	4.85 276	P	Pn	13 06 41.5	+1.5
VLI			S	Sn	13 07 35.4	+0.5
VLI	Veliai	4.85 276	P	Pn	13 06 41.5	+1.5
VLI			S	Sn	13 07 35.4	+0.5
VLI	Veliai	4.85 276	P	Pn	13 06 41.5	+1.5
VLI			S	Sn	13 07 35.4	+0.5
ENEZ	Enez	4.88 334	PN	Pn	13 06 40.6	+0.2
ENEZ	Enez	4.88 334	ePn	Pn	13 06 40.6	+0.2
SMTH	Samothraki Isl	4.90 328	P	Pn	13 06 43.0	+2.4
SMTH	Samothraki Isl	4.90 328	P	Pn	13 06 40.5	-0.2
SMTH	Samothraki Isl	4.90 328	P	Pn	13 06 40.5	-0.2
SMTH	Samothraki Isl	4.90 328	P	Pn	13 06 40.5	-0.2
BR131	Keskin Array S	5.00 46	ePn	Pn	13 06 42.5	+0.4
BR131	Keskin Array S	5.00 46	ePn	Pn	13 06 42.5	+0.4
BRTR	Keskin Array B	5.00 46	P	Pn	13 06 42.6	+0.4
	comp=E,13nm,0.3s,baz=224,slow=15,SNR=210					
BRTR			S	Sn	13 07 38.2	-0.6
	comp=E,19nm,0.3s,baz=225,slow=26,SNR=6.4					
LOUT	Loutraki	5.04 291	P	Pn	13 06 43.4	+0.9
LOUT	Loutraki	5.04 291	P	Pn	13 06 43.4	+0.9
LTK	Loutraki	5.05 291	P	Pn	13 06 44.4	+1.6
LTK	Loutraki	5.05 291	P	Pn	13 06 44.4	+1.6
LTK	Loutraki	5.05 291	P	Pn	13 06 44.4	+1.6
LTK	Loutraki	5.05 291	P	Pn	13 06 44.4	+1.6
ALN	Alexandroupoli	5.06 334	PN	Pn	13 06 42.8	-0.1
ALN	Alexandroupoli	5.06 334	ePn	Pn	13 06 42.5	-0.4
ALN	Alexandroupoli	5.06 334	P	Pn	13 06 42.5	-0.4
ALN	Alexandroupoli	5.06 334	eP	Pn	13 06 42.5	-0.4
ALN	Alexandroupoli	5.06 334	P	Pn	13 06 42.5	-0.4
ALN	Alexandroupoli	5.06 334	ePn	Pn	13 06 42.8	-0.1
SKIA	Skiathos	5.16 304	P	Pn	13 06 45.8	+1.5
SKIA	Skiathos	5.16 304	P	Pn	13 06 45.8	+1.5
PROD	Prodromos	5.18 293	P	Pn	13 06 46.0	+1.5
PROD			S	Sn	13 07 44.2	+1.2
PROD	Prodromos	5.18 293	P	Pn	13 06 46.0	+1.5
PROD			S	Sn	13 07 44.2	+1.2
SMIA	Simia	5.20 301	P	Pn	13 06 46.3	+1.5
SMIA	Simia	5.20 301	P	Pn	13 06 46.3	+1.5
LKR	Lokris	5.25 298	P	Pn	13 06 47.0	+1.6
LKR	Lokris	5.25 298	P	Pn	13 06 47.4	+2.0
LKR			S	Sn	13 07 44.9	+0.2
LKR	Lokris	5.25 298	P	Pn	13 06 47.4	+2.0
LKR			S	Sn	13 07 44.9	+0.2
LKR	Lokris	5.25 298	P	Pn	13 06 47.1	+1.6
LKR			S	Sn	13 07 44.9	+0.2
DYR	Agios Nikonas	5.34 276	P	Pn	13 06 49.3	+2.6
DYR	Agios Nikonas	5.34 276	P	Pn	13 06 49.3	+2.6
VLX	Vlachokerasia	5.36 283	P	Pn	13 06 49.1	+2.1
VLX	Vlachokerasia	5.36 283	P	Pn	13 06 49.5	+2.4
VLX	Vlachokerasia	5.36 283	P	Pn	13 06 49.5	+2.4
VLX	Vlachokerasia	5.36 283	P	Pn	13 06 49.1	+2.1
PHSR	Pinarhisar	5.38 349	PN	Pn	13 06 46.6	-0.6
PHSR	Pinarhisar	5.38 349	ePn	Pn	13 06 46.6	-0.6
XOR	Xorichti	5.45 305	P	Pn	13 06 49.3	+1.1
XOR	Xorichti	5.45 305	P	Pn	13 06 49.3	+1.1
XOR	Xorichti	5.45 305	P	Pn	13 06 49.3	+1.1
PAIG	Paliouri	5.47 312	P	Pn	13 06 50.3	+1.9
PAIG	Paliouri	5.47 312	P	Pn	13 06 50.3	+1.9
PAIG	Paliouri	5.47 312	P	Pn	13 06 50.3	+1.9
PAIG	Paliouri	5.47 312	P	Pn	13 06 50.3	+1.9
RDO	Rodhopi	5.47 332	PN	Pn	13 06 49.4	+1.0
RDO	Rodhopi	5.47 332	P	Pn	13 06 48.5	+0.1
RDO	Rodhopi	5.47 332	P	Pn	13 06 48.5	+0.1
RDO	Rodhopi	5.47 332	P	Pn	13 06 48.5	+0.1
RDO	Rodhopi	5.47 332	ePn	Pn	13 06 49.4	+1.0
TRIP	Tripoli	5.47 284	P	Pn	13 06 51.2	+2.6
TRIP	Tripoli	5.47 284	P	Pn	13 06 51.2	+2.6
GUR	Goura	5.50 289	P	Pn	13 06 50.6	+1.6
GUR	Goura	5.50 289	P	Pn	13 06 50.6	+1.6
GUR	Goura	5.50 289	P	Pn	13 06 50.6	+1.6
DSF	Desfina	5.50 294	P	Pn	13 06 51.2	+2.2
DSF	Desfina	5.50 294	P	Pn	13 06 51.2	+2.2
DSF	Desfina	5.50 294	P	Pn	13 06 51.2	+2.2
OUR	Ouranopolis	5.56 317	PN	Pn	13 06 50.5	+0.8
OUR	Ouranopolis	5.56 317	ePn	Pn	13 06 50.5	+0.8
FYTO	Fytoko, Volos	5.64 304	P	Pn	13 06 52.4	+1.6
FYTO	Fytoko, Volos	5.64 304	P	Pn	13 06 52.4	+1.6
FYTO	Fytoko, Volos	5.64 304	P	Pn	13 06 52.4	+1.6
KLV	Kalavryta, Ach	5.68 289	P	Pn	13 06 53.9	+2.5
KLV	Kalavryta, Ach	5.68 289	P	Pn	13 06 53.0	+1.6
KLV	Kalavryta, Ach	5.68 289	P	Pn	13 06 53.0	+1.6
KLV	Kalavryta, Ach	5.68 289	P	Pn	13 06 53.0	+1.6
ITM	Ithomi	5.69 280	PN	Pn	13 06 53.4	+1.8
ITM	Ithomi	5.69 280	P	Pn	13 06 52.6	+1.1
ITM	Ithomi	5.69 280	ePn	Pn	13 06 54.4	+2.8
ITM	Ithomi	5.69 280	P	Pn	13 06 54.2	+2.6
ITM	Ithomi	5.69 280	P	Pn	13 06 53.2	+1.6
ITM	Ithomi	5.69 280	ePn	Pn	13 06 54.4	+2.8
SLUM	Salum	5.76 214	P	Pn	13 06 53.2	+0.7
	baz=215					
SLUM			S	Sn	13 07 56.8	-0.6
	baz=215					
SLUM	Salum	5.76 214	P	Pn	13 06 53.2	+0.7
KAVA	Kavala	5.78 325	P	Pn	13 06 52.9	+0.2
KAVA	Kavala	5.78 325	P	Pn	13 06 52.9	+0.2
KAVA	Kavala	5.78 325	P	Pn	13 06 52.9	+0.2
PYL	PYLOS	5.82 277	P	Pn	13 06 55.6	+2.3
PYL	PYLOS	5.82 277	P	Pn	13 06 55.6	+2.3
PYL	PYLOS	5.82 277	P	Pn	13 06 55.6	+2.3
TRIZ	Trizonia	5.83 292	P	Pn	13 06 55.8	+2.4
TRIZ	Trizonia	5.83 292	P	Pn	13 06 55.8	+2.4
SERG	Sergoula	5.85 293	P	Pn	13 06 55.9	+2.1
SERG	Sergoula	5.85 293	P	Pn	13 06 55.9	+2.1
LAKA	Lakka	5.86 291	P	Pn	13 06 56.0	+2.1
LAKA	Lakka	5.86 291	P	Pn	13 06 56.0	+2.1
LAKA	Lakka	5.86 291	P	Pn	13 06 56.0	+2.1
CORM	Corum	5.87 48	PN	Pn	13 06 55.9	+1.7
CORM	Corum	5.87 48	ePn	Pn	13 06 55.9	+1.7
AGG	Agios Georgios	5.88 299	PN	Pn	13 06 57.3	+3.2
AGG	Agios Georgios	5.88 299	ePn	Pn	13 06 55.8	+1.7
AGG	Agios Georgios	5.88 299	P	Pn	13 06 56.1	+2.0
AGG	Agios Georgios	5.88 299	eP	Pn	13 06 55.8	+1.7
AGG	Agios Georgios	5.88 299	eP	Pn	13 06 55.8	+1.7
PLG	Polygyros	5.89 314	P	Pn	13 06 55.8	+1.5
PLG	Polygyros	5.89 314	P	Pn	13 06 55.8	+1.5
PLG	Polygyros	5.89 314	P	Pn	13 06 55.8	+1.5
PLG	Polygyros	5.89 314	P	Pn	13 06 55.8	+1.5
AMT	Artemida-Makis	5.91 284	P	Pn	13 06 58.1	+3.5
KDZ	Kurdzhali	5.95 334	PN	Pn	13 06 56.1	+1.0
KDZ	Kurdzhali	5.95 334	ePn	Pn	13 06 56.1	+1.0
EFP	Efpalio	5.97 292	P	Pn	13 06 57.7	+2.3
EFP	Efpalio	5.97 292	P	Pn	13 06 57.7	+2.3
ILGA	Ilgaz	5.99 37	ePn	Pn	13 06 56.9	+1.0
ILGA	Ilgaz	5.99 37	ePn	Pn	13 06 56.8	+1.0
DRO	Drossia	5.99 288	P	Pn	13 06 58.6	+2.9
DRO	Drossia	5.99 288	P	Pn	13 06 58.6	+2.9
ANX	Ano Chora	6.01 294	P	Pn	13 06 58.3	+2.3
ANX	Ano Chora	6.01 294	P	Pn	13 06 58.3	+2.3
BHL	Bhannes	6.02 112	eP	Pn	13 06 54.5	-1.7
HNTI	Hanita	6.08 121	Pn	Pn	13 06 56.2	-0.7
HNTI			Sn	Sn	13 08 03.4	-1.9
HWQ	Hawqa	6.09 108	eP	Pn	13 06 57.0	-0.1
QRWL	Qaraoun	6.20 115	eP	Pn	13 06 58.3	-0.3
EVR	Evrytania	6.21 296	P	Pn	13 07 01.4	+2.7
EVR	Evrytania	6.21 296	P	Pn	13 07 01.4	+2.7
EVR	Evrytania	6.21 296	P	Pn	13 07 01.4	+2.7
OFRI	'Ofer	6.23 125	Pn	Pn	13 06 59.1	+0.1
OFRI			Sn	Sn	13 08 05.0	-4.0
HORT	Hortiatis	6.24 314	PN	Pn	13 07 01.7	+2.6
HORT	Hortiatis	6.24 314	P	Pn	13 07 00.2	+1.1
HORT	Hortiatis	6.24 314	P	Pn	13 07 00.2	+1.1
HORT	Hortiatis	6.24 314	P	Pn	13 07 00.2	+1.1
HORT	Hortiatis	6.24 314	ePn	Pn	13 07 01.7	+2.6
MMA0B	Mount Meron ar	6.28 120	Pn	Pn	13 06 59.0	-0.7
MMAI	Mount Meron Ar	6.28 120	P	Pn	13 06 59.2	-0.5
	comp=E,220nm,0.3s,baz=300,slow=13,SNR=230					
MMAI			S	Sn	13 08 07.6	-2.7
	comp=E,91nm,0.3s,baz=307,slow=20,SNR=5.5					
MMAI			LR	LR	13 10 08.1	
	comp=E,2µm,21.3s,baz=310,slow=44					
BLGI	Bet Lehem HaGe	6.30 123	Pn	Pn	13 06 59.6	-0.3
LIT	Litokhoron	6.30 308	ePn	Pn	13 07 01.7	+1.8
LIT	Litokhoron	6.30 308	P	Pn	13 07 01.8	+1.8
LIT	Litokhoron	6.30 308	eP	Pn	13 07 01.7	+1.8
LIT	Litokhoron	6.30 308	eP	Pn	13 07 01.7	+1.8
SRS	Serrai	6.33 320	P	Pn	13 07 01.7	+1.4
SRS			pmax	pmax		
	comp=Z,63nm,0.6s					
SRS	Serrai	6.33 320	P	Pn	13 07 01.7	+1.4
	comp=Z,63nm,0.6s					
THE	Thessaloniki	6.34 314	P	Pn	13 07 01.8	+1.4
THE	Thessaloniki	6.34 314	P	Pn	13 07 01.8	+1.4
RCY	Rachaya	6.34 115	eP	Pn	13 06 59.9	-0.7
SHBL	Chebaa	6.35 116	eP	Pn	13 07 00.3	-0.3
NVR	Nevrokopi	6.37 323	P	Pn	13 07 01.3	+0.5
NVR	Nevrokopi	6.37 323	P	Pn	13 07 01.3	+0.5
NVR	Nevrokopi	6.37 323	P	Pn	13 07 01.3	+0.5
KSDI	Kefar Szold	6.37 118	Pn	Pn	13 07 00.4	-0.4
SLTI	Sal'it	6.51 127	Pn	Pn	13 07 02.2	-0.6
KSHT	Keshet	6.58 119	Pn	Pn	13 07 04.0	+0.1
MMLI	Mount Malkishu	6.63 124	PN	Pn	13 07 05.8	+1.3
MMLI	Mount Malkishu	6.63 124	Pn	Pn	13 07 04.3	-0.2
MMLI	Mount Malkishu	6.63 124	ePn	Pn	13 07 05.8	+1.3
RSH		6.70 142	P	Pn	13 07 05.0	-0.5
	baz=143					
RSH		6.70 142	P	Pn	13 07 04.9	-0.5
KNT	Kendrikon	6.73 317	P	Pn	13 07 07.1	+1.3
KNT	Kendrikon	6.73 317	P	Pn	13 07 07.1	+1.3
KNT	Kendrikon	6.73 317	P	Pn	13 07 07.1	+1.3
KNT	Kendrikon	6.73 317	P	Pn	13 07 07.1	+1.3
HMYD	Mayadein	6.73 166	P	Pn	13 07 06.2	+0.3
	baz=167					
HMYD	Mayadein	6.73 166	P	Pn	13 07 06.2	+0.3
SQR	Saqqara	6.73 163	P	Pn	13 07 06.2	+0.3
	baz=164					
SQR	Saqqara	6.73 163	P	Pn	13 07 06.2	+0.3
DSL	Palaion Diasel	6.81 296	P	Pn	13 07 10.8	+3.9
DSL	Palaion Diasel	6.81 296	P	Pn	13 07 10.8	+3.9
HMDT	Nahal Hemdat	6.81 125	Pn	Pn	13 07 06.3	-0.7
HMDT			Sn	Sn	13 08 21.3	-2.0
KOT	Kottamia	6.86 159	P	Pn	13 07 07.6	0.0
	baz=159					
KOT	Kottamia	6.86 159	P	Pn	13 07 07.6	0.0
HHAG	Hagoal	6.92 157	P	Pn	13 07 08.4	0.0
	baz=157					
HHAG	Hagoal	6.92 157	P	Pn	13 07 08.4	0.0
KPRO	Kipourio	6.97 303	P	Pn	13 07 11.0	+1.9
KPRO	Kipourio	6.97 303	P	Pn	13 07 11.0	+1.9
FSK	Fiskardo	6.99 290	P	Pn	13 07 13.7	+4.3
LKD2	Lefkada island	7.01 293	P	Pn	13 07 15.0	+5.3
LKD2	Lefkada island	7.01 293	P	Pn	13 07 15.0	+5.3
VAY	Valandovo	7.02 317	*i* Pn	Pn	13 07 12.0	+2.3
HSAF	As Saff	7.07 161	P	Pn	13 07 10.2	-0.4
	baz=162					
HSAF	As Saff	7.07 161	P	Pn	13 07 10.2	-0.4
KZIT	Kziot	7.09 139	Pn	Pn	13 07 10.2	-0.6
GLL	Jalalah	7.15 160	P	Pn	13 07 11.4	-0.3
	baz=161					
GLL	Jalalah	7.15 160	P	Pn	13 07 11.4	-0.3
YTIR	Yattir	7.16 132	Pn	Pn	13 07 11.5	-0.2
DSI	Dead Sea	7.17 130	Pn	Pn	13 07 11.7	-0.2
MZDA	Masada	7.34 132	Pn	Pn	13 07 14.2	+0.1
FNA	Florina	7.39 309	PN	Pn	13 07 15.5	+0.6
FNA	Florina	7.39 309	ePn	Pn	13 07 16.9	+2.0
FNA	Florina	7.39 309	P	Pn	13 07 17.6	+2.7
FNA	Florina	7.39 309	eP	Pn	13 07 16.9	+2.0
FNA	Florina	7.39 309	ePn	Pn	13 07 15.5	+0.6
FNA	Florina	7.39 309	eP	Pn	13 07 16.9	+2.0
STIP	Stip	7.48 317	*i* Pn	Pn	13 07 15.8	-0.3
IGT	Igoumenitsa	7.50 298	P	Pn	13 07 20.8	+4.4
RMNI	Mount Ramon	7.53 138	Pn	Pn	13 07 15.9	-0.9
BIA	Bitola	7.56 310	*i* Pn	Pn	13 07 21.7	+4.6
VTS	Vitosha	7.64 326	⇓*i*P	Pn	13 07 19.2	+0.9
VTS	Vitosha	7.64 326	S	Sn	13 08 42.9	-0.8
VTS	Vitosha	7.64 326	ePn	Pn	13 07 19.2	+0.9
VTS	Vitosha	7.64 326	eP	Pn	13 07 19.3	+0.9
VTS	Vitosha	7.64 326	ePn	Pn	13 07 19.2	+0.9
HNKL	Nakhl	7.68 145	P	Pn	13 07 17.9	-1.0
	baz=146					
SWA2		7.68 203	P	Pn	13 07 19.1	+0.2
	baz=205					
SWA2			AMP		13 08 00.0	
	baz=205					
SWA2		7.68 203	P	Pn	13 07 19.1	+0.2
ZNM	Zenema	7.71 154	P	Pn	13 07 19.4	+0.1
	baz=154					
ZNM	Zenema	7.71 154	P	Pn	13 07 19.4	+0.1
ZFRI	Zfri	7.79 136	Pn	Pn	13 07 18.9	-1.4
ICOR	Ion Corvin	7.79 354	⇑*i*P	Pn	13 07 20.8	+0.5
MALT	Malatya	7.80 73	PN	Pn	13 07 22.3	+1.7
MALT	Malatya	7.80 73	ePn	Pn	13 07 22.3	+1.7
KRUS	Krusevo	7.81 312	*i* Pn	Pn	13 07 24.1	+3.4
PRNI	Paran	7.85 138	Pn	Pn	13 07 20.0	-1.2
KRMI	Paran Flat	7.89 141	Pn	Pn	13 07 21.4	-0.3
OHR	Ohrid	7.94 309	*i* Pn	Pn	13 07 25.6	+3.3
OHR	Ohrid	7.94 309	P	Pn	13 07 25.3	+2.9
OHR			pmax	pmax		
	comp=Z,206nm,1.0s					
OHR	Ohrid	7.94 309	P	Pn	13 07 25.3	+2.9
	comp=Z,206nm,1.0s					
KEK	Kerkira	7.95 298	P	Pn	13 07 25.4	+2.8
KEK	Kerkira	7.95 298	P	Pn	13 07 25.4	+2.8
KEK	Kerkira	7.95 298	P	Pn	13 07 25.4	+2.8
NBNS	Bani Suef	7.97 165	P	Pn	13 07 22.5	-0.3
	baz=165					
NBNS			S	Sn	13 08 47.0	-4.8
	baz=165					
NBNS	Bani Suef	7.97 165	P	Pn	13 07 22.5	-0.3
SKO	Skopje	8.08 316	*i* Pn	Pn	13 07 26.4	+2.0
TIRR	Tirgusor	8.10 357	⇓*i*P	Pn	13 07 24.5	0.0
TIRR	Tirgusor	8.10 357	S	Sn	13 08 49.6	-5.1
TIRR	Tirgusor	8.10 357	ePn	Pn	13 07 24.2	-0.3
TIRR	Tirgusor	8.10 357	eP	Pn	13 07 24.2	-0.3
TIRR	Tirgusor	8.10 357	eP	Pn	13 07 24.2	-0.3
HRFI	Mount Harif	8.11 139	PN	Pn	13 07 25.1	+0.3
HRFI	Mount Harif	8.11 139	Pn	Pn	13 07 23.7	-1.1
HRFI	Mount Harif	8.11 139	ePn	Pn	13 07 25.1	+0.3
TLB	Topalu	8.24 355	⇑*i*P	Pn	13 07 26.0	-0.5
TLB	Topalu	8.24 355	S	Sn	13 08 53.3	-5.0
MBRI	Mt Berech	8.24 141	Pn	Pn	13 07 25.4	-1.3
HARR	Harsova	8.35 355	⇑*i*P	Pn	13 07 28.9	+0.9
EIL	Elat	8.36 141	P	Pn	13 07 28.3	+0.1
	comp=Z,11nm,0.3s,baz=356,slow=5.5,SNR=75					
EIL			S	Sn	13 08 58.0	-3.5
	comp=Z,26nm,0.3s,baz=107,slow=22,SNR=6.0					
EIL			LR	LR	13 12 05.4	
	comp=Z,431nm,20.6s,baz=306,slow=47					
EIL	Elat	8.36 141	Pn	Pn	13 07 27.1	-1.1
HBST	Basata	8.63 144	P	Pn	13 07 31.6	-0.3
	baz=144					
HBST	Basata	8.63 144	P	Pn	13 07 31.6	-0.3
HQLS		8.72 142	P	Pn	13 07 33.3	+0.1
HQLS			S	Sn	13 09 04.0	-6.3
NUB		8.75 145	P	Pn	13 07 33.7	+0.2
	baz=146					
TLCR		8.81 359	⇓*i*P	Pn	13 07 35.1	+0.8
CFR	Carcaliu	8.83 356	⇓*i*P	Pn	13 07 34.7	+0.2
CFR	Carcaliu	8.83 356	P	Pn	13 07 34.4	-0.1
CFR			pmax	pmax		
	comp=Z,39nm,0.5s					
CFR	Carcaliu	8.83 356	P	Pn	13 07 34.4	-0.1
	comp=Z,39nm,0.5s					
HAQS	Haql	8.86 144	P	Pn	13 07 33.9	-1.1
HKAT	Jabal Katrina	8.90 150	P	Pn	13 07 35.3	-0.5
	baz=150					
HKAT	Jabal Katrina	8.90 150	P	Pn	13 07 35.3	-0.5
SEV	Sevastopol'	8.93 22	eP	Pn	13 07 33.7	-2.2
SEV	Sevastopol'	8.93 22	eP	Pn	13 07 33.7	-2.2
ISR	Istrita	8.93 349	⇓*i*P	Pn	13 07 38.1	+2.1
YAL	Yalta	9.03 24	eP	Pn	13 07 39.5	+2.2
YAL			eS	Sn	13 09 16.6	-1.1
YAL	Yalta	9.03 24	eP	Pn	13 07 39.5	+2.2
YAL			eS	Sn	13 09 16.6	-1.1
ALU	Alushta	9.29 25	eP	Pn	13 07 44.0	+3.2
ALU			eS	Sn	13 09 23.4	-0.6
PVY	Plav	9.32 315	⇑*i*Pn	Pn	13 07 43.2	+1.7
PVY			eSn	Sn	13 09 23.6	-1.5
PVY	Plav	9.32 315	⇑*i*Pn	Pn	13 07 43.2	+1.7
PVY			eSn	Sn	13 09 23.6	-1.5
ULC	Ulcinj	9.38 310	⇑*i*Pn	Pn	13 07 44.2	+2.1
ULC			eSn	Sn	13 09 25.1	-1.2
ULC	Ulcinj	9.38

PLE *e*Sn **Sn** **13 09 41.8 -2.7**
TESR Tescani 10.29 351⇑ *i*P **Pn** **13 07 53.9 -0.6**
UPM Unac-Piva 10.31 315⇓ *i*Pn **Pn** **13 07 57.1 +2.1**
UPM *e*Sn **Sn** **13 09 47.1 -2.2**
UPM Unac-Piva 10.31 315⇓ *i*Pn **Pn** **13 07 57.1 +2.1**
UPM *e*Sn **Sn** **13 09 47.1 -2.2**
DIVS Divibare 10.32 321 *e*Pn **Pn** **13 07 52.9 -2.1**
DIVS Divibare 10.32 321 *e*Pn **Pn** **13 07 52.9 -2.1**
BRY Bratogost 10.34 312⇓ *i*Pn **Pn** **13 07 57.9 +2.5**
BRY *e*Sn **Sn** **13 09 48.5 -1.6**
BRY Bratogost 10.34 312⇓ *i*Pn **Pn** **13 07 57.9 +2.5**
BRY *e*Sn **Sn** **13 09 48.5 -1.6**
MATE Matera 10.50 298⇑ *i*P **Pn** **13 07 58.2 +0.7**
MILM Milestii Mici 10.55 360⇓ *i*P **Pn** **13 07 58.3 +0.2**
CEL Celeste 10.57 284 *e*Pn **Pn** **13 07 58.5 0.0**
CEL Celeste 10.57 284 *e*Pn **Pn** **13 07 58.5 0.0**
ANN Anapa 10.61 35 *e*P **Pn** **13 08 01.4 +2.5**
ANN *e*S **Sn** **13 10 00.8 +4.4**
ANN MLR MLR
comp=Z,332nm,9.0s
ANN Anapa 10.61 35 *e*P **Pn** **13 08 01.4 +2.5**
BEO Beograd 10.61 325 *e*Pn **Pn** **13 07 58.4 -0.5**
BEO Beograd 10.61 325 *e*P **Pn** **13 07 58.4 -0.5**
KIS Kishinev 10.63 360 *e*P Pn 13 08 07.0 +7.8
KIS *e*S Sn 13 10 08.0 +11
KIS *e*Li 13 11 04.0
KIS *e*LQ LQ 13 11 46.0
KIS LRM MLR 13 12 44.0
comp=Z,1μm,13.0s
KIS Kishinev 10.63 360 *e*P Pn 13 08 07.0 +7.8
KIS *e*S Sn 13 10 08.0 +11
KIS MLR MLR
comp=Z,1μm,13.0s
KIS MLR MLR
comp=N,1μm,15.0s
KIS MLR MLR
comp=Z,1μm,16.0s
KIS Kishinev 10.63 360 *e*P Pn 13 08 07.0 +7.8
KIS *e*S Sn 13 10 08.0 +11
BZS Buzias 10.77 331⇑ *i*P **Pn** **13 08 02.2 +1.1**
STON Ston 10.83 310 *e*Pn **Pn** **13 08 04.4 +2.4**
STON Ston 10.83 310 *e*Pn **Pn** **13 08 04.4 +2.4**
CUC Castrocucco 10.95 293 *e*Pn **Pn** **13 08 04.7 +1.0**
CUC Castrocucco 10.95 293 *e*Pn **Pn** **13 08 04.7 +1.0**
SOC Sochi 10.96 46 *e*P **Pn** **13 08 06.1 +2.3**
SOC *e* 13 10 09.6
SOC MLR MLR
comp=Z,482nm,11.0s
SOC Sochi 10.96 46 *e*P **Pn** **13 08 06.1 +2.3**
BURAR Bucovina Array 11.58 347⇑ *i*P **Pn** **13 08 12.9 +0.6**
BUR04 Bucovina Ar. S 11.58 347 *e*Pn **Pn** **13 08 11.2 -1.2**
BUR04 Bucovina Ar. S 11.58 347 *e*Pn **Pn** **13 08 11.1 -1.2**
BUR08 Bucovina Ar. S 11.61 347 *e*Pn **Pn** **13 08 11.9 -0.8**
BUR08 Bucovina Ar. S 11.61 347 *e*Pn **Pn** **13 08 11.9 -0.8**
VAE Valguarnera 11.69 280 P **Pn** **13 08 15.3 +1.5**
comp=Z,3.4nm,0.3s,baz=154,slow=6.3,SNR=4.4
VAE S **Sn** **13 10 22.6 -0.4**
comp=Z,13nm,0.3s,baz=281,slow=23,SNR=6.0
VAE LR LR 13 14 15.0
comp=Z,407nm,18.1s,baz=108,slow=45
SORM Soroca 11.77 358⇓ *i*P **Pn** **13 08 14.1 -0.7**
BLY Banja Luka 12.24 317⇑ *i*P **Pn** **13 08 22.3 +1.0**
BLY Banja Luka 12.24 317 *e*Pn **Pn** **13 08 21.7 +0.4**
BLY Banja Luka 12.24 317 *e*Pn **Pn** **13 08 21.7 +0.4**
AKH Akhalkalaki 12.40 62 *e*Pn **Pn** **13 08 24.1 +0.5**
AKH Akhalkalaki 12.40 62 *e*P **Pn** **13 08 24.1 +0.5**
AKH Akhalkalaki 12.40 62 *e*P **Pn** **13 08 24.1 +0.5**
NEY Neytrino 12.62 53⇓ *e*P **Pn** **13 08 26.7 +0.1**
NEY Neytrino 12.62 53 *e*P **Pn** **13 08 26.7 +0.1**
CLTB Caltabellotta 12.64 280 *e*Pn **Pn** **13 08 27.6 +0.8**
CLTB Caltabellotta 12.64 280 *e*Pn **Pn** **13 08 27.6 +0.8**
KIV Kislovodsk 12.95 50 *e*Pn **Pn** **13 08 31.6 +0.6**
KIV Kislovodsk 12.95 50 *e*P **Pn** **13 08 32.6 +1.6**
KIV *e*S **Sn** **13 10 55.5 +1.7**
KIV pmax pmax
comp=Z,11nm,1.0s
KIV MLR MLR
comp=Z,243nm,11.0s
KIV Kislovodsk 12.95 50 *e*Pn **Pn** **13 08 31.6 +0.6**
KIV Kislovodsk 12.95 50 *e*P **Pn** **13 08 32.6 +1.6**
comp=Z,11nm,1.0s
KIV *e*S **Sn** **13 10 55.5 +1.7**
comp=Z,243nm,11.0s
KVAR Kislovodsk Arr 12.96 50 LR LR 13 15 20.3
comp=Z,516nm,19.1s,baz=228,slow=46
KBZ Khabaz 12.97 51 P **Pn** **13 08 31.9 +0.8**
comp=Z,0.2nm,0.3s,baz=219,slow=13,SNR=3.1
KBZ LR LR 13 13 58.9
comp=Z,399nm,20.9s,baz=266,slow=39
GNI Garni 12.98 68 P **Pn** **13 08 32.0 +0.5**
comp=Z,1.0nm,0.3s,baz=74,slow=8.2,SNR=3.4
GNI LR LR 13 14 28.8
comp=Z,3μm,19.2s,baz=267,slow=42
GNI Garni 12.98 68⇑ *e*P **Pn** **13 08 29.1 -2.4**
GNI pmax pmax
comp=Z,45nm,1.2s
ZEI Tsey 13.19 56 *e*P **Pn** **13 08 39.1 +4.6**
ZEI pmax pmax
comp=Z,44nm,1.3s
UZH Uzhgorod 13.20 340 *e*P **Pn** **13 08 34.3 0.0**
UZH *e*S **Sn** **13 11 00.6 +0.9**
UZH MLR MLR
comp=Z,140nm,15.0s
UZH Uzhgorod 13.20 340 *e*P **Pn** **13 08 34.3 0.0**
UZH *e*S **Sn** **13 11 00.6 +0.9**
comp=Z,140nm,15.0s
NCK Nalchik 13.30 53⇑ *e*P **Pn** **13 08 38.1 +2.4**
NCK Nalchik 13.30 53 *e*P **Pn** **13 08 38.1 +2.4**
PSZ Piszkesteto 13.34 333⇑ *i*P **Pn** **13 08 37.0 +0.6**
PSZ Piszkesteto 13.34 333⇑ *e*Pn **Pn** **13 08 36.5 +0.1**
PSZ Piszkesteto 13.34 333 *e*Pn **Pn** **13 08 36.0 -0.4**
PSZ Piszkesteto 13.34 333 *e*P **Pn** **13 08 36.0 -0.4**
PSZ Piszkesteto 13.34 333 *e*P **Pn** **13 08 36.0 -0.4**
TBLG Delisi 13.39 62 *e*Pn **Pn** **13 08 37.4 +0.4**
TBLG Delisi 13.39 62 *e*P **Pn** **13 08 37.4 +0.4**
TBLG Delisi 13.39 62 *e*P **Pn** **13 08 37.4 +0.4**
AQU L'Aquila 13.43 301 *e*Pn **Pn** **13 08 37.6 +0.1**
AQU L'Aquila 13.43 301 *e*P **Pn** **13 08 37.6 +0.1**
AQU L'Aquila 13.43 301 *e*P **Pn** **13 08 37.6 +0.1**
NVLJ Novalja 13.47 312 *e*Pn **Pn** **13 08 41.0 +2.9**
NVLJ Novalja 13.47 312 *e*Pn **Pn** **13 08 40.9 +2.9**
KECS Kecovo 13.62 335 *e*P **P** **13 08 48.6 +0.2**
KECS Kecovo 13.62 335 *e*PN **P** **13 08 48.6 +0.2**
LVV L'vov 13.91 347 *e*P **Pn** **13 08 46.6 +2.5**
LVV *e*S **Sn** **13 11 20.7 +3.5**
LVV MLR MLR
comp=Z,700nm,10.0s
KWP Kalwaria Pacla 14.02 343 *e*Pn **P** **13 08 52.4 -0.5**
KWP Kalwaria Pacla 14.02 343 *e*Pn **Pn** **13 08 45.3 -0.2**
KWP Kalwaria Pacla 14.02 343 *e*P **Pn** **13 08 45.3 -0.2**
KWP Kalwaria Pacla 14.02 343 *e*Pn **Pn** **13 08 45.3 -0.2**
VYHS Vyhne 14.22 332 *e*P **P** **13 08 54.4 -0.8**
VYHS Vyhne 14.22 332 *e*PN **P** **13 08 54.4 -0.8**
VYHS Vyhne 14.22 332 *e*P **P** **13 08 54.4 -0.8**
AK11 Malin Array Si 14.31 1 *e*Pn **Pn** **13 08 48.3 -1.1**
KIEV Kiev 14.33 1 *e*Pn **Pn** **13 08 48.2 -1.4**
KIEV Kiev 14.33 1 *i* P Pn 13 08 37.0 -13
SNR=7.2
KIEV Kiev 14.33 1⇓ *e*P **Pn** **13 08 49.2 -0.5**
KIEV pmax pmax
comp=Z,6.0nm,1.1s
KIEV Kiev 14.33 1 *e*Pn **Pn** **13 08 48.2 -1.4**
AKASG Malin Array Be 14.33 1 P **Pn** **13 08 49.0 -0.7**
comp=Z,3.1nm,0.3s,baz=174,slow=11,SNR=9.9
AKASG LR LR 13 15 01.6
comp=Z,748nm,18.4s,baz=185,slow=40
NIE Niedzica 14.49 337 *e*Pn **Pn** **13 08 53.8 +1.9**
NIE Niedzica 14.49 337 *e*P **Pn** **13 08 53.8 +1.9**
PERS Pernice 14.56 319 *e*P **P** **13 08 58.0 -1.0**
SOKA Soboth 14.63 319 Pn **Pn** **13 08 56.6 +2.7**
comp=Z,10nm,0.8s
GROC Groznyy 14.63 57 *e*P **Pn** **13 08 52.2 -1.7**
GROC *e*S **Sn** **13 11 34.7 -0.1**
GROC pmax pmax
comp=Z,10.0nm,0.4s
MODS Modra-Piesok 14.76 328 *e*P **P** **13 09 00.0 -1.1**
MODS Modra-Piesok 14.76 328 *e*PN **P** **13 09 00.0 -1.1**
MODS Modra-Piesok 14.76 328 *e*P **P** **13 09 00.0 -1.1**
ARSA Arzberg 14.76 322 *i* P **P** **13 09 01.8 +0.6**
comp=Z,16nm,0.9s
ARSA Arzberg 14.76 322 P **P** **13 09 01.8 +0.6**
comp=Z,16nm,0.9s
OBKA Obir 14.79 318 P **P** **13 09 00.0 -1.5**
comp=Z,0.4nm,0.3s
OBKA Obir 14.79 318 P **P** **13 09 00.0 -1.5**
comp=Z,0.4nm,0.3s
SMOL Smolenice 14.80 329 P **Pn** **13 08 58.5 +2.4**
SMOL pmax pmax
comp=Z,50nm,0.9s
SMOL Smolenice 14.80 329 P **Pn** **13 08 58.5 +2.4**
comp=Z,50nm,0.9s
JAVC Velka Javorina 14.97 330 *e*PN **Pn** **13 08 59.1 +0.6**
CONA Conrad Observa 15.06 324 *i* Pn **Pn** **13 09 01.1 +1.4**
comp=Z,9.8nm,1.1s
OJC Ojcow 15.35 337 *e*Pn P 13 09 14.2 +6.6
OJC *e*Sn S 13 12 24.2 +17
OJC Ojcow 15.35 337 *e*Pn **Pn** **13 09 02.6 -0.8**
comp=Z,61nm,1.7s
OJC Ojcow 15.35 337 *e*P **Pn** **13 09 02.6 -0.8**
OJC pmax pmax
comp=Z,61nm,1.7s
MYKA Terra Mystica 15.36 317 P **P** **13 09 09.2 +1.3**
comp=Z,26nm,1.5s
MYKA Terra Mystica 15.36 317 P **P** **13 09 09.2 +1.3**
comp=Z,26nm,1.5s
AKT Akhty 15.48 65 *e*P **Pn** **13 09 04.4 -0.8**
AKT pmax pmax
comp=Z,7.0nm,0.9s
OKC Ostrava-Krasne 15.58 333 AMS AMS 13 16 10.0
comp=Z,900nm,13.2s
KRUC Moravsky 15.66 328 *e*PN **P** **13 09 10.3 -0.8**
MAK Makhachkala 15.72 60 *e*P **Pn** **13 09 08.3 +0.1**
MAK *e*S **Sn** **13 12 01.3 0.0**
MAK pmax pmax
comp=Z,101nm,1.3s
MAK MLR MLR
comp=Z,560nm,14.0s
MORC Moravsky Berou 15.76 332 *e*Pn **Pn** **13 09 08.6 -0.1**
comp=Z,66nm,0.9s
MORC Moravsky Berou 15.76 332 *e*P **Pn** **13 09 08.6 -0.1**
MORC pmax pmax
comp=Z,66nm,0.9s
MORC Moravsky Berou 15.76 332 *e*Pn **Pn** **13 09 08.6 -0.1**
comp=Z,66nm,0.9s
MORC Moravsky Berou 15.76 332 *e*PN **P** **13 09 11.0 -1.3**
VRAC Vranov 15.77 329 LR LR 13 15 42.1
comp=Z,713nm,18.5s,baz=140,slow=39
VRAC Vranov 15.77 329 *e*PN **P** **13 09 11.1 -1.2**
KBA Koelnbreinsper 15.79 318 *e*P **P** **13 09 12.9 +0.2**
comp=Z,19nm,0.7s
KBA Koelnbreinsper 15.79 318 P **P** **13 09 13.3 +0.5**
KBA pmax pmax
comp=Z,84nm,1.2s
KBA Koelnbreinsper 15.79 318 P **P** **13 09 13.3 +0.5**
comp=Z,84nm,1.2s
MOA Molln 15.79 321 *i* Pn **Pn** **13 09 09.4 +0.2**
comp=Z,8.7nm,0.8s
KEST Kesra 15.87 274 P **Pn** **13 09 10.8 +0.6**
comp=Z,0.9nm,0.3s,baz=17,slow=3.9,SNR=20
KEST Kesra 15.87 274 *e*Pn **Pn** **13 09 10.2 0.0**
comp=Z,85nm,1.0s
KEST Kesra 15.87 274 *e*Pn **Pn** **13 09 10.2 0.0**
comp=Z,85nm,1.0s
TAMR Tamra 15.93 278 *e*Pn **Pn** **13 09 08.5 -2.4**
comp=Z,97nm,1.1s
TAMR Tamra 15.93 278 *e*Pn **Pn** **13 09 08.5 -2.4**
comp=Z,97nm,1.1s
ABTA Abfaltersbach 16.06 315 *e*P **P** **13 09 16.6 +0.9**
comp=Z,12nm,0.8s
ABTA Abfaltersbach 16.06 315 P **P** **13 09 16.6 +0.9**
comp=Z,12nm,0.8s
VLC Villacollemand 16.14 305 *e*Pn **Pn** **13 09 14.7 +1.0**
comp=Z,72nm,1.3s
VLC Villacollemand 16.14 305 *e*Pn **Pn** **13 09 14.7 +1.0**
comp=Z,72nm,1.3s
THTN Thala 16.42 273 *e*Pn **P** **13 09 19.5 -0.3**
comp=Z,82nm,1.4s
THTN Thala 16.42 273 *e*Pn **P** **13 09 19.5 -0.3**
comp=Z,82nm,1.4s
BEL Belsk 16.52 342 *e*Pn P 13 09 28.8 +8.1
BEL Belsk 16.52 342 *e*P P 13 09 28.8 +8.2
VSR Storozhevoye 16.55 23 *e*P **P** **13 09 21.3 +0.3**
VSR pmax pmax
comp=Z,20nm,0.6s
VSR Storozhevoye 16.55 23 *e*P **P** **13 09 21.3 +0.3**
comp=Z,20nm,0.6s
DPC Dobruska-Polom 16.69 331 *e*P **P** **13 09 23.5 +0.9**
DPC *ex* x 13 09 37.1
DPC AMS AMS 13 16 40.0
comp=Z,700nm,9.9s
DPC Dobruska-Polom 16.69 331 *e*P **P** **13 09 23.5 +0.9**
DPC MLR MLR
comp=Z,700nm,9.9s
DPC Dobruska-Polom 16.69 331 *e*P **P** **13 09 23.5 +0.9**
comp=Z,700nm,9.9s
GEA0 GERESS Array S 16.73 323 *e*Pn **Pn** **13 09 21.3 +0.2**
GEA0 GERESS Array S 16.73 323 *e*Pn **Pn** **13 09 21.3 +0.2**
GEC2 GERESS Array S 16.74 323 *e*Pn **Pn** **13 09 19.3 -1.9**
comp=Z,106nm,1.2s
GEC2 GERESS Array S 16.74 323 *e*P **Pn** **13 09 19.3 -1.9**
GEC2 pmax pmax
comp=Z,106nm,1.2s
GEC2 GERESS Array S 16.74 323 *e*Pn **Pn** **13 09 19.3 -1.9**
comp=Z,106nm,1.2s
GERES GERESS Array B 16.74 323 P **Pn** **13 09 21.8 +0.6**
comp=Z,0.7nm,0.3s,baz=134,slow=11,SNR=30
GERES LR LR 13 16 33.4
comp=Z,954nm,18.5s,baz=136,slow=40
WTTA Wattenberg 16.85 316 *e*Pn **P** **13 09 27.5 +3.0**
comp=Z,31nm,1.2s
WATA Walderalm 16.92 316 *e*P **P** **13 09 26.7 +1.4**
comp=Z,14nm,0.7s
WATA Walderalm 16.92 316 P **P** **13 09 26.7 +1.4**
comp=Z,14nm,0.7s
UPC Upice 16.94 331 *e*S **Sn** **13 12 33.2 +2.6**
UPC AMS AMS 13 18 30.0
comp=Z,600nm,10.6s
VORR Voronezh 16.96 22 P **P** **13 09 29.0 +3.5**
VORR pmax pmax
comp=Z,350nm,1.2s
KHC Kasperske Hory 16.99 323 *e*P **P** **13 09 26.6 +0.7**
KHC *ex* x 13 09 40.0
KHC *e*S **Sn** **13 12 36.2 +4.2**
KHC AMS AMS 13 16 40.0
comp=Z,2μm,12.0s
KHC Kasperske Hory 16.99 323 *e*Pn **Pn** **13 09 24.3 -0.1**
comp=Z,28nm,1.3s
KHC Kasperske Hory 16.99 323 *e*P **Pn** **13 09 24.3 -0.1**
KHC pmax pmax
comp=Z,28nm,1.3s
KHC Kasperske Hory 16.99 323 *e*P **Pn** **13 09 24.3 -0.1**
comp=Z,28nm,1.3s
GOPC GO Pecny, Ondr 16.99 327 *e*P **P** **13 09 27.0 +1.1**
GOPC *ex* x 13 09 39.9
GOPC AMS AMS 13 16 40.0
comp=Z,900nm,13.3s
GOPC GO Pecny, Ondr 16.99 327 *e*P **P** **13 09 27.0 +1.1**
GOPC MLR MLR
comp=Z,900nm,13.3s
KSP Ksiaz 17.09 332 *e*Pn **P** **13 09 29.3 +2.3**
KSP *e*Sn S 13 12 54.0 +11
KSP Ksiaz 17.09 332 *e*P **P** **13 09 29.3 +2.3**
PRU Pruhonice 17.16 327 *e*P **P** **13 09 28.0 +0.3**
PRU *e*S **S** **13 12 42.5 -1.9**
PRU AMS AMS 13 16 10.0
comp=Z,800nm,11.6s
PRU Pruhonice 17.16 327 *e*P **P** **13 09 28.0 +0.3**
PRU *e*S **S** **13 12 42.5 -1.9**
PRU MLR MLR
comp=Z,800nm,11.6s
PRU Pruhonice 17.16 327 *e*P **P** **13 09 28.0 +0.3**
comp=Z,800nm,11.6s
PRU *e*S **S** **13 12 42.5 -1.9**
MOTA Moosalm 17.19 315 *e*P **Pn** **13 09 27.4 +0.4**
comp=Z,18nm,0.7s,SNR=7.1
MOTA Moosalm 17.19 315 P **Pn** **13 09 27.4 +0.4**
comp=Z,18nm,0.7s,SNR=7.1
FETA Feichten 17.23 314 *e*P **P** **13 09 29.9 +1.1**
comp=Z,70nm,1.1s,SNR=28
FUORN Ofenpass-Fuorn 17.30 312 *e*Pn **Pn** **13 09 28.7 +0.2**
comp=Z,59nm,1.0s
FUORN Ofenpass-Fuorn 17.30 312 *e*Pn **Pn** **13 09 28.7 +0.2**
comp=Z,59nm,1.0s
WET Wettzell 17.34 322 P **P** **13 09 30.1 +0.3**
WET pmax pmax
comp=Z,62nm,0.8s
RETA Reutte 17.46 315 *e*P **P** **13 09 30.9 -0.3**
comp=Z,7.3nm,0.6s
RETA Reutte 17.46 315 P **P** **13 09 30.9 -0.3**
comp=Z,7.3nm,0.6s
PVCC Panska Ves 17.54 328 AMS AMS 13 17 10.0
comp=Z,1μm,19.9s
FUR Furstenfeldbru 17.56 318 P **Pn** **13 09 31.8 +0.4**
FUR pmax pmax
comp=Z,37nm,0.9s
FUR Furstenfeldbru 17.56 318 P **Pn** **13 09 31.8 +0.4**
comp=Z,37nm,0.9s
DAVOX Davos/Dischmat 17.61 312 P **P** **13 09 33.1 +0.1**
comp=Z,1.0nm,0.3s,baz=134,slow=16,SNR=11
DAVOX LR LR 13 17 30.3
comp=Z,2μm,18.0s,baz=103,slow=41
TUE Stuetta 17.79 311 *e*Pn **Pn** **13 09 34.1 -0.3**
comp=Z,47nm,1.1s
TUE Stuetta 17.79 311 *e*Pn **Pn** **13 09 34.1 -0.3**
comp=Z,47nm,1.1s
DAVA Damuels 17.87 314 *e*P **P** **13 09 35.7 -0.1**
comp=Z,7.3nm,0.4s
DAVA Damuels 17.87 314 P **P** **13 09 35.7 -0.1**
comp=Z,7.3nm,0.4s
SBF Sospel 18.05 301 *e*P **Pn** **13 09 35.8 -1.7**
SBF pmax pmax
comp=Z,48nm,0.9s
SBF Sospel 18.05 301 *e*P **Pn** **13 09 35.8 -1.7**
comp=Z,48nm,0.9s
BRG Berggiesshubel 18.07 328 *e*P **Pn** **13 09 37.3 -0.3**
comp=Z,13nm,0.8s
BRG *e* 13 09 46.5
comp=Z,27nm,1.1s
BRG S **Sn** **13 13 00.0 +2.0**
comp=N,729nm,10.4s
comp=E,637nm,17.9s
comp=Z,826nm,12.2s
BRG Berggiesshubel 18.07 328 *e*P **Pn** **13 09 37.3 -0.3**
BRG S **Sn** **13 13 00.0 +2.0**
BRG pmax pmax
comp=Z,13nm,0.8s
BRG pmax pmax
comp=Z,27nm,1.1s
BRG MLR MLR
comp=N,729nm,10.4s
BRG MLR MLR
comp=E,637nm,17.9s
BRG MLR MLR
comp=Z,826nm,12.2s
BRG Berggiesshubel 18.07 328 *e*P **Pn** **13 09 37.3 -0.3**
comp=Z,27nm,1.1s
BRG S **Sn** **13 13 00.0 +2.0**
comp=Z,826nm,12.2s
SUW Suwalki 18.10 349 *e*Pn **Pn** **13 09 36.6 -1.3**
SUW Suwalki 18.10 349 *e*Pn **Pn** **13 09 36.9 -1.0**
comp=Z,139nm,1.2s
SUW Suwalki 18.10 349 *e*P **Pn** **13 09 36.9 -1.0**
SUW pmax pmax
comp=Z,139nm,1.2s
NKC Novy Kostel 18.28 324 *e*P **Pn** **13 09 41.3 +1.1**
NKC AMS AMS 13 17 30.0
comp=Z,1μm,13.8s
NKC Novy Kostel 18.28 324 *e*P **Pn** **13 09 41.3 +1.1**
NKC MLR MLR
comp=Z,1μm,13.8s
GRF Grafenberg Arr 18.52 322 P **P** **13 09 42.5 -0.3**
GRF pmax pmax
comp=Z,56nm,0.9s
GRFO Grafenberg 18.52 322 *e*P **P** **13 09 41.3 -1.4**
comp=Z,72nm,1.2s
GRFO Grafenberg 18.52 322 *e*P **P** **13 09 41.3 -1.4**
GRFO pmax pmax
comp=Z,72nm,1.2s
GRFO Grafenberg 18.52 322 *e*P **P** **13 09 41.3 -1.4**
comp=Z,72nm,1.2s
CLL Collm 18.79 328 *e*P **Pn** **13 09 47.0 +0.7**
comp=Z,11nm,0.7s
CLL *i* sP **pP** **13 09 54.9 +0.1**
comp=Z,31nm,1.1s
CLL *e*PPP PPP 13 10 06.0
CLL *e*S **S** **13 13 18.0 +0.6**
CLL LmH 13 16 00.0
comp=N,900nm,21.4s
CLL LmH 13 16 00.0
comp=E,1μm,19.7s
CLL LmV 13 18 00.0
comp=Z,800nm,18.9s
CLL Collm 18.79 328 *e*P **P** **13 09 44.2 -1.4**
comp=Z,19nm,0.9s
CLL Collm 18.79 328 *e*P **Pn** **13 09 47.0 +0.7**
CLL *e*S **S** **13 13 18.0 +0.6**
CLL pmax pmax
comp=Z,11nm,0.7s
CLL MLR MLR
comp=Z,800nm,18.9s
CLL Collm 18.79 328 *e*P **P** **13 09 44.2 -1.4**
comp=Z,19nm,0.9s
SLE Schleitheim 18.92 313 P **Pn** **13 09 47.7 -0.3**
SLE pmax pmax
comp=Z,63nm,1.0s
SLE Schleitheim 18.92 313 P **Pn** **13 09 47.7 -0.3**
comp=Z,63nm,1.0s
BNI Bardonecchia 18.94 304 *e*P **Pn** **13 09 48.2 -0.1**
comp=Z,76nm,1.4s
BNI Bardonecchia 18.94 304 *e*P **Pn** **13 09 48.2 -0.1**
BNI pmax pmax
comp=Z,76nm,1.4s
BNI Bardonecchia 18.94 304 *e*P **Pn** **13 09 48.2 -0.1**
comp=Z,76nm,1.4s
MOX Moxa 18.95 324 P **Pn** **13 09 48.1 -0.2**
MOX pmax pmax
comp=Z,70nm,1.0s
IDID Didziasalis 19.02 356 *e*P **P** **13 09 47.4 -0.7**
IDID IAmb IAmb 13 10 04.4
comp=Z,8.3nm,0.7s
IDID Didziasalis 19.02 356 *e*P **P** **13 09 47.4 -0.7**
SNR=34
SENIN Lac Senin/Sane 19.02 308 *e*P **P** **13 09 46.8 -1.7**
comp=Z,96nm,1.1s
SENIN Lac Senin/Sane 19.02 308 *e*P **P** **13 09 46.8 -1.7**
comp=Z,96nm,1.1s
LPG La Plagne 19.04 305 *e*P **P** **13 09 48.8 0.0**
LPG pmax pmax
comp=Z,25nm,1.0s
LPG La Plagne 19.04 305 *e*P **P** **13 09 48.8 0.0**
comp=Z,25nm,1.0s
STU Stuttgart 19.05 317 *e*P **P** **13 09 48.4 -0.1**
comp=Z,64nm,0.9s
STU Stuttgart 19.05 317 *e*P **P** **13 09 48.4 -0.1**
STU pmax pmax
comp=Z,64nm,0.9s
LPL La Plagne 19.06 306 *e*P **P** **13 09 49.0 +0.1**
LPL pmax pmax
comp=Z,21nm,0.6s
LPL La Plagne 19.06 306 *e*P **P** **13 09 49.0 +0.1**
comp=Z,21nm,0.6s
IIGN Ignalina 19.08 355 *e*P **P** **13 09 48.0 -0.9**
IIGN IAmb IAmb 13 09 59.5
comp=Z,9.1nm,0.8s
RAYN Ar Rayn 19.19 127 *e*P **Pn** **13 09 52.0 +0.6**
comp=Z,18nm,0.8s
RAYN Ar Rayn 19.19 127 *i* P **Pn** **13 09 52.1 +0.7**
SNR=15
RAYN Ar Rayn 19.19 127 P **Pn** **13 09 52.0 +0.6**
RAYN pmax pmax
comp=Z,18nm,0.9s
ORIF Oris-en-Rattie 19.43 303 *e*P **P** **13 09 52.3 -0.5**
ORIF pmax pmax
comp=Z,15nm,0.8s
ORIF Oris-en-Rattie 19.43 303 *e*P **P** **13 09 52.3 -0.5**
comp=Z,15nm,0.8s
OBN Obninsk 19.47 13 LR LR 13 18 42.0
comp=Z,1μm,18.9s,baz=200,slow=41
OBN Obninsk 19.47 13 *e*P **P** **13 09 52.3 -0.7**
comp=Z,250nm,1.3s
OBN Obninsk 19.47 13 *de*P **P** **13 09 52.7 -0.3**
OBN Obninsk 19.47 13 *e*P **P** **13 09 52.3 -0.7**
comp=Z,250nm,1.3s
IZAR Zarasai 19.48 355 *e*P **P** **13 09 52.3 -0.9**
IZAR IAmb IAmb 13 09 58.5
comp=Z,8.7nm,0.5s
IZAR Zarasai 19.48 355 *e*P **P** **13 09 52.3 -0.9**
SNR=34
CABF La Chapelle 19.89 308 *e*P **P** **13 09 56.9 -0.9**
CABF pmax pmax
comp=Z,33nm,0.8s
CABF La Chapelle 19.89 308 *e*P **P** **13 09 56.9 -0.9**
comp=Z,33nm,0.8s
HINF Hinteralfeld 19.92 312 *e*P **Pn** **13 09 59.3 -0.6**
HINF pmax pmax
comp=Z,8.0nm,0.9s

HINF Hinteralfeld 19.92 312 *e*P **Pn 13 09 59.3 -0.6**
comp=Z,8.0nm,0.9s
ECH Echery 19.92 313 *e*P **P 13 09 57.7 -0.5**
comp=Z,27nm,1.0s
ECH Echery 19.92 313 *e*P **P 13 09 57.7 -0.5**
ECH pmax pmax
comp=Z,27nm,1.0s
CDF Champ du Feu 19.95 314 *e*P **P 13 09 57.3 -1.2**
CDF pmax pmax
comp=Z,11nm,0.9s
CDF Champ du Feu 19.95 314 *e*P **P 13 09 57.3 -1.2**
comp=Z,11nm,0.9s
VIVF Saint-Julien-I 20.23 302 *e*P **P 13 10 00.2 -1.3**
VIVF pmax pmax
comp=Z,20nm,0.6s
VIVF Saint-Julien-I 20.23 302 *e*P **P 13 10 00.2 -1.3**
comp=Z,20nm,0.6s
MOS Moscow 20.26 14 *e*P **P 13 10 00.5 -1.2**
MOS *e* 13 10 17.2
MOS *e* 13 10 28.8
MOS pmax pmax
comp=Z,63nm,0.7s
MOS Moscow 20.26 14 *e*P **P 13 10 00.5 -1.2**
comp=Z,63nm,0.7s
HAU Haudompre 20.31 312 *e*P **P 13 10 01.9 -0.4**
HAU pmax pmax
comp=Z,47nm,1.2s
HAU Haudompre 20.31 312 *e*P **P 13 10 01.9 -0.4**
comp=Z,47nm,1.2s
SSB Saint Sauveur 20.44 303 *e*P **P 13 10 01.8 -2.0**
comp=Z,10.0nm,0.8s
SSB Saint Sauveur 20.44 303 *e*P **P 13 10 01.8 -2.0**
SSB pmax pmax
comp=Z,10.0nm,0.8s
SSB Saint Sauveur 20.44 303 *e*P **P 13 10 01.8 -2.0**
comp=Z,10.0nm,0.8s
EMHD Djebel Mahouad 20.94 277 P **P 13 10 09.4 0.0**
EMHD Djebel Mahouad 20.94 277 P **P 13 10 09.4 0.0**
WLF Walferdange 21.21 316 ⇑P **P 13 10 16.6 +4.6**
SMF Signal de Mont 21.34 307 *e*P **P 13 10 12.3 -1.1**
SMF pmax pmax
comp=Z,23nm,0.6s
MTLF Montolieu 21.61 297 *e*P **P 13 10 13.8 -2.6**
MTLF pmax pmax
comp=Z,12nm,0.7s
MTLF Montolieu 21.61 297 *e*P **P 13 10 13.8 -2.6**
comp=Z,12nm,0.7s
SSF Saint Saulge 21.70 307 *e*P **P 13 10 16.1 -1.2**
SSF pmax pmax
comp=Z,17nm,0.7s
SSF Saint Saulge 21.70 307 *e*P **P 13 10 16.1 -1.2**
comp=Z,17nm,0.7s
AVF Avril sur Loir 21.70 307 *e*P **P 13 10 15.9 -1.4**
AVF pmax pmax
comp=Z,10.0nm,0.7s
AVF Avril sur Loir 21.70 307 *e*P **P 13 10 15.9 -1.4**
comp=Z,10.0nm,0.7s
MEM Membach 21.78 318 ⇑P P 13 10 26.5 +8.4
comp=Z,25nm,1.1s
MEM Membach 21.78 318 P **P 13 10 17.8 -0.3**
MEM pmax pmax
comp=Z,40nm,0.9s
MEM Membach 21.78 318 P **P 13 10 17.8 -0.3**
comp=Z,40nm,0.9s
CAF Calviac 22.04 301 *e*P **P 13 10 22.3 +1.3**
CAF pmax pmax
comp=Z,6.0nm,0.8s
CAF Calviac 22.04 301 *e*P **P 13 10 22.3 +1.3**
comp=Z,6.0nm,0.8s
EBNR Beni Rached 22.06 278 P **P 13 10 22.7 +1.4**
EBNR Beni Rached 22.06 278 P **P 13 10 22.7 +1.4**
BCLA Clavier 22.07 317 ⇑P P 13 10 29.6 +8.4
comp=Z,40nm,1.1s
VSU Vasula 22.16 357 *ce*P **P 13 10 22.1 +0.1**
VSU pmax pmax
comp=Z,53nm,0.7s
VSU Vasula 22.16 357 *e*P **P 13 10 22.1 +0.1**
comp=Z,53nm,0.7s
GIVF Givet 22.18 316 *e*P **P 13 10 21.7 -0.7**
GIVF pmax pmax
comp=Z,9.0nm,0.9s
TCF Toulx Ste Croi 22.30 305 *e*P **P 13 10 24.2 +0.4**
EANR 'Ain N'Sour 22.46 277 P **P 13 10 25.8 +0.2**
EANR 'Ain N'Sour 22.46 277 P **P 13 10 25.8 +0.2**
GEYT Alibeck 23.27 77 P **P 13 10 34.9 +1.0**
comp=Z,4.6nm,0.5s,baz=287,slow=15,SNR=7.7
GEYT LR LR 13 21 59.5
comp=Z,373nm,19.6s,baz=260,slow=42
GYA0B ALIBECK ARRAY 23.27 77 *e*P **P 13 10 32.4 -1.5**
comp=Z,34nm,0.8s
GYA0B ALIBECK ARRAY 23.27 77 *e*P **P 13 10 32.4 -1.5**
comp=Z,34nm,0.8s
PUL Pulkovo 23.44 2⇑*e*P **P 13 10 38.7 +3.4**
PUL pmax pmax
comp=Z,46nm,0.7s
CART Cartagena 23.91 282 *e*S **S 13 14 49.7 -4.3**
TAM Tamanrasset 24.37 243 *e*P **P 13 10 44.2 -0.4**
comp=Z,81nm,1.6s
TAM Tamanrasset 24.37 243 *e*P **P 13 10 44.2 -0.4**
TAM pmax pmax
comp=Z,81nm,1.6s
TAM Tamanrasset 24.37 243 *e*P **P 13 10 44.2 -0.4**
comp=Z,81nm,1.6s
GRR Gorron 24.92 308 *e*P **P 13 10 47.4 -1.7**
GRR Gorron 24.92 308 *e*P **P 13 10 47.4 -1.7**
FIA1 FINESS Array S 25.17 357 *e*P **P 13 10 50.1 -1.1**
FINES FINESS Array B 25.17 357 P **P 13 10 50.3 -0.9**
comp=Z,7.3nm,0.6s,baz=158,slow=11,SNR=32
FINES LR LR 13 21 31.3
comp=Z,422nm,20.4s,baz=173,slow=38
AKTO Aktyubinsk 25.18 47 P **P 13 10 50.2 -1.3**
comp=Z,3.3nm,0.7s,baz=252,slow=11,SNR=11
AKTO LR LR 13 24 14.1
comp=Z,248nm,19.3s,baz=242,slow=45
KLMR Klimovskoe 25.42 12 *e*P **P 13 10 51.4 -2.1**
KLMR *e*S **S 13 15 16.2 -1.6**
KLMR pmax pmax
comp=Z,187nm,1.3s
KLMR Klimovskoe 25.42 12 *e*P **P 13 10 51.4 -2.1**
KLMR AMP 13 11 03.9
comp=Z,187nm,1.3s
KLMR *e*S **S 13 15 16.2 -1.6**
KLMR LQ LQ 13 19 43.2
KLMR LR LR 13 20 26.5
ASUD Al Ashush, Dub 25.48 110 P **P 13 10 54.4 0.0**
ASUD Al Ashush, Dub 25.48 110 P **P 13 10 54.4 0.0**
NAZ Nazwa, Dubai 25.54 109 P **P 13 10 55.5 +0.5**
NAZ Nazwa, Dubai 25.54 109 P **P 13 10 55.5 +0.5**
BANOM Banah 25.54 106 *i*P **P 13 10 54.5 -0.6**
SNR=9.1
BANOM Banah 25.54 106 P **P 13 10 54.5 -0.6**
SNR=9.1
HFS Hagfors 25.73 342 P **P 13 10 55.4 -1.0**
comp=Z,5.0nm,0.6s,baz=153,slow=10.0,SNR=7.8
HFS LR LR 13 22 24.6
comp=Z,803nm,20.2s,baz=156,slow=40
AB31 Akbulak array 25.93 50 *e*P **P 13 10 57.5 -0.8**
AB31 pmax pmax
comp=Z,3.0nm,0.4s
AB31 Akbulak array 25.93 50 *e*P **P 13 10 57.5 -0.8**
comp=Z,3.0nm,0.4s
ABKAR Akbulak array 25.93 50 *e*P **P 13 10 57.3 -1.0**
ABKAR Akbulak array 25.93 50 *e*P **P 13 10 57.3 -1.0**
UOSS Minazif 25.98 108 P **P 13 10 59.4 +0.5**
UOSS Minazif 25.98 108 P **P 13 10 59.4 +0.5**
HATD Hatta, Dubai 25.99 109 P **P 13 10 59.6 +0.6**
HATD Hatta, Dubai 25.99 109 P **P 13 10 59.6 +0.6**
ES19 SONSECA Array 26.00 287 *e*P **P 13 10 58.0 -1.1**
ES19 SONSECA Array 26.00 287 *e*P **P 13 10 58.0 -1.1**
ESDC Sonseca Array 26.05 287 P **P 13 10 58.4 -1.3**
comp=Z,3.4nm,0.5s,baz=85,slow=9.4,SNR=37
ESLA Sonseca Array 26.05 287 *e*P **P 13 10 58.7 -0.9**
comp=Z,23nm,0.9s
ESLA Sonseca Array 26.05 287 *e*P **P 13 10 58.7 -0.9**
comp=Z,23nm,0.9s
ALNE Al Ain 26.12 111 P **P 13 11 01.5 +1.2**
QUIF Quistinic 26.27 306 *e*P **P 13 11 02.1 +0.7**
QUIF pmax pmax
comp=Z,46nm,1.6s
PAB San Pablo 26.36 287 *e*P **P 13 11 01.8 -0.6**
comp=Z,15nm,0.8s
PAB San Pablo 26.36 287 *e*P **P 13 11 01.8 -0.6**
PAB pmax pmax
comp=Z,15nm,0.8s
PAB San Pablo 26.36 287 *e*P **P 13 11 01.8 -0.6**
comp=Z,15nm,0.8s
KONO Kongsberg 26.45 338⇑*e*P **P 13 11 04.9 +2.0**
KONO pmax pmax
comp=Z,64nm,2.7s
SOHO SOHO 26.67 109 P **P 13 11 06.4 +1.2**
NB2 NORSAR Subarra 27.14 341 P **P 13 11 07.0 -2.2**
comp=Z,6.9nm,0.9s,baz=145,slow=9.3
NOA NORSAR Array B 27.14 341 LR LR 13 22 53.0
comp=Z,419nm,19.8s,baz=140,slow=38
PRGR Permogore 27.39 17 *e*P **P 13 11 09.9 -1.4**
PRGR pmax pmax
comp=Z,37nm,1.3s
NC204 NORSAR Array S 27.46 341 *e*P **P 13 11 10.4 -1.6**
ATD Arta Tunnel 27.73 150 LR LR 13 22 07.0
comp=Z,87nm,21.8s,baz=340,slow=36
MDT Midelt 27.77 273 P **P 13 11 14.8 -0.4**
comp=Z,7.9nm,0.8s,baz=90,slow=10.0,SNR=16
PBRG Braganca 28.09 292 *e*P **P 13 11 16.2 -1.7**
comp=Z,23nm,1.1s
PBRG Braganca 28.09 292 *e*P **P 13 11 16.2 -1.7**
ARU Arti 28.28 35 P **P 13 11 18.3 -0.9**
comp=Z,2.0nm,0.3s,baz=164,slow=7.4,SNR=2.1
ARU LR LR 13 25 33.6
comp=Z,163nm,18.8s,baz=257,slow=43
ARU Arti 28.28 35 P **P 13 11 15.6 -3.6**
comp=Z,13nm,0.8s
ARU Arti 28.28 35 *d i*P **P 13 11 22.3 +3.0**
ARU 13 12 09.8
ARU PPP PPP 13 12 19.9
ARU 13 14 29.6
ARU SS SS 13 17 25.1 -38
ARU SSS SSS 13 17 49.9
ARU pmax pmax
comp=Z,9.0nm,2.5s
ARU MLR MLR
comp=Z,178nm,17.0s
MVO Moncorvo 28.32 291 *e*P **P 13 11 20.1 +0.1**
comp=Z,32nm,1.7s
MVO *e*LR LR 13 16 27.6
comp=Z,224nm,20.0s
MVO Moncorvo 28.32 291 *e*P **P 13 11 20.1 +0.1**
PBAR Barrancos 28.59 285 *e*P **P 13 11 21.8 -0.4**
comp=Z,50nm,1.8s
PBAR Barrancos 28.59 285 *e*P **P 13 11 21.8 -0.4**
PMRV Marv??o 28.72 287 *e*P **P 13 11 22.8 -0.6**
comp=Z,12nm,1.0s
PMRV *e*LR LR 13 16 13.5
comp=Z,278nm,20.0s
PMRV Marv??o 28.72 287 *e*P **P 13 11 22.8 -0.6**
PCBR Castelo Branco 28.75 288 *e*P **P 13 11 23.1 -0.5**
comp=Z,22nm,1.1s
PCBR Castelo Branco 28.75 288 *e*P **P 13 11 23.1 -0.5**
MTE Manteigas 28.75 289 *e*P **P 13 11 19.7 -4.1**
comp=Z,25nm,0.9s
MTE *e*LR LR 13 16 43.2
comp=Z,374nm,20.0s
WSAR Wadi Sarin 28.76 109 P **P 13 11 23.5 -0.5**
comp=Z,3.2nm,0.7s,baz=32,slow=9.5,SNR=2.8
WSAR LR LR 13 26 46.9
comp=Z,164nm,18.5s,baz=304,slow=44
POLO Lamas de Olo 28.89 291 *e*P **P 13 11 23.8 -1.3**
comp=Z,10nm,1.9s
POLO Lamas de Olo 28.89 291 *e*P **P 13 11 23.8 -1.3**
PESTR Estremoz 28.93 286 *e*P **P 13 11 28.3 +3.0**
comp=Z,19nm,0.9s
EKA Eskdalemuir Ar 28.94 321 P **P 13 11 23.4 -1.8**
comp=Z,1.4nm,0.6s,baz=115,slow=9.5,SNR=4.7
EKA PcP **PcP 13 14 33.0 -0.3**
comp=Z,1.7nm,0.5s,baz=100,slow=2.5,SNR=5.0
PVIS Viseu 29.00 290 *e*P **P 13 11 23.3 -2.7**
comp=Z,28nm,1.2s
PVIS Viseu 29.00 290 *e*P **P 13 11 23.3 -2.7**
PVAQ Vaqueiros 29.23 283 *e*P **P 13 11 27.4 -0.6**
comp=Z,37nm,1.6s
PVAQ *e*LR LR 13 16 43.5
comp=Z,87nm,20.0s
PVAQ Vaqueiros 29.23 283 *e*P **P 13 11 27.4 -0.6**
PGAV Gavieira, Arco 29.23 293 *e*LR LR 13 16 44.9
comp=Z,223nm,20.0s
PBDV Barranco-do-Ve 29.42 283 *e*P **P 13 11 31.2 +1.5**
comp=Z,56nm,1.7s
PBDV Barranco-do-Ve 29.42 283 *e*P **P 13 11 31.2 +1.5**
SVE Sverdlovsk 29.46 36 *e*P P 13 11 44.0 +14
SVE pmax pmax
comp=Z,21nm,1.2s
MESJ Messejana 29.56 284 *e*P **P 13 11 30.7 -0.1**
comp=Z,39nm,1.6s
MESJ Messejana 29.56 284 *e*P **P 13 11 30.7 -0.1**
APA Apatity 31.36 3⇓*i*P P 13 11 55.8 +9.4
APA pmax pmax
comp=Z,5.0nm,0.9s
APA MLR MLR
comp=Z,500nm,13.0s
VAL Valentia 31.69 312 *i*S S 13 17 05.1 +8.6
BRVK Borovoye 33.23 47⇓*e*P **P 13 12 06.7 +3.7**
BRVK pmax pmax
comp=Z,6.0nm,2.5s
ARCES ARCESS Array B 33.28 358 P **P 13 12 03.2 -0.1**
comp=Z,1.9nm,0.7s,baz=169,slow=9.9,SNR=6.0
ARCES LR LR 13 26 22.3
comp=Z,313nm,19.7s,baz=172,slow=38
ARCES ARCESS Array B 33.28 358 *e*P **P 13 12 03.1 -0.2**
BVAR Borovoye Array 33.29 47 P **P 13 12 02.6 -0.9**
comp=Z,1.0nm,0.6s,baz=1.6,slow=11,SNR=4.7
BVAR LR LR 13 28 59.1
comp=Z,426nm,21.1s,baz=258,slow=42
TOA0 Torodi Ar. Sit 33.65 234 *e*P **P 13 12 06.7 -0.3**
TORD Torodi Ar. Bea 33.65 234 P **P 13 12 06.6 -0.4**
comp=Z,20nm,0.5s,baz=34,slow=9.0,SNR=148
TORD PcP **PcP 13 14 46.1 -0.5**
baz=23,slow=3.5
OTUK Ortayu 33.78 56 P **P 13 12 07.8 -0.1**
OTUK pmax pmax
comp=Z,27nm,1.0s
SFK Sufi-Kurgan 34.94 70 P **P 13 12 19.1 +0.8**
SFK pmax pmax
comp=Z,8.0nm,0.6s
SFK Sufi-Kurgan 34.94 70 P **P 13 12 19.1 +0.8**
comp=Z,8.0nm,0.6s
NIL Nilore 36.16 81 *e*P **P 13 12 27.9 -0.7**
comp=Z,22nm,0.7s
NIL Nilore 36.16 81 *e*P **P 13 12 27.9 -0.7**
NIL pmax pmax
comp=Z,22nm,0.7s
NIL Nilore 36.16 81 *e*P **P 13 12 27.9 -0.7**
comp=Z,22nm,0.7s
KOWA Kowa 36.60 242 P **P 13 12 32.2 -0.3**
comp=Z,8.4nm,0.6s,baz=53,slow=12,SNR=22
KOWA Kowa 36.60 242 *e*P **P 13 12 32.1 -0.3**
comp=Z,15nm,1.0s
NRN Naryn 36.61 67 *e*P **P 13 12 31.9 -0.8**
comp=Z,14nm,1.1s
NRN Naryn 36.61 67 *e*P **P 13 12 31.9 -0.8**
NRN pmax pmax
comp=Z,14nm,1.1s
MBAR Mbarara 36.81 177 P **P 13 12 34.1 -0.3**
comp=Z,2.5nm,0.4s,baz=340,slow=12,SNR=10
MBAR Mbarara 36.81 177 *e*P **P 13 12 34.0 -0.5**
comp=Z,8.1nm,0.8s
KSH Kashi 36.90 71 P **P 13 12 34.0 -0.9**
KSH pmax pmax
comp=Z,190nm,4.7s
KURBB Kurchatov Arra 37.96 52 P **P 13 12 43.3 -0.3**
comp=Z,4.0nm,0.6s,baz=274,slow=8.8,SNR=49
KURK Kurchatov 38.02 52 *e*P **P 13 12 42.6 -1.5**
comp=Z,20nm,0.8s
KURK Kurchatov 38.02 52 *ce*P **P 13 12 43.2 -0.9**
KURK pmax pmax
comp=Z,3.0nm,0.5s
MAKZ Makanchi 40.32 58 *e*P **P 13 13 02.4 -1.1**
comp=Z,6.5nm,0.7s
MAKZ Makanchi 40.32 58 P **P 13 13 03.1 -0.3**
MAKZ pmax pmax
comp=Z,7.0nm,0.8s
MK31 Makanchi Array 40.54 58 *e*P **P 13 13 03.7 -1.5**
MK31 Makanchi Array 40.54 58 *e*P **P 13 13 03.7 -1.5**
MKAR Makanchi Array 40.54 58 P **P 13 13 04.3 -0.9**
comp=Z,2.8nm,0.6s,baz=277,slow=7.2,SNR=43
MKAR LR LR 13 31 57.0
comp=Z,169nm,21.3s,baz=260,slow=39
MKAR Makanchi Array 40.54 58 *e*P **P 13 13 03.7 -1.5**
comp=Z,82nm,0.7s
MK01 Makanchi Array 40.54 58 *e*P **P 13 13 04.2 -1.1**
BORG Borgarnes 41.01 330 LR LR 13 31 46.6
comp=Z,312nm,19.3s,baz=116,slow=38
NVS Novosibirsk 41.06 46 *e*P **P 13 13 10.7 +1.4**
NVS *e* 13 15 07.5
NVS pmax pmax
comp=Z,21nm,1.4s
ZAA0 Zalesovo Array 41.94 47 *e*P **P 13 13 16.1 -0.5**
comp=Z,7.7nm,0.6s
ZALV Zalesovo Beam 41.94 47 P **P 13 13 15.6 -1.0**
comp=Z,1.3nm,0.3s,baz=261,slow=8.7,SNR=6.3
ZALV LR LR 13 34 23.9
comp=Z,250nm,21.1s,baz=250,slow=41
ZALV Zalesovo Beam 41.94 47 *e*P **P 13 13 15.4 -1.2**
SPITS Spitsbergen Ar 42.26 356 P **P 13 13 18.0 -0.9**
comp=Z,0.7nm,0.4s,baz=130,slow=7.8,SNR=9.5
SPITS LR LR 13 33 14.0
comp=Z,136nm,20.0s,baz=245,slow=39
DBIC Dimbokro 42.75 235 P **P 13 13 22.2 -1.3**
comp=Z,15nm,0.6s,baz=24,slow=8.6,SNR=38
DBIC LR LR 13 33 29.7
comp=Z,339nm,19.4s,baz=27,slow=39
DBIC Dimbokro 42.75 235 *e*P **P 13 13 23.0 -0.5**
comp=Z,18nm,0.6s
DBIC Dimbokro 42.75 235 *e*P **P 13 13 23.0 -0.5**
DBIC pmax pmax
comp=Z,18nm,0.6s
TIC Toumodi 42.87 235 *e*P **P 13 13 23.5 -1.1**
KIC Kosan Boka 42.90 234 *e*P **P 13 13 24.0 -0.8**
comp=Z,52nm,0.6s
LIC Lamto 43.19 234 *e*P **P 13 13 26.3 -0.9**
comp=Z,67nm,0.7s
DGZ Jazzator, Alta 43.71 53⇓*e*P **P 13 13 31.5 +0.3**
DGZ pmax pmax
comp=Z,1.0nm,0.4s
WMQ Urumqi 44.73 62 P **P 13 13 40.3 +0.9**
WMQ pP pP 13 13 51.0 +1.3
WMQ sP sP 13 13 57.0 +3.1
WMQ PcP **PcP 13 15 22.0 +0.8**
WMQ pmax pmax
comp=Z,31nm,0.9s
WMQ pmax pmax
comp=Z,240nm,5.3s
WMQ LR LR
comp=Z,380nm,14.3s
WMQ LR LR
comp=Z,630nm,16.3s
WMQ LR LR
comp=Z,330nm,18.3s
NRIK Noril'sk 45.48 25 LR LR 13 37 29.3
comp=Z,99nm,18.4s,baz=251,slow=42
PYUN Piuthan 45.95 84 *e*P **P 13 13 49.3 -0.1**
comp=Z,29nm,0.7s
DANN Dangsing 46.47 84 *e*P **P 13 13 53.4 -0.1**
comp=Z,114nm,0.9s
KOLN Koldanda 46.58 84 *e*P **P 13 13 53.7 -0.6**
comp=Z,9.3nm,0.5s
GKN Gorkha 47.31 84 *e*P **P 13 13 59.6 -0.4**
comp=Z,58nm,0.9s
HYB Hyderabad 47.55 100 *i*P **P 13 14 01.0 -0.8**
DMN Daman 47.85 84 *e*P **P 13 14 03.9 -0.4**
comp=Z,60nm,0.9s
KKN Kakani 47.92 83 *e*P **P 13 14 04.4 -0.4**
PKIN Phulchoki 48.10 84 *e*P **P 13 14 05.6 -0.7**
comp=Z,14nm,0.6s
GUN Gumba 48.35 83 *e*P **P 13 14 07.7 -0.5**
comp=Z,32nm,0.8s
JIRN Jiri 48.70 83 *e*P **P 13 14 10.4 -0.6**
SUMG Summit 48.98 338 *e*P **P 13 14 12.2 -0.3**
comp=Z,9.3nm,1.0s
SUMG Summit 48.98 338 *e*P **P 13 14 12.2 -0.3**
SUMG pmax pmax
comp=Z,9.0nm,1.0s
RAMN Ramite 49.34 84 *e*P **P 13 14 14.6 -1.1**
comp=Z,36nm,0.8s
KNGR Kungurtug, Tuv 49.99 51 *e*P **P 13 14 23.0 +2.7**
LSZ Lusaka 51.36 181 P **P 13 14 31.0 +0.1**
comp=Z,7.3nm,0.7s,baz=16,slow=8.2,SNR=12
LSZ Lusaka 51.36 181 *e*P **P 13 14 32.1 +1.3**
comp=Z,6.7nm,0.7s
LSZ Lusaka 51.36 181 *e*P **P 13 14 32.1 +1.3**
LSZ pmax pmax
comp=Z,7.0nm,0.7s
LSA Lhasa 51.80 78 *e*P **P 13 14 32.2 -2.3**
comp=Z,8.0nm,0.9s
LSA Lhasa 51.80 78 *e*P **P 13 14 32.2 -2.3**
LSA pmax pmax
comp=Z,8.0nm,0.9s
LSA Lhasa 51.80 78 *e*P **P 13 14 32.2 -2.3**
comp=Z,8.0nm,0.9s
SFJD Kangerlussuaq 53.11 331 LR LR 13 38 42.5
comp=Z,172nm,21.0s,baz=90,slow=38
TLY Talaya 53.52 48 *e*P **P 13 14 46.2 -0.2**
TLY pmax pmax
comp=Z,4.0nm,0.8s
TLY MLR MLR
comp=Z,354nm,24.0s
ZAK Zakamensk 53.63 50 *e*P **P 13 14 46.7 -0.6**
ZAK pmax pmax
comp=Z,8.0nm,1.1s
GTA Gaotai 54.68 64 *e*P **P 13 14 55.8 +0.6**
GTA pP sP 13 15 08.8 -1.1
GTA sP pP 13 15 14.0 +8.3
GTA S **S 13 22 32.5 -0.5**
GTA pmax pmax
comp=Z,4.0nm,1.3s
GTA pmax pmax
comp=Z,43nm,5.0s
GTA LR LR
comp=Z,140nm,19.6s
GTA LR LR
comp=Z,130nm,19.6s
GTA LR LR
comp=Z,180nm,17.2s
PALK Pallekele 55.26 109 LR LR 13 39 51.5
comp=Z,135nm,19.7s,baz=304,slow=37
BRDH Bariadhala 55.37 86 LR LR 13 42 38.8
comp=Z,208nm,20.0s,baz=336,slow=40
TSUM Tsumeb 56.30 193 P **P 13 15 05.9 -1.0**
comp=Z,4.7nm,0.7s,baz=9.2,slow=12,SNR=6.7
TSUM Tsumeb 56.30 193 *e*P **P 13 15 06.7 -0.2**
comp=Z,5.2nm,0.8s
SONM Songino Array 56.33 52 P **P 13 15 06.6 -0.3**
comp=Z,1.3nm,0.5s,baz=269,slow=7.3,SNR=5.6
SONM LR LR 13 42 32.2
comp=Z,284nm,21.3s,baz=292,slow=40
ULN Ulaanbaatar 56.74 52⇑*e*P **P 13 15 09.1 -0.8**
ULN pmax pmax
comp=Z,2.0nm,1.0s
OPO Ambohidratompo 57.30 159 P **P 13 15 14.6 +0.6**
comp=Z,18nm,0.8s,baz=331,slow=4.6,SNR=22
BOD Bodaibo 57.60 39 *e*P **P 13 15 11.9 -3.6**
BOD pmax pmax
comp=Z,8.0nm,2.0s
ABPO Ambohimpanom 57.73 159 *e*P **P 13 15 18.7 +1.6**
comp=Z,11nm,0.8s
ABPO Ambohimpanom 57.73 159 *e*P **P 13 15 18.7 +1.6**
ABPO pmax pmax
comp=Z,11nm,0.8s
LZH Lanzhou 58.90 66 *e*P **P 13 15 25.0 -0.2**
LZH pP pP 13 15 37.0 +1.1
LZH sP sP 13 15 42.3 +2.3
LZH *e*PP **PP 13 17 33.8 -1.6**
LZH pmax pmax
comp=Z,21nm,1.0s
LZH pmax pmax
comp=Z,130nm,7.1s
LZH LR LR
comp=Z,360nm,17.4s
LZH LR LR
comp=Z,280nm,16.8s
LZH LR LR
comp=Z,350nm,18.8s
CD2 Chengdu 61.09 71 P **P 13 15 37.5 -2.7**
CD2 pmax pmax
comp=Z,20nm,0.8s
LBTB Lobatse 61.13 183 P **P 13 15 41.0 +0.7**
comp=Z,27nm,0.6s,baz=353,slow=7.7,SNR=39
LBTB Lobatse 61.13 183 *e*P **P 13 15 41.5 +1.2**
comp=Z,29nm,0.6s
LBTB Lobatse 61.13 183 *e*P **P 13 15 41.5 +1.2**
LBTB pmax pmax
comp=Z,29nm,0.6s
KMI Kunming 63.03 78 P **P 13 15 53.0 -0.5**
KMI pP sP 13 16 08.3 0.0
KMI sP pP 13 16 14.0 +10
KMI pmax pmax
comp=Z,14nm,0.8s
CHTO Chiang Mai 63.21 86 P **P 13 15 55.4 +0.9**
comp=Z,39nm,1.6s

CHTO	Chiang Mai	63.21	86	*e*P	P	13 15 53.2	-1.3
	comp=Z,16nm,1.4s						
CHTO	Chiang Mai	63.21	86	*e*P	P	13 15 53.2	-1.3
CHTO				pmax	pmax		
	comp=Z,16nm,1.4s						
RES	Resolute Bay	63.28	346	P	P	13 15 54.0	-0.1
	comp=Z,3.6nm,0.9s,baz=32,slow=12,SNR=6.2						
RES	Resolute Bay	63.28	346	*e*P	P	13 15 53.2	-0.9
	comp=Z,6.0nm,0.8s						
CMAR	Chiang Mai Arr	63.40	86	P	P	13 15 54.9	-0.9
	comp=Z,5.9nm,0.8s,baz=299,slow=8.2,SNR=33						
CMAR				LR	LR	13 50 17.3	
	comp=Z,96nm,18.5s,baz=338,slow=42						
CM01	Chiang Mai Arr	63.43	86	*e*P	P	13 15 54.0	-1.9
XAN	Xi'an	63.54	66	P	P	13 15 55.5	-1.0
XAN				pP	pP	13 16 07.3	0.0
XAN				sP	sP	13 16 12.8	+1.4
XAN				pmax	pmax		
	comp=Z,9.0nm,1.2s						
XAN				pmax	pmax		
	comp=Z,81nm,4.3s						
XAN				LR	LR		
	comp=Z,180nm,24.4s						
XAN				LR	LR		
	comp=Z,170nm,21.6s						
XAN				LR	LR		
	comp=Z,210nm,23.5s						
PAYA	Payao	63.67	85	P	P	13 15 56.9	-0.6
	comp=Z,7.1nm,0.8s						
SCHQ	Schefferville	64.25	320	LR	LR	13 43 09.8	
	comp=Z,201nm,21.7s,baz=70,slow=35						
SUKH	Sukhothai	64.47	87	P	P	13 16 02.5	-0.2
	comp=Z,5.4nm,0.9s						
NANT	Nan	64.63	85	P	P	13 16 03.6	-0.2
	comp=Z,3.3nm,0.8s						
BOSA	Boshof	64.72	184	P	P	13 16 04.6	+0.4
	comp=Z,14nm,0.6s,baz=352,slow=6.7,SNR=23						
BOSA				LR	LR	13 45 51.3	
	comp=Z,150nm,18.5s,baz=3.0,slow=37						
BOSA	Boshof	64.72	184	*e*P	P	13 16 05.4	+1.2
	comp=Z,16nm,0.8s						
BOSA	Boshof	64.72	184	*e*P	P	13 16 05.4	+1.2
BOSA				pmax	pmax		
	comp=Z,16nm,0.8s						
GYA	Guiyang	65.45	74	*e*P	P	13 16 09.0	-0.2
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PBKT	Sadao Pong	66.03	87	P	P	13 16 21.3	+8.4
SUR	Sutherland	68.81	187	P	P	13 16 31.2	+1.0
	comp=Z,12nm,0.6s,baz=11,slow=5.3,SNR=14						
BILL	Bilibino	71.11	16	*i* P	P	13 16 42.9	-0.9
BILL				*i*		13 16 52.9	
BILL				*i*		13 17 01.5	
BILL				*i*		13 19 23.9	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,108nm,20.0s						
SEY	Seymchan	71.25	24	*ce*P	P	13 16 45.1	+0.4
NJ2	Nanjing	71.77	63	*e*P	P	13 16 47.3	-1.1
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
GRNR	Gornyy	72.42	39	*e*P	P	13 16 52.8	+0.8
GRNR				pmax	pmax		
	comp=Z,26nm,1.0s						
MA2	Magadan	73.05	27	‖*e*P	P	13 16 57.3	+1.7
MA2				pmax	pmax		
	comp=Z,34nm,1.7s						
USRK	Ussuriysk Ar.	73.79	47	P	P	13 16 59.1	-1.1
	comp=Z,3.9nm,0.6s,baz=293,slow=4.9,SNR=9.1						
KS01	Wonju Array Si	75.06	54	*e*P	P	13 17 05.9	-1.9
KSAR	Wonju Array Be	75.08	54	P	P	13 17 06.9	-0.9
KSAR	Wonju Array Be	75.08	54	P	P	13 17 06.9	-0.9
KSRS	Korea Array	75.09	54	P	P	13 17 06.9	-1.0
	comp=Z,3.1nm,0.7s,baz=306,slow=4.3,SNR=12						
KSRS				LR	LR	13 54 07.1	
	comp=Z,62nm,21.3s,baz=305,slow=39						
TOLK	Toolik Lake Re	75.31	359	*e*P	P	13 17 08.4	-0.2
	comp=Z,9.7nm,0.9s						
COLD	Coldfoot	76.73	360	*e*P	P	13 17 16.0	-0.7
	comp=Z,9.3nm,1.0s						
YKA	Yellowknife Ar	77.21	344	P	P	13 17 17.8	-1.6
	comp=Z,0.9nm,0.7s,baz=34,slow=5.7,SNR=7.5						
YKA				LR	LR	13 52 10.5	
	comp=Z,11nm,21.0s,baz=34,slow=36						
YSS	Yuzh-Sakhalins	78.06	40	*e*P	P	13 17 22.9	-1.6
	comp=Z,27nm,1.2s						
YSS	Yuzh-Sakhalins	78.06	40	*e*P	P	13 17 24.1	-0.4
YSS				*e*		13 17 33.3	
YSS				*e*		13 20 25.0	
YSS				*e*S	S	13 27 15.3	-0.6
YSS				pmax	pmax		
	comp=Z,50nm,0.9s						
YSS				pmax	pmax		
	comp=N,30nm,1.1s						
YSS				pmax	pmax		
	comp=E,40nm,1.1s						
EGAK	Eagle	78.89	356	*e*P	P	13 17 27.6	-1.2
	comp=E,7.5nm,1.1s						
MLY	Manley	78.94	360	*e*P	P	13 17 28.2	-0.9
	comp=E,6.3nm,0.8s						
MDM	Murphy Dome	78.98	359	*e*P	P	13 17 28.4	-0.9
	comp=E,18nm,1.0s						
IL1	Eielson Array	79.14	358	*e*P	P	13 17 28.7	-1.5
ILAR	Eielson Array	79.14	358	P	P	13 17 29.1	-1.0
	comp=E,1.6nm,0.7s,baz=345,slow=3.6,SNR=18						
ILB	Eielson Array	79.14	358	*e*P	P	13 17 29.1	-1.0
CCB	Clear Creek Bu	79.29	359	*e*P	P	13 17 29.6	-1.3
	comp=E,10.0nm,1.0s						
WRH	Wood River Hil	79.47	359	*e*P	P	13 17 30.7	-1.2
	comp=E,15nm,0.9s						
DAWY	Dawson	79.48	355	*e*P	P	13 17 31.1	-0.9
	comp=E,7.6nm,0.9s						
HDA	Harding Lake	79.51	358	*e*P	P	13 17 30.9	-1.3
	comp=E,14nm,0.9s						
JNU	Nakatsue	79.57	57	LR	LR	13 57 11.2	
	comp=E,99nm,19.6s,baz=307,slow=39						
ASAJ	Asahikawa	79.85	42	LR	LR	13 57 14.1	
	comp=E,90nm,18.8s,baz=328,slow=39						
RIDG	Independ'e Rid	80.11	357	*e*P	P	13 17 34.6	-0.9
	comp=E,14nm,1.0s						
PETK	Petropavlovsk-	80.42	28	P	P	13 17 35.4	-1.9
	comp=E,1.7nm,0.7s,baz=36,slow=2.8,SNR=4.1						
PETK				PP	PP	13 20 38.1	-1.8
	comp=E,1.7nm,0.8s,baz=327,slow=11,SNR=3.5						
PETK				LR	LR	13 57 22.7	
	comp=E,141nm,21.1s,baz=317,slow=39						
TRF	Thorofare Moun	80.52	360	*e*P	P	13 17 36.6	-1.2
	comp=E,9.9nm,1.0s						
CAST	Castle Rocks	80.55	0	*e*P	P	13 17 36.4	-1.4
	comp=E,11nm,1.0s						
ULM	Lac du Bonnet	80.98	328	LR	LR	13 54 39.2	
	comp=E,186nm,19.1s,baz=74,slow=36						
PPLA	Purkeypile	81.08	1	*e*P	P	13 17 39.9	-0.9
	comp=E,14nm,0.5s						
SKT	Skwentna	82.00	0	*e*P	P	13 17 43.9	-1.6
	comp=E,12nm,1.0s						
SCM	Sheep Creek Mo	82.10	358	*e*P	P	13 17 45.4	-0.7
	comp=E,31nm,1.0s						
SCM	Sheep Creek Mo	82.10	358	*e*P	P	13 17 45.4	-0.7
SCM				pmax	pmax		
	comp=Z,31nm,1.0s						
GHO	Glory Hole Cre	82.19	359	*e*P	P	13 17 45.8	-0.8
	comp=Z,15nm,1.0s						
MJAR	Matsushiro Arr	82.21	50	P	P	13 17 46.3	-0.8
	comp=Z,1.8nm,0.7s,baz=306,slow=2.2,SNR=5.2						
MJAR				LR	LR	13 58 26.2	
	comp=Z,87nm,20.6s,baz=295,slow=39						
PMR	Palmer	82.38	359	*e*P	P	13 17 46.2	-1.2
	comp=Z,12nm,1.0s						
PMR	Palmer	82.38	359	*e*P	P	13 17 46.2	-1.2
PMR				pmax	pmax		
	comp=Z,12nm,1.0s						
SBUM	Sibu	83.14	92	*e*P	P	13 17 51.7	-0.5
	comp=Z,9.8nm,1.1s						
TGY	Tagaytay City	83.36	77	LR	LR	14 00 21.0	
	comp=Z,34nm,19.1s,baz=184,slow=40						
TKL	Tuckaleechee C	84.91	311	LR	LR	13 55 50.4	
	comp=Z,152nm,20.1s,baz=18,slow=36						
TKL	Tuckaleechee C	84.91	311	*e*P	P	13 18 00.3	-0.6
	comp=Z,60nm,1.9s						
TKL	Tuckaleechee C	84.91	311	*e*P	P	13 18 00.4	-0.6
TKL				pmax	pmax		
	comp=Z,60nm,1.9s						
JHJ	Hachijo jima 2	85.41	52	LR	LR	14 01 10.4	
	comp=Z,97nm,18.1s,baz=284,slow=39						
KDAK	Kodiak Island	86.20	1	P	P	13 18 06.5	-0.4
	comp=Z,5.1nm,0.7s,baz=126,slow=19,SNR=6.8						
KDAK	Kodiak Island	86.20	1	*i* P	P	13 18 06.3	-0.6
T42A	Van Buren	88.24	316	*e*P	P	13 18 16.7	-0.5
	comp=Z,19nm,1.3s						
PTGA	Pitinga	89.55	269	P	P	13 18 23.3	-0.4
	comp=Z,1.8nm,0.3s,baz=36,slow=17,SNR=6.1						
PTGA	Pitinga	89.55	269	*e*P	P	13 18 23.1	-0.6
	comp=Z,12nm,1.4s						
BOZ	Bozeman (W)	91.00	334	*e*P	P	13 18 28.5	-1.7
	comp=Z,8.1nm,1.6s						
BOZ	Bozeman (W)	91.00	334	*e*P	P	13 18 28.5	-1.7
BOZ				pmax	pmax		
	comp=Z,8.0nm,1.6s						
PDAR	Pinedale Array	92.63	331	P	P	13 18 35.3	-2.6
	comp=Z,0.5nm,0.7s,baz=29,slow=3.4,SNR=6.0						
PDAR				LR	LR	14 01 14.4	
	comp=Z,151nm,21.3s,baz=41,slow=36						
BMO	Blue Mountains	93.58	337	*e*P	P	13 18 39.2	-2.9
	comp=Z,2.0nm,0.8s						
BMO	Blue Mountains	93.58	337	*e*P	P	13 18 39.2	-2.9
BMO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ROSC	El Rosal	97.76	282	LR	LR	14 00 14.4	
	comp=Z,42nm,21.4s,baz=118,slow=34						
ANMO	Albuquerque	97.79	324	LR	LR	14 02 42.8	
	comp=Z,136nm,21.8s,baz=48,slow=35						
YBH	Yreka Blue Hor	98.06	339	LR	LR	14 07 06.3	
	comp=Z,154nm,19.0s,baz=18,slow=38						
NVAR	Mina Array Bea	99.66	334	LR	LR	14 06 08.4	
	comp=Z,165nm,21.7s,baz=304,slow=37						
ASAR	Alice Springs	115.26	102	PKP	PKPdf	13 24 06.5	-1.0
	comp=Z,1.2nm,0.8s,baz=332,slow=1.7,SNR=13						
AS01	Alice Springs	115.29	102	*e*PKPdf	PKPdf	13 24 05.7	-1.9
STKA	Stephens Creek	125.08	106	PKP	PKPdf	13 24 25.9	-0.3
	comp=Z,2.4nm,0.9s,baz=94,slow=6.1,SNR=4.7						
QSPA	South Pole Qui	126.21	180	PKP	PKPdf	13 24 26.6	-0.7
	comp=Z,2.4nm,0.7s,baz=162,slow=2.1,SNR=12						

*CSEM **25** 13:11:59.4±0.3, 36.°43N×28.°94E, h10km, ML3.5, Error ellipse: s-maj=6.4km s-min=3.9km az=177.0*
*DDA **25** 13:11:59.4, 36.°48N×28.°92E, h7km, Ml3.5*
*ISK **25** 13:11:59.3, 36.°43N×28.°92E, h16km, ML3.3/9*
*ISCJB **25** 13:12:00.2±0.6, 36.°44N±0.°04×28.°94E±0.°03, h22km±6km, Error ellipse: s-maj=6.3km s-min=4.3km az=175.5*

ISC 25 13:11:59.5±1.0, 36.°45N±0.°03×28.°92E±0.°02, h14km±8km, n40, σ0.58/64, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	Fethiye	0.23	35	PG	Pg	13 12 04.3	-0.4
FETY				SG	Sb	13 12 09.8	+0.2
FETY	Fethiye	0.23	35	*e*Pg	Pg	13 12 04.3	-0.4
FETY	Fethiye	0.23	35	P	Pg	13 12 04.8	+0.1
FETY				*e*Sg	Sb	13 12 09.8	+0.2
DALY	Dalyan (Mu¨la	0.43	330	PG	Pb	13 12 08.5	-0.3
DALY				SG	Sb	13 12 15.5	+0.4
DALY	Dalyan (Mu¨la	0.43	330	*i* P	Pb	13 12 08.7	-0.1
DALY				*i* S	Sb	13 12 15.6	+0.4
DALY	Dalyan (Mu¨la	0.43	330	P	Pb	13 12 08.7	-0.1
DALY				*e*Sg	Sb	13 12 15.5	+0.4
TURN	Turunc	0.49	330	PG	Pn	13 12 12.1	-0.1
TURN				SG	Sn	13 12 21.4	+0.9
TURN	Turunc	0.49	330	*i* P	Pn	13 12 12.3	+0.2
TURN				*i* S	Sn	13 12 21.5	+0.9
TURN	Turunc	0.49	330	*e*Pg	Pn	13 12 12.1	-0.1
TURN				*e*Sg	Sn	13 12 21.4	+0.9
AKAS	Kas	0.60	111	PG	Pg	13 12 10.9	-0.4
AKAS				SG	Sb	13 12 20.6	+0.5
AKAS	Kas	0.60	111	*i* P	Pg	13 12 10.8	-0.5
AKAS				*i* S	Sb	13 12 20.6	+0.5
AKAS	Kas	0.60	111	*e*Pg	Pg	13 12 10.9	-0.4
AKAS				S	Sb	13 12 20.6	+0.5
MRSB	Marmaris-Mugla	0.64	295	PG	Pb	13 12 12.7	+0.2
MRSB				SG	Sn	13 12 22.8	-1.3
MRSB	Marmaris-Mugla	0.64	295	*e*Pg	Pb	13 12 12.7	+0.2
MRSB				*e*Sg	Sn	13 12 22.8	-1.3
ARG	Arkhangelos	0.68	250	PG	Pb	13 12 12.9	-0.2
ARG				SG	Sb	13 12 22.9	+0.6
ARG	Arkhangelos	0.68	250	*e*Pg	Pb	13 12 12.9	-0.2
ARG				*e*Sg	Sb	13 12 22.9	+0.6
ELL	Elmali	0.85	69	PG	Pg	13 12 16.3	+0.2
ELL	Elmali	0.85	69	*e*Pg	Pg	13 12 16.3	+0.2
GOLH	Golhisar	0.94	33	*i* P	Pb	13 12 16.6	-1.1
GOLH				*i* S	Sg	13 12 30.4	+0.1
GOLH	Golhisar	0.94	33	P	Pb	13 12 16.6	-1.1
GOLH				S	Sg	13 12 30.4	+0.1
TAVA	DENIZLI_Tavas	1.02	360	*i* P	Pb	13 12 18.5	-0.5
TAVA				*i* S	Sb	13 12 32.5	+0.2
TAVA	DENIZLI_Tavas	1.02	360	P	Pb	13 12 18.5	-0.5
TAVA				S	Sb	13 12 32.5	+0.2
DATC	Datca-Mugla	1.06	288	PG	Pg	13 12 19.8	-0.2
DATC	Datca-Mugla	1.06	288	*e*Pg	Pg	13 12 19.8	-0.2
DAT	Datca	1.11	285	PN	Pg	13 12 20.7	-0.3
DAT	Datca	1.11	285	*i* P	Pb	13 12 19.9	-0.7
DAT				*i* S	Sg	13 12 35.8	+0.2
DAT	Datca	1.11	285	P	Pb	13 12 19.9	-0.7
DAT	Datca	1.11	285	*e*Pn	Pg	13 12 20.7	-0.3
DAT				S	Sg	13 12 35.8	+0.2
DNZL	Cakiroluk	1.25	5	*i* P	Pn	13 12 22.3	-0.4
DNZL				*i* S	Sb	13 12 38.9	-0.1
DNZL	Cakiroluk	1.25	5	P	Pn	13 12 22.3	-0.4
DNZL				S	Sb	13 12 38.8	-0.1
MLSB	Milas	1.25	313	PN	Pb	13 12 23.0	+0.2
MLSB	Milas	1.25	313	*e*Pn	Pb	13 12 23.0	+0.2
KORT	Korkueli	1.28	64	PN	Pb	13 12 23.4	-0.1
KORT	Korkueli	1.28	64	*i* P	Pn	13 12 22.9	-0.2
KORT				*i* S	Sg	13 12 43.1	+2.2
KORT	Korkueli	1.28	64	P	Pn	13 12 22.9	-0.2
KORT	Korkueli	1.28	64	*e*Pn	Pb	13 12 23.4	-0.1
DENT	Denizli	1.31	4	PN	Pn	13 12 23.2	-0.2
DENT	Denizli	1.31	4	*e*Pn	Pn	13 12 23.2	-0.2
ANTB	Antalya	1.47	72	PN	Pb	13 12 26.0	-0.6
ANTB	Antalya	1.47	72	*e*Pn	Pb	13 12 26.0	-0.6

*ISCJB **25** 13:24:32.1±0.4, 39.°43N±0.°02×123.°39W±0.°05, h14km±3km, Error ellipse: s-maj=7.2km s-min=2.9km az=158.1*
*NEIC **25** 13:24:32.7±0.0, 39.°46N×123.°32W, h9km, MW3.5(BRK), After NCEDC.*
NEIC Felt [III] at Redwood Valley and [II] at Willits. Also felt at Arcata, Mendocino, Santa Rosa, Ukiah and Vallejo.

ISC 25 13:24:32.4±1.2, 39.°45N±0.°02×123.°38W±0.°04, h11km±9km, n66, σ0.84/70, Near coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRKM	Rackout Spring	0.19	53	*e*Pg	Pg	13 24 35.2	-0.3
KFPM	Farley Peak	0.19	349	*e*Pg	Pg	13 24 36.8	+0.2
KCPM	Cahto Peak	0.28	326	*e*Pg	Pg	13 24 39.2	+0.9
KCPM				*e*Sg	Sb	13 24 44.6	+0.1
GHMM	Hull Mountain	0.35	82	*e*Pg	Pg	13 24 39.2	-0.2
KIPM	Iron Peak	0.37	347	*e*Pg	Pg	13 24 40.2	+0.5
KBNM	Bluenose Ridge	0.46	18	*e*Pg	Pb	13 24 42.2	-0.5
HOPS	Hopland Field	0.51	153	*e*Pg	Pg	13 24 43.0	+0.6
GSNM	Snow Mountain	0.53	164	*e*Pg	Pb	13 24 43.7	-0.1
GASB	Alder Springs	0.55	68	*e*Pg	Pb	13 24 43.2	-1.0
GGUM	Gualala	0.60	189	*e*Pg	Pb	13 24 45.4	+0.4
GMKM	Mount Konoctai	0.66	136	*e*Pg	Pb	13 24 45.9	-0.1
KKPM	Kettenpom Peak	0.69	3	*e*Pg	Pb	13 24 47.0	+0.3
GRTM	Round Top Moun	0.75	133	*e*Pg	Pb	13 24 47.1	-0.4
GDXM	Geysers	0.79	145	*e*Pg	Pg	13 24 47.8	+0.2
SKG	Skaggs Springs	0.80	159	*e*Pg	Pg	13 24 48.0	+0.1
KMRM	Mail Ridge	0.81	342	*e*Pg	Pg	13 24 48.6	+0.5
KMRM				*e*Sg	Sn	13 25 01.6	-0.5
GHCM	House Creek	0.85	171	*e*Pg	Pg	13 24 48.8	-0.1
NMCNC	Mill Creek, So	0.93	157	*e*Pg	Pg	13 24 49.8	-0.5
FTR	Fort Ross	0.94	170	*e*Pg	Pg	13 24 50.1	-0.4
NMTM	Middletown	0.97	131	*e*Pg	Pb	13 24 51.3	+0.1
GARM	Arbuckle	1.00	119	*e*Pn	Pn	13 24 53.4	+0.9
KCRM	Chalk Rock	1.03	341	*e*Pg	Pg	13 24 52.0	-0.3
KCSM	Cold Springs	1.09	355	*e*Pg	Pg	13 24 53.4	0.0
OSUM	Sutter Buttes	1.20	98	*e*Pg	Pb	13 24 53.6	-1.5
NBPM	Berryessa Peak	1.21	130	*e*Pn	Pn	13 24 56.9	+1.7
KCTM	Capetown	1.26	325	*e*Pn	Pn	13 24 55.2	-0.8
WDC	Whiskeytown Da	1.30	29	*e*Pn	Pn	13 24 55.8	-0.8
WDC				*e*Sn	Sn	13 25 14.4	+0.5
MCCM	Marconi Confer	1.36	163	*e*Pn	Pn	13 24 56.0	-1.3
OGOM	Van Goodin Ran	1.38	81	*e*Pn	Pn	13 24 57.1	-0.5
KHMM	Horse Mountain	1.45	349	*e*Pn	Pn	13 24 57.7	-1.0
JCC	Jacoby Creek,	1.45	340	*e*Pn	Pn	13 24 57.1	-1.6
ORV	Oroville	1.46	85	*e*Pn	Pn	13 24 58.1	-0.6
O03D	Paynes Creek	1.48	55	P	Pn	13 24 58.7	-0.4
	baz=235,SNR=36						
O03D	Paynes Creek	1.48	55	*e*Pn	Pn	13 24 58.9	-0.2
N02D	Trinity Center	1.61	18	P	Pn	13 25 00.3	-0.5
	baz=197,SNR=68						
AFDM	Forest Hills D	1.93	104	*e*Pn	Pn	13 25 04.2	-1.1
M02C	Callahan	1.98	11	P	Pn	13 25 05.6	-0.4
	baz=190,SNR=25						
M02C				S	Sn	13 25 31.8	+1.0
	baz=190						
LGBM	Gray Butte	2.10	25	*e*Pn	Pn	13 25 07.6	-0.1
YBH	Yreka Blue Hor	2.33	12	*e*Pn	Pn	13 25 10.6	-0.3
BEKR	Beckworth	2.37	79	*e*Pn	Pn	13 25 11.8	+0.4
RUBR	Rubicon Trail	2.53	98	*e*Pn	Pn	13 25 15.4	+1.7
M04C	Macdoel	2.61	26	P	Pn	13 25 14.8	+0.2
	baz=206,SNR=24						
L02D	Cave Junction,	2.71	356	P	Pn	13 25 15.8	-0.1
	baz=175,SNR=12						
CMB	Columbia Colle	2.73	120	*e*Pn	Pn	13 25 16.9	+0.6
KBO	Bosley Butte	2.83	347	*e*Pn	Pn	13 25 17.0	-0.7
VCNR	Virginia City	2.89	92	*e*Pn	Pn	13 25 19.4	+0.7
PNTR	Pine Nut	2.95	96	*e*Pn	Pn	13 25 22.0	+2.5
SAO	San Andreas Ge	3.08	150	*e*Pn	Pn	13 25 20.7	-0.4
PAHR	Pah Rah Range	3.10	84	*e*Pn	Pn	13 25 22.2	+0.8
HUMO	Hull Mountain	3.17	6	*e*Pn	Pn	13 25 22.9	+0.6
WAKR	Walker	3.21	106	*e*Pn	Pn	13 25 24.5	+1.5
YERR	Yerington	3.25	97	*e*Pn	Pn	13 25 25.0	+1.5
MOD	Modoc Plateau	3.38	43	*e*Pn	Pn	13 25 25.7	+0.3
KEBM	Edson Butte	3.49	348	*e*Pn	Pn	13 25 26.7	0.0
K05A	Summer Lake	3.77	29	*e*Pn	Pn	13 25 32.1	+1.4
PMPB	Monarch Peak	3.82	147	*e*Pn	Pn	13 25 31.5	+0.2
MDPB	Devils Postpil	3.83	117	*e*Pn	Pn	13 25 31.2	-0.3
RYN	Ryan	3.87	101	*e*Pn	Pn	13 25 30.6	-1.4
OMMB	Old Mammoth Mi	3.89	117	*e*Pn	Pn	13 25 31.9	-0.6
J04D	Umpqua Nationa	3.91	14	Pb	Pb	13 25 41.2	-0.2
	baz=194						
NV01	Mina Array Sit	4.08	103	*e*Pn	Pn	13 25 35.0	-0.1
KVN	Kaiserville	4.12	94	*e*Pn	Pn	13 25 34.9	-0.6
J05D	Fort Rock, OR	4.16	22	P	Pn	13 25 36.4	+0.4
	baz=203						
NV11	Mina Array Sit	4.20	102	*e*Pn	Pn	13 25 37.6	+1.1
PINE	Pine Mountain	4.71	22	*e*Pn	Pn	13 25 45.2	+1.6
MAGC	SCE Magundon P	5.41	138	*e*Pg	Pg	13 26 15.4	-0.5

IDC 25 13:25:54.5±6.3, 25.°10N×141.°19E, h54km±69km, mb3.6/4, mb1 3.7/5, mb1mx3.2/70, mbtmp3.9/5, ML4.1/1, Error ellipse: s-maj=105.5km s-min=20.0km az=91.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	2.18	24	P	Pn	13 26 28.8	+0.4
	62nm,0.3s,baz=308,slow=23,SNR=57						
JCJ				S	Sn	13 26 54.8	+0.6
	65nm,0.3s,baz=126,slow=21,SNR=10						
WRA	Warramunga Arr	45.26	189	P	P	13 34 07.0	+0.2
	1.0nm,0.4s,baz=7.5,slow=8.5,SNR=26						
ASAR	Alice Springs	48.99	189	P	P	13 34 35.5	-0.2
	0.2nm,0.7s,baz=21,slow=13,SNR=9.3						
STKA	Stephens Creek	56.66	180	P	P	13 35 31.7	-0.5
	1.2nm,0.5s,baz=6.3,slow=7.9,SNR=5.6						
FINES	FINESS Array B	79.34	334	P	P	13 37 54.3	+0.1
	1.1nm,0.5s,baz=76,slow=5.9,SNR=11						

*IDC **25** 13:38:14.6±0.6, 38.°15S×75.°01W, h0km, mb4.2/11, mb1 4.4/13, mb1mx4.2/37, mbtmp4.2/13, ML4.0/2, MS3.5/4, Ms1 3.5/4, ms1mx3.1/28, Error ellipse: s-maj=22.7km s-min=16.9km az=78.0*
*NEIC **25** 13:38:16.7±0.3, 37.°97S×74.°82W, h10km, mb4.6/29, Error ellipse: s-maj=8.4km s-min=6.4km az=93.0*
*GUC **25** 13:38:17.7±0.6, 38.°18S×74.°54W, h26km±24km, ML4.1*
*ISCJB **25** 13:38:19.1±0.3, 37.°89S±0.°03×74.°66W±0.°05, h33km, mb4.4/34, Error ellipse: s-maj=5.5km s-min=4.9km az=175.1*

ISC 25 13:38:19.8±0.5, 38.°01S±0.°05×74.°92W±0.°08, h35km, n92, σ1.974/98, mb4.5/34, 1C-7D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TMU	Temuco	1.96	112	*e*P	Pn	13 38 49.6	-0.9
TMU				*i* S	Sn	13 39 11.8	-2.1
VLCH	Valdivia	2.22	144	*e*P	Pn	13 38 51.3	-2.7
VLCH				*i* S	Sn	13 39 15.8	-4.4
CCHI	Chillan	2.67	59	*e*P	Pn	13 38 59.4	-0.9
CCHI				*i* S	Sn	13 39 31.3	-0.1
CCHI				IAML		13 39 36.6	
	comp=E,1μm,0.4s						
GO05	HualaæØ	3.85	40	*e*Pn	Pn	13 39 14.4	-2.1
GO05	HualaæØ	3.85	40	*e*P	Pn	13 39 14.7	-1.9
PLCA	Paso Flores	4.34	130	Pn	Pn	13 39 22.1	-1.2
	comp=E,1.0n

comp=Z,2.9nm,0.7s,baz=153,slow=8.5,SNR=33
SWET Sewanee 73.58 351 *eP* **P 13 49 49.7 +0.6**
comp=Z,26nm,1.4s
W39A Magazine 74.91 344 *eP* **P 13 49 57.9 +1.1**
comp=Z,7.7nm,1.0s
MNTX Cornudas Mount 74.95 333 *eP* **P 13 49 57.4 +0.2**
comp=Z,2.8nm,1.0s
CCM Cathedral Cave 77.18 347 *eP* **P 13 50 09.5 -0.1**
comp=Z,13nm,1.2s
ANMO Albuquerque 78.27 334 *eP* **P 13 50 17.1 +1.1**
comp=Z,3.7nm,0.9s
DBIC Dimbokro 78.66 72 P **P 13 50 19.5 +1.1**
comp=Z,4.4nm,0.8s,baz=185,slow=12,SNR=2.8
T25A Trinidad 79.59 336 *eP* **P 13 50 24.8 +1.6**
comp=Z,5.5nm,0.8s
X16A Lo Mia Camp, P 79.65 330 *eP* **P 13 50 24.6 +1.0**
comp=Z,5.4nm,1.1s
BOSA Boshof 80.24 119 P **P 13 50 27.9 +0.7**
comp=Z,2.7nm,0.9s,baz=180,slow=7.1,SNR=3.2
SDCO Great Sand Dun 80.49 336 *eP* **P 13 50 29.3 +1.1**
comp=Z,2.2nm,1.1s
WUAZ Wupatki 80.58 331 *eP* **P 13 50 30.4 +1.8**
comp=Z,5.5nm,1.2s
XPFO Piæon Flat 81.05 326 *eP* **P 13 50 32.0 +0.9**
comp=Z,6.3nm,1.0s
PFO Pinyon Flats O 81.06 326 *eP* **P 13 50 32.3 +1.1**
comp=Z,7.3nm,1.0s
U15A North Rim 81.74 330 *eP* **P 13 50 36.6 +1.7**
comp=Z,4.7nm,1.0s
KNB Kanab 82.46 330 *eP* **P 13 50 40.4 +1.9**
comp=Z,5.0nm,1.0s
ISA Isabella, Lake 83.67 326 *eP* **P 13 50 46.7 +2.0**
comp=Z,3.9nm,0.8s
ECSD EROS Data Cent 83.71 344 *eP* **P 13 50 45.5 +0.9**
comp=Z,25nm,2.0s
P18A Preston Nutter 83.79 333 *eP* **P 13 50 46.6 +1.1**
comp=Z,4.8nm,0.8s
P17A Butcher Ranch, 83.83 333 *eP* **P 13 50 46.9 +1.4**
comp=Z,6.8nm,1.2s
TMUT Trail Mountain 83.85 332 *eP* **P 13 50 47.0 +1.1**
comp=Z,3.7nm,0.8s
PSUT Pine Spring 84.18 330 *eP* **P 13 50 48.8 +1.4**
comp=Z,4.2nm,1.0s
KOWA Kowa 84.39 67 P **P 13 50 49.5 +0.7**
comp=Z,2.0nm,0.7s,baz=223,slow=5.3,SNR=4.3
KOWA LR LR 14 27 46.1
comp=Z,36nm,18.6s,baz=217,slow=35
NV01 Mina Array Sit 85.91 327 *eP* **P 13 50 57.5 +1.4**
NVAR Mina Array Bea 85.91 327 P **P 13 50 57.4 +1.3**
comp=Z,0.6nm,0.6s,baz=160,slow=6.0,SNR=6.7
HWUT Hardware Ranch 86.01 333 *eP* **P 13 50 56.5 +0.1**
comp=Z,5.7nm,1.0s
PDAR Pinedale Array 86.35 335 P **P 13 50 59.1 +0.9**
comp=Z,0.8nm,0.8s,baz=147,slow=3.5,SNR=8.0
PDAR Pinedale Array 86.35 335 *eP* **P 13 50 57.6 -0.6**
TORD Torodi Ar. Bea 87.74 72 P **P 13 51 05.9 +0.6**
comp=Z,1.5nm,1.1s,baz=246,slow=2.8
AGMN Agassiz Nation 87.93 346 *eP* **P 13 51 05.7 +0.3**
comp=Z,4.4nm,0.3s
HLID Hailey 88.74 332 *eP* **P 13 51 10.8 +1.3**
comp=Z,2.0nm,1.0s
WRA Warramunga Arr 116.12 211 PKP **PKPdf 13 56 58.6 -1.0**
comp=Z,0.5nm,0.7s,baz=175,slow=1.7,SNR=3.4
GEYT Alibeck 143.29 75 PKP PKPbc 13 57 48.2 +0.8
comp=Z,172nm,0.8s,baz=270,slow=1.0,SNR=3.6
PSI Prapat 144.50 169 PKP **PKPab 13 57 51.2 -0.2**
comp=Z,21nm,0.8s,baz=180,slow=2.0,SNR=9.1
AKTO Aktyubinsk 144.65 54 PKP **PKPab 13 57 51.2 +0.4**
comp=Z,3.1nm,0.8s,baz=274,slow=3.5,SNR=9.6
ABKAR Abkulak array 145.93 56 *e*PKPdf **PKPdf 13 57 54.3 0.0**
ASAJ Asahikawa 151.24 294 PKPbc **PKPbc 13 58 08.6 -0.5**
comp=Z,6.5nm,0.9s,baz=72,slow=7.6,SNR=5.5
YAK Yakutsk 151.57 336 *e*PKPbc **PKPbc 13 58 08.9 -0.4**
BVAR Borovoye Array 151.77 47 PKPbc **PKPbc 13 58 10.9 +0.9**
comp=Z,1.8nm,0.7s,baz=298,slow=3.1,SNR=9.4
KSH Kashi 157.30 77 PKP **PKPdf 13 58 14.0 +2.1**
KSH PP **PP 14 02 26.3 +3.5**
KSH AMB AMB
comp=Z,250nm,5.2s
ZALV Zalesovo Beam 158.86 35 PKP **PKPdf 13 58 12.3 -0.8**
comp=Z,0.5nm,0.4s,baz=316,slow=10,SNR=3.6
ZALV PKPab **PKPab 13 58 50.5 +1.2**
comp=Z,1.0nm,0.5s,baz=306,slow=5.3,SNR=4.5
MKAR Makanchi Array 161.07 55 PKP **PKPdf 13 58 16.2 +0.3**
comp=Z,0.1nm,0.4s,baz=331,slow=1.5,SNR=5.0
MKAR PKPab **PKPab 13 58 58.6 -0.7**
comp=Z,0.4nm,0.7s,baz=251,slow=4.4,SNR=3.1
CD2 Chengdu 172.83 171 PKP **PKPdf 13 58 25.0 -0.2**
LZH Lanzhou 177.84 152 *e*PKP **PKPdf 13 58 21.0 -5.6**
LZH pPKP pPKPdf 13 58 31.0 -7.1
LZH sPKP 13 58 38.0
LZH LR LR
comp=N,260nm,18.2s
LZH LR LR
comp=E,270nm,18.1s
LZH LR LR
comp=Z,380nm,20.2s

IDC 25 13:48:52.1±12.0, 15°02.02S×165°52.52E, h0km, mb3.8/4, mb1 4.0/5, mb1mx3.6/48, mbtmp3.8/5, ML4.2/1, MS3.3/1, Ms1 3.3/1, ms1mx2.5/42, Error ellipse: s-maj=213.0km s-min=34.0km az=56.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.07**	**173**	Pn	Pn	13 50 36.9	-0.1
	4.2nm,0.3s,baz=163,slow=17,SNR=36						
DZM				Sn	Sn	13 51 59.6	+1.4
	1.4nm,0.3s,baz=127,slow=22,SNR=6.6						
AFI	**Afiamalu**	**22.01**	**90**	LR	LR	14 00 10.8	
	comp=Z,82nm,21.6s,baz=170,slow=31						
STKA	**Stephens Creek**	**27.53**	**228**	P	P	13 54 40.6	0.0
	1.0nm,0.6s,baz=54,slow=9.4,SNR=5.9						
WRA	**Warramunga Arr**	**30.12**	**256**	P	P	13 55 03.6	-0.2
	0.3nm,0.6s,baz=82,slow=7.2,SNR=5.1						
ASAR	**Alice Springs**	**30.99**	**249**	P	P	13 55 11.6	+0.1
	0.4nm,0.3s,baz=78,slow=9.4,SNR=23						
FITZ	**Fitzroy Crossi**	**38.30**	**260**	P	P	13 56 14.7	-0.1
	1.5nm,0.6s,baz=63,slow=4.5,SNR=3.8						

*ISCJB **25** 13:58:51.4±0.7, 36°01N±0°04×28°53E±0°03, h15km±7km, Error ellipse: s-maj=6.1km s-min=4.1km az=15.2*
*ISK **25** 13:58:51.5, 36°10N×28°52E, h15km, ML3.1/11*
*CSEM **25** 13:58:51.3±0.2, 36°06N×28°53E, h8km, ML2.4, Error ellipse: s-maj=4.5km s-min=3.1km az=12.0*
*NIC **25** 13:58:51.2±0.1, 36°37N×28°68E, h12km, ML3.1*
*DDA **25** 13:58:51.1, 36°06N×28°52E, h7km, Ml3.0*
*ATH **25** 13:58:52.2, 36°13N×28°45E, h24km±2km, ML2.4/2, Error ellipse: s-maj=4.8km s-min=1.3km az=187.0*
*THE **25** 13:58:52.2, 36°21N×28°51E, h0km±2km, ML2.3/2, Error ellipse: s-maj=3.2km s-min=1.1km az=177.0*
ISC 25 13:58:52.1±1.0, 36°12N±0°03×28°52E±0°02, h16km±8km, n80, σ1°05/118, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.33**	**287**	PG	**Pb**	**13 58 59.4**	**-0.2**
ARG				SG	**Sb**	**13 59 04.5**	**-0.3**
ARG	**Arkhangelos**	**0.33**	**287**	P	**Pg**	**13 58 58.2**	**-0.8**
ARG	**Arkhangelos**	**0.33**	**287**	*e*Pg	**Pb**	**13 58 59.4**	**-0.2**
ARG				S	**Sb**	**13 59 04.0**	**-0.7**
MRSB	**Marmaris-Mugla**	**0.65**	**336**	PG	**Pb**	**13 59 05.1**	**0.0**
MRSB				SG	**Sn**	**13 59 15.1**	**-1.6**
MRSB	**Marmaris-Mugla**	**0.65**	**336**	*e*Pg	**Pb**	**13 59 05.1**	**0.0**
MRSB				*e*Sg	**Sn**	**13 59 15.1**	**-1.6**
FETY	**Fethiye**	**0.69**	**41**	PG	**Pg**	**13 59 04.8**	**-0.8**
FETY				SG	**Sb**	**13 59 15.6**	**+0.6**
FETY	**Fethiye**	**0.69**	**41**	P	**Pg**	**13 59 03.8**	**-1.8**
FETY				S	**Sb**	**13 59 15.4**	**+0.4**
FETY	**Fethiye**	**0.69**	**41**	P	**Pg**	**13 59 04.0**	**-1.6**
FETY	**Fethiye**	**0.69**	**41**	*e*Pg	**Pg**	**13 59 04.8**	**-0.8**
FETY				S	**Sb**	**13 59 15.3**	**+0.3**
DALY	**Dalyan (Mu¨la**	**0.71**	**9**	PG	**Pb**	**13 59 06.0**	**0.0**
DALY				SG	**Sn**	**13 59 16.6**	**-1.3**
DALY	**Dalyan (Mu¨la**	**0.71**	**9**	*i* P	**Pg**	**13 59 04.7**	**-1.2**
DALY				*i* S	**Sb**	**13 59 15.0**	**-0.5**
DALY	**Dalyan (Mu¨la**	**0.71**	**9**	P	**Pg**	**13 59 04.7**	**-1.2**
DALY	**Dalyan (Mu¨la**	**0.71**	**9**	*e*Pg	**Pb**	**13 59 06.0**	**0.0**
DALY				S	**Sb**	**13 59 15.0**	**-0.5**
DALY				*e*Sg	**Sn**	**13 59 16.6**	**-1.3**
TURN	**Turunc**	**0.76**	**5**	PG	**Pg**	**13 59 05.4**	**-1.4**
TURN				SG	**Sb**	**13 59 16.6**	**-0.3**
TURN	**Turunc**	**0.76**	**5**	*i* P	**Pg**	**13 59 05.1**	**-1.7**
TURN				*i* S	**Sb**	**13 59 16.8**	**-0.1**
TURN	**Turunc**	**0.76**	**5**	P	**Pg**	**13 59 05.1**	**-1.7**
TURN	**Turunc**	**0.76**	**5**	*e*Pg	**Pg**	**13 59 05.4**	**-1.4**
TURN				S	**Sb**	**13 59 16.8**	**-0.1**
KSL	**Kastellorizon**	**0.86**	**88**	P	**Pn**	**13 59 09.7**	**+0.1**
KSL				S	**Sn**	**13 59 23.8**	**+2.0**
KSL				AML	AML	13 59 25.0	
	comp=E,444μm,0.6s						
KSL				AML	AML	13 59 26.5	
	comp=N,525μm,0.6s						
KSL	**Kastellorizon**	**0.86**	**88**	P	**Pn**	**13 59 09.9**	**+0.4**
KSL				S	**Sn**	**13 59 23.9**	**+2.1**
KSL	**Kastellorizon**	**0.86**	**88**	P	**Pn**	**13 59 09.8**	**+0.3**
AKAS	**Kas**	**0.89**	**82**	PG	**Pb**	**13 59 08.9**	**-0.2**
AKAS				SG	**Sn**	**13 59 22.6**	**0.0**
AKAS	**Kas**	**0.89**	**82**	*i* P	**Pg**	**13 59 08.5**	**-0.8**
AKAS				*i* S	**Sn**	**13 59 23.6**	**+1.0**
AKAS	**Kas**	**0.89**	**82**	P	**Pg**	**13 59 08.5**	**-0.8**
AKAS	**Kas**	**0.89**	**82**	*e*Pg	**Pb**	**13 59 08.9**	**-0.2**
AKAS				*e*Sg	**Sn**	**13 59 22.6**	**0.0**
AKAS				S	**Sn**	**13 59 23.6**	**+1.0**
DATC	**Datca-Mugla**	**0.94**	**313**	PG	**Pn**	**13 59 10.1**	**-0.6**
DATC	**Datca-Mugla**	**0.94**	**313**	*e*Pg	**Pn**	**13 59 10.1**	**-0.6**
DAT	**Datca**	**0.97**	**309**	PG	**Pn**	**13 59 10.8**	**-0.4**
DAT	**Datca**	**0.97**	**309**	*i* P	**Pb**	**13 59 10.6**	**-0.1**
DAT				*i* S	**Sn**	**13 59 27.4**	**+2.6**
DAT	**Datca**	**0.97**	**309**	*e*Pg	**Pn**	**13 59 10.8**	**-0.4**
DAT				S	**Sn**	**13 59 27.4**	**+2.6**
KARP	**Karpathos**	**1.24**	**243**	PN	**Pn**	**13 59 14.9**	**+0.1**
KARP	**Karpathos**	**1.24**	**243**	P	**Pg**	**13 59 15.4**	**-0.7**
KARP	**Karpathos**	**1.24**	**243**	*e*Pn	**Pn**	**13 59 14.9**	**+0.1**
KARP	**Karpathos**	**1.24**	**243**	P	**Pb**	**13 59 15.2**	**0.0**
BDRM	**Kayabasi**	**1.28**	**318**	*i* P	**Pg**	**13 59 16.3**	**-0.5**
BDRM				*i* S	**Sg**	**13 59 34.8**	**+1.3**
BDRM	**Kayabasi**	**1.28**	**318**	P	**Pg**	**13 59 16.3**	**-0.5**
BDRM				S	**Sg**	**13 59 34.8**	**+1.3**
ELL	**Elmali**	**1.28**	**60**	PN	**Pg**	**13 59 16.3**	**-0.6**
ELL	**Elmali**	**1.28**	**60**	*e*Pn	**Pg**	**13 59 16.3**	**-0.6**
MLSB	**Milas**	**1.32**	**333**	PN	**Pg**	**13 59 16.5**	**-1.0**
MLSB	**Milas**	**1.32**	**333**	*e*Pn	**Pg**	**13 59 16.5**	**-1.0**
BODT	**Bodrum**	**1.35**	**314**	PN	**Pn**	**13 59 16.3**	**-0.1**
BODT	**Bodrum**	**1.35**	**314**	P	**Pn**	**13 59 16.2**	**-0.1**
BODT				S	**Sg**	**13 59 35.0**	**-0.8**
BODT	**Bodrum**	**1.35**	**314**	*e*Pn	**Pn**	**13 59 16.3**	**-0.1**
BODT				S	**Sg**	**13 59 35.0**	**-0.8**
TAVA	**DENIZLI_Tavas**	**1.38**	**13**	*i* P	**Pg**	**13 59 18.9**	**+0.2**
TAVA				*i* S	**Sg**	**13 59 38.8**	**+2.1**
TAVA	**DENIZLI_Tavas**	**1.38**	**13**	P	**Pg**	**13 59 18.9**	**+0.2**
TAVA				S	**Sg**	**13 59 38.8**	**+2.1**
GOLH	**Golhisar**	**1.40**	**37**	*i* P	**Pg**	**13 59 17.9**	**-1.1**
GOLH				*i* S	**Sg**	**13 59 39.3**	**+2.1**
GOLH	**Golhisar**	**1.40**	**37**	P	**Pg**	**13 59 17.9**	**-1.1**
GOLH				S	**Sg**	**13 59 39.3**	**+2.1**
AYDN	**Tasoluk**	**1.62**	**342**	*i* P	**Pg**	**13 59 22.8**	**-0.5**
AYDN				*i* S	**Sg**	**13 59 45.1**	**+0.7**
AYDN	**Tasoluk**	**1.62**	**342**	P	**Pg**	**13 59 22.8**	**-0.5**
AYDN				S	**Sg**	**13 59 45.1**	**+0.7**
DNZL	**Cakiroluk**	**1.62**	**15**	*i* P	**Pg**	**13 59 22.8**	**-0.5**
DNZL				*i* S	**Sg**	**13 59 46.9**	**+2.4**
DNZL	**Cakiroluk**	**1.62**	**15**	P	**Pg**	**13 59 22.8**	**-0.5**
DNZL				S	**Sg**	**13 59 46.9**	**+2.4**
DENT	**Denizli**	**1.68**	**14**	PN	**Pb**	**13 59 21.8**	**-0.9**
DENT	**Denizli**	**1.68**	**14**	*e*Pn	**Pb**	**13 59 21.8**	**-0.9**
KORT	**Korkueli**	**1.72**	**59**	PN	**Pb**	**13 59 22.1**	**-1.2**
KORT	**Korkueli**	**1.72**	**59**	*e*Pn	**Pb**	**13 59 22.1**	**-1.2**
GCAM	**G?zelcaml?**	**1.89**	**327**	PN	**Pn**	**13 59 23.8**	**+0.2**
GCAM	**G?zelcaml?**	**1.89**	**327**	*e*Pn	**Pn**	**13 59 23.8**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**1.89**	**345**	PN	**Pb**	**13 59 24.7**	**-1.6**
AYDB	**Zeytinkoy-Aydi**	**1.89**	**345**	*e*Pn	**Pb**	**13 59 24.7**	**-1.6**
SMG	**Samos**	**2.08**	**320**	P	**Pn**	**13 59 26.7**	**+0.3**
SMG	**Samos**	**2.08**	**320**	P	**Pn**	**13 59 26.9**	**+0.5**
KULA	**Kula-Manisa**	**2.39**	**3**	PN	**Pn**	**13 59 31.2**	**+0.5**
KULA	**Kula-Manisa**	**2.39**	**3**	*e*Pn	**Pn**	**13 59 31.2**	**+0.5**
SUTC	**Sutluce-Ispart**	**2.41**	**55**	PN	**Pn**	**13 59 31.7**	**+0.8**
SUTC	**Sutluce-Ispart**	**2.41**	**55**	*e*Pn	**Pn**	**13 59 31.7**	**+0.8**
APE	**Apeiranthos**	**2.59**	**292**	PN	**Pn**	**13 59 34.3**	**+1.0**
APE	**Apeiranthos**	**2.59**	**292**	*e*Pn	**Pn**	**13 59 34.3**	**+1.0**
URLA	**Izmir**	**2.71**	**326**	PN	**Pn**	**13 59 35.3**	**+0.2**
URLA	**Izmir**	**2.71**	**326**	*e*Pn	**Pn**	**13 59 35.3**	**+0.2**
CHOS	**Chios island**	**3.00**	**320**	P	**Pn**	**13 59 40.7**	**+1.7**
CHOS	**Chios island**	**3.00**	**320**	P	**Pn**	**13 59 40.4**	**+1.4**
AKMC	**Akamas**	**3.29**	**108**	P	**Pn**	**13 59 42.2**	**-0.8**
	baz=295						
AKMC	**Akamas**	**3.29**	**108**	P	**Pn**	**13 59 42.2**	**-0.8**
PPCY	**Paphos**	**3.35**	**110**	P	**Pn**	**13 59 43.1**	**-0.7**
	baz=297						
PPCY	**Paphos**	**3.35**	**110**	P	**Pn**	**13 59 43.1**	**-0.7**
ALFC	**Alefka**	**3.46**	**105**	P	**Pn**	**13 59 44.2**	**-1.1**
	baz=291						
ALFC				S	**Sn**	**14 00 25.5**	**-0.5**
ALFC	**Alefka**	**3.46**	**105**	P	**Pn**	**13 59 44.2**	**-1.1**
ALFC				S	**Sn**	**14 00 25.5**	**-0.5**
SZAC	**Souni**	**3.81**	**110**	P	**Pn**	**13 59 49.5**	**-0.7**
	baz=296						
SZAC	**Souni**	**3.81**	**110**	P	**Pn**	**13 59 49.5**	**-0.7**

*DDA **25** 14:33:29.8, 36°48N×28°96E, h32km, Ml3.4*
*ISK **25** 14:33:29.8, 36°45N×28°94E, h24km, ML3.6/14*
*THE **25** 14:33:30.9, 36°45N×28°91E, h13km±1km, ML3.3/5, Error ellipse: s-maj=1.3km s-min=0.4km az=80.0*
*CSEM **25** 14:33:30.8±0.1, 36°42N×28°97E, h30km, ML3.4, Error ellipse: s-maj=3.2km s-min=2.1km az=2.0*
*ATH **25** 14:33:30.1, 36°41N×28°93E, h44km±1km, ML3.3/7, Error ellipse: s-maj=1.5km s-min=0.6km az=148.0*
*NIC **25** 14:33:31.9±0.2, 36°44N×29°08E, h25km, mb4.0, ML3.5*
ISC 25 14:33:30.2±0.9, 36°43N±0°02×28°96E±0°02, h23km±7km, n163, σ0°97/236, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.23**	**26**	PG	**Pb**	**14 33 35.6**	**-0.5**
FETY				SG	**Sb**	**14 33 40.9**	**+0.8**
FETY	**Fethiye**	**0.23**	**26**	P	**Pb**	**14 33 35.6**	**-0.5**
FETY				S	**Sb**	**14 33 40.6**	**+0.5**
FETY	**Fethiye**	**0.23**	**26**	*e*Pg	**Pb**	**14 33 35.6**	**-0.5**
FETY				*e*Sg	**Sb**	**14 33 40.9**	**+0.8**
DALY	**Dalyan (Mu¨la**	**0.46**	**328**	PG	**Pb**	**14 33 39.5**	**-0.1**
DALY				SG	**Sb**	**14 33 46.3**	**+0.3**
DALY	**Dalyan (Mu¨la**	**0.46**	**328**	*i* P	**Pb**	**14 33 39.6**	**-0.1**
DALY				*i* S	**Sb**	**14 33 46.2**	**+0.1**
DALY	**Dalyan (Mu¨la**	**0.46**	**328**	P	**Pb**	**14 33 39.6**	**-0.1**
DALY				*e*Sg	**Sb**	**14 33 46.3**	**+0.3**
TURN	**Turunc**	**0.53**	**327**	PG	**Pn**	**14 33 43.1**	**+0.8**
TURN				SG	**Sn**	**14 33 52.4**	**+2.0**
TURN	**Turunc**	**0.53**	**327**	*e*Pg	**Pn**	**14 33 43.1**	**+0.8**
TURN				*e*Sg	**Sn**	**14 33 52.4**	**+2.0**
AKAS	**Kas**	**0.56**	**111**	PG	**Pb**	**14 33 41.5**	**+0.1**
AKAS				SG	**Sn**	**14 33 51.0**	**-0.5**
AKAS	**Kas**	**0.56**	**111**	*i* P	**Pb**	**14 33 41.5**	**+0.1**
AKAS				*i* S	**Sn**	**14 33 51.4**	**-0.1**
AKAS	**Kas**	**0.56**	**111**	P	**Pb**	**14 33 41.5**	**+0.1**
AKAS				*e*Sg	**Sn**	**14 33 51.0**	**-0.5**
KSL	**Kastellorizon**	**0.58**	**119**	P	**Pb**	**14 33 42.3**	**+0.6**
KSL				S	**Sn**	**14 33 52.8**	**+1.1**
KSL				AML	AML	14 33 53.4	
	comp=E,7252μm,0.6s						
KSL				AML	AML	14 33 54.3	
	comp=N,4493μm,0.4s						
KSL	**Kastellorizon**	**0.58**	**119**	P	**Pb**	**14 33 42.6**	**+0.9**
KSL				S	**Sn**	**14 33 52.7**	**+1.0**
MRSB	**Marmaris-Mugla**	**0.68**	**295**	PG	**Pb**	**14 33 43.4**	**0.0**
MRSB				SG	**Sn**	**14 33 53.6**	**-0.6**
MRSB	**Marmaris-Mugla**	**0.68**	**295**	*e*Pg	**Pb**	**14 33 43.4**	**0.0**
MRSB				*e*Sg	**Sn**	**14 33 53.6**	**-0.6**
ARG	**Arkhangelos**	**0.71**	**252**	PG	**Pb**	**14 33 44.1**	**+0.3**
ARG				SG	**Sb**	**14 33 54.3**	**+1.2**
ARG	**Arkhangelos**	**0.71**	**252**	P	**Pb**	**14 33 43.9**	**+0.1**
ARG				S	**Sn**	**14 33 54.8**	**-0.1**
ARG				AML	AML	14 33 54.9	
	comp=N,2688μm,0.5s						
ARG				AML	AML	14 33 55.2	
	comp=E,3494μm,0.3s						
ARG	**Arkhangelos**	**0.71**	**252**	P	**Pb**	**14 33 43.9**	**+0.1**
ARG				S	**Sn**	**14 33 54.6**	**-0.3**
ARG	**Arkhangelos**	**0.71**	**252**	*e*Pg	**Pb**	**14 33 44.1**	**+0.3**
ARG				*e*Sg	**Sb**	**14 33 54.3**	**+1.2**
ELL	**Elmali**	**0.83**	**67**	PG	**Pn**	**14 33 46.3**	**-0.3**
ELL	**Elmali**	**0.83**	**67**	*e*Pg	**Pn**	**14 33 46.3**	**-0.3**
YER	**Yerkesik**	**0.89**	**322**	PG	**Pn**	**14 33 46.9**	**-0.4**
YER	**Yerkesik**	**0.89**	**322**	P	**Pn**	**14 33 46.7**	**-0.6**
YER				S	**Sb**	**14 33 59.3**	**+0.9**
YER	**Yerkesik**	**0.89**	**322**	*e*Pg	**Pn**	**14 33 46.9**	**-0.4**
YER				S	**Sb**	**14 33 59.3**	**+0.9**
GOLH	**Golhisar**	**0.94**	**31**	*i* P	**Pn**	**14 33 47.1**	**-1.0**
GOLH				*i* S	**Sb**	**14 34 00.7**	**+0.8**
GOLH	**Golhisar**	**0.94**	**31**	P	**Pn**	**14 33 47.1**	**-1.0**
GOLH				S	**Sb**	**14 34 00.7**	**+0.8**
TAVA	**DENIZLI_Tavas**	**1.03**	**358**	*i* P	**Pn**	**14 33 49.3**	**-0.1**
TAVA	**DENIZLI_Tavas**	**1.03**	**358**	P	**Pn**	**14 33 49.3**	**-0.1**
DATC	**Datca-Mugla**	**1.09**	**288**	PG	**Pn**	**14 33 49.8**	**-0.3**
DATC	**Datca-Mugla**	**1.09**	**288**	*e*Pg	**Pn**	**14 33 49.8**	**-0.3**
DAT	**Datca**	**1.15**	**285**	PN	**Pn**	**14 33 51.3**	**+0.3**
DAT	**Datca**	**1.15**	**285**	*i* P	**Pn**	**14 33 50.9**	**-0.1**
DAT				*i* S	**Sb**	**14 34 06.9**	**+0.9**
DAT	**Datca**	**1.15**	**285**	P	**Pn**	**14 33 50.9**	**-0.1**
DAT	**Datca**	**1.15**	**285**	*e*Pn	**Pn**	**14 33 51.3**	**+0.3**
DAT				S	**Sb**	**14 34 06.9**	**+0.9**
KORT	**Korkueli**	**1.25**	**63**	PN	**Pb**	**14 33 53.2**	**-0.1**
KORT	**Korkueli**	**1.25**	**63**	*i* P	**Pb**	**14 33 54.1**	**+0.8**
KORT				*i* S	**Sb**	**14 34 13.1**	**+4.0**
KORT	**Korkueli**	**1.25**	**63**	*e*Pn	**Pb**	**14 33 53.2**	**-0.1**
KORT	**Korkueli**	**1.25**	**63**	P	**Pb**	**14 33 54.1**	**+0.8**
MLSB	**Milas**	**1.28**	**313**	PN	**Pn**	**14 33 52.9**	**+0.2**
MLSB	**Milas**	**1.28**	**313**	*e*Pn	**Pn**	**14 33 52.9**	**+0.2**
DENT	**Denizli**	**1.32**	**3**	PN	**Pn**	**14 33 52.8**	**-0.5**
DENT	**Denizli**	**1.32**	**3**	*e*Pn	**Pn**	**14 33 52.8**	**-0.5**
BDRM	**Kayabasi**	**1.37**	**298**	*i* P	**Pb**	**14 33 55.2**	**0.0**
BDRM				*i* S	**Sb**	**14 34 13.0**	**+0.7**
BDRM	**Kayabasi**	**1.37**	**298**	P	**Pb**	**14 33 55.2**	**0.0**
BDRM				S	**Sb**	**14 34 13.0**	**+0.7**
ANTB	**Antalya**	**1.44**	**71**	PN	**Pn**	**14 33 54.8**	**0.0**
ANTB	**Antalya**	**1.44**	**71**	*e*Pn	**Pn**	**14 33 54.8**	**0.0**
BODT	**Bodrum**	**1.47**	**296**	PN	**Pn**	**14 33 54.2**	**-1.0**
BODT	**Bodrum**	**1.47**	**296**	P	**Pn**	**14 33 54.2**	**-1.0**
BODT				S	**Sn**	**14 34 13.3**	**-0.4**
BODT	**Bodrum**	**1.47**	**296**	P	**Pn**	**14 33 54.2**	**-1.0**
BODT				S	**Sn**	**14 34 13.3**	**-0.4**
NISR	**Nisiros**	**1.48**	**277**	P	**Pn**	**14 33 55.7**	**+0.3**
NISR	**Nisiros**	**1.48**	**277**	P	**Pn**	**14 33 55.5**	**0.0**
AYDN	**Tasoluk**	**1.50**	**325**	*i* P	**Pb**	**14 33 56.9**	**-0.5**
AYDN				*i* S	**Sb**	**14 34 16.8**	**+0.7**
AYDN	**Tasoluk**	**1.50**	**325**	P	**Pb**	**14 33 56.9**	**-0.5**
AYDN				S	**Sb**	**14 34 16.8**	**+0.7**
BRDR	**BURDUR-Merkez**	**1.54**	**35**	*i* P	**Pb**	**14 33 58.2**	**+0.1**
BRDR				*i* S	**Sb**	**14 34 18.2**	**+1.0**
BRDR	**BURDUR-Merkez**	**1.54**	**35**	P	**Pb**	**14 33 58.2**	**+0.1**
KARP	**Karpathos**	**1.70**	**239**	PN	**Pn**	**14 33 58.8**	**+0.2**
KARP	**Karpathos**	**1.70**	**239**	P	**Pn**	**14 33 59.1**	**+0.6**
KARP				S	**Sn**	**14 34 18.3**	**-1.4**
KARP	**Karpathos**	**1.70**	**239**	P	**Pn**	**14 33 58.6**	**+0.1**
KARP				S	**Sn**	**14 34 19.1**	**-0.5**
KARP	**Karpathos**	**1.70**	**239**	P	**Pn**	**14 33 58.7**	**+0.2**
KARP				S	**Sn**	**14 34 19.1**	**-0.5**
AYDB	**Zeytinkoy-Aydi**	**1.74**	**331**	PN	**Pn**	**14 33 58.4**	**-0.7**
AYDB	**Zeytinkoy-Aydi**	**1.74**	**331**	*e*Pn	**Pn**	**14 33 58.4**	**-0.7**
ISP	**Isparta**	**1.87**	**42**	PN	**Pn**	**14 34 02.1**	**+1.2**
ISP	**Isparta**	**1.87**	**42**	*e*Pn	**Pn**	**14 34 02.1**	**+1.2**
GCAM	**G?zelcaml?**	**1.87**	**313**	PN	**Pn**	**14 34 01.3**	**+0.5**
GCAM	**G?zelcaml?**	**1.87**	**313**	*i* P	**Pn**	**14 34 01.5**	**+0.7**
GCAM				*i* S	**Sn**	**14 34 23.1**	**-0.6**
GCAM	**G?zelcaml?**	**1.87**	**313**	*e*Pn	**Pn**	**14 34 01.3**	**+0.5**
GCAM				S	**Sn**	**14 34 23.1**	**-0.6**
SUTC	**Sutluce-Ispart**	**1.94**	**57**	PN	**Pn**	**14 34 02.7**	**+0.8**
SUTC	**Sutluce-Ispart**	**1.94**	**57**	*e*Pn	**Pn**	**14 34 02.7**	**+0.8**
KZIL	**AFYON_Kizioren**	**2.05**	**27**	*i* P	**Pn**	**14 34 02.8**	**-0.6**
KZIL	**AFYON_Kizioren**	**2.05**	**27**	P	**Pn**	**14 34 02.8**	**-0.6**
MANT	**Manisa**	**2.08**	**351**	*i* P	**Pn**	**14 34 03.1**	**-0.8**
MANT				*i* S	**Sn**	**14 34 27.4**	**-1.8**

AKMC	Akamas	3.08 116	P	Pn	14 34 16.4	-1.0
LAST	Lasithi	3.10 247	P	Pn	14 34 17.8	0.0
LAST			S	Sn	14 34 51.7	-2.5
LAST	Lasithi	3.10 247	P	Pn	14 34 17.4	-0.4
LAST	Lasithi	3.10 247	P	Pn	14 34 17.8	0.0
LAST			S	Sn	14 34 52.2	-1.9
KONT	Konya--Tatoy	3.11 60	PN	Pn	14 34 19.2	+1.4
KONT	Konya--Tatoy	3.11 60	*e*Pn	Pn	14 34 19.2	+1.4
PPCY	Paphos baz=301	3.16 118	P	Pn	14 34 17.6	-0.9
PPCY	Paphos	3.16 118	P	Pn	14 34 17.6	-0.9
ALFC	Alefka baz=295	3.22 112	P	Pn	14 34 18.1	-1.3
ALFC			S	Sn	14 34 54.9	-2.2
ALFC	Alefka	3.22 112	P	Pn	14 34 18.1	-1.3
ALFC			S	Sn	14 34 54.9	-2.2
PRK	Paraskevi	3.52 324	P	Pn	14 34 25.6	+2.1
PRK	Paraskevi	3.52 324	P	Pn	14 34 24.8	+1.3
PRK	Paraskevi	3.52 324	P	Pn	14 34 24.8	+1.3
SZAC	Souni baz=299	3.61 116	P	Pn	14 34 24.1	-0.6
SZAC	Souni	3.61 116	P	Pn	14 34 24.1	-0.6
SIVA	Sivas	3.66 249	P	Pn	14 34 26.0	+0.6
SIVA			S	Sn	14 35 06.2	-1.5
SIVA	Sivas	3.66 249	P	Pn	14 34 25.9	+0.6
SIVA			S	Sn	14 35 06.3	-1.5
SIGR	SIGRI	3.71 319	P	Pn	14 34 26.8	+0.9
SIGR	SIGRI	3.71 319	P	Pn	14 34 26.9	+0.9
CSS	Mathiatis baz=294	3.85 111	P	Pn	14 34 27.6	-0.4
CSS			S	Sn	14 35 10.7	-1.8
CSS	Mathiatis	3.85 111	P	Pn	14 34 27.8	-0.2
CSS	Mathiatis	3.85 111	P	Pn	14 34 27.6	-0.4
CSS			S	Sn	14 35 10.7	-1.8
VAM	Vamos	4.00 257	P	Pn	14 34 29.9	-0.1
VAM	Vamos	4.00 257	P	Pn	14 34 30.2	+0.2
IMMV	Iera Moni Meta	4.15 258	P	Pn	14 34 33.8	+1.6
IMMV			S	Sn	14 35 16.9	-3.1
IMMV	Iera Moni Meta	4.15 258	P	Pn	14 34 33.3	+1.1
IMMV			S	Sn	14 35 17.7	-2.3
SKY	Skiros Island	4.27 306	P	Pn	14 34 35.5	+1.8
SKY	Skiros Island	4.27 306	P	Pn	14 34 35.1	+1.4
GVD	Gavdhos	4.27 250	P	Pn	14 34 34.2	+0.4
GVD			S	Sn	14 35 21.0	-1.9
GVD	comp=E,240μm,0.5s		AML	AML	14 35 23.4	
GVD	comp=N,208μm,0.4s		AML	AML	14 35 29.5	
GVD	Gavdhos	4.27 250	P	Pn	14 34 34.3	+0.4
GVD			S	Sn	14 35 21.2	-1.8
DION	Dionisos Attik	4.33 294	P	Pn	14 34 35.7	+1.0
DION			S	Sn	14 35 22.4	-2.0
DION	Dionisos Attik	4.33 294	P	Pn	14 34 35.6	+1.0
DION			S	Sn	14 35 22.9	-1.6
LIA	Limnos Island	4.56 320	P	Pn	14 34 39.5	+1.7
LIA	Limnos Island	4.56 320	P	Pn	14 34 39.2	+1.4
ANKY	Antikythira Is	4.61 265	P	Pn	14 34 39.4	+0.9
ANKY	Antikythira Is	4.61 265	P	Pn	14 34 39.3	+0.9
KYTH	Kithira	4.78 270	P	Pn	14 34 41.2	+0.5
KYTH	Kithira	4.78 270	P	Pn	14 34 41.5	+0.8
SMTH	Samothraki Isl	4.85 327	P	Pn	14 34 41.4	-0.3
SMTH	Samothraki Isl	4.85 327	P	Pn	14 34 42.2	+0.5
VLI	Veliai	4.86 275	P	Pn	14 34 42.9	+1.0
VLI	Veliai	4.86 275	P	Pn	14 34 42.8	+1.0
XOR	Xorichti	5.42 304	P	Pn	14 34 51.3	+1.7
XOR	Xorichti	5.42 304	P	Pn	14 34 51.1	+1.5
KLV	Kalavryta, Ach	5.67 289	P	Pn	14 34 54.3	+1.3
KLV	Kalavryta, Ach	5.67 289	P	Pn	14 34 54.3	+1.3

UCR ***25*** *14:37:47.3±1.3, 13°.83N×90°.41W, h93km±9km, ML4.1, mb4.6(NEIC)*
ISCJB ***25*** *14:37:47.8±0.6, 13°.78N±0°.07×90°.34W±0°.06, h103km±5km, mb4.2/13, Error ellipse: s-maj=13.4km s-min=6.7km az=31.2*
NEIC ***25*** *14:37:49.6±0.6, 13°.91N×90°.21W, h91km±7km, mb4.6/10, MD4.2(SNET), Error ellipse: s-maj=12.2km s-min=6.0km az=209.0*
NEIC Felt [I] at Ahuachapan, El Salvador.
IDC ***25*** *14:37:49.8±2.4, 14°.07N×90°.09W, h93km±21km, mb3.7/5, mb1 3.9/8, mb1mx3.5/43, mbtmp4.0/8, MS2.8/1, Ms1 2.8/1, ms1mx2.3/42, Error ellipse: s-maj=33.6km s-min=21.0km az=54.0*

ISC 25 14:37:49.3±0.9, 13°.85N±0°.09×90°.31W±0°.08, h93km±8km, n60, σ1§18/71, mb4.4/13, 2C-9D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	Ixpaco	0.35	337	⇑*i*P	Pn	14 38 02.0	-1.7
SBLS	San Blas	0.67	91	⇓*e*P	Pn	14 38 05.0	-1.0
CEDA	San Andres	0.89	93	⇑*i*P	Pn	14 38 07.3	-0.8
CEDA				*e*S	Sn	14 38 22.2	+0.1
COLS	Colinas	1.00	100	*e*P	Pn	14 38 08.5	-0.9
BOQS	Boqueron	1.01	96	⇓*i*P	Pn	14 38 08.7	-0.8
BOQS				*e*S	Sn	14 38 25.9	+1.2
UEES	San Salvador	1.04	96	*e*P	Pn	14 38 09.0	-0.8
UEES				*e*S	Sn	14 38 26.7	+1.5
SNET	Serv Nac Est T	1.06	99	*e*Pn	Pn	14 38 08.6	-1.4
SNET	Serv Nac Est T	1.06	99	*e*P	Pn	14 38 09.3	-0.7
SNET				*e*S	Sn	14 38 25.6	+0.1
SNET	comp=Z,3μm,0.2s			IAML		14 38 29.0	
MTO3	Montecristo	1.07	59	⇓*i*P	Pn	14 38 10.1	-0.1
MTO3				*e*S	Sn	14 38 27.1	+1.1
CUSC	San Salvador	1.10	96	⇓*e*P	Pn	14 38 10.1	-0.3
CUSC				*e*S	Sn	14 38 28.5	+2.3
LOMA	San Marcos	1.12	100	*e*P	Pn	14 38 09.8	-0.8
LOMA				*e*S	Sn	14 38 28.5	+1.8
LFU	La Fuente	1.17	95	*e*P	Pn	14 38 10.5	-0.7
LFRS	El Faro	1.23	100	⇓*i*P	Pn	14 38 11.1	-1.0
LBRS	Las Brisas	1.24	95	⇓*e*P	Pn	14 38 11.4	-0.6
SNVI	San Vicente	1.45	99	*e*P	Pn	14 38 14.4	-0.3
SNVI				*e*S	Sn	14 38 34.5	+0.6
TECA	Tecapa	1.79	101	⇓*e*P	Pn	14 38 18.6	-0.5
PACA	Pacayal	1.97	101	*e*P	Pn	14 38 21.6	+0.3
CAHU	Cacacuatique	2.04	92	*e*P	Pn	14 38 22.1	-0.3
CNCH	Conchagua	2.48	103	⇓*i*P	Pn	14 38 28.6	+0.6
TGUH	Tegucigalpa,Un	2.96	86	*e*Pn	Pn	14 38 34.0	-0.2
TGUH	Tegucigalpa,Un	2.96	86	⇓*i*P	Pn	14 38 34.6	+0.3
CCIG	Comitan	3.00	324	*e*Pn	Pn	14 38 36.0	+1.0
CNGN	Cerro Negro	3.77	110	*e*P	Pn	14 38 44.6	-0.6
ESTN	Estel	3.91	100	*e*Pn	Pn	14 38 46.8	-0.4
COPN	Copaltepe	3.99	114	*e*P	Pn	14 38 46.6	-1.6
CMIG	Matias Romero	5.46	307	P	Pn	14 39 07.8	-0.4
	comp=Z,4.8nm,0.3s,baz=122,slow=8.5,SNR=36						
ESPN	Las Esperanzas	6.08	105	*e*Pn	Pn	14 39 16.6	-0.1
JTS	JuntasAbangare	6.32	123	P	Pn	14 39 19.9	0.0
	comp=Z,16nm,0.3s,baz=14,slow=19,SNR=29						
JTS	JuntasAbangare	6.32	123	*e*Pn	Pn	14 39 19.6	-0.4
	comp=Z,36nm,0.6s						
TLIG	Tlapa	8.77	296	*e*Pn	Pn	14 39 54.1	+0.7
BCIP	Isla Barro Col	11.27	113	*e*Pn	Pn	14 40 26.7	-0.6
CBCY	The Bluff, Cay	11.68	58	*e*Pn	Pn	14 40 30.7	-2.1
344A	Westbrook Farm comp=Z,24nm,0.6s	17.53	359	*e*P	P	14 41 47.2	-0.3
WHTX	Lake Whitney, comp=Z,14nm,0.6s	19.21	341	*e*P	P	14 42 06.2	+0.3
TXAR	Lajitas Array comp=Z,0.2nm,0.3s,baz=150,slow=10,SNR=13	19.76	323	P	P	14 42 13.0	+1.0
TXAR				PcP	PcP	14 46 26.9	+0.1
	comp=Z,0.1nm,0.3s,baz=148,slow=2.8,SNR=6.7						
TX31	Lajitas Ar. Si	19.76	323	*e*P	P	14 42 12.7	+0.7
PLAL	Pickwick Lake comp=Z,57nm,2.0s	21.14	5	*e*P	P	14 42 26.8	+0.1
SWET	Sewanee comp=Z,11nm,0.8s	21.64	10	*e*P	P	14 42 32.4	+0.3
V48A	Smith Brothers comp=Z,29nm,1.4s	22.02	8	*e*P	P	14 42 36.4	+0.3
TKL	Tuckaleechee C comp=Z,6.4nm,0.5s,baz=183,slow=11,SNR=7.6	22.50	14	P	P	14 42 40.6	-0.5
TKL	Tuckaleechee C comp=Z,69nm,1.9s	22.50	14	*e*P	P	14 42 41.6	+0.5
T47A	Sharon Grove comp=Z,21nm,0.6s	23.22	7	*e*P	P	14 42 48.0	-0.2
WCI	Wyandotte Cave comp=Z,20nm,0.6s	24.54	8	*e*P	P	14 43 00.0	-0.2
JFWS	Jewell Farm comp=Z,28nm,1.1s	28.96	0	*e*P	P	14 43 39.9	+0.1
PDAR	Pinedale Array comp=Z,0.2nm,0.5s,baz=114,slow=4.4,SNR=2.9	33.26	334	PcP	PcP	14 46 57.2	-1.2
PDAR				LR	LR	15 00 02.7	
	comp=Z,14nm,19.2s,baz=84,slow=40						
AGMN	Agassiz Nation comp=Z,6.7nm,0.6s	34.66	353	*e*P	P	14 44 27.7	-2.0
NV11	Mina Array Sit comp=Z,0.3nm,1.3s	34.74	320	*e*P	P	14 44 31.8	+1.1
NV01	Mina Array Sit	34.83	320	*e*P	P	14 44 33.4	+1.8
NVAR	Mina Array Bea	34.83	320	P	P	14 44 33.4	+1.8
	comp=Z,2.5nm,0.7s,baz=132,slow=7.9,SNR=24						
NVAR				PcP	PcP	14 47 03.5	+0.6
	comp=Z,1.0nm,0.6s,baz=134,slow=3.0,SNR=9.5						
ULM	Lac du Bonnet	36.59	354	P	P	14 44 43.4	-2.8
	comp=Z,3.0nm,0.4s,baz=174,slow=5.7,SNR=4.2						
YKA	Yellowknife Ar	51.56	346	P	P	14 46 43.5	-2.0
	comp=Z,0.5nm,0.6s,baz=135,slow=7.1,SNR=4.9						
ILAR	Eielson Array	63.63	336	P	P	14 48 09.1	-1.0
	comp=Z,0.2nm,0.4s,baz=129,slow=5.2,SNR=4.9						
KSH	Kashi	125.39	13	PKP	PKPdf	14 56 39.0	-0.9
KSH				PP	PP	14 58 34.3	+4.3
KSH				AMB	AMB		
	comp=Z,170nm,3.8s						
LZH	Lanzhou	128.56	345	*e*PKP	PKPdf	14 56 45.5	-0.6
LZH				pPKP	pPKPdf	14 57 11.0	-1.0
LZH				sPKP		14 57 21.0	
LZH				LR	LR		
	comp=N,150nm,18.3s						
LZH				LR	LR		
	comp=E,140nm,18.0s						
LZH				LR	LR		
	comp=Z,190nm,20.1s						
CD2	Chengdu	133.49	343	PKP	PKPdf	14 56 53.8	-1.6
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
WRA	Warramunga Arr	136.95	256	PKP	PKPdf	14 57 03.3	+1.3
	comp=Z,0.7nm,0.9s,baz=93,slow=4.0,SNR=3.8						
ASAR	Alice Springs	137.16	250	PKP	PKPdf	14 57 04.9	+2.5
	comp=Z,0.6nm,1.0s,baz=84,slow=2.6,SNR=4.5						
FITZ	Fitzroy Crossi	145.22	258	PKPbc	PKPbc	14 57 16.8	+0.1
	comp=Z,2.1nm,0.6s,baz=347,slow=6.3,SNR=5.0						
CMAR	Chiang Mai Arr	146.63	344	PKPbc	PKPdf	14 57 19.6	+0.2
	comp=Z,1.4nm,0.5s,baz=336,slow=3.0,SNR=8.7						
CM01	Chiang Mai Arr	146.66	344	*e*PKPdf	PKPdf	14 57 19.8	+0.4

ISCJB ***25*** *14:38:55.2±1.1, 2°.3N±0°.1×89°.6E±0°.1, h10km, mb3.6/5, MS3.2/2, Error ellipse: s-maj=24.1km s-min=15.1km az=38.8*
IDC ***25*** *14:38:56.4±1.6, 2°.32N×89°.72E, h0km, mb3.5/5, mb1 3.6/7, mb1mx3.4/65, mbtmp3.5/7, ML3.6/2, MS3.2/3, Ms1 3.2/3, ms1mx2.5/49, Error ellipse: s-maj=50.1km s-min=22.1km az=55.0*

ISC 25 14:38:57.7±1.3, 2°.3N±0°.2×89°.7E±0°.2, h10km, n17, σ0§84/8, mb3.5/5, North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	9.21	87	LR	LR	14 44 45.1	
	comp=Z,155nm,18.3s,baz=89,slow=38						
PALK	Pallekele	10.24	299	Pn	Pn	14 41 25.1	+0.1
	0.3nm,0.3s,baz=116,slow=11,SNR=2.9						
PALK				Sn	Sn	14 43 08.9	-11
	3.3nm,0.3s,baz=298,slow=5.1,SNR=6.8						
CMAR	Chiang Mai Arr	18.42	29	P	P	14 43 13.5	+0.2
	0.1nm,0.3s,baz=227,slow=13,SNR=4.8						
H08S2	Diego Garcia H	19.83	240	T	T	15 03 51.6	
	baz=60,slow=75,SNR=29						
H08S3	Diego Garcia H	19.83	240	T	T	15 03 45.3	
	baz=60,slow=75,SNR=72						
H08S1	Diego Carcia H	19.84	240	T	T	15 03 47.9	
	baz=60,slow=75,SNR=7.3						
H01W3	Cape Leeuwin H	43.52	150	T	T	15 33 24.5	
	baz=325,slow=76,SNR=7.4						
H01W2	Cape Leeuwin H	43.53	150	T	T	15 33 19.7	
	baz=325,slow=76,SNR=12						
H01W1	Cape Leeuwin H	43.53	150	T	T	15 33 18.4	
	baz=325,slow=76,SNR=6.2						
MKAR	Makanchi Array	44.77	353	P	P	14 47 10.4	-1.2
	0.4nm,0.7s,baz=178,slow=9.6,SNR=4.5						
SONM	Songino Array	47.58	15	P	P	14 47 34.3	+0.5
	2.6nm,0.7s,baz=196,slow=8.5,SNR=11						
WRA	Warramunga Arr	49.05	119	P	P	14 47 45.2	-0.2
	0.4nm,0.7s,baz=292,slow=8.3,SNR=2.7						
KURBB	Kurchatov Arra	49.06	351	P	P	14 47 44.5	-0.5
	0.3nm,0.6s,baz=177,slow=6.5,SNR=4.5						
KSRS	Korea Array	49.53	40	LR	LR	15 12 23.3	
	comp=Z,18nm,18.5s,baz=220,slow=41						
ASAR	Alice Springs	50.14	124	P	P	14 47 53.5	-0.3
	0.1nm,0.5s,baz=295,slow=7.2,SNR=4.7						
SPITS	Spitsbergen Ar	84.36	349	LR	LR	15 33 33.6	
	comp=Z,9.6nm,18.5s,baz=240,slow=39						
TXAR	Lajitas Array	146.02	21	PKPbc	PKPbc	14 58 40.0	+1.3
	0.1nm,0.5s,baz=268,slow=2.7,SNR=2.5						

IDC 25 14:40:22.7±379.0, 47°.29N×46°.26E, h0km, Error ellipse: s-maj=147.4km s-min=129.8km az=175.0, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	8.37	64	*i*		15 37 10.0	
	baz=252,slow=375,SNR=1.9						
I43RU	DUBNA INFRASONI	0.96	333	*i*		15 45 20.0	
	baz=142,slow=378,SNR=3.7						
I26DE	FREYUNG INFRAS	21.72	286	*i*		16 54 49.0	
	baz=82,slow=303,SNR=0.3						
I48TN	KESRA INFRASON	29.66	261	*i*		17 38 40.0	
	baz=55,slow=315,SNR=0.4						

IDC ***25*** *14:55:25.7±0.8, 55°.90S×27°.19W, h0km, mb4.3/6, mb1 4.4/6, mb1mx4.1/33, mbtmp4.3/6, Error ellipse: s-maj=38.2km s-min=20.3km az=77.0*
ISCJB ***25*** *14:55:29.7±0.9, 55°.9S±0°.1×27°.1W±0°.4, h35km, mb4.3/6, Error ellipse: s-maj=36.4km s-min=16.1km az=159.1*

ISC 25 14:55:31.8±0.9, 55°.9S±0°.1×27°.2W±0°.3, h35km, n12, σ2§03/12, mb4.3/5, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	16.99	158	P	P	14 59 31.4	+3.5
VNA3	Neumayer Olymp	17.19	161	P	Pn	14 59 29.9	+1.2
SNAA	Sanae	18.94	156	P	P	14 59 49.3	-0.1
QSPA	South Pole Qui	34.40	180	P	P	15 02 14.6	-0.7
	4.8nm,0.5s,baz=218,slow=2.1,SNR=47						
MAW	Mawson	40.33	144	P	P	15 03 03.4	-1.7
	1.4nm,0.4s,baz=231,slow=8.5,SNR=7.3						
VNDA	Vanda	46.77	183	P	P	15 03 56.3	-0.7
	2.9nm,0.7s,baz=184,slow=5.7,SNR=23						
LPAZ	La Paz	50.24	305	P	P	15 04 25.2	+0.2
	1.0nm,0.4s,baz=123,slow=2.9,SNR=10						
TORD	Torodi Ar. Bea	72.89	30	P	P	15 06 57.4	+0.4
	1.9nm,0.5s,baz=201,slow=6.5,SNR=18						
ASAR	Alice Springs	99.19	163	P	Pdif	15 09 07.0	-2.6
	0.5nm,0.7s,baz=186,slow=3.3,SNR=8.5						
ZALV	Zalesovo Beam	142.30	64	PKP	PKPdf	15 14 58.9	-0.3
	0.4nm,0.3s,baz=246,slow=2.5,SNR=2.7						
INK	Inuvik	145.63	321	PKPbc	PKPdf	15 15 02.9	-1.7
	0.6nm,0.4s,baz=123,slow=5.0,SNR=3.2						
ILAR	Eielson Array	149.96	312	PKPbc	PKPdf	15 15 14.9	+3.1
	1.4nm,0.7s,baz=106,slow=1.5,SNR=17						

IDC 25 15:05:28.3±1.8, 1°.24N×126°.59E, h0km, mb3.2/4, mb1 3.3/4, mb1mx3.2/54, mbtmp3.2/4, Error ellipse: s-maj=178.7km s-min=21.4km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.38	161	P	P	15 10 27.0	-1.3
	0.2nm,0.4s,baz=339,slow=11,SNR=7.6						
ASAR	Alice Springs	25.75	164	P	P	15 11 01.9	+1.1
	0.3nm,0.6s,baz=345,slow=12,SNR=6.6						
MKAR	Makanchi Array	59.52	326	P	P	15 15 33.7	+0.2
	0.1nm,0.5s,baz=120,slow=5.2,SNR=3.1						
KURBB	Kurchatov Arra	63.76	328	P	P	15 16 01.6	-0.3
	0.2nm,0.4s,baz=129,slow=7.3,SNR=3.6						

IDC 25 15:21:58.4±4.6, 8°.82S×121°.71E, h89km±50km, mb3.2/1, mb1 3.2/5, mb1mx3.0/54, mbtmp3.4/5, ML3.1/4, Error ellipse: s-maj=101.4km s-min=37.6km az=62.0, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	2.37	126	P	Pn	15 22 35.9	+0.4
	3.8nm,0.3s,baz=259,slow=2.9,SNR=9.1						
BATI				S	Sn	15 23 09.7	+5.8
	5.1nm,0.3s,baz=326,slow=18,SNR=3.0						
FITZ	Fitzroy Crossi	9.98	158	P	Pn	15 24 18.6	-0.4
	0.1nm,0.3s,baz=5.1,slow=9.8,SNR=3.5						
WRA	Warramunga Arr	16.47	134	P	Pn	15 25 42.6	-1.6
	0.1nm,0.3s,baz=309,slow=15,SNR=7.0						
WRA				S	Sn	15 28 36.8	-10
	0.0nm,0.3s,baz=314,slow=24,SNR=3.3						
ASAR	Alice Springs	18.82	143	P	Pn	15 26 12.1	-0.6
	0.1nm,0.3s,baz=325,slow=13,SNR=8.3						
MKAR	Makanchi Array	65.55	331	P	P	15 32 32.6	0.0
	0.4nm,0.7s,baz=140,slow=7.7,SNR=5.0						

PGC 25 15:27:36.1±0.0, 65°.39N×134°.15W, h1km, ML3.6/4, 228km south of Fort McPherson, Nt Northern Yukon Territory, Canada, Northern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAWY	Dawson	2.62	242	Pn	Pn	15 28 18.5	-1.0
DAWY				Sn	Sn	15 28 52.5	+0.6
INK	Inuvik	2.94	5	Pn	Pn	15 28 22.9	-0.9
YUK5	Granite Creek	4.59	203	Pn	Pn	15 28 47.0	+0.2
YUK5				Sn	Sn	15 29 38.0	-2.8
YUK5				Sg	Sb	15 29 55.3	+2.0
DOT	Dot Lake	4.63	252	Sg	Sb	15 29 55.3	+1.2
HYT	Haines Junctio	4.83	200	Pn	Pn	15 28 50.3	+0.3
HYT				Sg	Sb	15 30 03.0	+2.9
YUK7	Dusty Glacier	5.21	202	Sg	Sb	15 30 15.1	+4.0
CTGM	Chitina Glacie	5.50	220	Sn	Sn	15 30 02.6	-0.6
PAX	Paxson	5.51	249	Pn	Pn	15 28 58.4	-0.9
PAX				Sg	Sb	15 30 24.3	+4.7
HARP	HAARP	5.71	243	Sg	Sg	15 30 32.6	-6.6
PLBC	Pleasant Camp	6.05	191	Sg	Sb	15 30 41.9	+7.0
DHRN	Dharma Camp	6.15	68	Pn	Pn	15 29 07.1	-0.8
DHRN				Sn	Sn	15 30 13.5	-5.2
COLD	Coldfoot	6.72	293	Pn	Pn	15 29 14.5	-1.3
COLD				Sn	Sn	15 30 26.9	-6.0
BESE	Bessie Mountai	6.85	183	Sg	Sg	15 31 09.0	-6.7
DLBC	Dease Lake	7.24	163	Pn	Pn	15 29 23.9	+0.9
KUKN	Kugluktuk,NWT	7.95	64	P	Pn	15 29 28.8	-3.8
YKW3	Yellowknife Ar	9.03	99	P	Pn	15 29 46.0	-1.4
YKW3				S	Sn	15 31 20.8	-8.8
YKW1	Yellowknife Ar	9.10	100	P	Pn	15 29 45.6	-2.9
YKW1				S	Sn	15 31 23.3	-8.1

SOME ***25*** *15:48:59.8, 48°.63N×78°.05E, h0km*
NNC ***25*** *15:49:04.5±2.2, 48°.74N×78°.09E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=32.5km s-min=9.3km az=69.0, Suspected Mining explosion.*

ISC 25 15:48:59.2±1.4, 48°.62N±0°.04×78°.1E±0°.1, h0km, n7, σ1§45/9, 3C-4D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	Kurchatov Arra	2.03	7	⇓Pn	Pb	15 49 37.9	+0.9
	5.3nm,0.5s						
KURBB				⇑Lg	Lg	15 50 06.6	
	14nm,0.6s						
KURK	Kurchatov	2.13	9	⇑Pn	Pb	15 49 39.5	+0.8
	4.2nm,0.6s						
KURK				⇑Lg	Lg	15 50 07.6	
	4.1nm,0.4s						
SEM	Semipalatinsk	2.27	37	*e*P	Pb	15 49 41.9	+0.6
	5.2nm,0.2s						
SEM				*e*S	Sg	15 50 12.3	+0.2
	29nm,0.2s						
MAKZ	Makanchi	3.17	123	⇓Lg	Lg	15 50 47.1	
	1.8nm,0.7s						
MK31	Makanchi Array	3.36	121	⇓Pn	Pb	15 50 00.5	+0.9
	0.8nm,0.8s,baz=297,slow=11,SNR=4.3						
MK31				⇓Lg	Lg	15 50 51.2	
	0.5nm,0.3s,baz=303,slow=27,SNR=3.9						
KAPS	Kapalarasan	3.44	165	*e*P	Pb	15 50 02.8	+1.8
	0.8nm,0.4s						
KAPS				*e*S	Sg	15 50 48.8	-0.8
	2.6nm,0.1s						
MNBS	Baschi	4.54	177	*e*P	Pg	15 50 24.2	-2.0
	1.1nm,0.3s						
MNBS				*e*S	Sg	15 51 26.4	+1.3
	7.1nm,0.5s						

CSEM ***25*** *15:51:37.6±0.2, 39°.18N×42°.22E, h12km, ML2.5, Error ellipse: s-maj=5.7km s-min=4.6km az=142.0*
ISK ***25*** *15:51:37.5, 39°.17N×42°.25E, h7km, ML2.4/5*
ISCJB ***25*** *15:51:38.1±0.5, 39°.17N±0°.03×42°.24E±0°.04, h9km±5km, Error ellipse: s-maj=5.3km s-min=4.7km az=157.6*
DDA ***25*** *15:51:38.3, 39°.19N×42°.28E, h7km, Ml2.5*

ISC 25 15:51:38.0±0.9, 39°.17N±0°.03×42°.25E±0°.03, h14km±7km, n20, σ0§60/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKAR	Karacoban	0.17	301	*i* P	Pg	15 51 41.6	-0.7
EKAR				*i* S	Sg	15 51 46.1	+0.9
EKAR	Karacoban	0.17	301	P	Pg	15 51 41.6	-0.7
EKAR				S	Sg	15 51 46.1	+0.9
TUTA	Tutak	0.50	62	*i* P	Pg	15 51 47.2	-0.7
TUTA				*i* S	Sg	15 51 54.8	+0.2
TUTA	Tutak	0.50	62	P	Pg	15 51 47.2	-0.7
TUTA				S	Sg	15 51 54.8	+0.2
ADCV	BITLIS_Adilcev	0.52	134	*i* P	Pg	15 51 48.1	-0.2
ADCV				*i* S	Sb	15 51 56.4	0.0
ADCV	BITLIS_Adilcev	0.52	134	P	Pg	15 51 48.1	-0.2
ADCV				S	Sb	15 51 56.4	0.0
GURO	Guroymak-BITLI	0.64	195	PG	Pg	15 51 50.5	-0.1
GURO				SG	Sb	15 51 59.7	-0.2
GURO	Guroymak-BITLI	0.64	195	*e*Pg	Pg	15

Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.45**	**52**	P	P	16 34 48.5	0.0
	2.8nm,0.3s,baz=117,slow=4.8,SNR=4.8						
CTA	**Charters Tower**	**33.90**	**262**	P	P	16 38 50.5	-0.1
	3.5nm,0.9s,baz=96,slow=10,SNR=3.2						
STKA	**Stephens Creek**	**38.80**	**242**	P	P	16 39 30.6	+0.1
	0.4nm,0.3s,baz=87,slow=12,SNR=4.6						
WRA	**Warramunga Arr**	**45.07**	**260**	P	P	16 40 19.7	-0.2
	0.6nm,0.4s,baz=97,slow=7.3,SNR=20						
ASAR	**Alice Springs**	**45.15**	**255**	P	P	16 40 20.3	-0.2
	1.7nm,0.8s,baz=89,slow=7.7,SNR=46						
FITZ	**Fitzroy Crossi**	**53.48**	**261**	P	P	16 41 21.6	-0.1
	3.4nm,1.2s,baz=129,slow=6.9,SNR=8.9						

*IDC **25** 16:33:33.3±2.0, 32°.99N×142°.50E, h0km, mb3.5/3, mb1 3.6/6, mb1mx3.3/71, mbtmp3.6/6, ML3.3/3, Error ellipse: s-maj=46.4km s-min=22.6km az=60.0*
*ISCJB **25** 16:33:36.5±1.0, 33°.17N±0°.06×142°.48E±0°.09, h33km, mb3.6/3, Error ellipse: s-maj=10.9km s-min=7.9km az=160.3*
*JMA **25** 16:33:38.5±0.2, 33°.17N×142°.32E, h80km, M3.5*

ISC 25 16:33:35.6±1.2, 33°.09N±0°.06×142°.7E±0°.1, h33km, n14, σ2s16/23, mb3.6/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**2.10**	**318**	P	**Pn**	**16 34 09.1**	**+1.1**
JHJ	**Hachijo jima 2**	**2.43**	**271**	**Pn**	**Pn**	**16 34 12.8**	**-0.1**
	8.5nm,0.3s,baz=322,slow=19,SNR=6.7						
JHJ				Sn	**Sn**	**16 34 39.5**	**-2.0**
	18nm,0.3s,baz=139,slow=19,SNR=9.2						
BSO3	**Boso 3**	**2.48**	**314**	P	**Pn**	**16 34 14.2**	**+0.7**
JIM2	**Oshima 3**	**3.15**	**302**	P	**Pn**	**16 34 22.7**	**-0.2**
JIM2				*e*S	**Sn**	**16 34 56.3**	**-3.1**
JHO	**Hitachi**	**3.92**	**334**	P	**Pn**	**16 34 34.0**	**+0.6**
JHO				*e*S	**Sn**	**16 35 16.2**	**-2.1**
JAG	**Ashikaga**	**4.25**	**322**	P	**Pn**	**16 34 39.3**	**+1.2**
JAG				*e*S	**Sn**	**16 35 25.9**	**-0.7**
JRY	**Ryogami san**	**4.27**	**314**	P	**Pn**	**16 34 38.9**	**+0.6**
JRY				*e*S	**Sn**	**16 35 24.9**	**-2.1**
JFK	**Kawauchi**	**4.51**	**341**	P	**Pn**	**16 34 41.8**	**+0.1**
JFK				*e*S	**Sn**	**16 35 27.6**	**-5.5**
JFT	**Otama**	**4.81**	**337**	P	**Pn**	**16 34 47.2**	**+1.4**
JFT				*e*S	**Sn**	**16 35 37.8**	**-2.6**
MJAR	**Matsushiro Arr**	**5.04**	**314**	Pn	**Pn**	**16 34 50.3**	**+1.5**
	0.7nm,0.3s,baz=160,slow=12,SNR=12						
MJAR				Sn	**Sn**	**16 35 44.6**	**-1.3**
	0.6nm,0.3s,baz=147,slow=25,SNR=5.4						
JCJ	**Chichijima**	**5.99**	**184**	Pn	**Pn**	**16 35 01.8**	**-0.1**
	4.4nm,0.3s,baz=282,slow=19,SNR=3.6						
JCJ				Sn	**Sn**	**16 36 05.6**	**-3.8**
	baz=270,slow=20						
MKAR	**Makanchi Array**	**47.17**	**305**	P	**P**	**16 42 07.0**	**+2.1**
	0.4nm,0.7s,baz=96,slow=8.0,SNR=4.3						
KURBB	**Kurchatov Arra**	**49.30**	**311**	P	**P**	**16 42 22.8**	**+1.6**
	0.4nm,0.5s,baz=85,slow=7.3,SNR=5.5						
WRA	**Warramunga Arr**	**53.33**	**190**	P	**P**	**16 42 53.4**	**+1.7**
	0.7nm,1.0s,baz=5.8,slow=8.1,SNR=3.3						

IDC 25 16:40:53.7±2.1, 2°.84N×89°.45E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.4/64, mbtmp3.8/5, ML3.6/1, Error ellipse: s-maj=61.7km s-min=27.4km az=49.0, North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	**Pallekele**	**9.76**	**297**	Pn	Pn	16 43 16.1	+0.6
	0.5nm,0.3s,baz=116,slow=3.8,SNR=5.0						
PALK				Sn	Sn	16 44 51.8	-14
	baz=118,slow=15,SNR=2.0						
MKAR	**Makanchi Array**	**44.22**	**353**	P	P	16 49 04.0	-0.7
	0.4nm,0.6s,baz=172,slow=9.6,SNR=5.6						
SONM	**Songino Array**	**47.15**	**16**	P	P	16 49 28.5	+0.5
	1.8nm,0.6s,baz=195,slow=9.9,SNR=8.7						
WRA	**Warramunga Arr**	**49.54**	**119**	P	P	16 49 46.6	-0.2
	0.5nm,0.9s,baz=294,slow=8.8,SNR=2.9						
ZALV	**Zalesovo Beam**	**51.09**	**356**	P	P	16 49 57.5	-0.4
	0.6nm,0.4s,baz=181,slow=6.5,SNR=3.2						

IDC 25 17:01:59.0±2.0, 7°.81S×128°.57E, h0km, mb3.1/1, mb1 3.6/5, mb1mx3.3/51, mbtmp3.4/5, ML3.0/4, Error ellipse: s-maj=53.1km s-min=28.0km az=78.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.40**	**243**	Pn	Pn	17 03 21.4	+0.5
	0.7nm,0.3s,baz=284,slow=21,SNR=1.5						
BATI				Sn	Sn	17 04 19.5	-4.5
	2.1nm,0.3s,baz=236,slow=22,SNR=5.8						
FITZ	**Fitzroy Crossi**	**10.62**	**195**	Pn	Pn	17 04 32.3	-0.2
	0.1nm,0.3s,baz=14,slow=12,SNR=1.1						
FITZ				Sn	Sn	17 06 28.1	-4.2
	0.1nm,0.3s,baz=146,slow=11,SNR=2.4						
WRA	**Warramunga Arr**	**13.29**	**156**	Pn	Pn	17 05 10.0	+0.8
	0.1nm,0.3s,baz=331,slow=12,SNR=5.8						
WRA				Sn	Sn	17 07 36.3	-1.5
	0.1nm,0.3s,baz=332,slow=21,SNR=8.3						
ASAR	**Alice Springs**	**16.58**	**163**	Pn	Pn	17 05 52.2	-0.8
	0.1nm,0.3s,baz=338,slow=11,SNR=4.9						
MKAR	**Makanchi Array**	**68.13**	**328**	P	P	17 13 00.9	0.0
	0.1nm,0.5s,baz=130,slow=7.8,SNR=2.6						

IDC 25 17:03:31.9±27.0, 22°.23S×173°.01W, h0km, mb3.9/4, mb1 4.0/4, mb1mx3.6/44, mbtmp3.9/4, Error ellipse: s-maj=506.1km s-min=157.7km az=77.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**37.97**	**265**	P	P	17 10 52.1	+0.4
	4.4nm,0.8s,baz=91,slow=11,SNR=7.6						
STKA	**Stephens Creek**	**41.30**	**247**	P	P	17 11 17.8	-1.6
	0.8nm,0.5s,baz=101,slow=16,SNR=3.9						
ASAR	**Alice Springs**	**48.67**	**257**	P	P	17 12 17.9	-0.2
	0.2nm,0.4s,baz=90,slow=6.6,SNR=12						
WRA	**Warramunga Arr**	**48.97**	**262**	P	P	17 12 21.1	+0.5
	0.6nm,0.3s,baz=97,slow=8.4,SNR=31						

*DDA **25** 17:04:41.9, 41°.49N×42°.19E, h7km, Ml2.5, Suspected Mining explosion.*
*ISCJB **25** 17:04:42.3±0.6, 41°.37N±0°.04×42°.20E±0°.04, h0km, Error ellipse: s-maj=5.8km s-min=4.2km az=170.1*
*CSEM **25** 17:04:42.3±0.2, 41°.38N×42°.22E, h1km, ML2.5, Error ellipse: s-maj=5.8km s-min=3.9km az=173.0, Suspected Mining explosion.*
*ISK **25** 17:04:42.4, 41°.37N×42°.17E, h8km, ML2.0/4*

ISC 25 17:04:42.8±0.9, 41°.36N±0°.04×42°.22E±0°.03, h0km, n14, σ0s47/25, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EPOS	**Posof**	**0.41**	**69**	*i* P	**Pg**	**17 04 50.2**	**-0.4**
EPOS				*i* S	**Sg**	**17 04 55.9**	**0.0**
EPOS	**Posof**	**0.41**	**69**	P	**Pg**	**17 04 50.2**	**-0.4**
EPOS				S	**Sg**	**17 04 55.9**	**0.0**
DBOC	**Borcka**	**0.42**	**269**	*i* P	**Pg**	**17 04 50.7**	**-0.1**
DBOC				*i* S	**Sg**	**17 04 56.4**	**+0.2**
DBOC	**Borcka**	**0.42**	**269**	P	**Pg**	**17 04 50.7**	**-0.1**
DBOC				S	**Sg**	**17 04 56.4**	**+0.2**
BCA	**Borcka**	**0.46**	**281**	PG	**Pg**	**17 04 51.3**	**-0.3**
BCA				SG	**Sg**	**17 04 57.4**	**-0.1**
BCA	**Borcka**	**0.46**	**281**	*e*Pg	**Pg**	**17 04 51.3**	**-0.3**
BCA				*e*Sg	**Sg**	**17 04 57.4**	**-0.1**
DDEM	**Demirkent**	**0.58**	**218**	*i* P	**Pg**	**17 04 53.6**	**-0.4**
DDEM				*i* S	**Sg**	**17 05 02.1**	**+0.5**
DDEM	**Demirkent**	**0.58**	**218**	P	**Pg**	**17 04 53.6**	**-0.4**
DDEM				S	**Sg**	**17 05 02.1**	**+0.5**
SENK	**Senkaya-Erzuru**	**0.80**	**173**	PG	**Pg**	**17 04 58.3**	**+0.2**
SENK				SG	**Sb**	**17 05 10.7**	**-0.5**
SENK	**Senkaya-Erzuru**	**0.80**	**173**	*e*Pg	**Pg**	**17 04 58.3**	**+0.2**
SENK				*e*Sg	**Sb**	**17 05 10.7**	**-0.5**
CHOM	**Cayeli-Rize**	**1.13**	**257**	PN	**Pg**	**17 05 03.8**	**-0.7**
CHOM				SN	**Sg**	**17 05 19.2**	**+0.1**
CHVG	**Ch'k'valeri**	**1.36**	**356**	PN	**Pb**	**17 05 10.5**	**+1.3**
BAYT	**Ayd¨–ntepe-Bay**	**1.85**	**239**	PN	**Pn**	**17 05 15.3**	**-0.6**
BAYT	**Ayd¨–ntepe-Bay**	**1.85**	**239**	*e*Pn	**Pn**	**17 05 15.3**	**-0.6**

IDC 25 17:32:08.7±2.0, 6°.66S×129°.99E, h0km, mb3.7/1, mb1 4.4/5, mb1mx3.7/54, mbtmp4.2/5, ML4.3/4, Error ellipse: s-maj=52.4km s-min=27.2km az=82.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**7.18**	**240**	Pn	Pn	17 33 56.7	+1.7
	4.1nm,0.3s,baz=111,slow=8.6,SNR=10						
BATI				Sn	Sn	17 35 05.7	-12
	9.2nm,0.3s,baz=94,slow=22,SNR=3.7						
FITZ	**Fitzroy Crossi**	**12.13**	**200**	Pn	Pn	17 35 01.0	-2.0
	1.9nm,0.3s,baz=48,slow=12,SNR=58						
FITZ				Sn	Sn	17 36 59.8	-19
	0.8nm,0.3s,baz=57,slow=18,SNR=2.8						
WRA	**Warramunga Arr**	**13.86**	**163**	Pn	Pn	17 35 27.2	+0.6
	1.3nm,0.3s,baz=344,slow=13,SNR=36						
WRA				Sn	Sn	17 37 47.3	-14
	1.2nm,0.3s,baz=334,slow=22,SNR=10.0						
ASAR	**Alice Springs**	**17.32**	**168**	P	Pn	17 36 12.4	+0.3
	0.9nm,0.3s,baz=333,slow=9.6,SNR=114						
ASAR				S	Sn	17 39 09.4	-16
	0.4nm,0.3s,baz=346,slow=26,SNR=5.2						
MKAR	**Makanchi Array**	**67.94**	**327**	P	P	17 43 09.3	-0.1
	0.4nm,0.5s,baz=125,slow=7.6,SNR=8.5						

*ISCJB **25** 17:44:34.3±1.0, 41°.09N±0°.08×112°.9W±0°.1, h0km, Error ellipse: s-maj=13.3km s-min=10.5km az=138.9*
*NEIC **25** 17:44:34.7±0.8, 41°.12N×112°.78W, h0km, ML1.4, Error ellipse: s-maj=13.7km s-min=8.2km az=144.0, Suspected Mining explosion.*
NEIC 68 km [42 miles] W of Ogden.
*IDC **25** 17:44:34.9±1.2, 41°.15N×112°.89W, h0km, mb1 2.7/1, mb1mx2.7/62, mbtmp2.2/1, ML1.7/1, Error ellipse: s-maj=36.4km s-min=5.6km az=157.0*

ISC 25 17:44:34.9±1.1, 41°.05N±0°.07×112°.80W±0°.07, h0km, n8, σ0s31/6, Utah

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUG	**Dugway, Tooele**	**0.86**	**181**	*e*P	**Pb**	**17 44 52.8**	**0.0**
HWUT	**Hardware Ranch**	**1.08**	**59**	*e*P	**Pg**	**17 44 55.3**	**-0.4**
ELK	**Elko**	**1.88**	**261**	Pg	**Pb**	**17 45 10.1**	**-0.1**
	0.9nm,0.3s,baz=133,slow=8.7,SNR=9.0						
ELK				Lg	Lg	17 45 32.4	
	1.2nm,0.3s,baz=235,slow=22,SNR=9.2						
HLID	**Hailey**	**2.78**	**335**	*e*P	**Pn**	**17 45 21.1**	**+0.2**
PDAR	**Pinedale Array**	**2.96**	**54**	Pg	**Pb**	**17 45 28.9**	**+0.2**
	0.7nm,0.3s,baz=229,slow=15,SNR=10						
PDAR				Lg	Lg	17 46 09.4	
	0.6nm,0.3s,baz=227,slow=22,SNR=5.2						
NVAR	**Mina Array Bea**	**4.99**	**240**	Pn	**Pn**	**17 45 51.5**	**+0.3**
	baz=56,slow=14,SNR=2.4						
NVAR				Lg	Lg	17 47 16.6	
	baz=66,slow=34,SNR=3.1						
I56US	**NEWPORT INFRAS**	**7.84**	**338**	*i*		18 30 00.0	
	baz=160,slow=304,SNR=2.6						
I57US	**PINON FLAT INF**	**7.98**	**203**	*i*		18 33 10.0	
	baz=18,slow=293,SNR=0.7						

*IDC **25** 17:50:32.3±2.1, 9°.74S×118°.01E, h0km, mb3.2/2, mb1 3.6/5, mb1mx3.4/53, mbtmp3.5/5, ML3.0/2, MS2.9/2, Ms1 2.9/2, ms1mx2.5/20, Error ellipse: s-maj=82.6km s-min=25.4km az=46.0*
*DJA **25** 17:50:42.5±0.4, 10°.5S±5°.1×11°.9E±°, h30km±6km, M3.9/11, MLv3.9/11*

ISC 25 17:50:41.5±0.9, 9°.5S±0°.1×118°.64E±0°.05, h48km, n16, σ1s91/19, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**0.74**	**98**	P	**Pn**	**17 50 56.4**	**+0.6**
WBSI				S	**Sn**	**17 51 07.2**	**+1.0**
PLAI	**Plampang**	**1.11**	**309**	P	**Pn**	**17 51 01.8**	**+1.1**
PLAI				S	**Sn**	**17 51 16.8**	**+2.0**
WSI	**Waingapu**	**1.64**	**95**	P	**Pn**	**17 51 09.1**	**+1.3**
TWSI	**Taliwang, Sumb**	**1.91**	**294**	P	**Pn**	**17 51 13.7**	**+2.1**
TWSI				S	**Sn**	**17 51 36.5**	**+2.0**
BASI	**Baing, Sumba**	**2.02**	**110**	P	**Pn**	**17 51 16.6**	**+3.5**
EDFI	**Ende, Flores**	**3.11**	**76**	P	**Pn**	**17 51 28.7**	**+0.5**
IGBI	**Denpasar**	**3.53**	**281**	P	**Pn**	**17 51 34.9**	**+1.1**
MMRI	**Maumere**	**3.66**	**76**	P	**Pn**	**17 51 37.2**	**+1.6**
SRBI	**Singaraja**	**3.69**	**293**	P	**Pn**	**17 51 37.7**	**+1.7**
JAGI	**Jajag, Banyuwa**	**4.56**	**283**	P	**Pn**	**17 51 48.6**	**+0.6**
BATI	**Baumata**	**4.99**	**98**	Pn	**Pn**	**17 51 56.9**	**+3.0**
	12nm,0.3s,baz=278,slow=8.4,SNR=4.1						
BATI				Sn	**Sn**	**17 52 51.9**	**+1.5**
	2.4nm,0.3s,baz=1.2,slow=23,SNR=1.8						
BATI				LR	LR	17 54 17.3	
	comp=Z,105nm,19.1s,baz=159,slow=40						
FITZ	**Fitzroy Crossi**	**10.89**	**142**	Pn	**Pn**	**17 53 13.2**	**-1.5**
	0.1nm,0.3s,baz=60,slow=23,SNR=1.6						
FITZ				Sn	Sn	17 55 05.7	-9.5
	0.2nm,0.3s,baz=136,slow=20,SNR=1.6						
DAV	**Davao City (W)**	**17.89**	**23**	LR	LR	18 02 48.6	
	comp=Z,32nm,19.5s,baz=156,slow=40						
WRA	**Warramunga Arr**	**18.35**	**126**	P	**P**	**17 54 52.2**	**0.0**
	0.1nm,0.3s,baz=297,slow=13,SNR=4.8						
ASAR	**Alice Springs**	**20.25**	**136**	P	**P**	**17 55 13.1**	**+0.1**
	0.5nm,0.5s,baz=308,slow=9.9,SNR=11						
MKAR	**Makanchi Array**	**64.77**	**333**	P	**P**	**18 01 12.0**	**-3.1**
	0.3nm,0.6s,baz=132,slow=9.3,SNR=4.1						

*NIED **25** 18:04:00, 36°.80N×141°.40E, h32km, Mw3.6 Best double couple: M0=2.42000×10^14 NP1:φs=54.00000°, δ=17.00000°, λ=-37.00000°. NP2:φs=181.00000°, δ=80.00000°, λ=-104.00000°.*
*IDC **25** 18:04:35.5±1.5, 36°.69N×141°.69E, h0km, mb3.6/6, mb1 3.7/9, mb1mx3.5/67, mbtmp3.6/9, ML3.3/3, MS2.5/4, Ms1 2.5/4, ms1mx2.3/60, Error ellipse: s-maj=39.5km s-min=18.7km az=74.0*
*ISCJB **25** 18:04:38.9±1.3, 36°.74N±0°.05×141°.47E±0°.08, h32km±7km, mb3.5/6, Error ellipse: s-maj=10.7km s-min=7.0km az=26.2*
*JMA **25** 18:04:41.4±0.1, 36°.77N×141°.32E, h40km±2km, M3.7*
JMA Felt I J1.

ISC 25 18:04:42.9±2.8, 36°.72N±0°.10×141°.4E±0°.2, h39km±9km, n23, σ2s53/20, mb3.5/6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.69**	**261**	P	**Pn**	**18 04 53.7**	**-2.6**
JHO				S	**Sn**	**18 05 02.5**	**-3.3**
JFK	**Kawauchi**	**0.78**	**326**	P	**Pn**	**18 04 54.7**	**-2.7**
JFK				S	**Sn**	**18 05 03.6**	**-4.3**
JFT	**Otama**	**1.17**	**313**	S	**Sn**	**18 05 14.1**	**-3.5**
JMM	**Marumori**	**1.25**	**336**	P	**Pn**	**18 05 01.7**	**-2.1**
JMM				S	**Sn**	**18 05 16.0**	**-3.3**
JAG	**Ashikaga**	**1.61**	**260**	P	**Pn**	**18 05 07.0**	**-1.8**
JAG				S	**Sn**	**18 05 25.7**	**-2.7**
MJAR	**Matsushiro Arr**	**2.59**	**267**	Pn	**Pn**	**18 05 21.5**	**-0.8**
	9.1nm,0.3s,baz=96,slow=26,SNR=66						
MJAR				Sn	**Sn**	**18 05 51.5**	**-1.0**
	9.0nm,0.3s,baz=76,slow=9.4,SNR=9.0						
MJAR				LR	LR	18 06 42.4	
	comp=Z,95nm,21.4s,baz=90,slow=46						
ASAJ	**Asahikawa**	**7.44**	**7**	Pn	**Pn**	**18 06 26.6**	**-2.3**
	0.9nm,0.3s,baz=204,slow=17,SNR=12						
ASAJ				Sn	**Sn**	**18 07 51.5**	**-0.4**
	0.4nm,0.3s,baz=34,slow=24,SNR=2.2						
JNU	**Nakatsue**	**9.37**	**251**	LR	LR	18 11 12.8	
	comp=Z,25nm,18.2s,baz=137,slow=42						
USRK	**Ussuriysk Ar.**	**10.36**	**319**	Pn	**Pn**	**18 07 09.0**	**+0.2**
	0.3nm,0.3s,baz=117,slow=13,SNR=7.6						
KSRS	**Korea Array**	**10.81**	**278**	LR	LR	18 11 11.5	
	comp=Z,32nm,20.3s,baz=85,slow=36						
PETK	**Petropavlovsk-**	**19.95**	**30**	LR	LR	18 17 27.5	
	comp=Z,11nm,18.5s,baz=248,slow=39						
SONM	**Songino Array**	**27.96**	**304**	P	**P**	**18 10 31.2**	**+1.3**
	0.8nm,0.7s,baz=103,slow=10.0,SNR=4.3						
H11N2	**WAKE ISLAND Hy**	**27.99**	**120**	T	T	18 39 47.2	
	baz=313,slow=75,SNR=21						
H11N1	**WAKE ISLAND Hy**	**27.99**	**120**	T	T	18 39 52.6	
	baz=313,slow=75,SNR=19						
H11N3	**WAKE ISLAND Hy**	**28.00**	**120**	T	T	18 39 48.9	
	baz=313,slow=75,SNR=18						
H11S1	**WAKE ISLAND Hy**	**28.69**	**122**	T	T	18 40 45.3	
	baz=314,slow=76,SNR=18						
H11S3	**WAKE ISLAND Hy**	**28.69**	**122**	T	T	18 40 40.4	
	baz=314,slow=76,SNR=19						
H11S2	**WAKE ISLAND Hy**	**28.70**	**122**	T	T	18 40 46.0	
	baz=314,slow=76,SNR=13						
ZALV	**Zalesovo Beam**	**42.13**	**313**	P	**P**	**18 12 29.1**	**-2.1**
	0.4nm,0.5s,baz=119,slow=12,SNR=2.4						
MKAR	**Makanchi Array**	**44.29**	**302**	P	**P**	**18 12 48.3**	**-0.5**
	0.4nm,0.6s,baz=89,slow=9.3,SNR=4.7						
KURBB	**Kurchatov Arra**	**46.20**	**308**	P	**P**	**18 13 02.8**	**-1.1**
	0.8nm,0.5s,baz=83,slow=8.0,SNR=6.0						
WRA	**Warramunga Arr**	**56.76**	**188**	P	**P**	**18 14 21.4**	**-1.6**
	0.8nm,1.1s,baz=6.3,slow=7.2,SNR=4.2						
ASAR	**Alice Springs**	**60.48**	**188**	P	**P**	**18 14 47.2**	**-1.7**
	0.2nm,0.7s,baz=4.6,slow=5.8,SNR=3.8						

*CSEM **25** 18:45:29.2, 45°.79N×26°.60E, h110km, MD3.5/2*

BUC 25 18:45:29.2±1.2, 45°.79N×26°.60E, h110km±11km, MD3.5/2, 30C-21D, Error ellipse: s-maj=8.8km s-min=6.8km az=106.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLOR	**Plostina**	**0.07**	**30**	↑*i* P	Pn	18 45 44.6	+0.2
PLOR	**Plostina**	**0.07**	**30**	↑P	Pn	18 45 44.6	+0.2
PLOR				*i* S	Sn	18 45 55.9	0.0
PLOR	**Plostina**	**0.07**	**30**	↑P	Pn	18 45 44.6	+0.2
PLOR				*i* S	Sn	18 45 55.9	0.0
VRI	**Vrincioaia**	**0.12**	**49**	↑P	Pn	18 45 44.8	+0.3
VRI	**Vrincioaia**	**0.12**	**49**	↑P	Pn	18 45 44.8	+0.3
VRI				*i* S	Sn	18 45 55.3	-0.7
VRI	**Vrincioaia**	**0.12**	**49**	↑P	Pn	18 45 44.8	+0.3
VRI				*i* S	Sn	18 45 55.3	-0.7
ODBI	**Odobesti**	**0.32**	**94**	S	Sn	18 45 58.2	+1.2
ODBI	**Odobesti**	**0.32**	**94**	*i* S	Sn	18 45 58.2	+1.2
ODBI	**Odobesti**	**0.32**	**94**	*i* S	Sn	18 45 58.2	+1.2
GRER		**0.49**	**147**	S	Sn	18 45 59.7	+1.1
GRER		**0.49**	**147**	*i* S	Sn	18 45 59.7	+1.1
GRER		**0.49**	**147**	*i* S	Sn	18 45 59.7	+1.1
MLR	**Muntele Rosu**	**0.54**	**237**	↑P	Pn	18 45 46.9	+0.4
MLR	**Muntele Rosu**	**0.54**	**237**	↑P	Pn	18 45 46.9	+0.4
MLR				*i* S	Sn	18 45 58.8	-0.7
MLR	**Muntele Rosu**	**0.54**	**237**	↑P	Pn	18 45 46.9	+0.4
MLR				*i* S	Sn	18 45 58.8	-0.7
ISR	**Istrita**	**0.67**	**183**	S	Sn	18 46 00.9	-0.2
ISR	**Istrita**	**0.67**	**183**	*i* S	Sn	18 46 00.9	-0.2
ISR	**Istrita**	**0.67**	**183**	*i* S	Sn	18 46 00.9	-0.2
TESR	**Tescani**	**0.73**	**3**	↑P	Pn	18 45 47.4	-0.4
TESR	**Tescani**	**0.73**	**3**	↑P	Pn	18 45 47.4	-0.4
TESR	**Tescani**	**0.73**	**3**	↑P	Pn	18 45 47.4	-0.4
SECR		**0.84**	**207**	↑P	Pn	18 45 49.8	+1.0
SECR		**0.84**	**207**	↑P	Pn	18 45 49.8	+1.0
SECR				*i* S	Sn	18 46 04.6	+1.0
SECR		**0.84**	**207**	↑P	Pn	18 45 49.8	+1.0
SECR				*i* S	Sn	18 46 04.6	+1.0
DOPR	**Dopca**	**0.86**	**283**	↓P	Pn	18 45 49.7	+0.7
DOPR	**Dopca**	**0.86**	**283**	↓P	Pn	18 45 49.7	+0.7
DOPR				*i* S	Sn	18 46 04.0	0.0
DOPR	**Dopca**	**0.86**	**283**	↓P	Pn	18 45 49.7	+0.7
DOPR				*i* S	Sn	18 46 04.0	0.0
PGOR	**Pogoanele**	**0.92**	**163**	S	Sn	18 46 05.2	+0.3
PGOR	**Pogoanele**	**0.92**	**163**	*i* S	Sn	18 46 05.2	+0.3
PGOR	**Pogoanele**	**0.92**	**163**	*i* S	Sn	18 46 05.2	+0.3
PLAR	**PLOIESTI**	**0.96**	**205**	S	Sn	18 46 06.8	+1.2
PLAR	**PLOIESTI**	**0.96**	**205**	*i* S	Sn	18 46 06.8	+1.2
PLAR	**PLOIESTI**	**0.96**	**205**	*i* S	Sn	18 46 06.8	+1.2
SULR		**1.13**	**192**	↑P	Pn	18 45 52.5	+0.7
SULR		**1.13**	**192**	↑P	Pn	18 45 52.5	+0.7
SULR				*i* S	Sn	18 46 09.4	+0.5
SULR		**1.13**	**192**	↑P	Pn	18 45 52.5	+0.7
SULR				*i* S	Sn	18 46 09.4	+0.5
VOIR		**1.14**	**253**	↑P	Pn	18 45 52.3	+0.3
VOIR		**1.14**	**253**	↑P	Pn	18 45 52.3	+0.3
VOIR				*i* S	Sn	18 46 08.4	-0.8
VOIR		**1.14**	**253**	↑P	Pn	18 45 52.3	+0.3
VOIR				*i* S	Sn	18 46 08.4	-0.8
CFR	**Carcaliu**	**1.24**	**119**	↓P	Pn	18 45 53.0	0.0
CFR	**Carcaliu**	**1.24**	**119**	↓P	Pn	18 45 53.0	0.0
CFR				*i* S	Sn	18 46 09.9	-1.1
CFR	**Carcaliu**	**1.24**	**119**	↓P	Pn	18 45 53.0	0.0
CFR				*i* S	Sn	18 46 09.9	-1.1
AMRR	**Amara**	**1.29**	**156**	↑P	Pn	18 45 53.8	+0.3
AMRR	**Amara**	**1.29**	**156**	↑P	Pn	18 45 53.8	+0.3
AMRR				*i* S	Sn	18 46 11.4	-0.5
AMRR	**Amara**	**1.29**	**156**	↑P	Pn	18 45 53.8	+0.3
AMRR				*i* S	Sn	18 46 11.4	-0.5
LEOM	**Leova**	**1.34**	**59**	↑P	Pn	18 45 55.1	+1.1
LEOM	**Leova**	**1.34**	**59**	↑P	Pn	18 45 55.1	+1.1
LEOM				*i* S	Sn	18 46 13.6	+0.7
LEOM	**Leova**	**1.34**	**59**	↑P	Pn	18 45 55.1	+1.1
LEOM				*i* S	Sn	18 46 13.6	+0.7
CIOR

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.20**	**64**	P	Pn	19 12 59.8	-0.1
	6.9nm,0.3s,baz=128,slow=4.5,SNR=7.8						
AFI				Sn	Sn	19 13 49.7	-11
	17nm,0.3s,baz=28,slow=23,SNR=8.1						
STKA	**Stephens Creek**	**40.96**	**240**	P	P	19 19 25.0	-0.4
	1.8nm,0.8s,baz=67,slow=13,SNR=3.2						
WRA	**Warramunga Arr**	**46.66**	**258**	P	P	19 20 11.7	+0.2
	0.3nm,0.4s,baz=92,slow=8.0,SNR=11						
ASAR	**Alice Springs**	**46.93**	**253**	P	P	19 20 13.3	-0.3
	2.7nm,0.6s,baz=87,slow=8.4,SNR=64						
FITZ	**Fitzroy Crossi**	**55.03**	**259**	LR	LR	19 43 11.1	
	comp=Z,78nm,20.3s,slow=34						
CMAR	**Chiang Mai Arr**	**89.97**	**289**	LR	LR	20 03 59.1	
	comp=Z,47nm,18.3s,baz=196,slow=35						

IDC 25 19:19:25.7±8.3, 2°.15N×125°.90E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.3/53, mbtmp3.6/3, Error ellipse: s-maj=186.5km s-min=130.4km az=72.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.46**	**160**	P	P	19 24 36.1	-1.0
	1.0nm,0.6s,baz=338,slow=10,SNR=16						
ASAR	**Alice Springs**	**26.82**	**164**	P	P	19 25 08.2	+0.3
	0.6nm,0.6s,baz=346,slow=12,SNR=29						
STKA	**Stephens Creek**	**36.97**	**158**	P	P	19 26 37.2	+0.3
	1.0nm,0.8s,baz=355,slow=11,SNR=2.4						

IDC 25 19:26:02.4±11.0, 31°.13N×80°.24E, h0km, mb3.2/2, mb1 3.3/4, mb1mx3.1/70, mbtmp3.2/4, ML3.2/1, Error ellipse: s-maj=286.4km s-min=30.3km az=63.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**15.72**	**5**	Pn	Pn	19 29 43.9	-1.2
	0.1nm,0.3s,baz=183,slow=11,SNR=7.4						
KURBB	**Kurchatov Arra**	**19.51**	**357**	P	P	19 30 31.6	+0.5
	baz=169,slow=10,SNR=1.6						
CMAR	**Chiang Mai Arr**	**21.12**	**122**	P	P	19 30 48.8	0.0
	0.7nm,0.8s,baz=309,slow=9.9,SNR=4.5						
ZALV	**Zalesovo Beam**	**23.04**	**7**	P	P	19 31 08.3	-0.7
	0.6nm,0.5s,baz=209,slow=12,SNR=3.2						

IGQ 25 19:32:38.8±1.5, 4°S±22°.×8°1W±2°.8, h12km, mB5.6/1, mb5.7/1, MLv4.9/7, Mw(mB)5.2/1, Near coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MILO	**Milagro-Astudi**	**2.84**	**42**	P	Pn	19 33 22.1	-1.9
MILO				S	Sn	19 34 00.8	+2.6
COHC	**Cochancay**	**2.93**	**49**	P	Pn	19 33 21.1	-4.1
COHC				S	Sn	19 33 58.6	-1.7
BMAS	**Trigal station**	**4.15**	**46**	P	Pn	19 33 41.0	-1.3
BMAS				S	Sb	19 34 41.5	-0.7
ARRY	**Arrayan**	**4.16**	**46**	P	Pn	19 33 40.9	-1.6
BPAT	**Tungurahua Vol**	**4.18**	**46**	P	Pn	19 33 43.2	+0.4
RETU	**Refugio**	**4.21**	**46**	P	Pn	19 33 46.7	+3.4
RUN5	**Runtun**	**4.25**	**46**	P	Pn	19 33 47.3	+3.6
PUYO	**Puyo, Santa Ro**	**4.49**	**50**	P	Pn	19 33 47.6	+0.8
PIS1	**Pisayambo**	**4.53**	**43**	P	Pn	19 33 47.5	-0.1
PISA	**Pisayambo**	**4.53**	**43**	P	Pn	19 33 47.3	-0.4
PITA	**Cotopaxi Volc**	**4.88**	**38**	P	Pn	19 33 52.3	-0.1
ARDO	**Archidona, Ten**	**4.99**	**47**	P	Pn	19 33 47.6	-6.0
GGPC	**Guagua Pichinc**	**5.08**	**34**	P	Pn	19 33 53.8	-1.6
PINO	**Pino**	**5.09**	**34**	P	Pn	19 33 54.9	-0.7

*ISCJB **25** 19:36:02.9±1.0, 41°.11N±0°.09×112°.9W±0°.1, h0km, Error ellipse: s-maj=13.3km s-min=11.3km az=135.5*
*NEIC **25** 19:36:03.3±0.9, 41°.13N×112°.79W, h0km, ML1.9, Error ellipse: s-maj=13.1km s-min=8.5km az=144.0, Suspected Mining explosion.*
NEIC 69 km [43 miles] W of Ogden.
*IDC **25** 19:36:03.4±2.2, 41°.07N×112°.86W, h0km, Error ellipse: s-maj=55.5km s-min=5.8km az=158.0*
ISC 25 19:36:04.0±1.2, 41°.13N±0°.09×112°.77W±0°.07, h0km, n8, σ1§20/6, Utah

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUG	**Dugway, Tooele**	**0.94**	**182**	*e*P	**Pg**	**19 36 21.4**	**-0.5**
HWUT	**Hardware Ranch**	**1.02**	**62**	*e*P	**Pb**	**19 36 24.2**	**-0.6**
ELK	**Elko**	**1.91**	**259**	Pg	**Pb**	**19 36 39.1**	**-0.7**
	2.0nm,0.3s,baz=124,slow=8.6,SNR=20						
ELK				Lg	Lg	19 37 01.1	
	1.2nm,0.3s,baz=242,slow=22,SNR=7.2						
HLID	**Hailey**	**2.72**	**334**	*e*P	**Pn**	**19 36 49.0**	**-0.1**
PDAR	**Pinedale Array**	**2.90**	**55**	Pg	**Pb**	**19 36 57.9**	**+1.1**
	1.2nm,0.3s,baz=230,slow=14,SNR=10						
PDAR				Lg	Lg	19 37 38.5	
	1.1nm,0.3s,baz=229,slow=25,SNR=7.7						
NVAR	**Mina Array Bea**	**5.04**	**239**	Pg	**Pb**	**19 37 34.7**	**+1.4**
	baz=57,slow=17,SNR=2.5						
NVAR				Lg	Lg	19 38 41.8	
	baz=61,slow=32,SNR=2.6						
I56US	**NEWPORT INFRAS**	**7.77**	**338**	*i*		20 20 00.0	
	baz=156,slow=316,SNR=0.5						
I57US	**PINON FLAT INF**	**8.06**	**202**	*i*		20 27 40.0	
	baz=19,slow=317,SNR=0.7						

*ISCJB **25** 19:52:01.7±0.9, 24°.20S±0°.07×180°.0W±0°.1, h505km, mb3.7/6, Error ellipse: s-maj=16.5km s-min=8.9km az=167.7*
*IDC **25** 19:52:07.4±5.1, 24°.57S×179°.95W, h569km±55km, mb3.3/7, mb1 3.5/8, mb1mx3.1/42, mbtmp4.3/8, Error ellipse: s-maj=39.0km s-min=19.1km az=39.0*
ISC 25 19:52:01.8±0.8, 24°.26S±0°.08×179°.9W±0°.1, h505km, n24, σ1§94/31, mb3.7/6, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**5.29**	**161**	P	**P**	**19 53 34.6**	**+3.0**
GLKZ				S	**S**	**19 54 44.5**	**-0.4**
URZ	**Urewera**	**14.19**	**190**	P	**P**	**19 55 04.2**	**+1.0**
	3.5nm,0.3s,baz=275,slow=3.5,SNR=14						
URZ				S	**S**	**19 57 32.2**	**-0.6**
	1.4nm,0.3s,baz=268,slow=23,SNR=10						
URZ	**Urewera**	**14.19**	**190**	P	**P**	**19 55 04.9**	**+1.7**
URZ				S	**S**	**19 57 32.2**	**-0.6**
MWZ	**Matawai**	**14.20**	**188**	P	**P**	**19 55 06.0**	**+2.6**
MWZ				S	**S**	**19 57 33.8**	**+0.6**
VRZ	**Vera Road**	**15.49**	**196**	P	**P**	**19 55 20.7**	**+3.8**
TSZ	**Takapari Road**	**16.13**	**191**	P	**P**	**19 55 22.8**	**-0.8**
TSZ				S	**S**	**19 58 08.1**	**-1.7**
BFZ	**Birch Farm**	**16.69**	**190**	P	**P**	**19 55 27.3**	**-2.0**
MRZ	**Mangatainoka R**	**16.79**	**192**	P	**P**	**19 55 28.3**	**-2.0**
MRZ				S	**S**	**19 58 17.7**	**-3.5**
OGWZ	**Otaki Gorge**	**17.02**	**193**	P	**P**	**19 55 28.8**	**-3.7**
TCW	**Tory Channel**	**17.59**	**195**	P	**P**	**19 55 37.9**	**0.0**
TCW				S	**S**	**19 58 31.4**	**-3.0**
TUWZ	**Tuamarina**	**17.88**	**195**	P	**P**	**19 55 40.9**	**+0.3**
RPZ	**Rata Peaks**	**20.78**	**199**	P	**P**	**19 56 07.3**	**+0.3**
	11nm,0.7s,baz=24,slow=16,SNR=5.3						
CTA	**Charters Tower**	**31.56**	**271**	P	**P**	**19 57 44.2**	**+1.7**
	7.3nm,0.3s,baz=93,slow=11,SNR=25						
STKA	**Stephens Creek**	**34.67**	**249**	P	**P**	**19 58 09.0**	**+0.3**
	0.9nm,0.4s,baz=92,slow=9.8,SNR=7.1						
ASAR	**Alice Springs**	**42.06**	**261**	P	**P**	**19 59 09.7**	**+0.7**
	1.3nm,0.5s,baz=93,slow=7.5,SNR=18						
WRA	**Warramunga Arr**	**42.47**	**266**	P	**P**	**19 59 12.4**	**+0.2**
	3.3nm,0.4s,baz=97,slow=8.4,SNR=100						
VNDA	**Vanda**	**54.03**	**185**	P	**P**	**20 00 35.9**	**-1.7**
	0.6nm,0.8s,baz=25,slow=5.0,SNR=3.0						
TXAR	**Lajitas Array**	**90.55**	**58**	P	**P**	**20 04 11.1**	**+1.2**
	0.6nm,0.7s,baz=230,slow=7.0,SNR=3.8						
MKAR	**Makanchi Array**	**112.46**	**313**	PKiKP	**PKiKP**	**20 09 37.8**	**-2.3**
	0.1nm,0.4s,baz=74,slow=2.8,SNR=3.0						
BVAR	**Borovoye Array**	**120.76**	**319**	PKP	**PKPdf**	**20 09 55.0**	**-0.8**
	0.3nm,0.3s,baz=131,slow=4.0,SNR=4.1						
HFS	**Hagfors**	**142.91**	**349**	PKP	**PKPdf**	**20 10 34.1**	**-2.9**
	2.1nm,0.4s,baz=67,slow=3.9,SNR=17						
BRTR	**Keskin Array B**	**147.86**	**307**	PKPbc	**PKPbc**	**20 10 50.1**	**+0.1**
	0.6nm,0.6s,baz=119,slow=1.8,SNR=4.1						
MMAI	**Mount Meron Ar**	**147.93**	**294**	PKPbc	**PKPbc**	**20 10 50.5**	**+0.2**
	1.6nm,0.4s,baz=81,slow=5.4,SNR=5.6						
EKA	**Eskdalemuir Ar**	**148.87**	**4**	PKPbc	**PKPbc**	**20 10 51.5**	**-0.4**
	0.3nm,0.6s,baz=14,slow=5.9,SNR=3.0						

*NIED **25** 19:52:00.43°.90N×147°.50E, h56km, Mw3.4 Best double couple: Ms1.35000×10^14 NP1:φ=238.00000°, δ=42.00000°, λ=146.00000°. NP2:φ=355.00000°, δ=68.00000°, λ=53.00000°.*
*JMA **25** 19:52:17.2±0.2, 43°.90N×147°.51E, h13km, M4.0*
*MOS **25** 19:52:18.5±1.3, 44°.26N×147°.44E, h35km, mb4.2/1, Error ellipse: s-maj=31.9km s-min=14.4km az=146.8*
*SKHL **25** 19:52:18.7±0.6, 44°.14N×147°.61E, h46km±1km, mb4.4/6*
ISC 25 19:52:15.2±2.6, 44°.10N±0°.08×147°.61E±0°.08, h11km±16km, n29, σ1§29/49, 3C-4D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.61**	**248**	*e*P	**Pn**	**19 52 30.2**	**+0.5**
SHO				AMB	AMB	19 52 31.0	
	29nm,0.2s						
SHO				AMB	AMB	19 52 31.0	
	108nm,0.2s						
SHO				*i* S	**Sn**	**19 52 38.0**	**-1.4**
SHO				A	A	19 52 39.0	
	1μm,0.2s						
SHO				A	A	19 52 39.0	
	1μm,0.2s						
SHO	**Shikotan**	**0.61**	**248**	*e*PN	**Pn**	**19 52 30.0**	**+0.3**
SHO				*i* S	**Sn**	**19 52 38.8**	**-0.6**
SHO				pmax	pmax		
	comp=Z,108nm,0.1s						
SHO				pmax	pmax		
	comp=E,29nm,0.2s						
SHO				smax	smax		
	comp=N,1μm,0.2s						
SHO				smax	smax		
	comp=E,1μm,0.2s						
KUR	**Kuril'sk**	**1.15**	**9**	*i* P	**Pb**	**19 52 36.8**	**-0.3**
KUR				AMB	AMB	19 52 38.0	
	comp=E,33nm,0.4s						
KUR				AMB	AMB	19 52 38.0	
	comp=E,27nm,0.4s						
KUR				AMB	AMB	19 52 38.0	
	comp=E,88nm,0.4s						
KUR				*i* S	**Sb**	**19 52 50.6**	**-1.3**
KUR				A	A	19 52 52.0	
	comp=E,2μm,0.4s						
KUR				A	A	19 52 52.0	
	comp=E,1μm,0.4s						
KUR	**Kuril'sk**	**1.15**	**9**	*c i*PN	**Pb**	**19 52 36.7**	**-0.3**
KUR				*i* S	**Sb**	**19 52 50.9**	**-1.0**
KUR				pmax	pmax		
	comp=Z,86nm,0.1s						
KUR				smax	smax		
	comp=N,2μm,0.2s						
KUR				smax	smax		
	comp=E,1μm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.26**	**268**	*i* P	**Pb**	**19 52 39.1**	**+0.2**
YUK				AMB	AMB	19 52 39.6	
	comp=E,73nm,0.3s						
YUK				AMB	AMB	19 52 39.6	
	comp=E,72nm,0.3s						
YUK				AMB	AMB	19 52 39.6	
	comp=E,43nm,0.3s						
YUK				*i* S	**Sb**	**19 52 54.2**	**-0.9**
YUK				A	A	19 52 57.0	
	comp=E,754nm,0.4s						
YUK				A	A	19 52 57.0	
	comp=E,772nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.26**	**268**	*d i*PN	**Pn**	**19 52 38.7**	**0.0**
YUK				*i* S	**Sn**	**19 52 55.0**	**-0.6**
YUK				pmax	pmax		
	comp=Z,435nm,0.2s						
YUK				pmax	pmax		
	comp=N,73nm,0.1s						
YUK				pmax	pmax		
	comp=E,72nm,0.2s						
YUK				smax	smax		
	comp=N,754nm,0.2s						
YUK				smax	smax		
	comp=E,772nm,0.2s						
LAGR	**Lagunnoye**	**1.31**	**269**	*i* P	**Pb**	**19 52 40.0**	**+0.2**
LAGR				AMB	AMB	19 52 42.0	
	comp=E,67nm,0.4s						
LAGR				AMB	AMB	19 52 42.0	
	comp=E,367nm,0.4s						
LAGR				*e*S	**Sb**	**19 52 56.0**	**-0.6**
LAGR				A	A	19 52 58.0	
	comp=E,101nm,0.4s						
LAGR				A	A	19 52 58.0	
	comp=E,839nm,0.4s						
LAGR	**Lagunnoye**	**1.31**	**269**	*c i*PN	**Pb**	**19 52 40.0**	**+0.2**
LAGR				*e*S	**Sg**	**19 52 56.8**	**-0.6**
LAGR				pmax	pmax		
	comp=Z,367nm,0.1s						
LAGR				pmax	pmax		
	comp=N,67nm,0.2s						
LAGR				smax	smax		
	comp=N,1μm,0.2s						
LAGR				smax	smax		
	comp=E,839nm,0.2s						
GRPR	**Tuman**	**1.33**	**266**	*i* P	**Pb**	**19 52 40.0**	**0.0**
GRPR				AMB	AMB	19 52 43.0	
	comp=E,238nm,0.3s						
GRPR				*i* S	**Sb**	**19 52 56.0**	**-1.0**
GRPR				A	A	19 52 57.0	
	comp=E,837nm,0.3s						
GRPR				A	A	19 52 57.0	
	comp=E,548nm,0.3s						
GRPR	**Tuman**	**1.33**	**266**	↓*i*PN	**Pb**	**19 52 40.1**	**0.0**
GRPR				*i* S	**Sb**	**19 52 56.4**	**-0.6**
GRPR				pmax	pmax		
	comp=Z,238nm,0.1s						
GRPR				smax	smax		
	comp=N,837nm,0.3s						
GRPR				smax	smax		
	comp=E,548nm,0.3s						
NEM2	**Nemuro 2**	**1.54**	**242**	P	**Pn**	**19 52 42.5**	**0.0**
NEM2				*e*S	**Sn**	**19 53 00.6**	**-1.8**
GLVR	**Golovnino**	**1.55**	**257**	*i* P	**Pn**	**19 52 43.0**	**+0.3**
GLVR				AMB	AMB	19 52 48.0	
	comp=E,264nm,0.4s						
GLVR				AMB	AMB	19 52 48.0	
	comp=E,135nm,0.4s						
GLVR				*i* S	**Sn**	**19 53 02.0**	**-0.7**
GLVR				A	A	19 53 07.0	
	comp=E,107nm,0.3s						
GLVR				A	A	19 53 07.0	
	comp=E,697nm,0.3s						
GLVR	**Golovnino**	**1.55**	**257**	↓*i*PN	**Pn**	**19 52 43.5**	**+0.8**
GLVR				*i* S	**Sn**	**19 53 02.4**	**-0.3**
GLVR				pmax	pmax		
	comp=N,264nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,135nm,0.1s						
GLVR				smax	smax		
	comp=N,1μm,0.2s						
GLVR				smax	smax		
	comp=E,697nm,0.2s						
JRA	**Rausu**	**1.80**	**266**	P	**Pb**	**19 52 47.5**	**-0.6**
JRA				*e*S	**Sb**	**19 53 09.9**	**-0.7**
JNK	**Nakash**	**2.15**	**257**	P	**Pn**	**19 52 52.0**	**+1.0**
JNK				*e*S	**Sn**	**19 53 17.2**	**-0.4**
JAK	**Akkeshi**	**2.39**	**243**	P	**Pn**	**19 52 54.5**	**+0.3**
JAK				*e*S	**Sn**	**19 53 21.4**	**-2.0**
JTKR	**Abashiri--Toko**	**2.67**	**268**	P	**Pn**	**19 52 59.5**	**+1.4**
JTKR				*e*S	**Sn**	**19 53 31.5**	**+1.1**
JAR	**Ashorobuto**	**2.90**	**255**	P	**Pn**	**19 53 02.7**	**+1.5**
JAR				*e*S	**Sn**	**19 53 37.1**	**+1.1**
JOB	**Onbets**	**2.99**	**248**	P	**Pn**	**19 53 03.8**	**+1.3**
JOB				*e*S	**Sn**	**19 53 38.0**	**-0.4**
JMP	**Maruseppu**	**3.06**	**270**	P	**Pn**	**19 53 05.2**	**+1.7**
HRK	**Horoka**	**3.30**	**260**	*e*P	**Pn**	**19 53 09.3**	**+2.4**
JCH	**Churui**	**3.43**	**246**	P	**Pn**	**19 53 09.3**	**+0.7**
JCH				*e*S	**Sn**	**19 53 49.1**	**-0.1**
JKK2	**Kamakawa 2**	**3.51**	**268**	P	**Pn**	**19 53 11.6**	**+1.9**
ERM	**Erimo**	**3.87**	**239**	*e*P	**Pn**	**19 53 17.8**	**+3.2**
ERM	**Erimo**	**3.87**	**239**	↓*i*PN	**Pn**	**19 53 17.8**	**+3.2**
JEM	**Erimo**	**3.87**	**239**	P	**Pn**	**19 53 17.7**	**+3.1**
JNBK	**Urakawa-nobuka**	**3.99**	**245**	P	**Pn**	**19 53 16.9**	**+0.7**
YSS	**Yuzh-Sakhalins**	**4.44**	**312**	*e*P	**Pn**	**19 53 23.8**	**+1.3**
MSHR	**Mys Shultsa**	**12.08**	**268**	↑*e*PN	**Pn**	**19 55 07.3**	**+0.2**

UCR 25 20:01:08.4±1.2, 13°.03N×89°.31W, h34km±11km, ML3.4, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COLS	**Colinas**	**0.63**	**1**	*e*P	Pn	20 01 20.8	-0.1
COLS				*e*S	Sb	20 01 31.3	+1.3
LOMA	**San Marcos**	**0.63**	**12**	*e*P	Pn	20 01 20.7	-0.2
LOMA				*e*S	Sb	20 01 30.6	+0.7
LFRS	**El Faro**	**0.63**	**22**	*e*P	Pn	20 01 20.6	-0.4
SNET	**Serv Nac Est T**	**0.65**	**7**	*e*P	Pb	20 01 22.2	+0.5
SNET				*e*S	Sb	20 01 31.3	+0.6
SNET				IAML		20 01 32.0	
	comp=Z,2μm,0.2s						
BOQS	**Boqueron**	**0.70**	**2**	*i* P	Pn	20 01 21.9	-0.1
BOQS				*e*S	Sb	20 01 32.5	+0.5
CUSC	**San Salvador**	**0.70**	**9**	*e*P	Pn	20 01 22.1	+0.1
CUSC				*e*S	Sb	20 01 32.7	+0.7
SNVI	**San Vicente**	**0.73**	**38**	*e*P	Pn	20 01 22.3	-0.2
SNVI				*e*S	Sb	20 01 33.0	0.0
SNVI				IAML		20 01 37.1	
	comp=Z,322nm,0.3s						
LFU	**La Fuente**	**0.74**	**15**	*e*P	Pn	20 01 22.5	0.0
LFU				*e*S	Sb	20 01 34.0	+1.1
LBRS	**Las Brisas**	**0.75**	**20**	*e*P	Pn	20 01 22.5	-0.1
CEDA	**San Andres**	**0.77**	**354**	*e*P	Pn	20 01 22.7	-0.2
CEDA				*e*S	Sb	20 01 34.3	+0.5
SBLS	**San Blas**	**0.86**	**339**	*e*P	Pn	20 01 24.5	+0.3
SNJE	**San Jose**	**0.88**	**341**	*e*P	Pn	20 01 24.9	+0.4
TECA	**Tecapa**	**0.91**	**60**	*e*P	Pn	20 01 24.3	-0.6
PACA	**Pacayal**	**1.05**	**66**	*e*P	Pn	20 01 26.7	-0.1
PACA				*e*S	Sn	20 01 40.7	+0.3
LCY	**Lacayo**	**1.06**	**68**	*e*P	Pn	20 01 26.6	-0.3
LCY				*e*S	Sb	20 01 41.5	-0.6
VSM	**San Miguel**	**1.08**	**69**	*e*P	Pn	20 01 27.1	-0.2
MTO3	**Montecristo**	**1.36**	**358**	*e*P	Pn	20 01 30.9	-0.2
MTO3				*e*S	Sn	20 01 49.2	+1.1
CNCH	**Conchagua**	**1.46**	**80**	*e*P	Pn	20 01 33.1	+0.8
CNCH				*e*S	Sn	20 01 51.5	+1.1
IXG	**Ixpaco**	**1.59**	**316**	*e*P	Pn	20 01 34.2	-0.1
IXG				*e*S	Sn	20 01 54.3	+0.6

*NSSP **25** 20:05:54.8, 41°.20N×47°.05E, h8km, Ms4.0*
*TIF **25** 20:05:57.5, 41°.14N×47°.13E, h6km±2km*
*AZER **25** 20:05:57.5±0.0, 41°.21N×47°.23E, h7km, ml4.0/28, Error ellipse: s-maj=0.5km s-min=0.2km az=338.0*
*IDC **25** 20:05:57.0±0.7, 41°.09N×47°.13E, h0km, mb4.0/11, mb1 4.0/17, mb1mx3.8/60, mbtmp3.9/17, ML2.4/4, MS2.8/8, Ms1 2.8/8, ms1mx2.6/60, Error ellipse: s-maj=14.3km s-min=8.9km az=164.0*
*ISCJB **25** 20:05:58.9±0.3, 41°.15N±0°.01×47°.18E±0°.01, h3km±2km, mb4.0/28, MS3.0/1, Error ellipse: s-maj=2.1km s-min=1.8km az=28.1*
*MOS **25** 20:05:58.6±1.2, 41°.11N×47°.25E, h11km, mb4.3/11, Error ellipse: s-maj=5.3km s-min=3.4km az=107.6*
*NEIC **25** 20:05:59.1±0.5, 41°.26N×47°.11E, h10km, mb4.3/5, Error ellipse: s-maj=11.7km s-min=7.3km az=172.0*
*CSEM **25** 20:05:59.1±0.1, 41°.16N×47°.19E, h5km, mb4.1/18, Error ellipse: s-maj=3.2km s-min=2.7km az=18.0*
*DDA **25** 20:06:12.3, 40°.97N×45°.68E, h5km, Ml3.8*
ISC 25 20:05:58.2±0.9, 41°.13N±0°.01×47°.13E±0°.01, h4km±6km, n275, σ1§48/370, mb4.2/29, 68C-66D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SEKA	**Sheki**	**0.10**	**33**	PG	**Pg**	**20 05 59.9**	**-0.3**
SEKA	**Sheki**	**0.10**	**33**	Pg	**Pg**	**20 05 59.9**	**-0.3**
SEKA				⇑S	**Sg**	**20 06 01.2**	**-0.5**
SEKA	**Sheki**	**0.10**	**33**	⇓P	**Pg**	**20 05 60.0**	**-0.3**
SEKA				⇑S	**Sg**	**20 06 01.2**	**-0.5**
MNGR	**Mingechevir, A**	**0.35**	**185**	PG	**Pb**	**20 06 08.4**	**+1.5**
MNGR	**Mingechevir, A**	**0.35**	**185**	Pg	**Pb**	**20 06 08.4**	**+1.5**
MNGR	**Mingechevir, A**	**0.35**	**185**	⇓P	**Pb**	**20 06 08.5**	**+1.5**
	SNR=30						
MNGR				⇑S	**Sb**	**20 06 17.1**	**+4.2**
QBL	**Gabala**	**0.57**	**108**	⇑P	**Pg**	**20 06 09.5**	**+0.5**
	SNR=356						
QBL	**Gabala**	**0.57**	**108**	⇑P	**Pg**	**20 06 09.5**	**+0.5**
	SNR=356						
QBL				⇓S	**Sb**	**20 06 20.5**	**+1.4**
AKT	**Akhty**	**0.58**	**52**	⇑*i*PG	**Pg**	**20 06 08.7**	**-0.5**
AKT				*i*		20 06 17.4	
AKT				pmax	pmax		
	comp=Z,3μm,0.4s						
AKT				smax	smax		
	comp=N,5μm,0.5s						
AKT	**Akhty**	**0.58**	**52**	*i* Pg	**Pg**	**20 06 08.7**	**-0.5**
	comp=N,3μm,0.4s						
AKT				*i* Sg	**Sg**	**20 06 17.4**	**+0.7**
	comp=N,5μm,0.5s						
ZKTA	**Zakatala**	**0.64**	**324**	PG	**Pg**	**20 06 10.6**	**+0.2**
ZKTA	**Zakatala**	**0.64**	**324**	Pg	**Pg**	**20 06 10.6**	**+0.2**
ZKTA	**Zakatala**	**0.64**	**324**	⇓P	**Pg**	**20 06 10.7**	**+0.2**
	SNR=641						
ZKTA				⇑S	**Sb**	**20 06 21.3**	**+0.2**
XNQ	**Khinaliq**	**0.77**	**86**	⇓P	**Pg**	**20 06 12.4**	**-0.5**
	SNR=1000						
XNQ				⇑S	**Sb**	**20 06 24.1**	**-0.9**
XNQ	**Khinaliq**	**0.77**	**86**	⇓P	**Pg**	**20 06 12.4**	**-0.5**
	SNR=1830						
XNQ				⇑S	**Sb**	**20 06 24.1**	**-0.9**
GANJ	**Ganja**	**0.78**	**232**	PG	**Pb**	**20 06 14.2**	**0.0**
GANJ	**Ganja**	**0.78**	**232**	⇓Pg	**Pb**	**20 06 14.3**	**0.0**
	SNR=65						
GANJ				⇑Sg	**Sn**	**20 06 27.0**	**-1.0**
GANJ	**Ganja**	**0.78**	**232**	⇓Pg	**Pb**	**20 06 14.3**	**0.0**
	SNR=65						
GANJ				⇑Sg	**Sn**	**20 06 27.0**	**-1.0**
DDFL	**Dedoflistskaro**	**0.82**	**293**	P	**Pn**	**20 06 17.1**	**+0.5**
DDFL				S	**Sb**	**20 06 26.2**	**-0.3**
DDFL	**Dedoflistskaro**	**0.82**	**293**	P	**Pn**	**20 06 17.1**	**+0.5**
DDFL				S	**Sb**	**20 06 26.2**	**-0.3**
BRDA	**Brd**	**0.86**	**177**	⇓P	**Pn**	**20 06 17.5**	**+0.5**
	SNR=55						
BRDA	**Brd**	**0.86**	**177**	⇓P	**Pn**	**20 06 17.5**	**+0.5**
	SNR=55						
BRDA				⇓S	**Sn**	**20 06 33.2**	**+3.2**
IML	**Ismayilli**	**0.86**	**112**	⇑P	**Pg**	**20 06 15.2**	**+0.4**
	SNR=50						
IML	**Ismayilli**	**0.86**	**112**	⇑P	**Pg**	**20 06 15.2**	**+0.4**
	SNR=50						
IML				⇓S	**Sn**	**20 06 29.2**	**-1.0**
KSMR	**Kasumkent**	**0.89**	**57**	⇓*i*PG	**Pg**	**20 06 15.0**	**-0.3**
KSMR				S	**Sb**	**20 06 28.0**	**-0.5**
KSMR				pmax	pmax		
	comp=

SNR=258
GDB ⇑Sg Sn 20 06 36.6 0.0
GDB GEDABAY 1.12 249 ⇑Pg Pg 20 06 19.5 0.0
SNR=258
GDB ⇑Sg Sn 20 06 36.6 0.0
PQL Pirkuli 1.16 106 P Pg 20 06 20.3 -0.1
SNR=635
PQL Pirkuli 1.16 106 P Pg 20 06 20.3 -0.1
SNR=635
PQL ⇓S Sn 20 06 38.0 +0.4
GNBR Gunib 1.27 355⇑*i*PG Pg 20 06 22.3 -0.2
GNBR *e*S Sn 20 06 41.5 +1.3
GNBR Gunib 1.27 355 *i* Pg Pg 20 06 22.3 -0.2
GNBR *e*Sg Sn 20 06 41.5 +1.3
DRN Derbent 1.28 45⇓*e*PG Pg 20 06 22.6 0.0
DRN *e* 20 06 41.5
DRN pmax pmax
comp=Z,687nm,0.4s
DRN smax smax
comp=N,2μm,0.9s
DRN Derbent 1.28 45 *e*Pg Pg 20 06 22.6 0.0
comp=N,687nm,0.4s
DRN *e*Sg Sn 20 06 41.5 +1.2
comp=N,2μm,0.9s
QZX Qazax, Azerbai 1.33 268 ⇑P Pn 20 06 23.3 -0.2
SNR=498
QZX ⇓S Sn 20 06 43.0 +1.4
QZX Qazax, Azerbai 1.33 268 ⇑P Pn 20 06 23.3 -0.2
SNR=498
QZX ⇓S Sn 20 06 43.0 +1.4
SIZA Siyzn 1.34 92 ⇑P Pn 20 06 23.6 -0.1
SNR=333
SIZA Siyzn 1.34 92 ⇑P Pn 20 06 23.6 -0.1
SNR=333
SIZA ⇑S Sn 20 06 43.6 +1.6
DGRG David-gareji 1.36 284 P Pn 20 06 23.9 0.0
DGRG S Sn 20 06 44.7 +2.3
DGRG David-gareji 1.36 284⇓*i*PG Pn 20 06 23.9 0.0
DGRG *e*S Sn 20 06 44.7 +2.3
DGRG David-gareji 1.36 284 P Pn 20 06 23.9 0.0
DGRG S Sn 20 06 44.7 +2.3
SGKR Sergokala 1.39 16⇑*i*PG Pn 20 06 24.5 +0.2
SGKR *e*S Sn 20 06 47.0 +3.8
SGKR pmax pmax
comp=Z,1μm,0.3s
SGKR Sergokala 1.39 16 *i* Pg Pn 20 06 24.5 +0.2
comp=Z,1μm,0.3s
ATGJ Altiaghaj 1.40 100 P Pn 20 06 24.4 -0.1
SNR=377
ATGJ Altiaghaj 1.40 100 P Pn 20 06 24.4 -0.1
SNR=377
ATGJ ⇑S Sn 20 06 45.0 +1.6
XNZR Khunzakh 1.45 348⇓*e*PG Pb 20 06 25.8 0.0
XNZR *e* 20 06 46.0
XNZR Khunzakh 1.45 348 *e*Pg Pb 20 06 25.8 0.0
XNZR *e*Sg Sn 20 06 46.0 +1.2
ARKR Arakani 1.48 356 *i* PG Pb 20 06 26.0 -0.2
ARKR *e*S Sg 20 06 49.0 +3.3
ARKR pmax pmax
comp=Z,278nm,0.5s
ARKR Arakani 1.48 356 *i* Pg Pb 20 06 26.0 -0.2
comp=Z,278nm,0.5s
ARKR *e*Sg Sg 20 06 49.0 +3.3
GBS Qobustan 1.50 113 ⇑Pn Pg 20 06 27.1 +0.2
SNR=58
GBS ⇓Sn Sg 20 06 47.4 +1.1
GBS Qobustan 1.50 113 ⇑Pn Pg 20 06 27.1 +0.2
SNR=58
GBS ⇓Sn Sg 20 06 47.4 +1.1
SAAT Saatly 1.60 142 Pn Pn 20 06 27.0 -0.2
SNR=20
SAAT ⇓Sn Sb 20 06 49.3 +0.4
SAAT Saatly 1.60 142 Pn Pn 20 06 27.0 -0.2
SNR=20
SAAT ⇓Sn Sb 20 06 49.3 +0.4
UNCR Uncukul 1.61 351⇓*i*PN Pb 20 06 28.5 +0.1
UNCR *i* S Sg 20 06 53.5 +3.7
UNCR pmax pmax
comp=Z,684nm,0.3s
UNCR Uncukul 1.61 351 *i* Pn Pb 20 06 28.5 +0.1
comp=Z,684nm,0.3s
UNCR *i* Sg Sg 20 06 53.5 +3.7
BTLR Botlikh 1.68 337⇑*i*PN Pg 20 06 30.5 +0.2
BTLR *e* 20 06 54.8
BTLR pmax pmax
comp=Z,239nm,0.9s
BTLR smax smax
comp=N,457nm,1.0s
BTLR Botlikh 1.68 337 *i* Pn Pg 20 06 30.5 +0.2
comp=N,239nm,0.9s
BTLR *e*Sg Sg 20 06 54.8 +2.7
comp=N,457nm,1.0s
BUJR Buynaksk 1.70 360 *e*PN Pg 20 06 31.0 +0.3
BUJR *i* S Sg 20 06 57.0 +4.3
BUJR pmax pmax
comp=Z,274nm,0.3s
BUJR Buynaksk 1.70 360 *e*Pn Pg 20 06 31.0 +0.3
comp=Z,274nm,0.3s
KRNR Karanay 1.71 355⇑*i*PN Pb 20 06 30.0 -0.2
KRNR *e*S Sg 20 06 56.0 +3.0
KRNR pmax pmax
comp=Z,191nm,0.4s
KRNR Karanay 1.71 355 *i* Pn Pb 20 06 30.0 -0.2
comp=Z,191nm,0.4s
KRNR *e*Sg Sg 20 06 56.0 +3.0
GRS Goris 1.73 201⇓*i*P Pn 20 06 29.0 -0.2
GRS ⇑*i*S Sb 20 06 53.0 +0.2
GRS Goris 1.73 201 ⇓P Pn 20 06 29.0 -0.2
GRS S Sb 20 06 53.0 +0.2
MAK Makhachkala 1.85 9⇓*i*PN Pb 20 06 32.8 +0.2
MAK *e* 20 07 00.9
MAK pmax pmax
comp=Z,246nm,0.7s
MAK smax smax
comp=E,1μm,0.6s
MAK smax smax
comp=E,2μm,0.6s
MAK Makhachkala 1.85 9 *i* Pn Pb 20 06 32.8 +0.2
comp=E,246nm,0.7s
MAK *e*Sg Sg 20 07 00.9 +3.1
SEAG Tbilisi Sea 1.86 291 P Pb 20 06 32.0 -0.7
SEAG S Sn 20 06 44.7 -10
SEAG Tbilisi Sea 1.86 291 P Pb 20 06 31.8 -0.9
SEAG S Sg 20 06 58.3 +0.4
TBLG Delisi 1.90 289 P Pb 20 06 32.3 -1.0
TBLG S Sg 20 06 58.6 -0.4
TBLG Delisi 1.90 289 P Pb 20 06 32.8 -0.5
TBLG S Sg 20 06 58.9 -0.1
TBLG Delisi 1.90 289 *e*PN Pb 20 06 32.3 -1.0
TBLG Delisi 1.90 289 P Pn 20 06 31.8 +0.5
TBLG Delisi 1.90 289 *e*Pn Pb 20 06 32.3 -1.0
TBLG S Sb 20 06 57.3 0.0
DBC Dubki 1.91 353⇓*e*PN Pg 20 06 34.3 -0.4
DBC *e* 20 07 02.9
DBC Dubki 1.91 353 *e*Pn Pg 20 06 34.3 -0.4
DBC *e*Sg Sg 20 07 02.9 +3.5
DVE Vedeno 1.98 338⇓*i*PN Pb 20 06 34.7 0.0
DVE Vedeno 1.98 338 *i* Pn Pb 20 06 34.7 0.0
DLMR Dylym 1.98 349 *i* PN Pb 20 06 35.0 +0.3
DLMR *i* S Sg 20 07 06.0 +4.3
DLMR pmax pmax
comp=Z,365nm,0.3s
DLMR Dylym 1.98 349 *i* Pn Pb 20 06 35.0 +0.3
comp=Z,365nm,0.3s
DLMR *i* Sg Sg 20 07 06.0 +4.3
DUS Dusheti 2.06 299 P Pn 20 06 34.6 +1.0
DUS S Sg 20 07 04.3 +0.1
DUS Dusheti 2.06 299 *e*PN Pn 20 06 34.6 +1.0
DUS Dusheti 2.06 299 P Pn 20 06 34.6 +1.0
DUS S Sg 20 07 04.4 +0.1
KZR Kazreti 2.06 278 P Pn 20 06 34.7 +1.1
KZR S Sb 20 07 02.1 0.0
KZR Kazreti 2.06 278 P Pn 20 06 34.7 +1.1
KZR S Sb 20 07 02.1 0.0
GNI Garni 2.06 243 Pn Pb 20 06 36.1 -0.1
comp=Z,19nm,0.3s,baz=55,slow=3.8,SNR=59
GNI Lg Lg 20 07 07.2
comp=Z,49nm,0.3s,baz=66,slow=22,SNR=5.5
GNI LR LR 20 07 24.7
comp=Z,162nm,21.3s,baz=138,slow=43
GNI Garni 2.06 243 P Pb 20 06 36.9 +0.7
GNI Garni 2.06 243⇓*i*P Pb 20 06 36.1 -0.1
GNI ⇑*i*S Sg 20 07 05.4 +1.0
GNI Garni 2.06 243 *e*Pn Pb 20 06 35.6 -0.6
GNI Lg Lg 20 07 07.2
GNI Garni 2.06 243 *e*Pn Pb 20 06 35.6 -0.6
GNI Garni 2.06 243 ⇓P Pb 20 06 36.1 -0.1
GNI S Sg 20 07 05.4 +1.0
GNI Lg Lg 20 07 07.2
STE Stepanavan 2.09 267 ⇓P Pg 20 06 38.6 +0.4
STE S Sb 20 07 02.4 -0.6
SBZ Shahbuz 2.10 215 ⇓Pn Pb 20 06 36.8 -0.1
SBZ Shahbuz 2.10 215 ⇓Pn Pb 20 06 36.8 -0.1
SBZ ⇑Sn Sg 20 07 07.8 +2.0
GLBA Ciilabad 2.12 152 ⇑Pn Pn 20 06 34.8 +0.5
SNR=63
GLBA Ciilabad 2.12 152 ⇑Pn Pn 20 06 34.8 +0.5
SNR=63
GLBA ⇓Sn Sg 20 07 06.6 +0.4
HYR Heyderabad 2.23 232 ⇓Pn Pb 20 06 38.5 -0.6
HYR Heyderabad 2.23 232 ⇓Pn Pb 20 06 38.5 -0.6
HYR ⇓Sn Sg 20 07 11.5 +1.6
NDR Nardaran 2.24 103 ⇑Pn Pb 20 06 38.3 -0.8
SNR=4.4
NDR ⇑Sn Sn 20 07 05.0 +1.1
NDR Nardaran 2.24 103 ⇑Pn Pb 20 06 38.3 -0.8
SNR=4.4
NDR ⇑Sn Sn 20 07 05.0 +1.1
GROC Groznyy 2.30 335 *e*PN Pb 20 06 38.7 -1.5
GROC *e*S Sb 20 07 07.7 -1.2
GROC pmax pmax
comp=Z,225nm,0.5s
GROC smax smax
comp=N,624nm,0.7s
GROC smax smax
comp=N,523nm,0.7s
GROC Groznyy 2.30 335 *e*Pn Pb 20 06 38.7 -1.5
comp=N,225nm,0.5s
GROC *e*Sn Sb 20 07 07.7 -1.2
comp=N,523nm,0.7s
NAX Nakhchivan 2.32 213 PN Pb 20 06 39.9 -0.6
NAX Nakhchivan 2.32 213 ⇑Pn Pb 20 06 39.9 -0.6
SNR=7.5
NAX Nakhchivan 2.32 213 ⇑Pn Pb 20 06 39.9 -0.6
SNR=7.5
NAX ⇓Sn Sg 20 07 12.1 -0.5
ORD Ordubad 2.36 202 ⇓Pn Pb 20 06 40.2 -1.0
ORD Ordubad 2.36 202 ⇓Pn Pb 20 06 40.2 -1.0
ORD ⇑Sn Sg 20 07 13.0 -1.0
GUDG Gudauri 2.39 305 P Pn 20 06 40.0 +1.7
GUDG S Sb 20 07 12.7 +0.9
GUDG Gudauri 2.39 305 P Pb 20 06 40.1 -1.8
GUDG S Sb 20 07 12.7 +0.9
KMGR Komgaron 2.56 320 *e*PN Pb 20 06 44.4 -0.3
KMGR *e*S Sg 20 07 19.2 -1.2
KMGR Komgaron 2.56 320 *e*Pn Pb 20 06 44.4 -0.3
IGDI IGDIR 2.64 243 *i* P Pn 20 06 43.5 +1.9
VLKR Vladikavkaz 2.65 317 *e*PN Pg 20 06 47.8 -1.1
VLKR *e*S Sg 20 07 24.4 +1.2
VLKR Vladikavkaz 2.65 317 *e*Sb Sg 20 07 24.4 +1.2
LRK Lerik 2.65 159 ⇓Pn Pn 20 06 42.7 +0.9
SNR=103
LRK ⇓Sn Sn 20 07 16.6 +2.2
LRK Lerik 2.65 159 ⇓Pn Pn 20 06 42.6 +0.9
SNR=103
LRK ⇓Sn Sn 20 07 16.6 +2.2
BGD Bogdanovka 2.67 274 P Pn 20 06 42.5 +0.4
BGD S Sb 20 07 19.9 +0.2
BGD Bogdanovka 2.67 274 P Pn 20 06 42.5 +0.4
BGD S Sb 20 07 19.9 +0.2
EAK Akyaka 2.70 262 *i* P Pn 20 06 43.1 +0.6
EAK Akyaka 2.70 262 P Pn 20 06 43.1 +0.6
LACR Lac 2.71 310 *e*PN Pb 20 06 45.7 -1.5
LACR *e*S Sb 20 07 22.4 +1.5
LACR Lac 2.71 310 *e*Pn Pb 20 06 45.7 -1.5
LKRN Lenkeran, Azer 2.73 152 PN Pn 20 06 43.1 +0.4
LKRN Lenkeran, Azer 2.73 152 ⇑Pn Pn 20 06 43.4 +0.7
LKRN ⇓Sn Sb 20 07 19.6 -1.6
LKRN Lenkeran, Azer 2.73 152 ⇑Pn Pn 20 06 43.4 +0.7
LKRN ⇓Sn Sb 20 07 19.6 -1.6
AKH Akhalkalaki 2.75 277 P Pn 20 06 45.0 +1.7
AKH S Sb 20 07 21.3 -0.9
AKH Akhalkalaki 2.75 277 P Pn 20 06 45.4 +2.2
AKH S Sb 20 07 22.1 -0.1
AKH Akhalkalaki 2.75 277⇓*i*P Pn 20 06 45.0 +1.7
AKH Akhalkalaki 2.75 277 *e*PN Pn 20 06 44.9 +1.7
AKH Akhalkalaki 2.75 277 P Pn 20 06 44.8 +1.6
AKH S Sb 20 07 21.3 -0.9
ASTR Astara 2.87 153 ⇓Pn Pn 20 06 45.4 +0.8
SNR=30
ASTR ⇑Sn Sb 20 07 22.6 -2.6
ASTR Astara 2.87 153 ⇓Pn Pn 20 06 45.4 +0.8
SNR=30
ASTR ⇑Sn Sb 20 07 22.6 -2.6
ZEI Tsey 2.92 306 *e*PN Pb 20 06 49.3 -1.6
ZEI *e*S Sb 20 07 28.0 +0.9
DIGO Kars 2.94 257 *i* P Pb 20 06 49.9 -1.3
DIGO Kars 2.94 257 P Pb 20 06 49.9 -1.3
KORR Kora 3.00 312 *e*PN Pn 20 06 48.7 +2.2
KORR *e*S Sb 20 07 28.8 -0.4
KORR Kora 3.00 312 *e*Pn Pn 20 06 48.7 +2.2
KARS Kars 3.11 262 *e*P Pn 20 06 50.9 +2.8
TRKR Terskaya 3.14 326 *e*PN Pn 20 06 50.7 +2.3
TRKR *e*S Sb 20 07 29.7 -3.5
TRKR Terskaya 3.14 326 *e*Pn Pn 20 06 50.7 +2.3
TRKR *e*Sn Sb 20 07 29.7 -3.5
CLDR Caldiran 3.16 232 *e*P Pn 20 06 50.1 +1.3
CLDR Caldiran 3.16 232 *i* P Pn 20 06 50.9 +2.1
CLDR Caldiran 3.16 232 P Pn 20 06 50.9 +2.1
EPOS Posof 3.33 278 *i* P Pb 20 06 55.6 -2.3
EPOS Posof 3.33 278 P Pb 20 06 55.6 -2.3
AGRB Hanur-Agry 3.52 245 *e*P Pb 20 06 58.5 -2.6
NCK Nalchik 3.53 313⇑*e*PN Pn 20 06 55.4 +1.6
NCK Nalchik 3.53 313 *e*Pn Pn 20 06 55.4 +1.6
SENK Senkaya-Erzuru 3.67 263 *e*P Pn 20 06 57.5 +1.7
TUTA Tutak 3.72 244 *i* P Pb 20 07 06.2 +1.6
EATA Eleskirt 3.75 252 *i* P Pn 20 07 00.7 +3.6
EATA Eleskirt 3.75 252 P Pn 20 07 00.7 +3.6
VANB Van 3.83 230 *e*P Pb 20 07 07.9 +1.6
KBZ Khabaz 4.07 311 Pn Pn 20 07 04.4 +3.3
comp=N,0.2nm,0.3s,baz=173,slow=10,SNR=3.9
KBZ Lg Lg 20 08 10.4
comp=N,2.3nm,0.3s,baz=302,slow=16,SNR=4.3
DDEM Demirkent 4.08 268 *i* P Pb 20 07 10.0 -0.5
CHVG Ch'k'valeri 4.08 295 P Pb 20 07 11.5 +0.9
CHVG Ch'k'valeri 4.08 295 *e*P Pn 20 06 57.1 -4.3
HOMI Horasan 4.12 257 *i* P Pg 20 07 16.3 -0.8
DBOC Borcka 4.12 275 *i* P Pb 20 07 09.1 -2.2
BCA Borcka 4.16 275 *e*P Pn 20 07 05.3 +2.9
KVAR Kislovodsk Arr 4.33 312 Pn Pn 20 07 05.5 +0.7
baz=9.8,slow=1.2,SNR=5.2
KVAR Lg Lg 20 08 20.9
baz=191,slow=6.9,SNR=5.4
KVAR LR LR 20 09 15.7
comp=N,65nm,22.0s,baz=177,slow=46
KIV Kislovodsk 4.33 312 *e*Pn Pn 20 07 06.0 +1.2
KIV Kislovodsk 4.33 312 *e*PN Pn 20 07 06.6 +1.8
KIV *e*S Sn 20 07 59.3 +3.5
KIV pmax pmax
comp=Z,7.0nm,0.9s
KIV Kislovodsk 4.33 312 *e*Pn Pn 20 07 06.0 +1.2
KIV *e*Sn Sn 20 07 59.3 +3.5
DOMR Dombai 4.62 300⇑*e*PN Pn 20 07 11.1 +2.2
DOMR Dombai 4.62 300 *e*Pn Pn 20 07 11.1 +2.2
ANN Anapa 8.00 301 *e*P Pn 20 08 03.1 +8.0
ANN pmax pmax
comp=Z,10.0nm,0.8s
GEYT Alibeck 9.07 107 Pn Pn 20 08 07.9 -1.9
comp=Z,0.8nm,0.3s,baz=287,slow=15,SNR=10
BRTR Keskin Array B 10.38 267 Pn Pn 20 08 31.5 +3.6
comp=Z,0.1nm,0.3s,baz=88,slow=7.0,SNR=15
AKTO Aktyubinsk 12.01 36 Pn Pn 20 08 48.7 -1.2
comp=Z,1.4nm,0.3s,baz=211,slow=12,SNR=19
AKTO LR LR 20 14 39.9
comp=Z,40nm,19.9s,baz=207,slow=43
OBN Obninsk 15.64 337⇑*e*P P 20 09 41.7 -1.7
AKASG Malin Array Be 15.68 314 Pn Pn 20 09 38.0 -1.6
comp=Z,1.3nm,0.3s,baz=119,slow=12,SNR=12
KIEV Kiev 15.68 314*d*iP P 20 09 42.9 -1.0
KIEV pmax pmax
comp=Z,10.0nm,1.7s
KIEV Kiev 15.68 314 *i* P P 20 09 42.9 -1.0
comp=Z,10.0nm,1.7s
TESR Tescani 15.72 297⇑*i*P P 20 09 44.8 +0.4
TESR Tescani 15.72 297⇑*i*P P 20 09 44.8 +0.4
MLR Muntele Rosu 16.01 293 LR LR 20 17 47.4
comp=Z,12nm,21.0s,baz=106,slow=44
MLR Muntele Rosu 16.01 293⇓*i*P P 20 09 46.5 -1.2
MLR Muntele Rosu 16.01 293 ⇓P P 20 09 46.6 -1.2
MLR Muntele Rosu 16.01 293 P P 20 09 46.6 -1.2
DOPR Dopca 16.47 294⇑*i*P P 20 09 53.6 +0.8
VOIR 16.63 292⇓*i*P P 20 09 55.7 +1.1
VOIR 16.63 292 ⇓P P 20 09 55.7 +1.1
BURAR Bucovina Array 16.93 300⇓*i*P P 20 09 59.3 +1.4
BURAR Bucovina Array 16.93 300 ⇓P P 20 09 59.3 +1.4
ARU Arti 17.03 22 P Pn 20 09 54.5 -2.4
comp=Z,0.0nm,0.3s,baz=241,slow=2.5,SNR=8.4
ARU LR LR 20 18 35.5
comp=Z,52nm,18.5s,baz=204,slow=44
ARU Arti 17.03 22 *e*P Pn 20 09 53.3 -3.6
comp=Z,6.9nm,0.6s
ARU Arti 17.03 22*c i*P Pn 20 09 55.3 -1.6
ARU S Sn 20 13 05.6 -0.9
ARU pmax pmax
comp=Z,9.0nm,1.0s
CJR Cluj-Napoca 17.82 296⇓*i*P P 20 10 10.2 +2.5
CJR Cluj-Napoca 17.82 296 ⇓P P 20 10 10.2 +2.5
CJR Cluj-Napoca 17.82 296 P P 20 10 10.2 +2.5
SVE Sverdlovsk 17.99 25⇑*e*P Pn 20 10 05.2 -3.6
SVE *e*S Sn 20 13 29.2 -0.4
SVE pmax pmax
comp=Z,11nm,0.6s
DRGR 18.43 296⇑*i*P P 20 10 16.1 +1.6
DRGR 18.43 296 ⇑P P 20 10 16.1 +1.6
KBL Kabul 18.49 104 P Pn 20 10 16.2 +0.8
KBL Kabul 18.49 104 P Pn 20 10 16.2 +0.8
TRPA Tarpa 18.80 300⇑*i*P Pn 20 10 21.1 +2.3
TRPA Tarpa 18.80 300⇑*i*P Pn 20 10 21.1 +2.3
MNAS Manas 18.95 77 P P 20 10 20.0 -0.3
MNAS pmax pmax
comp=Z,2.0nm,0.6s
MNAS Manas 18.95 77 P P 20 10 20.0 -0.3
comp=Z,2.0nm,0.6s
OTUK Ortayu 19.23 60 P P 20 10 22.1 -1.1
OTUK pmax pmax
comp=Z,13nm,0.9s
BRVK Borovoye 19.67 45 *e*P P 20 10 27.2 -0.7
comp=Z,27nm,0.7s
BRVK Borovoye 19.67 45 *e*P P 20 10 27.2 -0.7
BRVK pmax pmax
comp=Z,27nm,0.7s
CRVS Cervenica-Dubn 19.67 302 *e*P Pn 20 10 31.0 +1.6
CRVS pmax pmax
comp=Z,4.0nm,1.1s
CRVS Cervenica-Dubn 19.67 302 *e*P Pn 20 10 31.0 +1.6
CRVS Cervenica-Dubn 19.67 302 *e*P Pn 20 10 31.0 +1.6
comp=Z,4.0nm,1.1s
BVAR Borovoye Array 19.71 45 P P 20 10 28.7 +0.3
comp=Z,1.2nm,0.3s,baz=226,slow=12,SNR=26
SFK Sufi-Kurgan 20.05 84 P Pn 20 10 34.5 +0.4
SFK pmax pmax
comp=Z,13nm,0.7s
SFK Sufi-Kurgan 20.05 84 P Pn 20 10 34.5 +0.4
comp=Z,13nm,0.7s
WSAR Wadi Sarin 20.29 148 LR LR 20 19 55.0
comp=Z,70nm,19.8s,baz=67,slow=41
KLMR Klimovskoe 20.30 349 *e*P P 20 10 32.1 -2.6
KLMR pmax pmax
comp=Z,7.0nm,0.9s
KLMR Klimovskoe 20.30 349 *e*P P 20 10 32.2 -2.5
KLMR AMP 20 10 43.8
comp=Z,7.0nm,0.9s
SUW Suwalki 20.54 317 P P 20 10 35.3 -2.1
PRGR Permogore 20.56 358 *e*P P 20 10 34.1 -3.4
PRGR *e*S S 20 14 24.1 -3.5
PRGR pmax pmax
comp=Z,9.0nm,0.6s
LANS Liptovska Anna 21.01 302 *e*P P 20 10 50.8 +8.3
LANS Liptovska Anna 21.01 302 *e*P P 20 10 50.8 +8.3
VYHS Vyhne 21.30 300 *e*P P 20 10 46.7 +1.1
VYHS pmax pmax
comp=Z,3.0nm,1.3s
VYHS Vyhne 21.30 300 *e*P P 20 10 46.7 +1.1
VSU Vasula 21.63 330*c e*P P 20 10 52.1 +3.1
VSU pmax pmax
comp=Z,18nm,1.0s
NIL Nilore 22.00 101 *e*P P 20 10 55.1 +1.7
comp=Z,17nm,0.6s
NIL Nilore 22.00 101 *e*P P 20 10 55.1 +1.7
NIL pmax pmax
comp=Z,17nm,0.6s
NIL Nilore 22.00 101 *e*P P 20 10 55.1 +1.7
comp=Z,17nm,0.6s
MODS Modra-Piesok 22.30 299 *e*P P 20 10 56.9 +0.5
MODS pmax pmax
comp=Z,15nm,1.1s
MODS Modra-Piesok 22.30 299 *e*P P 20 10 56.8 +0.4
MODS Modra-Piesok 22.30 299 *e*P P 20 10 56.9 +0.5
comp=Z,15nm,1.1s
MORC Moravsky Berou 22.37 303 P P 20 10 55.6 -1.5
MORC pmax pmax
comp=Z,4.0nm,1.8s
MORC Moravsky Berou 22.37 303 P P 20 10 55.6 -1.5
comp=Z,4.0nm,1.8s
ARSA Arzberg 23.37 296 *e*P P 20 11 08.5 +0.9
comp=Z,8.4nm,1.0s
ARSA Arzberg 23.37 296 P P 20 11 08.5 +0.9
comp=Z,8.4nm,1.0s
SOKA Soboth 23.68 294 *e*P P 20 11 11.5 +0.8
comp=Z,4.4nm,0.6s
SOKA Soboth 23.68 294 P P 20 11 11.5 +0.8
comp=Z,4.4nm,0.6s
KURBB Kurchatov Arra 23.68 56 P P 20 11 10.4 -0.2
comp=Z,2.7nm,0.7s,baz=262,slow=11,SNR=19
KURK Kurchatov 23.75 56 P P 20 11 10.4 -0.9
KURK Kurchatov 23.75 56⇑*i*P P 20 11 12.0 +0.7
KURK pmax pmax
comp=Z,5.0nm,0.9s
PDGK Podgornoye 23.99 74 P P 20 11 14.5 +0.7
PDGK pmax pmax
comp=Z,5.0nm,1.5s
FINES FINESS Array B 24.02 335 P P 20 11 12.7 -1.1
comp=Z,1.7nm,0.6s,baz=123,slow=7.0,SNR=7.9
MOA Molln 24.26 297 *i* P P 20 11 16.3 +0.2
comp=Z,3.1nm,0.8s
GERES GERESS Array B 24.71 300 P P 20 11 19.8 -0.6
comp=Z,6.2nm,0.7s,baz=98,slow=9.6,SNR=40
GERES LR LR 20 21 22.9
comp=Z,32nm,20.2s,baz=293,slow=37
KHC Kasperske Hory 24.82 300 *e*P P 20 11 22.9 +1.6
KHC Kasperske Hory 24.82 300 *e*P P 20 11 22.9 +1.6
KBA Koelnbreinsper 24.85 295 *e*P P 20 11 22.3 +0.6
comp=Z,12nm,0.8s
KBA Koelnbreinsper 24.85 295 P P 20 11 21.7 0.0
KBA pmax pmax
comp=Z,19nm,0.9s
ABTA Abfaltersbach 25.41 294 *e*P P 20 11 26.8 +0.1
comp=Z,9.5nm,1.4s
CLL Collm 25.50 305 *e*P P 20 11 27.0 -0.3
comp=Z,8.0nm,1.1s
CLL Collm 25.50 305 *e*P P 20 11 27.0 -0.3
CLL pmax pmax
comp=Z,8.0nm,1.1s
MKAR Makanchi Array 25.79 65 P P 20 11 30.0 -0.1
comp=Z,3.2nm,0.7s,baz=264,slow=8.3,SNR=23
MKAR Makanchi Array 25.79 65 P P 20 11 30.0 -0.1
MOTA Moosalm 26.38 296 *i* pP pP 20 11 36.4 -0.4
comp=Z,4.3nm,0.7s
DAVA Damuels 27.21 296 *e*P P 20 11 43.6 +0.5
comp=Z,3.1nm,0.6s
NVS Novosibirsk 27.44 48 *e*P P 20 11 44.6 -0.2
ZALV Zalesovo Beam 28.13 50 P P 20 11 50.2 -0.8
comp=Z,0.7nm,0.4s,baz=253,slow=11,SNR=5.0
DGZ Jazzator, Alta 29.26 59 *e*P P 20 12 00.9 -0.4
DGZ pmax pmax
comp=Z,1.0nm,1.0s
EKA Eskdalemuir Ar 35.56 311 P P 20 12 54.7 -1.4
comp=Z,2.2nm,0.7s,baz=103,slow=8.7,SNR=9.6
LSA Lhasa 37.29 94 *e*P P 20 13 13.3 +1.6
comp=Z,3.1nm,0.6s
LSA Lhasa 37.29 94 *e*P P 20 13 13.3 +1.6
LSA pmax pmax
comp=Z,3.0nm,0.6s
LSA Lhasa 37.29 94 *e*P P 20 13 13.3 +1.6
comp=Z,3.1nm,0.6s
ESDC Sonseca Array 38.48 285 P P 20 13 19.8 -1.5
comp=Z,0.2nm,0.4s,baz=68,slow=9.4,SNR=4.5
ULN Ulaanbaatar 42.33 60 *e*P P 20 13 53.7 +0.6
comp=Z,2.1nm,0.8s
ULN Ulaanbaatar 42.33 60⇓*e*P P 20 13 53.2 +0.1
ULN pmax pmax

comp=Z,2.0nm,0.8s
TORD Torodi Ar. Bea 48.35 248 P P 20 14 40.1 -0.9
comp=Z,0.3nm,0.5s,baz=29,slow=6.6
CMAR Chiang Mai Arr 49.50 101 P P 20 14 49.5 -0.3
comp=Z,0.9nm,0.7s,baz=299,slow=8.5,SNR=8.5
CMAR LR LR 20 42 36.7
comp=Z,16nm,19.2s,baz=205,slow=44
KOWA Kowa 51.53 254 P P 20 15 04.9 -0.3
comp=Z,2.0nm,0.5s,baz=43,slow=9.6,SNR=5.3
DBIC Dimbokro 57.47 248 P P 20 15 47.8 -0.6
comp=Z,8.8nm,1.3s,baz=0.0,slow=7.1,SNR=3.1

MEX 25 20:12:55.5±0.5, 16°.72N×99°.73W, h13km±4km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.19**	**320**	*e*P	Pg	20 12 59.4	-0.4
ACX				*e*S	Sg	20 13 02.6	-0.1
ACP2	**Acapulco**	**0.21**	**315**	*e*P	Pg	20 12 59.3	-0.9
ACP2				*e*S	Sg	20 13 03.2	-0.1
CAIG	**El Cayaco**	**0.60**	**302**	*e*P	Pg	20 13 05.7	-1.7
CAIG				*e*S	Sg	20 13 14.0	-1.3
MEIG	**Mezcala**	**1.20**	**5**	*e*P	Pn	20 13 14.0	-4.2
MEIG				*e*S	Sb	20 13 28.8	-4.9
TLIG	**Tlapa**	**1.39**	**53**	*e*P	Pn	20 13 17.3	-3.5
TLIG				*e*S	Sn	20 13 34.0	-5.1
PLIG	**Platanillo**	**1.67**	**7**	*e*P	Pn	20 13 21.5	-3.1
PLIG				*i* S	Sn	20 13 41.2	-4.8
ZIIG	**Zihuatanejo**	**1.88**	**298**	*e*P	Pn	20 13 24.6	-2.7
ZIIG				*i* S	Sn	20 13 46.4	-4.4

IDC 25 20:20:46.4±1.8, 0°.70N×125°.52E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.5/52, mbtmp3.8/4, MS3.3/1, Ms1 3.3/1, ms1mx2.3/52, Error ellipse: s-maj=190.9km s-min=23.0km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.26**	**158**	P	P	20 25 44.3	-0.9
	2.2nm,0.8s,baz=336,slow=11,SNR=14						
ASAR	**Alice Springs**	**25.55**	**162**	P	P	20 26 17.8	+0.6
	0.5nm,0.3s,baz=341,slow=8.2,SNR=9.3						
STKA	**Stephens Creek**	**35.80**	**156**	P	P	20 27 47.6	0.0
	2.3nm,1.0s,baz=331,slow=13,SNR=2.8						
SONM	**Songino Array**	**49.80**	**343**	LR	LR	20 54 28.7	
	comp=Z,29nm,18.2s,baz=84,slow=41						
MKAR	**Makanchi Array**	**59.38**	**327**	P	P	20 30 50.5	-0.1
	0.4nm,0.4s,baz=119,slow=7.9,SNR=9.3						

ROM 25 20:23:43.8±0.4, 44°.93N±0°.02×10°.95E±0°.01, h10km, Md1.5/3, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NDIM	**Novi di Modena**	**0.06**	**216**	P	Pg	20 23 47.8	+2.0
NDIM				S	Sg	20 23 50.3	+3.0
NDIM				AML	AML		
	comp=E,886μm,0.5s						
NDIM				AML	AML		
	comp=N,701μm,0.2s						
NDIM				END			
NDIM				END			
NDIM				END			
NDIM				END			
RAVA	**Ravarino**	**0.22**	**145**	P	Pg	20 23 50.5	+2.3
RAVA				S	Sg	20 23 55.0	+3.7
RAVA				AML	AML		
	comp=E,554μm,0.3s						
RAVA				AML	AML		
	comp=N,925μm,0.3s						
RAVA				END			
RAVA				END			
RAVA				END			
RAVA				END			
T0800	**Massa Finalese**	**0.23**	**111**	P	Pg	20 23 50.9	+2.4
T0800				S	Sg	20 23 55.5	+3.8
T0800				AML	AML		
	comp=E,814μm,0.4s						
T0800				AML	AML		
	comp=N,956μm,0.2s						
T0800				END			
T0800				END			
T0800				END			
T0800				END			
T0822	**Casumaru (Bond**	**0.30**	**109**	P	Pb	20 23 52.6	+1.4
T0822				END			

PRU 25 20:23:44.3, 50°.23N×19°.00E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHZP	**Chorzow**	**0.06**	**355**	*e*Pg	Pg	20 23 46.6	+1.2
CHZP				*e*Sg	Sg	20 23 48.4	+2.1
OJC	**Ojcow**	**0.51**	**91**	*e*Pg	Pg	20 23 53.3	-0.8
OJC				*e*Sg	Sg	20 24 00.0	-0.7
MORC	**Moravsky Berou**	**1.04**	**245**	*e*PG	Pb	20 24 05.0	-0.3
MORC				*e*SG	Sg	20 24 18.4	+0.6
LANS	**Liptovska Anna**	**1.12**	**164**	*e*PG	Pg	20 24 05.6	-0.2
LANS				*e*SG	Sg	20 24 19.8	-0.5
NIE	**Niedzica**	**1.17**	**133**	*e*Pg	Pg	20 24 06.7	0.0
NIE				*e*Sg	Sg	20 24 21.9	+0.1
DPC	**Dobruska-Polom**	**1.72**	**275**	*e*SG	Sg	20 24 39.3	-0.3
	comp=Z,1.5nm,0.3s						
VYHS	**Vyhne**	**1.74**	**184**	*e*SN	Sn	20 24 36.7	-2.0
VYHS				*e*LG	Lg	20 24 38.7	
KHC	**Kasperske Hory**	**3.69**	**255**	*e*SG	Sg	20 25 40.7	-2.0

IPEC ***25*** *20:25:37.2±0.2, 49°.84N×18°.56E, h0km, ML1.0/3, Error ellipse: s-maj=2.1km s-min=1.1km az=161.0*
PRU ***25*** *20:25:38.1, 49°.86N×18°.50E, h0km*
CSEM 25 20:25:37.8±0.4, 49°.77N×18°.46E, h1km, ML1.0, Error ellipse: s-maj=9.5km s-min=3.0km az=20.0, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.21**	**289**	*e*PG	Pg	20 25 42.7	+0.8
OKC				*e*SG	Sg	20 25 46.9	+2.2
	comp=Z,4.0nm,0.2s						
MORC	**Moravsky Berou**	**0.60**	**271**	*e*Pg	Pg	20 25 49.9	+0.7
	baz=84						
MORC				*e*Sg	Sg	20 25 57.7	+0.8
	2.3nm,0.3s,baz=84						
MORC	**Moravsky Berou**	**0.60**	**271**	*e*Pg	Pg	20 25 49.9	+0.7
	baz=84						
MORC				*e*Sg	Sg	20 25 57.7	+0.8
	2.3nm,0.3s,baz=84						
LANS	**Liptovska Anna**	**0.90**	**133**	*e*Pg	Pg	20 25 55.2	+0.1
LANS				*e*Sg	Sb	20 26 08.5	-0.3
LANS	**Liptovska Anna**	**0.90**	**133**	*e*PG	Pg	20 25 55.2	+0.1
LANS				*e*SG	Sb	20 26 08.5	-0.3
VYHS	**Vyhne**	**1.30**	**169**	*e*PG	Pg	20 26 02.7	0.0
VYHS				*e*SG	Sn	20 26 21.0	-0.1
VYHS				*e*LG	Lg	20 26 23.1	
VYHS	**Vyhne**	**1.30**	**169**	*e*Pg	Pg	20 26 02.7	0.0
VYHS				*e*Sn	Sn	20 26 21.0	-0.1
VRAC	**Vranov**	**1.30**	**250**	*e*Pn	Pg	20 26 02.8	+0.1
VRAC				*e*Sg	Sb	20 26 20.5	+0.2
	3.3nm,0.3s,baz=67						
VRAC	**Vranov**	**1.30**	**250**	*e*PG	Pg	20 26 02.8	+0.1
VRAC				*e*SG	Sb	20 26 20.5	+0.2
VRAC	**Vranov**	**1.30**	**250**	*e*Pg	Pg	20 26 02.7	0.0
	baz=67						
VRAC				*e*Sg	Sb	20 26 20.5	+0.2
	3.3nm,0.3s,baz=67						
DPC	**Dobruska-Polom**	**1.50**	**294**	*e*PG	Pn	20 26 04.9	-0.9
DPC				*e*SG	Sg	20 26 25.2	-0.7
KRUC	**Moravsky**	**1.52**	**243**	*e*Pg	Pn	20 26 06.4	+0.2
	baz=60						
KRUC				*e*Sg	Sg	20 26 27.6	+0.9
	1.6nm,0.3s,baz=60						
KRUC	**Moravsky**	**1.52**	**243**	*e*PG	Pn	20 26 06.5	+0.3
KRUC				*e*SG	Sg	20 26 27.6	+0.9
KRUC	**Moravsky**	**1.52**	**243**	*e*Pg	Pn	20 26 06.4	+0.2
	baz=60						
KRUC				*e*Sg	Sg	20 26 27.6	+0.9
	1.6nm,0.3s,baz=60						
KHC	**Kasperske Hory**	**3.25**	**261**	*e*SG	Sg	20 27 22.3	+0.1

IDC 25 20:40:43.0±3.6, 5°.54S×150°.29E, h0km, mb3.2/2, mb1 3.5/2, mb1mx3.2/39, mbtmp3.3/2, Error ellipse: s-maj=143.5km s-min=47.1km az=117.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.11**	**226**	P	P	20 45 29.7	+0.2
	0.7nm,0.5s,baz=50,slow=10,SNR=7.8						
ASAR	**Alice Springs**	**23.95**	**220**	P	P	20 45 58.1	-1.1
	0.2nm,0.5s,baz=56,slow=8.1,SNR=5.8						
TORD	**Torodi Ar. Bea**	**148.13**	**286**	PKPbc	PKPbc	21 00 31.9	0.0
	baz=96,slow=1.8						

MAN 25 21:10:13.9, 10°.73N×122°.06E, h29km, mb3.9, ML2.6, MS2.2, 1D, Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAP	**San Jose, Anti**	**0.11**	**279**	‖*e*P	Pn	21 10 19.9	+0.2
GUIM	**Jordan**	**0.53**	**101**	*e*P	Pn	21 10 26.0	+0.4
GUIM				*e*S	Sn	21 10 34.7	+1.1
CUYO	**Cuyo Island**	**1.03**	**277**	*e*P	Pn	21 10 32.4	0.0
CUYO				*e*S	Sn	21 10 45.9	0.0
APYP	**Conner**	**7.13**	**354**	*e*P	Pb	21 12 24.3	+7.2
APYP				*e*S	Sn	21 12 37.1	-39

IDC 25 21:10:59.0±2.0, 49°.21S×105°.79E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.7/42, mbtmp3.7/4, MS3.3/4, Ms1 3.3/4, ms1mx2.9/39, Error ellipse: s-maj=83.7km s-min=23.7km az=119.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.57**	**26**	T	T	21 30 29.6	
	baz=200,slow=74,SNR=10.0						
H01W1	**Cape Leeuwin H**	**15.58**	**26**	T	T	21 30 30.4	
	baz=200,slow=74,SNR=9.1						
H01W3	**Cape Leeuwin H**	**15.59**	**26**	T	T	21 30 30.8	
	baz=200,slow=74,SNR=8.9						
MAW	**Mawson**	**28.19**	**214**	LR	LR	21 26 11.3	
	comp=Z,80nm,18.4s,baz=118,slow=32						
STKA	**Stephens Creek**	**31.87**	**70**	LR	LR	21 28 17.2	
	comp=Z,32nm,18.3s,baz=204,slow=33						
ASAR	**Alice Springs**	**33.73**	**51**	P	P	21 17 41.9	-0.3
	0.3nm,0.5s,baz=212,slow=7.9,SNR=6.0						
VNDA	**Vanda**	**35.26**	**162**	P	P	21 17 55.5	+0.7
	0.8nm,0.8s,baz=289,slow=9.0,SNR=5.3						
VNDA				LR	LR	21 31 08.7	
	comp=Z,63nm,18.3s,baz=298,slow=34						
WRA	**Warramunga Arr**	**37.07**	**48**	P	P	21 18 11.0	+0.1
	1.5nm,0.8s,baz=208,slow=8.8,SNR=6.4						
SNAA	**Sanae**	**49.46**	**203**	P	P	21 19 50.0	-0.5
	0.8nm,0.8s,baz=135,slow=10.0,SNR=3.8						
DAV	**Davao City (W)**	**58.66**	**23**	LR	LR	21 48 05.9	
	comp=Z,17nm,18.0s,baz=356,slow=38						
NVAR	**Mina Array Bea**	**146.85**	**92**	PKPbc	PKPbc	21 30 42.4	-0.7
	1.5nm,0.8s,baz=230,slow=6.2,SNR=5.1						
TXAR	**Lajitas Array**	**150.06**	**121**	PKPbc	PKPbc	21 30 50.5	-1.0
	0.7nm,0.9s,baz=193,slow=5.1,SNR=4.6						

MEX 25 21:13:40.3±0.4, 15°.15N×92°.59W, h104km±17km, MD3.6, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.82**	**312**	*e*P	Pn	21 13 58.0	-1.2
PCIG				*e*S	Sn	21 14 11.7	-1.7
CCIG	**Comitan**	**1.21**	**21**	*e*P	Pn	21 13 59.8	-3.8
TGIG		**1.70**	**343**	*e*P	Pn	21 14 08.1	-1.3
TGIG				*e*S	Sn	21 14 29.5	-1.9

BJI ***25*** *21:16:00.6, 50°.89N×157°.45E, h64km, mb4.8/45, mB4.9/32, Ms4.3/25, Ms7 4.0/25*
KRSC ***25*** *21:16:01.6±1.6, 50°.68N×157°.43E, h56km±19km, ML5.4, FELT [IV-V] at Severo-Kurilsk; [II] at lighthouse Krugliy, lighthouse Kurbatova, cape Lopatka.*
MOS ***25*** *21:16:04.1±0.9, 50°.81N×157°.02E, h74km, mb5.1/81, Error ellipse: s-maj=6.9km s-min=2.8km az=80.8*
MOS Felt (III-IV) at Severo-Kuril'sk.
ISCJB ***25*** *21:16:04.8±0.3, 50°.86N±0°.03×157°.09E±0°.02, h81km±2km, mb4.8/274, Error ellipse: s-maj=4.4km s-min=2.1km az=158.3*
NEIC ***25*** *21:16:05.3±0.3, 50°.94N×156°.98E, h66km±3km, mb4.9/175, Error ellipse: s-maj=4.0km s-min=2.1km az=160.0*
GCMT ***25*** *21:16:05.3±0.6, 50°.73N×157°.45E, h56km±2km, MW4.8/62, Moment Tensor Solution. s31,c36; s62,c81; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr1.98±.13; Mθθ-0.74±.09; Mφφ-1.24±.09; Mrθ0.14±.07; Mφθ-0.78±.06; Mφr0.75±.07; Best double couple: M0=2.04100×10^16 NP1:φs=28.00000°, δ56.00000°, λ81.00000°. NP2: φs=223.00000°, δ35.00000°, λ103.00000°. Principal axes: T 2.1480, Plg77.0000°, Azm267.0000°; N -0.2130, Plg7.0000°, Azm33.0000°; P -1.9330, Plg10.0000°, Azm124.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
IDC ***25*** *21:16:07.4±1.8, 50°.94N×156°.92E, h86km±16km, mb4.4/41, mb1 4.5/47, mb1mx4.4/77, mbtmp4.8/47, MS3.6/39, Ms1 3.6/39, ms1mx3.4/66 Error ellipse: s-maj=11.6km s-min=8.2km az=154.0*
ISC 25 21:16:04.2±0.4, 50°.77N±0°.04×157°.24E±0°.03, h63km±2km, h63km: pP-P, n894, σ1°.24/990, mb4.9/280, 21C-7D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.72**	**264**	*i* P	**Pn**	**21 16 18.6**	**-0.2**
SKR				*e*S	**Sn**	**21 16 29.5**	**0.0**
SKR	**Severo-Kuril's**	**0.72**	**264**	‖*i*PN	**Pn**	**21 16 18.7**	**-0.1**
SKR				*i* S	**Sn**	**21 16 29.6**	**0.0**
SKR				pmax	pmax		
	comp=Z,15μm,0.5s						
SKR				pmax	pmax		
	comp=Z,18μm,1.0s						
SKR				smax	smax		
	comp=N,106μm,0.6s						
SKR				smax	smax		
	comp=N,117μm,0.7s						
SKR				smax	smax		
	comp=E,75μm,0.5s						
SKR				smax	smax		
	comp=E,73μm,0.3s						
PAU	**Pauzhetka**	**0.75**	**339**	*i* P	**Pn**	**21 16 19.9**	**+0.6**
PAU				*e*S	**Sn**	**21 16 31.6**	**+1.3**
PAU	**Pauzhetka**	**0.75**	**339**	PN	**Pn**	**21 16 19.9**	**+0.6**
PAU				S	**Sn**	**21 16 31.6**	**+1.3**
KDTR	**Khodutka, Kamc**	**1.17**	**27**	*i* P	**Pn**	**21 16 24.1**	**-0.5**
KDTR				*e*S	**Sn**	**21 16 38.6**	**-1.1**
MIPR	**Malaya Ipel'ka**	**1.54**	**349**	*e*P	**Pn**	**21 16 30.1**	**+0.6**
MIPR	**Malaya Ipel'ka**	**1.54**	**349**	PN	**Pn**	**21 16 30.1**	**+0.6**
ASAK	**Asacha**	**1.67**	**14**	*e*P	**Pn**	**21 16 31.7**	**+0.3**
ASAK	**Asacha**	**1.67**	**14**	PN	**Pn**	**21 16 31.7**	**+0.3**
MTVR	**Mutnovka**	**1.82**	**19**	*e*P	**Pn**	**21 16 33.7**	**+0.3**
MTVR	**Mutnovka**	**1.82**	**19**	PN	**Pn**	**21 16 33.7**	**+0.3**
RUS	**Russkaya**	**1.85**	**25**	*e*P	**Pn**	**21 16 33.3**	**-0.3**
RUS				*e*S	**Sn**	**21 16 55.0**	**-1.0**
RUS	**Russkaya**	**1.85**	**25**	PN	**Pn**	**21 16 33.3**	**-0.3**
RUS				S	**Sn**	**21 16 55.0**	**-1.0**
GRL	**Gorelyy**	**1.86**	**16**	*e*P	**Pn**	**21 16 34.8**	**+0.8**
GRL				*e*S	**Sn**	**21 16 57.0**	**+0.5**
GRL	**Gorelyy**	**1.86**	**16**	PN	**Pn**	**21 16 34.8**	**+0.8**
GRL				S	**Sn**	**21 16 57.0**	**+0.5**
KRMR	**Karymshinskiy**	**2.14**	**15**	*e*P	**Pn**	**21 16 38.8**	**+1.2**
KRMR				*e*S	**Sn**	**21 17 05.6**	**+2.6**
KRMR	**Karymshinskiy**	**2.14**	**15**	PN	**Pn**	**21 16 38.8**	**+1.2**
KRMR				S	**Sn**	**21 17 05.6**	**+2.6**
APC	**Apacha**	**2.16**	**359**	*i* P	**Pn**	**21 16 39.1**	**+1.2**
APC				*i* S	**Sn**	**21 17 05.6**	**+2.0**
APC	**Apacha**	**2.16**	**359**	PN	**Pn**	**21 16 39.1**	**+1.2**
APC				S	**Sn**	**21 17 05.6**	**+2.0**
PEA0B	**Petropavlovsk-**	**2.36**	**7**	*e*Pn	**Pn**	**21 16 42.3**	**+1.6**
PETK	**Petropavlovsk-**	**2.36**	**7**	P	**Pn**	**21 16 42.1**	**+1.5**
	comp=E,90nm,0.3s,baz=169,slow=15,SNR=439						
PETK				S	**Sn**	**21 17 05.5**	**-3.0**
	comp=E,123nm,0.3s,baz=146,slow=16,SNR=5.3						
PETK				LR	LR	21 17 20.7	
	comp=E,410nm,20.8s,baz=192,slow=33						
PET	**Petropavlovsk**	**2.42**	**21**	*e*Pn	**Pn**	**21 16 41.9**	**+0.5**
PET	**Petropavlovsk**	**2.42**	**21**	*i* P	**Pn**	**21 16 42.3**	**+0.8**
PET	**Petropavlovsk**	**2.42**	**21**	*d* PN	**Pn**	**21 16 42.2**	**+0.8**
PET				*e*S	**Sn**	**21 17 10.4**	**+0.4**
PET				pmax	pmax		
	comp=Z,400nm,1.1s						
PET				pmax	pmax		
	comp=Z,100nm,3.0s						
PET				pmax	pmax		
	comp=Z,652nm,0.4s						
PET				smax	smax		
	comp=E,9μm,1.6s						
PET				smax	smax		
	comp=E,9μm,0.6s						
PET				smax	smax		
	comp=N,8μm,0.5s						
PET				smax	smax		
	comp=E,1μm,2.3s						
PET				MLR	MLR		
	comp=Z,1μm,16.0s						
DALK	**Dalny**	**2.45**	**22**	*e*P	**Pn**	**21 16 42.5**	**+0.6**
DALK				*e*S	**Sn**	**21 17 10.9**	**+0.2**
DALK	**Dalny**	**2.45**	**22**	PN	**Pn**	**21 16 42.5**	**+0.6**
DALK				S	**Sn**	**21 17 10.9**	**+0.2**
UGLR	**Uglovaya**	**2.63**	**21**	*e*P	**Pn**	**21 16 45.9**	**+1.5**
UGLR	**Uglovaya**	**2.63**	**21**	PN	**Pn**	**21 16 45.9**	**+1.5**
AVH	**Avacha**	**2.67**	**20**	*e*P	**Pn**	**21 16 46.8**	**+1.9**
AVH	**Avacha**	**2.67**	**20**	PN	**Pn**	**21 16 46.8**	**+1.9**
KOK	**Koryaka**	**2.67**	**18**	*e*P	**Pn**	**21 16 47.3**	**+2.4**
KOK	**Koryaka**	**2.67**	**18**	PN	**Pn**	**21 16 47.3**	**+2.4**
KRER	**Koryakskii**	**2.71**	**20**	*e*P	**Pn**	**21 16 47.2**	**+1.7**
KRER	**Koryakskii**	**2.71**	**20**	PN	**Pn**	**21 16 47.2**	**+1.7**
SDLR	**Sedlovina**	**2.71**	**21**	*e*P	**Pn**	**21 16 46.3**	**+0.8**
SDLR	**Sedlovina**	**2.71**	**21**	PN	**Pn**	**21 16 46.3**	**+0.8**
KRX	**Arik**	**2.74**	**18**	*e*P	**Pn**	**21 16 47.8**	**+1.9**
KRX	**Arik**	**2.74**	**18**	PN	**Pn**	**21 16 47.8**	**+1.9**
NLC	**Nalytchevo**	**2.74**	**28**	*e*P	**Pn**	**21 16 45.0**	**-0.7**
NLC				*e*S	**Sn**	**21 17 14.9**	**-2.7**
NLC	**Nalytchevo**	**2.74**	**28**	PN	**Pn**	**21 16 45.0**	**-0.7**
NLC				S	**Sn**	**21 17 14.9**	**-2.7**
SPN	**Mys Shipunski**	**2.90**	**35**	*e*P	**Pn**	**21 16 48.2**	**+0.2**
SPN				*e*S	**Sn**	**21 17 20.6**	**-1.0**
SPN	**Mys Shipunski**	**2.90**	**35**	PN	**Pn**	**21 16 48.2**	**+0.2**
SPN				S	**Sn**	**21 17 20.6**	**-1.0**
GNL	**Ganaly**	**2.96**	**8**	*e*P	**Pn**	**21 16 50.8**	**+1.9**
GNL				*e*S	**Sn**	**21 17 26.0**	**+2.6**
GNL	**Ganaly**	**2.96**	**8**	PN	**Pn**	**21 16 50.8**	**+1.9**
GNL				S	**Sn**	**21 17 26.0**	**+2.6**
KII	**Karymskiy**	**3.54**	**22**	*e*P	**Pn**	**21 16 58.5**	**+1.7**
KII	**Karymskiy**	**3.54**	**22**	PN	**Pn**	**21 16 58.5**	**+1.7**
MKZ	**Mys Kozlova**	**4.68**	**34**	*e*P	**Pn**	**21 17 12.2**	**0.0**
MKZ	**Mys Kozlova**	**4.68**	**34**	PN	**Pn**	**21 17 12.2**	**0.0**
KZV	**Kizimen**	**4.73**	**22**	*e*P	**Pn**	**21 17 15.5**	**+2.4**
KZV	**Kizimen**	**4.73**	**22**	PN	**Pn**	**21 17 15.5**	**+2.4**
TUMD	**Tumrok D**	**4.84**	**22**	*e*P	**Pn**	**21 17 16.4**	**+2.0**
TUMR	**Tumrok**	**4.85**	**20**	*e*P	**Pn**	**21 17 17.7**	**+3.0**
TUMR	**Tumrok**	**4.85**	**20**	PN	**Pn**	**21 17 17.7**	**+3.0**
ESO	**Esso**	**5.24**	**9**	*e*P	**Pn**	**21 17 22.7**	**+2.7**
ESO	**Esso**	**5.24**	**9**	PN	**Pn**	**21 17 22.7**	**+2.7**
KMNR	**Kamenistaya**	**5.31**	**19**	*e*P	**Pn**	**21 17 24.1**	**+3.1**
KMNR	**Kamenistaya**	**5.31**	**19**	PN	**Pn**	**21 17 24.1**	**+3.1**
KPT	**Kopyto**	**5.51**	**18**	*e*P	**Pn**	**21 17 25.8**	**+2.2**
KPT	**Kopyto**	**5.51**	**18**	PN	**Pn**	**21 17 25.8**	**+2.2**
KIRR	**Kirishev**	**5.52**	**18**	*e*P	**Pn**	**21 17 26.3**	**+2.4**
KIRR	**Kirishev**	**5.52**	**18**	PN	**Pn**	**21 17 26.3**	**+2.4**
KOZ	**Kozyrevsk**	**5.53**	**16**	*e*P	**Pn**	**21 17 26.3**	**+2.4**
KOZ	**Kozyrevsk**	**5.53**	**16**	PN	**Pn**	**21 17 26.3**	**+2.4**
BZMR	**Bezymyannaya**	**5.53**	**19**	*e*P	**Pn**	**21 17 26.7**	**+2.7**
BZMR	**Bezymyannaya**	**5.53**	**19**	PN	**Pn**	**21 17 26.7**	**+2.7**
BZWR	**Bezymyannyi-We**	**5.56**	**19**	*e*P	**Pn**	**21 17 26.9**	**+2.5**
BZWR	**Bezymyannyi-We**	**5.56**	**19**	PN	**Pn**	**21 17 26.9**	**+2.5**
ZLN	**Zelenaya**	**5.67**	**21**	*e*P	**Pn**	**21 17 29.2**	**+3.2**
ZLN	**Zelenaya**	**5.67**	**21**	PN	**Pn**	**21 17 29.2**	**+3.2**
LGNR	**Loginova**	**5.71**	**20**	*e*P	**Pn**	**21 17 29.5**	**+2.9**
LGNR	**Loginova**	**5.71**	**20**	PN	**Pn**	**21 17 29.5**	**+2.9**
CIRR	**Tsirk**	**5.75**	**20**	*e*P	**Pn**	**21 17 30.6**	**+3.5**
CIRR	**Tsirk**	**5.75**	**20**	PN	**Pn**	**21 17 30.6**	**+3.5**
KRSR	**Krestovskiy**	**5.81**	**19**	*e*P	**Pn**	**21 17 30.1**	**+2.3**
KRSR	**Krestovskiy**	**5.81**	**19**	PN	**Pn**	**21 17 30.1**	**+2.3**
KLY	**Klyuchi**	**5.92**	**19**	*e*P	**Pn**	**21 17 32.5**	**+3.4**
KLY	**Klyuchi**	**5.92**	**19**	PN	**Pn**	**21 17 32.5**	**+3.4**
BDR	**Baidarnaya**	**6.27**	**21**	*e*P	**Pn**	**21 17 36.2**	**+2.1**
BDR	**Baidarnaya**	**6.27**	**21**	PN	**Pn**	**21 17 36.2**	**+2.1**
SRKR	**Sorokina**	**6.34**	**20**	*e*P	**Pn**	**21 17 37.4**	**+2.4**
SRKR	**Sorokina**	**6.34**	**20**	PN	**Pn**	**21 17 37.4**	**+2.4**
SMKR	**Semkarok**	**6.34**	**22**	*e*P	**Pn**	**21 17 36.7**	**+1.6**
SMKR	**Semkarok**	**6.34**	**22**	PN	**Pn**	**21 17 36.7**	**+1.6**
KBTR	**Krutoberegovo**	**6.39**	**29**	*e*P	**Pn**	**21 17 36.4**	**+0.8**
KBTR				*e*S	**Sn**	**21 18 48.3**	**+1.3**
KBTR	**Krutoberegovo**	**6.39**	**29**	PN	**Pn**	**21 17 36.4**	**+0.8**
KBTR				S	**Sn**	**21 18 48.3**	**+1.3**
BKI	**Bering**	**6.89**	**46**	*e*P	**Pn**	**21 17 41.8**	**-0.7**
BKI	**Bering**	**6.89**	**46**	PN	**Pn**	**21 17 41.8**	**-0.7**
KUR	**Kuril'sk**	**8.37**	**232**	*e*PN	**Pn**	**21 18 06.0**	**+3.2**
KUR				S	**Sn**	**21 19 36.2**	**+0.5**
KUR				pmax	pmax		
	comp=Z,526nm,1.2s						
KUR				pmax	pmax		
	comp=Z,127nm,0.9s						
KUR				pmax	pmax		
	comp=N,93nm,0.5s						
KUR				pmax	pmax		
	comp=E,43nm,0.3s						
KUR				smax	smax		
	comp=N,138nm,0.8s						
KUR				smax	smax		
	comp=E,69nm,0.5s						
PALN	**Palana**	**8.49**	**10**	P	**Pn**	**21 18 06.6**	**+2.4**
PALN	**Palana**	**8.49**	**10**	PN	**Pn**	**21 18 06.6**	**+2.4**
OKH	**Okha**	**9.22**	**293**	*e*PN	**Pn**	**21 18 17.0**	**+2.7**
OKH				*e*S	**Sn**	**21 19 56.7**	**+0.3**
OKH				pmax	pmax		
	comp=Z,100nm,5.6s						
OKH				MLR	MLR		
	comp=Z,400nm,16.0s						
TYV	**Tymovskoe**	**9.23**	**276**	*e*PN	**Pn**	**21 18 17.8**	**+3.3**
TYV				*e*S	**Sn**	**21 19 58.2**	**+1.4**
T

comp=Z,9.2nm,0.3s,baz=72,slow=12,SNR=48
ASAJ LR LR 21 22 57.6
comp=Z,212nm,18.9s,baz=38,slow=35
ASAJ Asahikawa 11.93 242 *e*Pn **Pn 21 18 52.4 +1.1**
ASAJ Asahikawa 11.93 242 PN **Pn 21 18 53.0 +1.7**
ASAJ pmax pmax
comp=Z,9.0nm,0.3s
ASAJ MLR MLR
comp=Z,212nm,18.9s
SEY Seymchan 12.48 350⇓*i*PN **Pn 21 19 00.8 +2.1**
GRNR Gornyy 13.17 278 *e*PN **Pn 21 19 12.2 +3.9**
GRNR pmax pmax
comp=Z,42nm,1.0s
KIWB Kanaga Island 16.03 76 *e*Pn **Pn 21 19 45.7 +0.2**
BILL Bilibino 17.89 11 *e*Pn **P 21 20 07.9 -0.2**
comp=Z,19nm,1.0s
BILL Bilibino 17.89 11 *d i*P **P 21 20 07.8 -0.4**
BILL pmax pmax
comp=Z,12nm,0.9s
BILL MLR MLR
comp=Z,285nm,19.0s
USRK Ussuriysk Ar. 18.23 259 P **P 21 20 11.4 -0.7**
comp=Z,0.7nm,0.3s,baz=56,slow=17,SNR=23
USRK LR LR 21 26 54.8
comp=Z,258nm,21.8s,baz=53,slow=36
ZEA Zeya 18.53 291 *e*P **P 21 20 15.6 +0.2**
ZEA pmax pmax
comp=N,39nm,0.6s
ZEA pmax pmax
comp=E,39nm,0.6s
ZEA pmax pmax
comp=Z,46nm,0.8s
YAK Yakutsk 18.80 317 P **P 21 20 17.7 -0.5**
comp=Z,0.1nm,0.3s,baz=76,slow=1.3,SNR=31
YAK Yakutsk 18.80 317 *e*P **P 21 20 17.8 -0.5**
comp=Z,157nm,0.9s
YAK *e*Sn S 21 23 29.4 -19
YAK Yakutsk 18.80 317 *c i*P **P 21 20 17.6 -0.5**
YAK *e*S **S 21 23 44.7 -3.5**
YAK pmax pmax
comp=Z,73nm,0.8s
YAK pmax pmax
comp=E,21nm,1.1s
YAK pmax pmax
comp=N,11nm,0.9s
YAK pmax pmax
comp=Z,160nm,0.9s
YAK pmax pmax
comp=N,37nm,0.9s
YAK pmax pmax
comp=E,64nm,0.9s
YAK smax smax
comp=N,19nm,1.5s
YAK smax smax
comp=E,13nm,0.9s
YAK MLR MLR
comp=Z,299nm,12.0s
YAK MLR MLR
comp=N,177nm,11.0s
YAK MLR MLR
comp=E,149nm,12.0s
MDJ Mudanjiang 19.53 262 P **P 21 20 21.8 -4.6**
MDJ pP Pn 21 20 34.8 +6.6
MDJ sP pP 21 20 43.0 +3.2
MDJ S **S 21 24 00.0 -3.4**
MDJ sS Sn 21 24 17.8 +11
MDJ pmax pmax
comp=Z,25nm,0.7s
MDJ pmax pmax
comp=Z,120nm,4.2s
MDJ LR LR
comp=N,200nm,12.6s
MDJ LR LR
comp=E,290nm,20.8s
MDJ LR LR
comp=Z,410nm,17.5s
MSHR Mys Shultsa 19.60 255⇑*i*P **P 21 20 27.8 +0.7**
MJB9 Matsu-Tunnel 19.71 231 *e*P **P 21 20 28.8 +0.4**
comp=Z,41nm,0.6s
MAJO Matsushiro 19.71 231 *e*P **P 21 20 28.4 +0.1**
comp=Z,40nm,0.6s
MAJO Matsushiro 19.71 231⇑*i*P **P 21 20 28.3 -0.1**
MAJO pmax pmax
comp=Z,44nm,0.8s
MAT Matsushiro 19.71 231 P **P 21 20 28.0 -0.4**
MAT *e*S **S 21 24 07.2 +0.1**
MJAR Matsushiro Arr 19.71 231 P **P 21 20 28.8 +0.4**
comp=Z,2.2nm,0.3s,baz=22,slow=8.8,SNR=53
MJAR LR LR 21 28 09.1
comp=Z,157nm,21.5s,baz=30,slow=37
CLNS Chul'man 19.91 300 *e*P **P 21 20 33.1 +2.7**
CLNS pmax pmax
comp=Z,25nm,0.9s
CLNS pmax pmax
comp=E,17nm,1.0s
CLNS pmax pmax
comp=N,13nm,0.9s
INU Inuyama 21.24 231 *e*P **P 21 20 44.2 -0.7**
comp=N,63nm,0.7s
CN2 Changchun 22.54 264 *e*P **P 21 20 54.8 -3.9**
CN2 *es*P pP 21 21 16.3 +3.9
CN2 pmax pmax
comp=N,10.0nm,0.7s
CN2 LR LR
comp=N,200nm,14.0s
CN2 LR LR
comp=N,240nm,14.0s
CN2 LR LR
comp=N,220nm,14.0s
KSRS Korea Array 24.71 249 LR LR 21 29 38.6
comp=N,102nm,21.9s,baz=64,slow=33
KS01 Wonju Array Si 24.71 249 *e*P **P 21 21 20.1 +0.8**
TJN Taejon 25.77 248⇓*e*P **P 21 21 29.3 +0.4**
BOD Bodaibo 25.82 303 *e*P **P 21 21 27.9 -1.3**
BOD pmax pmax
comp=Z,6.0nm,0.8s
RDOG Red Dog Mine 25.96 33 *e*P **P 21 21 30.8 +0.4**
comp=Z,17nm,0.7s
JNU Nakatsue 26.15 238 P **P 21 21 33.1 +0.7**
comp=Z,37nm,0.9s,baz=257,slow=0.4,SNR=12
JNU LR LR 21 32 53.8
comp=Z,32nm,20.4s,baz=313,slow=39
JNU Nakatsue 26.15 238 *e*P **P 21 21 33.6 +1.2**
comp=Z,40nm,0.9s
CBIJ Chichi jima 26.28 212 *e*P **P 21 21 35.9 +2.3**
comp=Z,115nm,1.1s
CAST Castle Rocks 29.43 45 *e*P **P 21 22 02.4 +0.9**
comp=Z,6.3nm,1.0s
SKT Skwentna 29.69 48 *e*P **P 21 22 04.3 +0.5**
comp=Z,7.8nm,1.1s
BPAW Bear Paw Mtn. 29.94 44 *e*P **P 21 22 06.3 +0.4**
comp=Z,6.9nm,0.8s
KTH Kantishna Hill 29.96 45 *e*P **P 21 22 06.9 +0.8**
comp=Z,38nm,1.7s
CNPM China Poot 30.00 53 *e*P **P 21 22 06.6 +0.1**
comp=Z,22nm,0.9s
MLY Manley 30.08 42 *e*P **P 21 22 08.0 +0.8**
comp=Z,6.6nm,0.9s
MLY *e*PcP **PcP 21 25 08.2 +1.0**
TRF Thorofare Moun 30.24 45 *e*P **P 21 22 09.3 +0.5**
comp=Z,8.4nm,1.0s
COLD Coldfoot 30.48 38 *e*P **P 21 22 11.0 +0.4**
comp=Z,7.6nm,1.0s
MCK McKinley 30.84 44 *e*P **P 21 22 14.3 +0.4**
comp=Z,13nm,1.0s
MCK McKinley 30.84 44 *e*P **P 21 22 14.3 +0.4**
MCK pmax pmax
comp=Z,13nm,1.0s
TOLK Toolik Lake Re 30.89 35 P **P 21 22 14.2 0.0**
baz=262
MDM Murphy Dome 31.14 42 *e*P **P 21 22 17.0 +0.4**
comp=Z,8.2nm,0.9s
WRH Wood River Hil 31.20 43 *e*P **P 21 22 17.6 +0.5**
comp=Z,15nm,1.0s
SML Sawmill 31.21 48 *e*P **P 21 22 17.3 +0.1**
comp=Z,46nm,1.1s
SML Sawmill 31.21 48 *e*P **P 21 22 17.3 +0.1**
SML pmax pmax
comp=Z,47nm,1.1s
CCB Clear Creek Bu 31.33 43 *e*P **P 21 22 18.1 +0.1**
comp=Z,9.1nm,0.9s
DHY Denali Highway 31.57 46 *e*P **P 21 22 20.3 -0.1**
comp=Z,7.9nm,0.9s
SCM Sheep Creek Mo 31.69 48 *e*P **P 21 22 22.2 +0.8**
comp=Z,25nm,1.2s
IL1 Eielson Array 31.72 42 *e*P **P 21 22 20.9 -0.6**
ILAR Eielson Array 31.72 42 P **P 21 22 21.3 -0.3**
comp=Z,4.9nm,0.7s,baz=259,slow=7.8,SNR=45
ILAR LR LR 21 36 23.4
comp=Z,59nm,20.1s,baz=256,slow=38
ILB Eielson Array 31.72 42 *e*P **P 21 22 21.6 0.0**
H11N2 WAKE ISLAND Hy 31.90 163 T T 21 56 18.1
baz=348,slow=76,SNR=2867
H11N3 WAKE ISLAND Hy 31.92 163 T T 21 56 00.2
baz=348,slow=76,SNR=4733
H11N1 WAKE ISLAND Hy 31.92 163 T T 21 56 19.3
baz=348,slow=76,SNR=3470
ULN Ulaanbaatar 32.34 285 *e*P **P 21 22 26.9 -0.4**
comp=Z,4.6nm,0.7s
ULN Ulaanbaatar 32.34 285⇓*i*P **P 21 22 26.8 -0.6**
ULN pmax pmax
comp=Z,5.0nm,0.8s
FYU Fort Yukon 32.40 39 *e*P **P 21 22 28.3 +0.9**
comp=Z,18nm,0.8s
JOW Kunigami 32.51 234 *e*P **P 21 22 29.4 +0.5**
comp=Z,34nm,1.0s
RIDG Independ'e Rid 32.66 44 *e*P **P 21 22 29.4 -0.5**
comp=Z,16nm,1.0s
SONA1 Songino Array 32.74 285 *e*P **P 21 22 30.6 -0.3**
SONA1 *e*PcP **PcP 21 25 14.7 -0.2**
SONM Songino Array 32.75 285 P **P 21 22 30.3 -0.6**
comp=Z,3.2nm,0.4s,baz=67,slow=8.3,SNR=30
SONM PcP **PcP 21 25 14.7 -0.2**
comp=Z,3.2nm,0.8s,baz=86,slow=2.1,SNR=11
SONM LR LR 21 36 35.2
comp=Z,181nm,21.4s,baz=72,slow=38
TLY Talaya 32.95 293 *e*P P 21 22 26.6 -5.9
comp=Z,11nm,0.9s
TLY Talaya 32.95 293 *e*P P 21 22 26.6 -5.9
TLY pmax pmax
comp=Z,11nm,0.9s
SCRK Sand Creek 33.02 44 *e*P **P 21 22 32.6 -0.5**
comp=Z,14nm,1.2s
H11S1 WAKE ISLAND Hy 33.06 163 T T 21 57 37.6
baz=348,slow=76
H11S3 WAKE ISLAND Hy 33.07 163 T T 21 57 33.5
baz=348,slow=76,SNR=9838
H11S2 WAKE ISLAND Hy 33.08 163 T T 21 57 39.0
baz=348,slow=76,SNR=5147
BMRM Bremner River 33.09 49 *e*P **P 21 22 34.5 +0.8**
comp=Z,23nm,1.1s
ZAK Zakamensk 33.63 291 *e*P **P 21 22 38.3 -0.2**
ZAK *e* 21 25 16.6
ZAK pmax pmax
comp=Z,5.0nm,1.1s
NJ2 Nanjing 33.83 251 *e*P **P 21 22 40.3 0.0**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
EGAK Eagle 34.17 42 *e*P **P 21 22 42.3 -0.6**
comp=Z,13nm,0.6s
MOY Mondy 34.50 294 *e*P **P 21 22 46.2 +0.2**
MOY pmax pmax
comp=Z,10.0nm,1.2s
DAWY Dawson 35.02 43 *e*P **P 21 22 50.8 +0.5**
comp=Z,3.7nm,0.7s
INK Inuvik 36.79 35 P **P 21 23 06.1 +0.8**
comp=Z,8.6nm,0.8s,baz=286,slow=8.1,SNR=15
KNGR Kungurtug, Tuv 36.93 294⇑*i*P **P 21 23 07.6 +0.7**
WHN Wuhan 37.62 254⇑P **P 21 23 12.3 -0.5**
GUMO Guam 38.42 200 LR LR 21 36 19.6
comp=Z,44nm,20.7s,baz=36,slow=32
XAN Xi'an 38.64 263 P **P 21 23 20.0 -1.4**
XAN pmax pmax
comp=Z,3.0nm,0.9s
TPUB Ta-pu 39.42 240 *e*P **P 21 23 28.6 +0.7**
comp=Z,17nm,0.7s
LZH Lanzhou 40.56 270⇑P **P 21 23 38.0 +0.6**
LZH pP pP 21 23 53.3 0.0
LZH sP sP 21 23 59.3 -1.3
LZH *e*PP **PP 21 25 13.5 +1.8**
LZH *e*S **S 21 29 39.3 -2.9**
LZH pmax pmax
comp=Z,29nm,1.2s
LZH pmax pmax
comp=Z,110nm,6.0s
LZH LR LR
comp=Z,290nm,16.3s
LZH LR LR
comp=Z,280nm,17.4s
LZH LR LR
comp=Z,360nm,17.9s
ENH Enshi 40.81 258 *e*P **P 21 23 38.7 -0.7**
comp=Z,13nm,0.7s
DLBC Dease Lake 40.88 50 P **P 21 23 41.5 +1.8**
comp=Z,4.9nm,0.8s,baz=280,slow=7.3,SNR=6.9
DLBC Dease Lake 40.88 50 *e*P **P 21 23 41.0 +1.3**
comp=Z,11nm,1.1s
GTA Gaotai 41.12 277 *e*P **P 21 23 42.3 +0.3**
GTA pP pP 21 23 57.8 -0.1
GTA sP sP 21 24 06.0 +0.8
GTA PcP **PcP 21 25 40.5 +0.2**
GTA S **S 21 29 52.0 +1.6**
GTA sS sS 21 30 19.0 +1.7
GTA SS **SS 21 32 53.3 -1.4**
GTA pmax pmax
comp=Z,3.0nm,0.7s
GTA pmax pmax
comp=Z,38nm,5.0s
GTA LR LR
comp=Z,74nm,18.2s
GTA LR LR
comp=Z,120nm,18.2s
GTA LR LR
comp=Z,180nm,19.4s
ZAA0 Zalesovo Array 42.57 304 *e*P **P 21 23 52.3 -1.2**
comp=Z,3.7nm,0.8s
ZAA0 *e*PcP **PcP 21 25 44.8 +0.1**
ZALV Zalesovo Beam 42.57 304 P **P 21 23 52.1 -1.3**
comp=Z,2.1nm,0.3s,baz=59,slow=6.8,SNR=16
ZALV PcP **PcP 21 25 44.5 -0.1**
comp=Z,2.2nm,0.4s,baz=80,slow=1.7,SNR=8.0
ZALV LR LR 21 42 12.5
comp=Z,55nm,20.3s,baz=68,slow=37
ZALV Zalesovo Beam 42.57 304 *e*P **P 21 23 51.8 -1.7**
ZALV *e*PcP **PcP 21 25 44.4 -0.3**
NVS Novosibirsk 43.00 305 *e*P **P 21 23 55.6 -1.3**
NVS *e* 21 24 18.4
NVS pmax pmax
comp=N,5.0nm,0.8s
NVS pmax pmax
comp=Z,23nm,0.8s
NVS pmax pmax
comp=E,16nm,0.9s
DGZ Jazzator, Alta 43.13 297⇑*i*P **P 21 23 58.0 -0.2**
GYA Guiyang 45.26 257⇑*i*P **P 21 24 15.3 -0.2**
GYA pP pP 21 24 33.0 +1.4
GYA PP **PP 21 26 04.0 +1.8**
GYA S **S 21 30 51.3 +0.1**
GYA sS sS 21 31 19.0 +0.6
GYA SS **ScS 21 34 06.0 -0.3**
GYA pmax pmax
comp=E,20nm,0.8s
GYA LR LR
comp=E,460nm,16.9s
GYA LR LR
comp=E,480nm,17.0s
GYA LR LR
comp=E,470nm,17.2s
YKW3 Yellowknife Ar 46.04 40 *e*P **P 21 24 21.6 +0.6**
comp=E,12nm,0.7s
YKW3 *e*pP **pP 21 24 36.0 -1.2**
WMQ Urumqi 46.08 290 P **P 21 24 22.5 +0.8**
WMQ pP pP 21 24 37.8 0.0
WMQ sP sP 21 24 49.0 +3.9
WMQ pmax pmax
comp=E,31nm,0.7s
WMQ pmax pmax
comp=E,220nm,4.9s
WMQ LR LR
comp=E,240nm,23.5s
WMQ LR LR
comp=E,250nm,27.5s
WMQ LR LR
comp=E,250nm,24.3s
YKA Yellowknife Ar 46.08 40 P **P 21 24 22.0 +0.7**
comp=E,9.0nm,0.6s,baz=296,slow=7.4,SNR=26
YKA PcP **PcP 21 25 57.3 +0.8**
comp=E,2.9nm,0.8s,baz=306,slow=3.5,SNR=6.3
RES Resolute Bay 46.13 21 *e*P **P 21 24 21.5 -0.1**
comp=E,8.3nm,1.0s
RES Resolute Bay 46.13 21 *e*P **P 21 24 21.5 -0.1**
RES pmax pmax
comp=Z,8.0nm,1.0s
KURK Kurchatov 47.47 302 P **P 21 24 31.8 -0.5**
KURK Kurchatov 47.47 302 *c i*P **P 21 24 31.1 -1.2**
KURK pmax pmax
comp=Z,144nm,1.0s
KURBB Kurchatov Arra 47.57 302 P **P 21 24 31.8 -1.3**
comp=Z,5.8nm,0.5s,baz=59,slow=7.3,SNR=67
MK31 Makanchi Array 47.58 296 *e*P **P 21 24 32.0 -1.3**
MK31 Makanchi Array 47.58 296 *e*P **P 21 24 32.0 -1.3**
MKAR Makanchi Array 47.58 296 P **P 21 24 31.9 -1.3**
comp=Z,5.1nm,0.7s,baz=40,slow=5.6,SNR=64
MKAR LR LR 21 45 28.4
comp=Z,153nm,21.2s,baz=46,slow=37
MKAR Makanchi Array 47.58 296 *e*P **P 21 24 32.0 -1.3**
comp=Z,47nm,0.6s
MKAR Makanchi Array 47.58 296 *e*P **P 21 24 32.0 -1.3**
MKAR pmax pmax
comp=Z,47nm,0.6s
MK01 Makanchi Array 47.58 296 *e*P **P 21 24 31.8 -1.6**
MAKZ Makanchi 47.75 296 *e*P **P 21 24 33.5 -1.1**
comp=Z,5.6nm,0.8s
MAKZ Makanchi 47.75 296 *e*P **P 21 24 33.5 -1.1**
MAKZ pmax pmax
comp=Z,6.0nm,0.8s
KMI Kunming 48.66 259 P **P 21 24 42.3 +0.1**
KMI pmax pmax
comp=Z,3.0nm,0.5s
LLLB Lillooet 48.74 57 *e*P **P 21 24 43.7 +1.5**
comp=Z,8.9nm,0.8s
KBS Kingsbay 48.93 352 *e*P **P 21 24 43.3 +0.1**
comp=Z,11nm,0.6s
KBS Kingsbay 48.93 352 *e*P **P 21 24 43.3 +0.1**
KBS pmax pmax
comp=Z,11nm,0.6s
SPA0 Spitsbergen Ar 49.13 350 *e*P **P 21 24 44.3 -0.5**
SPITS Spitsbergen Ar 49.13 350 P **P 21 24 43.6 -1.2**
comp=Z,9.4nm,0.5s,baz=27,slow=9.7,SNR=59
SPITS LR LR 21 46 33.7
comp=Z,51nm,19.4s,baz=60,slow=37
A04D Lummi Island 49.35 59 P **P 21 24 47.8 +1.0**
baz=305
NLWA Neilton Lookou 49.47 61 *e*P **P 21 24 49.8 +2.0**
comp=Z,13nm,0.8s
B05A Bryant 49.94 59 P **P 21 24 52.4 +1.0**
baz=305,SNR=5.2
E03A Lebam 50.12 62 *e*P **P 21 24 54.6 +1.8**
comp=Z,18nm,0.9s
BVAR Borovoye Array 50.45 309 P **P 21 24 53.5 -1.7**
comp=Z,6.8nm,0.5s,baz=55,slow=7.0,SNR=52
BVAR LR LR 21 47 32.2
comp=Z,91nm,21.2s,baz=60,slow=38
BRVK Borovoye 50.48 309 *e*P **P 21 24 54.0 -1.4**
comp=Z,8.0nm,0.5s
BRVK Borovoye 50.48 309 *c i*P **P 21 24 53.6 -1.8**
BRVK *i* *PP **pP 21 25 09.8 -1.9**
BRVK pmax pmax
comp=Z,17nm,1.0s
F03A Seaside 50.49 63 *e*P **P 21 24 57.2 +1.7**
comp=Z,30nm,1.0s
PDGK Podgornoye 51.20 294 P **P 21 25 00.7 -0.4**
PDGK pmax pmax
comp=Z,8.0nm,1.0s
B08A Colville Reser 51.39 58 *e*P **P 21 25 03.2 +0.9**
B08A *e*pP **pP 21 25 17.9 -0.7**
I03D Drain, OR 51.95 65 P **P 21 25 08.2 +1.8**
baz=308
H04A Detroit Lake 52.01 63 *e*P **P 21 25 08.2 +1.3**
H04A *e*pP **pP 21 25 23.5 +0.1**
G05D Wamic, OR 52.16 62 P **P 21 25 09.6 +1.6**
baz=308
OTUK Ortayu 52.24 303 P **P 21 25 07.4 -1.2**
OTUK pmax pmax
comp=Z,9.0nm,0.7s
I04A Tendick Farm, 52.42 64 P **P 21 25 11.5 +1.4**
baz=308
HAWA Hanford 52.46 60 *e*P **P 21 25 11.5 +1.3**
comp=Z,12nm,1.0s
F07A Phinny Hill Vi 52.54 61 *e*P **P 21 25 12.6 +1.8**
comp=Z,21nm,0.6s
NEW Newport 52.63 57 P **P 21 25 12.0 +0.5**
baz=308
I05D Terrebonne, OR 52.70 63 P **P 21 25 13.4 +1.3**
baz=308
DAG Danmarks Havn 52.71 359⇑*i*P **P 21 25 10.8 -0.8**
comp=Z,24nm,0.9s
DAG Danmarks Havn 52.71 359⇑*i*P **P 21 25 10.8 -0.8**
DAG pmax pmax
comp=Z,24nm,0.9s
SVE Sverdlovsk 52.76 317⇓*i*P **P 21 25 10.7 -1.6**
SVE pmax pmax
comp=Z,16nm,0.9s
LSA Lhasa 52.79 273 P **P 21 25 14.3 +0.9**
HUMO Hull Mountain 52.84 66 *e*P **P 21 25 15.0 +1.8**
comp=Z,16nm,1.4s
J04D Umpqua Nationa 52.94 65 P **P 21 25 15.8 +1.7**
baz=309
E09A Wood Farm, Sta 53.14 59 *e*P **P 21 25 16.4 +1.1**
comp=Z,14nm,0.9s
PINE Pine Mountain 53.26 63 *e*P **P 21 25 18.6 +2.1**
comp=Z,7.2nm,0.8s
J05D Fort Rock, OR 53.41 64 P **P 21 25 19.4 +2.0**
baz=309
KHMM Horse Mountain 53.47 68 *e*P **P 21 25 19.9 +1.9**
comp=Z,29nm,1.1s
K04D Chiloquin, OR 53.52 65 P **P 21 25 19.8 +1.5**
baz=309
YBH Yreka Blue Hor 53.53 66 P **P 21 25 20.6 +2.3**
comp=Z,5.4nm,0.7s,baz=314,slow=3.4,SNR=16
YBH LR LR 21 44 22.5
comp=Z,22nm,20.0s,baz=340,slow=32
YBH Yreka Blue Hor 53.53 66 *e*P **P 21 25 20.9 +2.6**
YBH *e*pP **pP 21 25 35.5 +0.8**
M02C Callahan 53.66 67 P **P 21 25 21.5 +2.2**
baz=310
TKM2 Tokmak 2 53.70 296 P **P 21 25 18.3 -1.4**
SNR=14
WALA Waterton Lakes 53.83 55 *e*P **P 21 25 21.3 +0.9**
comp=Z,20nm,1.1s
ARU Arti 53.91 317 *e*P **P 21 25 18.6 -2.1**
comp=Z,22nm,0.5s
ARU Arti 53.91 317 *c i*P **P 21 25 18.5 -2.1**
ARU *PP **pP 21 25 33.8 -3.3**
ARU 21 26 22.7
ARU S **S 21 32 48.8 -2.1**
ARU 21 34 58.4
ARU SS **SKiKP 21 36 25.3 -1.7**
ARU pmax pmax
comp=Z,22nm,0.8s
K05A Summer Lake 53.96 64 *e*P **P 21 25 22.0 +0.5**
K05A *e*pP **pP 21 25 38.5 +0.6**
F10A Beach Ranch, E 53.98 59 *e*P **P 21 25 22.7 +1.2**
comp=Z,3.4nm,0.8s
M04C Macdoel 54.01 66 P **P 21 25 23.7 +1.9**
baz=310
SKNT Sakolnakorn 54.01 251 P **P 21 25 21.8 -0.1**
comp=Z,15nm,1.1s
N02D Trinity Center 54.01 67 P **P 21 25 23.9 +2.1**
baz=310
USP Ospenovka 54.11 297 P **P 21 25 21.6 -0.9**
SNR=8.1
CHMS Chumysh 54.14 296 P **P 21 25 21.8 -0.8**
SNR=8.4
KBK Karagaybulak 54.24 296 P **P 21 25 22.6 -0.9**
SNR=5.3
WDC Whiskeytown Da 54.36 67 *e*P **P 21 25 26.4 +2.2**
WDC *e*pP **pP 21 25 41.1 +0.4**
WDC Whiskeytown Da 54.36 67 *e*P **P 21 25 26.4 +2.2**
WDC *e**PP **pP 21 25 41.1 +0.4**
UBPT Khong Chiam 54.44 249 P **P 21 25 28.1 +3.1**
comp=Z,20nm,0.8s,comp=Z,1μm
BMO Blue Mountains 54.64 60 *e*P **P 21 25 27.6 +1.3**
comp=Z,5.5nm,0.8s
MOD Modoc Plateau 54.82 65 *e*P **P 21 25 29.7 +2.0**
comp=Z,25nm,0.8s
EKS2 Erkin-Say 54.90 296 P **P 21 25 27.7 -0.6**
SNR=15
J08A Circle Bar Ran 54.93 62 *e*P **P 21 25 30.5 +2.0**
comp=Z,18nm,1.5s
ARCES ARCESS Array B 54.94 341 P **P 21 25 26.9 -1.1**
comp=Z,1.2nm,0.5s,baz=39,slow=8.0,SNR=6.3
ARCES LR LR 21 52 22.4
comp=Z,100nm,20.9s,baz=43,slow=40
O03D Paynes Creek 54.98 67 P **P 21 25 30.0 +1.2**
baz=310
MSO Missoula 55.21 57 P **P 21 25 31.3 +0.8**
baz=310,SNR=5.7
MSO Missoula 55.21 57 *e*P **P 21 25 31.4 +0.9**

MSO epP **pP** **21 25 46.2 -0.7**
WVOR Wild Horse Val 55.43 63 eP **P** **21 25 34.0 +1.9**
comp=Z,20nm,0.8s
WVOR Wild Horse Val 55.43 63 eP **P** **21 25 34.0 +1.9**
WVOR pmax pmax
comp=Z,20nm,0.8s
KSH Kashi 55.65 292 P **P** **21 25 37.3 +3.6**
KSH pP pP 21 25 55.0 +4.7
KSH S **S** **21 33 17.0 +1.9**
KSH sS sS 21 33 45.3 +2.2
KSH SS **SS** **21 37 08.0 +7.5**
KSH pmax pmax
comp=Z,150nm,4.8s
KSH LR LR
comp=Z,280nm,6.5s
KSH LR LR
comp=Z,280nm,5.4s
KSH LR LR
comp=Z,320nm,6.6s
CHTO Chiang Mai 55.68 257 P **P** **21 25 34.8 +0.8**
comp=Z,294nm,0.9s,comp=Z,3µm
CHTO Chiang Mai 55.68 257 eP **P** **21 25 35.1 +1.1**
comp=Z,45nm,0.7s
CHTO Chiang Mai 55.68 257 eP **P** **21 25 35.1 +1.1**
CHTO pmax pmax
comp=Z,45nm,0.7s
MNAS Manas 55.74 297 P **P** **21 25 33.6 -0.7**
MNAS pmax pmax
comp=Z,4.0nm,0.6s
FFC Flin Flon 55.92 43 eP **P** **21 25 36.1 +0.8**
comp=Z,12nm,0.8s
FFC epP **pP** **21 25 51.4 -0.4**
FFC Flin Flon 55.92 43 eP **P** **21 25 36.1 +0.8**
FFC e*PP **pP** **21 25 51.4 -0.4**
FFC pmax pmax
comp=Z,12nm,0.8s
CM31 Chiang Mai Arr 55.95 257 eP **P** **21 25 37.3 +1.3**
CMAR Chiang Mai Arr 55.95 257 P **P** **21 25 37.1 +1.2**
comp=Z,27nm,0.7s,baz=29,slow=7.0,SNR=141
CMAR PcP **PcP** **21 26 34.5 +0.6**
comp=Z,3.3nm,0.6s,baz=15,slow=2.6,SNR=6.7
CM01 Chiang Mai Arr 55.97 257 eP **P** **21 25 36.9 +0.9**
PHIT Phitsanulok 56.01 255 P **P** **21 25 38.2 +1.9**
comp=Z,34nm,0.9s
BEKR Beckworth 56.09 67 eP **P** **21 25 38.8 +1.8**
BEKR epP **pP** **21 25 54.0 +0.5**
PBKT Sadao Pong 56.14 254 P **P** **21 25 37.7 +0.4**
comp=Z,22nm,0.8s,comp=Z,682nm
AFDM Forest Hills D 56.34 68 eP **P** **21 25 40.0 +1.5**
AFDM epP **pP** **21 25 54.9 -0.2**
MFID Camas Ranch 56.37 61 eP **P** **21 25 38.0 -0.8**
comp=Z,11nm,1.3s
FCC Fort Churchill 56.40 36 eP **P** **21 25 39.0 +0.4**
comp=Z,18nm,0.6s
FCC Fort Churchill 56.40 36 eP **P** **21 25 39.0 +0.4**
FCC pmax pmax
comp=Z,18nm,0.6s
KK31 Karatay Array 56.46 299 eP **P** **21 25 38.1 -1.2**
KK31 Karatay Array 56.46 299 eP **P** **21 25 38.1 -1.2**
KKAR Karatay Array 56.46 299 eP **P** **21 25 38.1 -1.2**
KKAR Karatay Array 56.46 299 eP **P** **21 25 38.1 -1.2**
SUMG Summit 56.47 6 *i* P **P** **21 25 39.3 -0.1**
comp=Z,43nm,1.0s
SUMG Summit 56.47 6 eP **P** **21 25 39.5 +0.1**
comp=Z,45nm,1.0s
SUMG Summit 56.47 6 *i* P **P** **21 25 39.3 -0.1**
SUMG pmax pmax
comp=Z,43nm,1.0s
EGMT Eagleton 56.62 53 P **P** **21 25 41.0 +0.5**
baz=311
EGMT Eagleton 56.62 53 eP **P** **21 25 41.2 +0.7**
comp=Z,2.3nm,0.6s
EGMT *e* 21 25 56.4
LRM Limekiln Ridge 56.65 57 eP **P** **21 25 42.3 +1.4**
LRM epP **pP** **21 25 58.0 +0.6**
PAHR Pah Rah Range 56.77 66 eP **P** **21 25 43.5 +1.8**
PAHR epP **pP** **21 25 58.3 0.0**
PNTR Pine Nut 57.05 67 eP **P** **21 25 45.5 +1.7**
comp=Z,17nm,0.8s
HLID Hailey 57.06 60 P **P** **21 25 45.2 +1.4**
baz=311
HLID Hailey 57.06 60 eP **P** **21 25 45.7 +1.9**
comp=Z,4.7nm,0.8s
MCMT McKenzie Canyo 57.08 58 eP **P** **21 25 44.8 +0.8**
MCMT epP **pP** **21 25 59.8 -0.8**
BOZ Bozeman (W) 57.23 57 P **P** **21 25 45.9 +1.0**
baz=311,SNR=6.3
BOZ Bozeman (W) 57.23 57 eP **P** **21 25 46.5 +1.6**
comp=Z,12nm,0.7s
BOZ Bozeman (W) 57.23 57 eP **P** **21 25 46.5 +1.6**
BOZ pmax pmax
comp=Z,13nm,0.7s
CMB Columbia Colle 57.28 68 eP **P** **21 25 46.9 +1.6**
CMB epP **pP** **21 26 02.1 +0.3**
CMB Columbia Colle 57.28 68 eP **P** **21 25 46.9 +1.6**
CMB e*PP **pP** **21 26 02.1 +0.3**
YERR Yerington 57.33 67 eP **P** **21 25 47.7 +2.0**
YERR epP **pP** **21 26 02.6 +0.2**
JIRN Jiri 57.34 275 eP **P** **21 25 46.5 +0.3**
comp=Z,12nm,0.2s
SRAK Srakaew 57.47 251 P **P** **21 25 45.6 -1.1**
comp=Z,59nm,0.8s,comp=Z,657nm
WAKR Walker 57.53 67 eP **P** **21 25 48.9 +1.7**
WAKR epP **pP** **21 26 04.3 +0.5**
BMN Battle Mountai 57.54 64 eP **P** **21 25 48.8 +1.7**
comp=Z,11nm,0.6s
BMN Battle Mountai 57.54 64 eP **P** **21 25 48.8 +1.7**
BMN pmax pmax
comp=Z,11nm,0.6s
RAMN Ramite 57.58 274 eP **P** **21 25 47.9 +0.2**
comp=Z,42nm,0.6s
UMPA Umpang Tak 57.71 255 P **P** **21 25 51.6 +3.2**
comp=Z,15nm,0.7s,comp=Z,177nm
UTHA Uthaitani 57.85 254 P **P** **21 25 51.4 +2.0**
comp=Z,8.1nm,0.9s
PKIN Phulchoki 57.90 275 eP **P** **21 25 50.1 +0.1**
comp=Z,15nm,0.5s
ABKAR Akbulak array 57.94 310 eP **P** **21 25 47.7 -1.9**
KVN Kaiserville 57.95 66 eP **P** **21 25 51.8 +1.7**
comp=Z,16nm,1.0s
KVN Kaiserville 57.95 66 eP **P** **21 25 51.8 +1.7**
KVN pmax pmax
comp=Z,16nm,1.0s
RYN Ryan 57.98 67 eP **P** **21 25 52.2 +1.9**
comp=Z,16nm,1.0s
DMN Daman 58.06 276 eP **P** **21 25 51.2 +0.1**
comp=Z,15nm,0.4s
KLMR Klimovskoe 58.06 329 eP P 21 25 45.3 -5.0
KLMR pmax pmax
comp=Z,5.0nm,0.8s
KLMR Klimovskoe 58.06 329 eP P 21 25 45.4 -4.8
KLMR AMP 21 25 49.6
comp=Z,5.0nm,0.8s
AKTO Aktyubinsk 58.07 312 P **P** **21 25 48.9 -1.7**
comp=Z,1.7nm,0.4s,baz=74,slow=10,SNR=4.7
AKTO PcP **PcP** **21 26 41.0 -0.7**
comp=Z,3.3nm,0.5s,baz=79,slow=7.3,SNR=4.8
AKTO LR LR 21 52 42.1
comp=Z,60nm,19.2s,baz=48,slow=38
GCMT Greycliff 58.13 55 eP **P** **21 25 53.2 +2.0**
GCMT epP **pP** **21 26 08.4 +0.6**
NV01 Mina Array Sit 58.24 67 eP **P** **21 25 53.8 +1.6**
NVAR Mina Array Bea 58.24 67 P **P** **21 25 53.9 +1.7**
comp=Z,6.7nm,0.6s,baz=296,slow=6.7,SNR=18
DANN Dangsing 58.39 277 eP **P** **21 25 54.1 +0.7**
comp=Z,23nm,0.4s
ILULI Ilulissat 58.53 11 *i* P **P** **21 25 52.5 -0.9**
comp=Z,16nm,0.8s
ILULI Ilulissat 58.53 11 *i* P **P** **21 25 52.5 -0.9**
ILULI pmax pmax
comp=Z,16nm,0.8s
IMW Indian Meadow 58.73 58 eP **P** **21 25 57.7 +2.1**
IMW epP **pP** **21 26 13.1 +0.9**
FLWY Flagg Ranch 58.73 57 eP **P** **21 25 57.4 +1.9**
comp=Z,12nm,1.0s
RLMT Red Lodge 58.79 56 P **P** **21 25 57.5 +1.6**
baz=312,SNR=7.5
RLMT Red Lodge 58.79 56 eP **P** **21 25 57.8 +1.9**
RLMT epP **pP** **21 26 12.8 +0.2**
FXWY Fox Creek 58.85 58 eP **P** **21 25 58.4 +2.1**
comp=Z,6.9nm,0.9s
KOLN Koldanda 58.90 277 eP **P** **21 25 56.7 -0.1**
comp=Z,15nm,0.3s
MOOW Moose Ponds 58.93 58 eP **P** **21 25 58.5 +1.6**
MOOW epP **pP** **21 26 13.9 +0.4**

TPAW Teton Pass 58.99 58 eP **P** **21 25 59.5 +2.1**
TPAW epP **pP** **21 26 13.8 -0.2**
PYUN Piuthan 59.05 278 eP **P** **21 25 58.1 +0.2**
comp=Z,81nm,0.7s
LOHW Long Hollow 59.10 58 eP **P** **21 25 59.5 +1.4**
comp=Z,15nm,1.0s
REDW Red Top Meadow 59.13 58 eP **P** **21 26 00.7 +2.4**
REDW epP **pP** **21 26 16.0 +1.0**
LAO LASA Array 59.30 53 P **P** **21 26 00.6 +1.4**
baz=313
LAO LASA Array 59.30 53 eP **P** **21 26 00.8 +1.6**
LAO epP **pP** **21 26 15.8 -0.1**
AHID Auburn Hatcher 59.40 59 eP **P** **21 26 01.8 +1.6**
AHID epP **pP** **21 26 16.9 0.0**
CWC Cottonwood Cre 59.72 68 P **P** **21 26 03.7 +1.4**
baz=313
PKM Mcpherson Peak 59.74 71 P **P** **21 26 05.1 +2.5**
baz=314
PHET Kaeng Krachan 59.79 252 P **P** **21 26 04.8 +2.0**
comp=Z,24nm,0.7s,comp=Z,251nm
R11A Troy Canyon, C 59.87 65 P **P** **21 26 04.7 +1.2**
baz=313
HWUT Hardware Ranch 59.93 60 eP **P** **21 26 05.5 +1.8**
comp=Z,9.4nm,0.8s
DAC Darwin (Calif) 60.11 68 eP **P** **21 26 06.3 +1.2**
DAC epP **pP** **21 26 21.6 -0.2**
DAC Darwin (Calif) 60.11 68 eP **P** **21 26 06.3 +1.2**
DAC e*PP **pP** **21 26 21.6 -0.2**
DUG Dugway, Tooele 60.20 62 P **P** **21 26 07.1 +1.5**
baz=313
DUG Dugway, Tooele 60.20 62 eP **P** **21 26 06.5 +0.9**
comp=Z,11nm,0.9s
DUG Dugway, Tooele 60.20 62 eP **P** **21 26 06.5 +0.9**
DUG pmax pmax
comp=Z,11nm,0.9s
BW06 Boulder Array 60.23 58 P **P** **21 26 07.0 +1.2**
baz=313,SNR=13
BW06 Boulder Array 60.23 58 eP **P** **21 26 07.1 +1.2**
comp=Z,12nm,0.8s
PD31 Pinedale Array 60.23 58 eP **P** **21 26 07.2 +1.3**
PDAR Pinedale Array 60.23 58 P **P** **21 26 07.2 +1.3**
comp=Z,9.3nm,0.7s,baz=306,slow=2.5,SNR=91
PDAR Pinedale Array 60.23 58 eP **P** **21 26 06.9 +1.1**
MPMC Manual Prospec 60.32 68 P **P** **21 26 07.7 +1.2**
baz=314
FURC Furnace Creek, 60.41 68 P **P** **21 26 08.1 +1.3**
baz=314
TPNV Topopah Spring 60.44 67 P **P** **21 26 08.4 +1.1**
baz=314
TPNV Topopah Spring 60.44 67 eP **P** **21 26 09.4 +2.2**
comp=Z,15nm,1.0s
TPNV Topopah Spring 60.44 67 eP **P** **21 26 09.5 +2.2**
TPNV pmax pmax
comp=Z,15nm,1.0s
PMG Port Moresby 60.56 191 LR LR 21 49 38.3
comp=Z,31nm,20.9s,baz=51,slow=33
SFJD Kangerlussuaq 60.68 12 LR LR 21 56 14.2
comp=Z,43nm,18.6s,baz=338,slow=40
EDW2 Edwards Air Fo 60.83 70 P **P** **21 26 10.9 +1.1**
baz=314
MPU Maple Canyon 60.98 61 eP **P** **21 26 13.0 +2.0**
comp=Z,10nm,0.8s
MPU epP **pP** **21 26 27.9 +0.2**
NIL Nilore 61.21 289 eP **P** **21 26 11.9 -0.5**
comp=Z,49nm,0.8s
GSC Goldstone, Bar 61.25 69 P **P** **21 26 13.6 +0.9**
baz=314
SHPR Sheep Range 61.38 66 eP **P** **21 26 15.2 +1.5**
SHPR epP **pP** **21 26 30.3 -0.2**
BFSC Mount Baldy Ra 61.48 70 P **P** **21 26 15.3 +1.0**
baz=314
FIA1 FINESS Array S 61.53 336 eP **P** **21 26 14.4 +0.3**
FINES FINESS Array B 61.53 336 P **P** **21 26 11.7 -2.3**
comp=Z,2.7nm,0.4s,baz=39,slow=6.5,SNR=18
FINES LR LR 21 56 02.3
comp=Z,87nm,21.1s,baz=31,slow=39
MSU Marysvale 61.71 63 eP **P** **21 26 17.9 +2.0**
MSU epP **pP** **21 26 33.1 +0.4**
MSU Marysvale 61.71 63 eP **P** **21 26 17.9 +2.0**
MSU e*PP **pP** **21 26 33.1 +0.4**
TMUT Trail Mountain 61.71 62 eP **P** **21 26 17.9 +1.9**
comp=Z,15nm,0.8s
ULM Lac du Bonnet 61.72 44 P **P** **21 26 16.3 +0.8**
comp=Z,2.3nm,0.6s,baz=295,slow=5.9,SNR=3.5
ULM Lac du Bonnet 61.72 44 eP **P** **21 26 15.7 +0.2**
comp=Z,7.7nm,1.0s
SZCU Shurtz Canyon 61.83 64 eP **P** **21 26 18.1 +1.4**
comp=Z,8.8nm,0.9s
P17A Butcher Ranch, 61.85 61 eP **P** **21 26 18.3 +1.5**
comp=Z,34nm,1.8s
HEC Hector,Ludlow 61.85 69 P **P** **21 26 17.8 +1.1**
baz=314
MTPU Mount Pierson 62.03 63 eP **P** **21 26 19.7 +1.5**
MTPU epP **pP** **21 26 35.5 +0.4**
LCMT Little Creek M 62.14 65 eP **P** **21 26 20.8 +2.0**
comp=Z,15nm,0.9s
RSSD Black Hills 62.19 54 P **P** **21 26 20.0 +1.0**
baz=315
RSSD Black Hills 62.19 54 eP **P** **21 26 19.9 +0.9**
comp=Z,15nm,0.6s
RSSD Black Hills 62.19 54 eP **P** **21 26 19.9 +0.9**
RSSD pmax pmax
comp=Z,15nm,0.6s
SRU San Rafael Swe 62.22 61 eP **P** **21 26 21.0 +1.7**
comp=Z,23nm,0.8s
SRU San Rafael Swe 62.22 61 eP **P** **21 26 21.0 +1.7**
SRU pmax pmax
comp=Z,23nm,0.8s
GMRC Granite Mounta 62.28 68 P **P** **21 26 20.9 +1.2**
baz=315
KNB Kanab 62.38 65 eP **P** **21 26 22.7 +2.3**
KNB epP **pP** **21 26 37.7 +0.5**
KNB Kanab 62.38 65 eP **P** **21 26 22.7 +2.3**
KNB e*PP **pP** **21 26 37.7 +0.5**
BELC Belle Mtn. Jos 62.63 69 P **P** **21 26 22.8 +0.7**
baz=315
O20A White River Ci 62.77 59 P **P** **21 26 23.8 +0.8**
baz=315,SNR=5.4
O20A White River Ci 62.77 59 eP **P** **21 26 24.4 +1.4**
O20A epP **pP** **21 26 39.3 -0.5**
IRM Iron Mountain 63.02 68 P **P** **21 26 25.6 +1.1**
baz=315,SNR=5.9
KSM Kuching 63.05 235 eP **P** **21 26 26.0 +1.2**
comp=Z,13nm,1.1s
KBL Kabul 63.09 292 eP **P** **21 26 23.2 -2.0**
comp=Z,6.5nm,0.8s
KBL Kabul 63.09 292 eP **P** **21 26 23.2 -2.0**
KBL pmax pmax
comp=Z,7.0nm,0.8s
W13A Hualapai Mount 63.10 67 eP **P** **21 26 26.5 +1.2**
AGMN Agassiz Nation 63.14 46 eP **P** **21 26 25.7 +0.7**
comp=Z,9.3nm,1.1s
BC3 Big Chuckawall 63.19 69 P **P** **21 26 26.1 +0.4**
baz=315
PV09 Paradox Valley 63.43 61 eP **P** **21 26 29.0 +1.5**
PV09 epP **pP** **21 26 44.0 -0.3**
N23A Red Feather La 63.47 57 P **P** **21 26 29.2 +1.5**
baz=316,SNR=9.0
N23A Red Feather La 63.47 57 eP **P** **21 26 29.2 +1.5**
comp=Z,11nm,0.7s
E31A Nome 63.47 48 P **P** **21 26 27.7 +0.4**
baz=317
OBN Obninsk 63.50 326 *c* *i* P **P** **21 26 26.7 -0.5**
OBN *e*S **S** **21 34 54.8 -0.5**
OBN *e*SS **SS** **21 38 59.9 -2.4**
OBN pmax pmax
comp=Z,8.0nm,0.5s
PDMCI Parker Dam,Lak 63.51 68 P **P** **21 26 28.3 +0.6**
baz=315
PV10 Paradox Valley 63.56 61 eP **P** **21 26 29.8 +1.5**
comp=Z,24nm,0.7s
PV04 Paradox Valley 63.63 61 eP **P** **21 26 30.3 +1.6**
PV04 epP **pP** **21 26 45.8 +0.3**
Y12C Blythe 63.68 68 epP pP 21 26 45.5 -0.1
KRAB Krabi 63.74 249 P **P** **21 26 32.0 +2.6**
comp=Z,273nm,0.6s,comp=Z,13µm
KRAB P **pP** **21 26 43.0 -3.3**
comp=Z,273nm,0.6s,comp=Z,13µm
PV07 Paradox Valley 63.74 61 eP **P** **21 26 30.9 +1.5**
comp=Z,10nm,1.0s
PV05 Paradox Valley 63.74 61 eP **P** **21 26 31.3 +1.8**
comp=Z,34nm,0.7s
PV02 Paradox Valley 63.85 61 eP **P** **21 26 31.3 +1.1**
comp=Z,9.8nm,0.8s
PV15 Paradox Valley 63.90 61 eP **P** **21 26 32.0 +1.5**
comp=Z,15nm,0.8s

PV01 Paradox Valley 64.00 61 eP **P** **21 26 32.7 +1.6**
comp=Z,26nm,1.5s
B35A Bob, Littlefor 64.06 45 P **P** **21 26 31.0 -0.1**
baz=318,SNR=7.3
B35A Bob, Littlefor 64.06 45 eP **P** **21 26 31.1 0.0**
comp=Z,9.2nm,1.0s
SMCO Snowmass 64.14 59 eP **P** **21 26 33.5 +1.3**
comp=Z,13nm,0.8s
WUAZ Wupatki 64.26 65 P **P** **21 26 34.5 +1.6**
baz=316
WUAZ Wupatki 64.26 65 eP **P** **21 26 35.0 +2.1**
WUAZ epP **pP** **21 26 49.9 +0.2**
ISCO Idaho Springs 64.43 58 P **P** **21 26 35.6 +1.5**
baz=316,SNR=14
ISCO Idaho Springs 64.43 58 eP **P** **21 26 35.7 +1.7**
comp=Z,12nm,0.8s
ISCO Idaho Springs 64.43 58 eP **P** **21 26 35.7 +1.7**
ISCO pmax pmax
comp=Z,12nm,0.8s
Y14A Wickenburg 64.44 67 eP **P** **21 26 35.6 +1.7**
Y14A epP **pP** **21 26 50.6 -0.2**
C35A Jirik Farms, M 64.44 45 P **P** **21 26 33.5 -0.1**
baz=319
MVCO Mesa Verde 64.69 62 P **P** **21 26 36.8 +1.1**
baz=316,SNR=6.1
MVCO Mesa Verde 64.69 62 eP **P** **21 26 36.9 +1.2**
MVCO epP **pP** **21 26 52.4 -0.3**
BORG Borgarnes 64.82 359 P **P** **21 26 36.8 +1.1**
comp=Z,23nm,0.9s,baz=18,slow=4.5,SNR=17
BORG LR LR 21 53 47.0
comp=Z,20nm,21.8s,baz=354,slow=35
BORG Borgarnes 64.82 359 eP **P** **21 26 37.5 +1.8**
comp=Z,25nm,0.9s
113A Mohawk Valley, 64.82 69 epP pP 21 26 52.6 -0.6
D35A Remer 64.87 46 P **P** **21 26 36.3 0.0**
baz=319
C36A Pine Crest Far 64.90 44 P **P** **21 26 36.6 0.0**
baz=319
X16A Lo Mia Camp, P 65.01 66 eP **P** **21 26 39.6 +1.9**
X16A epP **pP** **21 26 53.8 -0.8**
G33A Ortonville 65.16 48 P **P** **21 26 38.3 -0.1**
baz=318
D36A Goodland 65.20 45 P **P** **21 26 38.4 -0.2**
baz=319
C37A Embarrass 65.22 44 P **P** **21 26 38.4 -0.2**
baz=319
KULM Kulim 65.23 246 eP **P** **21 26 40.4 +1.2**
NB2 NORSAR Subarra 65.26 343 P **P** **21 26 36.7 -2.0**
comp=Z,2.0nm,0.8s,baz=23,slow=6.5
NOA NORSAR Array B 65.26 343 LR LR 22 00 10.9
comp=Z,38nm,19.5s,baz=35,slow=41
EYMN Ely 65.36 44 P **P** **21 26 39.5 -0.1**
baz=320,SNR=10
EYMN Ely 65.36 44 eP **P** **21 26 39.5 -0.1**
comp=Z,13nm,1.0s
OGNE Ogallala 65.50 55 P **P** **21 26 41.6 +1.0**
baz=317
D37A Cotton 65.54 45 P **P** **21 26 40.6 -0.2**
baz=320
HFS Hagfors 65.60 341 P **P** **21 26 39.4 -1.5**
comp=Z,2.0nm,0.4s,baz=46,slow=6.2,SNR=16
HFS LR LR 22 00 45.3
comp=Z,56nm,18.8s,baz=24,slow=41
C38A Sawbill Land. 65.63 44 P **P** **21 26 41.0 -0.3**
baz=320,SNR=9.9
VSR Storozhevoye 65.63 322 eP **P** **21 26 38.8 -2.4**
VSR pmax pmax
comp=Z,5.0nm,0.5s
E36A McGregor 65.65 46 P **P** **21 26 41.4 0.0**
baz=319
IPM Ipoh 65.67 245 eP **P** **21 26 42.8 +0.8**
comp=Z,13nm,1.0s
X18A Snowflake 65.79 65 eP **P** **21 26 44.8 +2.1**
214A Organ Pipe Nat 65.96 69 P **P** **21 26 44.7 +1.0**
baz=316
SDCO Great Sand Dun 65.97 59 P **P** **21 26 45.1 +1.1**
baz=317,SNR=6.6
SDCO Great Sand Dun 65.97 59 eP **P** **21 26 45.7 +1.7**
comp=Z,15nm,1.5s
SDCO epP **pP** **21 27 01.1 +0.1**
F36A Milaca 66.02 46 P **P** **21 26 43.6 -0.3**
baz=319
C39A Grand Marais 66.05 43 P **P** **21 26 43.4 -0.5**
baz=320,SNR=5.3
ECSD EROS Data Cent 66.16 50 P **P** **21 26 44.9 +0.1**
baz=318,SNR=12
ECSD EROS Data Cent 66.16 50 eP **P** **21 26 45.1 +0.3**
comp=Z,13nm,0.8s
ECSD epP **pP** **21 27 00.3 -1.5**
H35A Sunnyside Ranc 66.29 48 P **P** **21 26 46.1 +0.5**
baz=319
E38A The Farm, Brul 66.35 45 P **P** **21 26 45.6 -0.3**
baz=320
E38A The Farm, Brul 66.35 45 eP **P** **21 26 46.0 +0.1**
comp=Z,12nm,0.9s
IVI Ivigtut 66.53 13 eP **P** **21 26 46.7 -0.1**
comp=Z,22nm,0.7s
F38A Pierce - Schro 66.70 45 P **P** **21 26 48.5 +0.3**
baz=320,SNR=7.4
GEYT Alibeck 66.84 302 P **P** **21 26 48.0 -1.2**
comp=Z,1.7nm,0.4s,baz=18,slow=5.2,SNR=16
GYA0B ALIBECK ARRAY 66.84 302 eP **P** **21 26 48.6 -0.6**
comp=Z,4.1nm,0.7s
TUC Tucson 66.90 67 P **P** **21 26 50.9 +1.2**
baz=317
TUC Tucson 66.90 67 eP **P** **21 26 51.3 +1.5**
TUC epP **pP** **21 27 06.5 -0.3**
TUC Tucson 66.90 67 eP **P** **21 26 51.3 +1.5**
TUC e*PP **pP** **21 27 06.5 -0.3**
E39A Mellen 66.97 44 P **P** **21 26 49.6 -0.3**
baz=321,SNR=7.1
T25A Trinidad 67.00 59 P **P** **21 26 51.5 +1.0**
baz=317
T25A Trinidad 67.00 59 eP **P** **21 26 52.0 +1.5**
comp=Z,7.0nm,0.8s
T25A epP **pP** **21 27 07.0 -0.5**
F39A Loretta 67.16 45 P **P** **21 26 51.2 +0.1**
baz=321,SNR=5.1
I36A Fitzsimmons Fa 67.19 48 P **P** **21 26 51.4 +0.1**
baz=320
E40A Wakefield 67.20 44 P **P** **21 26 51.7 +0.3**
baz=321,SNR=14
H37A Dierke Farm, C 67.27 47 P **P** **21 26 51.8 0.0**
baz=320
D41A Chassel 67.31 43 P **P** **21 26 51.9 -0.1**
baz=321
D41A Chassel 67.31 43 eP **P** **21 26 52.4 +0.4**
comp=Z,13nm,0.6s
G38A Ridgeland 67.31 46 P **P** **21 26 51.7 -0.4**
baz=320
LHMI Lhok Sumawe 67.46 249 P **P** **21 26 56.2 +2.9**
LHMI Lhok Sumawe 67.46 249 eP **P** **21 26 55.4 +2.0**
comp=Z,97nm,0.8s
TASM ASL Pad, Albuq 67.47 62 P **P** **21 26 54.7 +1.3**
baz=317,SNR=6.9
ANMO Albuquerque 67.47 62 P **P** **21 26 54.8 +1.3**
comp=Z,5.2nm,0.8s,baz=341,slow=9.4,SNR=14
ANMO LR LR 21 52 32.4
comp=Z,16nm,21.2s,baz=285,slow=32
ANMO Albuquerque 67.47 62 P **P** **21 26 54.2 +0.7**
baz=317
ANMO Albuquerque 67.47 62 eP **P** **21 26 54.9 +1.5**
comp=Z,7.7nm,1.0s
ANMO Albuquerque 67.47 62 *i* P **P** **21 26 55.1 +1.6**
ANMO *i* *PP **pP** **21 27 10.0 -0.5**
ANMO pmax pmax
comp=Z,5.0nm,0.8s
TASL Snake Pit, Alb 67.47 62 P **P** **21 26 54.3 +0.8**
baz=317,SNR=7.5
LAZ Ladron 67.48 63 eP **P** **21 26 55.4 +1.9**
I37A Lemond, Waseca 67.48 47 P **P** **21 26 53.8 +0.6**
baz=320
I37A Lemond, Waseca 67.48 47 eP **P** **21 26 54.0 +0.8**
comp=Z,36nm,0.8s
H38A Maiden Rock 67.50 46 P **P** **21 26 53.3 0.0**
baz=320
F40A Park Falls 67.51 44 P **P** **21 26 53.0 -0.3**
baz=321
G39A Holcombe 67.53 45 P **P** **21 26 53.3 -0.2**
baz=321
J36A Seneca 1, Swea 67.56 49 P **P** **21 26 53.7 0.0**
baz=320
E41A Kenton 67.60 43 P **P** **21 26 53.5 -0.3**
baz=321
COWI Conover 67.81 44 eP **P** **21 26 55.2 0.0**
comp=Z,8.3nm,1.0s
J37A Redenius Farm, 67.94 48 P **P** **21 26 56.2 +0.1**

baz=320
BNM Barren Site 67.95 63 *e*P **P 21 26 58.0 +1.4**
BNM *ep*P **pP 21 27 13.6 0.0**
I38A Scanlan Farm, 67.96 47 P **P 21 26 56.0 -0.2**
baz=320
G40A Rib Lake 67.98 45 P **P 21 26 56.1 -0.2**
baz=321
K36A Gilmore City 68.03 49 P **P 21 26 56.4 -0.3**
baz=320
E42A Champion 68.08 43 P **P 21 26 56.8 -0.1**
baz=322,SNR=5.5
F41A Three Lakes 68.10 44 P **P 21 26 57.0 -0.1**
baz=322
CBKS Cedar Bluff 68.26 55 P **P 21 26 58.0 -0.2**
baz=319
K37A Belmond 68.32 48 P **P 21 26 58.2 -0.2**
baz=320
L36A Harm Buss Farm 68.33 50 P **P 21 26 58.2 -0.4**
baz=320
H40A Chili 68.40 45 P **P 21 26 58.6 -0.3**
baz=321
319A Douglas 68.45 67 *e*P **P 21 27 01.4 +1.8**
319A *ep*P **pP 21 27 16.6 -0.1**
I39A Houston 68.47 46 P **P 21 26 58.9 -0.5**
baz=321
I39A Houston 68.47 46 *e*P **P 21 26 59.7 +0.3**
comp=Z,14nm,0.9s
E43A Lone Tree Farm 68.51 42 P **P 21 26 59.2 -0.4**
baz=322
E43A Lone Tree Farm 68.51 42 *e*P **P 21 26 59.4 -0.2**
comp=Z,7.1nm,0.7s
SCHQ Schefferville 68.52 26 P **P 21 26 59.6 +0.1**
comp=Z,9.5nm,0.4s,baz=316,slow=6.4,SNR=8.9
SCHQ LR LR 21 58 44.8
comp=Z,16nm,21.2s,baz=16,slow=37
SCHQ Schefferville 68.52 26 *e*P **P 21 26 59.9 +0.4**
comp=Z,26nm,1.1s
MLSI Meulaboh, Aceh 68.55 249 P **P 21 27 00.0 -0.2**
comp=Z,96nm,0.8s
H41A Junction City 68.73 45 P **P 21 27 00.6 -0.4**
baz=322
H41A Junction City 68.73 45 *e*P **P 21 27 01.1 +0.1**
comp=Z,11nm,0.8s
L37A Phoenix Point, 68.75 49 P **P 21 27 01.1 -0.1**
baz=320
M36A Felix, Anita 68.76 50 P **P 21 27 01.0 -0.2**
baz=320
G42A Mountain 68.79 44 P **P 21 27 01.0 -0.3**
baz=322
J39A Decorah 68.79 47 P **P 21 27 00.7 -0.6**
baz=321
I40A Norwalk 68.86 46 P **P 21 27 01.5 -0.3**
baz=321
F43A Flat Rock, Esc 68.87 43 P **P 21 27 01.5 -0.3**
baz=322
TPTI 68.89 248 P **P 21 27 04.3 +2.0**
F44A Big Bay de Noc 69.08 42 P **P 21 27 02.7 -0.4**
baz=323
G43A Wallace 69.10 43 P **P 21 27 03.1 -0.1**
baz=322,SNR=5.1
G43A Wallace 69.10 43 *e*P **P 21 27 03.2 0.0**
comp=Z,18nm,0.9s
L38A Oak Wood Farm, 69.12 48 P **P 21 27 03.4 0.0**
baz=321
SCIA State Center 69.18 49 P **P 21 27 04.0 +0.2**
baz=321
SCIA State Center 69.18 49 *e*P **P 21 27 04.5 +0.7**
comp=Z,51nm,0.7s
J40A Soldiers Grove 69.19 46 P **P 21 27 03.1 -0.8**
baz=321
K39A Oelwein 69.19 47 P **P 21 27 03.3 -0.5**
baz=321
AKT Akhty 69.49 311 *e*P **P 21 27 04.3 -1.6**
AKT *e* 21 27 28.4
AKT pmax pmax
comp=Z,5.0nm,0.5s
J41A Loganville 69.55 46 P **P 21 27 05.5 -0.5**
baz=322
K40A Colesburg 69.55 47 P **P 21 27 05.5 -0.5**
baz=321
M38A Pleasantville 69.56 49 P **P 21 27 06.0 -0.2**
baz=321
HYB Hyderabad 69.59 273 *i*P **P 21 27 06.5 -0.2**
L39A Vinton 69.59 48 P **P 21 27 06.0 -0.3**
baz=321,SNR=5.1
I42A Draeger Farm, 69.63 45 P **P 21 27 06.3 -0.2**
baz=322
I42A Draeger Farm, 69.63 45 *e*P **P 21 27 06.8 +0.2**
comp=Z,12nm,0.9s
AKASG Malin Array Be 69.67 328 P **P 21 27 04.8 -1.8**
comp=Z,1.5nm,0.3s,baz=30,slow=6.3,SNR=6.0
AKASG LR LR 22 00 29.1
comp=Z,80nm,21.2s,baz=45,slow=38
H43A Windswept, Lux 69.68 44 P **P 21 27 06.7 -0.1**
baz=322
H43A Windswept, Lux 69.68 44 *e*P **P 21 27 07.1 +0.2**
comp=Z,16nm,0.9s
F45A CMU Biological 69.69 42 P **P 21 27 06.4 -0.5**
baz=323
JFWS Jewell Farm 69.79 46 P **P 21 27 07.2 -0.3**
baz=322
NCK Nalchik 69.85 315 *ce*P **P 21 27 07.3 -0.6**
NCK pmax pmax
comp=Z,3.0nm,0.7s
KIV Kislovodsk 69.89 316 P **P 21 27 07.3 -1.0**
KIV Kislovodsk 69.89 316 *e*P **P 21 27 07.8 -0.5**
KIV pmax pmax
comp=Z,5.0nm,1.0s
KIV MLR MLR
comp=Z,42nm,17.0s
F46A Macinaw City C 69.94 41 P **P 21 27 08.1 -0.2**
baz=324
KBZ Khabaz 69.98 315 P **P 21 27 07.7 -1.0**
comp=Z,4.4nm,0.6s,baz=92,slow=4.5,SNR=14
KBZ LR LR 22 01 11.2
comp=Z,63nm,20.9s,baz=30,slow=39
I43A Langenfeld Bro 69.98 44 P **P 21 27 08.4 -0.3**
baz=322
J42A Columbus 69.99 45 P **P 21 27 08.3 -0.5**
baz=322
L40A Anamosa 70.00 47 P **P 21 27 08.2 -0.7**
baz=321
K41A Shullsburg 70.00 47 P **P 21 27 08.4 -0.5**
baz=322
M39A Webster 70.01 48 P **P 21 27 08.8 -0.1**
baz=321,SNR=11
O37A Wolven Farm, M 70.06 51 P **P 21 27 09.2 -0.1**
baz=321
AMTX Amarillo 70.16 59 P **P 21 27 10.9 +0.8**
baz=319
AMTX Amarillo 70.16 59 *e*P **P 21 27 11.2 +1.1**
comp=Z,14nm,1.0s
GSI Gunungsitoli 70.24 246 P **P 21 27 09.3 -1.3**
comp=Z,21nm,0.6s
GSI Gunungsitoli 70.24 246 *e*P **P 21 27 11.4 +0.8**
comp=Z,14nm,0.9s
ZEI Tsey 70.26 314 *e*P **P 21 27 07.2 -3.5**
K42A Prairie Point, 70.31 46 P **P 21 27 10.6 -0.1**
baz=322
N39A Derby Farms, D 70.31 49 P **P 21 27 10.4 -0.4**
baz=321
N39A Derby Farms, D 70.31 49 *e*P **P 21 27 10.7 -0.1**
comp=Z,15nm,0.9s
L41A Preston 70.33 47 P **P 21 27 10.2 -0.7**
baz=322
P37A Lathrop 70.41 51 P **P 21 27 10.8 -0.6**
baz=321
O38A Galt 70.43 50 P **P 21 27 11.4 -0.1**
baz=321
MNTX Cornudas Mount 70.46 64 P **P 21 27 12.9 +1.1**
baz=318,SNR=12
MNTX Cornudas Mount 70.46 64 *e*P **P 21 27 13.2 +1.3**
comp=Z,11nm,1.0s
GDL2 Guadalupe Moun 70.67 63 *e*P **P 21 27 14.8 +1.5**
N40A Mertquake, Sal 70.75 48 P **P 21 27 13.3 -0.1**
baz=322
L42A Oliver, Polo 70.77 47 P **P 21 27 12.6 -0.9**
baz=322
P38A Dawn 70.78 51 P **P 21 27 13.5 -0.2**
baz=321
P38A Dawn 70.78 51 *e*P **P 21 27 13.8 +0.1**
comp=Z,14nm,0.8s
M41A Milan 70.86 48 P **P 21 27 13.7 -0.4**
baz=322
Q37A Longview Farm, 70.90 52 P **P 21 27 13.7 -0.7**
baz=321
MDO Dochfour 71.09 350 *e*P **P 21 27 14.3 -0.9**
O40A La Belle 71.20 49 P **P 21 27 16.2 0.0**
baz=322
N41A Harden Midland 71.23 48 P **P 21 27 16.3 -0.1**
baz=322
N41A Harden Midland 71.23 48 *e*P **P 21 27 16.4 +0.1**
comp=Z,94nm,0.5s
Q38A Cooks Store, C 71.25 51 P **P 21 27 16.2 -0.3**
baz=321,SNR=18
P39B Salisbury 71.27 50 P **P 21 27 16.1 -0.5**
baz=321
KPL Plockton 71.34 350 *e*P **P 21 27 16.4 -0.3**
Q39A Willow Grove F 71.50 51 P **P 21 27 17.8 -0.2**
baz=321
N42A Yates City 71.52 48 P **P 21 27 17.8 -0.3**
baz=322
M43A Waltham Townsh 71.54 46 P **P 21 27 17.6 -0.6**
baz=323
P40A Paris 71.58 50 P **P 21 27 18.5 0.0**
baz=322,SNR=5.3
P40A Paris 71.58 50 *e*P **P 21 27 18.9 +0.4**
comp=Z,14nm,0.8s
P40A *ep*P **pP 21 27 34.0 -1.7**
O41A Passleys Farm, 71.68 49 P **P 21 27 19.0 0.0**
baz=322,SNR=5.5
R38A Fenwick Farm, 71.71 52 P **P 21 27 18.3 -1.0**
baz=321,SNR=10
WMOK Wichita Mounta 71.83 57 P **P 21 27 20.5 +0.4**
baz=320,SNR=21
WMOK Wichita Mounta 71.83 57 *e*P **P 21 27 20.7 +0.6**
comp=Z,13nm,0.8s
WMOK Wichita Mounta 71.83 57 *e*P **P 21 27 20.7 +0.6**
WMOK pmax pmax
comp=Z,13nm,0.8s
N43A Stutzman Famil 71.84 47 P **P 21 27 19.7 -0.3**
baz=323
P41A Barry, Barry 71.94 49 P **P 21 27 20.7 0.0**
baz=322,SNR=8.2
GNI Garni 71.95 312 P **P 21 27 20.7 -0.1**
comp=Z,4.8nm,0.7s,baz=11,slow=10,SNR=5.6
GNI LR LR 22 02 30.8
comp=Z,58nm,20.7s,baz=32,slow=39
GNI Garni 71.95 312 *e*P **P 21 27 21.0 +0.1**
comp=Z,7.3nm,0.8s
GNI Garni 71.95 312 P **P 21 27 20.8 -0.1**
GNI Garni 71.95 312 ⇑*i*P **P 21 27 20.8 -0.1**
GNI pmax pmax
comp=Z,18nm,0.9s
Q40A Laux Farm, Aux 71.98 50 P **P 21 27 20.6 -0.3**
baz=322
R39A Chumby, Stover 72.04 51 P **P 21 27 20.6 -0.7**
baz=321,SNR=21
INVG Invergeldie, C 72.05 349 *e*P **P 21 27 19.9 -1.1**
HDIL Hopedale 72.08 47 P **P 21 27 21.4 -0.1**
baz=323
S38A Stockton 72.14 52 P **P 21 27 21.0 -0.9**
baz=321,SNR=6.7
P42A Winchester 72.35 49 P **P 21 27 22.9 -0.2**
baz=322
P42A Winchester 72.35 49 *e*P **P 21 27 23.1 +0.1**
comp=Z,16nm,0.6s
S39A Bolivar 72.38 52 P **P 21 27 22.4 -0.9**
baz=321,SNR=7.0
S39A Bolivar 72.38 52 *e*P **P 21 27 22.6 -0.7**
comp=Z,16nm,1.3s
T38A Diamond 72.40 53 P **P 21 27 23.3 -0.2**
baz=321,SNR=12
Q41A Truxton 72.42 50 P **P 21 27 23.7 +0.2**
baz=322,SNR=7.5
N44A Piper City 72.43 46 P **P 21 27 23.2 -0.3**
baz=323
R40A Maddies Statio 72.44 51 P **P 21 27 23.4 -0.2**
baz=322,SNR=10
R40A Maddies Statio 72.44 51 *e*P **P 21 27 23.5 -0.2**
comp=Z,17nm,0.8s
TUL1 Leonard 72.50 54 P **P 21 27 24.1 0.0**
baz=321
TUL1 Leonard 72.50 54 *e*P **P 21 27 24.4 +0.3**
comp=Z,36nm,1.5s
P43A Skaggs, Pawnee 72.70 48 P **P 21 27 24.9 -0.3**
baz=323
PGBU Glenifferbraes 72.71 349 *e*P **P 21 27 24.0 -0.9**
PGBU IAmb IAmb 21 27 25.1
comp=Z,12nm,0.7s
Q42A Golden Eagle 72.79 49 P **P 21 27 26.0 +0.3**
baz=322
S40A Lebanon 72.86 51 P **P 21 27 25.7 -0.5**
baz=322,SNR=8.2
R41A Rosebud 72.87 50 P **P 21 27 26.0 -0.2**
baz=322,SNR=5.7
T39A Clever 72.87 52 P **P 21 27 25.6 -0.7**
baz=322
ABTX Abilene, Hawle 72.97 59 P **P 21 27 27.6 +0.7**
baz=320
ABTX Abilene, Hawle 72.97 59 *e*P **P 21 27 28.0 +1.1**
comp=Z,13nm,0.8s
ABTX *ep*P **PcP 21 27 43.7 +0.1**
DZM Mont Dzumac 72.97 171 LR LR 21 51 19.4
comp=Z,64nm,21.7s,baz=175,slow=29
EKA Eskdalemuir Ar 73.01 348 P **P 21 27 26.1 -0.7**
comp=Z,3.1nm,0.4s,baz=19,slow=5.1,SNR=53
O45A Potomac 73.06 46 P **P 21 27 27.4 +0.1**
baz=323
CCM Cathedral Cave 73.12 50 P **P 21 27 27.9 +0.2**
baz=322
CCM Cathedral Cave 73.12 50 *e*P **P 21 27 27.6 -0.1**
CCM *e*PcP **PcP 21 27 42.8 -1.3**
CCM Cathedral Cave 73.12 50 *e*P **P 21 27 27.6 -0.1**
CCM *e* 21 27 42.8
ECK Cauldkaine Hil 73.16 348 *e*P **P 21 27 26.9 -0.7**
R42A Luebbering 73.16 50 P **P 21 27 27.8 -0.1**
baz=322
Q43A New Douglas 73.17 49 P **P 21 27 27.9 0.0**
baz=323
TX31 Lajitas Ar. Si 73.21 64 *e*P **P 21 27 29.5 +1.0**
TXAR Lajitas Array 73.21 64 P **P 21 27 29.6 +1.1**
comp=Z,13nm,0.7s,baz=299,slow=4.5,SNR=178
WRAB Tennant Creek 73.23 202 *ce*P **P 21 27 28.7 +0.4**
WRAB pmax pmax
comp=Z,13nm,1.2s
WB2 Warramunga Arr 73.23 202 *e*P **P 21 27 28.5 +0.1**
WB2 *e*PcP **PcP 21 27 44.1 -0.4**
SFIN Lafayette 73.24 46 P **P 21 27 28.0 -0.3**
baz=324
WRA Warramunga Arr 73.24 202 P **P 21 27 28.4 0.0**
comp=Z,9.1nm,0.6s,baz=18,slow=6.2,SNR=77
P44A Sand Creek, Wi 73.26 48 P **P 21 27 28.6 +0.1**
baz=323
U39A Green Forest 73.32 53 P **P 21 27 28.7 -0.2**
baz=322,SNR=20
Q44A Meyer Farm, Va 73.52 48 P **P 21 27 29.8 -0.2**
baz=323
TRQ Mont Tremblant 73.54 35 *e*P **P 21 27 29.9 -0.2**
S42A Caledonia 73.57 50 P **P 21 27 30.3 -0.1**
baz=322,SNR=7.6
FVM French Village 73.58 50 *e*P **P 21 27 30.8 +0.4**
comp=Z,10nm,0.6s
FVM *ep*P **pP 21 27 48.6 +1.1**
FVM French Village 73.58 50 *e*P **P 21 27 30.8 +0.4**
FVM *e**PP **pP 21 27 48.7 +1.1**
FVM pmax pmax
comp=Z,10.0nm,0.6s
R43A Red Bud 73.58 49 P **P 21 27 30.2 -0.2**
baz=323
P45A Graceland, Par 73.62 47 P **P 21 27 30.4 -0.2**
baz=324
BUR08 Bucovina Ar. S 73.64 328 *e*P **P 21 27 29.3 -1.4**
U40A Yellville 73.66 52 P **P 21 27 30.6 -0.3**
baz=322,SNR=18
V39A Pettigrew 73.66 53 P **P 21 27 30.6 -0.3**
baz=322,SNR=10
T41A Mountain View 73.66 51 P **P 21 27 30.4 -0.5**
baz=322,SNR=8.4
BUR04 Bucovina Ar. S 73.66 328 *e*P **P 21 27 29.1 -1.8**
KESW Keswick, Cumbr 73.73 348 *e*P **P 21 27 30.6 -0.4**
KESW IAmb IAmb 21 27 31.2
comp=Z,26nm,1.0s
P46A Rosedale 73.80 47 P **P 21 27 31.4 -0.2**
baz=324
CLL Collm 73.86 338 *i*P **P 21 27 31.1 -0.7**
comp=Z,6.0nm,0.9s
CLL Lm MLR 22 01 00.0
comp=Z,100nm,21.4s
CLL Collm 73.86 338 *i*P **P 21 27 31.1 -0.7**
CLL pmax pmax
comp=Z,6.0nm,0.9s
DPC Dobruska-Polom 73.89 335 *e*P P 21 27 38.3 +6.2
DPC Dobruska-Polom 73.89 335 *e*P P 21 27 38.3 +6.2
Q45A Warren Harvey, 73.94 48 P **P 21 27 32.3 -0.1**
baz=323
T42A Van Buren 74.00 51 P **P 21 27 32.5 -0.4**
baz=322
T42A Van Buren 74.00 51 *e*P **P 21 27 32.5 -0.4**
comp=Z,25nm,1.4s
R44A Waltonville 74.01 49 P **P 21 27 33.0 +0.1**
baz=323
S43A Fulton Ridge, 74.07 50 P **P 21 27 33.1 -0.2**
baz=323,SNR=6.3
W39A Magazine 74.09 54 P **P 21 27 33.3 -0.1**
baz=322
LANS Liptovska Anna 74.10 333 *e*P **P 21 27 33.1 -0.3**
LANS Liptovska Anna 74.10 333 *e*P **P 21 27 33.0 -0.3**
V40A Witts Springs 74.10 53 P **P 21 27 33.1 -0.4**
baz=322,SNR=5.3
V40A Witts Springs 74.10 53 *e*P **P 21 27 33.5 -0.1**
comp=Z,14nm,1.1s
U41A Viola 74.13 52 P **P 21 27 33.3 -0.3**
baz=322
P47A Martinsville 74.33 46 P **P 21 27 34.4 -0.3**
baz=324
R45A Skylar, Fairfi 74.36 48 P **P 21 27 34.7 -0.2**
baz=324
WIM Isle of Man 74.36 349 *e*P **P 21 27 34.0 -0.7**
GMM Mts of Mourne 74.42 350 *e*P **P 21 27 34.1 -0.9**
V41A Mountainview 74.45 52 P **P 21 27 35.1 -0.5**
baz=322,SNR=8.7
X39A Fountain Ranch 74.46 54 P **P 21 27 36.0 +0.4**
baz=322,SNR=6.5
W40A Ferguson Farm, 74.46 53 P **P 21 27 35.6 +0.1**
baz=322
W40A Ferguson Farm, 74.46 53 *e*P **P 21 27 36.0 +0.5**
comp=Z,20nm,1.1s
U42A Revenden 74.47 51 P **P 21 27 35.7 +0.1**
baz=323
JCT Junction City 74.52 61 P **P 21 27 36.5 +0.5**
baz=320,SNR=8.3
JCT Junction City 74.52 61 *e*P **P 21 27 36.8 +0.7**
comp=Z,15nm,0.8s
JCT *ep*P **pP 21 27 52.7 -0.6**
JCT Junction City 74.52 61 *e*P **P 21 27 36.8 +0.7**
JCT *e**PP **pP 21 27 52.7 -0.6**
JCT pmax pmax
comp=Z,15nm,0.8s
WHTX Lake Whitney, 74.64 58 P **P 21 27 37.1 +0.4**
baz=321
WHTX Lake Whitney, 74.64 58 *e*P **P 21 27 37.1 +0.4**
comp=Z,16nm,1.0s
N50A Nevada 74.68 43 P **P 21 27 37.6 +0.8**
baz=325
MIAR Mount Ida 74.70 54 P **P 21 27 37.1 +0.1**
baz=322,SNR=6.1
MIAR Mount Ida 74.70 54 *e*P **P 21 27 37.6 +0.6**
comp=Z,10nm,0.9s
MIAR *e*PcP **PcP 21 27 51.4 +0.5**
MIAR Mount Ida 74.70 54 *e*P **P 21 27 37.6 +0.6**
MIAR *e* 21 27 51.4
MIAR pmax pmax
comp=Z,10.0nm,0.9s
Q47A Bedord North L 74.70 46 P **P 21 27 36.9 0.0**
baz=324
WHAR Wooly Hollow 74.78 53 *e*P **P 21 27 37.5 +0.1**
comp=Z,42nm,1.8s
V42A Cord 74.82 52 P **P 21 27 37.1 -0.5**
baz=323
VYHS Vyhne 74.88 333 *e*P **P 21 27 37.4 -0.4**
VYHS pmax pmax
comp=Z,19nm,2.7s
VYHS Vyhne 74.88 333 *e*P **P 21 27 37.4 -0.4**
W41B Gary Mavity, V 74.89 53 P **P 21 27 37.9 -0.1**
baz=322,SNR=5.4
W41B Gary Mavity, V 74.89 53 *e*P **P 21 27 38.2 +0.2**
comp=Z,9.9nm,0.8s
LONY Lake Ozonia 74.90 36 P **P 21 27 37.1 -0.9**
baz=329
ERPA Erie 74.91 40 P **P 21 27 38.1 +0.1**
baz=327
O50A Cable 74.98 44 P **P 21 27 38.3 -0.2**
baz=325
WME Myndd Eilian 75.05 349 *e*P **P 21 27 37.6 -1.0**
X40A Basin Creek Fa 75.13 53 P **P 21 27 39.8 +0.3**
baz=322
WPM1 Penmaenmawr 75.14 348 *e*P **P 21 27 38.2 -0.9**
WLF1 Llynfaes 75.17 349 *e*P **P 21 27 38.5 -0.8**
WLF1 IAmb IAmb 21 27 39.1
comp=Z,14nm,0.9s
MMNY Mt. Morris Dam 75.23 39 *e*P **P 21 27 39.7 -0.2**
comp=Z,47nm,0.8s
MLR Muntele Rosu 75.27 327 P **P 21 27 39.8 -0.4**
comp=Z,1.2nm,0.4s,baz=292,slow=5.4
MLR LR LR 22 04 50.7
comp=Z,19nm,18.6s,baz=34,slow=39
MLR Muntele Rosu 75.27 327 *e*P **P 21 27 39.6 -0.6**
comp=Z,6.0nm,0.9s
WCI Wyandotte Cave 75.34 47 P **P 21 27 40.7 +0.1**
baz=324
WCI Wyandotte Cave 75.34 47 *e*P **P 21 27 41.1 +0.5**
WCI *ep*P **pP 21 27 59.1 +1.3**
WCI Wyandotte Cave 75.34 47 *e*P **P 21 27 41.1 +0.5**
WCI *e**PP **pP 21 27 59.1 +1.3**
P50A Jamestown 75.35 44 P **P 21 27 40.2 -0.4**
baz=325
FOEL Foel Wylfa 75.41 348 *e*P **P 21 27 39.3 -1.4**
FOEL IAmb IAmb 21 27 40.1
comp=Z,16nm,0.8s
DSB Dublin 75.44 350 *e*P **P 21 27 40.8 -0.1**
comp=Z,25nm,0.8s
LLW Llanuwychllyn 75.51 348 *e*P **P 21 27 40.7 -0.5**
T46A Princeton 75.54 49 P **P 21 27 42.2 +0.4**
baz=324
NCB Newcomb 75.59 36 *e*P **P 21 27 41.9 -0.1**
comp=Z,10.0nm,0.8s
HLM1 Long Mynd 75.72 348 *e*P **P 21 27 41.9 -0.6**
HLM1 IAmb IAmb 21 27 42.2
comp=Z,16nm,1.2s
KHC Kasperske Hory 75.73 336 *e*P **P 21 27 42.9 +0.2**
KHC *ex* x 21 27 48.0
KHC *ep*P **pP 21 28 01.9 +1.9**
KHC *es*P **sP 21 28 08.0 +1.0**
KHC Kasperske Hory 75.73 336 *e*P **P 21 27 42.8 +0.2**
comp=Z,2.2nm,0.8s
KHC Kasperske Hory 75.73 336 *e*P **P 21 27 42.9 +0.2**
KHC *e* 21 28 01.9
KHC *e* 21 28 08.0
Z40A Long Farm, Mag 75.80 55 P **P 21 27 43.5 +0.2**
baz=322
N54A Moraine State 75.87 41 P **P 21 27 43.3 -0.2**
baz=327
PALK Pallekele 75.89 264 P **P 21 27 44.1 0.0**
comp=Z,15nm,0.7s,baz=115,slow=4.2,SNR=9.9
PALK LR LR 22 03 40.6
comp=Z,27nm,19.5s,baz=78,slow=38
PALK Pallekele 75.89 264 P **P 21 27 44.2 +0.2**
WET Wettzell 75.89 337 P **P 21 27 44.4 +0.8**
WET pmax pmax
comp=Z,4.0nm,0.9s
S48A Wiedeman Farm, 75.91 47 P **P 21 27 43.9 0.0**
baz=325
T47A Sharon Grove 75.96 48 P **P 21 27 44.6 +0.4**
baz=324
GERES GERESS Array B 75.96 336 P **P 21 27 43.4 -0.7**
comp=Z,0.9nm,0.3s,baz=35,slow=5.5,SNR=14
GERES LR LR 22 05 58.0
comp=Z,101nm,18.6s,baz=37,slow=40
GEA0 GERESS Array S 75.97 336 *e*P **P 21 27 43.7 -0.4**
MEM Membach 76.07 342 ⇑P **P 21 27 44.0 -0.5**
comp=Z,6.1nm,0.7s
LBNH Lisbon 76.19 34 P **P 21 27 45.4 0.0**
baz=331
PKME Peaks-Kenny Pk 76.21 32 P **P 21 27 45.7 +0.3**
baz=332
CONA Conrad Observa 76.23 334 *e*P **P 21 27 44.4 -1.2**
comp=Z,0.7nm,0.5s
MCH1 Michaelchurch 76.25 348 *e*P **P 21 27 44.7 -0.9**
ACCN Adirondack Com 76.30 36 *e*P **P 21 27 46.1 +0.1**
comp=Z,15nm,0.7s
WVT Waverly 76.30 49 P **P 21 27 46.3 +0.2**
baz=324
WVT Waverly 76.30 49 *e*P **P 21 27 46.5 +0.4**
comp=Z,22nm,1.4s
WVT Waverly 76.30 49 *e*P **P 21 27 46.5 +0.4**
WVT pmax pmax
comp=Z,22nm,1.4s
MONM Monmouth 76.38 347 *e*P **P 21 27 45.7 -0.6**
MONM IAmb IAmb 21 27 46.5
comp=Z,20nm,0.8s

V46A	Holladay	76.43	49	P	P	21 27 46.9 +0.1
	baz=324					
BINY	Binghamton	76.44	38	P	P	21 27 46.8 0.0
	baz=329					
U48A	Cassie Pea, Po	76.61	48	P	P	21 27 47.8 0.0
	baz=324					
WVL	Waterville	76.70	32	eP	P	21 27 48.6 +0.4
	comp=Z,38nm,1.4s					
MOA	Molln	76.73	335	i P	P	21 27 48.2 -0.1
	comp=Z,4.5nm,1.2s					
OXF	Oxford	76.83	51	P	P	21 27 49.1 0.0
	baz=324					
SHME	Shamm	76.85	295	P	P	21 27 48.1 -1.3
BANOM	Banah	76.86	295	P	P	21 27 49.2 -0.2
AS01	Alice Springs	76.91	202	eP	P	21 27 50.2 +0.7
AS31	Alice Springs	76.92	202	eP	P	21 27 50.5 +0.9
	comp=Z,2.7nm,0.6s					
ASAR	Alice Springs	76.92	202	P	P	21 27 50.4 +0.8
	comp=Z,6.9nm,0.6s,baz=14,slow=5.4,SNR=101					
BAIF	Baives	76.95	343	eP	P	21 27 48.5 -1.0
BAIF				pmax	pmax	
	comp=Z,11nm,1.2s					
T50A	Nancy	76.99	47	P	P	21 27 50.3 +0.3
	baz=325					
SSPA	Standing Stone	77.01	40	P	P	21 27 49.9 -0.2
	baz=328					
MCWV	Mont Chateau	77.02	42	P	P	21 27 50.5 +0.5
	baz=327					
V48A	Smith Brothers	77.10	49	P	P	21 27 50.5 -0.1
	baz=324					
BR131	Keskin Array S	77.25	319	eP	P	21 27 50.6 -0.9
BRTR	Keskin Array B	77.25	319	P	P	21 27 50.2 -1.3
	comp=Z,1.5nm,0.6s,baz=69,slow=3.4,SNR=9.2					
BRTR				LR	LR	22 06 26.1
	comp=Z,25nm,18.9s,baz=20,slow=39					
MDH	Madha	77.34	294	P	P	21 27 50.8 -1.2
MSFE	Esma-Masafi	77.37	295	P	P	21 27 51.1 -1.2
W48A	Pulaski	77.53	49	P	P	21 27 53.2 +0.2
	baz=324					
SOKA	Soboth	77.60	334	i P	P	21 27 52.2 -1.1
	comp=Z,7.6nm,0.8s					
Y46A	Houston	77.61	51	P	P	21 27 53.8 +0.3
	baz=324					
N59A	State Game Lan	77.62	38	P	P	21 27 53.2 -0.3
	baz=329					
UOSS	Minazif	77.66	294	eP	P	21 27 53.2 -0.7
	comp=Z,21nm,0.8s					
UOSS	Minazif	77.66	294	i P	P	21 27 52.8 -1.1
	SNR=9.2					
KBA	Koelnbreinsper	77.69	336	eP	P	21 27 54.8 +0.8
	comp=Z,16nm,1.1s					
KBA	Koelnbreinsper	77.69	336	P	P	21 27 54.7 +0.8
KBA				pmax	pmax	
	comp=Z,12nm,0.9s					
T52A	Hallie	77.76	45	P	P	21 27 54.5 +0.1
	baz=326					
HATD	Hatta, Dubai	77.80	294	i P	P	21 27 54.1 -0.6
	SNR=10.0					
OBKA	Obir	77.89	335	i P	P	21 27 55.2 +0.3
	comp=Z,11nm,1.1s					
CDF	Champ du Feu	77.89	340	eP	P	21 27 53.7 -1.2
CDF				pmax	pmax	
	comp=Z,8.0nm,1.0s					
WATA	Walderalm	77.90	337	i P	P	21 27 55.5 +0.4
	comp=Z,2.1nm,0.4s					
NAZ	Nazwa, Dubai	77.94	295	P	P	21 27 54.8 -0.7
SWET	Sewanee	77.95	48	eP	P	21 27 55.3 -0.1
	comp=Z,75nm,1.8s					
WTTA	Wattenberg	77.95	337	i P	P	21 27 55.5 +0.1
	comp=Z,7.6nm,0.9s					
RETA	Reutte	77.96	337	i P	P	21 27 55.6 +0.3
	comp=Z,5.2nm,1.1s					
TZTN	Tazewell	77.97	46	P	P	21 27 55.7 +0.2
	baz=326					
MOTA	Moosalm	78.01	337	i P	P	21 27 54.9 -0.8
	comp=Z,15nm,1.3s					
Y47A	UCPARC, Winfie	78.09	50	P	P	21 27 56.5 +0.4
	baz=324					
SOHO	SOHO	78.09	293	i P	P	21 27 55.5 -0.8
	SNR=9.8					
ECH	Echery	78.10	340	eP	P	21 27 55.6 -0.4
ECH	Echery	78.10	340	eP	P	21 27 55.6 -0.4
ECH				pmax	pmax	
	comp=Z,4.0nm,0.8s					
244A	Avery, Jackson	78.16	54	P	P	21 27 56.8 +0.3
	baz=323					
ABTA	Abfaltersbach	78.21	336	eP	P	21 27 55.4 -1.3
	comp=Z,14nm,1.3s					
PAL	Palisades	78.26	37	P	P	21 27 56.6 -0.4
	baz=330					
X49A	Woodville	78.33	49	P	P	21 27 57.5 0.0
	baz=325					
DAVA	Damuels	78.36	338	i P	P	21 27 57.9 +0.3
	comp=Z,8.5nm,0.9s					
FETA	Feichten	78.40	337	i P	P	21 27 57.8 -0.1
	comp=Z,4.6nm,1.1s					
Y48A	Jasper	78.41	50	P	P	21 27 57.1 -0.8
	baz=325					
ASUD	Al Ashush, Dub	78.41	295	i P	P	21 27 57.0 -1.1
	SNR=17					
DIVS	Divibare	78.48	330	eP	P	21 27 57.2 -1.0
	comp=Z,3.4nm,0.5s					
V52A	Sevierville	78.53	46	P	P	21 27 58.5 0.0
	baz=326					
HINF	Hinteralfeld	78.54	340	eP	P	21 27 57.7 -0.8
HINF				pmax	pmax	
	comp=Z,2.0nm,0.6s					
Z47A	Carrollton	78.55	51	P	P	21 27 58.8 +0.2
	baz=324					
U53A	Fall Branch	78.56	45	P	P	21 27 58.8 0.0
	baz=326					
ALNE	Al Ain	78.61	294	i P	P	21 27 58.3 -0.9
	SNR=6.7					
Z48A	Northport	78.66	51	P	P	21 27 58.6 -0.7
	baz=324					
X50B	Fort Payne	78.70	49	P	P	21 27 59.1 -0.4
	baz=325					
VTS	Vitosha	78.76	327	eP	P	21 27 58.5 -1.4
	comp=Z,4.7nm,0.8s					
VTS	Vitosha	78.76	327	eP	P	21 27 58.5 -1.4
VTS				pmax	pmax	
	comp=Z,5.0nm,0.8s					
Y49A	Blount Mountai	78.82	49	P	P	21 28 00.2 0.0
	baz=325					
DAVOX	Davos/Dischmat	78.83	338	P	P	21 27 59.8 -0.5
	comp=Z,6.7nm,0.7s,baz=4.7,slow=9.3,SNR=8.2					
DAVOX				LR	LR	22 07 06.0
	comp=Z,54nm,20.8s,baz=87,slow=39					
JQE	Queens East	78.84	346	eP	P	21 27 59.6 -0.4
147A	Livingston	78.87	51	P	P	21 28 00.7 +0.2
	baz=324					
FUORN	Ofenpass-Fuorn	78.89	337	eP	P	21 28 01.0 +0.3
	comp=Z,9.7nm,1.0s					
W52A	Murphy	78.99	47	P	P	21 28 01.4 +0.3
	baz=326					
FLN	La Foliniere	79.02	345	eP	P	21 28 00.1 -0.9
FLN				pmax	pmax	
	comp=Z,19nm,0.9s					
V53A	Saluda	79.03	46	P	P	21 28 00.8 -0.5
	baz=326					
543A	St. Martinvill	79.11	56	P	P	21 28 01.8 0.0
	baz=323					
Y50A	Piedmont	79.12	49	P	P	21 28 01.9 +0.1
	baz=325					
LRAL	Lakeview Retre	79.21	50	P	P	21 28 02.2 -0.1
	baz=325					
TUE	Stuetta	79.25	338	eP	P	21 28 02.7 +0.1
	comp=Z,7.5nm,0.9s					
W53A	Cullowhee	79.28	46	P	P	21 28 03.0 +0.1
	baz=326					
Z49A	Columbiana	79.31	50	P	P	21 28 02.8 0.0
	baz=325					
Y51A	Rockmart	79.44	49	P	P	21 28 03.4 -0.2
	baz=326					
Z50A	Ashland	79.55	49	P	P	21 28 04.1 -0.1
	baz=325					
CABF	La Chapelle	79.85	340	eP	P	21 28 05.0 -0.7
CABF				pmax	pmax	
	comp=Z,9.0nm,1.0s					
SRS	Serrai	79.93	326	P	P	21 28 05.6 -0.5
SRS				pmax	pmax	
	comp=Z,8.0nm,0.9s					
Y52A	Lilburn	79.94	48	P	P	21 28 06.2 -0.1
	baz=326					
249A	Camden	80.00	51	P	P	21 28 07.3 +0.7
	baz=325					
150A	Eclectic	80.03	50	P	P	21 28 07.0 +0.2
	baz=325					
KMSC	Kings Mountain	80.14	45	P	P	21 28 07.1 -0.2
	baz=327					
TTG	Podgorica	80.21	330	eP	P	21 28 06.5 -1.1
	comp=Z,10nm,1.1s					
TTG	Podgorica	80.21	330	eP	P	21 28 06.5 -1.1
TTG				pmax	pmax	
	comp=Z,10.0nm,1.1s					
AVF	Avril sur Loir	80.24	342	eP	P	21 28 06.9 -0.8
AVF				pmax	pmax	
	comp=Z,15nm,0.8s					
QUIF	Quistinic	80.26	347	eP	P	21 28 07.0 -0.7
QUIF				pmax	pmax	
	comp=Z,11nm,0.8s					
Z52A	Williamson	80.33	48	P	P	21 28 08.4 0.0
	baz=326					
151A	Opelika	80.43	49	P	P	21 28 08.7 -0.2
	baz=326					
Y54A	Tignall	80.58	47	P	P	21 28 09.5 -0.2
	baz=326,SNR=5.5					
GOGA	Godfrey	80.59	48	P	P	21 28 09.7 -0.1
	baz=326					
152A	Waverly Hall	80.61	49	P	P	21 28 10.0 +0.1
	baz=326					
Z53A	Monticello	80.65	48	P	P	21 28 10.5 +0.4
	baz=326					
MZR	Muzera	80.73	295	i P	P	21 28 09.6 -1.2
	SNR=26					
LPL	La Plagne	80.75	339	eP	P	21 28 10.5 -0.2
LPL				pmax	pmax	
	comp=Z,14nm,0.7s					
LPG	La Plagne	80.77	339	eP	P	21 28 10.7 -0.2
LPG				pmax	pmax	
	comp=Z,17nm,0.8s					
TCF	Toulx Ste Croi	80.94	343	eP	P	21 28 10.9 -0.6
TCF				pmax	pmax	
	comp=Z,16nm,0.9s					
TIR	Tirane	80.99	329	eP	P	21 28 10.9 -0.9
	comp=Z,20nm,0.7s					
TIR	Tirane	80.99	329	eP	P	21 28 10.9 -0.9
TIR				pmax	pmax	
	comp=Z,20nm,0.7s					
FNA	Florina	80.99	328	eP	P	21 28 11.1 -0.8
	comp=Z,6.4nm,0.9s					
FNA	Florina	80.99	328	eP	P	21 28 11.1 -0.8
FNA				pmax	pmax	
	comp=Z,6.0nm,0.9s					
Z54A	Sparta	81.03	47	P	P	21 28 12.2 +0.1
	baz=326					
RAR	Rarotonga	81.05	140	LR	LR	21 57 33.5
	comp=Z,54nm,20.7s,baz=333,slow=31					
VLC	Villacollemand	81.16	337	eP	P	21 28 12.9 +0.2
	comp=Z,13nm,0.8s					
BNI	Bardonecchia	81.20	339	eP	P	21 28 13.6 +0.6
	comp=Z,8.1nm,0.7s					
BNI	Bardonecchia	81.20	339	eP	P	21 28 13.6 +0.6
BNI				pmax	pmax	
	comp=Z,8.0nm,0.7s					
CSS	Mathiatis	81.39	316	eP	P	21 28 12.8 -1.2
	comp=Z,1.9nm,0.8s					
352A	Blakely	81.48	50	P	P	21 28 14.8 +0.3
	baz=326					
ORIF	Oris-en-Rattie	81.51	340	eP	P	21 28 15.2 +0.6
ORIF				pmax	pmax	
	comp=Z,10.0nm,0.8s					
VIVF	Saint-Julien-l	81.83	341	eP	P	21 28 15.8 -0.4
VIVF				pmax	pmax	
	comp=Z,8.0nm,0.8s					
353A	Camilla	81.94	49	P	P	21 28 17.6 +0.7
	baz=326					
AQU	L'Aquila	82.04	334	eP	P	21 28 17.3 0.0
	comp=Z,10nm,0.8s					
AQU	L'Aquila	82.04	334	eP	P	21 28 17.3 0.0
AQU				pmax	pmax	
	comp=Z,10.0nm,0.8s					
MMAI	Mount Meron Ar	82.10	314	P	P	21 28 17.5 -0.3
	comp=Z,2.7nm,0.3s,baz=32,slow=5.6,SNR=22					
MMAI				LR	LR	22 09 54.0
	comp=Z,49nm,18.4s,baz=0.0,slow=39					
156A	Sylvania	82.14	47	P	P	21 28 18.6 +0.7
	baz=327					
TIGA	Tifton	82.16	49	P	P	21 28 18.6 +0.5
	baz=326					
CAF	Calviac	82.28	342	eP	P	21 28 18.5 -0.1
CAF				pmax	pmax	
	comp=Z,15nm,0.9s					
IGT	Igoumenitsa	82.47	328	P	P	21 28 19.0 -0.6
LFF	La Frestale	82.52	343	eP	P	21 28 19.6 -0.1
LFF				pmax	pmax	
	comp=Z,26nm,0.9s					
355A	Pearson	82.59	48	P	P	21 28 20.9 +0.5
	baz=327					
PGF	Pioggiola	83.02	337	eP	P	21 28 22.3 -0.2
PGF				pmax	pmax	
	comp=Z,36nm,1.2s					
STKA	Stephens Creek	83.44	193	P	P	21 28 25.0 +0.6
	comp=Z,3.1nm,0.9s,baz=349,slow=8.8,SNR=6.2					
STKA	Stephens Creek	83.44	193	P	P	21 28 25.0 +0.6
CUC	Castrocucco	83.50	331	eP	P	21 28 23.2 -1.8
	comp=Z,6.0nm,0.8s					
TIP	Timpagrande	83.95	330	eP	P	21 28 27.0 -0.3
	comp=Z,9.6nm,0.8s					
ITM	Ithomi	84.02	326	eP	P	21 28 25.8 -1.8
	comp=Z,12nm,0.7s					
EPF	Esparros	84.44	343	eP	P	21 28 28.9 -0.8
EPF				pmax	pmax	
	comp=Z,5.0nm,0.7s					
IDI	Anoyia	84.59	323	P	P	21 28 28.0 -2.7
	comp=Z,4.1nm,0.3s,baz=76,slow=4.2,SNR=20					
IDI				LR	LR	22 11 53.0
	comp=Z,28nm,18.0s,baz=82,slow=40					
SJPF	Ste Jean	84.63	344	eP	P	21 28 31.2 +0.6
SJPF				pmax	pmax	
	comp=Z,18nm,1.4s					
ETSF	Etsaut	84.73	344	eP	P	21 28 31.7 +0.5
ETSF				pmax	pmax	
	comp=Z,4.0nm,0.8s					
RAYN	Ar Rayn	84.79	301	eP	P	21 28 31.1 -0.8
	comp=Z,49nm,0.7s					
RAYN	Ar Rayn	84.79	301	i P	P	21 28 31.0 -0.8
	SNR=39					
RAYN	Ar Rayn	84.79	301	P	P	21 28 31.0 -0.8
RAYN				pmax	pmax	
	comp=Z,49nm,0.7s					
FORT	Forrest	85.19	205	eP	P	21 28 34.2 +0.9
	comp=Z,34nm,0.8s					
VAE	Valguarnera	86.24	331	LR	LR	22 14 21.6
	comp=Z,31nm,18.1s,baz=125,slow=41					
859A	Kempfer Cattle	86.26	49	P	P	21 28 38.2 -0.8
	baz=328					
ES19	SONSECA Array	88.40	346	eP	P	21 28 48.0 -1.2
ESDC	Sonseca Array	88.44	346	P	P	21 28 48.1 -1.2
	comp=Z,2.5nm,0.7s,baz=2.4,slow=4.2,SNR=21					
ESLA	Sonseca Array	88.44	346	eP	P	21 28 48.5 -0.8
	comp=Z,6.8nm,0.9s					
KEST	Kesra	89.34	334	P	P	21 28 53.2 -0.5
	comp=Z,18nm,0.9s,baz=178,slow=0.2,SNR=15					
KEST	Kesra	89.34	334	eP	P	21 28 54.6 +1.0
	comp=Z,13nm,0.8s					
MDT	Midelt	95.25	345	LR	LR	22 18 15.1
	comp=Z,32nm,18.3s,baz=360,slow=39					
DBIC	Dimbokro	120.74	339	PKP	PKPdf	21 34 49.2 0.0
	comp=Z,3.7nm,0.4s,baz=0.6,slow=1.1,SNR=19					
TIC	Toumodi	120.80	339	ePKIKP	PKPdf	21 34 49.1 -0.3
KIC	Kosan Boka	121.01	339	ePKIKP	PKPdf	21 34 49.5 -0.2
	comp=Z,154nm,2.1s					
LIC	Lamto	121.21	339	ePKIKP	PKPdf	21 34 49.3 -0.8
	comp=Z,96nm,1.7s					
VNDA	Vanda	128.05	179	PKP	PKPdf	21 35 00.8 -0.4
	comp=Z,0.6nm,0.7s,baz=325,slow=2.7,SNR=6.8					
LPAZ	La Paz	130.07	63	PKP	PKPdf	21 35 09.0 +1.3
	comp=Z,1.6nm,0.7s,baz=13,slow=5.2,SNR=6.7					
LPAZ	La Paz	130.07	63	PKIKP	PKPdf	21 35 09.0 +1.3
MAW	Mawson	137.06	214	PKP	PKPdf	21 35 19.8 +1.4
	comp=Z,2.0nm,0.6s,baz=62,slow=3.1,SNR=6.9					
BOSA	Boshof	137.86	283	PKP	PKPdf	21 35 21.9 +0.6
	comp=Z,6.0nm,1.0s,baz=83,slow=18,SNR=3.9					
CPUP	Villa Florida	144.10	60	PKP	PKPbc	21 35 31.1 +0.5
	comp=Z,5.3nm,0.7s,baz=280,slow=2.1,SNR=6.9					
PLCA	Paso Flores	145.73	92	PKPbc	PKPab	21 35 36.1 +0.2
	comp=Z,6.1nm,0.6s,baz=296,slow=3.6,SNR=26					
TRQA	Tornquist	149.61	81	ePKPbc	PKPbc	21 35 46.4 +0.4

*ISCJB **25** 21:39:50.3±0.6, 13°.3N±0°.2×88°.4W±0°.1, h195km±5km, mb3.6/4, Error ellipse: s-maj=29.1km s-min=7.2km az=32.1*
*UCR **25** 21:39:51.1±0.9, 12°.96N×88°.64W, h177km±22km, ML3.7*
*IDC **25** 21:39:52.8±2.6, 13°.62N×88°.22W, h187km±38km, mb3.3/4, mb1 3.7/6, mb1mx3.2/44, mbtmp3.9/6, Error ellipse: s-maj=52.6km s-min=25.0km az=39.0*

ISC 25 21:39:51.6±0.9, 13°.4N±0°.2×88°.4W±0°.1, h186km±7km, n24, σ0=94/27, mb3.6/4, 2C, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PACA	Pacayal	0.13	47	eP	Pn	21 40 17.4	+1.1
LCY	Lacayo	0.13	71	eP	Pn	21 40 15.7	-0.5
TECA	Tecapa	0.14	324	i P	Pn	21 40 15.7	-0.6
SNVI	San Vicente	0.47	299	eP	Pn	21 40 16.8	-0.3
CNCH	Conchagua	0.58	100	eP	Pn	21 40 18.0	+0.5
CNCH				eS	Sn	21 40 38.8	+1.4
CNCH				IAML		21 40 44.2	
	comp=Z,4μm,0.4s						
LFRS	El Faro	0.67	291 ⇑	i P	Pn	21 40 17.3	-0.6
LBRS	Las Brisas	0.70	300 ⇑	i P	Pn	21 40 17.8	-0.3
LFU	La Fuente	0.77	298	eP	Pn	21 40 18.2	-0.2
LOMA	San Marcos	0.78	290	i P	Pn	21 40 18.0	-0.4
BOQS	Boqueron	0.91	293	eP	Pn	21 40 19.4	0.0
SNJE	San Jose	1.25	293	eP	Pn	21 40 22.0	-0.1
SBLS	San Blas	1.25	291	eP	Pn	21 40 21.8	-0.3
RTR	El Retiro	1.30	293	eP	Pn	21 40 22.6	+0.2
MOMN	Momotombo	2.07	118	eP	Pn	21 40 29.8	0.0
MOMN				IAML		21 41 03.5	
	comp=Z,98nm,0.3s						
IXG	Ixpaco	2.13	292	eP	Pn	21 40 30.1	-0.4
IXG				eS	Sn	21 41 01.2	+0.3
COPN	Copaltepe	2.15	124	eP	Pn	21 40 30.3	-0.4
JTS	JuntasAbangare	4.58	132	P	Pn	21 41 01.7	+1.4
	comp=Z,4.4nm,0.3s,baz=36,slow=22,SNR=18						
JTS				S	Sn	21 41 51.5	-2.8
	comp=Z,9.2nm,0.3s,baz=196,slow=23,SNR=10						
SDV	Santo Domingo	18.01	103	P	P	21 43 48.6	-0.3
	comp=Z,0.7nm,0.3s,baz=308,slow=7.6,SNR=4.3						
TXAR	Lajitas Array	21.26	321	P	P	21 44 24.2	+0.7
	comp=Z,1.5nm,0.5s,baz=139,slow=9.7,SNR=19						
TKL	Tuckaleechee C	22.57	10	P	P	21 44 35.4	-0.9
	comp=Z,5.0nm,0.8s,baz=191,slow=10,SNR=4.8						
PDAR	Pinedale Array	34.51	332	P	P	21 46 22.4	+0.1
	comp=Z,0.6nm,0.9s,baz=101,slow=7.9,SNR=4.2						
YKA	Yellowknife Ar	52.47	345	P	P	21 48 44.2	-0.8
	comp=Z,0.8nm,0.7s,baz=144,slow=7.3,SNR=3.7						
WRA	Warramunga Arr	138.61	255	PKP	PKPdf	21 58 57.6	+1.4
	comp=Z,1.3nm,0.5s,baz=88,slow=2.7,SNR=19						
ASAR	Alice Springs	138.72	249	PKP	PKPdf	21 58 57.5	+1.2
	comp=Z,0.5nm,0.7s,baz=81,slow=1.7,SNR=5.5						

*ISK **25** 21:46:54.2, 38°.72N×43°.08E, h5km, ML2.4/9*
*ISCJB **25** 21:46:55.5±0.4, 38°.75N±0°.02×43°.08E±0°.03, h9km±4km, Error ellipse: s-maj=4.2km s-min=3.5km az=45.0*
*CSEM **25** 21:46:55.1±0.1, 38°.74N×43°.09E, h10km, ML2.4, Error ellipse: s-maj=3.3km s-min=2.7km az=135.0*
*DDA **25** 21:46:55.5, 38°.73N×43°.11E, h7km, Ml2.7*

ISC 25 21:46:55.2±1.1, 38°.73N±0°.02×43°.09E±0°.02, h11km±9km, n32, σ0=52/56, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	Van	0.27	119	PG	Pg	21 47 01.3	+0.5
VANB				SG	Sb	21 47 06.4	-0.5
VANB	Van	0.27	119	ePg	Pg	21 47 01.3	+0.5
VANB				eSg	Sb	21 47 06.4	-0.5
ADCV	BITLIS_Adilcev	0.30	286	i P	Pg	21 47 01.6	+0.3
ADCV				i S	Sb	21 47 07.8	+0.1
ADCV	BITLIS_Adilcev	0.30	286	P	Pg	21 47 01.6	+0.3
ADCV				S	Sb	21 47 07.8	+0.1
TVAN	Van	0.32	129	i P	Pg	21 47 01.3	-0.4
TVAN				i S	Sb	21 47 08.0	-0.4
TVAN	Van	0.32	129	P	Pg	21 47 01.3	-0.4
TVAN				S	Sb	21 47 08.0	-0.4
ERCV	ERCIS-VAN	0.35	34	PG	Pg	21 47 01.8	-0.5
ERCV				SG	Sb	21 47 08.1	-1.2
ERCV	ERCIS-VAN	0.35	34	ePg	Pg	21 47 01.8	-0.5
ERCV				eSg	Sb	21 47 08.1	-1.2
GEVA	Gevas	0.42	183	i P	Pg	21 47 02.7	-0.8
GEVA				i S	Sb	21 47 10.8	-0.3
GEVA	Gevas	0.42	183	P	Pg	21 47 02.7	-0.8
GEVA				S	Sb	21 47 10.8	-0.3
VMUR	Van-Muradiye	0.46	55	i P	Pg	21 47 04.1	-0.2
VMUR				i S	Sb	21 47 13.3	+0.9
VMUR	Van-Muradiye	0.46	55	P	Pg	21 47 04.1	-0.2
VMUR				S	Sb	21 47 13.3	+0.9
TUTA	Tutak	0.71	342	i P	Pg	21 47 08.7	-0.3
TUTA				i S	Sb	21 47 19.7	+0.1
TUTA	Tutak	0.71	342	P	Pg	21 47 08.7	-0.3
TUTA				S	Sb	21 47 19.7	+0.1
CLDR	Caldiran	0.77	57	PG	Pg	21 47 09.5	-0.6
CLDR				SG	Sg	21 47 20.3	+0.1
CLDR	Caldiran	0.77	57	i P	Pg	21 47 09.8	-0.3
CLDR				i S	Sb	21 47 21.2	-0.1
CLDR	Caldiran	0.77	57	ePg	Pg	21 47 09.5	-0.6
CLDR	Caldiran	0.77	57	P	Pg	21 47 09.8	-0.3
CLDR				eSg	Sg	21 47 20.3	+0.1
CLDR				S	Sb	21 47 21.2	-0.1
GURO	Guroymak-BITLI	0.85	258	PG	Pg	21 47 11.1	-0.5
GURO				SG	Sg	21 47 22.3	-0.3
GURO	Guroymak-BITLI	0.85	258	ePg	Pg	21 47 11.1	-0.5
GURO				eSg	Sg	21 47 22.3	-0.3
AGRB	Hanur-Agry	0.85	355	PG	Pg	21 47 11.2	-0.5
AGRB				SG	Sb	21 47 23.3	-0.4
AGRB	Hanur-Agry	0.85	355	ePg	Pg	21 47 11.2	-0.5
AGRB				eSg	Sb	21 47 23.3	-0.4
SRTM	Siirt_Merkez	1.18	232	i P	Pn	21 47 18.8	+1.0
SRTM				i S	Sn	21 47 34.3	+0.4
SRTM	Siirt_Merkez	1.18	232	P	Pn	21 47 18.8	+1.0
SRTM				S	Sn	21 47 34.3	+0.4
SIRT	Sirnak	1.33	203	PN	Pn	21 47 20.1	+0.2
SIRT	Sirnak	1.33	203	ePn	Pn	21 47 20.1	+0.2
VRTB	Varto-Mus	1.34	289	PN	Pn	21 47 20.3	+0.1
VRTB	Varto-Mus	1.34	289	ePn	Pn	21 47 20.3	+0.1
CUKT	Cukurca	1.53	164	PN	Pn	21 47 23.2	+0.5
CUKT	Cukurca	1.53	164	ePn	Pn	21 47 23.2	+0.5
SVAN	Silvan-Diyarba	1.59	249	PN	Pn	21 47 23.5	0.0
SVAN	Silvan-Diyarba	1.59	249	ePn	Pn	21 47 23.5	0.0

*NEIC **25** 21:49:07.7±0.0, 17°.85N×94°.56W, h163km, MD4.1(MEX), After MEX.*

MEX 25 21:49:07.7±0.3, 17°.85N×94°.56W, h163km±47km, MD4.1, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	Vista Hermosa	2.22	250	eP	Pn	21 49 44.9	-1.4
VHO				eS	Sn	21 50 14.2	-1.9
VHO	Vista Hermosa	2.22	250	eP	Pn	21 49 44.9	-1.4
VHO				eS	Sn	21 50 14.2	-1.9
PCIG		2.49	149	eP	Pn	21 49 48.2	-1.2
PCIG				i S	Sn	21 50 20.9	-0.7
PCIG		2.49	149	eP	Pn	21 49 48.2	-1.2
PCIG				i S	Sn	21 50 20.9	-0.7
TPIG	Tehuac#an	2.73	282	eP	Pn	21 49 55.0	+2.6
TPIG				i S	Sn	21 50 25.7	-1.3
TPIG	Tehuac#an	2.73	282	eP	Pn	21 49 55.0	+2.6
TPIG				i S	Sn	21 50 25.7	-1.3
TLIG	Tlapa	3.83	266	eP	P

	baz=277						
TWC	**Suao**	**0.49 263**	*i* P		**Pn**	**22 20 24.9**	**0.0**
	baz=251						
TWC			*e*S		**Sn**	**22 20 35.5**	**-0.6**
	baz=251						
TWB1	**Santiao Chiao**	**0.49 313**	P		**Pn**	**22 20 24.5**	**-0.5**
	baz=297						
TWB1			S		**Sn**	**22 20 36.0**	**-0.1**
	baz=297						
NTC	**Toucheng**	**0.54 290**	P		**Pn**	**22 20 25.2**	**0.0**
	baz=277						
NTC			*e*S		**Sn**	**22 20 36.1**	**-0.5**
	baz=277						
JYNG	**Yonaguni jima**	**0.56 113**	P		**Pn**	**22 20 25.5**	**+0.1**
JYNG			S		**Sn**	**22 20 37.0**	**0.0**
ENAH	**Nanao**	**0.57 247**	*e*P		**Pn**	**22 20 25.9**	**+0.3**
	baz=244						
ENAH			*e*S		**Sn**	**22 20 37.4**	**+0.3**
	baz=244						
ILA	**Ilan**	**0.59 280**	*e*P		**Pn**	**22 20 25.0**	**-0.7**
	baz=266						
ILA			*e*S		**Sn**	**22 20 37.8**	**+0.3**
	baz=266						
TIPB	**Shuangxi**	**0.59 301**	‖ *i*P		**Pn**	**22 20 24.9**	**-0.9**
	baz=287						
TIPB			S		**Sn**	**22 20 36.2**	**-1.4**
	baz=287						
YOJ	**Yonaguni jima**	**0.61 110**	⇑P		**Pn**	**22 20 25.9**	**0.0**
	baz=124						
YOJ			S		**Sn**	**22 20 37.6**	**-0.2**
	baz=124						
YOJ	**Yonaguni jima**	**0.61 110**	P		**Pn**	**22 20 25.9**	**0.0**
YOJ			S		**Sn**	**22 20 37.5**	**-0.2**
NANB	**Nanao**	**0.62 247**	P		**Pn**	**22 20 26.2**	**+0.2**
	baz=238						
ENA	**Nanau**	**0.63 248**	*i* P		**Pn**	**22 20 26.4**	**+0.2**
	baz=238						
TWE	**Neicheng**	**0.65 275**	*i* P		**Pn**	**22 20 26.5**	**+0.2**
	baz=271						
TWE			*e*S		**Sn**	**22 20 38.5**	**0.0**
	baz=271						
NWF	**Wu-fen Shan**	**0.68 306**	*e*P		**Pn**	**22 20 26.9**	**+0.3**
	baz=293						
NWF			*e*S		**Sn**	**22 20 39.2**	**+0.1**
	baz=293						
WFSB	**Wu-fen Shan**	**0.68 306**	*e*P		**Pn**	**22 20 26.9**	**+0.4**
	baz=295						
WFSB			*e*S		**Sn**	**22 20 39.0**	**+0.1**
	baz=295						
ENTT	**Nioudou**	**0.74 268**	*i* P		**Pn**	**22 20 27.8**	**+0.6**
	baz=268						
TWA	**Mucha**	**0.79 293**	P		**Pn**	**22 20 27.6**	**0.0**
	baz=279						
TWA			*e*S		**Sn**	**22 20 40.3**	**-0.6**
	baz=279						
NWLT	**Wulai**	**0.81 278**	P		**Pn**	**22 20 27.9**	**0.0**
	baz=275						
YM07	**YM07**	**0.86 306**	*e*P		**Pn**	**22 20 27.4**	**-1.0**
	baz=296						
TATO	**Taipei**	**0.87 291**	*i* P		**Pn**	**22 20 28.2**	**-0.3**
	baz=284						
TATO			*e*S		**Sn**	**22 20 41.3**	**-1.0**
	baz=284						
NACB	**Ninganchiao**	**0.87 236**	P		**Pn**	**22 20 28.1**	**-0.3**
	baz=226						
NACB			*e*S		**Sn**	**22 20 41.5**	**-0.9**
	baz=226						
YM11	**YM11**	**0.89 304**	*e*P		**Pn**	**22 20 29.7**	**+1.0**
	baz=290						
YM11			*e*S		**Sn**	**22 20 42.7**	**-0.1**
	baz=290						
YM10	**YM10**	**0.89 303**	*e*P		**Pn**	**22 20 28.8**	**0.0**
	baz=289						
YM12	**YM12**	**0.90 305**	*e*P		**Pn**	**22 20 28.6**	**-0.2**
	baz=291						
YM12			*i* S		**Sn**	**22 20 42.2**	**-0.7**
	baz=291						
YM04	**YM04**	**0.91 302**	*e*P		**Pn**	**22 20 28.9**	**-0.1**
	baz=289						
YM04			*e*S		**Sn**	**22 20 42.4**	**-0.7**
	baz=289						
YHNB	**Yeheng**	**0.92 270**	P		**Pn**	**22 20 29.5**	**+0.5**
	baz=271						
YHNB			S		**Sn**	**22 20 43.5**	**+0.1**
	baz=271						
TWD	**Chiawan**	**0.93 231**	*e*P		**Pn**	**22 20 28.8**	**-0.3**
	baz=227						
TWD			*e*S		**Sn**	**22 20 43.0**	**-0.4**
	baz=227						
NSK	**Sanguang**	**0.93 271**	P		**Pn**	**22 20 29.6**	**+0.4**
	baz=272						
NSK			*e*S		**Sn**	**22 20 43.7**	**+0.1**
	baz=272						
TWY	**Chenhua**	**0.93 310**	P		**Pn**	**22 20 29.5**	**+0.4**
	baz=297						
TWY			*e*S		**Sn**	**22 20 44.0**	**+0.5**
	baz=297						
NNSB	**Datong**	**0.94 255**	*i* P		**Pn**	**22 20 29.6**	**+0.3**
	baz=246						
NNSH	**Datong**	**0.94 255**	*i* P		**Pn**	**22 20 29.6**	**+0.2**
	baz=246						
NNS	**Nan Shan**	**0.95 256**	P		**Pn**	**22 20 29.7**	**+0.3**
	baz=246						
TWS1	**Kuangyinshan**	**0.98 296**	P		**Pn**	**22 20 29.8**	**+0.1**
	baz=290						
TWS1			*i* S		**Sn**	**22 20 44.3**	**0.0**
	baz=290						
NTST	**Danshui**	**0.98 300**	P		**Pn**	**22 20 29.8**	**+0.1**
	baz=288						
NTST			*e*S		**Sn**	**22 20 44.1**	**-0.3**
	baz=288						
HWA	**Hwalien**	**0.99 226**	*e*P		**Pn**	**22 20 29.9**	**+0.2**
	baz=217						
HWA			*e*S		**Sn**	**22 20 45.3**	**+0.7**
	baz=217						
ENLB	**Shoufeng**	**1.04 223**	P		**Pn**	**22 20 31.1**	**+0.8**
	baz=212						
ENLB			*e*S		**Sn**	**22 20 47.0**	**+1.3**
	baz=212						
NCU	**National Centr**	**1.13 286**	*e*P		**Pn**	**22 20 31.9**	**+0.6**
	baz=288						
NCU			*e*S		**Sn**	**22 20 48.5**	**+1.1**
	baz=288						
NCUH	**Zhongli**	**1.13 286**	*e*P		**Pn**	**22 20 31.8**	**+0.5**
	baz=287						
NCUH			*e*S		**Sn**	**22 20 48.2**	**+0.8**
	baz=287						
TDCB	**Techi**	**1.19 250**	*e*P		**Pn**	**22 20 33.0**	**+0.8**
	baz=240						
TDCB			*e*S		**Sn**	**22 20 49.3**	**+0.3**
	baz=240						
ESL	**Shilin**	**1.22 226**	*e*P		**Pn**	**22 20 31.8**	**-0.7**
	baz=231						
ESL			*e*S		**Sn**	**22 20 47.7**	**-1.6**
	baz=231						
LIOB	**Emei**	**1.25 269**	P		**Pn**	**22 20 33.1**	**+0.3**
	baz=265						
LIOB			*e*S		**Sn**	**22 20 50.2**	**+0.3**
	baz=265						
CHGB	**Renai**	**1.26 241**	*e*P		**Pn**	**22 20 33.5**	**+0.4**
	baz=232						
CHGB			*e*S		**Sn**	**22 20 51.0**	**+0.5**
	baz=232						
NSTT	**Nanjuang**	**1.26 269**	P		**Pn**	**22 20 33.2**	**+0.3**
	baz=264						
NSTT			*e*S		**Sn**	**22 20 50.2**	**0.0**
	baz=264						
IRIF	**Iriomote-Funau**	**1.27 105**	P		**Pn**	**22 20 33.0**	**0.0**
IRIF			S		**Sn**	**22 20 50.3**	**-0.1**
EGFH	**Guangfu**	**1.32 221**	*e*P		**Pn**	**22 20 33.2**	**-0.5**
	baz=229						
EGFH			*e*S		**Sn**	**22 20 50.2**	**-1.5**
	baz=229						
HATJ	**Hateruma jima**	**1.43 115**	P		**Pn**	**22 20 35.4**	**+0.4**
HATJ			*e*S		**Sn**	**22 20 54.2**	**+0.2**
VWDT	**VWDT**	**1.46 231**	*i* P		**Pn**	**22 20 35.5**	**+0.2**
	baz=223						
VWDT			*e*S		**Sn**	**22 20 54.1**	**-0.4**
	baz=223						
NMLH	**Miaoli**	**1.46 265**	P		**Pn**	**22 20 35.7**	**+0.4**
	baz=261						
NMLH			S		**Sn**	**22 20 54.5**	**0.0**
	baz=261						
HGSD	**Ruisui**	**1.46 217**	*e*P		**Pn**	**22 20 35.1**	**-0.3**
	baz=208						
DPDB	**Guoxing**	**1.47 245**	*e*P		**Pn**	**22 20 36.7**	**+1.1**
	baz=242						
NSY	**Sanyi**	**1.50 261**	*e*P		**Pn**	**22 20 36.6**	**+0.8**
	baz=257						
NSY			*e*S		**Sn**	**22 20 56.2**	**+0.7**
	baz=257						
JKRS	**Kuro-shima**	**1.54 106**	P		**Pn**	**22 20 36.8**	**+0.4**
JKRS			S		**Sn**	**22 20 56.5**	**+0.1**
SMLT	**Sun Moon Lake**	**1.56 240**	P		**Pn**	**22 20 38.0**	**+1.2**
	baz=232						
SMLT			*e*S		**Sn**	**22 20 58.4**	**+1.3**
	baz=232						
SSLB	**Suanglung**	**1.57 236**	*e*P		**Pn**	**22 20 38.1**	**+1.2**
	baz=231						
SSLB			*e*S		**Sn**	**22 20 58.1**	**+0.9**
	baz=231						
TYC	**Yuchr**	**1.59 242**	P		**Pn**	**22 20 38.2**	**+1.2**
	baz=239						
TYC			*e*S		**Sn**	**22 20 58.7**	**+1.3**
	baz=239						
YULB	**Yu-li**	**1.61 218**	*e*P		**Pn**	**22 20 36.2**	**-1.1**
	baz=224						
JIJ	**Ishigaki jima**	**1.63 100**	P		**Pn**	**22 20 37.4**	**-0.1**
JIJ			S		**Sn**	**22 20 57.9**	**-0.5**
TWF1	**Yuli**	**1.65 217**	*e*P		**Pn**	**22 20 36.9**	**-0.8**
	baz=223						
WJS	**Zhushan**	**1.73 241**	P		**Pn**	**22 20 40.2**	**+1.4**
	baz=248						
WJS			*e*S		**Sn**	**22 21 02.6**	**+1.9**
	baz=248						
JISG	**Ishigakijimahi**	**1.76 92**	P		**Pn**	**22 20 39.3**	**+0.2**
JISG			S		**Sn**	**22 21 01.1**	**-0.2**
FULB	**Fuli**	**1.77 214**	*e*P		**Pn**	**22 20 39.3**	**-0.1**
	baz=207						
FULB			*e*S		**Sn**	**22 21 01.0**	**-0.7**
	baz=207						
CHKT	**Chengkung**	**1.82 211**	*e*P		**Pn**	**22 20 39.1**	**-0.9**
	baz=203						
CHKT			*e*S		**Sn**	**22 21 00.2**	**-2.5**
	baz=203						
ALS	**Alishan**	**1.85 232**	P		**Pn**	**22 20 41.5**	**+0.9**
	baz=223						
ALS			*e*S		**Sn**	**22 21 04.4**	**+0.6**
	baz=223						
CHN5	**Tsauling**	**1.89 236**	P		**Pn**	**22 20 41.9**	**+0.9**
	baz=243						
CHN5			*e*S		**Sn**	**22 21 06.2**	**+1.7**
	baz=243						
WDLH	**Douliu**	**1.95 240**	*e*P		**Pn**	**22 20 43.0**	**+1.4**
	baz=238						
WDLH			*e*S		**Sn**	**22 21 07.0**	**+1.3**
	baz=238						
RLNB	**Erlin**	**2.00 248**	*e*P		**Pn**	**22 20 42.7**	**+0.4**
	baz=253						
RLNB			*e*S		**Sn**	**22 21 07.4**	**+0.4**
	baz=253						
CHN4	**Tsaushan**	**2.10 232**	*e*P		**Pn**	**22 20 44.6**	**+1.0**
	baz=229						
CHN4			*e*S		**Sn**	**22 21 10.5**	**+1.3**
	baz=229						
TPUB	**Ta-pu**	**2.10 230**	*e*P		**Pn**	**22 20 44.8**	**+1.1**
	baz=228						
JTJ	**Tarama**	**2.11 90**	P		**Pn**	**22 20 44.4**	**+0.7**
JTJ			S		**Sn**	**22 21 09.6**	**+0.1**
TWH	**Lutao**	**2.12 203**	*e*P		**Pn**	**22 20 43.1**	**-0.8**
	baz=206						
TWH			*e*S		**Sn**	**22 21 07.5**	**-2.2**
	baz=206						
WTP	**Ta-pu**	**2.15 229**	*e*P		**Pn**	**22 20 45.2**	**+0.9**
	baz=227						
TWGBT	**Beinan**	**2.20 213**	*e*P		**Pn**	**22 20 43.9**	**-1.0**
	baz=211						
TWG	**Pinlang**	**2.20 213**	P		**Pn**	**22 20 43.9**	**-1.0**
	baz=212						
TWG			*e*S		**Sn**	**22 21 09.6**	**-2.0**
	baz=212						
WSF	**Szhu**	**2.23 243**	*e*S		**Sn**	**22 21 12.5**	**+0.3**
	baz=240						
TWK	**Hsinying**	**2.23 232**	P		**Pn**	**22 20 46.1**	**+0.8**
	baz=229						
TWK			*e*S		**Sn**	**22 21 13.6**	**+1.2**
	baz=229						
CHN1	**Nanshi**	**2.25 229**	P		**Pn**	**22 20 46.5**	**+0.8**
	baz=227						
CHN1			*e*S		**Sn**	**22 21 14.3**	**+1.4**
	baz=227						
SGST	**Jiashian**	**2.28 227**	*e*P		**Pn**	**22 20 47.1**	**+1.1**
	baz=224						
SLGT	**Liugui**	**2.31 224**	*e*P		**Pn**	**22 20 47.6**	**+1.2**
	baz=231						
SLGT			*e*S		**Sn**	**22 21 15.8**	**+1.7**
	baz=231						
SSD	**Sandimen**	**2.50 220**	*e*P		**Pn**	**22 20 50.3**	**+1.4**
	baz=218						
JIRB	**Irabujima**	**2.54 86**	*e*S		**Sn**	**22 21 19.2**	**-0.5**
MASBT	**Mashibuluo**	**2.60 218**	*e*P		**Pn**	**22 20 51.3**	**+1.0**
	baz=216						
JIKM	**Ikemajima**	**2.62 84**	*e*S		**Sn**	**22 21 21.8**	**+0.3**
JMJ	**Miyako jima 2**	**2.65 86**	*e*S		**Sn**	**22 21 22.2**	**-0.1**
MATB	**Ma-tsu**	**2.65 304**	*e*P		**Pn**	**22 20 50.4**	**-0.6**
	baz=301						
VWUC	**VWUC**	**2.69 277**	*e*P		**Pn**	**22 20 50.7**	**-0.7**
	baz=274						
VWUC			*e*S		**Sn**	**22 21 20.4**	**-2.8**
	baz=274						
JOGS	**Gusukube**	**2.75 87**	P		**Pn**	**22 20 53.1**	**+0.9**
JOGS			*e*S		**Sn**	**22 21 25.2**	**+0.5**
PHUB	**P'eng-hu**	**2.81 246**	*e*P		**Pn**	**22 20 52.0**	**-1.1**
	baz=244						
PHUB			*e*S		**Sn**	**22 21 24.0**	**-2.2**
	baz=244						
WDGT	**Dungji**	**2.86 241**	*e*P		**Pn**	**22 20 53.1**	**-0.6**
	baz=230						
WDGT			*e*S		**Sn**	**22 21 25.4**	**-1.9**
	baz=230						

ISCJB ***25*** *22:30:11.2±0.4, 50°.14N±0°.03×19°.01E±0°.03, h0km, Error ellipse: s-maj=4.1km s-min=2.1km az=19.5*
IPEC ***25*** *22:30:12.9±0.2, 50°.17N×19°.07E, h4km±1km, ML2.3/4, Error ellipse: s-maj=1.9km s-min=1.1km az=164.0*
CSEM ***25*** *22:30:12.6±0.2, 50°.11N×19°.07E, h1km, ML3.0/6, Error ellipse: s-maj=5.8km s-min=3.3km az=12.0*
PRU ***25*** *22:30:13.1, 50°.14N×19°.07E, h0km*
WAR ***25*** *22:30:13.5, 50°.09N×19°.15E, h1km, Mw2.7*
VIE ***25*** *22:30:15.2±1.1, 49°.91N×19°.02E, h0km, mb2.2/3, ml2.6/4, Error ellipse: s-maj=10.6km s-min=6.4km az=5.0 38 km S of Katowice Suspected Mining induced.*
IDC ***25*** *22:30:16.0±1.7, 50°.20N×18°.83E, h0km, mb1 4.0/1, mb1mx3.0/56, mbtmp4.0/1, ML2.4/2, Error ellipse: s-maj=36.3km s-min=12.2km az=146.0*

ISC 25 22:30:12.4±0.7, 50°.07N±0°.02×19°.06E±0°.02, h0km, n68, σ1902/117, 4C-10D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHZP	**Chorzow**	**0.22**	**349**	*e*Pg	**Pg**	**22 30 18.0**	**+1.3**
CHZP				*e*Sg	**Sg**	**22 30 21.8**	**+2.2**
CHZP	**Chorzow**	**0.22**	**349**	*e*Pg	**Pg**	**22 30 18.0**	**+1.3**
CHZP				*e*Sg	**Sg**	**22 30 21.8**	**+2.2**
OJC	**Ojcow**	**0.50**	**73**	*e*Pg	**Pg**	**22 30 21.8**	**-0.2**
OJC				*e*Sg	**Sg**	**22 30 28.5**	**0.0**
OJC	**Ojcow**	**0.50**	**73**	*e*Pg	**Pg**	**22 30 21.8**	**-0.2**
OJC				*e*Sg	**Sg**	**22 30 28.5**	**0.0**
OJC	**Ojcow**	**0.50**	**73**	*e*Pg	**Pg**	**22 30 21.8**	**-0.2**
OJC				*e*Sg	**Sg**	**22 30 28.5**	**0.0**
RAC	**Raciborz**	**0.56**	**271**	*e*Pg	**Pb**	**22 30 25.2**	**+0.2**
RAC				*e*Sg	**Sb**	**22 30 34.2**	**+0.7**
OKC	**Ostrava-Krasne**	**0.63**	**248**	*e*PG	**Pb**	**22 30 26.6**	**+0.3**
OKC				*e*SG	**Sb**	**22 30 36.1**	**+0.4**
	comp=Z,45nm,0.5s						
LANS	**Liptovska Anna**	**0.96**	**164**	*e*PG	**Pb**	**22 30 32.1**	**+0.1**
LANS				*e*SG	**Sb**	**22 30 45.6**	**+0.4**
LANS	**Liptovska Anna**	**0.96**	**164**	*e*Pg	**Pb**	**22 30 32.1**	**+0.1**
LANS				*e*Sg	**Sb**	**22 30 45.6**	**+0.4**
MORC	**Moravsky Berou**	**1.02**	**254**	‖ *i*P	**Pb**	**22 30 32.9**	**-0.1**
MORC	**Moravsky Berou**	**1.02**	**254**	‖ *i*P	**Pb**	**22 30 32.9**	**-0.1**
MORC	**Moravsky Berou**	**1.02**	**254**	*e*Pg	**Pb**	**22 30 33.2**	**+0.2**
MORC				*e*Sg	**Sg**	**22 30 46.1**	**+0.9**
	63nm,0.4s						
MORC	**Moravsky Berou**	**1.02**	**254**	*e*PG	**Pb**	**22 30 33.2**	**+0.2**
MORC				*e*SG	**Sg**	**22 30 46.2**	**+1.0**
MORC	**Moravsky Berou**	**1.02**	**254**	*e*Pg	**Pb**	**22 30 33.2**	**+0.2**
	baz=68						
MORC				*e*Sg	**Sg**	**22 30 46.1**	**+0.9**
	63nm,0.4s,baz=68						
NIE	**Niedzica**	**1.04**	**129**	*e*Pg	**Pg**	**22 30 32.7**	**+0.4**
NIE				*e*Sg	**Sb**	**22 30 48.2**	**+0.7**
NIE	**Niedzica**	**1.04**	**129**	*e*Pg	**Pg**	**22 30 32.7**	**+0.4**
NIE				*e*Sg	**Sb**	**22 30 48.2**	**+0.7**
NIE	**Niedzica**	**1.04**	**129**	*e*Pg	**Pg**	**22 30 32.7**	**+0.4**
NIE				*e*Sg	**Sb**	**22 30 48.2**	**+0.7**
KRLC	**Kraliky**	**1.47**	**271**	*e*PG	**Pn**	**22 30 39.6**	**-0.5**
KRLC				*e*SG	**Sn**	**22 31 00.4**	**+0.3**
	comp=Z,11nm,0.6s						
JAVC	**Velka Javorina**	**1.52**	**217**	*e*Pn	**Pg**	**22 30 41.8**	**+0.4**
JAVC				*e*Sg	**Sn**	**22 31 02.8**	**+1.5**
	20nm,0.4s						
JAVC	**Velka Javorina**	**1.52**	**217**	*e*PN	**Pg**	**22 30 41.9**	**+0.5**
JAVC				*e*SG	**Sn**	**22 31 02.9**	**+1.6**
JAVC	**Velka Javorina**	**1.52**	**217**	*e*Pn	**Pg**	**22 30 41.8**	**+0.4**
	baz=34						
JAVC				*e*Sg	**Sn**	**22 31 02.8**	**+1.5**
	20nm,0.4s,baz=34						
VYHS	**Vyhne**	**1.59**	**185**	*e*PN	**Pn**	**22 30 41.9**	**+0.1**
VYHS				*e*SN	**Sg**	**22 31 04.0**	**+0.6**
VYHS				*e*LG	Lg	22 31 04.8	
VYHS	**Vyhne**	**1.59**	**185**	*e*Pg	**Pn**	**22 30 41.9**	**+0.1**
VYHS				*e*Sn	**Sg**	**22 31 04.0**	**+0.6**
VRAC	**Vranov**	**1.77**	**245**	‖ *i*P	**Pn**	**22 30 44.2**	**-0.1**
VRAC	**Vranov**	**1.77**	**245**	‖ *i*P	**Pn**	**22 30 44.2**	**-0.1**
VRAC	**Vranov**	**1.77**	**245**	*e*Pn	**Pn**	**22 30 45.0**	**+0.7**
VRAC				*e*Sg	**Sg**	**22 31 10.0**	**+0.7**
	16nm,0.3s						
VRAC	**Vranov**	**1.77**	**245**	*e*PN	**Pn**	**22 30 45.0**	**+0.7**
VRAC				*e*SG	**Sg**	**22 31 10.0**	**+0.7**
VRAC	**Vranov**	**1.77**	**245**	*e*Pn	**Pn**	**22 30 45.0**	**+0.7**
	baz=61						
VRAC				*e*Sg	**Sg**	**22 31 10.0**	**+0.7**
	16nm,0.3s,baz=61						
DPC	**Dobruska-Polom**	**1.78**	**280**	*e*PG	**Pn**	**22 30 45.0**	**+0.6**
DPC				*e*SG	**Sb**	**22 31 09.3**	**+0.6**
	comp=Z,28nm,0.4s						
KECS	**Kecovo**	**1.85**	**149**	*e*PN	**Pn**	**22 30 45.3**	**0.0**
KECS				*e*SN	**Sn**	**22 31 08.6**	**-0.8**
KECS	**Kecovo**	**1.85**	**149**	*e*Pn	**Pn**	**22 30 45.3**	**0.0**
KECS				*e*Sn	**Sn**	**22 31 08.6**	**-0.8**
KSP	**Ksiaz**	**1.93**	**295**	*e*Pb	**Pn**	**22 30 46.6**	**+0.2**
KSP				*e*Pg	**Pg**	**22 30 49.3**	**0.0**
KSP				*e*Sg	**Sg**	**22 31 15.3**	**+1.1**
KSP	**Ksiaz**	**1.93**	**295**	*e*Pb	**Pn**	**22 30 46.6**	**+0.2**
KSP				*e*Pg	**Pg**	**22 30 49.3**	**0.0**
KSP				*e*Sg	**Sg**	**22 31 15.3**	**+1.1**
KSP	**Ksiaz**	**1.93**	**295**	*e*Pb	**Pn**	**22 30 46.6**	**+0.2**
CRVS	**Cervenica-Dubn**	**1.96**	**126**	*e*PG	**Pg**	**22 30 51.2**	**+1.3**
CRVS				*e*LG	Lg	22 31 27.9	
CRVS	**Cervenica-Dubn**	**1.96**	**126**	*e*Pg	**Pg**	**22 30 51.3**	**+1.3**
UPC	**Upice**	**2.00**	**284**	*e*PG	**Pb**	**22 30 49.1**	**-0.6**
UPC				*e*SG	**Sb**	**22 31 15.8**	**+0.7**
	comp=Z,15nm,0.5s						
KRUC	**Moravsky**	**2.01**	**241**	*e*Pn	**Pn**	**22 30 48.3**	**+0.8**
KRUC				*e*Sg	**Sg**	**22 31 17.6**	**+0.8**
	26nm,0.5s						
KRUC	**Moravsky**	**2.01**	**241**	*e*PN	**Pn**	**22 30 48.3**	**+0.8**
KRUC				*e*SG	**Sg**	**22 31 17.7**	**+0.9**
KRUC	**Moravsky**	**2.01**	**241**	*e*Pn	**Pn**	**22 30 48.3**	**+0.8**
	baz=57						
KRUC				*e*Sg	**Sg**	**22 31 17.6**	**+0.8**
	26nm,0.5s,baz=57						
MODS	**Modra-Piesok**	**2.06**	**215**	*e*PN	**Pn**	**22 30 47.7**	**-0.6**
MODS				*e*SN	**Sn**	**22 31 14.6**	**-0.1**
MODS				*e*LG	Lg	22 31 33.9	
MODS	**Modra-Piesok**	**2.06**	**215**	*e*Pn	**Pn**	**22 30 47.7**	**-0.6**
MODS				*e*Sn	**Sn**	**22 31 14.6**	**-0.1**
PSZ	**Piszkesteto**	**2.23**	**165**	⇑ *i*P	**Pb**	**22 30 52.8**	**-0.7**
PSZ	**Piszkesteto**	**2.23**	**165**	*ex*	**Pb**	**22 30 52.8**	**-0.7**
PSZ				*ex*	x	22 30 56.8	
PSZ				*ex*	x	22 31 32.6	
PSZ	**Piszkesteto**	**2.23**	**165**	⇑ *i*P	**Pb**	**22 30 52.8**	**-0.7**
PSZ	**Piszkesteto**	**2.23**	**165**	*e*Pg	**Pg**	**22 30 56.8**	**+1.7**
GOPC	**GO Pecny, Ondr**	**2.76**	**268**	*e*PG	**Pg**	**22 31 05.2**	**-0.1**
GOPC				*e*SG	**Sg**	**22 31 40.2**	**-0.8**
	comp=Z,10.0nm,0.4s						
PRU	**Pruhonice**	**2.91**	**270**	*e*PN	**Pn**	**22 31 00.7**	**+0.7**
PRU				*e*PG	**Pg**	**22 31 08.0**	**-0.2**
PRU				*e*SG	**Sg**	**22 31 44.5**	**-1.4**
	comp=Z,7.1nm,0.4s						
PVCC	**Panska Ves**	**2.91**	**281**	*e*PG	**Pb**	**22 31 06.6**	**+1.4**
PVCC				*e*SG	**Sg**	**22 31 45.8**	**-0.1**
	comp=Z,17nm,0.4s						
TRPA	**Tarpa**	**3.00**	**129**	‖ *i*P	**Pn**	**22 31 01.8**	**+0.6**
TRPA	**Tarpa**	**3.00**	**129**	‖ *i*P	**Pn**	**22 31 01.8**	**+0.6**
CONA	**Conrad Observa**	**3.00**	**226**	Pn	**Pn**	**22 31 01.9**	**+0.6**
	0.3nm,0.1s						
CONA				Sn	**Sn**	**22 31 36.8**	**-1.3**
	1.2nm,0.2s						
CONA	**Conrad Observa**	**3.00**	**226**	Pn	**Pn**	**22 31 01.9**	**+0.6**
	0.3nm,0.1s						
CONA				Sn	**Sn**	**22 31 36.8**	**-1.3**
	1.2nm,0.2s						
BRG	**Berggiesshubel**	**3.36**	**286**	PG	**Pg**	**22 31 15.0**	**-1.8**
BRG				SG	**Sg**	**22 31 60.0**	**-0.4**
	8.4nm,0.5s						
KHC	**Kasperske Hory**	**3.69**	**257**	*e*PN	**Pn**	**22 31 11.5**	**+0.8**
KHC				*ex*	x	22 31 18.7	
KHC				*e*PG	**Pg**	**22 31 21.2**	**-1.8**
KHC				*e*SG	**Sg**	**22 32 09.5**	**-1.3**
	comp=Z,10nm,0.5s						
GERES	**GERESS Array B**	**3.70**	**253**	Pn	**Pn**	**22 31 12.6**	**+1.6**
	0.2nm,0.3s,baz=47,slow=15,SNR=3.6						
GERES				Pg	**Pg**	**22 31 21.9**	**-1.4**
	0.5nm,0.3s,baz=62,slow=19,SNR=9.9						
GERES				Lg	Lg	22 32 08.1	
	1.3nm,0.3s,baz=70,slow=26,SNR=8.2						
MOA	**Molln**	**3.86**	**237**	*i* Pn	**Pn**	**22 31 14.7**	**+1.6**
	0.3nm,0.2s						
MOA				*e*Sn	**Sn**	**22 32 00.8**	**+1.7**
	4.0nm,0.5s						
MOA	**Molln**	**3.86**	**237**	Pn	**Pn**	**22 31 14.7**	**+1.6**
	0.3nm,0.2s						
MOA				Sn	**Sn**	**22 32 00.8**	**+1.7**
	4.0nm,0.5s						
CLL	**Collm**	**4.04**	**290**	*e*Sg	**Sg**	**22 32 24.0**	**+1.8**
	comp=Z,8.0nm,0.6s						
DRGR		**4.09**	**142**	‖ *i*P	**Pn**	**22 31 16.5**	**+0.3**
DRGR		**4.09**	**142**	‖ *i*P	**Pn**	**22 31 16.5**	**+0.3**
NKC	**Novy Kostel**	**4.25**	**275**	*e*SG	**Sg**	**22 32

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**1.53**	**281**	*eP*	Pn	22 56 29.6	-1.3
VHO				*eS*	Sn	22 56 52.0	-1.9
TGIG		**1.96**	**90**	*eP*	Pn	22 56 34.2	-1.3
TLIG	**Tlapa**	**3.34**	**284**	*eP*	Pn	22 56 48.5	-4.2

*ISCJB **25** 23:08:47.6±1.3, 17°.7S±0°.5×178°.6W±0°.2, h547km, mb3.9/8, Error ellipse: s-maj=64.9km s-min=14.9km az=156.9*
*IDC **25** 23:08:50.5±4.2, 17°.85S×178°.56W, h576km±48km, mb3.4/8, mb1 3.7/9, mb1mx3.2/48, mbtmp4.4/9, Error ellipse: s-maj=61.3km s-min=21.5km az=160.0*
ISC 25 23:08:48.4±1.4, 17°.5S±0°.4×178°.5W±0°.2, h547km, n23, σ0983/23, mb3.9/8, 3C-3D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**14.83**	**250**	P	**P**	**23 11 57.5**	**+1.3**
	0.4nm,0.3s,baz=86,slow=18,SNR=3.1						
CTA	**Charters Tower**	**33.38**	**260**	P	**P**	**23 14 42.0**	**-0.1**
	3.7nm,0.4s,baz=86,slow=4.7,SNR=4.5						
JAY	**Jayapura**	**42.68**	**286**	P	**P**	**23 15 58.6**	**+0.9**
	8.0nm,0.6s,baz=175,slow=4.2,SNR=6.6						
WRA	**Warramunga Arr**	**44.57**	**259**	P	**P**	**23 16 11.1**	**-1.3**
	1.7nm,0.7s,baz=95,slow=7.2,SNR=20						
ASAR	**Alice Springs**	**44.77**	**254**	P	**P**	**23 16 13.0**	**-0.8**
	6.2nm,0.6s,baz=87,slow=8.9,SNR=65						
NVAR	**Mina Array Bea**	**79.25**	**44**	P	**P**	**23 19 58.1**	**+0.6**
	1.1nm,0.6s,baz=223,slow=9.5,SNR=7.6						
ILAR	**Eielson Array**	**85.56**	**13**	P	**P**	**23 20 28.7**	**+0.2**
	0.9nm,0.4s,baz=224,slow=4.8,SNR=11						
TXAR	**Lajitas Array**	**85.91**	**58**	P	**P**	**23 20 31.8**	**+0.7**
	1.8nm,0.7s,baz=219,slow=6.6,SNR=22						
PDAR	**Pinedale Array**	**87.17**	**43**	P	**P**	**23 20 37.3**	**+0.4**
	1.1nm,0.6s,baz=204,slow=3.3,SNR=9.6						
FINES	**FINESS Array B**	**132.80**	**344**	PKP	**PKPdf**	**23 26 59.5**	**-1.4**
	0.9nm,0.8s,baz=294,slow=1.9,SNR=3.5						
BURAR	**Bucovina Array**	**144.23**	**332**	⇓*iP*	**PKPab**	**23 27 23.0**	**+0.6**
TRPA	**Tarpa**	**144.96**	**335**	⇑*iP*	**PKPbc**	**23 27 24.1**	**0.0**
UPC	**Upice**	**145.10**	**344**	*eP*	**PKPab**	**23 27 25.1**	**-0.4**
DPC	**Dobruska-Polom**	**145.16**	**343**	*eP*	**PKPab**	**23 27 25.4**	**-0.3**
MLR	**Muntele Rosu**	**145.45**	**329**	PKPbc	**PKPbc**	**23 27 25.0**	**-0.9**
	0.4nm,0.8s,baz=117,slow=9.0,SNR=5.4						
MMAI	**Mount Meron Ar**	**145.84**	**303**	PKPbc	**PKPbc**	**23 27 26.9**	**-0.3**
	1.4nm,0.5s,baz=74,slow=6.2,SNR=6.6						
DRGR		**145.95**	**334**	⇑*iP*	**PKPbc**	**23 27 27.0**	**-0.1**
ARR	**Arges**	**146.18**	**330**	⇓*iP*	**PKPab**	**23 27 28.8**	**-1.1**
KHC	**Kasperske Hory**	**146.99**	**345**	*eP*	**PKPbc**	**23 27 30.0**	**+0.2**
KHC				*ex*	x	23 27 32.4	
GERES	**GERESS Array B**	**147.22**	**345**	PKPbc	**PKPbc**	**23 27 30.3**	**-0.2**
	1.0nm,0.6s,baz=24,slow=3.6,SNR=8.8						
BZS	**Buzias**	**147.35**	**333**	⇓*iP*	**PKPbc**	**23 27 29.5**	**-1.3**
HERR	**Herculane**	**147.57**	**332**	⇑*iP*	**PKPbc**	**23 27 30.6**	**-0.8**
DAVOX	**Davos/Dischmat**	**150.02**	**348**	PKPbc	**PKPbc**	**23 27 36.8**	**-0.8**
	2.6nm,0.5s,baz=336,slow=12,SNR=4.5						

*ISK **25** 23:17:44.8, 38°.73N×43°.65E, h16km, ML2.3/8*
*ISCJB **25** 23:17:45.5±0.6, 38°.71N±0°.03×43°.68E±0°.06, h19km±6km, Error ellipse: s-maj=7.6km s-min=4.9km az=16.3*
*DDA **25** 23:17:45.3, 38°.68N×43°.55E, h7km, Ml2.7*
*CSEM **25** 23:17:45.0±0.3, 38°.73N×43°.66E, h15km, ML2.7, Error ellipse: s-maj=7.4km s-min=4.8km az=99.0*
ISC 25 23:17:46.4±1.1, 38°.74N±0°.03×43°.61E±0°.04, h20km±2km, n30, σ1959/46, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.22**	**230**	PG	**Pb**	**23 17 51.4**	**-1.0**
VANB				SG	**Sb**	**23 17 56.8**	**+0.3**
VANB	**Van**	**0.22**	**230**	*e*Pg	**Pb**	**23 17 51.4**	**-1.0**
VANB				*e*Sg	**Sb**	**23 17 56.8**	**+0.3**
VMUR	**Van-Muradiye**	**0.25**	**354**	*i* P	**Pb**	**23 17 51.0**	**-1.7**
VMUR				*i* S	**Sb**	**23 17 56.8**	**-0.3**
VMUR	**Van-Muradiye**	**0.25**	**354**	P	**Pb**	**23 17 51.0**	**-1.7**
VMUR				S	**Sb**	**23 17 56.8**	**-0.3**
TVAN	**Van**	**0.26**	**217**	*i* P	**Pb**	**23 17 51.5**	**-1.3**
TVAN	**Van**	**0.26**	**217**	P	**Pb**	**23 17 51.5**	**-1.3**
ERCV	**ERCIS-VAN**	**0.35**	**323**	PG	**Pb**	**23 17 52.6**	**-1.3**
ERCV				SG	**Sb**	**23 17 59.8**	**+0.7**
ERCV	**ERCIS-VAN**	**0.35**	**323**	*e*Pg	**Pb**	**23 17 52.6**	**-1.3**
ERCV				*e*Sg	**Sb**	**23 17 59.8**	**+0.7**
CLDR	**Caldiran**	**0.47**	**31**	PG	**Pb**	**23 17 53.6**	**-2.4**
CLDR				SG	**Sb**	**23 18 02.0**	**-0.7**
CLDR	**Caldiran**	**0.47**	**31**	*i* P	**Pb**	**23 17 53.7**	**-2.4**
CLDR	**Caldiran**	**0.47**	**31**	P	**Pb**	**23 17 53.7**	**-2.4**
CLDR				*e*Sg	**Sb**	**23 18 02.0**	**-0.7**
GEVA	**Gevas**	**0.60**	**225**	*i* P	**Pb**	**23 17 56.4**	**-2.1**
GEVA				*i* S	**Sn**	**23 18 10.6**	**+1.4**
GEVA	**Gevas**	**0.60**	**225**	P	**Pb**	**23 17 56.4**	**-2.1**
TUTA	**Tutak**	**0.90**	**317**	*i* P	**Pb**	**23 18 02.3**	**-1.2**
TUTA				*i* S	**Sn**	**23 18 16.5**	**-0.2**
TUTA	**Tutak**	**0.90**	**317**	P	**Pb**	**23 18 02.3**	**-1.2**
TUTA				S	**Sn**	**23 18 16.5**	**-0.2**
AGRB	**Hanur-Agry**	**0.96**	**330**	PG	**Pb**	**23 18 03.2**	**-1.3**
AGRB				SG	**Sn**	**23 18 18.4**	**+0.3**
AGRB	**Hanur-Agry**	**0.96**	**330**	*e*Pg	**Pb**	**23 18 03.2**	**-1.3**
AGRB				*e*Sg	**Sn**	**23 18 18.4**	**+0.3**
HAKT	**HAKKARI**	**1.18**	**176**	*i* P	**Pn**	**23 18 06.7**	**-1.3**
HAKT				*i* S	**Sn**	**23 18 28.8**	**+5.2**
HAKT	**HAKKARI**	**1.18**	**176**	P	**Pn**	**23 18 06.7**	**-1.3**
IGDI	**IGDIR**	**1.19**	**18**	*i* P	**Pb**	**23 18 08.4**	**+0.2**
IGDI				*i* S	**Sn**	**23 18 28.1**	**+4.7**
GURO	**Guroymak-BITLI**	**1.25**	**262**	PN	**Pn**	**23 18 08.2**	**-0.6**
GURO				SN	**Sb**	**23 18 25.7**	**+0.8**
CUKT	**Cukurca**	**1.49**	**180**	PN	**Pn**	**23 18 11.7**	**-0.4**
CUKT	**Cukurca**	**1.49**	**180**	*e*Pn	**Pn**	**23 18 11.7**	**-0.4**
SIRT	**Sirnak**	**1.54**	**217**	PN	**Pn**	**23 18 12.7**	**-0.1**
GNI	**Garni**	**1.66**	**32**	PN	**Pn**	**23 18 14.8**	**+0.3**
GNI	**Garni**	**1.66**	**32**	*e*Pn	**Pn**	**23 18 14.8**	**+0.3**
VRTB	**Varto-Mus**	**1.73**	**285**	PN	**Pn**	**23 18 15.6**	**+0.2**
VRTB	**Varto-Mus**	**1.73**	**285**	*e*Pn	**Pn**	**23 18 15.6**	**+0.2**
SENK	**Senkaya-Erzuru**	**2.06**	**332**	PN	**Pn**	**23 18 20.6**	**+0.6**
SENK	**Senkaya-Erzuru**	**2.06**	**332**	*e*Pn	**Pn**	**23 18 20.6**	**+0.6**

JMA 25 23:18:03.5±0.1, 27°.61N×131°.30E, h66km, M3.5, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JZK	**Kikaishima**	**1.37**	**301**	P	Pn	23 18 27.2	+0.6
JAM	**Amami Oshima**	**1.70**	**298**	P	Pn	23 18 31.5	+0.5
JAM				*e*S	Sn	23 18 51.9	+0.1
JMZ	**Minamidaito 2**	**1.79**	**182**	P	Pn	23 18 32.6	+0.4
JMZ				*e*S	Sn	23 18 53.9	0.0
JAMN	**Amaminishikomi**	**1.98**	**289**	P	Pn	23 18 35.6	+0.8
JTK	**Tokunoshima**	**2.09**	**275**	P	Pn	23 18 37.4	+1.1
JTK				*e*S	Sn	23 19 01.0	-0.3
JTAJ	**Takarajima**	**2.40**	**310**	P	Pn	23 18 40.8	+0.3
JTAJ				*e*S	Sn	23 19 08.1	-0.8
JOKE	**Okinoerabujima**	**2.44**	**265**	P	Pn	23 18 42.0	+1.0
JOKE				*e*S	Sn	23 19 10.2	+0.5
JNN	**Nakanoshima**	**2.55**	**331**	P	Pn	23 18 43.0	+0.4
JNN				*e*S	Sn	23 19 11.6	-0.9
JYAK	**Yakushimahirau**	**2.71**	**345**	S	Sn	23 19 14.1	-2.2
JOW	**Kunigami**	**2.80**	**255**	P	Pn	23 18 47.1	+1.1
JOW				*e*S	Sn	23 19 18.2	-0.5
JIH	**Iheya**	**3.02**	**260**	P	Pn	23 18 50.2	+1.3
JIH				*e*S	Sn	23 19 23.9	0.0
JTN	**Tanegashima 3**	**3.05**	**355**	P	Pn	23 18 50.5	+1.2
JNTH	**Nagotoyohara**	**3.12**	**250**	P	Pn	23 18 51.5	+1.2
JNTH				S	Sn	23 19 25.6	-0.8
JJT3	**Tamagusuku3**	**3.46**	**246**	P	Pn	23 18 56.7	+1.7
JJT3				*e*S	Sn	23 19 35.3	+0.5
JAGN	**Aguni-jima**	**3.76**	**255**	*e*S	Sn	23 19 42.3	+0.3
JKE	**Kume jima 2**	**4.23**	**253**	P	Pn	23 19 06.4	+1.0
JKE				S	Sn	23 19 52.9	-0.6

*IDC **25** 23:19:29.0±1.5, 21°.30S×168°.64E, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.7/49, mbtmp3.8/5, ML3.7/1, MS3.3/1, Ms1 3.2/1, ms1mx2.5/43, Error ellipse: s-maj=50.9km s-min=27.2km az=156.0*
*ISCJB **25** 23:19:31.8±1.6, 21°.0S±0°.3×168°.6E±0°.2, h35km, mb3.6/4, MS3.2/1, Error ellipse: s-maj=50.0km s-min=16.7km az=155.5*
ISC 25 23:19:33.7±1.4, 21°.2S±0°.3×168°.6E±0°.2, h35km, n7, σ1903/8, mb3.6/4, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.19**	**247**	Pn	**Pn**	**23 20 06.3**	**-1.5**
	24nm,0.3s,baz=117,slow=18,SNR=219						
DZM				Sn	**Sn**	**23 20 34.6**	**+0.9**
	41nm,0.3s,baz=195,slow=17,SNR=16						
STKA	**Stephens Creek**	**26.33**	**241**	P	**P**	**23 25 07.0**	**+0.6**
	1.4nm,0.7s,baz=67,slow=11,SNR=2.7						
STKA				LR	LR	23 35 01.4	
	comp=Z,58nm,18.4s,baz=25,slow=35						
WRA	**Warramunga Arr**	**32.08**	**266**	P	**P**	**23 25 57.9**	**+0.2**
	0.6nm,0.8s,baz=94,slow=8.4,SNR=5.6						
ASAR	**Alice Springs**	**32.13**	**259**	P	**P**	**23 25 58.6**	**+0.5**
	0.2nm,0.5s,baz=91,slow=9.3,SNR=2.9						
SNAA	**Sanae**	**87.18**	**183**	P	**P**	**23 32 16.1**	**+0.1**
	1.3nm,0.9s,baz=191,slow=5.2,SNR=4.2						
EKA	**Eskdalemuir Ar**	**145.37**	**352**	PKPbc	**PKPab**	**23 39 06.8**	**-0.9**
	0.4nm,0.4s,baz=360,slow=3.2,SNR=3.2						
GERES	**GERESS Array B**	**145.92**	**330**	PKPbc	**PKPab**	**23 39 11.0**	**+0.9**
	1.0nm,0.6s,baz=82,slow=2.8,SNR=6.9						

*NIED **25** 23:23:00, 37°.50N×139°.00E, h17km, Mw3.9 Best double couple: M0:6.89000×10^14 NP1:φ=34.00000°, δ=15.00000°, λ=86.00000°. NP2:φ=219.00000°, δ=75.00000°, λ=91.00000°.*
*IDC **25** 23:23:39.8±1.0, 37°.59N×139°.02E, h0km, mb3.7/8, mb1 3.9/11, mb1mx3.6/70, mbtmp3.8/11, ML4.2/2, MS3.1/13, Ms1 3.1/13, ms1mx2.8/69, Error ellipse: s-maj=22.9km s-min=12.0km az=97.0*
*NEIC **25** 23:23:41.0±0.7, 37°.58N×139°.03E, h10km, mb4.2/1, Error ellipse: s-maj=16.0km s-min=8.7km az=110.0*
NEIC Recorded [3 JMA] in Niigata.
*ISCJB **25** 23:23:42.6±0.3, 37°.57N±0°.03×138°.93E±0°.03, h30km±3km, mb3.8/10, MS3.1/9, Error ellipse: s-maj=4.7km s-min=4.2km az=22.4*
*JMA **25** 23:23:43.5±0.1, 37°.55N×138°.96E, h19km±2km, M4.0 Broadband fault plane solution: P waves. NP1: φ=216.00000°, δ=73.00000°, λ=85.00000°. NP2:φ=52.00000°, δ=18.00000°, λ=105.00000°. Principal axes: T Plg62.0000°, Azm119.0000°; N Plg5.0000°, Azm218.0000°; P Plg28.0000°, Azm310.0000°;*
JMA Felt III J1.
ISC 25 23:23:43.2±0.9, 37°.56N±0°.03×138°.98E±0°.04, h24km±7km, n36, σ1906/38, mb3.7/10, MS3.0/9, 2C-7D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIZZ	**Izumozaki**	**0.21**	**263**	⇑P	**Pb**	**23 23 48.8**	**-0.1**
JIZZ				S	**Sb**	**23 23 53.1**	**+0.3**
JHK	**Hiroka**	**0.31**	**174**	⇓P	**Pb**	**23 23 49.7**	**-0.6**
JHK				S	**Sb**	**23 23 54.2**	**-1.0**
JNS	**Sasagawa**	**0.38**	**46**	⇓P	**Pb**	**23 23 51.3**	**0.0**
JNS				S	**Sn**	**23 23 57.3**	**-2.3**
JFY	**Yanaizu**	**0.60**	**104**	⇓P	**Pn**	**23 23 55.3**	**-0.9**
JFY				S	**Sn**	**23 24 03.5**	**-1.6**
JSD	**Sado**	**0.74**	**310**	⇓P	**Pb**	**23 23 56.4**	**-1.0**
JSD				S	**Sb**	**23 24 05.6**	**-1.5**
JKT	**Katashina**	**0.82**	**165**	⇓P	**Pb**	**23 23 58.6**	**-0.2**
JKT				S	**Sb**	**23 24 09.5**	**0.0**
JAW	**Awa shima**	**0.92**	**13**	⇓P	**Pb**	**23 24 00.1**	**-0.4**
JAW				*e*S	**Sn**	**23 24 12.9**	**-0.1**
JFT	**Otama**	**1.08**	**92**	⇑P	**Pn**	**23 24 03.4**	**+0.6**
JFT				S	**Sn**	**23 24 18.2**	**+1.2**
JYS	**Shiratake**	**1.09**	**52**	*e*S	**Sn**	**23 24 18.1**	**+1.0**
MAJO	**Matsushiro**	**1.19**	**211**	*e*Pg	**Pn**	**23 24 04.0**	**-0.3**
MAJO				*e*Sg	**Sb**	**23 24 19.6**	**-0.4**
MAT	**Matsushiro**	**1.19**	**211**	P	**Pn**	**23 24 04.2**	**0.0**
MAT				S	**Sb**	**23 24 19.5**	**-0.4**
MJAR	**Matsushiro Arr**	**1.19**	**211**	Pg	**Pn**	**23 24 04.6**	**+0.3**
	67nm,0.3s,baz=22,slow=14,SNR=648						
MJAR				Lg	Lg	23 24 19.3	
	122nm,0.3s,baz=24,slow=26,SNR=43						
MJAR				LR	LR	23 24 38.9	
	comp=Z,212nm,18.4s,baz=20,slow=48						
JHJ	**Hachijo jima 2**	**4.48**	**171**	Pn	**Pn**	**23 24 50.5**	**+1.0**
	31nm,0.3s,baz=273,slow=6.8,SNR=5.0						
JHJ				LR	LR	23 26 42.5	
	comp=Z,164nm,19.7s,baz=251,slow=40						
ASAJ	**Asahikawa**	**7.10**	**22**	LR	LR	23 28 32.7	
	comp=Z,72nm,20.2s,baz=179,slow=42						
USRK	**Ussuriysk Ar.**	**8.48**	**324**	Pn	**Pn**	**23 25 45.1**	**+0.7**
	0.8nm,0.3s,baz=141,slow=13,SNR=8.2						
USRK				LR	LR	23 28 47.1	
	comp=Z,149nm,20.5s,baz=164,slow=36						
KSRS	**Korea Array**	**8.79**	**273**	Pn	**Pn**	**23 25 51.0**	**+2.5**
	2.5nm,0.3s,baz=86,slow=14,SNR=14						
KSRS				LR	LR	23 28 58.1	
	comp=Z,140nm,19.1s,baz=70,slow=36						
KSAR	**Wonju Array Be**	**8.82**	**273**	Pn	**Pn**	**23 25 51.0**	**+2.0**
MA2	**Magadan**	**23.30**	**15**	LR	LR	23 37 40.1	
	comp=Z,28nm,18.5s,baz=312,slow=36						
GUMO	**Guam**	**24.44**	**166**	LR	LR	23 36 59.7	
	comp=Z,34nm,21.3s,baz=36,slow=33						
YAK	**Yakutsk**	**25.17**	**350**	LR	LR	23 39 03.9	
	comp=Z,89nm,18.3s,baz=170,slow=37						
YAK	**Yakutsk**	**25.17**	**350**	P	**P**	**23 29 04.8**	**-1.4**
	18nm,0.3s						
SONM	**Songino Array**	**25.88**	**304**	P	**P**	**23 29 13.7**	**+0.6**
	0.5nm,0.6s,baz=97,slow=12,SNR=5.0						
SONM				LR	LR	23 38 41.2	
	comp=Z,45nm,18.8s,baz=104,slow=35						
TLY	**Talaya**	**28.52**	**311**	LR	LR	23 40 48.7	
	comp=Z,36nm,18.1s,baz=110,slow=36						
CGP	**Cagayan de Oro**	**31.73**	**208**	⇓*eP*	**P**	**23 30 03.7**	**-1.5**
MKAR	**Makanchi Array**	**42.19**	**301**	P	**P**	**23 31 33.3**	**-0.6**
	0.3nm,0.7s,baz=112,slow=9.5,SNR=3.1						
MKAR				LR	LR	23 49 13.5	
	comp=Z,25nm,21.4s,baz=46,slow=36						
KURK	**Kurchatov**	**44.07**	**307**	P	**P**	**23 31 47.2**	**-1.8**
	1.8nm,0.5s						
KURBB	**Kurchatov Arra**	**44.14**	**307**	P	**P**	**23 31 48.9**	**-0.7**
	0.4nm,0.5s,baz=84,slow=8.1,SNR=5.0						
COLA	**College**	**49.67**	**32**	P	**P**	**23 32 32.5**	**0.0**
ILAR	**Eielson Array**	**50.09**	**33**	P	**P**	**23 32 36.8**	**+1.1**
	0.3nm,0.7s,baz=189,slow=9.2,SNR=4.2						
LEM	**Lembang**	**52.97**	**220**	LR	LR	23 56 17.0	
	comp=Z,37nm,18.6s,baz=308,slow=37						
FITZ	**Fitzroy Crossi**	**56.77**	**195**	P	**P**	**23 33 25.6**	**+0.5**
	3.4nm,0.8s,baz=0.0,slow=8.1,SNR=3.1						
WRA	**Warramunga Arr**	**57.36**	**185**	P	**P**	**23 33 29.6**	**+0.2**
	2.0nm,0.6s,baz=1.2,slow=7.5,SNR=24						
ASAR	**Alice Springs**	**61.09**	**185**	P	**P**	**23 33 55.3**	**+0.2**
	0.6nm,0.5s,baz=15,slow=14,SNR=9.8						
NOA	**NORSAR Array B**	**72.94**	**336**	LR	LR	00 10 02.1	
	comp=Z,16nm,18.0s,baz=25,slow=38						
BRTR	**Keskin Array B**	**77.04**	**310**	P	**P**	**23 35 35.0**	**+0.6**
	0.3nm,0.6s,baz=79,slow=7.5,SNR=3.0						
MLR	**Muntele Rosu**	**77.72**	**319**	LR	LR	00 12 57.7	
	comp=Z,6.8nm,18.1s,baz=66,slow=38						

*IDC **25** 23:46:59.0±0.8, 9°.11N×126°.97E, h0km, mb3.9/9, mb1 4.1/10, mb1mx3.7/59, mbtmp4.0/10, ML4.3/1, MS2.6/2, Ms1 2.6/2, ms1mx2.3/53, Error ellipse: s-maj=35.1km s-min=15.1km az=80.0*
*ISCJB **25** 23:47:02.7±0.6, 9°.12N±0°.06×126°.80E±0°.05, h35km, mb4.0/10, MS2.3/1, Error ellipse: s-maj=9.8km s-min=6.6km az=152.0*
*NEIC **25** 23:47:04.3±0.5, 9°.07N×126°.93E, h35km, mb4.3/1, Error ellipse: s-maj=21.0km s-min=9.5km az=82.0*
*MAN **25** 23:47:06.6, 9°.04N×126°.41E, h5km, mb4.7, ML3.5, MS3.4*
ISC 25 23:47:04.6±0.9, 9°.15N±0°.07×126°.73E±0°.08, h35km, n21, σ1959/22, mb4.0/10, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**1.11**	**261**	*eP*	**Pn**	**23 47 22.1**	**-1.6**
BUTP				*e*S	**Sn**	**23 47 36.0**	**-1.8**
SCPH	**Surigao**	**1.38**	**297**	⇑*eP*	**Pn**	**23 47 28.9**	**+1.6**
BUKP	**Musuan**	**2.08**	**233**	*eP*	**Pn**	**23 47 37.0**	**-0.1**
BUKP				*e*S	**Sn**	**23 48 02.9**	**+1.1**
CGP	**Cagayan de Oro**	**2.13**	**251**	⇑*eP*	**Pn**	**23 47 39.8**	**+2.1**
CGP				*e*S	**Sn**	**23 48 01.4**	**-1.6**
DAV	**Davao City (W)**	**2.36**	**209**	Pn	**Pn**	**23 47 41.4**	**+0.5**
	62nm,0.3s,baz=76,slow=15,SNR=2.8						
DAV				Sn	**Sn**	**23 48 11.8**	**+3.1**
	50nm,0.3s,baz=277,slow=23,SNR=4.9						
DAV				LR	LR	23 48 38.9	
	comp=Z,246nm,22.0s,baz=8.0,slow=41						
CTBH	**Cotabato--PC H**	**3.12**	**232**	⇓*iP*	**Pn**	**23 47 54.3**	**+3.0**
PAGZ	**Pagadian**	**3.56**	**249**	*eP*	**Pn**	**23 47 57.4**	**0.0**
PAGZ				*e*S	**Sn**	**23 48 38.5**	**+0.3**
FITZ	**Fitzroy Crossi**	**27.10**	**182**	P	**P**	**23 52 43.2**	**-1.1**
	3.2nm,0.8s,baz=14,slow=6.6,SNR=4.3						
KSRS	**Korea Array**	**28.20**	**2**	LR	LR	00 03 47.6	
	comp=Z,8.5nm,21.1s,baz=190,slow=36						
WRA	**Warramunga Arr**	**29.86**	**166**	P	**P**	**23 53 07.1**	**-1.8**
	0.8nm,0.6s,baz=351,slow=9.3,SNR=4.3						
ASAR	**Alice Springs**	**33.36**	**168**	P	**P**	**23 53 37.7**	**-2.0**
	0.3nm,0.5s,baz=351,slow=7.5,SNR=4.6						
H11S3	**WAKE ISLAND Hy**	**39.81**	**72**	T	T	00 37 36.8	
	baz=262,slow=75,SNR=18						
H11S1	**WAKE ISLAND Hy**	**39.83**	**72**	T	T	00 37 37.3	
	baz=262,slow=75,SNR=14						
H11S2	**WAKE ISLAND Hy**	**39.83**	**72**	T	T	00 37 38.3	
	baz=262,slow=75,SNR=19						
STKA	**Stephens Creek**	**43.20**	**161**	P	**P**	**23 55 01.5**	**-0.9**
	1.2nm,0.4s,baz=346,slow=8.9,SNR=8.8						
MKAR	**Makanchi Array**	**53.19**	**323**	P	**P**	**23 56 20.1**	**+0.7**
	1.4nm,0.7s,baz=120,slow=9.0,SNR=12						
KURK	**Kurchatov**	**57.24**	**326**	*eP*	**P**	**23 56 48.7**	**+0.2**
	1.4nm,0.4s						
KURBB	**Kurchatov Arra**	**57.25**	**326**	P	**P**	**23 56 48.9**	**+0.4**
	1.3nm,0.7s,baz=123,slow=7.8,SNR=11						
BVAR	**Borovoye Array**	**62.84**	**326**	P	**P**	**23 57 27.7**	**+0.9**
	0.6nm,0.7s,baz=109,slow=8.0,SNR=5.7						
ILAR	**Eielson Array**	**80.24**	**26**	P	**P**	**23 59 11.5**	**0.0**
	0.4nm,0.7s,baz=237,slow=6.8,SNR=4.3						
FINES	**FINESS Array B**	**87.09**	**332**	P	**P**	**23 59 47.9**	**+1.4**
	7.5nm,1.3s,baz=58,slow=7.2,SNR=4.3						

*JMA **25** 23:55:06.7±0.1, 23°.34N×121°.47E, h34km±2km, M3.0*
*ISCJB **25** 23:55:07.3±0.3, 23°.34N±0°.02×121°.55E±0°.02, h29km±2km, Error ellipse: s-maj=3.4km s-min=2.5km az=44.7*
*TAP **25** 23:55:07.7, 23°.34N×121°.49E, h31km, ML3.4, B*
ISC 25 23:55:07.5±0.9, 23°.34N±0°.02×121°.52E±0°.02, h32km±6km, n82, σ0984/119, 18C-3D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HGSD	**Ruisui**	**0.18**	**331**	⇑P	**Pb**	**23 55 13.8**	**+0.1**
	baz=339						
TWF1	**Yuli**	**0.20**	**275**	⇑P	**Pb**	**23 55 13.9**	**0.0**
	baz=287						
TWF1				*e*S	**Sn**	**23 55 18.2**	**-0.4**
	baz=287						
YULB	**Yu-li**	**0.21**	**286**	⇑P	**Pb**	**23 55 13.9**	**-0.1**
	baz=286						
YULB				*e*S	**Sn**	**23 55 18.6**	**-0.2**
	baz=286						
EHY	**Hungye**	**0.25**	**314**	⇑*iP*	**Pb**	**23 55 14.3**	**-0.2**
	baz=308						
FULB	**Fuli**	**0.25**	**236**	⇓*iP*	**Pb**	**23 55 14.6**	**+0.1**
	baz=222						
FULB				S	**Sn**	**23 55 20.8**	**+1.1**
	baz=222						
CHKT	**Chengkung**	**0.27**	**211**	⇓*iP*	**Pb**	**23 55 15.0**	**+0.2**
	baz=195						
CHKT				*i* S	**Sb**	**23 55 19.9**	**+0.2**
	baz=195						
EGFH	**Guangfu**	**0.34**	**346**	⇑P	**Pb**	**23 55 15.7**	**0.0**
	baz=337						
EGFH				*e*S	**Sb**	**23 55 21.2**	**-0.1**
	baz=337						
ELDTW	**Lidau**	**0.48**	**252**	⇑*iP*	**Pb**	**23 55 17.0**	**-0.8**
	baz=245						
ELDTW				*e*S	**Sb**	**23 55 22.7**	**-2.2**
	baz=245						
ESL	**Shilin**	**0.48**	**351**	⇑*iP*	**Pb**	**23 55 17.1**	**-0.6**
	baz=346						
ESL				*e*S	**Sb**	**23 55 23.5**	**-1.3**
	baz=346						
VWDT	**VWDT**	**0.54**	**320**	⇑P	**Pb**	**23 55 18.6**	**-0.1**
	baz=322						
VWDT				*e*S	**Sb**	**23 55 25.5**	**-0.8**
	baz=322						
ENLB	**Shoufeng**	**0.57**	**8**	⇓*eP*	**Pn**	**23 55 20.5**	**+1.2**
	baz=23						
ENLB				*e*S	**Sn**	**23 55 29.8**	**+2.1**
	baz=23						
TWH	**Lutao**	**0.62**	**183**	*eP*	**Pb**	**23 55 19.4**	**-0.6**
	baz=181						
HWA	**

	baz=231							
MASBT	Mashibuluo	1.09	229	*e*P	Pn	23 55 26.5	0.0	
	baz=222							
NNSB	Datong	1.09	354	*e*P	Pn	23 55 26.8	+0.1	
	baz=4.0							
NNSH	Datong	1.09	354	*e*P	Pn	23 55 26.7	0.0	
	baz=4.0							
ENA	Nanau	1.11	11	*e*P	Pn	23 55 26.8	0.0	
	baz=357							
NNS	Nan Shan	1.11	353	*e*P	Pn	23 55 27.3	+0.5	
	baz=4.0							
NANB	Nanao	1.11	11	*e*P	Pn	23 55 26.5	-0.3	
	baz=357							
TAW	Tawu	1.13	211	*e*P	Pn	23 55 26.1	-0.9	
	baz=211							
ENAH	Nanao	1.14	14	*e*P	Pn	23 55 28.2	+1.0	
WCHH	Zhanghua	1.15	310	*e*P	Pb	23 55 28.7	-0.1	
	baz=309							
WCHH				*e*S	Sb	23 55 44.0	+0.6	
	baz=309							
SCZT	Fangliau	1.27	221	*e*P	Pb	23 55 30.1	-0.7	
	baz=212							
LAY	Lan-yu	1.29	179	*e*P	Pn	23 55 28.2	-1.1	
	baz=173							
ENTT	Nioudou	1.30	2	*e*P	Pn	23 55 29.7	+0.3	
	baz=1.0							
TWC	Suao	1.30	13	*e*P	Pb	23 55 30.8	-0.6	
	baz=23							
EOS1	EOS1	1.33	25	*e*P	Pn	23 55 30.9	+1.1	
	baz=35							
PTSB	Yuanli	1.33	326	*e*P	Pb	23 55 31.7	-0.2	
	baz=324							
YHNB	Yeheng	1.33	355	*e*P	Pn	23 55 30.3	+0.3	
	baz=5.0							
YHNB				*e*S	Sn	23 55 46.2	-0.5	
	baz=5.0							
NSK	Sanguang	1.34	354	*e*P	Pn	23 55 30.9	+0.8	
	baz=4.0							
NSK				*e*S	Sn	23 55 46.4	-0.5	
	baz=4.0							
NMLH	Miaoli	1.37	331	*e*P	Pb	23 55 32.6	+0.1	
	baz=329							
LIOB	Emei	1.38	341	*e*P	Pb	23 55 32.0	-0.7	
	baz=339							
TWE	Neicheng	1.39	6	*e*P	Pb	23 55 32.5	-0.3	
	baz=6.0							
NWLT	Wulai	1.44	360	*e*P	Pb	23 55 33.0	-0.6	
	baz=10.0							
TWKBT	Hengchun	1.53	205	*e*P	Pn	23 55 33.4	+0.7	
	baz=207							
TWK1	Hengchun	1.53	205	*e*P	Pb	23 55 34.2	-1.1	
	baz=199							
EGS		1.55	14	*e*P	Pb	23 55 35.0	-0.5	
	baz=360							
TIPB	Shuangxi	1.65	10	*e*P	Pn	23 55 34.2	-0.1	
	baz=359							
WDGT	Dungji	1.71	268	*e*P	Pn	23 55 35.5	+0.5	
	baz=267							
JYNG	Yonaunijimaku	1.72	49	P	Pn	23 55 36.7	+1.6	
JYNG				S	Sn	23 55 56.6	+0.7	
YOJ	Yonaguni jima	1.77	50	*e*P	Pn	23 55 36.7	+0.8	
	baz=49							
YOJ				*e*S	Sn	23 55 57.9	+0.6	
	baz=49							
YOJ	Yonaguni jima	1.77	50	P	Pn	23 55 37.5	+1.7	
YOJ				*e*S	Sn	23 55 58.2	+0.9	
PHUB	P'eng-hu	1.79	276	*e*P	Pn	23 55 35.4	-0.8	
	baz=275							
YM04	YM04	1.81	1	*e*P	Pb	23 55 38.8	-1.2	
	baz=357							
PNG	Penghu	1.82	278	*e*P	Pn	23 55 36.9	+0.4	
	baz=277							
YM11	YM11	1.82	2	*e*P	Pn	23 55 37.3	+0.6	
	baz=358							
YM07	YM07	1.83	3	*e*P	Pn	23 55 36.3	-0.5	
	baz=359							
YM03	YM03	1.83	1	*e*P	Pb	23 55 39.1	-1.4	
	baz=357							
YM08	YM08	1.84	2	*e*P	Pn	23 55 38.0	+1.0	
	baz=358							
VCHM	Qimei	1.92	267	*e*P	Pn	23 55 38.5	+0.5	
	baz=266							
HATJ	Hateruma jima	2.22	71	P	Pn	23 55 42.7	+0.7	
HATJ				*e*S	Sn	23 56 08.3	0.0	
IRIF	Iriomote-Funau	2.26	63	P	Pn	23 55 44.1	+1.5	
IRIF				*e*S	Sn	23 56 11.0	+1.7	
JKRS	Kuro-shima	2.45	68	P	Pn	23 55 46.7	+1.4	
JKRS				S	Sn	23 56 15.0	+0.8	
VWUC	VWUC	2.51	312	*e*P	Pn	23 55 46.4	+0.4	
	baz=309							
JIJ	Ishigaki jima	2.61	66	P	Pn	23 55 48.2	+0.7	
JIJ				*e*S	Sn	23 56 17.5	-0.6	
JISG	Ishigakijimahi	2.84	63	*e*S	Sn	23 56 23.5	-0.3	
JTJ	Tarama	3.19	65	P	Pn	23 55 56.4	+1.0	
JTJ				*e*S	Sn	23 56 32.3	0.0	

*ISCJB **25** 23:58:00.8±0.3, 55°.93S±0°.05×27°.6W±0°.1, h112km, mb4.7/24, Error ellipse: s-maj=9.5km s-min=6.5km az=152.9*
*NEIC **25** 23:58:02.4±1.4, 55°.95S×27°.62W, h113km±12km, mb4.7/12, Error ellipse: s-maj=9.9km s-min=7.5km az=51.0*
*IDC **25** 23:58:04.4±1.9, 56°.03S×27°.59W, h132km±16km, mb4.3/13, mb1 4.3/15, mb1mx4.1/31, mbtmp4.7/15, MS3.3/1, Ms1 3.2/1, ms1mx2.6/30, Error ellipse: s-maj=14.6km s-min=10.1km az=75.0*

ISC 25 23:58:02.1±0.4, **55°.99S**±0°.07×**27°.66W**±0°.09, **h112**km, **n59**, σ**1**°**13**/60, **mb4.8**/23, **1C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	5.35	285	*e*Pn	Pn	23 59 19.4	-0.1
VNA1	Neumayer--Stat	16.95	158	P	P	00 01 52.9	+0.8
VNA3	Neumayer Olymp	17.14	160	P	Pn	00 01 55.6	+1.3
VNA3				S	S	00 05 19.5	+13
SNAA	Sanae	18.91	156	P	P	00 02 13.6	0.0
SNAA	Sanae	18.91	156	P	P	00 02 13.8	+0.2
	6.9nm,0.3s,baz=311,slow=11,SNR=502						
SNAA				S	S	00 05 39.5	-2.7
	0.1nm,0.3s,baz=157,slow=13,SNR=3.2						
SNAA	Sanae	18.91	156	*e*P	P	00 02 13.4	-0.3
	15nm,0.5s						
SNAA				S	S	00 05 39.5	-2.7
PMSA	Palmer Station	19.74	229	P	P	00 02 23.9	+1.2
	2.9nm,0.3s,baz=76,slow=6.0,SNR=7.4						
SYO	Syowa Base	31.80	141⇑	*e*P	P	00 04 14.1	-1.3
QSPA	South Pole Qui	34.26	180	P	P	00 04 37.6	+0.6
	8.2nm,0.6s						
QSPA				ScP	ScP	00 10 42.7	-2.4
	1.4nm,0.5s,baz=116,slow=0.3,SNR=7.1						
CPUP	Villa Florida	36.57	312	P	P	00 04 56.5	-0.6
	1.1nm,0.6s,baz=178,slow=4.6,SNR=3.2						
CPUP				ScP	ScP	00 10 51.4	-2.5
	2.6nm,0.9s,baz=163,slow=6.1,SNR=3.6						
MAW	Mawson	40.35	144	P	P	00 05 28.1	0.0
	3.9nm,0.6s,baz=227,slow=9.1,SNR=10						
MAW	Mawson	40.35	144	*e*P	P	00 05 28.5	+0.4
	7.8nm,2.0s						
GO02	Mina Guanaco	43.23	298	*e*P	P	00 05 52.3	-0.1
	9.9nm,0.6s						
PB04	IPOC Station P	45.88	299	*e*P	P	00 06 12.5	-0.9
	59nm,1.5s						
SBA	Scott Base	46.12	184	*e*P	P	00 06 16.0	+1.6
	4.3nm,0.6s						
BOSA	Boshof	46.21	76	P	P	00 06 15.4	-0.4
	3.3nm,0.6s,baz=207,slow=6.4,SNR=11						
BOSA				LR	LR	00 22 47.8	
	comp=Z,35nm,18.7s,baz=206,slow=32						
BOSA	Boshof	46.21	76	*e*P	P	00 06 15.3	-0.5
	60nm,2.0s						
VNDA	Vanda	46.62	183	P	P	00 06 19.4	+1.2
	8.2nm,0.6s,baz=186,slow=6.7,SNR=114						
VNDA				ScP	ScP	00 11 31.4	-1.7
	0.8nm,0.8s,baz=240,slow=4.5,SNR=5.3						
VNDA	Vanda	46.62	183	*e*P	P	00 06 19.3	+1.0
	9.2nm,0.6s						
VNDA				ScP	ScP	00 11 31.4	-1.7
PB01	IPOC Station P	46.65	301	*e*P	P	00 06 19.5	+0.1
	13nm,0.6s						
H10S2	ASCENSION HYDR	48.02	17	T	T	00 59 24.3	
	baz=189,slow=75,SNR=62						
H10S3	ASCENSION HYDR	48.02	17	T	T	00 59 24.7	
	baz=189,slow=75,SNR=64						
H10S1	ASCENSION HYDR	48.03	17	T	T	00 59 25.7	
	baz=189,slow=75,SNR=63						
MNMC	Minye Minye	48.34	302	*e*P	P	00 06 33.1	+0.5
	18nm,0.9s						
H10N1	ASCENSION HYDR	49.13	17	T	T	01 00 48.7	
	SNR=20						
H10N3	ASCENSION HYDR	49.14	17	T	T	01 00 48.5	
	SNR=38						
H10N2	ASCENSION HYDR	49.15	17	T	T	01 00 49.7	
	SNR=34						
LBTB	Lobatse	49.24	74	P	P	00 06 38.8	-0.4
	10.0nm,0.8s,baz=220,slow=10,SNR=15						
LBTB	Lobatse	49.24	74	*e*P	P	00 06 39.4	+0.2
	11nm,0.8s						
TSUM	Tsumeb	49.88	61	*e*P	P	00 06 43.8	-0.3
	5.5nm,1.0s						
LPAZ	La Paz	50.13	306	P	P	00 06 46.8	+0.2
	3.8nm,0.5s,baz=128,slow=5.7,SNR=27						
LPAZ				ScP	ScP	00 11 47.8	-1.8
	1.2nm,0.9s,baz=265,slow=2.0,SNR=4.0						
LPAZ	La Paz	50.13	306	*e*P	P	00 06 47.0	+0.4
	4.7nm,0.5s						
LPAZ				ScP	ScP	00 11 47.8	-1.8
CASY	Casey	54.05	161	*e*P	P	00 07 15.6	+1.3
	49nm,1.9s						
LSZ	Lusaka	58.59	69	*e*P	P	00 07 47.2	-0.1
	10nm,0.9s						
LIC	Lamto	64.75	25	*e*P	P	00 08 28.6	+0.2
	36nm,0.7s						
KIC	Kosan Boka	64.95	25	*e*P	P	00 08 29.7	0.0
	37nm,0.9s						
TIC	Toumodi	65.16	25	*e*P	P	00 08 31.1	+0.1
DBIC	Dimbokro	65.22	25	P	P	00 08 31.7	+0.3
	7.4nm,0.6s,baz=174,slow=7.8,SNR=15						
OPO	Ambohidratompo	66.35	88	P	P	00 08 40.1	+1.2
	3.1nm,0.8s,baz=233,slow=5.1,SNR=3.3						
PCRV	Puerto La Cruz	72.74	322	P	P	00 09 18.1	+0.1
	4.7nm,0.5s,baz=218,slow=3.2,SNR=1.8						
KOWA	Kowa	72.97	24	P	P	00 09 19.5	+0.3
	7.1nm,0.8s,baz=255,slow=2.1,SNR=8.7						
KOWA	Kowa	72.97	24	*e*P	P	00 09 19.3	+0.1
	6.3nm,0.6s						
TORD	Torodi Ar. Bea	73.13	30	P	P	00 09 20.6	+0.4
	28nm,0.6s,baz=200,slow=6.5,SNR=261						
TAM	Tamanrasset	83.37	31	*e*P	P	00 10 17.4	+0.8
MDT	Midelt	90.61	19	P	P	00 10 53.4	+2.0
	2.7nm,0.8s,baz=153,slow=6.8,SNR=6.7						
ASAR	Alice Springs	99.13	163	P	Pdif	00 11 29.4	-1.3
	0.8nm,0.7s,baz=195,slow=4.6,SNR=5.2						
FINES	FINESS Array B	124.45	28	PKP	PKPdf	00 16 45.3	-1.1
	2.6nm,0.6s,baz=180,slow=1.6,SNR=21						
ARCES	ARCESS Array B	130.98	22	PKP	PKPdf	00 16 57.2	-1.5
	1.8nm,0.6s,baz=187,slow=0.7,SNR=18						
BVAR	Borovoye Array	134.97	58	PKP	PKPdf	00 17 06.4	-0.3
	0.7nm,0.5s,baz=155,slow=2.3,SNR=5.7						
YKA	Yellowknife Ar	135.95	318	PKP	PKPdf	00 17 07.1	-1.1
	1.0nm,0.6s,baz=116,slow=2.7,SNR=6.7						
MKAR	Makanchi Array	137.12	72	PKP	PKPdf	00 17 11.2	+0.2
	0.5nm,0.7s,baz=225,slow=1.5,SNR=4.0						
CD2	Chengdu	137.93	106	PKP	PKPdf	00 17 13.0	0.0
LZH	Lanzhou	141.88	101	*e*PKP	PKPdf	00 17 21.5	+1.3
LZH				pPKP	pPKPdf	00 17 46.5	-4.0
LZH				sPKP		00 17 58.5	
LZH				LR	LR		
	comp=N,92nm,18.3s						
LZH				LR	LR		
	comp=E,100nm,18.0s						
LZH				LR	LR		
	comp=Z,140nm,20.1s						
ZALV	Zalesovo Beam	142.58	64	PKhKP	PKPpre	00 17 15.8	
	comp=Z,1.1nm,0.4s,baz=224,slow=4.8,SNR=3.5						
DAWY	Dawson	146.56	312	*e*PKPdf	PKPdf	00 17 27.9	+0.7
EGAK	Eagle	147.50	313	*e*PKPdf	PKPdf	00 17 30.1	+1.4
ILAR	Eielson Array	149.88	312	PKPbc	PKPbc	00 17 36.6	-0.9
	comp=Z,8.3nm,0.8s,baz=130,slow=1.8,SNR=57						
SONM	Songino Array	150.99	87	PKPbc	PKPbc	00 17 40.0	-0.9
	comp=Z,11nm,0.6s,baz=221,slow=3.5,SNR=66						
ULN	Ulaanbaatar	151.37	87	*e*PKPbc	PKPbc	00 17 41.1	-0.7

*ISCJB **26** 00:15:16.9±0.5, 4°.07N±0°.10×122°.8E±0°.2, h600km, mb3.8/18, Error ellipse: s-maj=28.9km s-min=8.1km az=160.1*
*IDC **26** 00:15:18.6±1.2, 4°.02N×122°.72E, h602km±16km, mb3.2/18, mb1 3.3/18, mb1mx3.1/54, mbtmp4.2/18, Error ellipse: s-maj=29.2km s-min=7.7km az=68.0*

ISC 26 00:15:18.2±0.6, **4°.0N**±0°.1×**122°.8E**±0°.2, **h600**km, **n20**, σ**0**°**99**/26, **mb3.9**/18, **Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	14.16	177	P	P	00 18 18.6	-0.2
	19nm,0.3s,baz=37,slow=2.3,SNR=12						
FITZ	Fitzroy Crossi	22.16	173	P	P	00 19 31.4	0.0
	0.9nm,0.3s,baz=344,slow=6.1,SNR=11						
WRA	Warramunga Arr	26.38	155	P	P	00 20 09.2	+0.4
	2.5nm,0.3s,baz=336,slow=9.5,SNR=54						
WRA				S	S	00 23 57.4	-3.9
	0.6nm,0.6s,baz=334,slow=16,SNR=3.9						
WRA				ScP	ScP	00 25 58.2	+0.6
	0.9nm,0.5s,baz=333,slow=3.1,SNR=6.1						
CMAR	Chiang Mai Arr	27.39	303	P	P	00 20 17.8	+0.3
	0.5nm,0.3s,baz=129,slow=9.4,SNR=5.2						
ASAR	Alice Springs	29.58	159	P	P	00 20 37.3	+0.8
	2.1nm,0.5s,baz=340,slow=7.0,SNR=38						
ASAR				S	S	00 24 50.7	-0.1
	1.1nm,0.8s,baz=333,slow=14,SNR=8.8						
ASAR				ScP	ScP	00 26 08.3	+0.6
	1.3nm,0.5s,baz=344,slow=3.2,SNR=14						
NWAO	Narrogin (SRO)	37.12	188	P	P	00 21 39.8	+0.3
	36nm,1.3s,baz=331,slow=10,SNR=4.2						
STKA	Stephens Creek	39.93	155	P	P	00 22 03.0	+0.8
	1.4nm,0.3s,baz=337,slow=10,SNR=6.7						
USRK	Ussuriysk Ar.	40.83	10	P	P	00 22 09.7	+0.7
	2.2nm,0.5s,baz=229,slow=7.5						
SONM	Songino Array	45.87	345	P	P	00 22 48.6	+0.4
	0.6nm,0.5s,baz=154,slow=9.9,SNR=4.2						
MKAR	Makanchi Array	55.13	327	P	P	00 23 55.5	+0.3
	2.8nm,0.3s,baz=126,slow=7.7,SNR=64						
MKAR				PcP	PcP	00 24 46.7	-0.5
	0.9nm,0.5s,baz=111,slow=3.9,SNR=6.3						
MKAR				ScP	ScP	00 27 48.7	-0.4
	0.4nm,0.6s,baz=104,slow=5.1,SNR=3.9						
ZALV	Zalesovo Beam	58.60	335	P	P	00 24 17.6	-1.1
	0.8nm,0.4s,baz=134,slow=6.4,SNR=3.9						
KURBB	Kurchatov Arra	59.42	329	P	P	00 24 23.9	-0.3
	2.7nm,0.6s,baz=133,slow=6.5,SNR=37						
BVAR	Borovoye Array	64.97	328	P	P	00 24 59.4	-0.6
	0.8nm,0.6s,baz=124,slow=7.7,SNR=5.2						
AKTO	Aktyubinsk	71.01	322	P	P	00 25 36.2	-0.4
	1.4nm,0.4s,baz=110,slow=8.5,SNR=6.8						
VNDA	Vanda	84.23	172	P	P	00 26 47.6	+0.5
	0.4nm,0.9s,baz=313,slow=2.5,SNR=3.2						
ASF	Jabal al Asfar	84.41	302	P	P	00 26 49.4	+0.3
	1.7nm,0.8s,baz=63,slow=2.3,SNR=3.8						
MMAI	Mount Meron Ar	85.65	303	P	P	00 26 55.3	+0.3
	0.4nm,0.5s,baz=79,slow=7.5,SNR=2.6						
SPITS	Spitsbergen Ar	89.42	349	P	P	00 27 11.3	-0.4
	0.7nm,0.3s,baz=76,slow=6.1,SNR=7.1						
FINES	FINESS Array B	89.71	331	P	P	00 27 12.3	-0.9
	2.3nm,1.0s,baz=187,slow=1.5,SNR=4.5						
TORD	Torodi Ar. Bea	119.09	287	PKP	PKPdf	00 33 00.2	-0.8
	1.1nm,1.1s,baz=118,slow=1.7,SNR=5.1						

WEL 26 00:28:53.0±0.4, **43°S**±2°×**17°3E**±°, **h5**km, **ML3.8**/5, **South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MQZ	McQueen's Vall	0.23	197	P	Pg	00 28 58.0	+0.6
MQZ				S	Sg	00 29 01.9	+1.5
EYCZ	Eyrewell	0.29	283	P	Pg	00 28 59.4	+0.7
EYCZ				S	Sg	00 29 03.8	+1.3
OKCZ	Okains Bay	0.33	136	P	Pg	00 28 59.8	+0.4
OKCZ				S	Sg	00 29 05.2	+1.4
AKCZ	Akaroa Harbour	0.40	163	P	Pg	00 29 01.3	+0.5
AKCZ				S	Sg	00 29 07.3	+1.2
OXZ	Oxford	0.54	287	P	Pg	00 29 03.8	+0.4
OXZ				S	Sg	00 29 11.7	+1.3
LTZ	Lake Taylor	0.79	334	P	Pg	00 29 08.2	+0.1
LTZ				S	Sg	00 29 18.7	+0.4
INZ	Inchbonnie	1.22	308	P	Pg	00 29 14.9	-1.5
INZ				S	Sg	00 29 31.6	-0.6
KHZ	Kahutara	1.22	29	P	Pg	00 29 13.9	-2.5
KHZ				P	Pb	00 29 14.4	-2.1
KHZ				S	Sg	00 29 30.6	-1.6
RPZ	Rata Peaks	1.25	259	P	Pg	00 29 15.6	-1.4
RPZ				S	Sn	00 29 34.2	-0.1
WVZ	Waitaha Valley	1.52	285	P	Pn	00 29 20.1	-0.7
DSZ	Denniston Nort	1.88	338	P	Pn	00 29 24.5	-1.2
BSWZ	Blackbirch Sta	1.96	26	P	Pn	00 29 24.9	-2.0
LBZ	Lake Benmore	2.06	243	P	Pn	00 29 27.4	-0.9
FOZ	Fox Glacier	2.13	268	P	Pn	00 29 29.4	+0.2
ODZ	Otahua Downs	2.17	223	P	Pn	00 29 28.3	-1.5
NNZ	Nelson	2.32	12	P	Pn	00 29 30.2	-1.6
TCW	Tory Channel	2.54	27	P	Pn	00 29 32.6	-2.3
QRZ	Quartz Range	2.67	356	P	Pn	00 29 36.0	-0.6
PLWZ	Palliser	2.67	45	P	Pn	00 29 33.5	-3.2
JCZ	Jackson Bay	2.93	257	P	Pn	00 29 39.7	-0.5
CAW	Cannon Point	2.94	37	P	Pn	00 29 37.6	-2.8
WKZ	Wanaka	3.00	242	P	Pn	00 29 40.1	-1.1
EAZ	Earnscleugh	3.02	234	P	Pn	00 29 40.1	-1.4
TRWZ	Traveller	3.02	47	P	Pn	00 29 38.1	-3.4
TUZ	Tuapeka	3.32	221	P	Pn	00 29 44.1	-1.4
MRZ	Mangatainoka R	3.53	38	P	Pn	00 29 45.3	-3.1
MLZ	Mavora Lakes	3.81	239	P	Pn	00 29 50.7	-1.6
BFZ	Birch Farm	3.83	44	P	Pn	00 29 50.7	-1.9
VRZ	Vera Road	4.62	20	P	Pn	00 30 03.1	-0.3
HIZ	Hauiti	5.22	19	P	Pn	00 30 10.3	-1.4

*IDC **26** 00:32:37.5±0.6, 41°.10N×74°.63E, h0km, mb4.1/26, mb1 4.3/32, mb1mx4.1/71, mbtmp4.2/32, ML3.7/7, MS3.4/27, Ms1 3.4/27, ms1mx3.1/78, Error ellipse: s-maj=11.2km s-min=9.5km az=162.0*
*SOME **26** 00:32:38.9, 41°.42N×74°.58E, h0km, MS4.0*
*BJI **26** 00:32:38.6, 41°.44N×74°.47E, h12km, mb4.4/22, mB4.4/17, ML4.5/7, Ms4.0/9, Ms7 3.7/8*
*ISCJB **26** 00:32:38.4±0.7, 41°.27N±0°.01×74°.59E±0°.02, h8km±5km, mb4.3/75, MS3.4/25, Error ellipse: s-maj=2.8km s-min=2.5km az=6.6*
*KRNET **26** 00:32:39.3±0.1, 41°.36N×74°.65E, h19km, mb4.8*
*NNC **26** 00:32:40.9±0.5, 41°.39N×74°.60E, h0km, mb4.8, mpv4.5, Error ellipse: s-maj=5.8km s-min=2.5km az=111.0*
*NEIC **26** 00:32:40.1±0.4, 41°.24N×74°.55E, h10km, mb4.4/16, Error ellipse: s-maj=7.8km s-min=5.1km az=161.0*
*MOS **26** 00:32:40.6±1.1, 41°.40N×74°.49E, h19km, mb4.7/37, Error ellipse: s-maj=5.9km s-min=4.2km az=95.5*

ISC 26 00:32:40.4±0.7, **41°.38N**±0°.02×**74°.57E**±0°.02, **h12**km±4km, **n274**, σ**1**°**99**/339, **mb4.4**/75, **MS3.3**/25, **52C-60D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UCH	Uchtor	0.85	357	P	Pg	00 32 55.7	-1.3
	SNR=1401						
UCH	Uchtor	0.85	357	⇑*i*P	Pg	00 32 55.6	-1.5
	baz=53						
UCH				⇑*i*S	Sg	00 33 08.0	-0.3
	baz=53						
KZA	Kyzart	0.87	36	P	Pg	00 32 55.4	-1.9
	SNR=1617						
KZA	Kyzart	0.87	36	⇓*i*P	Pg	00 32 55.4	-1.9
	baz=32						
KZA				⇓*i*S	Sg	00 33 06.8	-1.9
	baz=32						
AML	Almayashu	1.00	319	P	Pg	00 32 58.5	-1.3
	SNR=3531						
AML	Almayashu	1.00	319	⇓*i*P	Pg	00 32 58.7	-1.1
	baz=17						
AML				⇓*i*S	Sg	00 33 12.9	-0.1
	baz=17						
NRN	Naryn	1.07	86	⇓*i*P	Pg	00 32 57.9	-3.3
	baz=86						
NRN				⇓*i*S	Sg	00 33 11.8	-3.5
	baz=86						
AAK	Ala-Archa	1.26	357	⇓P	Pg	00 33 03.2	-1.7
	496nm,0.5s						
AAK				⇓S	Sn	00 33 22.6	+1.5
	2μm,0.9s						
AAK	Ala-Archa	1.26	357	P	Pg	00 33 03.1	-1.7
	SNR=123						
AAK	Ala-Archa	1.26	357	⇑*i*P	Pg	00 33 03.1	-1.7
	baz=55						
AAK				⇑*i*S	Sg	00 33 20.3	-0.9
	baz=55						
AAK	Ala-Archa	1.26	357	PG	Pg	00 33 03.1	-1.7
AAK				S	Sn	00 33 22.5	+1.5
AAK				pmax	pmax		
	comp=Z,496nm,0.5s						
AAK				smax	smax		
	comp=N,1μm,0.9s						
KBK	Karagaybulak	1.31	12	P	Pg	00 33 03.8	-1.8
	SNR=4296						
KBK	Karagaybulak	1.31	12	⇑*i*P	Pg	00 33 03.9	-1.8
	baz=10.0						
KBK				⇑*i*S	Sg	00 33 21.5	-1.3
	baz=10.0						
TOKL	Toktogul	1.40	294	⇓*i*P	Pn	00 33 06.0	+0.2
	baz=94						
TOKL				⇓*i*S	Sn	00 33 26.1	+1.9
	baz=94						
EKS2	Erkin-Say	1.42	336	P	Pn	00 33 06.1	0.0
	SNR=452						
EKS2	Erkin-Say	1.42	336	⇓*i*P	Pn	00 33 06.0	-0.1
	baz=34						
EKS2				⇓*i*S	Sb	00 33 25.8	+0.9
	baz=34						
FRU1	Bishkek	1.44	2	⇑*i*P	Pn	00 33 06.6	+0.3
	baz=59						
FRU1				⇑*i*S	Sb	00 33 25.3	-0.1
	baz=59						
FRU	Bishkek	1.46	1	⇑*i*PG	Pn	00 33 07.0	+0.4
FRU				*i*		00 33 28.0	
FRU				pmax	pmax		
	comp=Z,1μm,1.4s						
FRU				pmax	pmax		
	comp=Z,2μm,2.0s						
FRU				smax	smax		
	comp=E,4μm,2.0s						
BOOM	Boomskoye usch	1.51	42	⇑*i*P	Pn	00 33 06.4	-1.0
	baz=40						
BOOM				⇑*i*S	Sn	00 33 26.6	-0.5
	baz=40						
ULHL	Ulahol	1.52	55	P	Pn	00 33 06.4	-1.2
	SNR=841						
ULHL	Ulahol	1.52	55	⇓*i*P	Pn	00

baz=57
MNAS Manas 1.90 306 ⇓Pn Pn 00 33 14.6 +1.7
comp=Z,680nm,0.6s
MNAS ⇓Lg Lg 00 33 42.9
comp=Z,2μm,0.7s
MNAS Manas 1.90 306 ⇓*i*P Pn 00 33 14.5 +1.7
baz=6.0
MNAS ⇓*i*S **Sb 00 33 40.0 +1.1**
baz=6.0
MNAS Manas 1.90 306 PN **Pn 00 33 14.5 +1.7**
MNAS 00 33 39.6
MNAS pmax pmax
comp=Z,680nm,0.6s
MNAS smax smax
comp=N,2μm,0.7s
KST Kastek 1.96 31 ⇓*i*P Pn 00 33 15.2 +1.6
comp=N,464nm,0.3s
KST *e*S **Sb 00 33 41.9 +1.4**
comp=N,3μm,0.4s
ARK Arkit 2.00 283 ⇑*i*P Pn 00 33 16.0 +1.8
baz=83
ARK ⇑*i*S **Sb 00 33 42.7 +0.9**
baz=83
DGS Degeres 2.07 25 *e*P Pb 00 33 17.8 -0.1
comp=N,1μm,0.6s
DGS *e*S **Sb 00 33 45.2 +1.6**
comp=N,3μm,0.9s
KSH Kashi 2.14 150 Pg **Pg 00 33 21.5 0.0**
KSH Sg **Sb 00 33 47.8 +2.1**
KSH smax smax
comp=N,5μm,0.5s
KSH smax smax
comp=N,5μm,0.7s
MTBS Maitube 2.23 38 *e*P Pb 00 33 21.6 +0.9
comp=N,1μm,0.4s
MTBS *e*S **Sg 00 33 51.6 -0.5**
comp=N,2μm,0.5s
IZV Izvestkoviy 2.25 42 *e*P Pb 00 33 20.5 -0.5
comp=N,882nm,0.6s
IZV *e*S **Sb 00 33 49.9 +1.1**
comp=N,2μm,0.6s
TNSS Tian-Shan 2.42 46 *e*P Pb 00 33 23.3 -0.9
comp=N,739nm,0.6s
TNSS *e*S **Sb 00 33 55.3 +1.2**
comp=N,2μm,0.6s
AAA Alma-Ata 2.53 43 *e*PN Pb 00 33 26.1 +0.4
AAA *e*S **Sg 00 33 59.6 -2.0**
AAA pmax pmax
comp=Z,506nm,0.3s
AAA smax smax
comp=N,6μm,0.7s
AAA Alma-Ata 2.53 43 *e*P Pb 00 33 26.1 +0.4
comp=N,506nm,0.3s
AAA *e*S **Sg 00 33 59.6 -2.0**
comp=N,6μm,0.7s
MDOK Medeo 2.56 45 ⇑Pn Pn 00 33 24.5 +2.6
comp=N,652nm,0.6s
MDOK ⇓Lg Lg 00 34 00.5
comp=N,3μm,0.8s
MDOK Medeo 2.56 45 *e*P Pb 00 33 25.7 -0.7
comp=N,752nm,0.5s
MDOK *e*S **Sb 00 33 59.4 +1.5**
comp=N,2μm,0.7s
KOTS Kotyrbulak 2.65 45 *e*P Pb 00 33 27.4 -0.4
comp=N,821nm,0.6s
KOTS *e*S **Sb 00 34 02.0 +1.7**
comp=N,3μm,0.8s
KTBS Karatobe 2.81 33 *e*P Pb 00 33 30.4 -0.1
comp=N,423nm,0.6s
KTBS *e*S **Sb 00 34 07.2 +2.4**
comp=N,3μm,1.1s
KUU Kurty 2.83 27 ⇑*i*P Pb 00 33 31.0 0.0
comp=N,652nm,0.5s
KUU ⇓*i*S **Sb 00 34 08.2 +2.6**
comp=N,3μm,0.8s
DZA Taraz 2.85 303 *e*P Pb 00 33 32.4 +1.2
comp=N,604nm,0.6s
DZA *e*S **Sg 00 34 11.3 -0.7**
comp=N,5μm,0.6s
CHKK Chushkaly 3.05 35 *e*P Pb 00 33 34.6 0.0
comp=N,272nm,0.6s
CHKK *e*S **Sb 00 34 14.5 +2.6**
comp=N,2μm,0.3s
PRZ Przheval'sk 3.06 68 *e*Pn Pn 00 33 31.5 +2.7
PRZ Przheval'sk 3.06 68 *e*PN Pn 00 33 31.5 +2.7
BTK Batken 3.14 246 ⇑*e*P Pn 00 33 30.8 +1.0
baz=47
BTK ⇑*i*S **Sn 00 34 09.7 +2.5**
baz=47
SATY Saty 3.31 58 ⇓*i*P Pb 00 33 38.4 -0.7
comp=N,404nm,0.7s
SATY ⇓*i*S **Sb 00 34 21.2 +1.9**
comp=N,850nm,0.6s
ZHN Zhinishke 3.38 57 *e*P Pb 00 33 40.8 +0.5
comp=N,121nm,0.5s
ZHN ⇑*i*S **Sb 00 34 25.0 +3.6**
comp=N,257nm,0.6s
KK31 Karatay Array 3.48 301 Pn **Pn 00 33 36.5 +2.2**
comp=N,2.9nm,0.3s,baz=115,slow=12,SNR=1398
KK31 ⇓Pg **Pb 00 33 43.6 +1.7**
comp=N,51nm,0.3s
KK31 Lg Lg 00 34 31.3
comp=N,842nm,0.8s,baz=123,slow=27,SNR=8.8
KK31 Karatay Array 3.48 301 *e*Pn Pn 00 33 36.5 +2.2
KK31 Karatay Array 3.48 301 PN **Pn 00 33 36.4 +2.2**
KK31 00 33 42.7
KK31 pmax pmax
comp=Z,3.0nm,0.3s
KK31 pmax pmax
comp=Z,146nm,0.6s
KKAR Karatay Array 3.48 301 *e*Pn Pn 00 33 36.5 +2.3
KKAR Karatay Array 3.48 301 *e*PN Pn 00 33 36.6 +2.3
IUG Iuzhnay 3.48 284 *e*P Pb 00 33 43.1 +1.0
comp=Z,326nm,0.3s
IUG *e*S **Sg 00 34 29.1 -3.2**
comp=Z,846nm,0.7s
KPKS Kokpek 3.69 54 *e*P Pb 00 33 45.5 -0.1
comp=Z,425nm,0.4s
KPKS *e*S **Sb 00 34 33.5 +3.2**
comp=Z,869nm,0.7s
ARXS Arharly 3.71 39 *e*P Pb 00 33 46.2 +0.3
comp=Z,443nm,0.8s
ARXS *e*S **Sb 00 34 34.4 +3.4**
comp=Z,1μm,0.8s
UZB Uzynbulak 3.75 60 *e*P Pb 00 33 45.0 -1.6
comp=Z,126nm,0.7s
UZB *e*S **Sb 00 34 33.2 +1.3**
comp=Z,366nm,0.6s
CHM Chimkent 3.83 286 ⇑*i*P Pb 00 33 51.0 +3.1
comp=Z,287nm,0.4s
CHM *e*S **Sg 00 34 41.9 -1.6**
comp=Z,1μm,0.6s
BRLS Borolday 3.89 297 *e*P Pb 00 33 51.2 +2.3
comp=Z,41nm,0.7s
BRLS *e*S **Sg 00 34 43.0 -2.3**
comp=Z,102nm,0.6s
MNBS Baschi 3.91 45 *e*P Pb 00 33 49.2 -0.1
comp=Z,337nm,0.5s
MNBS *e*S **Sb 00 34 39.3 +2.8**
comp=Z,1μm,0.9s
TAS Tashkent 3.98 271 ⇓Pg Pb 00 33 52.7 +2.2
comp=Z,421nm,0.6s
TAS ⇑Lg Lg 00 34 47.7
comp=Z,2μm,0.7s
TAS Tashkent 3.98 271 PN **Pb 00 33 52.8 +2.3**
TAS pmax pmax
comp=Z,421nm,0.6s
SHLS Shalkode 4.04 62 *e*P Pg 00 33 58.4 +0.6
comp=Z,401nm,0.7s
SHLS *e*S **Sg 00 34 54.6 +4.4**
comp=Z,1μm,0.7s
PDGK Podgornoye 4.13 60 ⇑Pn Pn 00 33 44.8 +1.3
comp=Z,25nm,0.6s
PDGK ⇑Pg **Pg 00 33 56.6 -3.0**
comp=Z,204nm,0.7s
PDGK ⇑Lg Lg 00 34 52.0
comp=Z,592nm,0.7s
PDGK Podgornoye 4.13 60 PN **Pn 00 33 44.9 +1.4**
PDGK pmax pmax
comp=Z,204nm,0.7s
TDK Taldygorghan 4.58 36 *e*P Pb 00 34 02.1 +1.4
comp=Z,620nm,0.8s
TDK *e*S **Sb 00 35 02.0 +6.2**
comp=Z,1μm,1.2s
KTMS Ketmen 4.75 62 *e*P Pb 00 34 03.6 -0.1
comp=Z,82nm,0.4s
KTMS *e*S **Sb 00 35 04.2 +3.3**
comp=Z,224nm,0.8s

DJR Jarkent 4.84 51 ⇓*i*P Pb 00 34 06.3 +1.1
comp=Z,191nm,0.5s
DJR ⇑*i*S **Sb 00 35 09.1 +5.7**
comp=Z,416nm,1.0s
KAPS Kapalarasan 5.24 40 ⇓*i*P Pb 00 34 14.9 +3.0
comp=Z,95nm,0.9s
KAPS *e*S **Sg 00 35 24.1 -4.4**
comp=Z,327nm,1.0s
OTUK Ortayu 7.05 348 ⇓Pn Pn 00 34 25.1 +1.6
comp=Z,9.7nm,0.6s
OTUK ⇑Pg Pb 00 34 49.0 +6.2
comp=Z,25nm,0.7s
OTUK ⇓Lg Lg 00 36 24.4
comp=Z,602nm,0.8s
OTUK Ortayu 7.05 348 PN **Pn 00 34 25.0 +1.6**
OTUK pmax pmax
comp=Z,10.0nm,0.6s
MAKZ Makanchi 7.61 42 ⇑Pn Pn 00 34 32.5 +1.4
comp=Z,23nm,0.7s
MAKZ ⇓Lg Lg 00 36 42.5
comp=Z,179nm,1.2s
MAKZ Makanchi 7.61 42 *e*Pn Pn 00 34 33.4 +2.4
MAKZ Makanchi 7.61 42 *e*P Pn 00 34 33.4 +2.4
MK01 Makanchi Array 7.75 43 *e*Pn Pn 00 34 35.4 +2.5
MK31 Makanchi Array 7.76 43 Pn **Pn 00 34 36.3 +3.2**
comp=Z,23nm,0.6s,baz=226,slow=13,SNR=46
MK31 ⇓Lg Lg 00 36 47.3
comp=Z,102nm,0.9s,baz=242,slow=21,SNR=4.4
MK31 Makanchi Array 7.76 43 *e*Pn Pn 00 34 37.0 +3.9
MK31 Makanchi Array 7.76 43 *e*P Pn 00 34 37.0 +3.9
MKAR Makanchi Array 7.76 43 Pn **Pn 00 34 36.2 +3.1**
comp=Z,1.3nm,0.3s,baz=222,slow=14,SNR=32
MKAR Lg Lg 00 36 40.1
comp=Z,4.3nm,0.3s,baz=227,slow=28,SNR=6.2
MKAR LR LR 00 37 18.7
comp=Z,84nm,21.2s,baz=220,slow=36
MKAR Makanchi Array 7.76 43 *e*Pn Pn 00 34 37.0 +3.9
CHCP Chirah Chowk 7.77 188 P **Pn 00 34 35.3 +1.9**
NIL Nilore 7.78 188 *e*Pn Pn 00 34 35.6 +2.1
CEP Cherat 7.83 197 P **Pn 00 34 35.0 +0.8**
CEP S **Sn 00 36 06.0 +3.2**
KBL Kabul 8.10 214 *e*Pn Pn 00 34 39.1 +1.1
KBL Kabul 8.10 214 *e*P Pn 00 34 39.1 +1.1
THW Thamme Wali 8.86 196 P **Pn 00 34 49.5 +1.3**
DHRM DHARAMSHALA 9.21 171 *e*P Pn 00 34 52.1 -1.1
DHRM *e*S **Sn 00 36 32.9 -4.1**
DHRM IAML 00 36 39.1
comp=E,239nm,0.9s
SARP Sargodha 9.56 190 P **Pn 00 34 57.7 -0.1**
KURBB Kurchatov Arra 9.65 15 Pn **Pn 00 34 59.0 0.0**
comp=E,0.5nm,0.3s,baz=201,slow=12,SNR=34
KURBB Lg Lg 00 37 40.9
comp=E,0.7nm,0.3s,baz=203,slow=31,SNR=6.1
KURBB Kurchatov Arra 9.65 15 ⇓Pn Pn 00 34 59.7 +0.8
comp=E,9.1nm,0.6s
KURBB ⇓Lg Lg 00 37 49.0
comp=E,563nm,1.2s
KURK Kurchatov 9.76 15 ⇓Pn Pn 00 35 01.4 +1.0
comp=E,5.3nm,0.7s
KURK ⇓Lg Lg 00 37 51.8
comp=E,300nm,1.0s
KURK Kurchatov 9.76 15 *e*Pn Pn 00 35 02.2 +1.8
KURK Kurchatov 9.76 15 *c*eP Pn 00 35 02.2 +1.8
KURK pmax pmax
comp=Z,10.0nm,1.3s
WMQ Urumqi 9.98 71 P **Pn 00 35 06.8 +3.2**
WMQ S **Sn 00 36 59.3 +3.8**
SMLA Simla 10.44 168 *e*P Pn 00 35 09.8 0.0
SMLA *e*S **Sn 00 37 00.8 -5.9**
SMLA IAML 00 37 08.8
comp=E,79nm,0.3s
SMLA IAML 00 37 10.9
comp=N,67nm,1.1s
DDI Dehra Dun 11.38 165 *e*P Pn 00 35 21.0 -1.8
BVA0 Borovoye Array 11.99 348 Pn **Pn 00 35 32.4 +1.3**
comp=N,15nm,1.0s,baz=346,slow=3.5,SNR=41
BVA0 ⇑Sn **Sn 00 37 47.6 +2.9**
comp=N,1.6nm,0.8s,baz=161,slow=23,SNR=3.7
BVA0 ⇑Lg Lg 00 39 02.7
comp=N,3.6nm,0.8s,baz=160,slow=25,SNR=4.6
BVA0 Borovoye Array 11.99 348 P **Pn 00 35 32.4 +1.3**
BVA0 S **Sn 00 37 47.6 +2.9**
BVA0 pmax pmax
comp=Z,15nm,1.0s
BVA0 smax smax
comp=N,2.0nm,0.8s
BVAR Borovoye Array 11.99 348 Pn **Pn 00 35 30.7 -0.4**
comp=N,1.0nm,0.3s,baz=158,slow=13,SNR=23
BVAR Sn **Sn 00 37 43.4 -1.2**
comp=N,0.5nm,0.3s,baz=170,slow=25,SNR=2.8
BVAR Lg Lg 00 38 58.0
comp=N,2.2nm,0.3s,baz=160,slow=26,SNR=7.4
BVAR LR LR 00 40 18.4
comp=N,330nm,19.0s,baz=166,slow=38
BRVK Borovoye 12.04 348 ⇑Pn Pn 00 35 31.6 -0.1
comp=N,14nm,0.8s
BRVK ⇑Sn **Sn 00 37 49.5 +3.6**
comp=N,42nm,1.1s
BRVK ⇑Lg Lg 00 39 03.6
comp=N,132nm,0.9s
BRVK Borovoye 12.04 348 *e*Pn Pn 00 35 31.4 -0.3
BRVK Borovoye 12.04 348 *c*eP Pn 00 35 31.6 -0.1
BRVK pmax pmax
comp=Z,10.0nm,1.3s
DGZ Jazzator, Alta 12.26 43 *e*P Pn 00 35 37.1 +2.3
AB31 Akbulak array 12.95 312 Pn **Pn 00 35 43.9 -0.3**
comp=Z,12nm,0.7s,baz=122,slow=13,SNR=80
AB31 Akbulak array 12.95 312 *i* P Pn 00 35 43.8 -0.3
AB31 pmax pmax
comp=Z,6.0nm,0.5s
ABKAR Akbulak array 12.95 312 *e*Pn Pn 00 35 43.9 -0.2
GEYT Alibeck 13.14 260 Pn **Pn 00 35 43.8 -3.0**
comp=Z,0.9nm,0.3s,baz=81,slow=12,SNR=12
GEYT Sn **Sn 00 38 06.9 -5.9**
comp=Z,0.6nm,0.3s,baz=66,slow=18,SNR=3.8
GYA0B ALIBECK ARRAY 13.14 260 ⇓Pn Pn 00 35 48.1 +1.3
comp=Z,9.5nm,0.6s
GYA0B ⇓Sn **Sn 00 38 15.8 +2.9**
comp=Z,37nm,0.8s
GYA0B ALIBECK ARRAY 13.14 260 *e*Pn Pn 00 35 44.6 -2.2
ZAA0 Zalesovo Array 14.33 25 ⇓Pn Pn 00 36 06.0 +3.1
comp=Z,13nm,0.9s
ZAA0 ⇓Lg Lg 00 40 15.1
comp=Z,50nm,1.1s
ZAA0 Zalesovo Array 14.33 25 *e*Pn Pn 00 36 05.4 +2.5
ZALV Zalesovo Beam 14.33 25 Pn **Pn 00 36 02.9 0.0**
comp=Z,1.1nm,0.3s,baz=214,slow=14,SNR=19
ZALV Sn **Sn 00 38 41.3 -0.3**
comp=Z,0.2nm,0.3s,baz=234,slow=17,SNR=4.8
ZALV Lg Lg 00 40 13.9
comp=Z,0.4nm,0.3s,baz=221,slow=29,SNR=4.1
ZALV LR LR 00 41 45.2
comp=Z,100nm,19.8s,baz=246,slow=38
ZALV Zalesovo Beam 14.33 25 *e*Pn Pn 00 36 04.7 +1.8
ZALV Sn **Sn 00 38 41.3 -0.3**
ZALV Zalesovo Beam 14.33 25 *e*P Pn 00 36 04.7 +1.8
ZALV 00 38 41.3
AKTO Aktyubinsk 14.63 314 Pn **Pn 00 36 06.8 -0.3**
comp=Z,1.1nm,0.3s,baz=126,slow=14,SNR=37
AKTO Sn **Sn 00 38 47.4 -1.7**
comp=Z,0.2nm,0.3s,baz=11,slow=19,SNR=3.9
AKTO LR LR 00 42 16.0
comp=Z,191nm,21.1s,baz=134,slow=39
AKTO Aktyubinsk 14.63 314 ⇓Pn Pn 00 36 07.5 +0.4
comp=Z,34nm,0.8s
NVS Novosibirsk 14.65 20 *e*P Pn 00 36 07.9 +0.7
NVS *e* 00 38 52.9
PYUN Piuthan 14.93 150 *e*P Pn 00 36 06.3 -5.1
DANN Dangsing 15.01 147 *e*P Pn 00 36 08.7 -3.9
comp=Z,44nm,0.7s
KOLN Koldanda 15.46 149 *e*P Pn 00 36 13.6 -4.9
comp=Z,21nm,0.4s
GKN Gorkha 15.68 145 *e*P Pn 00 36 18.4 -2.9
DMN Daman 16.23 145 *e*P Pn 00 36 24.7 -3.7
GUN Gumba 16.32 142 *e*P Pn 00 36 26.9 -2.8
PKIN Phulchoki 16.38 144 *e*P Pn 00 36 28.1 -2.3
HVS Khovu-Aksy 16.40 47 ⇑*e*P Pn 00 36 32.1 +1.8
JIRN Jiri 16.68 142 *e*P Pn 00 36 32.3 -1.9
comp=Z,65nm,0.5s
RAMN Ramite 17.47 142 *e*P Pn 00 36 41.9 -2.2
SVE Sverdlovsk 17.90 334 ⇑*e*P Pn 00 36 48.6 -0.3
SVE *e*S **Sn 00 40 03.9 -4.3**
SVE pmax pmax
comp=Z,40nm,1.1s
ODAN Odare 17.92 140 *e*P Pn 00 36 49.9 +0.2
comp=Z,76nm,0.8s

GTK Tadong 18.15 136 *e*P Pn 00 36 51.9 -0.5
BHPL Bhopal 18.24 172 *e*P Pn 00 36 50.3 -3.1
ARU Arti 18.30 331 P **Pn 00 36 53.8 -0.1**
comp=Z,0.0nm,0.3s,baz=133,slow=6.8,SNR=15
ARU S **Sn 00 40 12.7 -5.4**
comp=Z,0.0nm,0.3s,baz=112,slow=19,SNR=3.4
ARU Lg Lg 00 42 22.6
comp=Z,0.0nm,0.3s,baz=332,slow=20,SNR=3.9
ARU LR LR 00 44 27.4
comp=Z,108nm,21.1s,baz=104,slow=38
ARU Arti 18.30 331 *e*P Pn 00 36 54.0 +0.1
comp=Z,35nm,1.0s
ARU S **Sn 00 40 12.7 -5.4**
ARU Arti 18.30 331 *d i*P Pn 00 36 54.7 +0.8
ARU S **Sn 00 40 19.7 +1.6**
ARU pmax pmax
comp=Z,30nm,1.2s
KNGR Kungurtug, Tuv 18.36 52 ⇑*e*P P 00 36 56.2 +1.4
GTA Gaotai 19.31 87 *e*P P 00 37 06.5 +1.1
GTA pP sP 00 37 11.0 +0.5
GTA sP pP 00 37 14.0 +5.1
GTA S **Sn 00 40 44.5 +1.7**
GTA pmax pmax
comp=Z,4.0nm,1.2s
GTA pmax pmax
comp=Z,80nm,5.2s
GTA LR LR
comp=Z,190nm,16.8s
GTA LR LR
comp=Z,170nm,17.0s
GTA LR LR
comp=Z,140nm,14.3s
BOK Bokaro 19.92 148 *e*P P 00 37 10.2 -1.8
AKT Akhty 20.11 279 *e*P P 00 37 15.8 +1.8
AKT *e* 00 37 31.8
AKT *e*PPP PPP 00 37 39.7
AKT pmax pmax
comp=Z,12nm,0.8s
GUWA GUWAHATI 20.72 132 *e*P P 00 37 19.7 -0.9
ZIRO ZIRO 21.00 125 *e*P P 00 37 23.4 -0.4
TEZP TEZPUR 21.03 129 *e*P P 00 37 24.0 0.0
SHL Shillong 21.32 132 *e*P P 00 37 24.9 -2.4
GROC Groznyy 21.33 285 *e*P P 00 37 24.5 -2.6
GROC *e*S **S 00 41 16.7 -6.9**
GROC pmax pmax
comp=Z,22nm,1.2s
ZAK Zakamensk 21.81 56 *e*P P 00 37 32.9 +0.6
ZAK pmax pmax
comp=Z,17nm,1.2s
TBLG Delisi 22.28 281 *e*P P 00 37 39.7 +2.3
comp=Z,12nm,1.0s
TLY Talaya 22.36 53 *e*P P 00 37 39.1 +1.0
comp=Z,5.0nm,0.8s
TLY Talaya 22.36 53 *i* P P 00 37 39.7 +1.6
TLY *i* XP **sP 00 37 43.6 +0.3**
TLY pmax pmax
comp=Z,3.0nm,0.9s
WSAR Wadi Sarin 22.48 221 P **P 00 37 37.4 -2.3**
comp=Z,5.7nm,0.9s,baz=49,slow=6.4,SNR=4.5
GNI Garni 22.58 277 P **P 00 37 40.9 +0.1**
comp=Z,12nm,0.9s,baz=322,slow=6.8,SNR=8.3
GNI LR LR 00 47 47.7
comp=Z,32nm,19.1s,baz=65,slow=40
GNI Garni 22.58 277 *e*P P 00 37 42.5 +1.7
comp=Z,31nm,1.0s
GNI Garni 22.58 277 ⇑*i*P P 00 37 44.4 +3.6
GNI pmax pmax
comp=Z,75nm,1.3s
ZEI Tsey 22.75 284 *e*P P 00 37 45.1 +2.5
NCK Nalchik 22.90 286 ⇑*e*P P 00 37 49.1 +5.2
NCK pmax pmax
comp=Z,16nm,1.1s
LZH Lanzhou 23.38 93 *e*P P 00 37 47.5 -1.5
LZH pP sP 00 37 57.0 +2.7
LZH sP pP 00 38 01.0 +8.3
LZH *e*PP **PnPn 00 38 18.5 +3.5**
LZH pmax pmax
comp=Z,18nm,1.0s
LZH pmax pmax
comp=Z,52nm,4.7s
LZH LR LR
comp=Z,170nm,11.5s
LZH LR LR
comp=Z,170nm,12.0s
LZH LR LR
comp=Z,220nm,14.2s
KBZ Khabaz 23.38 286 P **P 00 37 49.9 +1.1**
comp=Z,1.3nm,0.7s,baz=118,slow=5.8,SNR=3.5
KBZ LR LR 00 48 03.8
comp=Z,91nm,18.0s,baz=76,slow=39
SONM Songino Array 23.45 63 P **P 00 37 49.8 +0.2**
comp=Z,2.8nm,0.8s,baz=262,slow=10,SNR=12
SONA1 Songino Array 23.45 63 *e*P P 00 37 50.6 +0.9
KVAR Kislovodsk Arr 23.51 287 P **P 00 37 49.8 -0.4**
comp=Z,1.4nm,0.4s,baz=104,slow=8.3,SNR=2.5
KVAR LR LR 00 48 09.7
comp=Z,62nm,18.3s,baz=335,slow=39
KIV Kislovodsk 23.51 287 *e*P P 00 37 54.2 +4.0
KIV pmax pmax
comp=Z,8.0nm,1.0s
KIV MLR MLR
comp=Z,46nm,14.0s
BRDH Bariadhala 23.52 137 LR LR 00 48 26.3
comp=Z,140nm,20.5s,baz=240,slow=41
ULN Ulaanbaatar 23.89 63 *e*P P 00 37 54.7 +0.7
comp=Z,8.4nm,1.0s
ULN Ulaanbaatar 23.89 63 *d i*P P 00 37 54.9 +1.0
ULN pmax pmax
comp=Z,16nm,1.7s
HYB Hyderabad 24.12 171 *e*P P 00 37 51.6 -4.5
CD2 Chengdu 25.67 105 P **P 00 38 11.3 +1.2**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
VORD Divnogorie 26.02 304 *e*P P 00 38 13.2 +0.1
VORD pmax pmax
comp=Z,9.0nm,0.6s
VSR Storozhevoye 26.14 304 *e*P P 00 38 13.6 -0.5
VSR pmax pmax
comp=Z,6.0nm,0.7s
PRGR Permogore 26.74 329 *e*P P 00 38 19.7 +0.2
PRGR pmax pmax
comp=Z,6.0nm,0.4s
MOS Moscow 27.97 314 *e*P P 00 38 34.4 +3.9
MOS pmax pmax
comp=Z,32nm,0.8s
OBN Obninsk 28.40 312 ⇓*e*P P 00 38 35.0 +0.6
OBN *e* 00 38 39.2
OBN PPP PPP 00 39 36.0
OBN *e* 00 44 39.3
KMI Kunming 28.42 116 P **P 00 38 37.5 +2.3**
KMI pmax pmax
comp=Z,8.0nm,0.8s
KLMR Klimovskoe 28.86 324 *e*P P 00 38 38.0 -0.4
KLMR pmax pmax
comp=Z,13nm,1.4s
KLMR Klimovskoe 28.86 324 *e*P P 00 38 38.1 -0.4
KLMR AMP 00 38 42.5
comp=Z,13nm,1.4s
CMAR Chiang Mai Arr 30.91 130 P **P 00 38 54.9 -2.1**
comp=Z,1.3nm,0.3s,baz=307,slow=8.6,SNR=5.3
CMAR LR LR 00 51 46.0
comp=Z,61nm,18.6s,baz=206,slow=37
BR131 Keskin Array S 30.95 281 *e*P P 00 38 58.4 +1.1
BRTR Keskin Array B 30.95 281 P **P 00 38 58.0 +0.7**
comp=Z,2.7nm,1.0s,baz=94,slow=7.4,SNR=13
BRTR LR LR 00 51 45.7
comp=Z,26nm,20.0s,baz=62,slow=37
BRTR Keskin Array B 30.95 281 P **P 00 38 58.0 +0.7**
MMAI Mount Meron Ar 32.08 268 P **P 00 39 07.3 0.0**
comp=Z,3.5nm,1.0s,baz=60,slow=9.6,SNR=4.1
AKASG Malin Array Be 32.38 302 P **P 00 39 09.5 -0.1**
comp=Z,1.4nm,0.8s,baz=77,slow=8.6,SNR=4.8
AKASG LR LR 00 54 03.5
comp=Z,51nm,21.1s,baz=235,slow=40
APA Apatity 34.36 333 ⇑*i*P P 00 39 24.0 -2.7
APA pmax pmax
comp=Z,2.0nm,0.7s
APA MLR MLR
comp=Z,300nm,10.0s
PALK Pallekele 34.40 169 LR LR 00 53 44.8
comp=Z,126nm,18.7s,baz=295,slow=37
PLOR Plostina 34.57 294 ⇑*i*P P 00 39 30.9 +2.1
PLOR Plostina 34.57 294 ⇑P P 00 39 30.9 +2.1
MLR Muntele Rosu 35.12 293 P **P 00 39 35.7 +2.0**
comp=Z,0.7nm,0.8s,baz=77,slow=4.7

MLR			LR	LR	00 56 00.6	
	comp=Z,25nm,20.7s,baz=56,slow=40					
MLR	**Muntele Rosu**	**35.12 293**	⇓i P	**P**	**00 39 36.2**	**+2.5**
MLR	**Muntele Rosu**	**35.12 293**	eP	**P**	**00 39 35.6**	**+2.0**
	comp=Z,4.4nm,0.9s					
MLR	**Muntele Rosu**	**35.12 293**	⇓P	**P**	**00 39 36.2**	**+2.5**
FINES	**FINESS Array B**	**35.20 321**	P	**P**	**00 39 34.9**	**+0.9**
	comp=Z,1.8nm,0.5s,baz=102,slow=8.3,SNR=14					
FINES			LR	LR	00 54 37.0	
	comp=Z,113nm,20.0s,baz=94,slow=37					
BURAR	**Bucovina Array**	**35.26 297**	⇓i P	**P**	**00 39 36.1**	**+1.3**
BURAR	**Bucovina Array**	**35.26 297**	⇓P	**P**	**00 39 36.1**	**+1.3**
DRGR		**37.08 296**	⇓i P	**P**	**00 39 52.0**	**+1.6**
DRGR		**37.08 296**	⇓P	**P**	**00 39 52.0**	**+1.6**
ARCES	**ARCESS Array B**	**37.83 334**	P	**P**	**00 39 57.7**	**+1.3**
	comp=Z,4.0nm,0.6s,baz=102,slow=8.9,SNR=24					
ARCES			LR	LR	00 56 30.2	
	comp=Z,102nm,20.8s,baz=57,slow=38					
ARCES	**ARCESS Array B**	**37.83 334**	eP	**P**	**00 39 57.5**	**+1.1**
YAK	**Yakutsk**	**38.40 39**	LR	LR	00 54 50.7	
	comp=Z,32nm,18.0s,baz=269,slow=34					
YAK	**Yakutsk**	**38.40 39**	⇓eP	**P**	**00 40 03.2**	**+2.0**
YAK			pmax	pmax		
	comp=Z,7.0nm,0.8s					
OJC	**Ojcow**	**38.42 302**	eP	**P**	**00 40 01.2**	**-0.4**
	comp=Z,7.7nm,1.1s					
OJC	**Ojcow**	**38.42 302**	eP	**P**	**00 40 01.2**	**-0.4**
OJC			pmax	pmax		
	comp=Z,8.0nm,1.1s					
IDI	**Anoyia**	**39.01 278**	P	**P**	**00 40 05.9**	**-0.8**
	comp=Z,9.8nm,1.2s,baz=41,slow=11,SNR=5.8					
DIVS	**Divibare**	**39.57 293**	eP	**P**	**00 40 12.4**	**+1.0**
	comp=Z,4.2nm,1.1s					
FNA	**Florina**	**39.57 287**	eP	**P**	**00 40 11.9**	**+0.5**
	comp=Z,6.4nm,1.2s					
FNA	**Florina**	**39.57 287**	eP	**P**	**00 40 11.9**	**+0.5**
FNA			pmax	pmax		
	comp=Z,6.0nm,1.2s					
MORC	**Moravsky Berou**	**39.93 302**	eP	**P**	**00 40 14.7**	**+0.5**
	comp=Z,12nm,0.9s					
MORC	**Moravsky Berou**	**39.93 302**	eP	**P**	**00 40 14.7**	**+0.5**
MORC			pmax	pmax		
	comp=Z,12nm,0.9s					
ATD	**Arta Tunnel**	**40.70 232**	LR	LR	00 59 37.0	
	comp=Z,21nm,18.8s,baz=359,slow=40					
KSRS	**Korea Array**	**40.87 77**	LR	LR	00 57 54.0	
	comp=Z,22nm,18.4s,baz=300,slow=37					
HFS	**Hagfors**	**41.12 318**	P	**P**	**00 40 24.6**	**+0.8**
	comp=Z,2.2nm,0.6s,baz=123,slow=5.3,SNR=9.7					
HFS			LR	LR	00 58 11.6	
	comp=Z,76nm,19.5s,baz=98,slow=37					
MSHR	**Mys Shultsa**	**41.41 69**	⇑eP	**P**	**00 40 28.0**	**+1.6**
NC405	**NORSAR Array S**	**42.07 320**	eP	**P**	**00 40 31.6**	**-0.1**
NC303	**NORSAR Array S**	**42.23 320**	eP	**P**	**00 40 34.1**	**+1.1**
NB2	**NORSAR Subarra**	**42.31 320**	P	**P**	**00 40 33.8**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=88,slow=8.6					
NOA	**NORSAR Array B**	**42.31 320**	LR	LR	00 59 07.6	
	comp=Z,51nm,20.3s,baz=85,slow=37					
GEC2	**GERESS Array S**	**42.58 301**	eP	**P**	**00 40 37.9**	**+1.8**
	comp=Z,15nm,1.6s					
GEC2	**GERESS Array S**	**42.58 301**	eP	**P**	**00 40 37.9**	**+1.8**
GEC2			pmax	pmax		
	comp=Z,15nm,1.6s					
GERES	**GERESS Array B**	**42.58 301**	P	**P**	**00 40 37.3**	**+1.2**
	comp=Z,1.1nm,0.4s,baz=69,slow=7.3,SNR=12					
GERES			LR	LR	00 59 39.8	
	comp=Z,36nm,21.1s,baz=106,slow=38					
GEA0	**GERESS Array S**	**42.58 301**	eP	**P**	**00 40 36.9**	**+0.8**
SPITS	**Spitsbergen Ar**	**43.44 345**	P	**P**	**00 40 44.2**	**+1.6**
	comp=Z,3.0nm,0.8s,baz=105,slow=11,SNR=3.5					
SPITS			LR	LR	01 01 24.0	
	comp=Z,88nm,20.7s,baz=145,slow=40					
PSI	**Prapat**	**44.21 144**	LR	LR	01 03 37.1	
	comp=Z,58nm,19.1s,baz=288,slow=42					
KBS	**Kingsbay**	**44.52 346**	⇑i P	**P**	**00 40 53.4**	**+2.1**
JNU	**Nakatsue**	**44.89 82**	LR	LR	00 59 31.6	
	comp=Z,31nm,18.3s,baz=124,slow=36					
DAVOX	**Davos/Dischmat**	**45.62 300**	P	**P**	**00 41 00.2**	**-0.4**
	comp=Z,2.9nm,0.5s,baz=41,slow=9.3,SNR=5.9					
DAVOX			LR	LR	01 01 55.4	
	comp=Z,57nm,18.1s,baz=74,slow=38					
CDF	**Champ du Feu**	**46.80 303**	eP	**P**	**00 41 09.7**	**0.0**
CDF			pmax	pmax		
	comp=Z,11nm,1.5s					
HINF	**Hinteralfeld**	**47.25 302**	eP	**P**	**00 41 13.1**	**-0.1**
HINF			pmax	pmax		
	comp=Z,2.0nm,0.6s					
SENIN	**Lac Senin/Sane**	**47.44 300**	eP	**P**	**00 41 15.6**	**+0.6**
	comp=Z,4.1nm,0.9s					
HAU	**Haudompre**	**47.52 302**	eP	**P**	**00 41 15.5**	**+0.2**
HAU			pmax	pmax		
	comp=Z,9.0nm,1.2s					
YSS	**Yuzh-Sakhalins**	**47.83 59**	⇑eP	**P**	**00 41 19.6**	**+1.9**
YSS			pmax	pmax		
	comp=Z,7.0nm,1.0s					
LPG	**La Plagne**	**48.09 299**	eP	**P**	**00 41 21.2**	**+1.1**
LPG			pmax	pmax		
	comp=Z,3.0nm,0.7s					
LPL	**La Plagne**	**48.10 299**	eP	**P**	**00 41 20.7**	**+0.6**
LPL			pmax	pmax		
	comp=Z,4.0nm,0.8s					
CABF	**La Chapelle**	**48.14 301**	eP	**P**	**00 41 22.7**	**+2.5**
CABF			pmax	pmax		
	comp=Z,1.0nm,1.3s					
BAIF	**Baives**	**48.21 305**	eP	**P**	**00 41 21.2**	**+0.7**
BAIF			pmax	pmax		
	comp=Z,1.0nm,1.3s					
BNI	**Bardonecchia**	**48.30 298**	eP	**P**	**00 41 21.9**	**+0.4**
	comp=Z,10.0nm,1.1s					
BNI	**Bardonecchia**	**48.30 298**	eP	**P**	**00 41 21.9**	**+0.4**
BNI			pmax	pmax		
	comp=Z,10.0nm,1.1s					
MBDF	**Montbardon**	**48.36 298**	eP	**P**	**00 41 25.8**	**+3.8**
MBDF			pmax	pmax		
	comp=Z,8.0nm,1.0s					
MAJO	**Matsushiro**	**48.74 74**	⇑iP	**P**	**00 41 24.5**	**-0.3**
MAJO			pmax	pmax		
	comp=Z,5.0nm,0.9s					
MJAR	**Matsushiro Arr**	**48.74 74**	P	**P**	**00 41 24.0**	**-0.9**
	comp=Z,3.5nm,0.8s,baz=289,slow=9.5,SNR=8.8					
MJAR	**Matsushiro Arr**	**48.74 74**	P	**P**	**00 41 24.0**	**-0.9**
SEY	**Seymchan**	**48.83 36**	⇓i P	**P**	**00 41 26.5**	**+1.3**
MA2	**Magadan**	**48.84 41**	⇑iP	**P**	**00 41 26.0**	**+0.7**
VIVF	**Saint-Julien-l**	**49.70 299**	eP	**P**	**00 41 32.2**	**+0.1**
VIVF			pmax	pmax		
	comp=Z,6.0nm,1.0s					
AVF	**Avril sur Loir**	**49.84 302**	eP	**P**	**00 41 32.7**	**-0.4**
AVF			pmax	pmax		
	comp=Z,7.0nm,0.9s					
TCF	**Toulx Ste Croi**	**50.76 301**	eP	**P**	**00 41 40.1**	**0.0**
TCF			pmax	pmax		
	comp=Z,4.0nm,1.1s					
EKA	**Eskdalemuir Ar**	**50.82 314**	P	**P**	**00 41 40.4**	**0.0**
	comp=Z,1.1nm,0.7s,baz=76,slow=8.8,SNR=6.4					
CAF	**Calviac**	**51.38 300**	eP	**P**	**00 41 45.7**	**+0.9**
CAF			pmax	pmax		
	comp=Z,7.0nm,1.3s					
RJF	**Les Rejaudoux**	**51.59 301**	eP	**P**	**00 41 46.6**	**+0.3**
RJF			pmax	pmax		
	comp=Z,31nm,2.1s					
GRR	**Gorron**	**51.90 305**	eP	**P**	**00 41 47.9**	**-0.7**
GRR			pmax	pmax		
	comp=Z,39nm,1.9s					
MTLF	**Montolieu**	**51.92 298**	eP	**P**	**00 41 48.8**	**0.0**
MTLF			pmax	pmax		
	comp=Z,5.0nm,1.0s					
BILL	**Bilibino**	**53.01 28**	⇑eP	**P**	**00 41 58.3**	**+1.8**
BILL			i		00 42 00.2	
BILL			pmax	pmax		
	comp=Z,3.0nm,1.1s					
ROSF	**Rostrenen**	**53.40 306**	eP	**P**	**00 42 00.1**	**+0.4**
ROSF			pmax	pmax		
	comp=Z,22nm,1.4s					
QUIF	**Quistinic**	**53.51 305**	eP	**P**	**00 41 59.8**	**-0.7**
QUIF			pmax	pmax		
	comp=Z,27nm,1.6s					
ETSF	**Etsaut**	**53.95 299**	eP	**P**	**00 42 07.1**	**+3.2**
ETSF			pmax	pmax		
	comp=Z,3.0nm,0.8s					
KMBO	**Kilima Mbogo**	**54.16 228**	LR	LR	01 06 14.9	
	comp=Z,31nm,19.6s,baz=282,slow=37					
SUMG	**Summit**	**57.37 341**	eP	**P**	**00 42 30.2**	**+1.8**
	comp=Z,10nm,1.3s					
SUMG	**Summit**	**57.37 341**	eP	**P**	**00 42 30.2**	**+1.8**
SUMG			pmax	pmax		
	comp=Z,10.0nm,1.3s					
ES19	**SONSECA Array**	**57.66 297**	eP	**P**	**00 42 30.7**	**+0.2**
ESDC	**Sonseca Array**	**57.71 297**	P	**P**	**00 42 30.6**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=58,slow=7.4,SNR=10					
ANGG	**Ammassalik, Gr**	**61.25 334**	eP	**P**	**00 42 56.5**	**+1.7**
	comp=Z,18nm,1.2s					
RER	**Riviere de l'E**	**64.62 199**	eP	**P**	**00 43 18.2**	**+0.4**
	comp=Z,101nm,1.2s					
COLD	**Coldfoot**	**66.51 17**	eP	**P**	**00 43 29.6**	**+0.2**
	comp=Z,2.9nm,1.0s					
TOA0	**Torodi Ar. Sit**	**68.61 269**	eP	**P**	**00 43 42.9**	**-0.6**
TORD	**Torodi Ar. Bea**	**68.61 269**	P	**P**	**00 43 42.6**	**-0.9**
	comp=Z,6.8nm,0.8s,baz=49,slow=5.7,SNR=52					
IL1	**Eielson Array**	**69.32 18**	eP	**P**	**00 43 46.5**	**-0.6**
IL1			epP	sP	00 43 59.4	+6.7
ILAR	**Eielson Array**	**69.32 18**	P	**P**	**00 43 46.5**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=319,slow=4.6,SNR=8.0					
KOWA	**Kowa**	**72.06 274**	P	**P**	**00 44 03.9**	**-0.7**
	comp=Z,2.4nm,0.5s,baz=90,slow=8.1,SNR=11					
YKA	**Yellowknife Ar**	**76.22 4**	P	**P**	**00 44 28.0**	**-0.1**
	comp=Z,1.6nm,0.8s,baz=352,slow=5.8,SNR=7.7					
WRA	**Warramunga Arr**	**82.34 125**	P	**P**	**00 44 59.8**	**-2.4**
	comp=Z,1.6nm,0.9s,baz=318,slow=4.8,SNR=6.2					
ASAR	**Alice Springs**	**84.89 128**	P	**P**	**00 45 13.1**	**-2.1**
	comp=Z,1.0nm,0.8s,baz=321,slow=5.5,SNR=6.9					

*ISK **26** 00:45:26.9, 38°.73N×43°.63E, h16km, ML2.4/7*
*CSEM **26** 00:45:27.2±0.2, 38°.73N×43°.68E, h12km, ML2.4, Error ellipse: s-maj=4.5km s-min=3.4km az=97.0*
*DDA **26** 00:45:27.3, 38°.72N×43°.67E, h7km, Ml2.8*
*ISCJB **26** 00:45:28.0±0.5, 38°.72N±0°.03×43°.68E±0°.04, h17km±6km, Error ellipse: s-maj=5.8km s-min=3.9km az=22.7*

ISC 26 00:45:28.1±0.9, **38°.75N**±0°.02×**43°.64E**±0°.03, **h14**km±6km, **n44**, σ0**95**/73, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.25**	**232**	PG	**Pg**	**00 45 33.6**	**+0.1**
VANB				SG	**Sg**	**00 45 38.3**	**+1.2**
VANB	**Van**	**0.25**	**232**	ePg	**Pg**	**00 45 33.6**	**+0.1**
VANB				eSg	**Sg**	**00 45 38.3**	**+1.2**
VMUR	**Van-Muradiye**	**0.25**	**348**	i P	**Pg**	**00 45 33.4**	**-0.2**
VMUR				i S	**Sb**	**00 45 38.5**	**-0.3**
VMUR	**Van-Muradiye**	**0.25**	**348**	P	**Pg**	**00 45 33.4**	**-0.2**
VMUR				S	**Sb**	**00 45 38.5**	**-0.3**
TVAN	**Van**	**0.28**	**220**	i P	**Pg**	**00 45 33.5**	**-0.6**
TVAN				i S	**Sg**	**00 45 38.5**	**+0.2**
TVAN	**Van**	**0.28**	**220**	P	**Pg**	**00 45 33.5**	**-0.6**
TVAN				S	**Sg**	**00 45 38.5**	**+0.2**
ERCV	**ERCIS-VAN**	**0.36**	**320**	PG	**Pg**	**00 45 34.8**	**-0.7**
ERCV	**ERCIS-VAN**	**0.36**	**320**	ePg	**Pg**	**00 45 34.8**	**-0.7**
CLDR	**Caldiran**	**0.45**	**29**	PG	**Pg**	**00 45 36.1**	**-1.1**
CLDR				SG	**Sg**	**00 45 43.9**	**+0.5**
CLDR	**Caldiran**	**0.45**	**29**	i P	**Pg**	**00 45 35.9**	**-1.3**
CLDR				i S	**Sg**	**00 45 44.0**	**+0.5**
CLDR	**Caldiran**	**0.45**	**29**	ePg	**Pg**	**00 45 36.1**	**-1.1**
CLDR				eSg	**Sg**	**00 45 43.9**	**+0.5**
GEVA	**Gevas**	**0.63**	**227**	i P	**Pg**	**00 45 39.0**	**-1.4**
GEVA				i S	**Sb**	**00 45 49.7**	**+0.1**
GEVA	**Gevas**	**0.63**	**227**	P	**Pg**	**00 45 39.0**	**-1.4**
GEVA				S	**Sb**	**00 45 49.7**	**+0.1**
ADCV	**BITLIS_Adilcev**	**0.72**	**275**	i P	**Pg**	**00 45 41.5**	**-0.6**
ADCV				i S	**Sb**	**00 45 52.7**	**+0.5**
ADCV	**BITLIS_Adilcev**	**0.72**	**275**	P	**Pg**	**00 45 41.5**	**-0.6**
ADCV				S	**Sb**	**00 45 52.7**	**+0.5**
TUTA	**Tutak**	**0.92**	**316**	i P	**Pg**	**00 45 44.8**	**-1.1**
TUTA				i S	**Sb**	**00 45 58.4**	**+0.3**
TUTA	**Tutak**	**0.92**	**316**	P	**Pg**	**00 45 44.8**	**-1.1**
TUTA				S	**Sb**	**00 45 58.4**	**+0.3**
AGRB	**Hanur-Agry**	**0.97**	**329**	PG	**Pg**	**00 45 46.6**	**-0.3**
AGRB	**Hanur-Agry**	**0.97**	**329**	ePg	**Pg**	**00 45 46.6**	**-0.3**
IGDI	**IGDIR**	**1.17**	**17**	i P	**Pg**	**00 45 50.9**	**+0.2**
IGDI				i S	**Sn**	**00 46 07.3**	**+1.4**
HAKT	**HAKKARI**	**1.19**	**177**	i P	**Pb**	**00 45 49.0**	**-1.5**
HAKT				i S	**Sn**	**00 46 08.0**	**+1.5**
HAKT	**HAKKARI**	**1.19**	**177**	P	**Pb**	**00 45 49.0**	**-1.5**
HAKT				S	**Sn**	**00 46 08.0**	**+1.5**
YOVA	**Hakkari_Y`...kse**	**1.27**	**156**	i P	**Pn**	**00 45 51.4**	**-0.2**
YOVA				i S	**Sn**	**00 46 12.3**	**+3.9**
YOVA	**Hakkari_Y`...kse**	**1.27**	**156**	P	**Pn**	**00 45 51.3**	**-0.2**
GURO	**Guroymak-BITLI**	**1.27**	**262**	PN	**Pn**	**00 45 50.2**	**-1.4**
GURO				SN	**Sb**	**00 46 07.4**	**-0.8**
GURO	**Guroymak-BITLI**	**1.27**	**262**	ePn	**Pn**	**00 45 50.2**	**-1.4**
GURO				eSn	**Sb**	**00 46 07.4**	**-0.8**
EKAR	**Karacoban**	**1.33**	**293**	i P	**Pn**	**00 45 52.7**	**+0.3**
EKAR				i S	**Sn**	**00 46 10.7**	**+0.7**
EKAR	**Karacoban**	**1.33**	**293**	P	**Pn**	**00 45 52.7**	**+0.3**
EKAR				S	**Sn**	**00 46 10.7**	**+0.7**
CUKT	**Cukurca**	**1.50**	**181**	PN	**Pn**	**00 45 53.6**	**-1.0**
CUKT	**Cukurca**	**1.50**	**181**	i P	**Pn**	**00 45 54.2**	**-0.4**
CUKT				i S	**Sg**	**00 46 16.8**	**+0.5**
CUKT	**Cukurca**	**1.50**	**181**	ePn	**Pn**	**00 45 53.6**	**-1.0**
CUKT	**Cukurca**	**1.50**	**181**	P	**Pn**	**00 45 54.2**	**-0.4**
CUKT				S	**Sg**	**00 46 16.8**	**+0.5**
SRTM	**Siirt_Merkez**	**1.54**	**241**	i P	**Pb**	**00 45 56.4**	**-0.1**
SRTM				i S	**Sg**	**00 46 19.6**	**+1.7**
SRTM	**Siirt_Merkez**	**1.54**	**241**	P	**Pb**	**00 45 56.4**	**-0.1**
SRTM				S	**Sg**	**00 46 19.5**	**+1.7**
SIRT	**Sirnak**	**1.56**	**218**	PN	**Pn**	**00 45 54.9**	**-0.6**
SIRT	**Sirnak**	**1.56**	**218**	ePn	**Pn**	**00 45 54.9**	**-0.6**
GNI	**Garni**	**1.64**	**31**	PN	**Pn**	**00 45 56.4**	**-0.3**
GNI	**Garni**	**1.64**	**31**	ePn	**Pn**	**00 45 56.4**	**-0.3**
VRTB	**Varto-Mus**	**1.75**	**284**	PN	**Pn**	**00 45 57.9**	**-0.3**
VRTB	**Varto-Mus**	**1.75**	**284**	i P	**Pn**	**00 45 58.8**	**+0.6**
VRTB				i S	**Sg**	**00 46 23.5**	**-0.9**
VRTB	**Varto-Mus**	**1.75**	**284**	ePn	**Pn**	**00 45 57.9**	**-0.3**
VRTB	**Varto-Mus**	**1.75**	**284**	P	**Pn**	**00 45 58.8**	**+0.6**
VRTB				S	**Sg**	**00 46 23.5**	**-0.9**
SENK	**Senkaya-Erzuru**	**2.07**	**332**	PN	**Pn**	**00 46 02.6**	**0.0**
SENK	**Senkaya-Erzuru**	**2.07**	**332**	ePn	**Pn**	**00 46 02.6**	**0.0**

*NIED **26** 01:05:00, 37°.30N×143°.60E, h8km, Mw3.5 Best double couple: M0=1.90000×10^14 NP1:φs=27.00000°, δ36.00000°, λ-125.00000°. NP2:φs=248.00000°, δ61.00000°, λ-68.00000°*

JMA 26 01:05:56.7±0.2, **37°.32N**×**143°.55E**, **h48**km, **M3.8**, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**2.08**	**304**	P	Pn	01 06 30.3	+1.2
JIO				S	Sn	01 06 55.1	+1.4
JFK	**Kawauchi**	**2.13**	**272**	P	Pn	01 06 30.8	+0.9
JFK				S	Sn	01 06 56.0	+0.8
JMM	**Marumori**	**2.26**	**285**	P	Pn	01 06 32.5	+1.0
JMM				eS	Sn	01 06 59.5	+1.4
JMK	**Ichinoseki**	**2.46**	**312**	P	Pn	01 06 35.6	+1.4
JFT	**Otama**	**2.57**	**275**	P	Pn	01 06 38.0	+2.2
JFT				S	Sn	01 07 07.9	+2.1
JOM	**Ohasama**	**2.79**	**321**	P	Pn	01 06 40.2	+1.4
JOM				S	Sn	01 07 12.6	+1.4
JAG	**Ashikaga**	**3.40**	**256**	P	Pn	01 06 48.6	+1.3
JANG	**Nango**	**3.44**	**333**	P	Pn	01 06 48.8	+1.1
JANG				eS	Sn	01 07 27.6	+0.4
JRY	**Ryogami san**	**3.96**	**252**	P	Pn	01 06 55.8	+0.9
JRY				eS	Sn	01 07 38.8	-1.3
MAT	**Matsushiro**	**4.35**	**261**	P	Pn	01 07 03.6	+3.3
MAT				eS	Sn	01 07 47.7	-2.0
JOT	**Ohata**	**4.50**	**335**	P	Pn	01 07 03.3	+1.1
JOT				eS	Sn	01 07 52.8	-0.4

*ISCJB **26** 01:07:53.6±0.9, 42°.84N±0°.06×145°.05E±0°.06, h48km±11km, Error ellipse: s-maj=11.3km s-min=5.0km az=152.9*
*MOS **26** 01:07:54.9±1.2, 42°.85N×145°.03E, h49km, mb4.2/1, Error ellipse: s-maj=99.9km s-min=20.9km az=67.3*
*JMA **26** 01:07:54.4±0.1, 42°.85N×145°.01E, h46km±1km, M3.2*
*SKHL **26** 01:07:54.9±0.8, 42°.89N×144°.99E, h42km±4km, mb4.3/5*

ISC 26 01:07:53.6±1.7, **42°.81N**±0°.08×**145°.06E**±0°.05, **h46**km±15km, **n18**, σ0**65**/35, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAK	**Akkeshi**	**0.33**	**306**	P	**Pn**	**01 08 02.9**	**+0.3**
JAK				eS	**Sn**	**01 08 09.1**	**+0.1**
NEM2	**Nemuro 2**	**0.75**	**42**	P	**Pn**	**01 08 08.0**	**+0.1**
NEM2				eS	**Sn**	**01 08 17.8**	**-0.4**
JNK	**Nakash**	**0.82**	**342**	P	**Pn**	**01 08 08.7**	**-0.1**
JNK				eS	**Sn**	**01 08 18.9**	**-0.9**
JOB	**Onbets**	**0.91**	**277**	P	**Pn**	**01 08 10.1**	**+0.2**
GLVR	**Golovnino**	**0.99**	**20**	eP	**Pn**	**01 08 11.0**	**-0.1**
GLVR				AMB	AMB	01 08 16.0	
	119nm,0.2s						
GLVR				AMB	AMB	01 08 16.0	
	180nm,0.2s						
GLVR				i S	**Sn**	**01 08 24.0**	**0.0**
GLVR				A	A	01 08 26.0	
	134nm,0.2s						
GLVR				A	A	01 08 26.0	
	638nm,0.2s						
GLVR	**Golovnino**	**0.99**	**20**	ePN	**Pn**	**01 08 11.7**	**+0.6**
GLVR				i S	**Sn**	**01 08 24.5**	**+0.5**
GLVR				pmax	pmax		
	comp=Z,180nm,0.2s						
GLVR				pmax	pmax		
	comp=N,119nm,0.1s						
GLVR				smax	smax		
	comp=N,1μm,0.1s						
GLVR				smax	smax		
	comp=E,638nm,0.1s						
JAR	**Ashorobuto**	**1.06**	**298**	P	**Pn**	**01 08 12.2**	**+0.1**
JAR				eS	**Sn**	**01 08 24.8**	**-1.0**
JRA	**Rausu**	**1.13**	**2**	P	**Pn**	**01 08 13.2**	**+0.1**
JRA				eS	**Sn**	**01 08 27.0**	**-0.4**
JCH	**Churui**	**1.27**	**262**	P	**Pn**	**01 08 15.2**	**+0.4**
JCH				eS	**Sn**	**01 08 30.1**	**-0.6**
GRPR	**Tuman**	**1.30**	**23**	eP	**Pn**	**01 08 15.0**	**-0.3**
GRPR				AMB	AMB	01 08 17.0	
	comp=E,61nm,0.3s						
GRPR				AMB	AMB	01 08 17.0	
	comp=E,48nm,0.3s						
GRPR				AMB	AMB	01 08 17.0	
	comp=E,70nm,0.3s						
GRPR				i S	**Sn**	**01 08 30.0**	**-1.4**
GRPR				A	A	01 08 32.0	
	comp=E,133nm,0.2s						
GRPR				A	A	01 08 32.0	
	comp=E,127nm,0.2s						
GRPR	**Tuman**	**1.30**	**23**	ePN	**Pn**	**01 08 15.7**	**+0.4**
GRPR				i S	**Sn**	**01 08 30.9**	**-0.5**
GRPR				pmax	pmax		
	comp=N,61nm,0.2s						
GRPR				pmax	pmax		
	comp=E,48nm,0.2s						
GRPR				pmax	pmax		
	comp=Z,70nm,0.2s						
GRPR				smax	smax		
	comp=N,1μm,0.3s						
GRPR				smax	smax		
	comp=E,1μm,0.3s						
LAGR	**Lagunnoye**	**1.36**	**23**	eP	**Pn**	**01 08 17.0**	**+0.9**
LAGR				AMB	AMB	01 08 18.0	
	comp=E,87nm,0.3s						
LAGR				AMB	AMB	01 08 18.0	
	comp=E,191nm,0.3s						
LAGR				i S	**Sn**	**01 08 33.0**	**+0.1**
LAGR				A	A	01 08 34.0	
	comp=E,790nm,0.3s						
LAGR				A	A	01 08 34.0	
	comp=E,104nm,0.3s						
LAGR	**Lagunnoye**	**1.36**	**23**	ePN	**Pn**	**01 08 17.3**	**+1.2**
LAGR				i S	**Sn**	**01 08 33.4**	**+0.5**
LAGR				pmax	pmax		
	comp=E,87nm,0.1s						
LAGR				pmax	pmax		
	comp=Z,191nm,0.1s						
LAGR				smax	smax		
	comp=N,790nm,0.2s						
LAGR				smax	smax		
	comp=E,1μm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.36**	**25**	eP	**Pn**	**01 08 16.0**	**-0.2**
YUK				AMB	AMB	01 08 17.9	
	comp=E,94nm,0.4s						
YUK				AMB	AMB	01 08 17.9	
	comp=E,121nm,0.4s						
YUK				i S	**Sn**	**01 08 32.0**	**-1.0**
YUK				A	A	01 08 35.0	
	comp=E,328nm,0.2s						
YUK				A	A	01 08 35.0	
	comp=E,420nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.36**	**25**	ePN	**Pn**	**01 08 16.6**	**+0.4**
YUK				i S	**Sn**	**01 08 32.1**	**-1.0**
YUK				pmax	pmax		
	comp=Z,209nm,0.3s						
YUK				pmax	pmax		
	comp=N,121nm,0.4s						
YUK				pmax	pmax		
	comp=E,94nm,0.3s						
YUK				smax	smax		
	comp=N,328nm,0.2s						
YUK				smax	smax		
	comp=E,42nm,0.2s						
JTKR	**Abashiri--Toko**	**1.44**	**325**	P	**Pn**	**01 08 17.9**	**+0.7**
JTKR				eS	**Sn**	**01 08 35.8**	**+1.0**
SHO	**Shikotan**	**1.67**	**50**	eP	**Pn**	**01 08 21.0**	**+0.6**
SHO				AMB	AMB	01 08 23.2	
	comp=E,5.0nm,0.2s						
SHO				AMB	AMB	01 08 23.2	
	comp=E,14nm,0.2s						
SHO				AMB	AMB	01 08 23.2	
	comp=E,26nm,0.2s						
SHO				i S	**Sn**	**01 08 40.0**	**-0.7**
SHO				A	A	01 08 41.8	
	comp=E,341nm,0.2s						
SHO				A	A	01 08 41.8	
	comp=E,269nm,0.2s						
SHO	**Shikotan**	**1.67**	**50**	ePN	**Pn**	**01 08 21.0**	**+0.6**
SHO				i S	**Sn**	**01 08 40.3**	**-0.4**
SHO				pmax	pmax		
	comp=Z,26nm,0.3s						
SHO				pmax	pmax		
	comp=N,5.0nm,0.2s						
SHO				pmax	pmax		
	comp=E,14nm,0.2s						
SHO				smax	smax		
	comp=N,341nm,0.2s						
SHO				smax	smax		
	comp=E,269nm,0.3s						

*SJA **26** 01:21:33.8±0.8, 21°.67

PB04				*e*Sn	**Sn**	**01 22 30.7**	**+0.7**
PB04	**IPOC Station P**	**1.55**	**261**	*e*P	**Pn**	**01 22 08.7**	**-0.2**
PB04				*i* S	**Sn**	**01 22 29.4**	**-0.6**
PB04				IAML		01 22 36.1	
	comp=N,2μm,0.4s						
PB05	**IPOC Station P**	**1.75**	**244**	*e*P	**Pn**	**01 22 11.2**	**0.0**
PB05				*i* S	**Sn**	**01 22 33.8**	**-0.4**
PB05				IAML		01 22 38.8	
	comp=N,2μm,0.4s						
PB08	**IPOC Station P**	**2.05**	**342**	*e*P	**Pn**	**01 22 15.4**	**+0.1**
PB08				*i* S	**Sn**	**01 22 40.6**	**-0.8**
PB08				IAML		01 22 42.1	
	comp=E,789nm,0.6s						
PB10	**IPOC Station P**	**2.36**	**233**	*e*P	**Pn**	**01 22 20.8**	**+1.9**
PB10				*e*S	**Sn**	**01 22 45.0**	**-2.9**
YJA	**Yavi**	**2.76**	**92**	*e*P	**Pn**	**01 22 26.9**	**+2.4**
YJA				IAML		01 22 28.2	
	comp=Z,68nm,0.5s						
HJA	**Humahuaca**	**3.05**	**112**	*e*P	**Pn**	**01 22 30.9**	**+2.6**
PB14	**IPOC Station P**	**3.06**	**215**	*e*P	**Pn**	**01 22 29.1**	**+0.7**
PB14				*e*S	**Sn**	**01 22 58.4**	**-6.3**
MNMC	**Minye Minye**	**3.13**	**341**	*e*Pn	**Pn**	**01 22 28.0**	**-1.3**
MNMC				*e*Sn	**Sn**	**01 23 04.1**	**-2.3**
GO02	**Mina Guanaco**	**3.21**	**198**	*e*Pn	**Pn**	**01 22 30.9**	**+0.6**
GO02				*e*Sn	**Sn**	**01 23 03.5**	**-4.5**
SLA	**San Lorenzo**	**3.78**	**134**	*e*P	**Pn**	**01 22 41.8**	**+4.0**
SLA				IAML		01 22 44.3	
	comp=Z,37nm,0.5s						
AHML	**Horco Molle**	**5.47**	**149**	*e*P	**Pn**	**01 23 03.1**	**+2.6**
AHML				IAML		01 23 03.4	
	comp=Z,4.1nm,0.4s						
GO03	**Copiap**	**5.69**	**196**	*e*Pn	**Pn**	**01 23 02.0**	**-1.3**
GO03				*e*Sn	**Sn**	**01 24 05.6**	**-1.8**
LPAZ	**La Paz**	**5.80**	**3**	P	**Pn**	**01 23 04.7**	**-0.7**
	comp=Z,1.4nm,0.3s,baz=192,slow=1.6,SNR=21						
LPAZ				S	Sn	01 23 55.3	-16
	comp=Z,0.4nm,0.3s,baz=186,slow=12,SNR=5.7						
LPAZ	**La Paz**	**5.80**	**3**	*e*Pn	**Pn**	**01 23 06.7**	**+1.3**
LPAZ				S	Sn	01 23 55.3	-16
LPAZ				*e*Sn	Sn	01 24 06.9	-4.0
ACLC	**CERRO LA CRUZ**	**7.42**	**170**	*e*P	**Pn**	**01 23 27.0**	**+0.1**
GO04	**Tololo Observa**	**8.30**	**194**	*e*Pn	**Pn**	**01 23 35.8**	**-3.0**
GO04				*e*Sn	**Sn**	**01 25 07.7**	**-3.2**
AMOG	**MOGNA**	**8.80**	**180**	*e*P	**Pn**	**01 23 44.3**	**-1.2**
SIV	**San Ignacio**	**9.28**	**50**	P	**Pn**	**01 23 48.3**	**-3.8**
	comp=Z,3.3nm,0.3s,baz=251,slow=10,SNR=95						
SIV				S	Sn	01 25 25.0	-10
	comp=Z,0.6nm,0.3s,baz=288,slow=19,SNR=3.4						
CPUP	**Villa Florida**	**11.02**	**115**	P	**Pn**	**01 24 13.1**	**-2.4**
	comp=Z,0.1nm,0.3s,baz=246,slow=20,SNR=2.4						
TRQA	**Tornquist**	**16.86**	**162**	*e*Pn	**P**	**01 25 31.5**	**+1.0**
	comp=Z,23nm,1.3s						
PLCA	**Paso Flores**	**18.65**	**185**	P	**Pn**	**01 25 51.8**	**0.0**
	comp=Z,0.3nm,0.3s,baz=29,slow=11,SNR=10						
PLCA	**Paso Flores**	**18.65**	**185**	*e*P	**Pn**	**01 25 51.8**	**0.0**
	comp=Z,9.2nm,0.9s						
PTGA	**Pitinga**	**22.81**	**22**	P	**P**	**01 26 32.3**	**-2.3**
	comp=Z,1.5nm,0.3s,baz=301,slow=19,SNR=4.0						
SNAA	**Sanae**	**61.58**	**161**	P	**P**	**01 31 47.2**	**+1.0**
	comp=Z,1.6nm,0.6s,baz=273,slow=9.1,SNR=14						
SNAA	**Sanae**	**61.58**	**161**	*e*P	**P**	**01 31 47.2**	**+1.0**
	comp=Z,2.6nm,0.9s						
ANMO	**Albuquerque**	**67.22**	**327**	P	**P**	**01 32 23.8**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=113,slow=9.9,SNR=4.4						
ANMO	**Albuquerque**	**67.22**	**327**	*e*P	**P**	**01 32 23.8**	**+0.3**
	comp=Z,1.4nm,0.9s						
QSPA	**South Pole Qui**	**68.09**	**180**	P	**P**	**01 32 30.3**	**+1.7**
	comp=Z,3.2nm,0.5s,baz=136,slow=2.3,SNR=20						
DBIC	**Dimbokro**	**68.54**	**73**	P	**P**	**01 32 30.9**	**-1.2**
	comp=Z,3.3nm,0.6s,baz=217,slow=6.0,SNR=8.5						
EML	**El Monte Cty P**	**71.56**	**318**	*e*P	P	01 32 55.9	+5.8
PFO	**Pinyon Flats O**	**71.82**	**319**	*e*P	**P**	**01 32 51.1**	**-0.7**
FRD	**Ford Ranch, An**	**71.83**	**319**	*e*P	P	01 32 57.5	+5.8
CRY	**Cary Ranch**	**71.95**	**319**	*e*P	**P**	**01 32 55.0**	**+2.5**
BACC	**Bachelor Mtn.**	**72.17**	**319**	*e*P	**P**	**01 32 57.8**	**+4.0**
DGR	**Domenigoni Val**	**72.18**	**319**	*e*P	**P**	**01 32 57.1**	**+3.3**
HMTC	**Hemet**	**72.22**	**319**	*e*P	**P**	**01 32 55.7**	**+1.6**
CCUT	**Cedar City**	**72.83**	**324**	*e*P	**P**	**01 33 00.4**	**+2.6**
	comp=Z,3.0nm,0.8s						
KOWA	**Kowa**	**72.91**	**66**	P	**P**	**01 32 57.8**	**-0.7**
	comp=Z,2.9nm,0.6s,baz=234,slow=14,SNR=12						
TIN	**Tinemaha, Big**	**75.23**	**321**	*e*P	**P**	**01 33 12.0**	**+0.4**
NV01	**Mina Array Sit**	**76.21**	**322**	*e*P	**P**	**01 33 17.4**	**+0.1**
NVAR	**Mina Array Bea**	**76.21**	**322**	P	**P**	**01 33 17.4**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=134,slow=6.5,SNR=2.5						
TOA0	**Torodi Ar. Sit**	**77.20**	**70**	*e*P	**P**	**01 33 22.6**	**-0.6**
TOA1	**Torodi Ar. Sit**	**77.20**	**70**	*e*P	**P**	**01 33 22.4**	**-0.7**
TORD	**Torodi Ar. Bea**	**77.20**	**70**	P	**P**	**01 33 22.4**	**-0.7**
	comp=Z,2.6nm,0.6s,baz=255,slow=5.4,SNR=42						
HLID	**Hailey**	**77.76**	**328**	*e*P	**P**	**01 33 27.8**	**+1.9**
	comp=Z,1.6nm,0.8s						
TDL	**Tradedollar La**	**83.67**	**326**	*e*P	**P**	**01 33 59.1**	**+1.9**
YKA	**Yellowknife Ar**	**91.88**	**340**	P	**P**	**01 34 35.7**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=136,slow=4.6,SNR=5.6						
WR1	**Warramunga Arr**	**132.63**	**210**	*e*PKPdf	**PKPdf**	**01 40 43.8**	**+0.4**
WRA	**Warramunga Arr**	**132.63**	**210**	PKP	**PKPdf**	**01 40 43.8**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=150,slow=2.1,SNR=3.7						
MK32	**Makanchi Array**	**145.89**	**37**	*e*PKPdf	**PKPdf**	**01 41 05.3**	**-1.2**
MKAR	**Makanchi Array**	**145.89**	**37**	PKPbc	**PKPdf**	**01 41 05.4**	**-1.2**
	comp=Z,0.3nm,0.6s,baz=329,slow=5.0,SNR=3.1						
MKAR				pPKPbc	pPKPab	01 41 40.5	+2.5
	comp=Z,0.6nm,0.8s,baz=298,slow=3.1,SNR=3.6						

MAN 26 01:24:30.1, 9°.64N×126°.10E, h28km, mb4.6, ML3.4, MS3.3, 1C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.62**	**283**	⇓*e*P	Pb	01 24 42.2	-0.3
SCPH				*e*S	Sn	01 24 52.4	+0.3
BUTP	**Butuan**	**0.82**	**216**	*e*P	Pb	01 24 45.5	-0.3
BUTP				*e*S	Sn	01 24 59.1	+2.2
BIPH	**Bislig**	**1.47**	**170**	⇑*i*P	Pn	01 24 53.4	-1.3
BIPH				*i* S	Sn	01 25 11.0	-1.9
CGP	**Cagayan de Oro**	**1.82**	**230**	⇓*e*P	Pn	01 25 00.9	+1.3
CGP				*e*S	Sn	01 25 22.1	+0.4
PLP	**Palo**	**1.88**	**324**	⇓*e*P	Pn	01 25 00.9	+0.5
PLP				*e*S	Sn	01 25 23.2	0.0
BUKP	**Musuan**	**2.03**	**211**	*e*P	Pn	01 25 03.3	+0.8
BUKP				*e*S	Sb	01 25 31.5	+0.3
BESP	**Borongan**	**2.06**	**342**	*e*P	Pn	01 25 00.1	-2.8
BESP				*e*S	Sn	01 25 28.3	+0.7
TBP	**Tagbilaran**	**2.21**	**272**	*e*P	Pn	01 25 05.8	+0.8
CNP	**Cataman**	**3.19**	**334**	*e*P	Pn	01 25 20.0	+1.7
CNP				*e*S	Sb	01 26 04.3	-0.1
RCP	**Roxas**	**3.81**	**300**	⇓*e*P	Pn	01 25 28.8	+1.8

*ISK **26** 01:30:01.9, 38°.71N×43°.03E, h10km, ML2.3/5*
*ISCJB **26** 01:30:02.6±0.5, 38°.75N±0°.02×43°.03E±0°.03, h12km±4km, Error ellipse: s-maj=4.2km s-min=4.1km az=171.2*
*CSEM **26** 01:30:02.3±0.2, 38°.74N×43°.02E, h12km, ML2.6, Error ellipse: s-maj=3.8km s-min=3.4km az=120.0*
*DDA **26** 01:30:02.2, 38°.74N×43°.08E, h7km, Ml2.6*
ISC 26 01:30:02.7±0.9, 38°.74N±0°.02×43°.06E±0°.02, h15km±7km, n26, σ0°78/48, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADCV	**BITLIS_Adilcev**	**0.27**	**284**	*i* P	**Pg**	**01 30 09.0**	**+0.4**
ADCV				*i* S	**Sg**	**01 30 13.6**	**+1.0**
ADCV	**BITLIS_Adilcev**	**0.27**	**284**	P	**Pg**	**01 30 09.0**	**+0.4**
ADCV				S	**Sg**	**01 30 13.6**	**+1.0**
VANB	**Van**	**0.30**	**119**	PG	**Pb**	**01 30 09.6**	**-0.2**
VANB				SG	**Sb**	**01 30 15.1**	**+0.5**
VANB	**Van**	**0.30**	**119**	*e*Pg	**Pb**	**01 30 09.6**	**-0.2**
VANB				*e*Sg	**Sb**	**01 30 15.1**	**+0.5**
TVAN	**Van**	**0.35**	**128**	*i* P	**Pg**	**01 30 09.6**	**-0.4**
TVAN				*i* S	**Sg**	**01 30 15.3**	**+0.4**
TVAN	**Van**	**0.35**	**128**	P	**Pg**	**01 30 09.6**	**-0.4**
TVAN				S	**Sg**	**01 30 15.3**	**+0.4**
ERCV	**ERCIS-VAN**	**0.35**	**38**	PG	**Pb**	**01 30 10.4**	**-0.4**
ERCV	**ERCIS-VAN**	**0.35**	**38**	*e*Pg	**Pb**	**01 30 10.4**	**-0.4**
GEVA	**Gevas**	**0.43**	**180**	*i* P	**Pg**	**01 30 09.7**	**-1.7**
GEVA				*i* S	**Sg**	**01 30 17.3**	**0.0**
GEVA	**Gevas**	**0.43**	**180**	P	**Pg**	**01 30 09.7**	**-1.7**
GEVA				S	**Sg**	**01 30 17.3**	**0.0**
VMUR	**Van-Muradiye**	**0.47**	**58**	*i* P	**Pb**	**01 30 13.0**	**+0.1**
VMUR				*i* S	**Sg**	**01 30 17.7**	**-1.0**
VMUR	**Van-Muradiye**	**0.47**	**58**	P	**Pb**	**01 30 13.0**	**+0.1**
VMUR				S	**Sg**	**01 30 17.7**	**-1.0**
TUTA	**Tutak**	**0.69**	**344**	*i* P	**Pg**	**01 30 15.2**	**-1.0**
TUTA				*i* S	**Sg**	**01 30 24.8**	**-0.5**
TUTA	**Tutak**	**0.69**	**344**	P	**Pg**	**01 30 15.2**	**-1.0**
TUTA				S	**Sg**	**01 30 24.8**	**-0.5**
CLDR	**Caldiran**	**0.78**	**59**	PG	**Pb**	**01 30 18.1**	**-0.1**
CLDR				SG	**Sb**	**01 30 29.9**	**+1.2**
CLDR	**Caldiran**	**0.78**	**59**	*i* P	**Pg**	**01 30 17.2**	**-0.8**
CLDR				*i* S	**Sg**	**01 30 28.3**	**-0.1**
CLDR	**Caldiran**	**0.78**	**59**	P	**Pg**	**01 30 17.2**	**-0.8**
CLDR	**Caldiran**	**0.78**	**59**	*e*Pg	**Pb**	**01 30 18.1**	**-0.1**
CLDR				S	**Sg**	**01 30 28.3**	**-0.1**
CLDR				*e*Sg	**Sb**	**01 30 29.9**	**+1.2**
GURO	**Guroymak-BITLI**	**0.82**	**257**	PG	**Pg**	**01 30 17.9**	**-0.9**
GURO				SG	**Sb**	**01 30 28.9**	**-0.8**
GURO	**Guroymak-BITLI**	**0.82**	**257**	*e*Pg	**Pg**	**01 30 17.9**	**-0.9**
GURO				*e*Sg	**Sb**	**01 30 28.9**	**-0.8**
HAKT	**HAKKARI**	**1.29**	**156**	*i* P	**Pn**	**01 30 26.0**	**-0.4**
HAKT				*i* S	**Sn**	**01 30 45.0**	**+1.5**
HAKT	**HAKKARI**	**1.29**	**156**	P	**Pn**	**01 30 26.0**	**-0.4**
HAKT				S	**Sn**	**01 30 45.0**	**+1.5**
CUKT	**Cukurca**	**1.56**	**164**	PN	**Pn**	**01 30 30.0**	**+0.1**
CUKT	**Cukurca**	**1.56**	**164**	*i* P	**Pn**	**01 30 30.3**	**+0.4**
CUKT				*i* S	**Sb**	**01 30 51.1**	**+0.3**
CUKT	**Cukurca**	**1.56**	**164**	*e*Pn	**Pn**	**01 30 30.0**	**+0.1**
CUKT	**Cukurca**	**1.56**	**164**	P	**Pn**	**01 30 30.3**	**+0.4**
CUKT				S	**Sb**	**01 30 51.1**	**+0.3**

IDC 26 01:38:29.1±2.2, 49°.22S×106°.06E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.7/45, mbtmp3.7/4, MS3.4/7, Ms1 3.4/7, ms1mx3.1/36, Error ellipse: s-maj=85.3km s-min=24.1km az=118.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.50**	**26**	T	T	01 58 00.4	
	baz=199,slow=74,SNR=41						
H01W1	**Cape Leeuwin H**	**15.51**	**26**	T	T	01 58 01.0	
	baz=199,slow=74,SNR=47						
H01W3	**Cape Leeuwin H**	**15.52**	**26**	T	T	01 58 08.6	
	baz=199,slow=74,SNR=49						
MAW	**Mawson**	**28.29**	**214**	LR	LR	01 53 52.1	
	comp=Z,73nm,18.0s,baz=70,slow=33						
STKA	**Stephens Creek**	**31.71**	**70**	LR	LR	01 55 20.2	
	comp=Z,40nm,20.6s,baz=207,slow=32						
ASAR	**Alice Springs**	**33.60**	**51**	P	P	01 45 10.8	-0.2
	0.5nm,0.6s,baz=216,slow=8.2,SNR=6.2						
VNDA	**Vanda**	**35.20**	**162**	P	P	01 45 24.4	+0.1
	1.1nm,0.8s,baz=301,slow=11,SNR=7.7						
VNDA				LR	LR	01 58 10.3	
	comp=Z,147nm,18.4s,baz=297,slow=34						
WRA	**Warramunga Arr**	**36.94**	**48**	P	P	01 45 40.0	+0.1
	1.2nm,0.8s,baz=208,slow=8.0,SNR=3.9						
LEM	**Lembang**	**42.27**	**2**	LR	LR	01 59 56.1	
	comp=Z,66nm,20.4s,baz=262,slow=30						
SNAA	**Sanae**	**49.53**	**203**	P	P	01 47 20.8	-0.2
	0.6nm,0.6s,baz=119,slow=6.6,SNR=7.5						
PALK	**Pallekele**	**60.47**	**331**	LR	LR	02 10 05.2	
	comp=Z,52nm,19.7s,baz=96,slow=31						
BOSA	**Boshof**	**63.14**	**257**	LR	LR	02 11 43.2	
	comp=Z,30nm,18.5s,baz=134,slow=32						
CMAR	**Chiang Mai Arr**	**67.67**	**353**	LR	LR	02 15 58.5	
	comp=Z,11nm,19.5s,baz=200,slow=33						
NVAR	**Mina Array Bea**	**146.67**	**92**	PKPbc	PKPdf	01 58 11.6	+0.7
	0.2nm,0.3s,baz=218,slow=4.2,SNR=3.2						

*ISCJB **26** 02:30:55.4±0.2, 8°.33S±0°.03×120°.84E±0°.04, h33km, mb4.5/32, MS3.4/12, Error ellipse: s-maj=6.0km s-min=4.4km az=148.4*
*DJA **26** 02:30:59.6±0.4, 8°.5±2°.×12°.1E±°, h29km±6km, M4.7/19, mb4.9/12, mB5.1/6, MLv4.8/19, Mw(mB)4.5/6*
*IDC **26** 02:31:00.8±1.9, 8°.26S×120°.82E, h74km±17km, mb4.0/20, mb1 4.1/24, mb1mx3.9/56, mbtmp4.3/24, MS3.3/17, Ms1 3.3/17, ms1mx3.1/54, Error ellipse: s-maj=19.5km s-min=10.3km az=73.0*
*NEIC **26** 02:31:01.0±0.6, 8°.27S×120°.89E, h76km±6km, mb4.5/9, Error ellipse: s-maj=7.2km s-min=4.9km az=58.0*
NEIC Felt [III] at Ruteng. Felt at Bima, Sumbawa.
ISC 26 02:30:56.9±0.4, 8°.42S±0°.05×120°.72E±0°.05, h35km, n84, σ2°61/82, mb4.5/32, MS3.3/13, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDFI	**Ende, Flores**	**1.01**	**109**	P	**Pn**	**02 31 17.7**	**+3.0**
EDFI				S	**Sn**	**02 31 31.2**	**+3.4**
WSI	**Waingapu**	**1.31**	**199**	P	**Pn**	**02 31 23.1**	**+4.3**
MMRI	**Maumere**	**1.51**	**98**	P	**Pn**	**02 31 24.2**	**+2.7**
MMRI				S	**Sn**	**02 31 43.3**	**+3.2**
MMRI	**Maumere**	**1.51**	**98**	*e*Pn	**Pn**	**02 31 24.3**	**+2.7**
WBSI	**Waikabubak, Su**	**1.79**	**227**	P	**Pn**	**02 31 28.8**	**+3.4**
BASI	**Baing, Sumba**	**1.80**	**185**	P	**Pn**	**02 31 29.3**	**+3.8**
PLAI	**Plampang**	**2.94**	**262**	P	**Pn**	**02 31 44.7**	**+3.5**
BKSI	**Bulukumba**	**3.13**	**349**	P	**Pn**	**02 31 44.8**	**+1.0**
BATI	**Baumata**	**3.40**	**122**	P	**Pn**	**02 31 52.2**	**+4.6**
	7.0nm,0.3s,baz=261,slow=4.9,SNR=7.6						
BATI				LR	LR	02 33 38.5	
	comp=Z,650nm,20.4s,baz=81,slow=46						
BATI	**Baumata**	**3.40**	**122**	P	**Pn**	**02 31 51.4**	**+3.8**
SOEI	**Soe**	**3.74**	**111**	P	**Pn**	**02 31 56.2**	**+3.9**
SOEI	**Soe**	**3.74**	**111**	*e*Pn	**Pn**	**02 31 56.2**	**+3.9**
TWSI	**Taliwang, Sumb**	**3.81**	**265**	P	**Pn**	**02 31 55.4**	**+2.2**
SPSI	**Sidrap Palu**	**4.52**	**348**	P	**Pn**	**02 32 06.3**	**+3.3**
KDI	**Kendari**	**4.81**	**23**	P	**Pn**	**02 32 08.3**	**+1.3**
TTSI	**Tana Toraja**	**5.41**	**350**	P	Pn	02 32 19.5	+4.3
	176nm,0.9s,2μm0.5nm						
IGBI	**Denpasar**	**5.53**	**265**	P	**Pn**	**02 32 20.3**	**+3.5**
JAGI	**Jajag, Banyuwa**	**6.50**	**269**	P	**Pn**	**02 32 33.6**	**+3.4**
JAGI	**Jajag, Banyuwa**	**6.50**	**269**	*e*Pn	Pn	02 32 37.1	+6.9
KBKI	**Kotabaru**	**6.81**	**318**	P	**Pn**	**02 32 35.8**	**+1.4**
GMJI	**Gumukmas**	**7.21**	**271**	P	**Pn**	**02 32 44.4**	**+4.6**
PCI	**Palu**	**7.51**	**353**	P	**Pn**	**02 32 47.0**	**+2.9**
NLAI	**Namlea**	**8.16**	**51**	P	**Pn**	**02 32 56.7**	**+3.7**
SANI	**Sanana**	**8.21**	**40**	P	**Pn**	**02 32 56.0**	**+2.3**
MRSI	**Marisa**	**8.92**	**8**	P	**Pn**	**02 33 05.3**	**+2.0**
	21nm,0.9s						
MTKI	**Muara Teweh, K**	**9.42**	**322**	P	**Pn**	**02 33 13.7**	**+3.4**
	120nm,0.8s						
FITZ	**Fitzroy Crossi**	**10.75**	**154**	P	**Pn**	**02 33 31.2**	**+2.8**
	1.1nm,0.3s,baz=345,slow=7.0,SNR=33						
FITZ				S	**Sn**	**02 35 27.1**	**-0.4**
	30nm,0.3s,baz=180,slow=0.2,SNR=84						
MTN	**Manton Dam**	**11.14**	**114**	*e*Pn	**Pn**	**02 33 35.1**	**+1.4**
STKI	**Sintang**	**12.48**	**312**	P	P	02 33 58.0	-5.5
FAKI	**Fak Fak**	**12.70**	**65**	*e*Pn	**Pn**	**02 33 55.8**	**+0.6**
MBWA	**Marble Bar**	**12.71**	**184**	*e*Pn	**Pn**	**02 33 55.9**	**+0.7**
MBWA				*e*Sn	**Sn**	**02 36 10.0**	**-5.5**
SIJI	**Sorong**	**12.90**	**55**	LR	LR	02 39 22.4	
	comp=Z,158nm,20.2s,baz=194,slow=39						
LEM	**Lembang**	**13.09**	**276**	LR	LR	02 39 58.5	
	comp=Z,219nm,21.5s,baz=70,slow=41						
DAV	**Davao City (W)**	**16.13**	**18**	LR	LR	02 41 15.3	
	comp=Z,80nm,21.8s,baz=164,slow=38						
WRA	**Warramunga Arr**	**17.46**	**132**	P	**Pn**	**02 34 58.7**	**+0.8**
	0.9nm,0.3s,baz=307,slow=12,SNR=36						
WRA				S	Sn	02 37 58.9	-13
	0.1nm,0.3s,baz=306,slow=23,SNR=4.9						
WRA				ScP	**ScP**	**02 43 05.0**	**-5.4**
	0.0nm,0.3s,baz=288,slow=1.9,SNR=5.0						
WRA				LR	LR	02 43 29.8	
	comp=Z,120nm,18.6s,baz=255,slow=43						
WRAB	**Tennant Creek**	**17.46**	**132**	*e*Pn	**Pn**	**02 34 58.9**	**+0.9**
	22nm,1.0s						
WB2	**Warramunga Arr**	**17.47**	**132**	*e*Pn	**P**	**02 34 59.5**	**+0.6**
AS31	**Alice Springs**	**19.73**	**142**	*e*P	**Pn**	**02 35 25.7**	**+0.3**
	7.4nm,0.8s						
ASAR	**Alice Springs**	**19.73**	**142**	P	**P**	**02 35 24.4**	**+0.7**
	0.9nm,0.3s,baz=326,slow=11,SNR=69						
ASAR				S	**S**	**02 38 55.4**	**-9.1**
	baz=318,slow=24,SNR=5.1						
ASAR				ScP	**ScP**	**02 43 09.6**	**-5.8**
	0.1nm,0.3s,baz=336,slow=1.9,SNR=9.1						
ASAR				LR	LR	02 44 15.5	
	comp=Z,62nm,21.2s,baz=322,slow=40						
AS01	**Alice Springs**	**19.76**	**142**	*e*P	**P**	**02 35 25.2**	**+1.1**
JAY	**Jayapura**	**20.73**	**75**	P	**P**	**02 35 33.9**	**-0.8**
	3.8nm,0.6s,baz=128,slow=17,SNR=2.4						
COEN	**Coen**	**22.69**	**106**	*e*P	**P**	**02 35 55.2**	**-0.5**
	14nm,0.9s						
FORT	**Forrest**	**23.28**	**164**	*e*P	**P**	**02 36 02.7**	**+1.2**
	35nm,0.8s						
PSI	**Prapat**	**24.43**	**296**	P	**P**	**02 36 13.7**	**+0.9**
	1.5nm,0.3s,baz=180,slow=8.5,SNR=1.7						
NWAO	**Narrogin (SRO)**	**24.61**	**187**	P	**P**	**02 36 15.7**	**+1.8**
	10nm,0.9s,baz=41,slow=17,SNR=3.2						
PMG	**Port Moresby**	**26.13**	**94**	LR	LR	02 47 05.3	
	comp=Z,70nm,19.8s,baz=136,slow=37						
BBOO	**Buckleboo**	**28.12**	**152**	*e*P	**P**	**02 36 46.4**	**+0.6**
	83nm,1.9s						
STKA	**Stephens Creek**	**30.36**	**143**	P	**P**	**02 37 06.2**	**+0.6**
	3.9nm,0.5s,baz=310,slow=10,SNR=10						
STKA				LR	LR	02 52 01.7	
	comp=Z,76nm,20.2s,baz=326,slow=42						
CMAR	**Chiang Mai Arr**	**34.28**	**321**	P	**P**	**02 37 40.2**	**+0.1**
	1.7nm,0.3s,baz=148,slow=7.0,SNR=6.6						
CMAR				LR	LR	02 52 04.7	
	comp=Z,47nm,19.0s,baz=200,slow=37						
KMI	**Kunming**	**37.66**	**333**	P	**P**	**02 38 11.3**	**+2.1**
KMI				pmax	pmax		
	comp=Z,11nm,0.5s						
HNR	**Honiara**	**38.75**	**95**	LR	LR	02 54 19.9	
	comp=Z,31nm,19.5s,baz=262,slow=36						
CBIJ	**Chichi jima**	**40.98**	**30**	P	**P**	**02 38 34.9**	**-1.7**
JCJ	**Chichijima**	**40.98**	**30**	P	**P**	**02 38 34.9**	**-1.7**
	comp=Z,34nm,0.6s,baz=241,slow=19,SNR=3.6						
CD2	**Chengdu**	**42.35**	**338**	P	**P**	**02 38 48.0**	**+0.1**
CD2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
JNU	**Nakatsue**	**42.42**	**13**	LR	LR	02 59 08.6	
	comp=Z,7.9nm,18.7s,baz=314,slow=40						
LZH	**Lanzhou**	**47.03**	**341**	*e*P	**P**	**02 39 26.0**	**+0.8**
LZH				pP	sP	02 39 45.8	+6.0
LZH				sP	pP	02 39 55.3	+20
LZH				*e*PP	**PP**	**02 41 18.5**	**+2.2**
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
LZH				pmax	pmax		
	comp=Z,46nm,5.8s						
LZH				LR	LR		
	comp=N,120nm,14.5s						
LZH				LR	LR		
	comp=E,140nm,14.7s						
LZH				LR	LR		
	comp=Z,170nm,17.6s						
MJAR	**Matsushiro Arr**	**47.64**	**19**	P	**P**	**02 39 27.5**	**-2.3**
	comp=Z,5.7nm,0.9s,baz=204,slow=9.6,SNR=7.1						
MJAR				LR	LR	02 58 36.0	
	comp=Z,16nm,20.8s,baz=215,slow=35						
BJI	**Beijing**	**48.40**	**355**	P	**P**	**02 39 35.3**	**-0.2**
BJI				pmax	pmax		
	comp=Z,23nm,0.7s						
BJI				pmax	pmax		
	comp=Z,95nm,5.0s						
GTA	**Gaotai**	**51.39**	**339**	*e*P	**P**	**02 39 59.0**	**+0.5**
GTA				pP	pP	02 40 04.8	-4.2
GTA				sP	sP	02 40 07.3	-5.8
GTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
USRK	**Ussuriysk Ar.**	**53.35**	**10**	P	**P**	**02 40 12.1**	**-0.7**
	comp=Z,2.8nm,0.7s,baz=198,slow=7.7,SNR=6.5						
ASAJ	**Asahikawa**	**55.91**	**19**	P	**P**	**02 40 30.6**	**-0.8**
	comp=Z,2.1nm,0.3s,baz=246,slow=20,SNR=3.9						
ASAJ				LR	LR	03 05 50.3	
	comp=Z,16nm,19.8s,baz=70,slow=38						
RPZ	**Rata Peaks**	**56.08**	**138**	P	**P**	**02 40 33.9**	**+1.3**
	comp=Z,22nm,0.8s,baz=286,slow=4.8,SNR=3.7						
ULN	**Ulaanbaatar**	**57.33**	**349**	*e*P	**P**	**02 40 41.3**	**-0.3**
	comp=Z,4.7nm,0.9s						
SONM	**Songino

DR12	Loma Pena Alta	0.55	259⇓	eP	Pn	03 05 29.8	-0.6
IMPR	Mona Island, P	1.17	134⇑	eP	Pn	03 05 35.3	-0.4
IMPR	Mona Island, P	1.17	134	eS	Sn	03 05 53.5	-0.3
IDE	Isla Desecheo	1.37	111⇑	eP	Pn	03 05 38.0	+0.1
IDE	Isla Desecheo	1.37	111	eS	Sn	03 05 57.5	-0.1
IDE	Isla Desecheo	1.37	111⇑	eP	Pn	03 05 38.0	+0.1
IDE				eS	Sn	03 05 57.5	-0.1
AGPR	Aguadilla, PR	1.67	104⇑	eP	Pn	03 05 42.6	+1.2
AGPR	Aguadilla, PR	1.67	104⇑	eP	Pn	03 05 42.6	+1.2
LSP	Las Mesas	1.79	113⇑	eP	Pn	03 05 43.0	+0.2
LSP	Las Mesas	1.79	113	eS	Sn	03 06 06.8	+0.3
LSP	Las Mesas	1.79	113⇑	eP	Pn	03 05 43.0	+0.2
LSP				eS	Sn	03 06 06.8	+0.3
CRPR	Cabo Rojo, PR	1.84	118⇑	eP	Pn	03 05 43.0	-0.5
CRPR	Cabo Rojo, PR	1.84	118	eS	Sn	03 06 07.5	-0.1
CRPR	Cabo Rojo, PR	1.84	118⇑	eP	Pn	03 05 43.0	-0.5
CRPR				eS	Sn	03 06 07.5	-0.1
AOPR	Arecibo Observ	2.03	105⇑	eP	Pn	03 05 45.9	+0.1
AOPR	Arecibo Observ	2.03	105⇑	eP	Pn	03 05 46.0	+0.2
AOPR				eS	Sn	03 06 12.1	+0.4
AOPR	Arecibo Observ	2.03	105⇑	eP	Pn	03 05 45.9	+0.1
OBIP	Obispado Ponce	2.26	112⇑	eP	Pn	03 05 48.9	+0.2
OBIP	Obispado Ponce	2.26	112	eS	Sn	03 06 17.5	+0.6
OBIP	Obispado Ponce	2.26	112⇑	eP	Pn	03 05 48.9	+0.2
OBIP				eS	Sn	03 06 17.5	+0.6
CELP	Cerrillos	2.27	111⇑	eP	Pn	03 05 48.9	0.0
CELP				eS	Sn	03 06 17.0	-0.1
CELP	Cerrillos	2.27	111⇑	eP	Pn	03 05 48.9	0.0
SDDR	Presa de Saban	2.34	273	eP	Pn	03 05 49.5	-0.3
SDDR				eS	Sn	03 06 17.0	-1.9
SJG	San Juan	2.64	107⇑	eP	Pn	03 05 53.9	+0.2
SJG	San Juan	2.64	107⇑	eP	Pn	03 05 53.9	+0.2
CBYP	Canovanas	2.87	102⇑	eP	Pn	03 05 56.6	0.0
CBYP	Canovanas	2.87	102	eS	Sn	03 06 30.9	-0.1
CBYP	Canovanas	2.87	102⇑	eP	Pn	03 05 56.6	0.0
CBYP				eS	Sn	03 06 30.9	-0.1
HUMP	Col San Antoni	2.91	104⇑	eP	Pn	03 05 56.6	-0.4
HUMP	Col San Antoni	2.91	104⇑	eP	Pn	03 05 56.8	-0.2
HUMP	Col San Antoni	2.91	104⇑	eP	Pn	03 05 56.8	-0.2
MTP	Monte Pirata	3.19	104⇑	eP	Pn	03 06 01.1	+0.3
MTP	Monte Pirata	3.19	104⇑	eP	Pn	03 06 01.1	+0.3
STVI	Saint Thomas	3.70	98⇑	eP	Pn	03 06 07.5	0.0
STVI	Saint Thomas	3.70	98⇑	eP	Pn	03 06 07.5	0.0
ABVI	Anegada Island	4.25	91⇓	eP	Pn	03 06 14.9	+0.1
ABV	Anegada	4.25	91⇓	eP	Pn	03 06 14.9	+0.1

*IDC **26** 03:13:32.7±0.8,2°.43N×128°.82E,h0km,mb3.9/11, mb1 4.0/12,mb1mx3.8/55,mbtmp3.9/12,ML3.4/1,Error ellipse: s-maj=53.1km s-min=14.3km az=71.0*
*ISCJB **26** 03:13:35.8±0.4,2°.45N±0°.04×128°.97E±0°.07,h35km, mb4.3/17,Error ellipse: s-maj=10.3km s-min=6.0km az=170.5*
*NEIC **26** 03:13:39.6±1.6,2°.42N×128°.91E,h52km±15km,mb4.4/7, Error ellipse: s-maj=16.3km s-min=5.9km az=70.0*

ISC 26 03:13:37.6±0.6,2°.42N±0°.07×128°.99E±0°.08,h35km,n38, σ0§81/33,mb4.2/17,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	2.30	225	eP	Pn	03 14 13.6	+0.6
TNTI				eSn	Sn	03 14 38.8	-1.4
SIJI	Sorong	3.98	145	Pn	Pn	03 14 36.4	+0.2
	2.5nm,0.3s,baz=94,slow=17,SNR=9.1						
SIJI				Sn	Sn	03 15 20.5	-1.2
	3.9nm,0.3s,baz=243,slow=22,SNR=6.6						
FITZ	Fitzroy Crossi	20.65	189	P	P	03 18 14.4	+0.1
	5.8nm,1.1s,baz=0.0,slow=12,SNR=2.5						
WR1	Warramunga Arr	22.83	167	eP	P	03 18 39.1	+1.3
	10nm,0.9s						
WRA	Warramunga Arr	22.83	167	P	P	03 18 39.1	+1.3
	0.6nm,0.5s,baz=343,slow=9.7,SNR=6.4						
WB2	Warramunga Arr	22.84	167	eP	P	03 18 39.1	+1.3
	9.2nm,1.0s						
AS31	Alice Springs	26.36	170	eP	P	03 19 11.6	+0.8
	1.2nm,1.2s						
ASAR	Alice Springs	26.36	170	P	P	03 19 11.6	+0.8
	0.5nm,0.8s,baz=351,slow=7.9,SNR=4.4						
MJAR	Matsushiro Arr	35.01	13	P	P	03 20 27.3	+0.5
	0.5nm,0.4s,baz=206,slow=9.9,SNR=2.9						
MAJO	Matsushiro	35.01	13	eP	P	03 20 27.3	+0.5
BBOO	Buckleboo	35.67	170	eP	P	03 20 33.2	+0.7
	5.8nm,1.4s						
STKA	Stephens Creek	36.15	162	P	P	03 20 36.9	+0.3
	1.9nm,0.8s,baz=7.5,slow=11,SNR=4.2						
STKA	Stephens Creek	36.15	162	eP	P	03 20 36.9	+0.3
	2.5nm,1.5s						
H11S3	WAKE ISLAND Hy	40.23	64	T	T	04 04 31.2	
	baz=251,slow=75,SNR=19						
H11S2	WAKE ISLAND Hy	40.25	64	T	T	04 04 25.7	
	baz=251,slow=75,SNR=6.3						
H11S1	WAKE ISLAND Hy	40.25	64	T	T	04 04 27.9	
	baz=251,slow=75,SNR=6.6						
H11N1	WAKE ISLAND Hy	40.82	62	T	T	04 05 17.2	
	baz=246,slow=75						
H11N2	WAKE ISLAND Hy	40.83	62	T	T	04 05 15.6	
	baz=246						
H11N3	WAKE ISLAND Hy	40.84	62	T	T	04 05 15.0	
	baz=246,slow=75						
SONA0	Songino Array	49.27	340	eP	P	03 22 23.7	+0.7
SONM	Songino Array	49.27	340	P	P	03 22 23.7	+0.7
	1.1nm,1.0s,baz=152,slow=6.5,SNR=3.4						
MK01	Makanchi Array	59.90	325	eP	P	03 23 40.4	+0.3
MK31	Makanchi Array	59.92	325	eP	P	03 23 40.6	+0.4
MK32	Makanchi Array	59.92	325	eP	P	03 23 40.6	+0.4
MKAR	Makanchi Array	59.92	325	P	P	03 23 40.6	+0.4
	1.8nm,0.6s,baz=121,slow=8.2,SNR=20						
MKAR	Makanchi Array	59.92	325	eP	P	03 23 40.6	+0.4
	11nm,0.7s						
MAKZ	Makanchi	60.10	325	eP	P	03 23 42.1	+0.6
	2.9nm,0.9s						
ZALV	Zalesovo Beam	62.78	332	P	P	03 23 58.8	-0.6
	0.6nm,0.4s,baz=128,slow=9.3,SNR=3.4						
ZAA1	Zalesovo Array	62.78	332	eP	P	03 23 58.8	-0.6
KURK	Kurchatov	64.06	327	eP	P	03 24 07.6	-0.3
KURBB	Kurchatov Arra	64.06	327	P	P	03 24 07.6	-0.3
	2.4nm,0.6s,baz=128,slow=6.1,SNR=22						
BVAR	Borovoye Array	69.64	327	P	P	03 24 43.1	-0.3
	1.6nm,0.7s,baz=114,slow=9.6,SNR=8.3						
BILL	Bilibino	70.25	14	eP	P	03 24 52.5	+5.7
	6.8nm,0.4s						
ABKAR	Akbulak array	74.59	321	eP	P	03 25 12.8	-0.2
AKTO	Aktyubinsk	76.08	321	P	P	03 25 21.6	-0.1
	0.8nm,0.3s,baz=85,slow=3.4,SNR=4.6						
EYAK	Cordova Ski Ar	85.57	30	eP	P	03 26 10.4	-1.6
	21μm,0.7s						
TORD	Torodi Ar. Bea	125.47	288	PKP	PKPdf	03 32 34.9	-1.2
	0.4nm,1.0s,baz=108,slow=1.8						
TOA1	Torodi Ar. Sit	125.47	288	ePKPdf	PKPdf	03 32 34.9	-1.2

*IDC **26** 03:16:55.4±3.4,10°.05N×83°.45W,h0km,mb3.7/2, mb1 4.1/2,mb1mx3.4/47,mbtmp3.7/2,MS2.9/1,Ms1 2.9/1, ms1mx2.3/43,Error ellipse: s-maj=83.4km s-min=18.5km az=177.0*
*ISCJB **26** 03:16:57.6±0.7,10°.05N±0°.03×83°.51W±0°.03,h15km±6km, mb3.7/2,Error ellipse: s-maj=7.2km s-min=3.1km az=44.2*
*UCR **26** 03:16:58.8±2.2,9°.97N×83°.58W,h12km±3km,MD4.0*

ISC 26 03:16:57.4±1.4,10°.02N±0°.04×83°.55W±0°.04,h13km±9km, n48,σ0§59/65,5C-7D,Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CVTR	Volcan Turrial	0.21	270⇑	eP	Pb	03 17 03.6	+0.2
CVTR				eS	Sb	03 17 07.3	-0.1
VTR0	Volcan Turrial	0.21	269⇑	iP	Pb	03 17 03.8	+0.4
VTR0				eS	Sb	03 17 07.5	+0.1
URSC	Urasca	0.29	231	iP	Pb	03 17 04.2	-0.5
URSC				eS	Sb	03 17 08.4	-1.1
BUS	Buena Vista	0.51	204	iP	Pg	03 17 07.8	+0.2
BUS				eS	Sb	03 17 15.2	-0.7
SJS	Escuela Geolog	0.51	261	eP	Pb	03 17 08.4	+0.1
SJS				eS	Sb	03 17 15.0	-0.7
LCR2	La Lucha 2	0.53	239	iP	Pg	03 17 08.0	+0.1
LCR2				eS	Sg	03 17 14.9	-0.1
HDC	Heredia	0.56	268⇑	eP	Pb	03 17 09.2	0.0
HDC				eS	Sb	03 17 16.9	-0.2
EDLM	Las Mercedes	0.74	183	eP	Pg	03 17 11.8	0.0
EDLM				eS	Sb	03 17 21.6	-0.7
DRK0	Durika	0.81	159	eP	Pg	03 17 13.1	-0.1
DRK0				eS	Sb	03 17 24.1	-0.2
EDDO	Dominical	0.82	202	eP	Pb	03 17 13.6	-0.1
EDDO				eS	Sb	03 17 24.9	+0.2
QCR1	Quepos	0.85	226	iP	Pb	03 17 13.7	-0.4
QCR1				eS	Sg	03 17 24.9	-0.3
CGA2	Cerro Gallo 2	0.91	270	eP	Pb	03 17 14.9	-0.2
CGA2				eS	Sb	03 17 26.4	-0.7
SRA1	San Ram¨‡n	0.92	274	eP	Pb	03 17 14.9	-0.5
EDPN	Palmar Norte	1.06	175	iP	Pg	03 17 18.2	+0.4
EDPN				eS	Sn	03 17 33.4	+1.0
FORC	Fortuna	1.19	292	eP	Pb	03 17 20.0	+0.1
CEDE	Laguna Cede¨–o	1.23	292	eP	Pb	03 17 20.6	0.0
CASO	Castillo	1.24	289	eP	Pn	03 17 20.5	-0.1
EDSV	San Vito	1.32	155	eP	Pg	03 17 23.8	+0.9
ACR	Cerro Adams	1.41	165	eP	Pn	03 17 22.9	0.0
ACR				eS	Sb	03 17 41.4	-0.1
JTS	JuntasAbangare	1.41	281	Pg	Pn	03 17 23.2	+0.4
	baz=150,slow=14						
JTS				Lg	Lg	03 17 42.7	
	138nm,0.3s,baz=28,slow=21,SNR=44						
JTS	JuntasAbangare	1.41	281	eP	Pn	03 17 23.2	+0.4
JTS				eS	Sb	03 17 41.8	+0.2
TBS2		1.50	144	eP	Pn	03 17 24.5	+0.3
TBS2				i S	Sb	03 17 44.5	+0.2
AMAS	Alto Masis	1.54	293	eP	Pn	03 17 24.9	+0.2
PTEN	Parque Tenorio	1.58	296	eP	Pn	03 17 25.7	+0.5
ACAL	Aguas Claras	1.59	293	eP	Pn	03 17 25.7	+0.3
CUI	Cuipilapa	1.71	292	eP	Pn	03 17 27.5	+0.5
CUI				eS	Sb	03 17 50.8	+0.5
HORNC	Hornillas	1.75	293	eP	Pb	03 17 29.6	+0.2
COLC	Colonia	1.75	292	eP	Pb	03 17 28.9	-0.6
MESS	Mesas	1.77	294	eP	Pn	03 17 28.8	+0.9
MESS				eP	Pb	03 17 30.0	+0.1
GUAB	Guayabo de Bag	1.79	293	eP	Pb	03 17 30.1	-0.1
LIM1	Limonal	1.81	292	eP	Pb	03 17 29.6	-0.8
GPS1	Guardaparques	1.93	293	eP	Pb	03 17 32.2	-0.3
GPS3	Bodega del ICE	1.93	292	eP	Pb	03 17 31.4	-1.2
BUAI	Buenos Aires	1.95	296	eP	Pn	03 17 30.7	+0.4
LAPC	Finca la Perla	2.00	292	eP	Pn	03 17 32.1	+1.1
GBS3	Finca Las Im¨¡	2.02	292	eP	Pn	03 17 32.5	+1.2
NY14	Universidad de	2.05	288	eP	Pb	03 17 33.8	-0.8
VCR	Vista de Mar	2.06	273	eP	Pn	03 17 32.4	+0.6
ESPN	Las Esperanzas	2.28	341	eP	Pn	03 17 34.1	-0.8
BCIP	Isla Barro Col	3.75	103	eP	Pn	03 17 55.1	0.0
ZANG	Zanguenga, Cho	3.78	106	eP	Pn	03 17 55.8	+0.4
FRIJ	El Hiral	3.85	102	eP	Pn	03 17 56.5	+0.1
RCON	San Juan de Ri	4.29	324	eP	Pn	03 18 02.6	0.0
ROSC	El Rosal	10.49	119	LR	LR	03 23 43.1	
	comp=Z,60nm,20.3s,baz=156,slow=39						
YKA	Yellowknife Ar	56.99	343	P	P	03 26 42.4	0.0
	0.8nm,0.8s,baz=142,slow=6.8,SNR=5.1						
ILAR	Eielson Array	69.78	336	P	P	03 28 07.3	+0.1
	0.5nm,0.7s,baz=127,slow=5.1,SNR=7.8						
ASAR	Alice Springs	141.81	244	PKP	PKPdf	03 36 27.7	-2.1
	0.5nm,0.8s,baz=104,slow=3.1,SNR=3.7						
WRA	Warramunga Arr	142.18	250	PKP	PKPdf	03 36 31.4	+0.9
	0.9nm,0.9s,baz=102,slow=2.5,SNR=3.6						

*IDC **26** 03:32:57.0±1.7,33°.16S×178°.26W,h0km,mb4.1/3, mb1 4.2/4,mb1mx3.7/44,mbtmp4.1/4,ML3.8/1,MS3.5/1, Ms1 3.4/1,ms1mx2.4/46,Error ellipse: s-maj=50.9km s-min=31.2km az=136.0*
*ISCJB **26** 03:32:58.4±5.3,33°.35±0°.2×178°.0W±0°.8,h32km,mb4.0/3, MS3.4/1,Error ellipse: s-maj=94.9km s-min=14.7km az=15.7*

ISC 26 03:33:01.5±2.0,33°.25±0°.2×178°.2W±0°.3,h32km,n9, σ0§66/9,mb4.0/3,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	6.30	216	Pn	Pn	03 34 31.9	-0.3
	2.4nm,0.3s,baz=281,slow=3.4,SNR=9.8						
URZ				Sn	Sn	03 35 43.4	+0.4
	5.0nm,0.3s,baz=150,slow=19,SNR=13						
STKA	Stephens Creek	33.78	261	LR	LR	03 51 49.3	
	comp=Z,70nm,18.4s,baz=204,slow=34						
CTA	Charters Tower	34.20	283	P	P	03 39 45.0	+0.8
	2.7nm,0.7s,baz=114,slow=14,SNR=2.4						
ASAR	Alice Springs	42.87	270	P	P	03 40 56.4	-0.7
	1.2nm,0.6s,baz=106,slow=7.6,SNR=14						
WRA	Warramunga Arr	44.12	275	P	P	03 41 06.3	-0.8
	1.4nm,0.5s,baz=115,slow=7.9,SNR=26						
FINES	FINESS Array B	147.73	338	PKPbc	PKPbc	03 52 42.0	-0.2
	2.1nm,0.7s,baz=44,slow=4.3,SNR=10						
MMAI	Mount Meron Ar	151.93	279	PKPbc	PKPbc	03 52 54.3	+0.8
	0.9nm,0.3s,baz=93,slow=3.2,SNR=2.9						
HFS	Hagfors	151.98	347	PKPbc	PKPbc	03 52 52.6	0.0
	2.3nm,0.8s,baz=17,slow=1.5,SNR=3.2						
BRTR	Keskin Array B	153.69	293	PKPbc	PKPbc	03 52 57.3	0.0
	0.3nm,0.5s,baz=71,slow=2.7,SNR=3.2						

SJA 26 03:36:53.9±1.3,31°.85S×68°.42W,h109km±4km,ML3.5, MW3.5,15D,San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTCV	Cerro Valdivia	0.10	264	eP	Pn	03 37 10.1	+1.1
RTCV				eS	Sn	03 37 21.0	+0.6
SJA	San Juan	0.34	340	eP	Pn	03 37 10.8	+1.0
SJA				eS	Sn	03 37 22.6	+0.9
ZON	Zonda	0.38	325	eP	Pn	03 37 10.7	+0.7
ZON				eS	Sn	03 37 23.1	+1.0
RTLL	Cerro Villicun	0.52	355	eP	Pn	03 37 11.7	+0.8
RTLL				eS	Sn	03 37 24.6	+0.9
RTLS	Leoncito	0.74	274	eP	Pn	03 37 14.1	+1.2
RTLS				IAML		03 37 15.2	
	comp=Z,811nm,0.2s						
ASAL	Salagasta	0.81	205	eP	Pn	03 37 14.7	+1.3
ASAL				eS	Sn	03 37 28.5	+0.6
AUSP	Uspallata	0.90	245	eP	Pn	03 37 15.5	+1.2
AUSP				eS	Sn	03 37 31.4	+1.7
AMOG	MOGNA	0.91	356	eP	Pn	03 37 15.3	+1.0
AMOG				eS	Sn	03 37 29.7	+0.1
ARCO	CERRO ARCO	1.08	203	eP	Pn	03 37 17.2	+1.2
ARCO				IAML		03 37 17.6	
	comp=Z,956nm,0.2s						
ARCO				eS	Sn	03 37 34.5	+1.7
ACAN	Cantantal	1.13	112	eP	Pn	03 37 17.7	+1.3
AAGR	Agrelo	1.28	195	eP	Pn	03 37 19.5	+1.4
AAGR				eS	Sn	03 37 37.0	+0.4
AVIZ	Vizcacheras	1.62	183	eP	Pn	03 37 23.5	+1.3
AVIZ				eS	Sn	03 37 44.0	+0.3
ACDV	Cuesta del Vie	1.78	340	eP	Pn	03 37 25.5	+1.3
AROD	Rodeo	1.91	332	eP	Pn	03 37 27.5	+1.5
AROD				eS	Sn	03 37 51.7	+1.3
APLL	PUNTA DE LOS L	2.18	49	eP	Pn	03 37 29.6	+0.3
AGUA	GUANDACOL	2.36	359	eP	Pn	03 37 33.3	+1.7
MRA	San Martin	2.37	105	eP	Pn	03 37 32.4	+0.8
MRA				IAML		03 38 01.8	
	comp=Z,209nm,0.5s						
ROC1	El Roble	2.46	242	eP	Pn	03 37 33.8	+0.8

IDC 26 03:56:28.1±28.0,19°.17S×174°.04W,h0km,mb4.3/4, mb1 4.5/4,mb1mx3.8/50,mbtmp4.3/4,Error ellipse: s-maj=525.0km s-min=146.4km az=76.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	37.35	262	P	P	04 03 43.5	+0.8
	1.3nm,0.3s,baz=127,slow=10,SNR=2.7						
STKA	Stephens Creek	41.71	243	P	P	04 04 18.9	-0.1
	3.0nm,0.5s,baz=74,slow=7.4,SNR=12						
ASAR	Alice Springs	48.45	255	P	P	04 05 12.2	-0.5
	3.7nm,0.6s,baz=97,slow=7.9,SNR=6.8						
WRA	Warramunga Arr	48.49	260	P	P	04 05 12.7	-0.3
	1.1nm,0.3s,baz=96,slow=7.5,SNR=16						

IDC 26 03:59:08.3±3.9,6°.41S×154°.97E,h220km±35km,mb3.5/5, mb1 3.7/7,mb1mx3.3/50,mbtmp4.1/7,Error ellipse: s-maj=29.8km s-min=17.5km az=19.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	8.29	248	P	Pn	04 01 06.2	+0.8
	2.1nm,0.3s,baz=70,slow=11,SNR=3.7						
PMG				S	S	04 02 39.6	+0.4
	3.5nm,0.3s,baz=120,slow=14,SNR=5.4						
DZM	Mont Dzumac	19.11	146	P	P	04 03 14.8	-0.3
	1.5nm,0.3s,baz=329,slow=16,SNR=12						
WRA	Warramunga Arr	24.14	234	P	P	04 04 05.2	+0.7
	10nm,0.4s,baz=56,slow=9.9,SNR=79						
ASAR	Alice Springs	26.55	228	P	P	04 04 26.0	-0.2
	0.7nm,0.3s,baz=57,slow=9.3,SNR=13						
FITZ	Fitzroy Crossi	30.87	245	P	P	04 05 03.7	-0.7
	2.7nm,0.5s,baz=67,slow=10,SNR=11						
SONM	Songino Array	68.84	327	P	P	04 09 49.8	+0.6
	0.4nm,0.4s,baz=134,slow=6.2,SNR=2.7						
MKAR	Makanchi Array	82.95	319	P	P	04 11 08.4	-0.5
	0.2nm,0.7s,baz=98,slow=6.4,SNR=2.6						
TORD	Torodi Ar. Bea	152.85	286	PKPbc	PKPbc	04 18 40.6	+0.2
	baz=94,slow=2.2						

*ISCJB **26** 04:01:01.1±0.3,42°.76N±0°.05×134°.54E±0°.05,h414km, mb3.6/22,Error ellipse: s-maj=6.7km s-min=5.0km az=16.5*
*IDC **26** 04:01:02.2±0.7,42°.76N×134°.48E,h414km±6km,mb3.3/23, mb1 3.4/29,mb1mx3.2/75,mbtmp4.0/29,Error ellipse: s-maj=12.1km s-min=8.8km az=1.0*
*JMA **26** 04:01:04.3±0.5,42°.60N×135°.03E,h428km,M3.4*

ISC 26 04:01:02.0±0.6,42°.72N±0°.09×134°.62E±0°.06,h414km,n46, σ1§07/48,mb3.7/22,Primorye

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USRK	Ussuriysk Ar.	2.42	308	P	P	04 02 02.3	+0.6
	0.7nm,0.3s,baz=104,slow=7.2,SNR=14						
USRK				S	S	04 02 49.8	-0.5
	baz=129,slow=18						
JOSM	Okushiri--Mats	3.65	98	P	P	04 02 12.6	+1.1
JSH	Shimam	4.00	89	P	P	04 02 15.6	+0.9
JKB	Kayabe	4.83	98	P	P	04 02 23.6	+1.0
JOT	Ohata	4.97	103	P	P	04 02 24.4	+0.3
JHR	Hokuryu	5.29	76	P	P	04 02 28.9	+1.6
JSD	Sado	5.44	148	P	P	04 02 30.0	+1.0
JRG	Rokugo	5.63	124	P	P	04 02 30.7	-0.2
JWK2	Keihoku	5.85	61	P	P	04 02 35.4	+2.3
ASAJ	Asahikawa	5.97	74	P	P	04 02 35.7	+1.3
	4.5nm,0.3s,baz=253,slow=8.1,SNR=18						
ASAJ				S	S	04 03 48.9	-1.4
	0.5nm,0.3s,baz=15,slow=25,SNR=7.4						
JMK	Ichinoseki	6.26	125	P	P	04 02 37.1	-0.5
JCH	Churui	6.45	88	P	P	04 02 39.1	-0.4
MJAR	Matsushiro Arr	6.77	155	P	P	04 02 44.6	+0.8
	0.3nm,0.3s,baz=336,slow=11,SNR=9.5						
JMM	Marumori	6.77	134	P	P	04 02 42.8	-0.9
JFT	Otama	6.80	138	P	P	04 02 43.4	-0.7
JNG	Nsakai	6.86	156	P	P	04 02 45.3	+0.4
JTKR	Abashiri--Toko	6.88	76	P	P	04 02 45.0	+0.1
JTKR				S	S	04 04 05.1	-3.3
KSRS	Korea Array	7.35	226	P	P	04 02 51.1	+1.0
	1.6nm,0.3s,baz=40,slow=11,SNR=35						
JHS	Saijyo	7.80	189	P	P	04 02 57.1	+1.9
JNU	Nakatsue	10.03	198	P	P	04 03 20.6	+0.8
	1.1nm,0.3s,baz=271,slow=1.6,SNR=5.9						
PETK	Petropavlovsk-	18.55	48	P	P	04 04 51.6	+0.2
	baz=200,slow=7.1						
MA2	Magadan	19.59	25	P	P	04 05 01.5	+0.2
	0.8nm,0.3s,baz=238,slow=12,SNR=5.1						
SONM	Songino Array	20.45	294	P	P	04 05 09.2	-0.3
	2.0nm,0.6s,baz=90,slow=9,SNR=12						
ZALV	Zalesovo Beam	34.27	307	P	P	04 07 09.5	-1.5
	5.5nm,0.3s,baz=86,slow=8.8,SNR=2.4						
MKAR	Makanchi Array	36.81	295	P	P	04 07 31.5	-1.0
	3.0nm,0.7s,baz=84,slow=10.0,SNR=24						
KURBB	Kurchatov Arra	38.47	302	P	P	04 07 44.7	-1.3
	7.0nm,0.6s,baz=81,slow=8.7,SNR=39						
BVAR	Borovoye Array	42.92	307	P	P	04 08 21.5	-0.5
	1.2nm,0.6s,baz=75,slow=9.6,SNR=5.7						
KDAK	Kodiak Island	46.56	45	P	P	04 08 50.9	+0.9
	4.0nm,0.8s,baz=312,slow=16,SNR=6.0						
ILAR	Eielson Array	47.64	35	P	P	04 08 58.9	+0.7
	1.0nm,0.5s,baz=283,slow=7.3,SNR=17						
AKTO	Aktyubinsk	51.03	307	P	P	04 09 22.9	-0.8
	1.2nm,0.5s,baz=74,slow=7.4,SNR=5.3						
ARCES	ARCESS Array B	56.77	337	P	P	04 10 04.0	-0.4
	2.8nm,0.9s,baz=62,slow=8.6,SNR=8.5						
FINES	FINESS Array B	61.30	329	P	P	04 10 34.4	-0.6
	1.9nm,0.6s,baz=49,slow=8.6,SNR=5.8						
YKA	Yellowknife Ar	61.49	30	P	P	04 10 36.7	+0.5
	0.2nm,0.8s,baz=62,slow=10,SNR=4.1						
WRA	Warramunga Arr	62.35	180	P	P	04 10 42.5	0.0
	0.2nm,0.5s,baz=355,slow=7.3,SNR=3.9						
KBZ	Khabaz	63.28	306	P	P	04 10 48.2	0.0
	1.8nm,0.7s,baz=337,slow=3.3,SNR=4.9						
ASAR	Alice Springs	66.06	181	P	P	04 11 06.4	+0.2
	1.0nm,1.0s,baz=205,slow=30,SNR=3.7						
AKASG	Malin

WRA Warramunga Arr 56.78 189 P **P 04 35 04.1 +0.5**
0.4nm,1.0s,baz=4.9,slow=8.1,SNR=2.6

UCR 26 04:57:57.2±2.0,9°97N×83°58W,h15km±7km,MD3.6,1C, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CVTR	**Volcan Turrial**	**0.18**	**288**	*e*P	Pg	04 58 01.9	0.0
CVTR				*e*S	Sg	04 58 05.5	+0.6
URSC	**Urasca**	**0.23**	**236**	*e*P	Pg	04 58 02.5	+0.1
BUS	**Buena Vista**	**0.44**	**203**	*e*P	Pg	04 58 06.2	0.0
BUS				*e*S	Sb	04 58 13.2	-0.4
LCR2	**La Lucha 2**	**0.47**	**242**	*e*P	Pg	04 58 06.5	-0.1
LCR2				*e*S	Sg	04 58 13.6	+0.6
HDC	**Heredia**	**0.52**	**274**	*e*P	Pg	04 58 07.6	0.0
HDC				*e*S	Sb	04 58 16.1	+0.4
EDLM	**Las Mercedes**	**0.68**	**180**	*e*P	Pg	04 58 10.1	-0.5
EDDO	**Dominical**	**0.76**	**201**	*e*P	Pg	04 58 12.0	0.0
DRK0	**Durika**	**0.77**	**154**	*e*P	Pg	04 58 11.6	-0.8
DRK0				*e*S	Sg	04 58 22.4	-0.1
QCR1	**Quepos**	**0.79**	**227**	*e*P	Pg	04 58 12.0	-0.5
CGA2	**Cerro Gallo 2**	**0.87**	**273**	*e*P	Pg	04 58 13.3	-0.8
EDPN	**Palmar Norte**	**1.00**	**173**	*e*P	Pn	04 58 17.1	+0.2
ACR	**Cerro Adams**	**1.37**	**162**	*e*P	Pn	04 58 21.2	-0.6
ACR				*e*S	Sn	04 58 39.6	-0.1
JTS	**JuntasAbangare**	**1.39**	**284**	↑*i*P	Pn	04 58 21.5	-0.6
JTS				*e*S	Sb	04 58 41.1	+0.6
TBS2		**1.48**	**142**	*e*P	Pn	04 58 23.0	-0.6
TBS2				*e*S	Sn	04 58 42.8	0.0
ESPN	**Las Esperanzas**	**2.33**	**342**	*e*P	Pn	04 58 33.9	-1.1

*ISCJB **26** 05:05:25.0±0.4,8°71S±0°05×112°48E±0°03,h92km±3km, mb4.4/35,Error ellipse: s-maj=9.0km s-min=4.3km az=24.0*
*IDC **26** 05:05:25.0±0.7,8°57S×112°42E,h71km±6km,mb4.1/23, mb1 4.2/24,mb1mx4.0/56,mbtmp4.4/24,MS3.1/7, Ms1 3.2/7,ms1mx2.8/56,Error ellipse: s-maj=15.5km s-min=9.3km az=49.0*
*NEIC **26** 05:05:25.1±0.6,8°58S×112°54E,h76km±5km,mb4.6/10, Error ellipse: s-maj=9.2km s-min=4.6km az=215.0*
NEIC Felt [III] at Karangkates and [II] at Tulungagung. Also felt at Blitar.
*DJA **26** 05:05:25.3±0.6,9°S±4°×11°2E±°,h30km±6km,M4.8/25, mb4.9/9,mB5.2/7,MLv4.9/25,Mw(mB)4.6/7*

ISC 26 05:05:24.4±0.5,8.75S±0.06×112.45E±0.04,h66km±4km, h66km:pP-P,n221,σ1.78/232,mb4.4/35,Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PWJI	**Pagerwojo**	**0.96**	**318**	P	**Pn**	**05 05 44.1**	**+1.9**
PWJI				S	**Sn**	**05 05 56.6**	**+1.2**
GMJI	**Gumukmas**	**1.09**	**65**	P	**Pn**	**05 05 45.1**	**+1.3**
PCJI	**Pacitan**	**1.37**	**293**	P	**Pn**	**05 05 49.3**	**+1.8**
BLJI	**Banyuglugur**	**1.51**	**49**	P	**Pn**	**05 05 51.6**	**+2.3**
NGJI	**Ngawi**	**1.68**	**324**	P	**Pn**	**05 05 55.9**	**+4.2**
JAGI	**Jajag, Banyuwa**	**1.71**	**81**	P	**Pn**	**05 05 52.9**	**+0.9**
JAGI	**Jajag, Banyuwa**	**1.71**	**81**	*e*Pn	**Pn**	**05 05 52.9**	**+0.9**
JAGI				*e*Sn	**Sn**	**05 06 10.1**	**-2.8**
WOJI	**Wonogiri, Jawa**	**1.76**	**301**	P	**Pn**	**05 05 55.4**	**+2.7**
GRJI	**Gresik**	**1.82**	**1**	P	**Pn**	**05 05 56.4**	**+2.9**
TBJI	**Tambak Boyo**	**2.00**	**343**	P	**Pn**	**05 05 58.8**	**+2.8**
UGM	**Wanagama**	**2.08**	**293**	P	**Pn**	**05 05 59.4**	**+2.4**
UGM	**Wanagama**	**2.08**	**293**	*e*Pn	**Pn**	**05 05 59.6**	**+2.6**
UGM				*e*Sn	**Sn**	**05 06 18.7**	**-3.2**
SMRI	**Semarang**	**2.61**	**310**	P	**Pn**	**05 06 07.3**	**+3.1**
SMRI	**Semarang**	**2.61**	**310**	*e*Pn	**Pn**	**05 06 06.5**	**+2.2**
SMRI				*e*Sn	**Sn**	**05 06 26.7**	**-8.1**
IGBI	**Denpasar**	**2.67**	**92**	P	**Pn**	**05 06 06.6**	**+1.6**
SRBI	**Singaraja**	**2.81**	**77**	P	**Pn**	**05 06 09.3**	**+2.3**
KPJI	**Karang Pucung**	**3.76**	**292**	P	**Pn**	**05 06 22.9**	**+3.0**
CMJI	**Cimerak**	**4.07**	**283**	P	**Pn**	**05 06 25.7**	**+1.5**
TWSI	**Taliwang, Sumb**	**4.38**	**90**	P	**Pn**	**05 06 29.8**	**+1.4**
CISI	**Cisompet, Garu**	**4.74**	**284**	P	**Pn**	**05 06 35.3**	**+1.9**
CISI	**Cisompet, Garu**	**4.74**	**284**	*e*Pn	**Pn**	**05 06 35.2**	**+1.9**
LEM	**Lembang**	**5.15**	**291**	P	**Pn**	**05 06 38.0**	**-1.2**
	5.7nm,0.3s,baz=325,slow=22,SNR=2.9						
LEM				S	**Sn**	**05 07 35.9**	**-1.6**
	9.2nm,0.3s,baz=319,slow=22,SNR=1.6						
LEM				LR	LR	05 09 11.1	
	comp=Z,92nm,20.9s,baz=60,slow=45						
PLAI	**Plampang**	**5.26**	**91**	P	**Pn**	**05 06 42.8**	**+2.2**
DBJI	**Dramaga**	**6.05**	**291**	P	Pn	05 07 01.2	+10
WBSI	**Waikabubak, Su**	**6.91**	**98**	P	**Pn**	**05 07 03.9**	**+0.8**
CGJI	**Cibinong**	**7.02**	**287**	P	**Pn**	**05 07 07.3**	**+2.7**
BASI	**Baing, Sumba**	**8.15**	**101**	P	**Pn**	**05 07 20.5**	**+0.4**
BKSI	**Bulukumba**	**8.34**	**66**	P	**Pn**	**05 07 25.4**	**+2.8**
STKI	**Sintang**	**8.81**	**354**	P	**Pn**	**05 07 33.3**	**+4.3**
EDFI	**Ende, Flores**	**9.13**	**91**	P	**Pn**	**05 07 33.8**	**+0.2**
	74nm,0.7s,1μm						
KSM	**Kuching**	**10.37**	**348**	*e*Pn	**Pn**	**05 07 48.6**	**-1.9**
SBUM	**Sibu**	**11.12**	**359**	*e*Pn	**Pn**	**05 08 04.2**	**+3.5**
BATI	**Baumata**	**11.16**	**98**	P	**Pn**	**05 08 00.1**	**-1.1**
	14nm,0.3s,baz=19,slow=3.1,SNR=6.6						
BATI				S	**Sn**	**05 09 57.5**	**-6.8**
	3.6nm,0.3s,baz=40,slow=17,SNR=2.6						
BATI	**Baumata**	**11.16**	**98**	P	**Pn**	**05 08 00.7**	**-0.5**
	28nm,0.9s						
MPSI	**Mapaga**	**11.68**	**40**	P	**Pn**	**05 08 11.7**	**+3.4**
SOEI	**Soe**	**11.71**	**96**	*e*Pn	**Pn**	**05 08 08.8**	**0.0**
MBWA	**Marble Bar**	**14.20**	**151**	*e*Pn	**Pn**	**05 08 38.4**	**-3.9**
MBWA				*e*Sn	Sn	05 11 04.6	-14
FITZ	**Fitzroy Crossi**	**15.83**	**127**	P	**Pn**	**05 09 01.2**	**-2.2**
	1.1nm,0.3s,baz=295,slow=7.4,SNR=46						
FITZ				S	Sn	05 11 43.7	-14
	1.1nm,0.3s,baz=248,slow=19,SNR=5.8						
FITZ	**Fitzroy Crossi**	**15.83**	**127**	*e*Pn	**Pn**	**05 09 01.2**	**-2.2**
	12nm,1.1s						
FITZ				*e*Sn	Sn	05 11 43.7	-14
PSI	**Prapat**	**17.70**	**310**	LR	LR	05 16 25.4	
	comp=Z,120nm,19.7s,baz=96,slow=38						
MTN	**Manton Dam**	**18.80**	**104**	*e*P	**P**	**05 09 37.6**	**-1.1**
	24nm,0.8s						
SIJI	**Sorong**	**20.30**	**68**	P	Pn	05 09 56.6	-1.1
	28nm,0.6s,baz=330,slow=18,SNR=5.4						
WRA	**Warramunga Arr**	**23.92**	**120**	P	**P**	**05 10 32.2**	**-0.3**
	3.8nm,0.5s,baz=297,slow=11,SNR=133						
WRA				pP	**pP**	**05 10 49.7**	**+1.8**
	4.4nm,0.5s,baz=296,slow=11,SNR=6.8						
WRA				PcP	**PcP**	**05 14 13.5**	**-0.3**
	1.3nm,0.6s,baz=296,slow=1.8,SNR=5.2						
WRA				S	**S**	**05 14 53.9**	**+9.4**
	0.5nm,0.4s,baz=289,slow=25,SNR=3.2						
WRA				ScP	**ScP**	**05 17 44.5**	**-2.1**
	0.8nm,0.7s,baz=314,slow=2.3,SNR=3.2						
WR1	**Warramunga Arr**	**23.92**	**120**	*e*P	**P**	**05 10 32.2**	**-0.3**
	13nm,0.6s						
WR1				*e*pP	**pP**	**05 10 49.7**	**+1.8**
WR1				*e*PcP	**PcP**	**05 14 13.5**	**-0.3**
WR1				*e*S	**S**	**05 14 53.9**	**+9.4**
WRAB	**Tennant Creek**	**23.92**	**120**	*e*P	**P**	**05 10 32.3**	**-0.2**
	14nm,0.6s						
WB2	**Warramunga Arr**	**23.93**	**120**	*e*P	**P**	**05 10 32.4**	**-0.2**
	12nm,0.6s						
WB2				*e*P	**P**	**05 10 32.7**	**+0.2**
AS31	**Alice Springs**	**25.33**	**128**	*e*P	**P**	**05 10 45.4**	**+0.1**
	2.3nm,0.6s						
ASAR	**Alice Springs**	**25.33**	**128**	P	**P**	**05 10 45.4**	**0.0**
	4.6nm,0.6s,baz=303,slow=9.0,SNR=36						
ASAR				PcP	**PcP**	**05 14 17.1**	**+0.2**
	1.7nm,0.6s,baz=312,slow=2.2,SNR=7.2						
ASAR				S	S	05 15 30.0	+23
	0.7nm,0.6s,baz=300,slow=21,SNR=3.5						
AS01	**Alice Springs**	**25.37**	**128**	*e*P	**P**	**05 10 45.3**	**-0.3**
AS01				*e*PcP	**PcP**	**05 14 17.2**	**+0.3**
CMAR	**Chiang Mai Arr**	**30.14**	**334**	P	**P**	**05 11 28.6**	**+0.4**
	1.0nm,0.5s,baz=164,slow=7.7,SNR=4.3						
CMAR				LR	LR	05 23 47.2	
	comp=Z,45nm,18.4s,baz=180,slow=37						
CTA	**Charters Tower**	**34.55**	**113**	P	**P**	**05 12 07.8**	**+0.9**
	2.1nm,0.4s,baz=278,slow=7.1,SNR=3.3						
KMI	**Kunming**	**34.97**	**345**	P	**P**	**05 12 12.8**	**+2.2**
KMI				pmax	pmax		
	comp=Z,9.0nm,0.5s						
GYA	**Guiyang**	**35.44**	**351**	*e*P	**P**	**05 12 17.5**	**+2.9**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
STKA	**Stephens Creek**	**35.52**	**135**	P	**P**	**05 12 16.1**	**+1.0**
	14nm,0.5s,baz=312,slow=8.8,SNR=61						
STKA				PcP	**PcP**	**05 14 43.7**	**+0.4**
	6.2nm,0.5s,baz=3.2,slow=3.1,SNR=8.1						
STKA				LR	LR	05 27 25.7	
	comp=Z,63nm,20.2s,baz=10,slow=37						
STKA	**Stephens Creek**	**35.52**	**135**	*e*P	**P**	**05 12 15.7**	**+0.5**
STKA				*e*		05 12 16.1	
STKA				PcP	**PcP**	**05 14 43.7**	**+0.4**
H08S2	**Diego Garcia H**	**39.55**	**269**	T	T	05 54 25.9	
	baz=92,slow=74,SNR=4.9						
H08S3	**Diego Garcia H**	**39.56**	**269**	T	T	05 54 27.0	
	baz=92,slow=74,SNR=7.1						
H08S1	**Diego Carcia H**	**39.57**	**269**	T	T	05 54 17.7	
	baz=92						
CD2	**Chengdu**	**40.30**	**348**	P	**P**	**05 12 56.0**	**+0.6**
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
NJ2	**Nanjing**	**41.02**	**8**	*e*P	**P**	**05 13 03.3**	**+2.0**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
LZH	**Lanzhou**	**45.32**	**350**	*e*P	**P**	**05 13 37.3**	**+1.2**
LZH				pP	sP	05 13 57.5	-2.8
LZH				sP	pP	05 14 07.5	+15
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,76nm,6.5s						
LZH				LR	LR		
	comp=N,230nm,14.2s						
LZH				LR	LR		
	comp=Z,330nm,17.4s						
KS15	**Wonju Array Si**	**48.16**	**17**	*e*P	**P**	**05 13 57.5**	**-0.6**
KSAR	**Wonju Array Be**	**48.16**	**17**	P	**P**	**05 13 57.5**	**-0.6**
KSRS	**Korea Array**	**48.19**	**17**	P	**P**	**05 13 57.5**	**-0.7**
	2.9nm,0.7s,baz=203,slow=8.5,SNR=9.1						
KSRS				LR	LR	05 34 52.6	
	comp=Z,9.6nm,18.7s,baz=205,slow=37						
GTA	**Gaotai**	**49.33**	**347**	*e*P	**P**	**05 14 10.0**	**+2.9**
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MAJO	**Matsushiro**	**51.14**	**27**	*e*P	**P**	**05 14 18.2**	**-2.5**
MJAR	**Matsushiro Arr**	**51.14**	**27**	P	**P**	**05 14 18.2**	**-2.5**
	1.3nm,0.3s,baz=212,slow=8.4,SNR=7.0						
USRK	**Ussuriysk Ar.**	**55.59**	**17**	P	**P**	**05 14 52.0**	**-1.3**
	4.2nm,0.5s,baz=197,slow=5.6,SNR=11						
SONA0	**Songino Array**	**56.59**	**355**	*e*P	**P**	**05 14 59.3**	**-1.2**
SONA0				*e*PcP	**PcP**	**05 15 55.5**	**-0.7**
SONM	**Songino Array**	**56.59**	**355**	P	**P**	**05 14 59.3**	**-1.2**
	2.0nm,0.6s,baz=176,slow=8.5,SNR=15						
SONM				PcP	**PcP**	**05 15 55.5**	**-0.7**
	0.9nm,0.6s,baz=166,slow=3.8,SNR=3.6						
SONA1	**Songino Array**	**56.60**	**355**	*e*P	**P**	**05 14 59.4**	**-1.2**
WMQ	**Urumqi**	**56.94**	**339**	P	**P**	**05 15 04.0**	**+1.1**
WMQ				pP	pP	05 15 23.3	+3.2
WMQ				pmax	pmax		
	comp=Z,17nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,200nm,5.3s						
WMQ				LR	LR		
	comp=N,260nm,31.3s						
KSH	**Kashi**	**58.73**	**327**	P	**P**	**05 15 20.0**	**+4.4**
MK01	**Makanchi Array**	**61.45**	**337**	*e*P	**P**	**05 15 32.5**	**-1.5**
MK31	**Makanchi Array**	**61.48**	**337**	*e*P	**P**	**05 15 32.0**	**-2.2**
MK32	**Makanchi Array**	**61.48**	**337**	*e*P	**P**	**05 15 32.9**	**-1.3**
MKAR	**Makanchi Array**	**61.48**	**337**	P	**P**	**05 15 32.9**	**-1.3**
	2.8nm,0.5s,baz=145,slow=7.2,SNR=26						
MKAR	**Makanchi Array**	**61.48**	**337**	*e*P	**P**	**05 15 32.0**	**-2.2**
	21nm,0.6s						
KURBB	**Kurchatov Arra**	**66.04**	**337**	P	**P**	**05 16 02.6**	**-1.5**
	1.6nm,0.6s,baz=153,slow=5.9,SNR=12						
KURK	**Kurchatov**	**66.08**	**337**	*e*P	**P**	**05 16 02.6**	**-1.7**
ZALV	**Zalesovo Beam**	**66.68**	**343**	P	**P**	**05 16 05.5**	**-2.6**
	4.1nm,0.3s,baz=168,slow=3.6,SNR=3.2						
ZAA1	**Zalesovo Array**	**66.68**	**343**	*e*P	**P**	**05 16 05.5**	**-2.6**
GEYT	**Alibeck**	**68.69**	**316**	LR	LR	05 50 34.6	
	comp=Z,17nm,18.1s,baz=250,slow=40						
BVAR	**Borovoye Array**	**71.16**	**335**	P	**P**	**05 16 34.3**	**-1.6**
	1.3nm,0.6s,baz=133,slow=8.1,SNR=6.8						
PETK	**Petropavlovsk-**	**72.60**	**27**	P	**P**	**05 16 43.9**	**-0.7**
	1.7nm,0.6s,baz=241,slow=3.0						
PEA1	**Petropavlovsk-**	**72.60**	**27**	*e*P	**P**	**05 16 43.9**	**-0.7**
VNDA	**Vanda**	**73.30**	**170**	P	**P**	**05 16 49.4**	**+1.0**
	0.3nm,0.3s,baz=308,slow=5.9,SNR=10						
VNDA	**Vanda**	**73.30**	**170**	*e*P	**P**	**05 16 49.0**	**+0.6**
ABKAR	**Akbulak array**	**73.73**	**327**	*e*P	**P**	**05 16 50.0**	**-1.3**
AKTO	**Aktyubinsk**	**75.43**	**327**	P	**P**	**05 17 00.4**	**-0.7**
	2.0nm,0.6s,baz=111,slow=6.1,SNR=6.0						
AKTO				LR	LR	05 54 20.3	
	comp=Z,12nm,18.8s,baz=133,slow=39						
ARU	**Arti**	**78.58**	**333**	*e*P	**P**	**05 17 14.6**	**-4.1**
	5.8nm,0.4s						
TIXI	**Tiksi**	**80.96**	**5**	P	**P**	**05 17 29.3**	**-2.0**
	4.8nm,0.7s,baz=226,slow=2.1,SNR=13						
TIXI	**Tiksi**	**80.96**	**5**	*e*P	**P**	**05 17 28.9**	**-2.3**
	5.7nm,0.8s						
TIXI				*e*P	**P**	**05 17 29.3**	**-2.0**
QSPA	**South Pole Qui**	**81.25**	**180**	P	**P**	**05 17 34.1**	**+0.9**
	1.3nm,0.6s,baz=336,slow=5.0,SNR=10						
KBZ	**Khabaz**	**81.59**	**317**	P	**P**	**05 17 35.0**	**-0.2**
	2.1nm,0.8s,baz=162,slow=3.9,SNR=4.6						
MMAI	**Mount Meron Ar**	**84.02**	**305**	P	**P**	**05 17 48.2**	**0.0**
	0.6nm,0.2s,baz=85,slow=7.8,SNR=4.3						
BR101	**Keskin Array S**	**87.03**	**311**	*e*P	**P**	**05 18 01.9**	**-1.1**
BR101				*e*pP	**pP**	**05 18 20.9**	**-0.5**
BRTR	**Keskin Array B**	**87.03**	**311**	P	**P**	**05 18 01.9**	**-1.1**
	2.4nm,0.8s,baz=130,slow=6.7,SNR=15						
BRTR				pP	**pP**	**05 18 20.9**	**-0.5**
	1.5nm,0.8s,baz=133,slow=6.0,SNR=5.1						
ILGA	**Ilgaz**	**87.29**	**312**	*e*P	**P**	**05 18 04.0**	**-0.4**
	4.9nm,0.4s						
SNAA	**Sanae**	**89.44**	**197**	P	**P**	**05 18 15.2**	**+1.3**
	2.7nm,0.9s,baz=138,slow=8.9,SNR=8.0						
TORD	**Torodi Ar. Bea**	**112.05**	**281**	PKiKP	**PKiKP**	**05 23 52.7**	**-0.6**
	0.2nm,0.4s,baz=82,slow=1.5,SNR=8.6						
TOA1	**Torodi Ar. Sit**	**112.05**	**281**	*e*PKiKP	**PKiKP**	**05 23 52.7**	**-0.6**
YKA	**Yellowknife Ar**	**116.52**	**22**	PKP	**PKPdf**	**05 23 59.8**	**-0.7**
	0.6nm,0.6s,baz=314,slow=1.8,SNR=7.4						
NVAR	**Mina Array Bea**	**125.78**	**49**	PKP	**PKPdf**	**05 24 20.7**	**+1.3**
	0.3nm,0.4s,baz=323,slow=4.9,SNR=3.8						
PDAR	**Pinedale Array**	**130.02**	**40**	PKP	**PKPdf**	**05 24 27.6**	**+0.3**
	0.1nm,0.4s,baz=158,slow=1.6,SNR=4.0						
TXAR	**Lajitas Array**	**140.43**	**54**	PKhKP	PKPpre	05 24 38.9	
	0.3nm,0.7s,baz=243,slow=3.8,SNR=4.1						
S40A	**Lebanon**	**143.48**	**34**	P	PKPab	05 24 48.5	+0.2
	baz=316						
CPUP	**Villa Florida**	**143.75**	**196**	PKP	PKPbc	05 24 51.3	+0.9
	1.6nm,0.5s,baz=232,slow=3.2,SNR=4.2						
R42A	**Luebbering**	**143.90**	**32**	P	PKPab	05 24 50.1	+0.1
	baz=319						
V39A	**Pettigrew**	**144.03**	**37**	P	**PKPab**	**05 24 50.1**	**-0.5**
	baz=312						
U40A	**Yellville**	**144.15**	**36**	P	**PKPab**	**05 24 50.3**	**-0.6**
	baz=314						
S42A	**Caledonia**	**144.28**	**32**	P	**PKPab**	**05 24 50.8**	**-0.6**
	baz=318						
R43A	**Red Bud**	**144.35**	**31**	P	**PKPab**	**05 24 51.1**	**-0.5**
	baz=320						
V40A	**Witts Springs**	**144.55**	**37**	P	PKPbc	05 24 52.6	-0.1
	baz=314						
X39A	**Fountain Ranch**	**144.62**	**40**	P	PKPbc	05 24 52.9	0.0
	baz=310						
T42A	**Van Buren**	**144.67**	**34**	P	**PKPab**	**05 24 52.4**	**-0.4**
	baz=317						
U41A	**Viola**	**144.70**	**35**	P	**PKPab**	**05 24 52.3**	**-0.7**
	baz=315						
Q45A	**Warren Harvey,**	**144.74**	**28**	P	PKPbc	05 24 53.1	-0.1
	baz=323						
R44A	**Waltonville**	**144.80**	**30**	P	**PKPab**	**05 24 52.6**	**-0.7**
	baz=321						
S43A	**Fulton Ridge,**	**144.81**	**32**	P	**PKPab**	**05 24 52.4**	**-0.9**
	baz=319						
W40A	**Ferguson Farm,**	**144.82**	**38**	P	**PKPab**	**05 24 52.9**	**-0.6**
	baz=312						
MIAR	**Mount Ida**	**144.93**	**39**	P	**PKPab**	**05 24 53.4**	**-0.5**
	baz=311						
V41A	**Mountainview**	**144.95**	**36**	P	**PKPab**	**05 24 53.0**	**-0.9**
	baz=314						
T43A	**Greenville**	**145.06**	**33**	P	**PKPbc**	**05 24 53.5**	**-0.8**
	baz=318						
U42A	**Revenden**	**145.08**	**35**	P	**PKPbc**	**05 24 53.8**	**-0.5**
	baz=316						
P47A	**Martinsville**	**145.10**	**26**	P	**PKPbc**	**05 24 53.7**	**-0.6**
	baz=326						
S44A	**Carbondale**	**145.14**	**31**	P	**PKPbc**	**05 24 53.5**	**-0.9**
	baz=320						
R45A	**Skylar, Fairfi**	**145.15**	**29**	P	**PKPbc**	**05 24 53.9**	**-0.6**
	baz=322						
N50A	**Nevada**	**145.22**	**21**	P	**PKPbc**	**05 24 54.1**	**-0.6**
	baz=332						
W41B	**Gary Mavity, V**	**145.32**	**37**	P	**PKPbc**	**05 24 54.1**	**-1.0**
	baz=314						
V42A	**Cord**	**145.38**	**35**	P	**PKPbc**	**05 24 54.2**	**-1.0**
	baz=316						
T44A	**Benton**	**145.43**	**32**	P	**PKPdf**	**05 24 54.8**	**-0.6**
	baz=319						
Q47A	**Bedord North L**	**145.49**	**26**	P	**PKPdf**	**05 24 55.0**	**-0.4**
	baz=326						
S45A	**Carrier Mills**	**145.49**	**30**	P	**PKPdf**	**05 24 55.0**	**-0.5**
	baz=321						
R46A	**Gibon Southern**	**145.58**	**28**	P	**PKPdf**	**05 24 55.2**	**-0.4**
	baz=323						
O50A	**Cable**	**145.60**	**22**	P	**PKPdf**	**05 24 55.4**	**-0.2**
	baz=331						
M54A	**Oil Creek Stat**	**145.65**	**16**	P	**PKPdf**	**05 24 55.5**	**-0.2**
	baz=338						
ACSO	**Alum Creek Sta**	**145.76**	**21**	P	**PKPdf**	**05 24 55.9**	**+0.1**
	baz=332						
BINY	**Binghamton**	**145.86**	**11**	P	**PKPdf**	**05 24 56.2**	**+0.2**
	baz=345						
R47A	**Wooly Knot Far**	**145.97**	**27**	P	**PKPdf**	**05 24 56.5**	**+0.2**
	baz=325						
P50A	**Jamestown**	**146.00**	**23**	P	**PKPdf**	**05 24 56.2**	**-0.1**
	baz=330						
N54A	**Moraine State**	**146.07**	**17**	P	**PKPbc**	**05 24 57.2**	**-0.1**
	baz=338						
WCI	**Wyandotte Cave**	**146.13**	**27**	P	**PKPbc**	**05 24 57.1**	**-0.5**
	baz=325						
R48A	**Northridge Ran**	**146.18**	**26**	P	**PKPdf**	**05 24 57.1**	**+0.5**
	baz=326						
HRV	**Adam Dziewonsk**	**146.19**	**5**	P	**PKPbc**	**05 24 57.2**	**-0.4**
	baz=353						
T46A	**Princeton**	**146.33**	**30**	P	**PKPbc**	**05 24 58.0**	**-0.2**
	baz=322						
R49A	**Shelbyville**	**146.57**	**26**	P	**PKPbc**	**05 24 58.4**	**-0.5**
	baz=327						
S48A	**Wiedeman Farm,**	**146.71**	**27**	P	**PKPbc**	**05 24 58.9**	**-0.4**
	baz=325						
T47A	**Sharon Grove**	**146.75**	**29**	P	**PKPbc**	**05 24 59.3**	**-0.1**
	baz=323						
R50A	**Paris**	**146.93**	**25**	P	**PKPbc**	**05 24 59.2**	**-0.7**
	baz=328						
SSPA	**Standing Stone**	**146.94**	**14**	P	**PKPbc**	**05 24 59.5**	**-0.3**
	baz=341						
S49A	**Springfield**	**146.94**	**26**	P	**PKPbc**	**05 24 59.1**	**-0.8**
	baz=327						
WVT	**Waverly**	**147.07**	**31**	P	**PKPbc**	**05 24 60.0**	**-0.4**
	baz=321						
U47A	**Clarksville**	**147.10**	**30**	P	**PKPbc**	**05 25 00.2**	**-0.2**
	baz=322						
N59A	**State Game Lan**	**147.14**	**12**	P	**PKPbc**	**05 25 00.3**	**-0.2**
	baz=345						
V46A	**Holladay**	**147.18**	**32**	P	**PKPbc**	**05 25 00.0**	**-0.6**
	baz=320						
341A	**Kurthwood**	**147.23**	**43**	P	**PKPbc**	**05 25 01.6**	**+0.7**
	baz=308						
MCWV	**Mont Chateau**	**147.31**	**18**	P	**PKPbc**	**05 25 00.5**	**-0.4**
	baz=337						
Y44A	**Strider, Charl**	**147.37**	**36**	P	**PKPbc**	**05 25 01.2**	**-0.1**
	baz=315						
PAL	**Palisades**	**147.38**	**9**	P	**PKPbc**	**05 25 00.8**	**-0.2**
	baz=348						
U48A	**Cassie Pea, Po**	**147.41**	**29**	P	**PKPbc**	**05 25 00.8**	**-0.5**
	baz=323						
S50A	**Richmond**	**147.41**	**25**	P	**PKPbc**	**05 25 00.3**	**-0.9**
	baz=328						
OXF	**Oxford**	**147.44**	**35**	P	**PKPbc**	**05 25 00.7**	**-0.7**
	baz=317						
V47A	**Nunnelly**	**147.46**	**31**	P	**PKPbc**	**05 25 00.8**	**-0.6**
	baz=321						
X45A	**UM Field Stati**	**147.51**	**35**	P	**PKPbc**	**05 25 00.9**	**-0.7**
	baz=317						
Z44A	**Pea Ridge, Bel**	**147.72**	**38**	P	**PKPbc**	**05 25 02.6**	**+0.4**
	baz=314						
U49A	**Red Boiling Sp**	**147.77**	**28**	P	**PKPbc**	**05 25 01.9**	**-0.3**
	baz=325						
T50A	**Nancy**	**147.78**	**26**	P	**PKPbc**	**05 25 01.5**	**-0.7**
	baz=327						
S51A	**Beattyville**	**147.78**	**24**	P	**PKPbc**	**05 25 01.6**	**-0.6**
	baz=329						
Y45A	**Yeager Farm, C**	**147.83**	**36**	P	**PKPbc**	**05 25 02.5**	**+0.1**
	baz=316						
W47A	**Westpoint**	**147.87**

BRAL	Brewton	151.23	36	P		PKPbc	05 25 11.7 +0.8
	baz=317						
152A	Waverly Hall	151.37	31	P		PKPbc	05 25 11.4 +0.1
	baz=323						
Y54A	Tignall	151.38	27	P		PKPbc	05 25 11.5 +0.2
	baz=328						
GOGA	Godfrey	151.39	29	P		PKPbc	05 25 11.3 0.0
	baz=326						
Z53A	Monticello	151.45	29	P		PKPbc	05 25 11.3 -0.2
	baz=325						
251A	Midway	151.46	33	P		PKPbc	05 25 11.6 +0.1
	baz=321						
Z54A	Sparta	151.83	28	P		PKPbc	05 25 12.4 +0.1
	baz=327						
Z55A	Blythe	152.16	27	P		PKPbc	05 25 13.3 +0.2
	baz=328						
LPAZ	La Paz	155.12	179	PKPab		PKPab	05 25 37.8 +1.5
	1.6nm,0.7s,baz=162,slow=3.5,SNR=8.1						
LPAZ				pPKPab		pPKPab	05 25 58.1 +3.2
	1.6nm,0.8s,baz=136,slow=5.0,SNR=4.8						

*IDC **26** 05:49:39.9±1.5, 1°.43N×126°.50E, h0km, mb4.0/4, mb1 4.1/5, mb1mx3.7/57, mbtmp3.9/5, ML3.5/1, Error ellipse: s-maj=117.3km s-min=19.0km az=69.0*
*ISCJB **26** 05:49:44.7±0.8, 1°.33N±0°.09×126°.4E±0°.1, h47km, mb4.0/4, Error ellipse: s-maj=21.4km s-min=8.3km az=149.2*
*DJA **26** 05:49:44.7±2.1, 1°.N±4°×12°.6E±°, h26km±28km, M3.9/6, MLv3.9/6*

ISC 26 05:49:46.4±1.1, 1°.31N±0°.08×126°.4E±0°.1, h47km, n8, σ0s61/9, mb4.0/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	Labuha	2.23	150	P	Pn	05 50 20.3	-0.6
LBMI				S	Sn	05 50 47.7	+0.5
SGSI	Sangihe	2.52	340	P	Pn	05 50 24.7	-0.1
KMSI	Cibinong	2.52	253	P	Pn	05 50 24.5	-0.3
FITZ	Fitzroy Crossi	19.30	182	P	P	05 54 07.7	+0.2
	0.1nm,0.3s,baz=17,slow=12,SNR=3.2						
WRA	Warramunga Arr	22.51	160	P	P	05 54 41.7	-0.6
	5.3nm,0.5s,baz=339,slow=11,SNR=47						
ASAR	Alice Springs	25.88	164	P	P	05 55 15.0	+1.0
	1.2nm,0.4s,baz=343,slow=9.9,SNR=19						
MKAR	Makanchi Array	59.35	326	P	P	05 59 43.5	-0.4
	0.5nm,0.5s,baz=120,slow=7.6,SNR=8.0						
KURBB	Kurchatov Arra	63.59	328	P	P	06 00 12.4	0.0
	1.0nm,0.5s,baz=130,slow=6.1,SNR=11						

*ISCJB **26** 06:21:15.0±0.3, 27°.72N±0°.05×100°.84E±0°.06, h10km, mb4.1/24, MS3.2/16, Error ellipse: s-maj=8.8km s-min=5.0km az=136.1*
*IDC **26** 06:21:15.6±0.8, 27°.92N×101°.14E, h0km, mb3.9/13, mb1 4.0/13, mb1mx3.8/69, mbtmp3.9/13, MS3.2/16, Ms1 3.2/16, ms1mx3.0/65, Error ellipse: s-maj=27.9km s-min=14.0km az=54.0*
*BJI **26** 06:21:16.7, 27°.87N×100°.69E, h13km, mb4.0/8, ML3.7/15, Ms3.7/3, Ms7 3.6/4*
*NEIC **26** 06:21:17.1±0.3, 27°.77N×100°.92E, h10km, mb4.4/15, Error ellipse: s-maj=8.0km s-min=5.2km az=217.0*

ISC 26 06:21:16.6±0.5, 27°.77N±0°.06×100°.91E±0°.07, h10km, n66, σ2s02/55, mb4.2/24, MS3.2/16, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	Kunming	3.11	148	Pn	Pb	06 22 10.3	-1.8
KMI				Pg	Pg	06 22 15.5	-0.7
KMI				Sn	Sn	06 22 44.8	+1.5
KMI				Sg	Sg	06 23 02.0	+5.5
KMI				smax	smax		
	comp=N,220nm,0.8s						
KMI				smax	smax		
	comp=E,220nm,0.9s						
KMI				LR	LR		
	comp=N,900nm,4.4s						
KMI				LR	LR		
	comp=Z,310nm,5.1s						
GYA	Guiyang	5.30	103	Pn	Pn	06 22 42.3	+6.4
GYA				Sn	Sb	06 23 47.0	-6.1
GYA				smax	smax		
	comp=N,60nm,1.0s						
GYA				smax	smax		
	comp=E,50nm,1.0s						
ENH	Enshi	7.92	70	ePn	Pn	06 23 13.4	+1.6
LSA	Lhasa	8.78	285	ePn	Pn	06 23 25.9	+1.9
CMAR	Chiang Mai Arr	9.45	191	LR	LR	06 27 35.3	
	comp=Z,64nm,20.6s,baz=55,slow=39						
RAMN	Ramite	12.74	270	eP	Pn	06 24 13.8	-4.3
JIRN	Jiri	13.04	273	eP	Pn	06 24 18.6	-3.7
	30nm,0.6s						
GUN	Gumba	13.30	274	eP	Pn	06 24 22.4	-3.4
	17nm,0.4s						
PKIN	Phulchoki	13.75	273	eP	Pn	06 24 27.3	-4.6
	22nm,0.6s						
PKIN	Phulchoki	13.75	273	eP	Pn	06 24 28.2	-3.7
	42nm,0.6s						
KKN	Kakani	13.83	274	eP	Pn	06 24 28.8	-4.2
DMN	Daman	14.00	273	eP	Pn	06 24 31.7	-3.6
DANN	Dangsing	15.15	276	eP	Pn	06 24 47.8	-3.2
KOLN	Koldanda	15.32	274	eP	Pn	06 24 48.4	-4.8
WMQ	Urumqi	19.23	330	eP	P	06 25 38.5	-2.4
SONM	Songino Array	20.48	11	P	P	06 25 54.7	0.0
	2.0nm,1.0s,baz=200,slow=11,SNR=4.2						
SONM				LR	LR	06 34 48.6	
	comp=Z,109nm,19.9s,baz=118,slow=40						
SONA1	Songino Array	20.50	11	eP	Pn	06 25 57.0	0.0
ULN	Ulaanbaatar	20.62	12	eP	P	06 25 56.5	+0.2
	4.6nm,1.0s						
PRZ	Przheval'sk	23.44	315	eP	P	06 26 27.4	+1.2
	12nm,0.3s						
TARG	Taragay, Kyrgy	23.45	312	eP	P	06 26 27.2	+0.7
	4.5nm,1.0s						
MK01	Makanchi Array	23.95	327	eP	P	06 26 31.2	+0.2
MK31	Makanchi Array	23.97	327	eP	P	06 26 32.2	+1.0
MK32	Makanchi Array	23.97	327	eP	P	06 26 31.3	+0.1
MKAR	Makanchi Array	23.97	327	P	P	06 26 31.3	+0.1
	1.9nm,0.7s,baz=131,slow=10,SNR=20						
MKAR	Makanchi Array	23.97	327	eP	P	06 26 32.2	+1.0
	16nm,0.8s						
MAKZ	Makanchi	24.13	327	eP	P	06 26 33.9	+1.2
	1.9nm,1.0s						
MAKZ				eS	S	06 30 53.6	+3.2
NIL	Nilore	24.45	291	eP	P	06 26 35.3	-0.4
	9.9nm,0.8s						
NRN	Naryn	24.51	310	eP	P	06 26 37.1	+0.5
	3.3nm,0.6s						
KSAR	Wonju Array Be	24.62	60	P	P	06 26 36.9	-0.2
KSRS	Korea Array	24.65	60	P	P	06 26 36.9	-0.5
	1.0nm,0.7s,baz=250,slow=7.8,SNR=2.7						
KSRS				LR	LR	06 37 40.4	
	comp=Z,67nm,19.2s,baz=269,slow=40						
JNU	Nakatsue	26.33	71	LR	LR	06 38 16.9	
	comp=Z,76nm,20.8s,baz=300,slow=39						
PALK	Pallekele	27.96	227	LR	LR	06 39 29.0	
	comp=Z,52nm,19.1s,baz=112,slow=39						
KURBB	Kurchatov Arra	28.45	329	P	P	06 27 12.4	+0.9
	0.7nm,0.6s,baz=142,slow=8.8,SNR=11						
KURK	Kurchatov	28.48	330	eP	P	06 27 12.4	+0.7
KURK				eP	P	06 27 12.6	+0.8
ZAA0	Zalesovo Array	28.70	340	eP	P	06 27 14.9	+1.2
	2.6nm,1.0s						
ZALV	Zalesovo Beam	28.70	340	P	P	06 27 13.4	-0.3
	0.5nm,0.3s,baz=152,slow=9.6,SNR=6.6						
ZALV				LR	LR	06 39 02.8	
	comp=Z,22nm,18.0s,baz=66,slow=37						
ZALV	Zalesovo Beam	28.70	340	eP	P	06 27 14.0	+0.3
ZAA1	Zalesovo Array	28.71	340	eP	P	06 27 13.4	-0.4
USRK	Ussuriysk Ar.	29.79	48	P	P	06 27 20.6	-3.0
	2.0nm,0.6s,baz=253,slow=4.4						
MJAR	Matsushiro Arr	32.61	65	LR	LR	06 41 53.2	
	comp=Z,40nm,19.5s,baz=230,slow=38						
JHJ	Hachijo jima 2	33.80	71	LR	LR	06 42 12.5	
	comp=Z,32nm,18.6s,baz=292,slow=37						
BVAR	Borovoye Array	33.85	327	P	P	06 28 00.1	+1.0
	0.3nm,0.4s,baz=140,slow=9.2,SNR=2.5						
ASAJ	Asahikawa	37.05	53	LR	LR	06 42 58.2	
	comp=Z,29nm,20.0s,baz=104,slow=35						
ASAJ	Asahikawa	37.05	53	eP	P	06 28 26.7	0.0
	5.5nm,1.0s						
GEYT	Alibeck	37.07	297	LR	LR	06 45 44.2	
	comp=Z,59nm,18.1s,baz=175,slow=40						
ABKAR	Akbulak array	37.95	316	eP	P	06 28 35.3	+1.1
AKTO	Aktyubinsk	39.51	317	P	P	06 28 47.2	-0.2

	0.8nm,0.3s,baz=108,slow=11,SNR=4.9						
ARU	Arti	41.48	326	P	P	06 29 04.0	+0.5
	8.1nm,0.2s,baz=110,slow=10,SNR=6.0						
ARU	Arti	41.48	326	eP	P	06 29 04.0	+0.5
	5.3nm,0.5s						
GNI	Garni	47.48	300	LR	LR	06 54 10.6	
	comp=Z,26nm,19.4s,baz=117,slow=42						
PETK	Petropavlovsk-	48.52	42	LR	LR	06 50 18.7	
	comp=Z,21nm,20.8s,baz=218,slow=36						
ASF	Jabal al Asfar	54.90	291	LR	LR	06 58 48.8	
	comp=Z,244nm,18.6s,baz=329,slow=41						
WR1	Warramunga Arr	57.42	142	eP	P	06 31 06.2	+0.5
	6.0nm,0.7s						
WRA	Warramunga Arr	57.42	142	P	P	06 31 06.2	+0.5
	4.8nm,0.8s,baz=329,slow=7.8,SNR=28						
WB2	Warramunga Arr	57.42	142	eP	P	06 31 06.2	+0.5
	8.8nm,0.8s						
ASAR	Alice Springs	60.24	145	P	P	06 31 26.1	+0.9
	2.0nm,0.8s,baz=326,slow=6.8,SNR=15						
AS01	Alice Springs	60.26	145	eP	P	06 31 25.2	-0.2
MLR	Muntele Rosu	60.58	309	P	P	06 31 28.9	+1.3
	0.1nm,0.4s,baz=45,slow=4.3,SNR=5.2						
MLR				LR	LR	07 01 16.1	
	comp=Z,9.1nm,21.0s,baz=60,slow=40						
MLR	Muntele Rosu	60.58	309	eP	P	06 31 28.6	+1.1
	3.4nm,1.1s						
MLR				eP	P	06 31 28.9	+1.3
NOA	NORSAR Array B	65.97	328	LR	LR	07 02 20.7	
	comp=Z,14nm,18.0s,baz=95,slow=37						
STKA	Stephens Creek	70.85	144	P	P	06 32 34.2	+0.5
	1.6nm,0.7s,baz=337,slow=11,SNR=5.1						
DAVOX	Davos/Dischmat	70.98	313	LR	LR	07 06 09.2	
	comp=Z,18nm,19.8s,baz=29,slow=38						
VAE	Valguarnera	71.10	303	LR	LR	07 09 08.7	
	comp=Z,28nm,18.7s,baz=312,slow=40						
MLY	Manley	72.47	25	eP	P	06 32 44.3	+1.2
	3.3nm,0.8s						
MDM	Murphy Dome	73.43	25	eP	P	06 32 49.6	+0.8
	6.3nm,0.9s						
ILAR	Eielson Array	74.02	24	P	P	06 32 51.2	-1.1
	0.7nm,0.9s,baz=302,slow=5.1,SNR=8.0						

*KRNET **26** 06:35:53.7±0.1, 39°.16N×70°.47E, mb3.1*
*NNC **26** 06:35:55.4±0.9, 39°.15N×70°.60E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=14.2km s-min=5.4km az=146.0*
*ISCJB **26** 06:35:56.3±1.0, 39°.23N±0°.06×70°.38E±0°.05, h17km, Error ellipse: s-maj=9.2km s-min=5.7km az=171.5*

ISC 26 06:35:57.3±1.3, 39°.16N±0°.07×70°.55E±0°.05, h17km, n13, σ1s74/26, 20C-8D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	Batken	0.92	13	↑iP	Pb	06 36 11.5	-3.3
	baz=17						
BTK				↑iS	Sb	06 36 24.5	-2.3
	baz=17						
DZET	Dzherino	1.39	256	↑Pn	Pn	06 36 21.7	-0.3
	19nm,0.3s						
DZET				↑Sn	Sg	06 36 45.0	+2.8
	293nm,0.6s						
SFK	Sufi-Kurgan	2.44	69	↑Pn	Pn	06 36 36.5	0.0
	9.6nm,0.5s						
SFK				↓Lg	Lg	06 37 10.7	
	30nm,0.3s						
SFK	Sufi-Kurgan	2.44	69	↑iP	Pn	06 36 36.9	+0.4
	baz=69						
SFK				↑iS	Sb	06 37 09.1	-1.5
	baz=69						
ARK	Arkit	2.84	22	↑iP	Pn	06 36 42.7	+0.7
	baz=23						
ARK				↑iS	Sn	06 37 17.7	+1.7
	baz=23						
TOKL	Toktogul	3.29	32	↑iP	Pn	06 36 48.8	+0.7
	baz=33						
TOKL				↑iS	Sn	06 37 28.4	+1.5
	baz=33						
MNAS	Manas	3.64	23	↑Pn	Pn	06 36 54.1	+1.2
	2.1nm,0.4s						
MNAS				↑Pg	Pb	06 37 02.3	+1.2
	4.5nm,0.6s						
MNAS				↑Sn	Sn	06 37 38.8	+3.3
	13nm,0.6s						
MNAS				Lg	Lg	06 37 50.0	
MNAS	Manas	3.64	23	↓iP	Pn	06 36 53.5	+0.6
	baz=24						
MNAS				↓iS	Sn	06 37 37.8	+2.3
	baz=24						
KK31	Karatay Array	3.94	360	↓Pn	Pn	06 36 58.9	+2.0
	0.9nm,0.3s,baz=176,slow=12,SNR=15						
KK31				↑Pg	Pb	06 37 06.3	+0.1
	3.7nm,0.5s,baz=175,slow=14,SNR=7.3						
KK31				Lg	Lg	06 38 00.2	
	7.9nm,0.5s,baz=187,slow=29,SNR=7.4						
KZA	Kyzart	4.61	49	↓iP	Pn	06 37 07.8	+1.2
	baz=50						
KZA				↓iS	Sn	06 38 01.8	+1.9
	baz=50						
TKM2	Tokmak 2	5.35	44	↓Pn	Pn	06 37 16.2	-0.3
	1.9nm,0.5s						
TKM2				↑Sn	Sn	06 38 19.8	+1.8
	3.3nm,0.5s						
TKM2				↑Lg	Lg	06 38 45.0	
	3.7nm,0.6s						
AB31	Akbulak array	12.62	327	↑Pn	Pn	06 38 54.4	-1.6
	0.3nm,0.4s,baz=139,slow=14,SNR=9.8						
AB31				↓Sn	Sn	06 41 15.3	-0.7
	0.8nm,0.5s,baz=146,slow=21,SNR=6.5						
AKTO	Aktyubinsk	14.34	326	↑Pn	Pn	06 39 18.1	-1.3
	2.4nm,1.1s						
AKTO				↑Sn	Sn	06 41 56.8	-1.0
	2.6nm,1.2s						

*ISK **26** 06:46:34.8, 37°.28N×28°.27E, h14km, ML2.4/8*
*ISCJB **26** 06:46:35.8±0.4, 37°.26N±0°.03×28°.21E±0°.03, h0km, Error ellipse: s-maj=4.6km s-min=3.1km az=33.0*
*CSEM **26** 06:46:35.7±0.2, 37°.27N×28°.24E, h1km, ML2.4, Error ellipse: s-maj=5.9km s-min=4.0km az=39.0, Suspected Mining explosion.*
*DDA **26** 06:46:36.0, 37°.21N×28°.17E, h7km, Ml2.5, Suspected Mining explosion.*

ISC 26 06:46:34.9±0.8, 37°.31N±0°.03×28°.26E±0°.02, h0km, n34, σ0s80/50, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	Yerkesik	0.18	173	PG	Pg	06 46 38.9	+0.7
YER				SG	Sg	06 46 41.9	+1.4
YER	Yerkesik	0.18	173	ePg	Pg	06 46 38.9	+0.7
YER				eSg	Sg	06 46 41.9	+1.4
MLSB	Milas	0.38	268	PG	Pg	06 46 43.2	+1.0
MLSB				SG	Sg	06 46 48.9	+1.7
MLSB	Milas	0.38	268	ePg	Pg	06 46 43.2	+1.0
MLSB				eSg	Sg	06 46 48.9	+1.7
AYDN	Tasoluk	0.46	319	iP	Pb	06 46 46.1	+0.2
AYDN				iS	Sb	06 46 53.3	-0.1
AYDN	Tasoluk	0.46	319	P	Pb	06 46 46.1	+0.2
AYDN				S	Sb	06 46 53.3	-0.1
TURN	Turunc	0.52	148	PG	Pg	06 46 45.2	+0.4
TURN				SG	Sg	06 46 52.9	+1.5
TURN	Turunc	0.52	148	iP	Pg	06 46 44.5	-0.2
TURN				iS	Sg	06 46 51.5	+0.1
TURN	Turunc	0.52	148	P	Pg	06 46 44.5	-0.2
TURN	Turunc	0.52	148	ePg	Pg	06 46 45.2	+0.4
TURN				S	Sg	06 46 51.5	+0.1
TURN				eSg	Sg	06 46 52.9	+1.5
TAVA	DENIZLI_Tavas	0.55	73	iP	Pb	06 46 48.4	+1.0
TAVA				iS	Sb	06 46 56.6	+0.8
TAVA	DENIZLI_Tavas	0.55	73	P	Pb	06 46 48.4	+1.0
TAVA				S	Sb	06 46 56.6	+0.8
DALY	Dalyan (Mu¨la	0.58	147	PG	Pg	06 46 46.2	+0.1
DALY	Dalyan (Mu¨la	0.58	147	iP	Pb	06 46 47.3	-0.7
DALY				iS	Sb	06 46 57.2	+0.4
DALY	Dalyan (Mu¨la	0.58	147	ePg	Pg	06 46 46.2	+0.1
DALY	Dalyan (Mu¨la	0.58	147	P	Pb	06 46 47.3	-0.7
DALY				S	Sb	06 46 57.2	+0.4
BDRM	Kayabasi	0.69	250	iP	Pg	06 46 48.4	+0.2
BDRM				iS	Sg	06 46 56.5	-0.7
BDRM	Kayabasi	0.69	250	P	Pg	06 46 48.4	+0.2
BDRM				S	Sg	06 46 56.5	-0.7
AYDB	Zeytinkoy-Aydi	0.70	335	PG	Pb	06 46 49.5	-0.5
AYDB	Zeytinkoy-Aydi	0.70	335	ePg	Pb	06 46 49.5	-0.5
DAT	Datca	0.80	223	PG	Pg	06 46 50.4	+0.3

DAT	Datca	0.80	223	ePg	Pg	06 46 50.4	+0.3
BODT	Bodrum	0.80	252	PG	Pg	06 46 50.7	+0.6
BODT	Bodrum	0.80	252	ePg	Pg	06 46 50.7	+0.6
GCAM	G?zelcaml?	0.90	296	PG	Pb	06 46 53.2	-0.2
GCAM	G?zelcaml?	0.90	296	ePg	Pb	06 46 53.2	-0.2
FETY	Fethiye	0.94	135	PG	Pg	06 46 52.9	-0.1
FETY	Fethiye	0.94	135	ePg	Pg	06 46 52.9	-0.1
ARG	Arkhangelos	1.10	186	PG	Pg	06 46 56.2	+0.3
ARG	Arkhangelos	1.10	186	ePg	Pg	06 46 56.2	+0.3
KULA	Kula-Manisa	1.24	15	PN	Pg	06 46 58.6	-0.1
KULA	Kula-Manisa	1.24	15	ePn	Pg	06 46 58.6	-0.1
AKAS	Kas	1.52	134	PN	Pn	06 47 01.9	-1.6
AKAS	Kas	1.52	134	ePn	Pn	06 47 01.9	-1.6

*IDC **26** 06:49:13.7±0.4, 24°.92S×70°.02E, h0km, mb4.4/29, mb1 4.4/29, mb1mx4.3/67, mbtmp4.4/29, MS4.0/45, Ms1 4.0/45, ms1mx3.9/63, Error ellipse: s-maj=16.8km s-min=12.9km az=61.0*
*ISCJB **26** 06:49:15.0±0.3, 24°.91S±0°.07×70°.08E±0°.08, h19km, mb4.6/53, MS4.0/45, Error ellipse: s-maj=11.5km s-min=8.6km az=39.9*
*NEIC **26** 06:49:15.2±0.2, 24°.93S×70°.00E, h10km, mb4.7/20, Error ellipse: s-maj=7.2km s-min=5.5km az=222.0*
*GCMT **26** 06:49:15.2±0.3, 24°.47S×69°.88E, h12km, MW4.9/84, Moment Tensor Solution. s19,c22; s84,c114; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.23±.09; $M_{\theta\theta}$0.07±.09; $M_{\phi\phi}$2.16±.07; $M_{r\theta}$2.04±.39; $M_{\theta\phi}$-0.95±.07; $M_{\phi r}$0.96±.30; Best double couple: $M_0$3.12500×10^{16} NP1:ϕ_s189.00000°, δ57.00000°, λ-49.00000°. NP2: ϕ_s312.00000°, δ51.00000°, λ-135.00000°. Principal axes: T 2.5350, Plg3.0000°, Azm251.0000°; N 1.1810, Plg33.0000°, Azm344.0000°; P -3.7150, Plg57.0000°, Azm157.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 26 06:49:16.8±0.4, 24°.93S±0°.10×70°.0E±0°.1, h19km, n133, σ0s63/107, mb4.6/53, MS4.0/45, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	17.35	8	T	T	07 11 08.5	
	baz=188,slow=76,SNR=34						
H08S2	Diego Garcia H	17.36	8	T	T	07 11 02.8	
	baz=188,slow=76,SNR=88						
H08S3	Diego Garcia H	17.37	8	T	T	07 11 01.0	
	baz=188,slow=76,SNR=297						
OPO	Ambohidratompo	22.09	282	P	P	06 54 12.4	+1.2
	9.8nm,0.9s,baz=260,slow=4.7,SNR=7.4						
OPO				LR	LR	07 00 21.3	
	comp=Z,785nm,21.4s,baz=142,slow=30						
PALK	Pallekele	33.67	19	LR	LR	07 06 23.1	
	comp=Z,667nm,19.9s,baz=125,slow=31						
H01W2	Cape Leeuwin H	39.26	115	T	T	07 38 23.7	
	baz=272,slow=75,SNR=30						
H01W3	Cape Leeuwin H	39.26	115	T	T	07 38 21.8	
	baz=272,slow=75,SNR=24						
H01W1	Cape Leeuwin H	39.27	115	T	T	07 38 23.1	
	baz=272,slow=75,SNR=28						
PSI	Prapat	39.35	50	LR	LR	07 09 08.7	
	comp=Z,328nm,20.4s,baz=268,slow=30						
KMBO	Kilima Mbogo	39.50	302	P	P	06 56 59.0	+12
	5.5nm,1.0s,baz=127,slow=3.3,SNR=8.0						
KMBO				LR	LR	07 09 32.1	
	comp=Z,125nm,21.3s,baz=101,slow=31						
BOSA	Boshof	39.94	255	LR	LR	07 10 29.3	
	comp=Z,425nm,18.8s,baz=86,slow=32						
LEM	Lembang	40.22	70	LR	LR	07 09 40.6	
	comp=Z,303nm,21.7s,baz=216,slow=30						
NWAO	Narrogin (SRO)	41.82	112	LR	LR	07 10 15.5	
	comp=Z,245nm,21.5s,baz=151,slow=30						
MAW	Mawson	42.91	184	P	P	06 57 14.3	+0.5
	1.6nm,0.8s,baz=336,slow=8.3,SNR=3.0						
MAW	Mawson	42.91	184	eP	P	06 57 14.3	+0.5
	0.9nm,1.1s						
CMAR	Chiang Mai Arr	51.52	36	P	P	06 58 22.6	+1.0
	1.6nm,0.3s,baz=214,slow=6.5,SNR=4.8						
CMAR				LR	LR	07 16 25.8	
	comp=Z,166nm,21.5s,baz=202,slow=32						
BRDH	Bariadhala	51.78	26	LR	LR	07 17 54.8	
	comp=Z,343nm,20.1s,baz=174,slow=33						
FITZ	Fitzroy Crossi	51.92	94	P	P	06 58 24.1	-0.6
	2.6nm,0.8s,baz=285,slow=6.0,SNR=6.4						
FITZ				LR	LR	07 17 47.9	
	comp=Z,109nm,20.1s,baz=282,slow=33						
BATI	Baumata	52.89	84	LR	LR	07 18 02.3	
	comp=Z,150nm,20.8s,baz=231,slow=33						
RAYN	Ar Rayn	53.70	332	eP	P	06 58 37.6	-0.1
	7.4nm,1.0s						
ASAR	Alice Springs	57.76	103	P	P	06 59 07.3	+0.2
	4.0nm,1.0s,baz=252,slow=6.8,SNR=8.3						
ASAR				LR	LR	07 20 36.7	
	comp=Z,147nm,21.9s,baz=276,slow=33						
AS31	Alice Springs	57.76	103	eP	P	06 59 06.8	-0.3
	1.5nm,1.1s						
AS01	Alice Springs	57.80	103	eP	P	06 59 07.6	+0.3
WR1	Warramunga Arr	59.21	99	eP	P	06 59 17.3	+0.2
	7.4nm,1.0s						
WRA	Warramunga Arr	59.21	99	P	P	06 59 17.3	+0.2
	2.0nm,0.9s,baz=253,slow=6.9,SNR=7.7						
WRA				LR	LR	07 22 28.0	
	comp=Z,369nm,19.4s,baz=265,slow=34						
SNAA	Sanae	61.15	200	P	P	06 59 29.5	-0.2
	2.6nm,1.0s,baz=50,slow=6.4,SNR=6.2						
SNAA				LR	LR	07 21 55.2	
	comp=Z,62nm,18.5s,baz=354,slow=32						
STKA	Stephens Creek	62.34	114	LR	LR	07 22 56.4	
	comp=Z,188nm,21.0s,baz=210,slow=32						
DAV	Davao City (W)	62.74	67	LR	LR	07 23 13.3	
	comp=Z,68nm,21.8s,baz=182,slow=32						
TGY	Tagaytay City	63.03	58	LR	LR	07 25 01.6	
	comp=Z,235nm,19.7s,baz=318,slow=34						
GEYT	Alibeck	63.52	350	LR	LR	07 24 15.6	
	comp=Z,57nm,20.0s,baz=50,slow=33						
ASF	Jabal al Asfar	64.98	329	P	P	06 59 55.9	+0.3
	2.5nm,0.8s,baz=104,slow=2.2,SNR=4.2						
QSPA	South Pole Qui	65.20	180	P	P	06 59 56.4	-0.3
	8.0nm,1.1s,baz=275,slow=3.6,SNR=15						
QSPA				LR	LR	07 24 25.9	
	comp=Z,102nm,20.4s,baz=284,slow=32						
QSPA	South Pole Qui	65.20	180	eP	P	06 59 56.4	-0.3
QSPA				eP	P	06 59 56.9	+0.2
VNDA	Vanda	66.25	166	P	P	07 00 02.5	-0.6

KURBB **Kurchatov Arra 75.60 6** P **P 07 00 59.8 -0.3**
4.9nm,0.9s,baz=200,slow=6.4,SNR=18
KURK Kurchatov 75.70 6 *e*P **P 07 00 59.8 -0.8**
KURK *e*P **P 07 01 01.2 +0.6**
AKTO Aktyubinsk 75.78 352 P **P 07 01 01.0 -0.1**
2.9nm,0.7s,baz=179,slow=9.3,SNR=10
AKTO LR LR 07 32 06.9
comp=Z,49nm,21.4s,baz=152,slow=34
TOA0 Torodi Ar. Sit 76.57 291 *e*P **P 07 01 05.3 -1.1**
TORD Torodi Ar. Bea 76.57 291 P **P 07 01 05.9 -0.5**
3.5nm,1.0s,baz=123,slow=4.9,SNR=9.2
TORD LR LR 07 33 08.2
comp=Z,127nm,20.6s,baz=110,slow=34
TOA1 Torodi Ar. Sit 76.58 291 *e*P **P 07 01 05.9 -0.6**
BVAR Borovoye Array 77.63 0 P **P 07 01 11.1 -0.4**
2.8nm,0.7s,baz=233,slow=37,SNR=8.1
BVAR LR LR 07 33 23.5
comp=Z,75nm,21.7s,baz=158,slow=34
DBIC Dimbokro 79.21 283 LR LR 07 34 29.1
comp=Z,208nm,18.7s,baz=107,slow=34
SONA0 Songino Array 79.48 24 *e*P **P 07 01 22.1 +0.1**
SONM Songino Array 79.48 24 P **P 07 01 22.1 +0.1**
1.8nm,0.9s,baz=213,slow=4.4,SNR=8.1
SONM LR LR 07 34 59.9
comp=Z,134nm,21.9s,baz=192,slow=35
SONA1 Songino Array 79.49 24 *e*P **P 07 01 22.2 +0.1**
ZAA0 Zalesovo Array 79.59 9 *e*P **P 07 01 21.9 -0.4**
5.0nm,1.0s
ZALV Zalesovo Beam 79.59 9 P **P 07 01 21.7 -0.6**
2.6nm,0.7s,baz=197,slow=4.6,SNR=9.3
ZALV LR LR 07 36 33.7
comp=Z,53nm,18.7s,baz=256,slow=36
ZAA1 Zalesovo Array 79.60 9 *e*P **P 07 01 21.7 -0.6**
MLR Muntele Rosu 80.73 330 P **P 07 01 29.4 +0.6**
2.4nm,0.9s,baz=223,slow=18,SNR=10
MLR LR LR 07 34 57.0
comp=Z,8.9nm,21.9s,baz=118,slow=34
MLR Muntele Rosu 80.73 330 *e*P **P 07 01 29.1 +0.2**
15nm,1.1s
MLR *e*P **P 07 01 29.4 +0.6**
ARU Arti 81.62 354 *e*P **P 07 01 33.5 +0.5**
14nm,1.1s
JNU Nakatsue 81.79 48 LR LR 07 37 24.1
comp=Z,74nm,18.7s,baz=303,slow=35
KOWA Kowa 82.07 290 P **P 07 01 37.4 +1.0**
5.4nm,0.9s,baz=127,slow=7.5,SNR=7.6
KOWA LR LR 07 38 15.8
comp=Z,105nm,18.0s,baz=136,slow=36
KOWA Kowa 82.07 290 *e*P **P 07 01 36.0 -0.4**
4.6nm,1.0s
KOWA *e*P **P 07 01 37.4 +1.0**
GUMO Guam 82.39 71 LR LR 07 37 30.7
comp=Z,18nm,18.2s,baz=96,slow=35
KSRS Korea Array 82.54 43 LR LR 07 37 49.5
comp=Z,63nm,18.6s,baz=223,slow=35
DIVS Divibare 82.55 326 *e*P **P 07 01 38.0 -0.4**
9.3nm,1.1s
BUR04 Bucovina Ar. S 82.69 331 *e*P **P 07 01 38.9 -0.2**
KEST Kesra 83.20 314 LR LR 07 38 36.7
comp=Z,79nm,19.1s,baz=232,slow=36
AKASG Malin Array Be 83.47 335 P **P 07 01 41.7 -1.1**
1.0nm,0.4s,baz=132,slow=4.6,SNR=2.4
AKBB Malin Array Si 83.47 335 *e*P **P 07 01 42.3 -0.6**
5.0nm,0.9s
KIEV Kiev 83.47 335 *e*P **P 07 01 42.0 -0.9**
5.3nm,1.0s
THTN Thala 83.53 314 *e*P **P 07 01 45.0 +1.3**
19nm,1.1s
PMSA Palmer Station 83.78 198 LR LR 07 36 59.0
comp=Z,92nm,18.2s,baz=47,slow=34
HNR Honiara 86.04 98 LR LR 07 38 47.7
comp=Z,70nm,18.4s,baz=264,slow=35
DZM Mont Dzumac 86.44 113 LR LR 07 38 05.1
comp=Z,81nm,18.5s,baz=234,slow=34
JAVC Velka Javorina 87.04 328 *e*P **P 07 02 01.6 +0.7**
CONA Conrad Observa 87.28 327 *i* P **P 07 02 02.1 0.0**
13nm,1.1s
MORC Moravsky Berou 87.74 329 *e*P **P 07 02 03.9 -0.3**
8.2nm,1.0s
MORC Moravsky Berou 87.74 329 *e*P **P 07 02 04.1 -0.1**
KRUC Moravsky 87.79 328 *e*P **P 07 02 04.1 -0.3**
KBA Koelnbreinsper 87.99 325 *e*P **P 07 02 05.6 -0.1**
9.1nm,1.3s
MOA Molln 88.03 326 *i* P **P 07 02 05.5 -0.1**
15nm,1.1s
ABTA Abfaltersbach 88.21 325 *i* P **P 07 02 06.6 0.0**
15nm,1.0s
MJAR Matsushiro Arr 88.69 48 LR LR 07 41 36.9
comp=Z,52nm,18.6s,baz=255,slow=35
GEA0 GERESS Array S 88.96 327 *e*P **P 07 02 09.3 -0.7**
GEA0 *es*P **pP 07 02 14.1 -2.3**
GEC2 GERESS Array S 88.96 327 *e*P **P 07 02 09.7 -0.4**
3.0nm,0.9s
GERES GERESS Array B 88.96 327 P **P 07 02 09.7 -0.4**
1.5nm,0.9s,baz=137,slow=4.9,SNR=5.8
WATA Walderalm 89.08 325 *i* P **P 07 02 11.3 +0.5**
7.2nm,0.7s
USRK Ussurisk Ar. 89.12 39 LR LR 07 40 00.1
comp=Z,84nm,21.9s,baz=209,slow=34
FETA Feichten 89.33 324 *i* P **P 07 02 12.2 +0.2**
17nm,1.1s
FUORN Ofenpass-Fuorn 89.33 323 *e*P **P 07 02 12.3 +0.2**
12nm,0.9s
MOTA Moosalm 89.33 324 *i* P **P 07 02 10.9 -1.1**
9.4nm,1.0s
RETA Reutte 89.60 324 *e*P **P 07 02 13.4 +0.2**
5.5nm,0.7s
DAVOX Davos/Dischmat 89.64 323 P **P 07 02 13.7 +0.2**
9.5nm,0.9s,baz=152,slow=8.4,SNR=9.4
TUE Stuetta 89.74 323 *e*P **P 07 02 13.8 -0.2**
5.4nm,0.8s
DAVA Damuels 89.95 324 *i* P **P 07 02 14.9 +0.1**
13nm,1.0s
MDT Midelt 91.33 306 P **P 07 02 21.8 +0.2**
4.3nm,1.0s,baz=122,slow=7.5,SNR=8.3
MDT LR LR 07 44 05.8
comp=Z,73nm,18.9s,baz=150,slow=36
FINES FINESS Array B 93.06 341 LR LR 07 43 00.1
comp=Z,26nm,20.6s,baz=200,slow=35
ES19 SONSECA Array 94.15 312 *e*P **P 07 02 34.4 0.0**
ESDC Sonseca Array 94.18 312 P **P 07 02 34.4 -0.2**
0.5nm,0.5s,baz=111,slow=4.6,SNR=6.3
ASAJ Asahikawa 95.47 44 LR LR 07 41 56.2
comp=Z,64nm,21.8s,baz=336,slow=33
ILAR Eielson Array 133.63 21 PKP **PKPdf 07 08 31.0 -0.5**
0.2nm,0.7s,baz=285,slow=3.5,SNR=3.2
SCM Sheep Creek Mo 135.37 24 *e*PKPdf **PKPdf 07 08 34.7 -0.2**
FCC Fort Churchill 144.37 346 *e*PKPdf PKPbc 07 08 49.5 -0.1
FRNY Flat Rock 144.53 313 *e*PKPdf **PKPab 07 08 49.4 -0.9**
TRQ Mont Tremblant 144.61 316 *e*PKPdf PKPbc 07 08 50.9 0.0
ACCN Adirondack Com 145.10 311 *e*PKPbc **PKPdf 07 08 53.0 0.0**
NCB Newcomb 145.27 312 *e*PKPbc **PKPdf 07 08 53.2 -0.1**
TRY Troy 145.32 310 *e*PKPbc **PKPdf 07 08 53.8 +0.4**
FFC Flin Flon 149.65 351 *e*PKPbc **PKPbc 07 09 04.3 -0.5**
IP05 Hopewell Churc 149.77 303 *e*PKPbc **PKPbc 07 09 05.3 -0.3**
E44A Grand Marais A 151.05 324 *e*PKPbc **PKPbc 07 09 08.6 +0.1**
C40A Isle Royale Na 151.75 330 *e*PKPbc **PKPbc 07 09 09.7 -0.3**
E43A Lone Tree Farm 151.77 325 *e*PKPbc **PKPbc 07 09 10.0 -0.1**
D41A Chassel 152.09 328 *e*PKPbc **PKPbc 07 09 11.3 +0.5**
ULM Lac du Bonnet 152.45 340 PKPbc **PKPbc 07 09 10.3 -1.2**
9.3nm,1.0s,baz=53,slow=5.2,SNR=4.2
ULM Lac du Bonnet 152.45 340 *e*PKPbc **PKPbc 07 09 10.7 -0.8**
EYMN Ely 152.77 332 *e*PKPbc **PKPbc 07 09 12.5 +0.2**
COWI Conover 153.05 327 *e*PKPbc **PKPbc 07 09 12.9 -0.1**
PDAR Pinedale Array 162.21 359 PKP **PKPdf 07 09 17.2 -0.2**
0.5nm,0.8s,baz=48,slow=2.2,SNR=4.3
PDAR PKPab **PKPab 07 10 04.3 +0.1**
0.3nm,0.7s,baz=48,slow=1.3,SNR=2.3
NVAR Mina Array Bea 164.81 26 PKPab **PKPab 07 10 16.9 +1.1**
0.2nm,0.3s,baz=293,slow=2.7,SNR=3.0
ANMO Albuquerque 169.56 344 PKPab **PKPab 07 10 37.1 +0.3**
0.4nm,0.7s,baz=29,slow=4.5,SNR=3.8
TXAR Lajitas Array 172.85 309 PKP **PKPdf 07 09 24.4 -0.8**
0.3nm,0.9s,baz=123,slow=4.6,SNR=2.9
TXAR PKPab **PKPab 07 10 52.5 +0.9**
0.8nm,0.9s,baz=71,slow=2.7,SNR=7.8

*SJA **26** 07:09:25.8±1.0, 35°.48S×71°.72W, h33km±10km, ML3.9, MW3.8*
*ISCJB **26** 07:09:26.7±0.3, 35°.53S±0°.03×71°.53W±0°.05, h81km±2km, mb4.4/51, Error ellipse: s-maj=7.3km s-min=3.7km az=18.9*
*GUC **26** 07:09:27.7±0.8, 35°.50S×71°.61W, h78km±4km, ML4.6*
*NEIC **26** 07:09:27.0±0.0, 35°.47S×71°.68W, h84km, mb4.5/46, ML4.6(GUC), After GUC.*
NEIC Felt [IV] at Colbun, Curico, Longavi and Talca; [III] at Cauquenes, Chepica, Chimbarongo, Constitucion, Duao, Iloca, Maule, Parral, Pelluhue, Rancagua, Romeral, San Fernando, Santa Cruz and Villa Alegre; [II] at Pencahue and Rio Claro.
*IDC **26** 07:09:27.5±0.7, 35°.49S×71°.37W, h74km±6km, mb3.9/15, mb1 4.0/18, mb1mx3.9/35, mbtmp4.2/18, MS3.3/4, Ms1 3.3/4, ms1mx2.9/31, Error ellipse: s-maj=22.2km s-min=11.8km az=81.0*

ISC 26 07:09:27.4±0.5, 35°.51S±0°.04×71°.58W±0°.05, h76km±5km, n114, σ1°08/130, mb4.5/51, 6D, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO05	**HualaæØ**	**0.58**	**330**	*e*Pn	**Pn**	**07 09 41.6**	**0.0**
GO05				*e*Sn	**Sn**	**07 09 53.4**	**+1.3**
GO05	**HualaæØ**	**0.58**	**330**	↓*e*P	**Pn**	**07 09 41.6**	**0.0**
GO05				↓*e*S	**Sn**	**07 09 53.3**	**+1.3**
GO05	**HualaæØ**	**0.58**	**330**	*e*P	**Pn**	**07 09 41.5**	**-0.1**
GO05				*i* S	**Sn**	**07 09 52.2**	**+0.3**
GO05				IAML		07 09 53.4	
comp=N,23μm,0.3s							
NICH	**Los Niches**	**0.58**	**30**	*e*P	**Pn**	**07 09 41.2**	**-0.3**
NICH				*i* S	**Sn**	**07 09 52.2**	**+0.1**
CCHI	**Chillan**	**1.16**	**200**	↓*e*P	**Pn**	**07 09 48.6**	**+0.4**
CCHI	**Chillan**	**1.16**	**200**	*e*P	**Pn**	**07 09 48.5**	**+0.3**
CCHI				*i* S	**Sn**	**07 10 04.3**	**+0.5**
CCHI				IAML		07 10 05.7	
comp=N,9μm,0.5s							
CCSP	**San Pedro de C**	**1.82**	**222**	*e*P	**Pn**	**07 09 57.0**	**+0.2**
CCSP				*i* S	**Sn**	**07 10 18.2**	**-0.8**
CCSP				IAML		07 10 27.6	
comp=N,5μm,0.5s							
LMEL	**Las Melosas**	**2.01**	**35**	*e*P	**Pn**	**07 10 00.3**	**+0.8**
LMEL				*i* S	**Sn**	**07 10 25.4**	**+1.5**
LMEL				IAML		07 10 29.6	
comp=N,5μm,0.2s							
ANTU	**Antumapu**	**2.09**	**22**	*e*P	**Pn**	**07 10 00.5**	**0.0**
ANTU				*i* S	**Sn**	**07 10 25.9**	**+0.2**
ANTU				IAML		07 10 27.1	
comp=N,9μm,0.2s							
CLCH	**Cerro Calan**	**2.28**	**23**	*e*P	**Pn**	**07 10 02.9**	**-0.2**
CLCH				*i* S	**Sn**	**07 10 30.3**	**0.0**
CLCH				IAML		07 10 32.0	
comp=E,5μm,0.2s							
CANA	**Caviahue**	**2.41**	**170**	*e*P	**Pn**	**07 10 05.6**	**+0.8**
FCH	**Farellones**	**2.42**	**26**	*e*P	**Pn**	**07 10 05.7**	**+0.4**
FCH				*i* S	**Sn**	**07 10 34.8**	**+0.7**
FCH				IAML		07 10 42.1	
comp=N,4μm,0.2s							
PEL	**Peldehue**	**2.48**	**18**	*e*Pn	**Pn**	**07 10 06.0**	**+0.3**
PEL	**Peldehue**	**2.48**	**18**	*e*P	**Pn**	**07 10 05.8**	**+0.1**
PEL				*i* S	**Sn**	**07 10 34.6**	**-0.4**
PEL				IAML		07 10 40.9	
comp=N,4μm,0.3s							
ROC1	**El Roble**	**2.57**	**11**	*e*Pn	**Pn**	**07 10 07.5**	**+0.3**
ROC1	**El Roble**	**2.57**	**11**	*e*P	**Pn**	**07 10 07.5**	**+0.3**
ROCH	**El Roble**	**2.58**	**11**	*e*P	**Pn**	**07 10 07.3**	**+0.1**
ROCH				*i* S	**Sn**	**07 10 37.8**	**+0.2**
ROCH				IAML		07 10 46.7	
comp=N,5μm,0.4s							
AAGR	**Agrelo**	**3.32**	**44**	↓*e*P	**Pn**	**07 10 18.7**	**+1.4**
ARCO	**CERRO ARCO**	**3.45**	**40**	*e*P	**Pn**	**07 10 20.5**	**+1.5**
ARCO				IAML		07 11 13.7	
comp=Z,194nm,0.4s							
ASAL	**Salagasta**	**3.70**	**39**	*e*P	**Pn**	**07 10 23.7**	**+1.4**
AUSP	**Uspallata**	**3.75**	**30**	*e*P	**Pn**	**07 10 23.5**	**+0.2**
RTLS	**Leoncito**	**4.16**	**28**	↓*e*P	**Pn**	**07 10 30.2**	**+1.3**
RTLS				IAML		07 10 59.8	
comp=Z,174nm,0.4s							
RTCV	**Cerro Valdivia**	**4.43**	**36**	*e*P	**Pn**	**07 10 32.3**	**0.0**
ACAN	**Cantantal**	**4.87**	**50**	*e*P	**Pn**	**07 10 38.7**	**+0.4**
RTLL	**Cerro Villicun**	**4.91**	**33**	*e*P	**Pn**	**07 10 38.6**	**-0.3**
AMOG	**MOGNA**	**5.24**	**30**	*e*P	**Pn**	**07 10 43.0**	**-0.3**
PLCA	**Paso Flores**	**5.28**	**171**	P	**Pn**	**07 10 44.3**	**+0.5**
comp=Z,2.8nm,0.3s,baz=9.0,slow=14,SNR=44							
PLCA				LR	LR	07 13 10.3	
comp=Z,239nm,21.2s,baz=358,slow=42							
PLCA	**Paso Flores**	**5.28**	**171**	*e*Pn	**Pn**	**07 10 44.5**	**+0.7**
GO04	**Tololo Observa**	**5.36**	**7**	*e*Pn	**Pn**	**07 10 44.4**	**-0.8**
AROD	**Rodeo**	**5.62**	**19**	*e*P	**Pn**	**07 10 49.1**	**+0.4**
ACDV	**Cuesta del Vie**	**5.71**	**22**	*e*P	**Pn**	**07 10 49.9**	**0.0**
MRA	**San Martin**	**5.76**	**59**	↓*e*P	**Pn**	**07 10 51.5**	**+1.0**
MRA				IAML		07 13 07.6	
comp=Z,29nm,0.6s							
SUCO	**SUCO**	**5.94**	**71**	*e*P	**Pn**	**07 10 53.0**	**+0.1**
LCO	**Las Campanas**	**6.52**	**7**	*e*Pn	**Pn**	**07 10 59.8**	**-1.3**
AGUA	**GUANDACOL**	**6.55**	**24**	*e*P	**Pn**	**07 11 00.4**	**-0.8**
GO03	**Copiap**	**7.98**	**9**	*e*Pn	**Pn**	**07 11 19.1**	**-1.6**
TRQA	**Tornquist**	**8.11**	**111**	*e*Pn	**Pn**	**07 11 22.9**	**+0.5**
GO02	**Mina Guanaco**	**10.46**	**10**	*e*Pn	**Pn**	**07 11 58.5**	**+3.8**
CHRN	**Cochrane**	**11.75**	**183**	*e*Pn	**Pn**	**07 12 12.2**	**+0.2**
PB01	**IPOC Station P**	**14.53**	**8**	*e*Pn	**Pn**	**07 12 48.3**	**-1.0**
CPUP	**Villa Florida**	**15.26**	**57**	P	**Pn**	**07 12 57.2**	**-1.3**
comp=Z,0.1nm,0.3s,baz=220,slow=7.9,SNR=2.4							
CPUP				LR	LR	07 19 15.3	
comp=Z,153nm,19.9s,baz=228,slow=39							
MNMC	**Minye Minye**	**16.41**	**7**	*e*Pn	**Pn**	**07 13 13.0**	**-0.3**
comp=Z,8.7nm,0.7s							
EFI	**East Falkland**	**18.84**	**153**	*e*P	**P**	**07 13 41.3**	**+0.3**
comp=Z,84nm,1.3s							
LPAZ	**La Paz**	**19.39**	**10**	P	**P**	**07 13 48.4**	**+0.3**
comp=Z,0.3nm,0.3s,baz=161,slow=5.7,SNR=16							
LPAZ	**La Paz**	**19.39**	**10**	*e*P	**Pn**	**07 13 49.3**	**-0.5**
comp=Z,4.3nm,0.8s							
SIV	**San Ignacio**	**21.59**	**28**	P	**P**	**07 14 10.0**	**-1.1**
comp=Z,3.8nm,0.8s,baz=222,slow=9.2,SNR=22							
NNA	**Nana**	**23.90**	**347**	P	**P**	**07 14 34.5**	**+0.2**
comp=Z,8.2nm,0.8s,baz=227,slow=9.7,SNR=3.9							
NNA				LR	LR	07 21 43.2	
comp=Z,75nm,20.2s,baz=181,slow=31							
PMSA	**Palmer Station**	**29.65**	**173**	P	**P**	**07 15 24.4**	**-0.9**
comp=Z,20nm,0.8s,baz=175,slow=10.0,SNR=7.3							
PMSA	**Palmer Station**	**29.65**	**173**	*e*P	**P**	**07 15 24.7**	**-0.7**
comp=Z,136nm,1.5s							
PTGA	**Pitinga**	**36.25**	**20**	*e*P	**P**	**07 16 22.5**	**-0.9**
comp=Z,3.3nm,0.6s							
RUSC	**La Rusia**	**41.21**	**358**	*e*P	**P**	**07 17 06.3**	**+0.9**
comp=Z,3.2nm,1.1s							
HELC	**Santa Helena**	**41.65**	**354**	*e*P	**P**	**07 17 09.5**	**+0.7**
comp=Z,9.4nm,0.6s							
VNA3	**Neumayer Olymp**	**47.82**	**157**	P	**P**	**07 18 00.6**	**+3.6**
SNAA	**Sanae**	**50.05**	**157**	P	**P**	**07 18 13.0**	**-1.0**
SNAA	**Sanae**	**50.05**	**157**	P	**P**	**07 18 13.9**	**0.0**
comp=Z,1.5nm,0.4s,baz=298,slow=14,SNR=16							
SNAA	**Sanae**	**50.05**	**157**	*e*P	**P**	**07 18 14.0**	**0.0**
comp=Z,5.7nm,1.1s							
QSPA	**South Pole Qui**	**54.73**	**180**	P	**P**	**07 18 49.6**	**+0.8**
comp=Z,2.7nm,0.8s,baz=161,slow=2.7,SNR=9.6							
QSPA				pP	**pP**	**07 19 08.4**	**+0.4**
comp=Z,4.9nm,0.8s,baz=136,slow=5.2,SNR=7.9							
QSPA	**South Pole Qui**	**54.73**	**180**	*e*P	**P**	**07 18 50.2**	**+1.4**
comp=Z,5.8nm,0.9s							
QSPA				pP	**pP**	**07 19 08.4**	**+0.4**
CMIG	**Matias Romero**	**56.79**	**333**	LR	LR	07 37 25.4	
comp=Z,32nm,18.5s,baz=95,slow=30							
LVIG	**Laguna Verde**	**59.77**	**333**	*e*P	**P**	**07 19 26.7**	**+2.1**
comp=Z,16nm,1.0s							
833A	**Chaparral WMA,**	**68.70**	**334**	*e*P	**P**	**07 20 24.1**	**+1.2**
comp=Z,7.2nm,1.0s							
Z50A	**Ashland**	**69.71**	**347**	*e*P	**P**	**07 20 29.4**	**+0.3**
Y52A	**Lilburn**	**70.00**	**349**	*e*P	**P**	**07 20 31.8**	**+1.0**
comp=Z,35nm,1.5s							
143A	**Socs Landing,**	**70.36**	**342**	*e*P	**P**	**07 20 33.7**	**+0.7**
comp=Z,17nm,0.9s							
JCT	**Junction City**	**70.81**	**334**	*e*P	**P**	**07 20 36.6**	**+0.8**
comp=Z,6.4nm,0.9s							
TX31	**Lajitas Ar. Si**	**71.23**	**331**	*e*P	**P**	**07 20 39.4**	**+0.9**
TXAR	**Lajitas Array**	**71.23**	**331**	P	**P**	**07 20 39.2**	**+0.7**
comp=Z,1.1nm,0.6s,baz=151,slow=8.4,SNR=22							
TXAR				pP	**pP**	**07 20 59.0**	**+0.5**
comp=Z,0.2nm,0.5s,baz=162,slow=8.3,SNR=2.1							
Z41A	**Richland Creek**	**71.24**	**341**	*e*P	**P**	**07 20 39.2**	**+0.9**
comp=Z,15nm,1.0s							
WHTX	**Lake Whitney,**	**71.41**	**337**	*e*P	**P**	**07 20 40.0**	**+0.6**
comp=Z,5.9nm,0.8s							
W50A	**Signal Mountai**	**71.51**	**348**	*e*P	**P**	**07 20 40.5**	**+0.6**
comp=Z,9.3nm,0.9s							
CPCT	**Cooper Cave**	**71.62**	**349**	*e*P	**P**	**07 20 41.3**	**+0.7**
comp=Z,14nm,1.5s							
MAW	**Mawson**	**71.63**	**163**	P	**P**	**07 20 40.5**	**+0.2**
comp=Z,1.8nm,0.8s,baz=260,slow=6.1,SNR=4.1							
V52A	**Sevierville**	**71.87**	**350**	*e*P	**P**	**07 20 41.6**	**-0.5**
comp=Z,28nm,1.5s							
V48A	**Smith Brothers**	**72.30**	**347**	*e*P	**P**	**07 20 44.6**	**0.0**
comp=Z,15nm,0.9s							
ABTX	**Abilene, Hawle**	**72.71**	**335**	*e*P	**P**	**07 20 47.6**	**+0.5**
comp=Z,4.9nm,0.9s							
WVT	**Waverly**	**72.86**	**346**	*e*P	**P**	**07 20 47.5**	**-0.4**
comp=Z,6.3nm,0.7s							
W39A	**Magazine**	**73.33**	**341**	*e*P	**P**	**07 20 51.5**	**+0.8**
comp=Z,6.9nm,0.9s							
MNTX	**Cornudas Mount**	**74.01**	**330**	*e*P	**P**	**07 20 54.8**	**0.0**
comp=Z,2.7nm,0.8s							
PBMO	**Poplar Bluff**	**74.03**	**344**	*e*P	**P**	**07 20 54.6**	**-0.2**
comp=Z,3.9nm,0.7s							
DBIC	**Dimbokro**	**75.31**	**71**	P	**P**	**07 21 02.6**	**-0.2**
comp=Z,3.8nm,0.9s,baz=219,slow=6.1,SNR=3.4							
CCM	**Cathedral Cave**	**75.43**	**344**	*e*P	**P**	**07 21 02.8**	**-0.1**
comp=Z,5.9nm,0.8s							
AMTX	**Amarillo**	**75.46**	**335**	*e*P	**P**	**07 21 03.4**	**+0.1**
comp=Z,12nm,1.3s							
R40A	**Maddies Statio**	**75.89**	**343**	*e*P	**P**	**07 21 05.5**	**0.0**
comp=Z,5.0nm,0.6s							
P40A	**Paris**	**77.02**	**344**	*e*P	**P**	**07 21 11.9**	**+0.1**
comp=Z,7.7nm,0.8s							
ANMO	**Albuquerque**	**77.29**	**331**	P	**P**	**07 21 14.4**	**+0.7**
comp=Z,1.2nm,0.9s,baz=150,slow=12,SNR=6.9							
ANMO	**Albuquerque**	**77.29**	**331**	*e*P	**P**	**07 21 14.9**	**+1.2**
comp=Z,1.9nm,1.0s							
MMNY	**Mt. Morris Dam**	**78.08**	**355**	*e*P	**P**	**07 21 20.3**	**+2.6**
comp=Z,18nm,1.4s							
BOSA	**Boshof**	**79.04**	**117**	P	**P**	**07 21 23.1**	**-0.6**
comp=Z,2.3nm,0.5s,baz=263,slow=5.1,SNR=11							
BOSA	**Boshof**	**79.04**	**117**	*e*P	**P**	**07 21 23.1**	**-0.5**
comp=Z,6.0nm,1.3s							
W13A	**Hualapai Mount**	**80.58**	**326**	*e*P	**P**	**07 21 33.4**	**+1.7**
comp=Z,1.7nm,0.9s							
KOWA	**Kowa**	**80.92**	**65**	P	**P**	**07 21 33.6**	**-0.2**
comp=Z,1.5nm,0.4s,baz=260,slow=6.1,SNR=4.7							
KOWA	**Kowa**	**80.92**	**65**	*e*P	**P**	**07 21 34.1**	**+0.3**
comp=Z,6.0nm,1.1s							
SMCO	**Snowmass**	**81.19**	**333**	*e*P	**P**	**07 21 36.8**	**+1.6**
comp=Z,2.6nm,0.9s							
I37A	**Lemond, Waseca**	**81.60**	**344**	*e*P	**P**	**07 21 36.9**	**+0.2**
comp=Z,3.2nm,0.8s							
ECSD	**EROS Data Cent**	**82.10**	**342**	*e*P	**P**	**07 21 39.5**	**+0.2**
comp=Z,9.4nm,0.6s							
E43A	**Lone Tree Farm**	**82.69**	**349**	*e*P	**P**	**07 21 42.5**	**+0.3**
comp=Z,13nm,1.4s							
PSUT	**Pine Spring**	**83.42**	**328**	*e*P	**P**	**07 21 48.3**	**+1.7**
comp=Z,1.8nm,0.9s							
DUG	**Dugway, Tooele**	**84.36**	**330**	*e*P	**P**	**07 21 52.6**	**+1.4**
comp=Z,5.5nm,1.4s							
TOA0	**Torodi Ar. Sit**	**84.38**	**70**	*e*P	**P**	**07 21 51.2**	**-0.5**
comp=Z,4.3nm,1.0s							
TORD	**Torodi Ar. Bea**	**84.38**	**70**	P	**P**	**07 21 51.0**	**-0.7**
comp=Z,1.0nm,0.7s,baz=274,slow=5.1,SNR=8.7							
TORD				pP	**pP**	**07 22 10.6**	**-1.5**
comp=Z,3.2nm,0.8s,baz=260,slow=3.8,SNR=12							
HWUT	**Hardware Ranch**	**85.05**	**331**	*e*P	**P**	**07 21 55.2**	**+0.5**
comp=Z,8.7nm,1.4s							
BW06	**Boulder Array**	**85.28**	**333**	*e*P	**P**	**07 21 57.8**	**+2.0**
comp=Z,3.6nm,1.5s							
PDAR	**Pinedale Array**	**85.28**	**333**	P	**P**	**07 21 55.9**	**+0.1**
comp=Z,0.7nm,0.7s,baz=129,slow=5.2,SNR=7.2							
PDAR	**Pinedale Array**	**85.28**	**333**	*e*P	**P**	**07 21 56.1**	**+0.2**
NVAR	**Mina Array Bea**	**85.34**	**325**	P	**P**	**07 21 57.4**	**+1.2**
comp=Z,0.8nm,0.8s,baz=151,slow=6.2,SNR=4.6							
B35A	**Bob, Littlefor**	**85.81**	**345**	*e*P	**P**	**07 21 57.9**	**-0.1**
comp=Z,4.4nm,1.1s							
ULM	**Lac du Bonnet**	**88.05**	**345**	P	**P**	**07 22 08.4**	**-0.4**
comp=Z,3.7nm,0.7s,baz=99,slow=2.0,SNR=3.4							
WVOR	**Wild Horse Val**	**88.70**	**327**	*e*P	**P**	**07 22 14.6**	**+2.3**
comp=Z,7.3nm,0.8s							
RSO	**Redoubt South**	**116.12**	**327**	*e*PKPdf	**PKPdf**	**07 27 59.2**	**-2.0**
BVAR	**Borovoye Array**	**148.11**	**45**	PKPbc	**PKPbc**	**07 29 03.2**	**-0.6**
comp=Z,1.5nm,0.6s,baz=318,slow=1.9,SNR=4.8							
KURBB	**Kurchatov Arra**	**153.68**	**46**	PKPbc	**PKPbc**	**07 29 16.7**	**-0.3**
comp=Z,0.7nm,0.6s,baz=305,slow=3.2,SNR=4.2							
KURK	**Kurchatov**	**153.69**	**45**	PKPbc	**PKPbc**	**07 29 16.7**	**-0.3**
CD2	**Chengdu**	**173.97**	**138**	PKP	**PKPdf**	**07 29 26.3**	**-2.0**
LZH	**Lanzhou**	**176.24**	**80**	*e*PKP	**PKPdf**	**07 29 24.8**	**-4.2**
LZH				pPKP	pPKPdf	07 29 46.0	-4.6
LZH				sPKP		07 29 54.3	
LZH				PKP	**PKPab**	**07 31 07.0**	**-2.9**
LZH				LR	LR		
comp=N,65nm,18.3s							
LZH				LR	LR		
comp=E,78nm,18.2s							
LZH				LR	LR		
comp=Z,97nm,20.0s							

IDC 26 07:10:01.4±2.3, 6°.68S×129°.70E, h0km, mb3.3/1, mb1 3.5/4, mb1mx3.3/48, mbtmp3.3/4, ML3.3/3, Error ellipse: s-maj=81.6km s-min=29.9km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.02**	**199**	Pn	Pn	07 12 55.1	+1.0
0.1nm,0.3s,baz=19,slow=12,SNR=12							
FITZ				Sn	Sn	07 14 56.3	-13
0.3nm,0.3s,baz=128,slow=19,SNR=6.2							
WRA	**Warramunga Arr**	**13.93**	**162**	Pn	Pn	07 13 18.9	-1.3
0.2nm,0.3s,baz=340,slow=14,SNR=12							
WR

325nm,0.2s
YUK A A 07 39 23.0
369nm,0.2s
LAGR Lagunnoye 1.25 8 *e*P **Pn 07 39 05.0 0.0**
LAGR AMB AMB 07 39 07.0
49nm,0.1s
LAGR AMB AMB 07 39 07.0
20nm,0.1s
LAGR *i* S **Sn 07 39 21.0 -0.4**
LAGR A A 07 39 23.0
110nm,0.2s
LAGR A A 07 39 23.0
584nm,0.2s
JOB Onbets 1.25 274 P **Pn 07 39 05.2 +0.1**
JOB *e*S **Sn 07 39 20.9 -0.7**
JAR Ashorobuto 1.38 291 P **Pn 07 39 06.8 +0.1**
SHO Shikotan 1.41 42 *i* P **Pn 07 39 07.0 -0.1**
SHO AMB AMB 07 39 10.0
40nm,0.2s
SHO AMB AMB 07 39 10.0
11nm,0.2s
SHO *i* S **Sn 07 39 24.0 -1.1**
SHO A A 07 39 25.0
354nm,0.2s
SHO A A 07 39 25.0
389nm,0.2s
JCH Churui 1.62 263 P **Pn 07 39 10.0 +0.2**
JCH *e*S **Sn 07 39 29.0 -1.0**
JTKR Abashiri--Toko 1.65 315 P **Pn 07 39 10.6 +0.4**
JTKR *e*S **Sn 07 39 31.3 +0.5**
JEM Erimo 1.94 246 P **Pn 07 39 14.9 +0.9**
JMP Maruseppu 1.98 307 P **Pn 07 39 15.1 +0.5**
JMP *e*S **Sn 07 39 38.5 -0.2**

NNC 26 07:50:31.7±1.9, 53°.46N×87°.50E, h0km, mb4.0, mpv3.7, 7C-5D, Error ellipse: s-maj=16.8km s-min=8.7km az=69.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**1.67**	**288**	⇓Pn	Pn	07 51 01.3	-0.8
ZAA0	16nm,0.3s			⇑Sn	Sg	07 51 26.0	+0.8
KURK	**Kurchatov**	**6.12**	**247**	⇑Pn	Pn	07 52 04.1	+0.7
KURK	4.9nm,0.7s			⇓Lg	Lg	07 53 45.1	
KURBB	**Kurchatov Arra**	**6.22**	**246**	⇓Pn	Pn	07 52 05.2	+0.5
KURBB	18nm,0.7s			⇑Sn	Sn	07 53 15.9	-0.5
MK31	**Makanchi Array**	**7.46**	**209**	⇑Pn	Pn	07 52 22.9	+1.1
MK31	13nm,0.6s			⇑Sn	Sn	07 53 47.3	+0.2
MAKZ	**Makanchi**	**7.54**	**210**	⇓Pn	Pn	07 52 24.3	+1.4
MAKZ	3.2nm,0.6s			⇑Sn	Sn	07 53 50.4	+1.3
MAKZ	3.4nm,0.7s			⇑Lg	Lg	07 54 30.7	
	6.2nm,0.8s						

2.2nm,0.5s,baz=28,slow=12,SNR=3.1
2.7nm,0.7s,baz=30,slow=26,SNR=5.3
5.6nm,0.6s,baz=30,slow=29,SNR=6.2

*ISCJB **26** 07:51:43.1±0.8, 36°.91N±0°.04×7°.65W±0°.03, h59km±7km, Error ellipse: s-maj=7.1km s-min=4.4km az=13.4*
*CSEM **26** 07:51:43.7±0.3, 36°.87N×7°.67W, h30km, mb3.8, Error ellipse: s-maj=5.4km s-min=3.4km az=6.0*
*MDD **26** 07:51:44.1±0.9, 36°.81N×7°.69W, h37km±12km, mb3.8/8, Error ellipse: s-maj=8.7km s-min=5.5km az=175.0, PRXIMO*
*INMG **26** 07:51:44.4±1.3, 36°.81N×7°.70W, h29km±3km, ML1.9, Error ellipse: s-maj=3.5km s-min=3.0km az=39.0*
*IGIL **26** 07:51:44.3, 36°.81N×7°.70W, h28km, ML1.9*
ISC 26 07:51:43.0±1.4, 36°.82N±0°.05×7°.68W±0°.03, h47km±11km, n72, σ0s92/121, 2C-2D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBDV	**Barranco-do-Ve**	**0.47**	**335**	⇓*i*Pg	**Pn**	**07 51 53.9**	**+0.2**
PBDV				*e*Sg	**Sn**	**07 52 00.7**	**-0.6**
PBDV	64nm,0.3s			A	A	07 52 01.1	
PBDV	**Barranco-do-Ve**	**0.47**	**335**	P	**Pn**	**07 51 53.9**	**+0.2**
PBDV	64nm,0.3s			S	**Sn**	**07 52 00.7**	**-0.6**
PBDV	**Barranco-do-Ve**	**0.47**	**335**	P	**Pn**	**07 51 53.9**	**+0.2**
PBDV	64nm,0.3s			S	**Sn**	**07 52 00.7**	**-0.6**
PVAQ	**Vaqueiros**	**0.58**	**357**	*e*Pg	**Pn**	**07 51 55.5**	**+0.4**
PVAQ				*e*Sg	**Sn**	**07 52 03.6**	**-0.2**
PVAQ	78nm,0.1s			A	A	07 52 04.7	
PVAQ	**Vaqueiros**	**0.58**	**357**	P	**Pn**	**07 51 55.5**	**+0.4**
PVAQ	78nm,0.1s			Lg	Lg	07 52 03.6	
PVAQ	**Vaqueiros**	**0.58**	**357**	P	**Pn**	**07 51 55.5**	**+0.4**
PVAQ				*e*Sg	**Sn**	**07 52 03.6**	**-0.2**
EGRO	**El Granado**	**0.73**	**12**	⇑P	**Pn**	**07 51 57.7**	**+0.7**
EGRO	6.4nm,0.1s,SNR=18			S	**Sn**	**07 52 07.1**	**0.0**
EGRO	**El Granado**	**0.73**	**12**	P	**Pn**	**07 51 57.7**	**+0.7**
EGRO	6.4nm,0.1s,SNR=18			S	**Sn**	**07 52 07.1**	**0.0**
PCVE	**Castro Verde**	**0.86**	**341**	*e*P	**Pn**	**07 51 59.5**	**+0.8**
PCVE				*e*S	**Sn**	**07 52 10.5**	**+0.2**
PCVE	20nm,0.1s			A	A	07 52 11.7	
PCVE	**Castro Verde**	**0.86**	**341**	P	**Pn**	**07 51 59.5**	**+0.8**
PCVE	20nm,0.1s			S	**Sn**	**07 52 10.5**	**+0.2**
PCVE	**Castro Verde**	**0.86**	**341**	P	**Pn**	**07 51 59.5**	**+0.8**
PCVE	20nm,0.1s			S	**Sn**	**07 52 10.5**	**+0.2**
MORF	**Marmelete**	**0.92**	**302**	*e*P	**Pn**	**07 51 59.7**	**+0.1**
MORF				*e*S	**Sn**	**07 52 11.1**	**-0.6**
MORF	comp=N,20nm,0.2s			AML	AML	07 52 11.5	
MORF	**Marmelete**	**0.92**	**302**	*e*P	**Pn**	**07 51 59.5**	**0.0**
MORF				*e*S	**Sn**	**07 52 11.1**	**-0.6**
MORF	comp=N,12nm,0.1s			A	A	07 52 12.7	
MORF	**Marmelete**	**0.92**	**302**	P	**Pn**	**07 51 59.5**	**0.0**
MORF	comp=N,12nm,0.1s			S	**Sn**	**07 52 11.1**	**-0.6**
MORF	**Marmelete**	**0.92**	**302**	P	**Pn**	**07 51 59.5**	**0.0**
MORF	comp=N,12nm,0.1s			S	**Sn**	**07 52 11.1**	**-0.6**
PFVI	**Vila Bisbo**	**0.97**	**289**	*e*P	**Pn**	**07 52 00.3**	**+0.1**
PFVI				*e*S	**Sn**	**07 52 12.1**	**-0.8**
PFVI	comp=N,8.8nm,0.4s			A	A	07 52 19.8	
PFVI	**Vila Bisbo**	**0.97**	**289**	⇓P	**Pn**	**07 52 00.3**	**+0.1**
PFVI	comp=N,3.2nm,0.0s,SNR=18			S	**Sn**	**07 52 11.7**	**-1.1**
PFVI	**Vila Bisbo**	**0.97**	**289**	P	**Pn**	**07 52 00.3**	**+0.1**
PFVI	comp=N,3.2nm,0.0s,SNR=18			*e*S	**Sn**	**07 52 12.1**	**-0.8**
PTEO	**Sao Teotonio**	**1.11**	**311**	*e*P	**Pn**	**07 52 02.6**	**+0.6**
PTEO				*e*S	**Sn**	**07 52 16.1**	**-0.1**
PTEO	comp=N,6.1nm,0.4s			A	A	07 52 16.4	
PTEO	**Sao Teotonio**	**1.11**	**311**	P	**Pn**	**07 52 02.6**	**+0.6**
PTEO	comp=N,3.1nm,0.4s			S	**Sn**	**07 52 16.1**	**-0.1**
PTEO	**Sao Teotonio**	**1.11**	**311**	P	**Pn**	**07 52 02.6**	**+0.6**
PTEO	comp=N,3.1nm,0.4s			S	**Sn**	**07 52 16.1**	**-0.1**
MESJ	**Messejana**	**1.11**	**337**	*e*P	**Pn**	**07 52 02.8**	**+0.7**
MESJ				*e*S	**Sn**	**07 52 15.9**	**-0.3**
MESJ	comp=N,28nm,0.0s			AML	AML	07 52 18.8	
MESJ	**Messejana**	**1.11**	**337**	*e*P	**Pn**	**07 52 02.8**	**+0.7**
MESJ				*e*S	**Sn**	**07 52 16.1**	**-0.1**
MESJ	comp=N,11nm,0.2s			A	A	07 52 17.6	
MESJ	**Messejana**	**1.11**	**337**	P	**Pn**	**07 52 02.8**	**+0.7**
MESJ	comp=N,11nm,0.2s			S	**Sn**	**07 52 16.1**	**-0.1**
MESJ	**Messejana**	**1.11**	**337**	P	**Pn**	**07 52 02.8**	**+0.7**
MESJ	comp=N,11nm,0.2s			S	**Sn**	**07 52 16.1**	**-0.1**
PBEJ	**Beja**	**1.21**	**353**	*e*S	**Sn**	**07 52 18.8**	**0.0**
PBEJ	comp=N,13nm,0.2s			A	A	07 52 19.5	
PBEJ	**Beja**	**1.21**	**353**	S	**Sn**	**07 52 18.8**	**0.0**
PBEJ	**Beja**	**1.21**	**353**	S	**Sn**	**07 52 18.8**	**0.0**
EMIN	**Mina Concepcio**	**1.24**	**40**	⇑P	**Pn**	**07 52 04.4**	**+0.5**
EMIN	comp=N,1.0nm,0.0s,SNR=18			S	**Sn**	**07 52 19.2**	**-0.3**
EMIN	**Mina Concepcio**	**1.24**	**40**	P	**Pn**	**07 52 04.4**	**+0.5**
EMIN	comp=N,2.0nm,0.3s,SNR=6.7			S	**Sn**	**07 52 19.2**	**-0.3**
PNCL	**Nicolau / Gran**	**1.46**	**333**	*e*P	**Pn**	**07 52 07.4**	**+0.6**
PNCL				*e*S	**Sn**	**07 52 24.6**	**-0.1**
PNCL	comp=N,7.6nm,0.4s			A	A	07 52 36.0	
PNCL	**Nicolau / Gran**	**1.46**	**333**	*e*P	**Pn**	**07 52 07.4**	**+0.6**
PNCL				*e*S	**Sn**	**07 52 24.6**	**-0.1**
EBAD	**Badajoz**	**2.00**	**15**	P	**Pn**	**07 52 14.8**	**+0.5**
EBAD	comp=N,0.9nm,0.1s,SNR=7.9			S	**Sn**	**07 52 37.2**	**-1.0**
EBAD	**Badajoz**	**2.00**	**15**	P	**Pn**	**07 52 14.8**	**+0.5**
EBAD	comp=N,0.9nm,0.1s,SNR=7.9			S	**Sn**	**07 52 37.2**	**-1.0**
PESTR	**Estremoz**	**2.05**	**2**	*e*Pn	**Pn**	**07 52 15.3**	**+0.4**
PESTR				*e*Sn	**Sn**	**07 52 38.4**	**-0.8**
PESTR	comp=N,4.1nm,0.5s			A	A	07 52 53.0	
PESTR	**Estremoz**	**2.05**	**2**	*e*Pn	**Pn**	**07 52 15.3**	**+0.4**
PESTR				*e*Sn	**Sn**	**07 52 38.4**	**-0.8**
ECAB	**El Cabril**	**2.19**	**54**	P	**Pn**	**07 52 17.5**	**+0.5**
ECAB	comp=N,0.5nm,0.1s,SNR=7.6			S	**Sn**	**07 52 41.3**	**-1.6**
ECAB	**El Cabril**	**2.19**	**54**	P	**Pn**	**07 52 17.5**	**+0.5**
ECAB	comp=N,0.5nm,0.1s,SNR=7.6			S	**Sn**	**07 52 41.3**	**-1.6**
PMTG	**Montargil**	**2.29**	**349**	*e*Pn	**Pn**	**07 52 19.4**	**+1.2**
PMTG				*e*Sn	**Sn**	**07 52 44.9**	**-0.2**
PMTG	comp=N,4.3nm,0.8s			A	A	07 52 58.7	
PMTG	**Montargil**	**2.29**	**349**	*e*Pn	**Pn**	**07 52 19.4**	**+1.2**
PMTG				*e*Sn	**Sn**	**07 52 44.9**	**-0.2**
ALMR	**Almeirim**	**2.44**	**343**	*e*Pn	**Pn**	**07 52 21.4**	**+1.1**
ALMR				*e*Sn	**Sn**	**07 52 48.1**	**-0.8**
ALMR	**Almeirim**	**2.44**	**343**	P	**Pn**	**07 52 21.4**	**+1.1**
ALMR				S	**Sn**	**07 52 48.1**	**-0.8**
ALMR	**Almeirim**	**2.44**	**343**	P	**Pn**	**07 52 21.4**	**+1.1**
ALMR				S	**Sn**	**07 52 48.1**	**-0.8**
PMAFR	**Mafra**	**2.48**	**330**	*e*Pn	**Pn**	**07 52 22.3**	**+1.4**
PMAFR				*e*Sn	**Sn**	**07 52 48.9**	**-1.1**
PMAFR	comp=N,14nm,0.6s			A	A	07 52 52.0	
PMAFR	**Mafra**	**2.48**	**330**	*e*Pn	**Pn**	**07 52 22.3**	**+1.4**
PMAFR				*e*Sn	**Sn**	**07 52 48.9**	**-1.1**
PMRV	**Marv??o**	**2.62**	**5**	*e*Pn	**Pn**	**07 52 23.5**	**+0.8**
PMRV				*e*Sn	**Sn**	**07 52 53.4**	**+0.2**
PMRV	comp=N,3.1nm,0.2s			A	A	07 52 54.4	
PMRV	**Marv??o**	**2.62**	**5**	P	**Pn**	**07 52 23.5**	**+0.8**
PMRV				S	**Sn**	**07 52 53.4**	**+0.2**
PMRV	**Marv??o**	**2.62**	**5**	P	**Pn**	**07 52 23.5**	**+0.8**
PMRV	comp=N,3.1nm,0.2s			S	**Sn**	**07 52 53.4**	**+0.2**
EADA	**Adamuz**	**2.81**	**60**	P	**Pn**	**07 52 26.4**	**+1.0**
EADA	comp=N,1.3nm,0.1s,SNR=18			S	**Sn**	**07 52 56.4**	**-1.7**
EADA	**Adamuz**	**2.81**	**60**	P	**Pn**	**07 52 26.4**	**+1.0**
EADA	comp=N,1.3nm,0.1s,SNR=18			S	**Sn**	**07 52 56.4**	**-1.7**
PCBR	**Castelo Branco**	**3.02**	**3**	*e*Pn	**Pn**	**07 52 29.3**	**+1.0**
PCBR				*e*Sn	**Sn**	**07 53 02.5**	**-0.7**
PCBR	**Castelo Branco**	**3.02**	**3**	P	**Pn**	**07 52 29.3**	**+1.0**
PCBR				S	**Sn**	**07 53 02.5**	**-0.7**
PCBR	**Castelo Branco**	**3.02**	**3**	P	**Pn**	**07 52 29.3**	**+1.0**
PCBR				S	**Sn**	**07 53 02.5**	**-0.7**
ELGU	**Los Guajares,**	**3.25**	**88**	S	**Sn**	**07 53 10.9**	**+1.9**
ELGU	**Los Guajares,**	**3.25**	**88**	S	**Sn**	**07 53 10.9**	**+1.9**
PAB	**San Pablo**	**3.78**	**43**	P	**Pn**	**07 52 39.5**	**+0.7**
PAB	comp=N,0.4nm,0.1s,SNR=7.9			S	**Sn**	**07 53 18.7**	**-3.3**
PAB	**San Pablo**	**3.78**	**43**	P	**Pn**	**07 52 39.5**	**+0.7**
EQES	**Quesada**	**3.80**	**74**	S	**Sn**	**07 53 21.4**	**-1.2**
EQES	**Quesada**	**3.80**	**74**	S	**Sn**	**07 53 21.4**	**-1.2**
PVIS	**Viseu**	**3.90**	**358**	*e*Sn	**Sn**	**07 53 24.5**	**-0.3**
PVIS	**Viseu**	**3.90**	**358**	S	**Sn**	**07 53 24.5**	**-0.3**
PVIS	**Viseu**	**3.90**	**358**	S	**Sn**	**07 53 24.5**	**-0.3**
ESDC	**Sonseca Array**	**4.08**	**45**	P	**Pn**	**07 52 43.6**	**+0.7**
ESDC	**Sonseca Array**	**4.08**	**45**	P	**Pn**	**07 52 43.6**	**+0.7**
SESP	**Santiago Espad**	**4.29**	**71**	S	**Sn**	**07 53 32.5**	**-2.1**
MVO	**Moncorvo**	**4.37**	**6**	*e*Sn	**Sn**	**07 53 34.3**	**-2.2**
MVO	**Moncorvo**	**4.37**	**6**	*e*Sn	**Sn**	**07 53 34.3**	**-2.2**
POLO	**Lamas de Olo**	**4.55**	**359**	*e*Sn	**Sn**	**07 53 39.8**	**-1.2**
POLO	**Lamas de Olo**	**4.55**	**359**	*e*Sn	**Sn**	**07 53 39.8**	**-1.2**
ELOB	**Lobios**	**5.05**	**357**	S	**Sn**	**07 53 50.1**	**-3.2**
PGAV	**Gavieira, Arco**	**5.16**	**355**	*e*Sn	**Sn**	**07 53 55.8**	**-0.2**
PGAV	**Gavieira, Arco**	**5.16**	**355**	*e*Sn	**Sn**	**07 53 55.8**	**-0.2**

*ISCJB **26** 08:04:10.4±0.3, 31°.19S±0°.03×179°.70W±0°.07, h350km, mb4.0/20, Error ellipse: s-maj=8.4km s-min=3.2km az=14.6*
*NEIC **26** 08:04:10.8±0.7, 31°.16S×179°.71W, h331km±7km, mb4.3/15, Error ellipse: s-maj=14.4km s-min=8.5km az=112.0*
*WEL **26** 08:04:12.6±0.8, 32°.5±6°.×17°.9W±1°.6, h319km±9km*
*IDC **26** 08:04:12.0±1.1, 30°.90S×179°.56W, h351km±11km, mb3.7/11, mb1 3.8/13, mb1mx3.6/44, mbtmp4.5/13, Error ellipse: s-maj=12.7km s-min=10.9km az=93.0*
ISC 26 08:04:13.0±0.4, 31°.35S±0°.03×179°.76W±0°.08, h350km, n153, σ2s31/166, mb4.0/20, 3D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.62**	**38**	P	**Pn**	**08 05 04.6**	**-4.6**
GLKZ				S	**S**	**08 05 45.5**	**-8.7**
RAO	**Raoul Island**	**2.63**	**38**	P	**Pn**	**08 05 04.5**	**-4.7**
RAO	889nm,0.3s,baz=90,slow=20,SNR=37			S	S	08 05 42.5	-12
RAO	**Raoul Island**	**2.63**	**38**	*e*Pn	**Pn**	**08 05 04.8**	**-4.4**
RAO				*e*S	**S**	**08 05 50.7**	**-3.7**
RIZ	**Raoul Island**	**2.63**	**38**	P	**Pn**	**08 05 04.7**	**-4.5**
RIZ				S	**S**	**08 05 46.1**	**-8.3**
GRZ	**Great Barrier**	**6.30**	**218**	P	Pn	08 05 52.5	+5.4
MXZ	**Matakaoa Point**	**6.39**	**194**	*e*Pn	**Pn**	**08 05 49.2**	**+1.1**
MXZ				*e*S	**S**	**08 07 05.7**	**+0.2**
MXZ	**Matakaoa Point**	**6.39**	**194**	P	**Pn**	**08 05 49.6**	**+1.4**
MXZ				S	**S**	**08 07 06.0**	**+0.5**
WMGZ	**Waiomatatini S**	**6.62**	**193**	P	**Pn**	**08 05 53.1**	**+2.3**
WMGZ				S	**S**	**08 07 12.1**	**+1.8**
HAZ	**Te Kaha**	**6.70**	**197**	P	**Pn**	**08 05 52.8**	**+1.2**
HAZ				S	**S**	**08 07 13.7**	**+1.8**
WCZ	**Waipu Caves**	**6.71**	**225**	P	Pn	08 05 57.8	+5.9
OUZ	**Omahuta**	**6.76**	**233**	*e*Pn	Pn	08 05 58.0	+5.5
PUZ	**Puketiti**	**6.90**	**193**	P	**Pn**	**08 05 53.5**	**-0.5**
TWGZ	**Tauwhareparae**	**7.05**	**195**	P	**Pn**	**08 05 57.3**	**+1.4**
TWGZ				S	**S**	**08 07 21.6**	**+2.0**
ETAZ	**East Tamaki Re**	**7.11**	**217**	P	Pn	08 06 02.6	+6.1
MKAZ	**Moumakai**	**7.11**	**215**	P	Pn	08 06 01.9	+5.4
RVAZ	**Riverhead Bore**	**7.16**	**219**	P	Pn	08 06 03.4	+6.3
WTAZ	**Waiatarua**	**7.28**	**219**	P	Pn	08 06 04.9	+6.4
CNGZ	**Carnagh Statio**	**7.30**	**193**	P	**Pn**	**08 05 59.1**	**+0.3**
MWZ	**Matawai**	**7.31**	**197**	P	**Pn**	**08 05 58.7**	**-0.2**
MWZ				S	**S**	**08 07 24.9**	**-0.2**
TKGZ	**Te Karaka**	**7.33**	**195**	P	**Pn**	**08 05 58.5**	**-0.6**
TKGZ				S	**S**	**08 07 26.7**	**+1.1**
AWAZ	**Awhitu Peninsu**	**7.34**	**218**	P	Pn	08 06 05.0	+5.8
URZ	**Urewera**	**7.35**	**200**	P	**Pn**	**08 05 59.1**	**-0.2**
URZ	5.5nm,0.3s,baz=267,slow=3.6,SNR=69			S	**S**	**08 07 27.9**	**+2.0**
URZ	**Urewera**	**7.35**	**200**	*e*Pn	**Pn**	**08 05 59.7**	**+0.4**
URZ	32nm,0.3s,baz=60,slow=22,SNR=25			*e*S	**S**	**08 07 29.5**	**+3.6**
URZ	**Urewera**	**7.35**	**200**	P	**Pn**	**08 05 58.5**	**-0.8**
URZ				S	**S**	**08 07 28.0**	**+2.0**
TOZ	**Tahuroa Road**	**7.46**	**210**	P	**Pn**	**08 06 04.3**	**+3.6**
RAGZ	**Rawiri**	**7.49**	**197**	P	**Pn**	**08 06 02.2**	**+1.1**
RAGZ				S	**S**	**08 07 30.8**	**+1.8**
RIGZ	**Rimuhau**	**7.61**	**195**	P	**Pn**	**08 06 03.4**	**+1.0**
RIGZ				S	**S**	**08 07 32.3**	**+0.7**
MUGZ	**Murupara**	**7.65**	**201**	P	**Pn**	**08 06 03.7**	**+0.8**
MUGZ				S	**S**	**08 07 33.0**	**+0.5**
PRRZ	**Plateau Road**	**7.79**	**203**	P	**Pn**	**08 06 07.9**	**+3.3**
RAHZ	**Arahi**	**7.97**	**198**	P	**S**	**08 07 41.5**	**+2.0**
WHHZ	**Waihua**	**8.09**	**197**	P	**S**	**08 07 42.6**	**+0.8**
MRHZ	**Matea Rd**	**8.09**	**202**	P	Pn	08 06 06.1	-2.1
MRHZ				S	**S**	**08 07 42.0**	**0.0**
BKZ	**Black Stump Fm**	**8.37**	**200**	*e*Pn	**Pn**	**08 06 10.1**	**-1.3**
BKZ				*e*S	**S**	**08 07 48.8**	**+0.6**
BKZ	**Black Stump Fm**	**8.37**	**200**	P	**S**	**08 07 50.8**	**+2.6**
HIZ	**Hauiti**	**8.40**	**210**	*e*Pn	**Pn**	**08 06 15.7**	**+4.0**
MCHZ	**McNeill Hill**	**8.57**	**199**	P	**S**	**08 07 55.0**	**+2.6**
KRVZ	**Karewarewa**	**8.59**	**205**	P	**Pn**	**08 06 17.6**	**+3.5**
WTVZ	**West Tongariro**	**8.62**	**205**	P	**Pn**	**08 06 16.4**	**+1.9**
KWHZ	**Kaweka Forest**	**8.63**	**200**	P	**S**	**08 07 56.7**	**+2.8**
TWVZ	**Taurewa**	**8.64**	**206**	P	Pn	08 06 11.9	-2.8
NGZ	**Ngauruhoe**	**8.67**	**205**	P	**Pn**	**08 06 17.5**	**+2.4**
CKHZ	**Cape Kidnapper**	**8.68**	**196**	P	**Pn**	**08 06 14.9**	**0.0**
WHVZ	**Whangaehu Hut**	**8.77**	**204**	P	**S**	**08 08 01.6**	**+4.3**
BHHZ	**Black Hill Sta**	**8.80**	**202**	P	**S**	**08 07 58.1**	**+0.6**
MOVZ	**Moawhango**	**8.83**	**203**	P	**Pn**	**08 06 17.6**	**+0.7**
MOVZ	**Moawhango**	**8.83**	**203**	P	**S**	**08 07 57.9**	**-0.3**
KRHZ	**Kereru**	**8.85**	**200**	P	**Pn**	**08 06 17.0**	**-0.1**
KRHZ	**Kereru**	**8.85**	**200**	P	**S**	**08 07 57.7**	**-0.9**
KAHZ	**Kahuranaki**	**8.85**	**197**	P	**S**	**08 07 55.9**	**-2.7**
PKVZ	**Pokaka**	**8.87**	**205**	P	**Pn**	**08 06 18.8**	**+1.4**
VRZ	**Vera Road**	**8.95**	**209**	P	**Pn**	**08 06 21.4**	**+3.1**
PXZ	**Pawanui**	**9.08**	**197**	P	**Pn**	**08 06 19.2**	**-0.6**
PXZ	**Pawanui**	**9.08**	**197**	P	**S**	**08 07 59.4**	**-4.1**
PNHZ	**Pukenui**	**9.15**	**200**	P	Pn	08 06 18.6	-2.1
PNHZ	**Pukenui**	**9.15**	**200**	P	**S**	**08 08 04.2**	**-0.9**
WPHZ	**Waipukurau**	**9.22**	**198**	P	**Pn**	**08 06 22.7**	**+1.2**
WPHZ	**Waipukurau**	**9.22**	**198**	P	**S**	**08 08 04.4**	**-2.3**
TSZ	**Takapari Road**	**9.35**	**201**	P	**Pn**	**08 06 23.1**	**0.0**
TSZ	**Takapari Road**	**9.35**	**201**	P	**S**	**08 08 06.4**	**-3.2**
PRHZ	**Porangahau**	**9.36**	**197**	P	**Pn**	**08 06 22.9**	**-0.3**
PRHZ	**Porangahau**	**9.36**	**197**	P	S	08 08 04.2	-5.5
WAZ	**Wanganui**	**9.41**	**206**	P	**Pn**	**08 06 24.5**	**+0.7**
WAZ	**Wanganui**	**9.41**	**206**	P	**S**	**08 08 14.0**	**+3.2**
DVHZ	**Dannevirke**	**9.52**	**199**	P	**Pn**	**08 06 25.3**	**+0.3**
DVHZ	**Dannevirke**	**9.52**	**199**	P	**S**	**08 08 09.2**	**-4.0**
ANWZ	**Angora Road**	**9.58**	**197**	P	**Pn**	**08 06 25.6**	**-0.2**
ANWZ	**Angora Road**	**9.58**	**197**	P	**S**	**08 08 11.7**	**-2.9**
POWZ	**Post Office Ro**	**9.72**	**201**	P	**Pn**	**08 06 27.5**	**+0.1**
POWZ	**Post Office Ro**	**9.72**	**201**	P	**S**	**08 08 15.4**	**-2.2**
PRWZ	**Pori Road**	**9.81**	**199**	P	**Pn**	**08 06 28.6**	**+0.1**
PRWZ	**Pori Road**	**9.81**	**199**	P	S	08 08 13.3	-6.3
BFZ	**Birch Farm**	**9.85**	**198**	*e*Pn	**Pn**	**08 06 27.3**	**-1.7**
BFZ				*e*S	**S**	**08 08 20.9**	**+0.4**
BFZ	**Birch Farm**	**9.85**	**198**	P	**Pn**	**08 06 27.5**	**-1.5**
BFZ	**Birch Farm**	**9.85**	**198**	P	**S**	**08 08 17.7**	**-2.8**
MRZ	**Mangatainoka R**	**10.02**	**201**	P	Pn	08 06 28.4	-2.6
MRZ	**Mangatainoka R**	**10.02**	**201**	P	S	08 08 17.3	-7.0
CPWZ	**Castlepoint**	**10.08**	**198**	P	**Pn**	**08 06 32.5**	**+0.8**
HOWZ	**Holdsworth Sta**	**10.26**	**201**	P	Pn	08 06 31.3	-2.6
OGWZ	**Otaki Gorge**	**10.29**	**202**	P	**Pn**	**08 06 33.9**	**-0.4**
TMWZ	**Te Maipa**	**10.34**	**199**	P	**Pn**	**08 06 34.5**	**-0.4**
KIW	**Kapiti Island**	**10.42**	**203**	P	**Pn**	**08 06 36.3**	**+0.6**
MTW	**Mount Morrison**	**10.50**	**200**	P	**Pn**	**08 06 36.1**	**-0.7**
CAW	**Cannon Point**	**10.59**	**202**	P	**Pn**	**08 06 37.2**	**-0.5**
TRWZ	**Traveller**	**10.67**	**199**	P	**Pn**	**08 06 39.0**	**+0.2**
DUWZ	**D'Urville Isla**	**10.72**	**207**	P	Pn	08 06 37.1	-2.3
PAWZ	**Paruwai Farm**	**10.73**	**200**	P	**Pn**	**08 06 39.5**	**0.0**
MSWZ	**Moikau Station**	**10.81**	**200**	P	**Pn**	**08 06 39.4**	**-1.1**
SNZO	**South Karori**	**10.89**	**203**	*e*Pn	**Pn**	**08 06 40.3**	**-1.0**
SNZO				*e*S	**S**	**08 08 39.2**	**-4.1**
BHW	**Baring Head**	**10.92**	**202**	P	**Pn**	**08 06 40.8**	**-0.9**
TCW	**Tory Channel**	**10.95**	**204**	P	**Pn**	**08 06 41.2**	**-0.8**
PLWZ	**Palliser**	**10.95**	**200**	P	**Pn**	**08 06 41.1**	**-1.1**
TUWZ	**Tuamarina**	**11.26**	**205**	P	**Pn**	**08 06 44.9**	**-0.8**
NNZ	**Nelson**	**11.29**	**207**	P	Pn	08 06 44.2	-1.9
QRZ	**Quartz Range**	**11.32**	**211**	P	**Pn**	**08 06 46.6**	**+0.1**
THZ	**Tophouse**	**11.94**	**207**	*e*P	P	08 06 51.3	-2.5
THZ				*e*S	**S**	**08 09 03.0**	**-3.6**
KHZ	**Kahutara**	**12.27**	**204**	*e*P	**P**	**08 06 56.6**	**-0.8**
KHZ				*e*S	**S**	**08 09 13.4**	**0.0**
LTZ	**Lake Taylor**	**13.05**	**207**	*e*P	P	08 07 03.9	-2.2
OXZ	**Oxford**	**13.60**	**206**	*e*P	**P**	**08 07 12.2**	**+0.1**
OXZ				*e*S	**S**	**08 09 38.3**	**-2.3**
MQZ	**McQueen's Vall**	**13.71**	**204**	*e*P	**P**	**08 07 13.3**	**+0.1**
MQZ				*e*S	**S**	**08 09 39.6**	**-3.0**
RPZ	**Rata Peaks**	**14.31**	**208**	P	**P**	**08 07 20.6**	**+0.7**
RPZ	1.0nm,0.3s,baz=56,slow=3.6,SNR=5.1			S	**S**	**08 09 51.3**	**-3.7**
RPZ	**Rata Peaks**	**14.31**	**208**	*e*P	**P**	**08 07 21.5**	**+1.5**
DZM	**Mont Dzumac**	**15.39**	**304**	P	**P**	**08 07 30.3**	**-1.8**
ODZ	**Otahua Downs**	**15.59**	**206**	*e*P	**P**	**08 07 35.2**	**+1.3**
WKZ	**Wanaka**	**16.07**	**210**	*e*P	**P**	**08 07 40.6**	**+1.6**
AFI	**Afiamalu**	**18.85**	**25**	P	**P**	**08 08 02.9**	**-6.2**
AFI	1.1nm,0.3s,baz=163,slow=19,SNR=2.4			S	**S**	**08 11 15.6**	**-9.3**
AFI	**Afiamalu**	**18.85**	**25**	*e*P	**P**	**

QSPA	South Pole Qui	58.76	180	eP	P	08 13 37.8 +2.8
	29nm,0.8s					
MAW	Mawson	70.88	201	P	P	08 14 53.1 +0.8
	1.3nm,0.5s,baz=146,slow=8.7,SNR=6.7					
MAW	Mawson	70.88	201	eP	P	08 14 53.3 +1.1
	0.6nm,0.7s					
SYO	Syowa Base	75.84	194	⇓iP	P	08 15 19.4 -1.5
SYO	Syowa Base	75.84	194	⇓ePcP	PcP	08 15 30.0 -1.7
SNAA	Sanae	77.24	179	P	P	08 15 29.6 +0.9
SNAA	Sanae	77.24	179	P	P	08 15 29.6 +0.9
	3.3nm,0.4s,baz=194,slow=6.6,SNR=39					
SNAA	Sanae	77.24	179	eP	P	08 15 29.7 +0.9
	7.3nm,0.8s					
VNA3	Neumayer Olymp	77.45	177	P	P	08 15 30.7 +0.8
VNA1	Neumayer--Stat	78.10	177	P	P	08 15 34.7 +1.3
MJAR	Matsushiro Arr	78.18	327	P	P	08 15 32.0 -2.3
	1.0nm,0.5s,baz=143,slow=5.7,SNR=3.4					
PLCA	Paso Flores	82.96	134	P	P	08 15 59.9 +0.3
	4.4nm,1.0s,baz=255,slow=4.2,SNR=4.5					
R11A	Troy Canyon, C	91.54	45	eP	P	08 16 39.9 -0.8
	4.3nm,0.9s					
LZH	Lanzhou	98.08	307	⇓P	Pdif	08 17 10.8 +0.3
LZH				pP	pP	08 18 31.5 -1.4
LZH				sP	sP	08 19 06.0 -3.0
LZH				pmax	pmax	
	comp=Z,15nm,1.4s					
LZH				pmax	pmax	
	comp=Z,43nm,6.5s					
KURBB	Kurchatov Arra	120.64	314	PKP	PKPdf	08 22 20.7 -2.3
	comp=Z,0.5nm,0.6s,baz=115,slow=1.8,SNR=5.8					
BVAR	Borovoye Array	126.02	315	PKP	PKPdf	08 22 31.5 -1.9
	comp=Z,0.4nm,0.3s,baz=92,slow=4.3,SNR=3.1					
AKTO	Aktyubinsk	133.61	312	PKP	PKPdf	08 22 44.9 -3.0
	comp=Z,1.1nm,0.7s,baz=135,slow=2.9,SNR=5.2					
FIA1	FINESS Array S	145.49	338	ePKPdf	PKPdf	08 23 07.3 -1.6
FIA1				ePKPdf	PKPbc	08 23 07.9 -1.9
FINES	FINESS Array B	145.49	338	PKPbc	PKPdf	08 23 07.1 -1.9
	comp=Z,2.2nm,0.4s,baz=58,slow=4.4,SNR=24					
NC303	NORSAR Array S	149.24	349	ePKPbc	PKPdf	08 23 17.8 +2.7
HFS	Hagfors	149.85	347	PKPbc	PKPdf	08 23 18.7 +2.6
	comp=Z,1.2nm,0.6s,baz=153,slow=1.3,SNR=6.8					
MMAI	Mount Meron Ar	150.27	283	PKPbc	PKPbc	08 23 22.5 -0.9
	comp=Z,2.9nm,0.3s,baz=86,slow=5.9,SNR=7.1					
ILGA	Ilgaz	151.45	299	ePKPbc	PKPbc	08 23 25.3 -0.7
BR131	Keskin Array S	151.69	296	ePKPbc	PKPbc	08 23 24.8 -1.7
BRTR	Keskin Array B	151.69	296	PKPbc	PKPbc	08 23 24.7 -1.8
	comp=Z,1.5nm,0.5s,baz=141,slow=4.1,SNR=7.8					
BRTR				PKPab	PKPab	08 23 35.5 -1.4
	comp=Z,0.5nm,0.4s,baz=116,slow=3.4,SNR=3.2					
DBIC	Dimbokro	154.98	168	PKPab	PKPab	08 23 51.1 0.0
	comp=Z,1.8nm,0.5s,baz=200,slow=2.8,SNR=4.3					
TOA0	Torodi Ar. Sit	161.83	185	ePKPab	PKPab	08 24 21.2 +0.5
TORD	Torodi Ar. Bea	161.83	185	PKP	PKPdf	08 23 31.8 -1.4
	comp=Z,1.3nm,1.0s,baz=349,slow=1.5,SNR=4.4					
TORD				PKPab	PKPab	08 24 20.8 +0.1
	comp=Z,4.7nm,0.6s,baz=171,slow=4.2,SNR=38					
KOWA	Kowa	162.77	166	PKPab	PKPab	08 24 25.1 +0.2
	comp=Z,2.3nm,0.5s,baz=209,slow=3.1,SNR=5.1					
KOWA	Kowa	162.77	166	ePKPab	PKPab	08 24 25.8 +1.0

*NEIC **26** 08:16:36.9±0.0, 18°.33N×68°.98W, h135km±2km, MD3.5(RSPR), After RSPR.*

RSPR 26 08:16:36.9, 18°.33N×68°.98W, h135km±2km, MD3.5/8, 9C-8D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DR12	Loma Pena Alto	0.59	320	⇓eP	Pn	08 16 57.0	-0.1
DR12				eS	Sn	08 17 11.9	-0.6
DR12	Loma Pena Alto	0.59	320	⇑eP	Pn	08 16 57.0	-0.1
IMPR	Mona Island, P	1.03	104	⇑eP	Pn	08 17 00.7	+0.3
IMPR	Mona Island, P	1.03	104	eS	Sn	08 17 18.6	+0.3
IDE	Isla Desecheo	1.43	88	eS	Sn	08 17 25.4	-0.3
IDE	Isla Desecheo	1.43	88	⇑eP	Pn	08 17 04.5	-0.1
IDE	Isla Desecheo	1.43	88	⇓eP	Pn	08 17 04.5	-0.1
IDE				eS	Sn	08 17 25.4	-0.3
AGPR	Aguadilla, PR	1.78	85	eS	Sn	08 17 33.6	+1.0
AGPR	Aguadilla, PR	1.78	85	⇓eP	Pn	08 17 09.0	+0.5
AGPR	Aguadilla, PR	1.78	85	⇑eP	Pn	08 17 09.0	+0.5
AGPR				eS	Sn	08 17 33.6	+1.0
LSP	Las Mesas	1.81	95	⇑eP	Pn	08 17 08.5	-0.4
LSP	Las Mesas	1.81	95	⇓eP	Pn	08 17 08.5	-0.4
CRPR	Cabo Rojo, PR	1.81	100	⇓eP	Pn	08 17 08.1	-0.7
CRPR	Cabo Rojo, PR	1.81	100	⇓eP	Pn	08 17 08.1	-0.7
AOPR	Arecibo Observ	2.12	89	⇓eP	Pn	08 17 12.7	+0.2
AOPR	Arecibo Observ	2.12	89	eS	Sn	08 17 39.7	-0.2
AOPR	Arecibo Observ	2.12	89	⇓eP	Pn	08 17 12.7	+0.2
AOPR				eS	Sn	08 17 39.7	-0.2
OBIP	Obispado Ponce	2.28	97	⇑eP	Pn	08 17 14.1	-0.4
OBIP	Obispado Ponce	2.28	97	eS	Sn	08 17 44.1	+0.8
OBIP	Obispado Ponce	2.28	97	⇓eP	Pn	08 17 14.1	-0.4
OBIP				eS	Sn	08 17 44.1	+0.8
SDDR	Presa de Saban	2.28	287	ePn	Sn	08 17 16.7	+2.1
SDDR				eSn	Sn	08 17 49.5	+5.9
CELP	Cerrillos	2.30	96	⇑eP	Pn	08 17 14.5	-0.2
CELP				eS	Sn	08 17 43.9	+0.1
CELP	Cerrillos	2.30	96	⇓eP	Pn	08 17 14.5	-0.2

IDC 26 08:19:39.6±3.3, 32°.62S×178°.32W, h0km, mb3.9/2, mb1 4.1/3, mb1mx3.6/47, mbtmp3.9/3, ML3.3/1, Error ellipse: s-maj=73.0km s-min=37.8km az=114.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	6.75	212	Pn	Pn	08 21 19.8	-0.1
	0.5nm,0.3s,baz=15,slow=16,SNR=3.2						
URZ				Sn	Sn	08 22 36.8	-0.7
	2.4nm,0.3s,baz=29,slow=24,SNR=9.8						
ASAR	Alice Springs	42.76	269	P	P	08 27 39.2	+0.2
	1.0nm,0.7s,baz=110,slow=7.9,SNR=12						
WRA	Warramunga Arr	43.95	275	P	P	08 27 48.5	-0.1
	0.7nm,0.3s,baz=114,slow=8.2,SNR=8.3						
FINES	FINESS Array B	147.11	339	PKPbc	PKPdf	08 39 22.7	+1.1
	4.8nm,1.1s,baz=57,slow=5.1,SNR=3.5						

UCR 26 08:19:43.4±1.9, 11°.25N×85°.57W, h152km±9km, MD4.2, 20C-2D, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRZ1	La Cruz	0.19	201	⇑iP	Pn	08 20 04.5	+0.6
CRZ1				eS	Sn	08 20 21.9	+2.3
CONN	Concepcion	0.32	349	eP	Pn	08 20 04.7	+0.4
BUAI	Buenos Aires	0.44	148	⇑iP	Pn	08 20 05.9	+1.1
GBS3	Finca Las Im¨¡	0.48	167	⇑iP	Pn	08 20 05.3	+0.4
LAPC	Finca la Perla	0.50	165	⇑iP	Pn	08 20 05.3	+0.3
GPS1	Guardaparques	0.52	156	⇑eP	Pn	08 20 06.0	+0.7
GPS3	Bodega del ICE	0.53	158	⇑eP	Pn	08 20 05.8	+0.5
NY14	Universidad de	0.60	177	eP	Pn	08 20 06.2	+0.7
MESS	Mesas	0.62	144	⇑iP	Pn	08 20 06.5	+0.8
MESS				⇑iP		08 20 06.6	
LIM1	Limonal	0.63	151	⇑iP	Pn	08 20 06.5	+0.7
GUAB	Guayabo de Bag	0.63	149	eP	Pn	08 20 06.8	+0.9
HORNC	Hornillas	0.66	145	⇑eP	Pn	08 20 06.9	+0.9
COLC	Colonia	0.68	149	⇑eP	Pn	08 20 06.7	+0.6
PTEN	Parque Tenorio	0.78	133	⇑iP	Pn	08 20 07.9	+1.1
ACAL	Aguas Claras	0.81	140	⇑eP	Pn	08 20 07.8	+0.9
AMAS	Alto Masis	0.85	139	⇑iP	Pn	08 20 08.0	+0.7
VCR	Vista de Mar	1.12	183	⇑iP	Pn	08 20 09.8	+0.1
VCR				eS	Sn	08 20 30.4	+0.8
JTS	JuntasAbangare	1.13	148	eP	Pn	08 20 09.8	+0.2
JTS				eS	Sn	08 20 30.2	+0.7
CEDE	Laguna Cede¨–o	1.14	132	⇑iP	Pn	08 20 10.8	+1.1
CASO	Castillo	1.15	135	⇑iP	Pn	08 20 10.7	+0.9
FORC	Fortuna	1.18	132	⇑iP	Pn	08 20 11.0	+1.0
BOAB	BOACO BROADBAN	1.19	355	eP	Pn	08 20 10.3	+0.2
BOAB				eS	Sn	08 20 31.6	+1.0
APYN	Apoyeque	1.24	322	eP	Pn	08 20 10.7	+0.1
COPN	Copaltepe	1.36	313	eP	Pn	08 20 11.1	-0.6
MOMN	Momotombo	1.49	320	eP	Pn	08 20 12.7	-0.4
ESPN	Las Esperanzas	1.55	53	⇓iP	Pn	08 20 14.0	+0.3
ESPN				eS	Sn	08 20 37.9	+1.0
SRA1	San Ram¨‡n	1.58	137	eP	Pn	08 20 14.0	-0.1
SRA1				eS	Sn	08 20 37.9	+0.3
CGA2	Cerro Gallo 2	1.64	139	eP	Pn	08 20 15.3	+0.5
CGA2				eS	Sn	08 20 39.0	+0.2
CNGN	Cerro Negro	1.66	318	eP	Pn	08 20 15.2	+0.2
CNGN				eS	Sn	08 20 39.2	0.0
MATN	Matagalpa	1.70	348	eP	Pn	08 20 15.6	+0.1
MATN				eS	Sn	08 20 40.8	+0.7
HDC	Heredia	1.89	131	⇑iP	Pn	08 20 18.1	+0.5
HDC				eS	Sn	08 20 44.7	+0.9
SJS	Escuela Geolog	1.98	131	eP	Pn	08 20 20.4	+1.9
SJS				eS	Sn	08 20 46.0	+0.5
ESTN	Estel	2.00	337	eP	Pn	08 20 18.7	-0.1
LCR2	La Lucha 2	2.15	134	⇑eP	Pn	08 20 20.6	0.0
LCR2				eS	Sn	08 20 49.4	+0.2
URSC	Urasca	2.25	129	eP	Pn	08 20 21.5	-0.3
URSC				eS	Sn	08 20 53.9	+2.5
QCR1	Quepos	2.28	143	eP	Pn	08 20 22.3	+0.3
QCR1				eS	Sn	08 20 50.9	-0.7
RCON	San Juan de Ri	2.29	345	⇓iP	Pn	08 20 22.5	+0.2
BUS	Buena Vista	2.45	133	eP	Pn	08 20 24.6	+0.1
BUS				eS	Sn	08 20 56.5	+0.4
DRK0	Durika	3.02	131	eS	Sn	08 21 07.3	-1.0
EDPN	Palmar Norte	3.08	137	eP	Pn	08 20 32.6	+0.7

*IDC **26** 08:29:50.5±1.1, 53°.59N×165°.59W, h0km, mb4.0/12, mb1 4.2/14, mb1mx3.8/85, mbtmp4.0/14, ML3.4/2, MS3.2/16, Ms1 3.2/16, ms1mx2.9/75, Error ellipse: s-maj=26.7km s-min=17.0km az=17.0*

*NEIC **26** 08:29:54.0±0.0, 53°.42N×165°.25W, h26km, mb4.4/43, ML3.9(AEIC), After AEIC.*

ISC 26 08:29:51.2±1.8, 53°.45N±0°.07×165°.28W±0°.04, h1km±11km, n342, σ1§56/335, mb4.4/54, MS3.2/15, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKSA	Akutan Strait	0.73	340	P	Pn	08 30 08.3	-0.3
AHB	Akutan Harbor	0.74	335	P	Pn	08 30 08.8	0.0
AKA	Akutan	0.75	337	P	Pn	08 30 09.1	+0.2
AKA				S	Sn	08 30 19.8	-1.0
AKUT	Akutan	0.75	337	P	Pn	08 30 08.7	-0.1
AKUT				S	Sn	08 30 19.5	-1.3
AKMO	Akutan Morgan	0.78	326	P	Pn	08 30 09.1	-0.2
AKMO				S	Sn	08 30 20.6	-0.9
HSB	Akutan Spr's B	0.83	333	P	Pn	08 30 09.7	-0.3
UNV	Unalaska Valle	0.83	299	P	Pn	08 30 09.5	-0.6
UNV				S	Sn	08 30 20.6	-2.2
MNAT	Makushin Natee	0.94	298	P	Pn	08 30 11.8	+0.2
MTBL	Makushin Table	0.98	303	P	Pn	08 30 12.3	+0.1
MSW	Makushin Switc	1.01	298	P	Pn	08 30 12.6	+0.1
MGOD	Makushin Gods	1.01	291	P	Pn	08 30 12.5	-0.1
MCIR	Makushin Cirqu	1.08	298	P	Pn	08 30 13.9	+0.3
WESP	Westdahl Peak	1.09	17	P	Pn	08 30 14.2	+0.5
WESP				S	Sn	08 30 29.7	+0.1
WESE	West Dahl East	1.10	21	P	Pn	08 30 14.2	+0.3
SSLS	Shishaldin Sou	1.47	30	P	Pb	08 30 19.4	0.0
OKID	Okmok Mt. Idak	1.52	272	P	Pg	08 30 19.8	-0.5
ISLZ	Isanotski Laza	1.58	35	P	Pn	08 30 20.1	-0.2
OKTU	Okmok Mt. Tuli	1.66	269	P	Pb	08 30 21.5	-1.0
OKER	Okmok East Rim	1.66	271	P	Pg	08 30 22.0	-1.1
FALS	False Pass	1.79	37	P	Pn	08 30 23.5	+0.4
FALS				S	Sn	08 30 45.5	-0.9
OKAK	Okmok	1.84	275	P	Pb	08 30 24.0	-1.7
NIKH	Nikolski High	2.20	259	P	Pn	08 30 28.8	-0.1
NIKH				S	Sb	08 30 56.0	-3.6
SDPT	Sand Point	3.39	54	P	Pn	08 30 46.4	+1.3
VNWF	Veniaminof 8	4.27	48	P	Pn	08 30 58.6	+1.2
VNFG	Veniaminof 2	4.36	47	P	Pn	08 30 60.0	+1.4
SPIA	Saint Paul Isl	4.69	325	P	Pn	08 31 05.0	+1.9
CHGN	Chignik	4.88	51	ePn	Pn	08 31 07.5	+1.9
KOFP	Korovin Flat P	5.47	261	P	Pn	08 31 16.3	+2.4
ATKA	Atka Island	5.55	261	ePn	Pn	08 31 17.0	+2.2
KIWB	Kanaga Island	7.40	262	ePn	Pn	08 31 42.1	+1.9
OHAK	Old Harbor	7.81	56	ePn	Pn	08 31 46.7	+0.9
KDAK	Kodiak Island	8.39	54	Pn	Pn	08 31 53.5	-0.2
	0.9nm,0.3s,baz=208,slow=5.4,SNR=12						
KDAK				Sn	Sn	08 33 24.2	-4.8
	0.3nm,0.3s,baz=322,slow=19,SNR=2.0						
KDAK				LR	LR	08 35 13.1	
	comp=Z,96nm,18.8s,baz=123,slow=38						
KDAK	Kodiak Island	8.39	54	ePn	Pn	08 31 53.9	+0.1
KDAK				Sn	Sn	08 33 24.2	-4.8
SVW2	Sparrevohn	9.28	30	ePn	Pn	08 32 08.8	+2.8
AMKA	Amchitka	9.65	264	P	Pn	08 32 13.0	+1.9
RSO	Redoubt South	9.79	39	ePn	Pn	08 32 17.2	+4.0
CNPM	China Poot	9.85	46	ePn	Pn	08 32 15.2	+1.4
GAMB	Gambell	10.88	345	ePn	Pn	08 32 29.9	+2.1
ANM	Nome	11.15	360	ePn	Pn	08 32 35.5	+4.0
SUA	Susitna One	11.19	38	ePn	Pn	08 32 33.3	+1.1
SKT	Skwentna	11.25	35	ePn	Pn	08 32 36.2	+3.3
RC01	Rabbit Creek A	11.35	41	ePn	Pn	08 32 34.6	+0.4
PPLA	Purkeypile	11.70	31	ePn	Pn	08 32 42.7	+3.6
PMR	Palmer	11.88	40	ePn	Pn	08 32 46.8	+5.3
GHO	Glory Hole Cre	12.07	40	ePn	Pn	08 32 45.5	+1.4
CAST	Castle Rocks	12.12	29	ePn	Pn	08 32 47.0	+2.1
SML	Sawmill	12.31	40	ePn	Pn	08 32 49.0	+1.5
TRF	Thorofare Moun	12.69	32	ePn	Pn	08 32 56.2	+3.5
SCM	Sheep Creek Mo	12.72	42	ePn	Pn	08 32 53.2	+0.1
EYAK	Cordova Ski Ar	12.76	48	ePn	Pn	08 32 52.8	-0.7
BPAW	Bear Paw Mtn.	12.96	29	ePn	Pn	08 32 58.8	+2.6
DIV	Divide	13.01	46	ePn	Pn	08 32 56.8	-0.2
KLU	Klutina	13.12	44	ePn	Pn	08 32 57.3	-1.3
DHY	Denali Highway	13.43	37	ePn	Pn	08 33 01.4	-1.5
BMRM	Bremner River	13.45	48	ePn	Pn	08 33 06.9	+3.9
MLY	Manley	13.74	27	ePn	Pn	08 33 09.3	+2.4
HARP	HAARP	13.89	42	ePn	Pn	08 33 09.3	+0.2
PAX	Paxson	14.07	40	ePn	Pn	08 33 11.1	-0.5
WRH	Wood River Hil	14.10	32	ePn	Pn	08 33 12.0	+0.2
CCB	Clear Creek Bu	14.31	32	ePn	Pn	08 33 16.0	+1.3
MDM	Murphy Dome	14.40	30	ePn	Pn	08 33 18.4	+2.5
ILAR	Eielson Array	14.69	32	Pn	Pn	08 33 18.2	-1.6
	0.1nm,0.3s,baz=221,slow=12,SNR=3.1						
ILAR				LR	LR	08 39 29.5	
	comp=Z,129nm,19.0s,baz=224,slow=40						
MENT	Mentasta	14.74	41	ePn	Pn	08 33 21.6	+1.0
RIDG	Independ'e Rid	14.74	38	ePn	Pn	08 33 22.5	+1.8
SCRK	Sand Creek	15.19	38	ePn	Pn	08 33 28.2	+1.5
	12nm,1.2s						
YKU2	Yakutat	15.33	56	ePn	P	08 33 33.3	0.0
COLD	Coldfoot	15.63	22	ePn	P	08 33 34.2	-2.5
	4.0nm,0.9s						
EGAK	Eagle	16.66	38	ePn	P	08 33 48.5	+0.4
	6.3nm,0.8s						
TOLK	Toolik Lake Re	16.93	20	P	P	08 33 50.5	-0.6
	baz=214						
TOLK	Toolik Lake Re	16.93	20	ePn	P	08 33 50.6	-0.6
	5.7nm,0.8s						
DAWY	Dawson	16.98	41	ePn	P	08 33 51.2	-0.5
	14nm,1.0s						
DLBC	Dease Lake	20.20	62	P	Pn	08 34 28.7	-0.3
	1.8nm,0.7s,baz=252,slow=14,SNR=2.5						
INK	Inuvik	21.09	33	P	P	08 34 36.0	-0.5
	5.6nm,0.8s,baz=232,slow=9.6,SNR=5.6						
INK	Inuvik	21.09	33	eP	P	08 34 36.5	0.0
	8.4nm,0.6s						
PETK	Petropavlovsk-	21.99	284	P	P	08 34 44.7	-1.7
	0.9nm,0.5s,baz=82,slow=14,SNR=6.0						
PETK				LR	LR	08 44 14.3	
	comp=Z,27nm,18.6s,baz=67,slow=40						
PETK	Petropavlovsk-	21.99	284	eP	P	08 34 47.7	+1.3
YKA	Yellowknife Ar	27.65	51	P	P	08 35 40.4	+0.3
	0.7nm,0.7s,baz=274,slow=8.1,SNR=12						
G03D	McMinnville, O	28.23	90	P	P	08 35 46.3	+0.9
	baz=302						
I03D	Drain, OR	29.02	92	P	P	08 35 54.2	+1.9
	baz=305						
H04A	Detroit Lake	29.16	90	eP	P	08 35 55.5	+1.8
	9.7nm,0.8s						
I04A	Tendick Farm,	29.52	92	P	P	08 35 58.7	+1.7
	baz=304						
I05D	Terrebonne, OR	29.86	90	P	P	08 36 01.5	+1.6
	baz=304						
D08A	Wollman Farm,	29.88	83	eP	P	08 36 03.2	+3.2
	4.7nm,0.7s						
HUMO	Hull Mountain	29.88	94	eP	P	08 36 03.6	+3.5
	7.7nm,1.4s						
J04D	Umpqua Nationa	30.02	92	P	P	08 36 02.9	+1.3
	baz=305						
NEW	Newport	30.36	80	P	P	08 36 04.8	+0.5
	baz=298						
KHMM	Horse Mountain	30.47	97	eP	P	08 36 08.2	+2.7
	32nm,1.5s						
J05D	Fort Rock, OR	30.52	91	P	P	08 36 07.5	+1.7
	baz=305						
YBH	Yreka Blue Hor	30.55	95	P	P	08 36 08.2	+2.1
	2.3nm,0.8s,baz=297,slow=6.8,SNR=7.8						
YBH				LR	LR	08 45 13.3	
	comp=Z,49nm,21.2s,baz=296,slow=30						
YBH	Yreka Blue Hor	30.55	95	eP	P	08 36 09.0	+2.9
	23nm,1.9s						
M02C	Callahan	30.67	96	P	P	08 36 08.6	+1.4
	baz=308						
N02D	Trinity Center	31.02	96	P	P	08 36 11.8	+1.6
	baz=308						
M04C	Macdoel	31.04	94	P	P	08 36 12.1	+1.7
	baz=307						
K05A	Summer Lake	31.04	92	eP	P	08 36 13.2	+2.6
	8.2nm,0.8s						
MSO	Missoula	32.94	80	P	P	08 36 27.2	+0.1
	baz=301						
MFID	Camas Ranch	33.67	87	eP	P	08 36 35.2	+1.7
	1.7nm,0.8s						
PAHR	Pah Rah Range	33.79	95	eP	P	08 36 36.5	+1.9
	9.1nm,1.2s						
YERR	Yerington	34.34	96	eP	P	08 36 41.5	+2.0
	6.0nm,0.9s						
HLID	Hailey	34.43	86	P	P	08 36 40.7	+0.5
	baz=305						
WAKR	Walker	34.53	97	eP	P	08 36 43.1	+2.0
	4.9nm,0.8s						
ASAJ	Asahikawa	34.87	276	LR	LR	08 53 29.2	
	comp=Z,11nm,18.5s,baz=167,slow=41						
BOZ	Bozeman (W)	34.95	81	P	P	08 36 44.7	+0.1
	baz=303						
BOZ	Bozeman (W)	34.95	81	eP	P	08 36 45.7	+1.0
	1.8nm,0.8s						
KVN	Kaiserville	34.97	95	eP	P	08 36 46.6	+1.7
	2.7nm,0.8s						
RYN	Ryan	34.99	96	eP	P	08 36 46.7	+1.6
	5.1nm,1.0s						
NV01	Mina Array Sit	35.25	96	eP	P	08 36 49.1	+1.7
NVAR	Mina Array Bea	35.25	96	P	P	08 36 49.0	+1.6
	3.8nm,0.7s,baz=295,slow=8.6,SNR=29						
NVAR				PcP	PcP	08 39 17.2	-0.8
	0.4nm,0.7s,baz=339,slow=2.2,SNR=3.3						
MDPB	Devils Postpil	35.32	98	eP	P	08 36 50.4	+2.5
	5.3nm,0.8s						
NV11	Mina Array Sit	35.34	96	eP	P	08 36 49.7	+1.7
	0.2nm,0.8s						
H17A	Grant Village	36.24	82	P	P	08 36 57.1	+1.3
	baz=304						
VES	Vestal, Richgr	36.52	100	P	P	08 36 59.0	+1.0
	baz=314						
RLMT	Red Lodge	36.61	80	P	P	08 36 59.4	+0.5
	baz=304						
RLMT	Red Lodge	36.61	80	eP	P	08 36 59.8	+0.9
	4.7nm,0.9s						
CWC	Cottonwood Cre	36.71	98	P	P	08 37 01.1	+1.3
	baz=313						
R11A	Troy Canyon, C	36.93	94	P	P	08 37 02.5	+0.9
	baz=311						
ISA	Isabella, Lake	37.01	100	P	P	08 37 03.6	+1.4
	baz=314						
DAC	Darwin (Calif)	37.11	98	eP	P	08 37 05.1	+1.8
	2.7nm,0.7s						
MPMC	Manual Prospec	37.32	98	P	P	08 37 06.1	+1.1
	baz=313						
DUG	Dugway, Tooele	37.41	89	P	P	08 37 06.5	+0.8
	baz=309						
FURC	Furnace Creek,	37.41	97	P	P	08 37 07.1	+1.5
	baz=313						
TPNV	Topopah Spring	37.45	96	P	P	08 37 07.4	+1.3
	baz=312						
TPNV	Topopah Spring	37.45	96	eP	P	08 37 07.9	+1.8
	4.7nm,0.8s						
LAO	LASA Array	37.53	76	P	P	08 37 07.4	+0.8
	baz=303						
LAO	LASA Array	37.53	76	eP	P	08 37 07.2	+0.7
	11nm,1.0s						
BW06	Boulder Array	37.79	83	P	P	08 37 08.9	-0.1
	baz=306						
PDAR	Pinedale Array	37.79	83	P	P	08 37 09.3	+0.3
	1.3nm,0.8s,baz=295,slow=4.9,SNR=14						
PDAR				LR	LR	08 50 36.8	
	comp=Z,27nm,19.4s,baz=210,slow=33						
PDAR	Pinedale Array	37.79	83	eP	P	08 37 09.7	+0.7
SHOC	Shoshone, Teco	38.15	97	P	P	08 37 12.7	+0.9
	baz=313						
GSC	Goldstone, Bar	38.24	98	P	P	08 37 13.2	+0.5
	baz=314						
FCC	Fort Churchill	38.33	53	eP	P	08 37 13.1	+0.1
	4.9nm,1.1s						
SSK	Sunset Peak	38.48	100	eP	P	08 37 16.2	+1.4
TCRU	Three Creeks R	38.63	91	eP	P	08 37 16.8	+0.7
	9.5nm,1.8s						
HEC	Hector,Ludlow	38.85	99	P	P	08 37 18.5	+0.7
	baz=314						
GMRC	Granite Mounta	39.

4.1nm,0.9s
EYMN **Ely** 45.12 66 P P 08 38 07.9 -0.9
baz=306
EYMN **Ely** 45.12 66 *e*P P 08 38 08.5 -0.3
6.8nm,1.3s
H35A **Sunnyside Ranc** 45.21 71 P P 08 38 08.9 -0.6
baz=308
BGNE **Belgrade** 45.34 77 P P 08 38 10.1 -0.5
baz=309
121A **Cookes Peak, D** 45.54 94 P P 08 38 12.5 0.0
baz=315
CBKS **Cedar Bluff** 46.07 81 P P 08 38 16.5 0.0
baz=311
F38A **Pierce - Schro** 46.10 68 P P 08 38 15.9 -0.7
baz=307
I37A **Lemond, Waseca** 46.44 71 P P 08 38 18.8 -0.4
baz=308
E39A **Mellen** 46.57 67 P P 08 38 20.1 -0.2
baz=307
H38A **Maiden Rock** 46.66 70 P P 08 38 20.4 -0.5
baz=308
K36A **Gilmore City** 46.70 73 P P 08 38 20.4 -0.9
baz=309
J37A **Redenius Farm,** 46.79 72 P P 08 38 21.2 -0.8
baz=309
E40A **Wakefield** 46.89 66 P P 08 38 21.9 -0.9
baz=308
I38A **Scanlan Farm,** 47.02 70 P P 08 38 22.7 -1.1
baz=309
K37A **Belmond** 47.08 73 P P 08 38 23.3 -1.0
baz=309
F40A **Park Falls** 47.09 67 P P 08 38 23.3 -1.0
baz=308
H39A **Augusta** 47.21 69 P P 08 38 24.3 -1.0
baz=308
J38A **Wedel Dairy, R** 47.39 71 P P 08 38 26.2 -0.5
baz=309
CPRX **Cap Rock** 47.53 90 *e*P P 08 38 33.3 +5.3
MSTX **Muleshoe** 47.53 88 P P 08 38 27.6 -0.4
baz=314
MNTX **Cornudas Mount** 47.56 92 P P 08 38 28.9 +0.7
baz=316
MNTX **Cornudas Mount** 47.56 92 *e*P P 08 38 29.2 +1.0
2.0nm,0.8s
N36A **Muff Farm, Cla** 47.57 76 P P 08 38 27.5 -0.6
baz=310
I39A **Houston** 47.59 70 P P 08 38 27.3 -1.0
baz=309
M37A **Trindle Farm,** 47.71 74 P P 08 38 28.9 -0.3
baz=310
KSU1 **Kansas State U** 47.72 78 P P 08 38 28.5 -0.9
baz=311
J39A **Decorah** 47.82 71 P P 08 38 28.8 -1.2
baz=309
L38A **Oak Wood Farm,** 47.87 73 P P 08 38 29.4 -1.0
baz=310
N37A **Lee Faris, Mou** 48.04 75 P P 08 38 31.3 -0.5
baz=310
K39A **Oelwein** 48.12 72 P P 08 38 31.1 -1.3
baz=310
M38A **Pleasantville** 48.20 74 P P 08 38 31.9 -1.0
baz=310
DAG **Danmarks Havn** 48.33 10 *i*P P 08 38 34.6 +1.1
4.3nm,0.7s
I41A **Arkdale** 48.39 69 P P 08 38 33.6 -0.8
baz=309
L39A **Vinton** 48.42 72 P P 08 38 33.8 -0.9
baz=310
G42A **Mountain** 48.45 67 P P 08 38 34.2 -0.7
baz=309
N38A **Joes South For** 48.58 74 P P 08 38 34.8 -1.2
baz=311
SPITS **Spitsbergen Ar** 48.63 360 LR LR 09 00 32.4
comp=Z,25nm,18.2s,baz=300,slow=38
P37A **Lathrop** 48.72 76 P P 08 38 36.1 -0.9
baz=311
M39A **Webster** 48.74 73 P P 08 38 36.2 -1.0
baz=310
J41A **Loganville** 48.75 70 P P 08 38 36.1 -1.1
baz=310
L40A **Anamosa** 48.91 72 P P 08 38 37.4 -1.0
baz=310
E44A **Grand Marais A** 48.94 64 P P 08 38 37.7 -0.9
baz=309
N39A **Derby Farms, D** 48.95 74 P P 08 38 37.6 -1.1
baz=311
SUMG **Summit** 48.99 19 *i*P P 08 38 41.8 +2.7
5.8nm,0.6s
I42A **Draeger Farm,** 49.03 69 P P 08 38 38.3 -1.1
baz=310
K41A **Shullsburg** 49.08 71 P P 08 38 38.3 -1.4
baz=310
P38A **Dawn** 49.17 76 P P 08 38 39.1 -1.4
baz=311
L41A **Preston** 49.31 71 P P 08 38 40.2 -1.3
baz=310
O39A **Kirksville** 49.33 74 P P 08 38 40.4 -1.3
baz=311
WMOK **Wichita Mounta** 49.38 84 P P 08 38 41.6 -0.5
baz=314
WMOK **Wichita Mounta** 49.38 84 *e*P P 08 38 41.9 -0.2
3.0nm,0.8s
I43A **Langenfeld Bro** 49.46 68 P P 08 38 41.7 -0.9
baz=310
N40A **Mertquake, Sal** 49.47 73 P P 08 38 41.4 -1.3
baz=311
K42A **Prairie Point,** 49.51 70 P P 08 38 41.6 -1.4
baz=310
Q38A **Cooks Store, C** 49.56 76 P P 08 38 41.9 -1.5
baz=312
P39B **Salisbury** 49.71 75 P P 08 38 43.8 -0.8
baz=312
M41A **Milan** 49.74 72 P P 08 38 43.3 -1.5
baz=311
O40A **La Belle** 49.80 74 P P 08 38 43.9 -1.4
baz=311,SNR=6.9
Q39A **Willow Grove F** 49.88 76 P P 08 38 44.1 -1.8
baz=312,SNR=5.3
R38A **Fenwick Farm,** 49.91 77 P P 08 38 44.0 -2.2
baz=312
P40A **Paris** 50.09 75 P P 08 38 45.9 -1.6
baz=312,SNR=16
P40A **Paris** 50.09 75 *e*P P 08 38 46.0 -1.5
23nm,0.8s
S38A **Stockton** 50.28 78 P P 08 38 47.1 -1.9
baz=313
TX31 **Lajitas Ar. Si** 50.29 93 *e*P P 08 38 49.3 +0.1
TXAR **Lajitas Array** 50.29 93 P P 08 38 49.6 +0.3
3.2nm,0.7s,baz=299,slow=5.4,SNR=59
TXAR PcP PcP 08 40 07.5 -0.6
0.4nm,0.7s,baz=270,slow=1.8,SNR=2.2
TXAR LR LR 08 57 46.2
comp=Z,24nm,18.4s,baz=0.0,slow=33
R39A **Chumby, Stover** 50.33 77 P P 08 38 47.4 -1.9
baz=312
ABTX **Abilene, Hawle** 50.34 87 P P 08 38 49.0 -0.5
baz=315
O41A **Passleys Farm,** 50.38 74 P P 08 38 48.3 -1.3
baz=312
N42A **Yates City** 50.39 72 P P 08 38 48.5 -1.3
baz=311
Q40A **Laux Farm, Aux** 50.44 75 P P 08 38 48.4 -1.7
baz=312,SNR=6.4
T38A **Diamond** 50.46 79 P P 08 38 48.6 -1.8
baz=313
P41A **Barry, Barry** 50.56 74 P P 08 38 49.4 -1.7
baz=312,SNR=6.0
S39A **Bolivar** 50.59 78 P P 08 38 48.6 -2.7
baz=313
R40A **Maddies Statio** 50.80 76 P P 08 38 50.2 -2.6
baz=312,SNR=6.3
R40A **Maddies Statio** 50.80 76 *e*P P 08 38 50.4 -2.4
8.1nm,0.9s
Q41A **Truxton** 50.95 75 P P 08 38 52.3 -1.7
baz=312,SNR=6.5
HDIL **Hopedale** 50.99 72 P P 08 38 52.6 -1.6
baz=312
T39A **Clever** 51.01 78 P P 08 38 52.1 -2.4
baz=313,SNR=5.6
P42A **Winchester** 51.04 74 P P 08 38 52.7 -1.9
baz=312
P42A **Winchester** 51.04 74 *e*P P 08 38 53.2 -1.5
12nm,1.0s
R41A **Rosebud** 51.31 76 P P 08 38 54.4 -2.3
baz=313,SNR=5.1
Q42A **Golden Eagle** 51.38 74 P P 08 38 55.6 -1.6
baz=312,SNR=6.7
U39A **Green Forest** 51.38 79 P P 08 38 55.8 -1.5
baz=313
P43A **Skaggs, Pawnee** 51.47 73 P P 08 38 56.4 -1.5
baz=312
CCM **Cathedral Cave** 51.55 76 P P 08 38 56.3 -2.2
baz=313
S41A **Jillco Farms,** 51.58 77 P P 08 38 56.4 -2.3
baz=313
R42A **Luebbering** 51.66 75 P P 08 38 57.5 -1.8
baz=313
U40A **Yellville** 51.77 78 P P 08 38 58.1 -2.1
baz=314
JCT **Junction City** 51.77 89 P P 08 38 59.3 -1.0
baz=316
N45A **Kentland** 51.81 71 P P 08 38 58.4 -2.0
baz=312
Q43A **New Douglas** 51.84 74 P P 08 38 59.6 -1.0
baz=313
S42A **Caledonia** 52.00 76 P P 08 38 60.0 -1.9
baz=313
W39A **Magazine** 52.02 80 P P 08 39 01.0 -1.1
baz=314
O45A **Potomac** 52.09 71 P P 08 39 00.3 -2.1
baz=312
P44A **Sand Creek, Wi** 52.10 73 P P 08 39 01.1 -1.5
baz=313
R43A **Red Bud** 52.16 75 P P 08 39 01.2 -1.8
baz=313
V40A **Witts Springs** 52.17 79 P P 08 39 01.2 -2.0
baz=314
X39A **Fountain Ranch** 52.30 81 P P 08 39 03.0 -1.2
baz=314
U41A **Viola** 52.32 78 P P 08 39 02.1 -2.2
baz=314
T42A **Van Buren** 52.34 77 P P 08 39 01.6 -2.8
baz=313
W40A **Ferguson Farm,** 52.45 80 P P 08 39 04.0 -1.2
baz=314
S43A **Fulton Ridge,** 52.55 75 P P 08 39 04.0 -2.0
baz=313,SNR=6.3
V41A **Mountainview** 52.57 78 P P 08 39 04.1 -2.1
baz=314
MIAR **Mount Ida** 52.60 81 P P 08 39 05.2 -1.1
baz=314
R44A **Waltonville** 52.67 74 P P 08 39 03.9 -2.9
baz=313
U42A **Reveneden** 52.72 77 P P 08 39 04.8 -2.4
baz=314
Q45A **Warren Harvey,** 52.76 73 P P 08 39 05.9 -1.5
baz=313
PBMO **Poplar Bluff** 52.89 76 *e*P P 08 39 08.1 -0.4
43nm,2.0s
SCHQ **Schefferville** 52.92 46 LR LR 09 01 09.7
comp=Z,34nm,20.0s,baz=4.5,slow=36
S44A **Carbondale** 52.95 75 P P 08 39 07.5 -1.4
baz=313
O47A **Sheridan** 52.97 70 P P 08 39 06.9 -2.2
baz=313
R45A **Skylar, Fairfi** 53.10 73 P P 08 39 08.2 -1.7
baz=313
T44A **Benton** 53.17 75 P P 08 39 08.6 -1.9
baz=314
S45A **Carrier Mills** 53.34 74 P P 08 39 10.2 -1.6
baz=314
P47A **Martinsville** 53.43 71 P P 08 39 10.5 -1.9
baz=313
Q47A **Bedord North L** 53.71 72 P P 08 39 12.5 -2.0
baz=313
T46A **Princeton** 54.18 74 P P 08 39 15.9 -2.0
baz=314
U46A **Springville** 54.49 75 P P 08 39 18.8 -1.4
baz=314,SNR=5.9
T47A **Sharon Grove** 54.67 74 P P 08 39 19.8 -1.7
baz=314
T47A **Sharon Grove** 54.67 74 *e*P P 08 39 20.6 -0.9
9.3nm,1.0s
P50A **Jamestown** 54.73 69 P P 08 39 20.0 -2.0
baz=314
W45A **Hickory Valley** 54.74 77 P P 08 39 20.8 -1.3
baz=315
S48A **Wiedeman Farm,** 54.81 73 P P 08 39 20.6 -1.8
baz=314
WVT **Waverly** 54.85 75 P P 08 39 22.0 -0.8
baz=314
WVT **Waverly** 54.85 75 *e*P P 08 39 21.3 -1.5
8.1nm,0.8s
V46A **Holladay** 54.91 76 P P 08 39 21.9 -1.4
baz=315
Y44A **Strider, Charl** 54.99 79 P P 08 39 22.9 -1.0
baz=315
T48A **Bowling Green** 54.99 73 P P 08 39 22.3 -1.5
baz=314
OXF **Oxford** 55.07 78 P P 08 39 22.9 -1.5
baz=315
W46A **Michie** 55.23 76 P P 08 39 23.9 -1.7
baz=315
V47A **Nunnelly** 55.24 75 P P 08 39 24.6 -1.1
baz=315
U48A **Cassie Pea, Po** 55.33 74 P P 08 39 25.2 -1.0
baz=315
PLAL **Pickwick Lake** 55.51 76 *e*P P 08 39 26.2 -1.4
25nm,1.7s
X46A **Booneville** 55.52 77 P P 08 39 26.1 -1.6
baz=315
Y46A **Houston** 55.84 78 P P 08 39 28.6 -1.3
baz=315
T50A **Nancy** 55.95 72 P P 08 39 29.3 -1.4
baz=315
W48A **Pulaski** 56.07 75 P P 08 39 30.0 -1.6
baz=315
NRS **Narsarsuaq** 56.18 30 *e*P P 08 39 29.6 -2.5
44nm,0.8s
V49A **McMinnville** 56.22 74 P P 08 39 30.8 -1.9
baz=315
Z46A **Louisville** 56.28 78 P P 08 39 31.9 -1.2
baz=316
Y47A **UCPARC, Winfie** 56.41 77 P P 08 39 32.3 -1.8
baz=316
X48A **Hartselle** 56.49 76 P P 08 39 32.6 -2.0
baz=316
V50A **Pikevile** 56.74 74 P P 08 39 34.9 -1.5
baz=315
Z47A **Carrollton** 56.78 78 P P 08 39 35.5 -1.3
baz=316
X49A **Woodville** 56.86 75 P P 08 39 35.2 -2.0
baz=316
W50A **Signal Mountai** 56.96 74 P P 08 39 36.4 -1.6
baz=315
X50B **Fort Payne** 57.29 75 P P 08 39 39.1 -1.2
baz=316
V52A **Sevierville** 57.48 72 P P 08 39 40.1 -1.6
baz=316
V52A **Sevierville** 57.48 72 *e*P P 08 39 40.1 -1.6
97nm,2.0s
Z49A **Columbiana** 57.68 77 P P 08 39 40.8 -2.3
baz=316
546A **Slidell** 57.95 81 P P 08 39 43.3 -1.7
baz=317
149A **Jones** 57.96 77 P P 08 39 43.4 -1.6
baz=316
Z50A **Ashland** 57.99 76 P P 08 39 43.1 -2.2
baz=316
X52A **Dahlonega** 58.20 74 P P 08 39 44.8 -1.9
baz=316
BORG **Borgarnes** 58.90 17 LR LR 09 08 16.0
comp=Z,12nm,18.4s,baz=331,slow=39
251A **Midway** 59.13 77 P P 08 39 51.4 -1.8
baz=317
351A **Pinckard** 59.61 78 P P 08 39 55.2 -1.4
baz=317
LZH **Lanzhou** 62.45 294 *e*P P 08 40 18.5 +2.5
LZH pP sP 08 40 26.3 +10
LZH sP pP 08 40 30.5 +14
LZH *e*PP PP 08 42 37.5 +4.6
LZH pmax pmax
comp=Z,18nm,1.2s
LZH pmax pmax
comp=Z,77nm,7.4s
LZH LR LR
comp=N,89nm,15.4s
LZH LR LR
comp=E,93nm,16.0s
LZH LR LR
comp=Z,120nm,18.6s
BVAR **Borovoye Array** 64.22 326 P P 08 40 25.0 -2.3
comp=Z,0.5nm,0.5s,baz=44,slow=6.8,SNR=4.4
ARU **Arti** 64.74 335 LR LR 09 11 24.8
comp=Z,17nm,18.3s,baz=326,slow=39
FINES **FINESS Array B** 65.10 354 P P 08 40 30.3 -2.5
comp=Z,2.6nm,0.9s,baz=31,slow=8.4,SNR=3.3
HFS **Hagfors** 66.76 1 P P 08 40 41.9 -1.6
comp=Z,1.7nm,0.4s,baz=48,slow=4.3,SNR=14
KMI **Kunming** 71.36 287 P P 08 41 15.8 +2.9
KMI pmax pmax
comp=Z,8.0nm,0.5s
PPT **Papeete** 72.01 164 LR LR 09 06 05.5
comp=Z,37nm,21.2s,baz=65,slow=30
CLL **Collm** 75.61 1 *e*P P 08 41 37.0 -0.2
KBZ **Khabaz** 80.22 340 LR LR 09 19 50.4
comp=Z,27nm,18.7s,baz=40,slow=38
BRTR **Keskin Array B** 85.77 345 P P 08 42 30.9 -1.1
comp=Z,0.4nm,0.5s,baz=36,slow=5.7,SNR=3.3
BRTR LR LR 09 23 32.5
comp=Z,13nm,21.9s,baz=72,slow=38
MDT **Midelt** 92.46 16 LR LR 09 28 20.1
comp=Z,15nm,18.3s,baz=168,slow=38
CASY **Casey** 135.10 215 *e*PKPdf PKPdf 08 49 12.7 +2.0

IDC 26 08:34:27.1±4.5, 19°.37S×175°.33W, h0km, mb4.2/5, mb1 4.4/5, mb1mx3.8/51, mbtmp4.2/5, Error ellipse: s-maj=144.9km s-min=88.5km az=165.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	36.12	262	P	P	08 41 32.5	+1.3
1.4nm,0.4s,baz=80,slow=11,SNR=3.1							
STKA	**Stephens Creek**	40.54	243	P	P	08 42 08.1	-0.2
1.2nm,0.8s,baz=93,slow=15,SNR=4.9							
ASAR	**Alice Springs**	47.23	255	P	P	08 43 01.8	-0.5
4.4nm,0.6s,baz=94,slow=7.9,SNR=72							
ASAR				PcP	PcP	08 44 33.6	-0.1
0.3nm,0.6s,baz=95,slow=3.6,SNR=4.5							
WRA	**Warramunga Arr**	47.26	260	P	P	08 43 02.1	-0.4
2.0nm,0.3s,baz=97,slow=7.4,SNR=96							
FITZ	**Fitzroy Crossi**	55.68	261	P	P	08 44 05.3	-0.3
3.1nm,1.0s,baz=119,slow=6.4,SNR=5.9							

KRNET ***26*** *08:37:11.2±0.1, 39°.04N×70°.73E, mb3.6*
NNC ***26*** *08:37:11.2±2.3, 38°.63N×70°.87E, h167km±17km, mb2.8, mpv3.8, Error ellipse: s-maj=19.3km s-min=7.6km az=163.0*

ISC 26 08:37:12.9±1.6, 39°.09N±0°.06×70°.86E±0°.04, h4km±10km, n26, σ2=81/41, 19C-10D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	**Batken**	0.97	358	⇑*i*P	Pg	08 37 30.8	-0.7
BTK				⇑*i*S	Sg	08 37 44.9	+0.9
baz=4.0							
DZET	**Dzherino**	1.61	260	⇑P	Pn	08 37 42.3	+0.1
DZET				⇑S	Sg	08 38 08.4	+3.7
107nm,0.6s							
861nm,0.5s							
SFK	**Sufi-Kurgan**	2.24	65	⇓P	Pn	08 37 51.6	+0.6
SFK				⇓S	Sg	08 38 25.9	+1.0
17nm,0.3s							
95nm,0.4s							
SFK	**Sufi-Kurgan**	2.24	65	⇑*i*P	Pb	08 37 52.7	-1.4
SFK				⇑*i*S	Sg	08 38 23.8	-1.1
baz=65							
ARSB	**Arslanbob**	2.76	35	⇑*i*P	Pn	08 38 00.2	+2.1
ARSB				⇑*i*S	Sb	08 38 35.9	-1.2
baz=36							
ARK	**Arkit**	2.83	17	⇑*i*P	Pn	08 38 00.8	+1.8
ARK				⇑*i*S	Sb	08 38 36.6	-2.6
baz=19							
MNAS	**Manas**	3.61	20	⇓P	Pn	08 38 12.7	+2.9
MNAS				⇑S	Sb	08 39 00.1	-1.6
9.7nm,0.4s							
30nm,0.7s							
MNAS	**Manas**	3.61	20	⇑*i*P	Pn	08 38 11.9	+2.1
MNAS				⇑*i*S	Sn	08 38 56.1	+3.1
baz=21							
AML	**Almayashu**	3.72	34	P	Pn	08 38 14.9	+3.4
SNR=6.4							
AML	**Almayashu**	3.72	34	⇑*i*P	Pn	08 38 13.8	+2.2
AML				⇑*i*S	Sn	08 38 59.2	+3.1
baz=35							
KK31	**Karatay Array**	4.02	356	⇓P	Pn	08 38 18.6	+3.4
7.3nm,0.5s,baz=175,slow=12,SNR=49							
KK31				⇑S	Sb	08 39 09.3	-3.8
14nm,0.6s,baz=192,slow=27,SNR=4.3							
UCH	**Uchtor**	4.19	40	P	Pn	08 38 21.3	+3.4
SNR=18							
UCH	**Uchtor**	4.19	40	⇓*i*P	Pn	08 38 20.1	+2.1
UCH				⇓*i*S	Sn	08 39 10.6	+3.1
baz=41							
EKS2	**Erkin-Say**	4.20	31	P	Pn	08 38 21.4	+3.6
SNR=11							
KZA	**Kyzart**	4.48	47	P	Pn	08 38 24.8	+2.9
SNR=46							
KZA	**Kyzart**	4.48	47	⇓*i*P	Pn	08 38 24.3	+2.4
KZA				⇓*i*S	Sn	08 39 17.5	+2.8
baz=47							
AAK	**Ala-Archa**	4.49	37	⇓P	Pn	08 38 24.3	+2.5
AAK				⇓S	Sb	08 39 22.2	-4.6
6.7nm,0.4s							
9.7nm,0.7s							
KBK	**Karagaybulak**	4.72	40	P	Pn	08 38 28.9	+3.9
SNR=13							
CHMS	**Chumysh**	4.89	36	P	Pn	08 38 29.8	+2.6
SNR=9.6							
USP	**Ospenovka**	4.99	32	P	Pn	08 38 31.1	+2.4
SNR=5.6							
ULHL	**Ulahol**	5.16	51	P	Pn	08 38 34.3	+3.1
SNR=7.2							
TKM2	**Tokmak 2**	5.24	42	⇑P	Pn	08 38 34.3	+2.0
TKM2				⇑S	Sn	08 39 37.7	+4.6
9.7nm,0.7s							
4.9nm,0.7s							
TKM2	**Tokmak 2**	5.24	42	P	Pn	08 38 35.0	+2.8
SNR=22							
AB31	**Akbulak array**	12.82	326	P	Pn	08 40 16.3	+0.5
1.5nm,0.6s,baz=144,slow=12,SNR=12							
AB31				S	Sn	08 42 36.2	-2.6
5.6nm,0.8s,baz=144,slow=23,SNR=7.3							
WMQ	**Urumqi**	13.48	64	P	P	08 40 32.3	-2.1
WMQ				pmax	pmax		
comp=Z,24nm,0.7s							
WMQ				pmax	pmax		
comp=Z,150nm,4.7s							
WMQ				LR	LR		
comp=N,200nm,39.0s							
WMQ				LR	LR		
comp=Z,36nm,18.1s							
AKTO	**Aktyubinsk**	14.53	325	⇑S	Sn	08 43 17.4	-3.2
comp=Z,2.1nm,0.6s							

NIED ***26*** *08:46:00, 36°.90N×141°.10E, h50km, Mw3.7 Best double couple: M0=3.56000×10^14 NP1:φ0=209.00000°, δ20.00000°, λ101.00000°. NP2:φ0=18.00000°, δ70.00000°, λ86.00000°.*
ISCJB ***26*** *08:46:40.8±0.7, 36°.95N±0°.04×141°.17E±0°.07, h53km±5km, mb3.5/6, Error ellipse: s-maj=9.8km s-min=5.7km az=21.9*
JMA ***26*** *08:46:42.1±0.1, 36°.96N×141°.07E, h51km±1km, M3.8*
JMA Felt I J1.
IDC ***26*** *08:46:44.8±2.6, 36°.87N×140°.97E, h77km±24km, mb3.2/6, mb1 3.5/10, mb1mx3.3/75, mbtmp3.6/10, MS2.4/2, Ms1 2.4/2, ms1mx2.2/30, Error ellipse: s-maj=23.7km s-min=12.4km az=61.0*

ISC 26 08:46:42.0±1.1, 36°.96N±0°.04×141°.15E±0°.07, h47km±9km, n27, σ1=13/31, mb3.5/6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	0.32	297	P	Pn	08 46 50.9	-0.2
ONAJ				S	Sn	08 46 57.0	-0.5
JFK	**Kawauchi**	0.46	331	P	Pn	08 46 52.5	-0.2
JFK				S	Sn	08 46 59.8	-0.5
JHO	**Hitachi**	0.58	234	P	Pn	08 46 53.6	-0.5
JHO				S	Sn	08 47 01.5	-1.3
JFT	**Otama**	0.86	311	P	Pn	08 46 58.1	+0.3
JFT				S	Sn	08 47 09.2	-0.1

JMM	Marumori	0.95	343	P	Pn	08 46 58.7	-0.3
JMM				S	Sn	08 47 10.6	-0.8
JFY	Yanaizu	1.24	292	P	Pn	08 47 02.6	-0.3
JOU	Okura	1.46	345	P	Pn	08 47 05.9	0.0
JAG	Ashikaga	1.47	249	P	Pn	08 47 05.4	-0.6
JAG				S	Sn	08 47 22.3	-1.7
JKT	Katashina	1.54	263	P	Pn	08 47 07.1	0.0
JKT				S	Sn	08 47 25.2	-0.7
MJAR	Matsushiro Arr	2.40	261	P	Pn	08 47 19.2	+0.4
9.5nm,0.3s,baz=84,slow=14,SNR=63							
MJAR				S	Sn	08 47 46.7	-0.4
6.4nm,0.3s,baz=40,slow=19,SNR=5.9							
MJAR				LR	LR	08 48 32.3	
comp=Z,76nm,18.5s,baz=90,slow=48							
MAT	Matsushiro	2.40	261	P	Pn	08 47 19.5	+0.6
MAT				S	Sn	08 47 48.7	+1.6
JHJ	Hachijo jima 2	3.99	197	P	Pn	08 47 41.8	+1.1
19nm,0.3s,baz=87,slow=20,SNR=5.2							
JHJ				S	Sn	08 48 26.5	+0.3
23nm,0.3s,baz=76,slow=22,SNR=6.9							
ASAJ	Asahikawa	7.23	8	S	Sn	08 49 45.2	-0.7
0.1nm,0.3s,baz=36,slow=17,SNR=3.3							
USRK	Ussuriysk Ar.	10.04	319	P	Pn	08 49 06.7	+3.2
0.1nm,0.3s,baz=136,slow=12,SNR=4.7							
KSRS	Korea Array	10.56	277	P	Pn	08 49 13.5	+2.8
0.2nm,0.3s,baz=87,slow=13,SNR=3.7							
KSRS				LR	LR	08 53 00.8	
comp=Z,22nm,20.3s,baz=95,slow=36							
SONM	Songino Array	27.65	304	P	P	08 52 24.1	-1.3
0.3nm,0.4s,baz=112,slow=11,SNR=3.5							
H11N2	WAKE ISLAND Hy	28.29	120	T	T	09 22 32.4	
baz=312							
H11N1	WAKE ISLAND Hy	28.30	120	T	T	09 22 35.9	
baz=312							
H11N3	WAKE ISLAND Hy	28.31	120	T	T	09 22 37.3	
baz=312							
H11S1	WAKE ISLAND Hy	29.00	122	T	T	09 23 27.3	
baz=314,slow=74							
H11S3	WAKE ISLAND Hy	29.00	122	T	T	09 23 30.2	
baz=314,slow=74							
H11S2	WAKE ISLAND Hy	29.01	122	T	T	09 23 29.7	
baz=314							
MKAR	Makanchi Array	43.98	302	P	P	08 54 44.0	-0.6
0.6nm,0.7s,baz=83,slow=11,SNR=5.1							
KURBB	Kurchatov Arra	45.88	308	P	P	08 54 58.8	-0.8
1.2nm,0.6s,baz=84,slow=8.0,SNR=11							
ILAR	Eielson Array	49.67	32	P	P	08 55 28.9	+0.2
0.4nm,0.7s,baz=267,slow=7.0,SNR=5.0							
WRA	Warramunga Arr	56.96	188	P	P	08 56 21.6	-1.0
0.3nm,0.5s,baz=4.9,slow=7.4,SNR=10.0							
TXAR	Lajitas Array	90.33	52	P	P	08 59 38.8	+0.3
0.1nm,0.6s,baz=306,slow=3.0,SNR=2.8							

*IDC **26** 08:46:56.5±0.8,34°.84N×73°.64E, h0km, mb3.9/14, mb1 4.0/18,mb1mx3.8/68,mbtmp3.9/18,ML3.6/4,Error ellipse: s-maj=19.4km s-min=17.5km az=43.0*
*ISCJB **26** 08:46:57.9±0.3,34°.90N±0°.03×73°.70E±0°.05, h21km, mb4.0/19,Error ellipse: s-maj=6.5km s-min=3.3km az=148.8*
*NEIC **26** 08:47:02.7±0.7,34°.91N×73°.63E, h41km±7km, mb4.3/6, Error ellipse: s-maj=6.9km s-min=6.3km az=119.0*
*NNC **26** 08:47:06.7±3.1,35°.04N×73°.39E, h83km±37km, mb3.7, mpv4.0,Error ellipse: s-maj=23.0km s-min=18.4km az=162.0*

ISC 26 08:46:59.9±0.5,34°.92N±0°.05×73°.59E±0°.06,h21km,n66,
σ2s33/77,mb4.1/19,8C-4D,Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIL	Nilore	1.30	192	ePn	Pb	08 47 23.0	-0.6
KBL	Kabul	3.76	266	ePn	Pn	08 48 00.5	+3.7
BHK	Bhakra	4.22	145	eP	Pb	08 48 13.0	-0.5
BHK				eS	Sn	08 48 50.2	-1.6
SFK	Sufi-Kurgan	5.08	359	⇓P	Pn	08 48 19.8	+4.7
10nm,0.3s							
SFK				⇓S	Sn	08 49 17.0	+3.7
19nm,0.3s							
DZET	Dzherino	5.44	317	⇓P	Pn	08 48 21.2	+1.4
6.3nm,0.3s							
DZET				⇓S	Sn	08 49 23.5	+1.7
56nm,0.5s							
NRN	Naryn	6.78	16	ePn	Pn	08 48 41.3	+2.9
MNAS	Manas	7.60	354	⇑P	Pn	08 48 52.3	+2.8
4.2nm,0.5s							
MNAS				⇑S	Sn	08 50 15.4	+0.3
5.4nm,0.4s							
TKM2	Tokmak 2	8.14	10	⇑P	Pn	08 49 00.8	+3.7
4.5nm,0.5s							
TKM2				⇑S	Sn	08 50 30.6	+2.1
3.5nm,0.5s							
KK31	Karatay Array	8.51	345	P	Pn	08 49 04.0	+2.1
3.2nm,0.3s,baz=154,slow=11,SNR=59							
KK31				⇑S	Sn	08 50 38.9	+1.5
5.0nm,0.3s,baz=161,slow=23,SNR=7.0							
KK31	Karatay Array	8.51	345	ePn	Pn	08 49 04.0	+2.1
KKAR	Karatay Array	8.51	345	ePn	Pn	08 49 04.0	+2.0
PYUN	Piuthan	10.51	128	eP	Pn	08 49 29.5	-0.1
DANN	Dangsing	10.86	124	eP	Pn	08 49 33.1	-1.3
KOLN	Koldanda	11.13	127	eP	Pn	08 49 38.2	+0.1
GKN	Gorkha	11.68	123	eP	Pn	08 49 43.4	-2.1
DMN	Daman	12.25	123	eP	Pn	08 49 51.8	-1.6
KKN	Kakani	12.26	122	eP	Pn	08 49 51.7	-1.8
PKIN	Phulchoki	12.47	123	eP	Pn	08 49 54.5	-1.9
JIRN	Jiri	12.98	120	ePn	Pn	08 50 00.8	-2.6
MAKZ	Makanchi	13.46	26	ePn	P	08 50 20.1	+1.4
MK32	Makanchi Array	13.56	26	ePn	Pn	08 50 12.2	+1.3
MKAR	Makanchi Array	13.56	26	Pn	Pn	08 50 12.2	+1.3
0.1nm,0.3s,baz=195,slow=14,SNR=4.1							
RAMN	Ramite	13.70	122	eP	Pn	08 50 10.8	-2.3
TAPN	Taplejung	14.25	118	eP	Pn	08 50 17.8	-2.9
KURBB	Kurchatov Arra	16.10	11	Pn	Pn	08 50 43.5	-1.4
0.1nm,0.3s,baz=205,slow=10,SNR=4.7							
KURBB				Sn	Sn	08 53 37.2	-5.5
0.1nm,0.3s,baz=202,slow=27,SNR=3.3							
KURK	Kurchatov	16.21	12	ePn	Pn	08 50 43.5	-2.7
KURK				eSn	Sn	08 53 37.2	-8.1
AB31	Akbulak array	17.50	329	⇑P	Pn	08 51 02.9	+0.4
1.3nm,0.6s,baz=135,slow=12,SNR=11							
AB31				⇑S	Sn	08 54 12.9	-3.7
0.7nm,0.6s,baz=150,slow=22,SNR=4.7							
ABKAR	Akbulak array	17.50	329	ePn	Pn	08 51 01.9	-0.6
ABKAR				eSn	Sn	08 54 08.7	-7.9
BVAR	Borovoye Array	18.24	354	P	Pn	08 51 10.7	-0.9
0.7nm,0.3s,baz=161,slow=9.2,SNR=14							
BRVK	Borovoye	18.28	354	eP	Pn	08 51 14.3	+2.2
5.0nm,0.6s							
AKTO	Aktyubinsk	19.21	329	P	P	08 51 23.1	+0.8
0.9nm,0.3s,baz=132,slow=9.3,SNR=10							
AKTO				S	Sn	08 54 51.2	-6.7
0.2nm,0.3s,baz=229,slow=20,SNR=2.2							
AKTO	Aktyubinsk	19.21	329	⇑P	P	08 51 23.1	+0.8
4.3nm,0.6s							
ZAA0	Zalesovo Array	20.60	19	eP	P	08 51 37.2	-0.2
5.1nm,0.5s							
ZALV	Zalesovo Beam	20.60	19	P	P	08 51 37.5	0.0
5.7nm,0.5s,baz=213,slow=10,SNR=18							
ZAA1	Zalesovo Array	20.60	19	eP	P	08 51 37.5	0.0
GTA	Gaotai	21.35	70	eP	P	08 51 46.5	+0.7
GTA				pP	pP	08 51 51.3	-0.4
GTA				sP	sP	08 51 53.5	-1.0
GTA				pmax	pmax		
comp=Z,5.0nm,1.2s							
SONA0	Songino Array	27.57	52	eP	P	08 52 46.2	+0.7
SONM	Songino Array	27.57	52	P	P	08 52 46.2	+0.7
comp=Z,0.5nm,0.7s,baz=250,slow=8.6,SNR=2.9							
BR101	Keskin Array S	31.94	291	eP	P	08 53 25.8	+1.5
BRTR	Keskin Array B	31.94	291	P	P	08 53 25.8	+1.5
comp=Z,0.2nm,0.4s,baz=74,slow=6.6,SNR=2.2							
FIA0	FINESS Array S	39.96	327	eP	P	08 54 33.0	+0.5
FINES	FINESS Array B	39.96	327	P	P	08 54 33.0	+0.5
comp=Z,0.8nm,0.5s,baz=126,slow=7,SNR=5.1							
ARA0	ARCESS Array S	43.40	338	eP	P	08 55 01.1	+0.5
ARCES	ARCESS Array B	43.40	338	P	P	08 55 01.1	+0.5
comp=Z,2.2nm,0.5s,baz=106,slow=8.9,SNR=12							
ARCES	ARCESS Array B	43.40	338	eP	P	08 55 01.2	+0.7
ARE0	ARCESS Array S	43.40	338	eP	P	08 55 02.2	+1.7
comp=Z,8.1nm,1.0s							
HFS	Hagfors	45.60	323	P	P	08 55 18.7	+0.5
comp=Z,1.9nm,0.7s,baz=97,slow=7.8,SNR=3.9							
SPITS	Spitsbergen Ar	49.51	347	P	P	08 55 49.5	+1.1
comp=Z,1.2nm,0.6s,baz=108,slow=12,SNR=2.8							
TAMR	Tamra	51.31	292	eP	P	08 56 01.9	-0.7
comp=Z,77nm,1.2s							
MAJO	Matsushiro	51.58	68	eP	P	08 56 03.4	-1.2
MJAR	Matsushiro Arr	51.58	68	P	P	08 56 03.4	-1.2
comp=Z,1.5nm,0.7s,baz=303,slow=10,SNR=4.5							
TOA0	Torodi Ar. Sit	67.81	271	eP	P	08 57 56.3	-0.4
TOA1	Torodi Ar. Sit	67.81	271	eP	P	08 57 56.1	-0.6
TORD	Torodi Ar. Bea	67.81	271	P	P	08 57 56.1	-0.6
comp=Z,1.3nm,0.8s,baz=56,slow=5.9,SNR=8.9							
KOWA	Kowa	71.78	275	P	P	08 58 21.8	+0.6
comp=Z,0.7nm,0.3s,baz=64,slow=9.5,SNR=2.9							
KOWA	Kowa	71.78	275	eP	P	08 58 22.4	+1.3
ILAR	Eielson Array	75.70	17	P	P	08 58 43.5	+0.2
comp=Z,0.8nm,0.9s,baz=315,slow=5.6,SNR=11							
ILB	Eielson Array	75.70	17	eP	P	08 58 43.5	+0.2
WR1	Warramunga Arr	79.37	123	eP	P	08 59 04.5	+0.1
comp=Z,5.4nm,1.1s							
WRA	Warramunga Arr	79.37	123	P	P	08 59 04.5	+0.1
comp=Z,0.8nm,0.8s,baz=326,slow=5.5,SNR=9.5							
WB2	Warramunga Arr	79.38	123	eP	P	08 59 05.1	+0.6
comp=Z,4.4nm,1.0s							
WC3	Warramunga Arr	79.40	123	eP	P	08 59 05.0	+0.4
comp=Z,3.7nm,1.0s							
ASAR	Alice Springs	81.63	126	P	P	08 59 16.7	+0.2
comp=Z,0.5nm,0.6s,baz=307,slow=5.0,SNR=8.2							
AS01	Alice Springs	81.66	126	eP	P	08 59 17.3	+0.6
YKA	Yellowknife Ar	82.70	4	P	P	08 59 22.1	+0.5
comp=Z,0.4nm,0.6s,baz=345,slow=5.5,SNR=4.0							
BFZ	Birch Farm	120.46	121	ePKPdf	PKPdf	09 05 50.8	+1.2

*BJI **26** 09:02:15.0,39°.66N×74°.30E, h8km, ML3.5/5*
*IDC **26** 09:02:16.5±2.8,39°.33N×74°.35E, h0km, mb3.8/5, mb1 3.7/7, mb1mx3.4/72, mbtmp3.7/7, ML3.2/2, Error ellipse: s-maj=53.5km s-min=24.1km az=148.0*
*KRNET **26** 09:02:19.2±0.1,39°.59N×74°.42E, mb4.0*
*NNC **26** 09:02:19.3±0.8,39°.69N×74°.47E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=7.5km s-min=3.4km az=175.0*
*SOME **26** 09:02:23.4,39°.90N×74°.62E, h10km*

ISC 26 09:02:19.6±1.4,39°.87N±0°.05×74°.47E±0°.02,h3km±9km,
n64,σ1s87/103,mb3.8/5,38C-16D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.76	281	⇑P	Pg	09 02 34.6	+0.5
48nm,0.3s							
SFK				⇑S	Sb	09 02 46.7	+0.3
1μm,0.4s							
SFK	Sufi-Kurgan	0.76	281	⇓iP	Pg	09 02 34.6	+0.5
baz=1.0							
SFK				⇓iS	Sb	09 02 46.4	0.0
baz=1.0							
KSH	Kashi	1.21	106	Pg	Pg	09 02 35.5	-7.3
KSH				Sg	Sg	09 02 47.0	-12
KSH				smax	smax		
comp=N,3μm,0.9s							
KSH				smax	smax		
comp=E,2μm,0.9s							
NRN	Naryn	1.95	36	⇑iP	Pg	09 02 56.5	-0.4
baz=32							
NRN				⇑iS	Sg	09 03 24.6	+2.4
baz=32							
KZA	Kyzart	2.28	15	P	Pg	09 03 04.4	+1.0
SNR=48							
KZA	Kyzart	2.28	15	⇑iP	Pg	09 03 02.9	-0.5
baz=14							
KZA				⇑iS	Sg	09 03 34.5	+1.5
baz=14							
AML	Almayashu	2.33	346	P	Pg	09 03 03.2	-1.1
SNR=142							
AML	Almayashu	2.33	346	⇑iP	Pg	09 03 03.3	-1.1
baz=48							
AML				⇑iS	Sg	09 03 35.4	+0.8
baz=48							
UCH	Uchtor	2.36	1	P	Pg	09 03 04.2	-0.6
SNR=91							
UCH	Uchtor	2.36	1	⇓iP	Pg	09 03 03.9	-0.9
baz=1.0							
UCH				⇓iS	Sg	09 03 36.5	+1.2
baz=1.0							
ARK	Arkit	2.71	316	⇑iP	Pb	09 03 06.8	-2.0
baz=20							
ARK				⇑iS	Sb	09 03 41.8	-0.6
baz=20							
ULHL	Ulahol	2.73	29	P	Pg	09 03 10.4	-1.4
SNR=52							
ULHL	Ulahol	2.73	29	⇑iP	Pb	09 03 08.6	-0.5
baz=27							
ULHL				⇑iS	Sb	09 03 44.5	+1.4
baz=27							
AAK	Ala-Archa	2.77	0	⇑Pn	Pb	09 03 09.2	-0.6
48nm,0.3s							
AAK				⇑Lg	Lg	09 03 52.1	
80nm,0.5s							
AAK	Ala-Archa	2.77	0	P	Pb	09 03 10.2	+0.5
SNR=17							
AAK	Ala-Archa	2.77	0	⇑iP	Pb	09 03 09.1	-0.6
baz=1.0							
AAK				⇑iS	Sb	09 03 45.6	+1.4
baz=1.0							
KBK	Karagaybulak	2.81	7	P	Pb	09 03 11.2	+0.7
SNR=26							
KBK	Karagaybulak	2.81	7	⇑iP	Pb	09 03 09.8	-0.7
baz=7.0							
KBK				⇑iS	Sb	09 03 46.8	+1.4
baz=7.0							
BTK	Batken	2.81	275	⇑iP	Pn	09 03 06.2	+0.6
baz=81							
BTK				⇑iS	Sn	09 03 40.1	0.0
baz=81							
EKS2	Erkin-Say	2.84	350	P	Pb	09 03 10.9	-0.1
SNR=20							
EKS2	Erkin-Say	2.84	350	⇓iP	Pb	09 03 09.9	-1.1
baz=51							
EKS2				⇓iS	Sb	09 03 47.1	+0.9
baz=51							
BOOM	Boomskoye usch	2.84	22	⇑eP	Pb	09 03 10.4	-0.7
baz=21							
BOOM				⇑iS	Sb	09 03 47.3	+0.9
baz=21							
MNAS	Manas	3.01	331	⇓Pn	Pb	09 03 12.7	-1.2
26nm,0.5s							
MNAS				⇓Lg	Lg	09 03 58.8	
149nm,0.7s							
MNAS	Manas	3.01	331	⇑eP	Pb	09 03 12.0	-1.9
baz=34							
MNAS				⇑iS	Sb	09 03 50.1	-1.0
baz=34							
MRKS	Merke	3.02	342	eP	Pg	09 03 16.7	-0.8
60nm,0.7s							
MRKS				eS	Sg	09 03 54.8	-1.9
77nm,0.4s							
CHMS	Chumysh	3.13	4	P	Pb	09 03 14.9	-1.1
SNR=5.8							
CHMS	Chumysh	3.13	4	⇑iP	Pb	09 03 14.3	-1.7
baz=4.0							
CHMS				⇑iS	Sb	09 03 54.4	-0.2
baz=4.0							
TARG	Taragay, Kyrgy	3.14	53	⇓iP	Pb	09 03 13.6	-2.7
baz=49							
TARG				⇓iS	Sb	09 03 53.3	-1.9
baz=49							
TKM2	Tokmak 2	3.16	15	⇑Pn	Pb	09 03 13.4	-3.2
3.9nm,0.1s							
TKM2				⇑Pg	Pg	09 03 19.7	-0.5
34nm,0.2s							
TKM2				⇑Lg	Lg	09 04 03.9	
280nm,0.6s							
TKM2	Tokmak 2	3.16	15	P	Pb	09 03 15.2	-1.4
SNR=45							
TKM2	Tokmak 2	3.16	15	⇑iP	Pb	09 03 14.9	-1.7
baz=15							
TKM2				⇑iS	Sb	09 03 55.4	-0.3
baz=15							
KST	Kastek	3.36	19	eP	Pg	09 03 21.8	-2.3
48nm,0.7s							
KST				eS	Sb	09 04 03.4	+2.1
113nm,0.8s							
USP	Ospenovka	3.39	0	P	Pg	09 03 24.0	-0.6
SNR=9.4							
DGS	Degeres	3.51	16	eP	Pg	09 03 27.9	+1.1
45nm,0.6s							
DGS				eS	Sg	09 04 13.8	+1.5
236nm,0.8s							
IZV	Izvestkoviy	3.55	26	eP	Pg	09 03 26.8	-0.8
51nm,0.6s							
IZV				eS	Sg	09 04 12.2	-1.5
94nm,1.0s							
MTBS	Maitube	3.57	24	eP	Pb	09 03 24.6	+1.1
36nm,0.8s							
MTBS				eS	Sb	09 04 08.3	+1.0
69nm,0.5s							
TNSS	Tian-Shan	3.67	30	eP	Pg	09 03 30.3	+0.4
70nm,0.5s							
TNSS				eS	Sg	09 04 18.1	+0.5
67nm,0.9s							
MDOK	Medeo	3.82	30	⇑Pg	Pg	09 03 31.7	-1.1
22nm,0.6s							
MDOK				⇓Lg	Lg	09 04 24.3	
80nm,0.9s							
MDOK	Medeo	3.82	30	eP	Pg	09 03 30.8	-2.0
25nm,0.5s							
MDOK				eS	Sg	09 04 18.9	-3.4
57nm,0.8s							
KOTS	Kotyrbulak	3.90	30	eP	Pg	09 03 32.9	-1.4
16nm,0.5s							
KOTS				eS	Sg	09 04 22.5	-2.4
64nm,0.7s							
IUG	Iuzhnay	4.06	306	eP	Pg	09 03 38.3	+1.0
25nm,0.3s							
IUG				eS	Sg	09 04 32.0	+2.1
110nm,0.6s							
KTBS	Karatobe	4.18	23	eP	Pg	09 03 38.2	-1.5
18nm,0.5s							
KTBS				eS	Sg	09 04 31.8	-2.0
121nm,0.6s							
KUU	Kurty	4.25	19	eP	Pg	09 03 38.9	-2.3
9.7nm,0.4s							
KUU				eS	Sg	09 04 33.0	-3.3
114nm,0.9s							
SATY	Saty	4.35	42	eP	Pb	09 03 38.2	+1.5
38nm,1.5s							
SATY				eS	Sb	09 04 31.7	+2.0
36nm,1.3s							
KK31	Karatay Array	4.39	319	⇓Pn	Pn	09 03 29.6	+2.4
0.9nm,0.3s,baz=286,slow=10,SNR=3.0							
KK31				Pg	Pg	09 03 42.0	-1.7
6.8nm,0.5s,baz=144,slow=13,SNR=16							
KK31				⇑Sn	Sn	09 04 23.6	+4.7
10nm,0.4s,baz=141,slow=22,SNR=4.5							
KK31				⇓Lg	Lg	09 04 42.5	
18nm,0.5s,baz=148,slow=31,SNR=4.1							
CHKK	Chushkaly	4.40	24	eP	Pg	09 03 43.1	-0.9
9.6nm,0.2s							
CHKK				eS	Sg	09 04 39.8	-1.1
35nm,0.5s							
DZET	Dzherino	4.50	258	⇑Pn	Pn	09 03 29.3	+0.5
7.9nm,0.3s							
DZET				⇓Pg	Pb	09 03 40.4	+1.1
22nm,0.4s							
DZET				⇑Lg	Lg	09 04 42.2	
114nm,0.6s							
KURS	Kuram	4.55	36	eP	Pg	09 03 47.1	+0.2
15nm,0.5s							
KURS				eS	Sg	09 04 46.9	+1.1
14nm,0.4s							
BRLS	Borolday	4.70	314	eP	Pg	09 03 49.5	-0.1
0.8nm,0.4s							
BRLS				eS	Sg	09 04 50.6	0.0
7.3nm,0.7s							
UZB	Uzynbulak	4.73	45	eP	Pg	09 03 47.2	-3.0
11nm,0.8s							
UZB				eS	Sg	09 04 47.4	-4.2
17nm,0.6s							
SHLS	Shalkode	4.98	47	eP	Pg	09 03 58.8	+3.8
26nm,0.3s							
SHLS				eS	Sg	09 05 07.0	+7.4
35nm,1.0s							
ARXS	Arharly	5.01	29	eP	Pg	09 03 54.8	-0.7
23nm,0.8s							
ARXS				eS	Sg	09 05 00.3	-0.1
35nm,0.6s							
PDGK	Podgornoye	5.11	46	⇓Pn	Pn	09 03 39.2	+2.0
6.3nm,1.1s							
PDGK				⇑Pg	Pg	09 03 53.8	-3.6
12nm,0.6s							
PDGK				⇓Lg	Lg	09 05 05.4	
52nm,0.9s							
MNBS	Baschi	5.12	34	eP	Pb	09 03 52.6	+2.6
18nm,0.6s							
MNBS				eS	Sb	09 04 56.2	+4.2
29nm,0.8s							
OTUK	Ortayu	8.51	350	⇑Pn	Pn	09 04 26.3	+2.6
2.6nm,0.9s							
OTUK				⇑Lg	Lg	09 06 53.2	
25nm,1.1s							
MKAR	Makanchi Array	8.96	37	Pn	Pn	09 04 35.6	+5.7
0.1nm,0.3s,baz=218,slow=14,SNR=4.7							
WMQ	Urumqi	10.63	64	eP	Pn	09 04 53.0	+0.2
BVAR	Borovoye Array	13.45	349	Pn	P	09 05 41.0	+0.1
baz=162,slow=11,SNR=2.3							
BVAR				Lg	Lg	09 09 26.5	
0.1nm,0.3s,baz=274,slow=39,SNR=2.1							
AKTO	Aktyubinsk	15.66	318	Pn	Pn	09 06 02.0	+1.0
0.3nm,0.3s,baz=122,slow=13,SNR=3.4							
BRTR	Keskin Array B	31.18	283	P	P	09 08 39.0	-1.1
0.8nm,0.8s,baz=97,slow=7.4,SNR=3.5							
FINES	FINESS Array B	36.34	323	P	P	09 09 24.3	-0.1
0.6nm,0.4s,baz=110,slow=8.8,SNR=4.8							
ARCES	ARCESS Array B	39.16	335	P	P	09 09 47.3	-0.9
0.7nm,0.5s,baz=105,slow=8.9,SNR=5.0							
HFS	Hagfors	42.20	319	P	P	09 10 12.6	-0.8
1.6nm,0.8s,baz=140,slow=9.2,SNR=2.4							
TORD	Torodi Ar. Bea	68.51	269	P	P	09 13 20.5	-3.2
0.4nm,0.5s,baz=54,slow=5.6,SNR=5.7							

*ISN **26** 09:05:34.7±0.7,38°.51N×44°.47E, h0km±40km, ML3.5*
*NSSP **26** 09:05:35.8,38°.52N×44°.47E, h6km, Ms3.7*
*AZER **26** 09:05:35.4±0.7,38°.24N×44°.43E, h10km±7km, ml3.3/11, Error ellipse: s-maj=6.0km s-min=5.8km az=63.0*
*ISK **26** 09:05:36.8,38°.57N×44°.35E, h5km, ML3.4/13*
*CSEM **26** 09:05:37.7±0.2,38°.49N×44°.36E, h2km, ML3.4, Error ellipse: s-maj=5.2km s-min=3.6km az=129.0*
*DDA **26** 09:05:37.2,38°.53N×44°.28E, h4km, Ml3.6*
*TEH **26** 09:05:38.3,38°.53N×44°.24E, h5km, ML3.4*

ISC 26 09:05:37.0±1.1,38°.48N±0°.02×44°.39E±0°.02,h6km±10km,
n83,σ1s55/115,24C-22D,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLDR	Caldiran	0.76	331	PG	Pg	09 05 49.9	-1.7
CLDR				SG	Sg	09 06 00.5	-1.0
CLDR	Caldiran	0.76	331	iP	Pg	09 05 49.8	-1.7
CLDR				iS	Sg	09 06 00.4	-1.0
CLDR	Caldiran	0.76	331	ePg	Pg	09 05 49.9	-1.7
CLDR				eSg	Sg	09 06 00.5	-1.0
VANB	Van	0.79	279	PG	Pg	09 05 51.6	-0.7
VANB				SG	Sb	09 06 04.2	-0.1
VANB	Van	0.79	279	ePg	Pg	09 05 51.6	-0.7
VMUR	Van-Muradiye

ORD	**Ordubad**	**1.33**	**70**	⇓P	**Pb**	**09 06 01.9**	**-0.6**
ORD				⇓S	**Sg**	**09 06 21.4**	**+1.5**
ORD	**Ordubad**	**1.33**	**70**	⇓P	**Pb**	**09 06 01.9**	**-0.6**
ORD				⇓S	**Sg**	**09 06 21.4**	**+1.5**
CUKT	**Cukurca**	**1.38**	**207**	PN	**Pg**	**09 06 04.5**	**+1.1**
CUKT	**Cukurca**	**1.38**	**207**	*i* P	**Pb**	**09 06 03.1**	**-0.2**
CUKT	**Cukurca**	**1.38**	**207**	P	**Pb**	**09 06 03.1**	**-0.2**
CUKT	**Cukurca**	**1.38**	**207**	*e*Pn	**Pg**	**09 06 04.5**	**+1.1**
ITBZ	**Tabriz**	**1.40**	**100**	*e*		09 06 07.5	
	comp=Z,4μm,0.1s						
ITBZ				*e*Pn	**Pg**	**09 06 05.7**	**+1.7**
ITBZ				*e*Sg	**Sg**	**09 06 26.3**	**+4.1**
ITBZ				*e*		09 06 27.2	
	comp=E,5μm,0.2s						
ITBZ				*e*		09 06 32.0	
	comp=N,6μm,0.2s						
IGDI	**IGDIR**	**1.41**	**350**	*i* P	**Pb**	**09 06 03.3**	**-0.5**
TUTA	**Tutak**	**1.53**	**307**	*i* P	**Pb**	**09 06 05.1**	**-1.0**
TUTA	**Tutak**	**1.53**	**307**	P	**Pb**	**09 06 05.1**	**-1.0**
AGRB	**Hanur-Agry**	**1.54**	**316**	PN	**Pg**	**09 06 06.1**	**-0.5**
AGRB	**Hanur-Agry**	**1.54**	**316**	*e*Pn	**Pg**	**09 06 06.1**	**-0.5**
GNI	**Garni**	**1.69**	**9**	PN	**Pb**	**09 06 08.1**	**-0.5**
GNI	**Garni**	**1.69**	**9**	⇑*i*P	**Pg**	**09 06 10.1**	**+0.7**
GNI				⇑*i*S	**Sg**	**09 06 33.9**	**+2.6**
GNI	**Garni**	**1.69**	**9**	*e*Pn	**Pb**	**09 06 08.1**	**-0.5**
GNI	**Garni**	**1.69**	**9**	⇑P	**Pg**	**09 06 10.1**	**+0.7**
GNI				S	**Sg**	**09 06 33.9**	**+2.6**
SIRT	**Sirnak**	**1.82**	**238**	PN	**Pb**	**09 06 11.0**	**+0.1**
SIRT	**Sirnak**	**1.82**	**238**	*e*Pn	**Pb**	**09 06 11.0**	**+0.1**
GRS	**Goris**	**1.83**	**56**	⇓*i*P	**Pb**	**09 06 11.0**	**+0.1**
GRS				⇓*i*S	**Sg**	**09 06 36.0**	**+0.3**
GRS	**Goris**	**1.83**	**56**	⇓P	**Pb**	**09 06 11.0**	**+0.1**
GURO	**Guroymak-BITLI**	**1.85**	**273**	PN	**Pb**	**09 06 10.2**	**-1.2**
GURO	**Guroymak-BITLI**	**1.85**	**273**	*e*Pn	**Pb**	**09 06 10.2**	**-1.2**
EKAR	**Karacoban**	**1.97**	**294**	*i* P	**Pb**	**09 06 13.4**	**-0.1**
EKAR	**Karacoban**	**1.97**	**294**	P	**Pb**	**09 06 13.4**	**-0.1**
SRTM	**Siirt_Merkez**	**2.00**	**257**	*i* P	**Pb**	**09 06 13.9**	**0.0**
SRTM	**Siirt_Merkez**	**2.00**	**257**	P	**Pb**	**09 06 13.9**	**0.0**
EATA	**Eleskirt**	**2.02**	**314**	*i* P	**Pb**	**09 06 13.9**	**-0.5**
EATA	**Eleskirt**	**2.02**	**314**	P	**Pb**	**09 06 13.9**	**-0.5**
IHRS	**Heris**	**2.09**	**94**	*e*Pn	**Pg**	**09 06 16.1**	**-1.0**
IHRS				*e*		09 06 20.1	
	comp=Z,5μm,0.1s						
IHRS				*e*		09 06 54.7	
	comp=E,4μm,0.2s						
IHRS				*e*		09 06 56.5	
	comp=N,4μm,0.2s						
IBST	**Bostanabad**	**2.12**	**111**	*e*		09 06 48.3	
	comp=E,1μm,0.2s						
IBST				*e*		09 06 49.5	
	comp=N,2μm,0.2s						
IBST				*e*		09 06 50.1	
	comp=Z,2μm,0.2s						
MSL	**Mosul**	**2.31**	**206**	*e*Pn	**Pb**	**09 06 17.0**	**-2.2**
	SNR=4.0						
MSL				*e*Sn	**Sb**	**09 06 47.0**	**-1.0**
	SNR=4.0						
GDB	**GEDABAY**	**2.47**	**25**	⇓P	**Pn**	**09 06 18.7**	**+0.6**
	SNR=7.4						
GDB				⇓S	**Sb**	**09 06 52.5**	**-0.3**
GDB	**GEDABAY**	**2.47**	**25**	⇓P	**Pn**	**09 06 18.7**	**+0.6**
	SNR=7.4						
GDB				⇓S	**Sb**	**09 06 52.5**	**-0.3**
HOMI	**Horasan**	**2.48**	**310**	*i* P	**Pb**	**09 06 21.8**	**-0.4**
SVAN	**Silvan-Diyarba**	**2.53**	**264**	PN	**Pb**	**09 06 20.4**	**-2.5**
SVAN	**Silvan-Diyarba**	**2.53**	**264**	*e*Pn	**Pb**	**09 06 20.4**	**-2.5**
SENK	**Senkaya-Erzuru**	**2.61**	**323**	PN	**Pn**	**09 06 20.8**	**+0.8**
SENK	**Senkaya-Erzuru**	**2.61**	**323**	*e*Pn	**Pn**	**09 06 20.8**	**+0.8**
GANJ	**Ganja**	**2.63**	**34**	⇓P	**Pn**	**09 06 20.5**	**+0.4**
	SNR=7.1						
GANJ				⇑S	**Sb**	**09 06 55.0**	**-2.2**
GANJ	**Ganja**	**2.63**	**34**	⇓P	**Pn**	**09 06 20.5**	**+0.4**
	SNR=7.1						
GANJ				⇑S	**Sb**	**09 06 55.0**	**-2.2**
QZX	**Qazax, Azerbai**	**2.68**	**16**	⇓P	**Pn**	**09 06 21.7**	**+0.9**
QZX				⇓S	**Sb**	**09 06 57.3**	**-1.4**
QZX	**Qazax, Azerbai**	**2.68**	**16**	⇓P	**Pn**	**09 06 21.7**	**+0.9**
QZX				⇓S	**Sb**	**09 06 57.3**	**-1.4**
BNGB	**Bing˜]ll**	**2.94**	**281**	PN	**Pn**	**09 06 26.5**	**+2.0**
BINT	**Bingol**	**3.08**	**279**	*e*Pn	**Pn**	**09 06 26.5**	**+0.2**
LRK	**Lerik**	**3.10**	**86**	⇑P	**Pn**	**09 06 24.0**	**-2.7**
	SNR=29						
LRK	**Lerik**	**3.10**	**86**	⇑P	**Pn**	**09 06 24.0**	**-2.7**
	SNR=29						
LRK				⇓S	**Sn**	**09 07 01.7**	**-2.5**
YEDI	**Yedisu-Bingol**	**3.15**	**289**	PN	**Pn**	**09 06 28.5**	**+1.2**
YEDI	**Yedisu-Bingol**	**3.15**	**289**	*e*Pn	**Pn**	**09 06 28.5**	**+1.2**
GLBA	**Cilabad**	**3.22**	**75**	⇓P	**Pn**	**09 06 25.9**	**-2.2**
	SNR=9.2						
GLBA				⇑S	**Sn**	**09 07 05.4**	**-1.4**
GLBA	**Cilabad**	**3.22**	**75**	⇓P	**Pn**	**09 06 25.9**	**-2.2**
	SNR=9.2						
GLBA				⇑S	**Sn**	**09 07 05.4**	**-1.4**
MAZI	**Mazidag**	**3.28**	**253**	PN	**Pn**	**09 06 31.1**	**+2.0**
MAZI	**Mazidag**	**3.28**	**253**	*e*Pn	**Pn**	**09 06 31.1**	**+2.0**
SEKA	**Sheki**	**3.48**	**38**	⇑P	**Pn**	**09 06 33.1**	**+1.3**
	SNR=5.7						
SEKA				⇑S	**Sb**	**09 07 17.3**	**-4.3**
SEKA	**Sheki**	**3.48**	**38**	⇑P	**Pn**	**09 06 33.1**	**+1.3**
	SNR=5.7						
SEKA				⇑S	**Sb**	**09 07 17.3**	**-4.3**
PTK	**Pertek**	**3.93**	**278**	PN	**Pn**	**09 06 40.0**	**+1.9**
PTK	**Pertek**	**3.93**	**278**	*e*Pn	**Pn**	**09 06 40.0**	**+1.9**
XNQ	**Khinaliq**	**3.95**	**46**	⇑P	**Pn**	**09 06 38.5**	**+0.2**
	SNR=5.6						
XNQ	**Khinaliq**	**3.95**	**46**	⇑P	**Pn**	**09 06 38.5**	**+0.2**
	SNR=5.6						
XNQ				⇑S	**Sn**	**09 07 26.4**	**+1.4**
MALT	**Malatya**	**4.69**	**270**	PN	**Pn**	**09 06 51.3**	**+2.9**
MALT	**Malatya**	**4.69**	**270**	*e*Pn	**Pn**	**09 06 51.3**	**+2.9**
RTB	**Rutbah**	**6.37**	**213**	*e*Pn	**Pn**	**09 07 13.0**	**+1.5**
	SNR=4.0						
RTB				*e*Sn	**Sn**	**09 08 25.0**	**+0.4**
	SNR=4.0						

NIED ***26*** *09:10:00,39˙80N×142˙20E,h47km,Mw4.2 Best double couple: M₀2.31000×10¹⁵ NP1:φ=195.00000°,δ17.00000°, λ79.00000°. NP2:φ=26.00000°,δ73.00000°,λ93.00000°.*
MOS ***26*** *09:10:34.2±0.9,39˙77N×142˙24E,h43km,mb4.6/23,Error ellipse: s-maj=10.7km s-min=6.4km az=104.7*
ISCJB ***26*** *09:10:35.3±0.5,39˙88N±0˙03×142˙34E±0˙05,h50km±3km, mb4.4/53,MS3.3/19,Error ellipse: s-maj=6.7km s-min=4.1km az=25.2*
JMA ***26*** *09:10:36.7±0.1,39˙84N×142˙26E,h43km±1km,M4.0*
JMA Felt I J1.
NEIC ***26*** *09:10:38.4±0.6,39˙87N×142˙35E,h65km±5km,mb4.5/12, Error ellipse: s-maj=6.7km s-min=5.1km az=122.0*
NEIC Recorded [1 JMA] in Aomori and Iwate.
IDC ***26*** *09:10:38.1±2.4,39˙83N×142˙28E,h61km±21km,mb3.9/21, mb1 4.1/24,mb1mx3.9/73,mbtmp4.2/24,ML3.8/2,MS3.2/22, Ms1 3.2/22,ms1mx2.9/69,Error ellipse: s-maj=15.7km s-min=13.3km az=115.0*
BJI ***26*** *09:10:41.8,40˙48N×142˙23E,h90km,mb4.7/31,mB4.9/19*
ISC 26 09:10:36.5±0.7,39˙86N±0˙04×142˙38E±0˙05,h45km±6km, n137,σ1$60/140,mb4.5/53,MS3.4/20,4C-4D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.41**	**282**	P	**Pn**	**09 10 45.6**	**-0.8**
JTH				*e*S	**Sn**	**09 10 51.7**	**-1.7**
MIYJ	**Miyakonagasawa**	**0.52**	**237**	P	**Pn**	**09 10 46.6**	**-1.1**
MIYJ				*e*S	**Sn**	**09 10 53.5**	**-2.2**
JKZ	**Kuzumaki**	**0.82**	**279**	P	**Pn**	**09 10 50.9**	**-0.8**
JKZ				S	**Sn**	**09 11 00.9**	**-1.9**
JANG	**Nango**	**0.84**	**308**	P	**Pn**	**09 10 50.9**	**-1.1**
JANG				*e*S	**Sn**	**09 11 01.1**	**-2.2**
JOM	**Ohasama**	**0.92**	**246**	P	**Pn**	**09 10 52.1**	**-1.0**
JOM				*e*S	**Sn**	**09 11 03.6**	**-1.6**
OFUJ	**Ofunato**	**0.95**	**216**	P	**Pn**	**09 10 52.7**	**-0.8**
OFUJ				S	**Sn**	**09 11 04.0**	**-1.9**
JMK	**Ichinoseki**	**1.27**	**225**	P	**Pn**	**09 10 57.3**	**-0.6**
JMK				S	**Sn**	**09 11 12.2**	**-1.6**
JTM	**Tenmabayashi**	**1.37**	**313**	P	**Pn**	**09 10 58.6**	**-0.6**
JTM				S	**Sn**	**09 11 15.3**	**-0.8**
JAH	**Hinai**	**1.38**	**284**	P	**Pn**	**09 10 58.8**	**-0.5**
JRG	**Rokugo**	**1.43**	**252**	P	**Pn**	**09 10 59.0**	**-0.9**
ASAJ	**Asahikawa**	**4.26**	**2**	P	**Pn**	**09 11 40.0**	**+1.2**
	5.0nm,0.3s,baz=205,slow=11,SNR=24						
ASAJ				S	**Sn**	**09 12 25.5**	**-1.8**
	3.7nm,0.3s,baz=128,slow=19,SNR=3.2						
ASAJ	**Asahikawa**	**4.26**	**2**	*e*Pn	**Pn**	**09 11 39.5**	**+0.7**
ASAJ				*e*Sn	**Sn**	**09 12 25.5**	**-1.8**
MJAR	**Matsushiro Arr**	**4.66**	**226**	P	**Pn**	**09 11 46.3**	**+1.9**
	2.2nm,0.3s,baz=29,slow=12,SNR=53						
MJAR				LR	LR	09 13 49.7	
	comp=Z,153nm,20.8s,baz=45,slow=42						
MJB9	**Matsu-Tunnel**	**4.66**	**226**	*e*Pn	**Pn**	**09 11 46.1**	**+1.7**
MAJO	**Matsushiro**	**4.66**	**226**	*e*Pn	**Pn**	**09 11 45.9**	**+1.5**
MAJO	**Matsushiro**	**4.66**	**226**	⇓*e*P	**Pn**	**09 11 46.2**	**+1.8**
MAT	**Matsushiro**	**4.66**	**226**	P	**Pn**	**09 11 46.3**	**+1.9**
MAT				*e*S	**Sn**	**09 12 37.9**	**+0.6**
YUK	**Yuzh-Kuril'sk**	**4.92**	**31**	*e*P	**Pn**	**09 11 50.7**	**+2.9**
YUK				*i* S	**Sn**	**09 12 42.2**	**-1.1**
YUK				pmax	pmax		
	comp=Z,134nm,0.2s						
YUK				pmax	pmax		
	comp=N,42nm,0.1s						
YUK				smax	smax		
	comp=N,452nm,0.5s						
YUK				smax	smax		
	comp=E,495nm,0.4s						
SHO	**Shikotan**	**5.21**	**38**	*e*P	**Pn**	**09 11 51.5**	**-0.3**
SHO				*i* S	**Sn**	**09 12 45.9**	**-4.6**
SHO				pmax	pmax		
	comp=Z,23nm,0.4s						
SHO				pmax	pmax		
	comp=N,10.0nm,0.2s						
SHO				smax	smax		
	comp=N,142nm,0.2s						
SHO				smax	smax		
	comp=E,179nm,0.2s						
INU	**Inuyama**	**6.19**	**225**	*e*Pn	**Pn**	**09 12 07.2**	**+1.8**
KUR	**Kuril'sk**	**6.73**	**35**	P	**Pn**	**09 12 16.1**	**+3.5**
KUR				*e*S	**Sn**	**09 13 25.6**	**-2.3**
KUR				pmax	pmax		
	comp=Z,36nm,0.7s						
KUR				smax	smax		
	comp=N,82nm,0.5s						
KUR				smax	smax		
	comp=E,73nm,0.5s						
YSS	**Yuzh-Sakhalins**	**7.10**	**2**	*e*Pn	**Pn**	**09 12 18.0**	**+0.3**
YSS	**Yuzh-Sakhalins**	**7.10**	**2**	⇓*e*P	**Pn**	**09 12 20.8**	**+3.1**
YSS				*e*S	**Sn**	**09 13 41.9**	**+4.9**
YSS				pmax	pmax		
	comp=Z,20nm,0.6s						
YSS				smax	smax		
	comp=N,30nm,1.1s						
YSS				MLR	MLR		
	comp=Z,100nm,15.0s						
USRK	**Ussuriysk Ar.**	**8.87**	**303**	P	**Pn**	**09 12 44.0**	**+2.1**
	baz=106,slow=16						
USRK				LR	LR	09 16 00.2	
	comp=Z,153nm,19.1s,baz=139,slow=36						
MDJ	**Mudanjiang**	**10.61**	**301**	P	**Pn**	**09 13 05.3**	**-0.5**
MDJ				pmax	pmax		
	comp=Z,39nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,120nm,3.7s						
MDJ	**Mudanjiang**	**10.61**	**301**	*e*Pn	**Pn**	**09 13 08.0**	**+2.2**
JNU	**Nakatsue**	**11.43**	**238**	LR	LR	09 18 24.0	
	comp=Z,83nm,18.4s,baz=304,slow=41						
KSRS	**Korea Array**	**11.56**	**263**	P	**Pn**	**09 13 23.2**	**+4.4**
	comp=Z,0.3nm,0.3s,baz=75,slow=13,SNR=5.5						
KSRS				LR	LR	09 17 21.9	
	comp=Z,86nm,20.7s,baz=94,slow=35						
KS15	**Wonju Array Si**	**11.59**	**263**	*e*Pn	**Pn**	**09 13 20.1**	**+0.9**
KS15				*e*		09 13 30.5	
KSAR	**Wonju Array Be**	**11.59**	**263**	P	**Pn**	**09 13 23.2**	**+3.9**
KSAR	**Wonju Array Be**	**11.59**	**263**	P	**Pn**	**09 13 23.2**	**+3.9**
KLR	**Kul'dur**	**12.04**	**325**	*i* P	**Pn**	**09 13 26.0**	**+0.6**
PETK	**Petropavlovsk-**	**16.89**	**33**	LR	LR	09 21 15.7	
	comp=Z,23nm,20.2s,baz=224,slow=38						
JOW	**Kunigami**	**17.51**	**226**	*e*P	P	09 14 47.4	+9.4
BJI	**Beijing**	**20.07**	**279**	P	**P**	**09 15 04.5**	**-1.5**
BJI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MA2	**Magadan**	**20.44**	**12**	LR	LR	09 24 09.4	
	comp=Z,25nm,19.8s,baz=252,slow=40						
NJ2	**Nanjing**	**20.54**	**255**	*e*P	Pn	09 15 16.3	+2.7
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
YAK	**Yakutsk**	**23.51**	**345**	LR	LR	09 24 57.5	
	comp=Z,27nm,19.1s,baz=111,slow=36						
YAK	**Yakutsk**	**23.51**	**345**	*e*P	**P**	**09 15 38.8**	**-3.3**
YAK				*e**PP	**pP**	**09 15 50.4**	**-3.2**
YAK				*e*S	S	09 19 39.8	-13
YAK				*e**SS	sS	09 19 55.1	-17
YAK				pmax	pmax		
	comp=Z,23nm,1.1s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.4s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.3s						
YAK				smax	smax		
	comp=N,59nm,4.0s						
YAK				smax	smax		
	comp=E,21nm,2.5s						
SEY	**Seymchan**	**23.88**	**11**	*ce*P	**P**	**09 15 45.6**	**+0.1**
BOD	**Bodaibo**	**25.62**	**324**	*e*P	**P**	**09 15 59.3**	**-2.1**
BOD				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GUMO	**Guam**	**26.26**	**175**	LR	LR	09 25 36.7	
	comp=Z,21nm,21.3s,baz=22,slow=34						
ULN	**Ulaanbaatar**	**26.52**	**299**	*e*P	**P**	**09 16 08.5**	**-1.3**
	comp=Z,2.2nm,0.8s						
ULN	**Ulaanbaatar**	**26.52**	**299**	*ce*P	**P**	**09 16 08.1**	**-1.7**
ULN				pmax	pmax		
	comp=Z,7.0nm,1.7s						
SONA1	**Songino Array**	**26.95**	**299**	*e*P	**P**	**09 16 13.2**	**-0.5**
SONA0	**Songino Array**	**26.96**	**299**	*e*P	**P**	**09 16 13.4**	**-0.4**
SONM	**Songino Array**	**26.96**	**299**	P	**P**	**09 16 13.4**	**-0.4**
	comp=Z,1.4nm,0.6s,baz=90,slow=7.5,SNR=7.5						
SONM				LR	LR	09 27 24.4	
	comp=Z,102nm,18.1s,baz=104,slow=37						
H11N2	**WAKE ISLAND Hy**	**29.08**	**126**	T	T	09 47 18.9	
	baz=319,slow=75,SNR=358						
H11N1	**WAKE ISLAND Hy**	**29.09**	**126**	T	T	09 47 17.0	
	baz=319,slow=75,SNR=354						
H11N3	**WAKE ISLAND Hy**	**29.09**	**126**	T	T	09 47 21.5	
	baz=319,slow=75,SNR=463						
TLY	**Talaya**	**29.15**	**307**	LR	LR	09 28 47.5	
	comp=Z,50nm,19.2s,baz=96,slow=37						
ZAK	**Zakamensk**	**29.21**	**304**	*e*P	**P**	**09 16 32.6**	**-1.2**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
H11S1	**WAKE ISLAND Hy**	**29.88**	**128**	T	T	09 48 27.0	
	baz=321,slow=76,SNR=34						
H11S3	**WAKE ISLAND Hy**	**29.89**	**128**	T	T	09 48 27.0	
	baz=321,slow=76,SNR=30						
H11S2	**WAKE ISLAND Hy**	**29.90**	**128**	T	T	09 48 26.5	
	baz=321,slow=76,SNR=31						
LZH	**Lanzhou**	**30.45**	**275**	*e*P	**P**	**09 16 48.3**	**+3.3**
LZH				pP	sP	09 17 08.0	+5.5
LZH				sP	pP	09 17 19.0	+22
LZH				*e*PP	**PnPn**	**09 17 49.0**	**+4.2**
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
LZH				pmax	pmax		
	comp=Z,93nm,4.6s						
LZH				LR	LR		
	comp=Z,230nm,12.9s						
LZH				LR	LR		
	comp=Z,260nm,13.2s						
LZH				LR	LR		
	comp=Z,340nm,16.5s						
CD2	**Chengdu**	**32.52**	**266**	P	**P**	**09 17 05.5**	**+2.4**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA	**Guiyang**	**32.53**	**257**	*e*P	P	09 17 09.0	+5.7
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TIXI	**Tiksi**	**32.59**	**352**	P	**P**	**09 17 02.8**	**-0.4**
	comp=Z,1.4nm,0.3s,baz=260,slow=2.2,SNR=3.3						
TIXI	**Tiksi**	**32.59**	**352**	*i* P	**P**	**09 17 02.7**	**-0.4**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KMI	**Kunming**	**36.21**	**258**	P	P	09 17 41.5	+6.2
KMI				pmax	pmax		
	comp=Z,12nm,0.5s						
DGZ	**Jazzator, Alta**	**39.42**	**303**	⇓*i*P	**P**	**09 18 02.5**	**+0.5**
DGZ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
WMQ	**Urumqi**	**40.31**	**294**	P	**P**	**09 18 10.3**	**+0.9**
WMQ				pP	sP	09 18 27.5	+0.4
WMQ				pmax	pmax		
	comp=Z,39nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,160nm,4.5s						
WMQ				LR	LR		
	comp=Z,140nm,39.1s						
WMQ				LR	LR		
	comp=Z,66nm,26.1s						
ZAA1	**Zalesovo Array**	**40.63**	**310**	*e*P	**P**	**09 18 11.5**	**-0.2**
ZALV	**Zalesovo Beam**	**40.63**	**310**	P	**P**	**09 18 11.5**	**-0.3**
	comp=Z,5.2nm,0.5s,baz=90,slow=5.9,SNR=3.8						
ZALV				LR	LR	09 35 39.4	
	comp=Z,56nm,18.9s,baz=69,slow=37						
CHTO	**Chiang Mai**	**42.77**	**254**	*e*P	**P**	**09 18 32.8**	**+3.1**
CMAR	**Chiang Mai Arr**	**42.99**	**253**	P	**P**	**09 18 29.2**	**-2.3**
	comp=Z,1.3nm,0.3s,baz=57,slow=5.5,SNR=4.9						
CMAR				LR	LR	09 37 09.8	
	comp=Z,15nm,19.6s,baz=185,slow=37						
MK01	**Makanchi Array**	**43.32**	**300**	*e*P	**P**	**09 18 33.1**	**-0.7**
MK31	**Makanchi Array**	**43.32**	**300**	*e*P	**P**	**09 18 33.4**	**-0.5**
MK31	**Makanchi Array**	**43.32**	**300**	*e*P	**P**	**09 18 33.4**	**-0.5**
MK32	**Makanchi Array**	**43.32**	**300**	*e*P	**P**	**09 18 33.6**	**-0.3**
MK32				*e*PP	**PcP**	**09 20 21.6**	**-0.4**
MKAR	**Makanchi Array**	**43.32**	**300**	P	**P**	**09 18 33.6**	**-0.3**
	comp=Z,2.0nm,0.4s,baz=81,slow=10,SNR=35						
MKAR				PcP	**PcP**	**09 20 21.6**	**-0.4**
	comp=Z,0.7nm,0.8s,baz=64,slow=3.4,SNR=2.6						
MKAR				LR	LR	09 36 50.0	
	comp=Z,45nm,21.2s,baz=42,slow=36						
MKAR	**Makanchi Array**	**43.32**	**300**	*e*P	**P**	**09 18 33.5**	**-0.4**
	comp=Z,28nm,0.6s						
MKAR				PcP	**PcP**	**09 20 21.6**	**-0.4**
MAKZ	**Makanchi**	**43.53**	**300**	*e*P	**P**	**09 18 35.1**	**-0.5**
	comp=Z,4.5nm,0.8s						
MAKZ	**Makanchi**	**43.53**	**300**	*e*P	**P**	**09 18 35.1**	**-0.5**
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
RSO	**Redoubt South**	**44.24**	**40**	*e*P	**P**	**09 18 41.7**	**+0.4**
KDAK	**Kodiak Island**	**44.52**	**44**	P	**P**	**09 18 42.8**	**-0.5**
	comp=Z,9.6nm,1.0s,baz=239,slow=5.9,SNR=3.8						
KURK	**Kurchatov**	**44.84**	**306**	*e*P	**P**	**09 18 45.1**	**-0.8**
	comp=Z,7.8nm,1.0s						
KURK				*e*P	**P**	**09 18 46.1**	**+0.2**
KURK	**Kurchatov**	**44.84**	**306**	*ce*P	**P**	**09 18 44.9**	**-1.0**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KURBB	**Kurchatov Arra**	**44.91**	**306**	P	**P**	**09 18 46.1**	**-0.4**
	comp=Z,3.8nm,0.4s,baz=80,slow=8.7,SNR=27						
PDGK	**Podgornoye**	**46.18**	**296**	P	**P**	**09 18 55.7**	**-1.1**
PDGK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ILAR	**Eielson Array**	**46.72**	**34**	P	**P**	**09 19 00.5**	**-0.1**
	comp=Z,5.5nm,0.3s,baz=264,slow=6.3,SNR=13						
ILB	**Eielson Array**	**46.72**	**34**	*e*P	**P**	**09 19 00.5**	**-0.1**
TARG	**Taragay, Kyrgy**	**47.88**	**294**	*e*P	**P**	**09 19 10.4**	**-0.1**
	comp=Z,4.7nm,0.8s						
BVAR	**Borovoye Array**	**49.27**	**311**	P	**P**	**09 19 20.4**	**-0.1**
	comp=Z,1.7nm,0.5s,baz=78,slow=7.2,SNR=8.7						
BVAR				LR	LR	09 41 07.6	
	comp=Z,37nm,18.6s,baz=138,slow=37						
BRVK	**Borovoye**	**49.33**	**311**	*ce*P	**P**	**09 19 20.1**	**-0.8**
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
OTUK	**Ortayu**	**49.43**	**304**	P	**P**	**09 19 21.3**	**-0.5**
OTUK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KSH	**Kashi**	**49.99**	**292**	P	P	09 19 36.3	+10
KSH				pmax	pmax		
	comp=Z,150nm,4.4s						
MNAS	**Manas**	**51.28**	**297**	P	**P**	**09 19 36.1**	**+0.1**
MNAS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
INK	**Inuvik**	**51.54**	**28**	P	**P**	**09 19 38.1**	**+0.8**
	comp=Z,2.0nm,0.8s,baz=323,slow=5.1,SNR=3.8						
INK	**Inuvik**	**51.54**	**28**	*e*P	**P**	**09 19 37.6**	**+0.3**
	comp=Z,4.7nm,1.1s						
SFK	**Sufi-Kurgan**	**51.55**	**294**	P	**P**	**09 19 37.4**	**-0.8**
SFK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
NIL	**Nilore**	**54.49**	**287**	*e*P	**P**	**09 19 59.9**	**+0.2**
	comp=Z,7.4nm,0.8s						
NIL	**Nilore**	**54.49**	**287**	*e*P	**P**	**09 19 59.9**	**+0.2**
NIL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ARU	**Arti**	**54.77**	**317**	*d i*P	**P**	**09 20 01.1**	**-0.2**
ARU				*PP	**pP**	**09 20 15.3**	**+1.2**
ARU						09 22 00.8	
ARU				S	**S**	**09 27 38.7**	**+0.2**
ARU				SS	**SS**	**09 31 14.9**	**-6.5**
ARU				pmax	pmax		
	comp=Z,15nm,1.0s						
DZET	**Dzherino**	**55.34**	**294**	P	**P**	**09 20 05.8**	**0.0**
DZET				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ABKAR	**Akbulak array**	**56.73**	**309**	*e*P	**P**	**09 20 15.1**	**-0.4**
AKTO	**Aktyubinsk**	**57.38**	**311**	P	**P**	**09 20 19.6**	**-0.4**
	com

NIE	**Niedzica**	**77.50**	**325**	P	**P**	**09 22 27.5 +0.3**
BR101	**Keskin Array S**	**77.55**	**312**	*e*P	**P**	**09 22 27.7 -0.1**
BRTR	**Keskin Array B**	**77.55**	**312**	P	**P**	**09 22 27.7 -0.1**
	comp=Z,0.4nm,0.5s,baz=134,slow=3.6,SNR=3.8					
BRTR				LR	LR	10 02 02.0
	comp=Z,9.1nm,18.3s,baz=88,slow=40					
MLR	**Muntele Rosu**	**77.72**	**320**	LR	LR	10 00 11.1
	comp=Z,6.1nm,20.0s,baz=316,slow=38					
PRU	**Pruhonice**	**79.47**	**329**	P	**P**	**09 22 38.6 +0.6**
PRU				pmax	pmax	
	comp=Z,2.0nm,1.3s					
Q24A	**Divide**	**80.19**	**47**	*e*P	**P**	**09 22 41.9 -0.5**
	comp=Z,4.1nm,0.8s					
DAVOX	**Davos/Dischmat**	**83.90**	**329**	LR	LR	10 05 34.3
	comp=Z,24nm,18.2s,baz=81,slow=39					
TXAR	**Lajitas Array**	**87.81**	**53**	P	**P**	**09 23 22.5 +1.3**
	comp=Z,0.1nm,0.6s,baz=306,slow=3.2,SNR=3.5					
SNAA	**Sanae**	**143.66**	**198**	PKP	PKPab	09 30 02.1 +0.1
	comp=Z,1.0nm,0.7s,baz=202,slow=5.4,SNR=5.9					
SIV	**San Ignacio**	**148.64**	**47**	PKPbc	**PKPbc**	**09 30 19.6 +0.6**
	comp=Z,1.0nm,0.7s,baz=321,slow=1.0,SNR=9.2					

KRSC 26 09:24:06.0±1.7, 52°.66N×160°.81E, h41km±16km, ML3.9, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.65**	**313**	*i* P		Pn	09 24 18.5	-0.2
SPN					*e*S	Sn	09 24 26.3	-1.6
NLC	**Nalytchevo**	**1.03**	**301**	*e*P		Pn	09 24 24.2	+0.4
NLC					*e*S	Sn	09 24 36.9	-0.1
DALK	**Dalny**	**1.30**	**288**	*e*P		Pn	09 24 28.8	+1.2
DALK					*e*S	Sn	09 24 45.7	+1.9
SDLR	**Sedlovina**	**1.32**	**299**	*e*P		Pn	09 24 29.0	+1.0
UGLR	**Uglovaya**	**1.32**	**296**	*i* P		Pn	09 24 29.4	+1.4
PET	**Petropavlovsk**	**1.36**	**287**	*e*P		Pn	09 24 29.9	+1.5
PET					*e*S	Sn	09 24 46.0	+0.8
AVH	**Avacha**	**1.39**	**297**	*e*P		Pn	09 24 30.3	+1.3
KRER	**Koryakskii**	**1.41**	**298**	*e*P		Pn	09 24 30.7	+1.4
RUS	**Russkaya**	**1.42**	**262**	*e*P		Pn	09 24 31.1	+1.9
RUS				*e*P			09 24 31.2	
RUS					*e*S	Sn	09 24 48.5	+1.8
KOK	**Koryaka**	**1.46**	**297**	*e*P		Pn	09 24 31.8	+1.9
KRX	**Arik**	**1.48**	**299**	*e*P		Pn	09 24 31.6	+1.3
KII	**Karymskiy**	**1.60**	**330**	*e*P		Pn	09 24 33.9	+2.0
KII					*e*S	Sn	09 24 53.3	+1.9
MTVR	**Mutnovka**	**1.61**	**265**	*e*P		Pn	09 24 34.4	+2.4
MTVR					*e*S	Sn	09 24 54.2	+2.5
KRMR	**Karymshinskiy**	**1.64**	**277**	*e*P		Pn	09 24 34.1	+1.9
KRMR					*e*S	Sn	09 24 53.2	+1.1
GRL	**Gorelyy**	**1.67**	**267**	*e*P		Pn	09 24 35.2	+2.4
ASAK	**Asacha**	**1.80**	**262**	*e*P		Pn	09 24 37.4	+2.9
ASAK					*e*S	Sn	09 24 59.5	+3.3
KDTR	**Khodutka, Kamc**	**1.88**	**244**	*e*P		Pn	09 24 38.5	+2.9
KDTR					*e*S	Sn	09 25 01.1	+3.0
MKZ	**Mys Kozlova**	**1.98**	**16**	*e*P		Pn	09 24 39.2	+2.3
MKZ					*e*S	Sn	09 25 02.9	+2.4
GNL	**Ganaly**	**2.02**	**302**	*e*P		Pn	09 24 40.4	+2.9
GNL					*e*S	Sn	09 25 04.4	+2.8
APC	**Apacha**	**2.23**	**278**	*e*P		Pn	09 24 43.6	+3.2
APC					*e*S	Sn	09 25 10.3	+3.6
KZV	**Kizimen**	**2.48**	**353**	*e*P		Pn	09 24 47.2	+3.2
KZV					*e*S	Sn	09 25 16.9	+3.8
MIPR	**Malaya Ipel'ka**	**2.51**	**263**	*e*P		Pn	09 24 48.6	+4.4
TUMR	**Tumrok**	**2.66**	**352**	*e*P		Pn	09 24 50.0	+3.6
TUMR					*e*S	Sn	09 25 21.4	+3.9
PAU	**Pauzhetka**	**2.74**	**246**	*e*P		Pn	09 24 51.9	+4.5
KMNR	**Kamenistaya**	**3.12**	**354**	*e*P		Pn	09 24 56.9	+4.1
BZMR	**Bezymyannaya**	**3.29**	**357**	*e*P		Pn	09 24 59.7	+4.6
KIRR	**Kirishev**	**3.31**	**355**	*e*P		Pn	09 24 58.0	+2.6
BZWR	**Bezymyannyi-We**	**3.32**	**357**	*e*P		Pn	09 24 59.7	+4.2
KPT	**Kopyto**	**3.33**	**354**	*e*P		Pn	09 24 59.3	+3.7
LGNR	**Loginova**	**3.43**	**359**	*e*P		Pn	09 25 02.3	+5.1
KOZ	**Kozyrevsk**	**3.45**	**351**	*e*P		Pn	09 25 00.4	+3.2
CIRR	**Tsirk**	**3.47**	**359**	*e*P		Pn	09 25 02.8	+5.3
ESO	**Esso**	**3.50**	**340**	*e*P		Pn	09 25 00.7	+2.9
SKR	**Severo-Kuril's**	**3.53**	**238**	*e*P		Pn	09 25 01.0	+2.8
SKR					*e*S	Sn	09 25 40.7	+2.1
KRSR	**Krestovskiy**	**3.57**	**358**	*e*P		Pn	09 25 03.0	+4.1
KBTR	**Krutoberegovo**	**3.75**	**17**	*e*P		Pn	09 25 06.4	+5.2
KBTR					*e*S	Sn	09 25 48.8	+4.8
BDR	**Baidarnaya**	**3.93**	**3**	*e*P		Pn	09 25 07.5	+3.8
SMKR	**Semkarok**	**3.95**	**5**	*e*P		Pn	09 25 09.2	+5.1
BKI	**Bering**	**3.98**	**48**	*e*P		Pn	09 25 07.2	+2.9
BKI					*e*S	Sn	09 25 50.1	+0.5
SRKR	**Sorokina**	**4.01**	**3**	*e*P		Pn	09 25 10.5	+5.6

IDC 26 09:26:04.7±1.9, 4°.89N×124°.28E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.4/56, mbtmp3.5/4, Error ellipse: s-maj=131.2km s-min=24.4km az=67.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**22.88**	**177**	P		P	09 31 10.7	+0.6
	0.5nm,0.4s,baz=12,slow=8.0,SNR=2.8							
WRA	**Warramunga Arr**	**26.58**	**158**	P		P	09 31 44.6	-0.3
	0.2nm,0.4s,baz=336,slow=10,SNR=6.1							
ASAR	**Alice Springs**	**29.89**	**162**	P		P	09 32 14.1	-0.3
	0.2nm,0.3s,baz=340,slow=6.7,SNR=4.3							
MKAR	**Makanchi Array**	**55.23**	**326**	P		P	09 35 39.5	-0.1
	0.8nm,0.5s,baz=114,slow=8.8,SNR=6.3							

*SOME **26** 09:37:05.6, 44°.60N×82°.03E, h10km*
*NNC **26** 09:37:07.6±1.8, 44°.66N×81°.90E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=29.9km s-min=5.6km az=117.0*
*ISCJB **26** 09:37:08.7±1.3, 44°.64N±0°.06×82°.2E±0°.1, h10km, Error ellipse: s-maj=14.5km s-min=5.2km az=33.1*

ISC 26 09:37:05.2±1.5, 44°.68N±0°.07×82°.12E±0°.08, h10km, n12, σ1°42/23, 4C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.70**	**259**	*e*P		**Pg**	**09 37 37.7**	**-0.2**
	18nm,0.3s							
DJR					*e*S	**Sg**	**09 38 01.2**	**+1.3**
	19nm,0.3s							
KAPS	**Kapalarasan**	**2.05**	**288**	*e*P		**Pg**	**09 37 43.7**	**-0.8**
	5.3nm,0.3s							
KAPS					*e*S	**Sg**	**09 38 11.1**	**-0.1**
	18nm,0.4s							
MK31	**Makanchi Array**	**2.12**	**3**	⇑Pn		**Pg**	**09 37 45.5**	**-0.3**
	3.4nm,0.2s,baz=182,slow=14,SNR=196							
MK31				⇑Sn		**Sg**	**09 38 12.9**	**-0.3**
	3.4nm,0.2s,baz=184,slow=27,SNR=25							
MAKZ	**Makanchi**	**2.13**	**357**	⇑Pn		**Pg**	**09 37 44.7**	**-1.3**
	3.2nm,0.5s							
MAKZ				⇑Sn		**Sg**	**09 38 12.9**	**-0.8**
	5.9nm,0.3s							
PDGK	**Podgornoye**	**2.33**	**235**	⇓Pg		**Pb**	**09 37 47.1**	**-0.3**
	10.0nm,0.9s							
PDGK				⇓Lg		Lg	09 38 18.5	
	12nm,0.5s							
SHLS	**Shalkode**	**2.45**	**233**	*e*P		**Pn**	**09 37 46.4**	**+1.0**
	13nm,0.3s							
SHLS					*e*S	**Sn**	**09 38 15.8**	**+0.3**
	44nm,0.2s							
UZB	**Uzynbulak**	**2.71**	**237**	*e*P		**Pb**	**09 37 53.3**	**-0.7**
	5.5nm,0.3s							
UZB					*e*S	**Sb**	**09 38 27.8**	**+0.5**
	7.0nm,0.4s							
MNBS	**Baschi**	**2.73**	**259**	*e*P		**Pg**	**09 37 55.4**	**-2.2**
	4.0nm,0.4s							
MNBS					*e*S	**Sg**	**09 38 31.6**	**-1.5**
	11nm,0.4s							
KPKS	**Kokpek**	**2.76**	**245**	*e*P		**Pb**	**09 37 53.5**	**-1.2**
	11nm,0.1s							
KPKS					*e*S	**Sb**	**09 38 27.6**	**-1.0**
	20nm,0.5s							
ARXS	**Arharly**	**3.11**	**263**	*e*P		**Pb**	**09 38 01.6**	**+0.9**
	2.6nm,0.3s							
ARXS					*e*S	**Sg**	**09 38 42.2**	**-2.9**
	9.4nm,0.5s							
SATY	**Saty**	**3.14**	**240**	*e*P		**Pb**	**09 38 01.6**	**+0.4**
	6.8nm,0.2s							
SATY					*e*S	**Sb**	**09 38 41.9**	**+2.4**
	15nm,0.2s							
KTBS	**Karatobe**	**4.03**	**258**	*e*P		**Pb**	**09 38 16.6**	**+0.3**
	0.8nm,1.0s							
KTBS					*e*S	**Sb**	**09 39 08.0**	**+2.9**
	4.4nm,0.9s							

MEX 26 09:41:20.3±0.4, 15°.76N×93°.96W, h79km±8km, MD3.7, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PCIG		**0.71**	**94**	*e*P		Pn	09 41 34.7	-1.3
PCIG					*e*S	Sn	09 41 46.0	-1.6
TGIG		**1.29**	**38**	*e*P		Pn	09 41 41.9	-1.1
TGIG					*e*S	Sn	09 41 57.8	-2.2
CCIG	**Comitan**	**1.83**	**73**	*e*P		Pn	09 41 48.7	-1.3
CCIG					*e*S	Sn	09 42 11.1	-1.5

*IDC **26** 09:52:35.0±1.5, 2°.50N×90°.27E, h0km, mb3.9/5, mb1 4.0/8, mb1mx3.6/68, mbtmp3.9/8, ML3.7/2, MS3.0/1, Ms1 3.0/1, ms1mx2.3/59, Error ellipse: s-maj=43.9km s-min=21.4km az=53.0*

ISC 26 09:52:41.3±1.4, 2°.6N±0°.2×90°.6E±0°.1, h35km, n16, σ0°76/9, mb4.1/5, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**8.37**	**89**	Pn		**Pn**	**09 54 40.3**	**0.0**
	1.2nm,0.3s,baz=180,slow=4.2,SNR=2.4							
PSI					Sn	**Sn**	**09 56 13.1**	**-0.6**
	1.1nm,0.3s,baz=0.3,slow=11,SNR=3.8							
PALK	**Pallekele**	**10.84**	**296**	Pn		Pn	09 55 08.6	-5.6
	0.5nm,0.3s,baz=115,slow=14,SNR=2.4							
PALK					Sn	Sn	09 56 57.5	-17
	2.6nm,0.3s,baz=117,slow=5.9,SNR=7.5							
CMAR	**Chiang Mai Arr**	**17.76**	**27**	P		**P**	**09 56 47.3**	**+0.8**
	baz=203,slow=11,SNR=3.2							
H08S2	**Diego Garcia H**	**20.70**	**240**	T		T	10 18 13.8	
	baz=60,slow=74							
H08S3	**Diego Garcia H**	**20.70**	**240**	T		T	10 18 13.8	
	baz=60,slow=74							
H08S1	**Diego Carcia H**	**20.71**	**240**	T		T	10 18 12.7	
	baz=60							
H01W3	**Cape Leeuwin H**	**43.38**	**151**	T		T	10 47 02.5	
	baz=326,slow=76,SNR=6.9							
H01W2	**Cape Leeuwin H**	**43.39**	**151**	T		T	10 46 59.1	
	baz=326,slow=76,SNR=8.7							
H01W1	**Cape Leeuwin H**	**43.40**	**151**	T		T	10 46 59.2	
	baz=326,slow=76,SNR=6.8							
MKAR	**Makanchi Array**	**44.58**	**352**	P		**P**	**10 00 49.2**	**-0.8**
	0.5nm,0.7s,baz=164,slow=8.6,SNR=5.5							
SONM	**Songino Array**	**47.08**	**15**	P		**P**	**10 01 10.5**	**+0.7**
	1.9nm,0.4s,baz=197,slow=8.2,SNR=12							
WRA	**Warramunga Arr**	**48.47**	**120**	P		**P**	**10 01 21.1**	**+0.2**
	0.7nm,0.6s,baz=297,slow=8.6,SNR=10.0							
KSRS	**Korea Array**	**48.76**	**40**	LR		LR	10 23 43.5	
	comp=Z,13nm,18.1s,baz=260,slow=38							
ZALV	**Zalesovo Beam**	**51.38**	**356**	P		**P**	**10 01 41.3**	**-1.1**
	1.3nm,0.5s,baz=163,slow=7.5,SNR=5.3							
STKA	**Stephens Creek**	**59.31**	**130**	P		**P**	**10 02 40.0**	**+0.1**
	1.5nm,0.9s,baz=315,slow=10.0,SNR=4.0							
TXAR	**Lajitas Array**	**145.43**	**22**	PKPbc		**PKPbc**	**10 12 16.3**	**-0.1**
	0.5nm,0.8s,baz=358,slow=2.7,SNR=6.2							

*ISCJB **26** 10:06:03.7±0.5, 50°.19N±0°.03×18°.90E±0°.03, h0km, Error ellipse: s-maj=4.1km s-min=2.7km az=2.2*
*IPEC **26** 10:06:04.3±0.2, 50°.17N×19°.06E, h2km±1km, ML2.1/3, Error ellipse: s-maj=2.7km s-min=1.1km az=166.0*
*CSEM **26** 10:06:04.4±0.2, 50°.22N×18°.99E, h2km, ML2.1, Error ellipse: s-maj=4.8km s-min=2.3km az=2.0*
*PRU **26** 10:06:04.4, 50°.23N×18°.98E, h0km*
*WAR **26** 10:06:05.1, 50°.21N×19°.08E, h1km, Mw2.7*

ISC 26 10:06:04.4±0.8, 50°.15N±0°.03×19°.02E±0°.02, h0km, n30, σ0°56/58, Poland

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CHZP	**Chorzow**	**0.14**	**353**	*e*Pg		**Pg**	**10 06 07.3**	**+0.2**
CHZP					*e*Sg	**Sg**	**10 06 09.2**	**+0.2**
CHZP	**Chorzow**	**0.14**	**353**	*e*Pg		**Pg**	**10 06 07.3**	**+0.2**
CHZP					*e*Sg	**Sg**	**10 06 09.2**	**+0.2**
OJC	**Ojcow**	**0.51**	**82**	*e*Pg		**Pg**	**10 06 13.8**	**-0.2**
OJC					*e*Sg	**Sg**	**10 06 20.5**	**-0.1**
OJC	**Ojcow**	**0.51**	**82**	*e*Pg		**Pg**	**10 06 13.8**	**-0.2**
OJC					*e*Sg	**Sg**	**10 06 20.5**	**-0.1**
OJC	**Ojcow**	**0.51**	**82**	*e*Pg		**Pg**	**10 06 13.8**	**-0.2**
OJC					*e*Sg	**Sg**	**10 06 20.5**	**-0.1**
OKC	**Ostrava-Krasne**	**0.65**	**241**	*e*PG		**Pg**	**10 06 17.2**	**+0.5**
OKC					*e*SG	**Sg**	**10 06 26.2**	**+1.1**
	comp=Z,31nm,0.6s							
MORC	**Moravsky Berou**	**1.02**	**249**	*e*Pg		**Pg**	**10 06 24.3**	**+0.3**
	baz=67							
MORC					*e*Sg	**Sg**	**10 06 37.3**	**0.0**
	22nm,0.3s,baz=67							
MORC	**Moravsky Berou**	**1.02**	**249**	*e*PG		**Pg**	**10 06 24.3**	**+0.3**
MORC					*e*SG	**Sg**	**10 06 37.4**	**+0.1**
MORC	**Moravsky Berou**	**1.02**	**249**	*e*Pg		**Pg**	**10 06 24.3**	**+0.3**
	baz=67							
MORC					*e*Sg	**Sg**	**10 06 37.3**	**0.0**
	22nm,0.3s,baz=67							
LANS	**Liptovska Anna**	**1.04**	**164**	*e*PG		**Pb**	**10 06 25.7**	**+0.4**
LANS					*e*SG	**Sn**	**10 06 40.8**	**-0.8**
LANS	**Liptovska Anna**	**1.04**	**164**	*e*Pg		**Pb**	**10 06 25.7**	**+0.4**
LANS					*e*Sg	**Sn**	**10 06 40.8**	**-0.8**
NIE	**Niedzica**	**1.11**	**131**	*e*Pg		**Pn**	**10 06 27.3**	**+0.1**
NIE					*e*Sg	**Sn**	**10 06 43.3**	**+0.1**
NIE	**Niedzica**	**1.11**	**131**	*e*Pg		**Pn**	**10 06 27.3**	**+0.1**
NIE					*e*Sg	**Sn**	**10 06 43.3**	**+0.1**
NIE	**Niedzica**	**1.11**	**131**	*e*Pg		**Pn**	**10 06 27.3**	**+0.1**
NIE					*e*Sg	**Sn**	**10 06 43.3**	**+0.1**
KRLC	**Kraliky**	**1.44**	**268**	*e*PG		**Pn**	**10 06 30.6**	**-1.2**
KRLC					*e*SG	**Sg**	**10 06 49.8**	**-0.9**
	comp=Z,7.2nm,0.4s							
VYHS	**Vyhne**	**1.66**	**184**	*e*PN		**Pn**	**10 06 34.9**	**+0.1**
VYHS					*e*SN	**Sb**	**10 06 57.5**	**+0.1**
VYHS					*e*LG	Lg	10 07 03.1	
VYHS	**Vyhne**	**1.66**	**184**	*e*Pg		**Pn**	**10 06 34.9**	**+0.1**
VYHS					*e*Sn	**Sb**	**10 06 57.5**	**+0.1**
DPC	**Dobruska-Polom**	**1.74**	**278**	*e*PG		**Pn**	**10 06 35.3**	**-0.7**
DPC					*e*SG	**Sn**	**10 06 59.2**	**+0.3**
	comp=Z,23nm,0.5s							
VRAC	**Vranov**	**1.79**	**243**	*e*Pn		**Pn**	**10 06 37.0**	**+0.5**
	baz=61							
VRAC					*e*Sg	**Sb**	**10 07 01.2**	**+0.3**
	13nm,0.5s,baz=61							
VRAC	**Vranov**	**1.79**	**243**	*e*PN		**Pn**	**10 06 37.1**	**+0.5**
VRAC					*e*SG	**Sb**	**10 07 01.2**	**+0.3**
VRAC	**Vranov**	**1.79**	**243**	*e*Pn		**Pn**	**10 06 37.0**	**+0.5**
	baz=61							
VRAC					*e*Sg	**Sb**	**10 07 01.2**	**+0.3**
	13nm,0.5s,baz=61							
KSP	**Ksiaz**	**1.87**	**293**	*e*Pg		**Pb**	**10 06 39.6**	**+0.1**
KSP					*e*Sg	**Sg**	**10 07 04.5**	**-0.1**
KSP	**Ksiaz**	**1.87**	**293**	*e*Pg		**Pb**	**10 06 39.6**	**+0.1**
KSP					*e*Sg	**Sg**	**10 07 04.5**	**-0.1**
UPC	**Upice**	**1.96**	**282**	*e*PG		**Pn**	**10 06 38.8**	**-0.1**
KRUC	**Moravsky**	**2.03**	**238**	*e*Pn		**Pn**	**10 06 39.8**	**0.0**
	baz=56							
KRUC					*e*Sg	**Sg**	**10 07 08.8**	**-0.6**
	11nm,0.4s,baz=56							
KRUC	**Moravsky**	**2.03**	**238**	*e*PN		**Pn**	**10 06 39.9**	**+0.1**
KRUC					*e*SG	**Sg**	**10 07 08.8**	**-0.6**
KRUC	**Moravsky**	**2.03**	**238**	*e*Pn		**Pn**	**10 06 39.8**	**0.0**
	baz=56							
KRUC					*e*Sg	**Sg**	**10 07 08.8**	**-0.6**
	11nm,0.4s,baz=56							
GOPC	**GO Pecny, Ondr**	**2.74**	**267**	*e*SG		**Sg**	**10 07 30.6**	**-1.8**
	comp=Z,7.5nm,0.4s							
PRU	**Pruhonice**	**2.89**	**268**	*e*SG		**Sb**	**10 07 34.6**	**+1.9**
	comp=Z,6.6nm,0.5s							
KHC	**Kasperske Hory**	**3.68**	**256**	*e*PN		**Pn**	**10 07 02.5**	**-0.1**
KHC					*e*PG	**Pb**	**10 07 09.5**	**-0.8**
KHC					*e*SG	**Sg**	**10 08 01.7**	**-0.9**
	comp=Z,8.8nm,0.6s							

*IDC **26** 10:18:20.3±1.4, 21°.90S×168°.87E, h0km, mb3.9/6, mb1 4.0/7, mb1mx3.7/46, mbtmp3.9/7, ML3.8/1, MS3.3/3, Ms1 3.3/3, ms1mx2.6/43, Error ellipse: s-maj=42.9km s-min=25.4km az=166.0*
*ISCJB **26** 10:18:22.8±1.2, 21°.8S±0°.3×168°.9E±0°.1, h31km, mb3.8/6, MS3.4/2, Error ellipse: s-maj=40.0km s-min=14.3km az=176.9*

ISC 26 10:18:24.6±1.2, 21°.9S±0°.3×168°.9E±0°.1, h31km, n10, σ0°77/10, mb3.8/6, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.27**	**265**	Pn		**Pn**	**10 18 59.1**	**-1.0**
	27nm,0.3s,baz=85,slow=18,SNR=271							
DZM					Sn	**Sn**	**10 19 27.7**	**+0.6**
	106nm,0.3s,baz=156,slow=21,SNR=12							
DZM					LR	LR	10 19 53.5	
	comp=Z,321nm,19.2s,baz=3.5,slow=41							
CTA	**Charters Tower**	**21.20**	**271**	P		**P**	**10 23 08.8**	**+0.9**
	3.2nm,0.8s,baz=106,slow=10.0,SNR=5.0							
STKA	**Stephens Creek**	**26.24**	**242**	P		**P**	**10 23 57.9**	**+0.9**
	1.9nm,0.7s,baz=86,slow=14,SNR=4.6							
STKA					LR	LR	10 33 52.0	
	comp=Z,60nm,18.1s,baz=28,slow=36							
ASAR	**Alice Springs**	**32.26**	**260**	P		**P**	**10 24 50.4**	**-0.2**
	1.3nm,0.8s,baz=88,slow=9.5,SNR=12							
WRA	**Warramunga Arr**	**32.29**	**267**	P		**P**	**10 24 49.9**	**-1.0**
	0.5nm,0.5s,baz=97,slow=8.5,SNR=11							
NWAO	**Narrogin (SRO)**	**46.76**	**245**	LR		LR	10 45 56.4	
	comp=Z,70nm,20.0s,baz=1.5,slow=35							
SNAA	**Sanae**	**86.53**	**183**	P		**P**	**10 31 04.1**	**-0.1**
	1.4nm,0.8s,baz=219,slow=6.5,SNR=4.9							
SONM	**Songino Array**	**89.12**	**323**	P		**P**	**10 31 17.3**	**+0.4**
	0.2nm,0.4s,baz=127,slow=4.3,SNR=3.0							
EKA	**Eskdalemuir Ar**	**146.06**	**352**	PKPbc		**PKPbc**	**10 38 01.0**	**-0.1**
	0.4nm,0.4s,baz=10,slow=4.3,SNR=3.5							
GERES	**GERESS Array B**	**146.62**	**330**	PKPbc		**PKPab**	**10 38 04.3**	**+0.1**
	1.0nm,0.6s,baz=45,slow=4.0,SNR=5.5							

*ISCJB **26** 10:24:31.6±0.7, 6°.21S±0°.08×125°.4E±0°.2, h500km, mb3.4/4, Error ellipse: s-maj=20.8km s-min=8.3km az=162.6*
*IDC **26** 10:24:33.8±2.9, 6°.19S×125°.50E, h514km±41km, mb3.0/4, mb1 3.0/8, mb1mx2.8/55, mbtmp3.8/8, Error ellipse: s-maj=80.7km s-min=18.4km az=59.0*

ISC 26 10:24:32.5±1.0, 6°.27S±0°.10×125°.6E±0°.2, h500km, n8, σ1°92/12, mb3.3/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**4.35**	**206**	P		**P**	**10 25 56.6**	**+2.7**
	7.4nm,0.3s,baz=101,slow=5.2,SNR=4.3							
BATI					S	**S**	**10 26 58.4**	**-1.8**
	11nm,0.3s,baz=229,slow=19,SNR=3.8							
FITZ	**Fitzroy Crossi**	**11.76**	**180**	P		**P**	**10 27 09.7**	**+1.1**
	0.2nm,0.3s,baz=353,slow=6.8,SNR=9.9							
FITZ					S	**S**	**10 29 14.8**	**-2.3**
	0.1nm,0.3s,baz=335,slow=19,SNR=2.8							
WRA	**Warramunga Arr**	**16.04**	**149**	P		**P**	**10 27 55.4**	**+1.8**
	0.7nm,0.3s,baz=329,slow=11,SNR=48							
WRA					S	**S**	**10 30 37.3**	**-2.2**
	0.1nm,0.3s,baz=324,slow=18,SNR=3.6							
ASAR	**Alice Springs**	**19.06**	**156**	P		**P**	**10 28 24.5**	**+1.8**
	0.5nm,0.3s,baz=344,slow=15,SNR=37							
ASAR					S	**S**	**10 31 29.2**	**-1.0**
	0.1nm,0.3s,baz=345,slow=25,SNR=4.5							
SONM	**Songino Array**	**56.47**	**345**	P		**P**	**10 33 26.4**	**0.0**
	0.6nm,0.6s,baz=157,slow=7.8,SNR=2.9							
MKAR	**Makanchi Array**	**65.27**	**329**	P		**P**	**10 34 24.2**	**-0.2**
	0.9nm,0.5s,baz=129,slow=7.5,SNR=13							
KURBB	**Kurchatov Arra**	**69.64**	**330**	P		**P**	**10 34 49.2**	**-1.9**
	0.5nm,0.5s,baz=134,slow=6.6,SNR=3.6							
BVAR	**Borovoye Array**	**75.15**	**329**	P		**P**	**10 35 22.3**	**-0.6**
	0.4nm,0.4s,baz=134,slow=4.2,SNR=3.0							

*SJA **26** 10:38:51.5±1.0, 32°.89S×72°.56W, h23km±30km, ML3.9, MW4.1*
*IDC **26** 10:38:52.4±0.7, 32°.86S×72°.05W, h0km, mb3.7/9, mb1 3.9/12, mb1mx3.9/32, mbtmp3.7/12, ML3.7/3, MS3.3/2, Ms1 3.3/2, ms1mx2.7/27, Error ellipse: s-maj=30.2km s-min=17.8km az=85.0*
*GUC **26** 10:38:54.5±0.7, 33°.07S×72°.17W, h22km±6km, ML4.0*

ISC 26 10:38:53.2±0.6, 32°.79S±0°.04×72°.13W±0°.04, h10km, n46, σ1°52/51, mb3.8/9, 2D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ROC1	**El Roble**	**0.95**	**102**	⇓*e*P		**Pn**	**10 39 13.0**	**+0.1**
ROC1				⇓*e*S		**Sn**	**10 39 25.2**	**-1.5**
ROCH	**El Roble**	**0.96**	**101**	*e*P		**Pn**	**10 39 12.6**	**-0.3**
ROCH				*i* S		**Sn**	**10 39 26.2**	**-0.5**
PEL	**Peldehue**	**1.26**	**107**	*e*P		**Pg**	**10 39 17.6**	**+0.1**
PEL				*i* S		**Sn**	**10 39 34.9**	**+0.8**
CLCH	**Cerro

WRA	**Warramunga Arr**	**121.78**	**210**	PKP	**PKPdf**	**10 57 47.3**	**-0.8**
	comp=Z,0.7nm,1.2s,baz=149,slow=1.5,SNR=3.6						
BVAR	**Borovoye Array**	**146.44**	**42**	PKPbc	**PKPab**	**10 58 35.5**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=289,slow=4.4,SNR=3.4						
MKAR	**Makanchi Array**	**156.01**	**47**	PKPab	**PKPab**	**10 59 15.6**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=278,slow=3.1,SNR=4.0						

DJA 26 11:02:31.9±0.9, 2°N±6°×9°4E±°, h64km±34km, M3.7/7, MLv3.7/7, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNSI	**Sinabang, Aceh**	**1.96**	**76**	P	Pn	11 03 03.3	+0.4
SNSI				S	Sn	11 03 27.9	+1.3
MLSI	**Meulaboh, Aceh**	**3.05**	**40**	P	Pn	11 03 18.0	+0.2
TPTI		**3.06**	**64**	P	Pn	11 03 18.1	+0.3
TPTI				S	Sn	11 03 54.7	+1.4
GSI	**Gunungsitoli**	**3.21**	**101**	P	Pn	11 03 18.7	-1.3
GSI				S	Sn	11 03 58.0	+0.8
BSI	**Banda Aceh**	**3.65**	**14**	P	Pn	11 03 24.2	-1.8
KCSI	**Kotacane, Aceh**	**3.70**	**65**	P	Pn	11 03 28.8	+2.1
PBSI	**Pulau Batu**	**4.33**	**117**	P	Pn	11 03 36.0	+0.7

*IDC **26** 11:04:06.8±1.0, 35°.80N×22°.14E, h0km, mb3.9/11, mb1 3.9/19, mb1mx3.7/66, mbtmp3.8/19, MLS3.0/12, Ms1 3.0/12, ms1mx2.7/64, Error ellipse: s-maj=19.7km s-min=14.4km az=178.0*
*ATH **26** 11:04:08.6, 35°.65N×22°.17E, h15km±1km, ML3.7/9, Error ellipse: s-maj=1.9km s-min=0.8km az=43.0*
*CSEM **26** 11:04:09.3±0.4, 35°.67N×22°.10E, h10km, ML3.7, Error ellipse: s-maj=10.0km s-min=4.6km az=34.0*
*THE **26** 11:04:11.0, 35°.73N×22°.23E, h14km±1km, ML3.7/7, Error ellipse: s-maj=2.0km s-min=0.9km az=53.0*
*PDG **26** 11:04:11.6±0.6, 36°.05N×21°.71E, h13km±13km, ML4.3/8, Error ellipse: s-maj=15.2km s-min=4.1km az=90.0*

ISC 26 11:04:10.2±1.3, 35°.73N±0°.04×22°.11E±0°.03, h26km±10km, n182, σ2°15/219, mb3.8/11, MS3.0/7, 17C-10D, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTHR	**Kythira**	**0.90**	**53**	P	**Pb**	**11 04 25.8**	**-1.3**
KTHR				S	**Sb**	**11 04 37.8**	**-0.9**
KTHR	**Kythira**	**0.90**	**53**	P	**Pb**	**11 04 25.8**	**-1.3**
KTHR				S	**Sb**	**11 04 37.8**	**-0.9**
KYTH	**Kithira**	**0.93**	**54**	P	**Pb**	**11 04 26.9**	**-0.8**
KYTH				S	**Sb**	**11 04 40.0**	**+0.4**
KYTH				AML	AML	11 04 45.6	
	comp=N,8832μm,0.5s						
KYTH				AML	AML	11 04 46.0	
	comp=E,11310μm,0.6s						
KYTH	**Kithira**	**0.93**	**54**	P	**Pb**	**11 04 26.4**	**-1.3**
KYTH				S	**Sn**	**11 04 40.3**	**+0.2**
KYTH	**Kithira**	**0.93**	**54**	P	**Pb**	**11 04 26.7**	**-1.0**
KYTH				S	**Sb**	**11 04 39.7**	**+0.1**
ANKY	**Antikythira Is**	**0.97**	**82**	P	**Pn**	**11 04 27.3**	**-0.9**
ANKY				S	**Sb**	**11 04 39.2**	**-1.7**
ANKY				AML	AML	11 04 44.0	
	comp=N,22246μm,0.5s						
ANKY				AML	AML	11 04 48.6	
	comp=E,18301μm,0.7s						
ANKY	**Antikythira Is**	**0.97**	**82**	P	**Pn**	**11 04 27.2**	**-1.0**
ANKY				S	**Sb**	**11 04 40.5**	**-0.4**
ANKY	**Antikythira Is**	**0.97**	**82**	P	**Pn**	**11 04 27.2**	**-1.0**
ANKY				S	**Sb**	**11 04 39.4**	**-1.5**
DYR	**Agios Nikonas**	**1.05**	**10**	P	**Pn**	**11 04 29.3**	**+0.1**
DYR				S	**Sn**	**11 04 45.5**	**+2.5**
DYR				AML	AML	11 04 50.4	
	comp=E,7549μm,0.7s						
DYR				AML	AML	11 04 51.6	
	comp=N,4243μm,0.4s						
DYR	**Agios Nikonas**	**1.05**	**10**	P	**Pn**	**11 04 29.4**	**+0.1**
DYR				S	**Sn**	**11 04 45.0**	**+2.0**
DYR	**Agios Nikonas**	**1.05**	**10**	P	**Pn**	**11 04 29.5**	**+0.3**
DYR				S	**Sn**	**11 04 45.0**	**+2.0**
MES2	**Methoni**	**1.14**	**343**	P	**Pn**	**11 04 30.6**	**+0.1**
MES2	**Methoni**	**1.14**	**343**	P	**Pb**	**11 04 31.2**	**-0.1**
VLI	**Veliai**	**1.19**	**34**	P	**Pb**	**11 04 32.1**	**0.0**
VLI				S	**Sb**	**11 04 47.9**	**+0.7**
VLI				AML	AML	11 04 59.8	
	comp=E,10420μm,0.8s						
VLI				AML	AML	11 05 01.1	
	comp=N,6409μm,0.5s						
VLI	**Veliai**	**1.19**	**34**	P	**Pn**	**11 04 31.8**	**+0.6**
VLI	**Veliai**	**1.19**	**34**	P	**Pb**	**11 04 32.0**	**-0.1**
VLI				S	**Sb**	**11 04 48.4**	**+1.3**
PYL	**PYLOS**	**1.20**	**346**	P	**Pb**	**11 04 32.3**	**-0.1**
PYL				S	**Sb**	**11 04 50.6**	**+3.1**
PYL				AML	AML	11 05 01.3	
	comp=N,4351μm,0.6s						
PYL				AML	AML	11 05 04.0	
	comp=E,7084μm,0.9s						
PYL	**PYLOS**	**1.20**	**346**	P	**Pb**	**11 04 32.0**	**-0.3**
PYL				S	**Sb**	**11 04 49.6**	**+2.1**
PYL	**PYLOS**	**1.20**	**346**	P	**Pb**	**11 04 32.6**	**+0.3**
PYL				S	**Sb**	**11 04 49.6**	**+2.1**
ITM	**Ithomi**	**1.46**	**354**	P	**Pb**	**11 04 36.5**	**-0.1**
ITM				S	**Sb**	**11 04 59.9**	**+5.2**
ITM				AML	AML	11 05 04.6	
	comp=N,5094μm,0.7s						
ITM				AML	AML	11 05 08.7	
	comp=E,3504μm,0.9s						
ITM	**Ithomi**	**1.46**	**354**	P	**Pb**	**11 04 36.8**	**+0.1**
ITM				S	**Sb**	**11 04 55.7**	**+0.9**
ITM	**Ithomi**	**1.46**	**354**	P	**Pb**	**11 04 36.8**	**+0.1**
ITM				S	**Sb**	**11 04 55.7**	**+0.9**
IMMV	**Iera Moni Meta**	**1.54**	**99**	P	**Pn**	**11 04 37.2**	**+1.1**
IMMV				S	**Sb**	**11 04 57.2**	**0.0**
IMMV				AML	AML	11 05 06.1	
	comp=N,6067μm,0.5s						
IMMV				AML	AML	11 05 14.5	
	comp=E,7493μm,0.7s						
IMMV	**Iera Moni Meta**	**1.54**	**99**	P	**Pn**	**11 04 36.9**	**+0.9**
IMMV				S	**Sb**	**11 04 57.1**	**-0.2**
CHAN	**Chania**	**1.58**	**97**	P	**Pn**	**11 04 36.9**	**+0.3**
CHAN				S	**Sn**	**11 04 55.7**	**-0.5**
CHAN	**Chania**	**1.58**	**97**	P	**Pn**	**11 04 36.9**	**+0.3**
CHAN				S	**Sn**	**11 04 55.7**	**-0.5**
VLX	**Vlachokerasia**	**1.65**	**7**	P	**Pb**	**11 04 40.4**	**+0.3**
VLX	**Vlachokerasia**	**1.65**	**7**	P	**Pb**	**11 04 39.8**	**-0.2**
VLX				S	**Sb**	**11 04 59.9**	**-0.6**
VLX	**Vlachokerasia**	**1.65**	**7**	P	**Pb**	**11 04 39.8**	**-0.2**
VLX				S	**Sb**	**11 04 59.9**	**-0.6**
VAM	**Vamos**	**1.73**	**100**	P	**Pn**	**11 04 39.8**	**+1.2**
VAM	**Vamos**	**1.73**	**100**	P	**Pn**	**11 04 39.4**	**+0.8**
VAM	**Vamos**	**1.73**	**100**	P	**Pn**	**11 04 39.7**	**+1.1**
AMT	**Artemida-Makis**	**1.83**	**350**	P	**Pb**	**11 04 43.6**	**+0.6**
AMT	**Artemida-Makis**	**1.83**	**350**	P	**Pb**	**11 04 42.6**	**-0.4**
AMT	**Artemida-Makis**	**1.83**	**350**	P	**Pb**	**11 04 42.6**	**-0.4**
GVD	**Gavdhos**	**1.84**	**118**	P	**Pn**	**11 04 40.7**	**+0.6**
GVD				S	**Sb**	**11 05 05.1**	**-0.7**
GVD				AML	AML	11 05 20.4	
	comp=E,1895μm,0.8s						
GVD				AML	AML	11 05 25.5	
	comp=N,1772μm,0.5s						
GVD	**Gavdhos**	**1.84**	**118**	P	**Pn**	**11 04 40.8**	**+0.6**
GVD				S	**Sn**	**11 05 04.7**	**+2.1**
KRND	**KRANIDI**	**1.85**	**27**	P	**Pn**	**11 04 42.0**	**+1.7**
KRND	**KRANIDI**	**1.85**	**27**	P	**Pb**	**11 04 42.3**	**-1.0**
DID	**Didima**	**1.99**	**27**	P	**Pb**	**11 04 44.8**	**-1.0**
DID	**Didima**	**1.99**	**27**	P	**Pn**	**11 04 43.7**	**+1.5**
DID	**Didima**	**1.99**	**27**	P	**Pn**	**11 04 43.7**	**+1.5**
MHLO	**Agia Marina, M**	**2.08**	**62**	P	**Pn**	**11 04 43.8**	**+0.3**
MHLO	**Agia Marina, M**	**2.08**	**62**	P	**Pn**	**11 04 44.2**	**+0.8**
MHLO	**Agia Marina, M**	**2.08**	**62**	P	**Pn**	**11 04 44.5**	**+1.1**
MHLA	**Plaka, Milos I**	**2.12**	**61**	P	**Pn**	**11 04 45.6**	**+1.7**
MHLA	**Plaka, Milos I**	**2.12**	**61**	P	**Pn**	**11 04 45.7**	**+1.7**
GUR	**Goura**	**2.21**	**5**	P	**Pb**	**11 04 49.0**	**-0.5**
GUR	**Goura**	**2.21**	**5**	P	**Pb**	**11 04 48.6**	**-1.0**
DRO	**Drossia**	**2.24**	**352**	P	**Pb**	**11 04 49.2**	**-0.8**
DRO	**Drossia**	**2.24**	**352**	P	**Pb**	**11 04 49.0**	**-1.1**
IDI	**Anoyia**	**2.31**	**100**	Pn	**Pn**	**11 04 47.8**	**+1.2**
	comp=N,4.4nm,0.3s,baz=269,slow=11,SNR=14						
IDI	**Anoyia**	**2.31**	**100**	⇓iP	**Pn**	**11 04 47.7**	**+1.2**
KLV	**Kalavryta, Ach**	**2.31**	**1**	P	**Pb**	**11 04 49.7**	**-1.5**
KLV	**Kalavryta, Ach**	**2.31**	**1**	P	**Pb**	**11 04 49.6**	**-1.6**
SIVA	**Sivas**	**2.31**	**107**	P	**Pn**	**11 04 48.0**	**+1.4**
SIVA	**Sivas**	**2.31**	**107**	P	**Pn**	**11 04 47.8**	**+1.2**
SERI	**Serifos**	**2.39**	**53**	P	**Pn**	**11 04 48.1**	**+0.4**
SERI				S	**Sn**	**11 05 17.6**	**+1.5**
SERI	**Serifos**	**2.39**	**53**	P	**Pn**	**11 04 48.1**	**+0.4**
SERI				S	**Sn**	**11 05 17.6**	**+1.5**
LTK	**Loutraki**	**2.39**	**16**	P	**Pb**	**11 04 51.9**	**-0.6**
LTK	**Loutraki**	**2.39**	**16**	P	**Pb**	**11 04 51.2**	**-1.4**
VLY	**Voula,Athens**	**2.51**	**32**	P	**Pn**	**11 04 51.3**	**+2.0**
VLY	**Voula,Athens**	**2.51**	**32**	P	**Pn**	**11 04 51.6**	**+2.2**
ATH	**Athens Observa**	**2.58**	**29**	P	**Pn**	**11 04 53.0**	**+2.7**
ATH				S	**Sb**	**11 05 25.4**	**-1.8**
ATH				AML	AML	11 05 46.6	
	comp=E,1377μm,1.0s						
ATH				AML	AML	11 05 49.2	
	comp=N,1098μm,1.3s						
ATH	**Athens Observa**	**2.58**	**29**	P	**Pn**	**11 04 53.0**	**+2.7**
ATH				S	**Sb**	**11 05 25.3**	**-1.8**
KFL	**Anninata**	**2.60**	**336**	P	**Pn**	**11 04 51.9**	**+1.3**
KFL	**Anninata**	**2.60**	**336**	P	**Pn**	**11 04 52.5**	**+1.9**
KFL	**Anninata**	**2.60**	**336**	P	**Pn**	**11 04 52.5**	**+1.9**
SERG	**Sergoula**	**2.68**	**359**	P	**Pb**	**11 04 56.3**	**-1.2**
SERG	**Sergoula**	**2.68**	**359**	P	**Pb**	**11 04 55.5**	**-2.0**
DSF	**Desfina**	**2.70**	**7**	P	**Pn**	**11 04 54.9**	**+2.9**
DSF	**Desfina**	**2.70**	**7**	P	**Pn**	**11 04 54.9**	**+2.9**
EFP	**Efpalio**	**2.70**	**357**	P	**Pb**	**11 04 57.5**	**-0.3**
EFP	**Efpalio**	**2.70**	**357**	P	**Pb**	**11 04 56.3**	**-1.5**
PTL	**Penteli**	**2.71**	**31**	P	**Pn**	**11 04 54.8**	**+2.7**
PTL	**Penteli**	**2.71**	**31**	P	**Pn**	**11 04 54.7**	**+2.7**
VLS	**Valsamata**	**2.73**	**334**	P	**Pn**	**11 04 54.0**	**+1.6**
VLS	**Valsamata**	**2.73**	**334**	P	**Pn**	**11 04 54.0**	**+1.6**
IOSP	**Ios Island**	**2.75**	**68**	P	**Pn**	**11 04 52.7**	**0.0**
IOSP	**Ios Island**	**2.75**	**68**	P	**Pn**	**11 04 53.6**	**+1.0**
DION	**Dionisos Attik**	**2.76**	**31**	P	**Pb**	**11 04 56.7**	**-2.2**
DION	**Dionisos Attik**	**2.76**	**31**	P	**Pn**	**11 04 56.0**	**+3.2**
SANT	**Santorini**	**2.79**	**76**	⇓iP	**Pn**	**11 04 50.7**	**-2.4**
SANT	**Santorini**	**2.79**	**76**	P	**Pn**	**11 04 53.8**	**+0.6**
SANT	**Santorini**	**2.79**	**76**	P	**Pn**	**11 04 54.3**	**+1.2**
LAST	**Lasithi**	**2.81**	**101**	P	**Pn**	**11 04 54.3**	**+0.8**
LAST	**Lasithi**	**2.81**	**101**	P	**Pn**	**11 04 54.4**	**+1.0**
ANX	**Ano Chora**	**2.86**	**357**	P	**Pb**	**11 04 58.3**	**-2.3**
ANX	**Ano Chora**	**2.86**	**357**	P	**Pb**	**11 04 57.9**	**-2.8**
NPS	**Neapolis**	**2.89**	**98**	P	**Pn**	**11 04 55.8**	**+1.2**
NPS	**Neapolis**	**2.89**	**98**	P	**Pn**	**11 04 55.8**	**+1.2**
PVO	**Paravola**	**2.92**	**351**	P	**Pb**	**11 05 00.1**	**-1.5**
PVO	**Paravola**	**2.92**	**351**	P	**Pb**	**11 04 59.2**	**-2.4**
PDO	**Prodromos**	**2.96**	**346**	P	**Pn**	**11 04 58.5**	**+3.0**
PDO	**Prodromos**	**2.96**	**346**	P	**Pn**	**11 04 58.3**	**+2.8**
PDO	**Prodromos**	**2.96**	**346**	P	**Pn**	**11 04 58.3**	**+2.8**
FSK	**Fiskardo**	**3.00**	**336**	P	**Pn**	**11 04 57.9**	**+1.9**
LKR	**Lokris**	**3.00**	**13**	P	**Pn**	**11 04 58.1**	**+2.0**
LKR	**Lokris**	**3.00**	**13**	P	**Pn**	**11 04 58.5**	**+2.4**
LKR	**Lokris**	**3.00**	**13**	P	**Pn**	**11 04 58.5**	**+2.4**
APE	**Apeiranthos**	**3.06**	**63**	⇑iP	**Pn**	**11 04 52.8**	**-4.2**
APE	**Apeiranthos**	**3.06**	**63**	P	**Pn**	**11 04 59.2**	**+2.2**
APE	**Apeiranthos**	**3.06**	**63**	P	**Pn**	**11 04 59.0**	**+2.0**
EVR	**Evrytania**	**3.19**	**356**	P	**Pb**	**11 05 04.8**	**-1.4**
EVR	**Evrytania**	**3.19**	**356**	P	**Pb**	**11 05 03.4**	**-2.9**
AMGA	**Amorgos Island**	**3.25**	**69**	P	**Pn**	**11 05 00.3**	**+0.8**
AMGA	**Amorgos Island**	**3.25**	**69**	P	**Pn**	**11 05 00.9**	**+1.5**
AGG	**Agios Georgios**	**3.29**	**3**	P	**Pn**	**11 05 03.7**	**+3.6**
AGG	**Agios Georgios**	**3.29**	**3**	P	**Pn**	**11 05 03.5**	**+3.4**
DSL	**Palaion Diasel**	**3.49**	**347**	P	**Pn**	**11 05 05.3**	**+2.5**
DSL	**Palaion Diasel**	**3.49**	**347**	P	**Pn**	**11 05 05.8**	**+2.9**
XOR	**Xorichti**	**3.73**	**13**	P	**Pn**	**11 05 08.1**	**+2.0**
XOR	**Xorichti**	**3.73**	**13**	P	**Pn**	**11 05 08.1**	**+2.0**
KARP	**Karpathos**	**4.12**	**91**	P	**Pn**	**11 05 12.5**	**+1.1**
KARP	**Karpathos**	**4.12**	**91**	P	**Pn**	**11 05 12.9**	**+1.5**
CHOS	**Chios island**	**4.12**	**49**	P	**Pn**	**11 05 11.8**	**+0.3**
CHOS	**Chios island**	**4.12**	**49**	P	**Pn**	**11 05 13.0**	**+1.5**
BIA	**Bitola**	**5.32**	**354**	*e*Pn	**Pn**	**11 05 30.6**	**+2.6**
BIA				*e*Sn	**Sn**	**11 06 29.7**	**+1.3**
OHR	**Ohrid**	**5.47**	**350**	*i* Pn	**Pn**	**11 05 32.0**	**+1.9**
TIP	**Timpagrande**	**5.48**	**311**	⇑iP	**Pn**	**11 05 31.1**	**+0.9**
TIP	**Timpagrande**	**5.48**	**311**	⇑iP	**Pn**	**11 05 31.1**	**+0.9**
TIP				S	**Sn**	**11 06 35.3**	**+2.9**
VAY	**Valandovo**	**5.59**	**4**	*i* Pn	**Pn**	**11 05 32.1**	**+0.4**
KRUS	**Krusevo**	**5.67**	**353**	*i* Pn	**Pn**	**11 05 36.2**	**+3.4**
KRUS				*e*Sn	**Sn**	**11 06 36.6**	**-0.6**
STIP	**Stip**	**5.96**	**1**	*i* Pn	**Pn**	**11 05 38.9**	**+2.2**
VAE	**Valguarnera**	**6.44**	**288**	Pn	**Pn**	**11 05 43.5**	**+0.2**
	comp=N,2.2nm,0.3s,baz=90,slow=17,SNR=7.5						
VAE				Sn	**Sn**	**11 06 58.9**	**+2.9**
	comp=N,2.6nm,0.3s,baz=36,slow=19,SNR=1.9						
MATE	**Matera**	**6.50**	**321**	⇑*i*P	**Pn**	**11 05 44.5**	**+0.4**
MATE	**Matera**	**6.50**	**321**	S	**Sn**	**11 06 56.8**	**-0.6**
MATE	**Matera**	**6.50**	**321**	⇑*i*P	**Pn**	**11 05 44.5**	**+0.4**
ULC	**Ulcinj**	**6.62**	**341**	*e*Pn	**Pn**	**11 05 44.2**	**-1.5**
ULC				*e*Sn	**Sn**	**11 06 54.2**	**-6.1**
DRME	**Dracevica, Mon**	**6.84**	**341**	⇓*i*Pn	**Pn**	**11 05 48.1**	**-0.7**
DRME				*e*Sn	**Sn**	**11 07 00.3**	**-5.5**
DRME	**Dracevica, Mon**	**6.84**	**341**	*e*Pn	**Pn**	**11 05 48.7**	**-0.1**
VTS	**Vitosha**	**6.91**	**7**	⇑*i*P	Pn	11 05 44.8	-5.0
PDG	**Podgorica**	**7.05**	**342**	⇓*i*P	**Pn**	**11 05 48.9**	**-2.8**
PDG	**Podgorica**	**7.05**	**342**	S	**Sn**	**11 07 04.2**	**-6.7**
TTG	**Podgorica**	**7.05**	**342**	⇓*i*Pn	**Pn**	**11 05 50.6**	**-1.1**
TTG				*e*Sn	**Sn**	**11 07 05.3**	**-5.6**
BARS	**Barje**	**7.08**	**358**	⇓*i*Pn	**Pn**	**11 05 53.2**	**+1.1**
CEME	**Cevo**	**7.25**	**341**	*e*Pn	**Pn**	**11 05 53.3**	**-1.1**
CEME				*e*Sn	**Sn**	**11 07 09.9**	**-6.0**
BEY	**Berane**	**7.34**	**347**	*e*Pn	**Pn**	**11 05 55.3**	**-0.4**
IVA	**Berane**	**7.34**	**347**	*e*Pn	**Pn**	**11 05 55.3**	**-0.4**
IVA				*i* Sn	**Sn**	**11 07 12.5**	**-5.7**
KOME	**Kolasin**	**7.39**	**345**	⇓*i*Pn	**Pn**	**11 05 56.3**	**-0.2**
KOME				*e*Sn	**Sn**	**11 07 13.4**	**-6.1**
KOME	**Kolasin**	**7.39**	**345**	⇓*i*Pn	**Pn**	**11 05 56.3**	**-0.2**
NKME	**Niksic**	**7.44**	**342**	⇑*i*Pn	**Pn**	**11 05 55.9**	**-1.2**
NKME				*i* Sn	**Sn**	**11 07 14.5**	**-6.2**
NKY	**Niksic**	**7.48**	**342**	*e*Pn	Pn	11 05 46.9	-11
BRY	**Bratogost**	**7.68**	**340**	⇑*i*Pn	**Pn**	**11 05 59.9**	**-0.5**
BRY				*e*Sn	**Sn**	**11 07 20.6**	**-6.0**
BRY	**Bratogost**	**7.68**	**340**	⇑*i*Pn	**Pn**	**11 05 59.9**	**-0.5**
UPM	**Unac-Piva**	**7.87**	**343**	⇑*i*Pn	**Pn**	**11 06 02.7**	**-0.3**
UPM				*i* Sn	**Sn**	**11 07 24.4**	**-6.9**
UPM	**Unac-Piva**	**7.87**	**343**	⇑*i*Pn	**Pn**	**11 06 02.7**	**-0.3**
PLE	**Pljevlja**	**7.88**	**345**	⇑*i*Pn	**Pn**	**11 06 02.5**	**-0.6**
PLE				*i* Sn	**Sn**	**11 07 25.6**	**-5.9**
BOVS	**Bovan**	**7.90**	**358**	⇑*i*Pn	**Pn**	**11 06 03.2**	**-0.2**
STON	**Ston**	**7.91**	**336**	*e*Pn	**Pn**	**11 06 00.9**	**-2.5**
STON				Sn	**Sn**	**11 07 27.0**	**-5.1**
ZAGS	**Zajecar**	**8.07**	**1**	⇑*i*Pn	**Pn**	**11 06 06.8**	**+1.1**
GRUS	**Gruza**	**8.22**	**353**	*e*Pn	**Pn**	**11 06 07.2**	**-0.5**
BBLS	**Lazići**	**8.39**	**346**	⇑*i*Pn	**Pn**	**11 06 09.6**	**-0.5**
MDVR	**Moldovita**	**9.05**	**358**	⇓*i*P	Pn	11 06 13.3	-5.8
HERR	**Herculane**	**9.14**	**1**	⇑*i*P	Pn	11 06 15.3	-5.1
FGSL	**Fruska Gora**	**9.58**	**350**	⇓*i*Pn	**Pn**	**11 06 25.9**	**-0.5**
ARR	**Arges**	**9.82**	**10**	⇑*i*P	Pn	11 06 23.6	-6.1
BRTR	**Keskin Array B**	**9.96**	**63**	Pn	**Pn**	**11 06 33.1**	**+1.4**
	comp=N,0.1nm,0.3s,baz=263,slow=12,SNR=6.0						
MLR	**Muntele Rosu**	**10.18**	**15**	Pn	**Pn**	**11 06 33.0**	**-1.7**
	comp=N,0.1nm,0.3s,baz=174,slow=18,SNR=1.8						
MLR				LR	LR	11 10 34.2	
	comp=N,14nm,20.7s,baz=190,slow=38						
KEST	**Kesra**	**10.38**	**274**	Sn	**Sn**	**11 08 27.2**	**-5.8**
	comp=N,0.3nm,0.3s,baz=292,slow=19,SNR=3.0						
KEST				LR	LR	11 10 41.8	
	comp=N,41nm,18.8s,baz=118,slow=38						
EIL	**Elat**	**12.38**	**116**	Pn	**Pn**	**11 07 06.0**	**+1.2**
	comp=N,0.3nm,0.3s,baz=315,slow=2.9,SNR=2.4						
DAVOX	**Davos/Dischmat**	**14.35**	**324**	Pn	**Pn**	**11 07 31.9**	**+0.1**
	comp=N,0.3nm,0.3s,baz=139,slow=20,SNR=2.4						
DAVOX				Sn	Sn	11 09 59.9	-10
	comp=N,0.3nm,0.3s,baz=324,slow=19,SNR=2.1						
DAVOX				LR	LR	11 14 22.4	
	comp=N,54nm,18.5s,baz=102,slow=43						
GERES	**GERESS Array B**	**14.50**	**337**	Pn	**Pn**	**11 07 34.3**	**+0.6**
	comp=N,0.2nm,0.3s,baz=156,slow=15,SNR=2.0						
GERES				LR	LR	11 14 34.6	
	comp=N,93nm,20.7s,baz=122,slow=44						
AKASG	**Malin Array Be**	**15.82**	**17**	Pn	**Pn**	**11 07 49.5**	**-1.5**
	comp=N,0.8nm,0.3s,baz=205,slow=12,SNR=4.2						
KVAR	**Kislovodsk Arr**	**17.78**	**56**	P	**P**	**11 08 20.5**	**+4.0**
	baz=124,slow=3.6,SNR=2.2						
KBZ	**Khabaz**	**17.84**	**57**	P	**P**	**11 08 21.9**	**+4.9**
	comp=N,0.1nm,0.3s,baz=266,slow=9.9,SNR=5.9						
GNI	**Garni**	**18.37**	**69**	LR	LR	11 15 45.2	
	comp=N,61nm,18.2s,baz=273,slow=38						
ESDC	**Sonseca Array**	**20.98**	**289**	P	**P**	**11 08 52.1**	**+0.6**
	comp=N,4.9nm,1.1s,baz=84,slow=10,SNR=10						
MDT	**Midelt**	**22.25**	**270**	P	**P**	**11 09 06.2**	**+0.9**
	comp=N,0.8nm,0.4s,baz=101,slow=5.2,SNR=2.5						
MDT				LR	LR	11 18 44.1	
	comp=N,21nm,18.8s,baz=128,slow=39						
HFS	**Hagfors**	**25.02**	**350**	P	**P**	**11 09 31.8**	**0.0**
	comp=N,1.2nm,0.3s,baz=163,slow=11,SNR=11						
HFS				LR	LR	11 21 55.6	
	comp=N,21nm,19.3s,baz=141,slow=43						
FINES	**FINESS Array B**	**25.86**	**4**	P	**P**	**11 09 38.7**	**-0.7**
	comp=N,0.5nm,0.3s,baz=168,slow=9.8,SNR=5.7						
FINES				LR	LR	11 21 12.2	
	comp=N,48nm,21.0s,baz=180,slow=40						
EKA	**Eskdalemuir Ar**	**26.17**	**326**	P	**P**	**11 09 42.2**	**0.0**
	comp=N,6.4nm,0.7s,baz=126,slow=9.1,SNR=22						
NB2	**NORSAR Subarra**	**26.27**	**348**	P	**P**	**11 09 43.6**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=161,slow=10						
TORD	**Torodi Ar. Bea**	**29.05**	**224**	P	**P**	**11 10 08.5**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=24,slow=9.4,SNR=5.4						
KOWA	**Kowa**	**31.55**	**235**	LR	LR	11 25 08.7	
	comp=Z,68nm,18.1s,baz=43,slow=40						
ARCES	**ARCESS Array B**	**33.91**	**2**	P	**P**	**11 10 50.0**	**-0.6**
	comp=Z,1.3nm,0.5s,baz=186,slow=9.8,SNR=8.4						
BORG	**Borgarnes**	**38.87**	**332**	LR	LR	11 29 14.4	
	comp=Z,23nm,18.9s,baz=140,slow=39						
SPITS	**Spitsbergen Ar**	**42.62**	**358**	P	**P**	**11 12 03.5**	**-0.3**
	comp=Z,5.3nm,0.9s,baz=158,slow=1.6,SNR=2.6						
SPITS				LR	LR	11 31 20.3	
	comp=Z,43nm,21.6s,baz=335,slow=38						
KURBB	**Kurchatov Arra**	**42.71**	**51**	P	**P**	**11 12 04.1**	**-0.7**
	comp=Z,0.5nm,0.2s,baz=281,slow=8.3,SNR=3.4						
MKAR	**Makanchi Array**	**45.54**	**57**	P	**P**	**11 12 25.9**	**-1.7**
	comp=Z,1.7nm,0.4s,baz=263,slow=7.6,SNR=7.3						
SONM	**Songino Array**	**61.04**	**50**	P	**P**	**11 14 22.6**	**+0.9**
	comp=Z,0.3nm,0.4s,baz=292,slow=7.6,SNR=2.7						
ULM	**Lac du Bonnet**	**78.43**	**325**	LR	LR	11 50 33.2	

*NNC **26** 11:06:37.8±1.5, 44°.71N×81°.93E, h0km, mb3.0, mpv2.5, Error ellipse: s-maj=25.6km s-min=4.7km az=116.0*
*SOME **26** 11:06:39.9, 44°.78N×82°.12E, h30km*

ISC 26 11:06:37.7±2.6, 44°.72N±0°.07×82°.1E±0°.1, h1km±15km, n9, σ1°03/17, 3C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.71**	**258**	*e*P	**Pg**	**11 07 10.6**	**+0.2**
	5.1nm,0.1s						
DJR				*e*S	**Sg**	**11 07 32.5**	**0.0**
	7.0nm,0.3s						
KAPS	**Kapalarasan**	**2.04**	**287**	*e*P	**Pb**	**11 07 15.4**	**-0.1**
	5.6nm,0.1s						
KAPS				*e*S	**Sb**	**11 07 40.6**	**-0.8**
	9.7nm,0.3s			

NEIC ***26*** *12:32:35.2±0.5,21°.93S×176°.70W,h175km±4km, mb5.0/146, Error ellipse: s-maj=4.3km s-min=2.5km az=141.0*
WEL ***26*** *12:32:35.0,21°.93S×176°.70W,h175km*
BJI ***26*** *12:32:35.8,21°.30S×176°.34W,h184km,mb4.8/21, mB5.1/14*
GCMT ***26*** *12:32:35.2±0.3,21°.93S×176°.36W,h190km±2km, MW5.1/95,Moment Tensor Solution. s43,c52; s95,c136; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-2.95±.16; Mθθ2.28±.21; Mφφ0.67±.20; Mrθ0.47±.14; Mφφ4.17±.15; Mφr-3.13±.13; Best double couple: M0=5.87300×10^16 NP1:φs=16.00000°,δ68.00000°,λ-135.00000°. NP2: φs=266.00000°,δ49.00000°,λ-30.00000°. Principal axes: T 6.0470, Plg11.0000°, Azm137.0000°; N -0.3450, Plg41.0000°, Azm37.0000°; P -5.7000, Plg47.0000°, Azm239.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
IDC ***26*** *12:32:35.1±0.5,21°.77S×176°.68W,h169km±4km,mb4.7/34, mb1 4.8/34,mb1mx4.7/48,mbtmp5.2/34,MS3.4/4, Ms1 3.4/4,ms1mx2.9/43 Error ellipse: s-maj=10.1km s-min=8.5km az=149.0*
ISC 26 12:32:35.5±0.4,21°.95S±0°.04×176°.53W±0°.04, h179km±3km,h179km:pP-P,n1019,σ1s27/1131,mb4.9/177, 51C-43D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
NIUE	**Niue**	**6.82**	**66**	P	Pn	12 34 07.5	-5.7
	baz=6.7,SNR=120						
RIZ	**Raoul Island**	**7.37**	**190**	S	**Sn**	**12 35 39.9**	**-3.6**
RAO	**Raoul Island**	**7.38**	**189**	S	**Sn**	**12 35 40.1**	**-3.5**
	292nm,0.3s,baz=88,slow=22,SNR=11						
RAO	**Raoul Island**	**7.38**	**189**	*e*Pn	Pn	12 34 15.0	-5.5
RAO				*e*Pn	Pn	12 34 21.5	+0.9
RAO				*e*Sn	**Sn**	**12 35 40.1**	**-3.5**
RAO	**Raoul Island**	**7.38**	**189**	*e*P	Pn	12 34 15.0	-5.5
RAO				*e*		12 35 40.1	
GLKZ	**Green Lake**	**7.39**	**189**	P	**Pn**	**12 34 19.8**	**-0.8**
GLKZ				S	**Sn**	**12 35 39.9**	**-3.9**
AFI	**Afiamalu**	**9.19**	**30**	P	Pn	12 34 35.5	-9.0
	16nm,0.3s,baz=115,slow=4.2,SNR=21						
AFI				S	Sn	12 36 05.6	-22
	13nm,0.3s,baz=53,slow=20,SNR=4.3						
FUNA	**Funafuti**	**13.97**	**342**	*e*Pn	Pn	12 35 37.2	-8.7
RAR	**Rarotonga**	**15.61**	**90**	P	**Pn**	**12 36 03.9**	**-2.2**
	2.9nm,0.3s,baz=245,slow=7.0,SNR=12						
RAR				S	S	12 38 48.1	-12
	5.0nm,0.3s,baz=105,slow=20,SNR=4.5						
RAR				LR	LR	12 41 27.2	
	comp=Z,142nm,20.0s,baz=266,slow=34						
RAR	**Rarotonga**	**15.61**	**90**	*e*Pn	**P**	**12 36 07.2**	**+0.7**
	158nm,0.9s						
RAR				*e*S	**S**	**12 38 50.6**	**-10**
RAR				*e*		12 41 27.2	
RAR	**Rarotonga**	**15.61**	**90**	*e*P	**P**	**12 36 07.2**	**+0.7**
RAR				*e*S	**S**	**12 38 50.6**	**-10**
RAR				pmax	pmax		
	comp=Z,158nm,0.9s						
NFK	**Norfolk Island**	**15.69**	**240**	P	**Pn**	**12 36 07.2**	**+0.2**
	baz=16,SNR=4.0						
DZM	**Mont Dzumac**	**15.79**	**266**	P	**P**	**12 36 12.7**	**+4.1**
	comp=Z,5.8nm,0.3s,baz=82,slow=18,SNR=45						
DZM	**Mont Dzumac**	**15.79**	**266**	*e*P	**P**	**12 36 12.2**	**+3.5**
	comp=Z,355nm,0.8s						
DZM	**Mont Dzumac**	**15.79**	**266**	*e*Pn	**Pn**	**12 36 06.9**	**-1.5**
	comp=Z,165nm,0.8s						
DZM				P	**P**	**12 36 12.7**	**+4.1**
OUZ	**Omahuta**	**15.80**	**211**	*e*Pn	**P**	**12 36 09.0**	**+0.6**
	comp=Z,129nm,0.9s						
OUZ	**Omahuta**	**15.80**	**211**	P	**P**	**12 36 10.1**	**+1.6**
WCZ	**Waipu Caves**	**16.05**	**208**	P	**Pn**	**12 36 12.6**	**+1.3**
MXZ	**Matakaoa Point**	**16.19**	**195**	*e*P	**P**	**12 36 10.6**	**-2.2**
	comp=Z,63nm,0.8s						
MXZ	**Matakaoa Point**	**16.19**	**195**	S	S	12 38 56.7	-15
WMGZ	**Waiomatatini S**	**16.41**	**194**	P	**Pn**	**12 36 15.8**	**+0.2**
WMGZ				S	S	12 39 01.1	-16
HAZ	**Te Kaha**	**16.50**	**196**	P	**P**	**12 36 15.2**	**-1.0**
RUGZ	**Raukumara Rang**	**16.72**	**196**	P	**P**	**12 36 18.0**	**-0.8**
RUGZ				S	S	12 39 06.0	-18
TWGZ	**Tauwhareparae**	**16.85**	**195**	P	**Pn**	**12 36 21.3**	**+0.3**
TWGZ				S	S	12 39 11.9	-15
OPRZ	**Ohinepanea**	**16.93**	**199**	P	**Pn**	**12 36 22.2**	**+0.4**
CNGZ	**Carnagh Statio**	**17.09**	**194**	P	**P**	**12 36 22.7**	**+0.1**
MWZ	**Matawai**	**17.11**	**196**	P	**P**	**12 36 21.1**	**-1.9**
MWZ				S	S	12 39 16.3	-16
TKGZ	**Te Karaka**	**17.13**	**195**	P	**P**	**12 36 21.5**	**-1.6**
TKGZ				S	S	12 39 17.4	-15
URZ	**Urewera**	**17.15**	**197**	P	**P**	**12 36 22.0**	**-1.3**
	comp=Z,28nm,0.3s,baz=321,slow=3.0,SNR=80						
URZ				S	S	12 39 18.5	-14
	comp=Z,7.5nm,0.3s,baz=257,slow=20,SNR=9.1						
URZ	**Urewera**	**17.15**	**197**	*e*P	**P**	**12 36 22.0**	**-1.3**
URZ				*e*P	**Pn**	**12 36 22.4**	**-2.1**
URZ				*e*		12 39 18.5	
URZ	**Urewera**	**17.15**	**197**	P	**P**	**12 36 20.3**	**-3.1**
URZ				S	S	12 39 15.9	-17
OMRZ	**Omania**	**17.22**	**199**	P	**Pn**	**12 36 25.7**	**+0.3**
RAGZ	**Rawiri**	**17.29**	**196**	P	**P**	**12 36 24.0**	**-0.9**
HLRZ	**Highlands Stat**	**17.36**	**199**	P	**Pn**	**12 36 26.8**	**-0.2**
RRRZ	**Republican Roa**	**17.40**	**199**	P	**P**	**12 36 26.7**	**+0.6**
MUGZ	**Murupara**	**17.45**	**198**	P	**P**	**12 36 25.5**	**-1.1**
MUGZ				S	S	12 39 26.6	-12
HSRZ	**Hossack Road**	**17.45**	**199**	P	**Pn**	**12 36 27.6**	**-0.5**
HRRZ	**Handcock Road**	**17.51**	**199**	P	**P**	**12 36 26.5**	**-0.8**
GRRZ	**Galatos Road**	**17.53**	**200**	P	**Pn**	**12 36 28.8**	**-0.2**
PRRZ	**Plateau Road**	**17.58**	**199**	P	**P**	**12 36 27.7**	**-0.4**
SNGZ	**Shannon Statio**	**17.58**	**196**	P	**P**	**12 36 27.4**	**-0.7**
PRGZ	**Paritu Road**	**17.58**	**195**	P	**P**	**12 36 28.0**	**-0.1**
WPRZ	**Whakapapatarin**	**17.67**	**199**	P	**P**	**12 36 28.8**	**-0.3**
KNZ	**Kokohu**	**17.73**	**195**	P	**P**	**12 36 28.8**	**-0.8**
RAHZ	**Arahi**	**17.77**	**197**	P	**P**	**12 36 29.5**	**-0.6**
MTHZ	**Maungataniwha**	**17.78**	**197**	P	**P**	**12 36 29.6**	**-0.7**
MRHZ	**Matea Rd**	**17.88**	**198**	P	**P**	**12 36 29.6**	**-1.8**
WHHZ	**Waihua**	**17.89**	**196**	P	**P**	**12 36 30.8**	**-0.5**
HIZ	**Hauiti**	**18.09**	**202**	*e*P	**P**	**12 36 33.9**	**+0.3**
	comp=Z,136nm,0.7s						
RATZ	**Rangitukua**	**18.11**	**200**	P	**P**	**12 36 33.1**	**-0.8**
ARHZ	**Aropaoanui**	**18.12**	**196**	P	**P**	**12 36 32.4**	**-1.5**
BKZ	**Black Stump Fm**	**18.17**	**198**	*e*P	**P**	**12 36 32.8**	**-1.7**
	comp=Z,51nm,0.9s						
BKZ	**Black Stump Fm**	**18.17**	**198**	P	**P**	**12 36 33.0**	**-1.6**
RITZ	**Rihia Road**	**18.18**	**199**	P	**P**	**12 36 33.8**	**-0.8**
MCHZ	**McNeill Hill**	**18.37**	**197**	P	**P**	**12 36 34.8**	**-1.8**
TRVZ	**Turoa**	**18.57**	**200**	P	**P**	**12 36 37.9**	**-1.2**
BFZ	**Birch Farm**	**19.65**	**197**	*e*P	**P**	**12 36 50.1**	**-0.4**
	comp=Z,129nm,0.7s						
SNZO	**South Karori**	**20.67**	**199**	*e*P	**P**	**12 37 01.8**	**+0.5**
	comp=Z,202nm,1.0s						
THZ	**Tophouse**	**21.66**	**202**	*e*P	**P**	**12 37 10.1**	**-1.8**
	comp=Z,104nm,0.6s						
THZ				*e*S	**S**	**12 41 00.0**	**+0.2**
KHZ	**Kahutara**	**22.04**	**200**	*e*P	**P**	**12 37 13.0**	**-2.6**
	comp=Z,152nm,1.0s						
KHZ				*e*S	**S**	**12 41 05.6**	**-0.1**
LTZ	**Lake Taylor**	**22.78**	**202**	*e*P	**P**	**12 37 20.4**	**-2.2**
	comp=Z,124nm,0.6s						
OXZ	**Oxford**	**23.34**	**201**	*e*P	**P**	**12 37 25.5**	**-2.2**
	comp=Z,333nm,0.8s						
OXZ				*e*S	**S**	**12 41 30.6**	**+3.8**
MQZ	**McQueen's Vall**	**23.48**	**200**	*e*P	**P**	**12 37 29.1**	**+0.2**
	comp=Z,203nm,1.5s						
LHI	**Lord Howe Isla**	**23.75**	**241**	*e*P	**P**	**12 37 31.1**	**-0.4**
	comp=Z,172nm,0.7s						
RPZ	**Rata Peaks**	**24.03**	**203**	P	**P**	**12 37 33.0**	**-0.8**
	comp=Z,135nm,0.7s,baz=21,slow=1.6,SNR=24						
RPZ				S	**S**	**12 41 32.4**	**-5.4**
	comp=Z,13nm,0.9s,baz=45,slow=20,SNR=1.7						
FOZ	**Fox Glacier**	**24.33**	**205**	*e*P	**P**	**12 37 36.1**	**-0.5**
	comp=Z,198nm,0.7s						
LBZ	**Lake Benmore**	**24.92**	**203**	*e*P	**P**	**12 37 40.1**	**-1.9**
	comp=Z,92nm,0.9s						
TBI	**Tubuai**	**25.01**	**98**	*e*S	**S**	**12 41 52.9**	**-0.8**
	comp=Z,190nm,30.5s						
TBI				*e*LQ	LQ	12 43 00.9	
	comp=Z,781nm,27.0s						
TBI				*e*LR	LR	12 43 52.6	
	comp=Z,179nm,24.8s						
TBI	**Tubuai**	**25.01**	**98**	*e*T	T	13 02 30.5	
	comp=Z,11nm,0.3s						
ODZ	**Otahua Downs**	**25.33**	**202**	*e*P	**P**	**12 37 45.4**	**-0.2**
	comp=Z,55nm,0.8s						
PAE	**Paea**	**25.70**	**85**	*e*T	T	13 03 16.9	
	comp=Z,31nm,0.3s						
PPT2	**Papeete2**	**25.72**	**85**	*e*LQ	LQ	12 43 10.3	
	comp=Z,942nm,26.0s						
PPT2				*e*LR	LR	12 44 17.8	
	comp=Z,229nm,23.5s						
PPT2	**Papeete2**	**25.72**	**85**	*e*T	T	13 03 19.1	
	comp=Z,18nm,0.3s						
WKZ	**Wanaka**	**25.73**	**204**	*e*P	**P**	**12 37 47.8**	**-1.5**
	comp=Z,72nm,0.7s						
HNR	**Honiara**	**25.79**	**295**	P	**P**	**12 37 47.8**	**-2.3**
	comp=Z,49nm,0.4s,baz=124,slow=3.6,SNR=2.4						
HNR	**Honiara**	**25.79**	**295**	*e*P	**P**	**12 37 46.8**	**-3.4**
	comp=Z,111nm,0.8s						
HNR				*e*P	**P**	**12 37 47.9**	**-2.3**
MLZ	**Mavora Lakes**	**26.53**	**205**	*e*P	**P**	**12 37 56.0**	**-0.5**
	comp=Z,153nm,0.9s						
WHZ	**Wether Hill Ro**	**27.04**	**204**	*e*P	**P**	**12 38 00.7**	**-0.3**
	comp=Z,104nm,0.8s						
ARMA	**Armidale**	**29.71**	**247**	P	**P**	**12 38 26.0**	**+1.0**
	baz=30,SNR=44						
ARMA	**Armidale**	**29.71**	**247**	*e*P	**P**	**12 38 25.3**	**+0.2**
	comp=Z,321nm,1.9s						
EIDS	**Eidsvold**	**29.82**	**257**	P	**P**	**12 38 26.4**	**+0.5**
	baz=30,SNR=12						
EIDS	**Eidsvold**	**29.82**	**257**	*e*P	**P**	**12 38 25.8**	**-0.1**
	comp=Z,130nm,2.0s						
MGCD	**Mangrove Creek**	**30.68**	**242**	P	**P**	**12 38 33.5**	**+0.1**
	baz=31,SNR=36						
RMQ	**Roma**	**31.92**	**255**	P	**P**	**12 38 45.6**	**+1.3**
	baz=32,SNR=23						
CNB	**Canberra Magne**	**32.59**	**238**	P	**P**	**12 38 50.8**	**+0.7**
	baz=33,SNR=48						
CAN	**Canberra**	**32.88**	**238**	*e*P	**P**	**12 38 52.9**	**+0.2**
	comp=Z,124nm,1.2s						
CAN	**Canberra**	**32.88**	**238**	*e*P	**P**	**12 38 52.9**	**+0.2**
CAN				pmax	pmax		
	comp=Z,124nm,1.2s						
YNG	**Young**	**33.13**	**241**	P	**P**	**12 38 55.1**	**+0.3**
	baz=33,SNR=24						
MILA	**Mila**	**33.24**	**235**	P	**P**	**12 38 56.0**	**+0.3**
	baz=33,SNR=35						
CTA	**Charters Tower**	**34.74**	**266**	P	**P**	**12 39 09.5**	**+0.7**
	comp=Z,118nm,0.5s,baz=95,slow=10,SNR=262						
CTA				PcP	**PcP**	**12 41 39.1**	**+0.6**
	comp=Z,11nm,0.6s,baz=114,slow=3.9,SNR=5.3						
CTAO	**Charters Tower**	**34.74**	**266**	*e*P	**P**	**12 39 09.1**	**+0.3**
	comp=Z,174nm,0.6s						
CTAO	**Charters Tower**	**34.74**	**266**	*e*P	**P**	**12 39 09.1**	**+0.3**
CTAO				pmax	pmax		
	comp=Z,174nm,0.6s						
CMSA	**Cobar Meteorol**	**34.92**	**246**	P	**P**	**12 39 10.2**	**0.0**
	baz=35,SNR=160						
RABL	**Rabaul**	**35.11**	**296**	*e*P	**P**	**12 39 10.2**	**-1.8**
	comp=Z,66nm,1.1s						
QLP	**Quilpie**	**35.97**	**255**	P	**P**	**12 39 19.0**	**-0.2**
	baz=36,SNR=40						
TOO	**Toolangi**	**36.19**	**236**	P	**P**	**12 39 20.7**	**-0.3**
	baz=36,SNR=34						
TOO	**Toolangi**	**36.19**	**236**	P	**P**	**12 39 21.6**	**+0.6**
TOO				pmax	pmax		
	comp=Z,75nm,0.7s						
MOO	**Moorlands**	**36.50**	**227**	P	**P**	**12 39 24.6**	**+1.1**
	baz=37,SNR=3.0						
TAU	**Tasmania Unive**	**36.59**	**227**	*e*P	**P**	**12 39 24.0**	**-0.3**
	comp=Z,99nm,1.4s						
TAU	**Tasmania Unive**	**36.59**	**227**	*e*P	**P**	**12 39 24.0**	**-0.3**
TAU				pmax	pmax		
	comp=Z,99nm,1.4s						
MTSU	**Mount Surprise**	**36.91**	**269**	P	**P**	**12 39 27.7**	**+0.4**
	baz=37,SNR=58						
PMG	**Port Moresby**	**37.01**	**284**	P	**P**	**12 39 28.0**	**-0.2**
	comp=Z,117nm,0.8s,baz=128,slow=3.2,SNR=28						
PMG	**Port Moresby**	**37.01**	**284**	*e*P	**P**	**12 39 27.9**	**-0.2**
	comp=Z,123nm,0.8s						
PMG	**Port Moresby**	**37.01**	**284**	P	**P**	**12 39 28.0**	**-0.2**
PMG				pmax	pmax		
	comp=Z,117nm,0.8s						
RKT	**Rikitea**	**38.31**	**100**	*e*T	T	13 19 07.2	
	comp=Z,6.0nm,0.3s						
STKA	**Stephens Creek**	**38.42**	**246**	P	**P**	**12 39 39.8**	**-0.1**
	comp=Z,83nm,0.7s,baz=88,slow=10,SNR=140						
STKA				PcP	**PcP**	**12 41 50.8**	**+1.3**
	comp=Z,11nm,0.7s,baz=67,slow=3.4,SNR=3.3						
STKA				ScP	**S**	**12 45 23.7**	**+2.1**
	comp=Z,4.3nm,0.9s,baz=123,slow=5.3,SNR=4.0						
STKA	**Stephens Creek**	**38.42**	**246**	P	**P**	**12 39 40.0**	**+0.1**
	baz=38,SNR=91						
STKA	**Stephens Creek**	**38.42**	**246**	*e*P	**P**	**12 39 39.8**	**-0.1**
	comp=Z,17nm,0.8s						
STKA				*e*PcP	**PcP**	**12 41 50.8**	**+1.3**
STKA	**Stephens Creek**	**38.42**	**246**	*e*P	**P**	**12 39 39.8**	**-0.1**
STKA				*e*		12 41 50.8	
STKA				pmax	pmax		
	comp=Z,17nm,0.8s						
ARPS	**Mount Arapiles**	**38.86**	**238**	P	**P**	**12 39 42.9**	**-0.5**
	baz=39,SNR=26						
COEN	**Coen**	**39.06**	**275**	P	**P**	**12 39 45.4**	**+0.1**
	baz=39,SNR=31						
COEN	**Coen**	**39.06**	**275**	*e*P	**P**	**12 39 44.8**	**-0.5**
	comp=Z,88nm,0.8s						
MANU	**Manus Island**	**40.29**	**294**	*e*P	**P**	**12 39 55.5**	**0.0**
	comp=Z,119nm,1.3s						
HTT	**Hallett**	**40.79**	**244**	P	**P**	**12 39 58.6**	**-0.9**
	baz=41,SNR=127						
QIS	**Mount Isa**	**40.80**	**264**	P	**P**	**12 39 59.1**	**-0.6**
	baz=41,SNR=25						
BBOO	**Buckleboo**	**43.16**	**245**	P	**P**	**12 40 17.6**	**-1.0**
	baz=43,SNR=77						
BBOO	**Buckleboo**	**43.16**	**245**	*e*P	**P**	**12 40 17.4**	**-1.2**
	comp=Z,69nm,0.8s						
AS01	**Alice Springs**	**45.50**	**258**	*e*P	**P**	**12 40 36.4**	**-0.9**
AS31	**Alice Springs**	**45.54**	**258**	*e*P	**P**	**12 40 36.9**	**-0.7**
	comp=Z,40nm,0.6s						
AS31				*e*PcP	**PcP**	**12 42 13.4**	**+0.1**
AS31				*e*S	**S**	**12 47 03.1**	**-3.2**
ASAR	**Alice Springs**	**45.54**	**258**	P	**P**	**12 40 36.8**	**-0.8**
	comp=Z,111nm,0.8s,baz=91,slow=7.7,SNR=565						
ASAR				PcP	**PcP**	**12 42 13.4**	**+0.1**
	comp=Z,25nm,0.7s,baz=106,slow=3.7,SNR=19						
ASAR				ScP	**ScP**	**12 45 51.2**	**+2.0**
	comp=Z,2.5nm,0.9s,baz=108,slow=4.4,SNR=5.8						
ASAR				S	**S**	**12 47 03.1**	**-3.2**
	comp=Z,3.2nm,1.0s,baz=93,slow=16,SNR=8.5						
WB2	**Warramunga Arr**	**45.76**	**263**	*e*P	**P**	**12 40 38.1**	**-1.3**
	comp=Z,152nm,1.3s						
WB2				*e*P	**P**	**12 40 38.4**	**-1.0**
WRAB	**Tennant Creek**	**45.77**	**263**	*e*P	**P**	**12 40 37.7**	**-1.7**
	comp=Z,110nm,1.2s						
WRAB	**Tennant Creek**	**45.77**	**263**	*d i*P	**P**	**12 40 37.9**	**-1.5**
WRAB				pmax	pmax		
	comp=Z,74nm,1.0s						
WR1	**Warramunga Arr**	**45.77**	**263**	*e*P	**P**	**12 40 38.0**	**-1.4**
	comp=Z,185nm,1.3s						
WR1				*e*PcP	**PcP**	**12 42 14.2**	**+0.1**
WR1				*e*S	**S**	**12 47 04.5**	**-5.1**
WRA	**Warramunga Arr**	**45.77**	**263**	P	**P**	**12 40 38.0**	**-1.4**
	comp=Z,37nm,0.5s,baz=98,slow=7.5,SNR=526						
WRA				PcP	**PcP**	**12 42 14.2**	**+0.1**
	comp=Z,16nm,0.8s,baz=96,slow=3.8,SNR=12						
WRA				ScP	**ScP**	**12 45 53.4**	**+3.2**
	comp=Z,2.7nm,1.0s,baz=100,slow=4.2,SNR=4.6						
WRA				S	**S**	**12 47 04.5**	**-5.1**
	comp=Z,0.5nm,0.8s,baz=98,slow=13,SNR=2.7						
JAY	**Jayapura**	**45.81**	**289**	P	**P**	**12 40 39.3**	**-0.5**
	comp=Z,1μm,0.7s,comp=Z,12μm						
JAY	**Jayapura**	**45.81**	**289**	P	**P**	**12 40 39.5**	**-0.3**
JAY				pmax	pmax		
	comp=Z,90nm,0.7s						
KDU	**Kakadu**	**49.36**	**272**	P	**P**	**12 41 06.1**	**-1.0**
	baz=49,SNR=24						
FORT	**Forrest**	**50.00**	**248**	P	**P**	**12 41 10.4**	**-1.4**
	baz=50,SNR=119						
FORT	**Forrest**	**50.00**	**248**	*e*P	**P**	**12 41 10.3**	**-1.4**
	comp=Z,224nm,0.6s						
WRKA	**Warakurna**	**50.41**	**255**	P	**P**	**12 41 13.9**	**-1.0**
	baz=50,SNR=282						
MTN	**Manton Dam**	**50.56**	**271**	P	**P**	**12 41 14.9**	**-1.3**
	baz=50,SNR=19						
MTN	**Manton Dam**	**50.56**	**271**	*e*P	**P**	**12 41 14.7**	**-1.4**
	comp=Z,50nm,0.6s						
GUMO	**Guam**	**51.78**	**309**	P	**P**	**12 41 24.5**	**-0.6**
	comp=Z,88nm,0.8s,baz=158,slow=6.4,SNR=8.3						
GUMO	**Guam**	**51.78**	**309**	*e*P	**P**	**12 41 23.8**	**-1.3**
	comp=Z,113nm,0.9s						
GUMO				*e*P	**P**	**12 41 24.5**	**-0.6**
KNRA	**Kununurra**	**51.94**	**267**	P	**P**	**12 41 25.6**	**-0.8**
	baz=52,SNR=40						
FITZ	**Fitzroy Crossi**	**54.20**	**263**	P	**P**	**12 41 42.4**	**-0.6**
	comp=Z,24nm,0.6s,baz=88,slow=5.7,SNR=118						
FITZ	**Fitzroy Crossi**	**54.20**	**263**	P	**P**	**12 41 42.4**	**-0.6**
	baz=54,SNR=100						
FITZ	**Fitzroy Crossi**	**54.20**	**263**	*e*P	**P**	**12 41 42.4**	**-0.6**
	comp=Z,106nm,1.4s						
KMBL	**Kambalda**	**55.23**	**246**	P	**P**	**12 41 48.9**	**-1.2**
	baz=55,SNR=9.6						
SBA	**Scott Base**	**56.53**	**184**	*e*P	**P**	**12 42 02.5**	**+3.9**
	comp=Z,41nm,1.0s						
SBA	**Scott Base**	**56.53**	**184**	P	**P**	**12 42 02.4**	**+3.9**
SBA				pmax	pmax		
	comp=Z,41nm,1.0s						
VNDA	**Vanda**	**56.60**	**186**	P	**P**	**12 42 02.0**	**+3.0**
	comp=Z,14nm,0.9s,baz=3.6,slow=7.7,SNR=71						
VNDA	**Vanda**	**56.60**	**186**	*e*P	**P**	**12 42 02.1**	**+3.0**
	comp=Z,16nm,0.9s						
VNDA	**Vanda**	**56.60**	**186**	*e*P	**P**	**12 42 02.1**	**+3.0**
VNDA				pmax	pmax		
	comp=Z,16nm,0.9s						
SOEI	**Soe**	**57.92**	**272**	*e*P	**P**	**12 42 09.9**	**+0.4**
	comp=Z,89nm,0.7s						
BATI	**Baumata**	**58.33**	**271**	P	**P**	**12 42 13.2**	**+0.9**
	comp=Z,94nm,0.6s,baz=156,slow=2.9,SNR=25						
KLBR	**Kellerberrin**	**58.70**	**246**	P	**P**	**12 42 13.5**	**-1.0**
	baz=59,SNR=37						
MEEK	**Meekatharra**	**58.75**	**251**	P	**P**	**12 42 13.5**	**-1.5**
	baz=59,SNR=22						
MBWA	**Marble Bar**	**58.88**	**258**	*e*P	**P**	**12 42 14.7**	**-1.3**
	comp=Z,92nm,0.6s						
NWAO	**Narrogin (SRO)**	**58.96**	**244**	P	**P**	**12 42 15.2**	**-1.1**
	comp=Z,12nm,0.5s,baz=356,slow=9.1,SNR=15						
NWAO	**Narrogin (SRO)**	**58.96**	**244**	P	**P**	**12 42 15.4**	**-0.9**
	baz=59,SNR=12						
TNTI	**Ternate**	**59.16**	**285**	*e*P	**P**	**12 42 16.8**	**-1.0**
	comp=Z,66nm,0.9s						
BLDU	**Ballidu**	**59.73**	**247**	P	**P**	**12 42 20.5**	**-1.1**
	baz=60,SNR=27						
MUN	**Mundaring**	**59.95**	**245**	P	**P**	**12 42 22.2**	**-0.9**
	baz=60,SNR=12						
MORW	**Morawa**	**60.56**	**248**	P	**P**	**12 42 25.5**	**-1.8**
	baz=60,SNR=14						
LUWI	**Luwuk**	**62.55**	**281**	P	**P**	**12 42 40.2**	**-0.6**
LUWI	**Luwuk**	**62.55**	**281**	*e*P	**P**	**12 42 40.0**	**-0.8**
	comp=Z,103nm,1.1s						
JCJ	**Chichijima**	**63.03**	**319**	P	**P**	**12 42 42.3**	**-1.4**
	comp=Z,22nm,0.5s,baz=289,slow=20,SNR=4.7						
CBIJ	**Chichi jima**	**63.03**	**319**	*e*P	**P**	**12 42 42.8**	**-0.8**
	comp=Z,223nm,1.7s						
CASY	**Casey**	**63.25**	**206**	*e*P	**P**	**12 42 46.0**	**+1.5**
	comp=Z,98nm,0.9s						
GIRL	**Giralia**	**63.49**	**255**	P	**P**	**12 42 47.6**	**+0.7**
	baz=64,SNR=4.2						
DAV	**Davao City (W)**	**63.62**	**290**	LR	LR	13 06 35.3	
	comp=Z,24nm,21.5s,baz=148,slow=32						
PLAI	**Plampang**	**64.26**	**271**	P	**P**	**12 42 50.9**	**-1.1**
TWSI	**Taliwang, Sumb**	**65.12**	**270**	P	**P**	**12 42 56.8**	**-0.8**
	comp=Z,66nm,0.8s,comp=Z,1μm						
PCI	**Palu**	**65.29**	**280**	P	**P**	**12 43 01.7**	**+3.0**
MPSI	**Mapaga**	**65.73**	**281**	P	**P**	**12 43 00.0**	**-1.5**
SRBI	**Singaraja**	**66.89**	**270**	P	**P**	**12 43 07.9**	**-1.0**
JAGI	**Jajag, Banyuwa**	**67.75**	**270**	*e*P	**P**	**12 43 12.3**	**-2.0**
	comp=Z,48nm,0.8s						
QSPA	**South Pole Qui**	**68.12**	**180**	P	**P**	**12 43 18.0**	**+2.1**
	comp=Z,23nm,0.6s,baz=32,slow=2.7,SNR=99						
QSPA	**South Pole Qui**	**68.12**	**180**	*e*P	**P**	**12 43 17.6**	**+1.7**
	comp=Z,66nm,1.2s						
QSPA				*e*P	**P**	**12 43 18.1**	**+2.1**
MIR	**Mirnyy**	**70.27**	**205**	⇓*i*P	**P**	**12 43 31.5**	**+2.6**
MIR				*i*		12 43 49.0	
MIR				pmax	pmax		
	comp=Z,84nm,1.0s						
MJAR	**Matsushiro Arr**	**72.19**	**323**	P	**P**	**12 43 39.6**	**-1.2**
	comp=Z,14nm,0.7s,baz=166,slow=6.1,SNR=38						
MAJO	**Matsushiro**	**72.19**	**323**	*e*P	**P**	**12 43 39.8**	**-1.1**
	comp=Z,16nm,0.6s						
MAJO	**Matsushiro**	**72.19**	**323**	*c i*P	**P**	**12 43 39.9**	**-0.9**
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MJB9	**Matsu-Tunnel**	**72.19**	**323**	*e*P	**P**	**12 43 39.7**	**-1.1**
	comp=Z,16nm,0.6s						
KIWB	**Kanaga Island**	**73.49**	**360**	*e*P	**P**	**12 43 47.3**	**-0.8**
SBUM	**Sibu**	**73.60**	**280**	*e*P	**

WDC *e*pP **pP** **12 45 10.7 +2.5**
WDC Whiskeytown Da 79.93 39 *e*P **P** **12 44 25.5 +1.0**
BELC Belle Mtn. Jos 80.06 47 P **P** **12 44 26.5 +0.9**
baz=235,SNR=5.7
N02D Trinity Center 80.09 38 P **P** **12 44 26.7 +1.3**
baz=230,SNR=6.2
CWC Cottonwood Cre 80.10 44 P **P** **12 44 26.4 +0.7**
baz=233
O03D Paynes Creek 80.17 39 P **P** **12 44 26.3 +0.4**
baz=230,SNR=5.7
MDPB Devils Postpil 80.18 43 *e*P **P** **12 44 26.7 +0.5**
MDPB *e*pP **pP** **12 45 10.3 +0.4**
OMMB Old Mammoth Mi 80.22 43 *e*P **P** **12 44 27.5 +1.0**
OMMB *e*pP **pP** **12 45 10.6 +0.3**
BC3 Big Chuckawall 80.24 48 P **P** **12 44 27.5 +1.0**
baz=236
MPMC Manual Prospec 80.26 45 P **P** **12 44 27.5 +0.9**
baz=234,SNR=8.1
GSC Goldstone, Bar 80.27 46 P **P** **12 44 27.4 +0.9**
baz=234,SNR=5.6
GSC Goldstone, Bar 80.27 46 *e*P **P** **12 44 27.4 +0.9**
GSC *e*pP **pP** **12 45 10.0 -0.3**
GSC Goldstone, Bar 80.27 46 *e*P **P** **12 44 27.4 +0.9**
M02C Callahan 80.27 38 P **P** **12 44 27.9 +1.5**
baz=229,SNR=8.4
MSHR Mys Shultsa 80.29 324 *ce*P **P** **12 44 25.5 -0.8**
HEC Hector,Ludlow 80.31 46 P **P** **12 44 27.4 +0.6**
baz=235,SNR=5.2
DAC Darwin (Calif) 80.32 45 *e*P **P** **12 44 28.1 +1.2**
DAC *e*pP **pP** **12 45 13.9 +3.3**
DAC Darwin (Calif) 80.32 45 *e*P **P** **12 44 28.1 +1.2**
GLA Glamis 80.34 49 P **P** **12 44 28.2 +1.3**
baz=236
GLA Glamis 80.34 49 *e*P **P** **12 44 28.2 +1.3**
GLA *e*pP **pP** **12 45 13.0 +2.3**
GLA Glamis 80.34 49 *e*P **P** **12 44 28.3 +1.4**
L02D Cave Junction, 80.35 37 P **P** **12 44 28.0 +1.3**
baz=229
TIN Tinemaha, Big 80.37 44 P **P** **12 44 28.2 +1.1**
baz=233
WAKR Walker 80.48 42 *e*P **P** **12 44 28.8 +1.0**
WAKR *e*pP **pP** **12 45 10.5 -1.0**
YBH Yreka Blue Hor 80.58 38 P **P** **12 44 29.4 +1.3**
comp=Z,12nm,0.8s,baz=188,slow=1.2,SNR=46
YBH Yreka Blue Hor 80.58 38 *e*P **P** **12 44 29.3 +1.3**
comp=Z,14nm,0.8s
MAW Mawson 80.67 200 P **P** **12 44 29.7 +1.7**
comp=Z,41nm,0.6s,baz=135,slow=5.5,SNR=149
MAW LR LR 13 19 52.0
comp=Z,27nm,18.1s,baz=210,slow=35
MAW Mawson 80.67 200 P **P** **12 44 30.0 +2.0**
baz=81,SNR=58
MAW Mawson 80.67 200 *e*P **P** **12 44 29.6 +1.6**
comp=Z,30nm,1.4s
MAW *e* 13 19 52.0
IRM Iron Mountain 80.73 48 P **P** **12 44 30.1 +1.1**
baz=236,SNR=5.4
GMRC Granite Mounta 80.74 47 P **P** **12 44 29.9 +0.8**
baz=235
PNTR Pine Nut 80.74 41 *e*P **P** **12 44 29.9 +0.7**
PNTR *e*pP **pP** **12 45 15.4 +2.4**
BEKR Beckworth 80.76 40 *e*P **P** **12 44 29.8 +0.6**
BEKR *e*pP **pP** **12 45 15.2 +2.2**
VCNR Virginia City 80.84 41 *e*P **P** **12 44 30.4 +0.8**
VCNR *e*pP **pP** **12 45 15.9 +2.5**
GRAC Grapevine Rang 80.89 44 P **P** **12 44 31.0 +1.3**
baz=234,SNR=8.2
YERR Yerington 80.90 42 *e*P **P** **12 44 30.4 +0.4**
YERR *e*pP **pP** **12 45 16.1 +2.3**
FURC Furnace Creek, 80.91 45 P **P** **12 44 30.7 +1.0**
baz=234
113A Mohawk Valley, 80.92 49 *e*P **P** **12 44 31.1 +1.2**
113A *e*pP **pP** **12 45 15.1 +1.3**
USRK Ussuriysk Ar. 80.93 325 P **P** **12 44 29.8 +0.1**
comp=Z,10.0nm,0.9s,baz=149,slow=3.8,SNR=16
TUQ Turquoise Moun 80.93 46 P **P** **12 44 31.0 +0.8**
baz=235
Y12C Blythe 80.94 48 P **P** **12 44 31.0 +1.0**
baz=236
SHOC Shoshone, Teco 80.97 46 P **P** **12 44 31.0 +0.8**
baz=235
HUMO Hull Mountain 81.01 37 *e*P **P** **12 44 31.2 +1.0**
comp=Z,16nm,1.2s
HUMO *e*pP **pP** **12 45 16.8 +2.7**
M04C Macdoel 81.11 38 P **P** **12 44 31.8 +0.9**
baz=230,SNR=6.0
RYN Ryan 81.13 42 *e*P **P** **12 44 30.6 -0.5**
RYN *e*pP **pP** **12 45 17.5 +2.6**
NV01 Mina Array Sit 81.15 43 *e*P **P** **12 44 31.9 +0.6**
NV01 *e*pP **pP** **12 45 13.7 -1.4**
NVAR Mina Array Bea 81.15 43 P **P** **12 44 31.6 +0.3**
comp=Z,3.1nm,0.8s,baz=224,slow=8.3,SNR=17
NVAR pP **pP** **12 45 13.7 -1.4**
comp=Z,11nm,1.0s,baz=223,slow=8.4,SNR=10
NVAR PKKPbc **PKKPbc** **13 03 08.8 +0.9**
comp=Z,0.4nm,0.7s,baz=32,slow=2.4,SNR=2.9
214A Organ Pipe Nat 81.16 50 P **P** **12 44 32.3 +1.0**
baz=237
NV11 Mina Array Sit 81.24 43 *e*P **P** **12 44 32.5 +0.8**
NV11 *e*pP **pP** **12 45 15.1 -0.5**
PAHR Pah Rah Range 81.25 41 *e*P **P** **12 44 32.6 +0.9**
PAHR *e*pP **pP** **12 45 18.0 +2.4**
LDFC Landfair 81.28 47 *e*P **P** **12 44 33.0 +1.1**
LDFC *e*pP **pP** **12 45 19.0 +3.2**
PDMCI Parker Dam,Lak 81.51 48 P **P** **12 44 34.3 +1.3**
baz=236
I03D Drain, OR 81.51 36 P **P** **12 44 33.6 +0.9**
baz=229
TPNV Topopah Spring 81.59 45 P **P** **12 44 34.5 +0.9**
baz=235
TPNV Topopah Spring 81.59 45 *e*P **P** **12 44 34.5 +0.9**
TPNV *e*pP **pP** **12 45 18.3 +0.8**
TPNV Topopah Spring 81.59 45 *e*P **P** **12 44 34.5 +0.9**
KVN Kaiserville 81.65 42 *e*P **P** **12 44 34.5 +0.6**
KVN *e*pP **pP** **12 45 19.8 +2.1**
KVN Kaiserville 81.65 42 *e*P **P** **12 44 34.5 +0.6**
K04D Chiloquin, OR 81.69 38 P **P** **12 44 35.0 +1.0**
baz=230
NJ2 Nanjing 81.86 309 *e*P **P** **12 44 36.5 +1.6**
NJ2 pmax pmax
comp=Z,21nm,0.5s
J04D Umpqua Nationa 81.89 37 P **P** **12 44 36.2 +1.1**
baz=230,SNR=5.3
SHPR Sheep Range 82.05 46 *e*P **P** **12 44 37.3 +1.3**
SHPR *e*pP **pP** **12 45 20.1 +0.2**
I04A Tendick Farm, 82.08 36 P **P** **12 44 36.7 +0.8**
baz=230
Y14A Wickenburg 82.09 49 *e*P **P** **12 44 37.1 +1.0**
comp=Z,10nm,0.9s
W13A Hualapai Mount 82.12 47 *e*P **P** **12 44 37.1 +0.6**
comp=Z,7.1nm,0.9s
W13A *e*pP **pP** **12 45 22.8 +2.4**
K05A Summer Lake 82.25 38 *e*P **P** **12 44 38.0 +1.0**
comp=Z,25nm,1.0s
J05D Fort Rock, OR 82.41 37 P **P** **12 44 38.9 +1.2**
baz=230,SNR=17
G03D McMinnville, O 82.55 35 P **P** **12 44 39.3 +1.2**
baz=229
H04A Detroit Lake 82.78 36 *e*P **P** **12 44 40.1 +0.7**
comp=Z,20nm,1.0s
TUC Tucson 82.81 51 P **P** **12 44 41.3 +1.4**
baz=239
TUC Tucson 82.81 51 *e*P **P** **12 44 41.6 +1.7**
comp=Z,14nm,1.0s
TUC Tucson 82.81 51 *e*P **P** **12 44 41.6 +1.7**
TUC pmax pmax
comp=Z,14nm,1.0s
R11A Troy Canyon, C 82.83 44 P **P** **12 44 40.4 +0.4**
baz=235
PINE Pine Mountain 82.90 37 *e*P **P** **12 44 41.2 +0.9**
comp=Z,31nm,1.1s
PINE *e*pP **pP** **12 45 25.6 +1.3**
BMN Battle Mountai 83.01 41 *e*P **P** **12 44 41.6 +0.7**
comp=Z,18nm,1.1s
BMN *e*pP **pP** **12 45 27.2 +2.3**
BMN Battle Mountai 83.01 41 *e*P **P** **12 44 41.6 +0.7**
BMN pmax pmax
comp=Z,18nm,1.1s
I05D Terrebonne, OR 83.03 36 P **P** **12 44 41.6 +0.9**
baz=230,SNR=8.6
F04D Rainier, OR 83.26 34 P **P** **12 44 43.3 +1.5**
baz=229
E03A Lebam 83.28 34 *e*P **P** **12 44 43.1 +1.2**
comp=Z,38nm,1.0s
GRNR Gornyy 83.42 332 *e*P **P** **12 44 42.8 +0.3**

GRNR pmax pmax
comp=Z,26nm,1.0s
319A Douglas 83.42 53 *e*P **P** **12 44 44.6 +1.4**
comp=Z,25nm,1.1s
X16A Lo Mia Camp, P 83.44 49 *e*P **P** **12 44 44.5 +1.3**
comp=Z,14nm,0.9s
X16A *e*pP **pP** **12 45 29.3 +2.0**
LCMT Little Creek M 83.61 46 *e*P **P** **12 44 45.3 +1.3**
LCMT *e*pP **pP** **12 45 29.3 +1.2**
G05D Wamic, OR 83.62 36 P **P** **12 44 44.8 +1.1**
baz=230
NLWA Neilton Lookou 83.69 33 *e*P **P** **12 44 45.2 +1.2**
comp=Z,20nm,1.0s
CCUT Cedar City 83.83 46 *e*P **P** **12 44 46.4 +1.2**
CCUT *e*pP **pP** **12 45 30.6 +1.2**
KNB Kanab 83.89 46 *e*P **P** **12 44 46.6 +1.1**
comp=Z,38nm,1.4s
KNB Kanab 83.89 46 *e*P **P** **12 44 46.6 +1.1**
KNB pmax pmax
comp=Z,38nm,1.4s
U15A North Rim 83.93 47 *e*P **P** **12 44 47.3 +1.5**
comp=Z,24nm,1.0s
G06A Carlson Farm, 83.98 36 *e*P **P** **12 44 46.3 +0.7**
comp=Z,16nm,1.0s
J08A Circle Bar Ran 84.03 38 *e*P **P** **12 44 46.8 +0.9**
J08A *e*pP **pP** **12 45 32.6 +2.5**
SZCU Shurtz Canyon 84.03 46 *e*P **P** **12 44 47.3 +1.1**
SZCU *e*pP **pP** **12 45 33.2 +2.8**
PSUT Pine Spring 84.05 44 *e*P **P** **12 44 46.9 +0.6**
comp=Z,5.0nm,0.8s
WUAZ Wupatki 84.07 48 P **P** **12 44 47.8 +1.3**
baz=238
WUAZ Wupatki 84.07 48 *e*P **P** **12 44 46.8 +0.4**
WUAZ *e*pP **pP** **12 45 32.0 +1.5**
BRLK Bradley Lake 84.09 13 *e*P **P** **12 44 45.8 +0.1**
comp=Z,18nm,0.9s
LON Longmire 84.33 34 *e*P **P** **12 44 47.6 +0.3**
comp=Z,9.2nm,0.8s
LON Longmire 84.33 34 *e*P **P** **12 44 47.6 +0.3**
LON pmax pmax
comp=Z,9.0nm,0.8s
RSO Redoubt South 84.37 12 *e*P **P** **12 44 46.6 -0.8**
KLR Kul'dur 84.47 329 *i*P **P** **12 44 47.6 -0.3**
D05A Enumclaw 84.52 34 *e*P **P** **12 44 49.8 +1.6**
comp=Z,46nm,1.1s
D05A *e*pP **pP** **12 45 34.7 +2.4**
X18A Snowflake 84.55 50 *e*P **P** **12 44 49.2 +0.3**
comp=Z,7.3nm,0.8s
IPM Ipoh 84.67 277 *e*P **P** **12 44 49.5 -0.2**
comp=Z,32nm,0.8s
PGC Sidney 84.74 32 *e*P **P** **12 44 50.0 +0.9**
comp=Z,27nm,0.9s
MTPU Mount Pierson 84.88 46 *e*P **P** **12 44 52.0 +1.4**
MTPU *e*pP **pP** **12 45 37.3 +2.5**
G08A Pilot Rock 84.94 37 *e*P **P** **12 44 51.5 +1.0**
G08A *e*pP **pP** **12 45 36.8 +2.1**
W18A Petrified Fore 85.01 49 P **P** **12 44 52.2 +1.1**
baz=239
W18A Petrified Fore 85.01 49 *e*P **P** **12 44 52.1 +1.0**
W18A *e*pP **pP** **12 45 37.8 +2.4**
BBB Bella Bella 85.04 28 *e*P **P** **12 44 51.4 +0.8**
comp=Z,18nm,1.0s
121A Cookes Peak, D 85.10 52 P **P** **12 44 53.2 +1.6**
baz=240
MSU Marysvale 85.14 45 *e*P **P** **12 44 53.5 +1.8**
MSU *e*pP **pP** **12 45 37.4 +1.4**
MSU Marysvale 85.14 45 *e*P **P** **12 44 53.5 +1.8**
A04D Lummi Island 85.16 32 P **P** **12 44 52.5 +1.3**
baz=229
B05A Bryant 85.16 33 P **P** **12 44 52.3 +1.0**
baz=229
KULM Kulim 85.33 278 *e*P **P** **12 44 52.8 -0.2**
comp=Z,15nm,0.9s
RC01 Rabbit Creek A 85.53 13 *e*P **P** **12 44 52.9 0.0**
comp=Z,38nm,1.4s
BMO Blue Mountains 85.60 38 *e*P **P** **12 44 54.1 +0.4**
BMO *e*pP **pP** **12 45 39.2 +1.2**
MFID Camas Ranch 85.61 40 *e*P **P** **12 44 53.7 -0.1**
MFID *e*pP **pP** **12 45 40.1 +2.0**
SYO Syowa Base 85.61 192 ⇑*i*P **P** **12 44 52.2 -1.1**
SYO Syowa Base 85.61 192 ⇓*i*PcP **PcP** **12 44 56.0 0.0**
DUG Dugway, Tooele 85.64 44 P **P** **12 44 54.2 +0.1**
baz=237
SUA Susitna One 85.68 12 *e*P **P** **12 44 53.4 -0.4**
comp=Z,27nm,0.8s
SUA *e*pP **pP** **12 45 39.8 +1.8**
PSI Prapat 85.98 275 P **P** **12 44 54.6 -1.7**
comp=Z,19nm,0.9s,baz=180,slow=5.9,SNR=15
PSI Prapat 85.98 275 *e*P **P** **12 44 54.0 -2.4**
comp=Z,21nm,0.9s
Q16A Castle Valley 86.02 45 *e*P **P** **12 44 57.4 +1.3**
Q16A *e*pP **pP** **12 45 43.1 +2.8**
D08A Wollman Farm, 86.05 35 *e*P **P** **12 44 56.4 +0.7**
comp=Z,18nm,0.9s
D08A *e*pP **pP** **12 45 42.4 +2.3**
PMR Palmer 86.11 13 *e*P **P** **12 44 55.1 -0.6**
comp=Z,18nm,1.3s
PMR Palmer 86.11 13 *e*P **P** **12 44 55.1 -0.6**
PMR pmax pmax
comp=Z,18nm,1.3s
E09A Wood Farm, Sta 86.14 36 *e*P **P** **12 44 56.7 +0.5**
comp=Z,13nm,0.9s
TMUT Trail Mountain 86.20 45 *e*P **P** **12 44 58.4 +1.3**
comp=Z,14nm,0.7s
TMUT *e*pP **pP** **12 45 42.6 +1.3**
F10A Beach Ranch, E 86.32 37 *e*P **P** **12 44 57.8 +0.5**
F10A *e*pP **pP** **12 45 43.1 +1.6**
GHO Glory Hole Cre 86.32 13 *e*P **P** **12 44 56.7 -0.1**
comp=Z,23nm,0.6s
DIV Divide 86.43 14 *e*P **P** **12 44 57.0 -0.4**
comp=Z,21nm,1.0s
MNTX Cornudas Mount 86.48 54 P **P** **12 44 59.2 +1.0**
baz=242,SNR=5.8
MNTX Cornudas Mount 86.48 54 *e*P **P** **12 44 58.9 +0.6**
comp=Z,14nm,1.0s
MNTX *e*pP **pP** **12 45 43.5 +0.9**
LAZ Ladron 86.49 51 *e*P **P** **12 44 59.7 +1.2**
LAZ *e*pP **pP** **12 45 44.9 +2.0**
SNAA Sanae 86.53 178 P **P** **12 44 58.2 +0.3**
SNAA Sanae 86.53 178 P **P** **12 44 58.2 +0.3**
comp=Z,6.7nm,0.5s,baz=203,slow=8.1,SNR=29
SNAA Sanae 86.53 178 *e*P **P** **12 44 58.2 +0.3**
comp=Z,9.8nm,0.8s
SNAA Sanae 86.53 178 *d*iP **P** **12 44 58.2 +0.3**
SNAA pmax pmax
comp=Z,646nm,1.0s
HLID Hailey 86.54 40 P **P** **12 44 59.1 +0.7**
baz=235
HLID Hailey 86.54 40 *e*P **P** **12 44 59.2 +0.7**
HLID *e*pP **pP** **12 45 45.0 +2.2**
SRU San Rafael Swe 86.55 45 *e*P **P** **12 44 59.5 +0.8**
comp=Z,14nm,0.7s
SRU *e*pP **pP** **12 45 44.2 +1.2**
BMRM Bremner River 86.57 15 *e*P **P** **12 44 58.3 +0.3**
comp=Z,49nm,1.4s
P17A Butcher Ranch, 86.60 45 *e*P **P** **12 44 59.4 +0.6**
P17A *e*pP **pP** **12 45 45.4 +2.2**
VNA3 Neumayer Olymp 86.61 176 P **P** **12 44 59.1 +0.9**
B08A Colville Reser 86.64 34 *e*P **P** **12 44 58.7 0.0**
comp=Z,17nm,0.9s
GSI Gunungsitoli 86.67 273 *e*P **P** **12 44 59.4 -0.3**
comp=Z,55nm,0.7s
TX31 Lajitas Ar. Si 86.69 57 *e*P **P** **12 45 00.4 +0.9**
TX31 *e*pP **pP** **12 45 00.6 +1.1**
TXAR Lajitas Array 86.69 57 P **P** **12 45 00.5 +1.0**
comp=Z,8.2nm,1.0s,baz=216,slow=5.1,SNR=45
TXAR pP **pP** **12 45 43.0 -0.8**
comp=Z,4.5nm,1.0s,baz=202,slow=6.2,SNR=3.8
TXAR PKKP **PKKPdf** **13 02 47.1 -0.9**
comp=Z,0.2nm,0.7s,baz=103,slow=4.0,SNR=2.7
TXAR PKKPbc **PKKPbc** **13 02 54.7 +0.6**
comp=Z,0.4nm,0.6s,baz=104,slow=4.0,SNR=3.5
SCM Sheep Creek Mo 86.71 13 *e*P **P** **12 44 58.9 +0.2**
comp=Z,22nm,0.8s
SCM Sheep Creek Mo 86.71 13 *e*P **P** **12 44 58.9 +0.2**
SCM pmax pmax
comp=Z,22nm,0.8s
BNM Barren Site 86.74 51 *e*P **P** **12 45 00.7 +0.9**
BNM *e*pP **pP** **12 45 46.3 +2.2**
LLLB Lillooet 86.80 31 *e*P **P** **12 44 59.7 +0.3**
comp=Z,22nm,1.1s
C09A Chrisman Ranch 86.86 35 *e*P **P** **12 45 00.3 +0.7**
comp=Z,20nm,1.0s
SKNT Sakolnakorn 86.89 290 P **P** **12 44 59.9 -0.6**
comp=Z,12nm,0.9s

MVCO Mesa Verde 86.93 48 P **P** **12 45 01.7 +1.1**
baz=240
P18A Preston Nutter 87.00 45 *e*P **P** **12 45 01.6 +0.6**
P18A *e*pP **pP** **12 45 47.3 +2.0**
TCUT Toone Canyon 87.04 43 *e*pP pP 12 45 45.6 +0.1
PV09 Paradox Valley 87.16 46 *e*P **P** **12 45 01.6 -0.1**
PV19 Morning Glory 87.16 47 *e*P **P** **12 45 01.7 +0.1**
PV19 *e*pP **pP** **12 45 51.3 +5.2**
PV17 East Wray Mesa 87.16 47 *e*P **P** **12 45 01.8 +0.1**
comp=Z,14nm,1.3s
PV14 Lion Creek, Pa 87.17 47 *e*P **P** **12 45 01.9 +0.2**
comp=Z,9.2nm,0.9s
TRTT Trang 87.17 280 P **P** **12 45 02.1 +0.1**
comp=Z,11nm,1.0s
PV18 Skein Mesa, Pa 87.18 47 *e*P **P** **12 45 02.9 +1.1**
comp=Z,6.3nm,1.0s
PV13 Radium Mtn., P 87.20 47 *e*P **P** **12 45 02.4 +0.5**
comp=Z,5.3nm,1.0s
PV23 Carpenter Ridg 87.22 47 *e*P **P** **12 45 02.5 +0.5**
comp=Z,7.0nm,0.8s
CAST Castle Rocks 87.23 11 *e*P **P** **12 44 59.9 -1.3**
comp=Z,11nm,0.8s
TASM ASL Pad, Albuq 87.25 51 P **P** **12 45 02.8 +0.6**
baz=241,SNR=6.3
ANMO Albuquerque 87.25 51 P **P** **12 45 03.1 +1.0**
comp=Z,5.3nm,0.9s,baz=219,slow=6.0,SNR=18
ANMO Albuquerque 87.25 51 P **P** **12 45 02.9 +0.7**
baz=241
ANMO Albuquerque 87.25 51 *e*P **P** **12 45 03.2 +1.1**
ANMO *e*pP **pP** **12 45 48.8 +2.2**
ANMO Albuquerque 87.25 51 *ce*P **P** **12 45 02.1 0.0**
ANMO pmax pmax
comp=Z,7.0nm,1.0s
TASL Snake Pit, Alb 87.25 51 P **P** **12 45 02.8 +0.6**
baz=241,SNR=6.5
VNA1 Neumayer--Stat 87.28 176 P **P** **12 45 02.1 +0.6**
PLCA Paso Flores 87.28 133 P **P** **12 45 04.2 +2.0**
comp=Z,3.4nm,0.5s,baz=266,slow=5.5,SNR=24
PLCA PKKPbc **PKKPbc** **13 02 52.5 +0.3**
comp=Z,1.6nm,0.6s,baz=18,slow=3.2,SNR=4.5
PLCA Paso Flores 87.28 133 *e*P **P** **12 45 04.2 +2.0**
comp=Z,43nm,1.6s
PLCA Paso Flores 87.28 133 *e*P **P** **12 45 04.2 +2.0**
PLCA pmax pmax
comp=Z,43nm,1.6s
PV12 Saucer Basin, 87.29 47 *e*P **P** **12 45 02.6 +0.4**
comp=Z,8.1nm,1.0s
PV21 Cone Mtn., Par 87.30 47 *e*P **P** **12 45 02.7 +0.4**
comp=Z,8.0nm,1.1s
NVL N'lazarevskaya 87.35 183 ⇑*i*P P 12 45 13.3 +12
NVL pmax pmax
comp=Z,26nm,0.7s
PV22 Blue Mesa, Par 87.41 47 *e*P **P** **12 45 03.0 +0.2**
comp=Z,14nm,1.6s
GDL2 Guadalupe Moun 87.48 54 *e*P **P** **12 45 04.2 +1.0**
GDL2 *e*pP **pP** **12 45 49.4 +1.8**
TRF Thorofare Moun 87.58 11 *e*P **P** **12 45 02.2 -0.7**
comp=Z,37nm,0.8s
NEW Newport 87.75 35 P **P** **12 45 04.7 +0.7**
baz=233
BJI Beijing 87.88 315 P **P** **12 45 04.8 +0.1**
BJI pmax pmax
comp=Z,15nm,0.7s
NONG Nongkai 88.06 290 P P 12 45 11.0 +5.0
comp=Z,16nm,0.9s
MCK McKinley 88.09 12 *e*P **P** **12 45 04.7 -0.5**
MCK *e*pP **pP** **12 45 51.2 +1.5**
MCK McKinley 88.09 12 *e*P **P** **12 45 04.7 -0.5**
SEY Seymchan 88.10 346 *ce*P **P** **12 45 03.9 -1.3**
LNIG Linares 88.10 62 *e*P **P** **12 45 06.0 -0.1**
comp=Z,9.7nm,0.9s
LNIG *e*pP **pP** **12 45 50.5 -0.1**
MCMT McKenzie Canyo 88.18 40 *e*P **P** **12 45 07.1 +0.7**
S22A 4UR Ranch, Cre 88.35 48 P **P** **12 45 08.0 +0.6**
baz=241
S22A 4UR Ranch, Cre 88.35 48 *e*P **P** **12 45 08.2 +0.8**
comp=Z,5.2nm,1.0s
S22A *e*pP **pP** **12 45 54.0 +2.0**
MENT Mentasta 88.49 14 *e*P **P** **12 45 07.0 -0.1**
comp=Z,9.2nm,0.7s
GYA Guiyang 88.55 299 *e*P **P** **12 45 09.0 +0.6**
GYA pP pP 12 45 56.3 +3.3
GYA sP sP 12 46 16.0 +4.3
GYA PP **PP** **12 48 41.5 +1.9**
GYA SKS **SKSac** **12 55 17.8 -3.1**
GYA S **S** **12 55 36.5 -3.2**
GYA pmax pmax
comp=Z,10.0nm,1.0s
O20A White River Ci 88.58 45 P **P** **12 45 08.5 +0.2**
baz=240
DLMT Dillon 88.62 39 *e*P **P** **12 45 09.1 +0.8**
comp=Z,6.8nm,0.9s
MSO Missoula 88.67 38 P **P** **12 45 08.2 -0.2**
baz=236
MSO Missoula 88.67 38 *e*P **P** **12 45 08.3 -0.2**
comp=Z,4.5nm,1.0s
WRH Wood River Hil 88.92 12 *e*P **P** **12 45 08.4 -0.6**
comp=Z,122nm,2.0s
MLY Manley 88.95 11 *e*P **P** **12 45 08.3 -0.9**
comp=Z,6.1nm,0.6s
BW06 Boulder Array 89.08 43 P **P** **12 45 10.4 -0.2**
baz=239
BW06 Boulder Array 89.08 43 *e*P **P** **12 45 10.7 +0.1**
comp=Z,5.2nm,1.1s
PD31 Pinedale Array 89.08 43 *e*P **P** **12 45 10.9 +0.2**
PD31 *e*pP **pP** **12 45 53.9 -1.4**
PDAR Pinedale Array 89.08 43 P **P** **12 45 10.4 -0.3**
comp=Z,4.0nm,1.0s,baz=220,slow=3.9,SNR=21
PDAR pP **pP** **12 45 53.9 -1.4**
comp=Z,2.0nm,0.9s,baz=222,slow=2.0,SNR=4.3
PDAR Pinedale Array 89.08 43 *e*P **P** **12 45 10.3 -0.3**
PDAR *e*pP **pP** **12 45 56.0 +0.7**
HDA Harding Lake 89.09 12 *e*P **P** **12 45 09.7 -0.2**
comp=Z,16nm,0.6s
YHB Horse Butte 89.12 40 *e*P **P** **12 45 12.2 +1.4**
comp=Z,16nm,1.4s
CCB Clear Creek Bu 89.14 12 *e*P **P** **12 45 09.4 -0.6**
comp=Z,16nm,0.6s
SDCO Great Sand Dun 89.27 49 P **P** **12 45 11.6 -0.2**
baz=241
SDCO Great Sand Dun 89.27 49 *e*P **P** **12 45 11.9 +0.2**
comp=Z,2.2nm,0.8s
H17A Grant Village 89.31 41 P **P** **12 45 13.3 +1.6**
baz=238
H17A Grant Village 89.31 41 *e*P **P** **12 45 10.7 -1.0**
comp=Z,4.2nm,0.9s
BOZ Bozeman (W) 89.32 39 P **P** **12 45 12.3 +0.7**
baz=237
BOZ Bozeman (W) 89.32 39 *e*P **P** **12 45 12.5 +0.9**
comp=Z,12nm,0.8s
BOZ Bozeman (W) 89.32 39 *e*P **P** **12 45 12.5 +0.9**
BOZ pmax pmax
comp=Z,12nm,0.8s
COLA College 89.33 12 *e*P **P** **12 45 10.3 -0.6**
comp=Z,23nm,0.7s
COLA College 89.33 12 *e*P **P** **12 45 10.3 -0.6**
COLA pmax pmax
comp=Z,23nm,0.7s
SCRK Sand Creek 89.33 14 *e*P **P** **12 45 11.5 +0.4**
comp=Z,8.2nm,0.9s
MDM Murphy Dome 89.34 12 *e*P **P** **12 45 10.3 -0.7**
comp=Z,13nm,0.8s
PBKT Sadao Pong 89.38 288 P **P** **12 45 14.3 +2.1**
comp=Z,8.8nm,1.2s
IL1 Eielson Array 89.43 12 *e*P **P** **12 45 10.5 -0.9**
IL1 *e*pP **pP** **12 45 54.0 -2.0**
ILAR Eielson Array 89.43 12 P **P** **12 45 10.7 -0.8**
comp=Z,5.4nm,0.8s,baz=218,slow=5.4,SNR=49
ILAR pP **pP** **12 45 55.0 -1.0**
comp=Z,4.2nm,1.1s,baz=226,slow=4.7,SNR=3.1
ILAR PKiKP **PKiKP** **12 50 07.5 -0.7**
comp=Z,0.4nm,0.7s,baz=272,slow=2.1,SNR=3.2
ILAR PKKPbc **PKKPdf** **13 02 46.0 +1.5**
comp=Z,0.4nm,0.6s,baz=354,slow=3.9,SNR=6.0
ILB Eielson Array 89.43 12 *e*P **P** **12 45 10.7 -0.8**
MSTX Muleshoe 89.48 53 P **P** **12 45 13.0 +0.4**
baz=243
MSTX Muleshoe 89.48 53 *e*P **P** **12 45 12.9 +0.4**
comp=Z,53nm,1.8s
HRY Holter Researc 89.81 38 *e*P **P** **12 45 14.4 +0.6**
WALA Waterton Lakes 89.95 36 *e*P **P** **12 45 14.5 +0.2**
comp=Z,12nm,1.0s
Q24A Divide 90.10 48 P **P** **12 45 15.9 +0.3**
baz=242
ISCO Idaho Springs 90.18 47 P **P** **12 45 16.1 +0.1**
baz=241

JCT	Junction City	90.20	57	P	P	12 45 15.8	-0.2	
	baz=245							
DAWY	Dawson	90.48	15	eP	P	12 45 16.7	+0.3	
	comp=Z,17nm,0.9s							
NANT	Nan	90.48	290	P	P	12 45 18.6	+1.2	
	comp=Z,3.3nm,0.9s,comp=Z,117nm							
N23A	Red Feather La	90.48	46	P	P	12 45 17.4	+0.1	
	baz=241							
RLMT	Red Lodge	90.48	41	P	P	12 45 17.6	+0.5	
	baz=239							
RLMT	Red Lodge	90.48	41	eP	P	12 45 18.0	+0.9	
	comp=Z,5.8nm,0.9s							
BILL	Bilibino	90.62	354	eP	P	12 45 16.5	-0.4	
	comp=Z,18nm,1.3s							
BILL	Bilibino	90.62	354	deP	P	12 45 16.4	-0.4	
BILL				eSS	SS	13 02 14.4	+11	
BILL				pmax	pmax			
	comp=Z,8.0nm,1.0s							
EGAK	Eagle	90.66	14	eP	P	12 45 17.1	0.0	
	comp=Z,14nm,0.9s							
AMTX	Amarillo	90.69	53	P	P	12 45 18.3	+0.1	
	baz=244							
K22A	Casper	90.96	44	P	P	12 45 19.3	0.0	
	baz=241							
COLD	Coldfoot	91.06	10	eP	P	12 45 18.4	-0.6	
	comp=Z,4.9nm,0.9s							
COLD				epP	pP	12 46 05.5	+1.9	
KMI	Kunming	91.22	297	P	P	12 45 21.3	+0.3	
KMI				pmax	pmax			
	comp=Z,10.0nm,1.0s							
ABTX	Abilene, Hawle	91.24	55	P	P	12 45 20.8	+0.2	
	baz=245							
ABTX	Abilene, Hawle	91.24	55	eP	P	12 45 21.5	+0.9	
	comp=Z,13nm,0.9s							
ABTX				epP	pP	12 46 06.9	+1.6	
EGMT	Eagleton	91.70	38	P	P	12 45 22.6	+0.2	
	baz=239							
CM01	Chiang Mai Arr	91.86	289	eP	P	12 45 24.1	+0.3	
CM31	Chiang Mai Arr	91.89	289	eP	P	12 45 23.7	-0.2	
CMAR	Chiang Mai Arr	91.89	289	P	P	12 45 24.3	+0.4	
	comp=Z,7.0nm,0.9s,baz=124,slow=2.9,SNR=29							
CHTO	Chiang Mai	92.02	289	P	P	12 45 25.8	+1.3	
CHTO	Chiang Mai	92.02	289	eP	P	12 45 24.9	+0.4	
	comp=Z,5.8nm,0.8s							
CHTO	Chiang Mai	92.02	289	eP	P	12 45 24.9	+0.4	
CHTO				pmax	pmax			
	comp=Z,6.0nm,0.8s							
TOLK	Toolik Lake Re	92.45	10	P	P	12 45 25.6	+0.2	
	baz=205							
TOLK	Toolik Lake Re	92.45	10	eP	P	12 45 25.7	+0.3	
	comp=Z,7.1nm,1.0s							
WHTX	Lake Whitney,	92.66	57	P	P	12 45 27.4	+0.2	
	baz=246							
CD2	Chengdu	92.72	302	P	P	12 45 27.5	-0.1	
CD2				pmax	pmax			
	comp=Z,5.0nm,0.8s							
WMOK	Wichita Mounta	92.78	54	P	P	12 45 27.9	+0.1	
	baz=245							
LAO	LASA Array	93.11	40	P	P	12 45 30.2	+1.2	
	baz=241,SNR=6.1							
LAO	LASA Array	93.11	40	eP	P	12 45 30.2	+1.2	
LAO				epP	pP	12 46 16.2	+2.6	
OGNE	Ogallala	93.13	47	P	P	12 45 30.3	+1.0	
	baz=244							
RSSD	Black Hills	93.25	43	P	P	12 45 30.0	+0.1	
	baz=242							
RSSD	Black Hills	93.25	43	eP	P	12 45 30.1	+0.2	
	comp=Z,20nm,0.9s							
RSSD				epP	pP	12 46 15.9	+1.3	
RSSD	Black Hills	93.25	43	eP	P	12 45 30.1	+0.2	
RSSD				pmax	pmax			
	comp=Z,20nm,0.9s							
YAK	Yakutsk	93.97	338	i P	P	12 45 30.4	-2.0	
YAK				pmax	pmax			
	comp=Z,9.0nm,0.8s							
LZH	Lanzhou	94.73	307	eP	P	12 45 37.0	+0.2	
LZH				pP	pP	12 46 23.5	+1.9	
LZH				sP	sP	12 46 42.5	+2.2	
LZH				PP	PP	12 49 33.3	+5.2	
LZH				pmax	pmax			
	comp=Z,19nm,1.4s							
LZH				pmax	pmax			
	comp=Z,93nm,9.5s							
LZH				LR	LR			
	comp=Z,100nm,17.4s							
LZH				LR	LR			
	comp=Z,110nm,17.0s							
LZH				LR	LR			
	comp=Z,140nm,19.7s							
DGMT	Dagmar	95.16	40	P	P	12 45 38.8	+0.5	
	baz=243							
INK	Inuvik	95.31	15	P	P	12 45 38.0	-0.5	
	comp=Z,1.7nm,0.7s,baz=252,slow=3.2,SNR=3.1							
YKA	Yellowknife Ar	97.26	24	P	P	12 45 47.2	-0.2	
	comp=Z,2.9nm,0.7s,baz=235,slow=4.3,SNR=12							
YKA				pP	pP	12 46 31.5	-0.7	
	comp=Z,2.1nm,0.8s,baz=237,slow=4.5,SNR=4.8							
YKA				PKKPbc	PKKPbc	13 02 25.7	-2.5	
	comp=Z,1.8nm,0.7s,baz=41,slow=2.4,SNR=8.1							
H32A	Carlson Farm,	97.70	45	P	Pdif	12 45 50.4	+0.5	
	baz=247							
SONA0	Songino Array	97.74	318	eP	P	12 45 48.8	-1.4	
SONM	Songino Array	97.74	318	P	P	12 45 48.8	-1.4	
	comp=Z,0.3nm,0.5s,baz=106,slow=4.8,SNR=2.9							
ECSD	EROS Data Cent	97.94	46	Pdiff	Pdif	12 45 52.0	+1.0	
	baz=247							
ECSD	EROS Data Cent	97.94	46	eP	Pdif	12 45 51.3	+0.3	
	comp=Z,4.9nm,0.8s							
ECSD				epP	pP	12 46 37.0	+1.2	
GTA	Gaotai	98.95	309	eP	Pdif	12 45 56.0	+0.2	
GTA				pmax	pmax			
	comp=Z,1.0nm,0.8s							
LPAZ	La Paz	100.24	112	P	Pdif	12 46 05.1	+2.4	
	comp=Z,1.1nm,0.8s,baz=249,slow=5.6,SNR=3.8							
D37A	Cotton	101.92	44	Pdiff	Pdif	12 46 09.6	+1.0	
	baz=251							
353A	Camilla	102.97	61	Pdiff	Pdif	12 46 14.3	+0.7	
	baz=252							
M44A	Midewin, Midew	103.08	51	Pdiff	Pdif	12 46 14.6	+0.7	
	baz=252							
P46A	Rosedale	103.15	52	Pdiff	Pdif	12 46 15.4	+1.2	
	baz=252							
ZAA1	Zalesovo Array	112.48	321	ePKiKP	PKiKP	12 50 49.1	-0.9	
ZALV	Zalesovo Beam	112.48	321	PKiKP	PKiKP	12 50 49.1	-0.9	
	comp=Z,4.9nm,0.5s,baz=176,slow=1.3,SNR=12							
MK31	Makanchi Array	113.19	313	i PKIKP	PKiKP	12 50 50.2	-1.4	
MK31				pmax	pmax			
	comp=Z,5.0nm,0.6s							
MK32	Makanchi Array	113.19	313	ePKiKP	PKiKP	12 50 50.5	-1.1	
MKAR	Makanchi Array	113.19	313	PKiKP	PKiKP	12 50 50.5	-1.1	
	comp=Z,5.5nm,0.6s,baz=67,slow=1.5,SNR=57							
MKAR				PKKPbc	PKKPbc	13 01 37.2	-1.7	
	comp=Z,0.5nm,0.6s,baz=299,slow=1.7,SNR=3.7							
MKAR				PKKPab	PKKPab	13 01 46.1	+1.6	
	comp=Z,0.4nm,0.7s,baz=251,slow=4.4,SNR=2.5							
MAKZ	Makanchi	113.40	313	PKIKP	PKiKP	12 50 50.7	-1.3	
MAKZ				pmax	pmax			
	comp=Z,8.0nm,0.8s							
NVS	Novosibirsk	113.49	322	ePKIKP	PKiKP	12 50 50.7	-1.1	
PDGK	Podgornoye	114.69	309	PKIKP	PKPdf	12 50 53.4	-1.3	
PDGK				pmax	pmax			
	comp=Z,9.0nm,1.1s							
TARG	Taragay, Kyrgy	115.73	307	ePKPdf	PKPdf	12 50 56.3	-0.8	
KURK	Kurchatov	115.99	317	ePKPdf	PKPdf	12 50 55.7	-1.1	
KURK	Kurchatov	115.99	317	d i PKIKP	PKPdf	12 50 55.6	-1.1	
KURK				pmax	pmax			
	comp=Z,9.0nm,0.6s							
KURBB	Kurchatov Arra	116.04	317	PKP	PKPdf	12 50 55.8	-1.1	
	comp=Z,7.9nm,0.7s,baz=94,slow=1.9,SNR=89							
KURBB				PKKPbc	PKKPab	13 01 33.9	+2.1	
	comp=Z,1.1nm,0.9s,baz=270,slow=5.0,SNR=5.6							
KSH	Kashi	116.84	304	PKP	PKPdf	12 50 59.8	+0.8	
KSH				PP	PP	12 52 18.5	+8.0	
KSH				SKKS		12 58 51.5		
KSH				AMB	AMB			
	comp=Z,120nm,4.7s							
NRN	Naryn	117.04	306	ePKPdf	PKPdf	12 50 59.1	-0.4	
NRN	Naryn	117.04	306	ePKIKP	PKPdf	12 50 59.2	-0.4	
TKM2	Tokmak 2	117.48	308	P	PKPdf	12 50 59.4	-0.8	
	SNR=12							
TKM2	Tokmak 2	117.48	308	PKIKP	PKPdf	12 50 59.0	-1.2	
TKM2				pmax	pmax			
	comp=Z,8.0nm,0.8s							
KBK	Karagaybulak	117.94	308	P	PKPdf	12 51 00.6	-0.4	
	SNR=5.1							
CHMS	Chumysh	118.11	308	P	PKPdf	12 51 00.6	-0.6	
	SNR=5.8							
UCH	Uchtor	118.22	307	P	PKPdf	12 51 02.2	+0.3	
	SNR=10							
AML	Almayashu	118.82	307	P	PKPdf	12 51 02.9	-0.2	
	SNR=10							
SCHQ	Schefferville	118.96	39	PKP	PKPdf	12 51 02.0	-0.4	
	comp=Z,3.4nm,0.5s,baz=261,slow=14,SNR=2.5							
MNAS	Manas	119.72	307	PKIKP	PKPdf	12 51 03.5	-1.0	
MNAS				pmax	pmax			
	comp=Z,14nm,0.7s							
BVA0	Borovoye Array	121.07	320	i PKIKP	PKPdf	12 51 05.5	-1.0	
BVA0				pmax	pmax			
	comp=Z,16nm,0.7s							
BVAR	Borovoye Array	121.07	320	PKP	PKPdf	12 51 05.9	-0.6	
	comp=Z,16nm,0.6s,baz=85,slow=1.6,SNR=98							
BVAR				PKKPab	PKKPbc	13 01 11.7	+0.6	
	comp=Z,0.4nm,0.3s,baz=261,slow=7.2,SNR=3.5							
BRVK	Borovoye	121.13	320	ePKPdf	PKPdf	12 51 06.3	-0.3	
BRVK	Borovoye	121.13	320	c i PKIKP	PKPdf	12 51 05.9	-0.7	
BRVK				pmax	pmax			
	comp=Z,23nm,1.0s							
KK31	Karatay Array	121.22	308	ePKPdf	PKPdf	12 51 06.8	-0.3	
KK31	Karatay Array	121.22	308	ePKIKP	PKPdf	12 51 06.8	-0.3	
KKAR	Karatay Array	121.22	308	ePKPdf	PKPdf	12 51 06.8	-0.3	
KKAR	Karatay Array	121.22	308	ePKIKP	PKPdf	12 51 06.8	-0.3	
OPO	Ambohidratompo	121.25	230	PKP	PKPdf	12 51 08.6	+0.4	
	comp=Z,5.5nm,0.6s,baz=329,slow=1.5,SNR=13							
KBL	Kabul	121.78	298	ePKPdf	PKPdf	12 51 09.0	+0.3	
KBL	Kabul	121.78	298	PKIKP	PKPdf	12 51 09.0	+0.3	
ILULI	Ilulissat	122.63	20	i P	PKPdf	12 51 08.3	-0.7	
	comp=Z,20nm,0.7s							
ILULI	Ilulissat	122.63	20	ePKPdf	PKPdf	12 51 08.6	-0.4	
ILULI	Ilulissat	122.63	20	ePKIKP	PKPdf	12 51 08.6	-0.4	
KBS	Kingsbay	122.83	358	i PKIKP	PKPdf	12 51 08.7	-0.5	
KBS	Kingsbay	122.83	358	ePKPdf	PKPdf	12 51 09.2	0.0	
SPA0	Spitsbergen Ar	123.39	357	ePKPdf	PKPdf	12 51 10.2	-0.2	
SPA0	Spitsbergen Ar	123.39	357	ePKPdf	PKPdf	12 51 10.1	-0.2	
SPITS	Spitsbergen Ar	123.39	357	PKP	PKPdf	12 51 10.1	-0.2	
	comp=Z,17nm,0.8s,baz=15,slow=6.9,SNR=20							
SFJD	Kangerlussuaq	123.76	23	PKP	PKPdf	12 51 10.7	-0.5	
	comp=Z,7.8nm,0.5s,baz=307,slow=5.2,SNR=2.9							
DAG	Danmarks Havn	124.04	6	⇓ i P	PKPdf	12 51 10.1	-1.5	
	comp=Z,6.3nm,0.7s							
SUMG	Summit	124.23	14	i P	PKPdf	12 51 12.8	+0.3	
	comp=Z,9.0nm,0.8s							
SUMG	Summit	124.23	14	ePKPdf	PKPdf	12 51 12.7	+0.2	
SUMG	Summit	124.23	14	ePKIKP	PKPdf	12 51 12.7	+0.2	
BOSA	Boshof	125.51	204	PKP	PKPdf	12 51 17.1	+1.0	
	comp=Z,6.5nm,0.6s,baz=147,slow=1.8,SNR=9.9							
SVE	Sverdlovsk	125.96	325	ePKIKP	PKPdf	12 51 15.7	0.0	
SVE				pmax	pmax			
	comp=Z,28nm,0.9s							
IVI	Ivigtut	127.17	28	ePKPdf	PKPdf	12 51 17.4	-0.4	
ARU	Arti	127.17	325	PKP	PKPdf	12 51 18.2	+0.1	
	comp=Z,22nm,0.6s,baz=33,slow=0.3,SNR=35							
ARU	Arti	127.17	325	ePKPdf	PKPdf	12 51 17.6	-0.5	
ARU	Arti	127.17	325	i PKIKP	PKPdf	12 51 18.2	+0.1	
ARU						12 53 20.6		
AB31	Akbulak array	128.08	316	i PKIKP	PKPdf	12 51 19.4	-0.6	
AB31				pmax	pmax			
	comp=Z,9.0nm,1.0s							
ABKAR	Akbulak array	128.08	316	ePKPdf	PKPdf	12 51 19.6	-0.4	
AKTO	Aktyubinsk	129.06	318	PKP	PKPdf	12 51 21.8	-0.1	
	comp=Z,12nm,0.6s,baz=85,slow=3.6,SNR=50							
AKTO	Aktyubinsk	129.06	318	PKIKP	PKPdf	12 51 21.5	-0.4	
AKTO				pmax	pmax			
	comp=Z,13nm,0.7s							
WSAR	Wadi Sarin	129.32	283	PKP	PKPdf	12 51 21.1	-2.1	
	comp=Z,12nm,1.2s,baz=172,slow=7.1,SNR=3.0							
HAMF	Hammerfest	129.86	351	ePKPdf	PKPdf	12 51 22.2	-0.6	
ARA0	ARCESS Array S	130.59	350	ePKPdf	PKPdf	12 51 24.0	-0.2	
ARCES	ARCESS Array B	130.59	350	PKP	PKPdf	12 51 24.0	-0.2	
	comp=Z,10nm,0.5s,baz=191,slow=0.6,SNR=14							
ARCES				SKPbc	SKPab	12 54 33.7	+2.3	
	comp=Z,4.2nm,0.8s,baz=7.0,slow=8.2,SNR=6.4							
ARCES	ARCESS Array B	130.59	350	ePKPdf	PKPdf	12 51 23.7	-0.6	
ARE0	ARCESS Array S	130.59	350	ePKPdf	PKPdf	12 51 24.1	-0.2	
GEYT	Alibeck	130.71	302	PKP	PKPdf	12 51 25.9	+0.4	
	comp=Z,21nm,0.8s,baz=243,slow=1.3,SNR=2.5							
GYA0B	ALIBECK ARRAY	130.71	302	ePKPdf	PKPdf	12 51 25.3	-0.2	
SOHO	SOHO	131.36	283	i P	PKPdf	12 51 27.3	+0.3	
	SNR=17							
TRO	Tromso	131.41	353	ePKPdf	PKPdf	12 51 25.5	-0.3	
KTK1	Kautokeino	131.41	351	ePKPdf	PKPdf	12 51 25.2	-0.6	
KIF	Kilpisjarvi	131.76	352	ePKPdf	PKPdf	12 51 25.8	-0.6	
UOSS	Minazif	131.77	284	P	PKPdf	12 51 28.0	+0.2	
HATD	Hatta, Dubai	131.82	284	i P	PKPdf	12 51 28.6	+0.7	
	SNR=6.9							
MSFE	Esma-Masafi	131.87	285	P	PKPdf	12 51 28.8	+0.8	
HEF	Hetta	131.90	350	ePKPdf	PKPdf	12 51 26.3	-0.5	
SHME	Shamm	131.97	286	P	PKPdf	12 51 28.6	+0.4	
ALNE	Al Ain	132.06	283	P	PKPdf	12 51 28.6	+0.2	
NAZ	Nazwa, Dubai	132.27	284	P	PKPdf	12 51 29.1	+0.3	
ASUD	Al Ashush, Dub	132.52	284	P	PKPdf	12 51 29.0	-0.2	
STEI	Steigen	133.44	354	ePKPdf	PKPdf	12 51 30.0	+0.4	
KLMR	Klimovskoe	133.75	336	ePKIKP	PKPdf	12 51 29.8	-0.6	
KLMR				pmax	pmax			
	comp=Z,18nm,1.0s							
KLMR	Klimovskoe	133.75	336	ePKPdf	PKPdf	12 51 29.9	-0.5	
KLMR				AMP		12 51 31.6		
	comp=Z,18nm,1.0s							
KLMR				eSKP		12 54 40.7		
BORG	Borgarnes	134.21	15	PKP	PKPdf	12 51 32.0	+0.9	
	comp=Z,4.9nm,0.9s,baz=35,slow=1.0,SNR=4.2							
LSZ	Lusaka	135.77	215	ePKPdf	PKPdf	12 51 36.5	+0.7	
LSZ	Lusaka	135.77	215	ePKIKP	PKPdf	12 51 36.5	+0.7	
TSUM	Tsumeb	136.83	200	ePKPdf	PKPdf	12 51 38.0	+0.3	
FIA0	FINESS Array S	137.54	344	ePKPdf	PKPdf	12 51 37.5	0.0	
FINES	FINESS Array B	137.54	344	PKhKP	PKPpre	12 51 26.3		
	comp=Z,1.5nm,0.5s,baz=49,slow=3.5,SNR=6.4							
FINES				PKP	PKPdf	12 51 37.5	0.0	
	comp=Z,5.3nm,0.6s,baz=90,slow=1.9,SNR=11							
FINES				SKPbc	SKPbc	12 54 55.9	+1.7	
	comp=Z,4.4nm,0.8s,baz=56,slow=4.8,SNR=9.2							
OBN	Obninsk	138.68	332	⇓ i PKIKP	PKPdf	12 51 41.6	+1.9	
KMBO	Kilima Mbogo	139.84	240	PKP	PKPdf	12 51 45.4	+1.9	
	comp=Z,2.8nm,0.5s,baz=63,slow=16,SNR=1.7							
VSU	Vasula	139.86	341	i PKIKP	PKPdf	12 51 44.0	+2.2	
NC303	NORSAR Array S	140.37	354	ePKPpre	PKPpre	12 51 34.9		
NCK	Nalchik	140.49	313	i PKIKP	PKPdf	12 51 44.3	+0.8	
ZEI	Tsey	140.51	311	i PKIKP	PKPdf	12 51 42.8	-1.0	
NB2	NORSAR Subarra	140.57	354	PKP	PKPpre	12 51 35.1		
	comp=Z,2.2nm,0.7s,baz=16,slow=3.2							
NB2	NORSAR Subarra	140.57	354	PKP	PKPpre	12 51 35.1		
	baz=16,slow=3.2							
GNI	Garni	140.67	307	PKP	PKPdf	12 51 44.7	+0.6	
	comp=Z,4.3nm,0.4s,baz=34,slow=15,SNR=2.6							
GNI	Garni	140.67	307	c i PKIKP	PKPdf	12 51 44.7	+0.6	
GNI				pmax	pmax			
	comp=Z,60nm,1.7s							
KBZ	Khabaz	140.88	313	PKP	PKPdf	12 51 43.5	-0.6	
	comp=Z,4.1nm,0.8s,baz=61,slow=1.0,SNR=11							
KIV	Kislovodsk	140.94	314	i PKIKP	PKPdf	12 51 42.4	-2.0	
KIV				pmax	pmax			
	comp=Z,15nm,1.1s							
HFS	Hagfors	141.17	352	PKhKP	PKPpre	12 51 36.9		
	comp=Z,10.0nm,0.5s,baz=66,slow=3.5,SNR=40							
KONO	Kongsberg	142.09	355	ePKPdf	PKPpre	12 51 41.1		
IZAR	Zarasai	142.23	339	eP	PKPdf	12 51 42.7	-3.4	
IZAR				IAmb	IAmb	12 51 43.1		
	comp=Z,12nm,0.6s							
IDID	Didziasalis	142.42	338	eP	PKPdf	12 51 43.4	-3.0	
IDID				IAmb	IAmb	12 51 44.3		
	comp=Z,7.6nm,0.7s							
ISAL	Salakas	142.42	339	eP	PKPdf	12 51 42.7	-3.8	
ISAL				IAmb	IAmb	12 51 43.6		
	comp=Z,15nm,0.9s							
IIGN	Ignalina	142.56	339	eP	PKPdf	12 51 44.1	-2.6	
IIGN				IAmb	IAmb	12 51 44.8		
	comp=Z,14nm,0.7s							
SOC	Sochi	143.07	314	eP	Pdif	12 49 18.8	+7.1	
SOC				pmax	pmax			
	comp=Z,19nm,0.6s							
ERZM	Erzurum	143.23	308	i P	PKPbc	12 51 45.9	-0.5	
VRTB	Varto-Mus	143.38	307	eP	PKPdf	12 52 11.1	+22	
HOMB	Homborsund	143.54	356	ePKPdf	PKPab	12 51 45.5	+0.3	
MAZI	Mazidag	144.61	304	eP	PKPab	12 51 49.9	-0.3	
SUW	Suwalki	144.67	340	ePKP	PKPab	12 51 49.3	-0.3	
SUW	Suwalki	144.67	340	ePKPdf	PKPab	12 51 49.4	-0.2	
KELT	Kelkit	144.68	309	i P	PKPbc	12 51 50.7	+0.2	
AKASG	Malin Array Be	144.94	331	PKP	PKPbc	12 51 49.4	-1.3	
	comp=Z,5.6nm,0.5s,baz=42,slow=4.1,SNR=77							
AKASG				pPKP	pPKPdf	12 52 35.1	-2.8	
	comp=Z,4.9nm,0.6s,baz=43,slow=4.4,SNR=0.9							
AKASG				SKPbc	SKiKP	12 55 15.1	+0.9	
	comp=Z,2.5nm,0.8s,baz=49,slow=3.5,SNR=4.0							
AKBB	Malin Array Si	144.94	331	ePKPbc	PKPbc	12 51 49.4	-1.3	
AKBB	Malin Array Si	144.94	331	ePKIKP	PKPbc	12 51 49.4	-1.3	
KIEV	Kiev	144.95	331	ePKPbc	PKPbc	12 51 49.5	-1.3	
KIEV	Kiev	144.95	331	i P	PKPbc	12 51 49.5	-1.2	
	SNR=23							
KIEV	Kiev	144.95	331	ePKIKP	PKPbc	12 51 49.5	-1.2	
AK11	Malin Array Si	144.98	331	ePKPbc	PKPbc	12 51 49.4	-1.4	
PTK	Pertek	145.00	307	eP	PKPdf	12 51 51.9	+0.1	
MBAR	Mbarara	145.21	233	ePKPdf	PKPab	12 51 53.9	+0.8	
MBAR	Mbarara	145.21	233	ePKIKP	PKPab	12 51 53.9	+0.8	
MUD	Monsted U'grnd	145.28	354	⇓ i P	PKPdf	12 51 51.2	-0.2	
	comp=Z,126nm,0.8s							
ELZG	Elazig	145.42	307	i P	PKPab	12 51 53.2	-0.1	
KEMA	Kemaliye	145.53	308	i P	PKPbc	12 51 52.9	-0.2	
COP	Copenhagen	145.66	351	i P	PKPbc	12 51 52.9	+0.2	
	comp=Z,78nm,0.9s							
BSD	Bornholm Skovb	145.79	348	i P	PKPbc	12 51 53.1	-0.1	
	comp=Z,130nm,0.8s							
RSDY	Resadiye-TOKAT	145.97	311	eP	PKPab	12 52 10.8	+16	
SIM	Simferopol'	145.98	320	d i PKP2	PKPbc	12 51 54.2	+0.1	
SIM				pmax	pmax			
	comp=Z,53nm,0.8s							
LLD	Lille Linde	146.03	351	i P	PKPdf	12 51 50.0	-2.7	
	comp=Z,91nm,0.8s							
HEKM	Malatya_Hekimh	146.06	308	i P	PKPab	12 51 55.8	0.0	
CUKAN	kangal_SIVAS	146.26	309	i P	PKPbc	12 51 54.8	-0.5	
EKA	Eskdalemuir Ar	146.30	7	PKPbc	PKPbc	12 51 54.2	-0.4	
	comp=Z,4.6nm,0.4s,baz=340,slow=2.6,SNR=24							
ESK	Eskdalemuir	146.31	7	ePKPdf	PKPbc	12 51 54.4	-0.3	
ESK	Eskdalemuir	146.31	7	ePKP2	PKPbc	12 51 54.4	-0.3	
SVSK	Karacayir	146.38	310	eP	PKPab	12 51 57.1	+0.5	
SNOP	Sinop	146.74	314	eP	PKPbc	12 51 56.6	+0.2	
GKP	Gorka Klasztor	147.01	345	ePKP	PKPbc	12 51 56.9	+0.1	
SORM	Soroca	147.15	329	⇑ i P	PKPbc	12 51 57.1	-0.2	
SORM	Soroca	147.15	329	⇑ PKP2	PKPbc	12 51 57.1	-0.2	
BEL	Belsk	147.29	340	ePKP	PKPbc	12 51 58.1	+0.5	
SARI	SarD1z-Kayseri	147.35	308	eP	PKPbc	12 51 58.5	0.0	
YOZ	Yozgat	147.68	310	eP	PKPbc	12 51 59.7	+0.4	
KIS	Kishinev	147.70	327	⇓ i PKP	PKPdf	12 51 57.0	+1.2	
KIS				M	M	12 51 57.5		
	comp=Z,400nm,1.0s							
KIS	Kishinev	147.70	327	K i PKIKP	PKPdf	12 51 57.0	+1.2	
KIS				pmax	pmax			
	comp=Z,400nm,1.0s							
KIS				pmax	pmax			
	comp=Z,400nm,1.0s							
LVV	L'vov	147.80	335	ePKP2	PKPbc	12 51 59.4	+0.4	
CORM	Corum	147.94	312	eP	PKPbc	12 51 59.7	-0.2	
ILGA	Ilgaz	148.18	314	ePKPdf	PKPdf	12 51 58.0	+0.9	
YAYL	Yayladag	148.36	304	eP	PKPbc	12 52 01.6	+0.5	
KWP	Kalwaria Pacla	148.46	336	ePKP	PKPbc	12 52 00.8	0.0	
KWP	Kalwaria Pacla	148.46	336	ePKPbc	PKPbc	12 52 00.7	-0.1	
YURE	YUREGIR	148.47	305	eP	PKPbc	12 52 02.2	+0.9	
ASF	Jabal al Asfar	148.65	296	PKPbc	PKPbc	12 52 02.4	+0.5	
	comp=Z,37nm,0.8s,baz=65,slow=2.7,SNR=53							
BR101	Keskin Array S	148.82	312	ePKPbc	PKPbc	12 52 02.1	-0.1	
BR131	Keskin Array S	148.82	312	ePKPdf	PKPdf	12 51 60.0	+1.8	
BRTR	Keskin Array B	148.82	312	PKPbc	PKPbc	12 52 02.1	-0.1	
	comp=Z,26nm,0.7s,baz=138,slow=5.0,SNR=82							
TLCR		148.88	324	⇑ i P	PKPbc	12 52 02.3	+0.4	
TLCR		148.88	324	⇑ PKP2

KEBE	Keben-Mersin	150.06	306	eP	PKPbc	12 52 05.5	+0.3
KEBE	Keben-Mersin	150.06	306	eP	PKPbc	12 52 05.9	+0.7
KEBE	Keben-Mersin	150.06	306	eP	PKPbc	12 52 05.5	+0.3
MORC	Moravsky Berou	150.09	342	⇓iP	PKPbc	12 52 05.6	+0.8
MORC	Moravsky Berou	150.09	342	ePKPbc	PKPbc	12 52 04.9	+0.1
MORC	Moravsky Berou	150.09	342	⇓PKP2	PKPbc	12 52 05.6	+0.8
MORC	Moravsky Berou	150.09	342	ePKP	PKPbc	12 52 05.4	+0.6
DOPR	Dopca	150.12	328	⇑iP	PKPbc	12 52 06.1	+1.1
ICOR	Ion Corvin	150.12	323	⇑iP	PKPbc	12 52 05.8	+0.8
IKL	Isikli	150.15	305	eP	PKPbc	12 52 04.3	-1.1
IKL	Isikli	150.15	305	eP	PKPbc	12 52 04.3	-1.1
IKL	Isikli	150.15	305	eP	PKPbc	12 52 04.3	-1.1
PVCC	Panska Ves	150.18	346	⇑ePKP	PKPbc	12 52 05.7	+0.7
PVCC	Panska Ves	150.18	346	ePKP2	PKPbc	12 52 05.7	+0.7
MLR	Muntele Rosu	150.18	327	PKPbc	PKPbc	12 52 05.3	0.0
	comp=Z,13nm,0.6s,baz=59,slow=3.5,SNR=60						
MLR	Muntele Rosu	150.18	327	⇑iP	PKPbc	12 52 05.4	+0.1
MLR	Muntele Rosu	150.18	327	ePKPdf	PKPdf	12 52 02.5	+2.4
MLR				ePKPbc	PKPbc	12 52 05.3	0.0
PSN	Preselentsi	150.18	322	eP	PKPbc	12 52 05.9	+0.7
PSN	Preselentsi	150.18	322	iP	PKPbc	12 52 05.4	+0.2
AUMIH	MIHALICIK	150.24	313	eP	PKPbc	12 52 04.9	-0.8
AUMIH	MIHALICIK	150.24	313	eP	PKPbc	12 52 05.7	0.0
AUMIH	MIHALICIK	150.24	313	eP	PKPbc	12 52 04.9	-0.8
KECS	Kecovo	150.24	337	ePKP2	PKPbc	12 52 05.9	+0.7
KECS	Kecovo	150.24	337	ePKP	PKPbc	12 52 05.9	+0.7
TEVE	Tevekalti-Mers	150.26	306	eP	PKPbc	12 52 05.4	-0.3
TEVE	Tevekalti-Mers	150.26	306	eP	PKPbc	12 52 06.5	+0.8
TEVE	Tevekalti-Mers	150.26	306	eP	PKPbc	12 52 05.4	-0.3
AKKU	Akkuyu-Mersin	150.28	305	eP	PKPbc	12 52 04.7	-0.9
AKKU	Akkuyu-Mersin	150.28	305	eP	PKPbc	12 52 04.8	-0.9
AKKU	Akkuyu-Mersin	150.28	305	eP	PKPbc	12 52 04.7	-1.0
LADK	Ladik-KONYA	150.37	310	eP	PKPbc	12 52 03.8	-2.2
LADK	Ladik-KONYA	150.37	310	eP	PKPbc	12 52 03.6	-2.4
LADK	Ladik-KONYA	150.37	310	eP	PKPbc	12 52 03.8	-2.2
CJR	Cluj-Napoca	150.40	331	⇑iP	PKPbc	12 52 06.3	+0.6
CJR	Cluj-Napoca	150.40	331	⇑PKIKP	PKPbc	12 52 06.3	+0.6
AUSIV	SIVRIHISAR	150.40	312	eP	PKPbc	12 52 04.3	-1.7
AUSIV	SIVRIHISAR	150.40	312	eP	PKPbc	12 52 04.1	-1.9
AUSIV	SIVRIHISAR	150.40	312	eP	PKPbc	12 52 04.3	-1.7
KIZT	Kizilcal	150.42	311	eP	PKPbc	12 52 05.3	-0.8
KIZT	Kizilcal	150.42	311	eP	PKPbc	12 52 05.5	-0.6
KIZT	Kizilcal	150.42	311	eP	PKPbc	12 52 05.3	-0.8
SECR		150.44	326	⇑iP	PKPbc	12 52 06.3	+0.5
BERE	Bereket-Mersin	150.46	306	eP	PKPbc	12 52 05.6	-0.7
BERE	Bereket-Mersin	150.46	306	eP	PKPbc	12 52 06.5	+0.2
BERE	Bereket-Mersin	150.46	306	eP	PKPbc	12 52 05.6	-0.7
KONT	Konya--Tatoy	150.48	309	eP	PKPbc	12 52 05.3	-0.9
KONT	Konya--Tatoy	150.48	309	eP	PKPbc	12 52 05.5	-0.7
KONT	Konya--Tatoy	150.48	309	eP	PKPbc	12 52 05.3	-0.9
HRFI	Mount Harif	150.58	292	eP	PKPbc	12 52 07.6	+1.0
LTVH	L"tav"rtes,	150.59	334	⇓ePKPdf	PKPbc	12 52 06.5	+0.5
GULT	Gulveren	150.60	315	eP	PKPbc	12 52 06.0	-0.5
GULT	Gulveren	150.60	315	eP	PKPbc	12 52 05.9	-0.5
GULT	Gulveren	150.60	315	eP	PKPbc	12 52 06.0	-0.4
TEKE	Tekeli-Mersin	150.62	305	eP	PKPbc	12 52 05.5	-1.0
TEKE	Tekeli-Mersin	150.62	305	eP	PKPbc	12 52 06.2	-0.3
TEKE	Tekeli-Mersin	150.62	305	eP	PKPbc	12 52 05.5	-1.0
PRA	Prague	150.63	346	⇑ePKP	PKPbc	12 52 06.8	+0.8
PRA	Prague	150.63	346	ePKIKP	PKPbc	12 52 06.8	+0.8
VOIR		150.66	328	⇓iP	PKPbc	12 52 06.7	+0.3
VOIR		150.66	328	⇓PKIKP	PKPbc	12 52 06.7	+0.3
PRU	Pruhonice	150.69	345	⇑ePKP	PKPbc	12 52 06.8	+0.6
PRU				ex	x	12 52 11.3	
PRU	Pruhonice	150.69	345	ePKIKP	PKPbc	12 52 06.8	+0.6
PRU				e		12 52 11.3	
GOPC	GO Pecny, Ondr	150.70	345	⇑ePKP	PKPbc	12 52 06.7	+0.4
GOPC	GO Pecny, Ondr	150.70	345	ePKIKP	PKPbc	12 52 06.7	+0.4
EIL	Elat	150.70	292	eP	PKPbc	12 52 07.2	+0.3
DRGR		150.72	332	⇑iP	PKPbc	12 52 06.8	+0.3
DRGR		150.72	332	⇑PKIKP	PKPbc	12 52 06.8	+0.3
VRAC	Vranov	150.78	342	⇓iP	PKPbc	12 52 07.2	+0.7
VRAC	Vranov	150.78	342	⇓PKIKP	PKPbc	12 52 07.2	+0.7
VRAC	Vranov	150.78	342	ePKP	PKPbc	12 52 06.7	+0.2
VRAC				e		12 52 54.3	
VYHS	Vyhne	150.81	339	ePKIKP	PKPbc	12 52 06.9	+0.4
VYHS	Vyhne	150.81	339	ePKP	PKPbc	12 52 06.9	+0.4
CSS	Mathiatis	150.84	303	eP	PKPbc	12 52 06.7	-0.4
CSS	Mathiatis	150.84	303	eP	PKPbc	12 52 06.1	-1.0
CSS	Mathiatis	150.84	303	eP	PKPab	12 53 06.7	+52
CSS	Mathiatis	150.84	303	ePKPdf	PKPdf	12 52 01.1	-0.1
JAVC	Velka Javorina	150.86	341	ePKP	PKPbc	12 52 07.9	+1.2
JAVC				e		12 52 55.9	
NKC	Novy Kostel	150.90	348	⇑ePKP	PKPbc	12 52 07.2	+0.5
NKC	Novy Kostel	150.90	348	ePKIKP	PKPbc	12 52 07.2	+0.5
ARR	Arges	150.92	328	⇓iP	PKPbc	12 52 08.2	+1.2
BORA	Eskisehir	150.92	314	eP	PKPbc	12 52 06.7	-0.5
BORA	Eskisehir	150.92	314	eP	PKPbc	12 52 06.9	-0.3
BORA	Eskisehir	150.92	314	eP	PKPbc	12 52 06.7	-0.5
PSZ	Piszkesteto	150.93	337	⇓iP	PKPbc	12 52 07.2	+0.3
PSZ	Piszkesteto	150.93	337	⇓ePKPdf	PKPbc	12 52 06.7	-0.2
PSZ	Piszkesteto	150.93	337	ePKPbc	PKPbc	12 52 07.3	+0.3
PSZ	Piszkesteto	150.93	337	⇓PKIKP	PKPbc	12 52 07.2	+0.3
PRD	Provadia	150.93	322	iP	PKPbc	12 52 07.5	+0.6
HRT	Hereke	150.95	316	eP	PKPbc	12 52 06.4	-0.8
HRT	Hereke	150.95	316	eP	PKPbc	12 52 06.7	-0.5
HRT	Hereke	150.95	316	eP	PKPbc	12 52 06.4	-0.8
KRUC	Moravsky	151.06	342	ePKP	PKPbc	12 52 07.2	+0.1
KRUC				e		12 52 54.7	
ADVT	Abdulvahap	151.11	316	eP	PKPbc	12 52 07.0	-0.5
LEF	Lefka	151.13	303	eP	PKPbc	12 52 07.2	-0.5
LEF	Lefka	151.13	303	eP	PKPbc	12 52 07.7	0.0
LEF	Lefka	151.13	303	eP	PKPbc	12 52 07.2	-0.5
CAVI	Cavuskoy	151.16	315	eP	PKPbc	12 52 07.2	-0.5
CAVI	Cavuskoy	151.16	315	eP	PKPbc	12 52 07.2	-0.5
CAVI	Cavuskoy	151.16	315	eP	PKPbc	12 52 07.2	-0.5
HGN	Heimansgroeve	151.18	357	ePKPbc	PKPbc	12 52 07.4	+0.1
HGN				epPKPab	PKPab	12 52 15.5	-0.2
GAZI	Gazipasa	151.19	306	eP	PKPbc	12 52 06.7	-1.1
GAZI	Gazipasa	151.19	306	eP	PKPbc	12 52 05.9	-1.9
GAZI	Gazipasa	151.19	306	eP	PKPbc	12 52 06.7	-1.1
SMOL	Smolenice	151.24	341	ePKIKP	PKPbc	12 52 08.8	+1.3
SMOL	Smolenice	151.24	341	ePKP	PKPbc	12 52 08.8	+1.3
LOT	Lotru	151.27	329	⇑iP	PKPbc	12 52 07.5	-0.4
YLV	Yalova	151.28	316	eP	PKPbc	12 52 07.2	-0.8
YLV	Yalova	151.28	316	eP	PKPbc	12 52 07.4	-0.6
YLV	Yalova	151.28	316	eP	PKPbc	12 52 07.2	-0.8
MEM	Membach	151.33	357	⇑PKPbc	PKPbc	12 52 07.4	-0.3
HUMR	Humele	151.34	327	⇑iP	PKPbc	12 52 07.7	-0.2
MODS	Modra-Piesok	151.41	341	ePKIKP	PKPbc	12 52 07.3	-0.7
MODS	Modra-Piesok	151.41	341	ePKP	PKPbc	12 52 07.3	-0.7
CTKS	Kestanelik-??a	151.45	318	eP	PKPbc	12 52 08.2	0.0
KUTH	Kutahya	151.45	314	eP	PKPbc	12 52 08.6	+0.1
KUTH	Kutahya	151.45	314	eP	PKPbc	12 52 07.9	-0.6
KUTH	Kutahya	151.45	314	eP	PKPbc	12 52 08.6	+0.1
BCLA	Clavier	151.55	358	⇓PKPbc	PKPbc	12 52 08.0	-0.1
BCLA				⇓PKPab	PKPab	12 52 17.1	-0.1
SBT5	Esenkoy-Cinarc	151.56	317	eP	PKPbc	12 52 08.3	-0.1
SBT5	Esenkoy-Cinarc	151.56	317	eP	PKPbc	12 52 07.4	-1.0
SBT5	Esenkoy-Cinarc	151.56	317	eP	PKPbc	12 52 08.3	-0.1
SUTC	Sutluce-Ispart	151.66	309	eP	PKPbc	12 52 07.5	-1.5
SUTC	Sutluce-Ispart	151.66	309	eP	PKPbc	12 52 07.9	-1.1
SUTC	Sutluce-Ispart	151.66	309	eP	PKPbc	12 52 07.5	-1.5
KHC	Kasperske Hory	151.71	346	⇑ePKP	PKPbc	12 52 08.9	+0.3
KHC				ePKPAB	PKPab	12 52 15.6	-2.5
KHC	Kasperske Hory	151.71	346	ePKPdf	PKPdf	12 52 02.6	+0.4
KHC	Kasperske Hory	151.71	346	ePKIKP	PKPbc	12 52 08.9	+0.3
KHC				e		12 52 15.6	
TVSB	Tavsanli	151.80	314	eP	PKPbc	12 52 07.9	-1.4
TVSB	Tavsanli	151.80	314	eP	PKPbc	12 52 08.4	-0.9
TVSB	Tavsanli	151.80	314	eP	PKPbc	12 52 07.9	-1.4
ISP	Isparta	151.85	310	⇑iP	PKPbc	12 52 08.9	-0.5
ISP	Isparta	151.85	310	ePKPbc	PKPbc	12 52 08.6	-0.8
ISP	Isparta	151.85	310	⇑PKIKP	PKPbc	12 52 08.9	-0.5
JMB	Yambol	151.86	322	iP	PKPbc	12 52 09.3	+0.2
GEC2	GERESS Array S	151.95	346	ePKPdf	PKPdf	12 52 02.5	-0.1
GEC2				ePKPbc	PKPbc	12 52 09.3	+0.1
GEC2	GERESS Array S	151.95	346	ePKIKP	PKPdf	12 52 02.5	-0.1
GERES	GERESS Array B	151.95	346	PKP	PKPdf	12 52 02.5	-0.1
	comp=Z,0.7nm,0.5s,baz=62,slow=2.3,SNR=6.5						
GERES				PKPbc	PKPbc	12 52 09.4	+0.1
	comp=Z,4.5nm,0.5s,baz=56,slow=3.4,SNR=34						
GERES				pPKPbc	pPKPbc	12 52 53.1	-2.8
	comp=Z,2.3nm,0.7s,baz=85,slow=2.2,SNR=1.6						
GEA0	GERESS Array S	151.96	346	ePKPdf	PKPdf	12 52 02.2	-0.4
CSKK	Cs˘‡kako	151.98	338	⇓ePKPdf	PKPdf	12 52 03.9	+1.3
SBT3	Marmara-Eregli	151.98	318	eP	PKPbc	12 52 09.4	+0.2
SBT3	Marmara-Eregli	151.98	318	eP	PKPbc	12 52 09.3	+0.1
SBT3	Marmara-Eregli	151.98	318	eP	PKPbc	12 52 09.4	+0.2
GEDZ	Gediz	152.04	313	eP	PKPbc	12 52 09.7	-0.1
GEDZ	Gediz	152.04	313	eP	PKPbc	12 52 09.3	-0.5
GEDZ	Gediz	152.04	313	eP	PKPbc	12 52 09.7	-0.1
KCTX	Karacabey (Bur	152.09	317	eP	PKPbc	12 52 09.2	-0.6
KCTX	Karacabey (Bur	152.09	317	eP	PKPbc	12 52 08.9	-0.9
KCTX	Karacabey (Bur	152.09	317	eP	PKPbc	12 52 09.2	-0.6
BZS	Buzias	152.12	332	⇑iP	PKPbc	12 52 09.8	+0.2
BZS	Buzias	152.12	332	⇑PKIKP	PKPbc	12 52 09.8	+0.2
SRE	Strehaia	152.12	329	⇑iP	PKPbc	12 52 10.5	+0.8
SRE	Strehaia	152.12	329	⇑PKIKP	PKPbc	12 52 10.5	+0.8
EDRB	Edirne	152.16	321	eP	PKPbc	12 52 09.8	0.0
TKR	Tekirdag	152.19	319	eP	PKPab	12 52 21.4	+1.1
CONA	Conrad Observa	152.24	342	ePKiKP	PKiKP	12 52 10.3	+0.1
	comp=Z,35nm,1.2s,SNR=14						
SOP	Sopron	152.25	341	⇓ePKPdf	PKPbc	12 52 10.1	+0.3
WLF	Walferdange	152.26	356	⇓PKPbc	PKPbc	12 52 10.6	+0.8
WLF				⇓PKPab	PKPab	12 52 20.4	+0.1
WLF	Walferdange	152.26	356	ePKPbc	PKPbc	12 52 10.8	+1.0
SIMA	Simav-Kutahya	152.31	314	eP	PKPbc	12 52 10.0	-0.4
SIMA	Simav-Kutahya	152.31	314	eP	PKPbc	12 52 09.6	-0.8
SIMA	Simav-Kutahya	152.31	314	eP	PKPbc	12 52 10.0	-0.4
KORT	Korkueli	152.33	309	eP	PKPbc	12 52 09.8	-0.8
KORT	Korkueli	152.33	309	eP	PKPbc	12 52 10.1	-0.5
KORT	Korkueli	152.33	309	eP	PKPbc	12 52 09.8	-0.8
RKY	Sarkoy-Tekirda	152.59	318	eP	PKPbc	12 52 09.9	-1.0
RKY	Sarkoy-Tekirda	152.59	318	eP	PKPbc	12 52 10.3	-0.6
RKY	Sarkoy-Tekirda	152.59	318	eP	PKPbc	12 52 09.9	-1.0
KRBG	Karabiga-Canak	152.69	318	eP	PKPbc	12 52 10.4	-0.6
KRBG	Karabiga-Canak	152.69	318	eP	PKPbc	12 52 10.5	-0.6
KRBG	Karabiga-Canak	152.69	318	eP	PKPbc	12 52 10.4	-0.6
MDVR	Moldovita	152.73	331	⇓iP	PKPbc	12 52 11.3	+0.2
MOA	Molln	152.74	344	ePKPbc	PKPbc	12 52 10.6	-0.4
	comp=Z,2.2nm,0.4s						
ELL	Elmali	152.76	309	eP	PKPbc	12 52 10.8	-0.7
ELL	Elmali	152.76	309	eP	PKPbc	12 52 10.5	-1.0
ELL	Elmali	152.76	309	eP	PKPbc	12 52 10.8	-0.7
MPEP	Malo Peshtene	152.81	326	iP	PKPbc	12 52 11.4	+0.2
KULA	Kula-Manisa	152.81	313	eP	PKPbc	12 52 11.0	-0.5
KULA	Kula-Manisa	152.81	313	eP	PKPbc	12 52 10.8	-0.7
KULA	Kula-Manisa	152.81	313	eP	PKPbc	12 52 11.0	-0.5
MANT	Manisa	152.89	313	ePKPbc	PKPbc	12 52 12.1	+0.2
ARSA	Arzberg	152.95	342	ePKiKP	PKPbc	12 52 11.5	0.0
	comp=Z,8.5nm,1.1s						
ERIK	Erikli-Kesan	153.01	319	eP	PKPbc	12 52 11.4	-0.3
LPK	Lapseki	153.03	318	eP	PKPbc	12 52 10.2	-1.6
LPK	Lapseki	153.03	318	eP	PKPbc	12 52 09.3	-2.5
LPK	Lapseki	153.03	318	eP	PKPbc	12 52 10.2	-1.6
ALN	Alexandroupoli	153.15	320	eP	PKPbc	12 52 11.8	-0.2
ALN	Alexandroupoli	153.15	320	ePKPbc	PKPbc	12 52 11.6	-0.4
ENEZ	Enez	153.19	319	eP	PKPbc	12 52 11.8	-0.3
GELI	Tayfur-Gelibol	153.20	319	eP	PKPbc	12 52 11.3	-0.8
GELI	Tayfur-Gelibol	153.20	319	eP	PKPbc	12 52 11.3	-0.8
GELI	Tayfur-Gelibol	153.20	319	eP	PKPbc	12 52 11.3	-0.8
AKAS	Kas	153.20	308	eP	PKPbc	12 52 10.6	-1.9
AKAS	Kas	153.20	308	eP	PKPbc	12 52 10.3	-2.2
AKAS	Kas	153.20	308	eP	PKPbc	12 52 10.6	-1.9
RDO	Rodhopi	153.30	321	eP	PKPbc	12 52 12.5	+0.2
FETY	Fethiye	153.40	309	eP	PKPbc	12 52 10.9	-1.9
FETY	Fethiye	153.40	309	eP	PKPbc	12 52 09.8	-3.0
FETY	Fethiye	153.40	309	eP	PKPbc	12 52 10.9	-1.9
SOKA	Soboth	153.61	342	ePKPbc	PKPbc	12 52 12.8	-0.2
	comp=Z,11nm,0.8s,SNR=7.5						
AYDB	Zeytinkoy-Aydi	153.62	313	eP	PKPbc	12 52 13.3	0.0
AYDB	Zeytinkoy-Aydi	153.62	313	eP	PKPbc	12 52 11.7	-1.6
AYDB	Zeytinkoy-Aydi	153.62	313	eP	PKPbc	12 52 13.3	0.0
VTS	Vitosha	153.62	326	⇑iP	PKPbc	12 52 13.5	+0.3
VTS	Vitosha	153.62	326	ePKPbc	PKPbc	12 52 13.2	0.0
VTS	Vitosha	153.62	326	iP	PKPbc	12 52 13.0	-0.2
VTS	Vitosha	153.62	326	⇑PKIKP	PKPbc	12 52 13.5	+0.3
ECH	Echery	153.63	354	ePKPab	PKPab	12 52 25.5	-0.6
TURN	Turunc	153.64	310	eP	PKPbc	12 52 13.4	+0.2
TURN	Turunc	153.64	310	eP	PKPbc	12 52 13.2	0.0
TURN	Turunc	153.64	310	eP	PKPbc	12 52 13.4	+0.2
KBA	Koelnbreinsper	153.69	345	ePKPbc	PKPbc	12 52 12.6	-0.6
	comp=Z,4.0nm,0.5s						
YER	Yerkesik	153.75	311	eP	PKPbc	12 52 12.9	-0.7
YER	Yerkesik	153.75	311	eP	PKPbc	12 52 12.9	-0.7
YER	Yerkesik	153.75	311	eP	PKPbc	12 52 12.9	-0.7
WATA	Walderalm	153.84	347	iPKPbc	PKPbc	12 52 12.8	-0.7
	comp=Z,6.2nm,0.5s						
RETA	Reutte	153.85	349	ePKiKP	PKiKP	12 52 13.6	+0.1
	comp=Z,3.1nm,0.4s						
RETA				iPKPab	PKPab	12 52 26.9	-0.3
	comp=Z,6.1nm,0.6s						
WTTA	Wattenberg	153.90	347	ePKiKP	PKPbc	12 52 13.7	0.0
	comp=Z,7.4nm,0.8s						
WTTA				ePKPab	PKPab	12 52 26.6	-1.0
	comp=Z,11nm,0.8s						
OBKA	Obir	153.90	342	ePKPbc	PKPbc	12 52 13.2	-0.4
	comp=Z,2.6nm,0.5s						
MLSB	Milas	154.02	311	eP	PKPbc	12 52 13.9	-0.2
MLSB	Milas	154.02	311	eP	PKPbc	12 52 13.7	-0.4
MLSB	Milas	154.02	311	eP	PKPbc	12 52 13.9	-0.2
DIVS	Divibare	154.03	332	ePKPdf	PKPdf	12 52 05.7	-0.1
DIVS				ePKPbc	PKPbc	12 52 13.9	-0.1
MYKA	Terra Mystica	154.03	344	ePKPdf	PKPdf	12 52 04.9	-0.8
	comp=Z,1.1nm,0.4s						
MYKA				ePKPbc	PKPbc	12 52 13.0	-0.8
	comp=Z,2.0nm,0.4s						
MMB	Musomiste	154.04	324	iP	PKPbc	12 52 13.4	-0.6
GCAM	G?zelcaml?	154.19	313	eP	PKPbc	12 52 13.8	-0.6
GCAM	G?zelcaml?	154.19	313	eP	PKPbc	12 52 14.4	0.0
GCAM	G?zelcaml?	154.19	313	eP	PKPbc	12 52 13.8	-0.6
ABTA	Abfaltersbach	154.20	346	ePKPdf	PKPdf	12 52 05.4	-0.6
	comp=Z,10.0nm,0.8s						
ABTA				iPKPbc	PKPbc	12 52 13.6	-0.7
	comp=Z,9.0nm,0.6s						
DAVA	Damuels	154.20	350	ePKiKP	PKiKP	12 52 14.7	+0.3
	comp=Z,4.9nm,0.6s						
DAVA				ePKPab	PKPab	12 52 28.5	-0.3
	comp=Z,6.2nm,0.6s						
KKB	Krupnik	154.20	325	iP	PKPbc	12 52 14.0	-0.3
URLA	Izmir	154.28	315	eP	PKPbc	12 52 12.8	-1.9
URLA	Izmir	154.28	315	eP	PKPbc	12 52 12.7	-1.9
URLA	Izmir	154.28	315	eP	PKPbc	12 52 12.8	-1.8
FETA	Feichten	154.31	348	ePKPdf	PKPdf	12 52 06.4	+0.2
	comp=Z,9.0nm,1.0s						
DAT	Datca	154.44	310	eP	PKPbc	12 52 14.0	-1.1
DAT	Datca	154.44	310	eP	PKPbc	12 52 13.9	-1.1
DAT	Datca	154.44	310	eP	PKPbc	12 52 14.0	-1.1
BODT	Bodrum	154.46	311	eP	PKPbc	12 52 13.1	-1.9
BODT	Bodrum	154.46	311	eP	PKPbc	12 52 13.9	-1.1
BODT	Bodrum	154.46	311	eP	PKPbc	12 52 13.1	-1.9
BLY	Banja Luka	154.61	337	ePKPdf	PKPdf	12 52 06.2	-0.2
BLY				ePKPbc	PKiKP	12 52 15.5	+0.5
DAVOX	Davos/Dischmat	154.69	350	PKP	PKPdf	12 52 06.8	0.0
	comp=Z,4.1nm,0.8s,baz=27,slow=11,SNR=6.6						
DAVOX				PKPbc	PKiKP	12 52 15.7	+0.3
	comp=Z,12nm,0.7s,baz=225,slow=5.7,SNR=14						
FUORN	Ofenpass-Fuorn	154.78	349	ePKPdf	PKPdf	12 52 07.6	+0.7
FUORN				ePKPbc	PKiKP	12 52 16.1	+0.3
STIP	Stip	154.79	326	iP	PKPbc	12 52 13.7	-1.8
VAY	Valandovo	154.85	325	iP	PKPbc	12 52 14.8	-0.9
TUE	Stuetta	155.07	350	ePKPdf	PKPdf	12 52 07.0	-0.3
SENIN	Lac Senin/Sane	155.45	354	ePKPdf	PKPdf	12 52 08.4	+0.6
SENIN				ePKPab	PKPab	12 52 34.1	-0.1
FNA	Florina	155.87	325	ePKPdf	PKPdf	12 52 07.6	-0.8
FNA	Florina	155.87	325	ePKIKP	PKPdf	12 52 07.6	-0.8
OHR	Ohrid	155.94	326	iP	PKPdf	12 52 17.4	+9.0
BNI	Bardonecchia	156.81	354	ePKPdf	PKPdf	12 52 09.8	+0.3
BNI	Bardonecchia	156.81	354	ePKIKP	PKPdf	12 52 09.8	+0.3
IDI	Anoyia	157.04	310	PKP	PKPdf	12 52 09.5	-0.6
	comp=Z,5.6nm,1.0s,baz=135,slow=5.7,SNR=2.5						
IDI				PKPbc	PKPbc	12 52 19.1	
	comp=Z,2.8nm,0.5s,baz=232,slow=19,SNR=4.7						
PBRG	Braganca	158.42	21	ePKPab	PKPab	12 52 47.2	+0.2
POLO	Lamas de Olo	158.43	24	ePKPab	PKPab	12 52 47.0	-0.1
PVRL	Vila Real	158.54	24	ePKPab	PKPab	12 52 48.0	+0.5
MVO	Moncorvo	158.89	22	ePKPdf	PKPdf	12 52 13.2	+1.1
MVO	Moncorvo	158.89	22	ePKPab	PKPab	12 52 49.3	+0.3
PVIS	Viseu	158.96	25	ePKPab	PKPab	12 52 49.6	+0.3
PCAS	Casmilo, Conde	159.28	27	ePKPab	PKPab	12 52 51.0	+0.3
MTE	Mateigas	159.37	24	ePKPdf	PKPdf	12 52 13.8	+1.1
MTE	Manteigas	159.37	24	ePKPab	PKPab	12 52 51.4	+0.3
PTOM	Tomar	159.68	27	ePKPab	PKPab	12 52 52.7	+0.3
PCBR	Castelo Branco	159.87	25	ePKPdf	PKPdf	12 52 14.0	+0.8
PMRV	Marv??o	160.26	26	ePKPdf	PKPdf	12 52 12.8	-0.9
PMRV	Marv??o	160.26	26	ePKPab	PKPab	12 52 55.1	+0.1
PESTR	Estremoz	160.66	27	ePKPab	PKPab	12 52 56.7	0.0
ES19	SONSECA Array	161.22	18	ePKPdf	PKPdf	12 52 15.5	+0.7
MESJ	Messejana	161.23	30	ePKP	PKPdf	12 52 14.3	-0.5
MESJ	Messejana	161.23	30	ePKPdf	PKPdf	12 52 14.4	-0.3
ESDC	Sonseca Array	161.23	18	PKP	PKPdf	12 52 13.9	-0.8
	comp=Z,0.7nm,0.4s,baz=350,slow=2.7,SNR=13						
ESDC				PKPab	PKPab	12 52 59.4	+0.2
	comp=Z,3.1nm,0.7s,baz=331,slow=3.9,SNR=15						
ESDC				pPKPab	pPKPab	12 53 42.6	-1.6
	comp=Z,0.6nm,0.5s,baz=334,slow=3.5,SNR=2.6						
PAB	San Pablo	161.23	19	ePKPdf	PKPdf	12 52 15.5	+0.7
PAB	San Pablo	161.23	19	ePKIKP	PKPdf	12 52 15.5	+0.7
PBEJ	Beja	161.24	29	ePKPdf	PKPdf	12 52 16.1	+1.3
MORF	Marmelete	161.45	32	ePKPdf	PKPdf	12 52 16.9	+1.8
PBAR	Barrancos	161.47	27	ePKPdf	PKPdf	12 52 15.9	+0.9
PBAR	Barrancos	161.47	27	ePKPab	PKPab	12 52 59.

FITZ Sn Sn 13 22 06.9 -13
0.3nm,0.3s,baz=138,slow=16,SNR=4.4
WRA Warramunga Arr 22.70 114 P P 13 21 20.3 +0.9
1.7nm,0.8s,baz=289,slow=11,SNR=5.8
WRA S **S 13 25 27.1 +1.3**
0.5nm,0.6s,baz=284,slow=25,SNR=4.2
ASAR Alice Springs 23.73 123 P **P 13 21 30.6 +0.8**
1.0nm,0.8s,baz=300,slow=9.0,SNR=9.5
SONM Songino Array 59.47 355 P **P 13 26 20.2 0.0**
0.9nm,0.5s,baz=173,slow=9.2,SNR=5.8
MKAR Makanchi Array 64.11 338 P **P 13 26 51.6 +0.3**
1.6nm,0.6s,baz=142,slow=7.7,SNR=21
KURBB Kurchatov Arra 68.68 338 P **P 13 27 20.5 +0.1**
0.3nm,0.6s,baz=152,slow=5.7,SNR=3.0
ZALV Zalesovo Beam 69.42 343 P **P 13 27 24.3 -0.7**
0.5nm,0.3s,baz=165,slow=6.0,SNR=3.8

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*GCMT **26** 13:21:20.0±0.3, 13°.59S×112°.32W, h18km±1km, MW5.1/100, Moment Tensor Solution. s27,c30; s100,c146; Duration: 0 Moment tensor: Scale 1016Nm; Mrr=0.71±.16; Mθφ2.15±.13; Mθθ=-1.44±.14; Mrφ0.34±.29; Mθθ3.44±.12; Mφφ=3.03±.49; Best double couple: M0=4.94000×1016 NP1:φs=16.00000°, δ80.00000°, λ=-144.00000°. NP2:φs=279.00000°, δ55.00000°, λ=-13.00000°. Principal axes: T 4.6070, Plg16.0000°, Azm143.0000°; N 0.6670, Plg53.0000°, Azm30.0000°; P -5.2720, Plg32.0000°, Azm244.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface waves, cutoff=50s.*

IDC 26 13:21:18.3±3.7, 13°.85S×112°.64W, h0km, mb3.7/4, mb1 4.1/4, mb1mx3.8/35, mbtmp3.7/4, MS4.2/26, Ms1 4.2/26, ms1mx4.1/35 Error ellipse: s-maj=109.0km s-min=34.7km az=49.0, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**13.57**	**167**	LR	LR	13 28 30.8	
	comp=Z,2μm,21.5s,baz=345,slow=32						
RKT	**Rikitea**	**23.08**	**243**	eLR	LR	13 32 18.4	
	1μm,27.2s						
TAOE	**Nuku Hiva Isla**	**27.41**	**277**	eLR	LR	13 33 55.5	
	305nm,23.0s						
NNA	**Nana**	**34.92**	**91**	LR	LR	13 38 38.1	
	comp=Z,288nm,19.4s,baz=254,slow=30						
PPT	**Papeete**	**35.72**	**259**	LR	LR	13 39 08.0	
	comp=Z,137nm,18.7s,baz=125,slow=30						
PPT2	**Papeete2**	**35.72**	**259**	eLR	LR	13 38 05.7	
	600nm,26.8s,baz=102						
TBI	**Tubuai**	**36.07**	**249**	eLR	LR	13 38 23.6	
	891nm,26.8s,baz=79						
JTS	**JuntasAbangare**	**36.46**	**50**	LR	LR	13 39 15.7	
	comp=Z,623nm,21.1s,baz=300,slow=30						
LPIG	**La Paz**	**37.78**	**3**	LR	LR	13 39 57.6	
	comp=Z,605nm,20.6s,baz=200,slow=30						
ROSC	**El Rosal**	**42.31**	**67**	LR	LR	13 43 31.2	
	comp=Z,100nm,20.5s,baz=212,slow=32						
LPAZ	**La Paz**	**42.98**	**99**	P	P	13 29 20.4	0.0
	6.8nm,1.2s,baz=270,slow=8.7,SNR=7.5						
LPAZ				LR	LR	13 44 39.7	
	comp=Z,66nm,18.2s,baz=256,slow=33						
TXAR	**Lajitas Array**	**43.79**	**11**	P	P	13 29 25.3	-0.8
	0.3nm,0.7s,baz=190,slow=9.7,SNR=3.3						
TXAR				LR	LR	13 44 15.2	
	comp=Z,237nm,18.0s,baz=0.0,slow=31						
PLCA	**Paso Flores**	**45.38**	**134**	LR	LR	13 44 09.3	
	comp=Z,737nm,18.1s,baz=299,slow=30						
RAR	**Rarotonga**	**45.41**	**254**	LR	LR	13 44 05.3	
	comp=Z,329nm,18.6s,baz=101,slow=30						
ANMO	**Albuquerque**	**48.88**	**7**	LR	LR	13 47 12.1	
	comp=Z,378nm,18.1s,baz=192,slow=32						
NVAR	**Mina Array Bea**	**52.27**	**354**	P	P	13 30 32.3	+0.6
	0.6nm,0.7s,baz=186,slow=6.0,SNR=2.8						
NVAR				LR	LR	13 48 00.2	
	comp=Z,404nm,18.7s,baz=200,slow=31						
CPUP	**Villa Florida**	**53.05**	**113**	LR	LR	13 49 16.9	
	comp=Z,220nm,19.8s,baz=274,slow=32						
PCRV	**Puerto La Cruz**	**53.27**	**66**	LR	LR	13 49 36.6	
	comp=Z,212nm,22.0s,baz=249,slow=32						
YBH	**Yreka Blue Hor**	**56.08**	**351**	LR	LR	13 49 34.3	
	comp=Z,479nm,19.5s,baz=172,slow=30						
TKL	**Tuckaleechee C**	**56.31**	**28**	LR	LR	13 53 47.5	
	comp=Z,68nm,18.6s,baz=173,slow=35						
PDAR	**Pinedale Array**	**56.40**	**3**	P	P	13 31 01.8	0.0
	0.5nm,0.5s,baz=161,slow=5.7,SNR=4.8						
PDAR				LR	LR	13 51 21.5	
	comp=Z,272nm,18.8s,baz=196,slow=32						
PMSA	**Palmer Station**	**60.65**	**158**	LR	LR	13 52 00.2	
	comp=Z,215nm,21.8s,baz=296,slow=30						
ULM	**Lac du Bonnet**	**65.50**	**12**	LR	LR	13 57 35.6	
	comp=Z,135nm,18.8s,baz=117,slow=33						
RPZ	**Rata Peaks**	**70.70**	**228**	LR	LR	13 56 42.7	
	comp=Z,347nm,21.3s,baz=66,slow=30						
YKA	**Yellowknife Ar**	**76.11**	**359**	LR	LR	14 03 12.2	
	comp=Z,37nm,19.5s,baz=192,slow=33						
QSPA	**South Pole Qui**	**76.26**	**180**	LR	LR	14 01 00.1	
	comp=Z,62nm,20.8s,baz=108,slow=31						
DZM	**Mont Dzumac**	**76.64**	**250**	LR	LR	13 59 42.9	
	comp=Z,115nm,19.1s,baz=21,slow=30						
DZM	**Mont Dzumac**	**76.64**	**250**	eLR	LR	13 57 23.5	
	239nm,25.6s						
SCHQ	**Schefferville**	**78.59**	**25**	LR	LR	14 06 25.6	
	comp=Z,238nm,20.5s,baz=230,slow=34						
SNAA	**Sanae**	**83.02**	**163**	LR	LR	14 04 31.9	
	comp=Z,191nm,20.0s,baz=190,slow=31						
H11S2	**WAKE ISLAND Hy**	**85.72**	**290**	T	T	15 08 55.6	
	baz=106,slow=74,SNR=14						
H11S1	**WAKE ISLAND Hy**	**85.73**	**290**	T	T	15 09 00.9	
	baz=106,slow=74,SNR=11						
H11S3	**WAKE ISLAND Hy**	**85.74**	**290**	T	T	15 08 57.1	
	baz=106,slow=74,SNR=9.2						
STKA	**Stephens Creek**	**95.72**	**235**	LR	LR	14 09 56.5	
	comp=Z,133nm,20.8s,baz=44,slow=30						
MKAR	**Makanchi Array**	**144.85**	**342**	PKP	PKPab	13 40 56.4	0.0
	0.4nm,0.7s,baz=5.7,slow=1.4,SNR=3.5						

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*ISCJB **26** 13:40:34.2±0.7, 31°.48S±0°.05×138°.45E±0°.07, h14km, Error ellipse: s-maj=9.0km s-min=6.1km az=148.1*
*AUST **26** 13:40:36.5±0.0, 31°.65S×138°.53E, h15km, Error ellipse: s-maj=0.2km s-min=0.1km az=314.0*
*IDC **26** 13:40:37.3±6.2, 31°.22S×138°.74E, h0km, mb1 3.1/3, mb1mx3.1/42, mbtmp2.9/3, ML2.8/3, Error ellipse: s-maj=128.1km s-min=17.8km az=31.0*

ISC 26 13:40:35.0±0.9, 31°.52S±0°.06×138°.57E±0°.06, h14km, n9, σ2°37/15, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HTT	**Hallett**	**1.93**	**171**	P	**Pn**	**13 41 08.3**	**+0.8**
	baz=1.8						
HTT				S	**Sn**	**13 41 31.9**	**+0.3**
	baz=1.8						
BBOO	**Buckleboo**	**2.49**	**238**	P	**Pn**	**13 41 16.2**	**+1.0**
	baz=2.4						
STKA	**Stephens Creek**	**2.61**	**99**	Pn	**Pb**	**13 41 19.8**	**-1.8**
	0.3nm,0.3s,baz=280,slow=13,SNR=7.7						
STKA				Sn	**Sb**	**13 41 51.1**	**-2.3**
	1.6nm,0.3s,baz=310,slow=17,SNR=4.9						
STKA				Lg	Lg	13 41 57.6	
	3.7nm,0.3s,baz=187,slow=20,SNR=10						
STKA	**Stephens Creek**	**2.61**	**99**	P	**Pb**	**13 41 19.7**	**-1.8**
	baz=2.6						
STKA				S	**Sn**	**13 41 50.9**	**+2.7**
	baz=2.6						
ARPS	**Mount Arapiles**	**5.90**	**154**	P	**Pn**	**13 42 02.8**	**+0.8**
	baz=5.8						
CMSA	**Cobar Meteorol**	**6.08**	**92**	P	**Pn**	**13 42 06.3**	**+1.8**
	baz=6.1						
CMSA				S	**Sn**	**13 43 13.2**	**-0.8**
	baz=6.1						
QLP	**Quilpie**	**6.98**	**47**	P	**Pn**	**13 42 21.1**	**+4.2**
	baz=7.1						
ASAR	**Alice Springs**	**8.85**	**331**	Pn	**Pn**	**13 42 44.5**	**+1.9**
	0.1nm,0.3s,baz=153,slow=12,SNR=15						
ASAR				Sn	**Sn**	**13 44 21.2**	**-0.8**
	0.1nm,0.3s,baz=157,slow=22,SNR=5.7						
WRA	**Warramunga Arr**	**12.14**	**341**	Pn	**Pn**	**13 43 28.0**	**+0.4**
	0.2nm,0.3s,baz=162,slow=11,SNR=15						
WRA				Sn	**Sn**	**13 45 38.2**	**-4.6**
	0.0nm,0.3s,baz=168,slow=24,SNR=1.4						

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*NIED **26** 13:42:00, 38°.90N×141°.90E, h56km, Mw4.0 Best double couple: M0=1.14000×1015 NP1:φs=164.00000°, δ19.00000°, λ58.00000°. NP2:φs=18.00000°, δ74.00000°, λ100.00000°.*
*BJI **26** 13:42:26.7, 38°.02N×145°.09E, h34km, mb4.5/27, mB4.7/13, Ms4.0/4, Ms7 3.7/4*
*ISCJB **26** 13:42:49.8±0.7, 38°.94N±0°.04×142°.01E±0°.08, h58km±4km, mb4.3/31, MS3.6/4, Error ellipse: s-maj=11.1km s-min=5.5km az=19.1*
*IDC **26** 13:42:51.6±2.3, 38°.96N×141°.94E, h55km±19km, mb3.8/19, mb1 3.9/22, mb1mx3.7/71, mbtmp4.1/22, ML3.5/3, MS3.0/7, Ms1 3.0/7, ms1mx2.7/65, Error ellipse: s-maj=19.8km s-min=12.9km az=98.0*
*JMA **26** 13:42:51.4±0.1, 38°.92N×141°.93E, h51km±1km, M3.9*
JMA Felt II J1.
*NEIC **26** 13:42:51.9±0.8, 38°.98N×141°.91E, h58km±6km, mb4.6/5, Error ellipse: s-maj=10.3km s-min=6.7km az=111.0*
NEIC Recorded [2 JMA] in Iwate and Miyagi.

ISC 26 13:42:50.9±1.1, 38°.90N±0°.05×142°.05E±0°.07, h52km±8km, n75, σ1°43/77, mb4.3/31, MS3.3/5, 2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.35**	**302**	P	**Pn**	**13 43 00.5**	**-0.1**
OFUJ				S	**Sn**	**13 43 06.6**	**-1.0**
JMK	**Ichinoseki**	**0.65**	**275**	P	**Pn**	**13 43 03.5**	**-0.5**
JMK				S	**Sn**	**13 43 11.9**	**-1.6**
JIO	**Ouri**	**0.70**	**231**	P	**Pn**	**13 43 04.3**	**-0.4**
JIO				S	**Sn**	**13 43 13.2**	**-1.6**
JOM	**Ohasama**	**0.82**	**315**	P	**Pn**	**13 43 05.9**	**-0.4**
JOM				S	**Sn**	**13 43 16.4**	**-1.1**
JOU	**Okura**	**1.21**	**244**	P	**Pn**	**13 43 10.8**	**-0.6**
JOU				S	**Sn**	**13 43 25.2**	**-1.5**
JRG	**Rokugo**	**1.21**	**295**	P	**Pn**	**13 43 10.7**	**-0.7**
JRG				S	**Sn**	**13 43 25.0**	**-1.7**
JYK	**Kaneyama**	**1.32**	**271**	P	**Pn**	**13 43 12.3**	**-0.6**
JMM	**Marumori**	**1.43**	**224**	P	**Pn**	**13 43 13.7**	**-0.7**
JANG	**Nango**	**1.53**	**345**	P	**Pn**	**13 43 15.5**	**-0.3**
MJAR	**Matsushiro Arr**	**3.85**	**233**	P	**Pn**	**13 43 49.2**	**+1.7**
	5.0nm,0.3s,baz=34,slow=12,SNR=56						
MJAR				LR	LR	13 45 28.3	
	comp=Z,98nm,20.5s,baz=40,slow=41						
MAJO	**Matsushiro**	**3.85**	**234**	ePn	**Pn**	**13 43 48.8**	**+1.2**
MAT	**Matsushiro**	**3.85**	**234**	P	**Pn**	**13 43 49.2**	**+1.7**
MAT				S	**Sn**	**13 44 30.8**	**-0.7**
MJB9	**Matsu-Tunnel**	**3.85**	**234**	ePn	**Pn**	**13 43 48.8**	**+1.2**
ASAJ	**Asahikawa**	**5.23**	**4**	P	**Pn**	**13 44 07.1**	**+0.6**
	2.3nm,0.3s,baz=202,slow=14,SNR=22						
ASAJ				S	**Sn**	**13 45 04.0**	**-1.4**
	1.9nm,0.3s,baz=199,slow=26,SNR=4.5						
ASAJ	**Asahikawa**	**5.23**	**4**	ePn	**Pn**	**13 44 05.9**	**-0.6**
ASAJ				S	**Sn**	**13 45 04.0**	**-1.4**
INU	**Inuyama**	**5.36**	**230**	ePn	**Pn**	**13 44 07.1**	**-1.1**
JHJ	**Hachijo jima 2**	**6.05**	**198**	S	**Sn**	**13 45 23.9**	**-1.8**
	6.1nm,0.3s,baz=72,slow=20,SNR=2.6						
USRK	**Ussuriysk Ar.**	**9.21**	**308**	P	**Pn**	**13 45 00.8**	**-0.2**
	1.1nm,0.3s,baz=114,slow=13,SNR=26						
USRK				LR	LR	13 48 25.4	
	comp=Z,68nm,21.3s,baz=112,slow=37						
JNU	**Nakatsue**	**10.72**	**241**	LR	LR	13 49 47.4	
	comp=Z,57nm,18.5s,baz=318,slow=39						
MDJ	**Mudanjiang**	**10.91**	**306**	ePn	Pn	13 45 29.5	+5.3
KSRS	**Korea Array**	**11.21**	**267**	P	**Pn**	**13 45 32.1**	**+3.8**
	0.3nm,0.3s,baz=77,slow=14,SNR=4.3						
KSRS				LR	LR	13 48 48.2	
	comp=Z,46nm,20.7s,baz=66,slow=32						
KS01	**Wonju Array Si**	**11.23**	**267**	ePn	**Pn**	**13 45 31.3**	**+2.7**
KS15	**Wonju Array Si**	**11.25**	**267**	ePn	**Pn**	**13 45 31.5**	**+2.7**
KSAR	**Wonju Array Be**	**11.25**	**267**	P	**Pn**	**13 45 32.1**	**+3.3**
BJI	**Beijing**	**19.99**	**281**	P	**Pn**	**13 47 25.8**	**+4.8**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
NJ2	**Nanjing**	**20.06**	**257**	eP	Pn	13 47 22.8	+0.9
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
HHC	**Hu-ho-hao-te**	**23.42**	**285**	eP	**P**	**13 47 59.8**	**+4.4**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,46nm,6.1s						
WHN	**Wuhan**	**24.18**	**258**	⇓P	**P**	**13 48 02.3**	**0.0**
YAK	**Yakutsk**	**24.38**	**346**	P	**P**	**13 48 02.5**	**-1.3**
	5.2nm,0.3s,baz=191,slow=2.0,SNR=2.5						
SONM	**Songino Array**	**27.21**	**301**	P	**P**	**13 48 30.0**	**+0.3**
	0.6nm,0.4s,baz=100,slow=9.1,SNR=4.2						
SONM				LR	LR	13 59 33.2	
	comp=Z,26nm,20.1s,baz=60,slow=37						
H11N2	**WAKE ISLAND Hy**	**28.73**	**125**	T	T	14 19 10.2	
	baz=317,slow=75,SNR=331						
H11N1	**WAKE ISLAND Hy**	**28.74**	**125**	T	T	14 19 11.0	
	baz=317,slow=75,SNR=175						
H11N3	**WAKE ISLAND Hy**	**28.75**	**125**	T	T	14 19 11.7	
	baz=317,slow=75,SNR=211						
H11S1	**WAKE ISLAND Hy**	**29.51**	**127**	T	T	14 20 09.6	
	baz=319,slow=76,SNR=34						
H11S3	**WAKE ISLAND Hy**	**29.51**	**127**	T	T	14 20 09.1	
	baz=319,slow=76,SNR=74						
H11S2	**WAKE ISLAND Hy**	**29.52**	**127**	T	T	14 20 10.0	
	baz=319,slow=76,SNR=41						
LZH	**Lanzhou**	**30.30**	**277**	eP	**P**	**13 48 58.5**	**+1.2**
LZH				pP	pP	13 49 09.0	-1.6
LZH				sP	sP	13 49 12.8	-4.0
LZH				ePP	**PP**	**13 50 07.5**	**+1.2**
LZH				pmax	pmax		
	comp=Z,22nm,1.1s						
LZH				pmax	pmax		
	comp=Z,76nm,5.2s						
LZH				LR	LR		
	comp=N,360nm,13.0s						
LZH				LR	LR		
	comp=E,380nm,13.5s						
LZH				LR	LR		
	comp=Z,460nm,16.8s						
GYA	**Guiyang**	**32.06**	**258**	eP	**P**	**13 49 11.8**	**-1.1**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CD2	**Chengdu**	**32.21**	**268**	P	**P**	**13 49 12.3**	**-1.8**
CD2				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GTA	**Gaotai**	**32.54**	**285**	⇓P	**P**	**13 49 18.5**	**+1.5**
GTA				pP	pP	13 49 24.0	-6.3
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KMI	**Kunming**	**35.77**	**259**	P	**P**	**13 49 42.8**	**-2.4**
KMI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
WMQ	**Urumqi**	**40.48**	**295**	P	**P**	**13 50 24.3**	**-0.2**
WMQ				sP	pP	13 50 40.0	+1.9
WMQ				pmax	pmax		
	comp=Z,22nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,180nm,4.7s						
WMQ				LR	LR		
	comp=N,66nm,22.9s						
WMQ				LR	LR		
	comp=Z,51nm,39.1s						
ZAA0	**Zalesovo Array**	**41.05**	**311**	eP	**P**	**13 50 28.2**	**-0.8**
	4.9nm,0.7s						
ZALV	**Zalesovo Beam**	**41.05**	**311**	P	**P**	**13 50 28.4**	**-0.5**
	4.6nm,0.6s,baz=88,slow=7.7,SNR=20						
ZALV				PcP	**PcP**	**13 52 26.7**	**-1.1**
	0.7nm,0.3s,baz=104,slow=3.1,SNR=3.3						
ZALV	**Zalesovo Beam**	**41.05**	**311**	eP	**P**	**13 50 28.1**	**-0.9**
ZALV				PcP	**PcP**	**13 52 26.7**	**-1.1**
CMAR	**Chiang Mai Arr**	**42.48**	**254**	P	**P**	**13 50 39.7**	**-1.3**
	0.8nm,0.7s,baz=49,slow=8.5,SNR=4.1						
MK01	**Makanchi Array**	**43.58**	**301**	eP	**P**	**13 50 49.0**	**-0.6**
MK31	**Makanchi Array**	**43.58**	**301**	eP	**P**	**13 50 49.2**	**-0.4**
MKAR	**Makanchi Array**	**43.58**	**301**	P	**P**	**13 50 49.5**	**-0.1**
	5.8nm,0.7s,baz=86,slow=10.0,SNR=57						
MKAR	**Makanchi Array**	**43.58**	**301**	eP	**P**	**13 50 49.4**	**-0.3**
	48nm,0.8s						
MAKZ	**Makanchi**	**43.79**	**301**	eP	**P**	**13 50 50.8**	**-0.5**
	5.4nm,0.9s						
KURK	**Kurchatov**	**45.20**	**307**	eP	**P**	**13 51 01.9**	**-0.6**
	13nm,1.0s						
KURBB	**Kurchatov Arra**	**45.27**	**307**	P	**P**	**13 51 02.6**	**-0.5**
	7.4nm,0.7s,baz=81,slow=8.4,SNR=42						
ILAR	**Eielson Array**	**47.66**	**33**	P	**P**	**13 51 22.1**	**+0.5**
	0.5nm,0.7s,baz=267,slow=5.9,SNR=5.9						
PMG	**Port Moresby**	**48.29**	**173**	LR	LR	14 11 04.0	
	comp=Z,35nm,21.8s,baz=100,slow=35						
BVAR	**Borovoye Array**	**49.71**	**311**	P	**P**	**13 51 37.4**	**-0.1**
	2.8nm,0.4s,baz=74,slow=8.1,SNR=23						
BVAR				PcP	**PcP**	**13 52 58.2**	**+0.3**
	0.7nm,0.4s,baz=101,slow=2.9,SNR=3.3						
BRVK	**Borovoye**	**49.76**	**311**	eP	**P**	**13 51 37.3**	**-0.5**
	3.3nm,0.5s						
KSH	**Kashi**	**50.12**	**293**	P	P	13 51 46.0	+5.0
KSH				pmax	pmax		
	comp=Z,180nm,4.6s						
KK31	**Karatay Array**	**52.64**	**299**	eP	**P**	**13 51 59.0**	**-0.6**
KKAR	**Karatay Array**	**52.64**	**299**	eP	**P**	**13 51 59.0**	**-0.6**
NIL	**Nilore**	**54.52**	**287**	eP	**P**	**13 52 12.2**	**-1.4**
ARU	**Arti**	**55.31**	**318**	eP	**P**	**13 52 18.2**	**-0.6**
	7.5nm,0.9s						
ABKAR	**Abkulak array**	**57.13**	**309**	eP	**P**	**13 52 31.1**	**-0.8**
AKTO	**Aktyubinsk**	**57.81**	**311**	P	**P**	**13 52 36.5**	**-0.2**
	3.4nm,0.8s,baz=68,slow=12,SNR=7.9						
WRA	**Warramunga Arr**	**58.97**	**188**	P	**P**	**13 52 45.0**	**-0.1**
	1.0nm,0.4s,baz=5.8,slow=6.9,SNR=36						
ARCES	**ARCESS Array B**	**62.43**	**339**	P	**P**	**13 53 08.1**	**+0.1**
	1.8nm,0.9s,baz=51,slow=8.5,SNR=3.1						
ASAR	**Alice Springs**	**62.70**	**188**	P	**P**	**13 53 10.8**	**+0.5**
	0.8nm,0.7s,baz=0.4,slow=4.9,SNR=9.2						
FINES	**FINESS Array B**	**67.40**	**332**	P	**P**	**13 53 40.2**	**-0.2**
	2.1nm,0.6s,baz=28,slow=11,SNR=10						
KBZ	**Khabaz**	**70.07**	**310**	P	**P**	**13 53 57.9**	**+0.6**
	2.8nm,0.9s,baz=13,slow=1.9,SNR=6.2						
HFS	**Hagfors**	**72.60**	**336**	P	**P**	**13 54 12.0**	**-0.2**
	1.7nm,0.7s,baz=53,slow=17,SNR=4.5						
HFS				LR	LR	14 30 10.0	
	comp=Z,62nm,18.5s,baz=336,slow=39						
AKASG	**Malin Array Be**	**73.13**	**322**	P	**P**	**13 54 14.2**	**-1.4**
	1.1nm,0.4s,baz=44,slow=5.8,SNR=5.9						
BRTR	**Keskin Array B**	**77.99**	**312**	P	**P**	**13 54 43.4**	**-0.4**
	0.5nm,0.4s,baz=121,slow=4.6,SNR=4.5						
GERES	**GERESS Array B**	**81.39**	**328**	P	**P**	**13 55 01.8**	**-0.2**
	0.4nm,0.5s,baz=36,slow=3.7,SNR=2.5						
TXAR	**Lajitas Array**	**88.59**	**53**	P	**P**	**13 55 40.2**	**+1.7**
	0.2nm,0.6s,baz=318,slow=2.4,SNR=3.0						
LPAZ	**La Paz**	**145.30**	**58**	PKPbc	**PKPab**	**14 02 24.9**	**+0.9**
	1.2nm,0.8s,baz=34,slow=14,SNR=3.6						

IDC 26 13:55:02.5±9.1, 7°.59S×128°.10E, h207km±94km, mb3.4/4, mb1 3.5/6, mb1mx3.2/48, mbtmp4.1/6, Error ellipse: s-maj=99.0km s-min=32.8km az=46.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.09**	**239**	P	Pn	13 56 18.6	+0.2
	24nm,0.3s,baz=290,slow=4.6,SNR=34						
BATI				S	S	13 57 18.6	+0.7
	27nm,0.3s,baz=340,slow=21,SNR=14						
WRA	**Warramunga Arr**	**13.69**	**154**	P	Pn	13 58 02.3	-6.2
	0.6nm,0.3s,baz=331,slow=14,SNR=35						
WRA				S	S	14 00 25.5	-15
	1.8nm,0.3s,baz=333,slow=23,SNR=8.9						
ASAR	**Alice Springs**	**16.93**	**161**	P	P	13 58 46.2	-0.1
	0.9nm,0.3s,baz=340,slow=10,SNR=60						
ASAR				S	S	14 01 38.5	-14
	0.2nm,0.3s,baz=322,slow=19,SNR=1.5						
MKAR	**Makanchi Array**	**67.70**	**328**	P	P	14 05 37.5	-0.2
	0.6nm,0.5s,baz=117,slow=8.3,SNR=5.6						
ZALV	**Zalesovo Beam**	**71.29**	**335**	P	P	14 05 58.8	-0.6
	0.5nm,0.3s,baz=150,slow=8.5,SNR=2.8						
KURBB	**Kurchatov Arra**	**72.04**	**329**	P	P	14 06 04.2	+0.3
	1.2nm,0.5s,baz=128,slow=4.9,SNR=9.7						
BVAR	**Borovoye Array**	**77.57**	**328**	P	P	14 06 36.0	+0.4
	0.4nm,0.4s,baz=123,slow=10,SNR=3.5						

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*IDC **26** 14:11:20.1±0.9, 35°.44N×31°.46E, h0km, mb4.0/15, mb1 4.0/22, mb1mx3.9/66, mbtmp4.0/22, ML3.8/7, MS2.8/7, Ms1 2.9/7, ms1mx2.6/63, Error ellipse: s-maj=19.5km s-min=13.3km az=175.0*
*CSEM **26** 14:11:21.6±0.1, 35°.20N×31°.39E, h5km, ML4.1, Error ellipse: s-maj=3.5km s-min=2.5km az=21.0*
*DDA **26** 14:11:21.6, 35°.35N×31°.47E, h4km, Ml4.1*
*NIC **26** 14:11:21.7±0.3, 35°.44N×31°.44E, h1km, mb4.2, ML4.1*
*ISK **26** 14:11:22.7, 35°.18N×31°.44E, h22km, ML4.2/44*
*HLW **26** 14:11:23.8, 35°.28N×31°.38E, h32km±22km, Ml4.5*
*NEIC **26** 14:11:24.9±0.6, 35°.01N×31°.32E, h59km±6km, mb4.1/7, Error ellipse: s-maj=9.2km s-min=4.9km az=189.0*
NEIC Felt at Paphos.
*THE **26** 14:11:25.3, 35°.25N×31°.39E, h24km±3km, ML3.7/2, Error ellipse: s-maj=4.5km s-min=0.7km az=13.0*
*GII **26** 14:11:26.4±0.0, 35°.17N×31°.55E, h30km, MD3.4/5*

ISC 26 14:11:23.6±1.0, 35°.24N±0°.02×31°.39E±0°.02, h31km±8km, n325, σ1°71/369, mb4.1/21, MS3.6/4, 5C-2D, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKMC	**Akamas**	**0.80**	**105**	P	**Pn**	**14 11 38.4**	**-0.3**
	baz=299						
AKMC	**Akamas**	**0.80**	**105**	P	**Pn**	**14 11 38.4**	**-0.3**
PPCY	**Paphos**	**0.86**	**114**	P	**Pb**	**14 11 40.1**	**+0.1**
	baz=307						
PPCY	**Paphos**	**0.86**	**114**	P	**Pb**	**14 11 40.1**	**+0.1**
ALFC	**Alefka**	**0.99**	**95**	P	**Pn**	**14 11 40.9**	**-0.5**
	baz=287						
ALFC				S	**Sb**	**14 11 55.5**	**+0.5**
ALFC	**Alefka**	**0.99**	**95**	P	**Pn**	**14 11 40.9**	**-0.5**
ALFC				S	**Sb**	**14 11 55.5**	**+0.5**
LEF	**Lefka**	**1.23**	**95**	PN	**Pn**	**14 11 44.6**	**-0.1**
LEF	**Lefka**	**1.23**	**95**	P	**Pn**	**14 11 43.7**	**-1.0**
LEF	**Lefka**	**1.23**	**95**	ePn	**Pn**	**14 11 44.6**	**-0.1**
LEF				S	**Sb**	**14 12 01.2**	**-0.6**
GAZI	**Gazipasa**	**1.25**	**37**	PN	**Pn**	**14 11 45.0**	**+0.1**
GAZI	**Gazipasa**	**1.25**	**37**	⇑iP	**Pn**	**14 11 43.6**	**

KORT			*i* S		Sb	14 12 30.7	+8.2
KORT	**Korkueli**	**1.95**	**335**	*e*Pn	**Pb**	**14 11 57.1**	**-1.4**
KORT	**Korkueli**	**1.95**	**335**	P	**Pb**	**14 11 58.5**	**0.0**
AKK1	**Akkuyu-Mersin**	**1.97**	**62**	PN	**Pn**	**14 11 55.9**	**+1.1**
AKK1	**Akkuyu-Mersin**	**1.97**	**62**	*e*Pn	**Pn**	**14 11 55.9**	**+1.1**
AKK2	**Akkuyu-Mersin**	**1.97**	**62**	PN	**Pn**	**14 11 55.7**	**+0.9**
AKK2	**Akkuyu-Mersin**	**1.97**	**62**	*e*Pn	**Pn**	**14 11 55.7**	**+0.9**
AKKU	**Akkuyu-Mersin**	**1.98**	**62**	PN	**Pn**	**14 11 55.8**	**+0.8**
AKKU	**Akkuyu-Mersin**	**1.98**	**62**	*e*Pn	**Pn**	**14 11 55.8**	**+0.8**
GULN	**MERSIN_Gulnar**	**1.99**	**61**	⇑*i*P	**Pn**	**14 11 54.2**	**-0.9**
GULN			*i* S		**Sn**	14 12 19.8	+0.9
GULN	**MERSIN_Gulnar**	**1.99**	**61**	P	**Pn**	**14 11 54.2**	**-0.9**
GULN			S		**Sn**	14 12 19.8	+0.9
TEPE	**Tepekoy-Mersin**	**2.02**	**60**	PN	**Pn**	**14 11 56.1**	**+0.6**
TEPE	**Tepekoy-Mersin**	**2.02**	**60**	*e*Pn	**Pn**	**14 11 56.1**	**+0.6**
TEVE	**Tevekalti-Mers**	**2.05**	**54**	PN	**Pn**	**14 11 57.1**	**+1.1**
TEVE	**Tevekalti-Mers**	**2.05**	**54**	*e*Pn	**Pn**	**14 11 57.1**	**+1.1**
YESI	**Yesilovacik-Me**	**2.06**	**62**	PN	**Pn**	**14 11 57.2**	**+1.1**
YESI	**Yesilovacik-Me**	**2.06**	**62**	*e*Pn	**Pn**	**14 11 57.2**	**+1.1**
IKL	**Isikli**	**2.12**	**61**	PN	**Pn**	**14 11 57.7**	**+0.9**
IKL	**Isikli**	**2.12**	**61**	*e*Pn	**Pn**	**14 11 57.7**	**+0.9**
KEBE	**Keben-Mersin**	**2.24**	**57**	PN	**Pn**	**14 11 59.8**	**+1.2**
KEBE	**Keben-Mersin**	**2.24**	**57**	*e*Pn	**Pn**	**14 11 59.8**	**+1.2**
SUTC	**Sutluce-Ispart**	**2.25**	**352**	PN	**Pn**	**14 12 00.9**	**+2.0**
SUTC	**Sutluce-Ispart**	**2.25**	**352**	*e*Pn	**Pn**	**14 12 00.9**	**+2.0**
EREN	**Erenkoy**	**2.29**	**82**	PN	**Pn**	**14 11 59.3**	**+0.1**
EREN	**Erenkoy**	**2.29**	**82**	*e*Pn	**Pn**	**14 11 59.3**	**+0.1**
FETY	**Fethiye**	**2.33**	**307**	PN	**Pn**	**14 12 00.2**	**+0.4**
FETY	**Fethiye**	**2.33**	**307**	P	**Pn**	**14 12 00.0**	**+0.2**
FETY	**Fethiye**	**2.33**	**307**	P	**Pn**	**14 12 00.0**	**+0.2**
FETY			S		**Sn**	14 12 27.0	-0.5
GOLH	**Golhisar**	**2.48**	**324**	*i* P	**Pb**	**14 12 04.2**	**+2.2**
GOLH			*i* S		Sb	14 12 49.4	+12
KMER	**Konya-Meram**	**2.64**	**17**	⇑*i*P	**Pn**	**14 12 07.1**	**+2.9**
KMER			*i* S		**Sb**	14 12 42.6	+0.2
KMER	**Konya-Meram**	**2.64**	**17**	P	**Pn**	**14 12 07.1**	**+2.9**
ISP	**Isparta**	**2.67**	**345**	PN	**Pn**	**14 12 06.6**	**+2.0**
ISP	**Isparta**	**2.67**	**345**	*e*Pn	**Pb**	**14 12 09.4**	**-1.3**
ISP	**Isparta**	**2.67**	**345**	P	**Pb**	**14 12 09.6**	**-1.2**
ISP	**Isparta**	**2.67**	**345**	Pn	**Pb**	**14 12 08.5**	**-2.3**
ISP	**Isparta**	**2.67**	**345**	Pn	**Pb**	**14 12 08.5**	**-2.3**
ISP	**Isparta**	**2.67**	**345**	P	**Pb**	**14 12 09.6**	**-1.2**
BRDR	**BURDUR-Merkez**	**2.67**	**337**	*i* P	**Pb**	**14 12 08.4**	**-2.4**
BRDR			*i* S		**Sb**	14 12 45.3	+2.0
DALY	**Dalyan (Mu¨la**	**2.72**	**306**	PN	**Pn**	**14 12 07.5**	**+2.4**
TURN	**Turunc**	**2.79**	**307**	PN	**Pb**	**14 12 10.8**	**-1.8**
TURN	**Turunc**	**2.79**	**307**	*e*Pn	**Pb**	**14 12 10.8**	**-1.8**
BAGO	**Egridir - ISPA**	**2.79**	**350**	*i* P	**Pb**	**14 12 10.6**	**-2.2**
BAGO			*i* S		**Sb**	14 12 47.6	+1.2
KONT	**Konya--Tatoy**	**2.81**	**16**	PN	**Pn**	**14 12 08.7**	**+2.3**
KONT	**Konya--Tatoy**	**2.81**	**16**	⇓*i*P	**Pb**	**14 12 10.6**	**-2.5**
KONT			*i* S		**Sb**	14 12 44.5	-2.5
KONT	**Konya--Tatoy**	**2.81**	**16**	*e*Pn	**Pn**	**14 12 08.7**	**+2.3**
ARG	**Arkhangelos**	**2.83**	**291**	PN	**Pn**	**14 12 08.4**	**+1.8**
ARG	**Arkhangelos**	**2.83**	**291**	P	**Pn**	**14 12 07.8**	**+1.2**
	baz=104						
ARG	**Arkhangelos**	**2.83**	**291**	P	**Pn**	**14 12 08.0**	**+1.4**
ARG			S		**Sn**	14 12 40.7	+1.0
ARG	**Arkhangelos**	**2.83**	**291**	P	**Pn**	**14 12 07.8**	**+1.2**
ARG			S		**Sn**	14 12 40.7	+1.0
DOGA	**KONYA_Doganhis**	**2.87**	**4**	*i* P	**Pn**	**14 12 10.1**	**+2.8**
DOGA			*i* S		**Sb**	14 12 45.7	-3.2
DOGA	**KONYA_Doganhis**	**2.87**	**4**	P	**Pn**	**14 12 10.1**	**+2.8**
DOGA			S		**Sb**	14 12 45.7	-3.2
MRSB	**Marmaris-Mugla**	**2.98**	**301**	PN	**Pn**	**14 12 11.4**	**+2.7**
MRSB	**Marmaris-Mugla**	**2.98**	**301**	*e*Pn	**Pn**	**14 12 11.4**	**+2.7**
TAVA	**DENIZLI_Tavas**	**2.99**	**319**	*i* P	**Pn**	**14 12 10.6**	**+1.7**
TAVA			*i* S		Sb	14 13 04.0	+12
TAVA	**DENIZLI_Tavas**	**2.99**	**319**	P	**Pn**	**14 12 10.6**	**+1.7**
MERS	**Mersin**	**3.01**	**56**	PN	**Pn**	**14 12 10.9**	**+1.7**
MERS	**Mersin**	**3.01**	**56**	*e*Pn	**Pn**	**14 12 10.9**	**+1.7**
LADK	**Ladik-KONYA**	**3.06**	**15**	PN	**Pn**	**14 12 12.2**	**+2.3**
LADK	**Ladik-KONYA**	**3.06**	**15**	*e*Pn	**Pn**	**14 12 12.2**	**+2.3**
KERG	**Konya-Eregli**	**3.10**	**45**	*i* P	**Pn**	**14 12 13.4**	**+3.0**
KERG			*i* S		**Sb**	14 12 51.0	-4.4
KERG	**Konya-Eregli**	**3.10**	**45**	P	**Pn**	**14 12 13.4**	**+3.0**
KERG			S		**Sb**	14 12 51.0	-4.4
YER	**Yerkesik**	**3.15**	**308**	PN	**Pn**	**14 12 12.8**	**+1.8**
YER	**Yerkesik**	**3.15**	**308**	P	**Pn**	**14 12 12.4**	**+1.4**
YER	**Yerkesik**	**3.15**	**308**	P	**Pn**	**14 12 12.4**	**+1.4**
YER	**Yerkesik**	**3.15**	**308**	*e*Pn	**Pn**	**14 12 12.8**	**+1.8**
DENT	**Denizli**	**3.15**	**324**	PN	**Pn**	**14 12 13.3**	**+2.2**
DENT	**Denizli**	**3.15**	**324**	*e*Pn	**Pn**	**14 12 13.3**	**+2.2**
KDHN	**Kadinhani**	**3.33**	**10**	*i* P	**Pn**	**14 12 17.5**	**+4.0**
KDHN			*i* S		**Sb**	14 12 57.4	-4.6
SULT	**Sultanhani-AKS**	**3.41**	**29**	PN	**Pn**	**14 12 17.4**	**+2.7**
SULT	**Sultanhani-AKS**	**3.41**	**29**	*e*Pn	**Pn**	**14 12 17.4**	**+2.7**
KHL	**Karahalli**	**3.42**	**335**	PN	**Pn**	**14 12 17.9**	**+3.0**
KHL	**Karahalli**	**3.42**	**335**	*e*Pn	**Pn**	**14 12 17.9**	**+3.0**
KARP	**Karpathos**	**3.47**	**276**	*e*Pn	**Pn**	**14 12 15.9**	**+0.4**
KARP	**Karpathos**	**3.47**	**276**	P	**Pn**	**14 12 16.5**	**+1.0**
KARP			S		**Sn**	14 12 55.2	-0.3
KARP	**Karpathos**	**3.47**	**276**	*e*Pn	**Pn**	**14 12 15.9**	**+0.4**
KARP	**Karpathos**	**3.47**	**276**	P	**Pn**	**14 12 16.5**	**+1.0**
KARP			S		**Sn**	14 12 55.2	-0.3
KRTS	**Karatas**	**3.50**	**66**	PN	**Pn**	**14 12 17.4**	**+1.6**
KRTS	**Karatas**	**3.50**	**66**	*e*Pn	**Pn**	**14 12 17.4**	**+1.6**
CHBY	**Cihanbeyli**	**3.54**	**19**	PN	**Pn**	**14 12 18.6**	**+2.0**
CHBY	**Cihanbeyli**	**3.54**	**19**	*e*Pn	**Pn**	**14 12 18.6**	**+2.0**
KARA	**Karaisali**	**3.58**	**55**	PN	**Pn**	**14 12 19.4**	**+2.4**
KARA	**Karaisali**	**3.58**	**55**	*e*Pn	**Pn**	**14 12 19.4**	**+2.4**
KIZT	**Kizilcal**	**3.65**	**6**	PN	**Pn**	**14 12 20.4**	**+2.3**
KIZT	**Kizilcal**	**3.65**	**6**	*e*Pn	**Pn**	**14 12 20.4**	**+2.3**
BODT	**Bodrum**	**3.77**	**300**	P	**Pn**	**14 12 19.2**	**-0.4**
BODT	**Bodrum**	**3.77**	**300**	P	**Pn**	**14 12 19.2**	**-0.4**
DQRL	**Deir Qamar**	**3.78**	**113**	*e*P	**Pn**	**14 12 19.3**	**-0.5**
YURE	**YUREGIR**	**3.78**	**64**	PN	**Pn**	**14 12 21.7**	**+1.9**
YURE	**YUREGIR**	**3.78**	**64**	*i* P	**Pn**	**14 12 20.3**	**+0.5**
YURE			*i* S		**Sn**	14 13 08.1	+4.8
YURE	**YUREGIR**	**3.78**	**64**	P	**Pn**	**14 12 20.3**	**+0.5**
YURE	**YUREGIR**	**3.78**	**64**	*e*Pn	**Pn**	**14 12 21.7**	**+1.9**
YURE			S		**Sn**	14 13 08.1	+4.8
HNTI	**Hanita**	**3.80**	**123**	Pn	**Pn**	**14 12 20.8**	**+0.8**
HNTI			Sn		**Sn**	14 13 02.8	-0.9
HNTI	**Hanita**	**3.80**	**123**	Pn	**Pn**	**14 12 20.8**	**+0.8**
HNTI			Sn		**Sn**	14 13 02.8	-0.9
HWQ	**Hawqa**	**3.87**	**103**	*e*P	**Pn**	**14 12 22.1**	**+1.0**
YAYL	**Yayladag**	**3.92**	**77**	PN	**Pn**	**14 12 23.2**	**+1.4**
YAYL	**Yayladag**	**3.92**	**77**	*e*Pn	**Pn**	**14 12 23.2**	**+1.4**
OFRI	**'Ofer**	**3.97**	**130**	Pn	**Pn**	**14 12 23.3**	**+1.0**
OFRI			Sn		**Sn**	14 13 07.6	-0.3
OFRI	**'Ofer**	**3.97**	**130**	Pn	**Pn**	**14 12 23.3**	**+1.0**
OFRI			Sn		**Sn**	14 13 07.6	-0.3
MMA0B	**Mount Meron ar**	**4.00**	**123**	Pn	**Pn**	**14 12 23.2**	**+0.4**
MMA0B			Sn		**Sn**	14 13 08.9	+0.2
MMA0B	**Mount Meron ar**	**4.00**	**123**	Pn	**Pn**	**14 12 23.2**	**+0.4**
MMA0B			Sn		**Sn**	14 13 08.9	+0.2
MMAI	**Mount Meron Ar**	**4.00**	**123**	Pn	**Pn**	**14 12 23.2**	**+0.4**
	19nm,0.3s,baz=313,slow=12,SNR=40						
MMAI			Sn		**Sn**	14 13 06.8	-1.9
	62nm,0.3s,baz=310,slow=26,SNR=11						
KULU	**Kulu**	**4.01**	**18**	PN	**Pn**	**14 12 25.5**	**+2.6**
KULU	**Kulu**	**4.01**	**18**	*e*Pn	**Pn**	**14 12 25.5**	**+2.6**
BLGI	**Bet Lehem HaGe**	**4.03**	**127**	Pn	**Pn**	**14 12 24.2**	**+1.1**
BLGI	**Bet Lehem HaGe**	**4.03**	**127**	Pn	**Pn**	**14 12 24.2**	**+1.1**
TAHT	**Tahtakopru-Hat**	**4.06**	**72**	PN	**Pn**	**14 12 25.5**	**+2.0**
TAHT	**Tahtakopru-Hat**	**4.06**	**72**	*e*Pn	**Pn**	**14 12 25.5**	**+2.0**
RCY	**Rachaya**	**4.07**	**114**	*e*P	**Pn**	**14 12 24.1**	**+0.3**
KSDI	**Kefar Szold**	**4.08**	**119**	Pn	**Pn**	**14 12 24.6**	**+0.7**
KSDI			Sn		**Sn**	14 13 09.4	-1.2
KSDI	**Kefar Szold**	**4.08**	**119**	Pn	**Pn**	**14 12 24.6**	**+0.7**
KSDI			Sn		**Sn**	14 13 09.4	-1.2
AUSIV	**SIVRIHISAR**	**4.19**	**2**	PN	**Pn**	**14 12 28.8**	**+3.3**
AUSIV	**SIVRIHISAR**	**4.19**	**2**	*e*Pn	**Pn**	**14 12 28.8**	**+3.3**
ZKR	**Zakros**	**4.24**	**270**	P	**Pn**	**14 12 26.8**	**+0.8**
ZKR	**Zakros**	**4.24**	**270**	P	**Pn**	**14 12 26.8**	**+0.8**
SLTI	**Sal'it**	**4.26**	**134**	Pn	**Pn**	**14 12 26.9**	**+0.5**
SLTI	**Sal'it**	**4.26**	**134**	Pn	**Pn**	**14 12 26.9**	**+0.5**
KSHT	**Keshet**	**4.30**	**120**	Pn	**Pn**	**14 12 28.5**	**+1.5**
KSHT	**Keshet**	**4.30**	**120**	Pn	**Pn**	**14 12 28.5**	**+1.5**
MMLI	**Mount Malkishu**	**4.37**	**129**	PN	**Pn**	**14 12 28.8**	**+1.0**
MMLI	**Mount Malkishu**	**4.37**	**129**	Pn	**Pn**	**14 12 28.6**	**+0.8**
MMLI	**Mount Malkishu**	**4.37**	**129**	Pn	**Pn**	**14 12 28.6**	**+0.8**
AFSR	**Af´ar-Bala (A**	**4.41**	**17**	PN	**Pn**	**14 12 31.6**	**+3.2**
SMG	**Samos**	**4.42**	**305**	P	**Pn**	**14 12 28.5**	**0.0**
SMG	**Samos**	**4.42**	**305**	P	**Pn**	**14 12 28.5**	**0.0**
HMDT	**Nahal Hemdat**	**4.55**	**130**	Pn	**Pn**	**14 12 31.6**	**+1.2**
HMDT			Sn		**Sn**	14 13 22.8	+0.6
HMDT	**Nahal Hemdat**	**4.55**	**130**	Pn	**Pn**	**14 12 31.6**	**+1.2**
HMDT			Sn		**Sn**	14 13 22.8	+0.6
RSH		**4.70**	**155**	P	**Pn**	**14 12 33.0**	**+0.7**
	baz=154						
RSH		**4.70**	**155**	P	**Pn**	**14 12 33.0**	**+0.7**
ANAF	**Anafi Island**	**4.70**	**285**	P	**Pn**	**14 12 33.3**	**+0.9**
ANAF	**Anafi Island**	**4.70**	**285**	P	**Pn**	**14 12 33.3**	**+0.9**
BR231	**Keskin MP Arra**	**4.72**	**13**	*e*Pn	Pb	14 12 39.5	-6.2
NPS	**Neapolis**	**4.73**	**272**	P	**Pn**	**14 12 34.8**	**+2.0**
NPS	**Neapolis**	**4.73**	**272**	P	**Pn**	**14 12 34.8**	**+2.0**
ANTO	**Ankara**	**4.75**	**13**	*e*Pn	Pn	14 12 38.7	+5.5
ANTO	**Ankara**	**4.75**	**13**	*e*Pn	Pn	14 12 38.7	+5.5
BRTR	**Keskin Array B**	**4.82**	**21**	Pn	**Pn**	**14 12 36.9**	**+2.7**
	1.6nm,0.3s,baz=194,slow=14,SNR=42						
BRTR			Sn		**Sn**	14 13 33.9	+4.9
	1.3nm,0.3s,baz=182,slow=30,SNR=5.1						
BR131	**Keskin Array S**	**4.82**	**21**	*e*Pn	**Pn**	**14 12 37.8**	**+3.6**
LAST	**Lasithi**	**4.84**	**271**	P	**Pn**	**14 12 35.8**	**+1.4**
LAST	**Lasithi**	**4.84**	**271**	P	**Pn**	**14 12 35.8**	**+1.4**
SANT	**Santorini**	**4.95**	**285**	*e*Pn	**Pn**	**14 12 36.2**	**+0.4**
SANT	**Santorini**	**4.95**	**285**	*e*Pn	**Pn**	**14 12 36.2**	**+0.4**
DSI	**Dead Sea**	**4.95**	**137**	Pn	**Pn**	**14 12 37.2**	**+1.4**
DSI	**Dead Sea**	**4.95**	**137**	Pn	**Pn**	**14 12 37.2**	**+1.4**
YTIR	**Yattir**	**4.97**	**140**	Pn	**Pn**	**14 12 37.1**	**+1.0**
YTIR	**Yattir**	**4.97**	**140**	Pn	**Pn**	**14 12 37.1**	**+1.0**
KMRS	**Kahramanmaras**	**4.99**	**61**	PN	**Pn**	**14 12 38.4**	**+2.1**
KMRS	**Kahramanmaras**	**4.99**	**61**	*e*Pn	**Pn**	**14 12 38.4**	**+2.1**
KZIT	**Kziot**	**5.00**	**149**	Pn	**Pn**	**14 12 37.3**	**+0.7**
KZIT	**Kziot**	**5.00**	**149**	Pn	**Pn**	**14 12 37.3**	**+0.7**
THR5	**Thira Island,**	**5.05**	**285**	P	**Pn**	**14 12 38.2**	**+1.1**
THR5	**Thira Island,**	**5.05**	**285**	P	**Pn**	**14 12 38.2**	**+1.1**
BNN	**Bunyan**	**5.07**	**43**	PN	**Pn**	**14 12 38.9**	**+1.4**
BNN	**Bunyan**	**5.07**	**43**	*e*Pn	**Pn**	**14 12 38.9**	**+1.4**
GAZ	**Gaziantep**	**5.09**	**66**	PN	**Pn**	**14 12 39.9**	**+2.2**
GAZ	**Gaziantep**	**5.09**	**66**	*e*Pn	**Pn**	**14 12 39.9**	**+2.2**
SARI	**SarD1z-Kayseri**	**5.12**	**50**	PN	**Pn**	**14 12 41.2**	**+2.9**
IOSP	**Ios island**	**5.17**	**288**	P	**Pn**	**14 12 39.1**	**+0.4**
IOSP	**Ios island**	**5.17**	**288**	P	**Pn**	**14 12 39.1**	**+0.4**
HHAG	**Hagoal**	**5.31**	**173**	P	**Pn**	**14 12 41.7**	**+1.0**
	baz=173						
HHAG	**Hagoal**	**5.31**	**173**	P	**Pn**	**14 12 41.7**	**+1.0**
KOT	**Kottamia**	**5.31**	**176**	P	**Pn**	**14 12 41.6**	**+0.8**
	baz=175						
KOT			AMP			14 13 00.0	
	baz=175						
KOT			S		**Sn**	14 13 38.2	-2.7
	baz=175						
KOT	**Kottamia**	**5.31**	**176**	P	**Pn**	**14 12 41.6**	**+0.8**
KOT			S		**Sn**	14 13 38.2	-2.7
IDI	**Anoyia**	**5.32**	**272**	Pn	**Pn**	**14 12 41.9**	**+1.0**
	4.4nm,0.3s,baz=54,slow=8.3,SNR=67						
IDI			Sn		**Sn**	14 13 36.9	-4.3
	40nm,0.3s,baz=238,slow=15,SNR=16						
IDI	**Anoyia**	**5.32**	**272**	*e*Pn	**Pn**	**14 12 39.6**	**-1.3**
IDI			Sn		**Sn**	14 13 36.9	-4.3
IDI	**Anoyia**	**5.32**	**272**	*e*Pn	**Pn**	**14 12 39.6**	**-1.3**
SQR	**Saqqara**	**5.35**	**182**	P	**Pn**	**14 12 42.2**	**+1.0**
	baz=182						
SQR	**Saqqara**	**5.35**	**182**	P	**Pn**	**14 12 42.2**	**+1.0**
SIVA	**Sivas**	**5.40**	**270**	P	**Pn**	**14 12 43.1**	**+1.2**
SIVA	**Sivas**	**5.40**	**270**	P	**Pn**	**14 12 43.1**	**+1.2**
ASF	**Jabal al Asfar**	**5.51**	**122**	Pn	**Pn**	**14 12 45.4**	**+1.8**
	1.9nm,0.3s,baz=249,slow=5.2,SNR=11						
ASF			Sn		**Sn**	14 13 48.9	+2.8
	2.9nm,0.3s,baz=233,slow=20,SNR=2.6						
HSAF	**As Saff**	**5.61**	**179**	P	**Pn**	**14 12 45.3**	**+0.4**
	baz=178						
HSAF	**As Saff**	**5.61**	**179**	P	**Pn**	**14 12 45.3**	**+0.4**
GLL	**Jalalah**	**5.65**	**177**	P	**Pn**	**14 12 46.7**	**+1.2**
	baz=177						
GLL	**Jalalah**	**5.65**	**177**	P	**Pn**	**14 12 46.7**	**+1.2**
HNKL	**Nakhl**	**5.73**	**157**	P	**Pn**	**14 12 47.1**	**+0.6**
	baz=156						
HNKL	**Nakhl**	**5.73**	**157**	P	**Pn**	**14 12 47.1**	**+0.6**
PRNI	**Paran**	**5.75**	**147**	Pn	**Pn**	**14 12 47.3**	**+0.5**
PRNI	**Paran**	**5.75**	**147**	Pn	**Pn**	**14 12 47.3**	**+0.5**
KRMI	**Paran Flat**	**5.83**	**150**	Pn	**Pn**	**14 12 48.8**	**+0.9**
KRMI	**Paran Flat**	**5.83**	**150**	Pn	**Pn**	**14 12 48.8**	**+0.9**
VAM	**Vamos**	**5.88**	**274**	P	**Pn**	**14 12 49.5**	**+0.9**
VAM	**Vamos**	**5.88**	**274**	P	**Pn**	**14 12 49.5**	**+0.9**
GVDS	**Gavdos**	**6.00**	**268**	P	**Pn**	**14 12 52.8**	**+2.6**
GVDS	**Gavdos**	**6.00**	**268**	P	**Pn**	**14 12 52.8**	**+2.6**
HRFI	**Mount Harif**	**6.03**	**148**	Pn	**Pn**	**14 12 51.4**	**+0.7**
HRFI	**Mount Harif**	**6.03**	**148**	Pn	**Pn**	**14 12 51.4**	**+0.7**
IMMV	**Iera Moni Meta**	**6.06**	**274**	P	**Pn**	**14 12 51.8**	**+0.8**
IMMV	**Iera Moni Meta**	**6.06**	**274**	P	**Pn**	**14 12 51.8**	**+0.8**
MBRI	**Mt Berech**	**6.19**	**150**	Pn	**Pn**	**14 12 53.7**	**+0.8**
MBRI	**Mt Berech**	**6.19**	**150**	Pn	**Pn**	**14 12 53.7**	**+0.8**
EIL	**Elat**	**6.32**	**151**	Pn	Pn	14 13 02.4	+7.8
	3.4nm,0.3s,baz=339,slow=8.1,SNR=35						
EIL			Sn		**Sn**	14 14 09.2	+3.5
	4.1nm,0.3s,baz=110,slow=17,SNR=5.9						
EIL	**Elat**	**6.32**	**151**	Pn	**Pn**	**14 12 55.1**	**+0.5**
EIL	**Elat**	**6.32**	**151**	Pn	**Pn**	**14 12 55.1**	**+0.5**
SLUM	**Salum**	**6.38**	**236**	P	**Pn**	**14 12 56.1**	**+0.7**
	baz=236						
SLUM	**Salum**	**6.38**	**236**	P	**Pn**	**14 12 56.1**	**+0.7**
HQLS		**6.69**	**151**	P	**Pn**	**14 13 01.4**	**+1.7**
HAQS	**Haql**	**6.86**	**153**	P	**Pn**	**14 13 02.8**	**+0.8**
VLI	**Veliai**	**7.01**	**285**	P	**Pn**	**14 13 04.1**	**0.0**
VLI	**Veliai**	**7.01**	**285**	P	**Pn**	**14 13 04.1**	**0.0**
ALN	**Alexandroupoli**	**7.05**	**325**	*e*Pn	**Pn**	**14 13 08.1**	**+3.5**
ALN	**Alexandroupoli**	**7.05**	**325**	*e*Pn	**Pn**	**14 13 08.1**	**+3.5**
JLOS		**7.36**	**151**	P	**Pn**	**14 13 07.7**	**-1.4**
JLOS			S		**Sn**	14 14 29.9	-1.7
SWA2		**7.81**	**222**	AMP		14 14 00.0	
	baz=222						
ITM	**Ithomi**	**7.89**	**287**	*e*Pn	**Pn**	**14 13 16.5**	**+0.3**
ITM	**Ithomi**	**7.89**	**287**	*e*Pn	**Pn**	**14 13 16.5**	**+0.3**
AGG	**Agios Georgios**	**8.16**	**300**	*e*Pn	**Pn**	**14 13 21.4**	**+1.5**
AGG	**Agios Georgios**	**8.16**	**300**	*e*Pn	**Pn**	**14 13 21.4**	**+1.5**
LIT	**Litokhoron**	**8.56**	**307**	*e*Pn	**Pn**	**14 13 27.0**	**+1.6**
LIT	**Litokhoron**	**8.56**	**307**	*e*Pn	**Pn**	**14 13 27.0**	**+1.6**
TIRR	**Tirgusor**	**9.49**	**347**	*e*Pn	Pn	14 13 44.0	+6.0
FNA	**Florina**	**9.64**	**308**	*e*Pn	**Pn**	**14 13 42.5**	**+2.3**
FNA	**Florina**	**9.64**	**308**	*e*Pn	**Pn**	**14 13 42.5**	**+2.3**
VTS	**Vitosha**	**9.72**	**321**	*e*Pn	**Pn**	**14 13 46.1**	**+4.8**
TIR	**Tirane**	**10.91**	**307**	*e*Pn	**Pn**	**14 13 59.0**	**+1.4**
TIR	**Tirane**	**10.91**	**307**	*e*Pn	**Pn**	**14 13 59.0**	**+1.4**
MLR	**Muntele Rosu**	**11.05**	**340**	Pn	**Pn**	**14 14 02.4**	**+2.9**
	0.1nm,0.3s,baz=143,slow=10,SNR=2.6						
MLR			LR		LR	14 19 36.1	
	comp=Z,18nm,19.0s,baz=136,slow=46						
GNI	**Garni**	**11.65**	**61**	LR	LR	14 19 05.8	
	comp=Z,35nm,21.8s,baz=231,slow=40						
GNI	**Garni**	**11.65**	**61**	Pn	**Pn**	**14 14 09.3**	**+1.4**
GNI	**Garni**	**11.65**	**61**	Pn	**Pn**	**14 14 09.3**	**+1.4**
TTG	**Podgorica**	**11.87**	**311**	*e*Pn	**Pn**	**14 14 13.7**	**+3.1**
TTG	**Podgorica**	**11.87**	**311**	*e*Pn	**Pn**	**14 14 13.7**	**+3.1**
KBZ	**Khabaz**	**12.27**	**43**	Pn	**Pn**	**14 14 14.5**	**-1.6**
	0.1nm,0.3s,baz=149,slow=12,SNR=1.9						
KBZ			LR		LR	14 19 43.5	
	comp=Z,56nm,21.8s,baz=229,slow=42						
TBLG	**Delisi**	**12.30**	**54**	*e*Pn	**Pn**	**14 14 19.2**	**+2.7**
TBLG	**Delisi**	**12.30**	**54**	*e*Pn	**Pn**	**14 14 19.2**	**+2.7**
KVAR	**Kislovodsk Arr**	**12.31**	**42**	Pn	**Pn**	**14 14 17.3**	**+0.6**
	baz=170,slow=6.1,SNR=3.3						
KVAR			LR		LR	14 19 01.9	
	comp=Z,11nm,19.4s,baz=211,slow=38						
TIP	**Timpagrande**	**12.31**	**293**	*e*Pn	**Pn**	**14 14 14.9**	**-1.8**
DIVS	**Divibare**	**12.45**	**319**	*e*Pn	**Pn**	**14 14 20.7**	**+2.0**
DIVS	**Divibare**	**12.45**	**319**	*e*Pn	**Pn**	**14 14 20.7**	**+2.0**
BUR04	**Bucovina Ar. S**	**13.20**	**341**	*e*Pn	**P**	**14 14 36.0**	**-2.5**
CUC	**Castrocucco**	**13.22**	**296**	*e*Pn	**Pn**	**14 14 28.1**	**-1.1**
CUC	**Castrocucco**	**13.22**	**296**	*e*Pn	**Pn**	**14 14 28.1**	**-1.1**
BUR08	**Bucovina Ar. S**	**13.23**	**341**	*e*Pn	**P**	**14 14 36.6**	**-2.2**
KIEV	**Kiev**	**15.53**	**355**	*e*Pn	**P**	**14 15 06.5**	**+2.3**
AKASG	**Malin Array Be**	**15.53**	**355**	Pn	**Pn**	**14 15 02.1**	**+1.9**
	0.7nm,0.3s,baz=175,slow=10,SNR=3.0						
AKBB	**Malin Array Si**	**15.53**	**355**	*e*Pn	**P**	**14 15 06.6**	**+2.3**
	8.8nm,0.7s						
KEST	**Kesra**	**17.96**	**278**	P	**P**	**14 15 31.4**	**+0.1**
	0.2nm,0.3s,baz=135,slow=10.0,SNR=2.7						
GEA0	**GERESS Array S**	**18.84**	**322**	*e*P	**Pn**	**14 15 41.7**	**+0.1**
GEA0	**GERESS Array S**	**18.84**	**322**	*e*P	**Pn**	**14 15 41.7**	**+0.1**
GEC2	**GERESS Array S**	**18.84**	**322**	*e*P	**P**	**14 15 41.2**	**+0.3**
	8.0nm,1.0s						
GEC2	**GERESS Array S**	**18.84**	**322**	*e*P	**P**	**14 15 41.2**	**+0.3**
	8.0nm,1.0s						
GERES	**GERESS Array B**	**18.84**	**322**	P	**Pn**	**14 15 42.1**	**+0.5**
	0.3nm,0.3s,baz=129,slow=13,SNR=5.7						
GERES			LR		LR	14 24 22.6	
	comp=Z,60nm,19.3s,baz=230,slow=42						
KHC	**Kasperske Hory**	**19.09**	**322**	*e*P	**P**	**14 15 44.0**	**+0.4**
	3.5nm,0.9s						
KHC	**Kasperske Hory**	**19.09**	**322**	*e*P	**P**	**14 15 44.0**	**+0.4**
	3.5nm,0.9s						
FUORN	**Ofenpass-Fuorn**	**19.53**	**312**	*e*P	**P**	**14 15 47.9**	**-0.8**
	12nm,1.1s						
FUORN

ERMK				S	Sn	14 17 40.6	+0.9		
OREN	**Orenkoy-Mersin**	**1.90**	**58**	PN	**Pn**	14 17 17.3	+0.6		
OREN	**Orenkoy-Mersin**	**1.90**	**58**	*e*Pn	**Pn**	14 17 17.3	+0.6		
AKK2	**Akkuyu-Mersin**	**1.93**	**61**	PN	**Pn**	14 17 17.7	+0.6		
AKK2	**Akkuyu-Mersin**	**1.93**	**61**	*e*Pn	**Pn**	14 17 17.7	+0.6		
AKKU	**Akkuyu-Mersin**	**1.94**	**61**	PN	**Pn**	14 17 17.7	+0.4		
AKKU	**Akkuyu-Mersin**	**1.94**	**61**	*e*Pn	**Pn**	14 17 17.7	+0.4		
GULN	**MERSIN_Gulnar**	**1.94**	**60**	*i* P	**Pn**	14 17 16.6	-0.8		
GULN				*i* S	**Sn**	14 17 43.1	+1.1		
GULN	**MERSIN_Gulnar**	**1.94**	**60**	P	**Pn**	14 17 16.6	-0.8		
GULN				S	**Sn**	14 17 43.1	+1.1		
ELL	**Elmali**	**1.97**	**321**	PN	**Pb**	14 17 20.2	0.0		
ELL	**Elmali**	**1.97**	**321**	*e*Pn	**Pb**	14 17 20.2	0.0		
TEPE	**Tepekoy-Mersin**	**1.98**	**59**	PN	**Pn**	14 17 18.3	+0.4		
TEPE	**Tepekoy-Mersin**	**1.98**	**59**	*e*Pn	**Pn**	14 17 18.3	+0.4		
KORT	**Korkueli**	**1.98**	**333**	PN	**Pb**	14 17 19.6	+1.6		
KORT	**Korkueli**	**1.98**	**333**	*i* P	**Pb**	14 17 21.7	+1.2		
KORT				*i* S	**Sg**	14 17 51.7	+4.0		
KORT	**Korkueli**	**1.98**	**333**	*e*Pn	**Pn**	14 17 19.6	+1.6		
KORT	**Korkueli**	**1.98**	**333**	P	**Pb**	14 17 21.7	+1.2		
TEVE	**Tevekalti-Mers**	**2.01**	**53**	PN	**Pn**	14 17 19.1	+0.7		
TEVE	**Tevekalti-Mers**	**2.01**	**53**	*e*Pn	**Pn**	14 17 19.1	+0.7		
YESI	**Yesilovacik-Me**	**2.02**	**61**	PN	**Pn**	14 17 19.2	+0.8		
YESI	**Yesilovacik-Me**	**2.02**	**61**	*e*Pn	**Pn**	14 17 19.2	+0.8		
IKL	**Isikli**	**2.07**	**60**	PN	**Pn**	14 17 19.9	+0.8		
IKL	**Isikli**	**2.07**	**60**	*e*Pn	**Pn**	14 17 19.9	+0.8		
KEBE	**Keben-Mersin**	**2.20**	**56**	PN	**Pn**	14 17 21.8	+0.9		
KEBE	**Keben-Mersin**	**2.20**	**56**	*e*Pn	**Pn**	14 17 21.8	+0.9		
EREN	**Erenkoy**	**2.23**	**82**	PN	**Pn**	14 17 22.9	+1.5		
EREN	**Erenkoy**	**2.23**	**82**	*e*Pn	**Pn**	14 17 22.9	+1.5		
SUTC	**Sutluce-Ispart**	**2.27**	**351**	PN	**Pn**	14 17 23.6	+1.6		
SUTC	**Sutluce-Ispart**	**2.27**	**351**	*e*Pn	**Pn**	14 17 23.6	+1.6		
FETY	**Fethiye**	**2.38**	**307**	P	**Pn**	14 17 21.9	+1.6		
GOLH	**Golhisar**	**2.52**	**323**	*i* P	**Pn**	14 17 25.7	+0.2		
GOLH	**Golhisar**	**2.52**	**323**	P	**Pn**	14 17 25.7	+0.2		
KMER	**Konya-Meram**	**2.64**	**16**	*i* P	**Pb**	14 17 31.7	+0.1		
KMER	**Konya-Meram**	**2.64**	**16**	P	**Pb**	14 17 31.7	+0.1		
ISP	**Isparta**	**2.69**	**344**	PN	**Pn**	14 17 29.7	+1.9		
ISP	**Isparta**	**2.69**	**344**	Pn	**Pg**	14 17 36.1	+0.4		
ISP	**Isparta**	**2.69**	**344**	*e*Pn	**Pn**	14 17 29.7	+1.9		
KONT	**Konya--Tatoy**	**2.81**	**15**	PN	**Pn**	14 17 30.4	+1.1		
KONT	**Konya--Tatoy**	**2.81**	**15**	*i* P	**Pn**	14 17 31.8	+2.5		
KONT				*i* S	**Sn**	14 18 06.6	+3.3		
KONT	**Konya--Tatoy**	**2.81**	**15**	*e*Pn	**Pn**	14 17 30.4	+1.1		
BAGO	**Egridir - ISPA**	**2.81**	**349**	*i* P	**Pb**	14 17 33.0	-1.5		
BAGO				*i* S	**Sb**	14 18 08.7	-0.4		
DOGA	**KONYA_Doganhis**	**2.88**	**3**	*i* P	**Pb**	14 17 33.7	-2.0		
DOGA				*i* S	**Sb**	14 18 09.1	-2.0		
DOGA	**KONYA_Doganhis**	**2.88**	**3**	P	**Pb**	14 17 33.7	-2.0		
DOGA				S	**Sb**	14 18 09.1	-2.0		
MERS	**Mersin**	**2.97**	**56**	PN	**Pn**	14 17 32.3	+0.7		
MERS	**Mersin**	**2.97**	**56**	*e*Pn	**Pn**	14 17 32.3	+0.7		
LADK	**Ladik-KONYA**	**3.05**	**14**	PN	**Pn**	14 17 34.3	+1.6		
LADK	**Ladik-KONYA**	**3.05**	**14**	*e*Pn	**Pn**	14 17 34.3	+1.6		
KERG	**Konya-Eregli**	**3.06**	**44**	*i* P	**Pn**	14 17 34.5	+1.6		
KERG				*i* S	**Sn**	14 18 12.4	+2.5		
KERG	**Konya-Eregli**	**3.06**	**44**	P	**Pn**	14 17 34.5	+1.6		
KERG				S	**Sn**	14 18 12.4	+2.5		
GULE	**Gulek**	**3.38**	**52**	*i* P	**Pn**	14 17 39.1	+1.9		
GULE				*i* S	**Sb**	14 18 23.9	-1.6		
GULE	**Gulek**	**3.38**	**52**	P	**Pn**	14 17 39.1	+1.9		
SULT	**Sultanhani-AKS**	**3.39**	**29**	PN	**Pn**	14 17 38.6	+1.2		
SULT	**Sultanhani-AKS**	**3.39**	**29**	*e*Pn	**Pn**	14 17 38.6	+1.2		
KRTS	**Karatas**	**3.45**	**66**	PN	**Pn**	14 17 39.6	+1.5		
KRTS	**Karatas**	**3.45**	**66**	*e*Pn	**Pn**	14 17 39.6	+1.5		
CHBY	**Cihanbeyli**	**3.54**	**18**	PN	**Pn**	14 17 40.9	+1.5		
CHBY	**Cihanbeyli**	**3.54**	**18**	*e*Pn	**Pn**	14 17 40.9	+1.5		
KARA	**Karaisali**	**3.54**	**54**	PN	**Pn**	14 17 40.4	+1.0		
KARA	**Karaisali**	**3.54**	**54**	*e*Pn	**Pn**	14 17 40.4	+1.0		
YURE	**YUREGIR**	**3.74**	**64**	PN	**Pn**	14 17 43.7	+1.6		
YURE	**YUREGIR**	**3.74**	**64**	*e*Pn	**Pn**	14 17 43.7	+1.6		
HNTI	**Hanita**	**3.75**	**124**	Pn	**Pn**	14 17 42.8	+0.6		
HNTI				Sn	**Sn**	14 18 24.7	-1.9		
HNTI	**Hanita**	**3.75**	**124**	Pn	**Pn**	14 17 42.8	+0.6		
HNTI				Sn	**Sn**	14 18 24.7	-1.9		
YAYL	**Yayladag**	**3.87**	**77**	PN	**Pn**	14 17 45.4	+1.4		
YAYL	**Yayladag**	**3.87**	**77**	*i* P	**Pn**	14 17 44.5	+0.5		
YAYL				*i* S	**Sn**	14 18 28.9	-0.9		
YAYL	**Yayladag**	**3.87**	**77**	P	**Pn**	14 17 44.5	+0.5		
YAYL	**Yayladag**	**3.87**	**77**	*e*Pn	**Pn**	14 17 45.4	+1.4		
YAYL				S	**Sn**	14 18 28.9	-0.9		
OFRI	**'Ofer**	**3.92**	**131**	Pn	**Pn**	14 17 45.9	+1.3		
OFRI	**'Ofer**	**3.92**	**131**	Pn	**Pn**	14 17 45.9	+1.3		
MMA0B	**Mount Meron ar**	**3.95**	**123**	Pn	**Pn**	14 17 45.2	+0.2		
MMA0B	**Mount Meron ar**	**3.95**	**123**	Pn	**Pn**	14 17 45.2	+0.2		
TAHT	**Tahtakopru-Hat**	**4.01**	**72**	PN	**Pn**	14 17 47.9	+2.1		
TAHT	**Tahtakopru-Hat**	**4.01**	**72**	*e*Pn	**Pn**	14 17 47.9	+2.1		
KSDI	**Kefar Szold**	**4.03**	**119**	Pn	**Pn**	14 17 46.5	+0.4		
KSDI				Sn	**Sn**	14 18 31.5	-2.0		
KSDI	**Kefar Szold**	**4.03**	**119**	Pn	**Pn**	14 17 46.5	+0.4		
KSDI				Sn	**Sn**	14 18 31.5	-2.0		
SLTI	**Sal'it**	**4.22**	**134**	Pn	**Pn**	14 17 49.4	+0.7		
SLTI	**Sal'it**	**4.22**	**134**	Pn	**Pn**	14 17 49.4	+0.7		
KSHT	**Keshet**	**4.25**	**121**	Pn	**Pn**	14 17 50.1	+0.9		
KSHT	**Keshet**	**4.25**	**121**	Pn	**Pn**	14 17 50.1	+0.9		
MMLI	**Mount Malkishu**	**4.32**	**129**	PN	**Pn**	14 17 54.0	+4.0		
MMLI	**Mount Malkishu**	**4.32**	**129**	Pn	**Pn**	14 17 50.7	+0.7		
MMLI	**Mount Malkishu**	**4.32**	**129**	Pn	**Pn**	14 17 50.7	+0.7		
HMDT	**Nahal Hemdat**	**4.50**	**130**	Pn	**Pn**	14 17 53.7	+1.1		
HMDT				Sn	**Sn**	14 18 42.9	-2.3		
HMDT	**Nahal Hemdat**	**4.50**	**130**	Pn	**Pn**	14 17 53.7	+1.1		
HMDT				Sn	**Sn**	14 18 42.9	-2.3		
DSI	**Dead Sea**	**4.91**	**137**	Pn	**Pn**	14 17 59.2	+1.1		
DSI				Sn	**Sn**	14 18 57.2	+2.1		
DSI	**Dead Sea**	**4.91**	**137**	Pn	**Pn**	14 17 59.2	+1.1		
DSI				Sn	**Sn**	14 18 57.2	+2.1		
YTIR	**Yattir**	**4.92**	**141**	Pn	**Pn**	14 17 59.1	+0.7		
YTIR	**Yattir**	**4.92**	**141**	Pn	**Pn**	14 17 59.1	+0.7		
KZIT	**Kziot**	**4.97**	**149**	Pn	**Pn**	14 17 59.1	+0.1		
KZIT	**Kziot**	**4.97**	**149**	Pn	**Pn**	14 17 59.1	+0.1		
MZDA	**Masada**	**5.10**	**139**	Pn	**Pn**	14 18 00.8	+0.1		
MZDA	**Masada**	**5.10**	**139**	Pn	**Pn**	14 18 00.8	+0.1		
PRNI	**Paran**	**5.71**	**147**	Pn	**Pn**	14 18 09.0	-0.1		
PRNI	**Paran**	**5.71**	**147**	Pn	**Pn**	14 18 09.0	-0.1		
HRFI	**Mount Harif**	**5.99**	**149**	Pn	**Pn**	14 18 13.0	-0.1		
HRFI	**Mount Harif**	**5.99**	**149**	Pn	**Pn**	14 18 13.0	-0.1		
MBRI	**Mt Berech**	**6.16**	**151**	Pn	**Pn**	14 18 15.9	+0.5		
MBRI				Sn	**Sn**	14 19 24.6	-1.4		
MBRI	**Mt Berech**	**6.16**	**151**	Pn	**Pn**	14 18 15.9	+0.5		
MBRI				Sn	**Sn**	14 19 24.6	-1.4		
EIL	**Elat**	**6.28**	**151**	Pn	**Pn**	14 18 17.1	+0.1		
EIL	**Elat**	**6.28**	**151**	Pn	**Pn**	14 18 17.1	+0.1		

ISCJB ***26*** *14:17:39.8±0.1,56°.12N±0°.02×160°.63E±0°.02, h167km±1km, mb5.0/408, Error ellipse: s-maj=2.7km s-min=1.7km az=155.3*
KRSC ***26*** *14:17:39.3±0.6,56°.05N×160°.92E, h164km±7km, ML5.4*
MOS ***26*** *14:17:39.6±0.8,56°.15N×160°.58E, h165km, mb5.1/113, Error ellipse: s-maj=6.6km s-min=3.5km az=79.4*
GCMT ***26*** *14:17:40.9±0.1,56°.12N×160°.93E, h162km±1km, MW5.3/126, Moment Tensor Solution. s97,c149; s126,c239; Duration: 1§1 Moment tensor: Scale 10^17 Nm; M_rr0.60±.02; M_θθ-0.53±.02; M_φφ-0.08±.02; M_rθ0.22±.02; M_φφ0.66±.02; M_φr0.76±.01; Best double couple: M_0 1.16000×10^17 NP1:φ_s341.00000°, δ67.00000°, λ132.00000° NP2:φ_s94.00000°, δ47.00000°, λ32.00000°. Principal axes: T 1.2680, Plg49.0000°, Azm298.0000°; N -0.2150, Plg38.0000°, Azm141.0000°; P -1.0530, Plg12.0000°, Azm42.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
BJI ***26*** *14:17:40.1,56°.30N×160°.34E, h160km, mb5.0/64, mB5.0/42*
NEIC ***26*** *14:17:40.9±0.1,56°.16N×160°.52E, mb5.2/284, Error ellipse: s-maj=2.9km s-min=1.6km az=168.0*
IDC ***26*** *14:17:41.3±0.3,56°.12N×160°.53E, h163km±2km, mb4.5/58, mb1 4.6/61, mb1mx4.5/78, mbtmp5.0/61, MS3.9/27, Ms1 3.9/27, ms1mx3.6/75, Error ellipse: s-maj=6.7km s-min=5.2km az=147.0*
ISC 26 14:17:41.2±0.2, 56°.05N±0°.02×160°.75E±0°.02, h167km±1km, h166km; pP-P, n1266, σ1§17/1644, mb5.1/415, 50C-20D, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZLN	**Zelenaya**	**0.04**	**138**	*i* P	**Pn**	14 18 02.6	-0.9
ZLN	**Zelenaya**	**0.04**	**138**	PN	**Pn**	14 18 02.6	-0.9
LGNR	**Loginova**	**0.05**	**314**	*i* P	**Pn**	14 18 02.6	-1.1
LGNR	**Loginova**	**0.05**	**314**	PN	**Pn**	14 18 02.6	-1.1
CIRR	**Tsirk**	**0.07**	**358**	*e*P	**Pn**	14 18 02.3	-1.2
CIRR	**Tsirk**	**0.07**	**358**	PN	**Pn**	14 18 02.3	-1.2
BZWR	**Bezymyannyi-We**	**0.17**	**240**	*e*P	**Pn**	14 18 02.6	-1.1
BZWR	**Bezymyannyi-We**	**0.17**	**240**	PN	**Pn**	14 18 02.6	-1.1
BZMR	**Bezymyannaya**	**0.19**	**232**	*e*P	**Pn**	14 18 02.6	-1.1
BZMR	**Bezymyannaya**	**0.19**	**232**	PN	**Pn**	14 18 02.6	-1.1
KRSR	**Krestovskiy**	**0.20**	**328**	*i* P	**Pn**	14 18 01.8	-1.8
KRSR	**Krestovskiy**	**0.20**	**328**	PN	**Pn**	14 18 01.8	-1.8
KIRR	**Kirishev**	**0.25**	**248**	*i* P	**Pn**	14 18 02.3	-1.5
KIRR	**Kirishev**	**0.25**	**248**	PN	**Pn**	14 18 02.3	-1.5
KLY	**Klyuchi**	**0.27**	**348**	*e*P	**Pn**	14 18 02.2	-1.4
KLY				*i* P	**Pn**	14 18 02.4	-1.2
KLY				*e*S	**Sn**	14 18 19.6	-1.3
KLY	**Klyuchi**	**0.27**	**348**	PN	**Pn**	14 18 02.4	-1.2
KLY				S	**Sn**	14 18 19.6	-1.3
KPT	**Kopyto**	**0.31**	**255**	*i* P	**Pn**	14 18 02.7	-1.2
KPT	**Kopyto**	**0.31**	**255**	PN	**Pn**	14 18 02.7	-1.2
KMNR	**Kamenistaya**	**0.41**	**225**	*i* P	**Pn**	14 18 03.3	-0.9
KMNR	**Kamenistaya**	**0.41**	**225**	PN	**Pn**	14 18 03.3	-0.9
KOZ	**Kozyrevsk**	**0.49**	**271**	*i* P	**Pn**	14 18 03.5	-0.9
KOZ	**Kozyrevsk**	**0.49**	**271**	PN	**Pn**	14 18 03.5	-0.9
BDR	**Baidarnaya**	**0.58**	**26**	*i* P	**Pn**	14 18 03.5	-1.4
BDR	**Baidarnaya**	**0.58**	**26**	PN	**Pn**	14 18 03.5	-1.4
SRKR	**Sorokina**	**0.65**	**21**	*i* P	**Pn**	14 18 03.6	-1.6
SRKR	**Sorokina**	**0.65**	**21**	PN	**Pn**	14 18 03.6	-1.6
SMKR	**Semkarok**	**0.67**	**36**	*i* P	**Pn**	14 18 04.0	-1.4
SMKR	**Semkarok**	**0.67**	**36**	PN	**Pn**	14 18 04.0	-1.4
TUMR	**Tumrok**	**0.84**	**204**	*i* P	**Pn**	14 18 06.5	-0.1
TUMR	**Tumrok**	**0.84**	**204**	PN	**Pn**	14 18 05.9	-0.7
TUMR				S	**Sn**	14 18 24.9	-1.1
TUMD	**Tumrok D**	**0.87**	**193**	*i* P	**Pn**	14 18 05.9	-0.7
TUMD				*e*S	**Sn**	14 18 24.9	-1.2
KZV	**Kizimen**	**0.97**	**196**	*i* P	**Pn**	14 18 07.0	-0.6
KZV	**Kizimen**	**0.97**	**196**	PN	**Pn**	14 18 07.0	-0.6
KBG	**Krutoberegovo**	**1.11**	**78**	*i* P	**Pn**	14 18 06.8	-1.6
KBG				*e*S	**Sn**	14 18 27.2	-2.2
KBG	**Krutoberegovo**	**1.11**	**78**	PN	**Pn**	14 18 06.8	-1.6
KBG				S	**Sn**	14 18 27.2	-2.2
ESO	**Esso**	**1.16**	**265**	*i* P	**Pn**	14 18 07.9	-1.0
ESO				*e*S	**Sn**	14 18 28.9	-1.3
ESO	**Esso**	**1.16**	**265**	PN	**Pn**	14 18 07.9	-1.0
ESO				S	**Sn**	14 18 28.9	-1.3
KBTR	**Krutoberegovo**	**1.17**	**81**	*i* P	**Pn**	14 18 07.1	-1.8
KBTR	**Krutoberegovo**	**1.17**	**81**	PN	**Pn**	14 18 07.1	-1.8
MKZ	**Mys Kozlova**	**1.60**	**159**	*e*P	**Pn**	14 18 11.5	-1.5
MKZ				*e*S	**Sn**	14 18 35.8	-1.7
MKZ	**Mys Kozlova**	**1.60**	**159**	PN	**Pn**	14 18 11.5	-1.5
MKZ				S	**Sn**	14 18 35.8	-1.7
KII	**Karymskiy**	**2.15**	**201**	*i* P	**Pn**	14 18 19.3	+0.2
KII				*e*S	**Sn**	14 18 48.0	-0.5
KII	**Karymskiy**	**2.15**	**201**	PN	**Pn**	14 18 19.3	+0.2
KII				S	**Sn**	14 18 48.0	-0.5
GNL	**Ganaly**	**2.86**	**216**	*i* P	**Pn**	14 18 27.9	+0.3
GNL				*i* S	**Sn**	14 19 04.8	+1.2
GNL	**Ganaly**	**2.86**	**216**	PN	**Pn**	14 18 27.9	+0.3
GNL				S	**Sn**	14 19 04.8	+1.2
KRX	**Arik**	**2.96**	**205**	*i* P	**Pn**	14 18 29.5	+0.7
KRX				*e*S	**Sn**	14 19 05.3	-0.5
KRX	**Arik**	**2.96**	**205**	PN	**Pn**	14 18 29.5	+0.7
KRX				S	**Sn**	14 19 05.3	-0.5
SDLR	**Sedlovina**	**2.98**	**202**	*e*P	**Pn**	14 18 29.5	+0.4
SDLR	**Sedlovina**	**2.98**	**202**	PN	**Pn**	14 18 29.5	+0.4
KRER	**Koryakskii**	**2.99**	**204**	*e*P	**Pn**	14 18 29.9	+0.7
KRER	**Koryakskii**	**2.99**	**204**	PN	**Pn**	14 18 29.9	+0.7
SPN	**Mys Shipunski**	**2.99**	**188**	*i* P	**Pn**	14 18 27.0	-2.0
SPN				*e*S	**Sn**	14 19 02.4	-3.8
SPN	**Mys Shipunski**	**2.99**	**188**	PN	**Pn**	14 18 27.0	-2.0
SPN				S	**Sn**	14 19 02.4	-3.8
NLC	**Nalytchevo**	**3.00**	**196**	*e*P	**Pn**	14 18 28.6	-0.5
NLC				*e*S	**Sn**	14 19 05.4	-1.0
NLC	**Nalytchevo**	**3.00**	**196**	PN	**Pn**	14 18 28.6	-0.5
NLC				S	**Sn**	14 19 05.4	-1.0
KOK	**Koryaka**	**3.02**	**205**	*e*P	**Pn**	14 18 30.7	+1.1
KOK	**Koryaka**	**3.02**	**205**	PN	**Pn**	14 18 30.7	+1.1
AVH	**Avacha**	**3.02**	**204**	*i* P	**Pn**	14 18 30.5	+0.9
AVH				*e*S	**Sn**	14 19 08.3	+1.1
AVH	**Avacha**	**3.02**	**204**	PN	**Pn**	14 18 30.5	+0.9
AVH				S	**Sn**	14 19 08.3	+1.1
UGLR	**Uglovaya**	**3.06**	**202**	*i* P	**Pn**	14 18 30.4	+0.4
UGLR	**Uglovaya**	**3.06**	**202**	PN	**Pn**	14 18 30.4	+0.4
BKI	**Bering**	**3.08**	**104**	*i* P	**Pn**	14 18 29.1	-1.0
BKI				*i* S	**Sn**	14 19 05.5	-2.6
BKI	**Bering**	**3.08**	**104**	PN	**Pn**	14 18 29.1	-1.0
BKI				S	**Sn**	14 19 05.5	-2.6
PALN	**Palana**	**3.08**	**352**	*e*P	**Pn**	14 18 29.3	-0.7
PALN				*e*S	**Sn**	14 19 07.0	-1.2
PALN	**Palana**	**3.08**	**352**	PN	**Pn**	14 18 29.3	-0.7
PALN				S	**Sn**	14 19 07.0	-1.2
DALK	**Dalny**	**3.24**	**202**	*i* P	**Pn**	14 18 32.0	-0.2
DALK				*e*S	**Sn**	14 19 10.2	-1.6
DALK	**Dalny**	**3.24**	**202**	PN	**Pn**	14 18 32.0	-0.2
DALK				S	**Sn**	14 19 10.2	-1.6
PET	**Petropavlovsk**	**3.27**	**203**	*e*Pn	**Pn**	14 18 32.5	0.0
PET	**Petropavlovsk**	**3.27**	**203**	*e*P	**Pn**	14 18 32.7	+0.2
PET				*e*S	**Sn**	14 19 12.6	+0.2
PET	**Petropavlovsk**	**3.27**	**203**	*d*PN	**Pn**	14 18 32.5	0.0
PET				pmax	pmax		
	comp=Z,9μm,6.0s						
PET				pmax	pmax		
	comp=Z,3μm,0.9s						
PET				pmax	pmax		
	comp=Z,3μm,11.8s						
PET				MLR	MLR		
	comp=Z,5μm,11.0s						
PET				MLR	MLR		
	comp=Z,3μm,11.0s						
OSSR	**Ossora**	**3.44**	**20**	*i* P	**Pn**	14 18 34.4	-0.2
OSSR				*e*S	**Sn**	14 19 14.8	-1.5
OSSR	**Ossora**	**3.44**	**20**	PN	**Pn**	14 18 34.4	-0.2
OSSR				S	**Sn**	14 19 14.8	-1.5
PEA0B	**Petropavlovsk-**	**3.44**	**212**	*e*Pn	**Pn**	14 18 35.2	+0.4
PETK	**Petropavlovsk-**	**3.44**	**212**	P	**Pn**	14 18 35.5	+0.8
	comp=Z,65nm,0.3s,baz=54,slow=15,SNR=1749						
PETK				S	**Sn**	14 19 19.1	+2.7
	baz=86,slow=18						
PETK				LR	LR	14 19 43.6	
	comp=Z,4μm,20.1s,baz=228,slow=36						
PETK	**Petropavlovsk-**	**3.44**	**212**	*e*Pn	**Pn**	14 18 34.5	-0.2
PETK				S	**Sn**	14 19 19.1	+2.7
KRMR	**Karymshinskiy**	**3.57**	**206**	*i* P	**Pn**	14 18 36.4	+0.1
KRMR				*i* S	**Sn**	14 19 18.5	-0.8
KRMR	**Karymshinskiy**	**3.57**	**206**	PN	**Pn**	14 18 36.4	+0.1
KRMR				S	**Sn**	14 19 18.5	-0.8
APC	**Apacha**	**3.77**	**215**	*i* P	**Pn**	14 18 40.1	+1.3
APC				*e*S	**Sn**	14 19 23.9	+0.2
APC	**Apacha**	**3.77**	**215**	PN	**Pn**	14 18 40.1	+1.3
APC				S	**Sn**	14 19 23.9	+0.2
GRL	**Gorelyy**	**3.84**	**205**	*e*P	**Pn**	14 18 40.7	+0.8
GRL	**Gorelyy**	**3.84**	**205**	PN	**Pn**	14 18 40.7	+0.8
RUS	**Russkaya**	**3.85**	**201**	*i* P	**Pn**	14 18 38.8	-1.1
RUS				*e*S	**Sn**	14 19 23.2	-2.5
RUS	**Russkaya**	**3.85**	**201**	PN	**Pn**	14 18 38.8	-1.1
RUS				S	**Sn**	14 19 23.2	-2.5
MTVR	**Mutnovka**	**3.88**	**204**	*e*P	**Pn**	14 18 40.3	-0.1
MTVR				*e*S	**Sn**	14 19 26.0	-0.5
MTVR	**Mutnovka**	**3.88**	**204**	PN	**Pn**	14 18 40.3	-0.1
MTVR				S	**Sn**	14 19 26.0	-0.5
ASAK	**Asacha**	**4.04**	**206**	*e*P	**Pn**	14 18 42.6	+0.2
ASAK				*e*S	**Sn**	14 19 28.9	-1.2
ASAK	**Asacha**	**4.04**	**206**	PN	**Pn**	14 18 42.6	+0.2
ASAK				S	**Sn**	14 19 28.9	-1.2
MIPR	**Malaya Ipel'ka**	**4.45**	**213**	*i* P	**Pn**	14 18 48.1	+0.4
MIPR	**Malaya Ipel'ka**	**4.45**	**213**	PN	**Pn**	14 18 48.1	+0.4
KDTR	**Khodutka, Kamc**	**4.53**	**202**	*e*P	**Pn**	14 18 47.2	-1.5
PAU	**Pauzhetka**	**5.15**	**209**	*e*P	**Pn**	14 18 56.6	-0.2
PAU	**Pauzhetka**	**5.15**	**209**	PN	**Pn**	14 18 56.6	-0.2
TILK	**Tilichiki**	**5.25**	**31**	*i* P	**Pn**	14 18 58.5	+0.6
TILK				*e*S	**Sn**	14 19 57.1	-1.1
TILK	**Tilichiki**	**5.25**	**31**	PN	**Pn**	14 18 58.5	+0.6
TILK				S	**Sn**	14 19 57.1	-1.1
SKR	**Severo-Kuril's**	**6.05**	**209**	*e*P	**Pn**	14 19 07.5	-1.1
SKR	**Severo-Kuril's**	**6.05**	**209**	*e*PN	**Pn**	14 19 07.3	-1.3
SKR				*e*S	**Sn**	14 20 16.9	-0.3
SKR				pmax	pmax		
	comp=Z,2μm,4.6s						
SKR				pmax	pmax		
	comp=Z,1μm,5.9s						
SKR				pmax	pmax		
	comp=Z,816nm,0.5s						
SKR				smax	smax		
	comp=N,486nm,0.6s						
SKR				smax	smax		
	comp=E,404nm,0.5s						
SKR				MLR	MLR		
	comp=Z,2μm,10.0s						
SKR				MLR	MLR		
	comp=Z,3μm,13.0s						
MA2	**Magadan**	**6.40**	**308**	P	**Pn**	14 19 13.6	+0.4
	comp=Z,11nm,0.3s,baz=114,slow=10,SNR=148						
MA2				S	**Sn**	14 20 25.2	-0.2
	comp=Z,0.6nm,0.3s,baz=31,slow=17,SNR=2.3						
MA2	**Magadan**	**6.40**	**308**	*e*Pn	**Pn**	14 19 12.8	-0.4
MA2				S	**Sn**	14 20 25.2	-0.2
MA2	**Magadan**	**6.40**	**308**	*i* PN	**Pn**	14 19 13.8	+0.7
MA2				pmax	pmax		
	comp=Z,813nm,1.0s						
KMSK	**Kamenskaya**	**7.02**	**21**	*i* P	**Pn**	14 19 22.1	+0.9
KMSK				*e*S	**Sn**	14 20 37.6	-2.5
KMSK	**Kamenskaya**	**7.02**	**21**	PN	**Pn**	14 19 22.1	+0.9
KMSK				S	**Sn**	14 20 37.6	-2.5
SEY	**Seymchan**	**8.11**	**332**	*c i*PN	**Pn**	14 19 36.7	+1.0
SMY	**Shemya**	**8.47**	**108**	*e*Pn	**Pn**	14 19 40.6	+0.1
SMY	**Shemya**	**8.47**	**108**	*e*PN	**Pn**	14 19 40.7	+0.1
TYV	**Tymovskoe**	**11.96**	**252**	*e*PN	**Pn**	14 20 28.7	+2.5
TYV				*e*S	**Sn**	14 22 42.2	+3.6
TYV				pmax	pmax		
	comp=Z,500nm,3.3s						
TYV				pmax	pmax		
	comp=Z,46nm,1.4s						
TYV				smax	smax		
	comp=E,2μm,9.9s						
NKL	**Nikolayevsk**	**11.99**	**264**	*i* PN	**Pn**	14 20 28.0	+1.4
NKL				*e*S	**Sn**	14 22 42.

YAK pmax pmax
comp=N,103nm,2.0s
YAK pmax pmax
comp=E,248nm,1.6s
YAK smax smax
comp=N,206nm,2.0s
YAK smax smax
comp=E,101nm,2.2s
NIKH Nikolski High 17.84 87 *e*P **P 14 21 37.9 +0.7**
comp=E,2µm,2.0s
ANM Nome 18.60 49 *e*P **Pn 14 21 46.8 -0.8**
comp=E,316nm,1.0s
ANM Nome 18.60 49 *e*P **Pn 14 21 46.8 -0.8**
ANM pmax pmax
comp=Z,316nm,1.0s
KLR Kul'dur 18.78 261 *c i*P **P 14 21 47.7 +0.3**
UNV Unalaska Valle 18.84 83 *e*P **P 14 21 49.2 +1.1**
comp=Z,596nm,1.2s
AKUT Akutan 19.15 82 *e*P **P 14 21 52.7 +1.3**
comp=Z,1µm,1.7s
ZEA Zeya 19.30 277 *e*P **P 14 21 52.4 -0.6**
ZEA *e*S **S 14 25 22.0 -0.3**
ZEA pmax pmax
comp=E,600nm,4.0s
ZEA pmax pmax
comp=Z,800nm,4.0s
ZEA pmax pmax
comp=N,400nm,3.0s
ZEA pmax pmax
comp=E,130nm,1.8s
ZEA pmax pmax
comp=Z,220nm,1.8s
ZEA smax smax
comp=N,1µm,6.0s
ZEA smax smax
comp=E,500nm,6.0s
ZEA MLR MLR
comp=Z,600nm,14.0s
ZEA MLR MLR
comp=E,400nm,15.0s
CLNS Chul'man 19.70 287 *e*P **P 14 21 56.7 -0.7**
CLNS *e*S **S 14 25 29.5 -0.7**
CLNS pmax pmax
comp=Z,171nm,1.1s
CLNS pmax pmax
comp=N,112nm,1.0s
CLNS pmax pmax
comp=E,167nm,0.9s
CLNS smax smax
comp=N,247nm,13.1s
CLNS smax smax
comp=E,204nm,12.3s
CLNS MLR MLR
comp=N,232nm,13.0s
CLNS MLR MLR
comp=Z,493nm,15.0s
CLNS MLR MLR
comp=E,465nm,13.0s
FALS False Pass 20.22 78 *e*P **P 14 22 03.9 +1.0**
comp=E,184nm,0.8s
RDOG Red Dog Mine 20.46 40 *e*P **P 14 22 05.6 +0.3**
comp=E,351nm,1.3s
RDOG *e*S **S 14 25 46.5 +1.6**
TIXI Tiksi 20.60 332 P **P 14 22 07.0 +0.3**
comp=E,96nm,0.6s,baz=124,slow=11,SNR=130
TIXI S **S 14 25 47.4 -0.2**
comp=E,3.2nm,0.9s,baz=120,slow=16,SNR=4.9
TIXI ScP **ScP 14 29 31.0 +0.6**
comp=E,2.7nm,0.7s,baz=85,slow=3.1,SNR=5.8
TIXI Tiksi 20.60 332 *e*P **P 14 22 06.7 -0.1**
comp=E,440nm,1.3s
TIXI S **S 14 25 47.4 -0.2**
TIXI ScP **ScP 14 29 31.0 +0.6**
TIXI Tiksi 20.60 332 *c i*P **P 14 22 07.1 +0.3**
TIXI pmax pmax
comp=Z,291nm,1.2s
SDPT Sand Point 21.67 76 *e*P **P 14 22 16.6 -1.7**
comp=Z,122nm,0.9s
USRK Ussuriysk Ar. 21.74 249 P **P 14 22 17.1 -2.1**
comp=Z,11nm,0.5s,baz=54,slow=12,SNR=21
USRK pP **pP 14 22 50.0 +1.6**
comp=Z,32nm,0.9s,baz=54,slow=9.7,SNR=24
USRK S **S 14 26 08.8 +0.5**
baz=94,slow=12
USRK ScP **ScP 14 29 36.2 +2.5**
comp=Z,8.7nm,0.8s,baz=353,slow=0.7,SNR=12
CHGN Chignik 22.50 72 *e*P **P 14 22 25.9 -0.5**
comp=Z,160nm,1.2s
MDJ Mudanjiang 22.74 253 P **P 14 22 26.5 -2.2**
MDJ pP pP 14 22 55.5 -3.7
MDJ sP sP 14 23 17.5 -2.4
MDJ PcP **PcP 14 26 19.3 +4.7**
MDJ S **S 14 26 22.5 -1.9**
MDJ ScP **ScP 14 29 36.5 +0.3**
MDJ pmax pmax
comp=Z,31nm,1.0s
MDJ pmax pmax
comp=Z,110nm,3.8s
MDJ Mudanjiang 22.74 253 *e*P **P 14 22 26.8 -2.0**
comp=Z,82nm,1.5s
SVW2 Sparrevohn 22.97 59 *e*P **P 14 22 31.3 +0.6**
comp=Z,213nm,1.3s
MSHR Mys Shultsa 23.31 247 *ce*P **P 14 22 33.9 -0.1**
PPLA Purkeypile 24.37 54 *e*P **P 14 22 44.6 +1.0**
comp=Z,388nm,1.4s
CAST Castle Rocks 24.37 53 *e*P **P 14 22 44.0 +0.6**
comp=Z,168nm,1.2s
RSO Redoubt South 24.44 60 *e*P **P 14 22 45.0 +0.7**
MJB9 Matsu-Tunnel 24.76 227 *e*P **P 14 22 47.4 +0.1**
comp=Z,72nm,1.5s
MAJO Matsushiro 24.76 227 *e*P **P 14 22 47.3 0.0**
comp=Z,73nm,1.5s
MAJO Matsushiro 24.76 227 *i*P **P 14 22 47.5 +0.2**
MAJO pmax pmax
comp=Z,14nm,0.9s
MAT Matsushiro 24.76 227 P **P 14 22 47.6 +0.3**
MAT S **S 14 26 53.0 -4.0**
MJAR Matsushiro Arr 24.76 227 P **P 14 22 47.6 +0.4**
comp=Z,9.2nm,0.8s,baz=15,slow=7.8,SNR=17
MJAR pP **pP 14 23 21.6 +0.6**
comp=Z,10nm,1.0s,baz=17,slow=8.5,SNR=2.3
MJAR PcP **PcP 14 26 19.5 +0.4**
comp=Z,2.5nm,0.5s,baz=120,slow=1.3,SNR=7.2
MJAR ScP **ScP 14 29 43.3 +1.4**
comp=Z,2.4nm,0.8s,baz=26,slow=1.4,SNR=7.0
SKT Skwentna 24.78 56 *e*P **P 14 22 47.8 +0.6**
comp=Z,110nm,1.2s
MLY Manley 24.87 49 *e*P **P 14 22 48.2 +0.2**
comp=Z,102nm,0.9s
OHAK Old Harbor 24.94 68 *e*P **P 14 22 47.9 -0.7**
COLD Coldfoot 25.09 44 *e*P **P 14 22 49.8 -0.1**
comp=Z,61nm,1.0s
KDAK Kodiak Island 25.14 66 P **P 14 22 50.6 +0.2**
comp=Z,49nm,1.0s,baz=249,slow=6.4,SNR=20
KDAK LR LR 14 33 29.4
comp=Z,439nm,18.3s,baz=257,slow=38
KDAK Kodiak Island 25.14 66 *e*P **P 14 22 51.2 +0.8**
comp=Z,66nm,1.1s
KDAK Kodiak Island 25.14 66 *i*P **P 14 22 52.3 +1.9**
TRF Thorofare Moun 25.17 53 *e*P **P 14 22 50.9 +0.1**
comp=Z,260nm,1.2s
BOD Bodaibo 25.18 294⇓ *i*P **P 14 22 49.5 -1.3**
BOD pmax pmax
comp=Z,82nm,2.0s
SUA Susitna One 25.23 58 *e*P **P 14 22 51.1 -0.2**
comp=Z,138nm,0.9s
CNPM China Poot 25.38 62 *e*P **P 14 22 52.2 -0.4**
comp=Z,388nm,2.0s
TOLK Toolik Lake Re 25.41 41 P **P 14 22 53.2 +0.4**
baz=266,SNR=180
TOLK Toolik Lake Re 25.41 41 *e*P **P 14 22 52.9 0.0**
comp=Z,204nm,0.9s
BWN Browne 25.47 51 *e*P **P 14 22 53.9 +0.5**
comp=Z,313nm,1.1s
HIA Hailar 25.47 272 *e*P **P 14 22 52.2 -1.4**
comp=Z,62nm,0.7s
HIA Hailar 25.47 272 *e*P **P 14 22 52.2 -1.4**
HIA pmax pmax
comp=Z,63nm,0.7s
BRLK Bradley Lake 25.50 61 *e*P **P 14 22 53.0 -0.6**
comp=Z,73nm,1.2s
CN2 Changchun 25.51 256 *e*P **P 14 22 53.0 -0.9**
CN2 *e*S **S 14 27 07.5 -1.2**
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,300nm,13.0s
CN2 LR LR
comp=Z,300nm,13.0s
CN2 LR LR
comp=Z,300nm,12.0s
MCK McKinley 25.75 52 *e*P **P 14 22 55.7 -0.1**
comp=Z,213nm,1.2s
MCK McKinley 25.75 52 *e*P **P 14 22 55.7 -0.1**
MCK pmax pmax
comp=Z,213nm,1.2s
MDM Murphy Dome 25.94 49 *e*P **P 14 22 57.1 -0.5**
comp=Z,84nm,1.1s
PMR Palmer 25.97 57 *e*P **P 14 22 57.7 -0.1**
comp=Z,25nm,1.1s
PMR Palmer 25.97 57 *e*P **P 14 22 57.7 -0.1**
PMR pmax pmax
comp=Z,25nm,1.1s
GHO Glory Hole Cre 26.03 56 *e*P **P 14 22 58.0 -0.5**
comp=Z,71nm,1.1s
WRH Wood River Hil 26.04 50 *e*P **P 14 22 58.5 +0.1**
comp=Z,216nm,1.0s
COLA College 26.11 49 *e*P **P 14 22 59.2 +0.2**
comp=Z,85nm,1.0s
COLA College 26.11 49 *e*P **P 14 22 59.2 +0.2**
COLA pmax pmax
comp=Z,85nm,1.0s
CCB Clear Creek Bu 26.14 50 *e*P **P 14 22 59.5 +0.1**
comp=Z,140nm,1.2s
SML Sawmill 26.30 56 *e*P **P 14 23 01.0 +0.1**
comp=Z,210nm,1.2s
SML Sawmill 26.30 56 *e*P **P 14 23 01.0 +0.1**
SML pmax pmax
comp=Z,210nm,1.2s
IL1 Eielson Array 26.52 49 *e*P **P 14 23 01.2 -1.7**
ILAR Eielson Array 26.52 49 P **P 14 23 02.6 -0.2**
comp=Z,27nm,0.9s,baz=266,slow=7.6,SNR=196
ILAR pP **pP 14 23 36.9 -0.2**
comp=Z,28nm,0.9s,baz=265,slow=8.5,SNR=5.8
ILAR PcP **PcP 14 26 21.1 -1.6**
comp=Z,2.2nm,0.9s,baz=273,slow=3.7,SNR=4.1
ILB Eielson Array 26.52 49 *e*P **P 14 23 02.4 -0.4**
DHY Denali Highway 26.53 53 *e*P **P 14 23 02.4 -0.7**
comp=Z,122nm,1.3s
HDA Harding Lake 26.54 50 *e*P **P 14 23 02.4 -0.5**
comp=Z,124nm,1.5s
SCM Sheep Creek Mo 26.77 56 *e*P **P 14 23 05.2 +0.1**
comp=Z,435nm,1.6s
SCM Sheep Creek Mo 26.77 56 *e*P **P 14 23 05.2 +0.1**
SCM pmax pmax
comp=Z,435nm,1.6s
FYU Fort Yukon 27.06 45 *e*P **P 14 23 08.3 +0.8**
comp=Z,179nm,1.0s
KLU Klutina 27.50 56 *e*P **P 14 23 11.7 +0.1**
comp=Z,82nm,1.0s
RIDG Independ'e Rid 27.55 51 *e*P **P 14 23 10.8 -1.2**
comp=Z,144nm,1.2s
DIV Divide 27.65 57 *e*P **P 14 23 12.6 -0.3**
DIV *ep*P **pP 14 23 46.8 -0.6**
HARP HAARP 27.65 54 *e*P **P 14 23 13.2 +0.2**
HARP *ep*P **pP 14 23 47.2 -0.2**
SNY Shenyang 27.86 255⇓ P **P 14 23 15.5 +0.6**
SNY pP **pP 14 23 49.3 -0.1**
SNY PP **PnPn 14 24 10.0 -1.1**
SNY S **S 14 27 45.8 +0.2**
SNY pmax pmax
comp=Z,27nm,1.3s
SNY LR LR
comp=Z,600nm,11.2s
SNY LR LR
comp=Z,790nm,12.0s
SCRK Sand Creek 27.88 51 *e*P **P 14 23 14.1 -1.0**
comp=Z,98nm,1.0s
SCRK *ep*P **pP 14 23 48.3 -1.3**
MENT Mentasta 28.19 53 *e*P **P 14 23 17.4 -0.3**
comp=Z,41nm,1.0s
BMRM Bremner River 28.24 57 *e*P **P 14 23 18.5 +0.3**
comp=Z,113nm,1.0s
KS01 Wonju Array Si 28.78 244 *e*P **P 14 23 22.6 -0.5**
KS01 *ep*P **pP 14 23 58.1 +0.3**
KS01 *e*PcP **PcP 14 26 28.1 -0.5**
KSRS Korea Array 28.78 244 P **P 14 23 22.4 -0.7**
comp=Z,8.3nm,0.8s,baz=38,slow=8.6,SNR=19
KSRS pP **pP 14 23 58.6 +0.9**
comp=Z,18nm,1.0s,baz=38,slow=9.6,SNR=8.5
KSRS PcP **PcP 14 26 27.6 -0.9**
comp=Z,4.5nm,0.8s,baz=15,slow=1.9,SNR=13
KSRS LR LR 14 34 53.8
comp=Z,170nm,18.9s,baz=14,slow=36
KS15 Wonju Array Si 28.81 244 *e*P **P 14 23 25.8 +2.4**
KSAR Wonju Array Be 28.81 244 P **P 14 23 22.4 -1.0**
KSAR pP **pP 14 23 58.6 +0.6**
KSAR PcP **PcP 14 26 27.6 -1.0**
KSAR Wonju Array Be 28.81 244 P **P 14 23 22.4 -1.0**
KSAR *PP **pP 14 23 58.7 +0.6**
KSAR 14 26 27.6
EGAK Eagle 28.95 49 *e*P **P 14 23 23.3 -1.0**
comp=Z,100nm,0.9s
DAWY Dawson 29.85 50 *e*P **P 14 23 32.6 +0.3**
comp=Z,35nm,1.1s
JNU Nakatsue 30.86 235 P **P 14 23 40.7 -0.8**
comp=Z,7.5nm,0.8s,baz=5.7,slow=10,SNR=2.6
INK Inuvik 31.33 41 P **P 14 23 46.1 +0.9**
comp=Z,38nm,0.9s,baz=289,slow=7.6,SNR=37
INK Inuvik 31.33 41 *e*P **P 14 23 45.5 +0.3**
comp=Z,85nm,1.1s
INK Inuvik 31.33 41 *e*P **P 14 23 45.5 +0.3**
INK pmax pmax
comp=Z,85nm,1.1s
IRK Irkutsk 32.51 287 *e*P **P 14 23 54.2 -1.5**
IRK pmax pmax
comp=Z,133nm,1.9s
SKAG Skagway 33.11 57 *e*P **P 14 24 02.6 +1.8**
comp=Z,120nm,1.1s
SKAG *ep*P **pP 14 24 36.8 +1.0**
TLY Talaya 33.13 287 *e*P **P 14 24 00.5 -0.6**
comp=Z,105nm,2.0s
TLY Talaya 33.13 287 P **P 14 24 01.2 +0.1**
SNR=21
TLY Talaya 33.13 287 *e*P **P 14 24 01.4 +0.3**
TLY *e* 14 24 56.9
TLY pmax pmax
comp=Z,47nm,2.0s
TLY MLR MLR
comp=Z,323nm,17.0s
BJI Beijing 33.15 260⇓ *e*P **P 14 24 02.0 +0.6**
BJI S **S 14 29 08.5 +0.3**
BJI pmax pmax
comp=Z,40nm,0.7s
BJI LR LR
comp=Z,660nm,11.0s
BJI LR LR
comp=Z,790nm,9.8s
BJI LR LR
comp=Z,790nm,37.9s
BJT Baijiatuau 33.17 260 *e*P **P 14 24 01.4 -0.2**
BJT Baijiatuau 33.17 260 *e*P **P 14 24 01.4 -0.2**
ULN Ulaanbaatar 33.32 279 *e*P **P 14 24 02.6 -0.4**
comp=Z,158nm,1.9s
ULN Ulaanbaatar 33.32 279 P **P 14 24 03.2 +0.2**
SNR=24
ULN Ulaanbaatar 33.32 279 *c i*P **P 14 24 02.8 -0.2**
ULN pmax pmax
comp=Z,25nm,1.1s
BESE Bessie Mountai 33.68 58 *e*P **P 14 24 07.3 +1.4**
comp=Z,109nm,1.2s
SONA1 Songino Array 33.69 279 *e*P **P 14 24 05.8 -0.4**
SONA1 *e*PcP **PcP 14 26 41.0 -0.8**
SONM Songino Array 33.70 279 P **P 14 24 06.4 +0.2**
comp=Z,24nm,0.7s,baz=57,slow=8.3,SNR=103
SONM PcP **PcP 14 26 41.8 0.0**
comp=Z,4.2nm,0.7s,baz=23,slow=1.4,SNR=6.2
SONM ScP **ScP 14 30 11.5 +1.1**
comp=Z,6.0nm,0.8s,baz=64,slow=3.4,SNR=15
ZAK Zakamensk 34.00 285 *e*P **P 14 24 08.3 -0.5**
ZAK pmax pmax
comp=Z,30nm,1.5s
JIS Juneau Island 34.03 59 *e*P **P 14 24 10.8 +2.0**
comp=Z,102nm,1.1s
MOY Mondy 34.55 288 *e*P **P 14 24 13.4 -0.1**
MOY pmax pmax
comp=Z,129nm,2.2s
HHC Hu-ho-hao-te 35.16 266 *e*P **P 14 24 19.8 +0.9**
HHC PP **PnPn 14 25 43.5 +1.0**
HHC S **S 14 29 40.0 +0.6**
HHC pmax pmax
comp=Z,14nm,0.6s
HHC pmax pmax
comp=Z,100nm,6.7s
HHC LR LR
comp=Z,1µm,12.1s
HHC LR LR
comp=Z,1µm,11.2s
HHC LR LR
comp=Z,1µm,12.1s
WRAK Wrangell Islan 35.85 61 *e*P **P 14 24 26.5 +2.1**
comp=Z,47nm,1.1s
DLBC Dease Lake 36.03 57 P **P 14 24 28.4 +2.4**
comp=Z,49nm,1.0s,baz=295,slow=10.0,SNR=45
DLBC pP **pP 14 25 01.6 +0.1**
comp=Z,18nm,1.0s,baz=0.7,slow=2.3,SNR=2.9
DLBC Dease Lake 36.03 57 *e*P **P 14 24 28.2 +2.2**
comp=Z,70nm,1.0s
DLBC pP **pP 14 25 01.6 +0.1**
BTO Baotou 36.19 267 *e*P **P 14 24 27.8 +0.2**
BTO pmax pmax
comp=Z,14nm,0.6s
H11N2 WAKE ISLAND Hy 36.55 170 T T 15 03 58.2
baz=357,slow=76,SNR=15
H11N3 WAKE ISLAND Hy 36.57 170 T T 15 03 59.2
baz=357,slow=76,SNR=14
H11N1 WAKE ISLAND Hy 36.57 170 T T 15 03 58.4
baz=357,slow=76,SNR=15
DIB Dawson Inlet, 37.41 66 *e*P **P 14 24 40.4 +2.9**
comp=Z,47nm,1.4s
NJ2 Nanjing 37.65 248 *e*P **P 14 24 40.8 +1.0**
NJ2 pmax pmax
comp=Z,9.0nm,0.6s
HVS Khovu-Aksy 38.68 292 *i*P **P 14 24 47.4 -1.0**
HVS pmax pmax
comp=Z,37nm,1.0s
BBB Bella Bella 40.18 65 *e*P **P 14 25 02.4 +1.7**
comp=Z,58nm,1.4s
BBB *ep*P **pP 14 25 36.2 -0.5**
RES Resolute Bay 40.44 23 P **P 14 25 02.9 +0.4**
comp=Z,21nm,0.9s,baz=282,slow=8.1,SNR=34
RES PP **PP 14 26 37.9 -0.9**
comp=Z,5.3nm,1.0s,baz=273,slow=8.8,SNR=3.9
YKW3 Yellowknife Ar 40.72 45 *e*P **P 14 25 04.9 0.0**
comp=Z,31nm,1.0s
YKW3 *ep*P **pP 14 25 40.4 -0.7**
YKA Yellowknife Ar 40.76 45 P **P 14 25 05.9 +0.7**
comp=Z,22nm,0.8s,baz=300,slow=8.2,SNR=80
YKA pP **pP 14 25 41.4 +0.1**
comp=Z,14nm,0.8s,baz=300,slow=8.0,SNR=6.8
YKA PP **PP 14 26 43.7 +1.3**
comp=Z,3.2nm,0.9s,baz=305,slow=9.7,SNR=2.7
YKA PcP **PcP 14 27 03.3 +0.4**
comp=Z,2.6nm,0.8s,baz=310,slow=3.6,SNR=4.3
YKA ScP **ScP 14 30 38.0 +1.6**
comp=Z,0.9nm,0.6s,baz=309,slow=3.7,SNR=5.9
WHN Wuhan 41.20 252⇓ P **P 14 25 10.0 +0.7**
WHN LR LR
comp=Z,700nm,17.7s
XAN Xi'an 41.48 260 P **P 14 25 11.8 +0.2**
XAN pmax pmax
comp=Z,6.0nm,0.9s
ZAA0 Zalesovo Array 41.56 300 *e*P **P 14 25 10.0 -1.9**
comp=Z,8.7nm,1.3s
ZALV Zalesovo Beam 41.56 300 P **P 14 25 10.2 -1.7**
comp=Z,1.1nm,0.3s,baz=61,slow=7.0,SNR=7.6
ZALV PP **PP 14 26 50.0 -1.1**
comp=Z,29nm,1.2s,baz=46,slow=11,SNR=6.5
ZALV PcP **PcP 14 27 05.3 -0.4**
comp=Z,8.3nm,0.9s,baz=36,slow=7.9,SNR=5.2
ZALV ScP **ScP 14 30 39.2 -0.6**
comp=Z,4.1nm,0.8s,baz=71,slow=3.7,SNR=6.4
ZALV LR LR 14 43 57.6
comp=Z,231nm,18.2s,baz=68,slow=38
ZALV Zalesovo Beam 41.56 300 *e*P **P 14 25 09.4 -2.5**
ZALV PP **PP 14 26 50.0 -1.1**
ZALV PcP **PcP 14 27 05.3 -0.4**
ZALV ScP **ScP 14 30 39.2 -0.6**
NVS Novosibirsk 41.81 302 *e*P **P 14 25 13.3 -0.6**
NVS *e* 14 25 50.8
NVS *e* 14 26 48.5
NVS pmax pmax
comp=Z,101nm,2.1s
NVS pmax pmax
comp=N,37nm,2.2s
NVS pmax pmax
comp=E,48nm,1.9s
DGZ Jazzator, Alta 42.77 294 *i*P **P 14 25 21.4 -0.5**
DGZ pmax pmax
comp=Z,30nm,0.8s
LZH Lanzhou 42.81 267⇓ P **P 14 25 24.3 +1.8**
LZH pP pP 14 25 59.5 +0.6
LZH sP sP 14 26 17.0 -0.6
LZH PP **PP 14 27 04.0 -1.1**
LZH S **S 14 31 34.5 +0.5**
LZH sS sS 14 32 35.5 -2.1
LZH SS **SS 14 34 45.8 -5.5**
LZH pmax pmax
comp=Z,130nm,1.2s
LZH pmax pmax
comp=Z,410nm,4.9s
LZH LR LR
comp=Z,750nm,13.6s
LZH LR LR
comp=Z,660nm,13.4s
LZH LR LR
comp=Z,900nm,14.6s
KBS Kingsbay 44.00 352 *e*P **P 14 25 31.7 +0.5**
comp=Z,155nm,1.4s
KBS Kingsbay 44.00 352 *e*P **P 14 25 31.7 +0.5**
KBS pmax pmax
comp=Z,155nm,1.4s
ENH Enshi 44.04 256 *e*P **P 14 25 30.9 -1.3**
comp=Z,74nm,1.9s
LLLB Lillooet 44.26 63 *e*P **P 14 25 35.2 +1.5**
comp=Z,50nm,1.1s
LLLB *ep*P **pP 14 26 10.1 -0.2**
SPA0 Spitsbergen Ar 44.28 350 *e*P **P 14 25 33.3 -0.2**
SPA0 *ep*P **pP 14 26 10.8 +0.8**
SPITS Spitsbergen Ar 44.28 350 P **P 14 25 33.6 +0.2**
comp=Z,189nm,1.0s,baz=36,slow=7.2,SNR=71
SPITS PcP **PcP 14 27 14.4 -0.1**
comp=Z,8.4nm,1.0s,baz=46,slow=4.2,SNR=1.9
A04D Lummi Island 45.03 66 P **P 14 25 40.9 +1.2**
baz=310
NLWA Neilton Lookou 45.28 68 *e*P **P 14 25 43.1 +1.3**
comp=Z,38nm,1.0s
NLWA *ep*P **pP 14 26 18.5 -0.1**
B05A Bryant 45.63 66 P **P 14 25 45.6 +1.1**
baz=310,SNR=12
B06A Marblemount 45.78 65 *e*P **P 14 25 46.8 +1.1**
comp=Z,48nm,1.1s
B06A *ep*P **pP 14 26 22.3 -0.2**
E03A Lebam 45.99 68 *e*P **P 14 25 49.0 +1.7**
E03A *ep*P **pP 14 26 23.9 -0.3**
D05A Enumclaw 46.39 67 *e*P **P 14 25 52.0 +1.6**
D05A *ep*P **pP 14 26 27.9 +0.5**
WMQ Urumqi 46.41 287 P **P 14 25 51.5 +0.8**
WMQ sP sP 14 26 47.0 +0.7
WMQ PcP **PcP 14 27 22.3 -0.3**
WMQ PP **PP 14 27 43.8 +1.9**
WMQ S **S 14 32 24.5 -1.0**
WMQ LR LR
comp=Z,650nm,8.7s
WMQ LR LR
comp=Z,530nm,9.5s
WMQ LR LR
comp=Z,630nm,28.3s
C06D Leavenworth 46.47 65 P **P 14 25 52.5 +1.5**
baz=311
KURK Kurchatov 46.54 300 *e*P **P 14 25 50.0 -1.5**
comp=Z,68nm,1.0s
KURK pP **pP 14 26 29.0 +0.5**
KURK PP **PP 14 27 43.5 +0.7**
KURK Kurchatov 46.54 300 *c i*P **P 14 25 50.0 -1.5**
KURK pmax pmax
comp=Z,47nm,1.0s
F04D Rainier, OR 46.59 69 P **P 14 25 52.6 +0.7**
baz=312
KURBB Kurchatov Arra 46.65 300 P **P 14 25 51.4 -0.9**
comp=Z,23nm,0.6s,baz=56,slow=7.7,SNR=152
KURBB pP **pP 14 26 29.0 -0.4**
comp=Z,5.6nm,0.9s,baz=54,slow=8.1,SNR=1.4
KURBB PP **PP 14 27 43.5 -0.2**
comp=Z,18nm,1.1s,baz=51,slow=9.9,SNR=5.6
CD2 Chengdu 46.70 262 P **P 14 25 50.8 -2.3**
CD2 pmax pmax

comp=Z,50nm,0.9s
LON Longmire 46.77 67 *e*P **P 14 25 54.6 +1.2**
comp=Z,12nm,1.0s
LON Longmire 46.77 67 *e*P **P 14 25 54.6 +1.2**
LON pmax pmax
comp=Z,12nm,1.0s
B08A Colville Reser 46.98 64 *e*P **P 14 25 55.6 +0.6**
comp=Z,47nm,1.1s
G03D McMinnville, O 47.03 70 P **P 14 25 56.1 +0.7**
baz=312
KULLO Kullorsuaq 47.22 13⇑ *i*P **P 14 25 56.6 +0.2**
comp=Z,77nm,0.9s
MK31 Makanchi Array 47.27 294 *e*P **P 14 25 55.8 -1.5**
MK31 Makanchi Array 47.27 294 *i* P **P 14 25 56.5 -0.8**
MK31 pmax pmax
comp=Z,80nm,1.1s
MKAR Makanchi Array 47.27 294 P **P 14 25 56.8 -0.5**
comp=Z,24nm,0.6s,baz=58,slow=7.4,SNR=168
MKAR ScP **ScP 14 31 03.0 -0.5**
comp=Z,0.3nm,0.5s,baz=48,slow=2.1,SNR=3.0
MKAR Makanchi Array 47.27 294 *e*P **P 14 25 55.7 -1.6**
comp=Z,198nm,0.6s
MKAR ScP **ScP 14 31 03.0 -0.5**
MK01 Makanchi Array 47.28 294 *e*P **P 14 25 55.9 -1.5**
MAKZ Makanchi 47.42 294 *e*P **P 14 25 57.0 -1.5**
comp=Z,102nm,1.1s
MAKZ Makanchi 47.42 294 P **P 14 25 57.5 -1.0**
MAKZ pmax pmax
comp=Z,142nm,1.4s
COR Corvallis 47.43 70 *e*P **P 14 25 59.1 +0.6**
comp=Z,165nm,1.8s
COR Corvallis 47.43 70 *e*P **P 14 25 59.1 +0.6**
COR pmax pmax
comp=Z,165nm,1.8s
DAG Danmarks Havn 47.44 360⇑ *i*P **P 14 25 57.8 -0.4**
comp=Z,20nm,0.9s
DAG Danmarks Havn 47.44 360 P **P 14 25 57.7 -0.4**
DAG pmax pmax
comp=Z,30nm,1.4s
C09A Chrisman Ranch 47.88 64 *e*P **P 14 26 02.5 +0.6**
comp=Z,27nm,1.0s
H04A Detroit Lake 47.95 69 *e*P **P 14 26 03.0 +0.4**
comp=Z,50nm,1.4s
H04A *e*pP **pP 14 26 38.8 -1.0**
I03D Drain, OR 48.01 71 P **P 14 26 04.3 +1.3**
baz=313
G05D Wamic, OR 48.03 68 P **P 14 26 04.3 +1.1**
baz=313
D08A Wollman Farm, 48.05 65 *e*P **P 14 26 03.7 +0.5**
comp=Z,37nm,1.3s
KEBM Edson Butte 48.05 73 *e*P **P 14 26 06.5 +3.1**
comp=Z,56nm,1.2s
NEW Newport 48.15 63 P **P 14 26 05.0 +1.0**
comp=Z,16nm,1.0s,baz=311,slow=7.5,SNR=14
NEW Newport 48.15 63 P **P 14 26 04.5 +0.5**
baz=312,SNR=5.8
NEW Newport 48.15 63 *e*P **P 14 26 04.8 +0.8**
comp=Z,30nm,1.1s
NEW Newport 48.15 63 *e*P **P 14 26 04.8 +0.8**
NEW pmax pmax
comp=Z,30nm,1.1s
HAWA Hanford 48.18 66 *e*P **P 14 26 04.1 -0.2**
comp=Z,35nm,1.3s
F07A Phinny Hill Vi 48.31 67 *e*P **P 14 26 06.0 +0.8**
comp=Z,46nm,0.9s
E08A Dider Farm, El 48.36 66 *e*P **P 14 26 06.0 +0.4**
comp=Z,26nm,1.0s
I04A Tendick Farm, 48.44 70 P **P 14 26 07.6 +1.2**
baz=313,SNR=10
GYA Guiyang 48.56 256 P **P 14 26 10.8 +3.3**
GYA pP pP 14 26 44.5 -0.3
GYA sP sP 14 27 03.3 0.0
GYA PP **PP 14 28 02.0 +0.2**
GYA S **S 14 32 55.5 -0.8**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,130nm,5.2s
I05D Terrebonne, OR 48.63 69 P **P 14 26 08.9 +1.1**
baz=313
E09A Wood Farm, Sta 48.81 65 *e*P **P 14 26 09.8 +0.7**
comp=Z,56nm,1.1s
E09A *e*pP **pP 14 26 45.1 -1.2**
BVA0 Borovoye Array 48.89 307 *i* P **P 14 26 08.2 -1.4**
BVA0 pmax pmax
comp=Z,11nm,0.7s
BVAR Borovoye Array 48.89 307 P **P 14 26 08.3 -1.2**
comp=Z,6.4nm,0.6s,baz=62,slow=7.2,SNR=34
BVAR pP **pP 14 26 46.2 -0.7**
comp=Z,2.8nm,0.6s,baz=69,slow=8.0,SNR=1.6
BVAR PcP **PcP 14 27 31.0 -0.2**
comp=Z,4.4nm,0.6s,baz=54,slow=4.5,SNR=4.3
BVAR PP **PP 14 28 04.6 +0.5**
comp=Z,10.0nm,0.9s,baz=61,slow=9.3,SNR=7.4
BVAR ScP **ScP 14 31 10.1 0.0**
comp=Z,1.9nm,0.8s,baz=82,slow=2.2,SNR=5.5
BRVK Borovoye 48.91 307 *e*P **P 14 26 08.2 -1.5**
comp=Z,52nm,1.6s
BRVK Borovoye 48.91 307 P **P 14 26 08.9 -0.8**
SNR=11
BRVK Borovoye 48.91 307 *c i*P **P 14 26 08.5 -1.2**
BRVK pmax pmax
comp=Z,10.0nm,0.9s
L02D Cave Junction, 48.93 73 P **P 14 26 11.1 +1.0**
baz=314,SNR=6.4
HUMO Hull Mountain 48.97 72 *e*P **P 14 26 11.2 +0.8**
comp=Z,23nm,1.2s
HUMO *e*pP **pP 14 26 47.5 -0.1**
J04D Umpqua Nationa 48.98 71 P **P 14 26 12.0 +1.3**
baz=314,SNR=6.1
WALA Waterton Lakes 49.20 60 *e*P **P 14 26 12.9 +0.8**
comp=Z,71nm,1.1s
PINE Pine Mountain 49.22 69 *e*P **P 14 26 13.8 +1.4**
comp=Z,51nm,1.1s
PINE *e*pP **pP 14 26 49.5 -0.2**
G08A Pilot Rock 49.22 67 *e*P **P 14 26 12.0 -0.3**
comp=Z,22nm,1.4s
J05D Fort Rock, OR 49.41 70 P **P 14 26 15.7 +1.9**
baz=314,SNR=27
K04D Chiloquin, OR 49.59 71 P **P 14 26 16.3 +1.0**
baz=314
F10A Beach Ranch, E 49.64 65 *e*P **P 14 26 16.0 +0.5**
F10A *e*pP **pP 14 26 53.0 +0.1**
YBH Yreka Blue Hor 49.71 73 P **P 14 26 18.1 +2.0**
comp=Z,11nm,1.1s,baz=23,slow=4.0,SNR=20
YBH pP **pP 14 26 53.2 -0.2**
comp=Z,13nm,1.0s,baz=351,slow=4.1,SNR=4.1
YBH LR LR 14 44 45.7
comp=Z,113nm,19.4s,baz=320,slow=33
YBH Yreka Blue Hor 49.71 73 *e*P **P 14 26 17.6 +1.6**
comp=Z,20nm,1.1s
YBH *e*pP **pP 14 26 53.3 -0.2**
YBH Yreka Blue Hor 49.71 73 *e*P **P 14 26 17.6 +1.6**
YBH *e**PP **pP 14 26 53.3 -0.2**
YBH pmax pmax
comp=Z,21nm,1.1s
KHMM Horse Mountain 49.76 74 *e*P **P 14 26 17.8 +1.3**
comp=Z,40nm,1.1s
KHMM *e*pP **pP 14 26 54.1 +0.2**
I07A Izee 49.77 68 *e*P **P 14 26 17.1 +0.6**
comp=Z,9.3nm,1.0s
I07A *e*pP **pP 14 26 53.6 -0.4**
M02C Callahan 49.87 73 P **P 14 26 19.3 +2.1**
baz=315,SNR=11
JTMT Jette 49.90 62 *e*P **P 14 26 18.7 +1.2**
comp=Z,52nm,1.1s
JTMT *e*pP **pP 14 26 54.5 -0.5**
K05A Summer Lake 49.98 70 *e*P **P 14 26 19.4 +1.2**
comp=Z,59nm,1.4s
K05A *e*pP **pP 14 26 56.1 +0.4**
M04C Macdoel 50.14 72 P **P 14 26 21.0 +1.6**
baz=315,SNR=10
KMRM Mail Ridge 50.23 75 *e*P **P 14 26 22.0 +2.0**
comp=Z,26nm,1.0s
KMRM *e*pP **pP 14 26 59.2 +1.7**
N02D Trinity Center 50.24 73 P **P 14 26 22.1 +2.0**
baz=315,SNR=7.7
BMO Blue Mountains 50.37 66 *e*P **P 14 26 21.6 +0.6**
comp=Z,30nm,1.2s
BMO *e*pP **pP 14 26 57.5 -1.0**
BMO Blue Mountains 50.37 66 *e*P **P 14 26 21.6 +0.6**
BMO *e**PP **pP 14 26 57.5 -1.0**
BMO pmax pmax
comp=Z,30nm,1.2s
SVE Sverdlovsk 50.41 315⇓ *e*P **P 14 26 20.6 -0.4**
SVE pmax pmax
comp=Z,59nm,1.5s

ARCES ARCESS Array B 50.60 341 P **P 14 26 21.3 -1.0**
comp=Z,9.0nm,0.8s,baz=35,slow=8.9,SNR=16
ARCES PcP **PcP 14 27 37.2 0.0**
comp=Z,4.9nm,1.0s,baz=38,slow=4.6,SNR=4.2
ARCES ARCESS Array B 50.60 341 *e*P **P 14 26 20.9 -1.4**
ARCES PcP **PcP 14 27 37.2 0.0**
ARE0 ARCESS Array S 50.60 341 *e*P **P 14 26 21.1 -1.1**
comp=Z,63nm,1.4s
ARE0 ARCESS Array S 50.60 341 *e*P **P 14 26 21.6 -0.7**
ARE0 IAmb IAmb 14 26 22.9
comp=Z,59nm,1.4s
WDC Whiskeytown Da 50.61 74 *e*P **P 14 26 23.6 +0.9**
comp=Z,36nm,1.4s
WDC *e*pP **pP 14 27 00.4 +0.2**
WDC Whiskeytown Da 50.61 74 *e*P **P 14 26 23.6 +0.9**
WDC *e**PP **pP 14 27 00.4 +0.2**
WDC pmax pmax
comp=Z,36nm,1.4s
APA Apatity 50.67 337⇑ *i*P **P 14 26 20.6 -2.2**
APA *i* S S 14 33 14.0 -10
APA *i* 14 35 59.0
APA pmax pmax
comp=Z,9.0nm,1.0s
APA MLR MLR
comp=Z,200nm,16.0s
MSO Missoula 50.70 62 P **P 14 26 24.2 +0.7**
baz=314,SNR=19
MSO Missoula 50.70 62 *e*P **P 14 26 24.3 +0.8**
comp=Z,51nm,1.3s
FFC Flin Flon 50.72 48 *e*P **P 14 26 23.8 +0.4**
comp=Z,40nm,1.0s
FFC *e*pP **pP 14 27 00.3 -0.6**
FFC Flin Flon 50.72 48 *e*P **P 14 26 23.8 +0.4**
FFC *e**PP **pP 14 27 00.3 -0.6**
FFC pmax pmax
comp=Z,40nm,1.0s
J08A Circle Bar Ran 50.81 68 *e*P **P 14 26 25.7 +1.4**
comp=Z,31nm,1.2s
MOD Modoc Plateau 50.87 71 *e*P **P 14 26 25.8 +0.9**
comp=Z,40nm,1.3s
MOD *e*pP **pP 14 27 01.8 -0.7**
FCC Fort Churchill 50.95 40 *e*P **P 14 26 25.2 +0.2**
comp=Z,39nm,0.9s
FCC *e*pP **pP 14 27 02.0 -0.5**
FCC Fort Churchill 50.95 40 *e*P **P 14 26 25.2 +0.2**
FCC *e**PP **pP 14 27 02.0 -0.5**
FCC pmax pmax
comp=Z,39nm,0.9s
SUMG Summit 50.97 7⇑ *i*P **P 14 26 25.8 +0.3**
comp=Z,40nm,1.0s
SUMG Summit 50.97 7 *e*P **P 14 26 25.4 0.0**
comp=Z,48nm,1.1s
PDGK Podgornoye 51.08 292 P **P 14 26 25.5 -0.9**
PDGK pmax pmax
comp=Z,190nm,1.4s
O03D Paynes Creek 51.21 73 P **P 14 26 28.5 +1.2**
baz=316,SNR=11
WVOR Wild Horse Val 51.37 69 *e*P **P 14 26 29.9 +1.3**
comp=Z,25nm,1.1s
WVOR Wild Horse Val 51.37 69 *e*P **P 14 26 29.9 +1.3**
WVOR pmax pmax
comp=Z,25nm,1.1s
HOPS Hopland Field 51.45 75 *e*pP pP 14 27 08.5 +1.8
ARU Arti 51.50 316 P **P 14 26 27.8 -1.3**
comp=Z,16nm,0.6s,baz=43,slow=3.9,SNR=45
ARU pP **pP 14 27 06.4 -0.4**
comp=Z,14nm,0.9s,baz=47,slow=2.7,SNR=2.8
ARU LR LR 14 51 05.9
comp=Z,285nm,20.3s,baz=42,slow=39
ARU Arti 51.50 316 *e*P **P 14 26 27.6 -1.5**
comp=Z,35nm,0.9s
ARU pP **pP 14 27 06.4 -0.4**
ARU Arti 51.50 316 *c i*P **P 14 26 28.0 -1.1**
ARU **PP **pP 14 27 06.9 +0.1**
ARU 14 27 38.2
ARU 14 28 26.3
ARU PPP PPP 14 29 35.5
ARU S **S 14 33 36.0 0.0**
ARU SS **SS 14 37 08.5 -4.9**
ARU pmax pmax
comp=Z,62nm,1.2s
TRO Tromso 51.61 344 *e*P **P 14 26 29.5 -0.3**
TRO IAmb IAmb 14 26 39.4
comp=Z,67nm,1.5s
GDXM Geysers 51.73 75 *e*P **P 14 26 33.0 +1.8**
comp=Z,24nm,1.2s
GDXM *e*pP **pP 14 27 10.4 +1.5**
KMI Kunming 51.76 258 P **P 14 26 31.3 -0.4**
KMI pmax pmax
comp=Z,14nm,0.5s
KMI LR LR
comp=Z,290nm,16.6s
KMI LR LR
comp=Z,310nm,16.6s
KMI LR LR
comp=Z,240nm,19.1s
HRY Holter Researc 51.83 61 *e*P **P 14 26 32.9 +1.0**
HRY *e*pP **pP 14 27 09.7 +0.1**
ORV Oroville 51.90 74 *e*P **P 14 26 33.1 +0.8**
comp=Z,15nm,1.1s
ORV *e*pP **pP 14 27 09.4 -0.6**
ORV Oroville 51.90 74 *e*P **P 14 26 33.1 +0.8**
ORV *e**PP **pP 14 27 09.4 -0.6**
ORV pmax pmax
comp=Z,15nm,1.1s
EGMT Eagleton 51.91 59 P **P 14 26 33.0 +0.6**
baz=315,SNR=16
EGMT Eagleton 51.91 59 *e*P **P 14 26 32.9 +0.5**
comp=Z,42nm,1.1s
MFID Camas Ranch 52.14 66 *e*P **P 14 26 35.3 +1.1**
comp=Z,31nm,1.3s
MFID *e*pP **pP 14 27 11.7 -0.2**
LRM Limekiln Ridge 52.15 62 *e*P **P 14 26 33.7 -0.7**
PRGR Permogore 52.16 327 *e*P **P 14 26 31.5 -2.4**
PRGR *e**PP **pP 14 27 12.6 +1.0**
PRGR pmax pmax
comp=Z,65nm,1.5s
SGF Sodankyl 52.22 340 P **P 14 26 34.1 -0.1**
BEKR Beckworth 52.29 73 *e*P **P 14 26 36.4 +1.0**
comp=Z,30nm,1.2s
BEKR *e*pP **pP 14 27 12.7 -0.5**
TMCR Tamitsa 52.32 332 *e*P **P 14 26 34.5 -0.5**
DLMT Dillon 52.40 63 *e*P **P 14 26 37.1 +1.0**
comp=Z,43nm,1.3s
AAA Alma-Ata 52.50 294 *e*P **P 14 26 36.4 -0.4**
AAA *e*S **S 14 33 51.5 +1.4**
AAA pmax pmax
comp=Z,300nm,4.2s
AAA smax smax
comp=E,400nm,9.0s
AAA MLR MLR
comp=Z,200nm,13.0s
AFDM Forest Hills D 52.62 74 *e*P **P 14 26 39.0 +1.3**
comp=Z,20nm,1.2s
AFDM *e*pP **pP 14 27 15.5 0.0**
MCMT McKenzie Canyo 52.65 63 *e*P **P 14 26 38.7 +0.6**
BOZ Bozeman (W) 52.71 62 P **P 14 26 39.4 +1.0**
baz=316,SNR=12
BOZ Bozeman (W) 52.71 62 *e*P **P 14 26 39.6 +1.1**
comp=Z,32nm,1.3s
BOZ Bozeman (W) 52.71 62 P **P 14 26 39.5 +1.0**
BOZ pmax pmax
comp=Z,32nm,1.2s
HLID Hailey 52.76 65 P **P 14 26 40.2 +1.3**
baz=316,SNR=15
HLID Hailey 52.76 65 *e*P **P 14 26 40.2 +1.3**
comp=Z,14nm,1.1s
ILULI Ilulissat 52.91 14⇑ *i*P **P 14 26 38.6 -0.7**
comp=Z,26nm,0.9s
ILULI Ilulissat 52.91 14 *e*P **P 14 26 38.3 -1.0**
comp=Z,27nm,0.9s
ILULI Ilulissat 52.91 14 *e*P **P 14 26 38.3 -1.0**
ILULI pmax pmax
comp=Z,27nm,0.9s
QIZ Qiongzhong 52.92 247 P **P 14 26 40.5 +0.5**
QIZ S **S 14 33 57.5 +1.4**
QIZ pmax pmax
comp=Z,82nm,8.0s
QIZ LR LR
comp=Z,260nm,15.9s
PAHR Pah Rah Range 52.92 72 *e*P **P 14 26 41.1 +1.0**
comp=Z,38nm,1.2s
PAHR *e*pP **pP 14 27 17.9 0.0**
MSF Maaselka 53.02 337 P **P 14 26 39.5 -0.6**
MSF pmax pmax

comp=Z,56nm,1.2s
VCNR Virginia City 53.08 73 *e*P **P 14 26 42.8 +1.5**
comp=Z,26nm,1.1s
VCNR *e*pP **pP 14 27 18.7 -0.4**
TARG Taragay, Kyrgy 53.10 292 *e*P **P 14 26 41.0 -0.7**
comp=Z,177nm,1.9s
PNTR Pine Nut 53.25 73 *e*P **P 14 26 44.0 +1.4**
comp=Z,43nm,1.1s
PNTR *e*pP **pP 14 27 21.0 +0.5**
QLMT Earthquake Lak 53.36 62 *e*P **P 14 26 44.6 +1.3**
TKM2 Tokmak 2 53.38 294 P **P 14 26 43.1 -0.4**
SNR=45
TKM2 Tokmak 2 53.38 294 P **P 14 26 42.6 -0.8**
TKM2 pmax pmax
comp=Z,87nm,1.4s
YERR Yerington 53.52 73 *e*P **P 14 26 46.0 +1.5**
comp=Z,76nm,1.4s
YERR *e*pP **pP 14 27 22.7 +0.3**
YHB Horse Butte 53.53 62 *e*P **P 14 26 45.1 +0.6**
comp=Z,29nm,0.9s
ULHL Ulahol 53.54 293 P **P 14 26 44.5 0.0**
SNR=21
BMN Battle Mountai 53.55 70 *e*P **P 14 26 45.2 +0.6**
comp=Z,33nm,1.3s
BMN *e*pP **pP 14 27 22.1 -0.5**
BMN Battle Mountai 53.55 70 *e*P **P 14 26 45.2 +0.6**
BMN *e**PP **pP 14 27 22.1 -0.5**
BMN pmax pmax
comp=Z,33nm,1.3s
CMB Columbia Colle 53.59 74 *e*P **P 14 26 46.3 +1.5**
comp=Z,70nm,1.6s
CMB Columbia Colle 53.59 74 *e*P **P 14 26 46.3 +1.5**
CMB pmax pmax
comp=Z,70nm,1.6s
USP Ospenovka 53.69 295 P **P 14 26 45.4 -0.1**
SNR=102
STEI Steigen 53.73 345 *e*P **P 14 26 44.2 -1.1**
STEI IAmb IAmb 14 26 45.4
comp=Z,38nm,1.2s
CHMS Chumysh 53.76 295 P **P 14 26 45.8 -0.2**
SNR=43
WAKR Walker 53.77 73 *e*P **P 14 26 48.3 +2.1**
comp=Z,28nm,1.0s
LOF Lofoten 53.79 345 *e*P **P 14 26 45.4 -0.3**
LOF IAmb IAmb 14 26 47.1
comp=Z,77nm,0.9s
KBK Karagaybulak 53.90 294 P **P 14 26 47.1 -0.1**
SNR=39
YFT Old Faithful 53.92 62 *e*P **P 14 26 49.3 +1.9**
comp=Z,24nm,0.8s
FRU Bishkek 53.95 295⇑ *i*P **P 14 26 47.0 -0.3**
FRU *e*S **S 14 34 11.0 +1.4**
FRU pmax pmax
comp=Z,400nm,1.8s
SAO San Andreas Ge 53.95 76 *e*P **P 14 26 48.1 +0.7**
comp=Z,24nm,1.1s
SAO *e*pP **pP 14 27 27.1 +1.8**
SAO San Andreas Ge 53.95 76 *e*P **P 14 26 48.1 +0.7**
SAO *e**PP **pP 14 27 27.1 +1.8**
SAO pmax pmax
comp=Z,25nm,1.1s
YPP Pitchstone Pla 54.07 62 *e*P **P 14 26 49.8 +1.2**
comp=Z,21nm,1.2s
KVN Kaiserville 54.08 72 *e*P **P 14 26 50.7 +2.2**
comp=Z,34nm,1.1s
KVN Kaiserville 54.08 72 *e*P **P 14 26 50.7 +2.2**
KVN pmax pmax
comp=Z,34nm,1.1s
H17A Grant Village 54.09 62 P **P 14 26 51.4 +2.7**
baz=316,SNR=13
H17A Grant Village 54.09 62 *e*P **P 14 26 51.0 +2.3**
comp=Z,40nm,1.1s
H17A *e*pP **pP 14 27 28.3 +1.6**
AAK Ala-Archa 54.15 295 P **P 14 26 48.9 0.0**
SNR=26
AAK Ala-Archa 54.15 295 P **P 14 26 48.5 -0.4**
AAK pmax pmax
comp=Z,246nm,1.5s
RYN Ryan 54.16 72 *e*P **P 14 26 50.9 +1.8**
comp=Z,90nm,1.6s
RYN *e*pP **pP 14 27 27.5 +0.4**
KZA Kyzart 54.17 294 P **P 14 26 49.5 +0.1**
SNR=37
DGMT Dagmar 54.20 55 P **P 14 26 49.6 +0.6**
baz=317
DGMT Dagmar 54.20 55 *e*P **P 14 26 50.2 +1.1**
comp=Z,32nm,0.9s
RLMT Red Lodge 54.22 61 P **P 14 26 51.0 +1.5**
baz=316,SNR=34
RLMT Red Lodge 54.22 61 *e*P **P 14 26 50.6 +1.2**
comp=Z,52nm,1.0s
NRN Naryn 54.25 293 *e*P **P 14 26 49.5 -0.4**
comp=Z,95nm,1.5s
NRN Naryn 54.25 293 *e*P **P 14 26 49.5 -0.4**
NRN pmax pmax
comp=Z,95nm,1.5s
IMW Indian Meadow 54.27 63 *e*P **P 14 26 51.6 +1.6**
comp=Z,51nm,1.4s
FXWY Fox Creek 54.42 63 *e*P **P 14 26 52.4 +1.4**
comp=Z,23nm,1.1s
NV01 Mina Array Sit 54.43 72 *e*P **P 14 26 52.7 +1.6**
NVAR Mina Array Bea 54.43 72 P **P 14 26 53.2 +2.2**
comp=Z,17nm,1.0s,baz=296,slow=7.3,SNR=72
NVAR pP **pP 14 27 28.5 -0.6**
comp=Z,14nm,0.9s,baz=297,slow=6.6,SNR=5.9
NVAR ScP **ScP 14 31 35.7 +1.1**
comp=Z,0.9nm,0.8s,baz=297,slow=5.0,SNR=4.3
NVAR LR LR 14 48 18.1
comp=Z,106nm,19.0s,baz=73,slow=34
UCH Uchtor 54.44 294 P **P 14 26 51.3 -0.1**
SNR=46
MOOW Moose Ponds 54.48 63 *e*P **P 14 26 53.0 +1.7**
comp=Z,23nm,1.3s
MOOW *e*pP **pP 14 27 29.0 -0.4**
EKS2 Erkin-Say 54.50 295 P **P 14 26 51.2 -0.2**
SNR=107
NV11 Mina Array Sit 54.50 72 *e*P **P 14 26 53.2 +1.7**
comp=Z,6.6nm,1.6s
LAO LASA Array 54.55 58 P **P 14 26 53.0 +1.4**
baz=317,SNR=9.1
LAO LASA Array 54.55 58 *e*P **P 14 26 52.8 +1.2**
comp=Z,51nm,1.0s
LAO *e*pP **pP 14 27 32.5 +2.8**
TPAW Teton Pass 54.56 63 *e*P **P 14 26 53.6 +1.6**
comp=Z,31nm,0.9s
KLMR Klimovskoe 54.59 329 *e*P **P 14 26 48.8 -2.8**
KLMR *e**PP **pP 14 27 28.9 -0.8**
KLMR *e* 14 27 50.1
KLMR *e* 14 28 52.8
KLMR pmax pmax
comp=Z,78nm,1.4s
KLMR Klimovskoe 54.59 329 *e*P **P 14 26 48.8 -2.8**
KLMR AMP 14 26 52.1
comp=Z,78nm,1.4s
KLMR *e*pP **pP 14 27 28.9 -0.8**
KLMR *e*PcP **sP 14 27 50.1 +2.0**
KLMR *e*PP **PP 14 28 52.9 -2.3**
MDPB Devils Postpil 54.59 74 *e*P **P 14 26 53.9 +1.6**
comp=Z,67nm,1.2s
FRB Frobisher Bay 54.64 24 P **P 14 26 50.7 -1.2**
LOHW Long Hollow 54.65 63 *e*P **P 14 26 54.1 +1.5**
comp=Z,32nm,1.2s
OMMB Old Mammoth Mi 54.65 74 *e*P **P 14 26 53.9 +1.1**
OMMB *e*pP **pP 14 27 30.7 -0.2**
LSA Lhasa 54.68 272 P **P 14 26 54.0 +0.7**
LSA pmax pmax
comp=Z,28nm,0.8s
LSA Lhasa 54.68 272 *e*P **P 14 26 53.3 0.0**
comp=Z,56nm,0.6s
LSA Lhasa 54.68 272 *i* P **P 14 26 53.8 +0.6**
SNR=8.7
LSA Lhasa 54.68 272 *e*P **P 14 26 53.3 0.0**
LSA pmax pmax
comp=Z,56nm,0.6s
SNOW Snow King Moun 54.68 63 *e*P **P 14 26 53.8 +0.9**
comp=Z,47nm,1.4s
SNOW *e*pP **pP 14 27 32.4 +1.4**
REDW Red Top Meadow 54.70 63 *e*P **P 14 26 54.8 +1.8**
comp=Z,37nm,1.3s
MLAC Mammoth, Mammo 54.73 74 P **P 14 26 55.7 +2.4**
baz=318
HVU Hansel Valley 54.88 66 *e*P **P 14 26 56.0 +1.8**
comp=Z,40nm,1.4s
HVU *e*pP **pP 14 27 34.1 +1.8**
HVU Hansel Valley 54.88 66 P **P 14 26 56.0 +1.8**
HVU pmax pmax

comp=Z,40nm,1.3s
AML Almayashu 54.92 295 P P 14 26 54.9 +0.1
SNR=55
AHID Auburn Hatcher 55.01 64 eP P 14 26 56.7 +1.5
comp=Z,22nm,1.1s
SFJD Kangerlussuaq 55.05 14 P P 14 26 54.3 -0.5
comp=Z,13nm,0.4s,baz=313,slow=6.5,SNR=7.6
SFJD Kangerlussuaq 55.05 14⇑ iP P 14 26 54.2 -0.5
comp=Z,15nm,0.5s
SFJD Kangerlussuaq 55.05 14 eP P 14 26 54.0 -0.8
comp=Z,10nm,0.4s
MNAS Manas 55.27 296 P P 14 26 56.6 -0.4
MNAS pmax pmax
comp=Z,144nm,1.3s
PAGB Antelope Grade 55.36 76 eP P 14 26 58.3 +0.7
comp=Z,49nm,1.2s
PAGB epP pP 14 27 37.7 +2.0
BGU Big Grassy Mou 55.37 67 eP P 14 26 57.5 -0.3
comp=Z,32nm,1.7s
TIN Tinemaha, Big 55.48 74 P P 14 27 00.9 +2.4
baz=318
MOR8 Moi Rana 55.48 344 eP P 14 26 56.5 -1.5
HWUT Hardware Ranch 55.62 65 eP P 14 27 01.1 +1.5
comp=Z,41nm,1.2s
KSH Kashi 55.66 291⇑ iP P 14 27 03.0 +3.2
KSH pP pP 14 27 43.3 +5.3
KSH PP **PP 14 29 12.3 +6.9**
KSH S **S 14 34 32.5 -0.2**
KSH sS sS 14 35 39.5 +0.4
KSH SS **SS 14 38 22.5 +2.7**
KSH LR LR
comp=Z,310nm,6.1s
KSH LR LR
comp=Z,280nm,8.7s
KSH LR LR
comp=Z,330nm,8.6s
BW06 Boulder Array 55.79 63 P P 14 27 02.3 +1.5
baz=318,SNR=32
BW06 Boulder Array 55.79 63 eP P 14 27 01.7 +1.0
comp=Z,50nm,1.4s
PD31 Pinedale Array 55.79 63 eP P 14 27 01.6 +0.9
PD31 epP **pP 14 27 38.2 -0.8**
PDAR Pinedale Array 55.79 63 P P 14 27 02.2 +1.5
comp=Z,17nm,0.9s,baz=311,slow=3.4,SNR=68
PDAR pP **pP 14 27 38.6 -0.3**
comp=Z,6.5nm,0.7s,baz=316,slow=4.1,SNR=4.4
PDAR LR LR 14 51 39.8
comp=Z,98nm,18.4s,baz=328,slow=36
PDAR Pinedale Array 55.79 63 eP P 14 27 01.7 +0.9
PDAR epP **pP 14 27 38.4 -0.6**
PDAR e 14 27 39.0
SMMC Simmler 55.81 76 P P 14 27 02.8 +2.0
baz=318
KK31 Karatay Array 55.81 298 eP P 14 26 59.5 -1.2
KK31 Karatay Array 55.81 298 i P P 14 26 59.7 -1.0
KK31 pmax pmax
comp=Z,200nm,1.3s
KKAR Karatay Array 55.81 298 eP P 14 26 59.6 -1.1
KKAR Karatay Array 55.81 298 eP P 14 26 59.6 -1.1
VES Vestal, Richgr 55.91 75 P P 14 27 02.3 +0.8
baz=318
R11A Troy Canyon, C 55.93 71 P P 14 27 03.4 +1.6
baz=318,SNR=23
R11A Troy Canyon, C 55.93 71 eP P 14 27 02.9 +1.0
comp=Z,39nm,1.3s
GRAC Grapevine Rang 55.98 73 P P 14 27 04.4 +2.3
baz=318,SNR=8.1
CWC Cottonwood Cre 56.01 74 P P 14 27 04.1 +1.7
baz=318
DUG Dugway, Tooele 56.02 67 P P 14 27 04.3 +1.9
baz=318,SNR=14
DUG Dugway, Tooele 56.02 67 eP P 14 27 03.4 +1.0
comp=Z,31nm,1.1s
DUG epP **pP 14 27 40.3 -0.3**
DUG Dugway, Tooele 56.02 67 eP P 14 27 03.4 +1.0
DUG e*PP **pP 14 27 40.3 -0.3**
DUG pmax pmax
comp=Z,31nm,1.1s
TCUT Toone Canyon 56.06 66 eP P 14 27 03.9 +1.1
comp=Z,35nm,1.1s
AKTO Aktyubinsk 56.13 311 P P 14 27 01.9 -0.9
comp=Z,22nm,0.9s,baz=42,slow=7.8,SNR=59
AKTO ScP **ScP 14 31 41.6 -0.1**
comp=Z,3.3nm,0.7s,baz=59,slow=3.0,SNR=7.1
AKTO LR LR 14 54 10.1
comp=Z,117nm,19.0s,baz=21,slow=39
AB31 Akbulak array 56.19 309 i P P 14 27 02.3 -0.9
AB31 pmax pmax
comp=Z,16nm,0.6s
ABKAR Akbulak array 56.19 309 eP P 14 27 02.1 -1.1
CTU Camp Tracy 56.20 66 eP P 14 27 04.7 +1.0
comp=Z,30nm,1.3s
PKM Mcpherson Peak 56.23 76 P P 14 27 06.0 +2.1
baz=319
ISA Isabella, Lake 56.38 75 P P 14 27 05.9 +1.0
baz=319
ISA Isabella, Lake 56.38 75 eP P 14 27 05.7 +0.9
comp=Z,37nm,1.1s
ISA epP **pP 14 27 43.5 +0.3**
ISA Isabella, Lake 56.38 75 eP P 14 27 05.7 +0.9
ISA e*PP **pP 14 27 43.5 +0.3**
ISA pmax pmax
comp=Z,37nm,1.1s
DAC Darwin (Calif) 56.40 74 eP P 14 27 07.2 +2.1
comp=Z,41nm,1.3s
DAC epP **pP 14 27 44.7 +1.3**
DAC Darwin (Calif) 56.40 74 P P 14 27 07.2 +2.1
DAC pmax pmax
comp=Z,41nm,1.3s
JLU Jordanelle 56.42 66 eP P 14 27 06.0 +0.7
comp=Z,31nm,1.3s
JLU epP **pP 14 27 44.8 +1.1**
ULM Lac du Bonnet 56.54 48 P P 14 27 06.2 +0.5
comp=Z,17nm,0.9s,baz=317,slow=8.1,SNR=14
ULM pP **pP 14 27 43.1 -0.9**
comp=Z,29nm,1.1s,baz=319,slow=8.8,SNR=6.1
ULM LR LR 14 51 55.4
comp=Z,136nm,19.3s,baz=288,slow=36
ULM Lac du Bonnet 56.54 48 eP P 14 27 06.0 +0.3
comp=Z,52nm,1.1s
ULM pP **pP 14 27 43.1 -0.9**
SFK Sufi-Kurgan 56.58 293 P P 14 27 05.3 -1.1
SFK pmax pmax
comp=Z,45nm,1.3s
ARVC Arvin 56.58 76 P P 14 27 06.8 +0.5
baz=319
MPMC Manual Prospec 56.62 74 P P 14 27 08.4 +1.7
baz=319,SNR=9.5
TPNV Topopah Spring 56.62 72 P P 14 27 08.2 +1.5
baz=318,SNR=12
TPNV Topopah Spring 56.62 72 eP P 14 27 08.2 +1.5
comp=Z,61nm,1.2s
TPNV Topopah Spring 56.62 72 eP P 14 27 08.2 +1.5
TPNV pmax pmax
comp=Z,61nm,1.2s
FURC Furnace Creek, 56.65 73 P P 14 27 08.4 +1.8
baz=319
PSUT Pine Spring 56.71 69 eP P 14 27 08.6 +1.3
comp=Z,33nm,1.2s
MDND Maddock 56.74 53 P P 14 27 08.8 +1.6
baz=319,SNR=6.1
MDND Maddock 56.74 53 eP P 14 27 08.5 +1.4
comp=Z,134nm,1.1s
MPU Maple Canyon 56.76 67 eP P 14 27 09.2 +1.5
comp=Z,51nm,1.2s
MPU epP **pP 14 27 47.3 +1.2**
LRMC Laurel Mtn Rad 56.94 74 P P 14 27 09.8 +0.9
baz=319
SCZ2 Santa Cruz Isl 56.99 77 P P 14 27 10.2 +1.0
baz=319
OSI Osito Audit: C 57.03 76 P P 14 27 10.0 +0.6
baz=319
OSI Osito Audit: C 57.03 76 eP P 14 27 09.3 -0.1
comp=Z,68nm,1.2s
OSI epP **pP 14 27 49.1 +1.3**
BLG Laguna Peak, P 57.22 77 P P 14 27 11.7 +1.0
baz=319
EDW2 Edwards Air Fo 57.22 75 P P 14 27 12.3 +1.5
baz=319,SNR=9.3
K22A Casper 57.38 61 P P 14 27 13.0 +1.1
baz=319,SNR=7.0
K22A Casper 57.38 61 eP P 14 27 12.9 +1.0
comp=Z,36nm,1.2s
K22A epP **pP 14 27 53.7 +3.3**
SHL Shillong 57.45 268 eP P 14 27 12.3 -0.3
comp=Z,29nm,1.1s
SHL Shillong 57.45 268 P P 14 27 12.3 -0.3
SHL pmax pmax
comp=Z,29nm,1.1s
RSSD Black Hills 57.48 58 P P 14 27 13.4 +0.7
baz=319
RSSD Black Hills 57.48 58 eP P 14 27 13.7 +1.0
comp=Z,46nm,1.0s
RSSD Black Hills 57.48 58 eP P 14 27 13.7 +1.0
RSSD pmax pmax
comp=Z,46nm,1.0s
DECC Green Verdugo 57.51 76 P P 14 27 14.5 +1.8
baz=319
TMUT Trail Mountain 57.52 67 eP P 14 27 14.6 +1.5
comp=Z,39nm,1.0s
SHPR Sheep Range 57.53 72 eP P 14 27 14.5 +1.5
comp=Z,44nm,1.3s
SHPR epP **pP 14 27 52.9 +1.4**
GSC Goldstone, Bar 57.55 74 P P 14 27 14.8 +1.7
baz=319,SNR=6.1
GSC Goldstone, Bar 57.55 74 eP P 14 27 14.2 +1.1
GSC epP **pP 14 27 51.4 -0.2**
GSC Goldstone, Bar 57.55 74 eP P 14 27 14.2 +1.1
GSC e*PP **pP 14 27 51.4 -0.2**
FINES FINESS Array B 57.56 336 P P 14 27 12.1 -0.6
comp=Z,15nm,0.6s,baz=33,slow=8.6,SNR=80
FINES LR LR 14 57 15.1
comp=Z,44nm,19.3s,baz=26,slow=41
MSU Marysvale 57.60 68 eP P 14 27 15.0 +1.4
MSU epP **pP 14 27 52.6 +0.5**
SNCC San Nicolas Is 57.62 78 P P 14 27 13.6 +0.1
baz=320
P17A Butcher Ranch, 57.63 66 eP P 14 27 14.8 +1.1
P17A epP **pP 14 27 52.1 -0.1**
MWC Mount Wilson 57.68 76 eP P 14 27 14.7 +0.5
MWC epP **pP 14 27 52.3 -0.3**
MWC Mount Wilson 57.68 76 eP P 14 27 14.7 +0.5
MWC e*PP **pP 14 27 52.3 -0.3**
CCUT Cedar City 57.70 70 eP P 14 27 15.6 +1.3
CCUT epP **pP 14 27 52.8 0.0**
A33A Warroad 57.74 49 P P 14 27 14.9 +0.8
baz=320,SNR=9.5
P18A Preston Nutter 57.77 66 eP P 14 27 16.4 +1.6
P18A epP **pP 14 27 54.0 +0.7**
RRX Edison Barstow 57.77 74 P P 14 27 15.2 +0.7
baz=319
SZCU Shurtz Canyon 57.81 69 eP P 14 27 16.5 +1.4
SZCU epP **pP 14 27 53.3 -0.3**
ANGG Ammassalik, Gr 57.86 9 eP P 14 27 13.4 -1.2
comp=Z,17nm,1.0s
BFSC Mount Baldy Ra 57.89 75 P P 14 27 16.7 +1.1
baz=319
TUQ Turquoise Moun 57.92 73 P P 14 27 17.5 +1.7
baz=319,SNR=8.1
FMP Fort Macarthur 57.94 76 P P 14 27 17.1 +1.4
baz=320
MTPU Mount Pierson 57.95 68 eP P 14 27 18.6 +2.4
comp=Z,24nm,1.1s
MTPU epP **pP 14 27 56.1 +1.4**
PUL Pulkovo 58.01 333 i P P 14 27 14.5 -1.3
PUL pmax pmax
comp=Z,59nm,0.7s
SRU San Rafael Swe 58.01 67 eP P 14 27 18.0 +1.6
comp=Z,77nm,1.1s
SRU San Rafael Swe 58.01 67 eP P 14 27 18.0 +1.6
SRU pmax pmax
comp=Z,77nm,1.1s
AGMN Agassiz Nation 58.03 50 P P 14 27 16.6 +0.4
baz=320
AGMN Agassiz Nation 58.03 50 eP P 14 27 16.3 +0.2
comp=Z,89nm,0.3s
HEC Hector,Ludlow 58.16 74 P P 14 27 19.1 +1.8
baz=319
LCMT Little Creek M 58.17 70 eP P 14 27 19.3 +1.8
comp=Z,70nm,1.4s
BBRC Big Bear Solar 58.27 75 P P 14 27 19.4 +1.1
baz=320
KNB Kanab 58.38 70 eP P 14 27 21.0 +2.0
comp=Z,54nm,1.3s
KNB Kanab 58.38 70 eP P 14 27 21.0 +2.0
KNB pmax pmax
comp=Z,54nm,1.3s
O20A White River Ci 58.40 64 P P 14 27 20.6 +1.4
baz=319,SNR=21
O20A White River Ci 58.40 64 eP P 14 27 19.8 +0.6
comp=Z,53nm,1.0s
B34A Aery, Baudette 58.41 49 P P 14 27 19.1 +0.4
baz=321,SNR=11
E31A Nome 58.48 53 P P 14 27 19.8 +0.5
baz=320,SNR=6.8
C33A Trail 58.48 50 P P 14 27 19.8 +0.4
baz=320
GMRC Granite Mounta 58.55 73 P P 14 27 21.7 +1.5
baz=320,SNR=14
MURC Murrieta 58.62 76 P P 14 27 21.6 +1.1
baz=320
LDFC Landfair 58.63 73 eP P 14 27 21.9 +1.3
comp=Z,107nm,1.1s
B35A Bob, Littlefor 58.89 49 P P 14 27 22.6 +0.5
baz=321,SNR=12
B35A Bob, Littlefor 58.89 49 eP P 14 27 22.2 +0.1
B35A epP **pP 14 28 00.0 -0.7**
CHTO Chiang Mai 58.91 257 P P 14 27 23.5 +0.9
comp=Z,77nm,1.7s
CHTO Chiang Mai 58.91 257 eP P 14 27 21.6 -1.0
comp=Z,18nm,1.4s
CHTO Chiang Mai 58.91 257 eP P 14 27 21.6 -1.0
CHTO pmax pmax
comp=Z,18nm,1.4s
C34A RKJ Ranch, Bem 58.94 50 P P 14 27 22.7 +0.2
baz=321
BELC Belle Mtn. Jos 58.97 74 P P 14 27 24.3 +1.2
baz=320,SNR=6.3
ODAN Odare 58.97 273 eP P 14 27 22.8 -0.4
N23A Red Feather La 58.98 62 P P 14 27 24.8 +1.6
baz=320,SNR=22
N23A Red Feather La 58.98 62 eP P 14 27 23.9 +0.8
comp=Z,28nm,0.9s
GUN Gumba 59.00 275 eP P 14 27 23.0 -0.6
comp=Z,91nm,0.4s
PFO Pinyon Flats O 59.01 75 P P 14 27 24.2 +0.9
baz=320
PFO Pinyon Flats O 59.01 75 epP pP 14 28 01.8 -0.1
XPFO Piæon Flat 59.01 75 epP pP 14 28 02.5 +0.5
U15A North Rim 59.11 70 eP P 14 27 25.6 +1.5
comp=Z,50nm,1.3s
NEE2 Needles Airpor 59.13 73 P P 14 27 24.8 +0.9
baz=320
HWB Hans Werner Br 59.18 76 eP P 14 27 25.2 +0.8
PV09 Paradox Valley 59.18 66 eP P 14 27 26.1 +1.5
PV09 epP **pP 14 28 03.7 +0.4**
CMAR Chiang Mai Arr 59.20 257 P P 14 27 24.6 +0.1
comp=Z,3.0nm,0.7s,baz=16,slow=6.4,SNR=12
CMAR PcP **PcP 14 28 11.2 0.0**
comp=Z,8.3nm,0.8s,baz=18,slow=3.9,SNR=14
CMAR ScP **ScP 14 31 57.0 +1.4**
comp=Z,1.4nm,0.7s,baz=13,slow=4.6,SNR=6.1
CMAR LR LR 14 54 42.1
comp=Z,143nm,20.1s,baz=31,slow=38
109C Camp Elliot, M 59.21 76 P P 14 27 25.2 +0.7
baz=320
CPE Camp Elliot 59.21 76 epP pP 14 28 03.3 +0.2
CM01 Chiang Mai Arr 59.22 257 eP P 14 27 24.1 -0.7
CM01 ePcP **PcP 14 28 10.9 -0.4**
CTCC Cactus City 59.23 75 eP P 14 27 25.9 +1.1
W13A Hualapai Mount 59.27 72 eP P 14 27 26.3 +1.1
W13A epP **pP 14 28 04.2 +0.3**
C35A Jirik Farms, M 59.30 49 P P 14 27 24.6 -0.3
baz=321,SNR=10
IRM Iron Mountain 59.31 74 P P 14 27 26.5 +1.3
baz=320,SNR=14
PV10 Paradox Valley 59.33 66 eP P 14 27 27.9 +2.3
PV10 epP **pP 14 28 05.2 +1.0**
RAMN Ramite 59.34 273 eP P 14 27 24.6 -1.2
comp=Z,162nm,0.7s
F32A Veblen 59.34 53 P P 14 27 25.5 +0.3
baz=321
G31A Conde 59.35 54 P P 14 27 25.6 +0.2
baz=320
PV04 Paradox Valley 59.38 66 eP P 14 27 27.4 +1.6
comp=Z,94nm,1.3s
MOS Moscow 59.39 327 eP P 14 27 24.0 -1.3
MOS e 14 28 06.7
MOS pmax pmax
comp=Z,300nm,1.7s
MOS pmax pmax
comp=Z,81nm,1.2s
KKN Kakani 59.43 275 eP P 14 27 25.5 -0.9
comp=Z,108nm,0.7s
PV07 Paradox Valley 59.48 66 eP P 14 27 28.0 +1.4
comp=Z,73nm,1.3s
PV03 Paradox Valley 59.52 66 eP P 14 27 28.2 +1.3
comp=Z,95nm,1.3s
PV05 Paradox Valley 59.52 66 eP P 14 27 28.4 +1.5
PV05 epP **pP 14 28 05.6 +0.1**
BORG Borgarnes 59.52 1 P P 14 27 25.6 -0.6
comp=Z,8.7nm,0.9s,baz=8.0,slow=5.2,SNR=8.5
BORG Borgarnes 59.52 1 eP P 14 27 27.1 +1.0
comp=Z,54nm,1.6s
BORG Borgarnes 59.52 1 eP P 14 27 27.1 +1.0
BORG pmax pmax
comp=Z,54nm,1.6s
BC3 Big Chuckawall 59.52 74 P P 14 27 27.9 +1.1
baz=320
PKIN Phulchoki 59.53 275 eP P 14 27 26.2 -0.9
MONP2 Monument Peak 59.58 75 P P 14 27 28.6 +1.3
baz=320
BAR Barrett 59.60 76 epP pP 14 28 06.7 +0.7
PV02 Paradox Valley 59.61 66 eP P 14 27 29.0 +1.6
comp=Z,116nm,1.6s
SUSD Miller 59.62 55 P P 14 27 27.7 +0.5
baz=320
GKN Gorkha 59.62 276 eP P 14 27 26.8 -0.8
PV15 Paradox Valley 59.64 66 eP P 14 27 28.9 +1.2
comp=Z,54nm,1.1s
G32A Webster 59.65 53 P P 14 27 28.2 +0.8
baz=321
DMN Daman 59.67 275 eP P 14 27 27.3 -0.7
comp=Z,62nm,0.8s
E34A Wadena 59.71 51 P P 14 27 28.5 +0.7
baz=321
ERRC Elmore Ranch 59.73 75 eP P 14 27 27.2 -0.8
C36A Pine Crest Far 59.73 49 P P 14 27 28.1 +0.2
baz=322,SNR=7.1
PDMCI Parker Dam,Lak 59.73 73 P P 14 27 29.4 +1.3
baz=320,SNR=6.4
D35A Remer 59.75 50 P P 14 27 28.4 +0.4
baz=322
PV01 Paradox Valley 59.75 66 eP P 14 27 29.9 +1.4
comp=Z,64nm,1.7s
SMCO Snowmass 59.77 64 eP P 14 27 30.1 +1.3
comp=Z,26nm,0.8s
SMCO epP **pP 14 28 06.2 -1.3**
DANN Dangsing 59.84 277 eP P 14 27 28.6 -0.7
BRDH Bariadhala 59.86 266 LR LR 14 55 08.0
comp=Z,161nm,19.6s,baz=40,slow=38
SWSC Sam W. Stewart 59.88 75 P P 14 27 30.3 +1.3
baz=320
IKP In-Ko-Pah, Jac 59.93 75 P P 14 27 30.9 +1.3
baz=320
Y12C Blythe 59.95 73 P P 14 27 31.4 +1.8
baz=320
Y12C Blythe 59.95 73 eP P 14 27 31.5 +1.9
Y12C epP **pP 14 28 09.2 +0.9**
ISCO Idaho Springs 59.98 63 P P 14 27 32.2 +2.1
baz=320,SNR=23
ISCO Idaho Springs 59.98 63 eP P 14 27 32.1 +2.0
ISCO epP **pP 14 28 09.1 +0.3**
ISCO Idaho Springs 59.98 63 eP P 14 27 32.1 +2.0
ISCO e*PP **pP 14 28 09.1 +0.3**
E35A Pequot Lakes 60.01 50 P P 14 27 30.4 +0.6
baz=322
C37A Embarrass 60.03 48 P P 14 27 30.2 +0.2
baz=322,SNR=10.0
VSU Vasula 60.05 334c iP P 14 27 29.4 -0.4
VSU pmax pmax
comp=Z,138nm,1.1s
D36A Goodland 60.05 49 P P 14 27 30.4 +0.3
baz=322
D36A Goodland 60.05 49 eP P 14 27 30.4 +0.3
D36A epP **pP 14 28 08.0 -0.8**
EYMN Ely 60.15 48 P P 14 27 31.1 +0.3
baz=322,SNR=20
EYMN Ely 60.15 48 eP P 14 27 31.2 +0.5
comp=Z,145nm,1.5s
EYMN epP **pP 14 28 08.8 -0.7**
G33A Ortonville 60.17 53 P P 14 27 31.6 +0.7
baz=321,SNR=12
F34A Alexandria 60.23 51 P P 14 27 32.0 +0.8
baz=321
OBN Obninsk 60.24 327c iP P 14 27 30.0 -1.1
OBN i 14 28 12.5
OBN e 14 29 46.6
OBN eS **S 14 35 29.7 -1.7**
H32A Carlson Farm, 60.26 54 P P 14 27 31.9 +0.4
baz=321
WUAZ Wupatki 60.28 70 P P 14 27 34.2 +2.2
baz=320,SNR=14
WUAZ Wupatki 60.28 70 eP P 14 27 32.9 +0.9
WUAZ epP **pP 14 28 11.7 +0.9**
GLA Glamis 60.32 74 P P 14 27 33.9 +1.8
baz=320,SNR=6.4
GLA Glamis 60.32 74 eP P 14 27 33.6 +1.4
GLA epP **pP 14 28 11.3 +0.4**
GLA Glamis 60.32 74 eP P 14 27 33.6 +1.4
GLA e*PP **pP 14 28 11.3 +0.4**
AKN Aaknes 60.34 346 eP P 14 27 32.2 +0.4
D37A Cotton 60.38 49 P P 14 27 32.5 +0.2
baz=322
KOLN Koldanda 60.38 276 eP P 14 27 31.8 -1.0
C38A Sawbill Land. 60.42 48 P P 14 27 32.7 +0.1
baz=322,SNR=18
RABL Rabaul 60.45 190 eP P 14 27 33.6 +0.6
comp=Z,31nm,0.7s
PYUN Piuthan 60.47 277 eP P 14 27 32.5 -0.9
F35A Swanville 60.48 51 P P 14 27 33.4 +0.5
baz=322
MVCO Mesa Verde 60.49 67 P P 14 27 34.8 +1.3
baz=320
MVCO Mesa Verde 60.49 67 eP P 14 27 34.8 +1.3
comp=Z,28nm,1.1s
G34A Benson 60.49 52 P P 14 27 33.9 +0.8
baz=322
E36A McGregor 60.53 50 P P 14 27 34.0 +0.7
baz=322,SNR=7.8
NC303 NORSAR Array S 60.61 344 eP P 14 27 32.9 -0.8
NC303 epP **PcP 14 28 16.2 0.0**
Y14A Wickenburg 60.62 72 eP P 14 27 36.1 +1.9
Y14A epP **pP 14 28 13.0 0.0**
NC204 NORSAR Array S 60.66 344 eP P 14 27 33.4 -0.6
NC204 epP **PcP 14 28 16.2 -0.3**
NC405 NORSAR Array S 60.66 343 eP P 14 27 32.3 -1.7
NB201 NORSAR Array S 60.79 344 eP P 14 27 33.2 -1.6
MYLDM Lahad Datu 60.80 230 epP pP 14 28 19.2 +4.9
NB2 NORSAR Subarra 60.81 344 P P 14 27 34.4 -0.6
comp=Z,36nm,1.0s,baz=20,slow=6.9
NB2 NORSAR Subarra 60.81 344 P P 14 27 34.4 -0.6
baz=20,slow=6.9
C39A Grand Marais 60.81 47 P P 14 27 34.7 -0.5
baz=323,SNR=12
Q24A Divide 60.85 63 P P 14 27 37.8 +1.8
baz=320,SNR=5.7
OGNE Ogallala 60.86 59 P P 14 27 36.8 +1.1
baz=321
OGNE Ogallala 60.86 59 eP P 14 27 36.1 +0.3
comp=Z,30nm,0.9s
NBO00 NORSAR Array S 60.88 344 eP P 14 27 34.3 -1.2
IVI Ivigtut 60.89 16 eP P 14 27 34.8 -0.7
comp=Z,37nm,0.9s
F36A Milaca 60.93 50 eP P 14 27 36.0 0.0
comp=Z,80nm,1.9s
S22A 4UR Ranch, Cre 60.93 65 P P 14 27 38.5 +1.9
baz=320,SNR=39
S22A 4UR Ranch, Cre 60.93 65 eP P 14 27 38.3 +1.7
comp=Z,70nm,1.4s
G35A Watkins 61.02 51 P P 14 27 37.2 +0.6
baz=322
G35A Watkins 61.02 51 eP P 14 27 36.9 +0.3
G35A epP **pP 14 28 14.6 -0.9**
NC602 NORSAR Array S 61.05 343 eP P 14 27 35.3 -1.2
NC602 NORSAR Array S 61.05 343 eP P 14 27 35.8 -0.7
NAO01 NORSAR Array S 61.05 344 eP P 14 27 35.1 -1.5
X16A Lo Mia Camp, P 61.09 71 eP P 14 27 39.2 +1.7
comp=Z,37nm,1.0s
X16A epP **PcP 14 28 17.9 -1.0**
113A Mohawk Valley, 61.11 74 eP P 14 27 37.5 +0.1
comp=Z,29nm,1.0s
113A epP **pP 14 28 16.8 +0.5**
C40A Isle Royale Na 61.13 46 P P 14 27 38.1 +0.8
baz=323
C40A Isle Royale Na 61.13 46 eP P 14 27 37.1 -0.2
comp=Z,23nm,1.1s
C40A epP **pP 14 28 15.8 -0.5**

E38A The Farm, Brul 61.18 49 P P 14 27 37.8 +0.1
baz=323,SNR=9.4
E38A The Farm, Brul 61.18 49 eP P 14 27 37.7 0.0
comp=Z,125nm,1.7s
SRAK Srakaew 61.18 251 P P 14 27 37.3 -0.8
comp=Z,53nm,0.9s,comp=Z,642nm
ECSD EROS Data Cent 61.23 54 P P 14 27 38.6 +0.5
baz=322,SNR=17
ECSD EROS Data Cent 61.23 54 eP P 14 27 38.4 +0.3
comp=Z,56nm,1.4s
ECSD epP pP 14 28 16.5 -0.5
HFS Hagfors 61.25 342 P P 14 27 37.4 -0.6
comp=Z,10nm,0.5s,baz=44,slow=4.5,SNR=77
HFS PcP PcP 14 28 18.7 -0.1
comp=Z,3.9nm,0.7s,baz=93,slow=2.9,SNR=2.2
H35A Sunnyside Ranc 61.27 52 P P 14 27 38.9 +0.5
baz=322
G36A St. Michael 61.33 51 P P 14 27 39.0 +0.3
baz=322
NRS Narsarsuaq 61.33 14 *i* P P 14 27 38.5 +0.1
F37A Hinrichs Farm, 61.42 50 P P 14 27 39.9 +0.6
baz=322
W18A Petrified Fore 61.45 69 P P 14 27 41.7 +1.8
baz=321
NIL Nilore 61.51 289 eP P 14 27 39.5 -0.7
comp=Z,123nm,1.3s
NIL epP PcP 14 28 23.1 +2.7
NIL Nilore 61.51 289 eP P 14 27 39.5 -0.7
NIL e*PP PcP 14 28 23.1 +2.7
NIL pmax pmax
comp=Z,123nm,1.3s
F38A Pierce - Schro 61.56 49 P P 14 27 40.9 +0.7
baz=323,SNR=11
SDCO Great Sand Dun 61.61 64 P P 14 27 42.8 +1.7
baz=321,SNR=42
SDCO Great Sand Dun 61.61 64 eP P 14 27 41.7 +0.6
comp=Z,56nm,1.5s
SPMN Marine on St. 61.74 50 P P 14 27 42.1 +0.6
baz=323
SPMN Marine on St. 61.74 50 eP P 14 27 41.5 0.0
comp=Z,107nm,1.6s
SPMN epP pP 14 28 20.7 +0.3
H36A Jessenland, He 61.77 51 P P 14 27 40.9 -0.8
baz=322
E39A Mellen 61.78 48 P P 14 27 41.5 -0.2
baz=323,SNR=14
X18A Snowflake 61.79 70 eP P 14 27 44.3 +2.1
comp=Z,90nm,1.1s
X18A epP PcP 14 28 22.7 +1.0
F39A Loretta 62.00 49 P P 14 27 43.6 +0.4
baz=323,SNR=8.0
E40A Wakefield 62.00 48 P P 14 27 44.0 +0.7
baz=323,SNR=26
D41A Chassel 62.05 46 P P 14 27 43.4 -0.1
baz=324
D41A Chassel 62.05 46 eP P 14 27 43.5 -0.1
comp=Z,104nm,1.2s
D41A epP pP 14 28 22.4 -0.1
KSCO Kaye Shedlock' 62.06 61 P P 14 27 44.6 +0.7
baz=321
KSCO Kaye Shedlock' 62.06 61 eP P 14 27 45.2 +1.3
comp=Z,81nm,1.3s
KSCO epP pP 14 28 23.7 +0.8
I36A Fitzsimmons Fa 62.17 52 P P 14 27 44.6 +0.2
baz=322
G38A Ridgeland 62.20 50 P P 14 27 44.4 -0.1
baz=323,SNR=6.4
H37A Dierke Farm, C 62.20 51 P P 14 27 44.9 +0.3
baz=323
214A Organ Pipe Nat 62.25 73 P P 14 27 46.6 +1.5
baz=321,SNR=9.7
F40A Park Falls 62.33 48 P P 14 27 45.4 0.0
baz=324,SNR=10
BGNE Belgrade 62.34 56 P P 14 27 46.1 +0.5
baz=322
BGNE Belgrade 62.34 56 eP P 14 27 46.1 +0.5
comp=Z,124nm,1.1s
BGNE epP pP 14 28 25.0 +0.4
E41A Kenton 62.37 47 P P 14 27 45.8 +0.1
baz=324
KONO Kongsberg 62.39 344 eP P 14 27 45.0 -0.5
comp=Z,110nm,1.6s
KONO Kongsberg 62.39 344 *c* *i* P P 14 27 45.0 -0.5
KONO pmax pmax
comp=Z,33nm,1.1s
G39A Holcombe 62.40 49 P P 14 27 46.0 +0.2
baz=323
H38A Maiden Rock 62.41 50 P P 14 27 46.2 +0.3
baz=323
I37A Lemond, Waseca 62.44 52 P P 14 27 46.0 -0.1
baz=323,SNR=7.5
I37A Lemond, Waseca 62.44 52 eP P 14 27 46.4 +0.2
comp=Z,83nm,1.1s
I37A epP pP 14 28 25.3 0.0
J36A Seneca 1, Swea 62.57 53 P P 14 27 46.8 -0.3
baz=323
J36A Seneca 1, Swea 62.57 53 eP P 14 27 47.6 +0.6
comp=Z,43nm,0.9s
J36A epP pP 14 28 26.4 +0.3
IZAR Zarasai 62.59 333 eP P 14 27 47.0 +0.1
IZAR IAmb IAmb 14 27 48.4
comp=Z,15nm,1.0s
COWI Conover 62.59 47 eP P 14 27 46.7 -0.5
comp=Z,66nm,1.4s
COWI ePcP PcP 14 28 25.1 +0.5
T25A Trinidad 62.62 64 P P 14 27 48.4 +0.7
baz=321,SNR=10
T25A Trinidad 62.62 64 eP P 14 27 48.5 +0.8
comp=Z,69nm,1.4s
T25A epP pP 14 28 27.2 +0.3
VSR Storozhevoye 62.70 323 eP P 14 27 46.7 -1.0
VSR pmax pmax
comp=Z,110nm,1.4s
ISAL Salakas 62.78 333 eP P 14 27 48.2 0.0
ISAL IAmb IAmb 14 27 48.6
comp=Z,12nm,1.1s
G40A Rib Lake 62.82 49 P P 14 27 49.2 +0.5
baz=324
G40A Rib Lake 62.82 49 epP pP 14 28 27.7 -0.1
E42A Champion 62.83 46 P P 14 27 48.7 -0.1
baz=324,SNR=7.5
IDID Didziasalis 62.85 332 eP P 14 27 48.7 0.0
IDID IAmb IAmb 14 27 50.3
comp=Z,6.6nm,0.9s
SCHQ Schefferville 62.86 29 P P 14 27 48.3 -0.5
comp=Z,12nm,0.7s,baz=351,slow=7.6,SNR=5.6
SCHQ Schefferville 62.86 29 eP P 14 27 48.0 -0.8
comp=Z,14nm,0.8s
VORD Divnogorie 62.86 323 eP P 14 27 47.7 -1.1
VORD pmax pmax
comp=Z,70nm,1.5s
I38A Scanlan Farm, 62.89 51 P P 14 27 49.1 0.0
baz=323
F41A Three Lakes 62.90 48 P P 14 27 49.4 +0.2
baz=324,SNR=11
F41A Three Lakes 62.90 48 eP P 14 27 49.0 -0.2
comp=Z,76nm,1.4s
F41A epP pP 14 28 28.4 +0.1
J37A Redenius Farm, 62.94 52 P P 14 27 50.1 +0.6
baz=323,SNR=6.2
IIGN Ignalina 62.95 333 eP P 14 27 49.3 0.0
IIGN IAmb IAmb 14 27 50.9
comp=Z,14nm,1.0s
KBL Kabul 63.04 292 eP P 14 27 47.8 -2.7
comp=Z,80nm,1.1s
KBL Kabul 63.04 292 eP P 14 27 47.8 -2.7
KBL pmax pmax
comp=Z,80nm,1.1s
TUC Tucson 63.06 72 P P 14 27 51.8 +1.3
baz=321
TUC Tucson 63.06 72 eP P 14 27 50.8 +0.3
comp=Z,52nm,1.4s
TUC epP pP 14 28 30.5 +0.8
TUC Tucson 63.06 72 eP P 14 27 50.8 +0.3
TUC e*PP pP 14 28 30.5 +0.8
TUC pmax pmax
comp=Z,52nm,1.4s
E43A Lone Tree Farm 63.24 46 eP P 14 27 50.8 -0.7
comp=Z,50nm,1.5s
E43A epP pP 14 28 30.0 -0.6
H40A Chili 63.26 49 P P 14 27 51.5 -0.1
baz=324,SNR=5.7
TASM ASL Pad, Albuq 63.28 67 P P 14 27 53.0 +0.9
baz=321,SNR=10
ANMO Albuquerque 63.28 67 P P 14 27 53.8 +1.7
comp=Z,6.7nm,0.8s,baz=315,slow=9.5,SNR=15
ANMO pP pP 14 28 31.4 +0.2
comp=Z,12nm,1.1s,baz=308,slow=9.7,SNR=4.9
ANMO Albuquerque 63.28 67 P P 14 27 53.1 +0.9
baz=321
ANMO Albuquerque 63.28 67 eP P 14 27 53.0 +0.9
comp=Z,34nm,1.3s
ANMO pP pP 14 28 31.4 +0.2
ANMO Albuquerque 63.28 67 *d* *i* P P 14 27 51.7 -0.4
ANMO pmax pmax
comp=Z,11nm,1.1s
TASL Snake Pit, Alb 63.28 67 P P 14 27 53.0 +0.9
baz=321,SNR=11
K37A Belmond 63.33 53 P P 14 27 52.2 +0.1
baz=323
LAZ Ladron 63.35 68 eP P 14 27 53.6 +1.1
LAZ epP pP 14 28 32.7 +1.0
PHET Kaeng Krachan 63.39 253 P P 14 27 53.9 +1.2
comp=Z,10.0nm,0.8s
I39A Houston 63.39 50 P P 14 27 52.3 -0.1
baz=324
I39A Houston 63.39 50 eP P 14 27 52.0 -0.5
comp=Z,52nm,1.4s
I39A epP pP 14 28 31.2 -0.4
L36A Harm Buss Farm 63.40 54 P P 14 27 53.1 +0.6
baz=323
J38A Wedel Dairy, R 63.40 51 P P 14 27 52.5 0.0
baz=323
E44A Grand Marais A 63.48 45 P P 14 27 52.8 -0.1
baz=325
E44A Grand Marais A 63.48 45 eP P 14 27 52.0 -0.9
comp=Z,54nm,1.0s
E44A epP pP 14 28 31.9 -0.1
H41A Junction City 63.58 49 P P 14 27 53.6 0.0
baz=324
H41A Junction City 63.58 49 eP P 14 27 53.6 0.0
comp=Z,51nm,1.3s
H41A epP pP 14 28 32.6 -0.1
G42A Mountain 63.58 48 P P 14 27 54.1 +0.5
baz=324,SNR=8.0
G42A Mountain 63.58 48 eP P 14 27 54.0 +0.3
comp=Z,76nm,1.3s
G42A epP pP 14 28 32.9 0.0
F43A Flat Rock, Esc 63.62 46 P P 14 27 53.7 -0.2
baz=325
CBKS Cedar Bluff 63.62 59 P P 14 27 54.4 +0.3
baz=322
CBKS Cedar Bluff 63.62 59 eP P 14 27 54.4 +0.3
comp=Z,133nm,1.6s
CBKS epP pP 14 28 33.4 +0.1
CBKS Cedar Bluff 63.62 59 eP P 14 27 54.4 +0.3
CBKS e*PP pP 14 28 33.4 +0.1
CBKS pmax pmax
comp=Z,133nm,1.6s
LPM Los Pinos Moun 63.69 67 eP P 14 27 55.9 +1.2
LPM epP pP 14 28 34.8 +0.8
J39A Decorah 63.73 51 P P 14 27 53.8 -0.9
baz=324
L37A Phoenix Point, 63.79 53 P P 14 27 54.6 -0.4
baz=323
F44A Big Bay de Noc 63.80 46 P P 14 27 54.9 -0.2
baz=325,SNR=6.3
BNM Barren Site 63.81 67 eP P 14 27 57.2 +1.6
BNM epP pP 14 28 35.7 +0.8
G43A Wallace 63.87 47 P P 14 27 55.0 -0.5
baz=325
G43A Wallace 63.87 47 eP P 14 27 56.1 +0.6
comp=Z,75nm,1.3s
G43A epP pP 14 28 34.7 -0.1
E45A Wooded Hills, 63.98 45 P P 14 27 55.4 -0.9
baz=326
L38A Oak Wood Farm, 64.13 53 P P 14 27 56.9 -0.3
baz=324
H42A Shiocton 64.13 48 eP P 14 27 56.6 -0.7
H42A epP pP 14 28 35.9 -0.5
K39A Oelwein 64.15 51 P P 14 27 56.7 -0.8
baz=324
SCIA State Center 64.20 53 P P 14 27 57.4 -0.3
baz=324
SCIA State Center 64.20 53 eP P 14 27 58.1 +0.3
SCIA epP pP 14 28 36.7 -0.3
N36A Muff Farm, Cla 64.29 55 P P 14 27 59.1 +0.8
baz=323
F45A CMU Biological 64.40 45 P P 14 27 58.9 -0.1
baz=326
J41A Loganville 64.43 50 P P 14 27 58.5 -0.8
baz=324
121A Cookes Peak, D 64.47 69 P P 14 28 01.8 +1.9
baz=322,SNR=9.4
I42A Draeger Farm, 64.47 49 P P 14 27 59.0 -0.5
baz=325
I42A Draeger Farm, 64.47 49 eP P 14 27 59.2 -0.3
comp=Z,53nm,1.4s
I42A epP pP 14 28 38.6 -0.1
H43A Windswept, Lux 64.48 48 P P 14 27 59.5 0.0
baz=325,SNR=11
H43A Windswept, Lux 64.48 48 eP P 14 27 59.2 -0.4
H43A epP pP 14 28 38.4 -0.4
K40A Colesburg 64.48 51 P P 14 27 59.4 -0.2
baz=324
L39A Vinton 64.57 52 P P 14 28 00.1 -0.1
baz=324
319A Douglas 64.59 71 eP P 14 28 02.4 +1.9
319A epP pP 14 28 40.0 +0.2
M38A Pleasantville 64.61 53 P P 14 28 00.8 +0.4
baz=324,SNR=6.9
N37A Lee Faris, Mou 64.67 54 P P 14 28 01.2 +0.4
baz=324
N37A Lee Faris, Mou 64.67 54 eP P 14 28 01.3 +0.4
N37A epP pP 14 28 39.4 -0.7
JFWS Jewell Farm 64.70 50 P P 14 27 59.8 -1.2
baz=324
I43A Langenfeld Bro 64.80 48 P P 14 28 01.6 0.0
baz=325
J42A Columbus 64.85 49 P P 14 28 01.0 -1.0
baz=325
KSU1 Kansas State U 64.89 57 P P 14 28 02.2 -0.1
baz=323
KSU1 Kansas State U 64.89 57 eP P 14 28 02.1 -0.2
KSU1 epP pP 14 28 40.3 -1.3
K41A Shullsburg 64.92 50 P P 14 28 02.5 +0.1
baz=324
SUW Suwalki 64.92 334 eP P 14 28 01.8 -0.4
L40A Anamosa 64.96 51 P P 14 28 02.2 -0.4
baz=324
L40A Anamosa 64.96 51 eP P 14 28 02.0 -0.6
comp=Z,32nm,1.1s
M39A Webster 65.01 52 P P 14 28 03.2 +0.2
baz=324,SNR=7.5
N38A Joes South For 65.09 54 P P 14 28 03.6 +0.1
baz=324
O37A Wolven Farm, M 65.18 55 P P 14 28 04.1 0.0
baz=324
K42A Prairie Point, 65.19 50 P P 14 28 03.5 -0.7
baz=325
HNR Honiara 65.24 181 LR LR 14 54 45.3
comp=Z,89nm,19.4s,baz=14,slow=34
L41A Preston 65.27 51 P P 14 28 04.1 -0.6
baz=324
N39A Derby Farms, D 65.35 53 P P 14 28 05.3 +0.1
baz=324,SNR=5.1
N39A Derby Farms, D 65.35 53 eP P 14 28 05.3 +0.1
N39A epP pP 14 28 43.7 -0.9
M40A Post Highland 65.36 52 P P 14 28 05.3 +0.1
baz=324
O38A Galt 65.52 54 P P 14 28 06.4 +0.1
baz=324
HSIG 65.54 74 eP P 14 28 07.7 +1.1
HSIG epP pP 14 28 46.0 0.0
P37A Lathrop 65.55 55 P P 14 28 06.7 +0.2
baz=324,SNR=8.5
K43A Burlington 65.69 49 P P 14 28 06.6 -0.7
baz=325
L42A Oliver, Polo 65.69 50 P P 14 28 06.7 -0.7
baz=325
L42A Oliver, Polo 65.69 50 eP P 14 28 06.6 -0.7
comp=Z,39nm,1.3s
EPT El Paso 65.74 69 epP pP 14 28 47.7 +0.3
N40A Mertquake, Sal 65.75 52 P P 14 28 07.6 -0.2
baz=324,SNR=5.1
AMTX Amarillo 65.76 63 P P 14 28 08.5 +0.4
baz=323
AMTX Amarillo 65.76 63 eP P 14 28 08.2 +0.1
AMTX epP pP 14 28 46.6 -0.9
M41A Milan 65.82 51 P P 14 28 08.1 -0.1
baz=325
GEYT Alibeck 65.82 302 P P 14 28 08.7 +0.4
comp=Z,148nm,0.8s,baz=3.8,slow=4.3,SNR=13
GYA0B ALIBECK ARRAY 65.82 302 eP P 14 28 07.6 -0.7
comp=Z,215nm,1.5s
GYA0B epP pP 14 28 52.6 +4.9
P38A Dawn 65.89 55 P P 14 28 08.8 +0.2
baz=324,SNR=6.0
P38A Dawn 65.89 55 eP P 14 28 08.2 -0.5
P38A epP pP 14 28 47.1 -1.0
MSTX Muleshoe 65.93 65 P P 14 28 10.0 +0.8
baz=323,SNR=5.6
MSTX Muleshoe 65.93 65 eP P 14 28 09.9 +0.8
MSTX epP pP 14 28 48.1 -0.5
SBUM Sibu 66.02 235 eP P 14 28 10.2 +0.4
comp=Z,50nm,0.9s
SBUM epP pP 14 28 52.6 +3.4
Q37A Longview Farm, 66.07 56 P P 14 28 09.6 -0.3
baz=324
SRIG Santa Rosalia 66.17 76 eP P 14 28 10.4 -0.2
SRIG epP pP 14 28 50.0 -0.1
PMG Port Moresby 66.19 195 P P 14 28 11.2 +0.5
comp=Z,15nm,0.6s,baz=13,slow=5.7,SNR=7.9
N41A Harden Midland 66.22 52 P P 14 28 10.6 -0.2
baz=325,SNR=6.0
N41A Harden Midland 66.22 52 eP P 14 28 10.6 -0.2
N41A epP pP 14 28 49.3 -0.9
O40A La Belle 66.24 53 P P 14 28 11.0 +0.1
baz=324,SNR=8.9
AKASG Malin Array Be 66.28 329 P P 14 28 09.9 -1.0
comp=Z,4.8nm,0.4s,baz=30,slow=6.7,SNR=46
AKASG pP pP 14 28 50.1 -0.4
comp=Z,10.0nm,0.9s,baz=30,slow=6.6,SNR=3.0
AKASG PP PP 14 30 29.8 -8.6
comp=Z,0.3nm,0.3s,baz=29,slow=8.1,SNR=4.2
AKBB Malin Array Si 66.28 329 eP P 14 28 09.6 -1.4
comp=Z,43nm,1.2s
AKBB epP pP 14 28 52.1 +1.7
KIEV Kiev 66.29 329 eP P 14 28 09.4 -1.6
comp=Z,51nm,1.3s
KIEV epP pP 14 28 51.5 +1.1
KIEV Kiev 66.29 329 *i* P P 14 28 09.7 -1.2
SNR=8.9
KIEV Kiev 66.29 329 *c* *i* P P 14 28 09.8 -1.2
KIEV pmax pmax
comp=Z,30nm,1.3s
AK11 Malin Array Si 66.31 329 eP P 14 28 09.4 -1.7
AK11 epP pP 14 28 50.4 -0.2
P39B Salisbury 66.36 54 P P 14 28 11.8 +0.1
baz=324
MNTX Cornudas Mount 66.39 68 P P 14 28 13.7 +1.7
baz=323,SNR=47
MNTX Cornudas Mount 66.39 68 eP P 14 28 13.6 +1.7
MNTX epP pP 14 28 51.5 0.0
Q38A Cooks Store, C 66.39 55 P P 14 28 12.1 +0.3
baz=324,SNR=13
GDL2 Guadalupe Moun 66.52 67 eP P 14 28 14.0 +1.1
GDL2 epP pP 14 28 52.2 -0.3
Q39A Willow Grove F 66.61 55 P P 14 28 13.7 +0.4
baz=324,SNR=11
P40A Paris 66.64 54 P P 14 28 13.8 +0.3
baz=325,SNR=7.5
P40A Paris 66.64 54 eP P 14 28 13.6 +0.2
comp=Z,71nm,1.4s
P40A epP pP 14 28 52.8 -0.2
O41A Passleys Farm, 66.69 52 P P 14 28 13.8 +0.1
baz=325,SNR=8.2
N43A Stutzman Famil 66.77 51 P P 14 28 13.9 -0.3
baz=325
R38A Fenwick Farm, 66.88 56 P P 14 28 14.3 -0.7
baz=324,SNR=6.5
GROC Groznyy 66.95 314 eP P 14 28 13.8 -1.5
GROC e 14 28 39.8
GROC e*SP pP 14 28 51.7 -3.2
GROC eS S 14 36 48.9 -5.8
GROC e*SS pS 14 37 23.9 -16
GROC pmax pmax
comp=Z,85nm,1.0s
P41A Barry, Barry 66.97 53 P P 14 28 15.9 +0.3
baz=325,SNR=6.2
GKP Gorka Klasztor 66.99 337 eP P 14 28 16.1 +0.7
HDIL Hopedale 67.03 51 P P 14 28 15.9 +0.1
baz=325
HDIL Hopedale 67.03 51 eP P 14 28 16.0 +0.1
Q40A Laux Farm, Aux 67.07 54 P P 14 28 16.2 +0.1
baz=325
R39A Chumby, Stover 67.18 55 P P 14 28 16.7 -0.2
baz=324,SNR=14
O43A Sugar Creek Fa 67.24 51 P P 14 28 17.4 +0.1
baz=325
WMOK Wichita Mounta 67.32 61 P P 14 28 18.7 +0.8
baz=324,SNR=32
WMOK Wichita Mounta 67.32 61 eP P 14 28 18.1 +0.3
WMOK epP pP 14 28 56.8 -0.6
WMOK Wichita Mounta 67.32 61 eP P 14 28 18.1 +0.3
WMOK e*PP pP 14 28 56.8 -0.6
S38A Stockton 67.33 56 P P 14 28 17.4 -0.4
baz=324,SNR=9.9
N44A Piper City 67.34 50 P P 14 28 17.6 -0.3
baz=326
P42A Winchester 67.36 52 P P 14 28 18.0 0.0
baz=325
P42A Winchester 67.36 52 eP P 14 28 17.8 -0.2
P42A epP pP 14 28 56.3 -1.3
Q41A Truxton 67.48 53 P P 14 28 19.1 +0.3
baz=325,SNR=10
BEL Belsk 67.50 334 eP P 14 28 19.3 +0.6
KIV Kislovodsk 67.55 316 eP P 14 28 18.6 -0.7
comp=Z,37nm,1.1s
KIV Kislovodsk 67.55 316 *i* P P 14 28 19.0 -0.2
SNR=9.2
KIV Kislovodsk 67.55 316 eP P 14 28 19.4 +0.2
KIV eS S 14 37 02.4 +0.3
KIV pmax pmax
comp=Z,23nm,1.0s
KIV MLR MLR
comp=Z,66nm,17.0s
R40A Maddies Statio 67.55 55 P P 14 28 19.2 0.0
baz=325,SNR=10
R40A Maddies Statio 67.55 55 eP P 14 28 19.0 -0.2
R40A epP pP 14 28 56.6 -2.2
S39A Bolivar 67.55 56 P P 14 28 18.6 -0.6
baz=325,SNR=12
S39A Bolivar 67.55 56 eP P 14 28 19.0 -0.3
S39A epP pP 14 28 56.4 -2.5
N45A Kentland 67.56 50 P P 14 28 18.8 -0.5
baz=326
NCK Nalchik 67.58 316 *i* P P 14 28 18.6 -0.7
NCK pmax pmax
comp=Z,42nm,1.0s
AKT Akhty 67.58 312 eP P 14 28 19.3 -0.2
AKT e*PP pP 14 29 00.4 +1.3
AKT e*SP sP 14 29 19.1 +2.0
AKT e 14 30 47.8
AKT eS S 14 37 02.0 -0.6
AKT e 14 37 58.9
AKT pmax pmax
comp=Z,119nm,0.9s
T38A Diamond 67.63 57 P P 14 28 19.7 -0.1
baz=324,SNR=12
SADO Sadowa 67.63 42 epP pP 14 28 58.7 -0.5
KBZ Khabaz 67.66 316 P P 14 28 19.9 +0.2
comp=Z,41nm,1.0s,baz=57,slow=3.1,SNR=69
KBZ LR LR 15 00 57.4
comp=Z,125nm,21.1s,baz=9.0,slow=38
KBZ Khabaz 67.66 316 P P 14 28 20.0 +0.2
P43A Skaggs, Pawnee 67.68 52 P P 14 28 19.9 -0.1
baz=326
O44A Mansfield 67.72 51 P P 14 28 19.7 -0.5
baz=326
KSM Kuching 67.77 236 eP P 14 28 20.7 -0.1
comp=Z,22nm,0.9s
KSM epP pP 14 29 04.2 +3.7
Q42A Golden Eagle 67.83 53 P P 14 28 20.8 -0.1
baz=325
TUL1 Leonard 67.83 58 P P 14 28 20.5 -0.5
baz=324
TUL1 Leonard 67.83 58 eP P 14 28 21.6 +0.6
TUL1 epP pP 14 28 59.3 -1.4
R41A Rosebud 67.95 54 P P 14 28 21.8 +0.1
baz=325,SNR=10.0
S40A Lebanon 68.01 55 P P 14 28 22.1 0.0
baz=325,SNR=9.7
TRQ Mont Tremblant 68.03 38 eP P 14 28 21.7 -0.5
TRQ epP pP 14 29 00.3 -1.5
ZEI Tsey 68.06 315 eP P 14 28 20.0 -2.6
ZEI pmax pmax
comp=Z,39nm,0.9s

T39A **Clever** 68.07 56 P P 14 28 22.1 -0.4
baz=325
Q43A **New Douglas** 68.18 52 P P 14 28 22.9 -0.2
baz=326
EKA **Eskdalemuir Ar** 68.20 350 P P 14 28 22.6 -0.4
comp=Z,8.1nm,0.9s,baz=12,slow=5.8,SNR=16
EKA pP pP 14 29 00.5 -2.2
comp=Z,9.6nm,1.0s,baz=19,slow=4.5,SNR=3.2
CCM **Cathedral Cave** 68.21 54 P P 14 28 22.9 -0.3
baz=325
CCM **Cathedral Cave** 68.21 54 eP P 14 28 23.0 -0.3
CCM epP pP 14 29 01.7 -1.3
CCM **Cathedral Cave** 68.21 54 eP P 14 28 23.0 -0.3
CCM e*PP pP 14 29 01.7 -1.3
P44A **Sand Creek, Wi** 68.22 51 P P 14 28 23.0 -0.3
baz=326
ESK **Eskdalemuir** 68.22 350 eP P 14 28 22.6 -0.5
comp=Z,47nm,1.4s
ESK **Eskdalemuir** 68.22 350 eP P 14 28 22.6 -0.5
ESK pmax pmax
comp=Z,47nm,1.4s
R42A **Luebbering** 68.23 54 P P 14 28 23.7 +0.2
baz=325,SNR=6.2
S41A **Jillco Farms,** 68.36 55 P P 14 28 24.4 +0.1
baz=325,SNR=12
T40A **Mansfield** 68.36 55 P P 14 28 24.2 -0.2
baz=325,SNR=6.5
HHAR **Hobbs** 68.41 57 eP P 14 28 24.2 -0.4
HHAR epP pP 14 29 02.8 -1.5
LVV **L'vov** 68.53 331 eP P 14 28 26.1 +1.0
U39A **Green Forest** 68.54 57 P P 14 28 25.4 0.0
baz=325,SNR=17
P45A **Graceland, Par** 68.55 51 P P 14 28 24.9 -0.5
baz=326
ABTX **Abilene, Hawle** 68.58 63 P P 14 28 26.4 +0.6
baz=324,SNR=6.0
ABTX **Abilene, Hawle** 68.58 63 eP P 14 28 26.1 +0.4
ABTX epP pP 14 29 04.8 -0.7
TBLG **Delisi** 68.61 314 eP P 14 28 24.9 -0.8
comp=Z,240nm,1.6s
TBLG **Delisi** 68.61 314 eP P 14 28 25.0 -0.8
TBLG pmax pmax
comp=Z,240nm,1.6s
R43A **Red Bud** 68.62 53 P P 14 28 25.2 -0.7
baz=326
FVM **French Village** 68.64 53 eP P 14 28 25.7 -0.3
FVM epP pP 14 29 04.4 -1.3
FVM **French Village** 68.64 53 eP P 14 28 25.7 -0.3
FVM e*PP pP 14 29 04.4 -1.3
O47A **Sheridan** 68.64 49 P P 14 28 25.1 -0.9
baz=327
S42A **Caledonia** 68.65 54 P P 14 28 26.0 0.0
baz=325,SNR=6.0
P46A **Rosedale** 68.71 50 P P 14 28 26.0 -0.3
baz=326
ANN **Anapa** 68.78 320 eP P 14 28 25.9 -0.8
ANN pmax pmax
comp=Z,60nm,1.4s
T41A **Mountain View** 68.80 55 P P 14 28 26.6 -0.4
baz=325,SNR=8.4
U40A **Yellville** 68.86 56 P P 14 28 27.2 -0.2
baz=325,SNR=12
Q45A **Warren Harvey,** 68.89 51 P P 14 28 27.2 -0.3
baz=326
V39A **Pettigrew** 68.91 57 P P 14 28 27.8 +0.1
baz=325,SNR=17
SOC **Sochi** 69.00 318c iP P 14 28 27.1 -1.0
SOC e*PP pP 14 29 08.4 +0.6
SOC eS S 14 37 18.4 -0.6
SOC pmax pmax
comp=Z,27nm,0.8s
KWP **Kalwaria Pacla** 69.05 332 eP P 14 28 28.8 +0.4
KWP **Kalwaria Pacla** 69.05 332 eP P 14 28 28.0 -0.3
comp=Z,1µm,1.3s
KWP epP pP 14 29 09.9 +1.8
KWP **Kalwaria Pacla** 69.05 332 eP P 14 28 28.0 -0.3
KWP e*PP pP 14 29 09.9 +1.8
T42A **Van Buren** 69.12 54 P P 14 28 28.9 0.0
baz=326,SNR=5.8
T42A **Van Buren** 69.12 54 eP P 14 28 28.8 -0.2
T42A epP pP 14 29 07.6 -1.1
S43A **Fulton Ridge,** 69.13 53 P P 14 28 28.6 -0.5
baz=326
TX31 **Lajitas Ar. Si** 69.16 68 eP P 14 28 30.5 +1.1
TX31 epP pP 14 29 08.8 -0.5
TX31 epP pP 14 29 09.0 -0.3
TXAR **Lajitas Array** 69.16 68 P P 14 28 30.9 +1.5
comp=Z,14nm,0.8s,baz=296,slow=4.2,SNR=128
TXAR pP pP 14 29 09.4 +0.2
comp=Z,56nm,1.0s,baz=306,slow=4.3,SNR=14
TXAR PKP2bc 14 56 39.6
comp=Z,0.3nm,0.9s,baz=122,slow=4.4,SNR=4.6
TXAR LR LR 14 58 53.5
comp=Z,77nm,18.7s,baz=0.0,slow=36
P47A **Martinsville** 69.22 50 P P 14 28 28.6 -0.9
baz=327
OJC **Ojcow** 69.24 334 eP P 14 28 29.7 +0.2
OJC **Ojcow** 69.24 334 eP P 14 28 28.9 -0.6
comp=Z,79nm,1.4s
OJC **Ojcow** 69.24 334 eP P 14 28 28.9 -0.6
OJC pmax pmax
comp=Z,79nm,1.4s
KULM **Kulim** 69.25 247 eP P 14 28 29.5 -0.5
comp=Z,19nm,0.6s
U41A **Viola** 69.30 55 P P 14 28 29.9 -0.2
baz=325,SNR=5.5
V40A **Witts Springs** 69.32 56 P P 14 28 30.3 +0.1
baz=325,SNR=12
V40A **Witts Springs** 69.32 56 eP P 14 28 30.1 -0.2
V40A epP pP 14 29 09.0 -1.1
W39A **Magazine** 69.36 58 P P 14 28 30.9 +0.4
baz=325,SNR=6.1
W39A **Magazine** 69.36 58 eP P 14 28 30.8 +0.3
W39A epP pP 14 29 09.6 -0.7
AKH **Akhalkalaki** 69.38 314⇓iP P 14 28 31.5 +0.8
AKH **Akhalkalaki** 69.38 314 eP P 14 28 30.7 0.0
comp=Z,89nm,1.5s
AKH **Akhalkalaki** 69.38 314 eP P 14 28 30.7 0.0
AKH pmax pmax
comp=Z,89nm,1.5s
S44A **Carbondale** 69.40 53 P P 14 28 30.4 -0.3
baz=326
T43A **Greenville** 69.44 54 P P 14 28 31.1 +0.2
baz=326
N50A **Nevada** 69.45 47 P P 14 28 30.5 -0.4
baz=328
KSP **Ksiaz** 69.47 337 eP P 14 28 30.8 -0.1
ERPA **Erie** 69.57 44 P P 14 28 31.2 -0.5
baz=329
ERPA **Erie** 69.57 44 eP P 14 28 32.1 +0.5
comp=Z,96nm,1.3s
ERPA epP pP 14 29 10.7 -0.8
U42A **Revenden** 69.61 55 P P 14 28 31.4 -0.5
baz=326
Q47A **Bedord North L** 69.61 50 P P 14 28 31.8 -0.1
baz=327
PBMO **Poplar Bluff** 69.62 54 eP P 14 28 33.4 +1.3
PBMO epP pP 14 29 11.8 -0.1
V41A **Mountainview** 69.65 56 P P 14 28 32.1 -0.2
baz=325,SNR=9.3
W40A **Ferguson Farm,** 69.70 57 P P 14 28 33.0 +0.5
baz=325,SNR=8.2
W40A **Ferguson Farm,** 69.70 57 eP P 14 28 32.6 0.0
W40A epP pP 14 29 11.8 -0.6
KIS **Kishinev** 69.71 327⇑iP P 14 28 30.0 -2.4
comp=Z,400nm,1.2s
KIS epP pP 14 29 05.0 -7.2
KIS eS S 14 37 32.0 +4.8
KIS LRM MLR 15 05 30.0
comp=Z,200nm,15.0s
KIS **Kishinev** 69.71 327α iP P 14 28 30.0 -2.4
KIS e 14 29 32.0
KIS eS S 14 37 32.0 +4.8
KIS e 14 38 20.0
KIS pmax pmax
comp=Z,400nm,1.2s
KIS pmax pmax
comp=Z,400nm,1.5s
S45A **Carrier Mills** 69.72 52 P P 14 28 32.1 -0.5
baz=326
CLL **Collm** 69.72 339⇑iP P 14 28 32.0 -0.4
comp=Z,89nm,1.5s
CLL i pP pP 14 29 14.0 +1.7
CLL eS sP 14 29 28.0 -2.2
CLL eSS SS 14 42 24.0 +26

CLL **Collm** 69.72 339 eP P 14 28 31.7 -0.7
comp=Z,74nm,1.4s
CLL epP pP 14 29 14.4 +2.1
CLL **Collm** 69.72 339⇑iP P 14 28 32.0 -0.4
CLL i *PP pP 14 29 14.0 +1.7
CLL pmax pmax
comp=Z,89nm,1.5s
R46A **Gibon Southern** 69.74 51 P P 14 28 32.8 +0.1
baz=326
IPM **Ipoh** 69.74 247 eP P 14 28 31.7 -1.4
comp=Z,23nm,0.8s
T44A **Benton** 69.75 53 P P 14 28 32.9 0.0
baz=326
X39A **Fountain Ranch** 69.77 58 P P 14 28 33.6 +0.6
baz=325,SNR=13
LPIG **La Paz** 69.78 77 LR LR 14 55 33.7
comp=Z,25nm,19.9s,baz=38,slow=32
O50A **Cable** 69.78 47 P P 14 28 33.1 +0.1
baz=328
NIE **Niedzica** 69.86 334 eP P 14 28 33.8 +0.4
DPC **Dobruska-Polom** 69.93 337 eP P 14 28 34.4 +0.6
DPC epP pP 14 29 15.5 +1.9
DPC **Dobruska-Polom** 69.93 337 eP P 14 28 34.4 +0.6
DPC e 14 29 15.5
GNI **Garni** 69.94 313 P P 14 28 34.6 +0.5
comp=Z,39nm,1.0s,baz=180,slow=2.0,SNR=41
GNI LR LR 15 03 17.0
comp=Z,159nm,21.7s,baz=17,slow=39
GNI **Garni** 69.94 313 eP P 14 28 34.6 +0.5
comp=Z,206nm,1.5s
GNI **Garni** 69.94 313 iP P 14 28 34.8 +0.7
SNR=13
GNI **Garni** 69.94 313c iP P 14 28 34.6 +0.5
GNI pmax pmax
comp=Z,255nm,1.3s
BRG **Berggiesshubel** 69.94 338 eP P 14 28 33.5 -0.3
comp=Z,39nm,1.4s
BRG epP pP 14 29 13.0 -0.6
comp=Z,21nm,1.3s
BRG ePP PP 14 31 06.6 -3.3
comp=Z,7.1nm,1.2s
BRG S S 14 37 30.0 +0.1
BRG **Berggiesshubel** 69.94 338 eP P 14 28 33.5 -0.3
BRG e*PP pP 14 29 13.0 -0.6
BRG e 14 31 06.6
BRG S S 14 37 30.0 +0.1
BRG pmax pmax
comp=Z,39nm,1.4s
ACSO **Alum Creek Sta** 69.97 47 P P 14 28 34.7 +0.6
baz=328
ACSO **Alum Creek Sta** 69.97 47 epP pP 14 29 13.8 -0.3
V42A **Cord** 69.98 55 P P 14 28 34.1 -0.1
baz=326
WHAR **Wooly Hollow** 69.99 56 eP P 14 28 34.5 +0.2
WHAR epP pP 14 29 13.2 -0.9
MIAR **Mount Ida** 69.99 58 P P 14 28 34.7 +0.4
baz=325,SNR=8.4
MIAR **Mount Ida** 69.99 58 eP P 14 28 34.7 +0.4
MIAR epP pP 14 29 13.6 -0.6
MIAR **Mount Ida** 69.99 58 eP P 14 28 34.7 +0.4
MIAR e*PP pP 14 29 13.6 -0.6
HPIG 70.02 71 epP pP 14 29 14.2 -0.5
CRVS **Cervenica-Dubn** 70.04 333 eP P 14 28 40.3 +5.9
CRVS pmax pmax
comp=Z,41nm,1.8s
CRVS **Cervenica-Dubn** 70.04 333 eP P 14 28 40.3 +5.9
UZH **Uzhgorod** 70.08 332⇑iP P 14 28 34.3 -0.3
W41B **Gary Mavity, V** 70.10 56 P P 14 28 35.2 +0.2
baz=326,SNR=11
W41B **Gary Mavity, V** 70.10 56 eP P 14 28 35.0 0.0
W41B epP pP 14 29 13.8 -1.1
WHTX **Lake Whitney,** 70.18 62 P P 14 28 36.2 +0.7
baz=325
WHTX **Lake Whitney,** 70.18 62 eP P 14 28 35.5 0.0
comp=Z,56nm,1.4s
WHTX epP pP 14 29 15.3 -0.1
BUR08 **Bucovina Ar. S** 70.19 330 eP P 14 28 34.6 -0.8
MORC **Moravsky Berou** 70.19 336⇑iP P 14 28 35.8 +0.5
MORC **Moravsky Berou** 70.19 336 eP P 14 28 35.2 -0.1
comp=Z,180nm,1.3s
MORC epP pP 14 29 15.9 +0.7
MORC **Moravsky Berou** 70.19 336⇑P P 14 28 35.8 +0.5
MORC **Moravsky Berou** 70.19 336 eP P 14 28 35.4 +0.1
MORC e 14 29 16.7
U44A **Portageville** 70.19 54 P P 14 28 35.8 +0.3
baz=326
BUR04 **Bucovina Ar. S** 70.20 330 eP P 14 28 34.9 -0.7
BUR04 epP pP 14 29 15.7 +0.2
BURAR **Bucovina Array** 70.21 330⇓iP P 14 28 35.5 -0.1
BURAR **Bucovina Array** 70.21 330⇓P P 14 28 35.5 -0.1
M54A **Oil Creek Stat** 70.22 44 eP P 14 28 37.2 +1.6
comp=Z,27nm,0.8s
JCT **Junction City** 70.23 65 P P 14 28 36.5 +0.7
baz=324,SNR=12
JCT **Junction City** 70.23 65 eP P 14 28 36.2 +0.3
JCT epP pP 14 29 14.7 -1.1
JCT **Junction City** 70.23 65 eP P 14 28 36.2 +0.3
JCT e*PP pP 14 29 14.7 -1.1
SLBS **Sierra La Lagu** 70.31 77 eP P 14 28 38.2 +1.7
comp=Z,114nm,1.7s
SLBS epP pP 14 29 16.0 -0.4
LANS **Liptovska Anna** 70.31 334 eP P 14 28 37.2 +1.1
LANS **Liptovska Anna** 70.31 334 eP P 14 28 37.2 +1.1
X40A **Basin Creek Fa** 70.39 57 P P 14 28 37.1 +0.4
baz=325,SNR=5.6
X40A **Basin Creek Fa** 70.39 57 eP P 14 28 37.3 +0.6
X40A epP pP 14 29 15.5 -1.2
TRPA **Tarpa** 70.47 332⇑iP P 14 28 37.9 +0.9
TRPA **Tarpa** 70.47 332⇑esPKiKP P 14 28 37.2 +0.2
T46A **Princeton** 70.55 52 P P 14 28 38.0 +0.3
baz=327
Y40A **Okolona** 70.57 58 P P 14 28 38.3 +0.4
baz=325
PKME **Peaks-Kenny Pk** 70.64 35 P P 14 28 38.0 -0.1
baz=333
LBNH **Lisbon** 70.67 37 P P 14 28 38.5 +0.2
baz=332
GOPC **GO Pecny, Ondr** 70.67 337 eP P 14 28 38.8 +0.5
GOPC **GO Pecny, Ondr** 70.67 337 eP P 14 28 38.8 +0.5
VRAC **Vranov** 70.84 336⇑iP P 14 28 39.8 +0.5
VRAC **Vranov** 70.84 336⇑P P 14 28 39.8 +0.5
VRAC **Vranov** 70.84 336 eP P 14 28 39.4 +0.1
VRAC e 14 29 20.4
T47A **Sharon Grove** 70.94 52 P P 14 28 40.5 +0.5
baz=327
T47A **Sharon Grove** 70.94 52 eP P 14 28 40.5 +0.5
comp=Z,53nm,1.3s
JAVC **Velka Javorina** 71.02 335 eP P 14 28 41.4 +1.0
VYHS **Vyhne** 71.08 334 eP P 14 28 40.9 +0.2
VYHS pmax pmax
comp=Z,31nm,1.7s
VYHS **Vyhne** 71.08 334 eP P 14 28 40.9 +0.2
435B **Jarrell** 71.10 63 eP P 14 28 41.7 +0.6
435B epP pP 14 29 20.2 -0.9
KRUC **Moravsky** 71.12 336 eP P 14 28 40.8 -0.1
COEN **Coen** 71.28 198 eP P 14 28 42.8 +0.6
comp=Z,26nm,0.6s
COEN epP pP 14 29 21.8 -0.4
WVT **Waverly** 71.33 53 P P 14 28 42.1 -0.4
baz=327
WVT **Waverly** 71.33 53 eP P 14 28 42.8 +0.4
WVT epP pP 14 29 21.9 -0.5
WVT **Waverly** 71.33 53 eP P 14 28 42.8 +0.4
WVT e*PP pP 14 29 21.9 -0.5
PSZ **Piszkesteto** 71.35 333⇑iP P 14 28 43.6 +1.2
PSZ **Piszkesteto** 71.35 333⇑eP P 14 28 42.7 +0.3
PSZ **Piszkesteto** 71.35 333 eP P 14 28 42.4 0.0
comp=Z,33nm,1.3s
PSZ **Piszkesteto** 71.35 333 eP P 14 28 42.4 0.0
PSZ pmax pmax
comp=Z,33nm,1.3s
HYB **Hyderabad** 71.40 274 iP P 14 28 41.0 -2.1
V46A **Holladay** 71.48 53 P P 14 28 43.3 0.0
baz=327
CFR **Carcaliu** 71.55 327⇑iP P 14 28 43.3 -0.2
CFR **Carcaliu** 71.55 327⇑P P 14 28 43.3 -0.2
MODS **Modra-Piesok** 71.56 335 eP P 14 28 44.5 +0.9
MODS pmax pmax
comp=Z,47nm,1.5s
MODS **Modra-Piesok** 71.56 335 eP P 14 28 44.5 +0.9
GRF **Grafenberg Arr** 71.61 340 P P 14 28 45.7 +1.8
GRFO **Grafenberg** 71.62 340 eP P 14 28 43.1 -0.8
comp=Z,62nm,1.3s
GRFO **Grafenberg** 71.62 340 eP P 14 28 43.1 -0.8

GRFO pmax pmax
comp=Z,62nm,1.3s
SSPA **Standing Stone** 71.65 43 P P 14 28 44.3 0.0
baz=330
DRGR 71.65 331⇓iP P 14 28 44.0 -0.3
DRGR 71.65 331⇓P P 14 28 44.0 -0.3
MEM **Membach** 71.66 343⇑P P 14 28 43.9 -0.2
comp=Z,26nm,1.5s
KHC **Kasperske Hory** 71.67 338 eP P 14 28 44.8 +0.5
KHC epP pP 14 29 28.0 +3.7
KHC **Kasperske Hory** 71.67 338 eP P 14 28 44.2 -0.1
comp=Z,28nm,1.5s
KHC epP pP 14 29 27.1 +2.7
KHC **Kasperske Hory** 71.67 338 eP P 14 28 44.8 +0.5
KHC e 14 29 28.0
WET **Wettzell** 71.81 338 P P 14 28 46.1 +1.0
T50A **Nancy** 71.90 50 P P 14 28 45.7 -0.1
baz=328
GEC2 **GERESS Array S** 71.92 338 eP P 14 28 45.4 -0.4
comp=Z,41nm,1.5s
GEC2 epP pP 14 29 28.9 +3.1
GEC2 **GERESS Array S** 71.92 338 eP P 14 28 45.4 -0.4
GEC2 e*PP pP 14 29 29.0 +3.1
GEC2 pmax pmax
comp=Z,41nm,1.5s
GERES **GERESS Array B** 71.92 338 P P 14 28 45.7 -0.1
comp=Z,3.6nm,0.8s,baz=35,slow=4.9,SNR=20
GERES pP pP 14 29 26.4 +0.5
comp=Z,3.0nm,0.8s,baz=35,slow=4.9,SNR=4.3
GERES LR LR 15 06 02.3
comp=Z,56nm,18.2s,baz=39,slow=40
GEA0 **GERESS Array S** 71.92 338 eP P 14 28 45.4 -0.4
GEA0 epP pP 14 29 28.3 +2.4
MLR **Muntele Rosu** 71.93 328 P P 14 28 46.1 +0.2
comp=Z,1.6nm,0.6s,baz=24,slow=4.3,SNR=12
MLR LR LR 15 03 29.2
comp=Z,38nm,20.8s,baz=32,slow=38
MLR **Muntele Rosu** 71.93 328⇓iP P 14 28 47.1 +1.1
MLR **Muntele Rosu** 71.93 328 eP P 14 28 45.5 -0.5
comp=Z,62nm,1.6s
OXF **Oxford** 71.96 55 P P 14 28 46.7 +0.5
baz=327
OXF **Oxford** 71.96 55 eP P 14 28 46.4 +0.2
comp=Z,119nm,1.3s
OXF epP pP 14 29 26.4 +0.1
OXF **Oxford** 71.96 55 eP P 14 28 46.4 +0.2
OXF e*PP pP 14 29 26.4 +0.1
OXF pmax pmax
comp=Z,119nm,1.3s
Y44A **Strider, Charl** 72.05 56 P P 14 28 47.4 +0.7
baz=326
V48A **Smith Brothers** 72.11 52 P P 14 28 47.0 -0.1
baz=327
V48A **Smith Brothers** 72.11 52 eP P 14 28 49.2 +2.1
comp=Z,131nm,1.9s
833A **Chaparral WMA,** 72.18 66 epP pP 14 29 27.3 -0.4
PLAL **Pickwick Lake** 72.18 54 eP P 14 28 47.1 -0.3
PLAL epP pP 14 29 26.8 -0.7
N59A **State Game Lan** 72.21 42 P P 14 28 47.3 -0.3
baz=331
N59A **State Game Lan** 72.21 42 eP P 14 28 47.3 -0.3
comp=Z,20nm,1.2s
VOIR 72.24 329⇓iP P 14 28 48.2 +0.4
VOIR 72.24 329⇓P P 14 28 48.2 +0.4
PSI **Prapat** 72.26 248 P P 14 28 47.4 -0.9
comp=Z,13nm,0.6s,baz=0.2,slow=6.6,SNR=20
PSI **Prapat** 72.26 248 eP P 14 28 47.2 -1.1
comp=Z,24nm,0.9s
CONA **Conrad Observa** 72.31 336 eP P 14 28 48.1 0.0
comp=Z,28nm,1.4s,SNR=18
CONA epP pP 14 29 32.7 +4.4
comp=Z,14nm,1.3s
GIVF **Givet** 72.34 344 eP P 14 28 47.1 -1.1
GIVF pmax pmax
comp=Z,54nm,1.7s
241A **Mo Tay, Goldon** 72.37 59 eP P 14 28 51.1 +2.5
comp=Z,84nm,0.4s
241A epP pP 14 29 28.5 -0.3
SOP **Sopron** 72.38 335⇑eP P 14 28 48.8 +0.4
BAIF **Baives** 72.47 344 eP P 14 28 48.1 -0.9
BAIF pmax pmax
comp=Z,3.0nm,0.2s
W48A **Pulaski** 72.56 53 P P 14 28 49.5 -0.3
baz=327
T52A **Hallie** 72.61 49 P P 14 28 50.0 -0.1
baz=328
HKT **Hockley** 72.65 62 eP P 14 28 51.2 +0.9
HKT epP pP 14 29 29.6 -0.8
HKT **Hockley** 72.65 62 eP P 14 28 51.2 +0.9
HKT e*PP pP 14 29 29.6 -0.8
MOA **Molln** 72.74 337 eP P 14 28 51.0 +0.3
comp=Z,23nm,1.4s,SNR=9.9
MOA epP pP 14 29 32.8 +2.0
comp=Z,12nm,1.6s
PAL **Palisades** 72.82 40 P P 14 28 50.6 -0.5
baz=332
BATI **Baumata** 72.85 218 P P 14 28 51.4 -0.2
comp=Z,17nm,0.5s,baz=53,slow=5.8,SNR=7.7
TZTN **Tazewell** 72.85 49 P P 14 28 50.7 -0.8
baz=328
W49A **Belvidere** 72.87 52 P P 14 28 51.5 -0.1
baz=328
V50A **Pikevile** 72.92 51 P P 14 28 51.9 0.0
baz=328
SWET **Sewanee** 72.94 52 eP P 14 28 52.4 +0.3
comp=Z,23nm,1.0s
ARSA **Arzberg** 73.02 336 eP P 14 28 52.9 +0.6
comp=Z,22nm,1.5s,SNR=7.2
BZS **Buzias** 73.03 331⇑iP P 14 28 52.2 -0.1
BZS **Buzias** 73.03 331⇑P P 14 28 52.2 -0.1
X48A **Hartselle** 73.09 53 P P 14 28 52.7 -0.1
baz=327
X48A **Hartselle** 73.09 53 eP P 14 28 53.0 +0.2
X48A epP pP 14 29 31.6 -1.4
V51A **Loudon** 73.14 50 P P 14 28 52.9 -0.2
baz=328
Y47A **UCPARC, Winfie** 73.18 54 P P 14 28 53.6 +0.2
baz=327
W50A **Signal Mountai** 73.23 51 P P 14 28 53.6 -0.1
baz=328
X49A **Woodville** 73.36 53 P P 14 28 54.3 -0.1
baz=328
U53A **Fall Branch** 73.42 49 P P 14 28 54.5 -0.3
baz=329
V52A **Sevierville** 73.43 50 P P 14 28 54.7 -0.1
baz=328
HERR **Herculane** 73.49 330⇑iP P 14 28 54.6 -0.4
TKL **Tuckaleechee C** 73.51 50 P P 14 28 55.6 +0.3
comp=Z,6.2nm,0.8s,baz=349,slow=5.2,SNR=2.9
CDF **Champ du Feu** 73.57 342 eP P 14 28 54.7 -0.9
CDF pmax pmax
comp=Z,51nm,1.4s
KBA **Koelnbreinsper** 73.67 337 eP P 14 28 57.2 +0.9
comp=Z,53nm,1.2s,SNR=22
KBA epP pP 14 29 39.2 +2.6
comp=Z,27nm,1.1s
KBA **Koelnbreinsper** 73.67 337 P P 14 28 57.1 +0.9
SOKA **Soboth** 73.67 336 eP P 14 28 56.5 +0.3
comp=Z,31nm,1.6s,SNR=14
146A **Union** 73.69 56 epP pP 14 29 38.3 +1.7
X50B **Fort Payne** 73.70 52 P P 14 28 56.4 -0.1
baz=328
MDVR **Moldovita** 73.78 331⇑iP P 14 28 56.3 -0.5
ECH **Echery** 73.78 342 eP P 14 28 55.7 -1.0
comp=Z,44nm,1.4s
ECH epP pP 14 29 39.5 +2.5
ECH **Echery** 73.78 342 eP P 14 28 55.7 -1.0
ECH e*PP pP 14 29 39.5 +2.5
ECH pmax pmax
comp=Z,44nm,1.4s
WATA **Walderalm** 73.79 339 eP P 14 28 58.4 +1.4
comp=Z,24nm,1.2s
WATA epP pP 14 29 41.4 +4.2
comp=Z,12nm,0.9s
RETA **Reutte** 73.81 339 eP P 14 28 57.2 +0.2
comp=Z,19nm,1.3s,SNR=5.5
WTTA **Wattenberg** 73.85 339 eP P 14 28 58.5 +1.1
comp=Z,33nm,1.3s,SNR=11
WTTA epP pP 14 29 41.0 +3.3
comp=Z,19nm,1.1s
Y49A **Blount Mountai** 73.87 53 P P 14 28 57.1 -0.3
baz=328
MOTA **Moosalm** 73.88 339 eP P 14 28 57.1 -0.4
comp=Z,45nm,1.5s,SNR=6.1
MOTA epP pP 14 29 40.3 +2.6
comp=Z,17nm,1.2s

V53A	Saluda	73.91	49	P		P	14 28 57.6	-0.1
	baz=329							
W52A	Murphy	73.92	50	P		P	14 28 57.7	0.0
	baz=328							
OBKA	Obir	73.94	336	*e*P		P	14 28 58.5	+0.7
	comp=Z,47nm,1.3s,SNR=12							
OBKA				pP		pP	14 29 42.1	+4.1
	comp=Z,19nm,1.1s							
147A	Livingston	74.02	55	P		P	14 28 58.5	+0.2
	baz=327							
147A	Livingston	74.02	55	*e*pP		pP	14 29 38.6	0.0
MYKA	Terra Mystica	74.03	337	*e*P		P	14 28 59.0	+0.8
	comp=Z,25nm,1.6s,SNR=6.5							
HAU	Haudompre	74.12	342	*e*P		P	14 28 57.7	-1.0
HAU				pmax		pmax		
	comp=Z,31nm,1.3s							
Y50A	Piedmont	74.14	52	P		P	14 28 59.0	0.0
	baz=328							
ABTA	Abfaltersbach	74.16	338	*e*P		P	14 28 59.4	+0.4
	comp=Z,30nm,1.2s,SNR=11							
ABTA				*e*pP		pP	14 29 42.3	+3.0
	comp=Z,11nm,0.9s							
DAVA	Damuels	74.18	340	*e*P		P	14 28 59.4	+0.2
	comp=Z,20nm,1.4s,SNR=6.0							
W53A	Cullowhee	74.19	50	P		P	14 28 59.0	-0.4
	baz=329							
HINF	Hinteralfeld	74.22	342	*e*P		P	14 28 58.1	-1.2
HINF				pmax		pmax		
	comp=Z,52nm,1.8s							
GSI	Gunungsitoli	74.23	248	*e*P		P	14 28 58.4	-1.3
	comp=Z,35nm,0.8s							
FETA	Feichten	74.27	339	*e*P		P	14 29 00.2	+0.5
	comp=Z,29nm,1.3s,SNR=16							
FETA				*e*pP		pP	14 29 43.4	+3.3
	comp=Z,19nm,1.2s							
X52A	Dahlonega	74.35	51	P		P	14 29 00.0	-0.2
	baz=328							
FLN	La Foliniere	74.39	347	P		P	14 29 00.5	+0.3
Y51A	Rockmart	74.43	52	P		P	14 29 00.1	-0.7
	baz=328							
BG3	Lake Jocassee	74.43	50	*e*pP		pP	14 29 42.0	+1.0
LDF	La Druitiere	74.51	347	*e*P		P	14 28 59.5	-1.4
BR131	Keskin Array S	74.58	320	*e*P		P	14 29 00.8	-0.8
BRTR	Keskin Array B	74.58	320	P		P	14 29 01.4	-0.3
	comp=Z,6.3nm,0.7s,baz=63,slow=3.2,SNR=39							
BRTR				LR		LR	15 04 45.7	
	comp=Z,36nm,19.3s,baz=36,slow=38							
Z50A	Ashland	74.60	53	P		P	14 29 00.6	-1.0
	baz=328							
Z50A	Ashland	74.60	53	*e*P		P	14 29 00.7	-1.0
Z50A				*e*pP		pP	14 29 40.8	-1.2
DAVOX	Davos/Dischmat	74.66	340	P		P	14 29 02.5	+0.4
	comp=Z,9.8nm,1.0s,baz=329,slow=3.9,SNR=20							
DAVOX				LR		LR	15 07 16.5	
	comp=Z,46nm,18.2s,baz=80,slow=40							
FUORN	Ofenpass-Fuorn	74.74	339	*e*P		P	14 29 02.5	-0.1
	comp=Z,58nm,1.6s							
149A	Jones	74.76	54	P		P	14 29 02.3	-0.3
	baz=328							
ANTO	Ankara	74.76	321	*e*P		P	14 29 01.7	-0.9
	comp=Z,87nm,1.6s							
ANTO	Ankara	74.76	321	*e*P		P	14 29 01.7	-0.9
ANTO				pmax		pmax		
	comp=Z,87nm,1.6s							
GRR	Gorron	74.80	347	*e*P		P	14 29 01.4	-1.2
DIVS	Divibare	74.87	332	*e*P		P	14 29 02.5	-0.7
	comp=Z,10nm,1.0s							
LNIG	Linares	74.93	68	*e*P		P	14 29 03.9	+0.2
LNIG				*e*pP		pP	14 29 42.5	-1.6
KMSC	Kings Mountain	74.99	49	P		P	14 29 03.2	-0.7
	baz=329							
ZAIG	Zacatecas	75.03	72	*e*P		P	14 29 05.5	+0.9
ZAIG				*e*pP		pP	14 29 44.4	-0.6
TUE	Stuetta	75.06	340	*e*P		P	14 29 03.9	-0.5
	comp=Z,41nm,1.4s							
150A	Eclectic	75.10	53	P		P	14 29 03.6	-0.9
	baz=328							
ROSF	Rostrenen	75.13	349	*e*P		P	14 29 03.5	-0.9
ROSF				pmax		pmax		
	comp=Z,31nm,1.3s							
SGMF	Saint Gilles	75.13	349	*e*P		P	14 29 03.5	-1.0
SGMF				pmax		pmax		
	comp=Z,27nm,1.3s							
VTS	Vitosha	75.38	329	⇑*i*P		P	14 29 05.7	-0.5
VTS	Vitosha	75.38	329	*e*P		P	14 29 05.2	-1.0
	comp=Z,38nm,1.8s							
VTS	Vitosha	75.38	329	⇑P		P	14 29 05.7	-0.5
SSF	Saint Saulge	75.50	344	*e*P		P	14 29 05.5	-1.1
SSF				pmax		pmax		
	comp=Z,30nm,1.6s							
Y54A	Tignall	75.50	50	P		P	14 29 06.8	-0.1
	baz=329							
CABF	La Chapelle	75.52	342	*e*P		P	14 29 06.2	-0.6
CABF				pmax		pmax		
	comp=Z,71nm,1.6s							
SENIN	Lac Senin/Sane	75.55	341	*e*P		P	14 29 06.7	-0.5
	comp=Z,16nm,1.4s							
152A	Waverly Hall	75.63	52	*e*pP		pP	14 29 48.3	+0.3
ALN	Alexandroupoli	76.08	326	*e*P		P	14 29 08.7	-1.2
	comp=Z,20nm,1.4s							
ALN	Alexandroupoli	76.08	326	*e*P		P	14 29 08.7	-1.2
ALN				pmax		pmax		
	comp=Z,20nm,1.4s							
TCF	Toulx Ste Croi	76.45	345	*e*P		P	14 29 12.3	+0.3
TCF				pmax		pmax		
	comp=Z,33nm,1.6s							
LPL	La Plagne	76.47	342	*e*P		P	14 29 12.4	0.0
LPL				pmax		pmax		
	comp=Z,57nm,1.3s							
BANOM	Banah	76.48	296	P		P	14 29 11.4	-1.1
LPG	La Plagne	76.48	342	*e*P		P	14 29 12.7	+0.2
LPG				pmax		pmax		
	comp=Z,65nm,1.3s							
PDG	Podgorica	76.62	332	‖*i*P		P	14 29 12.8	-0.2
TTG	Podgorica	76.62	332	*e*P		P	14 29 11.8	-1.2
	comp=Z,54nm,1.6s							
TTG	Podgorica	76.62	332	*e*P		P	14 29 11.8	-1.2
TTG				pmax		pmax		
	comp=Z,54nm,1.6s							
CTA	Charters Tower	76.83	194	P		P	14 29 15.1	+0.8
	comp=Z,22nm,0.6s,baz=0.1,slow=8.1,SNR=47							
CTAO	Charters Tower	76.83	194	*e*P		P	14 29 14.4	+0.2
CTAO				*e*pP		pP	14 29 54.1	-0.7
CTAO	Charters Tower	76.83	194	*e*P		P	14 29 14.4	+0.2
CTAO				*e*PP		pP	14 29 54.1	-0.7
BNI	Bardonecchia	76.93	341	*e*P		P	14 29 14.7	-0.1
	comp=Z,37nm,1.5s							
BNI	Bardonecchia	76.93	341	P		P	14 29 14.7	-0.1
SSB	Saint Sauveur	77.07	343	*e*P		P	14 29 15.3	-0.2
	comp=Z,41nm,1.6s							
SSB	Saint Sauveur	77.07	343	*e*P		P	14 29 15.4	-0.2
SSB				pmax		pmax		
	comp=Z,41nm,1.6s							
ORIF	Oris-en-Rattie	77.20	342	*e*P		P	14 29 16.3	0.0
ORIF				pmax		pmax		
	comp=Z,54nm,1.6s							
MBDF	Montbardon	77.22	341	*e*P		P	14 29 16.2	-0.3
MBDF				pmax		pmax		
	comp=Z,11nm,0.9s							
UOSS	Minazif	77.33	296	*e*P		P	14 29 15.2	-2.0
	comp=Z,15nm,0.8s							
UOSS	Minazif	77.33	296	P		P	14 29 15.3	-2.0
UOSS	Minazif	77.33	296	P		P	14 29 15.5	-1.7
VIVF	Saint-Julien-l	77.46	343	*e*P		P	14 29 17.4	-0.3
VIVF				pmax		pmax		
	comp=Z,30nm,1.6s							
HATD	Hatta, Dubai	77.47	296	P		P	14 29 16.8	-1.2
WSAR	Wadi Sarin	77.50	293	P		P	14 29 17.8	-0.5
	comp=Z,8.4nm,0.9s,baz=300,slow=3.9,SNR=5.3							
RJF	Les Rejaudoux	77.51	345	*e*P		P	14 29 18.3	+0.4
RJF				pmax		pmax		
	comp=Z,52nm,1.8s							
FNA	Florina	77.57	330	*e*P		P	14 29 16.6	-1.8
	comp=Z,29nm,1.5s							
FNA	Florina	77.57	330	*e*P		P	14 29 16.6	-1.8
FNA				pmax		pmax		
	comp=Z,29nm,1.5s							
CAF	Calviac	77.80	345	*e*P		P	14 29 19.3	-0.3
CAF				pmax		pmax		
	comp=Z,38nm,1.4s							
DZM	Mont Dzumac	77.96	175	P		P	14 29 22.9	+2.4
	comp=Z,13nm,0.8s,baz=48,slow=12,SNR=5.0							
DZM				LR		LR	14 59 26.0	
	comp=Z,80nm,19.4s,baz=27,slow=32							
DZM	Mont Dzumac	77.96	175	*e*P		P	14 29 23.0	+2.4
	comp=Z,73nm,1.3s							
DZM				*e*pP		pP	14 30 01.3	0.0
	comp=Z,102nm,1.6s							
DZM	Mont Dzumac	77.96	175	*e*LR		LR	14 53 55.6	
	comp=Z,111nm,21.4s							
ASUD	Al Ashush, Dub	78.04	296	P		P	14 29 20.3	-0.8
PALK	Pallekele	78.45	266	P		P	14 29 22.7	-0.8
	comp=Z,10nm,0.7s,baz=297,slow=1.4,SNR=4.9							
PALK	Pallekele	78.45	266	P		P	14 29 22.5	-1.1
PGF	Pioggiola	78.90	339	*e*P		P	14 29 26.2	+0.4
PGF				pmax		pmax		
	comp=Z,34nm,1.3s							
WRAB	Tennant Creek	78.92	205	*e*P		P	14 29 25.4	-0.4
	comp=Z,27nm,0.9s							
WRAB				*e*pP		pP	14 30 08.2	+1.6
WRAB	Tennant Creek	78.92	205	*c i*P		P	14 29 26.3	+0.5
WRAB				pmax		pmax		
	comp=Z,19nm,0.9s							
WB2	Warramunga Arr	78.92	205	*e*P		P	14 29 25.9	+0.1
	comp=Z,24nm,0.8s							
WRA	Warramunga Arr	78.93	205	P		P	14 29 26.2	+0.4
	comp=Z,17nm,0.7s,baz=16,slow=6.1,SNR=211							
WRA				pP		pP	14 30 06.2	-0.4
	comp=Z,9.5nm,0.9s,baz=15,slow=5.9,SNR=5.0							
MTLF	Montolieu	79.33	344	*e*P		P	14 29 27.8	-0.1
MTLF				pmax		pmax		
	comp=Z,28nm,1.3s							
FITZ	Fitzroy Crossi	79.57	214	P		P	14 29 29.6	+0.3
	comp=Z,10nm,0.8s,baz=24,slow=8.8,SNR=32							
FITZ	Fitzroy Crossi	79.57	214	*e*P		P	14 29 29.6	+0.3
	comp=Z,38nm,1.4s							
MMAI	Mount Meron Ar	79.85	316	P		P	14 29 31.1	+0.1
	comp=Z,1.9nm,0.5s,baz=26,slow=6.9,SNR=8.6							
ASF	Jabal al Asfar	80.00	314	P		P	14 29 31.6	-0.2
	comp=Z,12nm,1.1s,baz=17,slow=11,SNR=14							
ETSF	Etsaut	80.16	346	*e*P		P	14 29 32.5	0.0
ETSF				pmax		pmax		
	comp=Z,48nm,1.6s							
TIP	Timpagrande	80.33	332	⇑*i*P		P	14 29 33.3	-0.1
TIP	Timpagrande	80.33	332	*e*P		P	14 29 33.1	-0.4
	comp=Z,42nm,1.3s							
TIP				*e*pP		pP	14 30 14.9	+0.6
LVIG	Laguna Verde	80.77	69	*e*pP		pP	14 30 16.5	-0.4
POLO	Lamas de Olo	82.46	351	*e*P		P	14 29 45.2	+0.5
	comp=Z,14nm,2.4s							
AS01	Alice Springs	82.60	205	*e*P		P	14 29 45.9	+0.6
AS31	Alice Springs	82.61	205	*e*P		P	14 29 45.8	+0.4
	comp=Z,5.6nm,0.9s							
AS31				*e*pP		pP	14 30 27.5	+1.0
ASAR	Alice Springs	82.61	205	P		P	14 29 46.2	+0.8
	comp=Z,9.2nm,0.5s,baz=15,slow=4.9,SNR=115							
ASAR				pP		pP	14 30 26.8	+0.2
	comp=Z,14nm,0.9s,baz=13,slow=4.9,SNR=6.2							
PMOR	Pomariorio Ree	82.78	130	*e*T		T	16 00 21.1	
	comp=Z,2.6nm,0.2s							
PVIS	Viseu	83.12	351	*e*P		P	14 29 48.4	+0.4
	comp=Z,33nm,1.8s							
ES19	SONSECA Array	83.73	348	*e*P		P	14 29 51.0	-0.1
ES19				*e*pP		pP	14 30 32.9	+0.6
RAYN	Ar Rayn	83.75	303	*e*P		P	14 29 50.1	-1.4
	comp=Z,126nm,1.6s							
RAYN	Ar Rayn	83.75	303	*i*P		P	14 29 50.7	-0.8
	SNR=23							
RAYN	Ar Rayn	83.75	303	P		P	14 29 50.1	-1.4
RAYN				pmax		pmax		
	comp=Z,130nm,1.6s							
ESDC	Sonseca Array	83.76	348	P		P	14 29 51.5	+0.2
	comp=Z,17nm,1.2s,baz=1.7,slow=4.5,SNR=45							
ESDC				pP		pP	14 30 32.7	+0.1
	comp=Z,2.1nm,0.7s,baz=4.1,slow=5.4,SNR=3.1							
ESLA	Sonseca Array	83.76	348	*e*P		P	14 29 51.3	0.0
	comp=Z,55nm,1.4s							
PCAS	Casmilo, Conde	83.83	352	*e*P		P	14 29 52.3	+0.7
	comp=Z,80nm,1.6s							
PCAS				*e*pP		pP	14 30 32.9	+0.1
RAR	Rarotonga	83.90	143	LR		LR	14 59 19.1	
	comp=Z,40nm,21.4s,baz=340,slow=30							
PAB	San Pablo	83.93	348	*e*P		P	14 29 52.4	+0.2
	comp=Z,53nm,1.5s							
PAB	San Pablo	83.93	348	*e*P		P	14 29 52.4	+0.2
PAB				pmax		pmax		
	comp=Z,53nm,1.5s							
PCBR	Castelo Branco	83.96	351	*e*P		P	14 29 53.0	+0.8
	comp=Z,55nm,1.5s							
PCBR				*e*pP		pP	14 30 32.8	-0.6
PMRV	Marv??o	84.36	351	*e*PP		PP	14 33 11.9	+1.4
MBWA	Marble Bar	84.37	218	*e*P		P	14 29 53.6	-0.8
	comp=Z,26nm,1.1s							
PPT	Papeete	84.37	133	LR		LR	14 58 59.6	
	comp=Z,74nm,21.1s,baz=12,slow=29							
PPT2	Papeete2	84.39	133	*e*S		S	14 40 06.5	0.0
	comp=Z,84nm,26.0s							
PPT2	Papeete2	84.39	133	*e*LR		LR	14 56 39.2	
	comp=Z,144nm,24.8s							
PMTG	Montargil	84.79	351	*e*P		P	14 29 55.5	-0.9
	comp=Z,51nm,1.6s							
PMTG				*e*pP		pP	14 30 37.3	-0.4
PMTG	Montargil	84.79	351	*e*PP		PP	14 33 15.3	+1.4
PESTR	Estremoz	84.93	351	*e*P		P	14 29 56.9	-0.2
	comp=Z,46nm,1.5s							
PESTR	Estremoz	84.93	351	*e*P		P	14 29 56.6	-0.6
	comp=Z,35nm,1.6s							
KEST	Kesra	85.39	337	P		P	14 29 59.4	-0.2
	comp=Z,9.2nm,1.1s,baz=261,slow=22,SNR=4.5							
KEST	Kesra	85.39	337	*e*P		P	14 29 59.0	-0.6
	comp=Z,30nm,1.4s							
PBAR	Barrancos	85.57	350	*e*P		P	14 30 00.6	+0.3
	comp=Z,92nm,1.5s							
PBAR				*e*pP		pP	14 30 42.1	+0.4
CCIG	Comitan	85.86	67	*e*pP		pP	14 30 43.3	-0.4
STKA	Stephens Creek	89.09	196	P		P	14 30 17.5	+0.6
	comp=Z,4.4nm,0.6s,baz=350,slow=5.7,SNR=16							
STKA	Stephens Creek	89.09	196	*e*P		P	14 30 17.3	+0.4
	comp=Z,8.3nm,1.5s							
STKA	Stephens Creek	89.09	196	*e*P		P	14 30 17.3	+0.4
STKA				pmax		pmax		
	comp=Z,8.0nm,1.5s							
TBI	Tubuai	89.61	135	*e*S		S	14 40 54.3	-1.8
	comp=Z,53nm,27.8s							
TBI	Tubuai	89.61	135	*e*LR		LR	14 59 09.4	
	comp=Z,80nm,25.2s							
MDT	Midelt	90.61	348	P		P	14 30 23.8	-0.7
	comp=Z,1.5nm,0.8s,baz=308,slow=2.2,SNR=4.0							
JTS	JuntasAbangare	94.60	64	LR		LR	15 15 41.9	
	comp=Z,22nm,21.4s,baz=42,slow=37							
TORD	Torodi Ar. Bea	108.87	338	PKiKP		PKiKP	14 35 49.9	-0.7
	baz=16,slow=2.2							
TORD				PP		PP	14 36 10.3	-8.9
	comp=Z,3.5nm,1.2s,baz=46,slow=6.4,SNR=8.1							
LPAZ	La Paz	125.81	63	PKP		PKPdf	14 36 23.8	+0.2
	comp=Z,1.2nm,0.7s,baz=338,slow=5.4,SNR=3.7							
SIV	San Ignacio	128.96	56	PKP		PKPdf	14 36 29.1	+0.2
	comp=Z,3.6nm,1.0s,baz=70,slow=0.7,SNR=13							
SIV				pPKP		pPKPdf	14 37 12.0	-0.6
	comp=Z,3.1nm,0.9s,baz=31,slow=2.5,SNR=4.0							
VNDA	Vanda	133.31	180	PKP		PKPdf	14 36 36.7	+1.4
	comp=Z,1.3nm,0.8s,baz=324,slow=4.7,SNR=14							
VNDA				pPKP		pPKPdf	14 37 18.7	-0.3
	comp=Z,1.3nm,0.9s,baz=346,slow=7.1,SNR=3.1							
SBA	Scott Base	133.69	178	*e*PKPdf		PKPdf	14 36 38.0	+2.0
SBA	Scott Base	133.69	178	*e*PKiKP		PKPdf	14 36 38.0	+2.0
BOSA	Boshof	138.26	292	PKP		PKPdf	14 36 46.2	0.0
	comp=Z,1.8nm,0.6s,baz=40,slow=2.6,SNR=3.8							
CPUP	Villa Florida	139.60	59	PKhKP		PKPpre	14 36 43.7	
	comp=Z,4.8nm,1.1s,baz=304,slow=7.3,SNR=2.9							
MAW	Mawson	142.57	219	PKhKP		PKPpre	14 36 49.6	
	comp=Z,2.8nm,0.6s,baz=46,slow=11,SNR=12							
MAW	Mawson	142.57	219	*e*PKPpre		PKPpre	14 36 49.8	
PLCA	Paso Flores	143.57	87	PKP		PKPbc	14 36 53.6	+0.4
	comp=Z,6.1nm,0.9s,baz=305,slow=3.1,SNR=11							
PLCA	Paso Flores	143.57	87	*e*PKPdf		PKPdf	14 36 55.4	+0.2
QSPA	South Pole Qui	145.80	180	PKPbc		PKPbc	14 36 59.0	-0.2
	comp=Z,37nm,0.6s,baz=329,slow=0.5,SNR=194							
QSPA				pPKPbc		pPKPdf	14 37 40.6	-1.4
	comp=Z,24nm,0.9s,baz=356,slow=3.7,SNR=3.0							
TRQA	Tornquist	146.46	76	*e*PKPbc		PKPbc	14 37 02.2	+0.3
TRQA	Tornquist	146.46	76	PKP2		PKPbc	14 37 02.2	+0.3
SYO	Syowa Base	151.25	220	‖*e*PKPbc		PKPbc	14 37 12.9	-0.1
SNAA	Sanae	162.85	198	*e*PKPab		PKPab	14 38 11.5	-0.4
SNAA	Sanae	162.85	198	*e*PKP2		PKPab	14 38 11.5	-0.4

*ISCJB **26** 14:22:48.6±0.2, 47°.49N±0°.01×11°.88E±0°.02, h9km±2km, Error ellipse: s-maj=2.3km s-min=1.9km az=144.2*
*VIE **26** 14:22:49.4±0.2, 47°.40N×11°.96E, h11km±3km, mb2.0/12, ml2.8/15, Error ellipse: s-maj=2.8km s-min=1.4km az=15.0*
13 km NNE of Ried im Zillertal felt 3-4 ems98 at Alpbach / Tyrol
*CSEM **26** 14:22:49.8±0.1, 47°.43N×11°.90E, h10km, ML2.9/10, Error ellipse: s-maj=2.3km s-min=1.9km az=174.0*
*LDG **26** 14:22:50.9±0.1, 47°.35N×11°.91E, h2km, Ml3.0/8, Error ellipse: s-maj=2.6km s-min=2.1km az=11.0*
*PRU **26** 14:22:50.7, 47°.44N×11°.95E, h3km*
*BGR **26** 14:22:50.7±0.2, 47°.42N×11°.94E, h10km, ML2.7/21, Error ellipse: s-maj=2.2km s-min=1.1km az=171.0*
BGR Felt IV EMS.
*ROM **26** 14:22:51.2±0.3, 47°.39N±0°.02×11°.83E±0°.02, h10km±1km, ML2.4/8*
ISC 26 14:22:50.0±0.8,**47°.43N**±0°.02×**11°.92E**±0°.01,**h15**km±6km,
n101,σ1$00/187,**1C-1D, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WATA	Walderalm	0.25	248	*e*Pg	Pg	14 22 55.1	-0.4
	31nm,0.1s,SNR=43						
WATA				*i* Sg	Sg	14 22 59.3	0.0
	520nm,0.2s						
WATA	Walderalm	0.25	248	Pg	Pg	14 22 55.1	-0.4
	31nm,0.1s,SNR=43						
WATA				Sg	Sg	14 22 59.3	0.0
	520nm,0.2s						
WTTA	Wattenberg	0.26	229	*e*Pg	Pg	14 22 55.3	-0.4
WTTA				*e*Sg	Sg	14 22 59.1	-0.4
WTTA	Wattenberg	0.26	229	*i* Pg	Pg	14 22 55.2	-0.4
	59nm,0.2s,SNR=85						
WTTA				*e*Sg	Sg	14 22 59.0	-0.4
	181nm,0.2s						
WTTA	Wattenberg	0.26	229	⇑P	Pg	14 22 55.2	-0.4
WTTA				S	Sg	14 22 59.1	-0.4
WTTA	Wattenberg	0.26	229	P	Pg	14 22 55.2	-0.4
WTTA				S	Sg	14 22 59.1	-0.4
WTTA				AML	AML		
	comp=E,1265μm,0.5s						
WTTA				AML	AML		
	comp=N,674μm,0.3s						
WTTA				AML	AML		
	comp=N,674μm,0.3s						
WTTA				AML	AML		
	comp=E,1265μm,0.5s						
SQTA	Sankt Quirin	0.53	247	Pg	Pg	14 23 00.2	-0.2
SQTA	Sankt Quirin	0.53	247	Pg	Pg	14 23 00.2	-0.2
MOTA	Moosalm	0.56	261	*e*Pg	Pg	14 22 59.4	-1.7
	comp=E,11nm,0.1s						
MOTA				*i* Sg	Sg	14 23 08.4	-0.2
MOTA	Moosalm	0.56	261	Pg	Pg	14 22 59.4	-1.7
	comp=E,11nm,0.1s						
MOTA				Sg	Sg	14 23 08.4	-0.2
ROSI	Rosskopf	0.61	215	P	Pg	14 23 01.9	-0.2
ROSI				S	Sg	14 23 09.5	-0.7
ROSI	Rosskopf	0.61	215	P	Pg	14 23 01.9	-0.2
ROSI				S	Sg	14 23 09.5	-0.7
ROSI				AML	AML		
	comp=E,492μm,1.3s						
ROSI				AML	AML		
	comp=N,408μm,0.3s						
ROSI				AML	AML		
	comp=E,492μm,1.3s						
ROSI				AML	AML		
	comp=N,408μm,0.3s						
ROSI				AML	AML		
	comp=E,492μm,1.3s						
ROSI				AML	AML		
	comp=N,408μm,0.3s						
RJOB	Jochberg	0.67	62	*e*Pg	Pn	14 23 04.5	-0.5
RJOB				*e*Sg	Sg	14 23 11.5	-0.4
RJOB	Jochberg	0.67	62	Pg	Pn	14 23 04.5	-0.5
RETA	Reutte	0.79	274	*e*Pg	Pg	14 23 05.4	+0.1
	comp=N,2.8nm,0.1s						
RETA				Sg	Sb	14 23 16.6	+0.7
	comp=N,3.7nm,0.1s,SNR=16						
RETA	Reutte	0.79	274	Pg	Pg	14 23 05.4	+0.1
	comp=N,2.8nm,0.1s						
RETA				Sg	Sb	14 23 16.6	+0.7
	comp=N,3.7nm,0.1s,SNR=16						
ABTA	Abfaltersbach	0.80	149	*e*Pg	Pg	14 23 04.8	-0.7
	comp=N,5.0nm,0.1s						
ABTA				*e*Sg	Sg	14 23 15.1	-0.9
	comp=N,23nm,0.1s						
ABTA	Abfaltersbach	0.80	149	Pg	Pg	14 23 04.8	-0.7
	comp=N,5.0nm,0.1s						
ABTA				Sg	Sg	14 23 15.1	-0.9
	comp=N,23nm,0.1s						
ABSI	Aberstueckl	0.81	210	P	Pg	14 23 05.5	-0.3
ABSI				S	Sg	14 23 15.7	-0.9
ABSI	Aberstueckl	0.81	210	P	Pg	14 23 05.5	-0.3
ABSI				S	Sg	14 23 15.7	-0.9
ABSI				AML	AML		
	comp=E,202μm,0.3s						
ABSI				AML	AML		
	comp=N,338μm,0.6s						
ABSI				AML	AML		
	comp=E,202μm,0.3s						
ABSI				AML	AML		
	comp=N,338μm,0.6s						
ABSI				AML	AML		
	comp=N,338μm,0.6s						
ABSI				AML	AML		
	comp=E,202μm,0.3s						
FUR	Furstenfeldbru	0.85	330	*e*Pg	Pb	14 23 07.5	+1.0
FUR				*e*Sg	Sn	14 23 19.9	+0.2
FUR	Furstenfeldbru	0.85	330	Pg	Pb	14 23 07.5	+1.0
FUR				Sg	Sn	14 23 19.9	+0.2
FETA	Feichten	0.91	244	*e*Pg	Pg	14 23 06.9	-0.7
	comp=E,3.2nm,0.2s,SNR=12						
FETA				*e*Sg	Sg	14 23 19.1	-0.5
	comp=E,7.8nm,0.3s,SNR=5.1						
FETA	Feichten	0.91	244	Pg	Pg	14 23 06.9	-0.7
	comp=E,3.2nm,0.2s,SNR=12						
FETA			

STAL				AML	AML		
	comp=N,254µm,0.3s						
STAL				AML	AML		
	comp=E,213µm,1.2s						
STAL				AML	AML		
	comp=E,199µm,0.2s						
STAL				AML	AML		
	comp=N,295µm,0.5s						
STAL				AML	AML		
	comp=N,254µm,0.3s						
DAVA	**Damuels**	**1.39**	**265**	*e*Pg	**Pg**	**14 23 17.1**	**+0.2**
DAVA				*e*Sg	**Sg**	**14 23 36.2**	**+1.2**
DAVA	**Damuels**	**1.39**	**265**	*e*Pg	**Pg**	**14 23 17.0**	**+0.2**
	SNR=9.8						
DAVA				*e*Sg	**Sg**	**14 23 36.5**	**+1.6**
	comp=N,24nm,0.2s						
DAVA	**Damuels**	**1.39**	**265**	Pg	**Pg**	**14 23 17.0**	**+0.2**
	SNR=9.8						
DAVA				Sg	**Sg**	**14 23 36.2**	**+1.2**
PTCC	**Patocco-Chiusa**	**1.42**	**136**	⇓P	**Pg**	**14 23 17.3**	**0.0**
PTCC	**Patocco-Chiusa**	**1.42**	**136**	P	**Pg**	**14 23 17.3**	**0.0**
PTCC				AML	AML		
	comp=E,84µm,1.4s						
PTCC				AML	AML		
	comp=N,83µm,0.5s						
PTCC				AML	AML		
	comp=E,84µm,1.4s						
PTCC				AML	AML		
	comp=N,83µm,0.5s						
MOA	**Molln**	**1.64**	**74**	*e*Pg	**Pg**	**14 23 20.6**	**-0.9**
MOA				*e*Sg	**Sg**	**14 23 43.0**	**+0.2**
MOA	**Molln**	**1.64**	**74**	Pg	**Pg**	**14 23 20.6**	**-0.9**
MOA				Sg	**Sg**	**14 23 43.0**	**+0.2**
PLONS	**Plons/SG**	**1.77**	**258**	*e*Pg	**Pg**	**14 23 23.5**	**-0.5**
PLONS				*e*Sg	**Sg**	**14 23 47.7**	**+0.7**
PLONS	**Plons/SG**	**1.77**	**258**	Pg	**Pg**	**14 23 23.5**	**-0.5**
WET	**Wettzell**	**1.83**	**20**	*e*Pn	**Pn**	**14 23 21.5**	**+0.6**
WET				*e*Pg	**Pg**	**14 23 24.6**	**-0.4**
WET				*e*Sg	**Sg**	**14 23 48.6**	**-0.2**
WET	**Wettzell**	**1.83**	**20**	Pn	**Pn**	**14 23 21.5**	**+0.6**
GEC2	**GERESS Array S**	**1.85**	**40**	*e*Pn	**Pn**	**14 23 21.9**	**+0.6**
GEC2				*e*Pg	**Pg**	**14 23 25.0**	**-0.5**
GEC2				*e*Sg	**Sg**	**14 23 49.1**	**-0.4**
GEC2	**GERESS Array S**	**1.85**	**40**	Pn	**Pn**	**14 23 21.9**	**+0.6**
MAGA	**Magasa**	**1.88**	**209**	AML	AML		
	comp=E,348µm,0.6s						
MAGA				AML	AML		
	comp=N,200µm,0.4s						
MAGA				AML	AML		
	comp=E,348µm,0.6s						
MAGA				AML	AML		
	comp=N,200µm,0.4s						
OBKA	**Obir**	**2.02**	**116**	*e*Pg	**Pg**	**14 23 28.5**	**-0.3**
OBKA				*e*Sg	**Sg**	**14 23 54.2**	**-0.8**
OBKA	**Obir**	**2.02**	**116**	*i* Pg	**Pb**	**14 23 26.5**	**0.0**
	comp=N,6.3nm,0.3s						
OBKA				*i* Sg	**Sg**	**14 23 53.8**	**-1.2**
	comp=N,13nm,0.4s						
OBKA	**Obir**	**2.02**	**116**	Pg	**Pg**	**14 23 28.5**	**-0.3**
OBKA				Sg	**Sg**	**14 23 54.2**	**-0.8**
KHC	**Kasperske Hory**	**2.03**	**32**	*e*PN	**Pn**	**14 23 24.7**	**+1.0**
KHC				*e*PG	**Pg**	**14 23 28.0**	**-0.9**
KHC				*e*SN	**Sn**	**14 23 50.1**	**+1.4**
KHC				*e*SG	**Sg**	**14 23 54.7**	**-0.5**
	comp=N,36nm,0.2s						
WILA	**Wila**	**2.04**	**271**	*e*Pg	**Pg**	**14 23 28.8**	**-0.4**
WILA				*e*Sg	**Sg**	**14 23 55.6**	**-0.2**
WILA	**Wila**	**2.04**	**271**	Pg	**Pg**	**14 23 28.8**	**-0.4**
WILA				Sg	**Sg**	**14 23 55.6**	**-0.2**
STU	**Stuttgart**	**2.27**	**307**	*e*Sg	**Sg**	**14 24 02.9**	**+0.1**
STU	**Stuttgart**	**2.27**	**307**	Sg	**Sg**	**14 24 02.9**	**+0.1**
GRA1	**Grafenberg Arr**	**2.31**	**349**	Pg	**Pg**	**14 23 34.3**	**+0.1**
GRF	**Grafenberg Arr**	**2.31**	**349**	*e*Pg	**Pg**	**14 23 34.3**	**+0.1**
GRF				*e*Sg	**Sg**	**14 24 04.0**	**-0.1**
SLE	**Schleitheim**	**2.34**	**279**	*e*Sg	**Sg**	**14 24 04.2**	**-1.1**
SLE	**Schleitheim**	**2.34**	**279**	Sg	**Sg**	**14 24 04.2**	**-1.1**
ROTZ	**Rotzenmuhle**	**2.34**	**5**	*e*Pg	**Pg**	**14 23 34.7**	**-0.2**
ROTZ				*e*Sg	**Sg**	**14 24 04.4**	**-0.9**
ROTZ	**Rotzenmuhle**	**2.34**	**5**	Pg	**Pg**	**14 23 34.7**	**-0.2**
ROTZ				Sg	**Sg**	**14 24 04.4**	**-0.9**
MANZ	**Manzenberg**	**2.56**	**3**	*e*Pg	**Pg**	**14 23 38.8**	**-0.2**
MANZ				*e*Sn	**Sn**	**14 24 01.0**	**-0.8**
MANZ	**Manzenberg**	**2.56**	**3**	Pg	**Pg**	**14 23 38.8**	**-0.2**
BFO	**Black Forest**	**2.58**	**292**	*e*Pn	**Pn**	**14 23 33.1**	**+1.9**
BFO				*e*Pg	**Pg**	**14 23 40.0**	**+0.6**
BFO				*e*Sn	**Sn**	**14 24 02.5**	**+0.2**
BFO				*e*Sg	**Sg**	**14 24 12.1**	**-0.6**
BFO	**Black Forest**	**2.58**	**292**	Pn	**Pn**	**14 23 33.1**	**+1.9**
BFO	**Black Forest**	**2.58**	**292**	Pg	**Pg**	**14 23 40.0**	**+0.6**
BFO				Sn	**Sn**	**14 24 02.5**	**+0.2**
SULZ	**Cheisacher**	**2.58**	**274**	*e*Sg	**Sg**	**14 24 12.4**	**-0.6**
NKC	**Novy Kostel**	**2.83**	**7**	*e*PG	**Pb**	**14 23 42.3**	**+2.2**
NKC				*e*SG	**Sg**	**14 24 19.5**	**-1.2**
	comp=N,29nm,0.4s						
BALST	**Balsthal**	**2.87**	**270**	*e*Pn	**Pn**	**14 23 37.1**	**+1.9**
BALST				*e*Sg	**Sg**	**14 24 21.3**	**-0.9**
BALST	**Balsthal**	**2.87**	**270**	Pn	**Pn**	**14 23 37.1**	**+1.9**
BALST				Sg	**Sg**	**14 24 21.3**	**-0.9**
PRU	**Pruhonice**	**3.09**	**33**	*e*SG	**Sg**	**14 24 26.6**	**-2.6**
	comp=N,3.8nm,0.4s						
MOX	**Moxa**	**3.22**	**357**	*e*Pg	**Pg**	**14 23 51.2**	**-0.5**
MOX				*e*Sn	**Sn**	**14 24 16.9**	**-1.2**
MOX				*e*Sg	**Sg**	**14 24 33.1**	**-0.3**
MOX	**Moxa**	**3.22**	**357**	Pg	**Pg**	**14 23 51.2**	**-0.5**
MOX				Sg	**Sg**	**14 24 33.1**	**-0.3**
CDF	**Champ du Feu**	**3.27**	**289**	*e*Pn	**Pn**	**14 23 41.6**	**+0.8**
CDF				*e*Sn	**Sn**	**14 24 19.1**	**-0.4**
CDF				*e*Sg	**Sg**	**14 24 34.2**	**-0.9**
	comp=N,8.3nm,0.4s						
CDF	**Champ du Feu**	**3.27**	**289**	*e*Pn	**Pn**	**14 23 41.6**	**+0.8**
CDF				*e*Sn	**Sn**	**14 24 19.1**	**-0.4**
ECH	**Echery**	**3.30**	**285**	*e*Pn	**Pn**	**14 23 42.6**	**+1.4**
ECH				*e*Sg	**Sg**	**14 24 34.8**	**-1.2**
ECH	**Echery**	**3.30**	**285**	Pn	**Pn**	**14 23 42.6**	**+1.4**
KRUC	**Moravsky**	**3.41**	**60**	*e*PG	Pg	14 24 10.0	+15
KRUC				*e*SG	Sn	14 24 11.4	-11
HINF	**Hinteralfeld**	**3.45**	**278**	*e*Pn	**Pn**	**14 23 43.7**	**+0.5**
HINF				*e*Sn	**Sn**	**14 24 22.4**	**-1.4**
HINF				*e*Sg	**Sg**	**14 24 38.9**	**-1.8**
	comp=N,7.2nm,0.3s						
HINF	**Hinteralfeld**	**3.45**	**278**	*e*Pn	**Pn**	**14 23 43.7**	**+0.5**
HINF				*e*Sn	**Sn**	**14 24 22.4**	**-1.4**
HINF				*e*Sg	**Sg**	**14 24 38.9**	**-1.8**
	comp=N,3.6nm,0.3s						
NVLJ	**Novalja**	**3.53**	**143**	*e*Pn	**Pn**	**14 23 44.3**	**+0.1**
NVLJ				Sn	**Sn**	**14 24 27.4**	**+1.7**
NVLJ	**Novalja**	**3.53**	**143**	*e*Pn	**Pn**	**14 23 44.3**	**+0.1**
NVLJ				Sn	**Sn**	**14 24 27.3**	**+1.7**
TNS	**Taunus Mts**	**3.61**	**322**	*e*Pn	**Pn**	**14 23 47.2**	**+1.7**
TNS				*e*Sn	**Sn**	**14 24 27.4**	**-0.4**
TNS				*e*Sg	**Sg**	**14 24 45.7**	**-0.2**
TNS	**Taunus Mts**	**3.61**	**322**	Pn	**Pn**	**14 23 47.2**	**+1.7**
TNS				Sn	**Sn**	**14 24 27.4**	**-0.4**
VRAC	**Vranov**	**3.64**	**57**	*e*PG	Pg	14 24 11.4	+12
VRAC				*e*SG	Sn	14 24 13.9	-14
MODS	**Modra-Piesok**	**3.73**	**73**	*e*SG	**Sb**	**14 24 39.1**	**-1.3**
MODS				*e*LG	Lg	14 24 40.6	
HAU	**Haudompre**	**3.81**	**281**	*e*Pn	**Pn**	**14 23 48.7**	**+0.7**
HAU				*e*Sn	**Sn**	**14 24 31.2**	**-1.3**
HAU				*e*Sg	**Sg**	**14 24 50.5**	**-1.6**
	comp=N,12nm,0.3s						
HAU	**Haudompre**	**3.81**	**281**	*e*Pn	**Pn**	**14 23 48.7**	**+0.7**
HAU				*e*Sn	**Sn**	**14 24 31.2**	**-1.3**
HAU				*e*Sg	**Sg**	**14 24 50.5**	**-1.6**
	comp=N,6.1nm,0.3s						
CLL	**Collm**	**3.94**	**10**	*e*Pg	**Pg**	**14 24 05.0**	**-0.5**
CLL				*e*Sg	**Sg**	**14 24 54.0**	**-2.5**
	comp=Z,12nm,0.8s						
UDBI	**Udbina**	**3.95**	**136**	*e*Pn	**Pn**	**14 23 51.9**	**+1.8**
UDBI	**Udbina**	**3.95**	**136**	*e*Pn	**Pn**	**14 23 51.9**	**+1.8**
CABF	**La Chapelle**	**4.07**	**261**	*e*Pn	**Pn**	**14 23 51.9**	**+0.1**
CABF	**La Chapelle**	**4.07**	**261**	*e*Pg	**Pg**	**14 24 06.1**	**-1.9**
CABF				*e*Sn	**Sn**	**14 24 37.2**	**-2.0**
CABF				*e*Sg	**Sg**	**14 24 58.4**	**-2.3**
	comp=Z,11nm,0.7s						
CABF	**La Chapelle**	**4.07**	**261**	*e*Pn	**Pn**	**14 23 51.9**	**+0.1**
CABF	**La Chapelle**	**4.07**	**261**	*e*Pg	**Pg**	**14 24 06.1**	**-1.9**
CABF				*e*Sg	**Sg**	**14 24 58.4**	**-2.3**
	comp=Z,5.3nm,0.7s						
PAGF	**Fort de Pagny**	**4.31**	**287**	*e*Pg	**Pg**	**14 24 11.1**	**-1.3**
PAGF				*e*Sg	**Sg**	**14 25 06.4**	**-1.8**
	comp=Z,4.9nm,0.3s						
PAGF	**Fort de Pagny**	**4.31**	**287**	*e*Pg	**Pg**	**14 24 11.1**	**-1.3**
PAGF				*e*Sg	**Sg**	**14 25 06.4**	**-1.8**
	comp=Z,2.5nm,0.3s						
SFTF	**Sexfontaines**	**4.70**	**282**	*e*Pn	**Pn**	**14 24 01.0**	**+0.7**
SFTF				*e*Sn	**Sn**	**14 24 53.5**	**-1.0**
SFTF				*e*Sg	**Sg**	**14 25 18.3**	**-2.5**
	comp=Z,16nm,0.7s						
SFTF	**Sexfontaines**	**4.70**	**282**	*e*Pn	**Pn**	**14 24 01.0**	**+0.7**
SFTF				*e*Sn	**Sn**	**14 24 53.5**	**-1.0**
SFTF				*e*Sg	**Sg**	**14 25 18.3**	**-2.5**
	comp=Z,8.0nm,0.7s						
VIVF	**Saint-Julien-l**	**5.66**	**246**	*e*Pn	**Pn**	**14 24 13.9**	**+0.4**
VIVF	**Saint-Julien-l**	**5.66**	**246**	*e*Pn	**Pn**	**14 24 13.9**	**+0.4**

CSEM ***26*** *14:26:43.5, 47°.43N×11°.96E, h4km, ML1.6/6*
VIE 26 14:26:43.5±0.8, 47°.43N×11°.96E, h4km, mb1.0/1, ml1.6/6, Error ellipse: s-maj=5.6km s-min=2.9km az=31.0 11 km SW of Wrgl, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WTTA	**Wattenberg**	**0.27**	**233**	*e*Pg	Pg	14 26 49.4	+0.5
	0.9nm,0.1s						
WTTA				*e*Sg	Sg	14 26 52.7	+0.2
	7.3nm,0.1s						
WTTA	**Wattenberg**	**0.27**	**233**	Pg	Pg	14 26 49.4	+0.5
	0.9nm,0.1s						
WTTA				Sg	Sg	14 26 52.7	+0.2
	7.3nm,0.1s						
WATA	**Walderalm**	**0.28**	**250**	*e*Pg	Pg	14 26 49.2	+0.3
	1.3nm,0.1s						
WATA				*e*Sg	Sg	14 26 53.7	+1.1
	17nm,0.1s						
WATA	**Walderalm**	**0.28**	**250**	Pg	Pg	14 26 49.2	+0.3
	1.3nm,0.1s						
WATA				Sg	Sg	14 26 53.7	+1.1
	17nm,0.1s						
MOTA	**Moosalm**	**0.59**	**262**	*e*Pg	Pg	14 26 54.3	-0.5
	0.7nm,0.1s						
MOTA				*e*Sg	Sg	14 27 02.7	+0.3
	1.6nm,0.1s						
MOTA	**Moosalm**	**0.59**	**262**	Pg	Pg	14 26 54.3	-0.5
	0.7nm,0.1s						
MOTA				Sg	Sg	14 27 02.7	+0.3
	1.6nm,0.1s						
ABTA	**Abfaltersbach**	**0.78**	**151**	Sg	Sg	14 27 09.0	+0.4
	1.1nm,0.1s						
ABTA	**Abfaltersbach**	**0.78**	**151**	Sg	Sg	14 27 09.0	+0.4
	1.1nm,0.1s						

ISCJB ***26*** *14:34:02.8±0.4, 32°.22N±0°.02×115°.30W±0°.02, h6km±3km, Error ellipse: s-maj=3.6km s-min=3.0km az=152.8*
NEIC ***26*** *14:34:04.7±0.0, 32°.24N×115°.30W, h6km, ML3.1(PAS), ML3.2(ECX), After ECX.*
NEIC Felt at San Diego, California.
ECX ***26*** *14:34:04.7±0.6, 32°.24N×115°.30W, h6km, MD3.0, ML3.2*
MEX ***26*** *14:34:06.0±0.3, 32°.30N×115°.22W, h17km±8km, MD3.9*
ISC 26 14:34:02.3±1.0, 32°.24N±0°.02×115°.31W±0°.02, h15km±9km, n63, σ0°80/87, 6C-5D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPBX	**Cerro Prieto**	**0.17**	**2**	⇓*e*P	**Pb**	**14 34 07.6**	**+0.3**
CPBX				*e*S	**Sb**	**14 34 10.8**	**+0.2**
CPBX				IAML		14 34 12.2	
	comp=N,18µm,0.2s						
CPBX				⇑*e*		14 34 12.2	
CPBX				IAML		14 34 12.6	
	comp=E,16µm,0.2s						
CPBX				⇓*e*		14 34 12.6	
MBIG	**Mexicali**	**0.19**	**31**	*e*P	**Pb**	**14 34 09.1**	**+1.5**
MBIG	**Mexicali**	**0.19**	**31**	*e*P	**Pb**	**14 34 08.8**	**+1.2**
MBIG				*e*S	**Sb**	**14 34 11.2**	**+0.2**
ERPC	**Ernies Place**	**0.58**	**329**	*e*P	**Pn**	**14 34 15.7**	**-0.4**
ERPC	**Ernies Place**	**0.58**	**329**	*e*Pg	**Pn**	**14 34 15.9**	**-0.2**
WESC	**Westside Schoo**	**0.62**	**326**	*e*Pg	**Pn**	**14 34 17.6**	**+0.9**
COA	**Coachella**	**0.64**	**14**	*e*P	**Pn**	**14 34 16.1**	**-0.7**
COA	**Coachella**	**0.64**	**14**	*e*Pg	**Pn**	**14 34 16.2**	**-0.7**
YUH	**Yuha Desert**	**0.66**	**308**	⇑*i*P	**Pn**	**14 34 16.6**	**-0.6**
YUH	**Yuha Desert**	**0.66**	**308**	*e*Pg	**Pn**	**14 34 16.6**	**-0.6**
COK	**Cook Ranch**	**0.70**	**330**	*e*P	**Pn**	**14 34 17.6**	**-0.1**
YMD	**Yuma Desert**	**0.72**	**64**	*e*P	**Pn**	**14 34 17.2**	**-0.8**
RMX	**La Rumorosa**	**0.74**	**299**	⇑*e*P	**Pn**	**14 34 17.3**	**-1.1**
RMX				*e*S	**Sb**	**14 34 26.3**	**-0.7**
RMX				⇑*e*		14 34 27.0	
RMX				IAML		14 34 27.0	
	comp=E,886nm,0.3s						
IKP	**In-Ko-Pah, Jac**	**0.79**	**301**	P	**Pn**	**14 34 18.8**	**-0.2**
	baz=121,SNR=91						
IKP				S	**Sn**	**14 34 29.5**	**-1.1**
	baz=121						
IKP	**In-Ko-Pah, Jac**	**0.79**	**301**	⇑*e*P	**Pn**	**14 34 18.8**	**-0.2**
ECBX	**El Chinero**	**0.80**	**164**	⇓*e*P	**Pb**	**14 34 18.2**	**+0.2**
ECBX				*e*S	**Sb**	**14 34 29.2**	**+0.6**
SWSC	**Sam W. Stewart**	**0.81**	**330**	P	**Pn**	**14 34 19.2**	**-0.1**
	baz=149,SNR=15						
SWSC				S	**Sn**	**14 34 30.2**	**-0.9**
	baz=149						
CRR	**Carrizo Plain**	**0.85**	**319**	*e*Pg	**Pn**	**14 34 20.1**	**+0.3**
GLA	**Glamis**	**0.90**	**27**	P	**Pn**	**14 34 19.7**	**-1.0**
	baz=206,SNR=35						
GLA	**Glamis**	**0.90**	**27**	*e*Pg	**Pn**	**14 34 19.8**	**-0.8**
CBKC	**Canebrake**	**1.03**	**310**	*e*Pg	**Pn**	**14 34 23.6**	**+1.3**
ZAX	**El Zacaton**	**1.09**	**229**	⇑*e*P	**Pg**	**14 34 23.8**	**+0.3**
ZAX				*e*S	**Sn**	**14 34 38.9**	**+0.7**
MONP2	**Monument Peak**	**1.14**	**305**	P	**Pg**	**14 34 24.0**	**-0.3**
	baz=124,SNR=37						
MONP2				S	**Sn**	**14 34 39.9**	**+0.4**
	baz=124						
CBX	**Cerro Bola**	**1.15**	**274**	*e*P	**Pg**	**14 34 24.8**	**+0.3**
CBX				*e*S	**Sn**	**14 34 40.3**	**+0.7**
CBX				IAML		14 34 41.7	
	comp=E,715nm,0.4s						
CBX				*e*		14 34 41.7	
CBX	**Cerro Bola**	**1.15**	**274**	*e*P	**Pg**	**14 34 24.7**	**+0.3**
CBX				*e*S	**Sg**	**14 34 39.2**	**-0.3**
CBX	**Cerro Bola**	**1.15**	**274**	*e*P	**Pg**	**14 34 24.7**	**+0.3**
CBX				*e*S	**Sg**	**14 34 39.2**	**-0.3**
TJIG	**Tijuana**	**1.17**	**280**	*e*P	**Pg**	**14 34 25.0**	**+0.1**
TJIG				*e*S	**Sn**	**14 34 40.1**	**+0.1**
SPIG	**San Pedro Mart**	**1.20**	**186**	⇓*e*P	**Pb**	**14 34 25.4**	**+0.4**
SPIG	**San Pedro Mart**	**1.20**	**186**	*e*P	**Pg**	**14 34 25.6**	**0.0**
SPIG				*e*S	**Sb**	**14 34 41.0**	**+0.6**
SPIG	**San Pedro Mart**	**1.20**	**186**	*e*P	**Pg**	**14 34 25.6**	**0.0**
SPIG				*e*S	**Sb**	**14 34 41.0**	**+0.6**
SPX	**San Pedro Mart**	**1.20**	**186**	⇓*e*P	**Pg**	**14 34 25.6**	**0.0**
SPX	**San Pedro Mart**	**1.20**	**186**	*e*P	**Pg**	**14 34 25.6**	**0.0**
SPX				*e*S	**Sb**	**14 34 40.6**	**+0.1**
SPX	**San Pedro Mart**	**1.20**	**186**	*e*P	**Pg**	**14 34 25.6**	**0.0**
SPX				*e*S	**Sb**	**14 34 40.6**	**+0.1**
BAR	**Barrett**	**1.23**	**291**	*e*P	**Pg**	**14 34 25.9**	**-0.2**
BAR	**Barrett**	**1.23**	**291**	*e*Pg	**Pg**	**14 34 25.7**	**-0.4**
BAR				*e*Sg	**Sg**	**14 34 42.0**	**-0.1**
BAR				*e*Sn	**Sn**	**14 34 43.0**	**+1.6**
ECNX	**Esteban Cantu**	**1.24**	**242**	*e*P	**Pg**	**14 34 26.3**	**+0.1**
113A	**Mohawk Valley,**	**1.41**	**68**	*e*Pn	**Pb**	**14 34 27.4**	**-0.9**
BC3	**Big Chuckawall**	**1.41**	**355**	P	**Pb**	**14 34 27.5**	**-1.1**
	baz=175						
SDRC	**San Diego Road**	**1.46**	**290**	*e*P	**Pg**	**14 34 30.3**	**-0.1**
DPP	**Dos Picos Cty**	**1.57**	**299**	*e*Pn	**Pg**	**14 34 33.1**	**+0.6**
DPP				*e*Sn	**Sg**	**14 34 52.9**	**0.0**
HWB	**Hans Werner Br**	**1.59**	**300**	*e*Pn	**Pg**	**14 34 33.7**	**+0.7**
Y12C	**Blythe**	**1.64**	**24**	Sb	**Sg**	**14 34 54.0**	**-1.2**
	baz=204						
Y12C	**Blythe**	**1.64**	**24**	*e*Pn	**Pg**	**14 34 34.3**	**+0.4**
109C	**Camp Elliot, M**	**1.65**	**294**	P	**Pb**	**14 34 31.5**	**-0.8**
	baz=113						
109C				Sb	**Sg**	**14 34 54.8**	**-0.6**
	baz=113						
CPE	**Camp Elliot**	**1.65**	**294**	*e*Pn	**Pg**	**14 34 34.0**	**+0.1**
CPE				*e*Sn	**Sg**	**14 34 55.0**	**-0.4**
FRD	**Ford Ranch, An**	**1.65**	**319**	*e*Sn	**Sg**	**14 34 56.1**	**+0.4**
XPFO	**Piæon Flat**	**1.67**	**325**	*e*Pn	**Pn**	**14 34 31.2**	**0.0**
PFO	**Pinyon Flats O**	**1.67**	**325**	P	**Pn**	**14 34 31.1**	**-0.1**
	baz=144						
PFO				Sb	**Sg**	**14 34 56.0**	**-0.2**
	baz=144						
PFO	**Pinyon Flats O**	**1.67**	**325**	*e*Pn	**Pn**	**14 34 31.1**	**-0.1**
PLM	**Palomar**	**1.71**	**311**	*e*Pn	**Pg**	**14 34 36.4**	**+1.1**
CRY	**Cary Ranch**	**1.78**	**318**	*e*Pn	**Pg**	**14 34 38.2**	**+1.6**
BACC	**Bachelor Mtn.**	**1.99**	**314**	*e*Sn	**Sg**	**14 35 06.8**	**+0.3**
HMTC	**Hemet**	**2.04**	**316**	*e*Pn	**Pg**	**14 34 42.0**	**+0.5**
MURC	**Murrieta**	**2.08**	**311**	Pb	**Pg**	**14 34 41.8**	**-0.5**
	baz=130						
MURC				Sb	**Sg**	**14 35 09.1**	**-0.3**
	baz=130						
214A	**Organ Pipe Nat**	**2.14**	**97**	P	**Pn**	**14 34 37.1**	**-0.5**
	baz=278,SNR=30						
214A				S	**Sn**	**14 35 02.9**	**-1.1**
	baz=278						
214A	**Organ Pipe Nat**	**2.14**	**97**	*e*P	**Pn**	**14 34 37.1**	**-0.5**
214A				*e*S	**Sn**	**14 35 01.2**	**-2.8**
Y14A	**Wickenburg**	**2.57**	**48**	*e*Pn	**Pb**	**14 34 48.4**	**+0.2**
SSK	**Sunset Peak**	**2.80**	**315**	*e*Pn	**Pg**	**14 34 55.0**	**-1.1**
RPV	**Rancho Palos V**	**3.00**	**301**	*e*Pn	**Pb**	**14 34 54.7**	**-0.8**
TUC	**Tucson**	**3.84**	**88**	*e*Pg	**Pg**	**14 35 16.3**	**+0.5**
X16A	**Lo Mia Camp, P**	**3.90**	**55**	*e*Pn	**Pn**	**14 35 03.8**	**+1.8**
WUAZ	**Wupatki**	**4.62**	**44**	*e*Pn	**Pn**	**14 35 14.8**	**+2.9**
U15A	**North Rim**	**4.87**	**30**	*e*Pn	Pb	14 35 21.2	-6.2

HLW ***26*** *14:34:10.8, 35°.93N×31°.34E, h10km±13km, Ml4.4*
IDC ***26*** *14:34:18.0±0.9, 35°.41N×31°.42E, h0km, mb3.8/14, mb1 3.9/21, mb1mx3.8/66, mbtmp3.8/21, ML4.1/7, Error ellipse: s-maj=19.3km s-min=13.6km az=2.0*
NIC ***26*** *14:34:18.7±0.4, 35°.51N×31°.22E, h36km, mb4.2, ML4.0*
MOS ***26*** *14:34:20.3±1.4, 35°.12N×31°.39E, h33km, mb4.2/10, Error ellipse: s-maj=6.7km s-min=4.6km az=112.4*
ISCJB ***26*** *14:34:21.2±0.2, 35°.15N±0°.02×31°.36E±0°.02, h49km±3km, mb4.0/24, MS3.9/1, Error ellipse: s-maj=2.7km s-min=2.0km az=30.7*
DDA ***26*** *14:34:21.3, 35°.38N×31°.61E, h27km, Ml4.2*
ISK ***26*** *14:34:21.9, 35°.32N×31°.68E, h9km, ML4.3/26*
CSEM ***26*** *14:34:22.9±0.1, 35°.21N×31°.43E, h40km, ML4.3, Error ellipse: s-maj=3.0km s-min=2.2km az=28.0*
NEIC ***26*** *14:34:23.0±0.4, 35°.23N×31°.40E, h47km±5km, mb4.0/3, ML4.1(THE), Error ellipse: s-maj=6.1km s-min=3.9km az=186.0*
THE ***26*** *14:34:23.4, 35°.27N×31°.35E, h21km±3km, ML3.7/2, Error ellipse: s-maj=4.7km s-min=0.9km az=197.0*
GII ***26*** *14:34:24.0±0.0, 35°.21N×31°.56E, h30km, MD3.3/7*
ISC 26 14:34:22.2±0.7, 35°.28N±0°.02×31°.43E±0°.02, h31km±5km, n361, σ1§68/438, mb4.0/24, 14C-5D, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKMC	**Akamas**	**0.78**	**109**	P	**Pn**	**14 34 36.1**	**-1.0**
	baz=298						
AKMC	**Akamas**	**0.78**	**109**	P	**Pn**	**14 34 36.1**	**-1.0**
PPCY	**Paphos**	**0.84**	**117**	P	**Pn**	**14 34 37.8**	**-0.1**
	baz=304						
PPCY	**Paphos**	**0.84**	**117**	P	**Pn**	**14 34 37.8**	**-0.1**
ALFC	**Alefka**	**0.96**	**97**	P	**Pn**	**14 34 38.5**	**-1.1**
	baz=287						
ALFC				S	**Sb**	**14 34 54.4**	**+1.6**
ALFC	**Alefka**	**0.96**	**97**	P	**Pn**	**14 34 38.5**	**-1.1**
ALFC				S	**Sb**	**14 34 54.4**	**+1.6**
GAZI	**Gazipasa**	**1.19**	**37**	PG	**Pn**	**14 34 42.6**	**-0.2**
GAZI				SG	**Sn**	**14 34 57.5**	**-0.5**
GAZI	**Gazipasa**	**1.19**	**37**	⇑*i*P	**Pn**	**14 34 41.2**	**-1.6**
GAZI				*i* S	**Sn**	**14 34 57.8**	**-0.2**
GAZI	**Gazipasa**	**1.19**	**37**	P	**Pn**	**14 34 41.2**	**-1.6**
GAZI	**Gazipasa**	**1.19**	**37**	*e*Pg	**Pn**	**14 34 42.6**	**-0.2**
GAZI				*e*Sg	**Sn**	**14 34 57.5**	**-0.5**
LEF	**Lefka**	**1.20**	**97**	PG	**Pn**	**14 34 41.5**	**-1.4**
LEF	**Lefka**	**1.20**	**97**	*e*Pg	**Pn**	**14 34 41.5**	**-1.4**
LEF				S	**Sb**	**14 34 59.3**	**-0.4**
SZAC	**Souni**	**1.30**	**113**	P	**Pn**	**14 34 44.5**	**+0.2**
	baz=299						
SZAC				S	**Sb**	**14 35 04.4**	**+2.0**
SZAC	**Souni**	**1.30**	**113**	P	**Pn**	**14 34 44.5**	**+0.2**
SZAC				S	**Sb**	**14 35 04.4**	**+2.0**
MAMC	**Mammari**	**1.47**	**94**	P	**Pn**	**14 34 46.0**	**-0.5**
	baz=282						
MAMC	**Mammari**	**1.47**	**

KMER S **Sb** 14 35 37.0 -2.8
ISP Isparta 2.64 344 PN **Pb** 14 35 06.7 -2.3
ISP Isparta 2.64 344 ⇑*i*P **Pb** 14 35 09.8 +0.8
ISP Isparta 2.64 344 *e*Pn **Pn** 14 35 04.6 +1.8
ISP S **Sn** 14 35 36.7 +2.8
ISP Isparta 2.64 344 P **Pb** 14 35 09.9 +0.9
ISP Isparta 2.64 344 Pn **Pn** 14 35 05.0 +2.2
ISP Isparta 2.64 344 *i*P **Pb** 14 35 09.3 +0.3
ISP Isparta 2.64 344 *e*Pn **Pn** 14 35 04.6 +1.8
ISP S **Sn** 14 35 36.7 +2.8
BRDR BURDUR-Merkez 2.66 336 *i*P **Pb** 14 35 05.9 -3.2
BRDR *i*S **Sb** 14 35 42.6 +1.2
BRDR BURDUR-Merkez 2.66 336 P **Pb** 14 35 05.9 -3.2
DALY Dalyan (Mu¨la 2.73 305 *i*P **Pn** 14 35 04.5 +0.7
DALY *i*S **Sn** 14 35 34.7 -1.0
DALY Dalyan (Mu¨la 2.73 305 P **Pn** 14 35 04.6 +0.7
DALY S **Sn** 14 35 34.7 -1.0
BAGO Egridir - ISPA 2.76 349 *i*P **Pb** 14 35 07.5 -3.4
BAGO *i*S **Sb** 14 35 44.0 -0.3
KONT Konya--Tatoy 2.77 15 PN **Pn** 14 35 06.7 +2.3
KONT Konya--Tatoy 2.77 15 *i*P **Pb** 14 35 08.0 -3.0
KONT *i*S **Sb** 14 35 44.8 +0.3
KONT Konya--Tatoy 2.77 15 *e*Pn **Pn** 14 35 06.7 +2.3
DOGA KONYA_Doganhis 2.83 4 *i*P **Pb** 14 35 09.6 -2.6
DOGA *i*S **Sb** 14 35 44.2 -2.2
DOGA KONYA_Doganhis 2.83 4 P **Pb** 14 35 09.6 -2.6
DOGA S **Sb** 14 35 44.2 -2.2
ARG Arkhangelos 2.85 290 P **Pn** 14 35 05.4 -0.1
ARG S **Sn** 14 35 38.1 -0.7
ARG Arkhangelos 2.85 290 P **Pn** 14 35 05.4 -0.1
ARG S **Sn** 14 35 38.1 -0.7
ARG Arkhangelos 2.85 290 P **Pn** 14 35 05.4 -0.1
ARG S **Sn** 14 35 38.1 -0.7
ARG Arkhangelos 2.85 290 P **Pn** 14 35 05.4 -0.1
ARG S **Sn** 14 35 38.1 -0.7
MERS Mersin 2.96 57 PN **Pn** 14 35 07.9 +0.7
MERS Mersin 2.96 57 *e*Pn **Pn** 14 35 07.9 +0.7
TAVA DENIZLI_Tavas 2.98 318 *i*P **Pn** 14 35 08.9 +1.4
TAVA *i*S Sb 14 36 01.1 +10
TAVA DENIZLI_Tavas 2.98 318 P **Pn** 14 35 08.9 +1.4
LADK Ladik-KONYA 3.01 14 PN **Pn** 14 35 10.0 +2.1
LADK Ladik-KONYA 3.01 14 *e*Pn **Pn** 14 35 10.0 +2.1
KERG Konya-Eregli 3.04 45 *i*P **Pn** 14 35 10.6 +2.2
KERG *i*S **Sb** 14 35 48.0 -4.6
KERG Konya-Eregli 3.04 45 P **Pn** 14 35 10.6 +2.2
KERG S **Sb** 14 35 48.0 -4.6
DNZL Cakiroluk 3.08 322 *i*P **Pn** 14 35 09.9 +1.0
DNZL *i*S **Sb** 14 35 59.1 +5.4
DNZL Cakiroluk 3.08 322 P **Pn** 14 35 09.9 +1.0
YER Yerkesik 3.15 307 P **Pn** 14 35 10.6 +0.9
YER S **Sn** 14 35 47.3 +1.0
YER Yerkesik 3.15 307 P **Pn** 14 35 10.6 +0.9
YER Yerkesik 3.15 307 P **Pn** 14 35 10.6 +0.9
YER S **Sn** 14 35 47.3 +1.0
YER Yerkesik 3.15 307 P **Pn** 14 35 10.6 +0.9
YER S **Sn** 14 35 47.3 +1.0
KDHN Kadinhani 3.28 9 *i*P **Pn** 14 35 14.2 +2.6
KDHN *i*S **Sb** 14 35 54.7 -4.7
KDHN Kadinhani 3.28 9 P **Pn** 14 35 14.2 +2.6
KDHN S **Sb** 14 35 54.7 -4.7
GULE Gulek 3.36 52 ⇑*i*P **Pn** 14 35 15.5 +2.7
GULE *i*S **Sb** 14 35 59.0 -2.8
GULE Gulek 3.36 52 P **Pn** 14 35 15.5 +2.7
SULT Sultanhani-AKS 3.36 29 PN **Pn** 14 35 14.4 +1.7
SULT Sultanhani-AKS 3.36 29 *e*Pn **Pn** 14 35 14.4 +1.7
KRTS Karatas 3.45 67 Pn **Pn** 14 35 14.7 +0.9
KRTS Karatas 3.45 67 *e*Pn **Pn** 14 35 14.7 +0.9
KRTD Karatas-Adana 3.49 67 PN **Pn** 14 35 15.1 +0.8
KRTD Karatas-Adana 3.49 67 *e*Pn **Pn** 14 35 15.1 +0.8
CHBY Cihanbeyli 3.50 19 PN **Pn** 14 35 16.7 +2.1
CHBY Cihanbeyli 3.50 19 *e*Pn **Pn** 14 35 16.7 +2.1
KARP Karpathos 3.50 276 *e*Pn **Pn** 14 35 14.6 0.0
KARP S **Sn** 14 35 53.5 -1.4
KARP Karpathos 3.50 276 P **Pn** 14 35 14.8 +0.3
KARP S **Sn** 14 35 52.6 -2.3
KARP Karpathos 3.50 276 P **Pn** 14 35 14.8 +0.3
KARP S **Sn** 14 35 53.5 -1.4
KARA Karaisali 3.53 55 PN **Pn** 14 35 16.2 +1.3
KARA Karaisali 3.53 55 *e*Pn **Pn** 14 35 16.2 +1.3
YURE YUREGIR 3.74 64 PN **Pn** 14 35 18.8 +1.0
YURE YUREGIR 3.74 64 ⇑*i*P **Pn** 14 35 18.8 +1.0
YURE *i*S **Sn** 14 36 04.4 +3.7
YURE YUREGIR 3.74 64 P **Pn** 14 35 18.8 +1.0
YURE S **Sn** 14 36 04.4 +3.7
DQRL Deir Qamar 3.76 113 *e*P **Pn** 14 35 17.2 -0.9
BODT Bodrum 3.78 299 P **Pn** 14 35 17.6 -0.8
BODT Bodrum 3.78 299 P **Pn** 14 35 17.2 -1.2
BODT Bodrum 3.78 299 P **Pn** 14 35 17.6 -0.8
HNTI Hanita 3.79 124 Pn **Pn** 14 35 19.0 +0.4
HNTI Hanita 3.79 124 Pn **Pn** 14 35 19.0 +0.4
GULA Gulagac 3.80 35 PN **Pn** 14 35 20.4 +1.7
GULA Gulagac 3.80 35 *e*Pn **Pn** 14 35 20.4 +1.7
NIG Nigde 3.81 41 PN **Pn** 14 35 20.4 +1.4
NIG Nigde 3.81 41 *e*Pn **Pn** 14 35 20.4 +1.4
HWQ Hawqa 3.85 104 *e*P **Pn** 14 35 19.9 +0.5
YAYL Yayladag 3.88 77 PN **Pn** 14 35 20.9 +1.1
YAYL Yayladag 3.88 77 *i*P **Pn** 14 35 20.2 +0.4
YAYL *i*S **Sn** 14 36 05.6 +1.2
YAYL Yayladag 3.88 77 P **Pn** 14 35 20.2 +0.4
YAYL Yayladag 3.88 77 *e*Pn **Pn** 14 35 20.9 +1.1
YAYL S **Sn** 14 36 05.6 +1.2
MANT Manisa 3.95 325 *e*Pn **Pn** 14 35 20.7 -0.2
MANT Manisa 3.95 325 *e*Pn **Pn** 14 35 20.7 -0.2
OFRI 'Ofer 3.97 131 Pn **Pn** 14 35 20.9 -0.1
OFRI Sn **Sn** 14 36 04.6 -1.8
OFRI 'Ofer 3.97 131 Pn **Pn** 14 35 20.9 -0.1
MMA0B Mount Meron ar 3.99 123 Pn **Pn** 14 35 21.2 -0.1
MMA0B Sn **Sn** 14 36 06.5 -0.6
MMA0B Mount Meron ar 3.99 123 Pn **Pn** 14 35 21.2 -0.1
MMAI Mount Meron Ar 3.99 123 Pn **Pn** 14 35 21.0 -0.3
26nm,0.3s,baz=320,slow=11,SNR=63
MMAI Sn **Sn** 14 36 03.0 -4.0
95nm,0.3s,baz=66,slow=12,SNR=11
TAHT Tahtakopru-Hat 4.01 73 PN **Pn** 14 35 22.7 +1.1
TAHT Tahtakopru-Hat 4.01 73 *e*Pn **Pn** 14 35 22.7 +1.1
BLGI Bet Lehem HaGe 4.02 128 Pn **Pn** 14 35 22.0 +0.3
BLGI Bet Lehem HaGe 4.02 128 Pn **Pn** 14 35 22.0 +0.3
RCY Rachaya 4.05 115 *e*P **Pn** 14 35 21.9 -0.3
SHBL Chebaa 4.05 117 *e*P **Pn** 14 35 22.4 +0.1
KSDI Kefar Szold 4.07 120 Pn **Pn** 14 35 22.5 +0.1
KSDI Kefar Szold 4.07 120 Pn **Pn** 14 35 22.5 +0.1
SLTI Sal'it 4.27 134 Pn **Pn** 14 35 25.4 +0.4
SLTI Sal'it 4.27 134 Pn **Pn** 14 35 25.4 +0.4
ZKR Zakros 4.28 269 P **Pn** 14 35 25.2 0.0
ZKR S **Sn** 14 36 10.8 -3.2
ZKR Zakros 4.28 269 P **Pn** 14 35 25.2 0.0
ZKR Zakros 4.28 269 P **Pn** 14 35 25.2 0.0
ZKR S **Sn** 14 36 10.8 -3.2
KSHT Keshet 4.29 121 Pn **Pn** 14 35 26.2 +0.7
KSHT Keshet 4.29 121 Pn **Pn** 14 35 26.2 +0.7
MMLI Mount Malkishu 4.36 129 PN **Pn** 14 35 27.9 +1.5
MMLI Mount Malkishu 4.36 129 Pn **Pn** 14 35 26.4 0.0
MMLI Mount Malkishu 4.36 129 Pn **Pn** 14 35 26.4 0.0
SMG Samos 4.43 305 P **Pn** 14 35 26.8 -0.4
SMG S **Sn** 14 36 14.6 -3.1
SMG Samos 4.43 305 P **Pn** 14 35 26.8 -0.4
SMG Samos 4.43 305 P **Pn** 14 35 26.8 -0.4
SMG S **Sn** 14 36 14.6 -3.1
HMDT Nahal Hemdat 4.55 130 Pn **Pn** 14 35 29.2 +0.2
HMDT Sn **Sn** 14 36 19.5 -1.3
HMDT Nahal Hemdat 4.55 130 Pn **Pn** 14 35 29.2 +0.2
ANTO Ankara 4.71 13 *e*Pn **Pn** 14 35 33.3 +2.1
ANTO Ankara 4.71 13 *e*P **Pn** 14 35 33.3 +2.1
ANTO Ankara 4.71 13 *e*P **Pn** 14 35 33.3 +2.1
RSH 4.71 155 P **Pn** 14 35 30.9 -0.3
baz=157
RSH 4.71 155 P **Pn** 14 35 30.9 -0.3
ANAF Anafi Island 4.72 285 P **Pn** 14 35 31.5 +0.2
ANAF Anafi Island 4.72 285 P **Pn** 14 35 31.5 +0.2
AMAZ Amatzia 4.74 141 Pn **Pn** 14 35 31.6 +0.1
AMAZ Amatzia 4.74 141 Pn **Pn** 14 35 31.6 +0.1
NPS Neapolis 4.76 271 P **Pn** 14 35 32.3 +0.4
NPS S **Sn** 14 36 23.0 -3.0
NPS Neapolis 4.76 271 P **Pn** 14 35 32.3 +0.4
NPS Neapolis 4.76 271 P **Pn** 14 35 32.3 +0.4
NPS S **Sn** 14 36 23.0 -3.0
NPS Neapolis 4.76 271 P **Pn** 14 35 32.3 +0.4
NPS S **Sn** 14 36 23.0 -3.0
BR131 Keskin Array S 4.77 21 *e*Pn **Pn** 14 35 33.1 +1.0
BR131 Keskin Array S 4.77 21 *e*Pn **Pn** 14 35 33.1 +1.0
BRTR Keskin Array B 4.77 21 Pn **Pn** 14 35 34.0 +1.9
1.2nm,0.3s,baz=191,slow=15,SNR=41
BRTR Sn **Sn** 14 36 32.7 +6.3
0.8nm,0.3s,baz=197,slow=19,SNR=4.0
LAST Lasithi 4.88 270 P **Pn** 14 35 33.7 +0.2
LAST S **Sn** 14 36 25.3 -3.6
LAST Lasithi 4.88 270 P **Pn** 14 35 33.9 +0.4
LAST Lasithi 4.88 270 P **Pn** 14 35 33.7 +0.2
LAST S **Sn** 14 36 25.3 -3.6
DSI Dead Sea 4.96 137 Pn **Pn** 14 35 34.9 +0.4
DSI Dead Sea 4.96 137 Pn **Pn** 14 35 34.9 +0.4
YTIR Yattir 4.97 141 Pn **Pn** 14 35 35.1 +0.2
YTIR Yattir 4.97 141 Pn **Pn** 14 35 35.1 +0.2
SANT Santorini 4.98 284 *e*Pn **Pn** 14 35 33.8 -1.0
SANT Santorini 4.98 284 *e*Pn **Pn** 14 35 33.8 -1.0
KZIT Kziot 5.02 149 Pn **Pn** 14 35 35.4 0.0
KZIT Kziot 5.02 149 Pn **Pn** 14 35 35.4 0.0
THR5 Thira Island, 5.07 285 P **Pn** 14 35 36.3 +0.2
THR5 Thira Island, 5.07 285 P **Pn** 14 35 36.3 +0.2
APE Apeiranthos 5.10 292 ⇓*i*P **Pn** 14 35 36.6 +0.1
APE Apeiranthos 5.10 292 *i*P **Pn** 14 35 36.9 +0.4
APE Apeiranthos 5.10 292 *i*P **Pn** 14 35 36.9 +0.4
APE S **Sn** 14 36 33.5 -0.8
MZDA Masada 5.15 139 Pn **Pn** 14 35 37.3 +0.2
MZDA Sn **Sn** 14 36 34.4 -1.0
MZDA Masada 5.15 139 Pn **Pn** 14 35 37.3 +0.2
MZDA Sn **Sn** 14 36 34.4 -1.0
IOSP Ios island 5.19 288 P **Pn** 14 35 37.2 -0.5
IOSP Ios island 5.19 288 P **Pn** 14 35 37.2 -0.5
HHAG Hagoal 5.34 174 P **Pn** 14 35 39.8 0.0
baz=173
HHAG Hagoal 5.34 174 P **Pn** 14 35 39.8 0.0
KOT Kottamia 5.35 176 P **Pn** 14 35 39.2 -0.7
baz=175
KOT Kottamia 5.35 176 P **Pn** 14 35 39.2 -0.7
IDI Anoyia 5.35 272 Pn **Pn** 14 35 39.8 -0.3
3.5nm,0.3s,baz=37,slow=12,SNR=78
IDI Sn **Sn** 14 36 36.4 -4.2
39nm,0.3s,baz=340,slow=22,SNR=14
IDI Anoyia 5.35 272 ⇑*i*P **Pn** 14 35 40.9 +0.9
IDI Anoyia 5.35 272 S **Sn** 14 36 36.3 -4.3
IDI Anoyia 5.35 272 *e*Pn **Pn** 14 35 39.3 -0.7
IDI Sn **Sn** 14 36 36.4 -4.2
IDI Anoyia 5.35 272 *e*Pn **Pn** 14 35 39.3 -0.7
IDI Anoyia 5.35 272 ⇑*i*P **Pn** 14 35 40.9 +0.9
IDI Sn **Sn** 14 36 36.4 -4.2
ASF Jabal al Asfar 5.51 123 Pn **Pn** 14 35 43.2 +1.0
3.8nm,0.3s,baz=283,slow=2.5,SNR=13
ASF Sn **Sn** 14 36 44.6 +0.2
1.7nm,0.3s,baz=165,slow=20,SNR=2.1
HSAF As Saff 5.64 179 P **Pn** 14 35 43.6 -0.4
baz=178
HSAF As Saff 5.64 179 P **Pn** 14 35 43.6 -0.4
GLL Jalalah 5.69 178 P **Pn** 14 35 44.0 -0.6
baz=177
GLL Jalalah 5.69 178 P **Pn** 14 35 44.0 -0.6
HNKL Nakhl 5.75 157 P **Pn** 14 35 44.9 -0.6
baz=158
HNKL S **Sn** 14 36 53.5 +3.1
baz=158
HNKL Nakhl 5.75 157 P **Pn** 14 35 44.9 -0.6
PRNI Paran 5.76 148 Pn **Pn** 14 35 45.2 -0.4
PRNI Paran 5.76 148 Pn **Pn** 14 35 45.2 -0.4
KRMI Paran Flat 5.85 151 Pn **Pn** 14 35 46.8 0.0
KRMI Paran Flat 5.85 151 Pn **Pn** 14 35 46.8 0.0
VAM Vamos 5.91 273 P **Pn** 14 35 47.0 -0.7
VAM Vamos 5.91 273 P **Pn** 14 35 47.0 -0.7
VAM Vamos 5.91 273 P **Pn** 14 35 47.0 -0.7
ZNM Zenema 6.01 168 P **Pn** 14 35 49.3 +0.3
baz=168
ZNM AMP 14 37 00.0
baz=168
ZNM Zenema 6.01 168 P **Pn** 14 35 49.3 +0.3
IMMV Iera Moni Meta 6.09 274 P **Pn** 14 35 50.5 +0.4
IMMV Iera Moni Meta 6.09 274 P **Pn** 14 35 50.5 +0.4
MBRI Mt Berech 6.21 151 Pn **Pn** 14 35 51.7 -0.1
MBRI Mt Berech 6.21 151 Pn **Pn** 14 35 51.7 -0.1
EIL Elat 6.33 151 Pn Pn 14 35 59.2 +5.8
3.3nm,0.3s,baz=316,slow=2.5,SNR=46
EIL Sn **Sn** 14 37 07.9 +3.2
3.7nm,0.3s,baz=12,slow=17,SNR=3.3
EIL Elat 6.33 151 Pn **Pn** 14 35 52.8 -0.6
EIL Elat 6.33 151 Pn **Pn** 14 35 52.8 -0.6
EIL Sn **Sn** 14 37 07.9 +3.2
HQLS 6.71 152 P **Pn** 14 35 58.2 -0.4
HQLS S **Sn** 14 37 08.3 -5.7
NUB 6.80 156 P **Pn** 14 35 59.4 -0.5
baz=157
HAQS Haql 6.88 154 P **Pn** 14 36 00.3 -0.6
ALN Alexandroupoli 7.04 324 *e*Pn **Pn** 14 36 05.2 +2.1
ALN Alexandroupoli 7.04 324 *e*P **Pn** 14 36 05.2 +2.1
ALN Alexandroupoli 7.04 324 *e*P **Pn** 14 36 05.2 +2.1
HKAT Jabal Katrina 7.08 161 P **Pn** 14 36 03.0 -0.9
baz=162
HKAT Jabal Katrina 7.08 161 P **Pn** 14 36 03.0 -0.9
JLOS 7.38 151 P **Pn** 14 36 07.1 -0.8
SWA2 7.86 222 P **Pn** 14 36 11.8 -2.6
baz=219
SWA2 7.86 222 P **Pn** 14 36 11.8 -2.6
AGG Agios Georgios 8.17 300 *e*Pn **Pn** 14 36 19.8 +1.1
AGG Agios Georgios 8.17 300 *e*P **Pn** 14 36 19.8 +1.1
AGG Agios Georgios 8.17 300 *e*P **Pn** 14 36 19.8 +1.1
LIT Litokhoron 8.57 307 *e*Pn **Pn** 14 36 25.1 +1.0
LIT Litokhoron 8.57 307 *e*P **Pn** 14 36 25.1 +1.0
LIT Litokhoron 8.57 307 *e*P **Pn** 14 36 25.1 +1.0
FNA Florina 9.65 308 *e*Pn **Pn** 14 36 40.3 +1.3
FNA Florina 9.65 308 *e*P **Pn** 14 36 40.3 +1.3
FNA Florina 9.65 308 *e*P **Pn** 14 36 40.3 +1.3
VTS Vitosha 9.71 321 *e*Pn **Pn** 14 36 40.9 +1.0
VTS Vitosha 9.71 321 *e*P **Pn** 14 36 40.9 +1.0
VTS Vitosha 9.71 321 *e*P **Pn** 14 36 40.9 +1.0
IGT Igoumenitsa 9.80 299 P **Pn** 14 36 43.4 +2.5
IGT Igoumenitsa 9.80 299 P **Pn** 14 36 43.4 +2.5
MLR Muntele Rosu 11.02 339 Pn **Pn** 14 36 59.4 +1.6
0.0nm,0.3s,baz=128,slow=19,SNR=2.0
VRI Vrincioaia 11.16 343 ⇑*i*P **Pn** 14 37 03.2 +3.6
VRI Vrincioaia 11.16 343 ⇑P **Pn** 14 37 03.2 +3.6
VRI Vrincioaia 11.16 343 P **Pn** 14 37 03.2 +3.6
GNI Garni 11.60 61 *i*P **Pn** 14 37 08.2 +2.4
GNI Garni 11.60 61 *i*P **Pn** 14 37 08.2 +2.4
NEY Neytrino 11.82 44 *c*eP Pn 14 37 14.1 +5.3
KBZ Khabaz 12.22 43 Pn **Pn** 14 37 16.0 +2.0
0.1nm,0.3s,baz=233,slow=14,SNR=2.4
KIV Kislovodsk 12.25 42 *e*P **Pn** 14 37 19.2 +4.6
KIV pmax pmax
comp=Z,8.0nm,1.1s
KVAR Kislovodsk Arr 12.26 42 Pn **Pn** 14 37 12.6 -2.1
baz=339,slow=8.6,SNR=1.9
TIP Timpagrande 12.33 293 ⇓*i*P **Pn** 14 37 12.5 -3.1
TIP Timpagrande 12.33 293 *e*Pn **Pn** 14 37 12.9 -2.7
TIP Timpagrande 12.33 293 *e*Pn **Pn** 14 37 12.9 -2.7
DIVS Divibare 12.45 318 *e*Pn **Pn** 14 37 18.1 +0.8
DIVS Divibare 12.45 318 *e*Pn **Pn** 14 37 18.1 +0.8
CUC Castrocucco 13.24 295 *e*Pn **Pn** 14 37 25.3 -2.7
CUC Castrocucco 13.24 295 *e*Pn **Pn** 14 37 25.3 -2.7
BLY Banja Luka 14.43 315 *e*Pn **Pn** 14 37 45.3 +1.1
BLY Banja Luka 14.43 315 *e*Pn **Pn** 14 37 45.3 +1.1
KIEV Kiev 15.49 355 *e*P **P** 14 38 03.6 +1.2
comp=Z,10nm,0.8s
KIEV Kiev 15.49 355 *c*i*P* **P** 14 38 05.3 +2.9
KIEV Kiev 15.49 355 *e*P **P** 14 38 03.6 +1.2
comp=Z,10nm,0.8s
AKASG Malin Array Be 15.50 355 Pn **Pn** 14 37 57.2 -1.2
comp=Z,1.0nm,0.3s,baz=214,slow=13,SNR=4.8
AKBB Malin Array Si 15.50 355 *e*Pn **P** 14 38 05.3 +2.9
comp=Z,10nm,0.8s
AKBB Malin Array Si 15.50 355 *e*P **P** 14 38 05.4 +2.9
AKBB pmax pmax
comp=Z,11nm,0.8s
AKBB Malin Array Si 15.50 355 *e*P **P** 14 38 05.4 +2.9
comp=Z,11nm,0.8s
MODS Modra-Piesok 16.77 326 *e*P **P** 14 38 16.7 +0.1
MODS pmax pmax
comp=Z,19nm,1.5s
MODS Modra-Piesok 16.77 326 *e*P **P** 14 38 16.7 +0.1
KBA Koelnbreinsper 17.96 317 P **P** 14 38 29.7 -0.3
KBA Koelnbreinsper 17.96 317 P **P** 14 38 29.7 -0.3
KEST Kesra 17.99 278 P **P** 14 38 30.1 -0.2
comp=Z,0.1nm,0.3s,baz=275,slow=12,SNR=2.2
GEA0 GERESS Array S 18.83 321 *e*P **P** 14 38 39.1 -0.3
GEA0 GERESS Array S 18.83 321 *e*P **P** 14 38 39.1 -0.3
GEC2 GERESS Array S 18.83 321 *e*P **Pn** 14 38 39.8 -0.3
comp=Z,6.7nm,0.9s
GEC2 GERESS Array S 18.83 321 *e*P **Pn** 14 38 39.8 -0.3
GEC2 pmax pmax
comp=Z,7.0nm,0.9s
GERES GERESS Array B 18.83 321 P **P** 14 38 39.5 0.0
comp=Z,1.1nm,0.3s,baz=128,slow=11,SNR=9.5
KHC Kasperske Hory 19.08 322 *e*P **P** 14 38 42.0 -0.1
comp=Z,3.6nm,0.8s
KHC Kasperske Hory 19.08 322 *e*P **P** 14 38 42.0 -0.1
KHC pmax pmax
comp=Z,4.0nm,0.8s
KHC Kasperske Hory 19.08 322 *e*P **P** 14 38 42.0 -0.1
comp=Z,3.6nm,0.8s
WET Wettzell 19.44 321 P **P** 14 38 46.4 +0.3
WET pmax pmax
comp=Z,12nm,0.9s
WET Wettzell 19.44 321 P **P** 14 38 46.4 +0.3
comp=Z,12nm,0.9s
BRG Berggiesshubel 20.07 326 *e*P **P** 14 38 52.6 -0.3
comp=Z,8.5nm,1.4s
BRG Berggiesshubel 20.07 326 *e*P **P** 14 38 52.6 -0.3
BRG pmax pmax
comp=Z,9.0nm,1.4s
OBN Obninsk 20.15 9 ⇓*e*P Pn 14 38 59.6 +3.9
OBN *e*S **S** 14 42 30.1 -8.0
OBN 14 43 00.0
NKC Novy Kostel 20.35 323 P Pn 14 38 58.9 +0.8
NKC pmax pmax
comp=Z,4.0nm,1.1s
NKC Novy Kostel 20.35 323 P Pn 14 38 58.9 +0.8
comp=Z,4.0nm,1.1s
CLL Collm 20.80 326 *e*P Pn 14 39 05.0 +1.7
CLL *e*pP sP 14 39 16.0 +2.9
CLL *e*sP pP 14 39 22.0 +13
CLL Collm 20.80 326 *e*P Pn 14 39 05.0 +1.7
CLL *e* 14 39 16.0
KLNR Kaliningrad 20.84 341 *i*P Pn 14 39 04.9 +1.2
KLNR pmax pmax
comp=Z,268nm,0.9s
MOX Moxa 21.02 323 P **P** 14 39 02.7 -0.5
MOX pmax pmax
comp=Z,12nm,1.1s
GEYT Alibeck 21.56 75 P **P** 14 39 10.5 +1.4
comp=Z,99nm,0.6s,baz=247,slow=10,SNR=7.7
AKTO Aktyubinsk 24.50 44 P **P** 14 39 37.8 -0.8
comp=Z,1.4nm,0.3s,baz=233,slow=6.3,SNR=5.6
ABKAR Akbulak array 25.12 47 *e*P **P** 14 39 43.3 -0.9
ABKAR Akbulak array 25.12 47 *e*P **P** 14 39 43.3 -0.9
TAM Tamanrasset 25.76 248 P **P** 14 39 50.9 +0.5
KLMR Klimovskoe 26.12 9 *e*P **P** 14 39 55.2 +2.2
KLMR pmax pmax
comp=Z,12nm,1.0s
KLMR Klimovskoe 26.12 9 *e*P **P** 14 39 55.3 +2.2
KLMR AMP 14 39 58.7
comp=Z,12nm,1.0s
FINES FINESS Array B 26.41 354 P **P** 14 39 52.7 -3.0
comp=Z,0.8nm,0.4s,baz=172,slow=11,SNR=8.5
HFS Hagfors 27.40 341 P **P** 14 40 03.3 -1.3
comp=Z,4.3nm,1.0s,baz=114,slow=10,SNR=3.2
ARU Arti 28.04 33 P **P** 14 40 09.2 -1.2
comp=Z,1.4nm,0.4s,baz=267,slow=19,SNR=2.7
ARU Arti 28.04 33 *c i*P **P** 14 40 11.9 +1.5
ARU *PP **sP** 14 40 22.9 -0.4
ARU 14 41 00.6
ARU S **S** 14 44 57.7 +4.9
ARU pmax pmax
comp=Z,9.0nm,2.5s
ARU MLR MLR
comp=Z,298nm,21.0s
ESDC Sonseca Array 28.32 290 P **P** 14 40 13.1 0.0
comp=Z,0.1nm,0.4s,baz=82,slow=11,SNR=3.0
EKA Eskdalemuir Ar 31.05 321 P **P** 14 40 36.0 -1.0
comp=Z,0.8nm,0.6s,baz=120,slow=12,SNR=3.7
KK31 Karatay Array 31.06 64 *e*P **P** 14 40 36.7 -0.6
KK31 Karatay Array 31.06 64 *e*P **P** 14 40 36.7 -0.6
KKAR Karatay Array 31.06 64 *e*P **P** 14 40 37.1 -0.2
KKAR Karatay Array 31.06 64 *e*P **P** 14 40 37.1 -0.2
BRVK Borovoye 32.54 45 *i*P **P** 14 40 52.8 +2.6
BRVK pmax pmax
comp=Z,2.0nm,1.0s
OTUK Ortayu 32.76 54 P **P** 14 40 52.5 +0.3
SFK Sufi-Kurgan 33.42 69 P **P** 14 40 58.3 0.0
SFK pmax pmax
comp=Z,3.0nm,0.6s
ARCES ARCESS Array B 34.47 356 P **P** 14 41 05.5 -1.3
comp=Z,1.2nm,0.7s,baz=162,slow=8.4,SNR=7.4
TORD Torodi Ar. Bea 34.72 238 P **P** 14 41 09.8 +0.3
comp=Z,0.2nm,0.4s,baz=52,slow=8.2
KURBB Kurchatov Arra 37.06 51 P **P** 14 41 28.3 -0.9
comp=Z,1.0nm,0.4s,baz=267,slow=8.6,SNR=11
KURK Kurchatov 37.13 51 P **P** 14 41 28.4 -1.4
KURK Kurchatov 37.13 51 *i*P **P** 14 41 30.8 +1.0
KURK pmax pmax
comp=Z,1.0nm,0.8s
MKAR Makanchi Array 39.41 57 P **P** 14 41 48.9 -0.2
comp=Z,1.3nm,0.7s,baz=276,slow=6.7,SNR=13
MKAR Makanchi Array 39.41 57 *e*P **P** 14 41 48.6 -0.5
comp=Z,30nm,1.0s
MK01 Makanchi Array 39.42 57 *e*P **P** 14 41 48.6 -0.6
ZALV Zalesovo Beam 41.22 46 P **P** 14 42 03.2 -0.8
comp=Z,1.0nm,0.3s,baz=264,slow=7.2,SNR=3.9
DGZ Jazzator, Alta 42.75 52 *i*P **P** 14 42 17.1 +0.4
DGZ pmax pmax
comp=Z,1.0nm,0.9s
WMQ Urumqi 43.48 61 *e*P **P** 14 42 26.0 +3.4
WMQ pP pP 14 42 32.5 +0.6
WMQ sP sP 14 42 44.8 +9.1
WMQ pmax pmax
comp=Z,22nm,0.7s
WMQ pmax pmax
comp=Z,290nm,5.9s
WMQ LR LR
comp=N,67nm,15.7s
WMQ LR LR
comp=E,110nm,20.5s
WMQ LR LR
comp=Z,76nm,17.7s
SPITS Spitsbergen Ar 43.49 356 P **P** 14 42 22.3 +0.1
comp=Z,0.8nm,0.4s,baz=146,slow=6.1,SNR=6.5
SONM Songino Array 55.40 52 P **P** 14 43 53.4 -0.2
comp=Z,0.5nm,0.4s,baz=285,slow=7.3,SNR=3.7
ULN Ulaanbaatar 55.81 52 *i*P **P** 14 43 56.6 +0.1
ULN pmax pmax
comp=Z,1.0nm,0.8s
LZH Lanzhou 57.49 66 *e*P **P** 14 44 06.8 -1.8
LZH pP pP 14 44 19.3 +1.1
LZH sP sP 14 44 25.0 +3.1
LZH *e*PP **PP** 14 46 16.0 -0.2
LZH pmax pmax
comp=Z,16nm,1.0s
LZH pmax pmax
comp=Z,41nm,7.6s
LZH LR LR
comp=N,49nm,15.4s
LZH LR LR
comp=E,54nm,15.6s
LZH LR LR
comp=Z,72nm,18.7s
HHC Hu-ho-hao-te 61.25 58 *e*P **P** 14 44 33.5 -1.0
CMAR Chiang Mai Arr 61.44 87 P **P** 14 44 36.6 +0.7
comp=Z,0.3nm,0.3s,baz=295,slow=8.6,SNR=3.2
KLR Kul'dur 70.24 43 *c*e*P* **P** 14 45 30.9 -1.2

*ISCJB **26** 14:36:58.2±0.5, 20°.96S±0°.04×68°.6W±0°.1, h135km±8km, mb4.0/5, Error ellipse: s-maj=17.9km s-min=6.3km az=9.2*
*GUC **26** 14:36:59.5±0.7, 20°.97S×68°.75W, h128km±5km, ML4.2*
*IDC **26** 14:37:00.2±2.4, 20°.91S×68°.36W, h130km±25km, mb3.9/5, mb1 3.8/8, mb1mx3.5/46, mbtmp4.2/8, MS2.9/2, Ms1 2.9/2, ms1mx2.6/37, Error ellipse: s-maj=42.4km s-min=19.0km az=106.0*

ISC 26 14:36:59.0±0.8, 20°.95S±0°.05×68°.7W±0°.1, h130km±9km, n21, σ1.9 04/27, mb4.0/5, 9C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.78**	**263**	⇑*i*P	**Pn**	**14 37 20.2**	**+0.1**
PB01				*i* S	**Sn**	**14 37 35.9**	**-0.2**
PB08	**IPOC Station P**	**0.92**	**330**	⇓*i*P	**Pn**	**14 37 22.6**	**+0.9**
PB08				*i* S	**Sn**	**14 37 39.8**	**+0.9**
PB08				IAML		14 37 40.5	
comp=N,4μm,0.3s							
PB09	**IPOC Station P**	**1.00**	**212**	⇑*i*P	**Pn**	**14 37 22.8**	**+0.6**

PB09 *e*S **Sn** **14 37 40.0 +0.2**
PB02 IPOC Station P 1.21 252 ⇑*i*P **Pn** **14 37 24.5 +0.4**
PB02 *i* S **Sn** **14 37 43.0 -0.2**
PB02 IAML 14 37 44.8
comp=E,8μm,0.5s
PB07 IPOC Station P 1.38 236 ⇑*i*P **Pn** **14 37 26.2 +0.2**
PB07 *i* S **Sn** **14 37 46.0 -0.5**
PB03 IPOC Station P 1.50 223 ⇑*i*P **Pn** **14 37 27.5 +0.3**
PSGC Pisagua 1.92 314 ⇑*i*P **Pn** **14 37 31.8 -0.3**
PSGC *e*S **Sn** **14 37 56.6 -0.8**
PB06 IPOC Station P 1.94 206 ⇑*i*P **Pn** **14 37 32.9 +0.4**
PB06 IAML 14 37 58.1
comp=E,3μm,0.4s
PB04 IPOC Station P 1.96 225 ⇑*i*P **Pn** **14 37 32.6 0.0**
PB04 IAML 14 37 58.4
comp=E,2μm,0.8s
MNMC Minye Minye 2.01 334 ⇑*i*P **Pn** **14 37 34.1 +0.8**
MNMC *i* S **Sn** **14 38 00.9 +1.3**
MNMC *i* S 14 38 01.0
PB05 IPOC Station P 2.38 217 IAML 14 38 07.5
comp=E,1μm,0.9s
LPAZ La Paz 4.66 6 P **Pn** **14 38 10.4 +2.3**
comp=E,3.9nm,0.3s,baz=200,slow=4.5,SNR=65
LPAZ S **Sn** **14 39 01.6 -0.2**
comp=E,0.4nm,0.3s,baz=342,slow=20,SNR=1.8
SIV San Ignacio 8.72 57 P **Pn** **14 38 60.0 -2.4**
comp=E,1.5nm,0.3s,baz=251,slow=14,SNR=22
SIV S Sn 14 40 24.3 -15
comp=E,0.1nm,0.3s,baz=248,slow=17,SNR=1.7
SIV LR LR 14 43 08.6
comp=E,22nm,20.9s,baz=144,slow=44
PLCA Paso Flores 19.79 184 P **Pn** **14 41 20.4 -1.6**
comp=E,0.1nm,0.3s,baz=11,slow=16,SNR=6.1
PTGA Pitinga 21.81 24 P **P** **14 41 39.6 -1.4**
comp=E,4.2nm,0.3s,baz=202,slow=17,SNR=16
DBIC Dimbokro 68.36 74 P **P** **14 47 46.5 -0.4**
comp=E,3.7nm,1.0s,baz=225,slow=10.0,SNR=3.5
QSPA South Pole Qui 69.24 180 P **P** **14 47 53.2 +1.5**
comp=E,0.7nm,0.5s,baz=138,slow=11,SNR=1.8
KOWA Kowa 72.59 67 P **P** **14 48 12.2 -0.3**
comp=E,1.9nm,0.6s,baz=248,slow=9.6,SNR=3.0
TORD Torodi Ar. Bea 76.95 70 P **P** **14 48 37.5 -0.3**
comp=E,1.8nm,0.6s,baz=250,slow=5.0,SNR=21
AFI Afiamalu 96.95 252 LR LR 15 22 59.4
comp=E,21nm,19.6s,baz=134,slow=28
MKAR Makanchi Array 145.05 36 PKP **PKPdf** **14 56 22.1 +1.1**
comp=E,1.0nm,0.5s,baz=332,slow=4.8,SNR=7.1

*ISCJB **26** 15:06:22.4±0.7,0°.95S±0°.06×126°.90E±0°.06,h33km, mb3.6/3,Error ellipse: s-maj=10.1km s-min=6.5km az=142.1*
*DJA **26** 15:06:22.1±1.1,1°.5S±6°×12°.7E±°,h11km±15km,M3.7/6, mB4.8/1,MLv3.7/6,Mw(mB)4.1/1*
*IDC **26** 15:06:26.1±1.4,1°.67S×127°.09E,h0km,mb3.6/3, mb1 3.8/5,mb1mx3.4/52,mbtmp3.6/5,ML3.6/2,Error ellipse: s-maj=44.4km s-min=23.2km az=65.0*
ISC 26 15:06:23.5±1.2,0°.94S±0°.07×126°.91E±0°.06,h35km,n11, σ1§21/12,mb3.6/3,Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**0.66**	**63**	P	**Pn**	**15 06 35.9**	**-0.5**
LBMI				S	**Sn**	**15 06 44.9**	**-0.7**
SANI	**Sanana**	**1.44**	**220**	P	**Pn**	**15 06 45.7**	**-1.5**
SANI				S	**Sn**	**15 07 05.5**	**+0.6**
NLAI	**Namlea**	**2.30**	**175**	P	**Pn**	**15 06 58.1**	**-0.9**
NLAI				S	**Sn**	**15 07 24.5**	**-1.5**
AAI	**Ambon**	**3.02**	**155**	P	**Pn**	**15 07 10.8**	**+1.9**
LUWI	**Luwuk**	**4.14**	**268**	P	**Pn**	**15 07 24.3**	**0.0**
SIJI	**Sorong**	**4.36**	**89**	Pn	Pn	15 07 33.1	+5.8
	2.0nm,0.3s,baz=260,slow=22,SNR=6.4						
SIJI				Sn	Sn	15 08 27.9	+11
	baz=90,slow=20,SNR=2.8						
APSI	**Ampana**	**5.26**	**270**	P	**Pn**	**15 07 40.3**	**+0.6**
WRA	**Warramunga Arr**	**20.24**	**159**	P	**P**	**15 10 54.9**	**-1.0**
	0.2nm,0.3s,baz=340,slow=11,SNR=20						
ASAR	**Alice Springs**	**23.59**	**164**	P	**P**	**15 11 31.0**	**-0.4**
	1.5nm,0.8s,baz=348,slow=11,SNR=13						
STKA	**Stephens Creek**	**33.76**	**157**	P	**P**	**15 13 03.3**	**+1.3**
	1.3nm,0.7s,baz=340,slow=12,SNR=3.2						
MKAR	**Makanchi Array**	**61.50**	**327**	P	P	15 16 49.5	+13
	0.2nm,0.5s,baz=109,slow=11,SNR=2.7						

JMA 26 15:18:02.9±0.1,36°.93N×141°.09E,h31km±1km,M1.8, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.29**	**306**	P	Pb	15 18 10.1	-0.3
ONAJ				S	Sb	15 18 15.2	-0.3
JFK	**Kawauchi**	**0.47**	**339**	P	Pb	15 18 12.5	-0.4
JFK				S	Sb	15 18 18.9	-0.9
JHO	**Hitachi**	**0.53**	**233**	P	Pb	15 18 13.4	-0.4
JHO				S	Sb	15 18 21.0	-0.2
JFT	**Otama**	**0.84**	**315**	P	Pb	15 18 19.1	+0.1
JFT				S	Sb	15 18 30.4	+0.4
JMM	**Marumori**	**0.96**	**346**	P	Pn	15 18 20.1	-0.2
JMM				S	Sn	15 18 32.3	-0.6
JYT	**Yasato**	**1.01**	**226**	P	Pn	15 18 21.0	+0.1
JYT				S	Sn	15 18 33.7	-0.2
JFY	**Yanaizu**	**1.21**	**294**	P	Pb	15 18 25.1	0.0

*ISCJB **26** 15:18:21.1±0.5,7°.23N±0°.04×126°.61E±0°.06,h149km±3km, mb4.0/25,Error ellipse: s-maj=10.3km s-min=6.9km az=179.5*
*IDC **26** 15:18:22.4±0.8,7°.22N×126°.57E,h145km±6km,mb3.8/21, mb1 3.8/22,mb1mx3.7/57,mbtmp4.2/22,Error ellipse: s-maj=17.8km s-min=11.1km az=83.0*
*MAN **26** 15:18:22.1,7°.16N×126°.54E,h134km,mb4.6,ML3.4, MS3.3*
*NEIC **26** 15:18:23.0±0.9,7°.26N×126°.52E,h150km±9km,mb4.4/3, Error ellipse: s-maj=15.0km s-min=7.8km az=77.0*
*DJA **26** 15:18:30.0±0.7,6°N±4°×12°6E±°,h10km,M4.6/4,mB4.7/2, mb4.6/2,MLv4.6/4,Mw(mB)4.0/2*
ISC 26 15:18:22.6±0.7,7°.21N±0.05×126°.59E±0°.08,h148km±6km, n48,σ1§32/57,mb4.1/25,4D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.42**	**232**	*e*P	**Pn**	**15 18 42.0**	**-1.4**
MATI				*e*S	**Sn**	**15 18 58.0**	**-1.2**
BIPH	**Bislig**	**0.99**	**347**	‖*e*P	**Pn**	**15 18 46.9**	**-0.2**
BIPH				*e*S	**Sn**	**15 19 03.9**	**-2.0**
DAV	**Davao City (W)**	**1.02**	**262**	P	**Pn**	**15 18 47.2**	**-0.1**
	420nm,0.3s,baz=248,slow=0.3,SNR=25						
DAV				S	**Sn**	**15 19 05.1**	**-1.0**
	180nm,0.3s,baz=281,slow=21,SNR=7.6						
DMPH	**Davao City--Mi**	**1.08**	**263**	‖*e*P	**Pn**	**15 18 50.7**	**+2.7**
DMPH				*e*S	**Sn**	**15 19 09.9**	**+2.6**
BUKP	**Musuan**	**1.66**	**294**	*e*P	**Pn**	**15 18 53.2**	**-0.6**
BUKP				*e*S	**Sn**	**15 19 16.2**	**-1.5**
BUTP	**Butuan**	**2.00**	**331**	*e*P	**Pn**	**15 18 57.7**	**+0.1**
BUTP				*e*S	**Sn**	**15 19 28.6**	**+4.1**
SKMP	**Bagumbayan, Su**	**2.15**	**251**	*e*P	**Pn**	**15 18 57.4**	**-2.0**
SKMP				*e*S	**Sn**	**15 19 29.2**	**+1.6**
CTBH	**Cotabato--PC H**	**2.33**	**270**	‖*i*P	**Pn**	**15 19 00.1**	**-1.4**
PAGZ	**Pagadian**	**3.25**	**281**	*e*P	**Pn**	**15 19 12.5**	**-0.6**
OCLP	**Ormoc**	**4.29**	**333**	*e*P	Pn	15 19 13.9	-13
OCLP				*e*S	**Sn**	**15 20 15.4**	**-1.1**
MRSI	**Marisa**	**8.14**	**215**	P	**Pn**	**15 20 17.3**	**-0.7**
BATI	**Baumata**	**17.55**	**190**	P	**P**	**15 22 17.0**	**-0.2**
	1.4nm,0.3s,baz=37,slow=10,SNR=2.4						
CBIJ	**Chichi jima**	**24.71**	**35**	P	**P**	**15 23 29.4**	**-0.8**
JCJ	**Chichijima**	**24.71**	**35**	P	**P**	**15 23 29.4**	**-0.8**
	20nm,0.4s,baz=270,slow=20						
FITZ	**Fitzroy Crossi**	**25.16**	**182**	P	**P**	**15 23 34.2**	**-0.1**
	2.3nm,1.0s,baz=9.7,slow=8.3,SNR=7.9						
ENH	**Enshi**	**28.00**	**327**	*e*P	**P**	**15 24 00.6**	**+0.8**
	7.0nm,0.8s						
WRAB	**Tennant Creek**	**28.03**	**164**	P	**P**	**15 24 02.6**	**+2.6**
WRA	**Warramunga Arr**	**28.04**	**164**	P	**P**	**15 24 01.4**	**+1.2**
	0.4nm,0.9s,baz=345,slow=10,SNR=5.3						
CMAR	**Chiang Mai Arr**	**29.14**	**295**	P	**P**	**15 24 09.4**	**-0.5**
	0.5nm,0.5s,baz=92,slow=7.4,SNR=4.5						
MJAR	**Matsushiro Arr**	**31.06**	**18**	P	**P**	**15 24 25.5**	**-1.3**
	0.6nm,0.5s,baz=80,slow=8.7,SNR=3.6						
ASAR	**Alice Springs**	**31.51**	**167**	P	**P**	**15 24 30.5**	**-0.3**
	0.3nm,0.4s,baz=346,slow=6.8,SNR=8.0						
ASAR				PcP	**PcP**	**15 27 20.1**	**-0.2**
	0.4nm,0.4s,baz=347,slow=2.7,SNR=6.0						
USRK	**Ussuriysk Ar.**	**37.15**	**6**	P	**P**	**15 25 18.2**	**-0.8**
	1.1nm,0.7s,baz=164,slow=6.9,SNR=4.1						
ASAJ	**Asahikawa**	**39.34**	**18**	P	**P**	**15 25 38.6**	**+1.3**
	2.2nm,0.4s,baz=228,slow=9.7,SNR=6.0						
STKA	**Stephens Creek**	**41.42**	**161**	P	**P**	**15 25 57.2**	**+2.5**
	1.1nm,0.7s,baz=334,slow=5.6,SNR=4.1						
ULN	**Ulaanbaatar**	**43.80**	**341**	*e*P	**P**	**15 26 13.9**	**+0.1**
	1.7nm,0.5s						
PETK	**Petropavlovsk-**	**52.29**	**23**	P	**P**	**15 27 20.1**	**+1.3**
	1.2nm,0.6s,baz=193,slow=4.5						
MKAR	**Makanchi Array**	**54.66**	**324**	P	**P**	**15 27 36.8**	**+0.6**
	5.3nm,0.4s,baz=116,slow=7.5,SNR=88						
MKAR				PcP	**PcP**	**15 28 37.8**	**+0.5**
	1.0nm,0.7s,baz=114,slow=2.9,SNR=5.4						
NIL	**Nilore**	**55.74**	**306**	*e*P	**P**	**15 27 43.8**	**-0.5**
	13nm,0.6s						
KZA	**Kyzart**	**57.00**	**316**	P	**P**	**15 27 54.7**	**+1.2**
	SNR=5.1						
TKM2	**Tokmak 2**	**57.09**	**317**	P	**P**	**15 27 53.6**	**-0.3**
	SNR=7.9						
ZALV	**Zalesovo Beam**	**57.46**	**332**	P	**P**	**15 27 55.5**	**-0.4**
	1.7nm,0.3s,baz=128,slow=6.1,SNR=8.8						
UCH	**Uchtor**	**57.56**	**316**	P	**P**	**15 27 58.9**	**+1.5**
	SNR=7.4						
USP	**Ospenovka**	**57.97**	**317**	P	**P**	**15 28 00.2**	**+0.5**
	SNR=5.6						
AML	**Almayashu**	**58.09**	**316**	P	**P**	**15 28 02.2**	**+1.1**
	SNR=5.8						
EKS2	**Erkin-Say**	**58.23**	**316**	P	**P**	**15 28 02.1**	**+0.4**
	SNR=6.3						
KURK	**Kurchatov**	**58.77**	**326**	*e*P	**P**	**15 28 04.8**	**-0.2**
KURBB	**Kurchatov Arra**	**58.77**	**326**	P	**P**	**15 28 05.6**	**+0.5**
	5.7nm,0.7s,baz=123,slow=7.3,SNR=47						
BVAR	**Borovoye Array**	**64.36**	**326**	P	**P**	**15 28 43.2**	**+0.7**
	5.3nm,0.6s,baz=130,slow=7.8,SNR=26						
AKTO	**Aktyubinsk**	**70.88**	**321**	P	**P**	**15 29 23.3**	**-0.2**
	4.2nm,0.6s,baz=83,slow=10,SNR=12						
ILAR	**Eielson Array**	**82.04**	**26**	P	**P**	**15 30 26.1**	**+0.1**
	0.4nm,0.5s,baz=226,slow=5.4,SNR=6.2						
SPITS	**Spitsbergen Ar**	**87.06**	**349**	P	**P**	**15 30 49.8**	**-1.3**
	1.0nm,0.5s,baz=57,slow=11,SNR=3.1						
MMAI	**Mount Meron Ar**	**87.12**	**303**	P	**P**	**15 30 53.3**	**+1.0**
	1.1nm,0.4s,baz=67,slow=8.0,SNR=2.6						
ARCES	**ARCESS Array B**	**87.16**	**340**	P	**P**	**15 30 50.9**	**-0.7**
	5.4nm,1.2s,baz=96,slow=5.6,SNR=8.8						
BRTR	**Keskin Array B**	**87.71**	**310**	P	**P**	**15 30 53.8**	**-1.3**
	0.5nm,0.4s,baz=97,slow=2.5,SNR=3.8						
FINES	**FINESS Array B**	**88.72**	**332**	P	**P**	**15 30 58.4**	**-0.7**
	0.7nm,0.4s,baz=38,slow=4.2,SNR=7.5						
HFS	**Hagfors**	**94.89**	**332**	P	**P**	**15 31 27.1**	**-0.7**
	2.1nm,0.8s,baz=76,slow=7.7,SNR=3.1						
SYO	**Syowa Base**	**95.60**	**201**	‖*e*X	**P**	**15 31 28.5**	**-2.2**
TORD	**Torodi Ar. Bea**	**121.65**	**290**	PKP	**PKPdf**	**15 36 59.3**	**-0.6**
	0.3nm,0.3s,baz=96,slow=1.9						

*ISCJB **26** 15:18:27.8±1.2,37°.25N±0°.07×42°.56E±0°.05,h2km±9km, Error ellipse: s-maj=11.7km s-min=6.4km az=17.9*
*CSEM **26** 15:18:27.7±0.4,37°.26N×42°.58E,h2km,ML2.8,Error ellipse: s-maj=10.8km s-min=4.4km az=20.0*
*ISK **26** 15:18:28.1,37°.30N×42°.55E,h5km,ML2.8/3*
*DDA **26** 15:18:28.2,37°.40N×42°.59E,h7km,Ml2.7*
ISC 26 15:18:28.5±1.3,37°.30N±0°.06×42°.61E±0°.03,h4km±11km, n17,σ0§86/26,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRT	**Sirnak**	**0.24**	**325**	PG	**Pg**	**15 18 33.1**	**-0.1**
SIRT				SG	**Sg**	**15 18 36.8**	**+0.3**
SIRT	**Sirnak**	**0.24**	**325**	*e*Pg	**Pg**	**15 18 33.1**	**-0.1**
SIRT				*e*Sg	**Sg**	**15 18 36.8**	**+0.3**
CUKT	**Cukurca**	**0.79**	**93**	*i* P	**Pg**	**15 18 43.0**	**-0.7**
CUKT				*i* S	**Sn**	**15 19 00.6**	**+1.7**
CUKT	**Cukurca**	**0.79**	**93**	P	**Pg**	**15 18 43.0**	**-0.7**
SRTM	**Siirt_Merkez**	**0.88**	**322**	*i* P	**Pg**	**15 18 45.1**	**-0.3**
SRTM				*i* S	**Sn**	**15 19 02.5**	**+1.5**
SRTM	**Siirt_Merkez**	**0.88**	**322**	P	**Pg**	**15 18 45.1**	**-0.3**
HAKT	**HAKKARI**	**0.91**	**73**	*i* P	**Pg**	**15 18 45.7**	**-0.2**
HAKT				*i* S	**Sn**	**15 19 01.6**	**-0.2**
HAKT	**HAKKARI**	**0.91**	**73**	P	**Pg**	**15 18 45.7**	**-0.2**
HAKT				S	**Sn**	**15 19 01.6**	**-0.2**
GURO	**Guroymak-BITLI**	**1.33**	**340**	PN	**Pb**	**15 18 53.8**	**-0.3**
GURO				SN	**Sn**	**15 19 12.4**	**+0.2**
GURO	**Guroymak-BITLI**	**1.33**	**340**	*e*Pn	**Pb**	**15 18 53.8**	**-0.3**
GURO				*e*Sn	**Sn**	**15 19 12.4**	**+0.2**
YOVA	**Hakkari_Y¨...kse**	**1.36**	**77**	*i* P	**Pg**	**15 18 55.4**	**+0.8**
YOVA	**Hakkari_Y¨...kse**	**1.36**	**77**	P	**Pg**	**15 18 55.4**	**+0.8**
SVAN	**Silvan-Diyarba**	**1.41**	**308**	PN	**Pb**	**15 18 54.5**	**-0.8**
SVAN	**Silvan-Diyarba**	**1.41**	**308**	*e*Pn	**Pb**	**15 18 54.5**	**-0.8**
MARD	**Mardin**	**1.46**	**271**	*i* P	**Pb**	**15 18 55.5**	**-0.8**
MARD				*i* S	**Sg**	**15 19 17.8**	**+2.4**
MAZI	**Mazidag**	**1.73**	**276**	PN	**Pn**	**15 18 58.9**	**-0.5**
MAZI	**Mazidag**	**1.73**	**276**	*e*Pn	**Pn**	**15 18 58.9**	**-0.5**

*ISCJB **26** 15:22:07.2±0.5,47°.51N±0°.07×146°.7E±0°.2,h450km, mb3.4/8,Error ellipse: s-maj=15.8km s-min=6.2km az=28.0*
*IDC **26** 15:22:07.9±2.0,48°.03N×146°.40E,h427km±33km,mb3.0/8, mb1 3.2/11,mb1mx2.9/68,mbtmp3.8/11,Error ellipse: s-maj=34.9km s-min=15.8km az=170.0*
ISC 26 15:22:07.6±0.7,47°.47N±0°.09×146°.6E±0°.1,h450km,n27, σ2§08/32,mb3.5/8,Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JRA	**Rausu**	**3.69**	**197**	P	**P**	**15 23 22.0**	**+1.9**
JSE	**Soyaes**	**3.77**	**230**	P	**P**	**15 23 22.9**	**+2.2**
JWK2	**Keihoku**	**3.92**	**239**	P	**P**	**15 23 24.5**	**+2.5**
JTKR	**Abashiri--Toko**	**3.98**	**210**	P	**P**	**15 23 24.9**	**+2.3**
NEM2	**Nemuro 2**	**4.15**	**189**	P	P	15 23 23.9	-0.2
NEM2				*e*S	**S**	**15 24 25.4**	**-0.9**
ASAJ	**Asahikawa**	**4.38**	**222**	P	**P**	**15 23 28.7**	**+2.5**
	1.5nm,0.3s,baz=50,slow=5.8,SNR=28						
JKK2	**Kamakawa 2**	**4.51**	**219**	P	**P**	**15 23 30.4**	**+3.0**
JAR	**Ashorobuto**	**4.63**	**207**	P	**P**	**15 23 30.3**	**+1.8**
JAK	**Akkeshi**	**4.67**	**198**	P	**P**	**15 23 29.0**	**+0.1**
JAK				*e*S	**S**	**15 24 33.7**	**-1.4**
JFR	**Furan**	**5.16**	**215**	P	**P**	**15 23 35.9**	**+2.3**
JCH	**Churui**	**5.38**	**207**	P	**P**	**15 23 35.7**	**0.0**
JCH				*e*S	**S**	**15 24 45.5**	**-2.0**
JNBK	**Urakawa-nobuka**	**5.87**	**209**	P	**P**	**15 23 41.0**	**+0.4**
JNBK				*e*S	**S**	**15 24 54.8**	**-1.8**
JEW	**Eniwo**	**5.90**	**220**	P	**P**	**15 23 43.2**	**+2.3**
JSK	**Shakotan**	**5.98**	**229**	P	**P**	**15 23 44.2**	**+2.6**
JKB	**Kayabe**	**6.86**	**218**	P	**P**	**15 23 51.3**	**+0.5**
JKB				*e*S	**S**	**15 25 12.3**	**-3.0**
JOT	**Ohata**	**7.28**	**215**	P	**P**	**15 23 56.0**	**+0.7**
JOT				*e*S	**S**	**15 25 20.6**	**-2.9**
JOSM	**Okushiri--Mats**	**7.41**	**226**	P	**P**	**15 23 58.1**	**+1.4**
MJAR	**Matsushiro Arr**	**12.58**	**213**	P	**P**	**15 24 56.9**	**+4.1**
	0.3nm,0.3s,baz=8.4,slow=11,SNR=4.0						
KSRS	**Korea Array**	**17.01**	**241**	P	**P**	**15 25 42.8**	**+2.9**
	0.1nm,0.3s,baz=47,slow=11,SNR=4.8						
ILAR	**Eielson Array**	**38.76**	**39**	P	**P**	**15 28 50.5**	**-0.8**
	0.9nm,0.5s,baz=250,slow=6.1,SNR=12						
MKAR	**Makanchi Array**	**42.65**	**294**	P	**P**	**15 29 21.7**	**-1.0**
	0.8nm,0.5s,baz=41,slow=5.1,SNR=5.8						
KURBB	**Kurchatov Arra**	**43.33**	**301**	P	**P**	**15 29 26.7**	**-1.3**
	1.1nm,0.4s,baz=72,slow=8.9,SNR=7.4						
INK	**Inuvik**	**43.41**	**32**	P	**P**	**15 29 26.8**	**-1.6**
	1.0nm,0.3s,baz=315,slow=10.0,SNR=4.6						
YKA	**Yellowknife Ar**	**52.94**	**35**	P	**P**	**15 30 39.3**	**-0.6**
	0.4nm,0.5s,baz=298,slow=6.9,SNR=2.9						
FINES	**FINESS Array B**	**61.41**	**332**	P	**P**	**15 31 36.4**	**-1.8**
	0.9nm,0.5s,baz=39,slow=9.8,SNR=5.8						
NVAR	**Mina Array Bea**	**65.94**	**59**	P	**P**	**15 32 09.3**	**+1.2**
	0.3nm,0.6s,baz=296,slow=6.4,SNR=5.4						
TXAR	**Lajitas Array**	**80.89**	**56**	P	**P**	**15 33 35.6**	**+1.8**
	0.5nm,0.4s,baz=294,slow=3.8,SNR=11						

*ATH **26** 15:37:03.2,36°.08N×22°.17E,h16km±1km,ML3.2/9,Error ellipse: s-maj=3.2km s-min=1.3km az=36.0*
*CSEM **26** 15:37:03.2±0.3,36°.05N×22°.16E,h2km,ML3.2,Error ellipse: s-maj=6.1km s-min=2.6km az=36.0*
*THE **26** 15:37:04.0,36°.06N×22°.19E,h2km±1km,ML3.2/9,Error ellipse: s-maj=2.0km s-min=0.7km az=39.0*
*IDC **26** 15:37:06.9±2.8,36°.07N×22°.13E,h58km±31km,mb3.5/8, mb1 3.5/11,mb1mx3.3/61,mbtmp3.7/11,ML2.7/3,MS2.7/4, Ms1 2.6/4,ms1mx2.2/53,Error ellipse: s-maj=45.5km s-min=19.7km az=12.0*
ISC 26 15:37:03.0±1.2,36°.06N±0°.04×22°.17E±0°.03,h17km±8km, n122,σ1§27/143,mb3.8/7,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTHR	**Kythira**	**0.70**	**73**	P	**Pb**	**15 37 17.1**	**+0.4**
KTHR				S	**Sb**	**15 37 26.9**	**+0.8**
KTHR	**Kythira**	**0.70**	**73**	P	**Pb**	**15 37 17.1**	**+0.4**
KTHR				S	**Sb**	**15 37 26.9**	**+0.8**
DYR	**Agios Nikonas**	**0.71**	**10**	P	**Pb**	**15 37 17.2**	**+0.3**
DYR				S	**Sg**	**15 37 26.1**	**-0.3**
DYR				AML	AML	15 37 31.1	
	comp=N,2296μm,0.4s						
DYR				AML	AML	15 37 33.6	
	comp=E,2631μm,0.6s						
DYR	**Agios Nikonas**	**0.71**	**10**	P	**Pg**	**15 37 16.8**	**-0.1**
DYR				S	**Sn**	**15 37 28.1**	**-0.7**
DYR	**Agios Nikonas**	**0.71**	**10**	P	**Pg**	**15 37 16.8**	**-0.1**
DYR				S	**Sb**	**15 37 26.2**	**-0.2**
KYTH	**Kithira**	**0.73**	**74**	P	**Pn**	**15 37 18.3**	**-0.3**
KYTH				S	**Sg**	**15 37 26.1**	**-1.0**
KYTH				AML	AML	15 37 27.8	
	comp=N,5102μm,0.3s						
KYTH				AML	AML	15 37 32.5	
	comp=E,4351μm,0.4s						
KYTH	**Kithira**	**0.73**	**74**	P	**Pb**	**15 37 17.8**	**+0.4**
KYTH				S	**Sb**	**15 37 27.5**	**+0.4**
KYTH	**Kithira**	**0.73**	**74**	P	**Pb**	**15 37 17.7**	**+0.4**
KYTH				S	**Sb**	**15 37 27.5**	**+0.4**
MES2	**Methoni**	**0.85**	**334**	P	**Pg**	**15 37 19.7**	**+0.2**
MES2	**Methoni**	**0.85**	**334**	P	**Pg**	**15 37 19.4**	**-0.1**
VLI	**Veliai**	**0.90**	**43**	P	**Pb**	**15 37 19.9**	**-0.3**
VLI				AML	AML	15 37 35.2	
	comp=N,2752μm,0.6s						
VLI				AML	AML	15 37 39.6	
	comp=E,4286μm,0.8s						
VLI	**Veliai**	**0.90**	**43**	P	**Pb**	**15 37 20.1**	**0.0**
VLI	**Veliai**	**0.90**	**43**	P	**Pb**	**15 37 20.1**	**0.0**
PYL	**PYLOS**	**0.90**	**337**	P	**Pb**	**15 37 20.1**	**-0.1**
PYL				AML	AML	15 37 39.1	
	comp=E,2866μm,0.4s						
PYL				AML	AML	15 37 40.5	
	comp=N,2250μm,0.7s						
PYL	**PYLOS**	**0.90**	**337**	P	**Pb**	**15 37 20.1**	**-0.1**
PYL				S	**Sn**	**15 37 35.2**	**+1.7**
PYL	**PYLOS**	**0.90**	**337**	P	**Pb**	**15 37 20.1**	**-0.1**
PYL				S	**Sn**	**15 37 35.2**	**+1.7**
ANKY	**Antikythira Is**	**0.94**	**102**	P	**Pn**	**15 37 22.5**	**+1.2**
ANKY				AML	AML	15 37 43.6	
	comp=E,3307μm,0.6s						
ANKY				AML	AML	15 37 44.1	
	comp=N,3822μm,0.5s						
ANKY	**Antikythira Is**	**0.94**	**102**	P	**Pn**	**15 37 21.8**	**+0.5**
ANKY				S	**Sn**	**15 37 34.9**	**+0.6**
ANKY	**Antikythira Is**	**0.94**	**102**	P	**Pn**	**15 37 21.8**	**+0.5**
ANKY				S	**Sn**	**15 37 34.9**	**+0.6**
MNVA	**Monemvasia**	**0.94**	**48**	P	**Pg**	**15 37 21.1**	**0.0**
MNVA	**Monemvasia**	**0.94**	**48**	P	**Pg**	**15 37 21.0**	**-0.2**
ITM	**Ithomi**	**1.13**	**350**	P	**Pb**	**15 37 23.4**	**-0.7**
ITM				AML	AML	15 37 44.3	
	comp=N,1237μm,0.3s						
ITM				AML	AML	15 37 44.6	
	comp=E,2853μm,0.4s						
ITM	**Ithomi**	**1.13**	**350**	P	**Pb**	**15 37 23.9**	**-0.2**
ITM				S	**Sg**	**15 37 42.4**	**+2.6**
ITM	**Ithomi**	**1.13**	**350**	P	**Pb**	**15 37 23.9**	**-0.2**
ITM				S	**Sg**	**15 37 42.4**	**+2.6**
MES3	**Kyparissia**	**1.25**	**341**	P	**Pn**	**15 37 25.7**	**0.0**
MES3	**Kyparissia**	**1.25**	**341**	P	**Pb**	**15 37 26.0**	**-0.1**
VLX	**Vlachokerasia**	**1.32**	**7**	P	**Pb**	**15 37 27.6**	**+0.3**
VLX				AML	AML	15 37 51.7	
	comp=N,2528μm,0.5s						
VLX				AML	AML	15 37 51.7	
	comp=E,2378μm,0.5s						
VLX	**Vlachokerasia**	**1.32**	**7**	P	**Pg**	**15 37 27.8**	**-0.6**
VLX				S	**Sg**	**15 37 46.9**	**+1.3**
VLX	**Vlachokerasia**	**1.32**	**7**	P	**Pg**	**15 37 27.8**	**-0.6**
VLX				S	**Sg**	**15 37 46.9**	**+1.3**
TRIP	**Tripoli**	**1.47**	**3**	P	**Pb**	**15 37 30.4**	**+0.6**
TRIP	**Tripoli**	**1.47**	**3**	P	**Pb**	**15 37 30.4**	**+0.6**
AMT	**Artemida-Makis**	**1.52**	**346**	P	**Pb**	**15 37 30.6**	**-0.1**
AMT	**Artemida-Makis**	**1.52**	**346**	P	**Pb**	**15 37 31.0**	**+0.4**
AMT	**Artemida-Makis**	**1.52**	**346**	P	**Pb**	**15 37 31.0**	**+0.4**
KRND	**KRANIDI**	**1.54**	**30**	P	**Pb**	**15 37 30.5**	**-0.5**
KRND				AML	AML	15 37 59.5	
	comp=E,968μm,0.9s						
KRND				AML	AML	15 38 03.1	
	comp=N,1463μm,0.6s					

PDO	Prodromos	2.65	343	P	Pb	15 37 47.8	-2.2
PDO	Prodromos	2.65	343	P	Pb	15 37 47.7	-2.3
KARY	Karystos	2.67	42	P	Pb	15 37 48.8	-1.5
KARY	Karystos	2.67	42	P	Pb	15 37 48.4	-2.0
LAST	Lasithi	2.84	107	P	Pn	15 37 49.9	+2.3
LAST	Lasithi	2.84	107	P	Pn	15 37 49.9	+2.3
AGG	Agios Georgios	2.96	2	P	Pb	15 37 52.7	-2.5
AGG	Agios Georgios	2.96	2	P	Pn	15 37 51.5	+2.3
AGG	Agios Georgios	2.96	2	P	Pn	15 37 51.5	+2.3
DSL	Palaion Diasel	3.18	345	P	Pn	15 37 53.8	+1.6
DSL	Palaion Diasel	3.18	345	P	Pn	15 37 54.4	+2.1
SKIA	Skiathos	3.27	18	P	Pn	15 37 56.9	+3.5
SKIA	Skiathos	3.27	18	P	Pn	15 37 56.5	+3.1
KPRO	Kipourio	3.94	351	P	Pn	15 38 05.1	+2.4
KPRO	Kipourio	3.94	351	P	Pn	15 38 05.4	+2.7
BRTR	Keskin Array B	9.77	65	P	Pn	15 39 25.6	+2.8
	comp=E,0.0nm,0.3s,baz=265,slow=16,SNR=2.4						
MLR	Muntele Rosu	9.84	16	LR	LR	15 44 00.6	
	comp=E,15nm,20.8s,baz=250,slow=42						
GERES	GERESS Array B	14.21	337	LR	LR	15 47 03.9	
	comp=E,58nm,19.3s,baz=121,slow=42						
KBZ	Khabaz	17.62	58	P	P	15 41 10.2	+1.7
	comp=E,0.1nm,0.3s,baz=223,slow=8.4,SNR=2.1						
KBZ				LR	LR	15 49 31.7	
	comp=E,20nm,21.2s,baz=186,slow=42						
ESDC	Sonseca Array	20.92	288	P	P	15 41 44.7	0.0
	comp=E,0.4nm,0.4s,baz=86,slow=11,SNR=5.0						
HFS	Hagfors	24.70	350	P	P	15 42 21.5	-1.5
	comp=E,1.0nm,0.4s,baz=149,slow=12,SNR=9.3						
HFS				LR	LR	15 52 46.1	
	comp=E,24nm,19.9s,baz=138,slow=38						
FINES	FINESS Array B	25.52	4	P	P	15 42 29.2	-1.1
	comp=E,2.4nm,1.1s,baz=169,slow=11,SNR=3.7						
EKA	Eskdalemuir Ar	25.92	326	P	P	15 42 33.5	-0.4
	comp=E,0.6nm,0.4s,baz=129,slow=7.9,SNR=5.7						
SPITS	Spitsbergen Ar	42.30	358	P	P	15 44 54.3	-0.9
	comp=E,3.7nm,0.9s,baz=132,slow=8.0,SNR=3.7						
KURBB	Kurchatov Arra	42.46	52	P	P	15 44 56.0	-0.8
	comp=E,0.4nm,0.5s,baz=276,slow=8.6,SNR=3.1						
MKAR	Makanchi Array	45.31	57	P	P	15 45 19.2	-0.7
	comp=E,0.7nm,0.5s,baz=284,slow=6.3,SNR=10.0						
KSRS	Korea Array	79.64	51	P	P	15 49 08.0	-1.4
	comp=E,0.4nm,0.5s,baz=300,slow=4.5,SNR=4.2						

*IDC **26** 15:38:46.9±1.5, 6°.65S×103°.60E, h0km, mb3.9/7, mb1 4.0/8, mb1mx3.7/63, mbtmp3.9/8, ML3.9/1, MS2.9/3, Ms1 2.9/3, ms1mx2.5/58, Error ellipse: s-maj=67.0km s-min=17.0km az=50.0*
*ISCJB **26** 15:38:50.8±0.9, 6°.62S±0°.09×103°.9E±0°.1, h35km, mb4.0/8, MS2.8/2, Error ellipse: s-maj=18.2km s-min=7.6km az=140.2*
*NEIC **26** 15:38:52.0±0.9, 6°.68S×103°.63E, h35km, mb4.4/1, Error ellipse: s-maj=30.1km s-min=9.9km az=224.0*
*DJA **26** 15:38:52.8±1.7, 6°.5±.9°×10°.4E±°, h19km±16km, M4.5/8, mb4.8/1, MLv4.3/8*
ISC 26 15:38:53.3±1.0, 6°.5S±0°.1×104°.0E±0°.1, h35km, n26, σ1§13/17, mb4.0/8, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	Kota Agung	1.09	30	P	Pn	15 39 11.3	-0.8
LWLI	Liwa	1.45	4	P	Pn	15 39 17.4	+0.1
CGJI	Cibinong	1.73	95	P	Pn	15 39 20.7	-0.3
MDSI	Maura Dua	1.99	6	P	Pn	15 39 24.8	+0.3
MNAI	Manna	2.33	335	P	Pn	15 39 30.1	+0.9
LEM	Lembang	3.65	96	Pn	Pn	15 39 50.8	+3.2
	8.3nm,0.3s,baz=143,slow=20,SNR=6.5						
LEM				LR	LR	15 41 45.6	
	comp=Z,129nm,19.8s,baz=276,slow=45						
MASI	Maura Aman, Be	3.73	333	P	Pn	15 39 50.5	+2.0
CISI	Cisompet, Garu	3.98	106	P	Pn	15 39 51.4	-0.5
CMJI	Cimerak	4.64	106	P	Pn	15 40 01.0	0.0
CMAR	Chiang Mai Arr	25.27	349	LR	LR	15 55 16.4	
	comp=Z,18nm,21.0s,baz=170,slow=39						
PALK	Pallekele	26.92	300	LR	LR	15 54 31.2	
	comp=Z,39nm,18.1s,baz=118,slow=35						
H01W3	Cape Leeuwin H	29.79	163	T	T	16 16 04.0	
	baz=341,slow=76,SNR=5.6						
H01W1	Cape Leeuwin H	29.80	163	T	T	16 16 05.1	
	baz=341,slow=76,SNR=7.7						
H01W2	Cape Leeuwin H	29.80	163	T	T	16 16 11.1	
	baz=341,slow=76,SNR=6.2						
H08S2	Diego Garcia H	31.24	266	T	T	16 18 51.8	
	baz=89,slow=75,SNR=5.1						
H08S3	Diego Garcia H	31.25	266	T	T	16 18 53.5	
	baz=89,slow=75,SNR=5.6						
H08S1	Diego Carcia H	31.26	266	T	T	16 18 55.5	
	baz=89,slow=75,SNR=3.7						
WRA	Warramunga Arr	32.39	117	P	P	15 45 19.5	-0.6
	1.7nm,0.7s,baz=292,slow=7.3,SNR=15						
WRA				PcP	PcP	15 48 07.4	+0.1
	0.2nm,0.3s,baz=308,slow=2.1,SNR=7.0						
WRAB	Tennant Creek	32.39	117	*e*P	P	15 45 19.8	-0.3
	4.9nm,0.9s						
ASAR	Alice Springs	33.47	124	P	P	15 45 30.1	+0.6
	0.8nm,0.6s,baz=310,slow=8.1,SNR=10						
STKA	Stephens Creek	43.25	131	P	P	15 46 51.8	+0.2
	2.6nm,0.7s,baz=306,slow=8.6,SNR=8.8						
SONM	Songino Array	54.12	2	P	P	15 48 14.9	-0.1
	0.9nm,0.7s,baz=181,slow=7.7,SNR=5.6						
MKAR	Makanchi Array	56.42	342	P	P	15 48 30.6	-0.8
	0.6nm,0.6s,baz=156,slow=9.1,SNR=5.7						
ZALV	Zalesovo Beam	62.32	347	P	P	15 49 11.5	-0.5
	0.5nm,0.3s,baz=153,slow=8.2,SNR=3.0						
BVAR	Borovoye Array	65.74	339	P	P	15 49 33.7	-0.8
	0.6nm,0.6s,baz=126,slow=9.3,SNR=3.5						
TXAR	Lajitas Array	145.43	46	PKPbc	PKPdf	15 58 28.5	0.0
	1.0nm,0.8s,baz=340,slow=2.0,SNR=10						

*ISK **26** 15:45:43.9, 38°.74N×43°.50E, h5km, ML2.8/5*
*CSEM **26** 15:45:44.7±0.3, 38°.68N×43°.64E, h2km, ML2.8, Error ellipse: s-maj=7.5km s-min=4.5km az=117.0*
*DDA **26** 15:45:44.4, 38°.66N×43°.66E, h7km, Ml2.8*
ISC 26 15:45:45.5±1.0, 38°.68N±0°.02×43°.62E±0°.03, h13km±7km, n29, σ1§29/47, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	Van	0.20	245	PG	Pg	15 45 49.4	-0.6
VANB				SG	Sg	15 45 54.3	+1.2
VANB	Van	0.20	245	*e*Pg	Pg	15 45 49.4	-0.6
VANB				*e*Sg	Sg	15 45 54.3	+1.2
TVAN	Van	0.22	228	*i* P	Pg	15 45 49.2	-1.3
TVAN				*i* S	Sg	15 45 54.0	+0.1
TVAN	Van	0.22	228	P	Pg	15 45 49.2	-1.3
TVAN				S	Sg	15 45 54.0	+0.1
VMUR	Van-Muradiye	0.31	354	*i* P	Pg	15 45 51.3	-0.7
VMUR				*i* S	Sb	15 45 59.5	+1.4
VMUR	Van-Muradiye	0.31	354	P	Pg	15 45 51.3	-0.7
VMUR				S	Sb	15 45 59.5	+1.4
CLDR	Caldiran	0.52	27	PG	Pg	15 45 55.0	-0.8
CLDR				SG	Sb	15 46 03.4	-0.7
CLDR	Caldiran	0.52	27	*i* P	Pg	15 45 54.8	-1.0
CLDR				*i* S	Sb	15 46 05.5	+1.4
CLDR	Caldiran	0.52	27	P	Pg	15 45 54.8	-1.0
CLDR	Caldiran	0.52	27	*e*Pg	Pg	15 45 55.0	-0.8
CLDR				*e*Sg	Sb	15 46 03.4	-0.7
CLDR				S	Sb	15 46 05.5	+1.4
GEVA	Gevas	0.57	230	*i* P	Pg	15 45 55.4	-1.3
GEVA				*i* S	Sb	15 46 05.3	-0.2
GEVA	Gevas	0.57	230	P	Pg	15 45 55.4	-1.3
GEVA				S	Sb	15 46 05.3	-0.2
ADCV	BITLIS_Adilcev	0.71	281	*i* P	Pg	15 45 57.9	-1.5
ADCV				*i* S	Sb	15 46 10.2	+0.7
ADCV	BITLIS_Adilcev	0.71	281	P	Pg	15 45 57.8	-1.5
ADCV				S	Sb	15 46 10.2	+0.7
AGRB	Hanur-Agry	1.02	332	PG	Pg	15 46 02.8	-2.4
AGRB	Hanur-Agry	1.02	332	*e*Pg	Pg	15 46 02.8	-2.4
HAKT	HAKKARI	1.12	176	*i* P	Pg	15 46 06.0	-1.1
HAKT	HAKKARI	1.12	176	P	Pg	15 46 06.0	-1.1
GURO	Guroymak-BITLI	1.25	265	PN	Pg	15 46 07.2	-2.3
CUKT	Cukurca	1.43	180	PN	Pg	15 46 12.6	-0.4
CUKT	Cukurca	1.43	180	*e*Pn	Pg	15 46 12.6	-0.4
EATA	Eleskirt	1.47	324	*i* P	Pb	15 46 12.7	-0.1
EATA				*i* S	Sg	15 46 34.8	+1.9
EATA	Eleskirt	1.47	324	P	Pb	15 46 12.7	-0.1
EATA				S	Sg	15 46 34.8	+1.9
SIRT	Sirnak	1.50	219	PN	Pb	15 46 12.8	-0.4
SIRT	Sirnak	1.50	219	*e*Pn	Pb	15 46 12.8	-0.4
SRTM	Siirt_Merkez	1.50	243	*i* P	Pb	15 46 13.1	-0.1
SRTM				*i* S	Sg	15 46 36.4	+2.6
SRTM	Siirt_Merkez	1.50	243	P	Pb	15 46 13.1	-0.1
SRTM				S	Sg	15 46 36.4	+2.6
GNI	Garni	1.71	30	PN	Pb	15 46 15.9	-0.9
GNI	Garni	1.71	30	*e*Pn	Pb	15 46 15.9	-0.9

*ISCJB **26** 15:48:06.1±0.6, 18°.2S±0°.1×177°.9W±0°.1, h550km, mb3.7/15, Error ellipse: s-maj=17.8km s-min=13.0km az=24.5*
*IDC **26** 15:48:06.6±4.9, 18°.20S×177°.83W, h543km±58km, mb3.3/16, mb1 3.5/16, mb1mx3.3/51, mbtmp4.2/16, Error ellipse: s-maj=21.7km s-min=14.3km az=57.0*
ISC 26 15:48:07.5±0.7, 18°.2S±0°.1×177°.9W±0°.2, h550km, n18, σ0§97/17, mb3.8/15, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	20.42	191	P	P	15 52 05.4	-1.8
	4.6nm,0.3s,baz=266,slow=2.6,SNR=8.6						
RPZ	Rata Peaks	27.05	198	P	P	15 53 07.0	+0.9
	11nm,0.8s,baz=333,slow=2.3,SNR=4.3						
CTA	Charters Tower	33.88	261	P	P	15 54 05.6	+0.5
	3.6nm,0.4s,baz=94,slow=9.8,SNR=7.8						
WRA	Warramunga Arr	45.06	260	P	P	15 55 34.6	-0.3
	2.0nm,0.3s,baz=97,slow=6.8,SNR=87						
ASAR	Alice Springs	45.18	255	P	P	15 55 35.8	0.0
	3.9nm,0.6s,baz=92,slow=8.0,SNR=89						
FITZ	Fitzroy Crossi	53.46	261	P	P	15 56 36.4	-0.4
	0.6nm,0.3s,baz=78,slow=7.2,SNR=10						
VNDA	Vanda	60.16	185	P	P	15 57 22.3	+0.5
	0.8nm,0.5s,baz=349,slow=5.9,SNR=15						
MJAR	Matsushiro Arr	68.47	323	P	P	15 58 14.2	-0.8
	1.5nm,0.5s,baz=166,slow=6.0,SNR=7.3						
ASAJ	Asahikawa	71.80	331	P	P	15 58 35.4	+0.9
	2.8nm,0.9s,baz=111,slow=8.6,SNR=4.8						
QSPA	South Pole Qui	71.82	180	P	P	15 58 34.2	-0.3
	5.0nm,0.6s,baz=258,slow=0.9,SNR=16						
PETK	Petropavlovsk-	74.12	345	P	P	15 58 46.9	-0.8
	3.0nm,0.6s,baz=106,slow=7.6,SNR=20						
NVAR	Mina Array Bea	79.32	44	P	P	15 59 16.6	-0.1
	0.4nm,0.6s,baz=222,slow=8.5,SNR=4.0						
TXAR	Lajitas Array	85.76	57	P	P	15 59 49.5	+0.3
	0.3nm,0.7s,baz=180,slow=5.3,SNR=2.5						
ILAR	Eielson Array	86.10	13	P	P	15 59 48.0	-1.8
	0.7nm,0.4s,baz=219,slow=4.8,SNR=12						
PDAR	Pinedale Array	87.25	43	P	P	15 59 55.5	-0.7
	0.4nm,0.6s,baz=66,slow=3.6,SNR=3.9						
CMAR	Chiang Mai Arr	89.46	290	P	P	16 00 06.5	-0.1
	0.7nm,0.9s,baz=118,slow=1.8,SNR=4.2						
CLL	Collm	145.89	348	⇓*i*PKPbc	PKPdf	16 06 43.9	+0.2
	comp=Z,7.0nm,0.8s						
GERES	GERESS Array B	148.06	345	PKPbc	PKPdf	16 06 49.8	+2.3
	comp=Z,0.9nm,0.7s,baz=20,slow=4.3,SNR=4.9						

*IDC **26** 15:51:44.4±5.5, 38°.53N×71°.89E, h0km, mb4.1/2, mb1 3.9/6, mb1mx3.5/69, mbtmp3.9/6, ML3.2/4, MS2.8/2, Ms1 2.9/2, ms1mx2.3/64, Error ellipse: s-maj=83.6km s-min=25.7km az=165.0*
*ISCJB **26** 15:51:50.0±0.9, 39°.04N±0°.05×71°.76E±0°.05, h10km, mb3.9/2, MS3.3/1, Error ellipse: s-maj=7.0km s-min=5.3km az=10.3*
*KRNET **26** 15:51:49.5±0.1, 39°.12N×71°.72E, h13km, mb4.0*
*NNC **26** 15:51:50.4±1.6, 39°.02N×71°.86E, h0km, mb4.3, mpv4.0, Error ellipse: s-maj=12.7km s-min=5.9km az=3.0*
*SOME **26** 15:52:02.1, 39°.85N×71°.95E, h10km*
ISC 26 15:51:50.2±1.0, 39°.14N±0°.05×71°.82E±0°.03, h10km, n56, σ2§85/83, 35C-25D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	Karamyk	0.34	358	⇑*i*P	Pg	15 51 56.7	-0.5
	baz=10.0						
DRK				⇑*i*S	Sg	15 52 02.1	+0.3
	baz=10.0						
BTK	Batken	1.20	320	⇑*i*P	Pg	15 52 12.0	-1.3
	baz=24						
BTK				⇑*i*S	Sg	15 52 27.6	-1.3
	baz=24						
SFK	Sufi-Kurgan	1.57	56	⇑P	Pn	15 52 19.1	+0.7
	37nm,0.2s						
SFK				⇓S	Sg	15 52 42.0	+1.2
	174nm,0.4s						
SFK	Sufi-Kurgan	1.57	56	⇓*i*P	Pb	15 52 19.4	-0.1
	baz=56						
SFK				⇓*i*S	Sg	15 52 42.2	+1.5
	baz=56						
ARSB	Arslanbob	2.36	22	⇑*i*P	Pb	15 52 31.9	-1.0
	baz=23						
ARSB				⇑*i*S	Sb	15 53 02.7	+0.5
	baz=23						
ARK	Arkit	2.66	2	⇑*i*P	Pn	15 52 35.1	+1.8
	baz=4.0						
ARK				⇑*i*S	Sn	15 53 08.1	+2.4
	baz=4.0						
TAS	Tashkent	2.92	319	⇓Pg	Pg	15 52 44.5	-1.8
	210nm,0.5s						
TAS				⇑Lg	Lg	15 53 24.8	
	426nm,0.3s						
KSH	Kashi	3.25	82	Pn	Pn	15 52 41.8	+0.5
KSH				Sn	Sn	15 53 19.0	-1.1
KSH				smax	smax		
	comp=N,290nm,0.6s						
KSH				smax	smax		
	comp=E,240nm,0.5s						
IUG	Iuzhnay	3.30	336	*e*P	Pb	15 52 49.5	+0.6
	comp=E,103nm,0.3s						
IUG				*e*S	Sb	15 53 27.1	-2.0
	comp=E,229nm,0.7s						
AML	Almayashu	3.31	25	P	Pb	15 52 46.9	-2.4
	SNR=78						
AML	Almayashu	3.31	25	⇑*e*P	Pn	15 52 45.3	+2.8
	baz=26						
AML				⇑*i*S	Sn	15 53 26.2	+4.0
	baz=26						
MNAS	Manas	3.39	9	⇑Pn	Pb	15 52 47.8	-2.6
	comp=E,15nm,0.5s						
MNAS				⇓Sn	Sb	15 53 31.0	-0.8
	comp=E,73nm,0.5s						
MNAS	Manas	3.39	9	⇑*e*P	Pn	15 52 44.6	+1.3
	baz=10.0						
MNAS				⇑*i*S	Sn	15 53 25.8	+2.2
	baz=10.0						
CHM	Chimkent	3.60	333	*e*P	Pg	15 52 59.8	+0.7
	comp=E,68nm,0.2s						
CHM				*e*S	Sg	15 53 45.0	-0.7
	comp=E,250nm,0.3s						
UCH	Uchtor	3.71	33	P	Pb	15 52 52.5	-3.5
	SNR=43						
UCH	Uchtor	3.71	33	⇓*i*P	Pn	15 52 50.8	+2.9
	baz=33						
UCH				⇓*i*S	Sn	15 53 35.3	+3.4
	baz=33						
MRKS	Merke	3.76	16	*e*P	Pb	15 52 56.1	-0.6
	comp=E,52nm,0.5s						
MRKS				*e*S	Sb	15 53 39.5	-2.9
	comp=E,45nm,0.5s						
EKS2	Erkin-Say	3.82	22	P	Pb	15 52 54.1	-3.7
	SNR=20						
EKS2	Erkin-Say	3.82	22	⇓*i*P	Pn	15 52 52.2	+3.0
	baz=23						
EKS2				⇓*i*S	Sn	15 53 37.4	+3.1
	baz=23						
KZA	Kyzart	3.93	41	P	Pn	15 52 55.3	+4.3
	SNR=24						
KZA	Kyzart	3.93	41	⇓*i*P	Pn	15 52 54.3	+3.3
	baz=41						
KZA				⇓*i*S	Sn	15 53 40.8	+3.4
	baz=41						
NRN	Naryn	3.94	53	⇑*i*P	Pn	15 52 53.3	+2.3
	baz=53						
NRN				⇑*i*S	Sn	15 53 39.7	+2.3
	baz=53						
AAK	Ala-Archa	4.04	29	⇑Pn	Pn	15 52 55.5	+3.2
	comp=E,37nm,0.5s						
AAK				⇑Lg	Lg	15 54 00.4	
	comp=E,48nm,0.6s						
AAK	Ala-Archa	4.04	29	P	Pb	15 52 58.4	-3.2
	SNR=12						
AAK	Ala-Archa	4.04	29	⇓*e*P	Pn	15 52 55.3	+3.0
	baz=30						
AAK				⇓*i*S	Sn	15 53 43.2	+3.4
	baz=30						
KK31	Karatay Array	4.08	346	⇑Pn	Pn	15 52 56.4	+3.6
	comp=E,6.3nm,0.3s,baz=173,slow=13,SNR=139						
KK31				⇓Pg	Pg	15 53 06.3	-2.1
	comp=E,4.2nm,0.3s,baz=171,slow=14,SNR=8.8						
KK31				⇑Sn	Sb	15 53 46.6	-5.0
	comp=E,13nm,0.3s,baz=163,slow=23,SNR=5.6						
KK31				⇓Lg	Lg	15 53 59.6	
	comp=E,66nm,0.7s,baz=158,slow=26,SNR=4.5						
BRLS	Borolday	4.17	340	*e*P	Pb	15 53 05.8	+2.2
	comp=E,1.2nm,0.6s						
BRLS				*e*S	Sb	15 53 56.2	+2.1
	comp=E,56nm,0.7s						
KBK	Karagaybulak	4.24	33	P	Pb	15 53 00.8	-4.2
	SNR=27						
CHMS	Chumysh	4.45	29	P	Pn	15 53 02.6	+4.8
	SNR=68						
CHMS	Chumysh	4.45	29	⇓*i*P	Pn	15 53 00.8	+3.0
	baz=30						
CHMS				⇓*i*S	Sn	15 53 52.5	+2.9
	baz=30						
ULHL	Ulahol	4.58	46	P	Pn	15 53 04.0	+4.3
	SNR=8.3						
ULHL	Ulahol	4.58	46	⇑*i*P	Pn	15 53 02.6	+2.9
	baz=46						
ULHL				⇑*i*S	Sn	15 53 56.5	+3.5
	baz=46						
BOOM	Boomskoye usch	4.58	42	⇑*i*P	Pn	15 53 02.0	+2.3
	baz=42						
BOOM				⇑*i*S	Sn	15 53 54.9	+1.8
	baz=42						
USP	Ospenovka	4.60	25	P	Pn	15 53 04.1	+4.3
	SNR=36						
USP	Ospenovka	4.60	25	⇑*i*P	Pn	15 53 02.7	+2.9
	baz=26						
USP				⇑*i*S	Sn	15 53 56.5	+3.3
	baz=26						
TKM2	Tokmak 2	4.74	36	⇑Pn	Pn	15 53 06.1	+4.2
	comp=E,6.7nm,0.5s						
TKM2				⇑Pg	Pb	15 53 17.2	+3.7
	comp=E,13nm,0.4s						
TKM2				⇓Lg	Lg	15 54 22.2	
	comp=E,23nm,0.8s						
TKM2	Tokmak 2	4.74	36	P	Pn	15 53 07.2	+5.2
	SNR=28						
KST	Kastek	5.00	37	*e*P	Pg	15 53 23.6	-2.4
	comp=E,22nm,0.3s						
KST				*e*S	Sg	15 54 28.5	-2.4
	comp=E,21nm,0.6s						
DGS	Degeres	5.07	35	*e*P	Pg	15 53 23.8	-3.5
	comp=E,36nm,0.4s						
DGS				*e*S	Sg	15 54 29.3	-3.7
	comp=E,48nm,0.6s						
IZV	Izvestkoviy	5.32	41	*e*P	Pg	15 53 28.2	-3.9
	comp=E,42nm,0.9s						
IZV				*e*S	Sg	15 54 36.9	-4.1
	comp=E,30nm,0.5s						
TNSS	Tian-Shan	5.50	43	*e*P	Pb	15 53 31.3	+4.9
	comp=E,17nm,0.5s						
TNSS				*e*S	Sg	15 54 42.8	-3.9
	comp=E,20nm,0.5s						
MDOK	Medeo	5.64	43	⇓Pn	Pn	15 53 17.3	+3.1
	comp=E,6.5nm,0.6s						
MDOK				⇑Pg	Pb	15 53 33.5	+4.8
	comp=E,7.2nm,0.5s						
MDOK				⇑Lg	Lg	15 54 49.4	
	comp=E,22nm,0.8s						
KTBS	Karatobe	5.85	37	*e*P	Pb	15 53 36.9	+4.5
	comp=E,5.4nm,0.7s						
KTBS				*e*S	Sg	15 54 53.2	-4.8
	comp=E,17nm,0.8s						
PDGK	Podgornoye	7.14	52	⇑Pn	Pn	15 53 38.5	+3.8
	comp=E,4.6nm,0.7s						
PDGK				⇓Pg	Pb	15 54 00.4	+6.1
	comp=E,5.6nm,0.6s						
PDGK				⇑Lg	Lg	15 55 36.5	
	comp=E,14nm,0.8s						
OTUK	Ortayu	9.11	2	⇑Lg	Lg	15 56 40.8	
	comp=E,14nm,0.9s						
GEYT	Alibeck	10.80	268	Sn	Sn	15 56 22.5	-3.4
	comp=E,0.9nm,0.3s,baz=260,slow=40,SNR=2.4						
GEYT				LR	LR	15 59 59.1	
	comp=E,17nm,18.8s,baz=65,slow=46						
MKAR	Makanchi Array	10.83	42	Pn	Pn	15 54 28.7	+3.4
	comp=E,0.1nm,0.3s,baz=243,slow=13,SNR=5.7						
KURBB	Kurchatov Arra	12.43	20	Pn	Pn	15 54 47.6	+0.6
	comp=E,0.1nm,0.3s,baz=215,slow=12,SNR=4.0						
KURBB	Kurchatov Arra	12.43	20	⇓Lg	Lg	15 58 28.1	
	comp=E,11nm,0.8s						
KURK	Kurchatov	12.53	20	⇑Lg	Lg	15 58 28.9	
	comp=E,5.9nm,0.8s						
AB31	Akbulak array	13.21	324	⇓Pn	Pn	15 54 56.8	-0.9
	comp=E,1.7nm,0.5s						
AB31				⇓Sn	Sn	15 57 20.4	-4.1
	comp=E,1.0nm,0.5s						
AKTO	Aktyubinsk	14.93	324	Pn	Pn	15 55 21.4	+0.3
	comp=E,0.2nm,0.3s,baz=126,slow=17,SNR=5.8						
AKTO	Aktyubinsk	14.93	324	⇓Pn	P	15 55 27.1	+0.3
	comp=E,5.7nm,0.8s						
AKTO				⇓Sn	Sn	15 58 02.9	-3.6
	comp=E,1.4nm,0.7s						
ZALV	Zalesovo Beam	17.26	27	P	P	15 55 53.7	+1.0
	comp=E,0.8nm,0.3s,baz=217,slow=11,SNR=11						
ARCES	ARCESS Array B	38.98	336	P	P	15 59 16.2	0.0
	comp=E,2.4nm,1.0s,baz=106,slow=9.4,SNR=3.5						
ARCES				LR	LR	16 16 39.9	
	comp=E,48nm,21.2s,baz=60,slow=38						
HFS	Hagfors	41.43	320	P	P	15 59 36.2	-0.3
	comp=E,1.6nm,0.4s,baz=98,slow=11,SNR=9.4						

IDC 26 16:08:19.1±17.0, 18°.36S×174°.04W, h0km, mb4.2/5, mb1 4.3/5, mb1mx3.8/49, mbtmp4.2/5, Error ellipse: s-maj=319.1km s-min=156.4km az=80.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	37.47	261	P	P	16 15 34.5	-0.2
	3.2nm,0.7s,baz=85,slow=8.9,SNR=4.9						
STKA	Stephens Creek	42.08	243	P	P	16 16 13.1	+0.1
	0.9nm,0.5s,baz=66,slow=10.0,SNR=3.9						
WRA	Warramunga Arr

APYP	**Conner**	**5.18**	**326**	*e*P	Pn	16 19 02.6 +1.1
APYP				*e*S	Sn	16 20 04.4 +3.6
ABRA	**Dolores**	**5.32**	**321**	*e*P	Pn	16 19 03.6 +0.1
ABRA				*e*S	Sn	16 20 09.1 +4.8

MAN 26 16:28:37.0, 16°.41N×120°.83E, h44km, mb4.5, ML3.4, MS3.2, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALP	**Baler**	**0.98**	**132**	*e*P	Pn	16 28 54.9	+0.6
BALP				*e*S	Sn	16 29 08.2	+1.1
CAUP	**Cauayan**	**1.09**	**61**	*e*P	Pn	16 28 55.8	-0.1
CAUP				*e*S	Sn	16 29 10.9	+1.0
ABRA	**Dolores**	**1.24**	**355**	*e*P	Pn	16 28 58.7	+0.8
ABRA				*e*S	Sn	16 29 14.6	+1.1
APYP	**Conner**	**1.50**	**15**	*e*P	Pn	16 29 02.9	+1.4
APYP				*e*S	Sn	16 29 23.5	+3.6

CSEM 26 16:35:58.0, 27°.70N×18°.07W, h19km, ML3.5, Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCL	**Mercadel, El H**	**0.04**	**72**	P	Pg	16 36 01.4	-0.2
	4μm,0.1s,SNR=7.9						
CMCL				S	Sg	16 36 03.9	-0.1
	9μm,0.1s,SNR=7.9						
CTAN	**El Hierro**	**0.06**	**10**	P	Pg	16 36 01.3	-0.2
	706nm,0.1s,SNR=18						
CTAN				S	Sg	16 36 03.6	-0.3
	39μm,0.3s,SNR=7.9						
CCUM	**Cumbre, El Hie**	**0.06**	**34**	P	Pg	16 36 01.3	-0.3
	1μm,0.1s,SNR=7.9						
CCUM				S	Sg	16 36 03.8	-0.2
	17μm,0.2s,SNR=7.9						
CRST	**La Restinga, E**	**0.09**	**128**	P	Pg	16 36 01.4	-0.4
	6μm,0.1s,SNR=18						
CRST				S	Sg	16 36 04.0	-0.3
	SNR=7.9						
CHIE	**El Hierro**	**0.10**	**74**	P	Pg	16 36 01.6	-0.2
	134nm,0.2s,SNR=18						
CTIG	**El Hierro**	**0.15**	**55**	P	Pg	16 36 02.1	-0.3
	266nm,0.1s,SNR=18						
CTIG				S	Sg	16 36 05.2	-0.3
	1μm,0.1s,SNR=7.9						

IDC 26 16:49:27.9±2.8, 18°.13S×174°.21W, h0km, mb4.1/3, mb1 4.3/4, mb1mx3.8/53, mbtmp4.1/4, ML3.7/1, MS3.5/8, Ms1 3.5/8, ms1mx3.0/53, Error ellipse: s-maj=134.3km s-min=26.7km az=144.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.80**	**29**	Pn	Pn	16 50 40.8	-0.7
	3.4nm,0.3s,baz=257,slow=20,SNR=5.2						
AFI				Sn	Sn	16 51 33.4	-4.5
	0.8nm,0.3s,baz=22,slow=19,SNR=1.9						
AFI				LR	LR	16 52 33.8	
	comp=Z,205nm,19.4s,baz=150,slow=39						
DZM	**Mont Dzumac**	**18.59**	**255**	LR	LR	16 59 16.5	
	comp=Z,94nm,19.4s,baz=215,slow=32						
RPZ	**Rata Peaks**	**28.38**	**203**	LR	LR	17 06 02.0	
	comp=Z,282nm,18.6s,baz=328,slow=35						
H11S2	**WAKE ISLAND Hy**	**40.94**	**332**	T	T	17 40 35.7	
	baz=148						
H11S3	**WAKE ISLAND Hy**	**40.95**	**332**	T	T	17 40 36.5	
	baz=148						
H11S1	**WAKE ISLAND Hy**	**40.96**	**332**	T	T	17 40 36.2	
	baz=148						
H11N3	**WAKE ISLAND Hy**	**41.93**	**333**	T	T	17 41 48.5	
	baz=152,slow=77,SNR=19						
H11N1	**WAKE ISLAND Hy**	**41.93**	**333**	T	T	17 41 48.3	
	baz=152,slow=77,SNR=50						
H11N2	**WAKE ISLAND Hy**	**41.95**	**333**	T	T	17 41 49.6	
	baz=152,slow=77,SNR=14						
STKA	**Stephens Creek**	**42.05**	**242**	LR	LR	17 11 53.3	
	comp=Z,29nm,20.0s,baz=28,slow=32						
WRA	**Warramunga Arr**	**48.52**	**259**	P	P	16 58 13.4	+0.3
	1.3nm,0.9s,baz=97,slow=7.4,SNR=9.9						
ASAR	**Alice Springs**	**48.58**	**254**	P	P	16 58 12.9	-0.6
	11nm,0.8s,baz=91,slow=8.4,SNR=73						
ANMO	**Albuquerque**	**83.14**	**50**	LR	LR	17 30 45.1	
	comp=Z,49nm,21.1s,baz=207,slow=30						
PDAR	**Pinedale Array**	**84.80**	**42**	P	P	17 02 04.8	+0.2
	0.7nm,0.8s,baz=224,slow=2.5,SNR=4.8						
NNA	**Nana**	**93.18**	**104**	LR	LR	17 34 45.6	
	comp=Z,18nm,18.7s,baz=14,slow=29						
ULM	**Lac du Bonnet**	**96.52**	**39**	LR	LR	17 40 23.8	
	comp=Z,33nm,21.3s,baz=16,slow=32						
LPAZ	**La Paz**	**99.60**	**111**	LR	LR	17 40 11.8	
	comp=Z,33nm,21.8s,baz=308,slow=31						

CSEM 26 16:50:19.9, 27°.71N×18°.11W, h18km, ML3.5, Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTAN	**El Hierro**	**0.07**	**47**	P	Pg	16 50 23.2	-0.2
	558nm,0.0s,SNR=7.9						
CTAN				S	Sg	16 50 25.6	-0.2
	2μm,0.1s,SNR=7.9						
CCUM	**Cumbre, El Hie**	**0.08**	**62**	P	Pg	16 50 23.4	-0.1
	490nm,0.1s,SNR=18						
CCUM				S	Sg	16 50 25.9	-0.1
	2μm,0.1s,SNR=7.9						
CMCL	**Mercadel, El H**	**0.08**	**87**	P	Pg	16 50 23.5	-0.1
	802nm,0.0s,SNR=7.9						
CMCL				S	Sg	16 50 26.2	+0.1
	2μm,0.1s,SNR=7.9						
CRST	**La Restinga, E**	**0.13**	**120**	P	Pg	16 50 23.5	-0.5
	1μm,0.1s,SNR=7.9						
CRST				S	Sg	16 50 26.5	-0.2
	2μm,0.1s,SNR=7.9						
CHIE	**El Hierro**	**0.13**	**82**	S	Sg	16 50 27.2	+0.4
	381nm,0.0s,SNR=7.9						
CTIG	**El Hierro**	**0.18**	**64**	P	Pb	16 50 24.3	+0.3
	58nm,0.1s,SNR=7.9						
CTIG				S	Sg	16 50 27.6	-0.3
	594nm,0.1s,SNR=7.9						

*IDC **26** 17:00:22.8±2.2, 5°.66S×130°.81E, h0km, mb3.9/2, mb1 3.8/5, mb1mx3.5/52, mbtmp3.7/5, ML3.6/3, Error ellipse: s-maj=116.3km s-min=25.4km az=78.0*
*ISCJB **26** 17:00:33.0±0.4, 6°.07S±0°.03×130°.62E±0°.05, h124km, mb4.8/10, Error ellipse: s-maj=7.1km s-min=4.5km az=173.3*
*NEIC **26** 17:00:35.5±1.0, 6°.13S×130°.42E, h126km±12km, mb4.5/8, Error ellipse: s-maj=15.1km s-min=8.4km az=66.0*

ISC 26 17:00:33.8±0.6, 6°.15S±0°.05×130°.53E±0°.06, h124km, n32, σ2°93/41, mb4.8/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**3.63**	**28**	*e*Pn	**Pn**	**17 01 31.1**	**+2.5**
FAKI				*e*Sn	**Sn**	**17 02 08.1**	**-3.0**
MTN	**Manton Dam**	**6.68**	**175**	*e*Pn	**Pn**	**17 02 13.9**	**+4.4**
MTN				*e*Sn	**Sn**	**17 03 25.9**	**+1.6**
SOEI	**Soe**	**7.16**	**240**	*e*Pn	**Pn**	**17 02 18.3**	**+2.2**
SOEI				*e*Sn	**Sn**	**17 03 41.1**	**+4.9**
TNTI	**Ternate**	**7.56**	**335**	*e*Pn	**Pn**	**17 02 20.7**	**-0.7**
BATI	**Baumata**	**7.90**	**239**	Pn	Pn	17 02 31.8	+5.8
	2.8nm,0.3s,baz=301,slow=19,SNR=5.2						
BATI				Sn	**Sn**	**17 03 56.8**	**+2.8**
	1.2nm,0.3s,baz=120,slow=20,SNR=2.0						
LUWI	**Luwuk**	**9.25**	**303**	*e*Pn	**Pn**	**17 02 43.4**	**-0.8**
LUWI				*e*Sn	**Sn**	**17 04 22.7**	**-3.9**
FITZ	**Fitzroy Crossi**	**12.80**	**201**	Pn	**Pn**	**17 03 33.0**	**+1.5**
	0.4nm,0.3s,baz=63,slow=18,SNR=48						
FITZ				Sn	**Sn**	**17 05 46.8**	**-5.7**
	0.3nm,0.3s,baz=49,slow=20,SNR=6.9						
FITZ	**Fitzroy Crossi**	**12.80**	**201**	*e*Pn	**Pn**	**17 03 32.9**	**+1.5**
FITZ				*e*Sn	**Sn**	**17 05 46.5**	**-6.1**
WR1	**Warramunga Arr**	**14.21**	**165**	*e*Pn	**Pn**	**17 03 51.1**	**+1.5**
WR1				*e*Sn	**Sn**	**17 06 21.4**	**-5.1**
WRA	**Warramunga Arr**	**14.21**	**165**	Pn	**Pn**	**17 03 51.1**	**+1.5**
	0.3nm,0.3s,baz=351,slow=13,SNR=24						
WRA				Sn	**Sn**	**17 06 21.4**	**-5.1**
	0.7nm,0.3s,baz=337,slow=24,SNR=11						
WB2	**Warramunga Arr**	**14.21**	**165**	*e*Pn	**Pn**	**17 03 49.9**	**+0.3**
COEN	**Coen**	**14.67**	**123**	*e*Pn	**P**	**17 03 59.7**	**+1.4**
AS31	**Alice Springs**	**17.72**	**170**	*e*P	**P**	**17 04 32.7**	**+0.7**
	2.0nm,1.4s						
AS31				*e*S	**S**	**17 07 46.2**	**-3.7**
ASAR	**Alice Springs**	**17.72**	**170**	P	**Pn**	**17 04 36.8**	**+3.9**
	0.1nm,0.3s,baz=349,slow=13,SNR=12						
ASAR				S	**S**	**17 07 46.1**	**-3.8**
	0.1nm,0.3s,baz=356,slow=28,SNR=4.9						
AS01	**Alice Springs**	**17.73**	**170**	*e*P	**P**	**17 04 32.4**	**+0.3**
KKM	**Kota Kinabalu**	**18.73**	**310**	*e*P	**P**	**17 04 42.8**	**-0.4**
	21nm,1.2s						
SBUM	**Sibu**	**20.18**	**295**	*e*P	**P**	**17 05 00.1**	**+1.4**
	12nm,1.8s						
KSM	**Kuching**	**21.56**	**290**	*e*P	**P**	**17 05 14.5**	**+0.9**
	6.6nm,1.0s						
CISI	**Cisompet, Garu**	**22.59**	**265**	*e*P	**P**	**17 05 24.5**	**+0.2**
	45nm,1.0s						
NWAO	**Narrogin (SRO)**	**29.38**	**203**	*e*P	**P**	**17 06 24.8**	**-0.6**
	149nm,1.6s						
BKNI	**Bangkinang**	**30.13**	**281**	*e*P	**P**	**17 06 30.4**	**-1.7**
	64nm,0.5s						
ARMA	**Armidale**	**31.25**	**143**	*e*P	**P**	**17 06 41.5**	**-0.5**
	107nm,1.9s						
NACB	**Ninganchiao**	**31.37**	**344**	*e*P	**P**	**17 06 41.3**	**-1.7**
	16nm,0.9s						
JOHN	**Johnston Islan**	**63.46**	**68**	*e*P	P	17 10 44.0	-7.1
	456nm,1.4s						
MK01	**Makanchi Array**	**67.78**	**326**	*e*P	**P**	**17 11 21.1**	**+2.7**
MK31	**Makanchi Array**	**67.80**	**326**	*e*P	**P**	**17 11 20.2**	**+1.7**
MK32	**Makanchi Array**	**67.80**	**326**	*e*P	**P**	**17 11 21.7**	**+3.2**
MKAR	**Makanchi Array**	**67.80**	**326**	P	**P**	**17 11 21.7**	**+3.2**
	0.9nm,0.4s,baz=130,slow=6.8,SNR=18						
MKAR	**Makanchi Array**	**67.80**	**326**	*e*P	**P**	**17 11 20.0**	**+1.6**
	8.7nm,0.6s						
MAKZ	**Makanchi**	**67.98**	**326**	*e*P	**P**	**17 11 21.9**	**+2.3**
	2.6nm,0.6s						
KURBB	**Kurchatov Arra**	**72.06**	**328**	P	**P**	**17 11 46.6**	**+2.2**
	0.2nm,0.3s,baz=116,slow=4.0,SNR=4.7						
KURK	**Kurchatov**	**72.07**	**328**	*e*P	**P**	**17 11 46.6**	**+2.2**

*IDC **26** 17:01:31.6±0.9, 37°.85S×75°.12W, h0km, mb3.8/6, mb1 4.0/8, mb1mx3.9/37, mbtmp3.8/8, ML3.9/2, MS3.4/3, Ms1 3.4/3, ms1mx2.8/33, Error ellipse: s-maj=33.8km s-min=18.6km az=80.0*
*ISCJB **26** 17:01:34.5±0.5, 37°.78S±0°.03×74°.82W±0°.06, h33km, mb4.4/9, MS3.8/1, Error ellipse: s-maj=7.4km s-min=4.5km az=12.9*
*NEIC **26** 17:01:36.8±0.6, 37°.76S×74°.82W, h35km, mb4.6/7, Error ellipse: s-maj=14.7km s-min=8.6km az=95.0*
*GUC **26** 17:01:38.9±0.5, 37°.82S×74°.11W, h29km±8km, ML4.1*

ISC 26 17:01:36.3±0.6, 37°.74S±0°.04×74°.91W±0°.08, h35km, n52, σ2°38/64, mb4.3/9, 3C, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TMU	**Temuco**	**2.07**	**119**	⇑*i*P	**Pn**	**17 02 08.5**	**0.0**
TMU				*i* S	**Sn**	**17 02 27.8**	**-5.3**
TMU				IAML		17 02 35.5	
	comp=N,715nm,0.4s						
VLCH	**Valdivia**	**2.44**	**148**	*e*P	**Pn**	**17 02 10.7**	**-2.9**
VLCH				*i* S	**Sn**	**17 02 36.4**	**-5.7**
GO05	**HualaæØ**	**3.63**	**42**	*e*Pn	**Pn**	**17 02 29.7**	**-0.4**
GO05				*e*Sn	**Sn**	**17 03 11.3**	**-0.4**
GO05	**HualaæØ**	**3.63**	**42**	*e*P	**Pn**	**17 02 29.8**	**-0.3**
GO05				*i* S	**Sn**	**17 03 07.8**	**-3.9**
GO05				IAML		17 03 16.5	
	comp=N,167nm,0.1s						
PLCA	**Paso Flores**	**4.51**	**133**	Pn	**Pn**	**17 02 41.7**	**-0.5**
	comp=N,1.3nm,0.3s,baz=324,slow=11,SNR=20						
PLCA				Sn	**Sn**	**17 03 37.8**	**+4.3**
	comp=N,5.5nm,0.3s,baz=62,slow=22,SNR=3.8						
PLCA				LR	LR	17 04 41.5	
	comp=N,169nm,18.9s,baz=3.0,slow=42						
PLCA	**Paso Flores**	**4.51**	**133**	*e*Pn	**Pn**	**17 02 42.2**	**0.0**
PLCA				*e*Sn	**Sn**	**17 03 33.7**	**+0.2**
ROC1	**El Roble**	**5.72**	**35**	*e*Pn	**Pn**	**17 02 58.8**	**-0.2**
ROC1				*e*Sn	**Sn**	**17 04 03.4**	**-0.1**
ROC1	**El Roble**	**5.72**	**35**	*e*P	**Pn**	**17 02 58.8**	**-0.2**
ROC1				*e*S	**Sn**	**17 03 57.5**	**-6.0**
ROCH	**El Roble**	**5.72**	**35**	⇑*i*P	**Pn**	**17 02 58.6**	**-0.4**
ROCH				*i* S	**Sn**	**17 04 00.3**	**-3.3**
ROCH				IAML		17 04 12.4	
	comp=N,119nm,0.2s						
PEL	**Peldehue**	**5.73**	**38**	*e*Pn	**Pn**	**17 02 59.5**	**+0.5**
PEL				*e*Sn	**Sn**	**17 04 04.6**	**+0.9**
FCH	**Farellones**	**5.79**	**42**	⇑*i*P	**Pn**	**17 03 00.2**	**+0.1**
FCH				*i* S	**Sn**	**17 04 01.6**	**-3.8**
RFA	**San Rafael**	**5.99**	**62**	*e*P	**Pn**	**17 03 04.8**	**+2.3**
AAGR	**Agrelo**	**6.79**	**49**	*e*P	**Pn**	**17 03 15.4**	**+1.8**
ARCO	**CERRO ARCO**	**6.91**	**47**	*e*P	**Pn**	**17 03 17.6**	**+2.3**
AUSP	**Uspallata**	**7.12**	**41**	*e*P	**Pn**	**17 03 19.7**	**+1.4**
ASAL	**Salagasta**	**7.15**	**46**	*e*P	**Pn**	**17 03 20.7**	**+2.2**
RTLS	**Leoncito**	**7.51**	**40**	*e*P	**Pn**	**17 03 25.1**	**+1.5**
RTLS				IAML		17 03 25.7	
	comp=Z,38nm,0.4s						
RTCV	**Cerro Valdivia**	**7.86**	**44**	*e*P	**Pn**	**17 03 28.4**	**+0.2**
ZON	**Zonda**	**8.03**	**42**	*e*P	**Pn**	**17 03 31.4**	**+0.9**
GO04	**Tololo Observa**	**8.28**	**25**	*e*Pn	**Pn**	**17 03 33.1**	**-1.1**
GO04				*e*Sn	**Sn**	**17 05 01.8**	**-4.8**
ACAN	**Cantantal**	**8.35**	**52**	*e*P	**Pn**	**17 03 37.5**	**+2.5**
AMOG	**MOGNA**	**8.61**	**40**	*e*P	**Pn**	**17 03 39.0**	**+0.5**
LCO	**Las Campanas**	**9.39**	**23**	*e*Pn	**Pn**	**17 03 45.9**	**-3.4**
LCO				*e*Sn	**Sn**	**17 05 27.5**	**-6.3**
CHRN	**Cochrane**	**9.66**	**171**	*e*Pn	**Pn**	**17 03 51.0**	**-1.7**
AGUA	**GUANDACOL**	**9.81**	**35**	*e*P	**Pn**	**17 03 54.9**	**-0.2**
APLL	**PUNTA DE LOS L**	**10.09**	**46**	*e*P	**Pn**	**17 03 57.4**	**-1.4**
TRQA	**Tornquist**	**10.22**	**96**	*e*Pn	**Pn**	**17 04 01.2**	**+0.7**
VCA	**Vinchina**	**10.58**	**34**	IAML		17 04 25.7	
	comp=Z,8.9nm,0.6s						
GO03	**Copiap**	**10.85**	**23**	*e*Pn	**Pn**	**17 04 08.2**	**-1.1**
EFI	**East Falkland**	**18.30**	**145**	*e*Pn	**Pn**	**17 05 47.3**	**+0.1**
	comp=Z,301nm,1.9s						
CPUP	**Villa Florida**	**18.71**	**58**	Pn	**Pn**	**17 05 52.9**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=202,slow=19,SNR=1.7						
CPUP				LR	LR	17 13 43.0	
	comp=Z,101nm,18.6s,baz=232,slow=39						
CPUP	**Villa Florida**	**18.71**	**58**	*e*P	**Pn**	**17 05 52.5**	**+0.1**
	comp=Z,28nm,1.8s						
MNMC	**Minye Minye**	**19.11**	**15**	*e*P	**Pn**	**17 05 59.9**	**+2.4**
	comp=Z,46nm,2.0s						
LPAZ	**La Paz**	**22.19**	**17**	P	**P**	**17 06 33.5**	**+3.2**
	comp=Z,1.6nm,0.7s,baz=171,slow=8.9,SNR=5.3						
LPAZ	**La Paz**	**22.19**	**17**	*e*P	**P**	**17 06 33.1**	**+2.9**
	comp=Z,3.9nm,0.9s						
NNA	**Nana**	**25.70**	**356**	*e*P	**P**	**17 07 06.2**	**+2.8**
	comp=Z,88nm,1.8s						
JTS	**JuntasAbangare**	**48.70**	**347**	LR	LR	17 24 53.6	
	comp=Z,110nm,21.4s,baz=3.0,slow=29						
SNAA	**Sanae**	**49.05**	**157**	P	**P**	**17 10 19.5**	**0.0**
	comp=Z,2.7nm,0.7s,baz=278,slow=7.1,SNR=5.6						
SNAA	**Sanae**	**49.05**	**157**	*e*P	**P**	**17 10 19.1**	**-0.4**
	comp=Z,4.7nm,1.0s						
QSPA	**South Pole Qui**	**52.50**	**180**	P	**P**	**17 10 44.9**	**-0.7**
	comp=Z,3.5nm,1.0s,baz=160,slow=2.9,SNR=7.0						
BBGH	**Gun Hill**	**52.62**	**19**	*e*P	**P**	**17 10 46.9**	**0.0**
	comp=Z,2μm,1.5s						
SBA	**Scott Base**	**58.94**	**193**	*e*P	**P**	**17 11 31.5**	**+0.1**
	comp=Z,16nm,1.8s						
VNDA	**Vanda**	**59.98**	**192**	P	**P**	**17 11 39.1**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=154,slow=4.2,SNR=3.5						
VNDA	**Vanda**	**59.98**	**192**	*e*P	**P**	**17 11 38.5**	**-0.1**
VNDA				*es*P	**P**	**17 11 39.2**	**+0.6**
TXAR	**Lajitas Array**	**71.95**	**334**	P	**P**	**17 12 56.8**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=150,slow=9.1,SNR=5.8						
COA	**Coachella**	**79.61**	**326**	*e*P	**P**	**17 13 39.7**	**-0.1**
SNDA	**J Saunders Pla**	**80.85**	**326**	*e*P	**P**	**17 13 49.6**	**+2.9**
HLLC	**North Hollywoo**	**82.17**	**325**	*e*P	**P**	**17 13 49.7**	**-3.7**
CCCA	**Chr Cany lake**	**82.85**	**326**	*e*P	**P**	**17 13 59.0**	**+2.0**
MSLM	**Sherwin Lakes**	**85.30**	**326**	*e*P	**P**	**17 14 08.3**	**-1.4**
PDAR	**Pinedale Array**	**86.11**	**335**	P	**P**	**17 14 13.9**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=168,slow=8.9,SNR=5.0						
BVAR	**Borovoye Array**	**151.57**	**46**	PKPbc	**PKPbc**	**17 21 27.4**	**+1.3**
	comp=Z,0.6nm,0.5s,baz=297,slow=0.6,SNR=4.9						

IDC 26 17:08:14.7±2.8, 12°.30N×146°.65E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.4/70, mbtmp3.5/5, ML4.0/1, MS2.6/4, Ms1 2.7/4, ms1mx2.4/34, Error ellipse: s-maj=88.6km s-min=22.6km az=77.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.16**	**307**	Pn	Pn	17 08 50.5	-1.4
	49nm,0.3s,baz=102,slow=3.8,SNR=90						
GUMO				Sn	Sn	17 09 15.4	-4.1
	249nm,0.3s,baz=348,slow=20,SNR=18						
GUMO				LR	LR	17 09 38.7	
	comp=Z,75nm,19.7s,baz=146,slow=39						
H11S3	**WAKE ISLAND Hy**	**20.27**	**70**	T	T	17 34 02.0	
	baz=253,slow=74,SNR=16						
H11S1	**WAKE ISLAND Hy**	**20.28**	**70**	T	T	17 34 00.0	
	baz=253,slow=74,SNR=5.5						
H11S2	**WAKE ISLAND Hy**	**20.28**	**70**	T	T	17 34 05.9	
	baz=253,slow=74,SNR=20						
H11N1	**WAKE ISLAND Hy**	**20.79**	**67**	T	T	17 34 45.2	
	baz=249,slow=75,SNR=5.3						
H11N2	**WAKE ISLAND Hy**	**20.80**	**67**	T	T	17 34 42.5	
	baz=249,slow=75,SNR=1.4						
H11N3	**WAKE ISLAND Hy**	**20.81**	**67**	T	T	17 34 47.4	
	baz=249,slow=75,SNR=8.9						
MJAR	**Matsushiro Arr**	**25.30**	**344**	LR	LR	17 22 10.5	
	comp=Z,14nm,21.8s,baz=220,slow=33						
ASAJ	**Asahikawa**	**31.89**	**354**	LR	LR	17 28 56.0	
	comp=Z,8.5nm,19.6s,baz=182,slow=39						
WRA	**Warramunga Arr**	**34.26**	**201**	P	P	17 15 03.0	+0.2
	0.3nm,0.7s,baz=28,slow=9.7,SNR=6.1						
ASAR	**Alice Springs**	**37.86**	**199**	P	P	17 15 33.1	-0.4
	0.2nm,0.5s,baz=23,slow=6.6,SNR=9.4						
CMAR	**Chiang Mai Arr**	**46.30**	**284**	LR	LR	17 37 15.1	
	comp=Z,14nm,18.1s,baz=345,slow=38						
MKAR	**Makanchi Array**	**63.62**	**316**	P	P	17 18 48.7	+1.0
	0.4nm,0.6s,baz=94,slow=7.7,SNR=3.5						
KURBB	**Kurchatov Arra**	**66.72**	**320**	P	P	17 19 07.2	-0.5
	0.2nm,0.5s,baz=106,slow=7.1,SNR=2.8						

*IDC **26** 17:08:41.4±0.8, 1°.02N×96°.93E, h0km, mb4.1/15, mb1 4.2/17, mb1mx3.9/71, mbtmp4.1/17, ML3.8/2, MS3.1/7, Ms1 3.2/7, ms1mx2.8/62, Error ellipse: s-maj=22.1km s-min=14.7km az=49.0*
*ISCJB **26** 17:08:43.4±0.4, 1°.12N±0°.04×97°.00E±0°.04, h25km, mb4.3/28, MS3.2/4, Error ellipse: s-maj=7.3km s-min=4.2km az=44.3*
*DJA **26** 17:08:43.7±1.0, 1°.N±4°×9°.7E±°, h20km±7km, M4.1/11, mb4.2/5, MLv4.1/11*
*NEIC **26** 17:08:47.6±1.0, 1°.21N×97°.17E, h39km±8km, mb4.4/18, Error ellipse: s-maj=10.9km s-min=5.3km az=51.0*

ISC 26 17:08:45.7±0.5, 1°.20N±0°.05×97°.08E±0°.06, h25km, n82, σ1°01/78, mb4.3/28, MS3.2/4, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.51**	**78**	P	**Pn**	**17 08 56.8**	**-0.6**
GSI				S	**Sn**	**17 09 05.2**	**-0.1**
GSI	**Gunungsitoli**	**0.51**	**78**	*e*Pn	**Pn**	**17 08 56.9**	**-0.5**
PBSI	**Pulau Batu**	**1.73**	**136**	P	**Pn**	**17 09 14.2**	**0.0**
PBSI				S	**Sn**	**17 09 33.7**	**-1.8**
TPTI		**2.05**	**3**	P	**Pn**	**17 09 18.1**	**-0.5**
KCSI	**Kotacane, Aceh**	**2.41**	**17**	P	**Pn**	**17 09 23.3**	**-0.3**
PSI	**Prapat**	**2.44**	**49**	Pn	**Pn**	**17 09 24.2**	**+0.2**
	4.2nm,0.3s,baz=180,slow=7.9,SNR=24						
PSI				Pg	**Pb**	**17 09 30.3**	**+1.4**
	4.5nm,0.3s,baz=180,slow=8.1,SNR=24						
PSI				LR	LR	17 10 14.2	
	comp=Z,252nm,21.6s,baz=271,slow=36						
PSI	**Prapat**	**2.44**	**49**	*e*Pn	**Pn**	**17 09 23.9**	**-0.2**
MNSI	**Mandailing Nat**	**2.53**	**99**	P	**Pn**	**17 09 25.5**	**+0.2**
MLSI	**Meulaboh, Aceh**	**3.12**	**348**	P	**Pn**	**17 09 32.9**	**-0.5**
PDSI	**Padang**	**3.98**	**122**	P	**Pb**	**17 09 57.4**	**+2.2**
LHMI	**Lhok Sumawe**	**4.01**	**358**	*e*Pn	**Pn**	**17 09 45.9**	**+0.3**
BKNI	**Bangkinang**	**4.06**	**102**	*e*Pn	**Pn**	**17 09 47.0**	**+0.7**
BSI	**Banda Aceh**	**4.63**	**337**	P	**Pn**	**17 09 52.9**	**-1.2**
IPM	**Ipoh**	**5.12**	**50**	*e*Pn	**Pn**	**17 10 00.4**	**-0.4**
KULM	**Kulim**	**5.41**	**41**	*e*Pn	**Pn**	**17 10 04.8**	**0.0**
KRJI	**Kerinci**	**5.47**	**127**	P	Pb	17 10 27.4	+6.8
MYKOM	**Kota Tinggi**	**6.80**	**85**	*e*Pn	**Pn**	**17 10 24.6**	**+0.7**
MNAI	**Manna**	**8.06**	**133**	*e*Pn	**Pn**	**17 10 40.5**	**-0.8**
MDSI	**Maura Dua**	**9.07**	**129**	P	**Pn**	**17 10 54.0**	**-1.1**
SBUM	**Sibu**	**15.19**	**85**	*e*Pn	**Pn**	**17 12 18.8**	**+0.1**
	4.4nm,0.7s						
CM01	**Chiang Mai Arr**	**17.21**	**6**	*e*Pn	**Pn**	**17 12 45.3**	**+0.7**
CM31	**Chiang Mai Arr**	**17.25**	**6**	*e*Pn	**Pn**	**17 12 44.1**	**-0.9**
CMAR	**Chiang Mai Arr**	**17.25**	**6**	P	**Pn**	**17 12 44.8**	**-0.3**
	0.4nm,0.3s,baz=199,slow=11,SNR=13						
CMAR				LR	LR	17 19 46.6	
	comp=Z,95nm,18.2s,baz=198,slow=38						
PALK	**Pallekele**	**17.40**	**291**	LR	LR	17 19 12.0	
	comp=Z,54nm,20

STKA	Stephens Creek	53.45	132	eP		P	17 18 04.0 0.0
	6.6nm,1.8s						
ZAA0	Zalesovo Array	53.54	351	eP		P	17 18 04.7 +0.5
	7.1nm,0.9s						
ZALV	Zalesovo Beam	53.54	351	P		P	17 18 05.0 +0.8
	4.4nm,0.6s,baz=181,slow=6.0,SNR=27						
ZALV	Zalesovo Beam	53.54	351	eP		P	17 18 04.7 +0.5
ZAA1	Zalesovo Array	53.55	351	eP		P	17 18 05.0 +0.8
BVAR	Borovoye Array	56.21	341	P		P	17 18 24.1 +0.5
	2.0nm,0.7s,baz=147,slow=8.3,SNR=15						
ABKAR	Abkulak array	57.46	332	eP		P	17 18 32.6 +0.1
EIDS	Eidsvold	58.48	121	eP		P	17 18 40.9 +0.8
	66nm,1.8s						
AKTO	Aktyubinsk	59.18	332	P		P	17 18 45.1 +0.6
	0.8nm,0.4s,baz=125,slow=8.8,SNR=5.0						
KBZ	Khabaz	63.99	319	P		P	17 19 18.2 +1.1
	0.8nm,0.5s,baz=115,slow=5.7,SNR=4.4						
MMAI	Mount Meron Ar	65.81	306	LR		LR	17 49 57.5
	comp=Z,20nm,18.2s,baz=60,slow=38						
BR101	Keskin Array S	69.02	312	eP		P	17 19 48.1 -1.4
BRTR	Keskin Array B	69.02	312	P		P	17 19 48.1 -1.4
	0.3nm,0.7s,baz=116,slow=3.4,SNR=3.1						
TIXI	Tiksi	73.21	10	P		P	17 20 13.2 -0.9
	1.9nm,0.8s,baz=228,slow=1.5,SNR=5.1						
FIA0	FINESS Array S	79.94	333	eP		P	17 20 52.6 +0.3
FINES	FINESS Array B	79.94	333	P		P	17 20 52.6 +0.3
	0.8nm,0.8s,baz=126,slow=7.1,SNR=3.7						

IDC ***26*** *17:13:13.1±1.5,29°.03S×73°.30W,h0km,mb4.0/1, mb1 4.0/2,mb1mx3.6/42,mbtmp3.9/2,ML3.8/1,Error ellipse: s-maj=173.4km s-min=41.2km az=101.0*

SJA ***26*** *17:13:24.2±0.5,28°.75S×67°.31W,h146km±2km,ML3.5, MW3.4*

ISCJB ***26*** *17:13:25.5±0.5,28°.77S±0°.05×67°.27W±0°.06,h129km, mb3.9/1,Error ellipse: s-maj=7.7km s-min=6.3km az=142.6*

ISC 26 17:13:26.1±1.0,28°.74S±0°.06×67°.30W±0°.05,h129km,n23, σ0°76/25,La Rioja Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACLC	CERRO LA CRUZ	0.75	156	eP	Pn	17 13 47.2	+0.3
VCA	Vinchina	0.80	270	eP	Pn	17 13 47.8	+0.5
VCA				eS	Sn	17 14 04.8	+1.5
VCA				IAML		17 14 07.3	
	comp=Z,770nm,0.2s						
AGUA	GUANDACOL	1.28	234	eP	Pn	17 13 51.9	+0.1
AGUA				eS	Sn	17 14 12.1	+0.7
CYA	Choya	1.35	78	eP	Pn	17 13 53.0	+0.5
CYA				IAML		17 13 54.4	
	comp=Z,193nm,0.3s						
CYA				eS	Sn	17 14 13.6	+1.1
APLL	PUNTA DE LOS L	1.78	158	eP	Pn	17 13 57.3	-0.1
APLL				IAML		17 13 57.6	
	comp=Z,191nm,0.1s						
ACDV	Cuesta del Vie	2.13	228	eP	Pn	17 14 02.2	+0.4
ACDV				IAML		17 14 30.1	
	comp=Z,174nm,0.6s						
AROD	Rodeo	2.37	233	eP	Pn	17 14 05.3	+0.4
AHML	Horco Molle	2.61	42	eP	Pn	17 14 07.6	-0.1
AHML				IAML		17 14 07.6	
	comp=Z,89nm,0.3s						
RTLL	Cerro Villicun	2.77	201	eP	Pn	17 14 09.2	-0.6
ZON	Zonda	3.04	203	eP	Pn	17 14 12.9	-0.4
ZON				IAML		17 14 50.0	
	comp=Z,155nm,0.6s						
TCA	Tanti	3.49	138	eP	Pn	17 14 18.5	-0.7
TCA				IAML		17 14 18.8	
	comp=Z,42nm,0.4s						
RTLS	Leoncito	3.50	209	eP	Pn	17 14 19.3	-0.2
RTLS				IAML		17 15 04.8	
	comp=Z,87nm,0.5s						
ACAN	Cantantal	3.52	178	eP	Pn	17 14 18.8	-0.8
AUSP	Uspallata	3.91	207	eP	Pn	17 14 24.7	-0.2
MRA	San Martin	3.91	160	eP	Pn	17 14 24.0	-0.8
MRA				IAML		17 15 10.1	
	comp=Z,108nm,0.6s						
ASAL	Salagasta	4.06	199	eP	Pn	17 14 26.2	-0.5
ARCO	CERRO ARCO	4.32	199	eP	Pn	17 14 29.5	-0.7
ARCO				IAML		17 15 19.7	
	comp=Z,100nm,0.3s						
PB14	IPOC Station P	4.95	325	eP	Pn	17 14 38.0	-0.8
PB10	IPOC Station P	5.97	330	eP	Pn	17 14 51.3	-0.9
LPAZ	La Paz	12.42	356	Pn	P	17 16 27.2	+1.4
	comp=Z,0.2nm,0.3s,baz=210,slow=7.2,SNR=5.0						
QSPA	South Pole Qui	61.48	180	P	P	17 23 29.5	+0.6
	comp=Z,1.1nm,0.6s,baz=140,slow=7.9,SNR=5.1						
ASAR	Alice Springs	124.04	204	PKP	PKPdf	17 32 08.2	-1.6
	comp=Z,0.2nm,0.5s,baz=151,slow=2.1,SNR=6.8						
WRA	Warramunga Arr	127.28	206	PKP	PKPdf	17 32 15.3	-0.7
	comp=Z,0.4nm,0.6s,baz=169,slow=1.8,SNR=6.2						

GCMT ***26*** *17:19:04.2±0.3,15°.53N×92°.28W,h167km±2km, MW5.1/106,Moment Tensor Solution. s61,c72; s106,c154; Duration: 0 Moment tensor: Scale 1016Nm; Mrr1.37±.15; Mθθ-1.51±.20; Mφφ0.14±.21; Mrθ3.78±.12; Mθφ0.26±.19; Mφr-4.56±.13; Best double couple: Mo6.08400×1016 NP1:φs138.00000°,δ85.00000°, λ98.00000°. NP2:φs261.00000°,δ10.00000°,λ33.00000°. Principal axes: T 6.3570, Plg50.0000°, Azm57.0000°; N -0.5450, Plg8.0000°, Azm318.0000°; P -5.8100, Plg39.0000°, Azm221.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

MOS ***26*** *17:19:04.7±0.9,15°.58N×91°.91W,h182km,mb4.9/49 Error ellipse: s-maj=7.0km s-min=4.1km az=104.7*

MEX ***26*** *17:19:04.5±1.0,15°.41N×92°.22W,h169km±8km,MD5.2*

NEIC ***26*** *17:19:04.2±0.1,15°.38N×92°.05W,mb5.4/290, MD5.2(MEX),Error ellipse: s-maj=3.2km s-min=2.3km az=211.0*

NEIC Felt at Cuilco, San Jose Pinula, San Pablo La Laguna, San Pedro La Laguna and Villa Canales.

ISCJB ***26*** *17:19:05.5±0.2,15°.48N±0°.01×92°.02W±0°.01,h196km±2km, mb5.0/335,Error ellipse: s-maj=2.7km s-min=1.7km az=139.7*

IDC ***26*** *17:19:05.0±0.5,15°.60N×91°.78W,h170km±3km,mb4.5/40, mb1 4.6/43,mb1mx4.6/52,mbtmp5.0/43,MS3.4/15, Ms1 3.4/15,ms1mx3.2/44,Error ellipse: s-maj=11.1km s-min=6.2km az=53.0*

BJI ***26*** *17:19:05.9,15°.50N×92°.00W,h181km,mB5.0/8*

ISC 26 17:19:04.3±0.3,15°.47N±0°.04×92°.05W±0°.04,h171km±1km, h171km:pP-P,n1455,σ1§41/1851,mb5.0/345,30C-12D, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		0.60	201	eSn	Sn	17 19 44.6	-2.5
THIG		0.60	201	iP	Pn	17 19 26.9	-1.6
THIG				iS	Sn	17 19 44.6	-2.5
CCIG	Comitan	0.81	354	ePn	Pn	17 19 29.8	-0.2
CCIG				eSn	Sn	17 19 47.0	-2.8
CCIG	Comitan	0.81	354	iP	Pn	17 19 29.8	-0.2
CCIG				eS	Sn	17 19 48.7	-1.1
PCIG		1.16	282	eSn	Sn	17 19 49.3	-4.6
PCIG		1.16	282	iP	Pn	17 19 29.8	-2.6
PCIG				iS	Sn	17 19 49.3	-4.6
TGBT	Tuxtla Gutierr	1.64	322	eP	Pn	17 19 35.5	-1.4
TGIG		1.66	322	iP	Pn	17 19 35.7	-1.5
TGIG				iS	Sn	17 19 59.2	-3.4
IXG	Ixpaco	2.01	130	iP	Pn	17 19 41.8	+0.8
RTR	El Retiro	2.80	124	eP	Pn	17 19 51.9	+1.6
RTR				eS	Sn	17 20 28.8	+2.8
MTO3	Montecristo	2.81	112	iP	Pn	17 19 51.6	+1.2
CMIG	Matias Romero	3.17	301	P	Pn	17 19 52.7	-1.9
	248nm,0.3s,baz=104,slow=8.6,SNR=1792						
CMIG				S	Sn	17 20 26.0	-7.7
	650nm,0.3s,baz=120,slow=15,SNR=41						
BOQS	Boqueron	3.19	122	eP	Pn	17 19 56.7	+1.7
SNET	Serv Nac Est T	3.25	123	eP	Pn	17 19 56.9	+1.2
SNET				IAML		17 20 44.6	
	comp=Z,675nm,0.3s						
LFU	La Fuente	3.31	121	eP	Pn	17 19 58.2	+1.7
LOMA	San Marcos	3.32	123	eP	Pn	17 19 59.9	+3.4
LFRS	El Faro	3.42	122	eP	Pn	17 20 00.2	+2.2
LFRS				eS	Sn	17 20 40.5	+0.8
TECA	Tecapa	3.96	119	eP	Pn	17 20 06.3	+1.5
VSM	San Miguel	4.18	119	eP	Pn	17 20 09.2	+1.4
OXBJ	Oaxaca	4.76	290	eP	Pn	17 20 13.6	-1.6
OXBJ				iS	Sn	17 21 04.2	-6.5
VHO	Vista Hermosa	4.78	290	iP	Pn	17 20 13.8	-1.5
VHO				iS	Sn	17 21 02.9	-8.0
TGUH	Tegucigalpa,Un	4.83	106	ePn	Pn	17 20 18.2	+2.4
TGUH				eSn	Sn	17 21 03.6	-8.2
TGUH	Tegucigalpa,Un	4.83	106	iP	Pn	17 20 18.7	+2.9
TGUH				iS	Sn	17 21 15.0	+3.2
TPIG	Tehuac#an	5.87	301	ePn	Pn	17 20 27.8	-1.9
TPIG				eSn	Sn	17 21 32.9	-3.9
TPIG	Tehuac#an	5.87	301	eP	Pn	17 20 27.8	-1.9
TPIG				iS	Sn	17 21 32.9	-3.9
MYIG	MØrida	5.88	22	ePn	Pn	17 20 29.8	+0.2
MYIG	MØrida	5.88	22	eP	Pn	17 20 29.6	0.0
LVIG	Laguna Verde	5.94	316	ePn	Pn	17 20 27.5	-2.9
LVIG				eSn	Sn	17 21 28.9	-9.2
LVIG	Laguna Verde	5.94	316	eP	Pn	17 20 27.5	-2.9
LVIG				iS	Sn	17 21 30.1	-8.0
ESTN	Estel	5.99	112	ePn	Pn	17 20 33.0	+1.8
TLIG	Tlapa	6.59	289	ePn	Pn	17 20 37.6	-1.6
TLIG				eSn	Sn	17 21 43.4	-10
TLIG				iS	Sn	17 21 50.4	-3.4
TLIG	Tlapa	6.59	289	iP	Pn	17 20 38.1	-1.0
TLIG				iS	Sn	17 21 50.4	-3.4
PPM	Popocatepetl	7.23	301	ePn	Pn	17 20 48.0	0.0
PPM				eSn	Sn	17 22 07.5	-2.1
PPM	Popocatepetl	7.23	301	eP	Pn	17 20 48.0	0.0
PPM				iS	Sn	17 22 07.5	-2.1
PPM	Popocatepetl	7.23	301	eP	Pn	17 20 48.0	0.0
PPM				e		17 22 07.5	
YAIG	Yautepec	7.51	298	eP	Pn	17 20 51.0	-0.4
YAIG				iS	Sn	17 22 04.7	-11
CRZ1	La Cruz	7.62	124	eP	Pn	17 20 54.2	+1.5
PLIG	Platanillo	7.71	293	ePn	Pn	17 20 53.6	-0.2
PLIG	Platanillo	7.71	293	iP	Pn	17 20 53.6	-0.2
PLIG				iS	Sn	17 22 08.6	-12
PBVM	Pinon	7.79	301	ePn	Pn	17 20 43.5	-11
PBVM	Pinon	7.79	301	iP	Pn	17 20 43.5	-11
UNM	Universidad Na	7.81	300	ePn	Pn	17 20 56.5	+1.0
UNM	Universidad Na	7.81	300	eP	Pn	17 20 56.5	+1.0
GBS3	Finca Las Im¯¡	7.93	125	iP	Pn	17 20 58.4	+1.6
NY14	Universidad de	7.95	126	eP	Pn	17 20 59.8	+2.8
LAPC	Finca la Perla	7.96	125	eP	Pn	17 20 58.4	+1.2
CAIG	El Cayaco	8.05	282	eSn	Sn	17 22 21.4	-7.1
CAIG	El Cayaco	8.05	282	iP	Pn	17 20 56.5	-1.9
CAIG				iS	Sn	17 22 21.4	-7.1
GUAB	Guayabo de Bag	8.15	125	eP	Pn	17 21 01.8	+2.0
MESS	Mesas	8.16	124	eP	Pn	17 21 01.5	+1.6
MESS				iP	Pn	17 21 01.6	+1.7
HORNC	Hornillas	8.19	124	eP	Pn	17 21 01.5	+1.2
ESPN	Las Esperanzas	8.20	112	ePn	Pn	17 21 02.3	+2.0
COLC	Colonia	8.20	125	eP	Pn	17 21 01.9	+1.6
DEIG	Demacu	8.21	307	eP	Pn	17 21 01.2	+0.6
VCR	Vista de Mar	8.21	130	eP	Pn	17 21 02.3	+1.8
CUI	Cuipilapa	8.24	125	eP	Pn	17 21 02.1	+1.3
ACAL	Aguas Claras	8.35	124	eP	Pn	17 21 04.2	+1.8
AMAS	Alto Masis	8.40	124	eP	Pn	17 21 04.5	+1.4
ARIG	Puente Sto Nin	8.42	291	eP	Pn	17 21 03.4	+0.1
ARIG				eS	Sn	17 22 44.8	+7.4
ARIG	Puente Sto Nin	8.42	291	eP	Pn	17 21 03.4	+0.1
ARIG				eS	Sn	17 22 44.8	+7.4
JTS	JuntasAbangare	8.62	126	P	Pn	17 21 06.4	+0.4
	comp=Z,66nm,0.3s,baz=27,slow=9.9,SNR=102						
JTS				S	Sn	17 22 36.0	-6.2
	comp=Z,2.8nm,0.3s,baz=198,slow=20,SNR=2.5						
JTS	JuntasAbangare	8.62	126	ePn	Pn	17 21 07.1	+1.2
JTS				eSn	Sn	17 22 36.0	-6.2
JTS	JuntasAbangare	8.62	126	eP	Pn	17 21 06.1	+0.2
JTS	JuntasAbangare	8.62	126	eP	Pn	17 21 07.1	+1.2
CEDE	Laguna Cede¯–o	8.70	124	eP	Pn	17 21 08.1	+1.0
CASO	Castillo	8.71	124	eP	Pn	17 21 08.5	+1.3
CGA2	Cerro Gallo 2	9.17	125	eP	Pn	17 21 14.5	+1.3
ZIIG	Zihuatanejo	9.28	285	ePn	Pn	17 21 14.7	+0.1
ZIIG				eSn	Sn	17 23 18.7	+21
ZIIG	Zihuatanejo	9.28	285	iP	Pn	17 21 14.7	+0.1
ZIIG				iS	Sn	17 23 18.7	+21
HDC	Heredia	9.46	124	ePn	Pn	17 21 17.7	+0.6
HDC	Heredia	9.46	124	eP	Pn	17 21 17.7	+0.6
JRQG	Juriquilla Cam	9.53	304	ePn	Pn	17 21 19.4	+1.3
MOIG	Morelia	9.67	297	ePn	Pn	17 21 21.5	+1.5
LCR2	La Lucha 2	9.70	125	eP	Pn	17 21 21.3	+1.0
CVTR	Volcan Turrial	9.73	123	eP	Pn	17 21 21.4	+0.5
QCR1	Quepos	9.76	127	eP	Pn	17 21 21.4	+0.5
URSC	Urasca	9.82	124	eP	Pn	17 21 24.1	+2.2
BUS	Buena Vista	10.00	125	eP	Pn	17 21 26.1	+1.6
EDLM	Las Mercedes	10.30	126	eP	Pn	17 21 29.1	+1.1
PRVC	Isla de Provid	10.55	100	eP	Pn	17 21 30.4	-0.9
EDPN	Palmar Norte	10.60	127	eP	Pn	17 21 33.0	+1.2
WBCY	West Bay, Gran	10.88	68	ePn	Pn	17 21 39.0	+3.5
PTJ1	Puerto Jim¯ne	10.98	128	eP	Pn	17 21 40.3	+3.4
FSCY	Frank Sound, G	11.05	68	ePn	Pn	17 21 39.4	+1.7
EDSV	San Vito	11.06	126	eP	Pn	17 21 40.1	+2.1
MMIG	Aquila	11.17	286	ePn	Pn	17 21 40.5	+1.2
MMIG	Aquila	11.17	286	eP	Pn	17 21 40.5	+1.2
LNIG	Linares	11.68	325	ePn	Pn	17 21 47.2	+1.3
LCCY	Blossom Villag	12.15	68	ePn	Pn	17 21 54.0	+2.1
ZAIG	Zacatecas	12.31	308	ePn	Pn	17 21 55.8	+1.6
CBCY	The Bluff, Cay	12.46	68	ePn	Pn	17 21 55.7	-0.2
BCIP	Isla Barro Col	13.47	116	ePn	Pn	17 22 08.3	-0.5
BCIP	Isla Barro Col	13.47	116	eP	Pn	17 22 08.0	-0.9
AZU	Azuero	13.82	122	eP	P	17 22 15.7	-0.4
062Z	Marathon	13.82	47	P	Pn	17 22 14.6	+1.4
	baz=230						
MBJ	Montego Bay	13.88	76	iP	P	17 22 25.2	+8.4
MCJ	Malvern	13.97	78	iP	P	17 22 21.1	+3.3
MTDJ	Mount Denham	14.16	77	ePn	Pn	17 22 18.4	+0.9
BBJ	Bamboo Saint A	14.43	76	iP	P	17 22 23.3	+0.3
PCJ	Portland Cotta	14.45	79	iP	P	17 22 24.4	+1.4
833A	Chaparral WMA,	14.49	333	P	Pn	17 22 22.2	+0.8
	baz=151						
833A	Chaparral WMA,	14.49	333	ePn	P	17 22 23.0	-0.4
833A				eSn	Sn	17 24 57.9	-4.9
543A	St. Martinvill	14.55	1	ePn	P	17 22 25.7	+1.7
541A	Lake Charles	14.56	356	P	P	17 22 23.3	-0.8
	baz=176						
541A	Lake Charles	14.56	356	ePn	Pn	17 22 22.6	+0.4
542A	Morse	14.59	358	P	P	17 22 24.3	-0.2
	baz=178						
544A	White Castle	14.59	3	P	P	17 22 24.2	-0.3
	baz=183						
059Z	Ave Maria	14.65	41	P	Pn	17 22 23.8	+0.4
	baz=224,SNR=6.2						
061Z	Ochoppi	14.67	43	P	Pn	17 22 24.0	+0.3
	baz=227						
061Z	Ochoppi	14.67	43	ePn	P	17 22 25.8	+0.3
STH	Stony Hill	14.82	78	iP	P	17 22 28.0	+0.8
HKT	Hockley	14.82	347	ePn	P	17 22 26.6	-0.5
HKT	Hockley	14.82	347	eP	P	17 22 26.6	-0.5
546A	Slidell	14.85	8	P	P	17 22 27.4	+0.1
	baz=189						
058A	Arcadia	14.95	38	P	P	17 22 28.5	-0.1
	baz=221						
957A	Wimauma	15.17	35	P	P	17 22 30.7	-0.3
	baz=218						
957A	Wimauma	15.17	35	ePn	P	17 22 31.1	+0.1
442A	Mamou	15.17	359	P	P	17 22 31.5	+0.5
	baz=179,SNR=8.5						
444A	Pine Grove	15.22	4	P	P	17 22 31.8	+0.3
	baz=185						
443A	Delano Plantat	15.22	1	P	P	17 22 32.7	+1.1
	baz=181,SNR=6.5						
441A	DeRidder	15.24	356	P	P	17 22 33.3	+1.5
	baz=176,SNR=13						
445A	Amite	15.27	6	P	P	17 22 32.9	+0.9
	baz=186						
060Z	West Palm Beac	15.27	43	P	P	17 22 31.9	-0.2
	baz=226						
059A	Moore Haven	15.29	40	P	Pn	17 22 31.7	+0.4
	baz=223,SNR=11						
059A	Moore Haven	15.29	40	ePn	P	17 22 32.8	+0.5
	comp=Z,373nm,0.8s						
958A	Wauchula	15.38	37	P	P	17 22 33.5	+0.2
	baz=220,SNR=9.5						
446A	Poplarville	15.45	9	P	P	17 22 35.2	+1.2
	baz=190						
447A	Lucedale	15.57	11	P	P	17 22 36.9	+1.6
	baz=192,SNR=10						
447A	Lucedale	15.57	11	ePn	P	17 22 37.3	+2.0
	comp=Z,318nm,0.9s						
857A	Zephyrhills	15.64	34	P	P	17 22 37.2	+1.0
	baz=217						
343A	Vidalia	15.74	1	P	P	17 22 38.8	+1.5
	baz=182,SNR=22						
341A	Kurthwood	15.82	356	P	P	17 22 39.0	+0.9
	baz=176,SNR=8.8						
341A	Kurthwood	15.82	356	ePn	P	17 22 39.4	+1.2
	comp=Z,329nm,1.5s						
060A	Indiantown	15.83	41	P	P	17 22 38.4	+0.2
	baz=225						
060A	Indiantown	15.83	41	ePn	P	17 22 40.0	+1.7
	comp=Z,505nm,0.8s						
342A	Flagon Creek P	15.83	359	P	P	17 22 39.3	+1.0
	baz=179,SNR=10						
342A	Flagon Creek P	15.83	359	ePn	P	17 22 40.9	+2.6
	comp=Z,284nm,1.0s						
449A	Pace	15.85	15	P	P	17 22 39.4	+1.0
	baz=197,SNR=9.2						
959A	Okeechobee	15.85	39	P	P	17 22 38.9	+0.3
	baz=223						
552A	Lynn Haven	15.86	22	P	P	17 22 39.2	+0.7
	baz=204						
448A	Bay Minette	15.86	13	P	P	17 22 39.9	+1.3
	baz=195						
345A	Thompson Farm,	15.87	6	P	P	17 22 40.0	+1.3
	baz=187,SNR=18						
CAPC	Capurgana	15.89	114	eP	Pn	17 22 38.8	0.0
344A	Westbrook Farm	15.95	4	P	P	17 22 40.9	+1.3
	baz=185,SNR=18						
344A	Westbrook Farm	15.95	4	ePn	P	17 22 42.5	+2.9
	comp=Z,333nm,0.8s						
DWPF	Disney Wildern	15.96	36	P	P	17 22 40.5	+0.7
	baz=220						
DWPF	Disney Wildern	15.96	36	ePn	P	17 22 42.5	+2.8
	comp=Z,201nm,0.6s						
346A	Big Creek Wild	16.02	8	P	P	17 22 41.7	+1.4
	baz=189						
346A	Big Creek Wild	16.02	8	ePn	P	17 22 43.1	+2.8
	comp=Z,102nm,0.8s						
450A	Crestview	16.06	17	P	P	17 22 42.6	+1.8
	baz=199						
435B	Jarrell	16.06	343	P	P	17 22 42.3	+1.4
	baz=161,SNR=7.3						
435B	Jarrell	16.06	343	ePn	P	17 22 42.3	+1.4
	comp=Z,59nm,0.8s						
858A	St. Cloud	16.08	36	P	P	17 22 42.0	+0.9
	baz=220,SNR=6.2						
PAYG	Puerto Ayora	16.14	174	ePn	Pn	17 22 44.3	+2.4
	comp=Z,70nm,1.0s						
451A	Vernon	16.14	20	P	Pn	17 22 44.4	+2.7
	baz=202						
451A	Vernon	16.14	20	ePn	Pn	17 22 44.9	+3.2
	comp=Z,1µm,1.9s						
655A	Horseshoe Beac	16.15	29	P	Pn	17 22 43.9	+2.0
	baz=212						
347A	Saraland	16.18	11	P	Pn	17 22 43.9	+1.8
	baz=192,SNR=20						
553A	Crawfordville	16.23	24	P	Pn	17 22 44.4	+1.6
	baz=207						
859A	Kempfer Cattle	16.23	38	P	Pn	17 22 43.8	+0.9
	baz=222,SNR=6.5						
757A	Oxford	16.27	33	P	Pn	17 22 45.0	+1.8
	baz=216						
BRAL	Brewton	16.28	15	P	Pn	17 22 45.4	+2.0
	baz=197						
BRAL	Brewton	16.28	15	eP	Pn	17 22 45.9	+2.5
	comp=Z,169nm,0.8s						
348A	Jackson	16.31	13	P	Pn	17 22 45.5	+1.7
	baz=194,SNR=17						
348A	Jackson	16.31	13	eP	Pn	17 22 46.8	+3.1
	comp=Z,586nm,1.3s						
243A	Waterproof	16.34	2	P	Pn	17 22 46.2	+2.1
	baz=182,SNR=43						
656A	Willston	16.38	31	P	Pn	17 22 46.5	+2.0
	baz=214						
656A	Willston	16.38	31	eP	Pn	17 22 47.2	+2.7
	comp=Z,143nm,0.6s						
NATX	Nacogdoches	16.39	352	P	Pn	17 22 46.3	+1.6
	baz=171						
NATX	Nacogdoches	16.39	352	eP	Pn	17 22 46.5	+1.8
	comp=Z,595nm,1.9s						
349A	Repton	16.42	15	P	Pn	17 22 47.1	+2.0
	baz=197,SNR=25						
554A	Perry	16.45	26	P	Pn	17 22 46.8	+1.4
	baz=209						
241A	Mo Tay, Goldon	16.50	357	P	Pn	17 22 48.0	+2.0
	baz=177						
241A	Mo Tay, Goldon	16.50	357	eP	Pn	17 22 48.5	+2.5
	comp=Z,270nm,1.0s						
242A	Grayson	16.52	360	P	Pn	17 22 48.2	+2.0
	baz=180,SNR=23						
244A	Avery, Jackson	16.54	4	P	Pn	17 22 47.8	+1.3
	baz=185,SNR=18						
452A	Marianna	16.55	21	P	Pn	17 22 48.8	+2.2
	baz=204,SNR=5.1						
JCT	Junction City	16.55	336	P	Pn	17 22 47.7	+1.0
	baz=153						
JCT	Junction City	16.55	336	eP	Pn	17 22 47.4	+0.7
	comp=Z,34nm,0.6s						
JCT				eS	Sn	17 25 51.0	-1.0
JCT	Junction City	16.55	336	eP	Pn	17 22 47.4	+0.7
JCT				eS	Sn	17 25 51.0	-1.0
JCT				pmax	pmax		
	comp=Z,34nm,0.6s						
240A	Hunter Patters	16.57	355	P	Pn	17 22 48.0	+1.1
	baz=174						
240A	Hunter Patters	16.57	355	eP	Pn	17 22 47.8	+0.9
	comp=Z,230nm,1.4s						
245A	Little AP, Sta	16.60	6	P	Pn	17 22 49.0	+1.7
	baz=187,SNR=24						
246A	Jackson Lee, B	16.68	9	P	Pn	17 22 49.1	+0.8
	baz=190						
350A	Dozier	16.71	17	P	Pn	17 22 49.7	+1.1
	baz=199,SNR=6.2						
GTBY	Guantanamo Bay	16.73	72	eP	Pn	17 22 50.7	+1.8
	comp=Z,264nm,0.6s						
VBMS	Vicksburg	16.73	5	P	Pn	17 22 49.9	+1.2
	baz=185						
VBMS	Vicksburg

352A **Blakely** 17.21 21 eP Pn 17 22 56.6 +2.0
comp=Z,479nm,0.7s
250A **Grady** 17.25 17 P Pn 17 22 56.0 +1.0
baz=199,SNR=9.6
250A **Grady** 17.25 17 eP Pn 17 22 56.7 +1.6
comp=Z,198nm,1.1s
146A **Union** 17.30 9 P Pn 17 22 57.1 +1.4
baz=190,SNR=8.1
146A **Union** 17.30 9 eP Pn 17 22 57.0 +1.3
comp=Z,229nm,1.3s
557A **Orange Park** 17.30 31 P Pn 17 22 56.5 +0.8
baz=215
MOTC **Monteria, Cord** 17.33 111 eP P 17 22 53.5 -1.4
353A **Camilla** 17.35 23 P Pn 17 22 57.3 +1.1
baz=206,SNR=9.1
SJCC **San Jacinto, C** 17.36 107 eP P 17 22 55.6 +0.3
147A **Livingston** 17.46 11 P Pn 17 22 58.2 +0.7
baz=192,SNR=29
147A **Livingston** 17.46 11 eP Pn 17 22 58.8 +1.3
comp=Z,374nm,0.8s
TXAR **Lajitas Array** 17.47 324 P Pn 17 22 59.1 +1.4
comp=Z,1.0nm,0.3s,baz=153,slow=11,SNR=216
TXAR PcP PcP 17 27 29.9 +1.5
comp=Z,0.4nm,0.3s,baz=160,slow=4.1,SNR=12
TXAR ScP ScP 17 30 51.0 +3.4
comp=Z,0.1nm,0.3s,baz=144,slow=4.7,SNR=12
TXAR PKiKP PKiKP 17 35 19.8 -0.9
comp=Z,0.0nm,0.3s,baz=92,slow=2.7,SNR=3.8
TX31 **Lajitas Ar. Si** 17.47 324 eP Pn 17 22 58.5 +0.8
148A **Greensboro** 17.57 13 P Pn 17 23 00.5 +1.7
baz=194,SNR=26
251A **Midway** 17.62 19 P Pn 17 23 00.4 +1.0
baz=201,SNR=33
TIGA **Tifton** 17.67 24 P Pn 17 23 01.3 +1.3
baz=208,SNR=15
TIGA **Tifton** 17.67 24 eP Pn 17 23 01.3 +1.3
comp=Z,527nm,0.8s
Z43A **Armstrong Fami** 17.68 2 P Pn 17 23 00.3 +0.3
baz=182
149A **Jones** 17.71 15 P Pn 17 23 01.1 +0.7
baz=197,SNR=78
Z41A **Richland Creek** 17.72 358 P Pn 17 23 01.2 +0.6
baz=178,SNR=50
Z41A **Richland Creek** 17.72 358 eP Pn 17 23 01.0 +0.4
comp=Z,602nm,0.8s
Z42A **Norrel Spur, H** 17.72 0 P Pn 17 23 00.6 0.0
baz=180,SNR=20
456A **Hilliard** 17.74 29 P Pn 17 23 01.9 +1.0
baz=213
456A **Hilliard** 17.74 29 eP Pn 17 23 02.4 +1.5
comp=Z,243nm,0.7s
252A **Lumpkin** 17.75 21 P Pn 17 23 01.3 +0.4
baz=204,SNR=34
Z40A **Long Farm, Mag** 17.75 356 P Pn 17 23 01.4 +0.5
baz=176,SNR=21
Z44A **Pea Ridge, Bel** 17.79 4 P Pn 17 23 01.9 +0.5
baz=185
Z46A **Louisville** 17.87 9 P Pn 17 23 03.1 +0.8
baz=190,SNR=45
457A **Yulee** 17.88 31 P Pn 17 23 03.2 +0.7
baz=215
UREC **San Jos¨ de U** 17.89 114 eP P 17 23 01.6 +0.5
355A **Pearson** 17.89 26 P Pn 17 23 02.2 -0.4
baz=210
150A **Eclectic** 17.91 17 P Pn 17 23 03.7 +0.8
baz=199,SNR=82
Z45A **Winona** 17.95 6 P Pn 17 23 03.9 +0.7
baz=187,SNR=7.9
Z45A **Winona** 17.95 6 eP Pn 17 23 03.8 +0.5
comp=Z,232nm,0.9s
Z47A **Carrollton** 18.01 11 P Pn 17 23 05.3 +1.2
baz=192,SNR=41
253A **Americus** 18.02 22 P Pn 17 23 04.7 +0.6
baz=205,SNR=7.3
253A **Americus** 18.02 22 eP Pn 17 23 05.0 +0.9
comp=Z,216nm,0.8s
151A **Opelika** 18.04 19 P Pn 17 23 06.0 +1.6
baz=201,SNR=87
LRAL **Lakeview Retre** 18.07 14 P Pn 17 23 05.9 +1.2
baz=196
LRAL **Lakeview Retre** 18.07 14 eP Pn 17 23 05.5 +0.7
comp=Z,355nm,1.0s
356A **Blackshear** 18.20 28 P Pn 17 23 07.1 +0.9
baz=212,SNR=7.0
254A **Abbeville** 18.24 24 P Pn 17 23 06.6 -0.1
baz=208,SNR=22
Z48A **Northport** 18.28 12 P Pn 17 23 07.6 +0.4
baz=194,SNR=34
Y42A **Garnett, Star** 18.29 1 P Pn 17 23 07.4 +0.2
baz=181,SNR=18
Y41A **Eaglette Beard** 18.34 359 P Pn 17 23 07.3 -0.5
baz=178,SNR=14
Z49A **Columbiana** 18.34 15 P Pn 17 23 09.0 +1.2
baz=197,SNR=74
CCAR **Cane Creek** 18.37 1 eP Pn 17 23 08.7 +0.5
comp=Z,360nm,0.8s
152A **Waverly Hall** 18.37 20 P Pn 17 23 09.4 +1.1
baz=203,SNR=65
152A **Waverly Hall** 18.37 20 eP Pn 17 23 08.7 +0.5
comp=Z,345nm,0.7s
Y43A **Makayla and Ka** 18.39 3 P Pn 17 23 08.3 -0.1
baz=183,SNR=9.5
MALC **Bahia Malaga** 18.42 127 eP Pn 17 23 10.9 +2.0
ABTX **Abilene, Hawle** 18.42 339 P Pn 17 23 07.9 -0.9
baz=156,SNR=34
ABTX **Abilene, Hawle** 18.42 339 eP P 17 23 07.6 +0.9
comp=Z,52nm,0.6s
GRGC **Isla de Gorgon** 18.45 131 eP Pn 17 23 09.6 +0.3
Y45A **Yeager Farm, C** 18.45 7 P Pn 17 23 09.6 +0.5
baz=188,SNR=17
Y44A **Strider, Charl** 18.48 5 P Pn 17 23 09.4 -0.1
baz=186,SNR=8.6
Y40A **Okolona** 18.49 357 P Pn 17 23 08.8 -0.9
baz=176,SNR=16
Z50A **Ashland** 18.55 16 P Pn 17 23 11.2 +0.8
baz=199,SNR=66
Z50A **Ashland** 18.55 16 eP Pn 17 23 10.5 +0.1
comp=Z,307nm,0.8s
Y46A **Houston** 18.56 8 P Pn 17 23 10.0 -0.4
baz=190,SNR=28
255A **Hazlehurst** 18.56 26 P Pn 17 23 10.3 -0.1
baz=210,SNR=8.4
255A **Hazlehurst** 18.56 26 eP Pn 17 23 10.4 -0.1
comp=Z,2µm,2.0s
357A **Townsend** 18.58 29 P Pn 17 23 10.9 +0.3
baz=213
ZARC **Zaragoza, Cauc** 18.61 113 eP P 17 23 08.3 -0.6
HELC **Santa Helena** 18.65 118 eP P 17 23 09.8 +0.1
comp=Z,168nm,1.0s
HELC **Santa Helena** 18.65 118 eP Pn 17 23 10.9 -1.1
153A **Fort Valley** 18.66 22 P Pn 17 23 11.9 +0.3
baz=205,SNR=11
PLMC **San Jos¨ del** 18.71 122 eP P 17 23 09.6 -0.5
SLBS **Sierra La Lagu** 18.73 299 eP Pn 17 23 12.5 -0.1
comp=Z,31nm,1.1s
Y47A **UCPARC, Winfie** 18.74 11 P Pn 17 23 12.3 -0.2
baz=193,SNR=50
Z51A **Franklin** 18.82 18 P Pn 17 23 13.6 0.0
baz=201,SNR=27
LGNH **LOogne** 18.84 78 eP Pn 17 23 13.0 -0.9
comp=Z,565nm,0.6s
256A **Glennville** 18.86 28 P Pn 17 23 14.2 +0.2
baz=212,SNR=8.9
Y48A **Jasper** 18.88 13 P Pn 17 23 14.0 -0.3
baz=195,SNR=48
154A **Montrose** 18.90 24 P Pn 17 23 14.5 +0.1
baz=207,SNR=22
154A **Montrose** 18.90 24 eP Pn 17 23 14.1 -0.3
comp=Z,836nm,0.7s
Z52A **Williamson** 18.95 20 P Pn 17 23 15.4 +0.4
baz=203,SNR=64
X41A **Kaden, Bauxite** 18.95 359 P Pn 17 23 14.0 -1.0
baz=179,SNR=11
X40A **Basin Creek Fa** 18.95 358 P P 17 23 13.6 +1.3
baz=178,SNR=18
X40A **Basin Creek Fa** 18.95 358 eP Pn 17 23 14.0 -1.0
comp=Z,56nm,1.0s
CODC **Agust`›n Codaz** 18.96 105 eP P 17 23 12.5 -0.1
X43A **Marvell** 18.99 3 P Pn 17 23 14.4 -1.1
baz=183,SNR=11
X43A **Marvell** 18.99 3 eP Pn 17 23 15.2 -0.4
comp=Z,392nm,0.7s
Y49A **Blount Mountai** 19.00 15 P Pn 17 23 15.7 0.0
baz=197,SNR=33
Y49A **Blount Mountai** 19.00 15 eP Pn 17 23 15.2 -0.4
comp=Z,288nm,1.0s
X42A **Stuttgart** 19.00 1 P P 17 23 14.2 +1.3
baz=181

X45A **UM Field Stati** 19.02 7 P Pn 17 23 15.0 -0.8
baz=188
X44A **Crenshaw** 19.02 5 P Pn 17 23 15.2 -0.7
baz=186,SNR=15
MIAR **Mount Ida** 19.04 356 P P 17 23 14.6 +1.2
baz=176
MIAR **Mount Ida** 19.04 356 eP P 17 23 14.2 +0.9
comp=Z,123nm,1.3s
MIAR **Mount Ida** 19.04 356 eP P 17 23 14.3 +0.9
MIAR pmax pmax
comp=Z,123nm,1.3s
X39A **Fountain Ranch** 19.05 355 P P 17 23 14.8 +1.3
baz=174,SNR=34
OXF **Oxford** 19.11 7 P Pn 17 23 15.6 -1.3
baz=188
OXF **Oxford** 19.11 7 eP Pn 17 23 15.9 -0.9
comp=Z,139nm,0.7s
OXF **Oxford** 19.11 7 eP Pn 17 23 15.9 -0.9
OXF pmax pmax
comp=Z,139nm,0.7s
155A **Kite** 19.16 25 P Pn 17 23 17.5 -0.1
baz=209,SNR=41
LPIG **La Paz** 19.19 299 P Pn 17 23 17.7 -0.3
comp=Z,5.0nm,0.3s,baz=342,slow=6.0,SNR=5.6
LPIG LR LR 17 30 39.4
comp=Z,106nm,19.7s,baz=139,slow=36
Y50A **Piedmont** 19.20 16 P Pn 17 23 17.1 -1.0
baz=193,SNR=16
YOTC **Yotoco, Valle** 19.21 125 eP P 17 23 16.3 +0.8
UALR **University of** 19.22 359 eP Pn 17 23 18.1 -0.1
comp=Z,167nm,0.9s
257A **Skidaway Islan** 19.25 30 P Pn 17 23 17.6 -1.0
baz=214
257A **Skidaway Islan** 19.25 30 eP Pn 17 23 18.1 -0.5
comp=Z,666nm,1.2s
X46A **Booneville** 19.26 9 P Pn 17 23 17.3 -1.3
baz=190,SNR=24
HORQ **Saladito** 19.30 127 eP P 17 23 17.6 +1.0
Z53A **Monticello** 19.32 22 P Pn 17 23 18.4 -1.0
baz=205,SNR=99
X47A **Russelville** 19.34 10 P P 17 23 18.1 +1.5
baz=192,SNR=29
PTBC **PUERTO BERRIO,** 19.40 115 eP P 17 23 15.6 -1.8
Y51A **Rockmart** 19.40 18 P Pn 17 23 20.0 -0.4
baz=200,SNR=124
X48A **Hartselle** 19.43 13 P Pn 17 23 19.4 -1.3
baz=194,SNR=53
X48A **Hartselle** 19.43 13 eP P 17 23 19.1 +1.5
comp=Z,209nm,0.8s
GOGA **Godfrey** 19.48 22 P Pn 17 23 20.5 -0.7
baz=205
GOGA **Godfrey** 19.48 22 eP Pn 17 23 20.4 -0.8
comp=Z,262nm,0.7s
GOGA **Godfrey** 19.48 22 eP Pn 17 23 20.4 -0.8
GOGA pmax pmax
comp=Z,262nm,0.7s
NORC **Norcasia** 19.53 118 eP P 17 23 18.3 -0.6
Z54A **Sparta** 19.55 24 P Pn 17 23 21.1 -1.0
baz=207,SNR=40
W43A **Forest City** 19.57 3 P Pn 17 23 20.8 -1.6
baz=184
156A **Sylvania** 19.61 27 P Pn 17 23 21.8 -1.0
baz=212,SNR=16
W41B **Gary Mavity, V** 19.62 360 P Pn 17 23 21.3 -1.6
baz=179,SNR=36
W41B **Gary Mavity, V** 19.62 360 eP Pn 17 23 21.3 -1.6
comp=Z,90nm,0.8s
X49A **Woodville** 19.65 14 P P 17 23 21.3 +1.4
baz=196,SNR=40
MET **Memphis--Engin** 19.66 5 eP Pn 17 23 21.9 -1.5
comp=Z,240nm,0.4s
W40A **Ferguson Farm,** 19.66 358 P Pn 17 23 21.9 -1.4
baz=177,SNR=14
W40A **Ferguson Farm,** 19.66 358 eP Pn 17 23 22.4 -1.0
comp=Z,70nm,0.8s
ANIL **Santa Ana** 19.67 122 eP P 17 23 21.7 +1.0
Y52A **Lilburn** 19.68 20 P Pn 17 23 23.1 -0.6
baz=203,SNR=70
Y52A **Lilburn** 19.68 20 eP Pn 17 23 22.8 -0.9
comp=Z,377nm,0.8s
TOLC **Tolima** 19.68 122 eP Pn 17 23 24.4 +0.1
W44A **Shelby Farms P** 19.69 5 P P 17 23 21.9 +1.5
baz=186
W39A **Magazine** 19.70 356 P P 17 23 22.0 +1.5
baz=175,SNR=26
W39A **Magazine** 19.70 356 eP Pn 17 23 22.6 -1.3
comp=Z,67nm,0.8s
W42A **Bald Knob** 19.72 1 P Pn 17 23 23.1 -1.1
baz=182,SNR=6.4
WHAR **Wooly Hollow** 19.74 359 eP P 17 23 22.2 +1.4
comp=Z,81nm,0.7s
PLAL **Pickwick Lake** 19.75 10 eP P 17 23 22.4 +1.4
comp=Z,59nm,0.6s
X50B **Fort Payne** 19.77 16 P Pn 17 23 23.2 -1.5
baz=198,SNR=78
W45A **Hickory Valley** 19.77 7 P P 17 23 22.4 +1.2
baz=188
Z55A **Blythe** 19.82 25 P P 17 23 23.4 +1.6
baz=209,SNR=17
Y53A **Monroe** 19.84 21 P Pn 17 23 24.0 -1.6
baz=204,SNR=54
W46A **Michie** 19.85 9 P P 17 23 22.9 +0.8
baz=190,SNR=18
POPC **Popayan, Colom** 19.86 129 eP Pn 17 23 25.0 -1.3
CLNB **Carlsbad** 19.89 329 eP Pn 17 23 25.0 -1.3
HBAR **Harrisburg** 20.04 3 eP Pn 17 23 26.8 -1.1
comp=Z,345nm,0.4s
GDL2 **Guadalupe Moun** 20.08 328 eP P 17 23 26.2 +1.5
GDL2 epP pP 17 23 56.2 +2.2
X51A **Calhoun** 20.08 17 P P 17 23 26.5 +1.8
baz=200,SNR=37
X51A **Calhoun** 20.08 17 eP P 17 23 26.4 +1.8
comp=Z,552nm,1.4s
W47A **Westpoint** 20.10 11 P P 17 23 26.0 +1.2
baz=192,SNR=26
W48A **Pulaski** 20.11 12 P P 17 23 26.5 +1.5
baz=194,SNR=26
WMOK **Wichita Mounta** 20.12 344 P P 17 23 25.1 +0.1
baz=161
WMOK **Wichita Mounta** 20.12 344 eP P 17 23 24.8 -0.2
comp=Z,70nm,0.8s
WMOK **Wichita Mounta** 20.12 344 eP P 17 23 24.8 -0.2
WMOK pmax pmax
comp=Z,71nm,0.8s
SDDR **Presa de Saban** 20.13 77 eP Pn 17 23 28.3 -1.0
comp=Z,278nm,0.9s
Y54A **Tignall** 20.17 23 P Pn 17 23 27.5 -2.0
baz=207,SNR=32
SOTA **Rioblanco** 20.18 130 eP Pn 17 23 30.4 0.0
PCON **Cinco Dias** 20.21 129 eP Pn 17 23 30.4 -0.5
MARP **Paez Belalcaza** 20.22 127 eP Pn 17 23 29.7 -0.9
MNTX **Cornudas Mount** 20.22 325 P P 17 23 27.3 +1.1
baz=140
MNTX **Cornudas Mount** 20.22 325 eP P 17 23 27.1 +1.0
comp=Z,58nm,0.7s
V41A **Mountainview** 20.23 360 P P 17 23 26.6 +0.5
baz=180,SNR=56
OTAV **Otavalo** 20.23 137 eP P 17 23 28.6 +1.7
comp=Z,165nm,1.4s
OTAV ePcP PcP 17 27 34.1 +0.1
OTAV **Otavalo** 20.23 137 eP Pn 17 23 29.0 -1.9
OTAV **Otavalo** 20.23 137 P Pn 17 23 29.4 -1.6
OTAV pmax pmax
comp=Z,86nm,1.0s
W49A **Belvidere** 20.24 14 P P 17 23 28.2 +1.9
baz=196,SNR=88
V42A **Cord** 20.26 2 P P 17 23 27.5 +1.1
baz=182,SNR=59
V40A **Witts Springs** 20.26 358 P P 17 23 27.3 +0.8
baz=178,SNR=37
V40A **Witts Springs** 20.26 358 eP P 17 23 27.1 +0.5
comp=Z,86nm,0.7s
GCUF **Volcan Galeras** 20.27 133 eP Pn 17 23 31.1 -0.4
V43A **Jonesboro** 20.27 4 P P 17 23 27.4 +0.8
baz=184
CRUC **La Cruz** 20.31 131 eP Pn 17 23 31.1 -0.8
V39A **Pettigrew** 20.33 356 P P 17 23 27.9 +0.6
baz=176,SNR=35
V44A **Blytheville** 20.36 5 P P 17 23 28.1 +0.5
baz=186
V45A **Humboldt** 20.37 7 P P 17 23 28.1 +0.4
baz=188,SNR=12
ROSC **El Rosal** 20.38 119 P P 17 23 30.3 +2.0
comp=Z,42nm,0.5s,baz=77,slow=0.8,SNR=18
ROSC **El Rosal** 20.38 119 eP P 17 23 29.6 +1.3
comp=Z,39nm,0.8s
ROSC **El Rosal** 20.38 119 eP P 17 23 28.4 0.0

SWET **Sewanee** 20.41 14 eP P 17 23 29.4 +1.3
comp=Z,337nm,0.6s
X52A **Dahlonega** 20.41 20 P P 17 23 29.5 +1.3
baz=203,SNR=82
RGRS **Roger Stewart** 20.42 30 eP P 17 23 29.1 +1.0
comp=Z,1µm,0.6s
GNAR **Gosnell** 20.49 5 eP P 17 23 30.8 +1.9
comp=Z,479nm,1.4s
BARC **Barichara** 20.49 113 eP P 17 23 28.4 -1.1
HALT **Halls** 20.50 6 eP P 17 23 30.1 +1.1
comp=Z,180nm,0.5s
CPRX **Cap Rock** 20.51 331 eP P 17 23 22.7 -6.6
X53A **Estanollee** 20.52 21 P P 17 23 31.3 +2.0
baz=204,SNR=36
PRAC **Prado** 20.54 123 eP P 17 23 30.1 +0.4
comp=Z,182nm,0.8s
PRAC **Prado** 20.54 123 eP P 17 23 31.1 +1.4
CSU **Charleston Sou** 20.54 30 eP P 17 23 30.2 +0.7
V46A **Holladay** 20.55 9 P P 17 23 29.8 +0.3
baz=191,SNR=46
W50A **Signal Mountai** 20.55 16 P P 17 23 31.2 +1.6
baz=199,SNR=32
W50A **Signal Mountai** 20.55 16 eP P 17 23 30.9 +1.3
comp=Z,132nm,0.8s
NHSC **New Hope** 20.59 29 eP Pn 17 23 32.5 -2.2
comp=Z,507nm,0.9s
PAMC **Pamplona, Colo** 20.60 111 eP P 17 23 28.4 -2.5
TUL1 **Leonard** 20.63 351 P P 17 23 31.0 +0.6
baz=170,SNR=10
TUL1 **Leonard** 20.63 351 eP P 17 23 30.0 -0.4
comp=Z,59nm,0.8s
HODGE **Hodges** 20.66 24 eP P 17 23 32.8 +2.0
comp=Z,106nm,1.5s
V47A **Nunnelly** 20.67 10 P P 17 23 31.4 +0.5
baz=192,SNR=39
GRTK **Grand Turk** 20.71 70 eP P 17 23 33.2 +1.8
comp=Z,413nm,0.6s
BETC **Betania** 20.72 126 eP P 17 23 32.4 +0.8
V48A **Smith Brothers** 20.72 12 P P 17 23 32.4 +1.0
baz=194,SNR=44
V48A **Smith Brothers** 20.72 12 eP P 17 23 32.0 +0.7
comp=Z,160nm,0.9s
U41A **Viola** 20.79 0 P P 17 23 32.2 +0.1
baz=180,SNR=28
HHAR **Hobbs** 20.79 356 eP P 17 23 32.5 +0.3
comp=Z,76nm,1.1s
U42A **Revenden** 20.81 2 P P 17 23 32.3 +0.1
baz=182,SNR=82
MSTX **Muleshoe** 20.81 334 P P 17 23 32.5 -0.1
baz=150,SNR=24
MSTX **Muleshoe** 20.81 334 eP P 17 23 32.4 -0.1
comp=Z,60nm,0.5s
U40A **Yellville** 20.81 358 P P 17 23 32.7 +0.3
baz=178,SNR=46
W52A **Murphy** 20.85 19 P P 17 23 34.5 +1.6
baz=202
W52A **Murphy** 20.85 19 eP P 17 23 34.5 +1.6
comp=Z,161nm,0.8s
GLAT **Glass** 20.86 6 eP P 17 23 33.1 +0.2
comp=Z,765nm,1.3s
U43A **Rector** 20.86 4 P P 17 23 34.4 +1.5
baz=184,SNR=25
U39A **Green Forest** 20.86 357 P P 17 23 33.3 +0.3
baz=176,SNR=19
RUSC **La Rusia** 20.90 115 eP P 17 23 33.0 -1.1
comp=Z,24nm,0.6s
RUSC **La Rusia** 20.90 115 eP P 17 23 32.4 -1.7
WVT **Waverly** 20.91 10 P P 17 23 33.9 +0.5
baz=191
WVT **Waverly** 20.91 10 eP P 17 23 33.8 +0.3
comp=Z,115nm,1.1s
WVT **Waverly** 20.91 10 eP P 17 23 33.8 +0.3
WVT pmax pmax
comp=Z,115nm,1.1s
U44B **Burton Farm, H** 20.92 6 P P 17 23 34.2 +0.7
baz=187,SNR=9.4
V49A **McMinnville** 20.94 14 P P 17 23 34.9 +1.1
baz=197,SNR=59
UTMT **University of** 20.98 7 eP P 17 23 34.4 +0.3
comp=Z,312nm,1.1s
CHIC **Chingaza** 20.98 119 eP P 17 23 35.1 +0.2
CHIC eP Pn 17 23 35.7 -4.5
U45A **Rockin P Farm,** 21.00 7 P P 17 23 34.7 +0.4
baz=189,SNR=12
CPCT **Cooper Cave** 21.01 17 eP P 17 23 36.0 +1.5
comp=Z,210nm,0.6s
U44A **Portagevile** 21.05 5 P P 17 23 36.0 +1.1
baz=186,SNR=11
V50A **Pikevile** 21.05 16 P P 17 23 36.2 +1.2
baz=199,SNR=36
U46A **Springville** 21.09 9 P P 17 23 36.2 +1.0
baz=190,SNR=47
BG3 **Lake Jocassee** 21.09 21 eP P 17 23 37.1 +1.7
comp=Z,247nm,0.7s
JSC **Jenkinsville** 21.10 25 eP P 17 23 37.1 +1.7
comp=Z,182nm,0.9s
JSC **Jenkinsville** 21.10 25 eP P 17 23 37.2 +1.7
JSC pmax pmax
comp=Z,182nm,0.9s
W53A **Cullowhee** 21.17 21 P P 17 23 38.0 +1.7
baz=204,SNR=24
AMTX **Amarillo** 21.18 338 P P 17 23 36.9 +0.5
baz=154
AMTX **Amarillo** 21.18 338 eP P 17 23 36.7 +0.3
comp=Z,110nm,0.6s
PARMO **Parma** 21.20 5 eP P 17 23 37.6 +1.0
comp=Z,447nm,0.7s
FLOC **Florencia** 21.26 129 eP P 17 23 38.4 +1.0
PBMO **Poplar Bluff** 21.27 4 eP P 17 23 36.9 -0.3
comp=Z,219nm,0.4s
VILC **Villavicencio,** 21.29 120 eP P 17 23 39.1 +1.2
U47A **Clarksville** 21.31 11 P P 17 23 37.7 0.0
baz=193,SNR=20
PAULI **Pauline** 21.35 24 eP P 17 23 40.3 +2.2
comp=Z,33nm,0.8s
SDD **Santo Domingo** 21.37 79 eP P 17 23 40.7 +2.1
comp=Z,596nm,1.0s
V51A **Loudon** 21.39 17 P P 17 23 40.0 +1.5
baz=201,SNR=26
V51A **Loudon** 21.39 17 eP P 17 23 39.6 +1.1
comp=Z,152nm,0.8s
TKL **Tuckaleechee C** 21.42 19 P P 17 23 40.7 +1.8
comp=Z,224nm,0.8s,baz=190,slow=12,SNR=91
TKL LR LR 17 32 38.3
comp=Z,117nm,21.2s,baz=199,slow=38
TKL **Tuckaleechee C** 21.42 19 eP P 17 23 40.5 +1.6
comp=Z,504nm,1.2s
TKL **Tuckaleechee C** 21.42 19 eP P 17 23 40.5 +1.6
TKL pmax pmax
comp=Z,504nm,1.2s
T41A **Mountain View** 21.49 1 P P 17 23 39.7 +0.1
baz=181,SNR=74
T42A **Van Buren** 21.49 2 P P 17 23 39.2 -0.4
baz=182,SNR=63
T42A **Van Buren** 21.49 2 eP P 17 23 39.0 -0.6
comp=Z,68nm,0.6s
T39A **Clever** 21.50 357 P P 17 23 39.4 -0.3
baz=176,SNR=55
U48A **Cassie Pea, Po** 21.52 12 P P 17 23 40.2 +0.3
baz=194,SNR=40
T38A **Diamond** 21.57 355 P P 17 23 40.0 -0.4
baz=174,SNR=26
T43A **Greenville** 21.58 4 P P 17 23 40.5 -0.1
baz=185,SNR=63
T40A **Mansfield** 21.60 359 P P 17 23 40.6 -0.1
baz=179,SNR=55
T44A **Benton** 21.64 5 P P 17 23 41.5 +0.3
baz=186,SNR=84
V52A **Sevierville** 21.65 19 P P 17 23 42.8 +1.5
baz=202,SNR=50
V52A **Sevierville** 21.65 19 eP P 17 23 42.7 +1.5
comp=Z,430nm,1.0s
T45A **Paducah** 21.67 7 P P 17 23 41.7 +0.2
baz=189,SNR=12
T45A **Paducah** 21.67 7 eP P 17 23 40.7 -0.8
comp=Z,368nm,0.6s
U49A **Red Boiling Sp** 21.69 14 P P 17 23 42.5 +0.9
baz=196,SNR=81
YOPC **Yopal, Colombi** 21.74 115 eP P 17 23 40.9 -1.7
V53A **Saluda** 21.75 21 P P 17 23 44.6 +2.2
baz=204,SNR=36
V53A **Saluda** 21.75 21 eP P 17 23 44.7 +2.3
comp=Z,225nm,0.7s
T46A **Princeton** 21.80 9 P P 17 23 43.3 +0.5
baz=191,SNR=38
KMSC **Kings Mountain** 21.82 24 P P 17 23 44.5 +1.4
baz=209,SNR=42
KMSC **Kings Mountain** 21.82 24 eP P 17 23 44.5 +1.4

comp=Z,250nm,0.8s
T47A Sharon Grove 21.88 11 P P 17 23 44.1 +0.5
baz=193,SNR=101
T47A Sharon Grove 21.88 11 eP P 17 23 43.7 +0.2
comp=Z,426nm,0.8s
SDV Santo Domingo 21.92 105 P P 17 23 43.8 -0.7
comp=Z,47nm,0.7s,baz=276,slow=3.9,SNR=11
SDV PcP PcP 17 27 37.8 +0.9
comp=Z,9.2nm,0.3s,baz=16,slow=2.5,SNR=4.3
SDV Santo Domingo 21.92 105 eP P 17 23 44.8 +0.4
comp=Z,110nm,0.8s
SDV eS PcP 17 27 37.9 +0.9
S41A Jillco Farms, 22.03 1 P P 17 23 44.7 -0.4
baz=181,SNR=55
S40A Lebanon 22.04 359 P P 17 23 44.8 -0.5
baz=179,SNR=72
HSIG 22.05 311 eP P 17 23 46.8 +1.4
comp=Z,48nm,0.8s
HSIG ePcP PcP 17 27 37.5 +0.8
S43A Fulton Ridge, 22.08 4 P P 17 23 45.0 -0.7
baz=185,SNR=37
T48A Bowling Green 22.13 12 P P 17 23 45.9 -0.2
baz=194,SNR=18
S38A Stockton 22.13 356 P P 17 23 45.7 -0.4
baz=175,SNR=39
SRIG Santa Rosalia 22.16 305 eP P 17 23 48.2 +1.7
comp=Z,45nm,0.9s
S39A Bolivar 22.16 357 P P 17 23 46.2 -0.2
baz=177,SNR=57
S39A Bolivar 22.16 357 eP P 17 23 45.9 -0.5
comp=Z,64nm,0.7s
121A Cookes Peak, D 22.20 323 P P 17 23 48.6 +1.5
baz=136,SNR=32
121A Cookes Peak, D 22.20 323 eP P 17 23 48.7 +1.6
S42A Caledonia 22.24 3 P P 17 23 46.2 -0.9
baz=183,SNR=54
S44A Carbondale 22.27 6 P P 17 23 47.4 0.0
baz=187,SNR=73
SIUC Southern Illin 22.30 6 eP P 17 23 48.6 +0.9
comp=Z,426nm,0.7s
T49A Edmonton 22.31 14 P P 17 23 48.3 +0.5
baz=197,SNR=82
T49A Edmonton 22.31 14 eP P 17 23 49.0 +1.2
comp=Z,381nm,1.2s
TZTN Tazewell 22.31 18 P P 17 23 49.3 +1.5
baz=202
TZTN Tazewell 22.31 18 eP P 17 23 49.2 +1.4
comp=Z,430nm,1.1s
319A Douglas 22.33 318 eP P 17 23 49.6 +1.4
comp=Z,80nm,1.2s
S45A Carrier Mills 22.33 7 P P 17 23 47.8 -0.2
baz=189,SNR=21
T50A Nancy 22.40 15 P P 17 23 48.9 +0.2
baz=198,SNR=70
S46A Don Dixon Farm 22.45 9 P P 17 23 49.2 +0.1
baz=191,SNR=21
U53A Fall Branch 22.45 20 P P 17 23 50.4 +1.1
baz=204,SNR=81
FVM French Village 22.47 3 eP P 17 23 48.4 -0.9
comp=Z,32nm,0.6s
FVM French Village 22.47 3 eP P 17 23 48.4 -0.9
FVM pmax pmax
comp=Z,32nm,0.6s
CCM Cathedral Cave 22.51 2 P P 17 23 49.0 -0.6
baz=182
CCM Cathedral Cave 22.51 2 eP P 17 23 48.9 -0.7
comp=Z,70nm,0.6s
CCM Cathedral Cave 22.51 2 eP P 17 23 48.9 -0.7
CCM pmax pmax
comp=Z,70nm,0.6s
R38A Fenwick Farm, 22.69 356 P P 17 23 50.3 -1.0
baz=175
S48A Wiedeman Farm, 22.73 12 P P 17 23 51.9 +0.2
baz=195
R40A Maddies Statio 22.73 360 P P 17 23 51.2 -0.5
baz=180,SNR=47
R40A Maddies Statio 22.73 360 eP P 17 23 51.0 -0.7
comp=Z,76nm,0.9s
USIN University of 22.74 9 eP P 17 23 53.0 +1.2
comp=Z,447nm,0.6s
R41A Rosebud 22.74 1 P P 17 23 51.2 -0.6
baz=182,SNR=98
R42A Luebbering 22.75 3 P P 17 23 51.5 -0.4
baz=183,SNR=28
R39A Chumby, Stover 22.77 358 P P 17 23 51.7 -0.3
baz=178,SNR=41
BNM Barren Site 22.78 327 eP P 17 23 54.4 +2.0
R43A Red Bud 22.79 4 P P 17 23 51.6 -0.7
baz=185,SNR=11
R44A Waltonville 22.84 6 P P 17 23 52.5 -0.2
baz=187,SNR=21
Y22E IRIS PASSCAL I 22.87 327 P P 17 23 54.0 +0.7
baz=141
LPM Los Pinos Moun 22.91 328 eP P 17 23 55.0 +1.5
LENM Lemitar 22.97 327 eP P 17 23 55.9 +1.8
R45A Skylar, Fairfi 22.97 8 P P 17 23 54.2 +0.3
baz=189,SNR=45
T52A Hallie 23.00 19 P P 17 23 55.7 +1.5
baz=203,SNR=60
R46A Gibon Southern 23.00 9 P P 17 23 54.7 +0.5
baz=191,SNR=14
SLM Saint Louis 23.13 4 eP P 17 23 55.6 +0.3
comp=Z,333nm,0.5s
SLM Saint Louis 23.13 4 eP P 17 23 55.6 +0.3
SLM pmax pmax
comp=Z,333nm,0.5s
WCI Wyandotte Cave 23.23 12 P P 17 23 56.8 +0.6
baz=194
WCI Wyandotte Cave 23.23 12 eP P 17 23 57.3 +1.1
comp=Z,615nm,0.8s
WCI Wyandotte Cave 23.23 12 eP P 17 23 57.3 +1.1
WCI pmax pmax
comp=Z,615nm,0.8s
R47A Wooly Knot Far 23.25 11 P P 17 23 57.0 +0.5
baz=194,SNR=56
S51A Beattyville 23.31 17 P P 17 23 57.8 +0.8
baz=201,SNR=77
S51A Beattyville 23.31 17 eP P 17 23 58.8 +1.8
comp=Z,272nm,0.6s
TASL Snake Pit, Alb 23.31 329 P P 17 23 58.3 +1.0
baz=143
ANMO Albuquerque 23.32 329 P P 17 23 58.7 +1.4
comp=Z,2.4nm,0.3s,baz=141,slow=12,SNR=8.6
ANMO PcP PcP 17 27 40.7 +1.3
comp=Z,4.7nm,0.7s,baz=145,slow=6.0,SNR=4.1
ANMO Albuquerque 23.32 329 P P 17 23 58.4 +1.1
baz=143
ANMO Albuquerque 23.32 329 eP P 17 23 58.6 +1.4
comp=Z,25nm,0.8s
ANMO ePcP PcP 17 27 39.5 +0.1
ANMO Albuquerque 23.32 329 ceP P 17 23 55.9 -1.4
ANMO pmax pmax
comp=Z,4.0nm,1.0s
TASM ASL Pad, Albuq 23.32 329 P P 17 23 58.2 +0.9
baz=143
Q41A Truxton 23.40 2 P P 17 23 57.2 -0.6
baz=182,SNR=112
Q37A Longview Farm, 23.41 355 P P 17 23 57.6 -0.2
baz=174
CNNC Cliffs of the 23.42 30 eP P 17 23 58.4 +0.4
comp=Z,178nm,0.8s
OLIL Olney 23.43 8 eP P 17 23 59.0 +1.0
comp=Z,566nm,0.6s
OLIL epP pP 17 24 31.0 +0.7
Q40A Laux Farm, Aux 23.43 360 P P 17 23 57.3 -0.7
baz=180,SNR=19
Q38A Cooks Store, C 23.44 357 P P 17 23 57.8 -0.3
baz=176,SNR=34
Q43A New Douglas 23.47 5 P P 17 23 58.3 -0.1
baz=186,SNR=47
R48A Northridge Ran 23.48 12 P P 17 23 58.9 +0.4
baz=195,SNR=26
Q44A Meyer Farm, Va 23.49 6 P P 17 23 58.5 -0.1
baz=187,SNR=47
Q39A Willow Grove F 23.50 358 P P 17 23 58.1 -0.6
baz=178,SNR=40
S52A Salyersville 23.50 18 P P 17 23 59.5 +0.8
baz=202,SNR=8.5
Q45A Warren Harvey, 23.58 8 P P 17 23 59.9 +0.4
baz=189,SNR=64
Q46A CEJHS Indians, 23.82 9 P P 17 24 01.3 -0.3
baz=191,SNR=9.1
KSU1 Kansas State U 23.88 351 P P 17 24 01.6 -0.5
baz=169
KSU1 Kansas State U 23.88 351 eP P 17 24 01.7 -0.5
comp=Z,94nm,0.7s
Q47A Bedord North L 23.89 11 P P 17 24 01.8 -0.5
baz=193,SNR=31

TUC Tucson 23.90 318 P P 17 24 03.9 +1.3
baz=130
TUC Tucson 23.90 318 eP P 17 24 04.0 +1.4
TUC epP pP 17 24 37.2 +1.6
TUC ePcP PcP 17 27 41.5 +0.9
TUC Tucson 23.90 318 eP P 17 24 04.0 +1.4
TUC e*PP pP 17 24 37.3 +1.6
TUC e 17 27 41.5
P39B Salisbury 23.93 359 P P 17 24 01.7 -0.9
baz=178,SNR=32
P40A Paris 23.97 360 P P 17 24 02.0 -0.9
baz=180,SNR=37
P40A Paris 23.97 360 eP P 17 24 01.8 -1.1
comp=Z,70nm,0.6s
P40A epP pP 17 24 36.2 +0.1
BLA Blacksburg 23.98 23 P P 17 24 04.2 +1.0
baz=208
BLA Blacksburg 23.98 23 eP P 17 24 04.6 +1.4
comp=Z,113nm,0.9s
MPR Mayaguez 23.99 80 eP P 17 24 04.1 +0.8
comp=Z,128nm,1.3s
AGP Aguadilla 24.00 79 eP P 17 24 06.3 +2.8
comp=Z,528nm,1.2s
CRPR Cabo Rojo, PR 24.01 80 eP P 17 24 05.2 +1.7
comp=Z,150nm,0.8s
P42A Winchester 24.07 3 P P 17 24 02.7 -1.1
baz=184,SNR=41
P42A Winchester 24.07 3 eP P 17 24 03.2 -0.6
comp=Z,121nm,0.5s
P42A epP pP 17 24 35.6 -1.6
P44A Sand Creek, Wi 24.09 7 P P 17 24 04.2 +0.1
baz=188,SNR=47
P38A Dawn 24.10 357 P P 17 24 02.8 -1.3
baz=176,SNR=8.5
P38A Dawn 24.10 357 eP P 17 24 03.0 -1.1
comp=Z,45nm,0.6s
BLO Bloomington 24.10 11 eP P 17 24 04.6 +0.4
comp=Z,288nm,0.6s
BLO Bloomington 24.10 11 eP P 17 24 04.6 +0.4
BLO pmax pmax
comp=Z,288nm,0.6s
P37A Lathrop 24.11 356 P P 17 24 03.3 -1.0
baz=175,SNR=28
P41A Barry, Barry 24.13 2 P P 17 24 03.6 -0.8
baz=182,SNR=31
P43A Skaggs, Pawnee 24.18 5 P P 17 24 04.5 -0.3
baz=186,SNR=23
VWCC Virginia Weste 24.19 24 eP P 17 24 06.9 +1.9
T25A Trinidad 24.21 335 P P 17 24 05.6 +0.1
baz=150,SNR=30
T25A Trinidad 24.21 335 eP P 17 24 06.8 +1.3
T25A epP pP 17 24 40.6 +1.5
CBKS Cedar Bluff 24.22 345 P P 17 24 03.8 -1.5
baz=162
CBKS Cedar Bluff 24.22 345 eP P 17 24 05.0 -0.3
comp=Z,56nm,1.0s
CBKS Cedar Bluff 24.22 345 eP P 17 24 05.0 -0.3
CBKS pmax pmax
comp=Z,56nm,1.0s
P45A Graceland, Par 24.26 8 P P 17 24 05.4 -0.2
baz=190,SNR=45
P45A Graceland, Par 24.26 8 eP P 17 24 06.2 +0.6
comp=Z,184nm,0.6s
AOPR Arecibo Observ 24.36 80 eP P 17 24 06.3 -0.5
comp=Z,99nm,0.7s
P46A Rosedale 24.43 9 P P 17 24 06.8 -0.3
baz=191,SNR=105
P47A Martinsville 24.45 11 P P 17 24 07.1 -0.3
baz=194,SNR=33
OBIP Obispado Ponce 24.49 80 eP P 17 24 08.4 +0.5
comp=Z,56nm,0.5s
ICMP Isla Caja de M 24.56 81 eP P 17 24 09.4 +0.9
comp=Z,146nm,0.7s
O40A La Belle 24.56 0 P P 17 24 07.6 -0.7
baz=180,SNR=31
O41A Passleys Farm, 24.57 2 P P 17 24 07.6 -0.9
baz=183,SNR=30
O38A Galt 24.59 357 P P 17 24 07.8 -0.8
baz=177,SNR=7.6
O37A Wolven Farm, M 24.67 356 P P 17 24 08.3 -1.0
baz=175,SNR=11
O42A Bath 24.69 4 P P 17 24 08.8 -0.7
baz=184,SNR=8.5
O39A Kirksville 24.70 359 P P 17 24 08.7 -0.8
baz=179
O44A Mansfield 24.79 7 P P 17 24 10.0 -0.4
baz=188,SNR=8.1
O43A Sugar Creek Fa 24.84 5 P P 17 24 10.3 -0.6
baz=186,SNR=17
X18A Snowflake 24.89 323 eP P 17 24 13.9 +2.3
X18A epP pP 17 24 44.9 -1.4
SJG San Juan 24.92 80 P P 17 24 11.9 +0.1
comp=Z,44nm,0.4s,baz=118,slow=23,SNR=13
SJG San Juan 24.92 80 eP P 17 24 11.6 -0.2
comp=Z,72nm,0.9s
SJG San Juan 24.92 80 eP P 17 24 11.2 -0.6
SJG San Juan 24.92 80 eP P 17 24 11.6 -0.2
SJG pmax pmax
comp=Z,72nm,0.9s
O45A Potomac 24.97 8 P P 17 24 11.8 -0.2
baz=190,SNR=59
214A Organ Pipe Nat 25.04 315 P P 17 24 13.0 +0.1
baz=126,SNR=17
HDIL Hopedale 25.11 5 P P 17 24 12.8 -0.4
baz=186
HDIL Hopedale 25.11 5 eP P 17 24 12.9 -0.4
comp=Z,78nm,0.6s
P50A Jamestown 25.11 15 P P 17 24 13.5 +0.2
baz=199,SNR=37
N41A Harden Midland 25.16 2 P P 17 24 13.3 -0.5
baz=183,SNR=14
N41A Harden Midland 25.16 2 eP P 17 24 13.4 -0.3
comp=Z,234nm,1.8s
SDCO Great Sand Dun 25.18 334 P P 17 24 15.0 +0.7
baz=148
SDCO Great Sand Dun 25.18 334 eP P 17 24 15.4 +1.1
comp=Z,13nm,1.0s
SDCO ePcP PcP 17 27 44.4 +0.8
SFIN Lafayette 25.19 9 P P 17 24 13.6 -0.4
baz=191,SNR=51
SFIN Lafayette 25.19 9 eP P 17 24 13.5 -0.5
comp=Z,190nm,0.7s
W18A Petrified Fore 25.19 324 P P 17 24 14.5 +0.2
baz=137,SNR=11
W18A Petrified Fore 25.19 324 eP P 17 24 16.2 +1.9
W18A epP pP 17 24 51.4 +2.1
W18A ePcP PcP 17 27 44.4 +0.9
O47A Sheridan 25.20 11 P P 17 24 13.7 -0.4
baz=193,SNR=46
CBYP Canovanas 25.21 80 eP P 17 24 14.1 -0.4
comp=Z,52nm,0.5s
HUMP Col San Antoni 25.21 80 eP P 17 24 14.1 -0.3
comp=Z,33nm,0.8s
KSCO Kaye Shedlock' 25.23 340 P P 17 24 14.2 -0.4
baz=156
KSCO Kaye Shedlock' 25.23 340 eP P 17 24 14.7 +0.2
comp=Z,56nm,0.6s
KSCO epP pP 17 24 49.6 +0.1
N38A Joes South For 25.25 358 P P 17 24 14.0 -0.5
baz=177,SNR=13
N37A Lee Faris, Mou 25.26 356 P P 17 24 13.7 -1.0
baz=175,SNR=6.2
N37A Lee Faris, Mou 25.26 356 eP P 17 24 13.7 -1.0
N37A epP pP 17 24 49.5 -0.1
N39A Derby Farms, D 25.32 359 P P 17 24 14.0 -1.2
baz=179,SNR=16
N39A Derby Farms, D 25.32 359 eP P 17 24 14.4 -0.7
comp=Z,44nm,0.8s
N39A epP pP 17 24 50.1 0.0
N40A Mertquake, Sal 25.32 1 P P 17 24 14.5 -0.7
baz=181,SNR=23
N42A Yates City 25.32 4 P P 17 24 15.3 0.0
baz=184,SNR=16
N36A Muff Farm, Cla 25.38 355 P P 17 24 15.2 -0.5
baz=174
JSRW J. Sargeant Re 25.44 27 eP P 17 24 17.4 +1.2
N44A Piper City 25.46 7 P P 17 24 16.4 -0.1
baz=189,SNR=39
URVA University of 25.49 28 eP P 17 24 18.1 +1.4
MTP Monte Pirata 25.49 80 eP P 17 24 16.9 -0.1
comp=Z,107nm,0.7s
MTP epP pP 17 24 53.7 +1.7
N43A Stutzman Famil 25.50 5 P P 17 24 16.5 -0.3
baz=186,SNR=25
IP07 Quail 25.56 26 eP P 17 24 18.5 +1.1
comp=Z,168nm,0.7s
N45A Kentland 25.59 8 P P 17 24 17.3 -0.3

baz=190,SNR=34
IP06 Yanceyville 25.59 26 eP P 17 24 19.0 +1.3
comp=Z,126nm,0.7s
IP05 Hopewell Churc 25.61 27 eP P 17 24 19.2 +1.4
comp=Z,177nm,0.9s
IP01 Cuckoo 25.64 26 eP P 17 24 19.6 +1.4
comp=Z,163nm,0.9s
IP03 Louisa 25.65 26 eP P 17 24 19.5 +1.3
comp=Z,128nm,0.6s
O50A Cable 25.66 15 P P 17 24 18.7 +0.5
baz=199,SNR=22
IP04 Greensprings 25.68 26 eP P 17 24 19.6 +1.2
comp=Z,205nm,0.6s
X16A Lo Mia Camp, P 25.70 321 eP P 17 24 20.8 +1.8
X16A epP pP 17 24 54.2 +0.1
SPRD Spring Road, M 25.71 26 eP P 17 24 20.1 +1.3
comp=Z,67nm,0.6s
N46A Monticello 25.75 9 P P 17 24 19.2 +0.2
baz=192,SNR=13
S22A 4UR Ranch, Cre 25.76 332 P P 17 24 20.2 +0.7
baz=146,SNR=12
S22A 4UR Ranch, Cre 25.76 332 eP P 17 24 20.7 +1.2
S22A epP pP 17 24 56.8 +2.2
CVRD Centerville Ro 25.78 27 eP P 17 24 20.7 +1.3
comp=Z,77nm,1.2s
M41A Milan 25.84 3 P P 17 24 20.6 +0.7
baz=183
M40A Post Highland 25.85 1 P P 17 24 19.2 -0.7
baz=181,SNR=6.1
M38A Pleasantville 25.87 358 P P 17 24 19.9 -0.3
baz=178
M37A Trindle Farm, 25.90 357 P P 17 24 20.2 -0.2
baz=176
ACSO Alum Creek Sta 25.91 16 P P 17 24 21.2 +0.7
baz=200
ACSO Alum Creek Sta 25.91 16 eP P 17 24 21.7 +1.3
comp=Z,114nm,0.7s
ACSO epP pP 17 24 57.4 +1.9
M39A Webster 25.91 360 P P 17 24 19.8 -0.7
baz=180,SNR=13
M42A Sheffield 25.97 4 P P 17 24 20.2 -0.8
baz=185
M36A Felix, Anita 26.00 355 P P 17 24 21.2 -0.2
baz=174
M43A Waltham Townsh 26.01 5 P P 17 24 21.4 0.0
baz=187,SNR=27
M44A Midewin, Midew 26.05 7 P P 17 24 21.5 -0.4
baz=189,SNR=11
M44A Midewin, Midew 26.05 7 eP P 17 24 21.4 -0.4
comp=Z,81nm,0.7s
M44A epP pP 17 24 57.5 +0.6
STVI Saint Thomas 26.07 80 eP P 17 24 22.3 +0.2
comp=Z,124nm,0.7s
STVI epP pP 17 24 59.1 +1.9
Q24A Divide 26.08 336 eP P 17 24 20.6 -1.8
Q24A epP pP 17 24 57.6 +0.1
CBN Corbin Frederi 26.09 27 P P 17 24 23.0 +0.9
baz=214
CBN Corbin Frederi 26.09 27 eP P 17 24 24.1 +2.0
comp=Z,294nm,0.6s
MVCO Mesa Verde 26.11 329 P P 17 24 23.6 +0.9
baz=142
MVCO Mesa Verde 26.11 329 eP P 17 24 24.6 +1.9
MVCO epP pP 17 25 02.6 +4.8
MVCO ePcP PcP 17 27 46.8 +1.1
M45A Boilermakers S 26.16 8 P P 17 24 23.0 +0.3
baz=190
113A Mohawk Valley, 26.17 315 eP P 17 24 24.3 +1.4
CDVI St. Croix 26.23 81 eP P 17 24 22.9 -0.7
comp=Z,96nm,0.8s
M46A Old House Fiel 26.31 10 P P 17 24 24.1 0.0
baz=192
M46A Old House Fiel 26.31 10 eP P 17 24 24.2 +0.1
comp=Z,62nm,1.1s
MCWV Mont Chateau 26.36 22 P P 17 24 24.6 0.0
baz=207
MCWV Mont Chateau 26.36 22 eP P 17 24 25.6 +1.1
comp=Z,264nm,1.9s
SCIA State Center 26.36 358 eP P 17 24 23.8 -0.7
comp=Z,152nm,1.5s
N50A Nevada 26.37 15 P P 17 24 24.4 -0.2
baz=200
Y14A Wickenburg 26.38 318 eP P 17 24 26.4 +1.6
Y14A epP pP 17 25 01.3 +1.3
BGNE Belgrade 26.38 350 P P 17 24 23.3 -1.4
baz=167
BGNE Belgrade 26.38 350 eP P 17 24 24.3 -0.5
BGNE epP pP 17 25 01.1 +1.2
WUAZ Wupatki 26.42 323 P P 17 24 26.4 +1.0
baz=134
WUAZ Wupatki 26.42 323 eP P 17 24 26.8 +1.4
WUAZ epP pP 17 25 02.2 +1.7
L40A Anamosa 26.51 1 P P 17 24 25.2 -0.6
baz=182,SNR=16
L40A Anamosa 26.51 1 eP P 17 24 25.2 -0.6
comp=Z,152nm,1.5s
L40A epP pP 17 25 00.2 -0.7
L42A Oliver, Polo 26.52 4 P P 17 24 25.5 -0.5
baz=185
L42A Oliver, Polo 26.52 4 eP P 17 24 25.6 -0.4
comp=Z,70nm,0.6s
L42A epP pP 17 25 00.3 -0.8
L41A Preston 26.54 3 P P 17 24 25.8 -0.3
baz=183,SNR=19
L39A Vinton 26.56 0 P P 17 24 26.2 -0.1
baz=180,SNR=9.9
L38A Oak Wood Farm, 26.59 358 P P 17 24 26.5 -0.1
baz=178,SNR=6.9
L37A Phoenix Point, 26.60 357 P P 17 24 26.2 -0.4
baz=176
L36A Harm Buss Farm 26.63 356 P P 17 24 26.3 -0.7
baz=174
ABVI Anegada Island 26.67 79 eP P 17 24 27.8 +0.2
comp=Z,158nm,0.6s
L43A Garden Prairie 26.77 5 P P 17 24 28.2 +0.1
baz=187
OGNE Ogallala 26.82 343 P P 17 24 28.9 +0.1
baz=158
OGNE Ogallala 26.82 343 eP P 17 24 29.1 +0.3
comp=Z,81nm,1.4s
L44A Lake County Fo 26.85 7 P P 17 24 28.3 -0.6
baz=189
PV01 Paradox Valley 26.88 330 eP P 17 24 30.8 +1.2
ISCO Idaho Springs 26.98 337 P P 17 24 31.2 +0.6
baz=150
ISCO Idaho Springs 26.98 337 eP P 17 24 32.2 +1.7
ISCO epP pP 17 25 05.5 -0.2
ISCO Idaho Springs 26.98 337 eP P 17 24 32.2 +1.7
ISCO e*PP pP 17 25 05.5 -0.2
PV15 Paradox Valley 27.00 331 eP P 17 24 30.8 +0.1
SMCO Snowmass 27.01 334 eP P 17 24 32.3 +1.5
SMCO epP pP 17 25 07.2 +1.1
PV02 Paradox Valley 27.02 330 eP P 17 24 32.2 +1.5
PV02 epP pP 17 25 06.8 +0.9
PV13 Radium Mtn., P 27.02 330 eP P 17 24 32.5 +1.8
PV13 epP pP 17 25 07.3 +1.3
GLA Glamis 27.06 314 P P 17 24 31.3 +0.3
baz=125,SNR=8.6
GLA Glamis 27.06 314 eP P 17 24 32.8 +1.8
GLA epP pP 17 25 07.3 +1.1
GLA ePcP PcP 17 27 48.9 +1.2
GLA Glamis 27.06 314 eP P 17 24 32.8 +1.8
GLA e*PP pP 17 25 07.3 +1.1
GLA e 17 27 48.9
K41A Shullsburg 27.08 3 P P 17 24 30.6 -0.4
baz=184,SNR=10
K38A Parkersburg 27.09 359 P P 17 24 31.1 +0.1
baz=178
K38A Parkersburg 27.09 359 eP P 17 24 31.9 +0.9
K38A epP pP 17 25 06.5 +0.3
PV05 Paradox Valley 27.09 329 eP P 17 24 32.1 +0.7
PV05 epP pP 17 25 06.5 -0.1
PV03 Paradox Valley 27.11 330 eP P 17 24 28.6 -3.0
PV03 epP pP 17 25 07.4 +0.6
PV18 Skein Mesa, Pa 27.13 330 eP P 17 24 32.9 +1.1
PV18 epP pP 17 25 07.3 +0.4
PV18 ePcP PcP 17 27 49.3 +1.3
PV12 Saucer Basin, 27.13 330 eP P 17 24 32.4 +0.6
PV12 epP pP 17 25 07.2 +0.2
PV12 ePcP PcP 17 27 49.2 +1.1
K39A Oelwein 27.14 0 P P 17 24 31.2 -0.3
baz=180,SNR=8.5
K40A Colesburg 27.15 1 P P 17 24 30.9 -0.6
baz=182,SNR=9.7
K36A Gilmore City 27.15 356 P P 17 24 31.3 -0.3
baz=175

PV11	David Mesa, Pa	27.15	330	eP	P	17 24 32.7	+0.7
PV11				epP	pP	17 25 06.7	-0.4
PV07	Paradox Valley	27.16	331	eP	P	17 24 34.0	+2.0
PV17	East Wray Mesa	27.18	330	eP	P	17 24 33.6	+1.4
PV17				epP	pP	17 25 06.8	-0.6
PV16	Nyswonger Mesa	27.18	330	eP	P	17 24 33.1	+0.8
PV16				epP	pP	17 25 06.0	-1.4
PV19	Morning Glory	27.21	330	eP	P	17 24 34.0	+1.5
PV19				epP	pP	17 25 07.1	-0.6
PCRV	Puerto La Cruz	27.22	98	P	P	17 24 32.4	-0.2
	comp=Z,9.9nm,0.4s,baz=258,slow=4.9,SNR=11						
PV20	West Nyswonger	27.23	330	eP	P	17 24 33.9	+1.3
PV20				epP	pP	17 25 07.3	-0.6
K37A	Belmond	27.24	357	P	P	17 24 31.8	-0.6
	baz=177						
PV04	Paradox Valley	27.24	330	eP	P	17 24 34.9	+2.2
Y12C	Blythe	27.26	316	P	P	17 24 33.1	+0.4
	baz=127						
Y12C	Blythe	27.26	316	eP	P	17 24 33.2	+0.5
Y12C				epP	pP	17 25 08.2	+0.3
Y12C				ePcP	PcP	17 27 49.2	+1.1
PV14	Lion Creek, Pa	27.28	330	eP	P	17 24 33.5	+0.4
	comp=Z,50nm,0.9s						
PV10	Paradox Valley	27.29	330	eP	P	17 24 33.0	-0.3
PV22	Blue Mesa, Par	27.30	330	eP	P	17 24 34.9	+1.7
PV22				epP	pP	17 25 07.3	-1.1
K42A	Prairie Point,	27.31	4	P	P	17 24 33.9	+0.8
	baz=186,SNR=10						
SDMD	Soldier's Deli	27.32	26	eP	P	17 24 34.1	+1.0
	comp=Z,85nm,0.8s						
K43A	Burlington	27.33	6	P	P	17 24 33.1	-0.1
	baz=188						
K43A	Burlington	27.33	6	eP	P	17 24 32.9	-0.2
K43A				epP	pP	17 25 08.7	+0.3
PDMCI	Parker Dam,Lak	27.34	317	P	P	17 24 34.4	+1.0
	baz=128,SNR=13						
PV23	Carpenter Ridg	27.34	330	eP	P	17 24 32.8	-0.8
PV23				epP	pP	17 25 09.1	+0.1
O56A	Blue Knob Stat	27.36	23	P	P	17 24 34.4	+0.9
	baz=209,SNR=15						
O56A	Blue Knob Stat	27.36	23	eP	P	17 24 34.5	+1.0
	comp=Z,71nm,0.9s						
O56A				epP	pP	17 25 07.2	-1.6
JFWS	Jewell Farm	27.39	3	P	P	17 24 33.9	+0.2
	baz=184						
JFWS	Jewell Farm	27.39	3	eP	P	17 24 33.9	+0.2
	comp=Z,48nm,0.6s						
JFWS	Jewell Farm	27.39	3	eP	P	17 24 33.9	+0.2
JFWS				pmax	pmax		
	comp=Z,48nm,0.6s						
PV21	Cone Mtn., Par	27.41	330	eP	P	17 24 34.8	+0.6
PV21				epP	pP	17 25 09.8	+0.3
PV09	Paradox Valley	27.44	330	eP	P	17 24 35.6	+1.0
PV09				epP	pP	17 25 09.2	-0.6
N54A	Moraine State	27.47	20	P	P	17 24 35.0	+0.5
	baz=206,SNR=22						
N54A	Moraine State	27.47	20	eP	P	17 24 35.0	+0.5
	comp=Z,105nm,0.6s						
N54A				epP	pP	17 25 10.0	+0.3
U15A	North Rim	27.58	323	eP	P	17 24 37.9	+2.0
U15A				epP	pP	17 25 10.3	-0.9
W13A	Hualapai Mount	27.67	319	eP	P	17 24 37.7	+1.1
SWSC	Sam W. Stewart	27.68	313	P	P	17 24 36.7	+0.3
	baz=124						
SABA	Saba	27.68	82	eP	P	17 24 36.2	-0.4
	comp=Z,125nm,0.6s						
AAM	Ann Arbor	27.70	13	P	P	17 24 37.1	+0.7
	baz=198						
AAM	Ann Arbor	27.70	13	eP	P	17 24 36.9	+0.5
	comp=Z,93nm,0.6s						
AAM	Ann Arbor	27.70	13	eP	P	17 24 36.9	+0.5
AAM				pmax	pmax		
	comp=Z,93nm,0.6s						
IKP	In-Ko-Pah, Jac	27.74	312	P	P	17 24 35.8	-1.2
	baz=123						
J38A	Wedel Dairy, R	27.76	359	P	P	17 24 36.3	-0.6
	baz=179						
J39A	Decorah	27.77	1	P	P	17 24 36.4	-0.7
	baz=181,SNR=10						
J37A	Redenius Farm,	27.77	358	P	P	17 24 37.1	-0.1
	baz=177						
J36A	Seneca 1, Swea	27.83	356	P	P	17 24 37.0	-0.7
	baz=175						
J36A	Seneca 1, Swea	27.83	356	eP	P	17 24 36.7	-1.0
J36A				epP	pP	17 25 12.5	-0.5
J36A				ePcP	PcP	17 27 48.4	-0.9
BC3	Big Chuckawall	27.84	315	P	P	17 24 39.4	+1.5
	baz=125,SNR=21						
SMRT	St. Maarten	27.84	81	eP	P	17 24 37.0	-1.1
	comp=Z,71nm,0.5s						
J40A	Soldiers Grove	27.85	2	P	P	17 24 37.6	-0.2
	baz=183						
J41A	Loganville	27.85	3	P	P	17 24 37.1	-0.8
	baz=184,SNR=16						
J42A	Columbus	27.86	5	P	P	17 24 37.9	0.0
	baz=186,SNR=12						
IRM	Iron Mountain	27.92	316	P	P	17 24 40.5	+1.9
	baz=126,SNR=11						
SEUS	St. Eustatius	27.93	82	eP	P	17 24 38.2	-0.6
	comp=Z,168nm,0.6s						
SSPA	Standing Stone	27.93	23	P	P	17 24 39.8	+1.3
	baz=210						
SSPA	Standing Stone	27.93	23	eP	P	17 24 39.6	+1.0
	comp=Z,77nm,0.8s						
SSPA				epP	pP	17 25 15.8	+1.9
NEE2	Needles Airpor	27.93	318	P	P	17 24 39.5	+0.8
	baz=128						
J43A	Natural Harves	27.99	6	P	P	17 24 39.4	+0.4
	baz=187,SNR=8.3						
MVL	Millersville	28.02	26	eP	P	17 24 40.6	+1.3
	comp=Z,157nm,0.7s						
ALLY	Alegheny Colle	28.04	19	eP	P	17 24 40.2	+0.7
	comp=Z,43nm,0.6s						
PAGS	Pennsylvania G	28.05	25	eP	P	17 24 40.5	+0.9
	comp=Z,90nm,0.6s						
N23A	Red Feather La	28.06	337	P	P	17 24 41.1	+1.0
	baz=151						
N23A	Red Feather La	28.06	337	eP	P	17 24 41.0	+1.0
	comp=Z,7.7nm,1.0s						
M54A	Oil Creek Stat	28.07	20	P	P	17 24 40.1	+0.4
	baz=206,SNR=9.4						
M54A	Oil Creek Stat	28.07	20	eP	P	17 24 40.3	+0.5
	comp=Z,43nm,1.0s						
MONP2	Monument Peak	28.09	312	P	P	17 24 42.0	+1.7
	baz=123						
PHWY	Pilot Hill	28.24	338	eP	P	17 24 39.6	-2.0
	comp=Z,20nm,0.8s						
I39A	Houston	28.29	1	P	P	17 24 41.2	-0.5
	baz=181						
I39A	Houston	28.29	1	eP	P	17 24 40.8	-0.9
	comp=Z,22nm,0.6s						
KNB	Kanab	28.30	323	eP	P	17 24 44.4	+2.3
	comp=Z,23nm,0.8s						
KNB				epP	pP	17 25 19.7	+2.2
KNB	Kanab	28.30	323	eP	P	17 24 44.4	+2.3
KNB				e*PP	pP	17 25 19.7	+2.2
KNB				pmax	pmax		
	comp=Z,23nm,0.8s						
PKCU	Pink Cliffs	28.31	324	eP	P	17 24 43.2	+0.9
	comp=Z,12nm,0.9s						
O20A	White River Ci	28.34	333	P	P	17 24 43.7	+1.2
	baz=146						
O20A	White River Ci	28.34	333	eP	P	17 24 42.9	+0.4
O20A				epP	pP	17 25 17.1	-0.8
PSUB	Penn St. - Bra	28.35	28	eP	P	17 24 43.3	+1.1
	comp=Z,81nm,0.6s						
I40A	Norwalk	28.35	2	P	P	17 24 43.2	+0.9
	baz=183						
BELC	Belle Mtn. Jos	28.40	315	P	P	17 24 44.3	+1.3
	baz=125,SNR=12						
ECSD	EROS Data Cent	28.44	353	P	P	17 24 42.2	-0.8
	baz=171						
ECSD	EROS Data Cent	28.44	353	eP	P	17 24 41.9	-1.2
ECSD				epP	pP	17 25 17.5	-0.9
LDFC	Landfair	28.44	318	eP	P	17 24 46.0	+2.7
	comp=Z,63nm,1.0s						
I42A	Draeger Farm,	28.45	5	P	P	17 24 42.9	-0.2
	baz=186,SNR=24						
I42A	Draeger Farm,	28.45	5	eP	P	17 24 42.3	-0.8
	comp=Z,53nm,0.4s						
I42A				epP	pP	17 25 17.1	-1.5
I37A	Lemond, Waseca	28.47	358	P	P	17 24 43.5	+0.2
	baz=177						
I37A	Lemond, Waseca	28.47	358	eP	P	17 24 43.5	+0.2
I37A				epP	pP	17 25 17.6	-1.2
I38A	Scanlan Farm,	28.48	360	P	P	17 24 43.0	-0.4
	baz=179						
I36A	Fitzsimmons Fa	28.50	357	P	P	17 24 44.0	+0.4
	baz=176						
XPFO	Piæon Flat	28.50	314	eP	P	17 24 45.3	+1.4
XPFO				epP	pP	17 25 17.4	-1.9
XPFO				ePcP	PcP	17 27 52.4	+1.0
PFO	Pinyon Flats O	28.50	314	P	P	17 24 44.7	+0.8
	baz=124						
PFO	Pinyon Flats O	28.50	314	eP	P	17 24 45.0	+1.1
	comp=Z,8.8nm,0.9s						
PFO				ePcP	PcP	17 27 52.1	+0.7
PFO	Pinyon Flats O	28.50	314	eP	P	17 24 45.0	+1.1
PFO				e		17 27 52.1	
PFO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
I43A	Langenfeld Bro	28.51	6	P	P	17 24 44.1	+0.4
	baz=188,SNR=8.9						
ERPA	Erie	28.51	19	P	P	17 24 44.0	+0.3
	baz=205						
ERPA	Erie	28.51	19	eP	P	17 24 44.4	+0.7
	comp=Z,40nm,0.7s						
ERPA				epP	pP	17 25 18.6	-0.5
LCMT	Little Creek M	28.54	323	eP	P	17 24 45.7	+1.5
	comp=Z,13nm,1.0s						
LCMT				epP	pP	17 25 20.3	+0.7
I41A	Arkdale	28.55	3	P	P	17 24 44.8	+0.7
	baz=184						
I41A	Arkdale	28.55	3	eP	P	17 24 44.3	+0.3
	comp=Z,23nm,0.6s						
I41A				epP	pP	17 25 18.5	-0.9
CPE	Camp Elliot	28.58	312	eP	P	17 24 45.9	+1.5
CPE				epP	pP	17 25 20.5	+0.7
SNDA	J Saunders Pla	28.58	313	eP	P	17 24 49.3	+4.8
SNDA				epP	pP	17 25 15.6	-4.4
SNDA				ePcP	PcP	17 27 53.8	+2.2
SNDA				eS	S	17 29 17.9	-2.4
SRU	San Rafael Swe	28.59	329	eP	P	17 24 46.1	+1.4
SRU				epP	pP	17 25 21.2	+1.1
SRU				ePcP	PcP	17 27 52.3	+0.7
SRU	San Rafael Swe	28.59	329	eP	P	17 24 46.1	+1.4
SRU				e*PP	pP	17 25 21.2	+1.1
SRU				e		17 27 52.3	
GMRC	Granite Mounta	28.63	317	P	P	17 24 46.6	+1.6
	baz=126						
MTPU	Mount Pierson	28.66	325	eP	P	17 24 47.6	+2.1
	comp=Z,14nm,0.9s						
MTPU				epP	pP	17 25 23.0	+2.1
MTPU				ePcP	PcP	17 27 53.3	+1.3
SZCU	Shurtz Canyon	28.85	324	eP	P	17 24 49.4	+2.4
	comp=Z,17nm,0.9s						
SZCU				epP	pP	17 25 23.3	+0.8
SZCU				ePcP	PcP	17 27 53.7	+1.4
P18A	Preston Nutter	28.86	330	eP	P	17 24 47.7	+0.5
P18A				epP	pP	17 25 24.9	+2.2
P18A				ePcP	PcP	17 27 53.0	+0.6
LUPA	Lehigh Univers	28.93	27	eP	P	17 24 48.7	+1.2
	comp=Z,19nm,0.7s						
CCUT	Cedar City	28.98	323	eP	P	17 24 50.5	+2.4
	comp=Z,25nm,1.1s						
CCUT				epP	pP	17 25 29.0	+5.4
CCUT				ePcP	PcP	17 27 53.1	+0.4
P17A	Butcher Ranch,	28.98	329	eP	P	17 24 50.0	+1.9
P17A				epP	pP	17 25 24.7	+1.1
MSU	Marysvale	29.00	326	eP	P	17 24 49.8	+1.4
MSU				ePcP	PcP	17 27 54.2	+1.5
MSU	Marysvale	29.00	326	eP	P	17 24 49.8	+1.4
MSU				e		17 27 54.2	
MURC	Murrieta	29.02	313	P	P	17 24 50.1	+1.8
	baz=123						
H37A	Dierke Farm, C	29.02	359	P	P	17 24 49.1	+0.9
	baz=178						
N59A	State Game Lan	29.02	26	P	P	17 24 49.4	+1.2
	baz=214,SNR=25						
N59A	State Game Lan	29.02	26	eP	P	17 24 49.5	+1.2
	comp=Z,79nm,0.6s						
H36A	Jessenland, He	29.05	357	P	P	17 24 49.7	+1.2
	baz=176						
TMUT	Trail Mountain	29.08	328	eP	P	17 24 49.9	+0.8
TMUT				epP	pP	17 25 23.9	-0.7
TMUT				ePcP	PcP	17 27 53.9	+1.0
H40A	Chili	29.09	2	P	P	17 24 48.9	+0.1
	baz=183						
H42A	Shiocton	29.10	5	P	P	17 24 49.4	+0.6
	baz=187						
H42A	Shiocton	29.10	5	eP	P	17 24 48.1	-0.7
	comp=Z,24nm,0.7s						
HEC	Hector,Ludlow	29.11	316	P	P	17 24 50.7	+1.5
	baz=126						
H38A	Maiden Rock	29.11	360	P	P	17 24 48.7	-0.2
	baz=180,SNR=6.4						
H39A	Augusta	29.12	1	P	P	17 24 49.3	+0.2
	baz=182						
H41A	Junction City	29.12	4	P	P	17 24 49.8	+0.7
	baz=185						
H41A	Junction City	29.12	4	eP	P	17 24 49.6	+0.5
H41A				epP	pP	17 25 24.4	-0.1
GDHS	Morne Mazeau,	29.12	84	eP	P	17 24 48.6	-0.9
	comp=Z,93nm,0.6s						
H43A	Windswept, Lux	29.13	6	P	P	17 24 49.3	+0.2
	baz=188						
H43A	Windswept, Lux	29.13	6	eP	P	17 24 49.1	0.0
	comp=Z,25nm,0.6s						
BBRC	Big Bear Solar	29.18	314	eP	P	17 24 50.0	-0.1
TUQ	Turquoise Moun	29.19	317	P	P	17 24 50.9	+1.0
	baz=127						
TCRU	Three Creeks R	29.22	326	eP	P	17 24 50.2	-0.1
	comp=Z,15nm,0.7s						
RWWY	Rawlins	29.23	336	eP	P	17 24 51.7	+1.4
	comp=Z,22nm,0.7s						
H32A	Carlson Farm,	29.30	352	P	P	17 24 50.0	-0.6
	baz=169						
RVR	Riverside	29.35	314	eP	P	17 24 50.9	-0.4
RVR	Riverside	29.35	314	eP	P	17 24 50.9	-0.4
BRNJ	Basking Ridge	29.36	28	eP	P	17 24 52.3	+1.1
	comp=Z,254nm,0.6s						
SHPR	Sheep Range	29.36	320	eP	P	17 24 52.7	+1.2
	comp=Z,13nm,1.1s						
SHPR				epP	pP	17 25 26.6	-0.4
SHPR				ePcP	PcP	17 27 54.8	+1.3
KSPA	Keystone Colle	29.56	25	eP	P	17 24 53.8	+0.8
	comp=Z,72nm,0.7s						
G38A	Ridgeland	29.60	0	P	P	17 24 52.6	-0.7
	baz=180						
VTV	Victorville	29.63	315	eP	P	17 24 53.1	-0.7
VTV	Victorville	29.63	315	eP	P	17 24 53.1	-0.7
ODNJ	Ogdensburg	29.66	27	eP	P	17 24 54.5	+0.6
	comp=Z,121nm,1.0s						
SPMN	Marine on St.	29.66	359	P	P	17 24 53.2	-0.7
	baz=178,SNR=11						
SPMN	Marine on St.	29.66	359	eP	P	17 24 53.9	0.0
	comp=Z,62nm,0.6s						
BREC	Barre Substati	29.68	313	eP	P	17 24 57.2	+3.1
BREC				epP	pP	17 25 31.6	+1.9
BFSC	Mount Baldy Ra	29.68	314	P	P	17 24 55.1	+0.7
	baz=123						
GRGR	Grenville	29.69	93	eP	P	17 24 54.3	-0.1
	comp=Z,131nm,0.7s						
GSC	Goldstone, Bar	29.69	316	P	P	17 24 55.4	+1.0
	baz=126						
GSC	Goldstone, Bar	29.69	316	eP	P	17 24 56.5	+2.1
	comp=Z,6.0nm,0.8s						
GSC				ePcP	PcP	17 27 55.4	+1.1
SHOC	Shoshone, Teco	29.70	318	P	P	17 24 55.5	+1.2
	baz=127						
G36A	St. Michael	29.70	358	P	P	17 24 55.7	+1.5
	baz=177						
PSRC	Puddingstone R	29.71	313	eP	P	17 24 58.8	+4.4
PSRC				ePcP	PcP	17 27 54.1	-0.2
CPNY	Central Park	29.72	28	eP	P	17 24 55.5	+1.1
	comp=Z,78nm,0.7s						
G35A	Watkins	29.73	357	P	P	17 24 54.9	+0.6
	baz=175						
G39A	Holcombe	29.73	1	P	P	17 24 53.5	-0.9
	baz=182						
G40A	Rib Lake	29.74	3	P	P	17 24 54.2	-0.4
	baz=184						
G40A	Rib Lake	29.74	3	eP	P	17 24 54.6	+0.1
	comp=Z,22nm,1.0s						
MMNY	Mt. Morris Dam	29.75	21	eP	P	17 24 55.7	+1.0
	comp=Z,119nm,1.0s						
CIS	Catalina Islan	29.78	312	P	P	17 24 54.4	-0.7
	baz=121						
K22A	Casper	29.80	338	P	P	17 24 55.2	-0.1
	baz=151						
K22A	Casper	29.80	338	eP	P	17 24 56.4	+1.1
	comp=Z,22nm,0.6s						
FDF	Fort de France	29.82	87	eP	P	17 24 54.1	-1.6
	comp=Z,106nm,0.6s						
FDF	Fort de France	29.82	87	eP	P	17 24 54.8	-0.9
FDF	Fort de France	29.82	87	eP	P	17 24 54.1	-1.6
FDF				pmax	pmax		
	comp=Z,106nm,0.6s						
G34A	Benson	29.83	355	P	P	17 24 54.7	-0.6
	baz=173						
G42A	Mountain	29.83	5	P	P	17 24 55.0	-0.4
	baz=187						
G42A	Mountain	29.83	5	eP	P	17 24 54.9	-0.4
G42A				epP	pP	17 25 30.0	-0.9
MPU	Maple Canyon	29.84	329	eP	P	17 24 56.5	+0.8
MPU				epP	pP	17 25 30.0	-1.3
MPU				ePcP	PcP	17 27 55.6	+0.9
G33A	Ortonville	29.86	354	P	P	17 24 54.8	-0.8
	baz=172						
SVB	Belmont	29.90	90	eP	P	17 24 55.1	-1.2
	comp=Z,173nm,0.5s						
PAL	Palisades	29.91	28	P	P	17 24 56.9	+0.8
	baz=217						
PAL	Palisades	29.91	28	eP	P	17 24 56.9	+0.8
	comp=Z,201nm,0.7s						
PAL	Palisades	29.91	28	eP	P	17 24 56.9	+0.8
PAL				pmax	pmax		
	comp=Z,201nm,0.7s						
G43A	Wallace	29.92	6	P	P	17 24 55.7	-0.4
	baz=188						
G43A	Wallace	29.92	6	eP	P	17 24 56.0	0.0
	comp=Z,26nm,0.6s						
PSUT	Pine Spring	29.94	324	eP	P	17 24 58.2	+1.6
PSUT				epP	pP	17 25 30.3	-1.9
PSUT				ePcP	PcP	17 27 56.4	+1.3
MWC	Mount Wilson	29.95	313	eP	P	17 24 58.6	+1.8
MWC				epP	pP	17 25 32.6	+0.3
MWC				ePcP	PcP	17 27 55.8	+0.7
MWC				eS	S	17 29 47.2	+5.2
MWC	Mount Wilson	29.95	313	eP	P	17 24 58.6	+1.8
MWC				e*PP	pP	17 25 32.7	+0.3
MWC				e		17 27 55.8	
MWC				eS	S	17 29 47.2	+5.2
BBSR	BB Station	30.00	51	eP	P	17 24 57.8	+0.8
	comp=Z,174nm,0.6s						
BINY	Binghamton	30.01	24	P	P	17 24 58.2	+1.2
	baz=212						
BINY	Binghamton	30.01	24	eP	P	17 24 55.9	-1.1
NLU	North Lily Min	30.01	328	ePcP	PcP	17 27 56.0	+0.8
G32A	Webster	30.04	352	P	P	17 24 56.5	-0.8
	baz=170						
JLU	Jordanelle	30.20	330	eP	P	17 24 58.8	-0.1
	comp=Z,5.3nm,0.8s						
EDW2	Edwards Air Fo	30.26	314	P	P	17 24 59.8	+0.5
	baz=123						
SBI	Santa Barbara	30.27	311	epP	pP	17 25 32.7	-2.1
F41A	Three Lakes	30.27	4	P	P	17 24 59.5	+0.3
	baz=186						
F41A	Three Lakes	30.27	4	eP	P	17 24 59.0	-0.2
	comp=Z,19nm,1.0s						
F36A	Milaca	30.32	358	P	P	17 24 59.8	+0.1
	baz=177						
F36A	Milaca	30.32	358	eP	P	17 24 59.1	-0.5
	comp=Z,48nm,1.6s						
TPNV	Topopah Spring	30.32	319	P	P	17 25 02.4	+2.5
	baz=129						
TPNV	Topopah Spring	30.32	319	eP	P	17 25 02.1	+2.2
	comp=Z,12nm,1.1s						
TPNV				ePcP	PcP	17 27 57.0	+1.0
RSSD	Black Hills	30.32	343	P	P	17 25 00.8	+0.8
	baz=157						
RSSD	Black Hills	30.32	343	eP	P	17 25 00.0	+0.1
	comp=Z,28nm,0.6s						
RSSD	Black Hills	30.32	343	eP	P	17 25 00.0	+0.1
RSSD				pmax	pmax		
	comp=Z,28nm,0.6s						
F34A	Alexandria	30.35	356	P	P	17 24 59.0	-0.9
	baz=174						
F39A	Loretta	30.36	2	P	P	17 24 58.9	-1.1
	baz=182						
F42A	Maple Grove Fa	30.37	5	P	P	17 24 59.5	-0.5
	baz=187						
LRMC	Laurel Mtn Rad	30.38	316	P	P	17 25 01.6	+1.1
	baz=125						
F38A	Pierce - Schro	30.39	0	P	P	17 24 59.5	-0.7
	baz=180						
F40A	Park Falls	30.40	3	P	P	17 24 59.5	-0.8
	baz=184						
CTU	Camp Tracy	30.41	330	eP	P	17 25 00.6	-0.1
CTU				epP	pP	17 25 37.2	+0.9
CTU				ePcP	PcP	17 27 54.7	-1.5
F43A	Flat Rock, Esc	30.54	7	P	P	17 25 00.6	-0.9
	baz=189						
DUG	Dugway, Tooele	30.57	328	eP	P	17 25 02.6	+0.6
	comp=Z,7.1nm,1.0s						
DUG				ePcP	PcP	17 27 55.6	-1.0
DUG	Dugway, Tooele	30.57	328	eP	P	17 25 02.7	+0.6
DUG				e		17 27 55.6	
DUG				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MPMC	Manual Prospec	30.58	317	P	P	17 25 03.7	+1.4
	baz=126						
YLE	Yale	30.61	29	eP	P	17 25 02.8	+0.6
	comp=Z,135nm,1.0s						
F45A	CMU Biological	30.61	9	P	P	17 25 02.2	0.0
	baz=192						
COWI	Conover	30.63	4	eP	P	17 25 01.4	-1.0
	comp=Z,32nm,0.6s						
F44A	Big Bay de Noc	30.77	8	P	P	17 25 03.4	-0.2
	baz=191						
DAC	Darwin (Calif)	30.78	317	eP	P	17 25 06.7	+2.7
DAC				ePcP	PcP	17 28 00.2	+2.9
R11A	Troy Canyon, C	30.81	322	P	P	17 25 06.3	+2.0
	baz=132						
R11A	Troy Canyon, C	30.81	322	eP	P	17 25 06.2	+1.9
	comp=Z,16nm,1.2s						
R11A				ePcP	PcP	17 27 58.1	+0.7
F46A	Macinaw City C	30.82	10	P	P	17 25 04.1	+0.1
	baz=194						
E39A	Mellen	30.84	2	P	P	17 25 03.4	-0.8
	baz=183						
E40A	Wakefield	30.93	3	P	P	17 25 04.2	-0.8
	baz=184						
E36A	McGregor	30.97	358	P	P	17 25 04.6	-0.7
	baz=178						
ARVC	Arvin	30.97	314	P	P	17 25 07.6	+2.1
	baz=123						
E41A	Kenton	31.01	4	P	P	17 25 04.6	-1.0
	baz=186						
ISA	Isabella, Lake	31.02	315	P	P	17 25 07.7	+1.7
	baz=124						
ISA	Isabella, Lake	31.02	315	eP	P	17 25 08.4	+2.4
	comp=Z,9.9nm,1.1s						
ISA				ePcP	PcP	17 27 59.3	+1.5
ISA	Isabella, Lake	31.02	315	eP	P	17 25 08.4	+2.4
ISA				e		17 27 59.3	
ISA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HWUT	Hardware Ranch	31.03	331	eP	P	17 25 07.1	+0.9
HWUT				epP	pP	17 25 41.7	-0.1
HWUT				ePcP	PcP	17 27 58.1	+0.3
E38A	The Farm, Brul	31.04	1	P	P	17 25 06.3	+0.3
	baz=181						
E38A	The Farm, Brul	31.04	1	eP	P	17 25 06.1	+0.1
	comp=Z,26nm,0.6s						
E38A				epP	pP	17 25 40.7	-0.9
E35A	Pequot Lakes	31.05	357	P	P	17 25 05.0	-1.1
	baz=176						
E42A	Champion	31.06	6	P	P	17 25 05.4	-0.8
	baz=188						
E34A	Wadena	31.06	356	P	P	17 25

comp=Z,1.3nm,0.7s,baz=162,slow=5.6,SNR=7.4
PDAR PKiKP **PKiKP** 17 35 27.2 -0.7
comp=Z,0.7nm,0.5s,baz=342,slow=0.5,SNR=4.8
PDAR LR LR 17 39 06.4
comp=Z,47nm,19.3s,baz=182,slow=39
PDAR Pinedale Array 31.07 335 *e*P **P** 17 25 06.4 -0.2
PDAR *ep*P **pP** 17 25 41.9 -0.3
PDAR *e*PcP **PcP** 17 27 57.6 -0.4
PDAR ScP **ScP** 17 31 26.4 +1.4
PDAR PKiKP **PKiKP** 17 35 27.2 -0.7
E43A Lone Tree Farm 31.10 7 P **P** 17 25 05.4 -1.0
baz=189
E43A Lone Tree Farm 31.10 7 *e*P **P** 17 25 05.6 -0.8
comp=Z,28nm,0.8s
NNA Nana 31.16 150 P **P** 17 25 08.4 +1.0
comp=Z,22nm,0.8s,baz=337,slow=8.7,SNR=6.4
NNA PcP **PcP** 17 27 59.4 +1.0
comp=Z,12nm,0.5s,baz=312,slow=5.5,SNR=7.2
NNA Nana 31.16 150 *e*P **P** 17 25 06.7 -0.7
comp=Z,20nm,0.8s
NNA *e*PcP **PcP** 17 27 59.1 +0.7
NNA *e*PcP PcP 17 27 59.4 +1.0
SADO Sadowa 31.18 18 P **P** 17 25 07.0 -0.2
comp=Z,44nm,0.6s,baz=223,slow=9.4,SNR=30
SADO Sadowa 31.18 18 *e*P **P** 17 25 07.2 0.0
comp=Z,48nm,0.6s
CWC Cottonwood Cre 31.20 317 P **P** 17 25 08.4 +0.8
baz=126
BGU Big Grassy Mou 31.22 328 *e*P **P** 17 25 09.7 +1.9
comp=Z,10nm,1.0s
SPUT South Promonto 31.22 330 *e*P **P** 17 25 10.0 +2.2
comp=Z,56nm,1.3s
BAKC Calstate 31.28 314 *e*P **P** 17 25 09.5 +1.3
BAKC *e*PcP **PcP** 17 27 60.0 +1.6
E45A Wooded Hills, 31.32 9 P **P** 17 25 08.5 +0.1
baz=193
TRY Troy 31.41 26 *e*P **P** 17 25 09.9 +0.7
comp=Z,149nm,0.7s
E44A Grand Marais A 31.47 8 P **P** 17 25 10.1 +0.4
baz=191
E44A Grand Marais A 31.47 8 *e*P **P** 17 25 09.9 +0.2
comp=Z,65nm,0.9s
VES Vestal, Richgr 31.53 315 P **P** 17 25 11.2 +0.8
baz=123
PKM Mcpherson Peak 31.54 313 P **P** 17 25 11.9 +1.2
baz=121
D35A Remer 31.56 357 P **P** 17 25 09.6 -0.9
baz=176
D37A Cotton 31.59 360 P **P** 17 25 10.0 -0.8
baz=179
D36A Goodland 31.62 359 P **P** 17 25 09.8 -1.3
baz=178
D36A Goodland 31.62 359 *e*P **P** 17 25 09.7 -1.3
comp=Z,9.2nm,0.8s
D36A *e*PcP **PcP** 17 27 58.9 -0.2
D41A Chassel 31.63 5 P **P** 17 25 10.0 -1.1
baz=186
D41A Chassel 31.63 5 *e*P **P** 17 25 10.0 -1.1
comp=Z,21nm,0.8s
QUA2 Belchertown 31.63 28 *e*P **P** 17 25 10.8 -0.4
comp=Z,118nm,1.0s
BRYW Bryant College 31.74 30 *e*P **P** 17 25 13.2 +1.0
comp=Z,73nm,0.8s
HVU Hansel Valley 31.74 330 *e*P **P** 17 25 13.6 +1.2
HVU *ep*P **pP** 17 25 47.5 -0.6
HVU Hansel Valley 31.74 330 *e*P **P** 17 25 13.6 +1.2
HVU *e**PP **pP** 17 25 47.5 -0.6
ACCN Adirondack Com 31.94 26 *e*P **P** 17 25 14.6 +0.7
comp=Z,37nm,0.7s
REDW Red Top Meadow 32.11 334 *e*P **P** 17 25 16.6 +1.0
REDW *ep*P **pP** 17 25 53.2 +1.9
SNOW Snow King Moun 32.15 334 *e*P **P** 17 25 16.8 +0.8
SNOW *ep*P **pP** 17 25 54.3 +2.5
C38A Sawbill Land. 32.16 1 P **P** 17 25 14.2 -1.6
baz=181
C37A Embarrass 32.16 360 P **P** 17 25 15.3 -0.5
baz=180
C34A RKJ Ranch, Bem 32.17 356 P **P** 17 25 14.9 -1.0
baz=175
C35A Jirik Farms, M 32.17 358 P **P** 17 25 14.9 -1.0
baz=176
HRV Adam Dziewonsk 32.18 29 P **P** 17 25 16.2 +0.2
baz=219
HRV Adam Dziewonsk 32.18 29 *e*P **P** 17 25 16.6 +0.7
comp=Z,67nm,1.0s
HRV Adam Dziewonsk 32.18 29 *e*P **P** 17 25 16.6 +0.7
HRV pmax pmax
comp=Z,67nm,1.0s
WES Weston 32.20 29 *e*P **P** 17 25 17.2 +1.1
comp=Z,70nm,1.2s
WES Weston 32.20 29 *e*P **P** 17 25 17.2 +1.1
WES pmax pmax
comp=Z,71nm,1.2s
C36A Pine Crest Far 32.20 359 P **P** 17 25 14.8 -1.3
baz=179
NCB Newcomb 32.20 24 *e*P **P** 17 25 16.7 +0.5
comp=Z,97nm,0.6s
LOHW Long Hollow 32.20 334 *e*P **P** 17 25 17.1 +0.6
LOHW *ep*P **pP** 17 25 53.8 +1.6
RCCR Rock Creek Can 32.22 318 *e*P **P** 17 25 21.3 +4.5
BCX Boston College 32.23 30 *e*P **P** 17 25 17.4 +1.1
comp=Z,76nm,0.9s
ELK Elko 32.25 326 P **P** 17 25 21.7 +4.8
comp=Z,5.8nm,0.7s,baz=184,slow=7.2,SNR=30
ELK pP **pP** 17 25 54.6 +2.0
comp=Z,2.9nm,0.9s,baz=167,slow=4.6,SNR=2.9
ELK PcP **PcP** 17 28 05.3 +4.1
comp=Z,12nm,0.6s,baz=209,slow=1.9,SNR=20
ELK ScP **ScP** 17 31 33.0 +4.1
comp=Z,1.4nm,0.8s,baz=136,slow=0.9,SNR=4.6
TPAW Teton Pass 32.25 334 *e*P **P** 17 25 17.9 +0.9
TPAW *ep*P **pP** 17 25 55.3 +2.6
PAGB Antelope Grade 32.27 314 *e*P **P** 17 25 19.5 +2.6
comp=Z,28nm,1.2s
PAGB *e*PcP **PcP** 17 28 02.1 +1.0
C39A Grand Marais 32.29 2 P **P** 17 25 16.0 -0.9
baz=183
MOOW Moose Ponds 32.38 334 *e*P **P** 17 25 17.9 -0.1
MOOW *ep*P **pP** 17 25 53.5 -0.2
MOOW *e*PcP **PcP** 17 28 01.0 -0.5
EYMN Ely 32.38 1 P **P** 17 25 16.6 -1.1
baz=181
EYMN Ely 32.38 1 *e*P **P** 17 25 16.1 -1.6
comp=Z,14nm,0.8s
FXWY Fox Creek 32.40 334 *e*P **P** 17 25 18.7 +0.4
FXWY *ep*P **pP** 17 25 53.1 -0.9
NV11 Mina Array Sit 32.42 320 *e*P **P** 17 25 20.9 +2.6
comp=Z,2.5nm,0.9s
NV11 *ep*P **pP** 17 25 55.8 +1.6
NV11 *e*PcP **PcP** 17 28 02.9 +1.3
C40A Isle Royale Na 32.44 4 P **P** 17 25 16.9 -1.2
baz=185
C40A Isle Royale Na 32.44 4 *e*P **P** 17 25 17.0 -1.2
comp=Z,18nm,0.6s
OMMB Old Mammoth Mi 32.47 318 *e*P **P** 17 25 21.4 +2.4
comp=Z,8.8nm,0.8s
OMMB *ep*P **pP** 17 25 55.7 +0.9
OMMB *e*PcP **PcP** 17 28 03.4 +1.3
NV01 Mina Array Sit 32.52 320 *e*P **P** 17 25 21.0 +1.8
NV01 *ep*P **pP** 17 25 55.4 +0.3
NV01 *e*PcP **PcP** 17 28 03.0 +1.0
NV01 *e*ScP **ScP** 17 31 32.1 +2.2
NVAR Mina Array Bea 32.52 320 P **P** 17 25 22.0 +2.8
comp=Z,40nm,0.7s,baz=133,slow=8.7,SNR=325
NVAR pP **pP** 17 25 55.0 0.0
comp=Z,9.2nm,0.7s,baz=131,slow=9.7,SNR=4.2
NVAR PcP **PcP** 17 28 03.4 +1.4
comp=Z,17nm,0.7s,baz=139,slow=3.4,SNR=24
NVAR ScP **ScP** 17 31 32.6 +2.7
comp=Z,1.7nm,0.7s,baz=131,slow=4.7,SNR=8.1
NVAR LR LR 17 41 17.8
comp=Z,54nm,21.1s,baz=219,slow=41
LHV Little Huntoon 32.53 319 *e*P **P** 17 25 22.5 +3.4
MDPB Devils Postpil 32.53 318 *e*P **P** 17 25 22.2 +2.7
comp=Z,17nm,0.8s
MDPB *ep*P **pP** 17 25 54.4 -0.8
MDPB *e*PcP **PcP** 17 28 03.2 +1.1
IMW Indian Meadow 32.58 334 *e*P **P** 17 25 19.6 -0.2
comp=Z,17nm,1.4s
LONY Lake Ozonia 32.60 23 P **P** 17 25 20.6 +0.9
baz=212
LONY Lake Ozonia 32.60 23 *e*P **P** 17 25 20.3 +0.7
comp=Z,115nm,0.8s
LONY *ep*P **pP** 17 25 54.6 -0.8
LONY *e*sP **sP** 17 26 14.9 -0.2
KVN Kaiserville 32.77 321 *e*P **P** 17 25 23.7 +2.3
comp=Z,28nm,1.0s
KVN *ep*P **pP** 17 25 58.4 +1.1
KVN *e*PcP **PcP** 17 28 03.4 +0.8
KVN Kaiserville 32.77 321 *e*P **P** 17 25 23.7 +2.3
KVN *e**PP **pP** 17 25 58.4 +1.1
KVN *e* 17 28 03.4
KVN pmax pmax
comp=Z,28nm,1.0s
RYN Ryan 32.77 320 *e*P **P** 17 25 23.9 +2.5
comp=Z,14nm,0.9s
RYN *ep*P **pP** 17 25 59.5 +2.3
RYN *e*PcP **PcP** 17 28 03.7 +1.1
B35A Bob, Littlefor 32.83 358 P **P** 17 25 20.5 -1.0
baz=177
B35A Bob, Littlefor 32.83 358 *e*P **P** 17 25 20.0 -1.5
B35A *ep*P **pP** 17 25 55.8 -1.5
MDND Maddock 32.88 351 P **P** 17 25 21.6 -0.5
baz=167
MDND Maddock 32.88 351 *e*P **P** 17 25 21.5 -0.5
comp=Z,108nm,0.6s
MDND *ep*P **pP** 17 25 56.2 -1.6
MDND *e*sP **sP** 17 26 15.3 -2.2
AGMN Agassiz Nation 32.88 355 P **P** 17 25 21.5 -0.6
baz=173
AGMN Agassiz Nation 32.88 355 *e*P **P** 17 25 20.8 -1.2
AGMN *ep*P **pP** 17 25 57.3 -0.6
AGMN *e*sP **sP** 17 26 14.8 -2.7
FFD Franklin Falls 32.89 28 *e*P **P** 17 25 22.4 +0.3
comp=Z,125nm,1.5s
PMPB Monarch Peak 32.91 314 *e*P **P** 17 25 24.6 +2.1
comp=Z,22nm,0.8s
PMPB *e*PcP **PcP** 17 28 04.1 +1.2
RLMT Red Lodge 32.94 337 P **P** 17 25 23.2 +0.4
baz=148
RLMT Red Lodge 32.94 337 *e*P **P** 17 25 22.7 -0.1
comp=Z,6.6nm,0.6s
RLMT *ep*P **pP** 17 25 59.8 +1.1
YFT Old Faithful 32.99 335 *e*P **P** 17 25 24.1 +0.8
YFT *ep*P **pP** 17 26 00.6 +1.5
YFT *e*PcP **PcP** 17 28 04.6 +1.4
B34A Aery, Baudette 32.99 357 P **P** 17 25 21.5 -1.4
baz=175
VT1 Waterbury 33.10 26 *e*P **P** 17 25 24.3 +0.3
comp=Z,54nm,0.6s
BMN Battle Mountai 33.14 324 *e*P **P** 17 25 26.3 +1.7
comp=Z,25nm,0.9s
BMN *ep*P **pP** 17 26 00.1 -0.3
BMN *e*PcP **PcP** 17 28 03.9 +0.3
BMN Battle Mountai 33.14 324 *e*P **P** 17 25 26.3 +1.7
BMN *e**PP **pP** 17 26 00.1 -0.3
BMN *e* 17 28 03.9
BMN pmax pmax
comp=Z,25nm,0.9s
FRNY Flat Rock 33.17 24 *e*P **P** 17 25 24.3 -0.2
comp=Z,67nm,0.9s
YMR Madison River 33.22 335 *e*P **P** 17 25 25.5 +0.2
comp=Z,72nm,1.6s
WAKR Walker 33.27 319 *e*P **P** 17 25 27.9 +2.1
comp=Z,50nm,1.7s
WAKR *e*PcP **PcP** 17 28 05.5 +1.4
LAO LASA Array 33.30 342 P **P** 17 25 26.2 +0.5
baz=155
LAO LASA Array 33.30 342 *e*P **P** 17 25 25.3 -0.5
comp=Z,14nm,0.6s
LBNH Lisbon 33.38 27 P **P** 17 25 27.1 +0.8
baz=217
LBNH Lisbon 33.38 27 *e*P **P** 17 25 27.1 +0.8
comp=Z,146nm,1.7s
LBNH Lisbon 33.38 27 *e*P **P** 17 25 27.2 +0.8
LBNH pmax pmax
comp=Z,146nm,1.7s
YERR Yerington 33.43 320 *e*P **P** 17 25 28.9 +1.7
comp=Z,21nm,0.7s
YERR *e*PcP **PcP** 17 28 06.0 +1.5
A33A Warroad 33.48 356 P **P** 17 25 25.9 -1.3
baz=174
CMB Columbia Colle 33.61 317 *e*P **P** 17 25 29.8 +1.2
comp=Z,8.7nm,0.8s
CMB *e*PcP **PcP** 17 28 05.2 +0.3
CMB Columbia Colle 33.61 317 *e*P **P** 17 25 29.8 +1.2
CMB *e* 17 28 05.2
CMB pmax pmax
comp=Z,9.0nm,0.8s
GCMT Greycliff 33.65 338 *e*P **P** 17 25 27.9 -1.1
PNTR Pine Nut 33.72 320 *e*P **P** 17 25 30.4 +0.7
comp=Z,32nm,0.8s
PNTR *ep*P **pP** 17 26 04.6 -1.1
PNTR *e*PcP **PcP** 17 28 06.5 +1.1
VCNR Virginia City 33.88 320 *e*P **P** 17 25 32.7 +1.7
comp=Z,9.2nm,0.8s
HLID Hailey 33.88 330 P **P** 17 25 32.0 +1.0
baz=139
HLID Hailey 33.88 330 *e*P **P** 17 25 31.7 +0.8
HLID *ep*P **pP** 17 26 06.7 -0.2
PAHR Pah Rah Range 33.96 321 *e*P **P** 17 25 33.7 +2.0
comp=Z,14nm,0.8s
PAHR *ep*P **pP** 17 26 06.2 -1.4
TRQ Mont Tremblant 33.97 22 *e*P **P** 17 25 32.2 +0.6
MCMT McKenzie Canyo 34.14 333 *e*P **P** 17 25 32.9 -0.4
MCMT *ep*P **pP** 17 26 09.5 +0.2
BOZ Bozeman (W) 34.25 335 P **P** 17 25 33.7 -0.4
baz=145
BOZ Bozeman (W) 34.25 335 *e*P **P** 17 25 33.1 -1.0
comp=Z,14nm,0.6s
BOZ Bozeman (W) 34.25 335 *e*P **P** 17 25 33.1 -1.0
BOZ pmax pmax
comp=Z,14nm,0.6s
DGMT Dagmar 34.39 346 P **P** 17 25 35.3 +0.2
baz=159
DGMT Dagmar 34.39 346 *e*P **P** 17 25 35.0 -0.1
comp=Z,46nm,0.6s
MFID Camas Ranch 34.46 329 *e*P **P** 17 25 37.4 +1.5
comp=Z,15nm,1.4s
MFID *ep*P **pP** 17 26 11.6 -0.3
MFID *e*PcP **PcP** 17 28 08.7 +1.4
AFDM Forest Hills D 34.51 318 *e*P **P** 17 25 37.1 +0.9
comp=Z,3.7nm,0.7s
AFDM *e*PcP **PcP** 17 28 08.3 +0.9
WVL Waterville 34.65 29 *e*P **P** 17 25 37.9 +0.7
comp=Z,101nm,1.3s
BEKR Beckworth 34.66 320 *e*P **P** 17 25 39.4 +1.7
BEKR *ep*P **pP** 17 26 14.8 +1.0
LRM Limekiln Ridge 34.77 335 *e*P **P** 17 25 38.5 -0.1
LRM *ep*P **pP** 17 26 14.2 -0.5
ULM Lac du Bonnet 34.83 356 P **P** 17 25 37.2 -1.5
comp=Z,5.7nm,0.4s,baz=179,slow=8.3,SNR=9.9
ULM pP **pP** 17 26 14.0 -0.8
comp=Z,8.4nm,1.0s,baz=173,slow=7.8,SNR=2.2
ULM PcP **PcP** 17 28 07.5 -0.5
comp=Z,6.6nm,0.6s,baz=242,slow=4.0,SNR=4.2
ULM ScP **ScP** 17 31 37.7 +0.3
comp=Z,2.8nm,0.4s,baz=195,slow=7.2,SNR=7.0
ULM Lac du Bonnet 34.83 356 *e*P **P** 17 25 37.1 -1.6
comp=Z,25nm,1.1s
ULM pP **pP** 17 26 14.0 -0.8
ULM PcP **PcP** 17 28 07.5 -0.5
ULM ScP **ScP** 17 31 37.7 +0.3
CVS Carmenet Viney 35.15 316 *ep*P pP 17 26 13.1 -4.8
ORV Oroville 35.19 319 *e*P **P** 17 25 43.0 +1.0
ORV *ep*P **pP** 17 26 17.6 -0.6
ORV *e*PcP **PcP** 17 28 10.8 +1.4
ORV Oroville 35.19 319 *e*P **P** 17 25 43.0 +1.0
ORV *e**PP **pP** 17 26 17.6 -0.6
ORV *e* 17 28 10.8
HRY Holter Researc 35.25 336 *e*P **P** 17 25 43.8 +1.3
WVOR Wild Horse Val 35.26 325 *e*P **P** 17 25 44.1 +1.4
comp=Z,25nm,1.0s
WVOR *ep*P **pP** 17 26 20.4 +1.5
WVOR *e*PcP **PcP** 17 28 11.6 +1.9
WVOR Wild Horse Val 35.26 325 *e*P **P** 17 25 44.1 +1.4
WVOR *e**PP **pP** 17 26 20.4 +1.5
WVOR *e* 17 28 11.6
WVOR pmax pmax
comp=Z,25nm,1.0s
PKME Peaks-Kenny Pk 35.35 28 P **P** 17 25 44.1 +0.8
baz=220
PKME Peaks-Kenny Pk 35.35 28 *e*P **P** 17 25 44.1 +0.8
comp=Z,88nm,0.5s
PTGA Pitinga 35.55 114 P **P** 17 25 43.9 -1.6
comp=Z,15nm,0.3s,baz=302,slow=15,SNR=31
PTGA PcP **PcP** 17 28 11.1 +0.3
comp=Z,12nm,1.0s,baz=308,slow=2.5,SNR=6.3
PTGA ScP **ScP** 17 31 41.2 +0.4
comp=Z,1.0nm,0.5s,baz=196,slow=3.5,SNR=4.1
PTGA Pitinga 35.55 114 *e*P **P** 17 25 43.6 -1.8
comp=Z,18nm,0.8s
PTGA *e*PcP **PcP** 17 28 09.3 -1.5
PTGA *e*ScP **ScP** 17 31 42.0 +1.1
EGMT Eagleton 35.60 339 P **P** 17 25 46.4 +0.9
baz=150
EGMT Eagleton 35.60 339 *e*P **P** 17 25 46.0 +0.5
comp=Z,44nm,0.9s
GDXM Geysers 35.62 317 *e*P **P** 17 25 48.3 +2.5
comp=Z,6.5nm,0.8s
J08A Circle Bar Ran 35.79 326 *e*P **P** 17 25 48.8 +1.5
comp=Z,148nm,1.4s
J08A *ep*P **pP** 17 26 22.9 -0.6
J08A *e*PcP **PcP** 17 28 12.5 +1.4
EMMW East Machias 35.80 30 *e*P **P** 17 25 48.2 +1.1
comp=Z,68nm,1.2s
O03D Paynes Creek 35.80 320 P **P** 17 25 48.1 +0.8
baz=125
MOD Modoc Plateau 35.86 323 *e*P **P** 17 25 48.9 +0.9
comp=Z,42nm,1.5s
MOD *ep*P **pP** 17 26 23.5 -0.7
MOD *e*PcP **PcP** 17 28 12.7 +1.2
HOPS Hopland Field 35.90 317 *e*PcP **PcP** 17 28 13.1 +1.7
MSO Missoula 36.19 334 P **P** 17 25 51.5 +0.9
baz=143
MSO Missoula 36.19 334 *e*P **P** 17 25 51.4 +0.7
MSO *ep*P **pP** 17 26 24.2 -2.7
BMO Blue Mountains 36.23 329 *e*P **P** 17 25 51.5 +0.5
BMO *ep*P **pP** 17 26 27.5 +0.2
BMO *e*PcP **PcP** 17 28 13.2 +0.8
BMO Blue Mountains 36.23 329 *e*P **P** 17 25 51.5 +0.5
BMO *e**PP **pP** 17 26 27.5 +0.2
BMO *e* 17 28 13.2
WDC Whiskeytown Da 36.43 319 *e*P **P** 17 25 51.8 -0.8
WDC *ep*P **pP** 17 26 28.6 -0.3
WDC *e*PcP **PcP** 17 28 13.2 +0.3
WDC Whiskeytown Da 36.43 319 *e*P **P** 17 25 51.8 -0.8
WDC *e**PP **pP** 17 26 28.6 -0.3
WDC *e* 17 28 13.2
KCPM Cahto Peak 36.60 317 *e*P **P** 17 25 55.0 +0.8
comp=Z,68nm,1.7s
KCPM *e*PcP **PcP** 17 28 15.9 +2.2
M04C Macdoel 36.70 322 P **P** 17 25 56.0 +1.0
baz=127
K05A Summer Lake 36.72 324 *e*P **P** 17 25 56.0 +0.8
comp=Z,29nm,1.5s
K05A *e*PcP **PcP** 17 28 15.5 +1.4
N02D Trinity Center 36.76 320 P **P** 17 25 54.8 -0.6
baz=125
I07A Izee 36.83 326 *e*P **P** 17 25 56.9 +0.9
comp=Z,8.9nm,0.9s
I07A *ep*P **pP** 17 26 31.9 -0.5
I07A *e*PcP **PcP** 17 28 15.9 +1.6
KMRM Mail Ridge 36.97 318 *e*P **P** 17 25 58.5 +1.2
KMRM *ep*P **pP** 17 26 34.0 +0.3
KMRM *e*PcP **PcP** 17 28 16.6 +1.8
F10A Beach Ranch, E 37.01 330 *e*P **P** 17 25 57.6 +0.1
F10A *ep*P **pP** 17 26 32.6 -1.3
JTMT Jette 37.06 335 *e*PcP **PcP** 17 28 15.6 +0.6
M02C Callahan 37.09 320 P **P** 17 25 58.1 -0.1
baz=125
K04D Chiloquin, OR 37.16 323 P **P** 17 25 59.5 +0.6
baz=128
YBH Yreka Blue Hor 37.20 321 P **P** 17 25 59.0 -0.1
comp=Z,4.2nm,0.6s,baz=150,slow=4.9,SNR=13
YBH pP **pP** 17 26 37.7 +2.1
comp=Z,3.0nm,0.7s,baz=92,slow=9.9,SNR=3.2
YBH PcP **PcP** 17 28 15.9 +0.5
comp=Z,5.8nm,0.8s,baz=128,slow=2.4,SNR=8.2
YBH ScP **ScP** 17 31 46.7 +0.2
comp=Z,0.9nm,0.7s,baz=97,slow=8.1,SNR=3.8
J05D Fort Rock, OR 37.27 324 P **P** 17 26 00.2 +0.4
baz=129
KHMM Horse Mountain 37.34 319 *e*P **P** 17 26 01.7 +1.2
KHMM *ep*P **pP** 17 26 38.9 +1.9
KHMM *e*PcP **PcP** 17 28 17.5 +1.5
G08A Pilot Rock 37.37 328 *e*P **P** 17 26 01.4 +0.7
G08A *ep*P **pP** 17 26 35.5 -1.6
G08A *e*PcP **PcP** 17 28 17.1 +1.2
PINE Pine Mountain 37.42 325 *e*P **P** 17 26 01.9 +0.8
comp=Z,21nm,0.9s
PINE *e*PcP **PcP** 17 28 18.0 +1.8
JCC Jacoby Creek, 37.50 319 *e*P **P** 17 26 03.7 +2.1
comp=Z,37nm,0.9s
JCC *ep*P **pP** 17 26 39.6 +1.6
SAML Samuel 37.50 128 *e*P **P** 17 26 00.1 -1.8
comp=Z,26nm,0.6s
J04D Umpqua Nationa 37.74 323 P **P** 17 26 04.2 +0.4
baz=128
HUMO Hull Mountain 37.85 322 *e*P **P** 17 26 05.5 +0.9
comp=Z,5.0nm,0.8s
HUMO *e*PcP **PcP** 17 28 17.9 +0.5
WALA Waterton Lakes 37.97 337 *e*P **P** 17 26 05.8 +0.2
comp=Z,7.4nm,1.0s
WALA *e*S **S** 17 31 51.6 +6.8
L02D Cave Junction, 37.98 321 P **P** 17 26 06.3 +0.6
baz=125
I05D Terrebonne, OR 38.00 325 P **P** 17 26 06.3 +0.5
baz=130
I04A Tendick Farm, 38.25 324 P **P** 17 26 08.1 +0.2
baz=128
KBO Bosley Butte 38.40 320 *e*P **P** 17 26 10.9 +1.7
KBO *ep*P **pP** 17 26 47.5 +1.7
BLTW Bickleton 38.42 328 *e*PcP **PcP** 17 28 19.5 +0.5
G05D Wamic, OR 38.57 326 P **P** 17 26 11.8 +1.3
baz=131
D08A Wollman Farm, 38.60 330 *e*P **P** 17 26 11.6 +0.9
comp=Z,8.6nm,1.0s
NEW Newport 38.67 333 *e*P **P** 17 26 09.3 -2.0
comp=Z,11nm,0.6s
NEW Newport 38.67 333 *e*P **P** 17 26 09.3 -2.0
NEW pmax pmax
comp=Z,11nm,0.6s
H04A Detroit Lake 38.68 325 *e*P **P** 17 26 12.4 +1.0
H04A *ep*P **pP** 17 26 49.1 +0.9
I03D Drain, OR 38.73 323 P **P** 17 26 12.8 +0.9
baz=127
KEBM Edson Butte 38.84 321 *e*P **P** 17 26 15.4 +2.5
comp=Z,98nm,1.0s
KEBM *ep*P **pP** 17 26 51.3 +1.8
C09A Chrisman Ranch 38.84 332 *e*P **P** 17 26 13.7 +1.0
comp=Z,14nm,0.7s
C09A *ep*P **pP** 17 26 49.9 +0.5
COR Corvallis 39.25 324 *e*P **P** 17 26 17.3 +1.2
comp=Z,29nm,0.8s
COR *ep*P **pP** 17 26 53.8 +1.0
COR Corvallis 39.25 324 *e*P **P** 17 26 17.3 +1.2
COR *e**PP **pP** 17 26 53.8 +1.0
COR pmax pmax
comp=Z,29nm,0.8s
LPAZ La Paz 39.41 142 P **P** 17 26 19.4 +0.9
comp=Z,30nm,0.7s,baz=332,slow=6.0,SNR=146
LPAZ PcP **PcP** 17 28 24.2 +0.9
comp=Z,8.7nm,0.4s,baz=332,slow=2.7,SNR=12
LPAZ ScP **ScP** 17 31 57.6 +1.6
comp=Z,2.2nm,0.8s,baz=304,slow=3.6,SNR=4.0
LPAZ La Paz 39.41 142 *e*P **P** 17 26 18.9 +0.4
LPAZ *e*PcP **PcP** 17 28 23.8 +0.5
LPAZ *e*ScP **ScP** 17 31 57.9 +2.0
LPAZ La Paz 39.41 142 *e*P **P** 17 26 18.9 +0.4
LPAZ *e* 17 28 23.8
LPAZ *e* 17 31 57.9
LTY Liberty 39.59 329 *e*P **P** 17 26 19.7 +0.6
LTY *ep*P **pP** 17 26 54.6 -1.2
LTY *e*PcP **PcP** 17 28 22.4 -0.4
G03D McMinnville, O 39.61 325 P **P** 17 26 19.7 +0.6
baz=129
B08A Colville Reser 39.73 331 *e*P **P** 17 26 19.1 -1.1
B08A *ep*P **pP** 17 26 56.6 -0.3
B08A *e*PcP **PcP** 17 28 23.4 +0.3
LON Longmire 39.82 328 *e*P **P** 17 26 21.9 +0.9
comp=Z,18nm,0.8s
LON *ep*P **pP** 17 26 56.5 -1.3
LON *e*PcP **PcP** 17 28 23.0 -0.5
FFC Flin Flon 39.92 351 *e*P **P** 17 26 21.2 -0.4
FFC *ep*P **pP** 17 26 57.0 -1.4
FFC Flin Flon 39.92 351 *e*P **P** 17 26 21.2 -0.4
FFC *e**PP **pP** 17 26 57.0 -1.4
D05A Enumclaw 40.20 328 *e*P **P** 17 26 25.0 +1.0
comp=Z,27nm,1.0s
D05A *e*PcP **PcP** 17 28 24.6 -0.1
F03A Seaside 40.22 326 *e*P **P** 17 26 26.1 +1.9
comp=Z,46nm,0.9s
F03A *ep*P **pP** 17 27 00.2 -0.8
E03A Lebam 40.61 326 *e*P **P** 17 26 28.7 +1.4

comp=Z,49nm,0.9s
E03A *e*pP **pP** **17 27 03.1 -1.1**
E03A *e*PcP **PcP** **17 28 27.1 +1.1**
B06A Marblemount 40.86 330 *e*P **P** **17 26 29.6 +0.3**
comp=Z,20nm,1.1s
B06A *e*PcP **PcP** **17 28 26.2 -0.5**
MNMC Minye Minye 40.87 147 *e*P **P** **17 26 31.5 +1.4**
comp=Z,62nm,0.8s
MNMC *e*PcP **PcP** **17 28 28.7 +1.1**
B05A Bryant 40.98 329 P **P** **17 26 30.4 +0.1**
baz=133
NLWA Neilton Lookou 41.31 327 *e*P **P** **17 26 34.3 +1.2**
comp=Z,50nm,1.2s
NLWA *e*PcP **PcP** **17 28 28.4 +0.1**
A04D Lummi Island 41.59 329 P **P** **17 26 35.4 +0.2**
baz=132
PGC Sidney 41.91 329 *e*P **P** **17 26 38.9 +1.1**
comp=Z,36nm,1.1s
LLLB Lilloоet 42.50 332 *e*P **P** **17 26 43.4 +0.7**
comp=Z,17nm,1.1s
LLLB *e*pP **pP** **17 27 21.3 +1.3**
LLLB *e*PP **PcP** **17 28 31.0 -1.2**
PB01 IPOC Station P 42.51 148 *e*P **P** **17 26 44.0 +0.8**
comp=Z,16nm,0.6s
PB01 *e*PP **PcP** **17 28 33.7 +0.9**
FCC Fort Churchill 43.24 358 *e*P **P** **17 26 47.1 -1.3**
FCC *e*pP **pP** **17 27 25.3 -0.5**
FCC *e*PP **PP** **17 28 33.0 +0.6**
FCC Fort Churchill 43.24 358 *e*P **P** **17 26 47.1 -1.3**
FCC *e**PP **pP** **17 27 25.3 -0.5**
FCC *e* 17 28 33.0
PB04 IPOC Station P 43.27 150 *e*P **P** **17 26 49.1 -0.2**
comp=Z,31nm,1.1s
PB04 *e*PP **PcP** **17 28 36.5 +1.2**
SIV San Ignacio 43.73 134 P **P** **17 26 53.0 0.0**
comp=Z,97nm,0.9s,baz=310,slow=7.7,SNR=347
SIV PcP **PcP** **17 28 37.6 +0.7**
comp=Z,36nm,0.7s,baz=300,slow=3.2,SNR=15
SCHQ Schefferville 43.87 21 P **P** **17 26 53.7 +0.1**
comp=Z,17nm,0.4s,baz=229,slow=6.6,SNR=13
SCHQ PcP **PcP** **17 28 36.1 -0.6**
comp=Z,8.3nm,0.5s,baz=205,slow=3.7,SNR=3.2
SCHQ LR LR 17 48 59.0
comp=Z,106nm,18.1s,baz=228,slow=41
SCHQ Schefferville 43.87 21 *e*P **P** **17 26 53.3 -0.2**
comp=Z,96nm,1.4s
SCHQ *e*pP **pP** **17 27 31.1 +0.2**
SCHQ *e*PcP **PcP** **17 28 35.4 -1.2**
RPN Rapa Nui 45.55 202 LR LR 17 42 44.1
comp=Z,35nm,20.5s,baz=12,slow=31
YJA Yavi 45.56 145 *e*P **P** **17 27 09.8 +2.0**
GO02 Mina Guanaco 45.94 151 *e*P **P** **17 27 11.2 +0.6**
comp=Z,30nm,0.8s
GO02 *e*PcP **PcP** **17 28 46.3 +1.6**
BBB Bella Bella 46.47 330 P **P** **17 27 15.8 +1.9**
comp=Z,5.0nm,0.6s,baz=111,slow=9.3,SNR=8.1
GO03 Copiap 47.75 154 *e*P **P** **17 27 25.1 +0.8**
comp=Z,15nm,0.9s
LCO Las Campanas 48.80 155 *e*P **P** **17 27 33.6 +1.0**
comp=Z,38nm,1.1s
LCO *e*PcP **PcP** **17 28 55.8 +1.0**
AHML Horco Molle 49.37 148 *e*P **P** **17 27 37.8 +1.0**
YKA Yellowknife Ar 49.59 346 P **P** **17 27 37.9 +0.1**
comp=Z,28nm,0.5s,baz=150,slow=7.3,SNR=160
YKA pP **pP** **17 28 16.8 +0.7**
comp=Z,20nm,0.9s,baz=146,slow=7.8,SNR=5.4
YKA LR LR 17 51 51.9
comp=Z,6.9nm,18.1s,baz=162,slow=40
YKB5 Yellowknife Ar 49.59 346 *e*P **P** **17 27 37.2 -0.6**
VCA Vinchina 49.63 152 *e*P **P** **17 27 40.5 +1.7**
YKW3 Yellowknife Ar 49.65 347 *e*P **P** **17 27 38.1 -0.2**
comp=Z,32nm,0.7s
YKW3 *e*pP **pP** **17 28 16.6 +0.1**
GO04 Tololo Observa 49.78 156 *e*P **P** **17 27 41.3 +1.3**
GO04 *e*PcP **PcP** **17 29 00.6 +2.3**
AGUA GUANDACOL 50.15 153 *e*P **P** **17 27 44.6 +2.0**
AROD Rodeo 50.32 154 *e*P **P** **17 27 46.8 +2.6**
ACDV Cuesta del Vie 50.47 154 *e*P **P** **17 27 47.2 +2.1**
CYA Choya 50.51 150 *e*P **P** **17 27 45.9 +0.7**
ACLC CERRO LA CRUZ 50.79 151 *e*P **P** **17 27 48.6 +1.1**
FRB Frobisher Bay 50.90 13 P **P** **17 27 46.9 -0.7**
comp=Z,22nm,0.3s,baz=207,slow=7.5,SNR=29
FRB pP **pP** **17 28 26.2 +0.2**
comp=Z,8.2nm,0.8s,baz=230,slow=7.9,SNR=1.5
DLBC Dease Lake 51.30 335 P **P** **17 27 53.0 +2.3**
comp=Z,20nm,0.9s,baz=143,slow=7.4,SNR=26
DLBC PcP **PcP** **17 29 03.8 +0.5**
baz=237,slow=2.9
DLBC Dease Lake 51.30 335 *e*P **P** **17 27 53.1 +2.3**
comp=Z,31nm,1.0s
DLBC *e*pP **pP** **17 28 28.6 -0.7**
DLBC *e*PcP **PcP** **17 29 04.3 +1.0**
AMOG MOGNA 51.40 154 *e*P **P** **17 27 53.2 +1.3**
RTLL Cerro Villicun 51.75 154 *e*P **P** **17 27 56.3 +1.9**
APLL PUNTA DE LOS L 51.80 152 *e*P **P** **17 27 55.8 +0.9**
RTLS Leoncito 51.82 155 *e*P **P** **17 27 57.3 +2.0**
ZON Zonda 51.85 154 *e*P **P** **17 27 55.7 +0.5**
AUSP Uspallata 52.16 156 *e*P **P** **17 27 60.0 +2.2**
RTCV Cerro Valdivia 52.19 155 *e*P **P** **17 27 59.2 +1.6**
ROC1 El Roble 52.20 158 *e*P **P** **17 27 58.7 +0.7**
comp=Z,16nm,0.8s
ROC1 *e*PcP **PcP** **17 29 08.0 +0.7**
PEL Peldehue 52.47 157 *e*P **P** **17 28 00.2 +0.4**
PEL Peldehue 52.47 157 *e*P **P** **17 28 00.2 +0.4**
ASAL Salagasta 52.70 155 *e*P **P** **17 28 03.2 +1.7**
ACAN Cantantal 53.11 154 *e*P **P** **17 28 05.4 +0.9**
AAGR Agrelo 53.14 156 *e*P **P** **17 28 06.3 +1.6**
TCA Tanti 53.49 151 *e*P **P** **17 28 07.8 +0.5**
CPUP Villa Florida 53.54 141 P **P** **17 28 07.0 -0.6**
comp=Z,48nm,0.8s,baz=333,slow=8.1,SNR=64
CPUP PcP **PcP** **17 29 13.2 +1.1**
comp=Z,15nm,0.8s,baz=341,slow=1.8,SNR=6.7
CPUP Villa Florida 53.54 141 *e*P **P** **17 28 06.6 -0.9**
comp=Z,64nm,0.9s
CPUP *e*PcP **PcP** **17 29 12.7 +0.5**
GO05 HualaæØ 53.72 160 *e*P **P** **17 28 09.7 +0.9**
comp=Z,39nm,0.9s
SKAG Skagway 54.10 334 *e*PcP **PcP** **17 29 14.8 +1.1**
IVI Ivigtut 55.35 24 *e*P **P** **17 28 19.3 -0.9**
NRS Narsarsuaq 56.43 25 *e*P **P** **17 28 27.1 -0.7**
NRS *e*pP **pP** **17 29 04.9 -2.2**
NRS Narsarsuaq 56.43 25 *e*P **P** **17 28 27.2 -0.7**
NRS *e**PP **pP** **17 29 04.9 -2.2**
SFJD Kangerlussuaq 58.13 18 LR LR 17 57 08.6
comp=Z,51nm,18.7s,baz=92,slow=39
DAWY Dawson 58.31 338 *e*P **P** **17 28 40.9 -0.1**
DAWY *e*pP **pP** **17 29 20.1 -0.4**
DAWY *e*PcP **PcP** **17 29 29.6 -0.5**
SPB Sao Paulo 58.39 131 *e*P **P** **17 28 41.0 -1.0**
INK Inuvik 59.02 343 P **P** **17 28 46.1 +0.3**
comp=Z,8.7nm,0.5s,baz=137,slow=7.8,SNR=22
INK pP **pP** **17 29 26.5 +1.2**
comp=Z,9.8nm,0.9s,baz=132,slow=9.3,SNR=3.6
INK PcP **PcP** **17 29 32.0 -0.8**
comp=Z,8.6nm,0.8s,baz=125,slow=7.4,SNR=4.8
INK Inuvik 59.02 343 *e*P **P** **17 28 46.0 +0.2**
INK *e*pP **pP** **17 29 25.6 +0.2**
INK *e*PcP **PcP** **17 29 32.5 -0.3**
RES Resolute Bay 59.24 359 P **P** **17 28 46.6 -0.5**
comp=Z,13nm,0.5s,baz=185,slow=10,SNR=34
RES Resolute Bay 59.24 359 *e*P **P** **17 28 46.3 -0.9**
comp=Z,14nm,0.6s
EGAK Eagle 59.34 338 *e*P **P** **17 28 48.1 +0.1**
comp=Z,8.1nm,1.1s
PLCA Paso Flores 59.37 161 P **P** **17 28 49.8 +1.1**
comp=Z,14nm,0.8s,baz=2.1,slow=8.1,SNR=25
PLCA PcP **PcP** **17 29 36.0 +1.2**
comp=Z,3.5nm,0.8s,baz=15,slow=4.2,SNR=3.6
PLCA Paso Flores 59.37 161 *e*P **P** **17 28 49.1 +0.5**
comp=Z,20nm,0.9s
PLCA *e*PcP **PcP** **17 29 36.5 +1.8**
MENT Mentasta 59.39 335 *e*P **P** **17 28 49.8 +1.4**
comp=Z,7.8nm,0.7s
RCBR Riachuelo 59.49 106 *e*P **P** **17 28 48.9 -1.1**
comp=Z,36nm,1.3s
TRQA Tornquist 60.26 153 *e*P **P** **17 28 55.0 +0.3**
comp=Z,28nm,1.0s
HDA Harding Lake 61.34 336 *e*P **P** **17 29 01.7 0.0**
comp=Z,84nm,1.9s
KDAK Kodiak Island 61.45 328 *e*P **P** **17 29 03.4 +1.0**
comp=Z,32nm,0.8s
KDAK Kodiak Island 61.45 328 *i* P **P** **17 29 03.4 +1.0**
IL1 Eielson Array 61.48 336 *e*P **P** **17 29 03.0 +0.5**
ILAR Eielson Array 61.48 336 P **P** **17 29 02.9 +0.3**
comp=Z,7.8nm,1.0s,baz=109,slow=6.4,SNR=37
ILAR PcP **PcP** **17 29 42.7 -0.1**
comp=Z,3.6nm,0.7s,baz=136,slow=2.5,SNR=9.4
ILAR PKPPKP **P'P'df** **17 58 12.0 -2.6**
comp=Z,0.6nm,0.7s,baz=295,slow=4.4,SNR=5.1
ILB Eielson Array 61.48 336 *e*P **P** **17 29 02.9 +0.3**
RSO Redoubt South 62.35 331 *e*P **P** **17 29 09.4 +0.7**
SVW2 Sparrevohn 63.87 331 *e*P **P** **17 29 18.5 0.0**
comp=Z,20nm,1.1s
TOLK Toolik Lake Re 64.13 340 P **P** **17 29 20.6 +0.6**
baz=115
CHGN Chignik 64.18 325 *e*P **P** **17 29 20.8 +0.3**
comp=Z,76nm,0.6s
SUMG Summit 64.84 16 *e*P **P** **17 29 24.7 -0.3**
comp=Z,15nm,0.6s
SUMG Summit 64.84 16 *e*P **P** **17 29 24.7 -0.3**
SUMG pmax pmax
comp=Z,15nm,0.6s
SDPT Sand Point 65.16 324 *e*P **P** **17 29 26.9 0.0**
comp=Z,56nm,0.6s
SDPT *e*PcP **PcP** **17 29 59.1 +1.1**
BORG Borgarnes 67.91 26 P **P** **17 29 44.0 -0.2**
comp=Z,2.2nm,0.5s,baz=245,slow=5.0,SNR=4.3
BORG Borgarnes 67.91 26 *e*P **P** **17 29 43.8 -0.4**
comp=Z,21nm,1.4s
BORG Borgarnes 67.91 26 P **P** **17 29 44.0 -0.2**
BORG pmax pmax
comp=Z,2.0nm,0.5s
PMAR Madeira 69.44 60 *e*P **P** **17 29 53.7 -0.8**
comp=Z,53nm,2.3s
KIWB Kanaga Island 74.99 320 *e*P **P** **17 30 26.7 -0.1**
KPL Plockton 75.19 34⇑ *e*P **P** **17 30 26.8 -1.0**
KPL IAmb IAmb 17 30 28.9
comp=Z,29nm,1.2s
PGAV Gavieira, Arco 75.25 50 *e*P **P** **17 30 27.7 -1.0**
comp=Z,25nm,1.9s
PCAS Casmilo, Conde 75.34 52 *e*P **P** **17 30 28.5 -0.6**
comp=Z,37nm,0.6s
ALMR Almeirim 75.40 53 *e*P **P** **17 30 28.7 -0.7**
ALMR AMb AMB 17 30 29.6
comp=Z,90nm,0.7s
ALMR Almeirim 75.40 53 *e*P **P** **17 30 28.7 -0.7**
comp=Z,90nm,0.5s
PCAB Cabril 75.47 50 *e*P **P** **17 30 28.9 -0.9**
comp=Z,29nm,2.1s
PTOM Tomar 75.47 52 *e*P **P** **17 30 29.1 -0.7**
comp=Z,36nm,1.7s
PFVI Vila Bisbo 75.50 55 *e*P **P** **17 30 29.8 -0.2**
comp=Z,82nm,2.0s
PTEO Sao Teotonio 75.52 55 *e*P **P** **17 30 29.7 -0.4**
comp=Z,42nm,1.2s
PNCL Nicolau / Gran 75.59 54 *e*P **P** **17 30 29.2 -1.3**
comp=Z,22nm,1.2s
MORF Marmelete 75.61 55 *e*P **P** **17 30 30.2 -0.6**
MORF Marmelete 75.61 55 *e*P **P** **17 30 30.1 -0.6**
comp=Z,31nm,1.8s
POLO Lamas de Olo 75.68 51 *e*P **P** **17 30 30.1 -1.0**
comp=Z,13nm,1.4s
PMTG Montargil 75.69 53 *e*P **P** **17 30 30.1 -1.0**
comp=Z,25nm,2.2s
PVIS Viseu 75.70 51 *e*P **P** **17 30 30.1 -1.1**
comp=Z,49nm,0.5s
PVRL Vila Real 75.76 51 *e*P **P** **17 30 30.5 -1.0**
comp=Z,21nm,1.3s
MDO Dochfour 75.87 34⇑ *e*P **P** **17 30 30.6 -1.1**
MESJ Messejana 75.87 54 *e*P **P** **17 30 31.6 -0.5**
MESJ AMb AMB 17 30 33.9
comp=Z,34nm,1.5s
MESJ Messejana 75.87 54 *e*P **P** **17 30 31.7 -0.5**
comp=Z,40nm,1.9s
EVO Evora 75.93 54 *e*P **P** **17 30 31.5 -1.0**
comp=Z,18nm,1.1s
GAL1 Galloway 75.98 37 *e*P **P** **17 30 31.3 -1.0**
MTE Manteigas 76.01 52 *e*P **P** **17 30 31.9 -1.1**
comp=Z,32nm,0.8s
MTE Manteigas 76.01 52 *e*P **P** **17 30 31.5 -1.5**
comp=Z,26nm,0.7s
PCVE Castro Verde 76.05 54 *e*P **P** **17 30 32.3 -0.8**
comp=Z,37nm,1.1s
PBEJ Beja 76.12 54 *e*P **P** **17 30 32.8 -0.8**
comp=Z,15nm,1.0s
PCBR Castelo Branco 76.14 52 *e*P **P** **17 30 32.7 -0.9**
comp=Z,26nm,1.3s
INVG Invergeldie, C 76.17 35⇑ *e*P **P** **17 30 32.2 -1.2**
INVG IAmb IAmb 17 30 33.1
comp=Z,15nm,0.9s
PBDV Barranco-do-Ve 76.19 55 *e*P **P** **17 30 33.9 -0.1**
comp=Z,39nm,1.9s
PESTR Estremoz 76.21 53 *e*P **P** **17 30 32.9 -1.1**
comp=Z,14nm,1.6s
PMRV Marv??o 76.27 53 *e*P **P** **17 30 33.2 -1.2**
comp=Z,22nm,1.3s
MVO Moncorvo 76.28 51 *e*P **P** **17 30 33.8 -0.7**
comp=Z,43nm,0.6s
PVAQ Vaqueiros 76.33 55 *e*P **P** **17 30 34.1 -0.7**
comp=Z,23nm,1.7s
PBRG Braganca 76.40 50 *e*P **P** **17 30 34.1 -1.0**
comp=Z,25nm,2.0s
MCD Coleburn Disti 76.45 34⇑ *e*P **P** **17 30 34.2 -0.7**
EDU Dundee 76.72 35 *e*P **P** **17 30 35.7 -0.8**
PBAR Barrancos 76.74 54 *e*P **P** **17 30 36.3 -0.7**
comp=Z,46nm,1.8s
ESK Eskdalemuir 76.78 36 *e*P **P** **17 30 35.7 -1.2**
comp=Z,28nm,1.0s
ESK Eskdalemuir 76.78 36 *e*P **P** **17 30 34.6 -2.3**
ESK IAmb IAmb 17 30 35.5
comp=Z,19nm,0.8s
ESK Eskdalemuir 76.78 36 *e*P **P** **17 30 35.7 -1.2**
ESK pmax pmax
comp=Z,28nm,1.0s
EKA Eskdalemuir Ar 76.80 36 P **P** **17 30 36.2 -0.8**
comp=Z,3.6nm,0.3s,baz=275,slow=5.6,SNR=60
EKA pP **pP** **17 31 17.3 -1.2**
comp=Z,14nm,0.8s,baz=278,slow=5.6,SNR=6.5
ECK Cauldkaine Hil 76.84 36⇑ *e*P **P** **17 30 36.0 -1.3**
ESY Stoneypath 77.03 35⇑ *e*P **P** **17 30 37.5 -0.7**
HLM1 Long Mynd 77.38 39 *e*P **P** **17 30 39.0 -1.3**
HLM1 IAmb IAmb 17 30 39.7
comp=Z,6.2nm,0.5s
KBS Kingsbay 77.58 11 *e*P **P** **17 30 41.2 +0.3**
ROSF Rostrenen 77.80 43 *e*P **P** **17 30 41.1 -1.6**
QUIF Quistinic 77.94 43 *e*P **P** **17 30 42.1 -1.4**
QUIF pmax pmax
comp=Z,9.0nm,0.6s
PAB San Pablo 78.58 52 *e*P **P** **17 30 46.6 -0.7**
comp=Z,11nm,0.6s
PAB *e*pP **pP** **17 31 28.6 -0.4**
PAB San Pablo 78.58 52 *e*P **P** **17 30 46.6 -0.7**
PAB *e**PP **pP** **17 31 28.6 -0.4**
PAB pmax pmax
comp=Z,11nm,0.6s
SPA0 Spitsbergen Ar 78.66 12 *e*P **P** **17 30 46.8 -0.2**
SPA0 Spitsbergen Ar 78.66 12 *e*P **P** **17 30 47.2 +0.3**
SPITS Spitsbergen Ar 78.66 12 P **P** **17 30 46.7 -0.2**
comp=Z,6.4nm,0.4s,baz=318,slow=5.8,SNR=75
ESDC Sonseca Array 78.84 52 P **P** **17 30 47.8 -0.9**
comp=Z,8.9nm,0.5s,baz=286,slow=5.9,SNR=71
ESDC pP **pP** **17 31 29.2 -1.3**
comp=Z,4.1nm,0.8s,baz=292,slow=5.7,SNR=3.0
ESLA Sonseca Array 78.84 52 *e*P **P** **17 30 47.6 -1.1**
comp=Z,14nm,0.6s
ESLA *e*pP **pP** **17 31 30.0 -0.5**
ES19 SONSECA Array 78.89 52 *e*P **P** **17 30 47.6 -1.3**
ES19 *e*pP **pP** **17 31 29.4 -1.3**
HSPB Hornsund (broa 78.91 13 *e*P **P** **17 30 49.4 +1.2**
FLN La Foliniere 79.55 42 *e*P **P** **17 30 51.0 -1.3**
FLN pmax pmax
comp=Z,16nm,0.6s
MDT Midelt 79.67 59 P **P** **17 30 53.0 -0.4**
comp=Z,14nm,0.7s,baz=300,slow=6.7,SNR=60
MDT LR LR 18 00 26.5
comp=Z,33nm,19.4s,baz=327,slow=31
LDF La Druitiere 79.82 42 *e*P **P** **17 30 52.4 -1.3**
LDF pmax pmax
comp=Z,20nm,0.9s
BILL Bilibino 80.08 338 *e*P **P** **17 30 55.0 +0.3**
comp=Z,22nm,0.7s
BILL *e*pP **pP** **17 31 37.6 +1.0**
BILL Bilibino 80.08 338 *c i* P **P** **17 30 55.0 +0.3**
BILL *i* *PP **pP** **17 31 38.7 +2.1**
BILL *SP **sP** **17 32 02.0 +7.2**
BILL pmax pmax
comp=Z,24nm,1.0s
BILL MLR MLR
comp=Z,93nm,23.0s
SJPF Ste Jean 80.19 48 *e*P **P** **17 30 54.8 -1.0**
SJPF pmax pmax
comp=Z,12nm,1.0s
ETSF Etsaut 80.71 48 *e*P **P** **17 30 56.8 -1.9**
ETSF pmax pmax
comp=Z,7.0nm,0.6s
HOPEN Hopen 81.10 12 *e*P **P** **17 31 00.1 +0.1**
LOF Lofoten 81.45 21 *e*P **P** **17 31 02.6 +0.7**
KONS Konsvik 81.85 23 *e*P **P** **17 31 04.8 +0.7**
TCF Toulx Ste Croi 81.87 44 *e*P **P** **17 31 02.9 -1.8**
TCF pmax pmax
comp=Z,5.0nm,0.5s
NSS Namsos 82.06 25 *e*P **P** **17 31 05.3 +0.1**
CAF Calviac 82.10 46 *e*P **P** **17 31 04.1 -1.8**
CAF pmax pmax
comp=Z,5.0nm,0.7s
STEI Steigen 82.12 21 *e*P **P** **17 31 06.0 +0.6**
NC204 NORSAR Array S 82.60 28 *e*P **P** **17 31 08.2 0.0**
TRO Tromso 82.67 19 *e*P **P** **17 31 09.0 +0.7**
NBO00 NORSAR Array S 82.68 29 *e*P **P** **17 31 08.8 +0.2**
BCLA Clavier 82.83 40 ⇑P **P** **17 31 08.6 -0.9**
BCLA ⇑AP **pP** **17 31 51.8 +0.2**
comp=Z,16nm,1.3s
NB2 NORSAR Subarra 82.88 29 P **P** **17 31 09.5 -0.1**
comp=Z,6.1nm,0.7s,baz=289,slow=5.1
NB2 NORSAR Subarra 82.88 29 P **P** **17 31 09.5 -0.1**
NB2 NORSAR Subarra 82.88 29 P **P** **17 31 09.5 -0.1**
baz=289,slow=5.1
NC303 NORSAR Array S 82.89 28 *e*P **P** **17 31 09.4 -0.2**
NB201 NORSAR Array S 82.91 28 *e*P **P** **17 31 09.1 -0.7**
NC602 NORSAR Array S 83.13 29 *e*P **P** **17 31 11.2 +0.3**
MEM Membach 83.21 39 ⇑P **P** **17 31 10.5 -1.0**
MEM ⇑AP **pP** **17 31 54.5 +0.9**
comp=Z,11nm,1.0s
KIF Kilpisjarvi 83.55 20 *e*P **P** **17 31 12.4 -0.4**
WLF Walferdange 83.56 40 ⇑P **P** **17 31 13.0 -0.2**
WLF ⇑AP **pP** **17 31 56.2 +0.7**
comp=Z,13nm,1.3s
HAMF Hammerfest 83.66 18 *e*P **P** **17 31 13.5 +0.1**
VIVF Saint-Julien-l 83.91 45 *e*P **P** **17 31 14.6 -0.6**
VIVF pmax pmax
comp=Z,7.0nm,1.0s
HAU Haudompre 84.15 42 *e*P **P** **17 31 14.9 -1.5**
HAU pmax pmax
comp=Z,7.0nm,0.6s
KTK1 Kautokeino 84.32 19 *e*P **P** **17 31 16.6 -0.2**
HFS Hagfors 84.34 29 P **P** **17 31 16.6 -0.4**
comp=Z,9.4nm,0.6s,baz=266,slow=2.3,SNR=40
HFS LR LR 18 06 52.6
comp=Z,48nm,21.9s,baz=290,slow=34
KOWA Kowa 84.37 77 P **P** **17 31 16.9 -1.2**
comp=Z,8.7nm,0.8s,baz=262,slow=4.9,SNR=18
KOWA LR LR 18 12 02.8
comp=Z,23nm,18.1s,baz=253,slow=38
KOWA Kowa 84.37 77 *e*P **P** **17 31 16.7 -1.3**
comp=Z,12nm,0.9s
KOWA ⇑*e* 18 12 02.8
HINF Hinteralfeld 84.53 42 *e*P **P** **17 31 16.6 -1.7**
ECH Echery 84.61 42 *e*pP pP 17 32 00.9 -0.1
CDF Champ du Feu 84.63 41 *e*P **P** **17 31 17.4 -1.4**
CDF pmax pmax
comp=Z,4.0nm,0.8s
ORIF Oris-en-Rattie 84.72 45 *e*P **P** **17 31 19.2 -0.2**
ORIF pmax pmax
comp=Z,4.0nm,0.6s
HEF Hetta 84.75 20 *e*P **P** **17 31 18.2 -0.7**
ARA0 ARCESS Array S 84.76 18 *e*P **P** **17 31 18.4 -0.6**
ARA0 *e*pP **pP** **17 32 01.6 +0.4**
ARA0 *e*PKKPbc **PKKPbc** **17 49 26.1 -3.4**
ARCES ARCESS Array B 84.76 18 P **P** **17 31 18.4 -0.6**
comp=Z,5.9nm,0.4s,baz=281,slow=5.0,SNR=104
ARCES pP **pP** **17 32 01.6 +0.4**
comp=Z,10nm,0.9s,baz=285,slow=4.6,SNR=4.7
ARCES PKKPbc **PKKPbc** **17 49 26.1 -3.4**
comp=Z,0.8nm,0.7s,baz=151,slow=2.8,SNR=4.5
ARCES ARCESS Array B 84.76 18 *e*P **P** **17 31 17.9 -1.1**
ARCES *e*pP **pP** **17 32 01.3 0.0**
ARCES PKKPbc **PKKPbc** **17 49 26.1 -3.4**
ARE0 ARCESS Array S 84.76 18 *e*P **P** **17 31 18.6 -0.3**
LPL La Plagne 85.12 44 *e*P **P** **17 31 20.7 -0.8**
LPL pmax pmax
comp=Z,3.0nm,0.5s
LPG La Plagne 85.14 44 *e*P **P** **17 31 21.2 -0.5**
LPG pmax pmax
comp=Z,4.0nm,0.6s
BNI Bardonecchia 85.22 45 *e*P **P** **17 31 20.9 -1.0**
BNI *e*pP **pP** **17 32 04.3 0.0**
BNI Bardonecchia 85.22 45 *e*P **P** **17 31 20.9 -1.0**
BNI *e**PP **pP** **17 32 04.3 0.0**
MBDF Montbardon 85.38 45 *e*P **P** **17 31 21.7 -1.0**
MBDF pmax pmax
comp=Z,8.0nm,0.7s
TIC Toumodi 85.40 84 *e*P **P** **17 31 21.2 -2.0**
LIC Lamto 85.50 85 *e*P **P** **17 31 21.9 -1.8**
comp=Z,47nm,1.0s
DBIC Dimbokro 85.55 84 P **P** **17 31 22.3 -1.6**
comp=Z,2.7nm,0.4s,baz=287,slow=5.5,SNR=5.6
DBIC pP **pP** **17 32 06.0 -0.3**
comp=Z,6.4nm,0.7s,baz=236,slow=5.4,SNR=3.6
DBIC LR LR 18 07 29.8
comp=Z,13nm,20.4s,baz=213,slow=34
DBIC Dimbokro 85.55 84 *e*P **P** **17 31 22.1 -1.8**
DBIC *e*pP **pP** **17 32 05.7 -0.6**
KIC Kosan Boka 85.74 85 *e*P **P** **17 31 23.1 -1.8**
comp=Z,25nm,0.8s
TUE Stuetta 86.56 43 *e*P **P** **17 31 27.8 -0.8**
TUE *e*pP **pP** **17 32 11.5 +0.4**
DAVA Damuels 86.64 42 *e*P **P** **17 31 28.3 -0.6**
comp=Z,14nm,1.1s
DAVA *e*pP **pP** **17 32 12.2 +0.8**
comp=Z,22nm,1.0s,SNR=8.1
DAVOX Davos/Dischmat 86.81 42 P **P** **17 31 29.6 -0.2**
comp=Z,3.4nm,0.6s,baz=317,slow=11,SNR=6.5
DAVOX LR LR 18 06 15.5
comp=Z,14nm,21.2s,baz=277,slow=33
RETA Reutte 87.14 41 *e*P **P** **17 31 30.5 -0.7**
comp=Z,6.2nm,0.6s
RETA *e*pP **pP** **17 32 13.4 -0.3**
comp=Z,12nm,1.0s
CLL Collm 87.18 37 *e*P **P** **17 31 31.0 -0.2**
comp=Z,3.0nm,0.9s
CLL *e*pP **pP** **17 32 14.0 +0.3**
comp=Z,12nm,1.3s
CLL *e* 17 32 37.0
CLL *e*PP **PP** **17 34 54.0 -2.9**
CLL *e*SP **SPn** **17 42 52.0 -3.9**
CLL Collm 87.18 37 *e*P **P** **17 31 31.0 -0.2**
CLL *e**PP **pP** **17 32 14.0 +0.3**
CLL *e**SP **sP** **17 32 37.0 +5.3**
CLL pmax pmax
comp=Z,3.0nm,0.9s
FETA Feichten 87.28 42 *e*P **P** **17 31 31.3 -0.7**
comp=Z,4.0nm,0.5s
FETA *e*pP **pP** **17 32 14.4 -0.1**
comp=Z,12nm,1.1s,SNR=7.0
SEY Seymchan 87.40 336 *c e*P **P** **17 31 32.7 +0.7**
MOTA Moosalm 87.41 42 *e*P **P** **17 31 32.0 -0.6**
comp=Z,3.7nm,0.6s
MOTA *e*pP **pP** **17 32 14.6 -0.6**
comp=Z,14nm,1.0s,SNR=5.5
WATA Walderalm 87.71 41 *e*pP pP 17 32 18.8 +2.2
comp=Z,2.3nm,0.5s
VLC Villacollemand 88.01 45 *e*P **P** **17 31 35.4 0.0**
VLC *e*pP **pP** **17 32 17.2 -0.8**
KHC Kasperske Hory 88.32 39 *e*P **P** **17 31 36.4 -0.3**
KHC Kasperske Hory 88.32 39 *e*P **P** **17 31 35.6 -1.1**
KHC *e*pP **pP** **17 32 19.0 -0.3**
KHC Kasperske Hory 88.32 39 *e*P **P** **17 31 36.4 -0.3**
GEC2 GERESS Array S 88.50 39 *e*P **P** **17 31 36.2 -1.4**
GEC2 *e*pP **pP** **17 32 20.8 +0.5**
GEC2 GERESS Array S 88.50 39 *e*P **P** **17 31 36.2 -1.4**
GEC2 *e**PP **pP** **17 32 20.8 +0.5**
GERES GERESS Array B 88.50 39 P **P** **17 31 36.8 -0.8**
comp=Z,1.6nm,0.6s,baz=318,slow=3.8,SNR=13
GERES pP **pP** **17 32 19.6 -0.7**
comp=Z,2.7nm,1.0s,baz=270,slow=3.9,SNR=5.5
GERES LR LR 18 11 30.8
comp=Z,27nm,19.3s,baz=286,slow=36
GEA0 GERESS Array S 88.50 40 *e*P **P** **17 31 36.5 -1.2**
GEA0 *e*pP **pP** **17 32 18.9 -1.4**
ABTA Abfaltersbach 88.52 42 *i* P **P** **17 31 36.7 -1.0**
comp=Z,2.0nm,0.6s
ABTA *e*pP **pP** **17 32 21.7 +1.2**
comp=Z,18nm,1.3s,SNR=6.5
PRU Pruhonice 88.58 38 *e*P **P** **17 31 36.5 -1.3**
PRU Pruhonice 88.58 38 *e*P **P** **17 31 36.5 -1.3**

TIXI	**Tiksi**	**88.82**	**348**	*ce*P	**P**	**17 31 37.3**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KBA	**Koelnbreinsper**	**88.93**	**41**	*e*P	**P**	**17 31 39.1**	**-0.7**
	comp=Z,1.5nm,0.4s						
KBA				*ep*P	**pP**	**17 32 23.4**	**+0.9**
	comp=Z,2.8nm,0.5s						
FIA0	**FINESS Array S**	**89.19**	**25**	*e*P	**P**	**17 31 39.4**	**-1.0**
FIA0				*ep*P	**pP**	**17 32 21.9**	**-1.3**
FIA0				⇑*e*		18 12 06.3	
FIA0	**FINESS Array S**	**89.19**	**25**	*e*P	**P**	**17 31 39.4**	**-1.0**
FIA0				*e**PP	**pP**	**17 32 21.9**	**-1.3**
FIA1	**FINESS Array S**	**89.19**	**25**	*e*P	**P**	**17 31 39.0**	**-1.4**
FIA1				*ep*P	**pP**	**17 32 22.1**	**-1.1**
FINES	**FINESS Array B**	**89.19**	**25**	P	**P**	**17 31 39.4**	**-1.0**
	comp=Z,7.0nm,0.4s,baz=322,slow=2.6,SNR=128						
FINES				pP	**pP**	**17 32 21.9**	**-1.3**
	comp=Z,5.1nm,0.8s,baz=343,slow=6.0,SNR=3.8						
FINES				LR	LR	18 12 06.3	
	comp=Z,16nm,18.9s,baz=314,slow=36						
MOA	**Molln**	**89.22**	**40**	*e*P	**P**	**17 31 40.1**	**-0.8**
	comp=Z,2.5nm,0.5s						
MOA				*ep*P	**pP**	**17 32 25.8**	**+2.2**
	comp=Z,2.1nm,0.6s						
UPC	**Upice**	**89.24**	**37**	*e*P	**P**	**17 31 40.6**	**-0.3**
UPC	**Upice**	**89.24**	**37**	*e*P	**P**	**17 31 40.6**	**-0.3**
MYKA	**Terra Mystica**	**89.29**	**42**	*i p*P	pP	17 32 26.0	+1.9
	comp=Z,1.1nm,0.4s						
PEA1	**Petropavlovsk-**	**89.41**	**326**	*e*P	**P**	**17 31 42.7**	**+1.0**
PEA1				*e*PKKPdf	**PKKPdf**	**17 49 13.3**	**+1.3**
PETK	**Petropavlovsk-**	**89.41**	**326**	P	**P**	**17 31 42.7**	**+1.0**
	comp=Z,7.0nm,0.7s,baz=66,slow=11,SNR=19						
PETK				PKKP	**PKKPdf**	**17 49 13.3**	**+1.3**
	comp=Z,2.0nm,0.7s,baz=197,slow=1.5,SNR=5.3						
PETK	**Petropavlovsk-**	**89.41**	**326**	*e*P	**P**	**17 31 42.2**	**+0.5**
PETK				PKKP	**PKKPdf**	**17 49 13.3**	**+1.3**
DPC	**Dobruska-Polom**	**89.49**	**37**	*e*P	**P**	**17 31 41.8**	**-0.4**
DPC	**Dobruska-Polom**	**89.49**	**37**	*e*P	**P**	**17 31 41.8**	**-0.4**
MA2	**Magadan**	**89.77**	**333**	⇑*e*P	**P**	**17 31 43.9**	**+0.7**
MA2				pmax	pmax		
	comp=Z,19nm,0.9s						
OBKA	**Obir**	**89.91**	**41**	*e*PcP	**P**	**17 31 44.2**	**0.0**
	comp=Z,2.2nm,0.6s						
KEST	**Kesra**	**90.05**	**53**	P	**P**	**17 31 44.5**	**-0.7**
	comp=Z,5.4nm,0.6s,baz=165,slow=2.8,SNR=7.6						
KEST	**Kesra**	**90.05**	**53**	*e*P	**P**	**17 31 44.3**	**-0.8**
	comp=Z,34nm,1.5s						
TOA1	**Torodi Ar. Sit**	**90.07**	**76**	*e*P	**P**	**17 31 43.0**	**-2.4**
TOA0	**Torodi Ar. Sit**	**90.08**	**76**	*e*P	**P**	**17 31 43.2**	**-2.3**
TORD	**Torodi Ar. Bea**	**90.08**	**76**	P	**P**	**17 31 43.0**	**-2.5**
	comp=Z,0.9nm,0.5s,baz=292,slow=6.3,SNR=8.6						
SOKA	**Soboth**	**90.16**	**41**	*e*P	**P**	**17 31 44.0**	**-1.4**
	comp=Z,1.0nm,0.4s						
CONA	**Conrad Observa**	**90.18**	**40**	*e*P	**P**	**17 31 45.0**	**-0.5**
	comp=Z,1.7nm,0.5s						
CONA				*ep*P	**pP**	**17 32 28.1**	**-0.1**
	comp=Z,1.9nm,0.7s						
ARSA	**Arzberg**	**90.24**	**41**	*i* P	**P**	**17 31 44.6**	**-1.1**
	comp=Z,2.9nm,0.8s						
CUC	**Castrocucco**	**93.30**	**47**	*e*P	**P**	**17 31 58.5**	**-1.5**
CUC				*ep*P	**pP**	**17 32 41.8**	**-1.0**
BZS	**Buzias**	**94.75**	**40**	⇓*i*P	**P**	**17 32 06.2**	**-0.3**
BZS	**Buzias**	**94.75**	**40**	⇓P	**P**	**17 32 06.2**	**-0.3**
DRGR		**94.86**	**39**	⇓*i*P	**P**	**17 32 06.1**	**-1.0**
DRGR		**94.86**	**39**	⇓P	**P**	**17 32 06.1**	**-1.0**
YAK	**Yakutsk**	**96.05**	**342**	*i* P	**P**	**17 32 11.3**	**-0.7**
YAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PRGR	**Permogore**	**96.17**	**19**	*e*P	**P**	**17 32 10.6**	**-1.9**
PRGR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
AKASG	**Malin Array Be**	**96.53**	**33**	P	**P**	**17 32 12.1**	**-2.3**
	comp=Z,0.4nm,0.4s,baz=128,slow=5.9,SNR=2.7						
AKBB	**Malin Array Si**	**96.53**	**33**	*e*P	**P**	**17 32 13.2**	**-1.2**
	comp=Z,6.6nm,1.3s						
AKBB	**Malin Array Si**	**96.53**	**33**	*e*P	**P**	**17 32 13.2**	**-1.2**
AKBB				pmax	pmax		
	comp=Z,7.0nm,1.3s						
OBN	**Obninsk**	**97.40**	**27**	⇑*e*P	**P**	**17 32 17.4**	**-0.8**
OBN				*PP	**pP**	**17 33 01.0**	**-0.1**
OBN				*e*PS	**PS**	**17 45 15.6**	**+3.8**
OBN				SS	SS	17 50 11.0	+2.2
OBN				SSS	SSS	17 54 01.0	
MLR	**Muntele Rosu**	**97.46**	**39**	P	**P**	**17 32 18.6**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=196,slow=7.4,SNR=4.9						
MLR	**Muntele Rosu**	**97.46**	**39**	⇑*i*P	**P**	**17 32 18.8**	**-0.2**
MLR	**Muntele Rosu**	**97.46**	**39**	⇑P	**P**	**17 32 18.8**	**-0.2**
ASAJ	**Asahikawa**	**102.59**	**323**	Pdiff	**Pdif**	**17 32 42.2**	**+0.6**
	comp=Z,1.2nm,0.6s,baz=326,slow=3.6,SNR=2.6						
MJAR	**Matsushiro Arr**	**109.84**	**319**	PKiKP	**PKiKP**	**17 37 14.3**	**-1.3**
	comp=Z,0.9nm,0.4s,baz=76,slow=1.0,SNR=4.3						
MJAR				PKKPbc	**PKKPbc**	**17 48 19.7**	**-0.1**
	comp=Z,1.9nm,0.7s,baz=237,slow=4.6,SNR=7.2						
MJAR				PKKPab	**PKKPab**	**17 48 31.2**	**-1.6**
	comp=Z,3.0nm,0.9s,baz=227,slow=4.6,SNR=6.5						
MAJO	**Matsushiro**	**109.84**	**319**	*e*PKiKP	**PKiKP**	**17 37 14.3**	**-1.3**
MAJO				*e*PKKPbc	**PKKPbc**	**17 48 19.7**	**-0.1**
MAJO				*e*PKKPab	**PKKPab**	**17 48 31.2**	**-1.6**
BVAR	**Borovoye Array**	**110.12**	**11**	PKiKP	**PKiKP**	**17 37 15.2**	**-0.4**
	comp=Z,1.5nm,0.5s,baz=318,slow=1.9,SNR=11						
ZAA1	**Zalesovo Array**	**110.81**	**2**	*e*PKiKP	**PKiKP**	**17 37 15.7**	**-1.2**
ZALV	**Zalesovo Beam**	**110.81**	**2**	PKiKP	**PKiKP**	**17 37 15.7**	**-1.2**
	comp=Z,1.2nm,0.3s,baz=245,slow=1.9,SNR=6.6						
KURK	**Kurchatov**	**113.59**	**6**	*i* PKIKP	**PKiKP**	**17 37 21.3**	**-1.0**
ULN	**Ulaanbaatar**	**114.68**	**346**	*i* PKIKP	PKPdf	17 37 23.9	-0.8
SONA0	**Songino Array**	**114.86**	**346**	*e*PKIKP	**PKiKP**	**17 37 24.5**	**-0.5**
SONA0				*e*PKKPbc	**PKKPbc**	**17 48 00.9**	**-3.0**
SONM	**Songino Array**	**114.86**	**346**	PKP	PKPdf	17 37 24.5	-0.5
	comp=Z,1.0nm,0.3s,baz=230,slow=1.0,SNR=6.9						
SONM				PKKPbc	**PKKPbc**	**17 48 00.9**	**-3.0**
	comp=Z,1.3nm,0.6s,baz=210,slow=2.7,SNR=6.7						
DGZ	**Jazzator, Alta**	**115.11**	**0**	*i* PKIKP	**PKPdf**	**17 37 24.9**	**-0.6**
KS01	**Wonju Array Si**	**115.31**	**326**	*e*PKPdf	**PKPdf**	**17 37 26.1**	**+0.1**
KSRS	**Korea Array**	**115.31**	**326**	PKP	**PKPdf**	**17 37 26.4**	**+0.5**
	comp=Z,7.3nm,0.7s,baz=1.4,slow=1.6,SNR=29						
KSRS				PKKPbc	**PKKPbc**	**17 48 01.4**	**-0.3**
	comp=Z,1.5nm,0.9s,baz=242,slow=2.7,SNR=4.8						
KS15	**Wonju Array Si**	**115.34**	**326**	*e*PKPdf	**PKPdf**	**17 37 26.2**	**+0.2**
KSAR	**Wonju Array Be**	**115.34**	**326**	PKP	**PKPdf**	**17 37 26.4**	**+0.5**
KSAR				PKKPbc	**PKKPbc**	**17 48 01.4**	**-0.3**
KSAR	**Wonju Array Be**	**115.34**	**326**	PKIKP	**PKPdf**	**17 37 26.5**	**+0.5**
SUR	**Sutherland**	**117.27**	**119**	PKP	**PKPdf**	**17 37 30.2**	**+0.2**
	baz=227,slow=5.0						
SUR	**Sutherland**	**117.27**	**119**	*e*PKPdf	**PKPdf**	**17 37 29.8**	**-0.2**
MK32	**Makanchi Array**	**117.81**	**4**	*e*PKPdf	**PKPdf**	**17 37 29.2**	**-1.4**
MK32				*e*PKKPbc	PKKPbc	17 47 44.3	-9.1
MKAR	**Makanchi Array**	**117.81**	**4**	PKP	**PKPdf**	**17 37 29.2**	**-1.4**
	comp=Z,1.4nm,0.6s,baz=311,slow=2.4,SNR=22						
MKAR				PKKPbc	PKKPbc	17 47 44.3	-9.1
	comp=Z,0.6nm,0.9s,baz=212,slow=4.3,SNR=3.6						
SYO	**Syowa Base**	**118.56**	**162**	⇑*e*Pdiff	**Pdif**	**17 33 50.2**	**-1.8**
HHC	**Hu-ho-hao-te**	**119.83**	**339**	*e*PKP	**PKPdf**	**17 37 36.8**	**+2.1**
WMQ	**Urumqi**	**121.00**	**0**	*e*PKP	**PKPdf**	**17 37 38.0**	**+1.2**
BOSA	**Boshof**	**121.01**	**114**	PKP	**PKPdf**	**17 37 36.9**	**-0.3**
	comp=Z,23nm,0.7s,baz=288,slow=2.4,SNR=40						
BOSA	**Boshof**	**121.01**	**114**	*e*PKPdf	**PKPdf**	**17 37 36.6**	**-0.7**
BOSA				*e*PKPdf	**PKPdf**	**17 37 36.9**	**-0.3**
LBTB	**Lobatse**	**121.16**	**110**	*e*PKPdf	**PKPdf**	**17 37 37.3**	**-0.3**
LBTB	**Lobatse**	**121.16**	**110**	*e*PKIKP	**PKPdf**	**17 37 37.3**	**-0.3**
PRZ	**Przheval'sk**	**121.67**	**8**	*e*PKPdf	**PKPdf**	**17 37 39.0**	**+0.6**
PRZ	**Przheval'sk**	**121.67**	**8**	*e*PKIKP	**PKPdf**	**17 37 39.0**	**+0.6**
NRN	**Naryn**	**122.31**	**11**	*e*PKPdf	**PKPdf**	**17 37 39.2**	**-0.6**
NRN	**Naryn**	**122.31**	**11**	*e*PKIKP	**PKPdf**	**17 37 39.2**	**-0.6**
TARG	**Taragay, Kyrgy**	**122.32**	**9**	*e*PKPdf	**PKPdf**	**17 37 39.6**	**-0.3**
LSZ	**Lusaka**	**122.55**	**98**	PKP	**PKPdf**	**17 37 40.8**	**+0.2**
	comp=Z,3.6nm,0.7s,baz=268,slow=1.2,SNR=7.7						
LSZ	**Lusaka**	**122.55**	**98**	*e*PKPdf	**PKPdf**	**17 37 40.5**	**0.0**
LSZ	**Lusaka**	**122.55**	**98**	*e*PKIKP	**PKPdf**	**17 37 40.5**	**0.0**
KSH	**Kashi**	**124.17**	**11**	PKP	**PKPdf**	**17 37 43.8**	**+0.7**
KSH				sPKP		17 38 49.0	
KSH				PP	**PP**	**17 39 35.8**	**+7.3**
KSH				AMB	AMB		
	comp=Z,180nm,5.0s						
NJ2	**Nanjing**	**124.23**	**328**	*e*PKP	**PKPdf**	**17 37 43.3**	**0.0**
GTA	**Gaotai**	**124.29**	**349**	⇑*e*PKP	**PKPdf**	**17 37 42.8**	**-0.6**
CTA	**Charters Tower**	**124.52**	**256**	PKP	**PKPdf**	**17 37 44.7**	**+0.6**
	comp=Z,4.1nm,0.5s,baz=70,slow=1.3,SNR=18						
MAW	**Mawson**	**125.42**	**169**	PKP	**PKPdf**	**17 37 45.1**	**+0.8**
	comp=Z,17nm,0.5s,baz=191,slow=2.7,SNR=56						
MAW	**Mawson**	**125.42**	**169**	*e*PKPdf	**PKPdf**	**17 37 45.0**	**+0.6**
MAW	**Mawson**	**125.42**	**169**	*e*PKIKP	**PKPdf**	**17 37 45.0**	**+0.6**
LZH	**Lanzhou**	**126.56**	**344**	*e*PKP	**PKPdf**	**17 37 48.0**	**+0.1**
LZH				SKS	**SKSdf**	**17 44 41.3**	**-2.7**
LZH				SKKS	**SKKSac**	**17 46 24.5**	**-2.5**
LZH				SS	**SS**	**17 56 34.3**	**-1.0**
LZH				AMB	AMB		
	comp=Z,180nm,9.2s						
XAN	**Xi'an**	**126.87**	**338**	PKP	**PKPdf**	**17 37 48.3**	**0.0**
WHN	**Wuhan**	**127.67**	**331**	PKP	**PKPdf**	**17 37 50.5**	**+0.6**
STKA	**Stephens Creek**	**128.73**	**241**	PKP	**PKPdf**	**17 37 52.4**	**+0.6**
	comp=Z,8.0nm,0.8s,baz=66,slow=0.9,SNR=14						
STKA				pPKP	**pPKPdf**	**17 38 34.7**	**-1.9**
	comp=Z,2.7nm,0.8s,baz=45,slow=2.9,SNR=2.2						
SSLB	**Suanglung**	**129.38**	**320**	*e*PKPdf	**PKPdf**	**17 37 53.9**	**+0.5**
ENH	**Enshi**	**130.01**	**336**	*e*PKPdf	**PKPdf**	**17 37 54.5**	**+0.1**
CD2	**Chengdu**	**131.44**	**342**	PKP	**PKPdf**	**17 37 56.0**	**-1.1**
WSAR	**Wadi Sarin**	**132.01**	**37**	PKP	**PKPdf**	**17 37 57.2**	**-1.1**
	comp=Z,3.0nm,0.5s,baz=241,slow=5.1,SNR=15						
GYA	**Guiyang**	**134.52**	**336**	*e*Pdif	**Pdif**	**17 35 03.0**	**-1.2**
GYA				PKP	**PKPdf**	**17 38 03.0**	**-0.1**
GYA				sPKP		17 39 09.5	
GYA				PP	**PP**	**17 40 41.3**	**+5.1**
GYA				AMB	AMB		
	comp=Z,130nm,8.0s						
LSA	**Lhasa**	**134.99**	**356**	*e*PKPdf	**PKPdf**	**17 38 04.8**	**+0.4**
WB2	**Warramunga Arr**	**135.68**	**257**	*e*PKPdf	**PKPdf**	**17 38 05.7**	**+0.5**
WRAB	**Tennant Creek**	**135.68**	**257**	*e*PKPdf	**PKPdf**	**17 38 05.7**	**+0.5**
WRAB	**Tennant Creek**	**135.68**	**257**	*i* PKIKP	**PKPdf**	**17 38 05.6**	**+0.3**
WR1	**Warramunga Arr**	**135.69**	**257**	*e*PKPpre	PKPpre	17 37 56.8	
WR1				*e*PKPdf	**PKPdf**	**17 38 05.7**	**+0.4**
WR1				*e*SKPbc	**SKPbc**	**17 41 22.4**	**+1.5**
WRA	**Warramunga Arr**	**135.69**	**257**	PKhKP	PKPpre	17 37 56.8	
	comp=Z,1.0nm,0.4s,baz=90,slow=3.5,SNR=17						
WRA				PKP	**PKPdf**	**17 38 05.7**	**+0.4**
	comp=Z,7.8nm,0.5s,baz=86,slow=2.6,SNR=41						
WRA				SKPbc	**SKPbc**	**17 41 22.4**	**+1.5**
	comp=Z,4.3nm,1.0s,baz=86,slow=3.2,SNR=10						
AS01	**Alice Springs**	**136.05**	**252**	*e*PKPpre	PKPpre	17 37 56.9	
AS01				*e*PKPdf	**PKPdf**	**17 38 06.4**	**+0.5**
AS31	**Alice Springs**	**136.10**	**252**	*e*PKPpre	PKPpre	17 37 57.7	
AS31				*e*PKPdf	**PKiKP**	**17 38 07.6**	**-0.1**
ASAR	**Alice Springs**	**136.10**	**252**	PKhKP	PKPpre	17 37 57.4	
	comp=Z,0.9nm,0.4s,baz=104,slow=3.8,SNR=13						
ASAR				PKP	**PKiKP**	**17 38 07.9**	**+0.2**
	comp=Z,6.2nm,0.7s,baz=94,slow=2.4,SNR=31						
ASAR				SKPbc	**SKPbc**	**17 41 23.6**	**+1.5**
	comp=Z,3.8nm,0.9s,baz=95,slow=3.1,SNR=13						
OPO	**Ambohidratompo**	**140.95**	**100**	PKhKP	PKPpre	17 38 11.6	
	comp=Z,1.5nm,0.4s,baz=281,slow=4.0,SNR=3.9						
MYLDM	**Lahad Datu**	**143.45**	**302**	*e*PKPdf	**PKPdf**	**17 38 19.8**	**+0.3**
FITZ	**Fitzroy Crossi**	**143.87**	**260**	PKP	PKPbc	17 38 19.0	+0.7
	comp=Z,14nm,0.7s,baz=106,slow=1.6,SNR=36						
SOEI	**Soe**	**144.15**	**275**	*e*PKPdf	**PKPdf**	**17 38 21.3**	**+0.4**
CM31	**Chiang Mai Arr**	**144.59**	**342**	*e*PKPbc	**PKPab**	**17 38 20.2**	**-0.1**
CM31				*ep*PKPdf	**pPKPdf**	**17 39 05.0**	**-1.3**
CMAR	**Chiang Mai Arr**	**144.59**	**342**	PKP	**PKPab**	**17 38 20.0**	**-0.3**
	comp=Z,12nm,0.7s,baz=342,slow=3.4,SNR=45						
CMAR				pPKP	**pPKPdf**	**17 39 05.3**	**-0.9**
	comp=Z,6.0nm,0.8s,baz=336,slow=3.6,SNR=4.0						
CMAR				SKPbc	**SKiKP**	**17 41 46.1**	**+0.7**
	comp=Z,2.5nm,0.8s,baz=346,slow=3.4,SNR=7.7						
CM01	**Chiang Mai Arr**	**144.62**	**342**	*e*PKPbc	**PKPab**	**17 38 19.6**	**-0.8**
CM01				*ep*PKPdf	**pPKPdf**	**17 39 04.0**	**-2.4**
KKM	**Kota Kinabalu**	**144.78**	**305**	*e*PKPbc	**PKPab**	**17 38 20.4**	**-0.9**
BATI	**Baumata**	**144.82**	**274**	PKPbc	**PKPdf**	**17 38 23.1**	**+1.2**
	comp=Z,36nm,0.5s,baz=140,slow=2.3,SNR=10						
HYB	**Hyderabad**	**146.03**	**16**	*i* PKP	**PKPdf**	**17 38 24.0**	**+0.1**
HYB				*e*		17 39 09.5	
NWAO	**Narrogin (SRO)**	**148.29**	**232**	PKP	**PKPdf**	**17 38 28.2**	**+1.0**
	comp=Z,11nm,0.8s,baz=45,slow=2.4,SNR=4.3						
NWAO				PKPbc	**PKPbc**	**17 38 31.2**	**+0.3**
	comp=Z,12nm,0.8s,baz=349,slow=6.1,SNR=5.9						
MBWA	**Marble Bar**	**149.34**	**255**	*e*PKPdf	**PKPdf**	**17 38 29.7**	**+0.4**
MBWA				*e*PKPbc	**PKPbc**	**17 38 33.6**	**-0.2**
SBUM	**Sibu**	**150.11**	**305**	*e*PKPdf	**PKPdf**	**17 38 31.4**	**+0.8**
SBUM				*e*PKPbc	**PKiKP**	**17 38 36.8**	**+0.1**
KSM	**Kuching**	**152.22**	**305**	*e*PKPdf	**PKPdf**	**17 38 34.8**	**+0.9**
KSM				*e*PKPbc	**PKiKP**	**17 38 41.6**	**+0.6**
KSM				*e*PKPab	**PKPab**	**17 38 51.8**	**+0.7**
KULM	**Kulim**	**155.84**	**328**	*e*PKPdf	**PKPdf**	**17 38 38.4**	**-0.6**
KULM				*e*PKPab	**PKPab**	**17 39 06.0**	**-0.3**
KULM				*ep*PKPab	**pPKPab**	**17 39 49.4**	**-0.1**
IPM	**Ipoh**	**156.32**	**326**	*e*PKPdf	**PKPdf**	**17 38 40.0**	**+0.3**
IPM				*e*PKPab	**PKPab**	**17 39 08.0**	**-0.5**
IPM				*ep*PKPab	**pPKPab**	**17 39 51.6**	**0.0**
PSI	**Prapat**	**158.85**	**328**	PKPab	**PKPab**	**17 39 19.8**	**+0.3**
	comp=Z,13nm,0.6s,baz=0.1,slow=5.6,SNR=8.3						
PSI	**Prapat**	**158.85**	**328**	*e*PKPdf	**PKPdf**	**17 38 42.4**	**-0.5**
PSI				*e*PKPab	**PKPab**	**17 39 19.4**	**-0.1**
PSI				*ep*PKPab	**pPKPab**	**17 40 02.7**	**+0.1**
PSI	**Prapat**	**158.85**	**328**	*e*PKIKP	**PKPdf**	**17 38 42.4**	**-0.5**
PSI				*e*		17 39 19.4	
CISI	**Cisompet, Garu**	**159.02**	**290**	*e*PKPdf	**PKPdf**	**17 38 41.9**	**-1.1**
CISI				*e*PKPab	**PKPab**	**17 39 22.4**	**+2.0**

MAN 26 17:30:09.2, 16°.07N×120°.58E, h34km, mb4.0, ML2.8, MS2.4, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAUP	**Cauayan**	**1.48**	**54**	*e*P	Pn	17 30 32.9	-0.5
CAUP				*e*S	Sn	17 30 48.6	-2.9
ABRA	**Dolores**	**1.57**	**5**	*e*P	Pn	17 30 34.8	0.0
ABRA				*e*S	Sn	17 30 54.7	+0.7
APYP	**Conner**	**1.89**	**20**	*e*P	Pb	17 30 42.1	-1.1
APYP				*e*S	Sn	17 31 03.2	+1.4

IDC 26 17:49:20.9±9.8, 14°.99S×173°.55W, h0km, mb3.5/3, mb1 3.9/3, mb1mx3.5/56, mbtmp3.5/3, Error ellipse: s-maj=434.9km s-min=36.0km az=139.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**49.80**	**256**	P	P	17 58 16.5	+0.6
	0.4nm,0.9s,baz=91,slow=8.0,SNR=3.5						
ASAR	**Alice Springs**	**50.10**	**252**	P	P	17 58 17.3	-0.9
	0.5nm,0.6s,baz=89,slow=8.4,SNR=4.5						
ILAR	**Eielson Array**	**82.07**	**11**	P	P	18 01 42.7	0.0
	0.7nm,0.8s,baz=227,slow=6.5,SNR=7.8						

IDC 26 18:15:45.6±9.9, 5°.93S×154°.26E, h376km±85km, mb3.2/6, mb1 3.3/7, mb1mx3.0/48, mbtmp3.9/7, Error ellipse: s-maj=82.5km s-min=30.1km az=93.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**16.08**	**208**	P	P	18 19 10.6	-0.3
	0.4nm,0.3s,baz=42,slow=12,SNR=5.3						
WRA	**Warramunga Arr**	**23.85**	**232**	P	P	18 20 27.1	+0.3
	0.7nm,0.4s,baz=57,slow=9.4,SNR=12						
ASAR	**Alice Springs**	**26.36**	**226**	P	P	18 20 48.9	-0.3
	0.5nm,0.3s,baz=56,slow=9.2,SNR=41						
ASAR				PcP	PcP	18 24 04.2	+0.4
	0.4nm,1.0s,baz=72,slow=3.0,SNR=3.6						
FITZ	**Fitzroy Crossi**	**30.43**	**244**	P	P	18 21 24.9	-0.2
	1.5nm,0.3s,baz=58,slow=10.0,SNR=22						
SONM	**Songino Array**	**68.05**	**327**	P	P	18 26 06.6	+0.8
	0.8nm,0.5s,baz=148,slow=4.9,SNR=4.7						
MKAR	**Makanchi Array**	**82.12**	**319**	P	P	18 27 25.4	+0.1
	1.0nm,0.8s,baz=104,slow=4.9,SNR=10.0						
ZALV	**Zalesovo Beam**	**82.89**	**326**	P	P	18 27 28.2	-0.8
	0.4nm,0.3s,baz=115,slow=6.8,SNR=2.9						
TORD	**Torodi Ar. Bea**	**152.03**	**287**	PKPbc	PKPbc	18 34 57.1	-0.8
	baz=91,slow=1.7						

*GII **26** 18:21:05.4±0.0, 34°.82N×33°.46E, h25km*
*CSEM **26** 18:21:05.9±0.4, 34°.71N×33°.27E, h26km±1km, ML2.4, Error ellipse: s-maj=8.0km s-min=4.2km az=164.0*
*ISCJB **26** 18:21:05.2±0.4, 34°.68N±0°.03×33°.31E±0°.05, h28km±4km, Error ellipse: s-maj=6.8km s-min=3.7km az=157.5*
*NIC **26** 18:21:05.5±0.2, 34°.64N×33°.36E, h25km, ML3.1*
*DDA **26** 18:21:06.5, 34°.87N×33°.24E, h39km, Ml2.6*
*ISK **26** 18:21:09.1, 35°.12N×33°.27E, h7km, ML2.4/9*

ISC 26 18:21:03.6±1.7, 34°.70N±0°.03×33°.23E±0°.03, h14km±13km, n50, σ1§30/71, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSS	**Mathiatis**	**0.28**	**18**	PG	**Pb**	**18 21 12.9**	**+2.5**
CSS	**Mathiatis**	**0.28**	**18**	P	**Pb**	**18 21 12.7**	**+2.3**
CSS	baz=175			S	**Sb**	**18 21 18.4**	**+3.4**
CSS	**Mathiatis**	**0.28**	**18**	Pg	**Pb**	**18 21 12.3**	**+1.9**
CSS	**Mathiatis**	**0.28**	**18**	*e*Pg	**Pb**	**18 21 12.9**	**+2.5**
CSS				S	**Sb**	**18 21 18.4**	**+3.4**
SZAC	**Souni**	**0.29**	**281**	P	**Pn**	**18 21 13.9**	**+0.4**
	baz=106						
SZAC				S	**Sn**	**18 21 20.6**	**+0.9**
SZAC	**Souni**	**0.29**	**281**	P	**Pn**	**18 21 13.9**	**+0.4**
SZAC				S	**Sn**	**18 21 20.6**	**+0.9**
AKIN	**Ak¨–nc¨–lar- K**	**0.37**	**32**	PG	**Pn**	**18 21 13.8**	**-0.8**
AKIN				SG	**Sb**	**18 21 16.7**	**-1.0**
AKIN	**Ak¨–nc¨–lar- K**	**0.37**	**32**	*e*Pg	**Pn**	**18 21 13.8**	**-0.8**
MAMC	**Mammari**	**0.47**	**359**	P	**Pn**	**18 21 15.8**	**-0.2**
	baz=167						
MAMC	**Mammari**	**0.47**	**359**	P	**Pn**	**18 21 15.8**	**-0.2**
LEF	**Lefka**	**0.50**	**327**	PG	**Pn**	**18 21 16.4**	**0.0**
LEF				SG	**Sb**	**18 21 21.9**	**+0.4**
LEF	**Lefka**	**0.50**	**327**	*e*Pg	**Pn**	**18 21 16.4**	**0.0**
LEF				*e*Sg	**Sb**	**18 21 21.9**	**+0.4**
LEF				S	**Sn**	**18 21 23.8**	**-1.1**
AKDN	**Akdeniz- K¨–br**	**0.63**	**340**	PG	**Pb**	**18 21 15.9**	**-0.6**
ALFC	**Alefka**	**0.69**	**312**	P	**Pn**	**18 21 19.2**	**+0.2**
	baz=129						
ALFC				S	**Sn**	**18 21 30.4**	**+0.8**
ALFC	**Alefka**	**0.69**	**312**	P	**Pn**	**18 21 19.2**	**+0.2**
ALFC				S	**Sn**	**18 21 30.4**	**+0.8**
PPCY	**Paphos**	**0.75**	**285**	P	**Pn**	**18 21 20.4**	**+0.6**
	baz=105						
PPCY	**Paphos**	**0.75**	**285**	P	**Pn**	**18 21 20.4**	**+0.6**
AKMC	**Akamas**	**0.81**	**294**	P	**Pn**	**18 21 21.5**	**+0.9**
	baz=114						
AKMC	**Akamas**	**0.81**	**294**	P	**Pn**	**18 21 21.5**	**+0.9**
EREN	**Erenkoy**	**1.13**	**43**	PG	**Pg**	**18 21 25.6**	**+0.1**
EREN	**Erenkoy**	**1.13**	**43**	*e*Pg	**Pg**	**18 21 25.6**	**+0.1**
AKKU	**Akkuyu-Mersin**	**1.48**	**10**	PG	**Pb**	**18 21 30.1**	**-0.8**
AKKU	**Akkuyu-Mersin**	**1.48**	**10**	*e*Pg	**Pb**	**18 21 30.1**	**-0.8**
GULN	**MERSIN_Gulnar**	**1.50**	**10**	*i* P	**

TBLG	**Delisi**	**1.96 292**	*e*PN	**Pn**		**18 26 15.8**	**+0.3**
TBLG	**Delisi**	**1.96 292**	*e*Pn	**Pn**		**18 26 15.8**	**+0.3**
DBC	**Dubki**	**2.01 353⇑**	*e*PN	**Pg**		**18 26 19.6**	**-0.3**
DBC			*e*			18 26 47.4	
DBC	**Dubki**	**2.01 353**	*e*Pn	**Pg**		**18 26 19.6**	**-0.3**
DBC			*e*Sb	**Sg**		**18 26 47.4**	**+1.4**
GNI	**Garni**	**2.05 245**	Pn	**Pg**		**18 26 20.7**	**+0.1**
comp=Z,4.6nm,0.3s,baz=74,slow=4.8,SNR=15							
GNI			Lg	Lg		18 26 50.6	
comp=Z,3.8nm,0.3s,baz=233,slow=10,SNR=3.7							
GNI	**Garni**	**2.05 245⇑**	*i*P	**Pg**		**18 26 20.9**	**+0.2**
GNI		⇑	*i*S	**Sg**		**18 26 50.4**	**+3.1**
DVE	**Vedeno**	**2.08 338**	*e*PN	**Pb**		**18 26 18.9**	**-0.9**
DVE			*e*S	**Sb**		**18 26 45.9**	**-0.1**
DVE	**Vedeno**	**2.08 338**	*e*Pn	**Pb**		**18 26 18.9**	**-0.9**
DVE			*e*Sn	**Sb**		**18 26 45.9**	**-0.1**
DLMR	**Dylym**	**2.08 349**	*e*PN	**Pg**		**18 26 21.0**	**-0.3**
DLMR			*e*S	**Sg**		**18 26 51.0**	**+2.7**
DLMR	**Dylym**	**2.08 349**	*e*Sb	**Sg**		**18 26 51.0**	**+2.7**
STEZ	**Stepenevan**	**2.10 270⇑**	*i*P	**Pn**		**18 26 17.2**	**-0.3**
STEZ		⇑	*i*S	**Sb**		**18 26 46.0**	**-0.6**
STE	**Stepanavan**	**2.12 270⇑**	P	**Pn**		**18 26 17.2**	**-0.6**
STE			S	**Sb**		**18 26 46.0**	**-1.2**
DUS	**Dusheti**	**2.14 301**	P	**Pb**		**18 26 19.3**	**-1.5**
DUS			S	**Sb**		**18 26 48.5**	**+0.8**
DUS	**Dusheti**	**2.14 301**	*e*PN	**Pb**		**18 26 19.3**	**-1.5**
DUS			*e*S	**Sb**		**18 26 48.5**	**+0.8**
DUS	**Dusheti**	**2.14 301**	*e*Pn	**Pb**		**18 26 19.3**	**-1.5**
DUS			*e*Sn	**Sb**		**18 26 48.5**	**+0.8**
GROC	**Groznyy**	**2.40 335**	*e*PN	**Pg**		**18 26 26.6**	**-0.9**
GROC			*e*S	**Sg**		**18 26 57.7**	**-0.9**
GROC			pmax	pmax			
comp=Z,30nm,0.6s							
GROC			smax	smax			
comp=N,67nm,1.1s							
GROC			smax	smax			
comp=N,122nm,1.0s							
LACR	**Lac**	**2.80 311**	*e*PN	**Pb**		**18 26 31.1**	**-1.0**
LACR			*e*S	**Sb**		**18 27 06.8**	**0.0**
LACR	**Lac**	**2.80 311**	*e*Pn	**Pb**		**18 26 31.1**	**-1.0**
AKH	**Akhalkalaki**	**2.80 279**	S	**Sb**		**18 27 06.5**	**-0.4**
KBZ	**Khabaz**	**4.16 312**	Pn	**Pb**		**18 26 51.5**	**-3.7**
comp=N,0.1nm,0.3s,baz=117,slow=9.0,SNR=2.2							
KBZ			Lg	Lg		18 27 52.1	
comp=N,0.2nm,0.3s,baz=310,slow=7.9,SNR=3.4							
KURBB	**Kurchatov Arra**	**23.71 56**	P	**P**		**18 30 54.5**	**+0.3**
comp=N,0.1nm,0.5s,baz=258,slow=11,SNR=2.7							
KURK	**Kurchatov**	**23.78 55**	P	**P**		**18 30 54.5**	**-0.5**
GERES	**GERESS Array B**	**24.79 300**	P	**P**		**18 31 05.4**	**+1.0**
comp=N,0.2nm,0.2s,baz=100,slow=10,SNR=5.0							
MKAR	**Makanchi Array**	**25.80 65**	P	**P**		**18 31 11.8**	**-1.7**
comp=N,0.2nm,0.6s,baz=269,slow=8.1,SNR=3.5							

MEX 26 18:32:28.6±0.9, 19°.43N×103°.90W, h3km, MD3.5, Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
R15V		**0.27**	**197**	*i* P	Pg	18 32 33.3	-0.5
R15V				*i* S	Sg	18 32 37.7	+0.3
EZ5V		**0.29**	**80**	*e*P	Pg	18 32 33.3	-0.9
EZ5V				*i* S	Sg	18 32 37.7	-0.3
CJM	**Chamela**	**1.08**	**274**	*e*P	Pg	18 32 47.1	-2.2
CJM				*e*S	Sg	18 33 00.8	-2.5
MMIG	**Aquila**	**1.25**	**155**	*e*P	Pg	18 32 49.0	-3.6
MMIG				*e*S	Sg	18 33 05.0	-3.9
PUVA	**Puert Vallarta**	**1.72**	**314**	*i* P	Pn	18 32 56.0	-3.4

RSNC 26 18:36:47.8±0.7, 5°.87N×78°.39W, h1km±48km, ML2.8, Mw3.9, 2C, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOLC	**Bahia Solano**	**1.03**	**70**	*i* P	Pg	18 37 06.3	-1.4
SOLC				*i*		18 37 06.4	
comp=Z,462nm,0.2s							
MALC	**Bahia Malaga**	**2.12**	**150**	*e*P	Pn	18 37 23.8	-0.6
MALC				*i*		18 37 49.4	
comp=Z,4.2nm,0.3s							
PLMC	**San Jos¨ del**	**2.30**	**114**	*e*P	Pn	18 37 24.8	-2.2
DBBC	**Dabeiba**	**2.45**	**62**	*e*P	Pn	18 37 28.1	-1.0
AZU	**Azuero**	**2.68**	**316⇑**	*i*P	Pn	18 37 30.9	-1.3
AZU				*i*		18 38 07.0	
comp=Z,278nm,0.5s							
YOTC	**Yotoco, Valle**	**2.76**	**133**	*e*P	Pn	18 37 31.8	-1.6
YOTC				*i*		18 38 03.4	
comp=Z,90nm,0.5s							
CAPC	**Capurgana**	**2.94**	**20**	*e*P	Pn	18 37 34.6	-1.1
CAPC				*i*		18 37 38.9	
comp=Z,17nm,0.2s							
HORQ	**Saladito**	**2.95**	**143**	*e*P	Pn	18 37 34.4	-1.7
HORQ				*i*		18 38 09.3	
comp=Z,28nm,0.5s							
BCIP	**Isla Barro Col**	**3.58**	**336⇑**	*i*P	Pn	18 37 43.3	-1.3
BCIP				*i*		18 38 28.4	
comp=Z,22nm,0.5s							

*ISCJB **26** 18:43:12.3±0.3, 1°.88N±0°.05×89°.74E±0°.03, h10km, mb4.5/47, MS3.8/43, Error ellipse: s-maj=7.1km s-min=3.9km az=28.8*
*IDC **26** 18:43:12.8±0.6, 1°.86N×89°.66E, h0km, mb4.1/21, mb1 4.2/23, mb1mx4.0/65, mbtmp4.1/23, ML3.8/2, MS3.8/47, Ms1 3.8/47, ms1mx3.7/65, Error ellipse: s-maj=20.9km s-min=12.8km az=44.0*
*NEIC **26** 18:43:14.0±0.2, 1°.86N×89°.68E, h10km, mb4.7/32, Error ellipse: s-maj=6.3km s-min=3.5km az=209.0*

ISC 26 18:43:14.2±0.5, 1°.93N±0°.08×89°.71E±0°.05, h10km, n165, σ1°.42/127, mb4.5/54, MS3.9/43, 5C-3D, North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**6.61**	**57**	P	**Pn**	**18 44 51.9**	**+0.5**
SNSI	**Sinabang, Aceh**	**6.63**	**86**	P	**Pg**	**18 45 18.3**	**-2.9**
MLSI	**Meulaboh, Aceh**	**7.08**	**71**	P	**Pn**	**18 44 58.7**	**+0.8**
TPTI		**7.58**	**80**	P	**Pn**	**18 45 04.9**	**+0.1**
GSI	**Gunungsitoli**	**7.88**	**94**	P	Pn	18 45 03.6	-5.4
GSI	**Gunungsitoli**	**7.88**	**94**	*e*Pn	**Pn**	**18 45 07.0**	**-2.0**
GSI				*e*Sn	**Sn**	**18 46 36.6**	**-1.8**
LHMI	**Lhok Sumawe**	**7.93**	**65**	P	**Pn**	**18 45 11.4**	**+1.8**
LHMI	**Lhok Sumawe**	**7.93**	**65**	*e*Pn	**Pn**	**18 45 10.3**	**+0.7**
KCSI	**Kotacane, Aceh**	**8.21**	**79**	P	**Pn**	**18 45 14.8**	**+1.4**
PBSI	**Pulau Batu**	**8.79**	**103**	P	Pn	18 45 35.3	+14
PSI	**Prapat**	**9.24**	**84**	LR	LR	18 48 52.8	
comp=Z,751nm,19.5s,baz=269,slow=37							
PSI	**Prapat**	**9.24**	**84**	*e*Pn	**Pn**	**18 45 27.7**	**-0.1**
PALK	**Pallekele**	**10.43**	**301**	Pn	**Pn**	**18 45 41.6**	**-2.4**
2.4nm,0.3s,baz=114,slow=12,SNR=18							
PALK				Sn	Sn	18 47 29.0	-12
3.9nm,0.3s,baz=296,slow=1.6,SNR=4.6							
PALK				LR	LR	18 49 27.9	
comp=Z,545nm,18.1s,baz=116,slow=36							
PALK	**Pallekele**	**10.43**	**301**	*e*Pn	**Pn**	**18 45 41.6**	**-2.4**
PALK				*e*Sn	Sn	18 47 29.8	-11
PKDT	**Phuket**	**10.44**	**55**	P	Pn	18 45 51.2	+7.2
23nm,1.2s,411nm							
KULM	**Kulim**	**11.41**	**73**	*e*Pn	**Pn**	**18 45 57.3**	**-0.1**
IPM	**Ipoh**	**11.58**	**77**	*e*Pn	**Pn**	**18 46 00.3**	**+0.6**
KRJI	**Kerinci**	**12.41**	**109**	P	**Pn**	**18 46 14.1**	**+3.0**
MNAI	**Manna**	**14.63**	**115**	*e*Pn	**Pn**	**18 46 39.8**	**-1.7**
MDSI	**Maura Dua**	**15.80**	**114**	P	**P**	**18 47 03.9**	**+3.1**
HMDM	**Hanimaadhoo**	**17.17**	**287**	*e*Pn	**Pn**	**18 47 12.3**	**-2.0**
82nm,1.0s							
SUKH	**Sukhothai**	**18.27**	**32**	P	P	18 47 37.2	+9.0
BWNR	**Bhubaneshwar**	**18.65**	**348**	*e*P	**P**	**18 47 32.5**	**+0.2**
CM01	**Chiang Mai Arr**	**18.73**	**28**	*e*P	**Pn**	**18 47 34.1**	**+0.4**
CM31	**Chiang Mai Arr**	**18.76**	**28**	*e*P	**P**	**18 47 33.6**	**+0.1**
CMAR	**Chiang Mai Arr**	**18.76**	**28**	P	**Pn**	**18 47 35.0**	**+1.1**
0.1nm,0.3s,baz=218,slow=12,SNR=6.5							
CMAR				LR	LR	18 55 06.1	
comp=Z,260nm,18.9s,baz=208,slow=38							
HYB	**Hyderabad**	**18.90**	**325**	*i* P	**Pn**	**18 47 36.0**	**+0.3**
HYB				*e*S	**Sn**	**18 51 05.0**	**-2.5**
CHTO	**Chiang Mai**	**19.07**	**28**	P	Pn	18 47 46.1	+8.4
CHTO	**Chiang Mai**	**19.07**	**28**	*e*P	**Pn**	**18 47 38.9**	**+1.3**
20nm,1.4s							
H08S2	**Diego Garcia H**	**19.63**	**241**	T	T	19 07 31.4	
baz=60,slow=74,SNR=46							
H08S3	**Diego Garcia H**	**19.63**	**241**	T	T	19 07 31.3	
baz=60,slow=74,SNR=131							
H08S1	**Diego Carcia H**	**19.65**	**241**	T	T	19 07 32.6	
baz=60,slow=74,SNR=18							
LEM	**Lembang**	**19.88**	**116**	LR	LR	18 54 31.6	
comp=Z,167nm,19.5s,baz=274,slow=34							
CISI	**Cisompet, Garu**	**20.37**	**118**	*e*P	**P**	**18 47 50.5**	**-0.7**
88nm,1.3s							
UBPT	**Khong Chiam**	**20.44**	**49**	P	Pn	18 48 01.6	+7.6
24nm,1.2s							
SKNT	**Sakolnakorn**	**20.51**	**42**	P	Pn	18 47 57.9	+3.1
8.5nm,1.1s							
KSM	**Kuching**	**20.59**	**91**	*e*P	**P**	**18 47 52.9**	**-0.8**
29nm,1.5s							
BELO	**BELONIA**	**21.26**	**4**	*e*P	**P**	**18 48 00.3**	**-0.4**
NGP	**Nagpur**	**21.75**	**332**	*e*P	**P**	**18 48 07.4**	**+1.3**
NGP				IAmb	IAmb	18 48 17.2	
comp=Z,6.9nm,0.6s							
BOK	**Bokaro**	**22.05**	**351**	*e*P	**P**	**18 48 11.1**	**+1.8**
BOK				IAmb	IAmb	18 48 25.1	
comp=Z,44nm,1.5s							
SBUM	**Sibu**	**22.50**	**88**	*e*P	**P**	**18 48 15.5**	**+1.3**
comp=Z,9.9nm,1.1s							
SMRI	**Semarang**	**22.53**	**114**	*e*P	**P**	**18 48 14.1**	**-0.3**
comp=Z,94nm,1.1s							
TURI	**Tura**	**23.50**	**1**	*e*P	**P**	**18 48 25.5**	**+1.2**
TURI				IAmb	IAmb	18 48 37.6	
comp=Z,22nm,1.5s							
SHL	**Shillong**	**23.60**	**5**	*e*P	**P**	**18 48 24.3**	**-1.2**
SHL				IAmb	IAmb	18 48 48.0	
comp=Z,45nm,1.9s							
SHL	**Shillong**	**23.60**	**5**	*e*P	**P**	**18 48 25.7**	**+0.2**
comp=Z,17nm,0.8s							
GUWA	**GUWAHATI**	**24.20**	**4**	*e*P	**P**	**18 48 27.9**	**-3.1**
BHPL	**Bhopal**	**24.31**	**332**	*e*P	**P**	**18 48 32.2**	**+0.1**
BHPL				IAmb	IAmb	18 48 37.2	
comp=Z,19nm,1.7s							
TEZP	**TEZPUR**	**24.73**	**7**	*e*P	**P**	**18 48 36.5**	**+0.6**
TEZP				IAmb	IAmb	18 48 48.9	
comp=Z,14nm,1.1s							
PKIN	**Phulchoki**	**25.84**	**351**	*e*P	**P**	**18 48 52.3**	**+6.1**
comp=Z,14nm,0.7s							
DMN	**Daman**	**25.92**	**351**	*e*P	**P**	**18 48 53.9**	**+7.0**
comp=Z,36nm,1.0s							
KKN	**Kakani**	**26.07**	**351**	*e*P	**P**	**18 48 50.8**	**+2.6**
comp=Z,48nm,1.1s							
KOLN	**Koldanda**	**26.36**	**348**	*e*P	P	18 48 58.1	+7.2
comp=Z,13nm,0.7s							
LSA	**Lhasa**	**27.66**	**3**	*e*P	**P**	**18 49 01.0**	**-1.8**
comp=Z,12nm,1.1s							
SMLA	**Simla**	**31.38**	**339**	*e*P	**P**	**18 49 36.8**	**+1.5**
SMLA				IAmb	IAmb	18 49 49.0	
comp=Z,18nm,1.2s							
DHRM	**DHARAMSHALA**	**32.70**	**339**	*e*P	**P**	**18 49 48.5**	**+1.3**
DHRM				IAmb	IAmb	18 49 48.8	
comp=Z,19nm,1.6s							
TGY	**Tagaytay City**	**33.14**	**67**	LR	LR	19 04 04.2	
comp=Z,118nm,18.5s,baz=188,slow=38							
ENH	**Enshi**	**33.86**	**32**	*e*P	**P**	**18 49 58.1**	**+0.9**
comp=Z,24nm,1.2s							
NIL	**Nilore**	**35.12**	**336**	*e*P	**P**	**18 50 08.0**	**0.0**
comp=Z,19nm,1.3s							
BATI	**Baumata**	**35.88**	**110**	LR	LR	19 06 55.5	
comp=Z,212nm,18.8s,baz=237,slow=40							
DAV	**Davao City (W)**	**36.11**	**81**	LR	LR	19 07 35.2	
comp=Z,78nm,18.3s,baz=275,slow=40							
WSAR	**Wadi Sarin**	**36.83**	**308**	LR	LR	19 03 34.0	
comp=Z,381nm,19.6s,baz=141,slow=33							
FITZ	**Fitzroy Crossi**	**40.58**	**121**	*e*P	**P**	**18 50 54.6**	**+0.3**
comp=Z,31nm,1.8s							
TARG	**Taragay, Kyrgy**	**41.05**	**346**	*e*P	**P**	**18 50 59.8**	**+1.5**
comp=Z,4.6nm,0.7s							
NRN	**Naryn**	**41.23**	**344**	*e*P	**P**	**18 51 01.2**	**+1.4**
comp=Z,3.7nm,0.7s							
H01W3	**Cape Leeuwin H**	**43.19**	**150**	T	T	19 37 10.3	
baz=286,slow=74,SNR=11							
H01W1	**Cape Leeuwin H**	**43.20**	**150**	T	T	19 37 08.0	
baz=322,slow=74,SNR=12							
NWAO	**Narrogin (SRO)**	**43.33**	**146**	LR	LR	19 07 08.1	
comp=Z,147nm,20.3s,baz=184,slow=33							
KK31	**Karatay Array**	**44.44**	**340**	*e*P	**P**	**18 51 24.8**	**-0.6**
KKAR	**Karatay Array**	**44.44**	**340**	*e*P	**P**	**18 51 24.7**	**-0.7**
MK01	**Makanchi Array**	**45.13**	**353**	*e*P	**P**	**18 51 31.2**	**+0.3**
MK31	**Makanchi Array**	**45.16**	**353**	*e*P	**P**	**18 51 31.6**	**+0.6**
MK32	**Makanchi Array**	**45.16**	**353**	*e*P	**P**	**18 51 31.4**	**+0.3**
MKAR	**Makanchi Array**	**45.16**	**353**	P	**P**	**18 51 31.4**	**+0.3**
comp=Z,1.5nm,0.7s,baz=176,slow=9.1,SNR=14							
MKAR				LR	LR	19 12 19.7	
comp=Z,137nm,18.2s,baz=204,slow=39							
MKAR	**Makanchi Array**	**45.16**	**353**	*e*P	**P**	**18 51 31.9**	**+0.9**
comp=Z,106nm,0.4s							
MAKZ	**Makanchi**	**45.21**	**353**	*e*P	**P**	**18 51 31.4**	**-0.1**
comp=Z,12nm,0.9s							
GEYT	**Alibeck**	**46.08**	**325**	P	**P**	**18 51 38.0**	**-0.6**
comp=Z,43nm,0.6s,baz=134,slow=6.4,SNR=4.7							
GEYT				LR	LR	19 12 30.2	
comp=Z,140nm,20.1s,baz=200,slow=38							
RAYN	**Ar Rayn**	**47.87**	**300**	*e*P	**P**	**18 51 51.8**	**-1.0**
comp=Z,4.4nm,0.9s							
SONA0	**Songino Array**	**47.96**	**15**	*e*P	**P**	**18 51 54.3**	**+1.1**
SONM	**Songino Array**	**47.96**	**15**	P	**P**	**18 51 54.3**	**+1.1**
comp=Z,3.3nm,0.5s,baz=196,slow=9.2,SNR=27							
SONM				LR	LR	19 14 19.1	
comp=Z,203nm,19.1s,baz=234,slow=39							
SONA1	**Songino Array**	**47.97**	**15**	*e*P	**P**	**18 51 53.3**	**0.0**
ULN	**Ulaanbaatar**	**48.16**	**16**	*e*P	**P**	**18 51 55.5**	**+0.7**
comp=Z,20nm,1.9s							
WRA	**Warramunga Arr**	**48.86**	**119**	P	**P**	**18 52 00.1**	**-0.4**
comp=Z,2.4nm,0.7s,baz=295,slow=8.6,SNR=20							
WR1	**Warramunga Arr**	**48.87**	**119**	*e*P	**P**	**18 52 00.1**	**-0.4**
comp=Z,20nm,1.4s							
WRAB	**Tennant Creek**	**48.87**	**119**	*e*P	**P**	**18 52 01.4**	**+0.9**
comp=Z,9.1nm,0.7s							
WB2	**Warramunga Arr**	**48.88**	**119**	*e*P	**P**	**18 52 00.2**	**-0.3**
KURBB	**Kurchatov Arra**	**49.44**	**351**	P	**P**	**18 52 04.8**	**+0.5**
comp=Z,2.5nm,0.7s,baz=174,slow=7.4,SNR=26							
JNU	**Nakatsue**	**49.49**	**47**	LR	LR	19 14 34.9	
comp=Z,142nm,19.2s,baz=304,slow=38							
KURK	**Kurchatov**	**49.51**	**351**	*e*P	**P**	**18 52 04.8**	**0.0**
KSRS	**Korea Array**	**49.82**	**40**	LR	LR	19 14 42.2	
comp=Z,105nm,18.5s,baz=222,slow=38							
ASAR	**Alice Springs**	**49.93**	**123**	P	**P**	**18 52 08.3**	**-0.3**
comp=Z,1.3nm,0.5s,baz=298,slow=7.7,SNR=52							
ASAR				LR	LR	19 12 11.4	
comp=Z,106nm,20.1s,baz=268,slow=35							
AS31	**Alice Springs**	**49.93**	**123**	*e*P	**P**	**18 52 08.4**	**-0.2**
comp=Z,3.4nm,1.4s							
AS01	**Alice Springs**	**49.97**	**123**	*e*P	**P**	**18 52 08.6**	**-0.3**
ZAA0	**Zalesovo Array**	**52.01**	**356**	*e*P	**P**	**18 52 24.1**	**+0.5**
comp=Z,4.6nm,0.8s							
ZALV	**Zalesovo Beam**	**52.01**	**356**	P	**P**	**18 52 24.2**	**+0.6**
comp=Z,2.6nm,0.7s,baz=170,slow=6.8,SNR=8.6							
ZALV				LR	LR	19 15 29.4	
comp=Z,136nm,21.4s,baz=250,slow=37							
ZALV	**Zalesovo Beam**	**52.01**	**356**	*e*P	**P**	**18 52 23.6**	**0.0**
ZAA1	**Zalesovo Array**	**52.01**	**356**	*e*P	**P**	**18 52 24.2**	**+0.6**
BVAR	**Borovoye Array**	**53.40**	**346**	P	**P**	**18 52 33.6**	**-0.3**
comp=Z,1.1nm,0.8s,baz=142,slow=7.3,SNR=6.7							
BVAR				LR	LR	19 15 41.4	
comp=Z,220nm,20.6s,baz=150,slow=36							
ABKAR	**Akbulak array**	**53.59**	**336**	*e*P	**P**	**18 52 35.5**	**+0.1**
AKTO	**Aktyubinsk**	**55.29**	**336**	P	**P**	**18 52 48.6**	**+0.8**
comp=Z,1.1nm,0.8s,baz=141,slow=10,SNR=4.0							
AKTO				LR	LR	19 17 07.6	
comp=Z,80nm,21.6s,baz=145,slow=37							
GNI	**Garni**	**55.71**	**319**	LR	LR	19 17 56.0	
comp=Z,101nm,20.9s,baz=122,slow=37							
GUMO	**Guam**	**55.73**	**75**	LR	LR	19 14 29.7	
comp=Z,34nm,22.0s,baz=248,slow=34							
JHJ	**Hachijo jima 2**	**56.19**	**51**	LR	LR	19 19 14.2	
comp=Z,27nm,18.5s,baz=268,slow=38							
USRK	**Ussuriysk Ar.**	**56.28**	**36**	LR	LR	19 18 45.1	
comp=Z,90nm,19.3s,baz=211,slow=38							
MAJO	**Matsushiro**	**56.42**	**46**	*e*P	**P**	**18 52 56.1**	**0.0**
MJAR	**Matsushiro Arr**	**56.42**	**46**	P	**P**	**18 52 56.1**	**0.0**
comp=Z,1.3nm,0.9s,baz=232,slow=7.5,SNR=3.2							
MJAR				LR	LR	19 17 33.8	
comp=Z,106nm,21.7s,baz=240,slow=36							
PMG	**Port Moresby**	**58.32**	**102**	LR	LR	19 19 35.3	
comp=Z,37nm,20.9s,baz=272,slow=37							
KBZ	**Khabaz**	**58.75**	**322**	P	**P**	**18 53 12.2**	**-0.2**
comp=Z,2.4nm,0.9s,baz=142,slow=5.2,SNR=5.3							
KBZ				LR	LR	19 23 15.0	
comp=Z,39nm,18.0s,baz=164,slow=41							
KIV	**Kislovodsk**	**58.99**	**322**	*e*P	**P**	**18 53 13.7**	**-0.6**
comp=Z,16nm,1.3s							
MMAI	**Mount Meron Ar**	**59.47**	**308**	LR	LR	19 19 04.4	
comp=Z,136nm,19.5s,baz=70,slow=36							
STKA	**Stephens Creek**	**59.52**	**129**	P	**P**	**18 53 18.1**	**+0.1**
comp=Z,1.2nm,0.4s,baz=310,slow=5.9,SNR=8.2							
STKA				LR	LR	19 16 40.9	
comp=Z,100nm,21.1s,baz=234,slow=34							
STKA	**Stephens Creek**	**59.52**	**129**	*e*P	**P**	**18 53 17.5**	**-0.5**
comp=Z,6.8nm,2.0s							
CTA	**Charters Tower**	**59.57**	**115**	P	**P**	**18 53 20.0**	**+1.5**
comp=Z,5.5nm,0.9s,baz=178,slow=7.2,SNR=3.1							
ARU	**Arti**	**59.81**	**341**	*e*P	**P**	**18 53 19.6**	**+0.1**
comp=Z,5.4nm,0.9s							
ASAJ	**Asahikawa**	**62.77**	**40**	LR	LR	19 21 20.7	
comp=Z,41nm,20.1s,baz=296,slow=36							
BR101	**Keskin Array S**	**63.16**	**314**	*e*P	**P**	**18 53 43.0**	**+0.2**
BR131	**Keskin Array S**	**63.16**	**314**	*e*P	**P**	**18 53 41.1**	**-1.6**
BRTR	**Keskin Array B**	**63.16**	**314**	P	**P**	**18 53 43.0**	**+0.2**
comp=Z,1.3nm,0.6s,baz=132,slow=7.2,SNR=8.5							
BRTR				LR	LR	19 21 34.9	
comp=Z,81nm,21.6s,baz=107,slow=36							
CAN	**Canberra**	**66.53**	**130**	*e*P	**P**	**18 54 05.0**	**+0.3**
comp=Z,36nm,1.5s							
YAK	**Yakutsk**	**67.01**	**19**	*e*P	**P**	**18 54 06.7**	**-0.4**
comp=Z,14nm,0.9s							
IDI	**Anoyia**	**68.47**	**307**	P	**P**	**18 54 18.0**	**+1.1**
comp=Z,8.8nm,1.1s,baz=102,slow=14,SNR=2.9							
IDI				LR	LR	19 26 32.7	
comp=Z,33nm,19.7s,baz=82,slow=38							
IDI	**Anoyia**	**68.47**	**307**	*e*P	**P**	**18 54 17.5**	**+0.5**
comp=Z,32nm,1.5s							
BOSA	**Boshof**	**68.72**	**238**	P	**P**	**18 54 17.9**	**-0.8**
comp=Z,1.7nm,0.7s,baz=98,slow=7.1,SNR=1.8							
BOSA				LR	LR	19 19 26.1	
comp=Z,74nm,20.2s,baz=79,slow=32							
TLB	**Topalu**	**68.76**	**318⇓**	*i*P	P	18 54 26.5	+8.0
SORM	**Soroca**	**69.78**	**321⇓**	*i*P	**P**	**18 54 24.9**	**+0.2**
VRI	**Vrincioaia**	**70.06**	**319⇑**	*i*P	**P**	**18 54 24.2**	**-2.3**
PLOR	**Plostina**	**70.10**	**318⇑**	*i*P	**P**	**18 54 27.6**	**+0.8**
AKASG	**Malin Array Be**	**70.19**	**324**	P	**P**	**18 54 27.3**	**+0.1**
comp=Z,0.9nm,0.5s,baz=95,slow=4.2,SNR=5.1							
AKASG				LR	LR	19 29 27.1	
comp=Z,31nm,18.6s,baz=95,slow=40							
AKBB	**Malin Array Si**	**70.19**	**324**	*e*P	**P**	**18 54 27.0**	**-0.2**
comp=Z,6.6nm,1.4s							
KIEV	**Kiev**	**70.20**	**324**	*e*P	**P**	**18 54 27.7**	**+0.5**
comp=Z,7.6nm,1.5s							
TESR	**Tescani**	**70.32**	**319⇑**	*i*P	**P**	**18 54 27.3**	**-0.8**
MLR	**Muntele Rosu**	**70.46**	**318**	P	**P**	**18 54 30.5**	**+1.3**
comp=Z,1.7nm,0.9s,baz=168,slow=10,SNR=12							
MLR				LR	LR	19 28 28.0	
comp=Z,14nm,21.5s,baz=90,slow=38							
MLR	**Muntele Rosu**	**70.46**	**318⇑**	*i*P	**P**	**18 54 28.2**	**-0.9**
MLR	**Muntele Rosu**	**70.46**	**318**	*e*P	**P**	**18 54 29.2**	**+0.1**
comp=Z,30nm,1.4s							
DOPR	**Dopca**	**70.98**	**318⇓**	*i*P	**P**	**18 54 33.2**	**+1.1**
BURAR	**Bucovina Array**	**71.59**	**320⇑**	*i*P	**P**	**18 54 37.2**	**+1.3**
BUR04	**Bucovina Ar. S**	**71.60**	**320**	*e*P	**P**	**18 54 36.6**	**+0.6**
BUR08	**Bucovina Ar. S**	**71.61**	**320**	*e*P	**P**	**18 54 36.5**	**+0.5**
MAW	**Mawson**	**71.89**	**190**	LR	LR	19 22 19.6	
comp=Z,40nm,18.3s,baz=40,slow=33							
TIXI	**Tiksi**	**73.91**	**12**	*e*P	**P**	**18 54 48.6**	**-0.5**
comp=Z,4.9nm,0.8s							
DIVS	**Divibare**	**74.17**	**315**	*e*P	**P**	**18 54 50.9**	**-0.4**
comp=Z,7.2nm,1.3s							
PETK	**Petropavlovsk-**	**75.38**	**35**	LR	LR	19 29 51.0	
comp=Z,46nm,19.6s,baz=244,slow=37							
FIA0	**FINESS Array S**	**75.96**	**334**	*e*P	**P**	**18 55 02.2**	**+1.0**
FINES	**FINESS Array B**	**75.96**	**334**	P	**P**	**18 55 02.2**	**+1.0**
comp=Z,1.9nm,0.

HELC			*i*		19 03 45.4	
	comp=Z,235nm,0.3s					
UREC	**San Jos¨ de U**	**2.55 291**	*e*P	**Pn**	**19 03 06.5**	**-0.9**
UREC			*i*		19 03 46.5	
	comp=Z,515nm,0.2s					
GUYC	**Guyana, Colomb**	**2.76 235**	*e*P	**Pn**	**19 03 11.4**	**+1.1**
GUYC			*i*		19 03 53.3	
	comp=Z,439nm,0.3s					
VILC	**Villavicencio,**	**2.76 192**	*e*P	**Pn**	**19 03 09.8**	**-0.2**
VILC			*e*S	**Sn**	**19 03 43.2**	**-1.4**
VILC			*i*		19 03 55.1	
	comp=Z,162nm,0.7s					
DBBC	**Dabeiba**	**3.06 274**	*e*P	**Pn**	**19 03 14.4**	**+0.6**
TOLC	**Tolima**	**3.12 224**	*e*P	**Pn**	**19 03 15.6**	**+0.9**
SDV	**Santo Domingo**	**3.21 50**	P	**Pn**	**19 03 16.3**	**+0.6**
	comp=Z,98nm,0.3s,baz=247,slow=8.7,SNR=111					
SDV	**Santo Domingo**	**3.21 50**	*e*P	**Pn**	**19 03 16.0**	**+0.3**
ANIL	**Santa Ana**	**3.24 224**	*e*P	**Pn**	**19 03 16.9**	**+0.6**
ANIL			*i*		19 04 00.4	
	comp=Z,917nm,0.4s					
PRAC	**Prado**	**3.56 210**	*e*P	**Pn**	**19 03 20.1**	**0.0**
PRAC			*e*S	**Sn**	**19 04 03.6**	**+1.0**
PRAC			*i*		19 04 07.4	
	comp=Z,767nm,0.2s					
PCRV	**Puerto La Cruz**	**9.03 68**	P	**Pn**	**19 04 32.5**	**-0.1**
	comp=Z,1.4nm,0.3s,baz=315,slow=8.6,SNR=6.2					
TXAR	**Lajitas Array**	**36.45 312**	P	**P**	**19 09 16.2**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=115,slow=10.0,SNR=5.6					
PDAR	**Pinedale Array**	**48.07 324**	P	**P**	**19 10 49.9**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=125,slow=7.4,SNR=4.0					
YKA	**Yellowknife Ar**	**63.25 340**	P	**P**	**19 12 36.9**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=122,slow=8.1,SNR=6.7					
ASAR	**Alice Springs**	**149.11 234**	PKPbc	**PKPbc**	**19 21 54.6**	**-1.6**
	comp=Z,0.2nm,0.6s,baz=115,slow=4.9,SNR=3.5					
WRA	**Warramunga Arr**	**150.33 241**	PKPbc	**PKPbc**	**19 21 58.1**	**-1.1**
	comp=Z,0.3nm,0.6s,baz=105,slow=3.1,SNR=6.2					

*ISCJB **26** 19:10:11.8±0.2, 47°.48N±0°.01×11°.95E±0°.02, h3km±3km, Error ellipse: s-maj=2.3km s-min=1.9km az=140.7*
*VIE **26** 19:10:13.2±0.2, 47°.40N×11°.94E, h13km±2km, mb1.5/10, ml2.5/15, Error ellipse: s-maj=2.0km s-min=1.2km az=16.0 12 km NNE of Ried im Zillertal felt 4 ems98 at Alpbach / Tyrol*
*CSEM **26** 19:10:13.1±0.1, 47°.43N×11°.93E, h2km, ML2.5/12, Error ellipse: s-maj=2.2km s-min=1.8km az=172.0*
*PRU **26** 19:10:14.7, 47°.42N×11°.95E, h0km*
*BGR **26** 19:10:14.1±0.2, 47°.42N×11°.94E, h10km, ML2.3/16, Error ellipse: s-maj=3.3km s-min=2.2km az=170.0*
*LDG **26** 19:10:15.1±0.1, 47°.36N×11°.91E, h2km, Ml2.6/5, Error ellipse: s-maj=2.9km s-min=1.3km az=55.0*
*ROM **26** 19:10:15.5±0.3, 47°.30N±0°.01×11°.89E±0°.01, h5km, ML2.2/8*

ISC 26 19:10:13.6±0.9, 47°.44N±0°.01×11°.93E±0°.01, h13km±6km, n106, σ1$10/188, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WATA	**Walderalm**	**0.26 247**		*e*Pg	**Pg**	**19 10 18.9**	**-0.2**
	16nm,0.1s,SNR=30						
WATA				*e*Sg	**Sg**	**19 10 22.9**	**0.0**
	72nm,0.1s						
WATA	**Walderalm**	**0.26 247**		Pg	**Pg**	**19 10 18.9**	**-0.2**
	16nm,0.1s,SNR=30						
WATA				Sg	**Sg**	**19 10 22.9**	**0.0**
	72nm,0.1s						
WTTA	**Wattenberg**	**0.27 229**		*e*Pg	**Pg**	**19 10 19.0**	**-0.3**
WTTA				*e*Sg	**Sg**	**19 10 22.7**	**-0.3**
WTTA	**Wattenberg**	**0.27 229**		*e*Pg	**Pg**	**19 10 18.9**	**-0.3**
	20nm,0.1s,SNR=35						
WTTA				*e*Sg	**Sg**	**19 10 22.6**	**-0.5**
	18nm,0.1s						
WTTA	**Wattenberg**	**0.27 229**		P	**Pg**	**19 10 18.0**	**-1.2**
WTTA	**Wattenberg**	**0.27 229**		Pg	**Pg**	**19 10 18.9**	**-0.3**
	20nm,0.1s,SNR=35						
WTTA				S	**Sg**	**19 10 22.5**	**-0.5**
WTTA	**Wattenberg**	**0.27 229**		P	**Pg**	**19 10 19.0**	**-0.3**
WTTA				S	**Sg**	**19 10 22.5**	**-0.5**
WTTA				AML	AML		
	comp=E,326μm,0.2s						
WTTA				AML	AML		
	comp=N,243μm,1.1s						
WTTA				AML	AML		
	comp=E,326μm,0.2s						
WTTA				AML	AML		
	comp=N,243μm,1.1s						
WTTA				AML	AML		
	comp=E,326μm,0.2s						
WTTA				AML	AML		
	comp=N,243μm,1.1s						
RISI	**Rein**	**0.50 168**		P	**Pg**	**19 10 23.2**	**-0.2**
RISI				S	**Sg**	**19 10 29.7**	**-0.5**
RISI	**Rein**	**0.50 168**		P	**Pg**	**19 10 23.2**	**-0.2**
RISI				S	**Sg**	**19 10 29.6**	**-0.5**
RISI				AML	AML		
	comp=E,680μm,0.3s						
RISI				AML	AML		
	comp=N,807μm,0.7s						
RISI				AML	AML		
	comp=E,680μm,0.3s						
RISI				AML	AML		
	comp=N,807μm,0.7s						
RISI				AML	AML		
	comp=N,807μm,0.7s						
RISI				AML	AML		
	comp=E,680μm,0.3s						
MOTA	**Moosalm**	**0.57 261**		*e*Pg	**Pg**	**19 10 24.1**	**-0.6**
	comp=E,1.7nm,0.1s,SNR=20						
MOTA	**Moosalm**	**0.57 261**		Pg	**Pg**	**19 10 24.1**	**-0.6**
	comp=E,1.7nm,0.1s,SNR=20						
ROSI	**Rosskopf**	**0.62 215**		P	**Pg**	**19 10 25.7**	**0.0**
ROSI				S	**Sg**	**19 10 33.6**	**-0.4**
ROSI	**Rosskopf**	**0.62 215**		P	**Pg**	**19 10 25.7**	**0.0**
ROSI				S	**Sg**	**19 10 33.6**	**-0.4**
ROSI				AML	AML		
	comp=E,252μm,0.6s						
ROSI				AML	AML		
	comp=N,417μm,0.4s						
ROSI				AML	AML		
	comp=E,252μm,0.6s						
ROSI				AML	AML		
	comp=N,417μm,0.4s						
ROSI				AML	AML		
	comp=E,252μm,0.6s						
ROSI				AML	AML		
	comp=N,417μm,0.4s						
RJOB	**Jochberg**	**0.66 63**		*e*Pg	**Pb**	**19 10 26.9**	**-0.1**
RJOB				*e*Sg	**Sb**	**19 10 34.7**	**-1.4**
RJOB	**Jochberg**	**0.66 63**		Pg	**Pb**	**19 10 26.9**	**-0.1**
RETA	**Reutte**	**0.79 274**		*e*Pg	**Pb**	**19 10 29.6**	**+0.3**
	comp=N,0.6nm,0.1s						
RETA				*e*Sg	**Sb**	**19 10 40.2**	**+0.2**
	comp=N,1.5nm,0.1s						
RETA	**Reutte**	**0.79 274**		Pg	**Pb**	**19 10 29.6**	**+0.3**
	comp=N,0.6nm,0.1s						
RETA				Sg	**Sb**	**19 10 40.2**	**+0.2**
	comp=N,1.5nm,0.1s						
ABTA	**Abfaltersbach**	**0.80 150**		*e*Pg	**Pg**	**19 10 28.4**	**-0.6**
	comp=N,0.7nm,0.1s,SNR=7.3						
ABTA				*e*Sg	**Sg**	**19 10 38.4**	**-1.1**
	comp=N,14nm,0.2s,SNR=6.3						
ABTA	**Abfaltersbach**	**0.80 150**		Pg	**Pg**	**19 10 28.4**	**-0.6**
	comp=N,0.7nm,0.1s,SNR=7.3						
ABTA				Sg	**Sg**	**19 10 38.4**	**-1.1**
	comp=N,14nm,0.2s,SNR=6.3						
ABSI	**Aberstueckl**	**0.82 211**		P	**Pg**	**19 10 29.3**	**-0.2**
ABSI				S	**Sg**	**19 10 39.4**	**-1.0**
ABSI	**Aberstueckl**	**0.82 211**		P	**Pg**	**19 10 29.3**	**-0.2**
ABSI				S	**Sg**	**19 10 39.4**	**-1.0**
ABSI				AML	AML		
	comp=E,142μm,1.0s						
ABSI				AML	AML		
	comp=N,161μm,0.5s						
ABSI				AML	AML		
	comp=E,142μm,1.0s						
ABSI				AML	AML		
	comp=N,161μm,0.5s						
ABSI				AML	AML		
	comp=E,142μm,1.0s						
ABSI				AML	AML		
	comp=N,161μm,0.5s						
FUR	**Furstenfeldbru**	**0.85 329**		*e*Pg	**Pb**	**19 10 30.9**	**+0.7**
FUR				*e*Sg	**Sb**	**19 10 43.3**	**+1.7**
FUR	**Furstenfeldbru**	**0.85 329**		Pg	**Pb**	**19 10 30.9**	**+0.7**
FUR				Sg	**Sb**	**19 10 43.3**	**+1.7**
FETA	**Feichten**	**0.92 243**		Pg	**Pg**	**19 10 30.7**	**-0.6**
	comp=N,0.5nm,0.1s,SNR=5.0						
FETA				Sg	**Sg**	**19 10 42.7**	**-0.6**
	comp=N,2.9nm,0.2s,SNR=14						
FETA	**Feichten**	**0.92 243**		Pg	**Pg**	**19 10 30.7**	**-0.6**
	comp=N,0.5nm,0.1s,SNR=5.0						
KBA	**Koelnbreinsper**	**1.03 110**		*e*Pg	**Pb**	**19 10 33.2**	**-0.1**
KBA				*e*Sg	**Sg**	**19 10 46.4**	**-0.5**
KBA	**Koelnbreinsper**	**1.03 110**		*e*Pg	**Pg**	**19 10 32.8**	**-0.6**
	comp=N,1.0nm,0.1s						
KBA				Sg	**Sg**	**19 10 45.9**	**-0.9**
	comp=N,9.9nm,0.3s,SNR=5.6						
KBA	**Koelnbreinsper**	**1.03 110**		Pg	**Pg**	**19 10 32.8**	**-0.6**
	comp=N,1.0nm,0.1s						
KBA				Sg	**Sg**	**19 10 45.9**	**-0.9**
	comp=N,9.9nm,0.3s,SNR=5.6						
KOSI	**Kohlern**	**1.05 201**		P	**Pg**	**19 10 33.3**	**-0.5**
KOSI				S	**Sg**	**19 10 46.5**	**-0.9**
KOSI	**Kohlern**	**1.05 201**		P	**Pg**	**19 10 33.3**	**-0.5**
KOSI				S	**Sg**	**19 10 46.5**	**-0.9**
KOSI				AML	AML		
	comp=E,120μm,1.0s						
KOSI				AML	AML		
	comp=N,110μm,0.9s						
KOSI				AML	AML		
	comp=E,120μm,1.0s						
KOSI				AML	AML		
	comp=N,110μm,0.9s						
KOSI				AML	AML		
	comp=N,110μm,0.9s						
KOSI				AML	AML		
	comp=E,120μm,1.0s						
APPI	**Appiano**	**1.07 207**		P	**Pg**	**19 10 33.7**	**-0.6**
APPI				S	**Sg**	**19 10 47.3**	**-1.0**
APPI	**Appiano**	**1.07 207**		P	**Pg**	**19 10 33.7**	**-0.6**
APPI				S	**Sg**	**19 10 47.3**	**-1.0**
APPI				AML	AML		
	comp=E,114μm,0.8s						
APPI				AML	AML		
	comp=N,102μm,1.3s						
APPI				AML	AML		
	comp=E,114μm,0.8s						
APPI				AML	AML		
	comp=N,101μm,1.3s						
APPI				AML	AML		
	comp=N,101μm,1.3s						
APPI				AML	AML		
	comp=E,114μm,0.8s						
MOSI	**Grossmontoni**	**1.25 229**		P	**Pb**	**19 10 37.9**	**+0.7**
MOSI				S	**Sg**	**19 10 53.6**	**-0.4**
MOSI	**Grossmontoni**	**1.25 229**		P	**Pb**	**19 10 37.9**	**+0.7**
MOSI				S	**Sg**	**19 10 53.6**	**-0.4**
MOSI				AML	AML		
	comp=E,158μm,0.6s						
MOSI				AML	AML		
	comp=N,220μm,0.6s						
MOSI				AML	AML		
	comp=N,220μm,0.6s						
MOSI				AML	AML		
	comp=E,158μm,0.6s						
STAL	**STALIGIAL**	**1.30 155**		P	**Pn**	**19 10 38.6**	**+1.2**
STAL	**STALIGIAL**	**1.30 155**		P	**Pn**	**19 10 38.6**	**+1.2**
STAL				AML	AML		
	comp=E,100μm,0.3s						
STAL				AML	AML		
	comp=N,92μm,0.4s						
STAL				AML	AML		
	comp=E,100μm,0.3s						
STAL				AML	AML		
	comp=N,92μm,0.4s						
DAVA	**Damuels**	**1.40 264**		*e*Pg	**Pb**	**19 10 40.9**	**+1.2**
DAVA				*e*Sg	**Sn**	**19 11 00.2**	**+2.7**
DAVA	**Damuels**	**1.40 264**		Pg	**Pb**	**19 10 40.6**	**+0.9**
	comp=N,1.9nm,0.1s,SNR=8.9						
DAVA				Sg	**Sn**	**19 10 59.8**	**+2.3**
	comp=N,21nm,0.2s,SNR=8.9						
DAVA	**Damuels**	**1.40 264**		Pg	**Pb**	**19 10 40.9**	**+1.2**
FUORN	**Ofenpass-Fuorn**	**1.41 235**		P	**Pn**	**19 10 40.2**	**+1.1**
FUORN	**Ofenpass-Fuorn**	**1.41 235**		P	**Pn**	**19 10 40.2**	**+1.1**
CTI	**Castel Tesino**	**1.41 188**		P	**Pn**	**19 10 39.7**	**+0.7**
CTI				S	**Sg**	**19 10 57.5**	**-1.3**
CTI	**Castel Tesino**	**1.41 188**		P	**Pn**	**19 10 39.7**	**+0.7**
CTI				S	**Sg**	**19 10 57.5**	**-1.3**
CTI				AML	AML		
	comp=E,132μm,0.5s						
CTI				AML	AML		
	comp=N,143μm,1.0s						
CTI				AML	AML		
	comp=N,143μm,1.0s						
CTI				AML	AML		
	comp=E,132μm,0.5s						
MYKA	**Terra Mystica**	**1.42 124**		Pg	**Pn**	**19 10 40.2**	**+1.0**
	comp=E,0.7nm,0.1s						
MYKA				Sg	**Sn**	**19 10 59.4**	**+1.5**
	comp=E,4.0nm,0.3s						
MYKA	**Terra Mystica**	**1.42 124**		Pg	**Pn**	**19 10 40.2**	**+1.0**
	comp=E,0.7nm,0.1s						
MYKA				Sg	**Sn**	**19 10 59.4**	**+1.5**
	comp=E,4.0nm,0.3s						
DAVOX	**Davos/Dischmat**	**1.55 246**		P	**Pg**	**19 10 43.2**	**-0.1**
DAVOX	**Davos/Dischmat**	**1.55 246**		P	**Pg**	**19 10 43.1**	**-0.1**
MOA	**Molln**	**1.63 75**		*e*Pg	**Pg**	**19 10 44.2**	**-0.7**
MOA				*e*Sg	**Sg**	**19 11 07.0**	**+0.9**
MOA	**Molln**	**1.63 75**		*e*Pg	**Pg**	**19 10 44.2**	**-0.7**
	comp=E,1.1nm,0.1s,SNR=8.8						
MOA				*e*Sg	**Sg**	**19 11 06.7**	**+0.7**
	comp=E,4.4nm,0.1s,SNR=5.3						
MOA	**Molln**	**1.63 75**		Pg	**Pg**	**19 10 44.2**	**-0.7**
	comp=E,1.1nm,0.1s,SNR=8.8						
MOA				Sg	**Sg**	**19 11 06.7**	**+0.7**
	comp=E,4.4nm,0.1s,SNR=5.3						
MABI	**Malga Bissina**	**1.69 216**		P	**Pn**	**19 10 44.5**	**+1.4**
MABI				S	**Sn**	**19 11 05.0**	**+0.3**
MABI	**Malga Bissina**	**1.69 216**		P	**Pn**	**19 10 44.5**	**+1.4**
MABI				S	**Sn**	**19 11 06.0**	**+1.2**
MABI				AML	AML		
	comp=E,10μm,0.4s						
MABI				AML	AML		
	comp=N,19μm,1.1s						
MABI				AML	AML		
	comp=N,19μm,1.1s						
MABI				AML	AML		
	comp=E,10μm,0.4s						
PLONS	**Plons/SG**	**1.78 258**		*e*Pg	**Pb**	**19 10 46.4**	**+0.3**
PLONS				*e*Sg	**Sg**	**19 11 10.7**	**-0.1**
PLONS	**Plons/SG**	**1.78 258**		Pg	**Pb**	**19 10 46.4**	**+0.3**
PLONS				Sg	**Sg**	**19 11 10.7**	**-0.1**
WET	**Wettzell**	**1.82 20**		*e*Pg	**Pg**	**19 10 48.5**	**0.0**
WET				*e*Sg	**Sg**	**19 11 12.0**	**0.0**
WET	**Wettzell**	**1.82 20**		Pg	**Pg**	**19 10 48.5**	**0.0**
WET				Sg	**Sg**	**19 11 12.0**	**0.0**
GEC2	**GERESS Array S**	**1.84 39**		*e*Pn	**Pn**	**19 10 45.6**	**+0.6**
GEC2				*e*Pg	**Pg**	**19 10 48.4**	**-0.4**
GEC2				*e*Sg	**Sg**	**19 11 12.8**	**+0.1**
GEC2	**GERESS Array S**	**1.84 39**		Pn	**Pn**	**19 10 45.6**	**+0.6**
MAGA	**Magasa**	**1.89 209**		AML	AML		
	comp=N,102μm,0.4s						
MAGA				AML	AML		
	comp=E,176μm,0.5s						
MAGA				AML	AML		
	comp=N,102μm,0.4s						
MAGA				AML	AML		
	comp=E,176μm,0.5s						
KHC	**Kasperske Hory**	**2.02 32**		*e*PG	**Pg**	**19 10 51.6**	**-0.7**
KHC				*e*SG	**Sg**	**19 11 17.8**	**-0.6**
	comp=E,7.7nm,0.2s						
OBKA	**Obir**	**2.02 116**		*e*Pg	**Pb**	**19 10 50.8**	**+0.6**
OBKA				*e*Sg	**Sg**	**19 11 17.1**	**-1.4**
OBKA	**Obir**	**2.02 116**		Pg	**Pg**	**19 10 51.6**	**-0.7**
	comp=E,1.2nm,0.2s						
OBKA				Sg	**Sg**	**19 11 17.1**	**-1.4**
	comp=E,0.8nm,0.0s						
OBKA	**Obir**	**2.02 116**		Pg	**Pg**	**19 10 51.6**	**-0.7**
	comp=E,1.2nm,0.2s						
OBKA				Sg	**Sg**	**19 11 17.1**	**-1.4**
WILA	**Wila**	**2.05 270**		*e*Pg	**Pb**	**19 10 51.8**	**+1.1**
WILA				*e*Sg	**Sg**	**19 11 18.9**	**-0.6**
WILA	**Wila**	**2.05 270**		Pg	**Pb**	**19 10 51.8**	**+1.1**
WILA				Sg	**Sg**	**19 11 18.9**	**-0.6**
SOKA	**Soboth**	**2.25 109**		Pg	**Pb**	**19 10 54.8**	**+0.6**
	comp=E,0.4nm,0.2s						
SOKA	**Soboth**	**2.25 109**		Pg	**Pb**	**19 10 54.8**	**+0.6**
	comp=E,0.4nm,0.2s						
GRA1	**Grafenberg Arr**	**2.30 348**		Pg	**Pg**	**19 10 57.9**	**+0.2**
GRF	**Grafenberg Arr**	**2.30 348**		*e*Pg	**Pg**	**19 10 57.9**	**+0.2**
GRF				*e*Sg	**Sg**	**19 11 27.6**	**0.0**
ROTZ	**Rotzenmuhle**	**2.34 4**		*e*Pg	**Pg**	**19 10 58.1**	**-0.2**
ROTZ				*e*Sg	**Sg**	**19 11 27.5**	**-1.1**
ROTZ	**Rotzenmuhle**	**2.34 4**		Pg	**Pg**	**19 10 58.1**	**-0.2**
ROTZ				Sg	**Sg**	**19 11 27.5**	**-1.1**
SLE	**Schleitheim**	**2.35 279**		*e*Pn	**Pn**	**19 10 53.5**	**+1.6**
SLE				*e*Sg	**Sg**	**19 11 27.4**	**-1.6**
SLE	**Schleitheim**	**2.35 279**		Pn	**Pn**	**19 10 53.5**	**+1.6**
SLE				Sg	**Sg**	**19 11 27.4**	**-1.6**
ARSA	**Arzberg**	**2.45 93**		Sg	**Sg**	**19 11 32.0**	**-0.2**
	comp=E,0.4nm,0.4s						
ARSA	**Arzberg**	**2.45 93**		Sg	**Sg**	**19 11 32.0**	**-0.2**
	comp=E,0.4nm,0.4s						
BFO	**Black Forest**	**2.58 292**		*e*Pn	**Pn**	**19 10 56.7**	**+1.6**
BFO				*e*Sn	**Sn**	**19 11 24.8**	**-1.6**
BFO				*e*Sg	**Sg**	**19 11 34.8**	**-1.7**
BFO	**Black Forest**	**2.58 292**		Pn	**Pn**	**19 10 56.7**	**+1.6**
BFO				Sn	**Sn**	**19 11 24.8**	**-1.6**
CONA	**Conrad Observa**	**2.70 78**		Pg	**Pg**	**19 11 03.8**	**-1.5**
	comp=E,0.3nm,0.1s						
CONA				Sg	**Sg**	**19 11 39.2**	**-1.1**
	comp=E,2.0nm,0.2s						
CONA	**Conrad Observa**	**2.70 78**		Pg	**Pg**	**19 11 03.8**	**-1.5**
	comp=E,0.3nm,0.1s						
CONA				Sg	**Sg**	**19 11 39.2**	**-1.1**
	comp=E,2.0nm,0.2s						
NKC	**Novy Kostel**	**2.82 7**		*e*PG	**Pg**	**19 11 07.3**	**-0.2**
NKC				*e*SG	**Sg**	**19 11 43.7**	**-0.3**
	comp=E,9.6nm,0.3s						
BALST	**Balsthal**	**2.88 269**		*e*Pn	**Pn**	**19 11 00.6**	**+1.4**
BALST				*e*Sg	**Sg**	**19 11 44.3**	**-1.7**
BALST	**Balsthal**	**2.88 269**		Pn	**Pn**	**19 11 00.6**	**+1.4**
BALST				Sg	**Sg**	**19 11 44.3**	**-1.7**
PRU	**Pruhonice**	**3.08 33**		*e*SG	**Sg**	**19 11 51.8**	**-0.7**
	comp=E,3.6nm,0.3s						
MOX	**Moxa**	**3.21 356**		*e*Pn	**Pn**	**19 11 03.7**	**-0.1**
MOX				*e*Sg	**Sg**	**19 11 56.6**	**-0.2**
MOX	**Moxa**	**3.21 356**		Pn	**Pn**	**19 11 03.7**	**-0.1**
MOX				Sg	**Sg**	**19 11 56.6**	**-0.2**
CDF	**Champ du Feu**	**3.28 289**		*e*Pn	**Pn**	**19 11 05.8**	**+1.1**
CDF	**Champ du Feu**	**3.28 289**		*e*Pg	**Pg**	**19 11 16.4**	**+0.1**
CDF				*e*Sn	**Sn**	**19 11 43.2**	**-0.4**
CDF				*e*Sg	**Sg**	**19 11 56.8**	**-2.0**
	comp=E,3.8nm,0.3s						
CDF	**Champ du Feu**	**3.28 289**		*e*Pn	**Pn**	**19 11 05.8**	**+1.1**
CDF	**Champ du Feu**	**3.28 289**		*e*Pg	**Pg**	**19 11 16.4**	**+0.1**
CDF				*e*Sn	**Sn**	**19 11 43.2**	**-0.4**
CDF				*e*Sg	**Sg**	**19 11 56.8**	**-2.0**
	comp=E,1.9nm,0.3s						
ECH	**Echery**	**3.31 285**		*e*Pn	**Pn**	**19 11 06.5**	**+1.4**
ECH				*e*Sg	**Sg**	**19 11 57.6**	**-2.1**
ECH	**Echery**	**3.31 285**		Pn	**Pn**	**19 11 06.5**	**+1.4**
ECH				Sg	**Sg**	**19 11 57.6**	**-2.1**
KRUC	**Moravsky**	**3.40 60**		*e*SN	**Sn**	**19 11 45.7**	**-0.7**
KRUC				*e*SG	**Sg**	**19 12 00.3**	**-2.3**
HINF	**Hinteralfeld**	**3.45 278**		*e*Pn	**Pn**	**19 11 07.9**	**+0.8**
HINF				*e*Sg	**Sg**	**19 12 01.8**	**-2.6**
	comp=E,6.1nm,0.5s						
HINF	**Hinteralfeld**	**3.45 278**		*e*Pn	**Pn**	**19 11 07.9**	**+0.8**
HINF				*e*Sg	**Sg**	**19 12 01.8**	**-2.6**
	comp=E,3.0nm,0.5s						
TNS	**Taunus Mts**	**3.61 322**		*e*Pn	**Pn**	**19 11 10.6**	**+1.3**
TNS	**Taunus Mts**	**3.61 322**		Pn	**Pn**	**19 11 10.6**	**+1.3**
BRG	**Bergqiesshubel**	**3.68 20**		SG	**Sg**	**19 12 10.3**	**-1.4**
	comp=E,2.3nm,0.4s						
HAU	**Haudompre**	**3.81 281**		*e*Pn	**Pn**	**19 11 13.4**	**+1.4**
HAU	**Haudompre**	**3.81 281**		*e*Pg	**Pg**	**19 11 25.6**	**-0.9**
HAU				*e*Sn	**Sn**	**19 11 55.7**	**-1.0**
HAU				*e*Sg	**Sg**	**19 12 14.6**	**-1.3**
	comp=E,2.7nm,0.3s						
HAU	**Haudompre**	**3.81 281**		*e*Pn	**Pn**	**19 11 13.4**	**+1.4**
HAU	**Haudompre**	**3.81 281**		*e*Pg	**Pg**	**19 11 25.6**	**-0.9**
HAU				*e*Sg	**Sg**	**19 12 14.6**	**-1.3**
	comp=E,1.4nm,0.3s						
CLL	**Collm**	**3.93 10**		*e*Sg	**Sg**	**19 12 18.0**	**-1.8**
CABF	**La Chapelle**	**4.08 260**		*e*Pn	**Pn**	**19 11 16.3**	**+0.5**
CABF	**La Chapelle**	**4.08 260**		*e*Pg	**Pg**	**19 11 29.8**	**-1.9**
CABF				*e*Sn	**Sn**	**19 12 01.2**	**-2.3**
CABF				*e*Sg	**Sg**	**19 12 21.6**	**-3.0**
	comp=E,1.2nm,0.2s						
CABF	**La Chapelle**	**4.08 260**		*e*Pn	**Pn**	**19 11 16.3**	**+0.5**
CABF	**La Chapelle**	**4.08 260**		*e*Pg	**Pg**	**19 11 29.8**	**-1.9**
CABF				*e*Sn	**Sn**	**19 12 01.2**	**-2.3**
CABF				*e*Sg	**Sg**	**19 12 21.6**	**-3.0**
	comp=E,0.6nm,0.2s						

*IDC **26** 19:19:01.5±5.3, 41°.38N×113°.28W, h0km, Error ellipse: s-maj=70.1km s-min=33.9km az=153.0*
*ISCJB **26** 19:19:04.6±1.0, 41°.18N±0°.05×112°.8W±0°.2, h0km, Error ellipse: s-maj=16.9km s-min=6.9km az=12.2*
*NEIC **26** 19:19:05.1±1.3, 41°.11N×112°.85W, h0km, ML1.7, Error ellipse: s-maj=20.4km s-min=12.8km az=106.0, Suspected Mining explosion.*
NEIC 75 km [46 miles] W of Ogden.

ISC 26 19:19:02.1±1.3, 41°.19N±0°.05×112°.91W±0°.09, h0km, n8, σ0$16/7, Utah

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUG	**Dugway, Tooele**	**1.00 176**		*e*Pg	**Pb**	**19 19 22.4**	**0.0**
DUG				*e*Sg	**Sn**	**19 19 38.2**	**-0.1**
HWUT	**Hardware Ranch**	**1.09 67**		*e*Pg	**Pn**	**19 19 24.9**	**+0.1**
AHID	**Auburn Hatcher**	**2.07 40**		*e*Pn	**Pb**	**19 19 40.5**	**-0.2**
HLID	**Hailey**	**2.62 335**		*e*Pn	**Pb**	**19 19 50.0**	**+0.1**
BW06	**Boulder Array**	**2.95 57**		*e*Pn	**Pb**	**19 19 55.9**	**+0.2**
PDAR	**Pinedale Array**	**2.95 57**		Pg	**Pg**	**19 19 58.6**	**-0.1**
	1.0nm,0.3s,baz=230,slow=14,SNR=13						
PDAR				Lg	Lg	19 20 39.2	
	1.0nm,0.3s,baz=240,slow=26,SNR=5.1						
I56US	**NEWPORT INFRAS**	**7.68 338**		*i*		20 02 40.0	
	baz=157,slow=321,SNR=2.5						
I57US	**PINON FLAT INF**	**8.08 202**		*i*		20 12 20.0	
	baz=19,slow=308,SNR=0.8						

*NEIC **26** 19:24:52.0±0.0, 15°.72N×98°.67W, h10km, MD4.0(MEX), After MEX.*

MEX 26 19:24:52.0±0.8, 15°.72N×98°.67W, h10km, MD4.0, Off coast of Guerrero

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

*ISCJB **26** 19:25:24.7±0.7, 1°.72N±0°.04×98°.96E±0°.07, h90km, mb3.8/5, Error ellipse: s-maj=9.6km s-min=5.7km az=172.8*
*DJA **26** 19:25:25.5±0.4, 2°.N±2°.×9°.9E±°, h97km±6km, M3.4/9, MLv3.4/9*

ISC 26 19:25:23.1±0.9, **1°.71N**±0°.05×**99°.01E**±0°.07, **h90**km, **n15**, σ2§14/19, **mb3.9**/5, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**1.07**	**148**	P	**Pn**	**19 25 46.9**	**+3.2**
PSI	**Prapat**	**1.08**	**356**	P	**Pn**	**19 25 46.2**	**+2.2**
	14nm,0.3s,baz=181,slow=1.1,SNR=51						
PSI				S	**Sn**	**19 26 02.2**	**+2.6**
	5.8nm,0.3s,baz=0.4,slow=20,SNR=17						
GSI	**Gunungsitoli**	**1.49**	**254**	P	**Pn**	**19 25 50.7**	**+1.9**
GSI				S	**Sn**	**19 26 10.2**	**+2.0**
PBSI	**Pulau Batu**	**1.90**	**203**	P	**Pn**	**19 25 55.4**	**+1.3**
PBSI				S	**Sn**	**19 26 18.5**	**+0.9**
KCSI	**Kotacane, Aceh**	**2.18**	**326**	P	**Pn**	**19 25 59.5**	**+1.7**
KCSI				S	**Sn**	**19 26 25.3**	**+1.0**
TPTI		**2.39**	**310**	P	**Pn**	**19 26 02.3**	**+1.8**
PPI	**Padang Panjang**	**2.56**	**147**	P	**Pn**	**19 26 05.5**	**+2.7**
SNSI	**Sinabang, Aceh**	**2.77**	**285**	P	**Pn**	**19 26 07.1**	**+1.5**
MLSI	**Meulaboh, Aceh**	**3.63**	**314**	P	**Pn**	**19 26 18.3**	**+1.0**
CMAR	**Chiang Mai Arr**	**16.64**	**360**	P	**P**	**19 29 12.6**	**+0.6**
	0.1nm,0.3s,baz=192,slow=11,SNR=5.9						
WRA	**Warramunga Arr**	**40.79**	**124**	P	**P**	**19 32 53.1**	**-2.9**
	1.8nm,0.6s,baz=306,slow=8.7,SNR=15						
ASAR	**Alice Springs**	**42.28**	**129**	P	**P**	**19 33 05.0**	**-3.2**
	0.5nm,0.6s,baz=300,slow=7.7,SNR=10						
MKAR	**Makanchi Array**	**47.21**	**344**	P	**P**	**19 33 46.0**	**-0.9**
	0.6nm,0.4s,baz=157,slow=8.8,SNR=18						
KURBB	**Kurchatov Arra**	**51.73**	**344**	P	**P**	**19 34 19.9**	**-1.3**
	0.3nm,0.5s,baz=162,slow=6.4,SNR=4.3						
ZALV	**Zalesovo Beam**	**53.36**	**350**	P	**P**	**19 34 32.0**	**-1.2**
	1.3nm,0.4s,baz=174,slow=6.7,SNR=8.5						

IDC 26 19:35:30.4±1.6, **0°.07S×125°.82E, h0**km, **mb3.4**/4, **mb1 3.6**/4, **mb1mx3.3**/54, **mbtmp3.4**/4, **Error ellipse: s-maj=178.1km s-min=21.6km az=65.0, Southern Moluccca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.44**	**158**	P	P	19 40 20.6	+0.2
	0.4nm,0.4s,baz=336,slow=10,SNR=10.0						
ASAR	**Alice Springs**	**24.74**	**162**	P	P	19 40 53.7	-0.1
	0.5nm,1.0s,baz=344,slow=7.8,SNR=3.8						
MKAR	**Makanchi Array**	**60.18**	**327**	P	P	19 45 40.3	+0.1
	0.4nm,0.4s,baz=116,slow=7.7,SNR=8.3						
KURBB	**Kurchatov Arra**	**64.46**	**329**	P	P	19 46 08.6	-0.1
	0.3nm,0.4s,baz=123,slow=6.5,SNR=4.5						

*NIED **26** 19:42:00, 39°.40N×142°.70E, h32km, Mw3.6 Best double couple: M0:2.92000×10^14 NP1:φs=204.00000°, δ40.00000°, λ-143.00000°. NP2:φs=85.00000°, δ67.00000°, λ-56.00000°.*
*ISCJB **26** 19:42:10.3±1.2, 39°.44N±0°.04×142°.75E±0°.07, h25km±6km, mb3.6/5, MS2.4/2, Error ellipse: s-maj=8.8km s-min=6.5km az=21.8*
*JMA **26** 19:42:11.4±0.1, 39°.42N×142°.68E, h32km±1km, M3.5*
*IDC **26** 19:42:16.7±2.8, 39°.70N×142°.40E, h51km±25km, mb3.3/5, mb1 3.5/7, mb1mx3.2/69, mbtmp3.5/7, ML3.0/2, MS2.7/4, Ms1 2.7/4, ms1mx2.3/36, Error ellipse: s-maj=32.9km s-min=15.9km az=104.0*

ISC 26 19:42:10.7±2.0, **39°.51N**±0°.04×**142°.57E**±0°.07, **h11**km±11km, **n28**, σ1§10/29, **mb3.8**/5, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**0.58**	**277**	P	**Pn**	**19 42 24.5**	**-0.4**
MIYJ				S	**Sn**	**19 42 33.5**	**-0.9**
JTH	**Tanohata**	**0.69**	**309**	P	**Pn**	**19 42 26.3**	**-0.1**
JTH				*e*S	**Sn**	**19 42 36.9**	**-0.3**
OFUJ	**Ofunato**	**0.82**	**239**	P	**Pb**	**19 42 27.0**	**+0.1**
OFUJ				S	**Sb**	**19 42 38.3**	**+0.4**
JOM	**Ohasama**	**0.99**	**268**	P	**Pn**	**19 42 30.8**	**+0.3**
JOM				S	**Sn**	**19 42 44.7**	**+0.3**
JKZ	**Kuzumaki**	**1.07**	**297**	P	**Pn**	**19 42 32.4**	**+0.8**
JKZ				S	**Sn**	**19 42 47.4**	**+0.9**
JMK	**Ichinoseki**	**1.19**	**243**	P	**Pb**	**19 42 32.8**	**-0.3**
JMK				*e*S	**Sb**	**19 42 48.2**	**-0.3**
JANG	**Nango**	**1.19**	**317**	P	**Pn**	**19 42 33.6**	**+0.4**
JANG				*e*S	**Sn**	**19 42 50.1**	**+0.8**
JIO	**Ouri**	**1.42**	**223**	P	**Pn**	**19 42 35.2**	**-1.1**
JIO				S	**Sn**	**19 42 52.8**	**-2.1**
JRG	**Rokugo**	**1.50**	**266**	P	**Pg**	**19 42 39.1**	**-0.4**
JRG				S	**Sg**	**19 43 00.1**	**+1.0**
JAH	**Hinai**	**1.64**	**295**	P	**Pg**	**19 42 41.4**	**-0.7**
JAH				S	**Sg**	**19 43 03.6**	**+0.2**
JTM	**Tenmabayashi**	**1.72**	**318**	P	**Pb**	**19 42 41.9**	**-0.4**
MJAR	**Matsushiro Arr**	**4.54**	**231**	P	**Pn**	**19 43 21.6**	**+2.3**
	0.6nm,0.3s,baz=36,slow=12,SNR=13						
ASAJ	**Asahikawa**	**4.61**	**0**	P	**Pn**	**19 43 21.5**	**+1.3**
	0.7nm,0.3s,baz=204,slow=9.2,SNR=8.4						
ASAJ				S	**Sn**	**19 44 12.4**	**-1.2**
	0.7nm,0.3s,baz=195,slow=20,SNR=2.2						
JNU	**Nakatsue**	**11.38**	**240**	LR	LR	19 50 14.4	
	comp=Z,31nm,18.2s,baz=298,slow=42						
PETK	**Petropavlovsk-**	**17.10**	**32**	LR	LR	19 51 59.2	
	comp=Z,30nm,18.8s,baz=227,slow=34						
MA2	**Magadan**	**20.75**	**12**	LR	LR	19 55 09.0	
	comp=Z,12nm,18.9s,baz=120,slow=38						
H11N2	**WAKE ISLAND Hy**	**28.75**	**126**	T	T	20 18 36.1	
	baz=319,slow=76,SNR=70						
H11N1	**WAKE ISLAND Hy**	**28.76**	**126**	T	T	20 18 38.7	
	baz=319,slow=76,SNR=48						
H11N3	**WAKE ISLAND Hy**	**28.77**	**126**	T	T	20 18 38.8	
	baz=319,slow=76,SNR=50						
TLY	**Talaya**	**29.48**	**307**	LR	LR	19 59 22.9	
	comp=Z,13nm,18.5s,baz=349,slow=35						
H11S1	**WAKE ISLAND Hy**	**29.55**	**128**	T	T	20 19 33.7	
	baz=320						
H11S3	**WAKE ISLAND Hy**	**29.55**	**128**	T	T	20 19 34.2	
	baz=320						
H11S2	**WAKE ISLAND Hy**	**29.57**	**128**	T	T	20 19 33.4	
	baz=320						
MKAR	**Makanchi Array**	**43.62**	**300**	P	**P**	**19 50 14.6**	**-0.4**
	0.3nm,0.6s,baz=79,slow=10.0,SNR=4.2						
KURBB	**Kurchatov Arra**	**45.24**	**306**	P	**P**	**19 50 27.0**	**-0.7**
	0.9nm,0.5s,baz=80,slow=8.6,SNR=6.1						
ILAR	**Eielson Array**	**46.93**	**34**	P	**P**	**19 50 40.2**	**-0.6**
	0.5nm,0.6s,baz=275,slow=6.7,SNR=8.0						
WRA	**Warramunga Arr**	**59.64**	**189**	P	**P**	**19 52 17.4**	**+2.7**
	0.4nm,0.8s,baz=9.0,slow=7.5,SNR=3.1						
FINES	**FINESS Array B**	**67.06**	**332**	P	**P**	**19 53 02.1**	**-1.4**
	0.7nm,0.7s,baz=30,slow=11,SNR=3.2						

IDC 26 19:48:41.2±3.3, **23°.18N×94°.36E, h62**km±35km, **mb3.1**/3, **mb1 3.2**/4, **mb1mx3.0**/71, **mbtmp3.3**/4, **ML3.6**/2, **Error ellipse: s-maj=32.8km s-min=19.2km az=29.0, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRDH	**Bariadhala**	**2.56**	**259**	P	Pn	19 49 20.9	+0.5
	38nm,0.3s,baz=270,slow=20,SNR=5.7						
BRDH				S	Sn	19 49 50.8	+0.5
	53nm,0.3s,baz=76,slow=22,SNR=9.5						
CMAR	**Chiang Mai Arr**	**6.36**	**137**	P	Pn	19 50 12.8	+0.4
	0.1nm,0.3s,baz=314,slow=14,SNR=4.2						
MKAR	**Makanchi Array**	**25.49**	**340**	P	P	19 54 04.0	+0.4
	0.4nm,0.5s,baz=145,slow=8.3,SNR=5.4						
WRA	**Warramunga Arr**	**57.95**	**135**	P	P	19 58 27.2	-0.3
	0.5nm,0.9s,baz=326,slow=7.3,SNR=9.9						
ASAR	**Alice Springs**	**60.37**	**138**	P	P	19 58 44.1	-0.1
	0.1nm,0.3s,baz=320,slow=6.6,SNR=5.7						

*IDC **26** 20:01:46.8±7.0, 36°.95N×71°.59E, h60km±36km, mb3.6/4, mb1 3.5/7, mb1mx3.2/62, mbtmp3.7/7, ML3.1/3, MS2.7/1, Ms1 2.9/1, ms1mx2.1/57, Error ellipse: s-maj=111.7km s-min=28.1km az=155.0*
*NNC **26** 20:01:54.9±1.8, 37°.33N×71°.39E, h170km±24km, mb2.8, mpv3.7, Error ellipse: s-maj=19.2km s-min=13.9km az=63.0*

ISC 26 20:01:52.3±1.5, **37°.2N**±0°.1×**71°.17E**±0°.08, **h100**km, **n22**, σ1§73/29, **mb3.7**/5, **6C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.38**	**32**	⇑P	**Pn**	**20 02 44.4**	**+1.1**
	3.5nm,0.4s						
SFK				⇑S	**Sn**	**20 03 25.0**	**+2.4**
	15nm,0.4s						
AML	**Almayashu**	**5.32**	**21**	P	**Pn**	**20 03 10.5**	**+0.8**
	SNR=49						
MNAS	**Manas**	**5.41**	**11**	⇑P	**Pn**	**20 03 11.6**	**+1.0**
	3.3nm,0.3s						
MNAS				⇓S	**Sn**	**20 04 12.2**	**+0.5**
	12nm,0.6s						
EKS2	**Erkin-Say**	**5.84**	**19**	P	**Pn**	**20 03 18.2**	**+1.8**
	SNR=13						
KK31	**Karatay Array**	**5.95**	**355**	P	**Pn**	**20 03 19.9**	**+2.0**
	4.3nm,0.2s,baz=181,slow=12,SNR=130						
KK31				⇓S	**Sn**	**20 04 25.9**	**+1.3**
	2.1nm,0.3s,baz=176,slow=22,SNR=7.0						
AAK	**Ala-Archa**	**6.03**	**24**	P	**Pn**	**20 03 19.4**	**+0.3**
	5.9nm,0.5s						
AAK				S	**Sn**	**20 04 26.7**	**0.0**
	2.2nm,0.6s						
CHMS	**Chumysh**	**6.44**	**24**	P	**Pn**	**20 03 24.9**	**+0.4**
	SNR=5.5						
USP	**Ospenovka**	**6.60**	**22**	P	**Pn**	**20 03 27.9**	**+1.1**
	SNR=6.5						
TKM2	**Tokmak 2**	**6.67**	**29**	⇑P	**Pn**	**20 03 28.1**	**+0.3**
	2.4nm,0.5s						
TKM2				⇑S	**Sn**	**20 04 40.0**	**-2.5**
	1.6nm,0.8s						
TKM2	**Tokmak 2**	**6.67**	**29**	P	**Pn**	**20 03 27.6**	**-0.3**
	SNR=6.9						
GEYT	**Alibeck**	**10.40**	**278**	P	**Pn**	**20 04 17.1**	**-1.3**
	5.5nm,0.3s,baz=310,slow=17,SNR=6.4						
GEYT				S	**Sn**	**20 06 10.1**	**-2.8**
	0.1nm,0.3s,baz=99,slow=15,SNR=2.4						
MKAR	**Makanchi Array**	**12.67**	**37**	P	**Pn**	**20 04 44.4**	**-4.4**
	0.0nm,0.3s,baz=228,slow=15,SNR=2.8						
AB31	**Akbulak array**	**14.57**	**330**	P	**Pn**	**20 05 13.6**	**+0.2**
	0.6nm,0.5s,baz=150,slow=12,SNR=12						
AB31				⇑S	**Sn**	**20 07 51.2**	**-2.7**
	2.1nm,0.7s,baz=156,slow=22,SNR=8.4						
AKTO	**Aktyubinsk**	**16.28**	**329**	P	**P**	**20 05 37.0**	**+1.0**
	0.4nm,0.3s,baz=153,slow=11,SNR=7.8						
AKTO	**Aktyubinsk**	**16.28**	**329**	⇓P	**Pn**	**20 05 33.8**	**-1.0**
	1.9nm,0.6s						
AKTO				⇓S	**Sn**	**20 08 34.9**	**-0.2**
	2.4nm,0.8s						
ZALV	**Zalesovo Beam**	**19.25**	**25**	P	**P**	**20 06 06.4**	**-2.2**
	0.2nm,0.3s,baz=182,slow=10,SNR=3.0						
BRTR	**Keskin Array B**	**29.37**	**287**	P	**P**	**20 07 48.4**	**+2.4**
	0.5nm,0.7s,baz=114,slow=9.6,SNR=3.9						
CMAR	**Chiang Mai Arr**	**30.66**	**120**	LR	LR	20 22 10.4	
	comp=Z,14nm,20.1s,baz=210,slow=40						
FINES	**FINESS Array B**	**37.01**	**326**	P	**P**	**20 08 53.2**	**+1.4**
	0.6nm,0.3s,baz=117,slow=9.4,SNR=14						
ARCES	**ARCESS Array B**	**40.58**	**337**	P	**P**	**20 09 22.3**	**+0.7**
	0.8nm,0.7s,baz=120,slow=8.4,SNR=4.8						
HFS	**Hagfors**	**42.63**	**321**	P	**P**	**20 09 39.6**	**+1.2**
	1.9nm,0.4s,baz=96,slow=10,SNR=16						
NB2	**NORSAR Subarra**	**43.93**	**323**	P	**P**	**20 09 49.4**	**+0.5**
	comp=Z,0.5nm,0.4s,baz=93,slow=7.9						

*DDA **26** 20:03:22.3, 34°.81N×27°.71E, h12km, MI3.0*
*ISCJB **26** 20:03:27.8±1.2, 35°.03N±0°.07×27°.75E±0°.05, h14km±11km, Error ellipse: s-maj=12.6km s-min=7.4km az=171.7*
*ISK **26** 20:03:28.9, 35°.13N×27°.80E, h10km, ML2.8/10*
*CSEM **26** 20:03:28.5±0.6, 35°.07N×27°.77E, h10km, ML2.5, Error ellipse: s-maj=12.7km s-min=6.4km az=175.0*
*ATH **26** 20:03:30.0, 35°.21N×27°.56E, h44km±4km, ML2.5/2, Error ellipse: s-maj=9.4km s-min=1.9km az=316.0*
*THE **26** 20:03:30.9, 35°.21N×27°.64E, h16km±3km, ML2.5/2, Error ellipse: s-maj=3.7km s-min=0.8km az=272.0*

ISC 26 20:03:27.4±1.7, **35°.08N**±0°.06×**27°.67E**±0°.04, **h13**km±10km, **n59**, σ1§25/77, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.62**	**318**	PG	**Pn**	**20 03 42.3**	**+0.3**
KARP	**Karpathos**	**0.62**	**318**	P	**Pn**	**20 03 41.1**	**-0.9**
KARP				S	**Sb**	**20 03 48.9**	**-0.1**
KARP				AML	AML	20 03 58.3	
	comp=E,511μm,0.6s						
KARP				AML	AML	20 03 59.5	
	comp=N,907μm,0.4s						
KARP	**Karpathos**	**0.62**	**318**	P	**Pb**	**20 03 40.8**	**+0.6**
KARP				S	**Sb**	**20 03 49.4**	**+0.5**
KARP	**Karpathos**	**0.62**	**318**	P	**Pn**	**20 03 41.1**	**-0.9**
KARP	**Karpathos**	**0.62**	**318**	*e*Pg	**Pn**	**20 03 42.3**	**+0.3**
KARP				S	**Sb**	**20 03 49.4**	**+0.5**
ARG	**Arkhangelos**	**1.19**	**18**	PN	**Pg**	**20 03 50.8**	**+0.5**
ARG				SN	**Sn**	**20 04 06.4**	**+0.6**
ARG	**Arkhangelos**	**1.19**	**18**	P	**Pg**	**20 03 50.0**	**-0.3**
ARG				S	**Sb**	**20 04 04.9**	**-0.2**
ARG				AML	AML	20 04 15.3	
	comp=N,544μm,0.8s						
ARG				AML	AML	20 04 16.6	
	comp=E,805μm,0.5s						
ARG	**Arkhangelos**	**1.19**	**18**	P	**Pg**	**20 03 49.8**	**-0.5**
ARG				S	**Sb**	**20 04 03.8**	**-1.3**
ARG	**Arkhangelos**	**1.19**	**18**	P	**Pg**	**20 03 50.0**	**-0.3**
ARG	**Arkhangelos**	**1.19**	**18**	*e*Pn	**Pg**	**20 03 50.8**	**+0.5**
ARG				S	**Sb**	**20 04 03.8**	**-1.3**
ARG				*e*Sn	**Sn**	**20 04 06.4**	**+0.6**
ZKR	**Zakros**	**1.20**	**272**	P	**Pb**	**20 03 49.2**	**-0.7**
DAT	**Datca**	**1.64**	**357**	PN	**Pg**	**20 03 58.1**	**-0.9**
DAT	**Datca**	**1.64**	**357**	*i* P	**Pb**	**20 03 57.8**	**+0.1**
DAT				*i* S	**Sg**	**20 04 21.9**	**+1.5**
DAT	**Datca**	**1.64**	**357**	P	**Pb**	**20 03 57.8**	**+0.1**
DAT	**Datca**	**1.64**	**357**	*e*Pn	**Pg**	**20 03 58.1**	**-0.9**
DAT				S	**Sg**	**20 04 21.9**	**+1.5**
LAST	**Lasithi**	**1.80**	**273**	P	**Pb**	**20 03 59.7**	**-0.6**
LAST	**Lasithi**	**1.80**	**273**	P	**Pb**	**20 03 59.4**	**-0.9**
LAST	**Lasithi**	**1.80**	**273**	P	**Pb**	**20 03 59.4**	**-0.9**
DALY	**Dalyan (Mu¨la**	**1.90**	**24**	PN	**Pb**	**20 04 01.1**	**-0.9**
DALY	**Dalyan (Mu¨la**	**1.90**	**24**	*i* P	**Pg**	**20 04 03.0**	**-1.0**
DALY				*i* S	**Sg**	**20 04 33.2**	**+4.5**
DALY	**Dalyan (Mu¨la**	**1.90**	**24**	*e*Pn	**Pb**	**20 04 01.1**	**-0.9**
DALY	**Dalyan (Mu¨la**	**1.90**	**24**	P	**Pg**	**20 04 03.0**	**-1.0**
FETY	**Fethiye**	**1.93**	**36**	PN	**Pb**	**20 04 01.2**	**-1.2**
FETY	**Fethiye**	**1.93**	**36**	P	**Pn**	**20 04 00.2**	**+0.3**
FETY				S	**Sn**	**20 04 23.4**	**-0.6**
FETY	**Fethiye**	**1.93**	**36**	P	**Pn**	**20 04 00.2**	**+0.3**
FETY	**Fethiye**	**1.93**	**36**	*e*Pn	**Pb**	**20 04 01.2**	**-1.2**
FETY				S	**Sn**	**20 04 23.4**	**-0.6**
TURN	**Turunc**	**1.94**	**23**	PN	**Pn**	**20 03 59.0**	**-1.0**
TURN	**Turunc**	**1.94**	**23**	*i* P	**Pn**	**20 03 59.0**	**-1.0**
TURN				*i* S	**Sn**	**20 04 25.4**	**+1.2**
TURN	**Turunc**	**1.94**	**23**	P	**Pn**	**20 03 59.0**	**-1.0**
TURN				S	**Sn**	**20 04 25.4**	**+1.2**
AKAS	**Kas**	**1.95**	**53**	PN	**Pn**	**20 04 01.1**	**+0.8**
AKAS	**Kas**	**1.95**	**53**	*i* P	**Pn**	**20 04 00.1**	**-0.2**
AKAS	**Kas**	**1.95**	**53**	P	**Pn**	**20 04 00.1**	**-0.2**
AKAS	**Kas**	**1.95**	**53**	*e*Pn	**Pn**	**20 04 01.1**	**+0.8**
BDRM	**Kayabasi**	**1.99**	**355**	*i* P	**Pb**	**20 04 02.8**	**-0.6**
BDRM				*i* S	**Sg**	**20 04 32.0**	**+0.7**
BDRM	**Kayabasi**	**1.99**	**355**	P	**Pb**	**20 04 02.8**	**-0.6**
BODT	**Bodrum**	**2.00**	**352**	PN	**Pb**	**20 04 03.0**	**-0.6**
BODT	**Bodrum**	**2.00**	**352**	*e*Pn	**Pb**	**20 04 03.0**	**-0.6**
YER	**Yerkesik**	**2.10**	**13**	PN	**Pb**	**20 04 04.4**	**-1.1**
YER	**Yerkesik**	**2.10**	**13**	*e*Pn	**Pb**	**20 04 04.4**	**-1.1**
MLSB	**Milas**	**2.21**	**2**	PN	**Pb**	**20 04 06.1**	**-1.1**
MLSB	**Milas**	**2.21**	**2**	*e*Pn	**Pb**	**20 04 06.1**	**-1.1**
SANT	**Santorini**	**2.21**	**306**	PN	**Pb**	**20 04 06.9**	**-0.4**
SANT	**Santorini**	**2.21**	**306**	*e*Pn	**Pb**	**20 04 06.9**	**-0.4**
ELL	**Elmali**	**2.46**	**47**	PN	**Pn**	**20 04 08.5**	**+1.2**
ELL	**Elmali**	**2.46**	**47**	*e*Pn	**Pn**	**20 04 08.5**	**+1.2**
AYDN	**Tasoluk**	**2.58**	**4**	*i* P	**Pn**	**20 04 10.3**	**+1.4**
AYDN				*i* S	**Sb**	**20 04 46.2**	**+1.1**
AYDN	**Tasoluk**	**2.58**	**4**	P	**Pn**	**20 04 10.3**	**+1.4**
TAVA	**DENIZLI_Tavas**	**2.58**	**22**	*i* P	**Pn**	**20 04 10.0**	**+1.0**
TAVA				*i* S	**Sg**	**20 04 47.8**	**-2.5**
TAVA	**DENIZLI_Tavas**	**2.58**	**22**	P	**Pn**	**20 04 10.0**	**+1.0**
APE	**Apeiranthos**	**2.63**	**319**	PN	**Pb**	**20 04 12.8**	**-1.7**
APE	**Apeiranthos**	**2.63**	**319**	*e*Pn	**Pb**	**20 04 12.8**	**-1.7**
GCAM	**G?zelcaml?**	**2.64**	**352**	PN	**Pb**	**20 04 12.4**	**-2.1**
GCAM	**G?zelcaml?**	**2.64**	**352**	*e*Pn	**Pb**	**20 04 12.4**	**-2.1**
GOLH	**Golhisar**	**2.64**	**35**	*i* P	**Pn**	**20 04 11.0**	**+1.3**
GOLH	**Golhisar**	**2.64**	**35**	P	**Pn**	**20 04 11.0**	**+1.3**
AYDB	**Zeytinkoy-Aydi**	**2.86**	**3**	PN	**Pb**	**20 04 15.7**	**-2.7**
AYDB	**Zeytinkoy-Aydi**	**2.86**	**3**	*e*Pn	**Pb**	**20 04 15.7**	**-2.7**
SUTC	**Sutluce-Ispart**	**3.59**	**47**	PN	**Pn**	**20 04 24.8**	**+1.8**
SUTC	**Sutluce-Ispart**	**3.59**	**47**	*e*Pn	**Pn**	**20 04 24.8**	**+1.8**

DJA 26 20:04:41.9±1.8, **2°.N**±6°.×**12°.5E**±°, **h117**km±24km, **M3.8**/4, **MLv3.8**/4, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**1.43**	**226**	P	Pn	20 05 08.6	+0.2
KMSI				S	Sn	20 05 28.7	+0.2
LBMI	**Labuha**	**3.31**	**131**	P	Pn	20 05 32.4	+0.2
LBMI				S	Sn	20 06 13.1	+2.0
SANI	**Sanana**	**3.72**	**165**	P	Pn	20 05 35.2	-2.5

*AUST **26** 20:07:02.0±0.0, 33°.33S×136°.98E, h15km, Error ellipse: s-maj=0.2km s-min=0.1km az=18.0*
*IDC **26** 20:07:17.7±7.0, 32°.22S×137°.62E, h0km, mb1 3.0/3, mb1mx3.0/41, mbtmp2.8/3, ML2.5/3, Error ellipse: s-maj=98.5km s-min=23.9km az=20.0*

ISC 26 20:06:58.4±0.9, **32°.8S**±0°.1×**137°.22E**±0°.04, **h10**km, **n8**, σ1§22/8, **Near coast of South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBOO	**Buckleboo**	**0.98**	**270**	P	**Pg**	**20 07 18.1**	**+0.9**
	baz=0.9						
BBOO				S	**Sg**	**20 07 29.5**	**-0.4**
	baz=0.9						
HTT	**Hallett**	**1.55**	**113**	P	**Pg**	**20 07 29.7**	**+1.4**
	baz=1.6						
STKA	**Stephens Creek**	**3.82**	**77**	Pn	**Pg**	**20 08 12.2**	**+0.5**
	0.1nm,0.3s,baz=261,slow=13,SNR=3.2						
STKA				Lg	Lg	20 09 05.8	
	0.2nm,0.3s,baz=259,slow=20,SNR=3.6						
STKA	**Stephens Creek**	**3.82**	**77**	P	**Pb**	**20 08 04.9**	**-1.1**
	baz=4.2						
ARPS	**Mount Arapiles**	**5.47**	**137**	P	**Pn**	**20 08 19.5**	**-0.5**
	baz=5.3						
FORT	**Forrest**	**8.06**	**282**	P	**Pn**	**20 08 54.7**	**-0.9**
	baz=8.0						
FORT				S	Sn	20 10 18.6	-8.1
	baz=8.0						
ASAR	**Alice Springs**	**9.58**	**341**	Pn	Pn	20 09 32.1	+16
	0.1nm,0.3s,baz=164,slow=11,SNR=5.1						
WRA	**Warramunga Arr**	**13.08**	**348**	Pn	**P**	**20 10 16.1**	**+1.3**
	0.1nm,0.3s,baz=161,slow=13,SNR=4.6						

DJA 26 20:10:07.2±1.1, **2°.N**±5°.×**9°.2E**±°, **h65**km±60km, **M4.3**/7, **mb4.4**/7, **MLv4.2**/5, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**5.01**	**38**	P	Pn	20 11 19.4	-0.6
BSI				S	Sn	20 12 18.3	+1.6
TPTI		**5.27**	**71**	P	Pn	20 11 23.5	+0.1
TPTI				S	Sn	20 12 25.3	+2.5
GSI	**Gunungsitoli**	**5.38**	**92**	P	Pn	20 11 23.8	-1.1
GSI				S	Sn	20 12 28.3	+2.7
KCSI	**Kotacane, Aceh**	**5.91**	**70**	P	Pn	20 11 33.7	+1.5
KCSI				S	Sn	20 12 41.4	+2.8
PBSI	**Pulau Batu**	**6.28**	**104**	P	Pn	20 11 35.5	-1.7
MNSI	**Mandailing Nat**	**7.41**	**95**	P	Pn	20 11 52.4	-0.4
KRJI	**Kerinci**	**9.93**	**111**	P	Pn	20 12 26.7	-0.6

MEX 26 20:23:48.9±0.5, **14°.61N×93°.15W, h13**km±73km, **MD3.7, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.91**	**71**	*e*P	Pg	20 24 03.4	-3.1
THIG				*e*S	Sg	20 24 14.8	-3.5
PCIG		**1.09**	**357**	*e*P	Pb	20 24 05.6	-4.1
PCIG				*i* S	Sb	20 24 19.5	-4.3
CCIG	**Comitan**	**1.93**	**30**	*e*P	Pn	20 24 17.4	-4.3
CCIG				*e*S	Sn	20 24 40.8	-5.0
TGIG		**2.16**	**1**	*e*P	Pn	20 24 22.3	-2.3
TGIG				*i* S	Sn	20 24 47.0	-4.3

MAN 26 20:41:31.5, 18°.15N×120°.07E, h1km, **mb4.6, ML3.5, MS3.4, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABRA	**Dolores**	**0.79**	**129**	*e*P	Pg	20 41 47.0	+0.4
ABRA				*e*S	Sg	20 41 55.8	-1.0
APYP	**Conner**	**1.15**	**104**	*e*P	Pg	20 41 53.2	-0.4
APYP				*e*S	Sg	20 42 08.0	-0.

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.98**	**79**	*i* P	Pb	20 52 38.0	-4.2
THIG				*i* S	Sb	20 52 50.6	-4.2
PCIG		**0.98**	**2**	*e*P	Pb	20 52 38.7	-3.5
PCIG				*e*S	Sb	20 52 50.6	-4.3
CCIG	**Comitan**	**1.89**	**35**	*e*P	Pn	20 52 52.9	-2.5
CCIG				*e*S	Sn	20 53 14.1	-5.0

*ISCJB **26** 20:58:35.1±1.7, 5.°6S±0.°3×151.°1E±0.°4, h35km, mb3.9/5, MS2.8/1, Error ellipse: s-maj=77.2km s-min=12.1km az=37.3*
*IDC **26** 20:58:36.5±5.7, 5.°81S×151.°38E, h43km±48km, mb3.7/5, mb1 4.1/6, mb1mx3.5/53, mbtmp4.1/6, ML2.6/1, MS2.8/2, Ms1 2.8/2, ms1mx2.4/39, Error ellipse: s-maj=71.3km s-min=31.0km az=124.0*

ISC 26 20:58:36.2±2.0, 5.°6S±0.°4×151.°2E±0.°5, h35km, n8, σ0§93/8, mb3.9/5, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.53**	**227**	P	**Pn**	**20 59 57.6**	**+1.5**
	13nm,0.3s,baz=47,slow=7.7,SNR=29						
PMG				S	**Sn**	**21 00 57.6**	**-1.0**
	2.7nm,0.3s,baz=299,slow=19,SNR=3.2						
PMG				LR	LR	21 02 21.2	
	comp=Z,57nm,18.7s,baz=101,slow=41						
WRA	**Warramunga Arr**	**21.75**	**228**	P	**P**	**21 03 24.2**	**-0.7**
	3.2nm,0.7s,baz=55,slow=11,SNR=22						
ASAR	**Alice Springs**	**24.52**	**221**	P	**P**	**21 03 52.0**	**-0.7**
	1.4nm,0.7s,baz=60,slow=8.9,SNR=16						
FITZ	**Fitzroy Crossi**	**27.91**	**241**	P	**P**	**21 04 23.1**	**-0.1**
	5.3nm,0.9s,baz=64,slow=9.4,SNR=8.4						
DAV	**Davao City (W)**	**28.54**	**296**	LR	LR	21 15 14.8	
	comp=Z,25nm,19.5s,baz=166,slow=35						
ZALV	**Zalesovo Beam**	**80.97**	**327**	P	**P**	**21 10 47.1**	**+0.1**
	0.5nm,0.4s,baz=108,slow=9.3,SNR=2.7						
ILAR	**Eielson Array**	**83.49**	**22**	P	**P**	**21 11 00.0**	**-0.1**
	0.7nm,0.6s,baz=253,slow=5.1,SNR=7.6						
TORD	**Torodi Ar. Bea**	**149.06**	**286**	PKPbc	**PKPbc**	**21 18 21.6**	**-0.3**
	1.8nm,0.7s,baz=81,slow=2.2,SNR=14						

*ISCJB **26** 21:03:42.1±0.5, 29.°93S±0.°08×111.°93W±0.°10, h10km, mb4.5/33, MS4.2/26, Error ellipse: s-maj=13.6km s-min=9.4km az=36.9*
*IDC **26** 21:03:42.6±0.6, 29.°83S×111.°94W, h0km, mb4.1/8, mb1 4.3/9, mb1mx4.0/43, mbtmp4.0/9, ML3.5/1, MS4.2/26, Ms1 4.2/26, ms1mx4.1/34, Error ellipse: s-maj=21.4km s-min=18.7km az=108.0*
*NEIC **26** 21:03:43.7±0.3, 29.°98S×111.°80W, h10km, mb4.7/28, Error ellipse: s-maj=13.5km s-min=10.0km az=102.0*
*GCMT **26** 21:03:43.7±0.3, 30.°05S×111.°87W, h24km±1km, MW5.0/70, Moment Tensor Solution. s29,c31; s70,c97; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.61±.18; $M_{\theta\theta}$-3.30±.16; $M_{\phi\phi}$3.91±.15; $M_{r\theta}$-0.79±.24; $M_{\theta\phi}$-0.50±.15; $M_{r\phi}$0.39±.20; Best double couple: $M_0$3.76100×10^{16} NP1:ϕ_s132.00000°, δ84.00000°, λ-165.00000°. NP2: ϕ_s40.00000°, δ76.00000°, λ-7.00000°. Principal axes: T 3.9880, Plg6.0000°, Azm265.0000°; N -0.4570, Plg74.0000°, Azm155.0000°; P -3.5340, Plg15.0000°, Azm357.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 26 21:03:44.0±0.5, 29.°9S±0.°1×111.°9W±0.°1, h10km, n91, σ1§00/67, mb4.7/33, MS4.2/26, Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**3.59**	**40**	Pn	**Pn**	**21 04 40.4**	**+0.7**
	4.2nm,0.3s,baz=219,slow=13,SNR=2.0						
RPN				LR	LR	21 05 02.9	
	comp=Z,146nm,18.1s,baz=223,slow=23						
RPN				Sn	**Sn**	**21 05 23.0**	**+0.7**
	3.4nm,0.3s,baz=276,slow=10,SNR=5.1						
RKT	**Rikitea**	**21.69**	**283**	*e*LR	LR	21 13 40.9	
	924nm,29.0s						
RKT	**Rikitea**	**21.69**	**283**	*e*T	T	21 30 32.4	
	4.2nm,0.4s						
TAOE	**Nuku Hiva Isla**	**33.72**	**303**	*e*LR	LR	21 19 16.7	
	523nm,26.1s						
TBI	**Tubuai**	**34.08**	**272**	*e*LR	LR	21 19 25.0	
	1μm,26.5s,baz=106						
PLCA	**Paso Flores**	**35.14**	**119**	P	**P**	**21 10 38.6**	**+0.8**
	7.3nm,1.0s,baz=288,slow=11,SNR=5.4						
PLCA				LR	LR	21 21 15.9	
	comp=Z,363nm,19.4s,baz=296,slow=30						
PLCA	**Paso Flores**	**35.14**	**119**	*e*P	**P**	**21 10 37.6**	**-0.3**
	14nm,1.1s						
PPT2	**Papeete2**	**36.42**	**281**	*e*LQ	LQ	21 19 04.6	
	529nm,26.8s						
PPT2				*e*LR	LR	21 20 25.7	
	1μm,26.8s,baz=109						
PPT	**Papeete**	**36.44**	**281**	LR	LR	21 22 31.7	
	comp=Z,133nm,18.4s,baz=148,slow=31						
LPAZ	**La Paz**	**42.25**	**81**	P	**P**	**21 11 39.0**	**+0.7**
	3.2nm,0.9s,baz=257,slow=7.4,SNR=9.1						
LPAZ				LR	LR	21 25 05.9	
	comp=Z,326nm,19.1s,baz=268,slow=30						
LPAZ	**La Paz**	**42.25**	**81**	*e*P	**P**	**21 11 38.5**	**+0.1**
	7.7nm,1.2s						
RAR	**Rarotonga**	**43.77**	**270**	P	**P**	**21 11 50.5**	**+0.5**
	14nm,0.5s,baz=107,slow=11,SNR=3.6						
RAR				LR	LR	21 24 52.6	
	comp=Z,364nm,20.3s,baz=114,slow=29						
RAR	**Rarotonga**	**43.77**	**270**	*e*P	**P**	**21 11 50.5**	**+0.5**
	18nm,0.6s						
PMSA	**Palmer Station**	**45.73**	**154**	LR	LR	21 26 29.9	
	comp=Z,208nm,19.7s,baz=292,slow=30						
JTS	**JuntasAbangare**	**47.67**	**37**	LR	LR	21 26 58.5	
	comp=Z,162nm,20.2s,baz=280,slow=29						
CPUP	**Villa Florida**	**47.90**	**100**	LR	LR	21 29 06.8	
	comp=Z,314nm,19.1s,baz=261,slow=32						
SAML	**Samuel**	**50.03**	**76**	*e*P	**P**	**21 12 36.5**	**-2.5**
	3.4nm,0.9s						
HELC	**Santa Helena**	**50.08**	**50**	*e*P	**P**	**21 12 39.5**	**-0.3**
	22nm,1.2s						
LPIG	**La Paz**	**53.74**	**2**	LR	LR	21 30 39.2	
	comp=Z,241nm,20.3s,baz=220,slow=30						
LNIG	**Linares**	**55.80**	**14**	*e*P	**P**	**21 13 20.8**	**-0.6**
	4.3nm,0.9s						
HPIG		**56.85**	**7**	*e*P	**P**	**21 13 29.6**	**+0.6**
	4.3nm,1.0s						
AFI	**Afiamalu**	**57.19**	**272**	LR	LR	21 33 11.2	
	comp=Z,157nm,18.8s,baz=132,slow=31						
TX31	**Lajitas Ar. Si**	**59.45**	**8**	*e*P	**P**	**21 13 47.1**	**0.0**
TXAR	**Lajitas Array**	**59.45**	**8**	P	**P**	**21 13 46.9**	**-0.2**
	0.2nm,0.7s,baz=185,slow=12,SNR=3.5						
TXAR				LR	LR	21 34 34.0	
	comp=Z,104nm,20.1s,baz=0.0,slow=31						
VNDA	**Vanda**	**60.21**	**194**	P	**P**	**21 13 53.1**	**+1.5**
	0.8nm,0.9s,baz=101,slow=5.4,SNR=3.3						
VNDA				LR	LR	21 35 16.5	
	comp=Z,184nm,18.2s,baz=91,slow=31						
PCRV	**Puerto La Cruz**	**60.48**	**56**	LR	LR	21 36 33.2	
	comp=Z,135nm,20.1s,baz=205,slow=33						
319A	**Douglas**	**61.01**	**3**	*e*P	**P**	**21 13 58.8**	**+1.0**
	5.7nm,0.8s						
JCT	**Junction City**	**61.16**	**12**	*e*P	**P**	**21 13 58.2**	**-0.5**
	17nm,1.2s						
HKT	**Hockley**	**61.48**	**16**	*e*P	**P**	**21 14 01.7**	**+1.0**
	7.1nm,1.2s						
X18A	**Snowflake**	**64.13**	**2**	*e*P	**P**	**21 14 19.1**	**+0.5**
	3.9nm,0.7s						
MSTX	**Muleshoe**	**64.13**	**8**	*e*P	**P**	**21 14 17.0**	**-1.5**
	20nm,1.2s						
ANMO	**Albuquerque**	**64.72**	**5**	LR	LR	21 37 50.7	
	comp=Z,150nm,18.1s,baz=226,slow=32						
U15A	**North Rim**	**66.00**	**360**	*e*P	**P**	**21 14 31.9**	**+1.0**
	5.2nm,1.1s						
DAC	**Darwin (Calif)**	**66.06**	**355**	*e*P	**P**	**21 14 32.6**	**+1.5**
	2.2nm,0.8s						
MVCO	**Mesa Verde**	**66.86**	**3**	*e*P	**P**	**21 14 36.3**	**0.0**
	8.9nm,1.1s						
CCUT	**Cedar City**	**67.13**	**359**	*e*P	**P**	**21 14 39.2**	**+1.2**
	7.1nm,1.2s						
SZCU	**Shurtz Canyon**	**67.17**	**359**	*e*P	**P**	**21 14 39.4**	**+1.1**
	8.5nm,1.3s						
W41B	**Gary Mavity, V**	**67.35**	**17**	*e*P	**P**	**21 14 39.0**	**-0.1**
	18nm,1.2s						
SNAA	**Sanae**	**67.60**	**161**	P	**P**	**21 14 40.4**	**-0.1**
	1.1nm,0.6s,baz=231,slow=5.5,SNR=4.2						
SNAA				LR	LR	21 38 08.5	
	comp=Z,78nm,21.7s,baz=204,slow=30						
SNAA	**Sanae**	**67.60**	**161**	*e*P	**P**	**21 14 39.6**	**-0.9**
	8.4nm,0.9s						
NV11	**Mina Array Sit**	**68.25**	**355**	*e*P	**P**	**21 14 44.1**	**-0.8**
	0.4nm,1.0s						
NV01	**Mina Array Sit**	**68.26**	**355**	*e*P	**P**	**21 14 46.4**	**+1.3**
NVAR	**Mina Array Bea**	**68.26**	**355**	P	**P**	**21 14 45.6**	**+0.5**
	0.7nm,0.6s,baz=181,slow=8.0,SNR=7.9						
NVAR				LR	LR	21 38 13.0	
	comp=Z,271nm,20.1s,baz=198,slow=30						
SRU	**San Rafael Swe**	**68.69**	**1**	*e*P	**P**	**21 14 47.8**	**+0.1**
	5.6nm,0.9s						
KVN	**Kaiserville**	**68.86**	**355**	*e*P	**P**	**21 14 50.0**	**+1.2**
	6.0nm,1.1s						
BMN	**Battle Mountai**	**70.17**	**356**	*e*P	**P**	**21 14 54.7**	**-2.1**
	7.8nm,1.1s						
TKL	**Tuckaleechee C**	**70.41**	**24**	LR	LR	21 42 03.2	
	comp=Z,60nm,18.8s,baz=222,slow=33						
RWWY	**Rawlins**	**71.39**	**4**	*e*P	**P**	**21 15 05.2**	**+0.8**
	46nm,1.0s						
MOD	**Modoc Plateau**	**71.88**	**353**	*e*P	**P**	**21 15 07.0**	**-0.2**
	11nm,1.5s						
YBH	**Yreka Blue Hor**	**71.99**	**352**	LR	LR	21 39 39.4	
	comp=Z,267nm,20.2s,baz=172,slow=30						
PDAR	**Pinedale Array**	**72.36**	**2**	P	**P**	**21 15 09.4**	**-0.7**
	1.0nm,0.8s,baz=188,slow=5.0,SNR=6.8						
PDAR				LR	LR	21 41 45.0	
	comp=Z,150nm,19.9s,baz=180,slow=32						
PDAR	**Pinedale Array**	**72.36**	**2**	*e*P	**P**	**21 15 08.6**	**-1.6**
DZM	**Mont Dzumac**	**72.39**	**254**	LR	LR	21 39 13.8	
	comp=Z,292nm,21.2s,baz=104,slow=29						
DZM	**Mont Dzumac**	**72.39**	**254**	*e*LR	LR	21 37 22.4	
	584nm,25.3s						
HLID	**Hailey**	**73.16**	**358**	*e*P	**P**	**21 15 15.2**	**+0.4**
	9.6nm,1.4s						
FXWY	**Fox Creek**	**73.20**	**1**	*e*P	**P**	**21 15 15.2**	**0.0**
	5.7nm,1.3s						
F36A	**Milaca**	**77.25**	**13**	*e*P	**P**	**21 15 38.9**	**+0.8**
	8.6nm,1.0s						
MAW	**Mawson**	**82.70**	**178**	LR	LR	21 50 24.8	
	comp=Z,188nm,18.1s,baz=230,slow=34						
HNR	**Honiara**	**83.76**	**263**	LR	LR	21 45 09.3	
	comp=Z,107nm,20.0s,baz=140,slow=30						
FFC	**Flin Flon**	**84.73**	**6**	*e*P	**P**	**21 16 16.9**	**-0.9**
	5.5nm,1.0s						
STKA	**Stephens Creek**	**87.06**	**235**	LR	LR	21 47 10.7	
	comp=Z,78nm,21.5s,baz=129,slow=30						
SCHQ	**Schefferville**	**92.88**	**24**	LR	LR	21 53 54.2	
	comp=Z,135nm,20.9s,baz=342,slow=32						
KDAK	**Kodiak Island**	**93.80**	**340**	LR	LR	21 49 01.4	
	comp=Z,138nm,21.4s,baz=119,slow=29						
PMG	**Port Moresby**	**94.69**	**256**	LR	LR	21 51 44.7	
	comp=Z,156nm,21.8s,baz=164,slow=30						
ASAR	**Alice Springs**	**97.35**	**238**	LR	LR	21 54 42.7	
	comp=Z,74nm,19.3s,baz=138,slow=31						
H01W1	**Cape Leeuwin H**	**102.27**	**217**	T	T	23 12 08.3	
	baz=138						
H01W2	**Cape Leeuwin H**	**102.27**	**217**	T	T	23 12 07.3	
	baz=138						
H01W3	**Cape Leeuwin H**	**102.28**	**217**	T	T	23 12 10.3	
	baz=138						
MLR	**Muntele Rosu**	**143.67**	**53**	PKP	PKPbc	21 23 16.6	0.0
	0.8nm,0.9s,baz=342,slow=1.9,SNR=4.6						
AKASG	**Malin Array Be**	**144.38**	**43**	PKP	**PKPab**	**21 23 17.8**	**-0.4**
	0.6nm,0.4s,baz=300,slow=2.1,SNR=6.3						
AKBB	**Malin Array Si**	**144.38**	**43**	*e*PKPdf	**PKPab**	**21 23 17.4**	**-0.8**
ULN	**Ulaanbaatar**	**145.22**	**312**	*e*PKPbc	**PKPab**	**21 23 21.6**	**0.0**
SONA1	**Songino Array**	**145.65**	**312**	*e*PKPdf	**PKPdf**	**21 23 22.3**	**-0.3**
SONA0	**Songino Array**	**145.66**	**312**	*e*PKPdf	**PKPdf**	**21 23 21.7**	**-0.9**
SONM	**Songino Array**	**145.66**	**312**	PKPbc	**PKPdf**	**21 23 21.7**	**-0.9**
	0.8nm,0.7s,baz=90,slow=1.4,SNR=6.0						
CM01	**Chiang Mai Arr**	**149.69**	**255**	*e*PKPbc	**PKPbc**	**21 23 35.7**	**+1.2**
CM31	**Chiang Mai Arr**	**149.72**	**255**	*e*PKPbc	**PKPbc**	**21 23 36.2**	**+1.5**
CMAR	**Chiang Mai Arr**	**149.72**	**255**	PKPbc	**PKPbc**	**21 23 36.2**	**+1.5**
	4.1nm,1.0s,baz=219,slow=0.6,SNR=12						
CHTO	**Chiang Mai**	**149.88**	**256**	*e*PKPdf	**PKPdf**	**21 23 30.2**	**0.0**
CHTO				*e*PKPbc	**PKiKP**	**21 23 35.8**	**-0.2**
BR101	**Keskin Array S**	**150.24**	**61**	*e*PKPbc	**PKPbc**	**21 23 35.2**	**-0.2**
BR131	**Keskin Array S**	**150.24**	**61**	*e*PKPbc	**PKPbc**	**21 23 34.9**	**-0.6**
BRTR	**Keskin Array B**	**150.24**	**61**	PKPbc	**PKPbc**	**21 23 35.2**	**-0.2**
	1.5nm,1.0s,baz=230,slow=1.0,SNR=8.2						
ZAA1	**Zalesovo Array**	**153.09**	**338**	*e*PKPdf	**PKPdf**	**21 23 34.3**	**+0.4**
ZALV	**Zalesovo Beam**	**153.09**	**338**	PKP	**PKPdf**	**21 23 34.3**	**+0.3**
	0.2nm,0.4s,baz=349,slow=1.5,SNR=3.7						
ZALV	**Zalesovo Beam**	**153.09**	**338**	*e*PKPdf	**PKPdf**	**21 23 33.3**	**-0.6**
KBZ	**Khabaz**	**155.70**	**49**	PKP	**PKPdf**	**21 23 38.8**	**+0.9**
	0.8nm,0.5s,baz=252,slow=3.2,SNR=2.2						
KURK	**Kurchatov**	**157.77**	**342**	*e*PKPdf	**PKPdf**	**21 23 39.8**	**-0.6**
KURBB	**Kurchatov Arra**	**157.88**	**342**	PKP	**PKPdf**	**21 23 39.8**	**-0.7**
	0.3nm,0.4s,baz=0.0,slow=1.9,SNR=4.2						
ABKAR	**Akbulak array**	**159.72**	**16**	*e*PKPdif	PKPdf	21 23 52.5	+10
ABKAR				*e*PKPab	**PKPab**	**21 24 21.6**	**+0.2**
MK32	**Makanchi Array**	**159.86**	**331**	*e*PKPdf	**PKPdf**	**21 23 42.0**	**-1.1**
MK32				*e*PKPab	**PKPab**	**21 24 19.6**	**-2.6**
MKAR	**Makanchi Array**	**159.86**	**331**	PKP	**PKPdf**	**21 23 42.0**	**-1.1**
	0.7nm,1.0s,baz=153,slow=0.3,SNR=3.5						
MKAR				PKPab	**PKPab**	**21 24 19.6**	**-2.6**
	0.6nm,0.9s,baz=56,slow=3.6,SNR=2.6						

*ISCJB **26** 21:17:12.4±1.0, 13.°62S±0.°09×76.°3W±0.°1, h55km, mb4.2/2, Error ellipse: s-maj=19.5km s-min=6.0km az=142.9*
*NEIC **26** 21:17:14.0±0.0, 13.°51S×76.°21W, h48km, mb3.7/2, ML4.3(ARE), After ARE.*
NEIC Felt [III] at Chincha Alta and Pisco. Also felt at Lima.
*IDC **26** 21:17:17.9±2.9, 13.°08S×76.°01W, h68km±17km, mb4.0/2, mb1 4.1/3, mb1mx3.4/39, mbtmp4.3/3, Error ellipse: s-maj=74.8km s-min=14.5km az=38.0*

ISC 26 21:17:14.0±0.9, 13.°56S±0.°09×76.°3W±0.°1, h55km, n22, σ1§59/24, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**1.64**	**342**	P	**Pn**	**21 17 40.7**	**+0.1**
	35nm,0.3s,baz=142,slow=12,SNR=33						
NNA				S	**Sn**	**21 17 58.3**	**-2.3**
	139nm,0.3s,baz=212,slow=15,SNR=14						
LPAZ	**La Paz**	**8.38**	**110**	P	**Pn**	**21 19 16.6**	**+3.2**
	2.1nm,0.3s,baz=259,slow=8.4,SNR=38						
LPAZ				S	**Sn**	**21 20 48.0**	**+1.0**
	0.1nm,0.3s,baz=186,slow=19,SNR=1.8						
LPAZ	**La Paz**	**8.38**	**110**	*e*Pn	**Pn**	**21 19 17.1**	**+3.6**
LPAZ				*e*Sn	**Sn**	**21 20 48.0**	**+1.0**
MNMC	**Minye Minye**	**8.52**	**131**	*e*Pn	**Pn**	**21 19 15.5**	**+0.5**
MNMC				*e*Sn	**Sn**	**21 20 49.4**	**-0.4**
PB01	**IPOC Station P**	**9.90**	**140**	*e*Pn	**Pn**	**21 19 33.6**	**-0.2**
PB01				*e*Sn	**Sn**	**21 21 2.2**	**-2.3**
SAML	**Samuel**	**13.69**	**72**	*e*Pn	**Pn**	**21 20 23.6**	**-1.8**
RUSC	**La Rusia**	**19.60**	**10**	*e*P	**Pn**	**21 21 40.8**	**+0.7**
	2.7nm,0.8s						
PTGA	**Pitinga**	**20.62**	**53**	*e*P	**P**	**21 21 49.7**	**+0.7**
	4.5nm,0.9s						
TX31	**Lajitas Ar. Si**	**50.15**	**329**	*e*P	**P**	**21 26 05.8**	**+1.6**
KOWA	**Kowa**	**76.81**	**71**	P	**P**	**21 28 58.9**	**-1.7**
	1.4nm,0.7s,baz=270,slow=8.1,SNR=4.4						
TOA1	**Torodi Ar. Sit**	**81.73**	**74**	*e*P	**P**	**21 29 28.1**	**+0.7**
TOA0	**Torodi Ar. Sit**	**81.73**	**74**	*e*P	**P**	**21 29 28.0**	**+0.6**
TORD	**Torodi Ar. Bea**	**81.73**	**74**	P	**P**	**21 29 28.1**	**+0.7**
	2.8nm,0.8s,baz=261,slow=4.6,SNR=11						
H11N3	**WAKE ISLAND Hyl**	**19.38**	**285**	T	T	23 46 24.5	
	baz=96,slow=74,SNR=15						
H11N2	**WAKE ISLAND Hyl**	**19.39**	**285**	T	T	23 46 20.6	
	baz=96,slow=74,SNR=14						
H11N1	**WAKE ISLAND Hyl**	**19.39**	**285**	T	T	23 46 17.0	
	baz=96,slow=74,SNR=7.5						
WR1	**Warramunga Arr**	**135.06**	**223**	*e*PKPdf	**PKPdf**	**21 36 29.2**	**+1.1**
WRA	**Warramunga Arr**	**135.06**	**223**	PKP	**PKPdf**	**21 36 29.2**	**+1.1**
	0.3nm,0.7s,baz=126,slow=1.8,SNR=3.0						
SONA1	**Songino Array**	**145.74**	**357**	*e*PKPdf	**PKPbc**	**21 36 48.2**	**+1.1**
SONA0	**Songino Array**	**145.76**	**357**	*e*PKPdf	**PKPab**	**21 36 48.4**	**+0.8**
SONM	**Songino Array**	**145.76**	**357**	PKPbc	**PKPab**	**21 36 48.4**	**+0.8**
	1.2nm,0.8s,baz=351,slow=1.6,SNR=7.9						
CD2	**Chengdu**	**162.73**	**360**	PKP	**PKPdf**	**21 37 09.8**	**-0.8**

*ISCJB **26** 21:32:42.6±0.5, 40.°8S±0.°1×44.°5E±0.°1, h12km, mb4.0/12, MS3.4/4, Error ellipse: s-maj=17.0km s-min=11.1km az=31.5*
*IDC **26** 21:32:42.7±0.7, 40.°84S×44.°63E, h0km, mb3.9/10, mb1 4.1/10, mb1mx3.7/61, mbtmp3.9/10, MS3.5/5, Ms1 3.5/5, ms1mx3.0/50, Error ellipse: s-maj=27.1km s-min=19.9km az=50.0*
*NEIC **26** 21:32:44.1±0.4, 40.°82S×44.°58E, h10km, mb4.5/7, Error ellipse: s-maj=14.2km s-min=9.3km az=210.0*

ISC 26 21:32:44.5±0.7, 40.°9S±0.°1×44.°6E±0.°1, h12km, n27, σ0§87/23, mb4.0/12, MS3.4/4, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	**Boshof**	**19.98**	**302**	P	**P**	**21 37 15.9**	**-0.9**
	5.1nm,1.2s,baz=145,slow=16,SNR=2.0						
BOSA				LR	LR	21 43 34.2	
	comp=Z,146nm,20.7s,baz=147,slow=33						
SUR	**Sutherland**	**20.82**	**286**	LR	LR	21 43 50.4	
	comp=Z,134nm,18.7s,baz=124,slow=32						
SUR	**Sutherland**	**20.82**	**286**	*e*P	**P**	**21 37 24.8**	**-1.2**
	61nm,1.4s						
LBTB	**Lobatse**	**22.36**	**309**	P	**P**	**21 37 42.3**	**-0.2**
	2.6nm,0.7s,baz=177,slow=8.8,SNR=3.0						
LBTB				LR	LR	21 44 58.1	
	comp=Z,141nm,20.0s,baz=142,slow=33						
LBTB	**Lobatse**	**22.36**	**309**	*e*P	**P**	**21 37 42.3**	**-0.2**
	17nm,1.3s						
SNAA	**Sanae**	**38.69**	**202**	P	**P**	**21 40 07.8**	**0.0**
	1.2nm,0.5s,baz=35,slow=12,SNR=4.4						
SNAA				LR	LR	21 52 14.7	
	comp=Z,41nm,21.2s,baz=174,slow=30						
SNAA	**Sanae**	**38.69**	**202**	*e*P	**P**	**21 40 07.8**	**0.0**
	4.3nm,1.1s						
QSPA	**South Pole Qui**	**49.35**	**180**	P	**P**	**21 41 33.4**	**0.0**
	2.4nm,0.8s,baz=268,slow=8.1,SNR=7.7						
QSPA	**South Pole Qui**	**49.35**	**180**	*e*P	**P**	**21 41 33.2**	**-0.2**
	5.8nm,1.0s						
H01W2	**Cape Leeuwin H**	**53.92**	**108**	T	T	22 40 06.2	
	baz=241,slow=75,SNR=17						
H01W3	**Cape Leeuwin H**	**53.92**	**108**	T	T	22 40 06.7	
	baz=241,slow=75,SNR=24						
H01W1	**Cape Leeuwin H**	**53.93**	**108**	T	T	22 40 07.3	
	baz=241,slow=75,SNR=22						
VNDA	**Vanda**	**55.92**	**166**	P	**P**	**21 42 21.4**	**-0.3**
	0.7nm,1.1s,baz=255,slow=5.7,SNR=3.5						
VNDA				LR	LR	22 04 13.0	
	comp=Z,48nm,20.2s,baz=212,slow=34						
TORD	**Torodi Ar. Bea**	**66.79**	**314**	P	**P**	**21 43 36.7**	**+0.7**
	0.5nm,0.8s,baz=152,slow=6.3						
TOA1	**Torodi Ar. Sit**	**66.80**	**314**	*e*P	**P**	**21 43 36.7**	**+0.7**
ASAR	**Alice Springs**	**74.43**	**108**	P	**P**	**21 44 22.8**	**+0.1**
	1.7nm,0.9s,baz=231,slow=5.3,SNR=5.7						
AS31	**Alice Springs**	**74.44**	**108**	*e*P	**P**	**21 44 22.8**	**+0.1**
	1.9nm,1.3s						
AS01	**Alice Springs**	**74.47**	**108**	*e*P	**P**	**21 44 23.5**	**+0.6**
WR1	**Warramunga Arr**	**77.06**	**105**	*e*P	**P**	**21 44 38.4**	**+0.7**
	10nm,1.4s						
WRA	**Warramunga Arr**	**77.06**	**105**	P	**P**	**21 44 38.4**	**+0.7**
	2.2nm,0.8s,baz=228,slow=4.5,SNR=9.9						
WB2	**Warramunga Arr**	**77.06**	**105**	*e*P	**P**	**21 44 37.9**	**+0.2**
	8.3nm,1.0s						
CM01	**Chiang Mai Arr**	**77.59**	**52**	*e*P	**P**	**21 44 38.7**	**-1.9**
CM31	**Chiang Mai Arr**	**77.61**	**52**	*e*P	**P**	**21 44 39.3**	**-1.4**
CMAR	**Chiang Mai Arr**	**77.61**	**52**	P	**P**	**21 44 39.3**	**-1.4**
	0.8nm,0.5s,baz=231,slow=5.7,SNR=3.7						
MK32	**Makanchi Array**	**93.50**	**25**	*e*P	**P**	**21 46 00.5**	**+0.9**
MKAR	**Makanchi Array**	**93.50**	**25**	P	**P**	**21 46 00.5**	**+0.9**
	0.3nm,0.8s,baz=209,slow=4.8,SNR=3.3						
TXAR	**Lajitas Array**	**151.74**	**256**	PKPbc	**PKPbc**	**21 52 40.2**	**+1.1**
	0.4nm,0.7s,baz=123,slow=4.6,SNR=6.4						

*MOS **26** 21:33:52.9±1.3, 43.°46N×39.°40E, h12km, mb4.2/7, Error ellipse: s-maj=5.8km s-min=4.5km az=34.1*
MOS Felt (III) at Sochi.
*IDC **26** 21:33:52.5±0.6, 43.°42N×39.°48E, h0km, mb3.8/8, mb1 3.8/18, mb1mx3.6/67, mbtmp3.7/18, ML3.5/10, MS3.1/11, Ms1 3.1/11, ms1mx2.7/62, Error ellipse: s-maj=10.6km s-min=5.9km az=173.0*
*CSEM **26** 21:33:54.5±0.1, 43.°43N×39.°45E, h10km, mb3.7/6, Error ellipse: s-maj=4.4km s-min=3.3km az=18.0*
*DDA **26** 21:33:55.7, 42.°90N×39.°51E, h7km, Ml4.2*

ISC 26 21:33:54.6±0.8, 43.°42N±0.°03×39.°49E±0.°02, h10km±5km, n199, σ1§87/247, mb3.9/10, MS3.9/4, 20C-17D, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOC	**Sochi**	**0.23**	**46⇓**	*i*PG	**Pg**	**21 33 57.6**	**-1.8**
**

NCK	**Nalchik**	**2.99**	**87**	*i* PN	**Pn**	**21 34 42.7**	**+0.6**
NCK	**Nalchik**	**2.99**	**87**	*i* Pn	**Pn**	**21 34 42.7**	**+0.6**
DDEM	**Demirkent**	**3.04**	**146**	*i* P	**Pn**	**21 34 42.4**	**-0.4**
DDEM	**Demirkent**	**3.04**	**146**	P	**Pn**	**21 34 42.4**	**-0.4**
DIGR	**Digorskoe uzhe**	**3.04**	**99**	*e*PN	**Pb**	**21 34 48.8**	**-0.1**
DIGR				pmax	pmax		
	comp=Z,27nm,1.1s						
DIGR	**Digorskoe uzhe**	**3.04**	**99**	*e*Pn	**Pb**	**21 34 48.8**	**-0.1**
	comp=Z,27nm,1.1s						
SAMS	**Samsun-Alacam**	**3.20**	**231**	*i* P	**Pn**	**21 34 44.7**	**-0.2**
SAMS	**Samsun-Alacam**	**3.20**	**231**	P	**Pn**	**21 34 44.7**	**-0.2**
KELT	**Kelkit**	**3.28**	**183**	*i* P	**Pn**	**21 34 46.2**	**0.0**
KELT				*i* S	**Sn**	**21 35 26.9**	**+1.5**
KELT	**Kelkit**	**3.28**	**183**	P	**Pn**	**21 34 46.2**	**0.0**
KELT				S	**Sn**	**21 35 26.9**	**+1.5**
ZEI	**Tsey**	**3.29**	**100**	*e*PN	**Pn**	**21 34 48.6**	**+2.1**
ZEI				pmax	pmax		
	comp=Z,55nm,0.6s						
ZEI	**Tsey**	**3.29**	**100**	*e*Pn	**Pn**	**21 34 48.6**	**+2.1**
	comp=Z,55nm,0.6s						
STDR	**Stavd-Durt**	**3.33**	**89**	*e*PN	**Pg**	**21 34 56.8**	**-1.7**
STDR				S	**Sg**	**21 35 41.6**	**-0.1**
STDR				pmax	pmax		
	comp=Z,56nm,1.3s						
STDR				smax	smax		
	comp=N,126nm,1.2s						
STDR	**Stavd-Durt**	**3.33**	**89**	*e*Pn	**Pg**	**21 34 56.8**	**-1.7**
	comp=N,56nm,1.3s						
STDR				Sb	**Sg**	**21 35 41.6**	**-0.1**
	comp=N,126nm,1.2s						
SUSE	**Susehri**	**3.35**	**197**	*i* P	**Pn**	**21 34 45.9**	**-1.4**
SUSE				*i* S	**Sn**	**21 35 28.0**	**+0.8**
ERBA	**Erbaa**	**3.41**	**218**	*i* P	**Pn**	**21 34 47.4**	**-0.5**
ERBA	**Erbaa**	**3.41**	**218**	P	**Pn**	**21 34 47.4**	**-0.5**
SINO	**SINOP_Merkez**	**3.46**	**247**	*i* P	**Pn**	**21 34 48.6**	**+0.1**
SINO	**SINOP_Merkez**	**3.46**	**247**	P	**Pn**	**21 34 48.6**	**+0.1**
KVT	**Kavak**	**3.46**	**229**	PN	**Pn**	**21 34 48.6**	**-0.1**
KVT	**Kavak**	**3.46**	**229**	Pn	**Pn**	**21 34 48.6**	**-0.1**
KOPT	**Kop Dagi**	**3.49**	**167**	*i* P	**Pn**	**21 34 50.5**	**+1.3**
KOPT	**Kop Dagi**	**3.49**	**167**	P	**Pn**	**21 34 50.5**	**+1.3**
PRTR	**Priterechnaya**	**3.50**	**83**	*e*PN	**Pb**	**21 34 58.9**	**+2.3**
PRTR				S	**Sg**	**21 35 50.5**	**+3.6**
PRTR				pmax	pmax		
	comp=Z,155nm,0.8s						
PRTR				smax	smax		
	comp=N,155nm,0.8s						
PRTR	**Priterechnaya**	**3.50**	**83**	*e*Pn	**Pb**	**21 34 58.9**	**+2.3**
	comp=N,155nm,0.8s						
PRTR				Sg	**Sg**	**21 35 50.5**	**+3.6**
	comp=N,155nm,0.8s						
SUDU	**Sudak**	**3.55**	**296**	*i* PN	**Pn**	**21 34 49.8**	**+0.1**
SUDU				*e*S	**Sn**	**21 35 32.7**	**+1.0**
SUDU	**Sudak**	**3.55**	**296**	*i* Pn	**Pn**	**21 34 49.8**	**+0.1**
SUDU				*e*Sn	**Sn**	**21 35 32.7**	**+1.0**
LACR	**Lac**	**3.57**	**98**	*e*PN	**Pb**	**21 35 00.4**	**+2.5**
LACR				S	**Sg**	**21 35 51.6**	**+2.3**
LACR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
LACR				smax	smax		
	comp=N,14nm,1.2s						
LACR	**Lac**	**3.57**	**98**	*e*Pn	**Pb**	**21 35 00.4**	**+2.5**
	comp=N,9.0nm,1.0s						
LACR				Sg	**Sg**	**21 35 51.6**	**+2.3**
	comp=N,14nm,1.2s						
AKH	**Akhalkalaki**	**3.58**	**123**	P	**Pn**	**21 34 51.1**	**+0.7**
AKH	**Akhalkalaki**	**3.58**	**123**	⇓*i*P	**Pn**	**21 34 51.6**	**+1.2**
AKH				S	**Sn**	**21 35 35.7**	**+2.8**
AKH	**Akhalkalaki**	**3.58**	**123**	*e*PN	**Pn**	**21 34 51.1**	**+0.7**
AKH	**Akhalkalaki**	**3.58**	**123**	*e*Pn	**Pn**	**21 34 51.1**	**+0.7**
AKH	**Akhalkalaki**	**3.58**	**123**	⇓*i*P	**Pn**	**21 34 51.6**	**+1.2**
AKH				S	**Sn**	**21 35 35.7**	**+2.8**
HAVZ	**Havza**	**3.65**	**231**	*i* P	**Pn**	**21 34 51.6**	**+0.4**
HAVZ	**Havza**	**3.65**	**231**	P	**Pn**	**21 34 51.6**	**+0.4**
EZC	**Erzincan**	**3.67**	**182**	PN	**Pn**	**21 34 53.8**	**+2.2**
EZC	**Erzincan**	**3.67**	**182**	Pn	**Pn**	**21 34 53.8**	**+2.2**
EUZM	**Uzumlu**	**3.72**	**177**	*i* P	**Pn**	**21 34 53.1**	**+0.9**
EUZM				*i* S	**Sn**	**21 35 39.5**	**+3.4**
EUZM	**Uzumlu**	**3.72**	**177**	P	**Pn**	**21 34 53.1**	**+0.9**
EUZM				S	**Sn**	**21 35 39.5**	**+3.4**
BGD	**Bogdanovka**	**3.73**	**124**	P	**Pn**	**21 34 52.7**	**+0.2**
GUDG	**Gudauri**	**3.79**	**103**	P	**Pn**	**21 34 49.1**	**-4.2**
ALU	**Alushta**	**3.88**	**291**	*e*PN	**Pn**	**21 34 54.8**	**+0.6**
ALU				*e*S	**Sn**	**21 35 40.9**	**+1.1**
ALU	**Alushta**	**3.88**	**291**	*e*Pn	**Pn**	**21 34 54.8**	**+0.6**
ALU				*e*Sn	**Sn**	**21 35 40.9**	**+1.1**
YAL	**Yalta**	**4.00**	**287**	*e*PN	**Pn**	**21 34 55.5**	**-0.4**
YAL				*e*S	**Sn**	**21 35 42.1**	**-0.6**
YAL	**Yalta**	**4.00**	**287**	*e*Pn	**Pn**	**21 34 55.5**	**-0.4**
YAL				*e*Sn	**Sn**	**21 35 42.1**	**-0.6**
REFA	**Refahiye_ERZ¯**	**4.06**	**188**	*i* P	Pn	21 34 50.3	-6.7
REFA				*i* S	Sn	21 35 34.7	-10
SIM	**Simferopol'**	**4.15**	**293**	*e*PN	**Pn**	**21 34 59.1**	**+1.0**
SIM				*e*S	**Sn**	**21 35 49.1**	**+2.4**
SIM	**Simferopol'**	**4.15**	**293**	*e*Pn	**Pn**	**21 34 59.1**	**+1.0**
SIM				*e*Sn	**Sn**	**21 35 49.1**	**+2.4**
EATA	**Eleskirt**	**4.21**	**147**	*i* P	**Pn**	**21 35 00.6**	**+1.4**
EATA	**Eleskirt**	**4.21**	**147**	P	**Pn**	**21 35 00.6**	**+1.4**
TBLG	**Delisi**	**4.23**	**112**	P	**Pn**	**21 34 59.9**	**+0.7**
TBLG	**Delisi**	**4.23**	**112**	*e*PN	**Pn**	**21 34 59.9**	**+0.7**
TBLG	**Delisi**	**4.23**	**112**	*e*Pn	**Pn**	**21 34 59.9**	**+0.7**
SEV	**Sevastopol'**	**4.35**	**287**	*i* PN	**Pn**	**21 34 57.5**	**-3.2**
SEV	**Sevastopol'**	**4.35**	**287**	*i* Pn	**Pn**	**21 34 57.5**	**-3.2**
CTAK	**Corum_Osmancik**	**4.46**	**233**	*i* P	**Pn**	**21 35 03.6**	**+1.1**
CTAK	**Corum_Osmancik**	**4.46**	**233**	P	**Pn**	**21 35 03.6**	**+1.1**
BINT	**Bingol**	**4.61**	**170**	PN	**Pn**	**21 35 03.7**	**-0.7**
BINT	**Bingol**	**4.61**	**170**	Pn	**Pn**	**21 35 03.7**	**-0.7**
COAL	**Corum-Alaca**	**4.62**	**228**	*i* P	**Pn**	**21 35 04.5**	**-0.1**
COAL	**Corum-Alaca**	**4.62**	**228**	P	**Pn**	**21 35 04.5**	**-0.1**
DGRG	**David-gareji**	**4.78**	**112**	P	**Pn**	**21 35 06.7**	**0.0**
DGRG	**David-gareji**	**4.78**	**112**	*e*PN	**Pn**	**21 35 06.7**	**0.0**
DGRG	**David-gareji**	**4.78**	**112**	P	**Pn**	**21 35 06.7**	**0.0**
GNI	**Garni**	**5.11**	**128**	Pg	**Pb**	**21 35 22.7**	**-1.5**
GNI				LR	LR	21 37 23.5	
	comp=N,1.1nm,0.3s,baz=315,slow=16,SNR=6.0						
	comp=N,67nm,18.6s,baz=325,slow=41						
GNI	**Garni**	**5.11**	**128**	*i* PN	**Pn**	**21 35 14.0**	**+2.6**
GNI	**Garni**	**5.11**	**128**	*i* Pn	**Pn**	**21 35 14.0**	**+2.6**
MALT	**Malatya**	**5.17**	**189**	PN	**Pn**	**21 35 12.8**	**+0.7**
MALT	**Malatya**	**5.17**	**189**	Pn	**Pn**	**21 35 12.8**	**+0.7**
DDFL	**Dedoflistskaro**	**5.29**	**110**	P	**Pn**	**21 35 11.3**	**-2.4**
CDAG	**Cicekdag**	**5.40**	**227**	*i* P	**Pn**	**21 35 15.3**	**+0.1**
GNBR	**Gunib**	**5.59**	**98**	*i* P	**Pn**	**21 35 18.8**	**+1.0**
GNBR	**Gunib**	**5.59**	**98**	*i* P	**Pn**	**21 35 18.8**	**+1.0**
BRTR	**Keskin Array B**	**5.73**	**232**	Pn	**Pn**	**21 35 20.4**	**+0.5**
	comp=N,1.9nm,0.3s,baz=42,slow=11,SNR=61						
BRTR				Sn	**Sn**	**21 36 26.7**	**+0.8**
	comp=N,1.5nm,0.3s,baz=44,slow=28,SNR=9.5						
MAK	**Makhachkala**	**5.88**	**92**	*i* P	**Pn**	**21 35 22.2**	**+0.4**
MAK	**Makhachkala**	**5.88**	**92**	*i* P	**Pn**	**21 35 22.2**	**+0.4**
VSR	**Storozhevoye**	**7.80**	**359**	*e*P	**Pn**	**21 35 48.3**	**+0.2**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VSR	**Storozhevoye**	**7.80**	**359**	*e*P	**Pn**	**21 35 48.3**	**+0.2**
	comp=Z,10.0nm,1.1s						
TLCR		**7.86**	**287**	⇓*i*P	**Pn**	**21 35 47.9**	**-1.0**
TLCR		**7.86**	**287**	S	**Sn**	**21 37 13.9**	**-3.9**
TLCR		**7.86**	**287**	⇓P	**Pn**	**21 35 47.9**	**-1.0**
TLCR		**7.86**	**287**	P	**Pn**	**21 35 47.9**	**-1.0**
MANR	**Mangalia**	**7.92**	**277**	S	**Sn**	**21 37 14.8**	**-4.6**
TIRR	**Tirgusor**	**8.06**	**281**	⇑*i*P	**Pn**	**21 35 50.2**	**-1.5**
TIRR	**Tirgusor**	**8.06**	**281**	S	**Sn**	**21 37 17.6**	**-5.2**
TIRR	**Tirgusor**	**8.06**	**281**	⇑P	**Pn**	**21 35 50.2**	**-1.5**
TIRR	**Tirgusor**	**8.06**	**281**	P	**Pn**	**21 35 50.2**	**-1.5**
PSN	**Preselentsi**	**8.22**	**276**	*i* P	**Pn**	**21 35 53.2**	**-0.6**
CFR	**Carcaliu**	**8.33**	**286**	⇓*i*P	**Pn**	**21 35 54.5**	**-0.9**
CFR	**Carcaliu**	**8.33**	**286**	S	**Sn**	**21 37 23.4**	**-6.0**
CFR	**Carcaliu**	**8.33**	**286**	⇓P	**Pn**	**21 35 54.5**	**-0.9**
CFR	**Carcaliu**	**8.33**	**286**	P	**Pn**	**21 35 54.5**	**-0.9**
TLB	**Topalu**	**8.33**	**282**	⇑*i*P	**Pn**	**21 35 54.0**	**-1.4**
TLB	**Topalu**	**8.33**	**282**	S	**Sn**	**21 37 24.3**	**-5.2**
TLB	**Topalu**	**8.33**	**282**	⇑P	**Pn**	**21 35 54.0**	**-1.4**
TLB	**Topalu**	**8.33**	**282**	P	**Pn**	**21 35 54.0**	**-1.4**
HARR	**Harsova**	**8.42**	**283**	⇑*i*P	**Pn**	**21 35 54.8**	**-1.8**
HARR	**Harsova**	**8.42**	**283**	⇑P	**Pn**	**21 35 54.8**	**-1.8**
HARR	**Harsova**	**8.42**	**283**	P	**Pn**	**21 35 54.8**	**-1.8**
ICOR	**Ion Corvin**	**8.49**	**279**	⇑*i*P	**Pn**	**21 35 56.0**	**-1.5**
ICOR	**Ion Corvin**	**8.49**	**279**	⇑*i*P	**Pn**	**21 35 56.0**	**-1.5**
PRD	**Provadia**	**8.82**	**273**	*i* P	**Pn**	**21 36 00.2**	**-1.9**
ROIA	**ROIAK**	**8.85**	**272**	*i* P	**Pn**	**21 36 01.5**	**-1.0**
SORM	**Soroca**	**9.09**	**305**	⇑*i*P	**Pn**	**21 36 04.9**	**-0.9**
SORM	**Soroca**	**9.09**	**305**	⇑P	**Pn**	**21 36 04.9**	**-0.9**
SORM	**Soroca**	**9.09**	**305**	P	**Pn**	**21 36 04.9**	**-0.9**
VRI	**Vrincioaia**	**9.42**	**289**	⇓*i*P	**Pn**	**21 36 09.4**	**-0.9**
VRI	**Vrincioaia**	**9.42**	**289**	⇓P	**Pn**	**21 36 09.4**	**-0.9**
VRI	**Vrincioaia**	**9.42**	**289**	P	**Pn**	**21 36 09.4**	**-0.9**
ISR	**Istrita**	**9.44**	**285**	⇑*i*P	**Pn**	**21 36 09.5**	**-1.2**
ISR	**Istrita**	**9.44**	**285**	⇑P	**Pn**	**21 36 09.5**	**-1.2**
ISR	**Istrita**	**9.44**	**285**	P	**Pn**	**21 36 09.5**	**-1.2**
SULR		**9.61**	**282**	⇓*i*P	**Pn**	**21 36 12.2**	**-0.7**
SULR		**9.61**	**282**	⇓*i*P	**Pn**	**21 36 12.2**	**-0.7**
SGRR	**Singureni**	**9.80**	**279**	⇑*i*P	**Pn**	**21 36 14.0**	**-1.6**
SGRR	**Singureni**	**9.80**	**279**	⇑*i*P	**Pn**	**21 36 14.0**	**-1.6**
MLR	**Muntele Rosu**	**9.90**	**287**	Pn	**Pn**	**21 36 18.2**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=114,slow=16,SNR=10.0						
MLR				Sn	**Sn**	**21 38 05.4**	**-2.9**
	comp=Z,0.1nm,0.3s,baz=322,slow=19,SNR=4.0						
MLR	**Muntele Rosu**	**9.90**	**287**	⇑*i*P	**Pn**	**21 36 16.0**	**-1.1**
AKASG	**Malin Array Be**	**10.09**	**320**	Pn	**Pn**	**21 36 16.9**	**-2.6**
	comp=Z,1.2nm,0.3s,baz=123,slow=14,SNR=4.3						
AKASG				Sn	**Sn**	**21 38 06.0**	**-6.7**
	comp=Z,0.8nm,0.3s,baz=134,slow=24,SNR=3.4						
KIEV	**Kiev**	**10.10**	**320**	*i* P	**Pn**	**21 36 21.0**	**+1.4**
KIEV	**Kiev**	**10.10**	**320**	*i* P	**Pn**	**21 36 21.0**	**+1.4**
DOPR	**Dopca**	**10.36**	**289**	⇓*i*P	**Pn**	**21 36 22.3**	**-0.9**
DOPR	**Dopca**	**10.36**	**289**	⇓*i*P	**Pn**	**21 36 22.3**	**-0.9**
BURAR	**Bucovina Array**	**10.85**	**298**	⇓*i*P	**Pn**	**21 36 28.5**	**-1.5**
BURAR	**Bucovina Array**	**10.85**	**298**	⇓P	**Pn**	**21 36 28.5**	**-1.5**
BURAR	**Bucovina Array**	**10.85**	**298**	⇓*i*P	**Pn**	**21 36 28.5**	**-1.5**
MMAI	**Mount Meron Ar**	**10.88**	**198**	Pn	**Pn**	**21 36 29.8**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=11,slow=16,SNR=2.3						
MMAI				LR	LR	21 41 42.2	
	comp=Z,33nm,19.5s,baz=110,slow=43						
OBN	**Obninsk**	**11.85**	**352**	⇑*e*P	**Pn**	**21 36 40.3**	**-3.3**
OBN				*e*S	**Sn**	**21 38 50.1**	**-5.7**
UZH	**Uzhgorod**	**13.03**	**300**	*e*P	**Pn**	**21 36 58.4**	**-1.2**
UZH	**Uzhgorod**	**13.03**	**300**	*e*P	**Pn**	**21 36 58.4**	**-1.2**
AKTO	**Aktyubinsk**	**14.45**	**55**	Pn	Pn	21 37 13.4	-5.7
	comp=Z,0.1nm,0.3s,baz=258,slow=14,SNR=2.5						
AKTO				Sn	Sn	21 39 50.1	-9.2
	comp=Z,0.1nm,0.3s,baz=81,slow=17,SNR=3.0						
AKTO				LR	LR	21 44 28.0	
	comp=Z,32nm,18.4s,baz=233,slow=44						
VYHS	**Vyhne**	**15.22**	**297**	*e*P	**P**	**21 37 39.9**	**+5.4**
VYHS	**Vyhne**	**15.22**	**297**	*e*P	**P**	**21 37 39.9**	**+5.4**
VYHS	**Vyhne**	**15.22**	**297**	*e*P	**P**	**21 37 39.9**	**+5.4**
MODS	**Modra-Piesok**	**16.21**	**295**	*e*P	**P**	**21 37 46.8**	**+1.2**
MODS				pmax	pmax		
	comp=Z,12nm,1.4s						
MODS	**Modra-Piesok**	**16.21**	**295**	*e*P	**P**	**21 37 46.8**	**+1.2**
KLMR	**Klimovskoe**	**17.46**	**0**	*e*P	**Pn**	**21 37 57.4**	**-0.5**
KLMR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KLMR	**Klimovskoe**	**17.46**	**0**	*e*Pn	**Pn**	**21 37 57.5**	**-0.5**
KLMR				AMP		21 38 16.2	
	comp=Z,8.0nm,0.8s						
ARU	**Arti**	**17.81**	**36**	P	**Pn**	**21 38 00.8**	**-1.6**
	comp=Z,0.0nm,0.3s,baz=270,slow=12,SNR=3.9						
ARU				LR	LR	21 45 29.5	
	comp=Z,31nm,18.3s,baz=238,slow=39						
ARU	**Arti**	**17.81**	**36**	P	**Pn**	**21 38 02.6**	**+0.2**
ARU				S	**Sn**	**21 41 21.8**	**+1.0**
GERES	**GERESS Array B**	**18.63**	**296**	P	**P**	**21 38 12.1**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=105,slow=11,SNR=5.2						
BRG	**Berggiesshubel**	**18.84**	**302**	*e*P	**Pn**	**21 38 16.7**	**+1.7**
	comp=Z,2.4nm,0.9s						
BRG	**Berggiesshubel**	**18.84**	**302**	*e*P	**Pn**	**21 38 16.7**	**+1.7**
BRG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SVE	**Sverdlovsk**	**18.96**	**38**	*e*P	**P**	**21 38 16.0**	**+0.2**
CLL	**Collm**	**19.52**	**303**	*e*P	**Pn**	**21 38 23.0**	**-0.1**
CLL				*e*pP	**sP**	**21 38 27.0**	**+1.1**
CLL	**Collm**	**19.52**	**303**	*e*P	**Pn**	**21 38 23.0**	**-0.1**
FINES	**FINESS Array B**	**19.74**	**341**	P	**P**	**21 38 24.0**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=150,slow=13,SNR=14						
FINES				LR	LR	21 46 55.4	
	comp=Z,38nm,18.1s,baz=152,slow=40						
FINES	**FINESS Array B**	**19.74**	**341**	P	**P**	**21 38 24.0**	**-0.2**
BRVK	**Borovoye**	**22.50**	**54**	*i* P	**P**	**21 38 54.2**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BVAR	**Borovoye Array**	**22.56**	**54**	P	**P**	**21 38 56.1**	**+1.3**
	comp=Z,1.3nm,0.9s,baz=251,slow=8.7,SNR=9.0						
BVAR				LR	LR	21 49 42.2	
	comp=Z,26nm,19.0s,baz=14,slow=42						
HFS	**Hagfors**	**22.88**	**326**	P	**P**	**21 38 58.7**	**+0.6**
	comp=Z,3.6nm,0.7s,baz=122,slow=11,SNR=6.2						
ARCES	**ARCESS Array B**	**27.15**	**349**	P	**P**	**21 39 35.9**	**-1.7**
	comp=Z,1.4nm,1.0s,baz=160,slow=11,SNR=2.4						
KURBB	**Kurchatov Arra**	**27.32**	**61**	P	**P**	**21 39 38.1**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=276,slow=9.9,SNR=2.8						
KURK	**Kurchatov**	**27.38**	**61**	P	**P**	**21 39 38.1**	**-1.8**
MKAR	**Makanchi Array**	**30.12**	**68**	P	**P**	**21 40 03.9**	**-0.5**
	comp=Z,0.9nm,1.1s,baz=281,slow=10,SNR=3.3						
SPITS	**Spitsbergen Ar**	**36.06**	**352**	LR	LR	21 56 31.2	
	comp=Z,216nm,18.5s,baz=275,slow=38						
TORD	**Torodi Ar. Bea**	**44.30**	**239**	P	**P**	**21 42 05.3**	**+0.5**
	comp=Z,3.4nm,0.7s,baz=44,slow=8.3,SNR=12						
KOWA	**Kowa**	**46.98**	**246**	P	**P**	**21 42 26.6**	**+0.6**
	comp=Z,2.0nm,0.6s,baz=30,slow=8.1,SNR=2.7						
KOWA				LR	LR	22 04 29.9	
	comp=Z,159nm,21.9s,baz=222,slow=39						
BILL	**Bilibino**	**61.93**	**20**	⇓*e*P	**P**	**21 44 17.7**	**+3.7**
BILL						21 46 36.0	
BILL				*e*S	**PnS**	**21 52 48.1**	**-3.4**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.1s						
PETK	**Petropavlovsk-**	**70.19**	**34**	LR	LR	22 21 15.1	
	comp=Z,48nm,19.0s,baz=43,slow=40						
YKA	**Yellowknife Ar**	**72.40**	**348**	P	**P**	**21 45 19.0**	**-1.5**
	comp=Z,1.0nm,0.7s,baz=23,slow=5.8,SNR=3.4						
YKA	**Yellowknife Ar**	**72.40**	**348**	P	**P**	**21 45 19.0**	**-1.5**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						

IDC 26 21:34:27.3±1.5, 14°.77S×174°.40W, h0km, mb4.0/4, mb1 4.3/5, mb1mx3.8/52, mbtmp4.1/5, ML4.4/1, MS3.7/6, Ms1 3.7/6, ms1mx3.1/44, Error ellipse: s-maj=80.2km s-min=23.2km az=152.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.68**	**72**	Pn	Pn	21 35 12.4	+0.5
	73nm,0.3s,baz=77,slow=0.6,SNR=70						
AFI				Sn	Sn	21 35 36.6	-8.4
	123nm,0.3s,baz=54,slow=20,SNR=15						
RAO	**Raoul Island**	**14.78**	**192**	LR	LR	21 42 16.2	
	comp=Z,163nm,21.0s,baz=280,slow=32						
STKA	**Stephens Creek**	**43.53**	**239**	P	P	21 42 31.8	-1.2
	3.4nm,0.9s,baz=83,slow=10,SNR=4.9						
WRA	**Warramunga Arr**	**49.05**	**256**	P	P	21 43 17.4	+0.7
	2.0nm,0.6s,baz=91,slow=6.9,SNR=34						
ASAR	**Alice Springs**	**49.40**	**251**	P	P	21 43 19.4	+0.2
	3.7nm,0.8s,baz=88,slow=7.9,SNR=28						
YBH	**Yreka Blue Hor**	**73.68**	**38**	LR	LR	22 12 49.6	
	comp=Z,24nm,20.8s,baz=14,slow=31						
NVAR	**Mina Array Bea**	**74.51**	**43**	LR	LR	22 12 38.2	
	comp=Z,77nm,20.7s,baz=320,slow=31						
TXAR	**Lajitas Array**	**81.06**	**57**	LR	LR	22 14 55.8	
	comp=Z,74nm,21.4s,baz=0.0,slow=30						
ILAR	**Eielson Array**	**82.02**	**12**	P	P	21 46 48.9	-0.1
	0.3nm,0.8s,baz=201,slow=4.8,SNR=3.8						
CMAR	**Chiang Mai Arr**	**91.50**	**289**	LR	LR	22 24 53.6	
	comp=Z,25nm,21.7s,baz=194,slow=33						
JTS	**JuntasAbangare**	**92.05**	**80**	LR	LR	22 22 20.3	
	comp=Z,39nm,18.2s,baz=47,slow=31						
BRTR	**Keskin Array B**	**145.06**	**321**	PKPbc	PKPbc	21 54 05.1	-1.5
	0.7nm,0.7s,baz=59,slow=1.5,SNR=5.1						

NIED ***26*** *21:34:00,21°.80N×120°.60E,h32km,Mw4.0 Best double couple: M0 1.11000×10^15 NP1:φs306.00000°,δ45.00000°, λ65.00000°. NP2:φs159.00000°,δ51.00000°,λ113.00000°.*
TAP ***26*** *21:34:33.9,21°.86N×120°.52E,h48km,ML3.7,C*
ISCJB ***26*** *21:34:34.4±0.4,21°.86N±0°.02×120°.50E±0°.02,h51km±3km, mb3.4/4,MS3.0/4, Error ellipse: s-maj=3.8km s-min=3.4km az=150.7*
JMA ***26*** *21:34:34.5±0.1,21°.81N×120°.58E,h44km±3km,M3.8*
IDC ***26*** *21:34:37.2±1.6,20°.85N×120°.20E,h0km,mb3.5/5, mb1 3.7/5,mb1mx3.4/69,mbtmp3.5/5,MS3.2/5,Ms1 3.2/5, ms1mx2.8/41, Error ellipse: s-maj=64.8km s-min=22.0km az=56.0*
ISC 26 21:34:34.8±1.1, 21°.82N±0°.04×120°.45E±0°.03, h42km±8km, n97, σ1.9 04/168, mb3.5/4, MS2.8/4, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HEN	**Hengchun**	**0.33**	**56**	*i* P	**Pn**	**21 34 42.8**	**-0.7**
	baz=63						
HEN				S	**Sn**	**21 34 49.5**	**-0.1**
	baz=63						
TWK1	**Hengchun**	**0.35**	**70**	*i* P	**Pn**	**21 34 43.0**	**-0.8**
	baz=73						
TWK1				*e*S	**Sn**	**21 34 49.4**	**-0.8**
	baz=73						
TWKBT	**Hengchun**	**0.36**	**71**	*i* P	**Pn**	**21 34 42.9**	**-1.0**
	baz=72						
TWKBT				*e*S	**Sn**	**21 34 49.4**	**-0.8**
	baz=72						
TSEB	**Hengchuen, Pin**	**0.43**	**80**	*i* P	**Pn**	**21 34 43.7**	**-1.0**
	baz=82						
TSEB				S	**Sn**	**21 34 50.9**	**-0.8**
	baz=82						
TWP	**Hsiaoliuchiu**	**0.53**	**352**	P	**Pn**	**21 34 46.3**	**+0.3**
	baz=335						
TWP				S	**Sn**	**21 34 55.9**	**+2.0**
	baz=335						
WLCH	**Liuqiu**	**0.53**	**353**	P	**Pn**	**21 34 46.3**	**+0.3**
	baz=336						
WLCH				S	**Sn**	**21 34 56.1**	**+2.2**
	baz=336						
SCZT	**Fangliau**	**0.57**	**17**	*i* P	**Pn**	**21 34 45.8**	**-0.7**
	baz=16						
SCZT				*e*S	**Sn**	**21 34 54.0**	**-0.9**
	baz=16						
SSPT	**Xinbi**	**0.67**	**10**	*e*P	**Pn**	**21 34 47.7**	**-0.2**
	baz=12						
SSPT				*e*S	**Sn**	**21 34 57.8**	**+0.6**
	baz=12						
EAST	**Anshuo**	**0.67**	**34**	*i* P	**Pn**	**21 34 47.3**	**-0.7**
	baz=39						
EAST				*e*S	**Sn**	**21 34 57.1**	**-0.2**
	baz=39						
TAW	**Tawu**	**0.68**	**38**	*i* P	**Pn**	**21 34 47.4**	**-0.6**
	baz=35						
TAW				*e*S	**Sn**	**21 34 56.2**	**-1.2**
	baz=35						
MASBT	**Mashibuluo**	**0.80**	**12**	P	**Pn**	**21 34 48.8**	**-0.9**
	baz=19						
MASBT				*e*S	**Sn**	**21 34 58.9**	**-1.6**
	baz=19						
SGLT	**Jiouru**	**0.90**	**3**	*e*P	**Pn**	**21 34 50.6**	**-0.4**
	baz=359						
SGLT				*e*S	**Sn**	**21 35 04.6**	**+1.8**
	baz=359						
ECL	**Taimali**	**0.90**	**31**	P	**Pn**	**21 34 50.4**	**-0.7**
	baz=24						
ECL				*e*S	**Sn**	**21 35 02.0**	**-0.9**
	baz=24						
SSD	**Sandimen**	**0.93**	**11**	P

PNG	Penghu	1.92	335	eP	Pn	21 35 04.0	-1.0
	baz=333						
PNG				eS	Sn	21 35 26.8	-1.2
	baz=333						
WJS	Zhushan	2.01	7	eP	Pn	21 35 05.7	-0.5
	baz=356						
WJS				eS	Sn	21 35 29.4	-0.6
	baz=356						
SSLB	Suanglung	2.01	13	eP	Pn	21 35 05.9	-0.4
	baz=12						
SSLB				eS	Sn	21 35 28.6	-1.6
	baz=12						
VWDT	VWDT	2.03	18	eP	Pn	21 35 06.7	+0.2
	baz=6.0						
VWDT				eS	Sn	21 35 29.8	-0.8
	baz=6.0						
EGFH	Guangfu	2.05	26	eP	Pn	21 35 06.7	-0.1
	baz=37						
EGFH				eS	Sn	21 35 30.2	-0.9
	baz=37						
WNT	Mingjian	2.06	6	eS	Sn	21 35 30.6	-0.7
	baz=5.0						
RLNB	Erlin	2.06	358	eP	Pn	21 35 06.5	-0.5
	baz=356						
RLNB				eS	Sn	21 35 30.5	-0.8
	baz=356						
SMLT	Sun Moon Lake	2.09	11	eP	Pn	21 35 07.3	-0.2
	baz=359						
SMLT				eS	Sn	21 35 31.9	-0.5
	baz=359						
TYC	Yuchr	2.10	10	eP	Pn	21 35 07.4	-0.1
	baz=358						
TYC				eS	Sn	21 35 31.8	-0.7
	baz=358						
ESL	Shilin	2.18	25	eP	Pn	21 35 09.1	+0.4
	baz=35						
ESL				eS	Sn	21 35 33.7	-0.7
	baz=35						
DPDB	Guoxing	2.24	11	eP	Pn	21 35 09.1	-0.5
	baz=360						
DPDB				eS	Sn	21 35 34.4	-1.7
	baz=360						
WCHH	Zhanghua	2.25	3	eS	Sn	21 35 35.1	-0.9
	baz=353						
TCU	Taichung	2.32	5	eP	Pn	21 35 10.9	+0.3
	baz=4.0						
TCU				eS	Sn	21 35 36.7	-1.2
	baz=4.0						
CHGB	Renai	2.33	17	eP	Pn	21 35 10.9	+0.1
	baz=7.0						
CHGB				eS	Sn	21 35 37.9	-0.4
	baz=7.0						
ENLB	Shoufeng	2.33	27	eS	Sn	21 35 38.2	+0.1
	baz=36						
TDCB	Techi	2.51	15	eP	Pn	21 35 12.9	-0.3
	baz=5.0						
TDCB				eS	Sn	21 35 41.8	-0.8
	baz=5.0						
NACB	Ninganchiao	2.57	24	eP	Pn	21 35 13.6	-0.3
	baz=23						
NACB				eS	Sn	21 35 42.7	-1.3
	baz=23						
NNSB	Datong	2.73	18	eP	Pn	21 35 17.0	+0.7
	baz=17						
NNSB				eS	Sn	21 35 47.5	-0.7
	baz=17						
NNSH	Datong	2.73	18	eP	Pn	21 35 16.8	+0.5
	baz=17						
NNSH				eS	Sn	21 35 47.2	-1.0
	baz=17						
NNS	Nan Shan	2.74	18	eP	Pn	21 35 17.3	+0.9
	baz=17						
NNS				eS	Sn	21 35 48.5	+0.1
	baz=17						
NSTT	Nanjuang	2.84	10	eP	Pn	21 35 17.3	-0.4
	baz=9.0						
NSTT				eS	Sn	21 35 49.1	-1.6
	baz=9.0						
NANB	Nanao	2.86	25	eP	Pn	21 35 17.6	-0.3
	baz=24						
NANB				eS	Sn	21 35 49.3	-1.7
	baz=24						
LIOB	Emei	2.86	10	eP	Pn	21 35 17.6	-0.4
	baz=9.0						
LIOB				eS	Sn	21 35 50.0	-1.1
	baz=9.0						
YHNB	Yeheng	2.96	17	eP	Pn	21 35 19.7	+0.3
	baz=16						
YHNB				eS	Sn	21 35 52.9	-0.8
	baz=16						
NSK	Sanguang	2.96	16	eP	Pn	21 35 20.6	+1.2
	baz=15						
NSK				eS	Sn	21 35 53.2	-0.5
	baz=15						
ENTT	Nioudou	2.99	20	eP	Pn	21 35 20.9	+1.2
	baz=31						
ENTT				eS	Sn	21 35 55.3	+1.0
	baz=31						
TWC	Suao	3.06	25	eP	Pn	21 35 20.8	+0.1
	baz=24						
TWC				eS	Sn	21 35 53.8	-2.2
	baz=24						
NWLT	Wulai	3.10	18	eP	Pn	21 35 21.9	+0.7
	baz=8.0						
NWLT				eS	Sn	21 35 56.5	-0.5
	baz=8.0						
EOS1	EOS1	3.12	29	eP	Pn	21 35 22.3	+0.8
	baz=38						
EOS1				eS	Sn	21 35 58.2	+0.6
	baz=38						
KNMB	Chin-men Tao	3.24	325	eS	Sn	21 35 58.5	-2.0
	baz=323						
TIPB	Shuangxi	3.38	22	eP	Pn	21 35 25.4	+0.3
	baz=30						
TIPB				eS	Sn	21 36 02.5	-1.5
	baz=30						
JYNG	Yonaguni jima	3.48	41	P	Pn	21 35 27.4	+0.9
JYNG				eS	Sn	21 36 06.2	-0.3
YOJ	Yonaguni jima	3.53	41	eP	Pn	21 35 27.5	+0.3
	baz=50						
YOJ				eS	Sn	21 36 07.1	-0.6
	baz=50						
YOJ	Yonaguni jima	3.53	41	P	Pn	21 35 28.2	+1.0
YOJ				eS	Sn	21 36 08.3	+0.6
VDOS	Pratas Island	3.64	253	eP	Pn	21 35 29.7	+1.0
	baz=252						
VDOS				eS	Sn	21 36 08.3	-2.1
	baz=252						
HATJ	Hateruma jima	3.81	54	P	Pn	21 35 31.2	+0.2
HATJ				eS	Sn	21 36 13.9	-0.7
IRIF	Iriomote-Funau	3.92	50	P	Pn	21 35 32.9	+0.4
IRIF				eS	Sn	21 36 17.2	-0.2
JKRS	Kuro-shima	4.07	53	P	Pn	21 35 35.0	+0.5
JKRS				S	Sn	21 36 20.8	-0.1
JIJ	Ishigaki jima	4.24	53	P	Pn	21 35 36.7	-0.2
JIJ				eS	Sn	21 36 23.6	-1.6
MATB	Ma-tsu	4.33	354	eP	Pn	21 35 37.3	-0.9
	baz=2.0						
MATB				eS	Sn	21 36 22.9	-4.5
	baz=2.0						
JISG	Ishigakijimahi	4.50	52	P	Pn	21 35 40.2	-0.2
JISG				S	Sn	21 36 31.0	-0.5
JTJ	Tarama	4.82	54	P	Pn	21 35 45.1	+0.3
JTJ				eS	Sn	21 36 38.4	-0.9
JIRB	Irabujima	5.28	55	P	Pn	21 35 51.0	-0.1
JMJ	Miyako jima 2	5.36	55	P	Pn	21 35 52.6	+0.3
KSRS	Korea Array	16.87	21	LR	LR	21 46 27.9	
	comp=Z,75nm,18.2s,baz=196,slow=40						
CMAR	Chiang Mai Arr	20.46	264	P	Pn	21 39 12.7	+1.2
	0.5nm,0.3s,baz=69,slow=9.0,SNR=4.8						
CMAR				LR	LR	21 47 24.1	
	comp=Z,54nm,19.0s,baz=158,slow=38						
JHJ	Hachijo jima 2	20.48	53	LR	LR	21 47 39.5	
	comp=Z,29nm,19.4s,baz=272,slow=37						
MJAR	Matsushiro Arr	21.29	43	LR	LR	21 48 31.3	
	comp=Z,26nm,20.3s,baz=305,slow=38						
MKAR	Makanchi Array	39.59	318	P	P	21 42 16.6	+14
	0.2nm,0.6s,baz=122,slow=7.0,SNR=4.7						
KURBB	Kurchatov Arra	43.50	322	P	P	21 42 45.5	+11
	0.4nm,0.6s,baz=116,slow=7.9,SNR=4.0						
WRA	Warramunga Arr	43.68	161	P	**P**	**21 42 37.0**	**+1.3**
	0.8nm,0.7s,baz=343,slow=9.0,SNR=7.5						
ASAR	Alice Springs	47.08	163	P	**P**	**21 43 04.3**	**+1.6**
	0.3nm,0.3s,baz=344,slow=7.0,SNR=6.1						
FINES	FINESS Array B	73.13	330	LR	LR	22 24 07.2	
	comp=Z,68nm,19.1s,baz=314,slow=40						

IDC 26 21:45:44.7±1.1, 62°27S×162°87W, h0km, mb4.1/4, mb1 4.2/4, mb1mx3.9/35, mbtmp4.1/4, Error ellipse: s-maj=126.1km s-min=30.7km az=7.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W1	Cape Leeuwin H	56.61	258	T	T	22 57 06.0	
	baz=147,slow=76,SNR=7.1						
H01W2	Cape Leeuwin H	56.62	258	T	T	22 57 02.1	
	baz=147,slow=76,SNR=5.3						
H01W3	Cape Leeuwin H	56.63	258	T	T	22 57 07.1	
	baz=147,slow=76,SNR=5.7						
NWAO	Narrogin (SRO)	56.83	262	P	P	21 55 30.5	-0.1
	15nm,1.0s,baz=163,slow=5.9,SNR=2.6						
ASAR	Alice Springs	56.91	282	P	P	21 55 31.7	+0.4
	1.0nm,0.9s,baz=135,slow=7.8,SNR=5.4						
WRA	Warramunga Arr	59.94	285	P	P	21 55 52.2	-0.3
	1.0nm,1.0s,baz=162,slow=5.3,SNR=3.2						
LPAZ	La Paz	77.92	102	P	P	21 57 45.1	+0.1
	1.1nm,0.8s,baz=219,slow=6.5,SNR=4.1						
ILAR	Eielson Array	127.28	9	PKP	PKPdf	22 04 49.4	0.0
	0.5nm,0.8s,baz=210,slow=1.8,SNR=5.4						
ZALV	Zalesovo Beam	144.87	288	PKP	PKPab	22 05 21.2	-0.1
	0.6nm,0.6s,baz=126,slow=2.0,SNR=3.7						
KURBB	Kurchatov Arra	145.49	279	PKPbc	PKPdf	22 05 21.4	-1.9
	0.5nm,0.2s,baz=119,slow=2.4,SNR=6.5						
BVAR	Borovoye Array	150.86	276	PKPbc	PKPbc	22 05 37.9	+0.2
	0.9nm,0.8s,baz=151,slow=3.3,SNR=7.6						

*ISCJB **26** 22:12:55.0±0.8, 17°2S±0°2×179°0W±0°1, h533km, mb3.4/8, Error ellipse: s-maj=30.9km s-min=14.5km az=155.6*
*IDC **26** 22:12:57.0±2.9, 17°12S×179°03W, h548km±34km, mb3.0/8, mb1 3.3/9, mb1mx3.1/46, mbtmp3.9/9, Error ellipse: s-maj=24.9km s-min=13.8km az=160.0*

ISC 26 22:12:55.9±0.9, 17°1S±0°2×179°0W±0°1, h533km, n9, σ0°73/10, mb3.3/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.55	248	P	**P**	**22 16 01.3**	**+0.2**
	0.6nm,0.3s,baz=64,slow=18,SNR=5.5						
STKA	Stephens Creek	38.50	240	P	**P**	**22 19 33.4**	**+0.8**
	1.1nm,0.5s,baz=56,slow=7.3,SNR=3.6						
WRA	Warramunga Arr	44.20	259	P	**P**	**22 20 17.4**	**-0.5**
	0.5nm,0.3s,baz=92,slow=8.3,SNR=28						
WRA				S	**S**	**22 26 12.1**	**-0.6**
	0.4nm,0.9s,baz=86,slow=14,SNR=3.1						
ASAR	Alice Springs	44.44	253	P	**P**	**22 20 19.9**	**+0.1**
	5.1nm,0.4s,baz=89,slow=8.1,SNR=72						
VNDA	Vanda	61.18	185	P	**P**	**22 22 18.1**	**-0.1**
	0.3nm,0.5s,baz=1.9,slow=8.8,SNR=4.1						
QSPA	South Pole Qui	72.94	180	P	**P**	**22 23 30.3**	**-0.5**
	2.7nm,0.6s,baz=158,slow=1.0,SNR=17						
NVAR	Mina Array Bea	79.27	44	P	**P**	**22 24 05.4**	**-0.9**
	0.4nm,0.6s,baz=221,slow=9.5,SNR=3.2						
TXAR	Lajitas Array	86.07	58	P	**P**	**22 24 41.8**	**+1.1**
	0.2nm,0.8s,baz=243,slow=8.0,SNR=2.7						
PDAR	Pinedale Array	87.19	44	P	**P**	**22 24 45.4**	**-0.4**
	0.2nm,0.5s,baz=225,slow=3.6,SNR=2.6						

*HLW **26** 22:53:30.4, 34°62N×25°49E, h10km±17km, Ml3.7*
*ISK **26** 22:53:30.9, 34°79N×25°34E, h22km, ML3.3/10*
*CSEM **26** 22:53:32.2±0.2, 34°76N×25°25E, h30km, ML3.4, Error ellipse: s-maj=4.2km s-min=2.2km az=1.0*
*ATH **26** 22:53:32.4, 34°89N×25°22E, h48km±2km, ML3.4/7, Error ellipse: s-maj=2.2km s-min=0.8km az=155.0*
*THE **26** 22:53:33.9, 34°80N×25°22E, h23km±1km, ML3.2/12, Error ellipse: s-maj=1.7km s-min=0.7km az=348.0*

ISC 26 22:53:31.1±1.1, 34°72N±0°03×25°27E±0°02, h28km±10km, n173, σ1°§07/220, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAST	Lasithi	0.47	22	P	Pn	22 53 42.6	+0.5
LAST				S	Sn	22 53 49.2	-0.4
LAST				AML	AML	22 53 53.2	
	comp=E,6395μm,0.8s						
LAST				AML	AML	22 53 54.3	
	comp=N,5676μm,0.8s						
LAST	Lasithi	0.47	22	P	Pn	22 53 42.5	+0.3
LAST				S	Sn	22 53 48.7	-0.9
LAST	Lasithi	0.47	22	P	Pn	22 53 42.4	+0.3
LAST				S	Sn	22 53 48.7	-0.9
SIVA	Sivas	0.48	309	P	Pb	22 53 41.6	+0.6
SIVA				S	Sn	22 53 48.9	-0.7
SIVA				AML	AML	22 53 52.5	
	comp=E,32012μm,0.9s						
SIVA				AML	AML	22 53 52.9	
	comp=N,26282μm,0.6s						
SIVA	Sivas	0.48	309	P	Pb	22 53 41.8	+0.7
SIVA				S	Sb	22 53 48.0	+0.2
SIVA	Sivas	0.48	309	P	Pb	22 53 41.8	+0.7
SIVA				S	Sb	22 53 48.0	+0.2
TMBK	Timbaki Herakl	0.54	311	P	Pn	22 53 43.0	+0.1
TMBK				S	Sn	22 53 51.4	+0.3
TMBK	Timbaki Herakl	0.54	311	P	Pn	22 53 43.0	+0.1
TMBK				S	Sn	22 53 51.4	+0.3
KSTL	Kastelli Herak	0.60	345	P	Pb	22 53 42.6	-0.6
KSTL				S	Sb	22 53 50.3	-1.1
KSTL	Kastelli Herak	0.60	345	P	Pb	22 53 42.6	-0.6
KSTL				S	Sb	22 53 50.3	-1.1
IACM	Heraklion	0.61	345	P	Pb	22 53 43.5	+0.3
IACM				S	Sb	22 53 50.0	-1.4
IACM	Heraklion	0.61	345	P	Pn	22 53 44.6	+0.7
IACM				S	Sn	22 53 52.0	-0.8
IACM	Heraklion	0.61	345	P	Pb	22 53 43.4	+0.2
IACM				S	Sb	22 53 50.6	-0.8
NPS	Neapolis	0.61	28	P	Pn	22 53 44.8	+0.8
NPS				S	Sn	22 53 53.2	+0.3
NPS				AML	AML	22 53 56.9	
	comp=N,5067μm,0.6s						
NPS				AML	AML	22 54 00.4	
	comp=E,3445μm,0.6s						
NPS	Neapolis	0.61	28	P	Pn	22 53 44.8	+0.8
NPS				S	Sn	22 53 53.7	+0.7
NPS	Neapolis	0.61	28	P	Pn	22 53 44.4	+0.4
NPS				S	Sn	22 53 52.8	-0.2
IDI	Anoyia	0.65	332	PG	Pb	22 53 43.8	-0.1
IDI				SG	Sn	22 53 53.0	-0.8
IDI	Anoyia	0.65	332	ePg	Pb	22 53 43.8	-0.1
IDI				eSg	Sn	22 53 53.0	-0.8
ZKR	Zakros	0.88	63	P	Pn	22 53 49.0	+1.4
ZKR				S	Sn	22 54 00.5	+1.0
ZKR				AML	AML	22 54 09.2	
	comp=E,4234μm,0.5s						
ZKR				AML	AML	22 54 10.9	
	comp=N,1779μm,0.4s						
ZKR	Zakros	0.88	63	P	Pn	22 53 49.4	+1.8
ZKR				S	Sn	22 54 02.8	+3.4
ZKR	Zakros	0.88	63	P	Pn	22 53 49.0	+1.4
ZKR				S	Sn	22 54 00.7	+1.3
PRNS	Prines Rethymn	0.90	316	P	Pn	22 53 49.3	+1.4
PRNS				S	Sn	22 54 01.7	+1.7
PRNS	Prines Rethymn	0.90	316	P	Pn	22 53 49.3	+1.4
PRNS				S	Sn	22 54 01.7	+1.7
GVDS	Gavdos	0.97	278	P	Pn	22 53 50.6	+1.7
GVDS				S	Sn	22 54 04.2	+2.4
GVDS	Gavdos	0.97	278	P	Pn	22 53 50.6	+1.7
GVDS				S	Sn	22 54 04.2	+2.4
GVD	Gavdhos	0.98	277	P	Pb	22 53 49.8	+0.4
GVD				S	Sn	22 54 03.2	+1.2
GVD				AML	AML	22 54 08.5	
	comp=E,4420μm,0.5s						
GVD				AML	AML	22 54 10.8	
	comp=N,5235μm,0.4s						
GVD	Gavdhos	0.98	277	P	Pb	22 53 49.9	+0.5
GVD				S	Sn	22 54 03.1	+1.2
GVD	Gavdhos	0.98	277	P	Pb	22 53 49.9	+0.5
GVD				S	Sn	22 54 03.0	+1.1
VAM	Vamos	1.11	308	P	Pb	22 53 52.2	+0.5
VAM				S	Sn	22 54 06.0	+0.7
VAM				AML	AML	22 54 11.9	
	comp=N,3421μm,0.4s						
VAM				AML	AML	22 54 13.5	
	comp=E,5121μm,0.4s						
VAM	Vamos	1.11	308	P	Pb	22 53 51.9	+0.2
VAM				S	Sb	22 54 05.2	-0.6
VAM	Vamos	1.11	308	P	Pn	22 53 51.4	+0.6
VAM				S	Sb	22 54 05.0	-0.8

IMMV	Iera Moni Meta	1.29	305	P	Pb	22 53 54.5	-0.2
IMMV				S	Sn	22 54 08.6	-1.0
IMMV				AML	AML	22 54 18.9	
	comp=N,2968μm,0.4s						
IMMV				AML	AML	22 54 21.0	
	comp=E,3132μm,0.7s						
IMMV	Iera Moni Meta	1.29	305	P	Pb	22 53 54.5	-0.2
IMMV				S	Sn	22 54 09.8	+0.2
IMMV	Iera Moni Meta	1.29	305	P	Pn	22 53 53.9	+0.7
IMMV				S	Sn	22 54 08.6	-1.0
THR6	Thira Island,	1.64	4	P	Pn	22 53 58.4	+0.4
THR6	Thira Island,	1.64	4	P	Pn	22 53 58.4	+0.4
SAP1	Santorini-Akro	1.64	4	P	Pn	22 53 57.3	-0.8
SANT	Santorini	1.66	5	PN	Pn	22 53 58.5	+0.1
SANT				SN	Sn	22 54 18.5	-0.2
SANT	Santorini	1.66	5	P	Pn	22 53 58.8	+0.4
SANT	Santorini	1.66	5	P	Pn	22 53 58.3	-0.1
SANT	Santorini	1.66	5	ePn	Pn	22 53 58.5	+0.1
SANT				eSn	Sn	22 54 18.5	-0.2
ANAF	Anafi Island	1.69	14	P	Pn	22 53 58.1	-0.6
ANAF	Anafi Island	1.69	14	P	Pn	22 53 59.8	+1.1
ANAF				S	Sn	22 54 20.2	+0.8
ANAF	Anafi Island	1.69	14	P	Pn	22 53 58.3	-0.4
ANAF				S	Sn	22 54 20.2	+0.8
THR3	Thira Island,	1.69	4	P	Pn	22 53 59.0	+0.2
THR3	Thira Island,	1.69	4	P	Pn	22 53 59.0	+0.2
THR5	Thira Island,	1.70	2	P	Pn	22 53 59.4	+0.5
THR5	Thira Island,	1.70	2	P	Pn	22 53 59.4	+0.5
SAP3	Santorini-Thir	1.71	2	P	Pn	22 53 57.9	-1.2
CMBO	Columbo, Santo	1.75	4	P	Pn	22 53 59.0	-0.6
CMBO	Columbo, Santo	1.75	4	P	Pn	22 53 59.1	-0.6
KARP	Karpathos	1.76	61	PN	Pn	22 53 59.6	-0.2
KARP	Karpathos	1.76	61	P	Pn	22 54 00.6	+0.9
KARP	Karpathos	1.76	61	ePn	Pn	22 53 59.6	-0.2
KARP	Karpathos	1.76	61	P	Pn	22 54 00.9	+1.1
ANKY	Antikythira Is	1.97	306	P	Pn	22 54 02.7	0.0
ANKY	Antikythira Is	1.97	306	P	Pn	22 54 02.8	+0.1
IOSP	Ios island	2.00	1	P	Pn	22 54 02.6	-0.5
IOSP				S	Sn	22 54 25.6	-1.6
IOSP	Ios island	2.00	1	P	Pn	22 54 03.1	+0.1
IOSP				S	Sn	22 54 27.2	0.0
IOSP	Ios island	2.00	1	P	Pn	22 54 03.1	+0.1
IOSP				S	Sn	22 54 25.2	-2.0
MHLO	Agia Marina, M	2.09	341	P	Pn	22 54 04.8	+0.5
MHLO	Agia Marina, M	2.09	341	P	Pn	22 54 04.3	+0.1
MHLO	Agia Marina, M	2.09	341	P	Pn	22 54 04.3	+0.1
MHLA	Plaka, Milos I	2.13	341	P	Pn	22 54 06.0	+1.1
MHLA	Plaka, Milos I	2.13	341	P	Pn	22 54 05.3	+0.4
AMGA	Amorgos Island	2.17	13	P	Pn	22 54 05.3	-0.1
AMGA	Amorgos Island	2.17	13	P	Pn	22 54 05.5	+0.1
AMGA				S	Sn	22 54 30.8	-0.6
AMGA	Amorgos Island	2.17	13	P	Pn	22 54 05.5	+0.1
AMGA				S	Sn	22 54 30.8	-0.6
APE	Apeiranthos	2.35	5	PN	Pn	22 54 08.3	+0.3
APE	Apeiranthos	2.35	5	P	Pn	22 54 06.7	-1.3
APE	Apeiranthos	2.35	5	P	Pn	22 54 07.3	-0.7
APE	Apeiranthos	2.35	5	ePn	Pn	22 54 08.3	+0.3
KYTH	Kithira	2.38	311	P	Pn	22 54 08.2	0.0
SERI	Serifos	2.52	346	P	Pn	22 54 09.4	-0.8
SERI	Serifos	2.52	346	P	Pn	22 54 09.7	-0.5
DAT	Datca	2.75	43	PN	Pn	22 54 13.7	+0.2
DAT	Datca	2.75	43	ePn	Pn	22 54 13.7	+0.2
VLI	Veliai	2.75	317	P	Pn	22 54 12.6	-0.7
VLI	Veliai	2.75	317	P	Pn	22 54 13.0	-0.4
VLI				S	Sn	22 54 45.0	-0.7
VLI	Veliai	2.75	317	P	Pn	22 54 13.0	-0.4
VLI				S	Sn	22 54 45.0	-0.7
ARG	Arkhangelos	2.77	57	PN	Pn	22 54 14.1	+0.5
ARG	Arkhangelos	2.77	57	P	Pn	22 54 14.9	+1.3
ARG	Arkhangelos	2.77	57	ePn	Pn	22 54 14.1	+0.5
ARG	Arkhangelos	2.77	57	P	Pn	22 54 15.0	+1.3
BODT	Bodrum	2.87	35	PN	Pn	22 54 15.6	+0.6
BODT	Bodrum	2.87	35	ePn	Pn	22 54 15.6	+0.6
DYR	Agios Nikonas	3.14	311	P	Pn	22 54 18.3	-0.4
DYR	Agios Nikonas	3.14	311	P	Pn	22 54 18.7	0.0
KRND	KRANIDI	3.16	328	P	Pn	22 54 19.4	+0.3
KRND	KRANIDI	3.16	328	P	Pn	22 54 19.2	+0.2
SLUM	Salum	3.22	181	P	Pn	22 54 19.8	0.0
	baz=185						
SLUM				AMP		22 54 00.0	
	baz=185						
SLUM				S	Sn	22 54 54.8	-2.4
	baz=185						
SLUM	Salum	3.22	181	P	Pn	22 54 19.8	0.0
DID	Didima	3.23	330	P	Pn	22 54 19.1	-0.9
DID	Didima	3.23	330	P	Pn	22 54 19.6	-0.4
DID	Didima	3.23	330	P	Pn	22 54 19.6	-0.4
SMG	Samos	3.24	23	P	Pn	22 54 19.9	-0.2
SMG	Samos	3.24	23	P	Pn	22 54 20.2	+0.1
VLY	Voula,Athens	3.34	340	P	Pn	22 54 21.5	0.0
VLY	Voula,Athens	3.34	340	P	Pn	22 54 21.5	0.0
YER	Yerkesik	3.44	45	PN	Pn	22 54 23.8	+1.0
YER	Yerkesik	3.44	45	P	Pn	22 54 24.2	+1.4
YER	Yerkesik	3.44	45	ePn	Pn	22 54 23.8	+1.0
YER	Yerkesik	3.44	45	P	Pn	22 54 24.2	+1.4
ATHU	Athens Univers	3.45	340	P	Pn	22 54 22.5	-0.5
ATHU	Athens Univers	3.45	340	P	Pn	22 54 22.8	-0.2
DALY	Dalyan (Mu¨la	3.46	52	PN	Pn	22 54 23.8	+0.7
DALY	Dalyan (Mu¨la	3.46	52	ePn	Pn	22 54 23.8	+0.7
TURN	Turunc	3.46	51	PN	Pn	22 54 19.8	-3.3
TURN	Turunc	3.46	51	ePn	Pn	22 54 19.8	-3.3
PTL	Penteli	3.51	342	P	Pn	22 54 23.9	+0.1
PTL	Penteli	3.51	342	P	Pn	22 54 24.0	+0.1
PTL	Penteli	3.51	342	P	Pn	22 54 24.0	+0.1
DION	Dionisos Attik	3.52	343	P	Pn	22 54 24.3	+0.4
DION	Dionisos Attik	3.52	343	P	Pn	22 54 24.2	+0.2
VLX	Vlachokerasia	3.53	319	P	Pn	22 54 23.6	-0.6
VLX	Vlachokerasia	3.53	319	P	Pn	22 54 24.0	-0.2
FETY	Fethiye	3.65	57	PN	Pn	22 54 25.8	+0.1
FETY	Fethiye	3.65	57	ePn	Pn	22 54 25.8	+0.1
ITM	Ithomi	3.66	313	P	Pn	22 54 24.9	-0.9
ITM	Ithomi	3.66	313	P	Pn	22 54 25.5	-0.2
TRIP	Tripoli	3.71	320	P	Pn	22 54 25.6	-1.0
TRIP	Tripoli	3.71	320	P	Pn	22 54 26.2	-0.4
CHOS	Chios island	3.72	10	PN	Pn	22 54 28.0	+1.3
CHOS	Chios island	3.72	10	ePn	Pn	22 54 28.0	+1.3
VILL	Villia	3.78	336	P	Pn	22 54 27.0	-0.6
LTK	Loutraki	3.78	331	P	Pn	22 54 27.0	-0.6
LTK	Loutraki	3.78	331	P	Pn	22 54 27.4	-0.2
VIL2	Platees	3.84	336	P	Pn	22 54 26.4	-2.0
AKAS	Kas	3.85	66	PN	Pn	22 54 29.7

baz=181
SWA2 S Sn 22 55 48.8 -3.7
baz=181
LKD2 Lefkada island 5.49 319 P Pn 22 54 50.3 -0.8
LKD2 Lefkada island 5.49 319 P Pn 22 54 51.2 +0.1
DSL Palaion Diasel 5.53 324 P Pn 22 54 52.9 +1.4
DSL Palaion Diasel 5.53 324 P Pn 22 54 52.7 +1.1
HFRF Wahat Farafira 7.99 160 P Pn 22 55 24.5 -0.8
baz=161
HFRF S Sn 22 56 48.4 -6.4
baz=161

*IDC **26** 23:09:20.9±0.8, 42°.18S×109°.99W, h0km, mb4.1/5, mb1 4.4/5, mb1mx4.0/34, mbtmp4.1/5, MS3.3/5, Ms1 3.3/5, ms1mx3.0/27, Error ellipse: s-maj=41.4km s-min=26.8km az=95.0*
*ISCJB **26** 23:09:21.8±0.9, 42°.2S±0°.2×109°.8W±0°.3, h10km, mb4.2/9, MS3.3/5, Error ellipse: s-maj=34.1km s-min=23.3km az=179.0*
*NEIC **26** 23:09:22.3±0.6, 42°.26S×109°.75W, h10km, mb4.5/4, Error ellipse: s-maj=24.6km s-min=19.8km az=88.0*
ISC 26 23:09:22.5±0.8, 42°.2S±0°.2×109°.7W±0°.3, h10km, n23, σ1°.07/20, mb4.5/9, MS3.2/5, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	Nana	41.52	53	LR	LR	23 29 52.4	
comp=Z,32nm,21.7s,baz=208,slow=30							
PPT	Papeete	41.84	294	LR	LR	23 29 06.0	
comp=Z,31nm,21.3s,baz=182,slow=28							
LPAZ	La Paz	43.93	67	P	P	23 17 31.8	+1.4
1.6nm,0.9s,baz=209,slow=10,SNR=5.7							
LPAZ				LR	LR	23 31 20.8	
comp=Z,20nm,20.1s,baz=179,slow=30							
CPUP	Villa Florida	45.40	87	LR	LR	23 33 10.1	
comp=Z,55nm,20.8s,baz=205,slow=31							
RAR	Rarotonga	46.69	281	LR	LR	23 31 46.6	
comp=Z,65nm,20.0s,baz=144,slow=29							
QSPA	South Pole Qui	48.01	180	P	P	23 18 02.5	+1.0
4.4nm,1.1s,baz=117,slow=6.1,SNR=6.0							
SAML	Samuel	52.53	65	eP	P	23 18 34.9	-1.2
1.5nm,0.7s							
TXAR	Lajitas Array	71.39	6	P	P	23 20 44.1	+1.4
1.0nm,1.0s,baz=183,slow=7.7,SNR=7.4							
NVAR	Mina Array Bea	80.63	353	P	P	23 21 34.1	-1.3
0.9nm,0.7s,baz=184,slow=7.9,SNR=6.6							
PDAR	Pinedale Array	84.58	0	P	P	23 21 55.8	-0.1
2.9nm,1.0s,baz=166,slow=4.6,SNR=12							
WVOR	Wild Horse Val	84.63	353	eP	P	23 21 56.9	+0.9
4.5nm,1.1s							
HLID	Hailey	85.48	357	eP	P	23 22 00.9	+0.6
6.1nm,1.1s							
RSSD	Black Hills	86.09	4	eP	P	23 22 04.2	+0.9
3.1nm,0.9s							
ESDC	Sonseca Array	125.55	66	PKP	PKPdf	23 28 23.8	+0.1
0.4nm,0.6s,baz=273,slow=2.8,SNR=3.9							
CMAR	Chiang Mai Arr	146.04	235	PKPbc	PKPdf	23 29 00.9	-1.2
5.5nm,1.1s,baz=162,slow=2.4,SNR=11							
FINES	FINESS Array B	147.45	38	PKPbc	PKPbc	23 29 04.7	-0.9
2.1nm,0.8s,baz=279,slow=3.7,SNR=5.3							
KIEV	Kiev	150.78	59	ePKPbc	PKPbc	23 29 12.2	-2.1
KIEV				ePKPab	PKPab	23 29 20.8	-0.8
AKASG	Malin Array Be	150.79	59	PKPbc	PKPbc	23 29 13.2	-1.2
1.4nm,0.6s,baz=282,slow=2.5,SNR=6.6							
BRTR	Keskin Array B	152.36	83	PKPbc	PKPbc	23 29 18.9	+0.2
1.3nm,1.0s,baz=211,slow=1.5,SNR=5.1							
ZALV	Zalesovo Beam	164.78	326	PKPab	PKPab	23 30 21.6	-0.2
0.5nm,0.4s,baz=0.0,slow=2.9,SNR=2.7							
BRVK	Borovoye	169.13	360	ePKPab	PKPab	23 30 41.4	+0.4
BVAR	Borovoye Array	169.16	360	PKPab	PKPab	23 30 41.6	+0.5
0.5nm,0.7s,baz=350,slow=4.8,SNR=3.7							
KURK	Kurchatov	169.72	329	ePKPab	PKPab	23 30 43.8	+0.1

*ISCJB **26** 23:34:28.0±1.4, 1°.4N±0°.2×91°.5E±0°.2, h10km, mb3.5/5, Error ellipse: s-maj=39.4km s-min=19.0km az=30.4*
*IDC **26** 23:34:29.0±1.8, 1°.47N×91°.68E, h0km, mb3.5/5, mb1 3.7/6, mb1mx3.4/64, mbtmp3.6/6, ML3.7/1, Error ellipse: s-maj=58.1km s-min=26.7km az=45.0*
ISC 26 23:34:30.0±1.5, 1°.4N±0°.3×91°.6E±0°.2, h10km, n9, σ0°.81/6, mb3.6/5, North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	Pallekele	12.31	299	Pn	Pn	23 37 25.1	-0.4
0.4nm,0.3s,baz=117,slow=13,SNR=2.9							
PALK				Sn	Sn	23 39 31.9	-11
0.7nm,0.3s,baz=116,slow=3.1,SNR=4.8							
H08S2	Diego Garcia H	21.03	245	T	T	00 00 57.1	
baz=65,slow=75,SNR=8.0							
H08S3	Diego Garcia H	21.03	245	T	T	00 00 53.2	
baz=65,slow=75,SNR=21							
H08S1	Diego Garcia H	21.04	245	T	T	00 00 59.2	
baz=65,slow=75,SNR=4.1							
MKAR	Makanchi Array	45.96	351	P	P	23 42 52.5	-0.7
0.2nm,0.6s,baz=153,slow=8.2,SNR=3.6							
WRA	Warramunga Arr	46.98	119	P	P	23 43 01.4	-0.3
0.4nm,0.7s,baz=299,slow=8.8,SNR=2.5							
SONM	Songino Array	48.03	13	P	P	23 43 09.7	+0.1
0.7nm,0.5s,baz=192,slow=9.5,SNR=5.3							
KURBB	Kurchatov Arra	50.30	349	P	P	23 43 26.8	+0.1
0.3nm,0.8s,baz=179,slow=7.9,SNR=3.4							
GERES	GERESS Array B	80.98	319	P	P	23 46 46.2	+1.0
0.4nm,0.7s,baz=70,slow=6.4,SNR=4.0							

*ATH **26** 23:48:30.6, 36°.34N×27°.79E, h88km±3km, ML2.4/3, Error ellipse: s-maj=6.7km s-min=1.5km az=160.0*
*ISK **26** 23:48:30.9, 36°.49N×27°.72E, h83km±1km, ML2.5/10*
*ISCJB **26** 23:48:31.0±0.6, 36°.43N±0°.04×27°.74E±0°.04, h80km±6km, Error ellipse: s-maj=6.3km s-min=5.3km az=152.4*
*CSEM **26** 23:48:31.6±0.1, 36°.44N×27°.74E, h80km, ML2.7, Error ellipse: s-maj=4.2km s-min=2.9km az=150.0*
*DDA **26** 23:48:37.6, 36°.92N×27°.78E, h7km, Ml2.7*
ISC 26 23:48:31.4±1.4, 36°.44N±0°.03×27°.76E±0°.03, h79km±8km, n56, σ1°.20/79, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	Datca	0.32	334	PG	Pn	23 48 43.9	0.0
DAT				SG	Sn	23 48 53.4	+0.3
DAT	Datca	0.32	334	i P	Pn	23 48 44.0	0.0
DAT				i S	Sn	23 48 53.4	+0.3
DAT	Datca	0.32	334	ePg	Pn	23 48 43.9	0.0
DAT				S	Sn	23 48 53.4	+0.3
ARG	Arkhangelos	0.38	127	PG	Pn	23 48 45.5	+1.4
ARG	Arkhangelos	0.38	127	P	Pn	23 48 44.9	+0.7
ARG				S	Sn	23 48 53.4	-0.1
ARG				AML	AML	23 48 55.2	
comp=N,504μm,0.1s							
ARG				AML	AML	23 48 55.4	
comp=E,979μm,0.2s							
ARG	Arkhangelos	0.38	127	P	Pn	23 48 44.5	+0.4
ARG	Arkhangelos	0.38	127	ePg	Pn	23 48 45.5	+1.4
ARG				S	Sn	23 48 53.8	+0.3
BODT	Bodrum	0.71	330	PG	Pn	23 48 46.9	-0.3
BODT				SG	Sn	23 48 58.7	-0.3
BODT	Bodrum	0.71	330	ePg	Pn	23 48 46.9	-0.3
BODT				eSg	Sn	23 48 58.7	-0.3
TURN	Turunc	0.81	57	PG	Pn	23 48 45.6	-2.6
TURN				SG	Sn	23 48 56.0	-4.6
TURN	Turunc	0.81	57	i P	Pn	23 48 45.7	-2.5
TURN				i S	Sn	23 48 55.7	-4.9
TURN	Turunc	0.81	57	ePg	Pn	23 48 45.6	-2.6
YER	Yerkesik	0.81	31	PG	Pn	23 48 48.5	+0.2
YER				SG	Sn	23 49 01.4	+0.5
YER	Yerkesik	0.81	31	ePg	Pn	23 48 48.5	+0.2
YER				eSg	Sn	23 49 01.4	+0.5
DALY	Dalyan (Mu¨la	0.81	62	PG	Pn	23 48 49.4	+1.1
DALY				SG	Sn	23 49 01.8	+1.0
DALY	Dalyan (Mu¨la	0.81	62	i P	Pn	23 48 49.0	+0.7
DALY				i S	Sn	23 49 02.1	+1.4
DALY	Dalyan (Mu¨la	0.81	62	P	Pn	23 48 49.0	+0.7
DALY	Dalyan (Mu¨la	0.81	62	ePg	Pn	23 48 49.4	+1.1
DALY				eSg	Sn	23 49 01.8	+1.0
DALY				S		23 49 02.1	
MLSB	Milas	0.85	1	PG	Pn	23 48 48.7	-0.1
MLSB				SG	Sn	23 49 01.4	-0.3
MLSB	Milas	0.85	1	ePg	Pn	23 48 48.7	-0.1
MLSB				eSg	Sn	23 49 01.4	-0.3
KARP	Karpathos	1.01	209	PG	Pn	23 48 51.2	+0.5
KARP	Karpathos	1.01	209	P	Pn	23 48 50.8	+0.1
KARP				S	Sn	23 49 04.1	-0.9
KARP				AML	AML	23 49 05.1	
comp=E,412μm,0.1s							
KARP				AML	AML	23 49 05.2	
comp=N,444μm,0.1s							
KARP	Karpathos	1.01	209	P	Pn	23 48 50.5	-0.2
KARP	Karpathos	1.01	209	ePg	Pn	23 48 51.2	+0.5
KARP				S	Sn	23 49 04.3	-0.7
FETY	Fethiye	1.09	79	PN	Pn	23 48 51.9	+0.4
FETY	Fethiye	1.09	79	P	Pn	23 48 51.1	-0.4
FETY	Fethiye	1.09	79	ePn	Pn	23 48 51.9	+0.4
FETY				S	Sn	23 49 05.9	-0.7
AYDN	Tasoluk	1.22	5	i P	Pn	23 48 54.1	+0.8
AYDN				i S	Sn	23 49 09.8	+0.2
AYDN	Tasoluk	1.22	5	P	Pn	23 48 54.1	+0.8
AYDN				S	Sn	23 49 09.8	+0.2
GCAM	G?zelcaml?	1.32	342	PN	Pn	23 48 54.6	+0.2
GCAM	G?zelcaml?	1.32	342	i P	Pn	23 48 54.8	+0.3
GCAM	G?zelcaml?	1.32	342	ePn	Pn	23 48 54.6	+0.2
KSL	Kastellorizon	1.50	101	P	Pn	23 48 57.1	+0.3
KSL				S	Sn	23 49 14.9	-1.0
KSL				AML	AML	23 49 15.8	
comp=E,141μm,0.5s							
KSL				AML	AML	23 49 16.9	
comp=N,101μm,0.5s							
KSL	Kastellorizon	1.50	101	P	Pn	23 48 56.9	+0.1
KSL				S	Sn	23 49 15.4	-0.5
AYDB	Zeytinkoy-Aydi	1.51	4	PN	Pn	23 48 56.7	-0.2
AYDB	Zeytinkoy-Aydi	1.51	4	ePn	Pn	23 48 56.7	-0.2
AKAS	Kas	1.51	97	PN	Pn	23 48 57.9	+0.9
AKAS	Kas	1.51	97	ePn	Pn	23 48 57.9	+0.9
GOLH	Golhisar	1.65	61	i P	Pn	23 48 59.2	+0.4
GOLH	Golhisar	1.65	61	P	Pn	23 48 59.2	+0.4
ELL	Elmali	1.76	79	PN	Pn	23 49 01.3	+1.1
ELL	Elmali	1.76	79	ePn	Pn	23 49 01.3	+1.1
ZKR	Zakros	1.82	224	P	Pn	23 49 01.8	+0.8
ZKR	Zakros	1.82	224	P	Pn	23 49 01.3	+0.3
NPS	Neapolis	2.10	237	P	Pn	23 49 01.6	-3.1
NPS	Neapolis	2.10	237	P	Pn	23 49 03.3	-1.4
KORT	Korkueli	2.16	74	PN	Pn	23 49 06.1	+0.6
KORT	Korkueli	2.16	74	ePn	Pn	23 49 06.1	+0.6
LAST	Lasithi	2.25	236	P	Pn	23 49 06.5	-0.2
LAST	Lasithi	2.25	236	P	Pn	23 49 06.7	0.0
SIVA	Sivas	2.79	240	P	Pn	23 49 13.4	-0.5
SIVA	Sivas	2.79	240	P	Pn	23 49 13.9	0.0
VAM	Vamos	3.06	251	P	Pn	23 49 17.5	-0.1
VAM	Vamos	3.06	251	P	Pn	23 49 18.0	+0.4
VLI	Veliai	3.89	275	P	Pn	23 49 30.5	+1.7
VLI	Veliai	3.89	275	P	Pn	23 49 30.5	+1.7

MEX 26 23:59:29.5±0.3, 14°.82N×93°.02W, h50km±140km, MD3.7, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		0.74	83	eS	Sn	23 59 54.6	+0.5
PCIG		0.90	348	eP	Pn	23 59 44.5	-1.5
PCIG				eS	Sn	23 59 55.7	-2.3
CCIG	Comitan	1.69	30	eP	Pn	23 59 54.3	-2.5

*ISK **27** 00:10:06.7, 38°.06N×25°.52E, h9km, ML2.9/22*
*ISCJB **27** 00:10:07.4±0.5, 38°.05N±0°.02×25°.58E±0°.02, h8km±4km, Error ellipse: s-maj=2.8km s-min=2.2km az=142.5*
*CSEM **27** 00:10:07.8±0.1, 38°.05N×25°.58E, h10km, ML2.8, Error ellipse: s-maj=2.3km s-min=1.7km az=141.0*
*ATH **27** 00:10:07.1, 38°.06N×25°.60E, h27km±1km, ML2.8/11, Error ellipse: s-maj=1.3km s-min=0.7km az=97.0*
*DDA **27** 00:10:07.1, 38°.00N×25°.60E, h6km, Ml3.1*
ISC 27 00:10:07.2±1.1, 38°.05N±0°.02×25°.58E±0°.01, h7km±10km, n151, σ0°.88/197, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSRA	Psara	0.49	358	P	Pb	00 10 18.8	+0.7
PSRA				S	Sg	00 10 23.8	+0.7
PSRA	Psara	0.49	358	P	Pb	00 10 18.0	-0.1
PSRA				S	Sb	00 10 24.3	-1.2
CHOS	Chios island	0.50	48	PG	Pb	00 10 17.9	-0.4
CHOS				SG	Sb	00 10 25.1	-0.7
CHOS	Chios island	0.50	48	P	Pb	00 10 17.9	-0.4
CHOS				S	Sb	00 10 24.4	-1.4
CHOS				AML	AML	00 10 26.1	
comp=E,5803μm,0.4s							
CHOS				AML	AML	00 10 26.2	
comp=N,2501μm,0.2s							
CHOS	Chios island	0.50	48	P	Pb	00 10 17.6	-0.7
CHOS	Chios island	0.50	48	ePg	Pb	00 10 17.9	-0.4
CHOS				S	Sb	00 10 24.6	-1.2
CHOS				eSg	Sb	00 10 25.1	-0.7
TNSA	Tinos	0.61	213	P	Pb	00 10 20.9	+0.7
TNSA				S	Sb	00 10 28.2	-0.7
TNSA	Tinos	0.61	213	P	Pb	00 10 20.3	+0.2
TNSA				S	Sb	00 10 28.5	-0.4
CESE	˜e¨me	0.63	63	PG	Pb	00 10 20.1	-0.4
CESE	˜e¨me	0.63	63	ePg	Pb	00 10 20.1	-0.4
ZEY	˜zmir	0.75	75	i P	Pg	00 10 18.6	-3.0
ZEY				i S	Sb	00 10 33.0	+0.1
URLA	Izmir	0.85	69	PG	Pb	00 10 24.2	-0.2
URLA	Izmir	0.85	69	i P	Pb	00 10 24.1	-0.2
URLA				i S	Sb	00 10 36.2	+0.2
URLA	Izmir	0.85	69	ePg	Pb	00 10 24.2	-0.2
URLA				S	Sb	00 10 36.2	+0.2
KARY	Karystos	0.91	269	P	Pg	00 10 22.4	-2.1
KARY				S	Sb	00 10 37.1	-0.3
KARY				AML	AML	00 10 39.6	
comp=N,1285μm,0.2s							
KARY				AML	AML	00 10 39.9	
comp=E,708μm,0.2s							
KARY	Karystos	0.91	269	P	Pg	00 10 23.7	-0.9
KARY				S	Sb	00 10 37.6	+0.1
KRBN	Karaburun	0.94	54	PG	Pn	00 10 25.9	-0.8
KRBN	Karaburun	0.94	54	ePg	Pn	00 10 25.9	-0.8
APE	Apeiranthos	0.98	183	PG	Pb	00 10 26.3	-0.2
APE				SG	Sb	00 10 40.2	+0.5
APE	Apeiranthos	0.98	183	P	Pg	00 10 25.2	-0.8
APE				S	Sb	00 10 39.3	-0.3
APE				AML	AML	00 10 40.9	
comp=E,1129μm,0.4s							
APE				AML	AML	00 10 41.2	
comp=N,830μm,0.2s							
APE	Apeiranthos	0.98	183	P	Pg	00 10 25.7	-0.3
APE	Apeiranthos	0.98	183	ePg	Pb	00 10 26.3	-0.2
APE				S	Sb	00 10 39.6	-0.1
APE				eSg	Sb	00 10 40.2	+0.5
DGB	˜zmir	1.02	90	i P	Pb	00 10 27.0	-0.2
DGB				i S	Sb	00 10 40.4	-0.5
FOCM	Fo˜§a	1.12	53	PN	Pn	00 10 29.2	0.0
FOCM	Fo˜§a	1.12	53	ePn	Pn	00 10 29.2	0.0
SIGR	SIGRI	1.18	10	PN	Pb	00 10 29.3	-0.5
SIGR	SIGRI	1.18	10	P	Pb	00 10 29.3	-0.5
SIGR				S	Sn	00 10 45.4	-0.8
SIGR				AML	AML	00 10 48.9	
comp=E,712μm,0.7s							
SIGR				AML	AML	00 10 50.3	
comp=N,464μm,0.6s							
SIGR	SIGRI	1.18	10	P	Pb	00 10 29.3	-0.5
SIGR				S	Sn	00 10 45.5	-0.8
AMGA	Amorgos Island	1.24	168	P	Pg	00 10 31.2	+0.2
AMGA				S	Sn	00 10 48.1	+0.2
AMGA	Amorgos Island	1.24	168	P	Pg	00 10 30.9	-0.1
AMGA				S	Sn	00 10 47.9	0.0
SERI	Serifos	1.25	225	P	Pn	00 10 30.2	-0.8
SERI	Serifos	1.25	225	P	Pn	00 10 30.5	-0.5
DION	Dionisos Attik	1.30	272	P	Pb	00 10 32.0	-0.1
DION				S	Sg	00 10 49.7	+0.6
DION				AML	AML	00 10 53.2	
comp=E,690μm,0.4s							
DION				AML	AML	00 10 54.9	
comp=N,357μm,0.5s							
DION	Dionisos Attik	1.30	272	P	Pb	00 10 31.9	-0.1
DION				S	Sg	00 10 49.7	+0.6
PRK	Paraskevi	1.31	24	P	Pn	00 10 30.3	-1.5
PRK	Paraskevi	1.31	24	P	Pn	00 10 30.8	-1.0
IOSP	Ios island	1.35	190	P	Pn	00 10 32.0	-0.4
IOSP				S	Sg	00 10 50.6	+0.1
IOSP				AML	AML	00 10 53.9	
comp=E,1386μm,0.8s							
IOSP				AML	AML	00 10 54.7	
comp=N,1161μm,0.5s							
IOSP	Ios island	1.35	190	P	Pn	00 10 32.1	-0.3
IOSP				S	Sg	00 10 50.6	+0.1
GCAM	G?zelcaml?	1.35	105	PN	Pg	00 10 33.0	-0.1
GCAM	G?zelcaml?	1.35	105	i P	Pn	00 10 31.7	-0.7
GCAM				i S	Sg	00 10 51.4	+0.8
GCAM	G?zelcaml?	1.35	105	P	Pn	00 10 31.7	-0.7
GCAM	G?zelcaml?	1.35	105	ePn	Pg	00 10 33.0	-0.1
GCAM				S	Sg	00 10 51.4	+0.8
PTL	Penteli	1.36	270	P	Pn	00 10 32.5	-0.1
PTL				S	Sg	00 10 53.0	+2.2
PTL				AML	AML	00 10 55.1	
comp=N,438μm,0.4s							
PTL				AML	AML	00 10 57.4	
comp=E,224μm,0.4s							
PTL	Penteli	1.36	270	P	Pn	00 10 32.5	-0.1
PTL				S	Sg	00 10 52.0	+1.2
ATHU	Athens Univers	1.42	267	P	Pb	00 10 33.8	-0.2
ATHU				S	Sg	00 10 53.8	+0.9
ATHU	Athens Univers	1.42	267	P	Pb	00 10 33.6	-0.4
ATHU				S	Sg	00 10 53.2	+0.2
VLY	Voula,Athens	1.43	263	P	Pb	00 10 33.9	-0.2
VLY				S	Sn	00 10 51.8	-0.7
VLY				AML	AML	00 10 55.5	
comp=N,486μm,0.4s							
VLY				AML	AML	00 10 57.5	
comp=E,446μm,0.5s							
VLY	Voula,Athens	1.43	263	P	Pb	00 10 33.7	-0.4
VLY				S	Sb	00 10 52.3	-0.2
DKL	Dikili	1.45	45	PN	Pg	00 10 34.5	-0.5
DKL	Dikili	1.45	45	ePn	Pg	00 10 34.5	-0.5
GPNR	Gulpinar-Canak	1.47	17	PN	Pn	00 10 33.8	-0.2
GPNR	Gulpinar-Canak	1.47	17	ePn	Pn	00 10 33.8	-0.2
ATH	Athens Observa	1.48	267	P	Pn	00 10 33.9	-0.3
ATH				S	Sb	00 10 53.6	-0.2
ATH				AML	AML	00 10 57.5	
comp=E,465μm,0.4s							
ATH				AML	AML	00 10 58.2	
comp=N,354μm,0.3s							
ATH	Athens Observa	1.48	267	P	Pn	00 10 34.0	-0.1
ATH				S	Sb	00 10 53.8	-0.1
AYVA	Ayvalik	1.52	34	i P	Pg	00 10 35.8	-0.6
AYVA				i S	Sg	00 10 58.4	+2.1
AYVA	Ayvalik	1.52	34	P	Pg	00 10 35.8	-0.6
AYVA				S	Sg	00 10 58.3	+2.1
CMBO	Columbo, Santo	1.58	185	P	Pb	00 10 36.7	-0.1
CMBO				S	Sb	00 10 56.8	-0.1
CMBO				AML	AML	00 11 00.2	
comp=N,1160μm,0.6s							
CMBO				AML	AML	00 11 00.2	
comp=E,1000μm,0.6s							
CMBO	Columbo, Santo	1.58	185	P	Pb	00 10 36.1	-0.7
CMBO				S	Sb	00 10 56.6	-0.4
MHLA	Plaka, Milos I	1.60	216	P	Pn	00 10 34.7	-1.2
MHLA	Plaka, Milos I	1.60	216	P	Pn	00 10 35.3	-0.5
SAP3	Santorini-Thir	1.62	187	P	Pn	00 10 36.0	-0.1
SAP2K	Karterados	1.64	184	P	Pb	00 10 37.5	-0.2
MHLO	Agia Marina, M	1.65	215	P	Pn	00 10 35.7	-0.8
MHLO	Agia Marina, M	1.65	215	P	Pn	00 10 36.2	-0.4
SANT	Santorini	1.68	183	PN	Pn	00 10 36.9	-0.1
SANT	Santorini	1.68	183	ePn	Pn	00 10 36.9	-0.1
BODT	Bodrum	1.69	125	PN	Pb	00 10 37.9	-0.7
BODT	Bodrum	1.69	125	ePn	Pb	00 10 37.9	-0.7
SAP1	Santorini-Akro	1.70	185	P	Pb	00 10 38.1	-0.6
VILL	Villia	1.80	274	P	Pn	00 10 37.8	-0.8
BOZC	Bozcaada	1.82	11	PN	Pn	00 10 39.2	+0.3
BOZC	Bozcaada	1.82	11	ePn	Pn	00 10 39.2	+0.3
AYDB	Zeytinkoy-Aydi	1.82	93	PN	Pb	00 10 40.1	-0.8
AYDB	Zeytinkoy-Aydi	1.82	93	ePn	Pb	00 10 40.1	-0.8
VIL2	Platees	1.83	276	P	Pn	00 10 37.0	-2.1
BAYC	CANAKKALE_Bayr	1.85	24	i P	Pn	00 10 38.6	-0.7
BAYC				i S	Sg	00 11 08.5	+2.0
BAYC	CANAKKALE_Bayr	1.85	24	P	Pn	00 10 38.6	-0.7
BAYC				S	Sg	00 11 08.5	+2.0
AYDN	Tasoluk	1.86	101	i P	Pn	00 10 38.0	-1.4
AYDN	Tasoluk	1.86	101	P	Pn	00 10 38.0	-1.4
EZN	Ezine	1.86	18	PN	Pn	00 10 39.6	+0.1
EZN	Ezine	1.86	18	ePn	Pn	00 10 39.6	+0.1
LIA	Limnos Island	1.87	350	P	Pn	00 10 39.1	-0.5
LIA	Limnos Island	1.87	350	P	Pn	00 10 39.3	-0.3
MLSB	Milas	1.90	113	PN	Pb	00 10 40.7	-1.4
MLSB	Milas	1.90	113	ePn	Pb	00 10 40.7	-1.4
DID	Didima	1.94	254	P	Pn	00 10 40.3	-0.2
DID	Didima	1.94	254	P	Pn	00 10 40.5	0.0
SKIA	Skiathos	2.00	305	P	Pn	00 10 41.7	+0.4
SKIA	Skiathos	2.00	305	P	Pn	00 10 41.6	+0.3
KRND	KRANIDI	2.04	252	P	Pn	00 10 41.9	0.0
KRND	KRANIDI	2.04	252	P	Pn	00 10 42.0	+0.1
DAT	Datca	2.06	129	PN	Pn	00 10 43.1	+0.8
DAT	Datca	2.06	129	ePn	Pn	00 10 43.1	+0.8
LTK	Loutraki	2.07	270	P	Pn	00 10 43.3	+1.0
LTK				S	Sn	00 11 08.8	+0.5
LTK				AML	AML	00 11 18.2	
comp=E,504μm,0.6s							
LTK				AML	AML	00 11 19.8	
comp=N,235μm,0.5s							
LTK	Loutraki	2.07	270	P	Pn	00 10 42.9	+0.6
LTK				S	Sn	00 11 08.5	+0.2
PROD	Prodromos	2.13	276	P	Pb	00 10 45.8	-0.2
PROD	Prodromos	2.13	276	P	Pb	00 10 44.6	-1.4
STEP	BALIKESIR_Sava	2.13	51	i P	Pg	00 10 48.1	+0.1
STEP				i S	Sg	00 11 17.8	+2.1
STEP	BALIKESIR_Sava	2.13	51	P	Pg	00 10 48.1	+0.1
GADA	Gvkgeada	2.15	6	PN	Pn	00 10 43.9	+0.5
GADA	Gvkgeada	2.15	6	ePn	Pn	00 10 43.9	+0.5
YER	Yerkesik	2.33	112	PN	Pn	00 10 46.9	+0.9
YER	Yerkesik	2.33	112	ePn	Pn	00 10 46.9	+0.9
MANT	Manisa	2.38	78	i P	Pg	00 10 53.3	+0.5
MANT				i S	Sg	00 11 23.8	+0.1
BALB	Balikesir	2.39	48	PN	Pn	00 10 47.8	+1.1
BALB	Balikesir	2.39	48	ePn

MEX 27 00:11:31.3±0.4, 15°.85N×98°.80W, h16km±9km, MD4.0, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.84**	**50**	*e*P	Pb	00 11 40.9	-6.8
ACX	**Acapulco**	**1.44**	**315**	*e*P	Pn	00 11 52.2	-4.5
ACX				*i* S	Sg	00 12 20.4	+2.7
ACX	**Acapulco**	**1.44**	**315**	*e*P	Pn	00 11 52.2	-4.5
ACX				*e*S	Sn	00 12 09.9	-5.4
TLIG	**Tlapa**	**1.72**	**8**	*e*P	Pn	00 11 57.4	-3.3
TLIG				*e*S	Sn	00 12 17.2	-5.3
TLIG	**Tlapa**	**1.72**	**8**	*e*P	Pn	00 11 57.4	-3.3
TLIG				*e*S	Sn	00 12 17.3	-5.2
CAIG	**El Cayaco**	**1.84**	**311**	*e*P	Pn	00 12 00.3	-2.0
CAIG				*e*S	Sn	00 12 20.8	-4.6
CAIG	**El Cayaco**	**1.84**	**311**	*e*P	Pn	00 11 58.5	-3.8
CAIG				*e*S	Sn	00 12 20.8	-4.6
MEIG	**Mezcala**	**2.21**	**339**	*i* P	Pn	00 12 05.8	-1.6
MEIG				*i* S	Sn	00 12 30.0	-4.5
MEIG	**Mezcala**	**2.21**	**339**	*e*P	Pn	00 12 04.7	-2.8
MEIG				*i* S	Sn	00 12 30.0	-4.5
VHO	**Vista Hermosa**	**2.33**	**58**	*e*P	Pn	00 12 05.9	-3.2
VHO				*i* S	Sn	00 12 33.5	-4.1
VHO	**Vista Hermosa**	**2.33**	**58**	*e*P	Pn	00 12 05.9	-3.2
VHO				*i* S	Sn	00 12 33.5	-4.1
PLIG	**Platanillo**	**2.62**	**345**	*e*S	Sb	00 12 48.5	-1.4
PLIG	**Platanillo**	**2.62**	**345**	*e*S	Sb	00 12 48.5	-1.4

*GII **27** 00:30:27.9±0.0, 34°.75N×32°.95E, h20km*
*ISCJB **27** 00:30:27.8±0.3, 34°.73N±0°.02×33°.04E±0°.04, h31km±3km, Error ellipse: s-maj=5.4km s-min=3.3km az=165.1*
*NIC **27** 00:30:27.7±0.1, 34°.78N×33°.07E, h35km, ML3.4*
*ISK **27** 00:30:27.8, 34°.79N×33°.05E, h26km, ML3.2/19*
*CSEM **27** 00:30:28.7±0.3, 34°.80N×33°.03E, h24km±1km, ML3.4, Error ellipse: s-maj=6.4km s-min=4.2km az=6.0*
*DDA **27** 00:30:34.3, 35°.33N×33°.25E, h35km, Ml3.3*
ISC 27 00:30:28.7±0.9, 34°.77N±0°.03×33°.05E±0°.03, h32km±6km, n84, σ1s04/106, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SZAC	**Souni**	**0.14**	**266**	P	**Pb**	**00 30 34.4**	**-0.3**
	baz=82						
SZAC				S	**Sb**	**00 30 39.2**	**+0.4**
SZAC	**Souni**	**0.14**	**266**	P	**Pb**	**00 30 34.4**	**-0.3**
SZAC				S	**Sb**	**00 30 39.2**	**+0.4**
CSS	**Mathiatis**	**0.30**	**50**	PG	**Pb**	**00 30 35.4**	**-1.1**
CSS	**Mathiatis**	**0.30**	**50**	P	**Pb**	**00 30 35.7**	**-0.8**
	baz=229						
CSS				S	**Sb**	**00 30 41.6**	**-0.2**
CSS	**Mathiatis**	**0.30**	**50**	*e*Pg	**Pb**	**00 30 35.4**	**-1.1**
CSS	**Mathiatis**	**0.30**	**50**	P	**Pb**	**00 30 35.7**	**-0.8**
CSS				S	**Sb**	**00 30 41.6**	**-0.2**
LEF	**Lefka**	**0.38**	**340**	PG	**Pb**	**00 30 36.6**	**-0.9**
LEF				SG	**Sb**	**00 30 42.7**	**-0.7**
LEF	**Lefka**	**0.38**	**340**	*e*Pg	**Pb**	**00 30 36.6**	**-0.9**
LEF				*e*Sg	**Sb**	**00 30 42.7**	**-0.7**
AKIN	**Ak¨–nc¨–lar- K**	**0.42**	**54**	PG	**Pb**	**00 30 37.1**	**-1.0**
AKIN				SG	**Sb**	**00 30 43.8**	**-0.8**
AKIN	**Ak¨–nc¨–lar- K**	**0.42**	**54**	*e*Pg	**Pb**	**00 30 37.1**	**-1.0**
AKIN				*e*Sg	**Sb**	**00 30 43.8**	**-0.8**
MAMC	**Mammari**	**0.43**	**19**	P	**Pb**	**00 30 37.2**	**-1.0**
	baz=197						
MAMC	**Mammari**	**0.43**	**19**	P	**Pb**	**00 30 37.2**	**-1.0**
AKDN	**Akdeniz- K¨–br**	**0.54**	**353**	PG	**Pb**	**00 30 38.9**	**-1.0**
AKDN	**Akdeniz- K¨–br**	**0.54**	**353**	*e*Pg	**Pb**	**00 30 38.9**	**-1.0**
ALFC	**Alefka**	**0.54**	**317**	P	**Pb**	**00 30 38.9**	**-1.0**
	baz=134						
ALFC				S	**Sb**	**00 30 47.2**	**-0.4**
ALFC	**Alefka**	**0.54**	**317**	P	**Pb**	**00 30 38.9**	**-1.0**
ALFC				S	**Sb**	**00 30 47.2**	**-0.4**
PPCY	**Paphos**	**0.59**	**282**	P	**Pb**	**00 30 39.7**	**-1.1**
	baz=100						
PPCY	**Paphos**	**0.59**	**282**	P	**Pb**	**00 30 39.7**	**-1.1**
AKMC	**Akamas**	**0.65**	**294**	P	**Pb**	**00 30 40.8**	**-0.9**
	baz=112						
AKMC	**Akamas**	**0.65**	**294**	P	**Pb**	**00 30 40.8**	**-0.9**
EREN	**Erenkoy**	**1.19**	**50**	PN	**Pn**	**00 30 48.9**	**-0.3**
EREN	**Erenkoy**	**1.19**	**50**	*e*Pn	**Pn**	**00 30 48.9**	**-0.3**
BOZY	**Bozyazi-Mersin**	**1.34**	**357**	PN	**Pn**	**00 30 50.8**	**-0.4**
BOZY	**Bozyazi-Mersin**	**1.34**	**357**	*e*Pn	**Pn**	**00 30 50.8**	**-0.4**
TEKE	**Tekeli-Mersin**	**1.38**	**2**	PN	**Pn**	**00 30 51.2**	**-0.5**
TEKE	**Tekeli-Mersin**	**1.38**	**2**	*e*Pn	**Pn**	**00 30 51.2**	**-0.5**
AKKU	**Akkuyu-Mersin**	**1.45**	**16**	PN	**Pn**	**00 30 52.3**	**-0.4**
AKKU	**Akkuyu-Mersin**	**1.45**	**16**	*e*Pn	**Pn**	**00 30 52.3**	**-0.4**
GULN	**MERSIN_Gulnar**	**1.47**	**16**	*i* P	**Pn**	**00 30 51.9**	**-1.1**
GULN				*i* S	**Sn**	**00 31 11.1**	**-0.1**
GULN	**MERSIN_Gulnar**	**1.47**	**16**	P	**Pn**	**00 30 51.9**	**-1.1**
GULN				S	**Sn**	**00 31 11.1**	**-0.1**
YESI	**Yesilovacik-Me**	**1.51**	**19**	PN	**Pn**	**00 30 53.4**	**-0.1**
YESI	**Yesilovacik-Me**	**1.51**	**19**	*e*Pn	**Pn**	**00 30 53.4**	**-0.1**
TEPE	**Tepekoy-Mersin**	**1.51**	**16**	PN	**Pn**	**00 30 53.5**	**-0.1**
TEPE	**Tepekoy-Mersin**	**1.51**	**16**	*e*Pn	**Pn**	**00 30 53.5**	**-0.1**
IKL	**Isikli**	**1.56**	**19**	PN	**Pn**	**00 30 54.0**	**-0.2**
IKL	**Isikli**	**1.56**	**19**	*e*Pn	**Pn**	**00 30 54.0**	**-0.2**
GAZI	**Gazipasa**	**1.58**	**338**	PN	**Pn**	**00 30 54.2**	**-0.4**
GAZI	**Gazipasa**	**1.58**	**338**	*e*Pn	**Pn**	**00 30 54.2**	**-0.4**
BERE	**Bereket-Mersin**	**1.58**	**5**	PN	**Pn**	**00 30 54.4**	**-0.3**
BERE	**Bereket-Mersin**	**1.58**	**5**	*e*Pn	**Pn**	**00 30 54.4**	**-0.3**
TEVE	**Tevekalti-Mers**	**1.70**	**11**	PN	**Pn**	**00 30 56.2**	**0.0**
TEVE	**Tevekalti-Mers**	**1.70**	**11**	*e*Pn	**Pn**	**00 30 56.2**	**0.0**
KEBE	**Keben-Mersin**	**1.76**	**18**	PN	**Pn**	**00 30 57.5**	**+0.4**
KEBE	**Keben-Mersin**	**1.76**	**18**	*e*Pn	**Pn**	**00 30 57.5**	**+0.4**
ERMK	**Ermenek**	**1.88**	**357**	*i* P	**Pn**	**00 30 58.7**	**-0.1**
ERMK				*i* S	**Sn**	**00 31 23.6**	**+2.1**
ERMK	**Ermenek**	**1.88**	**357**	P	**Pn**	**00 30 58.7**	**-0.1**
ERMK				S	**Sn**	**00 31 23.6**	**+2.1**
MERS	**Mersin**	**2.42**	**29**	PN	**Pn**	**00 31 07.2**	**+1.1**
MERS	**Mersin**	**2.42**	**29**	*e*Pn	**Pn**	**00 31 07.2**	**+1.1**
MMA0B	**Mount Meron ar**	**2.62**	**131**	Pn	**Pn**	**00 31 08.5**	**-0.4**
MMA0B				Sn	**Sn**	**00 31 39.1**	**-0.6**
OFRI	**'Ofer**	**2.68**	**142**	Pn	**Pn**	**00 31 08.7**	**-1.0**
BLGI	**Bet Lehem HaGe**	**2.70**	**138**	Pn	**Pn**	**00 31 10.4**	**+0.5**
KERG	**Konya-Eregli**	**2.78**	**18**	*i* P	**Pn**	**00 31 11.1**	**-0.1**
KERG				*i* S	**Sb**	**00 31 48.4**	**-3.2**
KERG	**Konya-Eregli**	**2.78**	**18**	P	**Pn**	**00 31 11.1**	**-0.1**
YAYL	**Yayladag**	**2.80**	**62**	PN	**Pn**	**00 31 12.0**	**+0.6**
YAYL	**Yayladag**	**2.80**	**62**	*i* P	**Pn**	**00 31 14.5**	**+3.1**
YAYL				*i* S	**Sn**	**00 31 45.0**	**+0.9**
YAYL	**Yayladag**	**2.80**	**62**	*e*Pn	**Pn**	**00 31 12.0**	**+0.6**
YAYL	**Yayladag**	**2.80**	**62**	P	**Pn**	**00 31 14.5**	**+3.1**
YAYL				S	**Sn**	**00 31 45.0**	**+0.9**
GULE	**Gulek**	**2.88**	**29**	*i* P	**Pn**	**00 31 14.5**	**+2.0**
GULE				*i* S	**Sn**	**00 31 48.4**	**+2.3**
GULE	**Gulek**	**2.88**	**29**	P	**Pn**	**00 31 14.5**	**+2.0**
GULE				S	**Sn**	**00 31 48.4**	**+2.3**
KSHT	**Keshet**	**2.91**	**127**	Pn	**Pn**	**00 31 13.3**	**+0.5**
KARA	**Karaisali**	**2.97**	**33**	PN	**Pn**	**00 31 15.3**	**+1.6**
KARA	**Karaisali**	**2.97**	**33**	*e*Pn	**Pn**	**00 31 15.3**	**+1.6**
SLTI	**Sal'it**	**3.02**	**146**	Pn	**Pn**	**00 31 14.4**	**+0.1**
TAHT	**Tahtakopru-Hat**	**3.02**	**57**	PN	**Pn**	**00 31 15.2**	**+0.9**
TAHT	**Tahtakopru-Hat**	**3.02**	**57**	*e*Pn	**Pn**	**00 31 15.2**	**+0.9**
MMLI	**Mount Malkishu**	**3.05**	**139**	PN	**Pn**	**00 31 16.0**	**+1.2**
MMLI	**Mount Malkishu**	**3.05**	**139**	Pn	**Pn**	**00 31 14.4**	**-0.4**
MMLI	**Mount Malkishu**	**3.05**	**139**	*e*Pn	**Pn**	**00 31 16.0**	**+1.2**
SUTC	**Sutluce-Ispart**	**3.17**	**329**	PN	**Pn**	**00 31 17.5**	**+0.9**
SUTC	**Sutluce-Ispart**	**3.17**	**329**	*e*Pn	**Pn**	**00 31 17.5**	**+0.9**
KONT	**Konya--Tatoy**	**3.22**	**350**	PN	**Pn**	**00 31 18.7**	**+1.6**
KONT	**Konya--Tatoy**	**3.22**	**350**	*e*Pn	**Pn**	**00 31 18.7**	**+1.6**
ELL	**Elmali**	**3.23**	**309**	PN	**Pn**	**00 31 17.9**	**+0.6**
ELL	**Elmali**	**3.23**	**309**	*e*Pn	**Pn**	**00 31 17.9**	**+0.6**
HMDT	**Nahal Hemdat**	**3.25**	**140**	Pn	**Pn**	**00 31 17.7**	**+0.2**
HMDT				Sn	**Sn**	**00 31 55.9**	**+0.9**
LADK	**Ladik-KONYA**	**3.47**	**351**	PN	**Pn**	**00 31 21.2**	**+0.6**
LADK	**Ladik-KONYA**	**3.47**	**351**	*e*Pn	**Pn**	**00 31 21.2**	**+0.6**
DSI	**Dead Sea**	**3.74**	**148**	Pn	**Pn**	**00 31 24.4**	**+0.2**
DSI				Sn	**Sn**	**00 32 07.7**	**+0.6**
YTIR	**Yattir**	**3.81**	**152**	Pn	**Pn**	**00 31 25.9**	**+0.6**
MZDA	**Masada**	**3.96**	**150**	Pn	**Pn**	**00 31 27.9**	**+0.8**
KZIT	**Kziot**	**4.01**	**163**	Pn	**Pn**	**00 31 27.4**	**-0.6**
PRNI	**Paran**	**4.70**	**159**	Pn	**Pn**	**00 31 37.5**	**0.0**
MBRI	**Mt Berech**	**5.20**	**162**	Pn	**Pn**	**00 31 44.6**	**+0.2**
EIL	**Elat**	**5.33**	**162**	Pn	**Pn**	**00 31 46.3**	**+0.2**

*ISCJB **27** 00:47:18.1±0.4, 56°.08S±0°.07×27°.5W±0°.1, h112km, mb4.3/14, Error ellipse: s-maj=13.4km s-min=8.4km az=143.6*

*IDC **27** 00:47:20.2±5.2, 56°.11S×27°.46W, h115km±48km, mb4.1/10, mb1 4.1/11, mb1mx3.9/30, mbtmp4.5/11, Error ellipse: s-maj=20.1km s-min=14.4km az=68.0*
*NEIC **27** 00:47:20.3±1.2, 56°.14S×27°.54W, h119km±11km, mb4.4/7, Error ellipse: s-maj=11.7km s-min=7.3km az=49.0*
ISC 27 00:47:19.5±0.5, 56°.11S±0°.10×27°.60W±0°.08, h112km, n42, σ0s84/41, mb4.3/14, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.41**	**286**	*e*Pn	**Pn**	**00 48 39.2**	**+1.4**
HOPE				*e*Sn	**Sn**	**00 49 36.1**	**-2.7**
VNA1	**Neumayer--Stat**	**16.83**	**158**	P	**P**	**00 51 08.7**	**+0.5**
VNA3	**Neumayer Olymp**	**17.02**	**160**	P	**P**	**00 51 10.3**	**0.0**
SNAA	**Sanae**	**18.78**	**156**	P	**P**	**00 51 29.6**	**-0.1**
SNAA	**Sanae**	**18.78**	**156**	P	**P**	**00 51 29.4**	**-0.3**
	6.9nm,0.3s,baz=300,slow=11,SNR=51						
SNAA	**Sanae**	**18.78**	**156**	*e*P	**P**	**00 51 29.2**	**-0.5**
	21nm,0.5s						
TRQA	**Tornquist**	**29.13**	**294**	*e*P	**P**	**00 53 09.8**	**+0.1**
	1.9nm,0.5s						
QSPA	**South Pole Qui**	**34.14**	**180**	P	**P**	**00 53 53.9**	**+0.5**
	5.1nm,0.5s,baz=188,slow=2.9,SNR=51						
QSPA				PcP	**PcP**	**00 56 27.2**	**-0.5**
	1.5nm,0.4s,baz=267,slow=1.7,SNR=5.7						
QSPA	**South Pole Qui**	**34.14**	**180**	*e*P	**P**	**00 53 54.1**	**+0.6**
	5.9nm,0.5s						
QSPA				PcP	**PcP**	**00 56 27.2**	**-0.5**
CPUP	**Villa Florida**	**36.68**	**312**	P	**P**	**00 54 15.1**	**-0.2**
	2.6nm,0.6s,baz=164,slow=7.3,SNR=6.4						
MAW	**Mawson**	**40.24**	**144**	P	**P**	**00 54 44.3**	**-0.3**
	2.3nm,0.4s,baz=257,slow=6.6,SNR=6.3						
GO02	**Mina Guanaco**	**43.31**	**298**	*e*P	**P**	**00 55 11.1**	**+0.6**
	13nm,0.6s						
BOSA	**Boshof**	**46.20**	**76**	P	**P**	**00 55 32.5**	**-0.7**
	2.1nm,1.0s,baz=207,slow=6.8,SNR=3.3						
VNDA	**Vanda**	**46.51**	**183**	P	**P**	**00 55 35.5**	**+0.7**
	2.7nm,0.6s,baz=186,slow=6.7,SNR=35						
VNDA	**Vanda**	**46.51**	**183**	*e*P	**P**	**00 55 34.5**	**-0.3**
	3.1nm,0.6s						
H10S2	**ASCENSION HYDR**	**48.12**	**17**	T	T	01 47 47.0	
	baz=190,slow=74,SNR=12						
H10S3	**ASCENSION HYDR**	**48.12**	**17**	T	T	01 47 51.1	
	baz=190,slow=74,SNR=10						
H10S1	**ASCENSION HYDR**	**48.14**	**17**	T	T	01 47 50.7	
	baz=190,slow=74,SNR=8.3						
H10N1	**ASCENSION HYDR**	**49.24**	**17**	T	T	01 49 39.9	
	baz=194						
H10N3	**ASCENSION HYDR**	**49.24**	**17**	T	T	01 49 34.2	
	baz=194,slow=74						
H10N2	**ASCENSION HYDR**	**49.26**	**17**	T	T	01 49 25.0	
	baz=194,slow=74						
LPAZ	**La Paz**	**50.22**	**306**	P	**P**	**00 56 05.7**	**+1.0**
	5.7nm,0.3s,baz=143,slow=3.8,SNR=56						
LPAZ	**La Paz**	**50.22**	**306**	*e*P	**P**	**00 56 05.7**	**+1.0**
	9.9nm,0.4s						
SAML	**Samuel**	**54.68**	**315**	*e*P	**P**	**00 56 36.6**	**-0.3**
	1.4nm,0.5s						
LSZ	**Lusaka**	**58.61**	**69**	*e*P	**P**	**00 57 04.3**	**-0.5**
	3.1nm,0.9s						
DBIC	**Dimbokro**	**65.31**	**25**	P	**P**	**00 57 49.7**	**+0.3**
	1.7nm,0.7s,baz=163,slow=6.4,SNR=4.0						
PCRV	**Puerto La Cruz**	**72.85**	**322**	P	**P**	**00 58 37.0**	**+1.0**
	5.9nm,0.6s,baz=162,slow=3.2,SNR=4.3						
KOWA	**Kowa**	**73.07**	**24**	P	**P**	**00 58 38.0**	**+0.9**
	0.8nm,0.5s,baz=192,slow=3.9,SNR=3.4						
TOA0	**Torodi Ar. Sit**	**73.22**	**30**	*e*P	**P**	**00 58 38.5**	**+0.4**
TORD	**Torodi Ar. Bea**	**73.22**	**30**	P	**P**	**00 58 38.6**	**+0.5**
	5.0nm,0.6s,baz=200,slow=6.4,SNR=87						
TORD				pP	**pP**	**00 59 06.5**	**+0.3**
	0.6nm,0.5s,baz=201,slow=6.3,SNR=4.8						
FINES	**FINESS Array B**	**124.54**	**28**	PKP	**PKPdf**	**01 06 03.2**	**-0.8**
	0.5nm,0.4s,baz=284,slow=2.8,SNR=8.6						
ILULI	**Ilulissat**	**126.18**	**350**	*e*PKPdf	**PKPdf**	**01 06 06.6**	**-0.3**
FCC	**Fort Churchill**	**126.19**	**324**	*e*PKPdf	**PKPdf**	**01 06 06.7**	**-0.5**
ARCES	**ARCESS Array B**	**131.08**	**22**	PKP	**PKPdf**	**01 06 15.1**	**-1.2**
	1.3nm,0.8s,baz=222,slow=1.2,SNR=4.7						
BVAR	**Borovoye Array**	**135.00**	**58**	PKP	**PKPdf**	**01 06 25.7**	**+1.5**
	0.5nm,0.4s,baz=274,slow=3.9,SNR=2.8						
MKAR	**Makanchi Array**	**137.12**	**72**	PKP	**PKPdf**	**01 06 29.5**	**+1.1**
	0.3nm,0.4s,baz=222,slow=1.9,SNR=2.6						
RES	**Resolute Bay**	**137.82**	**339**	*e*PKPdf	**PKPdf**	**01 06 29.0**	**+0.2**
CD2	**Chengdu**	**137.86**	**106**	PKP	**PKPdf**	**01 06 29.0**	**-1.3**
IL1	**Eielson Array**	**149.98**	**312**	*e*PKPbc	**PKPbc**	**01 06 54.8**	**-0.3**
ILAR	**Eielson Array**	**149.98**	**312**	PKPbc	**PKPbc**	**01 06 55.0**	**-0.1**
	1.7nm,0.6s,baz=105,slow=0.9,SNR=22						
ILAR				pPKPbc	**pPKPbc**	**01 07 24.4**	**-0.9**
	1.8nm,0.9s,baz=132,slow=1.8,SNR=6.4						
SONM	**Songino Array**	**150.96**	**87**	PKPbc	**PKPbc**	**01 06 57.7**	**-0.5**
	4.0nm,0.6s,baz=225,slow=3.3,SNR=21						
SONA1	**Songino Array**	**150.97**	**87**	*e*PKPbc	**PKPbc**	**01 06 57.4**	**-0.9**

*JMA **27** 00:50:54.1±0.2, 24°.45N×122°.20E, h57km±4km, M2.2*
*TAP **27** 00:50:54.4, 24°.52N×122°.20E, h51km, ML3.1, B*
ISC 27 00:50:53.7±1.2, 24°.49N±0°.02×122°.22E±0°.02, h23km±14km, n63, σ0s90/102, 2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.36**	**289**	P	**Pn**	**00 51 03.9**	**+0.3**
	baz=286						
TWC				*e*S	**Sn**	**00 51 10.8**	**+0.9**
	baz=286						
ENAH	**Nanao**	**0.38**	**264**	*e*P	**Pn**	**00 51 04.5**	**+0.7**
	baz=259						
NANB	**Nanao**	**0.43**	**262**	*e*P	**Pn**	**00 51 05.0**	**+0.4**
	baz=257						
NANB				*e*S	**Sn**	**00 51 13.9**	**+2.1**
	baz=257						
ENA	**Nanau**	**0.44**	**262**	P	**Pn**	**00 51 05.1**	**+0.4**
	baz=257						
NTC	**Toucheng**	**0.51**	**315**	P	**Pn**	**00 51 05.7**	**+0.1**
	baz=323						
NTC				*e*S	**Sn**	**00 51 13.3**	**-0.2**
	baz=323						
ILA	**Ilan**	**0.51**	**302**	*e*P	**Pn**	**00 51 05.5**	**-0.1**
	baz=307						
ILA				*e*S	**Sn**	**00 51 14.0**	**+0.4**
	baz=307						
TWE	**Neicheng**	**0.56**	**294**	P	**Pn**	**00 51 06.3**	**+0.1**
	baz=296						
TWE				*e*S	**Sn**	**00 51 14.8**	**+0.1**
	baz=296						
TWB1	**Santiao Chiao**	**0.56**	**338⇓**	*i*P	**Pn**	**00 51 05.9**	**-0.3**
	baz=330						
TWB1				S	**Sn**	**00 51 14.1**	**-0.7**
	baz=330						
TIPB	**Shuangxi**	**0.60**	**323**	P	**Pb**	**00 51 05.6**	**0.0**
	baz=330						
TIPB				*e*S	**Sb**	**00 51 14.4**	**+0.7**
	baz=330						
ENTT	**Nioudou**	**0.62**	**284**	P	**Pn**	**00 51 07.7**	**+0.7**
	baz=287						
ENTT				*e*S	**Sn**	**00 51 17.0**	**+0.8**
	baz=287						
NACB	**Ninganchiao**	**0.65**	**241**	*e*P	**Pn**	**00 51 07.3**	**-0.3**
	baz=228						
JYNG	**Yonagunijimaku**	**0.66**	**93**	P	**Pn**	**00 51 08.1**	**+0.5**
JYNG				S	**Sn**	**00 51 17.9**	**+0.6**
NWF	**Wu-fen Shan**	**0.70**	**325**	P	**Pn**	**00 51 08.1**	**-0.2**
	baz=325						
NWF				*e*S	**Sb**	**00 51 17.6**	**+0.9**
	baz=325						
TWD	**Chiawan**	**0.70**	**234**	P	**Pn**	**00 51 08.1**	**-0.1**
	baz=222						
TWD				*e*S	**Sn**	**00 51 18.4**	**0.0**
	baz=222						
WFSB	**Wu-fen Shan**	**0.70**	**325⇓**	*e*P	**Pn**	**00 51 08.1**	**-0.2**
	baz=325						
WFSB				*e*S	**Sb**	**00 51 17.6**	**+1.0**
	baz=325						
NWLT	**Wulai**	**0.71**	**294**	P	**Pn**	**00 51 09.0**	**+0.6**
	baz=296						
NWLT				*e*S	**Sn**	**00 51 18.4**	**-0.3**
	baz=296						
YOJ	**Yonaguni jima**	**0.72**	**92**	P	**Pn**	**00 51 08.9**	**+0.4**
	baz=86						
YOJ				*e*S	**Sn**	**00 51 19.1**	**+0.3**
	baz=86						
YOJ	**Yonaguni jima**	**0.72**	**92**	P	**Pn**	**00 51 08.9**	**+0.4**
YOJ				*e*S	**Sn**	**00 51 19.0**	**+0.3**
NNSH	**Datong**	**0.77**	**265**	P	**Pn**	**00 51 09.4**	**+0.2**
	baz=253						
NNSH				*e*S	**Sn**	**00 51 19.9**	**-0.2**
	baz=253						
NNS	**Nan Shan**	**0.78**	**266**	P	**Pn**	**00 51 09.5**	**+0.1**
	baz=254						
NNS				*e*S	**Sn**	**00 51 20.7**	**+0.4**
	baz=254						
YHNB	**Yeheng**	**0.79**	**283**	*e*P	**Pn**	**00 51 10.1**	**+0.5**
	baz=281						
YHNB				*e*S	**Sn**	**00 51 21.4**	**+0.7**
	baz=281						
NSK	**Sanguang**	**0.81**	**283**	*e*P	**Pn**	**00 51 10.5**	**+0.7**
	baz=282						
ENLB	**Shoufeng**	**0.81**	**224**	*e*P	**Pn**	**00 51 10.7**	**+0.9**
	baz=214						
ENLB				*e*S	**Sn**	**00 51 22.4**	**+1.2**
	baz=214						
TATO	**Taipei**	**0.82**	**306**	*e*P	**Pb**	**00 51 09.5**	**+0.1**
	baz=305						
TAP1	**Taipei**	**0.84**	**311**	*e*P	**Pb**	**00 51 09.9**	**+0.4**
	baz=309						
YM07	**YM07**	**0.87**	**321**	*e*P	**Pb**	**00 51 09.1**	**-1.2**
	baz=321						
YM07				*e*S	**Sb**	**00 51 20.2**	**-1.3**
	baz=321						
YM10	**YM10**	**0.89**	**318**	*e*P	**Pb**	**00 51 10.4**	**-0.2**
	baz=317						
YM08	**YM08**	**0.90**	**320**	*e*P	**Pb**	**00 51 10.1**	**-0.7**
	baz=320						
YM04	**YM04**	**0.91**	**317**	*e*P	**Pb**	**00 51 10.6**	**-0.3**
	baz=316						
YM04				*e*S	**Sb**	**00 51 22.3**	**-0.2**
	baz=316						
YM12	**YM12**	**0.91**	**319**	*e*P	**Pb**	**00 51 10.3**	**-0.5**
	baz=319						
TWS1	**Kuangyinshan**	**0.95**	**310**	P	**Pb**	**00 51 11.5**	**-0.1**
	baz=319						
TWY	**Chenhua**	**0.96**	**324**	*e*P	**Pb**	**00 51 11.4**	**-0.4**
	baz=324						
TWT	**Tachien**	**0.98**	**256**	*e*P	**Pn**	**00 51 13.1**	**+0.8**
	baz=247						
TWT				*e*S	**Sn**	**00 51 25.9**	**+0.3**
	baz=247						
ESL	**Shilin**	**0.99**	**227**	*e*P	**Pb**	**00 51 11.7**	**-0.4**
	baz=235						
TDCB	**Techi**	**1.00**	**256**	*e*P	**Pn**	**00 51 12.9**	**+0.5**
	baz=247						
TDCB				*e*S	**Sn**	**00 51 25.8**	**-0.1**
	baz=247						
CHGB	**Renai**	**1.05**	**246**	*e*P	**Pb**	**00 51 13.4**	**+0.1**
	baz=234						
CHGB				*e*S	**Sn**	**00 51 27.2**	**0.0**
	baz=234						
EGFH	**Guangfu**	**1.09**	**222**	*e*P	**Pn**	**00 51 13.1**	**-0.5**
	baz=211						
LIOB	**Emei**	**1.11**	**278**	*e*P	**Pb**	**00 51 14.9**	**+0.6**
	baz=286						
VWDT	**VWDT**	**1.23**	**234**	P	**Pn**	**00 51 15.7**	**+0.2**
	baz=223						
VWDT				*e*S	**Sn**	**00 51 30.5**	**-0.9**
	baz=223						
HGSD	**Ruisui**	**1.23**	**216**	*e*P	**Pn**	**00 51 14.9**	**-0.6**
	baz=208						
SMLT	**Sun Moon Lake**	**1.35**	**244**	P	**Pb**	**00 51 18.7**	**+0.3**
	baz=233						
SMLT				*e*S	**Sb**	**00 51 35.0**	**-0.3**
	baz=233						
SSLB	**Suanglung**	**1.35**	**239**	*e*P	**Pn**	**00 51 17.5**	**+0.3**
	baz=228						
TYC	**Yuchr**	**1.38**	**245**	*e*P	**Pb**	**00 51 19.1**	**+0.3**
	baz=235						
IRIF	**Iriomote-Funau**	**1.38**	**96**	P	**Pn**	**00 51 17.6**	**0.0**
IRIF				S	**Sn**	**00 51 35.1**	**-0.1**
YULB	**Yu-li**	**1.38**	**218**	*e*P	**Pn**	**00 51 16.6**	**-1.1**
	baz=228						
TWF1	**Yuli**	**1.42**	**217**	*e*P	**Pn**	**00 51 17.1**	**-1.0**
	baz=227						
HATJ	**Hateruma jima**	**1.51**	**106**	*e*S	**Sn**	**00 51 38.9**	**+0.7**
FULB	**Fuli**	**1.54**	**214**	*e*P	**Pn**	**00 51

7.0nm,0.3s,baz=242,slow=23,SNR=10
RKPI Ransiki, Papua 8.24 40 P **Pn 00 54 59.0 -2.8**
BASI Baing, Sumba 8.56 254 P **Pn 00 55 04.0 -2.0**
BKSI Bulukumba 9.12 286 P **Pn 00 55 11.0 -2.6**
20nm,0.9s,366nm0.1nm
WBSI Waikabubak, Su 9.58 259 P **Pn 00 55 16.7 -3.1**
84nm,0.4s,1μm
SPSI Sidrap Palu 9.92 293 P **Pn 00 55 21.1 -3.3**
JAY Jayapura 12.89 66 P **Pn 00 56 05.2 +1.6**
0.3nm,0.3s,baz=259,slow=16,SNR=1.8
JAY S **Sn 00 58 24.1 -1.9**
0.2nm,0.3s,baz=288,slow=20,SNR=3.1
WRAB Tennant Creek 13.04 157 *e*Pn **Pn 00 56 05.7 +0.2**
WRAB *e*Sn **Sn 00 58 23.6 -5.9**
WRA Warramunga Arr 13.05 157 P **Pn 00 56 05.9 +0.3**
3.7nm,0.3s,baz=347,slow=13,SNR=65
WRA S **Sn 00 58 25.4 -4.2**
12nm,0.3s,baz=334,slow=24,SNR=11
WB2 Warramunga Arr 13.05 157 *e*Pn **Pn 00 56 04.2 -1.4**
COEN Coen 15.21 114 *e*Pn **Pn 00 56 33.3 +0.2**
17nm,0.7s
COEN *e*Sn **Sn 00 59 15.2 -6.6**
MBWA Marble Bar 15.88 213 *e*Pn **Pn 00 56 41.3 0.0**
26nm,1.2s
MBWA *e*Sn **Sn 00 59 27.4 -10**
AS31 Alice Springs 16.36 164 *e*Pn **P 00 56 50.4 +2.6**
4.4nm,0.8s
ASAR Alice Springs 16.37 164 P **P 00 56 49.6 +1.8**
0.9nm,0.3s,baz=331,slow=9.4,SNR=34
ASAR S **Sn 00 59 46.5 -3.0**
2.4nm,0.3s,baz=321,slow=17,SNR=6.9
AS01 Alice Springs 16.38 163 *e*Pn **P 00 56 50.1 +2.2**
PMG Port Moresby 18.08 96 P **Pn 00 57 12.2 +4.2**
1.4nm,0.3s,baz=254,slow=5.6,SNR=5.5
PMG S **S 01 00 21.3 -6.1**
0.6nm,0.3s,baz=217,slow=17,SNR=2.5
PMG LR LR 01 04 53.1
comp=Z,56nm,20.8s,baz=248,slow=39
PMG Port Moresby 18.08 96 *e*P **P 00 57 07.0 +0.3**
11nm,0.5s
PMG P **Pn 00 57 12.2 +4.2**
PMG S **S 01 00 21.3 -6.1**
SBUM Sibu 19.60 301 *e*P **Pn 00 57 23.9 -1.9**
9.6nm,1.0s
CTA Charters Tower 20.68 128 P Pn 00 57 42.1 +3.6
5.9nm,1.0s,baz=337,slow=15,SNR=3.8
STKA Stephens Creek 26.59 155 P **P 00 58 38.2 +7.1**
0.7nm,0.2s,baz=346,slow=8.0,SNR=3.1
NWAO Narrogin (SRO) 27.14 202 P P 00 58 43.3 +7.3
13nm,1.0s,baz=22,slow=5.4,SNR=2.6
HNR Honiara 30.69 95 LR LR 01 12 47.3
comp=Z,33nm,19.5s,baz=126,slow=38
CMAR Chiang Mai Arr 39.53 312 P **P 01 00 22.9 -0.5**
7.6nm,0.4s,baz=142,slow=7.3,SNR=13
CHTO Chiang Mai 39.75 312 *e*P **P 01 00 24.6 -0.6**
7.5nm,0.8s
GYA Guiyang 40.44 328 *e*P **P 01 00 32.0 +1.1**
GYA pmax pmax
comp=Z,10.0nm,1.0s
JNU Nakatsue 40.86 2 P **P 01 00 31.9 -2.2**
7.8nm,0.7s,baz=135,slow=5.8,SNR=4.2
NJ2 Nanjing 40.90 347 *e*P **P 01 00 34.8 +0.4**
NJ2 pmax pmax
comp=Z,15nm,0.6s
KMI Kunming 41.59 323 P **P 01 00 42.3 +1.9**
KMI pmax pmax
comp=Z,13nm,0.5s
KMI pmax pmax
comp=Z,78nm,5.3s
JHJ Hachijo jima 2 42.10 14 LR LR 01 17 34.3
comp=Z,15nm,18.3s,baz=146,slow=35
MAJO Matsushiro 45.08 11 *e*P **P 01 01 05.3 -2.7**
5.3nm,0.5s
MAT Matsushiro 45.08 11 P **P 01 01 05.2 -2.8**
MJAR Matsushiro Arr 45.08 11 P **P 01 01 05.4 -2.6**
4.2nm,0.7s,baz=194,slow=10,SNR=11
KSAR Wonju Array Be 45.14 359 P **P 01 01 07.2 -1.2**
KSRS Korea Array 45.15 359 P **P 01 01 07.2 -1.3**
5.9nm,0.6s,baz=174,slow=8.9,SNR=21
KS01 Wonju Array Si 45.17 359 *e*P **P 01 01 07.5 -1.2**
CD2 Chengdu 45.53 329 P **P 01 01 11.3 -0.4**
CD2 pmax pmax
comp=Z,10.0nm,0.6s
LZH Lanzhou 49.73 333 *e*P **P 01 01 43.0 -1.2**
LZH pP pP 01 02 12.5 -2.0
LZH sP sP 01 02 26.3 -2.8
LZH *e*PP **PP 01 03 40.3 +0.1**
LZH pmax pmax
comp=Z,21nm,1.3s
LZH pmax pmax
comp=Z,67nm,6.2s
LZH LR LR
comp=N,170nm,14.3s
LZH LR LR
comp=E,180nm,14.0s
LZH LR LR
comp=Z,230nm,18.2s
HHC Hu-ho-hao-te 51.10 343 *e*P **P 01 01 57.0 +2.7**
HHC pmax pmax
comp=Z,6.0nm,0.7s
HHC pmax pmax
comp=Z,30nm,7.4s
USRK Ussuriysk Ar. 51.95 3 P **P 01 01 59.5 -0.9**
3.4nm,0.5s,baz=188,slow=7.3,SNR=10
ODAN Odare 53.07 312 *e*P **P 01 02 08.7 -0.7**
10nm,0.4s
ASAJ Asahikawa 53.25 12 P **P 01 02 09.2 -0.8**
2.5nm,0.3s,baz=191,slow=6.4,SNR=3.6
ASAJ LR LR 01 22 48.3
comp=Z,18nm,21.6s,baz=145,slow=34
RAMN Ramite 53.70 312 *e*P **P 01 02 13.3 -0.7**
18nm,0.6s
GTA Gaotai 54.28 332 ⇑P **P 01 02 17.0 -0.8**
GTA pmax pmax
comp=Z,9.0nm,0.7s
PKIN Phulchoki 54.94 312 *e*P **P 01 02 21.6 -1.4**
6.9nm,0.4s
GKN Gorkha 55.74 312 *e*P **P 01 02 27.6 -1.0**
10nm,0.3s
KOLN Koldanda 56.38 311 *e*P **P 01 02 31.6 -1.6**
8.1nm,0.5s
ULN Ulaanbaatar 58.82 343 *e*P **P 01 02 49.7 -0.1**
5.0nm,0.9s
SONM Songino Array 58.98 342 P **P 01 02 51.2 +0.3**
2.9nm,0.6s,baz=162,slow=7.0,SNR=18
SONA1 Songino Array 58.99 342 *e*P **P 01 02 50.4 -0.6**
TLY Talaya 63.22 343 *e*P **P 01 03 20.1 +0.7**
5.5nm,0.5s
WMQ Urumqi 63.59 328 P **P 01 03 23.5 +1.5**
WMQ pP pP 01 03 51.3 -2.3
WMQ PcP **PcP 01 03 57.0 -0.3**
WMQ pmax pmax
comp=Z,23nm,0.6s
WMQ pmax pmax
comp=Z,130nm,3.7s
PETK Petropavlovsk- 65.53 19 P **P 01 03 34.5 +0.3**
7.6nm,0.6s,baz=182,slow=2.8,SNR=15
KSH Kashi 67.99 318 P **P 01 03 51.8 +1.5**
KSH pP pP 01 04 24.8 +2.5
KSH pmax pmax
comp=Z,8.0nm,0.6s
KSH pmax pmax
comp=Z,110nm,4.6s
MK01 Makanchi Array 68.40 327 *e*P **P 01 03 52.2 -0.4**
MK31 Makanchi Array 68.42 328 *e*P **P 01 03 52.5 -0.3**
MKAR Makanchi Array 68.42 328 P **P 01 03 52.5 -0.3**
5.0nm,0.5s,baz=116,slow=8.2,SNR=63
MAKZ Makanchi 68.60 327 *e*P **P 01 03 53.7 -0.1**
13nm,1.3s
VNDA Vanda 71.67 173 P P 01 04 17.4 +5.4
0.6nm,0.6s,baz=315,slow=6.2,SNR=5.9
ZALV Zalesovo Beam 71.94 334 P **P 01 04 13.4 -0.6**
12nm,0.7s,baz=123,slow=4.7,SNR=40
KURBB Kurchatov Arra 72.74 329 P **P 01 04 18.8 0.0**
16nm,0.7s,baz=132,slow=5.1,SNR=115
KURK Kurchatov 72.75 329 *e*P **P 01 04 18.7 -0.1**
KK31 Karatay Array 73.34 319 *e*P **P 01 04 23.2 +0.6**
KKAR Karatay Array 73.34 319 *e*P **P 01 04 23.2 +0.6**
BVAR Borovoye Array 78.28 328 P **P 01 04 50.3 0.0**
3.6nm,0.7s,baz=134,slow=6.2,SNR=24
BRVK Borovoye 78.35 328 *e*P **P 01 04 50.5 -0.3**
6.2nm,0.9s
TIXI Tiksi 79.40 360 *e*P **P 01 04 55.2 -0.9**
7.3nm,0.5s
QSPA South Pole Qui 82.06 180 P **P 01 05 14.8 +4.1**
2.2nm,0.7s,baz=311,slow=5.4,SNR=10
SYO Syowa Base 82.42 201⇑*e*P **P 01 05 16.0 +3.7**
SYO Syowa Base 82.42 201⇑*e*PcP **PcP 01 05 18.6 +1.5**
ABKAR Akbulak array 82.57 322 *e*P **P 01 05 13.2 -0.1**
AKTO Aktyubinsk 84.15 323 P **P 01 05 21.9 +0.5**
6.0nm,0.9s,baz=107,slow=6.0,SNR=15
ARU Arti 85.93 328 *e*P **P 01 05 29.4 -0.7**
RAYN Ar Rayn 87.15 294 *e*P **P 01 05 38.7 +1.8**
2.0nm,0.7s
ILAR Eielson Array 94.63 25 P **P 01 06 10.1 -0.6**
0.5nm,0.8s,baz=261,slow=4.3,SNR=6.1
ARCES ARCESS Array B 102.07 340 P **Pdif 01 06 44.2 +0.1**
1.6nm,0.9s,baz=79,slow=4.7,SNR=3.0
GERES GERESS Array B 112.44 320 PKiKP **PKiKP 01 11 27.3 +1.5**
0.5nm,0.7s,baz=86,slow=1.3,SNR=4.1
PDAR Pinedale Array 118.29 45 PKP **PKPdf 01 11 39.5 +2.1**
0.3nm,0.6s,baz=169,slow=1.5,SNR=3.9
TXAR Lajitas Array 126.31 59 PKP **PKPdf 01 11 55.5 +2.4**
0.2nm,0.5s,baz=210,slow=3.2,SNR=7.4
TORD Torodi Ar. Bea 127.94 280 PKP **PKPdf 01 11 58.4 +2.1**
0.6nm,0.7s,baz=84,slow=2.4,SNR=7.7
TKL Tuckaleechee C 139.31 42 PKP **PKPdf 01 12 19.6 +2.4**
1.2nm,0.4s,baz=318,slow=12,SNR=3.4
CPUP Villa Florida 145.41 170 PKPbc **PKPab 01 12 32.5 +3.9**
1.1nm,0.5s,baz=315,slow=1.4,SNR=3.6
JTS JuntasAbangare 146.47 83 PKPbc **PKPab 01 12 33.9 +0.8**
1.5nm,0.3s,baz=253,slow=17,SNR=3.1
LPAZ La Paz 150.61 145 PKPbc **PKPab 01 12 48.0 -2.4**
1.0nm,0.5s,baz=236,slow=7.3,SNR=7.2
SAML Samuel 159.35 144 *e*PKPab **PKPab 01 13 27.0 +0.1**

DJA 27 00:54:29.0±0.7, 0°S±2°×12°3E±°, h10km, M4.0/5, MLv4.0/5, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.91**	**185**	P	Pg	00 54 45.3	-1.2
LUWI				S	Sg	00 54 58.5	+0.1
MRSI	**Marisa**	**1.09**	**304**	P	Pb	00 54 48.4	-1.6
MRSI				S	Sg	00 55 03.3	-0.9
KMSI	**Cibinong**	**1.33**	**58**	P	Pn	00 54 52.4	-1.2
APSI	**Ampana**	**1.43**	**237**	P	Pn	00 54 52.7	-2.3
APSI				S	Sb	00 55 14.2	+0.1
MPSI	**Mapaga**	**2.99**	**279**	P	Pn	00 55 15.8	-0.7
PCI	**Palu**	**3.11**	**256**	P	Pn	00 55 15.6	-2.6
TTSI	**Tana Toraja**	**4.19**	**226**	P	Pn	00 55 30.0	-3.0
SPSI	**Sidrap Palu**	**4.90**	**219**	P	Pn	00 55 39.4	-3.4

ISN 27 00:59:09.0±0.3, 37°.20N×42°.58E, h0km, ML2.5
CSEM 27 00:59:11.1±0.3, 37°.22N×42°.53E, h2km, ML2.6, Error ellipse: s-maj=8.9km s-min=5.4km az=48.0
ISK 27 00:59:11.0, 37°.26N×42°.50E, h5km, ML2.6/7, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRT	**Sirnak**	**0.24**	**349**	PG	Pg	00 59 16.3	+0.5
SIRT				SG	Sg	00 59 20.3	+1.3
SIRT	**Sirnak**	**0.24**	**349**	*e*Pg	Pg	00 59 16.3	+0.5
SIRT				*e*Sg	Sg	00 59 20.3	+1.3
CUKT	**Cukurca**	**0.89**	**91**	PG	Pb	00 59 28.5	-0.5
CUKT	**Cukurca**	**0.89**	**91**	*e*Pg	Pb	00 59 28.5	-0.5
GURO	**Guroymak-BITLI**	**1.34**	**344**	PN	Pg	00 59 37.3	+0.6
GURO	**Guroymak-BITLI**	**1.34**	**344**	*e*Pn	Pg	00 59 37.3	+0.6
SVAN	**Silvan-Diyarba**	**1.36**	**311**	PN	Pg	00 59 37.3	+0.2
SVAN	**Silvan-Diyarba**	**1.36**	**311**	*e*Pn	Pg	00 59 37.3	+0.2
MAZI	**Mazidag**	**1.65**	**277**	PN	Pn	00 59 40.9	+0.2
MAZI	**Mazidag**	**1.65**	**277**	*e*Pn	Pn	00 59 40.9	+0.2
DIY	**Diyarbakir**	**1.91**	**290**	*e*Pn	Pb	00 59 46.8	+0.4
DYBB	**Diyarbakir**	**2.00**	**291**	PN	Pb	00 59 46.8	-1.0
AGRB	**Hanur-Agry**	**2.34**	**9**	PN	Pn	00 59 51.1	+0.7
AGRB	**Hanur-Agry**	**2.34**	**9**	*e*Pn	Pn	00 59 51.1	+0.7
SVRC	**Sivrice-ELAZID**	**2.76**	**295**	PN	Pn	00 59 57.6	+1.5
SVRC	**Sivrice-ELAZID**	**2.76**	**295**	*e*Pn	Pn	00 59 57.6	+1.5

MAN 27 01:04:28.1, 17°.09N×121°.59E, h68km, mb3.8, ML2.6, MS2.1, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APYP	**Conner**	**0.83**	**337**	*e*P	Pn	01 04 45.7	+1.3
APYP				*e*S	Sn	01 04 59.0	+2.5
BOLP	**Bolinao**	**1.75**	**246**	*e*P	Pn	01 04 57.4	+1.0
BOLP				*e*S	Sn	01 05 07.1	-11

GII 27 01:14:03.2±0.3, 37°.00N×15°.03E, h3km
ROM 27 01:14:20.2±0.2, 36°.996N±0°.009×15°.06E±0°.01, h5km, ML3.7/36
CSEM 27 01:14:20.2, 37°.00N×15°.06E, h5km, Mw3.7
ISC 27 01:14:16.1±1.3, 36°.78N±0°.05×15°.21E±0°.03, h18km±4km, n113, σ2s07/131, 16C-18D, Sicily

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAVL	**Avola**	**0.20**	**339**	⇓*i*P	Pg	01 14 22.3	+1.2
HAVL				S	Sg	01 14 23.4	-1.1
HAVL	**Avola**	**0.20**	**339**	*i* P	Pg	01 14 22.3	+1.2
HAVL				S	Sg	01 14 23.4	-1.1
HMDC	**Modica**	**0.39**	**298**	⇑P	Pg	01 14 24.7	+0.4
HMDC				S	Sg	01 14 28.1	-1.7
HMDC	**Modica**	**0.39**	**298**	P	Pg	01 14 24.7	+0.4
HMDC				S	Sg	01 14 28.1	-1.7
HMDC				AML	AML		
	comp=E,40150μm,0.5s						
HMDC				AML	AML		
	comp=N,66500μm,0.5s						
HMDC				AML	AML		
	comp=E,40150μm,0.5s						
HMDC				AML	AML		
	comp=N,66500μm,0.5s						
HMDC				AML	AML		
	comp=E,40150μm,0.5s						
HMDC				AML	AML		
	comp=N,66500μm,0.5s						
HMDC				AML	AML		
	comp=E,40150μm,0.5s						
HMDC				AML	AML		
	comp=N,66500μm,0.5s						
HMDC				AML	AML		
	comp=E,40150μm,0.5s						
SSY	**Sortino**	**0.39**	**343**	P	Pg	01 14 24.3	-0.1
SSY				S	Sg	01 14 27.5	-2.4
SSY	**Sortino**	**0.39**	**343**	P	Pg	01 14 24.3	-0.1
SSY				S	Sg	01 14 27.5	-2.4
SSY				AML	AML		
SSY				AML	AML		
SSY				AML	AML		
SSY				AML	AML		
SSY				AML	AML		
SSY				AML	AML		
MEU	**Monte Lauro**	**0.40**	**325**	⇓*i*P	Pg	01 14 24.5	+0.1
MEU				S	Sg	01 14 27.7	-2.3
MEU	**Monte Lauro**	**0.40**	**325**	*i* P	Pg	01 14 24.5	+0.1
MEU				S	Sg	01 14 27.7	-2.3
HAGA	**Augusta**	**0.51**	**355**	⇑P	Pg	01 14 26.5	0.0
HAGA				S	Sg	01 14 31.7	-1.7
HAGA	**Augusta**	**0.51**	**355**	P	Pg	01 14 26.4	0.0
HAGA				S	Sg	01 14 31.7	-1.7
HAGA				AML	AML		
	comp=E,34300μm,0.7s						
HAGA				AML	AML		
	comp=N,19650μm,0.4s						
HAGA				AML	AML		
	comp=E,34300μm,0.7s						
HAGA				AML	AML		
	comp=N,19650μm,0.4s						
HAGA				AML	AML		
	comp=E,34300μm,0.7s						
HAGA				AML	AML		
	comp=N,19650μm,0.4s						
HAGA				AML	AML		
	comp=E,34300μm,0.7s						
HAGA				AML	AML		
	comp=N,19650μm,0.4s						
HCRL	**Carlentini**	**0.53**	**344**	⇓P	Pg	01 14 26.4	-0.3
HCRL				S	Sg	01 14 31.6	-2.2
HCRL	**Carlentini**	**0.53**	**344**	P	Pg	01 14 26.4	-0.3
HCRL				S	Sg	01 14 31.6	-2.2
HCRL				AML	AML		
HCRL				AML	AML		
HCRL				AML	AML		
HCRL				AML	AML		
HCRL				AML	AML		
HCRL				AML	AML		
HCRL				AML	AML		
HLNI	**Lentini**	**0.63**	**335**	⇓P	Pg	01 14 27.7	-1.0
HLNI				S	Sg	01 14 34.3	-2.9
HLNI	**Lentini**	**0.63**	**335**	P	Pg	01 14 27.7	-1.0
HLNI				S	Sg	01 14 34.3	-2.9
HLNI				AML	AML		
	comp=E,15500μm,0.4s						
HLNI				AML	AML		
	comp=N,22150μm,0.6s						
HLNI				AML	AML		
	comp=E,15500μm,0.4s						
HLNI				AML	AML		
	comp=N,22150μm,0.6s						
HLNI				AML	AML		
	comp=E,15500μm,0.4s						
HLNI				AML	AML		
	comp=N,22150μm,0.6s						
ECNV	**Catenanuova**	**0.91**	**334**	⇓P	Pb	01 14 34.2	+0.8
ECNV	**Catenanuova**	**0.91**	**334**	P	Pb	01 14 34.2	+0.8
ECNV				AML	AML		
	comp=E,6535μm,1.6s						
ECNV				AML	AML		
	comp=N,8940μm,0.7s						
ECNV				AML	AML		
	comp=E,6535μm,1.6s						
ECNV				AML	AML		
	comp=N,8940μm,0.7s						
ECNV				AML	AML		
	comp=E,6535μm,1.6s						
ECNV				AML	AML		
	comp=N,8940μm,0.7s						
ECNV				AML	AML		
	comp=N,8940μm,0.7s						
ECNV				AML	AML		
	comp=E,6535μm,1.6s						
ESLN	**Serra La Nave**	**0.94**	**348**	⇓P	Pb	01 14 34.7	+0.7
ESLN				S	Sb	01 14 45.9	-0.2
ESLN	**Serra La Nave**	**0.94**	**348**	P	Pb	01 14 34.7	+0.7
ESLN				S	Sb	01 14 45.9	-0.2
ESLN				AML	AML		
	comp=E,11800μm,0.8s						
ESLN				AML	AML		
	comp=N,9280μm,0.8s						
ESLN				AML	AML		
	comp=E,11800μm,0.8s						
ESLN				AML	AML		
	comp=N,9280μm,0.8s						
ESLN				AML	AML		
	comp=E,11800μm,0.8s						
ESLN				AML	AML		
	comp=N,9280μm,0.8s						
ESLN				AML	AML		
	comp=E,11800μm,0.8s						
ESLN				AML	AML		
	comp=N,9280μm,0.8s						
CAGR	**Agira**	**1.02**	**326**	⇓P	Pg	01 14 36.3	+0.4
CAGR	**Agira**	**1.02**	**326**	P	Pg	01 14 36.3	+0.4
CAGR				AML	AML		
	comp=E,4645μm,0.9s						
CAGR				AML	AML		
	comp=N,5200μm,0.8s						
CAGR				AML	AML		
	comp=E,4645μm,0.9s						
CAGR				AML	AML		
	comp=N,5200μm,0.8s						
CAGR				AML	AML		
	comp=E,4645μm,0.9s						
CAGR				AML	AML		
	comp=N,5200μm,0.8s						
CAGR				AML	AML		
	comp=E,4645μm,0.9s						
CAGR				AML	AML		
	comp=N,5200μm,0.8s						
GALF	**Gagliano Caste**	**1.07**	**331**	⇓P	Pb	01 14 36.0	-0.1
GALF	**Gagliano Caste**	**1.07**	**331**	P	Pg	01 14 37.0	+0.1
GALF				AML	AML		
	comp=E,3920μm,0.6s						
GALF				AML	AML		
	comp=N,8650μm,0.6s						
GALF				AML	AML		
	comp=E,3920μm,0.6s						
GALF				AML	AML		
	comp=N,8650μm,0.6s						
GALF				AML	AML		
	comp=E,3920μm,0.6s						
GALF				AML	AML		
	comp=N,8650μm,0.6s						
MNO	**Monte Soro**	**1.23**	**340**	⇓P	Pg	01 14 40.0	+0.1
MNO	**Monte Soro**	**1.23**	**340**	P	Pg	01 14 40.0	+0.1
NOV	**Novara**	**1.25**	**357**	P	Pg	01 14 40.7	+0.3
NOV				AML	AML		
	comp=E,9605μm,0.6s						
NOV				AML	AML		
	comp=N,4095μm,0.8s						
NOV				AML	AML		
	comp=E,9605μm,0.6s						
NOV				AML	AML		
	comp=N,4095μm,0.8s						
NOV				AML	AML		
	comp=N,4095μm,0.8s						
NOV				AML	AML		
	comp=E,9605μm,0.6s						
RESU	**Resuttano**	**1.27**	**314**	P	Pg	01 14 41.2	+0.5
RESU	**Resuttano**	**1.27**	**314**	P	Pg	01 14 41.2	+0.5
RESU				AML	AML		
	comp=E,1590μm,0.7s						
RESU				AML	AML		
	comp=N,2875μm,0.6s						
RESU				AML	AML		
	comp=E,1590μm,0.7s						
RESU				AML	AML		
	comp=N,2875μm,0.6s						
RESU				AML	AML		
	comp=N,2875μm,0.6s						
RESU				AML	AML		
	comp=E,1590μm,0.7s						
MTTG	**Motta San Giov**	**1.28**	**17**⇑*e*P	Pb	01 14 41.3	+1.5
MTTG	**Motta San Giov**	**1.28**	**17** *e*P	Pb	01 14 41.3	+1.5
MTTG				AML	AML		
	comp=E,1330μm,0.7s						
MTTG				AML	AML		
	comp=N,1615μm,0.8s						
MTTG				AML	AML		
	comp=E,1330μm,0.7s						
MTTG				AML	AML		
	comp=N,1615μm,0.8s						
MTTG				AML	AML		
	comp=N,1615μm,0.8s						
MTTG				AML	AML		
	comp=E,1330μm,0.7s						
MCSR	**Castroreale**	**1.29**	**1**⇑P	Pb	01 14 40.7	+0.8
MCSR	**Castroreale**	**1.29**	**1** P	Pb	01 14 40.7	+0.8
MCSR				AML	AML		
	comp=E,10550μm,0.3s						
MCSR				AML	AML		
	comp=N,10150μm,0.3s						
MCSR				AML	AML		
	comp=E,10550μm,0.3s						
MCSR				AML	AML		
	comp=N,10150μm,0.3s						
MCSR				AML	AML		
	comp=N,10150μm,0.3s						
MCSR				AML	AML		
	comp=E,10550μm,0.3s						
FAVR	**Favara**	**1.33**	**292**	P	Pg	01 14 43.1	+1.3
FAVR	**Favara**	**1.33**	**292**	P	Pg	01 14 43.1	+1.3
FAVR				AML	AML		
	comp=E,6850μm,1.1s						
FAVR				AML	AML		
	comp=N,6380μm,1.1s						
FAVR				AML	AML		
	comp=E,6850μm,1.1s						
FAVR				AML	AML		
	comp=N,6380μm,1.1s						
FAVR				AML	AML		
	comp=N,6380μm,1.1s						
FAVR				AML	AML		
	comp=E,6850μm,1.1s						
MPAZ	**Palizzi**	**1.33**	**28**	P	Pb	01 14 42.4	+1.7
MPAZ	**Palizzi**	**1.33**	**28**	P	Pb	01 14 42.4	+1.7
MPAZ				AML	AML		
	comp=E,898μm,0.9s						
MPAZ				AML	AML		
	comp=N,876μm,1.0s						
MPAZ				AML	AML		
	comp=E,898μm,0.9s						

MPAZ					AML	AML	
	comp=N,876μm,1.0s						
MSFR	**San Fratello**	**1.35**	**339**	⇓P		**Pb**	**01 14 41.7 +0.8**
MSFR	**San Fratello**	**1.35**	**339**	P		**Pb**	**01 14 41.7 +0.8**
MSFR					AML	AML	
	comp=E,1895μm,1.2s						
MSFR					AML	AML	
	comp=N,1705μm,1.0s						
MSFR					AML	AML	
	comp=E,1895μm,1.2s						
MSFR					AML	AML	
	comp=N,1705μm,1.0s						
MSFR					AML	AML	
	comp=E,1895μm,1.2s						
MSFR					AML	AML	
	comp=N,1705μm,1.0s						
MPNC	**Port Mandanici**	**1.37**	**5**	P		**Pg**	**01 14 42.8 +0.2**
MPNC				S		**Sg**	**01 14 59.9 -0.7**
MPNC	**Port Mandanici**	**1.37**	**5**	P		**Pg**	**01 14 42.8 +0.2**
MPNC				S		**Sg**	**01 14 59.9 -0.7**
MPNC					AML	AML	
	comp=E,8675μm,0.9s						
MPNC					AML	AML	
	comp=N,6665μm,0.9s						
MPNC					AML	AML	
	comp=E,8675μm,0.9s						
MPNC					AML	AML	
	comp=N,6665μm,0.9s						
ATN	**Antennamare**	**1.40**	**8**	⇑eP		**Pb**	**01 14 42.8 +1.1**
ATN	**Antennamare**	**1.40**	**8**	eP		**Pb**	**01 14 42.8 +1.1**
ATN					AML	AML	
	comp=E,2870μm,1.4s						
ATN					AML	AML	
	comp=N,4745μm,1.2s						
ATN					AML	AML	
	comp=E,2870μm,1.4s						
ATN					AML	AML	
	comp=N,4745μm,1.2s						
ATN					AML	AML	
	comp=E,2870μm,1.4s						
ATN					AML	AML	
	comp=N,4745μm,1.2s						
SOI	**Samo**	**1.46**	**27**	⇑P		**Pn**	**01 14 43.0 +1.4**
SOI	**Samo**	**1.46**	**27**	P		**Pn**	**01 14 44.0 +2.4**
SOI					AML	AML	
	comp=E,662μm,1.0s						
SOI					AML	AML	
	comp=N,738μm,0.8s						
SOI					AML	AML	
	comp=E,662μm,1.0s						
SOI					AML	AML	
	comp=N,737μm,0.8s						
SOI					AML	AML	
	comp=N,737μm,0.8s						
SOI					AML	AML	
	comp=E,662μm,1.0s						
PLLN	**Pollina**	**1.48**	**325**	⇓eP		**Pb**	**01 14 43.9 +0.7**
PLLN	**Pollina**	**1.48**	**325**	eP		**Pb**	**01 14 43.9 +0.7**
MILZ	**Milazzo**	**1.49**	**1**	P		**Pb**	**01 14 44.3 +1.0**
MILZ	**Milazzo**	**1.49**	**1**	P		**Pb**	**01 14 44.3 +1.0**
MILZ					AML	AML	
	comp=E,4335μm,0.9s						
MILZ					AML	AML	
	comp=N,5570μm,0.9s						
MILZ					AML	AML	
	comp=E,4335μm,0.9s						
MILZ					AML	AML	
	comp=N,5570μm,0.9s						
MILZ					AML	AML	
	comp=N,5570μm,0.9s						
MILZ					AML	AML	
	comp=E,4335μm,0.9s						
MSRU	**Castanea**	**1.50**	**9**	⇑P		**Pb**	**01 14 44.5 +1.0**
MSRU	**Castanea**	**1.50**	**9**	P		**Pb**	**01 14 44.5 +1.0**
MSRU					AML	AML	
	comp=E,4160μm,1.1s						
MSRU					AML	AML	
	comp=N,3560μm,1.5s						
MSRU					AML	AML	
	comp=E,4160μm,1.1s						
MSRU					AML	AML	
	comp=N,3560μm,1.5s						
ALJA	**Alia**	**1.52**	**310**	⇓P		**Pg**	**01 14 45.3 -0.1**
ALJA	**Alia**	**1.52**	**310**	P		**Pg**	**01 14 45.3 -0.1**
ALJA					AML	AML	
	comp=E,2190μm,0.9s						
ALJA					AML	AML	
	comp=N,3250μm,0.8s						
ALJA					AML	AML	
	comp=E,2190μm,0.9s						
ALJA					AML	AML	
	comp=N,3250μm,0.8s						
ALJA					AML	AML	
	comp=E,2190μm,0.9s						
ALJA					AML	AML	
	comp=N,3250μm,0.8s						
MCT	**Mte Cammarata**	**1.52**	**305**	P		**Pg**	**01 14 46.2 +0.7**
MCT	**Mte Cammarata**	**1.52**	**305**	P		**Pg**	**01 14 46.2 +0.7**
MSCL	**Scilla**	**1.52**	**17**	P		**Pb**	**01 14 44.8 +0.9**
MSCL	**Scilla**	**1.52**	**17**	P		**Pb**	**01 14 44.8 +0.9**
MSCL					AML	AML	
	comp=E,3510μm,0.9s						
MSCL					AML	AML	
	comp=N,1920μm,0.8s						
MSCL					AML	AML	
	comp=E,3510μm,0.9s						
MSCL					AML	AML	
	comp=N,1915μm,0.8s						
MSCL					AML	AML	
	comp=E,3510μm,0.9s						
MSCL					AML	AML	
	comp=N,1915μm,0.8s						
GIB	**Gibilmanna**	**1.54**	**322**	P		**Pb**	**01 14 44.7 +0.6**
GIB	**Gibilmanna**	**1.54**	**322**	P		**Pb**	**01 14 44.7 +0.6**
GIB					AML	AML	
	comp=E,4490μm,0.8s						
GIB					AML	AML	
	comp=N,4995μm,0.8s						
GIB					AML	AML	
	comp=E,4490μm,0.8s						
GIB					AML	AML	
	comp=N,4995μm,0.8s						
GIB					AML	AML	
	comp=N,4995μm,0.8s						
GIB					AML	AML	
	comp=E,4490μm,0.8s						
VPL	**Vulcano Piano**	**1.61**	**354**	P		**Pb**	**01 14 45.9 +0.6**
VPL	**Vulcano Piano**	**1.61**	**354**	P		**Pb**	**01 14 45.9 +0.6**
VPL					AML	AML	
	comp=E,12500μm,0.8s						
VPL					AML	AML	
	comp=N,13000μm,0.4s						
VPL					AML	AML	
	comp=N,13000μm,0.4s						
VPL					AML	AML	
	comp=E,12500μm,0.8s						
CLTB	**Caltabellotta**	**1.79**	**297**	P		**Pb**	**01 14 49.5 +1.1**
CLTB	**Caltabellotta**	**1.79**	**297**	P		**Pb**	**01 14 49.5 +1.1**
CLTB					AML	AML	
	comp=E,6070μm,1.4s						
CLTB					AML	AML	
	comp=N,7630μm,0.7s						
CLTB					AML	AML	
	comp=E,6070μm,1.4s						
CLTB					AML	AML	
	comp=N,7630μm,0.7s						
CLTB					AML	AML	
	comp=E,6070μm,1.4s						
CLTB					AML	AML	
	comp=N,7630μm,0.7s						
IFIL	**Filicudi I Eol**	**1.86**	**344**	P		**Pn**	**01 14 48.0 +0.9**
IFIL	**Filicudi I Eol**	**1.86**	**344**	P		**Pn**	**01 14 49.0 +1.9**
IFIL					AML	AML	
	comp=E,6100μm,0.8s						
IFIL					AML	AML	
	comp=N,1995μm,0.8s						
IFIL					AML	AML	
	comp=N,1995μm,0.8s						
IFIL					AML	AML	
	comp=E,6100μm,0.8s						
SOLUN	**Solunto**	**1.88**	**315**	⇓P		**Pb**	**01 14 50.3 +0.5**
SOLUN	**Solunto**	**1.88**	**315**	P		**Pb**	**01 14 50.3 +0.5**
SOLUN					AML	AML	
	comp=E,1270μm,1.6s						
SOLUN					AML	AML	
	comp=N,924μm,1.6s						
SOLUN					AML	AML	
	comp=N,924μm,1.6s						
SOLUN					AML	AML	
	comp=E,1270μm,1.6s						
CORL	**Corleone**	**1.89**	**307**	⇑P		**Pb**	**01 14 51.1 +1.0**
CORL	**Corleone**	**1.89**	**307**	P		**Pb**	**01 14 51.1 +1.0**
CORL					AML	AML	
	comp=E,2520μm,0.5s						
CORL					AML	AML	
	comp=N,2010μm,0.7s						
CORL					AML	AML	
	comp=E,2520μm,0.5s						
CORL					AML	AML	
	comp=N,2010μm,0.7s						
JOPP	**Joppolo**	**1.90**	**16**	P		**Pn**	**01 14 50.5 +2.8**
JOPP	**Joppolo**	**1.90**	**16**	P		**Pn**	**01 14 50.5 +2.8**
JOPP					AML	AML	
	comp=E,762μm,0.7s						
JOPP					AML	AML	
	comp=N,450μm,1.3s						
JOPP					AML	AML	
	comp=E,762μm,0.7s						
JOPP					AML	AML	
	comp=N,450μm,1.3s						
PLAC	**Placanica**	**1.93**	**30**	P		**Pn**	**01 14 51.4 +3.3**
PLAC	**Placanica**	**1.93**	**30**	P		**Pn**	**01 14 51.4 +3.3**
PLAC					AML	AML	
	comp=E,350μm,1.3s						
PLAC					AML	AML	
	comp=N,417μm,1.2s						
PLAC					AML	AML	
	comp=E,350μm,1.3s						
PLAC					AML	AML	
	comp=N,417μm,1.2s						
PLAC					AML	AML	
	comp=E,350μm,1.3s						
PLAC					AML	AML	
	comp=N,417μm,1.2s						
MPG	**Monte Pellegri**	**2.02**	**314**	⇑Pn		**Pb**	**01 14 52.2 -0.2**
MPG	**Monte Pellegri**	**2.02**	**314**	P		**Pb**	**01 14 52.2 -0.2**
CRJA	**Costa Raja**	**2.04**	**301**	P		**Pn**	**01 14 52.3 +2.7**
CRJA	**Costa Raja**	**2.04**	**301**	P		**Pn**	**01 14 52.3 +2.7**
MTGR	**Montagna Grand**	**2.25**	**300**	⇓Pn		**Pb**	**01 14 57.0 +0.7**
MTGR	**Montagna Grand**	**2.25**	**300**	P		**Pb**	**01 14 57.0 +0.7**
USI	**Ustica**	**2.51**	**321**	⇑Pn		**Pb**	**01 14 59.7 -1.0**
USI	**Ustica**	**2.51**	**321**	P		**Pb**	**01 14 59.7 -1.0**
USI					AML	AML	
	comp=E,1072μm,0.9s						
USI					AML	AML	
	comp=N,1075μm,1.4s						
USI					AML	AML	
	comp=E,1072μm,0.9s						
USI					AML	AML	
	comp=N,1075μm,1.4s						
SERS	**Sersale**	**2.54**	**27**	⇑Pn		**Pn**	**01 14 59.0 +2.4**
SERS	**Sersale**	**2.54**	**27**	P		**Pn**	**01 14 60.0 +3.4**
SERS					AML	AML	
	comp=E,150μm,1.6s						
SERS					AML	AML	
	comp=N,122μm,0.5s						
SERS					AML	AML	
	comp=N,122μm,0.5s						
SERS					AML	AML	
	comp=E,150μm,1.6s						
CAR1	**CAROLEI**	**2.60**	**17**	Pn		**Pn**	**01 14 59.7 +2.4**
CAR1	**CAROLEI**	**2.60**	**17**	P		**Pn**	**01 14 59.7 +2.4**
CAR1					AML	AML	
	comp=E,494μm,0.8s						
CAR1					AML	AML	
	comp=N,539μm,0.8s						
CAR1					AML	AML	
	comp=N,539μm,0.8s						
CAR1					AML	AML	
	comp=E,494μm,0.8s						
TIP	**Timpagrande**	**2.69**	**27**	⇑Pn		**Pn**	**01 15 01.8 +3.2**
TIP	**Timpagrande**	**2.69**	**27**	P		**Pn**	**01 15 01.8 +3.2**
TIP					AML	AML	
	comp=E,101μm,0.6s						
TIP					AML	AML	
	comp=N,136μm,1.0s						
TIP					AML	AML	
	comp=E,101μm,0.6s						
TIP					AML	AML	
	comp=N,136μm,1.0s						
CELI	**Celico**	**2.81**	**21**	⇓Pn		**Pn**	**01 15 03.8 +3.4**
CELI	**Celico**	**2.81**	**21**	P		**Pn**	**01 15 03.8 +3.4**
CELI					AML	AML	
	comp=E,442μm,1.0s						
CELI					AML	AML	
	comp=N,476μm,1.5s						
CELI					AML	AML	
	comp=N,476μm,1.5s						
CELI					AML	AML	
	comp=E,442μm,1.0s						
PIPA	**Pietrapaola**	**2.99**	**25**	⇓Pn		**Pn**	**01 15 06.3 +3.7**
PIPA	**Pietrapaola**	**2.99**	**25**	P		**Pn**	**01 15 06.3 +3.7**
T0715	**Campotenese**	**3.13**	**12**	⇑Pn		**Pn**	**01 15 07.4 +2.7**
T0715	**Campotenese**	**3.13**	**12**	P		**Pn**	**01 15 07.4 +2.7**
CUC	**Castrocucco**	**3.25**	**8**	⇑Pn		**Pn**	**01 15 09.3 +3.1**
CUC	**Castrocucco**	**3.25**	**8**	P		**Pn**	**01 15 09.3 +3.1**
CMPR	**Campora**	**3.54**	**1**	⇑Pn		**Pn**	**01 15 13.6 +3.4**
CMPR	**Campora**	**3.54**	**1**	P		**Pn**	**01 15 13.6 +3.4**
ACER	**Acerenza**	**4.04**	**8**	⇓Pn		**Pn**	**01 15 21.8 +4.6**
ACER	**Acerenza**	**4.04**	**8**	P		**Pn**	**01 15 21.9 +4.6**
SCTE	**Santa Cesarea**	**4.17**	**37**	⇑Pn		**Pn**	**01 15 20.5 +1.7**
SCTE	**Santa Cesarea**	**4.17**	**37**	P		**Pn**	**01 15 20.6 +1.7**
NOCI	**Noci**	**4.26**	**19**	⇓Pn		**Pn**	**01 15 21.6 +1.5**
NOCI	**Noci**	**4.26**	**19**	P		**Pn**	**01 15 21.6 +1.5**
AMUR	**Altamura**	**4.27**	**14**	⇑Pn		**Pn**	**01 15 23.4 +3.2**
AMUR	**Altamura**	**4.27**	**14**	P		**Pn**	**01 15 23.4 +3.2**
VSL	**Villasalto**	**5.34**	**302**	P		**Pn**	**01 15 37.3 +2.3**
BIA	**Bitola**	**6.38**	**46**	ePn		**Pn**	**01 15 52.7 +3.5**
BIA				eSg		**Sn**	**01 17 03.4 +1.8**
KRUS	**Krusevo**	**6.56**	**44**	ePn		**Pn**	**01 15 53.8 +2.1**
STIP	**Stip**	**7.31**	**46**	ePn		**Pn**	**01 16 05.3 +3.4**
MMA0B	**Mount Meron ar**	**16.98**	**97**	Sn		**Sn**	**01 21 15.9 -5.2**
MZDA	**Masada**	**17.56**	**102**	Sn		**Sn**	**01 21 30.2 -4.7**
PRNI	**Paran**	**17.68**	**105**	Sn		**Sn**	**01 21 33.5 -4.5**
HRFI	**Mount Harif**	**17.85**	**106**	Sn		**Sn**	**01 21 38.0 -4.1**
MBRI	**Mt Berech**	**17.87**	**107**	Sn		Sn	01 21 37.8 -4.8
EIL	**Elat**	**17.95**	**108**	Sn		**Sn**	**01 21 40.5 -4.1**

GUC 27 01:40:55.7±0.5, 24°.76S×71°.47W, h16km±479km, ML3.5, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB15	**IPOC Station P**	**2.39**	**50**	eP	Pb	01 41 36.7	-1.8
PB15				*i* S	Sb	01 42 07.4	-0.6
PB15				IAML		01 42 09.2	
	comp=E,644nm,0.4s						
PB06	**IPOC Station P**	**2.68**	**41**	eP	Pn	01 41 40.1	+1.7
PB06				*i* S	Sb	01 42 13.9	-2.4
PB06				IAML		01 42 16.7	
	comp=N,187nm,0.1s						
PB04	**IPOC Station P**	**2.70**	**27**	eP	Pg	01 41 47.8	+0.3
PB04				*i* S	Sg	01 42 26.9	+4.3
PB04				IAML		01 42 30.0	
	comp=E,93nm,0.2s						
PB07	**IPOC Station P**	**3.35**	**26**	eP	Pn	01 41 49.9	+2.3
PB07				*i* S	Sn	01 42 31.1	+3.9
PB07				IAML		01 42 33.9	
	comp=E,72nm,0.2s						

SJA 27 01:53:58.1±1.1, 31°.35S×68°.67W, h102km±4km, ML3.3, MW3.6, 10D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLL	**Cerro Villicun**	**0.17**	**84**	⇓eP	Pn	01 54 13.2	+0.6
RTLL				eS	Sn	01 54 24.2	+0.8
SJA	**San Juan**	**0.20**	**152**	eP	Pn	01 54 13.8	+1.0
SJA				IAML		01 54 13.8	
	comp=Z,638nm,0.5s						
RTCV	**Cerro Valdivia**	**0.53**	**168**	eP	Pn	01 54 15.3	+0.9
RTCV				eS	Sn	01 54 27.6	+0.9
RTLS	**Leoncito**	**0.70**	**230**	eP	Pn	01 54 17.1	+1.0
RTLS				eS	Sn	01 54 30.9	+1.3
RTLS				IAML		01 54 32.6	
	comp=Z,283nm,0.2s						
AUSP	**Uspallata**	**1.06**	**215**	⇓eP	Pn	01 54 20.9	+1.1
AUSP				⇓eS	Sn	01 54 37.6	+1.6
ACDV	**Cuesta del Vie**	**1.23**	**342**	⇓eP	Pn	01 54 22.5	+1.0
ACDV				eS	Sn	01 54 40.6	+1.4
ASAL	**Salagasta**	**1.25**	**186**	⇓eP	Pn	01 54 22.9	+1.3
ASAL				eS	Sn	01 54 42.1	+2.8
AROD	**Rodeo**	**1.36**	**329**	⇓eP	Pn	01 54 24.3	+1.2
ARCO	**CERRO ARCO**	**1.51**	**188**	eP	Pn	01 54 26.1	+1.3
ARCO				eS	Sn	01 54 47.0	+2.1
ARCO				IAML		01 54 48.5	
	comp=Z,495nm,0.6s						
ACAN	**Cantantal**	**1.57**	**127**	⇓eP	Pn	01 54 27.0	+1.7
ACAN				eS	Sn	01 54 47.7	+1.6
AAGR	**Agrelo**	**1.74**	**184**	eP	Pn	01 54 28.9	+1.3
AGUA	**GUANDACOL**	**1.86**	**5**	eP	Pn	01 54 30.7	+1.6
APLL	**PUNTA DE LOS L**	**2.08**	**63**	eP	Pn	01 54 33.0	+1.2
APLL				eS	Sn	01 54 58.7	+1.1
APLL				IAML		01 54 59.5	
	comp=Z,105nm,0.4s						
AVIZ	**Vizcacheras**	**2.12**	**176**	⇓eP	Pn	01 54 33.8	+1.3
AVIZ				eS	Sn	01 54 59.3	+0.5
ACLC	**CERRO LA CRUZ**	**2.42**	**38**	⇓eP	Pn	01 54 37.5	+1.0
VCA	**Vinchina**	**2.63**	**9**	eP	Pn	01 54 40.7	+1.4
VCA				eS	Sn	01 55 15.5	+4.8
VCA				IAML		01 55 17.0	
	comp=Z,175nm,0.3s						
MRA	**San Martin**	**2.73**	**114**	eS	Sn	01 55 13.3	+0.3
MRA				IAML		01 55 14.3	
	comp=N,310nm,0.7s						
TCA	**Tanti**	**3.49**	**91**	⇓eP	Pn	01 54 51.4	+0.9
TCA				IAML		01 55 32.2	

ISN ***27*** *02:25:34.5±0.7, 34°.13N×48°.46E, h0km±7km, ML4.6*
BJI ***27*** *02:25:35.9, 34°.15N×47°.67E, h31km, mb4.7/22, mB4.7/12, Ms4.3/8, Ms7 4.0/8*
TEH ***27*** *02:25:35.2, 34°.19N×48°.43E, h6km, ML4.5*
ISCJB ***27*** *02:25:36.6±0.1, 33°.92N±0°.02×48°.39E±0°.02, h10km, mb4.5/112, MS3.7/42, Error ellipse: s-maj=2.6km s-min=2.0km az=18.2*
CSEM ***27*** *02:25:37.4±0.1, 34°.08N×48°.41E, h5km, mb4.7/64, Ms3.2, Error ellipse: s-maj=4.2km s-min=2.7km az=16.0*
NEIC ***27*** *02:25:37.4±0.0, 34°.18N×48°.44E, h5km, mb4.7/55, ML4.3(THR), MN4.6(TEH), After TEH.*
GII ***27*** *02:25:38.0±0.0, 34°.13N×48°.54E, h1km*
MOS ***27*** *02:25:38.5±1.3, 33°.82N×48°.34E, h33km, mb4.6/36, Error ellipse: s-maj=5.8km s-min=3.5km az=110.3*
THR ***27*** *02:25:39.7±0.3, 34°.14N×48°.49E, h15km, ML4.3*
IDC ***27*** *02:25:41.2±3.1, 33°.96N×48°.46E, h33km±23km, mb4.1/25, mb1 4.2/34, mb1mx4.1/70, mbtmp4.2/34, ML3.7/8, MS3.7/49, Ms1 3.7/49, ms1mx3.6/64, Error ellipse: s-maj=16.9km s-min=10.5km az=169.0*
DSN ***27*** *02:25:41.0±0.6, 33°.82N×48°.32E, h30km, mb4.7/2, Error ellipse: s-maj=19.9km s-min=6.5km az=57.0*
AZER ***27*** *02:25:41.5±2.2, 33°.91N×48°.51E, h30km, ml5.1/4, ms3.2/4, Error ellipse: s-maj=23.1km s-min=14.0km az=175.0*
ISC 27 02:25:38.9±0.6, **34°.07N**±0°.03×**48°.46E**±0°.02, **h14**km±3km, **n591**, σ**2**s**19**/569, **mb4.6**/114, **MS3.7**/43, **52C-54D, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSAM	**Samen**	**0.19**	**39**	ePg	**Pg**	**02 25 39.9**	**-3.5**
HSAM				eSg	**Sg**	**02 25 42.2**	**-4.3**
HSAM				e		02 25 42.8	
	comp=N,99nm,0.1s						
HSAM				e		02 25 43.1	
	comp=E,99nm,0.2s						
HSAM				e		02 25 43.8	
	comp=Z,99nm,0.1s						
HSAM	**Samen**	**0.19**	**39**	ePg	**Pg**	**02 25 39.9**	**-3.5**
HSAM				eSg	**Sg**	**02 25 42.2**	**-4.3**
IBZA	**Bozab**	**0.64**	**309**	ePg	**Pg**	**02 25 47.9**	**-3.6**
IBZA				e		02 25 59.5	
	comp=Z,43μm,0.3s						
IBZA	**Bozab**	**0.64**	**309**	ePg	**Pg**	**02 25 47.9**	**-3.6**
IKFM	**Kafar-mosalman**	**0.74**	**224**	ePg	**Pg**	**02 25 51.8**	**-1.6**
IKFM				eSg	**Sb**	**02 26 04.9**	**+1.2**
IKFM				e		02 26 07.1	
	comp=N,99nm,0.2s						
IKFM				e		02 26 11.3	
	comp=E,99nm,0.4s						
IKFM				e		02 26 14.4	
	comp=Z,99nm,0.1s						
IKFM	**Kafar-mosalman**	**0.74**	**224**	ePg	**Pg**	**02 25 51.8**	**-1.6**
IKFM				eSg	**Sb**	**02 26 04.9**	**+1.2**
IKOM	**Komasi**	**0.80**	**278**	ePg	**Pg**	**02 25 51.2**	**-3.2**
IKOM				eSg	**Sg**	**02 26 03.5**	**-1.4**
IKOM				e		02 26 09.4	
	comp=Z,99nm,0.3s						
IKOM	**Komasi**	**0.80**	**278**	ePg	**Pg**	**02 25 51.2**	**-3.2**
IKOM				eSg	**Sg**	**02 26 03.5**	**-1.4**
HAGD	**Aghdareh**	**0.94**	**36**	ePg	**Pg**	**02 25 53.1**	**-4.1**
HAGD				e		02 26 07.8	
	comp=N,99nm,0.1s						
HAGD				e		02 26 08.4	
	comp=E,99nm,0.1s						
HAGD				e		02 26 08.7	
	comp=Z,99nm,0.1s						
HAGD	**Aghdareh**	**0.94**	**36**	ePg	**Pg**	**02 25 53.1**	**-4.1**
KCHF	**Cheshme Sefid,**	**1.20**	**280**	ePg	**Pn**	**02 25 58.0**	**-3.5**
KCHF				e		02 26 25.2	
	comp=Z,99nm,0.5s						
KCHF	**Cheshme Sefid,**	**1.20**	**280**	ePg	**Pn**	**02 25 58.0**	**-3.5**
HKZM	**Kohzaman**	**1.36**	**15**	ePg	**Pn**	**02 26 00.5**	**-3.3**
HKZM				e		02 26 18.2	
	comp=Z,99nm,0.2s						
HKZM				e		02 26 18.6	
	comp=E,99nm,0.1s						
HKZM				e		02 26 21.2	
	comp=N,99nm,0.1s						
HKZM	**Kohzaman**	**1.36**	**15**	ePg	**Pn**	**02 26 00.5**	**-3.3**
IVIS	**Veis**	**1.41**	**289**	ePg	**Pn**	**02 26 02.3**	**-2.1**
IVIS				e		02 26 29.8	
	comp=Z,91μm,0.3s						
IVIS				e		02 26 32.0	
	comp=E,9μm,0.2s						
IVIS				e		02 26 33.3	
	comp=N,69μm,0.3s						
IVIS	**Veis**	**1.41**	**289**	ePg	**Pn**	**02 26 02.3**	**-2.1**
ILIN	**Lien**	**1.50**	**305**	ePg	**Pn**	**02 26 02.7**	**-3.0**
ILIN				e		02 26 31.2	
	comp=E,49μm,0.3s						
ILIN				e		02 26 32.0	
	comp=Z,9μm,0.2s						
ILIN				e		02 26 37.3	
	comp=N,21μm,0.1s						
ILIN	**Lien**	**1.50**	**305**	ePg	**Pn**	**02 26 02.7**	**-3.0**
IRAZ	**Razeghan**	**1.80**	**42**	ePn	**Pn**	**02 26 08.6**	**-1.2**
IRAZ	**Razeghan**	**1.80**	**42**	ePn	**Pn**	**02 26 08.6**	**-1.2**
QABG	**Abgarm-Qazvin**	**1.88**	**29**	e		02 26 38.6	
	comp=E,99nm,0.6s						
QABG				ePn	**Pn**	**02 26 09.7**	**-1.2**
QABG				e		02 26 40.2	
	comp=N,99nm,0.3s						
QABG				e		02 26 58.1	
	comp=Z,99nm,1.8s						
SHGR	**Shooshtar-Gavs**	**1.97**	**172**	ePn	**Pb**	**02 26 15.5**	**+0.9**
SHGR				AML	AML	02 26 53.1	
	comp=N,2μm,0.5s						
SHGR				AML	AML	02 26 58.2	
	comp=E,2μm,0.7s						
SHGR	**Shooshtar-Gavs**	**1.97**	**172**	ePn	**Pb**	**02 26 15.5**	**+0.9**
GHVR	**GHOM**	**2.38**	**79**	ePn	**Pn**	**02 26 19.2**	**+1.5**
GHVR				AML	AML	02 26 58.6	
	comp=N,2μm,0.6s						
GHVR				AML	AML	02 27 02.0	
	comp=E,2μm,0.6s						
GHVR	**GHOM**	**2.38**	**79**	ePn	**Pn**	**02 26 19.2**	**+1.5**
GHVR	**GHOM**	**2.38**	**79**	ePn	**Pn**	**02 26 19.2**	**+1.5**
IMHD	**Mahdasht**	**2.43**	**48**	ePn	**Pn**	**02 26 19.3**	**+0.9**
IMHD				e		02 26 54.1	
	comp=E,62μm,0.2s						
IMHD				e		02 26 54.9	
	comp=N,90μm,0.3s						
IMHD				e		02 26 56.4	
	comp=Z,21μm,0.2s						
IMHD	**Mahdasht**	**2.43**	**48**	ePn	**Pn**	**02 26 19.3**	**+0.9**
QAM	**Ghamsar**	**2.50**	**96**	ePn	**Pn**	**02 26 21.4**	**+2.0**
QAM				e		02 27 00.2	

comp=Z,48μm,0.3s
QAM e 02 27 04.0
comp=E,38μm,0.3s
QAM e 02 27 05.0
comp=N,35μm,0.2s
ZNJK Zanjan 2.60 4 *e*Pn **Pn 02 26 22.4 +1.5**
ZNJK Zanjan 2.60 4 *e*Pn **Pn 02 26 22.4 +1.5**
ZNJK Zanjan 2.60 4 *e*Pn **Pn 02 26 22.4 +1.5**
IKLH Kolahrood 2.70 105 *e*Pn **Pb 02 26 25.9 -1.4**
IKLH e 02 27 07.7
comp=N,29μm,0.3s
IKLH e 02 27 10.8
comp=Z,17μm,0.2s
IKLH e 02 27 14.8
comp=E,30μm,0.3s
IKLH Kolahrood 2.70 105 *e*Pn **Pb 02 26 25.9 -1.4**
IGZV Ghazvin 2.73 31 *e*Pn **Pn 02 26 22.3 -0.3**
IGZV e 02 27 04.4
comp=E,84μm,0.2s
IGZV e 02 27 06.6
comp=N,72μm,0.4s
IGZV e 02 27 08.1
comp=Z,47μm,0.3s
IGZV Ghazvin 2.73 31 *e*Pn **Pn 02 26 22.3 -0.3**
AHWZ Ahwaz 2.73 177 *e* 02 27 20.3
comp=N,99nm,0.3s
AHWZ e 02 27 27.9
comp=E,99nm,0.3s
ROKH ROKH 2.76 128 *e*Pn **Pn 02 26 25.0 +2.0**
ROKH e 02 27 27.6
comp=N,99nm,1.0s
ROKH e 02 27 30.1
comp=Z,99nm,1.4s
ROKH ROKH 2.76 128 *e*Pn **Pn 02 26 25.0 +2.0**
ZNGN Zangian 2.79 133 *e*Pn **Pn 02 26 26.1 +2.5**
ZNGN e 02 27 24.4
comp=Z,99nm,0.4s
ZNGN e 02 27 34.4
comp=N,99nm,0.3s
ZNGN Zangian 2.79 133 *e*Pn **Pn 02 26 26.1 +2.5**
IVRN Varamin 2.85 70 *e*Pn **Pb 02 26 27.3 -2.4**
IVRN e 02 27 14.9
comp=Z,18μm,0.2s
IVRN e 02 27 16.9
comp=E,20μm,0.3s
IVRN Varamin 2.85 70 *e*Pn **Pb 02 26 27.3 -2.4**
QALM Alamut, Qazvin 2.96 37 *e*Pn **Pn 02 26 26.5 +0.7**
QALM e 02 27 10.4
comp=Z,99nm,0.4s
QALM e 02 27 11.0
comp=N,99nm,0.3s
QALM e 02 27 11.8
comp=E,99nm,0.3s
QALM Alamut, Qazvin 2.96 37 *e*Pn **Pn 02 26 26.5 +0.7**
IBRJ Brojen 3.19 132 *e*Pn **Pn 02 26 30.9 +2.0**
IBRJ e 02 27 33.6
comp=Z,6μm,0.5s
IBRJ e 02 27 36.9
comp=N,6μm,0.4s
IBRJ e 02 27 46.0
comp=E,8μm,0.5s
IAFJ Afjeh 3.21 55 *e*Pn **Pn 02 26 31.4 +2.1**
IAFJ e 02 27 26.3
comp=Z,21μm,0.4s
IAFJ e 02 27 27.9
comp=E,47μm,0.5s
IAFJ e 02 27 30.3
comp=N,50μm,0.4s
IAFJ Afjeh 3.21 55 *e*Pn **Pn 02 26 31.4 +2.1**
IDMV Damavand 3.30 62 *e*Pn **Pn 02 26 32.3 +1.8**
IDMV e 02 27 30.2
comp=N,41μm,0.6s
IDMV e 02 27 33.4
comp=E,47μm,0.5s
IDMV e 02 27 46.4
comp=Z,22μm,0.5s
IDMV Damavand 3.30 62 *e*Pn **Pn 02 26 32.3 +1.8**
IZEF Zefreh 3.44 109 *e*Pn **Pn 02 26 35.4 +3.0**
IZEF e 02 27 33.2
comp=N,7μm,0.3s
IZEF e 02 27 34.9
comp=Z,4μm,0.3s
IZEF e 02 27 35.4
comp=E,7μm,0.4s
IZEF Zefreh 3.44 109 *e*Pn **Pn 02 26 35.4 +3.0**
ISRB Sarab 3.81 350 *e*Pn **Pn 02 26 38.8 +1.4**
ISRB e 02 27 36.9
comp=E,17μm,0.2s
ISRB e 02 27 39.5
comp=N,19μm,0.4s
ISRB e 02 27 53.1
comp=Z,12μm,0.5s
ISRB Sarab 3.81 350 *e*Pn **Pn 02 26 38.8 +1.4**
IBST Bostanabad 3.84 341 *e* 02 27 39.4
comp=Z,5μm,0.3s
IBST e 02 27 45.9
comp=E,8μm,0.5s
IBST e 02 27 55.6
comp=N,4μm,0.4s
IPRN Peran 3.85 55 *e*Pn **Pn 02 26 41.4 +3.5**
IPRN e 02 27 42.3
comp=N,35μm,0.4s
IPRN e 02 27 43.6
comp=E,34μm,0.3s
IPRN e 02 27 47.5
comp=Z,14μm,0.3s
NASN Na'in 3.85 108 *e*Pn **Pn 02 26 40.8 +2.7**
NASN Na'in 3.85 108 *e*Pn **Pn 02 26 40.8 +2.7**
NASN Na'in 3.85 108 *e*Pn **Pn 02 26 40.8 +2.7**
IFIR Firoozkooh 3.86 65 *e*Pn **Pn 02 26 40.5 +2.3**
IFIR e 02 27 37.0
comp=Z,5μm,0.2s
IFIR e 02 27 48.4
comp=E,16μm,0.5s
IFIR e 02 27 50.2
comp=N,12μm,0.3s
IFIR Firoozkooh 3.86 65 *e*Pn **Pn 02 26 40.5 +2.3**
ILAS Lasjerd 3.93 69 *e*Pn **Pn 02 26 40.3 +1.2**
ILAS e 02 27 57.4
comp=E,13μm,0.3s
ILAS Lasjerd 3.93 69 *e*Pn **Pn 02 26 40.3 +1.2**
IRAM Ramesheh 3.99 123 *e*Pn **Pn 02 26 41.2 +1.3**
IRAM e 02 27 38.4
comp=N,4μm,0.3s
IRAM e 02 28 01.6
comp=E,5μm,0.4s
IRAM e 02 28 08.8
comp=Z,14μm,0.9s
IRAM Ramesheh 3.99 123 *e*Pn **Pn 02 26 41.2 +1.3**
IALA Alasht 4.09 59 *e*Pn **Pn 02 26 44.3 +2.9**
IALA e 02 27 49.1
comp=E,18μm,0.3s
IALA e 02 27 56.2
comp=Z,8μm,0.4s
IALA Alasht 4.09 59 *e*Pn **Pn 02 26 44.3 +2.9**
ISHM Shahmirzad 4.33 65 *e*Pn **Pn 02 26 46.8 +2.1**
ISHM e 02 28 05.0
comp=E,182nm,0.1s
ISHM e 02 28 06.9
comp=Z,15μm,0.4s
IHRS Heris 4.40 345 *e*Pn **Pn 02 26 47.0 +1.5**
IHRS e 02 28 03.8
comp=E,9μm,0.4s
IHRS e 02 28 05.9
comp=Z,5μm,0.4s
IHRS e 02 28 07.5
comp=N,6μm,0.3s
IHRS Heris 4.40 345 *e*Pn **Pn 02 26 47.0 +1.5**
ANAR Anarak 4.48 100 *e*Pn **Pn 02 26 50.0 +3.4**
ANAR e 02 28 11.2
comp=N,99nm,0.6s
ANAR e 02 28 28.1
comp=Z,99nm,0.4s
ANAR e 02 28 28.6
comp=E,99nm,0.7s
ANAR Anarak 4.48 100 *e*Pn **Pn 02 26 50.0 +3.4**
ASTR Astara 4.49 3 ⇓P **Pn 02 26 48.2 +1.6**
SNR=64
ASTR ⇑S **Sn 02 27 43.5 +4.8**
ASTR Astara 4.49 3 ⇓P **Pn 02 26 48.2 +1.6**
SNR=64
ASTR ⇑S **Sn 02 27 43.5 +4.8**
ITBZ Tabriz 4.56 336 *e*Pn **Pn 02 26 50.4 +2.7**
ITBZ e 02 28 18.4
comp=Z,3μm,0.3s
ITBZ e 02 28 32.1
comp=N,4μm,0.4s
ITBZ e 02 28 33.2
comp=E,4μm,0.3s
ITBZ Tabriz 4.56 336 *e*Pn **Pn 02 26 50.4 +2.7**
LRK Lerik 4.57 359 ⇑P **Pn 02 26 50.7 +2.9**
SNR=88
LRK ⇓S **Sn 02 27 45.5 +4.7**
LRK Lerik 4.57 359 ⇑P **Pn 02 26 50.7 +2.9**
SNR=88
LRK ⇓S **Sn 02 27 45.5 +4.7**
LKRN Lenkeran, Azer 4.64 3 ⇓P **Pn 02 26 50.9 +2.3**
LKRN ⇓S **Sn 02 27 47.3 +5.0**
LKRN Lenkeran, Azer 4.64 3 ⇓P **Pn 02 26 50.9 +2.3**
LKRN ⇓S **Sn 02 27 47.3 +5.0**
IANJ Anjilo 4.70 71 *e*Pn **Pn 02 26 51.0 +1.3**
IANJ e 02 28 24.4
comp=Z,9μm,0.5s
IANJ Anjilo 4.70 71 *e*Pn **Pn 02 26 51.0 +1.3**
GRMI Germi 4.75 355 *e*Pn **Pn 02 26 52.2 +1.8**
GRMI Germi 4.75 355 *e*Pn **Pn 02 26 52.2 +1.8**
GRMI Germi 4.75 355 *e*Pn **Pn 02 26 52.2 +1.8**
ISHB Shabestar 4.80 332 *e*Pn **Pn 02 26 52.1 +1.1**
ISHB e 02 28 13.2
comp=Z,4μm,0.2s
ISHB e 02 28 17.9
comp=N,17μm,0.4s
ISHB e 02 28 17.9
comp=E,20μm,0.4s
ISAD Sadrabad 4.89 115 *e*Pn Pn 02 26 57.0 +4.7
ISAD e 02 28 26.4
comp=E,3μm,0.3s
ISAD e 02 28 37.3
comp=Z,3μm,0.6s
ISAD e 02 28 39.5
comp=N,3μm,0.6s
ISAD Sadrabad 4.89 115 *e*Pn Pn 02 26 57.0 +4.7
IGLO Ghaloghah 5.02 60 *e*Pn **Pn 02 26 57.2 +3.1**
IGLO e 02 28 38.6
comp=N,33μm,0.6s
IGLO e 02 28 39.5
comp=E,25μm,0.5s
IGLO e 02 28 40.1
comp=Z,6μm,0.4s
IKAZ Kazeroun 5.15 145 *e*Pn **Pn 02 26 57.5 +1.5**
IKAZ e 02 28 11.6
comp=Z,2μm,0.3s
IKAZ Kazeroun 5.15 145 *e*Pn **Pn 02 26 57.5 +1.5**
GLBA Ciilabad 5.17 359 ⇓P **Pn 02 26 59.0 +3.1**
SNR=23
GLBA ⇓S **Sn 02 28 00.9 +5.6**
GLBA Ciilabad 5.17 359 ⇓P **Pn 02 26 59.0 +3.1**
SNR=23
GLBA ⇓S **Sn 02 28 00.9 +5.6**
ORD Ordubad 5.24 338 ⇑P **Pn 02 27 00.0 +3.0**
ORD ⇑S **Sn 02 28 02.1 +4.8**
ORD Ordubad 5.24 338 ⇑P **Pn 02 27 00.0 +3.0**
ORD ⇑S **Sn 02 28 02.1 +4.8**
ICHK Chekchek 5.31 108 *e*Pn **Pn 02 27 02.0 +4.0**
ICHK e 02 27 23.5
comp=Z,2μm,0.3s
ICHK e 02 28 32.5
comp=N,3μm,0.5s
ICHK e 02 28 48.3
comp=E,2μm,0.4s
ICHK Chekchek 5.31 108 *e*Pn **Pn 02 27 02.0 +4.0**
NAX Nakhchivan 5.63 336 ⇑P **Pn 02 27 05.4 +3.1**
SNR=16
NAX Nakhchivan 5.63 336 ⇑P **Pn 02 27 05.4 +3.1**
SNR=16
NAX ⇑S **Sn 02 28 11.4 +4.6**
SBZ Shahbuz 5.81 337 ⇑P **Pn 02 27 07.8 +3.0**
SBZ Shahbuz 5.81 337 ⇑P **Pn 02 27 07.8 +3.0**
SBZ ⇑S **Sn 02 28 17.3 +5.9**
IMEH Mehriz 5.83 116 *e*Pn **Pn 02 27 06.7 +1.5**
IMEH e 02 29 03.3
comp=Z,1μm,0.4s
IMEH e 02 29 14.0
comp=N,4μm,0.6s
IMEH Mehriz 5.83 116 *e*Pn **Pn 02 27 06.7 +1.5**
BRDA Brd 6.27 351 ⇑P **Pn 02 27 14.3 +3.3**
SNR=6.9
BRDA Brd 6.27 351 ⇑P **Pn 02 27 14.3 +3.3**
SNR=6.9
HYR Heyderabad 6.34 334 ⇓P **Pn 02 27 15.2 +3.2**
HYR Heyderabad 6.34 334 ⇓P **Pn 02 27 15.2 +3.2**
GBS Qobustan 6.47 3 ⇓P **Pn 02 27 17.0 +3.2**
SNR=3.9
GBS Qobustan 6.47 3 ⇓P **Pn 02 27 17.0 +3.2**
SNR=3.9
IBAF Bafgh 6.47 110 *e* 02 29 08.3
comp=N,1μm,0.4s
IBAF e 02 29 22.5
comp=E,1μm,0.5s
IBAF e 02 29 37.9
comp=Z,2μm,0.7s
PQL Pirkuli 6.71 1 ⇓P **Pn 02 27 20.4 +3.2**
SNR=7.4
PQL Pirkuli 6.71 1 ⇓P **Pn 02 27 20.4 +3.2**
SNR=7.4
IML Ismayilli 6.72 358 ⇓P **Pn 02 27 20.9 +3.6**
SNR=7.7
IML Ismayilli 6.72 358 ⇓P **Pn 02 27 20.9 +3.6**
SNR=7.7
GNI Garni 6.76 335 Pn Pn 02 27 24.1 +6.1
comp=Z,0.8nm,0.3s,baz=27,slow=7.3,SNR=7.8
GNI Lg Lg 02 29 17.9
comp=Z,1.6nm,0.3s,baz=131,slow=17,SNR=3.4
GNI LR LR 02 30 12.0
comp=Z,1μm,21.6s,baz=154,slow=40
GNI Garni 6.76 335 Pn **Pn 02 27 14.8 -3.1**
GNI *e*Sn **Sn 02 28 32.5 -2.3**
GNI Garni 6.76 335 P Pn 02 27 22.7 +4.8
GNI Garni 6.76 335 P **Pn 02 27 14.8 -3.1**
GNI *e* 02 28 32.5
GANJ Ganja 6.79 346 ⇑P **Pn 02 27 21.4 +3.3**
SNR=7.4
GANJ Ganja 6.79 346 ⇑P **Pn 02 27 21.4 +3.3**
SNR=7.4
ATGJ Altiaghaj 6.79 3 ⇓P **Pn 02 27 21.5 +3.2**
SNR=3.4
ATGJ Altiaghaj 6.79 3 ⇓P **Pn 02 27 21.5 +3.2**
SNR=3.4
QBL Gabala 6.89 356 ⇑P **Pn 02 27 23.0 +3.4**
SNR=12
QBL Gabala 6.89 356 ⇑P **Pn 02 27 22.9 +3.4**
SNR=12
GDB GEDABAY 6.98 343 ⇑P **Pn 02 27 24.1 +3.1**
SNR=9.0
GDB GEDABAY 6.98 343 ⇑P **Pn 02 27 24.1 +3.1**
SNR=9.0
SIZA Siyzn 7.01 3 ⇓P **Pn 02 27 24.4 +3.2**
SNR=8.1
SIZA Siyzn 7.01 3 ⇓P **Pn 02 27 24.4 +3.2**
SNR=8.1
XNQ Khinaliq 7.10 358 ⇑P **Pn 02 27 25.6 +3.0**
SNR=16
XNQ Khinaliq 7.10 358 ⇑P **Pn 02 27 25.6 +3.0**
SNR=16
SEKA Sheki 7.20 352 ⇓P **Pn 02 27 27.0 +3.1**
SNR=32
SEKA Sheki 7.20 352 ⇓P **Pn 02 27 27.0 +3.1**
SNR=32
QUBA Quba, Azerbaij 7.28 0 ⇓P **Pn 02 27 28.2 +3.3**
SNR=5.4
QUBA Quba, Azerbaij 7.28 0 ⇓P **Pn 02 27 28.2 +3.3**
SNR=5.4
QZX Qazax, Azerbai 7.40 342 ⇑P **Pn 02 27 29.5 +3.0**
SNR=3.7
QZX Qazax, Azerbai 7.40 342 ⇑P **Pn 02 27 29.5 +3.0**
SNR=3.7
AKT Akhty 7.42 356 *e*P **Pn 02 27 30.0 +3.0**
AKT *e*S **Sn 02 28 52.3 +1.2**
AKT pmax pmax
comp=Z,28nm,0.6s
AKT smax smax
comp=N,17nm,0.4s
AKT smax smax
comp=E,15nm,0.5s
AKT Akhty 7.42 356 *e*P **Pn 02 27 30.0 +3.0**
comp=E,17nm,0.4s
QSAR Qusar 7.44 359 ⇑P **Pn 02 27 30.3 +3.2**
SNR=11
QSAR Qusar 7.44 359 ⇑P **Pn 02 27 30.3 +3.2**
SNR=11
DDFL Dedoflistskaro 7.60 347 P Pb 02 27 43.6 -6.9
ZKTA Zakatala 7.70 350 ⇓P **Pn 02 27 34.3 +3.6**
SNR=13
KHGB Koh Gabri 7.72 116 *e*Pn **Pn 02 27 33.7 +2.5**
KHGB *e* 02 30 05.2
comp=N,99nm,1.2s
KHGB *e* 02 30 54.5
comp=Z,99nm,1.8s
KHGB *e* 02 30 54.9
comp=E,99nm,2.5s
KHGB Koh Gabri 7.72 116 *e*Pn **Pn 02 27 33.7 +2.5**
DGRG David-gareji 7.77 343 P Pn 02 27 36.1 +4.5
DGRG David-gareji 7.77 343 *e*P Pn 02 27 36.1 +4.5
DGRG David-gareji 7.77 343 *e*P Pn 02 27 36.1 +4.5
BGD Bogdanovka 8.15 333 P **Pn 02 27 37.4 +0.3**
TBLG Delisi 8.20 340 P Pn 02 27 42.6 +5.1
TBLG Delisi 8.20 340 *e*Pn Pn 02 27 42.0 +4.5
TBLG *e*Sn **Sn 02 29 08.5 -1.5**
TBLG Delisi 8.20 340 *e*P Pn 02 27 42.0 +4.5
TBLG *e* 02 29 08.5
TBLG Delisi 8.20 340 *e*P Pn 02 27 42.0 +4.5
NGRK Negar Kerman 8.30 120 *e*Pn **Pn 02 27 42.6 +3.3**
NGRK *e* 02 30 15.8
comp=N,99nm,0.0s
NGRK *e* 02 32 13.1
comp=Z,99nm,0.0s
NGRK *e* 02 32 13.1
comp=E,99nm,0.0s
NGRK Negar Kerman 8.30 120 *e*Pn **Pn 02 27 42.6 +3.3**
AKH Akhalkalaki 8.32 333 P Pn 02 27 44.6 +5.3
AKH Akhalkalaki 8.32 333 *e*Pn Pn 02 27 43.9 +4.6
AKH *e*Sn **Sn 02 29 10.0 -3.2**
AKH Akhalkalaki 8.32 333 *e*P Pn 02 27 43.9 +4.6
AKH *e* 02 29 10.0
ISFR Sfrayin 8.32 66 *e*Pn **Pn 02 27 43.0 +3.5**
ISFR *e* 02 28 22.0
comp=Z,640nm,0.4s
ISFR Sfrayin 8.32 66 *e*Pn **Pn 02 27 43.0 +3.5**
DUS Dusheti 8.54 341 P Pn 02 27 49.2 +6.9
DUS Dusheti 8.54 341 *e*P Pn 02 27 49.2 +6.9
IKRD Kardeh 8.64 69 *e*Pn Pn 02 27 57.8 +14
IKRD *e* 02 28 22.8
comp=N,257nm,0.2s
IKRD *e* 02 29 24.9
comp=Z,209nm,0.0s
IKRD *e* 02 29 26.9
comp=E,215nm,0.0s
IKRD Kardeh 8.64 69 *e*Pn Pn 02 27 57.8 +14
ITEG Tejag 8.67 95 *e*Pn Pn 02 27 49.3 +5.1
ITEG *e* 02 28 12.0
comp=N,518nm,0.3s
ITEG *e* 02 30 36.8
comp=Z,515nm,0.3s
ITEG *e* 02 30 49.0
comp=E,906nm,0.4s
ITEG Tejag 8.67 95 *e*Pn Pn 02 27 49.3 +5.1
GEYT Alibeck 8.72 61 Pn **Pn 02 27 46.3 +1.6**
comp=E,0.4nm,0.3s,baz=254,slow=16,SNR=18
GEYT LR LR 02 31 35.0
comp=E,825nm,18.5s,baz=245,slow=40
GYA0B ALIBECK ARRAY 8.72 61 *e*Pn **Pn 02 27 47.2 +2.5**
GYA0B ALIBECK ARRAY 8.72 61 *e*Pn **Pn 02 27 47.2 +2.5**
MAK Makhachkala 8.91 355 *e*P Pn 02 27 52.7 +5.4
MAK *e*S Sn 02 29 36.5 +9.0
MAK pmax pmax
comp=Z,126nm,1.1s
MAK MLR MLR
comp=Z,662nm,17.0s
IPAY Payeh 8.94 72 *e*Pn **Pn 02 27 50.0 +2.1**
IPAY *e* 02 27 55.1
comp=Z,350nm,0.2s
IPAY *e* 02 28 08.4
comp=E,513nm,0.4s
IPAY *e* 02 28 11.1
comp=N,566nm,0.3s
IPAY Payeh 8.94 72 *e*Pn **Pn 02 27 50.0 +2.1**
GUDG Gudauri 8.95 341 P **Pn 02 27 51.6 +3.6**
IKOO Kooshah 8.98 98 *e*Pn **Pn 02 27 52.8 +4.3**
IKOO *e* 02 30 41.3
comp=Z,1μm,0.7s
IKOO *e* 02 31 03.1
comp=E,594nm,0.6s
IKOO *e* 02 31 17.8
comp=N,946nm,0.6s
IKOO Kooshah 8.98 98 *e*Pn **Pn 02 27 52.8 +4.3**
IMOG Moghan 9.15 74 *e*Pn **Pn 02 27 53.0 +2.2**
IMOG *e* 02 27 57.2
comp=Z,712nm,0.3s
IMOG *e* 02 28 01.2
comp=E,581nm,0.3s
IMOG *e* 02 28 01.8
comp=N,415nm,0.3s
IMOG Moghan 9.15 74 *e*Pn **Pn 02 27 53.0 +2.2**
ISRO Mashad 9.29 73 *e*Pn **Pn 02 27 53.6 +1.1**
ISRO *e* 02 31 06.2
comp=N,8μm,1.5s
ISRO *e* 02 31 38.0
comp=Z,4μm,1.1s
ISRO *e* 02 31 43.0
comp=E,856nm,1.4s
ISRO Mashad 9.29 73 *e*Pn **Pn 02 27 53.6 +1.1**
GENO Geno 9.39 133 *e*Pn **Pn 02 27 53.9 -0.1**
GENO *e* 02 32 37.4
comp=Z,99nm,1.8s
GENO Geno 9.39 133 *e*Pn **Pn 02 27 53.9 -0.1**
ZEI Tsey 9.41 339 *e*P **Pn 02 27 57.9 +3.6**
ZEI pmax pmax
comp=Z,43nm,1.3s
NIAN Nian 9.69 130 *e*Pn **Pn 02 27 57.2 -0.8**
NIAN *e* 02 29 46.8
comp=N,99nm,0.3s
NIAN *e* 02 29 59.6
comp=E,99nm,0.2s
NIAN *e* 02 31 45.6
comp=Z,99nm,1.2s
NIAN Nian 9.69 130 *e*Pn **Pn 02 27 57.2 -0.8**
IMYA Miami 9.79 73 *e* 02 28 17.1
comp=E,523nm,0.4s
IMYA *e*Pn **Pn 02 28 02.2 +2.7**
IMYA *e* 02 28 19.6
comp=N,320nm,0.3s
IMYA *e* 02 31 32.3
comp=Z,714nm,0.7s
ASF Jabal al Asfar 9.88 262 Pn **Pn 02 28 00.3 -0.4**
comp=Z,0.6nm,0.3s,baz=42,slow=14,SNR=5.0
ASF LR LR 02 32 58.9
comp=Z,710nm,18.2s,baz=31,slow=44
NCK Nalchik 10.15 339 *i* P Pn 02 28 09.5 +5.2
NEY Neytrino 10.21 336 *i* P Pn 02 28 10.4 +5.2
SHME Shamm 10.39 138 P **Pn 02 28 06.4 -1.2**
KBZ Khabaz 10.57 337 Pn Pn 02 28 15.5 +5.5
comp=Z,0.1nm,0.3s,baz=158,slow=12,SNR=5.8
KBZ LR LR 02 31 57.6
comp=Z,175nm,18.9s,baz=153,slow=35
BANOM Banah 10.58 138 *i* P **Pn 02 28 09.6 -0.6**
SNR=24
BANOM Banah 10.58 138 P **Pn 02 28 09.6 -0.6**
SNR=24
KSDI Kefar Szold 10.71 269 Pn **Pn 02 28 14.2 +2.3**
RAYN Ar Rayn 10.82 195 *e*Pn **Pn 02 28 11.8 -1.7**
RAYN *e*Sn **Sn 02 30 07.5 -7.0**
RAYN Ar Rayn 10.82 195 *i* P **Pn 02 28 11.4 -2.1**
SNR=18
RAYN Ar Rayn 10.82 195 P **Pn 02 28 11.4 -2.1**
SNR=18
RAYN Ar Rayn 10.82 195 *e*Pn **Pn 02 28 11.8 -1.7**
RAYN *e*Sn **Sn 02 30 07.5 -7.0**
KVAR Kislovodsk Arr 10.84 337 Pn Pn 02 28 19.4 +5.6
baz=127,slow=5.7,SNR=9.7
KVAR LR LR 02 32 17.4
comp=Z,190nm,18.4s,baz=132,slow=36
KIV Kislovodsk 10.85 337 Pn **Pn 02 28 10.1 -3.8**
KIV Kislovodsk 10.85 337 *e*P Pn 02 28 18.4 +4.6
KIV *e*S **Sn 02 30 18.4 +3.4**
KIV pmax pmax
comp=Z,22nm,1.0s
KIV MLR MLR
comp=Z,191nm,9.0s
MMA0B Mount Meron ar 10.95 268 Pn **Pn 02 28 17.2 +1.9**
MMAI Mount Meron Ar 10.95 268 Pn **Pn 02 28 16.9 +1.6**
comp=Z,1.1nm,0.3s,baz=70,slow=12,SNR=5.6
MMAI LR LR 02 33 24.0
comp=Z,768nm,20.3s,baz=70,slow=42
MSFE Esma-Masafi 10.95 140 *i* P **Pn 02 28 14.6 -0.7**
SNR=16
HMDT Nahal Hemdat 10.99 264 Pn **Pn 02 28 17.8 +2.0**
MMLI Mount Malkishu 11.04 265 Pn **Pn 02 28 18.6 +2.1**

MDH	Madha	11.07	140	P	Pn	02 28 15.9 -1.1
MDH	Madha	11.07	140	P	Pn	02 28 15.9 -1.1
ASUD	Al Ashush, Dub	11.15	146	P	Pn	02 28 17.6 -0.3
ASUD	Al Ashush, Dub	11.15	146	P	Pn	02 28 17.6 -0.3
UOSS	Minazif	11.31	141	ePn	Pn	02 28 19.2 -1.0
UOSS				eSn	Sn	02 30 23.1 -3.4
UOSS	Minazif	11.31	141	P	Pn	02 28 18.5 -1.7
UOSS	Minazif	11.31	141	P	Pn	02 28 18.5 -1.7
UOSS	Minazif	11.31	141	ePn	Pn	02 28 19.2 -1.0
UOSS				eSn	Sn	02 30 23.1 -3.4
HATD	Hatta, Dubai	11.37	142	P	Pn	02 28 20.3 -0.8
HATD	Hatta, Dubai	11.37	142	P	Pn	02 28 20.3 -0.8
SOC	Sochi	11.69	327	eP	Pn	02 28 25.5 +0.2
SOC				e		02 30 35.6
SOC				MLR	MLR	
comp=Z,372nm,11.0s						
SOC	Sochi	11.69	327	eP	Pn	02 28 25.5 +0.2
SOC				eS	Sn	02 30 35.6 0.0
comp=Z,372nm,11.0s						
PRNI	Paran	11.98	256	Pn	Pn	02 28 31.4 +2.0
HRFI	Mount Harif	12.07	254	Pn	Pn	02 28 32.5 +1.8
MBRI	Mt Berech	12.27	253	Pn	Pn	02 28 35.5 +2.1
KZIT	Kziot	12.29	259	Pn	Pn	02 28 33.7 +0.2
EIL	Elat	12.29	253	Pn	Pn	02 28 35.2 +1.7
comp=Z,0.5nm,0.3s,baz=49,slow=11,SNR=3.1						
EIL				LR	LR	02 34 43.7
comp=Z,660nm,18.2s,baz=74,slow=44						
EIL	Elat	12.29	253	Pn	Pn	02 28 34.5 +0.9
CSS	Mathiatis	12.51	278	ePn	Pn	02 28 36.8 +0.2
CSS	Mathiatis	12.51	278	ePn	Pn	02 28 36.8 +0.2
BR101	Keskin Array S	13.13	300	ePn	Pn	02 28 46.4 +1.2
BR101	Keskin Array S	13.13	300	ePn	Pn	02 28 46.4 +1.2
BR131	Keskin Array S	13.13	300	ePn	Pn	02 28 47.0 +1.8
BR131	Keskin Array S	13.13	300	ePn	Pn	02 28 47.0 +1.8
BRTR	Keskin Array B	13.13	300	Pn	Pn	02 28 46.4 +1.2
comp=Z,0.1nm,0.3s,baz=116,slow=14,SNR=17						
BRTR				LR	LR	02 34 03.0
comp=Z,220nm,20.7s,baz=108,slow=38						
ILGA	Ilgaz	13.61	305	ePn	Pn	02 28 48.6 -3.1
ANTO	Ankara	13.79	299	ePn	Pn	02 28 54.0 -0.1
ANTO	Ankara	13.79	299	eP	Pn	02 28 54.0 -0.1
ANTO	Ankara	13.79	299	ePn	Pn	02 28 54.0 -0.1
BR231	Keskin MP Arra	13.80	299	ePn	Pn	02 28 53.7 -0.5
BR231	Keskin MP Arra	13.80	299	ePn	Pn	02 28 53.7 -0.5
WSAR	Wadi Sarin	13.99	138	Pn	Pn	02 28 55.0 -1.9
comp=Z,1.6nm,0.3s,baz=334,slow=11,SNR=24						
WSAR				LR	LR	02 34 52.6
comp=Z,760nm,20.4s,baz=346,slow=40						
WSAR	Wadi Sarin	13.99	138	ePn	Pn	02 28 55.0 -1.9
ISP	Isparta	15.01	290	ePn	Pn	02 29 11.7 +1.0
ISP	Isparta	15.01	290	i P	Pn	02 29 10.3 -0.4
ISP	Isparta	15.01	290	ePn	Pn	02 29 11.7 +1.0
SIM	Simferopol'	15.49	319	P	Pn	02 29 16.2 -0.7
SIM				eS	Sn	02 32 15.0 +6.7
MANT	Manisa	16.64	291	ePn	P	02 29 33.0 -1.4
comp=Z,146nm,1.3s						
MANT	Manisa	16.64	291	ePn	P	02 29 33.0 -1.4
comp=Z,146nm,1.3s						
KBL	Kabul	17.02	83	ePn	P	02 29 38.7 +0.1
comp=Z,12nm,0.8s						
KBL	Kabul	17.02	83	eP	P	02 29 38.7 +0.1
KBL				pmax	pmax	
comp=Z,12nm,0.8s						
KBL	Kabul	17.02	83	eP	P	02 29 38.7 +0.1
comp=Z,12nm,0.8s						
ABKAR	Akbulak array	17.40	26	eP	P	02 29 41.5 -0.9
AKTO	Aktyubinsk	17.80	20	Pn	Pn	02 29 45.0 -1.1
comp=Z,0.7nm,0.3s,baz=211,slow=11,SNR=17						
AKTO				LR	LR	02 38 56.2
comp=Z,159nm,19.4s,baz=171,slow=44						
AKTO	Aktyubinsk	17.80	20	P	Pn	02 29 44.0 -2.1
AKTO				pmax	pmax	
comp=Z,22nm,1.4s						
VORD	Divnogorie	18.17	341	eP	P	02 29 51.1 +0.2
VORD				pmax	pmax	
comp=Z,9.0nm,0.8s						
VORD	Divnogorie	18.17	341	eP	P	02 29 51.1 +0.2
comp=Z,9.0nm,0.8s						
VSR	Storozhevoye	18.43	341	eP	Pn	02 29 53.6 -0.2
VSR				pmax	pmax	
comp=Z,10.0nm,1.3s						
VSR	Storozhevoye	18.43	341	eP	Pn	02 29 53.6 -0.2
comp=Z,10.0nm,1.3s						
PRD	Provadia	18.77	305	eP	Pn	02 30 01.6 +3.5
APE	Apeiranthos	18.89	286	⇓i P	Pn	02 30 00.8 +1.2
APE	Apeiranthos	18.89	286	⇓P	Pn	02 30 00.8 +1.2
TLB	Topalu	18.92	310	⇓i P	P	02 29 58.4 -0.8
TLB	Topalu	18.92	310	⇓P	P	02 29 58.4 -0.8
TLB	Topalu	18.92	310	P	P	02 29 58.4 -0.8
ALN	Alexandroupoli	19.02	298	eP	P	02 29 56.2 -4.2
comp=Z,62nm,2.0s						
ALN	Alexandroupoli	19.02	298	P	Pn	02 30 04.7 +3.5
ALN				pmax	pmax	
comp=Z,12nm,1.4s						
CFR	Carcaliu	19.14	311	⇓i P	P	02 30 00.1 -1.5
CFR	Carcaliu	19.14	311	⇓P	P	02 30 00.1 -1.5
CFR	Carcaliu	19.14	311	P	P	02 30 00.1 -1.5
KK31	Karatay Array	19.41	56	eP	P	02 30 02.9 -1.8
KK31	Karatay Array	19.41	56	eP	P	02 30 02.9 -1.8
KKAR	Karatay Array	19.41	56	eP	Pn	02 30 07.5 +1.6
KKAR	Karatay Array	19.41	56	eP	Pn	02 30 07.5 +1.6
KKAR	Karatay Array	19.41	56	eP	Pn	02 30 07.5 +1.6
IDI	Anoyia	19.42	280	P	Pn	02 30 05.8 -0.2
comp=Z,2.2nm,0.3s,baz=140,slow=5.3,SNR=14						
IDI	Anoyia	19.42	280	⇓i P	Pn	02 30 06.5 +0.4
IDI	Anoyia	19.42	280	eP	P	02 30 03.1 -1.8
comp=Z,54nm,1.3s						
IDI	Anoyia	19.42	280	eP	P	02 30 03.1 -1.8
comp=Z,54nm,1.3s						
KIS	Kishinev	19.67	317	eP	P	02 30 07.0 -0.5
KIS				eS	S	02 33 43.0 -6.0
KIS				LRM	MLR	02 39 24.0
comp=Z,400nm,13.0s						
KIS	Kishinev	19.67	317	eP	P	02 30 07.0 -0.5
KIS				eS	S	02 33 43.0 -6.0
KIS				MLR	MLR	
comp=Z,400nm,13.0s						
KIS	Kishinev	19.67	317	eP	P	02 30 07.0 -0.5
KIS				eS	S	02 33 43.0 -6.0
VRI	Vrincioaia	20.33	312	⇑i P	P	02 30 14.2 -0.5
VRI	Vrincioaia	20.33	312	⇑P	P	02 30 14.2 -0.5
VRI	Vrincioaia	20.33	312	P	P	02 30 14.2 -0.5
PLOR	Plostina	20.38	312	⇓i P	P	02 30 15.1 -0.1
PLOR	Plostina	20.38	312	⇓P	P	02 30 15.2 0.0
PLOR	Plostina	20.38	312	P	P	02 30 15.2 0.0
NIL	Nilore	20.58	84	eP	Pn	02 30 19.0 -0.8
comp=Z,24nm,0.8s						
NIL	Nilore	20.58	84	eP	Pn	02 30 19.0 -0.8
NIL				pmax	pmax	
comp=Z,24nm,0.8s						
NIL	Nilore	20.58	84	eP	Pn	02 30 19.0 -0.8
comp=Z,24nm,0.8s						
SORM	Soroca	20.58	319	⇓i P	P	02 30 16.4 -1.0
SORM	Soroca	20.58	319	⇓P	P	02 30 16.4 -1.0
SORM	Soroca	20.58	319	P	P	02 30 16.4 -1.0
MNAS	Manas	20.61	59	P	Pn	02 30 21.5 +1.3
MNAS				pmax	pmax	
comp=Z,11nm,1.0s						
MLR	Muntele Rosu	20.66	310	P	Pn	02 30 20.8 +0.1
comp=Z,3.0nm,0.7s,baz=193,slow=14,SNR=14						
MLR	Muntele Rosu	20.66	310	⇑i P	P	02 30 18.2 -0.1
MLR	Muntele Rosu	20.66	310	eP	Pn	02 30 20.8 +0.1
comp=Z,25nm,1.0s						
MLR	Muntele Rosu	20.66	310	⇑P	P	02 30 18.2 -0.1
MLR	Muntele Rosu	20.66	310	P	P	02 30 18.2 -0.1
TESR	Tescani	20.69	313	⇑i P	P	02 30 17.0 -1.6
TESR	Tescani	20.69	313	⇑i P	P	02 30 17.0 -1.6
SRS	Serrai	20.88	297	P	Pn	02 30 24.1 +0.9
SRS				pmax	pmax	
comp=Z,24nm,0.9s						
MMB	Musomiste	20.89	298	eP	Pn	02 30 22.8 -0.5
VOIR		21.20	309	⇑i P	P	02 30 24.7 +0.5
VOIR		21.20	309	⇑P	P	02 30 24.7 +0.5
VOIR		21.20	309	P	P	02 30 24.7 +0.5
DOPR	Dopca	21.21	311	⇑i P	P	02 30 24.1 -0.1
DOPR	Dopca	21.21	311	⇑i P	P	02 30 24.1 -0.1
THE	Thessaloniki	21.26	295	P	P	02 30 28.1 +3.4
THE				pmax	pmax	
comp=Z,22nm,1.2s						
THE	Thessaloniki	21.26	295	P	P	02 30 28.1 +3.4
comp=Z,22nm,1.2s						
KKB	Krupnik	21.42	299	eP	P	02 30 34.5 +8.0
ARR	Arges	21.44	309	⇑i P	P	02 30 26.9 +0.1
ARR	Arges	21.44	309	⇑i P	P	02 30 26.9 +0.1
VTS	Vitosha	21.50	301	⇓i P	P	02 30 27.0 -0.5
VTS	Vitosha	21.50	301	eP	P	02 30 28.9 +1.4
comp=Z,6.6nm,0.9s						
VTS	Vitosha	21.50	301	⇓P	P	02 30 27.0 -0.5
VTS	Vitosha	21.50	301	P	P	02 30 27.0 -0.5
AGG	Agios Georgios	21.54	291	eP	P	02 30 27.5 -0.3
comp=Z,87nm,1.2s						
AGG	Agios Georgios	21.54	291	eP	P	02 30 27.5 -0.3
AGG				pmax	pmax	
comp=Z,87nm,1.2s						
AGG	Agios Georgios	21.54	291	eP	P	02 30 27.5 -0.3
comp=Z,87nm,1.2s						
AKASG	Malin Array Be	21.76	326	P	P	02 30 28.2 -1.8
comp=Z,1.7nm,0.6s,baz=131,slow=12,SNR=7.3						
AKASG				LR	LR	02 41 00.4
comp=Z,152nm,19.0s,baz=95,slow=42						
AKBB	Malin Array Si	21.76	326	eP	P	02 30 28.4 -1.6
comp=Z,14nm,0.8s						
AKBB	Malin Array Si	21.76	326	eP	P	02 30 28.4 -1.6
AKBB				pmax	pmax	
comp=Z,14nm,0.8s						
AKBB	Malin Array Si	21.76	326	eP	P	02 30 28.4 -1.6
comp=Z,14nm,0.8s						
KIEV	Kiev	21.77	326	eP	P	02 30 28.4 -1.7
comp=Z,14nm,0.8s						
KIEV	Kiev	21.77	326	P	P	02 30 29.3 -0.8
KIEV	Kiev	21.77	326	i P	P	02 30 30.6 +0.5
KIEV				pmax	pmax	
comp=Z,6.0nm,1.2s						
ITM	Ithomi	21.77	286	eP	P	02 30 29.6 -0.7
comp=Z,36nm,0.8s						
ITM	Ithomi	21.77	286	eP	P	02 30 29.6 -0.7
comp=Z,36nm,0.8s						
AK11	Malin Array Si	21.77	325	eP	P	02 30 30.9 +0.7
AK11	Malin Array Si	21.77	325	eP	P	02 30 30.9 +0.7
BURAR	Bucovina Array	22.08	315	⇓i P	P	02 30 33.1 -0.6
BURAR	Bucovina Array	22.08	315	⇓P	P	02 30 33.1 -0.6
BURAR	Bucovina Array	22.08	315	⇓i P	P	02 30 33.1 -0.6
BUR04	Bucovina Ar. S	22.09	315	eP	P	02 30 33.1 -0.6
BUR04	Bucovina Ar. S	22.09	315	eP	P	02 30 33.1 -0.6
BUR08	Bucovina Ar. S	22.11	315	eP	P	02 30 33.3 -0.6
BUR08	Bucovina Ar. S	22.11	315	eP	P	02 30 33.3 -0.6
FRU	Bishkek	22.21	59	eP	P	02 30 21.0 -14
FRU				e		02 31 16.0
FNA	Florina	22.48	295	eP	P	02 30 39.5 +1.6
comp=Z,11nm,0.9s						
FNA	Florina	22.48	295	eP	P	02 30 39.5 +1.6
FNA				pmax	pmax	
comp=Z,11nm,0.9s						
FNA	Florina	22.48	295	eP	P	02 30 39.5 +1.6
comp=Z,11nm,0.9s						
ZAGS	Zajecar	22.52	303	eP	P	02 30 37.6 -0.7
OBN	Obninsk	22.62	342	eP	P	02 30 39.6 +0.4
comp=Z,128nm,1.9s						
OBN	Obninsk	22.62	342	eP	P	02 30 40.9 +1.7
OBN				e		02 31 05.7
OBN				ePPP	PPP	02 31 19.4
OBN	Obninsk	22.62	342	eP	P	02 30 39.6 +0.4
comp=Z,128nm,1.9s						
KSH	Kashi	22.65	68	P	P	02 30 44.0 +4.2
KSH				pP	sP	02 30 49.5 +4.0
KSH				PP	PnPn	02 31 12.0 +8.5
KSH				S	S	02 34 47.3 -0.3
KSH				sS	sS	02 34 55.5 +1.4
KSH				SS	ScP	02 37 22.5 -47
KSH				pmax	pmax	
comp=Z,62nm,1.2s						
KSH				LR	LR	
comp=N,330nm,4.8s						
KSH				LR	LR	
comp=E,550nm,8.3s						
KSH				LR	LR	
comp=Z,400nm,7.5s						
HERR	Herculane	22.73	306	⇓i P	P	02 30 39.8 -0.6
HERR	Herculane	22.73	306	⇓i P	P	02 30 39.8 -0.6
OTUK	Ortayu	22.77	44	P	P	02 30 42.3 +1.5
OTUK				pmax	pmax	
comp=Z,15nm,1.5s						
OTUK	Ortayu	22.77	44	P	P	02 30 42.3 +1.5
comp=Z,15nm,1.5s						
BOVS	Bovan	22.84	303	eP	P	02 30 40.9 -0.7
NRN	Naryn	22.92	63	eP	P	02 30 42.6 -0.3
comp=Z,50nm,1.8s						
NRN	Naryn	22.92	63	eP	P	02 30 42.6 -0.3
NRN				pmax	pmax	
comp=Z,50nm,1.8s						
NRN	Naryn	22.92	63	eP	P	02 30 42.6 -0.3
comp=Z,50nm,1.8s						
MOS	Moscow	22.94	344	eP	P	02 30 43.1 +0.6
MOS				e		02 31 25.2
MOS				pmax	pmax	
comp=Z,100nm,1.3s						
MOS				pmax	pmax	
comp=Z,77nm,0.9s						
ATD	Arta Tunnel	23.01	194	LR	LR	02 39 14.6
comp=Z,150nm,18.2s,baz=350,slow=36						
IGT	Igoumenitsa	23.13	292	P	P	02 30 47.4 +2.8
MDVR	Moldovita	23.17	305	⇓i P	P	02 30 45.6 +0.5
MDVR	Moldovita	23.17	305	⇓i P	P	02 30 45.6 +0.5
DRGR		23.24	311	⇑i P	P	02 30 44.4 -1.4
DRGR		23.24	311	⇑i P	P	02 30 44.4 -1.4
SVIS	Svilajnac	23.36	304	eP	P	02 30 46.2 -0.7
ARU	Arti	23.42	14	P	P	02 30 48.7 +1.4
comp=Z,2.7nm,0.4s,baz=196,slow=5.3,SNR=16						
ARU				LR	LR	02 42 35.4
comp=Z,228nm,19.8s,baz=188,slow=43						
ARU	Arti	23.42	14	eP	P	02 30 48.8 +1.4
comp=Z,72nm,1.4s						
ARU	Arti	23.42	14c	i P	P	02 30 48.2 +0.8
ARU				PPP	PPP	02 31 22.3
ARU				S	S	02 34 59.1 -1.0
ARU				pmax	pmax	
comp=Z,38nm,1.7s						
ARU				MLR	MLR	
comp=Z,211nm,19.0s						
BZS	Buzias	23.51	307	⇓i P	P	02 30 47.2 -1.2
BZS	Buzias	23.51	307	⇓P	P	02 30 47.2 -1.2
BZS	Buzias	23.51	307	P	P	02 30 47.2 -1.2
GRUS	Gruza	23.60	303	eP	P	02 30 48.1 -1.2
LVV	L'vov	23.89	319	eP	P	02 30 53.3 +1.3
LVV	L'vov	23.89	319	eP	P	02 30 53.3 +1.3
TRUS	Trudelj	23.90	303	eP	P	02 30 52.9 +0.7
TRPA	Tarpa	23.92	314	⇑i P	P	02 30 52.2 -0.1
TRPA	Tarpa	23.92	314	⇑i P	P	02 30 52.2 -0.1
DIVS	Divibare	24.16	303	eP	P	02 30 55.6 +0.9
comp=Z,21nm,1.4s						
DIVS	Divibare	24.16	303	eP	P	02 30 55.6 +0.9
comp=Z,21nm,1.4s						
SVE	Sverdlovsk	24.24	16	eP	P	02 30 57.0 +1.8
TARG	Taragay, Kyrgy	24.30	63	eP	P	02 30 59.1 +2.6
comp=Z,17nm,1.5s						
TARG	Taragay, Kyrgy	24.30	63	eP	P	02 30 59.1 +2.6
comp=Z,17nm,1.5s						
KWP	Kalwaria Pacla	24.53	317	eP	P	02 31 01.1 +3.1
KWP	Kalwaria Pacla	24.53	317	eP	P	02 31 01.8 +3.8
comp=Z,397nm,1.7s						
BRVK	Borovoye	24.54	33	eP	P	02 30 59.1 +1.1
comp=Z,29nm,1.0s						
BRVK	Borovoye	24.54	33	ceP	P	02 30 58.8 +0.8
BRVK				pmax	pmax	
comp=Z,27nm,1.0s						
BRVK	Borovoye	24.54	33	eP	P	02 30 58.8 +0.8
comp=Z,27nm,1.0s						
BVA0	Borovoye Array	24.56	33	i P	P	02 30 58.7 +0.5
BVA0				pmax	pmax	
comp=Z,22nm,0.9s						
BVAR	Borovoye Array	24.56	33	P	P	02 30 58.8 +0.5
comp=Z,7.0nm,0.5s,baz=223,slow=7.7,SNR=37						
BVAR				LR	LR	02 42 08.8
comp=Z,186nm,21.7s,baz=227,slow=40						
TEKS	Tekeris	24.59	304	eP	P	02 30 57.0 -1.7
PRZ	Przheval'sk	24.86	61	eP	P	02 31 00.9 -0.4
comp=Z,20nm,1.2s						
PRZ	Przheval'sk	24.86	61	eP	P	02 31 00.9 -0.4
PRZ				pmax	pmax	
comp=Z,20nm,1.2s						
PRZ	Przheval'sk	24.86	61	eP	P	02 31 00.9 -0.4
comp=Z,20nm,1.2s						
KECS	Kecovo	25.31	313	eP	P	02 31 06.7 +1.7
KECS	Kecovo	25.31	313	eP	P	02 31 06.7 +1.7
KECS	Kecovo	25.31	313	eP	P	02 31 06.7 +1.7
PSZ	Piszkesteto	25.45	312	⇓i P	P	02 31 06.0 -0.4
PSZ	Piszkesteto	25.45	312	eP	P	02 31 06.1 -0.2
comp=Z,10nm,0.8s						
PSZ	Piszkesteto	25.45	312	⇓P	P	02 31 06.0 -0.4
PSZ	Piszkesteto	25.45	312	P	P	02 31 06.0 -0.4
PDGK	Podgornoye	25.80	60	P	P	02 31 11.5 +1.8
PDGK				pmax	pmax	
comp=Z,9.0nm,1.2s						
PDGK	Podgornoye	25.80	60	P	P	02 31 11.5 +1.8
comp=Z,9.0nm,1.2s						
NIE	Niedzica	25.82	315	eP	P	02 31 12.6 +3.0
TIP	Timpagrande	25.87	291	⇑i P	P	02 31 11.4 +1.1
TIP	Timpagrande	25.87	291	⇑i P	P	02 31 11.4 +1.1
LANS	Liptovska Anna	26.20	314	eP	P	02 31 14.7 +1.6
LANS	Liptovska Anna	26.20	314	eP	P	02 31 14.7 +1.6
LANS	Liptovska Anna	26.20	314	eP	P	02 31 14.7 +1.6
VYHS	Vyhne	26.32	312	eP	P	02 31 13.8 -0.4
VYHS				pmax	pmax	
comp=Z,5.0nm,1.4s						
VYHS	Vyhne	26.32	312	eP	P	02 31 13.8 -0.4
VYHS	Vyhne	26.32	312	eP	P	02 31 13.8 -0.4
comp=Z,5.0nm,1.4s						
OJC	Ojcow	26.46	316	eP	P	02 31 15.3 -0.2
OJC	Ojcow	26.46	316	eP	P	02 31 17.1 +1.6
comp=Z,11nm,0.9s						
CEL	Celeste	26.55	289	eP	P	02 31 17.4 +1.0
comp=Z,34nm,0.5s						
CEL	Celeste	26.55	289	eP	P	02 31 17.4 +1.0
comp=Z,34nm,0.5s						
FURI	Furi	26.62	202	eP	P	02 31 11.4 -6.1
comp=Z,42nm,1.5s						
CUC	Castrocucco	26.63	292	eP	P	02 31 17.5 +0.4
comp=Z,6.8nm,1.0s						
CUC	Castrocucco	26.63	292	eP	P	02 31 17.5 +0.4
comp=Z,6.8nm,1.0s						
SUW	Suwalki	26.73	326	eP	P	02 31 15.8 -2.0
comp=Z,48nm,1.0s						
SUW	Suwalki	26.73	326	eP	P	02 31 15.8 -2.0
SUW				pmax	pmax	
comp=Z,48nm,1.0s						
JAVC	Velka Javorina	27.17	312	eP	P	02 31 25.4 +3.4
KLMR	Klimovskoe	27.42	350	eP	P	02 31 22.1 -1.9
KLMR				pmax	pmax	
comp=Z,14nm,0.9s						
KLMR	Klimovskoe	27.42	350	eP	P	02 31 22.1 -1.9
KLMR				AMP		02 31 29.8
comp=Z,14nm,0.9s						
KURBB	Kurchatov Arra	27.45	44	P	P	02 31 25.8 +1.5
comp=Z,1.4nm,0.7s,baz=248,slow=9.3,SNR=8.0						
SOP	Sopron	27.48	309	P	P	02 31 30.2 +5.6
SOP				pmax	pmax	
comp=Z,9.0nm,1.1s						
KURK	Kurchatov	27.54	44	eP	P	02 31 27.2 +2.0
KURK	Kurchatov	27.54	44	i P	P	02 31 25.4 +0.3
KURK				pmax	pmax	
comp=Z,4.0nm,1.1s						
KURK	Kurchatov	27.54	44	i P	P	02 31 25.4 +0.3
comp=Z,4.0nm,1.1s						
MORC	Moravsky Berou	27.60	314	eP	P	02 31 24.3 -1.4
comp=Z,4.3nm,1.1s						
MORC	Moravsky Berou	27.60	314	eP	P	02 31 24.3 -1.4
MORC				pmax	pmax	
comp=Z,4.0nm,1.1s						
MORC	Moravsky Berou	27.60	314	eP	P	02 31 24.3 -1.4
comp=Z,4.3nm,1.1s						
MORC	Moravsky Berou	27.60	314	eP	P	02 31 27.2 +1.4
PRGR	Permogore	27.65	357	eP	P	02 31 24.2 -1.8
PRGR				pmax	pmax	
comp=Z,9.0nm,0.5s						
MAKZ	Makanchi	28.28	53	eP	P	02 31 30.4 -1.5
comp=Z,18nm,1.9s						
MAKZ	Makanchi	28.28	53	eP	P	02 31 30.4 -1.5
MAKZ				pmax	pmax	
comp=Z,18nm,1.9s						
MAKZ	Makanchi	28.28	53	eP	P	02 31 30.4 -1.5
comp=Z,18nm,1.9s						
VSU	Vasula	28.40	336	ceP	P	02 31 33.6 +0.9
VSU				pmax	pmax	
comp=Z,106nm,2.5s						
MK31	Makanchi Array	28.49	53	eP	P	02 31 35.0 +1.3
MK31	Makanchi Array	28.49	53	i P	P	02 31 34.5 +0.8
MK31				pmax	pmax	
comp=Z,2.0nm,0.6s						
MK32	Makanchi Array	28.49	53	eP	P	02 31 34.7 +1.0
MKAR	Makanchi Array	28.49	53	P	P	02 31 34.7 +1.0
comp=Z,0.9nm,0.7s,baz=249,slow=7.6,SNR=8.9						
MKAR				LR	LR	02 44 01.7
comp=Z,133nm,18.6s,baz=248,slow=38						
MKAR	Makanchi Array	28.49	53	eP	P	02 31 35.0 +1.4
comp=Z,14nm,0.6s						
MKAR	Makanchi Array	28.49	53	eP	P	02 31 35.1 +1.4
MKAR				pmax	pmax	
comp=Z,14nm,0.6s						
MK01	Makanchi Array	28.49	53	eP	P	02 31 34.9 +1.2
MK01	Makanchi Array	28.49	53	eP	P	02 31 34.9 +1.2
MOA	Molln	29.00	309	epP	P	02 31 37.7 -0.6
comp=Z,3.7nm,1.1s						
KBA	Koelnbreinsper	29.41	307	eP	P	02 31 40.8 -1.3
comp=Z,2.3nm,0.6s						
GEC2	GERESS Array S	29.64	310	eP	P	02 31 43.4 -0.7
comp=Z,4.4nm,1.2s						
GEC2	GERESS Array S	29.64	310	eP	P	02 31 43.4 -0.7
GEC2				pmax	pmax	
comp=Z,4.0nm,1.2s						
GERES	GERESS Array B	29.64	310	P	P	02 31 43.3 -0.7
comp=Z,0.5nm,0.5s,baz=133,slow=5.8,SNR=3.2						
GERES				LR	LR	02 46 54.7
comp=Z,110nm,18.7s,baz=113,slow=43						
KHC	Kasperske Hory	29.81	311	eP	P	02 31 46.5 +1.1
KHC	Kasperske Hory	29.81	311	eP	P	02 31 46.5 +1.1
ABTA	Abfaltersbach	29.89	306	epP	P	02 31 45.9 -0.3
comp=Z,4.2nm,1.2s						
JOF	Joensuu	30.82	345	P	P	02 31 58.1 +4.0
JOF				pmax	pmax	
comp=Z,8.0nm,0.9s						
CLL	Collm	30.86	315	eS	S	02 36 57.0 -0.8
CLL				LmV		02 46 00.0
comp=Z,100nm,18.2s						
FIA0	FINESS Array S	30.93	339	eP	P	02 31 54.7 -0.4
FIA0	FINESS Array S	30.93	339	eP	P	02 31 54.7 -0.4
FIA1	FINESS Array S	30.93	339	eP	P	02 31 54.4 -0.7
FINES	FINESS Array B	30.93	339	P	P	02 31 54.7 -0.4
comp=Z,3.4nm,0.9s,baz=133,slow=16,SNR=7.0						
FINES				LR	L

DGZ	**Jazzator, Alta**	**32.53**	**49**	*i* P	**P**	**02 32 10.2**	**+0.7**
DGZ				pmax	pmax		
comp=Z,1.0nm,0.9s							
THTN	**Thala**	**32.54**	**284**	*e*P	**P**	**02 32 11.2**	**+1.5**
comp=Z,37nm,0.8s							
SENIN	**Lac Senin/Sane**	**33.38**	**304**	*e*P	**P**	**02 32 17.2**	**+0.1**
comp=Z,32nm,1.8s							
SENIN	**Lac Senin/Sane**	**33.38**	**304**	*e*P	**P**	**02 32 17.2**	**+0.1**
comp=Z,32nm,1.8s							
BNI	**Bardonecchia**	**33.69**	**302**	*e*P	**P**	**02 32 18.8**	**-0.9**
comp=Z,20nm,1.0s							
BNI	**Bardonecchia**	**33.69**	**302**	*e*P	**P**	**02 32 18.8**	**-0.9**
BNI				pmax	pmax		
comp=Z,20nm,1.0s							
BNI	**Bardonecchia**	**33.69**	**302**	*e*P	**P**	**02 32 18.8**	**-0.9**
comp=Z,20nm,1.0s							
OUL	**Oulu**	**33.92**	**343**	P	**P**	**02 32 23.2**	**+2.0**
OUL				pmax	pmax		
comp=Z,18nm,1.0s							
HFS	**Hagfors**	**34.51**	**330**	P	**P**	**02 32 25.6**	**-0.9**
comp=Z,8.5nm,0.8s,baz=120,slow=8.8,SNR=15							
HFS				LR	LR	02 47 54.0	
comp=Z,106nm,18.3s,baz=122,slow=38							
APA	**Apatity**	**34.66**	**350**	‖ *i* P	P	02 32 21.0	-6.7
APA				pmax	pmax		
comp=Z,4.0nm,1.0s							
APA				MLR	MLR		
comp=Z,200nm,13.0s							
SSB	**Saint Sauveur**	**35.21**	**302**	*e*P	**P**	**02 32 31.7**	**-1.1**
comp=Z,9.8nm,1.4s							
SSB	**Saint Sauveur**	**35.21**	**302**	*e*P	**P**	**02 32 31.7**	**-1.1**
SSB				pmax	pmax		
comp=Z,10.0nm,1.4s							
SSB	**Saint Sauveur**	**35.21**	**302**	*e*P	**P**	**02 32 31.7**	**-1.1**
comp=Z,9.8nm,1.4s							
NC405	**NORSAR Array S**	**35.86**	**330**	*e*P	**P**	**02 32 36.8**	**-1.3**
NB2	**NORSAR Subarra**	**36.03**	**330**	P	**P**	**02 32 37.9**	**-1.7**
comp=Z,0.9nm,0.7s,baz=121,slow=8.6							
NOA	**NORSAR Array B**	**36.03**	**330**	LR	LR	02 48 17.7	
comp=Z,123nm,18.8s,baz=120,slow=38							
KONO	**Kongsberg**	**36.04**	**327**	*e*P	**P**	**02 32 38.9**	**-0.8**
comp=Z,36nm,1.4s							
KONO	**Kongsberg**	**36.04**	**327**	*e*P	**P**	**02 32 38.9**	**-0.8**
KONO				pmax	pmax		
comp=Z,36nm,1.4s							
NC303	**NORSAR Array S**	**36.06**	**330**	*e*P	**P**	**02 32 39.1**	**-0.7**
KMBO	**Kilima Mbogo**	**36.56**	**199**	LR	LR	02 47 24.9	
comp=Z,124nm,20.6s,baz=6.0,slow=36							
EMHD	**Djebel Mahouad**	**37.02**	**287**	P	**P**	**02 32 52.4**	**+4.0**
EMHD	**Djebel Mahouad**	**37.02**	**287**	P	**P**	**02 32 52.4**	**+4.0**
ARA0	**ARCESS Array S**	**37.74**	**347**	*e*P	**P**	**02 32 53.8**	**-0.2**
ARA0				*e*PP	**PP**	**02 34 15.4**	**-4.7**
ARCES	**ARCESS Array B**	**37.74**	**347**	P	**P**	**02 32 53.8**	**-0.2**
comp=Z,3.1nm,0.8s,baz=148,slow=7.1,SNR=12							
ARCES				PP	**PP**	**02 34 15.4**	**-4.7**
comp=Z,3.2nm,0.9s,baz=147,slow=15,SNR=2.5							
ARCES				LR	LR	02 49 45.8	
comp=Z,146nm,21.1s,baz=126,slow=38							
EANR	**'Ain N'Sour**	**38.54**	**287**	P	**P**	**02 33 03.4**	**+2.2**
EANR	**'Ain N'Sour**	**38.54**	**287**	P	**P**	**02 33 03.4**	**+2.2**
TAM	**Tamanrasset**	**39.14**	**265**	*e*P	P	02 33 11.1	+4.7
comp=Z,14nm,1.8s							
TAM	**Tamanrasset**	**39.14**	**265**	*e*P	**P**	**02 33 11.1**	**+4.6**
TAM				pmax	pmax		
comp=Z,14nm,1.8s							
BRDH	**Bariadhala**	**39.39**	**95**	LR	LR	02 51 17.0	
comp=Z,145nm,19.9s,baz=43,slow=39							
PALK	**Pallekele**	**39.94**	**124**	LR	LR	02 51 07.5	
comp=Z,163nm,18.6s,baz=290,slow=38							
GTA	**Gaotai**	**41.05**	**67**	*e*P	**P**	**02 33 25.8**	**+3.7**
GTA				pP	sP	02 33 35.8	+7.8
GTA				sP	pP	02 33 39.3	+13
GTA				pmax	pmax		
comp=Z,4.0nm,1.3s							
ESK	**Eskdalemuir**	**41.25**	**317**	*i* P	**P**	**02 33 26.0**	**+2.6**
ES19	**SONSECA Array**	**41.77**	**293**	*e*P	**P**	**02 33 30.3**	**+2.4**
ES19				*e*pP	**sP**	**02 33 38.4**	**+4.5**
ESDC	**Sonseca Array**	**41.82**	**293**	P	**P**	**02 33 28.0**	**-0.4**
comp=Z,0.9nm,0.7s,baz=67,slow=8.2,SNR=10							
ESDC	**Sonseca Array**	**41.82**	**293**	*e*P	**P**	**02 33 28.0**	**-0.4**
ZAK	**Zakamensk**	**42.73**	**50**	*e*P	**P**	**02 33 35.9**	**+0.2**
ZAK				pmax	pmax		
comp=Z,3.0nm,1.5s							
TLY	**Talaya**	**42.99**	**49**	*i* P	**P**	**02 33 37.7**	**0.0**
TLY				pmax	pmax		
comp=Z,3.0nm,0.8s							
MDT	**Midelt**	**43.89**	**284**	LR	LR	02 55 39.6	
comp=Z,41nm,19.8s,baz=88,slow=41							
PVRL	**Vila Real**	**44.38**	**296**	*e*P	**P**	**02 33 48.6**	**-0.5**
comp=Z,18nm,1.9s							
PVRL	**Vila Real**	**44.38**	**296**	*e*P	**P**	**02 33 48.6**	**-0.5**
POLO	**Lamas de Olo**	**44.42**	**297**	*e*P	**P**	**02 33 51.3**	**+1.9**
comp=Z,12nm,2.2s							
PCBR	**Castelo Branco**	**44.46**	**294**	*e*P	**P**	**02 33 49.5**	**-0.1**
comp=Z,19nm,1.8s							
PCBR	**Castelo Branco**	**44.46**	**294**	*e*P	**P**	**02 33 49.5**	**-0.1**
PBAR	**Barrancos**	**44.46**	**292**	*e*P	**P**	**02 33 51.8**	**+2.2**
comp=Z,32nm,1.4s							
PGAV	**Gavieira, Arco**	**44.68**	**298**	*e*P	**P**	**02 33 51.0**	**-0.5**
comp=Z,28nm,1.7s							
PESTR	**Estremoz**	**44.74**	**293**	*e*P	**P**	**02 33 50.3**	**-1.6**
comp=Z,20nm,1.8s							
LZH	**Lanzhou**	**44.85**	**71**	*e*P	**P**	**02 33 53.8**	**+0.8**
LZH				pP	sP	02 34 04.5	+5.6
LZH				sP	pP	02 34 09.3	+12
LZH				*e*PP	**PP**	**02 35 39.0**	**+1.3**
LZH				pmax	pmax		
comp=Z,17nm,1.2s							
LZH				pmax	pmax		
comp=Z,65nm,5.4s							
LZH				LR	LR		
comp=Z,260nm,13.3s							
LZH				LR	LR		
comp=Z,330nm,17.2s							
SONA0	**Songino Array**	**44.85**	**54**	*e*P	**P**	**02 33 53.7**	**+0.9**
SONM	**Songino Array**	**44.85**	**54**	P	**P**	**02 33 53.7**	**+0.9**
comp=Z,0.7nm,0.7s,baz=270,slow=8.9,SNR=4.4							
SONM				LR	LR	02 54 30.2	
comp=Z,88nm,20.4s,baz=256,slow=38							
PBEJ	**Beja**	**45.13**	**292**	*e*P	**P**	**02 33 55.6**	**+0.6**
comp=Z,12nm,1.8s							
PBEJ	**Beja**	**45.13**	**292**	*e*P	**P**	**02 33 55.6**	**+0.6**
ULN	**Ulaanbaatar**	**45.29**	**54**	*e*P	**P**	**02 33 57.2**	**+0.8**
comp=Z,7.0nm,1.2s							
ULN	**Ulaanbaatar**	**45.29**	**54**	*ce*P	**P**	**02 33 55.3**	**-1.0**
ULN				pmax	pmax		
comp=Z,9.0nm,1.7s							
CD2	**Chengdu**	**46.27**	**78**	P	**P**	**02 34 02.8**	**-1.4**
CD2				pmax	pmax		
comp=Z,6.0nm,0.5s							
SPA0	**Spitsbergen Ar**	**46.32**	**351**	*e*P	**P**	**02 34 04.0**	**+0.1**
SPITS	**Spitsbergen Ar**	**46.32**	**351**	P	**P**	**02 34 04.0**	**+0.1**
comp=Z,7.7nm,0.6s,baz=120,slow=5.9,SNR=9.8							
SPITS				LR	LR	02 56 46.3	
comp=Z,85nm,19.3s,baz=0.0,slow=40							
TOA1	**Torodi Ar. Sit**	**47.16**	**255**	*e*P	**P**	**02 34 10.3**	**-1.0**
TOA0	**Torodi Ar. Sit**	**47.16**	**255**	*e*P	**P**	**02 34 10.4**	**-0.8**
TORD	**Torodi Ar. Bea**	**47.16**	**255**	P	**P**	**02 34 10.3**	**-1.0**
comp=Z,2.7nm,0.8s,baz=48,slow=6.0,SNR=22							
TORD				LR	LR	02 55 42.9	
comp=Z,90nm,18.7s,baz=35,slow=38							
CM31	**Chiang Mai Arr**	**47.40**	**96**	*e*P	**P**	**02 34 12.6**	**-0.5**
CMAR	**Chiang Mai Arr**	**47.40**	**96**	P	**P**	**02 34 12.6**	**-0.5**
comp=Z,2.4nm,0.7s,baz=299,slow=8.4,SNR=6.7							
CMAR				LR	LR	02 58 00.2	
comp=Z,77nm,19.2s,baz=300,slow=41							
KMI	**Kunming**	**47.56**	**86**	P	**P**	**02 34 16.0**	**+1.4**
KMI				pmax	pmax		
comp=Z,10.0nm,0.6s							
KMI				pmax	pmax		
comp=Z,84nm,4.2s							
HHC	**Hu-ho-hao-te**	**49.60**	**63**	*e*P	**P**	**02 34 31.0**	**+1.1**
HHC				PP	**PP**	**02 36 26.0**	**+1.9**
HHC				S	**S**	**02 41 35.8**	**-2.0**
HHC				SS	**SS**	**02 45 04.3**	**-5.4**
HHC				pmax	pmax		
comp=Z,7.0nm,0.6s							
HHC				pmax	pmax		
comp=Z,42nm,5.9s							
HHC				LR	LR		
comp=Z,140nm,10.4s							
HHC				LR	LR		
comp=Z,150nm,11.2s							
HHC				LR	LR		
comp=Z,140nm,17.3s							
GYA	**Guiyang**	**50.27**	**82**	*e*P	**P**	**02 34 37.0**	**+1.8**
GYA				pmax	pmax		
comp=Z,10.0nm,1.0s							
KOWA	**Kowa**	**51.07**	**261**	LR	LR	02 58 29.8	
comp=Z,62nm,19.4s,baz=47,slow=39							
BORG	**Borgarnes**	**51.19**	**329**	LR	LR	02 58 21.8	
comp=Z,52nm,19.8s,baz=102,slow=38							
TIXI	**Tiksi**	**55.06**	**22**	*ce*P	**P**	**02 35 09.9**	**+0.1**
TIXI				pmax	pmax		
comp=Z,11nm,2.5s							
DBIC	**Dimbokro**	**56.16**	**254**	P	**P**	**02 35 17.0**	**-1.5**
comp=Z,2.6nm,0.6s,baz=30,slow=7.8,SNR=4.9							
DBIC				LR	LR	03 02 13.7	
comp=Z,161nm,19.8s,baz=38,slow=39							
DBIC	**Dimbokro**	**56.16**	**254**	*e*P	**P**	**02 35 17.0**	**-1.5**
comp=Z,74nm,1.9s							
DBIC	**Dimbokro**	**56.16**	**254**	*e*P	**P**	**02 35 17.0**	**-1.5**
DBIC				pmax	pmax		
comp=Z,74nm,1.9s							
PSI	**Prapat**	**56.30**	**112**	LR	LR	03 01 05.0	
comp=Z,129nm,18.1s,baz=276,slow=38							
YAK	**Yakutsk**	**56.53**	**34**	LR	LR	03 01 47.9	
comp=Z,73nm,19.6s,baz=260,slow=38							
YAK	**Yakutsk**	**56.53**	**34**	*i* P	**P**	**02 35 20.5**	**0.0**
YAK				pmax	pmax		
comp=Z,9.0nm,0.7s							
SUMG	**Summit**	**56.97**	**339**	*i* P	**P**	**02 35 25.2**	**+1.2**
comp=Z,43nm,1.6s							
SUMG	**Summit**	**56.97**	**339**	*e*P	**P**	**02 35 24.2**	**+0.2**
comp=Z,50nm,1.7s							
SUMG	**Summit**	**56.97**	**339**	*e*P	**P**	**02 35 24.2**	**+0.2**
SUMG				pmax	pmax		
comp=Z,50nm,1.7s							
NJ2	**Nanjing**	**57.93**	**71**	*e*P	**P**	**02 35 31.3**	**+0.5**
NJ2				pmax	pmax		
comp=Z,13nm,0.6s							
KLR	**Kul'dur**	**61.01**	**48**	*i* P	**P**	**02 35 50.9**	**-1.0**
SFJD	**Kangerlussuaq**	**62.54**	**334**	LR	LR	03 03 43.6	
comp=Z,49nm,21.4s,baz=65,slow=36							
KS01	**Wonju Array Si**	**62.68**	**62**	*e*P	**P**	**02 36 02.7**	**-0.7**
KS15	**Wonju Array Si**	**62.69**	**62**	*e*P	**P**	**02 36 02.8**	**-0.6**
KSAR	**Wonju Array Be**	**62.69**	**62**	P	**P**	**02 36 02.8**	**-0.6**
KSAR	**Wonju Array Be**	**62.69**	**62**	P	**P**	**02 36 02.8**	**-0.6**
KSRS	**Korea Array**	**62.71**	**62**	P	**P**	**02 36 02.8**	**-0.8**
comp=Z,1.5nm,0.6s,baz=282,slow=6.1,SNR=7.7							
KSRS				LR	LR	03 06 46.6	
comp=Z,74nm,18.6s,baz=278,slow=39							
USRK	**Ussuriysk Ar.**	**62.96**	**53**	P	**P**	**02 36 04.6**	**-0.5**
comp=Z,2.0nm,0.6s,baz=321,slow=2.7,SNR=4.4							
YHNB	**Yeheng**	**63.04**	**77**	*e*P	**P**	**02 36 06.7**	**+0.7**
comp=Z,20nm,1.1s							
YHNB	**Yeheng**	**63.04**	**77**	*e*P	**P**	**02 36 06.7**	**+0.7**
comp=Z,20nm,1.1s							
BOSA	**Boshof**	**66.10**	**202**	LR	LR	03 07 50.8	
comp=Z,103nm,18.1s,baz=25,slow=38							
SEY	**Seymchan**	**66.14**	**29**	*ce*P	**P**	**02 36 24.9**	**-0.7**
JNU	**Nakatsue**	**66.72**	**65**	LR	LR	03 08 44.6	
comp=Z,50nm,18.7s,baz=300,slow=39							
BILL	**Bilibino**	**68.23**	**21**	*e*P	**P**	**02 36 38.6**	**-0.1**
comp=Z,22nm,1.4s							
BILL	**Bilibino**	**68.23**	**21**	*e*P	**P**	**02 36 38.4**	**-0.3**
BILL				*e*		02 36 58.5	
BILL				*e*		02 39 10.7	
BILL				*e*PPP	PPP	02 40 46.8	
BILL				pmax	pmax		
comp=Z,20nm,1.7s							
YSS	**Yuzh-Sakhalins**	**68.68**	**47**	*i* P	**P**	**02 36 40.8**	**-1.1**
YSS				pmax	pmax		
comp=Z,9.0nm,1.1s							
LEM	**Lembang**	**69.10**	**114**	LR	LR	03 08 57.5	
comp=Z,45nm,19.3s,baz=64,slow=38							
ASAJ	**Asahikawa**	**69.90**	**50**	LR	LR	03 11 45.6	
comp=Z,74nm,18.1s,baz=38,slow=40							
MAJO	**Matsushiro**	**70.52**	**59**	*e*P	**P**	**02 36 53.5**	**0.0**
MJAR	**Matsushiro Arr**	**70.52**	**59**	P	**P**	**02 36 53.5**	**0.0**
comp=Z,0.8nm,0.3s,baz=300,slow=8.5,SNR=4.8							
MJAR				LR	LR	03 10 52.9	
comp=Z,39nm,18.1s,baz=225,slow=38							
FRB	**Frobisher Bay**	**70.63**	**335**	P	**P**	**02 36 53.1**	**-0.4**
comp=Z,10nm,0.7s,baz=62,slow=6.9,SNR=6.3							
JHJ	**Hachijo jima 2**	**73.31**	**61**	LR	LR	03 12 54.5	
comp=Z,57nm,18.5s,baz=309,slow=39							
PETK	**Petropavlovsk-**	**73.74**	**36**	LR	LR	03 13 26.3	
comp=Z,40nm,18.5s,baz=326,slow=39							
PET	**Petropavlovsk**	**74.26**	**36**	*i* P	**P**	**02 37 14.7**	**-0.7**
PET				pmax	pmax		
comp=Z,26nm,0.9s							
DAV	**Davao City (W)**	**75.41**	**91**	LR	LR	03 15 37.5	
comp=Z,38nm,20.2s,baz=298,slow=40							
RDOG	**Red Dog Mine**	**75.51**	**12**	*e*P	**P**	**02 37 22.5**	**+0.1**
comp=Z,11nm,1.0s							
TOLK	**Toolik Lake Re**	**76.72**	**7**	*e*P	**P**	**02 37 29.8**	**+0.3**
comp=Z,11nm,0.7s							
COLD	**Coldfoot**	**78.03**	**7**	*e*P	**P**	**02 37 37.2**	**+0.5**
comp=Z,5.2nm,1.0s							
MLY	**Manley**	**80.09**	**8**	*e*P	**P**	**02 37 48.1**	**0.0**
comp=Z,6.4nm,1.0s							
MDM	**Murphy Dome**	**80.44**	**7**	*e*P	**P**	**02 37 49.8**	**-0.1**
comp=Z,20nm,1.3s							
IL1	**Eielson Array**	**80.75**	**7**	*e*P	**P**	**02 37 50.6**	**-0.9**
ILAR	**Eielson Array**	**80.75**	**7**	P	**P**	**02 37 50.5**	**-1.0**
comp=Z,1.3nm,0.8s,baz=328,slow=3.3,SNR=12							
ILAR				LR	LR	03 20 51.1	
comp=Z,19nm,18.2s,baz=318,slow=41							
ILB	**Eielson Array**	**80.75**	**7**	*e*P	**P**	**02 37 50.5**	**-1.0**
EGAK	**Eagle**	**81.19**	**4**	*e*P	**P**	**02 37 53.5**	**-0.4**
comp=Z,4.8nm,0.9s							
SCRK	**Sand Creek**	**81.79**	**6**	*e*P	**P**	**02 37 57.3**	**0.0**
comp=Z,7.4nm,0.9s							
DAWY	**Dawson**	**82.00**	**3**	*e*P	**P**	**02 37 58.2**	**-0.1**
comp=Z,6.5nm,1.3s							
YKA	**Yellowknife Ar**	**82.81**	**352**	P	**P**	**02 38 00.8**	**-1.6**
comp=Z,4.4nm,1.2s,baz=14,slow=5.2,SNR=6.5							
YKA				LR	LR	03 17 05.2	
comp=Z,5.1nm,18.7s,baz=28,slow=37							
SKT	**Skwentna**	**82.93**	**9**	*e*P	**P**	**02 38 04.6**	**+1.5**
comp=Z,6.9nm,0.9s							
RAGM	**Ragged Mountai**	**85.27**	**7**	*e*P	**P**	**02 38 13.2**	**-1.8**
comp=Z,30nm,0.9s							
KDAK	**Kodiak Island**	**86.80**	**11**	P	**P**	**02 38 22.5**	**-0.1**
comp=Z,7.3nm,0.7s,baz=344,slow=9.3,SNR=4.8							
GUMO	**Guam**	**87.70**	**75**	LR	LR	03 21 55.4	
comp=Z,17nm,19.9s,baz=117,slow=38							
DLBC	**Dease Lake**	**87.84**	**359**	*e*P	**P**	**02 38 30.0**	**+2.2**
comp=Z,12nm,1.4s							
FFC	**Flin Flon**	**87.98**	**343**	*i* P	**P**	**02 38 28.2**	**-0.2**
ULM	**Lac du Bonnet**	**90.31**	**338**	LR	LR	03 19 31.6	
comp=Z,47nm,18.4s,baz=112,slow=36							
TKL	**Tuckaleechee C**	**97.52**	**323**	LR	LR	03 25 44.5	
comp=Z,25nm,18.8s,baz=335,slow=37							

CSEM ***27*** *02:29:46.2±0.1, 37°.96N×21°.89E, h15km, ML1.7, Error ellipse: s-maj=1.9km s-min=1.4km az=86.0*
THE ***27*** *02:29:46.6, 37°.97N×21°.88E, h11km±1km, ML1.8/10, Error ellipse: s-maj=1.4km s-min=0.3km az=272.0*
ATH 27 02:29:46.5, 37°.97N×21°.89E, h13km±2km, ML1.7/11, Error ellipse: s-maj=2.6km s-min=0.7km az=265.0, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRO	**Drossia**	**0.14**	**263**	P	Pg	02 29 50.1	0.0
DRO				S	Sg	02 29 52.8	+0.2
DRO				AML	AML	02 29 54.8	
comp=E,2687μm,0.2s							
DRO				AML	AML	02 29 57.6	
comp=N,2709μm,0.3s							
DRO	**Drossia**	**0.14**	**263**	P	Pg	02 29 50.0	-0.1
DRO				S	Sg	02 29 52.4	-0.2
DRO	**Drossia**	**0.14**	**263**	P	Pg	02 29 50.1	0.0
DRO				S	Sg	02 29 52.7	+0.1
KLV	**Kalavryta, Ach**	**0.22**	**70**	P	Pg	02 29 51.3	-0.1
KLV				S	Sg	02 29 54.4	-0.2
KLV				AML	AML	02 29 55.3	
comp=N,346μm,0.2s							
KLV				AML	AML	02 29 55.7	
comp=E,424μm,0.1s							
KLV	**Kalavryta, Ach**	**0.22**	**70**	P	Pg	02 29 51.3	0.0
KLV				S	Sg	02 29 54.6	0.0
KLV	**Kalavryta, Ach**	**0.22**	**70**	P	Pg	02 29 51.3	0.0
KLV				S	Sg	02 29 54.6	0.0
LAKA	**Lakka**	**0.28**	**15**	P	Pg	02 29 52.4	+0.1
LAKA				S	Sg	02 29 55.9	-0.4
LAKA				AML	AML	02 29 57.0	
comp=N,429μm,0.3s							
LAKA				AML	AML	02 29 57.6	
comp=E,299μm,0.1s							
LAKA	**Lakka**	**0.28**	**15**	P	Pg	02 29 52.2	-0.2
LAKA				S	Sg	02 29 56.5	+0.2
LAKA	**Lakka**	**0.28**	**15**	P	Pg	02 29 52.4	0.0
LAKA				S	Sg	02 29 56.5	+0.2
UPR	**University Cam**	**0.32**	**346**	P	Pg	02 29 53.6	+0.5
UPR				S	Sg	02 29 58.3	+0.7
UPR	**University Cam**	**0.32**	**346**	P	Pg	02 29 53.3	+0.2
UPR				S	Sg	02 29 58.1	+0.5
ALIK	**Aliki, Aigiali**	**0.34**	**31**	P	Pg	02 29 53.5	+0.1
ALIK				S	Sg	02 29 58.3	+0.2
ALIK	**Aliki, Aigiali**	**0.34**	**31**	P	Pg	02 29 53.5	+0.1
ALIK				S	Sg	02 29 58.3	+0.2
RLS	**Riolos of Patr**	**0.34**	**285**	P	Pg	02 29 52.8	-0.7
RLS				S	Sg	02 29 58.4	+0.2
RLS				AML	AML	02 29 59.1	
comp=N,592μm,0.1s							
RLS				AML	AML	02 29 59.2	
comp=E,470μm,0.2s							
RLS	**Riolos of Patr**	**0.34**	**285**	P	Pg	02 29 53.2	-0.3
RLS				S	Sg	02 29 58.3	+0.1
RLS	**Riolos of Patr**	**0.34**	**285**	P	Pg	02 29 53.2	-0.3
RLS				S	Sg	02 29 58.3	+0.1
GUR	**Goura**	**0.36**	**95**	P	Pg	02 29 53.6	-0.2
GUR				S	Sg	02 29 58.2	-0.6
GUR				AML	AML	02 30 01.2	
comp=N,602μm,0.2s							
GUR				AML	AML	02 30 02.0	
comp=E,399μm,0.2s							
GUR	**Goura**	**0.36**	**95**	P	Pg	02 29 53.6	-0.2
GUR				S	Sg	02 29 59.5	+0.8
GUR	**Goura**	**0.36**	**95**	P	Pg	02 29 53.7	-0.1
GUR				S	Sg	02 29 58.6	-0.1
TRIZ	**Trizonia**	**0.42**	**20**	P	Pg	02 29 54.6	-0.3
TRIZ				S	Sg	02 30 00.5	-0.1
TRIZ	**Trizonia**	**0.42**	**20**	P	Pg	02 29 54.7	-0.2
TRIZ				S	Sb	02 30 01.4	-0.7
TRIZ	**Trizonia**	**0.42**	**20**	P	Pg	02 29 54.7	-0.2
TRIZ				S	Sg	02 30 00.7	+0.1
EFP	**Efpalio**	**0.46**	**2**	P	Pg	02 29 55.7	+0.1
EFP				S	Sg	02 30 02.2	+0.5
EFP				AML	AML	02 30 03.4	
comp=N,285μm,0.2s							
EFP				AML	AML	02 30 03.5	
comp=E,346μm,0.2s							
EFP	**Efpalio**	**0.46**	**2**	P	Pg	02 29 55.6	0.0
EFP				S	Sg	02 30 02.3	+0.6
EFP	**Efpalio**	**0.46**	**2**	P	Pg	02 29 55.6	0.0
EFP				S	Sg	02 30 02.1	+0.4
AMT	**Artemida-Makis**	**0.46**	**198**	P	Pg	02 29 55.9	+0.4
AMT				S	Sg	02 30 02.1	+0.4
AMT				AML	AML	02 30 05.9	
comp=N,215μm,0.4s							
AMT				AML	AML	02 30 11.0	
comp=E,115μm,0.6s							
AMT	**Artemida-Makis**	**0.46**	**198**	P	Pg	02 29 55.4	-0.2
AMT				S	Sg	02 30 02.3	+0.6
AMT	**Artemida-Makis**	**0.46**	**198**	P	Pg	02 29 55.4	-0.2
AMT				S	Sg	02 30 02.1	+0.4
SERG	**Sergoula**	**0.46**	**17**	P	Pg	02 29 55.7	0.0
SERG				S	Sb	02 30 03.1	-0.3
SERG				AML	AML	02 30 03.4	
comp=N,374μm,0.3s							
SERG				AML	AML	02 30 04.1	
comp=E,358μm,0.2s							
SERG	**Sergoula**	**0.46**	**17**	P	Pg	02 29 55.5	-0.2
SERG				S	Sg	02 30 02.2	+0.3
SERG	**Sergoula**	**0.46**	**17**	P	Pg	02 29 55.5	-0.2
SERG				S	Sg	02 30 02.2	+0.3
TRIP	**Tripoli**	**0.54**	**145**	P	Pg	02 29 57.3	+0.2
TRIP				S	Sb	02 30 05.3	-0.1
TRIP				AML	AML	02 30 07.2	
comp=E,59μm,0.2s							
TRIP				AML	AML	02 30 09.4	
comp=N,56μm,0.3s							
TRIP	**Tripoli**	**0.54**	**145**	P	Pg	02 29 56.8	-0.2
TRIP				S	Sb	02 30 05.0	-0.4
TRIP	**Tripoli**	**0.54**	**145**	P	Pg	02 29 56.8	-0.2
TRIP				S	Sb	02 30 04.9	-0.5
VTN	**Vitineika**	**0.56**	**265**	P	Pb	02 29 58.1	0.0
VTN	**Vitineika**	**0.56**	**265**	P	Pg	02 29 57.7	+0.3
ANX	**Ano Chora**	**0.62**	**2**	P	Pg	02 29 58.5	-0.2
ANX				S	Sb	02 30 07.8	-0.3
ANX				AML	AML	02 30 10.0	
comp=N,191μm,0.3s							
ANX				AML	AML	02 30 10.3	
comp=E,226μm,0.4s							
ANX	**Ano Chora**	**0.62**	**2**	P	Pg	02 29 58.4	-0.3
ANX				S	Sg	02 30 07.5	+0.5
ANX	**Ano Chora**	**0.62**	**2**	P	Pg	02 29 58.5	-0.2
ANX				S	Sg	02 30 07.5	+0.5
DSF	**Desfina**	**0.67**	**49**	P	Pg	02 29 58.8	-0.7
DSF				S	Sg	02 30 08.7	+0.3
DSF				AML	AML	02 30 11.3	
comp=E,97μm,0.1s							
DSF				AML	AML	02 30 13.2	
comp=N,100μm,0.2s							
DSF	**Desfina**	**0.67**	**49**	P	Pg	02 29 59.1	-0.5
DSF				S	Sg	02 30 08.7	+0.3
PVO	**Paravola**	**0.71**	**336**	P	Pb	02 30 00.7	+0.1
PVO	**Paravola**	**0

BSI	**Banda Aceh**	**2.15**	**50**	P	Pn	03 29 55.9	-0.9
BSI				S	Sn	03 30 24.5	+1.0
TPTI		**3.63**	**103**	P	Pn	03 30 16.2	-0.9
TPTI				S	Sn	03 31 00.9	+0.8
KCSI	**Kotacane, Aceh**	**4.16**	**98**	P	Pn	03 30 25.9	+1.4
KCSI				S	Sn	03 31 15.9	+2.6

*ISN **27** 03:31:06.4±0.7, 39°.01N×43°.75E, h5km±35km, ML4.0*
*DDA **27** 03:31:07.8, 39°.01N×43°.66E, h1km, Ml4.0*
*AZER **27** 03:31:08.5±0.8, 38°.94N×43°.66E, h9km, ml3.9/25, Error ellipse: s-maj=1.5km s-min=1.4km az=241.0*
*IDC **27** 03:31:08.9±1.4, 38°.85N×43°.86E, h0km, mb3.6/7, mb1 3.7/8, mb1mx3.5/64, mbtmp3.6/8, ML2.6/1, MS3.0/14, Ms1 3.0/14, ms1mx2.8/57, Error ellipse: s-maj=28.5km s-min=11.4km az=145.0*
*CSEM **27** 03:31:09.7±0.1, 38°.88N×43°.70E, h2km, ML4.0, Error ellipse: s-maj=3.4km s-min=2.4km az=145.0*
*ISK **27** 03:31:09.1, 38°.93N×43°.63E, h5km, ML4.0/10*
ISC 27 03:31:09.1±1.1, 38°.96N±0°.02×43°.65E±0°.01, h1km±8km, n148, σ1°.57/198, mb3.5/6, MS3.0/8, 36C-52D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VMUR	**Van-Muradiye**	**0.07**	**293**	⇑*i* P	**Pg**	**03 31 10.2**	**-0.2**
VMUR				*i* S	**Sg**	**03 31 11.8**	**+0.4**
ERCV	**ERCIS-VAN**	**0.25**	**283**	PG	**Pg**	**03 31 13.8**	**-0.1**
ERCV	**ERCIS-VAN**	**0.25**	**283**	*e*Pg	**Pg**	**03 31 13.8**	**-0.1**
CLDR	**Caldiran**	**0.27**	**49**	⇑*i* P	**Pg**	**03 31 12.8**	**-1.6**
CLDR				*i* S	**Sg**	**03 31 16.6**	**-1.3**
VANB	**Van**	**0.42**	**209**	PG	**Pb**	**03 31 19.4**	**0.0**
VANB				SG	**Sb**	**03 31 26.9**	**+0.5**
VANB	**Van**	**0.42**	**209**	*e*Pg	**Pb**	**03 31 19.4**	**0.0**
TVAN	**Van**	**0.47**	**204**	⇓*i* P	**Pb**	**03 31 19.5**	**-0.9**
TVAN				*i* S	**Sb**	**03 31 26.3**	**-1.7**
TVAN	**Van**	**0.47**	**204**	P	**Pb**	**03 31 19.5**	**-0.9**
DYDN	**Diyadin**	**0.58**	**3**	⇓*i* P	**Pg**	**03 31 19.0**	**-1.3**
DYDN				*i* S	**Sg**	**03 31 27.3**	**-0.5**
ADCV	**BITLIS_Adilcev**	**0.74**	**258**	⇑*i* P	**Pg**	**03 31 23.2**	**0.0**
ADCV				*i* S	**Sn**	**03 31 35.8**	**-3.1**
ADCV	**BITLIS_Adilcev**	**0.74**	**258**	P	**Pg**	**03 31 23.2**	**0.0**
ADCV				S	**Sn**	**03 31 35.8**	**-3.1**
TUTA	**Tutak**	**0.78**	**304**	⇓*i* P	**Pg**	**03 31 23.3**	**-0.8**
TUTA				*i* S	**Sg**	**03 31 34.2**	**-0.1**
GEVA	**Gevas**	**0.80**	**216**	*i* P	**Pg**	**03 31 24.2**	**-0.2**
GEVA				*i* S	**Sn**	**03 31 37.8**	**-2.6**
GEVA	**Gevas**	**0.80**	**216**	P	**Pg**	**03 31 24.2**	**-0.2**
IGDI	**IGDIR**	**0.96**	**20**	⇓*i* P	**Pg**	**03 31 26.3**	**-1.3**
IGDI				*i* S	**Sg**	**03 31 40.1**	**+0.1**
HYR	**Heyderabad**	**1.20**	**51**	⇓P	**Pn**	**03 31 31.6**	**-1.6**
HYR				⇓S	**Sb**	**03 31 48.2**	**-0.6**
HYR	**Heyderabad**	**1.20**	**51**	⇓P	**Pn**	**03 31 31.6**	**-1.6**
HYR				⇓S	**Sb**	**03 31 48.2**	**-0.6**
EKAR	**Karacoban**	**1.27**	**284**	⇑*i* P	**Pn**	**03 31 31.5**	**-2.7**
EKAR				*i* S	**Sn**	**03 31 54.4**	**+2.3**
EATA	**Eleskirt**	**1.27**	**315**	*i* P	**Pn**	**03 31 31.9**	**-2.4**
EATA				*i* S	**Sb**	**03 31 49.6**	**-1.4**
GURO	**Guroymak-BITLI**	**1.33**	**252**	PN	**Pg**	**03 31 34.5**	**-0.1**
GURO				SN	**Sg**	**03 31 54.4**	**+2.6**
GURO	**Guroymak-BITLI**	**1.33**	**252**	*e*Pn	**Pg**	**03 31 34.5**	**-0.1**
GURO				*e*Sn	**Sg**	**03 31 54.4**	**+2.6**
HAKT	**HAKKARI**	**1.40**	**178**	⇓*i* P	**Pb**	**03 31 34.8**	**-1.5**
HAKT				*i* S	**Sg**	**03 31 58.2**	**+4.0**
HAKT	**HAKKARI**	**1.40**	**178**	P	**Pb**	**03 31 34.8**	**-1.5**
NAX	**Nakhchivan**	**1.45**	**81**	⇓P	**Pn**	**03 31 36.0**	**-0.6**
	SNR=51						
NAX				⇑S	**Sg**	**03 31 57.1**	**+1.4**
NAX	**Nakhchivan**	**1.45**	**81**	⇓P	**Pn**	**03 31 36.0**	**-0.6**
	SNR=51						
NAX				⇑S	**Sg**	**03 31 57.1**	**+1.4**
GNI	**Garni**	**1.45**	**35**	Pg	**Pn**	**03 31 35.6**	**-1.2**
	32nm,0.3s,baz=226,slow=2.9,SNR=116						
GNI				Lg	Lg	03 31 57.5	
	65nm,0.3s,baz=77,slow=23,SNR=32						
GNI				LR	LR	03 32 16.3	
	comp=Z,265nm,19.5s,baz=216,slow=46						
GNI	**Garni**	**1.45**	**35**	PN	**Pg**	**03 31 37.9**	**+0.9**
GNI	**Garni**	**1.45**	**35**	*e*Pn	**Pg**	**03 31 37.9**	**+0.9**
YOVA	**Hakkari_Y¨...kse**	**1.46**	**160**	*i* P	**Pg**	**03 31 36.7**	**-0.5**
YOVA				*i* S	**Sg**	**03 32 00.2**	**+4.1**
YOVA	**Hakkari_Y¨...kse**	**1.46**	**160**	P	**Pg**	**03 31 36.7**	**-0.5**
DIGO	**Kars**	**1.47**	**352**	*i* P	**Pn**	**03 31 36.0**	**-0.9**
DIGO				*i* S	**Sg**	**03 32 00.8**	**+4.6**
SBZ	**Shahbuz**	**1.54**	**73**	⇓P	**Pn**	**03 31 37.1**	**-0.8**
SBZ				⇓S	**Sg**	**03 31 59.2**	**+0.6**
SBZ	**Shahbuz**	**1.54**	**73**	⇓P	**Pn**	**03 31 37.1**	**-0.8**
SBZ				⇓S	**Sg**	**03 31 59.2**	**+0.6**
SRTM	**Siirt_Merkez**	**1.67**	**235**	⇑*i* P	**Pb**	**03 31 39.8**	**-0.9**
SRTM				*i* S	**Sg**	**03 32 05.6**	**+2.9**
SRTM	**Siirt_Merkez**	**1.67**	**235**	P	**Pb**	**03 31 39.8**	**-0.9**
CUKT	**Cukurca**	**1.71**	**181**	PN	**Pb**	**03 31 39.9**	**-1.6**
CUKT	**Cukurca**	**1.71**	**181**	*i* P	**Pb**	**03 31 39.6**	**-1.9**
CUKT				*i* S	**Sg**	**03 32 06.1**	**+2.0**
CUKT	**Cukurca**	**1.71**	**181**	P	**Pb**	**03 31 39.6**	**-1.9**
CUKT	**Cukurca**	**1.71**	**181**	*e*Pn	**Pb**	**03 31 39.9**	**-1.6**
KARS	**Kars**	**1.72**	**345**	PN	**Pb**	**03 31 41.6**	**0.0**
KARS	**Kars**	**1.72**	**345**	*e*Pn	**Pb**	**03 31 41.6**	**0.0**
VRTB	**Varto-Mus**	**1.72**	**277**	PN	**Pb**	**03 31 41.0**	**-0.6**
VRTB	**Varto-Mus**	**1.72**	**277**	⇑*i* P	**Pb**	**03 31 40.3**	**-1.3**
VRTB				*i* S	**Sg**	**03 32 05.6**	**+1.3**
VRTB	**Varto-Mus**	**1.72**	**277**	P	**Pb**	**03 31 40.3**	**-1.3**
VRTB	**Varto-Mus**	**1.72**	**277**	*e*Pn	**Pb**	**03 31 41.0**	**-0.6**
VRTB				S	**Sg**	**03 32 05.6**	**+1.3**
EAK	**Akyaka**	**1.72**	**359**	⇓*i* P	**Pn**	**03 31 40.2**	**-0.2**
EAK				*i* S	**Sg**	**03 32 06.6**	**+2.2**
EAK	**Akyaka**	**1.72**	**359**	P	**Pn**	**03 31 40.2**	**-0.2**
EAK				S	**Sg**	**03 32 06.6**	**+2.2**
HOMI	**Horasan**	**1.73**	**309**	*i* P	**Pn**	**03 31 39.7**	**-0.9**
HOMI				*i* S	**Sg**	**03 32 07.9**	**+3.2**
SIRT	**Sirnak**	**1.74**	**214**	PN	**Pg**	**03 31 41.5**	**-1.0**
SIRT	**Sirnak**	**1.74**	**214**	*e*Pn	**Pg**	**03 31 41.5**	**-1.0**
ORD	**Ordubad**	**1.83**	**90**	⇑P	**Pn**	**03 31 41.2**	**-0.6**
ORD				⇓S	**Sb**	**03 32 06.0**	**-0.9**
ORD	**Ordubad**	**1.83**	**90**	⇑P	**Pn**	**03 31 41.2**	**-0.6**
ORD				⇓S	**Sb**	**03 32 06.0**	**-0.9**
SENK	**Senkaya-Erzuru**	**1.88**	**328**	PN	**Pb**	**03 31 44.5**	**0.0**
SENK	**Senkaya-Erzuru**	**1.88**	**328**	*e*Pn	**Pb**	**03 31 44.5**	**0.0**
BNGL	**BINGOL**	**1.95**	**270**	⇑*i* P	**Pb**	**03 31 43.6**	**-2.0**
BNGL				*i* S	**Sg**	**03 32 11.5**	**-0.2**
ERZM	**Erzurum**	**2.00**	**299**	*i* P	**Pn**	**03 31 44.4**	**0.0**
ERZM				*i* S	**Sg**	**03 32 15.1**	**+1.6**
ERZM	**Erzurum**	**2.00**	**299**	P	**Pn**	**03 31 44.4**	**0.0**
ERZM				S	**Sg**	**03 32 15.1**	**+1.6**
SVAN	**Silvan-Diyarba**	**2.09**	**248**	PN	**Pb**	**03 31 46.8**	**-1.0**
SVAN	**Silvan-Diyarba**	**2.09**	**248**	*i* P	**Pb**	**03 31 46.9**	**-0.9**
SVAN				*i* S	**Sg**	**03 32 17.8**	**+1.7**
SVAN	**Silvan-Diyarba**	**2.09**	**248**	*e*Pn	**Pb**	**03 31 46.8**	**-1.0**
BTMN	**Batman**	**2.15**	**241**	⇑*i* P	**Pg**	**03 31 48.9**	**-1.5**
BTMN				*i* S	**Sg**	**03 32 19.3**	**+1.0**
BTMN	**Batman**	**2.15**	**241**	P	**Pg**	**03 31 48.9**	**-1.5**
BGD	**Bogdanovka**	**2.30**	**359**	P	**Pn**	**03 31 48.2**	**-0.1**
BGD				S	**Sg**	**03 32 23.3**	**+0.3**
BNGB	**Bing¨¶l**	**2.32**	**272**	PN	**Pb**	**03 31 50.5**	**-1.3**
BGOL	**Bingol**	**2.32**	**272**	*i* P	**Pb**	**03 31 50.9**	**-1.0**
BGOL				*i* S	**Sg**	**03 32 26.0**	**+2.3**
BGOL	**Bingol**	**2.32**	**272**	P	**Pb**	**03 31 50.9**	**-1.0**
GDB	**GEDABAY**	**2.39**	**42**	⇓P	**Pn**	**03 31 50.3**	**+0.7**
	SNR=11						
GDB				⇓S	**Sb**	**03 32 23.1**	**0.0**
GDB	**GEDABAY**	**2.39**	**42**	⇓P	**Pn**	**03 31 50.3**	**+0.7**
	SNR=11						
GDB				⇓S	**Sb**	**03 32 23.1**	**0.0**
AKH	**Akhalkalaki**	**2.45**	**357**	PN	**Pb**	**03 31 52.7**	**-1.3**
AKH	**Akhalkalaki**	**2.45**	**357**	P	**Pb**	**03 31 53.0**	**-1.0**
AKH				S	**Sg**	**03 32 28.1**	**+0.3**
AKH	**Akhalkalaki**	**2.45**	**357**	*e*Pn	**Pb**	**03 31 52.7**	**-1.3**
BINT	**Bingol**	**2.47**	**269**	*e*Pn	**Pn**	**03 31 50.5**	**-0.1**
QZX	**Qazax, Azerbai**	**2.48**	**32**	⇑P	**Pb**	**03 31 53.1**	**-1.3**
	SNR=47						
QZX				⇑S	**Sb**	**03 32 23.0**	**-2.4**
QZX	**Qazax, Azerbai**	**2.48**	**32**	⇑P	**Pb**	**03 31 53.1**	**-1.3**
	SNR=47						
QZX				⇑S	**Sb**	**03 32 23.0**	**-2.4**
GANJ	**Ganja**	**2.66**	**50**	P	**Pn**	**03 31 53.9**	**+0.7**
	SNR=38						
GANJ				⇓S	**Sb**	**03 32 28.7**	**-2.0**
GANJ	**Ganja**	**2.66**	**50**	P	**Pn**	**03 31 53.9**	**+0.7**
	SNR=38						
GANJ				⇓S	**Sb**	**03 32 28.7**	**-2.0**
DGRG	**David-gareji**	**2.81**	**27**	P	**Pn**	**03 31 55.9**	**+0.6**
TBLG	**Delisi**	**2.89**	**16**	PN	**Pn**	**03 31 58.3**	**+2.0**
TBLG	**Delisi**	**2.89**	**16**	P	**Pn**	**03 31 58.2**	**+2.0**
TBLG	**Delisi**	**2.89**	**16**	*e*Pn	**Pn**	**03 31 58.3**	**+2.0**
BCA	**Borcka**	**2.92**	**329**	PN	**Pb**	**03 31 59.4**	**-2.7**
BCA	**Borcka**	**2.92**	**329**	*e*Pn	**Pb**	**03 31 59.4**	**-2.7**
MAZI	**Mazidag**	**2.94**	**240**	PN	**Pb**	**03 31 58.8**	**-3.5**
MAZI	**Mazidag**	**2.94**	**240**	*e*Pn	**Pb**	**03 31 58.8**	**-3.5**
BRDA	**Brd**	**3.02**	**63**	⇑P	**Pn**	**03 31 58.4**	**+0.3**
BRDA	**Brd**	**3.02**	**63**	⇑P	**Pn**	**03 31 58.4**	**+0.3**
BAYT	**Ayd¨–ntepe-Bay**	**3.06**	**299**	PN	**Pn**	**03 32 00.3**	**+1.5**
BAYT	**Ayd¨–ntepe-Bay**	**3.06**	**299**	*e*Pn	**Pn**	**03 32 00.3**	**+1.5**
ERZN	**Erzincan**	**3.11**	**283**	PN	**Pn**	**03 32 01.3**	**+1.8**
DDFL	**Dedoflistskaro**	**3.12**	**37**	P	**Pb**	**03 32 06.0**	**+0.6**
DDFL				S	**Sg**	**03 32 48.5**	**-0.7**
MNGR	**Mingechevir, A**	**3.20**	**55**	⇓P	**Pn**	**03 32 01.6**	**+1.0**
MNGR				⇑S	**Sn**	**03 32 41.4**	**+2.0**
MNGR	**Mingechevir, A**	**3.20**	**55**	⇓P	**Pn**	**03 32 01.6**	**+1.0**
MNGR				⇑S	**Sn**	**03 32 41.4**	**+2.0**
DUS	**Dusheti**	**3.22**	**14**	P	**Pb**	**03 32 05.5**	**-1.7**
DUS				S	**Sg**	**03 32 54.5**	**+1.8**
ZRD	**Zardab**	**3.38**	**66**	⇑P	**Pn**	**03 32 03.8**	**+0.7**
ZRD				⇑S	**Sn**	**03 32 44.8**	**+1.0**
ZRD	**Zardab**	**3.38**	**66**	⇑P	**Pn**	**03 32 03.8**	**+0.7**
ZRD				⇑S	**Sn**	**03 32 44.8**	**+1.0**
EZC	**Erzincan**	**3.42**	**285**	*e*Pn	**Pn**	**03 32 01.3**	**-2.5**
SVRC	**Sivrice-ELAZID**	**3.45**	**262**	PN	**Pn**	**03 32 05.2**	**+1.0**
SVRC	**Sivrice-ELAZID**	**3.45**	**262**	*e*Pn	**Pn**	**03 32 05.2**	**+1.0**
ZKTA	**Zakatala**	**3.51**	**39**	⇓P	**Pn**	**03 32 06.5**	**+1.7**
ZKTA				⇓S	**Sn**	**03 32 49.9**	**+2.9**
SEKA	**Sheki**	**3.53**	**49**	⇑P	**Pn**	**03 32 06.8**	**+1.7**
SEKA				⇓S	**Sb**	**03 32 51.1**	**-4.6**
SEKA	**Sheki**	**3.53**	**49**	⇑P	**Pn**	**03 32 06.8**	**+1.7**
SEKA				⇓S	**Sb**	**03 32 51.1**	**-4.6**
LRK	**Lerik**	**3.68**	**94**	⇑P	**Pn**	**03 32 06.4**	**-0.9**
LRK	**Lerik**	**3.68**	**94**	⇑P	**Pn**	**03 32 06.4**	**-0.9**
GLBA	**Clilabad**	**3.70**	**84**	⇑P	**Pn**	**03 32 07.4**	**0.0**
GLBA				⇓S	**Sn**	**03 32 51.6**	**-0.1**
GLBA	**Clilabad**	**3.70**	**84**	⇑P	**Pn**	**03 32 07.4**	**0.0**
GLBA				⇓S	**Sn**	**03 32 51.6**	**-0.1**
KDMR	**Kurdemir**	**3.77**	**67**	⇑S	**Sn**	**03 32 54.4**	**+0.9**
KDMR	**Kurdemir**	**3.77**	**67**	⇑S	**Sn**	**03 32 54.4**	**+0.9**
QBL	**Gabala**	**3.78**	**57**	⇑S	**Sn**	**03 32 55.4**	**+1.7**
QBL	**Gabala**	**3.78**	**57**	⇑S	**Sn**	**03 32 55.4**	**+1.7**
IML	**Ismayilli**	**3.94**	**61**	⇓P	**Pn**	**03 32 10.8**	**+0.1**
IML				⇓S	**Sn**	**03 32 59.0**	**+1.4**
IML	**Ismayilli**	**3.94**	**61**	⇓P	**Pn**	**03 32 10.8**	**+0.1**
IML				⇓S	**Sn**	**03 32 59.0**	**+1.4**
ASTR	**Astara**	**4.04**	**94**	⇓P	**Pn**	**03 32 11.5**	**-0.6**
ASTR				⇓S	**Sn**	**03 32 59.2**	**-0.9**
ASTR	**Astara**	**4.04**	**94**	⇓P	**Pn**	**03 32 11.5**	**-0.6**
ASTR				⇓S	**Sn**	**03 32 59.2**	**-0.9**
XNQ	**Khinaliq**	**4.09**	**56**	⇓P	**Pn**	**03 32 14.1**	**+1.1**
XNQ	**Khinaliq**	**4.09**	**56**	⇓P	**Pn**	**03 32 14.1**	**+1.1**
PQL	**Pirkuli**	**4.22**	**63**	⇓P	**Pn**	**03 32 14.7**	**0.0**
PQL	**Pirkuli**	**4.22**	**63**	⇓P	**Pn**	**03 32 14.7**	**0.0**
QSAR	**Qusar**	**4.35**	**53**	⇓P	**Pn**	**03 32 17.3**	**+0.8**
QSAR	**Qusar**	**4.35**	**53**	⇓P	**Pn**	**03 32 17.3**	**+0.8**
GBS	**Qobustan**	**4.37**	**67**	⇓P	**Pn**	**03 32 17.1**	**+0.4**
GBS	**Qobustan**	**4.37**	**67**	⇓P	**Pn**	**03 32 17.1**	**+0.4**
QUBA	**Quba, Azerbaij**	**4.41**	**56**	⇓P	**Pn**	**03 32 18.1**	**+0.8**
QUBA	**Quba, Azerbaij**	**4.41**	**56**	⇓P	**Pn**	**03 32 18.1**	**+0.8**
ATGJ	**Altiaghaj**	**4.49**	**63**	⇓P	**Pn**	**03 32 19.0**	**+0.6**
ATGJ	**Altiaghaj**	**4.49**	**63**	⇓P	**Pn**	**03 32 19.0**	**+0.6**
SIZA	**Siyzn**	**4.55**	**61**	⇑P	**Pn**	**03 32 19.6**	**+0.4**
SIZA	**Siyzn**	**4.55**	**61**	⇑P	**Pn**	**03 32 19.6**	**+0.4**
KBZ	**Khabaz**	**4.79**	**353**	LR	LR	03 34 34.1	
	comp=Z,127nm,18.2s,baz=194,slow=42						
KVAR	**Kislovodsk Arr**	**5.04**	**352**	LR	LR	03 34 42.2	
	comp=Z,115nm,18.2s,baz=190,slow=41						
BHD	**Baghdad**	**5.71**	**174**	*e*Pn	**Pn**	**03 32 34.0**	**-1.1**
	SNR=4.0						
BHD				*e*Sn	**Sn**	**03 33 38.5**	**-2.8**
	SNR=4.0						
BRTR	**Keskin Array B**	**7.80**	**279**	Pn	Pn	03 33 08.9	+5.0
	0.1nm,0.3s,baz=97,slow=10,SNR=4.6						
NSR	**Nassriya**	**8.19**	**165**	*e*Pn	**Pn**	**03 33 09.0**	**-0.2**
	SNR=4.0						
NSR				*e*Sn	**Sn**	**03 34 38.0**	**-4.4**
	SNR=4.0						
MMAI	**Mount Meron Ar**	**8.94**	**231**	LR	LR	03 37 23.6	
	comp=Z,124nm,18.7s,baz=45,slow=42						
EIL	**Elat**	**11.73**	**220**	LR	LR	03 39 11.4	
	comp=Z,138nm,19.7s,baz=75,slow=41						
AKTO	**Aktyubinsk**	**15.33**	**37**	LR	LR	03 42 02.0	
	comp=Z,23nm,19.9s,baz=227,slow=43						
IDI	**Anoyia**	**15.41**	**262**	LR	LR	03 41 44.9	
	comp=Z,38nm,21.3s,baz=72,slow=41						
ARU	**Arti**	**20.07**	**25**	P	Pn	03 35 45.3	-0.2
	7.7nm,0.2s,baz=218,slow=6.7,SNR=5.6						
ARU				LR	LR	03 45 43.4	
	comp=Z,42nm,18.8s,baz=212,slow=44						
GERES	**GERESS Array B**	**23.59**	**305**	P	**P**	**03 36 24.4**	**+3.0**
	0.2nm,0.3s,baz=76,slow=8.2,SNR=3.0						
FINES	**FINESS Array B**	**24.99**	**340**	P	**P**	**03 36 36.6**	**+2.5**
	0.7nm,0.6s,baz=158,slow=12,SNR=3.6						
FINES				LR	LR	03 47 25.2	
	comp=Z,41nm,18.1s,baz=182,slow=39						
KURBB	**Kurchatov Arra**	**27.11**	**53**	P	**P**	**03 36 53.5**	**+0.2**
	0.3nm,0.6s,baz=264,slow=8.8,SNR=3.5						
HFS	**Hagfors**	**28.33**	**328**	LR	LR	03 49 54.3	
	comp=Z,28nm,18.1s,baz=134,slow=40						
MKAR	**Makanchi Array**	**29.14**	**62**	P	**P**	**03 37 12.1**	**+0.5**
	0.6nm,0.8s,baz=249,slow=7.6,SNR=4.9						
MKAR				LR	LR	03 50 46.5	
	comp=Z,30nm,18.6s,baz=312,slow=40						
NOA	**NORSAR Array B**	**29.85**	**328**	LR	LR	03 51 15.1	
	comp=Z,21nm,19.7s,baz=135,slow=40						
ZALV	**Zalesovo Beam**	**31.57**	**48**	LR	LR	03 52 08.3	
	comp=Z,31nm,18.3s,baz=66,slow=40						
ESDC	**Sonseca Array**	**36.50**	**287**	P	**P**	**03 38 16.6**	**+0.6**
	0.4nm,0.5s,baz=70,slow=9.4,SNR=5.3						
KMBO	**Kilima Mbogo**	**40.33**	**190**	LR	LR	03 54 34.6	
	comp=Z,27nm,19.9s,baz=106,slow=35						
TORD	**Torodi Ar. Bea**	**45.06**	**247**	P	**P**	**03 39 26.6**	**-0.2**
	1.2nm,1.0s,baz=37,slow=8.8,SNR=6.5						
PALK	**Pallekele**	**45.89**	**124**	LR	LR	04 01 18.4	
	comp=Z,22nm,19.7s,baz=312,slow=40						

*ISK **27** 03:32:43.8, 39°.01N×43°.66E, h5km, ML3.5/8*
*IASPEI **27** 03:32:44.8±1.0, 39°.03N±0°.03×43°.66E±0°.03, h4km±8km, Error ellipse: s-maj=4.7km s-min=2.9km az=140.7, GT5 selection from ISC bulletin GT5 identified by Bond¨¡r and McLaughlin (2009) selection criteria Bond¨¡r and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
*DDA **27** 03:32:44.6, 39°.02N×43°.63E, h6km, Ml3.6*
*AZER **27** 03:32:45.4±3.9, 39°.06N×43°.55E, h5km, ml3.4/3, Error ellipse: s-maj=30.1km s-min=18.1km az=41.0*
*ISCJB **27** 03:32:45.2±0.5, 39°.02N±0°.03×43°.63E±0°.03, h0km±4km, Error ellipse: s-maj=5.0km s-min=3.1km az=141.2*
*CSEM **27** 03:32:45.0±0.2, 39°.02N×43°.62E, h2km, ML3.6, Error ellipse: s-maj=4.7km s-min=3.5km az=139.0*
ISC 27 03:32:45.0±0.9, 39°.03N±0°.02×43°.63E±0°.02, h3km±8km, n56, σ0°.95/76, 8C-7D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VMUR	**Van-Muradiye**	**0.07**	**227**	*i* P	**Pg**	**03 32 46.0**	**-0.5**
VMUR				*i* S	**Sg**	**03 32 47.8**	**+0.2**
VMUR	**Van-Muradiye**	**0.07**	**227**	P	**Pg**	**03 32 46.0**	**-0.5**
VMUR				S	**Sg**	**03 32 47.8**	**+0.2**
ERCV	**ERCIS-VAN**	**0.23**	**267**	PG	**Pg**	**03 32 49.9**	**+0.4**
ERCV				SG	**Sg**	**03 32 54.2**	**+1.7**
ERCV	**ERCIS-VAN**	**0.23**	**267**	*e*Pg	**Pg**	**03 32 49.9**	**+0.4**
ERCV				*e*Sg	**Sg**	**03 32 54.2**	**+1.7**
CLDR	**Caldiran**	**0.25**	**64**	PG	**Pg**	**03 32 48.8**	**-1.0**
CLDR	**Caldiran**	**0.25**	**64**	*i* P	**Pg**	**03 32 48.6**	**-1.2**
CLDR				*i* S	**Sg**	**03 32 54.0**	**+1.0**
CLDR	**Caldiran**	**0.25**	**64**	P	**Pg**	**03 32 48.6**	**-1.2**
CLDR	**Caldiran**	**0.25**	**64**	*e*Pg	**Pg**	**03 32 48.8**	**-1.0**
CLDR				S	**Sg**	**03 32 54.0**	**+1.0**
VANB	**Van**	**0.48**	**204**	PG	**Pb**	**03 32 55.5**	**-0.6**
VANB				SG	**Sb**	**03 33 04.1**	**+0.5**
DYDN	**Diyadin**	**0.51**	**5**	*i* P	**Pg**	**03 32 54.9**	**+0.1**
DYDN				*i* S	**Sb**	**03 33 03.5**	**-1.2**
DYDN	**Diyadin**	**0.51**	**5**	P	**Pg**	**03 32 54.9**	**+0.1**
DYDN				S	**Sb**	**03 33 03.5**	**-1.2**
TVAN	**Van**	**0.54**	**199**	*i* P	**Pg**	**03 32 55.5**	**+0.2**
TVAN	**Van**	**0.54**	**199**	P	**Pg**	**03 32 55.5**	**+0.2**
TUTA	**Tutak**	**0.73**	**300**	*i* P	**Pg**	**03 32 59.0**	**-0.1**
TUTA				*i* S	**Sb**	**03 33 10.8**	**-0.3**
TUTA	**Tutak**	**0.73**	**300**	P	**Pg**	**03 32 59.0**	**-0.1**
TUTA				S	**Sb**	**03 33 10.8**	**-0.3**
ADCV	**BITLIS_Adilcev**	**0.74**	**253**	*i* P	**Pg**	**03 32 59.1**	**-0.2**
ADCV				*i* S	**Sb**	**03 33 11.4**	**+0.1**
ADCV	**BITLIS_Adilcev**	**0.74**	**253**	P	**Pg**	**03 32 59.1**	**-0.2**
GEVA	**Gevas**	**0.85**	**212**	*i* P	**Pg**	**03 33 00.4**	**-0.9**
GEVA	**Gevas**	**0.85**	**212**	P	**Pg**	**03 33 00.4**	**-0.9**
IGDI	**IGDIR**	**0.90**	**22**	*i* P	**Pb**	**03 33 03.2**	**-0.1**
IGDI				*i* S	**Sn**	**03 33 17.4**	**-0.8**
HYR	**Heyderabad**	**1.17**	**54**	⇓P	**Pb**	**03 33 08.1**	**+0.2**
EATA	**Eleskirt**	**1.21**	**313**	*i* P	**Pg**	**03 33 07.7**	**-0.5**
EATA	**Eleskirt**	**1.21**	**313**	P	**Pg**	**03 33 07.7**	**-0.5**
GURO	**Guroymak-BITLI**	**1.34**	**249**	PN	**Pn**	**03 33 10.4**	**-0.3**
GURO	**Guroymak-BITLI**	**1.34**	**249**	*e*Pn	**Pn**	**03 33 10.4**	**-0.3**
DIGO	**Kars**	**1.39**	**352**	*i* P	**Pn**	**03 33 11.2**	**-0.3**
DIGO	**Kars**	**1.39**	**352**	P	**Pn**	**03 33 11.2**	**-0.3**
GNI	**Garni**	**1.41**	**37**	PN	**Pb**	**03 33 11.9**	**-0.1**
GNI	**Garni**	**1.41**	**37**	*e*Pn	**Pb**	**03 33 11.9**	**-0.1**
NAX	**Nakhchivan**	**1.46**	**84**	⇓P	**Pb**	**03 33 12.5**	**-0.3**
NAX				⇑S	**Sg**	**03 33 36.4**	**+4.7**
HAKT	**HAKKARI**	**1.48**	**178**	*i* P	**Pn**	**03 33 11.9**	**-0.7**
HAKT	**HAKKARI**	**1.48**	**178**	P	**Pn**	**03 33 11.9**	**-0.7**
SBZ	**Shahbuz**	**1.53**	**76**	⇑P	**Pb**	**03 33 14.1**	**-0.1**
SBZ				⇑S	**Sg**	**03 33 35.6**	**+1.3**
KARS	**Kars**	**1.65**	**345**	PN	**Pn**	**03 33 15.5**	**+0.5**
KARS	**Kars**	**1.65**	**345**	*e*Pn	**Pn**	**03 33 15.5**	**+0.5**
SRTM	**Siirt_Merkez**	**1.70**	**233**	*i* P	**Pb**	**03 33 16.7**	**-0.2**
SRTM	**Siirt_Merkez**	**1.70**	**233**	P	**Pb**	**03 33 16.7**	**-0.2**
VRTB	**Varto-Mus**	**1.70**	**275**	PN	**Pb**	**03 33 16.1**	**-0.9**
VRTB	**Varto-Mus**	**1.70**	**275**	*i* P	**Pn**	**03 33 15.8**	**+0.1**

KMBO Kilima Mbogo 10.67 16 Pn Pn 03 38 00.5 +7.9
0.5nm,0.3s,baz=201,slow=16,SNR=2.8
KMBO Sn **Sn 03 39 55.4 +3.0**
1.3nm,0.3s,baz=291,slow=22,SNR=6.1
KMBO Lg Lg 03 40 58.1
4.4nm,0.3s,baz=112,slow=22,SNR=19
KMBO LR LR 03 41 44.2
comp=Z,45nm,18.9s,baz=174,slow=36
MBAR Mbarara 11.37 341 *e*Pn **Pn 03 38 01.5 -0.5**
MBAR *e*Sn **Sn 03 40 08.2 -1.1**
ABPO Ambohimpanom 14.53 123 *e*Pn **Pn 03 38 44.5 -0.7**
LBTB Lobatse 15.81 210 Pn **Pn 03 39 02.0 -0.3**
0.6nm,0.3s,baz=34,slow=14,SNR=8.8
LBTB Lg Lg 03 43 27.3
1.2nm,0.3s,baz=120,slow=22,SNR=4.3
LBTB LR LR 03 45 25.9
comp=Z,50nm,20.1s,baz=36,slow=38
LBTB Lobatse 15.81 210 *e*Pn **Pn 03 39 03.1 +0.8**
30nm,1.3s
LBTB *e*Sn **Sn 03 41 51.5 -6.3**
LBTB Lg Lg 03 43 27.3
TSUM Tsumeb 17.88 242 P **Pn 03 39 30.2 +1.7**
1.5nm,0.3s,baz=43,slow=13,SNR=10
TSUM LR LR 03 46 23.5
comp=Z,109nm,18.1s,baz=72,slow=37
TSUM Tsumeb 17.88 242 *e*Pn **P 03 39 31.4 +2.3**
11nm,1.0s
TSUM *e*Sn **Sn 03 42 43.6 -4.4**
BOSA Boshof 19.05 205 P **P 03 39 42.1 +0.1**
0.7nm,0.3s,baz=20,slow=11,SNR=13
BOSA Lg Lg 03 45 09.6
0.6nm,0.3s,baz=139,slow=15,SNR=5.2
BOSA LR LR 03 47 08.2
comp=Z,56nm,19.9s,baz=30,slow=37
SUR Sutherland 24.25 209 P **P 03 40 37.3 +0.5**
13nm,1.0s,baz=55,slow=12,SNR=3.2
SUR Sutherland 24.25 209 *e*P **P 03 40 37.3 +0.5**
26nm,1.1s
TOA0 Torodi Ar. Sit 40.58 306 *e*P **P 03 42 59.5 +0.1**
TORD Torodi Ar. Bea 40.58 306 P **P 03 42 59.8 +0.4**
1.6nm,0.9s,baz=120,slow=7.8,SNR=12
TOA1 Torodi Ar. Sit 40.58 306 *e*P **P 03 42 59.8 +0.3**
BR231 Keskin MP Arra 51.06 358 *e*P P 03 44 17.6 -4.4
ANTO Ankara 51.09 358 *e*P **P 03 44 18.4 -3.8**
30nm,0.8s
BUR04 Bucovina Ar. S 59.38 353 *e*P **P 03 45 18.7 -3.2**
AKASG Malin Array Be 62.06 356 P **P 03 45 39.9 0.0**
0.8nm,0.6s,baz=180,slow=6.3,SNR=5.8
AKBB Malin Array Si 62.06 356 *e*P **P 03 45 39.9 0.0**
3.2nm,0.9s
ESDC Sonseca Array 62.08 327 P **P 03 45 42.0 +1.5**
0.4nm,0.6s,baz=122,slow=5.9,SNR=5.2
GEA0 GERESS Array S 62.75 345 *e*P **P 03 45 45.4 +0.6**
GEC2 GERESS Array S 62.76 345 *e*P **P 03 45 45.2 +0.5**
2.7nm,0.9s
GERES GERESS Array B 62.76 345 P **P 03 45 45.2 +0.5**
2.2nm,1.0s,baz=134,slow=5.8,SNR=14
MK01 Makanchi Array 72.08 32 *e*P **P 03 46 43.2 -0.6**
MK31 Makanchi Array 72.09 32 *e*P **P 03 46 43.7 -0.2**
MK32 Makanchi Array 72.09 32 *e*P **P 03 46 43.7 -0.2**
MKAR Makanchi Array 72.09 32 P **P 03 46 43.7 -0.2**
0.8nm,0.6s,baz=222,slow=6.7,SNR=5.6
MKAR pP **sP 03 46 52.1 +3.8**
1.8nm,0.7s,baz=224,slow=6.3,SNR=5.6
KURBB Kurchatov Arra 72.82 28 P **P 03 46 48.0 -0.1**
0.7nm,0.8s,baz=232,slow=6.3,SNR=5.7
KURBB pP **sP 03 46 57.0 +4.5**
1.1nm,0.8s,baz=230,slow=6.7,SNR=7.1
KURK Kurchatov 72.92 28 *e*P **P 03 46 48.0 -0.7**
KURK pP **sP 03 46 57.0 +3.8**
FIA0 FINESS Array S 72.97 356 *e*P **P 03 46 48.8 +0.1**
FINES FINESS Array B 72.97 356 P **P 03 46 48.8 +0.1**
1.6nm,0.6s,baz=162,slow=8.0,SNR=8.0
HFS Hagfors 73.25 349 P **P 03 46 51.0 +0.5**
1.3nm,0.5s,baz=121,slow=7.6,SNR=7.1
ARA0 ARCESS Array S 81.04 357 *e*P **P 03 47 34.7 +0.7**
ARCES ARCESS Array B 81.04 357 P **P 03 47 34.7 +0.7**
2.4nm,0.7s,baz=193,slow=5.0,SNR=9.9
ASAR Alice Springs 94.05 115 LR LR 04 25 11.6
comp=Z,60nm,19.8s,baz=100,slow=32
NV01 Mina Array Sit 143.71 322 *e*PKPdf PKPbc 03 54 54.1 +1.3
NVAR Mina Array Bea 143.71 322 PKP PKPbc 03 54 54.5 +1.7
0.9nm,0.7s,baz=67,slow=2.2,SNR=7.3
NVAR pPKP sPKPdf 03 55 03.8 +3.8
0.7nm,0.7s,baz=45,slow=4.8,SNR=3.7

MEX 27 03:37:50.0±0.3, 28°.67N×106°.71W, h19km±48km, MD4.0, Chihuahua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HPIG		**1.96**	**152**	*i* P	Pn	03 38 21.0	-1.4
HPIG				*e*S	Sg	03 38 53.5	+0.2
CGIG		**2.02**	**327**	*e*P	Pn	03 38 20.4	-2.8
CGIG	baz=147,slow=4.1			*e*S	Sn	03 38 44.0	-4.0
MNTX	**Cornudas Mount**	**3.23**	**21**	*e*P	Pn	03 38 37.4	-2.4
121A	**Cookes Peak, D**	**3.96**	**347**	*e*P	Pn	03 38 47.9	-2.1
TUC	**Tucson**	**5.05**	**317**	*e*P	Pn	03 39 00.7	-4.1

*ISCJB **27** 03:39:02.0±0.2, 7°.14S±0°.03×129°.39E±0°.03, h200km, mb4.3/21, Error ellipse: s-maj=5.0km s-min=3.2km az=153.9*
*NEIC **27** 03:39:02.7±0.7, 7°.07S×129°.39E, h188km±8km, mb4.6/12, Error ellipse: s-maj=10.9km s-min=7.1km az=61.0*
*IDC **27** 03:39:02.1±1.7, 6°.91S×129°.41E, h176km±17km, mb3.9/9, mb1 4.1/11, mb1mx3.7/51, mbtmp4.5/11, MS2.9/1, Ms1 2.9/1, ms1mx2.1/50, Error ellipse: s-maj=21.4km s-min=11.9km az=73.0*
*DJA **27** 03:39:04.2±0.3, 7°.5S×3°.12°.9E±°, h182km±11km, M4.8/12, mb4.7/10, mB5.2/6, MLv5.0/12, Mw(mB)4.5/6*
ISC 27 03:39:02.8±0.5, 7°.14S±0°.04×129°.44E±0°.05, h200km, n73, σ1§98/84, mb4.4/21, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.02**	**115**	P	**Pn**	**03 39 43.3**	**+1.7**
SAUI	**Saumlaki**	**2.02**	**115**	*e*Pn	**Pn**	**03 39 43.3**	**+1.7**
SAUI				*e*Sn	**Sn**	**03 40 10.9**	**-0.8**
BNDI	**Bandanaira**	**2.64**	**10**	P	**Pn**	**03 39 48.6**	**+0.2**
AAI	**Ambon**	**3.65**	**340**	P	**Pn**	**03 40 00.3**	**-0.1**
MSAI	**Masohi**	**3.81**	**352**	P	**Pn**	**03 40 03.0**	**+0.7**
FAKI	**Fak Fak**	**5.04**	**34**	P	**Pn**	**03 40 15.3**	**-2.6**
FAKI	**Fak Fak**	**5.04**	**34**	*e*Pn	**Pn**	**03 40 15.2**	**-2.6**
SOEI	**Soe**	**5.74**	**243**	*e*Pn	**Pn**	**03 40 27.0**	**+0.1**
SOEI				*e*Sn	**Sn**	**03 41 31.3**	**-2.0**
MTN	**Manton Dam**	**5.91**	**164**	*e*Pn	**Pn**	**03 40 29.9**	**+1.0**
MTN				*e*Sn	**Sn**	**03 41 35.4**	**-1.7**
BATI	**Baumata**	**6.47**	**242**	P	**Pn**	**03 40 36.4**	**+0.1**
BATI	33nm,0.3s,baz=102,slow=0.9,SNR=20			S	**Sn**	**03 41 46.2**	**-4.1**
BATI	**Baumata**	**6.47**	**242**	P	**Pn**	**03 40 36.8**	**+0.5**
SIJI	**Sorong**	**6.49**	**16**	P	**Pn**	**03 40 33.5**	**-3.1**
SIJI	12nm,0.3s,baz=209,slow=23,SNR=47			S	**Sn**	**03 41 43.1**	**-7.7**
LBMI	**Labuha**	**6.75**	**343**	P	**Pn**	**03 40 39.9**	**+0.1**
RKPI	**Ransiki, Papua**	**7.32**	**40**	P	**Pn**	**03 40 47.4**	**+0.1**
EDFI	**Ende, Flores**	**7.84**	**258**	P	**Pn**	**03 40 54.4**	**+0.2**
BAKI	**Biak**	**8.89**	**49**	P	**Pn**	**03 41 09.6**	**+1.8**
FITZ	**Fitzroy Crossi**	**11.50**	**198**	*e*Pn	**Pn**	**03 41 40.5**	**-1.0**
FITZ				*e*Sn	Sn	03 43 40.3	-10
TWSI	**Taliwang, Sumb**	**12.54**	**262**	P	**Pn**	**03 41 53.5**	**-1.2**
WRAB	**Tennant Creek**	**13.58**	**160**	*e*Pn	**Pn**	**03 42 07.1**	**-0.5**
WRAB	75nm,1.3s			Sn	**S**	**03 44 33.8**	**-5.2**
WR1	**Warramunga Arr**	**13.58**	**160**	*e*Pn	**Pn**	**03 42 06.8**	**-0.9**
WRA	**Warramunga Arr**	**13.58**	**160**	P	**Pn**	**03 42 06.8**	**-0.9**
WRA	1.7nm,0.3s,baz=335,slow=13,SNR=82			S	**S**	**03 44 34.5**	**-4.6**
WB2	**Warramunga Arr**	**13.59**	**160**	*e*Pn	**Pn**	**03 42 07.0**	**-0.7**
WB2	4.5nm,0.3s,baz=331,slow=22,SNR=9.1			*e*S	**S**	**03 44 34.4**	**-4.8**
COEN	**Coen**	**15.10**	**118**	*e*Pn	**P**	**03 42 29.0**	**+2.0**
COEN	16nm,0.7s			*e*S	**S**	**03 45 07.8**	**-6.4**
AS31	**Alice Springs**	**16.98**	**166**	*e*P	**Pn**	**03 42 51.0**	**+2.0**
AS31	44nm,0.6s			*e*S	**S**	**03 45 53.2**	**-1.3**
ASAR	**Alice Springs**	**16.98**	**166**	P	**Pn**	**03 42 51.0**	**+2.0**
AS01	**Alice Springs**	**16.99**	**166**	*e*P	**Pn**	**03 42 50.6**	**+1.5**
AS01	20nm,0.3s,baz=339,slow=9.5,SNR=897			*e*S	**S**	**03 45 56.4**	**+1.7**
SBUM	**Sibu**	**19.65**	**298**	*e*P	**Pn**	**03 43 18.7**	**-1.9**
CTA	**Charters Tower**	**20.77**	**130**	P	Pn	03 43 32.4	-2.0
KSM	**Kuching**	**20.92**	**293**	*e*P	**P**	**03 43 29.9**	**-0.4**
FORT	**Forrest**	**23.55**	**183**	*e*P	**P**	**03 43 56.6**	**+1.4**
BBOO	**Buckleboo**	**26.27**	**167**	*e*P	**P**	**03 44 21.9**	**+2.1**
STKA	**Stephens Creek**	**27.10**	**157**	P	**P**	**03 44 30.0**	**+2.9**
STKA	**Stephens Creek**	**27.10**	**157**	*e*P	**P**	**03 44 28.7**	**+1.5**
PSI	**Prapat**	**32.02**	**287**	*e*P	**P**	**03 45 11.3**	**+0.3**
CM31	**Chiang Mai Arr**	**39.40**	**311**	*e*P	**P**	**03 46 13.8**	**+0.3**
CMAR	**Chiang Mai Arr**	**39.40**	**311**	P	**P**	**03 46 13.8**	**+0.3**
GYA	**Guiyang**	**40.05**	**327**	*e*P	**P**	**03 46 20.0**	**+1.1**
GYA	comp=Z,10.0nm,0.8s			pmax	pmax		
NJ2	**Nanjing**	**40.26**	**346**	*e*P	**P**	**03 46 21.5**	**+1.1**
NJ2	comp=Z,14nm,0.5s			pmax	pmax		
JHJ	**Hachijo jima 2**	**41.23**	**13**	LR	LR	04 02 59.1	
KMI	**Kunming**	**41.28**	**322**	P	**P**	**03 46 30.3**	**+1.2**
KMI	comp=Z,7.0nm,0.6s			pmax	pmax		
CD2	**Chengdu**	**45.13**	**328**	P	**P**	**03 46 59.5**	**-0.1**
CD2	comp=Z,13nm,0.7s			pmax	pmax		
LZH	**Lanzhou**	**49.27**	**332**	*e*P	**P**	**03 47 34.0**	**+2.4**
LZH				pP	pP	03 48 16.5	+0.8
LZH				sP	sP	03 48 38.5	+0.6
LZH				*e*PP	**PP**	**03 49 31.3**	**+3.6**
LZH	comp=Z,23nm,1.3s			pmax	pmax		
LZH	comp=Z,72nm,6.4s			pmax	pmax		
LZH	comp=N,280nm,14.5s			LR	LR		
LZH	comp=E,290nm,14.8s			LR	LR		
LZH	comp=Z,370nm,18.3s			LR	LR		
HHC	**Hu-ho-hao-te**	**50.51**	**342**	*e*P	**P**	**03 47 42.8**	**+2.0**
HHC	comp=Z,5.0nm,0.6s			pmax	pmax		
HHC	comp=Z,48nm,6.5s			pmax	pmax		
RAMN	**Ramite**	**53.57**	**311**	*e*P	**P**	**03 48 04.0**	**+0.2**
JIRN	**Jiri**	**54.26**	**312**	*e*P	**P**	**03 48 08.4**	**-0.6**
GUN	**Gumba**	**54.63**	**312**	*e*P	**P**	**03 48 11.4**	**-0.2**
PKIN	**Phulchoki**	**54.81**	**311**	*e*P	**P**	**03 48 12.9**	**+0.1**
KKN	**Kakani**	**55.01**	**311**	*e*P	**P**	**03 48 14.0**	**-0.2**
DMN	**Daman**	**55.05**	**311**	*e*P	**P**	**03 48 14.2**	**-0.2**
GKN	**Gorkha**	**55.61**	**311**	*e*P	**P**	**03 48 18.2**	**-0.1**
KOLN	**Koldanda**	**56.27**	**310**	*e*P	**P**	**03 48 23.0**	**-0.1**
DANN	**Dangsing**	**56.45**	**311**	*e*P	**P**	**03 48 24.5**	**+0.1**
PYUN	**Piuthan**	**56.90**	**310**	*e*P	**P**	**03 48 27.7**	**+0.2**
SONA0	**Songino Array**	**58.40**	**342**	*e*P	**P**	**03 48 38.9**	**+1.4**
SONM	**Songino Array**	**58.40**	**342**	P	**P**	**03 48 38.9**	**+1.4**
WMQ	**Urumqi**	**63.21**	**327**	P	**P**	**03 49 11.3**	**+1.4**
WMQ				PcP	**PcP**	**03 49 46.5**	**+1.0**
WMQ				pP	pP	03 50 00.3	+4.1
WMQ	comp=Z,5.0nm,0.7s			pmax	pmax		
WMQ	comp=Z,140nm,5.5s			pmax	pmax		
KSH	**Kashi**	**67.75**	**318**	P	**P**	**03 49 40.0**	**+0.8**
KSH				pP	pP	03 50 27.8	+1.7
KSH	comp=Z,210nm,5.7s			pmax	pmax		
MK01	**Makanchi Array**	**68.02**	**327**	*e*P	**P**	**03 49 41.0**	**+0.4**
MK31	**Makanchi Array**	**68.04**	**327**	*e*P	**P**	**03 49 41.0**	**+0.3**
MK32	**Makanchi Array**	**68.04**	**327**	*e*P	**P**	**03 49 41.5**	**+0.7**
MKAR	**Makanchi Array**	**68.04**	**327**	P	**P**	**03 49 41.5**	**+0.7**
MKAR	**Makanchi Array**	**68.04**	**327**	*e*P	**P**	**03 49 41.0**	**+0.3**
MAKZ	**Makanchi**	**68.22**	**327**	*e*P	**P**	**03 49 42.4**	**+0.5**
ZALV	**Zalesovo Beam**	**71.47**	**334**	P	**P**	**03 50 01.4**	**0.0**
ZAA1	**Zalesovo Array**	**71.47**	**334**	*e*P	**P**	**03 50 01.4**	**0.0**
KURBB	**Kurchatov Arra**	**72.34**	**329**	P	**P**	**03 50 07.0**	**+0.3**
KURK	**Kurchatov**	**72.35**	**329**	*e*P	**P**	**03 50 07.0**	**+0.2**
BVAR	**Borovoye Array**	**77.89**	**328**	P	**P**	**03 50 38.8**	**+0.4**
BRVK	**Borovoye**	**77.96**	**328**	*e*P	**P**	**03 50 37.0**	**-1.8**
ABKAR	**Akbulak array**	**82.28**	**322**	*e*P	**P**	**03 51 02.1**	**+0.2**
AKTO	**Aktyubinsk**	**83.85**	**322**	P	**P**	**03 51 10.9**	**+1.0**
TORD	**Torodi Ar. Bea**	**128.29**	**281**	PKP	**PKPdf**	**03 57 47.9**	**+1.4**
TOA1	**Torodi Ar. Sit**	**128.30**	**281**	*e*PKPdf	**PKPdf**	**03 57 47.9**	**+1.4**

*THE **27** 03:43:04.4, 39°.15N×28°.44E, h2km±4km, ML3.5/3, Error ellipse: s-maj=5.8km s-min=1.1km az=69.0*
*DDA **27** 03:43:06.9, 39°.13N×28°.16E, h27km, Ml3.8*
*ISCJB **27** 03:43:07.1±0.4, 39°.08N±0°.02×28°.12E±0°.02, h4km±3km, mb3.1/2, Error ellipse: s-maj=2.6km s-min=2.4km az=19.9*
*CSEM **27** 03:43:07.7±0.1, 39°.07N×28°.11E, h5km, ML3.7, Error ellipse: s-maj=2.1km s-min=2.0km az=34.0*
*ISK **27** 03:43:07.2, 39°.08N×28°.10E, h5km, ML3.7/44*
*ATH **27** 03:43:08.6, 39°.09N×28°.11E, h38km±13km, ML3.5/3, Error ellipse: s-maj=14.0km s-min=1.9km az=65.0*
*IDC **27** 03:43:10.2±3.7, 39°.06N×28°.18E, h35km±49km, mb3.0/2, mb1 3.2/5, mb1mx3.0/59, mbtmp3.1/5, ML3.1/3, Error ellipse: s-maj=28.6km s-min=22.9km az=53.0*
ISC 27 03:43:07.2±1.0, 39°.11N±0°.02×28°.15E±0°.02, h9km±8km, n224, σ1§29/256, 19C-5D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.35**	**228**	*i* P	**Pg**	**03 43 14.5**	**+0.4**
AKHS	**Akhisar**	**0.35**	**228**	P	**Pg**	**03 43 14.5**	**+0.4**
AKS	**Akhisar**	**0.35**	**228**	PG	**Pg**	**03 43 13.9**	**-0.2**
AKS				SG	**Sg**	**03 43 17.9**	**-0.9**
AKS	**Akhisar**	**0.35**	**228**	*e*Pg	**Pg**	**03 43 13.9**	**-0.2**
AKS				*e*Sg	**Sg**	**03 43 17.9**	**-0.9**
STEP	**BALIKESIR_Sava**	**0.42**	**308**	*i* P	**Pg**	**03 43 15.8**	**+0.3**
STEP				*i* S	**Sb**	**03 43 22.5**	**-0.9**
STEP	**BALIKESIR_Sava**	**0.42**	**308**	P	**Pg**	**03 43 15.8**	**+0.3**
STEP				S	**Sb**	**03 43 22.5**	**-0.9**
DEMI	**Demirci**	**0.45**	**99**	*i* P	**Pb**	**03 43 16.6**	**-0.7**
DEMI	**Demirci**	**0.45**	**99**	P	**Pb**	**03 43 16.6**	**-0.7**
DURS	**Dursunbey**	**0.55**	**27**	*i* P	**Pb**	**03 43 18.1**	**-0.9**
DURS				*i* S	**Sb**	**03 43 27.1**	**+0.1**
DURS	**Dursunbey**	**0.55**	**27**	P	**Pb**	**03 43 18.1**	**-0.9**
DURS				S	**Sb**	**03 43 27.1**	**+0.1**
DST	**Dursunbey**	**0.61**	**37**	PG	**Pb**	**03 43 18.9**	**-1.1**
DST	**Dursunbey**	**0.61**	**37**	*e*Pg	**Pb**	**03 43 18.9**	**-1.1**
SMAA	**Simav-Kutahya**	**0.65**	**91**	PG	**Pb**	**03 43 20.6**	**-0.1**
SMAA	**Simav-Kutahya**	**0.65**	**91**	*e*Pg	**Pb**	**03 43 20.6**	**-0.1**
SIMA	**Simav-Kutahya**	**0.65**	**92**	PG	**Pb**	**03 43 20.5**	**-0.2**
SIMA	**Simav-Kutahya**	**0.65**	**92**	*e*Pg	**Pb**	**03 43 20.5**	**-0.2**
MANT	**Manisa**	**0.70**	**153**	*i* P	**Pb**	**03 43 21.1**	**-0.6**
MANT				*i* S	**Sg**	**03 43 29.7**	**-0.2**
MANT	**Manisa**	**0.70**	**153**	P	**Pb**	**03 43 21.1**	**-0.6**
MANT				S	**Sg**	**03 43 29.7**	**-0.2**
KULA	**Kula-Manisa**	**0.72**	**146**	PG	**Pb**	**03 43 21.6**	**-0.3**
KULA	**Kula-Manisa**	**0.72**	**146**	*e*Pg	**Pb**	**03 43 21.6**	**-0.3**
SHAP	**Saphane-Kutahy**	**0.84**	**96**	PG	**Pn**	**03 43 24.6**	**-0.7**
SHAP	**Saphane-Kutahy**	**0.84**	**96**	*e*Pg	**Pn**	**03 43 24.6**	**-0.7**
DKL	**Dikili**	**0.97**	**268**	PG	**Pg**	**03 43 26.1**	**+0.3**
DKL				SG	**Sg**	**03 43 38.5**	**+0.1**
DKL	**Dikili**	**0.97**	**268**	*e*Pg	**Pg**	**03 43 26.1**	**+0.3**
DKL				*e*Sg	**Sg**	**03 43 38.5**	**+0.1**
GEDZ	**Gediz**	**0.98**	**94**	PG	**Pn**	**03 43 26.9**	**-0.3**
GEDZ	**Gediz**	**0.98**	**94**	*e*Pg	**Pn**	**03 43 26.9**	**-0.3**
GONE	**Gonen-Balikesi**	**1.00**	**339**	PG	**Pb**	**03 43 26.9**	**+0.3**
GONE	**Gonen-Balikesi**	**1.00**	**339**	*e*Pg	**Pb**	**03 43 26.9**	**+0.3**
AYVA	**Ayvalik**	**1.15**	**280**	*i* P	**Pg**	**03 43 29.1**	**-0.1**
AYVA				*i* S	**Sb**	**03 43 45.2**	**+1.0**
AYVA	**Ayvalik**	**1.15**	**280**	P	**Pg**	**03 43 29.1**	**-0.1**
AYVA				S	**Sb**	**03 43 45.2**	**+1.0**
KCTX	**Karacabey (Bur**	**1.16**	**8**	PN	**Pn**	**03 43 29.9**	**+0.3**
KCTX	**Karacabey (Bur**	**1.16**	**8**	*e*Pn	**Pn**	**03 43 29.9**	**+0.3**
FOCM	**Fo¨§a**	**1.18**	**251**	PN	**Pg**	**03 43 29.2**	**-0.6**
FOCM	**Fo¨§a**	**1.18**	**251**	*e*Pn	**Pg**	**03 43 29.2**	**-0.6**
AYDB	**Zeytinkoy-Aydi**	**1.18**	**190**	PN	**Pg**	**03 43 29.7**	**-0.2**
AYDB	**Zeytinkoy-Aydi**	**1.18**	**190**	*e*Pn	**Pg**	**03 43 29.7**	**-0.2**
EDC	**Edincik**	**1.25**	**350**	PN	**Pn**	**03 43 31.2**	**+0.4**
EDC	**Edincik**	**1.25**	**350**	*e*Pn	**Pn**	**03 43 31.2**	**+0.4**
KNL	**Bal¨–kesir**	**1.25**	**338**	*i* P	**Pn**	**03 43 31.2**	**+0.4**
KNL				*i* S	**Sn**	**03 43 48.2**	**+0.4**
KHL	**Karahalli**	**1.33**	**126**	PN	**Pb**	**03 43 33.6**	**+1.2**
KHL	**Karahalli**	**1.33**	**126**	*e*Pn	**Pb**	**03 43 33.6**	**+1.2**
KRBN	**Karaburun**	**1.35**	**248**	PN	**Pn**	**03 43 32.8**	**+0.6**
KRBN	**Karaburun**	**1.35**	**248**	*e*Pn	**Pn**	**03 43 32.8**	**+0.6**
BAYC	**CANAKKALE_Bayr**	**1.39**	**297**	*i* P	**Pn**	**03 43 32.8**	**0.0**
BAYC				*i* S	**Sn**	**03 43 53.2**	**+2.0**
BAYC	**CANAKKALE_Bayr**	**1.39**	**297**	P	**Pn**	**03 43 32.8**	**0.0**
BAYC				S	**Sn**	**03 43 53.2**	**+2.0**
URLA	**Izmir**	**1.43**	**239**	PN	**Pn**	**03 43 32.9**	**-0.4**
URLA	**Izmir**	**1.43**	**239**	*i* P	**Pn**	**03 43 32.4**	**-0.9**
URLA				*i* S	**Sb**	**03 43 53.1**	**+0.8**
URLA	**Izmir**	**1.43**	**239**	P	**Pn**	**03 43 32.4**	**-0.9**
URLA	**Izmir**	**1.43**	**239**	*e*Pn	**Pn**	**03 43 32.9**	**-0.4**
URLA				S	**Sb**	**03 43 53.1**	**+0.8**
KRBG	**Karabiga-Canak**	**1.44**	**333**	PN	**Pb**	**03 43 34.1**	**0.0**
KRBG	**Karabiga-Canak**	**1.44**	**333**	*e*Pn	**Pb**	**03 43 34.1**	**0.0**
PRK	**Paraskevi**	**1.47**	**276**	P	**Pn**	**03 43 34.2**	**+0.5**
PRK				S	**Sn**	**03 43 53.3**	**+0.2**
PRK	comp=N,2128μm,0.9s			AML	AML	03 43 57.4	
PRK	comp=E,4465μm,0.8s			AML	AML	03 43 57.9	
PRK	**Paraskevi**	**1.47**	**276**	P	**Pn**	**03 43 33.7**	**0.0**
PRK				S	**Sg**	**03 43 55.9**	**+1.6**
PRK	**Paraskevi**	**1.47**	**276**	P	**Pn**	**03 43 34.1**	**+0.4**
PRK				S	**Sn**	**03 43 52.8**	**-0.2**
AYDN	**Tasoluk**	**1.47**	**188**	*i* P	**Pn**	**03 43 33.3**	**-0.5**
AYDN				*i* S	**Sg**	**03 43 56.2**	**+1.8**
AYDN	**Tasoluk**	**1.47**	**188**	P	**Pn**	**03 43 33.3**	**-0.5**
AYDN				S	**Sg**	**03 43 56.2**	**+1.8**
KUTH	**Kutahya**	**1.48**	**78**	PN	**Pg**	**03 43 35.7**	**+0.1**
KUTH	**Kutahya**	**1.48**	**78**	*e*Pn	**Pg**	**03 43 35.7**	**+0.1**
DENT	**Denizli**	**1.52**	**153**	PN	**Pg**	**03 43 35.9**	**-0.5**
DENT	**Denizli**	**1.52**	**153**	*e*Pn	**Pg**	**03 43 35.9**	**-0.5**
ZEY	**¨zmir**	**1.56**	**236**	*i* P	**Pn**	**03 43 34.0**	**-1.0**
ZEY				*i* S	**Sg**	**03 43 58.4**	**+1.2**
EZN	**Ezine**	**1.58**	**297**	PN	**Pn**	**03 43 35.9**	**+0.6**
EZN	**Ezine**	**1.58**	**297**	*e*Pn	**Pn**	**03 43 35.9**	**+0.6**
GCAM	**G?zelcaml?**	**1.58**	**207**	PN	**Pb**	**03 43 36.5**	**-0.1**
GCAM	**G?zelcaml?**	**1.58**	**207**	*i* P	**Pn**	**03 43 34.1**	**-1.2**
GCAM	**G?zelcaml?**	**1.58**	**207**	P	**Pn**	**03 43 34.2**	**-1.2**
GCAM	**G?zelcaml?**	**1.58**	**207**	*e*Pn	**Pb**	**03 43 36.5**	**-0.1**
DNZL	**Cakiroluk**	**1.59**	**153**	*i* P	**Pg**	**03 43 37.1**	**-0.5**
DNZL	**Cakiroluk**	**1.59**	**153**	P	**Pg**	**03 43 37.1**	**-0.5**
IZI	**Iznik**	**1.59**	**39**	PN	**Pg**	**03 43 38.1**	**+0.4**
IZI	**Iznik**	**1.59**	**39**	*e*Pn	**Pg**	**03 43 38.1**	**+0.4**
GPNR	**Gulpinar-Canak**	**1.60**	**283**	PN	**Pn**	**03 43 36.4**	**+0.8**
GPNR	**Gulpinar-Canak**	**1.60**	**283**	*e*Pn	**Pn**	**03 43 36.4**	**+0.8**
SBT5	**Esenkoy-Cinarc**	**1.62**	**20**	PN	**Pg**	**03 43 37.6**	**-0.6**
SBT5	**Esenkoy-Cinarc**	**1.62**	**20**	*e*Pn	**Pg**	**03 43 37.6**	**-0.6**
CESE	**¨e¨me**	**1.65**	**242**	PN	**Pn**	**03 43 36.9**	**+0.7**
CESE	**¨e¨me**	**1.65**	**242**	*e*Pn	**Pn**	**03 43 36.9**	**+0.7**
LPK	**Lapseki**	**1.65**	**320**	PN	**Pn**	**03 43 36.7**	**+0.4**
LPK	**Lapseki**	**1.65**	**320**	*e*Pn	**Pn**	**03 43 36.7**	**+0.4**
AUBOZ	**BOZOYUK**	**1.66**	**61**	PN	**Pg**	**03 43 38.5**	**-0.5**
AUBOZ	**BOZOYUK**	**1.66**	**61**	*e*Pn	**Pg**	**03 43 38.5**	**-0.5**
CAVI	**Cavuskoy**	**1.70**	**50**	PN	**Pg**	**03 43 39.4**	**-0.4**
CAVI	**Cavuskoy**	**1.70**	**50**	*e*Pn	**Pg**	**03 43 39.4**	**-0.4**
YLV	**Yalova**	**1.73**	**33**	PN	**Pb**	**03 43 38.9**	**-0.2**
YLV	**Yalova**	**1.73**	**33**	*e*Pn	**Pb**	**03 43 38.9**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.74**	**335**	PN	**Pn**	**03 43 38.3**	**+0.7**
RKY	**Sarkoy-Tekirda**	**1.74**	**335**	*e*Pn	**Pn**	**03 43 38.3**	**+0.7**
SART	**Tekirdag**	**1.74**	**335**	*i* P	**Pn**	**03 43 36.9**	**-0.7**
SART	**Tekirdag**	**1.74**	**335**	P	**Pn**	**03 43 36.9**	**-0.7**
TAVA	**DENIZLI_Tavas**	**1.75**	**160**	*i* P	**Pn**	**03 43 37.7**	**-0.1**
TAVA	**DENIZLI_Tavas**	**1.75**	**160**	P	**Pn**	**03 43 37.7**	**-0.1**
SBT3	**Marmara-Eregli**	**1.77**	**356**	PN	**Pg**	**03 43 40.1**	**-1.1**
SBT3	**Marmara-Eregli**	**1.77**	**356**	*e*Pn	**Pg**	**03 43 40.1**	**-1.1**
BOZC	**Bozcaada**	**1.78**	**295**	PN	**Pn**	**03 43 38.3**	**+0.2**
BOZC	**Bozcaada**	**1.78**	**295**	*i* P	**Pn**	**03 43 38.6**	**+0.5**
BOZC	**Bozcaada**	**1.78**	**295**	*e*Pn	**Pn**	**03 43 38.3**	**+0.2**
KZIL	**AFYON_Kizioren**	**1.78**	**118**	*i* P	**Pn**	**03 43 37.6**	**-0.6**
KZIL	**AFYON_Kizioren**	**1.78**	**118**	P	**Pn**	**03 43 37.6**	**-0.6**
SIGR	**SIGRI**	**1.79**	**274**	PN	**Pn**	**03 43 39.4**	**+1.3**
SIGR	**SIGRI**	**1.79**	**274**	P	**Pn**	**03 43 38.2**	**+0.1**
SIGR				S	**Sn**	**03 43 59.8**	**-1.1**

BOLV	Bolvadin	2.22	99	P	Pb	03 43 45.5	-2.1
GULT	Gulveren	2.25	53	PN	Pb	03 43 46.9	-1.1
GULT	Gulveren	2.25	53	ePn	Pb	03 43 46.9	-1.1
TURN	Turunc	2.27	171	PN	Pb	03 43 46.7	-1.5
TURN	Turunc	2.27	171	ePn	Pb	03 43 46.7	-1.5
SPNC	Sapanca-Adapaz	2.29	46	PN	Pb	03 43 47.1	-1.5
SPNC	Sapanca-Adapaz	2.29	46	ePn	Pb	03 43 47.1	-1.5
DALY	Dalyan (Mu¨la	2.33	170	PN	Pn	03 43 46.7	+1.1
DALY	Dalyan (Mu¨la	2.33	170	ePn	Pn	03 43 46.7	+1.1
SAUV	Serdivan-Sakar	2.33	45	PN	Pb	03 43 47.9	-1.5
SAUV	Serdivan-Sakar	2.33	45	ePn	Pb	03 43 47.9	-1.5
BAGO	Egridir - ISPA	2.35	118	*i* P	Pn	03 43 46.6	+0.5
BAGO				*i* S	Sg	03 44 30.9	+8.1
ALN	Alexandroupoli	2.40	318	P	Pn	03 43 47.2	+0.6
ALN	Alexandroupoli	2.40	318	P	Pn	03 43 45.4	-1.3
ALN	Alexandroupoli	2.40	318	P	Pn	03 43 47.3	+0.6
DAT	Datca	2.42	191	PN	Pn	03 43 47.5	+0.5
DAT	Datca	2.42	191	ePn	Pn	03 43 47.5	+0.5
LIA	Limnos Island	2.42	290	P	Pn	03 43 47.3	+0.4
LIA	Limnos Island	2.42	290	P	Pn	03 43 47.4	+0.4
SMTH	Samothraki Isl	2.43	305	P	Pn	03 43 47.7	+0.7
SMTH	Samothraki Isl	2.43	305	P	Pn	03 43 47.7	+0.7
FETY	Fethiye	2.58	163	PN	Pn	03 43 49.1	-0.1
FETY	Fethiye	2.58	163	ePn	Pn	03 43 49.1	-0.1
AUSIV	SIVRIHISAR	2.65	82	PN	Pb	03 43 52.1	-2.8
AUSIV	SIVRIHISAR	2.65	82	ePn	Pb	03 43 52.1	-2.8
AUMIH	MIHALICIK	2.69	73	PN	Pb	03 43 53.1	-2.4
AUMIH	MIHALICIK	2.69	73	ePn	Pb	03 43 53.1	-2.4
KORT	Korkueli	2.73	140	PN	Pn	03 43 52.1	+0.8
KORT	Korkueli	2.73	140	ePn	Pn	03 43 52.1	+0.8
ELL	Elmali	2.74	149	PN	Pn	03 43 52.7	+1.3
ELL	Elmali	2.74	149	ePn	Pn	03 43 52.7	+1.3
SUTC	Sutluce-Ispart	2.78	125	PN	Pn	03 43 53.6	+1.7
SUTC	Sutluce-Ispart	2.78	125	ePn	Pn	03 43 53.6	+1.7
RDO	Rodhopi	2.85	316	P	Pn	03 43 53.1	+0.3
RDO	Rodhopi	2.85	316	P	Pn	03 43 53.4	+0.6
ARG	Arkhangelos	2.89	180	PN	Pn	03 43 54.5	+1.1
ARG	Arkhangelos	2.89	180	P	Pn	03 43 53.5	+0.1
ARG	Arkhangelos	2.89	180	P	Pn	03 43 53.7	+0.3
ARG	Arkhangelos	2.89	180	ePn	Pn	03 43 54.5	+1.1
KIZT	Kizilcal	2.92	93	PN	Pn	03 43 55.7	+1.9
KIZT	Kizilcal	2.92	93	ePn	Pn	03 43 55.7	+1.9
AKAS	Kas	3.10	158	PN	Pn	03 43 57.8	+1.4
AKAS	Kas	3.10	158	ePn	Pn	03 43 57.8	+1.4
KDHN	Kadinhani	3.15	100	*i* P	Pn	03 43 57.4	+0.3
KDHN	Kadinhani	3.15	100	P	Pn	03 43 57.4	+0.3
KSL	Kastellorizon	3.17	159	P	Pn	03 43 59.4	+2.2
KONT	Konya--Tatoy	3.50	108	*i* P	Pn	03 44 03.1	+1.3
ANTO	Ankara	3.67	77	⇑*i*P	Pg	03 44 19.0	+1.5
BRTR	Keskin Array B	4.30	80	Pn	Pn	03 44 14.1	+1.3
	comp=E,0.8nm,0.3s,baz=259,slow=13,SNR=26						
BRTR				Pg	Pg	03 44 29.2	-0.3
	comp=E,1.0nm,0.3s,baz=260,slow=14,SNR=6.0						
BRTR				Lg	Lg	03 45 26.2	
	comp=E,0.7nm,0.3s,baz=264,slow=26,SNR=9.8						
IDI	Anoyia	4.62	215	Pn	Pn	03 44 18.2	+1.0
	comp=E,0.6nm,0.3s,baz=20,slow=12,SNR=5.3						
VTS	Vitosha	5.11	314	⇑*i*P	Pn	03 44 28.6	+4.6
VTS	Vitosha	5.11	314	⇑*i*P	Pn	03 44 28.6	+4.6
TIRR	Tirgusor	5.34	2	⇓*i*P	Pn	03 44 29.9	+2.9
TIRR	Tirgusor	5.34	2	⇓*i*P	Pn	03 44 29.9	+2.9
TLB	Topalu	5.47	359	⇑*i*P	Pn	03 44 31.3	+2.6
TLB	Topalu	5.47	359	⇑*i*P	Pn	03 44 31.3	+2.6
TLCR		6.09	4	⇑*i*P	Pn	03 44 40.2	+2.9
TLCR		6.09	4	⇑*i*P	Pn	03 44 40.2	+2.9
MLR	Muntele Rosu	6.58	346	Pn	Pn	03 44 46.9	+2.8
	comp=E,0.2nm,0.3s,baz=122,slow=1.4,SNR=8.1						
MLR	Muntele Rosu	6.58	346	⇑*i*P	Pn	03 44 46.4	+2.3
MLR	Muntele Rosu	6.58	346	⇑*i*P	Pn	03 44 46.4	+2.3
VOIR		6.72	341	⇑*i*P	Pn	03 44 48.6	+2.5
VOIR		6.72	341	⇑*i*P	Pn	03 44 48.6	+2.5
ARR	Arges	6.77	338	⇑*i*P	Pn	03 44 49.5	+2.8
ARR	Arges	6.77	338	⇑*i*P	Pn	03 44 49.5	+2.8
VRI	Vrincioaia	6.83	352	⇑*i*P	Pn	03 44 49.9	+2.4
VRI	Vrincioaia	6.83	352	⇑*i*P	Pn	03 44 49.9	+2.4
DOPR	Dopca	7.14	344	⇓*i*P	Pn	03 44 53.7	+1.9
DOPR	Dopca	7.14	344	⇓*i*P	Pn	03 44 53.7	+1.9
TESR	Tescani	7.47	352	⇑*i*P	Pn	03 44 59.0	+2.7
TESR	Tescani	7.47	352	⇑*i*P	Pn	03 44 59.0	+2.7
PDG	Podgorica	7.52	299	⇓*i*P	Pn	03 45 03.6	+6.7
MMAI	Mount Meron Ar	8.46	134	Pn	Pn	03 45 06.4	-3.4
	comp=E,3.6nm,0.3s,baz=343,slow=9.2,SNR=4.4						
BURAR	Bucovina Array	8.76	347	⇑*i*P	Pn	03 45 16.7	+2.7
BURAR	Bucovina Array	8.76	347	⇑*i*P	Pn	03 45 16.7	+2.7
ESDC	Sonseca Array	24.76	282	P	P	03 48 27.1	-1.9
	comp=E,0.1nm,0.4s,baz=78,slow=9.4,SNR=2.4						
TORD	Torodi Ar. Bea	34.87	229	P	P	03 49 59.0	+0.1
	comp=E,0.4nm,0.7s,baz=37,slow=8.7,SNR=5.1						

*ISCJB **27** 03:47:50.1±0.2, 3.74N±0.03×76.31W±0.03, h159km±1km, mb4.4/68, Error ellipse: s-maj=4.3km s-min=3.3km az=17.3*

*RSNC **27** 03:47:52.3±1.2, 3.76N×76.34W, h143km±6km, ML4.5, Mw4.5*

*NEIC **27** 03:47:52.0±0.0, 3.76N×76.34W, h143km, mb4.5/67, After RSNC.*

NEIC Felt [III] at Armenia and Cali. Also felt in Caldas and at Bogota, Calarca, Ginebra and Pereira.

*IDC **27** 03:47:52.3±1.4, 3.69N×76.23W, h164km±11km, mb3.8/14, mb1 4.0/19, mb1mx3.9/45, mbtmp4.4/19, MS3.0/1, Ms1 3.0/1, ms1mx2.3/42, Error ellipse: s-maj=15.9km s-min=10.8km az=53.0*

ISC 27 03:47:51.0±0.5, 3.74N±0.03×76.32W±0.04, h147km±5km, **n388**, σ1§11/414, **mb4.4**/68, **Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOTC	Yotoco, Valle	0.24	353	eP	Pn	03 48 11.4	+0.1
YOTC				eS	Sn	03 48 26.5	-0.2
YOTC				*i*		03 48 30.9	
	comp=Z,6μm,0.3s						
HORQ	Saladito	0.40	230	eP	Pn	03 48 11.9	-0.1
HORQ				eS	Sn	03 48 28.1	+0.2
MARP	Paez Belalcaza	0.96	158	eP	Pn	03 48 16.6	+0.9
MARP				eS	Sn	03 48 35.2	+0.9
MALC	Bahia Malaga	1.05	285	eP	Pn	03 48 17.6	+1.6
PLMC	San Jos¨ del	1.16	2	eP	Pn	03 48 17.5	+0.4
PLMC				eS	Sn	03 48 37.0	0.0
ANIL	Santa Ana	1.18	51	eP	Pn	03 48 17.2	-0.3
ANIL				eS	Sn	03 48 37.6	-0.1
POPC	Popayan, Colom	1.25	197	eP	Pn	03 48 18.1	-0.1
POPC				eS	Sn	03 48 38.2	-0.6
TOLC	Tolima	1.30	50	eP	Pn	03 48 19.2	+0.5
TOLC				eS	Sn	03 48 40.0	+0.2
BETC	Betania	1.37	140	eP	Pn	03 48 19.6	+0.4
PCON	Cinco Dias	1.41	183	eP	Pn	03 48 21.2	+1.1
PCON				eS	Sn	03 48 43.4	+1.1
PRAC	Prado	1.43	91	ePn	Pn	03 48 20.6	+0.9
PRAC				eSn	Sn	03 48 42.8	+1.2
PRAC	Prado	1.43	91	eP	Pn	03 48 20.5	+0.8
PRAC				eS	Sn	03 48 41.7	+0.1
PRAC				*i*		03 48 44.7	
	comp=Z,3μm,0.2s						
SOTA	Rioblanco	1.62	190	eP	Pn	03 48 23.1	+0.8
SOTA				*i*		03 48 24.0	
	comp=Z,9μm,0.3s						
SOTA				eS	Sn	03 48 46.8	+0.6
GUYC	Guyana, Colomb	1.74	32	eP	Pn	03 48 24.3	+0.7
GUYC				eS	Sn	03 48 48.3	0.0
GUYC				*i*		03 48 54.2	
	comp=Z,3μm,0.5s						
GRGC	Isla de Gorgon	1.99	248	eP	Pn	03 48 25.0	-0.9
FLOC	Florencia	2.25	163	eP	Pn	03 48 29.6	+0.6
FLOC				eS	Sn	03 48 58.2	0.0
CRUC	La Cruz	2.25	196	eP	Pn	03 48 29.8	+0.4
CRUC				*i*		03 48 32.1	
	comp=Z,3μm,0.7s						
ROSC	El Rosal	2.27	61	P	Pn	03 48 31.4	+1.8
	comp=Z,107nm,0.3s,baz=21,slow=2.6,SNR=259						
ROSC				S	Sn	03 49 01.9	+2.7
	comp=Z,78nm,0.3s,baz=37,slow=21,SNR=19						
ROSC	El Rosal	2.27	61	eP	Pn	03 48 31.4	+1.8
ROSC				eS	Sn	03 49 01.1	+1.8
NORC	Norcasia	2.31	39	eP	Pn	03 48 30.3	+0.4
NORC				eS	Sn	03 48 60.0	+0.2
SJAC	San Juan de Ar	2.41	101	eS	Sn	03 49 03.5	+1.7
HELC	Santa Helena	2.56	18	ePn	Pn	03 48 33.1	0.0
HELC				eSn	Sn	03 49 05.2	-0.3
HELC	Santa Helena	2.56	18	eP	Pn	03 48 33.4	+0.3
HELC				*i*		03 48 35.2	
	comp=Z,1μm,0.5s						
HELC				eS	Sn	03 49 05.5	0.0
CPAS2	Pasto	2.67	200	eP	Pn	03 48 35.0	+0.4
CPAS2				*i*		03 48 36.4	
	comp=Z,2μm,0.5s						
CPAS2				eS	Sn	03 49 08.7	+0.6
CHIC	Chingaza	2.73	71	eP	Pn	03 48 36.6	+1.4
CHIC				*i*		03 49 18.6	
	comp=Z,374nm,0.5s						
RUSC	La Rusia	3.87	56	ePn	Pn	03 48 50.0	0.0
RUSC				eSn	Sn	03 49 37.6	+2.0
OTAV	Otavalo	4.08	212	ePn	Pn	03 48 52.2	-0.6
OTAV				eSn	Sn	03 49 39.4	-1.3
BCIP	Isla Barro Col	6.42	327	ePn	Pn	03 49 23.8	+0.4
BCIP				eSn	Sn	03 50 35.7	-0.1
SDV	Santo Domingo	7.62	48	P	Pn	03 49 38.9	-0.7
	comp=Z,18nm,0.3s,baz=240,slow=5.7,SNR=52						
SDV				S	Sn	03 51 01.0	-3.7
	comp=Z,23nm,0.3s,baz=54,slow=23,SNR=14						
SDV	Santo Domingo	7.62	48	ePn	Pn	03 49 38.7	-0.9
SDV				eSn	Sn	03 50 58.2	-6.6
JTS	JuntasAbangare	10.76	308	LR	LR	03 54 56.4	
	comp=Z,84nm,19.3s,baz=210,slow=39						
PCRV	Puerto La Cruz	13.23	61	P	Pn	03 50 54.9	+1.4
	comp=Z,0.7nm,0.3s,baz=225,slow=4.3,SNR=3.4						
MTDJ	Mount Denham	14.45	355	eP	P	03 51 13.3	+1.8
NNA	Nana	15.63	182	P	P	03 51 26.7	+2.0
	comp=Z,4.0nm,0.3s,baz=335,slow=10.0,SNR=8.6						
NNA	Nana	15.63	182	ePn	P	03 51 26.9	+2.3
PTGA	Pitinga	16.93	105	P	P	03 51 39.1	+0.2
	comp=Z,12nm,0.3s,baz=295,slow=13,SNR=93						
PTGA	Pitinga	16.93	105	eP	P	03 51 38.6	-0.4
	comp=Z,38nm,0.4s						
AOPR	Arecibo Observ	17.27	32	eP	Pn	03 51 43.2	-0.2
	comp=Z,30nm,0.8s						
SJG	San Juan	17.41	34	P	P	03 51 44.7	+0.6
	comp=Z,2.8nm,0.3s,baz=223,slow=11,SNR=8.6						
SJG	San Juan	17.41	34	eP	P	03 51 44.7	+0.6
	comp=Z,14nm,0.6s						
EMPR	Esperanza - Ma	17.50	32	eP	Pn	03 51 46.4	+0.3
	comp=Z,121nm,1.3s						
HUMP	Col San Antoni	17.60	35	eP	P	03 51 45.8	-0.4
	comp=Z,22nm,0.8s						
CBYP	Canovanas	17.70	35	eP	P	03 51 47.4	0.0
	comp=Z,31nm,0.8s						
MTP	Monte Pirata	17.74	36	eP	P	03 51 48.0	+0.2
	comp=Z,17nm,0.8s						
CDVI	St. Croix	17.94	38	eP	P	03 51 50.3	+0.4
	comp=Z,49nm,0.5s						
SAML	Samuel	18.18	134	eP	P	03 51 51.6	-0.9
	comp=Z,43nm,0.8s						
STVI	Saint Thomas	18.29	37	eP	P	03 51 52.6	-1.1
	comp=Z,27nm,0.7s						
GRTK	Grand Turk	18.37	15	eP	P	03 51 55.0	+0.5
	comp=Z,117nm,1.0s						
FDF	Fort de France	18.51	53	eP	P	03 51 55.2	-1.1
	comp=Z,127nm,1.5s						
BAMF	Morne Balai	18.56	53	eP	P	03 51 57.6	+0.8
CCIG	Comitan	19.93	310	eP	P	03 52 09.8	-1.9
	comp=Z,9.4nm,0.8s						
LPAZ	La Paz	21.48	158	P	P	03 52 26.7	-2.2
	comp=Z,5.1nm,0.7s,baz=338,slow=4.8,SNR=25						
LPAZ	La Paz	21.48	158	eP	P	03 52 26.6	-2.3
	comp=Z,5.0nm,0.6s						
MNMC	Minye Minye	23.67	164	eP	P	03 52 47.9	-1.7
	comp=Z,17nm,0.9s						
SIV	San Ignacio	24.73	143	P	P	03 52 57.5	-1.5
	comp=Z,6.1nm,0.6s,baz=328,slow=9.3,SNR=39						
PB01	IPOC Station P	25.52	165	eP	P	03 53 06.6	+0.4
	comp=Z,18nm,0.8s						
TLIG	Tlapa	25.77	304	eP	P	03 53 07.4	-1.1
	comp=Z,5.2nm,1.1s						
351A	Pinckard	28.75	343	P	P	03 53 36.3	+1.5
	baz=161						
154A	Montrose	29.42	348	P	P	03 53 42.0	+1.3
	baz=166						
251A	Midway	29.47	344	P	P	03 53 42.4	+1.2
	baz=161						
446A	Poplarville	29.59	337	P	P	03 53 43.9	+1.7
	baz=153						
250A	Grady	29.60	343	P	P	03 53 43.7	+1.3
	baz=160						
250A	Grady	29.60	343	eP	P	03 53 41.8	-0.6
	comp=Z,18nm,0.7s						
347A	Saraland	29.82	339	P	P	03 53 45.7	+1.4
	baz=155						
Z55A	Blythe	29.83	350	P	P	03 53 45.7	+1.4
	baz=168						
152A	Waverly Hall	29.84	346	P	P	03 53 45.4	+1.0
	baz=163						
151A	Opelika	29.86	345	P	P	03 53 45.4	+0.8
	baz=162						
249A	Camden	29.86	341	P	P	03 53 46.0	+1.4
	baz=158						
Z54A	Sparta	29.97	349	P	P	03 53 46.9	+1.3
	baz=167						
150A	Eclectic	30.12	344	P	P	03 53 48.2	+1.3
	baz=160						
Z53A	Monticello	30.16	348	P	P	03 53 48.4	+1.2
	baz=166						
248A	Dixon Mills	30.18	340	P	P	03 53 48.7	+1.3
	baz=157						
Z52A	Williamson	30.26	346	P	P	03 53 49.4	+1.3
	baz=166						
GOGA	Godfrey	30.26	348	P	P	03 53 49.5	+1.3
	baz=166						
GOGA	Godfrey	30.26	348	eP	P	03 53 49.1	+0.9
	comp=Z,22nm,1.4s						
149A	Jones	30.34	342	P	P	03 53 49.9	+1.0
	baz=159						
247A	Quitman	30.44	339	P	P	03 53 51.3	+1.6
	baz=155						
Z51A	Franklin	30.57	345	P	P	03 53 51.9	+1.1
	baz=162						
Z50A	Ashland	30.70	344	P	P	03 53 53.3	+1.3
	baz=161						
Z50A	Ashland	30.70	344	eP	P	03 53 53.4	+1.3
	comp=Z,17nm,0.8s						
Y53A	Monroe	30.72	348	P	P	03 53 53.4	+1.2
	baz=166						
344A	Westbrook Farm	30.72	335	P	P	03 53 53.7	+1.4
	baz=151						
344A	Westbrook Farm	30.72	335	eP	P	03 53 54.0	+1.8
	comp=Z,5.7nm,0.9s						
LRAL	Lakeview Retre	30.81	342	P	P	03 53 54.2	+1.2
	baz=159						
LRAL	Lakeview Retre	30.81	342	eP	P	03 53 54.2	+1.2
	comp=Z,15nm,1.1s						
Z49A	Columbiana	30.82	343	P	P	03 53 54.0	+1.0
	baz=160						
X53A	Estanollee	31.29	349	P	P	03 53 58.5	+1.3
	baz=167						
Z48A	Northport	31.30	342	P	P	03 53 57.8	+0.6
	baz=158						
Z47A	Carrollton	31.30	341	P	P	03 53 58.0	+0.7
	baz=157						
Y49A	Blount Mountai	31.41	344	P	P	03 53 59.0	+0.8
	baz=160						
145A	Houston Renfro	31.42	338	P	P	03 53 58.9	+0.5
	baz=153						
Z46A	Louisville	31.59	340	P	P	03 54 00.8	+1.0
	baz=156						
Y48A	Jasper	31.68	343	P	P	03 54 01.0	+0.4
	baz=159						
BG3	Lake Jocassee	31.70	350	eP	P	03 54 02.2	+1.5
	comp=Z,11nm,1.3s						
X50B	Fort Payne	31.77	345	P	P	03 54 02.1	+0.7
	baz=162						
242A	Grayson	31.86	334	P	P	03 54 03.1	+0.9
	baz=149						
Y47A	UCPARC, Winfie	31.88	342	P	P	03 54 03.0	+0.7
	baz=158						
W53A	Cullowhee	31.91	349	P	P	03 54 04.2	+1.4
	baz=167						
W52A	Murphy	31.98	348	P	P	03 54 04.5	+1.2
	baz=166						
X49A	Woodville	32.00	344	P	P	03 54 04.3	+0.9
	baz=161						
X48A	Hartselle	32.14	343	P	P	03 54 05.2	+0.6
	baz=160						
X48A	Hartselle	32.14	343	eP	P	03 54 05.4	+0.7
	comp=Z,8.6nm,0.8s						
Y46A	Houston	32.19	340	P	P	03 54 05.5	+0.5
	baz=156,SNR=5.3						
V53A	Saluda	32.33	350	P	P	03 54 07.6	+1.2
	baz=168						
V53A	Saluda	32.33	350	eP	P	03 54 07.4	+1.1
W50A	Signal Mountai	32.39	346	P	P	03 54 08.3	+1.4
	baz=163						
W50A	Signal Mountai	32.39	346	eP	P	03 54 05.6	-1.3
Y45A	Yeager Farm, C	32.41	339	P	P	03 54 07.8	+0.8
	baz=155						
X47A	Russelville	32.45	342	P	P	03 54 07.8	+0.5
	baz=158						
TKL	Tuckaleechee C	32.50	349	eP	P	03 54 05.3	-2.5
	comp=Z,25nm,1.4s						
W49A	Belvidere	32.56	345	P	P	03 54 08.9	+0.6
	baz=161						
V52A	Sevierville	32.64	349	P	P	03 54 10.0	+1.0
	baz=166						
V52A	Sevierville	32.64	349	eP	P	03 54 10.1	+1.0
X46A	Booneville	32.71	341	P	P	03 54 09.8	+0.2
	baz=157						
Y44A	Strider, Charl	32.74	338	P	P	03 54 10.1	+0.3
	baz=154						
W48A	Pulaski	32.76	344	P	P	03 54 10.6	+0.6
	baz=160						
V51A	Loudon	32.76	348	P	P	03 54 10.8	+0.8
	baz=165						
V50A	Pikevile	32.80	347	P	P	03 54 11.4	+1.1
	baz=164						
X45A	UM Field Stati	32.86	340	P	P	03 54 11.6	+0.7
	baz=156						
833A	Chaparral WMA,	32.87	320	P	P	03 54 10.7	-0.3
	baz=134						
U53A	Fall Branch	32.97	351	P	P	03 54 12.8	+0.9
	baz=169						
W47A	Westpoint	33.05	343	P	P	03 54 13.1	+0.5
	baz=159,SNR=6.1						
V49A	McMinnville	33.08	346	P	P	03 54 13.5	+0.7
	baz=162						
W46A	Michie	33.18	342	P	P	03 54 13.8	+0.2
	baz=158						
Y42A	Garnett, Star	33.23	336	P	P	03 54 14.8	+0.6
	baz=151						
V48A	Smith Brothers	33.29	344	P	P	03 54 15.3	+0.7
	baz=161,SNR=15						
V48A	Smith Brothers	33.29	344	eP	P	03 54 15.6	+1.0
	comp=Z,27nm,0.7s						
TZTN	Tazewell	33.32	349	P	P	03 54 15.8	+1.0
	baz=167						
W45A	Hickory Valley	33.46	341	P	P	03 54 16.0	-0.1
	baz=156						
V47A	Nunnelly	33.57	343	P	P	03 54 17.3	+0.3
	baz=160						
U49A	Red Boiling Sp	33.76	346	P	P	03 54 19.2	+0.5
	baz=163						
T52A	Hallie	33.77	350	P	P	03 54 19.7	+0.9
	baz=168						
X42A	Stuttgart	33.80	337	P	P	03 54 19.5	+0.5
	baz=152						
WVT	Waverly	33.94	343	P	P	03 54 20.4	+0.2
	baz=159						
WVT	Waverly	33.94	343	eP	P	03 54 19.9	-0.3
	comp=Z,8.7nm,0.7s						
U48A	Cassie Pea, Po	33.94	345	P	P	03 54 20.9	+0.6
	baz=162						
Y40A	Okolona	34.01	334	P	P	03 54 20.9	0.0
	baz=149						
U47A	Clarksville	34.08	344	P	P	03 54 21.6	+0.2
	baz=160						
X41A	Kaden, Bauxite	34.10	336	P	P	03 54 21.3	-0.3
	baz=150						
X40A	Basin Creek Fa	34.23	335	P	P	03 54 23.2	+0.4
	baz=150						
U46A	Springville	34.25	343	P	P	03 54 23.4	+0.4
	baz=159						
T49A	Edmonton	34.27	347	P	P	03 54 23.6	+0.5
	baz=164						
CBN	Corbin Frederi	34.31	359	P	P	03 54 24.6	+1.2
	baz=178						
S52A	Salyersville	34.34	350	P	P	03 54 24.8	+1.1
	baz=168						
S51A	Beattyville	34.39	350	P	P	03 54 25.1	+1.0
	baz=167						
U45A	Rockin P Farm,	34.42	342	P	P	03 54 24.6	+0.3
	baz=158						
T48A	Bowling Green	34.47	346	P	P	03 54 25.4	+0.5
	baz=162						
T47A	Sharon Grove	34.54	345	P	P	03 54 25.5	+0.1
	baz=161,SNR=5.1						
T47A	Sharon Grove	34.54	345	eP	P	03 54 25.7	+0.3
	comp=Z,13nm,0.6s						
MIAR	Mount Ida	34.59	334	P	P	03 54 25.4	-0.5
	baz=149						
U44B	Burton Farm, H	34.59	341	P	P	03 54 25.7	-0.1
	baz=157						
X39A	Fountain Ranch	34.80	334	P	P	03 54 28.1	+0.4
	baz=148						
T46A	Princeton	34.81	344	P	P	03 54 27.7	0.0
	baz=160						
V42A	Cord	34.81	338	P	P	03 54 26.8	-0.9
	baz=153,SNR=5.6						
S48A	Wiedeman Farm,	34.91	346	P	P	03 54 28.6	0.0
	baz=163						
W40A	Ferguson Farm,	34.93	336	P	P	03 54 28.8	0.0
	baz=150						
U43A	Rector	34.97	340	P	P	03 54 28.9	-0.2
	baz=155						
V41A	Mountainview	35.09	337	P	P	03 54 29.5	-0.7
	baz=152						
W39A	Magazine	35.24	335	P	P	03 54 31.4	0.0
	baz=149						
U42A	Revenden	35.25	339	P	P	03 54 31.1	-0.3
	baz=154						
PBMO	Poplar Bluff	35.35	340	eP	P	03 54 32.1	-0.2
	comp=Z,8.4nm,0.8s						
S46A	Don Dixon Farm	35.36	344	P	P	03 54 32.1	-0.3
	baz=160						
V40A	Witts Springs	35.36	336	P	P	03 54 32.1	-0.5
	baz=151,SNR=7.7						
V40A	Witts Springs	35.36	336	eP	P	03 54 32.4	-0.1
	comp=Z,11nm,0.8s						
U41A	Viola	35.49	338	P	P	03 54 33.1	-0.4
	baz=153						
WCI	Wyandotte Cave	35.52	346	P	P	03 54 33.8	0.0
	baz=163						
T43A	Greenville	35.58	341	P	P	03 54 33.8	-0.5
	baz=156						
R48A	Northridge Ran

T39A	Clever	36.64	337	P	P	03 54 42.9	-0.5
	baz=151						
P47A	Martinsville	36.71	347	P	P	03 54 43.7	-0.2
	baz=163						
TUL1	Leonard	36.72	333	P	P	03 54 43.6	-0.4
	baz=146,SNR=9.2						
TUL1	Leonard	36.72	333	eP	P	03 54 43.8	-0.2
	comp=Z,18nm,0.8s						
SSPA	Standing Stone	36.76	358	P	P	03 54 45.4	+1.1
	baz=177						
CCM	Cathedral Cave	36.78	340	P	P	03 54 43.3	-1.2
	baz=155						
CCM	Cathedral Cave	36.78	340	eP	P	03 54 43.8	-0.7
	comp=Z,9.3nm,0.9s						
S40A	Lebanon	36.81	338	P	P	03 54 44.1	-0.7
	baz=152,SNR=8.2						
ACSO	Alum Creek Sta	36.82	351	P	P	03 54 45.6	+0.8
	baz=169						
R42A	Luebbering	36.83	341	P	P	03 54 44.3	-0.6
	baz=156						
O50A	Cable	36.84	351	P	P	03 54 45.8	+0.8
	baz=168						
Q44A	Meyer Farm, Va	36.86	343	P	P	03 54 44.4	-0.7
	baz=159						
T38A	Diamond	37.02	336	P	P	03 54 45.6	-1.0
	baz=149						
R41A	Rosebud	37.04	340	P	P	03 54 46.2	-0.6
	baz=155						
P46A	Rosedale	37.05	346	P	P	03 54 46.3	-0.5
	baz=162						
Q43A	New Douglas	37.09	343	P	P	03 54 46.3	-0.8
	baz=158						
PAL	Palisades	37.16	3	P	P	03 54 48.3	+0.6
	baz=184						
N54A	Moraine State	37.20	355	P	P	03 54 49.5	+1.4
	baz=174						
S39A	Bolivar	37.20	337	P	P	03 54 47.1	-1.0
	baz=151,SNR=5.5						
S39A	Bolivar	37.20	337	eP	P	03 54 47.1	-1.0
	comp=Z,6.8nm,0.6s						
WMOK	Wichita Mounta	37.23	329	eP	P	03 54 48.0	-0.4
	comp=Z,3.8nm,0.7s						
WMOK				ePcP	PcP	03 57 07.4	+2.3
P44A	Sand Creek, Wi	37.27	344	P	P	03 54 48.5	-0.2
	baz=160						
Q42A	Golden Eagle	37.32	342	P	P	03 54 48.5	-0.5
	baz=156						
R40A	Maddies Statio	37.34	339	P	P	03 54 48.2	-1.1
	baz=153						
S38A	Stockton	37.38	337	P	P	03 54 49.2	-0.4
	baz=150						
O47A	Sheridan	37.41	348	P	P	03 54 49.4	-0.3
	baz=164						
Q41A	Truxton	37.59	341	P	P	03 54 51.0	-0.3
	baz=155						
R39A	Chumby, Stover	37.64	338	P	P	03 54 50.7	-1.1
	baz=152						
M54A	Oil Creek Stat	37.72	356	P	P	03 54 53.4	+0.9
	baz=175						
SFIN	Lafayette	37.75	347	P	P	03 54 51.5	-1.1
	baz=162						
O45A	Potomac	37.78	346	P	P	03 54 52.1	-0.8
	baz=161						
R38A	Fenwick Farm,	37.86	337	P	P	03 54 52.6	-1.0
	baz=151						
O44A	Mansfield	37.88	345	P	P	03 54 52.6	-1.1
	baz=160						
P42A	Winchester	37.88	342	P	P	03 54 52.9	-0.9
	baz=157						
Q40A	Laux Farm, Aux	37.91	340	P	P	03 54 53.3	-0.7
	baz=154						
P41A	Barry, Barry	38.19	341	P	P	03 54 55.3	-1.0
	baz=156						
Q39A	Willow Grove F	38.27	339	P	P	03 54 55.9	-1.1
	baz=153						
BINY	Binghamton	38.29	0	P	P	03 54 58.8	+1.6
	baz=181						
N44A	Piper City	38.40	346	P	P	03 54 57.2	-0.8
	baz=161						
Q38A	Cooks Store, C	38.43	338	P	P	03 54 57.7	-0.7
	baz=152						
HDIL	Hopedale	38.48	344	P	P	03 54 57.3	-1.4
	baz=159						
O41A	Passleys Farm,	38.53	342	P	P	03 54 57.6	-1.6
	baz=156						
P39B	Salisbury	38.58	339	P	P	03 54 58.4	-1.2
	baz=153						
O40A	La Belle	38.85	341	P	P	03 55 01.0	-0.8
	baz=155						
MSTX	Muleshoe	38.87	324	P	P	03 55 02.1	-0.2
	baz=135						
MSTX	Muleshoe	38.87	324	eP	P	03 55 02.2	-0.1
	comp=Z,11nm,1.3s						
MNTX	Cornudas Mount	38.98	319	P	P	03 55 03.6	+0.5
	baz=130,SNR=7.2						
MNTX	Cornudas Mount	38.98	319	eP	P	03 55 04.1	+1.0
	comp=Z,4.8nm,0.9s						
P38A	Dawn	38.98	339	P	P	03 55 02.1	-0.8
	baz=152						
N41A	Harden Midland	39.06	342	P	P	03 55 02.2	-1.4
	baz=157						
O38A	Galt	39.40	339	P	P	03 55 05.2	-1.2
	baz=152						
N40A	Mertquake, Sal	39.45	342	P	P	03 55 05.5	-1.3
	baz=156						
KSU1	Kansas State U	39.74	335	P	P	03 55 08.2	-1.1
	baz=147						
N39A	Derby Farms, D	39.74	341	P	P	03 55 08.0	-1.2
	baz=154						
L43A	Garden Prairie	39.85	346	P	P	03 55 08.6	-1.6
	baz=160						
M40A	Post Highland	39.90	342	P	P	03 55 09.1	-1.5
	baz=156						
L42A	Oliver, Polo	39.93	344	P	P	03 55 09.1	-1.7
	baz=159						
M39A	Webster	40.18	341	P	P	03 55 11.6	-1.2
	baz=155						
L41A	Preston	40.22	344	P	P	03 55 11.8	-1.4
	baz=158						
L40A	Anamosa	40.42	343	P	P	03 55 13.4	-1.4
	baz=157						
M38A	Pleasantville	40.45	340	P	P	03 55 14.2	-0.9
	baz=154						
LBNH	Lisbon	40.52	5	P	P	03 55 16.7	+1.1
	baz=187						
K42A	Prairie Point,	40.57	345	P	P	03 55 14.6	-1.5
	baz=160						
LONY	Lake Ozonia	40.74	2	P	P	03 55 18.3	+0.8
	baz=183						
JFWS	Jewell Farm	40.93	344	P	P	03 55 17.6	-1.4
	baz=159,SNR=5.2						
JFWS	Jewell Farm	40.93	344	eP	P	03 55 18.1	-0.9
	comp=Z,12nm,0.6s						
K40A	Colesburg	40.98	343	P	P	03 55 18.3	-1.1
	baz=157						
J42A	Columbus	41.02	346	P	P	03 55 18.8	-0.9
	baz=160						
121A	Cookes Peak, D	41.09	318	P	P	03 55 22.7	+2.0
	baz=128						
K39A	Oelwein	41.20	343	P	P	03 55 19.8	-1.4
	baz=156						
J41A	Loganville	41.29	345	P	P	03 55 20.8	-1.1
	baz=159						
I43A	Langenfeld Bro	41.32	347	P	P	03 55 21.0	-1.2
	baz=162						
I42A	Draeger Farm,	41.51	346	P	P	03 55 22.8	-0.9
	baz=161,SNR=5.0						
I42A	Draeger Farm,	41.51	346	eP	P	03 55 22.9	-0.7
	comp=Z,7.3nm,0.7s						
J40A	Soldiers Grove	41.51	344	P	P	03 55 22.2	-1.5
	baz=158						
J39A	Decorah	41.73	343	P	P	03 55 23.6	-1.9
	baz=157,SNR=6.6						
TASL	Snake Pit, Alb	41.76	322	P	P	03 55 27.3	+1.1
	baz=131,SNR=8.3						
ANMO	Albuquerque	41.76	322	P	P	03 55 27.4	+1.2
	baz=131						
ANMO	Albuquerque	41.76	322	eP	P	03 55 27.3	+1.2
	comp=Z,4.1nm,0.8s						
TASM	ASL Pad, Albuq	41.77	322	P	P	03 55 27.1	+0.9
	baz=131,SNR=8.3						
H43A	Windswept, Lux	41.80	348	P	P	03 55 25.1	-0.9
	baz=163						
LAZ	Ladron	41.84	321	eP	P	03 55 28.6	+1.8
I41A	Arkdale	41.90	345	P	P	03 55 26.2	-0.7
	baz=160						
I40A	Norwalk	41.94	345	P	P	03 55 26.2	-1.0
	baz=158						
H42A	Shiocton	42.00	347	P	P	03 55 26.9	-0.8
	baz=162						
I39A	Houston	42.15	344	P	P	03 55 27.5	-1.4
	baz=157						
F46A	Macinaw City C	42.51	351	P	P	03 55 31.4	-0.4
	baz=168						
G43A	Wallace	42.53	348	P	P	03 55 30.9	-1.1
	baz=163						
J36A	Seneca 1, Swea	42.54	340	P	P	03 55 31.0	-1.1
	baz=153						
I38A	Scanlan Farm,	42.55	343	P	P	03 55 30.8	-1.4
	baz=156,SNR=6.6						
H40A	Chili	42.56	345	P	P	03 55 31.3	-0.9
	baz=159						
G41A	Antigo	42.82	347	P	P	03 55 33.4	-0.9
	baz=161						
H39A	Augusta	42.85	344	P	P	03 55 33.9	-0.6
	baz=158						
I37A	Lemond, Waseca	42.85	342	P	P	03 55 33.4	-1.3
	baz=155						
F44A	Big Bay de Noc	42.98	350	P	P	03 55 34.8	-0.8
	baz=165						
TUC	Tucson	43.02	315	P	P	03 55 37.0	+0.8
	baz=124						
TUC	Tucson	43.02	315	eP	P	03 55 37.7	+1.4
	comp=Z,1.7nm,0.8s						
SDCO	Great Sand Dun	43.10	326	P	P	03 55 38.3	+1.3
	baz=135,SNR=7.5						
SDCO	Great Sand Dun	43.10	326	eP	P	03 55 38.4	+1.3
	comp=Z,2.7nm,0.6s						
G40A	Rib Lake	43.11	346	P	P	03 55 35.8	-0.9
	baz=160						
G40A	Rib Lake	43.11	346	eP	P	03 55 36.0	-0.7
	comp=Z,9.9nm,1.3s						
H37A	Dierke Farm, C	43.22	343	P	P	03 55 36.8	-0.7
	baz=156						
F41A	Three Lakes	43.30	347	P	P	03 55 37.3	-0.9
	baz=161						
F41A	Three Lakes	43.30	347	eP	P	03 55 37.6	-0.6
	comp=Z,8.5nm,1.0s						
G39A	Holcombe	43.38	345	P	P	03 55 38.0	-0.8
	baz=158,SNR=21						
G38A	Ridgeland	43.45	344	P	P	03 55 38.2	-1.2
	baz=157,SNR=5.4						
E43A	Lone Tree Farm	43.47	349	P	P	03 55 38.6	-1.0
	baz=164						
H36A	Jessenland, He	43.53	342	P	P	03 55 38.6	-1.4
	baz=154						
ECSD	EROS Data Cent	43.69	339	P	P	03 55 40.1	-1.2
	baz=150						
F40A	Park Falls	43.70	346	P	P	03 55 40.6	-0.8
	baz=160,SNR=8.7						
SPMN	Marine on St.	43.77	343	P	P	03 55 41.5	-0.4
	baz=156						
S22A	4UR Ranch, Cre	43.86	324	P	P	03 55 43.9	+0.7
	baz=133						
S22A	4UR Ranch, Cre	43.86	324	eP	P	03 55 42.3	-0.9
	comp=Z,6.4nm,1.3s						
F39A	Loretta	43.90	345	P	P	03 55 41.9	-1.0
	baz=159						
H35A	Sunnyside Ranc	43.92	341	P	P	03 55 41.4	-1.8
	baz=153						
E41A	Kenton	43.95	347	P	P	03 55 42.5	-0.9
	baz=162						
E40A	Wakefield	44.15	347	P	P	03 55 44.4	-0.5
	baz=160,SNR=7.3						
F38A	Pierce - Schro	44.19	344	P	P	03 55 44.3	-1.0
	baz=158						
E39A	Mellen	44.24	346	P	P	03 55 45.0	-0.6
	baz=160,SNR=7.2						
214A	Organ Pipe Nat	44.27	314	P	P	03 55 47.5	+1.3
	baz=122						
D41A	Chassel	44.44	348	P	P	03 55 46.9	-0.3
	baz=162						
F36A	Milaca	44.56	343	P	P	03 55 47.2	-1.0
	baz=155						
PLCA	Paso Flores	44.57	174	P	P	03 55 48.7	+0.2
	comp=Z,3.8nm,0.6s,baz=9.7,slow=9.1,SNR=7.2						
PLCA	Paso Flores	44.57	174	eP	P	03 55 48.7	+0.2
	comp=Z,6.6nm,0.9s						
ISCO	Idaho Springs	44.62	328	P	P	03 55 50.2	+1.0
	baz=136						
ISCO	Idaho Springs	44.62	328	eP	P	03 55 50.3	+1.1
	comp=Z,3.3nm,1.3s						
X16A	Lo Mia Camp, P	44.67	317	eP	P	03 55 51.3	+1.8
	comp=Z,1.9nm,0.8s						
E38A	The Farm, Brul	44.70	345	P	P	03 55 48.7	-0.6
	baz=158						
E36A	McGregor	45.08	343	P	P	03 55 51.2	-1.1
	baz=156						
C40A	Isle Royale Na	45.37	348	P	P	03 55 53.7	-0.9
	baz=162						
D37A	Cotton	45.44	345	P	P	03 55 54.3	-0.9
	baz=157						
C39A	Grand Marais	45.49	347	P	P	03 55 54.5	-1.1
	baz=161						
E34A	Wadena	45.65	342	P	P	03 55 55.3	-1.5
	baz=153						
D36A	Goodland	45.66	344	P	P	03 55 55.6	-1.3
	baz=156						
D36A	Goodland	45.66	344	eP	P	03 55 56.1	-0.8
	comp=Z,6.6nm,0.6s						
C38A	Sawbill Land.	45.67	346	P	P	03 55 55.6	-1.3
	baz=159						
C37A	Embarrass	45.91	345	P	P	03 55 58.0	-0.8
	baz=158						
EYMN	Ely	45.94	346	P	P	03 55 57.9	-1.2
	baz=159						
EYMN	Ely	45.94	346	eP	P	03 55 58.1	-0.9
	comp=Z,5.4nm,0.6s						
C36A	Pine Crest Far	46.10	345	P	P	03 55 59.6	-0.8
	baz=157						
C35A	Jirik Farms, M	46.36	344	P	P	03 56 01.0	-1.3
	baz=155						
B35A	Bob, Littlefor	46.90	344	P	P	03 56 05.1	-1.4
	baz=156,SNR=5.0						
B35A	Bob, Littlefor	46.90	344	eP	P	03 56 05.3	-1.2
	comp=Z,5.2nm,0.6s						
SWSC	Sam W. Stewart	46.95	313	P	P	03 56 06.4	-0.8
	baz=120						
RSSD	Black Hills	47.06	333	P	P	03 56 08.6	+0.4
	baz=141						
RSSD	Black Hills	47.06	333	eP	P	03 56 07.1	-1.1
	comp=Z,8.4nm,0.8s						
K22A	Casper	47.16	330	P	P	03 56 07.5	-1.3
	baz=137						
B34A	Aery, Baudette	47.27	343	P	P	03 56 08.2	-1.2
	baz=155						
AGMN	Agassiz Nation	47.45	342	P	P	03 56 09.9	-1.0
	baz=153						
AGMN	Agassiz Nation	47.45	342	eP	P	03 56 10.0	-0.8
	comp=Z,7.0nm,0.9s						
A33A	Warroad	47.89	343	P	P	03 56 13.2	-1.0
	baz=154,SNR=5.4						
PD31	Pinedale Array	48.82	328	eP	P	03 56 22.3	+0.6
PDAR	Pinedale Array	48.82	328	P	P	03 56 21.8	+0.1
	comp=Z,0.9nm,0.5s,baz=126,slow=8.2,SNR=12						
PDAR	Pinedale Array	48.82	328	eP	P	03 56 21.3	-0.4
DUG	Dugway, Tooele	48.99	323	P	P	03 56 23.7	+0.7
	baz=128						
ULM	Lac du Bonnet	49.20	344	P	P	03 56 22.8	-1.3
	comp=Z,2.8nm,0.4s,baz=167,slow=7.2,SNR=3.4						
EDW2	Edwards Air Fo	49.48	314	P	P	03 56 26.7	0.0
	baz=119						
REDW	Red Top Meadow	49.92	327	eP	P	03 56 30.6	+0.6
	comp=Z,6.1nm,0.8s						
LOHW	Long Hollow	49.95	328	eP	P	03 56 31.5	+1.2
	comp=Z,2.9nm,0.8s						
TPAW	Teton Pass	50.06	327	eP	P	03 56 31.7	+0.6
	comp=Z,2.5nm,0.6s						
FXWY	Fox Creek	50.20	327	eP	P	03 56 32.3	+0.1
	comp=Z,2.4nm,0.8s						
IMW	Indian Meadow	50.33	328	eP	P	03 56 33.8	+0.6
	comp=Z,6.1nm,0.6s						
GCMT	Greycliff	50.98	330	eP	P	03 56 38.1	+0.2
NV01	Mina Array Sit	51.49	318	eP	P	03 56 42.8	+1.0
NVAR	Mina Array Bea	51.49	318	P	P	03 56 43.1	+1.2
	comp=Z,2.2nm,0.7s,baz=123,slow=7.1,SNR=15						
BOZ	Bozeman (W)	51.84	329	P	P	03 56 44.6	+0.3
	baz=133,SNR=6.8						
BOZ	Bozeman (W)	51.84	329	eP	P	03 56 44.8	+0.5
	comp=Z,3.4nm,0.8s						
HLID	Hailey	52.02	325	P	P	03 56 46.1	+0.5
	baz=129,SNR=5.4						
HLID	Hailey	52.02	325	eP	P	03 56 46.5	+0.8
MFID	Camas Ranch	52.74	324	eP	P	03 56 48.6	-2.4
	comp=Z,2.3nm,0.6s						
WVOR	Wild Horse Val	53.86	322	eP	P	03 57 00.3	+1.2
	comp=Z,3.4nm,1.0s						
I07A	Izee	55.30	323	eP	P	03 57 08.1	-1.4
	comp=Z,1.9nm,0.6s						
YKA	Yellowknife Ar	65.10	342	P	P	03 58 14.3	-1.3
	comp=Z,1.8nm,0.5s,baz=135,slow=6.1,SNR=17						
TIC	Toumodi	71.02	84	eP	P	03 58 51.5	-2.0
LIC	Lamto	71.02	85	eP	P	03 58 51.8	-1.7
	comp=Z,109nm,1.8s						
DBIC	Dimbokro	71.18	84	P	P	03 58 53.0	-1.5
	comp=Z,11nm,0.8s,baz=251,slow=7.6,SNR=13						
KIC	Kosan Boka	71.30	85	eP	P	03 58 53.6	-1.6
	comp=Z,34nm,0.9s						
KOWA	Kowa	71.94	76	P	P	03 58 58.1	-1.0
	comp=Z,4.7nm,0.4s,baz=274,slow=8.3,SNR=26						
MDT	Midelt	72.62	57	P	P	03 59 03.5	+0.6
	comp=Z,2.8nm,0.9s,baz=300,slow=9.7,SNR=9.4						
ESDC	Sonseca Array	74.06	50	P	P	03 59 11.1	-0.1
	comp=Z,0.6nm,0.5s,baz=272,slow=5.8,SNR=12						
ES19	SONSECA Array	74.11	50	eP	P	03 59 11.2	-0.2
EYAK	Cordova Ski Ar	76.73	332	eP	P	03 59 29.6	+3.8
	comp=Z,32µm,1.2s						
TOA1	Torodi Ar. Sit	77.49	77	eP	P	03 59 29.2	-1.8
TOA0	Torodi Ar. Sit	77.49	77	eP	P	03 59 29.3	-1.8
TORD	Torodi Ar. Bea	77.49	77	P	P	03 59 29.2	-1.8
	comp=Z,2.4nm,0.4s,baz=281,slow=6.3,SNR=87						
ILAR	Eielson Array	78.41	336	P	P	03 59 34.4	-0.8
	comp=Z,0.4nm,0.7s,baz=113,slow=3.6,SNR=5.9						
ILB	Eielson Array	78.41	336	eP	P	03 59 34.4	-0.8
TAM	Tamanrasset	81.04	68	eP	P	03 59 50.1	-0.2
	comp=Z,2.6nm,0.9s						
KURK	Kurchatov	121.64	18	ePKPdf	PKPdf	04 06 26.6	-0.7
KURBB	Kurchatov Arra	121.69	19	PKP	PKPdf	04 06 26.6	-0.9
	comp=Z,0.5nm,0.6s,baz=340,slow=2.1,SNR=4.6						
HHC	Hu-ho-hao-te	135.04	352	ePKP	PKPdf	04 06 51.8	-1.6
HHC				PP	PP	04 09 31.8	+3.3
HHC	Hu-ho-hao-te	135.04	352	SS	SS	04 27 08.0	-1.9
HHC				AMB	AMB		
	comp=Z,36nm,2.3s						
HHC				LR	LR		
	comp=N,140nm,13.8s						
HHC				LR	LR		
	comp=E,170nm,13.0s						
HHC				LR	LR		
	comp=Z,35nm,16.4s						
LZH	Lanzhou	140.38	360	ePKP	PKPdf	04 07 00.5	-2.9
LZH				pPKP	pPKPdf	04 07 42.0	-0.6
LZH				sPKP		04 08 00.0	
AS31	Alice Springs	144.73	233	ePKPbc	PKPab	04 07 09.3	-1.1
ASAR	Alice Springs	144.73	233	PKP	PKPab	04 07 09.3	-1.1
	comp=Z,3.4nm,0.8s,baz=118,slow=3.9,SNR=33						
ASAR				pP	pPKPdf	04 07 48.8	-1.7
	comp=Z,1.7nm,0.7s,baz=120,slow=3.8,SNR=4.3						
CD2	Chengdu	145.54	360	PKPbc	PKPdf	04 07 10.0	-2.5
WR1	Warramunga Arr	146.05	239	ePKPdf	PKPdf	04 07 13.6	0.0
WRA	Warramunga Arr	146.05	239	PKPbc	PKPdf	04 07 13.6	0.0
	comp=Z,2.7nm,0.9s,baz=110,slow=2.7,SNR=10						
WRA				pPKPbc	pPKPdf	04 07 53.0	+0.2
	comp=Z,1.7nm,0.9s,baz=112,slow=3.2,SNR=4.7						

SOME ***27*** *04:03:45.2, 43°.55N×82°.82E, h15km*
NNC ***27*** *04:03:47.6±6.3, 43°.72N×82°.64E, h0km, mb2.9, mpv2.6, Error ellipse: s-maj=47.1km s-min=33.7km az=2.0*

ISC 27 04:03:42.0±2.6, 43°.51N±0°.08×82°.86E±0°.10, h3km±12km, n12, σ1§57/21, 7C-1D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	Ketmen	1.82	269	eP	Pg	04 04 17.3	+0.4
	4.0nm,0.2s						
KTMS				eS	Sg	04 04 41.1	+0.5
	108nm,0.3s						
DJR	Jarkent	2.36	291	eP	Pg	04 04 27.1	-0.3
	7.5nm,0.5s						
DJR				eS	Sg	04 04 58.0	0.0
	36nm,0.5s						
SHLS	Shalkode	2.50	263	eP	Pn	04 04 24.7	+1.0
	8.3nm,0.3s						
SHLS				eS	Sn	04 04 53.5	-1.2
	158nm,0.3s						
UZB	Uzynbulak	2.82	264	eP	Pg	04 04 35.4	-0.6
	1.4nm,0.1s						
UZB				eS	Sg	04 05 11.3	-1.4
	11nm,0.2s						
KPKS	Kokpek	3.04	271	eP	Pg	04 04 39.3	-0.9
	4.5nm,0.2s						
KPKS				eS	Sg	04 05 17.5	-2.0
	54nm,0.4s						
KAPS	Kapalarasan	3.07	307	eP	Pg	04 04 41.2	+0.3
	1.2nm,0.5s						
KAPS				eS	Sg	04 05 21.5	+0.8
	6.7nm,0.3s						
MNBS	Baschi	3.27	282	eP	Pb	04 04 41.6	+0.8
	1.2nm,0.5s						
MNBS				eS	Sb	04 05 22.9	+1.8
	5.2nm,0.4s						
SATY	Saty	3.28	264	eP	Pg	04 04 43.7	-1.2
	4.4nm,0.2s						
SATY				eS	Sg	04 05 26.1	-1.2
	24nm,0.2s						
MK31	Makanchi Array	3.31	353	⇑Pn	Pn	04 04 37.0	+2.3
	0.1nm,0.3s,baz=181,slow=14						
MK31				Pg	Pg	04 04 44.1	-1.4
	3.4nm,0.5s,baz=182,slow=15,SNR=40						
MK31				⇑Lg	Lg	04 05 24.1	
	14nm,0.6s,baz=172,slow=28						
MAKZ	Makanchi	3.36	350	⇑Pg	Pg	04 04 45.8	-0.6
	2.4nm,0.4s						
MAKZ				⇑Lg	Lg	04 05 26.8	
	6.8nm,0.6s						
KURBB	Kurchatov Arra	7.70	339	⇓Sn	Sn	04 07 00.6	-2.1
	3.9nm,0.8s						
KURBB				⇑Lg	Lg	04 07 46.3	
	5.4nm,0.7s						
KURK	Kurchatov	7.77	340	⇑Sn	Sn	04 07 00.6	-3.6
	1.4nm,0.6s						
KURK				⇑Lg	Lg	04 07 48.8	
	5.5nm,1.2s						

IDC ***27*** *04:05:34.5±10.0, 5°.23S×129°.05E, h280km±107km, mb3.1/1, mb1 3.7/4, mb1mx3.0/53, mbtmp4.3/4, Error ellipse: s-maj=120.9km s-min=25.3km az=51.0*
ISCJB ***27*** *04:05:37.8±0.6, 5°.59S±0°.08×128°.82E±0°.08, h300km, mb3.4/1, Error ellipse: s-maj=14.4km s-min=6.8km az=136.4*
DJA ***27*** *04:05:39.5±0.6, 5°S±5°×12°9E±°, h303km±12km, M4.2/9, mB5.0/3, mb4.2/4, MLv4.3/9, Mw(mB)4.3/3*

ISC 27 04:05:37.8±1.0, 5°.5S±0°.1×128°.7E±0°.1, h300km, n12, σ1§43/13, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.52	51	P	Pn	04 06 27.7	+6.6
MSAI	Masohi	2.14	6	P	Pn	04 06 26.7	+0.9
FAKI	Fak Fak	4.35	54	P	Pn	04 06 48.9	+1.0
FAKI				S	S	04 07 42.7	-1.4
SANI	Sanana	4.38	321	P	Pn	04 06 48.9	+0.7
SOEI	Soe	6.12	226	P	Pn	04 07 09.4	+0.7
	36nm,1.1s,0.2nm						
RKPI	Ransiki, Papua	6.73	54	P	Pn	04 07 18.5	+2.6
BATI	Baumata	6.86	227	P	Pn	04 07 18.9	+1.4
	20nm,0.3s,baz=67,slow=5.9,SNR=8.5						
BATI				S	S	04 08 37.6	-0.5
	3.9nm,0.3s,baz=336,slow=8.4,SNR=3.9						
BATI	Baumata	6.86	227	P	Pn	04 07 19.1	+1.6
EDFI	Ende, Flores	7.69	245	P	Pn	04 07 29.0	+1.3
WRA	Warramunga Arr	15.37	160	P	P	04 08 58.6	-0.3
	0.8nm,0.3s,baz=340,slow=12,SNR=36						
ASAR	Alice Springs	18.75	165	P	P	04 09 35.1	-0.4
	1.5nm,0.3s,baz=343,slow=12,SNR=55						
MKAR	Makanchi Array	66.28	327	P	P	04 15

s-min=1.8km az=136.8
BJI **27** 04:22:32.9, 49°.58N×129°.72W, h10km, mb4.8/25, mB5.0/13, Ms4.8/5, Ms7 4.5/3
NEIC **27** 04:22:34.7±0.2, 49°.48N×128°.95W, h10km, mb4.9/210, MW4.8(OTT), Error ellipse: s-maj=4.5km s-min=1.9km az=52.0
GCMT **27** 04:22:34.7±0.2, 49°.10N×129°.60W, h19km±1km, MW5.1/109, Moment Tensor Solution. s47,c55; s109,c178; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.47±.15; $M_{\theta\theta}$-4.33±.13; $M_{\phi\phi}$4.79±.13; $M_{r\theta}$-0.73±.30; $M_{\theta\phi}$1.14±.11; $M_{\phi r}$-0.47±.24; Best double couple: M_{o}4.78300×10^{16} NP1:φs52.00000°, δ88.00000°, λ-11.00000°. NP2:φs142.00000°, δ79.00000°, λ-178.00000°. Principal axes: T 4.9880, Plg6.0000°, Azm97.0000°; N -0.4150, Plg79.0000°, Azm220.0000°; P -4.5790, Plg9.0000°, Azm6.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
MOS **27** 04:22:34.9±1.1, 49°.48N×128°.98W, h32km, mb5.0/44 Error ellipse: s-maj=10.3km s-min=4.9km az=117.0
ISC 27 04:22:32.6±0.9, **49°.36N**±0°.03×**129°.22W**±0°.04, **h9**km±5km, **n1073**, σ1**9**48/1037, **mb5.0**/180, **MS4.2**/56, **4C-1D,**

Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BPBC	**Brooks Peninsu**	**1.23**	**49**	P	**Pb**	**04 22 54.2**	**-1.8**
NCHR	**NEPTUNE Canada**	**1.39**	**176**	P	Pn	04 22 46.1	-12
NCHR				S	Sn	04 23 01.6	-14
KEMF	**NEPTUNE Canada**	**1.41**	**177**	P	Pn	04 22 46.5	-12
EDB	**Eliza Dome**	**1.46**	**68**	Pn	**Pn**	**04 22 56.7**	**-2.3**
EDB				Sn	**Sn**	**04 23 16.4**	**-1.8**
EDB	**Eliza Dome**	**1.46**	**68**	*e*Pn	**Pn**	**04 22 56.8**	**-2.3**
HOLB	**Holberg**	**1.46**	**28**	Pn	**Pn**	**04 22 57.0**	**-2.1**
HOLB				Sn	**Sn**	**04 23 16.6**	**-1.8**
MAYB	**Maynard**	**1.69**	**51**	Pn	**Pn**	**04 23 00.3**	**-2.0**
NC89	**ODP889**	**1.71**	**113**	Sn	**Sn**	**04 23 21.0**	**-3.0**
ETB	**Estevan Point**	**1.75**	**88**	Pn	**Pn**	**04 23 00.6**	**-2.5**
PHC	**Port Hardy**	**1.77**	**40**	Pn	**Pn**	**04 23 01.5**	**-1.8**
PHC				Sn	**Sn**	**04 23 24.4**	**-1.6**
PHC	**Port Hardy**	**1.77**	**40**	*e*Pn	**Pn**	**04 23 01.9**	**-1.4**
NC27	**ODP1027**	**1.87**	**148**	Pn	**Pn**	**04 23 02.2**	**-2.1**
NC27				Sn	Sn	04 23 19.0	-8.8
WOSB	**Woss**	**1.90**	**64**	Pn	**Pn**	**04 23 03.8**	**-1.3**
TLCB	**Telegraph Cove**	**1.95**	**51**	Pn	**Pn**	**04 23 04.5**	**-1.2**
TLCB				Sn	**Sn**	**04 23 29.0**	**-1.2**
GDR	**Gold River**	**2.12**	**77**	Pn	**Pn**	**04 23 05.9**	**-2.1**
TOFB	**Tofino**	**2.18**	**94**	Pn	**Pn**	**04 23 05.9**	**-3.0**
TOFB				Sn	**Sn**	**04 23 33.5**	**-2.5**
NCBC	**Barkley Canyon**	**2.21**	**114**	Pn	**Pn**	**04 23 06.0**	**-3.3**
NCBC				Sn	**Sn**	**04 23 32.8**	**-3.9**
NCRB	**Newcastle Ridg**	**2.30**	**62**	Pn	**Pn**	**04 23 10.0**	**-0.7**
SPLB	**Strathcona Par**	**2.38**	**76**	Pn	**Pn**	**04 23 10.0**	**-1.7**
SPLB				Sn	**Sn**	**04 23 38.5**	**-2.4**
BTB	**Buttle Lake**	**2.42**	**86**	Pn	**Pn**	**04 23 10.2**	**-2.2**
BTB				Sn	**Sn**	**04 23 40.6**	**-1.5**
B012	**Ucluelet**	**2.45**	**99**	Pn	**Pn**	**04 23 09.6**	**-3.1**
B012				Sn	**Sn**	**04 23 38.4**	**-4.4**
OZB	**Mount Ozzard**	**2.48**	**98**	Pn	**Pn**	**04 23 10.0**	**-3.1**
OZB				Sn	**Sn**	**04 23 40.0**	**-3.4**
OZB	**Mount Ozzard**	**2.48**	**98**	*e*Pn	**Pn**	**04 23 10.1**	**-3.0**
MWAB	**Mount Washingt**	**2.58**	**80**	Pn	**Pn**	**04 23 11.9**	**-2.6**
MWAB				Sn	**Sn**	**04 23 45.4**	**-0.6**
CBB	**Campbell River**	**2.59**	**73**	Pn	**Pn**	**04 23 13.4**	**-1.2**
CBB				Sn	**Sn**	**04 23 46.3**	**+0.1**
B928	**Bamfield**	**2.73**	**100**	Pn	**Pn**	**04 23 13.4**	**-3.1**
B928				Sn	**Sn**	**04 23 45.5**	**-4.1**
B928	**Bamfield**	**2.73**	**100**	*e*Pn	**Pn**	**04 23 13.5**	**-3.0**
ALB	**Alberni**	**2.87**	**90**	Pn	**Pn**	**04 23 16.4**	**-2.0**
B927	**Port Alberni**	**2.89**	**91**	Pn	**Pn**	**04 23 16.2**	**-2.4**
B927				Sn	**Sn**	**04 23 51.6**	**-1.8**
BBB	**Bella Bella**	**2.92**	**14**	Pn	**Pn**	**04 23 17.5**	**-1.6**
BBB				LR	LR	04 23 46.7	
	comp=Z,1μm,19.3s,baz=204,slow=26						
BBB				Sn	**Sn**	**04 23 52.0**	**-2.1**
	55nm,0.3s,baz=334,slow=19,SNR=8.3						
BBB	**Bella Bella**	**2.92**	**14**	Pn	**Pn**	**04 23 17.4**	**-1.7**
BBB				Sn	**Sn**	**04 23 52.8**	**-1.3**
BBB	**Bella Bella**	**2.92**	**14**	*e*Pn	**Pn**	**04 23 17.4**	**-1.6**
BBB				*e*Sn	**Sn**	**04 23 52.0**	**-2.1**
BBB				*e*Sn	**Sb**	**04 23 53.7**	**-6.6**
MGB	**Mount Grey**	**2.99**	**95**	Pn	**Pn**	**04 23 17.4**	**-2.8**
MGB				Sn	**Sn**	**04 23 53.6**	**-2.6**
TXB	**Texada**	**3.13**	**82**	Pn	**Pn**	**04 23 21.4**	**-0.7**
GHNB	**Nanoose**	**3.26**	**89**	Pn	**Pn**	**04 23 22.1**	**-1.6**
GHNB				Sn	**Sn**	**04 24 02.0**	**-0.6**
YOUB	**Youbou, Lake C**	**3.29**	**96**	Pn	**Pn**	**04 23 21.7**	**-2.6**
YOUB				Sn	**Sn**	**04 24 00.6**	**-2.8**
B926	**Mesachie Lake**	**3.39**	**97**	Pn	**Pn**	**04 23 23.7**	**-1.9**
B926				Sn	**Sn**	**04 24 02.0**	**-3.8**
BCBC	**Bella Coola**	**3.40**	**26**	Pn	**Pn**	**04 23 25.4**	**-0.3**
NLLB	**Nanaimo Lost L**	**3.43**	**90**	Pn	**Pn**	**04 23 24.2**	**-1.8**
NLLB				Sn	**Sn**	**04 24 05.9**	**-0.9**
SHB	**Sechelt**	**3.49**	**84**	Pn	**Pn**	**04 23 25.5**	**-1.6**
OFR	**Olym-F Res Ctr**	**3.50**	**112**	Pn	**Pn**	**04 23 25.0**	**-2.1**
OFR				Sn	**Sn**	**04 24 04.8**	**-3.8**
BNB	**Barry Inlet**	**3.60**	**335**	Pn	**Pn**	**04 23 26.7**	**-1.8**
LZB	**Mount Lazard**	**3.63**	**100**	Pn	**Pn**	**04 23 26.1**	**-2.9**
LZB				Sn	**Sn**	**04 24 09.5**	**-2.4**
BPCB	**Bare Point**	**3.65**	**95**	Pn	**Pn**	**04 23 27.2**	**-1.9**
BPCB				Sn	**Sn**	**04 24 10.8**	**-1.4**
OBC	**Olympics--Boni**	**3.65**	**109**	Pn	**Pn**	**04 23 26.3**	**-3.0**
GOBB	**Galiano Island**	**3.77**	**94**	Pn	**Pn**	**04 23 29.5**	**-1.2**
B009	**North Saanich**	**3.86**	**98**	Pn	**Pn**	**04 23 30.2**	**-1.8**
B009				Sn	**Sn**	**04 24 16.5**	**-0.9**
B010	**North Saanich**	**3.86**	**98**	Pn	**Pn**	**04 23 28.7**	**-3.4**
B010				Sn	**Sn**	**04 24 16.3**	**-1.2**
PGC	**Sidney**	**3.86**	**98**	Pn	**Pn**	**04 23 29.4**	**-2.6**
PGC				Sn	**Sn**	**04 24 15.7**	**-1.8**
PGC	**Sidney**	**3.86**	**98**	*e*Pn	**Pn**	**04 23 30.0**	**-2.0**
PGC				*e*Sn	**Sn**	**04 24 14.2**	**-3.3**
PA12	**PA12 Sannich**	**3.86**	**98**	Pn	**Pn**	**04 23 29.9**	**-2.2**
PA12				Sn	**Sn**	**04 24 16.1**	**-1.5**
B011	**North Saanich**	**3.87**	**98**	Pn	**Pn**	**04 23 28.9**	**-3.1**
B011				Sn	**Sn**	**04 24 16.1**	**-1.4**
PA04	**PA04 Cage**	**3.87**	**98**	Pn	**Pn**	**04 23 28.4**	**-3.6**
PA04				Sn	**Sn**	**04 24 15.5**	**-2.0**
PA03	**PA03 Flamable**	**3.87**	**98**	Sn	**Sn**	**04 24 15.6**	**-2.0**
PA05	**PA05 Willingdo**	**3.87**	**98**	Pn	**Pn**	**04 23 29.5**	**-2.6**
PA05				Sn	**Sn**	**04 24 14.2**	**-3.4**
WPB	**Watts Point**	**3.93**	**83**	Pn	**Pn**	**04 23 31.8**	**-1.2**
OSD	**Olympics--Snow**	**3.97**	**111**	Pn	**Pn**	**04 23 30.8**	**-3.0**
VGZ	**Gonzales**	**4.00**	**101**	Pn	**Pn**	**04 23 31.1**	**-2.9**
VGZ				Sn	**Sn**	**04 24 17.0**	**-4.0**
SNB	**Saturna Island**	**4.02**	**96**	Pn	**Pn**	**04 23 31.6**	**-2.6**
SNB				Sn	**Sn**	**04 24 20.0**	**-1.4**
NLWA	**Neilton Lookou**	**4.07**	**117**	*e*Pn	**Pn**	**04 23 33.3**	**-1.7**
NLWA				*e*Sn	**Sn**	**04 24 18.3**	**-4.4**
MCW	**Mount Constitu**	**4.26**	**97**	Pn	**Pn**	**04 23 35.4**	**-2.2**
WISH	**Wishkah**	**4.28**	**120**	Pn	**Pn**	**04 23 35.2**	**-2.5**
A04D	**Lummi Island**	**4.33**	**96**	P	**Pn**	**04 23 34.7**	**-3.8**
	baz=279						
BLN	**Blyn Mountain**	**4.35**	**106**	Pn	**Pn**	**04 23 37.5**	**-1.3**
DIB	**Dawson Inlet,**	**4.36**	**333**	Pn	**Pn**	**04 23 35.8**	**-3.0**
DIB	**Dawson Inlet,**	**4.36**	**333**	*e*Pn	**Pn**	**04 23 36.1**	**-2.8**
DIB				*e*Sn	**Sn**	**04 24 27.1**	**-2.6**
H02S1	**DAWSON INLET T**	**4.36**	**333**	Pn	**Pn**	**04 23 37.3**	**-1.5**
HDW	**Hoodsport**	**4.44**	**110**	Pn	**Pn**	**04 23 38.5**	**-1.6**
HDW	**Hoodsport**	**4.44**	**110**	*e*Pn	**Pn**	**04 23 39.0**	**-1.1**
VDB	**Vedder Mountai**	**4.68**	**91**	Pn	**Pn**	**04 23 42.3**	**-1.0**
E03A	**Lebam**	**4.73**	**124**	Pn	**Pn**	**04 23 40.2**	**-3.7**
E03A	**Lebam**	**4.73**	**124**	*e*Pn	**Pn**	**04 23 42.6**	**-1.4**
E03A				*e*Sn	**Sn**	**04 24 35.6**	**-3.2**
UBRB	**Upper Baezaeko**	**4.79**	**40**	Pn	**Pn**	**04 23 46.0**	**+1.0**
B05A	**Bryant**	**4.83**	**100**	P	**Pn**	**04 23 43.6**	**-1.8**
	baz=284,SNR=22						
MBW	**Mount Baker**	**4.85**	**94**	Pn	**Pn**	**04 23 44.4**	**-1.4**
MBW	**Mount Baker**	**4.85**	**94**	*e*Pn	**Pn**	**04 23 44.6**	**-1.1**
LLLB	**Lillooet**	**4.90**	**72**	Pn	**Pn**	**04 23 45.3**	**-1.0**
LLLB	**Lillooet**	**4.90**	**72**	*e*Pn	**Pn**	**04 23 46.1**	**-0.3**
LLLB				*e*Sn	**Sn**	**04 24 44.6**	**+1.6**
JCW	**Jim Creek**	**4.96**	**101**	Pn	**Pn**	**04 23 45.5**	**-1.6**
JCW	**Jim Creek**	**4.96**	**101**	*e*Pn	**Pn**	**04 23 46.5**	**-0.7**
RUBB	**Prince Rupert**	**5.02**	**353**	Pn	**Pn**	**04 23 46.1**	**-1.8**
HOPB	**Hope**	**5.09**	**87**	Pn	**Pn**	**04 23 48.3**	**-0.7**
HOPB				Sn	**Sn**	**04 24 46.2**	**-1.7**
F03A	**Seaside**	**5.14**	**130**	*e*Pn	**Pn**	**04 23 49.4**	**-0.2**
B06A	**Marblemount**	**5.17**	**96**	Pn	**Pn**	**04 23 48.1**	**-1.9**
B06A	**Marblemount**	**5.17**	**96**	*e*Pn	**Pn**	**04 23 49.4**	**-0.6**
ELW	**Echo Lake**	**5.24**	**108**	Pn	**Pn**	**04 23 50.9**	**0.0**
C05A	**Tolt Reservoir**	**5.27**	**106**	Pn	**Pn**	**04 23 51.4**	**0.0**
D05A	**Enumclaw**	**5.29**	**111**	Pn	**Pn**	**04 23 50.7**	**-1.0**
D05A	**Enumclaw**	**5.29**	**111**	*e*Pn	**Pn**	**04 23 52.6**	**+0.9**
F04D	**Rainier, OR**	**5.32**	**126**	P	**Pn**	**04 23 50.8**	**-1.2**
	baz=308						
GPW	**Glacier Peak**	**5.49**	**100**	Pn	**Pn**	**04 23 54.0**	**-0.7**
FMW	**Mount Fremont**	**5.60**	**113**	Pn	**Pn**	**04 23 54.3**	**-1.9**
LON	**Longmire**	**5.61**	**115**	Pn	**Pn**	**04 23 54.8**	**-1.3**
LON	**Longmire**	**5.61**	**115**	*e*Pn	**Pn**	**04 23 56.1**	**-0.1**
LON				*e*Sn	**Sn**	**04 24 57.6**	**-3.1**
LON	**Longmire**	**5.61**	**115**	*e*P	**Pn**	**04 23 56.1**	**-0.1**
LON				*e*		04 24 57.6	
C06D	**Leavenworth**	**5.70**	**101**	P	**Pn**	**04 23 55.4**	**-1.9**
	baz=286						
G03D	**McMinnville, O**	**5.80**	**133**	P	**Pn**	**04 23 57.7**	**-1.0**
	baz=316						
LTY	**Liberty**	**6.08**	**107**	Pn	**Pn**	**04 24 02.6**	**+0.1**
LTY	**Liberty**	**6.08**	**107**	*e*Pn	**Pn**	**04 24 02.8**	**+0.1**
LTY				*e*Sn	**Sn**	**04 25 10.6**	**-1.6**
COR	**Corvallis**	**6.26**	**137**	*e*Pn	**Pn**	**04 24 05.3**	**+0.3**
COR	**Corvallis**	**6.26**	**137**	*e*P	**Pn**	**04 24 05.3**	**+0.3**
PNT	**Penticton**	**6.28**	**87**	Pn	**Pn**	**04 24 05.0**	**-0.2**
PNT	**Penticton**	**6.28**	**87**	*e*Pn	**Pn**	**04 24 05.7**	**+0.4**
EBG	**Ellensburg**	**6.29**	**110**	*e*Pn	**Pn**	**04 24 07.8**	**+2.4**
B08A	**Colville Reser**	**6.60**	**95**	Pn	**Pn**	**04 24 09.0**	**-0.7**
B08A	**Colville Reser**	**6.60**	**95**	*e*Pn	**Pn**	**04 24 09.2**	**-0.5**
H04A	**Detroit Lake**	**6.70**	**132**	*e*Pn	**Pn**	**04 24 11.4**	**+0.3**
G05D	**Wamic, OR**	**6.77**	**124**	P	**Pn**	**04 24 11.6**	**-0.4**
	baz=308						
BLBC	**Blue River**	**6.88**	**63**	Pn	**Pn**	**04 24 12.9**	**-0.9**
I03D	**Drain, OR**	**6.96**	**142**	P	**Pn**	**04 24 14.4**	**-0.2**
	baz=325,SNR=26						
G06A	**Carlson Farm,**	**7.14**	**122**	*e*Pn	Pn	04 24 22.8	+5.6
PRLK	**Prince Lake**	**7.16**	**133**	*e*Pn	**Pn**	**04 24 18.9**	**+1.4**
D08A	**Wollman Farm,**	**7.26**	**105**	*e*Pn	**Pn**	**04 24 22.4**	**+3.7**
KEBM	**Edson Butte**	**7.32**	**151**	*e*Pn	**Pn**	**04 24 20.6**	**+1.0**
I05D	**Terrebonne, OR**	**7.37**	**130**	P	**Pn**	**04 24 20.9**	**+0.6**
	baz=314,SNR=11						
C09A	**Chrisman Ranch**	**7.43**	**98**	Pn	**Pn**	**04 24 19.4**	**-1.6**
C09A	**Chrisman Ranch**	**7.43**	**98**	*e*Pn	**Pn**	**04 24 20.6**	**-0.4**
MNB	**Mounoet Dainar**	**7.43**	**63**	Pn	**Pn**	**04 24 21.8**	**+0.5**
J04D	**Umpqua National**	**7.85**	**139**	P	**Pn**	**04 24 27.9**	**+0.9**
	baz=322,SNR=20						
KBO	**Bosley Butte**	**7.95**	**152**	*e*Pn	**Pn**	**04 24 30.3**	**+2.0**
E09A	**Wood Farm, Sta**	**7.96**	**107**	*e*Pn	**Pn**	**04 24 31.4**	**+3.1**
E09A				*e*Pg	Pb	04 24 40.8	-10
PINE	**Pine Mountain**	**7.97**	**131**	*e*Pn	**Pn**	**04 24 29.6**	**+1.0**
HUMO	**Hull Mountain**	**8.04**	**145**	*e*Pn	**Pn**	**04 24 30.8**	**+1.4**
NEW	**Newport**	**8.06**	**93**	Pn	**Pn**	**04 24 29.0**	**-0.7**
	1.9nm,0.3s,baz=293,slow=12,SNR=16						
NEW				LR	LR	04 27 41.1	
	comp=Z,4μm,20.2s,baz=282,slow=38						
NEW	**Newport**	**8.06**	**93**	P	**Pn**	**04 24 29.2**	**-0.6**
	baz=281						
G08A	**Pilot Rock**	**8.07**	**116**	*e*Pn	**Pn**	**04 24 31.7**	**+1.8**
L02D	**Cave Junction,**	**8.20**	**149**	P	**Pn**	**04 24 32.9**	**+1.3**
	baz=332,SNR=19						
J05D	**Fort Rock, OR**	**8.21**	**135**	P	**Pn**	**04 24 32.8**	**+0.9**
	baz=319,SNR=28						
WAPA	**Wapiti River**	**8.44**	**43**	Pn	**Pn**	**04 24 36.6**	**+1.6**
K04D	**Chiloquin, OR**	**8.50**	**140**	P	**Pn**	**04 24 36.3**	**+0.4**
	baz=324						
I07A	**Izee**	**8.51**	**125**	*e*Pn	**Pn**	**04 24 37.5**	**+1.6**
F10A	**Beach Ranch, E**	**8.77**	**108**	*e*Pn	**Pn**	**04 24 40.5**	**+0.9**
K05A	**Summer Lake**	**8.80**	**136**	*e*Pn	**Pn**	**04 24 42.5**	**+2.4**
YBH	**Yreka Blue Hor**	**8.88**	**147**	Pn	**Pn**	**04 24 43.4**	**+2.2**
	0.5nm,0.3s,baz=339,slow=12,SNR=109						
DLBC	**Dease Lake**	**9.11**	**357**	Pn	**Pn**	**04 24 46.2**	**+2.1**
	0.4nm,0.3s,baz=206,slow=13,SNR=11						
DLBC				LR	LR	04 27 57.2	
	comp=Z,2μm,21.2s,baz=186,slow=36						
DLBC	**Dease Lake**	**9.11**	**357**	*e*Pn	**Pn**	**04 24 47.8**	**+3.6**
M02C	**Callahan**	**9.13**	**148**	P	**Pn**	**04 24 46.4**	**+1.9**
	baz=332,SNR=40						
M04C	**Macdoel**	**9.17**	**143**	P	**Pn**	**04 24 46.6**	**+1.5**
	baz=327,SNR=52						
BMO	**Blue Mountains**	**9.29**	**115**	*e*Pn	**Pn**	**04 24 46.3**	**-0.3**
BMO	**Blue Mountains**	**9.29**	**115**	*e*P	**Pn**	**04 24 46.3**	**-0.3**
JCC	**Jacoby Creek,**	**9.29**	**155**	*e*Pn	Pn	04 24 53.5	+6.9
KHMM	**Horse Mountain**	**9.32**	**153**	*e*Pn	**Pn**	**04 24 48.4**	**+1.2**
J08A	**Circle Bar Ran**	**9.54**	**125**	*e*Pn	**Pn**	**04 24 51.2**	**+1.1**
N02D	**Trinity Center**	**9.56**	**149**	P	**Pn**	**04 24 52.7**	**+2.4**
	baz=332,SNR=32						
BHMT	**Big Hole Peak**	**9.59**	**95**	Pn	**Pn**	**04 24 50.8**	**0.0**
BSMT	**Bassoo Peak**	**9.68**	**93**	Pn	**Pn**	**04 24 51.5**	**-0.6**
MOD	**Modoc Plateau**	**9.72**	**137**	*e*Pn	**Pn**	**04 24 54.3**	**+1.7**
KMRM	**Mail Ridge**	**9.94**	**155**	*e*Pn	**Pn**	**04 24 58.3**	**+2.8**
WDC	**Whiskeytown Da**	**9.97**	**149**	*e*Pn	**Pn**	**04 24 59.0**	**+3.2**
WDC	**Whiskeytown Da**	**9.97**	**149**	*e*P	**Pn**	**04 24 59.0**	**+3.2**
WALA	**Waterton Lakes**	**10.03**	**86**	*e*Pn	**Pn**	**04 25 01.2**	**+4.5**
JTMT	**Jette**	**10.04**	**94**	Pn	**Pn**	**04 24 55.9**	**-1.0**
JTMT	**Jette**	**10.04**	**94**	*e*Pn	**Pn**	**04 24 57.5**	**+0.6**
FBMT	**Ferry Basin**	**10.04**	**96**	Pn	**Pn**	**04 24 56.4**	**-0.6**
WVOR	**Wild Horse Val**	**10.11**	**129**	*e*Pn	**Pn**	**04 25 00.2**	**+2.3**
WVOR	**Wild Horse Val**	**10.11**	**129**	*e*P	**Pn**	**04 25 00.2**	**+2.3**
YBMT	**Yellow Bay**	**10.19**	**93**	Pn	**Pn**	**04 24 58.6**	**-0.3**
FNBB	**Fort Nelson**	**10.22**	**18**	Pn	**Pn**	**04 25 00.2**	**+1.0**
SWMT	**Swartz Lake**	**10.29**	**95**	Pn	**Pn**	**04 24 60.0**	**-0.3**
O03D	**Paynes Creek**	**10.48**	**147**	P	**Pn**	**04 25 04.7**	**+1.8**
	baz=331,SNR=18						
O03D	**Paynes Creek**	**10.48**	**147**	*e*Pn	**Pn**	**04 25 05.8**	**+2.9**
MSO	**Missoula**	**10.53**	**98**	P	**Pn**	**04 25 03.0**	**-0.6**
	baz=288						
MSO	**Missoula**	**10.53**	**98**	*e*Pn	**Pn**	**04 25 02.6**	**-1.1**
SLMT	**Seeley Lake**	**10.69**	**95**	Pn	**Pn**	**04 25 05.2**	**-0.6**
BPMT	**Black Pine Rid**	**10.99**	**99**	Pn	**Pn**	**04 25 10.0**	**0.0**
MFID	**Camas Ranch**	**10.99**	**118**	*e*Pn	**Pn**	**04 25 10.8**	**+0.9**
OVMT	**Ovando**	**11.07**	**96**	Pn	**Pn**	**04 25 10.7**	**-0.3**
ORV	**Oroville**	**11.24**	**148**	*e*Pn	**Pn**	**04 25 16.6**	**+3.4**
ORV	**Oroville**	**11.24**	**148**	*e*P	**Pn**	**04 25 16.6**	**+3.4**
HOPS	**Hopland Field**	**11.26**	**155**	*e*Pn	**Pn**	**04 25 14.6**	**+1.1**
BEKR	**Beckworth**	**11.39**	**143**	*e*Pn	**Pn**	**04 25 18.2**	**+2.7**
HLID	**Hailey**	**11.73**	**114**	P	**Pn**	**04 25 21.0**	**+0.7**
	baz=304						
HLID	**Hailey**	**11.73**	**114**	*e*Pn	**Pn**	**04 25 20.9**	**+0.7**
HBMT	**Mount Humbug**	**11.77**	**101**	Pn	**Pn**	**04 25 21.3**	**+0.5**
LRM	**Limekiln Ridge**	**11.86**	**101**	Pn	**Pn**	**04 25 22.1**	**+0.2**
LRM	**Limekiln Ridge**	**11.86**	**101**	*e*Pn	**Pn**	**04 25 22.1**	**+0.2**
PAHR	**Pah Rah Range**	**11.92**	**140**	*e*Pn	**Pn**	**04 25 25.0**	**+2.3**
DLMT	**Dillon**	**11.96**	**103**	*e*Pn	**Pn**	**04 25 22.9**	**-0.3**
AFDM	**Forest Hills D**	**11.96**	**147**	*e*Pn	**Pn**	**04 25 26.8**	**+3.5**
MCMT	**McKenzie Canyo**	**12.04**	**106**	*e*Pn	**Pn**	**04 25 25.4**	**+1.0**
VCNR	**Virginia City**	**12.16**	**142**	*e*Pn	**Pn**	**04 25 28.9**	**+2.8**
RUBR	**Rubicon Trail**	**12.17**	**144**	*e*Pn	Pn	04 25 31.2	+5.0
BMN	**Battle Mountai**	**12.32**	**132**	*e*Pn	**Pn**	**04 25 30.6**	**+2.4**
PNTR	**Pine Nut**	**12.36**	**143**	*e*Pn	**Pn**	**04 25 31.9**	**+3.2**
HYT	**Haines Junctio**	**12.42**	**341**	Pn	**Pn**	**04 25 28.4**	**-1.0**
BOZ	**Bozeman (W)**	**12.48**	**101**	P	**Pn**	**04 25 30.2**	**-0.1**
	baz=293						
BOZ	**Bozeman (W)**	**12.48**	**101**	*e*Pn	**Pn**	**04 25 30.1**	**-0.1**
BOZ	**Bozeman (W)**	**12.48**	**101**	*e*P	**Pn**	**04 25 30.1**	**-0.2**
YERR	**Yerington**	**12.59**	**142**	*e*Pn	**Pn**	**04 25 34.3**	**+2.4**
WAKR	**Walker**	**12.93**	**143**	*e*Pn	**Pn**	**04 25 40.3**	**+3.8**
EGMT	**Eagleton**	**12.93**	**89**	P	**Pn**	**04 25 35.8**	**-0.6**
	baz=282						
EGMT	**Eagleton**	**12.93**	**89**	*e*Pn	**Pn**	**04 25 36.7**	**+0.3**
QLMT	**Earthquake Lak**	**12.93**	**104**	*e*Pn	**Pn**	**04 25 38.6**	**+2.0**
CMB	**Columbia Colle**	**12.99**	**147**	*e*Pn	**Pn**	**04 25 39.3**	**+2.1**
CMB	**Columbia Colle**	**12.99**	**147**	*e*P	**Pn**	**04 25 39.3**	**+2.1**
KVN	**Kaiserville**	**13.02**	**138**	*e*Pn	**Pn**	**04 25 39.9**	**+2.2**
KVN	**Kaiserville**	**13.02**	**138**	P	**Pn**	**04 25 39.9**	**+2.2**
ELK	**Elko**	**13.09**	**126**	Pn	**Pn**	**04 25 43.2**	**+4.4**
	0.1nm,0.3s,baz=359,slow=18,SNR=9.0						
ELK				LR	LR	04 30 43.4	
	comp=Z,990nm,19.9s,baz=3.5,slow=37						
RYN	**Ryan**	**13.19**	**140**	*e*Pn	**Pn**	**04 25 42.3**	**+2.3**
NV01	**Mina Array Sit**	**13.45**	**140**	*e*Pn	**Pn**	**04 25 45.0**	**+1.4**
NVAR	**Mina Array Bea**	**13.45**	**140**	Pn	**Pn**	**04 25 45.2**	**+1.5**
	baz=317,slow=12,SNR=32						
NVAR				LR	LR	04 30 28.5	
	comp=Z,777nm,19.0s,baz=36,slow=35						
NV11	**Mina Array Sit**	**13.51**	**140**	*e*Pn	**Pn**	**04 25 46.5**	**+2.1**
GCMT	**Greycliff**	**13.67**	**98**	*e*Pn	**Pn**	**04 25 49.7**	**+3.1**
H17A	**Grant Village**	**13.68**	**104**	P	**Pn**	**04 25 48.2**	**+1.4**
	baz=297						
H17A	**Grant Village**	**13.68**	**104**	*e*Pn	**Pn**	**04 25 50.0**	**+3.3**
IMW	**Indian Meadow**	**13.69**	**107**	*e*Pn	**Pn**	**04 25 48.9**	**+2.0**
FLWY	**Flagg Ranch**	**13.75**	**106**	*e*Pn	**Pn**	**04 25 50.2**	**+2.5**
FXWY	**Fox Creek**	**13.76**	**108**	*e*Pn	**Pn**	**04 25 51.6**	**+3.6**
SAO	**San Andreas Ge**	**13.80**	**153**	*e*Pn	**P**	**04 25 54.7**	**-2.1**
SAO	**San Andreas Ge**	**13.80**	**153**	*e*P	**P**	**04 25 54.7**	**-2.1**
MDPB	**Devils Postpil**	**13.82**	**144**	*e*Pn	**Pn**	**04 25 50.6**	**+1.8**
OMMB	**Old Mammoth Mi**	**13.87**	**144**	*e*Pn	**Pn**	**04 25 51.5**	**+2.0**
MOOW	**Moose Ponds**	**13.88**	**107**	*e*Pn	**Pn**	**04 25 52.7**	**+3.2**
TPAW	**Teton Pass**	**13.89**	**108**	*e*Pn	**Pn**	**04 25 51.7**	**+2.1**
MLAC	**Mammoth, Mammo**	**13.92**	**143**	P	**Pn**	**04 25 51.1**	**+1.0**
	baz=330						
REDW	**Red Top Meadow**	**14.02**	**108**	*e*Pn	**Pn**	**04 25 53.9**	**+2.6**
SNOW	**Snow King Moun**	**14.02**	**108**	*e*Pn	**P**	**04 25 56.1**	**-3.4**
LOHW	**Long Hollow**	**14.04**	**107**	*e*Pn	**Pn**	**04 25 55.3**	**+3.6**
RAGM	**Ragged Mountai**	**14.14**	**327**	*e*Pn	**Pn**	**04 25 55.5**	**+2.7**
RAGM				*e*Sn	**Sn**	**04 28 25.7**	**-4.0**
AHID	**Auburn Hatcher**	**14.19**	**111**	*e*Pn	**Pn**	**04 25 55.5**	**+1.8**
RLMT	**Red Lodge**	**14.19**	**100**	P	**Pn**	**04 25 54.3**	**+0.5**
	baz=294						
RLMT	**Red Lodge**	**14.19**	**100**	*e*Pn	**Pn**	**04 25 54.7**	**+0.9**
BMRM	**Bremner River**	**14.53**	**329**	*e*Pn	**P**	**04 26 02.5**	**-2.3**
HWUT	**Hardware Ranch**	**

comp=Z,130nm,1.1s
DECC Green Verdugo 17.11 148 P P 04 26 33.0 -0.5
baz=335
SUA Susitna One 17.11 323 ePn P 04 26 34.1 +0.7
comp=Z,33nm,1.0s
RWWY Rawlins 17.18 108 ePn P 04 26 34.3 -0.3
comp=Z,79nm,1.1s
HEC Hector,Ludlow 17.35 142 P Pn 04 26 35.4 +0.6
baz=330
BFSC Mount Baldy Ra 17.36 146 P P 04 26 37.0 +0.6
baz=333
O20A White River Ci 17.48 114 P Pn 04 26 37.0 +0.5
baz=308
O20A White River Ci 17.48 114 ePn Pn 04 26 37.0 +0.5
comp=Z,95nm,1.1s
FFC Flin Flon 17.54 62 ePn Pn 04 26 34.4 -2.6
comp=Z,199nm,0.9s
FFC Flin Flon 17.54 62 eP Pn 04 26 34.4 -2.6
FFC pmax pmax
comp=Z,199nm,0.9s
BBRC Big Bear Solar 17.61 144 P Pn 04 26 39.0 +0.7
baz=332
LDFC Landfair 17.64 139 ePn P 04 26 39.3 -0.2
comp=Z,38nm,1.1s
GMRC Granite Mounta 17.66 140 P P 04 26 40.7 +1.0
baz=329
SKT Skwentna 17.71 324 ePn P 04 26 42.2 +2.2
comp=Z,21nm,1.3s
HDA Harding Lake 17.82 334 ePn P 04 26 44.6 +3.4
comp=Z,29nm,1.3s
U15A North Rim 17.86 130 ePn P 04 26 42.5 +0.4
comp=Z,41nm,1.2s
MCK McKinley 17.92 331 ePn P 04 26 45.6 +3.3
comp=Z,20nm,1.0s
RSSD Black Hills 18.00 97 P Pn 04 26 42.0 -1.0
baz=295
RSSD Black Hills 18.00 97 ePn Pn 04 26 42.2 -0.8
comp=Z,32nm,1.0s
RSSD Black Hills 18.00 97 eP Pn 04 26 42.2 -0.8
RSSD pmax pmax
comp=Z,32nm,1.0s
PV09 Paradox Valley 18.03 119 ePn P 04 26 44.4 +0.4
PV21 Cone Mtn., Par 18.08 119 ePn P 04 26 44.8 +0.3
comp=Z,36nm,0.9s
IL1 Eielson Array 18.08 335 ePn P 04 26 44.1 +0.1
ILAR Eielson Array 18.08 335 P Pn 04 26 43.6 0.0
comp=Z,0.1nm,0.3s,baz=150,slow=11,SNR=35
ILAR LR LR 04 32 42.5
comp=Z,126nm,21.0s,baz=149,slow=34
ILB Eielson Array 18.08 335 ePn P 04 26 45.9 +1.8
MURC Murrieta 18.10 146 P P 04 26 44.7 +0.1
baz=333
NEE2 Needles Airpor 18.12 138 P Pn 04 26 44.1 -0.2
baz=327
PV23 Carpenter Ridg 18.13 119 ePn P 04 26 46.9 +1.9
comp=Z,224nm,1.3s
PV10 Paradox Valley 18.17 120 ePn Pn 04 26 41.0 -4.2
comp=Z,224nm,1.1s
W13A Hualapai Mount 18.17 136 ePn P 04 26 45.9 +0.5
comp=Z,22nm,1.1s
TRF Thorofare Moun 18.18 329 ePn P 04 26 45.4 +0.1
comp=Z,52nm,1.3s
PV14 Lion Creek, Pa 18.18 120 ePn P 04 26 47.3 +1.7
comp=Z,336nm,1.3s
WRH Wood River Hil 18.20 333 ePn P 04 26 45.6 +0.3
comp=Z,58nm,1.4s
PV22 Blue Mesa, Par 18.20 119 ePn P 04 26 46.3 +0.5
comp=Z,126nm,1.4s
BELC Belle Mtn. Jos 18.20 143 P Pn 04 26 45.8 +0.3
baz=331
PV04 Paradox Valley 18.23 119 ePn P 04 26 48.0 +1.9
comp=Z,234nm,1.3s
PV20 West Nyswonger 18.23 120 ePn P 04 26 47.7 +1.6
comp=Z,124nm,0.9s
CCB Clear Creek Bu 18.24 334 ePn P 04 26 46.2 +0.4
comp=Z,37nm,1.2s
PV19 Morning Glory 18.25 120 ePn P 04 26 47.1 +0.9
comp=Z,221nm,1.2s
PV16 Nyswonger Mesa 18.28 120 ePn P 04 26 47.7 +1.1
comp=Z,197nm,1.2s
PV11 David Mesa, Pa 18.32 119 eP P 04 26 48.1 +1.1
comp=Z,233nm,1.1s
PV18 Skein Mesa, Pa 18.33 120 eP P 04 26 48.2 +0.9
comp=Z,179nm,1.0s
PV05 Paradox Valley 18.34 120 eP P 04 26 48.5 +1.2
comp=Z,231nm,1.5s
PV12 Saucer Basin, 18.34 119 eP P 04 26 49.1 +1.8
comp=Z,152nm,1.2s
PV07 Paradox Valley 18.35 119 eP P 04 26 48.8 +1.4
comp=Z,57nm,1.0s
PV03 Paradox Valley 18.36 120 eP P 04 26 48.5 +0.9
comp=Z,178nm,1.3s
PFO Pinyon Flats O 18.37 144 P Pn 04 26 47.6 +0.1
baz=332
PFO Pinyon Flats O 18.37 144 eP P 04 26 48.4 +0.9
comp=Z,9.3nm,1.0s
PFO Pinyon Flats O 18.37 144 eP P 04 26 48.4 +0.9
PFO pmax pmax
comp=Z,9.0nm,1.0s
XPFO Piæon Flat 18.37 144 eP P 04 26 48.5 +0.9
comp=Z,9.2nm,1.0s
BWN Browne 18.40 331 eP P 04 26 51.1 +3.6
comp=Z,73nm,1.2s
DHRN Dharma Camp 18.41 12 Pn Pn 04 26 47.2 -0.4
IRM Iron Mountain 18.41 140 P Pn 04 26 48.2 +0.3
baz=329
N23A Red Feather La 18.42 109 P Pn 04 26 47.0 -1.3
baz=305
N23A Red Feather La 18.42 109 eP P 04 26 49.3 +1.0
comp=Z,94nm,1.4s
COLA College 18.43 334 eP Pn 04 26 50.8 +3.0
comp=Z,26nm,0.9s
COLA College 18.43 334 eP Pn 04 26 50.8 +3.0
COLA pmax pmax
comp=Z,26nm,0.9s
PV13 Radium Mtn., P 18.44 120 eP Pn 04 26 49.5 +1.0
comp=Z,143nm,0.9s
PV02 Paradox Valley 18.46 119 eP Pn 04 26 49.8 +1.2
comp=Z,69nm,1.0s
PHWY Pilot Hill 18.49 107 eP Pn 04 26 49.7 +0.6
comp=Z,49nm,0.9s
PPLA Purkeypile 18.50 326 eP Pn 04 26 51.8 +2.9
comp=Z,36nm,1.3s
PV15 Paradox Valley 18.51 119 eP Pn 04 26 51.8 +2.4
comp=Z,67nm,1.0s
MDM Murphy Dome 18.60 334 eP Pn 04 26 50.0 +0.1
comp=Z,76nm,1.3s
PV01 Paradox Valley 18.60 119 eP P 04 26 50.1 -0.1
comp=Z,97nm,1.1s
PDMCI Parker Dam,Lak 18.72 138 P Pn 04 26 51.9 +0.2
baz=327
BC3 Big Chuckawall 18.72 142 P Pn 04 26 52.7 +0.9
baz=330
109C Camp Elliot, M 18.77 147 P Pn 04 26 53.0 +0.7
baz=334
SMCO Snowmass 18.84 114 eP Pn 04 26 53.8 +0.3
comp=Z,43nm,1.2s
SVW2 Sparrevohn 18.92 318 eP P 04 26 52.9 -0.4
comp=Z,28nm,0.9s
MONP2 Monument Peak 19.02 145 P Pn 04 26 56.0 +0.5
baz=333
Y12C Blythe 19.03 140 P Pn 04 26 57.1 +1.7
baz=329
Y12C Blythe 19.03 140 eP Pn 04 27 00.1 +4.7
comp=Z,22nm,1.1s
WUAZ Wupatki 19.03 130 P Pn 04 26 56.1 +0.4
baz=322
WUAZ Wupatki 19.03 130 eP Pn 04 26 56.0 +0.4
comp=Z,52nm,1.1s
FYU Fort Yukon 19.12 340 eP Pn 04 26 59.3 +3.1
comp=Z,108nm,1.4s
INK Inuvik 19.13 355 P Pn 04 26 56.7 +0.4
comp=Z,0.1nm,0.3s,baz=169,slow=16,SNR=25
INK LR LR 04 33 49.2
comp=Z,969nm,20.1s,baz=170,slow=36
INK Inuvik 19.13 355 Pn P 04 26 55.7 +0.2
INK Inuvik 19.13 355 eP Pn 04 26 57.3 +1.0
comp=Z,96nm,1.3s
INK Inuvik 19.13 355 eP Pn 04 26 57.3 +1.0
INK pmax pmax
comp=Z,96nm,1.3s
SWSC Sam W. Stewart 19.21 144 P Pn 04 26 57.6 +0.1
baz=332
ISCO Idaho Springs 19.27 111 P Pn 04 26 58.6 0.0
baz=307
ISCO Idaho Springs 19.27 111 eP Pn 04 26 59.3 +0.7
comp=Z,28nm,1.4s
ISCO Idaho Springs 19.27 111 eP Pn 04 26 59.3 +0.7
ISCO pmax pmax
comp=Z,28nm,1.4s
MVCO Mesa Verde 19.29 121 P P 04 26 58.0 +0.2
baz=315
MVCO Mesa Verde 19.29 121 eP P 04 26 58.2 +0.4
comp=Z,112nm,1.0s
IKP In-Ko-Pah, Jac 19.36 145 P Pn 04 26 59.2 -0.2
baz=333
MLY Manley 19.39 332 eP P 04 26 58.7 +0.2
comp=Z,53nm,1.2s
GLA Glamis 19.50 141 P Pn 04 27 01.8 +0.6
baz=330
GLA Glamis 19.50 141 eP Pn 04 27 03.5 +2.3
comp=Z,21nm,1.0s
GLA Glamis 19.50 141 eP Pn 04 27 03.5 +2.3
GLA pmax pmax
comp=Z,21nm,1.0s
Y14A Wickenburg 19.54 136 eP P 04 27 01.1 +0.8
comp=Z,49nm,1.4s
MDND Maddock 19.59 83 P P 04 27 00.9 +0.1
baz=285
MDND Maddock 19.59 83 eP Pn 04 27 03.7 +1.6
comp=Z,232nm,1.4s
KUKN Kugluktuk,NWT 19.83 16 Pn P 04 27 03.6 +0.4
S22A 4UR Ranch, Cre 19.87 117 P Pn 04 27 05.3 -0.4
baz=312
S22A 4UR Ranch, Cre 19.87 117 eP Pn 04 27 05.5 -0.2
comp=Z,41nm,1.4s
X16A Lo Mia Camp, P 19.88 132 eP Pn 04 27 06.7 +0.9
comp=Z,49nm,1.2s
Q24A Divide 20.07 112 P P 04 27 07.4 +1.0
baz=308
W18A Petrified Fore 20.18 128 P P 04 27 08.3 +0.9
baz=320
W18A Petrified Fore 20.18 128 eP Pn 04 27 11.9 +2.6
comp=Z,223nm,1.4s
X18A Snowflake 20.53 129 eP P 04 27 12.2 +1.0
comp=Z,80nm,1.1s
SDCO Great Sand Dun 20.65 115 P P 04 27 13.6 +1.0
baz=311
SDCO Great Sand Dun 20.65 115 eP Pn 04 27 13.9 -1.0
comp=Z,27nm,1.3s
OGNE Ogallala 20.85 103 P P 04 27 15.7 +1.1
baz=302
OGNE Ogallala 20.85 103 eP Pn 04 27 16.2 -0.9
comp=Z,307nm,1.4s
E31A Nome 21.09 86 P P 04 27 17.6 +0.6
baz=289
SUSD Miller 21.17 92 P P 04 27 17.7 -0.3
baz=294
214A Organ Pipe Nat 21.30 139 P P 04 27 18.8 -0.6
baz=329
G31A Conde 21.35 89 P P 04 27 19.8 -0.1
baz=292
ULM Lac du Bonnet 21.44 75 P P 04 27 20.2 -0.5
comp=Z,102nm,0.9s,baz=292,slow=9.5,SNR=27
ULM LR LR 04 35 54.7
comp=Z,2μm,19.7s,baz=279,slow=37
ULM Lac du Bonnet 21.44 75 Pn P 04 27 20.3 -0.5
ULM Lac du Bonnet 21.44 75 eP P 04 27 20.4 -0.4
comp=Z,188nm,1.0s
ULM Lac du Bonnet 21.44 75 eP P 04 27 20.4 -0.4
ULM pmax pmax
comp=Z,188nm,1.0s
KSCO Kaye Shedlock' 21.59 109 P P 04 27 23.4 +0.9
baz=307
KSCO Kaye Shedlock' 21.59 109 eP P 04 27 24.4 +1.8
comp=Z,185nm,1.1s
T25A Trinidad 21.70 115 P P 04 27 25.0 +1.2
baz=312
T25A Trinidad 21.70 115 eP P 04 27 25.3 +1.4
comp=Z,32nm,1.1s
TOLK Toolik Lake Re 21.78 340 P P 04 27 25.0 +0.7
baz=143
TOLK Toolik Lake Re 21.78 340 eP P 04 27 26.1 +1.8
comp=Z,54nm,1.2s
G32A Webster 21.80 89 P P 04 27 24.8 +0.1
baz=292
G32A Webster 21.80 89 eP P 04 27 26.4 +1.6
comp=Z,92nm,0.9s
F32A Veblen 21.82 87 P P 04 27 24.6 -0.3
baz=290
AGMN Agassiz Nation 21.89 80 P P 04 27 25.2 -0.4
baz=285
AGMN Agassiz Nation 21.89 80 eP P 04 27 25.7 +0.1
comp=Z,124nm,1.1s
TUC Tucson 21.92 134 P P 04 27 26.6 +0.6
baz=326
TUC Tucson 21.92 134 eP P 04 27 26.9 +0.8
comp=Z,31nm,1.3s
TUC Tucson 21.92 134 eP P 04 27 26.9 +0.8
TUC pmax pmax
comp=Z,31nm,1.3s
A33A Warroad 22.03 78 P P 04 27 26.1 -1.0
baz=284
TASM ASL Pad, Albuq 22.07 122 P P 04 27 27.9 +0.1
baz=317
ANMO Albuquerque 22.07 122 P P 04 27 28.0 +0.2
comp=Z,32nm,1.1s,baz=317,slow=9.7,SNR=40
ANMO LR LR 04 36 33.0
comp=Z,292nm,18.1s,baz=310,slow=38
ANMO Albuquerque 22.07 122 P P 04 27 27.8 0.0
baz=317
ANMO Albuquerque 22.07 122 eP P 04 27 28.4 +0.6
comp=Z,45nm,1.2s
ANMO Albuquerque 22.07 122 c iP P 04 27 28.2 +0.4
ANMO pmax pmax
comp=Z,36nm,1.3s
TASL Snake Pit, Alb 22.07 122 P P 04 27 28.0 +0.2
baz=317
C33A Trail 22.10 81 P P 04 27 27.5 -0.3
baz=286
LAZ Ladron 22.10 124 eP P 04 27 29.0 +0.8
H32A Carlson Farm, 22.14 91 P P 04 27 27.4 -0.9
baz=294
LENM Lemitar 22.37 124 eP P 04 27 33.5 +2.5
FCC Fort Churchill 22.42 52 P P 04 27 31.4 +0.3
FCC Fort Churchill 22.42 52 eP P 04 27 32.4 +1.3
comp=Z,60nm,1.0s
FCC Fort Churchill 22.42 52 eP P 04 27 32.4 +1.3
FCC pmax pmax
comp=Z,60nm,1.0s
LPM Los Pinos Moun 22.44 124 eP P 04 27 32.7 +0.9
Y22E IRIS PASSCAL I 22.47 124 P P 04 27 33.1 +1.0
baz=319
G33A Ortonville 22.52 88 P P 04 27 33.0 +0.6
baz=292
BNM Barren Site 22.57 124 eP P 04 27 33.5 +0.3
B34A Aery, Baudette 22.62 79 P P 04 27 32.9 -0.5
baz=285
C34A RKJ Ranch, Bem 22.68 81 P P 04 27 33.3 -0.8
baz=287
E34A Wadena 22.88 84 P P 04 27 36.0 -0.2
baz=289
EPLO Experimental L 22.92 76 P P 04 27 34.9 -1.7
ECSD EROS Data Cent 23.00 92 P P 04 27 37.1 -0.3
baz=295
ECSD EROS Data Cent 23.00 92 eP P 04 27 37.2 -0.3
comp=Z,24nm,0.9s
G34A Benson 23.03 87 P P 04 27 38.2 +0.5
baz=292
F34A Alexandria 23.07 86 P P 04 27 38.1 -0.1
baz=291
BGNE Belgrade 23.10 98 P P 04 27 38.1 -0.4
baz=300
BGNE Belgrade 23.10 98 eP P 04 27 40.0 +1.5
comp=Z,163nm,1.4s
121A Cookes Peak, D 23.21 128 P P 04 27 40.1 +0.2
baz=322
B35A Bob, Littlefor 23.25 79 P P 04 27 39.2 -0.7
baz=286
B35A Bob, Littlefor 23.25 79 eP P 04 27 39.3 -0.7
comp=Z,38nm,0.8s
C35A Jirik Farms, M 23.27 81 P P 04 27 39.3 -0.9
baz=287
E35A Pequot Lakes 23.36 84 P P 04 27 40.6 -0.5
baz=289
319A Douglas 23.40 133 eP P 04 27 42.6 +0.9
comp=Z,47nm,1.1s
D35A Remer 23.41 82 P P 04 27 40.7 -0.9
baz=288
F35A Swanville 23.49 85 P P 04 27 41.8 -0.6
baz=291
CBKS Cedar Bluff 23.51 105 P P 04 27 42.9 +0.2
baz=306
CBKS Cedar Bluff 23.51 105 eP P 04 27 43.5 +0.8
comp=Z,124nm,1.4s
CBKS Cedar Bluff 23.51 105 eP P 04 27 43.5 +0.8
CBKS pmax pmax
comp=Z,124nm,1.4s
H35A Sunnyside Ranc 23.77 88 P P 04 27 44.9 -0.2
baz=293
G35A Watkins 23.79 87 P P 04 27 45.5 +0.2
baz=292
G35A Watkins 23.79 87 eP P 04 27 45.8 +0.5
comp=Z,78nm,0.8s
SOLO Sioux Lookout 23.88 74 P P 04 27 45.3 -0.8
D36A Goodland 23.96 81 P P 04 27 46.8 -0.2
baz=288
D36A Goodland 23.96 81 eP P 04 27 47.0 +0.1
comp=Z,42nm,0.8s
C36A Pine Crest Far 23.99 80 P P 04 27 46.9 -0.3
baz=287
E36A McGregor 24.12 83 P P 04 27 49.0 +0.6
baz=290
F36A Milaca 24.18 85 P P 04 27 49.2 +0.3
baz=291
F36A Milaca 24.18 85 eP P 04 27 49.6 +0.6
comp=Z,80nm,1.3s
G36A St. Michael 24.26 86 P P 04 27 49.5 -0.3
baz=292
H36A Jessenland, He 24.41 88 P P 04 27 51.5 +0.4
baz=294
C37A Embarrass 24.42 80 P P 04 27 51.6 +0.5
baz=287
D37A Cotton 24.44 81 P P 04 27 51.5 +0.2
baz=289
EPT El Paso 24.47 127 eP P 04 27 52.6 +0.7
comp=Z,25nm,1.1s
ATKO Atikokan Iron 24.48 77 P P 04 27 51.5 -0.2
I36A Fitzsimmons Fa 24.58 89 P P 04 27 52.5 -0.2
baz=295
E37A Wrenshall 24.66 82 P P 04 27 53.9 +0.5
baz=290
PKLO Pickle Lake 24.66 70 P P 04 27 52.5 -0.8
J36A Seneca 1, Swea 24.67 91 P P 04 27 53.6 +0.1
baz=296
J36A Seneca 1, Swea 24.67 91 eP P 04 27 54.1 +0.7
comp=Z,43nm,0.9s
EYMN Ely 24.80 79 P P 04 27 55.2 +0.6
baz=287
EYMN Ely 24.80 79 eP P 04 27 55.2 +0.6
comp=Z,62nm,0.8s
F37A Hinrichs Farm, 24.81 84 P P 04 27 55.4 +0.7
baz=291
AMTX Amarillo 24.85 115 P P 04 27 55.3 0.0
baz=314
AMTX Amarillo 24.85 115 eP P 04 27 55.8 +0.5
comp=Z,26nm,0.8s
MSTX Muleshoe 24.86 118 P P 04 27 55.2 -0.1
baz=316
MSTX Muleshoe 24.86 118 eP P 04 27 55.7 +0.3
comp=Z,65nm,1.4s
SPMN Marine on St. 24.88 86 P P 04 27 56.1 +0.7
baz=292
SPMN Marine on St. 24.88 86 eP P 04 27 56.5 +1.1
comp=Z,21nm,0.9s
K36A Gilmore City 24.91 92 P P 04 27 56.0 +0.3
baz=297
I37A Lemond, Waseca 24.98 89 P P 04 27 56.9 +0.7
baz=295
I37A Lemond, Waseca 24.98 89 eP P 04 27 59.8 +3.5
comp=Z,38nm,1.1s
C38A Sawbill Land. 25.01 79 P P 04 27 57.0 +0.5
baz=288
L36A Harm Buss Farm 25.02 94 P P 04 27 57.1 +0.5
baz=298
H37A Dierke Farm, C 25.06 87 P P 04 27 58.2 +1.2
baz=294
MNTX Cornudas Mount 25.12 126 P P 04 27 57.9 +0.3
baz=321
MNTX Cornudas Mount 25.12 126 eP P 04 27 57.8 +0.2
comp=Z,38nm,1.5s
J37A Redenius Farm, 25.19 90 P P 04 27 58.7 +0.5
baz=296
E38A The Farm, Brul 25.19 82 P P 04 27 58.7 +0.5
baz=290
E38A The Farm, Brul 25.19 82 eP P 04 27 58.6 +0.5
comp=Z,25nm,1.1s
F38A Pierce - Schro 25.21 83 P P 04 27 59.5 +1.2
baz=291
M36A Felix, Anita 25.25 95 P P 04 27 58.7 0.0
baz=300
GDL2 Guadalupe Moun 25.28 123 eP P 04 28 00.5 +1.3
KSU1 Kansas State U 25.34 101 eP P 04 28 01.2 +1.7
comp=Z,44nm,1.1s
K37A Belmond 25.38 91 P P 04 28 00.4 +0.5
baz=297
H38A Maiden Rock 25.44 86 P P 04 28 01.3 +0.9
baz=294
N36A Muff Farm, Cla 25.47 97 P P 04 28 01.4 +0.7
baz=301
G38A Ridgeland 25.52 85 P P 04 28 01.6 +0.4
baz=293
L37A Phoenix Point, 25.61 93 P P 04 28 02.4 +0.5
baz=298
I38A Scanlan Farm, 25.67 88 P P 04 28 03.2 +0.6
baz=295
C39A Grand Marais 25.71 78 P P 04 28 02.7 -0.1
baz=288
M37A Trindle Farm, 25.76 95 P P 04 28 03.5 +0.1
baz=300
F39A Loretta 25.85 83 P P 04 28 04.8 +0.7
baz=291
J38A Wedel Dairy, R 25.89 89 P P 04 28 05.0 +0.5
baz=296
E39A Mellen 25.92 82 P P 04 28 04.9 +0.2
baz=291
TBO Thunder Bay 25.92 76 P P 04 28 05.3 +0.6
G39A Holcombe 25.92 84 P P 04 28 05.3 +0.5
baz=292
N37A Lee Faris, Mou 25.99 96 P P 04 28 05.8 +0.4
baz=301
K38A Parkersburg 26.00 91 P P 04 28 06.3 +0.8
baz=297
K38A Parkersburg 26.00 91 eP P 04 28 06.8 +1.3
comp=Z,90nm,1.1s
SCIA State Center 26.06 93 P P 04 28 07.0 +1.0
baz=299
SCIA State Center 26.06 93 eP P 04 28 05.9 -0.2
comp=Z,42nm,0.9s
H39A Augusta 26.09 86 P P 04 28 07.2 +0.9
baz=294
L38A Oak Wood Farm, 26.12 92 P P 04 28 07.2 +0.6
baz=298
I39A Houston 26.28 88 P P 04 28 08.6 +0.6
baz=295
I39A Houston 26.28 88 eP P 04 28 08.9 +0.9
comp=Z,49nm,0.9s
C40A Isle Royale Na 26.31 78 P P 04 28 08.7 +0.5
baz=288
C40A Isle Royale Na 26.31 78 eP P 04 28 09.1 +0.8
comp=Z,72nm,0.9s
M38A Pleasantville 26.31 94 P P 04 28 09.1 +0.7
baz=300
E40A Wakefield 26.32 81 P P 04 28 09.0 +0.6
baz=291
O37A Wolven Farm, M 26.34 97 P P 04 28 08.7 +0.1
baz=302
F40A Park Falls 26.36 82 P P 04 28 08.9 +0.1
baz=292
J39A Decorah 26.39 89 P P 04 28 09.4 +0.4
baz=296
P37A Lathrop 26.52 98 P P 04 28 10.7 +0.4
baz=303
K39A Oelwein 26.55 90 P P 04 28 10.2 -0.3
baz=297
G40A Rib Lake 26.56 84 P P 04 28 10.9 +0.3
baz=293
G40A Rib Lake 26.56 84 eP P 04 28 11.0 +0.4
comp=Z,18nm,1.0s
N38A Joes South For 26.60 95 P P 04 28 11.4 +0.4
baz=301
WMOK Wichita Mounta 26.69 112 P P 04 28 12.0 +0.2
baz=312
H40A Chili 26.70 85 P P 04 28 12.3 +0.5
baz=294
L39A Vinton 26.75 91 P P 04 28 12.6 +0.3
baz=298
O38A Galt 26.80 97 P P 04 28 13.0 +0.3
baz=302
Q37A Longview Farm, 26.85 100 P P 04 28 13.5 +0.3
baz=304
I40A Norwalk 26.85 87 P P 04 28 13.8 +0.6
baz=295
E41A Kenton 26.91 81 P P 04 28 13.9 +0.1

	baz=291						
COWI	Conover	26.93	82	eP	P	04 28 14.2	+0.2
	comp=Z,27nm,1.0s						
M39A	Webster	26.95	93	P	P	04 28 14.6	+0.5
	baz=299						
D41A	Chassel	26.96	79	P	P	04 28 14.5	+0.4
	baz=290						
D41A	Chassel	26.96	79	eP	P	04 28 15.1	+1.0
	comp=Z,87nm,1.2s						
J40A	Soldiers Grove	26.99	88	P	P	04 28 14.9	+0.4
	baz=296						
P38A	Dawn	27.03	97	P	P	04 28 15.0	+0.2
	baz=303						
P38A	Dawn	27.03	97	eP	P	04 28 15.6	+0.7
	comp=Z,34nm,1.1s						
N39A	Derby Farms, D	27.04	94	P	P	04 28 15.2	+0.3
	baz=300						
N39A	Derby Farms, D	27.04	94	eP	P	04 28 15.4	+0.5
	comp=Z,34nm,0.9s						
K40A	Colesburg	27.04	90	P	P	04 28 15.1	+0.2
	baz=297						
F41A	Three Lakes	27.09	82	P	P	04 28 15.5	+0.1
	baz=292						
F41A	Three Lakes	27.09	82	eP	P	04 28 16.2	+0.8
	comp=Z,15nm,1.2s						
GTO	Geraldton	27.16	73	P	P	04 28 16.3	+0.4
H41A	Junction City	27.18	85	P	P	04 28 16.1	0.0
	baz=294						
H41A	Junction City	27.18	85	eP	P	04 28 17.0	+0.9
	comp=Z,34nm,1.3s						
G41A	Antigo	27.25	83	P	P	04 28 17.3	+0.6
	baz=293						
I41A	Arkdale	27.27	86	P	P	04 28 17.4	+0.4
	baz=295						
I41A	Arkdale	27.27	86	eP	P	04 28 17.8	+0.8
	comp=Z,60nm,1.2s						
L40A	Anamosa	27.29	91	P	P	04 28 17.3	+0.2
	baz=298						
L40A	Anamosa	27.29	91	eP	P	04 28 17.7	+0.5
	comp=Z,81nm,0.9s						
O39A	Kirksville	27.33	95	P	P	04 28 17.8	+0.2
	baz=301						
Q38A	Cooks Store, C	27.34	99	P	P	04 28 17.5	-0.1
	baz=304						
M40A	Post Highland	27.42	92	P	P	04 28 18.7	+0.4
	baz=299						
J41A	Loganville	27.48	88	P	P	04 28 18.9	+0.1
	baz=296						
JFWS	Jewell Farm	27.53	89	P	P	04 28 19.4	+0.1
	baz=297						
JFWS	Jewell Farm	27.53	89	eP	P	04 28 20.0	+0.7
	comp=Z,41nm,0.8s						
JFWS	Jewell Farm	27.53	89	eP	P	04 28 20.0	+0.7
JFWS				pmax	pmax		
	comp=Z,41nm,0.8s						
R38A	Fenwick Farm,	27.59	100	P	P	04 28 20.0	+0.1
	baz=305						
E42A	Champion	27.60	80	P	P	04 28 20.1	+0.2
	baz=291						
P39B	Salisbury	27.61	97	P	P	04 28 20.3	+0.3
	baz=303						
K41A	Shullsburg	27.63	89	P	P	04 28 20.6	+0.4
	baz=297						
N40A	Mertquake, Sal	27.64	93	P	P	04 28 20.5	+0.3
	baz=300						
ABTX	Abilene, Hawle	27.64	116	P	P	04 28 20.1	-0.4
	baz=316						
ABTX	Abilene, Hawle	27.64	116	eP	P	04 28 20.4	-0.1
	comp=Z,28nm,1.4s						
Q39A	Willow Grove F	27.71	98	P	P	04 28 21.0	0.0
	baz=304						
F42A	Maple Grove Fa	27.71	82	P	P	04 28 20.9	0.0
	baz=292						
G42A	Mountain	27.72	83	P	P	04 28 20.6	-0.4
	baz=293						
G42A	Mountain	27.72	83	eP	P	04 28 22.0	+1.0
	comp=Z,23nm,1.1s						
L41A	Preston	27.76	90	P	P	04 28 21.5	+0.2
	baz=298						
TUL1	Leonard	27.77	106	P	P	04 28 21.6	+0.1
	baz=309						
TUL1	Leonard	27.77	106	eP	P	04 28 21.7	+0.1
	comp=Z,34nm,1.3s						
O40A	La Belle	27.84	95	P	P	04 28 22.3	+0.2
	baz=302						
TX31	Lajitas Ar. Si	27.89	126	eP	P	04 28 23.1	+0.4
TXAR	Lajitas Array	27.89	126	P	P	04 28 22.6	-0.1
	comp=Z,2.5nm,1.0s,baz=325,slow=6.4,SNR=24						
TXAR				LR	LR	04 40 11.5	
	comp=Z,625nm,19.6s,baz=0.0,slow=38						
PNPO	Pukaskwa Natio	27.91	75	P	P	04 28 23.1	+0.4
S38A	Stockton	27.92	101	P	P	04 28 23.2	+0.4
	baz=306						
H42A	Shiocton	27.95	84	P	P	04 28 23.4	+0.3
	baz=294						
H42A	Shiocton	27.95	84	eP	P	04 28 23.8	+0.7
	comp=Z,25nm,1.1s						
I42A	Draeger Farm,	27.97	86	P	P	04 28 23.7	+0.5
	baz=295						
I42A	Draeger Farm,	27.97	86	eP	P	04 28 23.8	+0.5
	comp=Z,47nm,1.0s						
T38A	Diamond	28.02	103	P	P	04 28 24.0	+0.2
	baz=307						
P40A	Paris	28.04	96	P	P	04 28 24.1	+0.1
	baz=303						
P40A	Paris	28.04	96	eP	P	04 28 24.4	+0.5
	comp=Z,17nm,0.9s						
M41A	Milan	28.07	92	P	P	04 28 24.3	+0.2
	baz=300						
R39A	Chumby, Stover	28.08	99	P	P	04 28 24.3	+0.1
	baz=305						
J42A	Columbus	28.08	87	P	P	04 28 24.3	+0.1
	baz=296						
K42A	Prairie Point,	28.18	88	P	P	04 28 25.1	0.0
	baz=297						
G43A	Wallace	28.20	82	P	P	04 28 25.4	+0.2
	baz=293						
G43A	Wallace	28.20	82	eP	P	04 28 25.9	+0.7
	comp=Z,12nm,0.9s						
N41A	Harden Midland	28.20	93	P	P	04 28 25.4	+0.1
	baz=301						
N41A	Harden Midland	28.20	93	eP	P	04 28 25.9	+0.7
	comp=Z,43nm,0.8s						
E43A	Lone Tree Farm	28.21	80	P	P	04 28 25.4	+0.1
	baz=291						
E43A	Lone Tree Farm	28.21	80	eP	P	04 28 26.0	+0.6
	comp=Z,14nm,0.9s						
S39A	Bolivar	28.26	101	P	P	04 28 26.5	+0.6
	baz=306						
S39A	Bolivar	28.26	101	eP	P	04 28 26.1	+0.2
	comp=Z,13nm,0.9s						
F43A	Flat Rock, Esc	28.31	81	P	P	04 28 26.4	+0.2
	baz=292						
Q40A	Laux Farm, Aux	28.32	97	P	P	04 28 26.3	-0.1
	baz=303						
L42A	Oliver, Polo	28.33	90	P	P	04 28 26.5	+0.1
	baz=298						
L42A	Oliver, Polo	28.33	90	eP	P	04 28 27.0	+0.5
	comp=Z,38nm,0.9s						
VIMO	Victor Mine	28.41	65	P	P	04 28 27.2	+0.3
H43A	Windswept, Lux	28.46	84	P	P	04 28 27.9	+0.3
	baz=294						
H43A	Windswept, Lux	28.46	84	eP	P	04 28 28.3	+0.7
	comp=Z,31nm,1.2s						
I43A	Langenfeld Bro	28.47	85	P	P	04 28 27.9	+0.2
	baz=295						
O41A	Passleys Farm,	28.49	94	P	P	04 28 28.0	+0.2
	baz=302						
M42A	Sheffield	28.54	91	P	P	04 28 28.2	-0.2
	baz=299						
R40A	Maddies Statio	28.59	99	P	P	04 28 28.5	-0.3
	baz=304						
R40A	Maddies Statio	28.59	99	eP	P	04 28 28.5	-0.3
	comp=Z,6.9nm,0.9s						
P41A	Barry, Barry	28.61	95	P	P	04 28 28.7	-0.2
	baz=302						
T39A	Clever	28.62	102	P	P	04 28 29.1	0.0
	baz=307						
N42A	Yates City	28.67	92	P	P	04 28 29.7	+0.2
	baz=300						
HHAR	Hobbs	28.71	104	eP	P	04 28 30.1	+0.3
	comp=Z,11nm,0.8s						
F44A	Big Bay de Noc	28.73	80	P	P	04 28 30.1	+0.1
	baz=292						
E44A	Grand Marais A	28.82	79	P	P	04 28 30.3	-0.4
	baz=291						
E44A	Grand Marais A	28.82	79	eP	P	04 28 32.1	+1.4
	comp=Z,63nm,1.0s						
HPIG		28.84	132	eP	P	04 28 31.8	+0.4
	comp=Z,15nm,1.5s						
S40A	Lebanon	28.84	100	P	P	04 28 30.7	-0.3
	baz=306						
L43A	Garden Prairie	28.85	89	P	P	04 28 30.9	-0.2
	baz=298						
K43A	Burlington	28.88	88	P	P	04 28 31.0	-0.3
	baz=297						
K43A	Burlington	28.88	88	eP	P	04 28 30.8	-0.5
	comp=Z,32nm,1.1s						
Q41A	Truxton	28.89	97	P	P	04 28 31.4	0.0
	baz=303						
U39A	Green Forest	28.94	103	P	P	04 28 31.5	-0.4
	baz=308						
O42A	Bath	28.97	93	P	P	04 28 32.4	+0.3
	baz=301						
M43A	Waltham Townsh	29.07	90	P	P	04 28 32.9	-0.2
	baz=299						
T40A	Mansfield	29.09	101	P	P	04 28 33.3	0.0
	baz=306						
P42A	Winchester	29.12	95	P	P	04 28 33.3	-0.2
	baz=302						
P42A	Winchester	29.12	95	eP	P	04 28 33.8	+0.3
	comp=Z,20nm,0.9s						
JCT	Junction City	29.13	119	P	P	04 28 33.1	-0.6
	baz=318						
JCT	Junction City	29.13	119	eP	P	04 28 33.4	-0.3
	comp=Z,16nm,0.8s						
JCT	Junction City	29.13	119	eP	P	04 28 33.4	-0.3
JCT				pmax	pmax		
	comp=Z,16nm,0.8s						
R41A	Rosebud	29.16	98	P	P	04 28 33.3	-0.5
	baz=304						
V39A	Pettigrew	29.17	104	P	P	04 28 34.1	0.0
	baz=308						
N43A	Stutzman Famil	29.18	91	P	P	04 28 33.7	-0.3
	baz=300						
RES	Resolute Bay	29.20	18	LR	LR	04 39 50.5	
	comp=Z,436nm,18.8s,baz=274,slow=36						
LPIG	La Paz	29.25	143	LR	LR	04 38 35.2	
	comp=Z,229nm,20.3s,baz=7.5,slow=33						
HDIL	Hopedale	29.30	92	P	P	04 28 35.0	-0.1
	baz=301						
HDIL	Hopedale	29.30	92	eP	P	04 28 35.6	+0.5
	comp=Z,76nm,1.1s						
S41A	Jillco Farms,	29.33	99	P	P	04 28 35.1	-0.3
	baz=305						
U40A	Yellville	29.36	102	P	P	04 28 35.7	0.0
	baz=308						
Q42A	Golden Eagle	29.37	96	P	P	04 28 35.4	-0.3
	baz=303						
CCM	Cathedral Cave	29.39	98	P	P	04 28 35.8	-0.1
	baz=305						
CCM	Cathedral Cave	29.39	98	eP	P	04 28 36.2	+0.3
	comp=Z,14nm,0.9s						
CCM	Cathedral Cave	29.39	98	eP	P	04 28 36.2	+0.3
CCM				pmax	pmax		
	comp=Z,14nm,0.9s						
E45A	Wooded Hills,	29.39	79	P	P	04 28 35.6	-0.3
	baz=292						
WHTX	Lake Whitney,	29.39	114	P	P	04 28 34.9	-1.1
	baz=315						
L44A	Lake County Fo	29.40	88	P	P	04 28 35.6	-0.4
	baz=298						
O43A	Sugar Creek Fa	29.43	93	P	P	04 28 36.0	-0.2
	baz=301						
F45A	CMU Biological	29.43	80	P	P	04 28 35.9	-0.3
	baz=293						
W39A	Magazine	29.49	105	P	P	04 28 36.8	+0.1
	baz=309						
W39A	Magazine	29.49	105	eP	P	04 28 37.6	+0.8
	comp=Z,27nm,1.1s						
R42A	Luebbering	29.55	97	P	P	04 28 37.2	-0.1
	baz=304						
P43A	Skaggs, Pawnee	29.63	94	P	P	04 28 38.0	0.0
	baz=302						
T41A	Mountain View	29.64	100	P	P	04 28 37.8	-0.4
	baz=306						
M44A	Midewin, Midew	29.70	90	P	P	04 28 37.6	-1.0
	baz=299						
M44A	Midewin, Midew	29.70	90	eP	P	04 28 39.1	+0.5
	comp=Z,46nm,1.1s						
V40A	Witts Springs	29.71	103	P	P	04 28 38.8	-0.1
	baz=308						
V40A	Witts Springs	29.71	103	eP	P	04 28 39.2	+0.4
	comp=Z,21nm,1.1s						
X39A	Fountain Ranch	29.72	107	P	P	04 28 38.8	-0.1
	baz=310						
S42A	Caledonia	29.84	98	P	P	04 28 39.5	-0.4
	baz=305						
F46A	Macinaw City C	29.88	80	P	P	04 28 39.5	-0.7
	baz=293						
Q43A	New Douglas	29.89	95	P	P	04 28 40.3	0.0
	baz=303						
N44A	Piper City	29.93	91	P	P	04 28 40.4	-0.3
	baz=300						
W40A	Ferguson Farm,	29.94	105	P	P	04 28 41.2	+0.4
	baz=309						
W40A	Ferguson Farm,	29.94	105	eP	P	04 28 42.1	+1.3
	comp=Z,58nm,1.4s						
FVM	French Village	29.96	98	eP	P	04 28 40.4	-0.5
	comp=Z,14nm,0.8s						
FVM	French Village	29.96	98	eP	P	04 28 40.4	-0.5
FVM				pmax	pmax		
	comp=Z,14nm,0.8s						
U41A	Viola	29.96	102	P	P	04 28 40.8	-0.2
	baz=307						
KAPO	Kapuskasing	30.02	72	P	P	04 28 41.7	+0.4
MIAR	Mount Ida	30.04	106	P	P	04 28 42.2	+0.5
	baz=310						
MIAR	Mount Ida	30.04	106	eP	P	04 28 42.6	+0.9
	comp=Z,39nm,1.4s						
MIAR	Mount Ida	30.04	106	eP	P	04 28 42.6	+0.9
MIAR				pmax	pmax		
	comp=Z,39nm,1.4s						
O44A	Mansfield	30.05	92	P	P	04 28 41.1	-0.6
	baz=301						
T42A	Van Buren	30.08	100	P	P	04 28 41.5	-0.5
	baz=306						
T42A	Van Buren	30.08	100	eP	P	04 28 41.3	-0.7
	comp=Z,17nm,1.5s						
R43A	Red Bud	30.11	97	P	P	04 28 41.8	-0.5
	baz=304						
V41A	Mountainview	30.15	103	P	P	04 28 42.3	-0.4
	baz=308						
435B	Jarrell	30.18	116	P	P	04 28 42.3	-0.6
	baz=317						
P44A	Sand Creek, Wi	30.31	93	P	P	04 28 44.2	+0.2
	baz=302						
N45A	Kentland	30.31	90	P	P	04 28 43.8	-0.2
	baz=300						
Q44A	Meyer Farm, Va	30.36	95	P	P	04 28 44.0	-0.4
	baz=303						
WHAR	Wooly Hollow	30.38	104	eP	P	04 28 45.0	+0.3
	comp=Z,41nm,1.5s						
U42A	Revenden	30.39	101	P	P	04 28 44.2	-0.5
	baz=307						
S43A	Fulton Ridge,	30.42	98	P	P	04 28 44.3	-0.7
	baz=305						
W41B	Gary Mavity, V	30.48	104	P	P	04 28 45.6	+0.1
	baz=309						
W41B	Gary Mavity, V	30.48	104	eP	P	04 28 45.9	+0.4
	comp=Z,28nm,1.3s						
X40A	Basin Creek Fa	30.54	105	P	P	04 28 46.1	0.0
	baz=310						
T43A	Greenville	30.57	99	P	P	04 28 45.3	-1.0
	baz=306						
Y40A	Okolona	30.57	107	P	P	04 28 46.3	-0.1
	baz=311						
V42A	Cord	30.63	102	P	P	04 28 46.4	-0.5
	baz=308						
X41A	Kaden, Bauxite	30.74	105	P	P	04 28 48.1	+0.2
	baz=310						
N46A	Monticello	30.80	90	P	P	04 28 48.1	-0.2
	baz=300						
SFIN	Lafayette	30.82	91	P	P	04 28 48.6	0.0
	baz=301						
P45A	Graceland, Par	30.85	93	P	P	04 28 48.4	-0.4
	baz=302						
P45A	Graceland, Par	30.85	93	eP	P	04 28 49.3	+0.5
	comp=Z,28nm,0.9s						
S44A	Carbondale	30.88	97	P	P	04 28 48.6	-0.5
	baz=305						
Q45A	Warren Harvey,	30.92	94	P	P	04 28 49.0	-0.4
	baz=303						
Z40A	Long Farm, Mag	30.99	108	P	P	04 28 49.8	-0.2
	baz=312						
833A	Chaparral WMA,	31.00	122	P	P	04 28 50.1	-0.1
	baz=321						
833A	Chaparral WMA,	31.00	122	eP	P	04 28 50.5	+0.4
	comp=Z,21nm,0.9s						
T44A	Benton	31.02	98	P	P	04 28 49.6	-0.7
	baz=306						
OLIL	Olney	31.05	94	eP	P	04 28 51.1	+0.5
	comp=Z,38nm,1.1s						
P46A	Rosedale	31.15	92	P	P	04 28 51.2	-0.2
	baz=302						
R45A	Skylar, Fairfi	31.18	95	P	P	04 28 51.0	-0.7
	baz=304						
NATX	Nacogdoches	31.24	111	P	P	04 28 52.7	+0.4
	baz=314						
140A	Cam and Jess,	31.30	109	P	P	04 28 53.2	+0.4
	baz=313						
140A	Cam and Jess,	31.30	109	eP	P	04 28 54.4	+1.6
	comp=Z,70nm,1.3s						
O47A	Sheridan	31.50	90	P	P	04 28 54.4	-0.1
	baz=301						
W43A	Forest City	31.51	102	P	P	04 28 54.5	-0.1
	baz=309						
U44B	Burton Farm, H	31.61	99	P	P	04 28 55.3	-0.2
	baz=307						
T45A	Paducah	31.67	97	P	P	04 28 55.6	-0.4
	baz=306						
R46A	Gibon Southern	31.72	95	P	P	04 28 56.1	-0.4
	baz=304						
SUNO	Sudbury Onapin	31.73	76	P	P	04 28 56.1	-0.4
141A	Papa Simpson,	31.74	108	P	P	04 28 56.9	+0.2
	baz=312						
X43A	Marvell	31.76	103	P	P	04 28 56.6	-0.2
	baz=309						
USIN	University of	31.76	95	eP	P	04 28 57.1	+0.3
	comp=Z,25nm,0.8s						
HKT	Hockley	31.82	115	eP	P	04 28 58.0	+0.7
	comp=Z,35nm,1.5s						
HKT	Hockley	31.82	115	eP	P	04 28 58.0	+0.7
HKT				pmax	pmax		
	comp=Z,35nm,1.5s						
P47A	Martinsville	31.84	92	P	P	04 28 57.2	-0.3
	baz=302						
S46A	Don Dixon Farm	31.89	96	P	P	04 28 57.8	-0.1
	baz=305						
Q47A	Bedord North L	32.03	93	P	P	04 28 58.5	-0.7
	baz=303						
KILO	Kirkland Lake	32.06	72	P	P	04 28 59.7	+0.3
AAM	Ann Arbor	32.12	85	P	P	04 28 59.3	-0.6
	baz=298						
Y43A	Makayla and Ka	32.12	104	P	P	04 28 59.8	-0.2
	baz=310						
241A	Mo Tay, Goldon	32.13	109	P	P	04 29 00.3	+0.2
	baz=313						
T46A	Princeton	32.14	97	P	P	04 28 59.0	-1.2
	baz=306						
X44A	Crenshaw	32.24	103	P	P	04 29 00.9	-0.1
	baz=309						
R47A	Wooly Knot Far	32.32	94	P	P	04 29 01.5	-0.2
	baz=304						
U46A	Springville	32.36	98	P	P	04 29 01.7	-0.4
	baz=306						
142A	Monroe	32.38	107	P	P	04 29 02.1	-0.1
	baz=312						
Z43A	Armstrong Fami	32.38	106	P	P	04 29 02.9	+0.7
	baz=311						
W45A	Hickory Valley	32.44	101	P	P	04 29 02.5	-0.3
	baz=308						
341A	Kurthwood	32.45	110	P	P	04 29 03.4	+0.5
	baz=314						
WCI	Wyandotte Cave	32.51	94	P	P	04 29 03.1	-0.3
	baz=304						
WCI	Wyandotte Cave	32.51	94	P	P	04 29 04.1	+0.7
WCI				pmax	pmax		
	comp=Z,17nm,1.4s						
Y44A	Strider, Charl	32.54	103	P	P	04 29 03.3	-0.4
	baz=310						
242A	Grayson	32.58	108	P	P	04 29 04.7	+0.7
	baz=313						
143A	Socs Landing,	32.61	106	P	P	04 29 05.0	+0.7
	baz=312						
143A	Socs Landing,	32.61	106	eP	P	04 29 05.7	+1.3
	comp=Z,69nm,1.5s						
R48A	Northridge Ran	32.69	93	P	P	04 29 05.4	+0.5
	baz=304						
T47A	Sharon Grove	32.69	96	P	P	04 29 04.9	-0.1
	baz=306						
OXF	Oxford	32.70	102	P	P	04 29 05.0	-0.1
	baz=309						
OXF	Oxford	32.70	102	eP	P	04 29 05.3	+0.2
	comp=Z,124nm,1.2s						
WVT	Waverly	32.72	98	P	P	04 29 04.8	-0.5
	baz=307						
WVT	Waverly	32.72	98	eP	P	04 29 05.2	-0.1
	comp=Z,31nm,1.5s						
WVT	Waverly	32.72	98	eP	P	04 29 05.2	-0.1
WVT				pmax	pmax		
	comp=Z,31nm,1.5s						
V46A	Holladay	32.74	99	P	P	04 29 04.9	-0.5
	baz=307						
X45A	UM Field Stati	32.77	102	P	P	04 29 05.6	-0.1
	baz=309						
Z44A	Pea Ridge, Bel	32.84	105	P	P	04 29 06.7	+0.4
	baz=311						
U47A	Clarksville	32.89	97	P	P	04 29 06.6	-0.1
	baz=306						
W46A	Michie	32.98	100	P	P	04 29 07.0	-0.5
	baz=308						
S48A	Wiedeman Farm,	32.98	94	P	P	04 29 07.3	-0.2
	baz=304						
Y45A	Yeager Farm, C	33.03	103	P	P	04 29 08.0	0.0
	baz=310						
T48A	Bowling Green	33.08	95	P	P	04 29 08.4	0.0
	baz=305						
V47A	Nunnelly	33.11	98	P	P	04 29 08.2	-0.4
	baz=307						
243A	Waterproof	33.12	108	P	P	04 29 09.5	+0.8
	baz=313						
EEO	Eldee	33.17	75	P	P	04 29 09.1	0.0
X46A	Booneville	33.20	101	P	P	04 29 09.2	-0.3
	baz=309						
N50A	Nevada	33.20	87	P	P	04 29 09.1	-0.4
	baz=300						
O50A	Cable	33.22	89	P	P	04 29 08.9	-0.7
	baz=301						
Z45A	Winona	33.25	104	P	P	04 29 10.2	+0.3
	baz=310						
PLAL	Pickwick Lake	33.26	100	eP	P	04 29 09.8	-0.2
	comp=Z,18nm,1.0s						
U48A	Cassie Pea, Po	33.33	96	P	P	04 29 10.4	-0.3
	baz=306						
P50A	Jamestown	33.38	89	P	P	04 29 10.4	-0.6
	baz=302						
W47A	Westpoint	33.41	99	P	P	04 29 10.7	-0.6
	baz=308						
Y46A	Houston	33.45	102	P	P	04 29 11.4	-0.3
	baz=310						
VBMS	Vicksburg	33.49	106	P	P	04 29 12.8	+0.8
	baz=312						
VBMS	Vicksburg	33.49	106	eP	P	04 29 13.4	+1.4
	comp=Z,42nm,1.0s						
244A	Avery, Jackson	33.50	107	P	P	04 29 12.4	+0.3
	baz=312						
ACSO	Alum Creek Sta	33.59	88	P	P	04 29 12.3	-0.5
	baz=301						
ACSO	Alum Creek Sta	33.59	88	eP	P	04 29 12.9	+0.1
	comp=Z,23nm,1.0s						
145A	Houston Renfro	33.60	105	P	P	04 29 13.6	+0.6
	baz=311						
V48A	Smith Brothers	33.61	98	P	P	04 29 12.8	-0.3
	baz=307						
LNIG	Linares	33.66	126	eP	P	04 29 13.0	-0.6
	comp=Z,14nm,1.3s						
Z46A	Louisville	33.84	103	P	P	04 29 15.3	+0.2
	baz=310						
ZAIG	Zacatecas	33.85	132	eP	P	04 29 16.5	+1.0
	comp=Z,5.1nm,0.9s						
344A	Westbrook Farm	33.87	107	P	P	04 29 15.8	+0.4
	baz=313						
W48A	Pulaski	33.91	99	P	P	04 29 15.6	-0.1
	baz=308						
SADO	Sadowa	33.91	78	P	P	04 29 15.4	-0.1
SADO	Sadowa	33.91	78	eP	P	04 29 14.8	-0.7
	comp=Z,18nm,0.8s						
245A	Little AP, Sta	34.01	106	P	P	04 29 17.1	+0.6
	baz=312						
Y47A	UCPARC, Winfie	34.09	101	P	P	04 29 16.9	-0.3
	baz=309						
V49A	McMinnville	34.19	97	P	P	04 29 17.7	-0.4
	baz=307						

X48A	**Hartselle**	34.26	100	P		**P**	04 29 18.0	-0.7
	baz=309							
X48A	**Hartselle**	34.26	100	*e*P		**P**	04 29 18.2	-0.5
	comp=Z,10nm,0.8s							
W49A	**Belvidere**	34.35	98	P		**P**	04 29 19.3	-0.2
	baz=308							
CRLO	**Chalk River**	34.48	75	P		**P**	04 29 20.7	+0.2
Y48A	**Jasper**	34.52	101	P		**P**	04 29 20.6	-0.4
	baz=309							
S51A	**Beattyville**	34.60	92	P		**P**	04 29 21.8	+0.1
	baz=304							
147A	**Livingston**	34.61	103	P		**P**	04 29 21.5	-0.2
	baz=311							
Z48A	**Northport**	34.61	102	P		**P**	04 29 21.5	-0.2
	baz=310							
X49A	**Woodville**	34.68	99	P		**P**	04 29 21.9	-0.5
	baz=308							
346A	**Big Creek Wild**	34.71	106	P		**P**	04 29 23.2	+0.5
	baz=312							
346A	**Big Creek Wild**	34.71	106	*e*P		**P**	04 29 23.8	+1.2
	comp=Z,48nm,0.9s							
247A	**Quitman**	34.80	104	P		**P**	04 29 23.6	+0.2
	baz=312							
S52A	**Salyersville**	34.92	92	P		**P**	04 29 23.7	-0.6
	baz=304							
W50A	**Signal Mountai**	34.92	97	P		**P**	04 29 23.9	-0.5
	baz=307							
Y49A	**Blount Mountai**	35.04	100	P		**P**	04 29 25.0	-0.4
	baz=309							
148A	**Greensboro**	35.07	103	P		**P**	04 29 26.1	+0.3
	baz=311							
M54A	**Oil Creek Stat**	35.10	84	P		**P**	04 29 25.7	-0.2
	baz=300							
X50B	**Fort Payne**	35.15	98	P		**P**	04 29 26.2	-0.2
	baz=308							
N54A	**Moraine State**	35.17	85	P		**P**	04 29 26.0	-0.5
	baz=300							
N54A	**Moraine State**	35.17	85	*e*P		**P**	04 29 26.5	0.0
	comp=Z,25nm,1.1s							
LRAL	**Lakeview Retre**	35.19	102	P		**P**	04 29 26.6	-0.2
	baz=310							
LRAL	**Lakeview Retre**	35.19	102	*e*P		**P**	04 29 26.5	-0.2
	comp=Z,28nm,1.4s							
TZTN	**Tazewell**	35.26	94	P		**P**	04 29 27.0	-0.4
	baz=306							
347A	**Saraland**	35.28	105	P		**P**	04 29 27.9	+0.3
	baz=312							
T52A	**Hallie**	35.30	93	P		**P**	04 29 27.0	-0.7
	baz=305							
Z49A	**Columbiana**	35.38	101	P		**P**	04 29 28.1	-0.3
	baz=310							
Y50A	**Piedmont**	35.45	99	P		**P**	04 29 28.7	-0.3
	baz=309							
X51A	**Calhoun**	35.60	98	P		**P**	04 29 30.1	-0.2
	baz=308							
149A	**Jones**	35.60	102	P		**P**	04 29 30.1	-0.1
	baz=310							
447A	**Lucedale**	35.62	106	P		**P**	04 29 31.1	+0.6
	baz=313							
MMNY	**Mt. Morris Dam**	35.64	81	*e*P		**P**	04 29 30.9	+0.3
	comp=Z,26nm,1.0s							
TKL	**Tuckaleechee C**	35.64	95	LR		LR	04 44 28.6	
	comp=Z,1um,18.8s,baz=313,slow=37							
V52A	**Sevierville**	35.65	95	P		**P**	04 29 30.2	-0.5
	baz=306							
V52A	**Sevierville**	35.65	95	*e*P		**P**	04 29 30.7	+0.1
	comp=Z,33nm,0.9s							
VABQ	**Val Des Bois**	35.66	75	P		**P**	04 29 30.1	-0.5
348A	**Jackson**	35.68	105	P		**P**	04 29 31.6	+0.7
	baz=312							
Z50A	**Ashland**	35.74	100	P		**P**	04 29 31.2	-0.2
	baz=310							
Z50A	**Ashland**	35.74	100	*e*P		**P**	04 29 31.3	-0.2
Z50A				*ep*P		**sP**	04 29 37.6	+2.1
249A	**Camden**	35.80	103	P		**P**	04 29 31.8	-0.2
	baz=311							
GAC	**Glen Almond**	35.83	75	P		**P**	04 29 31.4	-0.7
W52A	**Murphy**	35.88	96	P		**P**	04 29 32.3	-0.4
	baz=307							
Y51A	**Rockmart**	35.88	99	P		**P**	04 29 32.5	-0.2
	baz=309							
MCWV	**Mont Chateau**	35.94	87	P		**P**	04 29 32.7	-0.4
	baz=302							
MCWV	**Mont Chateau**	35.94	87	*e*P		**P**	04 29 33.2	0.0
	comp=Z,45nm,1.5s							
U53A	**Fall Branch**	36.00	93	P		**P**	04 29 33.4	-0.4
	baz=306							
150A	**Eclectic**	36.09	101	P		**P**	04 29 34.3	-0.2
	baz=310							
349A	**Repton**	36.17	104	P		**P**	04 29 35.6	+0.5
	baz=312							
Z51A	**Franklin**	36.18	100	P		**P**	04 29 35.0	-0.2
	baz=310							
TRQ	**Mont Tremblant**	36.19	74	P		**P**	04 29 34.7	-0.5
X52A	**Dahlonega**	36.20	97	P		**P**	04 29 35.0	-0.5
	baz=308							
BILL	**Bilibino**	36.21	325	*e*P		**P**	04 29 32.5	-2.6
BILL				*e*			04 29 40.3	
BILL				pmax		pmax		
	comp=Z,3.0nm,0.9s							
BILL				MLR		MLR		
	comp=Z,302nm,16.0s							
V53A	**Saluda**	36.26	94	P		**P**	04 29 35.8	-0.2
	baz=307							
W53A	**Cullowhee**	36.33	95	P		**P**	04 29 36.3	-0.4
	baz=307							
250A	**Grady**	36.34	102	P		**P**	04 29 36.9	+0.2
	baz=311							
250A	**Grady**	36.34	102	*e*P		**P**	04 29 37.2	+0.5
	comp=Z,41nm,0.8s							
O56A	**Blue Knob Stat**	36.45	85	P		**P**	04 29 36.9	-0.7
	baz=302							
Y52A	**Lilburn**	36.55	98	P		**P**	04 29 38.0	-0.4
	baz=309							
Y52A	**Lilburn**	36.55	98	*e*P		**P**	04 29 38.5	+0.1
	comp=Z,49nm,1.4s							
449A	**Pace**	36.55	105	P		**P**	04 29 38.2	-0.2
	baz=312							
X53A	**Estanollee**	36.65	96	P		**P**	04 29 38.7	-0.5
	baz=308							
350A	**Dozier**	36.67	103	P		**P**	04 29 39.5	+0.1
	baz=312							
SSPA	**Standing Stone**	36.70	84	P		**P**	04 29 39.2	-0.5
	baz=301							
Z52A	**Williamson**	36.75	99	P		**P**	04 29 39.9	-0.2
	baz=310							
251A	**Midway**	36.82	101	P		**P**	04 29 40.7	0.0
	baz=311							
Y53A	**Monroe**	36.87	97	P		**P**	04 29 41.0	-0.1
	baz=309							
152A	**Waverly Hall**	36.89	100	P		**P**	04 29 41.0	-0.3
	baz=310							
152A	**Waverly Hall**	36.89	100	*e*P		**P**	04 29 41.2	-0.1
	comp=Z,30nm,0.9s							
BINY	**Binghamton**	37.14	80	P		**P**	04 29 42.4	-1.0
	baz=300							
GOGA	**Godfrey**	37.22	98	P		**P**	04 29 43.6	-0.6
	baz=309							
GOGA	**Godfrey**	37.22	98	*e*P		**P**	04 29 43.2	-0.8
	comp=Z,18nm,0.9s							
GOGA	**Godfrey**	37.22	98	*e*P		**P**	04 29 43.3	-0.8
GOGA				pmax		pmax		
	comp=Z,18nm,0.9s							
351A	**Pinckard**	37.23	103	P		**P**	04 29 44.1	-0.1
	baz=312							
Z53A	**Monticello**	37.24	98	P		**P**	04 29 43.9	-0.4
	baz=309							
252A	**Lumpkin**	37.31	101	P		**P**	04 29 44.4	-0.5
	baz=311							
Y54A	**Tignall**	37.45	97	P		**P**	04 29 45.5	-0.5
	baz=308							
352A	**Blakely**	37.53	102	P		**P**	04 29 46.2	-0.5
	baz=311							
KMSC	**Kings Mountain**	37.54	94	P		**P**	04 29 46.2	-0.6
	baz=307							
451A	**Vernon**	37.58	103	P		**P**	04 29 47.2	+0.1
	baz=312							
SCHQ	**Schefferville**	37.58	57	LR		LR	04 45 44.7	
	comp=Z,550nm,21.0s,baz=290,slow=37							
253A	**Americus**	37.66	100	P		**P**	04 29 47.5	-0.3
	baz=311							
Z54A	**Sparta**	37.74	98	P		**P**	04 29 48.0	-0.5
	baz=309							
N59A	**State Game Lan**	37.93	82	P		**P**	04 29 49.4	-0.7
	baz=301							
N59A	**State Game Lan**	37.93	82	*e*P		**P**	04 29 49.7	-0.4
	comp=Z,18nm,1.0s							
IP04	**Greensprings**	37.94	87	*e*P		**P**	04 29 51.1	+0.9
	comp=Z,44nm,1.2s							
IP03	**Louisa**	38.03	88	*e*P		**P**	04 29 51.9	+0.9
	comp=Z,48nm,1.1s							
MVL	**Millersville**	38.04	84	*e*P		**P**	04 29 50.5	-0.4
	comp=Z,27nm,1.2s							
353A	**Camilla**	38.07	101	P		**P**	04 29 51.1	-0.2
	baz=311							
IP07	**Quail**	38.08	88	*e*P		**P**	04 29 52.3	+1.0
	comp=Z,42nm,1.0s							
IP06	**Yanceyville**	38.10	88	*e*P		**P**	04 29 52.6	+1.0
	comp=Z,45nm,1.1s							
SPRD	**Spring Road, M**	38.12	87	*e*P		**P**	04 29 52.5	+0.8
	comp=Z,36nm,1.0s							
IP01	**Cuckoo**	38.14	88	*e*P		**P**	04 29 52.7	+0.9
	comp=Z,83nm,1.3s							
CVRD	**Centerville Ro**	38.14	87	*e*P		**P**	04 29 52.7	+0.9
	comp=Z,57nm,1.3s							
Z55A	**Blythe**	38.21	97	P		**P**	04 29 52.1	-0.3
	baz=309							
254A	**Abbeville**	38.28	100	P		**P**	04 29 52.8	-0.2
	baz=310							
IP05	**Hopewell Churc**	38.31	88	*e*P		**P**	04 29 53.9	+0.6
	comp=Z,39nm,1.2s							
CBN	**Corbin Frederi**	38.35	87	P		**P**	04 29 53.6	0.0
	baz=304							
CBN	**Corbin Frederi**	38.35	87	*e*P		**P**	04 29 53.9	+0.3
	comp=Z,34nm,0.9s							
ODNJ	**Ogdensburg**	38.60	81	*e*P		**P**	04 29 55.4	-0.3
	comp=Z,22nm,1.0s							
454A	**Quitman**	38.87	101	P		**P**	04 29 57.9	-0.1
	baz=312							
555A	**McAlpin**	39.69	101	P		**P**	04 30 04.9	0.0
	baz=312							
556A	**Lake Butler**	40.13	101	P		**P**	04 30 08.7	+0.2
	baz=312							
SFJD	**Kangerlussuaq**	41.71	35	LR		LR	04 49 06.7	
	comp=Z,119nm,21.0s,baz=286,slow=38							
DWPF	**Disney Wildern**	42.04	102	P		**P**	04 30 24.4	+0.1
	baz=314							
859A	**Kempfer Cattle**	42.41	102	P		**P**	04 30 27.1	-0.2
	baz=314							
PET	**Petropavlovsk**	43.60	304	*e*P		P	04 30 41.6	+5.0
PET				*e*			04 32 27.6	
PET				*e*S		**S**	04 37 08.3	+2.6
SUMG	**Summit**	44.04	26	*i* P		**P**	04 30 40.4	0.0
	comp=Z,37nm,1.0s							
SUMG	**Summit**	44.04	26	*e*P		**P**	04 30 41.1	+0.7
	comp=Z,47nm,1.1s							
PEA1	**Petropavlovsk-**	44.08	304	*e*P		**P**	04 30 37.8	-2.7
PETK	**Petropavlovsk-**	44.08	304	P		**P**	04 30 37.8	-2.8
	comp=Z,4.6nm,0.6s,baz=68,slow=13,SNR=5.1							
PETK				LR		LR	04 46 10.7	
	comp=Z,222nm,21.1s,baz=71,slow=32							
DAG	**Danmarks Havn**	46.89	17	*i* P		**P**	04 31 02.1	-0.4
	comp=Z,14nm,1.2s							
DAG	**Danmarks Havn**	46.89	17	P		**P**	04 31 05.2	+2.7
DAG				pmax		pmax		
	comp=Z,11nm,1.2s							
TIXI	**Tiksi**	47.55	335	⇑ *i*P		**P**	04 31 08.1	+0.4
TIXI				pmax		pmax		
	comp=Z,5.0nm,1.0s							
ESTN	**Estel**	50.40	121	*e*P		**P**	04 31 33.6	+3.4
	comp=Z,23nm,1.1s							
SPITS	**Spitsbergen Ar**	51.01	9	LR		LR	04 53 59.6	
	comp=Z,210nm,20.0s,baz=325,slow=37							
BORG	**Borgarnes**	53.32	31	LR		LR	04 54 13.0	
	comp=Z,221nm,18.5s,baz=312,slow=36							
BORG	**Borgarnes**	53.32	31	*e*P		**P**	04 31 51.2	-0.2
	comp=Z,54nm,1.2s							
BORG	**Borgarnes**	53.32	31	*e*P		**P**	04 31 51.2	-0.2
BORG				pmax		pmax		
	comp=Z,54nm,1.2s							
GRNR	**Gornyy**	56.43	311	*e*P		**P**	04 32 12.1	-2.0
GRNR				pmax		pmax		
	comp=Z,25nm,1.0s							
ASAJ	**Asahikawa**	57.33	301	LR		LR	04 52 54.4	
	comp=Z,152nm,21.8s,baz=358,slow=32							
H11N2	**WAKE ISLAND Hy**	58.33	264	T		T	05 35 24.0	
	baz=43,slow=75,SNR=40							
H11N3	**WAKE ISLAND Hy**	58.33	264	T		T	05 35 20.9	
	baz=43,slow=75,SNR=36							
H11N1	**WAKE ISLAND Hy**	58.34	264	T		T	05 35 21.9	
	baz=43,slow=75,SNR=21							
TAOE	**Nuku Hiva Isla**	58.75	193	*e*LR		LR	04 49 53.2	
	comp=Z,711nm,25.6s							
ZEA	**Zeya**	58.82	318	*e*P		P	04 32 37.2	+6.4
ARCES	**ARCESS Array B**	59.98	10	LR		LR	04 58 36.0	
	comp=Z,108nm,21.8s,baz=9.0,slow=36							
MOTC	**Monteria, Cord**	60.09	113	*e*P		**P**	04 32 38.2	-1.9
HELC	**Santa Helena**	62.23	115	*e*P		**P**	04 32 54.1	-0.9
PTBC	**PUERTO BERRIO,**	62.59	114	*e*P		**P**	04 32 55.4	-1.6
USRK	**Ussuriysk Ar.**	63.01	307	P		**P**	04 32 56.0	-3.5
	comp=Z,1.6nm,0.6s,baz=39,slow=7.4							
USRK				LR		LR	05 01 20.6	
	comp=Z,112nm,18.4s,baz=31,slow=37							
SDV	**Santo Domingo**	63.07	109	LR		LR	05 04 00.5	
	comp=Z,103nm,18.5s,baz=242,slow=39							
BARC	**Barichara**	63.31	113	*e*P		**P**	04 32 59.4	-2.7
YOTC	**Yotoco, Valle**	63.52	117	*e*P		P	04 33 08.8	+5.5
RUSC	**La Rusia**	63.92	113	*e*P		**P**	04 33 08.8	+2.4
	comp=Z,6.9nm,1.3s							
RUSC	**La Rusia**	63.92	113	*e*P		**P**	04 33 04.8	-1.7
ROSC	**El Rosal**	64.02	115	LR		LR	05 03 59.7	
	comp=Z,48nm,20.5s,baz=313,slow=39							
CHIC	**Chingaza**	64.54	115	*e*P		**P**	04 33 08.7	-1.7
PRAC	**Prado**	64.59	116	*e*P		P	04 33 15.7	+5.4
	comp=Z,7.7nm,0.8s							
MAJO	**Matsushiro**	64.86	297	*e*P		**P**	04 33 11.6	-0.2
MAJO				pmax		pmax		
	comp=Z,8.0nm,1.0s							
OTAV	**Otavalo**	65.38	122	*e*P		**P**	04 33 16.3	+0.4
	comp=Z,11nm,1.1s							
OTAV	**Otavalo**	65.38	122	*e*P		**P**	04 33 16.3	+0.4
OTAV				pmax		pmax		
	comp=Z,11nm,1.1s							
NB2	**NORSAR Subarra**	65.44	20	P		**P**	04 33 17.1	+1.9
	comp=Z,29nm,1.7s,baz=333,slow=6.9							
NOA	**NORSAR Array B**	65.44	20	LR		LR	05 01 06.9	
	comp=Z,103nm,20.1s,baz=335,slow=35							
PCRV	**Puerto La Cruz**	65.85	103	LR		LR	05 02 15.0	
	comp=Z,170nm,21.8s,baz=318,slow=36							
FLOC	**Florencia**	65.86	118	*e*P		**P**	04 33 16.7	-1.8
PMOR	**Pomariorio Ree**	66.17	200	*e*T		T	05 44 51.8	
	comp=Z,21nm,0.3s							
JHJ	**Hachijo jima 2**	66.30	294	LR		LR	04 59 14.1	
	comp=Z,39nm,18.8s,baz=150,slow=33							
HFS	**Hagfors**	66.80	19	LR		LR	05 02 49.1	
	comp=Z,162nm,19.6s,baz=336,slow=36							
FINES	**FINESS Array B**	67.78	13	LR		LR	05 04 09.6	
	comp=Z,214nm,18.5s,baz=348,slow=37							
PPT	**Papeete**	69.04	201	LR		LR	04 55 48.4	
	comp=Z,132nm,20.0s,baz=4.0,slow=29							
PPT2	**Papeete2**	69.06	201	*e*S		**S**	04 42 46.2	+2.5
	comp=Z,336nm,28.0s							
PPT2	**Papeete2**	69.06	201	*e*LR		LR	04 54 32.8	
	comp=Z,359nm,26.5s							
PPT2	**Papeete2**	69.06	201	*e*T		T	05 48 26.8	
	comp=Z,4.9nm,0.3s							
PAE	**Paea**	69.13	201	*e*T		T	05 48 31.3	
	comp=Z,1.5nm,0.4s							
TVO	**Taravao**	69.17	200	*e*T		T	05 48 35.4	
	comp=Z,3.0nm,0.3s							
PRGR	**Permogore**	69.28	3	*e*P		**P**	04 33 38.8	-0.6
PRGR				pmax		pmax		
	comp=Z,18nm,0.9s							
KLMR	**Klimovskoe**	69.77	6	*e*P		**P**	04 33 40.3	-2.1
KLMR				pmax		pmax		
	comp=Z,23nm,1.1s							
KLMR	**Klimovskoe**	69.77	6	*e*P		**P**	04 33 40.3	-2.1
KLMR				AMP			04 33 47.2	
	comp=Z,23nm,1.1s							
KSRS	**Korea Array**	69.98	304	LR		LR	05 02 09.0	
	comp=Z,53nm,21.9s,baz=32,slow=34							
JNU	**Nakatsue**	71.51	299	LR		LR	05 01 07.4	
	comp=Z,95nm,21.4s,baz=120,slow=32							
ULN	**Ulaanbaatar**	71.64	324	*ce*P		**P**	04 33 54.2	-0.1
ULN				pmax		pmax		
	comp=Z,3.0nm,1.8s							
SONA0	**Songino Array**	71.92	324	*e*P		**P**	04 33 53.8	-2.2
SONM	**Songino Array**	71.92	324	P		**P**	04 33 53.8	-2.2
	comp=Z,0.7nm,0.7s,baz=53,slow=5.2,SNR=5.7							
SONM				LR		LR	05 04 43.6	
	comp=Z,245nm,21.9s,baz=40,slow=35							
RKT	**Rikitea**	72.33	186	*e*T		T	05 52 42.7	
	comp=Z,5.9nm,0.3s							
NVS	**Novosibirsk**	72.66	341	*e*P		**P**	04 34 01.5	+1.5
NVS				pmax		pmax		
	comp=Z,12nm,1.5s							
NVS				pmax		pmax		
	comp=N,5.0nm,1.2s							
GRR	**Gorron**	72.93	33	*e*P		P	04 34 07.0	+5.2
GRR				pmax		pmax		
	comp=Z,18nm,1.3s							
LDF	**La Druitiere**	73.02	33	*e*P		P	04 34 07.1	+4.8
LDF				pmax		pmax		
	comp=Z,28nm,1.6s							
ZAA1	**Zalesovo Array**	73.14	340	*e*P		**P**	04 34 01.2	-1.7
ZALV	**Zalesovo Beam**	73.14	340	P		**P**	04 34 01.2	-1.7
	comp=Z,1.8nm,0.3s,baz=348,slow=6.3,SNR=3.5							
ZALV				LR		LR	05 11 39.9	
	comp=Z,123nm,18.2s,baz=53,slow=40							
ZALV	**Zalesovo Beam**	73.14	340	*e*P		**P**	04 34 03.7	+0.8
ZALV	**Zalesovo Beam**	73.14	340	*e*P		**P**	04 34 03.7	+0.8
GIVF	**Givet**	73.37	29	*e*P		P	04 34 09.5	+5.1
GIVF				pmax		pmax		
	comp=Z,30nm,1.5s							
ARU	**Arti**	74.38	356	*d i*P		**P**	04 34 08.5	-1.7
ARU				S		**S**	04 43 42.7	-1.6
ARU				pmax		pmax		
	comp=Z,9.0nm,1.7s							
TBI	**Tubuai**	74.59	199	*e*LR		LR	04 56 57.3	
	comp=Z,275nm,33.2s							
TBI	**Tubuai**	74.59	199	*e*T		T	05 55 23.0	
	comp=Z,7.6nm,0.3s							
CLL	**Collm**	74.66	24	*e*P		**P**	04 34 15.0	+3.2
	comp=Z,22nm,1.9s							
CLL				*e*S		**S**	04 43 52.0	+4.5
CLL				*e*			04 46 36.0	
CLL				*e*SS		SS	04 49 06.0	+33
CLL				*e*SSS		SSS	04 52 06.0	
CLL				LmH			05 05 00.0	
	comp=N,100nm,21.6s							
CLL				LmH			05 05 00.0	
	comp=E,100nm,20.8s							
CLL				LmV			05 12 00.0	
	comp=Z,100nm,18.0s							
CLL	**Collm**	74.66	24	*e*P		**P**	04 34 10.0	-1.8
CLL				*e*S		**S**	04 43 52.0	+4.5
CLL				pmax		pmax		
	comp=Z,22nm,1.9s							
OBN	**Obninsk**	75.22	8	*e*P		**P**	04 34 15.3	+0.3
OBN				*e*			04 34 28.6	
OBN				*e*			04 37 06.3	
BRG	**Berggiesshubel**	75.30	23	*e*P		P	04 34 21.7	+6.1
	comp=Z,5.8nm,1.0s							
BRG				*i*			04 34 28.1	
	comp=Z,9.4nm,1.4s							
BRG	**Berggiesshubel**	75.30	23	*e*P		P	04 34 21.7	+6.1
BRG				*i*			04 34 28.0	
BRG				pmax		pmax		
	comp=Z,6.0nm,1.0s							
BRG				pmax		pmax		
	comp=Z,9.0nm,1.4s							
PGAV	**Gavieira, Arco**	75.33	41	*e*LR		LR	04 59 39.5	
	comp=Z,108nm,20.0s							
RAR	**Rarotonga**	75.33	209	LR		LR	05 02 54.6	
	comp=Z,189nm,18.5s,baz=21,slow=32							
HHC	**Hu-ho-hao-te**	75.47	317	*e*P		**P**	04 34 17.8	+0.9
HHC				PP		**PP**	04 37 08.5	+3.2
HHC				S		**S**	04 43 55.0	-2.2
HHC				SS		**SS**	04 48 46.5	0.0
HHC				pmax		pmax		
	comp=Z,7.0nm,0.6s							
HHC				pmax		pmax		
	comp=Z,65nm,5.9s							
HHC				LR		LR		
	comp=Z,120nm,11.2s							
HHC				LR		LR		
	comp=Z,180nm,13.8s							
SSF	**Saint Saulge**	75.59	31	*e*P		P	04 34 22.4	+5.1
SSF				pmax		pmax		
	comp=Z,18nm,1.3s							
CDF	**Champ du Feu**	75.62	28	*e*P		P	04 34 22.7	+5.1
CDF				pmax		pmax		
	comp=Z,15nm,1.3s							
HAU	**Haudompre**	75.69	29	*e*P		P	04 34 22.8	+4.9
HAU				pmax		pmax		
	comp=Z,6.0nm,1.0s							
AVF	**Avril sur Loir**	75.77	31	*e*P		P	04 34 23.2	+4.8
AVF				pmax		pmax		
	comp=Z,14nm,1.2s							
TCF	**Toulx Ste Croi**	75.81	32	*e*P		**P**	04 34 22.5	+3.9
TCF				pmax		pmax		
	comp=Z,25nm,1.3s							
HINF	**Hinteralfeld**	76.02	29	*e*P		P	04 34 24.7	+4.9
HINF				pmax		pmax		
	comp=Z,9.0nm,1.1s							
PBRG	**Braganca**	76.11	41	*e*P		P	04 34 26.2	+5.7
	comp=Z,14nm,1.5s							
PVRL	**Vila Real**	76.13	41	*e*P		**P**	04 34 22.6	+2.0
	comp=Z,19nm,1.6s							
RJF	**Les Rejaudoux**	76.41	33	*e*P		**P**	04 34 26.8	+4.7
RJF				pmax		pmax		
	comp=Z,19nm,1.2s							
DGZ	**Jazzator, Alta**	76.42	336	*i* P		**P**	04 34 20.7	-1.5
DGZ				pmax		pmax		
	comp=Z,4.0nm,1.0s							
MVO	**Moncorvo**	76.52	41	*e*P		**P**	04 34 25.3	+2.5
	comp=Z,20nm,1.4s							
MVO	**Moncorvo**	76.52	41	*e*LR		LR	05 00 27.1	
	comp=Z,128nm,18.0s							
BRVK	**Borovoye**	76.63	348	*ce*P		**P**	04 34 23.7	+0.6
BRVK				pmax		pmax		
	comp=Z,7.0nm,1.7s							
BVAR	**Borovoye Array**	76.65	348	LR		LR	05 12 17.0	
	comp=Z,41nm,18.4s,baz=23,slow=39							
CABF	**La Chapelle**	76.84	30	*e*P		P	04 34 29.9	+5.3
CABF				pmax		pmax		
	comp=Z,18nm,1.3s							
MTE	**Manteigas**	76.92	42	*e*LR		LR	05 00 15.9	
	comp=Z,113nm,18.0s							
CAF	**Calviac**	76.94	33	*e*P		P	04 34 29.9	+4.8
CAF				pmax		pmax		
	comp=Z,12nm,1.4s							
GEC2	**GERESS Array S**	77.09	24	*e*P		**P**	04 34 26.1	+0.2
	comp=Z,7.4nm,1.4s							
GEC2	**GERESS Array S**	77.09	24	*e*P		**P**	04 34 26.1	+0.2
GEC2				pmax		pmax		
	comp=Z,7.0nm,1.4s							

PBEJ	**Beja**	**78.73**	**43**	*e*P	P	04 34 40.3	+5.2
	comp=Z,13nm,1.6s						
NJ2	**Nanjing**	**78.92**	**307**	*e*P	**P**	**04 34 36.0**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,46nm,0.5s						
MORF	**Marmelete**	**78.96**	**44**	*e*P	**P**	**04 34 40.7**	**+4.2**
	comp=Z,36nm,1.7s						
PBAR	**Barrancos**	**78.97**	**43**	*e*P	P	04 34 41.9	+5.4
	comp=Z,20nm,1.6s						
PFVI	**Vila Bisbo**	**79.02**	**45**	*e*P	P	04 34 42.1	+5.4
	comp=Z,72nm,1.8s						
ESDC	**Sonseca Array**	**79.06**	**40**	P	**P**	**04 34 36.4**	**-0.6**
	comp=Z,1.3nm,0.8s,baz=312,slow=5.5,SNR=9.2						
ESDC				LR	LR	05 07 55.1	
	comp=Z,106nm,18.9s,baz=330,slow=34						
ES19	**SONSECA Array**	**79.06**	**40**	*e*P	**P**	**04 34 36.5**	**-0.5**
PVAQ	**Vaqueiros**	**79.31**	**44**	*e*P	P	04 34 43.7	+5.4
	comp=Z,31nm,1.6s						
PVAQ	**Vaqueiros**	**79.31**	**44**	*e*LR	LR	05 02 52.1	
	comp=Z,153nm,18.0s						
PBDV	**Barranco-do-Ve**	**79.34**	**44**	*e*P	**P**	**04 34 42.9**	**+4.4**
	comp=Z,32nm,1.9s						
AKTO	**Aktyubinsk**	**80.39**	**355**	LR	LR	05 12 52.0	
	comp=Z,43nm,19.9s,baz=8.7,slow=38						
MK31	**Makanchi Array**	**80.40**	**339**	*e*P	**P**	**04 34 43.0**	**-1.2**
MK32	**Makanchi Array**	**80.40**	**339**	*e*P	**P**	**04 34 42.0**	**-2.1**
MKAR	**Makanchi Array**	**80.40**	**339**	P	**P**	**04 34 42.0**	**-2.1**
	comp=Z,0.9nm,0.8s,baz=22,slow=5.6,SNR=7.6						
MKAR				LR	LR	05 12 02.1	
	comp=Z,70nm,19.7s,baz=28,slow=37						
MKAR	**Makanchi Array**	**80.40**	**339**	*e*P	**P**	**04 34 43.0**	**-1.2**
	comp=Z,13nm,0.8s						
MK01	**Makanchi Array**	**80.42**	**339**	*e*P	**P**	**04 34 41.9**	**-2.3**
MAKZ	**Makanchi**	**80.46**	**339**	*e*P	**P**	**04 34 42.3**	**-2.1**
	comp=Z,11nm,1.1s						
MAKZ	**Makanchi**	**80.46**	**339**	*e*P	**P**	**04 34 42.3**	**-2.1**
MAKZ				pmax	pmax		
	comp=Z,11nm,1.1s						
ABKAR	**Akbulak array**	**81.45**	**354**	*e*P	**P**	**04 34 51.4**	**+1.8**
WMQ	**Urumqi**	**81.74**	**334**	P	**P**	**04 34 53.5**	**+2.2**
WMQ				pP	PcP	04 34 56.8	-0.3
WMQ				sP	sP	04 35 01.0	+5.4
WMQ				pmax	pmax		
	comp=Z,25nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,310nm,4.9s						
WMQ				LR	LR		
	comp=Z,230nm,24.1s						
WMQ				LR	LR		
	comp=Z,310nm,24.1s						
WMQ				LR	LR		
	comp=Z,220nm,22.5s						
XAN	**Xi'an**	**82.24**	**315**	P	**P**	**04 34 57.0**	**+2.9**
XAN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MLR	**Muntele Rosu**	**83.08**	**17**	LR	LR	05 11 16.0	
	comp=Z,43nm,21.1s,baz=342,slow=35						
DIVS	**Divibare**	**83.11**	**22**	*e*P	**P**	**04 35 02.9**	**+4.4**
	comp=Z,11nm,1.3s						
MDT	**Midelt**	**84.52**	**44**	LR	LR	05 10 42.8	
	comp=Z,82nm,18.6s,baz=344,slow=34						
LPAZ	**La Paz**	**84.68**	**122**	P	**P**	**04 35 05.1**	**-2.3**
	comp=Z,1.7nm,0.9s,baz=323,slow=5.1,SNR=5.5						
LPAZ				LR	LR	05 15 47.0	
	comp=Z,85nm,20.0s,baz=334,slow=38						
LPAZ	**La Paz**	**84.68**	**122**	*e*P	**P**	**04 35 08.4**	**+1.1**
	comp=Z,5.2nm,1.1s						
LPAZ	**La Paz**	**84.68**	**122**	*e*P	**P**	**04 35 08.5**	**+1.1**
LPAZ				pmax	pmax		
	comp=Z,5.0nm,1.1s						
HNR	**Honiara**	**84.92**	**249**	LR	LR	05 08 54.0	
	comp=Z,111nm,18.0s,baz=22,slow=33						
KIV	**Kislovodsk**	**86.80**	**6**	*e*P	**P**	**04 35 16.5**	**-0.6**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,90nm,20.0s						
KBZ	**Khabaz**	**87.04**	**6**	LR	LR	05 17 36.9	
	comp=Z,97nm,19.9s,baz=4.0,slow=38						
KEST	**Kesra**	**87.65**	**33**	LR	LR	05 14 57.9	
	comp=Z,153nm,18.5s,baz=306,slow=36						
VAE	**Valguarnera**	**87.73**	**28**	LR	LR	05 16 59.3	
	comp=Z,78nm,18.3s,baz=353,slow=37						
KSH	**Kashi**	**88.75**	**341**	P	**P**	**04 35 29.0**	**+2.5**
KSH				pP	sP	04 35 32.3	+1.5
KSH				pmax	pmax		
	comp=Z,120nm,4.1s						
GYA	**Guiyang**	**89.62**	**312**	*e*P	**P**	**04 35 31.3**	**+0.5**
GYA				PP	**PP**	**04 39 04.0**	**+2.1**
GYA				SKS	**SKSac**	**04 45 58.5**	**-3.1**
GYA				S	**S**	**04 46 18.8**	**-3.4**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BRTR	**Keskin Array B**	**90.01**	**13**	LR	LR	05 17 33.1	
	comp=Z,49nm,20.4s,baz=332,slow=37						
GNI	**Garni**	**90.71**	**5**	LR	LR	05 18 48.7	
	comp=Z,88nm,21.8s,baz=20,slow=37						
GNI	**Garni**	**90.71**	**5**	*i* P	**P**	**04 35 35.2**	**-0.6**
GNI				pmax	pmax		
	comp=Z,12nm,0.9s						
DZM	**Mont Dzumac**	**91.15**	**237**	LR	LR	05 12 14.5	
	comp=Z,95nm,18.8s,baz=24,slow=33						
KMI	**Kunming**	**92.62**	**314**	P	**P**	**04 35 45.3**	**+0.4**
KMI				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,68nm,4.5s						
IDI	**Anoyia**	**92.64**	**21**	LR	LR	05 19 08.6	
	comp=Z,71nm,19.9s,baz=323,slow=37						
GEYT	**Alibeck**	**92.85**	**354**	LR	LR	05 22 16.1	
	comp=Z,30nm,18.9s,baz=280,slow=39						
PMG	**Port Moresby**	**92.93**	**259**	LR	LR	05 10 52.0	
	comp=Z,92nm,21.2s,baz=86,slow=31						
DAV	**Davao City (W)**	**94.45**	**286**	LR	LR	05 10 39.0	
	comp=Z,205nm,21.6s,baz=355,slow=31						
MMAI	**Mount Meron Ar**	**96.86**	**13**	LR	LR	05 22 46.6	
	comp=Z,52nm,18.7s,baz=5.0,slow=37						
CPUP	**Villa Florida**	**98.71**	**120**	LR	LR	05 24 18.9	
	comp=Z,54nm,21.8s,baz=344,slow=38						
BOSA	**Boshof**	**151.55**	**53**	PKPbc	**PKPbc**	**04 42 25.0**	**-2.0**
	comp=Z,5.3nm,0.8s,baz=318,slow=1.1,SNR=5.4						
BOSA	**Boshof**	**151.55**	**53**	*e*PKPbc	**PKPbc**	**04 42 25.0**	**-2.0**
BOSA	**Boshof**	**151.55**	**53**	*e*PKIKP	**PKPbc**	**04 42 25.0**	**-2.0**

NEIC ***27*** *04:31:04.1±0.0, 17°.28N×100°.91W, h13km, MD4.0(MEX), After MEX.*

MEX 27 04:31:03.6±0.5, 17°.27N×100°.91W, h8km±6km, MD4.0, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.62**	**302**	*e*P	Pg	04 31 14.4	-1.3
ZIIG				*e*S	Sg	04 31 23.5	-0.4
ZIIG	**Zihuatanejo**	**0.62**	**302**	*e*P	Pg	04 31 14.4	-1.3
ZIIG				*e*S	Sg	04 31 23.4	-0.5
CAIG	**El Cayaco**	**0.65**	**110**	*i* P	Pg	04 31 15.0	-1.2
CAIG				*e*S	Sg	04 31 22.8	-2.0
CAIG	**El Cayaco**	**0.65**	**110**	*i* P	Pg	04 31 15.0	-1.2
CAIG				*e*S	Sg	04 31 23.6	-1.2
ACP2	**Acapulco**	**1.06**	**112**	*i* P	Pg	04 31 21.3	-2.6
ACP2				*i* S	Sg	04 31 34.3	-3.3
ACX	**Acapulco**	**1.08**	**112**	*e*P	Pg	04 31 21.4	-3.0
ACX				*e*S	Sg	04 31 34.0	-4.5
ACX	**Acapulco**	**1.08**	**112**	*e*P	Pg	04 31 21.4	-3.0
ACX				*e*S	Sg	04 31 34.0	-4.5
MEIG	**Mezcala**	**1.39**	**62**	*e*P	Pn	04 31 25.6	-3.8
MEIG				*e*S	Sb	04 31 41.8	-6.0
MEIG	**Mezcala**	**1.39**	**62**	*e*P	Pn	04 31 25.6	-3.8
MEIG				*e*S	Sb	04 31 41.8	-6.0
PLIG	**Platanillo**	**1.74**	**50**	*e*P	Pn	04 31 31.1	-3.2
PLIG				*e*S	Sn	04 31 51.5	-5.2
PLIG	**Platanillo**	**1.74**	**50**	*e*P	Pn	04 31 31.1	-3.2
PLIG				*e*S	Sn	04 31 51.5	-5.2
TLIG	**Tlapa**	**2.26**	**82**	*e*P	Pn	04 31 38.2	-3.1
TLIG				*i* S	Sn	04 32 03.4	-6.0
TLIG	**Tlapa**	**2.26**	**82**	*e*P	Pn	04 31 38.2	-3.1
TLIG				*i* S	Sn	04 32 03.4	-6.0
MMIG	**Aquila**	**2.53**	**294**	*e*P	Pb	04 31 49.9	+0.6
MMIG	**Aquila**	**2.53**	**294**	*e*P	Pb	04 31 49.9	+0.6

BJI ***27*** *04:55:28.8, 7°.43S×106°.92E, h73km, mb4.7/16, mB4.8/10, Ms4.4/6, Ms7 4.2/6*

ISCJB ***27*** *04:55:29.3±0.3, 7°.59S±0°.05×107°.24E±0°.03, h92km±3km, mb4.5/34, Error ellipse: s-maj=9.0km s-min=3.3km az=28.7*

DJA ***27*** *04:55:29.5±0.3, 8°S±4°×10°7E±°, h56km±5km, M5.0/27, mb5.3/12, mB5.5/11, MLv5.1/27, Mw(mB)5.0/11*

NEIC ***27*** *04:55:30.0±0.7, 7°.35S×107°.27E, h87km±6km, mb4.6/24, Error ellipse: s-maj=12.1km s-min=6.0km az=224.0*

NEIC Felt [III] at Bandung, Cianjur and Cikalong. Also felt at Bogor.

IDC ***27*** *04:55:31.2±1.0, 7°.27S×107°.34E, h96km±9km, mb4.1/9, mb1 4.3/9, mb1mx3.9/53, mbtmp4.4/9, MS3.3/3, Ms1 3.3/3, ms1mx2.7/54, Error ellipse: s-maj=25.5km s-min=13.5km az=53.0*

ISC 27 04:55:29.7±0.7, 7°.56S±0°.06×107°.24E±0°.04, h84km±5km, n328, σ1$23/309, mb4.5/36, 1C-1D, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CISI	**Cisompet, Garu**	**0.57**	**90**	P	**Pn**	**04 55 44.3**	**-0.3**
CISI				S	**Sn**	**04 55 54.8**	**-0.8**
CISI	**Cisompet, Garu**	**0.57**	**90**	*e*Pn	**Pn**	**04 55 44.1**	**-0.5**
CISI				*e*Sn	**Sn**	**04 55 53.7**	**-1.9**
LEM	**Lembang**	**0.81**	**27**	LR	LR	04 55 41.0	
	comp=Z,90nm,20.7s,baz=198,slow=19						
LEM				P	**Pn**	**04 55 48.0**	**+0.8**
	3μm,0.3s,baz=306,slow=4.0,SNR=350						
LEM				S	**Sn**	**04 56 04.1**	**+4.0**
	2μm,0.3s,baz=326,slow=22,SNR=29						
LEM	**Lembang**	**0.81**	**27**	P	**Pn**	**04 55 47.9**	**+0.8**
SKJI	**Sukabumi**	**0.87**	**309**	P	**Pn**	**04 55 47.6**	**0.0**
SKJI				S	**Sn**	**04 56 01.2**	**+0.3**
DBJI	**Dramaga**	**1.11**	**334**	P	**Pn**	**04 55 51.4**	**+1.0**
DBJI				S	**Sn**	**04 56 07.8**	**+2.0**
CMJI	**Cimerak**	**1.22**	**101**	P	**Pn**	**04 55 51.6**	**-0.1**
CMJI				S	**Sn**	**04 56 08.2**	**0.0**
TNG	**Tangerang**	**1.50**	**337**	P	**Pn**	**04 55 56.2**	**+1.0**
TNG				P		04 55 56.3	
TNG				S	**Sn**	**04 56 15.9**	**+1.5**
TNG				S		04 56 16.1	
KPJI	**Karang Pucung**	**1.69**	**83**	P	**Pn**	**04 55 58.6**	**+0.9**
CGJI	**Cibinong**	**1.80**	**301**	P	**Pn**	**04 55 59.2**	**+0.1**
CGJI				S	**Sn**	**04 56 20.9**	**-0.5**
SBJI	**Serang**	**1.80**	**322**	P	**Pn**	**04 56 00.0**	**+0.9**
SBJI				S	**Sn**	**04 56 24.9**	**+3.4**
BLSI	**Bandar Lampung**	**2.94**	**318**	P	**Pn**	**04 56 15.8**	**+1.4**
SMRI	**Semarang**	**3.21**	**81**	P	**Pn**	**04 56 20.2**	**+2.1**
SMRI	**Semarang**	**3.21**	**81**	*e*Pn	**Pn**	**04 56 19.7**	**+1.6**
UGM	**Wanagama**	**3.27**	**96**	P	**Pn**	**04 56 19.3**	**+0.4**
UGM	**Wanagama**	**3.27**	**96**	*e*Pn	**Pn**	**04 56 18.0**	**-0.9**
UGM				*e*Sn	**Sn**	**04 56 55.8**	**-1.1**
KASI	**Kota Agung**	**3.39**	**306**	P	**Pn**	**04 56 21.2**	**+0.7**
KLI	**Kotabumi**	**3.57**	**318**	P	**Pn**	**04 56 24.4**	**+1.5**
WOJI	**Wonogiri, Jawa**	**3.66**	**95**	P	**Pn**	**04 56 24.4**	**+0.3**
PCJI	**Pacitan**	**3.95**	**100**	P	**Pn**	**04 56 28.6**	**+0.5**
LWLI	**Liwa**	**4.04**	**308**	P	**Pn**	**04 56 32.2**	**+2.8**
NGJI	**Ngawi**	**4.19**	**88**	P	**Pn**	**04 56 35.2**	**+3.9**
MDSI	**Maura Dua**	**4.31**	**315**	P	**Pn**	**04 56 34.1**	**+1.2**
PWJI	**Pagerwojo**	**4.55**	**96**	P	**Pn**	**04 56 37.7**	**+1.5**
TBJI	**Tambak Boyo**	**4.63**	**81**	P	**Pn**	**04 56 40.0**	**+2.7**
GRJI	**Gresik**	**5.24**	**83**	P	**Pn**	**04 56 47.3**	**+1.7**
MNAI	**Manna**	**5.31**	**306**	P	**Pn**	**04 56 46.9**	**+0.3**
MNAI	**Manna**	**5.31**	**306**	*e*Pn	**Pn**	**04 56 46.9**	**+0.3**
MNAI				*e*Sn	**Sn**	**04 57 42.5**	**-4.1**
PPBI	**Pangkal Pinang**	**5.47**	**348**	P	Pn	04 56 51.3	+2.5
GMJI	**Gumukmas**	**6.19**	**97**	P	**Pn**	**04 57 02.0**	**+3.5**
	136nm,0.6s,3μm0.5nm						
BLJI	**Banyuglugur**	**6.30**	**92**	P	**Pn**	**04 57 03.9**	**+3.8**
	188nm,0.5s,4μm1.1nm						
MASI	**Maura Aman, Be**	**6.63**	**311**	P	**Pn**	**04 57 04.9**	**+0.2**
	202nm,1.2s,3μm0.8nm						
JAGI	**Jajag, Banyuwa**	**6.91**	**98**	P	**Pn**	**04 57 10.6**	**+2.2**
JAGI	**Jajag, Banyuwa**	**6.91**	**98**	*e*Pn	**Pn**	**04 57 09.9**	**+1.5**
JAGI				*e*Sn	**Sn**	**04 58 24.7**	**-0.8**
SRBI	**Singaraja**	**7.92**	**94**	P	**Pn**	**04 57 24.3**	**+2.1**
PPSI	**Pulau Pagai**	**8.63**	**303**	P	**Pn**	**04 57 29.7**	**-2.2**
	519nm,0.6s,8μm						
STKI	**Sintang**	**8.67**	**29**	P	Pn	04 57 36.3	+3.8
TWSI	**Taliwang, Sumb**	**9.62**	**98**	P	**Pn**	**04 57 44.6**	**-0.8**
MYKOM	**Kota Tinggi**	**9.88**	**340**	*e*Pn	Pn	04 57 43.2	-5.7
SISI	**Saibi**	**10.21**	**307**	P	**Pn**	**04 57 49.0**	**-4.5**
PLAI	**Plampang**	**10.51**	**98**	P	**Pn**	**04 57 55.9**	**-1.6**
COCO	**West Island**	**11.24**	**245**	*e*Pn	Pn	04 57 58.8	-8.6
PBSI	**Pulau Batu**	**11.63**	**309**	P	Pn	04 58 08.0	-4.8
GSI	**Gunungsitoli**	**13.05**	**312**	P	Pn	04 58 25.6	-6.4
GSI	**Gunungsitoli**	**13.05**	**312**	*e*Pn	Pn	04 58 25.8	-6.2
PSI	**Prapat**	**13.22**	**321**	LR	LR	05 03 28.8	
	comp=Z,136nm,21.9s,baz=92,slow=37						
TTSI	**Tana Toraja**	**13.30**	**71**	P	P	04 58 49.0	+7.2
MMRI	**Maumere**	**14.89**	**95**	*e*P	**P**	**04 58 59.8**	**+0.3**
BATI	**Baumata**	**16.44**	**100**	P	**P**	**04 59 18.4**	**+1.7**
	17nm,0.3s,baz=263,slow=3.4,SNR=6.6						
SOEI	**Soe**	**16.98**	**99**	*e*Pn	**Pn**	**04 59 20.4**	**-1.8**
	79nm,1.1s						
MBWA	**Marble Bar**	**18.13**	**140**	*e*P	**P**	**04 59 36.6**	**+1.3**
	38nm,1.4s						
FITZ	**Fitzroy Crossi**	**20.75**	**122**	*e*P	**P**	**05 00 04.7**	**+0.8**
	8.6nm,0.7s						
MTN	**Manton Dam**	**24.09**	**105**	*e*P	**P**	**05 00 37.6**	**-0.1**
	12nm,0.8s						
NWAO	**Narrogin (SRO)**	**26.90**	**161**	*e*P	**P**	**05 01 03.1**	**+0.2**
	75nm,1.4s						
CM31	**Chiang Mai Arr**	**27.11**	**343**	*e*P	**P**	**05 01 03.6**	**-1.4**
CMAR	**Chiang Mai Arr**	**27.11**	**343**	P	**P**	**05 01 03.6**	**-1.4**
	1.6nm,0.5s,baz=176,slow=9.4,SNR=9.3						
H01W3	**Cape Leeuwin H**	**27.93**	**168**	T	T	05 30 41.0	
	baz=347,slow=76,SNR=68						
H01W1	**Cape Leeuwin H**	**27.94**	**168**	T	T	05 30 41.8	
	baz=347,slow=76,SNR=50						
H01W2	**Cape Leeuwin H**	**27.94**	**168**	T	T	05 30 43.9	
	baz=347,slow=76,SNR=75						
WR1	**Warramunga Arr**	**29.00**	**118**	*e*P	**P**	**05 01 22.1**	**+0.2**
	11nm,1.3s						
WR1				*e*PcP	**PcP**	**05 04 28.9**	**+0.2**
WRA	**Warramunga Arr**	**29.00**	**118**	P	**P**	**05 01 22.1**	**+0.2**
	2.8nm,0.5s,baz=294,slow=10,SNR=38						
WRA				PcP	**PcP**	**05 04 28.9**	**+0.2**
	1.8nm,0.6s,baz=317,slow=2.0,SNR=10.0						
WRAB	**Tennant Creek**	**29.01**	**118**	*e*P	**P**	**05 01 22.1**	**+0.1**
	9.9nm,1.3s						
WB2	**Warramunga Arr**	**29.01**	**118**	*e*P	**P**	**05 01 22.4**	**+0.4**
	4.6nm,0.6s						
WB2				*e*PcP	**PcP**	**05 04 28.7**	**0.0**
WC3	**Warramunga Arr**	**29.04**	**118**	*e*P	**P**	**05 01 22.1**	**-0.1**
	4.9nm,0.8s						
AS31	**Alice Springs**	**30.18**	**125**	*e*P	**P**	**05 01 33.0**	**+0.8**
	2.4nm,0.7s						
AS31				*e*PcP	**PcP**	**05 04 32.1**	**+0.4**
ASAR	**Alice Springs**	**30.18**	**125**	P	**P**	**05 01 32.7**	**+0.5**
	5.9nm,0.8s,baz=303,slow=8.9,SNR=39						
ASAR				PcP	**PcP**	**05 04 32.1**	**+0.4**
	1.9nm,0.5s,baz=316,slow=2.3,SNR=7.6						
ASAR				S	**S**	**05 06 24.4**	**-1.2**
	0.6nm,0.6s,baz=301,slow=16,SNR=4.4						
AS01	**Alice Springs**	**30.21**	**125**	*e*P	**P**	**05 01 31.7**	**-0.9**
KMI	**Kunming**	**32.77**	**352**	P	**P**	**05 01 57.0**	**+1.8**
KMI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KMI				pmax	pmax		
	comp=Z,60nm,4.3s						
GYA	**Guiyang**	**33.81**	**359**	*e*P	**P**	**05 02 07.0**	**+2.9**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
H08S2	**Diego Garcia H**	**34.44**	**268**	T	T	05 39 23.6	
	baz=92,slow=75,SNR=5.2						
H08S3	**Diego Garcia H**	**34.45**	**268**	T	T	05 39 32.2	
	baz=92,slow=75,SNR=5.7						
H08S1	**Diego Carcia H**	**34.45**	**268**	T	T	05 39 22.5	
	baz=92,slow=75,SNR=3.1						
COEN	**Coen**	**35.84**	**103**	*e*P	**P**	**05 02 20.9**	**-0.8**
	7.7nm,0.8s						
BBOO	**Buckleboo**	**36.69**	**137**	*e*P	**P**	**05 02 29.2**	**+0.6**
	20nm,1.2s						
CD2	**Chengdu**	**38.39**	**355**	P	**P**	**05 02 42.5**	**-0.5**
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
STKA	**Stephens Creek**	**40.09**	**132**	P	**P**	**05 02 58.6**	**+1.3**
	47nm,0.6s,baz=307,slow=8.6,SNR=148						
STKA				PcP	**PcP**	**05 05 00.9**	**+0.5**
	5.9nm,0.5s,baz=322,slow=4.8,SNR=5.1						
STKA				LR	LR	05 22 10.4	
	comp=Z,62nm,20.3s,baz=27,slow=40						
STKA	**Stephens Creek**	**40.09**	**132**	*e*P	**P**	**05 02 58.5**	**+1.3**
	11nm,0.6s						
STKA				*e*PcP	**PcP**	**05 05 00.9**	**+0.5**
NJ2	**Nanjing**	**40.92**	**15**	*e*P	**P**	**05 03 04.0**	**+0.1**
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
LZH	**Lanzhou**	**43.53**	**356**	*e*P	**P**	**05 03 27.0**	**+1.7**
LZH				pP	pP	05 03 45.5	0.0
LZH				sP	sP	05 03 54.5	-0.6
LZH				*e*PP	**PcP**	**05 05 11.3**	**-0.5**
LZH				pmax	pmax		
	comp=Z,22nm,1.3s						
LZH				pmax	pmax		
	comp=Z,79nm,5.4s						
LZH				LR	LR		
	comp=N,360nm,13.7s						
LZH				LR	LR		
	comp=E,350nm,14.0s						
LZH				LR	LR		
	comp=Z,440nm,17.2s						
GTA	**Gaotai**	**47.23**	**352**	*e*P	P	05 04 02.5	+8.0
GTA				pP	sP	05 04 22.0	-2.5
GTA				sP	pP	05 04 31.3	+16
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
HHC	**Hu-ho-hao-te**	**48.33**	**4**	*e*P	**P**	**05 04 03.8**	**+0.9**
HHC				pmax	pmax		
	comp=Z,13nm,0.6s						
HHC				pmax	pmax		
	comp=Z,39nm,6.1s						
WMQ	**Urumqi**	**54.12**	**343**	P	**P**	**05 04 46.8**	**+0.7**
WMQ				pP	pP	05 05 06.3	-0.7
WMQ				sP	sP	05 05 11.8	-4.7
WMQ				pmax	pmax		
	comp=Z,17nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,170nm,5.3s						
WMQ				LR	LR		
	comp=Z,190nm,14.7s						
WMQ				LR	LR		
	comp=Z,230nm,29.1s						
WMQ				LR	LR		
	comp=Z,190nm,19.1s						
KSH	**Kashi**	**55.06**	**331**	P	**P**	**05 04 51.8**	**-1.3**
KSH				pmax	pmax		
	comp=Z,180nm,4.6s						
SONM	**Songino Array**	**55.15**	**359**	PcP	**PcP**	**05 05 52.8**	**-1.1**
	comp=Z,2.5nm,0.5s,baz=178,slow=3.9,SNR=13						
SONM				ScP	**ScP**	**05 09 43.0**	**-2.1**
	comp=Z,2.3nm,0.8s,baz=165,slow=6.0,SNR=10						
MK01	**Makanchi Array**	**58.46**	**340**	*e*P	**P**	**05 05 13.5**	**-3.4**
MK31	**Makanchi Array**	**58.49**	**340**	*e*P	**P**	**05 05 16.6**	**-0.5**
MK32	**Makanchi Array**	**58.49**	**340**	*e*P	**P**	**05 05 13.8**	**-3.2**
MKAR	**Makanchi Array**	**58.49**	**340**	P	**P**	**05 05 13.8**	**-3.3**
	comp=Z,0.9nm,0.5s,baz=156,slow=8.4,SNR=8.6						
MKAR	**Makanchi Array**	**58.49**	**340**	*e*P	**P**	**05 05 16.6**	**-0.5**
	comp=Z,6.8nm,0.6s						
CASY	**Casey**	**58.68**	**178**	*e*P	**P**	**05 05 18.8**	**+0.8**
	comp=Z,10nm,0.8s						
ASAJ	**Asahikawa**	**60.54**	**29**	LR	LR	05 32 39.0	
	comp=Z,16nm,18.5s,baz=61,slow=37						
MAW	**Mawson**	**66.91**	**197**	P	**P**	**05 06 14.9**	**+2.2**
	comp=Z,8.2nm,0.6s,baz=54,slow=5.0,SNR=12						
MAW	**Mawson**	**66.91**	**197**	*e*P	**P**	**05 06 14.5**	**+1.8**
	comp=Z,2.5nm,0.7s						
BKZ	**Black Stump Fm**	**69.19**	**129**	*e*P	**P**	**05 06 28.3**	**+0.6**
	comp=Z,28nm,1.0s						
URZ	**Urewera**	**69.57**	**128**	*e*P	**P**	**05 06 31.4**	**+1.4**
	comp=Z,14nm,0.8s						
ABKAR	**Akbulak array**	**70.01**	**329**	*e*P	**P**	**05 06 29.7**	**-2.7**
SYO	**Syowa Base**	**75.07**	**200**	‖*e*X	**P**	**05 07 02.0**	**0.0**
SYO	**Syowa Base**	**75.07**	**200**	‖*e*pP	pP	05 07 25.0	+0.9
VNDA	**Vanda**	**75.38**	**169**	P	**P**	**05 07 05.0**	**+1.2**
	comp=Z,2.2nm,0.4s,baz=320,slow=6.5,SNR=45						
VNDA	**Vanda**	**75.38**	**169**	*e*P	**P**	**05 07 04.9**	**+1.2**
	comp=Z,7.1nm,1.2s						
KBZ	**Khabaz**	**77.22**	**318**	P	**P**	**05 07 14.8**	**+0.2**
	comp=Z,3.4nm,0.9s,baz=164,slow=3.2,SNR=5.4						
LSZ	**Lusaka**	**77.53**	**256**	*e*P	**P**	**05 07 18.4**	**+1.1**
	comp=Z,6.0nm,0.8s						
LBTB	**Lobatse**	**79.30**	**246**	*e*P	**P**	**05 07 28.1**	**+1.3**
	comp=Z,4.7nm,0.6s						
BOSA	**Boshof**	**79.41**	**242**	P	**P**	**05 07 28.8**	**+1.5**
	comp=Z,3.8nm,0.4s,baz=102,slow=3.9,SNR=16						
BOSA	**Boshof**	**79.41**	**242**	*e*P	**P**	**05 07 28.7**	**+1.3**
	comp=Z,21nm,1.4s						
BR101	**Keskin Array S**	**82.37**	**312**	*e*P	**P**	**05 07 41.8**	**-1.1**
BRTR	**Keskin Array B**	**82.37**	**312**	P	**P**	**05 07 41.8**	**-1.1**
	comp=Z,0.8nm,0.6s,baz=119,slow=4.4,SNR=4.3						
QSPA	**South Pole Qui**	**82.44**	**180**	*e*P	**P**	**05 07 43.8**	**+1.1**
	comp=Z,9.5nm,0.9s						
AKASG	**Malin Array Be**	**88.27**	**322**	pP	pP

R40A	Maddies Statio	144.68	27	ePKPdf	PKPab	05 14 55.1	-0.9
P43A	Skaggs, Pawnee	144.69	23	P	PKPab	05 14 54.9	-1.1
	baz=330,SNR=6.0						
ABTX	Abilene, Hawle	144.72	41	P	PKPbc	05 14 56.1	-0.3
	baz=309						
T38A	Diamond	144.72	31	P	PKPab	05 14 55.2	-1.0
	baz=321,SNR=16						
TUL1	Leonard	144.78	33	P	PKPab	05 14 55.8	-0.6
	baz=318,SNR=6.1						
TUL1	Leonard	144.78	33	ePKPdf	PKPbc	05 14 56.2	-0.4
O45A	Potomac	144.80	20	P	PKPab	05 14 55.7	-0.6
	baz=334						
SFIN	Lafayette	144.89	19	P	PKPab	05 14 55.8	-0.9
	baz=335,SNR=6.8						
Q42A	Golden Eagle	144.91	24	P	PKPab	05 14 55.8	-1.0
	baz=328,SNR=7.5						
GO03	Copiap	144.97	184	ePKPbc	PKPdf	05 14 58.8	+0.7
ERPA	Erie	144.99	9	P	PKPab	05 14 55.5	-1.5
	baz=348						
R41A	Rosebud	145.07	26	P	PKPab	05 14 56.3	-1.1
	baz=327,SNR=17						
S40A	Lebanon	145.14	28	P	PKPab	05 14 56.4	-1.3
	baz=324,SNR=20						
P44A	Sand Creek, Wi	145.18	22	P	PKPbc	05 14 56.7	-1.0
	baz=332,SNR=6.2						
T39A	Clever	145.18	30	P	PKPbc	05 14 56.9	-0.9
	baz=323,SNR=42						
Q43A	New Douglas	145.22	23	P	PKPbc	05 14 56.6	-1.2
	baz=330						
O47A	Sheridan	145.32	18	P	PKPbc	05 14 56.8	-1.3
	baz=336						
CCM	Cathedral Cave	145.33	26	P	PKPbc	05 14 57.0	-1.2
	baz=327						
CCM	Cathedral Cave	145.33	26	ePKPbc	PKPbc	05 14 57.0	-1.2
R42A	Luebbering	145.34	25	P	PKPbc	05 14 57.1	-1.1
	baz=328,SNR=34						
BINY	Binghamton	145.38	4	P	PKPbc	05 14 57.1	-1.2
	baz=354						
BINY	Binghamton	145.38	4	ePKPbc	PKPbc	05 14 57.5	-0.8
P45A	Graceland, Par	145.44	21	P	PKPbc	05 14 57.3	-1.2
	baz=333,SNR=7.9						
P45A	Graceland, Par	145.44	21	ePKPbc	PKPab	05 14 58.0	-0.7
HHAR	Hobbs	145.48	31	ePKPbc	PKPbc	05 14 57.8	-1.0
T40A	Mansfield	145.49	28	P	PKPbc	05 14 57.5	-1.3
	baz=324,SNR=26						
S41A	Jillco Farms,	145.50	27	P	PKPbc	05 14 57.8	-0.9
	baz=326,SNR=55						
Q44A	Meyer Farm, Va	145.52	23	P	PKPbc	05 14 57.7	-1.1
	baz=331						
P46A	Rosedale	145.54	20	P	PKPbc	05 14 57.9	-0.9
	baz=334						
U39A	Green Forest	145.63	30	P	PKPdf	05 14 57.9	-0.9
	baz=322,SNR=12						
M54A	Oil Creek Stat	145.64	9	P	PKPdf	05 14 57.8	-0.9
	baz=348						
N50A	Nevada	145.65	14	P	PKPdf	05 14 57.9	-0.9
	baz=342						
R43A	Red Bud	145.70	24	P	PKPdf	05 14 58.2	-0.7
	baz=329,SNR=11						
FVM	French Village	145.74	25	ePKPdf	PKPdf	05 14 58.6	-0.4
S42A	Caledonia	145.77	26	P	PKPdf	05 14 58.5	-0.5
	baz=327,SNR=12						
Q45A	Warren Harvey,	145.85	22	P	PKPdf	05 14 58.9	-0.3
	baz=332						
JCT	Junction City	145.92	44	P	PKPab	05 15 00.3	-0.6
	baz=307						
T41A	Mountain View	145.93	28	P	PKPdf	05 14 59.0	-0.3
	baz=325,SNR=10						
U40A	Yellville	145.97	30	P	PKPdf	05 14 59.1	-0.4
	baz=323,SNR=13						
P47A	Martinsville	145.97	19	P	PKPdf	05 14 59.0	-0.4
	baz=336						
V39A	Pettigrew	145.97	31	P	PKPdf	05 14 59.1	-0.4
	baz=321,SNR=10						
OLIL	Olney	146.01	22	ePKPdf	PKPab	05 14 59.9	-1.0
KSPA	Keystone Colle	146.03	4	ePKPdf	PKPab	05 15 00.0	-0.9
R44A	Waltonville	146.07	23	P	PKPdf	05 14 59.5	0.0
	baz=330,SNR=6.5						
N54A	Moraine State	146.12	10	P	PKPbc	05 15 00.2	-0.4
	baz=347						
O50A	Cable	146.12	15	P	PKPdf	05 14 59.4	-0.2
	baz=340						
ACSO	Alum Creek Sta	146.20	14	P	PKPdf	05 14 59.6	-0.1
	baz=342						
ACSO	Alum Creek Sta	146.20	14	ePKPdf	PKPbc	05 15 00.0	-0.8
S43A	Fulton Ridge,	146.24	25	P	PKPdf	05 14 59.9	0.0
	baz=328						
T42A	Van Buren	146.25	27	P	PKPbc	05 15 00.2	-0.8
	baz=326,SNR=20						
T42A	Van Buren	146.25	27	ePKPdf	PKPbc	05 15 00.4	-0.6
R45A	Skylar, Fairfi	146.34	22	P	PKPbc	05 15 00.4	-0.9
	baz=332,SNR=6.4						
W39A	Magazine	146.40	32	P	PKPbc	05 15 00.6	-1.0
	baz=320						
Q47A	Bedord North L	146.42	19	P	PKPdf	05 15 00.2	+0.1
	baz=335						
V40A	Witts Springs	146.42	30	P	PKPbc	05 15 00.6	-1.1
	baz=322						
V40A	Witts Springs	146.42	30	ePKPdf	PKPbc	05 15 00.8	-0.9
U41A	Viola	146.43	29	P	PKPbc	05 15 00.5	-1.1
	baz=324,SNR=9.8						
S44A	Carbondale	146.47	24	P	PKPdf	05 15 00.5	+0.3
	baz=330						
WHTX	Lake Whitney,	146.54	40	P	PKPab	05 15 02.2	-1.0
	baz=312						
WHTX	Lake Whitney,	146.54	40	ePKPdf	PKPab	05 15 02.7	-0.5
T43A	Greenville	146.56	26	P	PKPbc	05 15 00.8	-1.2
	baz=327,SNR=11						
P50A	Jamestown	146.58	16	P	PKPbc	05 15 00.8	-1.2
	baz=340						
N59A	State Game Lan	146.67	4	P	PKPbc	05 15 01.3	-0.9
	baz=355						
N59A	State Game Lan	146.67	4	ePKPdf	PKPbc	05 15 01.7	-0.5
PAL	Palisades	146.67	2	P	PKPdf	05 15 00.8	+0.3
	baz=358						
R46A	Gibon Southern	146.69	21	P	PKPbc	05 15 01.4	-0.8
	baz=333						
X39A	Fountain Ranch	146.74	33	P	PKPbc	05 15 02.5	-0.1
	baz=319						
U42A	Revenden	146.74	28	P	PKPbc	05 15 01.6	-0.9
	baz=325,SNR=15						
SSPA	Standing Stone	146.74	7	P	PKPbc	05 15 01.2	-1.2
	baz=351						
PBMO	Poplar Bluff	146.75	26	ePKPdf	PKPbc	05 15 01.4	-1.1
S45A	Carrier Mills	146.76	23	P	PKPbc	05 15 01.7	-0.8
	baz=331						
V41A	Mountainview	146.76	30	P	PKPbc	05 15 01.4	-1.2
	baz=323						
W40A	Ferguson Farm,	146.77	31	P	PKPbc	05 15 01.6	-1.1
	baz=321						
T44A	Benton	146.86	25	P	PKPbc	05 15 01.8	-1.0
	baz=329						
R47A	Wooly Knot Far	146.96	20	P	PKPbc	05 15 02.2	-0.9
	baz=334						
MIAR	Mount Ida	147.00	33	P	PKPbc	05 15 03.1	-0.2
	baz=320						
MIAR	Mount Ida	147.00	33	ePKPdf	PKPbc	05 15 03.1	-0.2
O56A	Blue Knob Stat	147.01	8	P	PKPbc	05 15 02.3	-1.0
	baz=349						
O56A	Blue Knob Stat	147.01	8	ePKPdf	PKPbc	05 15 02.6	-0.6
S46A	Don Dixon Farm	147.08	22	P	PKPbc	05 15 02.6	-0.8
	baz=332						
R48A	Northridge Ran	147.09	19	P	PKPbc	05 15 02.8	-0.6
	baz=336						
WCI	Wyandotte Cave	147.10	20	P	PKPbc	05 15 02.4	-1.0
	baz=335						
U43A	Rector	147.10	27	P	PKPbc	05 15 02.7	-0.9
	baz=327						
V42A	Cord	147.11	29	P	PKPbc	05 15 03.3	-0.3
	baz=325						
W41B	Gary Mavity, V	147.20	30	P	PKPbc	05 15 03.8	0.0
	baz=323						
GO02	Mina Guanaco	147.33	185	ePKPbc	PKPbc	05 15 05.9	+1.0
MCWV	Mont Chateau	147.41	10	P	PKPbc	05 15 03.7	-0.6
	baz=347						
X40A	Basin Creek Fa	147.44	32	P	PKPbc	05 15 04.8	+0.2
	baz=321						
833A	Chaparral WMA,	147.45	47	P	PKPbc	05 15 05.3	+0.5
	baz=305						
833A	Chaparral WMA,	147.45	47	ePKPbc	PKPab	05 15 05.6	-1.3
T46A	Princeton	147.58	23	P	PKPbc	05 15 04.0	-0.8
	baz=331						
S48A	Wiedeman Farm,	147.70	20	P	PKPbc	05 15 04.2	-0.9
	baz=335						
T47A	Sharon Grove	147.92	22	P	PKPbc	05 15 05.1	-0.6
	baz=333						
T47A	Sharon Grove	147.92	22	ePKPbc	PKPbc	05 15 05.2	-0.5
Y41A	Eaglette Beard	148.02	32	P	PKPbc	05 15 06.1	0.0
	baz=321						
T48A	Bowling Green	148.07	21	P	PKPbc	05 15 05.6	-0.6
	baz=334						
T49A	Edmonton	148.37	20	P	PKPbc	05 15 06.4	-0.5
	baz=336						
WVT	Waverly	148.40	24	P	PKPbc	05 15 06.6	-0.4
	baz=331						
WVT	Waverly	148.40	24	ePKPbc	PKPbc	05 15 06.6	-0.4
Z41A	Richland Creek	148.40	33	P	PKPbc	05 15 06.9	-0.2
	baz=320						
X43A	Marvell	148.40	29	P	PKPbc	05 15 06.7	-0.4
	baz=324						
140A	Cam and Jess,	148.43	35	P	PKPbc	05 15 07.5	+0.3
	baz=318						
S51A	Beattyville	148.48	17	P	PKPbc	05 15 06.0	-1.2
	baz=339						
Y42A	Garnett, Star	148.49	31	P	PKPbc	05 15 06.8	-0.5
	baz=322						
U48A	Cassie Pea, Po	148.55	22	P	PKPbc	05 15 06.9	-0.5
	baz=333						
V46A	Holladay	148.57	24	P	PKPbc	05 15 06.4	-1.1
	baz=330						
S52A	Salyersville	148.59	16	P	PKPbc	05 15 06.2	-1.3
	baz=340						
W45A	Hickory Valley	148.66	26	P	PKPbc	05 15 07.7	-0.1
	baz=328						
T50A	Nancy	148.68	19	P	PKPbc	05 15 06.7	-1.0
	baz=337						
V47A	Nunnelly	148.78	24	P	PKPbc	05 15 07.5	-0.6
	baz=331						
U49A	Red Boiling Sp	148.82	21	P	PKPbc	05 15 07.3	-0.8
	baz=335						
Y43A	Makayla and Ka	148.86	30	P	PKPbc	05 15 08.4	+0.1
	baz=324						
V48A	Smith Brothers	149.13	23	P	PKPbc	05 15 08.0	-0.9
	baz=332						
Y44A	Strider, Charl	149.17	29	P	PKPbc	05 15 08.9	-0.2
	baz=325						
X45A	UM Field Stati	149.18	28	P	PKPbc	05 15 08.3	-0.7
	baz=327						
LNIG	Linares	149.21	53	ePKPbc	PKPbc	05 15 09.4	0.0
W47A	Westpoint	149.25	24	P	PKPbc	05 15 08.2	-1.0
	baz=330						
241A	Mo Tay, Goldon	149.26	35	P	PKPbc	05 15 10.0	+0.7
	baz=318						
X46A	Booneville	149.43	26	P	PKPbc	05 15 08.9	-0.8
	baz=328						
V49A	McMinnville	149.45	21	P	PKPbc	05 15 08.9	-0.8
	baz=334						
TZTN	Tazewell	149.51	17	P	PKPbc	05 15 09.2	-0.7
	baz=339						
Y45A	Yeager Farm, C	149.57	28	P	PKPbc	05 15 09.9	-0.1
	baz=326						
W48A	Pulaski	149.62	23	P	PKPbc	05 15 09.8	-0.4
	baz=332						
341A	Kurthwood	149.62	36	P	PKPbc	05 15 11.0	+0.8
	baz=317						
341A	Kurthwood	149.62	36	ePKPbc	PKPbc	05 15 11.0	+0.8
X47A	Russelville	149.78	25	P	PKPbc	05 15 09.3	-1.2
	baz=329						
V50A	Pikevile	149.82	20	P	PKPbc	05 15 09.7	-1.0
	baz=335						
Y46A	Houston	149.87	27	P	PKPbc	05 15 10.2	-0.6
	baz=327						
W49A	Belvidere	149.89	22	P	PKPbc	05 15 09.8	-1.0
	baz=333						
SWET	Sewanee	149.93	22	ePKPbc	PKPbc	05 15 10.1	-0.9
V51A	Loudon	149.95	19	P	PKPbc	05 15 10.2	-0.7
	baz=337						
342A	Flagon Creek P	150.08	35	P	PKPbc	05 15 11.3	-0.1
	baz=319						
V52A	Sevierville	150.15	18	P	PKPbc	05 15 11.0	-0.5
	baz=338						
V52A	Sevierville	150.15	18	ePKPbc	PKPbc	05 15 10.9	-0.5
W50A	Signal Mountai	150.17	21	P	PKPbc	05 15 10.6	-0.9
	baz=334						
X48A	Hartselle	150.17	24	P	PKPbc	05 15 10.3	-1.2
	baz=331						
X48A	Hartselle	150.17	24	ePKPbc	PKPbc	05 15 10.2	-1.2
Y47A	UCPARC, Winfie	150.31	26	P	PKPbc	05 15 10.9	-0.9
	baz=329						
X49A	Woodville	150.40	23	P	PKPbc	05 15 11.2	-0.8
	baz=332						
145A	Houston Renfro	150.41	30	P	PKPbc	05 15 11.5	-0.6
	baz=324						
244A	Avery, Jackson	150.47	32	P	PKPbc	05 15 12.0	-0.2
	baz=322						
V53A	Saluda	150.54	17	P	PKPbc	05 15 11.9	-0.5
	baz=340						
Y48A	Jasper	150.59	25	P	PKPbc	05 15 11.5	-1.0
	baz=330						
Z47A	Carrollton	150.80	27	P	PKPbc	05 15 12.4	-0.6
	baz=328						
146A	Union	150.81	29	P	PKPbc	05 15 13.2	+0.1
	baz=326						
Z48A	Northport	150.88	26	P	PKPbc	05 15 12.3	-0.9
	baz=329						
X51A	Calhoun	150.90	21	P	PKPbc	05 15 12.7	-0.5
	baz=335						
W53A	Cullowhee	150.90	18	P	PKPbc	05 15 12.9	-0.5
	baz=339						
Y49A	Blount Mountai	150.94	24	P	PKPbc	05 15 12.8	-0.6
	baz=331						
X52A	Dahlonega	151.19	19	P	PKPbc	05 15 13.2	-0.8
	baz=337						
LRAL	Lakeview Retre	151.41	26	P	PKPbc	05 15 13.5	-0.9
	baz=330						
Z49A	Columbiana	151.47	25	P	PKPbc	05 15 13.8	-0.8
	baz=331						
X53A	Estanollee	151.48	18	P	PKPbc	05 15 14.3	-0.2
	baz=338						
Z50A	Ashland	151.67	24	P	PKPbc	05 15 14.3	-0.8
	baz=332						
Y52A	Lilburn	151.81	20	P	PKPbc	05 15 15.2	-0.1
	baz=336						
149A	Jones	151.88	26	P	PKPbc	05 15 15.2	-0.4
	baz=330						
248A	Dixon Mills	151.88	28	P	PKPbc	05 15 15.2	-0.4
	baz=327						
Y53A	Monroe	151.98	19	P	PKPbc	05 15 15.3	-0.5
	baz=337						
347A	Saraland	152.07	30	P	PKPbc	05 15 15.9	0.0
	baz=325						
150A	Eclectic	152.19	25	P	PKPbc	05 15 15.8	-0.4
	baz=331						
Y54A	Tignall	152.26	18	P	PKPbc	05 15 15.7	-0.6
	baz=339						
249A	Camden	152.26	27	P	PKPbc	05 15 16.3	-0.1
	baz=328						
Z52A	Williamson	152.30	21	P	PKPbc	05 15 16.3	-0.1
	baz=335						
GOGA	Godfrey	152.43	20	P	PKPbc	05 15 16.3	-0.4
	baz=337						
Z53A	Monticello	152.51	20	P	PKPbc	05 15 16.7	-0.3
	baz=336						
151A	Opelika	152.54	23	P	PKPbc	05 15 16.6	-0.4
	baz=332						
250A	Grady	152.63	26	P	PKPbc	05 15 17.1	-0.2
	baz=330						
152A	Waverly Hall	152.65	22	P	PKPbc	05 15 16.9	-0.4
	baz=334						
349A	Repton	152.76	28	P	PKPbc	05 15 17.4	-0.1
	baz=328						
Z54A	Sparta	152.79	19	P	PKPbc	05 15 17.3	-0.3
	baz=338						
251A	Midway	152.89	24	P	PKPbc	05 15 17.8	0.0
	baz=332						
BRAL	Brewton	152.97	28	P	PKPbc	05 15 17.8	-0.2
	baz=328						
Z55A	Blythe	153.02	18	P	PKPbc	05 15 18.1	0.0
	baz=339						
350A	Dozier	153.08	26	P	PKPbc	05 15 18.3	0.0
	baz=329						
252A	Lumpkin	153.25	23	P	PKPbc	05 15 18.5	-0.1
	baz=333						
155A	Kite	153.48	19	P	PKPbc	05 15 17.7	-1.4
	baz=338						
LPAZ	La Paz	155.87	191	ePKPab	PKPab	05 15 45.1	+2.4

*JMA **27** 05:03:36.4±0.1, 23°.42N×121°.53E, h31km±2km, M2.8*
*ISCJB **27** 05:03:37.1±0.3, 23°.45N±0°.02×121°.54E±0°.02, h27km±3km,*
Error ellipse: s-maj=3.8km s-min=2.5km az=29.9
*TAP **27** 05:03:37.4, 23°.45N×121°.48E, h27km, ML2.9, B*
ISC 27 05:03:36.9±0.9, 23°.44N±0°.02×121°.52E±0°.02, h29km±5km, n47, σ0°76/79, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HGSD	Ruisui	0.11	300	eP	Pn	05 03 42.7	0.0
	baz=308						
HGSD				eS	Sb	05 03 46.4	+0.8
	baz=308						
EHY	Hungye	0.20	290	P	Pb	05 03 42.7	-0.2
	baz=291						
EHY				S	Sb	05 03 46.6	-0.4
	baz=291						
YULB	Yu-li	0.21	257	eP	Pb	05 03 43.1	0.0
	baz=263						
YULB				eS	Sb	05 03 47.0	-0.4
	baz=263						
TWF1	Yuli	0.23	247	P	Pb	05 03 43.4	+0.1
	baz=253						
TWF1				eS	Sb	05 03 47.8	+0.2
	baz=253						
EGFH	Guangfu	0.24	339	eP	Pb	05 03 43.6	+0.1
	baz=337						
EGFH				eS	Sb	05 03 48.2	+0.2
	baz=337						
FULB	Fuli	0.32	221	eP	Pn	05 03 45.5	-0.2
	baz=230						
FULB				eS	Sn	05 03 51.2	-0.2
	baz=230						
CHKT	Chengkung	0.37	203	P	Pn	05 03 46.0	-0.3
	baz=190						
CHKT				S	Sn	05 03 52.5	-0.1
	baz=190						
ESL	Shilin	0.38	347	eP	Pb	05 03 45.8	+0.4
	baz=344						
ESL				eS	Sb	05 03 50.6	-0.6
	baz=344						
ENLB	Shoufeng	0.47	9	eP	Pn	05 03 47.6	-0.1
	baz=1.0						
ENLB				eS	Sn	05 03 54.8	-0.3
	baz=1.0						
VWDT	VWDT	0.47	312	eP	Pb	05 03 46.7	0.0
	baz=317						
VWDT				eS	Sb	05 03 52.9	-0.6
	baz=317						
ELDTW	Lidau	0.53	242	eP	Pb	05 03 47.3	-0.5
	baz=239						
SSLB	Suanglung	0.63	304	eP	Pb	05 03 48.9	-0.5
	baz=300						
SSLB				eS	Sb	05 03 56.2	-1.7
	baz=300						
TWD	Chiawan	0.64	6	eP	Pb	05 03 49.4	-0.2
	baz=355						
TWD				eS	Sn	05 03 58.9	-0.4
	baz=355						
ALS	Alishan	0.66	276	P	Pb	05 03 50.2	0.0
	baz=276						
ALS				eS	Sb	05 03 58.8	-0.4
	baz=276						
CHGB	Renai	0.70	333	eP	Pb	05 03 50.3	-0.4
	baz=340						
CHGB				eS	Sb	05 03 59.5	-0.5
	baz=340						
SMLT	Sun Moon Lake	0.72	308	P	Pb	05 03 50.9	-0.2
	baz=313						
SMLT				eS	Sb	05 03 59.9	-0.7
	baz=313						
TWH	Lutao	0.73	183	eP	Pb	05 03 51.0	0.0
	baz=170						
TWH				eS	Sn	05 04 01.5	+0.1
	baz=170						
NACB	Ninganchiao	0.73	5	eP	Pb	05 03 50.3	-0.9
	baz=354						
NACB				eS	Sb	05 03 59.5	-1.3
	baz=354						
TWGBT	Beinan	0.74	214	eP	Pb	05 03 50.5	-0.8
	baz=213						
TWGBT				eS	Sb	05 04 00.2	-0.8
	baz=213						
TWG	Pinlang	0.74	214	eP	Pb	05 03 50.5	-0.8
	baz=213						
TWG				eS	Sb	05 04 00.2	-0.9
	baz=213						
STYT	Tauyuan	0.76	249	eP	Pb	05 03 51.4	-0.2
	baz=241						
TYC	Yuchr	0.77	307	eP	Pn	05 03 51.5	-0.3
	baz=312						
TYC				eS	Sn	05 04 02.2	-0.2
	baz=312						
CHN5	Tsauling	0.79	282	eP	Pb	05 03 52.7	+0.6
	baz=286						
CHN5				eS	Sn	05 04 03.0	-0.2
	baz=286						
TPUB	Ta-pu	0.83	261	eP	Pb	05 03 53.6	+0.7
	baz=261						
TPUB				eS	Sb	05 04 03.4	-0.3
	baz=261						
WTP	Ta-pu	0.86	257	eP	Pb	05 03 54.0	+0.7
	baz=258						
WTP				eS	Sn	05 04 04.7	0.0
	baz=258						
CHN4	Tsaushan	0.86	264	P	Pb	05 03 54.1	+0.9
	baz=261						
CHN4				eS	Sn	05 04 05.5	+0.8
	baz=261						
TDCB	Techi	0.88	338	eP	Pn	05 03 53.5	+0.1
	baz=328						
WNT	Mingjian	0.89	300	eP	Pb	05 03 54.5	+0.9
	baz=300						
WNT				eS	Sn	05 04 06.5	+1.2
	baz=300						
SGST	Jiashian	0.94	248	eS	Sb	05 04 07.5	+0.9
	baz=248						
CHN1	Nanshi	0.95	255	eP	Pb	05 03 55.5	+0.7
	baz=256						
CHN1				eS	Sb	05 04 07.9	+0.9
	baz=256						
TWK	Hsinying	0.97	260	eP	Pb	05 03 55.5	+0.4
	baz=261						
TWK				eS	Sb	05 04 08.5	+1.0
	baz=261						
ECL	Taimali	0.99	212	eP	Pn	05 03 54.0	-0.9
	baz=201						
NANB	Nanao	1.00	12	eP	Pn	05 03 54.5	-0.6
	baz=356						
NANB				eS	Sn	05 04 07.0	-1.4
	baz=356						
MASBT	Mashibuluo	1.16	225	eP	Pn	05 03 57.7	+0.4
	baz=228						
TAW	Tawu	1.22	208	eP	Pb	05 04 00.3	+1.0
	baz=198						
YHNB	Yeheng	1.23	354	eP	Pn	05 03 58.3	0.0
	baz=3.0						
EOS1	EOS1	1.24	26	eP	Pb	05 03 59.5	0.0
	baz=43						
EOS1				eS	Sb	05 04 16.4	+1.3
	baz=43						
LIOB	Emei	1.29	339	eP	Pb	05 04 00.7	+0.2
	baz=336						
SCZT	Fangliau	1.35	218	eP	Pb	05 04 02.5	+1.0
	baz=209						
LAY	Lan-yu	1.39	179	eP	Pn	05 03 60.0	-0.5
	baz=168						
LAY				eS	Sn	05 04 15.7	-2.3
	baz=168						
YOJ	Yonaguni jima	1.70	53	P	Pb	05 04 06.4	-1.1
YOJ				eS	Sn	05 04 25.7	+0.3
HATJ	Hateruma jima	2.18	73	S	Sn	05 04 38.1	+0.8
IRIF	Iriomote-Funau	2.21	66	eS	Sn	05 04 39.4	+1.4
JKRS	Kuro-shima	2.41	70	eS	Sn	05 04 44.3	+1.3
JIJ	Ishigaki jima	2.57	68	S	Sn	05 04 47.7	+0.8
JISG	Ishigakijimahi	2.79	65	P	Pn	05 04 20.7	+1.0
JISG				S	Sn	05 04 52.5	+0.1
JTJ	Tarama	3.14	67	eS	Sn	05 05 02.5	+1.5

IDC 27 05:06:51.7±1.6, 28°.75N×140°.94E, h0km, mb3.6/3, mb1 3.7/4, mb1mx3.4/58, mbtmp3.6/4, ML3.5/1, Error ellipse: s-maj=74.5km s-min=18.6km az=60.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	1.98	146	Pn	Pn	05 07 26.2	-0.3
	2.1nm,0.3s,baz=256,slow=22,SNR=4.5						
JCJ				Sn	Sn	05 07 52.0	0.0
	7.0nm,0.3s,baz=256,slow=23,SNR=6.8						
MJAR	Matsushiro Arr	8.11	344	Pn	Pn	05 08 51.8	+1.1
	0.6nm,0.3s,baz=142,slow=12,SNR=5.5						
MKAR	Makanchi Array	48.58	309	P	P	05 15 36.9	-0.1
	0.5nm,0.9s,baz=94,slow=

WRA	Warramunga Arr	48.82	188	P		P	05 15 39.6	+0.6
	0.5nm,0.5s,baz=7.8,slow=8.2,SNR=5.1							
KURBB	Kurchatov Arra	51.10	314	P		P	05 15 55.2	-0.8
	0.6nm,0.6s,baz=89,slow=7.4,SNR=7.2							

*ISCJB **27** 05:18:37.0±0.9, 31°.97S±0°.03×70°.27W±0°.05, h115km±9km, Error ellipse: s-maj=6.8km s-min=4.4km az=18.7*
*GUC **27** 05:18:36.2±0.7, 31°.89S×70°.24W, h24km±6km, ML2.5*
*SJA **27** 05:18:37.0±1.0, 31°.97S×70°.28W, h99km±8km, ML2.4, MW2.7*

ISC 27 05:18:38.6±1.7, 31°.95S±0°.03×70°.28W±0°.04, h97km±17km, n19, σ0°.98/34, 2C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUSP	Uspallata	0.81	110	eP	Pn	05 18 57.0	-0.1
AUSP				eS	Sn	05 19 11.4	+0.5
RTLS	Leoncito	0.85	80	eP	Pn	05 18 57.2	-0.4
RTLS				eS	Sn	05 19 12.7	+0.9
RTLS				IAML		05 19 13.3	
	comp=Z,33nm,0.2s						
ROCH	El Roble	1.19	211	eP	Pn	05 19 00.1	-1.1
ROCH				i S	Sn	05 19 18.2	0.0
ROCH				IAML		05 19 19.3	
	comp=N,228nm,0.2s						
ROC1	El Roble	1.20	211	eP	Pn	05 19 00.4	-0.9
ROC1				eS	Sn	05 19 18.0	-0.4
ROC1				IAML		05 19 21.0	
FCH	Farellones	1.37	180	eP	Pn	05 19 02.7	-0.8
FCH				i S	Sn	05 19 23.2	+0.9
FCH				IAML		05 19 26.5	
	comp=E,102nm,0.2s						
ARCO	CERRO ARCO	1.45	128	eP	Pn	05 19 04.4	+0.2
ARCO				eS	Sn	05 19 24.7	+1.1
ARCO				IAML		05 19 26.6	
	comp=Z,68nm,0.2s						
CLCH	Cerro Calan	1.46	188	eP	Pn	05 19 03.6	-0.6
CLCH				i S	Sn	05 19 24.3	+0.6
CLCH				IAML		05 19 24.9	
	comp=E,123nm,0.6s						
RTCV	Cerro Valdivia	1.48	87	eP	Pn	05 19 03.7	-0.8
RTCV				eS	Sn	05 19 23.8	-0.4
RTLL	Cerro Villicun	1.66	69	eP	Pn	05 19 05.6	-1.2
RTLL				eS	Sn	05 19 26.9	-1.2
RTLL				IAML		05 19 28.3	
	comp=N,60nm,0.6s						
AAGR	Agrelo	1.67	133	eP	Pn	05 19 07.0	+0.1
AAGR				eS	Sn	05 19 28.9	+0.5
GO04	Tololo Observa	1.83	346	eP	Pn	05 19 08.5	-0.6
GO04				i S	Sn	05 19 32.7	+0.4
GO04				IAML		05 19 36.6	
	comp=E,59nm,0.1s						
AMOG	MOGNA	1.83	57	eP	Pn	05 19 08.2	-0.7
AMOG				eS	Sn	05 19 31.7	-0.4
TLL	Tololo Astrono	1.83	346⇑	eP	Pn	05 19 08.7	-0.5
TLL				i S	Sn	05 19 32.4	-0.1
TLL				IAML		05 19 34.0	
	comp=N,74nm,0.5s						
LMEL	Las Melosas	1.89	178⇑	eP	Pn	05 19 09.3	-0.5
LMEL				i S	Sn	05 19 36.6	+3.0
LMEL				IAML		05 19 37.9	
	comp=N,96nm,0.1s						
AROD	Rodeo	1.91	21	eP	Pn	05 19 10.9	+0.6
AROD				eS	Sn	05 19 36.1	+1.9
ACDV	Cuesta del Vie	2.04	30	eP	Pn	05 19 11.8	+0.1
ACDV				eS	Sn	05 19 37.8	+0.8
ACAN	Cantantal	2.64	98⇓	eP	Pn	05 19 18.1	-1.5
APLL	PUNTA DE LOS L	3.57	65	IAML		05 20 11.3	
	comp=Z,4.1nm,0.5s						
VCA	Vinchina	3.67	30	eP	Pn	05 19 33.7	+0.2
VCA				IAML		05 20 18.2	
	comp=Z,9.8nm,0.2s						

IDC 27 05:19:23.3±4.1, 2°.80N×89°.49E, h0km, mb3.6/3, mb1 3.7/3, mb1mx3.3/60, mbtmp3.6/3, Error ellipse: s-maj=146.5km s-min=32.1km az=62.0, North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S3	Diego Garcia H	19.88	238	T	T	05 44 14.2	
	baz=62,slow=74,SNR=7.4						
H08S2	Diego Garcia H	19.88	238	T	T	05 44 14.0	
	baz=62,slow=74,SNR=5.3						
H08S1	Diego Carcia H	19.89	238	T	T	05 44 21.7	
	baz=62						
MKAR	Makanchi Array	44.27	353	P	P	05 27 33.8	-0.8
	0.4nm,0.6s,baz=161,slow=7.7,SNR=3.9						
SONM	Songino Array	47.18	15	P	P	05 27 57.9	+0.1
	1.8nm,0.6s,baz=197,slow=9.5,SNR=11						
WRA	Warramunga Arr	49.48	119	P	P	05 28 15.6	-0.3
	0.4nm,0.9s,baz=294,slow=8.8,SNR=2.5						
TXAR	Lajitas Array	145.65	21	PKPbc	PKPdf	05 39 04.7	0.0
	0.2nm,0.5s,baz=292,slow=1.1,SNR=3.9						

*IDC **27** 05:40:22.4±2.5, 22°.25N×94°.14E, h69km±32km, mb3.3/2, mb1 3.7/4, mb1mx3.1/72, mbtmp3.7/4, ML4.0/2, Error ellipse: s-maj=41.0km s-min=17.1km az=33.0*

ISC 27 05:40:22.4±1.1, 22°.3N±0°.1×93°.8E±0°.1, h88km, n17, σ3°.32/27, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRDH	Bariadhala	2.06	282	P	Pn	05 40 59.5	+4.2
	42nm,0.3s,baz=75,slow=20,SNR=15						
BRDH				S	Sn	05 41 26.8	+6.3
	64nm,0.3s,baz=74,slow=22,SNR=7.2						
SHL	Shillong	3.74	332	ePN	Pn	05 41 20.0	+1.9
SHL				eSN	Sn	05 41 59.0	-2.2
CMAR	Chiang Mai Arr	6.11	127	P	Pn	05 41 47.6	-2.6
	0.9nm,0.3s,baz=306,slow=14,SNR=14						
ODAN	Odare	7.44	309	ePn	Pn	05 42 10.8	+2.4
ODAN				eSn	Sn	05 43 28.9	-2.4
	59nm,0.3s						
TAPN	Taplejung	7.52	314	ePn	Pn	05 42 11.8	+2.2
TAPN				eSn	Sn	05 43 30.1	-3.4
	53nm,0.3s						
RAMN	Ramite	8.06	307	ePn	Pn	05 42 19.8	+2.8
JIRN	Jiri	8.77	309	ePn	Pn	05 42 28.3	+1.6
GUN	Gumba	9.14	310	ePn	Pn	05 42 33.3	+1.6
GUN				eSn	Sn	05 44 09.0	-4.0
	45nm,0.3s						
PKIN	Phulchoki	9.30	306	ePn	Pn	05 42 35.4	+1.5
PKIN				eSn	Sn	05 44 14.4	-2.5
	25nm,0.4s						
KKN	Kakani	9.50	307	ePn	Pn	05 42 38.7	+2.1
DMN	Daman	9.54	306	ePn	Pn	05 42 39.7	+2.6
GKN	Gorkha	10.10	306	ePn	Pn	05 42 46.0	+1.3
GKN				eSn	Sn	05 44 31.9	-4.3
	54nm,0.3s						
KOLN	Koldanda	10.77	303	ePn	Pn	05 42 55.0	+1.1
KOLN				eSn	Sn	05 44 47.9	-4.8
	49nm,0.4s						
DANN	Dangsing	10.94	306	ePn	Pn	05 42 57.7	+1.5
DANN				eSn	Sn	05 44 52.5	-4.3
	33nm,0.5s						
PYUN	Piuthan	11.40	303	ePn	Pn	05 43 05.3	+2.8
PYUN				eSn	Sn	05 45 03.1	-4.9
	18nm,0.4s						
MKAR	Makanchi Array	26.20	342	P	P	05 45 52.8	+4.0
	0.8nm,0.8s,baz=150,slow=11,SNR=5.3						
WRA	Warramunga Arr	57.66	134	P	P	05 50 03.3	-0.6
	0.9nm,1.0s,baz=318,slow=7.6,SNR=5.9						

IDC 27 05:47:25.5±1.2, 13°.14N×144°.76E, h53km±11km, mb3.4/4, mb1 3.7/4, mb1mx3.2/63, mbtmp3.7/4, Error ellipse: s-maj=61.1km s-min=20.4km az=102.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	0.46	13	P	Pn	05 47 38.0	+1.4
	307nm,0.3s,baz=157,slow=3.0,SNR=153						
GUMO				S	Sn	05 47 46.9	+2.4
	1μm,0.3s,baz=283,slow=21,SNR=144						
H11N1	WAKE ISLAND Hy 22.20	70		T	T	06 15 22.1	
	baz=256,slow=75,SNR=14						
H11N2	WAKE ISLAND Hy 22.21	70		T	T	06 15 26.5	
	baz=256,slow=75,SNR=4.3						
H11N3	WAKE ISLAND Hy 22.22	70		T	T	06 15 23.6	
	baz=256,slow=75,SNR=14						

WRA	Warramunga Arr	34.43	198	P		P	05 54 08.0	-0.2
	0.9nm,0.7s,baz=22,slow=10,SNR=6.2							
ASAR	Alice Springs	38.09	196	P		P	05 54 39.2	-0.2
	0.4nm,0.5s,baz=24,slow=9.2,SNR=5.4							
KURBB	Kurchatov Arra	64.90	320	P		P	05 57 59.3	-0.1
	0.4nm,0.4s,baz=102,slow=6.9,SNR=4.3							
ILAR	Eielson Array	69.02	25	P		P	05 58 25.4	+0.1
	0.3nm,0.5s,baz=246,slow=6.3,SNR=11							

*CSEM **27** 06:08:29.5±0.2, 39°.77N×40°.77E, h10km, ML2.6, Error ellipse: s-maj=6.6km s-min=5.3km az=104.0*
*ISK **27** 06:08:29.3, 39°.82N×40°.72E, h7km, ML2.6/3*
*DDA **27** 06:08:30.1, 39°.75N×40°.73E, h7km, Ml2.6*

ISC 27 06:08:29.1±1.2, 39°.79N±0°.03×40°.67E±0°.03, h1km±12km, n21, σ1°.06/33, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOPT	Kop Dagi	0.27	330	i P	Pb	06 08 36.6	-0.3
KOPT				i S	Sb	06 08 41.9	-0.2
KOPT	Kop Dagi	0.27	330	P	Pb	06 08 36.6	-0.3
KOPT				S	Sb	06 08 41.9	-0.2
ECAT	Cat-ERZURUM	0.29	128	i P	Pg	06 08 35.0	+0.3
ECAT				i S	Sg	06 08 39.0	+0.5
ECAT	Cat-ERZURUM	0.29	128	P	Pg	06 08 35.0	+0.3
ECAT				S	Sg	06 08 39.0	+0.5
YEDI	Yedisu-Bingol	0.36	196	PG	Pb	06 08 37.8	-0.6
YEDI				SG	Sb	06 08 43.9	-0.8
YEDI	Yedisu-Bingol	0.36	196	i Pg	Pb	06 08 37.8	-0.6
YEDI				eSg	Sb	06 08 43.9	-0.8
ERZM	Erzurum	0.55	77	i P	Pg	06 08 38.7	-0.9
ERZM				i S	Sg	06 08 47.3	+0.7
ERZM	Erzurum	0.55	77	P	Pg	06 08 38.7	-0.9
ERZM				S	Sg	06 08 47.3	+0.7
ERZN	Erzincan	0.76	255	PG	Pg	06 08 45.2	+1.6
BNGB	Bing¶ll	0.80	180	PG	Pb	06 08 45.6	-0.2
BGOL	Bingol	0.80	180	i P	Pg	06 08 45.0	+0.6
BGOL				i S	Sb	06 08 56.0	-1.2
BGOL	Bingol	0.80	180	P	Pg	06 08 45.0	+0.6
BGOL				S	Sb	06 08 56.0	-1.2
BINT	Bingol	0.92	189	ePg	Pg	06 08 45.6	-1.1
EZC	Erzincan	1.02	268	ePg	Pg	06 08 45.2	-3.4
KELT	Kelkit	1.15	289	i P	Pb	06 08 52.6	+0.7
KELT				i S	Sn	06 09 10.8	+1.8
KELT	Kelkit	1.15	289	P	Pb	06 08 52.6	+0.7
CHOM	Cayeli-Rize	1.31	3	PN	Pn	06 08 54.1	-0.5
CHOM	Cayeli-Rize	1.31	3	ePn	Pn	06 08 54.1	-0.5
PTK	Pertek	1.34	228	PN	Pg	06 08 55.7	+1.0
PTK	Pertek	1.34	228	ePn	Pg	06 08 55.7	+1.0
EATA	Eleskirt	1.40	86	i P	Pg	06 08 57.2	+1.2
EATA				i S	Sn	06 09 15.9	+0.4

*UCR **27** 06:30:54.0±1.7, 13°.77N×90°.22W, h105km±7km, MD4.6, ML5.4, mb5.4(NEIC)*
*MOS **27** 06:30:55.9±1.1, 14°.03N×89°.72W, h105km, mb5.0/35, MS4.7/5, Error ellipse: s-maj=7.4km s-min=4.1km az=106.0*
*ISCJB **27** 06:30:56.3±0.2, 13°.78N±0°.01×90°.02W±0°.02, h118km±1km, mb4.9/123, Error ellipse: s-maj=2.9km s-min=1.7km az=142.2*
*IDC **27** 06:30:56.0±0.5, 14°.06N×89°.80W, h95km±3km, mb4.7/25, mb1 4.9/28, mb1mx4.7/44, mbtmp5.1/28, MS4.4/33, Ms1 4.4/33, ms1mx4.4/38, Error ellipse: s-maj=15.7km s-min=7.7km az=57.0*
*NEIC **27** 06:30:59.9±0.4, 13°.83N×89°.97W, h133km±4km, mb5.4/38, MW5.7, MD5.5(SNET), Error ellipse: s-maj=3.4km s-min=2.2km az=223.0*
NEIC Felt [IV] at San Salvador and [III] at Nueva San Salvador. Felt [IV] at Cuilco, Antigua Guatemala, Fraijanes, Guatemala, La Libertad, Mixco, San Jose Pinula, Santa Catarina Pinula and Villa Nueva; [III] at Cahabon and Quetzaltenango, Guatemala. Felt in much of El Salvador and in central and southern Guatemala.
*GCMT **27** 06:30:59.9±0.1, 13°.75N×90°.26W, h90km±1km, MW5.7/122, Moment Tensor Solution. s120,c246; s122,c314; Duration: 1s7 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.42±.05; $M_{\theta\theta}$0.79±.06; $M_{\phi\phi}$-0.36±.06; $M_{r\theta}$3.59±.03; $M_{\theta\phi}$-2.21±.05; $M_{\phi r}$-1.34±.04; Best double couple: M_o4.28100×10^{17} NP1:ϕ_s280.00000°, δ84.00000°, λ-115.00000°. NP2:ϕ_s178.00000°, δ25.00000°, λ-14.00000°. Principal axes: T 5.0340, Plg35.0000°, Azm31.0000°; N -1.5060, Plg25.0000°, Azm283.0000°; P -3.5280, Plg45.0000°, Azm166.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **27** 06:31:03.0±0.0, 13°.72N×89°.76W, h110km, Moment Tensor Solution. s26 Moment tensor: Scale 10^{17}Nm; M_{rr}0.06; $M_{\theta\theta}$-0.04; $M_{\phi\phi}$-0.02; $M_{r\theta}$3.08; $M_{\theta\phi}$-1.55; $M_{\phi r}$-1.92; Best double couple: M_o3.90000×10^{17} NP1:ϕ_s295.00000°, δ86.00000°, λ-105.00000°. NP2:ϕ_s191.00000°, δ15.00000°, λ-14.00000°. Principal axes: T 4.4400, Plg39.0000°, Azm38.0000°; N -1.3400, Plg15.0000°, Azm295.0000°; P -3.1000, Plg46.0000°, Azm189.0000°;*

ISC 27 06:30:57.2±0.3, 13°.85N±0°.03×90°.05W±0°.04, h111km±2km, h111km: pP-P, n1482, σ1°.48/1603, mb4.9/123, 21C-57D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTR	El Retiro	0.39	83	⇓iP	Pn	06 31 11.1	-2.6
SBLS	San Blas	0.41	91	⇓iP	Pn	06 31 11.1	-2.8
SNJE	San Jose	0.43	87	⇓iP	Pn	06 31 11.3	-2.6
UNIC	Santa Ana	0.49	73	eP	Pn	06 31 11.9	-2.3
UNIC				eS	Sn	06 31 24.8	-2.1
UNIC				AML	AML	06 31 32.4	
	comp=Z,65μm,0.7s						
IXG	Ixpaco	0.51	309	⇑iP	Pn	06 31 10.8	-3.7
CEDA	San Andres	0.63	94	⇓iP	Pn	06 31 12.8	-2.3
CEDA				eS	Sn	06 31 26.4	-2.2
CEDA				AML	AML	06 31 36.0	
	comp=Z,199μm,0.6s						
COLS	Colinas	0.75	104	⇓iP	Pn	06 31 13.9	-2.3
BOQS	Boqueron	0.75	98	⇑iP	Pn	06 31 14.0	-2.3
UEES	San Salvador	0.79	99	⇓eP	Pn	06 31 14.3	-2.2
UEES				eS	Sn	06 31 30.8	-0.2
UEES				AML	AML	06 31 42.3	
	comp=Z,85μm,0.7s						
SNET	Serv Nac Est T	0.81	101	⇓eP	Pn	06 31 14.4	-2.3
SNET				eS	Sn	06 31 29.8	-1.5
SNET				AML	AML	06 31 36.9	
	comp=Z,106μm,0.7s						
OPAM	San Salvador	0.83	99	⇓eP	Pn	06 31 14.9	-2.0
OPAM				eS	Sn	06 31 32.6	+1.0
OPAM				AML	AML	06 31 37.4	
	comp=Z,93μm,0.3s						
UESS	San Salvador	0.83	100	eP	Pn	06 31 15.0	-1.9
UESS				eS	Sn	06 31 33.1	+1.4
UESS				AML	AML	06 31 35.3	
	comp=Z,108μm,0.6s						
UTEC	San Salvador	0.83	100	eP	Pn	06 31 14.8	-2.1
UTEC				eS	Sn	06 31 32.0	+0.3
UTEC				AML	AML	06 31 43.1	
	comp=Z,91μm,0.9s						
SANM	San Marcos	0.86	102	eP	Pn	06 31 14.8	-2.3
SANM				eS	Sn	06 31 31.6	-0.6
SANM				AML	AML	06 31 37.0	
	comp=Z,76μm,0.7s						
MTO3	Montecristo	0.86	50	⇓iP	Pn	06 31 16.4	-0.9
MTO3				eS	Sn	06 31 32.4	-0.1
MTO3				AML	AML	06 31 37.7	
	comp=Z,31μm,0.8s						
LOMA	San Marcos	0.87	103	⇓iP	Pn	06 31 15.1	-2.0
LOMA				eS	Sn	06 31 31.6	-0.5
LOMA				AML	AML	06 31 38.5	
	comp=Z,189μm,0.6s						
UDBS	Soyapango	0.87	98	i P	Pn	06 31 15.3	-1.9
UDBS				eS	Sn	06 31 32.6	+0.3
UDBS				AML	AML	06 31 44.5	
	comp=Z,137μm,0.7s						
LFU	La Fuente	0.91	96	⇓iP	Pn	06 31 15.9	-1.7
LBRS	Las Brisas	0.98	96	⇓iP	Pn	06 31 16.8	-1.6
LFRS	El Faro	0.98	103	⇓iP	Pn	06 31 16.4	-2.0
AIES	Las Flores	1.04	112	⇓eP	Pn	06 31 17.0	-1.8
AIES				eS	Sn	06 31 33.9	-1.3
AIES				AML	AML	06 31 36.0	
	comp=Z,62μm,0.5s						
LLGN	La Laguna	1.11	73	⇓eP	Pn	06 31 18.9	-0.8
LLGN				eS	Sn	06 31 38.6	+1.9
LLGN				AML	AML	06 31 41.5	
	comp=Z,67μm,0.8s						
SNVI	San Vicente	1.20	101	eP	Pn	06 31 19.1	-1.6
UESV	Ojushtada	1.31	111	eP	Pn	06 31 19.6	-2.2
UESV				AML	AML	06 31 56.9	
	comp=Z,35μm,0.8s						
PACA	Pacayal	1.72	102	eP	Pn	06 31 25.9	-0.9
PACA				AML	AML	06 32 07.0	
	comp=Z,308μm,0.5s						
LCY	Lacayo	1.75	104	⇓eP	Pn	06 31 26.3	-0.9
VSM	San Miguel	1.77	103	eP	Pn	06 31 26.5	-1.1
CNCH	Conchagua	2.23	105	⇓eP	Pn	06 31 33.5	+0.2
CNCH				AML	AML	06 32 08.2	
	comp=Z,170μm,0.6s						
TGUH	Tegucigalpa,Un	2.70	85	ePn	Pn	06 31 39.6	+0.4
CCIG	Comitan	3.15	320	ePn	Pn	06 31 45.6	+0.2
CNGN	Cerro Negro	3.52	112	eP	Pn	06 31 49.0	-1.3
PCIG		3.58	301	P	Pn	06 31 49.1	-1.8
PCIG				S	Sn	06 32 32.2	-0.3
ESTN	Estel	3.65	101	ePn	Pn	06 31 51.4	-0.6
ESTN	Estel	3.65	101	eP	Pn	06 31 51.5	-0.6
MOMN	Momotombo	3.70	112	eP	Pn	06 31 51.1	-1.5
COPN	Copaltepe	3.75	116⇑	eP	Pn	06 31 51.3	-2.0
BRAN	Las Pilas	3.77	107	eP	Pn	06 31 55.9	+2.4
RCON	San Juan de Ri	3.80	95	eP	Pn	06 31 54.1	+0.1
APYN	Apoyeque	3.94	114	i P	Pn	06 31 54.4	-1.4
XAVN	Gruta Xavier	4.00	115	eP	Pn	06 31 55.0	-1.6
MGAN	Managua	4.07	114	eP	Pn	06 31 56.2	-1.3
MGAN				IAML		06 32 43.6	
	comp=E,1μm,0.8s						
CRUN	El Crucero	4.09	116	eP	Pn	06 31 57.3	-0.7
MATN	Matagalpa	4.11	102	eP	Pn	06 31 57.6	-0.6
TGIG		4.16	315	P	Pn	06 31 57.3	-1.5
TGIG				S	Sn	06 32 59.1	+13
CONN	Concepcion	4.87	117	eP	Pn	06 32 06.4	-2.0
CRZ1	La Cruz	5.12	122⇑	eP	Pn	06 32 10.2	-1.4
NY14	Universidad de	5.44	125⇓	eP	Pn	06 32 16.1	+0.2
GB1A	Borinquen Arri	5.45	123	eP	Pn	06 32 15.5	-0.7
BUEV	Buena Vista	5.45	123	eP	Pn	06 32 15.6	-0.6
BUAI	Buenos Aires	5.47	122⇓	eP	Pn	06 32 15.3	-1.2
GPS3	Bodega del ICE	5.51	123	eP	Pn	06 32 17.0	0.0
GUAB	Guayabo de Bag	5.65	123⇓	eP	Pn	06 32 18.3	-0.6
MESS	Mesas	5.66	123	eP	Pn	06 32 17.4	-1.7
MESS				⇑eP	Pn	06 32 18.3	-0.8
HORNC	Hornillas	5.69	123	eP	Pn	06 32 18.9	-0.5
VCR	Vista de Mar	5.69	130	⇓iP	Pn	06 32 19.1	-0.4
VCR				eS	Sn	06 33 23.2	-0.3
COLC	Colonia	5.69	123⇑	eP	Pn	06 32 19.2	-0.2
ESPN	Las Esperanzas	5.84	106	ePn	Pn	06 32 21.3	-0.1
ESPN	Las Esperanzas	5.84	106	eP	Pn	06 32 20.8	-0.6
PTEN	Parque Tenorio	5.84	122⇓	eP	Pn	06 32 20.4	-1.1
ACAL	Aguas Claras	5.85	123	eP	Pn	06 32 20.8	-0.8
AMAS	Alto Masis	5.89	123	eP	Pn	06 32 21.6	-0.7
JTS	JuntasAbangare	6.11	125	P	Pn	06 32 24.4	-0.7
	comp=E,147nm,0.3s,baz=353,slow=9.8,SNR=249						
JTS	JuntasAbangare	6.11	125	eP	Pn	06 32 24.3	-0.8
SRA1	San Ram¨‡n	6.61	124⇓	eP	Pn	06 32 31.8	-0.2
CGA2	Cerro Gallo 2	6.66	124	eP	Pn	06 32 31.4	-1.3
HDC	Heredia	6.95	123	ePn	Pn	06 32 35.9	-0.7
HDC	Heredia	6.95	123	⇓iP	Pn	06 32 36.3	-0.3
HDC				eS	Sn	06 33 56.0	+1.7
SJS	Escuela Geolog	7.03	123	eP	Pn	06 32 39.0	+1.3
MYIG	MØrida	7.08	2	ePn	Pn	06 32 38.9	+0.8
LCR2	La Lucha 2	7.19	124⇓	eP	Pn	06 32 38.7	-1.1
VHO	Vista Hermosa	7.20	297	P	Pn	06 32 38.4	-1.6
VHO				S	Sn	06 33 58.9	-1.6
CVTR	Volcan Turrial	7.23	121	⇓eP	Pn	06 32 40.1	-0.6
VTR0	Volcan Turrial	7.23	121	eP	Pn	06 32 39.9	-0.8
QCR1	Quepos	7.24	127	⇓iP	Pn	06 32 39.7	-0.7
URSC	Urasca	7.32	122	⇑iP	Pn	06 32 42.0	+0.4
BUS	Buena Vista	7.49	124	eP	Pn	06 32 44.3	+0.1
EDDO	Dominical	7.58	126	eP	Pn	06 32 45.1	0.0
EDLM	Las Mercedes	7.79	125	⇓eP	Pn	06 32 48.5	+0.6
DRK0	Durika	8.07	124	⇓eP	Pn	06 32 50.5	-1.4
EDPN	Palmar Norte	8.08	126	eP	Pn	06 32 51.9	+0.1
LVIG	Laguna Verde	8.45	315	ePn	Pn	06 32 53.4	-3.4
PRVC	Isla de Provid	8.45	92	eP	Pn	06 32 56.7	-0.2
PTJ1	Puerto Jim¨ne	8.46	128	⇓eP	Pn	06 32 57.0	0.0
ACR	Cerro Adams	8.49	127	eP	Pn	06 32 56.9	-0.6
EDSV	San Vito	8.55	125	eP	Pn	06 32 59.7	+1.4
ICCO	Coco Island	8.76	160	eP	Pn	06 33 02.1	+1.0
TLIG	Tlapa	9.00	295	ePn	Pn	06 33 03.2	-1.2
WBCY	West Bay, Gran	9.95	55	ePn	Pn	06 33 19.5	+2.4
FSCY	Frank Sound, G	10.08	56	ePn	Pn	06 33 21.8	+2.9
UNM	Universidad Na	10.31	303	ePn	Pn	06 33 22.6	+0.3
UNM	Universidad Na	10.31	303	eP	Pn	06 33 22.6	+0.3
BCIP	Isla Barro Col	11.03	114	ePn	Pn	06 33 30.7	-1.2
BCIP	Isla Barro Col	11.03	114	⇓iP	Pn	06 33 30.6	-1.2
BCIP	Isla Barro Col	11.03	114	eP	Pn	06 33 30.3	-1.6
LCCY	Blossom Villag	11.16	57	ePn	Pn	06 33 33.8	+0.4
JRQG	Juriquilla Cam	12.04	306	ePn	Pn	06 33 45.7	+0.2
MOIG	Morelia	12.14	300	ePn	Pn	06 33 47.5	+0.7
MCJ	Malvern	12.56	70	⇑iP	P	06 34 02.4	+3.2
MTDJ	Mount Denham	12.79	68	ePn	Pn	06 33 56.8	+1.7
BBJ	Bamboo Saint A	13.08	68	⇑iP	Pn	06 34 00.9	+1.9
STH	Stony Hill	13.40	70	i P	P	06 34 08.8	+0.3
HOJ	Hope	13.44	70	i P	P	06 34 11.6	+2.7
CAPC	Capurgana	13.48	111	eP	Pn	06 34 04.8	+0.6
062Z	Marathon	13.75	37	P	Pn	06 34 08.1	+0.7
	baz=219						
LNIG	Linares	14.13	322	ePn	P	06 34 15.2	-1.4
PAYG	Puerto Ayora	14.43	181	ePn	P	06 34 18.1	-1.8
SOLC	Bahia Solano	14.56	120	eP	Pn	06 34 18.6	+0.6
061Z	Ochoppi	14.72	34	P	P	06 34 21.7	-1.4
	baz=217						
061Z	Ochoppi	14.72	34	ePn	Pn	06 34 20.7	+0.8
059Z	Ave Maria	14.81	32	P	Pn	06 34 21.9	+0.8
	ba

baz=169
541A **Lake Charles** 16.39 350 *e*Pn P 06 34 42.4 +0.8
858A **St. Cloud** 16.42 28 P P 06 34 43.5 +1.6
baz=211,SNR=11
859A **Kempfer Cattle** 16.51 30 P P 06 34 45.1 +2.2
baz=212,SNR=13
YOTC **Yotoco, Valle** 16.70 125 *e*P P 06 34 45.6 +0.4
CODC **Agust`>n Codaz** 16.70 102 *e*P Pn 06 34 42.6 -2.2
757A **Oxford** 16.75 25 P P 06 34 46.5 +1.0
baz=208,SNR=11
HORQ **Saladito** 16.78 127 *e*P P 06 34 46.3 0.0
552A **Lynn Haven** 16.79 14 P P 06 34 46.9 +0.9
baz=196
444A **Pine Grove** 16.80 358 P P 06 34 48.1 +2.0
baz=177,SNR=18
445A **Amite** 16.81 359 P P 06 34 47.6 +1.4
baz=179,SNR=24
655A **Horseshoe Beac** 16.81 21 P P 06 34 47.2 +1.0
baz=203
833A **Chaparral WMA,** 16.83 330 P P 06 34 46.7 +0.3
baz=147,SNR=92
833A **Chaparral WMA,** 16.83 330 *e*P P 06 34 47.9 +1.4
446A **Poplarville** 16.88 2 P P 06 34 49.4 +2.5
baz=182,SNR=32
HKT **Hockley** 16.89 342 *e*P P 06 34 48.2 +1.1
comp=E,3µm,1.9s
HKT **Hockley** 16.89 342 *e*P P 06 34 48.2 +1.1
HKT pmax pmax
comp=Z,3µm,1.9s
443A **Delano Plantat** 16.91 355 P P 06 34 49.8 +2.5
baz=174,SNR=10
447A **Lucedale** 16.92 4 P P 06 34 50.2 +2.8
baz=184,SNR=31
447A **Lucedale** 16.92 4 *e*P P 06 34 50.5 +3.1
442A **Mamou** 16.93 353 P P 06 34 50.5 +3.0
baz=172,SNR=21
656A **Willston** 16.94 23 P P 06 34 48.9 +1.3
baz=206,SNR=8.9
656A **Willston** 16.94 23 *e*P P 06 34 47.9 +0.3
PTBC **PUERTO BERRIO,** 16.97 114 *e*P Pn 06 34 46.5 -1.4
449A **Pace** 17.03 8 P Pn 06 34 52.3 +3.7
baz=189,SNR=18
NORC **Norcasia** 17.06 117 *e*P P 06 34 49.8 +0.5
553A **Crawfordville** 17.07 17 P Pn 06 34 52.8 +3.7
baz=198,SNR=5.8
441A **DeRidder** 17.07 351 P Pn 06 34 52.0 +3.0
baz=169,SNR=35
448A **Bay Minette** 17.12 6 P Pn 06 34 52.7 +3.0
baz=187,SNR=16
758A **Lake Helen** 17.14 27 P Pn 06 34 52.3 +2.5
baz=210
451A **Vernon** 17.15 13 P Pn 06 34 52.6 +2.6
baz=194,SNR=7.4
451A **Vernon** 17.15 13 *e*P Pn 06 34 52.9 +2.8
450A **Crestview** 17.18 10 P Pn 06 34 53.5 +3.2
baz=191,SNR=14
554A **Perry** 17.20 19 P Pn 06 34 52.8 +2.3
baz=201
OCAC **Ocana** 17.33 107 *e*P Pn 06 34 52.1 -0.5
POPC **Popayan, Colom** 17.34 129 *e*P Pn 06 34 54.3 +1.5
LGNH **L0ogne** 17.38 72 *e*P Pn 06 34 53.4 +0.5
345A **Thompson Farm,** 17.38 0 P Pn 06 34 55.5 +2.7
baz=180,SNR=11
BRRC **Barranca, Sant** 17.39 111 *e*P Pn 06 34 52.8 -0.4
657A **Interlachen** 17.40 24 P Pn 06 34 54.9 +1.8
baz=207,SNR=11
343A **Vidalia** 17.42 356 P Pn 06 34 55.8 +2.6
baz=175,SNR=43
BRAL **Brewton** 17.46 9 P Pn 06 34 56.7 +2.9
baz=189,SNR=20
BRAL **Brewton** 17.46 9 *e*P Pn 06 34 55.9 +2.1
comp=Z,994nm,1.3s
555A **McAlpin** 17.47 21 P Pn 06 34 56.9 +3.0
baz=203,SNR=14
555A **McAlpin** 17.47 21 *e*P Pn 06 34 56.4 +2.5
346A **Big Creek Wild** 17.47 2 P Pn 06 34 57.1 +3.2
baz=182,SNR=21
346A **Big Creek Wild** 17.47 2 *e*P Pn 06 34 57.3 +3.4
452A **Marianna** 17.50 14 P Pn 06 34 57.1 +2.8
baz=196,SNR=24
658A **Bunnell** 17.51 26 P Pn 06 34 55.7 +1.3
baz=209
347A **Saraland** 17.53 4 P Pn 06 34 57.5 +2.9
baz=185,SNR=54
344A **Westbrook Farm** 17.54 358 P Pn 06 34 57.7 +3.0
baz=178,SNR=83
344A **Westbrook Farm** 17.54 358 *e*P Pn 06 34 58.0 +3.3
556A **Lake Butler** 17.56 22 P Pn 06 34 57.0 +2.0
baz=205,SNR=9.0
342A **Flagon Creek P** 17.57 354 P Pn 06 34 57.6 +2.5
baz=172,SNR=60
342A **Flagon Creek P** 17.57 354 *e*P Pn 06 34 57.6 +2.5
348A **Jackson** 17.59 6 P Pn 06 34 58.3 +2.9
baz=187,SNR=50
348A **Jackson** 17.59 6 *e*P Pn 06 34 58.9 +3.5
349A **Repton** 17.62 8 P Pn 06 34 58.0 +2.3
baz=189,SNR=60
341A **Kurthwood** 17.64 351 P Pn 06 34 57.5 +1.5
baz=170,SNR=54
341A **Kurthwood** 17.64 351 *e*P Pn 06 34 57.6 +1.7
PCON **Cinco Dias** 17.69 129 *e*P Pn 06 34 59.8 +2.5
MARP **Paez Belalcaza** 17.70 127 *e*P Pn 06 34 59.1 +1.9
453A **Whigham** 17.73 16 P Pn 06 34 59.3 +2.3
baz=198,SNR=12
453A **Whigham** 17.73 16 *e*P Pn 06 35 00.6 +3.5
OTAV **Otavalo** 17.74 139 *e*P Pn 06 34 58.6 +0.8
OTAV **Otavalo** 17.74 139 *e*P Pn 06 34 58.6 +0.8
GCUF **Volcan Galeras** 17.75 134 *e*P Pn 06 34 59.5 +1.5
CRUC **La Cruz** 17.79 132 *e*P Pn 06 34 59.2 +0.9
454A **Quitman** 17.80 18 P Pn 06 35 00.8 +2.9
baz=200,SNR=13
350A **Dozier** 17.82 10 P Pn 06 34 59.9 +1.8
baz=192,SNR=21
351A **Pinckard** 17.82 13 P Pn 06 35 00.7 +2.6
baz=194,SNR=13
557A **Orange Park** 17.83 24 P Pn 06 35 00.3 +2.0
baz=207,SNR=13
ROSC **El Rosal** 17.90 119 P Pn 06 35 01.0 +1.3
comp=Z,5.5nm,0.3s,baz=316,slow=5.8,SNR=32
ROSC PcP PcP 06 39 31.6 +1.6
comp=Z,0.5nm,0.3s,baz=257,slow=4.0,SNR=4.0
ROSC LR LR 06 42 22.8
comp=Z,443nm,21.2s,baz=340,slow=39
ROSC ScP ScP 06 43 00.5 +5.2
comp=Z,0.5nm,0.3s,baz=40,slow=0.9,SNR=7.4
ROSC **El Rosal** 17.90 119 *e*P Pn 06 35 01.3 +1.7
243A **Waterproof** 18.00 356 P Pn 06 35 02.1 +1.8
baz=175,SNR=41
PRAC **Prado** 18.04 123 *e*P Pn 06 35 01.8 +0.9
PRAC **Prado** 18.04 123 *e*P Pn 06 35 01.3 +0.4
245A **Little AP, Sta** 18.10 0 P Pn 06 35 03.8 +2.3
baz=180,SNR=72
246A **Jackson Lee, B** 18.10 3 P Pn 06 35 03.4 +1.9
baz=183,SNR=10
244A **Avery, Jackson** 18.12 358 P Pn 06 35 03.5 +1.8
baz=178,SNR=90
352A **Blakely** 18.17 14 P Pn 06 35 04.1 +1.8
baz=196,SNR=12
352A **Blakely** 18.17 14 *e*P Pn 06 35 04.4 +2.1
247A **Quitman** 18.17 4 P Pn 06 35 04.1 +1.8
baz=184,SNR=42
353A **Camilla** 18.22 16 P Pn 06 35 03.6 +0.6
baz=198,SNR=19
PAMC **Pamplona, Colo** 18.23 109 *e*P Pn 06 35 02.5 -1.2
435B **Jarrell** 18.23 339 P P 06 35 02.6 +0.9
baz=156,SNR=54
435B **Jarrell** 18.23 339 *e*P P 06 35 02.7 +0.9
242A **Grayson** 18.23 354 P Pn 06 35 04.4 +1.4
baz=173,SNR=20
249A **Camden** 18.24 8 P Pn 06 35 05.1 +1.9
baz=189,SNR=22
241A **Mo Tay, Goldon** 18.28 352 P Pn 06 35 04.9 +1.3
baz=171,SNR=108
241A **Mo Tay, Goldon** 18.28 352 *e*P Pn 06 35 04.7 +1.1
248A **Dixon Mills** 18.29 6 P Pn 06 35 05.6 +1.9
baz=187,SNR=22
VBMS **Vicksburg** 18.29 359 P Pn 06 35 05.8 +2.1
baz=178,SNR=41
VBMS **Vicksburg** 18.29 359 *e*P Pn 06 35 05.8 +2.1
NATX **Nacogdoches** 18.32 347 P Pn 06 35 04.6 +0.4
baz=165,SNR=42
NATX **Nacogdoches** 18.32 347 *e*P Pn 06 35 04.6 +0.4
comp=Z,192nm,0.7s
456A **Hilliard** 18.35 22 P Pn 06 35 06.6 +2.2
baz=205
456A **Hilliard** 18.35 22 *e*P Pn 06 35 06.6 +2.2

250A **Grady** 18.38 10 P Pn 06 35 05.9 +1.1
baz=191,SNR=20
250A **Grady** 18.38 10 *e*P Pn 06 35 07.2 +2.4
240A **Hunter Patters** 18.43 350 P Pn 06 35 06.0 +0.6
baz=168,SNR=12
240A **Hunter Patters** 18.43 350 *e*P Pn 06 35 06.1 +0.8
457A **Yulee** 18.44 24 P Pn 06 35 06.3 +0.8
baz=207
RUSC **La Rusia** 18.48 114 *e*P Pn 06 35 05.7 -0.9
RUSC **La Rusia** 18.48 114 *e*P Pn 06 35 05.9 -0.7
TIGA **Tifton** 18.49 18 P Pn 06 35 07.1 +1.1
baz=200,SNR=17
TIGA **Tifton** 18.49 18 *e*P Pn 06 35 07.5 +1.4
CHIC **Chingaza** 18.51 118 *e*P Pn 06 35 06.3 -0.6
355A **Pearson** 18.63 20 P Pn 06 35 09.4 +1.7
baz=202
251A **Midway** 18.65 12 P Pn 06 35 09.3 +1.2
baz=194,SNR=66
145A **Houston Renfro** 18.67 0 P Pn 06 35 09.8 +1.5
baz=180,SNR=41
142A **Monroe** 18.70 355 P Pn 06 35 09.0 +0.4
baz=174
SDDR **Presa de Saban** 18.70 72 *e*P Pn 06 35 09.6 +0.8
comp=Z,43nm,0.7s
144A **Alexander Plac** 18.70 359 P Pn 06 35 10.1 +1.5
baz=179,SNR=10
252A **Lumpkin** 18.71 14 P Pn 06 35 09.9 +1.1
baz=196,SNR=37
146A **Union** 18.73 3 P Pn 06 35 10.4 +1.5
baz=183,SNR=40
146A **Union** 18.73 3 *e*P Pn 06 35 10.6 +1.7
FLOC **Florencia** 18.74 129 *e*P Pn 06 35 09.7 +0.4
VILC **Villavicencio,** 18.81 119 *e*P Pn 06 35 10.5 +0.3
143A **Socs Landing,** 18.81 356 P Pn 06 35 10.5 +0.6
baz=176,SNR=30
143A **Socs Landing,** 18.81 356 *e*P Pn 06 35 10.4 +0.6
147A **Livingston** 18.81 5 P Pn 06 35 11.6 +1.6
baz=185,SNR=47
147A **Livingston** 18.81 5 *e*P Pn 06 35 11.4 +1.5
JCT **Junction City** 18.84 333 P P 06 35 09.4 +0.8
baz=149,SNR=44
JCT **Junction City** 18.84 333 *e*P P 06 35 09.4 +0.8
comp=Z,36nm,0.5s
JCT **Junction City** 18.84 333 *e*P P 06 35 09.4 +0.8
JCT pmax pmax
comp=Z,36nm,0.5s
148A **Greensboro** 18.85 6 P Pn 06 35 11.7 +1.4
baz=187,SNR=64
141A **Papa Simpson,** 18.85 353 P Pn 06 35 11.0 +0.6
baz=171,SNR=34
356A **Blackshear** 18.86 21 P Pn 06 35 11.0 +0.5
baz=204,SNR=13
149A **Jones** 18.90 9 P Pn 06 35 12.0 +1.1
baz=190,SNR=87
253A **Americus** 18.92 16 P Pn 06 35 11.7 +0.5
baz=198,SNR=6.8
253A **Americus** 18.92 16 *e*P Pn 06 35 12.2 +0.9
140A **Cam and Jess,** 18.98 351 P Pn 06 35 12.1 +0.2
baz=169,SNR=21
140A **Cam and Jess,** 18.98 351 *e*P Pn 06 35 12.3 +0.4
150A **Eclectic** 19.03 10 P Pn 06 35 13.4 +0.9
baz=192,SNR=97
254A **Abbeville** 19.05 18 P Pn 06 35 14.0 +1.3
baz=200,SNR=13
SJAC **San Juan de Ar** 19.05 122 *e*P Pn 06 35 14.2 +1.2
151A **Opelika** 19.09 12 P Pn 06 35 14.0 +0.8
baz=194,SNR=108
357A **Townsend** 19.18 23 P Pn 06 35 14.2 -0.1
baz=206
Z46A **Louisville** 19.29 3 P Pn 06 35 16.7 +1.3
baz=183,SNR=121
255A **Hazlehurst** 19.29 20 P Pn 06 35 15.1 -0.4
baz=202
255A **Hazlehurst** 19.29 20 *e*P Pn 06 35 15.3 -0.1
WHTX **Lake Whitney,** 19.29 341 P P 06 35 14.3 +0.9
baz=158,SNR=53
WHTX **Lake Whitney,** 19.29 341 *e*P P 06 35 14.4 +0.9
LRAL **Lakeview Retre** 19.30 8 P Pn 06 35 16.1 +0.4
baz=189,SNR=73
LRAL **Lakeview Retre** 19.30 8 *e*P Pn 06 35 16.5 +0.8
comp=Z,114nm,0.7s
Z43A **Armstrong Fami** 19.31 357 P Pn 06 35 15.6 -0.1
baz=176,SNR=26
Z44A **Pea Ridge, Bel** 19.35 359 P Pn 06 35 16.9 +0.7
baz=179,SNR=67
Z47A **Carrollton** 19.35 5 P Pn 06 35 17.0 +0.8
baz=186,SNR=126
152A **Waverly Hall** 19.36 14 P Pn 06 35 16.2 -0.2
baz=196,SNR=55
152A **Waverly Hall** 19.36 14 *e*P Pn 06 35 16.4 0.0
Z42A **Norrel Spur, H** 19.42 355 P Pn 06 35 16.7 -0.3
baz=174,SNR=9.0
Z45A **Winona** 19.44 1 P Pn 06 35 17.4 +0.1
baz=181,SNR=66
Z45A **Winona** 19.44 1 *e*P Pn 06 35 17.4 +0.1
BANI **BANI** 19.44 74 *e*P Pn 06 35 16.3 -1.2
Z41A **Richland Creek** 19.49 353 P Pn 06 35 18.2 +0.4
baz=172,SNR=78
Z41A **Richland Creek** 19.49 353 *e*P Pn 06 35 17.5 -0.3
Z49A **Columbiana** 19.52 9 P Pn 06 35 19.1 +0.8
baz=190,SNR=102
256A **Glennville** 19.54 21 P Pn 06 35 18.5 +0.1
baz=204,SNR=16
GRTK **Grand Turk** 19.55 64 *e*P Pn 06 35 18.7 0.0
comp=Z,759nm,0.8s
153A **Fort Valley** 19.56 16 P Pn 06 35 18.4 -0.3
baz=198,SNR=18
Z40A **Long Farm, Mag** 19.56 352 P Pn 06 35 18.1 -0.6
baz=170,SNR=49
HPIG 19.57 314 *e*P P 06 35 17.9 +1.2
Z48A **Northport** 19.57 6 P Pn 06 35 19.0 +0.1
baz=187,SNR=193
SDV **Santo Domingo** 19.66 102 P P 06 35 16.9 -0.8
comp=Z,11nm,0.3s,baz=282,slow=4.9,SNR=92
SDV ScP ScP 06 43 03.6 +4.6
comp=Z,0.2nm,0.3s,baz=267,slow=2.9,SNR=7.7
SDV LR LR 06 43 59.7
comp=Z,802nm,20.6s,baz=262,slow=40
SDV **Santo Domingo** 19.66 102 *e*P P 06 35 17.0 -0.8
comp=Z,127nm,0.6s
SDV *e* 06 43 59.7
SDV **Santo Domingo** 19.66 102 *e*P P 06 35 16.9 -0.8
Z50A **Ashland** 19.68 10 P Pn 06 35 20.0 -0.1
baz=192,SNR=79
Z50A **Ashland** 19.68 10 *e*P Pn 06 35 20.2 +0.1
154A **Montrose** 19.73 18 P Pn 06 35 19.7 -1.0
baz=200,SNR=29
154A **Montrose** 19.73 18 *e*P Pn 06 35 20.2 -0.4
257A **Skidaway Islan** 19.85 23 P Pn 06 35 21.4 -0.7
baz=206,SNR=7.3
257A **Skidaway Islan** 19.85 23 *e*P Pn 06 35 21.6 -0.4
SDD **Santo Domingo** 19.87 74 *e*P Pn 06 35 21.8 -0.7
Z51A **Franklin** 19.88 12 P Pn 06 35 22.4 -0.1
baz=194,SNR=66
TXAR **Lajitas Array** 19.92 323 P P 06 35 21.8 +1.4
comp=Z,3.0nm,0.3s,baz=147,slow=8.6,SNR=218
TXAR PcP PcP 06 39 34.1 +1.2
comp=Z,1.1nm,0.3s,baz=153,slow=2.7,SNR=11
TXAR ScP ScP 06 43 03.1 +3.9
comp=Z,0.2nm,0.3s,baz=156,slow=6.6,SNR=9.1
TX31 **Lajitas Ar. Si** 19.92 323 *e*P P 06 35 21.9 +1.6
Z52A **Williamson** 19.93 14 P Pn 06 35 22.3 -0.7
baz=196,SNR=29
155A **Kite** 19.93 19 P Pn 06 35 22.2 -0.8
baz=202,SNR=20
Y45A **Yeager Farm, C** 19.93 1 P Pn 06 35 23.5 +0.4
baz=181,SNR=75
Y42A **Garnett, Star** 19.96 356 P P 06 35 22.3 +1.6
baz=175,SNR=41
Y46A **Houston** 19.98 3 P Pn 06 35 23.3 -0.2
baz=183,SNR=164
Y43A **Makayla and Ka** 19.99 358 P Pn 06 35 23.4 -0.3
baz=177,SNR=44
Y44A **Strider, Charl** 20.03 360 P Pn 06 35 23.9 -0.2
baz=179,SNR=19
CCAR **Cane Creek** 20.04 356 *e*P Pn 06 35 23.5 -0.8
Y47A **UCPARC, Winfie** 20.07 5 P Pn 06 35 24.4 -0.2
baz=186,SNR=133
Y41A **Eaglette Beard** 20.08 354 P P 06 35 23.2 +1.3
baz=172,SNR=48
Y48A **Jasper** 20.15 7 P Pn 06 35 25.2 -0.3
baz=188,SNR=127
Y49A **Blount Mountai** 20.19 9 P Pn 06 35 25.6 -0.5
baz=190,SNR=46
Y49A **Blount Mountai** 20.19 9 *e*P Pn 06 35 25.8 -0.3
Z53A **Monticello** 20.23 16 P Pn 06 35 25.5 -0.9
baz=198,SNR=33

156A **Sylvania** 20.29 21 P Pn 06 35 26.5 -0.6
baz=204,SNR=11
Y40A **Okolona** 20.29 352 P P 06 35 25.6 +1.4
baz=171,SNR=41
Y50A **Piedmont** 20.34 10 P Pn 06 35 26.6 -1.2
baz=192,SNR=45
GOGA **Godfrey** 20.38 16 P Pn 06 35 27.0 -1.2
baz=198,SNR=29
GOGA **Godfrey** 20.38 16 *e*P Pn 06 35 27.1 -1.1
comp=Z,130nm,0.9s
GOGA **Godfrey** 20.38 16 *e*P Pn 06 35 27.1 -1.1
GOGA pmax pmax
comp=Z,130nm,0.9s
Z54A **Sparta** 20.39 18 P Pn 06 35 27.1 -1.2
baz=200,SNR=20
Y51A **Rockmart** 20.47 12 P Pn 06 35 28.2 -1.1
baz=194,SNR=116
X45A **UM Field Stati** 20.50 2 P P 06 35 28.3 +1.9
baz=182,SNR=68
X44A **Crenshaw** 20.56 360 P P 06 35 28.6 +1.5
baz=180,SNR=13
OXF **Oxford** 20.58 1 P P 06 35 28.8 +1.5
baz=182,SNR=51
OXF **Oxford** 20.58 1 *e*P P 06 35 29.0 +1.7
comp=Z,527nm,0.9s
OXF **Oxford** 20.58 1 *e*P P 06 35 29.0 +1.7
OXF pmax pmax
comp=Z,527nm,0.9s
Z55A **Blythe** 20.59 19 P Pn 06 35 29.3 -1.4
baz=202,SNR=20
X43A **Marvell** 20.59 358 P Pn 06 35 30.0 -0.7
baz=178,SNR=32
X43A **Marvell** 20.59 358 *e*P Pn 06 35 30.4 -0.3
X43A *e* 06 35 31.4
ABTX **Abilene, Hawle** 20.64 336 P P 06 35 27.8 -0.2
baz=153,SNR=58
ABTX **Abilene, Hawle** 20.64 336 *e*P P 06 35 28.0 0.0
Y52A **Lilburn** 20.66 14 P Pn 06 35 30.1 -1.4
baz=196,SNR=39
Y52A **Lilburn** 20.66 14 *e*P Pn 06 35 30.3 -1.2
X46A **Booneville** 20.66 3 P Pn 06 35 30.3 -1.2
baz=184,SNR=110
X42A **Stuttgart** 20.67 356 P P 06 35 29.7 +1.5
baz=175,SNR=18
X47A **Russelville** 20.68 5 P Pn 06 35 30.4 -1.3
baz=186,SNR=272
X41A **Kaden, Bauxite** 20.68 354 P P 06 35 29.3 +1.0
baz=173,SNR=96
X48A **Hartselle** 20.69 7 P P 06 35 30.4 +1.9
baz=188,SNR=112
X48A **Hartselle** 20.69 7 *e*P Pn 06 35 30.7 -1.2
X40A **Basin Creek Fa** 20.70 353 P P 06 35 29.7 +1.1
baz=172,SNR=30
X40A **Basin Creek Fa** 20.70 353 *e*P P 06 35 29.1 +0.5
X40A *e* 06 35 29.9
Y53A **Monroe** 20.77 15 P P 06 35 30.4 +1.1
baz=198,SNR=31
X49A **Woodville** 20.85 9 P P 06 35 31.2 +1.1
baz=190,SNR=109
MIAR **Mount Ida** 20.86 352 P P 06 35 30.9 +0.7
baz=170,SNR=56
MIAR **Mount Ida** 20.86 352 *e*P P 06 35 30.7 +0.5
comp=Z,38nm,0.5s
MIAR **Mount Ida** 20.86 352 *e*P P 06 35 30.7 +0.5
MIAR pmax pmax
comp=Z,38nm,0.5s
X39A **Fountain Ranch** 20.90 351 P P 06 35 32.0 +1.3
baz=169,SNR=22
X50B **Fort Payne** 20.91 10 P P 06 35 32.6 +1.7
baz=192,SNR=68
UALR **University of** 20.94 355 *e*P P 06 35 32.2 +1.1
RGRS **Roger Stewart** 21.00 24 *e*P P 06 35 33.5 +1.8
Y54A **Tignall** 21.02 17 P P 06 35 33.3 +1.3
baz=200,SNR=34
CSU **Charleston Sou** 21.11 24 *e*P P 06 35 35.3 +2.3
PLAL **Pickwick Lake** 21.12 4 *e*P P 06 35 34.5 +1.4
X51A **Calhoun** 21.16 12 P P 06 35 35.0 +1.5
baz=194,SNR=30
X51A **Calhoun** 21.16 12 *e*P P 06 35 35.0 +1.5
W43A **Forest City** 21.16 359 P P 06 35 33.9 +0.4
baz=178
NHSC **New Hope** 21.18 23 P P 06 35 35.0 +1.3
baz=207,SNR=24
NHSC **New Hope** 21.18 23 *e*P P 06 35 36.1 +2.4
comp=Z,473nm,0.8s
MET **Memphis--Engin** 21.18 0 *e*P P 06 35 35.8 +2.0
W44A **Shelby Farms P** 21.20 1 P P 06 35 34.6 +0.7
baz=180
SLBS **Sierra La Lagu** 21.21 300 *e*P P 06 35 36.4 +2.1
W45A **Hickory Valley** 21.23 2 P P 06 35 35.2 +0.9
baz=182,SNR=18
W46A **Michie** 21.25 4 P P 06 35 35.9 +1.4
baz=184,SNR=50
W41B **Gary Mavity, V** 21.33 355 P P 06 35 36.8 +1.5
baz=174,SNR=24
W41B **Gary Mavity, V** 21.33 355 *e*P P 06 35 36.2 +1.0
W41B *e* 06 35 36.8
W42A **Bald Knob** 21.38 357 P P 06 35 36.5 +0.7
baz=176,SNR=9.2
W48A **Pulaski** 21.39 7 P P 06 35 37.9 +2.0
baz=188,SNR=150
X52A **Dahlonega** 21.40 14 P P 06 35 37.4 +1.3
baz=196,SNR=52
W47A **Westpoint** 21.43 5 P P 06 35 37.7 +1.4
baz=186,SNR=128
W40A **Ferguson Farm,** 21.43 353 P P 06 35 37.2 +0.8
baz=172,SNR=20
W40A **Ferguson Farm,** 21.43 353 *e*P P 06 35 37.1 +0.8
WHAR **Wooly Hollow** 21.45 355 *e*P P 06 35 37.5 +0.9
X53A **Estanollee** 21.45 15 P P 06 35 37.4 +0.8
baz=198,SNR=38
W49A **Belvidere** 21.45 9 P P 06 35 38.0 +1.3
baz=190,SNR=53
HODGE **Hodges** 21.49 18 *e*P P 06 35 38.3 +1.3
W39A **Magazine** 21.52 352 P P 06 35 38.0 +0.6
baz=170,SNR=40
W39A **Magazine** 21.52 352 *e*P P 06 35 37.9 +0.5
SWET **Sewanee** 21.60 9 *e*P P 06 35 39.8 +1.6
HBAR **Harrisburg** 21.62 359 *e*P P 06 35 40.1 +1.6
W50A **Signal Mountai** 21.69 11 P P 06 35 40.3 +1.1
baz=192,SNR=33
W50A **Signal Mountai** 21.69 11 *e*P P 06 35 40.5 +1.4
V45A **Humboldt** 21.82 2 P P 06 35 41.1 +0.6
baz=183,SNR=21
JSC **Jenkinsville** 21.85 20 *e*P P 06 35 42.2 +1.4
JSC **Jenkinsville** 21.85 20 *e*P P 06 35 42.3 +1.4
V43A **Jonesboro** 21.85 359 P P 06 35 41.9 +1.0
baz=178,SNR=6.3
W52A **Murphy** 21.86 14 P P 06 35 42.0 +0.9
baz=196,SNR=24
W52A **Murphy** 21.86 14 *e*P P 06 35 42.5 +1.4
W52A *e* 06 35 42.8
V44A **Blytheville** 21.89 0 P P 06 35 42.0 +0.7
baz=180,SNR=9.4
V42A **Cord** 21.90 357 P P 06 35 41.8 +0.4
baz=176,SNR=72
V41A **Mountainview** 21.93 355 P P 06 35 41.8 +0.1
baz=174,SNR=61
V46A **Holladay** 21.93 4 P P 06 35 42.1 +0.4
baz=185,SNR=66
HALT **Halls** 21.98 2 *e*P P 06 35 44.4 +2.2
V48A **Smith Brothers** 21.99 7 P P 06 35 43.8 +1.4
baz=188,SNR=61
V48A **Smith Brothers** 21.99 7 *e*P P 06 35 44.0 +1.6
V47A **Nunnelly** 22.00 5 P P 06 35 43.8 +1.4
baz=186,SNR=164
V40A **Witts Springs** 22.01 354 P P 06 35 42.9 +0.3
baz=173,SNR=66
V40A **Witts Springs** 22.01 354 *e*P P 06 35 42.8 +0.2
V40A *e* 06 35 43.1
BG3 **Lake Jocassee** 22.01 16 *e*P P 06 35 44.3 +1.7
GNAR **Gosnell** 22.02 0 *e*P P 06 35 44.6 +1.9
GNAR epP pP 06 36 07.2 +3.4
CPCT **Cooper Cave** 22.08 12 *e*P P 06 35 44.8 +1.5
W53A **Cullowhee** 22.12 15 P P 06 35 45.0 +1.1
baz=198,SNR=9.9
V39A **Pettigrew** 22.14 352 P P 06 35 43.9 -0.1
baz=170
V49A **McMinnville** 22.14 9 P P 06 35 45.1 +1.2
baz=190,SNR=71
PAULI **Pauline** 22.17 18 *e*P P 06 35 46.3 +2.1
V50A **Pikevile** 22.18 11 P P 06 35 45.4 +1.1
baz=193,SNR=35
WMOK **Wichita Mounta** 22.25 341 P P 06 35 43.8 -1.3
baz=157,SNR=107
WMOK **Wichita Mounta** 22.25 341 *e*P P 06 35 43.9 -1.3

comp=Z,119nm,0.9s
WMOK Wichita Mounta 22.25 341 *e*P **P 06 35 43.9 -1.2**
WMOK pmax pmax
comp=Z,119nm,0.9s
WVT Waverly 22.28 5 P **P 06 35 45.5 +0.2**
baz=186
WVT Waverly 22.28 5 *e*P **P 06 35 46.0 +0.7**
GLAT Glass 22.34 2 *e*P **P 06 35 47.4 +1.5**
U44B Burton Farm, H 22.41 1 P **P 06 35 47.7 +1.1**
baz=182,SNR=28
UTMT University of 22.43 3 *e*P **P 06 35 48.4 +1.6**
U43A Rector 22.43 359 P **P 06 35 47.7 +0.9**
baz=179,SNR=23
MPR Mayaguez 22.43 76 *e*P **P 06 35 46.7 -0.4**
CRPR Cabo Rojo, PR 22.43 76 *e*P **P 06 35 47.1 0.0**
U42A Revenden 22.44 357 P **P 06 35 47.0 0.0**
baz=177,SNR=50
U45A Rockin P Farm, 22.44 3 P **P 06 35 47.8 +0.9**
baz=183,SNR=21
TKL Tuckaleechee C 22.44 13 P **P 06 35 48.0 +1.0**
comp=Z,260nm,0.9s,baz=183,slow=11,SNR=86
TKL LR LR 06 45 04.1
comp=Z,4µm,21.7s,baz=194,slow=38
TKL Tuckaleechee C 22.44 13 *e*P **P 06 35 48.6 +1.6**
TKL *e* 06 45 04.1
TKL Tuckaleechee C 22.44 13 *e*P **P 06 35 48.6 +1.6**
V51A Loudon 22.45 12 P **P 06 35 48.2 +1.1**
baz=194,SNR=30
V51A Loudon 22.45 12 *e*P **P 06 35 48.3 +1.1**
AGP Aguadilla 22.46 75 *e*P **P 06 35 48.9 +1.6**
U41A Viola 22.47 356 P **P 06 35 47.3 +0.1**
baz=175,SNR=32
PVMO Portageville 22.48 1 *e*P **P 06 35 49.0 +1.7**
GDL2 Guadalupe Moun 22.48 327 *e*P **P 06 35 50.2 +2.6**
U46A Springville 22.48 4 P **P 06 35 48.4 +1.1**
baz=184,SNR=210
U40A Yellville 22.56 354 P **P 06 35 48.4 +0.2**
baz=173,SNR=17
U44A Portageville 22.57 1 P **P 06 35 48.9 +0.7**
baz=181,SNR=18
TUL1 Leonard 22.57 348 P **P 06 35 47.4 -0.9**
baz=165,SNR=31
TUL1 Leonard 22.57 348 *e*P **P 06 35 47.5 -0.8**
HHAR Hobbs 22.61 352 *e*P **P 06 35 48.4 -0.4**
KMSC Kings Mountain 22.61 19 P **P 06 35 49.8 +1.1**
baz=202,SNR=43
KMSC Kings Mountain 22.61 19 *e*P **P 06 35 50.0 +1.3**
KMSC *e* 06 35 50.2
U47A Clarksville 22.64 6 P **P 06 35 49.8 +0.9**
baz=187,SNR=199
U39A Green Forest 22.65 353 P **P 06 35 48.8 -0.4**
baz=171,SNR=24
V52A Sevierville 22.66 14 P **P 06 35 50.4 +1.2**
baz=196,SNR=32
V52A Sevierville 22.66 14 *e*P **P 06 35 50.4 +1.2**
V52A *e* 06 35 50.5
MNTX Cornudas Mount 22.66 324 P **P 06 35 49.1 -0.1**
baz=138,SNR=39
MNTX Cornudas Mount 22.66 324 *e*P **P 06 35 49.7 +0.4**
comp=Z,23nm,0.7s
V53A Saluda 22.68 15 P **P 06 35 51.3 +1.8**
baz=198,SNR=42
V53A Saluda 22.68 15 *e*P **P 06 35 50.3 +0.8**
PARMO Parma 22.72 1 *e*P **P 06 35 51.3 +1.5**
U48A Cassie Pea, Po 22.79 7 P **P 06 35 51.2 +0.8**
baz=189,SNR=88
AOPR Arecibo Observ 22.82 76 *e*P **P 06 35 50.2 -0.7**
PBMO Poplar Bluff 22.84 359 *e*P **P 06 35 51.3 +0.3**
U49A Red Boiling Sp 22.89 9 P **P 06 35 51.9 +0.5**
baz=190,SNR=164
OBIP Obispado Ponce 22.91 76 *e*P **P 06 35 50.5 -1.3**
ICMP Isla Caja de M 22.97 77 *e*P **P 06 35 52.7 +0.3**
T42A Van Buren 23.11 358 P **P 06 35 53.4 -0.1**
baz=177,SNR=44
T42A Van Buren 23.11 358 *e*P **P 06 35 53.1 -0.4**
T45A Paducah 23.11 3 P **P 06 35 54.2 +0.7**
baz=183,SNR=46
T45A Paducah 23.11 3 *e*P **P 06 35 55.0 +1.5**
MSTX Muleshoe 23.12 332 P **P 06 35 52.8 -1.1**
baz=147,SNR=28
MSTX Muleshoe 23.12 332 *e*P **P 06 35 52.8 -1.1**
MSTX *e* 06 35 54.2
T43A Greenville 23.14 360 P **P 06 35 54.0 +0.2**
baz=179,SNR=69
T44A Benton 23.15 1 P **P 06 35 54.4 +0.5**
baz=181,SNR=57
T41A Mountain View 23.15 357 P **P 06 35 54.1 +0.2**
baz=176,SNR=42
T46A Princeton 23.18 4 P **P 06 35 55.0 +0.9**
baz=185,SNR=66
T47A Sharon Grove 23.20 6 P **P 06 35 55.4 +1.1**
baz=187,SNR=315
T47A Sharon Grove 23.20 6 *e*P **P 06 35 55.4 +1.1**
T39A Clever 23.27 353 P **P 06 35 54.9 -0.2**
baz=172,SNR=37
T40A Mansfield 23.31 355 P **P 06 35 55.5 +0.1**
baz=174,SNR=36
TZTN Tazewell 23.34 13 P **P 06 35 56.3 +0.6**
baz=196,SNR=36
TZTN Tazewell 23.34 13 *e*P **P 06 35 56.5 +0.8**
comp=Z,105nm,0.9s
SJG San Juan 23.35 76 P **P 06 35 55.2 -0.8**
comp=Z,99nm,0.7s,baz=258,slow=6.7,SNR=30
SJG PcP **PcP 06 39 40.1 +0.4**
comp=Z,38nm,0.9s,baz=192,slow=0.8,SNR=6.5
SJG San Juan 23.35 76 *e*P **P 06 35 55.1 -0.8**
comp=Z,91nm,0.7s
SJG *e*PcP **PcP 06 39 40.2 +0.4**
EPT El Paso 23.36 323 *e*P **P 06 35 55.6 -0.5**
T48A Bowling Green 23.39 7 P **P 06 35 56.5 +0.4**
baz=189,SNR=53
U53A Fall Branch 23.40 15 P **P 06 35 56.9 +0.6**
baz=198,SNR=72
T38A Diamond 23.40 351 P **P 06 35 56.3 0.0**
baz=169,SNR=22
AMTX Amarillo 23.43 335 P **P 06 35 56.3 -0.4**
baz=150
AMTX Amarillo 23.43 335 *e*P **P 06 35 56.2 -0.5**
comp=Z,45nm,0.6s
T49A Edmonton 23.51 9 P **P 06 35 57.8 +0.6**
baz=191,SNR=135
T50A Nancy 23.54 10 P **P 06 35 57.9 +0.4**
baz=192,SNR=96
S43A Fulton Ridge, 23.63 360 P **P 06 35 58.1 -0.1**
baz=180,SNR=45
HUMP Col San Antoni 23.64 76 *e*P **P 06 35 57.4 -1.2**
HUMP *e*PcP **PcP 06 39 41.0 +0.7**
CBYP Canovanas 23.65 76 *e*P **P 06 35 57.0 -1.8**
S41A Jillco Farms, 23.69 357 P **P 06 35 59.1 +0.2**
baz=176,SNR=45
S40A Lebanon 23.76 355 P **P 06 35 59.7 +0.2**
baz=174,SNR=19
S44A Carbondale 23.76 2 P **P 06 36 00.5 +1.0**
baz=182,SNR=128
S45A Carrier Mills 23.77 3 P **P 06 35 59.8 +0.3**
baz=183,SNR=17
SIUC Southern Illin 23.78 2 *e*P **P 06 36 00.6 +0.9**
S46A Don Dixon Farm 23.83 5 P **P 06 36 00.7 +0.6**
baz=185,SNR=79
S42A Caledonia 23.84 359 P **P 06 35 59.7 -0.4**
baz=178,SNR=28
MTP Monte Pirata 23.92 77 *e*P **P 06 36 00.2 -0.9**
S39A Bolivar 23.93 354 P **P 06 36 01.2 +0.3**
baz=172,SNR=94
S39A Bolivar 23.93 354 *e*P **P 06 36 00.9 0.0**
S39A *e* 06 36 01.8
S38A Stockton 23.93 352 P **P 06 36 01.0 0.0**
baz=171,SNR=70
CNNC Cliffs of the 23.96 25 P **P 06 36 01.4 +0.2**
baz=210,SNR=23
CNNC Cliffs of the 23.96 25 *e*P **P 06 36 02.2 +1.0**
comp=Z,232nm,0.8s
S48A Wiedeman Farm, 23.98 8 P **P 06 36 01.8 +0.3**
baz=189,SNR=67
T52A Hallie 24.01 14 P **P 06 36 02.7 +0.9**
baz=197,SNR=9.3
FVM French Village 24.04 359 *e*P **P 06 36 02.4 +0.4**
FVM French Village 24.04 359 *e*P **P 06 36 02.4 +0.4**
USIN University of 24.11 5 *e*P **P 06 36 03.9 +1.2**
CCM Cathedral Cave 24.14 358 P **P 06 36 03.0 +0.2**
baz=177
CCM Cathedral Cave 24.14 358 *e*P **P 06 36 02.7 -0.1**
comp=Z,379nm,0.7s
CCM Cathedral Cave 24.14 358 *e*P **P 06 36 02.7 -0.1**
CCM pmax pmax
comp=Z,379nm,0.7s

R44A Waltonville 24.32 2 P **P 06 36 05.2 +0.8**
baz=182,SNR=19
R43A Red Bud 24.33 0 P **P 06 36 05.2 +0.6**
baz=180,SNR=82
R42A Luebbering 24.34 359 P **P 06 36 04.8 +0.1**
baz=178,SNR=42
R46A Gibon Southern 24.37 5 P **P 06 36 05.8 +0.8**
baz=186,SNR=49
R41A Rosebud 24.38 357 P **P 06 36 05.2 +0.2**
baz=177,SNR=100
S51A Beattyville 24.38 12 P **P 06 36 05.8 +0.7**
baz=195,SNR=18
S51A Beattyville 24.38 12 *e*P **P 06 36 06.0 +0.9**
R45A Skylar, Fairfi 24.40 3 P **P 06 36 05.7 +0.5**
baz=184,SNR=56
R40A Maddies Statio 24.43 356 P **P 06 36 05.3 -0.1**
baz=175,SNR=47
R40A Maddies Statio 24.43 356 *e*P **P 06 36 05.5 0.0**
R40A *e* 06 36 05.7
R38A Fenwick Farm, 24.48 353 P **P 06 36 05.8 -0.2**
baz=171,SNR=47
STVI Saint Thomas 24.51 76 *e*P **P 06 36 05.1 -1.3**
WCI Wyandotte Cave 24.51 7 P **P 06 36 07.2 +0.9**
baz=189
WCI Wyandotte Cave 24.51 7 *e*P **P 06 36 07.1 +0.9**
comp=Z,3µm,0.7s
WCI Wyandotte Cave 24.51 7 *e*P **P 06 36 07.1 +0.9**
WCI pmax pmax
comp=Z,3µm,0.7s
R39A Chumby, Stover 24.51 354 P **P 06 36 06.3 0.0**
baz=173,SNR=142
S52A Salyersville 24.53 13 P **P 06 36 07.1 +0.7**
baz=196,SNR=28
R47A Wooly Knot Far 24.55 7 P **P 06 36 07.2 +0.6**
baz=188,SNR=127
HSIG 24.57 311 *e*P **P 06 36 08.2 +1.3**
HSIG *e*PcP **PcP 06 39 43.4 +1.2**
CDVI St. Croix 24.62 78 *e*P **P 06 36 07.6 +0.1**
121A Cookes Peak, D 24.67 322 P **P 06 36 09.5 +1.6**
baz=135,SNR=55
SRIG Santa Rosalia 24.67 306 *e*P **P 06 36 08.9 +1.1**
SLM Saint Louis 24.69 360 *e*P **P 06 36 08.7 +0.8**
SLM Saint Louis 24.69 360 *e*P **P 06 36 08.7 +0.8**
R48A Northridge Ran 24.73 8 P **P 06 36 08.8 +0.6**
baz=190,SNR=32
BLA Blacksburg 24.80 19 P **P 06 36 09.7 +0.7**
baz=202,SNR=19
BLA Blacksburg 24.80 19 *e*P **P 06 36 10.2 +1.2**
comp=Z,108nm,0.9s
BLA Blacksburg 24.80 19 *e*P **P 06 36 10.2 +1.2**
BLA pmax pmax
comp=Z,108nm,0.9s
319A Douglas 24.82 318 *e*P **P 06 36 11.3 +2.0**
319A *e*PcP **PcP 06 39 44.8 +1.9**
OLIL Olney 24.85 4 *e*P **P 06 36 10.3 +1.0**
Q42A Golden Eagle 24.97 359 P **P 06 36 10.8 +0.4**
baz=179,SNR=20
Q44A Meyer Farm, Va 24.97 2 P **P 06 36 10.7 +0.2**
baz=182,SNR=24
VWCC Virginia Weste 24.98 19 *e*P **P 06 36 11.5 +1.0**
Q43A New Douglas 25.00 1 P **P 06 36 11.5 +0.9**
baz=181,SNR=29
Q45A Warren Harvey, 25.00 3 P **P 06 36 11.3 +0.6**
baz=184,SNR=62
Q41A Truxton 25.03 358 P **P 06 36 11.3 +0.4**
baz=177,SNR=62
Q40A Laux Farm, Aux 25.11 356 P **P 06 36 11.5 -0.3**
baz=175,SNR=38
PCRV Puerto La Cruz 25.11 96 P **P 06 36 14.2 +2.1**
comp=Z,9.2nm,0.3s,baz=318,slow=5.2,SNR=12
PCRV LR LR 06 48 24.9
comp=Z,738nm,18.2s,baz=292,slow=42
ABVI Anegada Island 25.14 75 *e*P **P 06 36 12.6 +0.4**
BNM Barren Site 25.19 326 *e*P **P 06 36 14.4 +1.7**
Q46A CEJHS Indians, 25.19 5 P **P 06 36 13.3 +0.9**
baz=186,SNR=8.4
Q47A Bedord North L 25.20 7 P **P 06 36 13.1 +0.7**
baz=188,SNR=60
Q38A Cooks Store, C 25.21 353 P **P 06 36 12.6 0.0**
baz=172,SNR=63
Q39A Willow Grove F 25.23 355 P **P 06 36 12.8 0.0**
baz=173,SNR=32
Q37A Longview Farm, 25.23 352 P **P 06 36 12.7 -0.1**
baz=170,SNR=16
Y22D IRIS PASSCAL I 25.29 326 P **P 06 36 13.6 0.0**
baz=139
Y22E IRIS PASSCAL I 25.29 326 P **P 06 36 13.7 +0.1**
baz=139
LPM Los Pinos Moun 25.31 326 *e*P **P 06 36 15.3 +1.5**
LENM Lemitar 25.39 326 *e*P **P 06 36 15.4 +0.9**
LENM *e*pP **pP 06 36 40.6 +1.9**
BLO Bloomington 25.42 6 *e*P **P 06 36 14.7 +0.2**
BLO Bloomington 25.42 6 *e*P **P 06 36 14.7 +0.2**
P44A Sand Creek, Wi 25.55 3 P **P 06 36 16.0 +0.3**
baz=183,SNR=28
P42A Winchester 25.64 359 P **P 06 36 16.3 -0.2**
baz=179,SNR=41
P42A Winchester 25.64 359 *e*P **P 06 36 16.7 +0.2**
P40A Paris 25.64 356 P **P 06 36 16.4 -0.1**
baz=175,SNR=87
P40A Paris 25.64 356 *e*P **P 06 36 16.5 0.0**
P39B Salisbury 25.65 355 P **P 06 36 16.2 -0.3**
baz=174,SNR=41
LAZ Ladron 25.66 326 *e*P **P 06 36 18.3 +1.3**
P45A Graceland, Par 25.66 4 P **P 06 36 17.2 +0.5**
baz=185,SNR=32
P45A Graceland, Par 25.66 4 *e*P **P 06 36 17.4 +0.7**
P43A Skaggs, Pawnee 25.70 1 P **P 06 36 17.2 +0.2**
baz=181,SNR=37
TASL Snake Pit, Alb 25.71 328 P **P 06 36 18.0 +0.6**
baz=141,SNR=14
ANMO Albuquerque 25.71 328 P **P 06 36 18.4 +1.1**
comp=Z,4.5nm,0.6s,baz=144,slow=12,SNR=23
ANMO LR LR 06 49 13.4
comp=Z,526nm,18.4s,baz=156,slow=43
ANMO Albuquerque 25.71 328 P **P 06 36 17.8 +0.4**
baz=141
ANMO Albuquerque 25.71 328 *e*P **P 06 36 18.5 +1.1**
comp=Z,7.6nm,0.7s
ANMO *e* 06 49 13.4
ANMO Albuquerque 25.71 328 *e*P **P 06 36 18.9 +1.5**
ANMO pmax pmax
comp=Z,8.0nm,0.9s
TASM ASL Pad, Albuq 25.71 328 P **P 06 36 18.1 +0.7**
baz=141,SNR=13
P41A Barry, Barry 25.74 358 P **P 06 36 17.1 -0.3**
baz=178,SNR=7.9
P47A Martinsville 25.76 7 P **P 06 36 17.9 +0.4**
baz=188,SNR=32
P46A Rosedale 25.79 5 P **P 06 36 18.2 +0.4**
baz=186,SNR=35
KSU1 Kansas State U 25.82 348 P **P 06 36 17.7 -0.4**
baz=165,SNR=19
KSU1 Kansas State U 25.82 348 *e*P **P 06 36 17.9 -0.2**
comp=Z,206nm,0.8s
P38A Dawn 25.86 354 P **P 06 36 17.9 -0.5**
baz=172,SNR=35
P38A Dawn 25.86 354 *e*P **P 06 36 18.6 +0.1**
P37A Lathrop 25.92 352 P **P 06 36 18.7 -0.3**
baz=170,SNR=28
JSRW J. Sargeant Re 26.10 22 *e*P **P 06 36 21.7 +1.0**
Q41A Passleys Farm, 26.18 359 P **P 06 36 20.6 -0.7**
baz=178,SNR=7.2
Q40A La Belle 26.22 357 P **P 06 36 21.8 +0.1**
baz=176,SNR=70
Q44A Mansfield 26.24 3 P **P 06 36 22.0 +0.1**
baz=183,SNR=34
P50A Jamestown 26.25 11 P **P 06 36 22.2 +0.3**
baz=194,SNR=33
IP07 Quail 26.25 22 *e*P **P 06 36 22.8 +0.8**
Q42A Bath 26.25 360 P **P 06 36 21.8 -0.2**
baz=180,SNR=13
IP05 Hopewell Churc 26.27 22 *e*P **P 06 36 23.2 +1.0**
IP06 Yanceyville 26.28 22 *e*P **P 06 36 22.9 +0.7**
CBKS Cedar Bluff 26.30 343 P **P 06 36 22.4 -0.2**
baz=158,SNR=16
CBKS Cedar Bluff 26.30 343 *e*P **P 06 36 23.2 +0.7**
comp=Z,56nm,0.6s
CBKS Cedar Bluff 26.30 343 *e*P **P 06 36 23.2 +0.7**
CBKS pmax pmax
comp=Z,56nm,0.6s
IP01 Cuckoo 26.32 22 *e*P **P 06 36 23.6 +0.9**
IP03 Louisa 26.34 22 *e*P **P 06 36 23.9 +1.0**
Q43A Sugar Creek Fa 26.35 1 P **P 06 36 22.3 -0.5**
baz=181
O38A Galt 26.35 354 P **P 06 36 22.6 -0.2**

baz=172,SNR=14
IP04 Greenspring 26.38 22 *e*P **P 06 36 24.3 +1.2**
O45A Potomac 26.38 4 P **P 06 36 23.5 +0.4**
baz=185,SNR=37
SPRD Spring Road, M 26.39 22 *e*P **P 06 36 24.1 +0.8**
O39A Kirksville 26.40 356 P **P 06 36 22.9 -0.4**
baz=174,SNR=15
TUC Tucson 26.40 318 P **P 06 36 24.9 +1.3**
baz=129
TUC Tucson 26.40 318 *e*P **P 06 36 25.1 +1.6**
comp=Z,39nm,1.0s
TUC *e*PcP **PcP 06 39 47.9 +1.5**
TUC Tucson 26.40 318 *e*P **P 06 36 25.1 +1.6**
TUC *e* 06 39 47.9
TUC pmax pmax
comp=Z,39nm,1.0s
CVRD Centerville Ro 26.46 22 *e*P **P 06 36 24.8 +0.9**
O37A Wolven Farm, M 26.46 353 P **P 06 36 23.8 -0.1**
baz=171,SNR=17
T25A Trinidad 26.50 334 P **P 06 36 24.6 0.0**
baz=147,SNR=11
T25A Trinidad 26.50 334 *e*P **P 06 36 26.3 +1.7**
O47A Sheridan 26.51 7 P **P 06 36 24.4 +0.1**
baz=188,SNR=106
SFIN Lafayette 26.56 5 P **P 06 36 24.9 +0.2**
baz=186,SNR=33
SFIN Lafayette 26.56 5 *e*P **P 06 36 25.0 +0.2**
HDIL Hopedale 26.62 1 P **P 06 36 25.4 +0.1**
baz=181
HDIL Hopedale 26.62 1 *e*P **P 06 36 25.5 +0.3**
comp=Z,103nm,0.8s
CBN Corbin Frederi 26.74 23 P **P 06 36 27.1 +0.7**
baz=208,SNR=22
N41A Harden Midland 26.77 359 P **P 06 36 26.2 -0.5**
baz=178
O50A Cable 26.80 11 P **P 06 36 27.3 +0.3**
baz=194,SNR=73
N42A Yates City 26.88 0 P **P 06 36 27.5 -0.1**
baz=180,SNR=19
N44A Piper City 26.90 3 P **P 06 36 27.7 -0.1**
baz=184,SNR=31
N40A Mertquake, Sal 26.97 357 P **P 06 36 28.4 -0.1**
baz=177,SNR=6.8
N38A Joes South For 26.99 355 P **P 06 36 28.5 -0.2**
baz=173,SNR=15
N45A Kentland 26.99 4 P **P 06 36 28.3 -0.4**
baz=185,SNR=16
N43A Stutzman Famil 27.00 1 P **P 06 36 28.8 +0.1**
baz=182,SNR=36
ACSO Alum Creek Sta 27.01 12 P **P 06 36 29.2 +0.4**
baz=195,SNR=35
N39A Derby Farms, D 27.02 356 P **P 06 36 28.6 -0.3**
baz=175,SNR=41
N39A Derby Farms, D 27.02 356 *e*P **P 06 36 28.9 0.0**
N37A Lee Faris, Mou 27.06 353 P **P 06 36 29.0 -0.3**
baz=171,SNR=13
N37A Lee Faris, Mou 27.06 353 *e*P **P 06 36 29.4 +0.2**
N46A Monticello 27.10 6 P **P 06 36 29.8 +0.1**
baz=187,SNR=39
N36A Muff Farm, Cla 27.21 352 P **P 06 36 30.3 -0.3**
baz=169,SNR=6.9
MCWV Mont Chateau 27.23 17 P **P 06 36 31.1 +0.2**
baz=202,SNR=6.2
MCWV Mont Chateau 27.23 17 *e*P **P 06 36 31.5 +0.7**
X18A Snowflake 27.35 322 *e*P **P 06 36 33.7 +1.5**
KSCO Kaye Shedlock' 27.42 338 P **P 06 36 32.4 -0.3**
baz=153,SNR=8.1
KSCO Kaye Shedlock' 27.42 338 *e*P **P 06 36 32.9 +0.2**
KSCO *e*pP **pP 06 36 57.9 +1.0**
M41A Milan 27.43 359 P **P 06 36 32.2 -0.3**
baz=179,SNR=33
M40A Post Highland 27.49 358 P **P 06 36 32.9 -0.2**
baz=177,SNR=27
SDCO Great Sand Dun 27.49 333 P **P 06 36 33.6 +0.1**
baz=146,SNR=17
SDCO Great Sand Dun 27.49 333 *e*P **P 06 36 34.7 +1.3**
comp=Z,9.9nm,1.0s
N50A Nevada 27.49 11 P **P 06 36 32.9 -0.2**
baz=194,SNR=18
M44A Midewin, Midew 27.50 3 P **P 06 36 33.0 -0.1**
baz=184,SNR=11
M44A Midewin, Midew 27.50 3 *e*P **P 06 36 33.1 0.0**
M43A Waltham Townsh 27.50 2 P **P 06 36 33.3 +0.1**
baz=182,SNR=49
M42A Sheffield 27.51 0 P **P 06 36 33.2 0.0**
baz=180,SNR=6.8
M45A Boilermakers S 27.55 5 P **P 06 36 33.3 -0.3**
baz=186,SNR=11
214A Organ Pipe Nat 27.55 315 P **P 06 36 35.1 +1.3**
baz=126,SNR=23
M39A Webster 27.59 357 P **P 06 36 34.0 0.0**
baz=175,SNR=35
M38A Pleasantville 27.61 355 P **P 06 36 33.6 -0.5**
baz=173,SNR=33
W18A Petrified Fore 27.64 323 P **P 06 36 35.6 +0.9**
baz=135
W18A Petrified Fore 27.64 323 *e*P **P 06 36 36.9 +2.1**
M46A Old House Fiel 27.65 6 P **P 06 36 34.2 -0.3**
baz=188,SNR=7.3
M46A Old House Fiel 27.65 6 *e*P **P 06 36 34.7 +0.2**
M37A Trindle Farm, 27.68 353 P **P 06 36 34.6 -0.2**
baz=172,SNR=21
M36A Felix, Anita 27.82 352 P **P 06 36 35.8 -0.2**
baz=170,SNR=30
SDMD Soldier's Deli 28.00 22 *e*P **P 06 36 38.8 +1.1**
L42A Oliver, Polo 28.06 1 P **P 06 36 37.8 -0.3**
baz=181,SNR=16
L42A Oliver, Polo 28.06 1 *e*P **P 06 36 38.1 0.0**
SCIA State Center 28.09 355 P **P 06 36 38.3 -0.2**
baz=173
SCIA State Center 28.09 355 *e*P **P 06 36 38.8 +0.4**
comp=Z,49nm,0.6s
S22A 4UR Ranch, Cre 28.10 331 P **P 06 36 39.6 +0.6**
baz=143,SNR=18
S22A 4UR Ranch, Cre 28.10 331 *e*P **P 06 36 40.5 +1.6**
L41A Preston 28.13 359 P **P 06 36 38.7 -0.1**
baz=179,SNR=45
L40A Anamosa 28.13 358 P **P 06 36 38.8 0.0**
baz=177,SNR=52
L40A Anamosa 28.13 358 *e*P **P 06 36 38.8 0.0**
O56A Blue Knob Stat 28.18 19 P **P 06 36 39.6 +0.2**
baz=204,SNR=17
O56A Blue Knob Stat 28.18 19 *e*P **P 06 36 40.0 +0.7**
X16A Lo Mia Camp, P 28.18 320 *e*P **P 06 36 41.1 +1.6**
X16A *e*PcP **PcP 06 39 52.4 +1.5**
L39A Vinton 28.23 357 P **P 06 36 39.2 -0.4**
baz=176,SNR=20
L43A Garden Prairie 28.26 2 P **P 06 36 39.2 -0.6**
baz=182,SNR=20
L44A Lake County Fo 28.29 3 P **P 06 36 40.1 0.0**
baz=184,SNR=8.9
L38A Oak Wood Farm, 28.30 355 P **P 06 36 39.9 -0.4**
baz=174,SNR=32
BGNE Belgrade 28.35 347 P **P 06 36 40.6 -0.2**
baz=163,SNR=5.5
BGNE Belgrade 28.35 347 *e*P **P 06 36 42.0 +1.2**
Q24A Divide 28.36 335 P **P 06 36 41.3 +0.1**
baz=148
L37A Phoenix Point, 28.36 354 P **P 06 36 40.4 -0.4**
baz=172,SNR=16
N54A Moraine State 28.41 16 P **P 06 36 41.5 +0.2**
baz=201,SNR=20
N54A Moraine State 28.41 16 *e*P **P 06 36 41.7 +0.4**
L36A Harm Buss Farm 28.44 353 P **P 06 36 40.9 -0.6**
baz=170
MVCO Mesa Verde 28.50 328 P **P 06 36 43.2 +0.8**
baz=140,SNR=23
MVCO Mesa Verde 28.50 328 *e*P **P 06 36 43.6 +1.2**
comp=Z,15nm,0.7s
K41A Shullsburg 28.66 360 P **P 06 36 43.5 0.0**
baz=179,SNR=30
113A Mohawk Valley, 28.68 315 *e*P **P 06 36 45.9 +2.1**
113A *e*PcP **PcP 06 39 53.3 +1.4**
MVL Millersville 28.70 22 *e*P **P 06 36 44.8 +1.0**
SSPA Standing Stone 28.73 19 P **P 06 36 43.3 -0.8**
baz=205
SSPA Standing Stone 28.73 19 *e*P **P 06 36 44.5 +0.4**
comp=Z,64nm,0.5s
PAGS Pennsylvania G 28.76 22 *e*P **P 06 36 44.9 +0.5**
K40A Colesburg 28.77 358 P **P 06 36 44.3 -0.1**
baz=178,SNR=30
K43A Burlington 28.79 3 P **P 06 36 44.5 -0.1**
baz=183,SNR=17
K43A Burlington 28.79 3 *e*P **P 06 36 44.5 -0.1**
K38A Parkersburg 28.79 356 P **P 06 36 44.5 -0.1**
baz=174,SNR=23
K38A Parkersburg 28.79 356 *e*P **P 06 36 44.6 -0.1**

K39A Oelwein 28.80 357 P P 06 36 44.5 -0.2
baz=176,SNR=49
NNA Nana 28.81 152 P P 06 36 47.1 +2.0
comp=Z,26nm,0.8s,baz=336,slow=10,SNR=10.0
NNA LR LR 06 48 27.1
comp=Z,166nm,18.9s,baz=321,slow=36
NNA Nana 28.81 152 eP P 06 36 47.1 +2.0
NNA ePcP PcP 06 39 56.1 +3.6
NNA e 06 48 27.1
K42A Prairie Point, 28.84 1 P P 06 36 44.7 -0.3
baz=181,SNR=20
Y14A Wickenburg 28.87 318 eP P 06 36 47.0 +1.5
Y14A ePcP PcP 06 39 53.8 +1.4
WUAZ Wupatki 28.88 322 P P 06 36 47.1 +1.4
baz=133,SNR=25
WUAZ Wupatki 28.88 322 eP P 06 36 47.2 +1.5
comp=Z,15nm,0.8s
AAM Ann Arbor 28.89 10 P P 06 36 45.4 0.0
baz=193,SNR=11
AAM Ann Arbor 28.89 10 eP P 06 36 45.7 +0.2
comp=Z,53nm,0.5s
AAM Ann Arbor 28.89 10 eP P 06 36 45.7 +0.2
AAM pmax pmax
comp=Z,53nm,0.5s
K36A Gilmore City 28.94 353 P P 06 36 45.4 -0.6
baz=171
OGNE Ogallala 28.96 341 P P 06 36 46.8 +0.5
baz=155
OGNE Ogallala 28.96 341 eP P 06 36 46.9 +0.6
comp=Z,27nm,0.6s
JFWS Jewell Farm 28.96 360 P P 06 36 46.2 0.0
baz=179,SNR=33
JFWS Jewell Farm 28.96 360 eP P 06 36 46.1 -0.1
comp=Z,57nm,0.7s
JFWS Jewell Farm 28.96 360 eP P 06 36 46.1 -0.1
JFWS pmax pmax
comp=Z,57nm,0.7s
PSUB Penn St. - Bra 28.97 24 eP P 06 36 46.7 +0.5
K37A Belmond 28.98 355 P P 06 36 45.5 -0.8
baz=173,SNR=11
M54A Oil Creek Stat 29.00 16 P P 06 36 46.8 +0.3
baz=201,SNR=6.5
M54A Oil Creek Stat 29.00 16 eP P 06 36 46.9 +0.3
ALLY Alegheny Colle 29.01 15 eP P 06 36 47.2 +0.6
PV01 Paradox Valley 29.25 329 eP P 06 36 49.9 +0.9
ISCO Idaho Springs 29.25 335 P P 06 36 49.8 +0.6
baz=148,SNR=22
SMCO Snowmass 29.32 332 eP P 06 36 51.1 +1.2
PV15 Paradox Valley 29.36 330 eP P 06 36 52.2 +2.1
comp=Z,15nm,1.0s
J42A Columbus 29.38 1 P P 06 36 49.9 +0.1
baz=182,SNR=53
PV02 Paradox Valley 29.39 329 eP P 06 36 52.0 +1.7
PV13 Radium Mtn., P 29.39 329 eP P 06 36 52.1 +1.8
J41A Loganville 29.42 0 P P 06 36 50.1 0.0
baz=180,SNR=70
J39A Decorah 29.42 358 P P 06 36 49.7 -0.5
baz=177,SNR=24
J38A Wedel Dairy, R 29.44 356 P P 06 36 49.8 -0.6
baz=175,SNR=19
J40A Soldiers Grove 29.45 359 P P 06 36 50.0 -0.5
baz=178,SNR=22
J43A Natural Harves 29.46 2 P P 06 36 50.5 0.0
baz=183,SNR=44
PV05 Paradox Valley 29.47 328 eP P 06 36 52.2 +1.2
PV03 Paradox Valley 29.48 329 eP P 06 36 52.6 +1.6
ERPA Erie 29.49 15 P P 06 36 50.9 +0.1
baz=200,SNR=8.4
ERPA Erie 29.49 15 eP P 06 36 51.3 +0.5
PV18 Skein Mesa, Pa 29.50 329 eP P 06 36 52.8 +1.5
PV12 Saucer Basin, 29.51 329 eP P 06 36 52.8 +1.5
J37A Redenius Farm, 29.52 355 P P 06 36 50.8 -0.3
baz=173,SNR=22
PV07 Paradox Valley 29.52 329 eP P 06 36 53.0 +1.5
comp=Z,19nm,0.9s
PV11 David Mesa, Pa 29.53 329 eP P 06 36 52.9 +1.4
PV17 East Wray Mesa 29.56 329 eP P 06 36 53.1 +1.4
PV16 Nyswonger Mesa 29.56 329 eP P 06 36 53.2 +1.5
GLA Glamis 29.57 314 P P 06 36 53.2 +1.4
baz=124,SNR=10
GLA Glamis 29.57 314 eP P 06 36 54.0 +2.3
GLA ePcP PcP 06 39 55.7 +1.5
GLA Glamis 29.57 314 eP P 06 36 54.0 +2.3
GLA e 06 39 55.7
LUPA Lehigh Univers 29.58 23 eP P 06 36 53.0 +1.3
LUPA epP pP 06 37 16.9 +0.8
PV19 Morning Glory 29.59 329 eP P 06 36 53.9 +1.8
BBSR BB Station 29.60 47 eP P 06 36 53.2 +1.3
PV20 West Nyswonger 29.61 329 eP P 06 36 53.8 +1.6
J36A Seneca 1, Swea 29.61 354 P P 06 36 51.2 -0.7
baz=171,SNR=18
J36A Seneca 1, Swea 29.61 354 eP P 06 36 51.7 -0.2
PV04 Paradox Valley 29.62 329 eP P 06 36 53.7 +1.5
comp=Z,40nm,0.6s
PV14 Lion Creek, Pa 29.66 329 eP P 06 36 54.1 +1.5
PV22 Blue Mesa, Par 29.67 329 eP P 06 36 54.1 +1.4
PV10 Paradox Valley 29.67 329 eP P 06 36 54.0 +1.2
N59A State Game Lan 29.71 22 P P 06 36 53.5 +0.6
baz=209,SNR=19
N59A State Game Lan 29.71 22 eP P 06 36 53.6 +0.8
PV23 Carpenter Ridg 29.71 329 eP P 06 36 54.9 +1.7
Y12C Blythe 29.77 316 P P 06 36 55.1 +1.7
baz=126
Y12C Blythe 29.77 316 eP P 06 36 55.7 +2.4
Y12C ePcP PcP 06 39 55.3 +0.7
PV21 Cone Mtn., Par 29.78 329 eP P 06 36 55.2 +1.4
PV09 Paradox Valley 29.81 329 eP P 06 36 55.8 +1.7
PDMCI Parker Dam,Lak 29.84 317 P P 06 36 55.1 +1.1
baz=127,SNR=12
I39A Houston 29.93 358 P P 06 36 54.5 -0.2
baz=177,SNR=21
I39A Houston 29.93 358 eP P 06 36 54.5 -0.2
I40A Norwalk 29.95 359 P P 06 36 54.3 -0.5
baz=179,SNR=9.6
I42A Draeger Farm, 29.96 2 P P 06 36 55.1 +0.2
baz=182,SNR=76
I42A Draeger Farm, 29.96 2 eP P 06 36 55.2 +0.2
BRNJ Basking Ridge 29.97 24 eP P 06 36 55.8 +0.7
I43A Langenfeld Bro 29.98 3 P P 06 36 55.4 +0.3
baz=184,SNR=121
U15A North Rim 30.04 322 eP P 06 36 57.9 +1.7
I41A Arkdale 30.11 0 P P 06 36 56.4 0.0
baz=180,SNR=62
I41A Arkdale 30.11 0 eP P 06 36 56.3 0.0
I38A Scanlan Farm, 30.15 357 P P 06 36 56.6 -0.1
baz=175,SNR=51
W13A Hualapai Mount 30.16 319 eP P 06 36 58.7 +1.5
W13A ePcP PcP 06 39 57.4 +1.5
SWSC Sam W. Stewart 30.19 313 P P 06 36 58.6 +1.5
baz=123,SNR=9.3
I37A Lemond, Waseca 30.20 355 P P 06 36 56.9 -0.2
baz=173,SNR=47
I37A Lemond, Waseca 30.20 355 eP P 06 36 57.0 -0.1
IKP In-Ko-Pah, Jac 30.26 313 P P 06 36 59.1 +1.2
baz=122,SNR=11
I36A Fitzsimmons Fa 30.26 354 P P 06 36 57.0 -0.6
baz=172,SNR=15
KSPA Keystone Colle 30.27 22 eP P 06 36 58.2 +0.4
ODNJ Ogdensburg 30.30 24 eP P 06 36 58.3 +0.4
CPNY Central Park 30.30 25 eP P 06 36 58.0 0.0
ECSD EROS Data Cent 30.31 351 P P 06 36 57.5 -0.6
baz=167,SNR=65
ECSD EROS Data Cent 30.31 351 eP P 06 36 57.3 -0.8
N23A Red Feather La 30.32 336 P P 06 36 58.9 +0.4
baz=148,SNR=12
N23A Red Feather La 30.32 336 eP P 06 36 58.9 +0.4
BC3 Big Chuckawall 30.35 315 P P 06 37 00.4 +1.7
baz=124,SNR=24
IRM Iron Mountain 30.42 316 P P 06 37 00.8 +1.6
baz=126,SNR=16
NEE2 Needles Airpor 30.43 317 P P 06 37 00.5 +1.2
baz=127
PHWY Pilot Hill 30.47 337 eP P 06 37 00.7 +0.9
PHWY epP pP 06 37 29.7 +5.4
PAL Palisades 30.50 24 P P 06 36 60.0 +0.2
baz=212,SNR=13
PAL Palisades 30.50 24 eP P 06 37 00.3 +0.5
PAL Palisades 30.50 24 eP P 06 37 00.3 +0.5
H43A Windswept, Lux 30.58 3 P P 06 37 00.3 -0.1
baz=184,SNR=47
H43A Windswept, Lux 30.58 3 eP P 06 37 00.4 0.0
H42A Shiocton 30.59 2 P P 06 37 00.3 -0.2
baz=183,SNR=23
H42A Shiocton 30.59 2 eP P 06 37 00.4 0.0
MONP2 Monument Peak 30.61 313 P P 06 37 01.7 +0.6
baz=122,SNR=19
MMNY Mt. Morris Dam 30.63 18 eP P 06 37 01.4 +0.5
H41A Junction City 30.67 1 P P 06 37 01.0 -0.2
baz=181,SNR=21
H41A Junction City 30.67 1 eP P 06 37 01.1 -0.2
O20A White River Ci 30.67 332 P P 06 37 02.5 +1.0
baz=144,SNR=11
O20A White River Ci 30.67 332 eP P 06 37 02.9 +1.4
H40A Chili 30.67 360 P P 06 37 00.9 -0.3
baz=179,SNR=31
BAR Barrett 30.68 312 eP P 06 37 03.1 +1.6
BAR ePcP PcP 06 39 58.4 +1.3
H37A Dierke Farm, C 30.73 356 P P 06 37 01.8 +0.1
baz=174,SNR=33
H39A Augusta 30.75 358 P P 06 37 01.6 -0.3
baz=178,SNR=32
BINY Binghamton 30.77 21 P P 06 37 02.6 +0.5
baz=207,SNR=24
BINY Binghamton 30.77 21 eP P 06 37 02.7 +0.6
H38A Maiden Rock 30.78 357 P P 06 37 02.2 0.0
baz=176,SNR=24
H36A Jessenland, He 30.81 355 P P 06 37 02.6 +0.2
baz=172,SNR=66
BELC Belle Mtn. Jos 30.91 315 P P 06 37 05.4 +1.7
baz=124,SNR=11
LDFC Landfair 30.94 317 eP P 06 37 06.4 +2.5
LDFC ePcP PcP 06 39 59.8 +2.0
XPFO Piæon Flat 31.02 314 eP P 06 37 06.4 +1.8
XPFO ePcP PcP 06 39 59.5 +1.5
H35A Sunnyside Ranc 31.02 353 P P 06 37 03.5 -0.7
baz=171,SNR=63
PFO Pinyon Flats O 31.02 314 PcP PcP 06 39 57.7 -0.3
comp=Z,2.3nm,0.4s,baz=127,slow=5.9,SNR=6.4
PFO Pinyon Flats O 31.02 314 P P 06 37 06.2 +1.6
baz=123,SNR=8.8
PFO Pinyon Flats O 31.02 314 eP P 06 37 06.4 +1.8
PFO ePcP PcP 06 39 59.6 +1.5
PFO Pinyon Flats O 31.02 314 eP P 06 37 06.4 +1.8
PFO e 06 39 59.6
109C Camp Elliot, M 31.09 312 P P 06 37 06.3 +1.1
baz=121
CPE Camp Elliot 31.09 312 eP P 06 37 07.0 +1.8
CPE ePcP PcP 06 39 59.9 +1.8
GMRC Granite Mounta 31.13 317 P P 06 37 07.2 +1.6
baz=126,SNR=19
YLE Yale 31.16 25 eP P 06 37 06.5 +1.0
H32A Carlson Farm, 31.20 350 P P 06 37 05.3 -0.6
baz=166,SNR=38
G38A Ridgeland 31.26 358 P P 06 37 05.9 -0.5
baz=176,SNR=58
G41A Antigo 31.27 1 P P 06 37 06.2 -0.3
baz=182,SNR=18
G40A Rib Lake 31.32 360 P P 06 37 06.6 -0.4
baz=180,SNR=29
G40A Rib Lake 31.32 360 eP P 06 37 06.6 -0.4
G42A Mountain 31.32 2 P P 06 37 06.6 -0.3
baz=183,SNR=106
G42A Mountain 31.32 2 eP P 06 37 06.5 -0.4
G39A Holcombe 31.35 358 P P 06 37 06.8 -0.4
baz=178,SNR=81
SPMN Marine on St. 31.36 356 P P 06 37 07.1 -0.2
baz=175,SNR=268
SPMN Marine on St. 31.36 356 eP P 06 37 07.0 -0.3
G43A Wallace 31.37 3 P P 06 37 07.1 -0.3
baz=184,SNR=48
G43A Wallace 31.37 3 eP P 06 37 07.1 -0.3
SUSD Miller 31.43 348 P P 06 37 07.3 -0.6
baz=163
G36A St. Michael 31.44 355 P P 06 37 08.0 0.0
baz=173,SNR=43
G35A Watkins 31.50 354 P P 06 37 07.9 -0.5
baz=172,SNR=20
G35A Watkins 31.50 354 eP P 06 37 08.0 -0.5
RWWY Rawlins 31.50 335 eP P 06 37 10.1 +1.3
MURC Murrieta 31.53 313 P P 06 37 09.9 +0.9
baz=122,SNR=9.8
G34A Benson 31.65 352 P P 06 37 09.3 -0.6
baz=170,SNR=37
TUQ Turquoise Moun 31.69 317 P P 06 37 11.9 +1.4
baz=126,SNR=13
BBRC Big Bear Solar 31.70 315 P P 06 37 12.3 +1.6
baz=123,SNR=5.6
G33A Ortonville 31.71 351 P P 06 37 09.9 -0.5
baz=168,SNR=45
F41A Three Lakes 31.80 1 P P 06 37 10.6 -0.6
baz=182,SNR=68
F41A Three Lakes 31.80 1 eP P 06 37 10.6 -0.6
SHPR Sheep Range 31.85 320 eP P 06 37 13.8 +1.9
SHPR ePcP PcP 06 40 02.0 +1.8
F37A Hinrichs Farm, 31.85 357 P P 06 37 11.1 -0.5
baz=175,SNR=34
F42A Maple Grove Fa 31.85 3 P P 06 37 11.0 -0.6
baz=183,SNR=17
G32A Webster 31.94 350 P P 06 37 11.8 -0.6
baz=166,SNR=22
G32A Webster 31.94 350 eP P 06 37 12.3 -0.1
F45A CMU Biological 31.96 6 P P 06 37 12.3 -0.2
baz=188,SNR=23
F40A Park Falls 31.97 360 P P 06 37 12.2 -0.4
baz=180,SNR=59
F39A Loretta 31.97 359 P P 06 37 12.0 -0.7
baz=178,SNR=24
F43A Flat Rock, Esc 31.97 4 P P 06 37 12.2 -0.5
baz=185,SNR=51
G31A Conde 32.03 349 P P 06 37 12.0 -1.2
baz=165
K22A Casper 32.04 337 P P 06 37 13.5 0.0
baz=149,SNR=12
K22A Casper 32.04 337 eP P 06 37 14.1 +0.6
F38A Pierce - Schro 32.05 358 P P 06 37 12.8 -0.5
baz=176,SNR=98
F36A Milaca 32.05 355 P P 06 37 12.7 -0.5
baz=174,SNR=52
F36A Milaca 32.05 355 eP P 06 37 12.8 -0.5
TRY Troy 32.07 23 eP P 06 37 14.4 +0.9
RRX Edison Barstow 32.09 315 P P 06 37 15.2 +1.4
baz=124
F35A Swanville 32.14 354 P P 06 37 13.8 -0.3
baz=172,SNR=83
F46A Macinaw City C 32.14 7 P P 06 37 13.9 -0.2
baz=190,SNR=44
F34A Alexandria 32.15 353 P P 06 37 13.7 -0.5
baz=170,SNR=52
COWI Conover 32.16 1 eP P 06 37 13.9 -0.4
F44A Big Bay de Noc 32.17 5 P P 06 37 14.0 -0.3
baz=186,SNR=39
SCI2 San Clemente I 32.19 311 P P 06 37 15.0 +0.3
baz=120
SADO Sadowa 32.19 15 P P 06 37 14.3 -0.2
comp=Z,73nm,0.7s,baz=220,slow=9.0,SNR=50
SHOC Shoshone, Teco 32.19 318 P P 06 37 15.7 +0.9
baz=126
BFSC Mount Baldy Ra 32.20 314 P P 06 37 16.5 +1.5
baz=122,SNR=13
GSC Goldstone, Bar 32.20 316 P P 06 37 16.3 +1.4
baz=125,SNR=7.0
GSC Goldstone, Bar 32.20 316 ePcP PcP 06 40 02.7 +1.5
QUA2 Belchertown 32.21 25 eP P 06 37 14.8 0.0
QUA2 epP pP 06 37 37.8 -1.5
BRYW Bryant College 32.25 26 eP P 06 37 15.3 +0.1
CIS Catalina Islan 32.30 312 P P 06 37 17.2 +1.5
baz=120
M65A Busby, Falmout 32.36 28 P P 06 37 16.7 +0.7
baz=217
FMP Fort Macarthur 32.37 313 P P 06 37 16.1 -0.2
baz=121
E39A Mellen 32.43 359 P P 06 37 16.3 -0.3
baz=179,SNR=38
RSSD Black Hills 32.46 341 P P 06 37 17.9 +0.7
baz=154
RSSD Black Hills 32.46 341 eP P 06 37 17.8 +0.7
RSSD Black Hills 32.46 341 eP P 06 37 17.8 +0.6
MWC Mount Wilson 32.47 314 eP P 06 37 19.6 +2.2
MWC Mount Wilson 32.47 314 eP P 06 37 19.6 +2.2
F32A Veblen 32.48 351 P P 06 37 15.7 -1.4
baz=167,SNR=5.7
E40A Wakefield 32.49 0 P P 06 37 17.1 -0.1
baz=180,SNR=144
E41A Kenton 32.53 1 P P 06 37 16.7 -0.8
baz=182,SNR=26
E43A Lone Tree Farm 32.53 4 P P 06 37 17.2 -0.3
baz=185,SNR=78
E43A Lone Tree Farm 32.53 4 eP P 06 37 17.2 -0.3
E42A Champion 32.53 3 P P 06 37 17.1 -0.4
baz=184,SNR=38
PASC Pasadena Art C 32.53 313 eP P 06 37 19.7 +2.0
ACCN Adirondack Com 32.63 22 eP P 06 37 18.8 +0.4
E45A Wooded Hills, 32.66 6 P P 06 37 18.9 +0.2
baz=189,SNR=14
E37A Wrenshall 32.68 357 P P 06 37 18.4 -0.4
baz=176
DECC Green Verdugo 32.68 313 P P 06 37 20.9 +1.9
baz=122
E36A McGregor 32.68 356 P P 06 37 18.3 -0.6
baz=174,SNR=34
E38A The Farm, Brul 32.68 358 P P 06 37 18.4 -0.4
baz=177,SNR=54
E38A The Farm, Brul 32.68 358 eP P 06 37 18.5 -0.4
HRV Adam Dziewonsk 32.73 26 P P 06 37 19.1 -0.2
baz=214
HRV Adam Dziewonsk 32.73 26 eP P 06 37 19.7 +0.4
HRV Adam Dziewonsk 32.73 26 eP P 06 37 19.7 +0.4
BCX Boston College 32.75 26 eP P 06 37 19.9 +0.4
EDW2 Edwards Air Fo 32.77 315 P P 06 37 21.3 +1.4
baz=123,SNR=13
TPNV Topopah Spring 32.81 319 P P 06 37 22.0 +1.7
baz=128,SNR=11
TPNV Topopah Spring 32.81 319 eP P 06 37 22.7 +2.4
TPNV ePcP PcP 06 40 04.6 +1.7
TPNV Topopah Spring 32.81 319 eP P 06 37 22.7 +2.4
TPNV e 06 40 04.6
E35A Pequot Lakes 32.81 354 P P 06 37 20.1 +0.1
baz=172,SNR=91
E34A Wadena 32.85 353 P P 06 37 20.4 +0.1
baz=171,SNR=125
E44A Grand Marais A 32.85 5 P P 06 37 20.7 +0.3
baz=187,SNR=5.6
E44A Grand Marais A 32.85 5 eP P 06 37 20.6 +0.3
LRMC Laurel Mtn Rad 32.89 316 P P 06 37 22.5 +1.5
baz=124
FURC Furnace Creek, 32.91 318 P P 06 37 22.6 +1.6
baz=126,SNR=8.6
NCB Newcomb 32.94 21 eP P 06 37 21.3 +0.1
DUG Dugway, Tooele 32.97 327 P P 06 37 22.8 +1.1
baz=136
DUG Dugway, Tooele 32.97 327 eP P 06 37 23.8 +2.1
DUG Dugway, Tooele 32.97 327 eP P 06 37 23.8 +2.1
PLVO Plevna 32.99 17 eP P 06 37 21.4 -0.1
SNCC San Nicolas Is 33.03 311 P P 06 37 23.3 +1.2
baz=119
MPMC Manual Prospec 33.09 317 P P 06 37 24.1 +1.3
baz=125,SNR=33
BLG Laguna Peak, P 33.12 313 P P 06 37 24.4 +1.4
baz=120
PTGA Pitinga 33.13 114 P P 06 37 21.9 -1.2
comp=Z,74nm,0.8s,baz=300,slow=9.3,SNR=58
PTGA PcP PcP 06 40 04.4 +0.4
comp=Z,9.7nm,0.8s,baz=198,slow=2.6,SNR=4.1
PTGA LR LR 06 51 47.6
comp=Z,586nm,20.3s,baz=296,slow=38
PTGA Pitinga 33.13 114 eP P 06 37 22.4 -0.8
PTGA PcP PcP 06 40 04.4 +0.4
PTGA e 06 51 47.6
D41A Chassel 33.13 2 P P 06 37 22.3 -0.5
baz=182,SNR=34
D41A Chassel 33.13 2 eP P 06 37 22.3 -0.5
OSI Osito Audit: C 33.14 314 P P 06 37 24.2 +1.1
baz=122
OSI Osito Audit: C 33.14 314 eP P 06 37 24.7 +1.6
D37A Cotton 33.27 357 P P 06 37 23.4 -0.5
baz=176,SNR=50
E31A Nome 33.27 350 P P 06 37 23.2 -0.8
baz=166,SNR=16
R11A Troy Canyon, C 33.28 322 P P 06 37 26.0 +1.6
baz=130,SNR=21
R11A Troy Canyon, C 33.28 322 eP P 06 37 26.1 +1.8
DAC Darwin (Calif) 33.28 317 eP P 06 37 27.1 +2.7
DAC ePcP PcP 06 40 06.8 +2.5
DAC Darwin (Calif) 33.28 317 eP P 06 37 27.1 +2.7
DAC e 06 40 06.8
D35A Remer 33.30 355 P P 06 37 23.6 -0.6
baz=173,SNR=67
D36A Goodland 33.33 356 P P 06 37 23.7 -0.8
baz=174,SNR=56
D36A Goodland 33.33 356 eP P 06 37 23.7 -0.8
BW06 Boulder Array 33.38 333 P P 06 37 25.1 -0.1
baz=144
BW06 Boulder Array 33.38 333 eP P 06 37 23.3 -1.9
PD31 Pinedale Array 33.38 333 eP P 06 37 26.4 +1.2
PD31 ePcP PcP 06 40 04.1 -0.4
PDAR Pinedale Array 33.38 333 P P 06 37 24.7 -0.5
comp=Z,2.4nm,0.5s,baz=113,slow=10,SNR=19
PDAR pP pP 06 37 47.1 -2.7
comp=Z,3.3nm,0.7s,baz=125,slow=7.4,SNR=5.5
PDAR PcP PcP 06 40 04.1 -0.4
comp=Z,4.5nm,0.6s,baz=86,slow=5.5,SNR=15
PDAR ScP ScP 06 43 40.9 +2.0
comp=Z,8.1nm,1.2s,baz=108,slow=3.3,SNR=9.8
PDAR PKiKP PKiKP 06 47 29.0 -0.8
comp=Z,1.6nm,0.7s,baz=69,slow=3.2,SNR=11
LONY Lake Ozonia 33.38 20 P P 06 37 24.9 0.0
baz=208,SNR=40
LONY Lake Ozonia 33.38 20 eP P 06 37 25.0 0.0
HWUT Hardware Ranch 33.39 330 eP P 06 37 26.7 +1.4
HWUT ePcP PcP 06 40 05.4 +0.9
SCZ2 Santa Cruz Isl 33.48 312 P P 06 37 27.1 +1.1
baz=120
FFD Franklin Falls 33.48 25 eP P 06 37 26.6 +0.7
ARVC Arvin 33.49 314 P P 06 37 27.9 +1.9
baz=122,SNR=14
ISA Isabella, Lake 33.53 315 P P 06 37 28.2 +1.7
baz=123,SNR=13
ISA Isabella, Lake 33.53 315 eP P 06 37 28.8 +2.3
ISA ePcP PcP 06 40 06.7 +1.8
ISA Isabella, Lake 33.53 315 eP P 06 37 28.8 +2.3
ISA e 06 40 06.7
GRAC Grapevine Rang 33.55 318 P P 06 37 28.8 +2.2
baz=126,SNR=14
CWC Cottonwood Cre 33.70 317 P P 06 37 28.3 +0.2
baz=125
VT1 Waterbury 33.78 23 eP P 06 37 28.8 +0.3
C38A Sawbill Land. 33.78 359 P P 06 37 27.3 -1.1
baz=178,SNR=48
C37A Embarrass 33.83 357 P P 06 37 27.9 -0.9
baz=176,SNR=18
C39A Grand Marais 33.87 360 P P 06 37 27.8 -1.4
baz=180
C36A Pine Crest Far 33.89 357 P P 06 37 28.6 -0.7
baz=175,SNR=98
C35A Jirik Farms, M 33.91 355 P P 06 37 28.9 -0.6
baz=173,SNR=218
C34A RKJ Ranch, Bem 33.94 354 P P 06 37 29.1 -0.7
baz=171,SNR=43
C40A Isle Royale Na 33.97 1 P P 06 37 29.0 -1.1
baz=181
C40A Isle Royale Na 33.97 1 eP P 06 37 29.5 -0.5
LBNH Lisbon 34.02 24 P P 06 37 30.3 -0.2
baz=212
LBNH Lisbon 34.02 24 eP P 06 37 30.9 +0.4
LBNH Lisbon 34.02 24 eP P 06 37 30.9 +0.4
EYMN Ely 34.02 358 P P 06 37 29.6 -0.8
baz=177,SNR=63
EYMN Ely 34.02 358 eP P 06 37 29.6 -0.8
VES Vestal, Richgr 34.04 315 P P 06 37 32.7 +1.9
baz=123,SNR=20
PKM Mcpherson Peak 34.05 313 P P 06 37 32.9 +1.7
baz=121,SNR=9.8
AHID Auburn Hatcher 34.06 332 eP P 06 37 31.6 +0.5
C33A Trail 34.15 353 P P 06 37 30.2 -1.3
baz=170,SNR=19
TIN Tinemaha, Big 34.15 318 P P 06 37 33.0 +1.2
baz=125
SMMC Simmler 34.40 314 P P 06 37 35.9 +2.0
baz=121
REDW Red Top Meadow 34.42 333 eP P 06 37 34.8 +0.5
SNOW Snow King Moun 34.46 333 eP P 06 37 35.4 +0.8
LOHW Long Hollow 34.51 333 eP P 06 37 35.8 +0.8
B35A Bob, Littlefor 34.55 356 P P 06 37 34.1 -0.8
baz=174,SNR=90
B35A Bob, Littlefor 34.55 356 eP P 06 37 34.2 -0.8
TPAW Teton Pass 34.57 333 eP P 06 37 36.5 +0.9
MOOW Moose Ponds 34.68 333 eP P 06 37 37.1 +0.6
AGMN Agassiz Nation 34.69 353 P P 06 37 35.8 -0.3
baz=170,SNR=245
AGMN Agassiz Nation 34.69 353 eP P 06 37 35.9 -0.3
FXWY Fox Creek 34.72 333 eP P 06 37 36.7 -0.1
B34A Aery, Baudette 34.75 355 P P 06 37 36.2 -0.5
baz=172,SNR=153
PAGB Antelope Grade 34.79 314 eP P 06 37 39.8 +2.5
PAGB ePcP PcP 06 40 10.4 +2.0
TRQ Mont Tremblant 34.81 19 eP P 06 37 37.3 -0.1

MDND Maddock 34.82 349 P **P 06 37 37.6 +0.2**
baz=164,SNR=59
MDND Maddock 34.82 349 *e*P **P 06 37 37.4 0.0**
MLAC Mammoth, Mammo 34.87 318 P **P 06 37 38.6 +0.4**
baz=125,SNR=6.0
IMW Indian Meadow 34.88 333 *e*P **P 06 37 39.0 +0.7**
IMW *e*PcP **PcP 06 40 10.2 +1.4**
NV11 Mina Array Sit 34.91 320 *e*P **P 06 37 40.5 +2.0**
FLWY Flagg Ranch 34.93 344 *e*P **P 06 37 39.7 +1.1**
OMMB Old Mammoth Mi 34.97 318 *e*P **P 06 37 41.2 +2.0**
SAML Samuel 34.98 129 *e*P **P 06 37 37.6 -1.5**
SAML Samuel 34.98 129 *e*P **P 06 37 37.6 -1.5**
NV01 Mina Array Sit 35.00 320 *e*P **P 06 37 40.8 +1.5**
NV01 *e*PcP **PcP 06 40 10.0 +0.8**
NV01 *e* 06 55 54.2
NVAR Mina Array Bea 35.00 320 P **P 06 37 41.0 +1.7**
comp=Z,39nm,0.8s,baz=135,slow=8.1,SNR=216
NVAR PcP **PcP 06 40 10.0 +0.8**
comp=Z,14nm,0.9s,baz=138,slow=3.7,SNR=7.0
NVAR ScP **ScP 06 43 47.4 +2.6**
comp=Z,4.7nm,0.8s,baz=137,slow=4.5,SNR=11
NVAR PKiKP **PKiKP 06 47 32.3 +1.2**
comp=Z,0.6nm,0.7s,baz=144,slow=1.7,SNR=3.7
NVAR LR LR 06 55 54.2
comp=Z,930nm,18.4s,baz=225,slow=43
LHV Little Huntoon 35.02 319 *e*P **P 06 37 41.8 +2.6**
MDPB Devils Postpil 35.03 318 *e*P **P 06 37 41.8 +2.1**
H17A Grant Village 35.13 334 P **P 06 37 41.1 +0.8**
baz=144,SNR=6.6
H17A Grant Village 35.13 334 *e*P **P 06 37 42.8 +2.5**
RLMT Red Lodge 35.19 336 P **P 06 37 41.0 +0.2**
baz=146,SNR=12
RLMT Red Lodge 35.19 336 *e*P **P 06 37 41.0 +0.2**
WVL Waterville 35.20 26 *e*P **P 06 37 41.4 +0.7**
KVN Kaiserville 35.25 321 *e*P **P 06 37 42.9 +1.5**
KVN *e*PcP **PcP 06 40 11.5 +1.6**
KVN Kaiserville 35.25 321 *e*P **P 06 37 42.9 +1.5**
KVN *e* 06 40 11.5
RYN Ryan 35.26 320 *e*P **P 06 37 43.6 +2.2**
A33A Warroad 35.27 354 P **P 06 37 40.9 -0.2**
baz=171,SNR=251
LAO LASA Array 35.45 341 P **P 06 37 42.8 0.0**
baz=152,SNR=18
LAO LASA Array 35.45 341 *e*P **P 06 37 43.3 +0.5**
BMN Battle Mountai 35.59 323 *e*P **P 06 37 45.6 +1.4**
BMN Battle Mountai 35.59 323 *e*P **P 06 37 45.6 +1.4**
WAKR Walker 35.76 319 *e*P **P 06 37 48.2 +2.4**
QLMT Earthquake Lak 35.84 334 *e*P **P 06 37 47.5 +1.1**
GCMT Greycliff 35.90 336 *e*P **P 06 37 47.0 +0.2**
YERR Yerington 35.92 320 *e*P **P 06 37 49.0 +1.8**
PKME Peaks-Kenny Pk 35.92 25 P **P 06 37 46.9 +0.1**
baz=216,SNR=8.0
PKME Peaks-Kenny Pk 35.92 25 *e*P **P 06 37 47.3 +0.5**
CMB Columbia Colle 36.11 317 *e*P **P 06 37 50.0 +1.4**
CMB *e*PcP **PcP 06 40 13.5 +1.2**
CMB Columbia Colle 36.11 317 *e*P **P 06 37 50.0 +1.4**
CMB *e* 06 40 13.5
PNTR Pine Nut 36.21 319 *e*P **P 06 37 51.8 +2.2**
HLID Hailey 36.25 330 P **P 06 37 50.4 +0.5**
baz=137,SNR=14
HLID Hailey 36.25 330 *e*P **P 06 37 50.2 +0.4**
EMMW East Machias 36.27 28 *e*P **P 06 37 50.8 +1.0**
VCNR Virginia City 36.36 320 *e*P **P 06 37 53.0 +2.1**
PAHR Pah Rah Range 36.44 320 *e*P **P 06 37 53.2 +1.8**
DGMT Dagmar 36.46 344 P **P 06 37 51.9 +0.5**
baz=156,SNR=36
DGMT Dagmar 36.46 344 *e*P **P 06 37 51.9 +0.5**
MCMT McKenzie Canyo 36.46 332 *e*P **P 06 37 53.1 +1.4**
BOZ Bozeman (W) 36.54 334 P **P 06 37 53.0 +0.7**
baz=143,SNR=47
BOZ Bozeman (W) 36.54 334 *e*P **P 06 37 53.0 +0.7**
RUBR Rubicon Trail 36.54 319 *e*P **P 06 37 53.9 +1.5**
ULM Lac du Bonnet 36.61 354 P **P 06 37 51.6 -1.1**
comp=Z,109nm,0.7s,baz=169,slow=9.0,SNR=57
ULM Lac du Bonnet 36.61 354 *e*P **P 06 37 51.7 -0.9**
DLMT Dillon 36.77 333 *e*P **P 06 37 55.4 +1.2**
MFID Camas Ranch 36.85 328 *e*P **P 06 37 56.3 +1.4**
LPAZ La Paz 36.95 143 P **P 06 37 58.0 +1.5**
comp=Z,39nm,0.8s,baz=329,slow=6.0,SNR=119
LPAZ ScP **ScP 06 43 56.8 +4.1**
comp=Z,8.9nm,1.2s,baz=15,slow=3.5,SNR=6.1
LPAZ La Paz 36.95 143 *e*P **P 06 37 57.4 +0.8**
LPAZ *e* 06 37 57.8
AFDM Forest Hills D 37.00 318 *e*P **P 06 37 57.5 +1.4**
AFDM *e*PcP **PcP 06 40 16.5 +1.6**
LRM Limekiln Ridge 37.06 334 *e*P **P 06 37 57.7 +0.8**
BEKR Beckworth 37.14 320 *e*P **P 06 37 59.0 +1.5**
HRY Holter Researc 37.52 335 *e*P **P 06 38 01.0 +0.5**
ORV Oroville 37.68 319 *e*P **P 06 38 03.8 +2.0**
ORV Oroville 37.68 319 P **P 06 38 03.8 +2.0**
ORV pmax pmax
comp=Z,9.0nm,0.9s
WVOR Wild Horse Val 37.70 325 *e*P **P 06 38 03.0 +0.9**
WVOR Wild Horse Val 37.70 325 *e*P **P 06 38 03.0 +0.9**
EGMT Eagleton 37.80 338 P **P 06 38 03.4 +0.5**
baz=148,SNR=20
EGMT Eagleton 37.80 338 *e*P **P 06 38 03.3 +0.5**
J08A Circle Bar Ran 38.21 326 *e*P **P 06 38 07.0 +0.6**
O03D Paynes Creek 38.29 319 P **P 06 38 07.5 +0.5**
baz=124,SNR=26
O03D Paynes Creek 38.29 319 *e*P **P 06 38 08.1 +1.0**
MOD Modoc Plateau 38.32 323 *e*P **P 06 38 07.8 +0.4**
MNMC Minye Minye 38.47 148 *e*P **P 06 38 10.6 +1.7**
MSO Missoula 38.50 333 P **P 06 38 08.9 +0.2**
baz=141,SNR=13
MSO Missoula 38.50 333 *e*P **P 06 38 09.1 +0.4**
BMO Blue Mountains 38.62 329 *e*P **P 06 38 09.4 -0.3**
BMO Blue Mountains 38.62 329 *e*P **P 06 38 09.4 -0.3**
WDC Whiskeytown Da 38.91 319 *e*P **P 06 38 11.5 -0.7**
WDC *e*PcP **PcP 06 40 21.6 +0.8**
WDC Whiskeytown Da 38.91 319 *e*P **P 06 38 11.5 -0.7**
WDC *e* 06 40 21.6
KCPM Cahto Peak 39.10 317 *e*P **P 06 38 15.6 +1.7**
M04C Macdoel 39.17 321 P **P 06 38 14.8 +0.4**
baz=126,SNR=13
K05A Summer Lake 39.17 323 *e*P **P 06 38 15.7 +1.2**
K05A *e*S **S 06 44 04.0 -2.5**
N02D Trinity Center 39.24 320 P **P 06 38 13.3 -1.6**
baz=124
I07A Izee 39.25 326 *e*P **P 06 38 15.6 +0.6**
F10A Beach Ranch, E 39.37 330 *e*P **P 06 38 16.1 0.0**
KMRM Mail Ridge 39.47 318 *e*P **P 06 38 18.1 +1.2**
M02C Callahan 39.57 320 P **P 06 38 17.4 -0.3**
baz=124,SNR=9.8
K04D Chiloquin, OR 39.61 323 P **P 06 38 17.6 -0.5**
baz=127
YBH Yreka Blue Hor 39.67 321 P **P 06 38 17.8 -0.7**
comp=Z,5.9nm,0.6s,baz=124,slow=4.8,SNR=34
YBH ScP **ScP 06 44 04.2 +2.2**
comp=Z,1.4nm,0.8s,baz=215,slow=5.3,SNR=3.7
YBH LR LR 06 57 05.2
comp=Z,634nm,20.3s,baz=142,slow=40
YBH Yreka Blue Hor 39.67 321 *e*P **P 06 38 18.7 +0.2**
YBH Yreka Blue Hor 39.67 321 *e*P **P 06 38 18.7 +0.2**
J05D Fort Rock, OR 39.71 324 P **P 06 38 18.9 -0.1**
baz=128
KHMM Horse Mountain 39.83 319 *e*P **P 06 38 21.0 +1.0**
PINE Pine Mountain 39.86 325 *e*P **P 06 38 20.6 +0.4**
JCC Jacoby Creek, 39.99 319 *e*P **P 06 38 21.9 +0.8**
PB01 IPOC Station P 40.12 149 *e*P **P 06 38 23.6 +1.1**
PB01 *e*PcP **PcP 06 40 27.6 +2.6**
J04D Umpqua Nationa 40.19 323 P **P 06 38 23.3 +0.4**
baz=127,SNR=10.0
E09A Wood Farm, Sta 40.21 330 *e*P **P 06 38 23.6 +0.9**
WALA Waterton Lakes 40.23 336 *e*P **P 06 38 23.8 +0.7**
HUMO Hull Mountain 40.32 322 *e*P **P 06 38 24.4 +0.5**
I05D Terrebonne, OR 40.43 325 P **P 06 38 23.7 -1.0**
baz=129,SNR=6.2
L02D Cave Junction, 40.46 321 P **P 06 38 24.2 -0.8**
baz=124
I04A Tendick Farm, 40.70 324 P **P 06 38 27.3 +0.4**
baz=127
BLTW Bickleton 40.82 328 *e*P **P 06 38 30.9 +3.0**
KBO Bosley Butte 40.87 320 *e*P **P 06 38 30.3 +1.8**
PB04 IPOC Station P 40.91 151 *e*P **P 06 38 30.8 +1.8**
D08A Wollman Farm, 40.97 330 *e*P **P 06 38 30.1 +1.1**
G05D Wamic, OR 40.99 326 P **P 06 38 28.7 -0.5**
baz=130
NEW Newport 40.99 332 P **P 06 38 28.6 -0.6**
comp=Z,3.5nm,0.6s,baz=146,slow=8.6,SNR=5.8
NEW PcP **PcP 06 40 27.0 -0.3**
comp=Z,5.7nm,0.6s,baz=80,slow=6.0,SNR=6.3
NEW Newport 40.99 332 P **P 06 38 27.7 -1.6**
baz=138
NEW Newport 40.99 332 *e*P **P 06 38 30.4 +1.1**
NEW PcP **PcP 06 40 27.0 -0.3**
NEW Newport 40.99 332 *e*P **P 06 38 30.4 +1.1**
NEW 06 40 27.0
H04A Detroit Lake 41.12 325 *e*P **P 06 38 30.4 0.0**
C09A Chrisman Ranch 41.18 331 *e*P **P 06 38 31.6 +0.7**
I03D Drain, OR 41.19 323 P **P 06 38 30.6 -0.3**
baz=126
SIV San Ignacio 41.22 135 P **P 06 38 30.8 -0.7**
comp=Z,37nm,0.7s,baz=315,slow=8.0,SNR=72
SIV PcP **PcP 06 40 29.9 +1.4**
comp=Z,36nm,0.7s,baz=340,slow=4.1,SNR=9.0
SIV ScP **ScP 06 44 12.6 +4.1**
comp=Z,5.7nm,1.0s,baz=302,slow=4.0,SNR=6.8
KEBM Edson Butte 41.31 321 *e*P **P 06 38 33.5 +1.6**
COR Corvallis 41.69 324 P **P 06 38 34.9 0.0**
COR pmax pmax
comp=Z,161nm,2.1s
FFC Flin Flon 41.84 350 *e*P **P 06 38 36.2 +0.2**
FFC Flin Flon 41.84 350 *e*P **P 06 38 36.2 +0.2**
LTY Liberty 41.97 329 *e*P **P 06 38 38.1 +0.7**
G03D McMinnville, O 42.05 325 P **P 06 38 38.8 +1.0**
baz=127
B08A Colville Reser 42.08 331 *e*P **P 06 38 38.4 +0.3**
B08A *e*PcP **PcP 06 40 33.0 +2.1**
LON Longmire 42.22 327 *e*P **P 06 38 40.1 +0.8**
LON *e*PcP **PcP 06 40 31.8 +0.3**
LON Longmire 42.22 327 *e*P **P 06 38 40.1 +0.8**
LON *e* 06 40 31.8
F04D Rainier, OR 42.44 326 P **P 06 38 41.6 +0.6**
baz=128
C06D Leavenworth 42.53 329 P **P 06 38 42.0 +0.2**
baz=132
E03A Lebam 43.03 326 *e*P **P 06 38 47.3 +1.5**
B06A Marblemount 43.23 330 *e*P **P 06 38 47.1 -0.2**
B05A Bryant 43.36 329 P **P 06 38 47.4 -1.0**
baz=131
GO02 Mina Guanaco 43.60 153 *e*P **P 06 38 51.7 +0.7**
NLWA Neilton Lookou 43.72 327 *e*P **P 06 38 52.3 +0.9**
NLWA *e*pP **pP 06 39 18.2 +1.2**
A04D Lummi Island 43.97 329 P **P 06 38 53.5 +0.3**
baz=131
SCHQ Schefferville 44.73 19 P **P 06 38 57.9 -1.4**
comp=Z,154nm,0.7s,baz=219,slow=6.3,SNR=59
SCHQ Schefferville 44.73 19 *e*P **P 06 38 58.8 -0.5**
LLLB Lillooet 44.84 332 *e*P **P 06 39 00.7 +0.4**
LLLB *e*pP **pP 06 39 28.3 +2.3**
FCC Fort Churchill 44.94 357 *e*P **P 06 39 00.2 -0.6**
FCC Fort Churchill 44.94 357 *e*P **P 06 39 00.2 -0.6**
GO03 Copiap 45.45 155 *e*P **P 06 39 06.5 +1.1**
LCO Las Campanas 46.53 156 *e*P **P 06 39 15.0 +1.0**
LCO Las Campanas 46.53 156 *e*P **P 06 39 15.0 +1.0**
AHML Horco Molle 46.99 149 ‖ *e*P **P 06 39 18.0 +0.6**
VCA Vinchina 47.31 154 ‖ *e*P **P 06 39 21.6 +1.6**
GO04 Tololo Observa 47.53 157 *e*P **P 06 39 23.3 +1.5**
AROD Rodeo 48.04 156 ‖ *e*P **P 06 39 28.2 +2.4**
CYA Choya 48.14 151 ‖ *e*P **P 06 39 26.8 +0.5**
ACDV Cuesta del Vie 48.18 155 ‖ *e*P **P 06 39 28.3 +1.6**
ACLC CERRO LA CRUZ 48.45 153 ‖ *e*P **P 06 39 29.6 +0.8**
AMOG MOGNA 49.11 155 ‖ *e*P **P 06 39 35.1 +1.4**
RTLL Cerro Villicun 49.46 156 ‖ *e*P **P 06 39 37.1 +0.7**
APLL PUNTA DE LOS L 49.47 153 ‖ *e*P **P 06 39 36.9 +0.5**
RTLS Leoncito 49.56 157 ‖ *e*P **P 06 39 38.5 +1.1**
AUSP Uspallata 49.90 157 ‖ *e*P **P 06 39 41.4 +1.4**
RTCV Cerro Valdivia 49.91 156 ‖ *e*P **P 06 39 41.2 +1.5**
ROC1 El Roble 49.98 159 *e*P **P 06 39 41.0 +0.5**
PEL Peldehue 50.25 159 *e*P **P 06 39 43.4 +1.1**
PEL Peldehue 50.25 159 *e*P **P 06 39 43.4 +1.1**
ASAL Salagasta 50.44 157 *e*P **P 06 39 44.4 +0.6**
ARCO CERRO ARCO 50.62 157 ‖ *e*P **P 06 39 46.5 +1.3**
ACAN Cantantal 50.81 155 ‖ *e*P **P 06 39 48.2 +1.7**
AAGR Agrelo 50.88 157 ‖ *e*P **P 06 39 48.3 +1.2**
CPUP Villa Florida 51.06 141 P **P 06 39 47.8 -0.6**
comp=Z,17nm,0.9s,baz=330,slow=7.6,SNR=14
CPUP PcP **PcP 06 41 04.5 +1.7**
comp=Z,11nm,0.9s,baz=299,slow=5.5,SNR=5.3
CPUP LR LR 07 01 53.7
comp=Z,387nm,20.2s,baz=321,slow=36
TCA Tanti 51.14 152 ‖ *e*P **P 06 39 48.4 -0.6**
AVIZ Vizcacheras 51.34 157 ‖ *e*P **P 06 39 52.6 +2.1**
GO05 HualaæØ 51.54 161 *e*P **P 06 39 52.5 +0.6**
MRA San Martin 51.56 154 ‖ *e*P **P 06 39 53.1 +0.9**
YKA Yellowknife Ar 51.62 346 P **P 06 39 51.4 -0.7**
comp=Z,22nm,0.7s,baz=139,slow=6.9,SNR=55
YKA pP **pP 06 40 13.6 -4.8**
comp=Z,18nm,0.8s,baz=146,slow=7.6,SNR=8.7
YKA LR LR 07 05 28.2
comp=Z,35nm,20.1s,baz=146,slow=40
YKB5 Yellowknife Ar 51.62 346 *e*P **P 06 39 51.1 -1.0**
YKW3 Yellowknife Ar 51.69 346 *e*P **P 06 39 51.8 -0.7**
FRB Frobisher Bay 52.05 12 P **P 06 39 54.1 -1.1**
FRB pmax pmax
comp=Z,88nm,0.9s
DLBC Dease Lake 53.58 335 *e*P **P 06 40 07.8 +1.2**
TAOE Nuku Hiva Isla 54.60 248 *e*S **S 06 47 42.6 -3.8**
comp=Z,441nm,27.6s
TAOE *e*LR LR 06 55 51.2
comp=Z,2µm,30.4s,baz=64
TAOE Nuku Hiva Isla 54.60 248 *e*T T 07 37 57.0
comp=Z,83nm,0.3s
SPB Sao Paulo 55.87 131 *e*P **P 06 40 24.4 +0.8**
IVI Ivigtut 56.07 23 *e*P **P 06 40 23.2 -1.2**
NRS Narsarsuaq 57.10 24 *i*P **P 06 40 30.2 -1.6**
comp=Z,80nm,0.8s
NRS *i* 06 40 54.3
RCBR Riachuelo 57.18 106 *e*P **P 06 40 32.8 -0.3**
RCBR Riachuelo 57.18 106 *e*P **P 06 40 32.8 -0.3**
PLCA Paso Flores 57.23 162 P **P 06 40 33.7 +0.6**
comp=Z,32nm,0.9s,baz=3.0,slow=8.8,SNR=32
PLCA pP **pP 06 40 57.4 -2.4**
comp=Z,22nm,0.9s,baz=342,slow=7.6,SNR=5.5
PLCA LR LR 06 59 31.4
comp=Z,473nm,21.8s,baz=14,slow=30
PLCA Paso Flores 57.23 162 *e*P **P 06 40 34.1 +1.1**
PLCA *e*pP **pP 06 40 57.4 -2.4**
PLCA *e* 06 59 31.4
PLCA Paso Flores 57.23 162 *e*P **P 06 40 34.1 +1.1**
RKT Rikitea 57.30 231 *e*S **S 06 48 19.9 -1.8**
comp=Z,1µm,33.2s
RKT *e*LR LR 06 57 37.7
comp=Z,1µm,33.2s
RKT Rikitea 57.30 231 *e*T T 07 41 20.7
comp=Z,26nm,0.3s
TRQA Tornquist 57.95 154 *e*P **P 06 40 38.7 +0.6**
TRQA Tornquist 57.95 154 *e*P **P 06 40 38.7 +0.6**
SFJD Kangerlussuaq 59.10 17 LR LR 07 07 04.0
comp=Z,1µm,19.6s,baz=228,slow=37
SFJD Kangerlussuaq 59.10 17 ⇑ *i*P **P 06 40 44.2 -1.4**
comp=Z,12nm,0.6s
SFJD *i* 06 41 08.2
SFJD Kangerlussuaq 59.10 17 *e*P **P 06 40 44.7 -0.9**
SFJD *e* 07 07 04.0
SFJD Kangerlussuaq 59.10 17 *e*P **P 06 40 44.7 -0.9**
DAWY Dawson 60.54 337 *e*P **P 06 40 54.5 -1.1**
ILULI Ilulissat 60.54 15 *i*P **P 06 40 53.2 -2.2**
comp=Z,18nm,1.1s
ILULI *i* 06 41 18.1
comp=Z,2µm,20.0s
ILULI Ilulissat 60.54 15 *e*P **P 06 40 54.1 -1.3**
ILULI Ilulissat 60.54 15 *e*P **P 06 40 54.1 -1.3**
RES Resolute Bay 60.89 359 *e*P **P 06 40 56.7 -1.0**
RES Resolute Bay 60.89 359 *e*P **P 06 40 56.7 -1.0**
INK Inuvik 61.13 343 *e*P **P 06 40 59.1 -0.3**
INK Inuvik 61.13 343 *e*P **P 06 40 59.1 -0.3**
BMRM Bremner River 61.16 333 *e*P **P 06 41 00.3 +0.4**
BMRM *e*pP **pP 06 41 27.7 +0.8**
EGAK Eagle 61.56 338 *e*P **P 06 41 01.4 -1.0**
MENT Mentasta 61.66 335 *e*P **P 06 41 03.3 +0.1**
KLU Klutina 61.96 333 *e*P **P 06 41 05.5 +0.2**
KLU *e*pP **pP 06 41 33.7 +1.3**
SCRK Sand Creek 62.25 336 *e*P **P 06 41 08.3 +1.1**
PAX Paxson 62.39 335 *e*P **P 06 41 08.0 -0.2**
PAX Paxson 62.39 335 *e*P **P 06 41 08.0 -0.2**
ANGG Ammassalik, Gr 62.46 22 *e*P **P 06 41 06.9 -1.5**
RIDG Independ'e Rid 62.48 336 *e*P **P 06 41 09.1 +0.4**
CHRN Cochrane 62.80 167 *e*P **P 06 41 11.9 +1.0**
GHO Glory Hole Cre 63.39 333 *e*P **P 06 41 14.5 -0.3**
KULLO Kullorsuaq 63.41 9 *i*P **P 06 41 13.4 -1.2**
comp=Z,18nm,0.8s
KULLO *i* 06 41 37.7
PMR Palmer 63.42 333 *e*P **P 06 41 14.2 -0.5**
PMR Palmer 63.42 333 *e*P **P 06 41 14.3 -0.5**
HDA Harding Lake 63.60 336 *e*P **P 06 41 15.9 -0.1**
IL1 Eielson Array 63.73 336 *e*P **P 06 41 15.9 -1.0**
ILAR Eielson Array 63.73 336 P **P 06 41 15.7 -1.2**
comp=Z,3.4nm,0.5s,baz=160,slow=4.7,SNR=45
ILAR PKPPKP **P'P'df 07 10 10.7 -0.4**
comp=Z,1.0nm,0.8s,baz=322,slow=4.1,SNR=5.8
ILB Eielson Array 63.73 336 *e*P **P 06 41 16.0 -0.8**
KDAK Kodiak Island 63.85 328 *i*P **P 06 41 18.3 +0.6**
VAH Vaihoa 63.86 245 *e*T T 07 49 31.0
comp=Z,12nm,0.3s
PMOR Pomariorio Ree 64.00 246 *e*T T 07 49 41.5
comp=Z,7.6nm,0.2s
CCB Clear Creek Bu 64.04 336 *e*P **P 06 41 17.6 -1.3**
WRH Wood River Hil 64.08 336 *e*P **P 06 41 18.3 -0.8**
SUA Susitna One 64.09 332 *e*P **P 06 41 19.7 +0.3**
SUA *e*pP **pP 06 41 47.3 +0.6**
MCK McKinley 64.13 335 *e*P **P 06 41 20.5 +1.0**
MCK *e*pP **pP 06 41 47.4 +0.6**
MCK McKinley 64.13 335 *e*P **P 06 41 20.5 +1.0**
MCK *e**PP **pP 06 41 47.4 +0.6**
MDM Murphy Dome 64.33 336 *e*P **P 06 41 20.2 -0.6**
TRF Thorofare Moun 64.59 334 *e*P **P 06 41 22.6 -0.1**
SKT Skwentna 64.62 333 *e*P **P 06 41 22.3 -0.5**
RSO Redoubt South 64.71 331 *e*P **P 06 41 23.5 -0.1**
KIP Kipapa 64.80 287 ⇑ *i*P **P 06 41 26.2 +1.6**
KIP pmax pmax
comp=Z,1µm,1.6s
PPLA Purkeypile 65.21 334 *e*P **P 06 41 27.3 +0.6**
PPLA *e*PcP **pP 06 41 55.0 +1.0**
MLY Manley 65.35 336 *e*P **P 06 41 26.5 -0.9**
SUMG Summit 65.89 15 *i*P **P 06 41 30.5 -0.7**
comp=Z,38nm,0.7s
SUMG *i* 06 41 54.8
comp=Z,1µm,18.0s
SUMG Summit 65.89 15 *e*P **P 06 41 30.4 -0.7**
SUMG Summit 65.89 15 *e*P **P 06 41 30.4 -0.7**
COLD Coldfoot 65.97 338 *e*P **P 06 41 31.5 +0.2**
SVW2 Sparrevohn 66.22 331 *e*P **P 06 41 32.6 -0.4**
TOLK Toolik Lake Re 66.31 340 P **P 06 41 33.1 -0.5**
baz=114,SNR=11
TOLK Toolik Lake Re 66.31 340 *e*P **P 06 41 33.4 -0.2**
PPT Papeete 66.52 244 LR LR 07 02 24.3
comp=Z,890nm,20.2s,baz=34,slow=28
PPT2 Papeete2 66.52 244 *e*S **S 06 50 15.3 -2.9**
comp=Z,858nm,25.8s
PPT2 Papeete2 66.52 244 *e*LR LR 07 01 26.5
comp=Z,3µm,30.0s,baz=58
PMOZ Porto Moniz, M 68.32 60 *e*P **P 06 41 44.8 -2.1**
PMOZ *e*S **S 06 50 44.0 +4.5**
BORG Borgarnes 68.53 25 LR LR 07 12 08.3
comp=Z,343nm,19.3s,baz=267,slow=36
TBI Tubuai 68.87 238 *e*S **S 06 50 43.2 -2.7**
comp=Z,332nm,28.0s
TBI Tubuai 68.87 238 *e*LR LR 07 02 46.4
comp=Z,2µm,31.8s,baz=60
TBI Tubuai 68.87 238 *e*T T 07 55 45.0
comp=Z,8.4nm,0.3s
DAG Danmarks Havn 72.37 13 ⇑ *i*P **P 06 42 09.3 -1.4**
comp=Z,15nm,0.7s
DAG *e* 06 42 33.3
comp=Z,1µm,22.0s
VAL Valentia 72.95 40 ‖ *i*P **P 06 42 14.8 +0.3**
VAL *i*S **S 06 51 32.5 +0.2**
PGAV Gavieira, Arco 74.81 50 *e*P **P 06 42 24.5 -1.2**
comp=Z,33nm,1.8s
PGAV *e*S **S 06 51 49.3 -4.5**
PCAS Casmilo, Conde 74.81 52 *e*P **P 06 42 25.1 -0.6**
comp=Z,43nm,1.0s
ALMR Almeirim 74.84 53 *e*P **P 06 42 25.1 -0.7**
comp=Z,60nm,0.9s
PFVI Vila Bisbo 74.84 55 *e*P **P 06 42 26.7 +0.8**
comp=Z,51nm,1.9s
PTEO Sao Teotonio 74.88 54 *e*P **P 06 42 27.1 +1.0**
comp=Z,31nm,1.3s
MORF Marmelete 74.97 55 *e*P **P 06 42 26.0 -0.6**
MORF *e*S **S 06 51 50.6 -5.0**
MORF Marmelete 74.97 55 *e*P **P 06 42 25.9 -0.8**
comp=Z,50nm,1.9s
PMTG Montargil 75.12 53 *e*P **P 06 42 26.8 -0.6**
comp=Z,22nm,1.0s
PMTG *e*pP **pP 06 42 52.4 -3.0**
PVIS Viseu 75.21 51 *e*P **P 06 42 26.7 -1.3**
comp=Z,22nm,1.7s
PVIS *e*pP **pP 06 42 52.8 -3.2**
POLO Lamas de Olo 75.22 50 *e*P **P 06 42 26.8 -1.3**
comp=Z,8.5nm,1.2s
POLO *e*pP **pP 06 42 53.6 -2.5**
MESJ Messejana 75.25 54 *e*P **P 06 42 27.6 -0.6**
MESJ *e*S **S 06 51 53.7 -4.9**
PVRL Vila Real 75.29 51 *e*P **P 06 42 27.4 -1.0**
comp=Z,13nm,1.0s
MTE Manteigas 75.50 51 *e*P **P 06 42 28.7 -1.0**
comp=Z,24nm,1.1s
MTE *e*S **SKiKP 06 51 37.7 -3.3**
MTE Manteigas 75.50 51 *e*P **P 06 42 27.4 -2.3**
PBDV Barranco-do-Ve 75.54 55 *e*P **P 06 42 30.0 +0.1**
comp=Z,49nm,1.5s
PCBR Castelo Branco 75.61 52 *e*P **P 06 42 29.1 -1.1**
comp=Z,27nm,1.2s
PCBR *e*pP **pP 06 42 55.5 -2.8**
PESTR Estremoz 75.63 53 *e*P **P 06 42 29.7 -0.7**
comp=Z,16nm,1.0s
PESTR Estremoz 75.63 53 *e*P **P 06 42 28.9 -1.5**
PVAQ Vaqueiros 75.69 55 *e*P **P 06 42 31.4 +0.6**
comp=Z,17nm,1.6s
PVAQ *e*S **S 06 52 04.0 +0.5**
PMRV Marv??o 75.72 52 *e*P **P 06 42 29.7 -1.2**
comp=Z,19nm,1.1s
PMRV *e*pP **pP 06 42 55.7 -3.3**
PMRV *e*S **S 06 51 59.9 -3.9**
MVO Moncorvo 75.81 51 *e*P **P 06 42 29.3 -2.2**
comp=Z,20nm,0.9s
MVO *e*S **S 06 52 00.9 -4.0**
PBRG Braganca 75.96 50 *e*P **P 06 42 30.5 -1.8**
comp=Z,19nm,1.8s
PBAR Barrancos 76.14 54 *e*P **P 06 42 32.3 -1.0**
RAR Rarotonga 76.79 244 LR LR 07 09 06.7
comp=Z,123nm,18.0s,baz=28,slow=30
ESK Eskdalemuir 76.95 36 *e*P **P 06 42 36.4 -1.1**
ESK Eskdalemuir 76.95 36 *e*P **P 06 42 36.4 -1.1**
QUIF Quistinic 77.79 43 *e*P **P 06 42 40.0 -2.3**
QUIF pmax pmax
comp=Z,15nm,0.9s
PAB San Pablo 78.05 52 *e*P **P 06 42 42.3 -1.8**
PAB San Pablo 78.05 52 *e*P **P 06 42 42.3 -1.8**
SGMF Saint Gilles 78.15 43 *e*P **P 06 42 41.5 -2.8**
SGMF pmax pmax
comp=Z,6.0nm,0.9s
ESDC Sonseca Array 78.32 52 P **P 06 42 43.1 -2.4**
comp=Z,4.2nm,0.5s,baz=286,slow=5.4,SNR=34
ESDC pP **pP 06 43 10.1 -3.6**
comp=Z,6.5nm,0.6s,baz=287,slow=4.6,SNR=5.0
ESDC LR LR 07 10 06.9
comp=Z,272nm,21.7s,baz=265,slow=30
ESLA Sonseca Array 78.32 52 *e*P **P 06 42 43.6 -1.9**
ES19 SONSECA Array 78.37 52 *e*P **P 06 42 43.3 -2.5**
MDT Midelt 78.85 59 LR LR 07 10 57.6
comp=Z,383nm,21.2s,baz=290,slow=31
FLN La Foliniere 79.44 42 *e*P **P 06 42 49.1 -2.3**
FLN pmax pmax
comp=Z,13nm,0.6s
LDF La Druitiere 79.71 42 *e*P **P 06 42 50.5 -2.3**
LDF pmax pmax
comp=Z,13nm,0.8s
SJPF Ste Jean 79.83 48 *e*P **P 06 42 51.8 -1.8**
SJPF pmax pmax
comp=Z,15nm,0.9s
SPA0 Spitsbergen Ar 79.86 12 *e*P **P 06 42 53.1 0.0**
SPA0 *e* 07 19 40.1
SPITS Spitsbergen Ar 79.86 12 P **P 06 42 52.1 -1.0**
comp=Z,11nm,0.6s,baz=259,slow=1.5,SNR=16
SPITS LR LR 07 19 40.1
comp=Z,813nm,20.0s,baz=285,slow=37
MFF Saint Martin d 80.01 44 *e*P **P 06 42 52.0 -2.5**
MFF pmax pmax
comp=Z,9.0nm,0.9s
PMSA Palmer Station 80.84 169 LR LR 07 12 37.7
comp=Z,325nm,18.0s,baz=333,slow=31
LFF La Frestale 80.91 46 *e*P **P 06 42 58.0 -1.3**
LFF pmax pmax
comp=Z,7.0nm,0.4s
RJF Les Rejaudoux 81.39 46 *e*P **P 06 42 59.4 -2.5**
RJF pmax pmax
comp=Z,4.0nm,0.6s
CAF Calviac 81.84 46 *e*P **P 06 43 02.3 -2.0**

CAF pmax pmax
comp=Z,16nm,1.3s
BGF Bois d'Agland 82.05 44 *e*P **P 06 43 02.7 -2.6**
BGF pmax pmax
comp=Z,6.0nm,0.6s
BILL Bilibino 82.30 338 *e*P **P 06 43 05.9 -0.3**
BILL Bilibino 82.30 338 *e*P **P 06 43 06.7 +0.5**
BILL *e**PP **sP 06 43 48.9 +2.4**
BILL pmax pmax
comp=Z,27nm,1.3s
AVF Avril sur Loir 82.34 44 *e*P **P 06 43 03.8 -3.0**
AVF pmax pmax
comp=Z,3.0nm,0.6s
SMF Signal de Mont 82.70 44 *e*P **P 06 43 05.7 -3.0**
SMF pmax pmax
comp=Z,7.0nm,0.8s
BCLA Clavier 82.83 40 ⇑P **P 06 43 07.9 -1.3**
KOWA Kowa 82.86 77 LR LR 07 16 30.1
comp=Z,259nm,21.1s,baz=260,slow=33
KOWA Kowa 82.86 77 *e*P **P 06 43 08.9 -1.2**
KOWA *e* 07 16 30.1
NB2 NORSAR Subarra 83.37 29 P **P 06 43 10.7 -1.2**
comp=Z,14nm,1.0s,baz=287,slow=5.3
NB2 NORSAR Subarra 83.37 29 P **P 06 43 10.3 -1.6**
NB2 NORSAR Subarra 83.37 29 P **P 06 43 10.7 -1.2**
baz=287,slow=5.3
NOA NORSAR Array B 83.37 29 LR LR 07 18 58.9
comp=Z,312nm,20.5s,baz=285,slow=35
NB201 NORSAR Array S 83.41 29 *e*P **P 06 43 11.8 -0.3**
WLF Walferdange 83.53 41 ⇑P **P 06 43 12.2 -0.7**
MUD Monsted U'grnd 83.60 33 *i* P **P 06 43 14.3 +1.2**
NC602 NORSAR Array S 83.61 29 *e*P **P 06 43 12.9 -0.2**
TIC Toumodi 83.63 85 *e*P **P 06 43 12.4 -1.7**
VIVF Saint-Julien-l 83.67 45 *e*P **P 06 43 12.0 -1.8**
VIVF pmax pmax
comp=Z,6.0nm,0.9s
LIC Lamto 83.72 85 *e*P **P 06 43 11.8 -2.7**
comp=Z,108nm,1.1s
DBIC Dimbokro 83.78 85 P **P 06 43 13.0 -1.8**
comp=Z,15nm,0.8s,baz=277,slow=4.0,SNR=16
DBIC LR LR 07 18 00.8
comp=Z,188nm,20.1s,baz=272,slow=34
DBIC Dimbokro 83.78 85 *e*P **P 06 43 13.7 -1.1**
DBIC *e* 07 18 00.8
DBIC Dimbokro 83.78 85 *e*P **P 06 43 13.7 -1.1**
KIC Kosan Boka 83.96 85 *e*P **P 06 43 13.3 -2.5**
comp=Z,54nm,0.9s
HAU Haudompre 84.06 42 P **P 06 43 13.3 -2.4**
HAU pmax pmax
comp=Z,10.0nm,0.6s
CABF La Chapelle 84.22 44 *e*P **P 06 43 14.7 -1.9**
CABF pmax pmax
comp=Z,10.0nm,1.0s
HINF Hinteralfeld 84.43 42 *e*P **P 06 43 15.1 -2.5**
HINF pmax pmax
comp=Z,2.0nm,0.4s
ORIF Oris-en-Rattie 84.48 45 *e*P **P 06 43 17.1 -0.9**
ORIF pmax pmax
comp=Z,8.0nm,0.9s
ECH Echery 84.53 42 *e*P **P 06 43 15.5 -2.5**
ECH Echery 84.53 42 *e*P **P 06 43 15.5 -2.5**
CDF Champ du Feu 84.56 42 *e*P **P 06 43 16.0 -2.3**
CDF pmax pmax
comp=Z,7.0nm,0.9s
HFS Hagfors 84.81 29 P **P 06 43 17.3 -1.8**
comp=Z,8.7nm,0.7s,baz=273,slow=2.5,SNR=14
HFS pP **pP 06 43 44.8 -3.0**
comp=Z,7.5nm,0.7s,baz=270,slow=2.7,SNR=4.6
LPL La Plagne 84.92 45 *e*P **P 06 43 18.7 -1.6**
LPL pmax pmax
comp=Z,7.0nm,0.8s
SENIN Lac Senin/Sane 85.09 44 *e*P **P 06 43 19.3 -1.8**
FRF La Foret Royal 85.35 46 *e*P **P 06 43 20.1 -2.1**
AFI Afiamalu 85.48 255 LR LR 07 14 06.9
comp=Z,98nm,19.6s,baz=78,slow=30
COP Copenhagen 85.58 34 *i* P **P 06 43 22.6 -0.4**
ARA0 ARCESS Array S 85.68 19 *e*P **P 06 43 21.9 -1.4**
ARA0 *e*PP **PP 06 46 40.9 -2.5**
ARA0 *e* 07 21 50.1
ARCES ARCESS Array B 85.68 19 P **P 06 43 21.9 -1.4**
comp=Z,6.1nm,0.6s,baz=295,slow=3.1,SNR=31
ARCES PP **PP 06 46 40.9 -2.5**
comp=Z,5.1nm,0.9s,baz=296,slow=9.3,SNR=6.2
ARCES LR LR 07 21 50.1
comp=Z,240nm,20.6s,baz=304,slow=36
SBF Sospel 85.83 46 *e*P **P 06 43 22.5 -2.2**
SBF pmax pmax
comp=Z,14nm,1.0s
TUE Stuetta 86.43 43 *e*P **P 06 43 25.8 -1.9**
TUE *e*pP **pP 06 43 57.5 +1.1**
DAVA Damuels 86.55 42 *e*P **P 06 43 26.9 -1.3**
comp=Z,9.0nm,0.6s
DAVOX Davos/Dischmat 86.69 43 LR LR 07 17 09.4
comp=Z,168nm,21.4s,baz=276,slow=32
GRFO Grafenberg 86.70 40 *e*P **P 06 43 28.2 -0.5**
GRFO Grafenberg 86.70 40 *e*P **P 06 43 28.2 -0.5**
FUORN Ofenpass-Fuorn 86.99 43 *e*P **P 06 43 29.2 -1.3**
RETA Reutte 87.06 42 *e*P **P 06 43 28.6 -2.1**
comp=Z,18nm,1.0s
BSD Bornholm Skovb 87.10 34 *i* P **P 06 43 29.8 -0.7**
FETA Feichten 87.18 42 *e*P **P 06 43 29.5 -1.8**
comp=Z,12nm,1.0s
CLL Collm 87.28 38 ⇑*i*P **P 06 43 29.6 -1.9**
comp=Z,14nm,0.9s
CLL *i* 06 43 59.3
comp=Z,17nm,0.9s
CLL *e*(sP) **sP 06 44 17.0 +5.0**
CLL *e*PP **PP 06 46 54.0 -2.6**
CLL *e*PPPP 06 50 30.0
CLL *e*SKSac **SKSac 06 53 49.0 +0.1**
CLL *e*S **SKKSac 06 53 59.0 +0.7**
comp=N,200nm,24.4s
CLL *e*S **SKKSac 06 53 59.0 +0.7**
comp=E,400nm,26.3s
CLL *e*PS **PS 06 55 18.0 0.0**
CLL *e*SS **SS 06 59 48.0 -0.4**
CLL *e*SSS SSS 07 03 18.0
CLL Collm 87.28 38 *e*P **P 06 43 30.8 -0.6**
CLL Collm 87.28 38 ⇑*i*P **P 06 43 29.6 -1.9**
CLL *i* *PP **pP 06 43 59.3 -0.9**
CLL *e*S **SKSac 06 53 52.0 +3.1**
CLL pmax pmax
comp=Z,14nm,0.9s
PGF Pioggiola 87.28 47 *e*P **P 06 43 29.4 -2.5**
PGF pmax pmax
comp=Z,12nm,1.0s
NKC Novy Kostel 87.29 39 *e*P **P 06 43 30.1 -1.5**
NKC Novy Kostel 87.29 39 *e*P **P 06 43 30.1 -1.5**
MOTA Moosalm 87.33 42 *e*P **P 06 43 30.7 -1.3**
comp=Z,5.3nm,0.6s
BRG Berggiesshubel 87.98 38 *e*P **P 06 43 33.2 -1.6**
comp=Z,6.3nm,0.8s
BRG *e*pP **pP 06 44 02.9 -0.7**
comp=Z,12nm,1.1s
BRG PP **PP 06 47 04.0 +1.7**
BRG S **SKSac 06 53 47.0 -6.2**
BRG Berggiesshubel 87.98 38 *e*P **P 06 43 33.2 -1.6**
BRG *e**PP **pP 06 44 02.9 -0.7**
BRG 06 47 04.0
BRG S **SKSac 06 53 47.0 -6.2**
BRG pmax pmax
comp=Z,6.0nm,0.8s
BRG pmax pmax
comp=Z,12nm,1.1s
KHC Kasperske Hory 88.34 40 *e*P **P 06 43 33.7 -2.9**
KHC *e*x x 06 43 59.2
KHC *e*SKS **SKSac 06 53 53.4 -2.1**
KHC AMS AMS 07 19 30.0
comp=Z,400nm,21.4s
KHC Kasperske Hory 88.34 40 *e*P **P 06 43 34.9 -1.7**
KHC Kasperske Hory 88.34 40 *e*P **P 06 43 34.9 -1.7**
ABTA Abfaltersbach 88.43 42 *e*P **P 06 43 35.2 -1.9**
comp=Z,11nm,0.9s
GEC2 GERESS Array S 88.51 40 *e*P **P 06 43 36.8 -0.7**
GEC2 *e*pP **pP 06 44 03.1 -3.2**
GEC2 *e* 07 21 37.3
GEC2 GERESS Array S 88.51 40 *e*P **P 06 43 36.8 -0.7**
GEC2 *e**PP **pP 06 44 03.1 -3.2**
GERES GERESS Array B 88.51 40 P **P 06 43 35.3 -2.2**
comp=Z,2.0nm,0.7s,baz=298,slow=2.9,SNR=15
GERES pP **pP 06 44 03.1 -3.2**
comp=Z,3.1nm,0.8s,baz=298,slow=2.9,SNR=5.6
GERES LR LR 07 21 37.3
comp=Z,228nm,18.4s,baz=284,slow=34

GEA0 GERESS Array S 88.51 40 *e*P **P 06 43 35.5 -2.0**
TOA1 Torodi Ar. Sit 88.56 77 *e*P **P 06 43 34.6 -3.7**
TOA1 *e* 07 21 17.8
TORD Torodi Ar. Bea 88.57 77 P **P 06 43 34.6 -3.7**
comp=Z,2.3nm,0.8s,baz=294,slow=5.1,SNR=25
TORD LR LR 07 21 17.8
comp=Z,258nm,20.1s,baz=290,slow=34
PRU Pruhonice 88.64 39 *e*P **P 06 43 37.4 -0.6**
PRU *e*x x 06 44 04.3
PRU *e*PP **PP 06 47 02.8 -4.8**
PRU *e*SKS **SKSac 06 53 57.7 +0.6**
PRU AMS AMS 07 17 30.0
comp=Z,400nm,22.1s
PRU Pruhonice 88.64 39 *e*P **P 06 43 37.4 -0.6**
PRU *e* 06 44 04.3
PRU *e* 06 47 02.8
PRU *e* 06 53 57.7
PRU MLR MLR
comp=Z,400nm,22.1s
GOPC GO Pecny, Ondr 88.81 39 *e*P **P 06 43 37.5 -1.3**
GOPC *e*x x 06 44 02.6
GOPC *e*x x 06 47 17.8
GOPC *e*SKS **SKSac 06 53 57.6 -0.6**
GOPC AMS AMS 07 20 00.0
comp=Z,300nm,21.0s
GOPC GO Pecny, Ondr 88.81 39 *e*P **P 06 43 37.5 -1.3**
GOPC *e* 06 44 02.6
GOPC *e* 06 53 57.6
GOPC MLR MLR
comp=Z,300nm,21.0s
KBA Koelnbreinsper 88.86 42 *e*P **P 06 43 38.3 -1.0**
comp=Z,6.4nm,0.9s
APA Apatity 89.19 19 ⇑*i*P **P 06 43 37.6 -2.6**
APA *i* *PP **pP 06 44 09.4 +0.4**
APA pmax pmax
comp=Z,5.0nm,1.0s
MOA Molln 89.19 41 *e*P **P 06 43 39.6 -1.1**
comp=Z,2.1nm,0.5s
MYKA Terra Mystica 89.20 42 *e*P **P 06 43 38.8 -2.0**
comp=Z,3.1nm,0.6s
UPC Upice 89.34 38 *e*P **P 06 43 39.3 -2.0**
UPC *e*x x 06 44 05.3
UPC *e*SKS **SKSac 06 53 57.7 -3.6**
UPC AMS AMS 07 22 40.0
comp=Z,500nm,17.0s
UPC Upice 89.34 38 *e*P **P 06 43 39.3 -2.0**
UPC *e* 06 44 05.3
UPC *e* 06 53 57.7
UPC MLR MLR
comp=Z,500nm,17.0s
KEST Kesra 89.47 53 LR LR 07 20 20.1
comp=Z,199nm,18.4s,baz=256,slow=33
DPC Dobruska-Polom 89.58 38 *e*P **P 06 43 42.0 -0.5**
DPC *e*SKS **SKSac 06 54 03.2 +0.4**
DPC AMS AMS 07 22 40.0
comp=Z,400nm,19.3s
DPC Dobruska-Polom 89.58 38 *e*P **P 06 43 42.0 -0.5**
DPC *e* 06 54 03.2
DPC MLR MLR
comp=Z,400nm,19.3s
SEY Seymchan 89.67 336 ⇓*e*P **P 06 43 42.7 +0.2**
FIA0 FINESS Array S 89.82 26 *e*P **P 06 43 42.3 -0.9**
FIA0 FINESS Array S 89.82 26 *e*P **P 06 43 42.3 -0.9**
FINES FINESS Array B 89.82 26 P **P 06 43 42.3 -0.9**
comp=Z,3.0nm,0.6s,baz=299,slow=3.9,SNR=10
FINES LR LR 07 23 37.8
comp=Z,270nm,19.9s,baz=304,slow=35
SOKA Soboth 90.09 42 *e*P **P 06 43 44.0 -0.9**
comp=Z,3.3nm,0.7s
KRUC Moravsky 90.10 39 *e*P **P 06 43 43.6 -1.2**
VRAC Vranov 90.13 39 *e*P **P 06 43 43.4 -1.6**
CONA Conrad Observa 90.17 40 *e*P **P 06 43 43.6 -1.7**
comp=Z,3.5nm,0.7s
ARSA Arzberg 90.20 41 *e*P **P 06 43 43.6 -1.8**
comp=Z,2.4nm,0.5s
MORC Moravsky Berou 90.53 38 P **P 06 43 46.4 -0.5**
MORC pmax pmax
comp=Z,18nm,1.4s
TIXI Tiksi 90.79 349 *e*P **P 06 43 46.8 -0.8**
TIXI Tiksi 90.79 349 ⇓*e*P **P 06 43 48.5 +1.0**
TIXI pmax pmax
comp=Z,5.0nm,0.7s
OKC Ostrava-Krasne 90.87 38 *e*SKS **SKSac 06 53 59.5 -11**
OKC AMS AMS 07 24 50.0
comp=Z,400nm,21.7s
PET Petropavlovsk 91.35 326 *e*P **P 06 43 54.6 +4.1**
PET *e* 06 47 38.0
PET *e* 06 54 07.1
PET *e*S **S 06 54 39.8 -0.4**
PET *e*SS **SS 07 00 49.2 +2.0**
PET pmax pmax
comp=Z,100nm,16.7s
PET pmax pmax
comp=Z,100nm,15.6s
PET pmax pmax
comp=Z,100nm,19.2s
PET MLR MLR
comp=Z,100nm,18.0s
VSU Vasula 91.59 28 ⇓*e*P **P 06 43 51.2 -0.3**
VSU pmax pmax
comp=Z,41nm,1.1s
PEA1 Petropavlovsk- 91.83 326 *e*P **P 06 43 53.2 +0.4**
PETK Petropavlovsk- 91.84 326 P **P 06 43 53.2 +0.4**
comp=Z,4.3nm,0.8s,baz=76,slow=14,SNR=5.4
PETK LR LR 07 23 41.9
comp=Z,81nm,21.6s,baz=65,slow=34
PSZ Piszkesteto 92.69 39 P **P 06 43 55.2 -1.7**
PSZ pmax pmax
comp=Z,10.0nm,1.8s
VAE Valguarnera 92.80 50 LR LR 07 23 10.6
comp=Z,352nm,18.6s,baz=297,slow=34
KLMR Klimovskoe 95.48 22 *e*PP PP 06 47 57.0 -3.8
KLMR AMP 06 48 04.2
comp=Z,15nm,1.0s
KIEV Kiev 96.80 34 ⇓*e*P **P 06 44 14.4 -1.1**
KIEV pmax pmax
comp=Z,4.0nm,1.0s
AKASG Malin Array Be 96.80 34 LR LR 07 28 22.6
comp=Z,102nm,18.8s,baz=325,slow=36
MLR Muntele Rosu 97.49 40 LR LR 07 27 54.5
comp=Z,34nm,18.6s,baz=304,slow=35
OBN Obninsk 97.94 28 *e*P **P 06 44 19.1 -1.5**
OBN *e**PP **sP 06 45 00.0 -1.2**
OBN *e* 06 48 14.0
VNA3 Neumayer Olymp 99.93 161 P **Pdif 06 44 30.3 +1.3**
VNA1 Neumayer--Stat 100.25 160 P **Pdif 06 44 31.9 +1.5**
SNAA Sanae 102.16 161 P **Pdif 06 44 40.5 +1.5**
SNAA Sanae 102.16 161 ⇓*e*P **Pdif 06 44 39.2 +0.2**
DZM Mont Dzumac 107.42 251 *e*PS PS 06 58 59.8 +3.2
comp=Z,357nm,29.2s
DZM Mont Dzumac 107.42 251 *e*LR LR 07 20 51.3
comp=Z,667nm,29.1s
BRVK Borovoye 111.25 13 ⇓*i*PKIKP **PKiKP 06 49 18.2 +0.2**
BRVK pmax pmax
comp=Z,8.0nm,2.5s
BVAR Borovoye Array 111.30 13 PKiKP **PKiKP 06 49 18.6 +0.4**
comp=Z,0.9nm,0.4s,baz=252,slow=0.5,SNR=5.6
MJAR Matsushiro Arr 112.32 319 PP PP 06 50 05.8 -0.9
comp=Z,11nm,0.8s,baz=63,slow=3.5,SNR=4.2
MJAR PKKPbc **PKKPbc 07 00 13.5 +1.6**
comp=Z,0.4nm,0.3s,baz=214,slow=4.5,SNR=5.7
MAJO Matsushiro 112.32 319 *e*PP PP 06 50 05.8 -0.9
ZAA1 Zalesovo Array 112.33 3 *e*PKiKP **PKiKP 06 49 20.0 0.0**
ZALV Zalesovo Beam 112.33 3 PKiKP **PKiKP 06 49 20.0 0.0**
comp=Z,2.7nm,0.4s,baz=296,slow=2.0,SNR=8.3
KURK Kurchatov 114.95 8 *e*PKiKP **PKiKP 06 49 24.6 -0.5**
KURK Kurchatov 114.95 8 *e*PKiKP **PKiKP 06 49 24.6 -0.5**
KURBB Kurchatov Arra 115.03 8 PKP **PKPdf 06 49 24.6 -0.7**
comp=Z,2.5nm,0.5s,baz=347,slow=2.1,SNR=17
KURBB SKP 06 52 53.2
comp=Z,0.8nm,0.5s,baz=356,slow=1.8,SNR=5.1
KURBB PKKPbc **PKKPbc 07 00 01.0 -2.2**
comp=Z,1.3nm,0.7s,baz=183,slow=3.2,SNR=11
KURBB PKKP **PKKPdf 07 00 25.8 +0.1**
comp=Z,2.2nm,0.7s,baz=186,slow=2.6,SNR=9.7
DGZ Jazzator, Alta 116.69 2 ⇓*e*PKIKP **PKPdf 06 49 28.8 0.0**
ULN Ulaanbaatar 116.70 347 ⇓*i*PKIKP **PKPdf 06 49 29.1 +0.3**
ULN pmax pmax
comp=Z,2.0nm,0.7s
SONA0 Songino Array 116.87 348 *e*PKPdf **PKPdf 06 49 28.8 -0.4**
SONM Songino Array 116.87 348 PKP **PKPdf 06 49 28.8 -0.4**
comp=Z,3.2nm,0.6s,baz=300,slow=1.1,SNR=16
SONM PKKPbc **PKKPbc 06 59 55.9 -1.1**
comp=Z,2.1nm,0.8s,baz=201,slow=4.9,SNR=6.6
SONM PKKP **PKKPdf 07 00 20.5 -1.9**

comp=Z,4.4nm,0.8s,baz=195,slow=3.3,SNR=13
KS01 Wonju Array Si 117.73 326 *e*PKPdf **PKPdf 06 49 30.7 -0.2**
KSRS Korea Array 117.73 326 PKP **PKPdf 06 49 31.0 +0.1**
comp=Z,4.0nm,0.7s,baz=4.8,slow=0.6,SNR=18
KSRS pPKP **pPKPdf 06 49 56.3 -4.7**
comp=Z,2.6nm,0.6s,baz=359,slow=1.7,SNR=3.2
KS15 Wonju Array Si 117.76 326 *e*PKPdf **PKPdf 06 49 31.0 +0.1**
KSAR Wonju Array Be 117.76 326 PKP **PKPdf 06 49 31.0 +0.1**
KSAR Wonju Array Be 117.76 326 PKIKP **PKPdf 06 49 31.0 +0.1**
BOSA Boshof 118.57 115 PKP **PKPdf 06 49 32.8 -0.1**
comp=Z,30nm,0.9s,baz=283,slow=2.0,SNR=26
BOSA Boshof 118.57 115 *e*PKPdf **PKPdf 06 49 32.8 -0.1**
BOSA *e*PKPdf **PKiKP 06 49 33.1 +0.2**
LBTB Lobatse 118.78 111 *e*PKPdf **PKPdf 06 49 33.2 -0.1**
MAKZ Makanchi 119.20 6 *e*PKPdf **PKPdf 06 49 31.7 -1.8**
MAKZ Makanchi 119.20 6 *e*PKIKP **PKPdf 06 49 31.7 -1.8**
MK31 Makanchi Array 119.25 6 *e*PKPdf **PKPdf 06 49 32.0 -1.6**
MK31 Makanchi Array 119.25 6 *e*PKIKP **PKPdf 06 49 32.0 -1.6**
MK32 Makanchi Array 119.25 6 *e*PKPdf **PKPdf 06 49 31.4 -2.2**
MKAR Makanchi Array 119.25 6 PKP **PKPdf 06 49 31.4 -2.2**
comp=Z,2.6nm,0.5s,baz=340,slow=2.7,SNR=28
MKAR SKP 06 53 02.0
comp=Z,0.4nm,0.4s,baz=321,slow=4.5,SNR=4.8
MKAR PKKPbc **PKKPbc 06 59 46.9 -1.4**
comp=Z,0.7nm,0.8s,baz=133,slow=5.1,SNR=4.9
MKAR PKKP **PKKPdf 07 00 11.3 -6.4**
comp=Z,1.1nm,0.8s,baz=145,slow=4.4,SNR=6.8
MKAR Makanchi Array 119.25 6 *e*PKPdf **PKPdf 06 49 32.0 -1.6**
MK01 Makanchi Array 119.27 6 *e*PKPdf **PKPdf 06 49 31.4 -2.2**
LSZ Lusaka 120.38 100 *e*PKPdf **PKPdf 06 49 37.7 +1.1**
LSZ Lusaka 120.38 100 *e*PKIKP **PKPdf 06 49 37.7 +1.1**
BJI Beijing 121.10 337 PKP **PKPdf 06 49 36.5 -0.8**
HHC Hu-ho-hao-te 122.01 341 *e*PKP **PKPdf 06 49 37.5 -1.7**
HHC PP **PP 06 51 16.3 +2.8**
HHC SS SS 07 07 35.8 -6.6
HHC AMB AMB
comp=Z,31nm,5.6s
HHC LR LR
comp=Z,1μm,19.0s
HHC LR LR
comp=Z,1μm,17.3s
HHC LR LR
comp=Z,1μm,15.6s
WMQ Urumqi 122.58 2 PKP **PKPdf 06 49 39.0 -1.1**
WMQ PP **PP 06 51 22.0 +5.0**
WMQ SKS **SKSac 06 56 28.8 -2.2**
WMQ SS **SS 07 07 47.5 -1.5**
WMQ AMB AMB
comp=Z,500nm,6.3s
WMQ LR LR
comp=Z,2μm,38.7s
WMQ LR LR
comp=Z,2μm,32.3s
WMQ LR LR
comp=Z,2μm,38.7s
RAYN Ar Rayn 122.82 50 *e*PKPdf **PKPdf 06 49 41.3 +0.2**
RAYN Ar Rayn 122.82 50 *e*PKIKP **PKPdf 06 49 41.3 +0.2**
PRZ Przheval'sk 122.95 10 *e*PKPdf **PKPdf 06 49 42.7 +1.7**
PRZ Przheval'sk 122.95 10 *e*PKIKP **PKPdf 06 49 42.7 +1.7**
MAW Mawson 123.44 168 PKP **PKPdf 06 49 42.3 +1.5**
comp=Z,9.2nm,0.7s,baz=261,slow=3.9,SNR=10
MAW Mawson 123.44 168 *e*PKPdf **PKPdf 06 49 42.6 +1.8**
NRN Naryn 123.51 13 *e*PKPdf **PKPdf 06 49 42.9 +0.6**
NRN Naryn 123.51 13 *e*PKIKP **PKPdf 06 49 42.9 +0.6**
TARG Taragay, Kyrgy 123.58 11 *e*PKPdf **PKPdf 06 49 43.0 +0.4**
KSH Kashi 125.34 13 PKP **PKPdf 06 49 46.5 +0.9**
KSH sPKP 06 50 41.5
KSH SKS **SKSac 06 56 36.8 -3.4**
KSH SS **SS 07 08 21.8 -2.4**
KSH AMB AMB
comp=Z,460nm,5.0s
KSH LR LR
comp=Z,780nm,11.8s
KSH LR LR
comp=Z,350nm,10.0s
KSH LR LR
comp=Z,230nm,8.9s
CASY Casey 125.83 190 *e*PKPdf **PKPdf 06 49 48.5 +3.1**
GTA Gaotai 126.23 351 ⇑PKP **PKPdf 06 49 47.5 +0.2**
GTA PP **PP 06 51 43.5 +1.9**
GTA SS SS 07 08 30.3 -4.9
GTA AMB AMB
comp=Z,43nm,5.4s
GTA LR LR
comp=Z,240nm,24.1s
GTA LR LR
comp=Z,220nm,22.2s
GTA LR LR
comp=Z,450nm,23.8s
COEN Coen 128.43 263 *e*PKPdf **PKPdf 06 49 53.0 +1.0**
LZH Lanzhou 128.63 346 *e*PKP **PKPdf 06 49 53.5 +1.4**
LZH sPKP 06 50 53.3
LZH PP **PP 06 52 05.0 +7.5**
LZH SKKS 06 58 36.3
LZH SS **SS 07 09 04.3 -1.0**
LZH AMB AMB
comp=Z,290nm,8.0s
LZH LR LR
comp=Z,780nm,18.0s
LZH LR LR
comp=Z,610nm,18.2s
LZH LR LR
comp=Z,930nm,20.1s
JAY Jayapura 128.63 278 PKP **PKPdf 06 49 53.5 +1.1**
comp=Z,6.1nm,0.6s,baz=78,slow=2.9,SNR=4.9
XAN Xi'an 129.07 340 PKP **PKPdf 06 49 53.5 +0.7**
STKA Stephens Creek 129.63 240 PKP **PKPdf 06 49 54.6 +0.8**
comp=Z,10nm,0.7s,baz=13,slow=0.6,SNR=10
STKA Stephens Creek 129.63 240 *e*PKPdf **PKPdf 06 49 54.8 +1.0**
WHN Wuhan 130.01 332 PKP **PKPdf 06 49 56.5 +1.9**
WHN PP **PP 06 52 08.5 +1.9**
WHN LR LR
comp=Z,730nm,19.8s
SSLB Suanglung 131.86 321 *e*PKPdf **PKPdf 06 49 57.8 -0.5**
ENH Enshi 132.27 337 *e*PKPdf **PKPdf 06 49 59.7 +0.8**
CD2 Chengdu 133.56 344 PKP **PKPdf 06 50 03.8 +2.4**
CD2 sPKP 06 51 02.8
CD2 PP **PP 06 52 32.8 +3.5**
CD2 SKKS 06 59 11.3
CD2 SS **SS 07 10 00.8 -4.6**
CD2 AMB AMB
comp=Z,140nm,9.0s
LSA Lhasa 136.69 358 PKP **PKPdf 06 50 08.5 +0.7**
LSA Lhasa 136.69 358 *e*PKPdf **PKPdf 06 50 09.0 +1.2**
LSA Lhasa 136.69 358 *e*PKIKP **PKPdf 06 50 09.0 +1.2**
GYA Guiyang 136.77 338 *e*Pdif **Pdif 06 47 11.3 -2.8**
GYA PKP **PKPdf 06 50 05.5 -2.1**
GYA sPKP 06 51 05.8
GYA PP **PP 06 52 53.5 +3.8**
GYA PKS **PKSdf 06 53 40.0 -4.1**
GYA Guiyang 136.77 338 PKP **PKPdf 06 50 05.5 -2.1**
GYA sPKP 06 51 05.8
GYA PP **PP 06 52 53.5 +3.8**
GYA PKS **PKSdf 06 53 40.0 -4.1**
GYA SKKS 06 59 26.3
GYA AMB AMB
comp=Z,180nm,8.2s
GYA LR LR
comp=Z,160nm,20.8s
GYA LR LR
comp=Z,210nm,21.0s
GYA LR LR
comp=Z,240nm,21.5s
WB2 Warramunga Arr 137.18 256 *e*PKPdf **PKPdf 06 50 09.4 +1.1**
WRAB Tennant Creek 137.18 256 *e*PKPdf **PKPdf 06 50 10.3 +2.0**
WRAB Tennant Creek 137.18 256 ⇓*e*PKIKP **PKPdf 06 50 03.0 -5.3**
WR1 Warramunga Arr 137.19 256 *e*PKPdf **PKPdf 06 50 09.1 +0.8**
WR1 *e*PP **PP 06 52 51.9 -2.3**
WRA Warramunga Arr 137.19 256 PKhKP PKPpre 06 49 59.1
comp=Z,4.5nm,0.9s,baz=92,slow=3.4,SNR=15
WRA PKP **PKiKP 06 50 09.1 -1.1**
comp=Z,44nm,0.9s,baz=86,slow=1.7,SNR=68
WRA PP **PP 06 52 51.9 -2.3**
comp=Z,3.8nm,1.2s,baz=88,slow=6.2,SNR=6.6
WRA SKP 06 53 36.3
comp=Z,3.9nm,0.9s,baz=92,slow=2.6,SNR=6.5
AS01 Alice Springs 137.36 250 *e*PKPdf **PKPdf 06 50 09.2 +0.6**
AS31 Alice Springs 137.40 250 *e*PKPdf **PKPdf 06 50 05.9 -2.8**
ASAR Alice Springs 137.40 250 PKhKP PKPpre 06 49 59.2
comp=Z,2.5nm,0.5s,baz=108,slow=3.5,SNR=7.8
ASAR PKP **PKiKP 06 50 09.6 -1.0**
comp=Z,12nm,0.7s,baz=100,slow=2.1,SNR=33
ASAR SKP 06 53 36.6
comp=Z,3.1nm,0.8s,baz=106,slow=3.3,SNR=6.2

ABPO	**Ambohimpanom**	**138.77**	**103**	*e*PKPdf	**PKPdf**	**06 50 10.0**	**-1.5**
ABPO	**Ambohimpanom**	**138.77**	**103**	*e*PKIKP	**PKPdf**	**06 50 10.0**	**-1.5**
KMI	**Kunming**	**139.31**	**342**	PKP	**PKPdf**	**06 50 08.8**	**-3.6**
KMI				LR	LR		
	comp=Z,390nm,27.9s						
KMI				LR	LR		
	comp=Z,200nm,26.3s						
KMI				LR	LR		
	comp=Z,530nm,29.8s						
SHL	**Shillong**	**140.78**	**357**	*e*PKPdf	**PKPdf**	**06 50 14.2**	**-0.8**
SHL	**Shillong**	**140.78**	**357**	*e*PKIKP	**PKPdf**	**06 50 14.2**	**-0.8**
FORT	**Forrest**	**141.16**	**238**	*e*PKPdf	**PKPdf**	**06 50 16.1**	**+0.8**
FITZ	**Fitzroy Crossi**	**145.47**	**258**	*e*PKPdf	**PKPab**	**06 50 24.1**	**+0.4**
MYLDM	**Lahad Datu**	**145.94**	**302**	*e*PKPdf	**PKPab**	**06 50 26.0**	**+0.4**
SOEI	**Soe**	**146.19**	**273**	*e*PKPdf	**PKPab**	**06 50 27.3**	**+0.6**
CHTO	**Chiang Mai**	**146.36**	**345**	*e*PKPdf	**PKPdf**	**06 50 25.2**	**+0.5**
CHTO	**Chiang Mai**	**146.36**	**345**	*e*PKP2	**PKPdf**	**06 50 25.2**	**+0.5**
RER	**Riviere de l'E**	**146.63**	**107**	*e*PKPdf	**PKPab**	**06 50 27.8**	**-0.4**
CM31	**Chiang Mai Arr**	**146.70**	**344**	*e*PKPdf	**PKPbc**	**06 50 26.6**	**-0.5**
CMAR	**Chiang Mai Arr**	**146.70**	**344**	PKPbc	**PKPdf**	**06 50 25.9**	**+0.7**
	comp=Z,16nm,0.5s,baz=335,slow=3.5,SNR=31						
CMAR				pPKPbc	**pPKPdf**	**06 50 52.3**	**-3.2**
	comp=Z,12nm,0.6s,baz=337,slow=2.9,SNR=4.0						
CMAR	**Chiang Mai Arr**	**146.70**	**344**	PKP2	**PKPdf**	**06 50 26.0**	**+0.7**
CM01	**Chiang Mai Arr**	**146.73**	**344**	*e*PKPdf	**PKPdf**	**06 50 25.8**	**+0.5**
HYB	**Hyderabad**	**146.96**	**20**	*i* PKP	**PKPbc**	**06 50 28.0**	**+0.2**
KKM	**Kota Kinabalu**	**147.29**	**305**	*e*PKPdf	**PKPbc**	**06 50 29.5**	**+0.5**
MMRI	**Maumere**	**147.94**	**276**	*e*PKPdf	**PKPdf**	**06 50 27.7**	**+0.3**
MRIV	**Mauritius Mete**	**148.36**	**106**	*e*PKPdf	**PKPbc**	**06 50 30.3**	**-1.3**
MBWA	**Marble Bar**	**150.72**	**251**	*e*PKPdf	**PKPdf**	**06 50 33.9**	**+2.2**
SBUM	**Sibu**	**152.62**	**305**	*e*PKPdf	**PKPdf**	**06 50 35.6**	**+0.9**
KSM	**Kuching**	**154.73**	**305**	*e*PKPdf	**PKPdf**	**06 50 39.0**	**+1.2**
KSM				*e*PKPbc	**PKiKP**	**06 50 48.0**	**+1.5**
KSM				*e*PKPab	**PKPab**	**06 51 02.8**	**+1.1**
PSI	**Prapat**	**161.22**	**331**	PKP	**PKPdf**	**06 50 45.6**	**-0.3**
	comp=Z,12nm,0.9s,baz=180,slow=1.8,SNR=10						
PSI	**Prapat**	**161.22**	**331**	*e*PKPdf	**PKPdf**	**06 50 45.8**	**-0.1**
PSI	**Prapat**	**161.22**	**331**	*e*PKIKP	**PKPdf**	**06 50 45.8**	**-0.1**
CISI	**Cisompet, Garu**	**161.38**	**288**	*e*PKPdf	**PKPdf**	**06 50 46.3**	**+0.4**
GSI	**Gunungsitoli**	**163.16**	**333**	*e*PKPdf	**PKPdf**	**06 50 48.7**	**+1.0**

IDC 27 06:33:26.4±3.0, 32°.88S×178°.44W, h0km, mb3.9/2, mb1 4.1/3, mb1mx3.7/45, mbtmp3.9/3, ML3.8/1, Error ellipse: s-maj=70.8km s-min=44.9km az=123.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.47**	**213**	Pn	Pn	06 35 02.2	-0.8
	1.8nm,0.3s,baz=271,slow=4.6,SNR=15						
URZ				Sn	Sn	06 36 13.7	-3.8
	3.0nm,0.3s,baz=199,slow=22,SNR=7.5						
ASAR	**Alice Springs**	**42.66**	**270**	P	P	06 41 25.0	0.0
	0.8nm,0.6s,baz=108,slow=7.0,SNR=8.8						
WRA	**Warramunga Arr**	**43.87**	**275**	P	P	06 41 34.7	-0.1
	1.1nm,0.4s,baz=114,slow=7.8,SNR=42						
FINES	**FINESS Array B**	**147.32**	**338**	PKPbc	PKPbc	06 53 10.4	-0.7
	0.9nm,0.4s,baz=28,slow=4.5,SNR=6.9						

*DDA **27** 06:33:33.0, 39°.11N×29°.16E, h7km, Ml2.4*
*ISK **27** 06:33:32.6, 39°.13N×29°.15E, h5km, ML2.2/5*
*ISCJB **27** 06:33:33.1±0.6, 39°.09N±0°.05×29°.14E±0°.05, h11km±5km, Error ellipse: s-maj=9.4km s-min=5.9km az=150.6*
*CSEM **27** 06:33:33.1±0.2, 39°.10N×29°.15E, h10km, ML2.4, Error ellipse: s-maj=5.9km s-min=3.7km az=138.0*
ISC 27 06:33:33.0±1.1, 39°.12N±0°.04×29°.16E±0°.03, h12km±7km, n20, σ0°54/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHAP	**Saphane-Kutahy**	**0.11**	**151**	PG	**Pg**	**06 33 36.0**	**-0.1**
SHAP				SG	**Sg**	**06 33 38.0**	**-0.3**
SHAP	**Saphane-Kutahy**	**0.11**	**151**	*e*Pg	**Pg**	**06 33 36.0**	**-0.1**
SHAP				*e*Sg	**Sg**	**06 33 38.0**	**-0.3**
SIMA	**Simav-Kutahya**	**0.14**	**256**	PG	**Pg**	**06 33 36.4**	**-0.1**
SIMA	**Simav-Kutahya**	**0.14**	**256**	*e*Pg	**Pg**	**06 33 36.4**	**-0.1**
GEDZ	**Gediz**	**0.21**	**110**	PG	**Pg**	**06 33 37.9**	**+0.3**
GEDZ	**Gediz**	**0.21**	**110**	*e*Pg	**Pg**	**06 33 37.9**	**+0.3**
DEMI	**Demirci**	**0.35**	**258**	*i* P	**Pg**	**06 33 40.2**	**+0.1**
DEMI				*i* S	**Sg**	**06 33 44.9**	**+0.1**
DEMI	**Demirci**	**0.35**	**258**	P	**Pg**	**06 33 40.2**	**+0.1**
DEMI				S	**Sg**	**06 33 44.9**	**+0.1**
TVSB	**Tavsanli**	**0.41**	**35**	PG	**Pg**	**06 33 40.4**	**-0.8**
TVSB	**Tavsanli**	**0.41**	**35**	*e*Pg	**Pg**	**06 33 40.4**	**-0.8**
KULA	**Kula-Manisa**	**0.71**	**213**	PG	**Pg**	**06 33 46.6**	**-0.3**
KULA	**Kula-Manisa**	**0.71**	**213**	*e*Pg	**Pg**	**06 33 46.6**	**-0.3**
MANT	**Manisa**	**0.78**	**217**	*i* P	**Pg**	**06 33 47.8**	**-0.3**
MANT				*i* S	**Sg**	**06 33 57.3**	**-1.1**
MANT	**Manisa**	**0.78**	**217**	P	**Pg**	**06 33 47.8**	**-0.3**
MANT				S	**Sg**	**06 33 57.3**	**-1.1**
CAVI	**Cavuskoy**	**1.21**	**26**	PN	**Pn**	**06 33 56.7**	**+0.9**
CAVI	**Cavuskoy**	**1.21**	**26**	*e*Pn	**Pn**	**06 33 56.7**	**+0.9**
BORA	**Eskisehir**	**1.26**	**52**	PN	**Pn**	**06 33 56.9**	**+0.3**
BORA	**Eskisehir**	**1.26**	**52**	*e*Pn	**Pn**	**06 33 56.9**	**+0.3**
YLV	**Yalova**	**1.46**	**7**	PN	**Pg**	**06 34 00.9**	**-0.2**
YLV	**Yalova**	**1.46**	**7**	*e*Pn	**Pg**	**06 34 00.9**	**-0.2**

*ISCJB **27** 06:35:09.2±0.4, 43°.12N±0°.02×18°.04E±0°.02, h2km±3km, Error ellipse: s-maj=3.1km s-min=2.7km az=37.4*
*BEO **27** 06:35:10.2±0.3, 43°.09N×17°.98E, h10km±2km*
*PDG **27** 06:35:10.0±0.3, 43°.07N×18°.05E, h11km, MD2.9/2, ML2.8/11, Error ellipse: s-maj=0.5km s-min=0.5km az=0.0*
*CSEM **27** 06:35:11.0±0.2, 43°.07N×18°.11E, h10km, ML3.3/4, Error ellipse: s-maj=4.4km s-min=3.1km az=45.0*
ISC 27 06:35:10.2±1.0, 43°.08N±0°.02×18°.04E±0°.02, h7km±8km, n90, σ1°12/157, 18C-17D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STON	**Ston**	**0.32**	**231**	*e*Pg	**Pg**	**06 35 15.9**	**-0.7**
STON				*e*Sg	**Sg**	**06 35 21.5**	**+0.7**
STON	**Ston**	**0.32**	**231**	*i* Pg	**Pg**	**06 35 16.1**	**-0.4**
STON				Sg	**Sg**	**06 35 21.6**	**+0.7**
STON	**Ston**	**0.32**	**231**	*e*Pg	**Pg**	**06 35 15.9**	**-0.7**
STON				*e*Sg	**Sg**	**06 35 21.5**	**+0.7**
BRY	**Bratogost**	**0.40**	**115**	⇑*i*Pg	**Pg**	**06 35 17.8**	**-0.3**
BRY				*i* Sg	**Sg**	**06 35 23.9**	**+0.5**
BRY	**Bratogost**	**0.40**	**115**	⇑*i*Pg	**Pg**	**06 35 17.8**	**-0.3**
BRY				*i* Sg	**Sg**	**06 35 23.9**	**+0.5**
TREB	**Trebinje**	**0.42**	**148**	*e*Pg	**Pg**	**06 35 18.2**	**-0.3**
TREB				*e*Sg	**Sg**	**06 35 25.1**	**+1.1**
UPM	**Unac-Piva**	**0.64**	**78**	⇓*i*Pg	**Pg**	**06 35 21.9**	**-0.8**
UPM				*i* Sg	**Sb**	**06 35 32.2**	**-0.9**
UPM	**Unac-Piva**	**0.64**	**78**	⇓*i*Pg	**Pg**	**06 35 21.9**	**-0.8**
UPM				*e*Sg	**Sg**	**06 35 31.3**	**+0.2**
HCY	**Herceg Novi**	**0.71**	**152**	⇑*i*Pg	**Pg**	**06 35 23.0**	**-0.9**
HCY				*i* Sg	**Sb**	**06 35 34.2**	**-0.7**
HCY	**Herceg Novi**	**0.71**	**152**	*e*Pg	**Pg**	**06 35 23.2**	**-0.7**
HCY				*e*Sg	**Sg**	**06 35 33.3**	**+0.1**
NKME	**Niksic**	**0.74**	**115**	⇑*i*Pg	**Pg**	**06 35 23.7**	**-0.7**
NKME				*i* Sg	**Sb**	**06 35 35.2**	**-0.5**
NKY	**Niksic**	**0.75**	**110**	⇑*i*Pg	**Pg**	**06 35 23.8**	**-0.8**
NKY				*i* Sg	**Sb**	**06 35 35.7**	**-0.3**
CEME	**Cevo**	**0.83**	**129**	⇑*i*Pg	**Pg**	**06 35 25.1**	**-1.1**
CEME				*i* Sg	**Sb**	**06 35 38.4**	**-0.1**
BUM	**Brajici-Budva**	**1.00**	**141**	⇑*i*Pg	**Pg**	**06 35 28.3**	**-1.1**
BUM				*i* Sg	**Sn**	**06 35 43.9**	**-1.1**
BUM	**Brajici-Budva**	**1.00**	**141**	⇑*i*Pg	**Pg**	**06 35 28.3**	**-1.1**
BUM				*i* Sg	**Sn**	**06 35 43.9**	**-1.1**
PLE	**Pljevlja**	**1.02**	**75**	⇓*i*Pg	**Pg**	**06 35 28.9**	**-0.8**
PLE				*i* Sg	**Sn**	**06 35 44.7**	**-0.8**
PLE	**Pljevlja**	**1.02**	**75**	⇓*i*Pg	**Pg**	**06 35 28.9**	**-0.8**
PLE				*i* Sg	**Sn**	**06 35 44.7**	**-0.8**
PDG	**Podgorica**	**1.10**	**125**	*e*Pg	**Pg**	**06 35 30.7**	**-0.7**
PDG				*e*Sg	**Sn**	**06 35 46.7**	**-0.7**
PDG	**Podgorica**	**1.10**	**125**	⇑*i*P	**Pb**	**06 35 31.5**	**-0.1**
PDG	**Podgorica**	**1.10**	**125**	*e*Pg	**Pg**	**06 35 30.7**	**-0.7**
PDG	**Podgorica**	**1.10**	**125**	⇑*i*P	**Pb**	**06 35 31.5**	**-0.1**
PDG				*e*Sg	**Sg**	**06 35 45.4**	**-0.3**
PDG				S	**Sn**	**06 35 47.0**	**-0.4**
TTG	**Podgorica**	**1.10**	**125**	⇓*i*Pg	**Pg**	**06 35 30.2**	**-1.2**
TTG				*i* Sg	**Sn**	**06 35 47.6**	**+0.2**
KOME	**Kolasin**	**1.10**	**101**	*e*Pg	**Pg**	**06 35 30.4**	**-1.0**
KOME				*i* Sg	**Sn**	**06 35 48.0**	**+0.3**
KOME	**Kolasin**	**1.10**	**101**	*e*Pg	**Pg**	**06 35 30.4**	**-1.0**
KOME				*i* Sg	**Sn**	**06 35 48.0**	**+0.3**
HAPS	**Han Pijesak,Bl**	**1.21**	**33**	*e*Pg	**Pb**	**06 35 31.3**	**-2.1**
HAPS				*e*Sg	**Sn**	**06 35 50.0**	**-0.2**
HAPS	**Han Pijesak,Bl**	**1.21**	**33**	*e*Pg	**Pb**	**06 35 31.3**	**-2.1**
HAPS				*e*Sg	**Sg**	**06 35 48.8**	**-0.2**
DRME	**Dracevica, Mon**	**1.23**	**136**	⇓*i*Pg	**Pb**	**06 35 32.5**	**-1.2**
DRME				*i* Sg	**Sn**	**06 35 51.8**	**+1.3**
DRME	**Dracevica, Mon**	**1.23**	**136**	⇓*i*Pg	**Pb**	**06 35 32.5**	**-1.2**
DRME				*e*Sg	**Sb**	**06 35 49.3**	**-0.4**
BBLS	**Lazići**	**1.27**	**51**	*e*Pg	**Pn**	**06 35 33.8**	**-0.6**
BBLS				*e*Sg	**Sn**	**06 35 51.8**	**+0.1**
BBLS	**Lazići**	**1.27**	**51**	*e*Pg	**Pn**	**06 35 33.8**	**-0.6**
BBLS				*e*Sg	**Sb**	**06 35 50.1**	**-0.9**
BEY	**Berane**	**1.37**	**98**	⇓*i*Pg	**Pn**	**06 35 35.5**	**-0.3**
BEY				*i* Sg	**Sg**	**06 35 57.0**	**+2.6**
IVA	**Berane**	**1.37**	**98**	⇓*i*Pg	**Pn**	**06 35 35.5**	**-0.3**
IVA				*i* Sg	**Sg**	**06 35 57.0**	**+2.6**
ULC	**Ulcinj**	**1.42**	**141**	⇓*i*Pg	**Pn**	**06 35 36.2**	**-0.3**
ULC				*i* Sg	**Sg**	**06 35 58.2**	**+2.2**
ULC	**Ulcinj**	**1.42**	**141**	⇓*i*Pg	**Pn**	**06 35 36.2**	**-0.3**
ULC				*i* Sg	**Sg**	**06 35 58.2**	**+2.2**
SJES	**Sjenica**	**1.43**	**82**	*e*Pg	**Pb**	**06 35 36.9**	**-0.2**
SJES				*e*Sg	**Sg**	**06 35 56.3**	**+0.3**
PVY	**Plav**	**1.49**	**108**	⇑*i*Pg	**Pb**	**06 35 37.9**	**-0.4**
PVY				*i* Sg	**Sg**	**06 35 59.7**	**+1.6**
PVY	**Plav**	**1.49**	**108**	⇑*i*Pg	**Pb**	**06 35 37.9**	**-0.4**
PVY				*i* Sg	**Sg**	**06 35 59.7**	**+1.6**
DIVS	**Divibare**	**1.75**	**54**	*e*Pn	**Pn**	**06 35 40.6**	**-0.4**
DIVS				*e*Sg	**Sg**	**06 36 06.9**	**+0.6**
DIVS	**Divibare**	**1.75**	**54**	*e*Pn	**Pn**	**06 35 40.6**	**-0.4**
DIVS				*e*Sn	**Sn**	**06 36 03.7**	**+0.2**
DIVS				*e*Sg	**Sg**	**06 36 06.9**	**+0.6**
BLY	**Banja Luka**	**1.78**	**340**	⇓*i*P	**Pb**	**06 35 43.5**	**+0.3**
BLY	**Banja Luka**	**1.78**	**340**	*e*Pn	**Pn**	**06 35 42.1**	**+0.7**
BLY	**Banja Luka**	**1.78**	**340**	⇓*i*P	**Pb**	**06 35 43.5**	**+0.3**
BLY				*e*Sn	**Sn**	**06 36 04.7**	**+0.4**
BLY				S	**Sg**	**06 36 08.4**	**+0.9**
TEKS	**Tekeris**	**1.82**	**36**	*e*Pg	**Pb**	**06 35 43.3**	**-0.6**
TEKS				*e*Sg	**Sb**	**06 36 07.6**	**+0.7**
TEKS	**Tekeris**	**1.82**	**36**	*e*Pn	**Pn**	**06 35 41.3**	**-0.7**
TEKS	**Tekeris**	**1.82**	**36**	*e*Pg	**Pb**	**06 35 43.3**	**-0.6**
TEKS				*e*Sn	**Sn**	**06 36 05.1**	**-0.2**
TEKS				*e*Sg	**Sb**	**06 36 07.6**	**+0.7**
TRUS	**Trudelj**	**2.06**	**55**	*e*Pn	**Pn**	**06 35 44.8**	**-0.5**
TRUS	**Trudelj**	**2.06**	**55**	*e*Pn	**Pn**	**06 35 44.8**	**-0.5**
GRUS	**Gruza**	**2.11**	**66**	*e*Pn	**Pn**	**06 35 45.5**	**-0.4**
GRUS	**Gruza**	**2.11**	**66**	*e*Pn	**Pn**	**06 35 45.5**	**-0.4**
TIR	**Tirane**	**2.19**	**141**	⇑*i*P	**Pb**	**06 35 49.7**	**-0.5**
TIR	**Tirane**	**2.19**	**141**	⇑*i*P	**Pb**	**06 35 49.7**	**-0.5**
UDBI	**Udbina**	**2.20**	**312**	*e*Pn	**Pb**	**06 35 49.8**	**-0.5**
UDBI				Sn	**Sg**	**06 36 20.0**	**-0.8**
UDBI	**Udbina**	**2.20**	**312**	*e*Pn	**Pb**	**06 35 49.7**	**-0.5**
UDBI				Sn	**Sg**	**06 36 19.9**	**-0.8**
SELS	**Selova**	**2.26**	**85**	*e*Pn	**Pn**	**06 35 48.0**	**+0.1**
SELS				*e*Sn	**Sn**	**06 36 17.0**	**+1.0**
SELS	**Selova**	**2.26**	**85**	*e*Pn	**Pn**	**06 35 48.0**	**+0.1**
SELS				*e*Sn	**Sn**	**06 36 17.0**	**+1.0**
FGSL	**Fruska Gora**	**2.44**	**31**	*e*Pn	**Pn**	**06 35 50.8**	**+0.4**
FGSL				*e*Sn	**Sn**	**06 36 19.8**	**-0.7**
FRGS	**Fruska Gora**	**2.44**	**31**	*e*Pn	**Pn**	**06 35 50.8**	**+0.4**
FRGS				*e*Sn	**Sn**	**06 36 19.8**	**-0.7**
MATE	**Matera**	**2.62**	**203**	⇑*i*P	**Pb**	**06 35 55.9**	**-1.6**
MATE	**Matera**	**2.62**	**203**	⇑*i*P	**Pb**	**06 35 55.9**	**-1.6**
NVLJ	**Novalja**	**2.73**	**304**	*e*Pn	**Pn**	**06 35 55.8**	**+1.3**
NVLJ	**Novalja**	**2.73**	**304**	*e*Pn	**Pn**	**06 35 55.7**	**+1.3**
BARS	**Barje**	**2.78**	**94**	*e*Pn	**Pn**	**06 35 55.9**	**+0.8**
BARS				*e*Sn	**Sn**	**06 36 29.8**	**+0.9**
BARS	**Barje**	**2.78**	**94**	*e*Pn	**Pn**	**06 35 55.9**	**+0.8**
BARS				*e*Sn	**Sn**	**06 36 29.8**	**+0.9**
OZLJ	**Ozalj**	**3.14**	**325**	*i* Pn	**Pn**	**06 36 02.1**	**+2.1**
OZLJ	**Ozalj**	**3.14**	**325**	*i* Pn	**Pn**	**06 36 02.0**	**+2.1**
ZAGS	**Zajecar**	**3.14**	**75**	*e*Pn	**Pn**	**06 36 01.1**	**+1.1**
ZAGS				*e*Sn	**Sn**	**06 36 37.4**	**-0.3**
ZAGS	**Zajecar**	**3.14**	**75**	*e*Pn	**Pn**	**06 36 01.1**	**+1.1**
ZAGS				*e*Sn	**Sn**	**06 36 37.4**	**-0.3**
MDVR	**Moldovita**	**3.15**	**56**	⇑*i*P	**Pn**	**06 36 02.9**	**+2.6**
MDVR	**Moldovita**	**3.15**	**56**	⇑*i*P	**Pn**	**06 36 02.9**	**+2.6**
CRES	**Cresnjev**	**3.31**	**327**	*i* Pn	**Pn**	**06 36 03.8**	**+1.4**
CRES				*i* Sn	**Sn**	**06 36 42.8**	**+0.8**
CRES	**Cresnjev**	**3.31**	**327**	*e*Pn	**Pn**	**06 36 03.4**	**+1.0**
CRES				*e*Sn	**Sn**	**06 36 42.2**	**+0.1**
ZAPS	**Zavoj**	**3.36**	**85**	*e*Pn	**Pn**	**06 36 04.2**	**+1.0**
ZAPS				*e*Sn	**Sn**	**06 36 42.7**	**-0.6**
BZS	**Buzias**	**3.61**	**44**	⇓*i*P	**Pn**	**06 36 09.0**	**+2.5**
BZS	**Buzias**	**3.61**	**44**	⇓*i*P	**Pn**	**06 36 09.0**	**+2.5**
CEY	**Cerknica**	**3.71**	**317**	*e*Pn	**Pn**	**06 36 08.9**	**+0.9**
CEY				*e*Sn	**Sn**	**06 36 51.6**	**-0.3**
VTS	**Vitosha**	**3.83**	**96**	⇓*i*P	**Pn**	**06 36 10.9**	**+1.2**
VTS	**Vitosha**	**3.83**	**96**	⇓*i*P	**Pn**	**06 36 10.9**	**+1.2**
SOKA	**Soboth**	**4.19**	**330**	*e*Pn	**Pn**	**06 36 15.3**	**+0.8**
	10nm,0.5s						
SOKA				*e*Sn	**Sn**	**06 37 02.8**	**-0.9**
	10nm,0.5s						
SOKA	**Soboth**	**4.19**	**330**	Pn	**Pn**	**06 36 15.3**	**+0.8**
	10nm,0.5s						
SOKA				Sn	**Sn**	**06 37 02.8**	**-0.9**
	10nm,0.5s						
OBKA	**Obir**	**4.24**	**325**	*e*Pn	**Pn**	**06 36 16.5**	**+1.3**
	0.7nm,0.2s						
OBKA	**Obir**	**4.24**	**325**	Pn	**Pn**	**06 36 16.5**	**+1.3**
	0.7nm,0.2s						
ARSA	**Arzberg**	**4.54**	**338**	*e*Pn	**Pn**	**06 36 20.2**	**+0.9**
	3.7nm,0.3s						
ARSA				*e*Sn	**Sn**	**06 37 11.7**	**-0.6**
	2.1nm,0.3s						
ARSA	**Arzberg**	**4.54**	**338**	Pn	**Pn**	**06 36 20.2**	**+0.9**
	3.7nm,0.3s						
ARSA				Sn	**Sn**	**06 37 11.6**	**-0.6**
	2.1nm,0.3s						
CONA	**Conrad Observa**	**5.09**	**343**	*e*Pn	**Pn**	**06 36 29.2**	**+2.3**
	0.8nm,0.3s						
CONA				*e*Sn	**Sn**	**06 37 23.6**	**-2.3**
	4.1nm,0.4s						
CONA	**Conrad Observa**	**5.09**	**343**	Pn	**Pn**	**06 36 29.2**	**+2.3**
	0.8nm,0.3s						
CONA				Sn	**Sn**	**06 37 23.6**	**-2.3**
	4.1nm,0.4s						
MOA	**Molln**	**5.46**	**332**	*e*Pn	**Pn**	**06 36 34.4**	**+2.4**
	1.1nm,0.2s						
MOA				*e*Sn	**Sn**	**06 37 34.2**	**-0.8**
	17nm,0.6s						
MOA	**Molln**	**5.46**	**332**	Pn	**Pn**	**06 36 34.4**	**+2.4**
	1.1nm,0.2s						
MOA				Sn	**Sn**	**06 37 34.2**	**-0.8**
	17nm,0.6s						
RETA	**Reutte**	**6.77**	**313**	*e*Sn	**Sn**	**06 38 08.9**	**+1.7**
	4.0nm,0.6s						
RETA	**Reutte**	**6.77**	**313**	Sn	**Sn**	**06 38 08.9**	**+1.7**
	4.0nm,0.6s						
KHC	**Kasperske Hory**	**6.80**	**334**	*e*PN	**Pn**	**06 36 52.7**	**+2.3**
KHC				*e*SN	**Sn**	**06 38 07.0**	**-1.0**
KHC				*ex*	x	06 38 23.2	

*ISK **27** 06:46:06.5, 38°.55N×44°.01E, h18km, ML2.5/3*
*ISCJB **27** 06:46:09.8±1.4, 38°.72N±0°.06×43°.8E±0°.1, h27km±8km, Error ellipse: s-maj=15.2km s-min=6.8km az=28.2*
*CSEM **27** 06:46:10.5±0.5, 38°.75N×43°.65E, h10km, ML2.7, Error ellipse: s-maj=14.4km s-min=6.6km az=122.0*
*DDA **27** 06:46:10.7, 38°.76N×43°.65E, h7km, Ml2.7*
ISC 27 06:46:09.5±1.4, 38°.74N±0°.05×43°.77E±0°.08, h24km±9km, n13, σ0°62/25, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VMUR	**Van-Muradiye**	**0.29**	**328**	*i* P	**Pb**	**06 46 16.1**	**-0.4**
VMUR				*i* S	**Sb**	**06 46 21.4**	**+0.1**
VMUR	**Van-Muradiye**	**0.29**	**328**	P	**Pb**	**06 46 16.1**	**-0.4**
VMUR				S	**Sb**	**06 46 21.4**	**+0.1**
VANB	**Van**	**0.33**	**244**	PG	**Pb**	**06 46 17.1**	**+0.1**
VANB				SG	**Sb**	**06 46 23.5**	**+1.3**
VANB	**Van**	**0.33**	**244**	*e*Pg	**Pb**	**06 46 17.1**	**+0.1**
VANB				*e*Sg	**Sb**	**06 46 23.5**	**+1.3**
TVAN	**Van**	**0.35**	**233**	*i* P	**Pb**	**06 46 16.8**	**-0.7**
TVAN				*i* S	**Sb**	**06 46 22.1**	**-0.8**
TVAN	**Van**	**0.35**	**233**	P	**Pb**	**06 46 16.8**	**-0.7**
TVAN				S	**Sb**	**06 46 22.1**	**-0.8**
CLDR	**Caldiran**	**0.42**	**16**	PG	**Pb**	**06 46 18.6**	**+0.1**
CLDR				SG	**Sn**	**06 46 27.6**	**+0.3**
CLDR	**Caldiran**	**0.42**	**16**	*i* P	**Pb**	**06 46 18.5**	**-0.1**
CLDR				*i* S	**Sn**	**06 46 26.8**	**-0.6**
CLDR	**Caldiran**	**0.42**	**16**	*e*Pg	**Pb**	**06 46 18.6**	**+0.1**
CLDR				S	**Sn**	**06 46 26.8**	**-0.6**
CLDR				*e*Sg	**Sn**	**06 46 27.6**	**+0.3**
TUTA	**Tutak**	**0.99**	**312**	*i* P	**Pn**	**06 46 27.9**	**-0.3**
TUTA				*i* S	**Sn**	**06 46 41.4**	**-0.1**
TUTA	**Tutak**	**0.99**	**312**	P	**Pn**	**06 46 27.9**	**-0.3**
TUTA				S	**Sn**	**06 46 41.4**	**-0.1**
GURO	**Guroymak-BITLI**	**1.37**	**263**	PN	**Pn**	**06 46 33.9**	**+0.6**
GURO	**Guroymak-BITLI**	**1.37**	**263**	*e*Pn	**Pn**	**06 46 33.9**	**+0.6**

*NIED **27** 06:47:00, 39°.70N×143°.50E, h17km, Mw4.1 Best double couple: M0 1.64000×10^15 NP1:φs 198.00000°, δ25.00000°, λ75.00000°. NP2:φs 35.00000°, δ66.00000°, λ97.00000°.*
*ISCJB **27** 06:47:25.6±1.1, 39°.65N±0°.03×143°.53E±0°.05, h19km±7km, mb4.4/40, MS4.2/6, Error ellipse: s-maj=7.3km s-min=4.0km az=30.3*
*JMA **27** 06:47:26.8±0.3, 39°.70N×143°.52E, h33km, M4.2*
*MOS **27** 06:47:27.7±1.0, 39°.67N×143°.48E, h33km, mb4.7/15, Error ellipse: s-maj=10.4km s-min=6.4km az=99.1*
*IDC **27** 06:47:29.8±3.5, 39°.60N×143°.47E, h35km±28km, mb4.1/15, mb1 4.2/19, mb1mx3.9/75, mbtmp4.3/19, ML4.0/3, MS3.5/6, Ms1 3.5/6, ms1mx3.1/67, Error ellipse: s-maj=24.4km s-min=15.4km az=92.0*
*NEIC **27** 06:47:30.2±0.7, 39°.63N×143°.42E, h35km±6km, mb4.5/8, Error ellipse: s-maj=9.1km s-min=5.2km az=109.0*
*BJI **27** 06:47:31.1, 39°.69N×143°.08E, h38km, mb4.5/36, mB4.7/24, Ms4.2/19, Ms7 4.0/17*
ISC 27 06:47:27.4±2.0, 39°.70N±0°.05×143°.48E±0°.06, h15km±12km, n102, σ1°58/119, mb4.5/40, MS4.2/6, 7C-9D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**1.27**	**281**	P	**Pn**	**06 47 49.2**	**-1.4**
MIYJ	**Miyakonagasawa**	**1.29**	**265**	P	**Pn**	**06 47 49.7**	**-1.2**
JANG	**Nango**	**1.65**	**295**	P	**Pn**	**06 47 54.4**	**-1.5**
JOM	**Ohasama**	**1.70**	**263**	P	**Pn**	**06 47 56.1**	**-0.6**
JOM				*e*S	**Sn**	**06 48 17.8**	**-0.4**
JMK	**Ichinoseki**	**1.91**	**247**	P	**Pn**	**06 47 58.5**	**-0.9**
JMK				*e*S	**Sn**	**06 48 21.1**	**-2.0**
JIO	**Ouri**	**2.07**	**234**	P	**Pn**	**06 48 00.2**	**-1.5**
JIO				*e*S	**Sn**	**06 48 26.5**	**-0.8**
JTM	**Tenmabayashi**	**2.14**	**301**	P	**Pn**	**06 48 02.2**	**-0.4**
JTM				*e*S	**Sn**	**06 48 28.5**	**-0.4**
JOT	**Ohata**	**2.50**	**313**	P	**Pn**	**06

comp=Z,1μm,13.0s
HHC LR LR
comp=Z,990nm,13.0s
WHN Wuhan 25.43 258 ⇓*i*P **P 06 52 54.0 -0.5**
WHN pmax pmax
comp=Z,38nm,0.8s
BOD Bodaibo 26.24 323 *e*P **P 06 53 00.0 -1.7**
BOD pmax pmax
comp=Z,12nm,1.0s
ULN Ulaanbaatar 27.33 299 *e*P **P 06 53 11.9 +0.1**
comp=Z,6.6nm,1.0s
ULN Ulaanbaatar 27.33 299 ⇓*i*P **P 06 53 12.1 +0.3**
ULN pmax pmax
comp=Z,6.0nm,1.3s
SONA0 Songino Array 27.77 299 *e*P **P 06 53 15.8 +0.1**
SONM Songino Array 27.77 299 P **P 06 53 15.8 +0.1**
comp=Z,3.7nm,0.8s,baz=90,slow=8.1,SNR=13
H11N2 WAKE ISLAND Hy 28.31 128 T T 07 24 13.8
baz=318,slow=75,SNR=25
H11N1 WAKE ISLAND Hy 28.32 128 T T 07 24 15.1
baz=318,slow=75,SNR=21
H11N3 WAKE ISLAND Hy 28.33 128 T T 07 24 12.3
baz=318,slow=75,SNR=23
LZH Lanzhou 31.31 276 *e*P **P 06 53 47.0 -0.3**
LZH pP sP 06 53 58.5 +5.0
LZH sP pP 06 54 02.5 +11
LZH *e*PP **PnPn 06 54 48.5 -1.0**
LZH pmax pmax
comp=Z,22nm,1.1s
LZH pmax pmax
comp=Z,75nm,5.2s
LZH LR LR
comp=Z,370nm,12.9s
LZH LR LR
comp=Z,370nm,13.2s
LZH LR LR
comp=Z,480nm,16.5s
GYA Guiyang 33.32 258 *e*P **P 06 54 05.8 +0.9**
GYA pmax pmax
comp=Z,10.0nm,0.7s
CD2 Chengdu 33.36 267 P **P 06 54 03.0 -2.1**
CD2 pmax pmax
comp=Z,20nm,0.6s
GTA Gaotai 33.42 284 ⇓P **P 06 54 06.0 +0.3**
GTA pP sP 06 54 15.8 +3.8
GTA sP pP 06 54 19.0 +8.9
GTA PcP **PcP 06 56 47.8 +0.9**
GTA S **S 06 59 24.0 -2.5**
GTA pmax pmax
comp=Z,5.0nm,1.1s
GTA pmax pmax
comp=Z,48nm,5.1s
GTA LR LR
comp=Z,100nm,15.9s
GTA LR LR
comp=Z,170nm,14.6s
GTA LR LR
comp=Z,260nm,16.8s
KMI Kunming 37.01 259 P **P 06 54 37.5 +0.7**
KMI pmax pmax
comp=Z,21nm,0.5s
KMI pmax pmax
comp=Z,120nm,5.2s
DGZ Jazzator, Alta 40.21 303 *i*P **P 06 55 04.5 +1.1**
DGZ pmax pmax
comp=Z,3.0nm,0.7s
WMQ Urumqi 41.15 295 P **P 06 55 12.5 +1.4**
WMQ pP sP 06 55 21.5 +4.1
WMQ PcP **PcP 06 57 11.5 +1.3**
WMQ pmax pmax
comp=Z,37nm,0.9s
WMQ pmax pmax
comp=Z,240nm,6.1s
WMQ LR LR
comp=Z,360nm,21.5s
WMQ LR LR
comp=Z,170nm,24.1s
WMQ LR LR
comp=Z,470nm,28.1s
MK01 Makanchi Array 44.13 300 *e*P **P 06 55 34.8 -0.5**
MK31 Makanchi Array 44.13 300 *e*P **P 06 55 34.7 -0.5**
MK31 Makanchi Array 44.13 300 *e*P **P 06 55 34.7 -0.5**
MK32 Makanchi Array 44.13 300 *e*P **P 06 55 34.8 -0.5**
MKAR Makanchi Array 44.13 300 P **P 06 55 34.8 -0.5**
comp=Z,3.4nm,0.8s,baz=83,slow=8.8,SNR=16
MKAR Makanchi Array 44.13 300 *e*P **P 06 55 34.9 -0.4**
comp=Z,22nm,0.7s
MAKZ Makanchi 44.33 300 *e*P **P 06 55 36.5 -0.4**
comp=Z,5.3nm,1.0s
MAKZ Makanchi 44.33 300 *e*P **P 06 55 36.5 -0.4**
MAKZ pmax pmax
comp=Z,5.0nm,1.0s
KURK Kurchatov 45.61 306 *e*P **P 06 55 46.5 -0.4**
comp=Z,9.4nm,1.0s
KURK *e*P **P 06 55 47.0 +0.1**
KURK Kurchatov 45.61 306*c i*P **P 06 55 46.3 -0.6**
KURK pmax pmax
comp=Z,10.0nm,1.0s
KURBB Kurchatov Arra 45.69 306 P **P 06 55 47.0 -0.5**
comp=Z,5.8nm,0.7s,baz=81,slow=8.3,SNR=36
ILAR Eielson Array 46.38 34 P **P 06 55 53.4 +0.7**
comp=Z,0.8nm,0.7s,baz=266,slow=6.6,SNR=14
ILB Eielson Array 46.38 34 *e*P **P 06 55 53.4 +0.7**
PDGK Podgornoye 47.00 296 P **P 06 55 57.0 -1.2**
PDGK pmax pmax
comp=Z,3.0nm,0.7s
BVAR Borovoye Array 50.01 311 P **P 06 56 20.9 -0.1**
comp=Z,2.9nm,0.6s,baz=87,slow=8.2,SNR=10
BRVK Borovoye 50.06 311*c i*P **P 06 56 21.2 -0.2**
BRVK pmax pmax
comp=Z,2.0nm,0.7s
OTUK Ortayu 50.21 305 P **P 06 56 22.4 -0.2**
OTUK pmax pmax
comp=Z,4.0nm,0.7s
KSH Kashi 50.83 293 P P 06 56 35.5 +7.9
KSH pP sP 06 56 42.5 +8.5
KSH S **S 07 03 50.0 +6.8**
KSH sS sS 07 04 03.3 +13
KSH SS **SS 07 07 19.0 +1.5**
KSH pmax pmax
comp=Z,160nm,3.9s
KSH LR LR
comp=Z,450nm,8.4s
KSH LR LR
comp=Z,420nm,8.3s
KSH LR LR
comp=Z,380nm,5.0s
ARU Arti 55.46 318 P **P 06 57 01.1 -0.1**
comp=Z,4.9nm,0.2s,baz=69,slow=1.6,SNR=6.7
ARU Arti 55.46 318 *e*P **P 06 57 01.2 +0.1**
comp=Z,7.2nm,1.0s
ARU Arti 55.46 318*d i*P **P 06 57 01.0 -0.2**
ARU 06 59 02.0
ARU S **S 07 04 44.0 -1.4**
ARU SS **SS 07 08 24.6 -4.9**
ARU pmax pmax
comp=Z,8.0nm,1.0s
ABKAR Akbulak array 57.48 309 *e*P **P 06 57 15.5 -0.2**
AKTO Aktyubinsk 58.12 311 P **P 06 57 20.0 -0.1**
comp=Z,2.3nm,0.7s,baz=72,slow=13,SNR=6.5
WR1 Warramunga Arr 59.95 190 *e*P **P 06 57 31.2 -1.9**
comp=Z,6.4nm,1.1s
WRA Warramunga Arr 59.95 190 P **P 06 57 31.2 -1.9**
comp=Z,1.1nm,0.8s,baz=9.4,slow=7.0,SNR=6.5
AS31 Alice Springs 63.67 190 *e*P **P 06 57 56.7 -1.4**
comp=Z,1.9nm,1.1s
ASAR Alice Springs 63.67 190 P **P 06 57 56.7 -1.4**
comp=Z,0.6nm,0.6s,baz=19,slow=8.0,SNR=4.7
OBN Obninsk 66.93 323 *e*P **P 06 58 19.8 +0.9**
OBN pmax pmax
comp=Z,5.0nm,0.9s
FIA0 FINESS Array S 67.21 332 *e*P **P 06 58 20.4 -0.2**
FIA0 FINESS Array S 67.21 332 *e*P **P 06 58 20.4 -0.2**
FINES FINESS Array B 67.21 332 P **P 06 58 20.4 -0.2**
comp=Z,3.0nm,0.7s,baz=60,slow=7.5,SNR=10
KIV Kislovodsk 70.38 311 *e*P **P 06 58 42.2 +1.4**
KIV pmax pmax
comp=Z,12nm,1.0s
KBZ Khabaz 70.39 311 P **P 06 58 41.3 +0.6**
comp=Z,3.5nm,0.7s,baz=25,slow=3.7,SNR=9.0
KBZ LR LR 07 32 57.9
comp=Z,167nm,21.5s,baz=317,slow=39
NEY Neytrino 70.78 311⇑*e*P **P 06 58 44.8 +1.4**
NEY pmax pmax
comp=Z,1.0nm,0.7s
GNI Garni 71.41 307 LR LR 07 34 01.1
comp=Z,116nm,20.4s,baz=322,slow=39
NC204 NORSAR Array S 72.28 338 *e*P **P 06 58 52.3 +0.3**
HFS Hagfors 72.31 336 P **P 06 58 52.0 -0.1**
comp=Z,2.0nm,0.4s,baz=47,slow=8.5,SNR=12
HFS Hagfors 72.31 336 P **P 06 58 52.0 -0.1**
NB2 NORSAR Subarra 72.34 338 P **P 06 58 52.0 -0.3**
comp=Z,4.5nm,0.9s,baz=36,slow=6.2
AKASG Malin Array Be 73.17 323 P **P 06 58 56.9 -0.4**
comp=Z,1.1nm,0.4s,baz=45,slow=5.4,SNR=5.1
KIEV Kiev 73.18 323⇓*e*P **P 06 58 57.1 -0.3**
KIEV pmax pmax
comp=Z,4.0nm,0.9s
BUR08 Bucovina Ar. S 77.19 322 *e*P **P 06 59 20.9 +0.1**
BUR04 Bucovina Ar. S 77.21 322 *e*P **P 06 59 20.8 0.0**
SMCO Snowmass 78.48 48 *e*P **P 06 59 31.2 +2.8**
comp=Z,2.9nm,0.9s
CLL Collm 79.57 331 *e*P **P 06 59 34.0 +0.3**
CLL Collm 79.57 331 *e*P **P 06 59 34.0 +0.3**
GERES GERESS Array B 81.28 329 P **P 06 59 42.6 -0.4**
comp=Z,0.3nm,0.2s,baz=60,slow=5.8,SNR=3.4

IDC ***27*** *06:56:39.1±0.5, 15°.59S×173°.75W, h0km, mb4.8/16, mb1 4.9/17, mb1mx4.6/46, mbtmp4.8/17, ML4.5/1, MS3.6/8, Ms1 3.6/8, ms1mx3.3/48, Error ellipse: s-maj=22.9km s-min=13.1km az=129.0*
BJI ***27*** *06:56:41.5, 15°.06S×173°.60W, h19km, mb5.1/14, mB5.3/9, Ms4.9/4, Ms7 4.6/4*
ISCJB ***27*** *06:56:43.3±0.2, 15°.69S±0°.05×173°.72W±0°.04, h42km, mb4.8/140, MS4.0/9, Error ellipse: s-maj=8.4km s-min=4.2km az=146.0*
MOS ***27*** *06:56:44.9±1.1, 15°.58S×173°.74W, h47km, mb5.0/27, Error ellipse: s-maj=15.6km s-min=8.4km az=55.8*
NEIC ***27*** *06:56:44.8±1.0, 15°.61S×173°.81W, h40km±8km, mb4.8/120, Error ellipse: s-maj=7.5km s-min=3.6km az=141.0*
ISC 27 06:56:45.0±0.3, 15°.62S±0°.06×173°.62W±0°.07, h42km, n501, σ0s87/494, mb4.8/140, MS3.9/9, 21C-14D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.46**	**47**	Pn	**Pn**	**06 57 23.2**	**+0.4**
	88nm,0.3s,baz=178,slow=3.3,SNR=107						
AFI				LR	LR	06 57 47.0	
	comp=Z,214nm,18.7s,baz=278,slow=27						
AFI				Sn	**Sn**	**06 57 48.9**	**-2.7**
	324nm,0.3s,baz=196,slow=21,SNR=14						
AFI	**Afiamalu**	**2.46**	**47**	*e*Pn	**Pn**	**06 57 23.1**	**+0.4**
AFI				*e*Sn	**Sn**	**06 57 49.2**	**-2.4**
NIUE	**Niue**	**4.93**	**135**	P	**Pn**	**06 57 56.7**	**+0.2**
	baz=4.9,SNR=78						
DZM	**Mont Dzumac**	**19.92**	**248**	LR	LR	07 07 57.8	
	comp=Z,232nm,18.7s,baz=58,slow=34						
URZ	**Urewera**	**23.99**	**198**	P	**P**	**07 01 56.1**	**+0.4**
	12nm,0.9s,baz=36,slow=3.8,SNR=6.5						
HNR	**Honiara**	**26.51**	**280**	LR	LR	07 09 58.8	
	comp=Z,119nm,20.6s,baz=108,slow=30						
CNB	**Canberra Magne**	**38.45**	**232**	P	**P**	**07 04 02.5**	**-0.5**
	baz=38						
H11S2	**WAKE ISLAND Hy**	**39.04**	**330**	T	T	07 45 11.5	
	baz=147,slow=75,SNR=10						
H11S3	**WAKE ISLAND Hy**	**39.05**	**329**	T	T	07 45 25.0	
	baz=147,slow=75,SNR=8.1						
H11S1	**WAKE ISLAND Hy**	**39.06**	**330**	T	T	07 45 10.5	
	baz=147,slow=75,SNR=6.4						
CMSA	**Cobar Meteorol**	**40.26**	**239**	P	**P**	**07 04 16.6**	**-1.5**
	baz=40,SNR=12						
MTSU	**Mount Surprise**	**40.27**	**260**	P	**P**	**07 04 18.6**	**+0.2**
	baz=40,SNR=7.4						
QLP	**Quilpie**	**40.64**	**247**	P	**P**	**07 04 20.7**	**-0.6**
	baz=41,SNR=4.4						
COEN	**Coen**	**41.76**	**266**	P	**P**	**07 04 30.7**	**+0.1**
	baz=42,SNR=6.3						
TOO	**Toolangi**	**42.17**	**231**	P	**P**	**07 04 32.6**	**-1.1**
	baz=42,SNR=3.8						
STKA	**Stephens Creek**	**43.75**	**240**	P	**P**	**07 04 45.7**	**-0.8**
	17nm,1.0s,baz=73,slow=8.6,SNR=18						
STKA	**Stephens Creek**	**43.75**	**240**	P	**P**	**07 04 45.6**	**-0.9**
	baz=44,SNR=11						
STKA	**Stephens Creek**	**43.75**	**240**	*e*P	**P**	**07 04 45.4**	**-1.1**
	3.9nm,0.9s						
HTT	**Hallett**	**46.25**	**239**	P	**P**	**07 05 05.6**	**-0.9**
	baz=46,SNR=6.5						
BBOO	**Buckleboo**	**48.52**	**240**	P	**P**	**07 05 22.8**	**-1.3**
	baz=48,SNR=5.4						
WR8	**Warramunga Arr**	**49.44**	**257**	P	**P**	**07 05 30.1**	**-1.2**
	baz=49						
WB2	**Warramunga Arr**	**49.58**	**257**	*e*P	**P**	**07 05 30.8**	**-1.6**
	12nm,1.0s						
WRAB	**Tennant Creek**	**49.58**	**257**	*e*P	**P**	**07 05 30.8**	**-1.6**
	19nm,1.1s						
WRAB	**Tennant Creek**	**49.58**	**257**	*e*P	**P**	**07 05 30.8**	**-1.6**
WRAB				pmax	pmax		
	comp=Z,19nm,1.1s						
WR1	**Warramunga Arr**	**49.59**	**257**	*e*P	**P**	**07 05 30.9**	**-1.6**
	comp=Z,12nm,0.9s						
WR1				*e*PcP	**PcP**	**07 06 55.0**	**+1.2**
WRA	**Warramunga Arr**	**49.59**	**257**	P	**P**	**07 05 30.9**	**-1.6**
	comp=Z,8.4nm,0.8s,baz=92,slow=6.7,SNR=80						
WRA				PcP	**PcP**	**07 06 55.0**	**+1.2**
	comp=Z,0.3nm,0.4s,baz=95,slow=3.7,SNR=5.4						
AS01	**Alice Springs**	**49.80**	**252**	*e*P	**P**	**07 05 32.9**	**-1.2**
AS31	**Alice Springs**	**49.84**	**252**	*e*P	**P**	**07 05 33.2**	**-1.2**
	comp=Z,17nm,0.8s						
ASAR	**Alice Springs**	**49.84**	**252**	P	**P**	**07 05 32.7**	**-1.7**
	comp=Z,67nm,0.7s,baz=85,slow=8.5,SNR=371						
KDU	**Kakadu**	**52.24**	**266**	P	**P**	**07 05 51.9**	**-0.5**
	baz=52,SNR=3.6						
WRKA	**Warakurna**	**54.92**	**250**	P	**P**	**07 06 10.8**	**-1.2**
	baz=55,SNR=69						
SIJI	**Sorong**	**56.29**	**280**	LR	LR	07 29 43.6	
	comp=Z,64nm,21.1s,baz=280,slow=35						
SBA	**Scott Base**	**63.02**	**185**	*e*P	**P**	**07 07 08.8**	**+1.6**
	comp=Z,7.4nm,0.9s						
SBA	**Scott Base**	**63.02**	**185**	*e*P	**P**	**07 07 08.8**	**+1.6**
SBA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VNDA	**Vanda**	**63.14**	**186**	P	**P**	**07 07 09.2**	**+1.1**
	comp=Z,3.5nm,0.9s,baz=4.0,slow=6.4,SNR=19						
VNDA	**Vanda**	**63.14**	**186**	*e*P	**P**	**07 07 09.2**	**+1.1**
	comp=Z,6.1nm,1.0s						
VNDA	**Vanda**	**63.14**	**186**	*e*P	**P**	**07 07 09.2**	**+1.1**
VNDA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MEEK	**Meekatharra**	**63.54**	**248**	P	**P**	**07 07 10.3**	**-1.3**
	baz=64,SNR=4.7						
CASY	**Casey**	**70.12**	**205**	*e*P	**P**	**07 07 51.9**	**-0.9**
	comp=Z,2.6nm,1.0s						
ASAJ	**Asahikawa**	**71.61**	**328**	P	**P**	**07 08 03.4**	**+1.3**
	comp=Z,3.9nm,0.4s,baz=194,slow=6.8,SNR=6.6						
ASAJ	**Asahikawa**	**71.61**	**328**	*e*P	**P**	**07 08 02.4**	**+0.3**
	comp=Z,7.8nm,0.9s						
CIS	**Catalina Islan**	**71.74**	**46**	P	**P**	**07 08 04.0**	**+0.9**
	baz=236						
KMRM	**Mail Ridge**	**72.36**	**38**	*e*P	**P**	**07 08 08.3**	**+1.6**
	comp=Z,40nm,0.8s						
ARVC	**Arvin**	**72.41**	**45**	P	**P**	**07 08 08.2**	**+1.1**
	baz=236						
VES	**Vestal, Richgr**	**72.64**	**44**	P	**P**	**07 08 09.1**	**+0.7**
	baz=235,SNR=5.3						
MURC	**Murrieta**	**72.70**	**47**	P	**P**	**07 08 09.7**	**+0.8**
	baz=237						
BFSC	**Mount Baldy Ra**	**72.72**	**46**	P	**P**	**07 08 09.7**	**+0.6**
	baz=237						
KHMM	**Horse Mountain**	**72.76**	**37**	*e*P	**P**	**07 08 10.6**	**+1.4**
	comp=Z,20nm,1.0s						
PETK	**Petropavlovsk-**	**72.77**	**342**	P	**P**	**07 08 09.2**	**+0.4**
	comp=Z,6.5nm,0.9s,baz=152,slow=9.6,SNR=4.7						
PEA1	**Petropavlovsk-**	**72.78**	**342**	*e*P	**P**	**07 08 09.2**	**+0.4**
EDW2	**Edwards Air Fo**	**72.84**	**45**	P	**P**	**07 08 10.5**	**+0.7**
	baz=236,SNR=7.4						
MONP2	**Monument Peak**	**72.86**	**48**	P	**P**	**07 08 11.0**	**+1.0**
	baz=238						
ISA	**Isabella, Lake**	**72.95**	**44**	P	**P**	**07 08 11.2**	**+0.8**
	baz=236,SNR=5.5						
ISA	**Isabella, Lake**	**72.95**	**44**	*e*P	**P**	**07 08 11.0**	**+0.6**
	comp=Z,12nm,1.1s						
ISA	**Isabella, Lake**	**72.95**	**44**	*e*P	**P**	**07 08 11.0**	**+0.6**
ISA				pmax	pmax		
	comp=Z,12nm,1.1s						
IKP	**In-Ko-Pah, Jac**	**72.96**	**48**	P	**P**	**07 08 11.5**	**+1.0**
	baz=238						
CMB	**Columbia Colle**	**73.06**	**41**	*e*P	**P**	**07 08 11.8**	**+0.8**
	comp=Z,12nm,0.9s						
CMB	**Columbia Colle**	**73.06**	**41**	*e*P	**P**	**07 08 11.8**	**+0.8**
CMB				pmax	pmax		
	comp=Z,12nm,0.9s						
PFO	**Pinyon Flats O**	**73.22**	**47**	P	**P**	**07 08 12.9**	**+0.8**
	baz=238						
AFDM	**Forest Hills D**	**73.24**	**40**	*e*P	**P**	**07 08 12.6**	**+0.7**
	comp=Z,9.7nm,0.9s						
ORV	**Oroville**	**73.28**	**40**	*e*P	**P**	**07 08 12.8**	**+0.7**
	comp=Z,7.1nm,0.9s						
ORV	**Oroville**	**73.28**	**40**	*e*P	**P**	**07 08 12.8**	**+0.7**
ORV				pmax	pmax		
	comp=Z,7.0nm,0.9s						
WDC	**Whiskeytown Da**	**73.28**	**38**	*e*P	**P**	**07 08 13.2**	**+1.1**
	comp=Z,9.5nm,1.1s						
WDC	**Whiskeytown Da**	**73.28**	**38**	*e*P	**P**	**07 08 13.2**	**+1.1**
WDC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
LRMC	**Laurel Mtn Rad**	**73.39**	**45**	P	**P**	**07 08 14.1**	**+1.0**
	baz=236						
N02D	**Trinity Center**	**73.42**	**38**	P	**P**	**07 08 14.6**	**+1.5**
	baz=231,SNR=6.3						
RRX	**Edison Barstow**	**73.53**	**46**	P	**P**	**07 08 14.6**	**+0.9**
	baz=237						
O03D	**Paynes Creek**	**73.55**	**39**	P	**P**	**07 08 14.5**	**+0.7**
	baz=232,SNR=8.4						
YSS	**Yuzh-Sakhalins**	**73.57**	**330**	*e*P	**P**	**07 08 14.4**	**+0.8**
YSS				MLR	MLR		
	comp=Z,200nm,16.0s						
M02C	**Callahan**	**73.60**	**37**	P	**P**	**07 08 15.4**	**+1.4**
	baz=231,SNR=5.5						
L02D	**Cave Junction,**	**73.65**	**36**	P	**P**	**07 08 15.4**	**+1.2**
	baz=230						
CWC	**Cottonwood Cre**	**73.65**	**44**	P	**P**	**07 08 15.4**	**+0.8**
	baz=236						
MDPB	**Devils Postpil**	**73.67**	**42**	*e*P	**P**	**07 08 15.6**	**+0.8**
	comp=Z,9.4nm,1.0s						
OMMB	**Old Mammoth Mi**	**73.71**	**42**	*e*P	**P**	**07 08 16.1**	**+1.0**
	comp=Z,4.4nm,1.0s						
BELC	**Belle Mtn. Jos**	**73.75**	**47**	P	**P**	**07 08 16.0**	**+0.8**
	baz=238,SNR=6.7						
MPMC	**Manual Prospec**	**73.84**	**44**	P	**P**	**07 08 16.5**	**+0.8**
	baz=236,SNR=15						
GSC	**Goldstone, Bar**	**73.89**	**45**	P	**P**	**07 08 16.6**	**+0.7**
	baz=237,SNR=5.7						
GSC	**Goldstone, Bar**	**73.89**	**45**	*e*P	**P**	**07 08 16.6**	**+0.7**
	comp=Z,11nm,1.1s						
GSC	**Goldstone, Bar**	**73.89**	**45**	*e*P	**P**	**07 08 16.6**	**+0.7**
GSC				pmax	pmax		
	comp=Z,11nm,1.1s						
YBH	**Yreka Blue Hor**	**73.90**	**37**	P	**P**	**07 08 17.2**	**+1.4**
	comp=Z,16nm,0.8s,baz=207,slow=5.8,SNR=54						
YBH				LR	LR	07 32 35.5	
	comp=Z,35nm,21.6s,baz=19,slow=29						
YBH	**Yreka Blue Hor**	**73.90**	**37**	*e*P	**P**	**07 08 17.1**	**+1.3**
	comp=Z,19nm,0.9s						
TIN	**Tinemaha, Big**	**73.90**	**43**	P	**P**	**07 08 16.8**	**+0.9**
	baz=236						
WAKR	**Walker**	**73.94**	**41**	*e*P	**P**	**07 08 17.4**	**+1.1**
	comp=Z,11nm,0.9s						
BC3	**Big Chuckawall**	**73.96**	**48**	P	**P**	**07 08 17.3**	**+0.9**
	baz=238						
HEC	**Hector,Ludlow**	**73.96**	**46**	P	**P**	**07 08 17.1**	**+0.8**
	baz=238						
GLA	**Glamis**	**74.09**	**48**	P	**P**	**07 08 18.2**	**+1.1**
	baz=239						
GLA	**Glamis**	**74.09**	**48**	*e*P	**P**	**07 08 17.9**	**+0.8**
	comp=Z,14nm,1.0s						
GLA	**Glamis**	**74.09**	**48**	*e*P	**P**	**07 08 17.9**	**+0.8**
GLA				pmax	pmax		
	comp=Z,14nm,1.0s						
BEKR	**Beckworth**	**74.17**	**40**	*e*P	**P**	**07 08 18.5**	**+0.9**
	comp=Z,13nm,0.9s						
PNTR	**Pine Nut**	**74.18**	**41**	*e*P	**P**	**07 08 19.3**	**+1.6**
	comp=Z,20nm,0.9s						
VCNR	**Virginia City**	**74.27**	**41**	*e*P	**P**	**07 08 19.1**	**+0.9**
	comp=Z,12nm,0.8s						
HUMO	**Hull Mountain**	**74.31**	**36**	*e*P	**P**	**07 08 19.6**	**+1.6**
	comp=Z,7.9nm,0.9s						
YERR	**Yerington**	**74.35**	**41**	*e*P	**P**	**07 08 19.6**	**+1.0**
	comp=Z,14nm,0.9s						
GMRC	**Granite Mounta**	**74.40**	**46**	P	**P**	**07 08 19.8**	**+0.8**
	baz=238,SNR=6.7						
QSPA	**South Pole Qui**	**74.43**	**180**	P	**P**	**07 08 19.3**	**+0.7**
	comp=Z,7.0nm,0.9s,baz=23,slow=2.5,SNR=16						
QSPA	**South Pole Qui**	**74.43**	**180**	*e*P	**P**	**07 08 19.2**	**+0.6**
	comp=Z,10nm,0.9s						
QSPA				*e*P	**P**	**07 08 19.3**	**+0.7**
IRM	**Iron Mountain**	**74.44**	**47**	P	**P**	**07 08 20.0**	**+0.9**
	baz=238,SNR=8.3						
GRAC	**Grapevine Rang**	**74.44**	**44**	P	**P**	**07 08 20.4**	**+1.3**
	baz=236						
M04C	**Macdoel**	**74.44**	**38**	P	**P**	**07 08 19.9**	**+0.9**
	baz=232,SNR=10						
FURC	**Furnace Creek,**	**74.48**	**44**	P	**P**	**07 08 20.1**	**+0.9**
	baz=237,SNR=5.1						
TUQ	**Turquoise Moun**	**74.57**	**46**	P	**P**	**07 08 20.9**	**+0.9**
	baz=238						
SHOC	**Shoshone, Teco**	**74.58**	**45**	P	**P**	**07 08 20.9**	**+1.1**
	baz=237						
RYN	**Ryan**	**74.60**	**42**	*e*P	**P**	**07 08 20.9**	**+0.9**
	comp=Z,10nm,0.9s						
NV01	**Mina Array Sit**	**74.63**	**42**	*e*P	**P**	**07 08 20.6**	**+0.3**
NVAR	**Mina Array Bea**	**74.63**	**42**	P	**P**	**07 08 21.0**	**+0.7**
	comp=Z,9.7nm,0.8s,baz=228,slow=11,SNR=65						
NVAR				LR	LR	07 35 28.8	
	comp=Z,37nm,18.6s,baz=62,slow=31						
Y12C	**Blythe**	**74.67**	**48**	P	**P**	**07 08 21.4**	**+1.1**
	baz=239						
Y12C	**Blythe**	**74.67**	**48**	*e*P	**P**	**07 08 21.6**	**+1.3**
	comp=Z,13nm,1.1s						
PAHR	**Pah Rah Range**	**74.68**	**40**	*e*P	**P**	**07 08 21.5**	**+1.0**
	comp=Z,11nm,1.0s						
113A	**Mohawk Valley,**	**74.72**	**49**	*e*P	**P**	**07 08 21.6**	**+1.0**
	comp=Z,12nm,1.0s						
NV11	**Mina Array Sit**	**74.73**	**42**	*e*P	**P**	**07 08 22.2**	**+1.4**
	comp=Z,1.4nm,1.0s						
I03D	**Drain, OR**	**74.78**	**35**	P	**P**	**07 08 22.0**	**+1.3**
	baz=230						
LDFC	**Landfair**	**74.94**	**46**	*e*P	**P**	**07 08 23.1**	**+1.0**
	comp=Z,29nm,1.1s						
K04D	**Chiloquin, OR**	**75.01**	**37**	P	**P**	**07 08 23.3**	**+1.0**
	baz=232						
214A	**Organ Pipe Nat**	**75.01**	**50**	P	**P**	**07 08 23.4**	**+0.9**
	baz=241						
KVN	**Kaiserville**	**75.11**	**42**	*e*P	**P**	**07 08 24.0**	**+0.9**
	comp=Z,11nm,1.0s						
KVN	**Kaiserville**	**75.11**	**42**	*e*P	**P**	**07 08 24.0**	**+0.9**
KVN				pmax	pmax		
	comp=Z,11nm,1.0s						
NEE2	**Needles Airpor**	**75.12**	**47**	P	**P**	**07 08 24.1**	**+1.1**
	baz=239						
TPNV	**Topopah Spring**	**75.16**	**44**	P	**P**	**07 08 24.3**	**+0.9**
	baz=237						
TPNV	**Topopah Spring**	**75.16**	**44**	*e*P	**P**	**07 08 24.3**	**+0.9**
	comp=Z,6.0nm,1.0s						
TPNV	**Topopah Spring**	**75.16**	**44**	*e*P	**P**	**07 08 24.3**	**+0.9**
TPNV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KDAK	**Kodiak Island**	**75.17**	**11**	*i*P	**P**	**07 08 23.9**	**+1.2**
J04D	**Umpqua Nationa**	**75.19**	**36**	P	**P**	**07 08 24.4**	**+1.0**
	baz=231,SNR=8.8						
PDMCI	**Parker Dam,Lak**	**75.22**	**48**	P	**P**	**07 08 24.6**	**+1.0**
	baz=239						
I04A	**Tendick Farm,**	**75.36**	**36**	P	**P**	**07 08 25.0**	**+0.8**
	baz=231						
MOD	**Modoc Plateau**	**75.42**	**38**	*e*P	**P**	**07 08 25.7**	**+0.9**
	comp=Z,15nm,0.8s						
K05A	**Summer Lake**	**75.57**	**37**	*e*P	**P**	**07 08 26.9**	**+1.3**
	comp=Z,18nm,0.9s						
SHPR	**Sheep Range**	**75.66**	**45**	*e*P	**P**	**07 08 27.8**	**+1.5**
	comp=Z,6.4nm,1.1s						
J05D	**Fort Rock, OR**	**75.72**	**37**	P	**P**	**07 08 27.6**	**+1.2**
	baz=232,SNR=19						
G03D	**McMinnville, O**	**75.80**	**34**	P	**P**	**07 08 28.4**	**+1.9**
	baz=230						
W13A	**Hualapai Mount**	**75.81**	**47**	*e*P	**P**	**07 08 28.2**	**+1.0**
	comp=Z,5.5nm,1.0s						
Y14A	**Wickenburg**	**75.85**	**48**	*e*P	**P**	**07 08 28.0**	**+0.7**
	comp=Z,10nm,1.0s						
H04A	**Detroit Lake**	**76.05**	**35**	*e*P	**P**	**07 08 28.8**	**+0.7**
	comp=Z,7.4nm,0.8s						
PINE	**Pine Mountain**	**76.20**	**36**	*e*P	**P**	**07 08 30.5**	**+1.3**
	comp=Z,19nm,0.9s						
I05D	**Terrebonne, OR**	**76.31**	**36**	P	**P**	**07 08 30.6**	**+1.0**
	baz=232						
R11A	**Troy Canyon, C**	**

BMN	Battle Mountai	76.45	41	eP	P	07 08 31.5	+0.8
	comp=Z,11nm,0.8s						
BMN	Battle Mountai	76.45	41	eP	P	07 08 31.5	+0.8
BMN				pmax	pmax		
	comp=Z,11nm,0.8s						
F04D	Rainier, OR	76.49	34	P	P	07 08 31.7	+1.2
	baz=230						
E03A	Lebam	76.50	33	eP	P	07 08 32.0	+1.5
	comp=Z,22nm,1.1s						
TUC	Tucson	76.69	51	P	P	07 08 33.2	+1.1
	baz=242						
TUC	Tucson	76.69	51	eP	P	07 08 33.5	+1.4
	comp=Z,11nm,0.9s						
TUC	Tucson	76.69	51	P	P	07 08 33.5	+1.4
TUC				pmax	pmax		
	comp=Z,11nm,1.0s						
WVOR	Wild Horse Val	76.73	39	eP	P	07 08 33.1	+1.0
	comp=Z,11nm,0.9s						
WVOR	Wild Horse Val	76.73	39	eP	P	07 08 33.1	+1.0
WVOR				pmax	pmax		
	comp=Z,11nm,0.9s						
G05D	Wamic, OR	76.88	35	P	P	07 08 33.6	+0.9
	baz=232						
I07A	Izee	77.20	37	eP	P	07 08 35.7	+1.0
	comp=Z,5.8nm,0.8s						
X16A	Lo Mia Camp, P	77.22	49	eP	P	07 08 36.5	+1.3
	comp=Z,11nm,1.1s						
J08A	Circle Bar Ran	77.37	38	eP	P	07 08 36.6	+0.9
	comp=Z,13nm,1.1s						
U15A	North Rim	77.60	46	eP	P	07 08 38.7	+1.4
	comp=Z,9.1nm,1.1s						
WUAZ	Wupatki	77.80	48	P	P	07 08 39.4	+1.1
	baz=241						
WUAZ	Wupatki	77.80	48	eP	P	07 08 39.5	+1.1
	comp=Z,2.2nm,1.0s						
G08A	Pilot Rock	78.23	36	eP	P	07 08 41.2	+0.8
	comp=Z,5.5nm,1.0s						
HPIG		78.33	58	eP	P	07 08 42.1	+0.7
	comp=Z,8.5nm,1.1s						
X18A	Snowflake	78.35	49	eP	P	07 08 42.5	+1.1
	comp=Z,5.7nm,1.0s						
B05A	Bryant	78.37	32	P	P	07 08 41.8	+0.8
	baz=230						
W18A	Petrified Fore	78.78	49	P	P	07 08 44.8	+1.0
	baz=242						
BMO	Blue Mountains	78.92	37	eP	P	07 08 44.6	+0.3
	comp=Z,5.6nm,0.9s						
BMO	Blue Mountains	78.92	37	eP	P	07 08 44.6	+0.3
BMO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SUA	Susitna One	78.95	11	eP	P	07 08 44.3	+0.3
	comp=Z,12nm,0.7s						
MFID	Camas Ranch	78.99	39	eP	P	07 08 45.2	+0.5
	comp=Z,7.3nm,0.9s						
121A	Cookes Peak, D	79.05	52	P	P	07 08 46.6	+1.3
	baz=244,SNR=7.5						
DUG	Dugway, Tooele	79.16	43	P	P	07 08 46.4	+0.7
	baz=239						
DUG	Dugway, Tooele	79.16	43	eP	P	07 08 46.8	+1.0
	comp=Z,5.0nm,1.0s						
DUG	Dugway, Tooele	79.16	43	P	P	07 08 46.7	+1.0
DUG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PMR	Palmer	79.37	12	eP	P	07 08 46.5	+0.4
	comp=Z,13nm,1.1s						
PMR	Palmer	79.37	12	eP	P	07 08 46.5	+0.4
PMR				pmax	pmax		
	comp=Z,13nm,1.1s						
GHO	Glory Hole Cre	79.58	12	eP	P	07 08 47.9	+0.5
	comp=Z,12nm,0.7s						
F10A	Beach Ranch, E	79.62	36	eP	P	07 08 48.3	+0.3
	comp=Z,9.4nm,0.8s						
DIV	Divide	79.65	13	eP	P	07 08 48.3	+0.5
	comp=Z,18nm,0.8s						
BMRM	Bremner River	79.78	14	eP	P	07 08 49.1	+0.7
	comp=Z,15nm,0.9s						
HLID	Hailey	79.93	39	P	P	07 08 50.9	+1.0
	baz=237						
HLID	Hailey	79.93	39	eP	P	07 08 51.2	+1.3
	comp=Z,9.8nm,0.9s						
SCM	Sheep Creek Mo	79.95	12	eP	P	07 08 50.0	+0.6
	comp=Z,15nm,0.8s						
SCM	Sheep Creek Mo	79.95	12	eP	P	07 08 50.0	+0.6
SCM				pmax	pmax		
	comp=Z,15nm,0.8s						
NJ2	Nanjing	80.13	307	eP	P	07 08 51.0	+0.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LAZ	Ladron	80.36	50	eP	P	07 08 53.8	+1.3
MNTX	Cornudas Mount	80.52	53	P	P	07 08 54.0	+0.9
	baz=245,SNR=14						
MNTX	Cornudas Mount	80.52	53	eP	P	07 08 54.1	+0.9
	comp=Z,7.1nm,0.9s						
KLR	Kul'dur	80.58	327⇓	eP	P	07 08 53.4	+0.4
BNM	Barren Site	80.63	51	eP	P	07 08 55.0	+1.1
PV19	Morning Glory	80.82	46	eP	P	07 08 56.0	+1.2
	comp=Z,9.4nm,0.9s						
PV18	Skein Mesa, Pa	80.84	46	eP	P	07 08 55.4	+0.4
	comp=Z,4.4nm,0.8s						
TRF	Thorofare Moun	80.87	10	eP	P	07 08 54.4	-0.1
	comp=Z,7.8nm,1.0s						
TX31	Lajitas Ar. Si	80.91	56	eP	P	07 08 56.0	+0.7
TX31				eP	P	07 08 56.5	+1.2
TXAR	Lajitas Array	80.91	56	P	P	07 08 56.5	+1.1
	comp=Z,8.8nm,1.1s,baz=221,slow=5.4,SNR=48						
NEW	Newport	81.00	34	P	P	07 08 56.8	+1.4
	baz=234						
DHY	Denali Highway	81.07	12	eP	P	07 08 55.8	+0.3
	comp=Z,6.6nm,1.1s						
TASM	ASL Pad, Albuq	81.10	50	P	P	07 08 57.2	+0.8
	baz=244						
ANMO	Albuquerque	81.10	50	P	P	07 08 57.3	+1.0
	comp=Z,2.2nm,0.6s,baz=234,slow=6.9,SNR=12						
ANMO				LR	LR	07 37 26.0	
	comp=Z,60nm,21.8s,baz=356,slow=30						
ANMO	Albuquerque	81.10	50	P	P	07 08 57.2	+0.9
	baz=244						
ANMO	Albuquerque	81.10	50	eP	P	07 08 57.3	+1.0
	comp=Z,0.3nm,0.8s						
ANMO	Albuquerque	81.10	50⇑	eP	P	07 08 57.4	+1.0
ANMO				pmax	pmax		
	comp=Z,11nm,1.7s						
TASL	Snake Pit, Alb	81.10	50	P	P	07 08 57.2	+0.9
	baz=244,SNR=7.0						
CN2	Changchun	81.12	320	eP	P	07 08 54.0	-2.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MCK	McKinley	81.37	11	eP	P	07 08 57.3	+0.4
	comp=Z,23nm,1.0s						
MCK	McKinley	81.37	11	eP	P	07 08 57.3	+0.4
MCK				pmax	pmax		
	comp=Z,23nm,1.0s						
GDL2	Guadalupe Moun	81.52	53	eP	P	07 08 58.6	+0.1
MCMT	McKenzie Canyo	81.55	39	eP	P	07 08 59.1	+0.5
BWN	Browne	81.68	10	eP	P	07 08 58.7	+0.2
	comp=Z,37nm,1.0s						
MENT	Mentasta	81.71	13	eP	P	07 08 59.6	+0.9
	comp=Z,9.7nm,1.0s						
MSO	Missoula	81.98	37	P	P	07 09 00.5	-0.2
	baz=237						
MSO	Missoula	81.98	37	eP	P	07 09 00.8	+0.2
	comp=Z,6.6nm,1.1s						
DLMT	Dillon	81.99	39	eP	P	07 09 01.6	+0.8
	comp=Z,8.1nm,1.1s						
TPAW	Teton Pass	82.04	41	eP	P	07 09 02.0	+0.8
	comp=Z,8.2nm,1.0s						
FXWY	Fox Creek	82.06	41	eP	P	07 09 01.9	+0.6
	comp=Z,4.4nm,1.1s						
S22A	4UR Ranch, Cre	82.07	47	P	P	07 09 02.6	+1.0
	baz=243,SNR=16						
S22A	4UR Ranch, Cre	82.07	47	eP	P	07 09 02.8	+1.2
	comp=Z,12nm,0.9s						
SNOW	Snow King Moun	82.15	41	eP	P	07 09 02.4	+0.6
	comp=Z,11nm,1.0s						
RIDG	Independ'n Rid	82.18	12	eP	P	07 09 01.7	+0.5
	comp=Z,13nm,1.0s						
O20A	White River Ci	82.18	45	P	P	07 09 02.5	+0.5
	baz=242						
WRH	Wood River Hil	82.20	11	eP	P	07 09 01.1	-0.1
	comp=Z,27nm,1.0s						
IMW	Indian Meadow	82.25	40	eP	P	07 09 03.0	+0.6
	comp=Z,7.7nm,0.9s						
MLY	Manley	82.26	10	eP	P	07 09 01.5	-0.1
	comp=Z,11nm,1.0s						
MOOW	Moose Ponds	82.30	41	eP	P	07 09 03.4	+0.9
	comp=Z,1.4nm,0.8s						
LOHW	Long Hollow	82.32	41	eP	P	07 09 03.1	+0.5
	comp=Z,4.0nm,1.0s						
HDA	Harding Lake	82.36	11	eP	P	07 09 02.4	+0.4
	comp=Z,13nm,0.8s						
CCB	Clear Creek Bu	82.41	11	eP	P	07 09 02.2	-0.1
	comp=Z,21nm,0.9s						
QLMT	Earthquake Lak	82.42	39	eP	P	07 09 04.0	+0.8
FLWY	Flagg Ranch	82.49	40	eP	P	07 09 04.5	+1.0
	comp=Z,11nm,0.9s						
BW06	Boulder Array	82.56	42	P	P	07 09 03.8	-0.2
	baz=241,SNR=7.7						
BW06	Boulder Array	82.56	42	eP	P	07 09 02.1	-1.8
	comp=Z,8.0nm,0.9s						
PD31	Pinedale Array	82.57	42	eP	P	07 09 04.4	+0.4
PDAR	Pinedale Array	82.57	42	P	P	07 09 03.9	0.0
	comp=Z,5.1nm,0.8s,baz=219,slow=3.4,SNR=38						
SCRK	Sand Creek	82.57	13	eP	P	07 09 03.7	+0.4
	comp=Z,8.4nm,0.9s						
COLA	College	82.61	11	eP	P	07 09 03.7	+0.3
	comp=Z,26nm,0.8s						
COLA	College	82.61	11	P	P	07 09 03.6	+0.3
COLA				pmax	pmax		
	comp=Z,26nm,0.9s						
SMCO	Snowmass	82.61	46	eP	P	07 09 05.0	+0.5
	comp=Z,6.0nm,0.8s						
MDM	Murphy Dome	82.62	11	eP	P	07 09 03.6	+0.2
	comp=Z,9.7nm,1.0s						
SEY	Seymchan	82.67	345⇑	iP	P	07 09 04.3	+0.6
BOZ	Bozeman (W)	82.69	39	P	P	07 09 04.9	+0.5
	baz=239,SNR=8.9						
BOZ	Bozeman (W)	82.69	39	eP	P	07 09 05.4	+1.0
	comp=Z,8.7nm,1.1s						
BOZ	Bozeman (W)	82.69	39	eP	P	07 09 05.4	+1.0
BOZ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ILAR	Eielson Array	82.70	11	P	P	07 09 03.6	-0.2
	comp=Z,3.4nm,0.8s,baz=216,slow=6.0,SNR=32						
ILB	Eielson Array	82.70	11	eP	P	07 09 03.9	0.0
IL1	Eielson Array	82.70	11	eP	P	07 09 02.6	-1.2
LNIG	Linares	82.71	62	eP	P	07 09 04.9	+0.1
	comp=Z,9.9nm,0.9s						
H17A	Grant Village	82.72	40	P	P	07 09 06.3	+1.5
	baz=240,SNR=5.8						
SDCO	Great Sand Dun	83.01	48	P	P	07 09 06.8	+0.3
	baz=244,SNR=9.6						
SDCO	Great Sand Dun	83.01	48	eP	P	07 09 07.1	+0.6
	comp=Z,2.6nm,0.9s						
HRY	Holter Researc	83.15	38	eP	P	07 09 06.5	-0.2
MSTX	Muleshoe	83.46	52	P	P	07 09 08.9	+0.3
	baz=246						
MSTX	Muleshoe	83.46	52	eP	P	07 09 09.4	+0.8
	comp=Z,27nm,1.0s						
RWWY	Rawlins	83.59	44	eP	P	07 09 09.9	+0.5
	comp=Z,13nm,0.8s						
DAWY	Dawson	83.68	14	eP	P	07 09 09.7	+0.7
	comp=Z,13nm,1.0s						
Q24A	Divide	83.79	47	P	P	07 09 10.8	+0.3
	baz=244						
ISCO	Idaho Springs	83.83	46	P	P	07 09 11.0	+0.4
	baz=244						
EGAK	Eagle	83.88	13	eP	P	07 09 10.3	+0.4
	comp=Z,9.9nm,1.0s						
RLMT	Red Lodge	83.89	40	P	P	07 09 11.2	+0.5
	baz=241,SNR=5.5						
RLMT	Red Lodge	83.89	40	eP	P	07 09 11.4	+0.7
	comp=Z,7.4nm,0.9s						
833A	Chaparral WMA,	83.99	59	P	P	07 09 11.6	+0.3
	baz=249						
833A	Chaparral WMA,	83.99	59	eP	P	07 09 12.0	+0.7
	comp=Z,8.7nm,0.8s						
N23A	Red Feather La	84.09	45	P	P	07 09 12.3	+0.4
	baz=244,SNR=6.7						
N23A	Red Feather La	84.09	45	eP	P	07 09 12.8	+0.9
	comp=Z,8.2nm,0.9s						
COLD	Coldfoot	84.39	9	eP	P	07 09 13.5	+1.1
	comp=Z,13nm,1.1s						
JCT	Junction City	84.44	56	P	P	07 09 13.5	-0.1
	baz=248						
JCT	Junction City	84.44	56	eP	P	07 09 13.8	+0.2
	comp=Z,5.7nm,0.8s						
JCT	Junction City	84.44	56	eP	P	07 09 13.8	+0.2
JCT				pmax	pmax		
	comp=Z,6.0nm,0.8s						
K22A	Casper	84.48	43	P	P	07 09 13.6	-0.1
	baz=243						
K22A	Casper	84.48	43	eP	P	07 09 14.7	+1.0
	comp=Z,6.6nm,1.1s						
AMTX	Amarillo	84.65	52	P	P	07 09 14.6	0.0
	baz=247						
AMTX	Amarillo	84.65	52	eP	P	07 09 14.9	+0.3
	comp=Z,12nm,0.9s						
BILL	Biiibino	84.69	353⇓	eP	P	07 09 14.3	+0.3
BILL				e		07 12 31.2	
BILL				ePPP	PPP	07 14 22.4	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.7s						
EGMT	Eagleton	85.03	37	P	P	07 09 16.3	0.0
	baz=240						
ABTX	Abilene, Hawle	85.36	54	P	P	07 09 18.3	+0.1
	baz=248						
ABTX	Abilene, Hawle	85.36	54	eP	P	07 09 18.5	+0.3
	comp=Z,42nm,0.9s						
TOLK	Toolik Lake Re	85.79	9	P	P	07 09 20.1	+0.6
	baz=203						
TOLK	Toolik Lake Re	85.79	9	eP	P	07 09 20.4	+0.9
	comp=Z,6.9nm,1.0s						
435B	Jarrell	86.33	57	P	P	07 09 23.5	+0.5
	baz=250						
435B	Jarrell	86.33	57	eP	P	07 09 23.8	+0.8
	comp=Z,17nm,0.8s						
LAO	LASA Array	86.51	40	P	P	07 09 24.2	+0.7
	baz=243						
RSSD	Black Hills	86.76	43	P	P	07 09 25.8	+0.7
	baz=245						
WHTX	Lake Whitney,	86.86	56	P	P	07 09 25.6	0.0
	baz=250						
HKT	Hockley	87.47	58	eP	P	07 09 29.4	+0.9
	comp=Z,6.6nm,1.1s						
HKT	Hockley	87.47	58	eP	P	07 09 29.4	+0.9
HKT				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MAW	Mawson	87.52	199	P	P	07 09 28.2	+0.1
	comp=Z,7.8nm,1.0s,baz=13,slow=2.4,SNR=5.7						
GYA	Guiyang	87.96	298	eP	P	07 09 31.0	-0.1
GYA				pP	pP	07 09 41.5	-2.4
GYA				PP	PP	07 12 59.0	+0.9
GYA				SKS	SKSac	07 19 54.5	-2.2
GYA				S	SKKSac	07 20 09.0	+2.2
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
DGMT	Dagmar	88.53	39	P	P	07 09 33.6	+0.4
	baz=245						
DGMT	Dagmar	88.53	39	eP	P	07 09 33.6	+0.4
	comp=Z,12nm,0.9s						
HHC	Hu-ho-hao-te	89.02	313	eP	P	07 09 36.8	+1.0
HHC				PP	PP	07 13 09.0	+2.8
HHC				S	S	07 20 20.5	-0.8
HHC				SS	SS	07 26 17.0	+1.5
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,37nm,5.5s						
HHC				LR	LR		
	comp=Z,120nm,17.3s						
HHC				LR	LR		
	comp=Z,130nm,18.1s						
HHC				LR	LR		
	comp=Z,130nm,16.4s						
PLCA	Paso Flores	89.52	132	LR	LR	07 40 56.6	
	comp=Z,69nm,20.3s,baz=294,slow=30						
YKA	Yellowknife Ar	90.38	23	P	P	07 09 41.7	+0.3
	comp=Z,3.2nm,0.9s,baz=234,slow=4.0,SNR=9.5						
KMI	Kunming	90.93	296	P	P	07 09 45.0	-0.2
KMI				pmax	pmax		
	comp=Z,13nm,0.5s						
KMI				pmax	pmax		
	comp=Z,73nm,3.9s						
Z41A	Richland Creek	90.98	56	P	P	07 09 45.6	+0.6
	baz=252						
T38A	Diamond	91.01	52	P	P	07 09 45.1	0.0
	baz=251						
V39A	Pettigrew	91.12	53	P	P	07 09 45.4	-0.3
	baz=252						
U39A	Green Forest	91.42	53	P	P	07 09 46.9	-0.1
	baz=252						
X41A	Kaden, Bauxite	91.59	55	P	P	07 09 47.8	0.0
	baz=252						
R38A	Fenwick Farm,	91.67	51	P	P	07 09 47.4	-0.6
	baz=252						
V40A	Witts Springs	91.75	53	P	P	07 09 48.1	-0.5
	baz=252						
P37A	Lathrop	91.78	49	P	P	07 09 48.0	-0.6
	baz=251						
W41B	Gary Mavity, V	92.00	54	P	P	07 09 49.6	-0.1
	baz=252						
Q38A	Cooks Store, C	92.12	50	P	P	07 09 49.6	-0.6
	baz=252						
V41A	Mountainview	92.26	54	P	P	07 09 50.8	-0.1
	baz=252						
SYO	Syowa Base	92.35	191⇑	eP	P	07 09 49.0	-1.6
SYO	Syowa Base	92.35	191⇑	ePcP	PcP	07 09 54.7	+3.3
R39A	Chumby, Stover	92.36	51	P	P	07 09 50.8	-0.4
	baz=252						
T40A	Mansfield	92.39	52	P	P	07 09 51.1	-0.4
	baz=252						
S40A	Lebanon	92.54	52	P	P	07 09 51.7	-0.4
	baz=252						
M37A	Trindle Farm,	92.57	48	P	P	07 09 52.4	+0.2
	baz=252						
O38A	Galt	92.59	49	P	P	07 09 51.8	-0.5
	baz=252						
W42A	Bald Knob	92.60	54	P	P	07 09 52.5	+0.1
	baz=253						
VNA3	Neumayer Olymp	92.66	175	P	P	07 09 52.6	+0.5
SNAA	Sanae	92.70	177	P	P	07 09 53.0	+0.7
SNAA	Sanae	92.70	177⇑	eP	P	07 09 53.2	+0.8
V42A	Cord	92.86	54	P	P	07 09 53.0	-0.6
	baz=253						
P39B	Salisbury	92.93	50	P	P	07 09 53.1	-0.8
	baz=252						
R40A	Maddies Statio	92.93	51	P	P	07 09 53.5	-0.3
	baz=253						
R40A	Maddies Statio	92.93	51	eP	P	07 09 53.7	-0.1
T41A	Mountain View	92.94	52	P	P	07 09 53.6	-0.4
	baz=253						
L37A	Phoenix Point,	93.02	47	P	P	07 09 54.4	+0.2
	baz=252						
S41A	Jillco Farms,	93.11	52	P	P	07 09 54.2	-0.5
	baz=253						
U42A	Revenden	93.14	53	P	P	07 09 54.4	-0.4
	baz=253						
LZH	Lanzhou	93.18	306	eP	P	07 09 55.3	0.0
LZH				pP	pP	07 10 06.0	-2.1
LZH				sP	sP	07 10 09.8	-3.0
LZH				ePP	PP	07 13 41.3	+1.9
LZH				pmax	pmax		
	comp=Z,16nm,1.4s						
LZH				pmax	pmax		
	comp=Z,75nm,5.3s						
LZH				LR	LR		
	comp=Z,220nm,17.0s						
LZH				LR	LR		
	comp=Z,240nm,16.8s						
LZH				LR	LR		
	comp=Z,300nm,19.5s						
M38A	Pleasantville	93.19	48	P	P	07 09 54.5	-0.6
	baz=252						
Q40A	Laux Farm, Aux	93.28	51	P	P	07 09 54.8	-0.6
	baz=253						
T42A	Van Buren	93.45	53	P	P	07 09 55.3	-1.0
	baz=253						
P40A	Paris	93.46	50	P	P	07 09 55.4	-0.9
	baz=253						
N39A	Derby Farms, D	93.53	49	P	P	07 09 55.8	-0.8
	baz=253						
L38A	Oak Wood Farm,	93.58	47	P	P	07 09 56.2	-0.6
	baz=252						
AGMN	Agassiz Nation	93.59	41	P	P	07 09 55.6	-1.1
	baz=251						
R41A	Rosebud	93.60	51	P	P	07 09 56.1	-0.9
	baz=253						
CCM	Cathedral Cave	93.63	52	P	P	07 09 56.2	-0.9
	baz=253						
O40A	La Belle	93.76	50	P	P	07 09 57.0	-0.7
	baz=253						
S42A	Caledonia	93.89	52	P	P	07 09 57.7	-0.6
	baz=253						
Q41A	Truxton	93.90	51	P	P	07 09 57.8	-0.5
	baz=253						
M39A	Webster	93.95	48	P	P	07 09 58.4	-0.1
	baz=253						
T43A	Greenville	94.08	53	P	P	07 09 58.4	-0.8
	baz=254						
A33A	Warroad	94.10	40	P	P	07 09 58.1	-0.9
	baz=251						
N40A	Mertquake, Sal	94.20	49	P	P	07 09 58.9	-0.7
	baz=253						
P41A	Barry, Barry	94.23	50	P	P	07 09 59.3	-0.5
	baz=253						
L39A	Vinton	94.26	48	P	P	07 09 59.1	-0.8
	baz=253						
F36A	Milaca	94.33	44	P	P	07 09 59.4	-0.8
	baz=252						
D35A	Remer	94.36	42	P	P	07 09 59.4	-0.8
	baz=252						
S43A	Fulton Ridge,	94.38	52	P	P	07 09 59.9	-0.6
	baz=254						
M40A	Post Highland	94.40	48	P	P	07 10 00.0	-0.5
	baz=253						
W45A	Hickory Valley	94.40	55	P	P	07 10 00.4	-0.3
	baz=254						
B34A	Aery, Baudette	94.42	41	P	P	07 09 59.6	-0.9
	baz=252						
ULN	Ulaanbaatar	94.45	318⇑	eP	P	07 10 00.3	-0.6
ULN				pmax	pmax		
	comp=Z,5.0nm,1.8s						
O41A	Passleys Farm,	94.49	50	P	P	07 10 00.6	-0.4
	baz=254						
K39A	Oelwein	94.51	47	P	P	07 10 00.5	-0.5
	baz=253						
I38A	Scanlan Farm,	94.59	46	P	P	07 10 00.7	-0.7
	baz=253						
C35A	Jirik Farms, M	94.60	42	P	P	07 10 00.2	-1.1
	baz=252						
T44A	Benton	94.61	53	P	P	07 10 01.6	-0.1
	baz=254						
SPMN	Marine on St.	94.62	44	P	P	07 10 01.3	-0.2
	baz=253						
N41A	Harden Midland	94.68	49	P	P	07 10 01.3	-0.6
	baz=254						
R43A	Red Bud	94.68	52	P	P	07 10 01.5	-0.5
	baz=254						
E36A	McGregor	94.71	43	P	P	07 10 01.5	-0.3
	baz=252						
P42A	Winchester	94.74	50	P	P	07 10 02.1	0.0
	baz=254						
P42A	Winchester	94.74	50	eP	P	07 10 02.2	0.0
	comp=Z,17nm,0.9s						
L40A	Anamosa	94.80	48	P	P	07 10 02.2	-0.2
	baz=254						
L40A	Anamosa	94.80	48	eP	P	07 10 02.5	+0.1
	comp=Z,15nm,1.1s						
J39A	Decorah	94.82	46	P	P	07 10 01.7	-0.8
	baz=253						
D36A	Goodland	94.97	42	P	P	07 10 02.2	-0.8
	baz=253						
D36A	Goodland	94.97	42	eP	P	07 10 02.5	-0.5
	comp=Z,6.5nm,0.8s						
K40A	Colesburg	95.04	47	P	P	07 10 03.1	-0.4
	baz=254						
I39A	Houston	95.10	46	P	P	07 10 02.8	-0.9
	baz=253						
O42A	Bath	95.10	50	P	P	07 10 03.5	-0.3
	baz=254						
G38A	Ridgeland	95.25	45	P	P	07 10 03.7	-0.7
	baz=253						
X47A	Russelville	95.28	56	P	P	07 10 04.4	-0.4
	baz=255						
N42A	Yates City	95.31	49	P	P	07 10 04.0	-0.8
	baz=254						
D37A	Cotton	95.44	43	P	P	07 10 04.5	-0.7
	baz=253						
H39A	Augusta	95.50	45	P	P	07 10 05.0	-0.5
	baz=254						
J40A	Soldiers Grove	95.51	47	P	P	07 10 04.9	-0.8
	baz=254						
K41A	Shullsburg	95.60	47	P	P	07 10 05.4	-0.7
	baz=254						
W47A	Westpoint	95.68	55	P	P	07 10 06.0	-0.6
	baz=255						
WVT	Waverly	95.72	54	P	P	07 10 05.9	-0.9
	baz=255						
JFWS	Jewell Farm	95.73	47	P	P	07 10 05.7	-0.9
	baz=254						
JFWS	Jewell Farm	95.73	47	eP	P	07 10 06.2

JFWS	Jewell Farm	95.73	47	*e*P	P	07 10 06.2	-0.4
JFWS				pmax	pmax		
	comp=Z,9.0nm,0.8s						
G39A	Holcombe	95.74	45	P	P	07 10 05.8	-0.9
	baz=254						
C37A	Embarrass	95.76	42	P	P	07 10 05.9	-0.8
	baz=253						
L42A	Oliver, Polo	95.89	48	P	P	07 10 06.4	-1.0
	baz=254						
J41A	Loganville	96.01	47	P	P	07 10 07.0	-0.9
	baz=254						
F39A	Loretta	96.09	44	P	P	07 10 07.4	-0.8
	baz=254						
H40A	Chili	96.09	45	P	P	07 10 07.5	-0.8
	baz=254						
W48A	Pulaski	96.18	55	P	P	07 10 08.4	-0.5
	baz=255						
U47A	Clarksville	96.23	54	P	P	07 10 08.3	-0.7
	baz=255						
K42A	Prairie Point,	96.33	47	P	P	07 10 08.8	-0.6
	baz=255						
F40A	Park Falls	96.62	44	P	P	07 10 10.1	-0.5
	baz=255						
J42A	Columbus	96.63	47	P	P	07 10 10.2	-0.5
	baz=255						
W49A	Belvidere	96.70	56	P	P	07 10 11.3	+0.1
	baz=256						
E40A	Wakefield	96.91	44	P	P	07 10 11.7	-0.3
	baz=255						
I42A	Draeger Farm,	96.92	46	P	P	07 10 11.5	-0.5
	baz=255						
T48A	Bowling Green	97.09	54	P	P	07 10 12.7	-0.3
	baz=256						
J43A	Natural Harves	97.14	47	P	P	07 10 12.4	-0.6
	baz=256						
GTA	Gaotai	97.15	309	*e*P	P	07 10 04.8	-8.5
GTA				pP	PcP	07 10 10.3	-3.1
GTA				sP	Pdif	07 10 13.0	-0.4
GTA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
F41A	Three Lakes	97.26	45	P	P	07 10 13.2	-0.4
	baz=255						
F41A	Three Lakes	97.26	45	*e*P	P	07 10 13.1	-0.4
	comp=Z,5.2nm,0.9s						
COWI	Conover	97.33	44	*e*P	P	07 10 13.6	-0.3
	comp=Z,4.6nm,0.8s						
SFIN	Lafayette	97.35	50	P	P	07 10 14.0	-0.1
	baz=256						
U49A	Red Boiling Sp	97.42	54	P	P	07 10 14.3	-0.1
	baz=256						
I43A	Langenfeld Bro	97.46	47	P	P	07 10 13.9	-0.5
	baz=256						
W50A	Signal Mountai	97.48	56	P	Pdif	07 10 14.9	0.0
	baz=256						
E41A	Kenton	97.54	44	P	P	07 10 14.3	-0.5
	baz=256						
G42A	Mountain	97.60	45	P	P	07 10 14.6	-0.4
	baz=256						
D41A	Chassel	97.96	43	P	P	07 10 16.6	0.0
	baz=256						
455A	Stateville	98.32	60	P	Pdif	07 10 18.7	+0.1
	baz=257						
O50A	Cable	99.89	51	P	Pdif	07 10 26.0	+0.5
	baz=258						
MK32	Makanchi Array	110.83	315	*e*PKiKP	PKiKP	07 15 12.2	-1.4
MKAR	Makanchi Array	110.83	315	PKiKP	PKiKP	07 15 12.2	-1.4
	comp=Z,0.6nm,1.0s,baz=180,slow=0.2,SNR=3.7						
ARU	Arti	123.41	328	*i* PKIKP	PKPdf	07 15 36.8	-0.6
ARU						07 17 19.8	
ARU						07 22 45.5	
ARU				SS	SS	07 34 00.5	-1.5
ARA0	ARCESS Array S	124.79	352	*e*PKPdf	PKPdf	07 15 39.1	-0.6
ARCES	ARCESS Array B	124.79	352	PKP	PKPdf	07 15 39.1	-0.6
	comp=Z,3.4nm,0.8s,baz=325,slow=1.5,SNR=8.3						
KLMR	Klimovskoe	128.92	340	*e*PKIKP	PKPdf	07 15 45.6	-2.1
KLMR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KLMR	Klimovskoe	128.92	340	*e*PKPdf	PKPdf	07 15 45.7	-2.0
KLMR				AMP		07 15 47.4	
	comp=Z,7.0nm,1.0s						
OBN	Obninsk	134.22	336	*e*PKIKP	PKPdf	07 15 57.6	-0.3
OBN				*e*		07 18 28.8	
OJC	Ojcow	143.81	345	*e*PKIKP	PKPbc	07 16 13.3	0.0
CLL	Collm	144.00	353	*e*PKPdf	PKPab	07 16 12.0	-1.3
	comp=Z,5.0nm,0.7s						
CLL	Collm	144.00	353	*e*PKIHKP	PKPbc	07 16 12.0	-1.8
CLL				*e*		07 16 13.0	
DPC	Dobruska-Polom	144.43	349	*e*PKP	PKPbc	07 16 15.6	+0.3
DPC	Dobruska-Polom	144.43	349	*e*PKIKP	PKPbc	07 16 15.6	+0.3
BUR04	Bucovina Ar. S	144.49	338	*e*PKPdf	PKPab	07 16 15.2	-0.2
BURAR	Bucovina Array	144.49	338	⇓*i*P	PKPbc	07 16 16.3	+0.7
BURAR	Bucovina Array	144.49	338	⇓PKIKP	PKPbc	07 16 16.3	+0.7
UZH	Uzhgorod	144.58	342	*e*PKIKP	PKPab	07 16 14.0	-1.5
UZH				*e*		07 16 23.8	
MORC	Moravsky Berou	144.74	347	⇑*i*P	PKPbc	07 16 16.3	0.0
MORC	Moravsky Berou	144.74	347	*e*PKPdf	PKPbc	07 16 16.6	+0.3
MORC	Moravsky Berou	144.74	347	*e*PKIKP	PKPbc	07 16 16.6	+0.3
MORC	Moravsky Berou	144.74	347	*e*PKP	PKPbc	07 16 16.4	+0.1
LANS	Liptovska Anna	144.88	345	*e*PKIKP	PKPdf	07 16 17.3	-0.3
LANS	Liptovska Anna	144.88	345	*e*PKP	PKPdf	07 16 17.2	-0.3
BEBN	Eben Emael	144.90	1	⇑PKP	PKPdf	07 16 26.3	+8.9
TRPA	Tarpa	144.95	341	⇑*i*P	PKPbc	07 16 16.9	0.0
MEM	Membach	145.09	0	⇑PKP	PKPbc	07 16 16.9	-0.5
KECS	Kecovo	145.23	343	*e*PKIKP	PKPbc	07 16 17.0	-0.8
KECS	Kecovo	145.23	343	*e*PKP	PKPbc	07 16 17.0	-0.8
BCLA	Clavier	145.28	1	⇓PKP	PKPdf	07 16 18.1	-0.1
VRI	Vrincioaia	145.35	335	⇑*i*P	PKPab	07 16 18.5	0.0
VRI	Vrincioaia	145.35	335	⇑PKIKP	PKPab	07 16 18.5	0.0
VRAC	Vranov	145.38	348	⇑*i*P	PKPab	07 16 18.6	+0.1
VRAC	Vranov	145.38	348	⇑PKIKP	PKPab	07 16 18.6	+0.1
VRAC	Vranov	145.38	348	*e*PKP	PKPbc	07 16 18.3	0.0
JAVC	Velka Javorina	145.58	347	*e*PKP	PKPab	07 16 20.1	+0.8
VYHS	Vyhne	145.65	345	*e*PKP2	PKPbc	07 16 19.2	0.0
VYHS	Vyhne	145.65	345	*e*PKP	PKPbc	07 16 19.2	0.0
KRUC	Moravsky	145.65	348	*e*PKP	PKPbc	07 16 19.0	-0.1
HARR	Harsova	145.76	332	⇑*i*P	PKPab	07 16 20.2	+0.2
HARR	Harsova	145.76	332	⇑PKP2	PKPab	07 16 20.2	+0.2
TLB	Topalu	145.80	332	⇓*i*P	PKPab	07 16 20.0	-0.1
TLB	Topalu	145.80	332	⇓PKP2	PKPab	07 16 20.0	-0.1
DOPR	Dopca	145.80	336	⇑*i*P	PKPab	07 16 20.4	+0.2
MLR	Muntele Rosu	145.97	335	⇓*i*P	PKPab	07 16 21.0	0.0
MLR	Muntele Rosu	145.97	335	*e*PKPdf	PKPbc	07 16 20.2	-0.2
MLR	Muntele Rosu	145.97	335	⇓PKP2	PKPab	07 16 21.0	0.0
ISR	Istrita	146.03	334	⇓*i*P	PKPbc	07 16 20.8	+0.3
ISR	Istrita	146.03	334	⇓PKP2	PKPbc	07 16 20.8	+0.3
WLF	Walferdange	146.04	0	⇑PKP	PKPab	07 16 20.9	0.0
KHC	Kasperske Hory	146.06	352	*e*PKP	PKPab	07 16 20.8	-0.3
KHC	Kasperske Hory	146.06	352	*e*PKP2	PKPab	07 16 20.8	-0.3
DRGR		146.07	340	⇓*i*P	PKPbc	07 16 20.4	-0.2
DRGR		146.07	340	⇓PKP2	PKPbc	07 16 20.4	-0.2
MODS	Modra-Piesok	146.12	347	*e*PKP2	PKPdf	07 16 20.1	+0.4
MODS	Modra-Piesok	146.12	347	*e*PKP	PKPdf	07 16 20.1	+0.4
BR101	Keskin Array S	146.19	321	*e*PKPdf	PKPbc	07 16 20.9	-0.4
BR131	Keskin Array S	146.19	321	*e*PKPdf	PKPbc	07 16 21.2	-0.1
BRTR	Keskin Array B	146.19	321	PKPbc	PKPbc	07 16 20.9	-0.4
	comp=Z,11nm,0.8s,baz=104,slow=-2.2,SNR=35						
GEC2	GERESS Array S	146.32	351	*e*PKPdf	PKPdf	07 16 20.7	+0.6
GEC2	GERESS Array S	146.32	351	*e*PKP2	PKPdf	07 16 20.7	+0.6
GERES	GERESS Array B	146.32	351	PKPbc	PKPdf	07 16 20.7	+0.6
	comp=Z,1.5nm,0.5s,baz=26,slow=3.4,SNR=14						
GEA0	GERESS Array S	146.33	351	*e*PKPdf	PKPdf	07 16 20.0	-0.1
ARR	Arges	146.60	336	⇑*i*P	PKPbc	07 16 22.3	+0.1
CONA	Conrad Observa	146.84	348	*e*PKPab	PKPbc	07 16 22.8	-0.1
	comp=Z,7.4nm,0.8s						
MOA	Molln	147.20	350	*i* PKPab	PKPbc	07 16 24.0	+0.2
	comp=Z,5.5nm,0.8s						
BZS	Buzias	147.46	340	⇑*i*P	PKPbc	07 16 23.3	-1.3
BZS	Buzias	147.46	340	⇑PKP2	PKPbc	07 16 23.3	-1.3
ECH	Echery	147.49	359	*e*PKPdf	PKPbc	07 16 23.3	-1.3
ECH	Echery	147.49	359	*e*PKP2	PKPbc	07 16 23.3	-1.3
ARSA	Arzberg	147.56	348	*e*PKPab	PKPbc	07 16 24.8	0.0
	comp=Z,5.8nm,1.0s						
HERR	Herculane	147.83	338	⇓*i*P	PKPbc	07 16 24.4	-1.2
RETA	Reutte	148.01	354	*e*PKPbc	PKPbc	07 16 25.4	-0.7
	comp=Z,5.0nm,0.9s						
WATA	Walderalm	148.08	353	*e*PKiKP	PKPbc	07 16 27.1	+0.8
	comp=Z,1.5nm,0.4s						
KBA	Koelnbreinsper	148.10	351	*i* PKPbc	PKPdf	07 16 24.6	+1.4
	comp=Z,3.6nm,0.6s						
MOTA	Moosalm	148.12	354	*e*PKiKP	PKPbc	07 16 26.8	+0.3
	comp=Z,4.1nm,0.7s						
WTTA	Wattenberg	148.14	353	*i* PKPbc	PKPbc	07 16 25.9	-0.7
	comp=Z,2.7nm,0.6s						
SOKA	Soboth	148.20	349	*e*PKPbc	PKPbc	07 16 25.9	-0.7
	comp=Z,4.5nm,0.9s						
DAVA	Damuels	148.29	355	*e*PKiKP	PKPbc	07 16 27.3	+0.4
	comp=Z,12nm,0.9s						
OBKA	Obir	148.45	349	*e*PKPbc	PKPdf	07 16 25.2	+1.5
	comp=Z,5.9nm,1.0s						
FETA	Feichten	148.48	354	*e*PKiKP	PKPbc	07 16 27.5	0.0
	comp=Z,5.6nm,0.9s						
MYKA	Terra Mystica	148.49	350	*e*PKPbc	PKPbc	07 16 26.1	-1.3
	comp=Z,8.5nm,0.8s						
ABTA	Abfaltersbach	148.54	352	*e*PKPbc	PKPbc	07 16 26.6	-0.9
	comp=Z,7.4nm,0.8s						
DAVOX	Davos/Dischmat	148.79	355	PKPbc	PKPbc	07 16 28.7	+0.4
	comp=Z,9.6nm,0.8s,baz=354,slow=6.6,SNR=12						
CRNS	Crni Vrh	148.92	349	*i* PKPbc	PKPbc	07 16 27.5	-0.9
FUORN	Ofenpass-Fuorn	148.92	355	*e*PKPbc	PKPbc	07 16 29.3	+0.6
GBAS	Gorenja Brezov	149.03	349	*i* PKPbc	PKPbc	07 16 28.1	-0.6
TUE	Stuetta	149.14	356	*e*PKPbc	PKPbc	07 16 28.2	-1.0
SENIN	Lac Senin/Sane	149.34	359	*e*PKPbc	PKPbc	07 16 30.3	+0.6
DIVS	Divibare	149.34	341	*e*PKPbc	PKPbc	07 16 28.9	-0.7
SSB	Saint Sauveur	150.39	3	*e*PKPbc	PKPbc	07 16 32.7	+0.6
SSB	Saint Sauveur	150.39	3	*e*PKIKP	PKPbc	07 16 32.7	+0.6
BNI	Bardonecchia	150.66	360	*e*PKPbc	PKPbc	07 16 33.6	+0.8
BNI	Bardonecchia	150.66	360	*e*PKIKP	PKPbc	07 16 33.6	+0.8
PGAV	Gavieira, Arco	150.86	23	*e*PKPdf	PKPbc	07 16 34.0	+0.6
PCAB	Cabril	151.17	23	*e*PKPdf	PKPbc	07 16 34.5	+0.5
POLO	Lamas de Olo	151.55	23	*e*PKPdf	PKPbc	07 16 35.6	+0.6
FNA	Florina	151.74	335	*e*PKPbc	PKPbc	07 16 34.9	-0.5
FNA	Florina	151.74	335	*e*PKIKP	PKPbc	07 16 34.9	-0.5
MVO	Moncorvo	152.01	22	*e*PKPdf	PKPbc	07 16 36.2	+0.2
MTE	Manteigas	152.49	23	*e*PKPdf	PKPbc	07 16 37.0	-0.1
TOA1	Torodi Ar. Sit	174.84	118	*e*PKPdf	PKPdf	07 16 49.3	-2.0
TOA1				*e*PKPab	PKPab	07 18 25.4	-0.4
TORD	Torodi Ar. Bea	174.84	118	PKP	PKPdf	07 16 49.3	-2.0
	comp=Z,1.8nm,1.0s,baz=222,slow=1.9,SNR=5.8						
TORD				PKPab	PKPab	07 18 25.4	-0.4
	comp=Z,1.9nm,1.0s,baz=248,slow=5.5,SNR=5.3						

*IDC **27** 07:10:03.2±2.4, 36°.85N×141°.65E, h0km, mb3.5/3, mb1 3.6/5, mb1mx3.3/64, mbtmp3.5/5, ML3.5/2, Error ellipse: s-maj=57.0km s-min=26.3km az=69.0*
*ISCJB **27** 07:10:09.7±1.2, 36°.65N±0°.04×141°.2E±0°.1, h47km±10km, mb3.4/3, Error ellipse: s-maj=18.7km s-min=6.4km az=8.5*
*JMA **27** 07:10:10.6±0.1, 36°.68N×141°.12E, h45km±1km, M3.2*
ISC 27 07:10:09.6±1.7, 36°.68N±0°.04×141°.25E±0°.09, h31km±10km, n16, σ1§20/20, mb3.6/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	Hitachi	0.55	263	P	Pb	07 10 20.9	0.0
JHO				S	Sb	07 10 28.0	-0.6
ONAJ	Iwakimizuishiy	0.55	320	P	Pb	07 10 21.2	+0.2
ONAJ				S	Sb	07 10 28.6	-0.2
JFK	Kawauchi	0.75	337	P	Pn	07 10 24.0	-0.1
JYT	Yasato	0.96	242	P	Pn	07 10 26.4	-0.6
JYT				S	Sn	07 10 37.7	-1.9
JSB	Shiboa	1.10	285	P	Pn	07 10 28.7	-0.3
JFT	Otama	1.11	319	P	Pn	07 10 29.8	+0.8
JFT				S	Sn	07 10 43.2	-0.1
JMM	Marumori	1.24	343	P	Pn	07 10 31.2	+0.4
JMM				S	Sn	07 10 46.6	+0.2
MJAR	Matsushiro Arr	2.45	268	Pn	Pn	07 10 47.9	+0.4
	4.2nm,0.3s,baz=78,slow=11,SNR=19						
MAT	Matsushiro	2.45	268	P	Pn	07 10 48.5	+1.0
MAT				S	Sn	07 11 19.8	+3.4
JHJ	Hachijo jima 2	3.75	199	Pn	Pn	07 11 07.3	+1.9
	14nm,0.3s,baz=75,slow=22,SNR=4.8						
JHJ				Sn	Sn	07 11 48.0	-0.4
	9.5nm,0.3s,baz=253,slow=23,SNR=3.9						
H11N2	WAKE ISLAND Hy	28.09	120	T	T	07 46 03.5	
	baz=314,slow=75,SNR=5.7						
H11N1	WAKE ISLAND Hy	28.09	120	T	T	07 45 48.8	
	baz=314						
H11N3	WAKE ISLAND Hy	28.10	120	T	T	07 46 03.9	
	baz=314,slow=75,SNR=5.1						
MKAR	Makanchi Array	44.19	302	P	P	07 18 15.6	-0.1
	0.2nm,0.6s,baz=89,slow=9.2,SNR=2.8						
KURBB	Kurchatov Arra	46.11	308	P	P	07 18 30.1	-0.7
	0.5nm,0.6s,baz=86,slow=8.0,SNR=8.5						
WRA	Warramunga Arr	56.69	188	P	P	07 19 49.6	-0.6
	0.6nm,0.8s,baz=6.0,slow=7.1,SNR=8.6						

FIA0 27 07:14:09.3, 60°.94N×27°.39E, h0km, ML1.8, Explosion, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FIA0	FINESS Array S	0.81	309	PG	Pg	07 14 23.8	-1.0
	comp=Z,182nm,0.1s						
FIA0				RG	Rg	07 14 39.7	
	comp=Z,28nm,0.8s						

UCR 27 07:17:19.9±1.1, 12°.20N×87°.16W, h52km±10km, MD3.3, ML4.3, 1C, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNGN	Cerro Negro	0.54	57	*e*P	Pn	07 17 32.4	+0.6
CNGN				*e*S	Sn	07 17 41.6	+1.2
COPN	Copaltepe	0.56	92	*e*P	Pn	07 17 31.9	-0.1
COPN				*e*S	Sn	07 17 41.0	+0.3
MOMN	Momotombo	0.64	71	*e*P	Pn	07 17 32.9	-0.2
MOMN				*e*S	Sn	07 17 43.4	+0.8
MOMN				IAML		07 17 45.8	
	comp=Z,13μm,0.1s						
APYN	Apoyeque	0.80	88	⇑*e*P	Pn	07 17 34.9	-0.1
APYN				*e*S	Sn	07 17 46.1	+0.1
XAVN	Gruta Xavier	0.82	94	*e*P	Pn	07 17 35.2	-0.1
XAVN				*e*S	Sn	07 17 47.0	+0.4
CRUN	El Crucero	0.87	104	*e*P	Pn	07 17 36.2	+0.2
CRUN				*e*S	Sn	07 17 47.9	0.0
MGAN	Managua	0.90	94	*e*P	Pn	07 17 36.8	+0.5
BRAN	Las Pilas	0.94	57	*e*P	Pn	07 17 35.6	-1.4
ESTN	Estel	1.18	41	*e*P	Pn	07 17 40.3	+0.1
CNCH	Conchagua	1.25	329	*e*P	Pn	07 17 41.8	+0.6
CNCH				*e*S	Sn	07 17 57.6	+0.6
MATN	Matagalpa	1.41	59	*e*P	Pn	07 17 43.3	0.0
MATN				*e*S	Sn	07 18 01.4	+0.6
RCON	San Juan de Ri	1.61	38	*e*P	Pn	07 17 46.3	+0.2
PACA	Pacayal	1.69	318	*e*P	Pn	07 17 47.3	+0.1
PACA				*e*S	Sn	07 18 08.1	+0.3

*ISCJB **27** 07:21:29.1±0.9, 38°.18N±0°.04×141°.74E±0°.09, h55km±7km, mb3.5/3, Error ellipse: s-maj=12.5km s-min=5.2km az=21.2*
*JMA **27** 07:21:29.9±0.1, 38°.18N×141°.69E, h50km±1km, M3.5*
JMA Felt I J1.
*IDC **27** 07:21:32.0±7.7, 38°.17N×141°.72E, h71km±48km, mb3.3/3, mb1 3.5/6, mb1mx3.2/67, mbtmp3.6/6, ML3.2/2, Error ellipse: s-maj=109.6km s-min=22.9km az=69.0*
ISC 27 07:21:30.6±1.1, 38°.18N±0°.04×141°.73E±0°.08, h52km±9km, n26, σ1§51/33, mb3.5/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	Ouri	0.41	312	P	Pn	07 21 40.0	-1.0
JIO				S	Sn	07 21 46.8	-1.6
JMM	Marumori	0.81	247	P	Pn	07 21 44.3	-1.5
JMM				S	Sn	07 21 54.9	-2.0
JOU	Okura	0.86	283	P	Pn	07 21 45.6	-1.0
JOU				S	Sn	07 21 57.6	-0.7
JMK	Ichinoseki	0.87	333	P	Pn	07 21 46.0	-0.6
JMK				S	Sn	07 21 57.4	-1.0
OFUJ	Ofunato	0.90	357	P	Pn	07 21 46.1	-1.0
OFUJ				S	Sn	07 21 57.9	-1.3
JFK	Kawauchi	1.06	220	P	Pn	07 21 47.9	-1.3
JFK				S	Sn	07 22 00.9	-2.0
JFT	Otama	1.29	240	P	Pn	07 21 51.6	-0.7
JFT				S	Sn	07 22 07.4	-1.0
JYK	Kaneyama	1.31	305	P	Pn	07 21 51.7	-0.8
JYS	Shiratake	1.31	272	P	Pn	07 21 51.9	-0.7
JYS				S	Sn	07 22 08.3	-0.8
JOM	Ohasama	1.34	345	P	Pn	07 21 52.6	-0.3
JOM				S	Sn	07 22 09.3	-0.3
JRG	Rokugo	1.49	325	P	Pn	07 21 54.8	-0.2
JYA	Atsumi	1.64	285	P	Pn	07 21 56.3	-0.7
JFY	Yanaizu	1.78	245	P	Pn	07 21 58.6	-0.4
MJAR	Matsushiro Arr	3.25	241	P	Pn	07 22 19.8	+0.8
	1.2nm,0.3s,baz=55,slow=11,SNR=6.8						
MAT	Matsushiro	3.25	241	P	Pn	07 22 20.7	+1.6
MAT				*e*S	Sn	07 22 58.5	+2.0
JHJ	Hachijo jima 2	5.29	198	P	Pn	07 22 49.0	+1.9
	5.9nm,0.3s,baz=140,slow=23,SNR=3.9						
JHJ				S	Sn	07 23 44.2	-2.5
	6.1nm,0.3s,baz=129,slow=23,SNR=2.8						
USRK	Ussuriysk Ar.	9.49	312	P	Pn	07 23 45.3	+0.8
	baz=124,slow=14						
H11N2	WAKE ISLAND Hy	28.54	123	T	T	07 57 37.7	
	baz=316,slow=75,SNR=24						
H11N1	WAKE ISLAND Hy	28.55	123	T	T	07 57 35.3	
	baz=316,slow=75,SNR=36						
H11N3	WAKE ISLAND Hy	28.55	123	T	T	07 57 39.1	
	baz=316,slow=75,SNR=44						
H11S1	WAKE ISLAND Hy	29.29	125	T	T	07 58 30.4	
	baz=317,slow=76,SNR=10						
H11S3	WAKE ISLAND Hy	29.29	125	T	T	07 58 33.3	
	baz=317,slow=76,SNR=17						
H11S2	WAKE ISLAND Hy	29.30	125	T	T	07 58 35.3	
	baz=317,slow=76,SNR=13						
MKAR	Makanchi Array	43.73	301	P	P	07 29 30.1	-0.5
	0.4nm,0.6s,baz=85,slow=9.5,SNR=5.6						
MKAR				pP	pP	07 29 47.9	+3.4
	0.6nm,0.7s,baz=88,slow=9.8,SNR=6.4						
KURBB	Kurchatov Arra	45.51	307	P	P	07 29 44.1	-0.5
	0.6nm,0.4s,baz=80,slow=8.6,SNR=6.0						
KURBB				pP	pP	07 30 01.6	+3.1
	1.3nm,0.4s,baz=81,slow=8.2,SNR=9.2						
WRA	Warramunga Arr	58.23	188	P	P	07 31 18.4	-1.1
	0.3nm,0.8s,baz=5.7,slow=7.2,SNR=4.9						

IDC 27 07:30:04.2±2.4, 3°.40N×64°.56E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.5/66, mbtmp3.8/4, MS3.6/1, Ms1 3.6/1, ms1mx2.7/64, Error ellipse: s-maj=92.5km s-min=28.7km az=61.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08N2	Diego Garcia H	11.60	146	T	T	07 44 40.9	
	baz=326,slow=76,SNR=17						
H08N3	Diego Garcia H	11.62	146	T	T	07 44 44.8	
	baz=326,slow=76,SNR=16						
H08N1	Diego Garcia H	11.62	146	T	T	07 44 41.4	
	baz=326,slow=76,SNR=17						
LSZ	Lusaka	40.51	242	LR	LR	07 53 13.2	
	comp=Z,66nm,18.1s,baz=304,slow=34						
MKAR	Makanchi Array	45.88	17	P	P	07 38 28.5	+0.1
	0.2nm,0.6s,baz=203,slow=8.8,SNR=2.7						
AKTO	Aktyubinsk	47.19	354	P	P	07 38 38.3	-0.3
	1.3nm,0.7s,baz=183,slow=6.4,SNR=4.4						
WRA	Warramunga Arr	72.26	112	P	P	07 41 32.1	+0.1
	1.6nm,0.8s,baz=288,slow=5.6,SNR=8.5						
ASAR	Alice Springs	72.58	116	P	P	07 41 33.9	0.0
	0.8nm,0.7s,baz=298,slow=6.4,SNR=5.8						
TXAR	Lajitas Array	145.55	342	PKPbc	PKPdf	07 49 44.5	-0.8
	0.7nm,0.7s,baz=52,slow=2.4,SNR=12						

IDC 27 07:41:39.7±2.5, 3°.34N×64°.57E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.5/67, mbtmp3.9/4, MS3.8/16, Ms1 3.8/16, ms1mx3.4/65, Error ellipse: s-maj=102.3km s-min=27.4km az=60.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08N2	Diego Garcia H	11.55	146	T	T	07 56 17.2	
	baz=326,slow=76,SNR=74						
H08N3	Diego Garcia H	11.56	146	T	T	07 56 15.1	
	baz=326,slow=76,SNR=60						
H08N1	Diego Garcia H	11.57	146	T	T	07 56 19.3	
	baz=326,slow=76,SNR=63						
WSAR	Wadi Sarin	20.60	344	LR	LR	07 52 36.7	
	comp=Z,352nm,20.7s,baz=110,slow=32						
ATD	Arta Tunnel	23.01	292	LR	LR	07 53 41.1	
	comp=Z,111nm,22.0s,baz=303,slow=31						
KMBO	Kilima Mbogo	27.66	261	LR	LR	07 57 01.5	
	comp=Z,200nm,21.6s,baz=92,slow=33						
OPO	Ambohidratompo	27.69	218	LR	LR	07 56 22.5	
	comp=Z,516nm,18.3s,baz=12,slow=32						
GEYT	Alibeck	34.93	351	LR	LR	08 02 31.7	
	comp=Z,116nm,19.9s,baz=210,slow=36						
GNI	Garni	40.80	337	LR	LR	08 05 04.2	
	comp=Z,59nm,20.7s,baz=80,slow=34						
KBZ	Khabaz	44.57	338	LR	LR	08 08 57.8	
	comp=Z,45nm,19.3s,baz=90,slow=37						
BRTR	Keskin Array B	45.79	326	LR	LR	08 09 44.4	
	comp=Z,83nm,20.0s,baz=114,

GOLH				*i* S		**Sn**	**07 44 18.4**	**0.0**
GOLH	**Golhisar**	**1.06**	**30**	P		**Pb**	**07 44 02.7**	**-0.9**
GOLH				S		**Sn**	**07 44 18.4**	**0.0**
DAT	**Datca**	**1.15**	**291**	PN		**Pn**	**07 44 05.2**	**+0.1**
DAT	**Datca**	**1.15**	**291**	PN		**Pn**	**07 44 05.2**	**+0.1**
DAT	**Datca**	**1.15**	**291**	*e*Pn		**Pn**	**07 44 05.2**	**+0.1**
TAVA	**DENIZLI_Tavas**	**1.15**	**0**	*i* P		**Pb**	**07 44 04.9**	**-0.2**
TAVA				*i* S		**Sb**	**07 44 19.7**	**-0.1**
TAVA	**DENIZLI_Tavas**	**1.15**	**0**	P		**Pb**	**07 44 04.9**	**-0.2**
TAVA				S		**Sb**	**07 44 19.7**	**-0.1**
BODT	**Bodrum**	**1.48**	**301**	PN		**Pn**	**07 44 07.6**	**-2.0**
BODT	**Bodrum**	**1.48**	**301**	PN		**Pn**	**07 44 09.9**	**+0.3**
BODT	**Bodrum**	**1.48**	**301**	*e*Pn		**Pn**	**07 44 09.9**	**+0.3**
AYDN	**Tasoluk**	**1.57**	**329**	*i* P		**Pb**	**07 44 12.4**	**+0.1**
AYDN				*i* S		**Sb**	**07 44 32.2**	**+0.2**
AYDN	**Tasoluk**	**1.57**	**329**	P		**Pb**	**07 44 12.4**	**+0.1**
AYDN				S		**Sb**	**07 44 32.2**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**1.82**	**334**	PN		Pn	07 44 07.3	-7.0

NIED ***27*** *07:50:00, 32.°30N×141.°90E, h5km, Mw4.4 Best double couple: M₀4.30000×10¹⁵ NP1:φ₀214.00000°, δ23.00000°, λ144.00000°. NP2:φ₀338.00000°, δ77.00000°, λ71.00000°.*
IDC ***27*** *07:50:23.7±0.7, 32.°22N×141.°77E, h0km, mb4.2/16, mb1 4.3/20, mb1mx4.1/74, mbtmp4.1/20, ML3.9/2, MS3.6/10, Ms1 3.6/10, ms1mx3.2/66, Error ellipse: s-maj=18.9km s-min=15.5km az=71.0*
JMA ***27*** *07:50:24.2±0.2, 32.°33N×141.°91E, h12km, M4.2*
BJI ***27*** *07:50:24.2, 32.°15N×141.°53E, h16km, mb4.6/8, mB4.8/5, Ms4.1/2, Ms7 3.9/2*
MOS ***27*** *07:50:25.0±0.9, 32.°11N×141.°60E, h19km, mb4.6/21, Error ellipse: s-maj=20.7km s-min=6.7km az=120.8*
ISCJB ***27*** *07:50:27.3±0.3, 32.°20N±0.°03×141.°71E±0.°08, h39km, mb4.5/51, MS3.6/7, Error ellipse: s-maj=10.0km s-min=3.7km az=162.1*
NEIC ***27*** *07:50:30.3±0.4, 31.°67N×140.°27E, h10km, mb4.8/22, Error ellipse: s-maj=10.9km s-min=8.1km az=64.0*

ISC 27 07:50:29.4±0.5, 32.°28N±0.°05×141.°83E±0.°07, h39km, n116, σ1§64/106, mb4.5/51, MS3.6/7, 5C-4D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**1.89**	**295**	P	**Pn**	**07 50 57.1**	**-2.1**
JHJ2	**Mitsune**	**1.89**	**297**	*e*Pn	**Pn**	**07 50 57.6**	**-1.6**
JHJ2	**Mitsune**	**1.89**	**297**	P	**Pn**	**07 50 57.6**	**-1.6**
JHJ2				*e*S	**Sn**	**07 51 22.2**	**+0.3**
JHJ	**Hachijo jima 2**	**1.92**	**297**	**Pn**	**Pn**	**07 50 57.6**	**-2.0**
	124nm,0.3s,baz=106,slow=9.1,SNR=48						
JHJ				LR	LR	07 51 45.3	
	comp=Z,619nm,19.6s,baz=63,slow=44						
BSO1	**Boso 1**	**2.48**	**343**	P	**Pn**	**07 51 05.1**	**-1.6**
BSO1				S	**Sn**	**07 51 35.1**	**-0.4**
BSO2	**Boso 2**	**2.63**	**340**	*e*S	**Sn**	**07 51 38.6**	**-1.0**
BSO3	**Boso 3**	**2.75**	**337**	P	**Pn**	**07 51 09.2**	**-1.6**
BSO3				*e*S	**Sn**	**07 51 42.4**	**-0.2**
TK02	**Tokai 2**	**3.81**	**297**	*e*S	**Sn**	**07 52 11.4**	**+2.7**
JYN	**Shimob**	**4.22**	**320**	P	**Pn**	**07 51 31.0**	**-0.3**
JRY	**Ryogami san**	**4.45**	**328**	P	**Pn**	**07 51 33.1**	**-1.3**
JRY				*e*S	**Sn**	**07 52 24.4**	**-0.6**
JAG	**Ashikaga**	**4.58**	**335**	P	**Pn**	**07 51 34.5**	**-1.7**
JAG				*e*S	**Sn**	**07 52 26.4**	**-1.8**
INU	**Inuyama**	**5.05**	**309**	*e*Pn	**Pn**	**07 51 42.1**	**-0.4**
CBIJ	**Chichi jima**	**5.17**	**177**	*e*Pn	**Pn**	**07 51 41.8**	**-2.5**
CBIJ				*e*Sn	**Sn**	**07 52 38.4**	**-4.3**
CBIJ	**Chichi jima**	**5.17**	**177**	P	**Pn**	**07 51 43.0**	**-1.3**
JCJ	**Chichijima**	**5.17**	**177**	Pn	**Pn**	**07 51 41.8**	**-2.5**
JCJ				Sn	**Sn**	**07 52 38.3**	**-4.4**
	42nm,0.3s,baz=284,slow=19,SNR=5.7						
MJA0	**Matsu Arr-Jizo**	**5.19**	**326**	*e*P	**Pn**	**07 51 45.5**	**+1.0**
MJA0				pmax	pmax		
	comp=Z,4.0nm,0.3s						
MJAR	**Matsushiro Arr**	**5.20**	**326**	Pn	**Pn**	**07 51 43.9**	**-0.8**
	comp=Z,3.6nm,0.3s,baz=149,slow=11,SNR=23						
MJAR				LR	LR	07 54 00.3	
	comp=Z,403nm,19.1s,baz=140,slow=42						
MAJO	**Matsushiro**	**5.21**	**326**	*e*Pn	**Pn**	**07 51 45.7**	**+0.9**
MAJO	**Matsushiro**	**5.21**	**326**	*ce*P	**Pn**	**07 51 45.5**	**+0.7**
MAT	**Matsushiro**	**5.21**	**326**	P	**Pn**	**07 51 45.1**	**+0.3**
MAT	**Matsushiro**	**5.21**	**326**	P	**Pn**	**07 51 43.9**	**-0.9**
MAT				S	**Sn**	**07 52 41.2**	**-2.3**
MJB9	**Matsu-Tunnel**	**5.21**	**326**	*e*Pn	**Pn**	**07 51 45.9**	**+1.1**
JFT	**Otama**	**5.37**	**347**	P	**Pn**	**07 51 44.6**	**-2.4**
JFT				S	**Sn**	**07 52 43.3**	**-4.3**
JHHJ	**Haha-jima-NKT**	**5.63**	**177**	P	**Pn**	**07 51 49.0**	**-1.6**
JHHJ				S	**Sn**	**07 52 50.6**	**-3.5**
JNU	**Nakatsue**	**9.27**	**278**	LR	LR	07 56 11.0	
	comp=Z,230nm,18.6s,baz=117,slow=38						
ASAJ	**Asahikawa**	**11.84**	**3**	Pn	**Pn**	**07 53 13.9**	**-1.7**
	comp=Z,1.2nm,0.3s,baz=272,slow=12,SNR=6.5						
KSRS	**Korea Array**	**12.53**	**298**	Pn	**Pn**	**07 53 29.8**	**+4.7**
	comp=Z,0.3nm,0.3s,baz=106,slow=13,SNR=4.2						
KSRS				LR	LR	07 58 57.8	
	comp=Z,230nm,18.1s,baz=85,slow=41						
USRK	**Ussuriysk Ar.**	**14.18**	**330**	Pn	**Pn**	**07 53 47.0**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=140,slow=15,SNR=4.4						
YSS	**Yuzh-Sakhalins**	**14.68**	**2**	‖ *i* P	**P**	**07 53 59.9**	**+0.1**
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
KLR	**Kul'dur**	**18.55**	**339**	‖ *e*P	**P**	**07 54 42.0**	**-0.7**
SSLB	**Suanglung**	**20.25**	**251**	*e*P	P	07 54 50.3	-11
	comp=Z,12nm,1.1s						
PETK	**Petropavlovsk-**	**23.76**	**24**	LR	LR	08 07 52.0	
	comp=Z,96nm,18.1s,baz=254,slow=44						
ZEA	**Zeya**	**23.86**	**338**	*e*P	**P**	**07 55 38.1**	**-0.9**
ZEA				pmax	pmax		
	comp=N,49nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,51nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,200nm,2.0s						
XAN	**Xi'an**	**27.55**	**283**	P	P	07 56 23.0	+10
XAN				pP	sP	07 56 31.0	+2.9
XAN				pmax	pmax		
	comp=Z,12nm,1.0s						
ULN	**Ulaanbaatar**	**30.53**	**311**	*e*P	**P**	**07 56 39.3**	**+0.2**
	comp=Z,10nm,0.8s						
ULN	**Ulaanbaatar**	**30.53**	**311**	‖ *e*P	**P**	**07 56 40.1**	**+1.0**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SONA0	**Songino Array**	**30.94**	**311**	*e*P	**P**	**07 56 43.7**	**+1.0**
SONM	**Songino Array**	**30.94**	**311**	P	**P**	**07 56 43.7**	**+1.0**
	comp=Z,2.1nm,0.6s,baz=116,slow=8.4,SNR=13						
ZAK	**Zakamensk**	**33.66**	**314**	*e*P	**P**	**07 57 06.9**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
TLY	**Talaya**	**33.86**	**316**	*e*P	**P**	**07 57 07.8**	**-0.3**
TLY				pmax	pmax		
	comp=Z,6.0nm,1.3s						
BILL	**Biiibino**	**38.51**	**14**	*e*P	**P**	**07 57 51.2**	**+3.6**
BILL				*e*		07 59 22.7	
BILL				*e*PPP	PPP	07 59 41.1	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
DGZ	**Jazzator, Alta**	**43.59**	**310**	‖ *e*P	**P**	**07 58 30.3**	**+0.5**
NVS	**Novosibirsk**	**46.47**	**317**	*e*P	**P**	**07 58 52.1**	**-0.2**
NVS				pmax	pmax		
	comp=Z,9.0nm,1.0s						
NVS				pmax	pmax		
	comp=E,5.0nm,1.1s						
MK01	**Makanchi Array**	**47.06**	**306**	*e*P	**P**	**07 58 56.7**	**-0.5**
MK31	**Makanchi Array**	**47.07**	**306**	*e*P	**P**	**07 58 57.2**	**0.0**
MK31	**Makanchi Array**	**47.07**	**306**	*e*P	**P**	**07 58 57.2**	**0.0**
MK32	**Makanchi Array**	**47.07**	**306**	*e*P	**P**	**07 58 56.8**	**-0.4**
MKAR	**Makanchi Array**	**47.07**	**306**	P	**P**	**07 58 56.8**	**-0.4**
	comp=E,3.2nm,0.8s,baz=88,slow=9.8,SNR=18						
MKAR	**Makanchi Array**	**47.07**	**306**	*e*P	**P**	**07 58 57.2**	**0.0**
	comp=E,39nm,0.7s						
MKAR	**Makanchi Array**	**47.07**	**306**	*e*P	**P**	**07 58 57.1**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MAKZ	**Makanchi**	**47.28**	**306**	*e*P	**P**	**07 58 59.0**	**+0.1**
	comp=Z,5.2nm,0.7s						
MAKZ	**Makanchi**	**47.28**	**306**	*e*P	**P**	**07 58 59.0**	**+0.1**
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KURK	**Kurchatov**	**49.24**	**311**	*e*P	**P**	**07 59 13.2**	**-0.7**
	comp=Z,11nm,0.8s						
KURK				*e*P	**P**	**07 59 13.5**	**-0.3**
KURK	**Kurchatov**	**49.24**	**311**	*c i* P	**P**	**07 59 13.0**	**-0.9**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KURBB	**Kurchatov Arra**	**49.30**	**311**	P	**P**	**07 59 13.5**	**-0.8**
	comp=Z,2.5nm,0.5s,baz=88,slow=7.3,SNR=35						
PDGK	**Podgornoye**	**49.44**	**302**	P	**P**	**07 59 15.2**	**-0.5**
PDGK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KDAK	**Kodiak Island**	**50.48**	**39**	P	**P**	**07 59 23.6**	**+0.5**
	comp=Z,5.2nm,0.9s,baz=280,slow=12,SNR=3.3						
WRAB	**Tennant Creek**	**52.41**	**189**	‖ *e*P	**P**	**07 59 37.1**	**-0.9**
WB2	**Warramunga Arr**	**52.41**	**189**	*e*P	**P**	**07 59 37.3**	**-0.7**
	comp=Z,17nm,0.8s						
WR1	**Warramunga Arr**	**52.41**	**189**	*e*P	**P**	**07 59 37.2**	**-0.9**
	comp=Z,15nm,0.8s						
WRA	**Warramunga Arr**	**52.41**	**189**	P	**P**	**07 59 37.2**	**-0.9**
	comp=Z,5.4nm,0.6s,baz=6.2,slow=7.7,SNR=65						
ILAR	**Eielson Array**	**53.37**	**30**	P	**P**	**07 59 44.9**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=267,slow=6.3,SNR=11						
ILB	**Eielson Array**	**53.37**	**30**	*e*P	P	07 59 57.3	+13
OTUK	**Ortayu**	**53.59**	**309**	P	**P**	**07 59 46.4**	**-0.1**
OTUK				pmax	pmax		
	comp=Z,10.0nm,1.4s						
BRVK	**Borovoye**	**54.16**	**315**	‖ *e*P	**P**	**07 59 49.3**	**-1.3**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
MNAS	**Manas**	**54.63**	**302**	P	**P**	**07 59 53.8**	**-0.6**
MNAS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
EGAK	**Eagle**	**55.82**	**30**	*e*P	P	08 00 15.8	+13
	comp=Z,4.1nm,1.1s						
KK31	**Karatay Array**	**55.91**	**303**	*e*P	**P**	**08 00 03.3**	**-0.1**
KK31	**Karatay Array**	**55.91**	**303**	*e*P	**P**	**08 00 03.3**	**-0.1**
KKAR	**Karatay Array**	**55.91**	**303**	*e*P	**P**	**08 00 03.5**	**+0.1**
KKAR	**Karatay Array**	**55.91**	**303**	*e*P	**P**	**08 00 03.5**	**+0.1**
AS01	**Alice Springs**	**56.13**	**189**	*e*P	**P**	**08 00 03.8**	**-1.3**
AS01				*e*pP	**pP**	**08 00 17.6**	**+1.0**
ASAR	**Alice Springs**	**56.14**	**189**	P	**P**	**08 00 04.9**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=14,slow=12,SNR=8.6						
ARU	**Arti**	**60.20**	**321**	*d i* P	**P**	**08 00 31.4**	**-1.8**
ARU				*PP	**pP**	**08 00 41.6**	**-3.1**
ARU						08 02 41.5	
ARU				S	**S**	**08 08 43.8**	**-0.1**
ARU				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ABKAR	**Akbulak array**	**61.33**	**312**	*e*P	**P**	**08 00 40.8**	**-0.2**
STKA	**Stephens Creek**	**63.81**	**180**	LR	LR	08 27 35.7	
	comp=Z,50nm,21.6s,baz=270,slow=35						
SPA0	**Spitsbergen Ar**	**65.25**	**349**	*e*P	P	08 01 16.4	+10
SPA0				*e*PcP	**PcP**	**08 01 43.9**	**+5.2**
KBS	**Kingsbay**	**65.39**	**351**	P	**P**	**08 01 03.6**	**-3.8**
KBS				pmax	pmax		
	comp=Z,91nm,0.8s						
RES	**Resolute Bay**	**67.12**	**14**	P	**P**	**08 01 19.5**	**+1.0**
	comp=Z,1.4nm,0.6s,baz=336,slow=6.4,SNR=3.5						
OBN	**Obninsk**	**72.13**	**324**	*e*P	**P**	**08 01 50.3**	**+0.6**
OBN				*e*		08 04 29.2	
YBH	**Yreka Blue Hor**	**73.01**	**51**	LR	LR	08 33 07.3	
	comp=Z,29nm,18.1s,baz=324,slow=35						
PINE	**Pine Mountain**	**73.18**	**49**	*e*P	P	08 02 10.3	+14
	comp=Z,5.5nm,0.8s						
FIA0	**FINESS Array S**	**73.19**	**333**	*e*P	**P**	**08 01 55.6**	**-0.2**
FIA0	**FINESS Array S**	**73.19**	**333**	*e*P	**P**	**08 01 55.7**	**-0.2**
FINES	**FINESS Array B**	**73.19**	**333**	P	**P**	**08 01 55.6**	**-0.2**
	comp=Z,1.3nm,0.6s,baz=72,slow=6.2,SNR=8.3						
K05A	**Summer Lake**	**73.73**	**50**	*e*P	P	08 02 13.4	+14
	comp=Z,6.6nm,0.8s						
ZEI	**Tsey**	**74.12**	**311**	*e*P	**P**	**08 02 01.0**	**-1.0**
KBZ	**Khabaz**	**74.30**	**312**	P	**P**	**08 02 03.4**	**+0.7**
	comp=Z,5.0nm,0.9s,baz=121,slow=3.7,SNR=4.4						
KBZ				LR	LR	08 37 33.4	
	comp=Z,58nm,18.6s,baz=73,slow=38						
KIV	**Kislovodsk**	**74.32**	**312**	*e*P	**P**	**08 02 03.2**	**+0.3**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
J08A	**Circle Bar Ran**	**74.96**	**48**	*e*P	P	08 02 19.8	+13
	comp=Z,4.2nm,1.1s						
LRM	**Limekiln Ridge**	**77.32**	**44**	*e*P	P	08 02 33.6	+13
NVAR	**Mina Array Bea**	**77.58**	**52**	P	**P**	**08 02 22.9**	**+1.1**
	comp=Z,0.5nm,0.7s,baz=272,slow=5.5,SNR=6.4						
NVAR				LR	LR	08 32 54.1	
	comp=Z,52nm,18.6s,baz=64,slow=33						
BOZ	**Bozeman (W)**	**77.93**	**43**	*e*P	P	08 02 37.0	+13
	comp=Z,3.8nm,0.9s						
BOZ	**Bozeman (W)**	**77.93**	**43**	*e*P	P	08 02 37.0	+13
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AKASG	**Malin Array Be**	**78.28**	**323**	P	**P**	**08 02 24.7**	**-0.5**
	comp=Z,0.9nm,0.4s,baz=50,slow=6.0,SNR=3.8						
HFS	**Hagfors**	**78.57**	**336**	P	**P**	**08 02 26.5**	**-0.1**
	comp=Z,2.8nm,0.7s,baz=64,slow=6.6,SNR=4.8						
NB2	**NORSAR Subarra**	**78.71**	**338**	P	**P**	**08 02 27.1**	**-0.3**
	comp=Z,2.2nm,0.8s,baz=42,slow=5.3						
H17A	**Grant Village**	**79.22**	**44**	*e*P	P	08 02 45.0	+14
	comp=Z,5.3nm,0.9s						
PDAR	**Pinedale Array**	**80.77**	**45**	P	**P**	**08 02 40.0**	**+0.9**
	comp=Z,0.5nm,0.8s,baz=159,slow=1.3,SNR=4.2						
BUR04	**Bucovina Ar. S**	**82.27**	**322**	*e*P	**P**	**08 02 47.5**	**+0.7**
BR101	**Keskin Array S**	**82.28**	**312**	*e*P	**P**	**08 02 47.1**	**0.0**
BRTR	**Keskin Array B**	**82.28**	**312**	P	**P**	**08 02 47.1**	**0.0**
	comp=Z,1.4nm,0.8s,baz=357,slow=2.7,SNR=4.5						
BRTR				LR	LR	08 43 39.4	
	comp=Z,23nm,18.6s,baz=108,slow=39						
BRTR	**Keskin Array B**	**82.28**	**312**	*e*P	**P**	**08 02 46.7**	**-0.4**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
RAYN	**Ar Rayn**	**82.81**	**293**	*e*P	**P**	**08 02 50.2**	**+0.2**
	comp=Z,5.2nm,0.6s						
PV09	**Paradox Valley**	**83.53**	**48**	*e*P	P	08 03 06.3	+12
PV21	**Cone Mtn., Par**	**83.59**	**48**	*e*P	P	08 03 06.1	+12
	comp=Z,15nm,0.9s						
PV23	**Carpenter Ridg**	**83.64**	**48**	*e*P	P	08 03 07.7	+13
	comp=Z,18nm,1.1s						
PV20	**West Nyswonger**	**83.73**	**48**	*e*P	P	08 03 08.4	+14
	comp=Z,9.8nm,1.0s						
PV19	**Morning Glory**	**83.74**	**48**	*e*P	P	08 03 08.2	+13
	comp=Z,10nm,1.1s						
PV17	**East Wray Mesa**	**83.77**	**48**	*e*P	P	08 03 05.9	+11
	comp=Z,9.2nm,1.0s						
PV18	**Skein Mesa, Pa**	**83.82**	**48**	*e*P	P	08 03 08.0	+13
	comp=Z,8.2nm,0.9s						
PV12	**Saucer Basin,**	**83.85**	**48**	*e*P	P	08 03 07.4	+12
	comp=Z,7.6nm,0.9s						
PV13	**Radium Mtn., P**	**83.93**	**48**	*e*P	P	08 03 06.5	+11
	comp=Z,5.0nm,0.7s						
CLL	**Collm**	**85.39**	**331**	*e*P	**P**	**08 03 06.0**	**+3.4**
	comp=Z,5.0nm,0.9s						
CLL	**Collm**	**85.39**	**331**	*e*P	**P**	**08 03 06.0**	**+3.4**
CLL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TXAR	**Lajitas Array**	**92.73**	**53**	P	**P**	**08 03 39.3**	**+1.3**
	comp=Z,0.7nm,0.9s,baz=303,slow=3.6,SNR=5.5						
TXAR				LR	LR	08 40 21.9	
	comp=Z,24nm,20.7s,baz=0.0,slow=32						

GUC 27 08:02:33.1±0.4, 22.°37S×66.°65W, h289km±18km, ML4.1, 6C, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**2.47**	**283**	‖ *e*P	Pn	08 03 26.0	+2.8
PB09				*e*S	S	08 04 06.8	+3.8
PB06	**IPOC Station P**	**2.72**	**262**	*e*P	Pn	08 03 28.1	+2.6
PB06				*e*S	S	08 04 09.9	+2.7
PB06				IAML		08 04 13.1	
	comp=N,111nm,0.1s						
PB15	**IPOC Station P**	**2.73**	**252**	*e*P	Pn	08 03 28.4	+2.7
PB15				*i* S	S	08 04 10.1	+2.6
PB03	**IPOC Station P**	**2.89**	**276**	*e*P	Pn	08 03 30.1	+2.9
PB03				*i* S	S	08 04 13.2	+3.0
PB03				IAML		08 04 14.3	
	comp=N,190nm,0.1s						
PB01	**IPOC Station P**	**2.95**	**296**	‖ *e*P	Pn	08 03 30.1	+2.4
PB01				*i* S	S	08 04 14.0	+2.8
PB01				IAML		08 04 15.1	
	comp=N,178nm,0.2s						
PB07	**IPOC Station P**	**3.07**	**281**	‖ *e*P	Pn	08 03 31.8	+2.8
PB07				*i* S	S	08 04 16.3	+2.8
PB07				IAML		08 04 17.5	
	comp=N,149nm,0.2s						
PB02	**IPOC Station P**	**3.19**	**288**	*e*P	Pn	08 03 33.0	+2.8
PB02				*i* S	S	08 04 18.7	+3.0
PB08	**IPOC Station P**	**3.22**	**313**	‖ *e*P	Pn	08 03 33.5	+2.7
PB08				*i* S	S	08 04 19.1	+2.3
PB08				IAML		08 04 20.9	
	comp=N,61nm,0.4s						
PB04	**IPOC Station P**	**3.24**	**270**	‖ *e*P	Pn	08 03 33.8	+3.1
PB04				*i* S	S	08 04 19.7	+3.1
MNMC	**Minye Minye**	**4.24**	**319**	*e*P	Pn	08 03 44.1	+2.4
MNMC				*i* S	S	08 04 38.7	+2.0
PSGC	**Pisagua**	**4.26**	**310**	*e*P	Pn	08 03 43.2	+1.4
PB16	**IPOC Station P**	**4.82**	**326**	‖ *e*P	Pn	08 03 51.5	+2.6

MAN ***27*** *08:12:48.2, 5.°51N×126.°31E, h132km, mb4.8, ML3.7, MS3.7*
ISCJB ***27*** *08:12:50.9±0.7, 5.°76N±0.°08×126.°22E±0.°09, h154km±6km, mb3.9/11, Error ellipse: s-maj=14.9km s-min=12.3km az=166.8*
IDC ***27*** *08:12:52.2±1.2, 5.°86N×126.°39E, h150km±8km, mb3.7/11, mb1 3.8/11, mb1mx3.5/56, mbtmp4.1/11, Error ellipse: s-maj=60.1km s-min=11.0km az=66.0*

ISC 27 08:12:51.8±1.1, 5.°68N±0.°09×126.°19E±0.°09, h145km±8km, n20, σ1§81/28, mb4.0/11, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.26**	**3**	*e*P	**Pn**	**08 13 18.1**	**-0.5**
MATI				*e*S	**Sn**	**08 13 37.5**	**-1.6**
DAV	**Davao City (W)**	**1.51**	**336**	P	**Pn**	**08 13 20.9**	**-0.3**
	176nm,0.3s,baz=8.1,slow=4.3,SNR=8.7						
DAV				LR	LR	08 13 25.6	
	comp=Z,88nm,20.0s,baz=321,slow=23						
DAV				S	**Sn**	**08 13 43.6**	**0.0**
	164nm,0.3s,baz=187,slow=6.1,SNR=6.2						
DMPH	**Davao City--Mi**	**1.55**	**334**	‖ *e*P	**Pn**	**08 13 23.5**	**+1.8**
DMPH				*e*S	**Sn**	**08 13 46.9**	**+2.4**
SKMP	**Bagumbayan, Su**	**1.84**	**297**	*e*P	**Pn**	**08 13 23.5**	**-1.3**
SKMP				*e*S	**Sn**	**08 13 49.3**	**-0.7**
BUKP	**Musuan**	**2.46**	**333**	*e*P	**Pn**	**08 13 31.9**	**-0.3**
BUKP				*e*S	**Sn**	**08 14 04.7**	**+1.3**
CTBH	**Cotabato--PC H**	**2.46**	**309**	‖ *i* P	**Pn**	**08 13 30.9**	**-1.4**
BIPH	**Bislig**	**2.50**	**4**	‖ *i* P	**Pn**	**08 13 31.0**	**-1.7**
BIPH				*i* S	**Sn**	**08 14 02.2**	**-2.0**
BUTP	**Butuan**	**3.32**	**350**	*e*P	Pn	08 13 57.7	+15
BUTP				*e*S	**Sn**	**08 14 29.4**	**+6.6**
WRA	**Warramunga Arr**	**26.69**	**163**	P	**P**	**08 18 17.5**	**-0.1**
	0.5nm,0.6s,baz=337,slow=11,SNR=16						
CMAR	**Chiang Mai Arr**	**29.46**	**298**	P	**P**	**08 18 43.5**	**+1.3**
	2.0nm,0.3s,baz=117,slow=8.1,SNR=4.0						
ASAR	**Alice Springs**	**30.12**	**166**	P	**P**	**08 18 49.5**	**+1.4**
	0.9nm,0.5s,baz=342,slow=7.3,SNR=14						
STKA	**Stephens Creek**	**40.13**	**159**	P	**P**	**08 20 14.7**	**+1.1**
	1.3nm,0.4s,baz=336,slow=17,SNR=2.2						
SONM	**Songino Array**	**45.29**	**341**	P	**P**	**08 20 54.0**	**-1.1**
	0.5nm,0.7s,baz=147,slow=8.1,SNR=2.9						
SONM				PcP	**PcP**	**08 22 32.9**	**+0.4**
	1.1nm,0.8s,baz=142,slow=3.3,SNR=5.9						
MKAR	**Makanchi Array**	**55.66**	**325**	P	**P**	**08 22 12.2**	**-0.8**
	2.5nm,0.5s,baz=122,slow=8.1,SNR=39						
MKAR				PcP	**PcP**	**08 23 10.2**	**-0.5**
	1.9nm,0.8s,baz=132,slow=4.2,SNR=7.2						
KURBB	**Kurchatov Arra**	**59.82**	**327**	P	**P**	**08 22 40.9**	**-0.9**
	1.7nm,0.6s,baz=125,slow=6.6,SNR=21						
AKTO	**Aktyubinsk**	**71.81**	**321**	P	**P**	**08 23 57.9**	**-0.7**
	1.3nm,0.5s,baz=96,slow=14,SNR=5.5						
VNDA	**Vanda**	**85.41**	**173**	P	**P**	**08 25 13.1**	**+0.7**
	0.8nm,0.7s,baz=318,slow=6.4,SNR=10.0						
ARCES	**ARCESS Array B**	**88.45**	**340**	P	**P**	**08 25 26.7**	**-0.6**
	2.0nm,0.7s,baz=72,slow=7.8,SNR=5.0						
FINES	**FINESS Array B**	**89.87**	**332**	P	**P**	**08 25 33.1**	**-0.9**
	1.7nm,0.8s,baz=11,slow=3.9,SNR=3.7						
TORD	**Torodi Ar. Bea**	**121.79**	**289**	PKP	**PKPdf**	**08 31 29.4**	**-0.3**
	1.1nm,0.6s,baz=59,slow=2.0,SNR=8.6						

ISCJB ***27*** *08:19:04.7±0.5, 65.°97N±0.°02×150.°09W±0.°08, h22km±4km, mb2.9/1, Error ellipse: s-maj=5.4km s-min=4.1km az=176.0*
NEIC ***27*** *08:19:04.7±0.0, 65.°97N×150.°19W, h14km, MW3.6, ML3.8(AEIC), Moment Tensor Solution. s12 Moment tensor: Scale 10¹⁴Nm; Mrr=0.05; Mθθ=

Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**1.94**	**298**	Pn	Pn	08 28 17.0	-0.5
	9.2nm,0.3s,baz=142,slow=19,SNR=16						
JHJ				Sn	Sn	08 28 39.5	-3.1
	30nm,0.3s,baz=248,slow=22,SNR=5.8						
JCJ	**Chichijima**	**5.13**	**176**	Pn	Pn	08 29 01.6	+0.4
	2.6nm,0.3s,baz=18,slow=20,SNR=4.9						
MJAR	**Matsushiro Arr**	**5.24**	**326**	Pn	Pn	08 28 58.5	-4.4
	1.1nm,0.3s,baz=160,slow=3.8,SNR=7.6						
MKAR	**Makanchi Array**	**47.09**	**306**	P	P	08 36 17.1	+0.3
	0.2nm,0.5s,baz=104,slow=6.9,SNR=2.8						
WRA	**Warramunga Arr**	**52.37**	**189**	P	P	08 36 56.9	-0.3
	0.4nm,0.5s,baz=5.2,slow=7.6,SNR=10						
ILAR	**Eielson Array**	**53.41**	**30**	P	P	08 37 04.1	-0.3
	0.2nm,0.7s,baz=270,slow=5.4,SNR=3.8						

NIED ***27*** *08:34:00, 33°.20N×132°.30E, h44km, Mw3.7 Best double couple: M₀4.33000×10¹⁴ NP1:φ=6.00000°, δ46.00000°, λ-114.00000°. NP2:φ=219.00000°, δ49.00000°, λ-68.00000°.*

JMA 27 08:34:06.7, 33°.20N×132°.31E, h39km, M3.5, 4C-2D Broadband fault plane solution: P waves. NP1: φ=231.00000°, δ66.00000°, λ-78.00000°. **NP2:** φ=23.00000°, δ27.00000°, λ-115.00000°. **Principal axes:** T Plg20.0000°, Azm312.0000°; N Plg11.0000°, Azm46.0000°; P Plg67.0000°, Azm164.0000°; **Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UWA2	**Uwa jima 2**	**0.26**	**87**	⇑P	Pn	08 34 14.3	-0.5
UWA2				S	Sn	08 34 19.8	-1.4
JNA	**Nagahama**	**0.38**	**22**	⇓P	Pn	08 34 15.7	-0.1
JNA				S	Sn	08 34 21.9	-0.5
JUS	**Usuki**	**0.49**	**254**	⇓P	Pn	08 34 17.0	-0.2
JUS				S	Sn	08 34 24.5	-0.1
JTO	**Tosashimizu**	**0.54**	**129**	⇑P	Pn	08 34 17.8	-0.1
JTO				S	Sn	08 34 26.2	+0.4
JKU	**Kubokawa**	**0.64**	**80**	⇑P	Pn	08 34 19.3	-0.1
JKU				S	Sn	08 34 28.8	+0.4
JET	**Tanbara**	**0.84**	**47**	P	Pn	08 34 22.4	+0.3
JET				S	Sn	08 34 33.6	+0.2
JHM	**Kurahashi**	**0.95**	**11**	⇑P	Pn	08 34 23.8	+0.2

MEX 27 08:35:06.1±0.5, 15°.29N×93°.26W, h72km±6km, MD3.7, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.42**	**5**	*e*P	Pn	08 35 16.9	-1.4
PCIG				*e*S	Sn	08 35 25.6	-1.7
CCIG	**Comitan**	**1.47**	**47**	*e*P	Pn	08 35 30.4	-0.4
CCIG				*e*S	Sn	08 35 47.2	-2.3
TGIG		**1.49**	**5**	*i* P	Pn	08 35 29.8	-1.3
TGIG				*e*S	Sn	08 35 47.3	-2.6

IDC ***27*** *08:53:04.4±1.9, 32°.01S×177°.75W, h0km, mb4.2/4, mb1 4.3/5, mb1mx3.8/43, mbtmp4.1/5, ML3.1/1, MS3.5/2, Ms1 3.5/2, ms1mx2.7/46, Error ellipse: s-maj=51.4km s-min=30.6km az=135.0*

ISCJB ***27*** *08:53:05.5±5.1, 32°.1S±0°.2×177°.8W±0°.7, h18km, mb4.1/4, MS3.4/1, Error ellipse: s-maj=92.4km s-min=14.0km az=10.9*

ISC 27 08:53:07.8±1.8, 32°.0S±0°.2×177°.8W±0°.3, h18km, n11, σ0§91/10, mb4.1/4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.50**	**212**	**Pn**	**Pn**	**08 54 56.0**	**-0.1**
	0.3nm,0.3s,baz=283,slow=5.0,SNR=6.5						
URZ				Sn	**Sn**	**08 56 20.7**	**0.0**
	1.1nm,0.3s,baz=61,slow=24,SNR=10.0						
DZM	**Mont Dzumac**	**17.15**	**301**	LR	LR	09 02 27.5	
	comp=Z,273nm,20.1s,baz=210,slow=33						
CTA	**Charters Tower**	**34.24**	**281**	P	**P**	**08 59 53.3**	**+0.5**
	2.0nm,0.3s,baz=119,slow=13,SNR=2.7						
STKA	**Stephens Creek**	**34.30**	**259**	P	**P**	**08 59 54.2**	**+1.0**
	1.2nm,0.6s,baz=109,slow=13,SNR=4.3						
ASAR	**Alice Springs**	**43.21**	**269**	P	**P**	**09 01 07.0**	**-0.9**
	1.3nm,0.6s,baz=106,slow=7.2,SNR=23						
WRA	**Warramunga Arr**	**44.34**	**274**	P	**P**	**09 01 15.9**	**-1.2**
	1.9nm,0.4s,baz=113,slow=7.8,SNR=56						
ASAJ	**Asahikawa**	**83.94**	**333**	LR	LR	09 38 58.3	
	comp=Z,13nm,18.5s,baz=21,slow=33						
KURBB	**Kurchatov Arra**	**122.30**	**313**	PKP	**PKPdf**	**09 12 00.1**	**-1.1**
	4.5nm,0.2s,baz=116,slow=2.0,SNR=3.5						
KBZ	**Khabaz**	**146.12**	**302**	PKPbc	**PKPdf**	**09 12 46.3**	**+0.7**
	0.7nm,0.3s,baz=114,slow=1.6,SNR=3.5						
FINES	**FINESS Array B**	**146.70**	**339**	PKPbc	**PKPdf**	**09 12 46.7**	**+0.7**
	2.1nm,0.5s,baz=64,slow=3.3,SNR=16						
BRTR	**Keskin Array B**	**153.47**	**296**	PKPab	**PKPab**	**09 13 17.5**	**-0.1**
	1.9nm,1.0s,baz=72,slow=4.0,SNR=4.3						

ISCJB ***27*** *08:58:11.3±0.8, 32°.20N±0°.04×141°.95E±0°.09, h26km, mb3.6/2, Error ellipse: s-maj=11.4km s-min=4.6km az=159.0*

JMA ***27*** *08:58:13.0±0.4, 32°.30N×141°.85E, h108km, M3.1*

IDC ***27*** *08:58:13.1±3.3, 31°.97N×141°.33E, h0km, mb3.6/2, mb1 3.5/4, mb1mx3.3/60, mbtmp3.5/4, ML3.3/2, MS2.3/2, Ms1 2.3/2, ms1mx2.1/51, Error ellipse: s-maj=105.1km s-min=17.8km az=64.0*

ISC 27 08:58:13.0±1.1, 32°.24N±0°.05×141°.98E±0°.09, h26km, n14, σ1§64/18, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**2.02**	**295**	P	**Pn**	**08 58 44.3**	**-1.1**
JHCJ				*e*S	**Sn**	**08 59 09.0**	**-0.9**
JHJ2	**Mitsune**	**2.02**	**296**	*e*S	**Sn**	**08 59 09.3**	**-0.6**
JHJ	**Hachijo jima 2**	**2.05**	**296**	Pn	**Pn**	**08 58 44.7**	**-1.2**
	10nm,0.3s,baz=307,slow=20,SNR=9.4						
JHJ				LR	LR	08 59 02.7	
	comp=Z,33nm,18.3s,baz=84,slow=29						
JHJ				Sn	**Sn**	**08 59 09.2**	**-1.5**
	29nm,0.3s,baz=72,slow=20,SNR=5.0						
BSO1	**Boso 1**	**2.55**	**341**	P	**Pn**	**08 58 52.4**	**+0.2**
BSO1				*e*S	**Sn**	**08 59 23.6**	**+1.4**
BSO4	**Boso 4**	**3.07**	**334**	*e*S	**Sn**	**08 59 35.5**	**-0.1**
JHO	**Hitachi**	**4.52**	**345**	P	**Pn**	**08 59 19.2**	**-0.5**
JHO				*e*S	**Sn**	**09 00 08.1**	**-3.3**
JRY	**Ryogami san**	**4.55**	**327**	P	**Pn**	**08 59 19.2**	**-1.1**
CBIJ	**Chichi jima**	**5.13**	**178**	*e*S	**Sn**	**09 00 26.2**	**-0.3**
JCJ	**Chichijima**	**5.13**	**178**	Pn	**Pn**	**08 59 29.5**	**+1.3**
	3.4nm,0.3s,baz=90,slow=20,SNR=6.4						
JCJ				Sn	**Sn**	**09 00 25.5**	**-1.0**
	6.7nm,0.3s,baz=300,slow=20,SNR=4.9						
MJAR	**Matsushiro Arr**	**5.31**	**325**	Pn	**Pn**	**08 59 32.2**	**+1.6**
	0.3nm,0.3s,baz=149,slow=11,SNR=3.9						
MJAR				LR	LR	09 01 48.1	
	comp=Z,33nm,19.7s,baz=115,slow=41						
JFT	**Otama**	**5.44**	**346**	*e*S	**Sn**	**09 00 30.8**	**-3.4**
KSRS	**Korea Array**	**12.66**	**298**	LR	LR	09 05 49.1	
	comp=Z,14nm,18.6s,baz=30,slow=37						
MKAR	**Makanchi Array**	**47.19**	**306**	P	**P**	**09 06 44.7**	**+1.3**
	0.9nm,1.1s,baz=101,slow=6.2,SNR=3.0						
WRA	**Warramunga Arr**	**52.40**	**189**	P	**P**	**09 07 24.6**	**+1.4**
	0.3nm,0.5s,baz=5.2,slow=7.6,SNR=8.3						

ISCJB ***27*** *08:58:28.6±0.5, 37°.22N±0°.04×28°.18E±0°.04, h0km, Error ellipse: s-maj=6.0km s-min=3.2km az=32.4*

CSEM ***27*** *08:58:28.7±0.1, 37°.22N×28°.18E, h2km, ML2.5, Error ellipse: s-maj=4.3km s-min=2.2km az=32.0, Suspected Mining explosion.*

DDA ***27*** *08:58:28.7, 37°.23N×28°.19E, h7km, Ml2.4, Suspected Mining explosion.*

ISK ***27*** *08:58:28.4, 37°.21N×28°.17E, h5km, ML2.5/8*

ISC 27 08:58:29.0±0.9, 37°.22N±0°.03×28°.18E±0°.02, h0km, n34, σ0§63/44, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.12**	**138**	PG	**Pg**	**08 58 31.0**	**-0.3**
YER				SG	**Sg**	**08 58 33.5**	**+0.7**
YER	**Yerkesik**	**0.12**	**138**	*i* Pg	**Pg**	**08 58 31.0**	**-0.3**
YER				*e*Sg	**Sg**	**08 58 33.5**	**+0.7**
MLSB	**Milas**	**0.33**	**283**	PG	**Pg**	**08 58 35.5**	**+0.1**
MLSB				SG	**Sg**	**08 58 40.4**	**+0.6**
MLSB	**Milas**	**0.33**	**283**	*e*Pg	**Pg**	**08 58 35.5**	**+0.1**
MLSB				*e*Sg	**Sg**	**08 58 40.4**	**+0.6**
TURN	**Turunc**	**0.48**	**136**	PG	**Pg**	**08 58 37.0**	**-1.3**
TURN	**Turunc**	**0.48**	**136**	*i* P	**Pg**	**08 58 37.4**	**-0.9**
TURN				*i* S	**Sg**	**08 58 44.9**	**+0.4**
TURN	**Turunc**	**0.48**	**136**	*e*Pg	**Pg**	**08 58 37.0**	**-1.3**
TURN	**Turunc**	**0.48**	**136**	P	**Pg**	**08 58 37.4**	**-0.9**
TURN				S	**Sg**	**08 58 44.9**	**+0.4**
AYDN	**Tasoluk**	**0.50**	**331**	*i* P	**Pg**	**08 58 38.5**	**-0.1**
AYDN				*i* S	**Sg**	**08 58 45.6**	**+0.5**
AYDN	**Tasoluk**	**0.50**	**331**	P	**Pg**	**08 58 38.5**	**-0.1**
AYDN				S	**Sg**	**08 58 45.6**	**+0.5**
DALY	**Dalyan (Mu¨la**	**0.55**	**137**	PG	**Pg**	**08 58 39.6**	**0.0**
DALY	**Dalyan (Mu¨la**	**0.55**	**137**	*i* P	**Pg**	**08 58 39.2**	**-0.4**
DALY	**Dalyan (Mu¨la**	**0.55**	**137**	P	**Pg**	**08 58 39.2**	**-0.4**
DALY	**Dalyan (Mu¨la**	**0.55**	**137**	*e*Pg	**Pg**	**08 58 39.6**	**0.0**
BDRM	**Kayabasi**	**0.61**	**255**	*i* P	**Pg**	**08 58 41.1**	**+0.3**
BDRM	**Kayabasi**	**0.61**	**255**	P	**Pg**	**08 58 41.1**	**+0.3**
TAVA	**DENIZLI_Tavas**	**0.63**	**67**	*i* P	**Pg**	**08 58 40.7**	**-0.4**
TAVA	**DENIZLI_Tavas**	**0.63**	**67**	P	**Pg**	**08 58 40.7**	**-0.4**
DAT	**Datca**	**0.69**	**225**	PG	**Pg**	**08 58 42.2**	**-0.1**
DAT	**Datca**	**0.69**	**225**	*e*Pg	**Pg**	**08 58 42.2**	**-0.1**
BODT	**Bodrum**	**0.72**	**257**	PG	**Pg**	**08 58 41.8**	**-1.0**
BODT				SG	**Sg**	**08 58 52.3**	**+0.2**
BODT	**Bodrum**	**0.72**	**257**	*e*Pg	**Pg**	**08 58 41.8**	**-1.0**
BODT				*e*Sg	**Sg**	**08 58 52.3**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**0.76**	**342**	PG	**Pg**	**08 58 43.7**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**0.76**	**342**	*e*Pg	**Pg**	**08 58 43.7**	**+0.1**
GCAM	**G?zelcami?**	**0.89**	**303**	PG	**Pg**	**08 58 45.8**	**-0.4**
GCAM	**G?zelcami?**	**0.89**	**303**	*i* P	**Pg**	**08 58 44.6**	**-1.6**
GCAM	**G?zelcami?**	**0.89**	**303**	P	**Pg**	**08 58 44.6**	**-1.6**
GCAM	**G?zelcami?**	**0.89**	**303**	*e*Pg	**Pg**	**08 58 45.8**	**-0.4**
FETY	**Fethiye**	**0.93**	**129**	PG	**Pg**	**08 58 47.3**	**+0.5**
FETY	**Fethiye**	**0.93**	**129**	*e*Pg	**Pg**	**08 58 47.3**	**+0.5**
ELL	**Elmali**	**1.46**	**108**	PN	**Pb**	**08 58 57.1**	**-0.1**
ELL	**Elmali**	**1.46**	**108**	*e*Pn	**Pb**	**08 58 57.1**	**-0.1**
AKAS	**Kas**	**1.51**	**130**	PN	**Pn**	**08 58 57.4**	**-0.1**
AKAS	**Kas**	**1.51**	**130**	*e*Pn	**Pn**	**08 58 57.4**	**-0.1**

MEX 27 09:13:45.0±1.0, 16°.47N×98°.63W, h16km±999km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.49**	**99**	*e*P	Pg	09 13 53.0	-1.8
PNIG				*e*S	Sg	09 13 60.0	-1.5
TLIG	**Tlapa**	**1.09**	**3**	*e*P	Pb	09 14 01.8	-3.7
TLIG				*e*S	Sb	09 14 14.6	-5.0
ACX	**Acapulco**	**1.24**	**289**	*e*P	Pn	09 14 03.6	-4.1
ACX				*i* S	Sb	09 14 13.6	-10
ACP2	**Acapulco**	**1.27**	**289**	*e*P	Pn	09 14 05.1	-3.0
ACP2				*e*S	Sb	09 14 18.1	-6.5
CAIG	**El Cayaco**	**1.67**	**290**	*e*P	Pn	09 14 09.6	-4.0
MEIG	**Mezcala**	**1.73**	**327**	*e*P	Pn	09 14 11.1	-3.4
VHO	**Vista Hermosa**	**1.92**	**71**	*e*P	Pn	09 14 13.8	-3.4
ARIG	**Puente Sto Nin**	**2.43**	**318**	*e*P	Pn	09 14 21.9	-2.2
ARIG				*e*S	Sn	09 14 49.1	-4.5
HUIG	**Huatulco**	**2.52**	**106**	*e*P	Pn	09 14 24.4	-0.9
HUIG				*e*S	Sn	09 14 49.8	-6.0
PPM	**Popocatepetl**	**2.58**	**0**	*e*P	Pn	09 14 23.7	-2.9

MEX 27 09:21:10.3±0.6, 17°.17N×95°.22W, h133km±19km, MD3.7, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**1.45**	**267**	*e*P	Pn	09 21 37.2	-1.1
VHO				*i* S	Sn	09 21 57.7	-1.8
HUIG	**Huatulco**	**1.63**	**212**	*i* P	Pn	09 21 38.4	-1.7
HUIG				*e*S	Sn	09 22 01.3	-1.5
TGIG		**2.04**	**101**	*i* P	Pn	09 21 40.5	-4.4
TGIG				*i* S	Sn	09 22 09.4	-2.1
PCIG		**2.41**	**127**	*e*P	Pn	09 21 48.7	-0.7
TLIG	**Tlapa**	**3.22**	**278**	*e*P	Pn	09 21 59.0	-1.1
TLIG				*e*S	Sn	09 22 37.1	-1.3

ISCJB ***27*** *09:25:55.6±1.2, 37°.47N±0°.07×72°.14E±0°.09, h10km, Error ellipse: s-maj=10.8km s-min=9.7km az=176.6*

NNC ***27*** *09:26:04.3±3.3, 37°.94N×71°.74E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=29.1km s-min=10.3km az=154.0*

ISC 27 09:25:55.8±1.0, 37°.30N±0°.06×72°.08E±0°.08, h10km, n6, σ3§63/12, 5C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZET	**Dzherino**	**2.98**	**301**	⇑Pn	**Pn**	**09 26 44.9**	**+1.8**
	14nm,0.5s						
DZET				⇑Sn	**Sn**	**09 27 17.2**	**-1.7**
	40nm,0.5s						
MNAS	**Manas**	**5.19**	**3**	⇓P	**Pn**	**09 27 16.5**	**+3.0**
	7.9nm,0.5s						
MNAS				⇑S	**Sn**	**09 28 10.7**	**-2.8**
	49nm,0.8s						
AAK	**Ala-Archa**	**5.64**	**18**	⇑P	**Pn**	**09 27 23.2**	**+3.4**
	4.5nm,0.6s						
AAK				⇑S	**Sn**	**09 28 22.6**	**-2.1**
	7.4nm,0.8s						
KK31	**Karatay Array**	**5.92**	**349**	P	**Pn**	**09 27 25.3**	**+1.8**
	2.7nm,0.5s,baz=168,slow=12,SNR=31						
KK31				⇑S	**Sn**	**09 28 25.7**	**-5.6**
	19nm,0.5s,baz=165,slow=22						
DHRM	**DHARAMSHALA**	**6.12**	**144**	*e*P	**Pg**	**09 27 52.7**	**-0.3**
DHRM				*e*S	**Sn**	**09 28 34.4**	**-2.2**
DHRM				IAML		09 28 38.9	
	comp=N,91nm,0.6s						
DHRM				IAML		09 28 40.1	
	comp=E,138nm,0.5s						
SMLA	**Simla**	**7.46**	**144**	*e*P	**Pn**	**09 27 47.7**	**+3.1**
SMLA				*e*S	**Sn**	**09 29 03.8**	**-5.5**
SMLA				IAML		09 29 09.4	
	comp=N,37nm,0.5s						
SMLA				IAML		09 29 10.6	
	comp=E,42nm,0.4s						

IDC 27 09:27:13.7±3.2, 53°.40N×90°.66E, h0km, mb1 3.5/3, mb1mx3.2/75, mbtmp3.5/3, ML2.8/3, 3C-4D, Error ellipse: s-maj=27.5km s-min=22.0km az=49.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.52**	**281**	*i*		09 48 46.5	
	baz=100,slow=328,SNR=6.3						
ZALV	**Zalesovo Beam**	**3.52**	**281**	Pn	Pn	09 28 08.4	-1.2
	1.0nm,0.3s,baz=100,slow=16,SNR=2.0						
ZALV				Lg	Lg	09 29 03.0	
	3.3nm,0.3s,baz=99,slow=26,SNR=8.3						
KURK	**Kurchatov**	**7.89**	**255**	⇑Pn	Pn	09 29 09.6	0.0
	2.7nm,0.6s						
KURK				⇑Sn	Sn	09 30 38.8	-0.8
	10nm,0.9s						
KURK				⇓Lg	Lg	09 31 22.2	
	32nm,1.0s						
KURBB	**Kurchatov Arra**	**7.98**	**255**	Pn	Pn	09 29 10.1	-0.7
	0.3nm,0.3s,baz=64,slow=14,SNR=6.3						
KURBB				Sn	Sn	09 30 42.5	+0.7
	0.2nm,0.3s,baz=67,slow=26,SNR=12						
KURBB				Lg	Lg	09 31 29.0	
	0.1nm,0.3s,baz=70,slow=35,SNR=5.3						
MK31	**Makanchi Array**	**8.52**	**222**	⇓Pn	Pn	09 29 19.5	+1.3
	0.5nm,0.6s,baz=29,slow=12,SNR=12						
MK31				⇓Pg	Pg	09 29 33.0	-24
	1.2nm,0.6s,baz=45,slow=12,SNR=5.1						
MK31				⇑Sn	Sn	09 30 59.4	+4.4
	3.4nm,0.7s,baz=31,slow=27						
MK31				⇓Lg	Lg	09 31 47.3	
	13nm,0.9s,baz=30,slow=30						
MKAR	**Makanchi Array**	**8.52**	**222**	Pn	Pn	09 29 19.6	+1.3
	0.3nm,0.3s,baz=41,slow=14,SNR=13						
MKAR				Sn	Sn	09 30 52.2	-2.9
	0.1nm,0.3s,baz=37,slow=30,SNR=3.0						
MKAR				Lg	Lg	09 31 45.0	
	baz=33,slow=35,SNR=4.0						

MEX 27 09:31:52.1±0.3, 27°.56N×112°.36W, h9km±10km, MD3.6, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRIG	**Santa Rosalia**	**0.26**	**156**	*i* P	Pg	09 31 57.1	-0.3
	baz=336,slow=5.9						
SRIG				*i* S	Sg	09 32 00.9	0.0
GUYB	**Guaymas**	**1.36**	**75**	*i* P	Pn	09 32 13.6	-3.6
GUYB				*i* S	Sb	09 32 25.6	-10

KRNET ***27*** *09:32:13.2±0.1, 39°.41N×73°.05E, mb3.0*

NNC ***27*** *09:32:15.8±2.1, 39°.48N×73°.15E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=25.5km s-min=6.7km az=137.0*

ISCJB ***27*** *09:32:16.5±1.0, 39°.43N±0°.07×73°.12E±0°.06, h10km, Error ellipse: s-maj=10.8km s-min=4.5km az=149.6*

ISC 27 09:32:17.6±1.5, 39°.54N±0°.08×73°.07E±0°.06, h10km, n15, σ1§80/28, 14C-17D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**0.58**	**35**	⇓P	**Pg**	**09 32 26.8**	**-2.1**
	7.5nm,0.3s						
SFK				⇓S	**Sg**	**09 32 36.5**	**+0.1**
	111nm,0.3s						
SFK	**Sufi-Kurgan**	**0.58**	**35**	⇑*i*P	**Pg**	**09 32 26.9**	**-1.9**
	baz=29						
SFK				⇑*i*S	**Sg**	**09 32 36.6**	**+0.1**
	baz=29						
BTK	**Batken**	**1.81**	**287**	⇑*i*P	**Pn**	**09 32 47.3**	**-1.6**
	baz=91						
BTK				⇑*i*S	**Sb**	**09 33 13.0**	**-0.5**
	baz=91						
AML	**Almayashu**	**2.63**	**10**	⇑*i*P	**Pn**	**09 33 02.0**	**+1.6**
	baz=10.0						
AML				⇑*i*S	**Sb**	**09 33 37.1**	**-0.4**
	baz=10.0						
UCH	**Uchtor**	**2.90**	**22**	⇓*i*P	**Pn**	**09 33 05.0**	**+0.8**
	baz=21						
UCH				⇓*i*S	**Sb**	**09 33 42.6**	**-2.7**
	baz=21						
MNAS	**Manas**	**2.97**	**352**	⇑Pn	**Pn**	**09 33 07.3**	**+2.3**
	2.6nm,0.4s						
MNAS				⇑Lg	Lg	09 33 50.2	
	22nm,0.6s						
MNAS	**Manas**	**2.97**	**352**	⇓*i*P	**Pn**	**09 33 05.8**	**+0.9**
	baz=52						
MNAS				⇓*i*S	**Sb**	**09 33 44.0**	**-3.1**
	baz=52						
KZA	**Kyzart**	**3.03**	**32**	⇑*i*P	**Pn**	**09 33 06.4**	**+0.5**
	baz=31						
KZA				⇑*i*S	**Sn**	**09 33 44.9**	**+2.5**
	baz=31						
AAK	**Ala-Archa**	**3.27**	**19**	⇑Pn	**Pn**	**09 33 11.1**	**+2.0**
	8.4nm,0.7s						
AAK				⇓Lg	Lg	09 33 55.0	
	11nm,0.6s						
AAK	**Ala-Archa**	**3.27**	**19**	⇓*i*P	**Pn**	**09 33 10.3**	**+1.2**
	baz=18						
AAK				⇓*i*S	**Sn**	**09 33 51.6**	**+3.4**
	baz=18						
DZET	**Dzherino**	**3.38**	**259**	⇓Pn	**Pn**	**09 33 12.2**	**+1.7**
	3.4nm,0.4s						
DZET				⇑Pg	**Pg**	**09 33 20.9**	**-1.4**
	8.2nm,0.6s						
DZET				⇑Sn	**Sn**	**09 33 52.3**	**+1.7**
	16nm,0.5s						
DZET				⇓Lg	Lg	09 34 03.4	
	36nm,0.6s						
ULHL	**Ulahol**	**3.62**	**41**	⇓*i*P	**Pn**	**09 33 13.9**	**+0.1**
	baz=40						
ULHL				⇓*i*S	**Sn**	**09 33 57.9**	**+1.2**
	baz=40						
BOOM	**Boomskoye usch**	**3.66**	**35**	⇓*i*P	**Pn**	**09 33 14.8**	**+0.4**
	baz=34						
BOOM				⇓*i*S	**Sn**	**09 33 59.3**	**+1.6**
	baz=34						
TKM2	**Tokmak 2**	**3.88**	**29**	⇓Pn	**Pn**	**09 33 19.4**	**+2.0**
	2.1nm,0.4s						
KK31	**Karatay Array**	**4.04**	**332**	⇑Pn	**Pn**	**09 33 20.7**	**+1.2**
	0.7nm,0.3s,baz=148,slow=13						
KK31				⇓Sn	**Sn**	**09 34 08.8**	**+1.8**
	1.9nm,0.3s,baz=149,slow=25,SNR=7.8						

IDC ***27*** *09:40:04.9±0.5, 41°.36N×29°.45W, h0km, mb4.2/28, mb1 4.3/29, mb1mx4.1/71, mbtmp4.2/29, ML4.5/1, MS3.9/52, Ms1 3.9/52, ms1mx3.9/62, Error ellipse: s-maj=16.2km s-min=11.3km az=8.0*

IGIL ***27*** *09:40:04.5, 41°.12N×29°.51W, h2km, mb5.0*

ISCJB ***27*** *09:40:05.1±0.1, 41°.17N±0°.02×29°.42W±0°.02, h10km, mb4.5/180, MS4.0/62, Error ellipse: s-maj=3.2km s-min=1.9km az=14.2*

BJI ***27*** *09:40:05.0, 41°.20N×29°.40W, h10km, mb4.9/9, mB5.2/5, Ms5.1/2, Ms7 4.8/2*

CSEM ***27*** *09:40:06.6±0.1, 41°.18N×29°.30W, h10km, mb4.7/99, Error ellipse: s-maj=5.2km s-min=3.2km az=27.0*

NEIC ***27*** *09:40:07.1±0.2, 41°.24N×29°.36W, h10km, mb4.7/126, Error ellipse: s-maj=7.6km s-min=3.6km az=7.0*

PDA ***27*** *09:40:07.3±1.5, 41°.38N×29°.26W, h0km±18km, ML4.1, Error ellipse: s-maj=19.9km s-min=6.1km az=174.0*

GCMT ***27*** *09:40:07.1±0.3, 41°.40N×29°.33W, h12km±1km, MW4.8/92, Moment Tensor Solution. s21,c21; s92,c127; Duration: 0 Moment tensor: Scale 10¹⁶Nm; M_{rr}-1.93±.15; $M_{\theta\theta}$0.16±.09; $M_{\phi\phi}$1.77±.10; $M_{r\theta}$0.35±.38; $M_{\theta\phi}$0.28±.05; $M_{\phi r}$0.43±.23; Best double couple: $M_0$1.95200×10¹⁶ NP1:φ=197.00000°, δ53.00000°, λ-81.00000°. NP2: φ=2.00000°, δ38.00000°, λ-102.00000°. Principal axes: T 1.8780, Plg7.0000°, Azm281.0000°; N 0.1490, Plg7.0000°, Azm12.0000°; P -2.0260, Plg80.0000°, Azm146.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

MOS ***27*** *09:40:09.4±1.4, 41°.45N×29°.55W, h33km, mb4.8/45, MS4.0/4 Error ellipse: s-maj=10.1km s-min=5.8km az=145.0*

ISC 27 09:40:06.6±0.3, 41°.24N±0°.05×29°.26W±0°.03, h10km, n644, σ1§49/628, mb4.7/180, MS4.0/63, 8C-7D, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H07N1	**FLORES T-PHASE**	**2.10**	**223**	*e*P	**Pn**	**09 40 41.2

PDA Ponta Delgada 4.46 140 *eP* **Pn 09 41 13.3 -1.0**
GRON Grota Negra 4.51 139 *eP* **Pn 09 41 15.0 0.0**
CMLA Cha da Macela 4.51 139 *eP* **Pn 09 41 14.4 -0.7**
CMLA *eS* **Sn 09 42 04.2 -3.4**
CMLA A A 09 42 10.6
85nm,0.4s
CMLA Cha da Macela 4.51 139 *ePn* **Pn 09 41 13.7 -1.4**
CMLA Cha da Macela 4.51 139 *eP* **Pn 09 41 13.7 -1.4**
CMLA Cha da Macela 4.51 139 *eP* **Pn 09 41 14.4 -0.7**
CMLA *eS* **Sn 09 42 04.2 -3.4**
BART Pico Bartolome 4.69 136 *eP* **Pn 09 41 16.7 -0.8**
BART *eS* **Sn 09 42 08.3 -3.6**
BART A A 09 42 11.2
35nm,0.5s
BART Pico Bartolome 4.69 136 *eP* **Pn 09 41 16.7 -0.8**
BART *eS* **Sn 09 42 08.3 -3.6**
PSMA Santa Maria 5.32 142 *eP* **Pn 09 41 25.1 -1.0**
PSMA *eS* **Sn 09 42 23.4 -4.0**
PSMA A A 09 42 28.6
28nm,0.6s
PSMN Pico do Norte, 5.34 141 *eP* **Pn 09 41 25.6 -0.8**
PSMN *eS* **Sn 09 42 24.3 -3.7**
PSMN A A 09 42 29.1
21nm,0.4s
PSMN Pico do Norte, 5.34 141 *eP* **Pn 09 41 25.6 -0.8**
PSMN *eS* **Sn 09 42 24.3 -3.7**
PMOZ Porto Moniz, M 12.77 127 *eP* **Pn 09 43 09.4 +1.0**
116nm,1.6s
PMOZ *e*LR LR 09 45 46.7
368nm,20.0s
PMOZ Porto Moniz, M 12.77 127 *eP* **Pn 09 43 09.4 +1.0**
POLO Lamas de Olo 16.13 82 *eP* **Pn 09 43 54.6 +1.1**
26nm,1.6s
POLO Lamas de Olo 16.13 82 *eP* **Pn 09 43 54.6 +1.1**
PVIS Viseu 16.14 85 *eP* **Pn 09 43 53.2 -0.4**
39nm,1.7s
PVIS Viseu 16.14 85 *eP* **Pn 09 43 53.2 -0.4**
PVRL Vila Real 16.20 83 *eP* **P 09 43 58.8 +1.3**
32nm,1.3s
PVRL Vila Real 16.20 83 *eP* **P 09 43 58.8 +1.3**
PMTG Montargil 16.23 91 *eP* **Pn 09 43 55.0 +0.4**
49nm,1.5s
PMTG Montargil 16.23 91 *eP* **Pn 09 43 55.0 +0.4**
PNCL Nicolau / Gran 16.26 94 *eP* **P 09 43 57.1 -1.0**
48nm,1.5s
PNCL Nicolau / Gran 16.26 94 *eP* **P 09 43 57.1 -1.0**
PFVI Vila Bisbo 16.36 98 *eP* **Pn 09 43 57.6 +1.3**
89nm,1.4s
PFVI Vila Bisbo 16.36 98 *ePn* **Pn 09 43 57.9 +1.5**
44nm,1.0s
PFVI Vila Bisbo 16.36 98 *ePn* **Pn 09 43 57.8 +1.5**
44nm,1.0s
MORF Marmelete 16.43 97 *eP* **Pn 09 43 58.5 +1.2**
MORF AMb AMB 09 44 03.4
comp=Z,56nm,1.3s
MORF Marmelete 16.43 97 *eP* **Pn 09 43 58.7 +1.4**
comp=Z,58nm,1.6s
MORF Marmelete 16.43 97 *eP* **Pn 09 43 58.7 +1.4**
MTE Manteigas 16.46 86 *eP* **P 09 44 01.3 +0.9**
comp=Z,48nm,1.6s
MTE *e*LR LR 09 47 45.3
comp=Z,952nm,20.0s
MTE Manteigas 16.46 86 *ePn* **P 09 44 01.3 +0.9**
comp=Z,17nm,1.0s
MTE Manteigas 16.46 86 *eP* **P 09 44 01.3 +0.9**
MESJ Messejana 16.58 95 *eP* **Pn 09 44 00.2 +1.1**
MESJ AMb AMB 09 44 10.7
comp=Z,66nm,2.1s
MVO Moncorvo 16.73 83 *eP* **P 09 44 02.8 -0.6**
comp=Z,57nm,1.4s
MVO *e*LR LR 09 47 48.6
comp=Z,557nm,22.0s
MVO Moncorvo 16.73 83 *eP* **P 09 44 02.8 -0.6**
PMRV Marv??o 16.77 89 *eP* **P 09 44 02.9 -0.9**
comp=Z,47nm,1.6s
PMRV *e*LR LR 09 47 52.3
comp=Z,1µm,20.0s
PMRV Marv??o 16.77 89 *eP* **P 09 44 02.9 -0.9**
VAL Valentia 16.84 44 *eP* **Pn 09 43 57.3 -5.0**
PBRG Braganca 16.87 81 *eP* **P 09 44 05.7 +0.8**
comp=Z,49nm,1.5s
PBRG Braganca 16.87 81 *eP* **P 09 44 05.7 +0.8**
PBDV Barranco-do-Ve 16.99 97 *eP* **P 09 44 08.6 +2.4**
comp=Z,73nm,1.5s
PBDV Barranco-do-Ve 16.99 97 *eP* **P 09 44 08.6 +2.4**
PVAQ Vaqueiros 17.09 96 *eP* **P 09 44 10.4 +3.0**
comp=Z,36nm,1.6s
PVAQ *e*LR LR 09 48 04.8
comp=Z,639nm,20.0s
PVAQ Vaqueiros 17.09 96 *eP* **P 09 44 10.4 +3.0**
PBAR Barrancos 17.36 93 *eP* **P 09 44 10.9 +0.6**
comp=Z,81nm,1.4s
PBAR Barrancos 17.36 93 *eP* **P 09 44 10.9 +0.6**
PAB San Pablo 19.04 87 *eP* **Pn 09 44 33.0 +3.4**
comp=Z,12nm,1.1s
PAB San Pablo 19.04 87 *eP* **Pn 09 44 33.0 +3.4**
PAB pmax pmax
comp=Z,12nm,1.1s
PAB San Pablo 19.04 87 *eP* **Pn 09 44 33.0 +3.4**
comp=Z,12nm,1.1s
ESDC Sonseca Array 19.30 86 P **Pn 09 44 33.0 +0.3**
comp=Z,0.3nm,0.3s,baz=285,slow=9.8,SNR=8.2
ESDC LR LR 09 50 33.3
comp=Z,547nm,20.4s,baz=290,slow=32
ESLA Sonseca Array 19.30 86 *eP* **Pn 09 44 32.7 0.0**
comp=Z,5.7nm,1.1s
ESLA Sonseca Array 19.30 86 *eP* **Pn 09 44 32.7 0.0**
comp=Z,5.7nm,1.1s
ES19 SONSECA Array 19.34 86 *eP* **Pn 09 44 33.5 +0.3**
ES19 SONSECA Array 19.34 86 *eP* **Pn 09 44 33.5 +0.3**
QUIF Quistinic 19.69 61 *eP* **Pn 09 44 39.3 +2.0**
QUIF pmax pmax
comp=Z,87nm,1.5s
SJPF Ste Jean 20.82 75 *eP* Pn 09 44 51.1 +0.4
SJPF pmax pmax
comp=Z,103nm,1.4s
GRR Gorron 21.30 61 *eP* **P 09 44 54.9 +1.7**
GRR pmax pmax
comp=Z,33nm,1.2s
ETSF Etsaut 21.33 76 *eP* **P 09 44 59.0 +5.2**
ETSF pmax pmax
comp=Z,66nm,1.6s
MDT Midelt 21.34 105 P **P 09 44 55.3 +1.3**
comp=Z,17nm,1.2s,baz=287,slow=10.0,SNR=14
MDT LR LR 09 51 26.2
comp=Z,355nm,21.1s,baz=304,slow=32
MFF Saint Martin d 21.58 66 *eP* **P 09 44 58.3 +2.0**
MFF pmax pmax
comp=Z,51nm,1.3s
LDF La Druitiere 21.81 60 *eP* **P 09 45 01.4 +2.6**
LDF pmax pmax
comp=Z,44nm,1.4s
CART Cartagena 22.09 90 *eP* **P 09 45 05.8 +3.9**
comp=Z,12nm,1.0s
CART Cartagena 22.09 90 *eP* **P 09 45 05.8 +3.9**
comp=Z,12nm,1.0s
RJF Les Rejaudoux 22.70 69 *eP* **P 09 45 13.1 +4.7**
RJF pmax pmax
comp=Z,29nm,1.4s
CAF Calviac 23.10 70 *eP* **P 09 45 13.6 +1.1**
CAF pmax pmax
comp=Z,41nm,1.4s
TCF Toulx Ste Croi 23.19 67 *eP* **P 09 45 14.1 +0.6**
TCF pmax pmax
comp=Z,65nm,1.4s
MTLF Montolieu 23.31 74 *eP* **P 09 45 16.3 +1.6**
MTLF pmax pmax
comp=Z,31nm,1.4s
BGF Bois d'Agland 23.64 66 *eP* **P 09 45 20.3 +2.4**
BGF pmax pmax
comp=Z,19nm,0.8s
AVF Avril sur Loir 23.99 66 *eP* **P 09 45 25.2 +4.0**
AVF pmax pmax
comp=Z,16nm,1.3s
BORG Borgarnes 23.99 8 LR LR 09 52 00.7
comp=Z,308nm,20.6s,baz=177,slow=30
SMF Signal de Mont 24.32 66 *eP* **P 09 45 28.5 +4.1**
SMF pmax pmax
comp=Z,10.0nm,0.9s
SSB Saint Sauveur 24.84 69 *eP* **P 09 45 33.4 +4.3**
SSB pmax pmax
comp=Z,15nm,1.5s
SNF Seneffe 24.94 57 ⇑P **P 09 45 34.5 +4.6**
BCLA Clavier 25.57 57 ⇑P **P 09 45 38.8 +3.2**
CABF La Chapelle 25.87 66 *eP* **P 09 45 43.0 +4.5**
CABF pmax pmax
comp=Z,42nm,1.4s
WLF Walferdange 26.03 59 ⇓P **P 09 45 43.7 +3.9**
MEM Membach 26.04 57 ⇑P **P 09 45 44.9 +5.0**
HAU Haudompre 26.06 63 *eP* **P 09 45 43.9 +3.8**
HAU pmax pmax
comp=Z,35nm,1.5s
BNI Bardonecchia 26.36 70 *eP* **P 09 45 44.9 +1.9**
comp=Z,6.0nm,1.0s
BNI Bardonecchia 26.36 70 *eP* **P 09 45 44.8 +1.9**
BNI Bardonecchia 26.36 70 *eP* **P 09 45 44.9 +1.9**
comp=Z,6.0nm,1.0s
HINF Hinteralfeld 26.39 63 *eP* **P 09 45 47.1 +3.9**
HINF pmax pmax
comp=Z,47nm,1.7s
FRF La Foret Royal 26.49 73 *eP* **P 09 45 49.7 +5.7**
FRF pmax pmax
comp=Z,34nm,1.4s
ECH Echery 26.61 62 *eP* **P 09 45 42.9 -2.2**
comp=Z,5.2nm,1.1s
ECH Echery 26.61 62 *eP* **P 09 45 42.9 -2.2**
ECH pmax pmax
comp=Z,5.0nm,1.1s
CDF Champ du Feu 26.69 62 *eP* **P 09 45 46.3 +0.4**
CDF pmax pmax
comp=Z,23nm,1.2s
SENIN Lac Senin/Sane 26.71 67 *eP* **P 09 45 48.2 +2.0**
comp=Z,5.8nm,1.1s
TUE Stuetta 28.12 66 *eP* **P 09 46 01.2 +2.3**
comp=Z,2.3nm,0.8s
SCHQ Scheffer ville 28.18 312 LR LR 09 55 14.5
comp=Z,360nm,20.4s,baz=90,slow=32
PGF Pioggiola 28.35 74 *eP* P 09 46 06.2 +5.4
PGF pmax pmax
comp=Z,27nm,1.4s
SFJD Kangerlussuaq 28.37 342 LR LR 09 54 49.5
comp=Z,240nm,18.6s,baz=152,slow=31
DAVOX Davos/Dischmat 28.47 65 P **P 09 46 04.1 +2.1**
comp=Z,1.7nm,0.7s,baz=294,slow=5.7,SNR=5.1
DAVOX LR LR 09 56 08.2
comp=Z,318nm,19.0s,baz=266,slow=34
PKME Peaks-Kenny Pk 29.22 291 P **P 09 46 07.7 -0.6**
baz=84
NKC Novy Kostel 30.12 58 AMS AMS 09 56 40.0
comp=Z,500nm,16.9s
CLL Collm 30.51 56 *e*(P) **P 09 46 24.0 +4.3**
comp=Z,6.0nm,1.2s
CLL *e*S **S 09 51 24.0 +3.1**
CLL *e*SSS SSS 09 53 24.0
CLL LmH 09 56 00.0
comp=Z,200nm,20.8s
CLL Collm 30.51 56 *eP* **P 09 46 24.0 +4.3**
CLL pmax pmax
comp=Z,6.0nm,1.2s
KEST Kesra 30.54 88 P **P 09 46 22.6 +2.4**
comp=Z,3.2nm,0.6s,baz=39,slow=12,SNR=4.6
KEST LR LR 09 58 11.5
comp=Z,489nm,19.2s,baz=215,slow=35
KHC Kasperske Hory 30.86 61 *eP* **P 09 46 24.5 +1.6**
KHC AMS AMS 09 57 50.0
comp=Z,400nm,16.9s
KHC Kasperske Hory 30.86 61 *eP* **P 09 46 24.8 +1.9**
comp=Z,2.5nm,1.1s
KHC Kasperske Hory 30.86 61 *eP* **P 09 46 24.5 +1.6**
KHC MLR MLR
comp=Z,400nm,16.9s
GEA0 GERESS Array S 30.95 61 *eP* **P 09 46 27.8 +4.0**
GERES GERESS Array B 30.95 61 P **P 09 46 25.3 +1.5**
comp=Z,0.4nm,0.3s,baz=271,slow=9.1,SNR=3.1
GERES LR LR 09 57 21.1
comp=Z,273nm,19.8s,baz=280,slow=33
LBNH Lisbon 31.22 290 P **P 09 46 26.2 0.0**
baz=80
PRU Pruhonice 31.47 59 AMS AMS 09 57 50.0
comp=Z,500nm,18.3s
NOA NORSAR Array B 31.47 37 LR LR 09 56 54.4
comp=Z,123nm,22.0s,baz=255,slow=32
PVCC Panska Ves 31.48 58 AMS AMS 09 58 00.0
comp=Z,500nm,15.8s
JMIC Jan Mayen 31.62 13 LR LR 09 56 02.0
comp=Z,156nm,19.5s,baz=253,slow=30
GOPC GO Pecny, Ondr 31.63 59 AMS AMS 09 57 50.0
comp=Z,500nm,15.0s
HFS Hagfors 32.35 40 LR LR 09 58 04.6
comp=Z,210nm,20.2s,baz=252,slow=33
UPC Upice 32.40 58 AMS AMS 09 58 30.0
comp=Z,600nm,16.4s
DPC Dobruska-Polom 32.61 58 AMS AMS 09 59 10.0
comp=Z,500nm,15.5s
MODS Modra-Piesok 33.35 62 *eP* **P 09 46 47.5 +2.7**
MODS pmax pmax
comp=Z,16nm,1.2s
MODS pmax pmax
comp=N,64nm,0.9s
MODS Modra-Piesok 33.35 62 *eP* **P 09 46 47.5 +2.7**
MODS *e* 10 02 19.5
VAE Valguarnera 33.71 82 LR LR 09 58 48.6
comp=N,404nm,21.9s,baz=330,slow=33
OKC Ostrava-Krasne 33.80 59 AMS AMS 09 59 20.0
comp=N,400nm,18.6s
CUC Castrocucco 33.95 77 *eP* **P 09 46 51.8 +1.7**
comp=N,15nm,1.1s
KOWA Kowa 34.51 133 P **P 09 46 56.1 +1.1**
comp=N,2.1nm,0.7s,baz=355,slow=6.1,SNR=5.2
KOWA LR LR 10 00 19.9
comp=N,142nm,18.1s,baz=10,slow=35
N59A State Game Lan 34.74 285 P **P 09 46 56.3 -0.6**
baz=74
MMNY Mt. Morris Dam 35.80 289 *eP* **P 09 47 04.9 -1.0**
comp=N,5.3nm,1.2s
DIVS Divibare 35.90 69 *eP* **P 09 47 08.3 +1.4**
comp=N,6.6nm,1.1s
SSPA Standing Stone 36.36 286 P **P 09 47 10.0 -0.7**
baz=73
O56A Blue Knob Stat 36.96 285 P **P 09 47 16.1 +0.1**
baz=72
M54A Oil Creek Stat 37.38 288 P **P 09 47 19.1 -0.5**
baz=73
N54A Moraine State 37.78 287 P **P 09 47 23.5 +0.6**
baz=72
FINES FINESS Array B 38.55 39 P **P 09 47 27.5 -1.6**
comp=N,3.2nm,0.9s,baz=297,slow=9.2,SNR=2.2
FINES LR LR 10 01 36.2
comp=N,175nm,21.2s,baz=256,slow=34
BUR04 Bucovina Ar. S 38.73 62 *eP* **P 09 47 31.9 +0.9**
TORD Torodi Ar. Bea 38.88 127 P **P 09 47 32.9 +0.6**
comp=N,3.0nm,1.1s,baz=310,slow=8.5,SNR=12
TORD LR LR 10 01 51.5
comp=N,202nm,21.6s,baz=320,slow=33
TULEG Thule 39.23 346 *eP* **P 09 47 34.4 -0.1**
comp=N,32nm,0.7s
BLA Blacksburg 39.37 281 P **P 09 47 35.7 -0.7**
baz=68
OBIP Obispado Ponce 39.41 245 *eP* **P 09 47 36.6 -0.1**
comp=N,14nm,1.1s
OBIP Obispado Ponce 39.41 245 *eP* **P 09 47 36.6 -0.1**
comp=N,14nm,1.1s
SVB Belmont 39.42 234 *eP* **P 09 47 36.0 -0.8**
comp=N,42nm,0.8s
MLR Muntele Rosu 39.69 65 P **P 09 47 43.0 +4.0**
comp=N,1.0nm,0.7s,baz=14,slow=4.7,SNR=4.1
MLR Muntele Rosu 39.69 65 *eP* **P 09 47 39.7 +0.7**
comp=N,7.2nm,1.0s
ARCES ARCESS Array B 39.85 27 P **P 09 47 37.8 -2.0**
comp=N,3.0nm,0.9s,baz=274,slow=17,SNR=4.7
ARCES LR LR 10 00 41.7
comp=N,156nm,21.7s,baz=258,slow=31
N50A Nevada 40.12 288 P **P 09 47 42.1 -0.3**
baz=71
O50A Cable 40.66 287 P **P 09 47 45.8 -1.2**
baz=70
DBIC Dimbokro 40.71 141 P **P 09 47 48.6 +1.0**
comp=N,10nm,1.1s,baz=317,slow=6.1,SNR=4.1
DBIC LR LR 10 02 58.0
comp=N,193nm,20.0s,baz=311,slow=34
DBIC Dimbokro 40.71 141 P **P 09 47 48.6 +1.0**
DBIC pmax pmax
comp=Z,4.0nm,0.7s
KIEV Kiev 40.75 56 ⇓*iP* **P 09 47 51.3 +3.8**
KIEV pmax pmax
comp=Z,12nm,1.6s
AKASG Malin Array Be 40.76 56 P **P 09 47 47.9 +0.4**
comp=Z,3.5nm,0.9s,baz=279,slow=8.1,SNR=7.9
AKASG LR LR 10 04 22.4
comp=Z,288nm,18.4s,baz=275,slow=36
KMSC Kings Mountain 40.87 279 P **P 09 47 47.4 -1.4**
baz=65
F44A Big Bay de Noc 40.90 296 P **P 09 47 47.9 -1.0**
baz=75
P50A Jamestown 40.98 286 P **P 09 47 48.9 -0.7**
baz=70
E43A Lone Tree Farm 41.19 297 P **P 09 47 50.2 -1.0**
baz=76
SPITS Spitsbergen Ar 41.29 13 LR LR 10 00 55.8
comp=Z,83nm,18.2s,baz=215,slow=30
U53A Fall Branch 41.30 281 P **P 09 47 50.9 -1.4**
baz=66
F43A Flat Rock, Esc 41.44 296 P **P 09 47 52.5 -0.8**
baz=75
S51A Beattyville 41.55 283 P **P 09 47 53.2 -1.1**
baz=67
V53A Saluda 41.75 280 P **P 09 47 53.4 -2.7**
baz=66
E42A Champion 41.79 298 P **P 09 47 54.0 -2.2**
baz=75
D41A Chassel 42.06 299 P **P 09 47 57.2 -1.2**
baz=76
W53A Cullowhee 42.22 280 P **P 09 47 59.4 -0.6**
baz=65
IDI Anoyia 42.35 80 LR LR 10 05 05.0
comp=Z,69nm,21.9s,baz=275,slow=35
G42A Mountain 42.45 296 P **P 09 48 01.5 -0.1**
baz=74
G42A Mountain 42.45 296 *eP* **P 09 48 02.5 +0.9**
comp=Z,7.8nm,1.1s
O47A Sheridan 42.47 288 P **P 09 48 01.1 -0.7**
baz=69
TKL Tuckaleechee C 42.47 281 LR LR 10 04 28.6
comp=Z,272nm,19.5s,baz=64,slow=35
E41A Kenton 42.48 298 P **P 09 48 01.1 -0.7**
baz=75
X53A Estanollee 42.61 279 P **P 09 48 02.7 -0.3**
baz=64
T50A Nancy 42.70 283 P **P 09 48 03.4 -0.3**
baz=66
F41A Three Lakes 42.77 297 P **P 09 48 03.6 -0.6**
baz=74
W52A Murphy 42.82 280 P **P 09 48 03.8 -1.0**
baz=65
V51A Loudon 42.84 281 P **P 09 48 04.0 -0.8**
baz=65
C39A Grand Marais 42.90 300 P **P 09 48 04.2 -1.0**
baz=75
G41A Antigo 42.97 296 P **P 09 48 04.8 -1.0**
baz=73
J43A Natural Harves 43.00 293 P **P 09 48 05.1 -1.0**
baz=72
457A Yulee 43.08 273 P **P 09 48 07.1 +0.3**
baz=61
Y53A Monroe 43.10 278 P **P 09 48 06.7 -0.3**
baz=64
E40A Wakefield 43.11 298 P **P 09 48 05.9 -1.0**
baz=74
Q47A Bedord North L 43.12 287 P **P 09 48 06.7 -0.4**
baz=68
356A Blackshear 43.17 274 P **P 09 48 07.0 -0.5**
baz=61
T49A Edmonton 43.18 284 P **P 09 48 07.1 -0.5**
baz=66
I42A Draeger Farm, 43.19 294 P **P 09 48 06.8 -0.7**
baz=72
I42A Draeger Farm, 43.19 294 *eP* **P 09 48 09.0 +1.4**
comp=Z,9.9nm,1.1s
GOGA Godfrey 43.21 278 P **P 09 48 06.7 -1.2**
baz=63
F40A Park Falls 43.40 297 P **P 09 48 08.1 -1.2**
baz=74,SNR=5.4
P46A Rosedale 43.43 288 P **P 09 48 08.6 -1.0**
baz=68
R47A Wooly Knot Far 43.44 286 P **P 09 48 08.7 -1.0**
baz=67
658A Bunnell 43.45 271 P **P 09 48 09.3 -0.4**
baz=60
Y52A Lilburn 43.45 279 P **P 09 48 09.7 -0.1**
baz=64
E39A Mellen 43.56 298 P **P 09 48 10.0 -0.6**
baz=74
U49A Red Boiling Sp 43.60 283 P **P 09 48 10.0 -1.0**
baz=66
L43A Garden Prairie 43.62 292 P **P 09 48 11.1 0.0**
baz=70
G40A Rib Lake 43.65 297 P **P 09 48 10.3 -0.9**
baz=73,SNR=5.4
G40A Rib Lake 43.65 297 *eP* **P 09 48 09.5 -1.8**
comp=Z,7.4nm,1.0s
C38A Sawbill Land. 43.67 300 P **P 09 48 10.7 -0.7**
baz=75
355A Pearson 43.71 275 P **P 09 48 11.4 -0.5**
baz=61
254A Abbeville 43.75 276 P **P 09 48 11.5 -0.7**
baz=62
EYMN Ely 43.75 301 P **P 09 48 11.1 -1.0**
baz=75,SNR=5.5
EYMN Ely 43.75 301 *eP* **P 09 48 12.1 0.0**
comp=Z,13nm,1.0s
W50A Signal Mountai 43.80 281 P **P 09 48 13.5 +0.8**
baz=65
K42A Prairie Point, 43.84 293 P **P 09 48 12.4 -0.4**
baz=71
F39A Loretta 43.94 298 P **P 09 48 13.0 -0.6**
baz=73
H40A Chili 43.97 296 P **P 09 48 12.7 -1.2**
baz=72
V49A McMinnville 44.00 282 P **P 09 48 12.9 -1.3**
baz=65
Z52A Williamson 44.02 278 P **P 09 48 14.3 -0.1**
baz=63
M43A Waltham Townsh 44.02 291 P **P 09 48 13.6 -0.7**
baz=70
J41A Loganville 44.11 294 P **P 09 48 14.6 -0.4**
baz=71
U48A Cassie Pea, Po 44.16 283 P **P 09 48 14.3 -1.1**
baz=66
E38A The Farm, Brul 44.16 299 P **P 09 48 15.0 -0.4**
baz=73
E38A The Farm, Brul 44.16 299 *eP* **P 09 48 16.2 +0.9**
comp=Z,14nm,1.1s
Y51A Rockmart 44.19 279 P **P 09 48 14.9 -0.8**
baz=63
TIGA Tifton 44.22 275 *eP* **P 09 48 16.3 +0.3**
TIGA Tifton 44.22 275 *eP* **P 09 48 16.3 +0.3**
C37A Embarrass 44.26 301 P **P 09 48 15.0 -1.2**
baz=74
G39A Holcombe 44.29 297 P **P 09 48 15.7 -0.7**
baz=72
RES Resolute Bay 44.30 340 P **P 09 48 15.3 -0.7**
comp=Z,11nm,0.9s,baz=104,slow=6.3,SNR=12
RES Resolute Bay 44.30 340 *eP* **P 09 48 16.0 -0.1**
comp=Z,18nm,1.0s
OBN Obninsk 44.36 49 ⇓*eP* **P 09 48 18.0 +1.2**
OBN *e* 09 50 00.6
X50B Fort Payne 44.37 280 P **P 09 48 17.1 -0.2**
baz=64
T47A Sharon Grove 44.38 284 P **P 09 48 16.2 -1.0**
baz=66
T47A Sharon Grove 44.38 284 *eP* **P 09 48 18.2 +1.0**
comp=Z,16nm,1.0s
Q45A Warren Harvey, 44.38 287 P **P 09 48 16.7 -0.5**
baz=67
152A Waverly Hall 44.48 277 P **P 09 48 16.9 -1.2**
baz=62
Z51A Franklin 44.53 279 P **P 09 48 19.1 +0.6**
baz=63
S46A Don Dixon Farm 44.54 285 P **P 09 48 18.3 -0.2**
baz=66
H39A Augusta 44.56 296 P **P 09 48 18.3 -0.2**
baz=72
F38A Pierce - Schro 44.56 298 P **P 09 48 18.0 -0.5**
baz=73
K41A Shullsburg 44.56 293 P **P 09 48 18.9 +0.3**
baz=70
D37A Cotton 44.58 300 P **P 09 48 18.2 -0.5**
baz=74
HDIL Hopedale 44.58 290 P **P 09 48 17.7 -1.0**
baz=68
J40A Soldiers Grove 44.60 294 P **P 09 48 18.8 -0.1**
baz=71
C36A Pine Crest Far 44.67 301 P **P 09 48 18.0 -1.4**
baz=74,SNR=7.2
V48A Smith Brothers 44.69 282 P **P 09 48 19.4 -0.3**
baz=65
Y50A Piedmont 44.69 280 P **P 09 48 19.6 -0.1**
baz=63
U47A Clarksville 44.74 284 P **P 09 48 20.4 +0.4**
baz=65

G38A	Ridgeland	44.79 297	P	P	09 48 20.2	-0.2
	baz=72					
252A	Lumpkin	44.81 277	P	P	09 48 21.2	+0.4
	baz=62					
X49A	Woodville	44.85 281	P	P	09 48 20.6	-0.5
	baz=64					
T46A	Princeton	44.93 285	P	P	09 48 22.2	+0.6
	baz=66					
I39A	Houston	44.98 295	P	P	09 48 21.9	-0.1
	baz=71					
I39A	Houston	44.98 295	eP	P	09 48 22.6	+0.6
	comp=Z,8.8nm,0.8s					
151A	Opelika	45.01 278	P	P	09 48 22.2	-0.1
	baz=62					
W48A	Pulaski	45.03 282	P	P	09 48 21.5	-1.0
	baz=64					
KLMR	Klimovskoe	45.07 40	P	P	09 48 22.8	+0.4
KLMR			pmax	pmax		
	comp=Z,6.0nm,1.1s					
KLMR	Klimovskoe	45.07 40	P	P	09 48 22.8	+0.4
KLMR			AMP		09 48 32.7	
	comp=Z,6.0nm,1.1s					
P43A	Skaggs, Pawnee	45.08 289	P	P	09 48 21.9	-0.8
	baz=68					
957A	Wimauma	45.08 270	P	P	09 48 23.0	+0.1
	baz=58					
B35A	Bob, Littlefor	45.08 302	P	P	09 48 21.5	-1.2
	baz=74					
B35A	Bob, Littlefor	45.08 302	eP	P	09 48 21.6	-1.0
	comp=Z,7.8nm,1.0s					
Z50A	Ashland	45.12 279	P	P	09 48 22.5	-0.6
	baz=63					
F37A	Hinrichs Farm,	45.13 298	P	P	09 48 22.7	-0.5
	baz=72					
V47A	Nunnelly	45.16 283	P	P	09 48 23.8	+0.3
	baz=65					
S45A	Carrier Mills	45.17 286	P	P	09 48 23.6	+0.1
	baz=66					
352A	Blakely	45.20 276	P	P	09 48 23.4	-0.4
	baz=61					
Y49A	Blount Mountai	45.21 280	P	P	09 48 23.2	-0.6
	baz=63					
H38A	Maiden Rock	45.23 296	P	P	09 48 23.5	-0.5
	baz=71					
WVT	Waverly	45.26 283	P	P	09 48 24.1	-0.2
	baz=65					
251A	Midway	45.27 277	P	P	09 48 24.8	+0.4
	baz=62					
J39A	Decorah	45.28 294	P	P	09 48 23.3	-1.0
	baz=70					
R44A	Waltonville	45.30 287	P	P	09 48 23.9	-0.7
	baz=66					
E36A	McGregor	45.31 299	P	P	09 48 23.2	-1.3
	baz=72,SNR=7.6					
L40A	Anamosa	45.39 293	P	P	09 48 25.0	-0.2
	baz=69					
SPMN	Marine on St.	45.41 297	P	P	09 48 24.8	-0.6
	baz=72					
SPMN	Marine on St.	45.41 297	eP	P	09 48 25.2	-0.1
	comp=Z,12nm,1.0s					
X48A	Hartselle	45.41 281	P	P	09 48 25.3	-0.1
	baz=64					
C35A	Jirik Farms, M	45.43 301	P	P	09 48 24.6	-0.9
	baz=73					
150A	Eclectic	45.49 278	P	P	09 48 25.5	-0.6
	baz=62					
Z49A	Columbiana	45.60 279	P	P	09 48 26.4	-0.6
	baz=62					
V46A	Holladay	45.61 283	P	P	09 48 26.7	-0.4
	baz=64					
SIUC	Southern Illin	45.62 286	eP	P	09 48 27.9	+0.8
	comp=Z,16nm,1.1s					
K39A	Oelwein	45.63 294	P	P	09 48 26.4	-0.7
	baz=70					
B34A	Aery, Baudette	45.64 302	P	P	09 48 25.8	-1.3
	baz=74,SNR=6.4					
S44A	Carbondale	45.65 286	P	P	09 48 26.5	-0.8
	baz=66					
D35A	Remer	45.66 300	P	P	09 48 26.8	-0.5
	baz=73					
F36A	Milaca	45.69 298	P	P	09 48 27.0	-0.6
	baz=72					
P42A	Winchester	45.69 289	P	P	09 48 26.7	-0.8
	baz=67					
H37A	Dierke Farm, C	45.69 297	P	P	09 48 27.3	-0.2
	baz=71					
351A	Pinckard	45.80 276	P	P	09 48 27.8	-0.8
	baz=61					
J38A	Wedel Dairy, R	45.82 295	P	P	09 48 27.4	-1.2
	baz=70					
M40A	Post Highland	45.83 292	P	P	09 48 28.1	-0.5
	baz=68					
U45A	Rockin P Farm,	45.85 284	P	P	09 48 28.0	-1.0
	baz=65					
O41A	Passleys Farm,	45.87 290	P	P	09 48 26.3	-2.7
	baz=68					
R43A	Red Bud	45.91 287	P	P	09 48 28.7	-0.7
	baz=66					
L39A	Vinton	45.91 293	P	P	09 48 27.7	-1.7
	baz=69					
ULM	Lac du Bonnet	45.92 305	LR	LR	10 06 19.9	
	comp=Z,357nm,20.2s,baz=86,slow=34					
250A	Grady	45.97 277	P	P	09 48 30.3	+0.4
	baz=62					
A33A	Warroad	45.98 303	P	P	09 48 28.5	-1.3
	baz=74					
X47A	Russelville	45.98 281	P	P	09 48 30.4	+0.4
	baz=63					
LRAL	Lakeview Retre	46.02 279	P	P	09 48 30.9	+0.7
	baz=62					
E35A	Pequot Lakes	46.05 300	P	P	09 48 30.9	+0.5
	baz=72					
149A	Jones	46.07 279	P	P	09 48 30.3	-0.3
	baz=62					
Q42A	Golden Eagle	46.09 288	P	P	09 48 31.0	+0.3
	baz=67					
W46A	Michie	46.09 282	P	P	09 48 31.2	+0.4
	baz=64					
P41A	Barry, Barry	46.16 289	P	P	09 48 31.6	+0.3
	baz=67					
I37A	Lemond, Waseca	46.21 296	P	P	09 48 31.7	0.0
	baz=70					
Y47A	UCPARC, Winfie	46.25 281	P	P	09 48 32.0	-0.1
	baz=63					
K38A	Parkersburg	46.26 294	P	P	09 48 31.3	-0.7
	baz=69					
M39A	Webster	46.26 292	P	P	09 48 31.4	-0.7
	baz=68					
Z48A	Northport	46.27 280	P	P	09 48 32.5	+0.2
	baz=62					
U44B	Burton Farm, H	46.29 284	P	P	09 48 32.9	+0.6
	baz=65					
S43A	Fulton Ridge,	46.30 286	P	P	09 48 32.2	-0.2
	baz=66					
F35A	Swanville	46.38 299	P	P	09 48 32.5	-0.5
	baz=71					
U44A	Portageville	46.46 285	P	P	09 48 33.2	-0.5
	baz=65					
AGMN	Agassiz Nation	46.46 302	P	P	09 48 32.9	-0.7
	baz=73					
AGMN	Agassiz Nation	46.46 302	eP	P	09 48 32.9	-0.7
	comp=Z,12nm,1.1s					
X46A	Booneville	46.50 282	P	P	09 48 33.4	-0.6
	baz=63					
R42A	Luebbering	46.53 288	P	P	09 48 33.2	-1.0
	baz=66					
G35A	Watkins	46.53 298	P	P	09 48 33.8	-0.4
	baz=71					
J37A	Redenius Farm,	46.56 295	P	P	09 48 33.2	-1.2
	baz=69					
O40A	La Belle	46.57 290	P	P	09 48 33.6	-1.0
	baz=67					
L38A	Oak Wood Farm,	46.57 293	P	P	09 48 34.3	-0.2
	baz=69					
Q41A	Truxton	46.57 289	P	P	09 48 34.6	+0.1
	baz=66					
C33A	Trail	46.57 302	P	P	09 48 33.2	-1.2
	baz=72					
W45A	Hickory Valley	46.68 283	P	P	09 48 35.1	-0.4
	baz=64					
N39A	Derby Farms, D	46.72 292	P	P	09 48 34.8	-0.9
	baz=68					
S42A	Caledonia	46.73 287	P	P	09 48 35.7	-0.2
	baz=66					
Z47A	Carrollton	46.74 280	P	P	09 48 35.5	-0.4
	baz=62					
F34A	Alexandria	46.86 299	P	P	09 48 36.5	-0.2
	baz=71					
PBMO	Poplar Bluff	46.89 286	eP	P	09 48 37.5	+0.5
	comp=Z,8.3nm,1.0s					
BRTR	Keskin Array B	46.92 70	P	P	09 48 38.4	+0.9
	comp=Z,1.0nm,0.8s,baz=308,slow=4.9,SNR=4.2					
BRTR			LR	LR	10 09 41.7	
	comp=Z,34nm,19.2s,baz=276,slow=38					
P40A	Paris	46.92 290	P	P	09 48 36.1	-1.2
	baz=67					
P40A	Paris	46.92 290	eP	P	09 48 38.1	+0.8
	comp=Z,12nm,1.1s					
R41A	Rosebud	46.94 288	P	P	09 48 36.6	-0.9
	baz=66					
H35A	Sunnyside Ranc	46.94 297	P	P	09 48 37.0	-0.4
	baz=70					
CCM	Cathedral Cave	46.94 287	P	P	09 48 36.5	-1.0
	baz=66					
CCM	Cathedral Cave	46.94 287	eP	P	09 48 37.6	+0.1
	comp=Z,10nm,1.1s					
CCM	Cathedral Cave	46.94 287	eP	P	09 48 37.6	+0.1
CCM			pmax	pmax		
	comp=Z,10.0nm,1.1s					
M38A	Pleasantville	47.00 293	P	P	09 48 36.7	-1.2
	baz=68					
Y46A	Houston	47.01 281	P	P	09 48 38.2	+0.1
	baz=63					
J36A	Seneca 1, Swea	47.09 295	P	P	09 48 37.8	-0.7
	baz=69					
L37A	Phoenix Point,	47.12 294	P	P	09 48 38.1	-0.7
	baz=68					
OXF	Oxford	47.13 282	P	P	09 48 38.1	-0.8
	baz=63,SNR=5.1					
OXF	Oxford	47.13 282	eP	P	09 48 39.2	+0.2
	comp=Z,38nm,1.0s					
OXF	Oxford	47.13 282	eP	P	09 48 39.2	+0.2
OXF			pmax	pmax		
	comp=Z,38nm,1.0s					
147A	Livingston	47.13 279	P	P	09 48 38.3	-0.7
	baz=62					
Q40A	Laux Farm, Aux	47.15 289	P	P	09 48 38.4	-0.7
	baz=66					
X45A	UM Field Stati	47.16 282	P	P	09 48 38.1	-1.1
	baz=63					
T42A	Van Buren	47.26 286	P	P	09 48 39.5	-0.4
	baz=65					
Z46A	Louisville	47.39 280	P	P	09 48 39.9	-1.1
	baz=62					
P39B	Salisbury	47.44 290	P	P	09 48 40.5	-0.9
	baz=66					
S41A	Jillco Farms,	47.50 287	P	P	09 48 41.6	-0.2
	baz=65					
Y45A	Yeager Farm, C	47.52 282	P	P	09 48 42.2	+0.1
	baz=62					
R40A	Maddies Statio	47.58 288	P	P	09 48 41.8	-0.7
	baz=66					
R40A	Maddies Statio	47.58 288	eP	P	09 48 42.9	+0.4
	comp=Z,12nm,1.1s					
U42A	Revenden	47.66 285	P	P	09 48 41.8	-1.3
	baz=64					
T41A	Mountain View	47.74 286	P	P	09 48 42.4	-1.3
	baz=65					
Q39A	Willow Grove F	47.77 289	P	P	09 48 43.3	-0.7
	baz=66					
V42A	Cord	48.01 285	P	P	09 48 44.8	-1.0
	baz=64					
S40A	Lebanon	48.04 287	P	P	09 48 45.2	-0.9
	baz=65					
R39A	Chumby, Stover	48.12 289	P	P	09 48 46.2	-0.5
	baz=65					
U41A	Viola	48.16 286	P	P	09 48 46.0	-0.9
	baz=64					
T40A	Mansfield	48.24 287	P	P	09 48 47.1	-0.5
	baz=64					
Q38A	Cooks Store, C	48.27 290	P	P	09 48 47.3	-0.5
	baz=66					
E31A	Nome	48.32 301	P	P	09 48 47.6	-0.5
	baz=70					
FFC	Flin Flon	48.33 312	eP	P	09 48 49.1	+1.1
	comp=Z,6.3nm,0.9s					
FFC	Flin Flon	48.33 312	eP	P	09 48 49.1	+1.1
FFC			pmax	pmax		
	comp=Z,6.0nm,0.9s					
Z44A	Pea Ridge, Bel	48.45 281	P	P	09 48 48.6	-0.6
	baz=62					
ECSD	EROS Data Cent	48.48 297	P	P	09 48 48.3	-1.1
	baz=68,SNR=9.6					
ECSD	EROS Data Cent	48.48 297	eP	P	09 48 49.0	-0.4
	comp=Z,14nm,1.1s					
G32A	Webster	48.52 299	P	P	09 48 49.2	-0.5
	baz=69					
P37A	Lathrop	48.53 291	P	P	09 48 48.3	-1.5
	baz=66					
V41A	Mountainview	48.57 285	P	P	09 48 49.2	-1.0
	baz=64					
S39A	Bolivar	48.59 288	P	P	09 48 48.3	-2.0
	baz=65,SNR=6.3					
S39A	Bolivar	48.59 288	eP	P	09 48 49.1	-1.1
	comp=Z,9.9nm,0.9s					
H32A	Carlson Farm,	48.75 298	P	P	09 48 50.3	-1.2
	baz=69,SNR=6.8					
R38A	Fenwick Farm,	48.79 289	P	P	09 48 50.9	-1.0
	baz=65					
U40A	Yellville	48.83 286	P	P	09 48 51.2	-0.9
	baz=64,SNR=6.2					
T39A	Clever	48.91 287	P	P	09 48 51.8	-1.0
	baz=64					
W41B	Gary Mavity, V	48.91 284	P	P	09 48 51.9	-0.9
	baz=63					
VBMS	Vicksburg	49.02 280	P	P	09 48 53.8	+0.2
	baz=61					
S38A	Stockton	49.03 288	P	P	09 48 52.7	-1.0
	baz=64					
V40A	Witts Springs	49.05 285	P	P	09 48 52.8	-1.1
	baz=63					
V40A	Witts Springs	49.05 285	eP	P	09 48 52.7	-1.1
	comp=Z,10nm,0.8s					
CCAR	Cane Creek	49.14 283	eP	P	09 48 53.3	-1.3
	comp=Z,17nm,0.9s					
U39A	Green Forest	49.27 286	P	P	09 48 53.9	-1.7
	baz=64					
143A	Socs Landing,	49.44 281	P	P	09 48 57.0	+0.2
	baz=61					
W40A	Ferguson Farm,	49.51 285	P	P	09 48 57.4	+0.1
	baz=63					
W40A	Ferguson Farm,	49.51 285	eP	P	09 48 57.8	+0.5
	comp=Z,1.2nm,0.4s					
344A	Westbrook Farm	49.55 279	P	P	09 48 56.8	-0.9
	baz=60					
T38A	Diamond	49.57 288	P	P	09 48 57.1	-0.7
	baz=64					
V39A	Pettigrew	49.63 286	P	P	09 48 57.3	-1.0
	baz=63					
X40A	Basin Creek Fa	49.66 284	P	P	09 48 57.7	-0.8
	baz=62					
Y41A	Eaglette Beard	49.78 283	P	P	09 48 59.3	-0.1
	baz=62					
W39A	Magazine	50.02 285	P	P	09 49 00.8	-0.5
	baz=63,SNR=5.4					
W39A	Magazine	50.02 285	eP	P	09 49 02.1	+0.9
	comp=Z,23nm,1.1s					
MIAR	Mount Ida	50.17 284	P	P	09 49 02.0	-0.4
	baz=62					
MIAR	Mount Ida	50.17 284	eP	P	09 49 01.6	-0.8
	comp=Z,11nm,1.0s					
MIAR	Mount Ida	50.17 284	eP	P	09 49 01.6	-0.8
MIAR			pmax	pmax		
	comp=Z,11nm,1.0s					
MIAR	Mount Ida	50.17 284	eP	P	09 49 01.6	-0.8
	comp=Z,11nm,1.0s					
PTGA	Pitinga	50.20 222	eP	P	09 49 04.4	+1.6
	comp=Z,7.7nm,1.1s					
Y40A	Okolona	50.20 284	P	P	09 49 01.4	-1.3
	baz=62					
Z41A	Richland Creek	50.21 283	P	P	09 49 01.3	-1.4
	baz=61					
Z41A	Richland Creek	50.21 283	eP	P	09 49 02.8	+0.1
	comp=Z,50nm,1.1s					
BGNE	Belgrade	50.43 294	P	P	09 49 03.5	-0.8
	baz=66					
BGNE	Belgrade	50.43 294	eP	P	09 49 04.2	-0.1
	comp=Z,36nm,1.0s					
X39A	Fountain Ranch	50.58 285	P	P	09 49 05.0	-0.5
	baz=62					
342A	Flagon Creek P	50.77 280	P	P	09 49 06.7	-0.2
	baz=60					
MMAI	Mount Meron Ar	51.15 77	LR	LR	10 11 32.0	
	comp=Z,30nm,20.3s,baz=290,slow=37					
TUL1	Leonard	51.15 287	P	P	09 49 07.7	-2.1
	baz=63					
341A	Kurthwood	51.42 281	P	P	09 49 11.3	-0.6
	baz=60					
KIV	Kislovodsk	51.46 61	eP	P	09 49 11.6	-0.5
KIV			pmax	pmax		
	comp=Z,4.0nm,0.9s					
KIV			MLR	MLR		
	comp=Z,74nm,16.0s					
DGMT	Dagmar	51.64 305	P	P	09 49 12.7	-0.6
	baz=68					
DGMT	Dagmar	51.64 305	eP	P	09 49 13.2	-0.1
	comp=Z,22nm,1.0s					
KBZ	Khabaz	51.69 62	P	P	09 49 15.1	+1.4
	comp=Z,2.6nm,0.8s,baz=247,slow=7.7,SNR=3.9					
KBZ			LR	LR	10 11 12.0	
	comp=Z,105nm,19.8s,baz=334,slow=36					
NEY	Neytrino	51.77 62	eP	P	09 49 16.9	+2.4
NEY			pmax	pmax		
	comp=Z,2.0nm,1.3s					
YKA	Yellowknife Ar	52.41 324	P	P	09 49 17.4	-1.3
	comp=Z,1.5nm,0.9s,baz=72,slow=6.9,SNR=3.8					
YKA			LR	LR	10 08 10.8	
	comp=Z,7.2nm,20.0s,baz=71,slow=32					
ZEI	Tsey	52.75 62	eP	P	09 49 22.8	+0.9
ZEI			pmax	pmax		
	comp=Z,16nm,0.7s					
OGNE	Ogallala	53.28 295	P	P	09 49 24.8	-0.9
	baz=64					
LAO	LASA Array	53.60 304	P	P	09 49 26.2	-1.7
	baz=66,SNR=9.9					
LAO	LASA Array	53.60 304	eP	P	09 49 27.8	-0.1
	comp=Z,28nm,1.1s					
WMOK	Wichita Mounta	53.86 287	P	P	09 49 28.3	-1.6
	baz=61					
WMOK	Wichita Mounta	53.86 287	eP	P	09 49 28.6	-1.3
	comp=Z,5.5nm,1.1s					
WMOK	Wichita Mounta	53.86 287	eP	P	09 49 28.6	-1.3
WMOK			pmax	pmax		
	comp=Z,6.0nm,1.1s					
ROSC	El Rosal	54.14 241	LR	LR	10 10 25.4	
	comp=Z,85nm,21.0s,baz=66,slow=34					
WHTX	Lake Whitney,	54.25 284	P	P	09 49 31.4	-1.4
	baz=60					
WHTX	Lake Whitney,	54.25 284	eP	P	09 49 31.8	-1.0
	comp=Z,18nm,1.0s					
GNI	Garni	54.47 65	LR	LR	10 14 28.2	
	comp=Z,46nm,18.6s,baz=300,slow=38					
GNI	Garni	54.47 65	eP	P	09 49 36.3	+1.8
GNI			pmax	pmax		
	comp=Z,12nm,0.6s					
EGMT	Eagleton	55.23 306	P	P	09 49 39.1	-0.6
	baz=65					
ABTX	Abilene, Hawle	55.53 285	P	P	09 49 40.4	-1.7
	baz=59					
ABTX	Abilene, Hawle	55.53 285	eP	P	09 49 40.8	-1.3
	comp=Z,4.1nm,0.7s					
K22A	Casper	55.53 299	P	P	09 49 40.9	-1.3
	baz=63,SNR=8.4					
K22A	Casper	55.53 299	eP	P	09 49 41.6	-0.5
	comp=Z,16nm,1.0s					
ARU	Arti	55.81 42	P	P	09 49 43.5	-0.2
	comp=Z,3.7nm,0.5s,baz=323,slow=4.5,SNR=6.4					
ARU	Arti	55.81 42	eP	P	09 49 43.4	-0.2
	comp=Z,11nm,0.8s					
ARU	Arti	55.81 42	diP	P	09 49 43.1	-0.5
ARU					09 50 38.0	
ARU					09 51 46.9	
ARU			S	S	09 57 31.5	+1.1
ARU			SS	SS	10 01 07.9	-7.4
ARU			pmax	pmax		
	comp=Z,7.0nm,1.0s					
AMTX	Amarillo	55.87 289	P	P	09 49 43.6	-0.9
	baz=60					
AMTX	Amarillo	55.87 289	eP	P	09 49 44.6	+0.1
	comp=Z,6.6nm,0.8s					
N23A	Red Feather La	55.95 297	P	P	09 49 44.2	-1.1
	baz=62,SNR=9.6					
N23A	Red Feather La	55.95 297	eP	P	09 49 45.5	+0.3
	comp=Z,18nm,1.0s					
GCMT	Greycliff	56.14 304	eP	P	09 49 46.6	+0.2
RLMT	Red Lodge	56.19 303	P	P	09 49 45.6	-1.3
	baz=63					
RLMT	Red Lodge	56.19 303	eP	P	09 49 46.6	-0.3
	comp=Z,5.8nm,1.0s					
ISCO	Idaho Springs	56.24 296	P	P	09 49 45.8	-1.6
	baz=62					
ISCO	Idaho Springs	56.24 296	eP	P	09 49 48.8	+1.4
	comp=Z,4.1nm,1.1s					
ISCO	Idaho Springs	56.24 296	eP	P	09 49 48.8	+1.4
ISCO			pmax	pmax		
	comp=Z,4.0nm,1.1s					
Q24A	Divide	56.32 295	P	P	09 49 47.4	-0.6
	baz=62					
T25A	Trinidad	56.69 292	P	P	09 49 48.9	-1.6
	baz=61					
T25A	Trinidad	56.69 292	eP	P	09 49 52.4	+1.9
	comp=Z,7.7nm,1.1s					
HRY	Holter Researc	57.07 306	eP	P	09 49 52.5	-0.5
MSTX	Muleshoe	57.10 288	P	P	09 49 51.3	-2.1
	baz=59					
SDCO	Great Sand Dun	57.15 294	P	P	09 49 52.2	-1.7
	baz=61					
SDCO	Great Sand Dun	57.15 294	eP	P	09 49 55.2	+1.4
	comp=Z,1.9nm,1.0s					
WALA	Waterton Lakes	57.26 309	eP	P	09 49 53.3	-0.9
	comp=Z,20nm,0.9s					
H17A	Grant Village	57.35 303	P	P	09 49 55.4	+0.2
	baz=62					
H17A	Grant Village	57.35 303	eP	P	09 49 57.3	+2.1
	comp=Z,6.0nm,1.0s					
BOZ	Bozeman (W)	57.46 304	P	P	09 49 54.5	-1.3
	baz=62,SNR=15					
BOZ	Bozeman (W)	57.46 304	eP	P	09 49 55.0	-0.8
	comp=Z,11nm,1.1s					
BOZ	Bozeman (W)	57.46 304	eP	P	09 49 55.0	-0.8
BOZ			pmax	pmax		
	comp=Z,11nm,1.1s					
PD31	Pinedale Array	57.46 301	eP	P	09 49 54.7	-1.2
PDAR	Pinedale Array	57.46 301	P	P	09 49 54.2	-1.7
	comp=Z,3.3nm,0.9s,baz=60,slow=8.8,SNR=19					
PDAR			LR	LR	10 14 19.0	
	comp=Z,299nm,18.1s,baz=77,slow=36					
PDAR	Pinedale Array	57.46 301	eP	P	09 49 53.8	-2.2
BW06	Boulder Array	57.46 301	P	P	09 49 53.7	-2.2
	baz=62,SNR=7.6					
BW06	Boulder Array	57.46 301	eP	P	09 49 54.7	-1.3
FLWY	Flagg Ranch	57.58 302	eP	P	09 49 58.1	+1.4
	comp=Z,7.1nm,1.0s					
833A	Chaparral WMA,	57.60 281	P	P	09 49 56.5	-0.3
	baz=57					
JTS	JuntasAbangare	57.67 254	LR	LR	10 10 25.0	
	comp=Z,172nm,21.4s,baz=115,slow=32					
LOHW	Long Hollow	57.74 302	eP	P	09 49 56.3	-1.5
	comp=Z,3.6nm,1.0s					
MOOW	Moose Ponds	57.76 302	eP	P	09 49 57.8	-0.2
	comp=Z,6.6nm,1.1s					
IMW	Indian Meadow	57.82 302	eP	P	09 49 58.0	-0.5
	comp=Z,9.5nm,1.1s					
SNOW	Snow King Moun	57.91 302	eP	P	09 49 58.4	-0.7
	comp=Z,8.6nm,1.1s					
FXWY	Fox Creek	58.00 302	eP	P	09 49 59.3	-0.4
	comp=Z,2.9nm,1.0s					
REDW	Red Top Meadow	58.02 302	eP	P	09 49 59.0	-0.8
	comp=Z,7.6nm,1.0s					
TPAW	Teton Pass	58.02 302	eP	P	09 49 59.5	-0.3
	comp=Z,8.8nm,1.1s					
S22A	4UR Ranch, Cre	58.06 294	P	P	09 49 59.4	-0.9
	baz=60					
S22A	4UR Ranch, Cre	58.06 294	eP	P	09 50 00.9	+0.6
	comp=Z,0.7nm,0.9s					
AKTO	Aktyubinsk	58.14 49	P	P	09 50 00.3	0.0
	comp=Z,2.6nm,0.7s,baz=287,slow=7.9,SNR=7.3					
AKTO			LR	LR	10 14 29.1	
	comp=Z,122nm,20.6s,baz=292,slow=36					
DLMT	Dillon	58.17 304	eP	P	09 50 00.3	-0.5
	comp=Z,12nm,1.1s					
MSO	Missoula	58.30 307	P	P	09 50 00.1	-1.5
	baz=62,SNR=13					
MSO	Missoula	58.30 307	eP	P	09 50 00.8	-0.9
	comp=Z,13nm,1.0s					
MCMT	McKenzie Canyo	58.58 304	eP	P	09 50 03.4	-0.4
CCIG	Comitan	59.12 265	eP	P	09 50 07.5	-0.3
	comp=Z,16nm,0.9s					
CCIG	Comitan	59.12 265	eP	P	09 50 07.5	-0.3
	comp=Z,16nm,0.9s					
ANMO	Albuquerque	59.22 291	P	P	09 50 08.5	+0.2
	comp=Z,1.5nm,0.8s,baz=45,slow=2.9,SNR=4.4					
ANMO			LR	LR	10 15 34.9	

comp=Z,221nm,18.0s,baz=74,slow=36
ANMO Albuquerque 59.22 291 P P 09 50 07.7 -0.6
baz=59
ANMO Albuquerque 59.22 291 *e*P **P 09 50 10.6 +2.3**
comp=Z,3.0nm,1.0s
TASL Snake Pit, Alb 59.22 291 P **P 09 50 07.4 -0.9**
baz=59
TASM ASL Pad, Albuq 59.22 291 P **P 09 50 08.4 +0.1**
baz=59
PV09 Paradox Valley 59.26 296 *e*P **P 09 50 08.6 0.0**
HWUT Hardware Ranch 59.33 300 *e*P **P 09 50 08.0 -0.9**
comp=Z,11nm,1.0s
MVCO Mesa Verde 59.48 294 P **P 09 50 09.3 -0.8**
baz=59
MVCO Mesa Verde 59.48 294 *e*P **P 09 50 10.2 +0.1**
comp=Z,5.6nm,1.1s
NEW Newport 59.51 309 P **P 09 50 08.5 -1.4**
baz=61,SNR=7.5
NEW Newport 59.51 309 *e*P **P 09 50 09.2 -0.7**
comp=Z,18nm,0.9s
NEW Newport 59.51 309 *e*P **P 09 50 09.2 -0.7**
NEW pmax pmax
comp=Z,19nm,0.9s
BNM Barren Site 59.75 290 *e*P **P 09 50 13.7 +1.6**
ABKAR Akbulak array 59.80 49 *e*P **P 09 50 15.5 +3.7**
MNTX Cornudas Mount 60.16 287 P **P 09 50 13.7 -0.9**
baz=58
HLID Hailey 60.18 303 P **P 09 50 13.7 -1.1**
baz=60,SNR=8.4
HLID Hailey 60.18 303 *e*P **P 09 50 14.4 -0.3**
comp=Z,4.5nm,1.0s
TX31 Lajitas Ar. Si 60.19 284 *e*P **P 09 50 14.4 -0.6**
TXAR Lajitas Array 60.19 284 P **P 09 50 14.1 -0.9**
comp=Z,2.7nm,0.8s,baz=71,slow=7.5,SNR=26
TXAR LR LR 10 15 30.9
comp=Z,105nm,19.6s,baz=0.0,slow=35
DUG Dugway, Tooele 60.86 299 P **P 09 50 18.2 -1.2**
baz=59,SNR=9.5
DUG Dugway, Tooele 60.86 299 *e*P **P 09 50 19.4 0.0**
comp=Z,13nm,1.0s
DUG Dugway, Tooele 60.86 299 *e*P **P 09 50 19.4 0.0**
DUG pmax pmax
comp=Z,13nm,1.0s
BMO Blue Mountains 61.32 306 *e*P **P 09 50 20.9 -1.5**
comp=Z,4.3nm,1.0s
BMO Blue Mountains 61.32 306 *e*P **P 09 50 20.9 -1.5**
BMO pmax pmax
comp=Z,4.0nm,1.0s
W18A Petrified Fore 61.42 293 P **P 09 50 22.5 -0.9**
baz=58
W18A Petrified Fore 61.42 293 *e*P **P 09 50 23.1 -0.2**
comp=Z,5.2nm,0.9s
121A Cookes Peak, D 61.43 290 P **P 09 50 22.6 -0.8**
baz=57
DAWY Dawson 61.60 332 *e*P **P 09 50 24.1 +0.2**
comp=Z,4.7nm,1.1s
TOLK Toolik Lake Re 61.86 339 P **P 09 50 24.4 -1.3**
baz=48
TOLK Toolik Lake Re 61.86 339 *e*P **P 09 50 24.9 -0.7**
comp=Z,2.4nm,0.8s
X18A Snowflake 61.88 293 *e*P **P 09 50 28.1 +1.6**
comp=Z,4.3nm,0.9s
FYU Fort Yukon 61.98 336 *e*P **P 09 50 27.5 +1.2**
comp=Z,11nm,1.2s
LTY Liberty 62.09 310 *e*P **P 09 50 27.6 +0.2**
comp=Z,8.0nm,0.9s
WUAZ Wupatki 62.34 294 P **P 09 50 29.0 -0.5**
baz=57,SNR=7.7
WUAZ Wupatki 62.34 294 *e*P **P 09 50 30.6 +1.1**
comp=Z,9.7nm,1.1s
J08A Circle Bar Ran 62.82 305 *e*P **P 09 50 32.2 -0.3**
comp=Z,28nm,1.0s
X16A Lo Mia Camp, P 62.98 293 *e*P **P 09 50 34.9 +1.1**
comp=Z,3.6nm,1.0s
COLD Coldfoot 63.00 338 *e*P **P 09 50 32.8 -0.4**
comp=Z,4.4nm,1.1s
319A Douglas 63.13 289 *e*P **P 09 50 36.2 +1.5**
comp=Z,4.1nm,0.8s
TLIG Tlapa 63.18 270 *e*P **P 09 50 35.3 +0.1**
comp=Z,6.9nm,0.9s
TLIG Tlapa 63.18 270 *e*P **P 09 50 35.3 +0.1**
comp=Z,6.9nm,0.9s
BRVK Borovoye 63.38 42 *e*P **P 09 50 36.2 +0.4**
comp=Z,8.1nm,0.9s
BRVK Borovoye 63.38 42⇑*i*P **P 09 50 35.1 -0.8**
BRVK pmax pmax
comp=Z,4.0nm,0.8s
WVOR Wild Horse Val 63.41 304 *e*P **P 09 50 36.7 +0.2**
comp=Z,11nm,1.0s
BVAR Borovoye Array 63.45 42 P **P 09 50 36.1 -0.2**
comp=Z,1.8nm,0.8s,baz=298,slow=6.4,SNR=9.5
BVAR LR LR 10 18 07.4
comp=Z,106nm,19.3s,baz=308,slow=36
BMN Battle Mountai 63.60 302 *e*P **P 09 50 38.0 +0.2**
comp=Z,3.7nm,1.0s
R11A Troy Canyon, C 63.66 299 P **P 09 50 37.0 -1.2**
baz=57
R11A Troy Canyon, C 63.66 299 *e*P **P 09 50 38.6 +0.3**
comp=Z,2.3nm,1.1s
IL1 Eielson Array 63.68 335 *e*P **P 09 50 36.2 -1.5**
ILAR Eielson Array 63.68 335 P **P 09 50 36.4 -1.3**
comp=Z,0.7nm,1.0s,baz=40,slow=7.1,SNR=5.7
ILAR LR LR 10 15 24.0
comp=Z,72nm,18.7s,baz=70,slow=33
TUC Tucson 63.68 291 P **P 09 50 38.4 +0.1**
baz=56
TUC Tucson 63.68 291 *e*P **P 09 50 38.9 +0.5**
comp=Z,4.1nm,1.0s
NLWA Neilton Lookou 63.85 311 *e*P **P 09 50 40.0 +0.8**
comp=Z,16nm,0.9s
I05D Terrebonne, OR 64.04 307 P **P 09 50 40.7 +0.2**
baz=57
CCB Clear Creek Bu 64.05 335 *e*P **P 09 50 41.0 +0.8**
comp=Z,2.9nm,1.0s
PINE Pine Mountain 64.10 306 *e*P **P 09 50 42.0 +0.9**
comp=Z,13nm,1.1s
E03A Lebam 64.14 310 *e*P **P 09 50 42.4 +1.4**
comp=Z,22nm,1.0s
WRH Wood River Hil 64.26 335 *e*P **P 09 50 42.0 +0.5**
comp=Z,3.2nm,1.0s
W13A Hualapai Mount 64.29 295 *e*P **P 09 50 42.9 +0.4**
comp=Z,4.4nm,1.0s
H04A Detroit Lake 64.36 308 *e*P **P 09 50 43.5 +0.9**
comp=Z,5.5nm,0.9s
SHPR Sheep Range 64.38 297 *e*P **P 09 50 43.4 +0.4**
comp=Z,5.4nm,1.1s
J05D Fort Rock, OR 64.56 306 P **P 09 50 44.0 0.0**
baz=56,SNR=11
K05A Summer Lake 64.65 305 *e*P **P 09 50 44.8 0.0**
comp=Z,26nm,1.1s
MLY Manley 64.69 336 *e*P **P 09 50 45.0 +0.5**
comp=Z,3.3nm,1.2s
G03D McMinnville, O 64.71 309 P **P 09 50 44.8 +0.1**
baz=56
MOD Modoc Plateau 64.74 304 *e*P **P 09 50 45.3 0.0**
comp=Z,10nm,1.0s
TPNV Topopah Spring 64.86 298 P **P 09 50 45.8 -0.4**
baz=56
PDMCI Parker Dam,Lak 64.91 294 P **P 09 50 46.1 -0.1**
baz=56
KVN Kaiserville 64.92 301 *e*P **P 09 50 45.6 -0.9**
comp=Z,13nm,1.1s
KVN Kaiserville 64.92 301 *e*P **P 09 50 45.6 -0.9**
KVN pmax pmax
comp=Z,13nm,1.1s
I04A Tendick Farm, 64.98 307 P **P 09 50 46.4 -0.3**
baz=56
LDFC Landfair 65.14 296 *e*P **P 09 50 50.6 +2.7**
comp=Z,18nm,1.1s
NV11 Mina Array Sit 65.30 300 *e*P **P 09 50 47.9 -1.1**
comp=Z,0.2nm,1.1s
214A Organ Pipe Nat 65.30 292 P **P 09 50 48.5 -0.4**
baz=56
PAHR Pah Rah Range 65.38 302 *e*P **P 09 50 48.9 -0.5**
comp=Z,5.6nm,1.1s
NV01 Mina Array Sit 65.39 300 *e*P **P 09 50 48.7 -0.9**
NVAR Mina Array Bea 65.39 300 P **P 09 50 48.2 -1.4**
comp=Z,0.8nm,0.8s,baz=50,slow=6.2,SNR=7.3
NVAR LR LR 10 19 40.9
comp=Z,265nm,18.2s,baz=284,slow=36
RYN Ryan 65.43 301 *e*P **P 09 50 49.3 -0.5**
comp=Z,2.6nm,1.0s
SHOC Shoshone, Teco 65.47 297 P **P 09 50 49.7 -0.2**
baz=56
113A Mohawk Valley, 65.51 293 *e*P **P 09 50 50.4 +0.3**
comp=Z,3.7nm,1.0s
FURC Furnace Creek, 65.54 298 P **P 09 50 50.2 -0.1**
baz=56

GRAC Grapevine Rang 65.58 299 P **P 09 50 49.7 -1.0**
baz=56
I03D Drain, OR 65.60 307 P **P 09 50 50.2 -0.4**
baz=56
GMRC Granite Mounta 65.67 296 P **P 09 50 50.1 -1.3**
baz=56
IRM Iron Mountain 65.68 295 P **P 09 50 50.2 -1.1**
baz=56
M04C Macdoel 65.76 305 P **P 09 50 49.9 -1.9**
baz=56
VCNR Virginia City 65.78 302 *e*P **P 09 50 52.8 +0.7**
comp=Z,7.4nm,1.2s
BEKR Beckworth 65.91 303 *e*P **P 09 50 52.6 -0.3**
comp=Z,8.2nm,1.1s
DAC Darwin (Calif) 66.14 298 *e*P **P 09 50 56.0 +1.5**
comp=Z,6.1nm,1.0s
GSC Goldstone, Bar 66.16 297 P **P 09 50 54.7 +0.3**
baz=55
GSC Goldstone, Bar 66.16 297 *e*P **P 09 50 56.7 +2.2**
comp=Z,5.8nm,1.1s
BC3 Big Chuckawall 66.17 295 P **P 09 50 54.1 -0.5**
baz=55
MPMC Manual Prospec 66.19 298 P **P 09 50 54.4 -0.4**
baz=55,SNR=12
OMMB Old Mammoth Mi 66.31 300 *e*P **P 09 50 56.9 +1.2**
comp=Z,5.2nm,1.1s
YBH Yreka Blue Hor 66.33 305 P **P 09 50 53.2 -2.2**
comp=Z,1.9nm,0.9s,baz=102,slow=9.3,SNR=6.1
YBH LR LR 10 19 41.4
comp=Z,105nm,18.0s,baz=46,slow=36
BELC Belle Mtn. Jos 66.35 295 P **P 09 50 55.5 -0.3**
baz=55
CWC Cottonwood Cre 66.37 298 P **P 09 50 55.5 -0.3**
baz=55
O03D Paynes Creek 66.58 304 P **P 09 50 56.3 -0.8**
baz=55
M02C Callahan 66.61 305 P **P 09 50 56.5 -0.8**
baz=55
L02D Cave Junction, 66.63 306 P **P 09 50 56.8 -0.4**
baz=55
XPFO Piæon Flat 66.88 295 *e*P **P 09 50 59.6 +0.4**
comp=Z,4.4nm,1.0s
PFO Pinyon Flats O 66.89 295 P **P 09 50 58.9 -0.3**
baz=55
PFO Pinyon Flats O 66.89 295 *e*P **P 09 50 59.6 +0.4**
comp=Z,5.2nm,1.0s
PFO Pinyon Flats O 66.89 295 *e*P **P 09 50 59.6 +0.4**
PFO pmax pmax
comp=Z,5.0nm,1.0s
CMB Columbia Colle 66.97 301 *e*P **P 09 51 01.0 +1.4**
comp=Z,1.9nm,0.9s
CMB Columbia Colle 66.97 301 *e*P **P 09 51 01.0 +1.4**
CMB pmax pmax
comp=Z,2.0nm,0.9s
ISA Isabella, Lake 67.07 298 P **P 09 51 00.3 0.0**
baz=55
SKT Skwentna 67.13 334 *e*P **P 09 51 02.5 +2.4**
comp=Z,8.7nm,1.2s
EDW2 Edwards Air Fo 67.20 297 P **P 09 50 59.9 -1.2**
baz=55
KHMM Horse Mountain 67.45 305 *e*P **P 09 51 04.2 +1.5**
comp=Z,20nm,1.2s
LPAZ La Paz 67.61 221 P **P 09 51 04.2 -0.2**
comp=Z,7.6nm,1.2s,baz=26,slow=8.6,SNR=10
LPAZ LR LR 10 17 00.1
comp=Z,151nm,21.9s,baz=31,slow=33
LPAZ La Paz 67.61 221 *e*P **P 09 51 05.2 +0.7**
comp=Z,7.7nm,1.1s
LPAZ La Paz 67.61 221 *e*P **P 09 51 05.1 +0.7**
LPIG La Paz 68.04 283 LR LR 10 19 57.2
comp=Z,172nm,20.1s,baz=32,slow=35
NVS Novosibirsk 68.36 35 *e*P P 09 51 13.3 +5.4
NNA Nana 68.76 231 LR LR 10 19 16.4
comp=Z,64nm,20.0s,baz=29,slow=34
KURK Kurchatov 68.92 40 *e*P **P 09 51 11.3 -0.1**
comp=Z,55nm,1.0s
KURK Kurchatov 68.92 40⇑*i*P **P 09 51 11.1 -0.4**
KURK pmax pmax
comp=Z,8.0nm,1.3s
KURBB Kurchatov Arra 68.93 41 P **P 09 51 11.3 -0.2**
comp=Z,4.5nm,1.0s,baz=312,slow=6.5,SNR=13
ATD Arta Tunnel 69.05 93 LR LR 10 22 58.3
comp=Z,73nm,18.7s,baz=332,slow=37
ZALV Zalesovo Beam 69.65 35 P **P 09 51 14.8 -1.2**
comp=Z,2.2nm,0.3s,baz=308,slow=7.2,SNR=2.0
ZALV LR LR 10 23 50.4
comp=Z,41nm,18.6s,baz=282,slow=38
BILL Bilibino 70.42 354 *e*P **P 09 51 20.2 -0.3**
BILL pmax pmax
comp=Z,1.0nm,1.0s
FRU Bishkek 71.83 49 *e*P **P 09 51 30.0 +0.5**
CPUP Villa Florida 72.09 206 LR LR 10 20 47.1
comp=Z,45nm,18.4s,baz=61,slow=34
MAKZ Makanchi 73.16 42 *e*P **P 09 51 37.1 -0.3**
comp=Z,4.7nm,1.1s
MAKZ Makanchi 73.16 42 *e*P **P 09 51 37.1 -0.3**
MAKZ pmax pmax
comp=Z,5.0nm,1.1s
KMBO Kilima Mbogo 73.28 107 LR LR 10 24 49.4
comp=Z,155nm,18.7s,baz=281,slow=36
MK31 Makanchi Array 73.33 42 *e*P **P 09 51 37.7 -0.7**
MK31 Makanchi Array 73.33 42 *e*P **P 09 51 37.7 -0.7**
MKAR Makanchi Array 73.33 42 P **P 09 51 37.7 -0.7**
comp=Z,1.8nm,0.7s,baz=326,slow=5.8,SNR=20
MKAR LR LR 10 23 21.5
comp=Z,151nm,20.7s,baz=286,slow=35
MKAR Makanchi Array 73.33 42 *e*P **P 09 51 37.7 -0.7**
comp=Z,23nm,1.0s
MKAR Makanchi Array 73.33 42 *e*P **P 09 51 37.7 -0.7**
MKAR pmax pmax
comp=Z,23nm,1.0s
WSAR Wadi Sarin 73.55 73 LR LR 10 26 35.3
comp=Z,72nm,20.0s,baz=24,slow=38
DGZ Jazzator, Alta 73.77 37 *i*P **P 09 51 41.5 +0.4**
DGZ pmax pmax
comp=Z,1.0nm,0.7s
KSH Kashi 74.76 51 P **P 09 51 48.5 +1.5**
KSH pP sP 09 51 52.5 +1.1
KSH PP **PP 09 54 36.5 +2.9**
KSH S **S 10 01 19.8 -3.7**
KSH SKS **SKSac 10 01 49.8 -5.9**
KSH SS **SS 10 06 08.5 -1.7**
KSH pmax pmax
comp=Z,9.0nm,0.6s
KSH pmax pmax
comp=Z,230nm,5.1s
KSH LR LR
comp=Z,290nm,9.1s
KSH LR LR
comp=Z,240nm,7.0s
KSH LR LR
comp=Z,380nm,6.0s
YAK Yakutsk 75.68 10 LR LR 10 22 45.7
comp=Z,25nm,18.8s,baz=248,slow=34
YAK Yakutsk 75.68 10⇓*e*P **P 09 51 53.1 +1.4**
YAK pmax pmax
comp=Z,10.0nm,0.5s
SEY Seymchan 76.17 359⇑*e*P **P 09 51 53.4 -1.0**
WMQ Urumqi 78.13 41 P **P 09 52 09.0 +3.1**
WMQ pP sP 09 52 12.3 +1.9
WMQ sP PcP 09 52 16.0 +0.5
WMQ pmax pmax
comp=Z,19nm,0.7s
WMQ pmax pmax
comp=Z,100nm,5.5s
WMQ LR LR
comp=Z,310nm,20.7s
WMQ LR LR
comp=Z,200nm,22.7s
WMQ LR LR
comp=Z,190nm,23.7s
TLY Talaya 78.80 28⇑*e*P **P 09 52 09.5 +0.1**
MA2 Magadan 79.55 360 LR LR 10 23 48.1
comp=Z,25nm,21.9s,baz=336,slow=33
SONM Songino Array 83.00 28 P **P 09 52 31.6 -0.5**
comp=Z,2.6nm,1.2s,baz=329,slow=5.5,SNR=8.1
SONM LR LR 10 29 43.3
comp=Z,39nm,19.7s,baz=296,slow=36
ULN Ulaanbaatar 83.21 28⇓*e*P **P 09 52 33.8 +0.6**
ULN pmax pmax
comp=Z,6.0nm,1.9s
PETK Petropavlovsk- 85.84 356 LR LR 10 32 29.4
comp=Z,53nm,18.1s,baz=16,slow=37
BOSA Boshof 85.87 134 LR LR 10 27 25.9
comp=Z,140nm,21.9s,baz=359,slow=33
GTA Gaotai 87.31 37 *e*P **P 09 52 55.8 +2.0**
GTA pP sP 09 53 02.0 +3.7

GTA sP pP 09 53 04.8 +7.6
GTA pmax pmax
comp=Z,3.0nm,1.2s
HHC Hu-ho-hao-te 90.89 29 *e*P P 09 53 02.5 -8.2
HHC PP **PP 09 56 40.0 -5.6**
HHC Hu-ho-hao-te 90.89 29 S S 10 03 57.0 -11
HHC Hu-ho-hao-te 90.89 29 SS SS 10 10 01.5 -7.3
HHC pmax pmax
comp=Z,4.0nm,0.8s
HHC pmax pmax
comp=Z,52nm,5.8s
HHC LR LR
comp=N,150nm,12.1s
HHC LR LR
comp=E,130nm,8.6s
HHC LR LR
comp=Z,120nm,8.6s
BRDH Bariadhala 96.08 53 LR LR 10 41 22.0
comp=Z,72nm,18.4s,baz=312,slow=38
CD2 Chengdu 96.11 39 P **P 09 53 34.0 -0.8**
KSRS Korea Array 98.95 18 LR LR 10 41 17.6
comp=Z,22nm,18.8s,baz=338,slow=37
NJ2 Nanjing 101.36 27 *e*P **Pdif 09 53 59.3 +1.1**
QSPA South Pole Qui 131.12 180 PKP **PKPdf 09 59 17.9 +0.3**
comp=Z,3.9nm,1.0s,baz=236,slow=1.9,SNR=6.9
VNDA Vanda 143.32 184 PKP PKPbc 09 59 38.0 +1.1
comp=Z,1.1nm,0.9s,baz=220,slow=3.8,SNR=5.8
ASAR Alice Springs 157.51 44 PKPab **PKPab 10 00 33.9 -1.2**
comp=Z,0.8nm,1.0s,baz=352,slow=5.6,SNR=4.7

IDC 27 09:47:12.4±3.1, 30°.85N×141°.05E, h0km, mb3.4/4, mb1 3.5/6, mb1mx3.3/68, mbtmp3.4/6, ML3.3/2, Error ellipse: s-maj=129.3km s-min=20.5km az=70.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**2.51**	**335**	Sn	Sn	09 48 21.9	-3.8
	4.8nm,0.3s,baz=75,slow=20,SNR=2.3						
JCJ	**Chichijima**	**3.87**	**165**	Pn	Pn	09 48 14.5	+1.4
	3.8nm,0.3s,baz=342,slow=20,SNR=5.7						
JCJ				Sn	Sn	09 48 54.5	-4.8
	3.2nm,0.3s,baz=287,slow=19,SNR=2.8						
MJAR	**Matsushiro Arr**	**6.15**	**338**	Pn	Pn	09 48 43.9	-0.6
	0.5nm,0.3s,baz=152,slow=11,SNR=6.9						
MKAR	**Makanchi Array**	**47.38**	**307**	P	P	09 55 48.9	+0.7
	0.2nm,0.5s,baz=83,slow=8.4,SNR=3.2						
KURBB	**Kurchatov Arra**	**49.75**	**312**	P	P	09 56 06.0	-0.4
	0.3nm,0.3s,baz=83,slow=7.6,SNR=5.7						
WRA	**Warramunga Arr**	**50.91**	**188**	P	P	09 56 14.7	-0.7
	0.3nm,0.4s,baz=6.4,slow=7.7,SNR=15						
ASAR	**Alice Springs**	**54.64**	**188**	P	P	09 56 43.0	0.0
	0.2nm,0.4s,baz=3.1,slow=5.3,SNR=8.7						

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*ISCJB **27** 09:55:06.6±0.5, 40°.73N±0°.03×35°.98E±0°.05, h0km, Error ellipse: s-maj=5.9km s-min=4.2km az=159.2*
*CSEM **27** 09:55:06.6±0.3, 40°.73N×35°.96E, h1km, ML2.3, Error ellipse: s-maj=6.7km s-min=5.5km az=78.0, Suspected Mining explosion.*
*DDA **27** 09:55:06.9, 40°.74N×36°.05E, h7km, Ml2.5, Suspected Mining explosion.*
*ISK **27** 09:55:06.5, 40°.76N×36°.00E, h16km, ML2.3/3*
ISC 27 09:55:05.8±0.9, 40°.79N±0°.03×35°.99E±0°.03, h0km, n24, σ0°46/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KVT	**Kavak**	**0.30**	**8**	PG	**Pb**	**09 55 13.4**	**-0.6**
KVT				SG	**Sb**	**09 55 18.7**	**-0.8**
KVT	**Kavak**	**0.30**	**8**	*e*Pg	**Pb**	**09 55 13.4**	**-0.6**
KVT				*e*Sg	**Sb**	**09 55 18.7**	**-0.8**
HAVZ	**Havza**	**0.35**	**324**	*i* P	**Pb**	**09 55 15.0**	**0.0**
HAVZ				*i* S	**Sb**	**09 55 21.9**	**+0.7**
HAVZ	**Havza**	**0.35**	**324**	P	**Pb**	**09 55 15.0**	**0.0**
ERBA	**Erbaa**	**0.59**	**100**	*i* P	**Pg**	**09 55 17.4**	**+0.3**
ERBA	**Erbaa**	**0.59**	**100**	P	**Pg**	**09 55 17.4**	**+0.3**
SAMS	**Samsun-Alacam**	**0.59**	**15**	*i* P	**Pb**	**09 55 19.8**	**+0.8**
SAMS	**Samsun-Alacam**	**0.59**	**15**	P	**Pb**	**09 55 19.8**	**+0.8**
TOKT	**Tokat**	**0.63**	**138**	PG	**Pg**	**09 55 18.2**	**+0.4**
TOKT				SG	**Sb**	**09 55 28.4**	**-0.7**
TOKT	**Tokat**	**0.63**	**138**	*e*Pg	**Pg**	**09 55 18.2**	**+0.4**
TOKT				*e*Sg	**Sb**	**09 55 28.4**	**-0.7**
CTAK	**Corum_Osmancik**	**0.92**	**262**	*i* P	**Pb**	**09 55 24.7**	**-0.1**
CTAK				*i* S	**Sn**	**09 55 40.1**	**-0.2**
CTAK	**Corum_Osmancik**	**0.92**	**262**	P	**Pb**	**09 55 24.7**	**-0.1**
COAL	**Corum-Alaca**	**0.93**	**236**	*i* P	**Pg**	**09 55 23.9**	**+0.3**
COAL	**Corum-Alaca**	**0.93**	**236**	P	**Pg**	**09 55 23.9**	**+0.3**
DIKM	**Dikmen**	**1.02**	**328**	PG	**Pn**	**09 55 27.6**	**+0.2**
DIKM	**Dikmen**	**1.02**	**328**	*e*Pg	**Pn**	**09 55 27.6**	**+0.2**
CORM	**Corum**	**1.20**	**240**	PN	**Pg**	**09 55 29.1**	**+0.3**
CORM	**Corum**	**1.20**	**240**	*e*Pn	**Pg**	**09 55 29.1**	**+0.3**
YOZ	**Yozgat**	**1.26**	**204**	PN	**Pg**	**09 55 29.6**	**-0.2**
YOZ	**Yozgat**	**1.26**	**204**	*e*Pn	**Pg**	**09 55 29.6**	**-0.2**
SNOP	**Sinop**	**1.36**	**335**	PN	**Pg**	**09 55 32.0**	**0.0**
SNOP	**Sinop**	**1.36**	**335**	*e*Pn	**Pg**	**09 55 32.0**	**0.0**
CUSAR	**Sarkisla-SIVAS**	**1.38**	**172**	*i* P	**Pb**	**09 55 32.8**	**+0.2**
CUSAR	**Sarkisla-SIVAS**	**1.38**	**172**	P	**Pb**	**09 55 32.8**	**+0.2**

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*NIED **27** 09:56:00, 37°.40N×142°.40E, h8km, Mw3.4 Best double couple: M0=1.68000×10^14 NP1:φs=46.00000°, δ=37.00000°, λ=-113.00000°. NP2:φs=254.00000°, δ=57.00000°, λ=-74.00000°.*

JMA 27 09:56:52.1±0.5, 37°.38N×142°.45E, h11km±5km, M3.7, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.25**	**270**	P	Pn	09 57 15.0	-0.6
JFK				*e*S	Sb	09 57 31.7	-0.3
ONAJ	**Iwakimizuishiy**	**1.35**	**259**	P	Pn	09 57 16.2	-0.7
JIO	**Ouri**	**1.38**	**321**	P	Pn	09 57 16.9	-0.4
JMM	**Marumori**	**1.40**	**291**	P	Pn	09 57 17.1	-0.5
JFT	**Otama**	**1.69**	**275**	P	Pb	09 57 22.4	-0.8
JFT				*e*S	Sn	09 57 43.1	-0.1
JOU	**Okura**	**1.72**	**305**	P	Pn	09 57 22.5	+0.5
JOU				*e*S	Sn	09 57 44.4	+0.4
JMK	**Ichinoseki**	**1.84**	**329**	P	Pn	09 57 24.3	+0.6
JYS	**Shiratake**	**2.07**	**295**	P	Pb	09 57 28.2	-1.4
MAT	**Matsushiro**	**3.50**	**257**	P	Pn	09 57 48.7	+2.2
MAT				*e*S	Sn	09 58 30.6	+2.7

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*JMA **27** 09:59:50.4±0.3, 23°.60N×121°.70E, h0km, M2.9*
*ISCJB **27** 09:59:51.9±0.4, 23°.67N±0°.01×121°.59E±0°.02, h1km±3km, Error ellipse: s-maj=3.1km s-min=2.0km az=36.6*
*TAP **27** 09:59:51.3, 23.69N×121.54E, h1km, ML3.5, C*
ISC 27 09:59:52.0±1.0, 23°.67N±0°.02×121°.57E±0°.02, h6km±8km, n93, σ0°63/123, 3C-13D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	**Guangfu**	**0.13**	**271**	⇑P	**Pg**	**09 59 54.0**	**-0.7**
	baz=267						
EGFH				*i* S	**Sg**	**09 59 56.5**	**0.0**
	baz=267						
ESL	**Shilin**	**0.19**	**320**	⇓*i*P	**Pg**	**09 59 55.5**	**-0.4**
	baz=315						
ESL				*i* S	**Sg**	**09 59 57.9**	**-0.5**
	baz=315						
HGSD	**Ruisui**	**0.22**	**217**	⇓P	**Pg**	**09 59 57.0**	**+0.7**
	baz=195						
HGSD				S	**Sg**	**10 00 01.7**	**+2.5**
	baz=195						
ENLB	**Shoufeng**	**0.24**	**7**	⇓*e*P	**Pg**	**09 59 58.5**	**+1.8**
	baz=18						
EHY	**Hungye**	**0.28**	**235**	*e*P	**Pg**	**09 59 57.3**	**-0.1**
	baz=233						
HWA	**Hwalien**	**0.31**	**6**	*e*P	**Pb**	**09 59 59.2**	**-0.8**
	baz=15						
YULB	**Yu-li**	**0.37**	**222**	*e*P	**Pg**	**09 59 59.0**	**-0.2**
	baz=231						
YULB				*e*S	**Sb**	**10 00 05.8**	**-1.2**
	baz=231						
TWF1	**Yuli**	**0.40**	**219**	*e*P	**Pg**	**09 59 59.8**	**+0.1**
	baz=221						
VWDT	**VWDT**	**0.40**	**283**	⇓P	**Pg**	**09 59 59.6**	**-0.2**
	baz=279						
VWDT				*e*S	**Sg**	**10 00 04.7**	**-0.3**
	baz=279						
TWD	**Chiawan**	**0.41**	**3**	⇓*i*P	**Pg**	**10 00 00.7**	**+0.7**

baz=351
TWD eS **Sb** 10 00 07.9 -0.4
baz=351
NACB Ninganchiao 0.51 3 ⇓P **Pg** 10 00 02.0 +0.3
baz=353
FULB Fuli 0.53 209 ⇓P **Pb** 10 00 04.2 +0.5
baz=222
CHGB Renai 0.53 317 ⇓P **Pg** 10 00 02.3 -0.1
baz=317
CHGB S **Sg** 10 00 08.9 -0.4
baz=317
SSLB Suanglung 0.58 282 P **Pg** 10 00 02.8 -0.3
baz=280
SSLB eS **Sg** 10 00 09.6 -1.1
baz=280
CHKT Chengkung 0.59 198 eP **Pg** 10 00 04.1 +0.7
baz=193
CHKT eS **Sb** 10 00 14.3 +0.8
baz=193
SMLT Sun Moon Lake 0.65 289 eP **Pg** 10 00 04.0 -0.5
baz=288
SMLT eS **Sg** 10 00 13.0 0.0
baz=288
TWT Tachien 0.69 328 eP **Pg** 10 00 05.3 0.0
baz=328
DPDB Guoxing 0.69 302 eP **Pg** 10 00 05.0 -0.3
baz=300
TDCB Techi 0.69 327 eP **Pg** 10 00 05.2 -0.2
baz=328
TDCB eS **Sg** 10 00 13.8 -0.7
baz=328
TYC Yuchr 0.69 290 eP **Pg** 10 00 05.1 -0.2
baz=287
ELDTW Lidau 0.69 227 eP **Pg** 10 00 04.7 -0.7
baz=222
ELDTW eS **Sb** 10 00 15.9 -0.6
baz=222
ENA Nanau 0.77 12 eP **Pg** 10 00 06.9 0.0
baz=17
NANB Nanao 0.78 12 ⇓P **Pg** 10 00 07.2 +0.3
baz=17
NNSH Datong 0.78 347 eP **Pg** 10 00 06.7 -0.2
baz=341
WJS Zhushan 0.79 282 eP **Pb** 10 00 08.4 +0.3
baz=278
NNS Nan Shan 0.79 347 ⇓P **Pg** 10 00 07.3 +0.1
baz=339
NNS eS **Sb** 10 00 19.5 +0.2
baz=339
CHN5 Tsauling 0.82 265 eP **Pg** 10 00 08.1 +0.3
baz=261
WNT Mingjian 0.84 285 eP **Pb** 10 00 09.6 +0.6
baz=281
WGK Gukeng 0.92 271 eP **Pb** 10 00 10.7 +0.2
baz=266
TPUB Ta-pu 0.94 247 eP **Pg** 10 00 10.2 +0.3
baz=256
TPUB eS **Sn** 10 00 24.9 -0.7
baz=256
WDLH Douliu 0.94 272 eP **Pb** 10 00 11.0 +0.2
baz=266
TCU Taichung 0.95 301 eP **Pg** 10 00 10.3 +0.1
baz=298
CHN4 Tsaushan 0.95 251 eP **Pg** 10 00 10.8 +0.5
baz=247
CHN4 eS **Sn** 10 00 26.5 +0.7
baz=247
TWGBT Beinan 0.96 208 eP **Pg** 10 00 09.5 -0.9
baz=186
TWG Pinlang 0.96 209 eP **Pg** 10 00 09.1 -1.4
baz=186
ENTT Nioudou 0.97 360 ⇓P **Pg** 10 00 11.0 +0.4
baz=352
ENTT eS **Sb** 10 00 24.6 +0.3
baz=352
WTP Ta-pu 0.97 245 eP **Pb** 10 00 11.3 0.0
baz=251
WTP eS **Sb** 10 00 24.3 -0.2
baz=251
TWC Suao 0.97 15 ⇑P **Pb** 10 00 11.3 0.0
baz=21
CHN2 Minshiung 1.01 263 eP **Pn** 10 00 13.1 +0.4
baz=257
YHNB Yeheng 1.01 350 ⇓P **Pg** 10 00 11.8 +0.3
baz=339
YHNB eS **Sg** 10 00 24.1 -0.6
baz=339
EOS1 EOS1 1.02 30 eP **Pn** 10 00 13.9 +1.2
baz=59
NSK Sanguang 1.02 349 P **Pb** 10 00 12.1 -0.1
baz=353
NSY Sanyi 1.05 315 eP **Pn** 10 00 14.0 +0.7
baz=315
NSY eS **Sn** 10 00 28.6 +0.3
baz=315
TWE Neicheng 1.05 5⇓eP **Pb** 10 00 12.7 0.0
baz=11
CHY Chiayi 1.06 261 eP **Pn** 10 00 13.4 -0.1
baz=256
TWK Hsinying 1.07 248 eP **Pb** 10 00 13.1 +0.1
baz=244
TWK eS **Sn** 10 00 28.9 +0.1
baz=244
CHN1 Nanshi 1.07 244 ⇑P **Pg** 10 00 12.9 +0.3
baz=238
SGST Jiashian 1.08 237 eP **Pn** 10 00 13.6 -0.1
baz=233
SGST eS **Sn** 10 00 29.5 +0.6
baz=233
SLGT Liugui 1.08 232 eP **Pb** 10 00 12.8 -0.3
baz=226
NSTT Nanjuang 1.09 332 eP **Pb** 10 00 13.2 -0.1
baz=333
LIOB Emei 1.10 333 eP **Pb** 10 00 13.1 -0.4
baz=334
NWLT Wulai 1.11 357 eP **Pg** 10 00 13.7 +0.4
baz=1.0
PTSB Yuanli 1.11 315 eP **Pn** 10 00 14.1 0.0
baz=313
RLNB Erlin 1.13 282 eP **Pn** 10 00 14.3 -0.1
baz=277
WLTB Daxi 1.22 346 eP **Pn** 10 00 15.2 -0.4
baz=4.0
EGS 1.22 16 eP **Pg** 10 00 16.1 +0.7
baz=1.0
SSD Sandimen 1.26 223 eP **Pn** 10 00 15.5 -0.6
baz=225
CHN8 Yiju 1.29 256 eP **Pb** 10 00 16.8 +0.1
baz=250
TATO Taipei 1.30 357 eP **Pg** 10 00 17.5 +0.4
baz=1.0
TWA Mucha 1.31 1 eP **Pb** 10 00 17.1 +0.1
baz=6.0
TIPB Shuangxi 1.32 10 eP **Pn** 10 00 16.5 -0.6
baz=359
NCUH Zhongli 1.34 345 eP **Pg** 10 00 18.5 +0.8
baz=4.0
TWM1 Shoushan 1.35 232 eP **Pg** 10 00 20.2 +2.4
baz=226
MASBT Mashibuluo 1.36 220 eP **Pb** 10 00 17.6 -0.3
baz=214
TWB1 Santiao Chiao 1.39 16 eP **Pg** 10 00 19.5 +0.8
baz=2.0
NWF Wu-fen Shan 1.41 8 eP **Pg** 10 00 19.5 +0.4
baz=13
WFSB Wu-fen Shan 1.41 8 eP **Pg** 10 00 20.1 +1.0
baz=13
EAST Anshuo 1.44 208 eP **Pn** 10 00 18.7 0.0
baz=188
JYNG Yonagunijimaku 1.48 58 P **Pb** 10 00 19.7 -0.3
JYNG eS **Sg** 10 00 38.9 -0.7
YM04 YM04 1.48 359 eP **Pg** 10 00 21.3 +0.9
baz=2.0
YM10 YM10 1.48 360 eP **Pg** 10 00 21.1 +0.7
baz=2.0
YM07 YM07 1.50 2 eP **Pn** 10 00 19.4 -0.2
baz=6.0
YM03 YM03 1.51 359 eP **Pb** 10 00 20.4 -0.1
baz=2.0
YM08 YM08 1.52 1 eP **Pg** 10 00 21.2 +0.1
baz=3.0
YOJ Yonaguni jima 1.54 59 eP **Pb** 10 00 20.4 -0.5
baz=64
YOJ Yonaguni jima 1.54 59 P **Pb** 10 00 20.1 -0.8
YOJ eS **Sg** 10 00 41.4 -0.1
SCZT Fangliau 1.56 214 eP **Pg** 10 00 22.0 +0.2
baz=193
WDGT Dungji 1.80 257 eP **Pn** 10 00 23.6 0.0
baz=253
PHUB P'eng-hu 1.84 266 eP **Pn** 10 00 25.0 +0.8
baz=261
PNG Penghu 1.85 267 eP **Pn** 10 00 24.7 +0.4
baz=263
TWK1 Hengchun 1.85 202 eP **Pb** 10 00 25.6 -0.7
baz=185
TWKBT Hengchun 1.85 202 eP **Pb** 10 00 25.6 -0.8
baz=185
VCHM Qimei 2.02 257 eP **Pn** 10 00 27.0 +0.4
baz=253
HATJ Hateruma jima 2.08 79 P **Pn** 10 00 27.5 0.0
HATJ eS **Sn** 10 00 53.6 -0.2
IRIF Iriomote-Funau 2.08 71 P **Pn** 10 00 27.9 +0.4
IRIF S **Sb** 10 00 55.4 -1.0
JKRS Kuro-shima 2.30 75 P **Pn** 10 00 31.2 +0.7
JKRS eS **Sb** 10 01 01.5 -1.2
VWUC VWUC 2.34 305 eP **Pn** 10 00 30.8 -0.3
baz=303
JIJ Ishigaki jima 2.45 73 P **Pn** 10 00 32.4 -0.2
JIJ S **Sn** 10 01 03.3 +0.4
JISG Ishigakijimahi 2.67 69 P **Pn** 10 00 35.4 -0.1
JISG S **Sn** 10 01 08.3 +0.1
MATB Ma-tsu 2.88 330 eP **Pn** 10 00 38.5 +0.1
baz=325
KNM Kinmen 2.96 285 eP **Pn** 10 00 41.0 +1.4
baz=281
JTJ Tarama 3.02 71 P **Pn** 10 00 40.8 +0.4
JTJ S **Sn** 10 01 18.0 +1.1
JIRB Irabujima 3.49 70 P **Pn** 10 00 46.9 +0.1
JIRB S **Sn** 10 01 27.9 -0.5

*CSEM **27** 10:31:30.5±0.3, 37°.24N×42°.60E, h2km, ML2.9, Error ellipse: s-maj=8.2km s-min=4.1km az=26.0*
*DDA **27** 10:31:30.1, 37°.27N×42°.56E, h11km, Ml3.0*
*ISK **27** 10:31:30.5, 37°.31N×42°.59E, h5km±1km, ML2.9/5*
ISC 27 10:31:30.4±1.4, 37°.27N±0°.06×42°.60E±0°.03, h4km±10km, n25, σ0°44/41, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRT	**Sirnak**	**0.27**	**331**	PG	**Pg**	**10 31 35.4**	**-0.2**
SIRT				SG	**Sg**	**10 31 39.2**	**+0.1**
SIRT	**Sirnak**	**0.27**	**331**	*e*Pg	**Pg**	**10 31 35.4**	**-0.2**
SIRT				*e*Sg	**Sg**	**10 31 39.2**	**+0.1**
SIRN	**S¨–rnak**	**0.27**	**327**	*i* P	**Pg**	**10 31 35.4**	**-0.3**
SIRN				*i* S	**Sg**	**10 31 39.5**	**+0.2**
SIRN	**S¨–rnak**	**0.27**	**327**	P	**Pg**	**10 31 35.4**	**-0.3**
SIRN				S	**Sg**	**10 31 39.5**	**+0.2**
CUKT	**Cukurca**	**0.81**	**91**	PG	**Pb**	**10 31 46.7**	**-0.4**
CUKT	**Cukurca**	**0.81**	**91**	*i* P	**Pg**	**10 31 46.1**	**+0.3**
CUKT				*i* S	**Sb**	**10 31 57.7**	**-0.7**
CUKT	**Cukurca**	**0.81**	**91**	P	**Pg**	**10 31 46.2**	**+0.3**
CUKT	**Cukurca**	**0.81**	**91**	*e*Pg	**Pb**	**10 31 46.7**	**-0.4**
CUKT				S	**Sb**	**10 31 57.7**	**-0.7**
SRTM	**Siirt_Merkez**	**0.90**	**324**	*i* P	**Pg**	**10 31 47.8**	**+0.1**
SRTM				*i* S	**Sb**	**10 32 00.5**	**-0.6**
SRTM	**Siirt_Merkez**	**0.90**	**324**	P	**Pg**	**10 31 47.8**	**+0.1**
HAKT	**HAKKARI**	**0.93**	**72**	*i* P	**Pg**	**10 31 48.9**	**+0.7**
HAKT				*i* S	**Sb**	**10 32 01.5**	**-0.6**
HAKT	**HAKKARI**	**0.93**	**72**	P	**Pg**	**10 31 48.9**	**+0.7**
HAKT				S	**Sb**	**10 32 01.5**	**-0.6**
BTMN	**Batman**	**1.23**	**301**	*i* P	**Pn**	**10 31 54.4**	**-0.1**
BTMN				*i* S	**Sn**	**10 32 11.9**	**+0.4**
BTMN	**Batman**	**1.23**	**301**	P	**Pn**	**10 31 54.4**	**-0.1**
BTMN				S	**Sn**	**10 32 11.9**	**+0.4**
GURO	**Guroymak-BITLI**	**1.36**	**341**	PN	**Pg**	**10 31 56.9**	**+0.5**
GURO	**Guroymak-BITLI**	**1.36**	**341**	*e*Pn	**Pg**	**10 31 56.9**	**+0.5**
YOVA	**Hakkari_Y¨…kse**	**1.38**	**76**	*i* P	**Pg**	**10 31 57.5**	**+0.6**
YOVA				*i* S	**Sn**	**10 32 15.9**	**+0.3**
SVAN	**Silvan-Diyarba**	**1.42**	**309**	PN	**Pb**	**10 31 57.3**	**-0.2**
SVAN	**Silvan-Diyarba**	**1.42**	**309**	*e*Pn	**Pb**	**10 31 57.3**	**-0.2**
MARD	**Mardin**	**1.45**	**272**	*i* P	**Pn**	**10 31 56.7**	**-0.9**
MARD				*i* S	**Sg**	**10 32 17.0**	**-0.1**
MAZI	**Mazidag**	**1.73**	**277**	PN	**Pn**	**10 32 01.7**	**+0.3**
MAZI	**Mazidag**	**1.73**	**277**	*e*Pn	**Pn**	**10 32 01.7**	**+0.3**
BNGL	**BINGOL**	**2.03**	**326**	*i* P	**Pb**	**10 32 07.2**	**-0.8**
BNGL				*i* S	**Sb**	**10 32 34.2**	**+0.4**
HANI	**Diyarbakir_Han**	**2.08**	**304**	*i* P	**Pb**	**10 32 09.4**	**+0.5**
HANI				*i* S	**Sb**	**10 32 35.1**	**-0.1**
HANI	**Diyarbakir_Han**	**2.08**	**304**	P	**Pb**	**10 32 09.4**	**+0.5**
HANI				S	**Sb**	**10 32 35.1**	**-0.1**

*IDC **27** 10:57:10.2±4.6, 29°.12S×67°.85W, h70km±37km, mb3.4/4, mb1 3.5/7, mb1mx3.3/34, mbtmp3.6/7, ML3.5/3, Error ellipse: s-maj=35.1km s-min=30.0km az=12.0*
*ISCJB **27** 10:57:15.4±0.4, 28°.96S±0°.04×67°.58W±0°.05, h130km±4km, mb3.7/5, Error ellipse: s-maj=7.4km s-min=5.3km az=40.3*
*SJA **27** 10:57:15.8±0.9, 29°.00S×67°.57W, h123km±4km, ML3.7, MW3.7*
ISC 27 10:57:16.3±0.7, 28°.96S±0°.05×67°.58W±0°.05, h123km±6km, n35, σ1s00/43, mb3.4/5, 9D, La Rioja Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VCA	**Vinchina**	**0.59**	**292**	*e*P	**Pn**	**10 57 36.0**	**+0.7**
VCA				⇓*i*S	**Sn**	**10 57 49.5**	**-0.2**
VCA				IAML		10 57 52.5	
	comp=Z,3μm,0.6s						
ACLC	**CERRO LA CRUZ**	**0.72**	**130**	*e*P	**Pn**	**10 57 36.7**	**+0.4**
AGUA	**GUANDACOL**	**0.95**	**236**	*e*P	**Pn**	**10 57 38.5**	**+0.3**
AGUA				*i* S	**Sn**	**10 57 55.0**	**+0.2**
CYA	**Choya**	**1.65**	**72**	⇓*e*P	**Pn**	**10 57 46.6**	**+0.9**
CYA				⇓*e*S	**Sn**	**10 58 08.5**	**+0.4**
CYA				IAML		10 58 08.9	
	comp=Z,370nm,0.7s						
APLL	**PUNTA DE LOS L**	**1.70**	**147**	*e*P	**Pn**	**10 57 46.6**	**+0.3**
APLL				⇓*e*S	**Sn**	**10 58 08.5**	**-0.7**
ACDV	**Cuesta del Vie**	**1.80**	**228**	*e*P	**Pn**	**10 57 48.3**	**+0.7**
ACDV				*e*S	**Sn**	**10 58 12.3**	**+0.8**
AROD	**Rodeo**	**2.04**	**233**	⇓*e*P	**Pn**	**10 57 51.7**	**+1.0**
AROD				⇓*e*S	**Sn**	**10 58 17.9**	**+1.0**
AMOG	**MOGNA**	**2.12**	**202**	⇓*e*P	**Pn**	**10 57 51.6**	**+0.2**
AMOG				*e*S	**Sn**	**10 58 18.1**	**-0.3**
RTLL	**Cerro Villicun**	**2.48**	**198**	*e*P	**Pn**	**10 57 56.3**	**+0.3**
RTLL				IAML		10 57 56.6	
	comp=Z,358nm,0.3s						
RTLL				*e*S	**Sn**	**10 58 26.4**	**-0.1**
LCO	**Las Campanas**	**2.73**	**268**	*e*S	**Sn**	**10 58 30.1**	**-2.4**
ZON	**Zonda**	**2.74**	**200**	*e*P	**Pn**	**10 57 59.5**	**+0.2**
AHML	**Horco Molle**	**2.94**	**43**	⇓*e*P	**Pn**	**10 58 02.4**	**+0.4**
AHML				IAML		10 58 02.9	
	comp=Z,143nm,0.6s						
RTCV	**Cerro Valdivia**	**3.00**	**196**	⇓*e*P	**Pn**	**10 58 03.0**	**+0.3**
RTLS	**Leoncito**	**3.19**	**207**	*e*P	**Pn**	**10 58 05.8**	**+0.4**
ACAN	**Cantantal**	**3.32**	**174**	*e*P	**Pn**	**10 58 07.5**	**+0.7**
TCA	**Tanti**	**3.51**	**133**	*e*P	**Pn**	**10 58 09.3**	**-0.1**
TCA				IAML		10 59 06.1	
	comp=Z,107nm,0.5s						
AUSP	**Uspallata**	**3.60**	**205**	*e*P	**Pn**	**10 58 11.3**	**+0.4**
ASAL	**Salagasta**	**3.77**	**196**	*e*P	**Pn**	**10 58 13.2**	**+0.3**
MRA	**San Martin**	**3.80**	**155**	*e*P	**Pn**	**10 58 13.4**	**+0.1**
MRA				IAML		10 59 14.2	
	comp=Z,149nm,0.4s						
ARCO	**CERRO ARCO**	**4.04**	**196**	*e*P	**Pn**	**10 58 16.7**	**+0.2**
AAGR	**Agrelo**	**4.25**	**194**	*e*P	**Pn**	**10 58 19.2**	**0.0**
SLA	**San Lorenzo**	**4.62**	**24**	*e*P	**Pn**	**10 58 26.0**	**+1.7**
SLA				IAML		10 58 26.5	
	comp=Z,31nm,0.5s						
CPUP	**Villa Florida**	**9.46**	**76**	P	**Pn**	**10 59 27.8**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=266,slow=18,SNR=2.1						
LPAZ	**La Paz**	**12.63**	**358**	P	**Pn**	**11 00 09.8**	**-2.4**
	comp=Z,0.1nm,0.3s,baz=186,slow=9.2,SNR=2.6						
SIV	**San Ignacio**	**14.24**	**26**	P	**Pn**	**11 00 30.9**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=193,slow=13,SNR=4.4						
PTGA	**Pitinga**	**29.00**	**16**	P	**P**	**11 03 04.5**	**-0.1**
	comp=Z,1.4nm,0.3s,baz=187,slow=8.1,SNR=3.3						
TXAR	**Lajitas Array**	**67.44**	**326**	P	**P**	**11 07 59.6**	**+0.8**
	comp=Z,0.1nm,0.5s,baz=149,slow=8.9,SNR=2.5						
TORD	**Torodi Ar. Bea**	**78.86**	**68**	P	**P**	**11 09 08.0**	**+1.8**
	comp=Z,0.3nm,0.6s,baz=230,slow=4.7						
PDAR	**Pinedale Array**	**81.15**	**330**	P	**P**	**11 09 18.8**	**+0.6**
	comp=Z,0.5nm,0.8s,baz=138,slow=5.1,SNR=4.7						
RAR	**Rarotonga**	**81.83**	**250**	P	**P**	**11 09 19.7**	**-2.3**
	comp=Z,22nm,0.6s,baz=126,slow=8.7,SNR=5.1						
ASAR	**Alice Springs**	**123.73**	**204**	PKP	**PKPdf**	**11 15 59.7**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=97,slow=1.9,SNR=3.9						
WRA	**Warramunga Arr**	**126.97**	**206**	PKP	**PKPdf**	**11 16 06.8**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=160,slow=1.9,SNR=16						
ARU	**Arti**	**133.45**	**38**	PKP	**PKPdf**	**11 16 17.5**	**+0.2**
	comp=Z,2.6nm,0.3s,baz=105,slow=22,SNR=4.4						
KURBB	**Kurchatov Arra**	**146.59**	**40**	PKPbc	**PKPdf**	**11 16 42.5**	**+1.2**
	comp=Z,0.6nm,0.4s,baz=204,slow=14,SNR=4.1						
MKAR	**Makanchi Array**	**150.55**	**45**	PKPbc	**PKPbc**	**11 16 54.2**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=22,slow=3.9,SNR=3.7						

*IDC **27** 10:57:39.0±1.2, 6°.88N×77°.64W, h0km, mb3.6/2, mb1 3.6/5, mb1mx3.4/42, mbtmp3.7/5, ML2.7/3, MS2.8/2, Ms1 2.8/2, ms1mx2.3/35, Error ellipse: s-maj=37.4km s-min=18.1km az=22.0*
*RSNC **27** 10:57:43.1±0.6, 6°.94N×77°.77W, h32km±11km, ML3.3, Mw3.9*
ISC 27 10:57:41.9±1.8, 6°.93N±0°.05×77°.73W±0°.05, h24km±14km, n23, σ1s02/29, Near west coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOLC	**Bahia Solano**	**0.77**	**156**	*e*P	**Pb**	**10 57 56.7**	**+0.1**
SOLC				*e*S	**Sn**	**10 58 08.3**	**+0.2**
SOLC				*i*		10 58 10.8	
	comp=Z,730nm,0.3s						
DBBC	**Dabeiba**	**1.51**	**87**	*e*P	**Pn**	**10 58 07.5**	**0.0**
CAPC	**Capurgana**	**1.73**	**12**	*e*P	**Pn**	**10 58 09.9**	**-0.6**
CAPC				*e*S	**Sn**	**10 58 31.4**	**-0.4**
CAPC				*i*		10 58 34.6	
	comp=Z,532nm,0.5s						
HELC	**Santa Helena**	**2.31**	**109**	*e*P	**Pn**	**10 58 19.8**	**+1.1**
HELC				*e*S	**Sn**	**10 58 47.1**	**+0.6**
HELC				*i*		10 58 50.7	
	comp=Z,107nm,0.5s						
UREC	**San Jos¨ de U**	**2.32**	**69**	*e*P	**Pn**	**10 58 19.1**	**+0.5**
UREC				*e*S	**Sn**	**10 58 48.1**	**+1.6**
UREC				*i*		10 58 57.5	
	comp=Z,172nm,0.3s						
PLMC	**San Jos¨ del**	**2.48**	**144**	*e*P	**Pn**	**10 58 20.4**	**-0.3**
AZU	**Azuero**	**2.67**	**289**	*e*P	**Pn**	**10 58 24.4**	**+1.0**
AZU				*e*S	**Sn**	**10 58 53.4**	**-1.5**
MOTC	**Monteria, Cord**	**2.75**	**48**	*e*P	**Pn**	**10 58 24.9**	**+0.5**
GUYC	**Guyana, Colomb**	**2.88**	**126**	*e*P	**Pn**	**10 58 28.1**	**+1.4**
GUYC				*i*		10 58 39.3	
	comp=Z,142nm,0.5s						
ZARC	**Zaragoza, Cauc**	**2.90**	**79**	*e*P	**Pn**	**10 58 27.3**	**+0.7**
ZARC				*e*S	**Sn**	**10 59 00.5**	**-0.3**
ZARC				*i*		10 59 03.7	
	comp=Z,258nm,0.5s						
BCIP	**Isla Barro Col**	**3.05**	**317**	*e*P	**Pn**	**10 58 28.1**	**-0.5**
BCIP				*i*		10 59 25.2	
	comp=Z,71nm,0.6s						
YOTC	**Yotoco, Valle**	**3.24**	**155**	*e*P	**Pn**	**10 58 31.6**	**+0.3**
PTBC	**PUERTO BERRIO,**	**3.27**	**97**	*e*S	**Sn**	**10 59 10.0**	**+0.1**
PTBC				*i*		10 59 26.8	
	comp=Z,54nm,0.7s						
SJCC	**San Jacinto, C**	**3.88**	**40**	*e*P	**Pn**	**10 58 40.8**	**+0.7**
ROSC	**El Rosal**	**3.98**	**121**	P	**Pn**	**10 58 41.3**	**-0.4**
	comp=Z,1.3nm,0.3s,baz=288,slow=14,SNR=1.8						
ROSC				Pg	**Pb**	**10 58 50.8**	**-0.8**
	comp=Z,7.0nm,0.3s,baz=200,slow=20,SNR=9.3						
ROSC				Lg	Lg	10 59 44.8	
	comp=Z,1.9nm,0.3s,baz=128,slow=19,SNR=4.5						
SDV	**Santo Domingo**	**7.29**	**74**	Pn	**Pn**	**10 59 26.9**	**-0.2**
	comp=Z,4.0nm,0.3s,baz=287,slow=14,SNR=3.3						
SDV				Sn	**Sn**	**11 00 47.9**	**-1.4**
	comp=Z,4.6nm,0.3s,baz=284,slow=23,SNR=3.3						
JTS	**JuntasAbangare**	**7.88**	**296**	Pn	**Pn**	**10 59 38.0**	**+2.9**
	comp=Z,0.6nm,0.3s,baz=24,slow=22,SNR=4.7						
NNA	**Nana**	**18.82**	**177**	LR	LR	11 11 07.0	
	comp=Z,34nm,18.8s,baz=28,slow=43						
SIV	**San Ignacio**	**28.12**	**144**	P	**P**	**11 03 30.8**	**-1.5**
	comp=Z,0.8nm,0.9s,baz=324,slow=17,SNR=1.8						
ANMO	**Albuquerque**	**38.41**	**321**	LR	LR	11 23 48.7	
	comp=Z,10nm,18.2s,baz=118,slow=41						
TORD	**Torodi Ar. Bea**	**78.19**	**78**	P	**P**	**11 09 40.4**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=275,slow=6.2						
ASAR	**Alice Springs**	**145.38**	**238**	PKPbc	**PKPbc**	**11 17 18.6**	**0.0**
	comp=Z,0.3nm,0.6s,baz=124,slow=3.5,SNR=5.3						
WRA	**Warramunga Arr**	**146.32**	**244**	PKPbc	**PKPab**	**11 17 23.4**	**+1.0**
	comp=Z,0.5nm,0.9s,baz=104,slow=3.4,SNR=3.2						

MEX 27 11:09:19.4±0.7, 14°.04N×93°.29W, h12km±177km, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.65**	**2**	*e*P	Pn	11 09 44.2	-4.0
PCIG				*i* S	Sn	11 10 04.5	-4.8
CCIG	**Comitan**	**2.49**	**26**	*e*P	Pn	11 09 56.5	-3.4
CCIG				*e*S	Sn	11 10 26.1	-4.2
TGIG		**2.73**	**3**	*e*P	Pn	11 10 01.0	-2.0
TGIG				*e*S	Sn	11 10 31.8	-4.1

*NIED **27** 11:29:00, 23°.10N×144°.10E, h17km, Mw4.9 Best double couple: M0=2.51000×10^16 NP1:φs=221.00000°, δ54.00000°, λ-163.00000°. NP2:φs=121.00000°, δ76.00000°, λ-37.00000°.*
*BJI **27** 11:29:57.9, 23°.16N×143°.76E, h10km, mb4.8/57, mB5.0/39, Ms4.6/58, Ms7 4.4/55*
*IDC **27** 11:29:58.7±0.4, 23°.13N×143°.47E, h0km, mb4.6/32, mb1 4.7/37, mb1mx4.6/62, mbtmp4.6/37, ML4.0/5, MS4.1/55, Ms1 4.1/55, ms1mx4.1/64, Error ellipse: s-maj=14.8km s-min=9.7km az=72.0*
*JMA **27** 11:29:58.5±0.2, 23°.08N×144°.11E, h85km, M4.7*
*ISCJB **27** 11:29:58.2±0.9, 23°.20N±0°.03×143°.48E±0°.02, h1km±5km, mb5.0/222, MS4.2/69, Error ellipse: s-maj=4.4km s-min=3.4km az=18.3*
*NEIC **27** 11:30:01.1±0.1, 23°.13N×143°.48E, h10km, mb5.1/156, Error ellipse: s-maj=4.1km s-min=3.6km az=175.0*
*GCMT **27** 11:30:01.1±0.3, 23°.23N×143°.58E, h17km±1km, MW4.9/89, Moment Tensor Solution. s32,c36; s89,c129; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.58±.10; Mθθ1.52±.09; Mφφ-0.93±.08; Mrθ-0.58±.21; Mφφ2.16±.07; Mφr1.91±.30; Best double couple: M0=3.17800×10^16 NP1:φs199.00000°, δ74.00000°, λ-148.00000°. NP2: φs=99.00000°, δ59.00000°, λ-19.00000°. Principal axes: T 2.8540, Plg10.0000°, Azm326.0000°; N 0.6500, Plg54.0000°, Azm222.0000°; P -3.5010, Plg34.0000°, Azm63.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*MOS **27** 11:30:06.3±1.1, 23°.09N×143°.41E, h24km, mb5.2/60, MS4.2/7 Error ellipse: s-maj=7.9km s-min=5.0km az=107.1*
ISC 27 11:30:01.1±0.7, 23°.21N±0°.04×143°.62E±0°.04, h12km±3km, n526, σ1s59/537, mb5.1/223, MS4.2/71, 7C-14D, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**3.65**	**339**	P	**Pn**	**11 30 58.1**	**+0.7**
JHHJ				S	**Sn**	**11 31 43.7**	**+3.3**
JCJ	**Chichijima**	**4.08**	**342**	Pn	**Pn**	**11 31 02.9**	**-0.4**
	23nm,0.3s,baz=145,slow=16,SNR=38						
JCJ				Sn	**Sn**	**11 31 51.2**	**+0.1**
	baz=180,slow=20						
JCJ				LR	LR	11 32 24.4	
	comp=Z,1μm,18.9s,baz=172,slow=35						
CBIJ	**Chichi jima**	**4.08**	**342**	*e*Pn	**Pn**	**11 31 02.9**	**-0.5**
CBIJ				Sn	**Sn**	**11 31 51.2**	**+0.1**
CBIJ	**Chichi jima**	**4.08**	**342**	P	**Pn**	**11 31 03.6**	**+0.2**
CBIJ				*e*S	**Sn**	**11 31 53.4**	**+2.3**
GUMO	**Guam**	**9.64**	**173**	Pn	**Pn**	**11 32 21.5**	**+1.8**
	baz=176,slow=14,SNR=1.7						
GUMO				LR	LR	11 35 18.5	
	comp=Z,1μm,19.6s,baz=1.0,slow=33						
GUMO	**Guam**	**9.64**	**173**	*e*Pn	Pn	11 32 25.7	+6.0
GUMO	**Guam**	**9.64**	**173**	*e*P	Pn	11 32 25.7	+6.0
JHJ2	**Mitsune**	**10.42**	**342**	*e*Pn	**Pn**	**11 32 30.1**	**-0.3**
JHJ	**Hachijo jima 2**	**10.44**	**342**	Pn	**Pn**	**11 32 27.8**	**-2.8**
	4.2nm,0.3s,baz=240,slow=20,SNR=2.1						
JHJ				LR	LR	11 36 18.6	
	comp=Z,2μm,20.3s,baz=162,slow=36						
BSO1	**Boso 1**	**11.64**	**349**	P	**Pn**	**11 32 48.4**	**+1.9**
JOD2	**Odawara 2**	**12.65**	**343**	P	**Pn**	**11 32 59.4**	**-1.4**
JIE	**Ise**	**12.68**	**333**	P	**Pn**	**11 33 00.4**	**-0.9**
INU	**Inuyama**	**13.39**	**336**	*e*Pn	**Pn**	**11 33 10.6**	**-0.5**
JRY	**Ryogami san**	**13.41**	**343**	P	**Pn**	**11 33 08.6**	**-2.6**
JRY				*e*S	**Sn**	**11 35 37.7**	**-2.5**
MJAR	**Matsushiro Arr**	**14.09**	**342**	Pn	**Pn**	**11 33 17.7**	**-2.8**
	1.4nm,0.3s,baz=168,slow=12,SNR=34						

MJAR LR LR 11 38 40.2
comp=Z,846nm,18.9s,baz=155,slow=37
MAJO Matsushiro 14.09 342 *e*Pn **Pn 11 33 19.8 -0.8**
MAJO Matsushiro 14.09 342 *d i*P **Pn 11 33 19.7 -0.8**
MAT Matsushiro 14.09 342 P **Pn 11 33 17.3 -3.2**
MAT S **Sn 11 36 01.8 +4.9**
MJB9 Matsu-Tunnel 14.10 342 *e*Pn **Pn 11 33 19.8 -0.8**
JOW Kunigami 14.37 288 *e*Pn **Pn 11 33 26.3 +1.8**
JHS Saijyo 14.90 324 P **Pn 11 33 31.9 +0.3**
JNU Nakatsue 14.95 314 Pn **Pn 11 33 30.7 -1.6**
0.3nm,0.3s,baz=138,slow=6.7,SNR=2.0
JNU LR LR 11 39 06.1
comp=Z,600nm,18.0s,baz=124,slow=37
JMK Ichinoseki 15.83 353 P **Pn 11 33 42.9 -0.8**
YOJ Yonaguni jima 18.90 278 *e*P **Pn 11 34 23.4 +1.2**
152nm,0.7s
YOJ Yonaguni jima 18.90 278 *e*P **Pn 11 34 23.4 +1.2**
YOJ pmax pmax
comp=Z,152nm,0.7s
TJN Taejon 19.23 317⇑ *e*P **Pn 11 34 26.3 +0.2**
KSRS Korea Array 19.59 320 P **P 11 34 27.4 -1.6**
comp=Z,0.8nm,0.3s,baz=140,slow=11,SNR=22
KSRS LR LR 11 41 42.9
comp=Z,763nm,18.2s,baz=128,slow=36
KS15 Wonju Array Si 19.60 320 *e*P **P 11 34 29.7 +0.5**
KSAR Wonju Array Be 19.60 320 P **P 11 34 27.4 -1.8**
KSAR Wonju Array Be 19.60 320 P **P 11 34 27.4 -1.8**
KS01 Wonju Array Si 19.62 320 *e*P **P 11 34 28.9 -0.5**
YHNB Yeheng 20.39 279 *e*P Pn 11 34 39.8 -0.3
comp=Z,27nm,0.7s
YULB Yu-li 20.51 275 *e*P **P 11 34 40.0 +0.8**
comp=Z,29nm,0.5s
TWG Pinlang 20.76 273 *e*P Pn 11 34 46.1 +1.8
comp=Z,78nm,0.7s
SHO Shikotan 20.78 7 *e*P **P 11 34 34.9 -7.0**
SHO *e*S **S 11 38 28.2 -5.4**
SHO pmax pmax
comp=Z,39nm,0.7s
SHO pmax pmax
comp=E,11nm,0.6s
SHO pmax pmax
comp=N,15nm,0.7s
SSLB Suanglung 20.80 276 *e*P Pn 11 34 44.7 -0.1
comp=N,56nm,0.6s
YUK Yuzh-Kuril'sk 20.86 5 *e*P **P 11 34 41.0 -1.7**
YUK *e*S Sn 11 38 41.1 +0.5
YUK pmax pmax
comp=Z,40nm,0.7s
YUK pmax pmax
comp=N,38nm,0.6s
YUK pmax pmax
comp=E,20nm,0.6s
ASAJ Asahikawa 20.87 358 P Pn 11 34 45.8 +0.3
comp=E,27nm,0.8s,baz=213,slow=11,SNR=48
ASAJ Asahikawa 20.87 358 *e*P Pn 11 34 45.5 +0.1
comp=E,49nm,0.8s
TPUB Ta-pu 21.12 275 *e*P **P 11 34 47.4 +1.5**
comp=E,66nm,0.7s
PATS Pohnpei 21.56 137 *e*P **P 11 34 51.9 +1.4**
comp=E,144nm,1.0s
MSHR Mys Shultsa 21.93 335⇓ *e*P **P 11 34 52.1 -2.2**
H11N1 WAKE ISLAND Hy 21.93 95 T T 11 57 54.0
baz=283,slow=74,SNR=11
H11N2 WAKE ISLAND Hy 21.93 95 T T 11 58 05.3
baz=283,slow=74,SNR=15
H11N3 WAKE ISLAND Hy 21.94 95 T T 11 57 38.2
baz=283,slow=74,SNR=10
H11S3 WAKE ISLAND Hy 22.05 98 T T 11 58 26.0
baz=284,slow=75,SNR=28
H11S1 WAKE ISLAND Hy 22.06 98 T T 11 58 24.2
baz=284,slow=75,SNR=17
H11S2 WAKE ISLAND Hy 22.07 98 T T 11 58 24.9
baz=284,slow=75,SNR=18
KUR Kuril'sk 22.24 8 P **P 11 34 57.6 -0.1**
KUR *i*S **S 11 39 02.5 +0.3**
KUR pmax pmax
comp=Z,83nm,1.1s
KUR MLR MLR
comp=Z,274nm,11.0s
KUR MLR MLR
comp=E,311nm,17.0s
KUR MLR MLR
comp=N,191nm,8.0s
TEY Ternei 22.52 347 *e*P P 11 35 16.4 +16
QZH Quanzhou 22.91 279⇓ *i*P **P 11 35 08.3 +3.3**
QZH S **S 11 39 08.5 -6.3**
QZH SS **SnSn 11 39 53.5 +7.3**
QZH LR LR
comp=N,430nm,14.2s
QZH LR LR
comp=N,720nm,20.4s
QZH LR LR
comp=N,740nm,21.3s
USRK Ussuriysk Ar. 23.02 338 P **P 11 35 05.3 -0.6**
comp=N,18nm,0.7s,baz=171,slow=10,SNR=25
USRK LR LR 11 43 19.3
comp=N,443nm,20.1s,baz=138,slow=35
TGY Tagaytay City 23.30 251 LR LR 11 43 49.0
comp=N,812nm,19.0s,baz=74,slow=36
NJ2 Nanjing 23.60 297 *e*P **P 11 35 12.0 +0.1**
NJ2 S **S 11 39 27.5 +1.3**
NJ2 sS **sS 11 39 31.3 -1.0**
NJ2 pmax pmax
comp=N,16nm,0.6s
NJ2 pmax pmax
comp=N,200nm,4.9s
NJ2 LR LR
comp=N,1μm,17.9s
NJ2 LR LR
comp=N,630nm,17.3s
NJ2 LR LR
comp=N,840nm,17.9s
DAV Davao City (W) 23.63 230 LR LR 11 42 22.9
comp=N,1μm,21.4s,baz=61,slow=32
YSS Yuzh-Sakhalins 23.70 359 *e*P **P 11 35 13.6 +0.9**
comp=N,38nm,1.0s
YSS Yuzh-Sakhalins 23.70 359⇑ *e*P **P 11 35 14.5 +1.8**
YSS *e* 11 35 26.2
YSS *e*S **S 11 39 26.0 -1.4**
YSS pmax pmax
comp=Z,30nm,1.3s
YSS smax smax
comp=E,700nm,7.0s
YSS MLR MLR
comp=Z,560nm,14.0s
YSS MLR MLR
comp=N,830nm,16.0s
YSS MLR MLR
comp=E,690nm,14.0s
MDJ Mudanjiang 24.25 335 P **P 11 35 16.8 -1.1**
MDJ pP pP 11 35 19.8 -1.9
MDJ sP sP 11 35 21.3 -1.9
MDJ PP **PnPn 11 35 47.8 +0.1**
MDJ S **S 11 39 33.5 -2.8**
MDJ ScP **ScP 11 42 33.0 -3.5**
MDJ pmax pmax
comp=E,32nm,0.9s
MDJ pmax pmax
comp=E,360nm,4.6s
MDJ LR LR
comp=E,1μm,16.7s
MDJ LR LR
comp=E,890nm,17.5s
MDJ LR LR
comp=E,1μm,19.1s
MDJ Mudanjiang 24.25 335 *e*P **P 11 35 19.3 +1.4**
comp=E,19nm,0.8s
SNY Shenyang 25.00 323 ⇓P **P 11 35 24.8 +0.1**
SNY S **S 11 39 44.8 -3.6**
SNY pmax pmax
comp=E,26nm,0.9s
SNY LR LR
comp=E,830nm,14.6s
SNY LR LR
comp=E,560nm,13.5s
SNY LR LR
comp=E,650nm,15.3s
CN2 Changchun 25.42 328 *e*P **P 11 35 28.5 0.0**
CN2 *e*S **S 11 39 52.5 -2.5**
CN2 pmax pmax
comp=E,10.0nm,0.7s
CN2 pmax pmax
comp=E,200nm,3.0s
CN2 LR LR
comp=E,620nm,13.0s
CN2 LR LR
comp=E,600nm,13.0s
CN2 LR LR
comp=E,810nm,13.0s
TIA Tai'an 26.32 306 P **P 11 35 36.5 -0.3**
TIA pmax pmax
comp=E,10.0nm,0.7s
TIA LR LR
comp=E,270nm,13.8s
TIA LR LR
comp=E,170nm,12.7s
TIA LR LR
comp=E,250nm,13.7s
SIJI Sorong 26.78 208 LR LR 11 43 53.1
comp=E,345nm,21.1s,baz=64,slow=31
WHN Wuhan 27.06 292 *e*P **P 11 35 49.5 +6.0**
WHN S **S 11 40 19.5 -1.8**
WHN LR LR
comp=N,2μm,13.3s
WHN LR LR
comp=E,810nm,12.3s
WHN LR LR
comp=Z,2μm,17.9s
KLR Kul'dur 27.61 343 *d i*P **P 11 35 49.1 +0.9**
TYV Tymovskoe 27.62 359 *e*P **P 11 35 45.5 -2.7**
TYV pmax pmax
comp=Z,100nm,2.8s
TYV pmax pmax
comp=Z,14nm,0.7s
GRNR Gornyy 28.08 350 *e*P **P 11 35 55.1 +2.7**
GRNR pmax pmax
comp=Z,26nm,1.0s
BJI Beijing 28.61 312 P **P 11 35 56.3 -0.9**
BJI S **S 11 40 42.0 -3.5**
BJI pmax pmax
comp=Z,8.0nm,1.2s
BJI LR LR
comp=Z,630nm,16.3s
BJI LR LR
comp=Z,500nm,18.8s
BJI LR LR
comp=Z,950nm,18.4s
MYLDM Lahad Datu 30.14 237 *e*P **P 11 36 12.3 +1.2**
comp=Z,184nm,1.9s
MRSI Marisa 30.89 226 P **P 11 36 17.3 -0.4**
PETK Petropavlovsk- 31.72 16 P **P 11 36 25.7 +1.0**
comp=Z,1.4nm,0.4s,baz=179,slow=5.9,SNR=4.1
PETK PcP **PcP 11 39 16.2 +0.1**
baz=202,slow=2.7
PETK LR LR 11 47 50.9
comp=Z,382nm,21.8s,baz=197,slow=34
PET Petropavlovsk 31.90 17 *e*P **P 11 36 29.3 +3.2**
PET *e*S **S 11 41 35.8 -0.9**
PET pmax pmax
comp=Z,16nm,0.9s
PET pmax pmax
comp=Z,100nm,9.6s
PET pmax pmax
comp=Z,100nm,11.4s
PET MLR MLR
comp=Z,400nm,17.0s
PET MLR MLR
comp=Z,400nm,15.0s
HHC Hu-ho-hao-te 32.13 311 *e*P **P 11 36 29.0 +0.4**
HHC S **S 11 41 39.0 -2.0**
HHC SS **SnSn 11 43 31.3 +0.1**
HHC pmax pmax
comp=Z,6.0nm,0.6s
HHC pmax pmax
comp=Z,53nm,6.5s
HHC LR LR
comp=Z,1μm,12.1s
HHC LR LR
comp=Z,1μm,13.8s
HHC LR LR
comp=Z,1μm,15.6s
PMG Port Moresby 32.60 174 P **P 11 36 30.3 -2.3**
comp=Z,13nm,0.7s,baz=31,slow=12,SNR=5.2
ZEA Zeya 32.90 342 *e*P **P 11 36 35.7 +0.7**
ZEA *e*S **S 11 41 51.0 -1.4**
ZEA pmax pmax
comp=Z,200nm,4.0s
ZEA pmax pmax
comp=N,62nm,0.8s
ZEA pmax pmax
comp=Z,77nm,0.8s
ZEA smax smax
comp=N,300nm,16.0s
ZEA MLR MLR
comp=E,300nm,14.0s
ZEA MLR MLR
comp=Z,400nm,14.0s
GYA Guiyang 33.62 283⇑ *i*P **P 11 36 43.0 +1.2**
GYA PP **PnPn 11 37 55.3 +1.8**
GYA PcP **PcP 11 39 24.0 +2.0**
GYA S **S 11 42 04.5 0.0**
GYA SS **SnSn 11 44 07.0 -0.8**
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,130nm,5.0s
GYA LR LR
comp=Z,660nm,17.0s
GYA LR LR
comp=Z,610nm,17.6s
GYA LR LR
comp=Z,740nm,17.5s
TTSI Tana Toraja 34.92 225 P **P 11 36 53.7 +0.8**
SPSI Sidrap Palu 35.65 224 P **P 11 36 59.4 +0.2**
HNR Honiara 36.16 152 P **P 11 37 03.2 -0.3**
comp=Z,21nm,0.3s,baz=140,slow=7.9,SNR=1.9
CD2 Chengdu 36.17 291 P **P 11 37 02.5 -1.2**
CD2 PP **PnPn 11 38 24.5 -0.6**
CD2 PcP **PcP 11 39 28.5 -0.7**
CD2 S **S 11 42 42.5 -1.0**
CD2 pmax pmax
comp=Z,40nm,0.7s
CD2 pmax pmax
comp=Z,170nm,7.3s
CD2 LR LR
comp=Z,1μm,15.6s
CD2 LR LR
comp=Z,1μm,21.6s
LZH Lanzhou 36.63 300 *e*P **P 11 37 09.5 +1.9**
LZH pP sP 11 37 12.8 -0.1
LZH sP pP 11 37 14.3 +2.9
LZH PP **PP 11 38 33.0 +2.0**
LZH S **S 11 42 49.3 -1.3**
LZH SS **SnSn 11 45 17.8 -2.6**
LZH pmax pmax
comp=Z,27nm,1.1s
LZH pmax pmax
comp=Z,140nm,5.2s
LZH LR LR
comp=Z,1μm,14.0s
LZH LR LR
comp=Z,590nm,14.3s
LZH LR LR
comp=Z,1μm,16.0s
SBUM Sibu 36.75 240 *e*P **P 11 37 08.1 -0.6**
comp=Z,12nm,0.7s
MTKI Muara Teweh, K 36.84 233 P **P 11 37 13.1 +3.7**
COEN Coen 36.94 181 *e*P **P 11 37 10.5 +0.3**
comp=Z,34nm,0.8s
KMI Kunming 37.25 281 P **P 11 37 14.3 +1.2**
KMI pP sP 11 37 17.3 -1.1
KMI sP pP 11 37 18.8 +1.9
KMI PP **PnPn 11 38 40.5 +2.0**
KMI pmax pmax
comp=Z,10.0nm,0.6s
KMI LR LR
comp=Z,440nm,16.3s
KMI LR LR
comp=Z,280nm,16.8s
KMI LR LR
comp=Z,260nm,19.1s
ULN Ulaanbaatar 38.07 319 *e*P **P 11 37 19.0 -0.7**
comp=Z,3.6nm,0.7s
ULN Ulaanbaatar 38.07 319⇓ *e*P **P 11 37 19.1 -0.7**
ULN pmax pmax
comp=Z,6.0nm,1.3s
EDFI Ende, Flores 38.33 217 P **P 11 37 21.3 -0.8**
SONM Songino Array 38.45 319 P **P 11 37 21.6 -1.3**
comp=Z,1.8nm,0.5s,baz=130,slow=7.6,SNR=8.5
SONM PcP **PcP 11 39 36.3 +0.3**
comp=Z,1.1nm,0.7s,baz=149,slow=3.4,SNR=3.2
SONM LR LR 11 54 02.4
comp=Z,708nm,18.2s,baz=120,slow=38
BATI Baumata 38.53 213 LR LR 11 50 46.0
comp=Z,279nm,20.7s,baz=60,slow=32
YAK Yakutsk 39.96 350 *e*P **P 11 37 35.3 +0.3**
comp=Z,50nm,0.8s
YAK Yakutsk 39.96 350 *e*P **P 11 37 35.0 0.0**
YAK *e*PPP PPP 11 39 38.1
YAK *e*S **S 11 43 37.6 -2.3**
YAK *e*SS **SS 11 46 37.7 +1.1**
YAK *e*SSS SSS 11 47 03.5
YAK *e* 11 47 37.7
YAK pmax pmax
comp=Z,16nm,1.1s
YAK pmax pmax
comp=N,8.0nm,1.1s
YAK pmax pmax
comp=E,4.0nm,1.1s
YAK pmax pmax
comp=Z,63nm,3.4s
YAK pmax pmax
comp=N,27nm,2.2s
YAK pmax pmax
comp=E,37nm,3.6s
YAK smax smax
comp=N,10.0nm,2.2s
YAK smax smax
comp=E,30nm,2.2s
SEY Seymchan 40.15 6⇓ *i*P **P 11 37 37.7 +1.1**
SRAK Srakaew 40.34 264 P P 11 37 45.5 +6.7
comp=E,80nm,0.9s,comp=E,698nm
GTA Gaotai 40.35 304 P **P 11 37 39.0 +0.2**
GTA pP sP 11 37 48.3 +4.2
GTA sP pP 11 37 52.5 +10
GTA PcP **PcP 11 39 42.3 +0.2**
GTA S **S 11 43 45.3 -1.4**
GTA sS sS 11 44 01.8 +8.9
GTA pmax pmax
comp=E,3.0nm,1.0s
GTA pmax pmax
comp=E,140nm,5.2s
GTA LR LR
comp=E,420nm,16.5s
GTA LR LR
comp=E,400nm,15.6s
GTA LR LR
comp=E,590nm,17.5s
PBKT Sadao Pong 40.54 269 P **P 11 37 44.3 +3.8**
comp=E,28nm,0.8s
BOD Bodaibo 40.62 336 *e*P **P 11 37 42.2 +1.6**
BOD pmax pmax
comp=Z,21nm,0.9s
ZAK Zakamensk 41.41 321 *e*P **P 11 37 46.4 -1.0**
ZAK pmax pmax
comp=Z,6.0nm,1.1s
KIWB Kanaga Island 41.46 36 *e*P **P 11 37 43.4 -4.2**
CMAI Chiengmai2 41.47 274 P P 11 37 53.9 +5.6
comp=Z,583nm,1.4s,comp=Z,108μm
TLY Talaya 41.79 323 *e*P **P 11 37 50.3 -0.1**
TLY *e*pP **pP 11 37 50.7 -3.5**
TLY Talaya 41.79 323 *e*P **P 11 37 50.3 -0.1**
TLY *e*PPP PPP 11 40 06.4
TLY *e*S **S 11 44 05.7 -1.9**
TLY pmax pmax
comp=Z,9.0nm,0.9s
TLY MLR MLR
comp=Z,361nm,21.0s
CHTO Chiang Mai 41.82 273 P **P 11 37 55.4 +4.4**
comp=Z,100nm,0.9s,comp=Z,2μm
CHTO Chiang Mai 41.82 273 *e*P **P 11 37 49.6 -1.4**
CHTO *e*pP **pP 11 37 52.0 -2.8**
CHTO Chiang Mai 41.82 273 *e*P **P 11 37 49.6 -1.4**
CM01 Chiang Mai Arr 41.90 272 *e*P **P 11 37 51.4 -0.3**
CMAR Chiang Mai Arr 41.90 272 P **P 11 37 50.9 -0.9**
comp=Z,2.0nm,0.6s,baz=56,slow=8.9,SNR=7.0
CMAR LR LR 11 53 28.2
comp=Z,254nm,21.7s,baz=86,slow=34
BLJI Banyuglugur 42.53 227 P **P 11 37 57.5 +0.7**
CTA Charters Tower 43.11 176 P **P 11 38 00.1 -1.2**
comp=Z,12nm,0.8s,baz=2.9,slow=11,SNR=16
CTAO Charters Tower 43.11 176 *e*P **P 11 38 00.3 -1.0**
CTAO *e*sP **P 11 38 00.5 -0.9**
CTAO Charters Tower 43.11 176 *e*P **P 11 38 00.4 -0.9**
ATKA Atka Island 43.25 37 *e*P **P 11 38 02.6 +0.5**
comp=Z,18nm,0.8s
MOY Mondy 43.27 322 *e*P **P 11 38 05.2 +2.7**
WRAB Tennant Creek 43.82 193 *e*P **P 11 38 05.7 -1.5**
WRAB *e*sP **P 11 38 05.8 -1.4**
WRAB Tennant Creek 43.82 193⇑ *e*P **P 11 38 05.7 -1.5**
WRAB pmax pmax
comp=Z,22nm,1.6s
WB2 Warramunga Arr 43.83 193 *e*P **P 11 38 05.3 -1.9**
WB2 *e*sP **P 11 38 06.8 -0.5**
WRA Warramunga Arr 43.83 193 P **P 11 38 05.6 -1.6**
comp=Z,2.8nm,0.3s,baz=17,slow=9.1,SNR=67
WRA PcP **PcP 11 39 53.0 -0.7**
comp=Z,1.3nm,0.6s,baz=6.2,slow=3.4,SNR=5.4
MYKOM Kota Tinggi 44.03 247 *e*P **P 11 38 06.9 -2.1**
comp=Z,38nm,1.7s
LEM Lembang 46.15 234 LR LR 11 58 53.7
comp=Z,178nm,19.9s,baz=14,slow=38
SHL Shillong 46.94 284 *e*x **P 11 38 30.0 -2.2**
SHL Shillong 46.94 284 *e*P **P 11 38 32.6 +0.4**
comp=Z,24nm,0.7s
SHL Shillong 46.94 284 *e*P **P 11 38 32.6 +0.4**
SHL pmax pmax
comp=Z,25nm,0.7s
BILL Bilibino 46.97 11 *e*P **P 11 38 33.2 +1.6**
comp=Z,14nm,0.9s
BILL Bilibino 46.97 11 *e*P **P 11 38 33.1 +1.6**
BILL *e* 11 40 04.4
BILL *e* 11 40 22.9
BILL pmax pmax
comp=Z,24nm,1.3s
LSA Lhasa 47.10 290 P **P 11 38 35.5 +1.8**
LSA pmax pmax
comp=Z,6.0nm,0.6s
LSA Lhasa 47.10 290 *e*P **P 11 38 34.7 +1.0**
comp=Z,40nm,0.9s
AS31 Alice Springs 47.54 192 *e*P **P 11 38 35.3 -1.3**
comp=Z,2.5nm,0.6s
ASAR Alice Springs 47.54 192 P **P 11 38 34.6 -1.9**
comp=Z,2.0nm,0.6s,baz=18,slow=10,SNR=21
ASAR PcP **PcP 11 40 04.5 -2.0**
comp=Z,1.1nm,0.8s,baz=21,slow=3.1,SNR=4.8
ASAR LR LR 11 58 17.2
comp=Z,156nm,19.9s,baz=11,slow=36
BRDH Bariadhala 47.66 280 LR LR 11 57 54.4
comp=Z,208nm,21.3s,baz=150,slow=35
PSI Prapat 47.76 252 P **P 11 38 37.4 -1.2**
comp=Z,3.7nm,0.7s,baz=180,slow=8.6,SNR=2.5
PSI LR LR 12 00 58.7
comp=Z,143nm,18.1s,baz=88,slow=39
PSI Prapat 47.76 252 *e*P **P 11 38 38.0 -0.6**
comp=Z,12nm,0.9s
PSI Prapat 47.76 252 *e*P **P 11 38 38.0 -0.6**
PSI pmax pmax
comp=Z,12nm,0.9s
TIXI Tiksi 49.20 354 *e*P **P 11 38 49.4 +0.7**
comp=Z,9.5nm,0.9s
TIXI Tiksi 49.20 354 *d i*P **P 11 38 49.7 +1.0**
TIXI pmax pmax
comp=Z,13nm,1.0s
KRAR Krasnoyarsk 49.37 325⇓ *e*P **P 11 38 51.3 +1.0**
WMQ Urumqi 49.95 308 P **P 11 38 56.0 +1.0**
WMQ pP sP 11 39 03.0 +2.6
WMQ sP pP 11 39 07.0 +8.1
WMQ S **S 11 46 00.0 -5.3**
WMQ ScS **ScS 11 48 42.8 -3.7**
WMQ pmax pmax
comp=Z,90nm,1.1s
WMQ pmax pmax
comp=Z,330nm,6.5s
WMQ LR LR
comp=Z,590nm,16.7s
WMQ LR LR
comp=Z,480nm,16.7s
WMQ LR LR
comp=Z,390nm,20.5s
DZM Mont Dzumac 50.19 152 P **P 11 38 55.6 -1.3**
comp=Z,8.4nm,0.5s,baz=150,slow=20,SNR=7.4
DZM LR LR 11 58 24.7
comp=Z,226nm,20.8s,baz=22,slow=34
DZM Mont Dzumac 50.19 152 *e*LR LR 11 53 19.3
comp=Z,527nm,26.1s
DGZ Jazzator, Alta 50.92 316 *i* P **P 11 39 02.6 +0.3**
DGZ pmax pmax

comp=Z,12nm,0.8s
RAMN Ramite 51.42 287 *e*P **P 11 39 05.8 -0.7**
comp=Z,54nm,0.6s
JIRN Jiri 51.67 288 *e*P **P 11 39 08.4 -0.1**
comp=Z,145nm,0.6s
GUN Gumba 51.90 288 *e*P **P 11 39 10.2 -0.1**
comp=Z,72nm,0.8s
PKIN Phulchoki 52.38 288 *e*P **P 11 39 12.7 -1.0**
comp=Z,21nm,0.5s
KKN Kakani 52.45 288 *e*P **P 11 39 13.9 -0.3**
comp=Z,40nm,0.7s
ANM Nome 52.88 25 *e*P **P 11 39 18.9 +2.4**
comp=Z,23nm,0.9s
GKN Gorkha 52.97 288 *e*P **P 11 39 17.9 -0.1**
comp=Z,60nm,0.7s
ZAA0 Zalesovo Array 53.29 321 *e*P **P 11 39 20.0 +0.3**
comp=Z,27nm,0.8s
ZALV Zalesovo Beam 53.29 321 P **P 11 39 18.7 -1.0**
comp=Z,7.4nm,0.5s,baz=108,slow=8.1,SNR=11
ZALV PcP **PcP 11 40 25.6 -1.6**
comp=Z,3.5nm,0.6s,baz=132,slow=4.3,SNR=2.2
ZALV LR LR 12 02 02.4
comp=Z,181nm,20.0s,baz=70,slow=36
DANN Dangsing 53.68 289 *e*P **P 11 39 23.1 -0.3**
comp=Z,207nm,0.6s
KOLN Koldanda 53.92 288 *e*P **P 11 39 24.3 -0.7**
comp=Z,45nm,0.7s
MK01 Makanchi Array 53.98 312 *e*P P 11 39 19.8 -5.1
MK31 Makanchi Array 53.99 312 *e*P P 11 39 20.1 -4.9
MK31 Makanchi Array 53.99 312 *i*P **P 11 39 24.4 -0.6**
MK31 pmax pmax
comp=Z,31nm,0.8s
MKAR Makanchi Array 53.99 312 P **P 11 39 24.1 -0.9**
comp=Z,7.2nm,0.7s,baz=88,slow=9.0,SNR=44
MKAR LR LR 12 04 02.8
comp=Z,247nm,18.6s,baz=72,slow=38
MKAR Makanchi Array 53.99 312 *e*P P 11 39 20.2 -4.8
comp=Z,155nm,0.8s
MKAR Makanchi Array 53.99 312 *e*P P 11 39 20.2 -4.8
MKAR pmax pmax
comp=Z,155nm,0.8s
MAKZ Makanchi 54.20 312 *e*P **P 11 39 26.4 -0.2**
comp=Z,40nm,0.8s
MAKZ Makanchi 54.20 312 *e*P **P 11 39 26.4 -0.2**
MAKZ pmax pmax
comp=Z,40nm,0.8s
NVS Novosibirsk 54.37 322 *e*P **P 11 39 27.4 -0.1**
PYUN Piuthan 54.40 289 *e*P **P 11 39 27.9 -0.6**
comp=Z,114nm,0.6s
STKA Stephens Creek 54.81 182 P **P 11 39 28.9 -2.1**
comp=Z,4.5nm,0.6s,baz=360,slow=10,SNR=8.1
STKA LR LR 12 03 47.5
comp=Z,149nm,19.9s,baz=7.7,slow=37
STKA Stephens Creek 54.81 182 *e*P **P 11 39 29.9 -1.1**
comp=Z,2.1nm,0.6s
STKA Stephens Creek 54.81 182 *e*P **P 11 39 29.9 -1.1**
STKA pmax pmax
comp=Z,2.0nm,0.6s
RDOG Red Dog Mine 55.32 22 *e*P **P 11 39 36.1 +1.8**
comp=Z,22nm,0.9s
PDGK Podgornoye 55.89 308 P **P 11 39 38.5 -0.4**
PDGK pmax pmax
comp=Z,69nm,0.9s
SVW2 Sparrevohn 55.91 31 *e*P **P 11 39 40.4 +1.8**
comp=Z,20nm,1.1s
OHAK Old Harbor 56.27 36 *e*P **P 11 39 42.2 +1.0**
KURK Kurchatov 56.66 316 *e*P **P 11 39 43.9 -0.2**
comp=Z,59nm,1.0s
KURK Kurchatov 56.66 316 *ce*P **P 11 39 44.3 +0.2**
KURK pmax pmax
comp=Z,24nm,1.1s
PRZ Przheval'sk 56.71 307 *e*P **P 11 39 46.7 +1.8**
PRZ Przheval'sk 56.71 307 P **P 11 39 46.7 +1.8**
KURBB Kurchatov Arra 56.71 316 P **P 11 39 44.3 -0.2**
comp=Z,12nm,0.7s,baz=93,slow=8.7,SNR=50
KDAK Kodiak Island 56.73 35 *e*P **P 11 39 45.5 +1.0**
comp=Z,161nm,2.0s
KDAK Kodiak Island 56.73 35 *i*P **P 11 39 45.2 +0.7**
RSO Redoubt South 57.12 32 *e*P **P 11 39 43.2 -4.3**
AFI Afiamalu 57.15 126 LR LR 12 01 36.0
comp=Z,166nm,19.4s,baz=332,slow=33
TARG Taragay, Kyrgy 57.18 306 *e*P **P 11 39 49.9 +1.3**
comp=Z,48nm,1.0s
CNPM China Poot 57.71 33 *e*P **P 11 39 52.1 +0.7**
comp=Z,72nm,1.4s
PPLA Purkeypile 57.87 29 *e*P **P 11 39 51.6 -1.1**
comp=Z,77nm,1.7s
BRLK Bradley Lake 57.92 33 *e*P **P 11 39 53.0 0.0**
comp=Z,17nm,0.7s
SKT Skwentna 57.99 30 *e*P **P 11 39 53.7 +0.3**
comp=Z,16nm,0.9s
CAST Castle Rocks 58.03 29 *e*P **P 11 39 55.8 +2.1**
comp=Z,28nm,0.8s
ULHL Ulahol 58.32 306 P **P 11 39 56.9 +0.6**
SNR=11
NRN Naryn 58.55 305 *e*P **P 11 39 59.2 +1.1**
comp=Z,26nm,0.9s
NRN Naryn 58.55 305 *e*P **P 11 39 59.2 +1.1**
NRN pmax pmax
comp=Z,26nm,0.9s
RC01 Rabbit Creek A 58.69 31 *e*P **P 11 39 59.5 +1.3**
comp=Z,24nm,0.8s
KSH Kashi 58.74 303 P **P 11 40 02.8 +3.7**
KSH pP sP 11 40 09.3 +4.8
KSH sP pP 11 40 13.8 +11
KSH PP **PP 11 42 14.5 +5.6**
KSH S **S 11 48 06.8 +2.7**
KSH sS sS 11 48 15.8 +5.3
KSH SS **SS 11 52 02.8 +5.8**
KSH pmax pmax
comp=Z,370nm,4.8s
KSH LR LR
comp=Z,290nm,5.3s
KSH LR LR
comp=Z,300nm,7.4s
KSH LR LR
comp=Z,410nm,6.0s
TKM2 Tokmak 2 58.75 307 P **P 11 40 00.0 +0.7**
SNR=16
TKM2 Tokmak 2 58.75 307 P **P 11 39 59.5 +0.2**
TKM2 pmax pmax
comp=Z,54nm,1.2s
TRF Thorofare Moun 58.83 29 *e*P **P 11 40 00.4 +1.0**
comp=Z,34nm,0.8s
MLY Manley 58.94 27 *e*P **P 11 40 01.3 +1.3**
comp=Z,27nm,1.0s
PMR Palmer 59.05 31 *e*P **P 11 40 00.7 0.0**
comp=Z,32nm,0.8s
PMR Palmer 59.05 31 *e*P **P 11 40 00.7 0.0**
PMR pmax pmax
comp=Z,32nm,0.8s
KZA Kyzart 59.07 306 P **P 11 40 04.3 +2.6**
SNR=15
KBK Karagaybulak 59.24 307 P **P 11 40 00.5 -2.2**
SNR=6.7
BWN Browne 59.32 28 *e*P **P 11 40 05.7 +3.1**
comp=Z,61nm,1.0s
CHMS Chumysh 59.37 307 P P 11 40 15.3 +12
SNR=6.4
SML Sawmill 59.46 31 *e*P **P 11 40 04.7 +1.1**
comp=Z,61nm,0.8s
MCK McKinley 59.47 28 *e*P **P 11 40 04.7 +1.0**
comp=Z,30nm,0.9s
MCK McKinley 59.47 28 *e*P **P 11 40 04.7 +1.0**
MCK pmax pmax
comp=Z,30nm,0.9s
FRU Bishkek 59.48 307 *e*P **P 11 40 04.0 -0.1**
FRU pmax pmax
comp=Z,90nm,2.3s
USP Ospenovka 59.53 308 P P 11 40 15.9 +11
SNR=6.0
UCH Uchtor 59.60 306 P **P 11 40 05.5 +0.1**
SNR=18
COLD Coldfoot 59.63 24 *e*P **P 11 40 06.9 +2.2**
comp=Z,14nm,0.8s
WRH Wood River Hil 59.96 28 *e*P **P 11 40 07.7 +0.8**
comp=Z,12nm,1.0s
DHY Denali Highway 60.07 29 *e*P **P 11 40 09.5 +1.5**
comp=Z,8.2nm,0.6s
EKS2 Erkin-Say 60.11 307 P P 11 40 20.6 +12
SNR=5.6
CCB Clear Creek Bu 60.11 28 *e*P **P 11 40 09.2 +1.2**
comp=Z,28nm,1.7s
COLA College 60.12 27 *e*P **P 11 40 09.8 +1.7**
comp=Z,15nm,0.8s
COLA College 60.12 27 *e*P **P 11 40 09.8 +1.7**
COLA pmax pmax
comp=Z,15nm,0.8s
TOLK Toolik Lake Re 60.18 23 P **P 11 40 09.5 +1.0**
baz=257
TOLK Toolik Lake Re 60.18 23 *e*P **P 11 40 10.6 +2.2**
comp=Z,16nm,0.8s
IL1 Eielson Array 60.52 27 *e*P **P 11 40 09.8 -1.0**
ILAR Eielson Array 60.52 27 P **P 11 40 10.3 -0.5**
comp=Z,15nm,0.7s,baz=258,slow=5.4,SNR=161
ILAR LR LR 12 02 38.8
comp=Z,124nm,21.8s,baz=272,slow=32
ILB Eielson Array 60.52 27 *e*P **P 11 40 10.0 -0.8**
KLU Klutina 60.56 31 *e*P **P 11 40 12.8 +1.5**
comp=Z,22nm,1.0s
SFK Sufi-Kurgan 60.58 304 P **P 11 40 12.1 +0.1**
SFK pmax pmax
comp=Z,37nm,0.9s
DIV Divide 60.60 32 *e*P **P 11 40 13.0 +1.5**
comp=Z,50nm,1.5s
OTUK Ortayu 60.74 313 P **P 11 40 13.8 +1.1**
OTUK pmax pmax
comp=Z,35nm,1.1s
PAX Paxson 60.92 30 *e*P **P 11 40 14.9 +1.2**
comp=Z,41nm,1.5s
PAX Paxson 60.92 30 *e*P **P 11 40 14.9 +1.2**
PAX pmax pmax
comp=Z,41nm,1.5s
HARP HAARP 61.01 30 *e*P **P 11 40 16.4 +2.2**
comp=Z,24nm,0.7s
MNAS Manas 61.06 307 P **P 11 40 17.9 +2.8**
MNAS pmax pmax
comp=Z,13nm,0.9s
BMRM Bremner River 61.16 32 *e*P **P 11 40 17.1 +1.8**
comp=Z,30nm,1.0s
RIDG Independ'e Rid 61.28 29 *e*P **P 11 40 16.4 +0.3**
comp=Z,25nm,0.8s
FYU Fort Yukon 61.44 26 *e*P **P 11 40 19.3 +2.3**
comp=Z,35nm,1.0s
SCRK Sand Creek 61.68 29 *e*P **P 11 40 19.8 +1.0**
comp=Z,33nm,0.8s
NIL Nilore 61.71 297 *e*P **P 11 40 19.6 +0.1**
comp=Z,103nm,1.0s
MENT Mentasta 61.71 30 *e*P **P 11 40 20.7 +1.7**
comp=Z,11nm,0.7s
BVA0 Borovoye Array 61.80 319 *i*P **P 11 40 18.9 -0.8**
BVA0 pmax pmax
comp=Z,33nm,0.8s
BVAR Borovoye Array 61.80 319 P **P 11 40 19.4 -0.2**
comp=Z,9.1nm,0.5s,baz=90,slow=7.9,SNR=38
BVAR LR LR 12 08 41.1
comp=Z,328nm,18.8s,baz=84,slow=38
BRVK Borovoye 61.86 319 *e*P **P 11 40 20.2 +0.1**
comp=Z,36nm,0.8s
BRVK Borovoye 61.86 319 *d i*P **P 11 40 20.8 +0.7**
BRVK pmax pmax
comp=Z,14nm,0.8s
PALK Pallekele 62.30 266 LR LR 12 07 18.0
comp=Z,120nm,19.5s,baz=106,slow=36
KK31 Karatay Array 62.45 308 *e*P **P 11 40 24.5 +0.2**
KK31 Karatay Array 62.45 308 *e*P **P 11 40 24.5 +0.2**
KKAR Karatay Array 62.45 308 *e*P **P 11 40 24.5 +0.2**
KKAR Karatay Array 62.45 308 *e*P **P 11 40 24.5 +0.2**
EGAK Eagle 62.96 28 *e*P **P 11 40 28.1 +0.8**
comp=Z,6.1nm,0.8s
DAWY Dawson 63.70 29 *e*P **P 11 40 33.3 +1.0**
comp=Z,11nm,0.9s
DZET Dzherino 64.34 303 P **P 11 40 37.4 +0.4**
DZET pmax pmax
comp=Z,40nm,1.3s
KBL Kabul 64.97 299 *e*P **P 11 40 41.3 0.0**
comp=Z,42nm,1.1s
KBL Kabul 64.97 299 *e*P **P 11 40 41.3 0.0**
KBL pmax pmax
comp=Z,42nm,1.1s
INK Inuvik 66.03 24 *e*P **P 11 40 48.2 +1.0**
comp=Z,38nm,1.5s
INK Inuvik 66.03 24 *e*P **P 11 40 48.2 +1.0**
INK pmax pmax
comp=Z,38nm,1.5s
BESE Bessie Mountai 66.12 35 *e*P **P 11 40 50.6 +2.5**
comp=Z,31nm,1.0s
JIS Juneau Island 66.40 35 *e*P **P 11 40 52.1 +2.3**
comp=Z,23nm,1.2s
SVE Sverdlovsk 67.10 324 *e*P **P 11 40 54.0 -0.3**
SVE pmax pmax
comp=Z,26nm,0.9s
ARU Arti 68.30 323 *e*P **P 11 41 01.0 -0.8**
comp=Z,20nm,0.7s
ARU Arti 68.30 323 *d i*P **P 11 41 01.0 -0.8**
ARU 11 41 24.2
ARU S **S 11 50 03.7 +1.3**
ARU pmax pmax
comp=Z,16nm,1.7s
DLBC Dease Lake 68.65 34 *e*P **P 11 41 06.5 +2.4**
comp=Z,19nm,1.1s
AKTO Aktyubinsk 69.74 317 P **P 11 41 10.8 -0.1**
comp=Z,2.3nm,0.6s,baz=64,slow=7.9,SNR=8.0
AKTO LR LR 12 14 09.4
comp=Z,271nm,18.6s,baz=85,slow=38
RAR Rarotonga 70.64 124 LR LR 12 08 40.9
comp=Z,114nm,19.9s,baz=294,slow=33
GEYT Alibeck 72.73 304 P **P 11 41 29.6 +0.2**
comp=Z,30nm,0.7s,baz=73,slow=5.0,SNR=4.7
GEYT LR LR 12 17 33.2
comp=Z,179nm,18.0s,baz=265,slow=39
PRGR Permogore 73.55 330 *e*P **P 11 41 32.8 -0.9**
PRGR pmax pmax
comp=Z,12nm,0.5s
SPITS Spitsbergen Ar 74.42 350 P **P 11 41 37.3 -1.3**
comp=Z,3.6nm,0.9s,baz=45,slow=12,SNR=2.2
SPITS LR LR 12 15 56.2
comp=Z,99nm,20.6s,baz=30,slow=37
KBS Kingsbay 74.56 351 ‖ *i*P **P 11 41 40.7 +1.4**
KBS pmax pmax
comp=Z,48nm,0.8s
NLWA Neilton Lookou 74.92 45 *e*P **P 11 41 44.5 +2.5**
comp=Z,18nm,1.1s
YKA Yellowknife Ar 74.94 28 P **P 11 41 41.8 +0.1**
comp=Z,7.7nm,0.9s,baz=292,slow=5.9,SNR=11
YKA LR LR 12 13 39.1
comp=Z,16nm,21.1s,baz=294,slow=35
LLLB Lillooet 75.16 41 *e*P **P 11 41 44.9 +1.5**
comp=Z,11nm,0.8s
A04D Lummi Island 75.25 43 P **P 11 41 44.4 +0.7**
baz=288
E03A Lebam 75.38 45 *e*P **P 11 41 46.6 +2.0**
comp=Z,17nm,0.8s
RES Resolute Bay 75.52 14 *e*P **P 11 41 45.9 +1.0**
comp=Z,14nm,0.8s
RES Resolute Bay 75.52 14 *e*P **P 11 41 45.9 +1.0**
RES pmax pmax
comp=Z,14nm,0.8s
B05A Bryant 75.78 43 P **P 11 41 46.5 -0.4**
baz=289
G03D McMinnville, O 76.00 47 P **P 11 41 48.4 +0.1**
baz=289
APA Apatity 76.12 338 ⇑ *i*P P 11 41 42.9 -5.6
APA MLR MLR
comp=Z,200nm,15.0s
D05A Enumclaw 76.20 44 *e*P **P 11 41 51.7 +2.4**
comp=Z,19nm,1.1s
I03D Drain, OR 76.44 48 P **P 11 41 50.9 +0.2**
baz=289,SNR=9.1
LON Longmire 76.46 45 *e*P **P 11 41 52.2 +1.3**
comp=Z,5.1nm,0.7s
LON Longmire 76.46 45 *e*P **P 11 41 52.2 +1.3**
LON pmax pmax
comp=Z,5.0nm,0.7s
KLMR Klimovskoe 76.59 331 *e*P **P 11 41 52.1 +0.9**
KLMR pmax pmax
comp=Z,8.0nm,0.8s
KLMR Klimovskoe 76.59 331 *e*P **P 11 41 52.2 +1.0**
KLMR AMP 11 42 02.2
comp=Z,8.0nm,0.8s
L02D Cave Junction, 76.77 50 P **P 11 41 52.7 0.0**
baz=289
PPT Papeete 76.81 116 LR LR 12 11 43.1
comp=Z,65nm,18.5s,baz=2.0,slow=33
PPT2 Papeete2 76.82 116 *e*LR LR 12 05 14.2
comp=Z,85nm,22.8s
WSAR Wadi Sarin 76.84 290 P **P 11 41 53.2 -0.1**
comp=Z,6.0nm,0.9s,baz=346,slow=19,SNR=3.7
H04A Detroit Lake 76.90 47 *e*P **P 11 41 54.8 +1.4**
comp=Z,13nm,0.8s
LTY Liberty 77.02 44 *e*P **P 11 41 55.1 +1.0**
comp=Z,37nm,1.9s
I04A Tendick Farm, 77.05 48 P **P 11 41 54.2 0.0**
baz=290,SNR=7.4
HUMO Hull Mountain 77.07 49 *e*P **P 11 41 56.7 +2.4**
comp=Z,6.6nm,0.9s
KHMM Horse Mountain 77.10 51 *e*P **P 11 41 57.2 +2.4**
comp=Z,13nm,0.9s
G05D Wamic, OR 77.29 46 P **P 11 41 55.1 -0.5**
baz=290
J04D Umpqua Nationa 77.44 48 P **P 11 41 57.5 +0.8**
baz=290,SNR=7.0
B08A Colville Reser 77.48 43 *e*P **P 11 41 57.5 +0.9**
comp=Z,60nm,1.9s
YBH Yreka Blue Hor 77.54 50 P **P 11 41 58.0 +0.9**
comp=Z,4.7nm,0.7s,baz=178,slow=1.8,SNR=19
YBH LR LR 12 08 46.3
comp=Z,109nm,22.0s,baz=284,slow=30
YBH Yreka Blue Hor 77.54 50 *e*P **P 11 41 58.6 +1.5**
comp=Z,8.7nm,1.0s
YBH Yreka Blue Hor 77.54 50 *e*P **P 11 41 58.6 +1.5**
YBH pmax pmax
comp=Z,9.0nm,1.0s
M02C Callahan 77.55 50 P **P 11 41 58.6 +1.4**
baz=290,SNR=7.0
I05D Terrebonne, OR 77.59 47 P **P 11 41 57.4 +0.2**
baz=290
ARCES ARCESS Array B 77.62 341 P **P 11 41 56.7 -0.2**
comp=Z,4.0nm,0.6s,baz=63,slow=6.6,SNR=13
ARCES LR LR 12 20 57.8
comp=Z,193nm,18.9s,baz=70,slow=39
ARCES ARCESS Array B 77.62 341 *e*P **P 11 41 57.5 +0.6**
ARCES ARCESS Array B 77.62 341 *e*P **P 11 41 57.5 +0.6**
N02D Trinity Center 77.80 51 P **P 11 41 58.7 +0.2**
baz=290,SNR=6.6
K04D Chiloquin, OR 77.90 49 P **P 11 41 59.1 0.0**
baz=290
J05D Fort Rock, OR 78.03 48 P **P 11 42 00.6 +0.8**
baz=291,SNR=18
PINE Pine Mountain 78.05 47 *e*P **P 11 42 01.4 +1.4**
comp=Z,22nm,0.8s
WDC Whiskeytown Da 78.05 51 *e*P **P 11 42 01.9 +2.0**
comp=Z,18nm,1.4s
WDC Whiskeytown Da 78.05 51 *e*P **P 11 42 01.9 +2.0**
WDC pmax pmax
comp=Z,19nm,1.4s
M04C Macdoel 78.13 50 P **P 11 42 00.8 +0.3**
baz=290,SNR=10
C09A Chrisman Ranch 78.35 43 *e*P **P 11 42 02.8 +1.4**
comp=Z,18nm,1.3s
K05A Summer Lake 78.46 48 *e*P **P 11 42 03.9 +1.5**
comp=Z,35nm,1.3s
O03D Paynes Creek 78.68 51 P **P 11 42 03.9 +0.4**
baz=291
NEW Newport 78.89 42 P **P 11 42 04.5 +0.1**
baz=292,SNR=6.9
NEW Newport 78.89 42 *e*P **P 11 42 05.8 +1.4**
comp=Z,40nm,1.7s
NEW Newport 78.89 42 *e*P **P 11 42 05.8 +1.4**
NEW pmax pmax
comp=Z,40nm,1.7s
E09A Wood Farm, Sta 78.91 44 *e*P **P 11 42 06.2 +1.7**
comp=Z,9.8nm,0.8s
JOF Joensuu 79.13 334 P **P 11 42 05.7 +0.4**
JOF pmax pmax
comp=Z,43nm,0.7s
ORV Oroville 79.16 52 *e*P **P 11 42 07.0 +1.0**
comp=Z,19nm,1.4s
ORV Oroville 79.16 52 *e*P **P 11 42 07.0 +1.0**
ORV pmax pmax
comp=Z,19nm,1.4s
MOD Modoc Plateau 79.16 49 *e*P **P 11 42 07.4 +1.2**
comp=Z,22nm,1.6s
DAG Danmarks Havn 79.66 356 P **P 11 42 09.6 +1.6**
AFDM Forest Hills D 79.76 52 *e*P **P 11 42 10.7 +1.4**
comp=Z,26nm,1.7s
BEKR Beckworth 79.87 51 *e*P **P 11 42 11.1 +1.1**
comp=Z,16nm,0.9s
J08A Circle Bar Ran 79.88 47 *e*P **P 11 42 11.4 +1.4**
comp=Z,25nm,1.3s
BMO Blue Mountains 80.08 45 *e*P **P 11 42 12.2 +1.2**
comp=Z,11nm,1.1s
BMO Blue Mountains 80.08 45 *e*P **P 11 42 12.2 +1.2**
BMO pmax pmax
comp=Z,11nm,1.1s
WVOR Wild Horse Val 80.11 48 *e*P **P 11 42 12.5 +1.2**
comp=Z,11nm,1.0s
WVOR Wild Horse Val 80.11 48 *e*P **P 11 42 12.5 +1.2**
WVOR pmax pmax
comp=Z,11nm,1.0s
RUBR Rubicon Trail 80.32 52 *e*P **P 11 42 14.6 +2.0**
comp=Z,16nm,0.9s
OBN Obninsk 80.46 326 *e*P **P 11 42 12.9 +0.2**
OBN *e* 11 45 15.3
OBN *e*PPP PPP 11 47 09.9
CMB Columbia Colle 80.53 53 *e*P **P 11 42 14.7 +1.2**
comp=Z,16nm,0.9s
CMB Columbia Colle 80.53 53 *e*P **P 11 42 14.7 +1.2**
CMB pmax pmax
comp=Z,16nm,0.9s
VCNR Virginia City 80.59 51 *e*P **P 11 42 15.6 +1.6**
comp=Z,4.4nm,0.8s
PAHR Pah Rah Range 80.62 51 *e*P **P 11 42 15.5 +1.4**
comp=Z,10nm,1.1s
PNTR Pine Nut 80.70 52 *e*P **P 11 42 16.4 +1.8**
comp=Z,13nm,0.8s
TAOE Nuku Hiva Isla 81.00 104 *e*LR LR 12 07 29.5
comp=Z,199nm,25.7s
YERR Yerington 81.00 52 *e*P **P 11 42 17.4 +1.3**
comp=Z,16nm,1.2s
WAKR Walker 81.04 52 *e*P **P 11 42 18.3 +1.9**
comp=Z,9.3nm,0.8s
ZEI Tsey 81.32 313 *e*P **P 11 42 14.0 -3.8**
MSO Missoula 81.44 43 P **P 11 42 18.8 +0.5**
baz=295
MSO Missoula 81.44 43 *e*P **P 11 42 19.6 +1.4**
comp=Z,21nm,1.8s
PAGB Antelope Grade 81.50 55 *e*P **P 11 42 20.7 +2.1**
comp=Z,20nm,0.9s
KBZ Khabaz 81.62 314 P **P 11 42 20.1 +1.0**
comp=Z,9.5nm,0.8s,baz=139,slow=2.3,SNR=20
KBZ LR LR 12 22 03.5
comp=Z,233nm,18.4s,baz=70,slow=38
MFID Camas Ranch 81.63 46 *e*P **P 11 42 20.2 +0.8**
comp=Z,12nm,0.7s
MDPB Devils Postpil 81.64 53 *e*P **P 11 42 21.9 +2.2**
comp=Z,10nm,1.3s
RYN Ryan 81.66 52 *e*P **P 11 42 21.2 +1.6**
comp=Z,11nm,1.0s
KIV Kislovodsk 81.67 314 *e*P **P 11 42 20.5 +1.0**
KIV *e*S **S 11 52 32.8 +0.8**
KIV pmax pmax
comp=Z,10.0nm,0.9s
KIV MLR MLR
comp=Z,277nm,19.0s
OMMB Old Mammoth Mi 81.70 53 *e*P **P 11 42 22.1 +2.0**
comp=Z,16nm,1.5s
GNI Garni 81.79 310 LR LR 12 22 51.7
comp=Z,116nm,18.2s,baz=76,slow=39
KVN Kaiserville 81.80 51 *e*P **P 11 42 21.6 +1.2**
comp=Z,16nm,1.3s
SMMC Simmler 81.84 55 P **P 11 42 20.6 0.0**
baz=293
BMN Battle Mountai 81.87 50 *e*P **P 11 42 22.3 +1.6**
comp=Z,15nm,1.5s
BMN Battle Mountai 81.87 50 *e*P **P 11 42 22.3 +1.6**
BMN pmax pmax
comp=Z,15nm,1.5s
NV01 Mina Array Sit 81.89 52 *e*P **P 11 42 21.4 +0.4**
NVAR Mina Array Bea 81.89 52 P **P 11 42 22.1 +1.2**
comp=Z,6.9nm,0.7s,baz=266,slow=6.0,SNR=66
NVAR LR LR 12 12 35.0
comp=Z,209nm,20.5s,baz=90,slow=31
NEY Neytrino 81.93 314 ‖ *e*P **P 11 42 22.5 +1.5**
NEY pmax pmax
comp=Z,7.0nm,2.5s
NV11 Mina Array Sit 82.00 52 *e*P **P 11 42 22.6 +1.2**
comp=Z,0.7nm,1.0s
FINES FINESS Array B 82.00 335 P **P 11 42 19.4 -1.3**
comp=Z,3.9nm,0.5s,baz=74,slow=4.7,SNR=24
FINES LR LR 12 20 48.0
comp=Z,70nm,19.3s,baz=45,slow=37
PKM Mcpherson Peak 82.15 56 P **P 11 42 22.7 +0.4**
baz=293
VES Vestal, Richgr 82.33 54 P **P 11 42 23.0 +0.1**
baz=293,SNR=9.5
TIN Tinemaha, Big 82.48 53 P **P 11 42 24.7 +0.8**
baz=293
HLID Hailey 82.50 46 P **P 11 42 24.2 +0.2**
baz=295
HLID Hailey 82.50 46 *e*P **P 11 42 25.1 +1.1**

	comp=Z,26nm,0.4s						
SCZ2	Santa Cruz Isl	82.63	56	P		P	11 42 25.3 +0.7
	baz=293						
ARVC	Arvin	82.80	55	P		P	11 42 25.3 -0.1
	baz=293						
HRY	Holter Researc	82.80	42	eP		P	11 42 26.5 +1.1
LRM	Limekiln Ridge	82.81	43	eP		P	11 42 26.6 +0.9
CWC	Cottonwood Cre	82.84	54	P		P	11 42 25.4 -0.5
	baz=294						
ISA	Isabella, Lake	82.85	54	P		P	11 42 25.8 -0.1
	baz=293,SNR=5.1						
ISA	Isabella, Lake	82.85	54	eP		P	11 42 26.6 +0.7
	comp=Z,7.2nm,1.1s						
ISA	Isabella, Lake	82.85	54	eP		P	11 42 26.6 +0.7
ISA					pmax	pmax	
	comp=Z,7.0nm,1.1s						
DLMT	Dillon	82.91	44	eP		P	11 42 27.1 +1.0
	comp=Z,18nm,1.8s						
MCMT	McKenzie Canyo	82.98	44	eP		P	11 42 28.0 +1.4
SNCC	San Nicolas Is	83.00	57	P		P	11 42 26.8 +0.2
	baz=293						
GRAC	Grapevine Rang	83.14	53	P		P	11 42 27.9 +0.6
	baz=294						
DAC	Darwin (Calif)	83.26	54	eP		P	11 42 30.4 +2.2
	comp=Z,6.4nm,0.9s						
DAC	Darwin (Calif)	83.26	54	P		P	11 42 30.3 +2.2
DAC					pmax	pmax	
	comp=Z,6.0nm,1.0s						
BOZ	Bozeman (W)	83.42	43	P		P	11 42 28.5 -0.2
	baz=296,SNR=10.0						
BOZ	Bozeman (W)	83.42	43	eP		P	11 42 29.6 +0.9
BOZ	Bozeman (W)	83.42	43	eP		P	11 42 29.6 +0.9
MPMC	Manual Prospec	83.43	54	P		P	11 42 29.1 +0.1
	baz=294,SNR=12						
LRMC	Laurel Mtn Rad	83.52	54	P		P	11 42 29.6 +0.2
	baz=294						
EDW2	Edwards Air Fo	83.52	55	P		P	11 42 29.0 -0.3
	baz=294,SNR=5.8						
FURC	Furnace Creek,	83.73	53	P		P	11 42 29.5 -0.7
	baz=294,SNR=7.9						
FMP	Fort Macarthur	83.76	56	P		P	11 42 29.9 -0.6
	baz=294						
CIS	Catalina Islan	83.80	56	P		P	11 42 30.0 -0.7
	baz=294						
SCI2	San Clemente I	83.86	57	P		P	11 42 31.1 +0.2
	baz=294						
R11A	Troy Canyon, C	83.88	51	P		P	11 42 31.1 -0.1
	baz=295						
QLMT	Earthquake Lak	83.89	44	eP		P	11 42 33.1 +1.9
TPNV	Topopah Spring	83.98	52	P		P	11 42 31.8 0.0
	baz=294,SNR=16						
TPNV	Topopah Spring	83.98	52	eP		P	11 42 32.5 +0.8
	comp=Z,11nm,0.8s						
TPNV	Topopah Spring	83.98	52	eP		P	11 42 32.5 +0.8
TPNV					pmax	pmax	
	comp=Z,11nm,0.8s						
GSC	Goldstone, Bar	84.24	54	P		P	11 42 32.6 -0.4
	baz=294,SNR=9.6						
GSC	Goldstone, Bar	84.24	54	eP		P	11 42 34.1 +1.1
	comp=Z,12nm,1.0s						
FFC	Flin Flon	84.34	32	eP		P	11 42 34.0 +1.0
	comp=Z,19nm,0.8s						
FFC	Flin Flon	84.34	32	eP		P	11 42 34.0 +1.0
FFC					pmax	pmax	
	comp=Z,19nm,0.8s						
SHOC	Shoshone, Teco	84.39	53	P		P	11 42 33.9 +0.2
	baz=295						
SUMG	Summit	84.45	1	eP		P	11 42 35.1 +1.4
	comp=Z,8.2nm,0.7s						
SUMG	Summit	84.45	1	eP		P	11 42 35.1 +1.4
SUMG					pmax	pmax	
	comp=Z,8.0nm,0.7s						
IMW	Indian Meadow	84.62	44	eP		P	11 42 37.0 +2.0
	comp=Z,12nm,0.8s						
H17A	Grant Village	84.63	44	P		P	11 42 36.2 +1.2
	baz=297,SNR=9.8						
H17A	Grant Village	84.63	44	eP		P	11 42 38.5 +3.4
	comp=Z,13nm,0.9s						
MURC	Murrieta	84.65	56	P		P	11 42 35.0 0.0
	baz=294						
FXWY	Fox Creek	84.69	45	eP		P	11 42 36.7 +1.4
	comp=Z,32nm,1.8s						
FLWY	Flagg Ranch	84.69	44	eP		P	11 42 37.6 +2.3
	comp=Z,16nm,0.9s						
HEC	Hector,Ludlow	84.79	54	P		P	11 42 35.7 -0.1
	baz=295,SNR=6.8						
TPAW	Teton Pass	84.80	45	eP		P	11 42 37.4 +1.5
	comp=Z,4.7nm,0.8s						
MOOW	Moose Ponds	84.82	44	eP		P	11 42 37.7 +1.8
	comp=Z,4.4nm,0.9s						
TUQ	Turquoise Moun	84.84	54	P		P	11 42 36.9 +0.7
	baz=295,SNR=8.5						
REDW	Red Top Meadow	84.92	45	eP		P	11 42 38.4 +1.9
	comp=Z,5.4nm,0.9s						
SHPR	Sheep Range	84.96	53	eP		P	11 42 38.4 +1.7
	comp=Z,8.2nm,0.9s						
LOHW	Long Hollow	84.97	45	eP		P	11 42 38.7 +2.0
	comp=Z,21nm,1.7s						
109C	Camp Elliot, M	85.01	56	P		P	11 42 36.8 +0.1
	baz=294						
DUG	Dugway, Tooele	85.03	48	P		P	11 42 36.3 -0.7
	baz=296						
DUG	Dugway, Tooele	85.03	48	eP		P	11 42 38.1 +1.1
	comp=Z,11nm,0.8s						
DUG	Dugway, Tooele	85.03	48	eP		P	11 42 38.1 +1.1
DUG					pmax	pmax	
	comp=Z,11nm,0.8s						
AHID	Auburn Hatcher	85.03	45	eP		P	11 42 38.4 +1.4
	comp=Z,5.6nm,0.8s						
RLMT	Red Lodge	85.12	43	P		P	11 42 38.2 +0.8
	baz=298						
RLMT	Red Lodge	85.12	43	eP		P	11 42 38.6 +1.2
	comp=Z,20nm,0.7s						
PFO	Pinyon Flats O	85.20	56	P		P	11 42 38.2 +0.3
	baz=295,SNR=6.5						
PFO	Pinyon Flats O	85.20	56	eP		P	11 42 38.7 +0.8
	comp=Z,8.2nm,0.8s						
PFO	Pinyon Flats O	85.20	56	eP		P	11 42 38.7 +0.8
PFO					pmax	pmax	
	comp=Z,8.0nm,0.8s						
XPFO	Piæon Flat	85.20	56	eP		P	11 42 38.7 +0.7
	comp=Z,7.1nm,0.8s						
HWUT	Hardware Ranch	85.25	47	eP		P	11 42 39.2 +1.1
	comp=Z,12nm,0.8s						
GMRC	Granite Mounta	85.31	54	P		P	11 42 38.8 +0.3
	baz=295,SNR=10.0						
BELC	Belle Mtn. Jos	85.39	55	P		P	11 42 38.3 -0.6
	baz=295,SNR=7.0						
MONP2	Monument Peak	85.53	56	P		P	11 42 39.7 0.0
	baz=295						
LDFC	Landfair	85.60	54	eP		P	11 42 41.8 +1.9
	comp=Z,20nm,0.9s						
IKP	In-Ko-Pah, Jac	85.87	56	P		P	11 42 41.5 +0.3
	baz=295						
BC3	Big Chuckawall	85.94	55	P		P	11 42 42.1 +0.4
	baz=295,SNR=7.5						
IRM	Iron Mountain	85.96	55	P		P	11 42 41.5 -0.1
	baz=295,SNR=8.2						
SWSC	Sam W. Stewart	85.98	56	P		P	11 42 42.1 +0.4
	baz=295						
BW06	Boulder Array	86.04	45	P		P	11 42 42.3 +0.3
	baz=298						
BW06	Boulder Array	86.04	45	eP		P	11 42 42.6 +0.6
	comp=Z,3.4nm,0.9s						
PD31	Pinedale Array	86.04	45	eP		P	11 42 42.6 +0.6
PDAR	Pinedale Array	86.04	45	P		P	11 42 42.5 +0.5
	comp=Z,1.9nm,0.7s,baz=255,slow=3.7,SNR=18						
PDAR					LR	LR	12 15 58.9
	comp=Z,191nm,20.5s,baz=314,slow=32						
PDAR	Pinedale Array	86.04	45	eP		P	11 42 42.2 +0.1
LAO	LASA Array	86.22	40	P		P	11 42 43.4 +0.8
	baz=300						
LAO	LASA Array	86.22	40	eP		P	11 42 43.8 +1.1
	comp=Z,16nm,0.8s						
W13A	Hualapai Mount	86.50	53	eP		P	11 42 45.8 +1.3
AKASG	Malin Array Be	86.52	325	P		P	11 42 43.7 -0.2
	comp=Z,0.9nm,0.3s,baz=51,slow=5.0,SNR=2.9						
AKASG					LR	LR	12 23 30.1
	comp=Z,239nm,20.2s,baz=65,slow=37						
KIEV	Kiev	86.53	325	eP		P	11 42 44.6 +0.6
KIEV					pmax	pmax	
	comp=Z,4.0nm,0.6s						
Y12C	Blythe	86.61	55	eP		P	11 42 46.7 +2.0
	comp=Z,13nm,1.1s						
PDMCI	Parker Dam,Lak	86.65	54	P		P	11 42 45.3 +0.4
	baz=296,SNR=6.1						
GLA	Glamis	86.68	56	P		P	11 42 44.9 -0.2
	baz=296,SNR=6.8						
GLA	Glamis	86.68	56	eP		P	11 42 46.7 +1.6
	comp=Z,17nm,0.8s						
GLA	Glamis	86.68	56	P		P	11 42 46.7 +1.6
GLA					pmax	pmax	
	comp=Z,17nm,0.9s						
HFS	Hagfors	87.50	337	P		P	11 42 46.7 -1.8
	comp=Z,2.4nm,0.5s,baz=36,slow=5.9,SNR=8.2						
HFS					LR	LR	12 26 12.7
	comp=Z,113nm,18.4s,baz=46,slow=39						
113A	Mohawk Valley,	87.60	55	eP		P	11 42 50.6 +1.1
Y14A	Wickenburg	87.66	54	eP		P	11 42 50.9 +1.0
NB2	NORSAR Subarra	87.69	339	P		P	11 42 48.7 -0.8
	comp=Z,7.0nm,1.1s,baz=46,slow=5.1						
NOA	NORSAR Array B	87.69	339	LR		LR	12 25 48.2
	comp=Z,133nm,21.8s,baz=55,slow=38						
RAYN	Ar Rayn	87.92	295	eP		P	11 42 50.4 -0.9
RAYN	Ar Rayn	87.92	295	P		P	11 42 50.4 -0.9
WUAZ	Wupatki	88.15	52	P		P	11 42 53.1 +0.8
	baz=297						
WUAZ	Wupatki	88.15	52	eP		P	11 42 53.7 +1.3
	comp=Z,12nm,1.0s						
O20A	White River Ci	88.17	47	P		P	11 42 52.4 0.0
	baz=299,SNR=5.5						
O20A	White River Ci	88.17	47	eP		P	11 42 53.9 +1.5
	comp=Z,7.9nm,0.8s						
PV09	Paradox Valley	88.34	49	eP		P	11 42 55.0 +1.6
PV04	Paradox Valley	88.55	49	eP		P	11 42 55.9 +1.6
	comp=Z,10nm,1.0s						
PV05	Paradox Valley	88.57	49	eP		P	11 42 56.0 +1.6
	comp=Z,8.0nm,0.8s						
X16A	Lo Mia Camp, P	88.60	53	eP		P	11 42 56.1 +1.6
PV03	Paradox Valley	88.66	49	eP		P	11 42 55.7 +1.0
	comp=Z,9.4nm,1.0s						
214A	Organ Pipe Nat	88.69	56	P		P	11 42 55.9 +1.1
	baz=297						
PV02	Paradox Valley	88.76	49	eP		P	11 42 56.6 +1.3
	comp=Z,8.3nm,0.8s						
RSSD	Black Hills	88.86	42	P		P	11 42 56.0 +0.4
	baz=302						
PV01	Paradox Valley	88.91	49	eP		P	11 42 56.9 +0.9
N23A	Red Feather La	89.31	45	P		P	11 42 58.5 +0.7
	baz=301						
N23A	Red Feather La	89.31	45	eP		P	11 42 59.9 +2.0
	comp=Z,11nm,1.1s						
MVCO	Mesa Verde	89.40	49	P		P	11 42 58.1 -0.2
	baz=299						
MVCO	Mesa Verde	89.40	49	eP		P	11 43 00.2 +1.9
SFJD	Kangerlussuaq	89.44	6	LR		LR	12 22 57.4
	comp=Z,75nm,21.1s,baz=354,slow=36						
SMCO	Snowmass	89.49	47	eP		P	11 43 00.4 +1.5
	comp=Z,6.8nm,0.8s						
BRTR	Keskin Array B	89.60	314	P		P	11 42 57.0 -2.1
	comp=Z,1.8nm,0.8s,baz=94,slow=3.3,SNR=5.8						
BRTR					LR	LR	12 27 31.7
	comp=Z,64nm,18.1s,baz=34,slow=39						
X18A	Snowflake	89.64	52	eP		P	11 43 00.8 +1.3
ULM	Lac du Bonnet	89.96	34	LR		LR	12 20 58.2
	comp=Z,93nm,20.7s,baz=312,slow=34						
TUC	Tucson	90.06	55	P		P	11 43 02.3 +1.0
	baz=298						
TUC	Tucson	90.06	55	eP		P	11 43 03.0 +1.7
	comp=Z,16nm,1.6s						
TUC	Tucson	90.06	55	eP		P	11 43 03.0 +1.7
TUC					pmax	pmax	
	comp=Z,16nm,1.6s						
ISCO	Idaho Springs	90.08	46	P		P	11 43 01.9 +0.4
	baz=301						
S22A	4UR Ranch, Cre	90.30	48	P		P	11 43 02.3 -0.3
	baz=300,SNR=7.4						
S22A	4UR Ranch, Cre	90.30	48	eP		P	11 43 03.8 +1.2
	comp=Z,6.0nm,1.0s						
BUR04	Bucovina Ar. S	90.44	323	eP		P	11 43 02.5 -0.3
Q24A	Divide	90.82	47	P		P	11 43 05.3 +0.3
	baz=301						
A33A	Warroad	91.02	34	P		P	11 43 05.3 0.0
	baz=308						
E31A	Nome	91.10	37	P		P	11 43 05.8 0.0
	baz=306						
AGMN	Agassiz Nation	91.16	35	P		P	11 43 06.3 +0.3
	baz=308						
AGMN	Agassiz Nation	91.16	35	eP		P	11 43 06.7 +0.7
	comp=Z,8.5nm,0.8s						
SDCO	Great Sand Dun	91.21	48	P		P	11 43 06.4 -0.4
	baz=301,SNR=10						
SDCO	Great Sand Dun	91.21	48	eP		P	11 43 07.6 +0.8
	comp=Z,6.3nm,0.8s						
BORG	Borgarnes	91.56	354	LR		LR	12 25 02.1
	comp=Z,19nm,21.1s,baz=15,slow=36						
MMAI	Mount Meron Ar	91.67	307	LR		LR	12 29 39.5
	comp=Z,62nm,18.6s,baz=160,slow=39						
B34A	Aery, Baudette	91.68	34	P		P	11 43 08.3 -0.1
	baz=309						
TASM	ASL Pad, Albuq	91.95	51	P		P	11 43 10.2 0.0
	baz=300,SNR=9.2						
ANMO	Albuquerque	91.95	51	P		P	11 43 11.0 +0.8
	comp=Z,4.1nm,0.9s,baz=293,slow=7.7,SNR=19						
ANMO					LR	LR	12 20 04.5
	comp=Z,143nm,19.9s,baz=305,slow=33						
ANMO	Albuquerque	91.95	51	P		P	11 43 10.8 +0.6
	baz=300						
ANMO	Albuquerque	91.95	51	eP		P	11 43 12.1 +1.9
	comp=Z,5.5nm,0.9s						
ANMO	Albuquerque	91.95	51	eP		P	11 43 11.8 +1.6
ANMO					pmax	pmax	
	comp=Z,11nm,1.7s						
TASL	Snake Pit, Alb	91.95	51	P		P	11 43 10.5 +0.3
	baz=300,SNR=9.1						
121A	Cookes Peak, D	92.18	53	P		P	11 43 11.9 +0.6
	baz=299,SNR=6.2						
B35A	Bob, Littlefor	92.24	34	P		P	11 43 10.9 -0.1
	baz=309						
B35A	Bob, Littlefor	92.24	34	eP		P	11 43 11.4 +0.4
T25A	Trinidad	92.26	48	P		P	11 43 12.3 +0.7
	baz=302,SNR=6.6						
T25A	Trinidad	92.26	48	eP		P	11 43 12.8 +1.2
	comp=Z,6.8nm,0.9s						
H32A	Carlson Farm,	92.57	39	P		P	11 43 12.8 +0.2
	baz=306						
G33A	Ortonville	92.73	38	P		P	11 43 13.7 +0.4
	baz=307						
C36A	Pine Crest Far	93.08	34	P		P	11 43 14.9 0.0
	baz=310						
G34A	Benson	93.15	37	P		P	11 43 15.5 +0.3
	baz=308						
VYHS	Vyhne	93.24	327	eP		P	11 43 26.1 +10
F35A	Swonville	93.36	37	P		P	11 43 15.7 -0.5
	baz=309						
ECSD	EROS Data Cent	93.50	39	P		P	11 43 17.1 +0.2
	baz=307						
ECSD	EROS Data Cent	93.50	39	eP		P	11 43 17.8 +0.9
	comp=Z,17nm,1.8s						
E36A	McGregor	93.66	35	P		P	11 43 17.9 +0.3
	baz=310						
C38A	Sawbill Land.	93.91	34	P		P	11 43 18.9 +0.1
	baz=311						
F36A	Milaca	93.93	36	P		P	11 43 19.4 +0.6
	baz=309						
CLL	Collm	94.07	331	ePP		PP	11 47 05.0 +0.2
CLL				eS		S	11 54 26.0 -3.8
CLL				ePS		PS	11 55 50.0 +4.9
CLL				eSS		SS	12 00 49.0 +0.5
CLL				eSSSS			12 07 36.0
CLL				LmV			12 29 00.0
	comp=Z,200nm,20.5s						
LPIG	La Paz	94.22	62	LR		LR	12 21 41.1
	comp=Z,122nm,18.8s,baz=232,slow=33						
MNTX	Cornudas Mount	94.36	53	P		P	11 43 21.2 0.0
	baz=301,SNR=6.9						
MNTX	Cornudas Mount	94.36	53	eP		P	11 43 22.5 +1.3
	comp=Z,12nm,1.5s						
F38A	Pierce - Schro	94.75	35	P		P	11 43 23.5 +1.0
	baz=311						
J36A	Seneca 1, Swea	95.06	38	P		P	11 43 24.7 +0.6
	baz=309						
ATD	Arta Tunnel	95.21	285	LR		LR	12 26 01.7
	comp=Z,20nm,19.5s,baz=314,slow=35						
KHC	Kasperske Hory	95.36	330	eP		P	11 43 25.2 -0.1
	comp=Z,2.2nm,0.5s						
KHC	Kasperske Hory	95.36	330	eP		P	11 43 25.2 -0.1
KHC					pmax	pmax	
	comp=Z,2.0nm,0.5s						
GERES	GERESS Array B	95.50	329	LR		LR	12 30 32.7
	comp=Z,167nm,19.3s,baz=82,slow=38						
TX31	Lajitas Ar. Si	96.84	54	eP		P	11 43 33.8 +1.2
TXAR	Lajitas Array	96.84	54	P		P	11 43 32.4 -0.2
	comp=Z,0.5nm,0.6s,baz=268,slow=4.0,SNR=8.6						
TXAR					LR	LR	12 20 00.6
	comp=Z,87nm,21.9s,baz=0.0,slow=31						
K40A	Colesburg	97.27	37	P		Pdif	11 43 34.1 -0.1
	baz=311						
IDI	Anoyia	97.84	314	LR		LR	12 33 23.5
	comp=Z,57nm,18.4s,baz=89,slow=39						
SCHQ	Schefferville	98.00	17	LR		LR	12 29 44.9
	comp=Z,73nm,20.7s,baz=341,slow=37						
DAVOX	Davos/Dischmat	98.77	330	LR		LR	12 32 42.8
	comp=Z,158nm,18.1s,baz=83,slow=38						
TORD	Torodi Ar. Bea	128.10	310	PKP		PKPdf	11 49 06.4 -1.6
	comp=Z,0.4nm,0.4s,baz=18,slow=2.0,SNR=8.7						
PLCA	Paso Flores	146.42	129	PKPbc		PKPbc	11 49 42.2 0.0
	comp=Z,10nm,0.5s,baz=266,slow=3.6,SNR=35						
LPAZ	La Paz	149.38	83	PKP		PKPdf	11 49 47.9 +0.8
	comp=Z,18nm,0.6s,baz=272,slow=2.4,SNR=17						
LPAZ				PKPbc		PKiKP	11 49 52.3 -0.4
	comp=Z,17nm,0.6s,baz=328,slow=3.3,SNR=48						
SAML	Samuel	150.68	65	ePKPdf		PKPdf	11 49 48.3 -0.2
SAML				ePKPbc		PKPbc	11 49 54.0 0.0
SAML				ePKPab		PKPab	11 50 00.7 -0.2

UCR 27 11:31:26.0±1.5, 12°.37N×87°.39W, h66km±18km, ML3.4, 1C-2D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNGN	Cerro Negro	0.69	79	↓eP	Pn	11 31 40.9	+0.3
CNGN				eS	Sn	11 31 52.6	+1.4
COPN	Copaltepe	0.80	103	eP	Pn	11 31 41.9	0.0
COPN				eS	Sn	11 31 53.6	+0.1
MOMN	Momotombo	0.83	87	↓eP	Pn	11 31 42.0	-0.3
MOMN				eS	Sn	11 31 54.5	+0.3
CNCH	Conchagua	1.00	335	eP	Pn	11 31 45.3	+0.8
CNCH				eS	Sn	11 31 59.0	+0.9
APYN	Apoyeque	1.03	97	↑eP	Pn	11 31 44.6	0.0
APYN				eS	Sn	11 31 59.2	+0.7
APYN				IAML		11 32 00.0	
	comp=Z,859nm,0.2s						
XAVN	Gruta Xavier	1.06	102	eP	Pn	11 31 45.3	+0.2
XAVN				eS	Sn	11 31 59.5	+0.2
MGAN	Managua	1.14	101	eP	Pn	11 31 46.5	+0.4
MGAN				eS	Sn	11 32 02.4	+1.3
VSM	San Miguel	1.36	321	eP	Pn	11 31 49.4	+0.1
LCY	Lacayo	1.37	320	eP	Pn	11 31 49.1	-0.1
LCY				eS	Sn	11 32 08.3	+1.6
PACA	Pacayal	1.42	320	eP	Pn	11 31 50.5	+0.6
PACA				eS	Sn	11 32 07.8	-0.2
MATN	Matagalpa	1.54	68	eP	Pn	11 31 51.3	-0.1
UESV	Ojushtada	1.70	307	IAML		11 31 56.4	
	comp=Z,291nm,0.1s						
LFRS	El Faro	2.05	308	eP	Pn	11 31 58.6	+0.2
LFRS				eS	Sn	11 32 23.4	+0.3
LOMA	San Marcos	2.16	307	eP	Pn	11 32 00.0	+0.3
LOMA				eS	Sn	11 32 26.4	+1.0
SBLS	San Blas	2.62	304	eP	Pn	11 32 07.1	+0.8
SBLS				eS	Sn	11 32 39.5	+2.4
MTO3	Montecristo	2.78	317	eP	Pn	11 32 08.5	0.0
IXG	Ixpaco	3.48	301	eP	Pn	11 32 18.2	+0.3

MEX 27 11:40:20.0±0.4, 16°.86N×100°.43W, h4km±9km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.24	39	i P	Pg	11 40 24.5	-0.3
CAIG				i S	Sg	11 40 28.1	+0.1
ACP2	Acapulco	0.52	88	i P	Pg	11 40 29.7	-0.3
ACP2				eS	Sg	11 40 37.2	+0.5
ACX	Acapulco	0.54	89	eP	Pg	11 40 30.4	-0.1
ACX				eS	Sg	11 40 37.4	-0.1
MEIG	Mezcala	1.31	36	eP	Pg	11 40 40.9	-4.3
MEIG				eS	Sg	11 40 58.0	-4.3
ARIG	Puente Sto Nin	1.42	3	eP	Pn	11 40 42.9	-3.7
ARIG				eS	Sb	11 41 00.9	-4.6
TLIG	Tlapa	1.91	68	eP	Pn	11 40 53.9	+0.4

CSEM 27 11:44:18.5, 38°.67N×4°.15W, h0km, ML1.5, Mining explosion., Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EADA	Adamuz	0.60	214	Pg	Pg	11 44 29.1	-0.8
	1.3nm,0.3s,SNR=28						
EADA				Lg	Lg	11 44 38.0	
	5.8nm,0.4s,SNR=12						
PAB	San Pablo	0.89	350	ePdif	Pg	11 44 35.4	-0.3
PAB	San Pablo	0.89	350	eP	Pg	11 44 35.4	-0.2
PAB	San Pablo	0.89	350	Pg	Pg	11 44 35.5	-0.1
	SNR=7.9						
PAB				Lg	Lg	11 44 46.5	
	SNR=7.9						
ECAB	El Cabril	1.16	240	Pg	Pg	11 44 40.1	-0.5
	1.5nm,0.3s,SNR=15						
ECAB				Lg	Lg	11 44 54.4	
	7.0nm,0.2s						
EQES	Quesada	1.21	135	Pg	Pg	11 44 40.8	-0.9
	2.2nm,0.4s,SNR=12						
EQES				Lg	Lg	11 44 57.9	
	5.6nm,0.4s,SNR=7.4						
SESP	Santiago Espad	1.38	113	Pg	Pg	11 44 42.6	-2.3
	SNR=7.9						
SESP				Lg	Lg	11 45 02.4	
	SNR=7.9						
EGOR	Sierra Gorda,	1.55	179	Pg	Pn	11 44 46.5	-1.0
	SNR=7.9						
EGOR				Lg	Lg	11 45 08.0	
	SNR=7.9						
EQUE	Quentar	1.56	159	P	Pb	11 44 48.0	-0.4
	1.0nm,0.4s,SNR=6.4						
EQUE				Lg	Lg	11 45 09.1	
	4.0nm,0.4s,SNR=5.0						
ELGU	Los Guajares,	1.84	167	Lg	Lg	11 45 17.3	
	SNR=7.9						
ETOB	Tobarra	2.04	90	Lg	Lg	11 45 23.6	
	SNR=7.9						
EPLA	Plasencia	2.04	314	Lg	Lg	11 45 23.1	
	SNR=7.9						
EMIN	Mina Concepcio	2.18	246	Pg	Pb	11 44 57.9	-0.9
	SNR=7.9						
EMIN				Lg	Lg	11 45 28.3	
	2.3nm,0.4s,SNR=6.0						
EBAD	Badajoz	2.24	273	Pg	Pb	11 44 58.8	-1.0
	SNR=7.9						
EBAD				Lg	Lg	11 45 32.0	
	8.7nm,0.7s,SNR=12						

ISCJB ***27*** *12:08:59.2±0.3, 1°.75N±0°.03×127°.62E±0°.05, h150km, mb4.1/25, Error ellipse: s-maj=6.7km s-min=4.4km az=170.1*
IDC ***27*** *12:09:01.6±2.2, 1°.63N×127°.64E, h164km±20km, mb3.9/21, mb1 3.9/22, mb1mx3.7/59, mbtmp4.3/22, Error ellipse: s-maj=21.5km s-min=8.2km az=79.0*
DJA ***27*** *12:09:03.2±0.4, 2°.N±4°.×12°.8E±°, h122km±5km, M4.5/13, mb4.7/10, mB4.8/4, MLv4.5/13, Mw(mB)4.0/4*

SPSI **Sidrap Palu** 9.61 234 P Pn 12 11 17.1 +1.9
BATI **Baumata** 12.43 198 P Pn 12 11 55.9 +3.7
4.7nm,0.3s,baz=16,slow=11,SNR=3.4
JAY **Jayapura** 13.76 108 P P 12 12 13.6 +0.7
1.3nm,0.3s,baz=200,slow=12,SNR=8.8
JAY **Jayapura** 13.76 108 P P 12 12 14.0 +1.1
WRAB **Tennant Creek** 22.47 163 *e*P P 12 13 46.2 -1.0
7.0nm,0.6s
WRAB *e*pP pP 12 13 54.0 -21
WRA **Warramunga Arr** 22.47 163 P P 12 13 46.4 -0.9
8.2nm,0.6s,baz=343,slow=10,SNR=100
WRA PcP PcP 12 17 35.4 -0.9
0.3nm,0.6s,baz=338,slow=2.5,SNR=3.5
WRA S S 12 17 41.4 -1.6
0.4nm,0.5s,baz=334,slow=20,SNR=3.9
MBWA **Marble Bar** 23.95 198 *e*P P 12 14 00.8 0.0
6.3nm,0.3s
MBWA *e*pP pP 12 14 08.6 -22
ASAR **Alice Springs** 25.92 167 P P 12 14 18.1 -0.6
2.1nm,0.5s,baz=343,slow=7.2,SNR=41
ASAR PcP PcP 12 17 43.5 -0.2
0.8nm,0.6s,baz=2.1,slow=2.5,SNR=8.0
KSAR **Wonju Array Be** 35.60 0 P P 12 15 44.0 +0.5
KSRS **Korea Array** 35.61 0 P P 12 15 44.0 +0.4
3.2nm,0.6s,baz=178,slow=9.5,SNR=19
NWAO **Narrogin (SRO)** 35.77 195 P P 12 15 44.9 -0.1
12nm,0.9s,baz=288,slow=9.6,SNR=4.9
STKA **Stephens Creek** 35.91 159 P P 12 15 45.9 -0.3
1.5nm,0.4s,baz=324,slow=6.3,SNR=5.3
MJAR **Matsushiro Arr** 36.07 15 P P 12 15 46.0 -1.6
3.2nm,0.9s,baz=190,slow=10.0,SNR=9.2
XAN **Xi'an** 36.63 334 P P 12 15 53.0 +0.6
XAN pP pP 12 16 02.3 -23
XAN pmax pmax
comp=Z,9.0nm,0.9s
USRK **Ussuriysk Ar.** 42.53 5 P P 12 16 41.4 +0.4
comp=Z,2.9nm,0.8s,baz=137,slow=3.2,SNR=5.1
ASAJ **Asahikawa** 44.32 15 P P 12 16 55.8 +0.4
comp=Z,1.4nm,0.4s,baz=234,slow=8.6,SNR=10.0
ULN **Ulaanbaatar** 49.33 342 *e*P P 12 17 35.2 +0.8
comp=Z,3.1nm,0.9s
SONM **Songino Array** 49.51 341 P P 12 17 35.4 -0.3
comp=Z,1.8nm,0.6s,baz=153,slow=8.3,SNR=10
SONM PcP PcP 12 18 56.1 +0.7
comp=Z,0.4nm,0.5s,baz=160,slow=4.6,SNR=2.7
PETK **Petropavlovsk-** 57.02 21 P P 12 18 30.2 -0.1
comp=Z,1.7nm,0.6s,baz=191,slow=5.9
MKAR **Makanchi Array** 59.73 326 P P 12 18 49.8 +0.5
comp=Z,2.8nm,0.3s,baz=111,slow=7.8,SNR=50
MKAR PcP PcP 12 19 33.8 -0.8
comp=Z,0.9nm,0.6s,baz=119,slow=5.5,SNR=5.6
YAK **Yakutsk** 60.24 1 P P 12 18 52.5 +0.2
comp=Z,13nm,0.5s,baz=276,slow=1.6,SNR=6.0
KURBB **Kurchatov Arra** 63.93 328 P P 12 19 17.4 +0.2
comp=Z,3.9nm,0.6s,baz=128,slow=6.1,SNR=27
KURK **Kurchatov** 63.93 328 P P 12 19 17.4 +0.2
BVAR **Borovoye Array** 69.51 327 P P 12 19 52.5 0.0
comp=Z,1.3nm,0.6s,baz=126,slow=7.3,SNR=9.9
TIXI **Tiksi** 69.88 0 P P 12 19 53.8 -0.7
comp=Z,2.4nm,0.4s,baz=162,slow=4.5,SNR=6.2
WSAR **Wadi Sarin** 70.03 294 P P 12 19 56.2 -0.2
comp=Z,1.5nm,0.2s,baz=98,slow=12,SNR=5.7
VNDA **Vanda** 81.29 173 P P 12 20 58.9 -0.4
comp=Z,0.9nm,0.6s,baz=330,slow=6.5,SNR=5.4
KDAK **Kodiak Island** 83.17 32 P P 12 21 09.6 +0.2
comp=Z,2.7nm,0.8s,baz=255,slow=19,SNR=3.7
ILAR **Eielson Array** 86.59 25 P P 12 21 26.6 +0.2
comp=Z,0.2nm,0.7s,baz=242,slow=5.0,SNR=3.5
QSPA **South Pole Qui** 91.59 180 P P 12 21 49.9 -0.1
comp=Z,0.9nm,0.7s,baz=333,slow=4.5,SNR=2.8
ARCES **ARCESS Array B** 92.67 340 P P 12 21 53.7 -1.1
comp=Z,1.8nm,0.6s,baz=79,slow=5.2,SNR=6.4

*IGQ **27** 12:17:24.3±0.8, 2°S±5°×8°W±°, h10km, MLv5.2/9*
*ISCJB **27** 12:17:28.9±0.6, 1°.56S±0°.03×80°.88W±0°.04, h47km±5km, mb4.4/53, MS3.9/7, Error ellipse: s-maj=6.4km s-min=5.1km az=152.8*
*NEIC **27** 12:17:31.0±0.8, 1°.59S×80°.80W, h54km±7km, mb4.5/34, Mw4.7(IGQ), MW4.7(IGQ), Error ellipse: s-maj=8.0km s-min=5.6km az=63.0*
NEIC Felt at Bahia de Caraquez, Calceta, Chone, Jipijapa, Manta and Santa Elena.
*IDC **27** 12:17:32.3±2.9, 1°.51S×80°.79W, h65km±25km, mb3.8/22, mb1 4.0/27, mb1mx4.0/45, mbtmp4.2/27, ML3.5/4, MS3.8/7, Ms1 3.8/7, ms1mx3.3/41, Error ellipse: s-maj=18.6km s-min=11.3km az=59.0*
ISC 27 12:17:30.6±0.8, 1°.62S±0°.04×80°.87W±0°.05, h49km±8km, n182, σ1§75/181, mb4.4/53, MS3.6/7, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMIL	**Milagro (Trans**	**1.37**	**112**	P	**Pn**	**12 17 52.0**	**-1.3**
AMIL				S	**Sn**	**12 18 14.7**	**+4.4**
MILO	**Milagro-Astudi**	**1.47**	**116**	P	**Pn**	**12 17 51.2**	**-3.4**
MILO				S	**Sn**	**12 18 12.8**	**+0.1**
QUEV	**Quevedo**	**1.67**	**70**	P	**Pn**	**12 17 53.8**	**-3.7**
QUEV				S	**Sn**	**12 18 16.5**	**-1.3**
COHC	**Cochancay**	**1.82**	**117**	P	**Pn**	**12 17 56.3**	**-3.2**
MAG1	**Magdalena**	**1.89**	**35**	P	**Pn**	**12 17 57.5**	**-2.9**
ASDO	**Santo Domingo**	**2.21**	**52**	P	**Pn**	**12 18 00.6**	**-4.2**
ASDO				S	**Sn**	**12 18 32.0**	**+1.0**
RIOE1	**Riobamba**	**2.24**	**93**	P	**Pn**	**12 18 04.5**	**-1.1**
RIOE1				S	**Sn**	**12 18 34.7**	**+2.4**
BIL2	**Estacion Bilba**	**2.37**	**86**	P	**Pn**	**12 18 07.2**	**-0.1**
BBIL	**Ulba Tungurahu**	**2.39**	**86**	P	**Pn**	**12 18 06.7**	**-0.8**
BMAS	**Trigal station**	**2.39**	**87**	P	**Pn**	**12 18 07.3**	**-0.3**
PAST	**Pastocalle**	**2.41**	**67**	P	**Pn**	**12 18 06.3**	**-1.6**
ARRY	**Arrayan**	**2.42**	**87**	P	**Pn**	**12 18 07.3**	**-0.7**
POND	**Pondoa**	**2.42**	**85**	P	**Pn**	**12 18 07.4**	**-0.7**
RETU	**Refugio**	**2.43**	**86**	P	**Pn**	**12 18 07.9**	**-0.4**
BPAT	**Tungurahua Vol**	**2.44**	**87**	P	**Pn**	**12 18 08.1**	**-0.3**
RUN5	**Runtun**	**2.45**	**85**	P	**Pn**	**12 18 08.0**	**-0.5**
BRUN	**Tungurahua Vol**	**2.46**	**85**	P	**Pn**	**12 18 08.2**	**-0.5**
BULB	**Ulba Tungurahu**	**2.47**	**86**	P	**Pn**	**12 18 08.4**	**-0.2**
CAMI	**Rancho Maria**	**2.54**	**68**	P	**Pn**	**12 18 09.3**	**-0.5**
PIS1	**Pisayambo**	**2.54**	**77**	P	**Pn**	**12 18 09.2**	**-0.6**
PISA	**Pisayambo**	**2.55**	**77**	P	**Pn**	**12 18 09.4**	**-0.4**
NINA	**Atacazo Ninahu**	**2.56**	**61**	P	**Pn**	**12 18 10.1**	**-0.1**
BMOR	**Cotopaxi Volca**	**2.57**	**70**	P	**Pn**	**12 18 10.1**	**-0.1**
BNAS	**Cotopaxi Volca**	**2.57**	**68**	P	**Pn**	**12 18 10.8**	**+0.6**
NAS2	**Nasa**	**2.59**	**68**	P	**Pn**	**12 18 09.9**	**-0.6**
BREF	**Cotopaxi Volca**	**2.61**	**69**	P	**Pn**	**12 18 10.1**	**-0.7**
BVC2	**Cotopaxi Volca**	**2.64**	**69**	P	**Pn**	**12 18 10.4**	**-0.8**
BTAM	**Cotopaxi Volca**	**2.65**	**69**	P	**Pn**	**12 18 10.3**	**-1.0**
VC1	**Cotopaxi 1**	**2.65**	**68**	P	**Pn**	**12 18 10.8**	**-0.6**
PITA	**Cotopaxi Volc**	**2.66**	**67**	P	**Pn**	**12 18 10.0**	**-1.4**
GGPC	**Guagua Pichinc**	**2.69**	**58**	P	**Pn**	**12 18 09.6**	**-2.3**
PINO	**Pino**	**2.69**	**57**	P	**Pn**	**12 18 09.0**	**-2.9**
COV1	**Cotopaxi Volc**	**2.70**	**69**	P	**Pn**	**12 18 10.0**	**-2.1**
YANA	**Yana**	**2.74**	**57**	P	**Pn**	**12 18 10.1**	**-2.5**
ANTG	**Antisana-Guama**	**2.84**	**67**	P	**Pn**	**12 18 14.1**	**+0.1**
PUYO	**Puyo, Santa Ro**	**2.85**	**87**	P	**Pn**	**12 18 11.1**	**-2.5**
ANTM	**Antisana-La Mi**	**2.86**	**68**	P	**Pn**	**12 18 14.3**	**+0.1**
ANTS	**Antisana-Sarah**	**2.92**	**67**	P	**Pn**	**12 18 14.4**	**-0.7**
ARDO	**Archidona, Ten**	**3.13**	**79**	P	**Pn**	**12 18 13.3**	**-4.2**
CUIC	**Cuicocha-Domo**	**3.16**	**53**	P	**Pn**	**12 18 16.5**	**-1.7**
IMBA	**Imbabura, San**	**3.27**	**55**	P	**Pn**	**12 18 19.9**	**+0.2**
URCU	**Urcuqui**	**3.32**	**52**	P	**Pn**	**12 18 19.3**	**-1.2**
CAYA	**Cayambe**	**3.33**	**60**	P	**Pn**	**12 18 20.8**	**0.0**
YAHU	**Yahuarcocha**	**3.43**	**55**	P	**Pn**	**12 18 22.2**	**+0.3**
LITE1	**Lita**	**3.47**	**46**	P	**Pn**	**12 18 19.1**	**-3.2**
CONE	**Cono NE Rev Vo**	**3.58**	**64**	P	**Pn**	**12 18 25.0**	**+1.1**
CMBC	**Cumbal**	**3.97**	**50**	*e*P	**Pn**	**12 18 28.6**	**-0.7**
GCUF	**Volcan Galeras**	**4.52**	**51**	*e*P	**Pn**	**12 18 37.2**	**+0.2**
CRUC	**La Cruz**	**5.04**	**51**	*e*P	**Pn**	**12 18 43.8**	**-0.2**
GRGC	**Isla de Gorgon**	**5.33**	**30**	*e*P	**Pn**	**12 18 44.2**	**-3.5**
SOTA	**Rioblanco**	**5.67**	**49**	*e*P	**Pn**	**12 18 52.2**	**-0.5**
PCON	**Cinco Dias**	**5.95**	**49**	*e*P	**Pn**	**12 18 55.7**	**-1.0**
FLOC	**Florencia**	**6.11**	**59**	*e*P	**Pn**	**12 18 57.0**	**-1.5**
HORQ	**Saladito**	**6.61**	**40**	*e*P	Pn	12 18 59.4	-6.1
MARP	**Paez Belalcaza**	**6.62**	**48**	*e*P	**Pn**	**12 19 03.1**	**-2.5**
MALC	**Bahia Malaga**	**6.62**	**32**	*e*P	**Pn**	**12 19 03.1**	**-2.2**
BETC	**Betania**	**6.91**	**52**	*e*P	**Pn**	**12 19 09.6**	**+0.3**
YOTC	**Yotoco, Valle**	**7.17**	**39**	*e*P	Pn	12 19 08.2	-4.9
PLMC	**San Jos¨¹ del**	**7.94**	**35**	*e*P	Pn	12 19 14.3	-9.3
PRAC	**Prado**	**7.99**	**48**	*e*Pn	**Pn**	**12 19 21.2**	**-3.0**
PRAC	**Prado**	**7.99**	**48**	*e*P	**Pn**	**12 19 20.0**	**-4.2**
ANIL	**Santa Ana**	**8.17**	**42**	*e*P	Pn	12 19 22.2	-4.7
TOLC	**Tolima**	**8.29**	**42**	*e*P	**Pn**	**12 19 27.1**	**-1.5**
SJAC	**San Juan de Ar**	**8.46**	**55**	*e*P	**Pn**	**12 19 30.0**	**-0.6**
SOLC	**Bahia Solano**	**8.53**	**24**	*e*P	Pn	12 19 51.0	+19
VILC	**Villavicencio,**	**9.16**	**52**	*e*P	**Pn**	**12 19 39.5**	**-0.8**
ROSC	**El Rosal**	**9.17**	**46**	P	**Pn**	**12 19 39.1**	**-1.5**
ROSC	1.7nm,0.3s,baz=246,slow=20,SNR=2.5			S	**Sn**	**12 21 25.9**	**+3.2**
ROSC	**El Rosal**	**9.17**	**46**	*e*Pn	**Pn**	**12 19 40.1**	**-0.6**
ROSC				S	**Sn**	**12 21 25.9**	**+3.2**
ROSC	**El Rosal**	**9.17**	**46**	*e*P	**Pn**	**12 19 38.1**	**-2.5**
NORC	**Norcasia**	**9.32**	**40**	*e*P	**Pn**	**12 19 43.5**	**+1.1**
HELC	**Santa Helena**	**9.42**	**34**	*e*Pn	**Pn**	**12 19 44.8**	**+0.7**
HELC	**Santa Helena**	**9.42**	**34**	*e*P	**Pn**	**12 19 45.1**	**+1.1**
CHIC	**Chingaza**	**9.46**	**49**	*e*P	**Pn**	**12 19 43.9**	**-0.8**
PAYG	**Puerto Ayora**	**9.46**	**276**	*e*Pn	**Pn**	**12 19 42.8**	**-1.6**
PAYG				*e*Sn	**Sn**	**12 21 30.9**	**+1.5**
PTBC	**PUERTO BERRIO,**	**10.33**	**38**	*e*P	**Pn**	**12 19 56.7**	**+0.4**
CAPC	**Capurgana**	**10.78**	**19**	*e*P	Pn	12 19 46.0	-16
RUSC	**La Rusia**	**10.78**	**46**	*e*Pn	**Pn**	**12 20 02.8**	**0.0**
RUSC	**La Rusia**	**10.78**	**46**	*e*P	**Pn**	**12 20 03.3**	**+0.5**
ZARC	**Zaragoza, Cauc**	**10.86**	**33**	*e*P	Pn	12 20 09.1	+5.5
YOPC	**Yopal, Colombi**	**10.92**	**51**	*e*P	**Pn**	**12 20 02.5**	**-1.9**
NNA	**Nana**	**11.04**	**159**	P	**Pn**	**12 20 05.2**	**-0.8**
NNA	4.7nm,0.3s,baz=306,slow=10,SNR=4.7			S	**Sn**	**12 22 07.2**	**-0.9**
NNA	**Nana**	**11.04**	**159**	*e*Pn	**Pn**	**12 20 04.8**	**-1.2**
NNA	43nm,0.5s			*e*Sn	**Sn**	**12 22 07.0**	**-1.1**
BARC	**Barichara**	**11.20**	**43**	*e*P	**Pn**	**12 20 08.2**	**-0.1**
JTS	**JuntasAbangare**	**12.52**	**341**	P	**Pn**	**12 20 28.3**	**+2.2**
SJCC	**San Jacinto, C**	**12.77**	**26**	*e*P	**Pn**	**12 20 28.8**	**-0.8**
ESPN	**Las Esperanzas**	**14.15**	**346**	*e*Pn	**Pn**	**12 20 51.2**	**+3.0**
SDV	**Santo Domingo**	**14.60**	**44**	P	**Pn**	**12 20 54.4**	**-0.1**
SDV	**Santo Domingo**	**14.60**	**44**	*e*Pn	**Pn**	**12 20 53.9**	**-0.6**
SDV	**Santo Domingo**	**14.60**	**44**	*e*P	**P**	**12 20 59.1**	**-0.7**
SAML	**Samuel**	**19.04**	**113**	*e*P	**P**	**12 21 47.6**	**-1.2**
LPAZ	**La Paz**	**19.23**	**140**	P	**Pn**	**12 21 52.5**	**-0.3**
LPAZ	comp=Z,446nm,19.0s,baz=306,slow=41			LR	LR	12 30 34.7	
LPAZ	**La Paz**	**19.23**	**140**	*e*P	**Pn**	**12 21 52.6**	**-0.2**
PCRV	**Puerto La Cruz**	**19.96**	**54**	P	**P**	**12 21 59.0**	**+0.1**
MNMC	**Minye Minye**	**20.61**	**148**	*e*P	**P**	**12 22 06.6**	**+0.5**
PTGA	**Pitinga**	**20.92**	**88**	P	**P**	**12 22 08.1**	**-1.1**
PB01	**IPOC Station P**	**22.27**	**151**	*e*P	**P**	**12 22 24.0**	**+0.3**
GRGR	**Grenville**	**23.48**	**54**	*e*P	**P**	**12 22 35.7**	**-0.3**
AGP	**Aguadilla**	**24.06**	**34**	*e*P	**P**	**12 22 38.7**	**-2.7**
SIV	**San Ignacio**	**24.18**	**127**	P	**P**	**12 22 42.7**	**+0.2**
AOPR	**Arecibo Observ**	**24.22**	**34**	*e*P	**P**	**12 22 41.3**	**-1.7**
SJG	**San Juan**	**24.39**	**36**	P	**P**	**12 22 43.5**	**-0.8**
GO02	**Mina Guanaco**	**25.81**	**156**	*e*P	**P**	**12 22 59.8**	**+2.2**
DWPF	**Disney Wildern**	**29.57**	**359**	*e*P	**P**	**12 23 33.9**	**+3.1**
CPUP	**Villa Florida**	**33.40**	**139**	P	**P**	**12 24 04.7**	**+0.1**
CPUP	1.6nm,0.7s,baz=304,slow=9.4,SNR=3.4			LR	LR	12 40 20.1	
257A	**Skidaway Islan**	**33.42**	**360**	*e*P	**P**	**12 24 04.3**	**-0.3**
LRAL	**Lakeview Retre**	**34.95**	**351**	*e*P	**P**	**12 24 17.4**	**-0.5**
TKL	**Tuckaleschee C**	**37.19**	**356**	P	**P**	**12 24 35.3**	**-1.8**
RPN	**Rapa Nui**	**37.25**	**225**	LR	LR	12 36 25.9	
TXAR	**Lajitas Array**	**37.73**	**326**	P	**P**	**12 24 42.1**	**+0.3**
TXAR	0.2nm,0.7s,baz=149,slow=13,SNR=2.2			PcP	**PcP**	**12 26 58.5**	**+0.2**
LPIG	**La Paz**	**38.36**	**314**	LR	LR	12 36 51.3	
PLCA	**Paso Flores**	**40.04**	**168**	P	**P**	**12 25 02.2**	**+1.3**
MNTX	**Cornudas Mount**	**40.49**	**327**	*e*P	**P**	**12 25 08.4**	**+3.6**
S39A	**Bolivar**	**40.78**	**345**	*e*P	**P**	**12 25 05.9**	**-1.2**
ANMO	**Albuquerque**	**43.57**	**329**	P	**P**	**12 25 29.8**	**-0.2**
ANMO	**Albuquerque**	**43.57**	**329**	*e*P	**P**	**12 25 30.9**	**+0.8**
TUC	**Tucson**	**44.05**	**323**	*e*P	**P**	**12 25 35.0**	**+1.1**
SDCO	**Great Sand Dun**	**45.32**	**332**	*e*P	**P**	**12 25 44.4**	**+0.2**
I39A	**Houston**	**46.27**	**349**	*e*P	**P**	**12 25 48.8**	**-2.4**
WUAZ	**Wupatki**	**46.66**	**325**	*e*P	**P**	**12 25 56.1**	**+1.6**
ECSD	**ERS Data Cent**	**47.31**	**344**	*e*P	**P**	**12 25 58.1**	**-1.3**
PV03	**Paradox Valley**	**47.34**	**330**	*e*P	**P**	**12 26 01.3**	**+1.4**
W13A	**Hualapai Mount**	**47.84**	**323**	*e*P	**P**	**12 26 08.6**	**+4.7**
PDAR	**Pinedale Array**	**51.19**	**333**	P	**P**	**12 26 28.9**	**-0.4**
PDAR	0.3nm,0.6s,baz=110,slow=9.7,SNR=3.0			PcP	**PcP**	**12 27 42.9**	**-1.2**
PDAR	**Pinedale Array**	**51.19**	**333**	*e*P	**P**	**12 26 32.2**	**+3.0**
PDAR	0.3nm,0.5s,baz=140,slow=4.7,SNR=2.7			PcP	**PcP**	**12 27 42.9**	**-1.2**
AGMN	**Agassiz Nation**	**51.41**	**347**	*e*P	**P**	**12 26 29.7**	**-0.8**
OMMB	**Old Mammoth Mi**	**52.61**	**322**	*e*P	**P**	**12 26 44.0**	**+4.0**
NV11	**Mina Array Sit**	**52.61**	**323**	*e*P	**P**	**12 26 44.0**	**+4.1**
NV01	**Mina Array Sit**	**52.70**	**323**	*e*P	**P**	**12 26 43.0**	**+2.5**
NVAR	**Mina Array Bea**	**52.70**	**323**	P	**P**	**12 26 40.2**	**-0.3**
ULM	**Lac du Bonnet**	**53.26**	**348**	P	**P**	**12 26 42.7**	**-1.4**
ULM	**Lac du Bonnet**	**53.26**	**348**	*e*P	**P**	**12 26 43.0**	**-1.1**
HLID	**Hailey**	**54.11**	**330**	*e*P	**P**	**12 26 51.9**	**+1.1**
BOZ	**Bozeman (W)**	**54.34**	**334**	*e*P	**P**	**12 26 52.4**	**+0.1**
MFID	**Camas Ranch**	**54.71**	**329**	*e*P	**P**	**12 26 57.0**	**+2.0**
WVOR	**Wild Horse Val**	**55.52**	**327**	*e*P	**P**	**12 27 04.1**	**+3.2**
RKT	**Rikitea**	**56.59**	**243**	*e*T	T	13 27 56.3	
K05A	**Summer Lake**	**56.97**	**326**	*e*P	**P**	**12 27 14.2**	**+2.9**
YBH	**Yreka Blue Hor**	**57.40**	**324**	P	**P**	**12 27 14.5**	**+0.2**
YBH	1.5nm,0.7s,baz=144,slow=8.7,SNR=3.2			LR	LR	12 49 43.2	
YBH	**Yreka Blue Hor**	**57.40**	**324**	*e*P	**P**	**12 27 18.1**	**+3.8**
YKA	**Yellowknife Ar**	**68.84**	**344**	P	**P**	**12 28 27.9**	**-1.6**
PPT2	**Papeete2**	**69.23**	**252**	*e*LR	LR	12 49 26.9	
LIC	**Lanto**	**76.11**	**83**	*e*P	**P**	**12 29 16.4**	**+2.5**
TIC	**Toumodi**	**76.14**	**83**	*e*P	**P**	**12 29 13.1**	**-1.0**
KIC	**Kosan Boka**	**76.40**	**83**	*e*P	**P**	**12 29 15.2**	**-0.4**
KOWA	**Kowa**	**77.69**	**75**	P	**P**	**12 29 22.5**	**-0.2**
KOWA	3.6nm,0.6s,baz=262,slow=8.7,SNR=7.3			LR	LR	13 04 57.6	
DAWY	**Dawson**	**78.22**	**337**	*e*P	**P**	**12 29 24.8**	**+0.1**
SUMG	**Summit**	**78.73**	**12**	*e*P	**P**	**12 29 27.2**	**-0.6**
BORG	**Borgarnes**	**78.94**	**22**	P	**P**	**12 29 29.5**	**+0.9**
RAR	**Rarotonga**	**79.07**	**249**	P	**P**	**12 29 31.2**	**+1.0**
EGAK	**Eagle**	**79.23**	**338**	*e*P	**P**	**12 29 30.1**	**-0.2**
MDT	**Midelt**	**79.35**	**56**	P	**P**	**12 29 31.1**	**-0.7**
PAX	**Paxson**	**80.16**	**335**	*e*P	**P**	**12 29 34.6**	**-0.8**
ESDC	**Sonseca Array**	**80.97**	**50**	P	**P**	**12 29 39.8**	**-0.5**
ES19	**SONSECA Array**	**81.03**	**50**	*e*P	**P**	**12 29 41.0**	**+0.5**
ILAR	**Eielson Array**	**81.45**	**337**	P	**P**	**12 29 41.0**	**-1.1**
SKT	**Skwentna**	**82.44**	**333**	*e*P	**P**	**12 29 46.9**	**-0.6**
VNA3	**Neumayer Olymp**	**82.48**	**162**	P	**P**	**12 29 48.7**	**+1.2**
RSO	**Redoubt South**	**82.56**	**332**	*e*P	**P**	**12 29 50.2**	**+1.9**
VNA1	**Neumayer--Stat**	**82.75**	**161**	P	**P**	**12 29 49.6**	**+0.8**
MLY	**Manley**	**83.08**	**336**	*e*P	**P**	**12 29 50.5**	**-0.3**
TORD	**Torodi Ar. Bea**	**83.13**	**77**	P	**P**	**12 29 51.1**	**-0.9**
TORD	0.8nm,0.6s,baz=289,slow=5.8,SNR=4.6			LR	LR	13 04 13.3	
SNAA	**Sanae**	**84.70**	**162**	P	**P**	**12 29 60.0**	**+1.0**
SNAA	**Sanae**	**84.70**	**162**	P	**P**	**12 29 59.3**	**+0.3**
SNAA	**Sanae**	**84.70**	**162**	*e*P	**P**	**12 29 59.5**	**+0.5**
QSPA	**South Pole Qui**	**88.44**	**180**	P	**P**	**12 30 17.9**	**+0.6**
QSPA	**South Pole Qui**	**88.44**	**180**	*e*P	**P**	**12 30 18.5**	**+1.2**
VNDA	**Vanda**	**94.14**	**191**	P	**P**	**12 30 42.9**	**-0.5**
H11S2	**WAKE ISLAND Hyl**	**11.76**	**289**	T	T	14 36 53.2	
H11S1	**WAKE ISLAND Hyl**	**11.77**	**289**	T	T	14 36 53.4	
H11S3	**WAKE ISLAND Hyl**	**11.78**	**289**	T	T	14 36 54.4	
ZALV	**Zalesovo Beam**	**126.53**	**10**	PKP	**PKPdf**	**12 36 27.2**	**-1.0**
KURK	**Kurchatov**	**128.09**	**16**	PKP	**PKPdf**	**12 36 31.2**	**-0.1**
KURBB	**Kurchatov Arra**	**128.15**	**17**	PKP	**PKPdf**	**12 36 31.2**	**-0.2**
MKAR	**Makanchi Array**	**132.67**	**16**	PKP	**PKPdf**	**12 36 39.5**	**-0.7**
KSRS	**Korea Array**	**135.58**	**327**	PKP	**PKPdf**	**12 36 43.9**	**-1.9**
KSAR	**Wonju Array Be**	**135.61**	**327**	PKP	**PKPdf**	**12 36 43.9**	**-2.0**
ASAR	**Alice Springs**	**137.87**	**231**	PKhKP	PKPpre	12 36 45.3	
WRA	**Warramunga Arr**	**139.36**	**236**	PKhKP	PKPpre	12 36 45.4	
WRA				PKP	**PKPdf**	**12 36 52.7**	**-0.7**
HHC	**Hu-ho-hao-te**	**139.36**	**345**	*e*PKP	**PKPdf**	**12 36 54.3**	**+1.4**
HHC				PP	**PP**	**12 39 51.0**	**+5.1**
LZH	**Lanzhou**	**145.43**	**353**	*e*PKPbc	**PKPbc**	**12 37 01.5**	**-2.4**
LZH				pPKP	pPKPab	12 37 16.5	-2.3
LZH				sPKP		12 37 22.3	
LZH				LR	LR		
	comp=N,68nm,18.3s						
LZH				LR	LR		
	comp=E,73nm,18.0s						
LZH				LR	LR		
	comp=Z,97nm,20.2s						
CD2	**Chengdu**	**150.54**	**352**	PKPbc	**PKPdf**	**12 37 10.3**	**-2.0**
CMAR	**Chiang Mai Arr**	**163.27**	**1**	PKPab	**PKPab**	**12 38 17.5**	**-1.5**
	comp=Z,0.6nm,0.4s,baz=1.3,slow=3.9,SNR=2.6						

*ISK **27** 12:34:10.2, 37°.24N×28°.19E, h5km, ML2.5/8*
*ISCJB **27** 12:34:11.0±0.4, 37°.23N±0°.03×28°.18E±0°.03, h0km, Error ellipse: s-maj=4.4km s-min=3.3km az=31.6*
*CSEM **27** 12:34:11.1±0.2, 37°.23N×28°.19E, h2km, ML2.5, Error ellipse: s-maj=3.7km s-min=2.9km az=28.0, Suspected Mining explosion.*
*DDA **27** 12:34:11.0, 37°.23N×28°.17E, h7km, Ml2.5, Suspected Mining explosion.*
ISC 27 12:34:11.4±0.9, 37°.25N±0°.02×28°.24E±0°.02, h0km, n33, σ1§02/50, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.12**	**164**	PG	**Pg**	**12 34 13.6**	**-0.1**
YER	**Yerkesik**	**0.12**	**164**	*e*Pg	**Pg**	**12 34 13.6**	**-0.1**
MLSB	**Milas**	**0.37**	**277**	PG	**Pg**	**12 34 17.9**	**-0.6**
MLSB				SG	**Sg**	**12 34 23.4**	**+0.1**
MLSB	**Milas**	**0.37**	**277**	*e*Pg	**Pg**	**12 34 17.9**	**-0.6**
MLSB				*e*Sg	**Sg**	**12 34 23.4**	**+0.1**
TURN	**Turunc**	**0.48**	**142**	PG	**Pg**	**12 34 19.6**	**-1.0**
TURN	**Turunc**	**0.48**	**142**	*i* P	**Pg**	**12 34 19.6**	**-1.0**
TURN				*i* S	**Sg**	**12 34 26.2**	**-0.5**
TURN	**Turunc**	**0.48**	**142**	P	**Pg**	**12 34 19.6**	**-1.0**
TURN				S	**Sg**	**12 34 26.2**	**-0.5**
AYDN	**Tasoluk**	**0.50**	**325**	*i* P	**Pg**	**12 34 20.8**	**-0.1**
AYDN				*i* S	**Sg**	**12 34 28.1**	**+0.7**
AYDN	**Tasoluk**	**0.50**	**325**	P	**Pg**	**12 34 20.8**	**-0.1**
AYDN				S	**Sg**	**12 34 28.1**	**+0.7**
DALY	**Dalyan (Mu¨la**	**0.55**	**143**	PG	**Pg**	**12 34 21.5**	**-0.4**
DALY	**Dalyan (Mu¨la**	**0.55**	**143**	*i* P	**Pg**	**12 34 21.5**	**-0.4**
DALY				*i* S	**Sb**	**12 34 31.7**	**-0.5**
DALY	**Dalyan (Mu¨la**	**0.55**	**143**	P	**Pg**	**12 34 21.5**	**-0.4**
DALY				S	**Sb**	**12 34 31.7**	**-0.5**
TAVA	**DENIZLI_Tavas**	**0.58**	**68**	*i* P	**Pb**	**12 34 23.4**	**-1.1**
TAVA				*i* S	**Sb**	**12 34 31.8**	**-1.5**
TAVA	**DENIZLI_Tavas**	**0.58**	**68**	P	**Pb**	**12 34 23.4**	**-1.1**
TAVA				S	**Sb**	**12 34 31.8**	**-1.5**
DAT	**Datca**	**0.74**	**226**	PG	**Pg**	**12 34 25.3**	**-0.4**
DAT	**Datca**	**0.74**	**226**	*i* P	**Pg**	**12 34 25.1**	**-0.6**
DAT				*i* S	**Sb**	**12 34 38.6**	**+0.6**
DAT	**Datca**	**0.74**	**226**	P	**Pg**	**12 34 25.1**	**-0.6**
DAT				S	**Sb**	**12 34 38.6**	**+0.6**
AYDB	**Zeytinkoy-Aydi**	**0.75**	**338**	PG	**Pg**	**12 34 25.3**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**0.75**	**338**	*e*Pg	**Pg**	**12 34 25.3**	**-0.4**
BODT	**Bodrum**	**0.77**	**256**	PG	**Pg**	**12 34 24.3**	**-1.8**
BODT	**Bodrum**	**0.77**	**256**	*e*Pg	**Pg**	**12 34 24.3**	**-1.8**
DNZL	**Cakiroluk**	**0.78**	**56**	*i* P	**Pb**	**12 34 27.3**

MNMC	**Minye Minye**	**8.74**	**136**	*e*Pn	**Pn**	**12 43 15.5**	**+2.0**
MNMC				*e*Sn	**Sn**	**12 44 46.9**	**-3.6**
SAML	**Samuel**	**13.19**	**74**	*e*Pn	**Pn**	**12 44 12.5**	**-0.8**
SIV	**San Ignacio**	**14.79**	**104**	P	**Pn**	**12 44 34.7**	**+0.5**
	0.1nm,0.3s,baz=266,slow=13,SNR=6.5						
LCO	**Las Campanas**	**16.78**	**164**	*e*Pn	**Pn**	**12 44 59.4**	**+0.2**
	30nm,1.5s						
GO04	**Tololo Observa**	**17.86**	**165**	*e*P	**P**	**12 45 09.8**	**-2.0**
	33nm,1.4s						
PAYG	**Puerto Ayora**	**18.64**	**310**	*e*P	**Pn**	**12 45 22.9**	**+1.2**
	31nm,0.9s						
PTGA	**Pitinga**	**19.97**	**54**	P	**P**	**12 45 34.9**	**+0.2**
	0.4nm,0.3s,baz=258,slow=17,SNR=7.3						
PTGA	**Pitinga**	**19.97**	**54**	*e*P	**Pn**	**12 45 35.6**	**-1.6**
	9.4nm,1.4s						
CPUP	**Villa Florida**	**22.06**	**130**	*e*P	**P**	**12 45 59.5**	**+2.4**
	24nm,1.9s						
BCIP	**Isla Barro Col**	**22.24**	**350**	*e*P	**P**	**12 46 01.3**	**+2.3**
	54nm,1.8s						
SDV	**Santo Domingo**	**22.29**	**14**	P	**P**	**12 45 57.8**	**-1.9**
	8.2nm,0.5s,baz=248,slow=18,SNR=2.9						
TXAR	**Lajitas Array**	**49.75**	**328**	P	**P**	**12 49 54.0**	**+1.0**
	0.4nm,0.4s,baz=156,slow=8.0,SNR=9.6						
TXAR				pP	**pP**	**12 50 15.3**	**+0.3**
	0.2nm,0.6s,baz=146,slow=7.4,SNR=2.3						
TXAR				sP	**sP**	**12 50 23.7**	**-1.6**
	0.4nm,0.7s,baz=138,slow=9.6,SNR=3.4						
PDAR	**Pinedale Array**	**63.35**	**333**	P	**P**	**12 51 30.3**	**+0.8**
	0.2nm,0.6s,baz=153,slow=6.1,SNR=2.9						
TORD	**Torodi Ar. Bea**	**81.25**	**74**	P	**P**	**12 53 16.5**	**+0.2**
	0.6nm,0.8s,baz=253,slow=1.5						
TORD				sP	**sP**	**12 53 50.6**	**+0.7**
	1.4nm,1.0s,baz=241,slow=4.8,SNR=4.2						
H11N3	**WAKE ISLAND Hyl**	**19.51**	**285**	T	T	15 10 17.6	
	baz=96,slow=74,SNR=7.6						
H11N2	**WAKE ISLAND Hyl**	**19.52**	**285**	T	T	15 10 18.9	
	baz=96,slow=74,SNR=7.4						
H11N1	**WAKE ISLAND Hyl**	**19.53**	**285**	T	T	15 10 17.6	
	baz=96,slow=74,SNR=4.4						
H11S2	**WAKE ISLAND Hyl**	**19.61**	**284**	T	T	15 09 25.8	
	baz=93,slow=74,SNR=5.5						
H11S1	**WAKE ISLAND Hyl**	**19.62**	**284**	T	T	15 09 41.4	
	baz=93,slow=74,SNR=4.2						
H11S3	**WAKE ISLAND Hyl**	**19.63**	**284**	T	T	15 09 24.7	
	baz=93,slow=74,SNR=4.0						
ASAR	**Alice Springs**	**133.35**	**219**	PKP	**PKPdf**	**13 00 15.9**	**0.0**
	0.7nm,1.1s,baz=120,slow=2.7,SNR=4.3						
WRA	**Warramunga Arr**	**135.76**	**223**	PKP	**PKPdf**	**13 00 20.7**	**+0.2**
	0.3nm,0.4s,baz=125,slow=2.1,SNR=7.4						
SONM	**Songino Array**	**145.11**	**357**	PKPbc	**PKPdf**	**13 00 37.2**	**+0.5**
	0.4nm,0.4s,baz=353,slow=3.5,SNR=4.9						
SONM				sPKPbc	**sPKPdf**	**13 01 08.8**	**-2.6**
	1.4nm,0.9s,baz=321,slow=2.9,SNR=6.4						

BJI ***27*** *12:56:53.0,8°.30S×120°.00E,h10km,mb4.9/66,mB5.1/47, Ms4.7/53,Ms7 4.4/53*

MOS ***27*** *12:56:57.6±1.0,8°.21S×119°.94E,h41km,mb5.2/40, Error ellipse: s-maj=9.0km s-min=5.3km az=115.2*

ISCJB ***27*** *12:56:58.6±0.3,8°.27S±0°.02×119°.85E±0°.02,h50km±3km, mb5.0/113,MS4.4/60,Error ellipse: s-maj=3.2km s-min=2.6km az=41.9*

DJA ***27*** *12:56:58.9±0.4,8°S±1°×12°0E±°,h24km±3km,M5.0/77, mB5.4/37,mb5.2/77,MLv5.5/29,Mw(mB)4.9/37*

NEIC ***27*** *12:57:01.3±0.5,8°.30S×119°.94E,h61km±5km,mb5.2/28, Error ellipse: s-maj=5.7km s-min=3.8km az=48.0*

NEIC Felt [IV] at Labuanbajo and Ruteng. Felt [III] at Bima, Sumbawa and [II] at Waikabubak, Sumba.

IDC ***27*** *12:57:01.3±2.2,8°.19S×119°.92E,h58km±19km,mb4.6/32, mb1 4.6/34,mb1mx4.5/50,mbtmp4.9/34,ML3.9/2,MS4.3/43, Ms1 4.3/43,ms1mx4.2/57,Error ellipse: s-maj=13.1km s-min=8.9km az=71.0*

GCMT ***27*** *12:57:01.3±0.2,8°.12S×119°.89E,h38km,MW5.2/88, Moment Tensor Solution. s77,c118; s88,c142; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.87±.18; $M_{\theta\theta}$-6.14±.11; $M_{\phi\phi}$2.27±.16; $M_{r\theta}$-3.30±.13; $M_{\theta\phi}$-1.00±.09; $M_{r\phi}$-2.04±.18; Best double couple: $M_0$6.54800×10^{16} NP1:ϕ_s242.00000°,δ67.00000°,λ65.00000°. NP2: ϕ_s112.00000°,δ34.00000°,λ135.00000°. Principal axes: T 5.7130, Plg60.0000°, Azm114.0000°; N 1.6690, Plg23.0000°, Azm252.0000°; P -7.3820, Plg18.0000°, Azm350.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 27 12:56:59.9±0.4,8°.34S±0°.03×119°.87E±0°.03,h45km±3km, h46km:pP-P,n393,σ1§71/421,mb5.0/113,MS4.4/60, 12C-8D,Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**1.38**	**200**	P	**Pn**	**12 57 23.3**	**+0.6**
WBSI				S	**Sn**	**12 57 42.7**	**+2.9**
WSI	**Waingapu**	**1.39**	**162**	P	**Pn**	**12 57 24.2**	**+1.4**
WSI				S	**Sn**	**12 57 41.7**	**+1.8**
EDFI	**Ende, Flores**	**1.84**	**103**	P	**Pn**	**12 57 30.0**	**+0.9**
EDFI				S	**Sn**	**12 57 53.4**	**+2.1**
BASI	**Baing, Sumba**	**1.99**	**160**	P	**Pn**	**12 57 32.5**	**+1.4**
BASI				S	**Sn**	**12 57 57.4**	**+2.5**
PLAI	**Plampang**	**2.13**	**257**	P	**Pn**	**12 57 33.2**	**+0.2**
PLAI				S	**Sn**	**12 57 58.9**	**+0.7**
BSSI	**Bau Bau, Buton**	**2.27**	**16**	P	**Pn**	**12 57 35.2**	**+0.3**
BSSI				S	**Sn**	**12 58 04.8**	**+3.2**
MMRI	**Maumere**	**2.36**	**97**	P	**Pn**	**12 57 36.5**	**+0.4**
MMRI	**Maumere**	**2.36**	**97**	*e*Pn	**Pn**	**12 57 36.5**	**+0.4**
TWSI	**Taliwang, Sumb**	**2.98**	**262**	P	**Pn**	**12 57 44.1**	**-0.6**
BKSI	**Bulukumba**	**3.01**	**5**	P	**Pn**	**12 57 43.5**	**-1.5**
BATI	**Baumata**	**4.18**	**117**	P	**Pn**	**12 58 04.4**	**+3.3**
	24nm,0.3s,baz=291,slow=2.6,SNR=39						
BATI				S	**Sn**	**12 58 57.1**	**+8.4**
	45nm,0.3s,baz=312,slow=19,SNR=3.8						
BATI				LR	LR	13 00 06.3	
	comp=Z,22μm,19.0s,baz=14,slow=44						
BATI	**Baumata**	**4.18**	**117**	P	**Pn**	**12 58 02.2**	**+1.1**
SPSI	**Sidrap Palu**	**4.35**	**359**	P	**Pn**	**12 58 02.4**	**-1.0**
SOEI	**Soe**	**4.56**	**108**	P	**Pn**	**12 58 07.8**	**+1.3**
SOEI	**Soe**	**4.56**	**108**	*e*Pn	**Pn**	**12 58 09.7**	**+3.2**
SRBI	**Singaraja**	**4.62**	**273**	P	**Pn**	**12 58 04.9**	**-2.3**
DNP	**Denpasar**	**4.62**	**265**	P	**Pn**	**12 58 06.8**	**-0.4**
DNP	**Denpasar**	**4.62**	**265**	P	**Pn**	**12 58 07.0**	**-0.2**
IGBI	**Denpasar**	**4.70**	**264**	P	**Pn**	**12 58 07.3**	**-1.0**
KDI	**Kendari**	**5.14**	**32**	P	**Pn**	**12 58 15.1**	**+0.8**
TTSI	**Tana Toraja**	**5.26**	**359**	P	**Pn**	**12 58 16.3**	**+0.3**
JAGI	**Jajag, Banyuwa**	**5.66**	**268**	P	**Pn**	**12 58 20.5**	**-1.0**
JAGI	**Jajag, Banyuwa**	**5.66**	**268**	*e*Pn	**Pn**	**12 58 19.6**	**-2.0**
KBKI	**Kotabaru**	**6.22**	**323**	P	**Pn**	**12 58 27.5**	**-1.6**
BLJI	**Banyuglugur**	**6.25**	**275**	P	**Pn**	**12 58 29.0**	**-0.5**
GMJI	**Gumukmas**	**6.36**	**270**	P	**Pn**	**12 58 30.6**	**-0.5**
PCI	**Palu**	**7.38**	**360**	P	**Pn**	**12 58 45.3**	**+0.1**
PCI	**Palu**	**7.38**	**360**	P	**Pn**	**12 58 46.1**	**+0.9**
PCI				pmax	pmax		
	comp=Z,376nm,1.1s						
GRJI	**Gresik**	**7.46**	**280**	P	**Pn**	**12 58 45.4**	**-0.8**
APSI	**Ampana**	**7.59**	**14**	P	**Pn**	**12 58 47.7**	**-0.3**
BKB	**Balikpapan**	**7.63**	**337**	P	**Pn**	**12 58 50.0**	**+1.5**
LUWI	**Luwuk**	**7.80**	**22**	P	**Pn**	**12 58 51.5**	**+0.6**
LUWI	**Luwuk**	**7.80**	**22**	*e*Pn	**Pn**	**12 58 52.2**	**+1.3**
PWJI	**Pagerwojo**	**7.99**	**272**	P	**Pn**	**12 58 52.9**	**-0.6**
SGKI	**Sangatta, Kali**	**8.08**	**344**	P	**Pn**	**12 58 54.8**	**+0.1**
TBJI	**Tambak Boyo**	**8.10**	**280**	P	**Pn**	**12 58 54.2**	**-0.7**
SMKI	**Samarinda**	**8.28**	**341**	P	**Pn**	**12 58 57.5**	**+0.1**
NGJI	**Ngawi**	**8.39**	**276**	P	**Pn**	**12 58 58.4**	**-0.5**
PCJI	**Pacitan**	**8.61**	**270**	P	**Pn**	**12 59 01.5**	**-0.4**
MPSI	**Mapaga**	**8.62**	**0**	P	**Pn**	**12 59 02.5**	**+0.4**
SANI	**Sanana**	**8.72**	**45**	P	**Pn**	**12 59 04.4**	**+0.9**
MTKI	**Muara Teweh, K**	**8.87**	**326**	P	**Pn**	**12 59 04.8**	**-0.7**
WOJI	**Wonogiri, Jawa**	**8.88**	**273**	P	**Pn**	**12 59 05.5**	**-0.1**
MRSI	**Marisa**	**9.00**	**13**	P	**Pn**	**12 59 07.0**	**-0.3**
UWJI	**Ujung Watu**	**9.06**	**282**	P	**Pn**	**12 59 07.3**	**-0.8**
	comp=Z,78nm,0.6s						
UGM	**Wanagama**	**9.27**	**272**	P	**Pn**	**12 59 10.4**	**-0.6**
UGM	**Wanagama**	**9.27**	**272**	*e*Pn	**Pn**	**12 59 15.2**	**+4.2**
SMRI	**Semarang**	**9.44**	**277**	P	**Pn**	**12 59 12.6**	**-0.7**
SMRI	**Semarang**	**9.44**	**277**	*e*Pn	**Pn**	**12 59 14.2**	**+0.9**
AAI	**Ambon**	**9.48**	**61**	P	**Pn**	**12 59 14.9**	**+1.0**
KMSI	**Cibinong**	**9.76**	**25**	P	**Pn**	**12 59 17.4**	**-0.3**
PBKI	**Pangkalan Bun**	**9.90**	**304**	P	**Pn**	**12 59 19.0**	**-0.6**
MSAI	**Masohi**	**10.28**	**62**	P	**Pn**	**12 59 26.2**	**+1.3**
LBMI	**Labuha**	**10.78**	**45**	P	**Pn**	**12 59 32.4**	**+0.6**
KPJI	**Karang Pucung**	**10.89**	**275**	P	**Pn**	**12 59 31.7**	**-1.5**
FITZ	**Fitzroy Crossi**	**11.21**	**151**	P	**Pn**	**12 59 36.3**	**-1.1**
	baz=11,SNR=160						
FITZ	**Fitzroy Crossi**	**11.21**	**151**	*e*Pn	**Pn**	**12 59 35.9**	**-1.6**
SAUI	**Saumlaki**	**11.32**	**89**	P	**Pn**	**12 59 40.5**	**+1.4**
CMJI	**Cimerak**	**11.33**	**272**	P	**Pn**	**12 59 37.2**	**-2.0**
KNRA	**Kununurra**	**11.35**	**131**	P	**Pn**	**12 59 38.2**	**-1.2**
	baz=11,SNR=179						
JCJI	**Jatiwangi**	**11.65**	**278**	P	**Pn**	**12 59 43.4**	**-0.2**
STKI	**Sintang**	**11.82**	**315**	P	**Pn**	**12 59 45.5**	**-0.4**
MTN	**Manton Dam**	**11.94**	**113**	P	**Pn**	**12 59 45.7**	**-1.8**
	baz=12,SNR=184						
MTN	**Manton Dam**	**11.94**	**113**	*e*Pn	**Pn**	**12 59 46.1**	**-1.4**
CISI	**Cisompet, Garu**	**11.97**	**273**	P	**Pn**	**12 59 47.5**	**-0.5**
CISI	**Cisompet, Garu**	**11.97**	**273**	*e*Pn	**Pn**	**12 59 49.7**	**+1.7**
LEM	**Lembang**	**12.24**	**276**	P	**P**	**12 59 58.8**	**-4.4**
	comp=Z,2.1nm,0.3s,baz=96,slow=10,SNR=2.3						
LEM				LR	LR	13 05 04.2	
	comp=Z,5μm,21.7s,baz=80,slow=39						
MBWA	**Marble Bar**	**12.75**	**181**	*e*Pn	**Pn**	**12 59 58.5**	**-0.1**
KDU	**Kakadu**	**13.12**	**110**	P	**Pn**	**13 00 01.2**	**-2.4**
	baz=13,SNR=60						
SBUM	**Sibu**	**13.16**	**324**	*e*Pn	**Pn**	**13 00 05.1**	**+0.9**
FAKI	**Fak Fak**	**13.44**	**67**	P	**Pn**	**13 00 10.4**	**+2.3**
FAKI	**Fak Fak**	**13.44**	**67**	*e*Pn	**Pn**	**13 00 10.7**	**+2.6**
MYLDM	**Lahad Datu**	**13.50**	**354**	*e*Pn	**Pn**	**13 00 10.0**	**+1.1**
SIJI	**Sorong**	**13.56**	**57**	P	**Pn**	**13 00 09.5**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=220,slow=2.9,SNR=4.4						
KSM	**Kuching**	**13.64**	**315**	*e*Pn	**Pn**	**13 00 11.0**	**+0.2**
CGJI	**Cibinong**	**14.16**	**276**	P	**Pn**	**13 00 17.8**	**-0.1**
KKM	**Kota Kinabalu**	**14.75**	**346**	*e*Pn	**Pn**	**13 00 26.2**	**+0.5**
GIRL	**Giralia**	**15.22**	**200**	P	**Pn**	**13 00 32.7**	**+0.9**
	baz=15,SNR=33						
KLI	**Kotabumi**	**15.31**	**282**	P	**Pn**	**13 00 32.9**	**-0.2**
KASI	**Kota Agung**	**15.52**	**279**	P	**Pn**	**13 00 36.6**	**+0.9**
RKPI	**Ransiki, Papua**	**15.78**	**65**	P	**Pn**	**13 00 40.1**	**+1.0**
LWLI	**Liwa**	**16.05**	**281**	P	**Pn**	**13 00 42.6**	**-0.1**
MDSI	**Maura Dua**	**16.06**	**283**	P	**Pn**	**13 00 43.1**	**+0.4**
DAV	**Davao City (W)**	**16.33**	**21**	LR	LR	13 07 57.6	
	comp=Z,717nm,18.6s,baz=192,slow=41						
DSRI	**Dabo**	**17.12**	**296**	P	**Pn**	**13 00 56.5**	**+0.4**
MNAI	**Manna**	**17.27**	**282**	P	**Pn**	**13 00 58.3**	**+0.4**
SRPI	**Serui, Papua**	**17.52**	**69**	P	**P**	**13 01 02.1**	**+0.5**
BAKI	**Biak**	**17.66**	**67**	P	**P**	**13 01 05.6**	**+2.4**
	comp=Z,366nm,1.3s,comp=Z,6μm						
TPRI	**Tanjung Pinang**	**17.85**	**300**	P	**Pn**	**13 01 05.1**	**+0.1**
WRA	**Warramunga Arr**	**18.14**	**131**	P	**P**	**13 01 07.0**	**-1.5**
	comp=Z,3.3nm,0.3s,baz=298,slow=12,SNR=116						
WRA				S	**Sn**	**13 04 20.3**	**-10**
	comp=Z,1.0nm,0.3s,baz=308,slow=24,SNR=8.1						
WRA				LR	LR	13 09 09.9	
	comp=Z,1μm,21.5s,baz=310,slow=40						
WRA				ScP	**ScP**	**13 09 10.4**	**-2.1**
	comp=Z,0.0nm,0.3s,baz=315,slow=2.3,SNR=4.8						
WRAB	**Tennant Creek**	**18.14**	**131**	*e*Pn	**P**	**13 01 06.8**	**-1.7**
	comp=Z,87nm,0.8s						
WRAB	**Tennant Creek**	**18.14**	**131**	*de*P	**P**	**13 01 07.5**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,87nm,0.7s						
WB2	**Warramunga Arr**	**18.15**	**131**	*e*Pn	**P**	**13 01 06.9**	**-1.7**
WB2				*e*Sn	**Sn**	**13 04 26.3**	**-4.2**
MEEK	**Meekatharra**	**18.24**	**184**	P	**Pn**	**13 01 11.1**	**+1.4**
	baz=18,SNR=43						
MASI	**Maura Aman, Be**	**18.28**	**285**	P	**P**	**13 01 10.1**	**0.0**
WRKA	**Warakurna**	**18.45**	**155**	P	**Pn**	**13 01 12.4**	**+0.1**
	baz=18,SNR=153						
MYKOM	**Kota Tinggi**	**18.88**	**302**	*e*P	**Pn**	**13 01 17.4**	**-0.1**
MYKOM				*e*Pn	**P**	**13 01 17.7**	**+1.0**
KRJI	**Kerinci**	**19.35**	**288**	P	**P**	**13 01 22.2**	**+0.3**
AS31	**Alice Springs**	**20.32**	**140**	*e*P	**P**	**13 01 33.0**	**+0.7**
AS31				*e*Pn	**P**	**13 01 33.1**	**+0.8**
ASAR	**Alice Springs**	**20.32**	**140**	P	**P**	**13 01 33.4**	**+1.0**
	comp=Z,94nm,0.5s,baz=307,slow=8.8,SNR=492						
ASAR				S	**S**	**13 05 16.1**	**-1.7**
	comp=Z,17nm,0.9s,baz=323,slow=25,SNR=3.5						
ASAR				ScP	**ScP**	**13 09 16.0**	**-1.4**
	comp=Z,4.2nm,0.6s,baz=319,slow=2.1,SNR=6.7						
ASAR				LR	LR	13 10 54.3	
	comp=Z,2μm,18.8s,baz=318,slow=41						
AS01	**Alice Springs**	**20.35**	**140**	*e*P	**P**	**13 01 32.3**	**-0.4**
MORW	**Morawa**	**20.93**	**189**	P	**P**	**13 01 40.2**	**+1.3**
	baz=21,SNR=14						
PALU	**Palau**	**21.32**	**43**	P	**P**	**13 01 44.1**	**+1.0**
	baz=21,SNR=10						
JAY	**Jayapura**	**21.52**	**76**	P	**P**	**13 01 44.0**	**-1.4**
	comp=Z,12nm,0.8s,baz=307,slow=2.8,SNR=5.5						
JAY				LR	LR	13 12 11.1	
	comp=Z,1μm,21.6s,baz=257,slow=42						
JAY	**Jayapura**	**21.52**	**76**	P	**P**	**13 01 46.2**	**+0.9**
JAY	**Jayapura**	**21.52**	**76**	P	**P**	**13 01 44.0**	**-1.4**
SISI	**Saibi**	**21.84**	**288**	P	**P**	**13 01 48.9**	**+0.2**
MNSI	**Mandailing Nat**	**22.17**	**293**	P	**P**	**13 01 52.3**	**0.0**
TGY	**Tagaytay City**	**22.32**	**3**	P	**P**	**13 01 55.4**	**+1.5**
	comp=Z,115nm,0.3s,baz=184,slow=13,SNR=2.3						
TGY				LR	LR	13 11 14.5	
	comp=Z,638nm,19.1s,baz=214,slow=38						
BLDU	**Ballidu**	**22.36**	**187**	P	**P**	**13 01 55.8**	**+1.7**
	baz=22,SNR=14						
QIS	**Mount Isa**	**22.61**	**125**	P	**P**	**13 01 56.8**	**-0.1**
	baz=23,SNR=42						
IPM	**Ipoh**	**22.70**	**303**	*e*P	**P**	**13 01 58.8**	**+0.8**
IPM				*es*P	**P**	**13 01 59.6**	**+1.6**
KMBL	**Kambalda**	**22.99**	**176**	P	**P**	**13 02 00.5**	**-0.2**
	baz=23,SNR=12						
KLBR	**Kalberrin**	**23.22**	**185**	P	**P**	**13 02 03.5**	**+0.4**
	baz=23,SNR=15						
KULM	**Kulim**	**23.47**	**305**	*e*P	**P**	**13 02 06.4**	**+0.7**
	comp=Z,84nm,1.2s						
COEN	**Coen**	**23.52**	**106**	P	**P**	**13 02 05.5**	**-0.6**
	baz=24,SNR=43						
COEN	**Coen**	**23.52**	**106**	*e*P	**P**	**13 02 05.5**	**-0.6**
	comp=Z,65nm,0.8s						
FORT	**Forrest**	**23.60**	**162**	P	**P**	**13 02 07.2**	**+0.5**
	baz=24,SNR=15						
FORT	**Forrest**	**23.60**	**162**	*e*P	**P**	**13 02 07.3**	**+0.6**
PSI	**Prapat**	**23.64**	**297**	P	**P**	**13 02 06.7**	**-0.7**
	comp=Z,49nm,1.2s,baz=180,slow=6.9,SNR=12						
PSI				LR	LR	13 11 59.2	
	comp=Z,2μm,20.5s,baz=90,slow=38						
PSI	**Prapat**	**23.64**	**297**	*e*P	**P**	**13 02 06.2**	**-1.2**
PSI	**Prapat**	**23.64**	**297**	*e*P	**P**	**13 02 06.2**	**-1.2**
GSI	**Gunungsitoli**	**24.21**	**292**	P	**P**	**13 02 13.9**	**+1.4**
GSI	**Gunungsitoli**	**24.21**	**292**	*e*P	**P**	**13 02 15.0**	**+2.5**
	comp=Z,31nm,1.0s						
TSI	**Tuntungan**	**24.29**	**298**	P	**P**	**13 02 14.1**	**+0.9**
NWAO	**Narrogin (SRO)**	**24.59**	**185**	P	**P**	**13 02 16.6**	**+0.9**
	comp=Z,49nm,1.1s,baz=38,slow=7.9,SNR=12						
NWAO				LR	LR	13 11 48.2	
	comp=Z,1μm,21.6s,baz=234,slow=36						
NWAO	**Narrogin (SRO)**	**24.59**	**185**	P	**P**	**13 02 17.6**	**+1.9**
	baz=25,SNR=5.5						
NWAO	**Narrogin (SRO)**	**24.59**	**185**	*e*P	**P**	**13 02 18.2**	**+2.5**
NWAO	**Narrogin (SRO)**	**24.59**	**185**	*e*P	**P**	**13 02 18.2**	**+2.5**
KCSI	**Kotacane, Aceh**	**24.99**	**297**	P	**P**	**13 02 20.2**	**+0.5**
TPTI		**25.40**	**296**	P	**P**	**13 02 23.1**	**-0.2**
MTSU	**Mount Surprise**	**25.68**	**115**	P	**P**	**13 02 26.6**	**+0.7**
	baz=26,SNR=24						
TRTT	**Trang**	**25.75**	**308**	P	**P**	**13 02 26.9**	**+0.5**
	comp=Z,20nm,1.7s						
LHMI	**Lhok Sumawe**	**26.54**	**300**	P	**P**	**13 02 34.4**	**+0.8**
MLSI	**Meulaboh, Aceh**	**26.55**	**297**	P	**P**	**13 02 34.8**	**+1.1**
PMG	**Port Moresby**	**26.98**	**94**	P	**P**	**13 02 37.0**	**-0.6**
	comp=Z,6.1nm,0.6s,baz=260,slow=6.1,SNR=3.6						
CTA	**Charters Tower**	**28.06**	**117**	P	**P**	**13 02 47.7**	**+0.4**
	comp=Z,11nm,0.7s,baz=303,slow=12,SNR=13						
CTA				LR	LR	13 16 06.1	
	comp=Z,3μm,18.6s,baz=290,slow=41						
CTAO	**Charters Tower**	**28.06**	**117**	*e*P	**P**	**13 02 47.7**	**+0.4**
CTAO	**Charters Tower**	**28.06**	**117**	*e*P	**P**	**13 02 47.7**	**+0.4**
SRAK	**Srakaew**	**28.39**	**321**	P	**P**	**13 02 48.7**	**-1.5**
	comp=Z,46nm,1.5s,comp=Z,642nm						
BBOO	**Buckleboo**	**28.60**	**151**	P	**P**	**13 02 51.9**	**0.0**
	baz=29,SNR=75						
BBOO	**Buckleboo**	**28.60**	**151**	*e*P	**P**	**13 02 51.4**	**-0.5**
QLP	**Quilpie**	**29.38**	**131**	P	**P**	**13 03 00.0**	**+1.1**
	baz=29,SNR=6.2						
SKNT	**Sakolnakorn**	**29.66**	**328**	P	**P**	**13 03 01.4**	**0.0**
	comp=Z,15nm,0.9s						
HTT	**Hallett**	**30.55**	**148**	P	**P**	**13 03 10.2**	**+1.0**
	baz=31,SNR=59						
STKA	**Stephens Creek**	**30.93**	**142**	P	**P**	**13 03 13.1**	**+0.6**
	comp=Z,20nm,0.7s,baz=315,slow=9.3,SNR=29						
STKA				LR	LR	13 17 11.7	
	comp=Z,566nm,18.2s,baz=308,slow=39						
STKA	**Stephens Creek**	**30.93**	**142**	P	**P**	**13 03 13.1**	**+0.6**
	baz=31,SNR=28						
STKA	**Stephens Creek**	**30.93**	**142**	*e*P	**P**	**13 03 13.2**	**+0.6**
	comp=Z,4.1nm,0.6s						
STKA	**Stephens Creek**	**30.93**	**142**	*e*P	**P**	**13 03 13.2**	**+0.7**
STKA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
PBKT	**Sadao Pong**	**31.02**	**323**	P	**P**	**13 03 13.6**	**+0.2**
	comp=Z,29nm,1.0s						
UTHA	**Uthaitani**	**31.20**	**320**	P	**P**	**13 03 17.1**	**+2.1**
	comp=Z,9.1nm,0.8s						
TPUB	**Ta-pu**	**31.45**	**1**	*e*P	**P**	**13 03 16.8**	**-0.4**
	comp=Z,83nm,1.8s						
YULB	**Yu-li**	**31.57**	**2**	*e*P	**P**	**13 03 16.9**	**-1.3**
	comp=Z,27nm,1.6s						
PHIT	**Phitsanulok**	**31.83**	**323**	P	**P**	**13 03 22.6**	**+2.0**
	comp=Z,37nm,0.8s						
SUKH	**Sukhothai**	**32.53**	**322**	P	**P**	**13 03 29.3**	**+2.6**
	comp=Z,9.7nm,0.7s						
RMQ	**Roma**	**32.81**	**127**	P	**P**	**13 03 29.6**	**+0.4**
	baz=33,SNR=7.8						
GUMO	**Guam**	**33.02**	**49**	LR	LR	13 16 24.8	
	comp=Z,122nm,21.0s,baz=226,slow=35						
QZH	**Quanzhou**	**33.10**	**358⇑**	*i*P	**P**	**13 03 33.5**	**+1.9**
QZH				S	**S**	**13 08 45.0**	**-2.8**
QZH				LR	LR		
	comp=Z,330nm,17.5s						
CMSA	**Cobar Meteorol**	**33.32**	**137**	P	**P**	**13 03 34.7**	**+1.1**
	baz=33,SNR=19						
CM01	**Chiang Mai Arr**	**33.66**	**322**	*e*P	**P**	**13 03 37.6**	**+1.0**
CM31	**Chiang Mai Arr**	**33.70**	**322**	*e*P	**P**	**13 03 38.6**	**+1.7**
CMAR	**Chiang Mai Arr**	**33.70**	**322**	P	**P**	**13 03 38.1**	**+1.2**
	comp=Z,5.9nm,0.6s,baz=148,slow=6.8,SNR=29						
CMAR				LR	LR	13 18 02.1	
	comp=Z,440nm,20.4s,baz=158,slow=38						
CHTO	**Chiang Mai**	**33.97**	**323**	P	**P**	**13 03 41.0**	**+1.7**
	comp=Z,80nm,1.3s						
CHTO	**Chiang Mai**	**33.97**	**323**	*e*P	**P**	**13 03 40.2**	**+0.9**
	comp=Z,20nm,1.1s						
CHTO				*e*pP	**pP**	**13 03 52.5**	**+1.0**
CHTO	**Chiang Mai**	**33.97**	**323**	*e*P	**P**	**13 03 40.2**	**+0.9**
CHTO				*e*PP	**pP**	**13 03 52.5**	**+1.0**
CHTO				pmax	pmax		
	comp=Z,20nm,1.1s						
ARPS	**Mount Arapiles**	**34.63**	**148**	P	**P**	**13 03 46.0**	**+1.2**
	baz=35,SNR=56						
YNG	**Young**	**36.81**	**139**	P	**P**	**13 04 05.3**	**+1.7**
	baz=37,SNR=24						
GYA	**Guiyang**	**36.89**	**340**	P	**P**	**13 04 04.5**	**+0.1**
GYA				PP	**PnPn**	**13 05 32.5**	**+2.8**
GYA				S	**S**	**13 09 52.3**	**+6.0**
GYA				SS	**SnSn**	**13 12 20.5**	**-1.4**
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,140nm,5.0s						
GYA				LR	LR		
	comp=Z,610nm,17.8s						
GYA				LR	LR	

LZH sS sS 13 12 23.3 -8.7
LZH SS **SS** **13 15 32.3 -5.7**
LZH pmax pmax
comp=Z,32nm,1.0s
LZH pmax pmax
comp=Z,240nm,5.2s
LZH LR LR
comp=Z,580nm,14.0s
LZH LR LR
comp=Z,760nm,13.8s
LZH LR LR
comp=Z,960nm,17.3s
DZM Mont Dzumac 46.78 112 P **P** **13 05 24.9 -0.4**
comp=Z,21nm,1.2s,baz=282,slow=19,SNR=2.2
DZM LR LR 13 26 58.6
comp=Z,637nm,18.9s,baz=272,slow=38
DZM Mont Dzumac 46.78 112 *e*LR LR 13 18 44.1
comp=Z,1μm,23.6s
LSA Lhasa 46.84 325 P **P** **13 05 27.5 +1.4**
LSA pmax pmax
comp=Z,18nm,0.9s
LSA Lhasa 46.84 325 *e*P **P** **13 05 26.1 +0.1**
comp=Z,11nm,0.6s
LSA *e*pP **pP** **13 05 34.5 -4.1**
LSA Lhasa 46.84 325 *e*P **P** **13 05 26.2 +0.1**
LSA *e**PP **pP** **13 05 34.6 -4.1**
LSA pmax pmax
comp=Z,11nm,0.6s
ODAN Odare 47.08 319 *e*P **P** **13 05 27.9 +0.2**
RAMN Ramite 47.66 319 *e*P **P** **13 05 32.2 0.0**
MAJO Matsushiro 47.85 20 *e*P **P** **13 05 31.6 -1.7**
comp=Z,25nm,1.1s
MAJO *e*pP **pP** **13 05 43.0 -2.9**
MAJO Matsushiro 47.85 20 *c i*P **P** **13 05 31.3 -2.0**
MAT Matsushiro 47.85 20 P **P** **13 05 31.3 -2.0**
MAT S S 13 12 12.0 -15
MJAR Matsushiro Arr 47.85 20 P **P** **13 05 31.3 -2.0**
comp=Z,17nm,1.0s,baz=200,slow=8.6,SNR=33
MJB9 Matsu-Tunnel 47.85 20 *e*P **P** **13 05 31.4 -1.9**
MJB9 *e*sP **P** **13 05 32.0 -1.3**
BJT Baijiatuau 48.23 356 *e*P **P** **13 05 36.0 -0.1**
comp=Z,34nm,0.6s
BJT *e*pP **pP** **13 05 47.9 -0.8**
BJT Baijiatuau 48.23 356 *e*P **P** **13 05 36.0 -0.1**
BJT *e**PP **pP** **13 05 47.9 -0.8**
BJT pmax pmax
comp=Z,34nm,0.6s
BJI Beijing 48.26 356 P **P** **13 05 36.3 0.0**
BJI S S 13 12 42.8 +10
BJI pmax pmax
comp=Z,43nm,0.6s
BJI LR LR
comp=Z,540nm,16.7s
BJI LR LR
comp=Z,490nm,19.1s
BJI LR LR
comp=Z,330nm,51.3s
JIRN Jiri 48.41 319 *e*P **P** **13 05 38.0 -0.2**
comp=Z,51nm,0.6s
GUN Gumba 48.78 319 *e*P **P** **13 05 40.8 -0.2**
comp=Z,61nm,0.7s
PKIN Phulchoki 48.87 318 *e*P **P** **13 05 40.7 -0.9**
comp=Z,24nm,0.5s
DMN Daman 49.08 318 *e*P **P** **13 05 42.9 -0.3**
comp=Z,18nm,0.6s
KKN Kakani 49.09 318 *e*P **P** **13 05 42.9 -0.3**
HHC Hu-ho-hao-te 49.54 352 *e*P **P** **13 05 49.3 +3.0**
HHC PP **PP** **13 07 44.8 +3.8**
HHC S **S** **13 12 57.0 +6.0**
HHC pmax pmax
comp=Z,7.0nm,0.7s
HHC pmax pmax
comp=Z,76nm,6.1s
HHC LR LR
comp=Z,1μm,14.7s
HHC LR LR
comp=Z,1μm,13.8s
HHC LR LR
comp=Z,1μm,13.0s
GKN Gorkha 49.66 318 *e*P **P** **13 05 46.8 -0.7**
comp=Z,25nm,0.5s
SNY Shenyang 50.04 4 ⇓P **P** **13 05 49.5 -0.4**
SNY S **S** **13 12 54.3 -3.4**
SNY pmax pmax
comp=Z,38nm,0.7s
SNY LR LR
comp=Z,230nm,16.7s
SNY LR LR
comp=Z,280nm,17.4s
SNY LR LR
comp=Z,340nm,17.1s
KOLN Koldanda 50.20 317 *e*P **P** **13 05 50.7 -0.9**
comp=Z,29nm,0.6s
DANN Dangsing 50.47 318 *e*P **P** **13 05 53.0 -0.8**
comp=Z,76nm,0.6s
PYUN Piuthan 50.82 317 *e*P **P** **13 05 55.5 -0.9**
comp=Z,23nm,0.5s
GTA Gaotai 51.02 340 ⇓P **P** **13 05 58.3 +0.7**
GTA pP pP 13 06 07.3 -3.0
GTA sP sP 13 06 11.3 -4.2
GTA S **S** **13 13 08.8 -3.0**
GTA sS sS 13 13 22.0 -11
GTA SS **SS** **13 16 45.3 -2.3**
GTA pmax pmax
comp=Z,15nm,0.9s
GTA pmax pmax
comp=Z,49nm,5.2s
GTA LR LR
comp=Z,230nm,20.9s
GTA LR LR
comp=Z,340nm,18.7s
GTA LR LR
comp=Z,390nm,19.7s
MSHR Mys Shultsa 51.71 11⇑*e*P **P** **13 06 01.7 -0.8**
CN2 Changchun 52.14 5 *e*P **P** **13 06 04.8 -0.8**
CN2 *e*S **S** **13 13 28.5 +1.8**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,210nm,17.0s
CN2 LR LR
comp=Z,170nm,17.0s
CN2 LR LR
comp=Z,210nm,19.0s
USRK Ussuriysk Ar. 53.43 11 P **P** **13 06 14.3 -0.8**
comp=Z,17nm,0.7s,baz=194,slow=6.8,SNR=37
USRK LR LR 13 27 44.9
comp=Z,114nm,21.8s,baz=192,slow=35
MDJ Mudanjiang 53.44 9 P **P** **13 06 11.5 -3.7**
MDJ pmax pmax
comp=Z,57nm,0.8s
MDJ pmax pmax
comp=Z,130nm,4.0s
MDJ Mudanjiang 53.44 9 *e*P **P** **13 06 15.0 -0.2**
comp=Z,35nm,0.8s
ASAJ Asahikawa 56.12 20 P **P** **13 06 34.0 -0.7**
comp=Z,12nm,0.8s,baz=202,slow=5.9,SNR=18
ASAJ LR LR 13 30 04.4
comp=Z,77nm,21.0s,baz=190,slow=35
ASAJ Asahikawa 56.12 20 *e*P **P** **13 06 34.0 -0.7**
ASAJ *e*sP **P** **13 06 34.3 -0.3**
ULN Ulaanbaatar 57.10 350 *e*P **P** **13 06 41.8 0.0**
ULN Ulaanbaatar 57.10 350 *d i*P **P** **13 06 42.3 +0.5**
ULN pmax pmax
comp=Z,25nm,1.0s
SONM Songino Array 57.19 349 P **P** **13 06 42.8 +0.5**
comp=Z,20nm,1.0s,baz=169,slow=8.2,SNR=67
SONM LR LR 13 35 11.5
comp=Z,214nm,18.1s,baz=198,slow=40
SONA1 Songino Array 57.20 349 *e*P **P** **13 06 42.5 0.0**
CASY Casey 58.21 184 *e*P **P** **13 06 49.4 +0.3**
CASY *e*sP **P** **13 06 49.7 +0.6**
KLR Kul'dur 58.26 9 *c i*P **P** **13 06 48.6 -1.1**
YSS Yuzh-Sakhalins 58.70 18 *e*P **P** **13 06 52.5 -0.2**
comp=Z,29nm,1.3s
YSS Yuzh-Sakhalins 58.70 18⇑*e*P **P** **13 06 51.7 -1.0**
YSS *e* 13 07 00.6
YSS *e* 13 07 13.3
YSS *e*S S 13 14 44.1 -10
YSS *e* 13 16 34.6
YSS pmax pmax
comp=Z,20nm,1.3s
BKZ Black Stump Fm 59.08 131 *e*P **P** **13 06 56.4 +0.7**
comp=Z,67nm,1.5s
URZ Urewera 59.31 130 *e*P **P** **13 06 57.6 +0.4**
comp=Z,61nm,1.4s
WMQ Urumqi 59.55 333 P **P** **13 06 59.5 +0.7**
WMQ pP pP 13 07 05.3 -6.4
WMQ sP sP 13 07 07.3 -10
WMQ S **S** **13 15 09.5 +4.0**
WMQ SS **SS** **13 19 06.0 +4.3**
WMQ pmax pmax
comp=Z,58nm,1.5s
WMQ pmax pmax
comp=Z,180nm,3.7s
WMQ LR LR
comp=Z,870nm,19.5s
WMQ LR LR
comp=Z,660nm,21.7s
WMQ LR LR
comp=Z,660nm,22.7s
ZAK Zakamensk 60.23 348 *e*P **P** **13 07 03.0 -0.4**
ZAK pmax pmax
comp=Z,9.0nm,1.4s
TLY Talaya 61.39 349 *e*P **P** **13 07 11.9 +0.8**
comp=Z,11nm,0.9s
TLY Talaya 61.39 349 *e*P **P** **13 07 11.6 +0.4**
TLY *e*PPP PPP 13 11 01.1
TLY *e*S **S** **13 15 23.0 -5.7**
TLY *e*SS **SS** **13 19 31.5 +1.2**
TLY pmax pmax
comp=Z,13nm,1.1s
TLY MLR MLR
comp=Z,232nm,19.0s
IRK Irkutsk 61.81 349 *e*P **P** **13 07 14.5 +0.5**
IRK pmax pmax
comp=Z,26nm,1.8s
MOY Mondy 61.94 347 *e*P **P** **13 07 15.6 +0.6**
MOY pmax pmax
comp=Z,32nm,2.2s
ZEA Zeya 62.15 5 *e*P **P** **13 07 17.1 +0.9**
ZEA *e* 13 15 34.0
ZEA *e* 13 19 46.0
ZEA pmax pmax
comp=Z,43nm,1.2s
TYV Tymovskoe 62.18 16 *e*P **P** **13 07 16.8 +0.4**
TYV pmax pmax
comp=Z,11nm,0.9s
KSH Kashi 62.60 323 P **P** **13 07 18.8 -0.9**
KSH pP pP 13 07 27.3 -5.4
KSH PP **PP** **13 09 42.0 +4.1**
KSH S **S** **13 15 42.8 -1.8**
KSH sS pS 13 15 58.3 -1.8
KSH SS **SS** **13 19 55.0 +5.2**
KSH pmax pmax
comp=Z,25nm,0.7s
KSH pmax pmax
comp=Z,240nm,4.1s
KSH LR LR
comp=Z,390nm,6.4s
KSH LR LR
comp=Z,290nm,5.3s
KSH LR LR
comp=Z,570nm,20.0s
RER Riviere de l'E 62.95 251 *e*P **P** **13 07 23.9 +1.5**
TARG Taragay, Kyrgy 62.98 326 *e*P **P** **13 07 21.8 -0.7**
PDGK Podgornoye 63.16 328 P **P** **13 07 23.0 -0.3**
PDGK pmax pmax
comp=Z,27nm,1.3s
NKL Nikolayevsk 63.76 14 *e*P **P** **13 07 26.5 -0.4**
NKL pmax pmax
comp=Z,43nm,1.0s
NRN Naryn 63.81 324 *e*P **P** **13 07 27.4 -0.5**
comp=Z,8.1nm,0.8s
NRN Naryn 63.81 324 *e*P **P** **13 07 27.4 -0.5**
NRN pmax pmax
comp=Z,8.0nm,0.8s
MSEY Mahe Island 64.03 269 *e*P **P** **13 07 29.7 +0.2**
comp=Z,69nm,1.1s
KBL Kabul 64.24 315 *e*P **P** **13 07 28.8 -1.9**
comp=Z,8.3nm,0.6s
KBL Kabul 64.24 315 *e*P **P** **13 07 28.8 -1.9**
KBL pmax pmax
comp=Z,8.0nm,0.6s
MK01 Makanchi Array 64.25 332 *e*P **P** **13 07 29.9 -0.4**
MK31 Makanchi Array 64.27 332 *e*P **P** **13 07 30.1 -0.4**
MK31 Makanchi Array 64.27 332 *i* P **P** **13 07 30.0 -0.4**
MK31 pmax pmax
comp=Z,18nm,0.7s
MKAR Makanchi Array 64.27 332 P **P** **13 07 30.1 -0.3**
comp=Z,21nm,0.7s,baz=140,slow=7.7,SNR=212
MKAR PKP2bc 13 36 25.4
comp=Z,0.9nm,0.9s,baz=298,slow=3.1,SNR=6.0
MKAR LR LR 13 39 48.8
comp=Z,194nm,18.3s,baz=174,slow=40
MKAR Makanchi Array 64.27 332 *e*P **P** **13 07 30.1 -0.4**
comp=Z,120nm,0.7s
MKAR Makanchi Array 64.27 332 *e*P **P** **13 07 30.1 -0.4**
MKAR pmax pmax
comp=Z,120nm,0.7s
DGZ Jazzator, Alta 64.36 337 *i* P **P** **13 07 31.3 +0.1**
DGZ pmax pmax
comp=Z,11nm,0.8s
SFK Sufi-Kurgan 64.40 322 P **P** **13 07 32.0 +0.3**
SFK pmax pmax
comp=Z,8.0nm,1.0s
MAKZ Makanchi 64.43 332 *e*P **P** **13 07 30.8 -0.7**
MAKZ Makanchi 64.43 332 *e*P **P** **13 07 30.8 -0.7**
KZA Kyzart 64.65 325 P **P** **13 07 33.4 -0.2**
SNR=10
TKM2 Tokmak 2 65.00 326 P **P** **13 07 34.8 -0.7**
SNR=6.3
TKM2 Tokmak 2 65.00 326 P **P** **13 07 34.3 -1.2**
TKM2 pmax pmax
comp=Z,12nm,1.2s
KBK Karagaybulak 65.19 325 P **P** **13 07 36.8 +0.1**
SNR=5.2
FRU Bishkek 65.49 325 *e*P P 13 07 51.0 +12
USP Ospenovka 65.83 325 P **P** **13 07 40.2 -0.5**
SNR=5.2
EKS2 Erkin-Say 65.86 324 P **P** **13 07 41.0 0.0**
SNR=6.8
BOD Bodaibo 66.10 357 *e*P **P** **13 07 40.9 -1.1**
BOD pmax pmax
comp=Z,21nm,1.3s
MNAS Manas 66.50 324 P **P** **13 07 44.7 -0.4**
MNAS pmax pmax
comp=Z,15nm,1.1s
AFI Afiamalu 67.11 102 LR LR 13 35 10.5
comp=Z,132nm,21.6s,baz=230,slow=34
WSAR Wadi Sarin 67.58 299 LR LR 13 37 47.9
comp=Z,391nm,19.5s,baz=121,slow=36
KRAR Krasnoyarsk 67.92 344⇑*e*P **P** **13 07 54.7 +1.1**
KK31 Karatay Array 68.04 323 *e*P **P** **13 07 54.2 -0.6**
KK31 Karatay Array 68.04 323 *i* P **P** **13 07 53.1 -1.6**
KK31 pmax pmax
comp=Z,5.0nm,1.0s
KKAR Karatay Array 68.04 323 *e*P **P** **13 07 54.2 -0.5**
KKAR Karatay Array 68.04 323 *e*P **P** **13 07 54.2 -0.5**
ZAA0 Zalesovo Array 68.74 339 *e*P **P** **13 07 57.5 -1.3**
comp=Z,16nm,0.8s
ZALV Zalesovo Beam 68.74 339 P **P** **13 07 57.5 -1.3**
comp=Z,18nm,0.7s,baz=142,slow=5.1,SNR=63
ZALV LR LR 13 40 07.4
comp=Z,75nm,19.3s,baz=239,slow=38
ZALV Zalesovo Beam 68.74 339 *e*P **P** **13 07 57.3 -1.5**
ZALV Zalesovo Beam 68.74 339 *e*P **P** **13 07 57.3 -1.5**
KURBB Kurchatov Arra 68.77 333 P **P** **13 07 58.3 -0.7**
comp=Z,9.4nm,0.6s,baz=142,slow=5.6,SNR=128
KURK Kurchatov 68.79 333 *e*P **P** **13 07 58.2 -0.9**
KURK Kurchatov 68.79 333 *c i*P **P** **13 07 58.3 -0.9**
KURK pmax pmax
comp=Z,21nm,0.8s
PEA0B Petropavlovsk- **69.13 23** *e*P **P** **13 08 01.0 -0.3**
comp=Z,29nm,1.3s
PETK Petropavlovsk- **69.13 23** P **P** **13 08 00.7 -0.6**
comp=Z,4.2nm,0.6s,baz=173,slow=3.1,SNR=11
PET Petropavlovsk 69.44 24 *e*P **P** **13 08 03.9 +0.8**
comp=Z,45nm,1.6s
PET Petropavlovsk 69.44 24 *e*P **P** **13 08 03.7 +0.6**
PET pmax pmax
comp=Z,23nm,2.5s
NVS Novosibirsk 70.02 338 *e*P **P** **13 08 05.4 -1.2**
NVS pmax pmax
comp=Z,19nm,1.4s
NVS pmax pmax
comp=N,14nm,1.5s
NVS pmax pmax
comp=E,7.0nm,1.2s
MAW Mawson 70.15 200 P **P** **13 08 08.3 +1.0**
comp=E,7.0nm,0.8s,baz=38,slow=9.7,SNR=5.5
MAW LR LR 13 36 24.1
comp=E,335nm,18.9s,baz=53,slow=34
OTUK Ortayu 70.16 328 P **P** **13 08 07.0 -0.8**
OTUK pmax pmax
comp=Z,20nm,1.2s
YAK Yakutsk 70.57 5 *e*P **P** **13 08 08.5 -1.4**
YAK pmax pmax
comp=Z,18nm,1.2s
YAK pmax pmax
comp=N,5.0nm,1.4s
ABPO Ambohimpanom 70.98 253 *e*P **P** **13 08 14.2 +0.6**
comp=N,10.0nm,0.8s
ABPO Ambohimpanom 70.98 253 *e*P **P** **13 08 14.2 +0.6**
ABPO pmax pmax
comp=Z,10.0nm,0.8s
OPO Ambohidratompo 71.04 253 P **P** **13 08 14.6 +0.7**
comp=Z,13nm,0.7s,baz=83,slow=4.1,SNR=23
VNDA Vanda 72.50 171 P **P** **13 08 22.8 +1.4**
comp=Z,7.2nm,0.5s,baz=316,slow=6.6,SNR=181
VNDA LR LR 13 39 25.5
comp=Z,468nm,18.7s,baz=346,slow=35
VNDA Vanda 72.50 171 *e*P **P** **13 08 22.8 +1.4**
comp=Z,48nm,1.8s
VNDA Vanda 72.50 171 *e*P **P** **13 08 22.8 +1.4**
VNDA pmax pmax
comp=Z,48nm,1.8s
SBA Scott Base 73.50 171 *e*P **P** **13 08 28.6 +1.3**
comp=Z,30nm,1.4s
SBA Scott Base 73.50 171 *e*P **P** **13 08 28.6 +1.3**
SBA pmax pmax
comp=Z,30nm,1.4s
GEYT Alibeck 73.61 313 P **P** **13 08 28.1 -0.6**
comp=Z,205nm,1.0s,baz=65,slow=11,SNR=1.3
GEYT LR LR 13 45 14.5
comp=Z,110nm,19.3s,baz=90,slow=39
BVAR Borovoye Array 74.13 331 P **P** **13 08 30.5 -0.9**
comp=Z,4.8nm,0.7s,baz=141,slow=7.0,SNR=34
BVAR LR LR 13 45 21.1
comp=Z,371nm,19.3s,baz=127,slow=39
BRVK Borovoye 74.20 331 *c i*P **P** **13 08 30.3 -1.4**
BRVK pmax pmax
comp=Z,3.0nm,0.6s
SEY Seymchan 75.31 15⇑*i*P **P** **13 08 36.9 -1.0**
AB31 Akbulak array 77.53 324 P **P** **13 08 48.8 -2.0**
AB31 pmax pmax
comp=Z,9.0nm,0.9s
ABKAR Akbulak array 77.53 324 *e*P **P** **13 08 49.1 -1.7**
RAR Rarotonga 78.08 110 LR LR 13 42 23.1
comp=Z,48nm,21.9s,baz=266,slow=35
SYO Syowa Base 78.78 201⇓*i*P **P** **13 08 57.6 +0.2**
ATD Arta Tunnel 79.10 283 LR LR 13 41 55.4
comp=Z,119nm,19.0s,baz=122,slow=34
AKTO Aktyubinsk 79.18 325 P **P** **13 08 58.4 -1.5**
comp=Z,5.5nm,0.7s,baz=123,slow=6.7,SNR=21
AKTO LR LR 13 46 48.9
comp=Z,95nm,21.7s,baz=128,slow=38
RAYN Ar Rayn 79.19 296 *e*P **P** **13 08 59.1 -1.6**
comp=Z,20nm,1.8s
TIXI Tiksi 80.04 3⇓*i*P **P** **13 09 03.5 -0.6**
TIXI pmax pmax
comp=Z,9.0nm,1.0s
SVE Sverdlovsk 80.92 331⇑*e*P **P** **13 09 07.6 -1.5**
SVE pmax pmax
comp=Z,14nm,1.1s
QSPA South Pole Qui 81.65 180 P **P** **13 09 14.1 +1.0**
comp=Z,16nm,1.0s,baz=326,slow=1.7,SNR=29
QSPA LR LR 13 46 11.9
comp=Z,325nm,18.2s,baz=341,slow=36
QSPA South Pole Qui 81.65 180 *e*P **P** **13 09 14.1 +1.0**
comp=Z,32nm,1.3s
ARU Arti 81.72 330 *c i*P **P** **13 09 11.4 -2.0**
ARU S **S** **13 19 24.7 +2.1**
ARU pmax pmax
comp=Z,6.0nm,1.7s
KMBO Kilima Mbogo 82.54 270 P P 13 09 32.4 +13
comp=Z,9.8nm,0.7s,baz=66,slow=6.6,SNR=26
BILL Bilibino 82.92 16 *e*P **P** **13 09 19.2 -0.3**
BILL *e* 13 12 32.0
BILL *e*PPP PPP 13 14 20.6
BILL pmax pmax
comp=Z,9.0nm,3.3s
GNI Garni 84.14 312 LR LR 13 53 29.3
comp=Z,83nm,18.2s,baz=122,slow=40
ZEI Tsey 85.47 314 *e*P **P** **13 09 31.9 -1.3**
ZEI pmax pmax
comp=Z,8.0nm,0.4s
KBZ Khabaz 86.42 315 P **P** **13 09 36.3 -1.3**
comp=Z,3.2nm,0.8s,baz=133,slow=3.4,SNR=10
KBZ pP **pP** **13 09 53.5 +2.3**
comp=Z,5.5nm,1.0s,baz=193,slow=3.0,SNR=4.5
KBZ LR LR 13 54 06.4
comp=Z,100nm,21.6s,baz=100,slow=40
NEY Neytrino 86.42 314⇓*e*P **P** **13 09 39.0 +1.1**
NEY pmax pmax
comp=Z,3.0nm,1.4s
KIV Kislovodsk 86.63 315 *e*P **P** **13 09 35.9 -2.9**
KIV pmax pmax
comp=Z,4.0nm,1.0s
PPT2 Papeete2 88.04 107 *e*LR LR 13 37 39.9
comp=Z,442nm,26.5s
PPT Papeete 88.04 107 LR LR 13 47 04.7
comp=Z,35nm,20.2s,baz=196,slow=34
MBAR Mbarara 89.06 270 *e*P **P** **13 09 51.5 +0.3**
comp=Z,16nm,1.1s
MBAR Mbarara 89.06 270 *e*P **P** **13 09 51.5 +0.3**
MBAR pmax pmax
comp=Z,16nm,1.1s
LSZ Lusaka 89.45 255 *e*P **P** **13 09 53.4 +0.5**
comp=Z,32nm,1.5s
LSZ Lusaka 89.45 255 *e*P **P** **13 09 53.4 +0.5**
LSZ pmax pmax
comp=Z,32nm,1.5s
MMAI Mount Meron Ar 89.89 303 P **P** **13 09 54.1 -0.4**
comp=Z,0.5nm,0.3s,baz=74,slow=5.1,SNR=3.6
MMAI LR LR 13 54 52.0
comp=Z,232nm,19.0s,baz=110,slow=39
BOSA Boshof 90.08 241 P **P** **13 09 56.0 +0.4**
comp=Z,5.0nm,0.6s,baz=94,slow=4.0,SNR=8.8
SNAA Sanae 91.86 195 P **P** **13 10 04.5 +1.6**
SNAA Sanae 91.86 195 P **P** **13 10 04.4 +1.4**
comp=Z,6.4nm,0.5s,baz=184,slow=5.0,SNR=88
SNAA LR LR 13 49 33.0
comp=Z,757nm,19.3s,baz=161,slow=34
SNAA Sanae 91.86 195 *e*P **P** **13 10 04.3 +1.4**
comp=Z,8.1nm,0.6s
BRTR Keskin Array B 92.38 310 P **P** **13 10 04.1 -2.0**
comp=Z,0.6nm,0.6s,baz=79,slow=6.4,SNR=3.7
BRTR pP **pP** **13 10 21.8 +2.1**
comp=Z,1.3nm,0.9s,baz=100,slow=5.6,SNR=3.7
BRTR LR LR 13 56 39.1
comp=Z,96nm,19.5s,baz=108,slow=39
KLMR Klimovskoe 92.55 331 *e*P P 13 10 11.2 +5.1
KLMR pmax pmax
comp=Z,10.0nm,1.1s
KLMR Klimovskoe 92.55 331 *e*P P 13 10 11.3 +5.2
KLMR AMP 13 10 14.3
comp=Z,10.0nm,1.1s
RDOG Red Dog Mine 92.94 22 *e*P **P** **13 10 10.6 +2.8**
comp=Z,6.9nm,0.6s
OBN Obninsk 92.96 325 *e*P **P** **13 10 07.7 -0.4**
OBN pmax pmax
comp=Z,3.0nm,0.9s
VNA3 Neumayer Olymp 93.87 194 P **P** **13 10 13.3 +1.1**
AKASG Malin Array Be 96.80 320 LR LR 14 01 35.3
comp=Z,64nm,18.4s,baz=70,slow=40
BWN Browne 97.73 26 *e*P Pdif 13 10 33.6 +3.8
TAOE Nuku Hiva Isla 98.48 100 *e*LR LR 13 42 31.8
comp=Z,168nm,26.1s
IDI Anoyia 98.81 304 LR LR 13 59 03.9
comp=Z,62nm,21.8s,baz=89,slow=38
ILAR Eielson Array 98.87 26 PKKPbc PKKPbc 13 27 02.4 -2.3
comp=Z,0.5nm,0.5s,baz=131,slow=1.5,SNR=8.9
ARCES ARCESS Array B 99.29 339 LR LR 14 02 02.3
comp=Z,169nm,19.1s,baz=107,slow=39
DPC Dobruska-Polom 105.02 320 AMS AMS 14 03 10.0
comp=Z,200nm,21.9s
UPC Upice 105.20 320 AMS AMS 14 04 20.0
comp=Z,200nm,20.0s
GOPC GO Pecny, Ondr 106.05 319 AMS AMS 14 03 40.0
comp=Z,200nm,16.4s
PRU Pruhonice 106.20 320 AMS AMS 14 03 50.0
comp=Z,200nm,18.9s
KHC Kasperske Hory 106.92 319 AMS AMS 14 04 10.0
comp=Z,100nm,17.8s
CLL Collm 107.00 321 *e*PP PP 13 15 36.0 -2.0

CLL				*e*PS	**PS**	**13 24 55.0**	**-4.1**
CLL				*e*PPS	PPS	13 25 59.0	
CLL				*e*		13 36 24.0	
CLL				*e*		13 39 36.0	
CLL				LmV		14 09 00.0	
	comp=Z,100nm,19.2s						
YKA	**Yellowknife Ar**	**113.24**	**24**	PKiKP	**PKiKP**	**13 15 30.1**	**-2.0**
	comp=Z,1.0nm,0.7s,baz=302,slow=1.7,SNR=3.9						
TORD	**Torodi Ar. Bea**	**119.19**	**280**	PKP	**PKPdf**	**13 15 43.6**	**-1.3**
	comp=Z,4.0nm,0.7s,baz=75,slow=1.8,SNR=24						
NVAR	**Mina Array Bea**	**119.93**	**50**	PKP	**PKPdf**	**13 15 44.7**	**-1.4**
	comp=Z,0.5nm,0.6s,baz=293,slow=2.0,SNR=5.2						
NVAR				PKKPab	**PKKPab**	**13 25 56.9**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=124,slow=4.6,SNR=6.0						
ESDC	**Sonseca Array**	**121.12**	**312**	PKP	**PKPdf**	**13 15 46.9**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=50,slow=3.0,SNR=4.8						
MDT	**Midelt**	**123.33**	**304**	PKP	**PKPdf**	**13 15 51.7**	**-1.0**
	comp=Z,1.4nm,0.7s,baz=94,slow=0.9,SNR=7.5						
PDAR	**Pinedale Array**	**124.85**	**43**	PKP	**PKPdf**	**13 15 52.9**	**-2.5**
	comp=Z,0.1nm,0.3s,baz=249,slow=6.7,SNR=2.8						
DBIC	**Dimbokro**	**125.21**	**272**	PKP	**PKPdf**	**13 15 55.6**	**-1.0**
	comp=Z,5.9nm,1.0s,baz=28,slow=1.3,SNR=5.0						
TXAR	**Lajitas Array**	**134.15**	**57**	PKP	**PKPdf**	**13 16 12.7**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=194,slow=1.0,SNR=7.7						
WVT	**Waverly**	**142.55**	**38**	P	PKPpre	13 16 21.9	
	baz=311						
U49A	**Red Boiling Sp**	**143.51**	**36**	P	PKPab	13 16 25.6	-0.9
	baz=314						
T50A	**Nancy**	**143.69**	**34**	P	PKPab	13 16 26.4	-0.7
	baz=316						
W48A	**Pulaski**	**143.75**	**39**	P	PKPab	13 16 25.8	-1.6
	baz=311						
U50A	**Jamestown**	**144.12**	**35**	P	**PKPab**	**13 16 28.3**	**-0.5**
	baz=315						
W49A	**Belvidere**	**144.17**	**38**	P	**PKPab**	**13 16 26.0**	**-3.0**
	baz=312						
Z48A	**Northport**	**144.47**	**42**	P	**PKPab**	**13 16 27.6**	**-2.5**
	baz=308						
X49A	**Woodville**	**144.53**	**39**	P	**PKPab**	**13 16 27.8**	**-2.5**
	baz=311						
W50A	**Signal Mountai**	**144.69**	**37**	P	**PKPab**	**13 16 29.2**	**-1.7**
	baz=313						
N59A	**State Game Lan**	**144.70**	**21**	P	**PKPab**	**13 16 29.6**	**-1.2**
	baz=332						
TZTN	**Tazewell**	**144.75**	**34**	P	**PKPab**	**13 16 29.9**	**-1.2**
	baz=317						
V51A	**Loudon**	**144.84**	**35**	P	**PKPab**	**13 16 29.8**	**-1.6**
	baz=315						
Y49A	**Blount Mountai**	**144.91**	**40**	P	**PKPab**	**13 16 29.8**	**-1.9**
	baz=310						
U52A	**Thorn Hill**	**144.96**	**34**	P	**PKPab**	**13 16 30.5**	**-1.4**
	baz=317						
X50B	**Fort Payne**	**144.99**	**38**	P	**PKPab**	**13 16 29.1**	**-3.0**
	baz=312						
LRAL	**Lakeview Retre**	**145.05**	**42**	P	**PKPbc**	**13 16 30.8**	**-1.4**
	baz=309						
V52A	**Sevierville**	**145.24**	**35**	P	**PKPbc**	**13 16 31.8**	**-1.0**
	baz=316						
Z49A	**Columbiana**	**145.25**	**41**	P	**PKPbc**	**13 16 31.3**	**-1.6**
	baz=310						
TKL	**Tuckaleechee C**	**145.27**	**35**	PKPbc	**PKPbc**	**13 16 31.9**	**-1.1**
	comp=Z,12nm,0.8s,baz=316,slow=3.8,SNR=9.8						
Y50A	**Piedmont**	**145.31**	**39**	P	**PKPbc**	**13 16 31.2**	**-1.9**
	baz=311						
X51A	**Calhoun**	**145.40**	**37**	P	**PKPbc**	**13 16 32.7**	**-0.6**
	baz=313						
U53A	**Fall Branch**	**145.41**	**33**	P	**PKPbc**	**13 16 32.2**	**-1.2**
	baz=318						
CPUP	**Villa Florida**	**145.43**	**184**	PKPbc	**PKPab**	**13 16 34.5**	**+0.7**
	comp=Z,43nm,0.9s,baz=175,slow=2.9,SNR=8.6						
149A	**Jones**	**145.46**	**42**	P	**PKPdf**	**13 16 32.3**	**-1.3**
	baz=308						
Z50A	**Ashland**	**145.61**	**40**	P	**PKPdf**	**13 16 32.2**	**-1.6**
	baz=310						
V53A	**Saluda**	**145.80**	**34**	P	**PKPdf**	**13 16 33.7**	**-0.5**
	baz=317						
LPAZ	**La Paz**	**154.28**	**162**	PKP	**PKPdf**	**13 16 48.8**	**+0.1**
	comp=Z,2.3nm,0.9s,baz=297,slow=5.6,SNR=5.1						
LPAZ				PKPbc	**PKiKP**	**13 16 58.5**	**+1.5**
	comp=Z,4.0nm,0.7s,baz=206,slow=3.6,SNR=13						
LPAZ				PKPab	**pPKPbc**	**13 17 12.6**	**+1.7**
	comp=Z,15nm,0.7s,baz=175,slow=2.1,SNR=23						

TRN 27 13:01:11.8, 16.00N×61.41W, h157km, MD3.5, 5C-3D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGG	**Marie-Galante**	**0.12**	**132**	⇑*i*P	Pn	13 01 34.4	+1.6
MGG				*e*S	Sn	13 01 49.9	+1.1
DOG	**Dongo Capester**	**0.20**	**279**	⇓*i*P	Pn	13 01 34.2	+1.2
PHG	**Guadaloupe-2**	**0.23**	**274**	⇓*e*P	Pn	13 01 34.4	+1.2
TAG	**Tarade**	**0.25**	**280**	*e*P	Pn	13 01 34.8	+1.6
TAG				*e*S	Sn	13 01 51.1	+1.6
TBG	**Guadaloupe-3**	**0.27**	**237**	*e*P	Pn	13 01 33.9	+0.8
TBG				*e*S	Sn	13 01 49.8	+0.5
SSG	**Sans Toucher**	**0.27**	**289**	⇑*i*P	Pn	13 01 34.8	+1.5
HMG	**Houelmont**	**0.28**	**267**	*e*P	Pn	13 01 34.8	+1.6
MDPV	**Dominica, Penn**	**0.37**	**182**	*e*P	Pn	13 01 34.6	+1.1
MDPV				*e*S	Sn	13 01 50.7	+0.7
LZG	**Guadaloupe-1**	**0.38**	**292**	*e*P	Pn	13 01 34.1	+0.7
MDVC	**Dominica, Viel**	**0.38**	**179**	*e*P	Pn	13 01 34.6	+1.1
MDVC				*e*S	Sn	13 01 51.5	+1.5
SEG	**Port Louis**	**0.41**	**347**	⇑*i*P	Pn	13 01 35.1	+1.6
MDPO	**Dominica; Chan**	**0.42**	**185**	*e*P	Pn	13 01 34.6	+0.9
MDPO				*e*S	Sn	13 01 50.8	+0.5
DEG	**La Desirade**	**0.46**	**47**	*e*P	Pn	13 01 34.9	+1.1
DEG				*e*S	Sn	13 01 51.4	+0.8
BBL	**Barber's Block**	**0.47**	**187**	⇓*i*P	Pn	13 01 34.8	+0.9
BBL				*e*S	Sn	13 01 50.9	+0.2
DLPL	**La Plaine**	**0.68**	**167**	*e*P	Pn	13 01 35.4	+0.4
DLPL				*e*S	Sn	13 01 53.9	+1.1
MLYT	**Lee's Yard**	**1.04**	**314**	*e*P	Pn	13 01 38.2	+0.6
MLYT				*e*S	Sn	13 01 58.4	+1.0
BPA	**Boggy Peak**	**1.13**	**338**	⇑*i*P	Pn	13 01 40.2	+1.9
BPA				*e*S	Sn	13 01 59.2	+0.4
PCM	**Pelee Case Pet**	**1.19**	**171**	*e*P	Pn	13 01 39.4	+0.5
PCM	**Pelee Case Pet**	**1.19**	**171**	*e*P	Pn	13 01 40.0	+1.0
BAMF	**Morne Balai**	**1.20**	**168**	*e*P	Pn	13 01 40.0	+0.8
CXM	**Morne La Croix**	**1.20**	**169**	*e*P	Pn	13 01 40.4	+1.1
GBMF	**Grand Be**	**1.22**	**169**	*e*P	Pn	13 01 39.9	+0.6
PML	**Morne Lenard**	**1.23**	**170**	*e*P	Pn	13 01 39.8	+0.4
FDF	**Fort de France**	**1.28**	**169**	*e*P	Pn	13 01 40.2	+0.4
FDF				*e*S	Sn	13 02 01.9	+0.5
ZAM	**Aeronautique**	**1.47**	**165**	*e*P	Pn	13 01 42.4	+0.8
LPMF	**Morne Lapointe**	**1.48**	**163**	*e*P	Pn	13 01 42.6	+0.9
TRMF	**Trois Ilets**	**1.50**	**167**	*e*P	Pn	13 01 42.7	+0.8
BIM	**Bigot**	**1.51**	**167**	*e*P	Pn	13 01 42.9	+0.8
BIM				*e*S	Sn	13 02 08.1	+2.7
NEV	**Hard Times**	**1.59**	**316**	*e*P	Pn	13 01 44.1	+1.3
NEV				*e*S	Sn	13 02 07.1	+0.4
NVBH	**Bath Hotel, Ne**	**1.60**	**314**	*e*P	Pn	13 01 43.4	+0.4
NVBH				*e*S	Sn	13 02 08.2	+1.2
NVRH	**Round Hill, Ne**	**1.64**	**316**	*e*P	Pn	13 01 45.1	+1.7
NVRH				*e*S	Sn	13 02 08.2	+0.5
ANWB	**Willy Bob**	**1.70**	**348**	⇑*i*P	Pn	13 01 44.7	+0.7
ANWB				*e*S	Sn	13 02 09.2	+0.4
BSK	**Brimstone Hill**	**1.92**	**315**	*e*P	Pn	13 01 47.7	+1.3
BSK				*e*S	Sn	13 02 14.1	+1.0
SLB	**Belfond**	**2.19**	**171**	*e*P	Pn	13 01 50.5	+0.8
SLB				*e*S	Sn	13 02 19.2	+0.4
MCLT	**Moule a Chique**	**2.32**	**169**	*e*P	Pn	13 01 52.3	+1.2
MCLT				*e*S	Sn	13 02 21.6	0.0
SMRT	**St. Maarten**	**2.59**	**322**	*e*P	Pn	13 01 54.6	+0.2
SMRT				*e*S	Sn	13 02 27.3	0.0
SVV	**Soufriere Volc**	**2.67**	**176**	*e*P	Pn	13 01 57.0	+1.6
SVV				*e*S	Sn	13 02 29.3	+0.2
SVB	**Belmont**	**2.71**	**177**	*e*P	Pn	13 01 57.1	+1.1
SVB				*e*S	Sn	13 02 30.1	0.0
SVCV	**St. Vincent, C**	**2.72**	**175**	*e*P	Pn	13 01 56.6	+0.6
SVCV				*e*S	Sn	13 02 31.2	+1.0
FCV	**Fort Charlotte**	**2.83**	**177**	*e*P	Pn	13 01 58.8	+1.4
FCV				*e*S	Sn	13 02 32.8	+0.2
GRGR	**Grenville**	**3.85**	**184**	*e*S	Sn	13 02 55.3	-0.6

MAN 27 13:01:17.0, 8.88N×127.12E, h9km, mb4.4, ML3.2, MS2.9, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**1.02**	**227**	⇑*i*P	Pg	13 01 35.4	-1.2
BIPH				*i* S	Sg	13 01 45.6	-4.4
BUTP	**Butuan**	**1.48**	**273**	*e*P	Pn	13 01 43.3	-0.6
BUTP				*e*S	Sb	13 02 03.7	0.0
BUKP	**Musuan**	**2.27**	**244**	*e*P	Pn	13 01 55.6	+0.9
BUKP				*e*S	Sn	13 02 24.1	+1.3

ISCJB ***27*** *13:01:59.3±0.8, 22.23S±0.05×68.8W±0.1, h123km±8km, mb3.7/2, Error ellipse: s-maj=19.4km s-min=6.9km az=11.3*
GUC ***27*** *13:01:59.1±0.5, 22.22S×68.77W, h118km±3km, ML3.6*
IDC ***27*** *13:02:00.2±4.0, 22.32S×68.10W, h104km±37km, mb3.7/2, mb1 3.6/4, mb1mx3.3/37, mbtmp4.0/4, Error ellipse: s-maj=57.1km s-min=35.6km az=118.0*
ISC 27 13:02:00.1±1.1, 22.24S±0.05×68.8W±0.1, h114km±10km, n17, σ0.64/26, 6C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.63**	**314**	⇓*i*P	**Pn**	**13 02 18.2**	**-0.3**
PB09				*e*S	**Sn**	**13 02 32.6**	**+0.2**
PB09				AML	AML	13 02 33.9	
	comp=E,2μm,0.5s						
PB06	**IPOC Station P**	**0.89**	**238**	⇑*i*P	**Pn**	**13 02 20.4**	**-0.3**
PB06				*e*S	**Sn**	**13 02 36.6**	**+0.3**
PB06				AML	AML	13 02 37.2	
	comp=E,2μm,0.1s						
PB03	**IPOC Station P**	**0.94**	**281**	⇑*i*P	**Pn**	**13 02 21.1**	**-0.1**
PB03				*e*S	**Sn**	**13 02 37.4**	**+0.2**
PB03				AML	AML	13 02 38.9	
	comp=E,3μm,0.2s						
PB07	**IPOC Station P**	**1.16**	**296**	⇓*i*P	**Pn**	**13 02 23.5**	**-0.1**
PB07				*e*S	**Sn**	**13 02 41.7**	**+0.4**
PB07				AML	AML	13 02 42.9	
	comp=N,1μm,0.1s						
PB15	**IPOC Station P**	**1.17**	**214**	⇑*e*P	**Pn**	**13 02 23.5**	**-0.2**
PB15				*e*S	**Sn**	**13 02 42.5**	**+1.0**
PB04	**IPOC Station P**	**1.29**	**265**	*e*P	**Pn**	**13 02 24.8**	**-0.1**
PB04				*e*S	**Sn**	**13 02 44.2**	**+0.5**
PB01	**IPOC Station P**	**1.37**	**330**	⇑*e*P	**Pn**	**13 02 25.1**	**-0.6**
PB01				*e*S	**Sn**	**13 02 45.1**	**0.0**
PB01				AML	AML	13 02 50.5	
	comp=E,749nm,0.2s						
PB02	**IPOC Station P**	**1.40**	**311**	⇑*e*P	**Pn**	**13 02 25.9**	**-0.1**
PB02				*e*S	**Sn**	**13 02 45.6**	**-0.1**
PB02				AML	AML	13 02 47.5	
	comp=E,1μm,0.6s						
PB05	**IPOC Station P**	**1.47**	**245**	*e*P	**Pn**	**13 02 26.7**	**-0.2**
PB05				*e*S	**Sn**	**13 02 47.7**	**+0.4**
PB05				AML	AML	13 02 52.5	
	comp=N,498nm,0.6s						
PB10	**IPOC Station P**	**2.09**	**232**	*e*P	**Pn**	**13 02 34.0**	**-0.3**
PB08	**IPOC Station P**	**2.12**	**350**	⇑*i*P	**Pn**	**13 02 35.1**	**0.0**
PB08				*e*S	**Sn**	**13 03 02.7**	**+0.7**
LPAZ	**La Paz**	**5.95**	**6**	P	**Pn**	**13 03 27.4**	**+1.0**
	comp=N,1.4nm,0.3s,baz=182,slow=7.0,SNR=41						
SIV	**San Ignacio**	**9.56**	**51**	P	Pn	13 04 09.0	-5.8
	comp=N,1.7nm,0.3s,baz=251,slow=11,SNR=22						
SIV				S	Sn	13 05 48.1	-12
	comp=N,0.2nm,0.3s,baz=311,slow=19,SNR=2.9						
QSPA	**South Pole Qui**	**67.96**	**180**	P	**P**	**13 12 47.4**	**+0.8**
	comp=N,1.5nm,0.5s,baz=162,slow=1.4,SNR=5.8						
TORD	**Torodi Ar. Bea**	**77.47**	**70**	P	**P**	**13 13 41.7**	**-1.8**
	comp=N,0.3nm,0.5s,baz=243,slow=4.6,SNR=5.0						
WRA	**Warramunga Arr**	**132.39**	**210**	PKP	**PKPdf**	**13 21 02.7**	**+0.9**
	comp=N,0.6nm,1.1s,baz=155,slow=1.8,SNR=4.5						
MKAR	**Makanchi Array**	**146.14**	**37**	PKPbc	**PKPbc**	**13 21 26.7**	**-0.3**
	comp=N,0.4nm,0.6s,baz=318,slow=1.9,SNR=4.8						

GUC ***27*** *13:06:26.9±0.6, 31.72S×67.79W, h121km±56km, ML4.8*
SJA ***27*** *13:06:30.5±0.8, 31.73S×67.83W, h16km±4km, ML4.4, MW4.3, Fault plane solution: NP1:φs104.45000°, δ57.39000°, λ-66.04000°.*
ISCJB ***27*** *13:06:33.9±0.4, 31.77S±0.03×67.70W±0.04, h53km±4km, mb4.3/17, MS3.6/2, Error ellipse: s-maj=5.5km s-min=4.2km az=10.6*
IDC ***27*** *13:06:33.9±3.7, 31.74S×67.73W, h37km±30km, mb3.9/12, mb1 4.1/16, mb1mx4.0/36, mbtmp4.1/16, ML4.2/4, MS3.4/4, Ms1 3.4/4, ms1mx3.0/36, Error ellipse: s-maj=22.7km s-min=15.3km az=93.0*
NEIC ***27*** *13:06:34.1±0.5, 31.70S×67.69W, h40km±4km, mb4.5/6, MD4.4(SJA), Error ellipse: s-maj=6.1km s-min=4.4km az=92.0*
NEIC Felt [III] at San Juan.
ISC 27 13:06:34.5±0.8, 31.73S±0.04×67.71W±0.04, h41km±7km, n86, σ1.74/97, mb4.4/17, 10C-6D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZON	**Zonda**	**0.85**	**282**	⇓*e*P	Pn	13 06 44.7	-5.4
ASAL	**Salagasta**	**1.29**	**228**	⇑*i*P	**Pn**	**13 06 58.5**	**+2.4**
ASAL				*i* S	**Sn**	**13 07 10.2**	**-2.0**
RTLS	**Leoncito**	**1.36**	**267**	IAML		13 07 12.1	
	comp=Z,3μm,0.4s						
ARCO	**CERRO ARCO**	**1.52**	**223**	*i* P	**Pn**	**13 06 58.3**	**-1.1**
ARCO				*e*S	**Sn**	**13 07 18.6**	**+0.5**
ARCO				IAML		13 07 19.7	
	comp=Z,4μm,0.4s						
AAGR	**Agrelo**	**1.65**	**215**	⇑*e*P	**Pn**	**13 07 00.6**	**-0.6**
AAGR				*e*S	**Sn**	**13 07 22.3**	**+1.1**
APLL	**PUNTA DE LOS L**	**1.67**	**37**	⇑*e*P	**Pn**	**13 07 02.0**	**+0.6**
APLL				*e*S	**Sn**	**13 07 25.4**	**+3.7**
APLL				IAML		13 07 30.2	
	comp=Z,3μm,0.4s						
MRA	**San Martin**	**1.82**	**113**	⇓*e*P	**Pn**	**13 07 04.6**	**+1.1**
MRA				*e*S	**Sn**	**13 07 30.5**	**+5.0**
MRA				IAML		13 07 41.6	
	comp=Z,6μm,0.6s						
AVIZ	**Vizcacheras**	**1.87**	**201**	*e*P	**Pn**	**13 07 03.6**	**-0.5**
ACDV	**Cuesta del Vie**	**1.97**	**322**	*e*P	**Pn**	**13 07 05.5**	**-0.2**
ACDV				*e*S	**Sn**	**13 07 30.2**	**+1.0**
AROD	**Rodeo**	**2.18**	**315**	⇑*e*P	**Pn**	**13 07 09.0**	**+0.4**
AROD				*e*S	**Sn**	**13 07 36.4**	**+1.9**
AGUA	**GUANDACOL**	**2.34**	**343**	⇑*e*P	**Pn**	**13 07 12.2**	**+1.6**
AGUA				*e*S	**Sn**	**13 07 41.5**	**+3.4**
TCA	**Tanti**	**2.68**	**82**	⇓*e*P	**Pn**	**13 07 16.1**	**+0.8**
TCA				*e*S	Sn	13 07 56.5	+10
TCA				IAML		13 07 57.6	
	comp=Z,2μm,0.4s						
FCH	**Farellones**	**2.70**	**233**	⇑*i*P	**Pn**	**13 07 16.1**	**+0.3**
FCH				*e*S	**Sn**	**13 07 52.7**	**+5.2**
FCH				IAML		13 07 54.1	
	comp=E,2μm,0.2s						
SUCO	**SUCO**	**2.88**	**125**	⇓*e*P	**Pn**	**13 07 17.4**	**-0.5**
SUCO				*e*S	Sn	13 08 02.2	+11
SUCO				IAML		13 08 11.3	
	comp=Z,1μm,0.4s						
PEL	**Peldehue**	**2.89**	**240**	*e*Pn	**Pn**	**13 07 18.5**	**+0.4**
PEL	**Peldehue**	**2.89**	**240**	⇑*i*P	**Pn**	**13 07 18.6**	**+0.5**
PEL				*e*S	**Sn**	**13 07 57.5**	**+5.9**
CLCH	**Cerro Calan**	**2.91**	**234**	*e*P	**Pn**	**13 07 18.7**	**+0.3**
CLCH				*e*S	**Sn**	**13 07 58.1**	**+5.9**
CLCH				IAML		13 08 02.1	
	comp=N,5μm,0.8s						
LMEL	**Las Melosas**	**2.98**	**224**	*e*P	**Pn**	**13 07 19.6**	**+0.1**
LMEL				*e*S	Sn	13 08 01.5	+7.4
LMEL				IAML		13 08 03.9	
	comp=N,1μm,0.4s						
VCA	**Vinchina**	**3.02**	**352**	⇑*e*P	**Pn**	**13 07 21.3**	**+1.3**
ROCH	**El Roble**	**3.06**	**245**	*e*P	**Pn**	**13 07 20.5**	**-0.1**
ROC1	**El Roble**	**3.06**	**245**	*e*Pn	**Pn**	**13 07 20.3**	**-0.4**
GO04	**Tololo Observa**	**3.08**	**299**	*e*Pn	**Pn**	**13 07 21.4**	**+0.5**
GO04	**Tololo Observa**	**3.08**	**299**	*e*P	**Pn**	**13 07 21.2**	**+0.3**
TLL	**Tololo Astrono**	**3.08**	**300**	*e*P	**Pn**	**13 07 21.4**	**+0.4**
TLL				*e*S	**Sn**	**13 08 02.9**	**+6.2**
TLL				IAML		13 08 09.2	
	comp=E,5μm,0.8s						
RFA	**San Rafael**	**3.10**	**192**	*e*P	**Pn**	**13 07 21.4**	**+0.4**
RFA				*e*S	Sn	13 08 07.5	+11
RFA				IAML		13 08 19.1	
	comp=Z,2μm,0.4s						
PIL	**Pilar**	**3.26**	**90**	*e*P	**Pn**	**13 07 24.1**	**+0.9**
CYA	**Choya**	**3.67**	**27**	⇓*e*P	**Pn**	**13 07 29.6**	**+0.7**
CYA				*e*P	**Pn**	**13 07 29.6**	**+0.7**
CYA				IAML		13 08 37.1	
	comp=Z,685nm,0.5s						
LCO	**Las Campanas**	**3.75**	**316**	*e*Pn	**Pn**	**13 07 29.9**	**-0.2**
LCO	**Las Campanas**	**3.75**	**316**	*e*P	**Pn**	**13 07 30.7**	**+0.6**
GO03	**Copiap**	**4.67**	**331**	*e*Pn	**Pn**	**13 07 42.2**	**-0.4**
GO05	**HualaæØ**	**4.81**	**226**	*e*Pn	**Pn**	**13 07 43.5**	**-1.0**
GO05	**HualaæØ**	**4.81**	**226**	*e*P	**Pn**	**13 07 43.9**	**-0.6**
GO05				*i* S	Sn	13 08 55.5	+16
AHML	**Horco Molle**	**5.35**	**23**	IAML		13 09 33.4	
	comp=Z,208nm,0.4s						
GO02	**Mina Guanaco**	**6.75**	**345**	*e*Pn	**Pn**	**13 08 11.2**	**-0.3**
TRQA	**Tornquist**	**7.87**	**145**	*e*Pn	**Pn**	**13 08 25.3**	**-1.1**
TRQA	**Tornquist**	**7.87**	**145**	⇑*e*P	**Pn**	**13 08 25.7**	**-0.7**
PLCA	**Paso Flores**	**9.27**	**194**	Pn	**Pn**	**13 08 46.7**	**+1.0**
	comp=Z,0.8nm,0.3s,baz=30,slow=12,SNR=18						
PLCA				Lg	Lg	13 11 18.1	
	comp=Z,0.9nm,0.3s,baz=142,slow=16,SNR=3.2						
PLCA				LR	LR	13 13 08.8	
	comp=Z,119nm,20.0s,baz=44,slow=43						
PLCA	**Paso Flores**	**9.27**	**194**	*e*Pn	**Pn**	**13 08 47.1**	**+1.4**
PLCA				Lg	Lg	13 11 18.1	
CPUP	**Villa Florida**	**10.55**	**62**	Pn	**Pn**	**13 09 01.6**	**-1.6**
	comp=Z,1.1nm,0.3s,baz=248,slow=12,SNR=9.2						
CPUP				Lg	Lg	13 12 06.5	
	comp=Z,1.4nm,0.3s,baz=164,slow=18,SNR=2.3						
CPUP				LR	LR	13 13 55.5	
	comp=Z,142nm,21.1s,baz=222,slow=42						
CPUP	**Villa Florida**	**10.55**	**62**	*e*Pn	**Pn**	**13 09 03.1**	**-0.1**
CPUP				Lg	Lg	13 12 06.5	
MNMC	**Minye Minye**	**12.66**	**352**	*e*Pn	**Pn**	**13 09 29.2**	**-3.1**
LPAZ	**La Paz**	**15.38**	**358**	Pn	**Pn**	**13 10 07.9**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=175,slow=7.2,SNR=7.3						
LPAZ	**La Paz**	**15.38**	**358**	*e*Pn	**Pn**	**13 10 07.8**	**-1.4**
	comp=Z,8.2nm,0.6s						
SIV	**San Ignacio**	**16.79**	**23**	Pn	**Pn**	**13 10 26.1**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=230,slow=13,SNR=8.1						
SIV				Lg	Lg	13 15 31.8	
	comp=Z,0.1nm,0.3s,baz=288,slow=19,SNR=2.2						
NNA	**Nana**	**21.38**	**335**	LR	LR	13 18 17.0	
	comp=Z,96nm,21.8s,baz=149,slow=33						
RUSC	**La Rusia**	**37.76**	**351**	*e*P	**P**	**13 13 46.7**	**-0.6**
	comp=Z,7.3nm,0.6s						
HELC	**Santa Helena**	**38.44**	**347**	*e*P	**P**	**13 13 51.7**	**-1.1**
	comp=Z,53nm,0.5s						
SNAA	**Sanae**	**52.34**	**159**	P	**P**	**13 15 41.2**	**-0.7**
	comp=Z,2.3nm,0.7s,baz=212,slow=2.9,SNR=14						
SNAA	**Sanae**	**52.34**	**159**	*e*P	**P**	**13 15 41.1**	**-0.7**
	comp=Z,8.2nm,1.2s						
QSPA	**South Pole Qui**	**58.50**	**180**	P	**P**	**13 16 25.8**	**-0.6**
	comp=Z,1.8nm,0.6s,baz=169,slow=2.1,SNR=13						
SYO	**Syowa Base**	**66.61**	**158**	⇑*e*P	P	13 17 16.0	-4.2
SYO	**Syowa Base**	**66.61**	**158**	⇓*e*X	**P**	**13 17 23.0**	**+2.8**
VNDA	**Vanda**	**67.01**	**190**	P	**P**	**13 17 23.1**	**+0.4**
	comp=Z,0.7nm,0.8s,baz=152,slow=5.0,SNR=3.1						
TXAR	**Lajitas Array**	**69.69**	**327**	P	**P**	**13 17 39.8**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=151,slow=8.4,SNR=9.9						
TX31	**Lajitas Ar. Si**	**69.69**	**327**	*e*P	**P**	**13 17 39.4**	**-0.7**
DBIC	**Dimbokro**	**70.98**	**69**	P	**P**	**13 17 48.6**	**+0.4**
	comp=Z,3.6nm,0.9s,baz=202,slow=11,SNR=2.7						
PPT	**Papeete**	**74.22**	**259**	P	**P**	**13 18 07.8**	**+0.3**
	comp=Z,8.2nm,0.5s,baz=70,slow=17,SNR=3.4						
MAW	**Mawson**	**74.27**	**162**	P	**P**	**13 18 06.2**	**-0.7**
	comp=Z,2.6nm,0.5s,baz=241,slow=10,SNR=3.6						
ANMO	**Albuquerque**	**75.67**	**328**	P	**P**	**13 18 15.5**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=164,slow=7.4,SNR=3.1						
KOWA	**Kowa**	**76.37**	**63**	P	**P**	**13 18 19.8**	**0.0**
	comp=Z,3.0nm,1.0s,baz=256,slow=4.2,SNR=2.4						
X16A	**Lo Mia Camp, P**	**77.61**	**324**	*e*P	**P**	**13 18 26.5**	**-0.1**
	comp=Z,3.5nm,0.9s						
TOA0	**Torodi Ar. Sit**	**79.99**	**68**	*e*P	**P**	**13 18 40.4**	**+0.5**
TORD	**Torodi Ar. Bea**	**79.99**	**68**	P	**P**	**13 18 40.0**	**+0.1**
	comp=Z,2.7nm,0.6s,baz=250,slow=5.4,SNR=5.1						
PDAR	**Pinedale Array**	**83.49**	**330**	P	**P**	**13 18 57.7**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=114,slow=4.7,SNR=6.5						
NVAR	**Mina Array Bea**	**84.21**	**322**	P	**P**	**13 19 01.2**	**-0.6**
	comp=Z,0.7nm,0.8s,baz=163,slow=5.7

0.2nm,0.3s,baz=225,slow=10.0,SNR=3.1
H11N2 WAKE ISLAND Hy 28.07 120 T T 14 17 54.1
baz=313,slow=75,SNR=91
H11N1 WAKE ISLAND Hy 28.07 120 T T 14 17 54.7
baz=313,slow=75,SNR=98
H11N3 WAKE ISLAND Hy 28.08 120 T T 14 17 55.5
baz=313,slow=75,SNR=64
H11S1 WAKE ISLAND Hy 28.77 122 T T 14 18 48.1
baz=315,slow=76,SNR=61
H11S3 WAKE ISLAND Hy 28.77 122 T T 14 18 48.1
baz=315,slow=76,SNR=46
H11S2 WAKE ISLAND Hy 28.78 122 T T 14 18 49.1
baz=315,slow=76,SNR=35
ZALV Zalesovo Beam 42.05 313 P **P** **13 50 25.3 +0.5**
1.0nm,0.6s,baz=97,slow=7.6,SNR=3.7
MKAR Makanchi Array 44.21 302 P **P** **13 50 42.6 +0.2**
0.4nm,0.6s,baz=90,slow=9.1,SNR=4.9
KURBB Kurchatov Arra 46.12 308 P **P** **13 50 57.7 +0.3**
0.5nm,0.6s,baz=86,slow=7.6,SNR=4.4
WRA Warramunga Arr 56.79 188 P **P** **13 52 17.4 -0.2**
0.3nm,0.8s,baz=5.9,slow=7.4,SNR=6.0

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*ISCJB **27** 13:55:33.3±0.3,26°.06S±0°.04×179°.97W±0°.06, h458km, mb4.1/38, Error ellipse: s-maj=7.1km s-min=5.9km az=12.7*
*NEIC **27** 13:55:34.8±0.8,26°.20S×179°.88W, h473km±10km, mb4.5/21, Error ellipse: s-maj=11.2km s-min=8.5km az=167.0*
*IDC **27** 13:55:34.6±1.3,25°.93S×179°.96W, h459km±14km, mb3.6/19, mb1 3.8/19, mb1mx3.6/42, mbtmp4.4/19, Error ellipse: s-maj=13.9km s-min=11.2km az=171.0*

ISC 27 13:55:34.3±0.5,26°.09S±0°.07×179°.88W±0°.08,h458km, n73,σ1§24/74,mb4.2/38,2C,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.60**	**152**	P	**P**	**13 56 48.9**	**+2.4**
	171nm,0.3s,baz=52,slow=18,SNR=9.7						
RAO				S	**S**	**13 57 45.1**	**-0.2**
	432nm,0.3s,baz=53,slow=20,SNR=17						
RAO	**Raoul Island**	**3.60**	**152**	*eP*	**P**	**13 56 47.6**	**+1.1**
MXZ	**Matakaoa Point**	**11.54**	**187**	*eP*	**P**	**13 58 06.6**	**-1.3**
URZ	**Urewera**	**12.40**	**191**	P	**P**	**13 58 15.3**	**-1.9**
	8.1nm,0.3s,baz=302,slow=2.8,SNR=44						
URZ				S	**S**	**14 00 31.4**	**-0.2**
	4.3nm,0.3s,baz=117,slow=17,SNR=3.9						
DZM	**Mont Dzumac**	**13.12**	**285**	P	**P**	**13 58 26.6**	**+1.3**
	5.1nm,0.3s,baz=95,slow=15,SNR=36						
DZM	**Mont Dzumac**	**13.12**	**285**	*eP*	**P**	**13 58 25.5**	**+0.2**
HIZ	**Hauiti**	**13.16**	**198**	*eP*	**P**	**13 58 26.2**	**+0.8**
BKZ	**Black Stump Fm**	**13.39**	**192**	*eP*	P	13 58 19.4	-8.6
AFI	**Afiamalu**	**14.30**	**34**	P	P	13 58 31.6	-6.4
	6.2nm,0.3s,baz=249,slow=2.3,SNR=7.5						
AFI				S	S	14 00 56.4	-13
	1.2nm,0.3s,baz=319,slow=19,SNR=2.4						
AFI	**Afiamalu**	**14.30**	**34**	*eP*	P	13 58 31.4	-6.7
BFZ	**Birch Farm**	**14.91**	**192**	*eP*	**P**	**13 58 42.5**	**-1.5**
SNZO	**South Karori**	**15.83**	**195**	*eP*	**P**	**13 58 53.1**	**-0.7**
	287nm,1.5s						
KHZ	**Kahutara**	**17.16**	**197**	*eP*	**P**	**13 59 07.2**	**-0.6**
	115nm,1.5s						
LTZ	**Lake Taylor**	**17.85**	**199**	*eP*	**P**	**13 59 15.5**	**+0.5**
	209nm,2.0s						
OXZ	**Oxford**	**18.42**	**199**	*eP*	**P**	**13 59 18.6**	**-1.9**
	128nm,1.7s						
RPZ	**Rata Peaks**	**19.07**	**200**	P	**P**	**13 59 27.2**	**+0.7**
	1.2nm,0.3s,baz=0.0,slow=7.1,SNR=4.3						
RPZ	**Rata Peaks**	**19.07**	**200**	*eP*	**P**	**13 59 24.4**	**-2.1**
	188nm,1.7s						
FOZ	**Fox Glacier**	**19.32**	**203**	*eP*	**P**	**13 59 28.2**	**-0.6**
	217nm,1.7s						
EIDS	**Eidsvold**	**26.15**	**265**	*eP*	**P**	**14 00 31.1**	**+0.6**
	34nm,0.6s						
CTA	**Charters Tower**	**31.66**	**274**	P	**P**	**14 01 19.1**	**+0.4**
	26nm,0.7s,baz=104,slow=12,SNR=44						
CTAO	**Charters Tower**	**31.66**	**274**	*eP*	**P**	**14 01 18.9**	**+0.1**
	25nm,0.7s						
STKA	**Stephens Creek**	**34.06**	**251**	P	**P**	**14 01 39.5**	**+0.4**
	9.3nm,0.5s,baz=94,slow=11,SNR=55						
STKA	**Stephens Creek**	**34.06**	**251**	*eP*	**P**	**14 01 39.4**	**+0.4**
	2.2nm,0.5s						
COEN	**Coen**	**36.62**	**282**	*eP*	**P**	**14 02 00.5**	**-0.1**
	18nm,0.6s						
AS01	**Alice Springs**	**41.79**	**263**	*eP*	**P**	**14 02 41.9**	**-0.7**
AS31	**Alice Springs**	**41.83**	**263**	*eP*	**P**	**14 02 42.3**	**-0.6**
	6.1nm,0.6s						
ASAR	**Alice Springs**	**41.83**	**263**	P	**P**	**14 02 42.4**	**-0.6**
	16nm,0.7s,baz=90,slow=7.7,SNR=177						
ASAR				ScP	**ScP**	**14 07 35.6**	**+0.8**
	0.6nm,0.7s,baz=117,slow=4.4,SNR=4.4						
ASAR				S	**S**	**14 08 27.2**	**+0.5**
	0.3nm,0.8s,baz=106,slow=16,SNR=2.9						
WB2	**Warramunga Arr**	**42.40**	**268**	*eP*	**P**	**14 02 46.5**	**-0.9**
WRAB	**Tennant Creek**	**42.41**	**268**	*eP*	**P**	**14 02 46.3**	**-1.2**
	16nm,0.8s						
WRA	**Warramunga Arr**	**42.41**	**268**	P	**P**	**14 02 46.6**	**-1.0**
	21nm,0.8s,baz=101,slow=7.5,SNR=291						
WRA				ScP	**ScP**	**14 07 39.5**	**+2.2**
	0.7nm,0.7s,baz=106,slow=3.7,SNR=3.3						
WRA				S	**S**	**14 08 33.3**	**-1.9**
	1.1nm,0.9s,baz=99,slow=14,SNR=3.4						
FITZ	**Fitzroy Crossi**	**50.80**	**267**	*eP*	**P**	**14 03 50.4**	**-1.0**
	18nm,1.3s						
VNDA	**Vanda**	**52.22**	**185**	P	**P**	**14 04 02.7**	**+1.9**
	0.4nm,0.6s,baz=11,slow=9.4,SNR=4.3						
SIJI	**Sorong**	**53.26**	**290**	P	**P**	**14 04 08.2**	**-1.0**
	5.0nm,0.4s,baz=82,slow=5.9,SNR=5.0						
NWAO	**Narrogin (SRO)**	**54.46**	**247**	P	**P**	**14 04 16.6**	**-0.9**
	13nm,1.0s,baz=141,slow=9.8,SNR=2.7						
MBWA	**Marble Bar**	**55.13**	**262**	*eP*	**P**	**14 04 21.2**	**-1.3**
	14nm,0.4s						
BATI	**Baumata**	**55.52**	**276**	P	**P**	**14 04 26.0**	**+0.7**
	9.3nm,0.4s,baz=153,slow=2.3,SNR=3.1						
QSPA	**South Pole Qui**	**64.00**	**180**	P	**P**	**14 05 22.4**	**+1.0**
	0.8nm,0.3s,baz=53,slow=0.7,SNR=7.8						
MAW	**Mawson**	**75.75**	**201**	P	**P**	**14 06 32.7**	**+1.2**
	2.4nm,0.7s,baz=138,slow=9.3,SNR=3.8						
ASAJ	**Asahikawa**	**77.86**	**333**	P	**P**	**14 06 43.7**	**+0.4**
	1.5nm,0.7s,baz=125,slow=2.5,SNR=3.5						
KSRS	**Korea Array**	**79.99**	**320**	P	**P**	**14 06 54.8**	**-0.1**
	0.6nm,0.5s,baz=122,slow=5.4,SNR=4.9						
SYO	**Syowa Base**	**80.92**	**193⇑**	*eP*	**P**	**14 06 56.6**	**-2.7**
PETK	**Petropavlovsk-**	**81.25**	**347**	P	**P**	**14 06 60.0**	**-1.1**
	3.0nm,0.7s,baz=140,slow=7.8,SNR=4.8						
NJ2	**Nanjing**	**82.18**	**311**	*eP*	**P**	**14 07 07.5**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
SNAA	**Sanae**	**82.48**	**179**	P	**P**	**14 07 08.1**	**+0.7**
SNAA	**Sanae**	**82.48**	**179**	P	**P**	**14 07 08.1**	**+0.7**
	0.4nm,0.3s,baz=180,slow=14,SNR=6.3						
VNA3	**Neumayer Olymp**	**82.69**	**177**	P	**P**	**14 07 09.0**	**+0.5**
VNA1	**Neumayer--Stat**	**83.35**	**177**	P	**P**	**14 07 07.6**	**-4.1**
ISA	**Isabella, Lake**	**84.46**	**46**	*eP*	**P**	**14 07 17.7**	**-0.1**
	5.3nm,0.8s						
YBH	**Yreka Blue Hor**	**85.71**	**39**	P	**P**	**14 07 24.1**	**+0.2**
	0.4nm,0.3s,baz=180,slow=9.1,SNR=3.2						
NV01	**Mina Array Sit**	**86.25**	**44**	*eP*	**P**	**14 07 25.6**	**-1.1**
NVAR	**Mina Array Bea**	**86.25**	**44**	P	**P**	**14 07 26.8**	**+0.1**
	1.8nm,0.7s,baz=223,slow=9.4,SNR=17						
NV11	**Mina Array Sit**	**86.34**	**44**	*eP*	**P**	**14 07 25.9**	**-1.1**
	0.4nm,1.3s						
TPNV	**Topopah Spring**	**86.66**	**46**	*eP*	**P**	**14 07 28.2**	**-0.4**
	3.0nm,0.8s						
KVN	**Kaiserville**	**86.75**	**43**	*eP*	**P**	**14 07 28.4**	**-0.6**
	3.2nm,1.1s						
WVOR	**Wild Horse Val**	**88.50**	**40**	*eP*	**P**	**14 07 36.3**	**-0.7**
	7.4nm,1.4s						
U15A	**North Rim**	**88.97**	**48**	*eP*	**P**	**14 07 39.5**	**-0.1**
	4.6nm,1.2s						
J08A	**Circle Bar Ran**	**89.16**	**40**	*eP*	**P**	**14 07 39.1**	**-1.0**
	5.0nm,1.0s						
MTPU	**Mount Pierson**	**89.94**	**47**	*eP*	**P**	**14 07 44.7**	**+0.6**
	3.6nm,0.8s						
TMUT	**Trail Mountain**	**91.27**	**46**	*eP*	**P**	**14 07 50.5**	**+0.3**
	4.7nm,0.8s						
TXAR	**Lajitas Array**	**91.49**	**58**	P	**P**	**14 07 51.6**	**+0.4**
	0.7nm,0.8s,baz=212,slow=8.0,SNR=9.4						
HHC	**Hu-ho-hao-te**	**92.04**	**315**	*eP*	**P**	**14 07 53.5**	**0.0**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,32nm,5.6s						
CD2	**Chengdu**	**92.37**	**303**	P	**P**	**14 07 54.0**	**-1.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ILAR	**Eielson Array**	**94.12**	**14**	P	**P**	**14 08 00.6**	**-1.7**
	0.3nm,0.7s,baz=238,slow=5.1,SNR=4.4						
PDAR	**Pinedale Array**	**94.18**	**44**	P	**P**	**14 08 03.1**	**-0.3**
	0.1nm,0.4s,baz=187,slow=2.4,SNR=3.7						
LZH	**Lanzhou**	**94.80**	**308⇑**	P	**P**	**14 08 07.0**	**+0.7**
LZH				pP	pP	14 09 54.0	+3.8
LZH				sP	sP	14 10 40.0	+3.1
LZH				PP	**PP**	**14 12 06.0**	**+3.2**
LZH				pmax	pmax		
	comp=Z,15nm,1.4s						
LZH				pmax	pmax		
	comp=Z,59nm,9.6s						
ABKAR	**Akbulak array**	**128.80**	**313**	*e*PKPdf	**PKPdf**	**14 13 50.6**	**+2.0**
ARCES	**ARCESS Array B**	**134.04**	**348**	SKPab	**SKPbc**	**14 16 44.0**	**+0.3**
	1.3nm,0.7s,baz=29,slow=2.8,SNR=3.8						
NC303	**NORSAR Array S**	**144.05**	**351**	*e*PKPbc	PKPbc	14 14 13.6	-1.8
NB2	**NORSAR Subarra**	**144.25**	**351**	PKP	PKPbc	14 14 13.8	-2.3
	comp=Z,1.6nm,0.6s,baz=19,slow=3.2						
NAO01	**NORSAR Array S**	**144.49**	**351**	*e*PKPbc	PKPbc	14 14 14.9	-1.9
HFS	**Hagfors**	**144.70**	**348**	PKP	**PKPdf**	**14 14 15.8**	**-1.6**
	comp=Z,2.3nm,0.4s,baz=67,slow=3.7,SNR=26						
AKASG	**Malin Array Be**	**146.85**	**326**	PKPbc	**PKPdf**	**14 14 21.5**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=48,slow=4.1,SNR=2.8						
TORD	**Torodi Ar. Bea**	**167.04**	**187**	PKPab	**PKPab**	**14 15 54.4**	**+0.3**
	baz=178,slow=3.9						

KRSC 27 13:59:14.6±0.7,55°.55N×162°.55E,h81km±14km,ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.68**	**13**	*i* P	Pn	13 59 31.0	+1.0
KBTR				*e*S	Sn	13 59 42.5	+1.0
ZLN	**Zelenaya**	**1.09**	**296**	*e*P	Pn	13 59 36.5	+1.6
ZLN				*e*S	Sn	13 59 51.9	+1.8
MKZ	**Mys Kozlova**	**1.10**	**206**	*e*P	Pn	13 59 36.5	+1.7
MKZ				*e*S	Sn	13 59 52.0	+2.0
CIRR	**Tsirk**	**1.17**	**300**	*e*P	Pn	13 59 37.3	+1.5
LGNR	**Loginova**	**1.18**	**298**	*e*P	Pn	13 59 37.6	+1.5
LGNR				*e*S	Sn	13 59 53.7	+1.5
SMKR	**Semkarok**	**1.20**	**330**	*e*P	Pn	13 59 37.0	+0.9
SMKR				*e*S	Sn	13 59 53.3	+1.0
BZMR	**Bezymyannaya**	**1.23**	**289**	*e*P	Pn	13 59 38.0	+1.4
BZMR				*e*S	Sn	13 59 54.8	+1.7
BZWR	**Bezymyannyi-We**	**1.23**	**290**	*e*P	Pn	13 59 38.5	+1.8
BZWR				*e*S	Sn	13 59 55.5	+2.2
BDR	**Baidarnaya**	**1.27**	**324**	*e*P	Pn	13 59 38.3	+1.3
BDR				*e*S	Sn	13 59 55.0	+1.1
KRSR	**Krestovskiy**	**1.30**	**302**	*e*P	Pn	13 59 38.3	+0.8
KRSR				*e*S	Sn	13 59 55.2	+0.5
KIRR	**Kirishev**	**1.31**	**289**	*e*P	Pn	13 59 39.3	+1.7
KIRR				*e*S	Sn	13 59 57.0	+2.0
KLY	**Klyuchi**	**1.31**	**306**	*e*P	Pn	13 59 37.5	0.0
KLY				*e*S	Sn	13 59 53.7	-1.0
KMNR	**Kamenistaya**	**1.33**	**280**	*i* P	Pn	13 59 39.7	+1.9
KMNR				*e*S	Sn	13 59 57.6	+2.3
SRKR	**Sorokina**	**1.35**	**325**	*e*P	Pn	13 59 39.3	+1.3
SRKR				*e*S	Sn	13 59 56.8	+1.1
KZV	**Kizimen**	**1.36**	**252**	*e*P	Pn	13 59 40.0	+1.7
KZV				*e*S	Sn	13 59 57.6	+1.5
KPT	**Kopyto**	**1.38**	**288**	*e*P	Pn	13 59 40.0	+1.6
KPT				*e*S	Sn	13 59 58.9	+2.5
TUMR	**Tumrok**	**1.40**	**260**	*e*P	Pn	13 59 41.2	+2.5
TUMR				*e*S	Sn	13 59 59.7	+2.8
KOZ	**Kozyrevsk**	**1.60**	**290**	*e*P	Pn	13 59 42.9	+1.8
KOZ				*e*S	Sn	14 00 04.2	+2.9
BKI	**Bering**	**1.98**	**99**	*e*P	Pn	13 59 48.6	+2.5
BKI				*e*S	Sn	14 00 12.3	+2.1
ESO	**Esso**	**2.21**	**281**	*e*P	Pn	13 59 50.7	+1.4
ESO				*e*S	Sn	14 00 17.1	+1.3
KII	**Karymskiy**	**2.35**	**231**	*e*P	Pn	13 59 53.6	+2.4
SPN	**Mys Shipunski**	**2.87**	**212**	*e*P	Pn	13 59 59.2	+1.1
SPN				*e*S	Sn	14 00 31.4	-0.2
NLC	**Nalytchevo**	**3.04**	**220**	*e*P	Pn	14 00 03.1	+2.8
NLC				*e*S	Sn	14 00 37.3	+1.7
SDLR	**Sedlovina**	**3.13**	**225**	*e*P	Pn	14 00 04.3	+2.6
KRER	**Koryakskii**	**3.16**	**226**	*e*P	Pn	14 00 05.3	+3.0
KRX	**Arik**	**3.17**	**228**	*e*P	Pn	14 00 05.0	+2.8
AVH	**Avacha**	**3.20**	**226**	P	Pn	14 00 05.5	+2.9
UGLR	**Uglovaya**	**3.20**	**224**	*e*P	Pn	14 00 05.5	+2.8
GNL	**Ganaly**	**3.26**	**237**	*e*P	Pn	14 00 06.3	+2.8
DALK	**Dalny**	**3.37**	**223**	*e*P	Pn	14 00 07.5	+2.7
DALK				*e*S	Sn	14 00 44.6	+1.0
PET	**Petropavlovsk**	**3.41**	**224**	*e*P	Pn	14 00 07.5	+2.1
PET				*e*S	Sn	14 00 46.6	+1.9
KRMR	**Karymshinskiy**	**3.77**	**225**	*e*P	Pn	14 00 14.5	+4.3
KRMR				*e*S	Sn	14 00 57.3	+4.0
PALN	**Palana**	**3.81**	**339**	*e*P	Pn	14 00 14.2	+3.4
RUS	**Russkaya**	**3.93**	**219**	*e*P	Pn	14 00 14.5	+2.1
MTVR	**Mutnovka**	**4.01**	**222**	*e*P	Pn	14 00 16.6	+2.9
MTVR				*e*S	Sn	14 00 59.7	+0.1
ASAK	**Asacha**	**4.20**	**223**	P	Pn	14 00 18.6	+2.4
KDTR	**Khodutka, Kamc**	**4.60**	**217**	*e*P	Pn	14 00 23.8	+2.3

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*ISCJB **27** 14:04:06.7±0.6, 16°.73N±0°.04×120°.7E±0°.1, h129km±9km, mb3.3/4, Error ellipse: s-maj=19.7km s-min=6.2km az=11.1*
*IDC **27** 14:04:08.7±3.2, 16°.62N×120°.70E, h133km±25km, mb3.0/5, mb1 3.2/5, mb1mx3.0/65, mbtmp3.5/5, Error ellipse: s-maj=60.7km s-min=15.6km az=56.0*
*MAN **27** 14:04:09.1, 16°.66N×120°.63E, h21km, mb4.7, ML3.5, MS3.4*

ISC 27 14:04:07.2±1.1,16°.76N±0°.05×120°.5E±0°.1,h119km±13km, n13,σ1§36/18,mb3.4/4,1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAUP	**Cauayan**	**1.25**	**81**	*e*P	**Pn**	**14 04 32.4**	**+0.6**
CAUP				*e*S	**Sn**	**14 04 52.4**	**+1.9**
APYP	**Conner**	**1.29**	**32**	*e*P	**Pn**	**14 04 31.5**	**-0.7**
APYP				*e*S	**Sn**	**14 04 50.0**	**-1.3**
CVP	**Callao Caves**	**1.55**	**53**	*e*P	**Pn**	**14 04 34.9**	**-0.3**
CVP				*e*S	**Sn**	**14 04 55.0**	**-1.5**
SGCP	**Mt. Cagua**	**2.07**	**44**	*e*P	**Pn**	**14 04 41.5**	**0.0**
SGCP				*e*S	**Sn**	**14 05 09.5**	**+1.8**
TGY	**Tagaytay City**	**2.67**	**171**	P	**Pn**	**14 04 48.5**	**-0.8**
	100nm,0.3s,baz=37,slow=15,SNR=5.3						
TGY				S	**Sn**	**14 05 21.1**	**-0.5**
	244nm,0.3s,baz=319,slow=20,SNR=8.3						
LUBP	**Lubang**	**3.02**	**185**	*e*P	**Pn**	**14 04 53.6**	**-0.2**
LUBP				*e*S	**Sn**	**14 05 31.1**	**+1.4**
BBP	**Basco**	**3.91**	**20⇓**	*e*P	**Pn**	**14 05 05.1**	**-0.4**
SJMP	**San Jose**	**4.31**	**172**	*e*P	**Pn**	**14 05 11.6**	**+0.6**
CMAR	**Chiang Mai Arr**	**20.64**	**278**	P	Pn	14 08 40.1	-0.8
	1.1nm,0.6s,baz=85,slow=8.5,SNR=7.2						
WRA	**Warramunga Arr**	**38.92**	**159**	P	**P**	**14 11 19.6**	**-2.0**
	0.2nm,0.3s,baz=328,slow=11,SNR=11						
ASAR	**Alice Springs**	**42.25**	**162**	P	**P**	**14 11 47.6**	**-1.4**
	0.2nm,0.3s,baz=340,slow=7.1,SNR=18						
MKAR	**Makanchi Array**	**43.51**	**322**	P	**P**	**14 12 00.5**	**+1.6**
	0.4nm,0.6s,baz=132,slow=6.4,SNR=4.5						
KURBB	**Kurchatov Arra**	**47.59**	**325**	P	**P**	**14 12 32.3**	**+1.4**
	0.3nm,0.3s,baz=122,slow=7.9,SNR=4.0						

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*ISCJB **27** 14:16:15.5±0.7,31°.73S±0°.03×69°.91W±0°.05, h117km±8km, Error ellipse: s-maj=7.1km s-min=5.2km az=19.3*
*GUC **27** 14:16:16.0±0.5,31°.72S×70°.19W, h110km±12km, ML3.2*
*SJA **27** 14:16:16.0±0.8,31°.73S×69°.85W, h108km±4km, ML2.8, MW3.3*

ISC 27 14:16:16.2±1.6,31°.73S±0°.04×69°.92W±0°.05, h112km±13km,n25,σ0§61/33,1C-2D,San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLS	**Leoncito**	**0.53**	**98**	*i* P	**Pn**	**14 16 33.6**	**-0.2**
RTLS				*e*S	**Sn**	**14 16 46.8**	**-0.2**
RTLS				IAML		14 16 47.6	
	comp=Z,278nm,0.1s						
AUSP	**Uspallata**	**0.67**	**138**	*i* P	**Pn**	**14 16 34.9**	**+0.2**
AUSP				*e*S	**Sn**	**14 16 48.8**	**0.0**
ZON	**Zonda**	**1.07**	**81**	*e*P	**Pn**	**14 16 38.1**	**-0.1**
ZON				*e*S	**Sn**	**14 16 54.7**	**-0.3**
ZON				IAML		14 16 56.4	
	comp=Z,168nm,0.2s						
RTCV	**Cerro Valdivia**	**1.18**	**97**	*i* P	**Pn**	**14 16 39.6**	**+0.1**
ASAL	**Salagasta**	**1.26**	**133**	*i* P	**Pn**	**14 16 40.5**	**+0.2**
RTLL	**Cerro Villicun**	**1.29**	**72**	*i* P	**Pn**	**14 16 40.3**	**-0.4**
RTLL				IAML		14 16 59.6	
	comp=Z,243nm,0.4s						
ARCO	**CERRO ARCO**	**1.39**	**143**	*i* P	**Pn**	**14 16 42.4**	**+0.4**
ARCO				IAML		14 17 05.6	
	comp=Z,90nm,0.5s						
AMOG	**MOGNA**	**1.45**	**57**	*i* P	**Pn**	**14 16 42.7**	**+0.1**
ROCH	**El Roble**	**1.55**	**216⇓**	*i* P	**Pn**	**14 16 43.3**	**-0.6**
ROCH				*e*S	**Sn**	**14 17 04.3**	**-0.6**
ROCH				IAML		14 17 06.2	
	comp=N,276nm,0.4s						
ROC1	**El Roble**	**1.55**	**217**	*e*P	**Pn**	**14 16 43.1**	**-0.8**
PEL	**Peldehue**	**1.55**	**205**	*e*P	**Pn**	**14 16 43.7**	**-0.1**
PEL				*e*S	**Sn**	**14 17 04.5**	**-0.3**
AROD	**Rodeo**	**1.60**	**14**	*i* P	**Pn**	**14 16 45.5**	**+0.9**
FCH	**Farellones**	**1.63**	**191**	*e*P	**Pn**	**14 16 45.5**	**+0.6**
FCH				*e*S	**Sn**	**14 17 08.3**	**+1.6**
FCH				IAML		14 17 09.2	
	comp=E,252nm,0.1s						
AAGR	**Agrelo**	**1.64**	**146**	*e*P	**Pn**	**14 16 45.1**	**+0.3**
ACDV	**Cuesta del Vie**	**1.70**	**24**	*i* P	**Pn**	**14 16 46.5**	**+0.8**
ACDV				IAML		14 17 10.2	
	comp=Z,120nm,0.8s						
GO04	**Tololo Observa**	**1.73**	**334⇑**	*i* P	**Pn**	**14 16 45.7**	**-0.4**
GO04				*e*S	**Sn**	**14 17 08.5**	**-0.3**
GO04				IAML		14 17 10.2	
	comp=E,696nm,0.4s						
TLL	**Tololo Astrono**	**1.73**	**334⇓**	*i* P	**Pn**	**14 16 46.0**	**-0.2**
TLL				*e*S	**Sn**	**14 17 08.6**	**-0.4**
CLCH	**Cerro Calan**	**1.74**	**197**	*e*P	**Pn**	**14 16 46.5**	**+0.4**
CLCH				*e*S	**Sn**	**14 17 09.4**	**+0.5**
ACAN	**Cantantal**	**2.38**	**104**	*e*P	**Pn**	**14 16 53.8**	**-0.4**
AGUA	**GUANDACOL**	**2.55**	**29**	*e*P	**Pn**	**14 16 57.6**	**+1.2**
APLL	**PUNTA DE LOS L**	**3.20**	**66**	*e*P	**Pn**	**14 17 04.7**	**-0.2**
APLL				IAML		14 17 43.6	
	comp=Z,12nm,0.1s						
VCA	**Vinchina**	**3.33**	**27**	*e*P	**Pn**	**14 17 07.4**	**+0.7**
VCA				IAML		14 17 51.5	
	comp=Z,43nm,0.3s						
ACLC	**CERRO LA CRUZ**	**3.44**	**49**	*e*P	**Pn**	**14 17 08.1**	**-0.1**
MRA	**San Martin**	**3.63**	**102**	IAML		14 18 22.6	
	comp=Z,9.9nm,0.4s						
TCA	**Tanti**	**4.56**	**86**	*e*P	**Pn**	**14 17 22.0**	**-1.1**
TCA				IAML		14 18 53.1	
	comp=Z,5.6nm,0.7s						

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*IGQ **27** 14:18:49.1±0.7,2°S±5°×8°1W±°, h10km, MLv4.8/7*
*IDC **27** 14:18:52.1±1.9, 1°.80S×81°.12W, h0km, mb3.8/4, mb1 4.0/5, mb1mx3.7/41, mbtmp3.8/5, ML3.6/1, Error ellipse: s-maj=86.6km s-min=27.4km az=49.0*

ISC 27 14:18:53.4±0.9,1°.63S±0°.05×80°.77W±0°.07,h10km,n53, σ1§78/58,mb3.8/4,Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MILO	**Milagro-Astudi**	**1.38**	**118**	P	**Pn**	**14 19 17.5**	**-1.2**
MILO				S	**Sg**	**14 19 39.4**	**+1.7**
COHC	**Cochancay**	**1.73**	**119**	P	**Pn**	**14 19 22.6**	**-1.0**
MAG1	**Magdalena**	**1.84**	**33**	P	**Pn**	**14 19 23.1**	**-2.0**
MAG1				S	**Sg**	**14 19 55.3**	**+2.7**
RIOE1	**Riobamba**	**2.15**	**93**	P	**Pb**	**14 19 31.1**	**-1.5**
RIOE1				S	**Sg**	**14 20 01.5**	**-1.0**
BBIL	**Ulba Tungurahu**	**2.29**	**86**	P	**Pb**	**14 19 33.4**	**-1.6**
BMAS	**Trigal station**	**2.29**	**87**	P	**Pb**	**14 19 33.0**	**-2.1**
BMAS				S	**Sg**	**14 20 08.8**	**+1.6**
JUI6	**Juive**	**2.31**	**85**	P	**Pb**	**14 19 33.9**	**-1.4**
ARRY	**Arrayan**	**2.32**	**87**	P	**Pb**	**14 19 32.7**	**+0.7**
PAST	**Pastocalle**	**2.32**	**67**	P	**Pb**	**14 19 33.5**	**-2.1**
POND	**Pondoa**	**2.33**	**85**	P	**Pb**	**14 19 34.0**	**-1.6**
RETU	**Refugio**	**2.33**	**86**	P	**Pb**	**14 19 33.4**	**-2.4**
BPAT	**Tungurahua Vol**	**2.34**	**87**	P	**Pb**	**14 19 33.9**	**-2.0**
RUN5	**Runtun**	**2.35**	**85**	P	**Pb**	**14 19 34.5**	**-1.7**
BRUN	**Tungurahua Vol**	**2.37**	**85**	P	**Pb**	**14 19 34.7**	**-1.7**
BRUN				S	**Sg**	**14 20 09.2**	**-0.4**
BULB	**Ulba Tungurahu**	**2.37**	**85**	P	**Pb**	**14 19 34.5**	**-1.9**
GOLV	**Golondrinas**	**2.45**	**42**	P	**Pn**	**14 19 34.4**	**+0.9**
PIS1	**Pisayambo**	**2.45**	**77**	P	**Pb**	**14 19

s-min=29.0km az=124.0
*NEIC **27** 14:25:34.3±0.7, 26°.86S×176°.43W, h10km, mb4.7/2, Error ellipse: s-maj=21.9km s-min=13.8km az=109.0*
*ISCJB **27** 14:25:38.3±1.1, 27°.01S±0°.07×176°.8W±0°.2, h35km, mb3.9/6, MS3.4/3, Error ellipse: s-maj=26.4km s-min=10.2km az=7.2*

ISC 27 14:25:39.6±1.0, 27°.03S±0°.10×176°.7W±0°.2, h35km, n25, σ0°94/21, mb3.8/6, MS3.4/3, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.46**	**206**	Pn	**Pn**	**14 26 17.1**	**-0.2**
	160nm,0.3s,baz=45,slow=22,SNR=6.7						
RAO				Sn	**Sn**	**14 26 46.5**	**+0.3**
	300nm,0.3s,baz=332,slow=23,SNR=6.0						
RAO				LR	LR	14 26 55.1	
	comp=Z,219nm,21.9s,baz=7.5,slow=32						
RAO	**Raoul Island**	**2.46**	**206**	*e*Pn	**Pn**	**14 26 16.4**	**-0.9**
RAO				Sn	**Sn**	**14 26 46.5**	**+0.3**
URZ	**Urewera**	**12.35**	**203**	Pn	Pn	14 28 25.9	-7.0
	0.2nm,0.3s,baz=126,slow=7.6,SNR=2.3						
URZ				Sn	Sn	14 30 39.2	-10
	1.2nm,0.3s,baz=53,slow=20,SNR=9.1						
AFI	**Afiamalu**	**13.84**	**20**	Pn	Pn	14 28 45.4	-8.0
	1.0nm,0.3s,baz=265,slow=12,SNR=2.3						
AFI				Sn	Sn	14 31 12.4	-14
	1.0nm,0.3s,baz=266,slow=19,SNR=2.1						
DZM	**Mont Dzumac**	**16.12**	**284**	*e*LR	LR	14 33 10.6	
	141nm,24.1s						
PPT2	**Papeete2**	**26.74**	**75**	*e*LR	LR	14 37 53.0	
	63nm,24.2s						
HNR	**Honiara**	**28.17**	**304**	LR	LR	14 40 23.9	
	comp=Z,61nm,21.7s,baz=161,slow=31						
CTA	**Charters Tower**	**34.57**	**273**	P	**P**	**14 32 26.6**	**+1.4**
	2.7nm,0.5s,baz=108,slow=13,SNR=5.1						
CTAO	**Charters Tower**	**34.57**	**273**	*e*P	**P**	**14 32 25.9**	**+0.6**
	25nm,0.8s						
ASAR	**Alice Springs**	**44.55**	**263**	P	**P**	**14 33 47.5**	**-0.9**
	0.5nm,0.6s,baz=94,slow=7.3,SNR=7.7						
ASAR				PcP	**PcP**	**14 35 30.4**	**-0.8**
	0.5nm,0.8s,baz=120,slow=3.3,SNR=2.9						
WRAB	**Tennant Creek**	**45.23**	**268**	*e*P	**P**	**14 33 52.6**	**-1.2**
	3.6nm,0.9s						
WRA	**Warramunga Arr**	**45.24**	**268**	P	**P**	**14 33 53.1**	**-0.7**
	0.6nm,0.4s,baz=103,slow=8.6,SNR=25						
SBA	**Scott Base**	**51.47**	**184**	*e*P	**P**	**14 34 42.6**	**+1.6**
QSPA	**South Pole Qui**	**63.07**	**180**	*e*P	**P**	**14 36 02.8**	**-0.4**
TGY	**Tagaytay City**	**73.03**	**296**	LR	LR	15 05 50.8	
	comp=Z,22nm,20.4s,baz=30,slow=33						
MAW	**Mawson**	**75.85**	**200**	LR	LR	15 09 19.1	
	comp=Z,29nm,18.8s,baz=239,slow=35						
MJAR	**Matsushiro Arr**	**76.17**	**324**	P	**P**	**14 37 24.0**	**-0.1**
	0.3nm,0.5s,baz=170,slow=6.6,SNR=4.2						
KSRS	**Korea Array**	**82.56**	**319**	P	**P**	**14 37 59.9**	**+1.0**
	0.6nm,0.6s,baz=131,slow=6.3,SNR=3.4						
KSAR	**Wonju Array Be**	**82.58**	**319**	P	**P**	**14 37 59.9**	**+0.9**
BVAR	**Borovoye Array**	**124.76**	**317**	PKP	**PKPdf**	**14 44 34.6**	**-0.6**
	0.2nm,0.4s,baz=90,slow=2.9,SNR=2.7						
HFS	**Hagfors**	**146.15**	**351**	PKPbc	**PKPdf**	**14 45 14.4**	**-0.1**
	2.2nm,0.8s,baz=94,slow=4.5,SNR=5.4						
AKASG	**Malin Array Be**	**149.21**	**327**	PKPbc	**PKPdf**	**14 45 21.3**	**+1.4**
	0.2nm,0.3s,baz=44,slow=2.9,SNR=2.8						
MMAI	**Mount Meron Ar**	**151.65**	**290**	PKPbc	**PKPbc**	**14 45 30.1**	**-0.6**
	0.3nm,0.3s,baz=55,slow=7.6,SNR=2.2						
BRTR	**Keskin Array B**	**151.83**	**304**	PKPab	**PKPab**	**14 45 39.7**	**-0.4**
	1.0nm,0.7s,baz=62,slow=3.3,SNR=3.4						
TORD	**Torodi Ar. Bea**	**166.10**	**173**	PKPab	**PKPab**	**14 46 40.7**	**-1.3**
	0.6nm,1.0s,baz=198,slow=3.5,SNR=4.0						

*IDC **27** 14:53:03.2±1.0, 6°.98S×155°.04E, h0km, mb3.9/9, mb1 4.1/10, mb1mx3.8/46, mbtmp3.9/10, ML2.0/1, MS3.0/3, Ms1 3.0/3, ms1mx2.5/43, Error ellipse: s-maj=35.1km s-min=19.8km az=127.0*
*ISCJB **27** 14:53:08.3±0.6, 6°.95S±0°.10×154°.90E±0°.07, h41km, mb3.8/10, MS3.1/1, Error ellipse: s-maj=14.4km s-min=9.1km az=156.3*
*NEIC **27** 14:53:10.3±1.6, 6°.97S×154°.85E, h46km±16km, mb4.0/1, Error ellipse: s-maj=17.9km s-min=11.2km az=160.0*

ISC 27 14:53:09.9±0.7, 6°.9S±0°.1×154°.92E±0°.09, h41km, n19, σ1°28/18, mb3.8/10, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.57**	**117**	LR	LR	14 56 50.9	
	comp=Z,196nm,19.5s,baz=225,slow=42						
HNR	**Honiara**	**5.57**	**117**	Pn	**Pn**	**14 54 31.6**	**+1.3**
PMG	**Port Moresby**	**8.07**	**252**	Pn	**Pn**	**14 55 03.2**	**-1.4**
	1.0nm,0.3s,baz=73,slow=11,SNR=4.5						
PMG				Sn	**Sn**	**14 56 37.5**	**+2.8**
	1.6nm,0.3s,baz=77,slow=19,SNR=4.6						
PMG				LR	LR	14 57 56.6	
	comp=Z,48nm,21.4s,baz=31,slow=36						
CTAO	**Charters Tower**	**15.56**	**212**	P	**Pn**	**14 56 46.0**	**-0.6**
WRAB	**Tennant Creek**	**23.79**	**235**	*e*P	**P**	**14 58 18.3**	**-0.8**
	6.0nm,1.0s						
WRA	**Warramunga Arr**	**23.80**	**235**	P	**P**	**14 58 17.6**	**-1.6**
	1.5nm,0.5s,baz=58,slow=8.8,SNR=35						
WRA				PcP	**PcP**	**15 02 02.4**	**+0.3**
	0.3nm,0.4s,baz=65,slow=2.5,SNR=10						
ASAR	**Alice Springs**	**26.17**	**228**	P	**P**	**14 58 39.5**	**-1.3**
	1.1nm,0.7s,baz=61,slow=9.4,SNR=14						
ASAR				PcP	**PcP**	**15 02 07.4**	**+0.1**
	0.2nm,0.7s,baz=72,slow=4.0,SNR=3.0						
STKA	**Stephens Creek**	**27.77**	**205**	P	**P**	**14 58 55.0**	**-0.1**
	2.1nm,0.8s,baz=43,slow=12,SNR=3.0						
STKA				LR	LR	15 10 17.7	
	comp=Z,50nm,18.1s,baz=29,slow=37						
H11S3	**WAKE ISLAND Hy 27.79**	**25**		T	T	15 27 22.0	
	baz=203,slow=76,SNR=7.6						
H11S2	**WAKE ISLAND Hy 27.79**	**25**		T	T	15 27 23.8	
	baz=203,slow=76,SNR=6.7						
H11S1	**WAKE ISLAND Hy 27.81**	**25**		T	T	15 27 25.9	
	baz=203,slow=76,SNR=3.6						
CMAR	**Chiang Mai Arr**	**60.68**	**296**	P	**P**	**15 03 19.6**	**+2.1**
	1.9nm,0.8s,baz=111,slow=5.6,SNR=8.7						
SONM	**Songino Array**	**69.23**	**327**	P	**P**	**15 04 13.1**	**+0.4**
	0.5nm,0.4s,baz=120,slow=8.5,SNR=4.3						
MKAR	**Makanchi Array**	**83.29**	**319**	P	**P**	**15 05 32.4**	**-0.1**
	0.3nm,0.6s,baz=101,slow=6.3,SNR=3.2						
ILAR	**Eielson Array**	**83.33**	**22**	P	**P**	**15 05 31.1**	**-1.2**
	0.4nm,0.6s,baz=233,slow=5.7,SNR=6.9						
ZALV	**Zalesovo Beam**	**84.07**	**326**	P	**P**	**15 05 35.4**	**-0.8**
	0.5nm,0.3s,baz=155,slow=3.7,SNR=2.7						
KURK	**Kurchatov**	**86.72**	**322**	*e*P	**P**	**15 05 49.5**	**0.0**
NVAR	**Mina Array Bea**	**91.73**	**52**	P	**P**	**15 06 14.1**	**+0.3**
	0.4nm,0.7s,baz=238,slow=8.4,SNR=3.7						
TORD	**Torodi Ar. Bea**	**152.93**	**285**	PKPbc	**PKPbc**	**15 13 02.7**	**-1.2**
	baz=76,slow=1.6						

MAN 27 14:57:11.9, 8°.84N×125°.73E, h28km, mb4.2, ML3.0, MS2.7, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.17**	**321**	*e*P	Pn	14 57 18.5	-0.2
BUTP				*e*S	Sb	14 57 25.3	+3.8
BIPH	**Bislig**	**0.90**	**136**	⇑*i*P	Pn	14 57 27.7	-1.0
BIPH				*i* S	Sb	14 57 38.7	-1.8
CGP	**Cagayan de Oro**	**1.09**	**250**	⇑*e*P	Pn	14 57 31.5	+0.1
CGP				*i* S	Sb	14 57 46.0	-0.1
BUKP	**Musuan**	**1.16**	**215**	*e*P	Pn	14 57 31.0	-1.4
BUKP				*e*S	Sb	14 57 47.7	-0.3
PAGZ	**Pagadian**	**2.52**	**247**	*e*P	Pb	14 57 55.1	-1.5

MAN 27 15:08:05.4, 8°.39N×123°.33E, h32km, mb4.3, ML3.1, MS2.9, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCPH	**Dipolog City**	**0.19**	**6**	⇑*e*P	Pn	15 08 12.7	+0.6
DCPH				*e*S	Sn	15 08 18.9	+2.7
PAGZ	**Pagadian**	**0.54**	**175**	*e*P	Pn	15 08 17.6	+0.7
PAGZ				*e*S	Sn	15 08 26.0	+1.2
SNPH	**Sibulan**	**0.95**	**354**	⇓*i*P	Pn	15 08 22.9	+0.3
SNPH				*i* S	Sb	15 08 36.4	+0.6
GUIM	**Jordan**	**2.34**	**342**	*e*P	Pn	15 08 43.0	+1.4
GUIM				*e*S	Sn	15 09 09.7	+0.4

IDC 27 15:32:15.4±2.4, 7°.16N×93°.04E, h0km, mb3.5/4, mb1 3.6/5, mb1mx3.3/65, mbtmp3.4/5, ML3.1/1, MS3.4/1, Ms1 3.4/1, ms1mx2.4/47, Error ellipse: s-maj=84.8km s-min=26.7km az=59.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**12.62**	**27**	Pn	Pn	15 35 17.1	+0.7
	0.0nm,0.3s,baz=211,slow=14,SNR=3.7						
H08S3	**Diego Garcia H**	**25.22**	**235**	T	T	16 04 47.8	
	baz=57						
H08S2	**Diego Garcia H**	**25.22**	**235**	T	T	16 04 27.5	
	baz=57						
H08S1	**Diego Carcia H**	**25.23**	**235**	T	T	16 04 52.5	
	baz=57						
MKAR	**Makanchi Array**	**40.56**	**349**	P	P	15 39 56.2	-0.4
	0.1nm,0.4s,baz=168,slow=9.2,SNR=3.2						
KURBB	**Kurchatov Arra**	**44.98**	**347**	P	P	15 40 33.0	+0.6
	0.2nm,0.5s,baz=171,slow=7.4,SNR=3.4						
ZALV	**Zalesovo Beam**	**47.13**	**353**	P	P	15 40 48.4	-0.9
	0.9nm,0.3s,baz=164,slow=6.4,SNR=4.6						
JAY	**Jayapura**	**48.53**	**100**	LR	LR	16 04 52.0	
	comp=Z,40nm,18.5s,baz=142,slow=40						
WRA	**Warramunga Arr**	**48.75**	**124**	P	P	15 41 02.4	0.0
	0.8nm,1.2s,baz=304,slow=8.7,SNR=3.5						

*ISCJB **27** 15:34:24.2±0.7, 36°.18N±0°.03×141°.07E±0°.07, h43km±8km, mb3.5/4, Error ellipse: s-maj=8.9km s-min=5.7km az=175.8*
*JMA **27** 15:34:25.6±0.1, 36°.16N×140°.94E, h42km±1km, M3.3*
JMA Felt I J1.
*IDC **27** 15:34:26.4±2.0, 36°.17N×141°.07E, h44km±20km, mb3.2/4, mb1 3.5/8, mb1mx3.2/66, mbtmp3.6/8, ML3.6/4, MS2.4/3, Ms1 2.4/3, ms1mx2.2/23, Error ellipse: s-maj=19.2km s-min=10.4km az=68.0*

ISC 27 15:34:24.5±1.4, 36°.20N±0°.04×141°.05E±0°.07, h28km±10km, n22, σ0°83/23, mb3.5/4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.52**	**197**	P	**Pn**	**15 34 35.8**	**-0.3**
CHOJ				S	**Sb**	**15 34 42.6**	**+0.3**
JHO	**Hitachi**	**0.57**	**317**	P	**Pn**	**15 34 36.7**	**-0.1**
JHO				S	**Sb**	**15 34 44.3**	**+0.5**
JYT	**Yasato**	**0.69**	**273**	P	**Pb**	**15 34 38.0**	**0.0**
JYT				S	**Sb**	**15 34 46.3**	**-0.9**
ONAJ	**Iwakimizuishiy**	**0.93**	**348**	P	**Pn**	**15 34 42.0**	**+0.2**
ONAJ				S	**Sb**	**15 34 53.5**	**-0.5**
JFK	**Kawauchi**	**1.18**	**353**	P	**Pn**	**15 34 45.4**	**+0.2**
JAG	**Ashikaga**	**1.31**	**281**	P	**Pn**	**15 34 46.8**	**-0.2**
JAG				S	**Sn**	**15 35 02.1**	**-1.5**
MJAR	**Matsushiro Arr**	**2.32**	**279**	P	**Pn**	**15 35 01.4**	**+0.5**
	7.9nm,0.3s,baz=109,slow=6.9,SNR=65						
MJAR				S	**Sn**	**15 35 29.7**	**+1.2**
	6.9nm,0.3s,baz=76,slow=20,SNR=11						
MJAR				LR	LR	15 36 03.4	
	comp=Z,81nm,19.1s,baz=120,slow=42						
MAT	**Matsushiro**	**2.32**	**279**	P	**Pn**	**15 35 01.7**	**+0.8**
MAT				S	**Sn**	**15 35 29.1**	**+0.6**
JHJ	**Hachijo jima 2**	**3.24**	**199**	P	**Pn**	**15 35 14.7**	**+1.1**
	8.9nm,0.3s,baz=84,slow=18,SNR=7.7						
JHJ				S	**Sn**	**15 35 52.3**	**+1.1**
	19nm,0.3s,baz=73,slow=19,SNR=4.5						
JHJ				LR	LR	15 36 37.0	
	comp=Z,33nm,20.1s,baz=85,slow=41						
ASAJ	**Asahikawa**	**8.00**	**8**	P	**Pn**	**15 36 20.3**	**+1.4**
	0.5nm,0.3s,baz=211,slow=12,SNR=13						
JNU	**Nakatsue**	**8.92**	**253**	LR	LR	15 40 16.7	
	comp=Z,46nm,18.6s,baz=322,slow=39						
JCJ	**Chichijima**	**9.12**	**174**	P	**Pn**	**15 36 33.3**	**-1.1**
	5.0nm,0.3s,baz=307,slow=20,SNR=6.9						
JCJ				S	Sn	15 38 07.0	-9.2
	2.5nm,0.3s,baz=287,slow=19,SNR=4.2						
H11N2	**WAKE ISLAND Hy 27.98**	**119**		T	T	16 09 27.9	
	baz=311,slow=75,SNR=24						
H11N1	**WAKE ISLAND Hy 27.99**	**119**		T	T	16 09 31.0	
	baz=311,slow=75,SNR=18						
H11N3	**WAKE ISLAND Hy 28.00**	**119**		T	T	16 09 34.7	
	baz=311,slow=75,SNR=19						
H11S1	**WAKE ISLAND Hy 28.66**	**121**		T	T	16 10 24.9	
	baz=313,slow=76,SNR=23						
H11S3	**WAKE ISLAND Hy 28.66**	**121**		T	T	16 10 21.9	
	baz=313,slow=76,SNR=22						
H11S2	**WAKE ISLAND Hy 28.68**	**121**		T	T	16 10 25.8	
	baz=313,slow=76,SNR=18						
KURBB	**Kurchatov Arra**	**46.29**	**309**	P	**P**	**15 42 47.9**	**+0.4**
	0.3nm,0.5s,baz=85,slow=7.4,SNR=3.6						
ILAR	**Eielson Array**	**50.36**	**32**	P	**P**	**15 43 18.9**	**+0.1**
	0.4nm,0.7s,baz=278,slow=7.2,SNR=4.3						
WRA	**Warramunga Arr**	**56.19**	**188**	P	**P**	**15 44 01.4**	**-0.6**
	0.3nm,0.4s,baz=2.8,slow=7.3,SNR=11						
ASAR	**Alice Springs**	**59.92**	**188**	P	**P**	**15 44 27.4**	**-0.7**
	0.3nm,0.8s,baz=356,slow=5.8,SNR=4.1						

*IGQ **27** 15:37:25.8±1.6, 2°.5±8°.×8°.1W±1°.1, h10km, MLv4.6/4*

ISC 27 15:37:18.7±4.3, 1°.7S±0°.1×81°.3W±0°.3, h11km, n47, σ2°91/48, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MILO	**Milagro-Astudi**	**1.88**	**108**	P	**Pn**	**15 37 52.9**	**+2.1**
MILO				S	**Sn**	**15 38 12.7**	**-1.8**
COHC	**Cochancay**	**2.22**	**110**	P	**Pn**	**15 37 56.9**	**+1.4**
COHC				S	**Sn**	**15 38 21.1**	**-1.9**
MAG1	**Magdalena**	**2.25**	**44**	P	**Pn**	**15 37 57.9**	**+2.0**
RIOE1	**Riobamba**	**2.71**	**91**	P	**Pn**	**15 38 05.2**	**+2.6**
ILLI	**Illinizas Sur**	**2.79**	**70**	P	**Pn**	**15 38 06.7**	**+2.9**
BBIL	**Ulba Tungurahu**	**2.87**	**85**	P	**Pn**	**15 38 07.2**	**+2.6**
BMAS	**Trigal station**	**2.87**	**86**	P	**Pn**	**15 38 06.9**	**+2.1**
PAST	**Pastocalle**	**2.88**	**70**	P	**Pn**	**15 38 08.5**	**+3.5**
JUI6	**Juive**	**2.89**	**85**	P	**Pn**	**15 38 07.6**	**+2.6**
ARRY	**Arrayan**	**2.89**	**86**	P	**Pn**	**15 38 07.6**	**+2.5**
POND	**Pondoa**	**2.90**	**85**	P	**Pn**	**15 38 07.7**	**+2.5**
RETU	**Refugio**	**2.91**	**85**	P	**Pn**	**15 38 08.2**	**+2.8**
BPAT	**Tungurahua Vol**	**2.92**	**86**	P	**Pn**	**15 38 08.8**	**+3.3**
RUN5	**Runtun**	**2.93**	**85**	P	**Pn**	**15 38 08.5**	**+2.9**
BRUN	**Tungurahua Vol**	**2.94**	**85**	P	**Pn**	**15 38 08.4**	**+2.6**
BULB	**Ulba Tungurahu**	**2.94**	**85**	P	**Pn**	**15 38 08.0**	**+2.2**
NINA	**Atacazo Ninahu**	**3.02**	**65**	P	**Pb**	**15 38 11.6**	**-1.2**
PIS1	**Pisayambo**	**3.02**	**78**	P	**Pn**	**15 38 11.4**	**+4.4**
PISA	**Pisayambo**	**3.02**	**78**	P	**Pn**	**15 38 10.1**	**+3.1**
BNAS	**Cotopaxi Volca**	**3.04**	**70**	P	**Pn**	**15 38 10.6**	**+3.4**
BMOR	**Cotopaxi Volca**	**3.04**	**72**	P	**Pn**	**15 38 10.3**	**+3.0**
NAS2	**Nasa**	**3.06**	**70**	P	**Pb**	**15 38 11.8**	**-1.7**
BREF	**Cotopaxi Volca**	**3.08**	**71**	P	**Pn**	**15 38 11.8**	**+4.0**
BVC2	**Cotopaxi Volca**	**3.11**	**71**	P	**Pn**	**15 38 10.7**	**+2.4**
BTAM	**Cotopaxi Volca**	**3.12**	**71**	P	**Pn**	**15 38 12.2**	**+3.9**
VC1	**Cotopaxi 1**	**3.12**	**70**	P	**Pn**	**15 38 11.9**	**+3.5**
PITA	**Cotopaxi Volc**	**3.12**	**69**	P	**Pn**	**15 38 11.0**	**+2.6**
GGPC	**Guagua Pichinc**	**3.13**	**61**	P	**Pn**	**15 38 09.9**	**+1.3**
PINO	**Pino**	**3.13**	**61**	P	**Pn**	**15 38 09.5**	**+0.9**
COV1	**Cotopaxi Volc**	**3.17**	**71**	P	**Pn**	**15 38 11.5**	**+2.3**
YANA	**Yana**	**3.18**	**61**	P	**Pn**	**15 38 11.0**	**+1.8**
ANTG	**Antisana-Guama**	**3.31**	**69**	P	**Pn**	**15 38 15.6**	**+4.7**
ANTM	**Antisana-La Mi**	**3.33**	**70**	P	**Pn**	**15 38 15.7**	**+4.5**
ANTS	**Antisana-Sarah**	**3.39**	**69**	P	**Pn**	**15 38 15.2**	**+3.1**
CUIC	**Cuicocha-Domo**	**3.58**	**56**	P	**Pn**	**15 38 17.5**	**+2.9**
IMBA	**Imbabura, San**	**3.71**	**58**	P	**Pn**	**15 38 20.3**	**+3.9**
URCU	**Urcuqui**	**3.75**	**56**	P	**Pn**	**15 38 20.0**	**+3.1**
CONE	**Cono NE Rev Vo**	**4.04**	**66**	P	Pn	15 38 26.6	+5.8
CRUC	**La Cruz**	**5.46**	**54**	*e*P	**Pn**	**15 38 44.6**	**+4.2**
GRGC	**Isla de Gorgon**	**5.65**	**34**	*e*P	**Pb**	**15 38 54.7**	**-2.6**
SOTA	**Rioblanco**	**6.08**	**51**	*e*P	**Pn**	**15 38 49.6**	**+0.7**
POPC	**Popayan, Colom**	**6.28**	**48**	*e*P	**Pn**	**15 38 53.7**	**+2.1**
PCON	**Cinco Dias**	**6.36**	**51**	*e*P	**Pn**	**15 38 56.2**	**+3.3**
MARP	**Paez Belalcaza**	**7.03**	**50**	*e*P	**Pn**	**15 39 01.8**	**0.0**
BETC	**Betania**	**7.33**	**54**	*e*P	**Pn**	**15 39 09.5**	**+3.6**
YOTC	**Yotoco, Valle**	**7.54**	**42**	*e*P	**Pn**	**15 39 11.5**	**+2.8**
VILC	**Villavicencio,**	**9.58**	**53**	*e*P	**Pn**	**15 39 36.4**	**-0.4**

*ISCJB **27** 15:38:31.6±1.0, 60°.7N±0°.1×43°.9W±0°.2, h10km, mb3.5/7, Error ellipse: s-maj=20.6km s-min=11.7km az=10.8*
*IDC **27** 15:38:32.1±1.1, 60°.64N×43°.78W, h0km, mb3.5/7, mb1 3.7/9, mb1mx3.5/61, mbtmp3.6/9, ML3.5/2, Error ellipse: s-maj=28.4km s-min=22.4km az=174.0*

ISC 27 15:38:34.2±1.0, 60°.9N±0°.1×44°.05W±0°.09, h10km, n11, σ1°91/13, mb3.6/7, Western Kalaallit Nunaat

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRS	**Narsarsuaq**	**0.74**	**295**	*i* P	**Pg**	**15 38 47.9**	**-0.5**
SFJD	**Kangerlussuaq**	**6.81**	**338**	Pn	**Pn**	**15 40 15.9**	**+1.9**
	0.8nm,0.3s,baz=156,slow=13,SNR=2.6						
SFJD				Sn	**Sn**	**15 41 28.8**	**-2.7**
	3.5nm,0.3s,baz=71,slow=18,SNR=5.7						
SFJD				Lg	Lg	15 42 02.8	
	4.7nm,0.3s,baz=55,slow=18,SNR=8.9						
SFJD	**Kangerlussuaq**	**6.81**	**338**	*i* P	**Pn**	**15 40 16.4**	**+2.4**
SFJD				*i* S	**Sn**	**15 41 28.3**	**-3.2**
BORG	**Borgarnes**	**11.08**	**60**	Pn	**Pn**	**15 41 12.7**	**+0.3**
	0.4nm,0.3s,baz=255,slow=7.9,SNR=2.4						
ARCES	**ARCESS Array B**	**28.79**	**43**	P	**P**	**15 44 32.6**	**+0.9**
	0.8nm,0.6s,baz=304,slow=13,SNR=3.7						
ILAR	**Eielson Array**	**42.17**	**322**	P	**P**	**15 46 27.6**	**+1.2**
	0.6nm,0.8s,baz=48,slow=7.2,SNR=7.7						
TXAR	**Lajitas Array**	**50.12**	**259**	P	**P**	**15 47 30.0**	**+0.6**
	0.2nm,0.7s,baz=54,slow=4.6,SNR=2.5						
BVAR	**Borovoye Array**	**55.07**	**42**	P	**P**	**15 48 05.9**	**+0.2**
	0.4nm,0.5s,baz=341,slow=8.3,SNR=3.4						
TORD	**Torodi Ar. Bea**	**58.00**	**125**	P	**P**	**15 48 24.4**	**-2.5**
	0.2nm,0.5s,baz=340,slow=6.7						
KURBB	**Kurchatov Arra**	**59.72**	**38**	P	**P**	**15 48 38.0**	**-0.4**
	0.3nm,0.6s,baz=321,slow=6.3,SNR=3.1						
MKAR	**Makanchi Array**	**64.26**	**38**	P	**P**	**15 49 08.7**	**-0.4**
	0.2nm,0.3s,baz=350,slow=7.3,SNR=5.9						

MEX 27 15:50:10.7±0.8, 14°.70N×93°.04W, h48km±36km, MD3.6, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.77**	**75**	*e*P	Pn	15 50 23.9	-1.4
THIG				*e*S	Sn	15 50 34.5	-1.5
PCIG		**1.01**	**350**	*e*P	Pn	15 50 27.1	-1.4
PCIG				*e*S	Sn	15 50 39.5	-2.2
CCIG	**Comitan**	**1.79**	**29**	*e*P	Pn	15 50 38.9	-0.5
TGIG		**2.06**	**358**	*e*P	Pn	15 50 41.7	-1.3

*IDC **27** 15:51:45.2±0.5, 18°.93N×121°.12E, h0km, mb4.1/25, mb1 4.2/27, mb1mx4.1/67, mbtmp4.1/27, ML4.3/2, MS3.3/13, Ms1 3.3/13, ms1mx3.0/62, Error ellipse: s-maj=17.3km s-min=11.3km az=82.0*
*NEIC **27** 15:51:50.0±1.4, 18°.91N×121°.09E, h33km±9km, mb4.5/10, Error ellipse: s-maj=6.3km s-min=4.7km az=92.0*
*ISCJB **27** 15:51:52.0±0.4, 19°.17N±0°.03×121°.02E±0°.05, h53km±5km, mb4.2/35, MS3.4/11, Error ellipse: s-maj=7.7km s-min=4.6km az=170.3*
*MAN **27** 15:51:52.0, 19°.13N×121°.06E, h21km, mb5.3, ML4.3, MS4.5*
*BJI **27** 15:51:54.2, 19°.46N×120°.89E, h40km, mb4.1/22, mB4.4/11, ML3.9/3, Ms3.9/7, Ms7 3.6/6*

ISC 27 15:51:54.1±0.9, 19°.15N±0°.04×120°.98E±0°.06, h61km±9km, n92, σ1°89/91, mb4.2/35, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APYP	**Conner**	**1.31**	**169**	*e*P	**Pn**	**15 52 14.1**	**-2.1**
APYP				*e*S	**Sn**	**15 52 32.4**	**-0.4**
SGCP	**Mt. Cagua**	**1.35**	**132**	*e*P	**Pn**	**15 52 14.6**	**-2.2**
SGCP				*e*S	**Sn**	**15 52 32.0**	**-1.9**
ABRA	**Dolores**	**1.52**	**190**	*e*P	**Pn**	**15 52 16.1**	**-3.0**
CVP	**Callao Caves**	**1.65**	**151**	*i* P	**Pn**	**15 52 19.4**	**-1.4**
CVP				*i* S	**Sn**	**15 52 39.3**	**-1.7**
CAUP	**Cauayan**	**2.34**	**160**	*e*P	**Pn**	**15 52 31.2**	**+1.0**
CAUP				*e*S	**Sn**	**15 53 05.1**	**+7.4**
BOLP	**Bolinao**	**2.94**	**200**	*e*P	**Pn**	**15 52 36.1**	**-2.2**
BALP	**Baler**	**3.44**	**170**	*e*P	**Pn**	**15 52 44.9**	**-0.4**
BALP				*e*S	**Sn**	**15 53 26.1**	**+1.3**
SCZP	**Santa Cruz**	**3.51**	**197**	*e*P	Pn	15 52 52.0	+5.8
PCPH	**Palayan**	**3.57**	**178**	⇑*e*P	**Pn**	**15 52 46.7**	**-0.3**
TWG	**Pinlang**	**3.65**	**1**	*e*Pn	**Pn**	**15 52 46.1**	**-2.1**
TPUB	**Ta-pu**	**4.14**	**355**	*e*Pn	**Pn**	**15 52 53.4**	**-1.4**
YULB	**Yu-li**	**4.23**	**4**	*e*Pn	**Pn**	**15 52 55.2**	**-0.8**
SSLB	**Suanglung**	**4.61**	**360**	*e*Pn	**Pn**	**15 53 01.1**

WMQ	**Urumqi**	**37.16 319**	P	**P**	**15 59 01.0**	**+1.9**
WMQ			pP	pP	15 59 11.8	-2.6
WMQ			pmax	pmax		
	comp=Z,15nm,0.7s					
WMQ			LR	LR		
	comp=N,38nm,21.7s					
WMQ			LR	LR		
	comp=E,32nm,15.9s					
WRA	**Warramunga Arr**	**41.00 161**	P	**P**	**15 59 27.6**	**-3.8**
	0.8nm,0.4s,baz=342,slow=9.1,SNR=19					
WRA			PcP	**PcP**	**16 01 30.9**	**+0.3**
	1.4nm,0.6s,baz=345,slow=3.3,SNR=11					
MK01	**Makanchi Array**	**41.92 320**	*e*P	**P**	**15 59 40.1**	**+1.4**
MK01			*e*PcP	**PcP**	**16 01 33.4**	**+0.1**
MK31	**Makanchi Array**	**41.94 320**	*e*P	**P**	**15 59 40.3**	**+1.5**
MKAR	**Makanchi Array**	**41.94 320**	P	**P**	**15 59 40.6**	**+1.8**
	1.9nm,0.7s,baz=112,slow=10.0,SNR=19					
MKAR			PcP	**PcP**	**16 01 33.9**	**+0.6**
	1.6nm,0.8s,baz=118,slow=2.5,SNR=7.5					
MKAR	**Makanchi Array**	**41.94 320**	*e*P	**P**	**15 59 40.2**	**+1.4**
	15nm,0.7s					
MKAR			PcP	**PcP**	**16 01 33.9**	**+0.6**
H11S3	**WAKE ISLAND Hy 43.17**	**83**	T	T	16 45 28.2	
	baz=279,slow=75,SNR=56					
H11S1	**WAKE ISLAND Hy 43.18**	**83**	T	T	16 45 28.7	
	baz=279,slow=75,SNR=21					
H11S2	**WAKE ISLAND Hy 43.19**	**83**	T	T	16 45 29.5	
	baz=279,slow=75,SNR=15					
H11N1	**WAKE ISLAND Hy 43.19**	**81**	T	T	16 45 27.1	
	baz=277,slow=75,SNR=73					
H11N2	**WAKE ISLAND Hy 43.20**	**81**	T	T	16 45 27.4	
	baz=277,slow=75,SNR=59					
H11N3	**WAKE ISLAND Hy 43.21**	**81**	T	T	16 45 28.6	
	baz=277,slow=75,SNR=77					
KSH	**Kashi**	**43.64 308**	P	P	15 59 57.8	+4.9
PETK	**Petropavlovsk-**	**44.19 31**	P	**P**	**15 59 57.0**	**+0.1**
	1.5nm,0.6s,baz=198,slow=3.5					
AS31	**Alice Springs**	**44.39 163**	*e*P	**P**	**15 59 56.8**	**-2.0**
	1.9nm,1.1s					
ASAR	**Alice Springs**	**44.39 163**	P	**P**	**15 59 56.0**	**-2.8**
	1.1nm,0.3s,baz=344,slow=6.7,SNR=77					
ASAR			PcP	**PcP**	**16 01 41.7**	**-0.2**
	0.7nm,0.8s,baz=344,slow=3.8,SNR=4.5					
ZALV	**Zalesovo Beam**	**44.42 330**	P	**P**	**15 59 59.5**	**+0.8**
	1.5nm,0.5s,baz=118,slow=10,SNR=6.9					
ZALV	**Zalesovo Beam**	**44.42 330**	*e*P	**P**	**15 59 59.1**	**+0.4**
KURK	**Kurchatov**	**45.91 323**	*e*P	**P**	**16 00 11.0**	**+0.5**
	4.2nm,1.0s					
KURBB	**Kurchatov Arra**	**45.92 323**	P	**P**	**16 00 12.0**	**+1.4**
	2.4nm,0.6s,baz=120,slow=8.1,SNR=16					
HNR	**Honiara**	**47.77 123**	LR	LR	16 17 28.0	
	comp=Z,39nm,20.8s,baz=232,slow=32					
KK31	**Karatay Array**	**48.49 311**	*e*P	**P**	**16 00 31.0**	**+0.2**
KKAR	**Karatay Array**	**48.49 311**	*e*P	**P**	**16 00 31.1**	**+0.3**
BVAR	**Borovoye Array**	**51.51 323**	P	**P**	**16 00 54.9**	**+1.4**
	0.9nm,0.5s,baz=118,slow=7.4,SNR=9.3					
BVAR			PcP	**PcP**	**16 02 07.1**	**+0.2**
	1.6nm,0.7s,baz=93,slow=5.8,SNR=7.9					
BRVK	**Borovoye**	**51.58 323**	*e*P	**P**	**16 00 54.9**	**+0.8**
	3.6nm,0.8s					
NWAO	**Narrogin (SRO)**	**51.91 184**	P	**P**	**16 00 53.8**	**-2.8**
	14nm,1.0s,baz=3.6,slow=16,SNR=3.4					
TIXI	**Tiksi**	**52.70 3**	P	**P**	**16 01 02.3**	**+0.3**
	3.6nm,0.6s,baz=257,slow=2.2,SNR=5.0					
STKA	**Stephens Creek**	**54.45 158**	P	**P**	**16 01 12.2**	**-3.2**
	3.4nm,1.0s,baz=314,slow=11,SNR=3.0					
ABKAR	**Akbulak array**	**56.89 317**	*e*P	**P**	**16 01 33.6**	**+1.0**
AKTO	**Aktyubinsk**	**58.30 318**	P	**P**	**16 01 43.9**	**+1.3**
	1.0nm,0.5s,baz=97,slow=13,SNR=4.0					
ARU	**Arti**	**59.05 325**	*e*P	**P**	**16 01 48.2**	**+0.5**
	8.4nm,0.5s					
GNI	**Garni**	**67.56 306**	LR	LR	16 36 22.7	
	comp=Z,18nm,18.5s,baz=144,slow=40					
MLY	**Manley**	**72.10 26**	*e*P	**P**	**16 03 12.5**	**+0.7**
	18nm,1.8s					
KDAK	**Kodiak Island**	**72.13 34**	P	**P**	**16 03 11.8**	**-0.2**
	2.3nm,0.7s,baz=270,slow=5.1,SNR=3.8					
MDM	**Murphy Dome**	**73.17 26**	*e*P	**P**	**16 03 18.1**	**0.0**
	9.2nm,1.3s					
ILAR	**Eielson Array**	**73.76 26**	P	**P**	**16 03 20.8**	**-0.8**
	0.6nm,0.5s,baz=268,slow=5.0,SNR=12					
SPITS	**Spitsbergen Ar**	**74.34 348**	P	**P**	**16 03 25.2**	**+0.5**
	2.3nm,0.7s,baz=79,slow=9.0,SNR=3.1					
SPITS			LR	LR	16 38 55.9	
	comp=Z,20nm,20.9s,baz=315,slow=38					
FINES	**FINESS Array B**	**75.69 330**	P	**P**	**16 03 33.0**	**+0.3**
	2.3nm,0.8s,baz=57,slow=7.0,SNR=6.2					
BRTR	**Keskin Array B**	**76.03 307**	P	**P**	**16 03 34.9**	**-0.4**
	1.9nm,1.0s,baz=104,slow=6.1,SNR=4.2					
EGAK	**Eagle**	**76.16 26**	*e*P	**P**	**16 03 35.1**	**-0.2**
	11nm,1.5s					
AKASG	**Malin Array Be**	**76.51 319**	P	**P**	**16 03 37.1**	**-0.5**
	0.8nm,0.4s,baz=66,slow=5.6,SNR=3.7					
DAWY	**Dawson**	**77.09 26**	*e*P	**P**	**16 03 41.0**	**+0.3**
	2.6nm,0.9s					
INK	**Inuvik**	**77.94 21**	LR	LR	16 42 00.7	
	comp=Z,20nm,19.1s,baz=194,slow=39					
BUR04	**Bucovina Ar. S**	**79.87 317**	*e*P	**P**	**16 03 56.5**	**+0.1**
OPO	**Ambohidratompo**	**81.55 247**	P	**P**	**16 04 06.2**	**+0.4**
	2.4nm,0.6s,baz=48,slow=6.5,SNR=5.3					
HFS	**Hagfors**	**81.85 331**	P	**P**	**16 04 06.6**	**0.0**
	1.9nm,0.8s,baz=116,slow=6.6,SNR=4.0					
HFS			LR	LR	16 45 29.6	
	comp=Z,21nm,18.4s,baz=12,slow=39					
NOA	**NORSAR Array B**	**82.57 332**	LR	LR	16 43 56.2	
	comp=Z,31nm,19.5s,baz=70,slow=38					
CLL	**Collm**	**85.94 323**	*e*P	**P**	**16 04 30.0**	**+2.4**
YKA	**Yellowknife Ar**	**87.66 23**	P	**P**	**16 04 36.1**	**+0.4**
	2.3nm,0.7s,baz=315,slow=5.0,SNR=8.5					
TXAR	**Lajitas Array**	**115.36 43**	PKP	**PKPdf**	**16 10 30.2**	**+0.6**
	0.5nm,0.6s,baz=266,slow=0.5,SNR=6.7					
BCIP	**Isla Barro Col**	**145.17 38**	*e*PKPbc	**PKPbc**	**16 11 25.1**	**-0.2**
PRAC	**Prado**	**152.43 36**	*e*PKPbc	**PKPbc**	**16 11 44.3**	**-0.1**

JMA 27 15:53:40.1±0.2, 25°.72N×126°.50E, h2km, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKE	**Kume jima 2**	**0.66**	**23**	P	Pg	15 53 53.2	+0.5
JKE				S	Sg	15 54 02.4	+1.2
JAGN	**Aguni-jima**	**1.09**	**37**	*e*S	Sg	15 54 15.5	+0.3
JJT3	**Tamagusuku3**	**1.23**	**70**	P	Pg	15 54 03.8	+0.1
JJT3				*e*S	Sg	15 54 19.9	+0.2
JOGS	**Gusukube**	**1.38**	**226**	*e*S	Sg	15 54 22.8	-1.5
JNTH	**Nagotoyohara**	**1.58**	**60**	P	Pb	15 54 09.8	-0.3
JOW	**Kunigami**	**1.94**	**55**	*e*Pn	Pb	15 54 15.8	-0.4
JOW	**Kunigami**	**1.94**	**55**	P	Pb	15 54 16.1	-0.1

*NEIC **27** 16:01:51.6±0.0, 17°.61N×94°.85W, h124km, MD4.0(MEX), After MEX.*
MEX 27 16:01:51.6±0.4, **17°.61N×94°.85W, h124**km±10km, **MD4.0, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**1.84**	**116**	*e*P	Pn	16 02 22.2	-1.2
TGIG				*e*S	Sn	16 02 45.8	-1.8
TGIG		**1.84**	**116**	*e*P	Pn	16 02 22.2	-1.2
TGIG				*e*S	Sn	16 02 45.8	-1.8
VHO	**Vista Hermosa**	**1.88**	**254**	*e*P	Pn	16 02 23.0	-0.9
VHO				*e*S	Sn	16 02 47.1	-1.4
VHO	**Vista Hermosa**	**1.88**	**254**	*e*P	Pn	16 02 23.0	-0.9
VHO				*e*S	Sn	16 02 47.1	-1.4
HUIG	**Huatulco**	**2.19**	**214**	*e*P	Pn	16 02 25.3	-2.4
HUIG				*e*S	Sn	16 02 53.3	-1.9
HUIG	**Huatulco**	**2.19**	**214**	*e*P	Pn	16 02 25.3	-2.4
HUIG				*e*S	Sn	16 02 53.3	-1.9
PCIG		**2.45**	**140**	*e*P	Pn	16 02 30.1	-0.8
PCIG				*e*S	Sn	16 02 59.2	-1.9
PCIG		**2.45**	**140**	*e*P	Pn	16 02 30.1	-0.8
PCIG				*e*S	Sn	16 02 59.2	-1.9
TPIG	**Tehuac#an**	**2.52**	**289**	*i* P	Pn	16 02 30.1	-1.9
TPIG	**Tehuac#an**	**2.52**	**289**	*i* P	Pn	16 02 30.1	-1.9
CCIG	**Comitan**	**2.91**	**116**	*e*P	Pn	16 02 33.2	-3.9
CCIG	**Comitan**	**2.91**	**116**	*e*P	Pn	16 02 33.2	-3.9

*ISCJB **27** 16:10:42.2±1.0, 57°.4S±0°.1×25°.7W±0°.5, h43km, mb3.9/3, Error ellipse: s-maj=41.8km s-min=14.5km az=157.8*
*IDC **27** 16:10:49.6±8.0, 57°.46S×25°.58W, h101km±71km, mb3.6/3, mb1 3.6/4, mb1mx3.4/30, mbtmp3.9/4, ML4.0/1, Error ellipse: s-maj=39.6km s-min=27.8km az=61.0*
ISC 27 16:10:43.2±0.9, **57°.3S**±0°.2×**25°.6W**±0°.3, **h43km, n14, σ0°87/11, mb3.9/3, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**15.28**	**158**	P	**Pn**	**16 14 15.9**	**+0.4**
VNA3	**Neumayer Olymp**	**15.50**	**161**	P	**Pn**	**16 14 18.5**	**+0.1**
SNAA	**Sanae**	**17.22**	**156**	P	**P**	**16 14 41.7**	**+0.5**
SNAA	**Sanae**	**17.22**	**156**	P	**P**	**16 14 41.5**	**+0.3**
	0.6nm,0.3s,baz=324,slow=16,SNR=25						
QSPA	**South Pole Qui**	**32.93**	**180**	P	**P**	**16 17 13.1**	**0.0**
	1.1nm,0.6s,baz=224,slow=2.6,SNR=6.5						
H10S2	**ASCENSION HYDR**	**48.98**	**14**	T	T	17 12 05.3	
	baz=190						
H10S3	**ASCENSION HYDR**	**48.99**	**14**	T	T	17 12 05.6	
	baz=190,slow=74						
H10S1	**ASCENSION HYDR**	**49.00**	**14**	T	T	17 12 06.6	
	baz=190,slow=74						
LPAZ	**La Paz**	**51.84**	**304**	P	**P**	**16 19 48.1**	**+0.6**
	0.5nm,0.4s,baz=115,slow=14,SNR=3.6						
TORD	**Torodi Ar. Bea**	**73.74**	**28**	P	**P**	**16 22 13.6**	**+1.1**
	1.3nm,0.6s,baz=202,slow=6.4						
FINES	**FINESS Array B**	**125.09**	**27**	PKP	**PKPdf**	**16 29 36.4**	**-0.7**
	2.2nm,0.8s,baz=188,slow=8.4,SNR=3.2						
YKA	**Yellowknife Ar**	**137.71**	**316**	PKP	**PKPdf**	**16 30 00.3**	**-0.7**
	0.3nm,0.4s,baz=133,slow=1.9,SNR=3.6						
SONM	**Songino Array**	**149.90**	**87**	PKPbc	**PKPbc**	**16 30 26.0**	**-1.7**
	0.4nm,0.3s,baz=195,slow=4.5,SNR=2.9						
ILAR	**Eielson Array**	**151.62**	**310**	PKPbc	**PKPbc**	**16 30 30.6**	**-0.4**
	1.3nm,0.8s,baz=147,slow=3.7,SNR=13						

MAN 27 16:17:38.4, 13°.46N×122°.72E, h61km, mb3.7, ML2.4, MS1.9, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUQP	**San Andres**	**0.14**	**199**	*e*P	Pn	16 17 48.5	+0.8
AUQP				*e*S	Sn	16 17 56.7	+2.3
GQP	**Guinayangan**	**0.52**	**329**	*i* P	Pn	16 17 52.5	+1.9
GQP				*i* S	Sn	16 17 57.5	-2.0
BOAC	**Boac**	**0.86**	**270**	*e*P	Pn	16 17 56.2	+1.6
BOAC				*e*S	Sn	16 18 08.7	+2.2

*ISCJB **27** 16:23:46.7±0.8, 26°.98S±0°.08×179°.4W±0°.1, h400km, mb3.8/8, Error ellipse: s-maj=17.2km s-min=10.4km az=177.7*
*IDC **27** 16:23:49.5±1.6, 27°.03S×179°.34W, h425km±20km, mb3.5/8, mb1 3.7/10, mb1mx3.4/45, mbtmp4.4/10, Error ellipse: s-maj=34.6km s-min=18.3km az=167.0*
ISC 27 16:23:48.4±0.7, **26°.98S**±0°.09×**179°.5W**±0°.1, **h400**km, **n16, σ2°06/19, mb3.8/8, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.66**	**149**	P	**Pn**	**16 24 51.4**	**+2.6**
	349nm,0.3s,baz=68,slow=19,SNR=18						
RAO				S	**S**	**16 25 38.7**	**+1.0**
	baz=49,slow=20,SNR=1.3						
URZ	**Urewera**	**11.60**	**193**	P	**P**	**16 26 23.4**	**-0.2**
	3.0nm,0.3s,baz=312,slow=18,SNR=56						
URZ				S	**S**	**16 28 29.6**	**-2.1**
	2.0nm,0.3s,baz=72,slow=20,SNR=9.0						
DZM	**Mont Dzumac**	**13.70**	**288**	P	**P**	**16 26 50.7**	**+3.8**
	0.3nm,0.3s,baz=83,slow=18,SNR=3.7						
CTA	**Charters Tower**	**32.07**	**275**	P	**P**	**16 29 41.4**	**+1.1**
	16nm,0.5s,baz=99,slow=11,SNR=43						
ASAR	**Alice Springs**	**42.07**	**264**	P	**P**	**16 31 03.1**	**-0.2**
	3.7nm,0.8s,baz=95,slow=7.1,SNR=33						
ASAR				S	**S**	**16 36 47.2**	**-5.2**
	0.4nm,0.8s,baz=86,slow=14,SNR=3.7						
WRA	**Warramunga Arr**	**42.74**	**269**	P	**P**	**16 31 08.1**	**-0.5**
	10.0nm,0.6s,baz=106,slow=7.7,SNR=48						
WRA				S	**S**	**16 37 03.4**	**+1.3**
	1.0nm,0.9s,baz=104,slow=12,SNR=4.7						
MJAR	**Matsushiro Arr**	**74.69**	**326**	P	**P**	**16 34 43.9**	**-1.6**
	1.6nm,0.7s,baz=160,slow=5.7,SNR=4.9						
KSRS	**Korea Array**	**80.90**	**320**	P	**P**	**16 35 18.9**	**-0.2**
	1.5nm,0.8s,baz=126,slow=5.9,SNR=6.4						
PETK	**Petropavlovsk-**	**82.19**	**346**	P	**P**	**16 35 24.2**	**-1.3**
	1.9nm,0.7s,baz=105,slow=9.3						
NVAR	**Mina Array Bea**	**86.65**	**44**	P	**P**	**16 35 46.8**	**-1.5**
	0.2nm,0.6s,baz=238,slow=3.1,SNR=2.9						
CMAR	**Chiang Mai Arr**	**91.02**	**290**	P	**P**	**16 36 09.4**	**+0.5**
	0.5nm,0.7s,baz=134,slow=3.9,SNR=3.0						
FINES	**FINESS Array B**	**141.50**	**341**	PKhKP	PKPpre	16 42 24.8	
	1.9nm,1.0s,baz=132,slow=2.1,SNR=4.3						
HFS	**Hagfors**	**145.64**	**348**	PKPbc	**PKPdf**	**16 42 37.9**	**-1.4**
	0.8nm,0.5s,baz=46,slow=4.2,SNR=6.3						
AKASG	**Malin Array Be**	**147.77**	**325**	PKPbc	**PKPdf**	**16 42 44.4**	**+1.3**
	0.9nm,0.5s,baz=44,slow=4.1,SNR=5.2						
MMAI	**Mount Meron Ar**	**149.28**	**290**	PKPbc	**PKPbc**	**16 42 50.7**	**-0.4**
	0.8nm,0.3s,baz=76,slow=7.6,SNR=2.3						
BRTR	**Keskin Array B**	**149.72**	**303**	PKPab	**PKPab**	**16 42 57.7**	**-1.1**
	0.9nm,0.9s,baz=88,slow=3.6,SNR=2.8						

*AZER **27** 16:24:25.0±0.0, 41°.17N×48°.45E, h45km, ml3.0/18, Error ellipse: s-maj=0.9km s-min=0.8km az=37.0*
*MOS **27** 16:24:25.0±1.4, 41°.07N×48°.50E, h19km, mb4.1/1, Error ellipse: s-maj=10.7km s-min=5.1km az=124.4*
*ISCJB **27** 16:24:27.4±0.3, 41°.15N±0°.02×48°.42E±0°.03, h46km±4km, mb3.4/1, Error ellipse: s-maj=4.4km s-min=3.4km az=164.0*
*CSEM **27** 16:24:27.6±0.2, 41°.15N×48°.46E, h40km, ML3.0, Error ellipse: s-maj=5.7km s-min=4.2km az=67.0*
ISC 27 16:24:28.4±0.8, **41°.17N**±0°.02×**48°.41E**±0°.02, **h31**km±5km, **n87, σ1°42/130, 33C-37D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QUBA	**Quba, Azerbaij**	**0.20**	**18**	⇑P	**Pn**	**16 24 34.2**	**-1.1**
	SNR=77						
QUBA				⇑S	**Sb**	**16 24 40.6**	**+1.4**
QUBA	**Quba, Azerbaij**	**0.20**	**18**	⇑P	**Pn**	**16 24 34.2**	**-1.1**
	SNR=77						
QUBA				⇑S	**Sb**	**16 24 40.6**	**+1.4**
XNQ	**Khinaliq**	**0.21**	**271**	⇑P	**Pn**	**16 24 34.8**	**-0.8**
	SNR=1000						
XNQ				⇓S	**Sb**	**16 24 41.8**	**+2.2**
XNQ	**Khinaliq**	**0.21**	**271**	⇑P	**Pn**	**16 24 34.8**	**-0.8**
	SNR=1040						
XNQ				⇓S	**Sb**	**16 24 41.8**	**+2.2**
QSAR	**Qusar**	**0.36**	**342**	P	**Pb**	**16 24 35.9**	**-1.0**
	SNR=320						
QSAR				⇓S	**Sb**	**16 24 43.2**	**+0.5**
QSAR	**Qusar**	**0.36**	**342**	P	**Pb**	**16 24 35.9**	**-1.0**
	SNR=320						
QSAR				⇓S	**Sb**	**16 24 43.2**	**+0.5**
SIZA	**Siyzn**	**0.38**	**104**	P	**Pb**	**16 24 36.0**	**-1.1**
	SNR=37						
SIZA				⇑S	**Sn**	**16 24 44.7**	**+0.5**
SIZA	**Siyzn**	**0.38**	**104**	P	**Pb**	**16 24 36.0**	**-1.1**
	SNR=37						
SIZA				⇑S	**Sn**	**16 24 44.7**	**+0.5**
PQL	**Pirkuli**	**0.40**	**160**	⇑P	**Pb**	**16 24 37.1**	**-0.4**
	SNR=16						
PQL				⇑S	**Sn**	**16 24 45.7**	**+0.9**
PQL	**Pirkuli**	**0.40**	**160**	⇑P	**Pb**	**16 24 37.1**	**-0.4**
	SNR=16						
PQL				⇑S	**Sn**	**16 24 45.7**	**+0.9**
IML	**Ismayilli**	**0.41**	**205**	⇓P	**Pb**	**16 24 37.4**	**-0.2**
	SNR=153						
IML				⇑S	**Sn**	**16 24 46.3**	**+1.4**
IML	**Ismayilli**	**0.41**	**205**	⇓P	**Pb**	**16 24 37.4**	**-0.2**
	SNR=153						
IML				⇑S	**Sn**	**16 24 46.3**	**+1.4**
KSMR	**Kasumkent**	**0.48**	**334**	*e*PG	**Pb**	**16 24 37.0**	**-1.7**
KSMR				S	**Sb**	**16 24 44.0**	**-1.8**
KSMR				pmax	pmax		
	comp=Z,590nm,0.1s						
KSMR	**Kasumkent**	**0.48**	**334**	*e*Pg	**Pb**	**16 24 37.0**	**-1.7**
	comp=Z,590nm,0.1s						
KSMR				Sg	**Sb**	**16 24 44.0**	**-1.8**
QBL	**Gabala**	**0.49**	**243**	P	**Pb**	**16 24 38.3**	**-0.5**
	SNR=24						
QBL				⇓S	**Sn**	**16 24 48.3**	**+1.5**
QBL	**Gabala**	**0.49**	**243**	P	**Pb**	**16 24 38.3**	**-0.5**
	SNR=24						
QBL				⇓S	**Sn**	**16 24 48.3**	**+1.5**
ATGJ	**Altiaghaj**	**0.50**	**127**	P	**Pb**	**16 24 38.0**	**-1.0**
	SNR=20						
ATGJ				⇑S	**Sn**	**16 24 47.3**	**+0.1**
ATGJ	**Altiaghaj**	**0.50**	**127**	P	**Pb**	**16 24 38.0**	**-1.0**
	SNR=20						
ATGJ				⇑S	**Sn**	**16 24 47.3**	**+0.1**
AKT	**Akhty**	**0.60**	**301**	⇓*i*PG	**Pn**	**16 24 39.1**	**-1.9**
AKT				*i*		16 24 48.7	
AKT				pmax	pmax		
	comp=Z,284nm,0.2s						
AKT				smax	smax		
	comp=N,3μm,0.3s						
AKT	**Akhty**	**0.60**	**301**	*i* Pg	**Pn**	**16 24 39.1**	**-1.9**
	comp=N,284nm,0.2s						
AKT				*i* Sg	**Sb**	**16 24 48.7**	**-0.3**
	comp=N,3μm,0.3s						
GBS	**Qobustan**	**0.75**	**147**	⇓Pg	**Pn**	**16 24 42.7**	**-0.2**
	SNR=29						
GBS	**Qobustan**	**0.75**	**147**	⇓Pg	**Pn**	**16 24 42.7**	**-0.2**
	SNR=29						
GBS				⇓Sg	**Sb**	**16 24 57.2**	**+4.2**
DRN	**Derbent**	**0.86**	**356**	⇑*i*PG	**Pn**	**16 24 42.3**	**-2.1**
DRN				*e*		16 24 54.2	
DRN				pmax	pmax		
	comp=Z,2μm,0.3s						
DRN				smax	smax		
	comp=N,2μm,0.3s						
DRN	**Derbent**	**0.86**	**356**	*i* Pg	**Pn**	**16 24 42.3**	**-2.1**
	comp=N,2μm,0.3s						
DRN				*e*Sg	**Sn**	**16 24 54.2**	**-1.8**
	comp=N,2μm,0.3s						
SEKA	**Sheki**	**0.92**	**273**	PG	**Pn**	**16 24 43.5**	**-1.8**
SEKA	**Sheki**	**0.92**	**273**	⇑Pg	**Pn**	**16 24 44.0**	**-1.2**
	SNR=120						
SEKA				⇓Sg	**Sb**	**16 24 58.8**	**+1.0**
SEKA	**Sheki**	**0.92**	**273**	⇑Pg	**Pn**	**16 24 44.0**	**-1.2**
	SNR=120						
SEKA				⇓Sg	**Sb**	**16 24 58.8**	**+1.0**
MNGR	**Mingechevir, A**	**1.08**	**249**	PG	**Pn**	**16 24 46.1**	**-1.3**
MNGR	**Mingechevir, A**	**1.08**	**249**	Pg	**Pn**	**16 24 46.1**	**-1.3**
MNGR				⇓Sg	**Sb**	**16 25 02.8**	**+0.5**
MNGR	**Mingechevir, A**	**1.08**	**249**	⇓Pg	**Pn**	**16 24 46.8**	**-0.6**
	SNR=11						
MNGR				⇓Sg	**Sb**	**16 25 02.8**	**+0.5**
URKR	**Urkarakh**	**1.16**	**330**	⇓*i*PG	**Pn**	**16 24 47.3**	**-1.3**
URKR				*e*		16 25 04.0	
URKR	**Urkarakh**	**1.16**	**330**	*i* Pg	**Pn**	**16 24 47.3**	**-1.3**
URKR				*e*Sg	**Sn**	**16 25 04.0**	**+0.6**
KMKR	**Kumukh**	**1.38**	**315**	*e*PG	**Pn**	**16 24 51.0**	**-0.7**
KMKR				pmax	pmax		
	comp=Z,47nm,0.2s						
KMKR	**Kumukh**	**1.38**	**315**	*e*Pg	**Pn**	**16 24 51.0**	**-0.7**
	comp=Z,47nm,0.2s						
ZKTA	**Zakatala**	**1.43**	**290**	PG	**Pn**	**16 24 51.0**	**-1.2**
ZKTA	**Zakatala**	**1.43**	**290**	Pg	**Pn**	**16 24 51.0**	**-1.2**
ZKTA	**Zakatala**	**1.43**	**290**	⇑Pg	**Pn**	**16 24 51.1**	**-1.2**
	SNR=14						
ZKTA				⇓Sg	**Sb**	**16 25 14.6**	**+2.3**
GNBR	**Gunib**	**1.63**	**319**	⇑*e*PN	**Pn**	**16 24 55.1**	**0.0**
GNBR				pmax	pmax		
	comp=Z,38nm,0.6s						
GNBR	**Gunib**	**1.63**	**319**	*e*Pn	**Pn**	**16 24 55.1**	**0.0**
	comp=Z,38nm,0.6s						
GANJ	**Ganja**	**1.67**	**252**	PN	**Pn**	**16 24 53.4**	**-2.2**
GANJ	**Ganja**	**1.67**	**252**	Pn	**Pn**	**16 24 53.4**	**-2.2**
GANJ				⇓Sn	**Sn**	**16 25 14.0**	**-1.9**
GANJ	**Ganja**	**1.67**	**252**	⇑Pn	**Pn**	**16 24 53.3**	**-2.2**
	SNR=4.6						
GANJ				⇓Sn	**Sn**	**16 25 14.0**	**-1.9**
DDFL	**Dedoflistskaro**	**1.75**	**280**	P	**Pb**	**16 24 59.9**	**-0.1**
ARKR	**Arakani**	**1.78**	**324**	*e*PN	**Pn**	**16 24 57.0**	**-0.1**
ARKR	**Arakani**	**1.78**	**324**	*e*Pn	**Pn**	**16 24 57.0**	**-0.1**
XNZR	**Khunzakh**	**1.87**	**318**	⇓*e*PN	**Pb**	**16 25 02.3**	**+0.2**
MAK	**Makhachkala**	**1.92**	**340**	⇓*e*PN	**Pn**	**16 24 59.3**	**+0.4**
MAK	**Makhachkala**	**1.92**	**340**	*e*Pn	**Pn**	**16 24 59.3**	**+0.4**
UNCR	**Uncukul**	**1.96**	**323**	*e*PN	**Pn**	**16 24 59.5**	**-0.1**
UNCR	**Uncukul**	**1.96**	**323**	*e*Pn	**Pn**	**16 24 59.5**	**-0.1**
KRNR	**Karanay**	**2.00**	**326**	*e*PN	**Pn**	**16 25 00.0**	**-0.2**
KRNR	**Karanay**	**2.00**	**326**	*e*Pn	**Pn**	**16 25 00.0**	**-0.2**
GDB	**GEDABAY**	**2.06**	**258**	Pn	**Pn**	**16 24 58.8**	**-2.3**
	SNR=25						
GDB				⇓Sn	**Sn**	**16 25 23.7**	**-2.1**
GDB	**GEDABAY**	**2.06**	**258**	Pn	**Pn**	**16 24 58.8**	**-2.3**
	SNR=25						
GDB				⇓Sn	**Sn**	**16 25 23.7**	**-2.1**
DBC	**Dubki**	**2.19**	**328**	⇑*e*PN	**Pn**	**16 25 02.2**	**-0.6**
DBC				*e*		16 25 30.2	
DBC	**Dubki**	**2.19**	**328**	*e*Pn	**Pn**	**16 25 02.2**	**-0.6**
DBC				*e*Sn	**Sn**	**16 25 30.2**	**+1.3**
BTLR	**Botlikh**	**2.21**

ORL				*e*			16 29 56.0
ORL				pmax	pmax		
	comp=Z,80nm,0.4s						
ORL				smax	smax		
	comp=N,157nm,0.5s						
MOY	**Mondy**	**3.15**	**89**	*e*PN	**Pn**	**16 29 29.1**	**-0.9**
MOY				*e*		16 29 35.4	
MOY				*e*		16 30 17.5	
MOY				pmax	pmax		
	comp=Z,47nm,0.4s						
MOY				smax	smax		
	comp=N,237nm,0.6s						
ARS	**Arshan**	**4.03**	**84**	*e*PN	**Pb**	**16 29 50.7**	**-0.7**
ARS				*e*		16 30 43.8	
ARS				pmax	pmax		
	comp=Z,50nm,0.7s						
ARS				smax	smax		
	comp=E,378nm,0.7s						
KRAR	**Krasnoyarsk**	**4.69**	**338⇑**	*e*PN	**Pn**	**16 29 52.3**	**+1.3**
TLY	**Talaya**	**4.79**	**87**	Pg	**Pb**	**16 30 03.9**	**-0.5**
	comp=E,0.0nm,0.3s,baz=278,slow=12,SNR=2.2						
TLY				Lg	Lg	16 31 07.3	
	comp=E,0.1nm,0.3s,baz=168,slow=16,SNR=10						
TLY	**Talaya**	**4.79**	**87**	*e*PN	**Pn**	**16 29 50.5**	**-2.0**
TLY				*e*		16 30 05.2	
TLY				*e*		16 31 07.0	
TLY				pmax	pmax		
	comp=Z,8.0nm,0.5s						
ZAK	**Zakamensk**	**4.81**	**103**	*e*PN	**Pb**	**16 30 05.6**	**+0.8**
ZAK				pmax	pmax		
	comp=Z,17nm,0.5s						
IRK	**Irkutsk**	**5.18**	**81**	*e*PN	**Pb**	**16 30 12.1**	**+1.2**
IRK				*e*		16 31 17.0	
IRK				pmax	pmax		
	comp=Z,26nm,0.1s						
IRK				smax	smax		
	comp=N,217nm,1.2s						
DGZ	**Jazzator, Alta**	**5.76**	**253**	*e*PN	**Pn**	**16 30 08.2**	**+2.2**
ZALV	**Zalesovo Beam**	**7.11**	**293**	Pn	**Pn**	**16 30 24.7**	**+0.5**
	comp=N,0.5nm,0.3s,baz=107,slow=11,SNR=4.6						
ZALV				Sn	**Sn**	**16 31 43.4**	**-1.6**
	comp=N,0.6nm,0.3s,baz=110,slow=22,SNR=4.9						
ZALV				Lg	Lg	16 32 13.8	
	comp=N,2.2nm,0.3s,baz=113,slow=28,SNR=8.4						
OGRR	**Ongureny**	**7.35**	**70**	*e*P	**Pn**	**16 30 28.2**	**+0.6**
OGRR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SONM	**Songino Array**	**7.79**	**116**	Pg	Pb	16 30 59.3	+3.8
	comp=Z,0.4nm,0.3s,baz=303,slow=19,SNR=7.1						
SONM				Lg	Lg	16 32 44.3	
	comp=Z,0.9nm,0.3s,baz=303,slow=28,SNR=12						
NIZ	**Nizh Angarsk**	**9.03**	**58**	*e*P	**Pn**	**16 30 53.1**	**+2.5**
NIZ				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MKAR	**Makanchi Array**	**10.18**	**247**	Pn	**Pn**	**16 31 08.3**	**+1.9**
	comp=Z,0.1nm,0.3s,baz=50,slow=15,SNR=6.5						
MKAR				Lg	Lg	16 33 55.5	
	comp=Z,0.2nm,0.3s,baz=52,slow=28,SNR=3.5						
KURK	**Kurchatov**	**10.91**	**272**	P	**Pn**	**16 31 17.9**	**+1.5**
KURBB	**Kurchatov Arra**	**10.99**	**271**	Pn	**Pn**	**16 31 17.9**	**+0.5**
	comp=Z,0.0nm,0.3s,baz=74,slow=16,SNR=3.1						
KURBB				Lg	Lg	16 34 19.7	
	comp=Z,0.0nm,0.3s,baz=80,slow=32,SNR=5.0						
BVAR	**Borovoye Array**	**15.64**	**285**	Pn	**Pn**	**16 32 18.9**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=79,slow=15,SNR=3.0						
ARU	**Arti**	**22.25**	**297**	P	**P**	**16 33 37.5**	**+0.6**
	comp=Z,1.4nm,0.5s,baz=97,slow=16,SNR=2.7						
AKTO	**Aktyubinsk**	**23.69**	**282**	P	**P**	**16 33 52.5**	**+0.5**
	comp=Z,2.4nm,0.9s,baz=76,slow=11,SNR=6.1						
TIXI	**Tiksi**	**24.78**	**24**	P	**P**	**16 34 01.1**	**-0.8**
	comp=Z,3.5nm,0.6s,baz=263,slow=6.9,SNR=6.0						

NIED ***27*** *16:33:00, 39°.20N×144°.40E, h5km, Mw3.7 Best double couple: M0=4.52000×10¹⁴ NP1:φs=158.00000°, δ42.00000°, λ-102.00000°. NP2:φs=355.00000°, δ49.00000°, λ-79.00000°.*

IDC ***27*** *16:33:47.2±0.7, 39°.01N×144°.60E, h0km, mb3.9/17, mb1 4.0/21, mb1mx3.8/74, mbtmp3.9/21, ML3.7/3, MS2.8/5, Ms1 2.8/5, ms1mx2.4/68, Error ellipse: s-maj=19.2km s-min=16.2km az=114.0*

ISCJB ***27*** *16:33:49.0±0.5, 39°.12N±0°.04×144°.44E±0°.05, h19km, mb4.0/19, MS3.4/1, Error ellipse: s-maj=6.6km s-min=4.4km az=142.6*

JMA ***27*** *16:33:51.9±0.2, 39°.21N×144°.38E, h56km, M4.1*

NEIC ***27*** *16:33:52.7±0.4, 39°.08N×144°.52E, h35km, mb4.4/1, Error ellipse: s-maj=10.1km s-min=8.7km az=117.0*

ISC 27 16:33:50.6±0.7, 39°.14N±0°.05×144°.52E±0°.07, h19km, n48, σ1º83°/56, mb3.9/19, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**2.13**	**283**	P	**Pn**	**16 34 24.6**	**-0.6**
MIYJ				*e*S	**Sn**	16 34 48.7	-2.5
JTH	**Tanohata**	**2.20**	**292**	P	**Pn**	**16 34 25.2**	**-0.9**
OFUJ	**Ofunato**	**2.21**	**269**	P	**Pn**	**16 34 25.7**	**-0.6**
OFUJ				*e*S	**Sn**	**16 34 50.5**	**-2.7**
JOM	**Ohasama**	**2.52**	**279**	P	**Pn**	**16 34 30.3**	**-0.2**
JOM				S	**Sn**	**16 34 58.6**	**-2.1**
JMK	**Ichinoseki**	**2.57**	**267**	P	**Pn**	**16 34 30.8**	**-0.4**
JMK				*e*S	**Sn**	**16 34 59.6**	**-2.4**
JANG	**Nango**	**2.62**	**299**	P	**Pn**	**16 34 30.8**	**-1.1**
JYK	**Kaneyama**	**3.24**	**267**	P	**Pn**	**16 34 40.5**	**0.0**
JNBK	**Urakawa-nobuka**	**3.41**	**337**	P	**Pn**	**16 34 42.1**	**-0.6**
JOT	**Ohata**	**3.47**	**311**	P	**Pn**	**16 34 43.3**	**-0.2**
JCH	**Churui**	**3.58**	**346**	P	**Pn**	**16 34 43.7**	**-1.3**
JCH				*e*S	**Sn**	**16 35 22.7**	**-4.0**
JFT	**Otama**	**3.66**	**245**	P	**Pn**	**16 34 46.0**	**-0.3**
JFT				*e*S	**Sn**	**16 35 26.4**	**-2.6**
JKB	**Kayabe**	**3.81**	**317**	P	**Pn**	**16 34 47.8**	**-0.5**
JKB				*e*S	**Sn**	**16 35 29.8**	**-2.8**
JTKR	**Abashiri--Toko**	**4.84**	**355**	P	**Pn**	**16 35 01.2**	**-1.2**
JTKR				*e*S	**Sn**	**16 35 53.5**	**-4.5**
JHR	**Hokuryu**	**5.05**	**336**	*e*S	**Sn**	**16 36 02.3**	**-0.8**
ASAJ	**Asahikawa**	**5.17**	**344**	Pn	**Pn**	**16 35 06.7**	**-0.2**
	1.7nm,0.3s,baz=197,slow=16,SNR=32						
ASAJ				Sn	**Sn**	**16 36 03.1**	**-3.0**
	1.9nm,0.3s,baz=148,slow=19,SNR=6.8						
ASAJ				LR	LR	16 36 46.6	
	comp=Z,23nm,19.8s,baz=148,slow=34						
BSO1	**Boso 1**	**5.30**	**213**	*e*S	**Sn**	**16 36 04.0**	**-4.6**
JRY	**Ryogami san**	**5.44**	**237**	P	**Pn**	**16 35 09.6**	**-1.1**
JRY				*e*S	**Sn**	**16 36 08.3**	**-4.5**
MJAR	**Matsushiro Arr**	**5.63**	**244**	Pn	**Pn**	**16 35 13.9**	**+0.6**
	4.1nm,0.3s,baz=55,slow=10.0,SNR=36						
MJAR				Sn	**Sn**	**16 36 17.2**	**-0.2**
	1.6nm,0.3s,baz=75,slow=30,SNR=5.8						
MJAR				LR	LR	16 37 38.4	
	comp=Z,75nm,19.4s,baz=70,slow=41						
MAT	**Matsushiro**	**5.63**	**244**	P	**Pn**	**16 35 14.1**	**+0.8**
MAT				*e*S	**Sn**	**16 36 15.3**	**-2.1**
JHJ	**Hachijo jima 2**	**7.13**	**214**	Pn	**Pn**	**16 35 31.4**	**-2.4**
	4.9nm,0.3s,baz=57,slow=17,SNR=5.1						
JHJ				Sn	Sn	16 36 44.6	-10
	6.7nm,0.3s,baz=350,slow=14,SNR=6.8						
USRK	**Ussuriysk Ar.**	**10.64**	**302**	Pn	**Pn**	**16 36 23.8**	**+1.8**
	baz=90,slow=15						
CBIJ	**Chichi jima**	**12.17**	**190**	Pn	Pn	16 36 37.5	-5.5
CBIJ				Sn	Sn	16 38 43.2	-15
JCJ	**Chichijima**	**12.17**	**190**	Pn	Pn	16 36 37.5	-5.5
	baz=319,slow=18						
JCJ				Sn	Sn	16 38 43.2	-15
	2.6nm,0.3s,baz=338,slow=19,SNR=3.6						
MDJ	**Mudanjiang**	**12.39**	**301**	P	**Pn**	**16 36 46.7**	**+0.9**
JNU	**Nakatsue**	**12.55**	**246**	LR	LR	16 41 59.3	
	comp=Z,61nm,19.4s,baz=119,slow=39						
KSRS	**Korea Array**	**13.14**	**268**	Pn	**Pn**	**16 36 59.3**	**+3.1**
	0.1nm,0.3s,baz=78,slow=15,SNR=3.1						
KSRS				LR	LR	16 40 53.5	
	comp=Z,27nm,19.9s,baz=104,slow=32						
KSAR	**Wonju Array Be**	**13.18**	**268**	Pn	**Pn**	**16 36 59.3**	**+2.6**
YAK	**Yakutsk**	**24.65**	**343**	P	**P**	**16 39 10.1**	**+0.4**
	3.8nm,0.3s						
ZALV	**Zalesovo Beam**	**42.35**	**311**	P	**P**	**16 41 43.1**	**-0.1**
	1.2nm,0.5s,baz=91,slow=9.1,SNR=4.8						
CMAR	**Chiang Mai Arr**	**44.39**	**256**	P	**P**	**16 42 00.4**	**+0.3**
	0.5nm,0.8s,baz=46,slow=7.7,SNR=3.4						
MKAR	**Makanchi Array**	**45.10**	**301**	P	**P**	**16 42 06.0**	**+0.5**
	1.2nm,0.9s,baz=85,slow=9.0,SNR=9.7						
ILAR	**Eielson Array**	**46.40**	**33**	P	**P**	**16 42 16.0**	**+0.6**
	0.9nm,0.7s,baz=258,slow=6.8,SNR=10						
KURK	**Kurchatov**	**46.59**	**307**	*e*P	**P**	**16 42 17.2**	**+0.1**
	18nm,0.9s						
KURBB	**Kurchatov Arra**	**46.66**	**307**	P	**P**	**16 42 18.1**	**+0.4**
	2.1nm,0.6s,baz=81,slow=8.1,SNR=21						
BVAR	**Borovoye Array**	**50.98**	**312**	P	**P**	**16 42 51.7**	**+0.9**
	1.1nm,0.8s,baz=84,slow=7.9,SNR=6.2						
ARU	**Arti**	**56.41**	**318**	P	**P**	**16 43 31.2**	**+0.7**
	1.4nm,0.4s,baz=46,slow=4.6,SNR=3.8						
LEM	**Lembang**	**57.09**	**225**	LR	LR	17 08 52.1	
	comp=Z,25nm,18.0s,baz=227,slow=37						
AKTO	**Aktyubinsk**	**59.09**	**312**	P	**P**	**16 43 50.0**	**+0.6**
	1.5nm,0.6s,baz=71,slow=12,SNR=5.0						
WRA	**Warramunga Arr**	**59.54**	**191**	P	**P**	**16 43 51.2**	**-1.6**
	0.7nm,0.8s,baz=11,slow=6.8,SNR=4.6						
RES	**Resolute Bay**	**59.94**	**15**	P	**P**	**16 43 55.2**	**+0.3**
	1.3nm,0.6s,baz=291,slow=8.6,SNR=4.1						
ASAR	**Alice Springs**	**63.27**	**191**	P	**P**	**16 44 16.6**	**-1.3**
	0.3nm,0.8s,baz=3.4,slow=6.5,SNR=4.0						
FINES	**FINESS Array B**	**68.07**	**333**	P	**P**	**16 44 49.1**	**+0.6**
	1.9nm,0.6s,baz=35,slow=7.0,SNR=7.6						
KBZ	**Khabaz**	**71.36**	**311**	P	**P**	**16 45 10.2**	**+1.1**
	2.8nm,0.8s,baz=39,slow=5.3,SNR=5.5						
HFS	**Hagfors**	**73.15**	**337**	P	**P**	**16 45 20.4**	**+0.9**
	1.1nm,0.7s,baz=341,slow=7.6,SNR=5.0						
AKASG	**Malin Array Be**	**74.10**	**323**	P	**P**	**16 45 25.0**	**-0.2**
	0.7nm,0.5s,baz=47,slow=6.3,SNR=3.4						
PDAR	**Pinedale Array**	**74.44**	**47**	P	**P**	**16 45 28.4**	**+0.6**
	0.2nm,0.5s,baz=12,slow=4.6,SNR=3.0						
TXAR	**Lajitas Array**	**86.90**	**54**	P	**P**	**16 46 34.8**	**+0.3**
	0.2nm,0.6s,baz=302,slow=3.1,SNR=3.8						
TORD	**Torodi Ar. Bea**	**117.48**	**318**	PKP	**PKPdf**	**16 52 34.4**	**-1.2**
	0.2nm,0.5s,baz=64,slow=1.2						

JMA 27 16:35:05.4±0.2, 38°.14N×142°.51E, h20km, M3.5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**0.97**	**289**	*e*S	Sb	16 35 35.6	-0.2
JMK	**Ichinoseki**	**1.30**	**309**	*e*S	Sb	16 35 45.4	+0.1

IDC ***27*** *17:18:30.1±9.1, 36°.25N×70°.63E, h184km±86km, mb3.4/6, mb1 3.3/10, mb1mx3.0/64, mbtmp3.8/10, Error ellipse: s-maj=47.6km s-min=25.2km az=25.0*

ISCJB ***27*** *17:18:32.1±0.9, 36°.56N±0°.09×70°.7E±0°.1, h204km, mb3.5/6, Error ellipse: s-maj=15.3km s-min=8.4km az=137.3*

NNC ***27*** *17:18:36.6±2.2, 36°.90N×70°.61E, h205km±43km, mb2.8, mpv3.9, Error ellipse: s-maj=30.9km s-min=18.0km az=65.0*

ISC 27 17:18:32.1±0.9, 36°.49N±0°.08×70°.74E±0°.10, h204km, n27, σ1º60°/31, mb3.6/6, 7C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**4.14**	**31**	⇑P	**Pn**	**17 19 36.6**	**+0.7**
	10nm,0.5s						
SFK				⇑S	**S**	**17 20 25.2**	**-0.4**
	29nm,0.5s						
THN	**Thein Dam**	**5.77**	**133**	*e*P	Pn	17 20 04.0	+7.6
THN				*e*S	**S**	**17 21 00.0**	**-2.8**
AML	**Almayashu**	**6.08**	**21**	P	**Pn**	**17 20 00.9**	**+0.2**
	SNR=15						
MNAS	**Manas**	**6.14**	**12**	⇑P	**Pn**	**17 20 01.3**	**0.0**
	6.9nm,0.7s						
MNAS				⇑S	**S**	**17 21 08.4**	**-3.3**
	18nm,0.5s						
UCH	**Uchtor**	**6.43**	**26**	P	**Pn**	**17 20 05.8**	**+0.4**
	SNR=33						
KZA	**Kyzart**	**6.59**	**31**	P	**Pn**	**17 20 07.2**	**-0.1**
	SNR=6.3						
EKS2	**Erkin-Say**	**6.60**	**20**	P	**Pn**	**17 20 07.6**	**+0.4**
	SNR=11						
KK31	**Karatay Array**	**6.61**	**359**	⇓P	**Pn**	**17 20 06.4**	**-0.8**
	6.9nm,0.3s,baz=175,slow=12,SNR=121						
KK31				⇑S	**S**	**17 21 17.3**	**-5.2**
	6.4nm,0.4s						
AAK	**Ala-Archa**	**6.79**	**24**	⇓P	**Pn**	**17 20 09.5**	**-0.2**
	3.7nm,0.4s						
AAK				⇑S	**S**	**17 21 24.9**	**-2.1**
	12nm,0.8s						
AAK	**Ala-Archa**	**6.79**	**24**	P	**Pn**	**17 20 10.2**	**+0.5**
	SNR=7.4						
KBK	**Karagaybulak**	**6.96**	**27**	P	**Pn**	**17 20 12.8**	**+0.8**
	SNR=9.6						
CHMS	**Chumysh**	**7.20**	**24**	P	**Pn**	**17 20 15.3**	**+0.5**
	SNR=11						
USP	**Ospenovka**	**7.36**	**22**	P	**Pn**	**17 20 17.1**	**+0.2**
	SNR=5.6						
TKM2	**Tokmak 2**	**7.43**	**29**	P	**Pn**	**17 20 18.5**	**+0.4**
	SNR=42						
MKAR	**Makanchi Array**	**13.42**	**36**	P	**Pn**	**17 21 36.6**	**+2.0**
	0.2nm,0.3s,baz=224,slow=13,SNR=12						
AB31	**Akbulak array**	**14.99**	**332**	⇑P	**P**	**17 21 54.6**	**+0.2**
	0.6nm,0.5s,baz=146,slow=11,SNR=6.9						
KURBB	**Kurchatov Arra**	**15.20**	**19**	P	**P**	**17 21 58.8**	**+2.1**
	0.0nm,0.3s,baz=213,slow=9.2,SNR=4.6						
BVAR	**Borovoye Array**	**16.54**	**359**	P	**Pn**	**17 22 13.5**	**+1.1**
	0.4nm,0.3s,baz=161,slow=9.6,SNR=9.4						
AKTO	**Aktyubinsk**	**16.68**	**331**	P	**Pn**	**17 22 14.0**	**-0.2**
	0.4nm,0.3s,baz=135,slow=12,SNR=7.3						
AKTO	**Aktyubinsk**	**16.68**	**331**	⇓P	**Pn**	**17 22 14.0**	**-0.2**
	4.5nm,0.8s						
ZALV	**Zalesovo Beam**	**20.01**	**25**	P	**P**	**17 22 50.9**	**+1.9**
	1.2nm,0.3s,baz=223,slow=12,SNR=7.5						
FINES	**FINESS Array B**	**37.37**	**326**	P	**P**	**17 25 26.0**	**+1.2**
	3.9nm,1.0s,baz=114,slow=4.8,SNR=6.8						
ARCES	**ARCESS Array B**	**41.07**	**338**	P	**P**	**17 25 56.7**	**+1.4**
	1.4nm,0.7s,baz=110,slow=7.1,SNR=4.2						
HFS	**Hagfors**	**42.94**	**322**	P	**P**	**17 26 11.4**	**+0.9**
	1.2nm,0.4s,baz=98,slow=10,SNR=8.9						
NB2	**NORSAR Subarra**	**44.26**	**323**	P	**P**	**17 26 21.5**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=98,slow=7.9						
TORD	**Torodi Ar. Bea**	**65.50**	**268**	P	**P**	**17 28 53.3**	**-0.5**
	comp=Z,0.5nm,0.4s,baz=50,slow=6.2						
WRA	**Warramunga Arr**	**82.17**	**122**	P	**P**	**17 30 30.4**	**0.0**
	comp=Z,0.6nm,1.0s,baz=330,slow=4.9,SNR=3.1						

ISCJB ***27*** *17:33:20.0±0.3, 43°.88N±0°.05×145°.59E±0°.04, h154km±2km, mb3.6/20, Error ellipse: s-maj=8.6km s-min=4.6km az=160.2*

SKHL ***27*** *17:33:19.7±0.2, 43°.81N×145°.72E, h148km±10km, mb5.0/6, msh4.8/6*

MOS ***27*** *17:33:20.1±1.0, 44°.02N×145°.45E, h154km, mb4.1/9, Error ellipse: s-maj=14.4km s-min=10.6km az=77.1*

JMA ***27*** *17:33:21.7±0.2, 43°.85N×145°.55E, h146km±2km, M3.4*

IDC ***27*** *17:33:21.9±1.2, 44°.01N×145°.49E, h155km±10km, mb3.5/18, mb1 3.6/21, mb1mx3.4/71, mbtmp3.9/21, Error ellipse: s-maj=15.8km s-min=12.6km az=157.0*

ISC 27 17:33:21.1±0.6, 43°.90N±0°.06×145°.57E±0°.04, h150km±5km, n59, σ0º91°/75, mb3.7/20, 3C-1D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLVR	**Golovnino**	**0.17**	**193**	*i*P	**Pn**	**17 33 41.0**	**-0.3**
GLVR				AMB	AMB	17 33 44.0	
	333nm,0.4s						
GLVR				AMB	AMB	17 33 44.0	
	801nm,0.4s						
GLVR				*i*S	**Sn**	**17 33 57.0**	**+0.4**
GLVR				A	A	17 33 58.7	
	2μm,0.4s						
GLVR				A	A	17 33 58.7	
	352nm,0.4s						
GLVR	**Golovnino**	**0.17**	**193**	*c*iPN	**Pn**	**17 33 41.9**	**+0.6**
GLVR				*i*S	**Sn**	**17 33 57.5**	**+0.9**
GLVR				pmax	pmax		
	comp=E,333nm,0.2s						
GLVR				pmax	pmax		
	comp=Z,801nm,0.2s						
GLVR				pmax	pmax		
	comp=N,516nm,0.3s						
GLVR				smax	smax		
	comp=E,2μm,0.5s						
GLVR				smax	smax		
	comp=N,4μm,0.3s						
GRPR	**Tuman**	**0.17**	**58**	*e*P	**Pn**	**17 33 41.0**	**-0.3**
GRPR				AMB	AMB	17 33 44.0	
	comp=N,263nm,0.3s						
GRPR				AMB	AMB	17 33 44.0	
	comp=N,633nm,0.3s						
GRPR				AMB	AMB	17 33 44.0	
	comp=N,614nm,0.3s						
GRPR				*i*S	**Sn**	**17 33 57.0**	**+0.3**
GRPR				A	A	17 34 00.0	
	comp=N,1μm,0.4s						
GRPR				A	A	17 34 00.0	
	comp=N,609nm,0.4s						
GRPR	**Tuman**	**0.17**	**58**	*e*PN	**Pn**	**17 33 41.9**	**+0.6**
GRPR				*i*S	**Sn**	**17 33 57.6**	**+0.9**
GRPR				pmax	pmax		
	comp=N,263nm,0.3s						
GRPR				pmax	pmax		
	comp=E,633nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,614nm,0.3s						
GRPR				smax	smax		
	comp=N,1μm,0.4s						
GRPR				smax	smax		
	comp=E,609nm,0.5s						
LAGR	**Lagunnoye**	**0.22**	**45**	*i*P	**Pn**	**17 33 41.0**	**-0.4**
LAGR				AMB	AMB	17 33 44.0	
	comp=E,705nm,0.3s						
LAGR				*i*S	**Sn**	**17 33 57.0**	**+0.1**
LAGR				A	A	17 33 59.0	
	comp=E,140nm,0.4s						
LAGR				A	A	17 33 59.0	
	comp=E,1μm,0.4s						
LAGR	**Lagunnoye**	**0.22**	**45**	*c iP*N	**Pn**	**17 33 41.9**	**+0.5**
LAGR				*i*S	**Sn**	**17 33 57.6**	**+0.7**
LAGR				pmax	pmax		
	comp=Z,705nm,0.3s						
LAGR				pmax	pmax		
	comp=N,677nm,0.2s						
LAGR				pmax	pmax		
	comp=E,392nm,0.1s						
LAGR				smax	smax		
	comp=N,1μm,0.4s						
LAGR				smax	smax		
	comp=E,1μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**0.25**	**58**	*i*P	**Pn**	**17 33 41.0**	**-0.5**
YUK				AMB	AMB	17 33 42.0	
	comp=E,246nm,0.4s						
YUK				AMB	AMB	17 33 42.0	
	comp=E,483nm,0.4s						
YUK				AMB	AMB	17 33 42.0	
	comp=E,808nm,0.4s						
YUK				*i*S	**Sn**	**17 33 57.0**	**0.0**
YUK				A	A	17 33 58.0	
	comp=E,125nm,0.4s						
YUK				A	A	17 33 58.0	
	comp=E,1μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**0.25**	**58**	*c iP*N	**Pn**	**17 33 41.8**	**+0.3**
YUK				*i*S	**Sn**	**17 33 57.4**	**+0.4**
YUK				pmax	pmax		
	comp=E,483nm,0.2s						
YUK				pmax	pmax		
	comp=Z,808nm,0.2s						
YUK				pmax	pmax		
	comp=N,246nm,0.1s						
YUK				smax	smax		
	comp=N,1μm,0.5s						
YUK				smax	smax		
	comp=E,1μm,0.5s						
JRA	**Rausu**	**0.33**	**276**	P	**Pn**	**17 33 41.7**	**0.0**
NEM2	**Nemuro 2**	**0.55**	**167**	P	**Pn**	**17 33 42.3**	**-0.4**
NEM2				*e*S	**Sn**	**17 33 58.1**	**-1.0**
JNK	**Nakash**	**0.69**	**243**	P	**Pn**	**17 33 43.7**	**+0.1**
SHO	**Shikotan**	**0.91**	**92**	*e*P	**Pn**	**17 33 44.0**	**-1.1**
SHO				AMB	AMB	17 33 45.0	
	comp=E,782nm,0.3s						
SHO				*i*S	**Sn**	**17 34 02.0**	**-1.4**
SHO				A	A	17 34 02.0	
	comp=E,2μm,0.3s						
SHO				A	A	17 34 02.0	
	comp=E,210nm,0.3s						
SHO	**Shikotan**	**0.91**	**92**	*e*PN	**Pn**	**17 33 44.9**	**-0.2**
SHO				*i*S	**Sn**	**17 34 02.3**	**-1.1**
SHO				pmax	pmax		
	comp=E,261nm,0.3s						
SHO				pmax	pmax		
	comp=Z,782nm,0.3s						
SHO				pmax	pmax		
	comp=N,242nm,0.2s						
SHO				smax	smax		
	comp=N,2μm,0.2s						
SHO				smax	smax		
	comp=E,2μm,0.4s						
JAK	**Akkeshi**	**1.11**	**215**	P	**Pn**	**17 33 46.7**	**-0.1**
JAK				*e*S	**Sn**	**17 34 05.4**	**-1.0**
JTKR	**Abashiri--Toko**	**1.20**	**274**	P	**Pn**	**17 33 47.7**	**0.0**
JTKR				*e*S	**Sn**	**17 34 07.5**	**-0.4**
JAR	**Ashorobuto**	**1.44**	**246**	P	**Pn**	**17 33 50.4**	**+0.3**
JMP	**Maruseppu**	**1.60**	**275**	P	**Pn**	**17 33 51.8**	**+0.1**
JMP				*e*S	**Sn**	**17 34 14.6**	**-0.6**
JOB	**Onbets**	**1.61**	**232**	P	**Pn**	**17 33 52.1**	**+0.3**
JOB				*e*S	**Sn**	**17 34 14.6**	**-0.7**
JKK2	**Kamakawa 2**	**2.04**	**270**	P	**Pn**	**17 33 57.0**	**+0.3**
JKK2				*e*S	**Sn**	**17 34 24.0**	**0.0**
JCH	**Churui**	**2.06**	**232**	P	**Pn**	**17 33 56.7**	**-0.3**
JCH				*e*S	**Sn**	**17 34 22.4**	**-2.1**
KUR	**Kuril'sk**	**2.11**	**50**	*e*P	**Pn**	**17 33 57.6**	**+0.1**
KUR				AMB	AMB	17 34 02.2	
	comp=E,160nm,0.4s						
KUR				*e*S	**Sn**	**17 34 25.4**	**-0.1**
KUR				A	A	17 34 31.0	
	comp=E,80nm,0.2s						
KUR				A	A	17 34 31.0	
	comp=E,62nm,0.2s						
KUR	**Kuril'sk**	**2.11**	**50**	*e*PN	**Pn**	**17 33 58.3**	**+0.8**
KUR				*e*S	**Sn**	**17 34 26.4**	**+0.9**
KUR				pmax	pmax		
	comp=Z,16nm,0.4s						
KUR				pmax	pmax		
	comp=E,7.0nm,0.3s						
KUR				pmax	pmax		
	comp=N,7.0nm,0.2s						
KUR				smax	smax		
	comp=N,47nm,0.2s						
KUR				smax	smax		
	comp=E,62nm,0.2s						
JKA	**Kamikawa-asahi**	**2.15**	**277**	*e*P	**Pn**	**17 33 58.5**	**+0.5**
ASAJ	**Asahikawa**	**2.16**	**277**	P	**Pn**	**17 33 58.5**	**+0.5**
	comp=E,44nm,0.3s,baz=100,slow=7.8,SNR=134						
ASAJ				S	**Sn**	**17 34 26.9**	**+0.4**
	comp=E,2.3nm,0.3s,baz=4.3,slow=26,SNR=15						
ASAJ	**Asahikawa**	**2.16**	**277**	P	**Pn**	**17 33 58.6**

comp=Z,1.1nm,0.4s,baz=309,slow=6.5,SNR=3.4
BVAR Borovoye Array 48.52 309 P P 17 41 48.3 -0.2
comp=Z,0.4nm,0.4s,baz=78,slow=9.6,SNR=5.5
YKA Yellowknife Ar 56.31 33 P P 17 42 45.2 -0.5
comp=Z,0.4nm,0.5s,baz=299,slow=6.5,SNR=4.0
CTA Charters Tower 63.68 179 P P 17 43 38.4 +2.0
comp=Z,2.4nm,0.9s,baz=0.0,slow=14,SNR=3.1
FINES FINESS Array B 64.21 332 P P 17 43 38.4 -1.0
comp=Z,5.8nm,0.5s,baz=44,slow=7.8,SNR=51
WRA Warramunga Arr 64.36 192 P P 17 43 40.5 -0.3
comp=Z,0.7nm,1.1s,baz=12,slow=6.7,SNR=3.0
ASAR Alice Springs 68.08 192 P P 17 44 05.3 +0.8
comp=Z,0.8nm,1.1s,baz=14,slow=7.8,SNR=2.9
NVAR Mina Array Bea 68.46 57 P P 17 44 07.2 +0.1
comp=Z,0.1nm,0.5s,baz=282,slow=8.8,SNR=3.2
NB2 NORSAR Subarra 69.04 338 P P 17 44 09.1 -1.0
comp=Z,0.8nm,0.5s,baz=32,slow=6.5
HFS Hagfors 69.10 336 P P 17 44 09.5 -0.9
comp=Z,3.3nm,0.5s,baz=43,slow=6.5,SNR=16
PDAR Pinedale Array 70.68 49 P P 17 44 21.0 +0.3
comp=Z,0.3nm,0.5s,baz=285,slow=1.4,SNR=3.3
AKASG Malin Array Be 70.77 323 P P 17 44 20.1 -0.6
comp=Z,0.6nm,0.4s,baz=41,slow=6.7,SNR=4.1
MMAI Mount Meron Ar 80.48 307 P P 17 45 17.1 +0.7
comp=Z,0.6nm,0.5s,baz=31,slow=0.8,SNR=2.6
TXAR Lajitas Array 83.51 55 P P 17 45 32.8 +0.4
comp=Z,0.4nm,0.8s,baz=287,slow=5.1,SNR=4.2

*ISK **27** 17:51:45.3,38°.70N×43°.34E,h4km,ML2.1/4*
*ISCJB **27** 17:51:46.4±0.5,38°.67N±0°.03×43°.28E±0°.04,h14km±5km, Error ellipse: s-maj=6.1km s-min=5.3km az=39.8*
*CSEM **27** 17:51:46.0±0.3,38°.68N×43°.27E,h10km,ML2.8, Error ellipse: s-maj=6.8km s-min=5.9km az=94.0*
*DDA **27** 17:52:36.1,38°.65N×43°.30E,h16km,Ml2.8*
ISC 27 17:51:46.1±1.0,38°.67N±0°.03×43°.29E±0°.03,h18km±5km, n18,σ0 95/32,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.11**	**136**	PG	**Pg**	**17 51 49.9**	**-0.1**
VANB				SG	**Sg**	17 51 53.5	+0.9
VANB	**Van**	**0.11**	**136**	*e*Pg	**Pg**	**17 51 49.9**	**-0.1**
VANB				*e*Sg	**Sg**	**17 51 53.5**	**+0.9**
TVAN	**Van**	**0.17**	**148**	*i* P	**Pg**	**17 51 50.0**	**-0.8**
TVAN				*i* S	**Sg**	**17 51 53.6**	**-0.3**
TVAN	**Van**	**0.17**	**148**	P	**Pg**	**17 51 50.0**	**-0.8**
TVAN				S	**Sg**	**17 51 53.7**	**-0.3**
VMUR	**Van-Muradiye**	**0.38**	**35**	*i* P	**Pb**	**17 51 54.5**	**0.0**
VMUR				*i* S	**Sb**	**17 52 01.3**	**+1.1**
VMUR	**Van-Muradiye**	**0.38**	**35**	P	**Pb**	**17 51 54.5**	**0.0**
VMUR				S	**Sb**	**17 52 01.3**	**+1.1**
GEVA	**Gevas**	**0.40**	**207**	*i* P	**Pg**	**17 51 53.7**	**-0.8**
GEVA				*i* S	**Sb**	**17 52 00.8**	**0.0**
GEVA	**Gevas**	**0.40**	**207**	P	**Pg**	**17 51 53.7**	**-0.8**
GEVA				S	**Sb**	**17 52 00.8**	**0.0**
ADCV	**BITLIS_Adilcev**	**0.46**	**287**	*i* P	**Pg**	**17 51 54.8**	**-0.8**
ADCV				*i* S	**Sb**	**17 52 02.8**	**+0.3**
ADCV	**BITLIS_Adilcev**	**0.46**	**287**	P	**Pg**	**17 51 54.8**	**-0.8**
ADCV				S	**Sb**	**17 52 02.8**	**+0.3**
CLDR	**Caldiran**	**0.68**	**46**	PG	**Pg**	**17 51 58.1**	**-1.4**
CLDR	**Caldiran**	**0.68**	**46**	*i* P	**Pg**	**17 51 58.0**	**-1.6**
CLDR				*i* S	**Sb**	**17 52 09.6**	**+0.9**
CLDR	**Caldiran**	**0.68**	**46**	*e*Pg	**Pg**	**17 51 58.1**	**-1.4**
CLDR				S	**Sb**	**17 52 09.6**	**+0.9**
TUTA	**Tutak**	**0.82**	**333**	*i* P	**Pg**	**17 52 01.3**	**-0.8**
TUTA				*i* S	**Sb**	**17 52 14.5**	**+1.7**
TUTA	**Tutak**	**0.82**	**333**	P	**Pg**	**17 52 01.3**	**-0.8**
TUTA				S	**Sb**	**17 52 14.5**	**+1.7**
AGRB	**Hanur-Agry**	**0.93**	**346**	PG	**Pg**	**17 52 03.5**	**-0.8**
AGRB	**Hanur-Agry**	**0.93**	**346**	*e*Pg	**Pg**	**17 52 03.5**	**-0.8**
CUKT	**Cukurca**	**1.45**	**170**	PN	**Pb**	**17 52 13.3**	**+0.7**

*IDC **27** 18:27:33.6±3.6,36°.21N×71°.45E,h62km±32km,mb3.8/18, mb1 4.0/21,mb1mx3.7/66,mbtmp4.2/21,ML4.0/4,MS2.0/1, Ms1 2.0/1,ms1mx1.8/64,Error ellipse: s-maj=19.8km s-min=15.3km az=3.0*
*MOS **27** 18:27:37.9±1.2,36°.54N×71°.48E,h101km,mb4.4/15,Error ellipse: s-maj=8.2km s-min=4.7km az=95.0*
*ISCJB **27** 18:27:37.9±0.2,36°.44N±0°.02×71°.64E±0°.03,h114km, mb4.1/38,Error ellipse: s-maj=4.1km s-min=2.7km az=158.0*
*NEIC **27** 18:27:39.0±1.2,36°.48N×71°.46E,h107km±13km,mb4.3/4, Error ellipse: s-maj=11.5km s-min=10.1km az=74.0*
*BJI **27** 18:27:39.8,36°.69N×71°.58E,h86km,mb4.1/9,mB4.4/9, Ms3.7/2,Ms7 3.6/1*
*NNC **27** 18:27:40.9±1.8,36°.80N×70°.88E,h159km±21km,mb4.0, mpv4.9,Error ellipse: s-maj=17.8km s-min=11.7km az=159.0*
ISC 27 18:27:38.9±0.4,36°.42N±0°.04×71°.47E±0°.05,h114km,n144, σ2.9 28/159,mb4.2/38,17C-18D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.62**	**172**	⇓P	**Pn**	**18 28 20.8**	**+0.7**
CEP				S	**Sn**	**18 28 53.0**	**+1.2**
KBL	**Kabul**	**2.73**	**227**	PN	**Pn**	**18 28 20.2**	**-1.4**
NIL	**Nilore**	**3.13**	**152**	*e*Pn	**Pn**	**18 28 28.2**	**+1.5**
NIL	**Nilore**	**3.13**	**152**	*e*PN	**Pn**	**18 28 28.2**	**+1.5**
THW	**Thamme Wali**	**3.63**	**176**	P	**Pn**	**18 28 33.3**	**0.0**
SFK	**Sufi-Kurgan**	**3.93**	**23**	⇓P	**Pn**	**18 28 38.9**	**+1.4**
	41nm,0.3s						
SFK				⇓S	**Sn**	**18 29 25.4**	**+2.5**
	164nm,0.4s						
SFK	**Sufi-Kurgan**	**3.93**	**23**	PN	**Pn**	**18 28 38.8**	**+1.4**
SFK				S	**Sn**	**18 29 25.4**	**+2.5**
SFK				pmax	pmax		
	comp=Z,41nm,0.3s						
SFK				smax	smax		
	comp=N,165nm,0.4s						
SARP	**Sargodha**	**4.60**	**167**	P	**Pn**	**18 28 46.5**	**+0.2**
KSH	**Kashi**	**4.71**	**48**	P	**Pn**	**18 28 44.5**	**-3.4**
KSH				S	Sn	18 29 31.5	-10
KSH				smax	smax		
	comp=N,2μm,0.5s						
KSH				smax	smax		
	comp=N,3μm,0.7s						
TAS	**Tashkent**	**5.19**	**342**	PN	**Pn**	**18 28 52.7**	**-1.5**
TAS				pmax	pmax		
	comp=Z,144nm,0.7s						
THN	**Thein Dam**	**5.30**	**137**	*e*P	**Pn**	**18 28 55.4**	**-0.4**
THN				*e*S	**Sn**	**18 29 52.8**	**-3.0**
DHRM	**DHARAMSHALA**	**5.77**	**135**	*e*P	**Pn**	**18 29 01.5**	**-0.8**
DHRM				*e*S	**Sn**	**18 30 03.8**	**-3.5**
DHRM				IAML		18 30 07.7	
	comp=E,951nm,0.3s						
DHRM				IAML		18 30 07.9	
	comp=N,640nm,0.2s						
AML	**Almayashu**	**5.96**	**16**	P	**Pn**	**18 29 04.8**	**-0.1**
	SNR=96						
MNAS	**Manas**	**6.11**	**7**	⇓P	**Pn**	**18 29 06.1**	**-0.8**
	comp=N,78nm,0.7s						
MNAS				⇓S	**Sn**	**18 30 12.3**	**-3.1**
	comp=N,230nm,0.6s						
MNAS	**Manas**	**6.11**	**7**	PN	**Pn**	**18 29 06.0**	**-0.8**
MNAS				pmax	pmax		
	comp=Z,78nm,0.7s						
UCH	**Uchtor**	**6.26**	**21**	P	**Pn**	**18 29 08.9**	**-0.2**
	SNR=95						
KZA	**Kyzart**	**6.36**	**26**	P	**Pn**	**18 29 10.8**	**+0.3**
	SNR=37						
EKS2	**Erkin-Say**	**6.48**	**15**	P	**Pn**	**18 29 11.7**	**-0.1**
	SNR=113						
AAK	**Ala-Archa**	**6.63**	**20**	⇑P	**Pn**	**18 29 14.0**	**0.0**
	comp=Z,71nm,0.5s						
AAK				⇑S	**Sn**	**18 30 27.0**	**-1.1**
	comp=Z,117nm,0.7s						
AAK	**Ala-Archa**	**6.63**	**20**	P	**Pn**	**18 29 13.9**	**0.0**
	SNR=100						
AAK	**Ala-Archa**	**6.63**	**20**	PN	**Pn**	**18 29 13.9**	**0.0**
AAK				pmax	pmax		
	comp=Z,71nm,0.5s						
KK31	**Karatay Array**	**6.71**	**354**	⇓P	**Pn**	**18 29 13.1**	**-1.7**
	comp=Z,69nm,0.5s,baz=186,slow=14,SNR=846						
KK31				⇑S	**Sn**	**18 30 22.4**	**-7.5**
	comp=Z,26nm,0.3s						
KK31	**Karatay Array**	**6.71**	**354**	*e*PN	**Pn**	**18 29 13.3**	**-1.5**
KK31				pmax	pmax		
	comp=Z,69nm,0.5s						
KBK	**Karagaybulak**	**6.78**	**22**	P	**Pn**	**18 29 16.5**	**+0.6**
	SNR=34						
FRU	**Bishkek**	**6.85**	**20**	⇓*e*PN	**Pn**	**18 29 16.0**	**-0.7**
FRU				*e*S	**Sn**	**18 30 34.0**	**+0.9**
FRU				pmax	pmax		
	comp=Z,140nm,1.6s						
FRU				smax	smax		
	comp=N,135nm,1.5s						
ULHL	**Ulahol**	**6.89**	**31**	P	**Pn**	**18 29 17.8**	**+0.4**
	SNR=50						
CHMS	**Chumysh**	**7.04**	**20**	P	**Pn**	**18 29 19.3**	**0.0**
	SNR=135						
SMLA	**Simla**	**7.10**	**136**	*e*P	**Pn**	**18 29 19.8**	**-0.3**
SMLA				*e*S	**Sn**	**18 30 34.3**	**-4.9**
SMLA				IAML		18 30 40.5	
	comp=E,208nm,0.1s						
SMLA				IAML		18 30 41.1	
	comp=N,291nm,0.2s						
USP	**Ospenovka**	**7.22**	**18**	P	**Pn**	**18 29 21.4**	**-0.3**
	SNR=19						
TKM2	**Tokmak 2**	**7.23**	**25**	⇓P	**Pn**	**18 29 22.3**	**+0.3**
	comp=N,108nm,0.9s						
TKM2	**Tokmak 2**	**7.23**	**25**	P	**Pn**	**18 29 22.3**	**+0.3**
	SNR=173						
TKM2	**Tokmak 2**	**7.23**	**25**	PN	**Pn**	**18 29 22.3**	**+0.3**
TKM2				pmax	pmax		
	comp=Z,108nm,0.9s						
MDOK	**Medeo**	**7.98**	**31**	⇑P	**Pn**	**18 29 32.3**	**+0.2**
	comp=Z,29nm,0.8s						
DDI	**Dehra Dun**	**8.20**	**136**	*e*P	**Pn**	**18 29 34.4**	**-0.7**
DDI				*e*S	**Sn**	**18 31 00.8**	**-5.4**
NDI	**New Delhi**	**9.11**	**146**	*e*S	**Sn**	**18 31 22.0**	**-6.2**
PDGK	**Podgornoye**	**9.25**	**39**	P	**Pn**	**18 29 48.8**	**-0.5**
PDGK				pmax	pmax		
	comp=Z,59nm,0.9s						
GEYT	**Alibeck**	**10.76**	**282**	P	Pn	18 30 04.2	-5.5
	comp=Z,1.8nm,0.3s,baz=120,slow=8.8,SNR=3.6						
GEYT				S	Sn	18 31 55.4	-13
	comp=Z,3.3nm,0.3s,baz=220,slow=44,SNR=5.3						
GEYT				LR	LR	18 35 39.6	
	comp=Z,8.2nm,21.4s,baz=200,slow=45						
GYA0B	**ALIBECK ARRAY**	**10.76**	**282**	⇓P	Pn	18 30 03.7	-6.0
	comp=Z,5.9nm,0.4s						
GYA0B				⇓S	Sn	18 31 56.1	-12
	comp=Z,56nm,0.6s						
OTUK	**Ortayu**	**11.83**	**3**	⇓P	**Pn**	**18 30 20.8**	**-3.0**
	comp=Z,14nm,0.6s						
OTUK	**Ortayu**	**11.83**	**3**	P	**Pn**	**18 30 20.8**	**-3.0**
OTUK				pmax	pmax		
	comp=Z,14nm,0.6s						
PYUN	**Piuthan**	**12.79**	**127**	*e*S	Sn	18 32 47.3	-10
MAKZ	**Makanchi**	**13.01**	**34**	⇓P	**Pn**	**18 30 37.9**	**-1.3**
	comp=Z,38nm,1.0s						
DANN	**Dangsing**	**13.13**	**124**	*e*P	**Pn**	**18 30 38.6**	**-2.7**
	comp=Z,16nm,0.3s						
DANN				*e*S	Sn	18 32 54.9	-11
MK31	**Makanchi Array**	**13.14**	**35**	⇓P	**Pn**	**18 30 39.0**	**-1.9**
	comp=Z,33nm,1.2s,baz=201,slow=10,SNR=80						
MKAR	**Makanchi Array**	**13.14**	**35**	P	**Pn**	**18 30 39.9**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=221,slow=11,SNR=52						
MKAR	**Makanchi Array**	**13.14**	**35**	*e*P	**Pn**	**18 30 39.7**	**-1.3**
BHJ	**Bhuj**	**13.22**	**187**	*e*P	**Pn**	**18 30 39.5**	**-2.6**
KOLN	**Koldanda**	**13.41**	**127**	*e*P	**Pn**	**18 30 42.7**	**-2.1**
	comp=Z,12nm,0.3s						
GKN	**Gorkha**	**13.94**	**123**	*e*P	**Pn**	**18 30 48.7**	**-3.0**
	comp=Z,25nm,0.4s						
BHPL	**Bhopal**	**14.11**	**157**	*e*P	**Pn**	**18 30 55.0**	**+1.3**
DMN	**Daman**	**14.51**	**123**	*e*P	**Pn**	**18 30 56.6**	**-2.5**
	comp=Z,19nm,0.4s						
KKN	**Kakani**	**14.52**	**122**	*e*P	**Pn**	**18 30 56.4**	**-2.6**
PKIN	**Phulchoki**	**14.73**	**123**	*e*P	**Pn**	**18 31 00.0**	**-1.8**
	comp=Z,13nm,0.3s						
GUN	**Gumba**	**14.85**	**121**	*e*P	**Pn**	**18 31 00.0**	**-3.4**
KURBB	**Kurchatov Arra**	**15.08**	**18**	P	**Pn**	**18 31 02.0**	**-3.7**
	comp=Z,0.2nm,0.3s,baz=201,slow=11,SNR=24						
KURBB	**Kurchatov Arra**	**15.08**	**18**	⇑P	**Pn**	**18 31 02.6**	**-3.2**
	comp=Z,20nm,0.7s						
KURK	**Kurchatov**	**15.19**	**18**	⇑P	**Pn**	**18 31 03.0**	**-4.1**
	comp=Z,12nm,0.6s						
KURK	**Kurchatov**	**15.19**	**18**	P	**Pn**	**18 31 02.0**	**-5.0**
KURK	**Kurchatov**	**15.19**	**18**	⇑*e*P	**Pn**	**18 31 04.8**	**-2.3**
JIRN	**Jiri**	**15.22**	**121**	*e*P	**Pn**	**18 31 05.4**	**-2.7**
	comp=Z,45nm,0.3s						
AB31	**Akbulak array**	**15.34**	**330**	P	**Pn**	**18 31 05.2**	**-3.8**
	comp=Z,3.1nm,0.5s,baz=139,slow=12,SNR=71						
AB31				⇓S	Sn	18 33 43.0	-16
	comp=Z,6.2nm,0.5s,baz=157,slow=23,SNR=9.3						
AB31	**Akbulak array**	**15.34**	**330**	*e*P	**Pn**	**18 31 05.2**	**-3.8**
AB31				pmax	pmax		
	comp=Z,3.0nm,0.5s						
RAMN	**Ramite**	**15.95**	**122**	*e*P	**Pn**	**18 31 15.4**	**-1.7**
ODAN	**Odare**	**16.55**	**121**	*e*P	**Pn**	**18 31 22.1**	**-2.4**
	comp=Z,19nm,0.6s						
NGP	**Nagpur**	**16.59**	**154**	*e*P	**P**	**18 31 28.1**	**+2.9**
BVA0	**Borovoye Array**	**16.62**	**358**	⇓P	**Pn**	**18 31 22.3**	**-2.5**
	comp=Z,4.5nm,0.6s,baz=165,slow=11,SNR=6.3						
BVA0	**Borovoye Array**	**16.62**	**358**	P	**Pn**	**18 31 22.3**	**-2.5**
BVA0				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BVAR	**Borovoye Array**	**16.62**	**358**	P	**Pn**	**18 31 23.0**	**-1.8**
	comp=Z,0.7nm,0.3s,baz=169,slow=14,SNR=17						
BRVK	**Borovoye**	**16.66**	**358**	⇑P	**Pn**	**18 31 22.4**	**-2.9**
	comp=Z,5.2nm,0.6s						
BRVK	**Borovoye**	**16.66**	**358**	*e*P	**Pn**	**18 31 24.9**	**-0.4**
	comp=Z,17nm,0.6s						
BRVK	**Borovoye**	**16.66**	**358**	⇑*e*P	**Pn**	**18 31 22.9**	**-2.4**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
AKTO	**Aktyubinsk**	**17.04**	**329**	P	**P**	**18 31 28.2**	**-1.7**
	comp=Z,1.0nm,0.3s,baz=135,slow=12,SNR=17						
AKTO				S	Sn	18 34 26.0	-13
	comp=Z,0.5nm,0.3s,baz=132,slow=18,SNR=6.0						
AKTO	**Aktyubinsk**	**17.04**	**329**	⇑P	**P**	**18 31 28.1**	**-1.8**
	comp=Z,22nm,0.8s						
AKTO				⇓S	Sn	18 34 24.1	-15
	comp=Z,9.1nm,0.7s						
DGZ	**Jazzator, Alta**	**17.62**	**36**	*e*P	**P**	**18 31 36.0**	**-0.5**
BOK	**Bokaro**	**17.69**	**131**	*e*P	**Pn**	**18 31 38.2**	**+0.2**
AKT	**Akhty**	**19.12**	**293**	*e*P	**Pn**	**18 31 54.7**	**-0.3**
AKT				*e*S	**Sn**	**18 35 27.6**	**-2.1**
AKT				pmax	pmax		
	comp=Z,9.0nm,0.6s						
TURI	**Tura**	**19.43**	**119**	*e*P	**P**	**18 31 56.7**	**+0.3**
ZALV	**Zalesovo Beam**	**19.83**	**24**	P	**P**	**18 32 00.7**	**+0.3**
	comp=Z,34nm,0.5s,baz=223,slow=11,SNR=166						
NVS	**Novosibirsk**	**20.12**	**20**	⇑*i* P	**P**	**18 32 04.0**	**+0.5**
NVS				*e*S	**S**	**18 35 43.2**	**+0.1**
NVS				pmax	pmax		
	comp=N,20nm,0.5s						
NVS				pmax	pmax		
	comp=E,9.0nm,0.5s						
NVS				pmax	pmax		
	comp=Z,27nm,0.5s						
NVS				smax	smax		
	comp=N,8.0nm,1.2s						
NVS				smax	smax		
	comp=E,17nm,1.9s						
SHL	**Shillong**	**20.53**	**116**	*e*P	**P**	**18 32 06.0**	**-2.4**
TEZP	**TEZPUR**	**20.61**	**112**	*e*P	Pn	18 32 10.6	-1.7
GROC	**Groznyy**	**20.80**	**297**	*e*P	**P**	**18 32 10.1**	**-0.9**
GROC				*e**PP	**pP**	**18 32 31.9**	**-0.3**
GROC				*e**SP	**sP**	**18 32 47.6**	**+1.1**
GROC				*e*S	**S**	**18 35 55.9**	**-0.8**
GROC				pmax	pmax		
	comp=Z,31nm,0.7s						
GNI	**Garni**	**21.28**	**288**	P	**P**	**18 32 18.3**	**+2.1**
	comp=Z,23nm,0.9s,baz=12,slow=3.7,SNR=11						
GNI	**Garni**	**21.28**	**288**	*c i*P	**P**	**18 32 18.8**	**+2.5**
GNI				pmax	pmax		
	comp=Z,103nm,1.0s						
JORH	**JORHAT**	**21.63**	**110**	*e*P	**P**	**18 32 21.2**	**+1.2**
SVE	**Sverdlovsk**	**21.67**	**344**	*e*P	**P**	**18 32 20.4**	**+0.3**
SVE				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ARU	**Arti**	**21.83**	**341**	P	**P**	**18 32 22.5**	**+0.8**
	comp=Z,9.1nm,0.7s,baz=148,slow=9.1,SNR=13						
ARU	**Arti**	**21.83**	**341**	*e*P	**P**	**18 32 21.4**	**-0.4**
	comp=Z,9.6nm,0.8s						
ARU	**Arti**	**21.83**	**341**	*d i*P	**P**	**18 32 17.1**	**-4.7**
ARU						18 32 48.1	
ARU				S	**S**	**18 36 07.3**	**-8.6**
ARU				SS	**SnSn**	**18 36 48.5**	**-3.8**
ARU				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MOKO	**MOKOCHONG**	**22.06**	**111**	*e*P	**P**	**18 32 26.1**	**+1.5**
KOHI	**KOHIMA**	**22.08**	**113**	*e*P	**P**	**18 32 28.1**	**+3.2**
ZEI	**Tsey**	**22.11**	**295**	*e*P	**P**	**18 32 26.7**	**+1.6**
NCK	**Nalchik**	**22.43**	**297**	⇑*e*P	**P**	**18 32 30.7**	**+2.5**
NCK				pmax	pmax		
	comp=Z,17nm,0.6s						
GTA	**Gaotai**	**22.52**	**74**	⇑P	**P**	**18 32 32.5**	**+3.2**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KBZ	**Khabaz**	**22.97**	**297**	P	**P**	**18 32 34.4**	**+1.0**
	comp=Z,2.1nm,0.7s,baz=129,slow=8.7,SNR=5.5						
KBZ				S	Sn	18 36 51.0	-10
	comp=Z,1.6nm,0.8s,baz=282,slow=19,SNR=2.6						
NEY	**Neytrino**	**23.03**	**296**	⇓*e*P	**P**	**18 32 37.4**	**+3.2**
NEY				pmax	pmax		
	comp=Z,3.0nm,1.4s						
KIV	**Kislovodsk**	**23.16**	**298**	*e*P	**P**	**18 32 36.6**	**+1.3**
KIV				*e*S	**S**	**18 36 39.7**	**+1.6**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SAIH	**SAIHA**	**23.25**	**121**	*e*P	**P**	**18 32 36.9**	**+0.5**
KRAR	**Krasnoyarsk**	**24.38**	**30**	⇑*e*P	**P**	**18 32 41.5**	**-4.6**
RAYN	**Ar Rayn**	**25.82**	**247**	*e*P	**P**	**18 32 59.1**	**-0.5**
	comp=Z,5.8nm,1.0s						
MOY	**Mondy**	**25.89**	**45**	*e*P	**P**	**18 33 03.8**	**+3.7**
SONM	**Songino Array**	**28.07**	**55**	P	**P**	**18 33 22.5**	**+2.9**
	comp=Z,0.4nm,0.4s,baz=264,slow=7.8,SNR=4.2						
BRTR	**Keskin Array B**	**29.82**	**288**	P	**P**	**18 33 35.8**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=104,slow=9.5,SNR=5.2						
BRTR	**Keskin Array B**	**29.82**	**288**	*e*P	**P**	**18 33 38.3**	**+3.1**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
PRGR	**Permogore**	**30.00**	**335**	*e*P	**P**	**18 33 35.3**	**-1.0**
PRGR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
OBN	**Obninsk**	**30.24**	**319**	*e*P	**P**	**18 33 39.0**	**+0.5**
OBN				*e*		18 34 46.8	
AKASG	**Malin Array Be**	**33.29**	**309**	P	**P**	**18 34 06.4**	**+1.1**
	comp=Z,2.1nm,0.5s,baz=80,slow=7.2,SNR=7.9						
AKASG	**Malin Array Be**	**33.29**	**309**	*e*P	**P**	**18 34 07.4**	**+2.1**
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KIEV	**Kiev**	**33.30**	**309**	*e*P	**P**	**18 34 06.0**	**+0.6**
	comp=Z,3.2nm,0.6s						
KIEV	**Kiev**	**33.30**	**309**	⇑*i*P	**P**	**18 34 06.3**	**+0.9**
KIEV				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ISR	**Istrita**	**34.74**	**299**	P	**P**	**18 34 21.5**	**+3.5**
ISR				pmax	pmax		
	comp=Z,23nm,1.4s						
MLR	**Muntele Rosu**	**35.15**	**299**	P	**P**	**18 34 23.9**	**+2.3**
	comp=Z,2.8nm,0.9s,baz=90,slow=6.1,SNR=16						
VOIR		**35.78**	**299**	P	**P**	**18 34 29.1**	**+2.2**
VOIR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
JOF	**Joensuu**	**36.12**	**330**	P	**P**	**18 34 30.6**	**+1.1**
JOF				pmax	pmax		
	comp=Z,13nm,0.5s						
DRGR		**37.36**	**302**	P	**P**	**18 34 41.4**	**+1.1**
DRGR				pmax	pmax		
	comp=Z,16nm,1.1s						
FINES	**FINESS Array B**	**37.76**	**326**	P	**P**	**18 34 44.7**	**+1.3**
	comp=Z,2.3nm,0.4s,baz=117,slow=9.1,SNR=21						
BZS	**Buzias**	**38.18**	**300**	P	**P**	**18 34 49.4**	**+2.3**
BZS				pmax	pmax		
	comp=Z,3.0nm,1.3s						
MORC	**Moravsky Berou**	**40.71**	**307**	P	**P**	**18 35 10.0**	**+1.8**
MORC				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ARCES	**ARCESS Array B**	**41.36**	**338**	P	**P**	**18 35 14.7**	**+1.5**
	comp=Z,2.3nm,0.5s,baz=113,slow=8.2,SNR=19						
BRG	**Berggiesshubel**	**42.97**	**308**	*e*P	**P**	**18 35 28.9**	**+2.5**
	comp=Z,4.3nm,0.8s						
BRG	**Berggiesshubel**	**42.97**	**308**	*e*P	**P**	**18 35 28.9**	**+2.5**
BRG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GERES	**GERESS Array B**	**43.28**	**305**	P	**P**	**18 35 30.2**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=93,slow=8.5,SNR=4.8						
GERES	**GERESS Array B**	**43.28**	**305**	*e*P	**P**	**18 35 31.5**	**+2.4**
KHC	**Kasperske Hory**	**43.34**	**306**	P	**P**	**18 35 31.2**	**+1.7**
KHC				pmax	pmax		
	comp=Z,1.0nm,1.1s						
HFS	**Hagfors**	**43.36**	**322**	P	**P**	**18 35 30.4**	**+0.9**
	comp=Z,3.1nm,0.4s,baz=96,slow=10,SNR=15						
CLL	**Collm**	**43.53**	**309**	*e*P	**P**	**18 35 33.0**	**+2.0**
	comp=Z,4.0nm,0.9s						
CLL	**Collm**	**43.53**	**309**	*e*P	**P**	**18 35 33.0**	**+2.0**
CLL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
YAK	**Yakutsk**	**43.81**	**35**	⇑*e*P	**P**	**18 35 33.9**	**+0.9**
YAK				pmax	pmax		
	comp=Z,8.0nm,0.4s						
NB2	**NORSAR Subarra**	**44.67**	**323**	P	**P**	**18 35 40.5**	**+0.6**
	comp=Z,1.4nm,0.4s,baz=98,slow=7.9						
NB2	**NORSAR Subarra**	**44.67**	**323**	P	**P**	**18 35 38.9**	**-1.0**
SPITS	**Spitsbergen Ar**	**47.66**	**347**	P	**P**	**18 36 05.6**	**+2.6**
	comp=Z,4.7nm,0.8s,baz=115,slow=9.7,SNR=3.4						
BILL	**Bilibino**	**58.51**	**26**	*e*P	**P**	**18 37 25.3**	**+2.6**
BILL				*e*		18 38 14.7	
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
SUMG	**Summit**	**61.26**	**

VIVF	**Saint-Julien-I**	**1.03**	**249**	*e*Pn	Pg	18 33 36.2	+0.3
VIVF				*e*Sg	Sg	18 33 48.9	-0.4
	4.6nm,0.4s						
VIVF	**Saint-Julien-I**	**1.03**	**249**	*e*Pg	Pg	18 33 35.4	-0.5
VIVF	**Saint-Julien-I**	**1.03**	**249**	*e*Pn	Pg	18 33 36.2	+0.3
VIVF				*e*Sg	Sg	18 33 48.9	-0.4
	2.3nm,0.4s						
CABF	**La Chapelle**	**1.37**	**2**	*e*Pn	Pn	18 33 40.5	-1.9
CABF	**La Chapelle**	**1.37**	**2**	*e*Pg	Pn	18 33 41.8	-0.6
CABF				*e*Sn	Sg	18 33 58.2	-2.0
	1.5nm,0.3s						
CABF	**La Chapelle**	**1.37**	**2**	*e*Pn	Pn	18 33 40.5	-1.9
CABF	**La Chapelle**	**1.37**	**2**	*e*Pg	Pn	18 33 41.8	-0.6
CABF				*e*Sn	Sg	18 33 58.2	-2.0
	0.8nm,0.3s						
LASF	**Ste Croix**	**1.94**	**234**	*e*Pn	Pn	18 33 48.4	-1.7
LASF	**Ste Croix**	**1.94**	**234**	*e*Pn	Pn	18 33 48.4	-1.7
SMF	**Signal de Mont**	**2.07**	**313**	*e*Pn	Pn	18 33 49.9	-2.0
SMF				*e*Sn	Sn	18 34 15.2	-3.2
	1.4nm,0.2s						
SMF	**Signal de Mont**	**2.07**	**313**	*e*Pn	Pn	18 33 49.9	-2.0
SMF				*e*Sn	Sn	18 34 15.2	-3.2
	0.7nm,0.2s						
AVF	**Avril sur Loir**	**2.42**	**311**	*e*Pn	Pn	18 33 55.0	-1.7
AVF				*e*Sn	Sn	18 34 22.6	-4.4
	2.7nm,0.3s						
AVF	**Avril sur Loir**	**2.42**	**311**	*e*Pn	Pn	18 33 55.0	-1.7
AVF				*e*Sn	Sn	18 34 22.6	-4.4
	1.4nm,0.3s						

*ISCJB **27** 18:44:26.6±0.9, 42°.34N±0°.06×8°.64E±0°.05, h10km, Error ellipse: s-maj=8.2km s-min=5.3km az=174.2*
*LDG **27** 18:44:26.4±0.2, 42°.26N×8°.82E, h2km, Md2.6/2, Ml2.8/13, Error ellipse: s-maj=3.3km s-min=1.9km az=162.0*
*CSEM **27** 18:44:27.0±0.3, 42°.39N×8°.63E, h2km, ML2.7/12, Error ellipse: s-maj=6.3km s-min=3.6km az=174.0*
*STR **27** 18:44:31.3±1.3, 42°.N±6°.×°.±1°.2, h5km, M3.1/8, mb3.7/1, MLv2.8/8*

ISC 27 18:44:26.3±1.3, 42°.36N±0°.07×8°.60E±0°.04, h10km, n46, σ1°.51/73, Corsica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGF	**Pioggiola**	**0.35**	**57**	*e*Pg	**Pg**	**18 44 32.6**	**-0.7**
PGF				*e*Sg	**Sg**	**18 44 37.3**	**-0.7**
	371nm,0.3s						
PGF	**Pioggiola**	**0.35**	**57**	*e*Pg	**Pg**	**18 44 32.6**	**-0.7**
PGF				*e*Sg	**Sg**	**18 44 37.3**	**-0.7**
	186nm,0.3s						
REVF	**Revere**	**1.65**	**327**	S	**Sg**	**18 45 18.2**	**-1.1**
REVF	**Revere**	**1.65**	**327**	S	**Sg**	**18 45 18.2**	**-1.1**
SBF	**Sospel**	**1.73**	**331**	*e*Pn	**Pb**	**18 44 57.9**	**-0.3**
SBF				*e*Sn	**Sg**	**18 45 21.3**	**-0.6**
	94nm,0.3s						
SBF	**Sospel**	**1.73**	**331**	*e*Pn	**Pb**	**18 44 57.9**	**-0.3**
SBF				*e*Sn	**Sg**	**18 45 21.3**	**-0.6**
	47nm,0.3s						
LUCF	**Luceram**	**1.79**	**330**	P	**Pb**	**18 44 58.5**	**-0.7**
LUCF	**Luceram**	**1.79**	**330**	P	**Pb**	**18 44 58.5**	**-0.7**
LUCF				S	**Sg**	**18 45 22.3**	**-1.4**
LMR	**La Mourre**	**1.82**	**303**	*e*Pn	**Pb**	**18 44 59.3**	**-0.4**
LMR				*e*Sn	**Sb**	**18 45 22.7**	**+0.2**
LMR	**La Mourre**	**1.82**	**303**	*e*Pn	**Pb**	**18 44 59.3**	**-0.4**
LMR				*e*Sn	**Sb**	**18 45 22.7**	**+0.2**
CALF	**Calern**	**1.86**	**319**	P	**Pb**	**18 44 59.9**	**-0.5**
CALF	**Calern**	**1.86**	**319**	P	**Pb**	**18 44 59.9**	**-0.5**
MVIF	**Mont Vial**	**1.87**	**326**	P	**Pb**	**18 45 00.2**	**-0.4**
MVIF	**Mont Vial**	**1.87**	**326**	P	**Pb**	**18 45 00.2**	**-0.4**
FRF	**La Foret Royal**	**1.87**	**311**	*e*Pn	**Pb**	**18 44 59.9**	**-0.7**
FRF				*e*Sn	**Sb**	**18 45 24.6**	**+0.6**
	11nm,0.2s						
FRF	**La Foret Royal**	**1.87**	**311**	*e*Pn	**Pb**	**18 44 59.9**	**-0.7**
FRF				*e*Sn	**Sb**	**18 45 24.6**	**+0.6**
	5.3nm,0.2s						
ISO	**Isola**	**2.15**	**329**	P	**Pb**	**18 45 04.2**	**-1.1**
ISO	**Isola**	**2.15**	**329**	P	**Pb**	**18 45 04.2**	**-1.1**
OGDI	**Digne**	**2.42**	**317**	P	**Pb**	**18 45 09.5**	**-0.6**
SURF	**Saint Ours**	**2.49**	**329**	P	**Pb**	**18 45 09.4**	**-1.8**
SURF	**Saint Ours**	**2.49**	**329**	P	**Pb**	**18 45 09.4**	**-1.8**
MBDF	**Montbardon**	**2.71**	**331**	*e*P	**Pb**	**18 45 14.0**	**-1.0**
MBDF				*e*Sn	**Sn**	**18 45 44.8**	**+1.7**
	41nm,0.5s						
MBDF	**Montbardon**	**2.71**	**331**	*e*P	**Pb**	**18 45 14.0**	**-1.0**
MBDF				*e*Sn	**Sn**	**18 45 44.8**	**+1.7**
	20nm,0.5s						
SMRF	**Simiane la Rot**	**2.74**	**307**	*e*Pn	**Pb**	**18 45 12.7**	**-2.7**
SMRF				*e*Sn	**Sb**	**18 45 45.9**	**-3.2**
	3.3nm,0.2s						
SMRF	**Simiane la Rot**	**2.74**	**307**	*e*Pn	**Pb**	**18 45 12.7**	**-2.7**
SMRF				*e*Sn	**Sb**	**18 45 45.9**	**-3.2**
	1.6nm,0.2s						
RUSF	**Rustrel**	**2.77**	**306**	P	**Pb**	**18 45 13.4**	**-2.6**
RUSF	**Rustrel**	**2.77**	**306**	P	**Pb**	**18 45 13.4**	**-2.6**
ORIF	**Oris-en-Rattie**	**3.23**	**323**	*e*Pn	**Pn**	**18 45 18.9**	**+1.7**
ORIF				*e*Sn	**Sn**	**18 45 57.6**	**+1.9**
	4.3nm,0.4s						
ORIF	**Oris-en-Rattie**	**3.23**	**323**	*e*Pn	**Pn**	**18 45 18.9**	**+1.7**
ORIF				*e*Sn	**Sn**	**18 45 57.6**	**+1.9**
	2.2nm,0.4s						
LPG	**La Plagne**	**3.41**	**338**	*e*Pn	**Pn**	**18 45 21.5**	**+1.7**
LPG				*e*Sn	**Sn**	**18 46 01.6**	**+1.2**
	2.5nm,0.4s						
LPG	**La Plagne**	**3.41**	**338**	*e*Pn	**Pn**	**18 45 21.5**	**+1.7**
LPG				*e*Sn	**Sn**	**18 46 01.6**	**+1.2**
	1.2nm,0.4s						
LPL	**La Plagne**	**3.43**	**338**	*e*Pn	**Pn**	**18 45 21.4**	**+1.3**
LPL				*e*Sn	**Sn**	**18 46 02.0**	**+1.1**
	3.4nm,0.4s						
LPL	**La Plagne**	**3.43**	**338**	*e*Pn	**Pn**	**18 45 21.4**	**+1.3**
LPL				*e*Sn	**Sn**	**18 46 02.0**	**+1.1**
	1.7nm,0.4s						
VIVF	**Saint-Julien-I**	**3.79**	**313**	*e*Pn	**Pn**	**18 45 26.8**	**+2.0**
VIVF				*e*Sn	**Sn**	**18 46 11.3**	**+1.9**
	0.8nm,0.2s						
VIVF	**Saint-Julien-I**	**3.79**	**313**	*e*Pn	**Pn**	**18 45 26.8**	**+2.0**
VIVF				*e*Sn	**Sn**	**18 46 11.3**	**+1.9**
	0.4nm,0.2s						
TRBF	**Trabuc cave**	**3.81**	**299**	P	**Pn**	**18 45 26.9**	**+1.8**
TRBF	**Trabuc cave**	**3.81**	**299**	P	**Pn**	**18 45 26.9**	**+1.8**
LASF	**Ste Croix**	**3.87**	**298**	*e*Pn	**Pn**	**18 45 27.3**	**+1.4**
LASF				*e*Sn	**Sn**	**18 46 13.1**	**+1.8**
	8.0nm,0.3s						
LASF	**Ste Croix**	**3.87**	**298**	*e*Pn	**Pn**	**18 45 27.3**	**+1.4**
LASF				*e*Sn	**Sn**	**18 46 13.1**	**+1.8**
	4.0nm,0.3s						
MTLF	**Montolieu**	**4.79**	**284**	*e*Pn	**Pn**	**18 45 40.0**	**+1.4**
MTLF				*e*Sn	**Sn**	**18 46 34.8**	**+0.7**
	1.4nm,0.2s						
MTLF	**Montolieu**	**4.79**	**284**	*e*Pn	**Pn**	**18 45 40.1**	**+1.6**
MTLF	**Montolieu**	**4.79**	**284**	*e*Pn	**Pn**	**18 45 40.0**	**+1.4**
MTLF				*e*Sn	**Sn**	**18 46 34.8**	**+0.7**
	0.7nm,0.2s						
CAF	**Calviac**	**5.39**	**301**	*e*Pn	**Pn**	**18 45 48.8**	**+2.0**
CAF				*e*Sn	**Sn**	**18 46 49.2**	**+0.3**
	1.7nm,0.2s						
CAF	**Calviac**	**5.39**	**301**	*e*Pn	**Pn**	**18 45 48.8**	**+2.0**
CAF				*e*Sn	**Sn**	**18 46 49.2**	**+0.3**
	0.9nm,0.2s						
MLS	**Moulis**	**5.57**	**279**	P	**Pn**	**18 45 51.1**	**+1.9**
MLS	**Moulis**	**5.57**	**279**	P	**Pn**	**18 45 51.1**	**+1.9**

*CNRM **27** 18:55:02.2, 27°.62N×18°.14W, h20km*
*INMG **27** 18:55:08.5±0.9, 27°.60N×18°.23W, h10km, ML3.3, Error ellipse: s-maj=5.2km s-min=3.9km az=59.0*

CSEM 27 18:55:06.6±0.4, 27°.84N×17°.77W, h10km, ML4.0, Error ellipse: s-maj=20.9km s-min=6.5km az=129.0, Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTIG	**El Hierro**	**0.15**	**249**	P	Pg	18 55 13.3	+3.4
	2μm,0.1s,SNR=18						
CTIG				S	Sg	18 55 16.8	+4.6
	7μm,0.2s,SNR=7.9						
CHIE	**El Hierro**	**0.20**	**236**	P	Pg	18 55 12.8	+1.9
	78nm,0.1s,SNR=18						
CCUM	**Cumbre, El Hie**	**0.25**	**248**	P	Pg	18 55 12.3	+0.6
	7μm,0.1s,SNR=18						
CCUM				S	Sg	18 55 15.0	-0.2
	16μm,0.2s,SNR=7.9						
CMCL	**Mercadel, El H**	**0.26**	**240**	P	Pg	18 55 12.5	+0.6
	14μm,0.1s,SNR=18						
CMCL				S	Sg	18 55 15.1	-0.3
	16μm,0.1s,SNR=7.9						
CTAN	**El Hierro**	**0.27**	**251**	P	Pg	18 55 12.2	+0.2
	10μm,0.1s,SNR=18						
CTAN				S	Sg	18 55 15.1	-0.6
	16μm,0.1s,SNR=7.9						
CRST	**La Restinga, E**	**0.27**	**224**	P	Pg	18 55 12.5	+0.4
	11μm,0.2s,SNR=18						
CRST				S	Sg	18 55 15.3	-0.6
	51μm,0.2s,SNR=7.9						
CJUL	**El Julon, El H**	**0.30**	**248**	P	Pg	18 55 12.3	-0.4
	11μm,0.1s,SNR=18						
CJUL				S	Sg	18 55 14.9	-1.8
	31μm,0.1s,SNR=7.9						
FUL	**Funchal**	**4.85**	**9**	*e*Pn	Pn	18 56 19.8	+0.2
FUL				*e*Sn	Sn	18 57 13.1	-2.8
PMAR	**Madeira**	**4.92**	**8**	*e*Pn	Pn	18 56 20.4	-0.4
PMAR				*e*Sn	Sn	18 57 14.4	-3.5
PMAR				A	A	18 57 23.0	
	48nm,0.2s						
PMAR	**Madeira**	**4.92**	**8**	P	Pn	18 56 20.1	-0.7
PMAR	**Madeira**	**4.92**	**8**	*e*Pn	Pn	18 56 20.4	-0.4
PMOZ	**Porto Moniz, M**	**4.99**	**6**	*e*Pn	Pn	18 56 21.4	-0.3
PMOZ				*e*Sn	Sn	18 57 16.0	-3.5
PMOZ				A	A	18 57 26.8	
	69nm,0.4s						
PMOZ	**Porto Moniz, M**	**4.99**	**6**	*e*Pn	Pn	18 56 21.4	-0.3
PMOZ	**Porto Moniz, M**	**4.99**	**6**	P	Pn	18 56 21.8	+0.1
PMPS	**Porto Santo**	**5.34**	**13**	*e*Pn	Pn	18 56 27.3	+0.9
PMPS				*e*Sn	Sn	18 57 26.3	-1.7
PMPS				A	A	18 57 31.4	
	18nm,0.7s						
PMPS	**Porto Santo**	**5.34**	**13**	*e*Pn	Pn	18 56 27.3	+0.9
OUK	**Oukaimeden**	**9.25**	**66**	P	Pn	18 57 19.0	-1.4

*GUC **27** 18:59:46.1±0.6, 32°.39S×71°.24W, h20km±4km, ML3.0*
*SJA **27** 18:59:49.9±1.0, 32°.68S×71°.34W, h20km, ML3.0, MW3.5*

ISC 27 18:59:39.3±2.2, 32°.54S±0°.06×71°.97W±0°.09, h23km±17km, n20, σ1°.37/23, 1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROC1	**El Roble**	**0.91**	**119**	*e*P	**Pn**	**18 59 58.3**	**+1.3**
ROCH	**El Roble**	**0.91**	**118**	*e*P	**Pn**	**18 59 58.1**	**+1.2**
ROCH				*e*S	**Sb**	**19 00 07.3**	**-1.0**
ROCH				IAML		19 00 09.7	
	comp=E,1μm,0.6s						
PEL	**Peldehue**	**1.23**	**120**	*e*P	**Pb**	**19 00 02.9**	**+1.0**
PEL				*e*S	**Sn**	**19 00 15.2**	**-2.0**
PEL				IAML		19 00 17.8	
	comp=N,2μm,0.5s						
CLCH	**Cerro Calan**	**1.47**	**126**	*e*P	**Pb**	**19 00 07.2**	**+1.1**
CLCH				*e*S	**Sn**	**19 00 23.7**	**+0.5**
CLCH				IAML		19 00 25.8	
	comp=E,633nm,0.5s						
FCH	**Farellones**	**1.61**	**120**	⇓*i*P	**Pb**	**19 00 09.0**	**+0.4**
FCH				*e*S	**Sn**	**19 00 26.1**	**-0.8**
FCH				IAML		19 00 27.1	
	comp=E,494nm,0.2s						
LMEL	**Las Melosas**	**1.97**	**132**	*e*P	**Pb**	**19 00 15.2**	**+0.6**
AUSP	**Uspallata**	**2.20**	**82**	*e*P	**Pb**	**19 00 20.0**	**+1.4**
AUSP				*e*S	**Sb**	**19 00 44.6**	**-1.0**
RTLS	**Leoncito**	**2.38**	**73**	*e*P	**Pb**	**19 00 23.5**	**+1.9**
RTLS				IAML		19 00 59.0	
	comp=Z,67nm,0.3s						
GO05	**HualaæØ**	**2.46**	**179**	*e*P	**Pb**	**19 00 22.8**	**-0.1**
ARCO	**CERRO ARCO**	**2.58**	**98**	*e*P	**Pb**	**19 00 26.1**	**+1.2**
ARCO				IAML		19 00 36.7	
	comp=Z,82nm,0.4s						
ASAL	**Salagasta**	**2.64**	**92**	*e*P	**Pb**	**19 00 27.3**	**+1.3**
AAGR	**Agrelo**	**2.70**	**102**	*e*P	**Pb**	**19 00 28.5**	**+1.6**
RTCV	**Cerro Valdivia**	**2.98**	**78**	*e*P	**Pb**	**19 00 31.9**	**+0.2**
AMOG	**MOGNA**	**3.36**	**63**	*e*P	**Pb**	**19 00 37.0**	**-1.2**
ACDV	**Cuesta del Vie**	**3.39**	**47**	*e*P	**Pb**	**19 00 38.9**	**+0.1**
ACDV				IAML		19 01 27.6	
	comp=Z,34nm,0.7s						
RFA	**San Rafael**	**3.67**	**128**	*e*P	**Pb**	**19 00 41.8**	**-1.7**
RFA				IAML		19 00 56.2	
	comp=Z,12nm,0.6s						
ACAN	**Cantantal**	**4.05**	**88**	*e*P	**Pb**	**19 00 47.2**	**-2.7**
AGUA	**GUANDACOL**	**4.26**	**45**	*e*P	**Pb**	**19 00 53.4**	**-0.2**
VCA	**Vinchina**	**4.99**	**41**	IAML		19 02 15.2	
	comp=Z,54nm,0.4s						
APLL	**PUNTA DE LOS L**	**5.11**	**67**	IAML		19 02 05.1	
	comp=Z,15nm,0.5s						

IGQ 27 19:03:14.5±1.5, 4°.S±13°.×8°.0W±2°.6, h20km, MLv4.1/3, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COHC	**Cochancay**	**2.14**	**33**	P	Pn	19 03 48.4	-0.7
COHC				S	Sn	19 04 16.0	+0.9
MILO	**Milagro-Astudi**	**2.16**	**24**	P	Pn	19 03 50.9	+1.5
MILO				S	Sb	19 04 18.4	-0.9
BMAS	**Trigal station**	**3.36**	**35**	P	Pn	19 04 06.4	0.0
ARRY	**Arrayan**	**3.38**	**36**	P	Pn	19 04 06.2	-0.2

MAN 27 19:25:57.4, 17°.21N×120°.59E, h81km, mb4.7, ML3.6, MS3.5, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APYP	**Conner**	**0.90**	**44**	*e*P	Pn	19 26 15.8	+0.4
APYP				*e*S	Sn	19 26 30.4	+1.7
BOLP	**Bolinao**	**1.05**	**218**	*e*P	Pn	19 26 17.8	+0.6
BOLP				*e*S	Sn	19 26 33.8	+1.9
CAUP	**Cauayan**	**1.21**	**103**	*e*P	Pn	19 26 20.0	+1.0
CVP	**Callao Caves**	**1.27**	**67**	*e*P	Pn	19 26 19.8	-0.1
CVP				*e*S	Sn	19 26 37.2	+0.5
BALP	**Baler**	**1.74**	**147**	*e*P	Pn	19 26 26.7	+0.7
BALP				*e*S	Sn	19 26 48.3	+0.7

*ISCJB **27** 19:35:02.8±0.9, 34°.99S±0°.05×71°.0W±0°.1, h113km±12km, Error ellipse: s-maj=15.6km s-min=6.3km az=25.9*
*GUC **27** 19:35:03.0±0.4, 35°.04S×70°.95W, h108km±4km, ML3.5*
*SJA **27** 19:35:03.2±1.2, 34°.96S×70°.91W, h91km±19km, ML3.0, MW3.3*

ISC 27 19:35:04.5±1.8, 34°.98S±0°.06×70°.95W±0°.08, h95km±20km, n21, σ0°.65/27, 1C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO05	**HualaæØ**	**0.81**	**267**	*e*P	**Pn**	**19 35 22.1**	**-0.5**
GO05				*e*S	**Sn**	**19 35 36.0**	**-0.1**
GO05	**HualaæØ**	**0.81**	**267**	⇑*i*P	**Pn**	**19 35 22.1**	**-0.5**
GO05				*e*S	**Sn**	**19 35 36.0**	**-0.1**
GO05				IAML		19 35 40.8	
	comp=E,993nm,0.3s						
LMEL	**Las Melosas**	**1.28**	**29**	⇓*i*P	**Pn**	**19 35 27.9**	**-0.1**
LMEL				*e*S	**Sn**	**19 35 46.7**	**+0.9**
LMEL				IAML		19 35 49.7	
	comp=N,965nm,0.0s						
CLCH	**Cerro Calan**	**1.61**	**12**	⇓*i*P	**Pn**	**19 35 31.8**	**-0.3**
CLCH				*e*S	**Sn**	**19 35 53.4**	**+0.5**
CLCH				IAML		19 35 56.4	
	comp=N,731nm,0.5s						
FCH	**Farellones**	**1.73**	**19**	*e*P	**Pn**	**19 35 33.4**	**-0.4**
FCH				*e*S	**Sn**	**19 35 56.6**	**+0.6**
FCH				IAML		19 35 58.9	
	comp=E,547nm,0.1s						
PEL	**Peldehue**	**1.84**	**7**	*e*P	**Pn**	**19 35 34.4**	**-0.6**
PEL				*e*S	**Sn**	**19 35 58.4**	**+0.4**
CCHI	**Chillan**	**1.86**	**209**	*e*P	**Pn**	**19 35 35.6**	**+0.5**
CCHI				*e*S	**Sn**	**19 35 58.7**	**+0.3**
ROC1	**El Roble**	**2.00**	**358**	*e*P	**Pn**	**19 35 36.8**	**-0.3**
ROCH	**El Roble**	**2.00**	**358**	*e*P	**Pn**	**19 35 36.7**	**-0.4**
ROCH				*e*S	**Sn**	**19 36 02.9**	**+0.9**
RFA	**San Rafael**	**2.05**	**85**	*e*P	**Pn**	**19 35 37.0**	**-0.6**
AAGR	**Agrelo**	**2.58**	**44**	*e*P	**Pn**	**19 35 44.4**	**-0.3**
ARCO	**CERRO ARCO**	**2.71**	**39**	*e*P	**Pn**	**19 35 46.4**	**-0.1**
ARCO				IAML		19 36 16.9	
	comp=Z,24nm,0.5s						
ASAL	**Salagasta**	**2.96**	**37**	*e*P	**Pn**	**19 35 50.2**	**+0.5**
AUSP	**Uspallata**	**3.04**	**26**	*e*P	**Pn**	**19 35 51.1**	**+0.2**
RTLS	**Leoncito**	**3.46**	**24**	*e*P	**Pn**	**19 35 57.5**	**+0.9**
RTLS				IAML		19 35 57.9	
	comp=Z,29nm,0.4s						
RTCV	**Cerro Valdivia**	**3.70**	**34**	*e*P	**Pn**	**19 35 58.7**	**-1.0**
ACAN	**Cantantal**	**4.13**	**50**	*e*P	**Pn**	**19 36 04.7**	**-0.8**
RTLL	**Cerro Villicun**	**4.19**	**30**	*e*P	**Pn**	**19 36 05.0**	**-1.3**
RTLL				IAML		19 36 54.5	
	comp=Z,26nm,0.5s						
AMOG	**MOGNA**	**4.53**	**28**	*e*P	**Pn**	**19 36 09.8**	**-1.0**
ACDV	**Cuesta del Vie**	**5.04**	**18**	IAML		19 37 19.3	
	comp=Z,8.7nm,0.3s						
APLL	**PUNTA DE LOS L**	**5.89**	**40**	IAML		19 36 27.8	
	comp=Z,6.1nm,0.1s						

*BJI **27** 19:36:17.6, 36°.31N×79°.21E, h9km, mb4.4/8, mB4.4/9, ML4.6/7, Ms3.9/4*
*IDC **27** 19:36:17.4±0.8, 36°.36N×79°.31E, h0km, mb4.0/18, mb1 4.2/23, mb1mx3.9/70, mbtmp4.1/23, ML3.8/5, MS3.1/14, Ms1 3.1/14, ms1mx2.8/64, Error ellipse: s-maj=20.2km s-min=14.6km az=40.0*
*ISCJB **27** 19:36:17.8±0.4, 36°.39N±0°.04×79°.32E±0°.05, h10km, mb4.1/29, MS3.1/9, Error ellipse: s-maj=5.7km s-min=5.5km az=163.0*
*NNC **27** 19:36:20.7±2.1, 36°.55N×79°.21E, h0km, mb4.4, mpv4.2, Error ellipse: s-maj=23.9km s-min=15.8km az=23.0*
*MOS **27** 19:36:22.1±1.1, 36°.51N×79°.29E, h41km, mb4.3/4, Error ellipse: s-maj=12.0km s-min=6.0km az=109.8*
*NEIC **27** 19:36:22.9±1.1, 36°.44N×79°.36E, h37km±10km, mb4.1/3, Error ellipse: s-maj=8.6km s-min=8.0km az=169.0*

ISC 27 19:36:19.6±0.6, 36°.42N±0°.06×79°.25E±0°.05, h10km, n89, σ2°.10/89, mb4.2/29, MS3.0/9, 17C-9D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**4.03**	**321**	Pn	**Pn**	**19 37 23.8**	**+2.3**
KSH				Sn	**Sn**	**19 38 10.5**	**+1.6**
KSH				smax	smax		
	comp=N,1μm,0.4s						
KSH				smax	smax		
	comp=E,2μm,0.6s						
NIL	**Nilore**	**5.64**	**242**	*e*Pn	Pn	19 37 45.6	+2.1
	172nm,0.5s						
NIL	**Nilore**	**5.64**	**242**	*e*P	Pn	19 37 45.6	+2.1
NIL				pmax	pmax		
	comp=Z,172nm,0.5s						
SFK	**Sufi-Kurgan**	**5.77**	**310**	⇑Pn	**Pn**	**19 37 47.7**	**+2.2**
	comp=Z,8.6nm,0.4s						
SFK				⇓Pg	**Pb**	**19 38 03.8**	**+3.3**
	comp=Z,19nm,0.5s						
SFK				⇑Sn	**Sn**	**19 38 54.0**	**+2.1**
	comp=Z,75nm,0.3s						
SFK				⇑Lg	Lg	19 39 18.8	
	comp=Z,104nm,0.5s						
SFK	**Sufi-Kurgan**	**5.77**	**310**	P	**Pn**	**19 37 47.7**	**+2.2**
SFK				S	**Sn**	**19 38 54.0**	**+2.1**
SFK				pmax	pmax		
	comp=Z,9.0nm,0.4s						
SFK				smax	smax		
	comp=N,75nm,0.3s						
ULHL	**Ulahol**	**6.27**	**339**	P	**Pn**	**19 37 55.0**	**+2.7**
	SNR=10						
KZA	**Kyzart**	**6.45**	**332**	P	**Pn**	**19 37 58.5**	**+3.6**
	SNR=29						
CEP	**Cherat**	**6.55**	**249**	P	Pn	19 37 59.4	+3.3
UCH	**Uchtor**	**6.86**	**329**	P	**Pn**	**19 38 03.8**	**+3.1**
	SNR=10						
MDOK	**Medeo**	**6.95**	**347**	⇑Pn	**Pn**	**19 38 03.5**	**+1.9**
	comp=N,5.2nm,0.5s						
MDOK				⇑Pg	**Pb**	**19 38 24.5**	**+4.1**
	comp=N,53nm,0.8s						
MDOK				⇑Lg	Lg	19 39 56.0	
	comp=N,102nm,0.8s						
SARP	**Sargodha**	**7.06**	**232**	P	**Pn**	**19 38 03.9**	**+0.9**
KBK	**Karagaybulak**	**7.06**	**333**	P	**Pn**	**19 38 06.7**	**+3.5**
	SNR=9.8						
TKM2	**Tokmak 2**	**7.08**	**338**	⇑Pn	**Pn**	**19 38 06.0**	**+2.6**
	comp=N,5.5nm,0.3s						
TKM2				⇑Pg	**Pb**	**19 38 24.7**	**+2.0**
	comp=N,15nm,0.8s						
TKM2				⇑Lg	Lg	19 40 01.5	
	comp=N,24nm,0.6s						
TKM2	**Tokmak 2**	**7.08**	**338**	P	**Pn**	**19 38 06.0**	**+2.6**
	SNR=28						
TKM2	**Tokmak 2**	**7.08**	**338**	P	**Pn**	**19 38 06.0**	**+2.6**
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.4s						
THW	**Thamme Wali**	**7.17**	**242**	P	Pn	19 38 07.3	+2.8
AAK	**Ala-Archa**	**7.21**	**331**	⇑Pn	**Pn**	**19 38 09.0**	**+3.7**
	comp=Z,5.5nm,0.5s						
AAK				⇑Pg	Pg	19 38 31.2	-6.5
	comp=Z,17nm,0.7s						
AAK				⇓Lg	Lg	19 40 07.7	
	comp=Z,64nm,0.8s						
FRU	**Bishkek**	**7.33**	**332**	*e*P	**Pn**	**19 38 09.0**	**+2.2**
FRU				pmax	pmax		
	comp=N,43nm,1.5s						
CHMS	**Chumysh**	**7.43**	**334**	P	**Pn**	**19 38 11.4**	**+3.4**
	SNR=7.8						
MNAS	**Manas**	**7.99**	**321**	⇑Pn	**Pn**	**19 38 17.0**	**+1.1**
	comp=N,2.1nm,0.4s						
MNAS				⇓Pg	**Pg**	**19 38 48.6**	**-4.0**
	comp=N,9.1nm,0.6s						
MNAS				⇑Lg	Lg	19 40 33.1	
	comp=N,40nm,1.1s						
MNAS	**Manas**	**7.99**	**321**	P	**Pn**	**19 38 17.4**	**+1.5**
MNAS				pmax	pmax		
	comp=Z,2.0nm,0.4s						
KK31	**Karatay Array**	**9.47**	**317**	⇓P	**Pn**	**19 38 36.2**	**+0.1**
	comp=Z,1.5nm,0.2s						
KK31			

BVAR	**Borovoye Array**	**17.73**	**342**	P	**P**	**19 40 27.5**	**+0.2**
	comp=Z,0.9nm,0.3s,baz=150,slow=12,SNR=23						
BVAR				LR	LR	19 47 57.5	
	comp=Z,72nm,18.8s,baz=124,slow=39						
BRVK	**Borovoye**	**17.79**	**342**	*e*P	**P**	**19 40 28.5**	**+0.6**
	comp=Z,17nm,0.9s						
ZALV	**Zalesovo Beam**	**17.95**	**11**	P	**Pn**	**19 40 27.2**	**-1.9**
	comp=Z,0.9nm,0.3s,baz=197,slow=12,SNR=11						
ZALV				LR	LR	19 48 07.4	
	comp=Z,60nm,18.3s,baz=240,slow=39						
NVS	**Novosibirsk**	**18.63**	**7**	*e*P	**P**	**19 40 36.4**	**-0.7**
NVS				pmax	pmax		
	comp=Z,16nm,0.7s						
NVS				pmax	pmax		
	comp=N,15nm,0.7s						
NVS				pmax	pmax		
	comp=E,6.0nm,0.5s						
AB31	**Akbulak array**	**19.04**	**318**	⇓P	**Pn**	**19 40 42.3**	**-0.1**
	comp=E,2.2nm,0.6s,baz=123,slow=12,SNR=22						
AB31	**Akbulak array**	**19.04**	**318**	P	**Pn**	**19 40 42.3**	**-0.1**
AB31				pmax	pmax		
	comp=Z,2.0nm,0.6s						
LZH	**Lanzhou**	**19.83**	**84**	*e*P	**Pn**	**19 40 52.5**	**+0.3**
LZH				pP	sP	19 40 55.3	+0.5
LZH				sP	pP	19 40 57.3	+3.8
LZH				*e*PP	**PnPn**	**19 41 11.5**	**+5.5**
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
LZH				pmax	pmax		
	comp=Z,65nm,4.8s						
LZH				LR	LR		
	comp=Z,310nm,11.5s						
LZH				LR	LR		
	comp=Z,310nm,12.1s						
AKTO	**Aktyubinsk**	**20.73**	**319**	P	Pn	19 41 01.0	-1.6
	comp=Z,4.6nm,0.4s,baz=122,slow=10,SNR=30						
AKTO				LR	LR	19 49 51.7	
	comp=Z,24nm,18.8s,baz=130,slow=39						
AKTO	**Aktyubinsk**	**20.73**	**319**	⇑P	Pn	19 41 00.3	-2.2
	comp=Z,8.1nm,0.7s						
AKTO	**Aktyubinsk**	**20.73**	**319**	P	Pn	19 41 01.0	-1.5
ZAK	**Zakamensk**	**22.23**	**44**	*e*P	**P**	**19 41 17.8**	**+1.5**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SONM	**Songino Array**	**23.02**	**52**	P	**P**	**19 41 25.3**	**+0.5**
	comp=Z,1.6nm,0.6s,baz=251,slow=14,SNR=5.3						
ULN	**Ulaanbaatar**	**23.45**	**52**	*e*P	**P**	**19 41 27.9**	**-1.3**
	comp=Z,3.9nm,0.8s						
ULN	**Ulaanbaatar**	**23.45**	**52**	*e*P	**P**	**19 41 27.9**	**-1.3**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SVE	**Sverdlovsk**	**23.94**	**334**	*e*P	P	19 41 40.9	+7.3
SVE				pmax	pmax		
	comp=Z,15nm,1.2s						
ARU	**Arti**	**24.40**	**332**	P	**P**	**19 41 38.6**	**+0.8**
	comp=Z,5.9nm,0.5s,baz=122,slow=6.0,SNR=17						
ARU	**Arti**	**24.40**	**332**	*e*P	**P**	**19 41 37.4**	**-0.5**
	comp=Z,6.7nm,0.6s						
ARU	**Arti**	**24.40**	**332**	*e*P	**P**	**19 41 38.2**	**+0.3**
CMAR	**Chiang Mai Arr**	**24.93**	**131**	P	**P**	**19 41 43.0**	**0.0**
	comp=Z,0.9nm,0.7s,baz=320,slow=9.3,SNR=7.8						
CMAR				LR	LR	19 52 21.6	
	comp=Z,36nm,18.6s,baz=282,slow=39						
PALK	**Pallekele**	**29.04**	**177**	LR	LR	19 54 11.1	
	comp=Z,40nm,19.8s,baz=300,slow=37						
BRTR	**Keskin Array B**	**35.76**	**289**	P	**P**	**19 43 19.2**	**+0.4**
	comp=Z,1.2nm,0.4s,baz=114,slow=8.2,SNR=11						
AKASG	**Malin Array Be**	**38.21**	**308**	P	**P**	**19 43 39.0**	**-0.4**
	comp=Z,1.4nm,0.3s,baz=78,slow=9.5,SNR=6.8						
AKASG				LR	LR	20 00 38.0	
	comp=Z,26nm,19.5s,baz=245,slow=38						
AKASG	**Malin Array Be**	**38.21**	**308**	P	**P**	**19 43 39.0**	**-0.4**
KSRS	**Korea Array**	**38.58**	**73**	LR	LR	20 01 12.1	
	comp=Z,22nm,19.8s,baz=240,slow=39						
MLR	**Muntele Rosu**	**40.61**	**300**	P	**P**	**19 44 00.5**	**+0.9**
	comp=Z,1.1nm,0.5s,baz=351,slow=13,SNR=16						
FINES	**FINESS Array B**	**41.35**	**324**	P	**P**	**19 44 05.3**	**0.0**
	comp=Z,2.3nm,0.6s,baz=108,slow=9.6,SNR=15						
ARCES	**ARCESS Array B**	**43.85**	**336**	P	**P**	**19 44 25.4**	**-0.2**
	comp=Z,3.5nm,0.6s,baz=100,slow=8.8,SNR=14						
DPC	**Dobruska-Polom**	**46.44**	**308**	*e*P	**P**	**19 44 47.3**	**+0.8**
DPC	**Dobruska-Polom**	**46.44**	**308**	*e*P	**P**	**19 44 47.3**	**+0.8**
UPC	**Upice**	**46.62**	**308**	*e*P	**P**	**19 44 48.3**	**+0.5**
UPC	**Upice**	**46.62**	**308**	*e*P	**P**	**19 44 48.3**	**+0.5**
CONA	**Conrad Observa**	**47.12**	**305**	*i* P	**P**	**19 44 52.1**	**+0.2**
	comp=Z,1.5nm,0.4s						
HFS	**Hagfors**	**47.25**	**322**	P	**P**	**19 44 52.5**	**-0.1**
	comp=Z,2.0nm,0.7s,baz=92,slow=10,SNR=6.5						
HFS				LR	LR	20 05 56.4	
	comp=Z,27nm,20.6s,baz=147,slow=38						
SOKA	**Soboth**	**47.91**	**303**	*i* P	**P**	**19 44 58.1**	**0.0**
	comp=Z,4.7nm,0.7s						
MOA	**Molln**	**48.19**	**305**	*i* P	**P**	**19 44 59.7**	**-0.4**
	comp=Z,1.0nm,0.5s						
OBKA	**Obir**	**48.27**	**303**	*i* P	**P**	**19 45 00.8**	**-0.1**
	comp=Z,0.6nm,0.2s						
GERES	**GERESS Array B**	**48.37**	**306**	P	**P**	**19 45 01.9**	**+0.3**
	comp=Z,1.4nm,0.8s,baz=74,slow=7.5,SNR=11						
KHC	**Kasperske Hory**	**48.40**	**307**	*e*P	**P**	**19 45 02.1**	**+0.4**
KHC				*e*pP	**sP**	**19 45 11.3**	**+5.2**
KHC	**Kasperske Hory**	**48.40**	**307**	*e*P	**P**	**19 45 02.1**	**+0.4**
KHC				*e*		19 45 11.3	
NB2	**NORSAR Subarra**	**48.45**	**323**	P	**P**	**19 45 01.1**	**-0.9**
	comp=Z,2.2nm,0.7s,baz=89,slow=7.9						
NOA	**NORSAR Array B**	**48.45**	**323**	LR	LR	20 05 38.4	
	comp=Z,13nm,19.7s,baz=75,slow=36						
SPITS	**Spitsbergen Ar**	**49.14**	**346**	P	**P**	**19 45 07.5**	**+0.5**
	comp=Z,2.4nm,0.7s,baz=74,slow=11,SNR=5.9						
SPITS				LR	LR	20 09 48.4	
	comp=Z,30nm,18.2s,baz=35,slow=41						
WATA	**Walderalm**	**50.08**	**305**	*e*P	**P**	**19 45 13.8**	**-0.9**
	comp=Z,0.9nm,0.3s						
MOTA	**Moosalm**	**50.39**	**305**	*i* P	**P**	**19 45 15.8**	**-1.3**
	comp=Z,1.4nm,0.4s						
RETA	**Reutte**	**50.58**	**305**	*i* P	**P**	**19 45 18.1**	**-0.3**
	comp=Z,0.8nm,0.3s						
FETA	**Feichten**	**50.71**	**305**	*i* P	**P**	**19 45 18.5**	**-1.1**
	comp=Z,1.1nm,0.4s						
DAVOX	**Davos/Dischmat**	**51.34**	**305**	P	**P**	**19 45 23.3**	**-1.0**
	comp=Z,2.9nm,0.5s,baz=133,slow=8.0,SNR=4.9						
MDT	**Midelt**	**66.95**	**295**	LR	LR	20 22 14.4	
	comp=Z,26nm,18.3s,baz=138,slow=41						
TORD	**Torodi Ar. Bea**	**72.36**	**274**	P	**P**	**19 47 44.8**	**-1.3**
	comp=Z,1.0nm,0.4s,baz=47,slow=5.7						
KOWA	**Kowa**	**76.19**	**278**	P	**P**	**19 48 07.8**	**-0.6**
	comp=Z,1.9nm,0.6s,baz=38,slow=2.2,SNR=5.2						
WRA	**Warramunga Arr**	**76.48**	**127**	P	**P**	**19 48 08.5**	**-1.4**
	comp=Z,0.4nm,0.8s,baz=313,slow=7.1,SNR=2.9						
ASAR	**Alice Springs**	**78.94**	**130**	P	**P**	**19 48 22.0**	**-1.5**
	comp=Z,0.3nm,0.7s,baz=307,slow=6.4,SNR=4.3						
YKA	**Yellowknife Ar**	**80.80**	**6**	P	**P**	**19 48 32.0**	**-1.0**
	comp=Z,0.8nm,0.7s,baz=340,slow=5.8,SNR=3.8						

*ROM **27** 19:40:00.3±0.1, 44°.847N±0°.004×11°.115E±0°.005, h9km, ML2.4/14*
*CSEM **27** 19:40:01.5±0.2, 44°.83N×11°.15E, h15km, ML2.4, Error ellipse: s-maj=5.6km s-min=3.8km az=107.0*
*ISCJB **27** 19:40:02.4±0.4, 44°.87N±0°.02×11°.14E±0°.04, h13km±3km, Error ellipse: s-maj=4.3km s-min=3.9km az=146.3*
ISC 27 19:40:01.8±0.8, 44°.85N±0°.03×11°.15E±0°.02, h17km±4km, n58, σ0s71/75, 1C-4D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
T0802	**SanFelice sul**	**0.04**	**42**	P	**Pg**		**19 40 04.2**	**-0.7**
T0802				S	**Sg**		**19 40 06.6**	**-0.3**
T0802	**SanFelice sul**	**0.04**	**42**	P	**Pg**		**19 40 04.2**	**-0.7**
T0802				S	**Sg**		**19 40 06.6**	**-0.3**
T0800	**Massa Finalese**	**0.07**	**88**	P	**Pg**		**19 40 04.8**	**-0.3**
T0800				S	**Sg**		**19 40 07.8**	**+0.5**
T0800	**Massa Finalese**	**0.07**	**88**	P	**Pg**		**19 40 04.8**	**-0.3**
T0800				S	**Sg**		**19 40 07.8**	**+0.5**
T0800				END				
T0800				END				
RAVA	**Ravarino**	**0.09**	**192**	P	**Pg**		**19 40 04.8**	**-0.5**
RAVA				S	**Sg**		**19 40 07.9**	**+0.4**
RAVA	**Ravarino**	**0.09**	**192**	P	**Pg**		**19 40 04.8**	**-0.5**
RAVA				S	**Sg**		**19 40 07.9**	**+0.4**
RAVA				END				
RAVA				END				
T0822	**Casumaru (Bond**	**0.14**	**95**	P	**Pb**		**19 40 05.9**	**-0.1**
T0822				S	**Sg**		**19 40 09.9**	**+1.4**
T0822	**Casumaru (Bond**	**0.14**	**95**	P	**Pb**		**19 40 05.9**	**-0.1**
T0822				S	**Sg**		**19 40 09.9**	**+1.4**
T0822				AML	AML			
	comp=E,3340μm,1.4s							
T0822				AML	AML			
	comp=N,8925μm,0.4s							
T0822				AML	AML			
	comp=N,8925μm,0.4s							
T0822				AML	AML			
	comp=E,3340μm,1.4s							
T0822				END				
T0822				END				
T0803	**Dosso, Cento (**	**0.17**	**118**	P	**Pb**		**19 40 06.3**	**-0.1**
T0803	**Dosso, Cento (**	**0.17**	**118**	P	**Pb**		**19 40 06.3**	**-0.1**
SERM	**Sermide**	**0.20**	**33**	P	**Pb**		**19 40 07.4**	**+0.4**
SERM	**Sermide**	**0.20**	**33**	P	**Pb**		**19 40 07.4**	**+0.4**
SERM				END				
SERM				END				
T0826	**Rio Saliceto (**	**0.24**	**269**	P	**Pg**		**19 40 06.0**	**-1.2**
T0826				S	**Sg**		**19 40 12.0**	**+1.1**
T0826	**Rio Saliceto (**	**0.24**	**269**	P	**Pb**		**19 40 07.0**	**-0.7**
T0826				S	**Sg**		**19 40 12.0**	**+1.1**
T0826				END				
T0826				END				
T0825	**Gonzaga (MN)**	**0.25**	**301**	P	**Pb**		**19 40 08.0**	**+0.2**
T0825				S	**Sg**		**19 40 12.8**	**+1.6**
T0825	**Gonzaga (MN)**	**0.25**	**301**	P	**Pb**		**19 40 08.0**	**+0.2**
T0825				S	**Sg**		**19 40 12.8**	**+1.6**
T0825				AML	AML			
	comp=E,3870μm,0.2s							
T0825				AML	AML			
	comp=N,2085μm,0.2s							
T0825				AML	AML			
	comp=N,2080μm,0.2s							
T0825				AML	AML			
	comp=E,3870μm,0.2s							
T0825				END				
T0825				END				
MODE	**Modena**	**0.26**	**213**	P	**Pb**		**19 40 08.8**	**+0.8**
MODE	**Modena**	**0.26**	**213**	P	**Pb**		**19 40 08.8**	**+0.8**
SBPO	**S.Benedetto Po**	**0.26**	**322**	P	**Pb**		**19 40 08.2**	**+0.1**
SBPO	**S.Benedetto Po**	**0.26**	**322**	P	**Pb**		**19 40 08.2**	**+0.1**
SBPO				END				
NOVE	**Novellara**	**0.31**	**261**	P	**Pb**		**19 40 08.3**	**-0.6**
NOVE	**Novellara**	**0.31**	**261**	P	**Pb**		**19 40 08.3**	**-0.6**
NOVE				AML	AML			
	comp=E,688μm,0.2s							
NOVE				AML	AML			
	comp=N,658μm,0.7s							
NOVE				AML	AML			
	comp=E,688μm,0.2s							
NOVE				AML	AML			
	comp=N,658μm,0.7s							
NOVE				END				
NOVE				END				
TEOL	**Teolo**	**0.63**	**36**	⇓*e*Pg	**Pb**		**19 40 14.9**	**+0.4**
TEOL				*e*Sg	**Sn**		**19 40 24.8**	**-1.0**
TEOL	**Teolo**	**0.63**	**36**	*e*Pg	**Pb**		**19 40 14.9**	**+0.4**
TEOL				*e*Sg	**Sn**		**19 40 24.8**	**-1.0**
TEOL	**Teolo**	**0.63**	**36**	P	**Pb**		**19 40 14.8**	**+0.4**
TEOL				AML	AML			
	comp=E,330μm,1.0s							
TEOL				AML	AML			
	comp=N,244μm,0.4s							
TEOL				AML	AML			
	comp=E,330μm,1.0s							
TEOL				AML	AML			
	comp=N,244μm,0.4s							
TEOL				END				
TEOL				END				
ZOVE	**Zovencedo**	**0.65**	**22**	P	**Pn**		**19 40 15.4**	**-0.9**
ZOVE	**Zovencedo**	**0.65**	**22**	P	**Pn**		**19 40 15.4**	**-0.9**
MARN	**Marana (Italy)**	**0.79**	**3**	⇓*e*Pg	**Pn**		**19 40 17.6**	**-0.7**
MARN				*e*Sg	**Sn**		**19 40 29.0**	**-0.7**
MARN	**Marana (Italy)**	**0.79**	**3**	*e*Pg	**Pn**		**19 40 17.6**	**-0.7**
MARN				*e*Sg	**Sn**		**19 40 29.0**	**-0.7**
ROVR	**Rover¯¤ Verone**	**0.80**	**356**	P	**Pn**		**19 40 17.9**	**-0.6**
ROVR	**Rover¯¤ Verone**	**0.80**	**356**	P	**Pn**		**19 40 17.9**	**-0.6**
ROVR				AML	AML			
	comp=E,530μm,0.9s							
ROVR				AML	AML			
	comp=N,492μm,0.2s							
ROVR				AML	AML			
	comp=N,492μm,0.2s							
ROVR				AML	AML			
	comp=E,530μm,0.9s							
ROVR				END				
ROVR				END				
BALD	**Monte Baldo**	**0.87**	**345**	*e*Pg	**Pn**		**19 40 19.5**	**0.0**
BALD				*e*Sg	**Sn**		**19 40 32.3**	**+0.4**
BALD	**Monte Baldo**	**0.87**	**345**	*e*Pg	**Pn**		**19 40 19.5**	**0.0**
BALD				*e*Sg	**Sn**		**19 40 32.3**	**+0.4**
SALO	**Salr**	**0.89**	**331**	P	**Pn**		**19 40 19.8**	**+0.2**
SALO	**Salr**	**0.89**	**331**	P	**Pn**		**19 40 19.8**	**+0.2**
SALO				AML	AML			
	comp=E,269μm,1.0s							
SALO				AML	AML			
	comp=N,252μm,0.4s							
SALO				AML	AML			
	comp=N,252μm,0.4s							
SALO				AML	AML			
	comp=E,269μm,1.0s							
MAGA	**Magasa**	**1.00**	**339**	P	**Pg**		**19 40 20.0**	**-1.2**
MAGA	**Magasa**	**1.00**	**339**	P	**Pn**		**19 40 21.0**	**-0.2**
MAGA				AML	AML			
	comp=E,856μm,0.4s							
MAGA				AML	AML			
	comp=N,530μm,0.6s							
MAGA				AML	AML			
	comp=E,856μm,0.4s							
MAGA				AML	AML			
	comp=N,530μm,0.6s							
DOSS	**Dosso del Somm**	**1.04**	**2**	⇓*e*Pg	**Pn**		**19 40 21.8**	**0.0**
DOSS				*e*Sg	**Sn**		**19 40 35.9**	**0.0**
DOSS	**Dosso del Somm**	**1.04**	**2**	*e*Pg	**Pn**		**19 40 21.8**	**0.0**
DOSS				*e*Sg	**Sn**		**19 40 35.9**	**0.0**
CGRP	**Cima Grappa**	**1.13**	**24**	⇓*e*Pg	**Pn**		**19 40 23.4**	**+0.3**
CGRP				*e*Sg	**Sn**		**19 40 39.4**	**+1.0**
CGRP	**Cima Grappa**	**1.13**	**24**	*e*Pg	**Pn**		**19 40 23.4**	**+0.3**
CGRP				*e*Sg	**Sn**		**19 40 39.4**	**+1.0**
RNI	**Roncone**	**1.19**	**342**	*e*Pg	**Pg**		**19 40 24.4**	**-0.5**
RNI	**Roncone**	**1.19**	**342**	*e*Pg	**Pg**		**19 40 24.4**	**-0.5**
PANI	**Panarotta**	**1.21**	**6**	⇓*e*Pg	**Pg**		**19 40 25.2**	**-0.1**
PANI				*e*Sg	**Sn**		**19 40 41.5**	**+1.2**
PANI	**Panarotta**	**1.21**	**6**	*e*Pg	**Pg**		**19 40 25.2**	**-0.1**
PANI				*e*Sg	**Sn**		**19 40 41.5**	**+1.2**
MABI	**Malga Bissina**	**1.29**	**340**	P	**Pg**		**19 40 26.2**	**-0.5**
MABI	**Malga Bissina**	**1.29**	**340**	P	**Pg**		**19 40 26.2**	**-0.5**
MABI				AML	AML			
	comp=E,70μm,0.4s							
MABI				AML	AML			
	comp=N,57μm,1.3s							
MABI				AML	AML			
	comp=E,70μm,0.4s							
MABI				AML	AML			
	comp=N,57μm,1.3s							
VARN	**Col Varnada, M**	**1.33**	**30**	*e*Pg	**Pg**		**19 40 26.6**	**-0.9**
VARN	**Col Varnada, M**	**1.33**	**30**	*e*Pg	**Pg**		**19 40 26.6**	**-0.9**
OZOL	**Ozolo**	**1.56**	**358**	*e*Pg	**Pb**		**19 40 29.9**	**-0.4**
OZOL	**Ozolo**	**1.56**	**358**	*e*Pg	**Pb**		**19 40 29.9**	**-0.4**
CDCA	**Citt' di Caste**	**1.59**	**150**	AML	AML			
	comp=N,1170μm,0.1s							
CDCA				AML	AML			
	comp=E,4214μm,1.4s							
KOSI	**Kohlern**	**1.63**	**6**	AML	AML			
	comp=N,58μm,1.0s							
KOSI				AML	AML			
	comp=E,60μm,1.1s							
KOSI				AML	AML			
	comp=E,60μm,1.1s							
KOSI				AML	AML			
	comp=N,58μm,1.0s							
FSSB	**Fossombrone**	**1.65**	**134**	AML	AML			
	comp=N,47μm,1.5s							
FSSB				AML	AML			
	comp=E,37μm,0.6s							
FSSB				AML	AML			
	comp=N,47μm,1.5s							
FSSB				AML	AML			
	comp=E,37μm,0.6s							
MOSI	**Grossmontoni**	**1.82**	**347**	AML	AML			
	comp=E,147μm,1.0s							
MOSI				AML	AML			
	comp=N,146μm,1.0s							
MOSI				AML	AML			
	comp=N,146μm,1.0s							
MOSI				AML	AML			
	comp=E,147μm,1.0s							
ABSI	**Aberstueckl**	**1.89**	**4**	AML	AML			
	comp=E,84μm,1.2s							
ABSI				AML	AML			
	comp=E,84μm,1.2s							
ABSI				AML	AML			
	comp=N,73μm,1.1s							
ABSI				AML	AML			
	comp=N,73μm,1.1s							
ROSI	**Rosskopf**	**2.09**	**5**	AML	AML			
	comp=N,56μm,0.9s							
ROSI				AML	AML			
	comp=E,61μm,0.8s							
ROSI				AML	AML			
	comp=N,56μm,0.9s							
ROSI				AML	AML			
	comp=E,61μm,0.8s							
SATI	**Passo dei Sala**	**2.53**	**295**	AML	AML			
	comp=E,15μm,1.0s							
SATI				AML	AML			
	comp=E,15μm,1.0s							
SATI				AML	AML			
	comp=N,12μm,0.9s							
SATI				AML	AML			
	comp=N,12μm,0.9s							

*CSEM **27** 19:40:43.8, 44°.84N×11°.12E, h8km, MD1.3/5*
ROM 27 19:40:43.8±0.1, 44°.839N±0°.005×11°.117E±0°.006, h8km, Md1.3/5, 1C-1D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
T0802	**SanFelice sul**	**0.06**	**52**	P	Pg		19 40 47.5	+1.9
T0802				S	Sg		19 40 49.8	+2.9
T0802	**SanFelice sul**	**0.06**	**52**	P	Pg		19 40 47.5	+1.9
T0802				S	Sg		19 40 49.8	+2.9
RAVA	**Ravarino**	**0.08**	**179**	⇓P	Pg		19 40 48.8	+2.9
RAVA				S	Sg		19 40 51.2	+3.8
RAVA	**Ravarino**	**0.08**	**179**	P	Pg		19 40 48.8	+2.9
RAVA				S	Sg		19 40 51.2	+3.8
RAVA				AML	AML			
	comp=E,20250μm,0.2s							
RAVA				AML	AML			
	comp=N,9160μm,0.2s							
RAVA				AML	AML			
	comp=E,20250μm,0.2s							
RAVA				AML	AML			
	comp=N,9160μm,0.2s							
RAVA				END				
RAVA				END				
RAVA				END				
RAVA				END				
T0800	**Massa Finalese**	**0.09**	**84**	P	Pg		19 40 48.3	+2.2
T0800				S	Sg		19 40 51.0	+3.4
T0800	**Massa Finalese**	**0.09**	**84**	P	Pg		19 40 48.3	+2.2
T0800				S	Sg		19 40 51.0	+3.4
T0800				AML	AML			
	comp=E,6800μm,0.8s							
T0800				AML	AML			
	comp=N,3800μm,0.2s							
T0800				AML	AML			
	comp=E,6170μm,0.7s							
T0800				AML	AML			
	comp=N,3560μm,0.2s							
T0800				AML	AML			
	comp=N,3560μm,0.2s							
T0800				AML	AML			
	comp=E,6800μm,0.8s							
T0800				AML	AML			
	comp=N,3800μm,0.2s							
T0800				AML	AML			
	comp=E,6170μm,0.7s							
T0800				END				
T0800				END				
T0800				END				
T0800				END				
T0822	**Casumaru (Bond**	**0.16**	**92**	⇑P	Pg		19 40 49.2	+2.0
T0822				S	Sg		19 40 53.3	+3.8
T0822	**Casumaru (Bond**	**0.16**	**92**	P	Pg		19 40 49.2	+2.0
T0822				S	Sg		19 40 53.3	+3.8
T0822				AML	AML			
	comp=E,2635μm,0.3s							
T0822				AML	AML			
	comp=N,3280μm,0.4s							
T0822				AML	AML			
	comp=N,3280μm,0.4s							
T0822				AML	AML			
	comp=E,2635μm,0.3s							
T0822				END				
T0822				END				
T0822				END				
T0822				END				
T0803	**Dosso, Cento (**	**0.18**	**113**	P	Pg		19 40 49.7	+2.2
T0803	**Dosso, Cento (**	**0.18**	**113**	P	Pg		19 40 49.7	+2.2
T0803				END				
T0826	**Rio Saliceto (**	**0.22**	**270**	P	Pg		19 40 50.3	+2.1
T0826				S	Sg		19 40 55.2	+4.1
T0826	**Rio Saliceto (**	**0.22**	**270**	P	Pg		19 40 50.3	+2.1
T0826				S	Sg		19 40 55.2	+4.1
T0826				END				
T0826				END				
T0825	**Gonzaga (MN)**	**0.23**	**305**	P	Pg		19 40 51.3	+2.8
T0825				S	Sg		19 40 57.7	+6.0
T0825	**Gonzaga (MN)**	**0.23**	**305**	P	Pg		19 40 51.3	+2.8
T0825				S	Sg		19 40 57.7	+6.0
T0825				AML	AML			
	comp=E,3870μm,0.2s							
T0825				AML	AML			
	comp=N,2085μm,0.2s							
T0825				AML	AML			
	comp=N,2080μm,0.2s							
T0825				AML	AML			
	comp=E,3870μm,0.2s							
MODE	**Modena**	**0.24**	**210**	P	Pg		19 40 51.5	+2.9
MODE	**Modena**	**0.24**	**210**	P	Pg		19 40 51.5	+2.9
NOVE	**Novellara**	**0.29**	**262**	P	Pb		19 40 51.6	+0.4
NOVE	**Novellara**	**0.29**	**262**	P	Pb		19 40 51.6	+0.4
TEOL	**Teolo**	**0.65**	**37**	P	Pn		19 40 58.7	-0.7
TEOL	**Teolo**	**0.65**	**37**	P	Pn		19 40 58.7	-0.6
ROVR	**Rover¯¤ Verone**	**0.81**	**358**	P	Pn		19 41 02.4	+0.8
ROVR	**Rover¯¤ Verone**	**0.81**	**358**	P	Pn		19 41 02.4	+0.7
SALO	**Salr**	**0.89**	**332**	P	Pn		19 41 03.9	+1.3
SALO	**Salr**	**0.89**	**332**	P	Pn		19 41 03.9	+1.3

*CSEM **27** 19:42:20.0±0.8, 59°.51N×9°.23E, h1km, ML0.4, Error ellipse: s-maj=19.2km s-min=9.4km az=160.0, Suspected Mining explosion.*
UPP 27 19:42:24.1, 58°.86N×9°.36E, h0km, ML0.4, Suspected Mining explosion., Southern Norway

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
STRU	**Stroemstad**	**0.96**	**78**	P	Pg		19 42 42.0	-0.5
STRU				S	Sg		19 42 55.6	+0.7
SNART	**Snartemo**	**1.24**	**246**	*i* P	Pn		19 42 49.2	+0.6
	SNR=66							
VANU	**Vaenersborg**	**1.46**	**103**	P	Pn		19 42 51.1	-0.6

PRU 27 20:03:39.9, 50°.15N×19°.11E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.45**	**81**	*e*Pg	Pg		20 03 48.0	-0.5
OJC				*e*Sg	Sg		20 03 54.5	+0.2
OKC	**Ostrava-Krasne**	**0.70**	**244**	*e*SG	Sb		20 04 03.9	-1.1
	comp=Z,4.4nm,0.5s

*IPEC **27** 20:05:44.5±0.2, 49.°83N×18.°58E, h0km, ML1.5/3, Error ellipse: s-maj=1.7km s-min=1.1km az=163.0*
*PRU **27** 20:05:45.3, 49.°81N×18.°52E, h0km*
CSEM 27 20:05:44.4±0.2, 49.82N×18.53E, h1km, ML1.5, Error ellipse: s-maj=4.5km s-min=2.3km az=174.0, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.25**	**274**	*e*PG	Pg	20 05 50.5	+1.3
OKC				*e*SG	Sg	20 05 54.9	+2.5
	comp=Z,29nm,0.4s						
MORC	**Moravsky Berou**	**0.64**	**267**	*e*Pg	Pb	20 05 57.6	-0.8
MORC	baz=86			*e*Sg	Sg	20 06 05.6	+0.6
	5.4nm,0.2s,baz=86						
MORC	**Moravsky Berou**	**0.64**	**267**	*e*PG	Pb	20 05 57.6	-0.8
MORC				*e*SG	Sg	20 06 05.6	+0.6
MORC	**Moravsky Berou**	**0.64**	**267**	*e*Pg	Pb	20 05 57.6	-0.8
MORC	baz=86			*e*Sg	Sg	20 06 05.6	+0.6
	5.4nm,0.2s,baz=86						
LANS	**Liptovska Anna**	**0.91**	**137**	*e*Pg	Pg	20 06 02.0	+0.2
LANS				*e*Sg	Sb	20 06 14.7	-0.8
LANS	**Liptovska Anna**	**0.91**	**137**	*e*PG	Pg	20 06 02.0	+0.2
LANS				*e*SG	Sb	20 06 14.7	-0.8
OJC	**Ojcow**	**0.91**	**63**	*e*Pg	Pg	20 06 01.6	-0.3
OJC				*e*Sg	Sg	20 06 14.0	+0.4
OJC	**Ojcow**	**0.91**	**63**	*e*Pg	Pg	20 06 01.6	-0.2
OJC				*e*Sg	Sg	20 06 14.0	+0.4
JAVC	**Velka Javorina**	**1.11**	**211**	*e*Pg	Pb	20 06 06.5	0.0
	baz=31						
JAVC	**Velka Javorina**	**1.11**	**211**	*e*PG	Pb	20 06 06.5	0.0
JAVC	**Velka Javorina**	**1.11**	**211**	*e*Pg	Pb	20 06 06.5	0.0
	baz=31						
KRLC	**Kraliky**	**1.16**	**283**	*e*PG	Pg	20 06 06.5	-0.1
KRLC				*e*SG	Sb	20 06 23.5	+0.7
	comp=Z,1.6nm,0.2s						
NIE	**Niedzica**	**1.22**	**109**	*e*Pg	Pg	20 06 07.6	-0.1
NIE				*e*Sg	Sn	20 06 25.6	-0.1
VYHS	**Vyhne**	**1.34**	**171**	*e*PG	Pg	20 06 09.7	-0.4
VYHS				*e*SG	Sb	20 06 28.1	+0.1
VYHS				*e*LG	Lg	20 06 30.2	
VYHS	**Vyhne**	**1.34**	**171**	*e*Pg	Pg	20 06 09.7	-0.4
VYHS				*e*Sn	Sb	20 06 28.1	+0.1
VRAC	**Vranov**	**1.36**	**249**	*e*Pg	Pg	20 06 10.5	0.0
	baz=68						
VRAC				*e*Sg	Sg	20 06 28.1	0.0
	6.9nm,0.3s,baz=68						
VRAC	**Vranov**	**1.36**	**249**	*e*PG	Pg	20 06 10.5	0.0
VRAC				*e*SG	Sg	20 06 28.2	+0.1
VRAC	**Vranov**	**1.36**	**249**	*e*Pg	Pg	20 06 10.5	0.0
	baz=68						
VRAC				*e*Sg	Sg	20 06 28.1	0.0
	6.9nm,0.3s,baz=68						
DPC	**Dobruska-Polom**	**1.52**	**291**	*e*PG	Pn	20 06 12.8	+0.1
DPC				*e*SG	Sn	20 06 33.5	+0.3
	comp=Z,2.5nm,0.2s						
KRUC	**Moravsky**	**1.59**	**242**	*e*Pg	Pn	20 06 13.9	+0.3
	baz=61						
KRUC				*e*Sg	Sg	20 06 35.4	+0.1
	4.5nm,0.3s,baz=61						
KRUC	**Moravsky**	**1.59**	**242**	*e*PG	Pn	20 06 13.9	+0.3
KRUC				*e*SG	Sg	20 06 35.5	+0.2
KRUC	**Moravsky**	**1.59**	**242**	*e*Pg	Pn	20 06 13.9	+0.3
	baz=61						
KRUC				*e*Sg	Sg	20 06 35.4	+0.1
	4.5nm,0.3s,baz=61						
UPC	**Upice**	**1.76**	**294**	*e*PG	Pb	20 06 17.4	-0.1
UPC				*e*SG	Sg	20 06 42.2	+1.3
	comp=Z,2.2nm,0.2s						
GOPC	**GO Pecny, Ondr**	**2.42**	**274**	*e*PG	Pb	20 06 29.7	+0.9
GOPC				*e*SG	Sg	20 07 01.0	-1.2
PRU	**Pruhonice**	**2.58**	**275**	*e*SG	Sg	20 07 06.2	-1.2
	comp=Z,2.0nm,0.5s						
PVCC	**Panska Ves**	**2.64**	**287**	*e*SG	Sg	20 07 09.6	+0.3
	comp=Z,2.7nm,0.2s						
KHC	**Kasperske Hory**	**3.30**	**260**	*e*PG	Pg	20 06 46.3	-1.4
KHC				*e*SG	Sg	20 07 29.8	-0.6
	comp=Z,1.8nm,0.3s						

*NIED **27** 20:12:00, 43.°00N×147.°10E, h29km, Mw3.7 Best double couple: M0=3.61000×10^14 NP1:φ=215.00000°, δ=32.00000°, λ=86.00000°. NP2:φ=41.00000°, δ=58.00000°, λ=93.00000°.*
*ISCJB **27** 20:12:14.8±1.3, 43.°02N±0.°05×146.°95E±0.°07, h24km±7km, Error ellipse: s-maj=9.6km s-min=6.8km az=138.8*
*JMA **27** 20:12:14.0±0.2, 42.°98N×147.°08E, h46km, M3.7*
*SKHL **27** 20:12:15.1±0.5, 42.°93N×147.°02E, h45km±2km, mb4.6/6*
*MOS **27** 20:12:15.2±1.3, 42.°92N×147.°00E, h43km, mb4.6/1, Error ellipse: s-maj=45.0km s-min=15.7km az=108.0*
ISC 27 20:12:14.6±2.2, 43.°07N±0.°08×146.°82E±0.°06, h6km±11km, n23, σ0°79/38, 5C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.80**	**1**	*i* P	**Pb**	**20 12 31.0**	**0.0**
SHO				AMB	AMB	20 12 32.0	
	687nm,0.2s						
SHO				AMB	AMB	20 12 32.0	
	122nm,0.2s						
SHO				*i* S	**Sb**	**20 12 43.0**	**+1.0**
SHO				A	A	20 12 44.0	
	515nm,0.4s						
SHO				A	A	20 12 44.0	
	3μm,0.4s						
SHO	**Shikotan**	**0.80**	**1**	*c i*PN	**Pb**	**20 12 31.5**	**+0.5**
SHO				*i* S	**Sb**	**20 12 43.2**	**+1.2**
SHO				pmax	pmax		
	comp=E,291nm,0.2s						
SHO				pmax	pmax		
	comp=Z,1μm,0.2s						
SHO				pmax	pmax		
	comp=N,687nm,0.3s						
SHO				smax	smax		
	comp=N,5μm,0.7s						
SHO				smax	smax		
	comp=E,3μm,0.4s						
NEM2	**Nemuro 2**	**0.84**	**291**	P	**Pn**	**20 12 32.8**	**-0.2**
NEM2				*e*S	**Sn**	**20 12 45.9**	**+0.3**
GLVR	**Golovnino**	**1.16**	**306**	*i* P	**Pg**	**20 12 37.0**	**+0.1**
GLVR				AMB	AMB	20 12 37.0	
	comp=E,98nm,0.3s						
GLVR				AMB	AMB	20 12 37.0	
	comp=E,99nm,0.3s						
GLVR				AMB	AMB	20 12 37.0	
	comp=E,503nm,0.3s						
GLVR				*i* S	**Sn**	**20 12 54.0**	**+0.5**
GLVR				A	A	20 12 55.0	
	comp=E,346nm,0.4s						
GLVR				A	A	20 12 55.0	
	comp=E,2μm,0.4s						
GLVR	**Golovnino**	**1.16**	**306**	*c i*PN	**Pb**	**20 12 37.2**	**+0.1**
GLVR				*i* S	**Sn**	**20 12 54.2**	**+0.7**
GLVR				pmax	pmax		
	comp=N,98nm,0.3s						
GLVR				pmax	pmax		
	comp=E,99nm,0.3s						
GLVR				pmax	pmax		
	comp=Z,503nm,0.3s						
GLVR				smax	smax		
	comp=E,2μm,0.3s						
GLVR				smax	smax		
	comp=N,3μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.19**	**325**	*i* P	**Pg**	**20 12 37.0**	**-0.5**
YUK				AMB	AMB	20 12 38.0	
	comp=N,145nm,0.3s						
YUK				AMB	AMB	20 12 38.0	
	comp=N,211nm,0.3s						
YUK				AMB	AMB	20 12 38.0	
	comp=N,60nm,0.3s						
YUK				*i* S	**Sb**	**20 12 53.0**	**-0.2**
YUK				A	A	20 12 55.0	
	comp=N,3μm,0.5s						
YUK				A	A	20 12 55.0	
	comp=N,411nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.19**	**325**	*c i*PN	**Pg**	**20 12 37.3**	**-0.2**
YUK				*i* S	**Sn**	**20 12 53.6**	**-0.7**
YUK				pmax	pmax		
	comp=N,145nm,0.3s						
YUK				pmax	pmax		
	comp=Z,599nm,0.3s						
YUK				pmax	pmax		
	comp=E,211nm,0.2s						
YUK				smax	smax		
	comp=N,3μm,0.5s						
YUK				smax	smax		
	comp=E,4μm,0.5s						
GRPR	**Tuman**	**1.20**	**321**	*i* P	**Pg**	**20 12 37.0**	**-0.6**
GRPR				AMB	AMB	20 12 39.0	
	comp=E,109nm,0.3s						
GRPR				AMB	AMB	20 12 39.0	
	comp=E,350nm,0.3s						
GRPR				*i* S	**Sg**	**20 12 53.0**	**-0.1**
GRPR				A	A	20 12 56.0	
	comp=E,232nm,0.4s						
GRPR				A	A	20 12 56.0	
	comp=E,1μm,0.4s						
GRPR	**Tuman**	**1.20**	**321**	*c i*PN	**Pg**	**20 12 37.3**	**-0.3**
GRPR				*i* S	**Sn**	**20 12 53.7**	**-0.7**
GRPR				pmax	pmax		
	comp=E,109nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,350nm,0.3s						
GRPR				pmax	pmax		
	comp=N,266nm,0.2s						
GRPR				smax	smax		
	comp=N,2μm,0.4s						
GRPR				smax	smax		
	comp=E,1μm,0.4s						
LAGR	**Lagunnoye**	**1.24**	**323**	*i* P	**Pb**	**20 12 38.0**	**-0.4**
LAGR				AMB	AMB	20 12 42.0	
	comp=E,290nm,0.2s						
LAGR				AMB	AMB	20 12 42.0	
	comp=E,518nm,0.2s						
LAGR				*i* S	**Sn**	**20 12 55.0**	**-0.5**
LAGR				A	A	20 12 59.0	
	comp=E,2μm,0.4s						
LAGR				A	A	20 12 59.0	
	comp=E,361nm,0.4s						
LAGR	**Lagunnoye**	**1.24**	**323**	*c i*PN	**Pb**	**20 12 38.0**	**-0.4**
LAGR				*i* S	**Sn**	**20 12 55.0**	**-0.5**
LAGR				pmax	pmax		
	comp=E,290nm,0.2s						
LAGR				pmax	pmax		
	comp=Z,518nm,0.2s						
LAGR				pmax	pmax		
	comp=N,334nm,0.4s						
LAGR				smax	smax		
	comp=E,4μm,0.6s						
LAGR				smax	smax		
	comp=N,2μm,0.4s						
JRA	**Rausu**	**1.51**	**306**	P	**Pn**	**20 12 42.3**	**+0.1**
JRA				*e*S	**Sg**	**20 13 03.7**	**+0.5**
JAK	**Akkeshi**	**1.56**	**268**	P	**Pn**	**20 12 42.5**	**-0.3**
JNK	**Nakash**	**1.62**	**289**	P	**Pn**	**20 12 43.1**	**-0.6**
JNK				*e*S	**Sb**	**20 13 05.0**	**-0.5**
JAR	**Ashorobuto**	**2.24**	**277**	P	**Pn**	**20 12 52.4**	**+0.1**
KUR	**Kuril'sk**	**2.29**	**19**	*i* P	**Pn**	**20 12 52.0**	**-0.9**
KUR				AMB	AMB	20 13 00.0	
	comp=N,28nm,0.3s						
KUR				AMB	AMB	20 13 00.0	
	comp=N,40nm,0.3s						
KUR				AMB	AMB	20 13 00.0	
	comp=N,42nm,0.3s						
KUR				*i* S	**Sn**	**20 13 19.8**	**-1.6**
KUR				A	A	20 13 23.0	
	comp=N,96nm,0.3s						
KUR				A	A	20 13 23.0	
	comp=N,153nm,0.3s						
KUR	**Kuril'sk**	**2.29**	**19**	*e*PN	**Pn**	**20 12 53.0**	**+0.1**
KUR				*e*S	**Sn**	**20 13 21.3**	**-0.1**
KUR				pmax	pmax		
	comp=Z,40nm,0.4s						
KUR				pmax	pmax		
	comp=E,39nm,0.3s						
KUR				pmax	pmax		
	comp=N,28nm,0.5s						
KUR				smax	smax		
	comp=E,153nm,0.3s						
KUR				smax	smax		
	comp=N,96nm,0.4s						
JTKR	**Abashiri--Toko**	**2.30**	**294**	P	**Pn**	**20 12 53.9**	**+0.9**
JTKR				*e*S	**Sb**	**20 13 23.6**	**-1.6**
JCH	**Churui**	**2.58**	**261**	P	**Pn**	**20 12 57.5**	**+0.6**
JEM	**Erimo**	**2.90**	**250**	P	**Pn**	**20 13 02.7**	**+1.4**
JNBK	**Urakawa-nobuka**	**3.10**	**257**	P	**Pn**	**20 13 03.9**	**-0.1**
YSS	**Yuzh-Sakhalins**	**4.84**	**325**	*e*P	**Pn**	**20 13 30.2**	**+2.3**
SEY	**Seymchan**	**20.16**	**7**	*i* P	P	20 16 42.3	-7.1

*SOME **27** 20:17:45.8, 45.°25N×81.°72E, h5km*
*NNC **27** 20:17:47.4±1.6, 45.°40N×81.°83E, h0km, mb3.3, mpv3.0, Error ellipse: s-maj=16.1km s-min=9.7km az=107.0*
ISC 27 20:17:45.9±2.5, 45.°31N±0.°05×81.°83E±0.°05, h1km±19km, n20, σ1°16/39, 6C-5D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAKZ	**Makanchi**	**1.51**	**4**	⇑P	**Pn**	**20 18 13.4**	**-0.6**
	5.1nm,0.2s						
MAKZ				⇑S	**Sn**	**20 18 32.9**	**-1.4**
	28nm,0.6s						
MK31	**Makanchi Array**	**1.52**	**12**	⇑P	**Pn**	**20 18 13.6**	**-0.7**
	1.1nm,0.1s,baz=187,slow=14,SNR=583						
MK31				⇓S	**Sn**	**20 18 33.7**	**-1.0**
	19nm,0.3s,baz=195,slow=27						
KAPS	**Kapalarasan**	**1.74**	**270**	⇓*i*P	**Pb**	**20 18 18.2**	**-0.5**
	10nm,0.3s						
KAPS				*e*S	**Sg**	**20 18 41.7**	**-0.1**
	54nm,0.4s						
KTMS	**Ketmen**	**2.14**	**210**	*e*P	**Pn**	**20 18 23.8**	**+1.0**
	8.9nm,0.1s						
KTMS				*e*S	**Sb**	**20 18 51.6**	**-0.9**
	102nm,0.2s						
TDK	**Taldyqorghan**	**2.44**	**264**	*e*P	**Pb**	**20 18 29.8**	**-0.7**
	13nm,0.2s						
TDK				*e*S	**Sb**	**20 19 01.5**	**+0.5**
	110nm,0.2s						
PDGK	**Podgornoye**	**2.59**	**221**	⇑Pn	**Pb**	**20 18 32.1**	**-1.1**
	4.5nm,0.4s						
PDGK				⇓Lg	Lg	20 19 05.1	
	71nm,0.6s						
MNBS	**Baschi**	**2.73**	**245**	*e*P	**Pb**	**20 18 34.8**	**-0.7**
	6.3nm,0.3s						
MNBS				*e*S	**Sb**	**20 19 10.1**	**+0.5**
	45nm,0.4s						
SHLS	**Shalkode**	**2.74**	**219**	*e*P	**Pn**	**20 18 31.4**	**+0.4**
	18nm,0.6s						
SHLS				*e*S	**Sn**	**20 19 04.5**	**-0.3**
	127nm,0.3s						
KPKS	**Kokpek**	**2.91**	**232**	*e*P	**Pb**	**20 18 38.0**	**-0.6**
	15nm,0.3s						
KPKS				*e*S	**Sb**	**20 19 15.3**	**+0.7**
	70nm,0.5s						
UZB	**Uzynbulak**	**2.95**	**224**	*e*P	**Pb**	**20 18 38.2**	**-1.1**
	4.9nm,0.3s						
UZB				*e*S	**Sb**	**20 19 15.8**	**-0.2**
	28nm,0.2s						
ZSN	**Zaisan**	**3.00**	**43**	⇓*i*P	**Pb**	**20 18 40.3**	**+0.1**
	1.5nm,0.4s						
ZSN				⇓*i*S	**Sb**	**20 19 19.9**	**+2.6**
	7.1nm,0.6s						
ARXS	**Arharly**	**3.05**	**250**	*e*P	**Pb**	**20 18 41.3**	**+0.3**
	2.4nm,0.3s						
ARXS				*e*S	**Sb**	**20 19 21.0**	**+2.3**
	29nm,0.2s						
KURS	**Kuram**	**3.19**	**237**	*e*P	**Pb**	**20 18 42.2**	**-1.0**
	1.7nm,0.6s						
KURS				*e*S	**Sb**	**20 19 23.1**	**+0.5**
	13nm,0.4s						
ZHN	**Zhinishke**	**3.24**	**230**	*e*P	**Pb**	**20 18 43.4**	**-0.9**
	4.5nm,0.5s						
ZHN				*e*S	**Sb**	**20 19 24.6**	**+0.4**
	63nm,0.3s						
SATY	**Saty**	**3.33**	**229**	⇑*i*P	**Pb**	**20 18 45.6**	**-0.1**
	12nm,0.4s						
SATY				⇑*i*S	**Sb**	**20 19 28.7**	**+1.9**
	42nm,0.2s						
CHKK	**Chushkaly**	**3.75**	**249**	*e*P	**Pb**	**20 18 52.1**	**-0.7**
	3.6nm,0.6s						
CHKK				*e*S	**Sb**	**20 19 39.6**	**+0.9**
	22nm,0.3s						
KOTS	**Kotyrbulak**	**3.97**	**240**	*e*P	**Pb**	**20 18 56.0**	**-0.7**
	0.9nm,0.3s						
KOTS				*e*S	**Sb**	**20 19 46.2**	**+1.0**
	8.6nm,0.5s						
KTBS	**Karatobe**	**4.01**	**248**	*e*P	**Pb**	**20 18 57.6**	**+0.3**
	1.2nm,0.5s						
KTBS				*e*S	**Sb**	**20 19 49.6**	**+3.4**
	14nm,0.3s						
MDOK	**Medeo**	**4.05**	**240**	*e*P	**Pb**	**20 18 56.8**	**-1.2**
	1.1nm,0.4s						
MDOK				*e*S	**Sb**	**20 19 48.2**	**+0.8**
	11nm,0.7s						
TNSS	**Tian-Shan**	**4.18**	**239**	*e*P	**Pb**	**20 18 60.0**	**-0.4**
	0.7nm,0.4s						
TNSS				*e*S	**Sb**	**20 19 52.9**	**+1.5**
	11nm,0.4s						

*IDC **27** 20:17:41.6±0.5, 2.°85S×141.°46E, h0km, mb4.5/19, mb1 4.7/22, mb1mx4.5/51, mbtmp4.6/22, ML5.1/3, MS3.6/4, Ms1 3.6/4, ms1mx3.1/42, Error ellipse: s-maj=14.0km s-min=8.6km az=38.0*
*NEIC **27** 20:17:43.0±0.3, 2.°88S×141.°41E, h10km, mb4.8/5, Error ellipse: s-maj=7.9km s-min=5.6km az=65.0*
NEIC Felt [II] at Jayapura, Indonesia.
*ISCJB **27** 20:17:44.9±0.3, 2.°93S±0.°05×141.°52E±0.°04, h35km, mb4.6/27, MS3.4/1, Error ellipse: s-maj=6.6km s-min=6.0km az=11.1*
*DJA **27** 20:17:52.8±0.8, 3.°S±3.°×14.°1E±.°, h31km±8km, M4.7/31, mB5.1/9, mb4.9/31, MLv5.0/4, Mw(mB)4.4/9*
ISC 27 20:17:46.8±0.4, 2.°89S±0.°06×141.°44E±0.°06, h35km, n90, σ1°48/89, mb4.6/27, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**0.82**	**297**	Pg	Pn	20 17 57.5	-4.5
	851nm,0.3s,baz=126,slow=7.1,SNR=122						
JAY				Lg	Lg	20 18 09.6	
	858nm,0.3s,baz=238,slow=19,SNR=40						
JAY	**Jayapura**	**0.82**	**297**	P	Pn	20 17 57.3	-4.7
WAMI	**Wamena**	**2.90**	**250**	P	**Pn**	**20 18 27.7**	**-2.8**
WAMI				S	Sn	20 18 55.9	-8.2
SRPI	**Serui, Papua**	**5.29**	**281**	P	**Pn**	**20 19 05.3**	**+1.8**
SRPI				S	**Sn**	**20 20 01.6**	**-1.7**
BAKI	**Biak**	**5.59**	**287**	P	**Pn**	**20 19 10.0**	**+2.5**
RKPI	**Ransiki, Papua**	**7.38**	**281**	P	**Pn**	**20 19 33.5**	**+1.3**
RKPI				S	**Sn**	**20 20 54.1**	**-0.7**
PMG	**Port Moresby**	**8.62**	**139**	Pn	**Pn**	**20 19 52.3**	**+3.2**
	2.0nm,0.3s,baz=359,slow=2.2,SNR=8.6						
PMG	**Port Moresby**	**8.62**	**139**	*e*Pn	**Pn**	**20 19 47.2**	**-1.9**
	68nm,1.0s						
FAKI	**Fak Fak**	**9.18**	**270**	P	**Pn**	**20 19 57.8**	**+0.9**
FAKI				S	**Sn**	**20 21 36.5**	**-2.5**
SIJI	**Sorong**	**10.36**	**281**	Pn	**Pn**	**20 20 15.3**	**+2.2**
	3.3nm,0.3s,baz=87,slow=9.9,SNR=16						
SIJI				LR	LR	20 24 59.7	
	comp=Z,485nm,19.6s,baz=314,slow=42						
SAUI	**Saumlaki**	**11.29**	**243**	P	**Pn**	**20 20 25.6**	**-0.2**
AAI	**Ambon**	**13.25**	**266**	P	**Pn**	**20 20 54.1**	**+1.5**
LBMI	**Labuha**	**14.11**	**279**	P	**Pn**	**20 21 05.7**	**+1.4**
SANI	**Sanana**	**15.46**	**273**	P	**Pn**	**20 21 24.2**	**+1.8**
CTA	**Charters Tower**	**17.73**	**165**	P	**P**	**20 21 55.4**	**+3.7**
	0.4nm,0.3s,baz=349,slow=12,SNR=8.3						
CTAO	**Charters Tower**	**17.73**	**165**	*e*P	**Pn**	**20 21 49.0**	**-2.1**
KMSI	**Cibinong**	**17.79**	**281**	P	**P**	**20 21 53.5**	**+1.1**
WRAB	**Tennant Creek**	**18.30**	**202**	*e*P	**P**	**20 21 56.5**	**-1.4**
	31nm,0.8s						
WRA	**Warramunga Arr**	**18.31**	**202**	P	**P**	**20 21 57.8**	**-0.4**
	3.7nm,0.3s,baz=19,slow=12,SNR=77						
WRA				LR	LR	20 30 21.2	
	comp=Z,155nm,18.7s,baz=5.0,slow=41						
SOEI	**Soe**	**18.37**	**247**	P	**P**	**20 21 59.5**	**+0.6**
DAV	**Davao City (W)**	**18.67**	**302**	LR	LR	20 29 58.7	
	comp=Z,191nm,18.8s,baz=111,slow=40						
LUWI	**Luwuk**	**18.75**	**275**	P	**Pn**	**20 22 04.9**	**+1.4**
	68nm,0.9s,1μm						
KDI	**Kendari**	**18.82**	**266**	P	**Pn**	**20 22 05.8**	**+1.4**
BATI	**Baumata**	**19.09**	**247**	P	**P**	**20 22 06.9**	**+0.2**
	7.6nm,0.3s,baz=43,slow=0.2,SNR=13						
BATI	**Baumata**	**19.09**	**247**	P	**P**	**20 22 07.6**	**+0.9**
HNR	**Honiara**	**19.51**	**110**	*e*P	**Pn**	**20 22 11.0**	**-1.7**
HNR	**Honiara**	**19.51**	**110**	P	**Pn**	**20 22 11.7**	**-1.0**
	20nm,0.3s,baz=237,slow=2.4,SNR=24						
MRSI	**Marisa**	**19.78**	**279**	P	**P**	**20 22 15.8**	**+1.6**
	29nm,0.8s,305nm						
APSI	**Ampana**	**19.88**	**275**	P	**Pn**	**20 22 18.5**	**+1.4**
	92nm,1.0s,776nm						
MMRI	**Maumere**	**19.93**	**253**	P	**P**	**20 22 16.7**	**+0.8**
EDFI	**Ende, Flores**	**20.48**	**253**	P	**P**	**20 22 22.8**	**+0.8**
BKSI	**Bulukumba**	**21.40**	**263**	P	**P**	**20 22 33.7**	**+1.9**
TTSI	**Tana Toraja**	**21.59**	**269**	P	**P**	**20 22 35.5**	**+1.7**
SPSI	**Sidrap Palu**	**21.66**	**267**	P	**P**	**20 22 36.9**	**+2.4**
PCI	**Palu**	**21.68**	**275**	P	**P**	**20 22 36.9**	**+2.1**
	140nm,1.0s,950nm						
MPSI	**Mapaga**	**21.77**	**278**	P	**P**	**20 22 37.4**	**+1.6**
ASAR	**Alice Springs**	**21.90**	**199**	P	**P**	**20 22 36.7**	**-0.4**
	19nm,0.7s,baz=31,slow=9.6,SNR=61						
ASAR				LR	LR	20 31 11.4	
	comp=Z,173nm,21.5s,baz=32,slow=37						
BASI	**Baing, Sumba**	**21.95**	**250**	P	**P**	**20 22 39.2**	**+1.5**
WSI	**Waingapu**	**22.05**	**251**	P	**P**	**20 22 40.1**	**+1.3**
	171nm,1.1s						
SGKI	**Sangatta, Kali**	**23.94**	**275**	P	**P**	**20 23 01.4**	**+3.4**
BKB	**Balikpapan**	**24.58**	**273**	P	**P**	**20 23 06.9**	**+3.0**
MBWA	**Marble Bar**	**27.86**	**228**	*e*P	**P**	**20 23 33.1**	**-0.3**
	558nm,2.0s						
STKA	**Stephens Creek**	**28.83**	**180**	P	**P**	**20 23 40.9**	**-1.0**
	2.6nm,0.5s,baz=5.7,slow=8.1,SNR=9.4						
DZM	**Mont Dzumac**	**30.87**	**130**	P	**P**	**20 24 00.3**	**0.0**
	7.3nm,0.7s,baz=298,slow=15,SNR=3.7						
NWAO	**Narrogin (SRO)**	**37.51**	**214**	P	**P**	**20 24 58.5**	**+0.9**
	23nm,1.0s,baz=302,slow=7.6,SNR=5.4						
KSAR	**Wonju Array Be**	**42.06**	**344**	P	**P**	**20 25 35.1**	**-0.1**
KSRS	**Korea Array**	**42.06**	**344**	P	**P**	**20 25 35.1**	**-0.1**
	1.7nm,0.7s,baz=161,slow=8.0,SNR=6.7						
PSI	**Prapat**	**42.87**	**277**	P	**P**	**20 25 40.5**	**-2.0**
	8.1nm,0.5s,baz=2.8,slow=1.8,SNR=9.7						
ENH	**Enshi**	**44.93**	**320**	*e*P	**P**	**20 25 57.6**	**-1.0**
	10nm,0.7s						
ASAJ	**Asahikawa**	**46.81**	**1**	P	**P**	**20 26 12.3**	**-0.7**
	7.6nm,1.0s,baz=198,slow=4.4,SNR=5.2						
CMAR	**Chiang Mai Arr**	**46.90**	**299**	P	**P**	**20 26 13.7**	**-0.6**
	2.6nm,0.9s,baz=120,slow=6.1,SNR=9.3						
PETK	**Petropavlovsk-**	**57.45**	**12**	P	**P**	**20 27 32.0**	**0.0**
	2.5nm,0.5s,baz=165,slow=6.9						
LSA	**Lhasa**	**57.96**	**308**	*e*P	**P**	**20 27 36.7**	**0.0**
	4.1nm,0.8s						
SONM	**Songino Array**	**59.08**	**333**	P	**P**	**20 27 44.9**	**+1.1**
	0.7nm,0.6s,baz=134,slow=8.4,SNR=3.1						
ODAN	**Odare**	**59.91**	**303**	*e*P	**P**	**20 27 50.5**	**+0.5**
GUN	**Gumba**	**61.54**	**304**	*e*P	**P**	**20 28 01.8**	**+0.6**
KKN	**Kakani**	**62.00**	**304**	*e*P	**P**	**20 28 04.3**	**+0.1**
	17nm,0.9s						
DMN	**Daman**	**62.08**	**303**	*e*P	**P**	**20 28 05.0**	**+0.2**
	46nm,1.2s						
GKN	**Gorkha**	**62.60**	**304**	*e*P	**P**	**20 28 08.3**	**+0.1**
KOLN	**Koldanda**	**63.39**	**303**	*e*P	**P**	**20 28 11.9**	**-1.6**
DANN	**Dangsing**	**63.45**	**304**	*e

EGAK	**Eagle**	87.25	25	*e*P	P	20 30 29.0	-0.4
	7.2nm,1.1s						
DAWY	**Dawson**	87.85	26	*e*P	P	20 30 32.8	+0.3
	10nm,1.0s						
ARU	**Arti**	88.44	327	P	P	20 30 35.0	-0.4
	1.0nm,0.4s,baz=90,slow=3.0,SNR=3.3						
KLMR	**Klimovskoe**	98.32	331	*e*P	P	20 31 17.9	-2.8
KLMR				AMP		20 31 21.2	
	comp=Z,5.0nm,0.8s						
GERES	**GERESS Array B**	116.19	324	PKP	PKPdf	20 36 26.3	-0.4
	comp=Z,0.2nm,0.4s,baz=101,slow=1.4,SNR=4.0						
TORD	**Torodi Ar. Bea**	138.92	287	PKP	PKPdf	20 37 12.3	+1.7
	comp=Z,1.9nm,0.7s,baz=57,slow=2.0						
KOWA	**Kowa**	144.02	291	PKP	PKPbc	20 37 18.5	+0.7
	comp=Z,4.3nm,0.5s,baz=64,slow=4.7,SNR=13						
LPAZ	**La Paz**	145.11	124	PKPbc	PKPdf	20 37 23.7	+1.2
	comp=Z,3.2nm,0.7s,baz=314,slow=1.7,SNR=11						
CPUP	**Villa Florida**	145.75	149	PKPbc	PKPab	20 37 23.8	+0.5
	comp=Z,3.8nm,0.7s,baz=353,slow=2.0,SNR=4.8						
KIC	**Kosan Boka**	146.12	277	*e*PKP1	PKPbc	20 37 24.5	0.0
	comp=Z,93nm,1.7s						
DBIC	**Dimbokro**	146.21	278	PKPbc	PKPbc	20 37 24.9	+0.2
	comp=Z,6.4nm,0.6s,baz=54,slow=3.6,SNR=15						
TIC	**Toumodi**	146.38	278	*e*PKP1	PKPbc	20 37 25.1	-0.1
LIC	**Lamto**	146.41	277	*e*PKP1	PKPbc	20 37 25.2	-0.1
	comp=Z,70nm,1.6s						

*IDC **27** 20:28:34.0±0.8, 21°.90S×168°.85E, h0km, mb4.4/12, mb1 4.5/13, mb1mx4.3/43, mbtmp4.4/13, ML4.0/1, MS3.9/3, Ms1 3.9/3, ms1mx3.4/40, Error ellipse: s-maj=21.5km s-min=19.1km az=21.0*

*ISCJB **27** 20:28:36.9±0.5, 21°.87S±0°.10×168°.87E±0°.07, h31km, mb4.5/16, MS3.8/3, Error ellipse: s-maj=14.2km s-min=9.6km az=5.9*

*NEIC **27** 20:28:37.1±10.0, 21°.87S×168°.84E, h19km±59km, mb4.8/4, Error ellipse: s-maj=24.9km s-min=12.5km az=66.0*

ISC 27 20:28:38.7±0.6, 21°.9S±0°.1×168°.83E±0°.09, h31km, n53, σ0°.66/54, mb4.5/16, MS3.8/3, 1D, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.22**	**264**	Pn	**Pn**	**20 29 12.3**	**-1.2**
	40nm,0.3s,baz=129,slow=13,SNR=717						
DZM				Sn	**Sn**	**20 29 41.3**	**+1.3**
	186nm,0.3s,baz=199,slow=23,SNR=23						
DZM				LR	LR	20 29 49.5	
	comp=Z,1μm,20.6s,baz=100,slow=34						
CTA	**Charters Tower**	**21.15**	**271**	P	**P**	**20 33 23.0**	**+1.6**
	11nm,1.0s,baz=113,slow=15,SNR=4.4						
CTAO	**Charters Tower**	**21.15**	**271**	*e*P	**P**	**20 33 21.5**	**+0.1**
	243nm,1.4s						
PMG	**Port Moresby**	**24.23**	**297**	P	**P**	**20 33 53.8**	**+0.8**
	15nm,0.9s,baz=117,slow=6.0,SNR=4.1						
PMG				LR	LR	20 42 11.6	
	comp=Z,166nm,18.7s,baz=121,slow=34						
STKA	**Stephens Creek**	**26.20**	**242**	P	**P**	**20 34 10.8**	**+0.1**
	15nm,1.1s,baz=65,slow=7.0,SNR=7.8						
STKA				LR	LR	20 43 36.0	
	comp=Z,437nm,20.6s,baz=33,slow=34						
ASAR	**Alice Springs**	**32.21**	**260**	P	**P**	**20 35 03.3**	**-1.0**
	5.7nm,0.9s,baz=83,slow=9.1,SNR=24						
ASAR				LR	LR	20 47 46.5	
	comp=Z,199nm,18.5s,baz=154,slow=36						
WRA	**Warramunga Arr**	**32.24**	**267**	P	**P**	**20 35 03.0**	**-1.5**
	2.8nm,0.9s,baz=97,slow=8.6,SNR=13						
MBWA	**Marble Bar**	**45.52**	**261**	*e*P	**P**	**20 36 55.6**	**-0.2**
VNDA	**Vanda**	**55.80**	**182**	P	**P**	**20 38 12.9**	**+0.4**
	1.9nm,0.9s,baz=2.1,slow=7.7,SNR=10						
SBA	**Scott Base**	**56.05**	**181**	*e*P	**P**	**20 38 15.4**	**+1.2**
	18nm,1.0s						
QSPA	**South Pole Qui**	**68.20**	**180**	P	**P**	**20 39 36.0**	**-0.1**
	5.7nm,0.9s,baz=27,slow=4.4,SNR=11						
QSPA	**South Pole Qui**	**68.20**	**180**	P	**P**	**20 39 36.0**	**-0.1**
KSRS	**Korea Array**	**70.46**	**326**	P	**P**	**20 39 50.0**	**-0.1**
	0.8nm,0.7s,baz=148,slow=7.2,SNR=3.8						
KSAR	**Wonju Array Be**	**70.47**	**326**	P	**P**	**20 39 50.0**	**-0.2**
ENH	**Enshi**	**77.05**	**310**	*e*P	**P**	**20 40 28.2**	**-0.9**
	6.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**79.24**	**295**	P	**P**	**20 40 42.5**	**+1.1**
	5.4nm,1.0s,baz=127,slow=4.0,SNR=21						
CHTO	**Chiang Mai**	**79.40**	**295**	*e*P	**P**	**20 40 43.4**	**+1.1**
	13nm,1.3s						
SNAA	**Sanae**	**86.53**	**183**	P	**P**	**20 41 18.0**	**-0.4**
SNAA	**Sanae**	**86.53**	**183**	P	**P**	**20 41 17.3**	**-1.2**
	9.1nm,0.9s,baz=182,slow=5.5,SNR=26						
VNA3	**Neumayer Olymp**	**87.14**	**180**	P	**P**	**20 41 20.8**	**-0.5**
VNA1	**Neumayer--Stat**	**87.71**	**181**	P	**P**	**20 41 23.9**	**-0.1**
ULN	**Ulaanbaatar**	**88.74**	**324**	*e*P	**P**	**20 41 29.4**	**+0.1**
	3.6nm,1.0s						
SONM	**Songino Array**	**89.08**	**323**	P	**P**	**20 41 30.6**	**-0.3**
	2.3nm,0.9s,baz=143,slow=5.4,SNR=12						
NVAR	**Mina Array Bea**	**90.82**	**49**	P	**P**	**20 41 39.2**	**-0.2**
	0.6nm,0.7s,baz=229,slow=8.7,SNR=4.2						
ARCES	**ARCESS Array B**	**127.49**	**345**	PKP	**PKPdf**	**20 47 40.0**	**+0.1**
	1.9nm,0.8s,baz=60,slow=2.2,SNR=4.3						
VYHS	**Vyhne**	**144.25**	**325**	*e*PKP	PKPbc	20 48 10.5	+0.7
JAVC	**Velka Javorina**	**144.63**	**327**	*e*PKP	**PKPdf**	**20 48 13.0**	**+0.8**
VRAC	**Vranov**	**144.88**	**328**	*e*PKP	**PKPdf**	**20 48 12.3**	**-0.3**
PVCC	**Panska Ves**	**145.00**	**331**	*e*PKP	**PKPdf**	**20 48 13.3**	**+0.6**
BRG	**Berggiesshubel**	**145.02**	**332**	*i* PKP	**PKPab**	**20 48 12.4**	**+0.2**
	29nm,1.1s						
BRG				*i*		20 48 18.4	
	14nm,1.1s						
CLL	**Collm**	**145.10**	**333**	‖ *i* PKPdf	**PKPbc**	**20 48 12.1**	**-0.3**
	comp=Z,26nm,1.0s						
CLL				*i* PKiKPf		20 48 18.4	
KRUC	**Moravsky**	**145.14**	**328**	*e*PKP	**PKPdf**	**20 48 13.0**	**0.0**
GOPC	**GO Pecny, Ondr**	**145.33**	**330**	*e*PKP	**PKPab**	**20 48 14.1**	**+0.7**
CONA	**Conrad Observa**	**146.15**	**327**	*i* PKPab	**PKPab**	**20 48 16.7**	**+0.2**
	comp=Z,21nm,1.6s,SNR=14						
KHC	**Kasperske Hory**	**146.44**	**330**	*e*PKP	**PKPab**	**20 48 17.4**	**-0.2**
KHC				*ep*PKP	**pPKPdf**	**20 48 26.2**	**+0.6**
GERES	**GERESS Array B**	**146.59**	**330**	PKPbc	**PKPbc**	**20 48 17.4**	**+0.2**
	comp=Z,8.2nm,0.9s,baz=40,slow=2.3,SNR=50						
ARSA	**Arzberg**	**146.77**	**326**	PKPbc	**PKPdf**	**20 48 16.7**	**+0.8**
	comp=Z,2.0nm,0.8s						
MOA	**Moln**	**147.00**	**328**	*i* PKPbc	**PKPbc**	**20 48 18.1**	**-0.2**
	comp=Z,6.0nm,1.4s						
SOKA	**Soboth**	**147.39**	**326**	*i* PKPbc	**PKPbc**	**20 48 19.6**	**+0.1**
	comp=Z,9.9nm,1.1s,SNR=8.4						
OBKA	**Obir**	**147.76**	**326**	*e*PKPbc	**PKPbc**	**20 48 20.2**	**-0.3**
	comp=Z,4.7nm,1.1s						
KBA	**Koelnbreinsper**	**147.99**	**328**	*i* PKPbc	**PKPbc**	**20 48 20.8**	**-0.5**
	comp=Z,8.4nm,1.0s,SNR=5.4						
BOJS	**Bojanci**	**148.02**	**324**	*i* PKPbc	**PKPbc**	**20 48 21.3**	**+0.2**
LJU	**Ljubljana**	**148.07**	**325**	*e*PKPbc	**PKPbc**	**20 48 21.2**	**0.0**
MYKA	**Terra Mystica**	**148.14**	**327**	*i* PKPbc	**PKPbc**	**20 48 21.1**	**-0.4**
	comp=Z,8.8nm,1.4s						
ABTA	**Abfaltersbach**	**148.63**	**328**	*i* PKPbc	**PKPbc**	**20 48 21.9**	**-0.9**
	comp=Z,11nm,1.1s,SNR=5.6						
WATA	**Walderalm**	**148.66**	**330**	*e*PKPdf	**PKPdf**	**20 48 18.8**	**-0.3**
	comp=Z,2.3nm,0.4s						
WTTA	**Wattenberg**	**148.69**	**329**	*e*PKPbc	**PKPbc**	**20 48 23.3**	**+0.2**
	comp=Z,9.7nm,0.9s						
MOTA	**Moosalm**	**148.88**	**330**	*i* PKPbc	**PKPbc**	**20 48 23.7**	**+0.2**
	comp=Z,15nm,1.1s,SNR=9.8						
RETA	**Reutte**	**148.93**	**331**	*e*PKPbc	**PKPbc**	**20 48 23.8**	**+0.3**
	comp=Z,4.9nm,0.9s						
FETA	**Feichten**	**149.29**	**330**	*i* PKiKP	**PKPbc**	**20 48 24.9**	**+0.3**
	comp=Z,17nm,1.1s,SNR=8.6						
BFO	**Black Forest**	**149.33**	**334**	*e*PKPbc	**PKPbc**	**20 48 24.4**	**-0.1**
DAVA	**Damuels**	**149.48**	**331**	*i* PKPbc	**PKPbc**	**20 48 25.0**	**0.0**
	comp=Z,7.6nm,0.9s						
DAVOX	**Davos/Dischmat**	**149.86**	**331**	PKPbc	**PKPbc**	**20 48 26.6**	**+0.7**
	comp=Z,15nm,0.9s,baz=90,slow=2.0,SNR=19						

*IDC **27** 20:39:14.7±0.4, 15°.22S×173°.24W, h0km, mb4.8/27, mb1 4.9/27, mb1mx4.8/50, mbtmp4.8/27, MS4.8/36, Ms1 4.8/36, ms1mx4.8/43, Error ellipse: s-maj=15.1km s-min=11.7km az=131.0*

*GCMT **27** 20:39:15.9±0.1, 15°.08S×172°.97W, h14km, MW5.4/131, Moment Tensor Solution. s103,c206; s131,c259; Duration: 1s3 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.37±.02; $M_{\theta\theta}$1.42±.02; $M_{\phi\phi}$-1.05±.02; $M_{r\theta}$0.53±.05; $M_{\theta\phi}$0.74±.02; $M_{\phi r}$0.87±.07; Best double couple: $M_0$1.78000×10^{17} NP1:ϕ_s214.00000°, δ82.00000°, λ-143.00000°. NP2:ϕ_s118.00000°, δ53.00000°, λ-9.00000°. Principal axes: T 1.8820, Plg19.0000°, Azm340.0000°; N -0.2030, Plg52.0000°, Azm223.0000°; P -1.6790, Plg31.0000°, Azm82.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **27** 20:39:15.9±0.1, 15°.22S×173°.27W, h10km, mb5.3/240, MS5.1/45 Error ellipse: s-maj=5.8km s-min=3.6km az=145.0*

*BJI **27** 20:39:16.4, 15°.20S×173°.30W, h24km, mb5.0/39, mB5.3/32, Ms5.1/35, Ms7 4.8/36*

*ISCJB **27** 20:39:17.0±0.1, 15°.28S±0°.04×173°.21W±0°.03, h29km, mb5.2/286, MS5.0/97, Error ellipse: s-maj=6.0km s-min=3.7km az=164.9*

*MOS **27** 20:39:19.7±1.1, 15°.00S×173°.00W, h33km, mb5.3/49, MS4.8/20, Error ellipse: s-maj=11.2km s-min=7.6km az=78.4*

ISC 27 20:39:19.0±0.3, 15°.28S±0°.05×173°.20W±0°.06, h29km, n1052, σ1°.04/1006, mb5.3/285, MS5.0/100, 42C-43D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.94**	**45**	Pn	Pn	20 39 41.7	-8.4
	303nm,0.3s,baz=178,slow=0.6,SNR=167						
AFI				Sn	Sn	20 39 58.8	-15
	980nm,0.3s,baz=165,slow=20,SNR=16						
AFI				LR	LR	20 40 06.0	
	comp=Z,4μm,20.8s,baz=98,slow=27						
KNTN	**Kanton**	**12.52**	**7**	*e*Pn	Pn	20 42 05.8	-10
RAR	**Rarotonga**	**14.04**	**117**	Pn	Pn	20 42 30.8	-5.3
	4.9nm,0.3s,baz=257,slow=8.8,SNR=20						
RAR				Sn	Sn	20 44 55.7	-15
	0.9nm,0.3s,baz=168,slow=19,SNR=2.1						
RAR				LR	LR	20 46 26.7	
	comp=Z,7μm,21.2s,baz=308,slow=31						
RAO	**Raoul Island**	**14.57**	**197**	LR	LR	20 47 05.2	
	comp=Z,3μm,19.4s,baz=14,slow=32						
RAO	**Raoul Island**	**14.57**	**197**	*e*Pn	**Pn**	**20 42 42.0**	**-1.2**
RAO	**Raoul Island**	**14.57**	**197**	*e*P	**Pn**	**20 42 42.0**	**-1.2**
DZM	**Mont Dzumac**	**20.42**	**248**	LR	LR	20 50 40.3	
	comp=Z,5μm,18.6s,baz=81,slow=34						
DZM	**Mont Dzumac**	**20.42**	**248**	*e*P	Pn	20 44 00.9	+4.5
	220nm,1.4s						
DZM				*e*LR	LR	20 49 01.0	
	10μm,25.0s						
TARA	**Tarawa**	**21.49**	**319**	*e*P	**P**	**20 44 05.5**	**0.0**
	274nm,1.3s						
PAE	**Paea**	**22.77**	**99**	*e*P	**P**	**20 44 17.8**	**-1.5**
	15nm,1.2s						
PAE	**Paea**	**22.77**	**99**	*e*T	T	21 07 31.8	
	12nm,0.4s						
PPT	**Papeete**	**22.77**	**99**	P	**P**	**20 44 19.2**	**-0.1**
	73nm,1.1s,baz=20,slow=7.1,SNR=5.1						
PPT				LR	LR	20 50 36.0	
	comp=Z,3μm,21.3s,baz=268,slow=30						
PPT2	**Papeete2**	**22.77**	**99**	*e*P	**P**	**20 44 17.6**	**-1.8**
	96nm,1.2s						
PPT2				*e*LQ	LQ	20 48 41.2	
	13μm,28.5s						
PPT2				*e*LR	LR	20 49 43.4	
	10μm,25.0s,baz=264						
PPT2	**Papeete2**	**22.77**	**99**	*e*T	T	21 07 32.8	
	18nm,0.3s						
TIAR	**Tiarei**	**22.99**	**99**	*e*P	**P**	**20 44 20.1**	**-1.5**
	13nm,1.0s						
TIAR	**Tiarei**	**22.99**	**99**	*e*T	T	21 07 47.8	
	7.3nm,0.3s						
TVO	**Taravao**	**23.09**	**100**	*e*P	**P**	**20 44 20.7**	**-1.9**
	34nm,1.3s						
TVO	**Taravao**	**23.09**	**100**	*e*T	T	21 07 55.6	
	5.5nm,0.4s						
TBI	**Tubuai**	**23.77**	**113**	*e*LQ	LQ	20 49 09.4	
	11μm,29.2s						
TBI				*e*LR	LR	20 50 06.9	
	10μm,26.0s,baz=282						
TBI	**Tubuai**	**23.77**	**113**	*e*T	T	21 08 39.6	
	31nm,0.4s						
PMOR	**Pomariorio Ree**	**24.42**	**93**	*e*P	**P**	**20 44 34.7**	**-0.6**
	512nm,1.1s						
PMOR	**Pomariorio Ree**	**24.42**	**93**	*e*T	T	21 09 32.1	
	9.6nm,0.3s						
URZ	**Urewera**	**24.43**	**199**	P	**P**	**20 44 36.7**	**+1.5**
	21nm,0.8s,baz=349,slow=4.7,SNR=7.7						
URZ				LR	LR	20 53 16.9	
	comp=Z,4μm,21.2s,baz=16,slow=34						
URZ	**Urewera**	**24.43**	**199**	*e*P	**P**	**20 44 34.3**	**-0.9**
	37nm,0.9s						
VAH	**Vaihoa**	**24.67**	**93**	*e*P	**P**	**20 44 36.6**	**-0.9**
	252nm,1.0s						
VAH	**Vaihoa**	**24.67**	**93**	*e*T	T	21 09 50.3	
	20nm,0.3s						
HNR	**Honiara**	**26.86**	**279**	LR	LR	20 53 54.0	
	comp=Z,3μm,19.0s,baz=124,slow=33						
RPZ	**Rata Peaks**	**31.36**	**202**	P	**P**	**20 45 36.2**	**-0.9**
	12nm,1.0s,baz=73,slow=20,SNR=2.2						
TAOE	**Nuku Hiva Isla**	**32.91**	**83**	*e*LR	LR	20 54 19.6	
	7μm,25.9s,baz=258						
TAOE	**Nuku Hiva Isla**	**32.91**	**83**	*e*T	T	21 20 03.0	
	94nm,0.2s						
RKT	**Rikitea**	**36.84**	**108**	*e*LQ	LQ	20 54 51.5	
	2μm,27.0s						
RKT				*e*LR	LR	20 56 17.7	
	4μm,25.5s,baz=281						
RKT	**Rikitea**	**36.84**	**108**	*e*T	T	21 25 01.2	
	19nm,0.4s						
CTA	**Charters Tower**	**38.86**	**257**	P	**P**	**20 46 40.7**	**-1.4**
	1.3nm,0.5s,baz=95,slow=11,SNR=2.3						
CTA				LR	LR	21 00 01.5	
	comp=Z,2μm,21.8s,baz=88,slow=32						
CTAO	**Charters Tower**	**38.86**	**257**	PFAKE		20 46 50.0	+7.9
CTAO				LR	LR		
	comp=Z,3μm,22.0s						
H11S2	**WAKE ISLAND Hy**	**38.97**	**329**	T	T	21 27 53.9	
	baz=149,slow=75,SNR=15						
H11S3	**WAKE ISLAND Hy**	**38.98**	**329**	T	T	21 28 08.7	
	baz=149,slow=75,SNR=16						
H11S1	**WAKE ISLAND Hy**	**38.98**	**329**	T	T	21 28 05.1	
	baz=149,slow=75,SNR=17						
PMG	**Port Moresby**	**39.12**	**274**	LR	LR	21 01 00.9	
	comp=Z,1μm,18.7s,baz=90,slow=33						
KIP	**Kipapa**	**39.41**	**231** ‖	*e*P	**P**	**20 46 47.5**	**+1.1**
H11N3	**WAKE ISLAND Hy**	**39.91**	**330**	T	T	21 29 23.3	
	baz=149,slow=76,SNR=20						
H11N1	**WAKE ISLAND Hy**	**39.91**	**330**	T	T	21 29 24.0	
	baz=149,slow=76,SNR=16						
H11N2	**WAKE ISLAND Hy**	**39.93**	**330**	T	T	21 29 25.1	
	baz=149,slow=76,SNR=22						
COEN	**Coen**	**42.19**	**266**	*e*P	**P**	**20 47 09.1**	**-0.5**
	comp=Z,24nm,1.1s						
STKA	**Stephens Creek**	**44.26**	**240**	P	**P**	**20 47 24.9**	**-1.3**
	comp=Z,9.5nm,0.8s,baz=85,slow=11,SNR=18						
STKA				LR	LR	21 03 52.5	
	comp=Z,880nm,21.3s,baz=76,slow=33						
STKA	**Stephens Creek**	**44.26**	**240**	*e*P	**P**	**20 47 24.7**	**-1.5**
	comp=Z,3.9nm,0.9s						
JAY	**Jayapura**	**47.16**	**281**	LR	LR	21 06 06.1	
	comp=Z,2μm,20.4s,baz=103,slow=34						
JAY	**Jayapura**	**47.16**	**281**	P	**P**	**20 47 50.8**	**+1.5**
WB2	**Warramunga Arr**	**50.05**	**257**	*e*P	**P**	**20 48 08.0**	**-3.5**
	comp=Z,22nm,1.1s						
WRAB	**Tennant Creek**	**50.05**	**257**	*e*P	**P**	**20 48 09.6**	**-1.9**
	comp=Z,16nm,1.0s						
WRAB	**Tennant Creek**	**50.05**	**257** ‖	*i*P	**P**	**20 48 09.9**	**-1.6**
WRAB				pmax	pmax		
	comp=Z,5.0nm,1.2s						
WRA	**Warramunga Arr**	**50.06**	**257**	P	**P**	**20 48 09.8**	**-1.8**
	comp=Z,5.6nm,0.7s,baz=91,slow=7.0,SNR=156						
WRA				LR	LR	21 07 12.8	
	comp=Z,2μm,20.9s,baz=90,slow=34						
AS01	**Alice Springs**	**50.29**	**252**	*e*P	**P**	**20 48 10.5**	**-2.9**
AS31	**Alice Springs**	**50.33**	**252**	*e*P	**P**	**20 48 12.1**	**-1.6**
	comp=Z,10nm,0.8s						
ASAR	**Alice Springs**	**50.33**	**252**	P	**P**	**20 48 11.6**	**-2.1**
	comp=Z,10nm,0.5s,baz=86,slow=8.4,SNR=150						
ASAR				LR	LR	21 07 34.6	
	comp=Z,4μm,21.7s,baz=96,slow=34						
GUMO	**Guam**	**50.44**	**303**	LR	LR	21 07 28.2	
	comp=Z,557nm,19.4s,baz=130,slow=34						
SRPI	**Serui, Papua**	**51.59**	**280**	P	**P**	**20 48 23.7**	**+0.5**
BAKI	**Biak**	**51.93**	**281**	P	**P**	**20 48 26.1**	**+0.4**
RKPI	**Ransiki, Papua**	**53.67**	**280**	P	**P**	**20 48 37.2**	**-1.4**
SAUI	**Saumlaki**	**54.73**	**271**	P	**P**	**20 48 44.8**	**-1.5**
FAKI	**Fak Fak**	**55.09**	**277**	P	**P**	**20 48 48.5**	**-0.5**
FORT	**Forrest**	**55.64**	**243**	*e*P	**P**	**20 48 50.8**	**-1.9**
	comp=Z,55nm,1.1s						
SIJI	**Sorong**	**56.63**	**279**	P	**P**	**20 48 59.8**	**-0.2**
	comp=Z,12nm,0.9s,baz=90,slow=7.6,SNR=3.9						
BNDI	**Bandanaira**	**56.91**	**275**	P	**P**	**20 49 01.2**	**-0.7**
MSAI	**Masohi**	**58.16**	**276**	P	**P**	**20 49 11.0**	**+0.2**
AAI	**Ambon**	**58.77**	**275**	P	**P**	**20 49 15.4**	**+0.3**
RPN	**Rapa Nui**	**60.15**	**113**	LR	LR	21 08 48.7	
	comp=Z,928nm,20.5s,baz=272,slow=30						
LBMI	**Labuha**	**60.29**	**278**	P	**P**	**20 49 26.3**	**+0.8**
SOEI	**Soe**	**61.13**	**267**	P	**P**	**20 49 32.1**	**+0.7**
SOEI	**Soe**	**61.13**	**267**	*e*P	**P**	**20 49 31.1**	**-0.3**
	comp=Z,50nm,1.0s						
SANI	**Sanana**	**61.34**	**276**	P	**P**	**20 49 33.0**	**+0.3**
SBA	**Scott Base**	**63.38**	**185**	*e*P	**P**	**20 49 47.9**	**+2.6**
	comp=Z,15nm,0.9s						
SBA	**Scott Base**	**63.38**	**185**	*e*P	**P**	**20 49 47.9**	**+2.6**
SBA				pmax	pmax		
	comp=Z,15nm,0.9s						
VNDA	**Vanda**	**63.51**	**186**	P	**P**	**20 49 48.1**	**+2.0**
	comp=Z,9.9nm,0.9s,baz=9.1,slow=6.4,SNR=54						
VNDA				LR	LR	21 13 31.9	
	comp=Z,346nm,20.6s,baz=24,slow=32						
VNDA	**Vanda**	**63.51**	**186**	*e*P	**P**	**20 49 48.2**	**+2.0**
	comp=Z,12nm,0.9s						
EDFI	**Ende, Flores**	**63.83**	**268**	P	**P**	**20 49 49.6**	**+0.2**
KMSI	**Cibinong**	**64.01**	**278**	P	**P**	**20 49 51.4**	**+0.9**
BASI	**Baing, Sumba**	**64.59**	**266**	P	**P**	**20 49 54.0**	**-0.2**
DAV	**Davao City (W)**	**64.59**	**286**	PFAKE		20 50 10.0	+16
DAV				LR	LR		
	comp=Z,565nm,21.0s						
NWAO	**Narrogin (SRO)**	**64.85**	**241**	LR	LR	21 15 48.8	
	comp=Z,1μm,20.8s,baz=316,slow=34						
JHJ	**Hachijo jima 2**	**65.81**	**318**	LR	LR	21 13 13.5	
	comp=Z,372nm,22.0s,baz=126,slow=31						
KAPI	**Kappang**	**66.57**	**271**	PFAKE		20 50 20.0	+13
KAPI				LR	LR		
	comp=Z,422nm,22.0s						
KIWB	**Kanaga Island**	**66.94**	**357**	*e*P	**P**	**20 50 08.4**	**-0.2**
PCI	**Palu**	**67.56**	**275**	P	**P**	**20 50 13.2**	**-0.2**
	comp=Z,52nm,1.1s,comp=Z,642nm						
NIKH	**Nikolski High**	**68.08**	**3**	*e*P	**P**	**20 50 14.1**	**-1.7**
	comp=Z,17nm,0.9s						
MJAR	**Matsushiro Arr**	**68.98**	**320**	P	**P**	**20 50 21.0**	**-0.8**
	comp=Z,8.2nm,0.9s,baz=160,slow=6.0,SNR=19						
MJAR				LR	LR	21 15 00.2	
	comp=Z,1μm,21.8s,baz=125,slow=31						
MAJO	**Matsushiro**	**68.98**	**320**	*e*P	**P**	**20 50 21.4**	**-0.3**
	comp=Z,56nm,1.5s						
MAJO	**Matsushiro**	**68.98**	**320**	*c i*P	**P**	**20 50 21.5**	**-0.3**
MAJO				pmax	pmax		
	comp=Z,42nm,1.5s						
MAT	**Matsushiro**	**68.98**	**320**	P	**P**	**20 50 21.5**	**-0.3**
MAT				S	**S**	**20 59 23.0**	**-1.8**
MJB9	**Matsu-Tunnel**	**68.98**	**320**	*e*P	**P**	**20 50 21.6**	**-0.2**
	comp=Z,57nm,1.5s						
SNCC	**San Nicolas Is**	**70.36**	**46**	P	**P**	**20 50 30.3**	**0.0**
	baz=236						
CASY	**Casey**	**70.59**	**205**	*e*P	**P**	**20 50 30.3**	**-0.9**
	comp=Z,9.3nm,0.9s						
CASY				LR	LR		
	comp=Z,100nm,19.0s						
SCZ2	**Santa Cruz Isl**	**70.70**	**45**	P	**P**	**20 50 32.5**	**+0.1**
	baz=235						
SBC	**Santa Barbara**	**70.91**	**45**	P	**P**	**20 50 33.7**	**+0.1**
	baz=235						
PKM	**Mcpherson Peak**	**71.09**	**44**	P	**P**	**20 50 35.0**	**0.0**
	baz=235						
BLG	**Laguna Peak, P**	**71.16**	**45**	P	**P**	**20 50 34.8**	**-0.5**
	baz=236						
SMMC	**Simmler**	**71.22**	**44**	P	**P**	**20 50 35.7**	**+0.1**
	baz=235						
TGY	**Tagaytay City**	**71.37**	**291**	LR	LR	21 16 46.9	
	comp=Z,959nm,21.8s,baz=102,slow=32						
ASAJ	**Asahikawa**	**71.55**	**328**	P	**P**	**20 50 38.6**	**+1.3**
	comp=Z,13nm,0.8s,baz=177,slow=2.3,SNR=15						
ASAJ				LR	LR	21 16 12.0	
	comp=Z,400nm,21.9s,baz=172,slow=31						
ASAJ	**Asahikawa**	**71.55**	**328**	*e*P	**P**	**20 50 36.1**	**-1.2**
	comp=Z,24nm,1.0s						
OSI	**Osito Audit: C**	**71.68**	**45**	P	**P**	**20 50 38.2**	**-0.2**
	baz=236						
DECC	**Green Verdugo**	**71.74**	**46**	P	**P**	**20 50 38.2**	**-0.6**
	baz=236						
KMRM	**Mail Ridge**	**71.85**	**38**	*e*P	**P**	**20 50 39.0**	**-0.4**
	comp=Z,44nm,1.0s						
109C	**Camp Elliot, M**	**71.86**	**47**	P	**P**	**20 50 38.8**	**-0.7**
	baz=237						
JNU	**Nakatsue**	**71.86**	**313**	LR	LR	21 16 51.1

DAC	Darwin (Calif)	73.37	44	eP		P	20 50 48.1 -0.5
	comp=Z,18nm,1.6s						
GSC	Goldstone, Bar	73.37	45	P		P	20 50 47.6 -0.9
	baz=237						
GSC	Goldstone, Bar	73.37	45	eP		P	20 50 48.2 -0.4
	comp=Z,11nm,1.0s						
TIN	Tinemaha, Big	73.38	43	P		P	20 50 48.1 -0.5
	baz=236						
YBH	Yreka Blue Hor	73.39	37	P		P	20 50 48.9 +0.4
	comp=Z,10nm,0.9s,baz=222,slow=7.3,SNR=30						
YBH	Yreka Blue Hor	73.39	37	eP		P	20 50 48.3 -0.2
	comp=Z,14nm,0.8s						
WAKR	Walker	73.43	41	eP		P	20 50 47.5 -1.5
	comp=Z,44nm,1.6s						
BC3	Big Chuckawall	73.43	47	P		P	20 50 48.6 -0.3
	baz=238						
HEC	Hector,Ludlow	73.44	46	P		P	20 50 48.1 -0.8
	baz=237						
YSS	Yuzh-Sakhalins	73.48	330	eP		P	20 50 47.1 -1.6
	comp=Z,41nm,1.1s						
YSS	Yuzh-Sakhalins	73.48	330	⇑iP		P	20 50 48.9 +0.2
YSS				e			20 50 57.0
YSS				eS		S	21 00 16.2 -0.2
YSS				pmax	pmax		
	comp=Z,30nm,1.3s						
GLA	Glamis	73.57	48	P		P	20 50 49.5 -0.2
	baz=239						
GLA	Glamis	73.57	48	eP		P	20 50 47.6 -2.1
	comp=Z,11nm,0.8s						
GLA	Glamis	73.57	48	eP		P	20 50 47.6 -2.1
GLA				pmax	pmax		
	comp=Z,11nm,0.8s						
HUMO	Hull Mountain	73.80	36	eP		P	20 50 48.9 -2.0
	comp=Z,20nm,1.3s						
YERR	Yerington	73.83	41	eP		P	20 50 49.9 -1.4
	comp=Z,30nm,1.5s						
GMRC	Granite Mounta	73.88	46	P		P	20 50 51.1 -0.6
	baz=238						
IRM	Iron Mountain	73.92	47	P		P	20 50 51.5 -0.2
	baz=238						
GRAC	Grapevine Rang	73.92	44	P		P	20 50 51.6 0.0
	baz=236						
M04C	Macdoel	73.93	37	P		P	20 50 51.7 0.0
	baz=232,SNR=5.9						
FURC	Furnace Creek,	73.96	44	P		P	20 50 51.4 -0.4
	baz=237						
TUQ	Turquoise Moun	74.05	46	P		P	20 50 52.1 -0.4
	baz=238						
SHOC	Shoshone, Teco	74.06	45	P		P	20 50 51.9 -0.5
	baz=237						
RYN	Ryan	74.08	42	eP		P	20 50 50.6 -2.2
	comp=Z,42nm,1.9s						
NV01	Mina Array Sit	74.11	42	eP		P	20 50 50.8 -2.2
NVAR	Mina Array Bea	74.11	42	P		P	20 50 52.7 -0.3
	comp=Z,3.1nm,0.7s,baz=230,slow=9.7,SNR=25						
Y12C	Blythe	74.15	48	P		P	20 50 52.7 -0.2
	baz=239						
Y12C	Blythe	74.15	48	eP		P	20 50 51.6 -1.4
	comp=Z,22nm,1.4s						
PAHR	Pah Rah Range	74.17	40	eP		P	20 50 52.3 -0.9
	comp=Z,16nm,1.3s						
NV11	Mina Array Sit	74.21	42	eP		P	20 50 52.2 -1.2
	comp=Z,1.4nm,1.3s						
I03D	Drain, OR	74.28	35	P		P	20 50 53.2 -0.3
	baz=230,SNR=6.3						
214A	Organ Pipe Nat	74.49	50	P		P	20 50 54.9 -0.2
	baz=240						
K04D	Chiloquin, OR	74.50	37	P		P	20 50 54.8 -0.2
	baz=232						
KVN	Kaiserville	74.60	41	eP		P	20 50 55.0 -0.8
	comp=Z,32nm,1.6s						
KVN	Kaiserville	74.60	41	eP		P	20 50 55.0 -0.8
KVN				pmax	pmax		
	comp=Z,32nm,1.6s						
NEE2	Needles Airpor	74.60	47	P		P	20 50 55.1 -0.5
	baz=239						
TPNV	Topopah Spring	74.64	44	P		P	20 50 55.5 -0.5
	baz=237						
J04D	Umpqua Nationa	74.68	36	P		P	20 50 55.9 -0.2
	baz=231,SNR=8.5						
PDMCI	Parker Dam,Lak	74.70	47	P		P	20 50 55.8 -0.4
	baz=239						
QSPA	South Pole Qui	74.76	180	P		P	20 50 57.8 +1.6
	comp=Z,27nm,1.0s,baz=46,slow=3.6,SNR=45						
QSPA				LR	LR		21 19 14.5
	comp=Z,354nm,20.3s,baz=66,slow=32						
QSPA	South Pole Qui	74.76	180	eP		P	20 50 57.3 +1.1
	comp=Z,133nm,1.1s						
KDAK	Kodiak Island	74.77	11	eP		P	20 50 55.2 -0.8
	comp=Z,52nm,1.3s						
KDAK				LR	LR		
	comp=Z,357nm,21.0s						
KDAK	Kodiak Island	74.77	11	eP		P	20 50 55.2 -0.8
KDAK				pmax	pmax		
	comp=Z,52nm,1.3s						
KDAK				MLR	MLR		
	comp=Z,357nm,21.0s						
I04A	Tendick Farm,	74.86	36	P		P	20 50 56.5 -0.5
	baz=231,SNR=7.1						
MOD	Modoc Plateau	74.91	38	eP		P	20 50 56.5 -1.0
	comp=Z,13nm,0.9s						
K05A	Summer Lake	75.06	37	eP		P	20 50 57.9 -0.4
	comp=Z,45nm,1.2s						
SHPR	Sheep Range	75.14	45	eP		P	20 50 58.2 -0.7
	comp=Z,21nm,1.3s						
TPUB	Ta-pu	75.20	300	eP		P	20 50 58.3 -1.0
	comp=Z,31nm,0.9s						
J05D	Fort Rock, OR	75.21	37	P		P	20 50 58.9 -0.3
	baz=232,SNR=20						
W13A	Hualapai Mount	75.29	47	eP		P	20 50 58.6 -1.3
	comp=Z,16nm,1.3s						
G03D	McMinnville, O	75.30	34	P		P	20 50 59.3 0.0
	baz=230						
Y14A	Wickenburg	75.33	48	eP		P	20 50 59.3 -0.7
	comp=Z,11nm,0.8s						
H04A	Detroit Lake	75.55	35	eP		P	20 51 00.1 -0.9
	comp=Z,20nm,0.9s						
H04A				eS		S	21 00 43.2 +3.4
PINE	Pine Mountain	75.69	36	eP		P	20 51 01.2 -0.8
	comp=Z,38nm,0.9s						
I05D	Terrebonne, OR	75.80	36	P		P	20 51 02.2 -0.2
	baz=232						
R11A	Troy Canyon, C	75.84	43	P		P	20 51 02.3 -0.6
	baz=237						
R11A	Troy Canyon, C	75.84	43	eP		P	20 51 02.0 -0.9
	comp=Z,32nm,1.5s						
BMN	Battle Mountai	75.94	41	eP		P	20 51 02.5 -0.9
	comp=Z,13nm,1.0s						
BMN	Battle Mountai	75.94	41	eP		P	20 51 02.5 -0.9
BMN				pmax	pmax		
	comp=Z,13nm,1.0s						
F04D	Rainier, OR	76.00	33	P		P	20 51 03.4 0.0
	baz=230						
E03A	Lebam	76.00	33	eP		P	20 51 03.4 0.0
	comp=Z,36nm,1.1s						
TJN	Taejon	76.04	314	⇓eP		P	20 51 05.6 +1.8
TUC	Tucson	76.17	51	P		P	20 51 04.8 0.0
	baz=242						
TUC	Tucson	76.17	51	eP		P	20 51 04.2 -0.5
	comp=Z,21nm,1.1s						
TUC	Tucson	76.17	51	eP		P	20 51 04.3 -0.5
TUC				pmax	pmax		
	comp=Z,21nm,1.1s						
KSRS	Korea Array	76.21	315	P		P	20 51 06.3 +1.6
	comp=Z,4.8nm,0.9s,baz=128,slow=7.0,SNR=14						
KSRS				LR	LR		21 18 46.9
	comp=Z,356nm,21.9s,baz=110,slow=31						
WVOR	Wild Horse Val	76.22	38	eP		P	20 51 04.5 -0.4
	comp=Z,77nm,1.9s						
WVOR	Wild Horse Val	76.22	38	eP		P	20 51 04.5 -0.4
WVOR				pmax	pmax		
	comp=Z,77nm,1.9s						
KSAR	Wonju Array Be	76.23	315	P		P	20 51 06.3 +1.4
KS01	Wonju Array Si	76.25	315	eP		P	20 51 05.2 +0.2
KS01				eS		S	21 00 44.2 -3.4
TYV	Tymovskoe	76.34	333	eP		P	20 51 04.5 -0.7
TYV				pmax	pmax		
	comp=Z,23nm,1.5s						
TYV				pmax	pmax		
	comp=Z,300nm,4.7s						
G05D	Wamic, OR	76.38	35	P		P	20 51 05.3 -0.3
	baz=231						
NLWA	Neilton Lookou	76.40	32	eP		P	20 51 04.7 -1.0
	comp=Z,20nm,1.2s						
CNPM	China Poot	76.66	11	eP		P	20 51 06.0 -0.9
	comp=Z,25nm,1.0s						
I07A	Izee	76.69	37	eP		P	20 51 08.0 +0.4
	comp=Z,26nm,1.4s						
X16A	Lo Mia Camp, P	76.69	48	eP		P	20 51 08.1 +0.2
	comp=Z,19nm,1.0s						
X16A				eS		S	21 00 50.8 -2.4
LCMT	Little Creek M	76.72	45	eP		P	20 51 08.4 +0.5
	comp=Z,9.9nm,1.0s						
J08A	Circle Bar Ran	76.86	38	eP		P	20 51 08.4 -0.1
	comp=Z,76nm,1.8s						
J08A				eS		S	21 00 55.8 +1.4
319A	Douglas	76.87	52	eP		P	20 51 09.4 +0.6
	comp=Z,26nm,0.9s						
CCUT	Cedar City	76.91	45	eP		P	20 51 09.8 +0.7
	comp=Z,27nm,1.6s						
BRLK	Bradley Lake	76.94	11	eP		P	20 51 08.6 +0.1
	comp=Z,21nm,1.0s						
KNB	Kanab	77.01	46	eP		P	20 51 11.1 +1.5
	comp=Z,84nm,1.9s						
LON	Longmire	77.06	33	eP		P	20 51 09.0 -0.5
	comp=Z,13nm,1.1s						
LON	Longmire	77.06	33	eP		P	20 51 09.0 -0.5
LON				pmax	pmax		
	comp=Z,13nm,1.1s						
U15A	North Rim	77.08	46	eP		P	20 51 09.7 -0.4
	comp=Z,35nm,1.4s						
U15A				eS		S	21 00 55.5 -1.9
PSUT	Pine Spring	77.09	44	eP		P	20 51 10.3 +0.3
	comp=Z,11nm,0.9s						
D05A	Enumclaw	77.24	33	eP		P	20 51 11.2 +0.8
	comp=Z,73nm,1.3s						
RSO	Redoubt South	77.26	10	eP		P	20 51 09.6 -0.9
WUAZ	Wupatki	77.28	47	P		P	20 51 11.2 +0.1
	baz=241						
WUAZ	Wupatki	77.28	47	eP		P	20 51 11.8 +0.7
	comp=Z,22nm,1.3s						
USRK	Ussuriysk Ar.	77.41	323	P		P	20 51 11.5 +0.1
	comp=Z,12nm,1.2s,baz=94,slow=6.1						
USRK				LR	LR		21 19 54.7
	comp=Z,881nm,20.8s,baz=117,slow=32						
SVW2	Sparrevohn	77.42	9	eP		P	20 51 10.3 -0.8
	comp=Z,22nm,1.4s						
PGC	Sidney	77.44	31	eP		P	20 51 11.5 +0.1
	comp=Z,29nm,1.1s						
QZH	Quanzhou	77.56	300	P		P	20 51 13.8 +1.1
QZH				S		S	21 01 02.5 0.0
QZH				LR	LR		
	comp=Z,310nm,20.4s						
QZH				LR	LR		
	comp=Z,470nm,27.5s						
G08A	Pilot Rock	77.73	36	eP		P	20 51 13.5 +0.2
	comp=Z,44nm,1.3s						
G08A				eS		S	21 01 06.5 +2.8
X18A	Snowflake	77.83	49	eP		P	20 51 14.9 +0.7
	comp=Z,14nm,1.1s						
A04D	Lummi Island	77.86	32	P		P	20 51 13.8 0.0
	baz=230,SNR=8.7						
B05A	Bryant	77.88	32	P		P	20 51 13.5 -0.4
	baz=230,SNR=6.8						
MTPU	Mount Pierson	77.97	45	eP		P	20 51 16.3 +1.2
	comp=Z,76nm,1.8s						
LTY	Liberty	77.99	34	eP		P	20 51 14.3 -0.3
	comp=Z,21nm,1.4s						
HAWA	Hanford	78.07	35	eP		P	20 51 15.3 +0.3
	comp=Z,54nm,1.5s						
MSU	Marysvale	78.21	45	eP		P	20 51 16.6 +0.3
W18A	Petrified Fore	78.26	49	P		P	20 51 16.2 -0.4
	baz=242						
C06D	Leavenworth	78.28	33	P		P	20 51 15.4 -0.8
	baz=231						
SLFW	Sugar Loaf	78.37	33	eP		P	20 51 18.8 +1.9
RC01	Rabbit Creek A	78.39	11	eP		P	20 51 16.7 +0.2
	comp=Z,21nm,1.0s						
E08A	Dider Farm, El	78.39	35	eP		P	20 51 17.0 +0.2
	comp=Z,52nm,1.4s						
BMO	Blue Mountains	78.42	37	eP		P	20 51 16.6 -0.6
	comp=Z,37nm,1.5s						
BMO				LR	LR		
	comp=Z,648nm,20.0s						
BMO	Blue Mountains	78.42	37	eP		P	20 51 16.6 -0.6
BMO				pmax	pmax		
	comp=Z,37nm,1.5s						
BMO				MLR	MLR		
	comp=Z,648nm,20.0s						
MFID	Camas Ranch	78.47	39	eP		P	20 51 17.1 -0.4
	comp=Z,17nm,1.0s						
121A	Cookes Peak, D	78.52	52	P		P	20 51 18.2 +0.1
	baz=244						
SUA	Susitna One	78.55	11	eP		P	20 51 16.7 -0.8
	comp=Z,21nm,0.8s						
DUG	Dugway, Tooele	78.64	43	P		P	20 51 18.2 -0.4
	baz=239						
DUG	Dugway, Tooele	78.64	43	eP		P	20 51 18.7 +0.1
	comp=Z,13nm,1.0s						
DUG				LR	LR		
	comp=Z,957nm,22.0s						
DUG	Dugway, Tooele	78.64	43	eP		P	20 51 18.7 +0.1
DUG				pmax	pmax		
	comp=Z,13nm,1.0s						
DUG				MLR	MLR		
	comp=Z,957nm,22.0s						
ZAIG	Zacatecas	78.78	63	eP		P	20 51 20.2 +0.3
	comp=Z,19nm,1.1s						
D08A	Wollman Farm,	78.81	34	eP		P	20 51 19.2 +0.1
	comp=Z,58nm,1.4s						
GAMB	Gambell	78.82	1	eP		P	20 51 20.5 +1.8
	comp=Z,24nm,1.0s						
BGU	Big Grassy Mou	78.88	42	eP		P	20 51 19.9 0.0
	comp=Z,33nm,1.7s						
SKT	Skwentna	78.89	10	eP		P	20 51 17.7 -1.6
	comp=Z,18nm,1.1s						
PMR	Palmer	78.97	11	eP		P	20 51 19.7 +0.1
	comp=Z,24nm,1.0s						
PMR	Palmer	78.97	11	eP		P	20 51 19.7 +0.1
PMR				pmax	pmax		
	comp=Z,24nm,1.0s						
MDJ	Mudanjiang	79.05	322	P		P	20 51 18.5 -2.0
MDJ				pmax	pmax		
	comp=Z,17nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,310nm,4.4s						
Q16A	Castle Valley	79.09	45	eP		P	20 51 22.2 +1.1
	comp=Z,16nm,1.1s						
F10A	Beach Ranch, E	79.11	36	eP		P	20 51 19.9 -1.1
	comp=Z,37nm,1.4s						
GRNR	Gornyy	79.14	330	eP		P	20 51 22.8 +2.0
GRNR				pmax	pmax		
	comp=Z,31nm,1.0s						
GHO	Glory Hole Cre	79.17	11	eP		P	20 51 20.8 -0.1
	comp=Z,28nm,0.8s						
DIV	Divide	79.24	13	eP		P	20 51 20.7 -0.5
	comp=Z,39nm,0.9s						
TMUT	Trail Mountain	79.25	44	eP		P	20 51 23.3 +1.1
	comp=Z,33nm,1.1s						
SML	Sawmill	79.32	12	eP		P	20 51 21.6 0.0
	comp=Z,20nm,1.1s						
SML	Sawmill	79.32	12	eP		P	20 51 21.6 0.0
SML				pmax	pmax		
	comp=Z,20nm,1.1s						
MPU	Maple Canyon	79.33	43	eP		P	20 51 23.1 +0.7
	comp=Z,13nm,1.1s						
BMRM	Bremner River	79.36	14	eP		P	20 51 21.4 -0.5
	comp=Z,64nm,1.1s						
B08A	Colville Reser	79.38	33	eP		P	20 51 21.2 -1.1
	comp=Z,26nm,1.3s						
HLID	Hailey	79.42	39	P		P	20 51 22.7 0.0
	baz=237						
HLID	Hailey	79.42	39	eP		P	20 51 22.7 0.0
	comp=Z,24nm,1.0s						
SPUT	South Promonto	79.45	42	eP		P	20 51 23.2 +0.2
	comp=Z,51nm,1.5s						
LLLB	Lillooet	79.49	30	eP		P	20 51 23.3 +0.5
	comp=Z,15nm,0.9s						
HVU	Hansel Valley	79.49	41	eP		P	20 51 22.9 -0.3
	comp=Z,19nm,1.1s						
KLU	Klutina	79.53	13	eP		P	20 51 22.4 -0.5
	comp=Z,29nm,1.2s						
SCM	Sheep Creek Mo	79.55	12	eP		P	20 51 22.4 -0.5
	comp=Z,33nm,0.9s						
SCM	Sheep Creek Mo	79.55	12	eP		P	20 51 22.4 -0.5
SCM				pmax	pmax		
	comp=Z,33nm,0.9s						
CTU	Camp Tracy	79.59	43	eP		P	20 51 24.8 +1.0
	comp=Z,11nm,0.9s						
C09A	Chrisman Ranch	79.61	34	eP		P	20 51 23.4 -0.1
	comp=Z,36nm,1.4s						
PPLA	Purkeypile	79.64	10	eP		P	20 51 21.8 -1.7
	comp=Z,11nm,1.0s						
JLU	Jordanelle	79.75	43	eP		P	20 51 25.0 +0.3
	comp=Z,13nm,0.9s						
LAZ	Ladron	79.83	50	eP		P	20 51 25.8 +0.6
Y22E	IRIS PASSCAL I	79.85	51	P		P	20 51 25.1 -0.2
	baz=244						
JIS	Juneau Island	79.93	20	eP		P	20 51 25.5 +0.6
	comp=Z,20nm,1.2s						
MNTX	Cornudas Mount	80.00	53	P		P	20 51 25.9 -0.1
	baz=245,SNR=18						
MNTX	Cornudas Mount	80.00	53	eP		P	20 51 25.8 -0.1
	comp=Z,25nm,1.4s						
TCUT	Toone Canyon	80.03	43	eP		P	20 51 26.8 +0.5
	comp=Z,102nm,1.0s						
BNM	Barren Site	80.10	51	eP		P	20 51 27.0 +0.2
PV05	Paradox Valley	80.11	46	eP		P	20 51 27.8 +1.1
	comp=Z,39nm,1.2s						
MA2	Magadan	80.11	342	⇑eP		P	20 51 27.3 +1.4
MA2				pmax	pmax		
	comp=Z,40nm,1.7s						
MVCO	Mesa Verde	80.12	47	P		P	20 51 26.6 -0.2
	baz=242						
CAST	Castle Rocks	80.15	9	eP		P	20 51 24.8 -1.2
	comp=Z,8.3nm,0.8s						
LPM	Los Pinos Moun	80.17	50	eP		P	20 51 27.2 +0.1
HWUT	Hardware Ranch	80.18	42	eP		P	20 51 26.7 -0.3
	comp=Z,9.7nm,0.9s						
HWUT				LR	LR		
	comp=Z,1μm,21.0s						
NJ2	Nanjing	80.25	307	eP		P	20 51 28.0 +0.7
NJ2				pmax	pmax		
	comp=Z,11nm,0.7s						
NJ2				LR	LR		
	comp=Z,410nm,19.6s						
NJ2				LR	LR		
	comp=Z,300nm,17.5s						
NJ2				LR	LR		
	comp=Z,630nm,16.9s						
PV09	Paradox Valley	80.28	46	eP		P	20 51 28.3 +0.6
PV10	Paradox Valley	80.29	46	eP		P	20 51 27.9 +0.2
	comp=Z,34nm,1.2s						
PV03	Paradox Valley	80.36	46	eP		P	20 51 28.3 +0.2
	comp=Z,32nm,1.3s						
TX31	Lajitas Ar. Si	80.39	56	eP		P	20 51 27.7 -0.6
TX31				eP		P	20 51 28.4 +0.1
TXAR	Lajitas Array	80.39	56	P		P	20 51 28.6 +0.3
	comp=Z,15nm,1.1s,baz=223,slow=5.1,SNR=57						
PV04	Paradox Valley	80.39	46	eP		P	20 51 28.7 +0.5
	comp=Z,40nm,1.3s						
PV02	Paradox Valley	80.42	46	eP		P	20 51 28.8 +0.4
	comp=Z,33nm,1.3s						
TRF	Thorofare Moun	80.48	10	eP		P	20 51 27.0 -1.0
	comp=Z,46nm,0.9s						
PV01	Paradox Valley	80.50	46	eP		P	20 51 29.2 +0.4
	comp=Z,30nm,1.2s						
NEW	Newport	80.50	34	P		P	20 51 27.3 -1.0
	baz=234						
NEW	Newport	80.50	34	eP		P	20 51 27.8 -0.6
	comp=Z,15nm,1.3s						
NEW	Newport	80.50	34	eP		P	20 51 27.8 -0.6
NEW				pmax	pmax		
	comp=Z,15nm,1.3s						
HARP	HAARP	80.52	13	eP		P	20 51 28.5 +0.4
	comp=Z,62nm,1.3s						
KLR	Kul'dur	80.53	327	⇑eP		P	20 51 28.6 +0.2
SKAG	Skagway	80.57	19	eP		P	20 51 29.1 +0.8
	comp=Z,36nm,1.2s						
TASM	ASL Pad, Albuq	80.58	50	P		P	20 51 29.1 -0.1
	baz=244,SNR=12						
ANMO	Albuquerque	80.58	50	P		P	20 51 29.3 0.0
	comp=Z,12nm,1.1s,baz=225,slow=8.7,SNR=16						
ANMO	Albuquerque	80.58	50	P		P	20 51 29.5 +0.2
	baz=244						
ANMO	Albuquerque	80.58	50	eP		P	20 51 29.3 0.0
	comp=Z,22nm,1.1s						
ANMO				LR	LR		
	comp=Z,871nm,21.0s						
ANMO	Albuquerque	80.58	50	d iP		P	20 51 29.2 0.0
ANMO				pmax	pmax		
	comp=Z,19nm,1.3s						
TASL	Snake Pit, Alb	80.58	50	P		P	20 51 29.2 -0.1
	baz=244,SNR=12						
PV07	Paradox Valley	80.59	46	eP		P	20 51 29.6 +0.4
	comp=Z,24nm,1.4s						
PV15	Paradox Valley	80.66	46	eP		P	20 51 30.2 +0.5
	comp=Z,20nm,1.1s						
DHY	Denali Highway	80.67	12	eP		P	20 51 27.8 -1.3
	comp=Z,26nm,1.2s						
PAX	Paxson	80.95	12	eP		P	20 51 29.7 -0.8
	comp=Z,19nm,1.2s						
PAX	Paxson	80.95	12	eP		P	20 51 29.7 -0.8
PAX				pmax	pmax		
	comp=Z,19nm,1.2s						
MCK	McKinley	80.97	11	eP		P	20 51 29.9 -0.6
	comp=Z,61nm,1.0s						
MCK	McKinley	80.97	11	eP		P	20 51 29.9 -0.6
MCK				pmax	pmax		
	comp=Z,61nm,1.0s						
GDL2	Guadalupe Moun	81.00	53	eP		P	20 51 31.6 +0.2
MCMT	McKenzie Canyo	81.04	39	eP		P	20 51 31.5 -0.1
AHID	Auburn Hatcher	81.06	41	eP		P	20 51 27.8 -3.9
	comp=Z,178nm,0.8s						
AHID				LR	LR		
	comp=Z,607nm,19.0s						
CN2	Changchun	81.12	320	eP		P	20 51 31.5 -0.2
CN2				eS		S	21 01 39.5 -0.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,350nm,21.0s						
CN2				LR	LR		
	comp=Z,440nm,21.0s						
CN2				LR	LR		
	comp=Z,500nm,23.0s						
MENT	Mentasta	81.30	13	eP		P	20 51 31.4 -0.9
	comp=Z,41nm,1.3s						
SNY	Shenyang	81.32	318	⇑P		P	20 51 34.0 +1.2
SNY				pmax	pmax		
	comp=Z,230nm,12.0s						
SNY				LR	LR		
	comp=Z,180nm,23.5s						
SNY				LR	LR		
	comp=Z,370nm,19.2s						
SNY				LR	LR		
	comp=Z,440nm,19.9s						
MSO	Missoula	81.47	37	P		P	20 51 32.3 -1.4
	baz=237,SNR=13						
MSO	Missoula	81.47	37	eP		P	20 51 33.1 -0.6
	comp=Z,33nm,1.1s						
DLMT	Dillon	81.48	38	eP		P	20 51 33.5 -0.2
	comp=Z,23nm,1.1s						
REDW	Red Top Meadow	81.52	41	eP		P	20 51 34.4 +0.3
	comp=Z,78nm,1.7s						
TPAW	Teton Pass	81.52	41	eP		P	20 51 34.2 0.0
	comp=Z,33nm,1.0s						
DLBC	Dease Lake	81.52	21	eP		P	20 51 33.6 0.0
	comp=Z,10nm,1.0s						
S22A	4UR Ranch, Cre	81.55	47	P		P	20 51 34.6 +0.1
	baz=243						
FXWY	Fox Creek	81.55	40	eP		P	20 51 34.2 -0.1
	comp=Z,43nm,1.5s						
SNOW	Snow King Moun	81.63	41	eP		P	20 51 35.2 +0.4
	comp=Z,28nm,1.0s						
O20A	White River Ci	81.66	45	P		P	20 51 34.8 -0.1
	baz=242						
O20A	White River Ci	81.66	45	eP		P	20 51 35.3 +0.4
	comp=Z,14nm,0.9s						
IMW	Indian Meadow	81.73	40	eP		P	20 51 35.8 +0.5
	comp=Z,33nm,1.3s						
RIDG	Independ'e Rid	81.77	12	eP		P	20 51 34.2 -0.5
	comp=Z,44nm,1.1s						
MOOW	Moose Ponds	81.78	40	eP		P	20 51 35.2 -0.3
	comp=Z,41nm,1.6s						
LOHW	Long Hollow	81.80	41	eP		P	20 51 35.7 +0.1
	comp=Z,80nm,1.9s						
WRH	Wood River Hil	81.80	11	eP		P	20 51 33.9 -1.0
	comp=Z,86nm,1.0s						
LRM	Limekiln Ridge	81.81	38	eP		P	20 51 35.3 -0.3
DOT	Dot Lake	81.85	13	eP		P	20 51 35.4 +0.3
	comp=Z,148nm,1.1s					

comp=Z,40nm,1.1s
CCB Clear Creek Bu 82.01 11 *e*P **P 20 51 34.9 -1.0**
comp=Z,54nm,0.9s
BW06 Boulder Array 82.05 42 P **P 20 51 35.9 -1.0**
baz=241
BW06 Boulder Array 82.05 42 *e*P **P 20 51 36.7 -0.3**
comp=Z,92nm,1.9s
BW06 LR LR
comp=Z,746nm,19.0s
PD31 Pinedale Array 82.05 42 *e*P **P 20 51 36.3 -0.7**
PDAR Pinedale Array 82.05 42 P **P 20 51 36.2 -0.7**
comp=Z,6.7nm,0.8s,baz=214,slow=3.6,SNR=41
PDAR Pinedale Array 82.05 42 *e*P **P 20 51 35.2 -1.7**
SMCO Snowmass 82.09 46 *e*P **P 20 51 38.0 +0.5**
comp=Z,79nm,1.6s
YMR Madison River 82.11 40 *e*P **P 20 51 38.9 +1.7**
comp=Z,137nm,1.7s
SCRK Sand Creek 82.16 13 *e*P **P 20 51 36.1 -0.7**
comp=Z,25nm,1.0s
BOZ Bozeman (W) 82.18 39 P **P 20 51 37.2 -0.3**
baz=239,SNR=18
BOZ Bozeman (W) 82.18 39 *e*P **P 20 51 37.4 0.0**
comp=Z,77nm,1.7s
BOZ LR LR
comp=Z,627nm,20.0s
LNIG Linares 82.19 62 *e*P **P 20 51 36.8 -1.0**
comp=Z,61nm,1.3s
H17A Grant Village 82.21 40 P **P 20 51 38.6 +0.8**
baz=240
COLA College 82.21 11 *e*P **P 20 51 36.5 -0.5**
comp=Z,80nm,0.8s
COLA LR LR
comp=Z,1.0nm,22.0s
MDM Murphy Dome 82.22 10 *e*P **P 20 51 36.4 -0.7**
comp=Z,43nm,1.1s
IL1 Eielson Array 82.30 11 *e*P **P 20 51 35.5 -1.9**
ILAR Eielson Array 82.30 11 P **P 20 51 36.1 -1.3**
comp=Z,12nm,1.0s,baz=209,slow=5.7,SNR=61
ILB Eielson Array 82.30 11 *e*P **P 20 51 36.5 -0.9**
LKWY Lake 82.41 40 PFAKE 20 51 50.0 +11
LKWY LR LR
comp=Z,1μm,20.0s
SEY Seymchan 82.46 345⇑ *i*P **P 20 51 39.3 +1.0**
SDCO Great Sand Dun 82.49 48 P **P 20 51 39.2 -0.2**
baz=244,SNR=20
SDCO Great Sand Dun 82.49 48 *e*P **P 20 51 39.4 -0.1**
comp=Z,34nm,1.3s
HRY Holter Researc 82.64 38 *e*P **P 20 51 40.0 +0.2**
T25A Trinidad 83.02 49 P **P 20 51 41.7 -0.4**
baz=245,SNR=11
T25A Trinidad 83.02 49 *e*P **P 20 51 42.2 +0.1**
comp=Z,27nm,1.1s
RWWY Rawlins 83.08 44 *e*P **P 20 51 42.4 0.0**
comp=Z,108nm,1.3s
WHN Wuhan 83.19 304⇓ *i*P **P 20 51 45.5 +2.7**
WHN LR LR
comp=Z,960nm,20.5s
DAWY Dawson 83.26 14 *e*P **P 20 51 42.2 -0.3**
comp=Z,41nm,1.1s
Q24A Divide 83.27 47 P **P 20 51 43.4 -0.1**
baz=244,SNR=16
ISCO Idaho Springs 83.31 46 P **P 20 51 43.8 +0.1**
baz=244,SNR=9.6
ISCO Idaho Springs 83.31 46 *e*P **P 20 51 44.1 +0.5**
comp=Z,24nm,1.1s
ISCO Idaho Springs 83.31 46 *e*P **P 20 51 44.1 +0.5**
ISCO pmax pmax
comp=Z,24nm,1.1s
RLMT Red Lodge 83.38 40 P **P 20 51 43.8 0.0**
baz=241,SNR=25
RLMT Red Lodge 83.38 40 *e*P **P 20 51 43.5 -0.2**
comp=Z,42nm,1.1s
RDOG Red Dog Mine 83.44 4 *e*P **P 20 51 42.0 -1.3**
comp=Z,24nm,1.1s
EGAK Eagle 83.46 13 *e*P **P 20 51 42.8 -0.6**
comp=Z,23nm,1.0s
EGAK LR LR
comp=Z,601nm,19.0s
GCMT Greycliff 83.47 39 *e*P **P 20 51 44.7 +0.6**
833A Chaparral WMA, 83.47 58 P **P 20 51 44.1 -0.3**
baz=249
833A Chaparral WMA, 83.47 58 *e*P **P 20 51 44.6 +0.3**
comp=Z,37nm,1.0s
N23A Red Feather La 83.57 45 P **P 20 51 44.9 -0.1**
baz=244,SNR=19
N23A Red Feather La 83.57 45 *e*P **P 20 51 45.0 +0.1**
comp=Z,56nm,1.1s
JCT Junction City 83.92 56 P **P 20 51 45.7 -1.0**
baz=248
JCT Junction City 83.92 56 *e*P **P 20 51 46.4 -0.3**
comp=Z,21nm,1.0s
JCT Junction City 83.92 56 *e*P **P 20 51 46.4 -0.3**
JCT pmax pmax
comp=Z,21nm,1.0s
K22A Casper 83.97 43 P **P 20 51 46.3 -0.5**
baz=243,SNR=8.0
K22A Casper 83.97 43 *e*P **P 20 51 46.8 0.0**
comp=Z,77nm,1.4s
COLD Coldfoot 84.00 9 *e*P **P 20 51 46.3 +0.2**
comp=Z,26nm,1.0s
PHWY Pilot Hill 84.08 45 *e*P **P 20 51 47.2 -0.3**
comp=Z,32nm,1.1s
AMTX Amarillo 84.12 52 P **P 20 51 47.1 -0.6**
baz=247
AMTX Amarillo 84.12 52 *e*P **P 20 51 47.2 -0.4**
comp=Z,78nm,1.0s
PMSA Palmer Station 84.20 156 LR LR 21 20 18.0
comp=Z,739nm,21.2s,baz=246,slow=29
FYU Fort Yukon 84.21 11 *e*P **P 20 51 47.6 +0.4**
comp=Z,14nm,1.1s
BILL Bilibino 84.42 352 *e*P **P 20 51 48.1 -0.2**
comp=Z,25nm,1.1s
BILL LR LR
comp=Z,1μm,22.0s
BILL Bilibino 84.42 352 *e*P **P 20 51 48.0 -0.2**
BILL *e* 20 54 57.9
BILL *e*PPP PPP 20 56 56.0
BILL pmax pmax
comp=Z,29nm,1.3s
EGMT Eagleton 84.52 37 P **P 20 51 49.0 -0.3**
baz=240
EGMT Eagleton 84.52 37 PFAKE 20 52 00.0 +11
EGMT LR LR
comp=Z,738nm,21.0s
ABTX Abilene, Hawle 84.84 54 P **P 20 51 50.9 -0.4**
baz=248
ABTX Abilene, Hawle 84.84 54 *e*P **P 20 51 51.1 -0.1**
comp=Z,159nm,1.3s
KSCO Kaye Shedlock' 85.07 48 P **P 20 51 51.7 -0.7**
baz=246
TOLK Toolik Lake Re 85.40 8 P **P 20 51 53.0 -0.3**
baz=203
TOLK Toolik Lake Re 85.40 8 *e*P **P 20 51 53.7 +0.4**
comp=Z,32nm,1.1s
ZEA Zeya 85.42 329 *e*P **P 20 51 54.9 +1.3**
ZEA *e*S **S 21 02 18.0 -4.7**
ZEA pmax pmax
comp=Z,64nm,1.8s
ZEA smax smax
comp=N,500nm,12.0s
BJT Baijiatuau 85.53 313 PFAKE 20 52 10.0 +16
BJT LR LR
comp=Z,460nm,22.0s
BJI Beijing 85.53 313 P **P 20 51 56.0 +1.5**
BJI S **S 21 02 27.3 +2.9**
BJI pmax pmax
comp=Z,23nm,2.0s
BJI LR LR
comp=Z,340nm,17.6s
BJI LR LR
comp=Z,370nm,23.5s
BJI LR LR
comp=Z,660nm,23.5s
435B Jarrell 85.81 57 P **P 20 51 56.1 -0.1**
baz=250
435B Jarrell 85.81 57 *e*P **P 20 51 56.8 +0.6**
comp=Z,61nm,0.9s
LAO LASA Array 85.99 39 P **P 20 51 57.0 +0.2**
baz=243
LAO LASA Array 85.99 39 *e*P **P 20 51 57.6 +0.9**
comp=Z,86nm,1.0s
RSSD Black Hills 86.24 42 P **P 20 51 57.4 -0.8**
baz=245
RSSD Black Hills 86.24 42 *e*P **P 20 51 57.4 -0.8**
comp=Z,43nm,1.1s
RSSD Black Hills 86.24 42 *e*P **P 20 51 57.4 -0.8**
RSSD pmax pmax
comp=Z,43nm,1.1s
OGNE Ogallala 86.27 46 P **P 20 51 57.5 -0.8**
baz=246
WMOK Wichita Mounta 86.28 53 P **P 20 51 57.4 -1.0**
baz=249
WMOK Wichita Mounta 86.28 53 *e*P **P 20 51 57.8 -0.6**
comp=Z,20nm,1.3s
WMOK Wichita Mounta 86.28 53 *e*P **P 20 51 57.8 -0.6**
WMOK pmax pmax
comp=Z,20nm,1.3s
WHTX Lake Whitney, 86.34 56 P **P 20 51 58.1 -0.6**
baz=250,SNR=13
WHTX Lake Whitney, 86.34 56 *e*P **P 20 51 58.9 +0.2**
comp=Z,116nm,1.3s
COCO West Island 86.82 258 PFAKE 20 52 10.0 +8.6
COCO LR LR
comp=Z,1μm,19.0s
HKT Hockley 86.96 58 *e*P **P 20 52 02.4 +0.8**
comp=Z,90nm,1.8s
HKT Hockley 86.96 58 *e*P **P 20 52 02.4 +0.8**
HKT pmax pmax
comp=Z,90nm,1.8s
ENH Enshi 87.02 302 PFAKE 20 52 10.0 +7.9
ENH LR LR
comp=Z,360nm,20.0s
CBKS Cedar Bluff 87.07 49 P **P 20 52 01.5 -0.7**
baz=248
CBKS Cedar Bluff 87.07 49 PFAKE 20 52 10.0 +7.8
CBKS LR LR
comp=Z,707nm,22.0s
MAW Mawson 87.96 199 P **P 20 52 07.2 +1.3**
comp=Z,10nm,0.8s,baz=87,slow=6.1,SNR=13
MAW LR LR 21 31 30.1
comp=Z,761nm,18.1s,baz=108,slow=36
MAW Mawson 87.96 199 *e*P **P 20 52 07.1 +1.2**
comp=Z,6.8nm,1.4s
DGMT Dagmar 88.02 38 P **P 20 52 06.3 -0.1**
baz=244
DGMT Dagmar 88.02 38 *e*P **P 20 52 07.0 +0.5**
comp=Z,84nm,1.0s
DGMT LR LR
comp=Z,1μm,19.0s
INK Inuvik 88.11 14 *e*P **P 20 52 05.9 -0.5**
comp=Z,18nm,0.9s
INK Inuvik 88.11 14 *e*P **P 20 52 05.9 -0.5**
INK pmax pmax
comp=Z,18nm,0.9s
GYA Guiyang 88.16 298 P **P 20 52 10.0 +2.2**
GYA pP pP 20 52 16.3 -0.8
GYA PP **PP 20 55 37.5 +2.3**
GYA SKS **SKSac 21 02 32.3 -2.6**
GYA S **S 21 02 49.0 -1.7**
GYA SS **SS 21 08 41.8 +1.6**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,140nm,6.3s
GYA LR LR
comp=Z,410nm,19.8s
GYA LR LR
comp=Z,480nm,20.0s
GYA LR LR
comp=Z,460nm,20.5s
NATX Nacogdoches 88.50 57 P **P 20 52 09.4 +0.3**
baz=251
NATX Nacogdoches 88.50 57 *e*P **P 20 52 10.0 +0.9**
comp=Z,85nm,0.9s
TUL1 Leonard 88.98 52 P **P 20 52 10.7 -0.6**
baz=250
TUL1 Leonard 88.98 52 *e*P **P 20 52 11.1 -0.2**
comp=Z,44nm,1.4s
YAK Yakutsk 89.08 337 *e*P **P 20 52 09.0 -2.1**
YAK *e**PP **pP 20 52 18.7 -1.8**
YAK *e* 20 55 39.1
YAK *e*S **SKSac 21 02 36.2 -2.3**
YAK *e**SS **SKKSac 21 02 52.4 +2.1**
YAK *e*SS **SS 21 08 51.1 -0.7**
YAK *e*SSS SSS 21 12 25.4
YAK pmax pmax
comp=Z,10.0nm,1.0s
YAK pmax pmax
comp=N,2.0nm,1.3s
YAK pmax pmax
comp=E,2.0nm,0.9s
YAK pmax pmax
comp=Z,53nm,3.1s
YAK pmax pmax
comp=N,17nm,2.8s
YAK pmax pmax
comp=E,18nm,2.8s
YAK smax smax
comp=N,71nm,3.8s
YAK smax smax
comp=E,63nm,3.2s
HHC Hu-ho-hao-te 89.09 313 *e*P **P 20 52 13.8 +2.0**
HHC pmax pmax
comp=E,10.0nm,0.7s
HHC pmax pmax
comp=E,200nm,5.9s
240A Hunter Patters 89.31 57 P **P 20 52 13.3 +0.4**
baz=252
PLCA Paso Flores 89.44 132 LR LR 21 24 51.7
comp=E,467nm,19.3s,baz=266,slow=31
KSU1 Kansas State U 89.45 49 P **P 20 52 13.6 +0.1**
baz=250
341A Kurthwood 89.57 57 P **P 20 52 14.7 +0.5**
baz=252
341A Kurthwood 89.57 57 *e*P **P 20 52 15.3 +1.1**
comp=E,86nm,1.2s
140A Cam and Jess, 89.65 56 P **P 20 52 14.8 +0.3**
baz=252
140A Cam and Jess, 89.65 56 *e*P **P 20 52 15.7 +1.2**
comp=E,88nm,0.8s
X39A Fountain Ranch 89.82 54 P **P 20 52 15.5 +0.2**
baz=251,SNR=6.2
YKA Yellowknife Ar 89.91 23 P **P 20 52 14.2 -0.7**
comp=E,11nm,0.9s,baz=238,slow=4.3,SNR=35
YKW3 Yellowknife Ar 89.95 23 *e*P **P 20 52 14.4 -0.8**
comp=E,14nm,1.0s
Z40A Long Farm, Mag 89.99 56 P **P 20 52 16.1 0.0**
baz=252
241A Mo Tay, Goldon 89.99 57 P **P 20 52 16.7 +0.6**
baz=252
141A Papa Simpson, 90.18 56 P **P 20 52 17.4 +0.5**
baz=252
MIAR Mount Ida 90.25 54 P **P 20 52 17.2 -0.1**
baz=252
MIAR Mount Ida 90.25 54 *e*P **P 20 52 17.3 +0.1**
comp=E,13nm,1.3s
MIAR Mount Ida 90.25 54 *e*P **P 20 52 17.3 +0.1**
MIAR pmax pmax
comp=Z,13nm,1.3s
543A St. Martinvill 90.27 59 P **P 20 52 18.4 +1.0**
baz=253
342A Flagon Creek P 90.27 58 P **P 20 52 18.0 +0.6**
baz=252
W39A Magazine 90.29 54 P **P 20 52 17.3 -0.1**
baz=252,SNR=6.1
W39A Magazine 90.29 54 *e*P **P 20 52 17.9 +0.4**
comp=Z,38nm,1.6s
Y40A Okolona 90.32 55 P **P 20 52 17.0 -0.6**
baz=252
Z41A Richland Creek 90.46 56 P **P 20 52 18.0 -0.3**
baz=252
Z41A Richland Creek 90.46 56 *e*P **P 20 52 19.4 +1.2**
comp=Z,63nm,0.9s
T38A Diamond 90.49 52 P **P 20 52 17.6 -0.7**
baz=251,SNR=12
HHAR Hobbs 90.52 53 *e*P **P 20 52 18.3 -0.1**
comp=Z,9.2nm,0.8s
443A Delano Plantat 90.53 58 P **P 20 52 19.1 +0.4**
baz=253
MDND Maddock 90.57 40 P **P 20 52 18.5 0.0**
baz=248
V39A Pettigrew 90.60 53 P **P 20 52 18.0 -0.9**
baz=252
242A Grayson 90.62 57 P **P 20 52 19.0 0.0**
baz=252
H32A Carlson Farm, 90.75 44 P **P 20 52 17.7 -1.8**
baz=249
Y41A Eaglette Beard 90.80 55 P **P 20 52 19.4 -0.4**
baz=252,SNR=5.7
X40A Basin Creek Fa 90.81 55 P **P 20 52 19.3 -0.6**
baz=252
W40A Ferguson Farm, 90.85 54 P **P 20 52 19.8 -0.2**
baz=252
U39A Green Forest 90.90 53 P **P 20 52 19.4 -0.9**
baz=252,SNR=7.9
142A Monroe 90.93 57 P **P 20 52 20.9 +0.4**
baz=253
G32A Webster 90.98 43 P **P 20 52 18.7 -1.7**
baz=249
JTS JuntasAbangare 91.00 80 LR LR 21 23 44.3
comp=Z,1μm,20.4s,baz=312,slow=29
JTS JuntasAbangare 91.00 80 *i*P **P 20 52 22.5 +1.3**
ECSD EROS Data Cent 91.04 45 P **P 20 52 19.2 -1.5**
baz=250
ECSD EROS Data Cent 91.04 45 *e*P **P 20 52 19.2 -1.5**
comp=Z,13nm,1.0s
ECSD LR LR
comp=Z,1μm,20.0s
R38A Fenwick Farm, 91.14 51 P **P 20 52 20.3 -1.0**
baz=252,SNR=13
Z42A Norrel Spur, H 91.15 56 P **P 20 52 19.8 -1.7**
baz=253
KMI Kunming 91.15 296 P **P 20 52 22.0 0.0**
KMI pP pP 20 52 30.0 -1.3
KMI sP sP 20 52 33.0 -1.7
KMI PP **PP 20 56 00.0 +0.8**
KMI S **S 21 03 15.0 -3.8**
KMI sS pS 21 03 26.5 -4.3
KMI SS **SS 21 09 24.5 +0.7**
KMI pmax pmax
comp=Z,4.0nm,0.5s
KMI pmax pmax
comp=Z,85nm,4.9s
KMI LR LR
comp=Z,190nm,18.2s
KMI LR LR
comp=Z,260nm,19.3s
KMI LR LR
comp=Z,340nm,19.1s
T39A Clever 91.18 52 P **P 20 52 20.6 -1.0**
baz=252,SNR=9.3
E31A Nome 91.19 42 P **P 20 52 19.7 -1.7**
baz=249
N36A Muff Farm, Cla 91.22 48 P **P 20 52 20.8 -0.9**
baz=251
V40A Witts Springs 91.23 53 P **P 20 52 21.1 -0.8**
baz=252,SNR=9.2
V40A Witts Springs 91.23 53 *e*P **P 20 52 21.0 -0.8**
comp=Z,22nm,0.9s
P37A Lathrop 91.26 49 P **P 20 52 20.9 -1.0**
baz=251
UALR University of 91.29 54 *e*P **P 20 52 23.2 +1.1**
comp=Z,50nm,1.3s
U40A Yellville 91.37 53 P **P 20 52 21.6 -0.9**
baz=252,SNR=5.6
S39A Bolivar 91.43 51 P **P 20 52 21.9 -0.8**
baz=252,SNR=6.0
S39A Bolivar 91.43 51 *e*P **P 20 52 22.1 -0.6**
comp=Z,8.2nm,0.9s
W41B Gary Mavity, V 91.48 54 P **P 20 52 22.9 -0.1**
baz=252,SNR=9.7
W41B Gary Mavity, V 91.48 54 *e*P **P 20 52 23.3 +0.3**
comp=Z,43nm,1.2s
WHAR Wooly Hollow 91.48 54 *e*P **P 20 52 23.6 +0.6**
comp=Z,107nm,1.7s
O37A Wolven Farm, M 91.59 49 P **P 20 52 22.2 -1.2**
baz=251
344A Westbrook Farm 91.60 58 P **P 20 52 24.6 +1.0**
baz=253
344A Westbrook Farm 91.60 58 *e*P **P 20 52 25.5 +1.9**
comp=Z,119nm,0.9s
Q38A Cooks Store, C 91.60 50 P **P 20 52 22.4 -1.1**
baz=252,SNR=5.4
G33A Ortonville 91.66 44 P **P 20 52 22.2 -1.3**
baz=250
V41A Mountainview 91.74 53 P **P 20 52 24.1 -0.1**
baz=252,SNR=5.6
X42A Stuttgart 91.78 55 P **P 20 52 24.4 0.0**
baz=253
244A Avery, Jackson 91.81 57 P **P 20 52 25.1 +0.6**
baz=253
R39A Chumby, Stover 91.83 51 P **P 20 52 23.6 -1.0**
baz=252,SNR=15
T40A Mansfield 91.87 52 P **P 20 52 23.8 -0.9**
baz=252,SNR=8.3
P38A Dawn 91.87 49 P **P 20 52 23.5 -1.1**
baz=252,SNR=5.3
P38A Dawn 91.87 49 *e*P **P 20 52 23.9 -0.8**
comp=Z,19nm,0.9s
PEL Peldehue 91.88 125 P **P 20 52 28.1 +3.0**
PEL pmax pmax
comp=Z,24nm,1.5s
FFC Flin Flon 91.90 33 *e*P **P 20 52 23.7 -0.7**
comp=Z,17nm,1.2s
FFC LR LR
comp=Z,404nm,19.0s
FFC Flin Flon 91.90 33 *e*P **P 20 52 23.7 -0.7**
FFC pmax pmax
comp=Z,17nm,1.2s
FFC MLR MLR
comp=Z,404nm,19.0s
CD2 Chengdu 91.92 301 P **P 20 52 24.3 -0.9**
CD2 pmax pmax
comp=Z,10.0nm,0.6s
S40A Lebanon 92.02 52 P **P 20 52 24.7 -0.8**
baz=252,SNR=9.7
M37A Trindle Farm, 92.05 48 P **P 20 52 24.7 -0.8**
baz=252
O38A Galt 92.07 49 P **P 20 52 24.7 -0.9**
baz=252
W42A Bald Knob 92.08 54 P **P 20 52 25.5 -0.2**
baz=253
U41A Viola 92.09 53 P **P 20 52 25.3 -0.5**
baz=253,SNR=16
Q39A Willow Grove F 92.10 50 P **P 20 52 24.3 -1.5**
baz=252
345A Thompson Farm, 92.13 58 P **P 20 52 27.1 +1.0**
baz=254
Y43A Makayla and Ka 92.15 56 P **P 20 52 26.3 +0.3**
baz=253
K36A Gilmore City 92.17 46 P **P 20 52 25.7 -0.3**
baz=251
V42A Cord 92.34 54 P **P 20 52 26.3 -0.6**
baz=253,SNR=7.7
P39B Salisbury 92.40 50 P **P 20 52 25.9 -1.2**
baz=252,SNR=6.9
R40A Maddies Statio 92.40 51 P **P 20 52 26.0 -1.2**
baz=253,SNR=13
R40A Maddies Statio 92.40 51 *e*P **P 20 52 26.6 -0.5**
comp=Z,59nm,1.3s
T41A Mountain View 92.41 52 P **P 20 52 26.5 -0.8**
baz=253,SNR=18
J36A Seneca 1, Swea 92.47 46 P **P 20 52 27.6 +0.3**
baz=251
J36A Seneca 1, Swea 92.47 46 *e*P **P 20 52 26.9 -0.4**
comp=Z,17nm,0.8s
L37A Phoenix Point, 92.49 47 P **P 20 52 26.5 -1.0**
baz=252,SNR=5.5
S41A Jillco Farms, 92.59 52 P **P 20 52 27.0 -1.1**
baz=253,SNR=17
U42A Revenden 92.61 53 P **P 20 52 27.4 -0.8**
baz=253,SNR=10.0
346A Big Creek Wild 92.62 58 P **P 20 52 28.8 +0.5**
baz=254
M38A Pleasantville 92.67 48 P **P 20 52 27.4 -1.0**
baz=252,SNR=5.7
CM01 Chiang Mai Arr 92.74 288 *e*P **P 20 52 32.5 +3.4**
SYO Syowa Base 92.75 191⇓ *e*P **P 20 52 27.0 -1.2**
SYO Syowa Base 92.75 191⇓ *e*pP pP 20 52 38.4 +0.8
Q40A Laux Farm, Aux 92.76 50 P **P 20 52 27.5 -1.3**
baz=253,SNR=6.6
CMAR Chiang Mai Arr 92.77 288 P **P 20 52 29.9 +0.6**
comp=Z,0.6nm,0.7s,baz=108,slow=2.9,SNR=4.3
CMAR LR LR 21 29 14.5
comp=Z,284nm,21.8s,baz=110,slow=32
K37A Belmond 92.78 46 P **P 20 52 28.0 -0.8**
baz=252,SNR=6.1
SCIA State Center 92.81 47 P **P 20 52 28.5 -0.4**
baz=252
SCIA State Center 92.81 47 *e*P **P 20 52 29.6 +0.7**
comp=Z,36nm,0.9s
CHTO Chiang Mai 92.86 289 PFAKE 20 52 40.0 +10
CHTO LR LR
comp=Z,405nm,22.0s
NNA Nana 92.89 103 LR LR 21 24 31.8
comp=Z,437nm,21.5s,baz=246,slow=29
T42A Van Buren 92.92 53 P **P 20 52 28.7 -0.8**
baz=253,SNR=8.4
T42A Van Buren 92.92 53 *e*P **P 20 52 28.9 -0.7**
comp=Z,22nm,1.0s
P40A Paris 92.94 50 P **P 20 52 28.4 -1.2**
baz=253,SNR=8.5

P40A	Paris	92.94	50	*e*P	P	20 52 28.8	-0.8
	comp=Z,27nm,1.0s						
X44A	Crenshaw	92.94	55	P	P	20 52 29.6	-0.1
	baz=254						
VNA3	Neumayer Olymp	92.95	175	P	P	20 52 30.5	+1.3
J37A	Redenius Farm,	93.00	46	P	P	20 52 28.9	-1.0
	baz=252,SNR=5.3						
N39A	Derby Farms, D	93.01	49	P	P	20 52 28.5	-1.4
	baz=252,SNR=8.2						
N39A	Derby Farms, D	93.01	49	*e*P	P	20 52 29.2	-0.7
	comp=Z,51nm,1.2s						
SNAA	Sanae	93.01	177	P	P	20 52 30.1	+0.6
SNAA	Sanae	93.01	177	P	P	20 52 30.0	+0.4
	comp=Z,6.6nm,1.0s,baz=189,slow=4.0,SNR=14						
SNAA				LR	LR	21 33 46.7	
	comp=Z,336nm,18.1s,baz=195,slow=35						
SNAA	Sanae	93.01	177	*e*P	P	20 52 29.9	+0.4
	comp=Z,12nm,1.2s						
SNAA	Sanae	93.01	177‖	*e*P	P	20 52 29.8	+0.3
L38A	Oak Wood Farm,	93.06	47	P	P	20 52 29.5	-0.6
	baz=252,SNR=8.8						
R41A	Rosebud	93.07	51	P	P	20 52 28.6	-1.7
	baz=253,SNR=9.9						
AGMN	Agassiz Nation	93.08	41	P	P	20 52 28.4	-1.7
	baz=251,SNR=6.2						
AGMN	Agassiz Nation	93.08	41	*e*P	P	20 52 28.8	-1.3
	comp=Z,36nm,1.4s						
AGMN				LR	LR		
	comp=Z,875nm,20.0s						
CCM	Cathedral Cave	93.10	52	P	P	20 52 28.8	-1.6
	baz=253						
CCM	Cathedral Cave	93.10	52	*e*P	P	20 52 29.1	-1.3
	comp=Z,20nm,1.1s						
CCM	Cathedral Cave	93.10	52	*e*P	P	20 52 29.1	-1.3
CCM				pmax	pmax		
	comp=Z,20nm,1.1s						
O40A	La Belle	93.24	49	P	P	20 52 29.7	-1.2
	baz=253,SNR=8.1						
LZH	Lanzhou	93.31	306	*e*P	P	20 52 34.5	+2.9
LZH				pP	pP	20 52 42.5	+1.5
LZH				sP	sP	20 52 45.8	+1.4
LZH				PP	**PP**	**20 56 21.0**	**+5.1**
LZH				SKS	**SKSac**	**21 03 05.0**	**+0.7**
LZH				*e*S	**S**	**21 03 38.3**	**+0.7**
LZH				sS	pS	21 03 50.3	+0.6
LZH				SS	**SS**	**21 09 57.3**	**+2.9**
LZH				pmax	pmax		
	comp=Z,27nm,1.3s						
LZH				pmax	pmax		
	comp=Z,140nm,9.5s						
LZH				LR	LR		
	comp=Z,420nm,16.8s						
LZH				LR	LR		
	comp=Z,550nm,15.2s						
LZH				LR	LR		
	comp=Z,620nm,19.5s						
I37A	Lemond, Waseca	93.33	45	P	P	20 52 30.8	-0.5
	baz=252,SNR=5.4						
I37A	Lemond, Waseca	93.33	45	*e*P	P	20 52 31.6	+0.3
	comp=Z,54nm,1.1s						
K38A	Parkersburg	93.35	47	P	P	20 52 30.5	-0.9
	baz=252						
K38A	Parkersburg	93.35	47	*e*P	P	20 52 31.5	0.0
	comp=Z,42nm,1.0s						
S42A	Caledonia	93.36	52	P	P	20 52 30.5	-1.2
	baz=253,SNR=5.5						
Q41A	Truxton	93.37	51	P	P	20 52 30.8	-0.8
	baz=253,SNR=8.5						
M39A	Webster	93.42	48	P	P	20 52 30.8	-1.0
	baz=253,SNR=7.8						
C34A	RKJ Ranch, Bem	93.47	42	P	P	20 52 30.2	-1.7
	baz=251						
X45A	UM Field Stati	93.52	55	P	P	20 52 32.2	-0.1
	baz=254						
OXF	Oxford	93.53	55	P	P	20 52 32.0	-0.4
	baz=254						
OXF	Oxford	93.53	55	*e*P	P	20 52 32.5	0.0
	comp=Z,124nm,1.2s						
OXF	Oxford	93.53	55	P	P	20 52 32.4	0.0
OXF				pmax	pmax		
	comp=Z,120nm,1.2s						
T43A	Greenville	93.56	53	P	P	20 52 31.5	-1.0
	baz=254						
A33A	Warroad	93.58	40	P	P	20 52 30.6	-1.7
	baz=251,SNR=6.9						
VNA1	Neumayer--Stat	93.65	175	P	P	20 52 34.1	+1.7
N40A	Mertquake, Sal	93.67	49	P	P	20 52 32.1	-0.9
	baz=253,SNR=8.6						
FVM	French Village	93.70	52	*e*P	P	20 52 32.9	-0.3
	comp=Z,30nm,1.0s						
FVM	French Village	93.70	52	*e*P	P	20 52 32.9	-0.3
FVM				pmax	pmax		
	comp=Z,30nm,1.0s						
P41A	Barry, Barry	93.71	50	P	P	20 52 32.3	-0.8
	baz=253,SNR=13						
ULM	Lac du Bonnet	93.72	39	P	P	20 52 31.6	-1.3
	comp=Z,12nm,0.9s,baz=256,slow=4.9,SNR=8.8						
ULM	Lac du Bonnet	93.72	39	*e*P	P	20 52 31.8	-1.2
	comp=Z,18nm,0.9s						
L39A	Vinton	93.74	47	P	P	20 52 32.2	-1.1
	baz=253,SNR=6.4						
J38A	Wedel Dairy, R	93.76	46	P	P	20 52 32.6	-0.7
	baz=253						
Y46A	Houston	93.80	56	P	P	20 52 32.9	-0.8
	baz=254						
F36A	Milaca	93.81	44	P	P	20 52 32.6	-0.9
	baz=252,SNR=7.7						
F36A	Milaca	93.81	44	*e*P	P	20 52 32.2	-1.3
	comp=Z,28nm,1.3s						
H37A	Dierke Farm, C	93.83	45	P	P	20 52 32.7	-0.9
	baz=252						
D35A	Remer	93.84	42	P	P	20 52 32.1	-1.5
	baz=252						
S43A	Fulton Ridge,	93.86	52	P	P	20 52 32.7	-1.2
	baz=254						
M40A	Post Highland	93.88	48	P	P	20 52 32.8	-1.1
	baz=253,SNR=8.4						
W45A	Hickory Valley	93.88	55	P	P	20 52 33.7	-0.3
	baz=254						
Q42A	Golden Eagle	93.88	51	P	P	20 52 32.8	-1.1
	baz=254						
B34A	Aery, Baudette	93.90	41	P	P	20 52 32.0	-1.8
	baz=252						
O41A	Passleys Farm,	93.97	50	P	P	20 52 33.5	-0.8
	baz=254,SNR=17						
K39A	Oelwein	93.99	47	P	P	20 52 33.2	-1.2
	baz=253						
I38A	Scanlan Farm,	94.07	46	P	P	20 52 33.5	-1.2
	baz=253,SNR=11						
U44B	Burton Farm, H	94.07	54	P	P	20 52 34.5	-0.4
	baz=254						
C35A	Jirik Farms, M	94.09	42	P	P	20 52 32.9	-1.8
	baz=252,SNR=9.3						
T44A	Benton	94.09	53	P	P	20 52 33.9	-1.0
	baz=254						
SPMN	Marine on St.	94.10	44	P	P	20 52 33.7	-1.1
	baz=253						
GLAT	Glass	94.10	54	*e*P	P	20 52 36.1	+1.0
	comp=Z,144nm,1.0s						
N41A	Harden Midland	94.15	49	P	P	20 52 34.2	-1.0
	baz=254						
R43A	Red Bud	94.16	52	P	P	20 52 34.4	-0.9
	baz=254						
E36A	McGregor	94.19	43	P	P	20 52 33.8	-1.4
	baz=252,SNR=6.0						
P42A	Winchester	94.21	50	P	P	20 52 34.7	-0.8
	baz=254,SNR=12						
P42A	Winchester	94.21	50	*e*P	P	20 52 35.2	-0.2
	comp=Z,77nm,1.0s						
L40A	Anamosa	94.27	48	P	P	20 52 34.6	-1.1
	baz=253,SNR=13						
L40A	Anamosa	94.27	48	*e*P	P	20 52 35.0	-0.7
	comp=Z,53nm,0.9s						
H38A	Maiden Rock	94.29	45	P	P	20 52 34.5	-1.2
	baz=253						
J39A	Decorah	94.30	46	P	P	20 52 34.3	-1.5
	baz=253,SNR=11						
F37A	Hinrichs Farm,	94.37	44	P	P	20 52 34.7	-1.3
	baz=253						
B35A	Bob, Littlefor	94.45	41	P	P	20 52 34.6	-1.7
	baz=252,SNR=11						
B35A	Bob, Littlefor	94.45	41	*e*P	P	20 52 35.0	-1.4
	comp=Z,23nm,1.0s						
D36A	Goodland	94.45	42	P	P	20 52 34.8	-1.6
	baz=252,SNR=5.1						
D36A	Goodland	94.45	42	*e*P	P	20 52 35.2	-1.2
	comp=Z,61nm,1.2s						
UTMT	University of	94.45	54	*e*P	P	20 52 37.5	+0.9
	comp=Z,242nm,1.2s						
ULN	Ulaanbaatar	94.48	318	*e*P	P	20 52 37.5	+0.8
	comp=Z,10nm,1.4s						
ULN	Ulaanbaatar	94.48	318‖	*e*P	P	20 52 37.5	+0.8
ULN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
349A	Repton	94.48	59	P	P	20 52 37.8	+0.9
	baz=255						
148A	Greensboro	94.50	58	P	P	20 52 36.7	-0.3
	baz=255						
W46A	Michie	94.51	55	P	P	20 52 36.0	-0.9
	baz=255						
S44A	Carbondale	94.51	52	P	P	20 52 35.9	-1.0
	baz=254						
K40A	Colesburg	94.52	47	P	P	20 52 35.8	-1.0
	baz=254						
Q43A	New Douglas	94.52	51	P	P	20 52 36.4	-0.5
	baz=254						
U45A	Rockin P Farm,	94.53	54	P	P	20 52 36.6	-0.4
	baz=254						
BRAL	Brewton	94.55	59	P	P	20 52 35.9	-1.3
	baz=255						
M41A	Milan	94.57	48	P	P	20 52 36.1	-1.0
	baz=254						
I39A	Houston	94.58	46	P	P	20 52 35.7	-1.3
	baz=253,SNR=5.6						
I39A	Houston	94.58	46	*e*P	P	20 52 36.2	-0.9
	comp=Z,30nm,0.9s						
O42A	Bath	94.58	50	P	P	20 52 36.1	-1.0
	baz=254						
249A	Camden	94.70	58	P	P	20 52 37.8	-0.1
	baz=255						
PLAL	Pickwick Lake	94.71	55	*e*P	P	20 52 37.5	-0.3
	comp=Z,22nm,1.0s						
G38A	Ridgeland	94.73	45	P	P	20 52 36.6	-1.1
	baz=253,SNR=9.5						
X47A	Russelville	94.76	56	P	P	20 52 37.2	-0.9
	baz=255						
N42A	Yates City	94.79	49	P	P	20 52 36.7	-1.4
	baz=254,SNR=5.6						
L41A	Preston	94.80	48	P	P	20 52 36.5	-1.5
	baz=254						
R44A	Waltonville	94.80	52	P	P	20 52 36.8	-1.4
	baz=254						
C36A	Pine Crest Far	94.83	42	P	P	20 52 36.3	-1.8
	baz=253,SNR=7.4						
P43A	Skaggs, Pawnee	94.84	50	P	P	20 52 37.4	-0.9
	baz=254						
SONA1	Songino Array	94.89	318	*e*P	P	20 52 38.5	-0.1
SONM	Songino Array	94.89	318	P	P	20 52 38.0	-0.5
	comp=Z,0.9nm,0.9s,baz=116,slow=3.4,SNR=6.2						
SONM				LR	LR	21 30 06.5	
	comp=Z,509nm,21.9s,baz=102,slow=32						
V46A	Holladay	94.89	54	P	P	20 52 38.2	-0.5
	baz=255						
D37A	Cotton	94.92	43	P	P	20 52 37.3	-1.2
	baz=253,SNR=17						
F38A	Pierce - Schro	94.94	44	P	P	20 52 37.8	-0.9
	baz=253,SNR=8.2						
TIXI	Tiksi	94.94	344⇑	*i*P	P	20 52 38.7	+0.6
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
H39A	Augusta	94.97	45	P	P	20 52 38.1	-0.8
	baz=254,SNR=10						
J40A	Soldiers Grove	94.99	46	P	P	20 52 37.5	-1.4
	baz=254						
Q44A	Meyer Farm, Va	95.02	51	P	P	20 52 38.3	-0.8
	baz=255						
S45A	Carrier Mills	95.03	52	P	P	20 52 38.7	-0.5
	baz=255						
K41A	Shullsburg	95.08	47	P	P	20 52 38.3	-1.1
	baz=254,SNR=8.3						
149A	Jones	95.13	58	P	P	20 52 39.3	-0.5
	baz=255						
W47A	Westpoint	95.16	55	P	P	20 52 38.8	-1.2
	baz=255						
O43A	Sugar Creek Fa	95.17	50	P	P	20 52 39.6	-0.2
	baz=254						
WVT	Waverly	95.20	54	P	P	20 52 39.3	-0.8
	baz=255						
JFWS	Jewell Farm	95.20	47	P	P	20 52 38.6	-1.3
	baz=254,SNR=9.3						
JFWS	Jewell Farm	95.20	47	*e*P	P	20 52 38.7	-1.3
	comp=Z,46nm,1.0s						
JFWS	Jewell Farm	95.20	47	*e*P	P	20 52 38.7	-1.3
JFWS				pmax	pmax		
	comp=Z,46nm,1.0s						
I40A	Norwalk	95.21	46	P	P	20 52 38.7	-1.3
	baz=254						
G39A	Holcombe	95.22	45	P	P	20 52 38.9	-1.1
	baz=254,SNR=7.5						
C37A	Embarrass	95.25	42	P	P	20 52 38.4	-1.7
	baz=253,SNR=6.3						
HDIL	Hopedale	95.25	50	P	P	20 52 39.5	-0.7
	baz=254						
HDIL	Hopedale	95.25	50	*e*P	P	20 52 39.6	-0.7
	comp=Z,44nm,0.9s						
E38A	The Farm, Brul	95.34	43	P	P	20 52 39.2	-1.3
	baz=254						
V47A	Nunnelly	95.37	54	P	P	20 52 39.1	-1.7
	baz=255						
L42A	Oliver, Polo	95.37	48	P	P	20 52 39.3	-1.4
	baz=254,SNR=10.0						
L42A	Oliver, Polo	95.37	48	*e*P	P	20 52 39.4	-1.4
	comp=Z,53nm,1.0s						
T46A	Princeton	95.39	53	P	P	20 52 40.8	-0.1
	baz=255						
X48A	Hartselle	95.39	56	P	P	20 52 39.8	-1.2
	baz=255						
R45A	Skylar, Fairfi	95.42	52	P	P	20 52 40.6	-0.4
	baz=255						
P44A	Sand Creek, Wi	95.47	51	P	P	20 52 40.4	-0.8
	baz=255						
Z49A	Columbiana	95.49	57	P	P	20 52 40.5	-1.0
	baz=256						
J41A	Loganville	95.49	47	P	P	20 52 39.9	-1.4
	baz=254,SNR=8.5						
H40A	Chili	95.57	45	P	P	20 52 40.7	-0.9
	baz=254,SNR=15						
BCIP	Isla Barro Col	95.58	82	PFAKE		20 52 50.0	+7.7
BCIP				LR	LR		
	comp=Z,570nm,20.0s						
W48A	Pulaski	95.66	55	P	P	20 52 41.3	-0.9
	baz=255						
U47A	Clarksville	95.70	54	P	P	20 52 41.6	-0.8
	baz=255						
M43A	Waltham Townsh	95.73	49	P	P	20 52 41.3	-1.1
	baz=255,SNR=6.0						
Y49A	Blount Mountai	95.75	57	P	P	20 52 41.5	-1.1
	baz=256						
EYMN	Ely	95.76	42	P	P	20 52 40.9	-1.5
	baz=254						
EYMN	Ely	95.76	42	*e*P	P	20 52 41.1	-1.3
	comp=Z,17nm,1.2s						
EYMN				LR	LR		
	comp=Z,1μm,20.0s						
150A	Eclectic	95.76	58	P	P	20 52 42.0	-0.7
	baz=256						
I41A	Arkdale	95.78	46	P	P	20 52 41.7	-0.9
	baz=254						
I41A	Arkdale	95.78	46	*e*P	P	20 52 41.7	-0.9
	comp=Z,24nm,0.8s						
K42A	Prairie Point,	95.81	47	P	P	20 52 41.2	-1.5
	baz=255,SNR=10						
C38A	Sawbill Land.	95.83	42	P	P	20 52 41.0	-1.7
	baz=254,SNR=5.4						
G40A	Rib Lake	95.88	45	P	P	20 52 41.9	-1.0
	baz=254,SNR=7.4						
G40A	Rib Lake	95.88	45	*e*P	P	20 52 42.3	-0.7
	comp=Z,22nm,1.0s						
E39A	Mellen	95.94	44	P	P	20 52 41.8	-1.4
	baz=254,SNR=8.8						
X49A	Woodville	95.98	56	P	P	20 52 42.8	-0.9
	baz=256						
T47A	Sharon Grove	95.98	53	P	P	20 52 43.2	-0.5
	baz=256						
H41A	Junction City	96.08	46	P	P	20 52 42.2	-1.7
	baz=255,SNR=5.7						
H41A	Junction City	96.08	46	*e*P	P	20 52 42.9	-1.0
	comp=Z,42nm,1.1s						
L43A	Garden Prairie	96.08	48	P	P	20 52 42.5	-1.5
	baz=255,SNR=6.2						
F40A	Park Falls	96.11	44	P	P	20 52 42.7	-1.3
	baz=254,SNR=12						
J42A	Columbus	96.11	47	P	P	20 52 42.9	-1.1
	baz=255						
P45A	Graceland, Par	96.14	51	P	P	20 52 43.5	-0.8
	baz=255						
N44A	Piper City	96.17	50	P	P	20 52 43.2	-1.2
	baz=255						
W49A	Belvidere	96.18	55	P	P	20 52 43.3	-1.3
	baz=256						
U48A	Cassie Pea, Po	96.31	54	P	P	20 52 44.4	-0.7
	baz=256						
Y50A	Piedmont	96.31	57	P	P	20 52 44.5	-0.7
	baz=256						
O45A	Potomac	96.33	50	P	P	20 52 44.6	-0.5
	baz=256						
M44A	Midewin, Midew	96.38	49	P	P	20 52 44.7	-0.6
	baz=255						
E40A	Wakefield	96.39	44	P	P	20 52 44.0	-1.3
	baz=255,SNR=12						
I42A	Draeger Farm,	96.40	46	P	P	20 52 44.7	-0.7
	baz=255						
I42A	Draeger Farm,	96.40	46	*e*P	P	20 52 44.9	-0.4
	comp=Z,26nm,1.0s						
SWET	Sewanee	96.47	55	*e*P	P	20 52 45.7	-0.3
	comp=Z,50nm,1.3s						
K43A	Burlington	96.51	48	P	P	20 52 45.1	-0.8
	baz=255						
K43A	Burlington	96.51	48	*e*P	P	20 52 45.1	-0.8
	comp=Z,46nm,0.9s						
T48A	Bowling Green	96.57	53	P	P	20 52 46.0	-0.3
	baz=256						
C39A	Grand Marais	96.61	42	P	P	20 52 44.7	-1.5
	baz=255						
J43A	Natural Harves	96.62	47	P	P	20 52 45.5	-0.8
	baz=255						
V49A	McMinnville	96.63	55	P	P	20 52 45.6	-1.0
	baz=256						
N45A	Kentland	96.64	50	P	P	20 52 46.0	-0.5
	baz=256						
L44A	Lake County Fo	96.68	48	P	P	20 52 45.8	-0.8
	baz=256						
F41A	Three Lakes	96.74	45	P	P	20 52 45.9	-1.0
	baz=255,SNR=10						
F41A	Three Lakes	96.74	45	*e*P	P	20 52 46.4	-0.6
	comp=Z,40nm,1.1s						
COWI	Conover	96.81	44	*e*P	P	20 52 46.6	-0.6
	comp=Z,42nm,1.0s						
COWI				LR	LR		
	comp=Z,1μm,20.0s						
SFIN	Lafayette	96.83	50	P	P	20 52 46.5	-0.9
	baz=256						
152A	Waverly Hall	96.84	58	P	P	20 52 47.2	-0.4
	baz=256						
U49A	Red Boiling Sp	96.90	54	P	P	20 52 46.9	-0.9
	baz=256						
I43A	Langenfeld Bro	96.94	47	P	P	20 52 46.9	-0.9
	baz=256						
S48A	Wiedeman Farm,	96.96	53	P	P	20 52 47.2	-0.9
	baz=256						
W50A	Signal Mountai	96.96	56	P	P	20 52 47.3	-0.9
	baz=256						
E41A	Kenton	97.02	44	P	P	20 52 46.2	-1.9
	baz=255,SNR=7.9						
G42A	Mountain	97.08	45	P	P	20 52 47.0	-1.4
	baz=256						
G42A	Mountain	97.08	45	*e*P	P	20 52 47.5	-1.0
	comp=Z,23nm,1.0s						
N46A	Monticello	97.22	50	P	P	20 52 48.5	-0.7
	baz=256						
V50A	Pikevile	97.24	55	P	P	20 52 48.4	-0.9
	baz=256						
GTA	Gaotai	97.26	309	*e*P	P	20 52 48.5	-1.1
GTA				pP	pP	20 52 56.3	-2.6
GTA				sP	sP	20 52 59.8	-2.5
GTA				SKS	**SKSac**	**21 03 23.3**	**-1.8**
GTA				S	**S**	**21 04 08.3**	**-3.4**
GTA				sS	pS	21 04 21.0	-2.8
GTA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,61nm,5.6s						
GTA				LR	LR		
	comp=Z,180nm,21.9s						
GTA				LR	LR		
	comp=Z,400nm,20.6s						
GTA				LR	LR		
	comp=Z,720nm,21.9s						
C40A	Isle Royale Na	97.27	42	P	P	20 52 48.5	-0.6
	baz=255						
C40A	Isle Royale Na	97.27	42	*e*P	P	20 52 48.4	-0.8
	comp=Z,22nm,0.9s						
H43A	Windswept, Lux	97.34	46	P	P	20 52 49.3	-0.3
	baz=256						
D41A	Chassel	97.44	43	P	P	20 52 49.3	-0.7
	baz=256						
D41A	Chassel	97.44	43	*e*P	P	20 52 49.5	-0.5
	comp=Z,44nm,1.0s						
G43A	Wallace	97.59	45	P	P	20 52 49.7	-1.0
	baz=256						
Y52A	Lilburn	97.65	57	P	P	20 52 50.5	-0.8
	baz=257						
TLY	Talaya	97.67	321	*e*P	Pdif	20 52 54.3	+3.3
TLY				*e*SS	SS	21 10 51.5	-3.6
TLY				*e*SSS	SSS	21 14 47.4	
TLY				pmax	pmax		
	comp=Z,4.0nm,0.9s						
E42A	Champion	97.72	44	P	P	20 52 50.6	-0.7
	baz=256						
V51A	Loudon	97.86	55	P	P	20 52 51.4	-0.7
	baz=257						
V51A	Loudon	97.86	55	*e*P	Pdif	20 52 52.3	+0.1
	comp=Z,98nm,1.8s						
Z53A	Monticello	97.92	58	P	P	20 52 52.3	-0.2
	baz=257						
X52A	Dahlonega	97.96	56	P	Pdif	20 52 53.1	+0.4
	baz=257						
GOGA	Godfrey	98.03	58	P	P	20 52 52.8	-0.2
	baz=257						
F43A	Flat Rock, Esc	98.08	45	P	P	20 52 52.2	-0.7
	baz=257						
TKL	Tuckaleechee C	98.29	55	LR	LR	21 30 37.9	
	comp=Z,698nm,19.1s,baz=246,slow=31						
E43A	Lone Tree Farm	98.32	44	Pdiff	P	20 52 53.0	-1.0
	baz=257						
E43A	Lone Tree Farm	98.32	44	*e*P	P	20 52 53.3	-0.7
	comp=Z,21nm,0.9s						
X53A	Estanollee	98.41	57	Pdiff	P	20 52 53.9	-0.8
	baz=257						
V52A	Sevierville	98.47	55	Pdiff	P	20 52 53.9	-1.0
	baz=257						
F44A	Big Bay de Noc	98.62	45	Pdiff	P	20 52 54.4	-0.9
	baz=257						
155A	Kite	98.68	59	Pdiff	P	20 52 55.2	-0.7
	baz=258						
E44A	Grand Marais A	99.10	44	Pdiff	**Pdif**	**20 52 56.9**	**-0.5**
	baz=258						
P50A	Jamestown	99.12	51	Pdiff	**Pdif**	**20 52 57.1**	**-0.6**
	baz=258						
T52A	Hallie	99.22	54	Pdiff	**Pdif**	**20 52 57.6**	**-0.7**
	baz=258						
O50A	Cable	99.37	51	Pdiff	**Pdif**	**20 52 58.1**	**-0.7**
	baz=258						
E45A	Wooded Hills,	99.55	45	Pdiff	**Pdif**	**20 52 59.0**	**-0.4**
	baz=258						
LPAZ	La Paz	99.67	110	LR	LR	21 30 03.7	
	comp=Z,256nm,19.9s,baz=260,slow=31						
AAM	Ann Arbor	99.78	49	PFAKE		20 53 10.0	+9.4
AAM				LR	LR		
	comp=Z,606nm,19.0s						
ROSC	El Rosal	99.81	88	LR	LR	21 28 35.7	
	comp=Z,424nm,21.9s,baz=246,slow=30						
N50A	Nevada	99.85	50	Pdiff	**Pdif**	**20 53 00.0**	**-0.9**
	baz=258						
ACSO	Alum Creek Sta	99.86	51	Pdiff	**Pdif**	**20 52 59.9**	**-1.2**
	baz=258						
ACSO	Alum Creek Sta	99.86	51	PFAKE		20 53 10.0	+9.0
ACSO				LR	LR		
	comp=Z,1μm,20.0s						
KMSC	Kings Mountain	100.13	56	Pdiff	**Pdif**	**20 53 01.2**	**-1.2**
	baz=258						
NHSC	New Hope	100.67	59	Pdiff	**Pdif**	**20 53 03.3**	**-1.4**
	baz=259						
BLA	Blacksburg	101.25	54	PFAKE		20 53 20.0	+13
BLA				LR	LR		
	comp=Z,789nm,20.0s						
M54A	Oil Creek Stat	102.57	50	Pdiff	**Pdif**	**20 53 12.2**	**-0.9**
	baz=261						
O56A	Blue Knob Stat	103.20	52	Pdiff	**Pdif**	**20 53 15.3**	**-0.6**
	baz=261						
SSPA	Standing Stone	103.76	51	Pdiff	**Pdif**	**20 53 17.5**	**-0.9**
	baz=262						
CBN	Corbin Frederi	103.80	54	PFAKE		20 53 30.0	+11
CBN				LR	LR		

comp=Z,1μm,20.0s
BINY Binghamton 105.39 50 PFAKE 20 57 50.0
BINY LR LR
comp=Z,971nm,20.0s
KURK Kurchatov 113.18 319 PFAKE 20 58 10.0
KURK LR LR
comp=Z,672nm,20.0s
ANWB Willy Bob 114.52 77 PFAKE 20 58 10.0 +13
ANWB LR LR
comp=Z,352nm,21.0s
KSH Kashi 115.56 307 PKP **PKPdf 20 57 59.8 +1.0**
KSH PP **PP 20 59 06.0 +4.8**
KSH PKS **PKSdf 21 01 32.5 -3.1**
KSH SKS **SKSdf 21 05 05.3 -3.8**
KSH SKKS **SKKSac 21 05 56.8 -3.8**
KSH AMB AMB
comp=Z,250nm,5.2s
KSH LR LR
comp=Z,420nm,10.8s
KSH LR LR
comp=Z,320nm,12.2s
KSH LR LR
comp=Z,260nm,7.6s
BBGH Gun Hill 115.86 83 PFAKE 20 58 10.0 +10
BBGH LR LR
comp=Z,1μm,19.0s
BRVK Borovoye 117.97 322 PFAKE 20 58 10.0 +7.2
BRVK LR LR
comp=Z,282nm,22.0s
BRVK Borovoye 117.97 322 ⇓*i*PKIKP **PKPdf 20 58 03.1 +0.3**
KBL Kabul 121.26 301 *e*PKPdf **PKPdf 20 58 10.7 +0.7**
KBL Kabul 121.26 301 *e*PKIKP **PKPdf 20 58 10.7 +0.7**
ARU Arti 123.34 329 *e*PKPdf **PKPdf 20 58 13.2 +0.1**
ARU LR LR
comp=Z,561nm,21.0s
ARU Arti 123.34 329 *i* PKIKP **PKPdf 20 58 12.9 -0.1**
ARU 20 59 53.8
ARU 21 05 23.3
ARU SP SP 21 09 46.5 +0.1
ARU SS **SS 21 16 37.1 -0.8**
ARCES ARCESS Array B 124.52 352 PKP **PKPdf 20 58 14.8 -0.1**
comp=Z,6.1nm,0.9s,baz=318,slow=3.4,SNR=9.3
ABKAR Abkulak array 125.25 320 *e*PKPdf **PKPdf 20 58 17.4 +0.4**
PRGR Permogore 126.10 338 *e*PKIKP **PKPdf 20 58 17.0 -1.1**
PRGR pmax pmax
comp=Z,9.0nm,1.0s
BORG Borgarnes 126.99 15 PFAKE 20 58 30.0 +10
BORG LR LR
comp=Z,168nm,19.0s
ABPO Ambohimpanom 127.61 231 PFAKE 20 58 30.0 +7.4
ABPO LR LR
comp=Z,301nm,20.0s
KLMR Klimovskoe 128.75 340 *e*PKIKP **PKPdf 20 58 20.8 -2.4**
KLMR *e* 21 00 26.4
KLMR pmax pmax
comp=Z,13nm,1.3s
KLMR Klimovskoe 128.75 340 *e*PKPdf **PKPdf 20 58 20.9 -2.3**
KLMR AMP 20 58 24.0
comp=Z,13nm,1.3s
KLMR *e*PP **PP 21 00 26.5 -2.9**
GEYT Alibeck 129.59 307 PKP **PKPdf 20 58 25.8 +0.2**
comp=Z,1.1nm,0.7s,baz=239,slow=2.5,SNR=4.4
FINES FINESS Array B 131.87 348 PKP **PKPdf 20 58 29.7 +0.6**
comp=Z,2.5nm,0.8s,baz=40,slow=3.2,SNR=6.0
BOSA Boshof 132.85 202 PKP **PKPdf 20 58 33.7 +1.5**
comp=Z,3.5nm,0.9s,baz=76,slow=4.5,SNR=3.9
OBN Obninsk 134.09 337 *e*PKIKP **PKPdf 20 58 33.3 -0.1**
HFS Hagfors 134.94 355 PKP **PKPdf 20 58 37.2 +2.3**
comp=Z,2.0nm,0.9s,baz=159,slow=4.3,SNR=2.9
KIV Kislovodsk 138.24 321 PFAKE 20 58 50.0 +8.3
KIV LR LR
comp=Z,213nm,20.0s
KIV Kislovodsk 138.24 321 *i* PKIKP **PKPdf 20 58 42.4 +0.7**
KIV *e* 21 01 29.5
KIV *e*SS SS 21 19 42.0 +1.1
KIV *e*SSS SSS 21 24 50.4
KIV pmax pmax
comp=Z,6.0nm,1.1s
KIV MLR MLR
comp=Z,384nm,24.0s
NEY Neytrino 138.58 320⇑*i*PKIKP **PKPdf 20 58 45.5 +3.0**
GNI Garni 138.73 314 *d i*PKIKP **PKPdf 20 58 42.1 -0.7**
ESK Eskdalemuir 139.31 9 PFAKE 20 58 50.0 +6.8
ESK LR LR
comp=Z,471nm,19.0s
SOC Sochi 140.24 322 *i* PKIKP **PKPdf 20 58 47.7 +2.5**
SOC *e* 21 01 43.5
SOC *e*PPP PPP 21 04 45.0
SOC MLR MLR
comp=Z,314nm,19.0s
AKASG Malin Array Be 140.31 338 PKP **PKPdf 20 58 45.3 +0.2**
comp=Z,3.2nm,0.8s,baz=34,slow=2.2,SNR=8.5
AKBB Malin Array Si 140.31 338 *e*PKPdf **PKPdf 20 58 46.1 +1.1**
AKBB Malin Array Si 140.31 338 *e*PKIKP **PKPdf 20 58 46.2 +1.1**
KIEV Kiev 140.32 338⇑*e*PKIKP **PKPdf 20 58 44.7 -0.4**
AK11 Malin Array Si 140.35 338 *e*PKPdf **PKPdf 20 58 45.4 +0.2**
SORM Soroca 142.73 336 ⇓*i*P **PKPdf 20 58 48.9 -0.6**
SORM Soroca 142.73 336 ⇓PKIKP **PKPdf 20 58 48.9 -0.6**
LVV L'vov 142.81 341 *e*PKHKP PKPpre 20 58 40.8
KWP Kalwaria Pacla 143.37 343 *e*PKP **PKPdf 20 58 51.5 +0.8**
KWP Kalwaria Pacla 143.37 343 *e*PKPdf **PKPdf 20 58 50.9 +0.2**
KIS Kishinev 143.46 334 *e*PP PP 21 02 29.0 +27
KIS *e*L L 21 48 12.0
KIS LRM MLR 22 00 42.0
comp=Z,400nm,22.0s
OJC Ojcow 143.59 346 *e*PKP PKPbc 20 58 48.1 -0.3
KSP Ksiaz 143.71 350 *e*PKP PKPbc 20 58 49.8 +1.0
CLL Collm 143.72 353 *e*PKPdf PKPbc 20 58 49.0 +0.3
comp=Z,6.0nm,0.8s
CLL *e*PKiKP **PKiKP 20 58 53.0 -1.6**
CLL *es*PKiKP pPKPdf 20 59 00.0 -0.8
CLL *e*PP **PP 21 02 04.0 +0.9**
CLL *e* 21 08 24.0
CLL *e*PSKS 21 12 18.0
CLL *e*PPS PPS 21 14 43.0
CLL *e* 21 17 41.0
CLL *e*(SS) 21 20 24.0
CLL *e*PSPS 21 21 44.0
CLL *e*SSS SSS 21 26 00.0
CLL *e*SSSS 21 30 18.0
CLL Lm MLR 22 11 00.0
comp=N,200nm,18.9s
CLL Lm MLR 22 11 00.0
comp=E,200nm,20.0s
CLL Lm MLR 22 11 00.0
comp=Z,300nm,18.6s
CLL Collm 143.72 353 *e*PKPdf PKPbc 20 58 49.4 +0.6
CLL Collm 143.72 353 *e*PKIKP PKPbc 20 58 49.4 +0.7
BRG Berggiesshubel 144.04 352 *e*PKP **PKPdf 20 58 52.2 +0.4**
comp=Z,4.4nm,1.0s
BRG Berggiesshubel 144.04 352 *e*PKIKP **PKPdf 20 58 52.2 +0.4**
BRG pmax pmax
comp=Z,4.0nm,1.0s
UPC Upice 144.09 350 AMS AMS 22 01 00.0
comp=Z,400nm,19.9s
TSUM Tsumeb 144.12 198 *e*PKPdf **PKPdf 20 58 52.3 -0.8**
DPC Dobruska-Polom 144.18 350 *e*PKP **PKPdf 20 58 51.3 -0.8**
DPC *ep*PKP **PKiKP 20 58 54.9 -0.8**
DPC AMS AMS 22 01 50.0
comp=Z,300nm,22.0s
DPC Dobruska-Polom 144.18 350 *e*PKIKP **PKPdf 20 58 51.3 -0.8**
DPC *e* 20 58 57.5
DPC MLR MLR
comp=Z,300nm,22.0s
NIE Niedzica 144.22 345 *e*PKP PKPbc 20 58 50.9 +0.5
NIE Niedzica 144.22 345 PKIKP PKPbc 20 58 50.9 +0.5
PVCC Panska Ves 144.29 352 *e*PKP **PKPdf 20 58 51.8 -0.4**
PVCC AMS AMS 22 05 30.0
comp=Z,400nm,19.2s
PVCC Panska Ves 144.29 352 *e*PKIKP **PKPdf 20 58 51.8 -0.4**
PVCC MLR MLR
comp=Z,400nm,19.2s
BUR08 Bucovina Ar. S 144.31 339 *e*PKPdf **PKPdf 20 58 52.0 -0.5**
OKC Ostrava-Krasne 144.32 347 *e*PKP **PKPdf 20 58 51.8 -0.5**
OKC AMS AMS 21 57 30.0
comp=Z,400nm,22.4s
OKC Ostrava-Krasne 144.32 347 *e*PKIKP **PKPdf 20 58 51.8 -0.5**
OKC MLR MLR
comp=Z,400nm,22.4s
BUR04 Bucovina Ar. S 144.33 339 *e*PKPdf PKPbc 20 58 51.0 +0.1
BURAR Bucovina Array 144.33 338 ⇓*i*P **PKPdf 20 58 52.0 -0.6**
BURAR Bucovina Array 144.33 338 ⇓PKIKP **PKPdf 20 58 52.0 -0.6**
KRLC Kraliky 144.37 349 *e*PKP **PKPdf 20 58 52.1 -0.4**
KRLC Kraliky 144.37 349 *e*PKIKP **PKPdf 20 58 52.1 -0.4**

UZH Uzhgorod 144.39 342 *e*PKIKP **PKPab 20 58 49.6 -1.0**
UZH *e* 20 58 56.4
UZH *e* 20 59 00.8
MORC Moravsky Berou 144.50 348 ⇓*i*P PKPbc 20 58 51.4 +0.1
MORC Moravsky Berou 144.50 348 *e*PKPdf PKPbc 20 58 51.7 +0.4
MORC Moravsky Berou 144.50 348 *e*PKIKP PKPbc 20 58 51.7 +0.4
MORC Moravsky Berou 144.50 348 *e*PKP PKPbc 20 58 51.3 0.0
UCC Uccle 144.52 3 ⇓PKP **PKPab 20 58 50.9 -0.1**
BEBN Eben Emael 144.57 1 ⇑PKP **PKPdf 20 58 54.9 +2.3**
BIZ Bicaz 144.58 337⇑*i*P PKPbc 20 58 51.5 -0.1
LANS Liptovska Anna 144.67 346 *e*PKIKP **PKPdf 20 58 52.5 -0.5**
LANS Liptovska Anna 144.67 346 *e*PKP **PKPdf 20 58 52.5 -0.5**
TESR Tescani 144.72 336⇑*i*P **PKPab 20 58 50.9 -1.0**
MEM Membach 144.76 1 ⇑PKP **PKPab 20 58 51.8 -0.1**
TRPA Tarpa 144.76 342 ⇓*i*P **PKPab 20 58 51.6 -0.4**
TRPA Tarpa 144.76 342⇓*e*PKPbc **PKPab 20 58 51.5 -0.5**
PRU Pruhonice 144.82 351 *e*PKP **PKPdf 20 58 53.1 -0.1**
PRU *ep*PKP **PKiKP 20 58 58.2 +1.3**
PRU AMS AMS 22 05 50.0
comp=Z,400nm,18.8s
PRU Pruhonice 144.82 351 *e*PKIKP **PKPdf 20 58 53.1 -0.1**
PRU *e* 20 58 58.2
PRU MLR MLR
comp=Z,400nm,18.8s
NKC Novy Kostel 144.84 354 *e*PKP **PKPdf 20 58 53.5 +0.3**
NKC Novy Kostel 144.84 354 *e*PKIKP **PKPdf 20 58 53.5 +0.3**
GOPC GO Pecny, Ondr 144.86 351 *e*PKP PKPbc 20 58 52.7 +0.3
GOPC *ep*PKP **PKiKP 20 58 58.4 +1.3**
GOPC AMS AMS 22 06 10.0
comp=Z,400nm,19.5s
GOPC GO Pecny, Ondr 144.86 351 *e*PKIKP PKPbc 20 58 52.7 +0.3
GOPC *e* 20 58 58.4
GOPC MLR MLR
comp=Z,400nm,19.5s
BMR Baia Mare 144.87 340⇑*i*P **PKPab 20 58 52.4 0.0**
BMR Baia Mare 144.87 340 ⇑PKIKP **PKPab 20 58 52.4 0.0**
TLCR 144.88 333⇑*i*P **PKPdf 20 58 53.2 -0.2**
TLCR 144.88 333 ⇑PKIKP **PKPdf 20 58 53.2 -0.2**
BCLA Clavier 144.94 2 ⇑PKP **PKPab 20 58 52.2 -0.3**
KECS Kecovo 145.03 344 *e*PKIKP **PKPdf 20 58 54.8 +1.2**
KECS Kecovo 145.03 344 *e*PKP **PKPdf 20 58 54.8 +1.2**
ARCR ARCALIA 145.09 339 ⇓*i*P **PKPdf 20 58 54.3 +0.6**
VRAC Vranov 145.14 349 ⇓*i*P **PKPdf 20 58 53.4 +0.1**
VRAC Vranov 145.14 349 ⇓PKIKP **PKPab 20 58 53.4 +0.1**
VRAC Vranov 145.14 349 *e*PKP **PKPbc 20 58 53.1 -0.2**
CFR Carcaliu 145.19 333 ⇓*i*P **PKPdf 20 58 53.8 -0.1**
CFR Carcaliu 145.19 333 ⇓PKIKP **PKPdf 20 58 53.8 -0.1**
VRI Vrincioaia 145.22 335 ⇓*i*P **PKPbc 20 58 53.7 0.0**
VRI Vrincioaia 145.22 335 ⇓PKIKP **PKPbc 20 58 53.7 0.0**
PLOR Plostina 145.27 335⇑*i*P **PKPbc 20 58 53.8 0.0**
PLOR Plostina 145.27 335 ⇑PKIKP **PKPbc 20 58 53.8 0.0**
JAVC Velka Javorina 145.35 347 *e*PKP **PKPdf 20 58 55.0 +0.8**
KRUC Moravsky 145.41 349 *e*PKP **PKPbc 20 58 53.8 -0.3**
VYHS Vyhne 145.43 346 *e*PKIKP **PKPbc 20 58 54.1 -0.2**
VYHS Vyhne 145.43 346 *e*PKP **PKPbc 20 58 54.1 -0.2**
GRFO Grafenberg 145.50 355 *e*PKPbc **PKPbc 20 58 54.5 +0.1**
GRFO Grafenberg 145.50 355 *e*PKIKP **PKPbc 20 58 54.5 +0.1**
GRER 145.52 335⇑*i*P **PKPab 20 58 56.5 +1.7**
LTVH L"tav"rtes, 145.62 342⇓*e*PKPbc **PKPab 20 58 55.0 -0.1**
TIRR Tirgusor 145.63 332 ⇓*i*P **PKPab 20 58 55.5 +0.3**
TIRR Tirgusor 145.63 332 *e*PKPdf **PKPab 20 58 55.4 +0.2**
TIRR Tirgusor 145.63 332 ⇓PKIKP **PKPab 20 58 55.5 +0.2**
HARR Harsova 145.66 333 ⇓*i*P **PKPab 20 58 57.1 +1.7**
HARR Harsova 145.66 333 ⇓PKIKP **PKPab 20 58 57.1 +1.7**
DOPR Dopca 145.66 337⇑*i*P **PKPab 20 58 56.1 +0.7**
TLB Topalu 145.69 333⇑*i*P **PKPab 20 58 55.5 0.0**
TLB Topalu 145.69 333 ⇑PKP2 **PKPab 20 58 55.5 0.0**
PSZ Piszkesteto 145.70 344 ⇓*i*P **PKPab 20 58 55.6 0.0**
PSZ Piszkesteto 145.70 344⇓*e*PKPdf **PKPbc 20 58 55.3 +0.1**
PSZ Piszkesteto 145.70 344 *e*PKPdf **PKPbc 20 58 55.4 +0.1**
PSZ Piszkesteto 145.70 344 ⇓PKIKP **PKPab 20 58 55.6 0.0**
WLF Walferdange 145.71 1 ⇑PKP **PKPab 20 58 55.3 -0.1**
WLF Walferdange 145.71 1 *e*PKPdf **PKPab 20 58 55.4 0.0**
WLF Walferdange 145.71 1 *e*PKIKP **PKPab 20 58 55.4 0.0**
SMOL Smolenice 145.73 347 *e*PKIKP **PKPab 20 58 56.1 +0.6**
SMOL Smolenice 145.73 347 *e*PKP **PKPab 20 58 56.1 +0.6**
KHC Kasperske Hory 145.79 352 *e*PKP **PKPab 20 58 55.9 +0.1**
KHC *ex* x 20 59 02.5
KHC *ex* x 21 20 53.6
KHC AMS AMS 22 07 00.0
comp=Z,400nm,18.2s
KHC Kasperske Hory 145.79 352 *e*PKPdf **PKPab 20 58 55.9 +0.1**
KHC Kasperske Hory 145.79 352 *e*PKP2 **PKPab 20 58 55.9 +0.1**
KHC MLR MLR
comp=Z,400nm,18.2s
MLR Muntele Rosu 145.84 336 PKPbc **PKPab 20 58 57.1 +0.9**
comp=Z,4.6nm,0.8s,baz=78,slow=2.7,SNR=33
MLR Muntele Rosu 145.84 336 ⇓*i*P **PKPbc 20 58 55.9 +0.1**
MLR Muntele Rosu 145.84 336 *e*PKPdf **PKPbc 20 58 55.7 -0.1**
MLR Muntele Rosu 145.84 336 *e*PKP2 **PKPbc 20 58 55.7 -0.1**
MODS Modra-Piesok 145.89 348 *e*PKIKP **PKPdf 20 58 54.8 -0.3**
MODS Modra-Piesok 145.89 348 *e*PKP **PKPdf 20 58 54.8 -0.3**
DRGR 145.90 340⇑*i*P **PKPbc 20 58 55.8 -0.1**
DRGR 145.90 340 ⇑PKP2 **PKPbc 20 58 55.8 -0.1**
ISR Istrita 145.91 335⇑*i*P **PKPab 20 58 56.3 -0.1**
ISR Istrita 145.91 335 ⇑PKP2 **PKPab 20 58 56.3 -0.1**
GEC2 GERESS Array S 146.06 352 *e*PKPdf **PKPbc 20 58 56.5 +0.3**
GEC2 GERESS Array S 146.06 352 *e*PKP2 **PKPbc 20 58 56.6 +0.3**
GERES GERESS Array B 146.06 352 PKPbc **PKPbc 20 58 56.1 -0.2**
comp=Z,12nm,0.8s,baz=29,slow=3.0,SNR=102
GEA0 GERESS Array S 146.06 352 *e*PKPdf **PKPdf 20 58 55.8 +0.3**
SECR 146.17 335 ⇓*i*P **PKPbc 20 58 56.6 -0.1**
BR131 Keskin Array S 146.19 321 *e*PKPdf **PKPbc 20 58 56.9 -0.2**
BRTR Keskin Array B 146.19 321 PKPbc **PKPab 20 58 57.5 -0.3**
comp=Z,18nm,0.8s,baz=100,slow=1.8,SNR=30
VOIR 146.24 337⇑*i*P **PKPab 20 58 57.5 -0.2**
VOIR 146.24 337 ⇑PKP2 **PKPab 20 58 57.5 -0.2**
SULR 146.38 335 ⇓*i*P **PKPab 20 58 57.5 +0.2**
ARR Arges 146.45 337 ⇓*i*P **PKPbc 20 58 58.0 +0.4**
CONA Conrad Observa 146.60 349 *i* PKPab **PKPbc 20 58 57.3 -0.6**
comp=Z,26nm,1.0s,SNR=23
ANTO Ankara 146.60 322⇑*i*P **PKPab 20 58 59.3 0.0**
ANTO Ankara 146.60 322 PFAKE 20 59 10.0 +11
ANTO LR LR
comp=Z,232nm,22.0s
ANTO Ankara 146.60 322 ⇑PKP2 **PKPab 20 58 59.4 +0.1**
LOT Lotru 146.71 338⇑*i*P **PKPdf 20 58 57.2 +0.5**
MOA Molin 146.95 351 *i* pPKPdf **PKPbc 20 58 59.2 +0.4**
comp=Z,22nm,1.0s,SNR=12
HUMR Humele 147.03 336 ⇓*i*P **PKPab 20 59 00.7 +0.1**
PRD Provadia 147.07 332 P **PKPab 20 59 00.6 -0.2**
ECH Echery 147.16 360 *e*PKPdf **PKPbc 20 58 59.4 0.0**
ECH Echery 147.16 360 *e*PKP2 **PKPbc 20 58 59.4 0.0**
BZS Buzias 147.29 341⇑*i*P **PKPdf 20 58 57.9 +0.4**
BZS Buzias 147.29 341 ⇑PKIKP **PKPdf 20 58 57.9 +0.4**
ARSA Arzberg 147.31 349 *i* PKPab **PKPbc 20 59 00.5 +0.6**
comp=Z,17nm,1.1s,SNR=9.1
ZIMR 147.59 334 ⇓*i*P **PKPab 20 59 02.5 -0.3**
ZIMR 147.59 334 ⇓PKP2 **PKPab 20 59 02.5 -0.3**
BANR Banloc 147.65 341 ⇓*i*P **PKPbc 20 59 01.6 +0.8**
SZH Strazhica 147.66 333 P **PKPbc 20 59 01.4 +0.4**
HERR Herculane 147.67 339⇑*i*P **PKPbc 20 59 01.1 +0.2**
RETA Reutte 147.72 355 *i* sPKPdf **PKPbc 20 59 01.3 +0.2**
comp=Z,26nm,1.1s,SNR=15
WATA Walderalm 147.80 354 *i* PKPab **PKPbc 20 59 02.3 +1.0**
comp=Z,16nm,0.9s
MOTA Moosalm 147.83 355 *i* sPKPdf **PKPbc 20 59 01.8 +0.4**
comp=Z,20nm,0.9s,SNR=14
KBA Koelnbreinsper 147.84 352 *i* pPKPdf **PKPbc 20 59 00.9 -0.6**
comp=Z,19nm,1.6s,SNR=7.6
KBA Koelnbreinsper 147.84 352 PKP2 **PKPbc 20 59 00.9 -0.6**
WTTA Wattenberg 147.86 354 *i* sPKPdf **PKPbc 20 59 01.7 +0.1**
comp=Z,18nm,1.0s,SNR=7.4
KOGS Kog 147.94 348 *e*PKPbc **PKPbc 20 59 01.0 -0.6**
SOKA Soboth 147.95 349 *i* sPKPdf **PKPbc 20 59 01.6 -0.1**
comp=Z,28nm,1.0s,SNR=18
DAVA Damuels 147.99 356 *i* sPKPdf **PKPbc 20 59 02.1 +0.2**
comp=Z,34nm,1.0s,SNR=16
MDVR Moldovita 148.00 340 ⇓*i*P **PKPbc 20 59 01.8 -0.1**
JMB Yambol 148.01 332 P **PKPbc 20 59 01.6 -0.3**
FETA Feichten 148.19 355 *i* sPKPdf **PKPbc 20 59 02.3 -0.2**
comp=Z,22nm,1.1s,SNR=11
OBKA Obir 148.20 350 *i* sPKPdf **PKPbc 20 59 02.2 -0.2**
comp=Z,10nm,1.0s,SNR=6.3
MYKA Terra Mystica 148.23 351 *i* pPKPdf **PKPbc 20 59 01.6 -0.8**
comp=Z,22nm,1.0s,SNR=7.2
ABTA Abfaltersbach 148.27 353 *i* pPKPdf **PKPbc 20 59 01.8 -0.7**
comp=Z,28nm,1.0s,SNR=12
DAVOX Davos/Dischmat 148.49 356 PKPbc **PKPbc 20 59 03.8 +0.5**
comp=Z,17nm,0.8s,baz=348,slow=3.8,SNR=27
FUORN Ofenpass-Fuorn 148.62 355 *e*PKPbc **PKPbc 20 59 04.4 +0.6**
MMAI Mount Meron Ar 148.65 309 PKPbc **PKPbc 20 59 05.2 +1.2**

comp=Z,8.0nm,0.8s,baz=35,slow=5.3,SNR=6.9
LJU Ljubljana 148.66 350 *e*PKPbc **PKPbc 20 59 03.1 -0.4**
ASCN Ascension 148.82 136 PFAKE 20 59 10.0 +1.4
ASCN LR LR
comp=Z,349nm,20.0s
TUE Stuetta 148.83 357 *e*PKPbc **PKPbc 20 59 04.7 +0.5**
PGB Panagyurishte 149.00 335 P **PKPbc 20 59 04.6 0.0**
SENIN Lac Senin/Sane 149.01 359 *e*PKPbc **PKPbc 20 59 05.4 +0.7**
BOJS Bojanci 149.04 348 *e*PKPbc **PKPbc 20 59 04.0 -0.5**
KDZ Kurdzhali 149.19 332 P **PKPbc 20 59 04.5 -0.5**
BLY Banja Luka 149.34 345⇑*i*P **PKPbc 20 59 05.9 +0.7**
BLY Banja Luka 149.34 345 *e*PKPbc **PKPbc 20 59 05.8 +0.5**
VTS Vitosha 149.35 336 ⇓*i*P **PKPbc 20 59 06.3 +0.7**
VTS Vitosha 149.35 336 *e*PKPbc **PKPbc 20 59 06.2 +0.6**
VTS Vitosha 149.35 336 P **PKPbc 20 59 04.5 -1.1**
VTS Vitosha 149.35 336 ⇓PKP2 **PKPbc 20 59 06.3 +0.7**
RZN Rozhen 149.47 333 P **PKPbc 20 59 05.0 -0.9**
MMB Musomiste 149.98 334 P **PKPbc 20 59 06.4 -0.6**
KKB Krupnik 150.01 335 P **PKPbc 20 59 06.9 -0.1**
SSB Saint Sauveur 150.04 3 *e*PKPbc **PKPbc 20 59 07.2 +0.2**
BNI Bardonecchia 150.33 0 *e*PKPdf **PKPdf 20 59 04.4 +1.8**
BNI Bardonecchia 150.33 0 *e*PKIKP **PKPdf 20 59 04.4 +1.8**
PGAV Gavieira, Arco 150.40 23 *e*PKPdf **PKPbc 20 59 07.7 -0.4**
PGAV Gavieira, Arco 150.40 23 *e*LR LR 21 57 11.3
comp=Z,513nm,20.0s
STIP Stip 150.51 336 *i* P **PKPbc 20 59 07.1 -1.1**
SKO Skopje 150.56 337 *i* P **PKPbc 20 59 08.5 +0.1**
PCAB Cabril 150.71 23 *e*PKPdf **PKPbc 20 59 09.4 +0.7**
PDG Podgorica 150.90 341 ⇓*i*P **PKPbc 20 59 09.1 0.0**
TTG Podgorica 150.90 341 *e*PKPbc **PKPbc 20 59 09.2 +0.1**
TTG Podgorica 150.90 341 *e*PKIKP **PKPbc 20 59 09.2 +0.1**
VLC Villacollemand 151.06 355 *e*PKPbc **PKPbc 20 59 09.0 -0.5**
VLC *e*PKPab **PKPab 20 59 16.3 -0.7**
POLO Lamas de Olo 151.09 23 *e*PKPdf **PKPbc 20 59 10.3 +0.6**
PBRG Braganca 151.10 21 *e*PKPdf **PKPbc 20 59 10.1 +0.5**
PVRL Vila Real 151.20 23 *e*PKPdf **PKPbc 20 59 10.9 +1.0**
BIA Bitola 151.42 337 *i* P **PKPbc 20 59 10.1 -0.4**
OHR Ohrid 151.54 337 *i* P **PKPbc 20 59 10.7 0.0**
MVO Moncorvo 151.56 22 *e*PKPdf **PKPbc 20 59 11.4 +0.6**
MVO Moncorvo 151.56 22 *e*LR LR 22 01 12.6
comp=Z,344nm,20.0s
MBAR Mbarara 151.56 238 PFAKE 20 59 20.0 -0.2
MBAR LR LR
comp=Z,608nm,21.0s
FNA Florina 151.61 336 *e*PKPbc **PKPbc 20 59 10.8 -0.1**
FNA Florina 151.61 336 *e*PKIKP **PKPbc 20 59 10.8 -0.1**
PVIS Viseu 151.62 24 *e*PKPdf **PKPbc 20 59 11.2 +0.3**
PVIS Viseu 151.62 24 *e*PKPab **PKPab 20 59 19.9 +0.4**
LIT Litokhoron 151.73 334 *e*PKPbc **PKPbc 20 59 11.1 0.0**
LIT Litokhoron 151.73 334 *e*PKIKP **PKPbc 20 59 11.1 0.0**
PCAS Casmilo, Conde 151.94 26 *e*PKPdf **PKPbc 20 59 11.7 +0.1**
MTE Manteigas 152.03 24 *e*PKPdf **PKPbc 20 59 12.2 +0.3**
MTE Manteigas 152.03 24 *e*LR LR 21 57 27.6
comp=Z,381nm,20.0s
MTE Manteigas 152.03 24 *e*PKPbc **PKPbc 20 59 12.0 +0.1**
PMOZ Porto Moniz, M 152.09 47 *e*LR LR 21 52 37.9
comp=Z,292nm,18.0s
PTOM Tomar 152.34 26 *e*PKPdf **PKPbc 20 59 12.9 +0.4**
AQU L'Aquila 152.43 349 *e*PKPbc **PKPbc 20 59 11.7 -1.0**
AQU L'Aquila 152.43 349 *e*PKIKP **PKPbc 20 59 11.7 -1.0**
PMAFR Mafra 152.50 28 *e*PKPab **PKPab 20 59 23.4 +0.2**
PCBR Castelo Branco 152.53 24 *e*PKPdf **PKPbc 20 59 12.6 -0.3**
ALMR Almeirim 152.65 27 *e*PKPdf **PKPbc 20 59 14.1 +0.9**
PMTG Montargil 152.87 26 *e*PKPdf **PKPbc 20 59 14.0 +0.3**
PMTG Montargil 152.87 26 *e*PKPab **PKPab 20 59 24.5 -0.2**
PMRV Marv??o 152.92 25 *e*PKPdf **PKPbc 20 59 14.1 +0.3**
PMRV Marv??o 152.92 25 *e*LR LR 21 58 07.7
comp=Z,368nm,22.0s
PESTR Estremoz 153.31 26 *e*PKPab **PKPab 20 59 26.9 +0.3**
PESTR Estremoz 153.31 26 *e*PKPab **PKPab 20 59 26.5 -0.1**
EVO Evora 153.41 27 *e*PKPab **PKPab 20 59 27.0 0.0**
PNCL Nicolau / Gran 153.53 28 *e*PKPdf **PKPbc 20 59 16.3 +1.1**
PNCL Nicolau / Gran 153.53 28 *e*PKPab **PKPab 20 59 27.6 +0.1**
MESJ Messejana 153.89 28 *e*PKP **PKPdf 20 59 06.5 -1.5**
PBEJ Beja 153.90 27 *e*PKPab **PKPab 20 59 29.0 -0.1**
ES19 SONSECA Array 153.93 19 *e*PKPdf **PKPdf 20 59 09.1 +1.0**
ES19 *e*PKPbc **PKiKP 20 59 16.3 +0.2**
ESDC Sonseca Array 153.94 19 PKP **PKPdf 20 59 09.6 +1.5**
comp=Z,0.5nm,0.8s,baz=10,slow=2.1,SNR=5.7
ESDC PKPbc **PKPbc 20 59 15.6 -0.5**
comp=Z,1.1nm,0.7s,baz=329,slow=3.1,SNR=7.7
ESDC PKPab **PKPab 20 59 29.7 +0.5**
comp=Z,10nm,1.0s,baz=336,slow=3.8,SNR=25
ESLA Sonseca Array 153.94 19 *e*PKPab **PKPab 20 59 29.8 +0.6**
PBAR Barrancos 154.13 26 *e*PKPab **PKPab 20 59 30.1 +0.1**
MORF Marmelete 154.13 29 *e*PKPab **PKPab 20 59 30.1 0.0**
PCVE Castro Verde 154.15 28 *e*PKPab **PKPab 20 59 30.4 +0.3**
PFVI Vila Bisbo 154.19 30 *e*PKPab **PKPab 20 59 30.7 +0.4**
PVAQ Vaqueiros 154.48 28 *e*PKPab **PKPab 20 59 31.9 +0.4**
PVAQ Vaqueiros 154.48 28 *e*LR LR 21 56 18.2
comp=Z,532nm,22.0s
TIP Timpagrande 154.64 342⇑*i*P **PKPbc 20 59 16.2 -1.4**
TIP Timpagrande 154.64 342 *e*PKPbc **PKPbc 20 59 17.6 0.0**
MDT Midelt 159.70 29 PKP **PKPdf 20 59 17.1 +1.3**
comp=Z,2.6nm,0.9s,baz=15,slow=1.5,SNR=7.8
MDT PKPab **PKPab 20 59 54.5 +0.2**
comp=Z,10nm,1.0s,baz=331,slow=5.5,SNR=10
KOWA Kowa 169.51 93 PKPab **PKPab 21 00 37.9 -0.1**
comp=Z,6.6nm,0.8s,baz=267,slow=6.0,SNR=8.8
TOA0 Torodi Ar. Sit 174.61 113 *e*PKPdf **PKPdf 20 59 26.1 -0.9**
TORD Torodi Ar. Bea 174.61 113 PKP **PKPdf 20 59 25.7 -1.3**
comp=Z,3.9nm,1.1s,baz=259,slow=0.7
TORD PKPab **PKPab 21 00 59.2 -1.4**
baz=248,slow=3.9

IDC 27 20:48:50.1±52.0, 14°.24S×170°.12E, h0km, mb4.3/3, mb1 4.5/3, mb1mx3.8/46, mbtmp4.3/3, Error ellipse: s-maj=894.5km s-min=122.0km az=68.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**31.43**	**231**	P	P	20 55 12.1	-1.2
	3.4nm,1.1s,baz=64,slow=9.8,SNR=3.7						
WRA	**Warramunga Arr**	**34.62**	**255**	P	P	20 55 41.4	0.0
	1.6nm,0.5s,baz=85,slow=8.9,SNR=13						
ASAR	**Alice Springs**	**35.43**	**249**	P	P	20 55 48.9	+0.5
	2.5nm,0.3s,baz=77,slow=9.4,SNR=66						

*IDC **27** 20:48:53.4±0.5, 15°.16S×173°.42W, h0km, mb4.5/18, mb1 4.7/18, mb1mx4.4/49, mbtmp4.5/18, MS4.2/6, Ms1 4.2/6, ms1mx3.8/53, Error ellipse: s-maj=20.8km s-min=14.3km az=118.0*

*NEIC **27** 20:48:54.7±0.2, 15°.13S×173°.41W, h10km, mb5.0/17, Error ellipse: s-maj=12.6km s-min=7.5km az=128.0*

*GCMT **27** 20:48:54.7±0.3, 15°.06S×172°.99W, h22km, MW5.2/89, Moment Tensor Solution. s34,c40; s89,c120; Duration: 1s0 Moment tensor: Scale 10^16Nm; Mrr6.87±.39; Mθθ-4.01±.23; Mφφ-2.86±.23; Mrθ-3.62±.38; Mφθ3.59±.14; Mφr-0.70±.37; Best double couple: M0 7.85900×10^16 NP1:φ291.00000°, δ57.00000°, λ68.00000°. NP2: φ148.00000°, δ39.00000°, λ121.00000°. Principal axes: T 8.2480, Plg69.0000°, Azm153.0000°; N -0.7780, Plg19.0000°, Azm303.0000°; P -7.4700, Plg10.0000°, Azm37.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*ISCJB **27** 20:48:56.4±0.3, 15°.19S±0°.06×173°.28W±0°.06, h30km, mb4.7/41, MS4.2/4 Error ellipse: s-maj=9.8km s-min=7.8km az=143.1*

*MOS **27** 20:48:59.1±0.9, 14°.66S×173°.11W, h33km, mb5.1/21, Error ellipse: s-maj=19.3km s-min=12.5km az=95.6*

**ISC

DZM Mont Dzumac 20.38 248 LR LR 20 59 57.4
comp=Z,1μm,20.2s,baz=82,slow=33
DZM Mont Dzumac 20.38 248 eLR LR 20 58 48.0
2μm,26.4s
PAE Paea 22.84 99 eT T 21 16 50.3
3.1nm,0.3s
PPT Papeete 22.84 99 LR LR 21 01 07.2
comp=Z,551nm,18.4s,baz=264,slow=32
PPT2 Papeete2 22.84 99 eLQ LQ 20 58 17.4
3μm,27.5s
PPT2 eLR LR 20 59 23.3
783nm,27.2s
PPT2 Papeete2 22.84 99 eT T 21 16 51.9
6.8nm,0.3s
TVO Taravao 23.16 100 eT T 21 17 15.2
1.5nm,0.3s
TBI Tubuai 23.84 113 eLQ LQ 20 58 45.3
2μm,28.0s
TBI eLR LR 20 59 48.6
508nm,24.2s
TBI Tubuai 23.84 113 eT T 21 18 13.5
10nm,0.3s
URZ Urewera 24.45 199 P **P 20 54 14.7 +0.6**
3.7nm,0.3s,baz=0.0,slow=6.1,SNR=3.9
HNR Honiara 26.79 279 LR LR 21 03 10.5
comp=Z,441nm,20.5s,baz=124,slow=32
TAOE Nuku Hiva Isla 32.98 83 eLR LR 21 03 58.4
832nm,24.4s
H11S2 WAKE ISLAND Hy 38.90 329 T T 21 37 51.4
baz=148
H11S3 WAKE ISLAND Hy 38.91 329 T T 21 37 50.2
baz=148
H11S1 WAKE ISLAND Hy 38.92 329 T T 21 37 52.9
baz=148
H11N3 WAKE ISLAND Hy 39.84 330 T T 21 38 58.9
baz=150,slow=76,SNR=2.3
H11N1 WAKE ISLAND Hy 39.85 330 T T 21 38 59.0
baz=150,slow=76,SNR=4.7
H11N2 WAKE ISLAND Hy 39.86 330 T T 21 39 01.4
baz=150,slow=76,SNR=6.7
STKA Stephens Creek 44.23 240 P **P 20 57 03.2 -1.5**
7.3nm,0.9s,baz=96,slow=10,SNR=8.2
STKA LR LR 21 14 47.7
comp=Z,331nm,18.4s,baz=93,slow=35
WRAB Tennant Creek 50.00 257 eP **P 20 57 47.9 -2.0**
WRAB Tennant Creek 50.00 257⇑ eP **P 20 57 48.1 -1.8**
WRAB pmax pmax
comp=Z,30nm,2.5s
WRA Warramunga Arr 50.01 257 P **P 20 57 47.7 -2.3**
comp=Z,1.7nm,0.6s,baz=90,slow=7.2,SNR=13
WRA Warramunga Arr 50.01 257 eP **P 20 57 46.7 -3.3**
WRA pmax pmax
comp=Z,2.0nm,0.6s
ASAR Alice Springs 50.28 252 P **P 20 57 49.5 -2.6**
comp=Z,7.2nm,0.6s,baz=87,slow=8.0,SNR=41
ASAR Alice Springs 50.28 252 eP **P 20 57 49.9 -2.2**
ASAR pmax pmax
comp=Z,7.0nm,0.6s
SIJI Sorong 56.56 279 P **P 20 58 38.0 -0.3**
comp=Z,6.0nm,0.6s,baz=88,slow=9.0,SNR=4.9
SBA Scott Base 63.41 185 eP **P 20 59 25.7 +1.5**
comp=Z,42nm,1.6s
SBA Scott Base 63.41 185 eP **P 20 59 25.7 +1.5**
SBA pmax pmax
comp=Z,42nm,1.6s
VNDA Vanda 63.54 186 P **P 20 59 26.5 +1.4**
comp=Z,8.3nm,1.0s,baz=4.8,slow=6.7,SNR=30
MJAR Matsushiro Arr 68.91 320 P **P 20 59 59.2 -0.9**
comp=Z,5.5nm,1.0s,baz=165,slow=5.8,SNR=12
MAJO Matsushiro 68.91 320⇓ eP **P 21 00 00.1 0.0**
MAJO pmax pmax
comp=Z,19nm,1.2s
EDW2 Edwards Air Fo 72.34 45 P **P 21 00 20.8 -0.4**
baz=236
PETK Petropavlovsk- 72.53 342 P **P 21 00 21.4 -0.4**
comp=Z,6.7nm,1.0s,baz=108,slow=6.4
N02D Trinity Center 72.93 38 P **P 21 00 25.3 +0.8**
baz=231
O03D Paynes Creek 73.05 39 P **P 21 00 26.4 +1.1**
baz=232
MPMC Manual Prospec 73.34 44 P **P 21 00 27.5 +0.2**
baz=236
YBH Yreka Blue Hor 73.40 37 P **P 21 00 27.0 -0.3**
comp=Z,4.6nm,0.9s,baz=229,slow=4.9,SNR=8.9
YSS Yuzh-Sakhalins 73.42 330⇑ iP **P 21 00 28.5 +1.4**
YSS e 21 00 43.3
YSS pmax pmax
comp=Z,20nm,0.9s
HUMO Hull Mountain 73.81 36 eP **P 21 00 30.2 +0.5**
comp=Z,39nm,1.2s
GMRC Granite Mounta 73.91 46 P **P 21 00 31.0 +0.5**
baz=238
IRM Iron Mountain 73.94 47 P **P 21 00 31.7 +1.2**
baz=239
TUQ Turquoise Moun 74.07 46 P **P 21 00 31.6 +0.1**
baz=238
NVAR Mina Array Bea 74.13 42 P **P 21 00 31.5 -0.3**
comp=Z,1.5nm,0.9s,baz=230,slow=7.0,SNR=4.7
214A Organ Pipe Nat 74.52 50 P **P 21 00 35.2 +1.1**
baz=241
J04D Umpqua Nationa 74.69 36 P **P 21 00 35.5 +0.5**
baz=231
KDAK Kodiak Island 74.75 11 iP **P 21 00 35.0 +0.3**
QSPA South Pole Qui 74.80 180 P **P 21 00 36.2 +1.0**
comp=Z,18nm,1.1s,baz=42,slow=3.7,SNR=18
QSPA South Pole Qui 74.80 180 eP **P 21 00 35.8 +0.6**
MOD Modoc Plateau 74.92 38 eP **P 21 00 36.9 +0.6**
comp=Z,17nm,1.2s
J05D Fort Rock, OR 75.22 37 P **P 21 00 38.1 +0.1**
baz=232
R11A Troy Canyon, C 75.86 43 P **P 21 00 42.7 +0.8**
baz=237
KSRS Korea Array 76.14 315 P **P 21 00 44.2 +1.0**
comp=Z,2.8nm,1.1s,baz=122,slow=6.5,SNR=9.4
KSAR Wonju Array Be 76.16 315 P **P 21 00 44.2 +0.9**
TUC Tucson 76.19 51 P **P 21 00 45.7 +2.0**
baz=242
TUC Tucson 76.19 51 eP **P 21 00 43.7 0.0**
comp=Z,26nm,1.3s
TUC Tucson 76.19 51 eP **P 21 00 43.7 0.0**
TUC pmax pmax
comp=Z,26nm,1.3s
WVOR Wild Horse Val 76.23 38 eP **P 21 00 42.2 -1.6**
comp=Z,14nm,1.1s
WVOR Wild Horse Val 76.23 38 eP **P 21 00 42.2 -1.6**
WVOR pmax pmax
comp=Z,14nm,1.1s
MSHR Mys Shultsa 76.89 321 c iP **P 21 00 47.6 +0.3**
BMO Blue Mountains 78.43 37 eP **P 21 00 55.1 -0.8**
comp=Z,8.8nm,1.3s
BMO Blue Mountains 78.43 37 eP **P 21 00 55.2 -0.8**
BMO pmax pmax
comp=Z,9.0nm,1.3s
HLID Hailey 79.43 39 P **P 21 01 01.7 +0.1**
baz=237
HLID Hailey 79.43 39 eP **P 21 01 01.4 -0.2**
comp=Z,9.7nm,1.1s
MNTX Cornudas Mount 80.03 53 P **P 21 01 04.9 0.0**
baz=245
MNTX Cornudas Mount 80.03 53 eP **P 21 01 04.6 -0.3**
comp=Z,6.7nm,1.1s
TXAR Lajitas Array 80.42 56 P **P 21 01 09.8 +2.6**
comp=Z,1.9nm,1.0s,baz=224,slow=2.5,SNR=5.6
TXAR Lajitas Array 80.42 56 eP **P 21 01 07.3 +0.1**
TXAR pmax pmax
comp=Z,2.0nm,1.0s
KLR Kul'dur 80.46 327⇓ eP **P 21 01 07.4 +0.6**
TASM ASL Pad, Albuq 80.60 50 P **P 21 01 08.3 +0.2**
baz=244
ANMO Albuquerque 80.60 50 P **P 21 01 07.8 -0.4**
baz=244
ANMO Albuquerque 80.60 50 eP **P 21 01 06.7 -1.5**
comp=Z,27nm,1.9s
ANMO Albuquerque 80.60 50 eP **P 21 01 06.7 -1.5**
ANMO pmax pmax
comp=Z,27nm,1.9s
TASL Snake Pit, Alb 80.60 50 P **P 21 01 07.0 -1.2**
baz=244
S22A 4UR Ranch, Cre 81.57 47 P **P 21 01 14.4 +1.0**
baz=244
PDAR Pinedale Array 82.06 42 P **P 21 01 15.4 -0.4**
comp=Z,1.3nm,0.8s,baz=204,slow=3.3,SNR=11
BOZ Bozeman (W) 82.19 39 P **P 21 01 16.0 -0.3**
baz=239
BOZ Bozeman (W) 82.19 39 eP **P 21 01 15.5 -0.8**
comp=Z,16nm,1.4s
BOZ Bozeman (W) 82.19 39 eP **P 21 01 15.5 -0.8**
BOZ pmax pmax
comp=Z,16nm,1.4s
ILAR Eielson Array 82.27 11 P **P 21 01 14.9 -1.2**
comp=Z,2.2nm,0.8s,baz=206,slow=5.9,SNR=18
SEY Seymchan 82.41 345 ceP **P 21 01 17.5 +0.7**
SDCO Great Sand Dun 82.52 48 P **P 21 01 18.7 +0.3**
baz=244
MSTX Muleshoe 82.96 52 P **P 21 01 21.4 +0.8**
baz=246
T25A Trinidad 83.04 49 P **P 21 01 20.1 -0.9**
baz=245
Q24A Divide 83.29 47 P **P 21 01 22.3 -0.1**
baz=244
RLMT Red Lodge 83.39 40 P **P 21 01 22.7 +0.1**
baz=241
RLMT Red Lodge 83.39 40 eP **P 21 01 22.6 0.0**
comp=Z,8.2nm,1.0s
EGAK Eagle 83.44 13 eP **P 21 01 22.1 0.0**
comp=Z,6.8nm,1.0s
N23A Red Feather La 83.59 45 P **P 21 01 24.2 +0.5**
baz=244
K22A Casper 83.98 43 P **P 21 01 25.9 +0.2**
baz=243
AMTX Amarillo 84.15 52 P **P 21 01 26.2 -0.3**
baz=247
AMTX Amarillo 84.15 52 eP **P 21 01 26.3 -0.3**
comp=Z,14nm,0.9s
BILL Bilibino 84.38 352 eP **P 21 01 26.2 -0.6**
comp=Z,8.1nm,0.9s
BILL Bilibino 84.38 352 eP **P 21 01 26.6 -0.2**
BILL pmax pmax
comp=Z,7.0nm,1.0s
ABTX Abilene, Hawle 84.87 54 P **P 21 01 29.8 -0.4**
baz=248
ZEA Zeya 85.36 329 eP **P 21 01 31.8 -0.3**
ZEA pmax pmax
comp=Z,14nm,1.2s
TOLK Toolik Lake Re 85.38 8 P **P 21 01 32.6 +0.7**
baz=203
RSSD Black Hills 86.26 42 P **P 21 01 36.8 -0.3**
baz=245
RSSD Black Hills 86.26 42 eP **P 21 01 36.4 -0.7**
comp=Z,12nm,1.3s
RSSD Black Hills 86.26 42 eP **P 21 01 36.4 -0.7**
RSSD pmax pmax
comp=Z,11nm,1.3s
WHTX Lake Whitney, 86.37 56 P **P 21 01 37.1 -0.6**
baz=250
MAW Mawson 87.98 199 P **P 21 01 44.8 +0.1**
comp=Z,9.5nm,1.0s,baz=117,slow=6.3,SNR=8.4
INK Inuvik 88.09 14 eP **P 21 01 44.4 -0.7**
comp=Z,13nm,1.2s
INK Inuvik 88.09 14 eP **P 21 01 44.4 -0.7**
INK pmax pmax
comp=Z,13nm,1.2s
YAK Yakutsk 89.03 337 eP **P 21 01 49.1 -0.5**
YAK pmax pmax
comp=Z,6.0nm,0.6s
YKA Yellowknife Ar 89.91 23 P **P 21 01 52.9 -0.8**
comp=Z,3.0nm,0.9s,baz=236,slow=4.4,SNR=11
YKA Yellowknife Ar 89.91 23 P **P 21 01 53.0 -0.8**
JTS JuntasAbangare 91.06 80 eP **P 21 02 01.0 +0.8**
W41B Gary Mavity, V 91.51 54 P **P 21 02 02.6 +0.7**
baz=253
R39A Chumby, Stover 91.86 51 P **P 21 02 02.3 -1.2**
baz=252
T40A Mansfield 91.90 52 P **P 21 02 02.6 -1.0**
baz=252
S40A Lebanon 92.05 52 P **P 21 02 03.8 -0.5**
baz=252
U41A Viola 92.12 53 P **P 21 02 04.0 -0.7**
baz=253
V42A Cord 92.37 54 P **P 21 02 05.1 -0.7**
baz=253
R40A Maddies Statio 92.43 51 P **P 21 02 04.8 -1.3**
baz=253
T41A Mountain View 92.44 52 P **P 21 02 05.5 -0.6**
baz=253
S41A Jillco Farms, 92.62 52 P **P 21 02 05.6 -1.4**
baz=253
P40A Paris 92.96 50 P **P 21 02 07.7 -0.8**
baz=253
VNA3 Neumayer Olymp 93.00 175 P **P 21 02 09.2 +1.1**
N39A Derby Farms, D 93.03 49 P **P 21 02 08.1 -0.7**
baz=253
SNAA Sanae 93.05 177 P **P 21 02 09.5 +1.0**
SNAA Sanae 93.05 177 P **P 21 02 08.7 +0.2**
comp=Z,5.3nm,1.1s,baz=215,slow=4.4,SNR=7.6
SNAA Sanae 93.05 177⇓ eP **P 21 02 09.0 +0.5**
R41A Rosebud 93.10 51 P **P 21 02 08.5 -0.6**
baz=253
M39A Webster 93.45 48 P **P 21 02 10.0 -0.7**
baz=253
VNA1 Neumayer--Stat 93.69 175 P **P 21 02 12.8 +1.5**
N40A Mertquake, Sal 93.70 49 P **P 21 02 11.1 -0.7**
baz=253
P41A Barry, Barry 93.73 50 P **P 21 02 10.9 -1.2**
baz=254
L39A Vinton 93.76 47 P **P 21 02 11.8 -0.3**
baz=253
B34A Aery, Baudette 93.92 41 P **P 21 02 11.5 -1.1**
baz=252
O41A Passleys Farm, 93.99 50 P **P 21 02 12.2 -1.0**
baz=254
K39A Oelwein 94.01 47 P **P 21 02 12.2 -1.0**
baz=253
I38A Scanlan Farm, 94.09 46 P **P 21 02 12.4 -1.2**
baz=253
C35A Jirik Farms, M 94.10 42 P **P 21 02 12.2 -1.4**
baz=252
E36A McGregor 94.21 43 P **P 21 02 13.0 -1.1**
baz=252
P42A Winchester 94.24 50 P **P 21 02 13.4 -0.9**
baz=254
L40A Anamosa 94.30 48 P **P 21 02 14.0 -0.6**
baz=254
J39A Decorah 94.32 46 P **P 21 02 13.7 -0.9**
baz=253
ULN Ulaanbaatar 94.41 318⇓ iP **P 21 02 15.5 +0.4**
ULN pmax pmax
comp=Z,4.0nm,1.3s
D36A Goodland 94.47 42 P **P 21 02 14.1 -1.1**
baz=253
G38A Ridgeland 94.75 45 P **P 21 02 16.0 -0.6**
baz=253
D37A Cotton 94.94 43 P **P 21 02 17.1 -0.3**
baz=253
F38A Pierce - Schro 94.96 44 P **P 21 02 17.5 0.0**
baz=253
H39A Augusta 95.00 45 P **P 21 02 16.9 -0.8**
baz=254
J40A Soldiers Grove 95.01 47 P **P 21 02 16.9 -1.0**
baz=254
J41A Loganville 95.51 47 P **P 21 02 19.4 -0.7**
baz=254
F39A Loretta 95.59 44 P **P 21 02 20.0 -0.5**
baz=254
H40A Chili 95.59 45 P **P 21 02 19.9 -0.6**
baz=254
E39A Mellen 95.96 44 P **P 21 02 20.6 -1.5**
baz=254
F40A Park Falls 96.12 44 P **P 21 02 21.5 -1.4**
baz=255
TRQA Tornquist 96.67 132 eP **P 21 02 26.4 +0.7**
COWI Conover 96.83 44 eP **P 21 02 24.6 -1.5**
comp=Z,14nm,1.1s
D41A Chassel 97.46 43 P **P 21 02 27.8 -1.1**
baz=256
KURK Kurchatov 113.11 319⇓ iPKIKP **PKiKP 21 07 30.6 -1.7**
BRVK Borovoye 117.90 322⇑ iPKIKP **PKPdf 21 07 41.8 +0.4**
ARU Arti 123.28 329 iPKIKP **PKPdf 21 07 50.9 -0.8**
ARU 21 09 31.6
ARU 21 15 01.3
ARU SS SS 21 26 14.3 -1.4
PRGR Permogore 126.04 338 ePKIKP **PKPdf 21 07 55.8 -1.0**
PRGR pmax pmax
comp=Z,6.0nm,1.1s
KLMR Klimovskoe 128.69 340 ePKIKP **PKPdf 21 08 00.3 -1.6**
KLMR pmax pmax
comp=Z,10.0nm,1.3s
KLMR Klimovskoe 128.69 340 ePKPdf **PKPdf 21 08 00.3 -1.6**
KLMR AMP 21 08 02.6
comp=Z,10.0nm,1.3s
OBN Obninsk 134.03 337 ePKIKP **PKPdf 21 08 11.7 -0.4**
KIV Kislovodsk 138.17 321 ePKIKP **PKPdf 21 08 20.0 -0.4**
KIV pmax pmax
comp=Z,5.0nm,1.1s
AKASG Malin Array Be 140.25 338 PKP **PKPdf 21 08 23.5 -0.2**
comp=Z,0.2nm,0.3s,baz=22,slow=1.6,SNR=7.0
KIEV Kiev 140.26 338⇑ ePKIKP **PKPdf 21 08 23.8 0.0**
LVV L'vov 142.76 341 ePKHKP PKPpre 21 08 20.2
CLL Collm 143.68 353 i PKPdf **PKPdf 21 08 29.5 -0.4**
comp=Z,4.0nm,0.9s
CLL i PKiKP **PKiKP 21 08 35.4 +2.1**
CLL Collm 143.68 353 i PKIKP **PKPdf 21 08 29.5 -0.4**
CLL i 21 08 35.4
CLL pmax pmax
comp=Z,4.0nm,0.9s
DPC Dobruska-Polom 144.14 350 ePKP PKPbc 21 08 29.6 +0.7
DPC epPKP **PKiKP 21 08 34.9 +0.5**
DPC Dobruska-Polom 144.14 350 ePKIKP PKPbc 21 08 29.6 +0.7
DPC e 21 08 34.9
BURAR Bucovina Array 144.28 338 ⇓PKIKP PKPbc 21 08 29.9 +0.4
MORC Moravsky Berou 144.45 348 ⇓iP PKPbc 21 08 30.2 +0.3
MORC Moravsky Berou 144.45 348 ⇓PKIKP PKPbc 21 08 30.2 +0.3
MORC Moravsky Berou 144.45 348 ePP PKPbc 21 08 29.7 -0.2
LANS Liptovska Anna 144.62 346 ePKIKP PKPbc 21 08 30.7 +0.3
LANS Liptovska Anna 144.62 346 ePKP PKPbc 21 08 30.7 +0.3
TRPA Tarpa 144.71 342⇑ iP PKPbc 21 08 30.7 0.0
TRPA Tarpa 144.71 342⇑ ePKPbc **PKPab 21 08 30.0 -0.5**
VRAC Vranov 145.09 349 ⇓iP **PKPdf 21 08 32.3 -0.2**
VRAC Vranov 145.09 349 ⇓PKIKP **PKPdf 21 08 32.3 -0.2**
VRAC Vranov 145.09 349 ePP **PKPdf 21 08 32.2 -0.2**
VRI Vrincioaia 145.16 335 ⇑PKIKP **PKPab 21 08 32.3 0.0**
JAVC Velka Javorina 145.30 347 ePP **PKPbc 21 08 33.4 +0.8**
KRUC Moravsky 145.36 349 ePP **PKPbc 21 08 32.3 -0.5**
VYHS Vyhne 145.38 346 ePKIKP **PKPbc 21 08 32.7 -0.2**
VYHS Vyhne 145.38 346 ePKP **PKPbc 21 08 32.7 -0.2**
GRFO Grafenberg 145.46 355 eP **PKPdf 21 08 33.1 0.0**
GRFO Grafenberg 145.46 355 ePKIKP **PKPdf 21 08 33.1 0.0**
LTVH L"tav"rtes, 145.57 342⇑ ePKPbc **PKPab 21 08 33.6 -0.1**
DOPR Dopca 145.60 337 ⇓iP **PKPab 21 08 35.1 +1.1**
TLB Topalu 145.63 333 ⇓PKIKP **PKPab 21 08 34.2 +0.2**
PSZ Piszkesteto 145.65 344⇑ iP **PKPbc 21 08 33.9 +0.1**
PSZ Piszkesteto 145.65 344⇑ ePKPbc **PKPdf 21 08 33.1 -0.4**
PSZ Piszkesteto 145.65 344 ⇑PKIKP **PKPbc 21 08 33.9 +0.1**
SMOL Smolenice 145.68 347 ePKIKP **PKPab 21 08 34.0 -0.1**
SMOL Smolenice 145.68 347 ePKP **PKPab 21 08 34.0 -0.1**
KHC Kasperske Hory 145.75 352 ePKP **PKPab 21 08 34.5 +0.1**
KHC ex x 21 08 50.5
KHC Kasperske Hory 145.75 352 ePKIKP **PKPab 21 08 34.5 +0.1**
KHC e 21 08 50.5
MLR Muntele Rosu 145.78 336 PKPbc **PKPbc 21 08 34.5 +0.1**
comp=Z,2.7nm,1.1s,baz=74,slow=4.1,SNR=14
MLR Muntele Rosu 145.78 336⇑ iP **PKPab 21 08 34.8 0.0**
MLR Muntele Rosu 145.78 336 ⇑PKIKP **PKPab 21 08 34.8 0.0**
DRGR 145.84 340 ⇓iP **PKPdf 21 08 34.1 +0.2**
DRGR 145.84 340 ⇓PKIKP **PKPdf 21 08 34.1 +0.2**
MODS Modra-Piesok 145.84 347 ePKIKP **PKPdf 21 08 33.9 +0.1**
MODS Modra-Piesok 145.84 347 ePKP **PKPdf 21 08 33.9 +0.1**
GERES GERESS Array B 146.01 352 PKPbc **PKPbc 21 08 34.5 -0.4**
comp=Z,4.0nm,0.9s,baz=29,slow=3.0,SNR=27
BRTR Keskin Array B 146.12 321 PKPbc **PKPbc 21 08 35.8 +0.2**
comp=Z,12nm,0.9s,baz=128,slow=2.0,SNR=34
BRTR Keskin Array B 146.12 321 ePKP2 **PKPab 21 08 36.0 -0.3**
BRTR pmax pmax
comp=Z,12nm,0.9s
VOIR 146.18 337 ⇓iP **PKPab 21 08 36.3 +0.1**
VOIR 146.18 337 ⇓PKP2 **PKPab 21 08 36.3 +0.1**
ARR Arges 146.40 337 ⇓iP **PKPab 21 08 37.1 +0.1**
ANTO Ankara 146.54 322 ePKPbc **PKPbc 21 08 36.4 -0.4**
ANTO Ankara 146.54 322 ⇑PKP2 **PKPab 21 08 37.4 -0.4**
CONA Conrad Observa 146.55 349 i pPKPdf **PKPab 21 08 37.2 -0.4**
comp=Z,24nm,1.4s,SNR=14
MOA Molln 146.90 351 i pPKPdf **PKPbc 21 08 37.8 +0.3**
comp=Z,13nm,1.3s,SNR=6.9
BFO Black Forest 146.99 358 ePKPdf **PKPbc 21 08 36.7 -1.0**
BFO Black Forest 146.99 358 ePKP2 **PKPbc 21 08 36.7 -1.0**
BZS Buzias 147.24 341⇑ iP **PKPbc 21 08 38.3 -0.2**
BZS Buzias 147.24 341 ⇑PKP2 **PKPbc 21 08 38.3 -0.2**
ARSA Arzberg 147.26 349 i PKPbc **PKPdf 21 08 37.2 +1.0**
comp=Z,13nm,1.3s
SRE Strehaia 147.53 338⇑ iP PKPpre 21 08 32.1
SRE Strehaia 147.53 338 ⇑PKHKP PKPpre 21 08 32.1
HERR Herculane 147.62 339 ⇓iP **PKPbc 21 08 39.0 -0.5**
RETA Reutte 147.68 355 i PKPab **PKPbc 21 08 39.7 0.0**
comp=Z,16nm,1.4s
WATA Walderalm 147.75 354 i PKPab **PKPbc 21 08 40.9 +0.8**
comp=Z,14nm,1.0s
KBA Koelnbreinsper 147.79 352 i pPKPdf **PKPbc 21 08 39.6 -0.5**
comp=Z,12nm,1.1s
MOTA Moosalm 147.79 354 i sPKPdf **PKPbc 21 08 40.0 -0.1**
comp=Z,18nm,1.2s,SNR=11
WTTA Wattenberg 147.82 354 i PKPbc **PKPdf 21 08 37.7 +0.3**
comp=Z,13nm,1.4s
KOGS Kog 147.89 348 ePKPbc **PKPbc 21 08 39.2 -1.0**
SOKA Soboth 147.91 349 i PKPbc **PKPdf 21 08 37.7 +0.3**
comp=Z,19nm,1.3s,SNR=13
MDVR Moldovita 147.94 340⇑ iP **PKPbc 21 08 41.3 +0.8**
DAVA Damuels 147.95 356 i sPKPdf **PKPbc 21 08 40.4 -0.2**
comp=Z,17nm,1.1s,SNR=13
FETA Feichten 148.15 355 i PKiKP **PKPbc 21 08 41.9 +0.8**
comp=Z,20nm,1.2s
OBKA Obir 148.15 350 i pPKPdf **PKPbc 21 08 40.4 -0.7**
comp=Z,7.5nm,1.1s
MYKA Terra Mystica 148.18 351 i PKPbc **PKPbc 21 08 39.5 -1.6**
comp=Z,11nm,1.1s
ABTA Abfaltersbach 148.23 352 i pPKPdf **PKPbc 21 08 40.5 -0.8**
comp=Z,14nm,1.0s,SNR=7.6
MMAI Mount Meron Ar 148.57 309 PKPbc **PKPbc 21 08 43.0 +0.4**
comp=Z,6.4nm,0.8s,baz=38,slow=5.4,SNR=6.9
BOJS Bojanci 149.00 348 ePKPbc **PKPbc 21 08 43.0 -0.2**
VTS Vitosha 149.29 336 ⇓iP **PKPbc 21 08 43.6 -0.6**
VTS Vitosha 149.29 336 ⇓PKP2 **PKPbc 21 08 43.6 -0.6**
ESDC Sonseca Array 153.92 19 PKPbc **PKPbc 21 08 54.0 -0.8**
comp=Z,0.4nm,0.6s,baz=323,slow=3.4,SNR=3.2

ISN ***27*** *20:51:27.1±0.8, 32°.46N×46°.92E, h9km±3km, ML3.2*
CSEM ***27*** *20:51:27.1, 32°.46N×46°.92E, h9km, ML3.2*
TEH 27 20:51:34.2, 32°.51N×46°.95E, h10km, ML3.2, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKFM	**Kafar-mosalman**	**1.26**	**36**	ePg	Pn	20 51 55.7	-2.2
IKFM				eSg	Sb	20 52 13.7	-0.6
IKFM				e		20 52 22.1	
	comp=Z,99nm,0.2s						
NSR	**Nassriya**	**1.65**	**205**	ePn	Pn	20 51 57.0	-6.2
	SNR=4.0						
NSR				eSn	Sn	20 52 18.0	-6.4
	SNR=4.0						
IVIS	**Veis**	**2.01**	**358**	e		20 52 40.0	
	comp=N,4μm,0.4s						
IVIS				ePn	Pn	20 52 08.0	-0.3
IVIS				e		20 52 40.2	
	comp=E,2μm,0.3s						
IVIS				e		20 52 41.1	
	comp=Z,1μm,0.2s						
IBZA	**Bozab**	**2.10**	**21**	e		20 52 19.1	
	comp=Z,911nm,0.2s						
IBZA				ePn	Pn	20 52 09.4	-0.2
HSAM	**Samen**	**2.19**	**39**	ePn	Pn	20 52 10.5	-0.4
HSAM				e		20 52 20.1	
	comp=E,99nm,0.2s						
HSAM				e		20 52 47.2	
	comp=N,99nm,0.3s						
HSAM				e		20 52 49.5	
	comp=Z,99nm,0.4s						
BHD	**Baghdad**	**2.29**	**290**	ePn	Pn	20 52 06.6	-5.4
	SNR=4.0						
BHD				eSn	Sn	20 52 36.0	-4.3
	SNR=4.0						
HAGD	**Aghdareh**	**2.94**	**38**	ePn	Pn	20 52 21.0	-0.2
HAGD				e		20 55 46.9	
	comp=Z,99nm,0.0s						
HKZM	**Kohzaman**	**3.29**	**29**	ePn	Pn	20 52 26.0	0.0
HKZM				e		20 53 07.8	
	comp=Z,99nm,0.3s						
ZNGN	**Zangian**	**3.33**	**96**	ePn	Pn	20 52 26.9	+0.3
IRAZ	**Razeghan**	**3.80**	**40**	ePn	Pn	20 52 33.6	+0.6
IRAZ				e		20 52 50.6	
	comp=Z,364nm,0.3s						
QAM	**Ghamsar**	**3.97**	**70**	ePn	Pn	20 52 35.7	+0.4
QAM				e		20 52 37.4	
	comp=Z,890nm,0.1s						
QAM				e		20 52 39.4	
	comp=N,426nm,0.1s						
QAM				e		20 52 43.7	
	comp=E,408nm,0.1s						

IKLH	**Kolahrood**	**3.98**	**77**	*e*Pn	Pn	20 52 35.0	-0.5
IKLH				*e*		20 52 36.7	
	comp=Z,430nm,0.1s						
IKLH				*e*		20 53 25.1	
	comp=N,542nm,0.2s						
IKLH				*e*		20 53 25.1	
	comp=E,547nm,0.3s						
IGAR	**Gharneh**	**4.31**	**90**	*e*Pn	Pn	20 52 39.4	-0.6
IGAR				*e*		20 53 31.5	
	comp=N,342nm,0.1s						
IZEF	**Zefreh**	**4.55**	**84**	*e*Pn	Pn	20 52 42.4	-1.0
IZEF				*e*		20 52 44.9	
	comp=Z,190nm,0.1s						
IZEF				*e*		20 52 45.9	
	comp=N,102nm,0.1s						
IZEF				*e*		20 52 48.4	
	comp=E,130nm,0.1s						
IRAM	**Ramesheh**	**4.66**	**97**	*e*Pn	Pn	20 52 43.5	-1.3
IRAM				*e*		20 53 45.2	
	comp=N,121nm,0.1s						
IRAM				*e*		20 53 46.1	
	comp=E,139nm,0.3s						
IRAM				*e*		20 53 47.2	
	comp=Z,91nm,0.3s						
IGZV	**Ghazvin**	**4.71**	**34**	*e*Pn	Pn	20 52 44.9	-0.7
IGZV				*e*		20 53 14.3	
	comp=E,473nm,0.1s						
IGZV				*e*		20 53 31.7	
	comp=Z,240nm,0.0s						
IGZV				*e*		20 54 23.3	
	comp=N,467nm,0.1s						
IKAZ	**Kazeroun**	**5.00**	**122**	*e*Pn	Pn	20 52 48.5	-1.1
IKAZ				*e*		20 53 47.4	
	comp=Z,378nm,0.2s						
IKAZ				*e*		20 53 47.5	
	comp=Z,378nm,0.2s						
RTB	**Rutbah**	**5.62**	**277**	*e*Pn	Pn	20 52 52.5	-5.4
	SNR=4.0						
RTB				*e*Sn	Sn	20 53 55.5	-7.0
	SNR=4.0						

*IDC **27** 20:53:08.3±1.9, 36°.26N×141°.35E, h0km, mb3.6/4, mb1 3.6/7, mb1mx3.4/66, mbtmp3.7/7, ML3.5/3, MS4.0/1, Ms1 4.1/1, ms1mx2.7/64, Error ellipse: s-maj=40.5km s-min=19.8km az=69.0*
*ICSJB **27** 20:53:13.0±0.9, 36°.25N±0°.04×141°.14E±0°.08, h40km±9km, mb3.5/4, MS4.0/1, Error ellipse: s-maj=11.3km s-min=5.9km az=175.1*
*JMA **27** 20:53:13.4±0.1, 36°.26N×141°.09E, h44km±2km, M3.4*
ISC 27 20:53:11.4±1.7, 36°.24N±0°.05×141°.23E±0°.08, h23km±13km, n15, σ1§54/24, mb3.5/4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.62**	**210**	P	**Pn**	**20 53 25.4**	**+0.7**
CHOJ				S	**Sn**	**20 53 33.6**	**-0.3**
JHO	**Hitachi**	**0.65**	**305**	P	**Pb**	**20 53 24.8**	**+0.6**
JHO				S	**Sb**	**20 53 32.6**	**-0.2**
JYT	**Yasato**	**0.84**	**269**	P	**Pb**	**20 53 27.5**	**+0.1**
JYT				S	**Sb**	**20 53 37.4**	**-0.8**
ONAJ	**Iwakimizuishiy**	**0.93**	**338**	P	**Pb**	**20 53 28.9**	**0.0**
ONAJ				S	**Sb**	**20 53 40.1**	**-0.7**
JAG	**Ashikaga**	**1.45**	**278**	P	**Pn**	**20 53 36.2**	**0.0**
JAG				S	**Sn**	**20 53 52.9**	**-1.6**
JFT	**Otama**	**1.46**	**331**	P	**Pb**	**20 53 37.7**	**-0.3**
JFT				S	**Sn**	**20 53 54.8**	**-0.1**
MJAR	**Matsushiro Arr**	**2.46**	**278**	Pn	**Pn**	**20 53 51.1**	**+1.0**
	5.8nm,0.3s,baz=112,slow=10.0,SNR=50						
MJAR				Sn	**Sn**	**20 54 21.3**	**+1.8**
	5.9nm,0.3s,baz=42,slow=42,SNR=2.8						
MJAR				LR	LR	20 54 56.7	
	comp=Z,69nm,20.6s,baz=120,slow=43						
MAT	**Matsushiro**	**2.46**	**278**	P	**Pn**	**20 53 51.5**	**+1.4**
MAT				*e*S	**Sn**	**20 54 16.2**	**-3.3**
JHJ	**Hachijo jima 2**	**3.34**	**201**	Pn	**Pn**	**20 54 03.7**	**+1.6**
	4.9nm,0.3s,baz=26,slow=16,SNR=7.0						
JHJ				Sn	**Sn**	**20 54 42.4**	**+1.4**
	9.8nm,0.3s,baz=106,slow=24,SNR=2.3						
JCJ	**Chichijima**	**9.15**	**175**	Pn	**Pn**	**20 55 21.3**	**-0.8**
	2.9nm,0.3s,baz=279,slow=19,SNR=4.0						
JCJ				Sn	**Sn**	**20 57 00.1**	**-4.2**
	2.6nm,0.3s,baz=288,slow=22,SNR=1.2						
ZALV	**Zalesovo Beam**	**42.34**	**313**	P	**P**	**21 01 04.4**	**+1.0**
	0.8nm,0.6s,baz=80,slow=7.4,SNR=3.5						
MKAR	**Makanchi Array**	**44.42**	**303**	P	**P**	**21 01 21.5**	**+1.2**
	0.3nm,0.7s,baz=100,slow=7.5,SNR=2.6						
KURBB	**Kurchatov Arra**	**46.38**	**309**	P	**P**	**21 01 36.0**	**+0.3**
	1.3nm,0.6s,baz=83,slow=7.5,SNR=20						
ILAR	**Eielson Array**	**50.24**	**32**	LR	LR	21 27 24.7	
	comp=Z,145nm,18.0s,baz=212,slow=41						
WRA	**Warramunga Arr**	**56.26**	**188**	P	**P**	**21 02 50.5**	**+0.6**
	0.1nm,0.4s,baz=5.5,slow=7.5,SNR=4.4						

IDC 27 21:01:06.2±3.5, 21°.79S×168°.42E, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.4/42, mbtmp3.5/2, Error ellipse: s-maj=152.1km s-min=36.2km az=161.0, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**1.85**	**261**	Pn	Pn	21 01 38.0	-1.3
	7.7nm,0.3s,baz=88,slow=18,SNR=16						
DZM				Sn	Sg	21 02 05.7	-0.1
	15nm,0.3s,baz=21,slow=18,SNR=6.1						
ASAR	**Alice Springs**	**31.84**	**260**	P	P	21 07 33.7	+0.6
	0.9nm,0.7s,baz=88,slow=8.7,SNR=8.1						
WRA	**Warramunga Arr**	**31.86**	**267**	P	P	21 07 33.2	-0.1
	0.3nm,0.8s,baz=97,slow=8.5,SNR=3.8						
GERES	**GERESS Array B**	**146.33**	**329**	PKPbc	PKPdf	21 20 48.0	+0.3
	0.1nm,0.4s,baz=68,slow=2.6,SNR=3.5						

*CSEM **27** 21:06:22.7, 42°.64N×13°.02E, h12km, ML1.3/17*
ROM 27 21:06:22.7±0.1, 42°.638N±0°.003×13°.021E±0°.004, h12km, ML1.3/7, 1C-1D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNSS	**Leonessa**	**0.04**	**158**	⇓*i*P	Pg	21 06 25.4	+0.4
LNSS				S	Sg	21 06 26.8	+0.2
LNSS	**Leonessa**	**0.04**	**158**	*i*P	Pg	21 06 25.4	+0.4
LNSS				S	Sg	21 06 26.8	+0.2
LNSS				AML	AML		
	comp=E,438μm,0.4s						
LNSS				AML	AML		
	comp=N,421μm,0.2s						
LNSS				AML	AML		
	comp=E,438μm,0.4s						
LNSS				AML	AML		
	comp=N,421μm,0.2s						
LNSS				AML	AML		
	comp=E,438μm,0.4s						
LNSS				AML	AML		
	comp=N,421μm,0.2s						
ARRO	**Arrone**	**0.20**	**253**	P	Pg	21 06 27.4	+0.5
ARRO				S	Sg	21 06 30.8	+0.9
ARRO	**Arrone**	**0.20**	**253**	P	Pg	21 06 27.4	+0.5
ARRO				S	Sg	21 06 30.8	+0.9
ARRO				AML	AML		
	comp=E,121μm,0.2s						
ARRO				AML	AML		
	comp=N,82μm,1.1s						
ARRO				AML	AML		
	comp=E,121μm,0.2s						
ARRO				AML	AML		
	comp=N,83μm,1.1s						
ARRO				AML	AML		
	comp=E,121μm,0.2s						
ARRO				AML	AML		
	comp=N,83μm,1.1s						
NRCA	**Norcia**	**0.21**	**19**	⇑*i*P	Pg	21 06 27.5	+0.3
NRCA				S	Sg	21 06 30.8	+0.5
NRCA	**Norcia**	**0.21**	**19**	*i*P	Pg	21 06 27.5	+0.3
NRCA				S	Sg	21 06 30.8	+0.5
NRCA				AML	AML		
	comp=E,398μm,0.1s						
NRCA				AML	AML		
	comp=N,288μm,0.7s						
NRCA				AML	AML		
	comp=E,398μm,0.1s						
NRCA				AML	AML		
	comp=N,288μm,0.7s						

CAMP	**Campotosto**	**0.30**	**110**	P	Pg	21 06 29.4	+0.5
CAMP				S	Sb	21 06 34.3	-0.9
CAMP	**Campotosto**	**0.30**	**110**	P	Pg	21 06 29.4	+0.5
CAMP				S	Sb	21 06 34.3	-0.9
CESX	**Cesi**	**0.33**	**265**	P	Pg	21 06 29.4	+0.1
CESX				S	Sb	21 06 34.7	-1.0
CESX	**Cesi**	**0.33**	**265**	P	Pg	21 06 29.4	+0.2
CESX				S	Sb	21 06 34.7	-1.0
CESX				AML	AML		
	comp=E,35μm,1.1s						
CESX				AML	AML		
	comp=N,46μm,0.3s						
CESX				AML	AML		
	comp=E,35μm,1.1s						
CESX				AML	AML		
	comp=N,46μm,0.3s						
MOMA	**Monte Martano**	**0.37**	**297**	P	Pg	21 06 30.5	+0.4
MOMA				S	Sb	21 06 36.3	-0.8
MOMA	**Monte Martano**	**0.37**	**297**	P	Pg	21 06 30.4	+0.3
MOMA				S	Sb	21 06 36.3	-0.8
MOMA				AML	AML		
	comp=E,112μm,1.4s						
MOMA				AML	AML		
	comp=N,75μm,0.2s						
MOMA				AML	AML		
	comp=N,75μm,0.2s						
MOMA				AML	AML		
	comp=E,112μm,1.4s						
CESI	**CESI - Serrava**	**0.38**	**347**	P	Pg	21 06 30.5	+0.3
CESI				S	Sb	21 06 36.3	-0.9
CESI	**CESI - Serrava**	**0.38**	**347**	P	Pg	21 06 30.5	+0.3
CESI				S	Sb	21 06 36.3	-1.0
CESI				AML	AML		
	comp=E,12μm,0.1s						
CESI				AML	AML		
	comp=N,21μm,1.0s						
CESI				AML	AML		
	comp=N,21μm,1.0s						
CESI				AML	AML		
	comp=E,12μm,0.1s						
FIAM	**Fiamignano**	**0.38**	**169**	P	Pg	21 06 30.6	+0.4
FIAM				S	Sb	21 06 36.3	-0.9
FIAM	**Fiamignano**	**0.38**	**169**	P	Pg	21 06 30.6	+0.4
FIAM				S	Sb	21 06 36.3	-0.9
AQU	**L'Aquila**	**0.40**	**135**	AML	AML		
	comp=E,90μm,0.1s						
AQU				AML	AML		
	comp=E,90μm,0.1s						
AQU				AML	AML		
	comp=N,116μm,0.1s						
AQU				AML	AML		
	comp=N,116μm,0.1s						
AQU				AML	AML		
	comp=N,116μm,0.1s						
AQU				AML	AML		
	comp=E,90μm,0.1s						
FDMO	**Fiordimonte**	**0.40**	**7**	P	Pg	21 06 30.9	+0.3
FDMO				S	Sg	21 06 36.0	0.0
FDMO	**Fiordimonte**	**0.40**	**7**	P	Pg	21 06 30.9	+0.2
FDMO				S	Sb	21 06 37.0	-0.9
FDMO				AML	AML		
	comp=E,62μm,0.6s						
FDMO				AML	AML		
	comp=N,57μm,0.6s						
FDMO				AML	AML		
	comp=N,57μm,0.6s						
FDMO				AML	AML		
	comp=E,62μm,0.6s						
TERO	**Teramo**	**0.43**	**92**	P	Pg	21 06 31.4	+0.2
TERO				S	Sg	21 06 37.8	+0.9
TERO	**Teramo**	**0.43**	**92**	P	Pg	21 06 31.4	+0.2
TERO				S	Sb	21 06 37.8	-0.9
ASSB	**Assisi San Ben**	**0.48**	**327**	P	Pg	21 06 32.4	+0.2
ASSB				S	Sb	21 06 40.2	-0.1
ASSB	**Assisi San Ben**	**0.48**	**327**	P	Pg	21 06 32.4	+0.2
ASSB				S	Sb	21 06 40.2	-0.2
ASSB				AML	AML		
	comp=E,30μm,1.1s						
ASSB				AML	AML		
	comp=N,34μm,1.1s						
ASSB				AML	AML		
	comp=N,34μm,1.1s						
ASSB				AML	AML		
	comp=E,30μm,1.1s						

*IDC **27** 21:10:20.5±1.2, 2°.81S×141°.50E, h0km, mb3.5/5, mb1 3.6/6, mb1mx3.5/47, mbtmp3.5/6, ML3.4/1, Error ellipse: s-maj=25.6km s-min=12.5km az=22.0*
*ISCJB **27** 21:10:24.4±1.1, 2°.8S±0°.1×141°.3E±0°.2, h35km, mb3.4/5, Error ellipse: s-maj=26.2km s-min=15.2km az=174.5*
ISC 27 21:10:26.2±1.4, 2°.8S±0°.1×141°.2E±0°.2, h35km, n13, σ0§88/7, mb3.6/5, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**0.56**	**297**	Pg	**Pn**	**21 10 37.3**	**-0.4**
	17nm,0.3s,baz=142,slow=9.1,SNR=56						
JAY				Lg	Lg	21 10 48.6	
	31nm,0.3s,baz=247,slow=23,SNR=9.9						
WRA	**Warramunga Arr**	**18.34**	**201**	P	**Pn**	**21 14 38.0**	**+0.1**
	0.1nm,0.3s,baz=19,slow=13,SNR=9.3						
ASAR	**Alice Springs**	**21.94**	**198**	P	**P**	**21 15 16.7**	**-0.2**
	0.5nm,0.7s,baz=34,slow=9.6,SNR=8.2						
H11S3	**WAKE ISLAND Hy**	**32.80**	**49**	T	T	21 51 13.5	
	baz=232,slow=75,SNR=49						
H11S2	**WAKE ISLAND Hy**	**32.82**	**49**	T	T	21 51 15.7	
	baz=232,slow=75,SNR=34						
H11S1	**WAKE ISLAND Hy**	**32.82**	**49**	T	T	21 51 16.3	
	baz=232,slow=75,SNR=39						
H11N1	**WAKE ISLAND Hy**	**33.70**	**47**	T	T	21 52 16.9	
	baz=230,slow=76,SNR=6.3						
H11N2	**WAKE ISLAND Hy**	**33.72**	**47**	T	T	21 52 18.3	
	baz=230,slow=76,SNR=4.8						
H11N3	**WAKE ISLAND Hy**	**33.72**	**47**	T	T	21 52 22.3	
	baz=230,slow=76,SNR=3.0						
MKAR	**Makanchi Array**	**71.37**	**322**	P	**P**	**21 21 43.2**	**+0.5**
	0.4nm,0.7s,baz=111,slow=7.9,SNR=3.9						
ZALV	**Zalesovo Beam**	**73.25**	**329**	P	**P**	**21 21 55.0**	**+1.2**
	0.5nm,0.4s,baz=101,slow=7.5,SNR=2.7						
KURBB	**Kurchatov Arra**	**75.22**	**324**	P	**P**	**21 22 05.9**	**+0.6**
	0.3nm,0.8s,baz=111,slow=5.1,SNR=2.9						
ILAR	**Eielson Array**	**84.86**	**24**	P	**P**	**21 22 56.3**	**-0.8**
	0.3nm,0.7s,baz=267,slow=4.5,SNR=3.6						

*IDC **27** 21:12:40.4±0.6, 15°.08S×173°.49W, h0km, mb4.1/14, mb1 4.3/14, mb1mx4.1/51, mbtmp4.1/14, Error ellipse: s-maj=26.0km s-min=15.8km az=123.0*
*NEIC **27** 21:12:41.8±0.3, 15°.07S×173°.51W, h10km, mb4.4/7, Error ellipse: s-maj=13.4km s-min=7.5km az=128.0*
*ISCJB **27** 21:12:43.1±0.4, 15°.1S±0°.1×173°.6W±0°.1, h30km, mb4.1/21, Error ellipse: s-maj=19.4km s-min=10.6km az=39.0*
ISC 27 21:12:44.9±0.6, 15°.1S±0°.1×173°.5W±0°.2, h30km, n43, σ0§87/42, mb4.3/21, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.06**	**55**	Pn	Pn	21 13 07.3	-10
	101nm,0.3s,baz=177,slow=2.2,SNR=43						
AFI				Sn	Sn	21 13 28.5	-14
	216nm,0.3s,baz=70,slow=22,SNR=6.0						
URZ	**Urewera**	**24.51**	**198**	P	**P**	**21 18 02.1**	**+0.5**
	12nm,0.9s,baz=36,slow=14,SNR=3.0						
STKA	**Stephens Creek**	**44.08**	**240**	P	**P**	**21 20 50.2**	**-0.3**
	2.0nm,0.5s,baz=90,slow=9.2,SNR=6.3						
JAY	**Jayapura**	**46.81**	**281**	P	**P**	**21 21 11.9**	**-0.5**
	3.7nm,0.6s,baz=107,slow=19,SNR=2.6						
WRAB	**Tennant Creek**	**49.79**	**257**	*e*P	**P**	**21 21 34.9**	**-0.3**
	1.3nm,0.5s						
WRA	**Warramunga Arr**	**49.80**	**257**	P	**P**	**21 21 35.1**	**-0.3**
	1.0nm,0.4s,baz=91,slow=6.9,SNR=63						
ASAR	**Alice Springs**	**50.09**	**252**	P	**P**	**21 21 36.9**	**-0.7**
	3.9nm,0.5s,baz=87,slow=8.3,SNR=50						
SBA	**Scott Base**	**63.54**	**185**	*e*P	**P**	**21 23 12.0**	**0.0**
	4.0nm,1.0s						
VNDA	**Vanda**	**63.66**	**186**	P	**P**	**21 23 14.0**	**+1.1**
	2.5nm,1.0s,baz=10,slow=6.2,SNR=13						
PETK	**Petropavlovsk-**	**72.31**	**342**	P	**P**	**21 24 09.3**	**+1.8**
	1.9nm,0.6s,baz=119,slow=8.9						
NVAR	**Mina Array Bea**	**74.19**	**42**	P	**P**	**21 24 18.4**	**-0.8**
	0.3nm,0.5s,baz=226,slow=7.3,SNR=3.6						
KDAK	**Kodiak Island**	**74.66**	**11**	P	**P**	**21 24 21.4**	**+0.4**
	2.3nm,0.8s,baz=164,slow=7.4,SNR=2.6						
QSPA	**South Pole Qui**	**74.94**	**180**	P	**P**	**21 24 23.0**	**0.0**
	3.0nm,0.8s,baz=64,slow=5.8,SNR=6.9						
MOD	**Modoc Plateau**	**74.96**	**38**	*e*P	**P**	**21 24 24.0**	**+0.5**
	4.2nm,1.2s						
HLID	**Hailey**	**79.47**	**39**	*e*P	**P**	**21 24 48.7**	**-0.1**
	2.7nm,1.1s						
TXAR	**Lajitas Array**	**80.55**	**56**	P	**P**	**21 24 54.6**	**-0.2**
	0.6nm,0.9s,baz=213,slow=8.8,SNR=5.6						
PDAR	**Pinedale Array**	**82.12**	**42**	P	**P**	**21 25 02.4**	**-0.7**
	0.4nm,0.6s,baz=225,slow=6.2,SNR=3.6						
ILAR	**Eielson Array**	**82.18**	**11**	P	**P**	**21 25 01.6**	**-0.9**
	0.8nm,0.7s,baz=221,slow=6.1,SNR=9.1						
BOZ	**Bozeman (W)**	**82.23**	**39**	*e*P	**P**	**21 25 03.5**	**0.0**
	2.3nm,0.7s						
DAWY	**Dawson**	**83.16**	**14**	*e*P	**P**	**21 25 07.7**	**-0.1**
EGAK	**Eagle**	**83.36**	**13**	*e*P	**P**	**21 25 07.3**	**-1.3**
	3.8nm,1.1s						
RSSD	**Black Hills**	**86.32**	**43**	*e*P	**P**	**21 25 23.4**	**-1.0**
	1.6nm,0.7s						
YKA	**Yellowknife Ar**	**89.87**	**23**	P	**P**	**21 25 40.0**	**-0.5**
	1.1nm,0.8s,baz=246,slow=3.3,SNR=4.1						
CLL	**Collm**	**143.51**	**353**	*e*PKPdf	**PKPdf**	**21 32 16.0**	**-0.6**
GRFO	**Grafenberg**	**145.29**	**355**	*e*PKPbc	**PKPdf**	**21 32 19.9**	**+0.1**
MLR	**Muntele Rosu**	**145.55**	**336**	PKPbc	**PKPdf**	**21 32 20.2**	**-0.2**
	0.4nm,0.8s,baz=153,slow=2.3,SNR=3.3						
KHC	**Kasperske Hory**	**145.57**	**352**	*e*P	**PKPab**	**21 32 21.4**	**+0.7**
KHC				*ex*	x	21 32 27.9	
GERES	**GERESS Array B**	**145.83**	**351**	PKPbc	**PKPab**	**21 32 21.9**	**+0.1**
	1.3nm,0.8s,baz=29,slow=3.0,SNR=12						
BRTR	**Keskin Array B**	**145.85**	**321**	PKPbc	**PKPab**	**21 32 22.8**	**+0.6**
	2.7nm,0.9s,baz=102,slow=1.6,SNR=9.0						
ANTO	**Ankara**	**146.27**	**322**	*e*PKPbc	**PKPab**	**21 32 23.3**	**-0.4**
CONA	**Conrad Observa**	**146.36**	**349**	*i* pPKPdf	**PKPab**	**21 32 23.9**	**+0.1**
	5.6nm,1.8s						
MOA	**Molln**	**146.72**	**350**	*i* sPKPab	**PKPab**	**21 32 28.7**	**+3.6**
	1.2nm,0.5s						
BFO	**Black Forest**	**146.83**	**358**	*e*PKPbc	**PKPbc**	**21 32 24.6**	**+0.3**
ARSA	**Arzberg**	**147.07**	**349**	*i* pPKPdf	**PKPbc**	**21 32 25.1**	**+0.1**
	2.6nm,1.1s						
RETA	**Reutte**	**147.51**	**355**	*i* PKPab	**PKPbc**	**21 32 26.6**	**+0.4**
	6.3nm,1.5s						
WATA	**Walderalm**	**147.58**	**354**	*e*PKPbc	**PKPbc**	**21 32 25.3**	**-1.2**
	2.0nm,0.6s						
KBA	**Koelnbreinsper**	**147.61**	**351**	*i* PKiKP	**PKPab**	**21 32 28.3**	**-0.5**
	2.8nm,0.7s						
MOTA	**Moosalm**	**147.62**	**354**	*i* pPKPdf	**PKPbc**	**21 32 26.5**	**-0.2**
	2.8nm,1.0s						
SOKA	**Soboth**	**147.72**	**349**	*i* pPKPdf	**PKPbc**	**21 32 26.9**	**+0.1**
	2.9nm,1.1s						
DAVA	**Damuels**	**147.79**	**356**	*i* sPKPdf	**PKPbc**	**21 32 27.7**	**+0.6**
	5.2nm,1.1s						
OBKA	**Obir**	**147.97**	**349**	*i* pPKPbc	**PKPab**	**21 32 30.0**	**-0.1**
	2.2nm,0.9s						
FETA	**Feichten**	**147.98**	**355**	*i* sPKPdf	**PKPbc**	**21 32 28.5**	**+0.9**
	6.4nm,1.2s						
ABTA	**Abfaltersbach**	**148.05**	**352**	*i* pPKPdf	**PKPbc**	**21 32 27.3**	**-0.4**
	3.5nm,0.8s						

*IDC **27** 21:13:59.5±0.4, 15°.26S×173°.24W, h0km, mb4.6/28, mb1 4.7/28, mb1mx4.6/53, mbtmp4.6/28, MS4.5/8, Ms1 4.5/8, ms1mx4.3/18, Error ellipse: s-maj=16.5km s-min=12.1km az=129.0*
*NEIC **27** 21:14:01.5±0.2, 15°.25S×173°.41W, h10km, mb4.9/100, Error ellipse: s-maj=8.2km s-min=4.6km az=144.0*
*GCMT **27** 21:14:01.5±0.1, 15°.12S×172°.96W, h18km, MW5.4/116, Moment Tensor Solution. s95,c158; s116,c202; Duration: 1§2 Moment tensor: Scale 10^{17}Nm; M_{rr}1.23±.03; $M_{\theta\theta}$-0.83±.02; $M_{\phi\phi}$-0.40±.02; $M_{r\theta}$-0.65±.04; $M_{\theta\phi}$0.67±.01; $M_{\phi r}$-0.01±.04; Best double couple: $M_0$1.43000×10^{17} NP1:ϕ_s291.00000°, δ58.00000°, λ72.00000°. NP2:ϕ_s142.00000°, δ36.00000°, λ116.00000°. Principal axes: T 1.4410, Plg71.0000°, Azm159.0000°; N -0.0190, Plg15.0000°, Azm300.0000°; P -1.4200, Plg12.0000°, Azm33.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*ISCJB **27** 21:14:02.7±0.2, 15°.30S±0°.05×173°.34W±0°.04, h29km, mb4.8/137, MS4.4/2 Error ellipse: s-maj=7.7km s-min=5.1km az=156.0*
*BJI **27** 21:14:02.5, 15°.20S×173°.40W, h10km, mb5.0/25, mB5.4/17, Ms5.0/12, Ms7 4.8/12*
*MOS **27** 21:14:04.4±1.2, 15°.16S×173°.34W, h33km, mb5.1/37, Error ellipse: s-maj=11.4km s-min=8.6km az=60.8*
ISC 27 21:14:04.3±0.3, 15°.33S±0°.08×173°.23W±0°.07, h29km, n423, σ1§03/399, mb4.9/137, 32C-20D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.99**	**45**	Pn	Pn	21 14 28.1	-8.0
	432nm,0.3s,baz=208,slow=6.0,SNR=6.6						
AFI				Sn	Sn	21 14 44.7	-15
	1μm,0.3s,baz=281,slow=18,SNR=11						
RAR	**Rarotonga**	**14.05**	**117**	Pn	Pn	21 17 16.6	-4.9
	2.4nm,0.3s,baz=272,slow=7.4,SNR=7.4						
RAR				Sn	Sn	21 19 45.3	-11
	1.7nm,0.3s,baz=86,slow=17,SNR=2.0						
RAR				LR	LR	21 22 26.5	
	comp=Z,1μm,18.1s,baz=290,slow=36						
RAR	**Rarotonga**	**14.05**	**117**	*e*Pn	Pn	21 17 15.9	-5.6
RAR				Sn	Sn	21 19 45.4	-11
RAO	**Raoul Island**	**14.52**	**197**	LR	LR	21 22 08.5	
	comp=Z,2μm,20.0s,baz=17,slow=34						
DZM	**Mont Dzumac**	**20.38**	**248**	P	**P**	**21 18 39.1**	**+0.2**
	7.8nm,0.3s,baz=123,slow=13,SNR=20						
DZM	**Mont Dzumac**	**20.38**	**248**	*e*P	**P**	**21 18 39.8**	**+0.9**
	270nm,1.4s						
DZM				*e*LR	LR	21 23 30.8	
	3μm,29.9s						
DZM	**Mont Dzumac**	**20.38**	**248**	*e*P	Pn	21 18 43.5	+2.4
	157nm,1.3s						
PAE	**Paea**	**22.79**	**99**	*e*P	**P**	**21 19 03.9**	**-0.9**
	8.9nm,1.2s						
PAE	**Paea**	**22.79**	**99**	*e*T	T	21 42 15.0	
	4.7nm,0.3s						
PPT	**Papeete**	**22.79**	**99**	LR	LR	21 26 34.0	
	comp=Z,1μm,18.2s,baz=266,slow=33						
PPT2	**Papeete2**	**22.79**	**99**	*e*P	**P**	**21 19 04.3**	**-0.6**
	57nm,1.4s						
PPT2				*e*LQ	LQ	21 23 25.4	
	7μm,28.0s						
PPT2				*e*LR	LR	21 24 37.6	
	1μm,23.5s,baz=270						
TVO	**Taravao**	**23.11**	**99**	*e*P	**P**	**21 19 07.5**	**-0.7**
	9.3nm,0.9s						
TBI	**Tubuai**	**23.78**	**113**	*e*LQ	LQ	21 23 53.0	
	4μm,27.8s						
TBI				*e*LR	LR	21 25 09.6	
	1μm,22.2s,baz=285						
TBI	**Tubuai**	**23.78**	**113**	*e*T	T	21 43 31.4	
	16nm,0.3s						
URZ	**Urewera**	**24.38**	**199**	P	**P**	**21 19 19.2**	**-0.8**
	17nm,0.6s,baz=353,slow=2.2,SNR=6.1						
PMOR	**Pomariorio Ree**	**24.45**	**93**	*e*P	**P**	**21 19 19.8**	**-1.1**
	138nm,1.2s						
PMOR	**Pomariorio Ree**	**24.45**	**93**	*e*T	T	21 44 38.2	
	5.2nm,0

H11N2 WAKE ISLAND Hy 39.95 330 T T 22 04 13.1
baz=150,slow=76,SNR=6.4
TOO Toolangi 42.63 231 P **P** **21 21 56.2 -2.1**
TOO pmax pmax
comp=Z,20nm,1.4s
STKA Stephens Creek 44.21 240 P **P** **21 22 10.0 -1.0**
comp=Z,6.6nm,0.8s,baz=78,slow=12,SNR=9.2
STKA Stephens Creek 44.21 240 *e*P **P** **21 22 10.4 -0.6**
comp=Z,5.7nm,1.4s
STKA Stephens Creek 44.21 240 *e*P **P** **21 22 10.4 -0.6**
STKA pmax pmax
comp=Z,6.0nm,1.4s
WB2 Warramunga Arr 50.01 257 *e*P **P** **21 22 55.5 -1.0**
comp=Z,21nm,1.5s
WRAB Tennant Creek 50.01 257 *e*P **P** **21 22 55.0 -1.5**
comp=Z,3.3nm,0.4s
WRAB Tennant Creek 50.01 257*d i*P **P** **21 22 55.6 -0.9**
WRA Warramunga Arr 50.02 257 P **P** **21 22 55.3 -1.2**
comp=Z,2.9nm,0.4s,baz=91,slow=7.0,SNR=43
AS01 Alice Springs 50.24 252 *e*P **P** **21 22 56.0 -2.2**
AS31 Alice Springs 50.29 252 *e*P **P** **21 22 57.0 -1.6**
comp=Z,3.3nm,0.6s
ASAR Alice Springs 50.29 252 P **P** **21 22 57.0 -1.6**
comp=Z,10nm,0.6s,baz=87,slow=8.1,SNR=20
ASAR Alice Springs 50.29 252 P **P** **21 22 57.0 -1.6**
SIJI Sorong 56.61 279 P **P** **21 23 44.9 -0.2**
comp=Z,5.3nm,0.5s,baz=66,slow=14,SNR=4.0
BATI Baumata 61.58 267 LR LR 21 49 18.4
comp=Z,387nm,20.0s,baz=126,slow=34
SBA Scott Base 63.33 185 *e*P **P** **21 24 33.0 +2.8**
SBA Scott Base 63.33 185 *e*P **P** **21 24 33.0 +2.8**
VNDA Vanda 63.46 186 P **P** **21 24 32.7 +1.6**
comp=Z,6.5nm,0.9s,baz=7.7,slow=6.3,SNR=21
VNDA Vanda 63.46 186 *e*P **P** **21 24 33.6 +2.5**
comp=Z,16nm,1.1s
JHJ Hachijo jima 2 65.83 318 LR LR 21 50 30.9
comp=Z,148nm,18.6s,baz=124,slow=33
MJAR Matsushiro Arr 68.99 320 P **P** **21 25 06.6 -0.5**
comp=Z,3.0nm,0.8s,baz=164,slow=6.1,SNR=9.8
MAJO Matsushiro 68.99 320 *e*P **P** **21 25 06.4 -0.8**
comp=Z,9.5nm,1.0s
MAJO Matsushiro 68.99 320*ce*P **P** **21 25 06.7 -0.4**
MAJO pmax pmax
comp=Z,10.0nm,1.0s
MAT Matsushiro 68.99 320 P **P** **21 25 06.4 -0.7**
MAT S **S** **21 34 08.4 -1.8**
MJB9 Matsu-Tunnel 69.00 320 *e*P **P** **21 25 07.2 +0.1**
comp=Z,9.7nm,1.0s
H06S1 SOCORRO T 70.03 63 T T 22 41 34.8
SNR=5.5
H06E1 SOCORRO T-PHAS 70.08 63 T T 22 41 34.8
CASY Casey 70.54 205 *e*P **P** **21 25 17.1 +0.9**
comp=Z,8.6nm,1.0s
ASAJ Asahikawa 71.57 328 P **P** **21 25 23.1 +0.4**
comp=Z,8.0nm,0.8s,baz=118,slow=12,SNR=5.4
ASAJ LR LR 21 55 16.4
comp=Z,146nm,18.3s,baz=180,slow=35
ASAJ Asahikawa 71.57 328 *e*P **P** **21 25 23.6 +0.9**
comp=Z,10nm,0.9s
KHMM Horse Mountain 72.31 37 *e*P **P** **21 25 29.1 +1.7**
comp=Z,15nm,1.2s
PETK Petropavlovsk- 72.61 342 P **P** **21 25 28.2 -0.6**
comp=Z,10nm,0.7s,baz=134,slow=9.4
WDC Whiskeytown Da 72.82 38 *e*P **P** **21 25 32.0 +1.7**
comp=Z,12nm,1.3s
WDC Whiskeytown Da 72.82 38 *e*P **P** **21 25 32.0 +1.7**
WDC pmax pmax
comp=Z,12nm,1.3s
GSC Goldstone, Bar 73.42 45 *e*P **P** **21 25 35.6 +1.5**
comp=Z,32nm,1.8s
GSC Goldstone, Bar 73.42 45 *e*P **P** **21 25 35.6 +1.5**
GSC pmax pmax
comp=Z,32nm,1.8s
YBH Yreka Blue Hor 73.44 37 P **P** **21 25 34.2 +0.1**
comp=Z,6.2nm,0.8s,baz=234,slow=8.7,SNR=15
YBH Yreka Blue Hor 73.44 37 *e*P **P** **21 25 34.6 +0.5**
comp=Z,8.2nm,0.9s
YBH Yreka Blue Hor 73.44 37 *e*P **P** **21 25 34.6 +0.5**
YBH pmax pmax
comp=Z,8.0nm,0.9s
YSS Yuzh-Sakhalins 73.50 330 *e*P **P** **21 25 36.5 +2.4**
YSS *e* 21 25 49.6
YSS pmax pmax
comp=Z,20nm,0.6s
HUMO Hull Mountain 73.86 36 *e*P **P** **21 25 36.1 -0.3**
comp=Z,14nm,1.3s
RYN Ryan 74.14 42 *e*P **P** **21 25 40.7 +2.4**
comp=Z,14nm,1.4s
NV01 Mina Array Sit 74.17 42 *e*P **P** **21 25 38.0 -0.6**
NVAR Mina Array Bea 74.17 42 P **P** **21 25 38.5 -0.1**
comp=Z,2.5nm,0.8s,baz=230,slow=10,SNR=9.8
113A Mohawk Valley, 74.25 49 *e*P **P** **21 25 39.5 +0.7**
comp=Z,16nm,1.5s
NV11 Mina Array Sit 74.27 42 *e*P **P** **21 25 38.0 -1.0**
comp=Z,1.2nm,1.4s
KVN Kaiserville 74.65 41 *e*P **P** **21 25 40.5 -0.8**
comp=Z,26nm,1.9s
KVN Kaiserville 74.65 41 *e*P **P** **21 25 40.5 -0.8**
KVN pmax pmax
comp=Z,26nm,1.9s
QSPA South Pole Qui 74.71 180 P **P** **21 25 42.6 +1.4**
comp=Z,13nm,0.9s,baz=80,slow=5.4,SNR=15
KDAK Kodiak Island 74.82 11 P **P** **21 25 40.8 -0.7**
comp=Z,4.3nm,0.6s,baz=252,slow=4.5,SNR=11
KDAK Kodiak Island 74.82 11 *i* P **P** **21 25 41.5 -0.1**
MOD Modoc Plateau 74.97 38 *e*P **P** **21 25 42.0 -1.0**
comp=Z,8.0nm,0.9s
K05A Summer Lake 75.12 37 *e*P **P** **21 25 43.9 -0.1**
comp=Z,20nm,1.1s
W13A Hualapai Mount 75.34 47 *e*P **P** **21 25 46.2 +0.8**
comp=Z,24nm,1.8s
Y14A Wickenburg 75.39 48 *e*P **P** **21 25 45.7 +0.2**
comp=Z,4.3nm,0.8s
H04A Detroit Lake 75.60 35 *e*P **P** **21 25 45.7 -0.8**
comp=Z,50nm,1.8s
PINE Pine Mountain 75.75 36 *e*P **P** **21 25 47.5 -0.1**
comp=Z,20nm,1.1s
SBUM Sibu 75.78 277 *e*P **P** **21 25 46.0 -2.2**
comp=Z,11nm,1.2s
R11A Troy Canyon, C 75.90 43 *e*P **P** **21 25 48.5 0.0**
comp=Z,10nm,0.8s
R11A *e*S **S** **21 35 31.8 +2.3**
BMN Battle Mountai 75.99 41 *e*P **P** **21 25 48.3 -0.7**
comp=Z,36nm,2.0s
BMN Battle Mountai 75.99 41 *e*P **P** **21 25 48.3 -0.7**
BMN pmax pmax
comp=Z,36nm,2.0s
E03A Lebam 76.06 33 *e*P **P** **21 25 49.7 +0.7**
comp=Z,20nm,1.0s
TUC Tucson 76.22 51 *e*P **P** **21 25 50.3 -0.1**
comp=Z,38nm,1.8s
TUC Tucson 76.22 51 *e*P **P** **21 25 50.3 -0.1**
TUC pmax pmax
comp=Z,39nm,1.8s
KSRS Korea Array 76.22 315 P **P** **21 25 50.6 +0.5**
comp=Z,2.2nm,0.9s,baz=124,slow=5.9,SNR=6.6
KSAR Wonju Array Be 76.24 315 P **P** **21 25 50.6 +0.4**
KS01 Wonju Array Si 76.25 315 *e*P **P** **21 25 50.2 -0.1**
WVOR Wild Horse Val 76.28 38 *e*P **P** **21 25 50.4 -0.1**
comp=Z,19nm,1.4s
WVOR Wild Horse Val 76.28 38 *e*P **P** **21 25 50.4 -0.1**
WVOR pmax pmax
comp=Z,19nm,1.4s
I07A Izee 76.75 37 *e*P **P** **21 25 54.1 +1.0**
comp=Z,9.5nm,1.3s
X16A Lo Mia Camp, P 76.75 48 *e*P **P** **21 25 54.1 +0.7**
comp=Z,5.4nm,0.9s
J08A Circle Bar Ran 76.92 38 *e*P **P** **21 25 56.5 +2.5**
comp=Z,19nm,1.4s
319A Douglas 76.92 52 *e*P **P** **21 25 55.5 +1.1**
comp=Z,12nm,0.9s
MSHR Mys Shultsa 76.97 321*c i*P **P** **21 25 54.8 +0.6**
KNB Kanab 77.06 46 P **P** **21 25 55.4 +0.3**
KNB pmax pmax
comp=Z,44nm,1.8s
U15A North Rim 77.14 46 *e*P **P** **21 25 57.9 +2.2**
comp=Z,39nm,1.8s
RSO Redoubt South 77.31 10 *e*P **P** **21 25 55.7 -0.3**
WUAZ Wupatki 77.33 48 *e*P **P** **21 25 56.3 -0.4**
comp=Z,23nm,1.8s
USRK Ussuriysk Ar. 77.43 323 P **P** **21 25 56.4 -0.4**
comp=Z,2.1nm,0.9s,baz=132,slow=4.1
SVW2 Sparrevohn 77.47 9 *e*P **P** **21 25 55.8 -0.8**
comp=Z,4.7nm,0.9s
MTPU Mount Pierson 78.02 45 *e*P **P** **21 26 01.4 +0.7**
comp=Z,11nm,1.1s
HAWA Hanford 78.13 35 *e*P **P** **21 26 00.8 +0.2**
comp=Z,8.8nm,0.9s
MSU Marysvale 78.26 45 *e*P **P** **21 26 01.4 -0.5**
MSU Marysvale 78.26 45 *e*P **P** **21 26 01.4 -0.5**
BMO Blue Mountains 78.47 37 *e*P **P** **21 26 02.5 -0.2**
comp=Z,4.8nm,1.0s
BMO Blue Mountains 78.47 37 *e*P **P** **21 26 02.5 -0.2**
BMO pmax pmax
comp=Z,5.0nm,1.0s
MFID Camas Ranch 78.53 39 *e*P **P** **21 26 03.1 +0.1**
comp=Z,9.9nm,1.3s
SUA Susitna One 78.60 11 *e*P **P** **21 26 02.5 -0.5**
comp=Z,9.4nm,0.9s
DUG Dugway, Tooele 78.70 43 *e*P **P** **21 26 04.1 0.0**
comp=Z,12nm,1.4s
DUG Dugway, Tooele 78.70 43 *e*P **P** **21 26 04.1 0.0**
DUG pmax pmax
comp=Z,12nm,1.4s
GHO Glory Hole Cre 79.23 11 *e*P **P** **21 26 06.8 +0.4**
comp=Z,12nm,0.9s
DIV Divide 79.29 13 *e*P **P** **21 26 06.2 -0.6**
comp=Z,12nm,0.8s
TMUT Trail Mountain 79.31 44 *e*P **P** **21 26 08.4 +0.7**
comp=Z,12nm,1.1s
BMRM Bremner River 79.41 14 *e*P **P** **21 26 07.4 0.0**
comp=Z,14nm,0.9s
HLID Hailey 79.47 39 *e*P **P** **21 26 08.2 -0.1**
comp=Z,7.0nm,0.9s
HVU Hansel Valley 79.55 41 *e*P **P** **21 26 10.0 +1.3**
comp=Z,12nm,1.3s
HVU Hansel Valley 79.55 41 P **P** **21 26 10.0 +1.3**
HVU pmax pmax
comp=Z,12nm,1.2s
KLU Klutina 79.59 13 *e*P **P** **21 26 07.8 -0.5**
comp=Z,7.9nm,0.9s
SCM Sheep Creek Mo 79.60 12 *e*P **P** **21 26 07.8 -0.6**
comp=Z,13nm,0.8s
SCM Sheep Creek Mo 79.60 12 *e*P **P** **21 26 07.8 -0.6**
SCM pmax pmax
comp=Z,13nm,0.8s
SRU San Rafael Swe 79.68 45 *e*P **P** **21 26 09.5 -0.1**
comp=Z,7.6nm,1.0s
SRU San Rafael Swe 79.68 45 *e*P **P** **21 26 09.5 -0.1**
SRU pmax pmax
comp=Z,8.0nm,1.0s
PPLA Purkeypile 79.69 10 *e*P **P** **21 26 09.8 +0.8**
comp=Z,28nm,1.6s
P17A Butcher Ranch, 79.71 44 *e*P **P** **21 26 10.8 +1.1**
comp=Z,35nm,1.7s
LAZ Ladron 79.89 50 *e*P **P** **21 26 10.8 0.0**
MNTX Cornudas Mount 80.05 53 *e*P **P** **21 26 11.3 -0.2**
comp=Z,7.6nm,1.1s
P18A Preston Nutter 80.12 44 *e*P **P** **21 26 13.5 +1.4**
comp=Z,36nm,2.0s
BNM Barren Site 80.16 51 *e*P **P** **21 26 12.2 -0.2**
NJ2 Nanjing 80.25 307 *e*P **P** **21 26 13.8 +1.2**
NJ2 pmax pmax
comp=Z,9.0nm,0.7s
PV03 Paradox Valley 80.42 46 *e*P **P** **21 26 16.0 +2.4**
comp=Z,15nm,1.4s
TX31 Lajitas Ar. Si 80.44 56 *e*P **P** **21 26 15.1 +1.3**
TXAR Lajitas Array 80.44 56 P **P** **21 26 13.8 0.0**
comp=Z,0.9nm,0.7s,baz=221,slow=9.1,SNR=9.3
PV02 Paradox Valley 80.47 46 *e*P **P** **21 26 15.8 +1.9**
comp=Z,26nm,1.7s
TRF Thorofare Moun 80.53 10 *e*P **P** **21 26 12.5 -1.1**
comp=Z,15nm,0.9s
KLR Kul'dur 80.55 327⇑*e*P **P** **21 26 13.8 0.0**
ANMO Albuquerque 80.63 50 P **P** **21 26 14.5 -0.3**
comp=Z,2.6nm,0.9s,baz=233,slow=6.2,SNR=8.5
ANMO Albuquerque 80.63 50 *e*P **P** **21 26 15.0 +0.2**
comp=Z,14nm,1.4s
ANMO Albuquerque 80.63 50⇑*i*P **P** **21 26 14.8 0.0**
ANMO pmax pmax
comp=Z,12nm,1.5s
DHY Denali Highway 80.72 12 *e*P **P** **21 26 14.3 -0.3**
comp=Z,5.7nm,0.9s
MCK McKinley 81.03 11 *e*P **P** **21 26 15.4 -0.6**
comp=Z,26nm,0.9s
MCK McKinley 81.03 11 *e*P **P** **21 26 15.4 -0.6**
MCK pmax pmax
comp=Z,27nm,0.9s
MCMT McKenzie Canyo 81.10 39 *e*P **P** **21 26 17.5 +0.4**
CN2 Changchun 81.14 320 *e*P **P** **21 26 17.5 +0.5**
CN2 pmax pmax
comp=Z,20nm,0.8s
BWN Browne 81.34 10 *e*P **P** **21 26 17.5 -0.1**
comp=Z,45nm,1.1s
MSO Missoula 81.53 37 *e*P **P** **21 26 20.8 +1.6**
comp=Z,17nm,1.5s
REDW Red Top Meadow 81.58 41 *e*P **P** **21 26 20.6 +0.9**
comp=Z,24nm,1.5s
TPAW Teton Pass 81.58 41 *e*P **P** **21 26 21.9 +2.1**
comp=Z,17nm,1.3s
S22A 4UR Ranch, Cre 81.60 47 *e*P **P** **21 26 20.9 +0.9**
comp=Z,41nm,1.8s
FXWY Fox Creek 81.61 40 *e*P **P** **21 26 20.1 +0.2**
comp=Z,5.0nm,1.0s
IMW Indian Meadow 81.79 40 *e*P **P** **21 26 21.3 +0.4**
comp=Z,11nm,1.1s
RIDG Independ'e Rid 81.82 12 *e*P **P** **21 26 19.8 -0.5**
comp=Z,15nm,1.1s
LRM Limekiln Ridge 81.86 38 *e*P **P** **21 26 21.3 +0.2**
MLY Manley 81.92 9 *e*P **P** **21 26 19.7 -1.0**
comp=Z,14nm,1.0s
FLWY Flagg Ranch 82.03 40 *e*P **P** **21 26 24.2 +2.1**
comp=Z,22nm,1.3s
CCB Clear Creek Bu 82.06 11 *e*P **P** **21 26 20.7 -0.7**
comp=Z,18nm,0.8s
BW06 Boulder Array 82.11 42 *e*P **P** **21 26 23.2 +0.7**
comp=Z,19nm,1.5s
PD31 Pinedale Array 82.11 42 *e*P **P** **21 26 22.6 +0.1**
PDAR Pinedale Array 82.11 42 P **P** **21 26 21.6 -0.9**
comp=Z,2.7nm,0.7s,baz=217,slow=3.1,SNR=16
PDAR Pinedale Array 82.11 42 *e*P **P** **21 26 21.4 -1.1**
SMCO Snowmass 82.15 46 *e*P **P** **21 26 23.7 +0.7**
comp=Z,26nm,1.5s
SCRK Sand Creek 82.21 13 *e*P **P** **21 26 22.1 -0.3**
comp=Z,9.1nm,0.8s
BOZ Boman (W) 82.24 39 *e*P **P** **21 26 22.7 -0.3**
comp=Z,9.8nm,1.0s
BOZ Bozeman (W) 82.24 39 *e*P **P** **21 26 22.7 -0.3**
BOZ pmax pmax
comp=Z,10.0nm,1.0s
LNIG Linares 82.24 62 *e*P **P** **21 26 22.5 -0.8**
comp=Z,24nm,1.4s
MDM Murphy Dome 82.28 10 *e*P **P** **21 26 21.7 -0.9**
comp=Z,22nm,1.2s
IL1 Eielson Array 82.35 11 *e*P **P** **21 26 21.4 -1.6**
ILAR Eielson Array 82.35 11 P **P** **21 26 21.8 -1.2**
comp=Z,3.2nm,0.8s,baz=204,slow=6.0,SNR=18
ILB Eielson Array 82.35 11 *e*P **P** **21 26 22.0 -0.9**
SEY Seymchan 82.50 345⇓*i*P **P** **21 26 23.4 -0.3**
SDCO Great Sand Dun 82.55 48 *e*P **P** **21 26 25.4 +0.4**
comp=Z,5.4nm,0.9s
MSTX Muleshoe 82.99 52 *e*P **P** **21 26 27.4 +0.3**
comp=Z,14nm,0.9s
T25A Trinidad 83.07 49 *e*P **P** **21 26 27.9 +0.2**
comp=Z,6.6nm,0.9s
RWWY Rawlins 83.13 44 *e*P **P** **21 26 28.1 +0.2**
comp=Z,22nm,1.2s
DAWY Dawson 83.31 14 *e*P **P** **21 26 27.0 -1.1**
comp=Z,11nm,1.0s
ISCO Idaho Springs 83.36 46 *e*P **P** **21 26 29.7 +0.5**
comp=Z,35nm,1.8s
ISCO Idaho Springs 83.36 46 *e*P **P** **21 26 29.7 +0.5**
ISCO pmax pmax
comp=Z,35nm,1.8s
RLMT Red Lodge 83.44 40 *e*P **P** **21 26 30.0 +0.7**
comp=Z,11nm,1.0s
RDOG Red Dog Mine 83.49 4 *e*P **P** **21 26 29.5 +0.7**
comp=Z,7.1nm,0.7s
EGAK Eagle 83.52 13 *e*P **P** **21 26 28.0 -0.9**
comp=Z,5.6nm,0.9s
N23A Red Feather La 83.62 45 *e*P **P** **21 26 31.1 +0.6**
comp=Z,17nm,1.2s
JCT Junction City 83.97 56 *e*P **P** **21 26 32.4 +0.2**
comp=Z,8.3nm,1.0s
JCT Junction City 83.97 56 *e*P **P** **21 26 32.4 +0.2**
JCT pmax pmax
comp=Z,8.0nm,1.0s
COLD Coldfoot 84.05 9 *e*P **P** **21 26 32.2 +0.5**
comp=Z,17nm,1.2s
AMTX Amarillo 84.18 52 *e*P **P** **21 26 32.4 -0.8**
BILL Bilibino 84.46 352 *e*P **P** **21 26 32.9 -0.8**
comp=Z,6.5nm,0.9s
BILL Bilibino 84.46 352⇓*i*P **P** **21 26 33.4 -0.3**
BILL *e* 21 29 48.0
BILL pmax pmax
comp=Z,6.0nm,1.1s
RSSD Black Hills 86.30 42 *e*P **P** **21 26 43.2 -0.6**
comp=Z,12nm,1.0s
RSSD Black Hills 86.30 42 *e*P **P** **21 26 43.2 -0.6**
RSSD pmax pmax
comp=Z,12nm,1.0s
HKT Hockley 87.01 58 *e*P **P** **21 26 47.5 +0.3**
HKT Hockley 87.01 58 *e*P **P** **21 26 47.5 +0.3**
MAW Mawson 87.91 199 P **P** **21 26 51.3 +0.4**
comp=Z,9.4nm,0.8s,baz=125,slow=7.9,SNR=12
MAW Mawson 87.91 199 *e*P **P** **21 26 52.6 +1.7**
comp=Z,2.7nm,0.9s
GYA Guiyang 88.16 298 P **P** **21 26 54.0 +1.0**
GYA PP **PP** **21 30 23.3 +2.9**
GYA SKS **SKSac** **21 37 20.8 +0.6**
GYA S **S** **21 37 36.5 +0.6**
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,110nm,6.0s
INK Inuvik 88.16 14 P **P** **21 26 50.9 -1.0**
comp=Z,5.0nm,0.9s,baz=211,slow=13,SNR=5.0
INK Inuvik 88.16 14 *e*P **P** **21 26 51.2 -0.7**
INK Inuvik 88.16 14 *e*P **P** **21 26 51.2 -0.7**
PSI Prapat 88.65 273 P **P** **21 26 52.6 -3.1**
HHC Hu-ho-hao-te 89.10 313 *e*P **P** **21 26 57.5 +0.4**
HHC PP **PP** **21 30 29.8 +2.1**
HHC S **S** **21 37 43.3 -0.9**
HHC SS **SS** **21 43 39.5 +1.0**
HHC pmax pmax
comp=Z,3.0nm,0.6s
HHC pmax pmax
comp=Z,190nm,6.7s
HHC LR LR
comp=Z,72nm,13.8s
HHC LR LR
comp=Z,73nm,12.1s
HHC LR LR
comp=Z,66nm,11.2s
YAK Yakutsk 89.11 337⇓*e*P **P** **21 26 58.2 +1.7**
YAK pmax pmax
comp=Z,7.0nm,0.5s
YKA Yellowknife Ar 89.97 23 P **P** **21 26 59.2 -1.3**
comp=Z,4.4nm,0.8s,baz=235,slow=4.3,SNR=14
JTS JuntasAbangare 91.04 80 P **P** **21 27 07.4 +0.8**
comp=Z,9.7nm,0.7s,baz=311,slow=11,SNR=8.7
KMI Kunming 91.14 296 P **P** **21 27 08.3 +1.1**
KMI pmax pmax
comp=Z,4.0nm,0.6s
KMI pmax pmax
comp=Z,160nm,6.6s
CD2 Chengdu 91.91 301 P **P** **21 27 09.0 -1.4**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
SYO Syowa Base 92.70 191⇑*e*P **P** **21 27 11.7 -1.5**
SYO Syowa Base 92.70 191⇓*e*PcP **P** **21 27 13.4 +0.2**
CMAR Chiang Mai Ar 92.75 288 P **P** **21 27 15.4 +0.9**
comp=Z,0.2nm,0.5s,baz=100,slow=3.0,SNR=2.8
VNA3 Neumayer Olymp 92.91 175 P **P** **21 27 16.4 +2.2**
SNAA Sanae 92.97 177 P **P** **21 27 16.7 +2.1**
SNAA Sanae 92.97 177 P **P** **21 27 13.7 -0.9**
comp=Z,2.1nm,0.8s,baz=190,slow=6.1,SNR=6.4
SNAA Sanae 92.97 177 *e*P **P** **21 27 15.9 +1.3**
comp=Z,14nm,1.3s
SNAA Sanae 92.97 177 *e*P **P** **21 27 15.9 +1.3**
SNAA pmax pmax
comp=Z,15nm,1.3s
LCO Las Campanas 93.24 121 *e*P **P** **21 27 17.7 +0.7**
LZH Lanzhou 93.31 306 *e*P **P** **21 27 18.5 +1.6**
LZH pP pP 21 27 23.3 -3.0
LZH sP sP 21 27 25.5 -4.1
LZH *e*PP **PP** **21 31 05.5 +4.3**
LZH pmax pmax
comp=Z,15nm,1.4s
LZH pmax pmax
comp=Z,89nm,5.2s
LZH LR LR
comp=Z,230nm,17.0s
LZH LR LR
comp=Z,240nm,17.1s
LZH LR LR
comp=Z,350nm,19.4s
VNA1 Neumayer--Stat 93.61 175 P **P** **21 27 19.7 +2.3**
ULM Lac du Bonnet 93.78 39 P **P** **21 27 16.5 -2.0**
comp=Z,2.4nm,0.5s,baz=250,slow=4.5,SNR=5.1
ULM Lac du Bonnet 93.78 39 *e*P **P** **21 27 16.9 -1.6**
comp=Z,7.6nm,1.0s
ULM Lac du Bonnet 93.78 39 *e*P **P** **21 27 16.9 -1.6**
ULM pmax pmax
comp=Z,8.0nm,1.0s
ULN Ulaanbaatar 94.49 318 *e*P **P** **21 27 21.5 -0.5**
comp=Z,1.2nm,0.5s
ULN Ulaanbaatar 94.49 318 *e*P **P** **21 27 21.5 -0.5**
ULN pmax pmax
comp=Z,1.0nm,0.5s
B35A Bob, Littlefor 94.50 41 *e*P **P** **21 27 20.4 -1.4**
comp=Z,8.8nm,1.1s
SONA1 Songino Array 94.90 318 *e*P **P** **21 27 23.7 -0.2**
SONM Songino Array 94.90 318 P **P** **21 27 22.7 -1.2**
comp=Z,0.2nm,0.3s,baz=126,slow=4.4,SNR=3.8
BCIP Isla Barro Col 95.62 82 *e*P **P** **21 27 28.4 +0.6**
COWI Conover 96.87 44 *e*P **P** **21 27 31.6 -1.2**
GTA Gaotai 97.26 309 *e*P Pdif 21 27 37.3 +2.4
GTA pP pP 21 27 41.8 -2.4
GTA sP sP 21 27 44.3 -3.3
GTA S **S** **21 39 02.8 +5.8**
GTA pmax pmax
comp=Z,1.0nm,0.8s
GTA pmax pmax
comp=Z,52nm,4.8s
GTA LR LR
comp=Z,110nm,18.7s
GTA LR LR
comp=Z,170nm,20.9s
GTA LR LR
comp=Z,230nm,19.0s
FCC Fort Churchill 97.44 31 *e*P **P** **21 27 33.3 -1.6**
comp=Z,4.6nm,0.7s
FCC Fort Churchill 97.44 31 *e*P **P** **21 27 33.3 -1.6**
FCC pmax pmax
comp=Z,5.0nm,0.7s
TLY Talaya 97.68 321 *e*P **P** **21 27 36.2 -0.1**
TLY pmax pmax
comp=Z,2.0nm,0.8s
ROSC El Rosal 99.84 88 LR LR 22 06 40.8
comp=Z,183nm,18.0s,baz=239,slow=32
MKAR Makanchi Array 110.89 315 PKIKP **PKiKP** **21 32 34.0 -0.7**
comp=Z,0.3nm,0.6s,baz=96,slow=1.4,SNR=3.7
KURK Kurchatov 113.20 319 PKiKP **PKiKP** **21 32 38.3 -0.6**
KURK Kurchatov 113.20 319⇑*i*PKIKP 21 32 37.4
KURBB Kurchatov Arra 113.26 319 PKiKP **PKiKP** **21 32 38.3 -0.7**
comp=Z,0.8nm,0.9s,baz=84,slow=1.0,SNR=6.8
BVAR Borovoye Array 117.93 322 PKP **PKPdf** **21 32 47.3 -0.7**
comp=Z,0.9nm,0.6s,baz=90,slow=2.9,SNR=8.9
BRVK Borovoye 117.98 322 *e*PKPdf **PKPdf** **21 32 46.9 -1.2**
BRVK Borovoye 117.98 322⇓*i*PKIKP **PKPdf** **21 32 48.1 0.0**
ARU Arti 123.37 328 *e*PKPdf **PKPdf** **21 32 58.0 -0.3**
ARU Arti 123.37 328 *i* PKIKP **PKPdf** **21 32 57.6 -0.7**
ARU 21 34 38.6
ARU 21 40 08.2
ARU SS SS 21 51 22.6 -0.8
ARCES ARCESS Array B 124.56 352 PKP **PKPdf** **21 32 59.2 -1.1**
comp=Z,3.4nm,0.9s,baz=64,slow=2.1,SNR=5.0
ABKAR Akbulak array 125.27 320 *e*PKPdf **PKPdf** **21 33 02.8 +0.6**
PRGR Permogore 126.13 338 *e*PKIKP **PKPdf** **21 33 01.7 -1.7**
PRGR pmax pmax
comp=Z,10.0nm,1.5s
KLMR Klimovskoe 128.78 340 *e*PKIKP **PKPdf** **21 33 06.9 -1.6**
KLMR pmax pmax
comp=Z,14nm,1.6s
KLMR Klimovskoe 128.78 340 *e*PKPdf **PKPdf** **21 33 06.9 -1.6**
KLMR AMP 21 33 08.2
comp=Z,14nm,1.6s
GEYT Alibeck 129.60 307 PKP **PKPdf** **21 33 09.1 -1.8**
comp=Z,0.4nm,0.4s,baz=86,slow=1.9,SNR=5.0
SUR Sutherland 130.69 196 *e*PKPdf **PKPdf** **21 33 15.1 +1.7**
OBN Obninsk 134.11 337⇓*e*PKIKP **PKPdf** **21 33 19.0 +0.2**
AKT Akhty 136.12 315 *i* PKIKP **PKPdf** **21 33 23.9 +0.7**
AKT pmax pmax
comp=Z,7.0nm,1.3s
NCK Nalchik 137.92 319⇑*e*PKIKP **PKPdf** **21 33 26.0 -0.3**
AKASG Malin Array Be 140.34 338 PKP **PKPdf** **21 33 28.5 -2.0**
comp=Z,0.3nm,0.3s,baz=29,slow=1.8,SNR=6.7
KIEV Kiev 140.35 338 *e*PKPdf **PKPdf** **21 33 30.2 -0.3**

KIEV	Kiev	140.35 338	⇓	*e*PKIKP	PKPdf	21 33 30.3	-0.1
RAYN	Ar Rayn	142.67 289		*e*PKPdf	PKPdf	21 33 35.6	+0.1
RAYN	Ar Rayn	142.67 289		*e*PKIKP	PKPdf	21 33 35.6	+0.1
SORM	Soroca	142.76 336	⇑	*i*P	PKPdf	21 33 34.5	-0.3
SORM	Soroca	142.76 336	⇑	PKIKP	PKPdf	21 33 34.5	-0.3
LVV	L'vov	142.84 341		*e*PKIKP	PKPdf	21 33 36.4	+1.4
LSZ	Lusaka	142.95 216		*e*PKPdf	PKPdf	21 33 37.3	+0.9
OJC	Ojcow	143.63 346		*e*PKP	PKPab	21 33 32.8	-0.1
KSP	Ksiaz	143.75 350		*e*PKP	PKPdf	21 33 40.3	+3.8
CLL	Collm	143.76 353		*e*PKPdf	PKPdf	21 33 36.0	-0.5
	comp=Z,6.0nm,1.3s						
CLL				*i* (PKiKP)		21 33 39.2	
CLL	Collm	143.76 353		*e*PKPdf	PKPdf	21 33 37.9	+1.3
CLL	Collm	143.76 353		*e*PKIKP	PKPdf	21 33 36.0	-0.5
CLL				pmax	pmax		
	comp=Z,6.0nm,1.3s						
TSUM	Tsumeb	144.07 198		*e*PKPdf	PKPdf	21 33 37.6	-0.6
BRG	Berggiesshubel	144.08 352		*e*PKP	PKPdf	21 33 37.1	0.0
	comp=Z,6.1nm,1.5s						
BRG	Berggiesshubel	144.08 352		*e*PKIKP	PKPdf	21 33 37.1	0.0
BRG				pmax	pmax		
	comp=Z,6.0nm,1.5s						
DPC	Dobruska-Polom	144.22 350		*e*PKP	PKPbc	21 33 36.2	+0.6
DPC				*e*pPKP	PKiKP	21 33 40.1	-0.9
DPC	Dobruska-Polom	144.22 350		*e*PKIKP	PKPbc	21 33 36.2	+0.6
NIE	Niedzica	144.25 345		*e*PKP	PKPab	21 33 35.4	+0.1
NIE	Niedzica	144.25 345		PKIKP	PKPbc	21 33 36.2	+0.5
BUR08	Bucovina Ar. S	144.34 338		*e*PKPdf	PKPdf	21 33 37.5	-0.3
BUR04	Bucovina Ar. S	144.36 338		*e*PKPdf	PKPab	21 33 36.0	+0.1
BURAR	Bucovina Array	144.36 338	⇓	PKIKP	PKPdf	21 33 37.7	-0.2
UZH	Uzhgorod	144.42 342		*e*PKHKP	PKPpre	21 33 33.4	
MORC	Moravsky Berou	144.54 348	⇑	*i*P	PKPbc	21 33 37.2	+0.5
MORC	Moravsky Berou	144.54 348		*e*PKPdf	PKPbc	21 33 36.9	+0.2
MORC	Moravsky Berou	144.54 348		*e*PKIKP	PKPbc	21 33 36.9	+0.2
MORC	Moravsky Berou	144.54 348		*e*PKP	PKPab	21 33 36.2	-0.2
BEBN	Eben Emael	144.61 1	⇑	PKP	PKPdf	21 33 40.3	+2.3
LANS	Liptovska Anna	144.71 346		*e*PKIKP	PKPbc	21 33 37.7	+0.5
LANS	Liptovska Anna	144.71 346		*e*PKP	PKPbc	21 33 37.7	+0.5
ATD	Arta Tunnel	144.73 268		PKP	PKPab	21 33 38.1	-0.1
	comp=Z,6.4nm,0.8s,baz=242,slow=21,SNR=1.5						
TESR	Tescani	144.75 336	⇓	*i*P	PKPab	21 33 37.3	0.0
TRPA	Tarpa	144.80 342	⇑	*i*P	PKPab	21 33 37.4	+0.1
TRPA	Tarpa	144.80 342	⇑	*e*Pdiff	PKPab	21 33 36.8	-0.5
MEM	Membach	144.81 1	⇓	PKP	PKPab	21 33 37.3	0.0
PRU	Pruhonice	144.86 351		*e*PKP	PKPdf	21 33 38.5	0.0
PRU	Pruhonice	144.86 351		*e*PKIKP	PKPdf	21 33 38.5	0.0
GOPC	GO Pecny, Ondr	144.90 351		*e*PKP	PKPab	21 33 37.7	0.0
GOPC	GO Pecny, Ondr	144.90 351		*e*PKIKP	PKPab	21 33 37.7	0.0
BCLA	Clavier	144.98 2	⇓	PKP	PKPab	21 33 37.0	-0.9
KECS	Kecovo	145.06 344		*e*PKIKP	PKPdf	21 33 40.7	+1.8
KECS	Kecovo	145.06 344		*e*PKP	PKPdf	21 33 40.7	+1.8
VRAC	Vranov	145.17 349	⇓	*i*P	PKPdf	21 33 39.6	+0.5
VRAC	Vranov	145.17 349	⇓	PKIKP	PKPdf	21 33 39.6	+0.5
VRAC	Vranov	145.17 349		*e*PKP	PKPbc	21 33 38.1	-0.6
CFR	Carcaliu	145.21 333	⇓	PKIKP	PKPdf	21 33 39.3	+0.1
VRI	Vrincioaia	145.25 335	⇑	*i*P	PKPbc	21 33 39.1	+0.1
VRI	Vrincioaia	145.25 335	⇑	PKIKP	PKPbc	21 33 39.1	+0.1
JAVC	Velka Javorina	145.39 347		*e*PKP	PKPab	21 33 40.1	+0.5
KRUC	Moravsky	145.45 349		*e*PKP	PKPbc	21 33 38.1	-0.4
VYHS	Vyhne	145.47 346		*e*PKIKP	PKPab	21 33 39.8	-0.1
VYHS	Vyhne	145.47 346		*e*PKP	PKPab	21 33 39.8	-0.1
GRFO	Grafenberg	145.54 355		*e*PKPbc	PKPab	21 33 40.1	0.0
GRFO	Grafenberg	145.54 355		*e*PKIKP	PKPab	21 33 40.1	0.0
TIRR	Tirgusor	145.65 332	⇑	*i*P	PKPbc	21 33 40.4	+0.1
TIRR	Tirgusor	145.65 332		*e*PKPdf	PKPbc	21 33 40.4	+0.1
TIRR	Tirgusor	145.65 332		*e*PKIKP	PKPbc	21 33 40.4	+0.1
LTVH	L"tav"rtes,	145.66 342	⇑	*e*Pdiff	PKPab	21 33 40.4	-0.1
HARR	Harsova	145.69 333	⇑	*i*P	PKPab	21 33 40.9	+0.2
HARR	Harsova	145.69 333	⇑	PKIKP	PKPab	21 33 40.9	+0.2
KMBO	Kilima Mbogo	145.71 244		PKPbc	PKPbc	21 33 54.2	+12
	comp=Z,1.5nm,0.4s,baz=97,slow=2.2,SNR=5.7						
TLB	Topalu	145.72 333	⇑	*i*P	PKPdf	21 33 40.1	0.0
TLB	Topalu	145.72 333	⇑	PKP2	PKPdf	21 33 40.1	0.0
PSZ	Piszkesteto	145.74 344	⇑	*i*P	PKPab	21 33 41.0	0.0
PSZ	Piszkesteto	145.74 344	⇑	*e*PKPbc	PKPbc	21 33 40.5	-0.1
PSZ	Piszkesteto	145.74 344		*e*PKPdf	PKPab	21 33 41.1	+0.1
PSZ	Piszkesteto	145.74 344	⇑	PKP2	PKPab	21 33 41.0	+0.1
WLF	Walferdange	145.75 1	⇓	PKP	PKPbc	21 33 40.6	+0.1
WLF	Walferdange	145.75 1		*e*PKPdf	PKPbc	21 33 40.4	-0.1
WLF	Walferdange	145.75 1		*e*PKP2	PKPbc	21 33 40.4	-0.1
KHC	Kasperske Hory	145.83 352		*e*PKP	PKPab	21 33 41.3	+0.1
KHC	Kasperske Hory	145.83 352		*e*PKPdf	PKPbc	21 33 41.0	+0.2
KHC	Kasperske Hory	145.83 352		*e*PKP2	PKPab	21 33 41.3	+0.1
MLR	Muntele Rosu	145.87 336		PKPbc	PKPbc	21 33 41.1	0.0
	comp=Z,2.2nm,0.9s,baz=28,slow=2.2,SNR=14						
MLR	Muntele Rosu	145.87 336	⇓	*i*P	PKPab	21 33 42.0	+0.4
MLR	Muntele Rosu	145.87 336		*e*PKPdf	PKPab	21 33 41.5	-0.1
DRGR		145.93 340	⇑	*i*P	PKPbc	21 33 41.2	0.0
DRGR		145.93 340	⇑	PKP2	PKPbc	21 33 41.2	0.0
MODS	Modra-Piesok	145.93 347		*e*PKIKP	PKPdf	21 33 39.6	-0.8
MODS	Modra-Piesok	145.93 347		*e*PKP	PKPdf	21 33 39.6	-0.8
ISR	Istrita	145.94 335	⇑	*i*P	PKPdf	21 33 40.3	-0.3
ISR	Istrita	145.94 335	⇑	PKP2	PKPdf	21 33 40.3	-0.3
GEC2	GERESS Array S	146.10 352		*e*PKPdf	PKPbc	21 33 42.0	+0.3
GEC2	GERESS Array S	146.10 352		*e*PKP2	PKPbc	21 33 42.0	+0.3
GERES	GERESS Array B	146.10 352		PKPbc	PKPbc	21 33 41.5	-0.2
	comp=Z,5.9nm,0.9s,baz=29,slow=3.0,SNR=18						
GEA0	GERESS Array S	146.10 352		*e*PKPdf	PKPdf	21 33 41.1	+0.3
BR131	Keskin Array S	146.21 321		*e*PKPdf	PKPab	21 33 43.0	-0.1
BRTR	Keskin Array B	146.21 321		PKPbc	PKPbc	21 33 42.5	+0.1
	comp=Z,16nm,0.9s,baz=103,slow=2.1,SNR=29						
VOIR		146.27 337	⇓	*i*P	PKPbc	21 33 42.3	0.0
VOIR		146.27 337	⇓	PKP2	PKPbc	21 33 42.3	0.0
ANTO	Ankara	146.62 322		*e*PKPbc	PKPbc	21 33 43.3	-0.2
ANTO	Ankara	146.62 322	⇓	PKP2	PKPbc	21 33 42.9	-0.6
CONA	Conrad Observa	146.64 349		*i*pPKPdf	PKPab	21 33 44.0	-0.4
	comp=Z,28nm,1.5s,SNR=18						
MOA	Molln	146.99 351		*i*PKPab	PKPbc	21 33 44.3	+0.1
	comp=Z,9.8nm,1.1s						
BFO	Black Forest	147.07 358		*e*PKPbc	PKPbc	21 33 43.9	-0.6
BFO	Black Forest	147.07 358		*e*PKP2	PKPbc	21 33 43.9	-0.6
PRD	Provadia	147.09 332		*i*P	PKPbc	21 33 44.7	+0.1
ECH	Echery	147.21 360		*e*PKPdf	PKPbc	21 33 45.0	+0.1
ECH	Echery	147.21 360		*e*PKP2	PKPbc	21 33 45.0	+0.1
BZS	Buzias	147.32 341	⇑	PKP2	PKPbc	21 33 45.2	0.0
ARSA	Arzberg	147.35 349		*i*pPKPdf	PKPbc	21 33 45.4	+0.1
	comp=Z,19nm,1.9s,SNR=7.2						
SZH	Strazhica	147.69 333		*i*P	PKPbc	21 33 45.7	-0.6
HERR	Herculane	147.71 339	⇑	*i*P	PKPbc	21 33 46.4	+0.1
RETA	Reutte	147.77 355		*i*PKPbc	PKPbc	21 33 45.3	-1.2
	comp=Z,17nm,1.5s,SNR=5.5						
WATA	Walderalm	147.84 354		*i*sPKPdf	PKPbc	21 33 46.8	+0.1
	comp=Z,9.5nm,1.0s						
KBA	Koelnbreinsper	147.88 352		*i*pPKPdf	PKPbc	21 33 46.1	-0.8
	comp=Z,7.0nm,1.0s						
MOTA	Moosalm	147.88 354		*i*sPKPdf	PKPbc	21 33 46.9	0.0
	comp=Z,11nm,1.0s,SNR=9.7						
WTTA	Wattenberg	147.90 354		*i*pPKPdf	PKPbc	21 33 46.9	-0.1
	comp=Z,11nm,1.1s						
KOGS	Kog	147.98 348		*e*PKPdf	PKPdf	21 33 43.8	-0.1
KOGS				*i*PKPbc	PKPbc	21 33 46.3	-0.6
SOKA	Soboth	147.99 349		*i*pPKPdf	PKPbc	21 33 46.5	-0.6
	comp=Z,14nm,1.1s,SNR=12						
MDVR	Moldovita	148.03 340	⇑	*i*P	PKPbc	21 33 47.1	-0.1
DAVA	Damuels	148.03 356		*i*sPKPdf	PKPbc	21 33 47.3	0.0
	comp=Z,16nm,1.2s,SNR=12						
FETA	Feichten	148.23 355		*i*sPKPdf	PKPbc	21 33 48.0	+0.2
	comp=Z,10nm,1.2s,SNR=5.5						
OBKA	Obir	148.24 350		*i*pPKPdf	PKPbc	21 33 47.1	-0.6
	comp=Z,7.9nm,1.6s						
MYKA	Terra Mystica	148.27 351		*i*PKPbc	PKPbc	21 33 46.4	-1.5
	comp=Z,8.9nm,1.1s						
ABTA	Abfaltersbach	148.31 352		*i*pPKPdf	PKPbc	21 33 47.3	-0.6
	comp=Z,11nm,1.0s,SNR=7.3						
DAVOX	Davos/Dischmat	148.54 356		PKPbc	PKPbc	21 33 47.9	-0.8
	comp=Z,7.4nm,0.9s,baz=24,slow=4.4,SNR=9.5						
MMAI	Mount Meron Ar	148.65 309		PKPbc	PKPbc	21 33 48.4	-0.8
	comp=Z,2.6nm,0.7s,baz=57,slow=5.3,SNR=5.6						
FUORN	Ofenpass-Fuorn	148.67 355		*e*PKPbc	PKPbc	21 33 49.4	+0.3
LJU	Ljubljana	148.70 350		*i*PKPdf	PKPdf	21 33 45.1	0.0
LJU				*i*PKPbc	PKPbc	21 33 48.4	-0.4
TUE	Stuetta	148.88 357		*e*PKPbc	PKPbc	21 33 49.7	+0.1
PGB	Panagyurishte	149.03 335		*i*P	PKPbc	21 33 50.0	+0.1
SENIN	Lac Senin/Sane	149.06 359		*e*PKPbc	PKPbc	21 33 50.8	+0.8
CSS	Mathiatis	149.17 314		*e*PKPbc	PKPbc	21 33 50.3	-0.1
KDZ	Kurdzhali	149.22 332		*i*P	PKPbc	21 33 50.8	+0.5
BLY	Banja Luka	149.38 345		*e*PKPbc	PKPbc	21 33 50.9	+0.3
VTS	Vitosha	149.38 336	⇑	*i*P	PKPbc	21 33 49.2	-1.7
VTS	Vitosha	149.38 336		*e*PKPbc	PKPbc	21 33 51.5	+0.6
VTS	Vitosha	149.38 336		*i*P	PKPbc	21 33 50.7	-0.2
VTS	Vitosha	149.38 336		*e*PKP2	PKPbc	21 33 51.5	+0.6
RZN	Rozhen	149.50 333		*i*P	PKPbc	21 33 50.8	-0.5
MMB	Musomiste	150.00 334		*i*P	PKPbc	21 33 52.0	-0.3
KKB	Krupnik	150.04 335		*i*P	PKPbc	21 33 52.1	-0.3
SSB	Saint Sauveur	150.09 3		*e*PKPbc	PKPbc	21 33 53.0	+0.6
SSB	Saint Sauveur	150.09 3		*e*PKP2	PKPbc	21 33 53.0	+0.6
BNI	Bardonecchia	150.37 0		*e*PKPbc	PKPbc	21 33 53.8	+0.6
BNI	Bardonecchia	150.37 0		*e*PKIKP	PKPbc	21 33 53.8	+0.6
PCAB	Cabril	150.77 23		*e*PKPdf	PKPbc	21 33 54.7	+0.6
POLO	Lamas de Olo	151.15 23		*e*PKPdf	PKPbc	21 33 54.2	-0.9
PBRG	Braganca	151.15 21		*e*PKPdf	PKPbc	21 33 56.7	+1.7
PVRL	Vila Real	151.26 23		*e*PKPdf	PKPbc	21 33 56.0	+0.7
PVRL	Vila Real	151.26 23		*e*PKPab	PKPab	21 34 02.9	-0.3
MVO	Moncorvo	151.61 22		*e*PKPdf	PKPbc	21 33 56.4	+0.2
FNA	Florina	151.64 336		*e*PKPbc	PKPbc	21 33 56.1	-0.1
FNA	Florina	151.64 336		*e*PKIKP	PKPbc	21 33 56.1	-0.1
PVIS	Viseu	151.67 24		*e*PKPab	PKPab	21 34 05.2	+0.3
PCBR	Castelo Branco	152.59 24		*e*PKPdf	PKPbc	21 33 58.3	0.0
PCBR	Castelo Branco	152.59 24		*e*PKPab	PKPab	21 34 08.2	-0.5
PMRV	Marv??o	152.97 25		*e*PKPdf	PKPbc	21 33 59.9	+0.7
EVO	Evora	153.47 27		*e*PKPab	PKPab	21 34 12.3	-0.2
ES19	SONSECA Array	153.99 19		*e*PKPbc	PKPbc	21 34 02.4	+1.0
ESDC	Sonseca Array	153.99 19		PKPbc	PKPbc	21 34 00.6	-0.9
	comp=Z,0.9nm,0.7s,baz=339,slow=2.9,SNR=6.5						
ESDC				PKPab	sPKPbc	21 34 14.5	+0.1
	comp=Z,2.9nm,0.9s,baz=324,slow=4.0,SNR=11						
PCVE	Castro Verde	154.20 28		*e*PKPab	PKPab	21 34 16.1	+0.5
IDI	Anoyia	154.33 324		PKPab	PKPab	21 34 14.3	-2.1
	comp=Z,5.5nm,0.9s,baz=36,slow=7.2,SNR=2.5						
PVAQ	Vaqueiros	154.53 28		*e*PKPab	PKPab	21 34 17.3	+0.3
MDT	Midelt	159.75 29		PKPab	PKPab	21 34 40.0	+0.2
	comp=Z,2.7nm,0.9s,baz=284,slow=4.2,SNR=7.0						
KOWA	Kowa	169.54 93		PKPab	PKPab	21 35 21.1	-2.3
	comp=Z,2.0nm,0.7s,baz=326,slow=3.6,SNR=4.9						
TAM	Tamanrasset	172.49 9		*e*PKPdf	PKPdf	21 34 12.3	+0.8
TAM	Tamanrasset	172.49 9		*e*PKIKP	PKPdf	21 34 12.3	+0.8
TOA0	Torodi Ar. Sit	174.62 113		*e*PKPdf	PKPdf	21 34 11.5	-0.8
TORD	Torodi Ar. Bea	174.62 113		PKP	PKPdf	21 34 11.2	-1.1
	comp=Z,1.9nm,1.1s,baz=247,slow=0.8						
TORD				PKPab	PKPab	21 35 44.5	-1.4
	baz=258,slow=2.9						

ISCJB ***27*** *21:17:13.1±0.7, 13°.6S±0°.2×166°.4E±0°.1, h39km, mb4.2/12, Error ellipse: s-maj=28.0km s-min=11.7km az=38.4*
IDC ***27*** *21:17:15.9±6.3, 13°.67S×166°.51E, h54km±50km, mb4.0/11, mb1 4.1/12, mb1mx3.8/55, mbtmp4.3/12, ML4.6/1, Error ellipse: s-maj=54.2km s-min=24.1km az=79.0*
NEIC ***27*** *21:17:16.2±3.9, 13°.65S×166°.51E, h58km±29km, mb4.3/1, Error ellipse: s-maj=45.9km s-min=19.2km az=77.0*

ISC 27 21:17:14.2±0.8, 13°.7S±0°.2×166°.5E±0°.2, h39km, n17, σ1§13/19, mb4.3/12, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	7.67	303	P	Pn	21 19 05.4	+2.0
	9.4nm,0.3s,baz=170,slow=17,SNR=4.5						
HNR				S	Sn	21 20 26.9	-2.1
	9.1nm,0.3s,baz=111,slow=19,SNR=1.6						
MJAR	Matsushiro Arr	56.62	333	P	P	21 26 51.7	-1.7
	1.6nm,0.8s,baz=152,slow=5.5,SNR=4.2						
ASAJ	Asahikawa	61.49	341	P	P	21 27 27.5	+0.5
	2.5nm,0.4s,baz=96,slow=9.2,SNR=8.0						
KSRS	Korea Array	62.44	326	P	P	21 27 33.8	+0.3
	1.2nm,0.8s,baz=134,slow=7.0,SNR=3.0						
KSAR	Wonju Array Be	62.45	326	P	P	21 27 33.8	+0.2
USRK	Ussuriysk Ar.	65.60	333	P	P	21 27 54.5	+0.4
	5.4nm,0.9s,baz=134,slow=6.2						
CMAR	Chiang Mai Arr	73.83	294	P	P	21 28 46.7	+1.4
	1.2nm,0.7s,baz=128,slow=5.0,SNR=5.1						
QSPA	South Pole Qui	76.35	180	P	P	21 28 59.6	+0.3
	3.1nm,0.9s,baz=317,slow=9.3,SNR=5.1						
ULN	Ulaanbaatar	80.84	324	*e*P	P	21 29 24.0	-0.2
	1.5nm,0.4s						
SONM	Songino Array	81.20	324	P	P	21 29 26.1	0.0
	1.3nm,0.9s,baz=139,slow=5.6,SNR=5.6						
ILAR	Eielson Array	85.76	18	P	P	21 29 49.8	+0.8
	1.0nm,0.4s,baz=237,slow=5.1,SNR=16						
ILAR				pP	sP	21 30 05.8	+0.4
	1.1nm,0.8s,baz=233,slow=6.6,SNR=4.5						
SNAA	Sanae	94.56	183	P	P	21 30 29.7	-0.8
	2.6nm,1.1s,baz=178,slow=6.0,SNR=5.2						
MKAR	Makanchi Array	95.92	317	P	P	21 30 37.0	-0.1
	0.6nm,0.6s,baz=110,slow=5.2,SNR=6.6						
ZALV	Zalesovo Beam	96.09	324	P	P	21 30 35.8	-1.8
	0.2nm,0.3s,baz=87,slow=5.9,SNR=3.6						
ARCES	ARCESS Array B	119.04	345	PKP	PKPdf	21 35 56.9	-1.4
	0.5nm,0.3s,baz=56,slow=2.2,SNR=5.9						
KEST	Kesra	149.91	321	PKPbc	PKPbc	21 37 00.8	-0.1
	5.1nm,0.8s,baz=6.7,slow=3.1,SNR=7.2						
ESDC	Sonseca Array	152.76	344	PKPbc	PKPbc	21 37 06.6	-0.7
	0.2nm,0.4s,baz=7.1,slow=3.1,SNR=5.8						

IDC ***27*** *21:20:55.0±0.4, 15°.13S×173°.32W, h0km, mb4.8/34, mb1 4.9/34, mb1mx4.8/56, mbtmp4.7/34, MS4.7/1, Ms1 4.7/1, ms1mx3.6/45, Error ellipse: s-maj=15.8km s-min=11.1km az=132.0*
GCMT ***27*** *21:20:56.7±0.4, 15°.02S×172°.92W, h30km±1km, MW5.1/73, Moment Tensor Solution. s22,c23; s73,c92; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr3.85±.38; Mθθ-1.33±.25; Mφφ-2.52±.28; Mrθ-3.69±.33; Mθφ2.01±.12; Mφr0.79±.28; Best double couple: M0 5.41900×10^16 NP1:φs298.00000°, δ67.00000°, λ70.00000°. NP2: φs162.00000°, δ30.00000°, λ130.00000°. Principal axes: T 5.7750, Plg62.0000°, Azm176.0000°; N -0.7120, Plg19.0000°, Azm306.0000°; P -5.0630, Plg20.0000°, Azm43.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***27*** *21:20:56.7±0.1, 15°.14S×173°.34W, h10km, mb5.2/198, MS5.0/109 Error ellipse: s-maj=6.2km s-min=3.5km az=146.0*
BJI ***27*** *21:20:56.0, 15°.29S×173°.37W, h10km, mb4.9/33, mB5.3/22, Ms5.2/16, Ms7 4.9/8*
ISCJB ***27*** *21:20:58.1±0.2, 15°.13S±0°.05×173°.28W±0°.04, h29km, mb5.1/238, MS4.9/123, Error ellipse: s-maj=6.9km s-min=4.8km az=158.8*
MOS ***27*** *21:20:58.9±0.9, 15°.16S×173°.33W, h35km, mb5.0/55, MS5.0/15, Error ellipse: s-maj=11.0km s-min=7.5km az=55.1*

ISC 27 21:20:59.7±0.3, 15°.18S±0°.07×173°.20W±0°.07, h29km, n898, σ0§90/817, mb5.2/238, MS5.0/123, 21C-19D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	1.87	48	Pn	Pn	21 21 22.5	-7.3
	131nm,0.3s,baz=212,slow=2.8,SNR=38						
AFI				Sn	Sn	21 21 41.5	-11
	525nm,0.3s,baz=236,slow=20,SNR=8.5						
RAR	Rarotonga	14.09	117	Pn	Pn	21 24 11.6	-5.8
	1.4nm,0.3s,baz=269,slow=9.7,SNR=5.1						
RAR				Sn	Sn	21 26 38.6	-14
	1.2nm,0.3s,baz=307,slow=20,SNR=0.9						
DZM	Mont Dzumac	20.46	247	LR	LR	21 32 11.3	
	comp=Z,2μm,20.4s,baz=78,slow=33						
DZM	Mont Dzumac	20.46	247	*e*P	Pn	21 25 41.0	+3.5
	381nm,1.4s						
PAE	Paea	22.79	99	*e*T	T	21 49 14.5	
	4.3nm,0.3s						
PPT2	Papeete2	22.79	99	*e*LQ	LQ	21 30 19.9	
	1μm,28.8s						
PPT2				*e*LR	LR	21 31 25.7	
	878nm,24.5s						
TVO	Taravao	23.10	100	*e*T	T	21 49 38.0	
	1.4nm,0.2s						
XMAS	Kiritimati	23.15	44	PFAKE		21 26 10.0	+6.1
XMAS				LR	LR		
	comp=Z,2.0nm,20.0s						
OUZ	Omahuta	23.21	208	*e*P	P	21 26 06.8	+2.5
	comp=Z,124nm,1.3s						
TBI	Tubuai	23.81	114	*e*LQ	LQ	21 30 48.0	
	comp=Z,940nm,27.5s						
TBI	Tubuai	23.81	114	*e*T	T	21 50 31.9	
	comp=Z,13nm,0.3s						
PMOR	Pomariorio Ree	24.43	93	*e*P	P	21 26 15.3	-0.7
	comp=Z,198nm,1.1s						
PMOR	Pomariorio Ree	24.43	93	*e*T	T	21 51 14.8	
	comp=Z,4.0nm,0.2s						
URZ	Urewera	24.53	199	P	P	21 26 17.1	+0.4
	comp=Z,17nm,0.7s,baz=324,slow=19,SNR=8.5						
VAH	Vaihoa	24.67	94	*e*P	P	21 26 17.1	-1.1
	comp=Z,125nm,1.1s						
VAH	Vaihoa	24.67	94	*e*T	T	21 51 32.3	
	comp=Z,8.0nm,0.3s						
HNR	Honiara	26.84	279	PFAKE		21 26 50.0	+12
HNR				LR	LR		
	comp=Z,707nm,21.0s						
TAOE	Nuku Hiva Isla	32.90	83	*e*LR	LR	21 36 01.8	
	comp=Z,1μm,25.4s						
WKZ	Wanaka	33.17	203	*e*P	P	21 27 29.5	-4.2
	comp=Z,205nm,0.6s						
MLZ	Mavora Lakes	33.97	204	*e*P	P	21 27 44.2	+3.6
	comp=Z,83nm,0.9s						
RKT	Rikitea	36.88	108	*e*T	T	22 06 54.6	
	comp=Z,6.1nm,0.3s						
POHA	Pohakuloa	38.83	27	PFAKE		21 28 30.0	+7.4
POHA				LR	LR		
	comp=Z,531nm,22.0s						
H11S2	WAKE ISLAND Hy	38.88	329	T	T	22 09 52.2	
	baz=149,slow=76,SNR=8.0						
CTA	Charters Tower	38.88	257	P	P	21 28 21.5	-1.4
	comp=Z,4.5nm,0.9s,baz=76,slow=4.8,SNR=3.2						
CTAO	Charters Tower	38.88	257	*e*P	P	21 28 22.1	-0.8
CTAO				LR	LR		
	comp=Z,1μm,20.0s						
CTAO	Charters Tower	38.88	257	*e*P	P	21 28 22.1	-0.8
CTAO				MLR	MLR		
	comp=Z,1μm,20.0s						
H11S3	WAKE ISLAND Hy	38.89	329	T	T	22 09 55.5	
	baz=149,slow=76,SNR=4.7						
H11S1	WAKE ISLAND Hy	38.90	329	T	T	22 09 43.1	
	baz=149,slow=76,SNR=9.3						
PMG	Port Moresby	39.11	274	PFAKE		21 28 40.0	+15
PMG				LR	LR		
	comp=Z,555nm,19.0s						
H11N3	WAKE ISLAND Hy	39.82	330	T	T	22 11 05.5	
	baz=150,slow=76,SNR=3.8						
H11N1	WAKE ISLAND Hy	39.83	330	T	T	22 10 60.0	
	baz=150,slow=76,SNR=6.8						
H11N2	WAKE ISLAND Hy	39.84	330	T	T	22 11 03.8	
	baz=150,slow=76,SNR=4.6						
TAU	Tasmania Unive	43.61	223	PFAKE		21 29 10.0	+8.6
TAU				LR	LR		
	comp=Z,2μm,19.0s						
STKA	Stephens Creek	44.31	240	P	P	21 29 05.2	-2.0
	comp=Z,8.8nm,0.7s,baz=100,slow=10,SNR=11						
STKA	Stephens Creek	44.31	240	*e*P	P	21 29 05.7	-1.6
	comp=Z,2.5nm,0.9s						
STKA	Stephens Creek	44.31	240	*e*P	P	21 29 05.7	-1.6
STKA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
JAY	Jayapura	47.14	281	P	P	21 29 29.6	-0.3
	comp=Z,5.2n

WDC pmax pmax
comp=Z,22nm,1.4s
SWSC Sam W. Stewart 72.75 48 P **P 21 32 25.2 -0.2**
baz=238
N02D Trinity Center 72.84 38 P **P 21 32 26.5 +0.6**
baz=231,SNR=5.1
RRX Edison Barstow 72.93 46 P **P 21 32 26.5 -0.1**
baz=237
O03D Paynes Creek 72.95 39 P **P 21 32 26.1 -0.5**
baz=232
M02C Callahan 73.01 37 P **P 21 32 27.4 +0.5**
baz=231,SNR=7.7
CWC Cottonwood Cre 73.06 44 P **P 21 32 26.9 -0.5**
baz=236
L02D Cave Junction, 73.06 36 P **P 21 32 26.7 -0.4**
baz=230
BELC Belle Mtn. Jos 73.16 47 P **P 21 32 27.7 -0.3**
baz=238
MLAC Mammoth, Mammo 73.24 42 P **P 21 32 28.5 0.0**
baz=235
MPMC Manual Prospec 73.25 44 P **P 21 32 28.5 0.0**
baz=236
GSC Goldstone, Bar 73.30 45 P **P 21 32 28.3 -0.5**
baz=237
GSC Goldstone, Bar 73.30 45 *e*P **P 21 32 29.0 +0.2**
comp=Z,49nm,2.0s
GSC Goldstone, Bar 73.30 45 *e*P **P 21 32 29.0 +0.2**
GSC pmax pmax
comp=Z,49nm,2.0s
YBH Yreka Blue Hor 73.31 37 P **P 21 32 28.3 -0.4**
comp=Z,9.0nm,0.8s,baz=246,slow=2.1,SNR=29
YBH Yreka Blue Hor 73.31 37 *e*P **P 21 32 29.2 +0.5**
comp=Z,14nm,0.9s
YBH Yreka Blue Hor 73.31 37 *e*P **P 21 32 29.2 +0.5**
YBH pmax pmax
comp=Z,14nm,0.9s
WAKR Walker 73.35 41 *e*P **P 21 32 29.6 +0.5**
comp=Z,32nm,1.9s
BC3 Big Chuckawall 73.37 47 P **P 21 32 29.0 -0.2**
baz=238
HEC Hector,Ludlow 73.37 46 P **P 21 32 28.5 -0.7**
baz=238
YSS Yuzh-Sakhalins 73.39 330 PFAKE 21 32 40.0 +11
YSS LR LR
comp=Z,192nm,20.0s
YSS Yuzh-Sakhalins 73.39 330 *e*P P 21 32 20.4 -8.5
YSS *e* 21 32 46.4
GLA Glamis 73.50 48 P **P 21 32 30.1 +0.1**
baz=239
GLA Glamis 73.50 48 *e*P **P 21 32 30.6 +0.7**
comp=Z,22nm,1.5s
GLA Glamis 73.50 48 *e*P **P 21 32 30.6 +0.7**
GLA pmax pmax
comp=Z,22nm,1.5s
PNTR Pine Nut 73.59 41 *e*P **P 21 32 31.7 +1.1**
comp=Z,18nm,1.1s
HUMO Hull Mountain 73.72 36 *e*P **P 21 32 31.5 +0.6**
comp=Z,15nm,1.2s
YERR Yerington 73.76 41 *e*P **P 21 32 31.8 +0.2**
comp=Z,11nm,1.2s
GMRC Granite Mounta 73.81 46 P **P 21 32 31.3 -0.6**
baz=238
GRAC Grapevine Rang 73.85 44 P **P 21 32 31.3 -0.6**
baz=236
IRM Iron Mountain 73.85 47 P **P 21 32 31.8 -0.2**
baz=239
M04C Macdoel 73.85 37 P **P 21 32 32.2 +0.3**
baz=232,SNR=8.5
FURC Furnace Creek, 73.89 44 P **P 21 32 31.9 -0.2**
baz=237
TUQ Turquoise Moun 73.98 46 P **P 21 32 32.6 -0.2**
baz=238
SHOC Shoshone, Teco 73.98 45 P **P 21 32 32.8 +0.1**
baz=237
RYN Ryan 74.01 42 *e*P **P 21 32 33.4 +0.5**
comp=Z,8.5nm,1.1s
NV01 Mina Array Sit 74.04 42 *e*P **P 21 32 32.4 -0.8**
NVAR Mina Array Bea 74.04 42 P **P 21 32 33.0 -0.1**
comp=Z,2.2nm,0.8s,baz=229,slow=9.9,SNR=15
Y12C Blythe 74.08 48 P **P 21 32 33.5 +0.3**
baz=239
113A Mohawk Valley, 74.13 49 *e*P **P 21 32 33.9 +0.3**
comp=Z,46nm,1.9s
NV11 Mina Array Sit 74.13 42 *e*P **P 21 32 34.0 +0.3**
comp=Z,2.3nm,1.6s
I03D Drain, OR 74.19 35 P **P 21 32 33.9 +0.2**
baz=230,SNR=8.3
K04D Chiloquin, OR 74.42 37 P **P 21 32 35.1 -0.1**
baz=232
214A Organ Pipe Nat 74.42 50 P **P 21 32 34.8 -0.6**
baz=241
NEE2 Needles Airpor 74.53 47 P **P 21 32 36.0 +0.1**
baz=239
TPNV Topopah Spring 74.57 44 P **P 21 32 36.0 -0.2**
baz=237
J04D Umpqua Nationa 74.60 36 P **P 21 32 36.6 +0.2**
baz=231,SNR=7.5
PDMCI Parker Dam,Lak 74.63 47 P **P 21 32 36.5 +0.1**
baz=239
KDAK Kodiak Island 74.67 11 P **P 21 32 35.8 -0.2**
comp=Z,18nm,1.0s,baz=200,slow=3.6,SNR=12
KDAK Kodiak Island 74.67 11 *e*P **P 21 32 36.3 +0.2**
KDAK comp=Z,56nm,1.4s LR LR
comp=Z,330nm,19.0s
KDAK Kodiak Island 74.67 11 *i*P **P 21 32 36.1 0.0**
I04A Tendick Farm, 74.78 36 P **P 21 32 36.9 -0.2**
baz=231,SNR=8.7
MOD Modoc Plateau 74.83 38 *e*P **P 21 32 37.8 +0.2**
comp=Z,19nm,1.1s
QSPA South Pole Qui 74.86 180 P **P 21 32 38.2 +0.7**
comp=Z,22nm,1.1s,baz=36,slow=2.4,SNR=17
QSPA South Pole Qui 74.86 180 P **P 21 32 38.2 +0.7**
QSPA LR LR
comp=Z,403nm,19.0s
K05A Summer Lake 74.98 37 *e*P **P 21 32 39.1 +0.6**
comp=Z,37nm,1.0s
SHPR Sheep Range 75.07 45 *e*P **P 21 32 39.8 +0.6**
comp=Z,15nm,1.3s
J05D Fort Rock, OR 75.13 37 P **P 21 32 39.7 +0.3**
baz=232
G03D McMinnville, O 75.21 34 P **P 21 32 39.7 +0.2**
baz=230
W13A Hualapai Mount 75.22 47 *e*P **P 21 32 40.2 +0.1**
comp=Z,8.8nm,1.1s
Y14A Wickenburg 75.26 48 *e*P **P 21 32 40.5 +0.4**
comp=Z,8.7nm,1.0s
H04A Detroit Lake 75.47 35 *e*P **P 21 32 41.0 -0.1**
comp=Z,47nm,1.5s
F03A Seaside 75.52 33 *e*P **P 21 32 42.1 +0.8**
comp=Z,80nm,1.5s
PINE Pine Mountain 75.61 36 *e*P **P 21 32 42.7 +0.6**
comp=Z,37nm,1.0s
I05D Terrebonne, OR 75.72 36 P **P 21 32 42.9 +0.3**
baz=232
R11A Troy Canyon, C 75.77 43 P **P 21 32 43.0 -0.1**
baz=237
BMN Battle Mountai 75.86 41 *e*P **P 21 32 44.1 +0.5**
comp=Z,13nm,1.1s
BMN Battle Mountai 75.86 41 *e*P **P 21 32 44.1 +0.5**
BMN pmax pmax
comp=Z,13nm,1.1s
F04D Rainier, OR 75.91 33 P **P 21 32 43.7 +0.2**
baz=230
E03A Lebam 75.92 33 *e*P **P 21 32 44.3 +0.7**
comp=Z,36nm,1.1s
TUC Tucson 76.10 51 P **P 21 32 45.5 +0.4**
baz=242
TUC Tucson 76.10 51 *e*P **P 21 32 44.9 -0.2**
comp=Z,16nm,1.1s
TUC LR LR
comp=Z,1µm,19.0s
TUC Tucson 76.10 51 P **P 21 32 45.8 +0.7**
TUC pmax pmax
comp=Z,16nm,1.1s
KSRS Korea Array 76.14 315 P **P 21 32 45.5 +0.5**
comp=Z,3.6nm,0.9s,baz=134,slow=6.8,SNR=11
WVOR Wild Horse Val 76.14 38 *e*P **P 21 32 44.6 -0.5**
comp=Z,26nm,1.3s
WVOR LR LR
comp=Z,1µm,19.0s
WVOR Wild Horse Val 76.14 38 *e*P **P 21 32 44.6 -0.5**
WVOR pmax pmax
comp=Z,26nm,1.3s
WVOR MLR MLR
comp=Z,1µm,19.0s
KSAR Wonju Array Be 76.16 315 P **P 21 32 45.5 +0.3**
KS01 Wonju Array Si 76.17 315 *e*P **P 21 32 46.9 +1.7**

G05D Wamic, OR 76.30 35 P **P 21 32 45.3 -0.5**
baz=232
NLWA Neilton Lookou 76.31 32 *e*P **P 21 32 45.3 -0.5**
comp=Z,22nm,1.3s
NLWA LR LR
comp=Z,591nm,19.0s
I07A Izee 76.61 37 *e*P **P 21 32 48.5 +0.7**
comp=Z,25nm,1.5s
X16A Lo Mia Camp, P 76.63 48 *e*P **P 21 32 49.0 +0.9**
comp=Z,12nm,1.0s
LCMT Little Creek M 76.64 45 *e*P **P 21 32 48.6 +0.5**
comp=Z,12nm,1.1s
J08A Circle Bar Ran 76.78 38 *e*P **P 21 32 48.9 +0.2**
comp=Z,41nm,1.5s
319A Douglas 76.81 52 *e*P **P 21 32 50.0 +0.9**
comp=Z,19nm,0.9s
CCUT Cedar City 76.84 45 *e*P **P 21 32 51.0 +1.7**
comp=Z,25nm,1.7s
BRLK Bradley Lake 76.84 11 *e*P **P 21 32 49.0 +0.4**
comp=Z,45nm,1.2s
MSHR Mys Shultsa 76.88 321⇑ *e*P **P 21 32 50.3 +1.2**
KNB Kanab 76.94 46 *e*P **P 21 32 51.5 +1.7**
comp=Z,52nm,1.7s
LON Longmire 76.98 33 *e*P **P 21 32 49.7 0.0**
comp=Z,14nm,1.3s
LON Longmire 76.98 33 *e*P **P 21 32 49.7 0.0**
LON pmax pmax
comp=Z,14nm,1.3s
U15A North Rim 77.01 46 *e*P **P 21 32 51.3 +0.9**
comp=Z,21nm,1.3s
D05A Enumclaw 77.16 33 *e*P **P 21 32 51.9 +1.3**
comp=Z,72nm,1.3s
RSO Redoubt South 77.16 10 *e*P **P 21 32 49.9 -0.6**
WUAZ Wupatki 77.21 48 P **P 21 32 51.6 +0.3**
baz=241
WUAZ Wupatki 77.21 48 *e*P **P 21 32 52.4 +1.0**
comp=Z,15nm,1.1s
WUAZ LR LR
comp=Z,875nm,19.0s
ELK Elko 77.29 41 P **P 21 32 54.0 +2.2**
comp=Z,5.1nm,1.2s,baz=291,slow=8.6,SNR=6.5
SVW2 Sparrevohn 77.31 9 *e*P **P 21 32 50.3 -0.9**
comp=Z,18nm,1.3s
USRK Ussuriysk Ar. 77.33 323 P **P 21 32 51.1 -0.5**
comp=Z,3.1nm,0.9s,baz=61,slow=9.1
G08A Pilot Rock 77.64 36 *e*P **P 21 32 53.9 +0.3**
comp=Z,31nm,1.2s
A04D Lummi Island 77.77 32 P **P 21 32 53.8 -0.1**
baz=230,SNR=9.4
B05A Bryant 77.79 32 P **P 21 32 54.1 0.0**
baz=230,SNR=5.9
MTPU Mount Pierson 77.89 45 *e*P **P 21 32 56.8 +1.4**
comp=Z,25nm,1.4s
LTY Liberty 77.90 34 *e*P **P 21 32 55.0 +0.2**
comp=Z,11nm,1.1s
HAWA Hanford 77.99 35 *e*P **P 21 32 55.9 +0.6**
comp=Z,40nm,1.4s
HAWA LR LR
comp=Z,755nm,19.0s
W18A Petrified Fore 78.19 49 P **P 21 32 57.1 +0.2**
baz=242
RC01 Rabbit Creek A 78.29 11 *e*P **P 21 32 56.9 +0.4**
comp=Z,33nm,1.1s
E08A Dider Farm, El 78.31 35 *e*P **P 21 32 57.5 +0.6**
comp=Z,37nm,1.3s
BMO Blue Mountains 78.33 37 *e*P **P 21 32 57.0 -0.4**
comp=Z,28nm,1.4s
BMO LR LR
comp=Z,843nm,19.0s
BMO Blue Mountains 78.33 37 *e*P **P 21 32 57.0 -0.4**
BMO pmax pmax
comp=Z,28nm,1.4s
BMO MLR MLR
comp=Z,843nm,19.0s
MFID Camas Ranch 78.40 39 *e*P **P 21 32 57.0 -0.8**
comp=Z,24nm,1.4s
SUA Susitna One 78.45 11 *e*P **P 21 32 56.7 -0.9**
comp=Z,21nm,0.9s
121A Cookes Peak, D 78.46 52 P **P 21 32 59.0 +0.6**
baz=244,SNR=5.0
DUG Dugway, Tooele 78.57 43 P **P 21 32 58.3 -0.5**
baz=239
DUG Dugway, Tooele 78.57 43 *e*P **P 21 32 59.0 +0.2**
comp=Z,16nm,1.2s
DUG LR LR
comp=Z,875nm,19.0s
DUG Dugway, Tooele 78.57 43 *e*P **P 21 32 59.0 +0.2**
DUG pmax pmax
comp=Z,16nm,1.2s
DUG MLR MLR
comp=Z,875nm,19.0s
GAMB Gambell 78.72 1 *e*P **P 21 33 00.5 +1.6**
comp=Z,42nm,1.2s
D08A Wollman Farm, 78.72 34 *e*P **P 21 32 59.9 +0.5**
comp=Z,35nm,1.3s
ZAIG Zacatecas 78.73 63 *e*P **P 21 33 01.0 +0.7**
comp=Z,40nm,1.8s
SKT Skwentna 78.79 10 *e*P **P 21 32 58.1 -1.2**
comp=Z,26nm,1.2s
BGU Big Grassy Mou 78.81 42 *e*P **P 21 33 01.1 +1.0**
comp=Z,26nm,1.9s
E09A Wood Farm, Sta 78.83 35 *e*P **P 21 33 00.1 +0.2**
comp=Z,28nm,1.3s
PMR Palmer 78.87 11 *e*P **P 21 32 59.6 -0.1**
comp=Z,44nm,1.2s
PMR Palmer 78.87 11 *e*P **P 21 32 59.6 -0.1**
PMR pmax pmax
comp=Z,44nm,1.2s
MDJ Mudanjiang 78.97 322 P **P 21 33 02.8 +2.1**
MDJ pmax pmax
comp=Z,8.0nm,0.9s
MDJ pmax pmax
comp=Z,170nm,5.6s
MDJ Mudanjiang 78.97 322 PFAKE 21 33 10.0 +9.3
MDJ LR LR
comp=Z,397nm,20.0s
Q16A Castle Valley 79.02 45 *e*P **P 21 33 03.3 +1.9**
comp=Z,28nm,1.5s
F10A Beach Ranch, E 79.03 36 *e*P **P 21 33 00.7 -0.5**
comp=Z,41nm,1.4s
GHO Glory Hole Cre 79.08 11 *e*P **P 21 33 00.9 -0.1**
comp=Z,48nm,1.1s
WRAK Wrangell Islan 79.08 22 PFAKE 21 33 10.0 +9.0
WRAK LR LR
comp=Z,584nm,21.0s
DIV Divide 79.14 13 *e*P **P 21 33 01.2 -0.1**
comp=Z,52nm,1.0s
TMUT Trail Mountain 79.18 44 *e*P **P 21 33 03.5 +1.1**
comp=Z,40nm,1.4s
SML Sawmill 79.22 12 *e*P **P 21 33 01.5 -0.3**
comp=Z,39nm,1.3s
SML Sawmill 79.22 12 *e*P **P 21 33 01.5 -0.3**
SML pmax pmax
comp=Z,39nm,1.3s
MPU Maple Canyon 79.26 43 *e*P **P 21 33 04.1 +1.5**
comp=Z,12nm,1.2s
BMRM Bremner River 79.26 14 *e*P **P 21 33 01.6 -0.4**
comp=Z,66nm,1.1s
B08A Colville Reser 79.29 33 *e*P **P 21 33 02.1 -0.3**
comp=Z,18nm,1.2s
HLID Hailey 79.34 39 P **P 21 33 03.4 +0.4**
baz=237
HLID Hailey 79.34 39 *e*P **P 21 33 03.2 +0.3**
comp=Z,20nm,1.1s
HLID LR LR
comp=Z,643nm,20.0s
SPUT South Promonto 79.38 42 *e*P **P 21 33 03.7 +0.4**
comp=Z,28nm,1.4s
LLLB Lillooet 79.40 30 *e*P **P 21 33 03.2 +0.2**
comp=Z,18nm,1.0s
HVU Hansel Valley 79.41 41 *e*P **P 21 33 03.4 0.0**
comp=Z,22nm,1.3s
HVU Hansel Valley 79.41 41 *e*P **P 21 33 03.4 0.0**
HVU pmax pmax
comp=Z,22nm,1.3s
KLU Klutina 79.43 13 *e*P **P 21 33 02.4 -0.5**
SCM Sheep Creek Mo 79.45 12 *e*P **P 21 33 02.9 -0.1**
comp=Z,45nm,1.1s
SCM Sheep Creek Mo 79.45 12 *e*P **P 21 33 02.9 -0.1**
SCM pmax pmax
comp=Z,45nm,1.1s
C09A Chrisman Ranch 79.52 34 *e*P **P 21 33 03.9 +0.2**
comp=Z,81nm,0.2s
PPLA Purkeypile 79.54 10 *e*P **P 21 33 02.4 -1.2**
comp=Z,14nm,1.2s
SRU San Rafael Swe 79.55 45 *e*P **P 21 33 05.1 +0.8**
comp=Z,18nm,1.1s
SRU San Rafael Swe 79.55 45 P **P 21 33 05.0 +0.8**

SRU pmax pmax
comp=Z,18nm,1.0s
P17A Butcher Ranch, 79.58 44 *e*P **P 21 33 06.0 +1.6**
comp=Z,31nm,1.2s
LAZ Ladron 79.77 50 *e*P **P 21 33 06.6 +1.0**
Y22E IRIS PASSCAL I 79.79 51 P **P 21 33 04.8 -0.8**
baz=244
BESE Bessie Mountai 79.92 19 *e*P **P 21 33 06.4 +0.8**
comp=Z,41nm,1.3s
MNTX Cornudas Mount 79.94 53 P **P 21 33 06.4 +0.1**
baz=245,SNR=13
MNTX Cornudas Mount 79.94 53 *e*P **P 21 33 06.6 +0.2**
comp=Z,13nm,1.1s
MNTX LR LR
comp=Z,798nm,19.0s
TCUT Toone Canyon 79.96 43 *e*P **P 21 33 07.7 +1.2**
comp=Z,46nm,0.7s
P18A Preston Nutter 79.99 44 *e*P **P 21 33 08.2 +1.3**
comp=Z,26nm,1.4s
MA2 Magadan 80.02 342 P **P 21 33 04.8 -1.2**
comp=Z,11nm,0.8s,baz=192,slow=21,SNR=4.3
MA2 Magadan 80.02 342 P **P 21 33 04.8 -1.2**
MA2 LR LR
comp=Z,309nm,19.0s
MA2 Magadan 80.02 342⇑ *e*P **P 21 33 07.2 +1.2**
MA2 pmax pmax
comp=Z,30nm,1.7s
PV05 Paradox Valley 80.04 46 *e*P **P 21 33 08.4 +1.4**
comp=Z,43nm,1.4s
BNM Barren Site 80.04 51 *e*P **P 21 33 07.6 +0.5**
CAST Castle Rocks 80.05 9 *e*P **P 21 33 04.7 -1.5**
comp=Z,14nm,1.0s
MVCO Mesa Verde 80.05 47 PFAKE 21 33 20.0 +13
MVCO LR LR
comp=Z,1µm,19.0s
HWUT Hardware Ranch 80.10 42 *e*P **P 21 33 07.4 +0.2**
comp=Z,37nm,1.8s
HWUT LR LR
comp=Z,1µm,19.0s
LPM Los Pinos Moun 80.11 50 *e*P **P 21 33 08.2 +0.9**
NJ2 Nanjing 80.19 307 *e*P **P 21 33 07.8 +0.2**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
PV09 Paradox Valley 80.21 46 *e*P **P 21 33 08.9 +0.9**
PV03 Paradox Valley 80.29 46 *e*P **P 21 33 09.1 +0.8**
comp=Z,29nm,1.3s
PV04 Paradox Valley 80.32 46 *e*P **P 21 33 09.3 +0.9**
comp=Z,33nm,1.3s
TX31 Lajitas Ar. Si 80.33 56 *e*P **P 21 33 09.3 +0.8**
TXAR Lajitas Array 80.33 56 P **P 21 33 09.1 +0.5**
comp=Z,10.0nm,1.1s,baz=227,slow=4.8,SNR=47
TXAR Lajitas Array 80.33 56 *e*P **P 21 33 09.3 +0.7**
TXAR pmax pmax
comp=Z,10.0nm,1.1s
PV02 Paradox Valley 80.35 46 *e*P **P 21 33 09.5 +0.8**
comp=Z,19nm,1.1s
TRF Thorofare Moun 80.38 10 *e*P **P 21 33 07.1 -1.1**
comp=Z,40nm,1.0s
HARP HAARP 80.42 13 *e*P **P 21 33 08.3 +0.2**
comp=Z,31nm,1.0s
NEW Newport 80.42 34 P **P 21 33 07.6 -1.0**
comp=Z,7.3nm,1.0s,baz=266,slow=6.9,SNR=5.1
NEW Newport 80.42 34 P **P 21 33 07.2 -1.3**
baz=234
NEW Newport 80.42 34 *e*P **P 21 33 08.2 -0.4**
comp=Z,9.8nm,1.2s
NEW LR LR
comp=Z,471nm,19.0s
PV01 Paradox Valley 80.43 46 *e*P **P 21 33 09.7 +0.6**
comp=Z,19nm,1.0s
KLR Kul'dur 80.44 327⇑ *e*P **P 21 33 09.2 +0.6**
SKAG Skagway 80.47 19 *e*P **P 21 33 09.0 +0.5**
comp=Z,24nm,1.0s
TASM ASL Pad, Albuq 80.51 50 P **P 21 33 09.6 +0.1**
baz=244,SNR=15
ANMO Albuquerque 80.51 50 P **P 21 33 09.4 -0.2**
comp=Z,11nm,1.0s,baz=270,slow=5.1,SNR=12
ANMO Albuquerque 80.51 50 P **P 21 33 09.6 0.0**
baz=244
ANMO Albuquerque 80.51 50 *e*P **P 21 33 09.9 +0.3**
comp=Z,26nm,1.4s
ANMO LR LR
comp=Z,928nm,19.0s
ANMO Albuquerque 80.51 50 *d i*P **P 21 33 09.7 +0.1**
ANMO pmax pmax
comp=Z,12nm,1.0s
TASL Snake Pit, Alb 80.51 50 P **P 21 33 09.6 +0.1**
baz=244,SNR=15
DHY Denali Highway 80.56 12 *e*P **P 21 33 07.1 -2.1**
comp=Z,23nm,1.1s
PV15 Paradox Valley 80.59 46 *e*P **P 21 33 11.1 +1.1**
comp=Z,17nm,1.1s
PAX Paxson 80.85 12 *e*P **P 21 33 10.0 -0.6**
comp=Z,21nm,1.2s
PAX Paxson 80.85 12 *e*P **P 21 33 10.0 -0.6**
PAX pmax pmax
comp=Z,21nm,1.2s
MCK McKinley 80.87 11 *e*P **P 21 33 10.2 -0.4**
comp=Z,70nm,1.0s
MCK McKinley 80.87 11 *e*P **P 21 33 10.2 -0.4**
MCK pmax pmax
comp=Z,71nm,1.0s
GDL2 Guadalupe Moun 80.94 53 *e*P **P 21 33 12.8 +1.0**
MCMT McKenzie Canyo 80.96 39 *e*P **P 21 33 12.2 +0.4**
AHID Auburn Hatcher 80.99 41 *e*P **P 21 33 12.2 +0.3**
comp=Z,25nm,1.3s
AHID LR LR
comp=Z,710nm,19.0s
CN2 Changchun 81.05 320 *e*P **P 21 33 12.8 +0.9**
CN2 pmax pmax
comp=Z,20nm,0.8s
BWN Browne 81.19 10 *e*P **P 21 33 12.0 -0.2**
comp=Z,101nm,1.1s
MSO Missoula 81.39 37 P **P 21 33 13.1 -0.7**
baz=237,SNR=11
MSO Missoula 81.39 37 *e*P **P 21 33 13.2 -0.7**
comp=Z,37nm,1.3s
DLMT Dillon 81.40 38 *e*P **P 21 33 14.2 +0.2**
comp=Z,21nm,1.1s
DLBC Dease Lake 81.43 21 P **P 21 33 13.5 -0.2**
comp=Z,7.9nm,1.0s,baz=226,slow=3.1,SNR=7.8
DLBC Dease Lake 81.43 21 *e*P **P 21 33 13.3 -0.4**
comp=Z,22nm,1.4s
REDW Red Top Meadow 81.44 41 *e*P **P 21 33 14.9 +0.5**
comp=Z,46nm,1.5s
TPAW Teton Pass 81.44 41 *e*P **P 21 33 15.0 +0.6**
comp=Z,20nm,1.0s
FXWY Fox Creek 81.47 40 *e*P **P 21 33 15.0 +0.5**
comp=Z,25nm,1.4s
S22A 4UR Ranch, Cre 81.48 47 P **P 21 33 15.2 +0.4**
baz=244
S22A 4UR Ranch, Cre 81.48 47 *e*P **P 21 33 15.9 +1.1**
comp=Z,26nm,1.1s
SNOW Snow King Moun 81.56 41 *e*P **P 21 33 15.7 +0.7**
comp=Z,23nm,1.0s
O20A White River Ci 81.59 45 P **P 21 33 15.0 -0.2**
baz=242
O20A White River Ci 81.59 45 *e*P **P 21 33 15.4 +0.2**
comp=Z,61nm,1.9s
IMW Indian Meadow 81.66 40 *e*P **P 21 33 16.3 +0.7**
comp=Z,19nm,1.0s
RIDG Independ'e Rid 81.67 12 *e*P **P 21 33 14.5 -0.4**
comp=Z,42nm,1.1s
WRH Wood River Hil 81.70 11 *e*P **P 21 33 14.4 -0.5**
comp=Z,112nm,1.1s
MOOW Moose Ponds 81.70 40 *e*P **P 21 33 16.3 +0.6**
comp=Z,17nm,1.3s
LOHW Long Hollow 81.72 41 *e*P **P 21 33 16.3 +0.4**
comp=Z,22nm,1.3s
LRM Limekiln Ridge 81.73 38 *e*P **P 21 33 16.0 +0.2**
DOT Dot Lake 81.75 13 *e*P **P 21 33 15.9 +0.6**
comp=Z,124nm,1.1s
MLY Manley 81.77 9 *e*P **P 21 33 14.8 -0.5**
comp=Z,39nm,1.0s
QLMT Earthquake Lak 81.83 39 *e*P **P 21 33 17.6 +1.2**
FLWY Flagg Ranch 81.90 40 *e*P **P 21 33 17.7 +0.9**
comp=Z,32nm,1.0s
CCB Clear Creek Bu 81.91 11 *e*P **P 21 33 15.2 -0.8**
comp=Z,58nm,1.0s
YHB Horse Butte 81.93 39 *e*P **P 21 33 18.8 +1.9**
comp=Z,33nm,1.1s
BW06 Boulder Array 81.97 42 P **P 21 33 16.7 -0.5**
baz=241,SNR=11
BW06 Boulder Array 81.97 42 *e*P **P 21 33 16.7 -0.5**
comp=Z,15nm,1.0s
BW06 LR LR
comp=Z,977nm,19.0s

PD31	Pinedale Array	81.97	42	*e*P	P	21 33 17.1	-0.1
PDAR	Pinedale Array	81.97	42	P	P	21 33 17.1	-0.1
	comp=Z,4.9nm,0.8s,baz=217,slow=3.7,SNR=33						
PDAR	Pinedale Array	81.97	42	*e*P	P	21 33 16.5	-0.7
PDAR				*e*S	S	21 43 26.6	-3.1
SMCO	Snowmass	82.02	46	*e*P	P	21 33 18.6	+0.8
	comp=Z,32nm,1.4s						
YMR	Madison River	82.03	40	*e*P	P	21 33 19.3	+1.9
	comp=Z,48nm,1.3s						
SCRK	Sand Creek	82.06	13	*e*P	P	21 33 16.2	-0.8
	comp=Z,33nm,1.0s						
BOZ	Bozeman (W)	82.10	39	P	P	21 33 17.8	+0.1
	baz=239,SNR=25						
BOZ	Bozeman (W)	82.10	39	*e*P	P	21 33 17.0	-0.7
	comp=Z,29nm,1.3s						
BOZ				LR	LR		
	comp=Z,803nm,19.0s						
BOZ	Bozeman (W)	82.10	39	*e*P	P	21 33 17.0	-0.7
BOZ				pmax	pmax		
	comp=Z,29nm,1.3s						
BOZ				MLR	MLR		
	comp=Z,803nm,19.0s						
COLA	College	82.11	11	*e*P	P	21 33 17.1	+0.1
	comp=Z,115nm,1.0s						
COLA				LR	LR		
	comp=Z,1.0nm,19.0s						
MDM	Murphy Dome	82.12	10	*e*P	P	21 33 16.4	-0.8
	comp=Z,51nm,1.1s						
H17A	Grant Village	82.13	40	P	P	21 33 17.9	-0.1
	baz=240						
LNIG	Linares	82.14	62	*e*P	P	21 33 17.6	-0.6
	comp=Z,23nm,1.1s						
IL1	Eielson Array	82.19	11	*e*P	P	21 33 15.2	-2.4
ILAR	Eielson Array	82.19	11	P	P	21 33 16.8	-0.8
	comp=Z,11nm,1.0s,baz=203,slow=5.8,SNR=58						
ILB	Eielson Array	82.19	11	*e*P	P	21 33 16.8	-0.8
LKWY	Lake	82.33	40	PFAKE		21 33 30.0	+11
LKWY				LR	LR		
	comp=Z,1μm,20.0s						
SEY	Seymchan	82.36	345⇓	*i*P	P	21 33 18.1	-0.3
SDCO	Great Sand Dun	82.42	48	P	P	21 33 19.8	+0.1
	baz=244,SNR=15						
SDCO	Great Sand Dun	82.42	48	*e*P	P	21 33 19.5	-0.3
	comp=Z,22nm,1.4s						
SDCO				LR	LR		
	comp=Z,622nm,19.0s						
HRY	Holter Researc	82.56	38	*e*P	P	21 33 20.4	+0.4
MSTX	Muleshoe	82.87	52	P	P	21 33 21.8	-0.1
	baz=246						
T25A	Trinidad	82.95	49	P	P	21 33 22.2	-0.2
	baz=245,SNR=10.0						
T25A	Trinidad	82.95	49	*e*P	P	21 33 22.6	+0.2
	comp=Z,16nm,1.0s						
QIZ	Qiongzhong	83.01	292	PFAKE		21 33 30.0	+7.2
QIZ				LR	LR		
	comp=Z,136nm,19.0s						
DAWY	Dawson	83.16	14	*e*P	P	21 33 22.8	+0.1
	comp=Z,40nm,1.0s						
Q24A	Divide	83.20	47	P	P	21 33 23.7	-0.1
	baz=244,SNR=12						
TIA	Tai'an	83.22	310	P	P	21 33 28.5	+5.0
TIA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ISCO	Idaho Springs	83.24	46	P	P	21 33 24.0	+0.1
	baz=244,SNR=9.6						
ISCO	Idaho Springs	83.24	46	*e*P	P	21 33 24.6	+0.7
	comp=Z,36nm,1.6s						
ISCO				LR	LR		
	comp=Z,956nm,19.0s						
ISCO	Idaho Springs	83.24	46	*e*P	P	21 33 24.6	+0.7
ISCO				pmax	pmax		
	comp=Z,36nm,1.6s						
ISCO				MLR	MLR		
	comp=Z,956nm,19.0s						
RLMT	Red Lodge	83.30	40	P	P	21 33 24.2	+0.2
	baz=241,SNR=18						
RLMT	Red Lodge	83.30	40	*e*P	P	21 33 24.5	+0.5
	comp=Z,36nm,1.1s						
RLMT				LR	LR		
	comp=Z,675nm,20.0s						
RDOG	Red Dog Mine	83.34	4	*e*P	P	21 33 24.5	+1.0
	comp=Z,23nm,1.2s						
EGAK	Eagle	83.36	13	*e*P	P	21 33 23.5	-0.1
	comp=Z,25nm,1.0s						
EGAK				LR	LR		
	comp=Z,657nm,22.0s						
833A	Chaparral WMA,	83.42	58	P	P	21 33 24.8	+0.1
	baz=249						
N23A	Red Feather La	83.50	45	P	P	21 33 25.5	+0.3
	baz=244,SNR=13						
N23A	Red Feather La	83.50	45	*e*P	P	21 33 25.7	+0.5
	comp=Z,52nm,1.3s						
JCT	Junction City	83.87	56	P	P	21 33 26.5	-0.6
	baz=249						
JCT	Junction City	83.87	56	*e*P	P	21 33 26.8	-0.3
	comp=Z,11nm,0.9s						
JCT				LR	LR		
	comp=Z,562nm,19.0s						
JCT	Junction City	83.87	56	*e*P	P	21 33 26.8	-0.3
JCT				pmax	pmax		
	comp=Z,11nm,0.9s						
JCT				MLR	MLR		
	comp=Z,562nm,19.0s						
K22A	Casper	83.89	43	P	P	21 33 26.8	-0.3
	baz=243,SNR=7.1						
K22A	Casper	83.89	43	*e*P	P	21 33 27.4	+0.3
	comp=Z,44nm,1.3s						
COLD	Coldfoot	83.90	9	*e*P	P	21 33 25.6	-0.7
	comp=Z,30nm,1.1s						
PHWY	Pilot Hill	84.00	45	*e*P	P	21 33 28.1	+0.3
	comp=Z,28nm,1.3s						
AMTX	Amarillo	84.06	52	P	P	21 33 27.6	-0.4
	baz=247						
AMTX	Amarillo	84.06	52	*e*P	P	21 33 28.2	+0.2
FYU	Fort Yukon	84.11	11	*e*P	P	21 33 26.9	-0.5
	comp=Z,11nm,1.0s						
BILL	Bilibino	84.32	352	*e*P	P	21 33 28.1	-0.4
	comp=Z,12nm,0.9s						
BILL				LR	LR		
	comp=Z,594nm,22.0s						
BILL	Bilibino	84.32	352	*d i*P	P	21 33 28.0	-0.4
BILL				*e*		21 36 42.5	
BILL				*e*PPP	PPP	21 38 37.7	
BILL				pmax	pmax		
	comp=Z,26nm,1.7s						
KVTX	Kingsville	84.39	60	PFAKE		21 33 40.0	+10
KVTX				LR	LR		
	comp=Z,735nm,19.0s						
EGMT	Eagleton	84.44	37	P	P	21 33 29.3	-0.3
	baz=240						
EGMT	Eagleton	84.44	37	PFAKE		21 33 40.0	+10
EGMT				LR	LR		
	comp=Z,880nm,19.0s						
ABTX	Abilene, Hawle	84.78	54	P	P	21 33 31.3	-0.3
	baz=248						
ABTX	Abilene, Hawle	84.78	54	*e*P	P	21 33 31.9	+0.2
	comp=Z,110nm,1.3s						
TOLK	Toolik Lake Re	85.30	8	P	P	21 33 33.4	0.0
	baz=203						
TOLK	Toolik Lake Re	85.30	8	*e*P	P	21 33 34.2	+0.8
	comp=Z,31nm,1.0s						
ZEA	Zeya	85.33	329	*e*P	P	21 33 34.3	+0.5
ZEA				pmax	pmax		
	comp=Z,28nm,1.2s						
BJT	Baijiatuau	85.46	313	PFAKE		21 33 50.0	+15
BJT				LR	LR		
	comp=Z,182nm,19.0s						
BJI	Beijing	85.46	313	P	P	21 33 37.5	+2.7
BJI				pmax	pmax		
	comp=Z,20nm,2.3s						
435B	Jarrell	85.76	57	P	P	21 33 36.5	0.0
	baz=250						
435B	Jarrell	85.76	57	*e*P	P	21 33 37.7	+1.2
	comp=Z,32nm,0.9s						
LAO	LASA Array	85.92	39	P	P	21 33 37.4	+0.4
	baz=243						
LAO	LASA Array	85.92	39	*e*P	P	21 33 37.5	+0.4
LAO				LR	LR		
	comp=Z,522nm,19.0s						
RSSD	Black Hills	86.17	42	P	P	21 33 38.0	-0.6
	baz=245						
RSSD	Black Hills	86.17	42	*e*P	P	21 33 37.9	-0.6
	comp=Z,34nm,1.2s						
RSSD	Black Hills	86.17	42	*e*P	P	21 33 37.9	-0.6
RSSD				pmax	pmax		
	comp=Z,34nm,1.2s						
OGNE	Ogallala	86.20	46	PFAKE		21 33 50.0	+11
OGNE				LR	LR		
	comp=Z,1μm,19.0s						
WMOK	Wichita Mounta	86.22	53	P	P	21 33 38.5	-0.2
	baz=249						
WMOK	Wichita Mounta	86.22	53	*e*P	P	21 33 38.2	-0.5
	comp=Z,13nm,1.3s						
WMOK				LR	LR		
	comp=Z,740nm,19.0s						
WMOK	Wichita Mounta	86.22	53	*e*P	P	21 33 38.2	-0.5
WMOK				pmax	pmax		
	comp=Z,13nm,1.3s						
WMOK				MLR	MLR		
	comp=Z,740nm,19.0s						
WHTX	Lake Whitney,	86.28	56	P	P	21 33 38.8	-0.3
	baz=250						
WHTX	Lake Whitney,	86.28	56	*e*P	P	21 33 39.4	+0.4
	comp=Z,72nm,1.4s						
HKT	Hockley	86.90	58	*e*P	P	21 33 43.1	+1.1
	comp=Z,46nm,1.7s						
HKT	Hockley	86.90	58	*e*P	P	21 33 43.1	+1.1
HKT				pmax	pmax		
	comp=Z,46nm,1.7s						
ENH	Enshi	86.97	302	PFAKE		21 33 50.0	+7.5
ENH				LR	LR		
	comp=Z,255nm,22.0s						
CBKS	Cedar Bluff	87.00	49	PFAKE		21 33 50.0	+7.5
CBKS				LR	LR		
	comp=Z,819nm,19.0s						
HIA	Hailar	87.14	323	PFAKE		21 33 50.0	+7.1
HIA				LR	LR		
	comp=Z,296nm,20.0s						
DGMT	Dagmar	87.94	38	P	P	21 33 46.6	-0.2
	baz=244						
DGMT	Dagmar	87.94	38	*e*P	P	21 33 47.3	+0.6
DGMT				LR	LR		
	comp=Z,1μm,21.0s						
INK	Inuvik	88.01	14	P	P	21 33 46.5	-0.1
	comp=Z,13nm,0.9s,baz=219,slow=6.8,SNR=12						
INK	Inuvik	88.01	14	*e*P	P	21 33 46.5	-0.1
	comp=Z,17nm,0.9s						
INK	Inuvik	88.01	14	*e*P	P	21 33 46.5	-0.1
INK				pmax	pmax		
	comp=Z,17nm,0.9s						
MAW	Mawson	88.06	199	P	P	21 33 47.5	+0.5
	comp=Z,9.0nm,0.7s,baz=117,slow=6.7,SNR=12						
MAW	Mawson	88.06	199	*e*P	P	21 33 47.8	+0.8
	comp=Z,2.7nm,0.9s						
MAW	Mawson	88.06	199	*e*P	P	21 33 47.8	+0.8
MAW				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GYA	Guiyang	88.11	298	P	P	21 33 48.0	-0.2
GYA				pP	pP	21 33 54.0	-3.6
GYA				PP	PP	21 37 16.3	+0.8
GYA				SKS	SKSac	21 44 12.8	-2.5
GYA				S	S	21 44 28.8	-2.1
GYA				SS	SS	21 50 20.0	-0.1
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,6.0s						
GYA				LR	LR		
	comp=Z,410nm,19.8s						
GYA				LR	LR		
	comp=Z,480nm,20.0s						
GYA				LR	LR		
	comp=Z,460nm,20.5s						
NATX	Nacogdoches	88.44	57	P	P	21 33 49.6	+0.1
	baz=251						
NATX	Nacogdoches	88.44	57	*e*P	P	21 33 49.3	-0.2
NATX				LR	LR		
	comp=Z,643nm,20.0s						
TUL1	Leonard	88.92	52	P	P	21 33 51.8	+0.2
	baz=250						
TUL1	Leonard	88.92	52	*e*P	P	21 33 52.1	+0.5
	comp=Z,22nm,1.2s						
YAK	Yakutsk	88.99	337	*e*P	P	21 33 50.8	-0.5
	comp=Z,11nm,0.6s						
YAK				LR	LR		
	comp=Z,255nm,20.0s						
YAK	Yakutsk	88.99	337⇓	*e*P	P	21 33 51.1	-0.2
YAK				pmax	pmax		
	comp=Z,15nm,0.9s						
HHC	Hu-ho-hao-te	89.02	313	*e*P	P	21 33 52.8	+0.6
HHC				PP	PP	21 37 25.0	+2.6
HHC				S	S	21 44 38.0	-0.9
HHC				SS	SS	21 50 34.3	+1.5
HHC				pmax	pmax		
	comp=Z,2.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,54nm,5.7s						
HHC				LR	LR		
	comp=Z,550nm,13.8s						
HHC				LR	LR		
	comp=Z,450nm,13.0s						
HHC				LR	LR		
	comp=Z,450nm,14.7s						
240A	Hunter Patters	89.26	57	P	P	21 33 53.4	+0.1
	baz=252						
KSU1	Kansas State U	89.38	49	PFAKE		21 34 10.0	+16
KSU1				LR	LR		
	comp=Z,969nm,19.0s						
341A	Kurthwood	89.52	57	P	P	21 33 55.0	+0.4
	baz=252						
341A	Kurthwood	89.52	57	*e*P	P	21 33 55.9	+1.3
	comp=Z,29nm,0.9s						
140A	Cam and Jess,	89.60	56	P	P	21 33 55.7	+0.9
	baz=252						
X39A	Fountain Ranch	89.76	54	P	P	21 33 56.2	+0.6
	baz=252						
YKA	Yellowknife Ar	89.82	23	P	P	21 33 54.8	-0.4
	comp=Z,9.1nm,0.9s,baz=236,slow=4.3,SNR=31						
YKW3	Yellowknife Ar	89.86	23	*e*P	P	21 33 54.9	-0.5
	comp=Z,15nm,1.0s						
141A	Papa Simpson,	90.12	56	P	P	21 33 57.1	-0.2
	baz=252						
MIAR	Mount Ida	90.19	54	P	P	21 33 57.8	+0.1
	baz=252						
MIAR	Mount Ida	90.19	54	PFAKE		21 34 10.0	+12
MIAR				LR	LR		
	comp=Z,885nm,20.0s						
W39A	Magazine	90.23	54	P	P	21 33 58.2	+0.4
	baz=252						
Z41A	Richland Creek	90.41	56	P	P	21 33 58.5	-0.1
	baz=252						
T38A	Diamond	90.42	52	P	P	21 33 58.0	-0.7
	baz=251						
HHAR	Hobbs	90.45	53	*e*P	P	21 33 58.8	-0.1
	comp=Z,9.7nm,1.1s						
V39A	Pettigrew	90.54	53	P	P	21 33 59.0	-0.3
	baz=252,SNR=6.5						
H32A	Carlson Farm,	90.68	44	P	P	21 33 58.9	-0.8
	baz=249						
Y41A	Eaglette Beard	90.75	55	P	P	21 33 59.8	-0.4
	baz=252						
U39A	Green Forest	90.84	53	P	P	21 34 00.7	0.0
	baz=252						
Q37A	Longview Farm,	90.89	50	P	P	21 34 00.9	+0.1
	baz=251						
G32A	Webster	90.90	43	P	P	21 34 00.3	-0.5
	baz=249						
S38A	Stockton	90.90	51	P	P	21 34 00.4	-0.5
	baz=252						
ECSD	EROS Data Cent	90.97	45	P	P	21 34 00.7	-0.4
	baz=250						
ECSD	EROS Data Cent	90.97	45	*e*P	P	21 34 00.6	-0.4
	comp=Z,9.9nm,1.0s						
ECSD				LR	LR		
	comp=Z,981nm,20.0s						
JTS	JuntasAbangare	90.98	80	P	P	21 34 03.0	+1.2
	comp=Z,17nm,0.9s,baz=307,slow=5.4,SNR=12						
JTS	JuntasAbangare	90.98	80	*e*P	P	21 34 02.6	+0.9
	comp=Z,29nm,1.1s						
JTS				LR	LR		
	comp=Z,357nm,20.0s						
JTS	JuntasAbangare	90.98	80	P	P	21 34 03.0	+1.2
JTS				pmax	pmax		
	comp=Z,17nm,0.9s						
243A	Waterproof	91.06	57	P	P	21 34 02.7	+1.0
	baz=253						
R38A	Fenwick Farm,	91.08	51	P	P	21 34 01.4	-0.3
	baz=252						
Z42A	Norrel Spur, H	91.09	56	P	P	21 34 01.5	-0.4
	baz=253						
KMI	Kunming	91.11	296	P	P	21 34 01.3	-1.1
KMI				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,89nm,5.2s						
KMI				LR	LR		
	comp=Z,130nm,15.8s						
KMI				LR	LR		
	comp=Z,190nm,12.2s						
KMI				LR	LR		
	comp=Z,220nm,16.4s						
E31A	Nome	91.11	42	P	P	21 34 01.0	-0.6
	baz=249						
T39A	Clever	91.11	52	P	P	21 34 02.0	+0.1
	baz=252,SNR=5.6						
N36A	Muff Farm, Cla	91.15	48	P	P	21 34 01.9	-0.1
	baz=251						
V40A	Witts Springs	91.17	53	P	P	21 34 02.0	-0.2
	baz=252,SNR=5.7						
P37A	Lathrop	91.20	49	P	P	21 34 02.2	0.0
	baz=251						
U40A	Yellville	91.31	53	P	P	21 34 02.5	-0.3
	baz=252						
S39A	Bolivar	91.36	51	P	P	21 34 02.8	-0.3
	baz=252						
W41B	Gary Mavity, V	91.42	54	P	P	21 34 03.6	+0.3
	baz=253,SNR=5.9						
WHAR	Wooly Hollow	91.43	54	*e*P	P	21 34 04.0	+0.6
	comp=Z,18nm,1.0s						
O37A	Wolven Farm, M	91.53	49	P	P	21 34 03.5	-0.2
	baz=252						
Q38A	Cooks Store, C	91.54	50	P	P	21 34 03.2	-0.5
	baz=252						
344A	Westbrook Farm	91.54	58	P	P	21 34 05.9	+1.9
	baz=253						
V41A	Mountainview	91.68	53	P	P	21 34 04.6	+0.1
	baz=253						
244A	Avery, Jackson	91.75	57	P	P	21 34 06.3	+1.4
	baz=253						
R39A	Chumby, Stover	91.77	51	P	P	21 34 04.3	-0.6
	baz=252,SNR=10						
L36A	Harm Buss Farm	91.77	47	P	P	21 34 05.0	+0.2
	baz=251						
P38A	Dawn	91.81	49	P	P	21 34 04.5	-0.6
	baz=252						
T40A	Mansfield	91.81	52	P	P	21 34 05.2	+0.1
	baz=252						
FFC	Flin Flon	91.81	33	*e*P	P	21 34 04.1	-0.6
	comp=Z,13nm,1.2s						
FFC				LR	LR		
	comp=Z,412nm,19.0s						
FFC	Flin Flon	91.81	33	*e*P	P	21 34 04.1	-0.6
FFC				pmax	pmax		
	comp=Z,13nm,1.2s						
FFC				MLR	MLR		
	comp=Z,412nm,19.0s						
CD2	Chengdu	91.86	301	P	P	21 34 04.0	-1.6
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
S40A	Lebanon	91.96	52	P	P	21 34 05.5	-0.3
	baz=252,SNR=6.5						
M37A	Trindle Farm,	91.98	48	P	P	21 34 06.1	+0.3
	baz=252						
W42A	Bald Knob	92.02	54	P	P	21 34 06.8	+0.8
	baz=253						
U41A	Viola	92.03	53	P	P	21 34 05.6	-0.5
	baz=253,SNR=9.5						
Q39A	Willow Grove F	92.04	50	P	P	21 34 05.0	-1.1
	baz=252						
K36A	Gilmore City	92.10	46	P	P	21 34 06.8	+0.5
	baz=251						
V42A	Cord	92.28	54	P	P	21 34 06.7	-0.6
	baz=253,SNR=5.5						
X43A	Marvell	92.30	55	P	P	21 34 08.3	+0.9
	baz=253						
P39B	Salisbury	92.34	50	P	P	21 34 06.5	-1.0
	baz=252,SNR=5.5						
R40A	Maddies Statio	92.34	51	P	P	21 34 06.9	-0.6
	baz=253,SNR=8.4						
T41A	Mountain View	92.35	52	P	P	21 34 07.3	-0.4
	baz=253,SNR=13						
245A	Little AP, Sta	92.39	58	P	P	21 34 08.6	+0.7
	baz=254						
J36A	Seneca 1, Swea	92.39	46	P	P	21 34 07.9	+0.2
	baz=252						
J36A	Seneca 1, Swea	92.39	46	*e*P	P	21 34 08.3	+0.6
	comp=Z,25nm,1.3s						
L37A	Phoenix Point,	92.42	47	P	P	21 34 08.3	+0.4
	baz=252						
S41A	Jillco Farms,	92.53	52	P	P	21 34 07.2	-1.2
	baz=253,SNR=14						
U42A	Revenden	92.55	53	P	P	21 34 07.8	-0.7
	baz=253,SNR=6.3						
346A	Big Creek Wild	92.56	58	P	P	21 34 08.0	-0.7
	baz=254						
M38A	Pleasantville	92.60	48	P	P	21 34 08.4	-0.3
	baz=252						
Q40A	Laux Farm, Aux	92.69	50	P	P	21 34 08.7	-0.4
	baz=253						
K37A	Belmond	92.71	46	P	P	21 34 09.0	-0.1
	baz=252						
CMAR	Chiang Mai Arr	92.73	288	P	P	21 34 10.3	+0.6
	comp=Z,0.4nm,0.7s,baz=103,slow=1.9,SNR=3.1						
SCIA	State Center	92.74	47	P	P	21 34 09.7	+0.4
	baz=252						
SCIA	State Center	92.74	47	PFAKE		21 34 20.0	+11
SCIA				LR	LR		
	comp=Z,807nm,19.0s						
CHTO	Chiang Mai	92.82	289	PFAKE		21 34 20.0	+10
CHTO				LR	LR		
	comp=Z,195nm,21.0s						
SYO	Syowa Base	92.85	191⇑	*e*pP	P	21 34 11.0	+1.7
E34A	Wadena	92.86	43	P	P	21 34 09.1	-0.6
	baz=251						
T42A	Van Buren	92.86	53	P	P	21 34 09.1	-0.9
	baz=253,SNR=6.0						
T42A	Van Buren	92.86	53	*e*P	P	21 34 09.3	-0.6
	comp=Z,9.9nm,1.0s						
P40A	Paris	92.87	50	P	P	21 34 09.6	-0.3
	baz=253						
X44A	Crenshaw	92.88	55	P	P	21 34 10.6	+0.5
	baz=254						
NNA	Nana	92.92	103	PFAKE		21 34 20.0	+9.2
NNA				LR	LR		
	comp=Z,159nm,19.0s						
J37A	Redenius Farm,	92.94	46	P	P	21 34 09.7	-0.5
	baz=252						
N39A	Derby Farms, D	92.94	49	P	P	21 34 09.9	-0.4
	baz=253						
L38A	Oak Wood Farm,	92.99	47	P	P	21 34 10.0	-0.4
	baz=252,SNR=7.0						
AGMN	Agassiz Nation	93.00	41	P	P	21 34 08.7	-1.6
	baz=251,SNR=5.2						
AGMN	Agassiz Nation	93.00	41	*e*P	P	21 34 09.1	-1.2
	comp=Z,20nm,1.2s						
AGMN				LR	LR		
	comp=Z,932nm,19.0s						
R41A	Rosebud	93.01	51	P	P	21 34 09.7	-0.9
	baz=253,SNR=5.9						
CCM	Cathedral Cave	93.04	52	P	P	21 34 10.3	-0.5
	baz=253						
CCM	Cathedral Cave	93.04	52	*e*P	P	21 34 08.8	-2.0
	comp=Z,23nm,1.2s						
CCM	Cathedral Cave	93.04	52	*e*P	P	21 34 08.8	-2.0
CCM				pmax	pmax		
	comp=Z,23nm,1.2s						
VNA3	Neumayer Olymp	93.06	175	P	P	21 34 11.8	+1.5
SNAA	Sanae	93.11	177	P	P	21 34 11.7	+1.1
SNAA	Sanae	93.11	177	P	P	21 34 10.3	-0.3
	comp=Z,6.9nm,1.1s,baz=238,slow=12,SNR=12						
SNAA	Sanae	93.11	177	*e*P	P	21 34 11.2	+0.6
	comp=Z,19nm,1.3s						
SNAA	Sanae	93.11	177	*e*P	P	21 34 11.2	+0.6
SNAA				pmax	pmax		
	comp=Z,19nm,1.3s						
O40A	La Belle	93.17	49	P	P	21 34 10.4	-0.9
	baz=253,SNR=6.3						
Y45A	Yeager Farm, C	93.19	56	P	P	21 34 12.4	+0.9
	baz=254						
LZH	Lanzhou	93.25	306	*e*P	P	21 34 11.8	-0.2
LZH				pP	pP	21 34 18.3	-3.1
LZH				sP	sP	21 34 21.0	-3.7
LZH				*e*PP	PP	21 37 58.8	+2.7
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
LZH				pmax	pmax		
	comp=Z,110nm,9.5s						
LZH				LR	LR		
	comp=Z,380nm,17.5s						
LZH				LR	LR		
	comp=Z,390nm,17.1s						
LZH				LR	LR		

comp=Z,580nm,19.3s
I37A Lemond, Waseca 93.26 45 P **P** 21 34 11.6 0.0
baz=252
I37A Lemond, Waseca 93.26 45 *e*P **P** 21 34 12.1 +0.5
comp=Z,24nm,0.9s
K38A Parkersburg 93.28 47 P **P** 21 34 12.0 +0.3
baz=253
S42A Caledonia 93.30 52 P **P** 21 34 11.1 -0.9
baz=254,SNR=5.3
Q41A Truxton 93.31 51 P **P** 21 34 11.2 -0.7
baz=253,SNR=6.1
M39A Webster 93.36 48 P **P** 21 34 11.9 -0.3
baz=253
X45A UM Field Stati 93.46 55 P **P** 21 34 13.3 +0.5
baz=254
OXF Oxford 93.47 55 P **P** 21 34 13.3 +0.6
baz=254
OXF Oxford 93.47 55 *e*P **P** 21 34 13.4 +0.6
comp=Z,78nm,1.3s
OXF Oxford 93.47 55 P **P** 21 34 13.4 +0.6
OXF pmax pmax
comp=Z,78nm,1.3s
T43A Greenville 93.49 53 P **P** 21 34 13.0 +0.2
baz=254
A33A Warroad 93.51 40 P **P** 21 34 11.4 -1.3
baz=251,SNR=7.5
N40A Mertquake, San 93.61 49 P **P** 21 34 12.7 -0.6
baz=253,SNR=6.6
FVM French Village 93.64 52 *e*P **P** 21 34 13.3 -0.2
comp=Z,28nm,1.3s
FVM French Village 93.64 52 *e*P **P** 21 34 13.3 -0.2
FVM pmax pmax
comp=Z,28nm,1.3s
ULM Lac du Bonnet 93.64 39 P **P** 21 34 12.0 -1.2
comp=Z,10nm,1.0s,baz=240,slow=7.0,SNR=6.3
ULM Lac du Bonnet 93.64 39 *e*P **P** 21 34 12.2 -1.0
comp=Z,14nm,1.0s
P41A Barry, Barry 93.64 50 P **P** 21 34 12.9 -0.6
baz=254,SNR=9.9
L39A Vinton 93.67 47 P **P** 21 34 13.0 -0.6
baz=253,SNR=5.2
J38A Wedel Dairy, R 93.69 46 P **P** 21 34 13.5 -0.1
baz=253
Y46A Houston 93.74 56 P **P** 21 34 14.0 -0.1
baz=254
F36A Milaca 93.74 44 P **P** 21 34 13.2 -0.6
baz=252
F36A Milaca 93.74 44 *e*P **P** 21 34 13.3 -0.6
comp=Z,14nm,1.1s
VNA1 Neumayer--Stat 93.75 175 P **P** 21 34 15.2 +1.7
H37A Dierke Farm, C 93.76 45 P **P** 21 34 13.7 -0.2
baz=253
D35A Remer 93.77 42 P **P** 21 34 13.1 -0.8
baz=252
S43A Fulton Ridge, 93.79 52 P **P** 21 34 13.7 -0.6
baz=254,SNR=6.5
M40A Post Highland 93.81 48 P **P** 21 34 14.1 -0.2
baz=253
Q42A Golden Eagle 93.82 51 P **P** 21 34 14.2 -0.2
baz=254
W45A Hickory Valley 93.82 55 P **P** 21 34 14.5 +0.1
baz=254
B34A Aery, Baudette 93.83 41 P **P** 21 34 13.2 -0.9
baz=252
O41A Passleys Farm, 93.90 50 P **P** 21 34 14.1 -0.5
baz=254,SNR=15
K39A Oelwein 93.92 47 P **P** 21 34 14.1 -0.6
baz=253
I38A Scanlan Farm, 94.00 46 P **P** 21 34 14.6 -0.5
baz=253,SNR=6.8
C35A Jirik Farms, M 94.01 42 P **P** 21 34 13.4 -1.7
baz=252,SNR=5.7
SPMN Marine on St. 94.03 44 P **P** 21 34 15.3 +0.2
baz=253
SPMN Marine on St. 94.03 44 *e*P **P** 21 34 15.6 +0.5
comp=Z,21nm,1.0s
T44A Benton 94.03 53 P **P** 21 34 14.8 -0.6
baz=254
GLAT Glass 94.04 54 *e*P **P** 21 34 16.9 +1.5
comp=Z,79nm,0.9s
N41A Harden Midland 94.09 49 P **P** 21 34 15.0 -0.6
baz=254,SNR=5.5
N41A Harden Midland 94.09 49 *e*P **P** 21 34 15.2 -0.4
comp=Z,35nm,1.0s
R43A Red Bud 94.10 52 P **P** 21 34 15.6 0.0
baz=254
E36A McGregor 94.12 43 P **P** 21 34 14.8 -0.8
baz=252
P42A Winchester 94.15 50 P **P** 21 34 15.2 -0.6
baz=254,SNR=9.2
P42A Winchester 94.15 50 *e*P **P** 21 34 15.4 -0.4
comp=Z,47nm,0.9s
Z47A Carrollton 94.19 57 P **P** 21 34 17.0 +0.8
baz=255
NVL N'lazarevskaya 94.20 182 *e*P **P** 21 34 14.2 -1.3
NVL pmax pmax
comp=Z,4.0nm,0.7s
L40A Anamosa 94.21 48 P **P** 21 34 15.4 -0.6
baz=254,SNR=8.0
L40A Anamosa 94.21 48 *e*P **P** 21 34 16.2 +0.1
comp=Z,35nm,0.9s
H38A Maiden Rock 94.22 45 P **P** 21 34 16.0 -0.1
baz=253
J39A Decorah 94.23 46 P **P** 21 34 15.0 -1.2
baz=253,SNR=5.8
B35A Bob, Littlefor 94.37 41 P **P** 21 34 15.1 -1.6
baz=252,SNR=7.4
B35A Bob, Littlefor 94.37 41 *e*P **P** 21 34 15.5 -1.2
comp=Z,14nm,1.0s
D36A Goodland 94.38 42 P **P** 21 34 16.4 -0.3
baz=253
D36A Goodland 94.38 42 *e*P **P** 21 34 16.1 -0.6
comp=Z,35nm,1.0s
ULN Ulaanbaatar 94.40 318 PFAKE 21 34 30.0 +13
ULN LR LR
comp=Z,233nm,21.0s
ULN Ulaanbaatar 94.40 318 ‖ *e*P **P** 21 34 18.1 +1.1
ULN pmax pmax
comp=Z,2.0nm,0.8s
349A Repton 94.43 59 P **P** 21 34 17.7 +0.4
baz=255
K40A Colesburg 94.45 47 P **P** 21 34 16.8 -0.3
baz=254
148A Greensboro 94.45 58 P **P** 21 34 17.6 +0.2
baz=255
Q43A New Douglas 94.45 51 P **P** 21 34 16.9 -0.3
baz=254
W46A Michie 94.45 55 P **P** 21 34 17.0 -0.3
baz=255
U45A Rockin P Farm, 94.47 54 P **P** 21 34 18.1 +0.7
baz=255
M41A Milan 94.50 48 P **P** 21 34 17.1 -0.3
baz=254
I39A Houston 94.50 46 P **P** 21 34 17.0 -0.4
baz=254
I39A Houston 94.50 46 *e*P **P** 21 34 17.1 -0.3
comp=Z,33nm,1.1s
O42A Bath 94.51 50 P **P** 21 34 17.1 -0.4
baz=254
Y47A UCPARC, Winfie 94.55 56 P **P** 21 34 17.4 -0.5
baz=255
PLAL Pickwick Lake 94.65 55 *e*P **P** 21 34 18.0 -0.3
comp=Z,66nm,1.9s
G38A Ridgeland 94.65 45 P **P** 21 34 16.6 -1.5
baz=253,SNR=6.8
N42A Yates City 94.72 49 P **P** 21 34 17.8 -0.6
baz=254
L41A Preston 94.73 48 P **P** 21 34 17.6 -0.8
baz=254
R44A Waltonville 94.73 52 P **P** 21 34 17.2 -1.4
baz=255
C36A Pine Crest Far 94.76 42 P **P** 21 34 15.9 -2.5
baz=253
P43A Skaggs, Pawnee 94.78 50 P **P** 21 34 17.9 -0.8
baz=254,SNR=5.4
SONM Songino Array 94.81 318 P **P** 21 34 17.7 -1.1
comp=Z,0.3nm,0.6s,baz=108,slow=4.7,SNR=2.3
SONM PP **PP** 21 38 10.1 +2.1
comp=Z,0.2nm,0.3s,baz=108,slow=8.0,SNR=4.2
V46A Holladay 94.83 54 P **P** 21 34 19.0 0.0
baz=255
TIXI Tiksi 94.85 344 PFAKE 21 34 30.0 +12
TIXI LR LR
comp=Z,339nm,21.0s
TIXI Tiksi 94.85 344 ‖ *e*P **P** 21 34 18.5 +0.2
D37A Cotton 94.85 43 P **P** 21 34 17.9 -1.0
baz=253,SNR=10
F38A Pierce - Schro 94.87 44 P **P** 21 34 18.7 -0.2
baz=253
H39A Augusta 94.90 45 P **P** 21 34 18.2 -1.0
baz=254,SNR=7.2
J40A Soldiers Grove 94.92 46 P **P** 21 34 17.9 -1.4
baz=254,SNR=7.6
Q44A Meyer Farm, Va 94.96 51 P **P** 21 34 19.5 -0.1
baz=255
K41A Shullsburg 95.01 47 P **P** 21 34 18.7 -1.0
baz=254,SNR=6.0
149A Jones 95.08 58 P **P** 21 34 20.0 -0.3
baz=255
O43A Sugar Creek Fa 95.10 50 P **P** 21 34 19.8 -0.4
baz=255
W47A Westpoint 95.10 55 P **P** 21 34 20.2 -0.2
baz=255
JFWS Jewell Farm 95.14 47 P **P** 21 34 19.8 -0.5
baz=254
JFWS Jewell Farm 95.14 47 *e*P **P** 21 34 19.5 -0.8
JFWS LR LR
comp=Z,1μm,19.0s
JFWS Jewell Farm 95.14 47 *e*P **P** 21 34 19.5 -0.8
JFWS MLR MLR
comp=Z,1μm,19.0s
I40A Norwalk 95.14 46 P **P** 21 34 19.4 -0.9
baz=254
WVT Waverly 95.14 54 P **P** 21 34 19.6 -0.9
baz=255
WVT Waverly 95.14 54 *e*P **P** 21 34 20.2 -0.3
comp=Z,11nm,0.6s
WVT Waverly 95.14 54 *e*P **P** 21 34 20.2 -0.3
WVT pmax pmax
comp=Z,11nm,0.6s
G39A Holcombe 95.15 45 P **P** 21 34 19.3 -1.0
baz=254
C37A Embarrass 95.17 42 P **P** 21 34 19.4 -1.0
baz=253
HDIL Hopedale 95.19 50 P **P** 21 34 19.8 -0.8
baz=255
HDIL Hopedale 95.19 50 *e*P **P** 21 34 20.6 0.0
comp=Z,51nm,1.1s
HDIL LR LR
comp=Z,1μm,19.0s
L42A Oliver, Polo 95.30 48 P **P** 21 34 20.4 -0.7
baz=255
L42A Oliver, Polo 95.30 48 *e*P **P** 21 34 20.4 -0.7
comp=Z,43nm,1.1s
V47A Nunnelly 95.31 54 P **P** 21 34 20.5 -0.8
baz=255
X48A Hartselle 95.34 56 P **P** 21 34 21.1 -0.2
baz=255
R45A Skylar, Fairfi 95.35 52 P **P** 21 34 21.3 0.0
baz=255
P44A Sand Creek, Wi 95.40 51 P **P** 21 34 21.3 -0.2
baz=255
J41A Loganville 95.42 47 P **P** 21 34 20.9 -0.7
baz=254
F39A Loretta 95.50 44 P **P** 21 34 20.9 -1.0
baz=254,SNR=8.8
H40A Chili 95.50 45 P **P** 21 34 20.9 -1.0
baz=254,SNR=9.4
BCIP Isla Barro Col 95.57 82 PFAKE 21 34 30.0 +7.1
BCIP LR LR
comp=Z,299nm,20.0s
W48A Pulaski 95.60 55 P **P** 21 34 22.3 -0.3
baz=256
Q45A Warren Harvey, 95.60 51 P **P** 21 34 22.5 +0.1
baz=255
U47A Clarksville 95.64 54 P **P** 21 34 22.7 -0.1
baz=256
M43A Waltham Townsh 95.67 49 P **P** 21 34 22.4 -0.3
baz=255
EYMN Ely 95.68 42 P **P** 21 34 21.8 -0.9
baz=254
EYMN Ely 95.68 42 *e*P **P** 21 34 22.0 -0.7
comp=Z,7.3nm,0.9s
EYMN LR LR
comp=Z,798nm,19.0s
Y49A Blount Mountai 95.70 57 P **P** 21 34 23.7 +0.6
baz=256
150A Eclectic 95.71 58 P **P** 21 34 23.6 +0.4
baz=256
K42A Prairie Point, 95.74 47 P **P** 21 34 21.9 -1.2
baz=255,SNR=7.0
C38A Sawbill Land. 95.76 42 P **P** 21 34 22.1 -1.0
baz=254
G40A Rib Lake 95.81 45 P **P** 21 34 22.5 -0.8
baz=254,SNR=5.5
G40A Rib Lake 95.81 45 *e*P **P** 21 34 22.9 -0.4
comp=Z,22nm,1.2s
E39A Mellen 95.86 44 P **P** 21 34 22.3 -1.3
baz=254,SNR=6.1
X49A Woodville 95.93 56 P **P** 21 34 23.8 -0.3
baz=256
Z50A Ashland 95.94 57 P **P** 21 34 23.9 -0.3
baz=256
452A Marianna 95.97 60 P **P** 21 34 24.4 0.0
baz=256
H41A Junction City 96.01 46 P **P** 21 34 23.1 -1.1
baz=255,SNR=5.2
H41A Junction City 96.01 46 *e*P **P** 21 34 23.6 -0.7
comp=Z,29nm,1.1s
L43A Garden Prairie 96.01 48 P **P** 21 34 23.6 -0.7
baz=255
F40A Park Falls 96.03 44 P **P** 21 34 23.3 -1.0
baz=255,SNR=9.6
J42A Columbus 96.04 47 P **P** 21 34 23.6 -0.8
baz=255
P45A Graceland, Par 96.07 51 P **P** 21 34 23.5 -1.1
baz=256
N44A Piper City 96.10 50 P **P** 21 34 24.3 -0.4
baz=255
W49A Belvidere 96.12 55 P **P** 21 34 25.1 +0.1
baz=256
U48A Cassie Pea, Po 96.25 54 P **P** 21 34 25.1 -0.4
baz=256
M44A Midewin, Midew 96.32 49 P **P** 21 34 25.6 -0.1
baz=256
E40A Wakefield 96.32 44 P **P** 21 34 24.9 -0.8
baz=255,SNR=7.7
I42A Draeger Farm, 96.33 46 P **P** 21 34 25.5 -0.2
baz=255
K43A Burlington 96.44 48 P **P** 21 34 25.8 -0.4
baz=256
K43A Burlington 96.44 48 *e*P **P** 21 34 26.1 -0.1
comp=Z,40nm,1.0s
X50B Fort Payne 96.46 56 P **P** 21 34 26.4 -0.2
baz=256
C39A Grand Marais 96.53 42 P **P** 21 34 25.4 -1.1
baz=255
J43A Natural Harves 96.55 47 P **P** 21 34 26.3 -0.4
baz=256
N45A Kentland 96.57 50 P **P** 21 34 26.9 +0.1
baz=256
F41A Three Lakes 96.67 45 P **P** 21 34 26.4 -0.8
baz=255,SNR=6.2
F41A Three Lakes 96.67 45 *e*P **P** 21 34 26.9 -0.4
comp=Z,21nm,0.9s
COWI Conover 96.74 44 *e*P **P** 21 34 27.2 -0.3
COWI LR LR
comp=Z,1μm,20.0s
152A Waverly Hall 96.79 58 P **P** 21 34 28.0 -0.1
baz=256
Y51A Rockmart 96.80 57 P **P** 21 34 27.9 -0.2
baz=256
U49A Red Boiling Sp 96.84 54 P **P** 21 34 27.8 -0.4
baz=256
I43A Langenfeld Bro 96.87 47 P **P** 21 34 27.3 -0.8
baz=256
W50A Signal Mountai 96.90 56 P **P** 21 34 28.2 -0.4
baz=256
Q47A Bedord North L 96.92 52 P **P** 21 34 27.9 -0.6
baz=256
E41A Kenton 96.95 44 P **P** 21 34 27.2 -1.2
baz=256,SNR=5.9
G42A Mountain 97.01 45 P **P** 21 34 27.7 -1.0
baz=256
G42A Mountain 97.01 45 *e*P **P** 21 34 28.1 -0.7
comp=Z,16nm,1.0s
X51A Calhoun 97.12 56 P **P** 21 34 28.9 -0.5
baz=257
N46A Monticello 97.16 50 P **P** 21 34 29.2 -0.3
baz=256
T49A Edmonton 97.17 54 P **P** 21 34 29.3 -0.4
baz=257
V50A Pikevile 97.18 55 P **P** 21 34 29.4 -0.4
baz=257
C40A Isle Royale Na 97.19 42 P **P** 21 34 28.6 -0.8
baz=256
GTA Gaotai 97.19 309 *e*P Pdif 21 34 36.8 +6.8
GTA pP sP 21 34 46.0 +3.4
GTA sP pP 21 34 50.0 +11
GTA Gaotai 97.19 309 S S 21 46 02.0 +10
D41A Chassel 97.36 43 P **P** 21 34 30.0 -0.4
baz=256
D41A Chassel 97.36 43 *e*P **P** 21 34 29.9 -0.4
comp=Z,31nm,1.0s
TLY Talaya 97.59 321 PFAKE 21 34 40.0 +8.7
TLY LR LR
comp=Z,257nm,19.0s
TLY Talaya 97.59 321 ‖ *e*P Pdif 21 34 31.9 +0.6
TLY pmax pmax
comp=Z,3.0nm,1.8s
E42A Champion 97.65 44 P **P** 21 34 31.1 -0.5
baz=256
T50A Nancy 97.69 54 P **P** 21 34 30.8 -1.3
baz=257
V51A Loudon 97.80 55 P **P** 21 34 32.1 -0.5
baz=257
857A Zephyrhills 97.88 63 P **P** 21 34 33.0 0.0
baz=257
F43A Flat Rock, Esc 98.01 45 P **P** 21 34 32.7 -0.5
baz=257
E43A Lone Tree Farm 98.25 44 P **P** 21 34 33.8 -0.5
baz=257
E43A Lone Tree Farm 98.25 44 *e*P **P** 21 34 34.1 -0.2
comp=Z,53nm,1.5s
F44A Big Bay de Noc 98.55 45 P **P** 21 34 35.3 -0.3
baz=257
F45A CMU Biological 99.10 45 P **Pdif** 21 34 37.4 -0.7
baz=258
AAM Ann Arbor 99.72 49 PFAKE 21 34 50.0 +9.1
AAM LR LR
comp=Z,759nm,19.0s
N50A Nevada 99.78 50 P **Pdif** 21 34 40.4 -0.9
baz=258
ACSO Alum Creek Sta 99.80 51 PFAKE 21 34 50.0 +8.6
ACSO LR LR
comp=Z,1μm,19.0s
MTDJ Mount Denham 99.87 74 PFAKE 21 34 50.0 +7.7
MTDJ LR LR
comp=Z,315nm,19.0s
NHSC New Hope 100.61 59 P **Pdif** 21 34 45.7 +0.5
baz=259
RES Resolute Bay 101.47 15 P **Pdif** 21 34 47.1 -0.9
comp=Z,3.9nm,0.9s,baz=271,slow=2.8,SNR=5.6
RES Resolute Bay 101.47 15 *e*Pdif **Pdif** 21 34 47.3 -0.7
comp=Z,4.7nm,1.1s
LSA Lhasa 102.18 298 PFAKE 21 35 00.0 +7.2
LSA LR LR
comp=Z,157nm,22.0s
CBN Corbin Frederi 103.74 54 PFAKE 21 35 10.0 +11
CBN LR LR
comp=Z,794nm,19.0s
SDV Santo Domingo 104.33 85 PFAKE 21 35 10.0 +7.6
SDV LR LR
comp=Z,296nm,20.0s
BINY Binghamton 105.32 50 PFAKE 21 39 30.0
BINY LR LR
comp=Z,2μm,19.0s
SDDR Presa de Saban 105.83 74 PFAKE 21 39 30.0
SDDR LR LR
comp=Z,693nm,20.0s
LONY Lake Ozonia 106.59 47 PFAKE 21 39 30.0
LONY LR LR
comp=Z,648nm,20.0s
SAML Samuel 106.64 104 PFAKE 21 39 30.0
SAML LR LR
comp=Z,293nm,20.0s
ZALV Zalesovo Beam 109.17 322 PP PP 21 39 59.1 +3.6
comp=Z,0.4nm,0.2s,baz=141,slow=7.3,SNR=3.9
PKME Peaks-Kenny Pk 110.37 47 PFAKE 21 39 40.0
PKME LR LR
comp=Z,418nm,19.0s
SJG San Juan 110.47 76 PFAKE 21 39 40.0
SJG LR LR
comp=Z,380nm,20.0s
MKAR Makanchi Array 110.81 315 PKiKP **PKiKP** 21 39 28.0 -2.0
comp=Z,0.7nm,0.9s,baz=94,slow=1.6,SNR=4.0
KURK Kurchatov 113.11 319 *e*PKP **PKiKP** 21 39 34.2 +0.1
KURK LR LR
comp=Z,413nm,21.0s
KURK Kurchatov 113.11 319 ‖ *i*PKIKP **PKiKP** 21 39 35.9 +1.8
KURBB Kurchatov Arra 113.17 319 PKiKP **PKiKP** 21 39 33.0 -1.3
comp=Z,1.1nm,0.8s,baz=85,slow=1.7,SNR=5.1
BBSR BB Station 113.45 61 PFAKE 21 39 50.0
BBSR LR LR
comp=Z,479nm,19.0s
ANWB Willy Bob 114.49 77 PFAKE 21 39 50.0 +12
ANWB LR LR
comp=Z,240nm,20.0s
KSH Kashi 115.50 307 PKP **PKPdf** 21 39 37.8 -1.5
KBS Kingsbay 116.18 359 PFAKE 21 39 50.0 +11
KBS LR LR
comp=Z,162nm,20.0s
SFJD Kangerlussuaq 116.33 22 PFAKE 21 39 50.0 +10
SFJD LR LR
comp=Z,488nm,19.0s
NIL Nilore 117.73 300 PFAKE 21 40 00.0 +16
NIL LR LR
comp=Z,136nm,19.0s
BVAR Borovoye Array 117.83 322 PKP **PKPdf** 21 39 42.6 -0.6
comp=Z,1.5nm,0.8s,baz=59,slow=0.8,SNR=7.4
BRVK Borovoye 117.89 322 *e*PKPdf **PKPdf** 21 39 43.4 +0.1
BRVK LR LR
comp=Z,143nm,20.0s
BRVK Borovoye 117.89 322 ‖ *i*PKIKP **PKPdf** 21 39 43.2 -0.1
ARU Arti 123.26 329 *e*PKPdf **PKPdf** 21 39 53.8 +0.3
ARU LR LR
comp=Z,268nm,20.0s
ARU Arti 123.26 329 *i* PKIKP **PKPdf** 21 39 53.3 -0.2
ARU 21 41 35.1
ARU 21 47 03.7
ARU SS SS 21 58 15.0 -2.4
KEV Kevo 124.01 352 PFAKE 21 40 10.0 +15
KEV LR LR
comp=Z,478nm,19.0s
ARCES ARCESS Array B 124.42 352 PKP **PKPdf** 21 39 54.2 -1.2
comp=Z,3.8nm,0.8s,baz=72,slow=4.0,SNR=4.9
ARCES ARCESS Array B 124.42 352 *e*PKIKP **PKPdf** 21 39 57.8 +2.4
ARCES pmax pmax
comp=Z,4.0nm,0.8s
ABKAR Akbulak array 125.17 320 *e*PKPdf **PKPdf** 21 39 57.7 +0.3
AKTO Aktyubinsk 125.93 322 PKP **PKPdf** 21 39 57.8 -1.0
comp=Z,0.9nm,0.6s,baz=101,slow=5.2,SNR=4.2
PRGR Permogore 126.01 338 *e*PKIKP **PKPdf** 21 39 58.0 -0.6
PRGR pmax pmax
comp=Z,10.0nm,1.1s
BORG Borgarnes 126.89 15 PFAKE 21 40 10.0 +10
BORG LR LR
comp=Z,186nm,20.0s
ABPO Ambohimpanom 127.67 231 PFAKE 21 40 10.0 +6.7
ABPO LR LR
comp=Z,129nm,19.0s
KLMR Klimovskoe 128.65 340 *e*PKIKP **PKPdf** 21 40 02.5 -1.2
KLMR pmax pmax
comp=Z,13nm,1.3s
KLMR Klimovskoe 128.65 340 *e*PKPdf **PKPdf** 21 40 02.5 -1.2
KLMR AMP 21 40 12.2
comp=Z,13nm,1.3s
GEYT Alibeck 129.53 307 PKP **PKPdf** 21 40 06.8 +0.6
comp=Z,27nm,0.6s,baz=129,slow=4.2,SNR=5.1
OBN Obninsk 133.99 337 PFAKE 21 40 30.0 +16
OBN LR LR
comp=Z,165nm,22.0s
OBN Obninsk 133.99 337 ‖ *i*PKIKP **PKPdf** 21 40 16.1 +2.2
OBN *e* 21 42 44.9
OBN *e*PPP PPP 21 45 39.4
KIV Kislovodsk 138.16 321 PFAKE 21 40 30.0 +7.8
KIV LR LR
comp=Z,255nm,20.0s
KIV Kislovodsk 138.16 321 *i* PKIKP **PKPdf** 21 40 25.9 +3.7
KIV pmax pmax
comp=Z,4.0nm,1.1s
KIV MLR MLR
comp=Z,271nm,24.0s
GNI Garni 138.66 314 PFAKE 21 40 30.0 +6.6
GNI LR LR
comp=Z,249nm,19.0s
ESK Eskdalemuir 139.21 9 PFAKE 21 40 40.0 +16
ESK LR LR
comp=Z,513nm,20.0s
AKASG Malin Array Be 140.21 338 PKP **PKPdf** 21 40 25.7 +0.1
comp=Z,1.6nm,0.8s,baz=30,slow=2.1,SNR=7.0
KIEV Kiev 140.22 338 *e*PKPdf **PKPdf** 21 40 25.6 0.0

KIEV LR LR
comp=Z,243nm,20.0s
KIEV Kiev 140.22 338⇑ ePKIKP PKPdf 21 40 25.0 -0.6
AK11 Malin Array Si 140.25 338 ePKPdf PKPdf 21 40 25.8 +0.1
RAYN Ar Rayn 142.65 289 ePKPdf PKPdf 21 40 31.2 +0.3
RAYN LR LR
comp=Z,365nm,21.0s
LVV L'vov 142.71 342 ePKIKP PKPdf 21 40 26.6 -3.5
LSZ Lusaka 143.09 216 ePKPdf PKPdf 21 40 31.5 -0.4
LSZ LR LR
comp=Z,393nm,19.0s
KWP Kalwaria Pacla 143.27 343 ePKPdf PKPdf 21 40 33.2 +2.0
KWP Kalwaria Pacla 143.27 343 PKIKP PKPdf 21 40 33.2 +2.0
OJC Ojcow 143.50 346 ePKP PKPbc 21 40 28.5 -0.3
CLL Collm 143.62 353⇑ iPKPdf PKPdf 21 40 30.5 -1.2
comp=Z,6.0nm,0.9s
CLL *i* PKiKP **PKiKP 21 40 34.5 -0.6**
comp=Z,5.0nm,0.9s
CLL *i* pPKiKP **pPKPdf 21 40 36.8 -4.5**
CLL LmH 22 44 00.0
comp=N,200nm,18.5s
CLL LmH 22 44 00.0
comp=E,200nm,22.0s
CLL Collm 143.62 353 ePKPdf PKPdf 21 40 30.6 -1.2
CLL Collm 143.62 353⇑ iPKIKP PKPdf 21 40 30.5 -1.2
CLL *i* 21 40 36.8
CLL pmax pmax
comp=Z,6.0nm,0.9s
BRG Berggiesshubel 143.94 352 *e*PKP PKPbc 21 40 31.0 +1.0
comp=Z,7.5nm,1.6s
BRG Berggiesshubel 143.94 352 *e*PKIKP PKPbc 21 40 31.0 +1.0
BRG pmax pmax
comp=Z,8.0nm,1.6s
DPC Dobruska-Polom 144.08 350 ePKP PKPdf 21 40 31.7 -0.9
DPC *e*pPKP **pPKPdf 21 40 40.8 -1.4**
DPC Dobruska-Polom 144.08 350 ePKIKP PKPdf 21 40 31.7 -0.9
DPC *e* 21 40 40.8
NIE Niedzica 144.12 345 *e*PKP PKPbc 21 40 31.3 +0.6
NIE Niedzica 144.12 345 PKIKP PKPbc 21 40 31.3 +0.6
PVCC Panska Ves 144.19 352 AMS AMS 22 45 30.0
comp=Z,200nm,16.6s
BUR08 Bucovina Ar. S 144.22 339 ePKPdf PKPdf 21 40 32.2 -0.8
OKC Ostrava-Krasne 144.22 347 *e*PKP **PKPdf 21 40 34.0 +1.2**
OKC AMS AMS 22 53 30.0
comp=Z,200nm,16.2s
OKC Ostrava-Krasne 144.22 347 ePKIKP PKPdf 21 40 34.0 +1.2
OKC MLR MLR
comp=Z,200nm,16.2s
TSUM Tsumeb 144.22 198 ePKPdf PKPbc 21 40 32.9 +0.9
TSUM LR LR
comp=Z,675nm,21.0s
BUR04 Bucovina Ar. S 144.24 339 ePKPdf PKPbc 21 40 31.4 +0.1
BURAR Bucovina Array 144.24 339 ⇓PKIKP PKPbc 21 40 32.1 +0.9
UZH Uzhgorod 144.29 342 ePKIKP PKPab 21 40 29.6 -1.3
UZH *e* 21 40 35.0
UZH *e* 21 40 41.4
MORC Moravsky Berou 144.40 348 ePKPdf PKPbc 21 40 31.5 -0.1
MORC Moravsky Berou 144.40 348 ePKIKP PKPbc 21 40 31.5 -0.1
MORC Moravsky Berou 144.40 348 ePKP PKPbc 21 40 32.2 +0.6
BEBN Eben Emael 144.47 1⇑ PKP PKPdf 21 40 34.1 +1.0
LANS Liptovska Anna 144.57 346 ePKIKP PKPdf 21 40 33.3 -0.2
LANS Liptovska Anna 144.57 346 *e*PKP **PKPdf 21 40 33.3 -0.2**
PRA Prague 144.65 351 AMS AMS 22 52 00.0
comp=Z,300nm,17.8s
MEM Membach 144.66 1⇑ PKP PKPdf 21 40 33.3 -0.2
TRPA Tarpa 144.67 342⇑ ePKPbc PKPbc 21 40 32.8 +0.4
SNF Seneffe 144.71 3⇑ PKP PKPab 21 40 30.9 -1.4
PRU Pruhonice 144.72 351 *e*PKP **PKPdf 21 40 33.3 -0.3**
PRU AMS AMS 22 50 30.0
comp=Z,300nm,18.6s
PRU Pruhonice 144.72 351 ePKIKP PKPdf 21 40 33.3 -0.3
PRU MLR MLR
comp=Z,300nm,18.6s
NKC Novy Kostel 144.74 354 *e*PKP **PKPdf 21 40 33.5 -0.2**
NKC AMS AMS 22 47 20.0
comp=Z,300nm,16.2s
NKC Novy Kostel 144.74 354 ePKIKP PKPdf 21 40 33.5 -0.2
NKC MLR MLR
comp=Z,300nm,16.2s
GOPC GO Pecny, Ondr 144.75 351 AMS AMS 22 49 00.0
comp=Z,300nm,16.9s
BCLA Clavier 144.83 2⇑ PKP PKPab 21 40 32.7 -0.1
KECS Kecovo 144.93 344 ePKIKP PKPdf 21 40 34.5 +0.4
KECS Kecovo 144.93 344 ePKP PKPdf 21 40 34.5 +0.4
VRAC Vranov 145.03 349⇑ PKIKP PKPdf 21 40 34.7 +0.5
VRAC Vranov 145.03 349 ePKP PKPdf 21 40 34.4 +0.2
CFR Carcaliu 145.09 333 ⇓PKIKP PKPdf 21 40 34.5 +0.1
VRI Vrincioaia 145.13 335⇑ PKIKP PKPab 21 40 34.1 0.0
PLOR Plostina 145.17 335 ⇓PKIKP PKPab 21 40 34.3 0.0
JAVC Velka Javorina 145.25 347 ePKP PKPdf 21 40 35.7 +1.0
KRUC Moravsky 145.31 349 ePKP PKPdf 21 40 34.7 0.0
VYHS Vyhne 145.33 346 ePKIKP PKPdf 21 40 34.8 0.0
VYHS Vyhne 145.33 346 ePKP PKPdf 21 40 34.8 0.0
GRFO Grafenberg 145.40 355 ePKPbc PKPab 21 40 34.9 0.0
LTVH L`"tav`"rtes, 145.53 342⇑ ePKPbc PKPab 21 40 35.9 +0.5
TIRR Tirgusor 145.54 332 ePKPbc PKPbc 21 40 35.4 +0.1
TIRR Tirgusor 145.54 332 ⇓PKIKP PKPab 21 40 35.8 +0.2
HARR Harsova 145.57 333⇑ PKIKP PKPab 21 40 36.1 +0.4
TLB Topalu 145.60 333 ⇓PKP2 PKPab 21 40 35.8 0.0
PSZ Piszkesteto 145.61 344⇓ eSKPab PKPab 21 40 35.8 0.0
PSZ Piszkesteto 145.61 344 ePKPdf PKPdf 21 40 34.6 -0.7
PSZ Piszkesteto 145.61 344 ePKP2 PKPdf 21 40 34.6 -0.7
WLF Walferdange 145.61 1⇑ PKP PKPab 21 40 35.8 +0.1
WLF Walferdange 145.61 1 ePKPdf PKPdf 21 40 35.1 -0.1
WLF Walferdange 145.61 1 ePKP2 PKPdf 21 40 35.1 -0.1
SMOL Smolenice 145.63 347 ePKP2 PKPab 21 40 36.6 +0.8
SMOL Smolenice 145.63 347 ePKP PKPab 21 40 36.6 +0.8
KHC Kasperske Hory 145.69 352 *e*PKP **PKPab 21 40 36.2 +0.1**
KHC *ex* x 21 40 50.8
KHC AMS AMS 22 46 00.0
comp=Z,400nm,18.6s
KHC Kasperske Hory 145.69 352 ePKPdf PKPbc 21 40 35.9 +0.1
KHC Kasperske Hory 145.69 352 ePKP2 PKPbc 21 40 35.9 +0.1
MLR Muntele Rosu 145.75 336 PKPbc **PKPbc 21 40 36.0 -0.2**
baz=91,slow=3.6
MLR Muntele Rosu 145.75 336⇑ PKP2 PKPab 21 40 36.6 +0.1
MODS Modra-Piesok 145.79 348 ePKP2 PKPdf 21 40 35.3 -0.3
MODS Modra-Piesok 145.79 348 ePKP PKPdf 21 40 35.3 -0.3
DRGR 145.80 340⇑ PKP2 PKPab 21 40 36.5 -0.1
KMBO Kilima Mbogo 145.80 244 PKPbc PKPbc 21 40 50.8 +13
comp=Z,6.1nm,1.1s,baz=106,slow=2.5,SNR=5.5
KMBO Kilima Mbogo 145.80 244 PKPbc PKPbc 21 40 50.8 +13
KMBO LR LR
comp=Z,280nm,20.0s
ISR Istrita 145.81 335 ⇓PKP2 PKPab 21 40 37.2 +0.5
GEC2 GERESS Array S 145.95 352 ePKPdf PKPbc 21 40 36.8 +0.2
GEC2 GERESS Array S 145.95 352 ePKP2 PKPbc 21 40 36.8 +0.2
GERES GERESS Array B 145.95 352 PKPbc **PKPbc 21 40 36.4 -0.3**
comp=Z,9.7nm,1.0s,baz=29,slow=3.0,SNR=54
GERES GERESS Array B 145.95 352 *e*PKP2 **PKPbc 21 40 36.8 +0.2**
GERES pmax pmax
comp=Z,10.0nm,1.0s
GEA0 GERESS Array S 145.96 352 ePKPdf PKPdf 21 40 36.1 +0.1
BR131 Keskin Array S 146.11 321 ePKPdf PKPab 21 40 37.8 -0.3
BRTR Keskin Array B 146.11 321 PKPbc **PKPab 21 40 38.0 -0.1**
comp=Z,21nm,0.9s,baz=97,slow=2.8,SNR=47
VOIR 146.14 337 ⇓PKP2 PKPab 21 40 38.2 +0.2
CONA Conrad Observa 146.50 349 *i* pPKPdf **PKPab 21 40 38.9 -0.3**
comp=Z,40nm,1.2s,SNR=29
ANTO Ankara 146.52 322 ePKPbc PKPbc 21 40 39.0 +0.4
ANTO LR LR
comp=Z,204nm,20.0s
ANTO Ankara 146.52 322⇑ PKP2 PKPab 21 40 39.8 +0.2
MOA Molln 146.84 351 *i* pPKPdf **PKPbc 21 40 39.5 +0.3**
comp=Z,15nm,1.2s,SNR=12
BFO Black Forest 146.92 358 ePKPbc PKPbc 21 40 38.5 -0.9
BFO Black Forest 146.92 358 ePKP2 PKPbc 21 40 38.5 -0.9
ECH Echery 147.06 360 ePKPdf PKPbc 21 40 39.8 0.0
ECH Echery 147.06 360 ePKP2 PKPbc 21 40 39.8 0.0
BZS Buzias 147.19 341⇑ PKP2 PKPbc 21 40 40.5 +0.3
ARSA Arzberg 147.21 349 *i* PKPab **PKPbc 21 40 40.7 +0.4**
comp=Z,16nm,1.2s,SNR=7.8
RETA Reutte 147.62 355 *i* pPKPdf **PKPbc 21 40 41.6 +0.1**
comp=Z,15nm,1.1s,SNR=8.6
WATA Walderalm 147.69 354 *i* PKPab **PKPbc 21 40 42.8 +1.1**
comp=Z,17nm,0.9s
MOTA Moosalm 147.73 355 *i* sPKPdf **PKPbc 21 40 42.0 +0.2**
comp=Z,34nm,1.2s,SNR=19
KBA Koelnbreinsper 147.73 352 *i* pPKPdf **PKPbc 21 40 41.6 -0.3**
comp=Z,11nm,1.0s,SNR=12
KBA Koelnbreinsper 147.73 352 PKP2 **PKPbc 21 40 41.6 -0.3**
WTTA Wattenberg 147.76 354 *i* pPKPdf **PKPbc 21 40 41.0 -1.0**
comp=Z,23nm,1.4s

KOGS Kog 147.84 348 *e*PKPbc **PKPbc 21 40 41.8 -0.2**
SOKA Soboth 147.85 349 *i* PKPbc **PKPdf 21 40 40.5 +1.3**
comp=Z,18nm,1.2s,SNR=16
DAVA Damuels 147.89 356 *i* sPKPdf **PKPbc 21 40 42.8 +0.5**
comp=Z,20nm,1.0s,SNR=14
FETA Feichten 148.09 355 *i* sPKPdf **PKPbc 21 40 43.4 +0.5**
comp=Z,25nm,1.1s,SNR=12
OBKA Obir 148.10 350 *i* sPKPdf **PKPbc 21 40 42.5 -0.3**
comp=Z,5.0nm,0.8s
MYKA Terra Mystica 148.13 351 *i* pPKPdf **PKPbc 21 40 41.9 -0.9**
comp=Z,22nm,1.2s,SNR=9.6
ABTA Abfaltersbach 148.17 353 *i* sPKPdf **PKPbc 21 40 42.8 -0.2**
comp=Z,19nm,1.1s,SNR=14
DAVOX Davos/Dischmat 148.39 356 PKPbc **PKPbc 21 40 43.8 +0.1**
comp=Z,10nm,0.9s,baz=18,slow=6.4,SNR=16
CADS Cadrg 148.51 351 *i* PKPbc **PKPbc 21 40 43.1 -0.7**
FUORN Ofenpass-Fuorn 148.52 355 *e*PKPbc **PKPbc 21 40 44.6 +0.5**
LJU Ljubljana 148.56 350 *e*PKPdf **PKPdf 21 40 40.8 +0.6**
LJU *i* PKPbc **PKPbc 21 40 44.0 +0.1**
MMAI Mount Meron Ar 148.58 310 PKPbc **PKPbc 21 40 45.6 +1.2**
comp=Z,4.6nm,0.7s,baz=64,slow=3.4,SNR=8.7
TUE Stuetta 148.73 357 *e*PKPbc **PKPbc 21 40 45.1 +0.5**
ASCN Ascension 148.90 136 PFAKE 21 40 50.0 +0.4
ASCN LR LR
comp=Z,381nm,19.0s
SENIN Lac Senin/Sane 148.91 359 *e*PKPbc **PKPbc 21 40 45.9 +0.8**
CSS Mathiatis 149.09 314 *e*PKPbc **PKPbc 21 40 46.4 +0.8**
BLY Banja Luka 149.24 345 *e*PKPbc **PKPbc 21 40 46.2 +0.5**
VTS Vitosha 149.26 336 *e*PKPbc **PKPbc 21 40 45.7 -0.3**
VTS Vitosha 149.26 336 *e*PKP2 **PKPbc 21 40 45.7 -0.3**
SSB Saint Sauveur 149.94 3 *e*PKPbc **PKPbc 21 40 48.1 +0.7**
SSB Saint Sauveur 149.94 3 *e*PKP2 **PKPbc 21 40 48.1 +0.7**
BNI Bardonecchia 150.22 0 *e*PKPbc **PKPbc 21 40 48.6 +0.4**
BNI Bardonecchia 150.22 0 *e*PKIKP **PKPbc 21 40 48.6 +0.4**
PGAV Gavieira, Arco 150.31 23 *e*PKPdf **PKPab 21 40 54.6 -0.1**
PCAB Cabril 150.62 23 *e*PKPdf **PKPbc 21 40 50.1 +0.9**
PCAB Cabril 150.62 23 *e*PKPab **PKPab 21 40 59.6 +3.7**
TTG Podgorica 150.81 341 *e*PKPbc **PKPbc 21 40 49.6 +0.1**
TTG Podgorica 150.81 341 *e*PKIKP **PKPbc 21 40 49.6 +0.1**
VLC Villacollemand 150.96 355 *e*PKPbc **PKPbc 21 40 49.3 -0.6**
POLO Lamas de Olo 151.00 23 *e*PKPdf **PKPbc 21 40 50.6 +0.5**
PBRG Braganca 151.00 21 *e*PKPdf **PKPbc 21 40 50.6 +0.5**
PBRG Braganca 151.00 21 *e*PKPab **PKPab 21 40 57.8 +0.3**
PVRL Vila Real 151.11 23 *e*PKPdf **PKPbc 21 40 51.2 +0.9**
MVO Moncorvo 151.46 22 *e*PKPdf **PKPbc 21 40 52.3 +1.1**
MVO Moncorvo 151.46 22 *e*PKPab PKPab 21 41 08.7 +9.2
FNA Florina 151.51 336 *e*PKPbc **PKPbc 21 40 51.2 -0.1**
FNA Florina 151.51 336 *e*PKIKP **PKPbc 21 40 51.2 -0.1**
PVIS Viseu 151.52 24 *e*PKPdf **PKPab 21 40 59.3 -0.4**
MBAR Mbarara 151.61 239 PFAKE 21 41 00.0 -1.1
MBAR LR LR
comp=Z,627nm,20.0s
MTE Manteigas 151.93 24 *e*PKPdf **PKPbc 21 40 50.8 -1.5**
MTE Manteigas 151.93 24 *e*PKPab **PKPbc 21 40 52.8 +0.5**
PMOZ Porto Moniz, M 152.02 47 *e*PKPdf **PKPbc 21 40 54.0 +1.2**
PTOM Tomar 152.25 26 *e*PKPdf **PKPbc 21 40 53.5 +0.6**
PCBR Castelo Branco 152.44 24 *e*PKPdf **PKPbc 21 40 50.1 -3.2**
ALMR Almeirim 152.56 27 *e*PKPdf **PKPbc 21 40 54.1 +0.5**
PMTG Montargil 152.78 26 *e*PKPdf **PKPbc 21 40 53.6 -0.5**
PMRV Marv??o 152.82 25 *e*PKPdf **PKPbc 21 40 54.6 +0.3**
EVO Evora 153.32 27 *e*PKPab **PKPab 21 41 06.8 -0.5**
PNCL Nicolau / Gran 153.44 28 *e*PKPdf **PKPbc 21 40 57.2 +1.6**
PNCL Nicolau / Gran 153.44 28 *e*PKPab **PKPab 21 41 08.0 +0.2**
PAB San Pablo 153.83 20 *e*PKPab **PKPab 21 41 10.2 +0.7**
PAB LR LR
comp=Z,234nm,19.0s
PAB San Pablo 153.83 20 *e*PKP2 **PKPab 21 41 10.2 +0.7**
PAB MLR MLR
comp=Z,234nm,19.0s
ES19 SONSECA Array 153.84 19 *e*PKPbc **PKPbc 21 40 57.1 +0.6**
ESDC Sonseca Array 153.84 19 PKPbc **PKPbc 21 40 57.0 +0.5**
comp=Z,1.5nm,0.7s,baz=337,slow=4.1,SNR=9.8
ESDC PKPab **PKPab 21 41 09.1 -0.4**
comp=Z,6.3nm,0.9s,baz=326,slow=3.6,SNR=20
ESLA Sonseca Array 153.84 19 *e*PKPab **PKPab 21 41 09.9 +0.4**
PCVE Castro Verde 154.06 28 *e*PKPab **PKPab 21 41 10.7 +0.3**
PVAQ Vaqueiros 154.39 28 *e*PKPab **PKPab 21 41 12.3 +0.5**
KEST Kesra 159.41 354 PKPab **PKPab 21 41 33.2 -0.3**
comp=Z,4.8nm,0.9s,baz=327,slow=5.5,SNR=3.0
MDT Midelt 159.61 29 PKPab **PKPab 21 41 34.5 -0.1**
comp=Z,4.8nm,1.0s,baz=335,slow=4.2,SNR=5.1
KOWA Kowa 169.52 92 PKPab **PKPab 21 42 18.2 -0.4**
comp=Z,2.2nm,0.8s,baz=248,slow=5.4,SNR=4.0
TOA0 Torodi Ar. Sit 174.65 112 *e*PKPdf **PKPdf 21 41 06.9 -0.8**
TOA0 *e*PKPab **PKPab 21 42 41.2 -0.2**
TORD Torodi Ar. Bea 174.65 112 PKP **PKPdf 21 41 06.7 -1.0**
comp=Z,2.6nm,1.1s,baz=273,slow=2.2
TORD PKPab **PKPab 21 42 40.9 -0.5**
baz=278,slow=4.8

*WEL **27** 21:26:26.7, 43°S±1°×172°8E±0°7, h10km±1km, ML4.1/5*
*ISCJB **27** 21:26:27.4±0.3, 43°49S±0°03×172°85E±0°04, h26km±4km, mb3.3/2, Error ellipse: s-maj=5.6km s-min=4.0km az=143.3*
*IDC **27** 21:26:28.4±1.8, 43°04S×172°44E, h0km, mb3.4/2, mb1 3.7/3, mb1mx3.5/39, mbtmp3.5/3, ML3.6/1, Error ellipse: s-maj=45.6km s-min=15.6km az=138.0*
ISC 27 21:26:27.2±0.9, 43°44S±0°03×172°82E±0°03, h16km±8km, n57, σ1°±23/64, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MQZ	**McQueen's Vall**	**0.29**	**204**	P	**Pg**	21 26 33.3	-0.2
MQZ				S	**Sg**	21 26 37.2	-0.7
OKCZ	**Okains Bay**	**0.33**	**149**	P	**Pg**	21 26 34.7	+0.5
OKCZ				S	**Sg**	21 26 40.0	+1.0
EYCZ	**Eyrewell**	**0.34**	**273**	P	**Pb**	21 26 35.0	+0.1
EYCZ				S	**Sb**	21 26 40.1	+0.1
AKCZ	**Akaroa Harbour**	**0.44**	**172**	P	**Pg**	21 26 36.3	+0.3
AKCZ				S	**Sg**	21 26 42.3	+0.2
OXZ	**Oxford**	**0.58**	**281**	P	**Pn**	21 26 39.4	-1.4
OXZ				S	**Sb**	21 26 47.5	+0.5
LTZ	**Lake Taylor**	**0.77**	**328**	P	**Pn**	21 26 43.7	+0.3
KHZ	**Kahutara**	**1.15**	**28**	P	**Pg**	21 26 48.9	-0.4
INZ	**Inchbonnie**	**1.24**	**305**	P	**Pg**	21 26 50.3	-0.7
RPZ	**Rata Peaks**	**1.31**	**257**	Pg	**Pb**	21 26 50.8	-0.7
	98nm,0.3s,baz=60,slow=20,SNR=109						
RPZ				Lg	Lg	21 27 08.1	
	177nm,0.3s,baz=0.0,slow=22,SNR=8.5						
RPZ	**Rata Peaks**	**1.31**	**257**	P	**Pb**	21 26 50.7	-0.7
WVZ	**Waitahaha Valley**	**1.57**	**283**	P	**Pb**	21 26 55.1	-0.6
THZ	**Tophouse**	**1.68**	**2**	*e*P	**Pb**	21 26 57.0	-0.6
	408nm,0.9s						
THZ	**Tophouse**	**1.68**	**2**	P	**Pb**	21 26 56.7	-0.9
DSZ	**Denniston Nort**	**1.85**	**336**	P	**Pb**	21 26 59.7	-0.9
BSWZ	**Blackbirch Sta**	**1.89**	**25**	P	**Pb**	21 26 59.8	-1.4
CMWZ	**Cape Campbell**	**1.98**	**32**	P	**Pb**	21 27 01.7	-1.0
LBZ	**Lake Benmore**	**2.13**	**243**	P	**Pn**	21 27 02.4	+0.4
TUWZ	**Tuamarina**	**2.17**	**23**	P	**Pn**	21 27 03.4	+0.8
FOZ	**Fox Glacier**	**2.19**	**266**	P	**Pb**	21 27 04.6	-1.7
ODZ	**Otahua Downs**	**2.24**	**223**	P	**Pn**	21 27 03.4	-0.1
NNZ	**Nelson**	**2.26**	**11**	P	**Pb**	21 27 05.3	-2.2
TCW	**Tory Channel**	**2.47**	**26**	P	**Pn**	21 27 07.2	+0.5
PLWZ	**Palliser**	**2.59**	**45**	P	**Pn**	21 27 08.3	-0.1
QRZ	**Quartz Range**	**2.62**	**355**	P	**Pn**	21 27 10.5	+1.7
MSWZ	**Moikau Station**	**2.70**	**42**	P	**Pn**	21 27 09.9	0.0
DUWZ	**D'Urville Isla**	**2.76**	**18**	P	**Pn**	21 27 12.3	+1.6
PAWZ	**Paruwai Farm**	**2.82**	**44**	P	**Pn**	21 27 11.3	-0.3
CAW	**Cannon Point**	**2.86**	**36**	P	**Pn**	21 27 12.2	+0.1
HHSZ	**Highcliff Hill**	**2.92**	**212**	P	**Pn**	21 27 12.5	-0.3
TRWZ	**Traveller**	**2.94**	**47**	P	**Pn**	21 27 12.0	-1.2
TRWZ				P	**Pn**	21 27 12.0	-1.2
JCZ	**Jackson Bay**	**2.99**	**256**	P	**Pn**	21 27 14.5	+0.5
MTW	**Mount Morrison**	**3.02**	**42**	P	**Pn**	21 27 13.9	-0.4
WKZ	**Wanaka**	**3.07**	**242**	P	**Pn**	21 27 15.2	+0.2
EAZ	**Earnscleugh**	**3.09**	**233**	P	**Pn**	21 27 15.2	0.0
OGWZ	**Otaki Gorge**	**3.15**	**34**	P	**Pn**	21 27 16.0	0.0
HOWZ	**Holdsworth Sta**	**3.23**	**39**	P	**Pn**	21 27 18.4	+1.2
TMWZ	**Te Maipa**	**3.26**	**45**	P	**Pn**	21 27 18.6	+1.0
TUZ	**Tuapeka**	**3.39**	**221**	P	**Pn**	21 27 19.2	-0.2
MRZ	**Mangatainoka R**	**3.45**	**37**	P	**Pn**	21 27 20.2	0.0
BFZ	**Birch Farm**	**3.75**	**44**	P	**Pn**	21 27 23.8	-0.6
MLZ	**Mavora Lakes**	**3.88**	**239**	P	**Pn**	21 27 26.1	0.0
DVHZ	**Dannevirke**	**4.01**	**40**	P	**Pn**	21 27 27.1	-0.8
KHEZ	**Kahui Hut**	**4.24**	**13**	P	**Pn**	21 27 34.2	+3.2
PKE	**Pukeiti**	**4.33**	**12**	P	**Pn**	21 27 35.3	+3.0
DCZ	**Deep Cove**	**4.54**	**242**	P	**Pn**	21 27 35.2	+0.1
VRZ	**Vera Road**	**4.55**	**19**	P	**Pn**	21 27 37.5	+2.2
PKVZ	**Pokaka**	**4.56**	**25**	P	**Pn**	21 27 37.6	+2.2
MOVZ	**Moawhango**	**4.59**	**30**	P	**Pn**	21 27 37.4	+1.5
TRVZ	**Turoa**	**4.62**	**27**	P	**Pn**	21 27 38.1	+1.7
WHVZ	**Whangaehu Hut**	**4.64**	**28**	P	**Pn**	21 27 38.9	+2.1
FWVZ	**Far West T-bar**	**4.66**	**27**	P	**Pn**	21 27 39.0	+2.0
NGZ	**Ngauruhoe**	**4.74**	**27**	P	**Pn**	21 27 40.0	+1.9
HIZ	**Hauiti**	**5.16**	**18**	P	**Pn**	21 27 45.4	+1.8
URZ	**Urewera**	**6.11**	**34**	Pn	**Pn**	21 27 55.5	-1.2
	1.4nm,0.3s,baz=208,slow=9.6,SNR=5.3						
URZ				Sn	**Sn**	21 29 03.8	-2.4
	1.1nm,0.3s,baz=165,slow=4.4,SNR=1.5						
ASAR	**Alice Springs**	**37.52**	**289**	P	**P**	21 33 41.4	+1.0
	0.4nm,0.5s,baz=123,slow=7.2,SNR=3.3						
WRA	**Warramunga Arr**	**39.76**	**294**	P	**P**	21 33 59.5	+0.4
	0.4nm,0.6s,baz=133,slow=7.9,SNR=5.2						
TORD	**Torodi Ar. Bea**	**148.86**	**197**	PKPbc	**PKPab**	21 46 19.3	+1.2
	baz=216,slow=2.1						

IDC 27 21:29:51.9±3.3, 15°35S×172°81W, h0km, mb3.4/3, mb1 3.8/3, mb1mx3.4/53, mbtmp3.4/3, Error ellipse: s-maj=174.0km s-min=24.9km az=143.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.75**	**35**	Pn	Pn	21 30 22.6	-0.9
	15nm,0.3s,baz=251,slow=18,SNR=3.3						
AFI				Sn	Sn	21 30 41.9	-4.7
	82nm,0.3s,baz=112,slow=24,SNR=8.3						
H11S2	**WAKE ISLAND Hy**	**39.22**	**328**	T	T	22 18 44.5	
	baz=148						
H11S3	**WAKE ISLAND Hy**	**39.23**	**328**	T	T	22 19 00.2	
	baz=148						
H11S1	**WAKE ISLAND Hy**	**39.23**	**328**	T	T	22 19 03.1	
	baz=148						
WRA	**Warramunga Arr**	**50.41**	**257**	P	P	21 38 51.2	-0.3
	0.2nm,0.6s,baz=90,slow=7.3,SNR=3.2						
ASAR	**Alice Springs**	**50.67**	**252**	P	P	21 38 52.4	-1.1
	0.5nm,0.6s,baz=90,slow=7.8,SNR=6.6						
NVAR	**Mina Array Bea**	**73.91**	**42**	P	P	21 41 28.7	-0.6
	0.1nm,0.3s,baz=221,slow=5.7,SNR=2.0						
BRTR	**Keskin Array B**	**146.47**	**322**	PKPbc	PKPab	21 49 36.9	+0.5
	1.6nm,1.1s,baz=46,slow=4.2,SNR=3.3						

MEX 27 21:35:59.2±0.4, 14°72N×93°01W, h16km±33km, MD3.6, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.00**	**348**	*e*P	Pb	21 36 14.9	-3.3
PCIG				*e*S	Sb	21 36 26.6	-4.7
CCIG	**Comitan**	**1.77**	**28**	*e*P	Pn	21 36 26.3	-3.0
CCIG				*e*S	Sn	21 36 46.7	-4.9
TGIG		**2.05**	**357**	*e*P	Pn	21 36 33.1	0.0
TGIG				*e*S	Sn	21 36 53.8	-4.7

IDC 27 21:36:41.2±4.1, 15°05S×173°05W, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.5/52, mbtmp3.7/2, Error ellipse: s-maj=229.6km s-min=24.8km az=146.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.67**	**47**	Pn	Pn	21 37 11.6	-0.3
	29nm,0.3s,baz=223,slow=9.4,SNR=8.5						
AFI				Sn	Sn	21 37 29.3	-4.8
	86nm,0.3s,baz=198,slow=19,SNR=9.7						
H11S2	**WAKE ISLAND Hy**	**38.85**	**328**	T	T	22 25 59.8	
	baz=148						
H11S3	**WAKE ISLAND Hy**	**38.86**	**328**	T	T	22 25 49.4	
	baz=148						
H11S1	**WAKE ISLAND Hy**	**38.86**	**328**	T	T	22 25 52.0	
	baz=148						
H11N3	**WAKE ISLAND Hy**	**39.78**	**330**	T	T	22 26 54.0	
	baz=150						
H11N1	**WAKE ISLAND Hy**	**39.79**	**330**	T	T	22 26 49.6	
	baz=150						
H11N2	**WAKE ISLAND Hy**	**39.80**	**330**	T	T	22 27 04.3	
	baz=150						
WRA	**Warramunga Arr**	**50.26**	**256**	P	P	21 45 39.4	-0.3
	0.4nm,0.5s,baz=91,slow=7.1,SNR=3.1						
ASAR	**Alice Springs**	**50.54**	**252**	P	P	21 45 41.5	-0.4
	0.7nm,0.6s,baz=86,slow=7.9,SNR=12						
GERES	**GERESS Array B**	**145.85**	**352**	PKPbc	PKPdf	21 56 21.2	-0.9
	0.1nm,0.3s,baz=15,slow=4.1,SNR=2.3						
BRTR	**Keskin Array B**	**146.10**	**322**	PKPbc	PKPab	21 56 24.2	-0.1
	0.8nm,0.8s,baz=38,slow=2.6,SNR=3.6						

*IDC **27** 21:40:32.9±2.9, 14°91S×173°49W, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.7/49, mbtmp3.8/5, Error ellipse: s-maj=138.0km s-min=27.7km az=144.0*
ISC 27 21:40:37.4±2.7, 14°95±0°7×173°5W±0°5, h30km, n11, σ0°52/7, mb3.8/5, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.95**	**59**	Pn	Pn	21 41 00.2	-8.3
	81nm,0.3s,baz=249,slow=17,SNR=11						
AFI				Sn	Sn	21 41 18.3	-14
	157nm,0.3s,baz=216,slow=22,SNR=10						
H11S2	**WAKE ISLAND Hy**	**38.51**	**329**	T	T	22 29 46.4	
	baz=148						
H11S3	**WAKE ISLAND Hy**	**38.53**	**329**	T	T	22 29 54.0	
	baz=148						
H11S1	**WAKE ISLAND Hy**	**38.53**	**329**	T	T	22 29 42.4	
	baz=148						
WRA	**Warramunga Arr**	**49.86**	**256**	P	**P**	21 49 28.2	-0.1
	0.5nm,0.5s,baz=91,slow=7.2,SNR=13						
ASAR	**Alice Springs**	**50.17**	**252**	P	**P**	21 49 30.5	-0.2
	1.2nm,0.6s,baz=87,slow=8.1,SNR=15

comp=Z,38nm,0.3s
TCA Tanti 3.50 91 *e*P Pn 21 42 19.9 +0.2
TCA IAML 21 43 13.8
comp=Z,16nm,0.6s

*ISCJB **27** 21:52:29.9±0.4, 22°.38S±0°.08×179°.62W±0°.08, h579km, mb4.2/25, Error ellipse: s-maj=11.6km s-min=7.9km az=143.4*
*IDC **27** 21:52:30.9±1.9, 22°.17S×179°.58W, h577km±20km, mb3.8/15, mb1 4.0/16, mb1mx3.6/43, mbtmp4.7/16, Error ellipse: s-maj=18.1km s-min=12.6km az=151.0*
*NEIC **27** 21:52:31.4±1.5, 22°.37S×179°.60W, h590km±17km, mb4.3/11, Error ellipse: s-maj=16.0km s-min=11.1km az=164.0*
ISC 27 21:52:30.5±0.5, 22°.4S±0°.1×179°.55W±0°.09, h579km, n76, σ0:89/81, mb4.2/25, 17C-4D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.97**	**269**	P	**P**	**21 55 18.9**	**-0.3**
	1.4nm,0.3s,baz=94,slow=19,SNR=4.8						
URZ	**Urewera**	**16.07**	**190**	P	**P**	**21 55 47.4**	**-1.9**
	2.0nm,0.3s,baz=296,slow=3.7,SNR=8.4						
URZ				S	**S**	**21 58 28.7**	**-2.6**
	1.2nm,0.3s,baz=18,slow=20,SNR=12						
CTA	**Charters Tower**	**31.91**	**268**	P	**P**	**21 58 10.5**	**+0.7**
	15nm,0.5s,baz=98,slow=12,SNR=14						
CTAO	**Charters Tower**	**31.91**	**268**	*e*P	**P**	**21 58 10.1**	**+0.2**
PMG	**Port Moresby**	**34.42**	**287**	P	**P**	**21 58 30.5**	**-0.4**
	26nm,0.8s,baz=120,slow=6.2,SNR=10						
PMG	**Port Moresby**	**34.42**	**287**	*e*P	**P**	**21 58 30.2**	**-0.8**
	28nm,0.8s						
STKA	**Stephens Creek**	**35.68**	**246**	P	**P**	**21 58 42.6**	**+1.3**
	9.3nm,0.6s,baz=95,slow=11,SNR=22						
ASAR	**Alice Springs**	**42.70**	**259**	P	**P**	**21 59 38.2**	**+0.4**
	19nm,0.8s,baz=93,slow=8.1,SNR=123						
ASAR				ScP	**ScP**	**22 04 13.2**	**+0.8**
	0.6nm,0.8s,baz=99,slow=4.8,SNR=3.4						
ASAR				S	**S**	**22 05 19.1**	**-1.3**
	1.0nm,0.9s,baz=91,slow=16,SNR=5.2						
WRAB	**Tennant Creek**	**42.93**	**264**	*e*P	**P**	**21 59 39.0**	**-0.6**
	16nm,0.8s						
WRA	**Warramunga Arr**	**42.94**	**264**	P	**P**	**21 59 39.2**	**-0.4**
	12nm,0.7s,baz=94,slow=7.9,SNR=166						
WRA				ScP	**ScP**	**22 04 15.9**	**+2.6**
	2.6nm,0.9s,baz=97,slow=4.0,SNR=9.7						
JAY	**Jayapura**	**43.33**	**291**	P	**P**	**21 59 42.4**	**-0.3**
	18nm,0.7s,baz=170,slow=12,SNR=10						
BATI	**Baumata**	**55.55**	**273**	P	**P**	**22 01 13.1**	**+0.7**
	14nm,0.3s,baz=72,slow=20,SNR=4.8						
VNDA	**Vanda**	**55.91**	**185**	P	**P**	**22 01 16.5**	**+2.7**
	0.5nm,0.6s,baz=11,slow=6.7,SNR=7.8						
MBWA	**Marble Bar**	**56.05**	**259**	*e*P	**P**	**22 01 15.4**	**-0.3**
PETK	**Petropavlovsk-**	**77.74**	**346**	P	**P**	**22 03 27.8**	**-0.3**
	4.3nm,0.7s,baz=147,slow=8.1						
YBH	**Yreka Blue Hor**	**82.66**	**39**	P	**P**	**22 03 55.0**	**+0.9**
	3.4nm,0.7s,baz=191,slow=5.2,SNR=13						
HUMO	**Hull Mountain**	**83.07**	**38**	*e*P	**P**	**22 03 56.8**	**+0.8**
	29nm,1.1s						
NVAR	**Mina Array Bea**	**83.39**	**44**	P	**P**	**22 03 57.8**	**-0.2**
	4.2nm,0.9s,baz=225,slow=8.8,SNR=8.7						
TUC	**Tucson**	**85.28**	**52**	*e*P	**P**	**22 04 08.1**	**+1.0**
	6.1nm,0.8s						
WVOR	**Wild Horse Val**	**85.50**	**40**	*e*P	**P**	**22 04 08.1**	**0.0**
	3.6nm,0.9s						
HLID	**Hailey**	**88.70**	**41**	*e*P	**P**	**22 04 23.6**	**+0.5**
	1.2nm,0.6s						
MNTX	**Cornudas Mount**	**89.02**	**55**	*e*P	**P**	**22 04 25.4**	**+0.7**
	4.1nm,0.8s						
TXAR	**Lajitas Array**	**89.29**	**58**	P	**P**	**22 04 26.9**	**+0.8**
	2.4nm,0.8s,baz=210,slow=6.5,SNR=21						
CMAR	**Chiang Mai Arr**	**89.39**	**290**	P	**P**	**22 04 28.4**	**+1.8**
	1.0nm,0.3s,baz=116,slow=3.1,SNR=8.5						
HWUT	**Hardware Ranch**	**89.45**	**44**	*e*P	**P**	**22 04 27.0**	**+0.3**
	2.1nm,0.6s						
CHTO	**Chiang Mai**	**89.53**	**290**	*e*P	**P**	**22 04 28.6**	**+1.3**
	3.6nm,0.8s						
ANMO	**Albuquerque**	**89.71**	**52**	P	**P**	**22 04 27.9**	**-0.1**
	1.8nm,0.7s,baz=183,slow=6.8,SNR=4.4						
ILAR	**Eielson Array**	**90.48**	**13**	P	**P**	**22 04 29.5**	**-1.1**
	0.7nm,0.7s,baz=217,slow=5.2,SNR=6.6						
PDAR	**Pinedale Array**	**91.33**	**44**	P	**P**	**22 04 35.5**	**+0.2**
	1.2nm,0.8s,baz=218,slow=3.6,SNR=9.7						
SDCO	**Great Sand Dun**	**91.68**	**50**	*e*P	**P**	**22 04 37.1**	**-0.1**
	0.9nm,0.5s						
MKAR	**Makanchi Array**	**111.43**	**313**	PKiKP	**PKiKP**	**22 09 58.4**	**-1.0**
	0.3nm,0.4s,baz=116,slow=1.3,SNR=8.3						
KURK	**Kurchatov**	**114.39**	**317**	PKiKP	PKPdf	22 10 03.6	-1.3
KURBB	**Kurchatov Arra**	**114.44**	**317**	PKiKP	PKPdf	22 10 03.6	-1.4
	0.4nm,0.4s,baz=109,slow=1.7,SNR=7.6						
BVAR	**Borovoye Array**	**119.58**	**319**	PKP	**PKPdf**	**22 10 13.8**	**-1.0**
	1.6nm,0.3s,baz=113,slow=2.4,SNR=25						
SPITS	**Spitsbergen Ar**	**123.65**	**356**	PKP	**PKPdf**	**22 10 21.3**	**-0.7**
	1.6nm,0.6s,baz=18,slow=5.2,SNR=3.8						
AKTO	**Aktyubinsk**	**127.49**	**317**	PKP	**PKPdf**	**22 10 29.7**	**-0.4**
	0.9nm,0.6s,baz=80,slow=6.1,SNR=3.1						
ARCES	**ARCESS Array B**	**130.50**	**349**	PKP	**PKPdf**	**22 10 33.8**	**-1.5**
	4.1nm,1.1s,baz=5.0,slow=2.1,SNR=4.8						
FINES	**FINESS Array B**	**137.15**	**342**	PKP	**PKPdf**	**22 10 46.9**	**-1.0**
	0.9nm,0.5s,baz=27,slow=0.6,SNR=5.9						
HFS	**Hagfors**	**141.15**	**349**	PKhKP	PKPpre	22 10 49.0	
	2.4nm,0.3s,baz=56,slow=2.6,SNR=29						
AKASG	**Malin Array Be**	**143.92**	**326**	PKP	PKPbc	22 10 58.7	-1.0
	1.9nm,0.3s,baz=45,slow=4.1,SNR=15						
KIEV	**Kiev**	**143.93**	**329**	*e*PKPdf	PKPbc	22 10 58.6	-1.2
SORM	**Soroca**	**146.01**	**326**	||*i*P	**PKPbc**	**22 11 05.2**	**-0.8**
BRTR	**Keskin Array B**	**146.97**	**309**	PKPbc	**PKPbc**	**22 11 08.7**	**-0.4**
	1.1nm,0.6s,baz=139,slow=4.8,SNR=5.9						
EKA	**Eskdalemuir Ar**	**146.99**	**4**	PKPbc	**PKPbc**	**22 11 07.6**	**-0.8**
	0.9nm,0.4s,baz=4.4,slow=1.8,SNR=19						
MMAI	**Mount Meron Ar**	**147.43**	**297**	PKPbc	**PKPbc**	**22 11 10.9**	**+0.4**
	2.9nm,0.4s,baz=46,slow=6.2,SNR=15						
CFR	**Carcaliu**	**147.93**	**322**	⇑|*i*P	**PKPbc**	**22 11 11.4**	**+0.2**
TESR	**Tescani**	**147.93**	**325**	⇑|*i*P	**PKPdf**	**22 11 08.9**	**+1.6**
BURAR	**Bucovina Array**	**147.94**	**328**	||*i*P	**PKPbc**	**22 11 11.5**	**+0.2**
TLB	**Topalu**	**148.33**	**321**	⇑|*i*P	**PKPbc**	**22 11 12.2**	**0.0**
DOPR	**Dopca**	**148.95**	**325**	⇑|*i*P	**PKPbc**	**22 11 14.2**	**+0.5**
MLR	**Muntele Rosu**	**148.96**	**324**	⇑|*i*P	**PKPbc**	**22 11 14.0**	**+0.1**
OKC	**Ostrava-Krasne**	**149.26**	**337**	*e*PKP	**PKPbc**	**22 11 14.7**	**+0.4**
LANS	**Liptovska Anna**	**149.34**	**335**	*e*PKP	**PKPbc**	**22 11 15.8**	**+1.2**
UPC	**Upice**	**149.40**	**340**	⇑*e*PKP	**PKPbc**	**22 11 15.1**	**+0.4**
DPC	**Dobruska-Polom**	**149.44**	**340**	⇑*e*PKP	**PKPbc**	**22 11 15.4**	**+0.6**
VOIR		**149.48**	**325**	||*i*P	**PKPbc**	**22 11 15.6**	**+0.5**
MORC	**Moravsky Berou**	**149.53**	**338**	⇑|*i*P	**PKPbc**	**22 11 15.1**	**+0.1**
MORC	**Moravsky Berou**	**149.53**	**338**	*e*PKP	**PKPbc**	**22 11 15.0**	**0.0**
CLL	**Collm**	**149.53**	**344**	⇑|*i*PKPbc	**PKPbc**	**22 11 15.0**	**+0.1**
	comp=Z,10.0nm,0.5s						
CLL				*i* PKPab	**PKPab**	**22 11 22.0**	**-0.4**
	comp=Z,4.0nm,0.6s						
KRLC	**Kraliky**	**149.53**	**339**	⇑*e*PKP	**PKPbc**	**22 11 15.4**	**+0.4**
BRG	**Berggiesshubel**	**149.68**	**343**	*i* PKP	**PKPbc**	**22 11 15.4**	**+0.1**
	comp=Z,8.4nm,0.5s						
BRG				*e*		22 11 23.0	
	comp=Z,2.2nm,0.6s						
DRGR		**149.73**	**329**	⇑|*i*P	**PKPbc**	**22 11 15.4**	**-0.2**
ARR	**Arges**	**149.75**	**325**	⇑|*i*P	**PKPbc**	**22 11 16.8**	**+1.1**
PVCC	**Panska Ves**	**149.82**	**342**	⇑*e*PKP	**PKPbc**	**22 11 16.1**	**+0.5**
PVCC				*e*PKPAB	**PKPab**	**22 11 24.3**	**+0.7**
VYHS	**Vyhne**	**150.11**	**335**	*e*PKP	**PKPbc**	**22 11 16.2**	**-0.2**
JAVC	**Velka Javorina**	**150.25**	**337**	*e*PKP	**PKPbc**	**22 11 17.7**	**+0.9**
GOPC	**GO Pecny, Ondr**	**150.30**	**341**	⇑*e*PKP	**PKPbc**	**22 11 17.1**	**+0.3**
PRU	**Pruhonice**	**150.31**	**341**	⇑*e*PKP	**PKPbc**	**22 11 16.8**	**0.0**
PRU				*e*PKPAB	**PKPab**	**22 11 26.2**	**+0.5**
KRUC	**Moravsky**	**150.53**	**338**	*e*PKP	**PKPbc**	**22 11 17.2**	**-0.1**
BZS	**Buzias**	**151.11**	**328**	⇑|*i*P	**PKPbc**	**22 11 18.1**	**-0.6**
HERR	**Herculane**	**151.23**	**326**	||*i*P	**PKPbc**	**22 11 18.6**	**-0.4**
KHC	**Kasperske Hory**	**151.35**	**342**	⇑*e*PKP	**PKPbc**	**22 11 19.4**	**+0.1**
KHC				*e*PKPAB	**PKPab**	**22 11 30.3**	**+0.1**
GERES	**GERESS Array B**	**151.58**	**341**	PKPbc	**PKPbc**	**22 11 19.3**	**-0.5**
	comp=Z,0.9nm,0.4s,baz=8.8,slow=2.7,SNR=12						
GERES				PKPab	**PKPab**	**22 11 30.7**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=35,slow=3.6,SNR=3.5						
DAVOX	**Davos/Dischmat**	**154.50**	**345**	PKPbc	**PKPbc**	**22 11 26.3**	**-0.1**
	comp=Z,0.8nm,0.4s,baz=19,slow=18,SNR=2.8						
ESDC	**Sonseca Array**	**162.37**	**11**	PKPab	**PKPab**	**22 12 17.1**	**-1.1**
	comp=Z,0.2nm,0.5s,baz=341,slow=5.5,SNR=4.0						
TORD	**Torodi Ar. Bea**	**170.73**	**188**	PKP	**PKPdf**	**22 11 32.3**	**-1.3**
	comp=Z,0.4nm,0.7s,baz=204,slow=1.6						
TORD				PKPab	**PKPab**	**22 12 55.6**	**+0.1**
	baz=173,slow=4.2						

*IDC **27** 22:04:22.2±0.8, 32°.74S×71°.81W, h0km, mb3.8/5, mb1 3.9/9, mb1mx3.8/35, mbtmp3.7/9, ML3.9/4, Error ellipse: s-maj=37.5km s-min=20.4km az=92.0*
*GUC **27** 22:04:25.8±0.6, 32°.68S×71°.72W, h20km±10km, ML3.9*
*NEIC **27** 22:04:25.0±0.0, 32°.68S×71°.72W, h20km, mb3.9/2, ML3.9(GUC), After GUC.*
NEIC Felt [III] at Papudo, Vina del Mar and Zapallar; [II] at Concon, Puchuncavi, Quillota, Quilpue, Quintero and Rancagua.
*SJA **27** 22:04:26.9±0.9, 33°.03S×71°.68W, h25km±10km, ML4.0, MW4.1*
ISC 27 22:04:22.8±1.7, 32°.73S±0°.04×71°.93W±0°.06, h8km±10km, n46, σ1:78/51, mb3.9/7, 2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROC1	**El Roble**	**0.81**	**108**	*e*P	**Pg**	**22 04 39.2**	**+0.7**
ROC1				*e*S	**Sg**	**22 04 47.4**	**-1.6**
ROCH	**El Roble**	**0.81**	**108**	*e*P	**Pg**	**22 04 39.2**	**+0.7**
ROCH				*e*S	**Sg**	**22 04 48.8**	**-0.3**
ROCH				IAML		22 04 51.9	
	comp=N,5μm,0.1s						
PEL	**Peldehue**	**1.13**	**112**	*e*P	**Pb**	**22 04 44.0**	**-0.6**
PEL				*e*S	**Sb**	**22 04 57.7**	**-1.8**
PEL				IAML		22 05 00.9	
	comp=E,7μm,0.1s						
CLCH	**Cerro Calan**	**1.35**	**120**	||*i*P	**Pn**	**22 04 47.7**	**-0.4**
CLCH				*e*S	**Sn**	**22 05 04.2**	**-2.0**
CLCH				IAML		22 05 07.7	
	comp=E,7μm,1.2s						
FCH	**Farellones**	**1.50**	**114**	||*i*P	**Pn**	**22 04 50.2**	**-0.2**
FCH				*e*S	**Sn**	**22 05 08.9**	**-1.5**
FCH				IAML		22 05 12.2	
	comp=E,4μm,0.2s						
LMEL	**Las Melosas**	**1.83**	**128**	*e*P	**Pn**	**22 04 55.6**	**+0.9**
LMEL				*e*S	**Sn**	**22 05 18.7**	**+0.5**
LMEL				IAML		22 05 21.5	
	comp=N,5μm,0.2s						
AUSP	**Uspallata**	**2.21**	**77**	*e*P	**Pb**	**22 05 03.7**	**+0.5**
GO05	**HualaæØ**	**2.27**	**180**	*e*P	**Pn**	**22 05 01.1**	**+0.3**
GO05	**HualaæØ**	**2.27**	**180**	*e*P	**Pn**	**22 05 00.6**	**-0.2**
RTLS	**Leoncito**	**2.42**	**68**	*e*P	**Pb**	**22 05 07.0**	**+0.3**
RTLS				IAML		22 05 47.9	
	comp=Z,395nm,0.6s						
ARCO	**CERRO ARCO**	**2.53**	**93**	*e*P	**Pb**	**22 05 09.0**	**+0.4**
ARCO				IAML		22 05 14.2	
	comp=Z,286nm,0.3s						
ASAL	**Salagasta**	**2.62**	**88**	*e*P	**Pb**	**22 05 10.6**	**+0.6**
AAGR	**Agrelo**	**2.63**	**99**	*e*P	**Pb**	**22 05 11.2**	**+0.9**
RTCV	**Cerro Valdivia**	**3.00**	**74**	*e*P	**Pb**	**22 05 15.0**	**-1.6**
ZON	**Zonda**	**3.00**	**68**	*e*P	**Pb**	**22 05 14.8**	**-1.7**
ZON				IAML		22 06 09.9	
	comp=Z,330nm,0.6s						
RTLL	**Cerro Villicun**	**3.25**	**65**	*e*P	**Pb**	**22 05 18.0**	**-2.8**
RTLL				IAML		22 06 07.6	
	comp=Z,348nm,0.3s						
AMOG	**MOGNA**	**3.43**	**60**	*e*P	**Pb**	**22 05 21.6**	**-2.3**
ACDV	**Cuesta del Vie**	**3.50**	**44**	*e*P	**Pb**	**22 05 24.4**	**-0.9**
ACDV				IAML		22 06 21.5	
	comp=Z,279nm,0.5s						
RFA	**San Rafael**	**3.53**	**126**	*e*P	**Pg**	**22 05 30.4**	**-0.2**
RFA				IAML		22 05 59.2	
	comp=Z,276nm,1.1s						
LCO	**Las Campanas**	**3.85**	**16**	*e*Pn	**Pn**	**22 05 21.6**	**-1.1**
LCO				*e*Sn	**Sn**	**22 06 05.5**	**-2.8**
ACAN	**Cantantal**	**4.03**	**85**	*e*P	**Pn**	**22 05 29.6**	**+4.6**
AGUA	**GUANDACOL**	**4.38**	**43**	*e*P	**Pn**	**22 05 34.2**	**+4.5**
VCA	**Vinchina**	**5.11**	**40**	*e*P	**Pn**	**22 05 44.4**	**+4.5**
VCA				IAML		22 06 60.0	
	comp=Z,372nm,0.7s						
APLL	**PUNTA DE LOS L**	**5.17**	**65**	*e*P	**Pn**	**22 05 44.8**	**+4.3**
APLL				IAML		22 06 56.1	
	comp=Z,78nm,0.4s						
MRA	**San Martin**	**5.26**	**88**	*e*P	**Pn**	**22 05 44.0**	**+2.2**
MRA				IAML		22 06 50.6	
	comp=Z,179nm,0.8s						
TCA	**Tanti**	**6.38**	**79**	*e*P	**Pn**	**22 05 57.8**	**+0.5**
TCA				IAML		22 07 18.6	
	comp=Z,100nm,0.7s						
PLCA	**Paso Flores**	**8.06**	**172**	Pn	**Pn**	**22 06 20.6**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=0.2,slow=12,SNR=15						
PLCA				Lg	Lg	22 08 24.7	
	baz=59,slow=18,SNR=1.9						
TRQA	**Tornquist**	**9.71**	**126**	*e*Pn	**Pn**	**22 06 44.8**	**+1.9**
CPUP	**Villa Florida**	**14.21**	**67**	Pn	**Pn**	**22 07 44.7**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=243,slow=9.0,SNR=2.5						
CPUP				Sn	**Sn**	**22 10 19.9**	**-2.5**
	comp=Z,0.2nm,0.3s,baz=78,slow=18,SNR=3.2						
LPAZ	**La Paz**	**16.73**	**13**	Pn	**P**	**22 08 20.2**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=185,slow=9.6,SNR=6.2						
SIV	**San Ignacio**	**19.36**	**33**	P	**P**	**22 08 48.3**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=231,slow=9.5,SNR=6.6						
SAML	**Samuel**	**25.01**	**21**	*e*P	**P**	**22 09 46.9**	**-0.5**
	comp=Z,2.7nm,1.0s						
SNAA	**Sanae**	**52.73**	**158**	P	**P**	**22 13 37.8**	**+0.1**
	comp=Z,1.3nm,0.9s,baz=266,slow=8.9,SNR=4.8						
QSPA	**South Pole Qui**	**57.50**	**180**	P	**P**	**22 14 12.9**	**+0.5**
	comp=Z,2.8nm,0.9s,baz=142,slow=5.3,SNR=6.6						
TXAR	**Lajitas Array**	**68.67**	**330**	P	**P**	**22 15 26.6**	**-0.3**
	comp=Z,0.1nm,0.7s,baz=150,slow=9.3,SNR=2.7						
MNTX	**Cornudas Mount**	**71.45**	**330**	*e*P	**P**	**22 15 44.7**	**+0.9**
	comp=Z,0.9nm,0.7s						
NVAR	**Mina Array Bea**	**82.89**	**325**	P	**P**	**22 16 50.5**	**+2.3**
	comp=Z,0.2nm,0.5s,baz=150,slow=7.8,SNR=3.3						
TORD	**Torodi Ar. Bea**	**83.69**	**70**	P	**P**	**22 16 52.1**	**-0.5**
	comp=Z,1.4nm,0.8s,baz=261,slow=5.1						
H11S2	**WAKE ISLAND Hyl**	**25.87**	**270**	T	T	00 42 26.9	
	baz=117						
H11S1	**WAKE ISLAND Hyl**	**25.88**	**270**	T	T	00 42 27.3	
	baz=117						
H11S3	**WAKE ISLAND Hyl**	**25.89**	**270**	T	T	00 42 26.2	
	baz=117						
BVAR	**Borovoye Array**	**146.28**	**42**	PKPbc	**PKPbc**	**22 24 04.2**	**+0.6**
	comp=Z,1.3nm,0.6s,baz=298,slow=3.1,SNR=15						
KURBB	**Kurchatov Arra**	**151.88**	**42**	PKPbc	**PKPbc**	**22 24 18.4**	**+0.5**
	comp=Z,1.9nm,0.7s,baz=302,slow=3.0,SNR=21						
KURK	**Kurchatov**	**151.88**	**42**	PKPbc	**PKPbc**	**22 24 18.4**	**+0.5**
ZALV	**Zalesovo Beam**	**153.10**	**31**	PKPbc	**PKPbc**	**22 24 20.6**	**+0.1**
	comp=Z,2.7nm,0.7s,baz=307,slow=2.6,SNR=14						
MKAR	**Makanchi Array**	**155.85**	**47**	PKPab	**PKPab**	**22 24 44.0**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=297,slow=5.3,SNR=7.3						

*ISN **27** 23:03:16.0±1.7, 33°.66N×47°.50E, h15km, ML2.5*
TEH 27 23:03:18.1, 33°.68N×47°.55E, h25km, ML2.5, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKFM	**Kafar-mosalman**	**0.29**	**122**	*e*Pg	Pb	23 03 25.0	0.0
IKFM				*e*Sg	Sb	23 03 30.0	+0.3
IKFM				*e*		23 03 32.1	
	comp=Z,99nm,0.1s						
IKOM	**Komasi**	**0.49**	**356**	*e*Pg	Pb	23 03 27.9	-0.5
IKOM				*e*		23 03 36.9	
	comp=Z,99nm,0.1s						
KCHF	**Cheshme Sefid,**	**0.73**	**325**	*e*Pg	Pb	23 03 32.1	-0.2
KCHF				*e*		23 03 46.0	
	comp=Z,99nm,0.1s						
HSAM	**Samen**	**1.02**	**58**	*e*Pg	Pn	23 03 37.0	-0.1
HSAM				*e*Sg	Sn	23 03 51.0	+0.2
HSAM				*e*		23 03 57.5	
	comp=N,99nm,0.3s						

IDC 27 23:03:40.4±8.7, 5°.93S×150°.01E, h76km±64km, mb3.2/2, mb1 3.5/3, mb1mx3.1/40, mbtmp3.6/3, ML1.7/1, Error ellipse: s-maj=128.4km s-min=56.4km az=122.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.46**	**219**	P	Pn	23 04 45.7	0.0
	2.5nm,0.3s,baz=17,slow=9.4,SNR=4.6						
PMG				S	Sn	23 05 37.3	+0.9
	11nm,0.3s,baz=348,slow=20,SNR=10						
WRA	**Warramunga Arr**	**20.64**	**226**	P	P	23 08 13.9	-0.1
	2.4nm,0.5s,baz=52,slow=11,SNR=35						
ASAR	**Alice Springs**	**23.48**	**220**	P	P	23 08 43.4	-0.3
	0.5nm,0.5s,baz=59,slow=8.3,SNR=4.8						
TORD	**Torodi Ar. Bea**	**147.97**	**285**	PKPbc	PKPbc	23 23 17.7	-0.5
	baz=107,slow=3.4						

IDC 27 23:23:17.1±7.8, 15°.22S×172°.96W, h0km, mb3.8/2, mb1 4.1/2, mb1mx3.6/48, mbtmp3.8/2, MS3.2/1, Ms1 3.2/1, ms1mx2.6/37, Error ellipse: s-maj=401.6km s-min=25.3km az=143.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.73**	**41**	Pn	Pn	23 23 46.9	-1.7
	22nm,0.3s,baz=270,slow=20,SNR=27						
AFI				Sn	Sn	23 24 04.3	-7.2
	150nm,0.3s,baz=76,slow=18,SNR=23						
DZM	**Mont Dzumac**	**20.66**	**248**	*e*LR	LR	23 33 14.7	
	232nm,25.1s						
PPT	**Papeete**	**22.55**	**99**	LR	LR	23 34 40.1	
	comp=Z,63nm,21.0s,baz=193,slow=30						
PPT2	**Papeete2**	**22.55**	**99**	*e*LR	LR	23 33 38.4	
	160nm,25.5s						
TAOE	**Nuku Hiva Isla**	**32.68**	**83**	*e*LR	LR	23 38 20.7	
	143nm,25.6s						
H11S2	**WAKE ISLAND Hy**	**39.03**	**328**	T	T	00 12 29.0	
	baz=152						
H11S3	**WAKE ISLAND Hy**	**39.04**	**328**	T	T	00 12 18.4	
	baz=152,slow=74						
H11S1	**WAKE ISLAND Hy**	**39.05**	**328**	T	T	00 12 32.1	
	baz=152,slow=74						
H11N3	**WAKE ISLAND Hy**	**39.97**	**330**	T	T	00 13 26.1	
	baz=154						
H11N1	**WAKE ISLAND Hy**	**39.97**	**330**	T	T	00 13 23.8	
	baz=154						
H11N2	**WAKE ISLAND Hy**	**39.99**	**330**	T	T	00 13 23.8	
	baz=154						
WRA	**Warramunga Arr**	**50.30**	**257**	P	P	23 32 15.0	-0.9
	0.5nm,0.7s,baz=94,slow=7.9,SNR=2.5						
ASAR	**Alice Springs**	**50.57**	**252**	P	P	23 32 17.1	-0.8
	1.8nm,0.6s,baz=86,slow=8.2,SNR=6.2						
GERES	**GERESS Array B**	**146.02**	**352**	PKPbc	PKPab	23 43 00.6	+1.0
	0.3nm,0.6s,baz=0.0,slow=3.9,SNR=3.7						
BRTR	**Keskin Array B**	**146.28**	**322**	PKPbc	PKPbc	23 42 60.0	-0.3
	1.3nm,0.9s,baz=62,slow=1.5,SNR=5.2						

*CSEM **27** 23:24:17.8±0.4, 35°.49N×23°.62E, h15km, ML1.7, Error ellipse: s-maj=13.3km s-min=3.0km az=30.0*
*ATH **27** 23:24:17.9, 35°.59N×23°.70E, h27km±3km, ML1.7/2, Error ellipse: s-maj=16.2km s-min=1.2km az=214.0*
THE 27 23:24:19.2, 35°.67N×23°.76E, h2km±4km, ML1.6/2, Error ellipse: s-maj=4.4km s-min=0.3km az=207.0, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHAN	**Chania**	**0.28**	**122**	P	Pg	23 24 24.4	-0.1
CHAN				S	Sg	23 24 28.9	+0.8
CHAN	**Chania**	**0.28**	**122**	P	Pg	23 24 24.4	-0.1
CHAN				S	Sg	23 24 28.9	+0.8
IMMV	**Iera Moni Meta**	**0.28**	**138**	P	Pg	23 24 24.1	-0.4
IMMV				S	Sg	23 24 28.6	+0.6
IMMV				AML	AML	23 24 30.5	
	comp=N,224μm,0.2s						
IMMV				AML	AML	23 24 30.8	
	comp=E,253μm,0.4s						
IMMV	**Iera Moni Meta**	**0.28**	**138**	P	Pg	23 24 24.5	0.0
IMMV				S	Sg	23 24 29.0	+0.9
IMMV	**Iera Moni Meta**	**0.28**	**138**	P	Pg	23 24 24.5	0.0
IMMV				S	Sg	23 24 29.1	+1.0
ANKY	**Antikythira Is**	**0.42**	**298**	P	Pg	23 24 27.5	+0.2
ANKY				S	Sg	23 24 33.8	+1.0
ANKY	**Antikythira Is**	**0.42**	**298**	P	Pg	23 24 27.5	+0.2
ANKY				S	Sg	23 24 33.6	+0.8
ANKY	**Antikythira Is**	**0.42**	**298**	P	Pg	23 24 27.3	0.0
ANKY				S	Sg	23 24 33.6	+0.8
VAM	**Vamos**	**0.45**	**126**	P	Pg	23 24 28.3	+0.6
VAM				S	Sg	23 24 35.2	+1.7
VAM				AML	AML	23 24 35.6	
	comp=N,335μm,0.2s						
VAM				AML	AML	23 24 37.3	
	comp=E,313μm,0.3s						
VAM	**Vamos**	**0.45**

GNI	**Garni**	**1.57**	**33**	*e*Pn	**Pb**	**23 35 53.2**	**+0.3**

*ISK **27** 23:46:46.9, 39.′41N×28.°23E, h9km, ML2.4/5*
*ISCJB **27** 23:46:47.4±0.5, 39.′40N±0.°03×28.°21E±0.°04, h11km±6km, Error ellipse: s-maj=6.0km s-min=4.9km az=44.3*
*DDA **27** 23:46:47.3, 39.′41N×28.°20E, h7km, Ml2.5*
*CSEM **27** 23:46:47.5±0.1, 39.′40N×28.°22E, h10km, ML2.5, Error ellipse: s-maj=3.2km s-min=2.2km az=61.0*

ISC 27 23:46:47.4±0.9, 39.′40N±0.°03×28.°20E±0.°03, h17km±9km, n24, σ0§49/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DURS	**Dursunbey**	**0.29**	**46**	*i* P	**Pg**	**23 46 53.6**	**-0.2**
DURS				*i* S	**Sb**	**23 46 58.0**	**-0.8**
DURS	**Dursunbey**	**0.29**	**46**	P	**Pg**	**23 46 53.6**	**-0.2**
DURS				S	**Sb**	**23 46 58.0**	**-0.8**
BALB	**Balikesir**	**0.35**	**314**	PG	**Pb**	**23 46 55.3**	**+0.1**
BALB				SG	**Sg**	**23 47 00.1**	**+0.4**
BALB	**Balikesir**	**0.35**	**314**	*i* Pg	**Pb**	**23 46 55.3**	**+0.1**
BALB				*i* Sg	**Sg**	**23 47 00.1**	**+0.4**
STEP	**BALIKESIR_Sava**	**0.38**	**267**	*i* P	**Pg**	**23 46 54.8**	**-0.5**
STEP				*i* S	**Sg**	**23 47 00.5**	**-0.1**
STEP	**BALIKESIR_Sava**	**0.38**	**267**	P	**Pg**	**23 46 54.8**	**-0.5**
STEP				S	**Sg**	**23 47 00.5**	**-0.1**
DEMI	**Demirci**	**0.53**	**132**	*i* P	**Pg**	**23 46 58.2**	**+0.1**
DEMI				*i* S	**Sg**	**23 47 05.4**	**+0.2**
DEMI	**Demirci**	**0.53**	**132**	P	**Pg**	**23 46 58.2**	**+0.1**
DEMI				S	**Sg**	**23 47 05.4**	**+0.2**
SIMA	**Simav-Kutahya**	**0.68**	**117**	PG	**Pb**	**23 47 01.0**	**+0.1**
SIMA	**Simav-Kutahya**	**0.68**	**117**	*e*Pg	**Pb**	**23 47 01.0**	**+0.1**
KCTX	**Karacabey (Bur**	**0.88**	**8**	PG	**Pg**	**23 47 04.1**	**-0.4**
KCTX	**Karacabey (Bur**	**0.88**	**8**	*e*Pg	**Pg**	**23 47 04.1**	**-0.4**
MANT	**Manisa**	**0.95**	**163**	*i* P	**Pb**	**23 47 06.0**	**+0.4**
MANT				*i* S	**Sg**	**23 47 17.4**	**-0.9**
MANT	**Manisa**	**0.95**	**163**	P	**Pb**	**23 47 05.9**	**+0.4**
MANT				S	**Sg**	**23 47 17.4**	**-0.9**
KULA	**Kula-Manisa**	**0.95**	**158**	PG	**Pg**	**23 47 05.5**	**-0.4**
KULA	**Kula-Manisa**	**0.95**	**158**	*i* Pg	**Pg**	**23 47 05.5**	**-0.4**
EDC	**Edincik**	**0.98**	**345**	PG	**Pg**	**23 47 06.2**	**-0.3**
EDC	**Edincik**	**0.98**	**345**	*e*Pg	**Pg**	**23 47 06.2**	**-0.3**
SBT5	**Esenkoy-Cinarc**	**1.34**	**23**	PN	**Pn**	**23 47 12.0**	**+0.8**
SBT5	**Esenkoy-Cinarc**	**1.34**	**23**	*e*Pn	**Pn**	**23 47 12.0**	**+0.8**
AYDB	**Zeytinkoy-Aydi**	**1.47**	**190**	PN	**Pb**	**23 47 14.9**	**+0.5**
AYDB	**Zeytinkoy-Aydi**	**1.47**	**190**	*e*Pn	**Pb**	**23 47 14.9**	**+0.5**
YLV	**Yalova**	**1.47**	**37**	PN	**Pn**	**23 47 13.6**	**+0.4**
YLV	**Yalova**	**1.47**	**37**	*e*Pn	**Pn**	**23 47 13.6**	**+0.4**

*IDC **28** 00:10:00.5±1.4, 21.°95S×168.°83E, h0km, mb3.9/4, mb1 4.0/5, mb1mx3.7/45, mbtmp3.9/5, ML3.7/1, MS2.7/2, Ms1 2.7/2, ms1mx2.4/40, Error ellipse: s-maj=45.3km s-min=26.6km az=170.0*

ISC 28 00:10:04.7±1.2, 21.°9S±0.°3×168.°8E±0.°1, h31km, n10, σ0§47/10, mb3.8/4, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.23**	**264**	Pn	**Pn**	**00 10 39.6**	**-0.1**
	23nm,0.3s,baz=89,slow=19,SNR=32						
DZM				Sn	**Sn**	**00 11 06.4**	**+0.3**
	42nm,0.3s,baz=90,slow=19,SNR=6.6						
DZM				LR	LR	00 11 19.7	
	comp=Z,177nm,20.0s,baz=104,slow=36						
AFI	**Afiamalu**	**20.06**	**70**	LR	LR	00 20 23.5	
	comp=Z,26nm,21.4s,baz=138,slow=31						
STKA	**Stephens Creek**	**26.20**	**242**	P	**P**	**00 15 37.1**	**+0.3**
	2.4nm,0.8s,baz=84,slow=10,SNR=2.8						
ASAR	**Alice Springs**	**32.21**	**260**	P	**P**	**00 16 30.4**	**+0.1**
	0.9nm,0.7s,baz=83,slow=9.1,SNR=5.5						
WRA	**Warramunga Arr**	**32.24**	**267**	P	**P**	**00 16 29.8**	**-0.9**
	0.4nm,0.6s,baz=94,slow=7.7,SNR=4.8						
SNAA	**Sanae**	**86.54**	**183**	P	**P**	**00 22 44.2**	**-0.2**
	1.4nm,0.8s,baz=150,slow=11,SNR=6.2						
BRG	**Berggiesshubel**	**145.02**	**332**	*e*PKP	**PKPdf**	**00 29 39.4**	**+0.7**
	2.9nm,0.8s						
CLL	**Collm**	**145.10**	**333**	*i* PKPbc	**PKPdf**	**00 29 39.2**	**+0.4**
	comp=Z,6.0nm,1.1s						
EKA	**Eskdalemuir Ar**	**146.04**	**352**	PKPbc	**PKPbc**	**00 29 41.2**	**0.0**
	comp=Z,1.2nm,0.7s,baz=350,slow=2.2,SNR=5.8						
GERES	**GERESS Array B**	**146.59**	**330**	PKPbc	**PKPab**	**00 29 44.1**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=46,slow=2.8,SNR=11						

MEX 28 00:21:17.4±0.3, 16.°44N×98.°25W, h20km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.15**	**345**	*e*P	Pn	00 21 35.3	-3.2
TLIG				*e*P	Pb	00 21 35.4	-3.4
VHO	**Vista Hermosa**	**1.58**	**67**	*e*P	Pn	00 21 41.6	-2.9
VHO				*i* S	Sn	00 22 01.4	-3.1
ARIG	**Puente Sto Nin**	**2.71**	**313**	*e*P	Pn	00 22 02.3	+2.5
ARIG				*i* S	Sb	00 22 40.1	+2.1

*ATH **28** 00:26:22.8, 38.°89N×27.°31E, h27km±2km, ML3.5/5, Error ellipse: s-maj=4.4km s-min=1.7km az=56.0*
*ISK **28** 00:26:22.9, 38.°85N×27.°24E, h12km, ML3.8/41*
*CSEM **28** 00:26:23.5±0.1, 38.°83N×27.°26E, h10km, ML3.8, Error ellipse: s-maj=1.8km s-min=1.7km az=178.0*
*ISCJB **28** 00:26:23.2±0.3, 38.°84N±0.°02×27.°26E±0.°02, h10km±3km, mb3.4/2, MS2.3/1, Error ellipse: s-maj=2.6km s-min=2.5km az=169.5*
*DDA **28** 00:26:23.4, 38.°86N×27.°27E, h7km, Ml3.7*
*THE **28** 00:26:24.6, 38.°82N×27.°32E, h17km±2km, ML3.2/9, Error ellipse: s-maj=2.4km s-min=0.6km az=74.0*
*IDC **28** 00:26:24.1±1.2, 38.°73N×27.°59E, h0km, mb3.4/2, mb1 3.4/6, mb1mx3.2/57, mbtmp3.3/6, ML2.8/3, MS2.4/1, Ms1 2.5/1, ms1mx1.9/35, Error ellipse: s-maj=20.3km s-min=14.5km az=114.0*

ISC 28 00:26:23.3±1.1, 38.°83N±0.°02×27.°28E±0.°02, h4km±8km, n204, σ0§96/228, 13C-5D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DKL	**Dikili**	**0.38**	**310**	PG	**Pg**	**00 26 31.2**	**+0.6**
DKL				SG	**Sg**	**00 26 35.7**	**+0.1**
DKL	**Dikili**	**0.38**	**310**	*e*Pg	**Sg**	**00 26 31.2**	**+0.6**
DKL				*e*Sg	**Sg**	**00 26 35.7**	**+0.1**
AKS	**Akhisar**	**0.42**	**83**	PG	**Pb**	**00 26 32.6**	**-0.6**
AKS				SG	**Sb**	**00 26 39.1**	**-0.8**
AKS	**Akhisar**	**0.42**	**83**	*e*Pg	**Pb**	**00 26 32.6**	**-0.6**
AKS				*e*Sg	**Sb**	**00 26 39.1**	**-0.8**
AKHS	**Akhisar**	**0.42**	**83**	*i* P	**Pb**	**00 26 32.6**	**-0.6**
AKHS	**Akhisar**	**0.42**	**83**	P	**Pb**	**00 26 32.6**	**-0.6**
FOCM	**Fo^§a**	**0.45**	**255**	PG	**Pg**	**00 26 32.2**	**+0.3**
FOCM				SG	**Sg**	**00 26 37.6**	**-0.1**
FOCM	**Fo^§a**	**0.45**	**255**	*e*Pg	**Pg**	**00 26 32.2**	**+0.3**
FOCM				*e*Sg	**Sg**	**00 26 37.6**	**-0.1**
KRBN	**Karaburun**	**0.62**	**248**	PG	**Pg**	**00 26 34.9**	**-0.2**
KRBN	**Karaburun**	**0.62**	**248**	*e*Pg	**Pg**	**00 26 34.9**	**-0.2**
STEP	**BALIKESIR_Sava**	**0.65**	**32**	*i* P	**Pg**	**00 26 35.9**	**+0.2**
STEP	**BALIKESIR_Sava**	**0.65**	**32**	P	**Pg**	**00 26 35.9**	**+0.2**
AYVA	**Ayvalik**	**0.67**	**316**	*i* P	**Pg**	**00 26 36.3**	**+0.2**
AYVA	**Ayvalik**	**0.67**	**316**	P	**Pg**	**00 26 36.3**	**+0.2**
URLA	**Izmir**	**0.71**	**229**	PG	**Pg**	**00 26 36.3**	**-0.7**
URLA				SG	**Sg**	**00 26 47.1**	**+0.9**
URLA	**Izmir**	**0.71**	**229**	*i* P	**Pg**	**00 26 36.6**	**-0.4**
URLA	**Izmir**	**0.71**	**229**	*e*Pg	**Pg**	**00 26 36.3**	**-0.7**
URLA	**Izmir**	**0.71**	**229**	P	**Pg**	**00 26 36.6**	**-0.4**
URLA				*e*Sg	**Sg**	**00 26 47.1**	**+0.9**
DGB	**˜zmir**	**0.84**	**202**	*i* P	**Pb**	**00 26 40.4**	**+0.1**
ZEY	**˜zmir**	**0.85**	**226**	*i* P	**Pg**	**00 26 40.0**	**+0.5**
PRK	**Paraskevi**	**0.89**	**298**	P	**Pb**	**00 26 41.0**	**-0.3**
PRK				S	**Sg**	**00 26 51.5**	**-0.4**
PRK				AML	AML	00 26 59.1	
	comp=E,7077μm,0.6s						
PRK				AML	AML	00 26 59.6	
	comp=N,8256μm,0.6s						
PRK	**Paraskevi**	**0.89**	**298**	P	**Pg**	**00 26 40.6**	**+0.2**
PRK				S	**Sb**	**00 26 54.1**	**+0.6**
PRK	**Paraskevi**	**0.89**	**298**	P	**Pg**	**00 26 40.5**	**+0.2**
PRK				S	**Sg**	**00 26 52.1**	**+0.2**
CESE	**˜e˜me**	**0.92**	**238**	PG	**Pg**	**00 26 40.5**	**-0.3**
CESE	**˜e˜me**	**0.92**	**238**	*e*Pg	**Pg**	**00 26 40.5**	**-0.3**
BALB	**Balikesir**	**0.94**	**30**	PG	**Pg**	**00 26 41.0**	**-0.2**
BALB	**Balikesir**	**0.94**	**30**	*e*Pg	**Pg**	**00 26 41.0**	**-0.2**
AYDB	**Zeytinkoy-Aydi**	**1.00**	**151**	PG	**Pb**	**00 26 43.6**	**+0.4**
AYDB	**Zeytinkoy-Aydi**	**1.00**	**151**	*e*Pg	**Pb**	**00 26 43.6**	**+0.4**
MANT	**Manisa**	**1.05**	**108**	*i* P	**Pn**	**00 26 44.6**	**-0.4**
MANT	**Manisa**	**1.05**	**108**	P	**Pn**	**00 26 44.6**	**-0.4**
CHOS	**Chios island**	**1.06**	**246**	PG	**Pg**	**00 26 43.1**	**-0.5**
CHOS	**Chios island**	**1.06**	**246**	P	**Pb**	**00 26 44.1**	**0.0**
CHOS				S	**Sn**	**00 26 59.5**	**-0.6**
CHOS				AML	AML	00 27 00.9	
	comp=N,4100μm,0.6s						
CHOS				AML	AML	00 27 02.5	
	comp=E,5241μm,0.4s						
CHOS	**Chios island**	**1.06**	**246**	P	**Pb**	**00 26 44.1**	**0.0**
CHOS				S	**Sb**	**00 26 58.7**	**+0.3**
CHOS	**Chios island**	**1.06**	**246**	*e*Pg	**Pg**	**00 26 43.1**	**-0.5**
CHOS	**Chios island**	**1.06**	**246**	P	**Pb**	**00 26 44.0**	**-0.2**
CHOS				S	**Sb**	**00 26 58.7**	**+0.3**
BAYC	**CANAKKALE_Bayr**	**1.08**	**328**	*i* P	**Pg**	**00 26 43.1**	**-0.8**
BAYC	**CANAKKALE_Bayr**	**1.08**	**328**	P	**Pg**	**00 26 43.1**	**-0.8**
GPNR	**Gulpinar-Canak**	**1.09**	**305**	PG	**Pg**	**00 26 43.5**	**-0.7**
GPNR	**Gulpinar-Canak**	**1.09**	**305**	*e*Pg	**Pg**	**00 26 43.5**	**-0.7**
KULA	**Kula-Manisa**	**1.12**	**106**	PN	**Pn**	**00 26 45.7**	**-0.1**
KULA	**Kula-Manisa**	**1.12**	**106**	*e*Pn	**Pn**	**00 26 45.7**	**-0.1**
GCAM	**G?zelcaml?**	**1.13**	**182**	PN	**Pg**	**00 26 44.8**	**-0.1**
GCAM	**G?zelcaml?**	**1.13**	**182**	*i* P	**Pg**	**00 26 45.0**	**+0.1**
GCAM	**G?zelcaml?**	**1.13**	**182**	P	**Pg**	**00 26 45.0**	**+0.1**
DEMI	**Demirci**	**1.14**	**79**	*i* P	**Pb**	**00 26 45.5**	**-0.1**
DEMI	**Demirci**	**1.14**	**79**	P	**Pb**	**00 26 45.5**	**-0.1**
SMG	**Samos**	**1.17**	**198**	P	**Pg**	**00 26 44.8**	**-0.9**
SMG				S	**Sn**	**00 27 04.0**	**+1.2**
SMG				AML	AML	00 27 06.3	
	comp=N,5266μm,0.5s						
SMG				AML	AML	00 27 07.2	
	comp=E,2675μm,0.4s						
SMG	**Samos**	**1.17**	**198**	P	**Pg**	**00 26 45.4**	**-0.3**
SMG				S	**Sg**	**00 27 01.1**	**+0.2**
SMG	**Samos**	**1.17**	**198**	P	**Pg**	**00 26 45.5**	**-0.3**
SMG				S	**Sg**	**00 27 01.1**	**+0.2**
SIGR	**SIGRI**	**1.18**	**289**	PN	**Pg**	**00 26 45.1**	**-0.7**
SIGR	**SIGRI**	**1.18**	**289**	P	**Pg**	**00 26 45.3**	**-0.6**
SIGR				S	**Sg**	**00 27 00.1**	**-0.9**
SIGR				AML	AML	00 27 06.8	
	comp=E,4089μm,0.6s						
SIGR				AML	AML	00 27 06.8	
	comp=N,8938μm,0.8s						
SIGR	**SIGRI**	**1.18**	**289**	P	**Pg**	**00 26 45.1**	**-0.7**
SIGR				S	**Sb**	**00 27 01.8**	**+0.1**
SIGR	**SIGRI**	**1.18**	**289**	P	**Pg**	**00 26 45.2**	**-0.6**
SIGR				S	**Sg**	**00 27 00.8**	**-0.3**
DURS	**Dursunbey**	**1.21**	**50**	*i* P	**Pg**	**00 26 45.8**	**-0.6**
DURS	**Dursunbey**	**1.21**	**50**	P	**Pg**	**00 26 45.8**	**-0.6**
EZN	**Ezine**	**1.24**	**324**	PN	**Pg**	**00 26 45.9**	**-1.2**
EZN	**Ezine**	**1.24**	**324**	P	**Pg**	**00 26 46.3**	**-0.8**
EZN				S	**Sg**	**00 27 03.0**	**-0.2**
EZN	**Ezine**	**1.24**	**324**	*e*Pn	**Pg**	**00 26 45.9**	**-1.2**
EZN	**Ezine**	**1.24**	**324**	P	**Pg**	**00 26 46.3**	**-0.8**
EZN				S	**Sg**	**00 27 03.0**	**-0.2**
GONE	**Gonen-Balikesi**	**1.26**	**14**	PN	**Pn**	**00 26 47.5**	**-0.1**
GONE	**Gonen-Balikesi**	**1.26**	**14**	*e*Pn	**Pn**	**00 26 47.5**	**-0.1**
DST	**Dursunbey**	**1.30**	**53**	PN	**Pn**	**00 26 47.1**	**-1.1**
DST	**Dursunbey**	**1.30**	**53**	*e*Pn	**Pn**	**00 26 47.1**	**-1.1**
SIMA	**Simav-Kutahya**	**1.35**	**79**	PN	**Pn**	**00 26 48.3**	**-0.7**
SIMA	**Simav-Kutahya**	**1.35**	**79**	*e*Pn	**Pn**	**00 26 48.3**	**-0.7**
SMAA	**Simav-Kutahya**	**1.35**	**78**	PN	**Pn**	**00 26 48.2**	**-0.8**
SMAA	**Simav-Kutahya**	**1.35**	**78**	*e*Pn	**Pn**	**00 26 48.2**	**-0.8**
PSRA	**Psara**	**1.38**	**259**	P	**Pn**	**00 26 48.8**	**-0.5**
PSRA				S	**Sn**	**00 27 08.4**	**+0.6**
PSRA				AML	AML	00 27 09.4	
	comp=N,1889μm,0.4s						
PSRA				AML	AML	00 27 10.1	
	comp=E,2450μm,0.5s						
PSRA	**Psara**	**1.38**	**259**	P	**Pn**	**00 26 48.7**	**-0.5**
PSRA				S	**Sn**	**00 27 08.0**	**+0.2**
BOZC	**Bozcaada**	**1.39**	**317**	PN	**Pn**	**00 26 48.3**	**-1.1**
BOZC	**Bozcaada**	**1.39**	**317**	*i* P	**Pn**	**00 26 49.4**	**0.0**
BOZC	**Bozcaada**	**1.39**	**317**	*e*Pn	**Pn**	**00 26 48.3**	**-1.1**
SHAP	**Saphane-Kutahy**	**1.52**	**82**	PN	**Pn**	**00 26 51.6**	**+0.2**
SHAP	**Saphane-Kutahy**	**1.52**	**82**	*e*Pn	**Pn**	**00 26 51.6**	**+0.2**
KRBG	**Karabiga-Canak**	**1.56**	**0**	PN	**Pn**	**00 26 50.4**	**-1.4**
KRBG	**Karabiga-Canak**	**1.56**	**0**	*e*Pn	**Pn**	**00 26 50.4**	**-1.4**
MLSB	**Milas**	**1.58**	**166**	PN	**Pn**	**00 26 51.7**	**-0.4**
MLSB	**Milas**	**1.58**	**166**	*e*Pn	**Pn**	**00 26 51.7**	**-0.4**
EDC	**Edincik**	**1.58**	**16**	PN	**Pn**	**00 26 50.7**	**-1.4**
EDC	**Edincik**	**1.58**	**16**	*e*Pn	**Pn**	**00 26 50.7**	**-1.4**
LPK	**Lapseki**	**1.59**	**346**	PN	**Pn**	**00 26 50.4**	**-1.9**
LPK	**Lapseki**	**1.59**	**346**	*e*Pn	**Pn**	**00 26 50.4**	**-1.9**
KCTX	**Karacabey (Bur**	**1.66**	**30**	PN	**Pn**	**00 26 51.7**	**-1.5**
KCTX	**Karacabey (Bur**	**1.66**	**30**	*e*Pn	**Pn**	**00 26 51.7**	**-1.5**
GEDZ	**Gediz**	**1.67**	**82**	PN	**Pn**	**00 26 53.7**	**+0.3**
GEDZ	**Gediz**	**1.67**	**82**	*e*Pn	**Pn**	**00 26 53.7**	**+0.3**
GELI	**Tayfur-Gelibol**	**1.69**	**339**	PN	**Pn**	**00 26 52.5**	**-1.0**
GELI	**Tayfur-Gelibol**	**1.69**	**339**	*e*Pn	**Pn**	**00 26 52.5**	**-1.0**
GOKC	**Gokceada-Canak**	**1.73**	**323**	PN	**Pn**	**00 26 53.4**	**-0.7**
GOKC	**Gokceada-Canak**	**1.73**	**323**	*e*Pn	**Pn**	**00 26 53.4**	**-0.7**
DENT	**Denizli**	**1.75**	**127**	PN	**Pb**	**00 26 55.2**	**-0.7**
DENT	**Denizli**	**1.75**	**127**	*e*Pn	**Pb**	**00 26 55.2**	**-0.7**
BODT	**Bodrum**	**1.76**	**179**	PN	**Pn**	**00 26 53.4**	**-1.2**
BODT	**Bodrum**	**1.76**	**179**	P	**Pn**	**00 26 52.9**	**-1.7**
BODT				S	**Sn**	**00 27 14.6**	**-2.8**
BODT	**Bodrum**	**1.76**	**179**	P	**Pn**	**00 26 52.9**	**-1.7**
BODT	**Bodrum**	**1.76**	**179**	*e*Pn	**Pn**	**00 26 53.4**	**-1.2**
BODT				S	**Sn**	**00 27 14.6**	**-2.8**
TVSB	**Tavsanli**	**1.81**	**69**	PN	**Pn**	**00 26 54.1**	**-1.1**
TVSB	**Tavsanli**	**1.81**	**69**	*e*Pn	**Pn**	**00 26 54.1**	**-1.1**
KHL	**Karahalli**	**1.83**	**105**	PN	**Pn**	**00 26 55.7**	**+0.2**
KHL	**Karahalli**	**1.83**	**105**	*e*Pn	**Pn**	**00 26 55.7**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.86**	**358**	PN	**Pn**	**00 26 54.9**	**-1.0**
RKY	**Sarkoy-Tekirda**	**1.86**	**358**	*e*Pn	**Pn**	**00 26 54.9**	**-1.0**
SART	**Tekirdag**	**1.86**	**358**	*i* P	**Pn**	**00 26 54.1**	**-1.9**
SART	**Tekirdag**	**1.86**	**358**	P	**Pn**	**00 26 54.1**	**-1.9**
YER	**Yerkesik**	**1.87**	**155**	PN	**Pn**	**00 26 55.9**	**-0.1**
YER	**Yerkesik**	**1.87**	**155**	*e*Pn	**Pn**	**00 26 55.9**	**-0.1**
ERIK	**Erikli-Kesan**	**1.93**	**342**	PN	**Pn**	**00 26 55.9**	**-1.0**
ERIK	**Erikli-Kesan**	**1.93**	**342**	*e*Pn	**Pn**	**00 26 55.9**	**-1.0**
LIA	**Limnos Island**	**1.95**	**304**	P	**Pn**	**00 26 56.2**	**-0.9**
LIA	**Limnos Island**	**1.95**	**304**	P	**Pn**	**00 26 56.7**	**-0.4**
LIA				S	**Sn**	**00 27 21.2**	**-0.7**
LIA	**Limnos Island**	**1.95**	**304**	P	**Pn**	**00 26 56.1**	**-0.9**
LIA				S	**Sn**	**00 27 21.2**	**-0.7**
KESN	**Edirne-Kesan**	**2.05**	**347**	*i* P	**Pn**	**00 26 57.9**	**-0.9**
KESN	**Edirne-Kesan**	**2.05**	**347**	P	**Pn**	**00 26 57.9**	**-0.9**
ENEZ	**Enez**	**2.10**	**336**	PN	**Pn**	**00 26 58.1**	**-1.0**
ENEZ	**Enez**	**2.10**	**336**	*e*Pn	**Pn**	**00 26 58.1**	**-1.0**
DAT	**Datca**	**2.11**	**174**	PN	**Pn**	**00 26 59.6**	**+0.2**
DAT	**Datca**	**2.11**	**174**	*e*Pn	**Pn**	**00 26 59.6**	**+0.2**
SBT3	**Marmara-Eregli**	**2.12**	**14**	PN	**Pn**	**00 26 59.9**	**+0.6**
SBT3	**Marmara-Eregli**	**2.12**	**14**	*e*Pn	**Pn**	**00 26 59.9**	**+0.6**
SMTH	**Samothraki Isl**	**2.13**	**321**	P	**Pn**	**00 26 59.3**	**-0.3**
SMTH				S	**Sn**	**00 27 24.9**	**-1.5**
SMTH	**Samothraki Isl**	**2.13**	**321**	P	**Pn**	**00 26 59.3**	**-0.3**
SMTH				S	**Sn**	**00 27 24.9**	**-1.5**
TKR	**Tekirdag**	**2.17**	**5**	PN	**Pn**	**00 27 00.4**	**+0.3**
TKR	**Tekirdag**	**2.17**	**5**	*e*Pn	**Pn**	**00 27 00.4**	**+0.3**
SBT5	**Esenkoy-Cinarc**	**2.18**	**34**	PN	**Pn**	**00 27 00.8**	**+0.5**
SBT5	**Esenkoy-Cinarc**	**2.18**	**34**	*e*Pn	**Pn**	**00 27 00.8**	**+0.5**
KUTH	**Kutahya**	**2.21**	**74**	PN	**Pn**	**00 27 01.5**	**+0.7**
KUTH	**Kutahya**	**2.21**	**74**	*e*Pn	**Pn**	**00 27 01.5**	**+0.7**
TURN	**Turunc**	**2.21**	**151**	PN	**Pn**	**00 26 59.9**	**-0.8**
TURN	**Turunc**	**2.21**	**151**	*e*Pn	**Pn**	**00 26 59.9**	**-0.8**
APE	**Apeiranthos**	**2.24**	**219**	PN	**Pn**	**00 27 00.9**	**-0.2**
APE	**Apeiranthos**	**2.24**	**219**	*i* P	**Pb**	**00 27 03.0**	**-1.3**
APE	**Apeiranthos**	**2.24**	**219**	S	**Sg**	**00 27 35.0**	**-0.1**
APE	**Apeiranthos**	**2.24**	**219**	P	**Pn**	**00 26 59.9**	**-1.2**
APE				S	**Sn**	**00 27 27.4**	**-1.8**
APE	**Apeiranthos**	**2.24**	**219**	P	**Pn**	**00 26 59.9**	**-1.2**
APE	**Apeiranthos**	**2.24**	**219**	*e*Pn	**Pn**	**00 27 00.9**	**-0.2**
APE				S	**Sn**	**00 27 27.4**	**-1.8**
IZI	**Iznik**	**2.27**	**48**	PN	**Pn**	**00 27 01.7**	**+0.1**
IZI	**Iznik**	**2.27**	**48**	*e*Pn	**Pn**	**00 27 01.7**	**+0.1**
ALN	**Alexandroupoli**	**2.28**	**336**	PN	**Pn**	**00 27 01.3**	**-0.3**
ALN	**Alexandroupoli**	**2.28**	**336**	P	**Pn**	**00 27 00.8**	**-0.8**
ALN				S	**Sn**	**00 27 28.6**	**-1.5**
ALN	**Alexandroupoli**	**2.28**	**336**	P	**Pn**	**00 27 00.8**	**-0.8**
ALN	**Alexandroupoli**	**2.28**	**336**	*e*Pn	**Pn**	**00 27 01.3**	**-0.3**
ALN				S	**Sn**	**00 27 28.6**	**-1.5**
DALY	**Dalyan (Mu¨la**	**2.28**	**151**	PN	**Pn**	**00 27 02.3**	**+0.6**
DALY	**Dalyan (Mu¨la**	**2.28**	**151**	*e*Pn	**Pn**	**00 27 02.3**	**+0.6**
CRLT	**Corlu**	**2.33**	**8**	PN	**Pn**	**00 27 02.5**	**+0.2**
CRLT	**Corlu**	**2.33**	**8**	*e*Pn	**Pn**	**00 27 02.5**	**+0.2**
YLV	**Yalova**	**2.37**	**42**	PN	**Pn**	**00 27 02.1**	**-0.9**
YLV	**Yalova**	**2.37**	**42**	*e*Pn	**Pn**	**00 27 02.1**	**-0.9**
AUBOZ	**BOZOYUK**	**2.39**	**62**	PN	**Pn**	**00 27 03.3**	**0.0**
AUBOZ	**BOZOYUK**	**2.39**	**62**	*e*Pn	**Pn**	**00 27 03.3**	**0.0**
CAVI	**Cavuskoy**	**2.41**	**54**	PN	**Pn**	**00 27 03.1**	**-0.4**
CAVI	**Cavuskoy**	**2.41**	**54**	*e*Pn	**Pn**	**00 27 03.1**	**-0.4**
BUY	**Buyukada**	**2.47**	**34**	PN	**Pn**	**00 27 03.9**	**-0.3**
BUY	**Buyukada**	**2.47**	**34**	*e*Pn	**Pn**	**00 27 03.9**	**-0.3**
ADVT	**Abdulvahap**	**2.48**	**49**	PN	**Pn**	**00 27 04.6**	**+0.1**
ADVT	**Abdulvahap**	**2.48**	**49**	*e*Pn	**Pn**	**00 27 04.6**	**+0.1**
SLVT	**Silivri**	**2.50**	**16**	PN	**Pn**	**00 27 04.1**	**-0.6**
SLVT	**Silivri**	**2.50**	**16**	*e*Pn	**Pn**	**00 27 04.1**	**-0.6**
CTKS	**Kestanelik-??a**	**2.58**	**21**	PN	**Pn**	**00 27 04.8**	**-1.0**
CTKS	**Kestanelik-??a**	**2.58**	**21**	*e*Pn	**Pn**	**00 27 04.8**	**-1.0**
KAVV	**Kandilli-Istan**	**2.62**	**31**	PN	**Pn**	**00 27 06.2**	**-0.1**
KAVV	**Kandilli-Istan**	**2.62**	**31**	*e*Pn	**Pn**	**00 27 06.2**	**-0.1**
ISK	**Istanbul-Kandi**	**2.62**	**31**	PN	**Pn**	**00 27 06.8**	**+0.5**
ISK	**Istanbul-Kandi**	**2.62**	**31**	*e*Pn	**Pn**	**00 27 06.8**	**+0.5**
RDO	**Rodhopi**	**2.68**	**330**	PN	**Pn**	**00 27 06.8**	**-0.3**
RDO	**Rodhopi**	**2.68**	**330**	P	**Pn**	**00 27 06.4**	**-0.7**
RDO				S	**Sn**	**00 27 39.3**	**-0.6**
RDO	**Rodhopi**	**2.68**	**330**	P	**Pn**	**00 27 06.4**	**-0.7**
RDO	**Rodhopi**	**2.68**	**330**	*e*Pn	**Pn**	**00 27 06.8**	**-0.3**
RDO				S	**Sn**	**00 27 39.3**	**-0.6**
ISP	**Isparta**	**2.74**	**110**	⇑*i*P	**Pn**	**00 27 08.4**	**+0.3**
ISP	**Isparta**	**2.74**	**110**	⇑*i*P	**Pn**	**00 27 08.4**	**+0.3**
CTYL	**Yalikoy Yolu**	**2.75**	**16**	PN	**Pn**	**00 27 08.5**	**+0.3**
CTYL	**Yalikoy Yolu**	**2.75**	**16**	*e*Pn	**Pn**	**00 27 08.5**	**+0.3**
PHSR	**Pinarhisar**	**2.81**	**4**	PN	**Pn**	**00 27 09.3**	**+0.4**
PHSR	**Pinarhisar**	**2.81**	**4**	*e*Pn	**Pn**	**00 27 09.3**	**+0.4**
OUR	**

ONI	**Oni**	**1.32 344**	P	**Pn**	**00 53 10.6**	**-0.3**
ONI			S	**Sb**	**00 53 28.4**	**+0.1**
ONI	**Oni**	**1.32 344**	P	**Pn**	**00 53 10.6**	**-0.3**
ONI			S	**Sb**	**00 53 28.5**	**+0.1**
SENK	**Senkaya-Erzuru**	**1.43 238**	PN	**Pb**	**00 53 13.1**	**-0.1**
SENK	**Senkaya-Erzuru**	**1.43 238**	*e*Pn	**Pb**	**00 53 13.1**	**-0.1**
IGDI	**IGDIR**	**1.46 176**	*i* P	**Pn**	**00 53 12.8**	**0.0**
IGDI			*i* S	**Sb**	**00 53 32.2**	**+0.1**
ARTV	**Artvin**	**1.53 266**	*i* P	**Pn**	**00 53 13.7**	**-0.3**
ARTV			*i* S	**Sn**	**00 53 33.9**	**-0.1**
ARTV	**Artvin**	**1.53 266**	P	**Pn**	**00 53 13.6**	**-0.3**
ARTV			S	**Sn**	**00 53 33.9**	**-0.1**
DDFL	**Dedoflistskaro**	**1.64 85**	P	**Pg**	**00 53 17.6**	**-0.2**
DDFL			S	**Sg**	**00 53 39.8**	**+0.8**
DDFL	**Dedoflistskaro**	**1.64 85**	P	**Pg**	**00 53 17.6**	**-0.2**
DDFL			S	**Sg**	**00 53 39.8**	**+0.8**
DDEM	**Demirkent**	**1.71 256**	*i* P	**Pn**	**00 53 16.7**	**+0.3**
DDEM			*i* S	**Sb**	**00 53 40.0**	**+0.3**
DDEM	**Demirkent**	**1.71 256**	P	**Pn**	**00 53 16.7**	**+0.3**
DDEM			S	**Sb**	**00 53 40.0**	**+0.3**
DBOC	**Borcka**	**1.72 272**	*i* P	**Pb**	**00 53 18.0**	**-0.1**
DBOC			*i* S	**Sn**	**00 53 38.7**	**+0.3**
DBOC	**Borcka**	**1.72 272**	P	**Pb**	**00 53 18.0**	**-0.1**
DBOC			S	**Sn**	**00 53 38.7**	**+0.3**
BCA	**Borcka**	**1.75 275**	PN	**Pn**	**00 53 17.2**	**+0.3**
BCA	**Borcka**	**1.75 275**	*e*Pn	**Pn**	**00 53 17.2**	**+0.3**
EATA	**Eleskirt**	**1.83 218**	*i* P	**Pg**	**00 53 21.9**	**+0.4**
EATA			*i* S	**Sb**	**00 53 42.6**	**-0.6**
EATA	**Eleskirt**	**1.83 218**	P	**Pg**	**00 53 21.9**	**+0.4**
EATA			S	**Sb**	**00 53 42.6**	**-0.6**
AGRB	**Hanur-Agry**	**1.89 203**	PN	**Pn**	**00 53 19.4**	**+0.5**
AGRB	**Hanur-Agry**	**1.89 203**	*e*Pn	**Pn**	**00 53 19.4**	**+0.5**
CHOM	**Cayeli-Rize**	**2.42 266**	PN	**Pn**	**00 53 26.5**	**+0.6**
CHOM	**Cayeli-Rize**	**2.42 266**	*e*Pn	**Pn**	**00 53 26.5**	**+0.6**

SJA 28 01:24:26.8±1.0, 32°.82S×69°.56W, h37km±3km, ML2.7, MW3.5, 3D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARCO	**CERRO ARCO**	**0.53**	**93**	*e*P	Pn	01 24 38.3	+0.2
ARCO				IAML		01 24 44.2	
	comp=Z,438nm,0.1s						
AUSP	**Uspallata**	**0.61**	**14**	*e*P	Pn	01 24 42.2	+2.8
AUSP				*e*S	Sn	01 24 51.0	+2.9
ASAL	**Salagasta**	**0.65**	**70**	*e*P	Pn	01 24 38.9	-0.9
RTLS	**Leoncito**	**1.04**	**13**	*e*P	Pn	01 24 48.6	+3.5
RTLS				IAML		01 25 05.3	
	comp=Z,44nm,0.2s						
AVIZ	**Vizcacheras**	**1.09**	**127**	*e*P	Pn	01 24 47.6	+1.9
ROC1	**El Roble**	**1.23**	**262**	*e*S	Sn	01 25 06.1	+2.9
RTCV	**Cerro Valdivia**	**1.29**	**43**	*e*P	Pn	01 24 49.6	+1.4
RTCV				*e*S	Sn	01 25 04.4	+0.1
ZON	**Zonda**	**1.47**	**31**	*e*P	Pn	01 24 53.1	+2.3
ZON				*e*S	Sn	01 25 11.4	+2.6
RTLL	**Cerro Villicun**	**1.75**	**32**	*e*P	Pn	01 24 57.2	+2.6
RTLL				⇓*e*S	Sn	01 25 18.6	+2.9
RTLL				IAML		01 25 19.7	
	comp=Z,142nm,0.3s						
ACAN	**Cantantal**	**2.08**	**76**	*e*P	Pn	01 25 01.6	+2.5
AMOG	**MOGNA**	**2.08**	**26**	*e*P	Pn	01 25 02.7	+3.5
ACDV	**Cuesta del Vie**	**2.67**	**8**	*e*P	Pn	01 25 13.0	+5.6
AGUA	**GUANDACOL**	**3.44**	**16**	*e*P	Pn	01 25 22.8	+4.7
APLL	**PUNTA DE LOS L**	**3.54**	**48**	⇓*e*P	Pn	01 25 21.0	+1.7
VCA	**Vinchina**	**4.23**	**16**	⇓*e*P	Pn	01 25 34.8	+5.9
VCA				IAML		01 26 44.1	
	comp=Z,12nm,0.3s						

IDC ***28*** *01:37:13.1±1.2, 3°.14S×70°.60E, h0km, mb4.2/6, mb1 4.3/7, mb1mx3.9/54, mbtmp4.2/7, ML3.3/1, MS3.2/8, Ms1 3.2/8, ms1mx2.8/49, Error ellipse: s-maj=50.7km s-min=25.0km az=86.0*

ISCJB ***28*** *01:37:17.0±0.6, 3°.10S±0°.06×130°.89E±0°.06, h33km, mb4.1/5, MS3.1/5, Error ellipse: s-maj=9.5km s-min=7.2km az=139.5*

DJA ***28*** *01:37:17.3±0.8, 3°.5S±5°×13°.1E±°, h13km±7km, M4.4/6, mB5.0/1, mb5.0/1, MLv4.1/6, Mw(mB)4.4/1*

ISC 28 01:37:18.1±0.8, 3°.13S±0°.07×130°.85E±0°.05, h35km, n21, σ2°.37/18, mb4.3/5, MS3.2/5, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**1.41**	**81**	P	**Pn**	**01 37 41.9**	**+0.6**
FAKI				S	**Sn**	**01 38 04.9**	**+6.2**
BNDI	**Bandanaira**	**1.68**	**214**	P	Pn	01 37 50.3	+5.3
MSAI	**Masohi**	**1.93**	**264**	P	**Pn**	**01 37 49.9**	**+1.4**
MSAI				S	**Sn**	**01 38 14.3**	**+2.6**
MSAI				Sg		01 38 21.6	
SIJI	**Sorong**	**2.29**	**10**	Pn	**Pn**	**01 37 53.3**	**-0.1**
	7.8nm,0.3s,baz=204,slow=18,SNR=20						
SIJI				Sn	**Sn**	**01 38 19.6**	**-0.8**
	18nm,0.3s,baz=143,slow=4.5,SNR=6.2						
AAI	**Ambon**	**2.71**	**258**	P	**Pn**	**01 38 01.5**	**+2.3**
RKPI	**Ransiki, Papua**	**3.69**	**64**	P	**Pn**	**01 38 13.4**	**+0.7**
BAKI	**Biak**	**5.59**	**70**	P	**Pn**	**01 38 40.0**	**+1.1**
JAY	**Jayapura**	**9.86**	**87**	LR	LR	01 43 53.1	
	comp=Z,72nm,19.6s,baz=239,slow=40						
DAV	**Davao City (W)**	**11.42**	**333**	LR	LR	01 45 15.0	
	comp=Z,68nm,19.7s,baz=148,slow=43						
WRA	**Warramunga Arr**	**17.05**	**169**	P	**Pn**	**01 41 09.7**	**-4.3**
	0.2nm,0.3s,baz=350,slow=12,SNR=5.4						
WRA				S	Sn	01 44 09.7	-13
	0.2nm,0.3s,baz=351,slow=21,SNR=4.0						
WRA				LR	LR	01 49 25.1	
	comp=Z,144nm,20.5s,baz=30,slow=43						
ASAR	**Alice Springs**	**20.63**	**172**	P	**P**	**01 41 54.5**	**-0.1**
	13nm,0.4s,baz=351,slow=11,SNR=121						
ASAR				S	**S**	**01 45 40.5**	**-2.9**
	0.5nm,0.8s,baz=1.1,slow=14,SNR=3.0						
GUMO	**Guam**	**21.66**	**40**	LR	LR	01 50 30.0	
	comp=Z,32nm,19.4s,baz=111,slow=36						
LEM	**Lembang**	**23.43**	**260**	LR	LR	01 53 37.8	
	comp=Z,79nm,18.3s,baz=262,slow=42						
KSRS	**Korea Array**	**40.47**	**356**	LR	LR	02 00 08.5	
	comp=Z,45nm,19.7s,baz=129,slow=34						
ASAJ	**Asahikawa**	**48.20**	**11**	LR	LR	02 04 16.5	
	comp=Z,23nm,21.8s,baz=120,slow=34						
MKAR	**Makanchi Array**	**65.51**	**326**	P	**P**	**01 47 58.0**	**+0.1**
	2.6nm,0.7s,baz=120,slow=7.9,SNR=26						
SEY	**Seymchan**	**67.87**	**10**	P	**P**	**01 48 13.3**	**+0.6**
	1.8nm,0.7s,baz=225,slow=20,SNR=7.2						
ZALV	**Zalesovo Beam**	**68.53**	**333**	P	**P**	**01 48 16.0**	**-1.0**
	0.6nm,0.4s,baz=115,slow=6.5,SNR=4.5						
KURBB	**Kurchatov Arra**	**69.70**	**327**	P	**P**	**01 48 23.7**	**-0.6**
	2.0nm,0.7s,baz=126,slow=5.6,SNR=23						
BVAR	**Borovoye Array**	**75.28**	**327**	P	**P**	**01 48 57.3**	**-0.3**
	1.0nm,0.5s,baz=101,slow=7.5,SNR=8.4						
BVAR				LR	LR	02 24 59.2	
	comp=Z,15nm,18.6s,baz=310,slow=38						
TORD	**Torodi Ar. Bea**	**128.79**	**284**	PKP	**PKPdf**	**01 56 23.2**	**+0.2**
	0.3nm,0.6s,baz=104,slow=1.5						

IDC ***28*** *01:51:52.1±0.5, 21°.88S×168°.87E, h0km, mb4.6/20, mb1 4.7/22, mb1mx4.5/47, mbtmp4.6/22, ML4.0/2, MS3.8/28, Ms1 3.8/28, ms1mx3.6/41, Error ellipse: s-maj=16.2km s-min=14.0km az=105.0*

BJI ***28*** *01:51:53.8, 21°.42S×169°.10E, h15km, mb5.0/31, mB5.0/20, Ms4.5/3, Ms7 4.4/4*

ISCJB ***28*** *01:51:55.6±0.2, 21°.97S±0°.05×168°.79E±0°.04, h31km, mb4.8/72, MS3.9/26, Error ellipse: s-maj=7.4km s-min=5.2km az=163.4*

NEIC ***28*** *01:51:56.0±3.0, 21°.91S×168°.80E, h24km±20km, mb4.9/41, Error ellipse: s-maj=8.0km s-min=7.3km az=196.0*

MOS ***28*** *01:51:56.5±1.2, 21°.83S×168°.73E, h33km, mb5.1/25, Error ellipse: s-maj=10.7km s-min=10.1km az=42.6*

GCMT ***28*** *01:51:56.0±0.3, 21°.90S×168°.90E, h20km±1km, MW4.9/74, Moment Tensor Solution. s28,c28; s74,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.78±.19; $M_{\theta\theta}$0.76±.12; $M_{\phi\phi}$2.02±.12; $M_{r\theta}$-0.44±.25; $M_{\theta\phi}$-0.33±.07; $M_{\phi r}$-0.71±.20; Best double couple: $M_0$2.55900×10^{16} NP1:ϕ_s357.00000°, δ53.00000°, λ-79.00000°. NP2: ϕ_s159.00000°, δ39.00000°, λ-104.00000°. Principal axes: T 2.1720, Plg7.0000°, Azm79.0000°; N 0.7760, Plg9.0000°, Azm170.0000°; P -2.9460, Plg79.0000°, Azm311.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 28 01:51:57.2±0.3, 21°.96S±0°.07×168°.83E±0°.06, h31km, n262, σ1°.01/256, mb4.9/72, MS3.9/26, 19C-15D, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.21**	**267**	Pn	**Pn**	**01 52 30.9**	**-1.1**
	64nm,0.3s,baz=128,slow=14,SNR=358						
DZM				LR	LR	01 52 57.3	
	comp=Z,2μm,18.5s,baz=156,slow=29						
DZM				Sn	**Sn**	**01 52 58.8**	**+0.5**
	176nm,0.3s,baz=188,slow=18,SNR=7.6						
DZM	**Mont Dzumac**	**2.21**	**267**	*e*Pn	**Pn**	**01 52 31.0**	**-0.9**
	532nm,0.3s						
DZM				*e*Sn	**Sn**	**01 52 55.6**	**-2.7**
	2μm,0.3s						
DZM				*e*LR	LR	01 52 58.2	
	5μm,25.2s						
DZM	**Mont Dzumac**	**2.21**	**267**	*e*Pn	**Pn**	**01 52 31.2**	**-0.8**
DZM				*e*Sn	**Sn**	**01 52 58.8**	**+0.5**
RAO	**Raoul Island**	**13.98**	**124**	LR	LR	01 58 33.0	
	comp=Z,83nm,21.8s,baz=284,slow=29						
HNR	**Honiara**	**15.10**	**324**	LR	LR	02 00 09.1	
	comp=Z,249nm,18.9s,baz=152,slow=33						
EIDS	**Eidsvold**	**16.61**	**255**	*e*Pn	**Pn**	**01 55 45.9**	**-1.9**
	35nm,1.2s						
ARMA	**Armidale**	**17.57**	**238**	*e*Pn	**Pn**	**01 55 59.3**	**-0.6**
	96nm,1.3s						
URZ	**Urewera**	**17.74**	**158**	P	**Pn**	**01 56 01.6**	**-0.2**
	0.3nm,0.3s,baz=335,slow=19,SNR=2.9						
URZ				LR	LR	02 00 49.7	
	comp=Z,272nm,18.5s,baz=9.0,slow=30						
AFI	**Afiamalu**	**20.10**	**70**	LR	LR	02 02 51.2	
	comp=Z,383nm,21.6s,baz=202,slow=33						
CTA	**Charters Tower**	**21.15**	**271**	P	**P**	**01 56 40.6**	**+0.7**
	30nm,1.0s,baz=93,slow=13,SNR=15						
CTA				LR	LR	02 04 45.1	
	comp=Z,710nm,20.4s,baz=90,slow=36						
CTAO	**Charters Tower**	**21.15**	**271**	*e*P	**P**	**01 56 41.8**	**+1.9**
	90nm,1.4s						
CTAO	**Charters Tower**	**21.15**	**271**	*e*P	**P**	**01 56 41.8**	**+1.9**
CTAO				pmax	pmax		
	comp=Z,90nm,1.4s						
RPZ	**Rata Peaks**	**21.78**	**176**	LR	LR	02 05 05.6	
	comp=Z,277nm,18.6s,baz=354,slow=36						
CAN	**Canberra**	**21.86**	**228**	*e*P	**P**	**01 56 46.7**	**-0.7**
	comp=Z,32nm,1.0s						
CAN	**Canberra**	**21.86**	**228**	*e*P	**P**	**01 56 46.7**	**-0.7**
CAN				pmax	pmax		
	comp=Z,32nm,1.0s						
PMG	**Port Moresby**	**24.27**	**298**	P	**P**	**01 57 11.0**	**-0.8**
	comp=Z,24nm,0.8s,baz=119,slow=7.8,SNR=8.9						
PMG				LR	LR	02 04 43.4	
	comp=Z,333nm,21.4s,baz=136,slow=32						
PMG	**Port Moresby**	**24.27**	**298**	*e*P	**P**	**01 57 11.8**	**0.0**
	comp=Z,27nm,0.8s						
PMG	**Port Moresby**	**24.27**	**298**	*e*P	**P**	**01 57 11.8**	**0.0**
PMG				pmax	pmax		
	comp=Z,27nm,0.8s						
TOO	**Toolangi**	**25.45**	**227**	P	**P**	**01 57 25.7**	**+3.3**
TOO				pmax	pmax		
	comp=Z,26nm,1.4s						
COEN	**Coen**	**25.64**	**284**	*e*P	**P**	**01 57 25.3**	**+1.0**
	comp=Z,22nm,0.8s						
STKA	**Stephens Creek**	**26.15**	**242**	P	**P**	**01 57 29.6**	**+0.8**
	comp=Z,13nm,0.9s,baz=66,slow=9.3,SNR=12						
STKA				LR	LR	02 06 43.2	
	comp=Z,492nm,21.4s,baz=54,slow=34						
STKA	**Stephens Creek**	**26.15**	**242**	*e*P	**P**	**01 57 30.3**	**+1.5**
	comp=Z,10nm,1.5s						
RAR	**Rarotonga**	**29.18**	**94**	LR	LR	02 09 38.3	
	comp=Z,74nm,18.0s,baz=265,slow=37						
BBOO	**Bukebeoo**	**30.93**	**242**	*e*P	**P**	**01 58 11.0**	**-0.4**
	comp=Z,51nm,1.4s						
AS01	**Alice Springs**	**32.15**	**260**	*e*P	**P**	**01 58 19.5**	**-2.8**
ASAR	**Alice Springs**	**32.19**	**260**	P	**P**	**01 58 22.0**	**-0.7**
	comp=Z,7.8nm,0.9s,baz=83,slow=9.0,SNR=41						
ASAR				PcP	**PcP**	**02 01 10.6**	**-0.5**
	comp=Z,1.6nm,0.8s,baz=114,slow=3.4,SNR=4.7						
ASAR				LR	LR	02 10 53.2	
	comp=Z,269nm,18.9s,baz=88,slow=35						
WB2	**Warramunga Arr**	**32.22**	**267**	*e*P	**P**	**01 58 21.8**	**-1.1**
	comp=Z,18nm,1.4s						
WRAB	**Tennant Creek**	**32.23**	**267**	*e*P	**P**	**01 58 21.8**	**-1.2**
	comp=Z,25nm,1.4s						
WRAB	**Tennant Creek**	**32.23**	**267**	⇓*e*P	**P**	**01 58 21.1**	**-1.8**
WRAB				pmax	pmax		
	comp=Z,14nm,1.2s						
WR1	**Warramunga Arr**	**32.23**	**267**	*e*P	**P**	**01 58 21.1**	**-1.9**
	comp=Z,19nm,1.3s						
WRA	**Warramunga Arr**	**32.23**	**267**	P	**P**	**01 58 21.1**	**-1.9**
	comp=Z,5.4nm,1.0s,baz=97,slow=7.9,SNR=19						
WRA				LR	LR	02 11 42.6	
	comp=Z,623nm,18.0s,baz=95,slow=37						
WRA	**Warramunga Arr**	**32.23**	**267**	*e*P	**P**	**01 58 21.5**	**-1.5**
WRA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
JAY	**Jayapura**	**33.47**	**301**	P	**P**	**01 58 35.7**	**+1.8**
FORT	**Forrest**	**37.40**	**248**	*e*P	**P**	**01 59 07.6**	**+0.1**
	comp=Z,32nm,1.0s						
TBI	**Tubuai**	**38.42**	**100**	*e*LR	LR	02 09 50.2	
	comp=Z,338nm,29.8s						
PPT2	**Papeete2**	**39.30**	**91**	*e*S	**S**	**02 05 24.0**	**+1.1**
	comp=Z,91nm,26.0s						
PPT2				*e*LR	LR	02 10 14.1	
	comp=Z,370nm,26.8s						
FAKI	**Fak Fak**	**40.24**	**293**	*e*P	**P**	**01 59 30.0**	**-1.4**
	comp=Z,75nm,1.5s						
FITZ	**Fitzroy Crossi**	**40.66**	**267**	*e*P	**P**	**01 59 34.8**	**-0.1**
	comp=Z,20nm,0.9s						
BATI	**Baumata**	**44.78**	**278**	LR	LR	02 19 10.0	
	comp=Z,300nm,18.2s,baz=130,slow=37						
MBWA	**Marble Bar**	**45.51**	**261**	*e*P	**P**	**02 00 14.2**	**+0.1**
	comp=Z,22nm,1.0s						
NWAO	**Narrogin (SRO)**	**46.67**	**245**	P	**P**	**02 00 22.7**	**-0.5**
	comp=Z,21nm,0.8s,baz=44,slow=3.9,SNR=7.3						
NWAO				LR	LR	02 19 13.3	
	comp=Z,458nm,20.8s,baz=344,slow=35						
NWAO	**Narrogin (SRO)**	**46.67**	**245**	*e*P	**P**	**02 00 23.2**	**0.0**
NWAO	**Narrogin (SRO)**	**46.67**	**245**	*e*P	**P**	**02 00 23.2**	**0.0**
APSI	**Ampana**	**50.45**	**288**	P	**P**	**02 00 55.7**	**+3.3**
TAOE	**Nuku Hiva Isla**	**50.66**	**83**	*e*S	**S**	**02 08 06.0**	**-1.5**
	comp=Z,97nm,25.9s						
TAOE				*e*LR	LR	02 15 30.0	
	comp=Z,367nm,27.9s						
VNDA	**Vanda**	**55.72**	**182**	P	**P**	**02 01 30.6**	**+0.3**
	comp=Z,2.3nm,0.9s,baz=6.4,slow=7.4,SNR=11						
VNDA	**Vanda**	**55.72**	**182**	*e*P	**P**	**02 01 31.1**	**+0.8**
	comp=Z,4.1nm,1.0s						
VNDA	**Vanda**	**55.72**	**182**	*e*P	**P**	**02 01 31.1**	**+0.8**
VNDA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SBA	**Scott Base**	**55.96**	**181**	*e*P	**P**	**02 01 34.0**	**+2.0**
	comp=Z,20nm,0.9s						
SBA	**Scott Base**	**55.96**	**181**	*e*P	**P**	**02 01 34.0**	**+2.0**
SBA				pmax	pmax		
	comp=Z,20nm,0.9s						
CASY	**Casey**	**57.50**	**204**	*e*P	**P**	**02 01 43.3**	**+0.2**
	comp=Z,15nm,1.0s						
MJAR	**Matsushiro Arr**	**64.98**	**333**	P	**P**	**02 02 32.6**	**-1.5**
	comp=Z,0.9nm,0.3s,baz=149,slow=5.8,SNR=4.1						
MJAR				LR	LR	02 34 19.3	
	comp=Z,12nm,18.0s,baz=85,slow=39						
MAJO	**Matsushiro**	**64.98**	**333**	*e*P	**P**	**02 02 32.6**	**-1.5**
MAJO	**Matsushiro**	**64.98**	**333**	*e*P	**P**	**02 02 32.6**	**-1.5**
QSPA	**South Pole Qui**	**68.11**	**180**	P	**P**	**02 02 54.3**	**+0.3**
	comp=Z,7.4nm,0.8s,baz=20,slow=3.8,SNR=18						
QSPA	**South Pole Qui**	**68.11**	**180**	*e*P	**P**	**02 02 54.2**	**+0.2**
	comp=Z,9.7nm,0.9s						
ASAJ	**Asahikawa**	**70.01**	**340**	P	**P**	**02 03 05.8**	**+0.1**
	comp=Z,20nm,0.9s,baz=184,slow=4.6,SNR=12						
ASAJ				LR	LR	02 29 19.3	
	comp=Z,31nm,20.7s,baz=138,slow=32						
ASAJ	**Asahikawa**	**70.01**	**340**	*e*P	**P**	**02 03 06.4**	**+0.7**
	comp=Z,29nm,1.1s						
KSRS	**Korea Array**	**70.53**	**326**	P	**P**	**02 03 08.6**	**-0.5**
	comp=Z,2.9nm,0.9s,baz=143,slow=6.2,SNR=8.0						
KS15	**Wonju Array Si**	**70.54**	**326**	*e*P	**P**	**02 03 08.6**	**-0.6**
KSAR	**Wonju Array Be**	**70.54**	**326**	P	**P**	**02 03 08.6**	**-0.6**
KSAR	**Wonju Array Be**	**70.54**	**326**	P	**P**	**02 03 08.6**	**-0.6**
NJ2	**Nanjing**	**71.90**	**317**	*e*P	**P**	**02 03 19.8**	**+2.3**
NJ2				pmax	pmax		
	comp=Z,18nm,0.7s						
PSI	**Prapat**	**72.51**	**280**	LR	LR	02 37 50.0	
	comp=Z,69nm,18.8s,baz=91,slow=38						
YSS	**Yuzh-Sakhalins**	**72.52**	**342**	⇓*e*P	**P**	**02 03 21.4**	**+0.6**
YSS				pmax	pmax		
	comp=Z,40nm,1.0s						
RPN	**Rapa Nui**	**73.38**	**113**	LR	LR	02 27 50.4	
	comp=Z,64nm,21.1s,baz=170,slow=29						
WHN	**Wuhan**	**73.90**	**313**	P	**P**	**02 03 29.8**	**+0.4**
USA0B	**Ussuriysk Arra**	**73.97**	**333**	*e*P	**P**	**02 03 29.8**	**+0.3**
	comp=Z,29nm,1.3s						
USRK	**Ussuriysk Ar.**	**73.97**	**333**	P	**P**	**02 03 29.7**	**+0.2**
	comp=Z,10.0nm,1.0s,baz=142,slow=4.9						
USRK				LR	LR	02 37 49.3	
	comp=Z,18nm,18.7s,baz=298,slow=37						
SKNT	**Sakolnakorn**	**74.35**	**296**	P	**P**	**02 03 31.5**	**-0.8**
	comp=Z,13nm,0.9s						
PETK	**Petropavlovsk-**	**75.37**	**353**	P	**P**	**02 03 36.7**	**-0.7**
	comp=Z,5.6nm,0.8s,baz=164,slow=7.3						
PETK				LR	LR	02 31 22.9	
	comp=Z,33nm,21.1s,baz=125,slow=32						
PETK	**Petropavlovsk-**	**75.37**	**353**	*e*P	**P**	**02 03 36.8**	**-0.6**
PEA1	**Petropavlovsk-**	**75.38**	**353**	*e*P	**P**	**02 03 36.7**	**-0.7**
NONG	**Nongkai**	**75.58**	**296**	P	**P**	**02 03 40.3**	**+1.0**
	comp=Z,39nm,0.9s,comp=Z,3μm						
MAW	**Mawson**	**75.78**	**202**	P	**P**	**02 03 41.0**	**+1.3**
	comp=Z,7.0nm,0.8s,baz=111,slow=7.0,SNR=7.6						
MAW				LR	LR	02 32 51.5	
	comp=Z,59nm,19.9s,baz=62,slow=32						
MAW	**Mawson**	**75.78**	**202**	*e*P	**P**	**02 03 41.0**	**+1.3**
	comp=Z,2.6nm,1.0s						
MAW	**Mawson**	**75.78**	**202**	*e*P	**P**	**02 03 41.0**	**+1.3**
MAW				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TYV	**Tymovskoe**	**76.09**	**343**	*e*P	**P**	**02 03 41.7**	**+0.2**
TYV				pmax	pmax		
	comp=Z,300nm,5.8s						
TYV				pmax	pmax		
	comp=Z,15nm,0.9s						
GYA	**Guiyang**	**77.06**	**306**	*e*P	**P**	**02 03 49.0**	**+1.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NANT	**Nan**	**77.96**	**296**	P	**P**	**02 03 53.7**	**+0.9**
	comp=Z,5.7nm,1.0s						
KLR	**Kul'dur**	**78.18**	**336**	*d i*P	**P**	**02 03 53.4**	**0.0**
NKL	**Nikolayevsk**	**78.68**	**343**	*e*P	**P**	**02 03 56.0**	**0.0**
NKL				pmax	pmax		
	comp=Z,34nm,1.0s						
BJI	**Beijing**	**78.81**	**322**	P	**P**	**02 03 57.3**	**+0.3**
BJI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
CM31	**Chiang Mai Arr**	**79.28**	**295**	*e*P	**P**	**02 04 01.1**	**+1.0**
CMAR	**Chiang Mai Arr**	**79.28**	**295**	P	**P**	**02 04 01.1**	**+1.0**
	comp=Z,6.2nm,0.8s,baz=134,slow=3.9,SNR=25						
CMAR				LR	LR	02 42 44.5	
	comp=Z,18nm,18.7s,baz=178,slow=38						
CMAR	**Chiang Mai Arr**	**79.28**	**295**	*e*P	**P**	**02 04 01.3**	**+1.2**
CMAR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KMI	**Kunming**	**79.39**	**303**	P	**P**	**02 04 02.0**	**+1.1**
KMI				pmax	pmax		
	comp=Z,34nm,0.6s						
KMI				pmax	pmax		
	comp=Z,130nm,4.5s						
KMI				LR	LR		
	comp=Z,100nm,4.3s						
KMI				LR	LR		
	comp=Z,100nm,5.8s						
KMI				LR	LR		
	comp=Z,87nm,8.7s						
CHTO	**Chiang Mai**	**79.44**	**295**	P	**P**	**02 04 02.0**	**+1.0**
	comp=Z,79nm,1.2s						
CHTO	**Chiang Mai**	**79.44**	**295**	*e*P	**P**	**02 04 01.9**	**+1.0**
	comp=Z,23nm,1.1s						
CHTO	**Chiang Mai**	**79.44**	**295**	*e*P	**P**	**02 04 01.9**	**+1.0**
CHTO				pmax	pmax		
	comp=Z,23nm,1.1s						
CMAI	**Chiengmai2**	**79.87**	**296**	P	**P**	**02 04 04.6**	**+1.1**
	comp=Z,112nm,1.6s,comp=Z,6μm						
CD2	**Chengdu**	**81.59**	**308**	P	**P**	**02 04 12.5**	**+0.2**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC	**Hu-ho-hao-te**	**82.03**	**320**	*e*P	**P**	**02 04 17.0**	**+2.5**
HHC				pP	PcP	02 04 22.0	+2.1
HHC				S	**S**	**02 14 27.0**	**+0.1**
HHC				sS	ScS	02 14 41.8	-1.2
HHC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,45nm,5.7s						
SYO	**Syowa Base**	**82.23**	**196**	⇑*e*P	**P**	**02 04 13.0**	**-2.0**
SYO	**Syowa Base**	**82.23**	**196**	⇑*e*PcP	**PcP**	**02 04 19.6**	**-0.7**
SYO	**Syowa Base**	**82.23**	**196**	⇑*e*pP	pP	02 04 21.4	-3.5
HIA	**Hailar**	**83.26**	**330**	⇑*e*P	**P**	**02 04 20.1**	**-0.5**
HIA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
ZEA	**Zeya**	**83.48**	**337**	*e*P

RCWM	Renegade Canyo	90.21	51	*e*P		P	02 04 57.5	+2.6
PAHR	Pah Rah Range	90.73	47	*e*P		P	02 04 56.9	-0.5
	comp=Z,7.2nm,1.3s							
RYN	Ryan	90.82	48	*e*P		P	02 04 57.8	0.0
	comp=Z,9.4nm,1.4s							
NV01	Mina Array Sit	90.88	49	*e*P		P	02 04 57.0	-1.1
NVAR	Mina Array Bea	90.88	49	P		P	02 04 56.6	-1.6
	comp=Z,1.7nm,0.8s,baz=221,slow=8.6,SNR=12							
NVAR				e	LR	LR	02 37 44.8	
	comp=Z,71nm,21.1s,baz=103,slow=30							
LPIG	La Paz	90.93	64	LR		LR	02 36 54.2	
	comp=Z,88nm,21.6s,baz=238,slow=30							
NV11	Mina Array Sit	90.98	49	*e*P		P	02 04 58.0	-0.6
	comp=Z,0.4nm,1.1s							
K05A	Summer Lake	91.17	44	*e*P		P	02 04 59.5	+0.1
	comp=Z,6.9nm,1.1s							
KVN	Kaiserville	91.31	48	*e*P		P	02 04 59.5	-0.6
	comp=Z,5.0nm,1.1s							
KVN	Kaiserville	91.31	48	*e*P		P	02 04 59.5	-0.6
KVN					pmax	pmax		
	comp=Z,5.0nm,1.1s							
DHY	Denali Highway	91.49	18	*e*P		P	02 05 01.8	+1.5
	comp=Z,6.7nm,1.0s							
PINE	Pine Mountain	91.66	43	*e*P		P	02 05 01.3	-0.3
	comp=Z,6.2nm,1.0s							
ZAK	Zakamensk	92.27	324	*e*P		P	02 05 03.0	-1.1
ZAK					pmax	pmax		
	comp=Z,5.0nm,1.3s							
TLY	Talaya	92.77	326	*i* P		P	02 05 05.6	-0.7
TLY					pmax	pmax		
	comp=Z,7.0nm,1.4s							
ILAR	Eielson Array	92.93	17	P		P	02 05 06.0	-0.7
	comp=Z,0.5nm,0.8s,baz=249,slow=4.7,SNR=4.2							
ILAR					LR	LR	02 40 31.4	
	comp=Z,36nm,20.5s,baz=259,slow=31							
ILB	Eielson Array	92.93	17	*e*P		P	02 05 06.0	-0.7
U15A	North Rim	94.32	53	*e*P		P	02 05 15.5	+1.3
	comp=Z,3.3nm,1.0s							
ANMO	Albuquerque	98.15	56	LR		LR	02 44 35.2	
	comp=Z,43nm,18.0s,baz=236,slow=32							
TXAR	Lajitas Array	98.39	62	P		P	02 05 32.3	-0.3
	comp=Z,0.3nm,0.9s,baz=242,slow=1.9,SNR=2.3							
PDAR	Pinedale Array	98.73	47	LR		LR	02 42 45.7	
	comp=Z,27nm,20.1s,baz=256,slow=31							
WMQ	Urumqi	98.80	314	P		Pdif	02 05 34.8	+0.8
WMQ				pP		pP	02 05 39.5	-4.5
WMQ				sP		sP	02 05 42.5	-5.1
WMQ				LR		LR		
	comp=Z,67nm,20.5s							
WMQ				LR		LR		
	comp=Z,87nm,23.3s							
WMQ				LR		LR		
	comp=Z,56nm,24.7s							
CPRX	Cap Rock	99.50	58	*e*P		Pdif	02 05 36.2	-1.3
DGZ	Jazzator, Alta	101.10	319	⇑*e*P		Pdif	02 05 43.9	-0.4
DGZ					pmax	pmax		
	comp=Z,1.0nm,0.9s							
MK32	Makanchi Array	103.39	315	*e*Pdif		Pdif	02 05 53.8	-0.6
MKAR	Makanchi Array	103.39	315	Pdiff		Pdif	02 05 53.8	-0.6
	comp=Z,0.8nm,0.8s,baz=100,slow=5.9,SNR=6.3							
ARU	Arti	119.19	323	*i* PKIKP		PKPdf	02 10 42.4	-0.4
ARU							02 17 53.2	
PTGA	Pitinga	127.36	109	*e*PKPdf		PKPdf	02 10 59.4	-0.3
ARA0	ARCESS Array S	127.58	345	*e*PKPdf		PKPdf	02 10 57.8	-0.7
ARCES	ARCESS Array B	127.58	345	PKP		PKPdf	02 10 57.8	-0.7
	comp=Z,4.1nm,0.9s,baz=76,slow=3.8,SNR=6.3							
ARCES	ARCESS Array B	127.58	345	*e*PKIKP		PKPdf	02 10 58.2	-0.3
ARCES					pmax	pmax		
	comp=Z,4.0nm,0.9s							
KIV	Kislovodsk	130.73	310	*i* PKIKP		PKPdf	02 11 06.1	+0.7
KIV					pmax	pmax		
	comp=Z,6.0nm,1.0s							
FIA0	FINESS Array S	132.93	337	*e*PKPdf		PKPdf	02 11 09.0	+0.2
FIA0	FINESS Array S	132.93	337	*e*PKIKP		PKPdf	02 11 09.0	+0.2
FINES	FINESS Array B	132.93	337	PKP		PKPdf	02 11 09.0	+0.2
	comp=Z,2.7nm,0.9s,baz=39,slow=5.3,SNR=4.5							
KIEV	Kiev	137.44	322	⇓*e*PKIKP		PKPdf	02 11 17.0	-0.6
NB2	NORSAR Subarra	137.95	344	PKPdf		PKPdf	02 11 18.7	+0.4
	comp=Z,2.7nm,1.1s,baz=31,slow=1.9							
BIZ	Bicaz	140.98	319	⇓*i* P		PKPdf	02 11 26.5	+2.3
MLR	Muntele Rosu	141.72	317	⇑*i* P		PKPdf	02 11 29.7	+3.9
MLR	Muntele Rosu	141.72	317	⇑PKIKP		PKPdf	02 11 29.7	+3.9
UZH	Uzhgorod	142.37	323	*e*PKHKP		PKPpre	02 11 20.4	
UZH				*e*			02 11 24.6	
UZH				*e*			02 11 33.6	
DRGR		143.09	320	⇑*i* P		PKPbc	02 11 25.3	+0.3
DRGR		143.09	320	⇑PKIKP		PKPbc	02 11 25.3	+0.3
PSZ	Piszkesteto	144.09	324	⇑*e*PKPdf		PKPbc	02 11 28.0	+0.1
PSZ	Piszkesteto	144.09	324	*e*PKPdf		PKPab	02 11 26.8	-0.6
PSZ	Piszkesteto	144.09	324	*e*PKIKP		PKPab	02 11 26.8	-0.6
MORC	Moravsky Berou	144.18	328	*e*PKP		PKPbc	02 11 28.0	0.0
HERR	Herculane	144.22	318	⇓*i* P		PKPab	02 11 27.9	+0.1
VYHS	Vyhne	144.32	325	*e*PKIKP		PKPab	02 11 28.2	+0.1
VYHS	Vyhne	144.32	325	*e*PKP		PKPab	02 11 28.2	+0.1
BZS	Buzias	144.35	319	⇑*i* P		PKPab	02 11 27.4	-0.9
BZS	Buzias	144.35	319	⇑PKIKP		PKPab	02 11 27.4	-0.9
MDVR	Moldovita	144.70	318	⇑*i* P		PKPab	02 11 29.5	-0.2
JAVC	Velka Javorina	144.70	327	*e*PKP		PKPdf	02 11 31.3	+0.5
VTS	Vitosha	144.73	314	⇓*i* P		PKPab	02 11 29.9	-0.1
VTS	Vitosha	144.73	314	*e*PKPdf		PKPab	02 11 29.8	-0.2
VTS	Vitosha	144.73	314	*e*PKIKP		PKPab	02 11 29.8	-0.2
VRAC	Vranov	144.96	328	*e*PKP		PKPab	02 11 30.3	-0.2
PVCC	Panska Ves	145.07	331	*e*PKP		PKPdf	02 11 31.2	-0.1
PVCC	Panska Ves	145.07	331	*e*PKIKP		PKPdf	02 11 31.2	-0.1
BRG	Berggiesshubel	145.10	332	*i* PKP		PKPbc	02 11 30.7	-0.2
	comp=Z,49nm,1.0s							
BRG	Berggiesshubel	145.10	332	*i* PKIKP		PKPbc	02 11 30.7	-0.2
BRG					pmax	pmax		
	comp=Z,49nm,1.0s							
CLL	Collm	145.19	333	⇓*i* PKPdf		PKPbc	02 11 30.8	-0.4
	comp=Z,49nm,1.0s							
CLL				*i* (PKiKP)			02 11 36.9	
CLL	Collm	145.19	333	*e*PKPbc		PKPbc	02 11 30.6	-0.4
CLL	Collm	145.19	333	*e*PKIKP		PKPbc	02 11 30.7	-0.4
MODS	Modra-Piesok	145.21	326	*e*PKIKP		PKPbc	02 11 30.3	-1.0
MODS	Modra-Piesok	145.21	326	*e*PKP		PKPbc	02 11 30.3	-1.0
KRUC	Moravsky	145.22	328	*e*PKP		PKPbc	02 11 30.9	-0.4
GOPC	GO Pecny, Ondr	145.41	330	*e*PKP		PKPbc	02 11 31.5	-0.4
GOPC	GO Pecny, Ondr	145.41	330	*e*PKIKP		PKPbc	02 11 31.5	-0.4
PRU	Pruhonice	145.47	330	*e*PKP		PKPbc	02 11 32.1	0.0
PRU				*ep*PKP		PKiKP	02 11 35.4	-0.6
PRU	Pruhonice	145.47	330	*e*PKIKP		PKPbc	02 11 32.1	0.0
SOP	Sopron	146.02	326	⇓*e*P		PKPdf	02 11 33.4	+0.4
DIVS	Divibare	146.11	318	*e*PKPdf		PKPdf	02 11 33.3	-0.1
EKA	Eskdalemuir Ar	146.13	352	PKPbc		PKPdf	02 11 32.9	-0.1
	comp=Z,16nm,0.9s,baz=353,slow=2.5,SNR=36							
NKC	Novy Kostel	146.22	332	*e*PKP		PKPab	02 11 34.8	-0.3
NKC	Novy Kostel	146.22	332	*e*PKP2		PKPab	02 11 34.8	-0.3
CONA	Conrad Observa	146.23	327	*e*PKPab		PKPbc	02 11 34.3	-0.3
	comp=Z,35nm,1.5s,SNR=28							
KHC	Kasperske Hory	146.52	330	*e*PKP		PKPbc	02 11 35.7	+0.3
KHC	Kasperske Hory	146.52	330	*e*PKPdf		PKPdf	02 11 33.1	-0.8
KHC	Kasperske Hory	146.52	330	*e*PKIKP		PKPdf	02 11 33.1	-0.8
GEC2	GERESS Array S	146.66	330	*e*PKPdf		PKPdf	02 11 34.4	+0.2
GEC2	GERESS Array S	146.66	330	*e*PKP2		PKPdf	02 11 34.4	+0.2
GERES	GERESS Array B	146.66	330	PKPbc		PKPbc	02 11 35.8	-0.1
	comp=Z,12nm,0.8s,baz=33,slow=3.2,SNR=86							
GERES	GERESS Array B	146.66	330	*e*PKP2		PKPdf	02 11 34.5	+0.3
GERES					pmax	pmax		
	comp=Z,12nm,0.8s							
GEA0	GERESS Array S	146.67	330	*e*PKPdf		PKPdf	02 11 33.8	-0.5
FNA	Florina	146.73	312	*e*PKPdf		PKPbc	02 11 36.0	-0.3
FNA	Florina	146.73	312	*e*PKP2		PKPbc	02 11 36.0	-0.3
ARSA	Arzberg	146.84	326	*e*PKPbc		PKPbc	02 11 35.9	-0.5
	comp=Z,5.8nm,1.4s							
MOA	Molln	147.08	328	*e*PKPab		PKPbc	02 11 36.8	-0.2
	comp=Z,7.6nm,1.1s							
GRFO	Grafenberg	147.15	333	*e*PKPdf		PKPbc	02 11 37.2	+0.1
GRFO	Grafenberg	147.15	333	*e*PKP2		PKPbc	02 11 37.2	+0.1
BLY	Banja Luka	147.45	321	⇓*i* P		PKPbc	02 11 37.7	-0.4
BLY	Banja Luka	147.45	321	*e*PKPbc		PKPbc	02 11 38.3	+0.2
SOKA	Soboth	147.47	326	*e*PKPbc		PKPbc	02 11 37.6	-0.6
	comp=Z,15nm,1.1s,SNR=11							
OBKA	Obir	147.83	326	*e*PKPbc		PKPbc	02 11 38.5	-0.7
	comp=Z,7.8nm,1.1s							
KBA	Koelnbreinsper	148.06	328	*e*PKPbc		PKPbc	02 11 39.5	-0.4
	comp=Z,14nm,1.0s,SNR=7.1							
MYKA	Terra Mystica	148.22	327	*i* PKPbc		PKPbc	02 11 39.4	-0.8
	comp=Z,10nm,1.1s							
BEBN	Eben Emael	148.34	339	⇓PKPbc		PKPbc	02 11 39.6	-0.6
BEBN				⇑PKPab		PKPab	02 11 43.2	-0.2
MEM	Membach	148.39	339	⇓PKP		PKPbc	02 11 40.0	-0.4
UDBI	Udbina	148.40	322	P		PKPbc	02 11 40.2	-0.5
ABTA	Abfaltersbach	148.71	328	*e*PKPbc		PKPbc	02 11 40.2	-1.3
	comp=Z,14nm,0.9s,SNR=7.6							
WATA	Walderalm	148.74	330	*i* PKPbc		PKPbc	02 11 41.2	-0.4
	comp=Z,12nm,1.0s,SNR=7.2							
UCC	Uccle	148.75	341	⇓PKPbc		PKPbc	02 11 40.9	-0.3
WTTA	Wattenberg	148.76	329	*i* PKPbc		PKPbc	02 11 41.4	-0.4
	comp=Z,18nm,1.1s,SNR=5.7							
BCLA	Clavier	148.78	340	⇑PKPbc		PKPbc	02 11 41.1	-0.3
BCLA				⇑PKPab		PKPab	02 11 44.6	-0.6
NVLJ	Novalja	148.89	323	P		PKPbc	02 11 40.9	-0.9
MOTA	Moosalm	148.95	330	*e*PKPbc		PKPbc	02 11 41.6	-0.6
	comp=Z,18nm,0.8s,SNR=14							
RETA	Reutte	149.01	331	*i* PKPbc		PKPbc	02 11 41.6	-0.5
	comp=Z,12nm,1.1s,SNR=5.7							
WLF	Walferdange	149.14	338	⇑PKPbc		PKPbc	02 11 42.7	+0.3
WLF				⇑PKPab		PKPab	02 11 47.4	+0.7
WLF	Walferdange	149.14	338	*e*PKPbc		PKPbc	02 11 42.9	+0.6
FETA	Feichten	149.37	330	*e*PKPbc		PKPbc	02 11 42.9	-0.3
	comp=Z,30nm,1.1s,SNR=13							
BFO	Black Forest	149.41	334	*e*PKPbc		PKPbc	02 11 42.4	-0.7
BFO	Black Forest	149.41	334	*e*PKP2		PKPbc	02 11 42.4	-0.7
DAVA	Damuels	149.56	331	*i* PKPbc		PKPbc	02 11 43.1	-0.6
	comp=Z,15nm,0.9s,SNR=6.7							
FUORN	Ofenpass-Fuorn	149.88	330	*e*PKPdf		PKPdf	02 11 39.8	0.0
DAVOX	Davos/Dischmat	149.94	330	PKPbc		PKPbc	02 11 44.5	-0.2
	comp=Z,25nm,0.9s,baz=37,slow=5.3,SNR=33							
ECH	Echery	149.97	335	*e*PKPbc		PKPbc	02 11 44.1	-0.4
ECH	Echery	149.97	335	*e*PKP2		PKPbc	02 11 44.1	-0.4
TUE	Stuetta	150.41	331	*e*PKPbc		PKPbc	02 11 45.4	-0.4
AQU	L'Aquila	151.08	320	*e*PKPbc		PKPbc	02 11 47.1	-0.3
AQU				*e*PKPab		pPKPdf	02 11 52.9	+1.1
AQU	L'Aquila	151.08	320	*e*PKIKP		PKPbc	02 11 47.1	-0.3
AQU				*e*			02 11 52.9	
SENIN	Lac Senin/Sane	151.40	333	*e*PKPbc		PKPbc	02 11 47.6	-0.6
BNI	Bardonecchia	152.69	332	*e*PKPbc		PKPbc	02 11 50.7	-0.4
BNI	Bardonecchia	152.69	332	*e*PKIKP		PKPbc	02 11 50.7	-0.4
SSB	Saint Sauveur	153.41	335	*e*PKPbc		PKPbc	02 11 52.0	-0.5
SSB				*e*PKPab		pPKPbc	02 12 03.5	+0.8
SSB	Saint Sauveur	153.41	335	*e*PKIKP		PKPbc	02 11 52.0	-0.5
SSB				*e*			02 12 03.5	
ES19	SONSECA Array	161.26	342	*e*PKPab		PKPab	02 12 38.2	-0.4
ESDC	Sonseca Array	161.30	342	PKPab		PKPab	02 12 38.0	-0.8
	comp=Z,1.0nm,0.7s,baz=7.2,slow=3.4,SNR=8.1							
TAM	Tamanrasset	164.53	276	*e*PKPab		PKPab	02 12 54.1	+0.3
TAM	Tamanrasset	164.53	276	*e*PKP2		PKPab	02 12 54.1	+0.3
TOA0	Torodi Ar. Sit	164.93	237	*e*PKPdf		PKPdf	02 11 58.2	-0.8
TORD	Torodi Ar. Bea	164.93	237	PKP		PKPdf	02 11 58.1	-1.0
	comp=Z,1.9nm,0.9s,baz=102,slow=1.9							
TORD					PKPab	PKPab	02 12 54.5	-0.9
	baz=121,slow=4.7							
TOA1	Torodi Ar. Sit	164.94	237	*e*PKPdf		PKPdf	02 11 58.1	-1.0
TOA1				*e*PKPab		PKPab	02 12 54.5	-0.9
MDT	Midelt	167.72	333	PKPab		PKPab	02 13 06.6	-0.6
	comp=Z,1.7nm,0.8s,baz=44,slow=3.1,SNR=5.6							
KOWA	Kowa	169.94	224	PKPab		PKPab	02 13 17.5	+0.1
	comp=Z,3.0nm,0.9s,baz=158,slow=5.4,SNR=4.1							

NIED ***28*** *01:54:00,36°.90N×141°.20E,h20km,Mw3.9 Best double couple: M₀8.37000×10¹⁴ NP1:φ₀=15.00000°,δ59.00000°, λ-154.00000°. NP2:φ₀=271.00000°,δ68.00000°, λ-34.00000°.*

ISCJB ***28*** *01:54:08.2±1.1,36°.86N±0°.03×141°.27E±0°.07,h18km±7km, mb3.6/6,MS3.1/1,Error ellipse: s-maj=9.4km s-min=5.2km az=14.6*

JMA ***28*** *01:54:10.7±0.1,36°.88N×141°.07E,h31km±1km,M3.8*

JMA Felt II J1.

IDC ***28*** *01:54:16.3±2.8,36°.74N×140°.84E,h60km±24km,mb3.4/6, mb1 3.6/9,mb1mx3.3/67,mbtmp3.7/9,ML3.4/2,MS3.0/2, Ms1 3.0/2,ms1mx2.5/35,Error ellipse: s-maj=31.5km s-min=13.1km az=77.0*

ISC 28 01:54:09.7±1.5,36°.87N±0°.04×141°.14E±0°.06,h10km±9km, n27,σ1¶41/31,mb3.6/6,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.35	311	P	Pb	01 54 18.2	+0.1
ONAJ				S	Sg	01 54 23.1	+1.6
JHO	Hitachi	0.52	240	P	Pb	01 54 20.7	-0.2
JHO				S	Sb	01 54 27.9	-0.6
JFK	Kawauchi	0.54	337	P	Pb	01 54 20.9	-0.3
JFK				S	Sg	01 54 27.9	+0.7
JFT	Otama	0.91	316	P	Pg	01 54 27.2	0.0
JFT				*e*S	Sg	01 54 38.8	-0.2
JSB	Shiboa	0.98	276	P	Pb	01 54 28.8	+0.1
JSB				S	Sg	01 54 41.1	-0.2
JYT	Yasato	0.99	230	P	Pb	01 54 27.8	-1.1
JYT				S	Sg	01 54 40.4	-1.3
JMM	Marumori	1.03	345	P	Pg	01 54 28.4	-1.1
JMM				S	Sg	01 54 41.3	-1.6
JFY	Yanaizu	1.26	295	P	Pn	01 54 32.7	-0.6
JFY				S	Sb	01 54 48.5	-1.3
MJAR	Matsushiro Arr	2.38	263	P	Pn	01 54 48.7	+0.1
	7.9nm,0.3s,baz=90,slow=14,SNR=43						
MJAR				S	Sb	01 55 21.4	-0.5
	20nm,0.3s,baz=58,slow=20,SNR=7.9						
MJAR				LR	LR	01 55 36.3	
	comp=Z,40nm,21.0s,baz=65,slow=38						
MAT	Matsushiro	2.38	263	P	Pn	01 54 49.1	+0.5
MAT				S	Sn	01 55 19.7	+1.9
JHJ	Hachijo jima 2	3.91	197	P	Pn	01 55 10.6	+1.0
	13nm,0.3s,baz=97,slow=17,SNR=15						
JHJ				S	Sn	01 55 54.3	-1.2
	36nm,0.3s,baz=90,slow=20,SNR=8.0						
ASAJ	Asahikawa	7.32	8	P	Pn	01 55 54.5	-2.0
	1.5nm,0.3s,baz=153,slow=18,SNR=2.9						
ASAJ				S	Sn	01 57 17.1	-2.6
	0.4nm,0.3s,baz=131,slow=20,SNR=2.7						
JNU	Nakatsue	9.21	249	LR	LR	02 00 09.7	
	comp=Z,54nm,18.9s,baz=99,slow=40						
USRK	Ussuriysk Ar.	10.10	319	P	Pn	01 56 38.7	+4.1
	baz=132,slow=14						
YAK	Yakutsk	26.18	348	LR	LR	02 10 26.5	
	comp=Z,46nm,18.3s,baz=256,slow=37						
SONM	Songino Array	27.69	304	P	P	01 59 57.9	0.0
	0.3nm,0.3s,baz=96,slow=10,SNR=2.7						
H11N2	WAKE ISLAND Hy	28.26	120	T	T	02 29 37.0	
	baz=313,slow=75,SNR=437						
H11N1	WAKE ISLAND Hy	28.27	120	T	T	02 29 37.6	
	baz=313,slow=75,SNR=509						
H11N3	WAKE ISLAND Hy	28.28	120	T	T	02 29 38.4	
	baz=313,slow=75,SNR=398						
H11S1	WAKE ISLAND Hy	28.96	122	T	T	02 30 28.1	
	baz=315,slow=76,SNR=286						
H11S3	WAKE ISLAND Hy	28.96	122	T	T	02 30 32.4	
	baz=315,slow=76,SNR=218						
H11S2	WAKE ISLAND Hy	28.98	122	T	T	02 30 29.4	
	baz=315,slow=76,SNR=201						
MKAR	Makanchi Array	44.02	302	P	P	02 02 16.6	-0.6
	0.4nm,0.7s,baz=82,slow=8.8,SNR=4.9						
KURBB	Kurchatov Arra	45.93	308	P	P	02 02 31.7	-0.7
	1.1nm,0.8s,baz=85,slow=8.3,SNR=9.7						
ILAR	Eielson Array	49.75	32	P	P	02 03 03.9	+2.1
	0.2nm,0.6s,baz=275,slow=6.1,SNR=4.1						
WRA	Warramunga Arr	56.87	188	P	P	02 03 53.4	-1.2
	1.1nm,0.4s,baz=5.1,slow=7.2,SNR=40						
ASAR	Alice Springs	60.60	188	P	P	02 04 20.0	-0.5
	0.7nm,0.9s,baz=12,slow=9.5,SNR=4.9						

SKO 28 02:09:59.5,41°.82N×22°.82E,h1km,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STIP	Stip	0.49	255	*e*Pg	Pg	02 10 04.6	-4.2
STIP				*i* Sg	Sg	02 10 08.7	-6.5

IDC 28 02:16:18.1±5.9,21°.01S×169°.14E,h0km,mb3.5/2, mb1 3.8/2,mb1mx3.5/41,mbtmp3.5/2,MS3.8/1,Ms1 3.8/1, ms1mx2.6/28,Error ellipse: s-maj=266.2km s-min=41.8km az=151.0,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	2.72	247	Pn	Pn	02 16 55.1	-8.1
	37nm,0.3s,baz=115,slow=13,SNR=88						
DZM				Sn	Sn	02 17 21.3	-15
	44nm,0.3s,baz=310,slow=23,SNR=12						
WRA	Warramunga Arr	32.58	266	P	P	02 22 51.5	0.0
	0.6nm,0.9s,baz=97,slow=8.4,SNR=5.1						
ASAR	Alice Springs	32.65	259	P	P	02 22 51.9	-0.1
	0.6nm,0.7s,baz=77,slow=9.6,SNR=7.5						
TGY	Tagaytay City	58.81	302	LR	LR	02 50 06.0	
	comp=Z,83nm,19.9s,baz=120,slow=34						
EKA	Eskdalemuir Ar	145.25	352	PKPbc	PKPbc	02 35 56.4	-0.8
	1.4nm,0.9s,baz=9.9,slow=4.5,SNR=3.5						
GERES	GERESS Array B	145.99	331	PKPbc	PKPdf	02 35 59.0	-0.1
	0.6nm,0.6s,baz=48,slow=1.5,SNR=5.6						

NNC 28 02:45:38.2±8.8,36°.88N×70°.22E,h0km,mb3.5,mpv3.2, 3C-4D,Error ellipse: s-maj=68.0km s-min=58.3km az=163.0,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	4.05	39	⇑Pn	Pn	02 46 41.3	-0.3
	6.3nm,0.3s						
SFK				⇓Sn	Sn	02 47 30.6	+0.6
	5.3nm,0.4s						
MNAS	Manas	5.87	17	⇑Pn	Pn	02 47 07.3	+0.8
	0.3nm,0.4s						
MNAS				⇓Sn	Sn	02 48 16.0	+1.4
	1.6nm,0.3s						
KK31	Karatay Array	6.22	2	⇓Pn	Pn	02 47 12.9	+1.7
	0.4nm,0.4s,baz=180,slow=13						
KK31				⇓Sn	Sn	02 48 26.4	+3.4
	0.4nm,0.2s,baz=190,slow=26						
AAK	Ala-Archa	6.62	28	⇑Pn	Pn	02 47 16.4	-0.6
	1.3nm,0.5s						
AAK				Sn	Sn	02 48 31.6	-1.6
	1.5nm,0.5s						

IDC 28 03:14:32.6±8.2,6°.21N×92°.97E,h0km,mb3.5/3,mb1 3.7/3, mb1mx3.3/70,mbtmp3.5/3,Error ellipse: s-maj=400.1km s-min=30.8km az=58.0,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	41.46	349	P	P	03 22 21.2	-0.1
	0.3nm,0.4s,baz=169,slow=8.3,SNR=3.6						
WRA	Warramunga Arr	48.28	124	P	P	03 23 16.1	+0.1
	0.4nm,0.9s,baz=305,slow=8.4,SNR=5.0						
ASAR	Alice Springs	49.78	128	P	P	03 23 27.1	-0.3
	0.5nm,0.4s,baz=294,slow=7.8,SNR=6.8						

IDC 28 03:16:43.7±0.8,13°.89S×65°.41E,h0km,mb3.7/7, mb1 3.9/8,mb1mx3.6/69,mbtmp3.8/8,ML3.8/1,MS3.3/5, Ms1 3.2/5,ms1mx2.7/61,Error ellipse: s-maj=32.0km s-min=20.7km az=8.0,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08N3	Diego Garcia H	9.29	37	T	T	03 28 33.6	
	baz=215,slow=76,SNR=403						
H08S1	Diego Carcia H	9.30	49	T	T	03 28 31.3	
	baz=226,slow=75,SNR=15						
H08N1	Diego Carcia H	9.30	37	T	T	03 28 37.3	
	baz=215,slow=76,SNR=391						
H08N2	Diego Garcia H	9.31	37	T	T	03 28 36.6	
	baz=215,slow=76,SNR=393						
H08S2	Diego Carcia H	9.32	49	T	T	03 28 36.2	
	baz=226,slow=75,SNR=62						
H08S3	Diego Garcia H	9.32	49	T	T	03 28 37.1	
	baz=226,slow=75,SNR=147						
OPO	Ambohidratompo	18.11	253	P	P	03 20 58.2	+0.7
	0.3nm,0.3s,baz=91,slow=14,SNR=3.4						
PALK	Pallekele	25.93	37	LR	LR	03 30 09.2	
	comp=Z,62nm,19.4s,baz=176,slow=31						
LSZ	Lusaka	36.03	263	P	P	03 23 46.1	-1.1
	3.5nm,1.1s,baz=106,slow=7.4,SNR=4.1						
PSI	Prapat	37.14	66	LR	LR	03 35 59.4	
	comp=Z,79nm

979nm,0.4s
SHO A A 03 20 41.0
905nm,0.4s
SHO Shikotan 1.57 313 *d iPN* **Pn 03 20 22.1 -2.3**
SHO *i* S **Sn 03 20 40.8 -2.8**
SHO pmax pmax
comp=E,71nm,0.3s
SHO pmax pmax
comp=Z,115nm,0.3s
SHO pmax pmax
comp=N,27nm,0.1s
SHO smax smax
comp=N,979nm,0.4s
SHO smax smax
comp=E,905nm,0.4s
NEM2 Nemuro 2 2.04 287 P **Pn 03 20 29.0 -1.8**
NEM2 *e*S **Sn 03 20 52.8 -2.2**
YUK Yuzh-Kuril'sk 2.23 304 *i P* **Pn 03 20 32.0 -1.5**
YUK AMB AMB 03 20 34.0
comp=E,9.0nm,0.4s
YUK AMB AMB 03 20 34.0
comp=E,25nm,0.4s
YUK AMB AMB 03 20 34.0
comp=E,88nm,0.4s
YUK *i* S **Sn 03 20 56.8 -3.0**
YUK A A 03 20 58.0
comp=E,320nm,0.4s
YUK A A 03 20 58.0
comp=E,562nm,0.4s
YUK Yuzh-Kuril'sk 2.23 304 *c iPN* **Pn 03 20 32.2 -1.3**
YUK *i* S **Sn 03 20 57.4 -2.4**
YUK pmax pmax
comp=Z,88nm,0.2s
YUK pmax pmax
comp=N,9.0nm,0.1s
YUK pmax pmax
comp=E,25nm,0.3s
YUK smax smax
comp=E,339nm,0.4s
YUK smax smax
comp=N,241nm,0.6s
GRPR Tuman 2.27 302 *e*P **Pn 03 20 32.0 -1.9**
GRPR *i* S **Sn 03 20 57.0 -3.6**
GRPR A A 03 20 58.0
comp=N,381nm,0.4s
GRPR A A 03 20 58.0
comp=N,390nm,0.4s
GRPR Tuman 2.27 302 *e*PN **Pn 03 20 32.3 -1.6**
LAGR Lagunnoye 2.29 304 *e*P **Pn 03 20 33.0 -1.3**
LAGR *i* S **Sn 03 20 58.0 -3.2**
LAGR A A 03 21 05.0
comp=N,620nm,0.6s
LAGR A A 03 21 05.0
comp=N,395nm,0.6s
LAGR Lagunnoye 2.29 304 PN **Pn 03 20 33.7 -0.6**
LAGR *i* S **Sn 03 20 58.6 -2.6**
LAGR smax smax
comp=N,620nm,0.6s
LAGR smax smax
comp=E,395nm,0.6s
GLVR Golovnino 2.31 295 *e*P **Pn 03 20 34.0 -0.6**
GLVR *i* S **Sn 03 20 59.0 -2.8**
GLVR A A 03 21 06.0
comp=E,313nm,0.3s
GLVR A A 03 21 06.0
comp=E,124nm,0.3s
GLVR Golovnino 2.31 295 PN **Pn 03 20 34.7 +0.1**
GLVR *i* S **Sn 03 20 59.8 -2.0**
GLVR smax smax
comp=N,313nm,0.3s
GLVR smax smax
comp=E,124nm,0.3s
KUR Kuril'sk 2.46 351 *e*P **Pn 03 20 34.6 -2.0**
KUR *i* S **Sn 03 21 00.9 -4.4**
KUR A A 03 21 03.6
comp=E,123nm,0.2s
KUR A A 03 21 03.6
comp=E,125nm,0.2s
KUR Kuril'sk 2.46 351 *e*PN **Pn 03 20 34.7 -1.9**
KUR *e*S **Sn 03 21 02.9 -2.4**
KUR smax smax
comp=N,69nm,0.5s
KUR smax smax
comp=E,123nm,0.5s
JRA Rausu 2.66 296 P **Pn 03 20 38.2 -1.1**
JRA *e*S **Sn 03 21 08.5 -1.8**
JAK Akkeshi 2.74 275 P **Pn 03 20 39.3 -1.2**
JAK *e*S **Sn 03 21 11.0 -1.4**
JAR Ashorobuto 3.44 280 P **Pn 03 20 49.2 -1.0**
JAR *e*S **Sn 03 21 27.7 -2.0**
JTKR Abashiri--Toko 3.49 291 P **Pn 03 20 50.2 -0.5**
JCH Churui 3.73 269 P **Pn 03 20 53.7 -0.4**
JCH *e*S **Sn 03 21 35.0 -1.8**
JFR Furan 4.29 277 P **Pn 03 21 02.2 +0.4**
JFR *e*S **Sn 03 21 49.5 -1.1**
JKA Kamikawa-asahi 4.43 289 *e*P **Pn 03 21 06.3 +2.5**
ASAJ Asahikawa 4.44 289 Pn **Pn 03 21 06.3 +2.5**
comp=E,2.3nm,0.3s,baz=106,slow=9.7,SNR=15
ASAJ Sn **Sn 03 21 57.6 +3.4**
comp=E,0.2nm,0.3s,baz=156,slow=18,SNR=3.9
ASAJ LR LR 03 22 58.6
comp=E,30nm,19.4s,baz=198,slow=40
JKB Kayabe 5.55 263 P **Pn 03 21 18.9 -0.2**
JKB *e*S **Sn 03 22 18.6 -3.1**
JOT Ohata 5.67 258 *e*S **Sn 03 22 20.6 -3.9**
JANG Nango 5.72 247 P **Pn 03 21 19.2 -2.3**
JANG *e*S **Sn 03 22 20.3 -5.6**
YSS Yuzh-Sakhalins 5.78 318 *e*P **Pn 03 21 20.7 -1.5**
JOM Ohasama 6.33 241 P **Pn 03 21 28.2 -1.6**
JOM *e*S **Sn 03 22 36.4 -4.4**
SONM Songino Array 29.70 294 P **P 03 26 04.1 +2.4**
comp=E,1.2nm,0.6s,baz=96,slow=9.1,SNR=4.9
MKAR Makanchi Array 45.85 299 P **P 03 28 20.3 +2.7**
comp=E,1.7nm,0.9s,baz=79,slow=8.8,SNR=7.4
KURK Kurchatov 46.83 305 *e*P **P 03 28 26.1 +1.0**
KURK Kurchatov 46.83 305 P **P 03 28 26.1 +1.0**
KURK pmax pmax
comp=Z,1.0nm,0.4s
KURBB Kurchatov Arra 46.91 305 P **P 03 28 26.1 +0.3**
comp=Z,0.6nm,0.4s,baz=72,slow=8.0,SNR=6.9
AKTO Aktyubinsk 58.85 312 P **P 03 29 54.6 +0.7**
comp=Z,1.0nm,0.7s,baz=31,slow=5.9,SNR=2.5
ARCES ARCESS Array B 60.45 340 P **P 03 30 05.6 +1.0**
comp=Z,2.0nm,0.8s,baz=46,slow=6.4,SNR=3.6
WRA Warramunga Arr 63.77 195 P **P 03 30 27.2 -0.2**
comp=Z,0.4nm,0.9s,baz=9.7,slow=6.8,SNR=4.3
FINES FINESS Array B 66.13 334 P **P 03 30 42.4 +0.1**
comp=Z,1.2nm,0.5s,baz=31,slow=8.9,SNR=12
TXAR Lajitas Array 82.39 57 P **P 03 32 18.4 +0.7**
comp=Z,0.1nm,0.5s,baz=293,slow=3.8,SNR=4.3

ISCJB ***28*** *03:44:59.5±0.8, 5°.78S±0°.06×146°.72E±0°.10, h100km, mb3.8/5, Error ellipse: s-maj=13.8km s-min=8.9km az=168.1*
IDC ***28*** *03:45:00.3±2.2, 5°.84S×146°.56E, h94km±19km, mb3.7/5, mb1 3.9/9, mb1mx3.6/43, mbtmp4.1/9, MS3.2/5, Ms1 3.2/5, ms1mx2.7/42, Error ellipse: s-maj=19.4km s-min=15.2km az=104.0*
ISC 28 03:44:59.9±1.2, 5°.83S±0°.10×146°.6E±0°.2, h100km, n13, σ1=03°/9, mb3.7/4, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.60**	**170**	P	**Pn**	**03 45 53.6**	**-0.2**
	12nm,0.3s,baz=28,slow=4.1,SNR=20						
PMG				S	**Sn**	**03 46 35.6**	**+0.2**
	21nm,0.3s,baz=19,slow=21,SNR=7.6						
PMG				LR	LR	03 47 03.5	
	comp=Z,94nm,20.1s,baz=78,slow=3.4						
JAY	**Jayapura**	**6.70**	**299**	P	Pn	03 46 38.2	+2.4
	0.8nm,0.3s,baz=356,slow=9.3,SNR=3.8						
JAY				LR	LR	03 49 35.4	
	comp=Z,212nm,19.4s,baz=117,slow=41						
HNR	**Honiara**	**13.75**	**106**	LR	LR	03 52 33.9	
	comp=Z,63nm,20.0s,baz=297,slow=33						
CTA	**Charters Tower**	**14.18**	**181**	P	**P**	**03 48 20.6**	**0.0**
	0.4nm,0.3s,baz=4.6,slow=16,SNR=2.6						
SIJI	**Sorong**	**16.03**	**287**	P	**P**	**03 48 41.5**	**+0.2**
	1.6nm,0.3s,baz=110,slow=7.3,SNR=4.9						
WRA	**Warramunga Arr**	**18.38**	**219**	P	**Pn**	**03 49 08.5**	**+0.2**
	0.4nm,0.3s,baz=45,slow=12,SNR=21						
WRA				S	**Sn**	**03 52 32.1**	**-1.7**
	0.1nm,0.3s,baz=39,slow=23,SNR=3.2						
ASAR	**Alice Springs**	**21.51**	**213**	P	**P**	**03 49 42.7**	**+1.7**
	1.0nm,0.5s,baz=41,slow=8.4,SNR=18						
ASAR				LR	LR	03 58 18.3	
	comp=Z,105nm,19.4s,baz=48,slow=37						
DZM	**Mont Dzumac**	**25.11**	**132**	LR	LR	03 58 01.7	
	comp=Z,134nm,18.2s,baz=334,slow=31						
VNDA	**Vanda**	**72.11**	**177**	P	P	03 56 15.8	+2.8
	0.7nm,0.8s,baz=327,slow=6.1,SNR=6.3						
QSPA	**South Pole Qui**	**84.14**	**180**	P	P	03 57 22.1	+2.3
	3.0nm,0.9s,baz=336,slow=4.2,SNR=5.1						
ILAR	**Eielson Array**	**85.50**	**23**	P	**P**	**03 57 25.8**	**-0.6**
	1.1nm,0.9s,baz=255,slow=5.2,SNR=13						
NVAR	**Mina Array Bea**	**97.62**	**52**	P	Pdif	03 58 24.0	+0.2
	0.6nm,0.7s,baz=264,slow=3.4,SNR=6.2						
TORD	**Torodi Ar. Bea**	**144.62**	**284**	PKP	**PKPdf**	**04 04 26.1**	**+0.1**
	0.7nm,0.7s,baz=66,slow=3.4						

MEX 28 03:58:37.1±0.5, 14°.57N×92°.78W, h16km±62km, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.21**	**339**	*e*P	Pn	03 58 55.4	-3.8
PCIG				*e*S	Sb	03 59 10.0	-4.9
CCIG	**Comitan**	**1.81**	**20**	*e*P	Pn	03 59 07.1	-0.7
CCIG				*e*S	Sn	03 59 31.2	+0.8
TGIG		**2.22**	**351**	*e*P	Pn	03 59 10.9	-2.4
TGIG				*i* S	Sn	03 59 36.1	-4.3

NSSP ***28*** *04:00:56.8, 38°.35N×45°.03E, h5km, Ms3.1*
DDA ***28*** *04:00:56.9, 38°.31N×45°.07E, h3km, Ml3.2*
ISK ***28*** *04:00:57.9, 38°.40N×44°.93E, h5km±1km, ML3.1/6*
TEH ***28*** *04:00:57.7, 38°.25N×44°.88E, h5km, ML3.0*
CSEM ***28*** *04:00:57.1±0.6, 38°.25N×45°.04E, h2km, ML2.6, Error ellipse: s-maj=13.4km s-min=10.4km az=108.0*
ISN ***28*** *04:00:59.8±3.0, 38°.09N×44°.72E, h16km±22km, ML3.1*
ISC 28 04:00:57.8±1.1, 38°.35N±0°.02×45°.05E±0°.02, h6km±10km, n47, σ1=35/74, 3C-3D, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISHB	**Shabestar**	**0.45**	**98**	*e*		04 01 08.7	
	comp=Z,28μm,0.1s						
ISHB				*e*Pg	**Pb**	**04 01 08.3**	**-0.1**
ISHB				*e*Sg	**Sb**	**04 01 15.4**	**-0.1**
ISHB				*e*		04 01 17.6	
	comp=N,64μm,0.1s						
ISHB				*e*		04 01 19.3	
	comp=E,43μm,0.2s						
ITBZ	**Tabriz**	**0.87**	**97**	*e*Pg	**Pb**	**04 01 15.7**	**+0.2**
ITBZ				*e*		04 01 18.2	
	comp=E,7μm,0.1s						
ITBZ				*e*Sg	**Sb**	**04 01 28.8**	**+1.3**
ITBZ				*e*		04 01 30.4	
	comp=N,5μm,0.1s						
ITBZ				*e*		04 01 30.5	
	comp=Z,4μm,0.1s						
YOVA	**Hakkari_Y¨…kse**	**0.97**	**218**	*i* P	**Pg**	**04 01 15.5**	**-0.9**
YOVA				*i* S	**Sn**	**04 01 33.1**	**+0.8**
YOVA	**Hakkari_Y¨…kse**	**0.97**	**218**	P	**Pg**	**04 01 15.5**	**-0.9**
YOVA				S	**Sn**	**04 01 33.1**	**+0.8**
MAKU	**Maku**	**1.04**	**344**	*e*Pg	**Pg**	**04 01 17.6**	**-0.3**
MAKU				*e*Sg	**Sg**	**04 01 29.9**	**-1.5**
CLDR	**Caldiran**	**1.19**	**312**	PN	**Pg**	**04 01 18.8**	**-1.8**
CLDR				SN	**Sg**	**04 01 35.6**	**-0.4**
CLDR	**Caldiran**	**1.19**	**312**	*i* P	**Pg**	**04 01 19.1**	**-1.5**
CLDR				*i* S	**Sg**	**04 01 36.0**	**0.0**
CLDR	**Caldiran**	**1.19**	**312**	*e*Pn	**Pg**	**04 01 18.8**	**-1.8**
CLDR	**Caldiran**	**1.19**	**312**	P	**Pg**	**04 01 19.1**	**-1.5**
CLDR				*e*Sn	**Sg**	**04 01 35.6**	**-0.4**
CLDR				S	**Sg**	**04 01 36.0**	**0.0**
TVAN	**Van**	**1.30**	**278**	*i* P	**Pg**	**04 01 22.5**	**-0.3**
TVAN				*i* S	**Sn**	**04 01 42.5**	**+1.9**
TVAN	**Van**	**1.30**	**278**	P	**Pg**	**04 01 22.5**	**-0.3**
TVAN				S	**Sn**	**04 01 42.5**	**+1.9**
VMUR	**Van-Muradiye**	**1.32**	**299**	*i* P	**Pb**	**04 01 23.4**	**+0.3**
VMUR				*i* S	**Sn**	**04 01 42.8**	**+1.8**
VMUR	**Van-Muradiye**	**1.32**	**299**	P	**Pb**	**04 01 23.4**	**+0.3**
VMUR				S	**Sn**	**04 01 42.8**	**+1.8**
VANB	**Van**	**1.32**	**281**	PN	**Pn**	**04 01 22.4**	**-0.6**
VANB				SN	**Sg**	**04 01 39.5**	**-0.9**
VANB	**Van**	**1.32**	**281**	*e*Pn	**Pn**	**04 01 22.4**	**-0.6**
VANB				*e*Sn	**Sg**	**04 01 39.5**	**-0.9**
GRS	**Goris**	**1.52**	**41**	⇑*i*P	**Pn**	**04 01 22.0**	**-3.8**
GRS				⇑*i*S	**Sn**	**04 01 44.0**	**-2.0**
GRS	**Goris**	**1.52**	**41**	⇑P	**Pn**	**04 01 22.0**	**-3.8**
GRS				S	**Sn**	**04 01 44.0**	**-2.0**
GEVA	**Gevas**	**1.56**	**269**	*i* P	**Pn**	**04 01 26.4**	**+0.1**
GEVA				*i* S	**Sg**	**04 01 47.6**	**-0.5**
GEVA	**Gevas**	**1.56**	**269**	P	**Pn**	**04 01 26.4**	**+0.1**
GEVA				S	**Sg**	**04 01 47.6**	**-0.5**
IHRS	**Heris**	**1.57**	**91**	*e*Pg	**Pg**	**04 01 28.8**	**+0.9**
IHRS				*e*		04 01 29.9	
	comp=Z,4μm,0.1s						
IHRS				*e*Sg	**Sg**	**04 01 51.1**	**+2.8**
IHRS				*e*		04 01 55.0	
	comp=E,4μm,0.2s						
IHRS				*e*		04 01 57.3	
	comp=N,3μm,0.1s						
CUKT	**Cukurca**	**1.58**	**226**	PN	**Pg**	**04 01 27.6**	**-0.6**
CUKT	**Cukurca**	**1.58**	**226**	*e*Pn	**Pg**	**04 01 27.6**	**-0.6**
IBST	**Bostanabad**	**1.59**	**113**	*e*Pg	**Pb**	**04 01 27.6**	**-0.2**
IBST				*e*		04 01 52.0	
	comp=E,2μm,0.2s						
IBST				*e*		04 01 53.7	
	comp=N,2μm,0.2s						
IBST				*e*		04 01 55.1	
	comp=Z,2μm,0.2s						
DYDN	**Diyadin**	**1.59**	**319**	*i* P	**Pb**	**04 01 28.1**	**+0.2**
DYDN				*i* S	**Sg**	**04 01 51.3**	**+2.2**
DYDN	**Diyadin**	**1.59**	**319**	P	**Pb**	**04 01 28.1**	**+0.2**
DYDN				S	**Sg**	**04 01 51.3**	**+2.2**
IGDI	**IGDIR**	**1.69**	**334**	*i* P	**Pb**	**04 01 30.2**	**+0.8**
IGDI				*i* S	**Sg**	**04 01 54.4**	**+2.1**
GNI	**Garni**	**1.81**	**353**	PN	**Pb**	**04 01 31.4**	**-0.1**
GNI	**Garni**	**1.81**	**353**	⇓*i*P	**Pg**	**04 01 33.1**	**+0.5**
GNI				⇓*i*S	**Sg**	**04 01 57.7**	**+1.6**
GNI	**Garni**	**1.81**	**353**	*e*Pn	**Pb**	**04 01 31.4**	**-0.1**
GNI	**Garni**	**1.81**	**353**	⇓P	**Pg**	**04 01 33.1**	**+0.5**
GNI				S	**Sg**	**04 01 57.7**	**+1.6**
ADCV	**BITLIS_Adilcev**	**1.88**	**285**	*i* P	**Pb**	**04 01 31.7**	**-0.9**
ADCV				*i* S	**Sg**	**04 01 59.8**	**+1.6**
ADCV	**BITLIS_Adilcev**	**1.88**	**285**	P	**Pb**	**04 01 31.7**	**-0.9**
AGRB	**Hanur-Agry**	**2.02**	**308**	PN	**Pn**	**04 01 32.9**	**+0.3**
AGRB	**Hanur-Agry**	**2.02**	**308**	*e*Pn	**Pn**	**04 01 32.9**	**+0.3**
TUTA	**Tutak**	**2.04**	**302**	*i* P	**Pb**	**04 01 36.1**	**+0.7**
TUTA	**Tutak**	**2.04**	**302**	P	**Pb**	**04 01 36.1**	**+0.7**
SIRT	**Sirnak**	**2.23**	**248**	PN	**Pn**	**04 01 35.8**	**+0.4**
SIRT	**Sirnak**	**2.23**	**248**	*e*Pn	**Pn**	**04 01 35.8**	**+0.4**
GRMI	**Germi**	**2.28**	**78**	*e*Pn	**Pb**	**04 01 40.4**	**+1.0**
GRMI	**Germi**	**2.28**	**78**	*e*Sg	**Sg**	**04 02 12.3**	**+1.3**
GURO	**Guroymak-BITLI**	**2.38**	**276**	PN	**Pn**	**04 01 38.1**	**+0.6**
GURO	**Guroymak-BITLI**	**2.38**	**276**	*e*Pn	**Pn**	**04 01 38.1**	**+0.6**
MSL	**Mosul**	**2.48**	**219**	*e*Pg	**Pn**	**04 01 37.0**	**-1.8**
	SNR=9.0						
MSL				*e*Sg	**Sn**	**04 02 08.0**	**-1.4**
	SNR=9.0						
SRTM	**Siirt_Merkez**	**2.49**	**263**	*i* P	**Pb**	**04 01 42.9**	**-0.1**
SRTM	**Siirt_Merkez**	**2.49**	**263**	P	**Pb**	**04 01 42.9**	**-0.1**
ZNJK	**Zanjan**	**3.34**	**119**	*e*Pn	**Pb**	**04 01 56.3**	**-1.4**
ZNJK	**Zanjan**	**3.34**	**119**	*e*Sg	**Sg**	**04 02 48.2**	**+3.0**

NIED ***28*** *04:55:00, 36°.70N×141°.10E, h5km, Mw4.3 Best double couple: M0=3.44000×10^15 NP1:φs=51.00000°, δ=45.00000°, λ=-22.00000°. NP2:φs=157.00000°, δ=75.00000°, λ=-133.00000°.*
IDC ***28*** *04:55:07.8±0.6, 36°.64N×141°.02E, h0km, mb4.1/19, mb1 4.2/24, mb1mx4.1/68, mbtmp4.1/24, ML3.9/4, MS3.4/17, Ms1 3.4/17, ms1mx3.1/66, Error ellipse: s-maj=15.0km s-min=14.3km az=113.0*
JMA ***28*** *04:55:09.5, 36°.67N×141°.08E, h18km±1km, M4.5*
JMA Felt II J1.
ISCJB ***28*** *04:55:10.5±0.5, 36°.68N±0°.02×140°.99E±0°.03, h26km±3km, mb4.4/61, MS3.5/19, Error ellipse: s-maj=5.0km s-min=3.6km az=34.4*
MOS ***28*** *04:55:13.2±1.0, 37°.01N×140°.90E, h33km, mb4.6/24, Error ellipse: s-maj=9.2km s-min=6.9km az=84.5*
NEIC ***28*** *04:55:14.4±0.6, 36°.70N×140°.92E, h43km±6km, mb4.5/32, Error ellipse: s-maj=5.6km s-min=4.8km az=115.0*
NEIC Felt at Tsukuba. Recorded [2 JMA] in Fukushima, Ibaraki and Tochigi.
BJI ***28*** *04:55:15.1, 36°.64N×140°.73E, h44km, mb4.5/24, mB4.7/19, Ms4.2/17, Ms7 4.0/12*
ISC 28 04:55:12.1±0.7, 36°.68N±0°.03×141°.03E±0°.04, h29km±4km, n163, σ1=87/180, mb4.4/61, MS3.5/21, 8C-5D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.38**	**259**	P	**Pb**	**04 55 17.7**	**-2.9**
JHO				*e*S	**Sb**	**04 55 23.8**	**-2.6**
ONAJ	**Iwakimizuishiy**	**0.46**	**336**	P	**Pb**	**04 55 19.2**	**-2.7**
ONAJ				S	**Sb**	**04 55 25.7**	**-2.9**
JFK	**Kawauchi**	**0.69**	**349**	P	**Pb**	**04 55 22.9**	**-2.9**
JFK				S	**Sb**	**04 55 32.6**	**-2.4**
JYT	**Yasato**	**0.81**	**236**	P	**Pn**	**04 55 25.0**	**-2.7**
JYT				S	**Sb**	**04 55 36.5**	**-1.9**
JSB	**Shiboa**	**0.94**	**288**	P	**Pn**	**04 55 28.4**	**-1.0**
JSB				S	**Sb**	**04 55 42.2**	**+0.3**
JFT	**Otama**	**1.00**	**326**	P	**Pn**	**04 55 28.8**	**-1.5**
JFT				S	**Sn**	**04 55 42.5**	**-1.0**
MJAR	**Matsushiro Arr**	**2.28**	**267**	Pn	**Pn**	**04 55 47.4**	**-0.4**
	19nm,0.3s,baz=80,slow=12,SNR=70						
MJAR				Sn	**Sb**	**04 56 19.3**	**-1.0**
	70nm,0.3s,baz=51,slow=52,SNR=9.1						
MJAR				LR	LR	04 56 56.1	
	comp=Z,781nm,19.3s,baz=90,slow=48						
MAJO	**Matsushiro**	**2.28**	**267**	*e*Pn	**Pn**	**04 55 48.1**	**+0.2**
MAJO				*e*Sn	**Sn**	**04 56 13.7**	**-1.3**
MAJO				*e*Lg	Lg	04 56 19.3	
MAJO	**Matsushiro**	**2.28**	**267**	*ce*P	**Pn**	**04 55 48.0**	**+0.2**
MAT	**Matsushiro**	**2.28**	**267**	P	**Pn**	**04 55 48.0**	**+0.2**
MAT				S	**Sb**	**04 56 20.6**	**+0.3**
MJB9	**Matsu-Tunnel**	**2.28**	**267**	*e*Pn	**Pn**	**04 55 48.1**	**+0.3**
MJB9				*e*Sn	**Sn**	**04 56 13.9**	**-1.1**
INU	**Inuyama**	**3.52**	**249**	*e*Pn	**Pn**	**04 56 06.6**	**+1.8**
INU				*e*Sn	**Sn**	**04 56 44.1**	**-1.4**
JHJ	**Hachijo jima 2**	**3.70**	**196**	Pn	**Pn**	**04 56 09.2**	**+1.8**
	20nm,0.3s,baz=273,slow=23,SNR=6.7						
JHJ				Sn	**Sn**	**04 56 51.6**	**+1.6**
	24nm,0.3s,baz=276,slow=21,SNR=3.3						
JHJ				LR	LR	04 56 53.8	
	comp=Z,64nm,20.5s,baz=300,slow=29						
JHJ2	**Mitsune**	**3.70**	**196**	*e*Pn	**Pn**	**04 56 11.1**	**+3.7**
JHJ2				*e*Sn	**Sn**	**04 56 46.9**	**-3.1**
ASAJ	**Asahikawa**	**7.52**	**9**	Pn	**Pn**	**04 56 58.0**	**-1.8**
	2.2nm,0.3s,baz=198,slow=11,SNR=14						
ASAJ				Sn	**Sn**	**04 58 27.5**	**+3.4**
	0.7nm,0.3s,baz=145,slow=31,SNR=2.9						
ASAJ	**Asahikawa**	**7.52**	**9**	*e*Pn	**Pn**	**04 56 59.0**	**-0.8**
ASAJ				*e*Sn	**Sn**	**04 58 27.5**	**+3.4**
YUK	**Yuzh-Kuril'sk**	**8.21**	**25**	P	**Pn**	**04 57 08.3**	**-1.0**
YUK				*e*S	**Sn**	**04 58 37.7**	**-3.4**
YUK				MLR	MLR		
	comp=Z,268nm,17.0s						
SHO	**Shikotan**	**8.43**	**30**	*e*P	**Pn**	**04 57 10.3**	**-2.0**
SHO				*e*S	**Sn**	**04 58 41.0**	**-5.5**
SHO				pmax	pmax		
	comp=Z,15nm,0.5s						
SHO				pmax	pmax		
	comp=E,8.0nm,0.3s						
SHO				pmax	pmax		
	comp=N,9.0nm,0.4s						
SHO				MLR	MLR		
	comp=Z,229nm,16.0s						
TEY	**Ternei**	**8.99**	**339**	*e*P	**Pn**	**04 57 24.0**	**+4.0**
JNU	**Nakatsue**	**9.06**	**250**	Pn	**Pn**	**04 57 16.5**	**-4.6**
	comp=Z,0.4nm,0.3s,baz=246,slow=7.8,SNR=2.2						
JNU				LR	LR	05 01 09.0	
	comp=Z,170nm,18.4s,baz=125,slow=40						
CBIJ	**Chichi jima**	**9.61**	**174**	*e*Pn	**Pn**	**04 57 29.4**	**+1.0**
CBIJ				*e*Sn	**Sn**	**04 59 13.2**	**-2.3**
JCJ	**Chichijima**	**9.61**	**174**	Pn	**Pn**	**04 57 27.3**	**-1.2**
	comp=Z,8.1nm,0.3s,baz=286,slow=22,SNR=8.5						
JCJ				Sn	**Sn**	**04 59 13.2**	**-2.3**
KUR	**Kuril'sk**	**9.98**	**29**	P	**Pn**	**04 57 30.7**	**-2.8**
KUR				*e*S	**Sn**	**04 59 20.1**	**-4.3**
KUR				MLR	MLR		
	comp=Z,208nm,12.0s						
USA0B	**Ussuriysk Arra**	**10.19**	**320**	*e*Pn	**Pn**	**04 57 37.5**	**+1.1**
USRK	**Ussuriysk Ar.**	**10.19**	**320**	Pn	**Pn**	**04 57 35.9**	**-0.5**
	baz=143,slow=12						
YSS	**Yuzh-Sakhalins**	**10.34**	**7**	⇓*e*P	**Pn**	**04 57 37.9**	**-0.6**
YSS				*e*S	**Sn**	**04 59 30.0**	**-3.3**
YSS				pmax	pmax		
	comp=Z,20nm,0.5s						
YSS				MLR	MLR		
	comp=Z,500nm,15.0s						
KSRS	**Korea Array**	**10.51**	**278**	Pn	**Pn**	**04 57 42.2**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=88,slow=15,SNR=3.0						
KSRS				LR	LR	05 01 26.4	
	comp=Z,233nm,21.7s,baz=104,slow=36						
KS15	**Wonju Array Si**	**10.54**	**278**	*e*Pn	**Pn**	**04 57 42.2**	**+1.0**
KSAR	**Wonju Array Be**	**10.54**	**278**	Pn	**Pn**	**04 57 42.2**	**+1.0**
KSAR	**Wonju Array Be**	**10.54**	**278**	P	**Pn**	**04 57 42.2**	**+1.0**
CN2	**Changchun**	**13.86**	**306**	*e*P	**Pn**	**04 58 27.3**	**+0.8**
CN2				*e*sP	P	04 58 42.5	+8.0
CN2				*e*S	**Sn**	**05 00 57.8**	**-1.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,510nm,16.0s						
CN2				LR	LR		
	comp=Z,240nm,16.0s						
CN2				LR	LR		
	comp=Z,280nm,15.0s						
NJ2	**Nanjing**	**18.87**	**262**	*e*P	**P**	**04 59 29.0**	**-1.1**
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
BJI	**Beijing**	**19.76**	**287**	⇑*e*P	**P**	**04 59 37.3**	**-2.4**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BJI				LR	LR		
	comp=Z,370nm,13.5s						
BJI				LR	LR		
	comp=Z,210nm,15.1s						
PETK	**Petropavlovsk-**	**20.14**	**30**	P	**P**	**04 59 44.4**	**+0.6**
	comp=Z,3.1nm,0.7s,baz=202,slow=15						
PETK				LR	LR	05 07 50.6	
	comp=Z,43nm,19.2s,baz=224,slow=38						
PETK	**Petropavlovsk-**	**20.14**	**30**	*e*P	**P**	**04 59 44.5**	**+0.8**
PETK	**Petropavlovsk-**	**20.14**	**30**	*e*P	**P**	**04 59 44.6**	**+0.8**
PEA1	**Petropavlovsk-**	**20.15**	**30**	*e*P	**P**	**04 59 44.4**	**+0.5**
HHC	**Hu-ho-hao-te**	**23.30**	**289**	*e*P	**P**	**05 00 17.8**	**+0.1**
HHC				pP	sP	05 00 30.0	+0.7
HHC				PP	**PnPn**	**05 00 49.3**	**+5.4**
HHC				S	**S**	**05 04 22.5**	**-5.8**
HHC				pmax	pmax		
	comp=Z,39nm,5.9s						
HHC				LR	LR		
	comp=Z,550nm,9.7s						
HHC				LR	LR		
	comp=Z,680nm,10.9s						
HHC				LR	LR		
	comp=Z,550nm,9.8s						
MA2	**Magadan**	**23.76**	**12**	P	**P**	**05 00 22.2**	**+0.4**
	comp=Z,12nm,0.8s,baz=181,slow=11,SNR=4.2						
MA2				LR	LR	05 10 33.6	
	comp=Z,84nm,18.8s,baz=204,slow=39						
MA2	**Magadan**	**23.76**	**12**	*e*P	**P**	**05 00 22.0**	**+0.1**
	comp=Z,17nm,1.0s						
MA2	**Magadan**	**23.76**	**12**	⇑*e*P	**P**	**05 00 22.8**	**+1.0**
MA2		

YAK pmax pmax
comp=E,8.0nm,1.3s
YAK pmax pmax
comp=N,7.0nm,0.9s
YAK smax smax
comp=N,21nm,2.0s
YAK MLR MLR
comp=Z,103nm,19.0s
SEY Seymchan 27.19 11 P **P 05 00 53.5 +0.5**
comp=Z,8.8nm,0.9s,baz=203,slow=5.8,SNR=17
SEY Seymchan 27.19 11 ⇓*e*P **P 05 00 53.1 +0.1**
ULN Ulaanbaatar 27.30 305 *e*P **P 05 00 53.9 -0.5**
comp=Z,2.6nm,0.6s
ULN Ulaanbaatar 27.30 305 ⇑*e*P **P 05 00 55.5 +1.2**
ULN pmax pmax
comp=Z,4.0nm,2.1s
SONA1 Songino Array 27.73 305 *e*P **P 05 00 57.4 -0.7**
SONA0 Songino Array 27.73 305 *e*P **P 05 00 58.7 +0.6**
SONM Songino Array 27.73 305 P **P 05 00 58.7 +0.6**
comp=Z,3.6nm,0.8s,baz=109,slow=7.7,SNR=18
H11N2 WAKE ISLAND Hy 28.23 120 T T 05 30 28.7
baz=313,slow=75,SNR=382
H11N1 WAKE ISLAND Hy 28.24 120 T T 05 30 38.3
baz=313,slow=75,SNR=588
H11N3 WAKE ISLAND Hy 28.25 120 T T 05 30 39.0
baz=313,slow=75,SNR=523
H11S1 WAKE ISLAND Hy 28.93 122 T T 05 31 27.3
baz=314,slow=76,SNR=971
H11S3 WAKE ISLAND Hy 28.93 122 T T 05 31 27.7
baz=314,slow=76,SNR=1318
H11S2 WAKE ISLAND Hy 28.95 122 T T 05 31 32.0
baz=314,slow=76,SNR=701
LZH Lanzhou 29.83 280 *e*P **P 05 01 17.3 +0.4**
LZH pP sP 05 01 30.0 +1.2
LZH sP pP 05 01 36.0 +11
LZH *e*PP **PnPn 05 02 14.5 +1.3**
LZH pmax pmax
comp=Z,19nm,1.0s
LZH pmax pmax
comp=Z,65nm,4.8s
LZH LR LR
comp=Z,320nm,12.9s
LZH LR LR
comp=Z,340nm,13.2s
LZH LR LR
comp=Z,410nm,16.5s
TLY Talaya 30.33 312 *e*P P 05 01 27.2 +6.1
TLY *e* 05 02 41.0
TLY *e*SS SS 05 08 16.9 -12
TLY pmax pmax
comp=Z,2.0nm,0.8s
TLY MLR MLR
comp=Z,62nm,15.0s
GYA Guiyang 30.86 261 *e*P **P 05 01 27.3 +1.2**
GYA pmax pmax
comp=Z,10.0nm,1.0s
DAV Davao City (W) 32.68 209 LR LR 05 12 45.1
comp=Z,71nm,22.0s,baz=344,slow=32
BILL Bilibino 34.45 16 ⇑*i*P **P 05 01 56.1 -0.8**
BILL *e* 05 03 12.3
BILL pmax pmax
comp=Z,6.0nm,1.7s
BILL MLR MLR
comp=Z,96nm,17.0s
KMI Kunming 34.61 262 P **P 05 01 59.5 +0.5**
KMI pmax pmax
comp=Z,9.0nm,0.5s
KMI pmax pmax
comp=Z,74nm,4.2s
MYLDM Lahad Datu 37.55 219 *e*P **P 05 02 24.9 +1.0**
comp=Z,24nm,1.3s
DGZ Jazzator, Alta 40.35 306 *i*P **P 05 02 48.1 +0.8**
DGZ pmax pmax
comp=Z,4.0nm,0.7s
WMQ Urumqi 40.73 297 P **P 05 02 51.5 +1.1**
WMQ pP sP 05 03 02.8 +0.4
WMQ sP pP 05 03 08.5 +10
WMQ pmax pmax
comp=Z,25nm,0.7s
WMQ pmax pmax
comp=Z,190nm,4.3s
WMQ LR LR
comp=Z,460nm,12.7s
WMQ LR LR
comp=Z,160nm,19.7s
CMAR Chiang Mai Arr 41.11 255 LR LR 05 22 31.9
comp=Z,50nm,19.9s,baz=38,slow=40
ZAA0 Zalesovo Array 41.93 313 *e*P **P 05 03 00.0 0.0**
comp=Z,3.1nm,0.6s
ZAA1 Zalesovo Array 41.93 313 *e*P **P 05 02 59.8 -0.1**
ZALV Zalesovo Beam 41.93 313 P **P 05 02 59.8 -0.1**
comp=Z,3.3nm,0.8s,baz=97,slow=6.1,SNR=6.5
ZALV LR LR 05 20 15.9
comp=Z,34nm,19.5s,baz=70,slow=36
MK01 Makanchi Array 44.05 302 *e*P **P 05 03 16.9 -0.3**
MK31 Makanchi Array 44.05 302 *e*P **P 05 03 17.4 +0.1**
MK31 Makanchi Array 44.05 302 *e*P **P 05 03 17.4 +0.1**
MK32 Makanchi Array 44.05 302 *e*P **P 05 03 17.4 +0.1**
MKAR Makanchi Array 44.05 302 P **P 05 03 17.4 +0.1**
comp=Z,0.9nm,0.7s,baz=87,slow=8.6,SNR=9.4
MKAR LR LR 05 20 36.6
comp=Z,42nm,22.0s,baz=86,slow=35
MKAR Makanchi Array 44.05 302 *e*P **P 05 03 17.4 +0.1**
comp=Z,17nm,0.7s
MKAR Makanchi Array 44.05 302 *e*P **P 05 03 17.4 +0.1**
MKAR pmax pmax
comp=Z,17nm,0.7s
BRDH Bariadhala 44.66 266 LR LR 05 25 21.8
comp=Z,122nm,18.9s,baz=192,slow=41
KURK Kurchatov 45.91 308 *e*P **P 05 03 31.9 -0.1**
comp=Z,10nm,0.8s
KURK Kurchatov 45.91 308 *e*P **P 05 03 31.9 -0.1**
KURK pmax pmax
comp=Z,10.0nm,0.8s
KURBB Kurchatov Arra 45.98 308 P **P 05 03 31.9 -0.6**
comp=Z,2.3nm,0.7s,baz=83,slow=7.7,SNR=11
SOEI Soe 48.81 202 *e*P **P 05 03 54.9 0.0**
comp=Z,41nm,1.4s
RC01 Rabbit Creek A 48.82 37 *e*P **P 05 03 56.0 +1.5**
comp=Z,12nm,1.4s
BWN Browne 48.85 33 *e*P **P 05 03 56.2 +1.5**
comp=Z,11nm,0.9s
TOLK Toolik Lake Re 48.92 27 *e*P **P 05 03 56.2 +1.0**
comp=Z,3.5nm,0.9s
MDM Murphy Dome 49.37 32 *e*P **P 05 04 00.2 +1.5**
comp=Z,7.2nm,1.1s
SML Sawmill 49.45 36 *e*P **P 05 03 59.4 0.0**
comp=Z,9.0nm,1.2s
SML Sawmill 49.45 36 *e*P **P 05 03 59.4 0.0**
SML pmax pmax
comp=Z,9.0nm,1.2s
ILAR Eielson Array 49.95 32 P **P 05 04 02.5 -0.6**
comp=Z,1.9nm,0.9s,baz=268,slow=6.4,SNR=24
ILB Eielson Array 49.95 32 *e*P **P 05 04 04.0 +0.9**
IL1 Eielson Array 49.95 32 *e*P **P 05 04 02.8 -0.2**
PBA Port Blair 49.96 253 *e*P P 05 04 01.8 -1.9
comp=Z,212nm,1.1s
KSH Kashi 50.27 294 P **P 05 04 09.0 +3.0**
KSH pP sP 05 04 20.5 +2.3
KSH PP **PP 05 06 06.8 +5.5**
KSH pmax pmax
comp=Z,95nm,4.5s
BVAR Borovoye Array 50.58 312 P **P 05 04 07.3 -0.7**
comp=Z,0.7nm,0.6s,baz=77,slow=6.5,SNR=4.1
BRVK Borovoye 50.64 313 ⇑*e*P **P 05 04 10.0 +1.6**
BRVK pmax pmax
comp=Z,13nm,3.2s
INK Inuvik 54.84 27 LR LR 05 28 38.0
comp=Z,30nm,20.1s,baz=25,slow=37
INK Inuvik 54.84 27 *e*P **P 05 04 40.2 +1.0**
comp=Z,3.3nm,0.9s
INK Inuvik 54.84 27 *e*P **P 05 04 40.2 +1.0**
INK pmax pmax
comp=Z,3.0nm,0.9s
ARU Arti 56.42 319 LR LR 05 29 32.7
comp=Z,34nm,18.2s,baz=66,slow=37
ARU Arti 56.42 319 *c i*P **P 05 04 50.1 -0.7**
ARU 05 06 51.8
ARU S **S 05 12 37.9 -1.6**
ARU SS **SS 05 16 21.5 -4.8**
ARU pmax pmax
comp=Z,4.0nm,0.8s
WRAB Tennant Creek 56.66 188 *e*P **P 05 04 55.0 +2.2**
comp=Z,5.1nm,0.9s
WRAB Tennant Creek 56.66 188 ⇓*e*P **P 05 04 56.6 +3.8**
WRAB pmax pmax
comp=Z,16nm,1.7s
WB2 Warramunga Arr 56.67 188 *e*P **P 05 04 51.9 -1.0**
WR1 Warramunga Arr 56.67 188 *e*P **P 05 04 52.2 -0.6**
comp=Z,8.0nm,1.1s
WRA Warramunga Arr 56.67 188 P **P 05 04 52.3 -0.6**
comp=Z,3.3nm,0.7s,baz=5.0,slow=7.4,SNR=26
PUH Pauahi 57.87 89 *e*P **P 05 05 02.9 +1.2**
comp=Z,202nm,1.5s
ABKAR Akbulak array 57.93 310 *e*P **P 05 05 01.1 -0.5**
AKTO Aktyubinsk 58.68 312 LR LR 05 30 29.9
comp=Z,34nm,19.0s,baz=68,slow=36
AS01 Alice Springs 60.39 187 *e*P **P 05 05 18.8 0.0**
AS31 Alice Springs 60.40 188 *e*P **P 05 05 18.0 -0.8**
comp=Z,1.6nm,1.1s
ASAR Alice Springs 60.40 188 P **P 05 05 18.0 -0.8**
comp=Z,1.5nm,0.7s,baz=7.5,slow=6.9,SNR=9.7
OBN Obninsk 68.19 323 ⇓*e*P **P 05 06 10.6 +1.1**
OBN *e* 05 08 38.5
OBN *e*S **SKiKP 05 15 57.6 -4.6**
OBN MLR MLR
comp=Z,31nm,14.0s
FIA0 FINESS Array S 68.98 332 *e*P **P 05 06 14.1 -0.3**
FIA0 FINESS Array S 68.98 332 *e*P **P 05 06 14.1 -0.3**
FINES FINESS Array B 68.98 332 P **P 05 06 14.1 -0.3**
comp=Z,2.2nm,0.8s,baz=22,slow=7.7,SNR=4.0
PINE Pine Mountain 70.80 49 *e*P **P 05 06 28.1 +2.0**
comp=Z,5.8nm,1.0s
YBH Yreka Blue Hor 70.80 52 P **P 05 06 27.0 +1.0**
comp=Z,0.7nm,0.6s,baz=77,slow=1.5,SNR=3.3
KIV Kislovodsk 70.91 311 *e*P **P 05 06 25.3 -1.3**
KIV pmax pmax
comp=Z,10.0nm,1.0s
KIV MLR MLR
comp=Z,41nm,18.0s
GNI Garni 71.67 307 LR LR 05 40 23.2
comp=Z,25nm,18.2s,baz=70,slow=38
HJGM San Juan Grade 74.23 56 *e*P **P 05 06 44.7 -1.7**
HFS Hagfors 74.28 336 P **P 05 06 47.4 +1.1**
comp=Z,2.0nm,0.8s,baz=179,slow=39,SNR=3.1
HFS LR LR 05 41 32.3
comp=Z,41nm,18.1s,baz=40,slow=38
AKASG Malin Array Be 74.39 322 P **P 05 06 47.1 0.0**
comp=Z,0.4nm,0.3s,baz=48,slow=6.1,SNR=3.8
AKBB Malin Array Si 74.39 322 *e*P **P 05 06 47.0 0.0**
comp=Z,3.7nm,1.1s
AKBB Malin Array Si 74.39 322 *e*P **P 05 06 47.1 0.0**
AKBB pmax pmax
comp=Z,4.0nm,1.1s
NB2 NORSAR Subarra 74.39 337 P **P 05 06 47.3 +0.3**
comp=Z,2.1nm,0.8s,baz=40,slow=6.2
NOA NORSAR Array B 74.39 337 LR LR 05 41 44.9
comp=Z,35nm,21.5s,baz=25,slow=38
KIEV Kiev 74.40 322 ⇓*e*P **P 05 06 50.1 +3.0**
KIEV pmax pmax
comp=Z,8.0nm,3.2s
LRM Limekiln Ridge 74.61 44 *e*P **P 05 06 50.1 +1.3**
DLMT Dillon 74.81 45 *e*P **P 05 06 51.3 +1.5**
comp=Z,3.0nm,0.8s
BOZ Bozeman (W) 75.20 44 *e*P **P 05 06 53.5 +1.3**
comp=Z,4.4nm,1.3s
BOZ Bozeman (W) 75.20 44 *e*P **P 05 06 53.5 +1.3**
BOZ pmax pmax
comp=Z,4.0nm,1.3s
KVN Kaiserville 75.21 52 *e*P **P 05 06 53.9 +1.5**
comp=Z,4.9nm,1.2s
KVN Kaiserville 75.21 52 *e*P **P 05 06 53.9 +1.5**
KVN pmax pmax
comp=Z,5.0nm,1.2s
NV01 Mina Array Sit 75.44 53 *e*P **P 05 06 54.9 +1.2**
NVAR Mina Array Bea 75.44 53 P **P 05 06 54.3 +0.6**
comp=Z,1.1nm,0.8s,baz=284,slow=6.5,SNR=8.0
MMLB Mammoth Lakes 75.45 54 *e*P **P 05 06 58.6 +4.7**
HVU Hansel Valley 76.87 48 *e*P **P 05 07 03.9 +2.2**
comp=Z,2.1nm,1.0s
HVU Hansel Valley 76.87 48 *e*P **P 05 07 03.9 +2.2**
HVU pmax pmax
comp=Z,2.0nm,1.0s
VPEM Volcano Peak E 77.20 55 *e*P **P 05 07 00.5 -3.2**
R11A Troy Canyon, C 77.22 52 *e*P **P 05 07 05.2 +1.4**
comp=Z,5.9nm,1.4s
LAO LASA Array 77.44 41 *e*P **P 05 07 06.6 +1.9**
comp=Z,6.3nm,0.9s
TPNV Topopah Spring 77.63 53 *e*P **P 05 07 07.4 +1.3**
comp=Z,2.5nm,0.9s
TPNV Topopah Spring 77.63 53 *e*P **P 05 07 07.4 +1.3**
TPNV pmax pmax
comp=Z,3.0nm,0.9s
DUG Dugway, Tooele 77.81 49 *e*P **P 05 07 08.6 +1.6**
comp=Z,5.2nm,1.3s
DUG Dugway, Tooele 77.81 49 *e*P **P 05 07 08.6 +1.6**
DUG pmax pmax
comp=Z,5.0nm,1.3s
PDAR Pinedale Array 78.13 45 P **P 05 07 09.2 +0.4**
comp=Z,1.1nm,0.9s,baz=256,slow=2.7,SNR=8.0
KNB Kanab 79.77 51 *e*P **P 05 07 19.4 +1.6**
comp=Z,6.1nm,1.3s
KNB Kanab 79.77 51 *e*P **P 05 07 19.4 +1.6**
KNB pmax pmax
comp=Z,6.0nm,1.3s
SRU San Rafael Swe 79.87 49 *e*P **P 05 07 19.8 +1.4**
comp=Z,3.6nm,0.9s
SRU San Rafael Swe 79.87 49 *e*P **P 05 07 19.8 +1.4**
SRU pmax pmax
comp=Z,4.0nm,0.9s
BRG Berggiesshubel 81.20 329 *e*(P) **P 05 07 24.8 -0.2**
comp=Z,3.2nm,0.9s
BRG Berggiesshubel 81.20 329 *e*P **P 05 07 24.8 -0.2**
BRG pmax pmax
comp=Z,3.0nm,1.0s
PV14 Lion Creek, Pa 81.25 48 *e*P **P 05 07 27.7 +1.9**
comp=Z,7.7nm,1.2s
CLL Collm 81.25 330 *i*P **P 05 07 25.5 +0.3**
CLL Collm 81.25 330 *i*P **P 05 07 25.5 +0.3**
PV22 Blue Mesa, Par 81.28 48 *e*P **P 05 07 27.8 +1.8**
comp=Z,5.2nm,1.1s
GEC2 GERESS Array S 82.85 328 *e*P **P 05 07 33.7 -0.1**
comp=Z,1.7nm,0.8s
GEC2 GERESS Array S 82.85 328 *e*P **P 05 07 33.7 -0.1**
GEC2 pmax pmax
comp=Z,2.0nm,0.8s
GERES GERESS Array B 82.85 328 P **P 05 07 33.7 -0.1**
comp=Z,0.4nm,0.5s,baz=64,slow=2.3,SNR=5.6
T25A Trinidad 84.80 47 *e*P **P 05 07 44.7 +0.5**
comp=Z,3.5nm,0.9s
ANMO Albuquerque 85.05 50 *c e*P **P 05 07 48.1 +2.6**
ANMO pmax pmax
comp=Z,2.0nm,1.7s
TXAR Lajitas Array 90.58 52 P **P 05 08 12.8 +0.9**
comp=Z,0.8nm,0.9s,baz=270,slow=3.8,SNR=7.2
LPAZ La Paz 147.13 60 PKPbc **PKPbc 05 14 54.0 +0.4**
comp=Z,1.5nm,0.8s,baz=7.1,slow=4.2,SNR=8.5
LPAZ La Paz 147.13 60 *e*PKPbc **PKPbc 05 14 54.2 +0.6**
LPAZ La Paz 147.13 60 *e*PKP2 **PKPbc 05 14 54.2 +0.6**

IDC 28 05:38:46.4±1.4, 1°.03N×126°.38E, h0km, mb4.2/9, mb1 4.3/9, mb1mx4.0/50, mbtmp4.2/9, Error ellipse: s-maj=176.4km s-min=16.0km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.25**	**160**	P	P	05 43 45.2	0.0
	3.3nm,0.5s,baz=340,slow=8.5,SNR=54						
ASAR	**Alice Springs**	**25.61**	**164**	P	P	05 44 18.3	+0.5
	1.2nm,0.5s,baz=348,slow=6.9,SNR=22						
SONM	**Songino Array**	**49.74**	**342**	P	P	05 47 40.5	-0.2
	1.0nm,0.5s,baz=158,slow=7.5,SNR=5.1						
MKAR	**Makanchi Array**	**59.58**	**326**	P	P	05 48 52.0	0.0
	3.0nm,0.5s,baz=122,slow=8.1,SNR=57						
ZALV	**Zalesovo Beam**	**62.83**	**334**	P	P	05 49 13.7	-0.2
	0.8nm,0.3s,baz=124,slow=7.8,SNR=2.7						
KURBB	**Kurchatov Arra**	**63.82**	**328**	P	P	05 49 20.8	+0.3
	6.0nm,0.7s,baz=128,slow=5.9,SNR=40						
BVAR	**Borovoye Array**	**69.39**	**328**	P	P	05 49 56.3	+0.1
	6.1nm,1.2s,baz=115,slow=6.5,SNR=7.9						
AKTO	**Aktyubinsk**	**75.56**	**322**	P	P	05 50 33.0	0.0
	1.6nm,0.6s,baz=139,slow=11,SNR=4.0						
VNDA	**Vanda**	**80.81**	**173**	P	P	05 51 00.9	-0.6
	0.9nm,1.0s,baz=317,slow=7.9,SNR=6.8						

*IDC **28** 05:40:58.7±2.1, 7°.32S×127°.47E, h0km, mb3.6/1, mb1 4.4/4, mb1mx3.8/50, mbtmp4.3/4, ML4.5/3, Error ellipse: s-maj=53.0km s-min=31.9km az=72.0*
*ISCJB **28** 05:41:10.3±0.7, 8°.06S±0°.07×127°.08E±0°.05, h100km, mb3.5/1, Error ellipse: s-maj=10.1km s-min=7.4km az=178.4*
*DJA **28** 05:41:12.4±0.4, 8°.5S±5°×12°.7E±°, h113km±15km, M4.4/8, mb4.3/4, MLv4.4/8*

ISC 28 05:41:10.0±1.1, 8°.08S±0°.09×127°.11E±0°.07, h100km, n13, σ3°22/19, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**3.27**	**239**	P	**Pn**	**05 42 02.4**	**+3.0**
SOEI				S	**Sn**	**05 42 41.6**	**+4.0**
BATI	**Baumata**	**4.01**	**238**	Pn	**Pn**	**05 42 11.9**	**+2.6**
	83nm,0.3s,baz=99,slow=3.9,SNR=42						
BATI				Sn	**Sn**	**05 42 57.0**	**+1.7**
	53nm,0.3s,baz=170,slow=23,SNR=18						
BATI	**Baumata**	**4.01**	**238**	P	**Pn**	**05 42 11.7**	**+2.4**
BATI				S	**Sn**	**05 42 53.8**	**-1.6**
SAUI	**Saumlaki**	**4.15**	**89**	P	**Pn**	**05 42 14.3**	**+3.1**
MMRI	**Maumere**	**4.86**	**263**	P	**Pn**	**05 42 21.6**	**+0.8**
MSAI	**Masohi**	**5.04**	**21**	P	**Pn**	**05 42 24.6**	**+1.3**
EDFI	**Ende, Flores**	**5.41**	**263**	P	**Pn**	**05 42 29.9**	**+1.6**
	32nm,0.8s,0.1nm						
EDFI				S	**Sn**	**05 43 24.4**	**-5.0**
	32nm,0.8s,0.1nm						
BKSI	**Bulukumba**	**7.46**	**291**	P	**Pn**	**05 42 56.6**	**+0.4**
	18nm,1.2s,0.1nm						
WBSI	**Waikabubak, Su**	**7.79**	**258**	P	**Pn**	**05 43 02.5**	**+1.8**
PLAI	**Plampang**	**9.27**	**265**	P	**Pn**	**05 43 19.3**	**-1.5**
WRA	**Warramunga Arr**	**13.71**	**150**	Pn	**Pn**	**05 44 21.8**	**+1.4**
	1.0nm,0.3s,baz=322,slow=14,SNR=9.4						
WRA				Sn	**Sn**	**05 46 45.1**	**-6.2**
	1.3nm,0.3s,baz=338,slow=23,SNR=9.6						
ASAR	**Alice Springs**	**16.81**	**158**	P	**P**	**05 45 02.5**	**+2.6**
	1.9nm,0.3s,baz=341,slow=13,SNR=14						
ASAR				S	**Sn**	**05 48 00.8**	**-5.4**
	0.8nm,0.3s,baz=329,slow=20,SNR=8.9						
MKAR	**Makanchi Array**	**67.60**	**328**	P	**P**	**05 51 54.3**	**-1.7**
	0.4nm,0.6s,baz=135,slow=7.9,SNR=3.8						

MAN 28 05:43:20.6, 13°.55N×120°.96E, h1km, mb4.6, ML3.5, MS3.4, 2C-1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**0.55**	**358**	⇓*i*P	Pg	05 43 30.7	-0.5
TGY				*i* S	Sg	05 43 39.4	+1.0
LUBP	**Lubang**	**0.72**	**285**	*e*P	Pg	05 43 33.5	-0.9
LUBP				*e*S	Sg	05 43 42.5	-1.2
LQP	**Lukban**	**0.79**	**45**	⇑*e*P	Pg	05 43 33.7	-2.2
BOAC	**Boac**	**0.86**	**96**	*e*P	Pg	05 43 37.5	+0.3
BOAC				*e*S	Sb	05 43 50.2	-0.3
SJMP	**San Jose**	**1.09**	**172**	*e*P	Pn	05 43 43.7	+0.7
SJMP				*e*S	Sn	05 44 02.3	+3.6
GQP	**Guinayangan**	**1.49**	**76**	⇑*e*P	Pg	05 43 52.6	+3.5
GQP				*e*S	Sn	05 44 14.0	+5.5
OTRP	**Odiongan**	**1.57**	**139**	*e*P	Pn	05 43 49.3	-0.3
OTRP				*e*S	Sg	05 44 11.1	+0.1
AUQP	**San Andres**	**1.68**	**97**	*e*P	Pb	05 43 52.0	-0.4
AUQP				*e*S	Sg	05 44 20.6	+5.9
BUSP	**Coron**	**1.71**	**206**	*e*P	Pb	05 43 52.2	-0.5
BUSP				*e*S	Sg	05 44 15.4	0.0
BALP	**Baler**	**2.26**	**15**	*e*P	Pn	05 43 59.0	-0.1
BALP				*e*S	Sb	05 44 29.5	-1.3
SCZP	**Santa Cruz**	**2.44**	**335**	*e*P	Pn	05 44 03.4	+1.8
SCZP				*e*S	Sb	05 44 34.0	-1.8

*NIED **28** 05:51:00, 37°.20N×141°.20E, h59km, Mw5.2 Best double couple: M0 7.99000×10^16 NP1:φs=58.00000°, δ12.00000°, λ134.00000°. NP2:φs=193.00000°, δ81.00000°, λ81.00000°.*
*BJI **28** 05:51:45.7, 37°.07N×141°.23E, h40km, mb5.2/85, mB5.2/55, Ms4.7/90, Ms7 4.6/80*
*JMA **28** 05:51:50.8±0.1, 37°.17N×141°.20E, h63km±1km, M5.2 Broadband fault plane solution: P waves. NP1: φs=220.00000°, δ69.00000°, λ84.00000°. NP2:φs=55.00000°, δ21.00000°, λ105.00000°. Principal axes: T Plg65.0000°, Azm120.0000°; N Plg5.0000°, Azm222.0000°; P Plg24.0000°, Azm314.0000°;*
JMA Felt IV J1.
*ISCJB **28** 05:51:51.4±0.2, 37°.20N±0°.02×141°.02E±0°.02, h71km±1km, mb5.1/314 Error ellipse: s-maj=3.0km s-min=2.2km az=153.9*
*IDC **28** 05:51:52.3±1.7, 37°.20N×141°.05E, h69km±15km, mb4.7/40, mb1 4.8/44, mb1mx4.7/68, mbtmp5.0/44, MS4.3/49, Ms1 4.3/49, ms1mx4.2/57, Error ellipse: s-maj=10.9km s-min=9.7km az=101.0*
*MOS **28** 05:51:52.3±0.9, 37°.31N×140°.97E, h75km, mb5.5/96, MS4.6/24, Error ellipse: s-maj=6.5km s-min=4.2km az=115.2*
*GCMT **28** 05:51:53.6±0.1, 37°.24N×141°.06E, h59km±1km, MW5.2/114, Moment Tensor Solution. s90, c152; s114, c198; Duration: 1s0 Moment tensor: Scale 10^16 Nm; Mrr3.60±.17; Mθθ-1.27±.14; Mφφ-2.33±.16; Mrθ-1.52±.12; Mrφ-1.32±.13; Mθr-8.01±.15; Best double couple: M0 8.81900×10^16 NP1:φs=193.00000°, δ79.00000°, λ84.00000°. NP2:φs=44.00000°, δ13.00000°, λ121.00000°. Principal axes: T 9.2000, Plg55.0000°, Azm95.0000°; N -0.7610, Plg6.0000°, Azm194.0000°; P -8.4390, Plg34.0000°, Azm288.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **28** 05:51:53.6±0.4, 37°.17N×140°.93E, h78km±4km, mb5.2/189 Error ellipse: s-maj=3.4km s-min=2.4km az=151.0*
NEIC Felt [III] in Sendai and [II] at Tokyo. Widely felt along the east coast of Honshu. Recorded [4 JMA] in Fukushima and Ibaraki.

ISC 28 05:51:51.4±0.3, 37°.24N±0°.03×141°.05E±0°.03, h59km±2km, h59km:pP-P, n1053, σ1°53/1167, mb5.2/321, MS4.5/78, 36C-55D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**0.18**	**312**	⇑P	**Pn**	**05 52 01.3**	**+0.6**
JFK				S	**Sn**	**05 52 09.0**	**+1.5**
ONAJ	**Iwakimizuishiy**	**0.24**	**235**	⇑P	**Pn**	**05 52 01.3**	**+0.2**
ONAJ				S	**Sn**	**05 52 08.9**	**+0.8**
JFT	**Otama**	**0.63**	**296**	⇑P	**Pn**	**05 52 06.7**	**+2.0**
JFT				S	**Sn**	**05 52 18.4**	**+3.9**
JMM	**Marumori**	**0.65**	**342**	⇑P	**Pn**	**05 52 06.2**	**+1.2**
JMM				S	**Sn**	**05 52 17.4**	**+2.5**
JHO	**Hitachi**	**0.74**	**211**	⇑P	**Pn**	**05 52 05.6**	**-0.4**
JHO				S	**Sn**	**05 52 16.5**	**-0.3**
JFY	**Yanaizu**	**1.08**	**279**	⇓P	**Pn**	**05 52 12.1**	**+1.6**
JFY				S	**Sn**	**05 52 27.8**	**+3.1**
JOU	**Okura**	**1.16**	**345**	⇓P	**Pn**	**05 52 12.7**	**+1.2**
JOU				S	**Sn**	**05 52 29.0**	**+2.5**
JIO	**Ouri**	**1.23**	**11**	⇓P	**Pn**	**05 52 12.9**	**+0.5**
JIO				S	**Sn**	**05 52 28.4**	**+0.3**
JYS	**Shirataka**	**1.25**	**322**	⇓P	**Pn**	**05 52 14.6**	**+1.9**
JYS				S	**Sn**	**05 52 31.3**	**+2.7**
JNS	**Sasagawa**	**1.49**	**293**	⇓P	**Pn**	**05 52 17.1**	**+1.2**
JAG	**Ashikaga**	**1.52**	**238**	⇑P	**Pn**	**05 52 16.9**	**+0.6**
JAG				S	**Sn**	**05 52 36.9**	**+1.9**
JHK	**Hiroka**	**1.62**	**271**	⇓P	**Pn**	**05 52 19.5**	**+1.9**
JMK	**Ichinoseki**	**1.71**	**4**	⇓P	**Pn**	**05 52 19.5**	**+0.6**
JYA	**Atsumi**	**1.71**	**322**	⇓P	**Pn**	**05 52 20.9**	**+2.0**
JAW	**Awa shima**	**1.87**	**311**	⇓P	**Pn**	**05 52 22.9**	**+1.9**
I30JP	**ISUMI INFRASON**	**2.02**	**197**	P	**Pn**	**05 52 24.7**	**+1.6**
	baz=32,slow=12						
I30JP				S	**Sn**	**05 52 48.8**	**+1.6**
	baz=90,slow=298						
I30JP				*i*		06 05 00.0	
	baz=11,slow=323,SNR=0.6						
JGK	**Kuni**	**2.05**	**251**	⇓P	**Pn**	**05 52 25.5**	**+2.0**
JRY	**Ryogami san**	**2.12**	**235**	⇑P	**Pn**	**05 52 25.1**	**+0.7**
JOM	**Ohasama**	**2.23**	**5**	⇓P	**Pn**	**05 52 27.1**	**+1.1**
JJN	**Nakama**	**2.31**	**267**	⇓P	**Pn**	**05 52 29.4**	**+2.4**
JSD	**Sado**	**2.35**	**291**	⇓P	**Pn**	**05 52 28.7**	**+1.2**
MJAR	**Matsushiro Arr**	**2.38**	**254**	P	**Pn**	**05 52 30.0**	**+1.9**
	198nm,0.3s,baz=78,slow=15,SNR=380						
MJAR				S	**Sn**	**05 53 02.2**	**+6.1**
	250nm,0.3s,baz=162,slow=17,SNR=8.2						
MAJO	**Matsushiro**	**2.38**	**254**	*e*Pn	**Pn**	**05 52 30.3**	**+2.3**
MAJO	**Matsushiro**	**2.38**	**254**	*d i*P	**Pn**	**05 52 30.3**	**+2.3**
MAT	**Matsushiro**	**2.38**	**254**	P	**Pn**	**05 52 30.3**	**+2.3**
MAT	**Matsushiro**	**2.38**	**254**	P	**Pn**	**05 52 30.3**	**+2.3**
MAT				S	**Sn**	**05 53 03.3**	**+7.2**
MJB9	**Matsu-Tunnel**	**2.38**	**254**	*e*Pn	**Pn**	**05 52 30.2**	**+2.1**

MIYJ	**Miyakonagasawa**	**2.41**	**14**	⇓P	**Pn**	**05 52 28.5 +0.2**
JNG	**Nsakai**	**2.51**	**251**	⇓P	**Pn**	**05 52 32.0 +2.2**
JYN	**Shimob**	**2.67**	**230**	P	**Pn**	**05 52 33.5 +1.5**
JNT	**Takato**	**2.71**	**241**	⇓P	**Pn**	**05 52 34.9 +2.3**
JKZ	**Kuzumaki**	**2.75**	**5**	⇓P	**Pn**	**05 52 34.1 +1.1**
JNY	**Yasuok**	**3.19**	**235**	⇓P	**Pn**	**05 52 41.7 +2.6**
JGF	**Kuroka**	**3.40**	**242**	⇓P	**Pn**	**05 52 44.6 +2.7**
JIW	**Iwasaki**	**3.44**	**347**	⇓P	**Pn**	**05 52 44.4 +1.9**
INU	**Inuyama**	**3.77**	**241**	*e*Pn	**Pn**	**05 52 48.7 +1.8**
JHJ	**Hachijo jima 2**	**4.24**	**194**	P	**Pn**	**05 52 52.3 -1.2**
	377nm,0.3s,baz=333,slow=14,SNR=124					
JHJ				S	**Sn**	**05 53 39.2 -2.5**
	1μm,0.3s,baz=49,slow=19,SNR=14					
JHJ2	**Mitsune**	**4.24**	**194**	*e*Pn	**Pn**	**05 52 52.6 -0.9**
JHJ2				*e*Sn	**Sn**	**05 53 39.6 -2.1**
ASAJ	**Asahikawa**	**6.96**	**9**	P	**Pn**	**05 53 29.9 -0.8**
	29nm,0.3s,baz=213,slow=9.7,SNR=48					
ASAJ				S	**Sn**	**05 54 48.5 0.0**
	21nm,0.3s,baz=102,slow=20,SNR=6.9					
ASAJ	**Asahikawa**	**6.96**	**9**	*e*Pn	**Pn**	**05 53 29.9 -0.8**
ASAJ				*e*Sn	**Sn**	**05 54 47.3 -1.1**
GLVR	**Golovnino**	**7.33**	**26**	*e*P	**Pn**	**05 53 33.3 -2.3**
GLVR				*e*S	**Sn**	**05 54 51.6 -5.7**
GLVR				pmax	pmax	
	comp=E,198nm,0.4s					
GLVR				pmax	pmax	
	comp=Z,777nm,0.4s					
GLVR				pmax	pmax	
	comp=N,174nm,0.2s					
GRPR	**Tuman**	**7.64**	**27**	*e*P	**Pn**	**05 53 36.8 -3.1**
GRPR				pmax	pmax	
	comp=Z,587nm,0.4s					
GRPR				pmax	pmax	
	comp=N,253nm,0.2s					
GRPR				pmax	pmax	
	comp=E,252nm,0.3s					
LAGR	**Lagunnoye**	**7.70**	**26**	*e*P	**Pn**	**05 53 38.2 -2.5**
LAGR				*e*S	**Sn**	**05 55 00.2 -6.2**
LAGR				pmax	pmax	
	comp=Z,781nm,0.5s					
LAGR				pmax	pmax	
	comp=E,426nm,0.6s					
LAGR				pmax	pmax	
	comp=N,194nm,0.3s					
YUK	**Yuzh-Kuril'sk**	**7.71**	**27**	*e*P	**Pn**	**05 53 37.9 -2.9**
YUK				*i* S	**Sn**	**05 55 00.0 -6.6**
YUK				pmax	pmax	
	comp=Z,504nm,0.5s					
YUK				pmax	pmax	
	comp=E,180nm,0.2s					
YUK				pmax	pmax	
	comp=N,215nm,0.5s					
YUK				MLR	MLR	
	comp=Z,1μm,15.0s					
SHO	**Shikotan**	**7.95**	**32**	*e*P	**Pn**	**05 53 39.8 -4.3**
SHO				pmax	pmax	
	comp=Z,104nm,0.4s					
SHO				pmax	pmax	
	comp=N,80nm,0.2s					
SHO				pmax	pmax	
	comp=E,41nm,0.2s					
SHO				MLR	MLR	
	comp=Z,710nm,11.0s					
TEY	**Ternei**	**8.47**	**338**	*e*P	**Pn**	**05 53 54.0 +2.7**
TEY				*e*		05 55 35.0
JNU	**Nakatsue**	**9.28**	**247**	P	**Pn**	**05 54 05.0 +2.5**
	comp=Z,2.0nm,0.3s,baz=43,slow=10.0,SNR=24					
JNU				LR	LR	05 58 02.1
	comp=Z,4μm,20.7s,baz=122,slow=40					
JNU	**Nakatsue**	**9.28**	**247**	*e*Pn	**Pn**	**05 54 04.6 +2.1**
KUR	**Kuril'sk**	**9.49**	**31**	⇓*e*P	**Pn**	**05 54 03.2 -2.0**
KUR				pmax	pmax	
	comp=Z,161nm,0.5s					
KUR				pmax	pmax	
	comp=N,45nm,0.4s					
KUR				pmax	pmax	
	comp=E,63nm,0.5s					
KUR				pmax	pmax	
	comp=Z,429nm,1.9s					
USRK	**Ussuriysk Ar.**	**9.77**	**318**	P	**Pn**	**05 54 13.4 +4.3**
	baz=128,slow=13					
USRK				LR	LR	05 57 51.1
	comp=Z,2μm,20.6s,baz=121,slow=37					
YSS	**Yuzh-Sakhalins**	**9.79**	**7**	*e*Pn	**Pn**	**05 54 08.8 -0.5**
	comp=Z,66nm,0.6s					
YSS	**Yuzh-Sakhalins**	**9.79**	**7**	κ*e*P	**Pn**	**05 54 08.4 -0.8**
YSS				pmax	pmax	
	comp=Z,90nm,0.5s					
CBIJ	**Chichi jima**	**10.16**	**174**	*e*Pn	Pn	05 54 09.4 -5.1
CBIJ				*e*Sn	Sn	05 55 55.0 -12
JCJ	**Chichijima**	**10.16**	**174**	P	**Pn**	**05 54 11.0 -3.5**
	comp=Z,58nm,0.3s,baz=82,slow=17,SNR=26					
JCJ				S	Sn	05 55 54.8 -12
	comp=Z,37nm,0.3s,baz=274,slow=22,SNR=6.4					
KSRS	**Korea Array**	**10.45**	**275**	P	**Pn**	**05 54 22.9 +4.6**
	comp=Z,4.8nm,0.3s,baz=90,slow=13,SNR=132					
KSRS				ScP	**ScP**	**06 03 45.4 -1.3**
	comp=Z,0.2nm,0.3s,baz=151,slow=2.8,SNR=6.3					
KSRS	**Korea Array**	**10.45**	**275**	P	**Pn**	**05 54 23.0 +4.6**
KSRS				pmax	pmax	
	comp=Z,5.0nm,0.3s					
KS01	**Wonju Array Si**	**10.47**	**275**	*e*Pn	**Pn**	**05 54 21.9 +3.2**
KS15	**Wonju Array Si**	**10.48**	**275**	*e*Pn	**Pn**	**05 54 23.4 +4.6**
KSAR	**Wonju Array Be**	**10.48**	**275**	P	**Pn**	**05 54 22.9 +4.1**
KSAR				ScP	**ScP**	**06 03 45.4 -1.4**
KSAR	**Wonju Array Be**	**10.48**	**275**	P	**Pn**	**05 54 23.0 +4.1**
TJN	**Taejon**	**11.01**	**270**	*de*P	**Pn**	**05 54 24.8 -1.2**
MDJ	**Mudanjiang**	**11.36**	**314**	P	**Pn**	**05 54 29.5 -1.3**
MDJ				S	**Sn**	**05 56 37.3 +1.2**
MDJ				SS	**SnSn**	**05 56 51.8 +3.2**
MDJ				pmax	pmax	
	comp=Z,22nm,1.4s					
MDJ				pmax	pmax	
	comp=Z,420nm,3.7s					
MDJ				LR	LR	
	comp=Z,2μm,19.5s					
MDJ				LR	LR	
	comp=Z,2μm,22.3s					
MDJ				LR	LR	
	comp=Z,5μm,25.3s					
MDJ	**Mudanjiang**	**11.36**	**314**	*e*Pn	**Pn**	**05 54 33.3 +2.5**
	comp=Z,420nm,1.1s					
UGL	**Uglegorsk**	**11.85**	**3**	P	Pn	05 54 50.3 +13
UGL				S	**Sn**	**05 56 54.8 +6.9**
UGL				pmax	pmax	
	comp=Z,73nm,0.7s					
UGL				smax	smax	
	comp=N,500nm,3.7s					
UGL				MLR	MLR	
	comp=Z,1μm,16.0s					
UGL				MLR	MLR	
	comp=E,1μm,14.0s					
CN2	**Changchun**	**13.54**	**304**	*e*P	**Pn**	**05 55 01.0 +0.5**
CN2				*es*P	P	05 55 16.3 +8.6
CN2				*e*S	**Sn**	**05 57 31.5 +2.2**
CN2				pmax	pmax	
	comp=E,10.0nm,1.0s					
CN2				pmax	pmax	
	comp=E,200nm,5.0s					
CN2				LR	LR	
	comp=E,690nm,19.0s					
CN2				LR	LR	
	comp=E,2μm,19.0s					
CN2				LR	LR	
	comp=E,2μm,18.0s					
TYV	**Tymovskoe**	**13.66**	**4**	*e*P	**Pn**	**05 54 59.9 -2.2**
TYV				*e*S	**Sn**	**05 57 24.6 -7.5**
TYV				pmax	pmax	
	comp=Z,300nm,3.6s					
TYV				pmax	pmax	
	comp=Z,50nm,1.1s					
TYV				smax	smax	
	comp=E,14nm,1.3s					
TYV				smax	smax	
	comp=E,300nm,9.0s					
KLR	**Kul'dur**	**13.75**	**334**	*d i*P	**Pn**	**05 54 59.9 -3.4**
SNY	**Shenyang**	**14.23**	**294**	⇓P	**Pn**	**05 55 10.5 +0.8**
SNY				pmax	pmax	
	comp=E,49nm,1.2s					
SNY				LR	LR	
	comp=E,2μm,13.5s					
SNY				LR	LR	
	comp=E,3μm,18.5s					
SNY				LR	LR	
	comp=E,4μm,18.9s					
JOW	**Kunigami**	**14.99**	**230**	*e*Pn	**Pn**	**05 55 17.3 -2.3**
DL2	**Dalian**	**15.39**	**282**	⇓*i*P	**Pn**	**05 55 25.8 +1.1**
DL2				sP	**pP**	**05 55 38.0 -2.9**
DL2				S	**S**	**05 58 21.0 -6.2**
DL2				pmax	pmax	
	comp=E,170nm,0.7s					
DL2				pmax	pmax	
	comp=E,1μm,4.6s					
DL2				LR	LR	
	comp=E,860nm,15.1s					
DL2				LR	LR	
	comp=E,2μm,18.4s					
DL2				LR	LR	
	comp=E,3μm,19.0s					
NKL	**Nikolayevsk**	**15.91**	**359**	*e*P	**Pn**	**05 55 27.0 -4.2**
NKL				*e*		05 58 22.0
NKL				pmax	pmax	
	comp=N,40nm,1.0s					
NKL				pmax	pmax	
	comp=Z,43nm,1.0s					
NKL				MLR	MLR	
	comp=N,900nm,14.0s					
NKL				MLR	MLR	
	comp=E,1μm,14.0s					
NKL				MLR	MLR	
	comp=Z,850nm,14.0s					
SKR	**Severo-Kuril's**	**17.22**	**34**	*e*P	**Pn**	**05 55 46.9 -0.7**
SKR				pmax	pmax	
	comp=Z,149nm,1.3s					
SKR				MLR	MLR	
	comp=Z,500nm,15.0s					
SKR				MLR	MLR	
	comp=Z,300nm,15.0s					
SSE	**Sheshan**	**17.53**	**255**	P	**Pn**	**05 55 49.5 -2.1**
SSE				S	**Sn**	**05 59 01.0 -5.1**
SSE				pmax	pmax	
	comp=Z,27nm,0.8s					
SSE				pmax	pmax	
	comp=Z,250nm,3.5s					
SSE				LR	LR	
	comp=Z,650nm,16.2s					
NJ2	**Nanjing**	**18.97**	**261**	*e*P	**P**	**05 56 06.0 -1.8**
NJ2				sP	**pP**	**05 56 21.5 +0.9**
NJ2				S	**S**	**05 59 35.0 -5.0**
NJ2				pmax	pmax	
	comp=Z,47nm,0.8s					
NJ2				pmax	pmax	
	comp=Z,470nm,8.7s					
NJ2				LR	LR	
	comp=Z,1μm,15.2s					
NJ2				LR	LR	
	comp=Z,2μm,20.6s					
NJ2				LR	LR	
	comp=Z,3μm,18.4s					
ZEA	**Zeya**	**19.06**	**334**	*e*P	**P**	**05 56 05.7 -3.0**
ZEA				*e*S	**S**	**05 59 32.0 -10**
ZEA				pmax	pmax	
	comp=Z,500nm,5.0s					
ZEA				pmax	pmax	
	comp=E,200nm,6.0s					
ZEA				pmax	pmax	
	comp=N,200nm,5.0s					
ZEA				pmax	pmax	
	comp=N,210nm,0.8s					
ZEA				pmax	pmax	
	comp=E,100nm,0.8s					
ZEA				pmax	pmax	
	comp=Z,230nm,0.8s					
ZEA				smax	smax	
	comp=E,1μm,8.0s					
ZEA				smax	smax	
	comp=N,500nm,3.0s					
ZEA				MLR	MLR	
	comp=N,1μm,16.0s					
ZEA				MLR	MLR	
	comp=Z,1μm,16.0s					
ZEA				MLR	MLR	
	comp=E,500nm,13.0s					
TIA	**Tai'an**	**19.20**	**274**	P	**P**	**05 56 09.3 -1.0**
TIA				pmax	pmax	
	comp=E,21nm,1.4s					
TIA				pmax	pmax	
	comp=E,200nm,2.8s					
TIA				LR	LR	
	comp=E,340nm,13.8s					
TIA				LR	LR	
	comp=E,500nm,17.1s					
TIA				LR	LR	
	comp=E,870nm,15.8s					
HIA	**Hailar**	**19.55**	**315**	*e*P	**P**	**05 56 10.9 -3.2**
	comp=E,29nm,0.8s					
HIA				*e*S	**S**	**05 59 49.7 -1.9**
HIA	**Hailar**	**19.55**	**315**	*e*P	**P**	**05 56 10.9 -3.2**
HIA				*e*S	**S**	**05 59 49.7 -1.9**
HIA				pmax	pmax	
	comp=Z,29nm,0.8s					
BJI	**Beijing**	**19.61**	**286**	⇑*i*P	**P**	**05 56 13.3 -1.5**
BJI				pP	**pP**	**05 56 23.3 -4.3**
BJI				S	**S**	**05 59 47.3 -5.6**
BJI				sS	**sS**	**06 00 11.3 -2.4**
BJI				pmax	pmax	
	comp=Z,110nm,1.5s					
BJI				pmax	pmax	
	comp=Z,540nm,3.0s					
BJI				LR	LR	
	comp=Z,1μm,15.4s					
BJI				LR	LR	
	comp=Z,1μm,19.4s					
BJI				LR	LR	
	comp=Z,2μm,33.2s					
BJT	**Baijiatuau**	**19.62**	**286**	*e*P	**P**	**05 56 13.3 -1.5**
	comp=Z,55nm,0.7s					
BJT	**Baijiatuau**	**19.62**	**286**	*e*P	**P**	**05 56 13.3 -1.5**
BJT				pmax	pmax	
	comp=Z,55nm,0.7s					
PEA0B	**Petropavlovsk-**	**19.66**	**31**	*e*P	**Pn**	**05 56 16.1 -0.9**
	comp=Z,52nm,1.1s					
PETK	**Petropavlovsk-**	**19.66**	**31**	P	**P**	**05 56 15.8 +0.6**
	baz=214,slow=7.7					
PETK				LR	LR	06 03 27.0
	comp=Z,686nm,21.5s,baz=219,slow=35					
PETK	**Petropavlovsk-**	**19.66**	**31**	*e*P	**P**	**05 56 16.0 +0.8**
PETK	**Petropavlovsk-**	**19.66**	**31**	*e*P	**P**	**05 56 16.0 +0.8**
PET	**Petropavlovsk**	**19.99**	**32**	*e*P	**P**	**05 56 19.4 +0.6**
	comp=Z,92nm,1.2s					
PET				*e*S	**S**	**06 00 01.9 +1.7**
PET	**Petropavlovsk**	**19.99**	**32**	*e*P	**P**	**05 56 18.5 -0.3**
PET				*e*S	**S**	**06 00 00.5 +0.3**
PET				pmax	pmax	
	comp=Z,400nm,2.0s					
PET				pmax	pmax	
	comp=Z,91nm,1.2s					
PET				MLR	MLR	
	comp=Z,1μm,21.0s					
YOJ	**Yonaguni jima**	**20.01**	**236**	*e*P	**P**	**05 56 17.9 -1.3**
	comp=Z,94nm,1.0s					
YOJ	**Yonaguni jima**	**20.01**	**236**	*e*P	**P**	**05 56 17.9 -1.3**
YOJ				pmax	pmax	
	comp=Z,94nm,1.0s					
YHNB	**Yeheng**	**20.97**	**239**	*e*P	**P**	**05 56 26.7 -3.0**
	comp=Z,49nm,0.8s					
SSLB	**Suanglung**	**21.84**	**238**	*e*P	**P**	**05 56 35.7 -3.2**
	comp=Z,27nm,1.0s					
YULB	**Yu-li**	**21.88**	**236**	*e*P	**P**	**05 56 39.0 -0.3**
	comp=Z,22nm,0.6s					
CLNS	**Chul'man**	**22.37**	**336**	*e*P	**P**	**05 56 42.1 -2.3**
CLNS				*e**PP	**pP**	**05 56 57.7 +0.2**
CLNS				*e*		06 00 35.2
CLNS				*e*S	**S**	**06 00 40.3 -6.0**
CLNS				*e*SS	**SnSn**	**06 01 27.7 +9.2**
CLNS				*e*		06 07 55.2
CLNS				pmax	pmax	
	comp=N,36nm,1.2s					
CLNS				pmax	pmax	
	comp=Z,41nm,1.0s					
CLNS				pmax	pmax	
	comp=E,20nm,1.3s					
CLNS				smax	smax	
	comp=E,384nm,9.2s					
CLNS				smax	smax	
	comp=N,587nm,11.6s					
CLNS				MLR	MLR	
	comp=N,524nm,15.0s					
CLNS				MLR	MLR	
	comp=Z,553nm,14.0s					
CLNS				MLR	MLR	
	comp=E,203nm,13.0s					
TPUB	**Ta-pu**	**22.39**	**237**	*e*P	**P**	**05 56 41.5 -3.4**
	comp=E,51nm,0.8s					
TWG	**Pinlang**	**22.42**	**236**	*e*P	**P**	**05 56 44.4 -0.8**
	comp=E,466nm,1.3s					
TIY	**Taiyuan**	**22.68**	**280**	*e*P	**P**	**05 56 45.3 -2.6**
TIY				S	**S**	**06 00 56.0 +4.1**
TIY				pmax	pmax	
	comp=E,57nm,0.6s					
TIY				LR	LR	
	comp=E,750nm,16.5s					
TIY				LR	LR	
	comp=E,2μm,15.3s					
TIY				LR	LR	
	comp=E,2μm,18.8s					
QZH	**Quanzhou**	**22.74**	**244**	⇑*i*P	**P**	**05 56 45.5 -3.0**
QZH				sP	**pP**	**05 57 03.5 +1.9**
QZH				S	**S**	**06 00 52.0 -0.9**
QZH				pmax	pmax	
	comp=E,42nm,1.2s					
QZH				LR	LR	
	comp=E,830nm,19.9s					
QZH				LR	LR	
	comp=E,720nm,17.1s					
QZH				LR	LR	
	comp=E,990nm,22.7s					
WHN	**Wuhan**	**23.10**	**261**	⇓P	**P**	**05 56 50.8 -1.4**
WHN				pP	**pP**	**05 56 59.0 -6.4**
WHN				S	**S**	**06 00 58.5 -0.3**
WHN				pmax	pmax	
	comp=E,480nm,1.8s					
WHN				LR	LR	
	comp=E,1μm,11.5s					
WHN				LR	LR	
	comp=E,2μm,16.4s					
WHN				LR	LR	
	comp=E,4μm,20.7s					
HHC	**Hu-ho-hao-te**	**23.13**	**288**	*e*P	**P**	**05 56 50.8 -1.7**
HHC				pP	pP	05 57 02.5 -3.3
HHC				sP	sP	05 57 11.5 -1.7
HHC				PP	**PnPn**	**05 57 22.3 +2.4**
HHC				S	**S**	**06 00 57.5 -1.8**
HHC				SS	**SnSn**	**06 01 42.5 +5.2**
HHC				pmax	pmax	
	comp=E,17nm,1.2s					
HHC				pmax	pmax	
	comp=E,110nm,6.0s					
HHC				LR	LR	
	comp=E,340nm,12.4s					
HHC				LR	LR	
	comp=E,370nm,14.5s					
HHC				LR	LR	
	comp=E,380nm,14.5s					
MA2	**Magadan**	**23.21**	**13**	P	**P**	**05 56 52.6 -0.3**
	comp=E,44nm,0.6s,baz=204,slow=9.6,SNR=22					
MA2				LR	LR	06 06 23.8
	comp=E,241nm,19.9s,baz=196,slow=38					
MA2	**Magadan**	**23.21**	**13**	*e*P	**P**	**05 56 52.9 -0.1**
	comp=E,196nm,0.7s					
MA2	**Magadan**	**23.21**	**13**	⇑*e*P	**P**	**05 56 53.6 +0.7**
MA2				pmax	pmax	
	comp=Z,54nm,0.7s					
BTO	**Baotou**	**24.31**	**288**	*e*P	**P**	**05 57 02.0 -1.4**
BTO				pmax	pmax	
	comp=Z,17nm,1.2s					
CIT	**Chita**	**24.32**	**316**	*e*P	**P**	**05 57 02.6 -0.7**
CIT				*e*		05 57 14.9
CIT				*e*		05 57 26.2
CIT				*e*		05 57 44.2
CIT				pmax	pmax	
	comp=Z,385nm,1.5s					
YAK	**Yakutsk**	**25.80**	**348**	P	**P**	**05 57 15.8 -0.8**
	comp=Z,112nm,0.5s,baz=31,slow=4.4,SNR=21					
YAK				LR	LR	06 07 29.5
	comp=Z,657nm,19.6s,baz=102,slow=36					
YAK	**Yakutsk**	**25.80**	**348**	*e*P	**P**	**05 57 16.0 -0.5**
	comp=Z,272nm,0.9s					
YAK				*e*S	**S**	**06 01 41.2 -0.2**
YAK	**Yakutsk**	**25.80**	**348**	*d i*P	**P**	**05 57 15.9 -0.6**
YAK				*e*		06 00 39.2
YAK				*e*S	**S**	**06 01 40.8 -0.6**
YAK				*e*		06 08 03.0
YAK				pmax	pmax	
	comp=Z,145nm,0.9s					
YAK				pmax	pmax	
	comp=N,38nm,0.9s					
YAK				pmax	pmax	
	comp=E,22nm,1.0s					
YAK				pmax	pmax	
	comp=Z,220nm,2.0s					
YAK				pmax	pmax	
	comp=N,131nm,1.7s					
YAK				pmax	pmax	
	comp=E,71nm,1.6s					
YAK				smax	smax	
	comp=N,537nm,3.0s					
YAK				smax	smax	
	comp=E,310nm,2.8s					
YAK				MLR	MLR	
	comp=Z,626nm,17.0s					
YAK				MLR	MLR	
	comp=E,358nm,21.0s					
XAN	**Xi'an**	**26.24**	**273**	P	**P**	**05 57 19.5 -1.4**
XAN				pP	pP	05 57 33.5 -1.9
XAN				S	**S**	**06 01 46.0 -3.0**
XAN				pmax	pmax	
	comp=E,47nm,0.7s					
XAN				pmax	pmax	
	comp=E,520nm,4.1s					
XAN				LR	LR	
	comp=E,580nm,17.8s					
XAN				LR	LR	
	comp=E,630nm,22.1s					
XAN				LR	LR	
	comp=E,1μm,36.5s					
SEY	**Seymchan**	**26.64**	**12**	P	**P**	**05 57 25.4 +1.3**
	comp=E,36nm,0.9s,baz=204,slow=6.4,SNR=42					
SEY	**Seymchan**	**26.64**	**12**	*ce*P	**P**	**05 57 25.5 +1.4**
ULN	**Ulaanbaatar**	**27.00**	**304**	*e*P	**P**	**05 57 27.6 -0.1**
	comp=E,126nm,1.3s					
ULN	**Ulaanbaatar**	**27.00**	**304**	P	**P**	**05 57 27.2 -0.5**
	SNR=46					
ULN	**Ulaanbaatar**	**27.00**	**304**	*de*P	**P**	**05 57 26.7 -1.0**
ULN				pmax	pmax	
	comp=Z,105nm,1.3s					
ENH	**Enshi**	**27.06**	**264**	*e*P	**P**	**05 57 27.6 -0.7**
	comp=Z,210nm,1.0s					
BOD	**Bodaibo**	**27.20**	**328**	*e*P	**P**	**05 57 29.0 -0.2**
BOD				pmax	pmax	
	comp=Z,107nm,0.9s					
SONA1	**Songino Array**	**27.42**	**304**	*e*P	**P**	**05 57 30.9 -0.6**
SONM	**Songino Array**	**27.43**	**304**	P	**P**	**05 57 31.5 0.0**
	comp=Z,52nm,0.6s,baz=105,slow=8.6,SNR=162					
SONM				ScP	**ScP**	**06 04 23.0 -1.2**
	comp=Z,2.0nm,1.0s,baz=99,slow=1.9,SNR=6.2					
H11N2	**WAKE ISLAND Hy 28.51**	**121**		T	T	06 27 49.7
	baz=314,slow=75,SNR=343					
H11N1	**WAKE ISLAND Hy 28.51**	**121**		T	T	06 27 59.4
	baz=314,slow=75,SNR=496					
H11N3	**WAKE ISLAND Hy 28.52**	**121**		T	T	06 27 54.1
	baz=314,slow=75,SNR=676					
H11S1	**WAKE ISLAND Hy 29.22**	**123**		T	T	06 28 44.9
	baz=315,slow=76,SNR=422					
H11S3	**WAKE ISLAND Hy 29.22**	**123**		T	T	06 28 43.3
	baz=315,slow=76,SNR=444					
H11S2	**WAKE ISLAND Hy 29.23**	**123**		T	T	06 28 38.3
	baz=315,slow=76,SNR=544					
IRK	**Irkutsk**	**29.74**	**312**	*e*P	**P**	**05 57 52.7 +0.8**
IRK				*e*		05 58 08.7
IRK				pmax	pmax	
	comp=Z,69nm,1.9s					
LZH	**Lanzhou**	**29.74**	**279**	⇑P	**P**	**05 57 52.5 +0.2**
LZH				pP	pP	05 58 03.8 -3.1
LZH				sP	sP	05 58 09.0 -4.9
LZH				PP	**PnPn**	**05 58 50.0 +0.1**
LZH				S	**S**	**06 02 43.8 -0.6**
LZH				sS	sS	06 03 02.3 -7.1
LZH				SS	**SnSn**	**06 04 20.5 +1.7**
LZH				pmax	pmax	
	comp=Z,190nm,1.3s					
LZH				pmax	pmax	
	comp=Z,540nm,5.1s					
LZH				LR	LR	
	comp=Z,1μm,14.2s					
LZH				LR	LR	
	comp=Z,3μm,14.3s					
LZH				LR	LR	

comp=Z,4μm,16.4s
ZAK Zakamensk 29.91 308 *e*P **P 05 57 52.6 -0.9**
ZAK pmax pmax
comp=Z,26nm,1.0s
TLY Talaya 29.97 311 P **P 05 57 55.1 +1.2**
comp=Z,32nm,0.7s,baz=123,slow=3.5,SNR=20
TLY LR LR 06 10 40.8
comp=Z,1μm,18.0s,baz=104,slow=38
TLY Talaya 29.97 311 *e*P **P 05 57 53.9 -0.1**
comp=Z,37nm,0.7s
TLY Talaya 29.97 311 P **P 05 57 53.3 -0.7**
SNR=17
TLY Talaya 29.97 311 *e*P **P 05 57 53.7 -0.3**
TLY *e* 05 58 58.1
TLY *e*S **S 06 02 49.9 +2.5**
TLY *e*SS **SS 06 04 49.3 -7.3**
TLY pmax pmax
comp=Z,56nm,1.0s
TLY MLR MLR
comp=Z,1μm,17.0s
GYA Guiyang 30.97 260⇑ *i*P **P 05 58 02.3 -0.8**
GYA pP pP 05 58 16.3 -1.5
GYA PP **PnPn 05 59 07.5 +1.6**
GYA PcP **PcP 06 01 00.0 +1.8**
GYA S **S 06 02 55.5 -8.2**
GYA sS sS 06 03 24.5 -4.2
GYA ScP **ScP 06 04 38.0 +2.2**
GYA SS **SnSn 06 04 49.5 +0.8**
GYA ScS **ScS 06 08 34.8 +1.7**
GYA pmax pmax
comp=Z,100nm,1.1s
GYA pmax pmax
comp=Z,180nm,5.3s
GYA LR LR
comp=Z,650nm,19.2s
GYA LR LR
comp=Z,890nm,21.7s
GYA LR LR
comp=Z,1μm,21.4s
CD2 Chengdu 31.38 270⇓ P **P 05 58 05.5 -1.1**
CD2 pP pP 05 58 21.5 +0.2
CD2 S **S 06 03 03.5 -6.4**
CD2 pmax pmax
comp=Z,100nm,0.8s
CD2 pmax pmax
comp=Z,180nm,3.6s
CD2 LR LR
comp=Z,1μm,16.8s
CD2 LR LR
comp=Z,2μm,18.0s
MOY Mondy 31.58 310 *e*P **P 05 58 08.6 +0.4**
MOY pmax pmax
comp=Z,54nm,2.4s
GTA Gaotai 32.22 287 *e*P **P 05 58 13.8 -0.2**
GTA pP pP 05 58 25.3 -3.5
GTA sP sP 05 58 31.5 -4.2
GTA PP **PP 05 59 26.5 -1.1**
GTA S **S 06 03 23.8 +0.7**
GTA sS sS 06 03 44.0 -4.1
GTA SS **SnSn 06 05 21.5 +2.6**
GTA pmax pmax
comp=Z,20nm,0.7s
GTA pmax pmax
comp=Z,220nm,6.2s
GTA LR LR
comp=Z,570nm,15.8s
GTA LR LR
comp=Z,610nm,21.1s
GTA LR LR
comp=Z,1μm,24.9s
KIWB Kanaga Island 32.68 50 *e*P **P 05 58 18.3 +0.5**
QIZ Qiongzhong 32.75 245 P **P 05 58 19.3 +0.6**
QIZ S **S 06 03 35.0 +3.7**
QIZ pmax pmax
comp=Z,93nm,3.7s
QIZ LR LR
comp=Z,490nm,22.1s
QIZ LR LR
comp=Z,440nm,18.1s
QIZ LR LR
comp=Z,550nm,22.6s
DAV Davao City (W) 33.17 209 LR LR 06 09 31.5
comp=Z,342nm,21.9s,baz=4.5,slow=32
GSTR Great Sitkin T 33.39 50 *e*P **P 05 58 24.7 +0.8**
BILL Bilibino 33.91 17⇑ *e*P **P 05 58 28.5 +0.3**
BILL pmax pmax
comp=Z,11nm,1.3s
BILL MLR MLR
comp=Z,323nm,19.0s
ATKA Atka Island 34.54 50 *e*P **P 05 58 33.0 -0.8**
comp=Z,234nm,1.8s
KMI Kunming 34.70 261 P **P 05 58 35.0 -0.9**
KMI pP pP 05 58 44.3 -6.4
KMI sP sP 05 58 51.0 -6.6
KMI PP **PnPn 05 59 53.3 0.0**
KMI S **S 06 04 01.8 -0.1**
KMI sS sS 06 04 22.0 -5.1
KMI SS **SnSn 06 06 15.5 -4.0**
KMI pmax pmax
comp=Z,160nm,1.1s
KMI pmax pmax
comp=Z,380nm,4.4s
KMI LR LR
comp=Z,540nm,22.6s
KMI LR LR
comp=Z,1μm,23.1s
KMI LR LR
comp=Z,2μm,20.1s
TIXI Tiksi 35.05 353 P **P 05 58 38.2 +0.2**
comp=Z,21nm,0.9s,baz=158,slow=7.6,SNR=19
TIXI Tiksi 35.05 353 *e*P **P 05 58 38.0 +0.1**
comp=Z,30nm,1.0s
TIXI Tiksi 35.05 353 *de*P **P 05 58 37.4 -0.6**
TIXI pmax pmax
comp=Z,16nm,0.7s
KRAR Krasnoyarsk 37.11 316 *i*P **P 05 58 54.3 -1.5**
SPIA Saint Paul Isl 37.61 42 *e*P **P 05 59 01.1 +1.1**
comp=Z,166nm,1.4s
NIKH Nikolski High 37.86 49 *e*P **P 05 59 01.0 -1.2**
comp=Z,30nm,0.8s
MYLDM Lahad Datu 37.99 218 *e*P **P 05 59 02.2 -1.4**
comp=Z,81nm,1.1s
SKNT Sakolnakorn 38.35 248 P **P 05 59 06.0 -0.7**
comp=Z,50nm,1.1s,comp=Z,2μm
UBPT Khong Chiam 38.35 245 P **P 05 59 06.3 -0.4**
comp=Z,161nm,1.2s,comp=Z,2μm
PAYA Payao 40.03 255 P P 05 59 26.6 +5.8
CMAI Chiengmai2 40.34 257 P **P 05 59 24.0 +0.5**
comp=Z,314nm,1.5s,comp=Z,4μm
WMQ Urumqi 40.48 297 P **P 05 59 26.0 +1.7**
WMQ pP pP 05 59 35.0 -4.4
WMQ PP **PnPn 06 01 05.5 +2.9**
WMQ PcP **PcP 06 01 26.3 +0.4**
WMQ S **S 06 05 30.8 +1.9**
WMQ sS sS 06 05 53.8 -0.5
WMQ LR LR
comp=Z,1μm,26.3s
WMQ LR LR
comp=Z,1μm,21.5s
WMQ LR LR
comp=Z,2μm,26.3s
MRSI Marisa 40.62 210 P **P 05 59 25.3 -0.3**
FAKI Fak Fak 40.79 194 P **P 05 59 30.0 +3.1**
PBKT Sadao Pong 40.85 251 P **P 05 59 26.7 -0.8**
comp=Z,43nm,1.5s,comp=Z,811nm
CHTO Chiang Mai 41.06 255 P **P 05 59 29.4 +0.2**
comp=Z,114nm,1.7s
CHTO Chiang Mai 41.06 255 *e*P **P 05 59 28.9 -0.3**
comp=Z,95nm,1.8s
CHTO Chiang Mai 41.06 255 P **P 05 59 28.9 -0.3**
SNR=5.0
CHTO Chiang Mai 41.06 255 *e*P **P 05 59 28.9 -0.3**
CHTO pmax pmax
comp=Z,95nm,1.8s
CM31 Chiang Mai Arr 41.27 255 *e*P **P 05 59 31.1 +0.1**
CMAR Chiang Mai Arr 41.27 255 P **P 05 59 30.9 0.0**
comp=Z,7.5nm,0.7s,baz=46,slow=7.1,SNR=30
CMAR LR LR 06 17 38.8
comp=Z,520nm,21.3s,baz=62,slow=38
CMAR Chiang Mai Arr 41.27 255 P **P 05 59 31.0 0.0**
CM01 Chiang Mai Arr 41.28 255 *e*P **P 05 59 31.0 0.0**
SANI Sanana 41.52 203 P **P 05 59 33.7 +0.8**
ZAA0 Zalesovo Array 41.56 312 *e*P **P 05 59 33.0 +0.1**
comp=Z,149nm,0.8s
ZALV Zalesovo Beam 41.56 312 P **P 05 59 32.8 -0.1**
comp=Z,130nm,0.7s,baz=96,slow=7.1,SNR=246
ZALV PcP **PcP 06 01 29.0 -0.1**
comp=Z,3.4nm,0.6s,baz=107,slow=2.0,SNR=2.2
ZALV ScP **ScP 06 05 13.2 -0.9**
comp=Z,1.5nm,0.6s,baz=90,slow=3.0,SNR=3.6
ZALV Zalesovo Beam 41.56 312 *e*P **P 05 59 32.0 -0.8**
ZALV PcP **PcP 06 01 29.0 -0.1**
ZALV ScP **ScP 06 05 13.2 -0.9**
ANM Nome 41.57 32 *e*P **P 05 59 34.1 +1.2**
comp=Z,64nm,1.4s
ANM Nome 41.57 32 *e*P **P 05 59 34.1 +1.2**
ANM pmax pmax
comp=Z,64nm,1.4s
MPSI Mapaga 41.60 213 P **P 05 59 35.7 +2.1**
comp=Z,11nm,0.7s,comp=Z,483nm
LSA Lhasa 41.90 275 P **P 05 59 37.5 +1.0**
LSA pmax pmax
comp=Z,74nm,1.4s
LSA Lhasa 41.90 275 *e*P **P 05 59 37.6 +1.0**
comp=Z,116nm,1.1s
LSA Lhasa 41.90 275 P **P 05 59 37.6 +1.0**
LSA Lhasa 41.90 275 *e*P **P 05 59 37.6 +1.0**
LSA pmax pmax
comp=Z,116nm,1.1s
APSI Ampana 42.00 210 P **P 05 59 39.3 +2.4**
comp=Z,43nm,0.6s,comp=Z,678nm
NVS Novosibirsk 42.48 314⇑ *i*P **P 05 59 41.3 +0.9**
NVS *e*S **S 06 05 56.5 -1.5**
NVS *e*SSS SSS 06 09 33.4
NVS pmax pmax
comp=Z,137nm,1.2s
NVS pmax pmax
comp=N,32nm,1.4s
NVS pmax pmax
comp=E,113nm,1.2s
NVS smax smax
comp=E,19nm,1.4s
UMPA Umpang Tak 42.67 252 P **P 05 59 44.6 +2.2**
comp=E,17nm,1.0s
SHL Shillong 43.12 269 *e*P **P 05 59 46.0 -0.1**
SHL *e*S **S 06 06 08.0 -0.3**
SHL Shillong 43.12 269 *e*P **P 05 59 44.0 -2.1**
comp=E,27nm,0.7s
SHL Shillong 43.12 269 *e*P **P 05 59 44.0 -2.1**
SHL pmax pmax
comp=Z,27nm,0.7s
RDOG Red Dog Mine 43.45 27 *e*P **P 05 59 49.1 +1.0**
comp=Z,48nm,1.2s
SBUM Sibu 43.61 224 *e*P **P 05 59 50.2 +0.3**
comp=Z,17nm,1.0s
SRDT SRDT 43.63 250 P **P 05 59 51.0 +0.9**
comp=Z,57nm,2.4s
MK01 Makanchi Array 43.76 302 *e*P **P 05 59 51.3 +0.5**
MK31 Makanchi Array 43.76 302 *e*P **P 05 59 51.2 +0.3**
MK31 Makanchi Array 43.76 302 *e*P **P 05 59 51.2 +0.3**
MKAR Makanchi Array 43.76 302 P **P 05 59 50.9 0.0**
comp=Z,40nm,0.7s,baz=84,slow=9.9,SNR=219
MKAR LR LR 06 18 48.7
comp=Z,498nm,18.3s,baz=70,slow=37
MKAR Makanchi Array 43.76 302 *e*P **P 05 59 51.3 +0.4**
comp=Z,477nm,1.0s
MKAR Makanchi Array 43.76 302 *e*P **P 05 59 51.3 +0.4**
MKAR pmax pmax
comp=Z,477nm,1.0s
MAKZ Makanchi 43.97 302 *e*P **P 05 59 52.7 +0.1**
comp=Z,70nm,0.9s
MAKZ Makanchi 43.97 302 P **P 05 59 52.7 +0.1**
MAKZ pmax pmax
comp=Z,109nm,1.1s
CHGN Chignik 44.02 44 *e*P **P 05 59 52.5 -0.3**
comp=Z,33nm,0.7s
PHET Kaeng Krachan 44.17 248 P **P 05 59 55.6 +1.2**
comp=Z,30nm,0.7s,comp=Z,304nm
BRDH Bariadhala 44.72 265 LR LR 06 21 37.4
comp=Z,718nm,19.9s,baz=101,slow=40
KSM Kuching 45.49 226 *e*P **P 06 00 04.8 -0.1**
comp=Z,32nm,1.0s
SPSI Sidrap Palu 45.53 210 P **P 06 00 07.0 +1.8**
comp=Z,18nm,1.3s
KURK Kurchatov 45.57 308 *e*P **P 06 00 05.7 +0.5**
comp=Z,178nm,0.7s
KURK Kurchatov 45.57 308 P **P 06 00 05.0 -0.1**
SNR=86
KURK Kurchatov 45.57 308 P **P 06 00 06.0 +0.8**
KURK pmax pmax
comp=Z,80nm,0.5s
TAPN Taplejung 45.63 274 *e*P **P 06 00 07.2 +0.8**
KURBB Kurchatov Arra 45.64 308 P **P 06 00 06.0 +0.3**
comp=Z,79nm,0.5s,baz=84,slow=8.4,SNR=445
ODAN Odare 46.11 273 *e*P **P 06 00 10.4 +0.4**
comp=Z,324nm,1.2s
PDGK Podgornoye 46.42 298 P **P 06 00 12.0 -0.1**
PDGK pmax pmax
comp=Z,139nm,1.2s
RAMN Ramite 46.70 274 *e*P **P 06 00 14.8 +0.1**
comp=Z,254nm,0.8s
JIRN Jiri 46.71 275 *e*P **P 06 00 15.4 +0.5**
comp=Z,274nm,0.7s
OHAK Old Harbor 46.80 43 *e*P **P 06 00 14.3 -0.4**
GUN Gumba 46.84 275 *e*P **P 06 00 16.1 +0.2**
comp=Z,81nm,0.3s
KDAK Kodiak Island 47.14 42 *e*P **P 06 00 17.2 -0.1**
comp=Z,91nm,0.8s
KDAK *e*pP **pP 06 00 35.6 +2.9**
KDAK Kodiak Island 47.14 42 *e*P **P 06 00 17.3 -0.1**
KDAK *e**PP **pP 06 00 35.6 +2.9**
KDAK pmax pmax
comp=Z,91nm,0.8s
KKN Kakani 47.37 275 *e*P **P 06 00 20.1 +0.2**
comp=Z,165nm,0.9s
PKIN Phulchoki 47.38 275 *e*P **P 06 00 19.7 -0.3**
comp=Z,69nm,0.7s
TRTT Trang 47.54 243 P **P 06 00 21.6 +0.6**
comp=Z,25nm,1.1s
DMN Daman 47.59 275 *e*P **P 06 00 22.0 +0.4**
GKN Gorkha 47.79 276 *e*P **P 06 00 23.3 +0.2**
comp=Z,514nm,1.2s
TARG Taragay, Kyrgy 48.05 296 *e*P **P 06 00 25.4 +0.2**
comp=Z,144nm,1.6s
AAA Alma-Ata 48.27 298 *e*P **P 06 00 27.4 +1.0**
AAA pmax pmax
comp=Z,300nm,3.9s
DANN Dangsing 48.33 277 *e*P **P 06 00 27.9 +0.5**
comp=Z,432nm,0.7s
TOLK Toolik Lake Re 48.42 27 P **P 06 00 26.8 -0.4**
baz=267
TOLK Toolik Lake Re 48.42 27 P **P 06 00 26.7 -0.5**
PKDT Phuket 48.47 244 P **P 06 00 28.5 +0.3**
comp=Z,56nm,1.0s,comp=Z,3μm
KOLN Koldanda 48.72 276 *e*P **P 06 00 31.0 +0.7**
IPM Ipoh 49.00 238 *e*P **P 06 00 31.7 -0.6**
comp=Z,36nm,1.0s
ULHL Ulahol 49.01 297 P **P 06 00 33.5 +1.1**
SNR=17
PYUN Piuthan 49.05 277 *e*P **P 06 00 33.2 +0.4**
TKM2 Tokmak 2 49.27 298 P **P 06 00 35.1 +0.8**
SNR=94
TKM2 Tokmak 2 49.27 298 P **P 06 00 34.9 +0.6**
TKM2 pmax pmax
comp=Z,160nm,2.1s
SOEI Soe 49.33 202 *e*P **P 06 00 34.4 -0.4**
ILAR Eielson Array 49.47 32 LR LR 06 22 30.8
comp=Z,133nm,21.7s,baz=279,slow=37
HNR Honiara 49.70 155 LR LR 06 18 37.6
comp=Z,336nm,21.6s,baz=330,slow=32
KZA Kyzart 49.77 297 P **P 06 00 39.4 +1.0**
SNR=28
KBK Karagaybulak 49.81 298 P **P 06 00 39.1 +0.7**
SNR=51
CHMS Chumysh 49.84 298 P **P 06 00 39.5 +1.0**
SNR=7.7
USP Ospenovka 49.94 299 P **P 06 00 39.6 +0.3**
SNR=13
FRU Bishkek 49.99 298 *e*P **P 06 00 39.0 -0.6**
FRU *e* 06 01 07.0
FRU pmax pmax
comp=Z,120nm,2.0s
KSH Kashi 50.05 294⇓ *i*P **P 06 00 44.0 +3.8**
KSH pP pP 06 00 58.3 +2.6
KSH PP **PP 06 02 41.5 +6.0**
KSH S **S 06 07 51.3 +4.2**
KSH sS sS 06 08 13.5 +0.3
KSH SS **SS 06 11 26.5 +6.1**
KSH pmax pmax
comp=Z,45nm,0.6s
KSH LR LR
comp=Z,2μm,14.7s
KSH LR LR
comp=Z,730nm,10.0s
KSH LR LR
comp=Z,2μm,15.5s
OTUK Ortayu 50.07 306 P **P 06 00 39.8 -0.3**
OTUK pmax pmax
comp=Z,56nm,0.8s
AAK Ala-Archa 50.13 298 P **P 06 00 41.1 +0.3**
SNR=15
AAK Ala-Archa 50.13 298 P **P 06 00 41.0 +0.2**
AAK pmax pmax
comp=Z,14nm,0.6s
BVA0 Borovoye Array 50.22 312 P **P 06 00 41.0 -0.1**
BVA0 pmax pmax
comp=Z,35nm,0.7s
BVAR Borovoye Array 50.22 312 P **P 06 00 41.0 -0.1**
comp=Z,31nm,0.6s,baz=79,slow=9.0,SNR=152
UCH Uchtor 50.24 298 P **P 06 00 43.3 +1.3**
SNR=14
BRVK Borovoye 50.27 312 *e*P **P 06 00 41.5 0.0**
comp=Z,46nm,0.8s
BRVK Borovoye 50.27 312 P **P 06 00 41.4 -0.1**
SNR=29
BRVK Borovoye 50.27 312 *d i*P **P 06 00 41.4 -0.1**
BRVK pmax pmax
comp=Z,64nm,1.0s
BRVK pmax pmax
comp=Z,52nm,0.9s
EKS2 Erkin-Say 50.63 298 P **P 06 00 44.7 +0.2**
SNR=17
MTN Manton Dam 50.69 193 *e*P **P 06 00 43.9 -1.0**
comp=Z,75nm,1.4s
AML Almayashu 50.85 298 P **P 06 00 48.3 +1.8**
SNR=12
COEN Coen 50.97 177 *e*P **P 06 00 46.9 -0.1**
comp=Z,43nm,0.9s
TWSI Taliwang, Sumb 51.04 211 P **P 06 00 47.4 -0.2**
MNAS Manas 51.58 299 P **P 06 00 51.9 +0.3**
MNAS pmax pmax
comp=Z,43nm,0.7s
PSI Prapat 51.65 239 LR LR 06 24 37.5
comp=Z,214nm,18.3s,baz=88,slow=38
PSI Prapat 51.65 239 *e*P **P 06 00 52.0 -0.4**
comp=Z,24nm,0.9s
PSI Prapat 51.65 239 *e*P **P 06 00 52.0 -0.4**
PSI pmax pmax
comp=Z,25nm,0.9s
SFK Sufi-Kurgan 51.68 295 P **P 06 00 52.9 +0.3**
SFK pmax pmax
comp=Z,43nm,0.6s
KCSI Kotacane, Aceh 51.92 240 P **P 06 00 55.6 +1.2**
comp=Z,18nm,1.1s
BKNI Bangkinang 52.07 235 P **P 06 00 57.3 +1.9**
comp=Z,127nm,1.1s
MLSI Meulaboh, Aceh 52.35 242 P **P 06 00 57.4 -0.1**
comp=Z,86nm,1.0s
MNSI Mandailing Nat 52.68 236 P **P 06 00 59.7 -0.2**
comp=Z,31nm,0.7s
KK31 Karatay Array 52.77 300 *e*P **P 06 01 00.6 +0.3**
KK31 Karatay Array 52.77 300 *e*P **P 06 01 00.6 +0.3**
KKAR Karatay Array 52.77 300 *e*P **P 06 01 00.6 +0.3**
KKAR Karatay Array 52.77 300 *e*P **P 06 01 00.6 +0.3**
KPJI Karang Pucung 53.56 221 P **P 06 01 06.2 -0.1**
comp=Z,74nm,1.1s
GSI Gunungsitoli 53.66 239 P **P 06 01 07.3 +0.2**
comp=Z,253nm,1.4s,comp=Z,3μm
GSI Gunungsitoli 53.66 239 *e*P **P 06 01 06.9 -0.2**
LEM Lembang 53.83 223 P **P 06 01 08.3 -0.2**
comp=Z,97nm,1.0s,baz=75,slow=5.6,SNR=8.7
LEM LR LR 06 24 10.5
comp=Z,63nm,19.7s,baz=50,slow=36
MDSI Maura Dua 53.87 228 P **P 06 01 08.5 -0.1**
comp=Z,25nm,1.4s
MASI Maura Aman, Be 53.98 231 P **P 06 01 12.5 +3.0**
comp=Z,184nm,2.0s
NIL Nilore 54.27 288 *e*P **P 06 01 12.1 +0.7**
comp=Z,96nm,0.7s
INK Inuvik 54.33 27 P **P 06 01 08.2 -3.1**
comp=Z,16nm,0.9s
INK Inuvik 54.33 27 P **P 06 01 08.2 -3.1**
INK pmax pmax
comp=Z,16nm,0.9s
SVE Sverdlovsk 54.80 318 *ce*P **P 06 01 15.3 +0.4**
SVE pmax pmax
comp=Z,166nm,0.9s
ARU Arti 56.01 318 *e*P **P 06 01 22.9 -0.6**
comp=Z,166nm,1.0s
ARU Arti 56.01 318 *d i*P **P 06 01 23.5 -0.1**
ARU *PP **pP** 06 01 38.6 -0.7
ARU 06 03 27.1
ARU S **S** 06 09 07.3 0.0
ARU 06 11 03.3
ARU SS **SS 06 12 47.1 -6.3**
ARU pmax pmax
comp=Z,232nm,1.2s
ARU MLR MLR
comp=Z,772nm,20.0s
BESE Bessie Mountai 56.20 39 *e*P **P 06 01 27.4 +2.4**
comp=Z,40nm,1.2s
JIS Juneau Island 56.53 39 *e*P **P 06 01 29.5 +2.3**
comp=Z,42nm,1.1s
FITZ Fitzroy Crossi 56.93 198 *e*P **P 06 01 30.6 +0.2**
comp=Z,42nm,1.5s
KBL Kabul 57.07 291 *e*P **P 06 01 31.7 -0.1**
comp=Z,48nm,0.9s
WRAB Tennant Creek 57.22 187 *e*P **P 06 01 31.4 -1.1**
comp=Z,23nm,0.8s
WB2 Warramunga Arr 57.23 187 *e*P **P 06 01 31.5 -1.1**
WRA Warramunga Arr 57.23 188 P **P 06 01 31.1 -1.5**
comp=Z,20nm,0.7s,baz=5.0,slow=7.4,SNR=116
WRA LR LR 06 27 06.1
comp=Z,64nm,18.8s,baz=60,slow=37
CTA Charters Tower 57.23 174 P **P 06 01 31.8 -0.8**
comp=Z,4.6nm,0.4s,baz=330,slow=7.9,SNR=7.0
CTAO Charters Tower 57.23 174 *e*P **P 06 01 32.2 -0.4**
comp=Z,8.5nm,0.8s
CTAO Charters Tower 57.23 174 *e*P **P 06 01 32.2 -0.4**
CTAO pmax pmax
comp=Z,9.0nm,0.8s
MLOA Mauna Loa Obse 57.48 89 *e*P **P 06 01 36.7 +1.6**
comp=Z,198nm,1.1s
ABKAR Akbulak array 57.58 310 *e*P **P 06 01 34.4 -0.4**
AIN Ainahou 57.66 89 *e*P **P 06 01 37.9 +1.8**
comp=Z,336nm,1.2s
HYB Hyderabad 57.92 268 *i*P **P 06 01 38.0 +0.3**
AKTO Aktyubinsk 58.32 312 P **P 06 01 39.9 -0.1**
comp=Z,39nm,0.8s,baz=73,slow=11,SNR=104
DLBC Dease Lake 58.64 38 *e*P **P 06 01 44.6 +2.4**
comp=Z,28nm,1.1s
DLBC *e*pP **pP 06 01 57.3 -0.8**
SPITS Spitsbergen Ar 60.26 349 P **P 06 01 53.1 +0.1**
comp=Z,6.6nm,0.9s,baz=70,slow=17,SNR=7.1
SPITS LR LR 06 29 18.0
comp=Z,143nm,21.1s,baz=350,slow=37
PRGR Permogore 60.43 327 *e*P **P 06 01 53.3 -1.0**
PRGR *e*S **S 06 10 01.4 -3.3**
PRGR pmax pmax
comp=Z,62nm,0.9s
AS01 Alice Springs 60.95 187 *e*P **P 06 01 56.7 -1.6**
AS31 Alice Springs 60.96 187 *e*P **P 06 01 58.1 -0.2**
comp=Z,4.1nm,0.6s
ASAR Alice Springs 60.96 187 P **P 06 01 57.5 -0.8**
comp=Z,11nm,0.8s,baz=3.4,slow=5.5,SNR=66
ASAR LR LR 06 27 25.0
comp=Z,98nm,20.3s,baz=18,slow=35
MBWA Marble Bar 61.47 203 *e*P **P 06 02 01.3 -0.5**
comp=Z,63nm,1.5s
PALK Pallekele 62.13 257 LR LR 06 30 33.7
comp=Z,261nm,21.2s,baz=89,slow=37
PALK Pallekele 62.13 257 P **P 06 02 06.8 +0.3**
PALK Pallekele 62.13 257 *i*P **P 06 02 07.9 +1.3**
APA Apatity 62.38 336⇓ *i*P **P 06 02 08.3 +0.9**
APA pmax pmax
comp=Z,17nm,0.6s
APA MLR MLR
comp=Z,800nm,16.0s
RES Resolute Bay 62.47 14 *e*P **P 06 02 09.3 +1.4**
comp=Z,60nm,2.0s
RES Resolute Bay 62.47 14 *e*P **P 06 02 09.3 +1.4**
RES pmax pmax
comp=Z,60nm,2.0s
EIDS Eidsvold 62.99 170 *e*P **P 06 02 11.9 0.0**
comp=Z,28nm,0.6s
KLMR Klimovskoe 63.42 328 *e*P **P 06 02 12.8 -1.6**
KLMR *e* 06 04 33.1

KLMR pmax pmax
comp=Z,73nm,1.3s
KLMR Klimovskoe 63.42 328 *e*P **P 06 02 12.8 -1.6**
KLMR AMP 06 02 15.2
comp=Z,73nm,1.3s
KLMR *e*PP **PP 06 04 33.2 -0.8**
GEYT Alibeck 63.48 299 P **P 06 02 16.1 +0.8**
comp=Z,25nm,0.7s,baz=174,slow=3.0,SNR=4.5
GEYT LR LR 06 32 35.4
comp=Z,198nm,18.2s,baz=65,slow=38
GYA0B ALIBECK ARRAY 63.48 299 *e*P **P 06 02 16.5 +1.2**
comp=Z,50nm,0.9s
DZM Mont Dzumac 63.67 154 LR LR 06 27 45.0
comp=Z,452nm,20.4s,baz=352,slow=34
DZM Mont Dzumac 63.67 154 *e*LR LR 06 21 14.8
comp=Z,697nm,21.4s
DZM Mont Dzumac 63.67 154 *e*P **P 06 02 17.5 +1.0**
comp=Z,103nm,1.1s
ARCES ARCESS Array B 63.70 339 P **P 06 02 16.5 +0.4**
comp=Z,6.2nm,0.5s,baz=56,slow=7.9,SNR=39
ARCES LR LR 06 34 27.5
comp=Z,196nm,18.1s,baz=66,slow=40
YKW3 Yellowknife Ar 63.73 30 *e*P **P 06 02 16.9 +0.4**
YKA Yellowknife Ar 63.77 30 P **P 06 02 16.4 -0.3**
comp=Z,3.9nm,0.7s,baz=303,slow=6.8,SNR=21
YKA LR LR 06 30 07.4
comp=Z,12nm,21.9s,baz=290,slow=36
SGF Sodankyl 64.65 337 *e*P **P 06 02 25.3 +3.0**
SGF pmax pmax
comp=Z,32nm,0.8s
MSF Maaselka 64.73 335 *e*P P 06 02 34.1 +11
JOF Joensuu 65.64 332 P **P 06 02 29.8 +1.0**
JOF pmax pmax
comp=Z,32nm,1.1s
OUL Oulu 66.28 335 P **P 06 02 34.1 +1.2**
OUL pmax pmax
comp=Z,32nm,1.4s
LLLB Lillooet 66.30 44 *e*P **P 06 02 34.5 +1.1**
comp=Z,62nm,1.5s
PGC Sidney 66.40 46 *e*P **P 06 02 35.2 +1.2**
comp=Z,42nm,1.5s
NLWA Neilton Lookou 66.79 47 *e*P **P 06 02 38.2 +1.7**
comp=Z,37nm,1.1s
A04D Lummi Island 66.79 46 P **P 06 02 37.0 +0.5**
baz=300
MOS Moscow 66.91 323 *e*P **P 06 02 36.1 -1.0**
MOS *e* 06 02 52.1
MOS *e* 06 02 59.4
MOS *e* 06 05 02.3
MOS *e*S **S 06 11 23.3 -2.0**
MOS pmax pmax
comp=Z,106nm,1.3s
MOS pmax pmax
comp=Z,200nm,1.7s
B05A Bryant 67.38 46 P **P 06 02 40.8 +0.6**
baz=301,SNR=6.5
E03A Lebam 67.40 48 *e*P **P 06 02 42.2 +1.9**
comp=Z,31nm,1.0s
AFI Afiamalu 67.49 130 LR LR 06 27 47.5
comp=Z,219nm,19.2s,baz=334,slow=32
F03A Seaside 67.71 49 *e*P **P 06 02 44.3 +1.9**
comp=Z,36nm,1.0s
OBN Obninsk 67.75 323*d i*P **P 06 02 41.9 -0.5**
OBN *e* 06 05 08.2
OBN *i*S **S 06 11 35.0 -0.4**
D05A Enumclaw 67.99 47 *e*P **P 06 02 46.1 +2.0**
comp=Z,38nm,1.1s
ARMA Armidale 68.04 170 *e*P **P 06 02 45.7 +1.2**
comp=Z,137nm,1.8s
MAK Makhachkala 68.10 308 *e*P **P 06 02 43.8 -1.0**
MAK *e*S **S 06 11 34.7 -5.3**
MAK pmax pmax
comp=Z,31nm,0.3s
MAK MLR MLR
comp=Z,333nm,17.0s
G03D McMinnville, O 68.26 49 P **P 06 02 46.8 +1.0**
baz=301
LON Longmire 68.33 47 *e*P **P 06 02 47.4 +1.1**
comp=Z,12nm,1.4s
FINES FINESS Array B 68.49 332 P **P 06 02 46.9 -0.1**
comp=Z,22nm,0.6s,baz=60,slow=7.5,SNR=62
FINES LR LR 06 35 21.7
comp=Z,389nm,18.9s,baz=56,slow=38
COR Corvallis 68.56 50 *e*P **P 06 02 49.1 +1.4**
comp=Z,48nm,0.9s
COR Corvallis 68.56 50 *e*P **P 06 02 49.1 +1.4**
COR pmax pmax
comp=Z,48nm,0.9s
VSR Storozhevoye 68.58 319 *e*P **P 06 02 47.5 -0.2**
VSR pmax pmax
comp=Z,60nm,0.8s
VSR MLR MLR
comp=Z,480nm,25.0s
VORD Divnogorie 68.65 318 *e*P **P 06 02 47.5 -0.6**
VORD pmax pmax
comp=Z,10.0nm,0.4s
AKT Akhty 68.72 306 *e*P **P 06 02 48.1 -0.8**
AKT *e* 06 03 13.5
AKT *e* 06 05 20.0
AKT pmax pmax
comp=Z,41nm,0.6s
LTY Liberty 68.72 46 *e*P **P 06 02 49.8 +1.0**
comp=Z,14nm,0.9s
FORT Forrest 68.75 192 *e*P **P 06 02 48.9 +0.1**
comp=Z,96nm,0.6s
KEBM Edson Butte 68.82 52 *e*P **P 06 02 51.8 +2.4**
comp=Z,56nm,1.0s
B08A Colville Reser 68.89 45 *e*P **P 06 02 50.8 +1.0**
comp=Z,81nm,2.0s
I03D Drain, OR 69.00 51 P **P 06 02 51.6 +1.2**
baz=302,SNR=24
GROC Groznyy 69.04 309 *e*P **P 06 02 50.2 -0.5**
GROC *e* 06 03 15.4
GROC *e* 06 05 20.4
GROC *e*S **S 06 11 51.9 +0.7**
GROC pmax pmax
comp=Z,87nm,1.6s
H04A Detroit Lake 69.19 49 *e*P **P 06 02 52.3 +0.6**
comp=Z,31nm,0.9s
KBO Bosley Butte 69.23 52 *e*P **P 06 02 54.3 +2.3**
comp=Z,49nm,1.3s
G05D Wamic, OR 69.42 48 P **P 06 02 53.4 +0.4**
baz=302
I04A Tendick Farm, 69.53 50 P **P 06 02 54.3 +0.6**
baz=302,SNR=11
L02D Cave Junction, 69.66 52 P **P 06 02 55.4 +0.9**
baz=302,SNR=6.7
C09A Chrisman Ranch 69.79 45 *e*P **P 06 02 56.5 +1.2**
comp=Z,58nm,1.5s
HUMO Hull Mountain 69.82 51 *e*P **P 06 02 57.2 +1.6**
comp=Z,21nm,1.6s
G06A Carlson Farm, 69.83 48 *e*P **P 06 02 56.9 +1.3**
comp=Z,32nm,1.3s
D08A Wollman Farm, 69.83 46 *e*P **P 06 02 56.7 +1.1**
comp=Z,12nm,0.8s
I05D Terrebonne, OR 69.89 49 P **P 06 02 56.4 +0.4**
baz=303,SNR=9.9
J04D Umpqua Nationa 70.01 51 P **P 06 02 57.8 +0.9**
baz=303,SNR=5.1
JCC Jacoby Creek, 70.10 54 *e*P **P 06 02 59.2 +2.0**
comp=Z,53nm,1.4s
VSU Vasula 70.12 329*d i*P **P 06 02 56.3 -0.8**
VSU pmax pmax
comp=Z,69nm,0.8s
NEW Newport 70.18 44 P **P 06 02 57.8 0.0**
baz=304,SNR=7.3
NEW Newport 70.18 44 *e*P **P 06 02 58.4 +0.7**
comp=Z,14nm,0.8s
NEW *e*pP **pP 06 03 16.4 +2.5**
NEW Newport 70.18 44 *e*P **P 06 02 58.4 +0.7**
NEW *e**PP **pP 06 03 16.4 +2.5**
NEW pmax pmax
comp=Z,14nm,0.8s
KHMM Horse Mountain 70.26 53 *e*P **P 06 03 00.5 +2.0**
comp=Z,25nm,1.1s
PINE Pine Mountain 70.42 50 *e*P **P 06 03 00.7 +1.2**
comp=Z,58nm,0.9s
ZEI Tsey 70.44 309 *e*P P 06 02 53.1 -6.5
ZEI pmax pmax
comp=Z,21nm,0.8s
YBH Yreka Blue Hor 70.45 52 P **P 06 03 00.3 +0.8**
comp=Z,7.3nm,0.9s,baz=292,slow=1.3,SNR=27
YBH LR LR 06 28 00.4
comp=Z,59nm,20.4s,baz=300,slow=31
YBH Yreka Blue Hor 70.45 52 *e*P **P 06 03 00.5 +1.0**
comp=Z,15nm,0.9s
YBH Yreka Blue Hor 70.45 52 *e*P **P 06 03 00.5 +1.0**
YBH pmax pmax
comp=Z,15nm,0.9s
SUMG Summit 70.47 360 *i*P **P 06 03 01.0 +1.5**
comp=Z,29nm,1.2s
SUMG Summit 70.47 360 *e*P **P 06 03 00.4 +0.9**
comp=Z,35nm,1.3s
SUMG Summit 70.47 360 *e*P **P 06 03 00.4 +0.9**
SUMG pmax pmax
comp=Z,35nm,1.3s
TBLG Delisi 70.49 308 *e*P **P 06 03 00.5 +0.9**
comp=Z,36nm,1.1s
J05D Fort Rock, OR 70.52 50 P **P 06 03 00.9 +0.9**
baz=303,SNR=18
WSAR Wadi Sarin 70.53 285 P **P 06 03 00.4 +0.2**
comp=Z,15nm,1.0s,baz=106,slow=5.1,SNR=5.9
WSAR LR LR 06 37 51.4
comp=Z,173nm,18.9s,baz=84,slow=39
M02C Callahan 70.54 53 P **P 06 03 01.2 +1.1**
baz=303,SNR=9.2
KBZ Khabaz 70.54 310 P **P 06 03 00.8 +0.9**
comp=Z,28nm,0.8s,baz=73,slow=5.2,SNR=36
KBZ LR LR 06 38 53.0
comp=Z,418nm,18.3s,baz=54,slow=40
KIV Kislovodsk 70.55 311 *e*P **P 06 03 00.7 +0.6**
comp=Z,102nm,0.9s
KIV Kislovodsk 70.55 311 *i*P **P 06 03 00.4 +0.3**
SNR=11
KIV Kislovodsk 70.55 311 *e*P **P 06 02 58.8 -1.3**
KIV *e*S **S 06 12 07.5 -1.6**
KIV *e*SS **SS 06 16 39.6 -1.0**
KIV pmax pmax
comp=Z,27nm,3.2s
KIV pmax pmax
comp=Z,139nm,1.1s
KIV MLR MLR
comp=Z,293nm,18.0s
K04D Chiloquin, OR 70.56 51 P **P 06 03 00.9 +0.6**
baz=303
E09A Wood Farm, Sta 70.58 46 *e*P **P 06 03 01.5 +1.4**
comp=Z,21nm,0.9s
G08A Pilot Rock 70.78 47 *e*P **P 06 03 02.0 +0.5**
comp=Z,34nm,1.8s
N02D Trinity Center 70.86 53 P **P 06 03 02.9 +0.9**
baz=303,SNR=8.3
SHME Shamm 70.92 289 *i*P **P 06 03 02.8 +0.3**
SNR=14
M04C Macdoel 70.97 52 P **P 06 03 03.4 +0.7**
baz=303,SNR=13
K05A Summer Lake 71.04 50 *e*P **P 06 03 04.3 +1.1**
comp=Z,51nm,1.0s
I07A Izee 71.13 49 *e*P **P 06 03 05.2 +1.5**
comp=Z,6.7nm,0.9s
WDC Whiskeytown Da 71.18 53 *e*P **P 06 03 05.0 +1.2**
comp=Z,18nm,1.2s
WDC Whiskeytown Da 71.18 53 *e*P **P 06 03 05.0 +1.2**
WDC pmax pmax
comp=Z,18nm,1.2s
MSFE Esma-Masafi 71.28 288 P **P 06 03 05.0 +0.3**
GNI Garni 71.35 306 LR LR 06 37 13.7
comp=Z,302nm,18.1s,baz=62,slow=38
GNI Garni 71.35 306 *e*P **P 06 03 06.6 +1.5**
comp=Z,73nm,1.4s
GNI Garni 71.35 306 P **P 06 03 06.0 +0.9**
SNR=9.3
GNI Garni 71.35 306 *i*P **P 06 03 05.9 +0.8**
SNR=5.1
GNI Garni 71.35 306*d i*P **P 06 03 05.6 +0.5**
GNI pmax pmax
comp=Z,89nm,1.6s
F10A Beach Ranch, E 71.41 46 *e*P **P 06 03 06.2 +0.9**
comp=Z,16nm,1.4s
AKH Akhalkalaki 71.45 308⇑ *i*P **P 06 03 07.1 +1.4**
AKH Akhalkalaki 71.45 308 *e*P **P 06 03 07.4 +1.7**
comp=Z,21nm,0.8s
AKH Akhalkalaki 71.45 308 *e*P **P 06 03 07.4 +1.7**
AKH pmax pmax
comp=Z,21nm,0.8s
UOSS Minazif 71.47 288 *e*P **P 06 03 06.0 +0.1**
comp=Z,33nm,0.9s
UOSS Minazif 71.47 288 *i*P **P 06 03 05.6 -0.3**
SNR=9.9
WALA Waterton Lakes 71.48 42 *e*P **P 06 03 06.8 +1.1**
comp=Z,15nm,0.8s
HATD Hatta, Dubai 71.59 287 *i*P **P 06 03 06.6 0.0**
SNR=11
O03D Paynes Creek 71.81 53 P **P 06 03 07.7 -0.1**
baz=304,SNR=14
NAZ Nazwa, Dubai 71.86 288 P **P 06 03 08.2 0.0**
MOD Modoc Plateau 71.86 51 *e*P **P 06 03 08.6 +0.5**
comp=Z,41nm,1.6s
BMO Blue Mountains 72.00 47 *e*P **P 06 03 09.4 +0.5**
comp=Z,19nm,1.0s
BMO Blue Mountains 72.00 47 *e*P **P 06 03 09.4 +0.5**
BMO pmax pmax
comp=Z,19nm,1.0s
NMCNC Mill Creek, So 72.03 55 *e*P **P 06 03 13.3 +4.3**
J08A Circle Bar Ran 72.16 49 *e*P **P 06 03 10.6 +0.8**
comp=Z,34nm,1.2s
ISAL Salakas 72.24 327 *e*P **P 06 03 10.6 +0.7**
ASUD Al Ashush, Dub 72.31 288 *i*P **P 06 03 10.8 0.0**
SNR=6.5
IIGN Ignalina 72.34 327 *e*P **P 06 03 11.2 +0.6**
ORV Oroville 72.41 54 *e*P **P 06 03 11.9 +0.6**
ORV *e*pP **PcP 06 03 29.4 +0.5**
ORV Oroville 72.41 54 *e*P **P 06 03 11.9 +0.6**
ORV *e**PP **PcP 06 03 29.4 +0.5**
SOC Sochi 72.54 312 *e*P **P 06 03 11.6 -0.3**
SOC *e**SP **PcP 06 03 30.2 +0.9**
SOC *e* 06 05 54.1
SOC *e*PPP PPP 06 07 45.6
SOC *e*S **S 06 12 32.8 +1.0**
SOC *e**SS **SKSac 06 13 07.1 -4.6**
SOC *e*SS **SS 06 17 17.2 +6.4**
SOC pmax pmax
comp=Z,19nm,0.5s
SOC MLR MLR
comp=Z,387nm,18.0s
CAN Canberra 72.58 173 *e*P **P 06 03 13.1 +1.1**
comp=Z,46nm,1.3s
WVOR Wild Horse Val 72.58 50 *e*P **P 06 03 13.5 +1.1**
comp=Z,41nm,1.4s
WVOR Wild Horse Val 72.58 50 *e*P **P 06 03 13.5 +1.1**
WVOR pmax pmax
comp=Z,41nm,1.4s
MSO Missoula 72.77 44 P **P 06 03 13.2 -0.3**
baz=306,SNR=7.7
MSO Missoula 72.77 44 *e*P **P 06 03 13.9 +0.5**
MSO *e*pP **PcP 06 03 31.7 +1.3**
BEKR Beckworth 72.96 53 *e*P **P 06 03 15.0 +0.2**
comp=Z,20nm,0.9s
AFDM Forest Hills D 73.09 54 *e*P **P 06 03 16.2 +0.9**
comp=Z,29nm,1.5s
ANN Anapa 73.17 314 *e*P **P 06 03 15.5 -0.1**
ANN pmax pmax
comp=Z,83nm,1.4s
NWAO Narrogin (SRO) 73.26 201 P **P 06 03 16.0 -0.1**
comp=Z,8.7nm,0.6s,baz=45,slow=4.3,SNR=4.3
PAHR Pah Rah Range 73.67 52 *e*P **P 06 03 20.1 +1.1**
comp=Z,17nm,1.0s
FFC Flin Flon 73.69 33 *e*P **P 06 03 18.8 +0.3**
comp=Z,20nm,0.8s
FFC Flin Flon 73.69 33 *e*P **P 06 03 18.8 +0.3**
FFC pmax pmax
comp=Z,20nm,0.8s
MFID Camas Ranch 73.70 48 *e*P **P 06 03 19.6 +0.6**
comp=Z,52nm,1.5s
VCNR Virginia City 73.74 53 *e*P **P 06 03 20.3 +0.9**
comp=Z,28nm,1.5s
HFS Hagfors 73.78 336 P **P 06 03 19.2 +0.3**
comp=Z,11nm,0.7s,baz=59,slow=5.7,SNR=34
HFS LR LR 06 38 23.1
comp=Z,512nm,20.5s,baz=38,slow=38
NB2 NORSAR Subarra 73.88 337 P **P 06 03 19.2 -0.4**
comp=Z,19nm,0.8s,baz=40,slow=6.2
NB2 NORSAR Subarra 73.88 337 P **P 06 03 19.2 -0.4**
baz=40,slow=6.2
NOA NORSAR Array B 73.88 337 LR LR 06 39 09.1
comp=Z,336nm,19.1s,baz=40,slow=38
PNTR Pine Nut 73.89 53 *e*P **P 06 03 21.8 +1.5**
comp=Z,87nm,1.9s
PNTR *e*pP **pP 06 03 38.2 +1.6**
FCC Fort Churchill 73.94 26 *e*P **P 06 03 19.4 -0.5**
comp=Z,15nm,0.9s
FCC Fort Churchill 73.94 26 *e*P **P 06 03 19.4 -0.5**
FCC pmax pmax
comp=Z,15nm,0.9s
AKASG Malin Array Be 73.95 322 P **P 06 03 19.6 -0.5**
comp=Z,13nm,0.5s,baz=46,slow=6.2,SNR=68
AKASG Malin Array Be 73.95 322 P **P 06 03 19.6 -0.5**
AKASG pmax pmax
comp=Z,14nm,0.5s
AKBB Malin Array Si 73.95 322 *e*P **P 06 03 19.7 -0.4**
comp=Z,40nm,1.0s
KIEV Kiev 73.96 322 *e*P **P 06 03 18.9 -1.2**
comp=Z,43nm,1.1s
KIEV Kiev 73.96 322 *i*P **P 06 03 19.6 -0.6**
SNR=5.9
KIEV Kiev 73.96 322*d i*P **P 06 03 19.4 -0.8**
KIEV pmax pmax
comp=Z,40nm,1.0s
CMB Columbia Colle 73.98 54 *e*P **P 06 03 21.0 +0.4**
comp=Z,46nm,1.5s
CMB Columbia Colle 73.98 54 *e*P **P 06 03 21.0 +0.4**
CMB pmax pmax
comp=Z,46nm,1.5s
AK11 Malin Array Si 73.99 322 *e*P **P 06 03 20.1 -0.2**
HRY Holter Researc 74.00 43 *e*P **P 06 03 21.6 +0.9**
YERR Yerington 74.18 53 *e*P **P 06 03 22.6 +0.7**
comp=Z,25nm,1.0s
LRM Limekiln Ridge 74.20 44 *e*P **P 06 03 22.4 +0.4**
EGMT Eagleton 74.31 41 P **P 06 03 22.3 -0.1**
baz=309,SNR=14
EGMT Eagleton 74.31 41 *e*P **P 06 03 23.0 +0.7**
comp=Z,35nm,1.0s
WAKR Walker 74.33 53 *e*P **P 06 03 24.3 +1.4**
comp=Z,10nm,0.9s
DLMT Dillon 74.40 45 *e*P **P 06 03 23.9 +0.9**
comp=Z,22nm,0.8s
HLID Hailey 74.44 47 P **P 06 03 23.9 +0.5**
baz=307,SNR=22
HLID Hailey 74.44 47 *e*P **P 06 03 24.0 +0.5**
comp=Z,17nm,1.3s
SUW Suwalki 74.55 327 *e*P **P 06 03 23.8 +0.3**
MCMT McKenzie Canyo 74.58 45 *e*P **P 06 03 24.4 +0.2**
BMN Battle Mountai 74.61 51 *e*P **P 06 03 25.4 +1.1**
comp=Z,33nm,1.4s
BMN Battle Mountai 74.61 51 *e*P **P 06 03 25.4 +1.1**
BMN pmax pmax
comp=Z,33nm,1.4s
BOZ Bozeman (W) 74.79 44 P **P 06 03 25.7 +0.4**
baz=308,SNR=33
BOZ Bozeman (W) 74.79 44 *e*P **P 06 03 25.7 +0.4**
comp=Z,20nm,0.9s
BOZ Bozeman (W) 74.79 44 *e*P **P 06 03 25.7 +0.4**
BOZ pmax pmax
comp=Z,20nm,0.9s
RYN Ryan 74.84 53 *e*P **P 06 03 27.1 +1.4**
comp=Z,31nm,1.4s
KVN Kaiserville 74.86 52 *e*P **P 06 03 26.5 +0.6**
comp=Z,27nm,1.1s
KVN Kaiserville 74.86 52 *e*P **P 06 03 26.5 +0.6**
KVN pmax pmax
comp=Z,27nm,1.1s
SIM Simferopol' 74.97 315 *e*P **P 06 03 26.7 +0.5**
SIM S **S 06 12 57.0 -2.2**
SIM pmax pmax
comp=Z,28nm,0.9s
SIM MLR MLR
comp=Z,220nm,16.2s
MDPB Devils Postpil 75.06 54 *e*P **P 06 03 28.3 +1.2**
comp=Z,19nm,1.3s
NV01 Mina Array Sit 75.10 53 *e*P **P 06 03 26.9 -0.4**
NVAR Mina Array Bea 75.10 53 P **P 06 03 27.8 +0.5**
comp=Z,8.5nm,0.7s,baz=291,slow=5.6,SNR=80
NVAR LR LR 06 31 54.1
comp=Z,102nm,21.9s,baz=83,slow=32
OMMB Old Mammoth Mi 75.12 54 *e*P **P 06 03 28.9 +1.3**
comp=Z,24nm,1.5s
NV11 Mina Array Sit 75.19 53 *e*P **P 06 03 28.2 +0.5**
comp=Z,4.6nm,1.8s
MLAC Mammoth, Mammo 75.22 54 P **P 06 03 28.8 +0.8**
baz=306
QLMT Earthquake Lak 75.38 45 *e*P **P 06 03 30.0 +1.2**
PAGB Antelope Grade 75.40 56 *e*P **P 06 03 30.3 +1.5**
comp=Z,91nm,1.6s
KONO Kongsberg 75.47 337 *i*P **P 06 03 28.0 -0.7**
KONO pmax pmax
comp=Z,10.0nm,0.8s
YHB Horse Butte 75.56 44 *e*P **P 06 03 30.9 +1.1**
comp=Z,20nm,0.9s
SFJD Kangerlussuaq 75.70 5 LR LR 06 40 08.9
comp=Z,78nm,18.7s,baz=358,slow=38
YMR Madison River 75.74 44 *e*P **P 06 03 32.2 +1.4**
comp=Z,70nm,1.7s
GCMT Greycliff 75.75 43 *e*P **P 06 03 32.2 +1.4**
SMMC Simmler 75.81 56 P **P 06 03 31.7 +0.5**
baz=306
YFT Old Faithful 75.94 45 *e*P **P 06 03 35.4 +3.3**
comp=Z,63nm,1.7s
TIN Tinemaha, Big 75.95 54 P **P 06 03 32.5 +0.5**
baz=306
SORM Soroca 76.04 320⇑ *i*P **P 06 03 32.4 +0.2**
SORM Soroca 76.04 320 P **P 06 03 32.4 +0.2**
YPP Pitchstone Pla 76.07 45 *e*P **P 06 03 34.9 +2.0**
comp=Z,45nm,1.6s
VES Vestal, Richgr 76.10 56 P **P 06 03 32.5 -0.3**
baz=306,SNR=7.8
H17A Grant Village 76.12 44 P **P 06 03 35.4 +2.3**
baz=309,SNR=27
H17A Grant Village 76.12 44 *e*P **P 06 03 35.5 +2.3**
comp=Z,30nm,0.9s
PKM Mcpherson Peak 76.18 57 P **P 06 03 34.2 +0.7**
baz=306
IMW Indian Meadow 76.23 45 *e*P **P 06 03 35.0 +1.2**
comp=Z,22nm,1.0s
FLWY Flagg Ranch 76.25 45 *e*P **P 06 03 36.0 +2.2**
comp=Z,49nm,1.4s
FXWY Fox Creek 76.34 45 *e*P **P 06 03 35.7 +1.4**
comp=Z,28nm,1.3s
RLMT Red Lodge 76.39 43 P **P 06 03 35.3 +0.7**
baz=310,SNR=11
RLMT Red Lodge 76.39 43 *e*P **P 06 03 35.6 +1.0**
comp=Z,55nm,1.5s
CWC Cottonwood Cre 76.41 55 P **P 06 03 34.8 +0.1**
baz=306
MOOW Moose Ponds 76.43 45 *e*P **P 06 03 35.8 +0.9**
comp=Z,36nm,1.4s
TPAW Teton Pass 76.48 45 *e*P **P 06 03 36.3 +1.1**
comp=Z,67nm,1.6s
HVU Hansel Valley 76.48 48 *e*P **P 06 03 36.2 +1.2**
comp=Z,14nm,1.0s
SBC Santa Barbara 76.50 57 P **P 06 03 35.8 +0.8**
baz=306
GRAC Grapevine Rang 76.54 54 P **P 06 03 35.7 +0.4**
baz=307
KIS Kishinev 76.54 319 *e*P **P 06 03 35.0 -0.1**
KIS *e*S **S 06 13 12.0 -4.4**
KIS LRM MLR 06 40 20.0
comp=Z,800nm,16.0s
KIS Kishinev 76.54 319 *e*P **P 06 03 35.0 -0.1**
KIS *e* 06 04 05.0
KIS *e*S **S 06 13 12.0 -4.4**
KIS MLR MLR
comp=Z,800nm,16.0s
LOHW Long Hollow 76.60 45 *e*P **P 06 03 37.3 +1.5**
LOHW *e*pP **PcP 06 03 49.0 +1.9**
ISA Isabella, Lake 76.61 55 P **P 06 03 35.2 -0.6**
baz=306
ISA Isabella, Lake 76.61 55 *e*P **P 06 03 35.8 0.0**
comp=Z,34nm,1.8s
ISA *e*PcP **pP 06 03 54.1 +1.9**
ISA Isabella, Lake 76.61 55 *e*P **P 06 03 35.8 0.0**
ISA *e* 06 03 54.1
ISA pmax pmax
comp=Z,34nm,1.8s
SNOW Snow King Moun 76.61 45 *e*P **P 06 03 37.0 +1.2**
comp=Z,11nm,0.8s
SNOW *e*pP **pP 06 03 51.3 -1.0**
REDW Red Top Meadow 76.61 45 *e*P **P 06 03 37.2 +1.3**
comp=Z,25nm,1.3s
ARVC Arvin 76.69 56 P **P 06 03 35.6 -0.6**
baz=306
SCZ2 Santa Cruz Isl 76.82 57 P **P 06 03 37.2 +0.3**
baz=306
DAC Darwin (Calif) 76.82 54 *e*P **P 06 03 38.0 +0.9**
comp=Z,26nm,1.4s
DAC Darwin (Calif) 76.82 54 *e*P **P 06 03 38.0 +0.9**
DAC pmax pmax
comp=Z,26nm,1.4s
AHID Auburn Hatcher 76.85 46 *e*P **P 06 03 38.4 +1.2**
comp=Z,43nm,1.7s
DGMT Dagmar 76.86 38 P **P 06 03 36.8 0.0**
baz=312,SNR=6.7
DGMT Dagmar 76.86 38 *e*P **P 06 03 37.5 +0.7**

comp=Z,26nm,1.0s
BGU Big Grassy Mou 76.86 48 *e*P **P 06 03 38.0 +0.8**
comp=Z,21nm,1.4s
R11A Troy Canyon, C 76.86 52 ‖ P **P 06 03 37.7 +0.4**
baz=307,SNR=19
R11A Troy Canyon, C 76.86 52 *e*P **P 06 03 37.9 +0.6**
comp=Z,31nm,1.3s
SPUT South Promonto 76.97 48 *e*P **P 06 03 39.1 +1.3**
comp=Z,27nm,1.4s
LAO LASA Array 77.01 41 P **P 06 03 38.4 +0.6**
baz=311,SNR=11
LAO LASA Array 77.01 41 *e*P **P 06 03 38.7 +0.9**
comp=Z,32nm,1.1s
MPMC Manual Prospec 77.02 55 P **P 06 03 38.4 +0.2**
baz=307,SNR=15
OSI Osito Audit: C 77.06 56 P **P 06 03 38.7 +0.4**
baz=306
BEL Belsk 77.11 327 *e*P **P 06 03 39.2 +1.0**
BSD Bornholm Skovb 77.12 332 *i* P **P 06 03 38.1 0.0**
comp=Z,27nm,0.9s
BLG Laguna Peak, P 77.13 57 P **P 06 03 38.1 -0.5**
baz=306
FURC Furnace Creek, 77.18 54 P **P 06 03 39.2 +0.4**
baz=307,SNR=16
LRMC Laurel Mtn Rad 77.24 55 P **P 06 03 39.6 +0.2**
baz=307
TPNV Topopah Spring 77.28 53 P **P 06 03 39.9 +0.2**
baz=307,SNR=17
TPNV Topopah Spring 77.28 53 *e*P **P 06 03 39.9 +0.2**
comp=Z,68nm,1.5s
TPNV Topopah Spring 77.28 53 *e*P **P 06 03 39.9 +0.2**
TPNV pmax pmax
comp=Z,68nm,1.5s
HWUT Hardware Ranch 77.30 47 *e*P **P 06 03 40.4 +0.6**
comp=Z,52nm,1.4s
EDW2 Edwards Air Fo 77.39 56 P **P 06 03 40.4 +0.3**
baz=307,SNR=9.4
DUG Dugway, Tooele 77.44 49 P **P 06 03 41.0 +0.6**
baz=308,SNR=21
DUG Dugway, Tooele 77.44 49 *e*P **P 06 03 41.2 +0.8**
comp=Z,16nm,0.8s
DUG Dugway, Tooele 77.44 49 *e*P **P 06 03 41.2 +0.8**
DUG pmax pmax
comp=Z,16nm,0.8s
DECC Green Verdugo 77.53 56 P **P 06 03 40.7 -0.3**
baz=307
TCUT Toone Canyon 77.70 48 *e*P **P 06 03 43.2 +1.2**
comp=Z,24nm,0.9s
BW06 Boulder Array 77.73 45 P **P 06 03 42.0 -0.2**
baz=310,SNR=8.1
BW06 Boulder Array 77.73 45 *e*P **P 06 03 41.9 -0.2**
BW06 *e*pP **pP 06 04 01.0 +2.4**
PD31 Pinedale Array 77.73 45 *e*P **P 06 03 42.2 +0.1**
PDAR Pinedale Array 77.73 45 P **P 06 03 42.0 -0.2**
comp=Z,5.4nm,0.7s,baz=261,slow=2.5,SNR=47
PDAR LR LR 06 34 03.6
comp=Z,98nm,22.0s,baz=318,slow=33
PDAR Pinedale Array 77.73 45 *e*P **P 06 03 41.4 -0.7**
MWC Mount Wilson 77.74 56 *e*P **P 06 03 43.0 +0.7**
comp=Z,61nm,1.8s
MWC Mount Wilson 77.74 56 *e*P **P 06 03 43.0 +0.7**
MWC pmax pmax
comp=Z,61nm,1.8s
CTU Camp Tracy 77.76 48 *e*P **P 06 03 43.3 +1.0**
comp=Z,10nm,1.0s
KWP Kalwaria Pacla 77.79 324 *e*P **P 06 03 42.6 +0.6**
KWP Kalwaria Pacla 77.79 324 *e*P **P 06 03 43.1 +1.1**
comp=Z,555nm,1.0s
KWP Kalwaria Pacla 77.79 324 P **P 06 03 43.3 +1.3**
KWP pmax pmax
comp=Z,581nm,1.5s
PSUT Pine Spring 77.83 51 *e*P **P 06 03 43.6 +0.9**
comp=Z,28nm,1.2s
FMP Fort Macarthur 77.88 57 P **P 06 03 42.4 -0.4**
baz=307
SHOC Shoshone, Teco 77.90 54 P **P 06 03 42.5 -0.4**
baz=307
GSC Goldstone, Bar 77.92 55 P **P 06 03 42.9 -0.2**
baz=307,SNR=5.6
GSC Goldstone, Bar 77.92 55 *e*P **P 06 03 44.0 +0.9**
GSC *e*PcP **pP 06 04 01.9 +2.4**
GSC Goldstone, Bar 77.92 55 *e*P **P 06 03 44.0 +0.9**
GSC *e* 06 04 01.9
GSC pmax pmax
comp=Z,53nm,1.8s
BUR08 Bucovina Ar. S 77.95 322 *e*P **P 06 03 43.6 +0.5**
LLD Lille Linde 77.96 333 *i* P **P 06 03 43.3 +0.5**
comp=Z,40nm,0.8s
BUR04 Bucovina Ar. S 77.97 321 *e*P **P 06 03 43.0 -0.1**
BURAR Bucovina Array 77.97 321 ⇑ *i*P **P 06 03 43.7 +0.5**
BURAR Bucovina Array 77.97 321 P **P 06 03 43.7 +0.5**
BIZ Bicaz 77.98 321 ‖ *i*P **P 06 03 44.4 +1.3**
TESR Tescani 77.98 320 ‖ *i*P **P 06 03 43.2 0.0**
CIS Catalina Islan 77.99 57 P **P 06 03 43.2 -0.3**
baz=307
BFSC Mount Baldy Ra 77.99 56 P **P 06 03 43.6 0.0**
baz=307,SNR=5.2
JLU Jordanelle 78.00 48 *e*P **P 06 03 45.0 +1.3**
comp=Z,25nm,1.3s
RRX Edison Barstow 78.05 55 P **P 06 03 44.1 +0.3**
baz=307
CFR Carcaliu 78.09 318 ‖ *i*P **P 06 03 44.2 +0.4**
SCI2 San Clemente I 78.15 58 P **P 06 03 44.3 -0.1**
baz=307
SHPR Sheep Range 78.25 53 *e*P **P 06 03 45.8 +0.8**
comp=Z,23nm,1.2s
MPU Maple Canyon 78.26 48 *e*P **P 06 03 46.0 +0.9**
comp=Z,31nm,1.3s
VRI Vrincioaia 78.38 319 ⇑ *i*P **P 06 03 45.9 +0.5**
VRI Vrincioaia 78.38 319 P **P 06 03 46.9 +1.5**
VRI pmax pmax
comp=Z,260nm,1.6s
TUQ Turquoise Moun 78.41 54 P **P 06 03 46.2 +0.3**
baz=308,SNR=6.5
TIRR Tirgusor 78.42 318 ⇑ *i*P **P 06 03 45.7 +0.1**
TIRR Tirgusor 78.42 318 P **P 06 03 45.7 +0.1**
PLOR Plostina 78.43 319 ‖ *i*P **P 06 03 46.9 +1.2**
PLOR Plostina 78.43 319 P **P 06 03 46.8 +1.1**
BBRC Big Bear Solar 78.47 56 P **P 06 03 46.3 0.0**
baz=307
BR131 Keskin Array S 78.49 311 *e*P **P 06 03 46.1 -0.2**
BRTR Keskin Array B 78.49 311 P **P 06 03 46.1 -0.2**
comp=Z,5.7nm,0.7s,baz=98,slow=3.7,SNR=25
BRTR PP **PP 06 06 43.8 -0.1**
comp=Z,2.1nm,0.9s,baz=120,slow=4.4,SNR=4.5
BRTR LR LR 06 44 46.5
comp=Z,134nm,18.0s,baz=42,slow=40
HEC Hector,Ludlow 78.51 55 P **P 06 03 46.6 +0.2**
baz=308,SNR=6.2
TLB Topalu 78.54 318 ⇑ *i*P **P 06 03 46.5 +0.3**
UZH Uzhgorod 78.68 324 *e*P **P 06 03 47.0 0.0**
UZH *e* 06 04 08.6
MURC Murrieta 78.68 56 P **P 06 03 47.1 -0.2**
baz=307
OJC Ojcow 78.70 326 *e*P **P 06 03 47.4 +0.3**
OJC Ojcow 78.70 326 *e*P **P 06 03 47.0 -0.1**
comp=Z,36nm,0.9s
OJC Ojcow 78.70 326 *e*P **P 06 03 47.0 -0.1**
OJC pmax pmax
comp=Z,36nm,0.9s
CCUT Cedar City 78.74 51 *e*P **P 06 03 48.9 +1.1**
comp=Z,43nm,1.6s
MSU Marysvale 78.87 50 *e*P **P 06 03 49.5 +1.0**
MSU Marysvale 78.87 50 *e*P **P 06 03 49.5 +1.0**
SZCU Shurtz Canyon 78.88 51 *e*P **P 06 03 49.6 +1.0**
comp=Z,27nm,1.6s
TRPA Tarpa 78.92 323 ‖ *i*P **P 06 03 48.9 +0.7**
TRPA Tarpa 78.92 323 ⇑ *e*P **P 06 03 49.6 +1.4**
TMUT Trail Mountain 78.97 49 *e*P **P 06 03 50.3 +1.2**
comp=Z,28nm,1.5s
ISR Istrita 78.97 319 ‖ *i*P **P 06 03 49.9 +1.2**
GMRC Granite Mounta 78.98 55 P **P 06 03 49.2 +0.2**
baz=308,SNR=10
ICOR Ion Corvin 78.98 318 ⇑ *i*P **P 06 03 50.1 +1.4**
DOPR Dopca 79.00 320 ⇑ *i*P **P 06 03 50.0 +1.2**
MLR Muntele Rosu 79.04 320 P **P 06 03 49.1 0.0**
comp=Z,0.9nm,0.5s,baz=338,slow=3.5,SNR=9.9
MLR Muntele Rosu 79.04 320 ‖ *i*P **P 06 03 49.5 +0.3**
MLR Muntele Rosu 79.04 320 *e*P **P 06 03 49.8 +0.6**
comp=Z,35nm,1.5s
MLR Muntele Rosu 79.04 320 *e*P **P 06 03 49.8 +0.6**
MLR pmax pmax
comp=Z,35nm,1.5s
NIE Niedzica 79.05 325 *e*P **P 06 03 49.9 +0.8**

NIE Niedzica 79.05 325 P **P 06 03 50.3 +1.3**
P17A Butcher Ranch, 79.13 48 *e*P **P 06 03 50.9 +1.1**
comp=Z,62nm,1.4s
LCMT Little Creek M 79.15 52 *e*P **P 06 03 50.8 +0.9**
comp=Z,24nm,1.1s
LDFC Landfair 79.15 54 *e*P **P 06 03 50.9 +0.9**
comp=Z,59nm,1.5s
MTPU Mount Pierson 79.16 50 *e*P **P 06 03 51.6 +1.3**
comp=Z,108nm,2.0s
PFO Pinyon Flats O 79.17 56 P **P 06 03 50.1 0.0**
baz=308,SNR=7.9
PFO Pinyon Flats O 79.17 56 *e*P **P 06 03 50.7 +0.6**
comp=Z,44nm,1.6s
PFO Pinyon Flats O 79.17 56 *e*P **P 06 03 50.7 +0.6**
PFO pmax pmax
comp=Z,44nm,1.6s
XPFO Piæon Flat 79.17 56 *e*P **P 06 03 50.7 +0.6**
comp=Z,38nm,1.6s
109C Camp Elliot, M 79.17 57 P **P 06 03 49.8 -0.1**
baz=307
Q16A Castle Valley 79.23 49 *e*P **P 06 03 51.8 +1.4**
comp=Z,62nm,1.5s
BELC Belle Mtn. Jos 79.23 56 P **P 06 03 50.4 -0.1**
baz=308,SNR=7.7
CJR Cluj-Napoca 79.39 322 ⇑ *i*P **P 06 03 51.8 +0.8**
CJR Cluj-Napoca 79.39 322 P **P 06 03 51.7 +0.8**
KNB Kanab 79.41 51 *e*P **P 06 03 52.8 +1.4**
comp=Z,58nm,1.4s
ULM Lac du Bonnet 79.49 33 P **P 06 03 51.1 -0.3**
comp=Z,6.4nm,0.7s,baz=305,slow=6.3,SNR=5.0
ULM LR LR 06 40 18.8
comp=Z,66nm,21.2s,baz=326,slow=36
ULM Lac du Bonnet 79.49 33 *e*P **P 06 03 51.6 +0.3**
ULM Lac du Bonnet 79.49 33 *e*P **P 06 03 51.6 +0.3**
SRU San Rafael Swe 79.49 49 *e*P **P 06 03 52.3 +0.4**
comp=Z,25nm,0.9s
SRU San Rafael Swe 79.49 49 *e*P **P 06 03 52.3 +0.4**
SRU pmax pmax
comp=Z,25nm,0.9s
K22A Casper 79.50 44 P **P 06 03 51.5 -0.3**
baz=312,SNR=7.0
K22A Casper 79.50 44 *e*P **P 06 03 52.4 +0.6**
MDND Maddock 79.52 37 P **P 06 03 51.5 -0.1**
baz=315
MDND Maddock 79.52 37 *e*P **P 06 03 52.4 +0.8**
VOIR 79.53 320 ⇑ *i*P **P 06 03 52.9 +1.1**
VOIR 79.53 320 P **P 06 03 52.9 +1.1**
VOIR pmax pmax
comp=Z,7.0nm,1.3s
BAR Barrett 79.59 57 *e*P **P 06 03 53.0 +0.7**
comp=Z,68nm,1.8s
LANS Liptovska Anna 79.62 325 *e*P **P 06 03 53.7 +1.5**
LANS *e* 06 06 48.3
LANS Liptovska Anna 79.62 325 *e*P **P 06 03 53.7 +1.5**
LANS *e*PP **PP 06 06 48.3 -4.5**
MONP2 Monument Peak 79.63 57 P **P 06 03 52.9 +0.2**
baz=308
KECS Kecovo 79.64 324 *e*P **P 06 03 53.4 +1.2**
KECS Kecovo 79.64 324 *e*P **P 06 03 53.4 +1.2**
NEE2 Needles Airpor 79.66 54 P **P 06 03 52.8 +0.2**
baz=308
IRM Iron Mountain 79.70 55 P **P 06 03 53.1 +0.3**
baz=308,SNR=9.8
OKC Ostrava-Krasne 79.71 326 *e*S **S 06 13 49.5 -0.8**
OKC AMS AMS 06 42 20.0
comp=Z,300nm,16.8s
RWWY Rawlins 79.75 45 *e*P **P 06 03 53.6 +0.3**
comp=Z,18nm,1.0s
KSP Ksiaz 79.77 328 *e*P **P 06 03 53.6 +0.7**
DRGR 79.77 322 ⇑ *i*P **P 06 03 54.0 +0.9**
ARR Arges 79.80 320 ⇑ *i*P **P 06 03 54.7 +1.5**
BC3 Big Chuckawall 79.80 55 P **P 06 03 53.5 0.0**
baz=308,SNR=9.9
RSSD Black Hills 79.87 42 P **P 06 03 53.1 -0.8**
baz=313
RSSD Black Hills 79.87 42 *e*P **P 06 03 54.1 +0.3**
comp=Z,68nm,2.0s
RSSD Black Hills 79.87 42 *e*P **P 06 03 54.1 +0.3**
RSSD pmax pmax
comp=Z,68nm,2.0s
IKP In-Ko-Pah, Jac 79.98 57 P **P 06 03 54.8 +0.3**
baz=308,SNR=5.9
SWSC Sam W. Stewart 80.01 56 P **P 06 03 54.2 -0.2**
baz=306
MORC Moravsky Berou 80.02 327 ‖ *i*P **P 06 03 54.5 +0.2**
MORC Moravsky Berou 80.02 327 *e*P **P 06 03 55.4 +1.1**
comp=Z,82nm,1.0s
MORC Moravsky Berou 80.02 327 *e*P **P 06 03 55.4 +1.1**
MORC pmax pmax
comp=Z,82nm,1.0s
MORC Moravsky Berou 80.02 327 *e*P **P 06 03 55.2 +0.9**
DPC Dobruska-Polom 80.12 328 *e*P **P 06 03 56.2 +1.3**
DPC *e*S **S 06 13 54.1 -0.7**
DPC AMS AMS 06 42 20.0
comp=Z,300nm,15.1s
DPC Dobruska-Polom 80.12 328 *e*P **P 06 03 56.2 +1.3**
DPC *e*S **S 06 13 54.1 -0.7**
DPC MLR MLR
comp=Z,300nm,15.1s
KRLC Kraliky 80.13 327 *e*P **P 06 03 56.0 +1.1**
KRLC *e*x x 06 04 10.5
KRLC Kraliky 80.13 327 *e*P **P 06 03 56.0 +1.1**
UPC Upice 80.14 328 *e*P **P 06 03 56.2 +1.3**
UPC *e*S **S 06 13 55.4 +0.6**
UPC AMS AMS 06 42 30.0
comp=Z,500nm,18.0s
UPC Upice 80.14 328 *e*P **P 06 03 56.2 +1.3**
UPC *e*S **S 06 13 55.4 +0.6**
UPC MLR MLR
comp=Z,500nm,18.0s
LOT Lotru 80.18 321 ‖ *i*P **P 06 03 56.3 +1.0**
O20A White River Ci 80.18 47 P **P 06 03 55.6 0.0**
baz=311,SNR=7.3
O20A White River Ci 80.18 47 *e*P **P 06 03 56.0 +0.4**
PDMCI Parker Dam,Lak 80.26 54 P **P 06 03 55.6 -0.2**
baz=309
RAYN Ar Rayn 80.31 292 *e*P **P 06 03 56.0 -0.3**
comp=Z,94nm,1.7s
RAYN Ar Rayn 80.31 292 *i* P **P 06 03 55.9 -0.4**
SNR=15
PSZ Piszkesteto 80.32 324 ‖ *i*P **P 06 03 56.6 +0.6**
PSZ Piszkesteto 80.32 324 ‖ *e*P **P 06 03 57.3 +1.3**
PSZ Piszkesteto 80.32 324 *e*P **P 06 03 56.9 +0.9**
PSZ Piszkesteto 80.32 324 *e*P **P 06 03 56.9 +0.9**
Y12C Blythe 80.35 55 P **P 06 03 56.7 +0.3**
baz=308,SNR=5.0
Y12C Blythe 80.35 55 *e*P **P 06 03 57.5 +1.2**
VYHS Vyhne 80.39 325 *e*P **P 06 03 57.0 +0.7**
VYHS pmax pmax
comp=Z,17nm,1.5s
VYHS Vyhne 80.39 325 *e*P **P 06 03 57.0 +0.7**
VYHS *e*PP **PP 06 06 54.9 -4.2**
RAR Rarotonga 80.52 126 LR LR 06 33 23.5
comp=Z,396nm,21.0s,baz=295,slow=31
GLA Glamis 80.59 56 P **P 06 03 57.9 +0.2**
baz=308,SNR=6.2
GLA Glamis 80.59 56 *e*P **P 06 03 58.9 +1.2**
comp=Z,58nm,1.5s
JAVC Velka Javorina 80.64 326 *e*P **P 06 03 59.6 +1.9**
A33A Warroad 80.67 34 P **P 06 03 57.0 -0.8**
baz=318,SNR=7.9
PV09 Paradox Valley 80.72 48 *e*P **P 06 03 59.8 +1.2**
BRG Berggiesshubel 80.72 329 *i* P **P 06 03 58.6 +0.6**
comp=Z,14nm,0.9s
BRG PP **PP 06 07 00.0 -1.8**
BRG S **S 06 14 01.0 +0.1**
BRG SS **SS 06 19 13.0 -0.7**
comp=N,276nm,17.9s
comp=E,76nm,16.5s
comp=Z,349nm,21.7s
BRG Berggiesshubel 80.72 329 *i* P **P 06 03 58.6 +0.6**
BRG 06 07 00.0
BRG S **S 06 14 01.0 +0.1**
BRG SS **SS 06 19 13.0 -0.7**
BRG pmax pmax
comp=Z,14nm,0.9s
BRG MLR MLR
comp=N,276nm,17.9s
BRG MLR MLR
comp=E,76nm,16.5s
BRG MLR MLR
comp=Z,349nm,21.7s
PVCC Panska Ves 80.73 329 *e*P **P 06 03 59.9 +1.9**
PVCC AMS AMS 06 42 40.0
comp=Z,400nm,16.4s

PVCC Panska Ves 80.73 329 *e*P **P 06 03 59.9 +1.9**
PVCC MLR MLR
comp=Z,400nm,16.4s
CLL Collm 80.77 330 *i* P **P 06 03 58.8 +0.6**
comp=Z,25nm,0.9s
CLL *i* pP **pP 06 04 13.8 -1.0**
comp=Z,14nm,1.0s
CLL *e*S **S 06 13 59.0 -2.3**
CLL *e*SS SS 06 19 42.0 +28
CLL LmV 06 44 00.0
comp=Z,200nm,20.5s
CLL Collm 80.77 330 *e*P **P 06 03 58.7 +0.6**
comp=Z,23nm,0.9s
CLL *e*pP **pP 06 04 14.0 -0.8**
CLL Collm 80.77 330 *i* P **P 06 03 58.8 +0.6**
CLL *e*S **S 06 13 59.0 -2.3**
CLL pmax pmax
comp=Z,25nm,0.9s
VRAC Vranov 80.78 327 ‖ *i*P **P 06 03 58.9 +0.5**
VRAC Vranov 80.78 327 *e*P **P 06 03 59.3 +0.9**
PV10 Paradox Valley 80.85 48 *e*P **P 06 04 00.7 +1.5**
comp=Z,66nm,0.8s
PV04 Paradox Valley 80.92 48 *e*P **P 06 04 00.8 +1.2**
comp=Z,30nm,1.0s
AGMN Agassiz Nation 80.93 35 P **P 06 03 58.6 -0.6**
baz=318
AGMN Agassiz Nation 80.93 35 *e*P **P 06 03 59.1 -0.1**
comp=Z,11nm,0.9s
N23A Red Feather La 80.99 45 P **P 06 03 59.5 -0.4**
baz=312
PV05 Paradox Valley 81.01 49 *e*P **P 06 04 01.1 +1.1**
comp=Z,49nm,0.9s
PV03 Paradox Valley 81.05 48 *e*P **P 06 04 01.1 +0.9**
comp=Z,29nm,1.0s
PV07 Paradox Valley 81.05 48 *e*P **P 06 04 01.1 +0.9**
comp=Z,26nm,1.4s
PV07 *e*pP **pP 06 04 15.1 -1.7**
KRUC Moravsky 81.06 327 *e*P **P 06 04 00.7 +0.9**
GOPC GO Pecny, Ondr 81.10 328 *e*P **P 06 04 00.5 +0.4**
GOPC *e*PCP **PcP 06 04 04.6 -1.7**
GOPC *e*x x 06 04 16.7
GOPC *e*S **S 06 14 04.0 -1.0**
GOPC AMS AMS 06 43 00.0
comp=Z,400nm,18.8s
GOPC GO Pecny, Ondr 81.10 328 *e*P **P 06 04 00.5 +0.4**
GOPC *e* 06 04 16.7
GOPC *e*S **S 06 14 04.0 -1.0**
GOPC MLR MLR
comp=Z,400nm,18.8s
BZS Buzias 81.14 322 ⇑ *i*P **P 06 04 00.9 +0.6**
PV02 Paradox Valley 81.14 48 *e*P **P 06 04 01.6 +0.8**
comp=Z,81nm,1.6s
ASF Jabal al Asfar 81.15 304 P **P 06 04 00.7 0.0**
comp=Z,5.0nm,0.9s,baz=16,slow=7.4,SNR=6.8
PRU Pruhonice 81.15 328 *e*P **P 06 04 00.9 +0.6**
PRU *e*x x 06 04 17.2
PRU *e*S **S 06 14 04.5 -0.9**
PRU AMS AMS 06 43 00.0
comp=Z,400nm,17.2s
PRU Pruhonice 81.15 328 *e*P **P 06 04 00.9 +0.6**
PRU *e* 06 04 17.2
PRU *e*S **S 06 14 04.5 -0.9**
PRU MLR MLR
comp=Z,400nm,17.2s
MODS Modra-Piesok 81.18 326 *e*P **P 06 03 59.9 -0.6**
MODS pmax pmax
comp=Z,21nm,1.2s
MODS Modra-Piesok 81.18 326 *e*P **P 06 03 59.9 -0.6**
PV15 Paradox Valley 81.21 48 *e*P **P 06 04 02.0 +0.8**
comp=Z,43nm,1.7s
Y14A Wickenburg 81.22 54 *e*P **P 06 04 01.4 +0.3**
E31A Nome 81.26 37 P **P 06 04 00.3 -0.6**
baz=316,SNR=9.7
HERR Herculane 81.26 321 ⇑ *i*P **P 06 04 01.3 +0.3**
WUAZ Wupatki 81.26 52 P **P 06 04 01.9 +0.5**
baz=310,SNR=12
WUAZ Wupatki 81.26 52 *e*P **P 06 04 02.1 +0.7**
comp=Z,22nm,1.0s
PV01 Paradox Valley 81.29 48 *e*P **P 06 04 02.1 +0.6**
comp=Z,24nm,1.0s
B34A Aery, Baudette 81.33 34 P **P 06 04 00.6 -0.7**
baz=318,SNR=5.4
C33A Trail 81.37 35 P **P 06 04 00.8 -0.7**
baz=318,SNR=5.8
MMAI Mount Meron Ar 81.61 305 P **P 06 04 02.6 -0.5**
comp=Z,12nm,0.9s,baz=45,slow=4.3,SNR=9.0
MMAI LR LR 06 43 38.9
comp=Z,331nm,21.5s,baz=50,slow=38
MDVR Moldovita 81.68 321 ‖ *i*P **P 06 04 03.6 +0.3**
B35A Bob, Littlefor 81.83 33 P **P 06 04 03.2 -0.8**
baz=319,SNR=7.5
C34A RKJ Ranch, Bem 81.84 34 P **P 06 04 02.2 -1.8**
baz=318
ISCO Idaho Springs 81.91 46 P **P 06 04 05.4 +0.4**
baz=312,SNR=10
ISCO Idaho Springs 81.91 46 *e*P **P 06 04 06.2 +1.3**
comp=Z,29nm,1.8s
X16A Lo Mia Camp, P 81.92 53 *e*P **P 06 04 05.8 +0.9**
MVCO Mesa Verde 81.94 49 P **P 06 04 05.3 +0.3**
baz=311,SNR=14
MVCO Mesa Verde 81.94 49 *e*P **P 06 04 05.5 +0.5**
comp=Z,18nm,0.9s
F32A Veblen 82.12 37 P **P 06 04 05.0 -0.5**
baz=317
CONA Conrad Observa 82.14 326 *i* PcP **P 06 04 07.1 +1.4**
comp=Z,21nm,1.3s,SNR=9.7
KHC Kasperske Hory 82.21 328 *e*P **P 06 04 06.1 +0.1**
KHC *e*pP **pP 06 04 23.1 +0.6**
KHC *e*S **S 06 14 17.1 +0.6**
KHC AMS AMS 06 43 30.0
comp=Z,400nm,16.8s
KHC Kasperske Hory 82.21 328 *e*P **P 06 04 06.2 +0.3**
KHC Kasperske Hory 82.21 328 *e*P **P 06 04 06.1 +0.1**
KHC *e* 06 04 23.1
KHC *e*S **S 06 14 17.1 +0.6**
KHC MLR MLR
comp=Z,400nm,16.8s
C35A Jirik Farms, M 82.22 34 P **P 06 04 04.9 -1.1**
baz=319,SNR=8.3
SUSD Miller 82.26 39 P **P 06 04 05.6 -0.6**
baz=316
GEC2 GERESS Array S 82.38 328 *e*P **P 06 04 06.9 0.0**
GEC2 GERESS Array S 82.38 328 *e*P **P 06 04 06.9 0.0**
GERES GERESS Array B 82.38 328 P **P 06 04 06.8 -0.1**
comp=Z,3.3nm,0.5s,baz=35,slow=4.9,SNR=32
GERES PP **PP 06 07 16.3 +0.7**
comp=Z,1.2nm,0.5s,baz=46,slow=11,SNR=4.0
GERES LR LR 06 44 21.2
comp=Z,282nm,18.5s,baz=46,slow=38
GEA0 GERESS Array S 82.39 328 *e*P **P 06 04 06.5 -0.5**
G32A Webster 82.39 37 P **P 06 04 06.0 -0.9**
baz=317
G32A Webster 82.39 37 *e*P **P 06 04 07.7 +0.8**
VTS Vitosha 82.46 319 ‖ *i*P **P 06 04 08.1 +0.6**
VTS Vitosha 82.46 319 *e*P **P 06 04 08.3 +0.8**
VTS *e*pP **pP 06 04 24.9 +0.8**
VTS Vitosha 82.46 319 *e*P **P 06 04 08.3 +0.8**
VTS *e*PP **pP 06 04 24.9 +0.8**
W18A Petrified Fore 82.54 51 P **P 06 04 07.8 -0.4**
baz=311
E34A Wadena 82.57 35 P **P 06 04 07.3 -0.5**
baz=318
S22A 4UR Ranch, Cre 82.58 48 P **P 06 04 09.0 +0.5**
baz=312,SNR=18
S22A 4UR Ranch, Cre 82.58 48 *e*P **P 06 04 09.1 +0.7**
214A Organ Pipe Nat 82.60 55 P **P 06 04 08.5 +0.3**
baz=310,SNR=7.7
C36A Pine Crest Far 82.68 33 P **P 06 04 07.6 -0.7**
baz=320,SNR=6.5
GRFO Grafenberg 82.74 330 *e*P **P 06 04 09.9 +1.2**
GRFO Grafenberg 82.74 330 *e*P **P 06 04 09.9 +1.2**
Q24A Divide 82.74 46 P **P 06 04 09.2 -0.1**
baz=313
X18A Snowflake 82.79 52 *e*P **P 06 04 10.7 +1.3**
ARSA Arzberg 82.80 326 *i* P **P 06 04 09.9 +0.8**
comp=Z,11nm,1.3s
E35A Pequot Lakes 82.89 35 P **P 06 04 09.4 -0.1**
baz=319
MOA Molln 82.90 327 *i* P **P 06 04 10.1 +0.6**
comp=Z,16nm,1.1s
G33A Ortonville 82.94 37 P **P 06 04 09.6 -0.2**
baz=317
H32A Carlson Farm, 82.96 38 P **P 06 04 08.7 -1.2**
baz=317
D36A Goodland 82.98 34 P **P 06 04 08.6 -1.3**
baz=319

C37A	Embarrass	82.99	33	P	P	06 04 09.1	-0.9
	baz=320,SNR=6.5						
DIVS	Divibare	83.03	322	eP	P	06 04 10.5	+0.1
F34A	Alexandria	83.06	36	P	P	06 04 09.9	-0.5
	baz=318						
EYMN	Ely	83.12	33	P	P	06 04 09.9	-0.8
	baz=320,SNR=7.5						
EYMN	Ely	83.12	33	eP	P	06 04 10.0	-0.6
	comp=Z,14nm,0.9s						
OGNE	Ogallala	83.12	43	P	P	06 04 10.2	-0.7
	baz=314						
G34A	Benson	83.29	36	P	P	06 04 11.5	-0.1
	baz=318						
D37A	Cotton	83.32	34	P	P	06 04 10.7	-0.9
	baz=320						
F35A	Swanville	83.33	36	P	P	06 04 10.8	-1.0
	baz=319						
SDCO	Great Sand Dun	83.36	47	P	P	06 04 12.9	+0.4
	baz=313,SNR=18						
SDCO	Great Sand Dun	83.36	47	eP	P	06 04 12.8	+0.4
	comp=Z,18nm,1.4s						
C38A	Sawbill Land.	83.39	33	P	P	06 04 11.4	-0.6
	baz=321,SNR=9.0						
E36A	McGregor	83.44	34	P	P	06 04 11.6	-0.7
	baz=319,SNR=5.6						
PERS	Pernice	83.45	326	eP	P	06 04 11.5	-0.9
SOKA	Soboth	83.46	326	i P	P	06 04 13.1	+0.6
	comp=Z,51nm,1.9s,SNR=18						
STIP	Stip	83.64	319	i P	P	06 04 12.6	-0.8
TUC	Tucson	83.69	54	P	P	06 04 13.6	-0.4
	baz=310						
TUC	Tucson	83.69	54	eP	P	06 04 15.0	+1.0
TUC	Tucson	83.69	54	eP	P	06 04 15.0	+1.0
VAY	Valandovo	83.70	318	i P	P	06 04 14.5	+0.7
C39A	Grand Marais	83.80	32	P	P	06 04 13.2	-1.0
	baz=321						
OBKA	Obir	83.80	326	i P	P	06 04 12.6	-1.7
	comp=Z,7.4nm,0.8s						
F36A	Milaca	83.81	35	P	P	06 04 13.9	-0.3
	baz=319						
SKO	Skopje	83.83	319	i P	P	06 04 15.7	+1.3
G35A	Watkins	83.85	36	P	P	06 04 13.7	-0.7
	baz=319						
G35A	Watkins	83.85	36	eP	P	06 04 15.2	+0.7
KBA	Koelnbreinsper	83.89	327	i PcP	P	06 04 15.5	+0.6
	comp=Z,12nm,1.0s,SNR=7.4						
ECSD	EROS Data Cent	83.93	38	P	P	06 04 14.3	-0.6
	baz=317,SNR=9.4						
ECSD	EROS Data Cent	83.93	38	eP	P	06 04 14.8	-0.2
MEM	Membach	83.99	333	⇑P	P	06 04 15.1	+0.1
H35A	Sunnyside Ranc	84.08	36	P	P	06 04 15.4	-0.2
	baz=318,SNR=12						
MYKA	Terra Mystica	84.11	327	i P	P	06 04 13.6	-2.3
	comp=Z,14nm,1.6s						
E38A	The Farm, Brul	84.12	33	P	P	06 04 15.1	-0.8
	baz=320,SNR=7.5						
E38A	The Farm, Brul	84.12	33	eP	P	06 04 15.4	-0.4
KSCO	Kaye Shedlock'	84.14	45	P	P	06 04 16.1	-0.2
	baz=314						
KSCO	Kaye Shedlock'	84.14	45	eP	P	06 04 16.8	+0.6
G36A	St. Michael	84.18	35	P	P	06 04 15.7	-0.4
	baz=319						
VISS	Visnje	84.21	325	eP	P	06 04 15.7	-0.5
BOJS	Bojanci	84.25	325	eP	P	06 04 16.2	-0.3
F37A	Hinrichs Farm,	84.32	35	P	P	06 04 17.4	+0.5
	baz=320						
BCLA	Clavier	84.40	333	⇑P	P	06 04 17.3	+0.1
T25A	Trinidad	84.41	47	P	P	06 04 17.9	+0.2
	baz=313,SNR=13						
T25A	Trinidad	84.41	47	eP	P	06 04 18.1	+0.4
F38A	Pierce - Schro	84.48	34	P	P	06 04 17.3	-0.3
	baz=320,SNR=9.8						
WTTA	Wattenberg	84.48	328	i PcP	P	06 04 18.2	+0.4
	comp=Z,3.2nm,0.5s						
JAVS	Javornik	84.49	326	eP	P	06 04 16.6	-1.2
ABTA	Abfaltersbach	84.51	327	i P	P	06 04 17.6	-0.3
	comp=Z,3.9nm,0.6s						
PMOR	Pomariorio Ree	84.53	113	eT	T	07 37 06.0	
	comp=Z,34nm,0.2s						
H36A	Jessenland, He	84.59	36	P	P	06 04 17.6	-0.6
	baz=319						
LIT	Litokhoron	84.60	317	eP	P	06 04 18.5	+0.1
PDG	Podgorica	84.62	321	⇑i P	P	06 04 18.5	+0.2
TTG	Podgorica	84.62	321	eP	P	06 04 18.0	-0.4
TTG	Podgorica	84.62	321	eP	P	06 04 18.0	-0.4
LAZ	Ladron	84.62	50	eP	P	06 04 20.1	+1.3
SPMN	Marine on St.	84.62	35	P	P	06 04 17.5	-0.9
	baz=320						
MOTA	Moosalm	84.64	328	i PcP	P	06 04 19.2	+0.6
	comp=Z,6.7nm,0.9s						
RETA	Reutte	84.67	329	i PcP	P	06 04 19.3	+0.7
	comp=Z,18nm,0.9s,SNR=7.1						
TASM	ASL Pad, Albuq	84.67	50	P	P	06 04 19.5	+0.4
	baz=312,SNR=21						
ANMO	Albuquerque	84.67	50	P	P	06 04 19.8	+0.7
	comp=Z,12nm,1.1s,baz=314,slow=6.3,SNR=23						
ANMO				LR	LR	06 38 05.4	
	comp=Z,87nm,20.9s,baz=309,slow=33						
ANMO	Albuquerque	84.67	50	P	P	06 04 19.5	+0.4
	baz=312						
ANMO	Albuquerque	84.67	50	eP	P	06 04 20.2	+1.1
ANMO	Albuquerque	84.67	50	c iP	P	06 04 19.5	+0.4
ANMO				pmax	pmax		
	comp=Z,24nm,1.3s						
TASL	Snake Pit, Alb	84.67	50	P	P	06 04 19.6	+0.5
	baz=312,SNR=20						
FNA	Florina	84.71	319	eP	P	06 04 19.3	+0.3
FNA	Florina	84.71	319	eP	P	06 04 19.3	+0.3
E39A	Mellen	84.74	33	P	P	06 04 18.3	-0.6
	baz=321,SNR=5.7						
OHR	Ohrid	84.78	319	i P	P	06 04 19.5	+0.2
BGNE	Belgrade	84.85	40	P	P	06 04 18.7	-1.0
	baz=317						
F39A	Loretta	84.94	34	P	P	06 04 19.5	-0.5
	baz=321						
E40A	Wakefield	84.97	33	P	P	06 04 20.1	0.0
	baz=322,SNR=7.3						
I36A	Fitzsimmons Fa	84.97	36	P	P	06 04 19.1	-1.1
	baz=319						
Y22D	IRIS PASSCAL I	84.97	51	P	P	06 04 20.5	0.0
	baz=312						
Y22E	IRIS PASSCAL I	84.97	51	P	P	06 04 20.6	+0.1
	baz=312						
BFO	Black Forest	84.98	331	eP	P	06 04 20.6	+0.5
BFO	Black Forest	84.98	331	eP	P	06 04 20.6	+0.5
PPT	Papeete	84.99	116	LR	LR	06 33 51.3	
	comp=Z,220nm,22.0s,baz=316,slow=30						
LPM	Los Pinos Moun	84.99	50	eP	P	06 04 21.8	+1.1
PPT2	Papeete2	85.00	116	eS	S	06 14 51.4	+6.1
	comp=Z,89nm,23.8s						
PPT2	Papeete2	85.00	116	eLR	LR	06 30 51.3	
	comp=Z,1μm,30.0s,baz=312						
PPT2	Papeete2	85.00	116	eT	T	07 37 44.5	
	comp=Z,6.9nm,0.3s						
PAE	Paea	85.05	116	eT	T	07 37 46.3	
	comp=Z,1.4nm,0.3s						
D41A	Chassel	85.05	32	P	P	06 04 19.8	-0.7
	baz=322						
FETA	Feichten	85.05	328	i PcP	P	06 04 20.1	-0.6
	comp=Z,8.8nm,1.0s						
H37A	Dierke Farm, C	85.06	35	P	P	06 04 20.6	+0.1
	baz=320						
G38A	Ridgeland	85.10	34	P	P	06 04 19.9	-0.8
	baz=320						
BNM	Barren Site	85.10	50	eP	P	06 04 22.0	+0.7
TIAR	Tiarei	85.15	116	eT	T	07 37 53.3	
	comp=Z,3.9nm,0.2s						
DAVA	Damuels	85.19	329	i PcP	P	06 04 21.9	+0.5
	comp=Z,19nm,1.0s,SNR=6.9						
SCHQ	Schefferville	85.22	16	LR	LR	06 45 49.0	
	comp=Z,95nm,20.1s,baz=350,slow=38						
I37A	Lemond, Waseca	85.27	36	P	P	06 04 21.9	+0.3
	baz=320,SNR=6.2						
I37A	Lemond, Waseca	85.27	36	eP	P	06 04 22.0	+0.3
H38A	Maiden Rock	85.28	35	P	P	06 04 21.6	-0.1
	baz=320						
F40A	Park Falls	85.28	33	P	P	06 04 21.4	-0.3
	baz=322						
G39A	Holcombe	85.31	34	P	P	06 04 21.7	-0.2
	baz=321						
J36A	Seneca 1, Swea	85.34	37	P	P	06 04 22.0	0.0
	baz=319						
J36A	Seneca 1, Swea	85.34	37	eP	P	06 04 22.2	+0.2
E41A	Kenton	85.35	32	P	P	06 04 21.5	-0.5
	baz=322,SNR=5.6						
121A	Cookes Peak, D	85.46	52	P	P	06 04 23.5	+0.5
	baz=312,SNR=9.6						
ECH	Echery	85.53	331	eP	P	06 04 22.8	-0.1
ECH	Echery	85.53	331	eP	P	06 04 22.8	-0.1
FUORN	Ofenpass-Fuorn	85.57	328	eP	P	06 04 24.1	+0.8
DAVOX	Davos/Dischmat	85.60	329	P	P	06 04 23.8	+0.4
	comp=Z,4.1nm,0.7s,baz=329,slow=4.6,SNR=6.8						
DAVOX				LR	LR	06 46 15.2	
	comp=Z,385nm,19.7s,baz=38,slow=38						
J37A	Redenius Farm,	85.73	37	P	P	06 04 24.0	+0.1
	baz=319						
H39A	Augusta	85.73	34	P	P	06 04 23.5	-0.5
	baz=321						
I38A	Scanlan Farm,	85.75	35	P	P	06 04 23.5	-0.5
	baz=320						
G40A	Rib Lake	85.76	34	P	P	06 04 23.5	-0.5
	baz=322,SNR=6.1						
G40A	Rib Lake	85.76	34	eP	P	06 04 23.9	-0.1
K36A	Gilmore City	85.80	38	P	P	06 04 23.9	-0.4
	baz=319						
E42A	Champion	85.82	32	P	P	06 04 23.7	-0.7
	baz=323						
F41A	Three Lakes	85.87	33	P	P	06 04 24.4	-0.2
	baz=322						
F41A	Three Lakes	85.87	33	eP	P	06 04 24.7	+0.1
CBKS	Cedar Bluff	85.88	43	P	P	06 04 23.8	-1.0
	baz=316						
HAU	Haudompre	86.01	331	P	P	06 04 24.5	-0.8
TUE	Stuetta	86.06	329	eP	P	06 04 26.1	+0.3
K37A	Belmond	86.10	37	P	P	06 04 25.2	-0.5
	baz=319						
H40A	Chili	86.18	34	P	P	06 04 25.9	-0.2
	baz=321						
J38A	Wedel Dairy, R	86.23	36	P	P	06 04 25.7	-0.8
	baz=320						
E43A	Lone Tree Farm	86.25	31	P	P	06 04 25.9	-0.5
	baz=324						
G41A	Antigo	86.25	33	P	P	06 04 25.9	-0.6
	baz=322						
I39A	Houston	86.26	35	P	P	06 04 25.7	-0.8
	baz=321						
I39A	Houston	86.26	35	eP	P	06 04 26.6	0.0
I39A				epP	pP	06 04 43.6	+0.3
TAOE	Nuku Hiva Isla	86.50	104	eLR	LR	06 31 37.8	
	comp=Z,1μm,25.9s,baz=315						
TAOE	Nuku Hiva Isla	86.50	104	eT	T	07 39 30.3	
	comp=Z,19nm,0.2s						
H41A	Junction City	86.51	34	P	P	06 04 26.7	-1.1
	baz=322						
H41A	Junction City	86.51	34	eP	P	06 04 27.3	-0.5
M36A	Felix, Anita	86.52	39	P	P	06 04 27.4	-0.5
	baz=319						
L37A	Phoenix Point,	86.53	38	P	P	06 04 27.4	-0.5
	baz=319						
G42A	Mountain	86.55	33	P	P	06 04 27.5	-0.4
	baz=323						
J39A	Decorah	86.58	36	P	P	06 04 27.1	-1.0
	baz=321,SNR=6.9						
K38A	Parkersburg	86.61	37	P	P	06 04 28.4	+0.1
	baz=320						
IDI	Anoyia	86.63	313	P	P	06 04 28.7	+0.1
	comp=Z,16nm,0.7s,baz=38,slow=9.6,SNR=9.9						
IDI				LR	LR	06 48 00.9	
	comp=Z,82nm,20.0s,baz=80,slow=39						
IDI	Anoyia	86.63	313	⇓i P	P	06 04 28.9	+0.3
IDI	Anoyia	86.63	313	eP	P	06 04 27.7	-0.9
I40A	Norwalk	86.65	35	P	P	06 04 28.1	-0.3
	baz=321						
F44A	Big Bay de Noc	86.81	31	P	P	06 04 28.9	-0.3
	baz=324						
I41A	Arkdale	86.85	34	P	P	06 04 29.2	-0.2
	baz=322						
I41A	Arkdale	86.85	34	eP	P	06 04 29.7	+0.3
G43A	Wallace	86.86	32	P	P	06 04 29.1	-0.3
	baz=323						
L38A	Oak Wood Farm,	86.90	37	P	P	06 04 29.5	-0.2
	baz=320						
N36A	Muff Farm, Cla	86.92	39	P	P	06 04 29.6	-0.2
	baz=319						
M37A	Trindle Farm,	86.93	38	P	P	06 04 29.5	-0.3
	baz=319						
J40A	Soldiers Grove	86.98	35	P	P	06 04 29.1	-0.9
	baz=321						
K39A	Oelwein	86.98	36	P	P	06 04 29.0	-1.1
	baz=320						
ITM	Ithomi	86.99	316	eP	P	06 04 29.9	-0.4
ITM				epP	pP	06 04 45.8	-1.2
E45A	Wooded Hills,	87.00	30	P	P	06 04 29.4	-0.6
	baz=325						
H42A	Shiocton	87.09	33	P	P	06 04 30.2	-0.4
	baz=323						
J41A	Loganville	87.33	35	P	P	06 04 31.1	-0.6
	baz=322						
K40A	Colesburg	87.33	36	P	P	06 04 30.9	-0.9
	baz=321						
N37A	Lee Faris, Mou	87.34	39	P	P	06 04 31.4	-0.5
	baz=319						
M38A	Pleasantville	87.34	38	P	P	06 04 31.5	-0.3
	baz=320						
KSU1	Kansas State U	87.34	41	P	P	06 04 31.4	-0.5
	baz=318						
L39A	Vinton	87.37	37	P	P	06 04 31.6	-0.4
	baz=320,SNR=8.1						
I42A	Draeger Farm,	87.41	34	P	P	06 04 31.5	-0.6
	baz=322						
I42A	Draeger Farm,	87.41	34	eP	P	06 04 32.9	+0.8
F45A	CMU Biological	87.41	31	P	P	06 04 30.4	-1.7
	baz=325						
H43A	Windswept, Lux	87.45	33	P	P	06 04 32.0	-0.3
	baz=323						
MNTX	Cornudas Mount	87.53	51	P	P	06 04 32.8	-0.2
	baz=313,SNR=6.7						
MNTX	Cornudas Mount	87.53	51	eP	P	06 04 33.3	+0.4
MSTX	Muleshoe	87.56	48	P	P	06 04 32.6	-0.6
	baz=314						
AMTX	Amarillo	87.56	47	P	P	06 04 33.0	-0.2
	baz=315						
AMTX	Amarillo	87.56	47	eP	P	06 04 34.2	+1.1
JFWS	Jewell Farm	87.58	35	P	P	06 04 32.5	-0.5
	baz=322						
F46A	Macinaw City C	87.64	30	P	P	06 04 32.9	-0.3
	baz=325						
J42A	Columbus	87.77	34	P	P	06 04 33.1	-0.8
	baz=322						
M39A	Webster	87.79	37	P	P	06 04 33.4	-0.5
	baz=320						
L40A	Anamosa	87.79	36	P	P	06 04 33.5	-0.5
	baz=321						
K41A	Shullsburg	87.79	35	P	P	06 04 33.4	-0.6
	baz=322						
N38A	Joes South For	87.79	38	P	P	06 04 33.6	-0.4
	baz=320						
FLN	La Foliniere	87.80	336	eP	P	06 04 33.4	-0.5
FLN				pmax	pmax		
	comp=Z,38nm,1.4s						
O37A	Wolven Farm, M	87.81	39	P	P	06 04 33.8	-0.4
	baz=319						
LDF	La Druitiere	87.83	335	eP	P	06 04 33.5	-0.5
LDF				pmax	pmax		
	comp=Z,22nm,1.3s						
SSF	Saint Saulge	87.86	332	eP	P	06 04 34.0	-0.2
SSF				pmax	pmax		
	comp=Z,11nm,1.1s						
LPL	La Plagne	87.91	330	eP	P	06 04 35.7	+0.9
LPL				pmax	pmax		
	comp=Z,2.0nm,0.4s						
LPG	La Plagne	87.91	330	eP	P	06 04 35.9	+1.0
LPG				pmax	pmax		
	comp=Z,4.0nm,0.6s						
J43A	Natural Harves	88.03	34	P	P	06 04 34.6	-0.5
	baz=323						
N39A	Derby Farms, D	88.09	38	P	P	06 04 35.3	-0.1
	baz=320						
K42A	Prairie Point,	88.09	35	P	P	06 04 34.6	-0.8
	baz=322						
L41A	Preston	88.12	36	P	P	06 04 35.2	-0.3
	baz=321						
AVF	Avril sur Loir	88.15	332	eP	P	06 04 35.6	0.0
P37A	Lathrop	88.15	40	P	P	06 04 35.3	-0.5
	baz=319						
M40A	Post Highland	88.16	37	P	P	06 04 35.3	-0.5
	baz=321						
GRR	Gorron	88.25	336	eP	P	06 04 35.9	-0.1
GRR				pmax	pmax		
	comp=Z,11nm,0.9s						
N40A	Mertquake, Sal	88.53	37	P	P	06 04 37.4	-0.1
	baz=321						
P38A	Dawn	88.53	39	P	P	06 04 37.2	-0.3
	baz=320						
MBDF	Montbardon	88.54	329	eP	P	06 04 41.0	+3.3
MBDF				pmax	pmax		
	comp=Z,3.0nm,0.6s						
O39A	Kirksville	88.55	38	P	P	06 04 37.0	-0.6
	baz=320						
L42A	Oliver, Polo	88.56	35	P	P	06 04 36.7	-0.9
	baz=322						
K43A	Burlington	88.61	34	P	P	06 04 37.1	-0.7
	baz=323						
Q37A	Longview Farm,	88.63	40	P	P	06 04 37.2	-0.8
	baz=319						
M41A	Milan	88.64	36	P	P	06 04 37.4	-0.6
	baz=321						
L43A	Garden Prairie	88.84	35	P	P	06 04 38.4	-0.5
	baz=323						
TBI	Tubuai	88.89	121	eLR	LR	06 32 43.0	
	comp=Z,985nm,26.8s,baz=316						
TBI	Tubuai	88.89	121	eT	T	07 42 34.7	
	comp=Z,82nm,0.3s						
M42A	Sheffield	88.95	36	P	P	06 04 38.9	-0.6
	baz=322						
O40A	La Belle	88.97	38	P	P	06 04 39.0	-0.6
	baz=321						
Q38A	Cooks Store, C	88.99	40	P	P	06 04 39.3	-0.5
	baz=320						
N41A	Harden Midland	89.01	37	P	P	06 04 39.3	-0.5
	baz=321						
P39B	Salisbury	89.03	39	P	P	06 04 39.6	-0.2
	baz=320						
ROSF	Rostrenen	89.06	337	eP	P	06 04 38.9	-1.0
ROSF				pmax	pmax		
	comp=Z,63nm,1.5s						
L44A	Lake County Fo	89.22	34	P	P	06 04 40.6	-0.1
	baz=323						
Q39A	Willow Grove F	89.25	39	P	P	06 04 40.5	-0.4
	baz=320						
VIVF	Saint-Julien-l	89.27	331	eP	P	06 04 42.5	+1.5
VIVF				pmax	pmax		
	comp=Z,13nm,1.5s						
M43A	Waltham Townsh	89.33	35	P	P	06 04 41.0	-0.3
	baz=322						
LPIG	La Paz	89.34	60	LR	LR	06 40 19.7	
	comp=Z,65nm,19.6s,baz=250,slow=32						
WMOK	Wichita Mounta	89.34	45	P	P	06 04 41.1	-0.4
	baz=316						
WMOK	Wichita Mounta	89.34	45	eP	P	06 04 41.9	+0.4
WMOK	Wichita Mounta	89.34	45	eP	P	06 04 41.9	+0.4
P40A	Paris	89.34	38	P	P	06 04 41.0	-0.4
	baz=320						
P40A	Paris	89.34	38	eP	P	06 04 41.9	+0.6
P40A				epP	pP	06 04 59.2	+1.0
R38A	Fenwick Farm,	89.43	40	P	P	06 04 40.7	-1.1
	baz=319						
O41A	Passleys Farm,	89.46	37	P	P	06 04 41.1	-0.8
	baz=321						
ATD	Arta Tunnel	89.53	284	LR	LR	06 49 14.5	
	comp=Z,88nm,19.1s,baz=326,slow=38						
MFF	Saint Martin d	89.56	334	eP	P	06 04 42.1	-0.1
MFF				pmax	pmax		
	comp=Z,13nm,1.0s						
P41A	Barry, Barry	89.72	38	P	P	06 04 42.7	-0.3
	baz=321						
Q40A	Laux Farm, Aux	89.74	39	P	P	06 04 42.5	-0.8
	baz=320						
R39A	Chumby, Stover	89.78	40	P	P	06 04 42.6	-0.9
	baz=320						
M44A	Midewin, Midew	89.79	35	P	P	06 04 42.7	-0.7
	baz=323						
S38A	Stockton	89.85	41	P	P	06 04 42.7	-1.1
	baz=319						
HDIL	Hopedale	89.87	36	P	P	06 04 43.2	-0.6
	baz=322						
O43A	Sugar Creek Fa	90.08	36	P	P	06 04 44.2	-0.6
	baz=322						
RJF	Les Rejaudoux	90.08	333	eP	P	06 04 44.6	-0.1
RJF				pmax	pmax		
	comp=Z,4.0nm,0.8s						
T38A	Diamond	90.10	41	P	P	06 04 44.3	-0.6
	baz=319,SNR=6.7						
S39A	Bolivar	90.11	40	P	P	06 04 44.5	-0.5
	baz=320						
S39A	Bolivar	90.11	40	eP	P	06 04 45.0	0.0
P42A	Winchester	90.13	37	P	P	06 04 44.6	-0.4
	baz=322						
P42A	Winchester	90.13	37	eP	P	06 04 45.5	+0.5
TUL1	Leonard	90.14	43	P	P	06 04 44.9	-0.2
	baz=318,SNR=5.2						
TUL1	Leonard	90.14	43	eP	P	06 04 45.7	+0.6
TUL1				epP	pP	06 05 03.2	+1.2
R40A	Maddies Statio	90.19	39	P	P	06 04 44.8	-0.5
	baz=320						
R40A	Maddies Statio	90.19	39	eP	P	06 04 45.9	+0.6
Q41A	Truxton	90.19	38	P	P	06 04 44.9	-0.4
	baz=321						
CAF	Calviac	90.21	332	eP	P	06 04 45.6	+0.3
CAF				pmax	pmax		
	comp=Z,12nm,1.3s						
TX31	Lajitas Ar. Si	90.22	52	eP	P	06 04 45.7	-0.1
TXAR	Lajitas Array	90.22	52	P	P	06 04 45.7	-0.1
	comp=Z,7.1nm,0.7s,baz=303,slow=3.0,SNR=89						
TXAR				LR	LR	06 38 55.0	
	comp=Z,114nm,21.5s,baz=0.0,slow=31						
ABTX	Abilene, Hawle	90.36	47	P	P	06 04 46.2	-0.1
	baz=316,SNR=5.4						
ABTX	Abilene, Hawle	90.36	47	eP	P	06 04 46.4	+0.1
HPIG		90.58	55	eP	P	06 04 48.0	+0.4
T39A	Clever	90.59	41	P	P	06 04 46.9	-0.4
	baz=320						
R41A	Rosebud	90.63	39	P	P	06 04 46.9	-0.5
	baz=321						
LFF	La Frestale	90.68	333	eP	P	06 04 47.6	+0.1
LFF				pmax	pmax		
	comp=Z,18nm,1.2s						
N46A	Monticello	90.77	34	P	P	06 04 47.5	-0.5
	baz=324						
VAE	Valguarnera	90.79	320	LR	LR	06 49 31.5	
	comp=Z,271nm,19.3s,baz=59,slow=38						
HHAR	Hobbs	90.85	41	eP	P	06 04 48.5	0.0
HHAR				epP	pP	06 05 05.7	+0.4
CCM	Cathedral Cave	90.88	39	P	P	06 04 48.2	-0.4
	baz=321						
T40A	Mansfield	90.93	40	P	P	06 04 48.2	-0.6
	baz=320						
U39A	Green Forest	91.02	41	P	P	06 04 48.6	-0.7
	baz=320,SNR=10						
P44A	Sand Creek, Wi	91.05	36	P	P	06 04 49.1	-0.2
	baz=323						
S42A	Caledonia	91.33	39	P	P	06 04 49.8	-0.8
	baz=321						
V39A	Pettigrew	91.34	42	P	P	06 04 50.0	-0.8
	baz=320						
U40A	Yellville	91.37	41	P	P	06 04 50.4	-0.5
	baz=320,SNR=9.0						
P45A	Graceland, Par	91.41	36	P	P	06 04 50.4	-0.6
	baz=323						
Q45A	Warren Harvey,	91.72	36	P	P	06 04 52.1	-0.3
	baz=323						
T42A	Van Buren	91.75	39	P	P	06 04 52.3	-0.3
	baz=321						
W39A	Magazine	91.76	42	P	P	06 04 52.5	-0.2
	baz=319						
JCT	Junction City	91.80	49	P	P	06 04 52.7	-0.3
	baz=316,SNR=6.7						
JCT	Junction City	91.80	49	eP	P	06 04 53.4	+0.4
JCT				epP	pP	06 05 10.2	+0.5
JCT	Junction City	91.80	49	eP	P	06 04 53.4	+0.4
JCT				e*PP	pP	06 05 10.3	+0.5
U41A	Viola	91.86	40	P	P	06 04 52.4	-0.7
	baz=320						
WHTX	Lake Whitney,	92.09	46	P	P	06 04 53.7	-0.6
	baz=317						
WHTX	Lake Whitney,	92.09	46	eP	P	06 04 55.6	+1.3
X39A	Fountain Ranch	92.10	43	P	P	06 04 54.5	+0.3
	baz=319,SNR=5.3						

MIAR				e*PP	pP	06 05 13.3	+1.0
R46A	Gibon Southern	92.57	36	P	P	06 04 55.7	-0.6
	baz=323						
W41B	Gary Mavity, V	92.59	41	P	P	06 04 55.5	-1.0
	baz=320						
X40A	Basin Creek Fa	92.80	42	P	P	06 04 57.1	-0.4
	baz=320						
ETSF	Etsaut	92.92	333	eP	P	06 04 58.1	+0.1
ETSF				pmax	pmax		
	comp=Z,9.0nm,1.3s						
833A	Chaparral WMA,	93.59	50	P	P	06 05 01.3	+0.1
	baz=316						
S48A	Wiedeman Farm,	93.70	36	P	P	06 05 01.0	-0.5
	baz=324						
U47A	Clarksville	94.09	37	P	P	06 05 02.9	-0.5
	baz=323						
T49A	Edmonton	94.39	36	P	P	06 05 04.0	-0.8
	baz=325						
V47A	Nunnelly	94.47	38	P	P	06 05 04.5	-0.6
	baz=323						
KEST	Kesra	94.68	322	LR	LR	06 53 49.0	
	comp=Z,127nm,18.4s,baz=95,slow=39						
U49A	Red Boiling Sp	94.75	36	P	P	06 05 05.8	-0.6
	baz=324						
T50A	Nancy	94.78	35	P	P	06 05 06.1	-0.4
	baz=325						
V48A	Smith Brothers	94.88	37	P	P	06 05 06.4	-0.6
	baz=324						
V49A	McMinnville	95.30	37	P	P	06 05 07.7	-1.2
	baz=324						
W48A	Pulaski	95.31	38	P	P	06 05 08.2	-0.8
	baz=324						
ZAIG	Zacatecas	95.48	56	eP	P	06 05 11.7	+1.4
Y47A	UCPARC, Winfie	95.84	39	P	P	06 05 10.7	-0.8
	baz=323						
LNIG	Linares	95.99	53	eP	P	06 05 12.1	-0.2
V51A	Loudon	96.00	36	P	P	06 05 11.5	-0.7
	baz=325						
W50A	Signal Mountai	96.04	37	P	P	06 05 11.9	-0.5
	baz=325						
TKL	Tuckaleechee C	96.39	35	LR	LR	06 51 13.8	
	comp=Z,84nm,20.9s,baz=347,slow=37						
ESDC	Sonseca Array	96.97	334	P	P	06 05 16.5	-0.1
	comp=Z,0.2nm,0.4s,baz=28,slow=5.8,SNR=4.5						
ESDC				LR	LR	06 52 39.5	
	comp=Z,257nm,21.9s,baz=45,slow=38						
347A	Saraland	97.46	41	P	P	06 05 18.2	-0.6
	baz=322						
RKT	Rikitea	99.10	112	eLR	LR	06 37 33.7	
	comp=Z,771nm,26.5s						
TORD	Torodi Ar. Bea	116.98	315	PP	PP	06 11 36.6	-2.4
	baz=15,slow=6.3						
SDV	Santo Domingo	125.35	40	ePKPdf	PKPdf	06 10 46.4	+0.1
SAML	Samuel	144.30	44	ePKPdf	PKPab	06 11 18.6	-0.6
LPAZ	La Paz	146.84	59	PKPbc	PKPbc	06 11 27.9	-0.2
	comp=Z,28nm,0.6s,baz=332,slow=2.7,SNR=218						
LCO	Las Campanas	152.27	82	ePKPbc	PKPbc	06 11 40.8	-0.1
LCO				ePKPab	pPKPdf	06 11 51.4	-0.2
PLCA	Paso Flores	155.26	108	PKPab	PKPab	06 12 04.1	+1.0
	comp=Z,7.6nm,1.0s,baz=268,slow=7.0,SNR=5.9						
CPUP	Villa Florida	161.00	60	PKPab	PKPab	06 12 27.9	-0.2
	comp=Z,3.2nm,0.7s,baz=289,slow=4.6,SNR=6.1						

NEIC 28 05:58:57.8±0.0, 62°.47N×148°.32W, h56km, MW3.7, ML3.5(AEIC), **Moment Tensor Solution. s7 Moment tensor: Scale** 10^{14}**Nm;** M_{rr}-4.18; $M_{\theta\theta}$1.51; $M_{\phi\phi}$2.67; $M_{r\theta}$0.73; $M_{\theta\phi}$2.02; $M_{\phi r}$1.37; **Best double couple:** $M_0$4.50000×10^{14} **NP1:**ϕ_s40.00000°, δ35.00000°, λ-85.00000°. **NP2:**ϕ_s214.00000°, δ55.00000°, λ-93.00000°. **Principal axes:** T 4.4600, Plg10.0000°, Azm306.0000°; N 0.0000, Plg3.0000°, Azm216.0000°; P -4.4700, Plg80.0000°, Azm110.0000°; **After AEIC.**

Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SML	Sawmill	0.66	181	P	Pn	05 59 10.6	-0.8
SML				S	Sn	05 59 21.9	+0.6
DHY	Denali Highway	0.75	35	P	Pn	05 59 11.5	-1.1
DHY				S	Sn	05 59 23.3	-0.1
GHO	Glory Hole Cre	0.75	203	P	Pn	05 59 11.8	-0.8
HUR	Hurricane	0.80	311	P	Pn	05 59 12.1	-0.9
HUR				S	Sn	05 59 23.8	-0.4
TRAP	Trapper Creek	0.91	263	P	Pn	05 59 13.7	-0.7
TRAP				S	Sn	05 59 27.0	+0.3
PMR	Palmer	0.96	204	P	Pn	05 59 14.1	-0.9
PMR				S	Sn	05 59 28.7	+0.9
KNK	Knik Glacier	1.06	184	P	Pn	05 59 16.1	-0.4
KNK				S	Sn	05 59 31.9	+1.6
MCK	McKinley	1.30	348	P	Pn	05 59 19.3	-0.5
MCK				S	Sn	05 59 36.0	-0.1
TRF	Thorofare Moun	1.34	319	P	Pn	05 59 19.3	-1.1
PS11	TAPS Pump St11	1.38	105	P	Pn	05 59 21.2	+0.4
PAX	Paxson	1.41	68	P	Pn	05 59 20.8	-0.4
PAX				S	Sn	05 59 39.4	+0.7
HARP	HAARP	1.47	91	P	Pn	05 59 22.1	+0.1
KLU	Klutina	1.49	130	P	Pn	05 59 21.5	-0.9
PS10	TAPS Pump St10	1.51	49	P	Pn	05 59 22.8	+0.2
PS10				S	Sn	05 59 41.3	+0.2
SUA	Susitna One	1.52	230	P	Pn	05 59 22.8	0.0
SUA				S	Sn	05 59 42.9	+1.2
RC01	Rabbit Creek A	1.54	207	P	Pn	05 59 22.5	-0.4
FIB	Fire Island	1.57	215	P	Pn	05 59 24.0	+0.6
SKT	Skwentna	1.58	254	P	Pn	05 59 22.9	-0.6
KTH	Kantishna Hill	1.61	314	P	Pn	05 59 23.3	-0.7
KTH				S	Sn	05 59 44.0	+0.2
PTE	Portage	1.64	192	P	Pn	05 59 24.2	0.0
VMT	TAPS Tl Valdez	1.67	145	P	Pn	05 59 23.5	-1.1
BWN	Browne	1.79	344	P	Pn	05 59 25.3	-1.0
PS12	TAPS Pump St12	1.80	122	P	Pn	05 59 25.8	-0.6
DIV	Divide	1.80	137	P	Pn	05 59 25.1	-1.4
PPLA	Purkeypile	1.84	285	P	Pn	05 59 26.5	-0.6
CAST	Castle Rocks	1.97	301	P	Pn	05 59 27.6	-1.1
WAZA	Wrangell Mount	1.99	100	P	Pn	05 59 28.3	-0.9
WRH	Wood River Hil	2.02	3	P	Pn	05 59 28.2	-1.2
RIDG	Independ'e Rid	2.03	49	P	Pn	05 59 29.9	+0.2
BPAW	Bear Paw Mtn.	2.04	325	P	Pn	05 59 28.5	-1.2
WANC	Wrangell North	2.04	101	P	Pn	05 59 29.6	-0.6
HDA	Harding Lake	2.05	17	P	Pn	05 59 29.4	-0.4
SPCG	Spurr Capps Gl	2.11	238	P	Pn	05 59 30.7	-0.2
NEA	Nenana	2.15	351	P	Pn	05 59 29.9	-1.2
SLKM	Skilak Lake	2.17	206	P	Pn	05 59 32.2	+0.7
MENT	Mentasta	2.17	75	P	Pn	05 59 31.7	+0.2
SPCP	Crater Peak Br	2.18	238	P	Pn	05 59 32.0	+0.2
PS08	TAPS Pump Stn8	2.19	17	P	Pn	05 59 31.3	-0.4
CCB	Clear Creek Bu	2.20	6	P	Pn	05 59 30.6	-1.3
HIN	Hinchinbrook I	2.25	156	P	Pn	05 59 31.6	-1.0
CKL	Chakachamna La	2.29	238	P	Pn	05 59 33.7	+0.4
CHUM	Lake Minchumin	2.31	310	P	Pn	05 59 32.4	-0.9
BMRM	Bremner River	2.32	129	P	Pn	05 59 32.0	-1.5
SPWE	Spurr West	2.34	241	P	Pn	05 59 34.3	+0.4
ILB	Eielson Array	2.40	15	P	Pn	05 59 33.6	-1.0
COLA	College	2.43	5	P	Pn	05 59 34.0	-0.9
SCRK	Sand Creek	2.48	50	P	Pn	05 59 35.1	-0.7
MDM	Murphy Dome	2.50	1	P	Pn	05 59 35.0	-1.0
GOAT	Goat Mountain	2.56	136	P	Pn	05 59 35.7	-1.1
GLM	Gilmore Dome	2.57	9	P	Pn	05 59 36.1	-0.8
VRDI	Verde Repeater	2.62	116	P	Pn	05 59 36.6	-1.2
RAGM	Ragged Mountai	2.72	138	P	Pn	05 59 38.2	-0.9
MCARA	McCarthy VSAT	2.73	111	P	Pn	05 59 38.6	-0.5
MLY	Manley	2.79	338	P	Pn	05 59 39.0	-1.0
DFR	Drift River	2.81	230	P	Pn	05 59 40.3	0.0
RDJH	Redoubt Jeurge	2.86	231	P	Pn	05 59 41.1	+0.1
NCT	North Crescent	2.92	231	P	Pn	05 59 42.3	+0.5
RDWB	Redoubt West	2.94	230	P	Pn	05 59 42.1	-0.1
BRLK	Bradley Lake	2.98	206	P	Pn	05 59 42.5	-0.1
BERG	Berg Lake	3.04	131	P	Pn	05 59 42.1	-1.3
PTPK	Patty Peak	3.06	112	P	Pn	05 59 43.0	-0.8
BCA3	Beaver Creek A	3.06	76	P	Pn	05 59 43.0	-0.8
KHIT	Khitrov Hills	3.17	128	P	Pn	05 59 44.0	-1.2
KAIM	Kayak Island	3.17	142	P	Pn	05 59 43.7	-1.4
BALM	Baldy	3.18	114	P	Pn	05 59 44.0	-1.4
KIAG	Kiagna River	3.23	116	P	Pn	05 59 44.5	-1.6
CNPM	China Poot	3.27	207	P	Pn	05 59 46.5	-0.1
PRP	Porcupine Dome	3.30	21	P	Pn	05 59 46.9	-0.2
ISLE	Juniper Island	3.42	120	P	Pn	05 59 48.1	-0.6
PS06	TAPS Pump Stn6	3.46	350	P	Pn	05 59 48.1	-1.0
BARN	Barnard Glacie	3.46	111	P	Pn	05 59 48.6	-0.7
BARK	Barkley Ridge	3.48	124	P	Pn	05 59 48.2	-1.3
KULT	Kultieth River	3.49	127	P	Pn	05 59 49.1	-0.6
TT01	Tatalina	3.58	281	P	Pn	05 59 49.7	-1.0
BAGL	Bagley Icefiel	3.58	121	P	Pn	05 59 50.5	-0.3
GRNC	Granite Creek	3.58	116	P	Pn	05 59 49.4	-1.6
CTGM	Chitina Glacie	3.65	111	P	Pn	05 59 51.0	-0.9
SVW2	Sparrevohn	3.71	252	P	Pn	05 59 51.2	-1.4
MESA	MESA	3.83	124	P	Pn	05 59 53.9	-0.5
EGAK	Eagle	3.95	51	P	Pn	05 59 55.2	-0.5
AUE	Augustine Isla	3.98	221	P	Pn	05 59 55.9	-0.2
AUNW	Augustine NWes	3.99	221	P	Pn	05 59 56.4	+0.1
AUJK	Augustine Jueg	3.99	221	P	Pn	05 59 56.6	+0.2
AUI	Augustine Isla	4.01	221	P	Pn	05 59 56.7	+0.1
IM05	Indian Mountai	4.24	329	P	Pn	05 59 58.8	-1.0
SAMH	Samovar Hills	4.32	119	P	Pn	06 00 00.8	-0.2
DAWY	Dawson	4.34	64	ePn	Pn	06 00 00.6	-0.6
CDD	Cape Douglas	4.41	219	P	Pn	06 00 01.8	-0.3
GCSA	Galena City Sc	4.46	305	P	Pn	06 00 02.0	-0.6
PS05	TAPS Pump Stn5	4.48	348	P	Pn	06 00 03.5	+0.5
COLD	Coldfoot	4.85	351	P	Pn	06 00 07.5	-0.5
KARR	Katmai Rainbow	5.08	221	P	Pn	06 00 09.1	-2.2
KDAK	Kodiak Island	5.16	206	P	Pn	06 00 10.2	-2.1
PNL	Peninsula	5.16	119	P	Pn	06 00 11.5	-0.9
BM3	Burnt Mountain	5.22	16	P	Pn	06 00 12.8	-0.3
HYT	Haines Junctio	5.41	103	P	Pn	06 00 14.6	-1.3
OHAK	Old Harbor	5.82	208	P	Pn	06 00 18.9	-2.5
BESE	Bessie Mountai	7.69	114	P	Pn	06 00 45.5	-1.6

ISK ***28*** *06:01:34.9, 39°.96N×39°.57E, h14km, ML2.5/3*
ISCJB ***28*** *06:01:36.0±0.4, 39°.96N±0°.02×39°.62E±0°.04, h12km±4km, Error ellipse: s-maj=4.9km s-min=3.6km az=13.5*
DDA ***28*** *06:01:36.3, 39°.93N×39°.54E, h7km, Ml2.7*
CSEM ***28*** *06:01:36.0±0.2, 39°.95N×39°.59E, h15km, ML2.5, Error ellipse: s-maj=4.8km s-min=3.5km az=123.0*

ISC 28 06:01:35.9±0.8, 39°.95N±0°.02×39°.55E±0°.02, h17km±7km, n30, σ1§16/50, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZC	Erzincan	0.25	218	ePg	Pb	06 01 43.1	+1.0
EZC				eSg	Sb	06 01 48.9	+2.7
EUZM	Uzumlu	0.27	155	i P	Pg	06 01 42.0	+0.2
EUZM				i S	Sg	06 01 45.8	0.0
EUZM	Uzumlu	0.27	155	P	Pg	06 01 42.0	+0.2
EUZM				S	Sg	06 01 45.8	0.0
KELT	Kelkit	0.30	311	i P	Pb	06 01 43.2	+0.1
KELT				i S	Sg	06 01 47.4	+0.3
KELT	Kelkit	0.30	311	P	Pb	06 01 43.2	+0.1
KELT				S	Sg	06 01 47.4	+0.3
ERZN	Erzincan	0.38	160	PG	Pg	06 01 43.1	-0.7
ERZN				SG	Sg	06 01 48.9	-0.3
GUMT	Gumushane	0.51	354	PG	Pg	06 01 46.0	-0.2
GUMT				SG	Sg	06 01 52.8	-0.4
GUMT	Gumushane	0.51	354	ePg	Pg	06 01 46.0	-0.2
GUMT				eSg	Sg	06 01 52.8	-0.4
BAYT	Ayd¨–ntepe-Bay	0.63	45	PG	Pg	06 01 47.9	-0.5
BAYT				SG	Sg	06 01 56.3	-0.6
BAYT	Ayd¨–ntepe-Bay	0.63	45	ePg	Pg	06 01 47.9	-0.5
BAYT				eSg	Sg	06 01 56.3	-0.6
KOPT	Kop Dagi	0.73	84	i P	Pb	06 01 50.3	0.0
KOPT				i S	Sn	06 02 01.9	-0.7
KOPT	Kop Dagi	0.73	84	P	Pb	06 01 50.3	0.0
KOPT				S	Sn	06 02 01.9	-0.7
REFA	Refahiye_ERZ¨	0.82	228	i P	Pg	06 01 47.8	-4.1
REFA				i S	Sg	06 02 02.5	-0.3
REFA	Refahiye_ERZ¨	0.82	228	P	Pg	06 01 47.8	-4.1
REFA				S	Sg	06 02 02.5	-0.3
MACK	Trabzon	1.01	9	i P	Pn	06 01 56.1	+0.8
MACK				i S	Sb	06 02 07.8	-0.2
MACK	Trabzon	1.01	9	P	Pn	06 01 56.1	+0.8
MACK				S	Sb	06 02 07.8	-0.2
PTK	Pertek	1.06	187	PG	Pb	06 01 56.0	0.0
PTK	Pertek	1.06	187	ePg	Pb	06 01 56.0	0.0
KEMA	Kemaliye	1.06	231	i P	Pb	06 01 56.4	+0.5
KEMA				i S	Sn	06 02 13.1	+2.5
KEMA	Kemaliye	1.06	231	P	Pb	06 01 56.4	+0.5
KEMA				S	Sn	06 02 13.1	+2.5
SUSE	Susehri	1.07	285	i P	Pb	06 01 56.4	+0.3
SUSE				i S	Sn	06 02 11.6	+0.8
SUSE	Susehri	1.07	285	P	Pb	06 01 56.4	+0.3
SUSE				S	Sn	06 02 11.6	+0.8
ESPY	Espiye-Giresun	1.16	327	PN	Pb	06 01 57.3	-0.1
ESPY	Espiye-Giresun	1.16	327	ePn	Pb	06 01 57.3	-0.1
CHOM	Cayeli-Rize	1.47	38	PN	Pn	06 02 01.5	-0.2
CHOM	Cayeli-Rize	1.47	38	ePn	Pn	06 02 01.5	-0.2
SVRC	Sivrice-ELAZID	1.58	187	PN	Pn	06 02 03.0	-0.3
SVRC	Sivrice-ELAZID	1.58	187	ePn	Pn	06 02 03.0	-0.3
BCA	Borcka	2.17	46	PN	Pn	06 02 11.4	+0.1
BCA	Borcka	2.17	46	ePn	Pn	06 02 11.4	+0.1

NIED ***28*** *06:17:00, 36°.10N×140°.50E, h35km, Mw4.0 Best double couple: $M_0$1.28000×10^{15} NP1:ϕ_s84.00000°, δ39.00000°, λ-12.00000°. NP2:ϕ_s183.00000°, δ82.00000°, λ-128.00000°.*
ISCJB ***28*** *06:17:23.4±0.7, 36°.01N±0°.04×140°.51E±0°.05, h30km±5km, mb3.9/13, Error ellipse: s-maj=7.3km s-min=6.0km az=42.0*
JMA ***28*** *06:17:24.8±0.1, 36°.08N×140°.45E, h33km±1km, M4.0 Broadband fault plane solution: P waves. NP1: ϕ_s193.00000°, δ63.00000°, λ-135.00000°. NP2: ϕ_s78.00000°, δ51.00000°, λ-36.00000°. Principal axes: T Plg7.0000°, Azm313.0000°; N Plg39.0000°, Azm217.0000°; P Plg50.0000°, Azm51.0000°;*
JMA Felt III J1.
NEIC ***28*** *06:17:26.0±1.2, 35°.95N×140°.41E, h39km±12km, mb4.6/3 Error ellipse: s-maj=15.1km s-min=8.2km az=54.0*
NEIC Recorded [3 JMA] in Ibaraki.
IDC ***28*** *06:17:26.7±2.0, 35°.97N×140°.37E, h43km±21km, mb3.5/10, mb1 3.8/13, mb1mx3.5/69, mbtmp3.8/13, ML4.2/2, MS3.2/1, Ms1 3.2/1, ms1mx2.5/52, Error ellipse: s-maj=20.7km s-min=8.1km az=57.0*

ISC 28 06:17:23.9±2.1, 36°.01N±0°.05×140°.43E±0°.05, h19km±13km, n32, σ1§16/34, mb3.8/13, 5C, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYT	Yasato	0.29	318	⇑P	Pn	06 17 32.1	-1.1
JYT				S	Sb	06 17 36.6	+1.8
JHO	Hitachi	0.61	10	⇑P	Pb	06 17 35.5	-0.4
JHO				S	Sg	06 17 42.1	-2.1
JAG	Ashikaga	0.89	298	⇑P	Pb	06 17 40.6	-0.2
JKT	Katashina	1.22	309	⇑P	Pn	06 17 45.4	-0.6
JKT				S	Sb	06 18 00.5	-1.3
JRY	Ryogami san	1.24	271	⇑P	Pn	06 17 45.9	-0.4
JRY				S	Sb	06 18 00.5	-1.9
MJAR	Matsushiro Arr	1.87	287	P	Pn	06 17 55.2	+0.3
	29nm,0.3s,baz=110,slow=7.9,SNR=220						
MJAR				S	Sn	06 18 17.2	-0.9
	24nm,0.3s,baz=74,slow=22,SNR=16						
MJAR				LR	LR	06 18 42.3	
	comp=Z,232nm,19.3s,baz=120,slow=42						
MAJO	Matsushiro	1.87	287	ePn	Pn	06 17 55.6	+0.6
MAJO				eSn	Sb	06 18 21.0	+0.3
MAT	Matsushiro	1.87	287	P	Pn	06 17 55.3	+0.3
MAT				S	Sn	06 18 17.7	-0.5
JHJ	Hachijo jima 2	2.94	191	P	Pn	06 18 11.3	+1.8
	35nm,0.3s,baz=187,slow=8.1,SNR=8.6						
JHJ				S	Sn	06 18 43.6	-0.7
	24nm,0.3s,baz=246,slow=20,SNR=4.6						
JNU	Nakatsue	8.39	253	LR	LR	06 23 03.5	
	comp=Z,154nm,18.8s,baz=124,slow=40						
CBIJ	Chichi jima	9.01	170	P	Pn	06 19 33.1	+0.1
JCJ	Chichijima	9.02	170	P	Pn	06 19 33.1	+0.1
	5.6nm,0.3s,baz=303,slow=10,SNR=5.7						
KSRS	Korea Array	10.14	282	P	Pn	06 19 53.7	+5.2
	0.2nm,0.3s,baz=98,slow=12,SNR=4.4						
KSAR	Wonju Array Be	10.17	282	P	Pn	06 19 53.7	+4.8
USRK	Ussuriysk Ar.	10.42	324	P	Pn	06 19 55.4	+3.1
	baz=133,slow=13						
YAK	Yakutsk	26.90	349	eP	P	06 23 02.9	-0.5
	15nm,0.6s						
ULN	Ulaanbaatar	27.30	306	eP	P	06 23 07.5	+0.1
	3.4nm,1.5s						
SONM	Songino Array	27.72	306	P	P	06 23 11.9	+0.8
	0.4nm,0.4s,baz=98,slow=8.9,SNR=4.2						
H11S1	WAKE ISLAND Hy	29.00	120	T	T	06 54 11.2	
	baz=314,slow=76,SNR=34						
H11S3	WAKE ISLAND Hy	29.00	120	T	T	06 54 14.7	
	baz=314,slow=76,SNR=26						
H11S2	WAKE ISLAND Hy	29.02	120	T	T	06 54 06.1	
	baz=314,slow=76,SNR=20						
ZALV	Zalesovo Beam	42.03	313	P	P	06 25 13.6	-0.3
	0.9nm,0.4s,baz=91,slow=7.9,SNR=5.8						
MKAR	Makanchi Array	44.00	303	P	P	06 25 29.9	-0.1
	1.5nm,0.8s,baz=90,slow=9.8,SNR=16						
KURK	Kurchatov	45.95	309	P	P	06 25 45.3	-0.1
KURBB	Kurchatov Arra	46.01	309	P	P	06 25 45.3	-0.7
	1.0nm,0.6s,baz=84,slow=7.8,SNR=10						
ILAR	Eielson Array	50.78	32	P	P	06 26 22.0	-0.5
	0.8nm,0.8s,baz=264,slow=6.3,SNR=9.2						
WRAB	Tennant Creek	55.94	187	eP	P	06 26 58.1	-2.7
	20nm,1.6s						
WRA	Warramunga Arr	55.95	187	P	P	06 27 00.6	-0.3
	0.4nm,0.4s,baz=2.7,slow=7.5,SNR=17						
AKASG	Malin Array Ba	74.62	322	P	P	06 29 00.4	-1.3
	1.0nm,0.6s,baz=48,slow=6.0,SNR=5.0						
NVAR	Mina Array Bea	76.23	52	P	P	06 29 11.6	+0.2
	0.3nm,0.7s,baz=298,slow=6.6,SNR=3.2						
PDAR	Pinedale Array	78.94	45	P	P	06 29 26.2	-0.4
	0.2nm,0.4s,baz=291,slow=2.5,SNR=4.2						
TXAR	Lajitas Array	91.37	52	P	P	06 30 28.9	-0.1
	0.3nm,0.7s,baz=274,slow=2.5,SNR=4.4						

MAN 28 06:48:27.7, 10°.37N×125°.56E, h82km, mb3.6, ML2.3, MS1.7, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	Surigao	0.59	187	eP	Pn	06 48 44.4	+1.9
SCPH				eS	Sn	06 48 56.4	+3.0
MSLP	Maasin	0.73	251	eP	Pn	06 48 45.5	+1.7
BESP	Borongan	1.23	355	eP	Pn	06 48 50.2	+0.5
BESP				eS	Sn	06 49 07.6	+1.4

NEIC ***28*** *07:17:45.6±0.0, 15°.80N×96°.59W, h15km, mb4.4/123, MD4.5(MEX), After MEX.*
NEIC Felt at Oaxaca and Puerto Escondido.
MEX ***28*** *07:17:45.6±0.7, 15°.80N×96°.59W, h15km±14km, MD4.5*
IDC ***28*** *07:17:50.5±4.8, 16°.14N×96°.51W, h67km±45km, mb3.7/9, mb1 3.9/11, mb1mx3.7/45, mbtmp3.9/11, ML3.6/2, MS3.5/8, Ms1 3.5/8, ms1mx3.1/49, Error ellipse: s-maj=44.7km s-min=15.3km az=49.0*

ISC 28 07:17:43.1±1.2, 16°.07N±0°.04×96°.55W±0°.04, h2km±8km, n461, σ1§30/467, mb4.5/99, MS3.3/7, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	0.52	125	eP	Pg	07 17 54.0	+0.9
HUIG				eS	Sg	07 17 58.9	-1.0
HUIG	Huatulco	0.52	125	eP	Pg	07 17 54.0	+0.9
HUIG				eS	Sg	07 17 58.9	-1.0
VHO	Vista Hermosa	1.01	350	eP	Pn	07 18 04.9	+0.4
VHO				eS	Sg	07 18 10.6	-5.0
VHO	Vista Hermosa	1.01	350	eP	Pn	07 18 04.9	+0.4
VHO				eS	Sg	07 18 10.6	-5.0
TLIG	Tlapa	2.44	308	ePn	Pn	07 18 21.9	-2.2
TLIG				eS	Sn	07 18 50.5	-4.1
TLIG	Tlapa	2.44	308	eP	Pn	07 18 24.6	+0.5
TLIG				eS	Sn	07 18 50.5	-4.1
TPIG	Tehuac#an	2.46	342	eP	Pb	07 18 27.9	-0.3
TPIG				eS	Sg	07 19 03.9	+1.7
TPIG	Tehuac#an	2.46	342	eP	Pb	07 18 27.9	-0.3
TPIG				eS	Sg	07 19 03.9	+1.7
PCIG		3.23	96	eP	Pn	07 18 33.3	-1.5
PCIG				eS	Sn	07 19 11.8	-2.1
PCIG		3.23	96	eP	Pn	07 18 33.3	-1.5
PCIG				eS	Sn	07 19 11.8	-2.1
ACX	Acapulco	3.27	284	eP	Pn	07 18 35.0	-0.5
ACX				eS	Sn	07 19 16.9	+1.8
ACX	Acapulco	3.27	284	eP	Pn	07 18 35.0	-0.5
ACX				eS	Sn	07 19 16.9	+1.8
LVIG	Laguna Verde	3.63	2	ePn	Pn	07 18 40.0	-0.5
CAIG	El Cayaco	3.69	286	eP	Pn	07 18 39.5	-1.8
CAIG				eS	Sn	07 19 18.9	-6.6
CAIG	El Cayaco	3.69	286	eP	Pn	07 18 39.5	-1.8
CAIG				eS	Sn	07 19 18.9	-6.6
UNM	Universidad Na	4.09	323	ePg	Pb	07 18 59.1	+2.9
ARIG	Puente Sto Nin	4.24	302	eP	Pn	07 18 49.7	+0.9
ARIG				eS	Sn	07 19 38.4	-0.7
ARIG	Puente Sto Nin	4.24	302	eP	Pn	07 18 49.7	+0.9
ARIG				eS	Sn	07 19 38.4	-0.7
CCIG	Comitan	4.25	87	ePn	Pn	07 18 48.5	-0.5
JRQG	Juriquilla Cam	5.91	322	ePg	Pg	07 19 38.3	+1.9
LNIG	Linares	9.20	343	ePn	Pn	07 19 58.0	+1.2
JTS	JuntasAbangare	12.67	116	P	Pn	07 20 46.3	+1.8
	0.7nm,0.3s,baz=11,slow=18,SNR=4.8						
HPIG		13.73	323	ePn	Pn	07 20 59.3	+0.1
HKT	Hockley	13.83	3	ePn	Pn	07 21 00.5	+0.3
JCT	Junction City	14.65	349	ePn	Pn	07 21 11.0	-0.6

250A	Grady baz=212	18.39	29	P	P	07 22 00.1	+0.6
148A	Greensboro baz=208	18.40	25	P	P	07 21 59.9	+0.3
X39A	Fountain Ranch baz=187,SNR=6.6	18.49	6	P	Pn	07 22 01.3	+0.7
MIAR	Mount Ida baz=189,SNR=18	18.59	8	P	P	07 22 01.8	+0.2
MIAR	Mount Ida 28nm,0.8s	18.59	8	eP	Pn	07 22 02.2	+0.5
X40A	Basin Creek Fa baz=191	18.64	10	P	Pn	07 22 02.6	+0.2
X40A	Basin Creek Fa 3.3nm,0.9s	18.64	10	eP	P	07 22 00.2	-2.0
149A	Jones baz=210	18.68	27	P	Pn	07 22 03.3	+0.3
MSTX	Muleshoe baz=161,SNR=12	18.68	344	P	P	07 22 02.5	-0.3
MSTX	Muleshoe 20nm,1.0s	18.68	344	eP	P	07 22 02.9	+0.1
WMOK	Wichita Mounta baz=174	18.70	354	P	P	07 22 02.6	-0.2
WMOK	Wichita Mounta 6.0nm,1.1s	18.70	354	eP	P	07 22 02.1	-0.7
WMOK				eSn	S	07 25 44.4	+7.9
Z47A	Carrollton baz=206	18.70	23	P	P	07 22 03.2	+0.3
X41A	Kaden, Bauxite baz=192,SNR=16	18.70	10	P	P	07 22 02.6	-0.2
Y44A	Strider, Charl baz=199	18.71	17	P	P	07 22 03.1	+0.2
Y45A	Yeager Farm, C baz=201	18.81	18	P	P	07 22 04.4	+0.3
X42A	Stuttgart baz=195	18.93	13	P	Pn	07 22 06.0	+0.1
UALR	University of 18nm,0.8s	19.00	11	eP	P	07 22 06.0	-0.2
Y46A	Houston baz=203,SNR=11	19.04	20	P	P	07 22 05.9	-0.7
X43A	Marvell baz=197	19.06	14	P	P	07 22 07.2	+0.4
X43A	Marvell 41nm,0.8s	19.06	14	eP	Pn	07 22 07.8	+0.2
252A	Lumpkin baz=216	19.15	32	P	P	07 22 08.1	+0.3
319A	Douglas 7.1nm,0.9s	19.15	325	eP	Pn	07 22 08.7	-0.1
W39A	Magazine baz=188	19.20	7	P	P	07 22 08.9	+0.5
W39A	Magazine 8.8nm,0.8s	19.20	7	eP	Pn	07 22 09.2	0.0
X44A	Crenshaw baz=199	19.23	16	P	P	07 22 08.7	+0.1
151A	Opelika baz=214	19.29	30	P	P	07 22 09.7	+0.4
AMTX	Amarillo baz=165	19.29	347	P	P	07 22 09.3	-0.1
AMTX	Amarillo 9.5nm,0.9s	19.29	347	eP	Pn	07 22 10.9	+0.5
W40A	Ferguson Farm, baz=190	19.29	9	P	Pn	07 22 10.3	0.0
W40A	Ferguson Farm, 9.4nm,0.9s	19.29	9	eP	Pn	07 22 10.2	0.0
121A	Cookes Peak, D baz=146	19.30	330	P	P	07 22 09.7	0.0
Z49A	Columbiana baz=210	19.30	26	P	P	07 22 10.0	+0.5
X45A	UM Field Stati baz=201	19.37	18	P	P	07 22 10.3	+0.1
W41B	Gary Mavity, V baz=192	19.41	11	P	P	07 22 11.2	+0.6
W41B	Gary Mavity, V 8.2nm,0.9s	19.41	11	eP	P	07 22 09.6	-1.0
Y47A	UCPARC, Winfie baz=206	19.41	22	P	P	07 22 11.1	+0.4
OXF	Oxford baz=201	19.45	18	P	P	07 22 10.8	-0.3
OXF	Oxford 25nm,0.8s	19.45	18	eP	P	07 22 10.8	-0.3
WHAR	Wooly Hollow 7.1nm,0.9s	19.52	10	eP	P	07 22 11.9	+0.1
Z50A	Ashland baz=212	19.62	27	P	P	07 22 13.0	+0.1
Z50A	Ashland 7.9nm,0.6s	19.62	27	eP	P	07 22 13.6	+0.6
W42A	Bald Knob baz=194	19.64	12	P	P	07 22 13.6	+0.4
152A	Waverly Hall baz=215	19.70	31	P	P	07 22 13.9	+0.1
456A	Hilliard 65nm,1.1s	19.73	40	eP	Pn	07 22 15.4	-0.2
X46A	Booneville baz=203,SNR=12	19.75	20	P	P	07 22 14.1	-0.2
TUL1	Leonard baz=182	19.77	2	P	P	07 22 14.7	+0.1
TUL1	Leonard 25nm,0.8s	19.77	2	eP	Pn	07 22 15.6	-0.4
V39A	Pettigrew baz=188	19.86	7	P	P	07 22 16.2	+0.6
Y49A	Blount Mountai baz=209	19.93	25	P	P	07 22 16.1	-0.2
Y49A	Blount Mountai 12nm,0.8s	19.93	25	eP	P	07 22 15.8	-0.5
V40A	Witts Springs baz=190,SNR=12	19.93	9	P	P	07 22 16.2	-0.2
V40A	Witts Springs 15nm,0.9s	19.93	9	eP	P	07 22 16.3	0.0
X47A	Russelville baz=205	19.96	21	P	P	07 22 16.1	-0.6
V41A	Mountainview baz=192,SNR=14	20.02	10	P	P	07 22 16.9	-0.4
W45A	Hickory Valley baz=201	20.12	18	P	P	07 22 18.8	+0.4
BNM	Barren Site	20.16	335	eP	Pn	07 22 20.5	-0.4
V42A	Cord baz=194,SNR=23	20.18	12	P	P	07 22 19.1	0.0
X48A	Hartselle baz=207,SNR=5.4	20.20	23	P	P	07 22 18.6	-0.6
X48A	Hartselle 13nm,1.0s	20.20	23	eP	P	07 22 18.9	-0.3
Y50A	Piedmont baz=211	20.24	27	P	P	07 22 19.4	-0.4
HHAR	Hobbs 22nm,1.2s	20.26	6	eP	P	07 22 20.7	+0.7
LPM	Los Pinos Moun	20.30	335	eP	Pn	07 22 22.0	-0.5
PLAL	Pickwick Lake 20nm,0.7s	20.30	20	eP	P	07 22 19.8	-0.6
W46A	Michie baz=203,SNR=7.9	20.34	20	P	P	07 22 20.2	-0.6
V43A	Jonesboro baz=197	20.35	14	P	P	07 22 21.2	+0.3
U39A	Green Forest baz=188,SNR=16	20.41	7	P	P	07 22 21.6	+0.1
U40A	Yellville baz=190,SNR=21	20.47	9	P	P	07 22 22.4	+0.2
X49A	Woodville baz=209	20.53	25	P	P	07 22 22.6	-0.3
Y51A	Rockmart baz=213	20.55	28	P	P	07 22 22.7	-0.4
LAZ	Ladron	20.59	334	eP	Pn	07 22 25.4	-0.5
U41A	Viola baz=193,SNR=14	20.61	11	P	P	07 22 23.9	+0.2
TUC	Tucson baz=139	20.70	324	P	P	07 22 25.2	+0.4
TUC	Tucson 7.1nm,1.0s	20.70	324	eP	P	07 22 25.4	+0.6
W47A	Westpoint baz=205,SNR=6.5	20.71	21	P	P	07 22 24.0	-0.9
U42A	Revenden baz=194,SNR=15	20.74	12	P	P	07 22 24.8	-0.4
Z53A	Monticello baz=217	20.76	32	P	P	07 22 25.8	+0.4
X50B	Fort Payne baz=210	20.77	26	P	P	07 22 25.9	+0.4
TASL	Snake Pit, Alb baz=153,SNR=6.8	20.79	337	P	P	07 22 26.1	+0.2
ANMO	Albuquerque 2.3nm,0.7s,baz=157,slow=12,SNR=19	20.79	337	P	P	07 22 26.8	+0.9
ANMO	comp=Z,109nm,19.4s,baz=154,slow=39			LR	LR	07 31 28.2	
ANMO	Albuquerque baz=153	20.79	337	P	P	07 22 26.0	+0.1
ANMO	Albuquerque 3.2nm,0.8s	20.79	337	eP	P	07 22 26.8	+0.9
TASM	ASL Pad, Albuq baz=153,SNR=6.6	20.79	337	P	P	07 22 26.1	+0.2
W48A	Pulaski baz=206	20.85	23	P	P	07 22 25.8	-0.5
U43A	Rector baz=197	20.94	14	P	P	07 22 27.4	+0.1
T38A	Diamond baz=186,SNR=9.1	20.98	5	P	P	07 22 28.4	+0.7
Y52A	Lilburn baz=215	20.99	30	P	P	07 22 27.6	-0.3
V46A	Holladay baz=203,SNR=14	21.04	19	P	P	07 22 27.0	-1.4
T39A	Clever baz=188,SNR=12	21.06	7	P	P	07 22 28.0	-0.6
W49A	Belvidere baz=208	21.09	24	P	P	07 22 28.4	-0.4
Y53A	Monroe baz=216	21.21	31	P	P	07 22 30.1	-0.2
V47A	Nunnelly baz=204,SNR=9.6	21.26	21	P	P	07 22 30.2	-0.6
T40A	Mansfield baz=191,SNR=13	21.30	9	P	P	07 22 31.1	-0.1
SWET	Sewanee 16nm,0.9s	21.30	25	eP	P	07 22 30.1	-1.1
T41A	Mountain View baz=193,SNR=15	21.32	11	P	P	07 22 31.5	+0.2
PBMO	Poplar Bluff 20nm,0.8s	21.33	14	eP	P	07 22 31.9	+0.5
U45A	Rockin P Farm, baz=201	21.35	17	P	P	07 22 31.1	-0.6
PARMO	Parma 67nm,0.8s	21.38	15	eP	P	07 22 32.5	+0.5
156A	Sylvania baz=223	21.42	37	P	P	07 22 30.7	-1.8
V48A	Smith Brothers baz=206,SNR=7.6	21.43	22	P	P	07 22 31.6	-0.9
V48A	Smith Brothers 16nm,0.8s	21.43	22	eP	P	07 22 31.6	-0.9
T42A	Van Buren baz=194,SNR=12	21.43	12	P	P	07 22 32.1	-0.4
T42A	Van Buren 13nm,0.8s	21.43	12	eP	P	07 22 32.3	-0.3
WVT	Waverly baz=203	21.43	20	P	P	07 22 31.6	-1.0
WVT	Waverly 17nm,0.6s	21.43	20	eP	P	07 22 31.6	-1.0
U46A	Springville baz=202,SNR=12	21.54	19	P	P	07 22 32.8	-0.8
W50A	Signal Mountai baz=210	21.54	26	P	P	07 22 31.8	-2.1
S38A	Stockton baz=187,SNR=15	21.60	6	P	P	07 22 33.8	-0.6
MOTC	Monteria, Cord	21.63	107	eP	P	07 22 32.4	-2.5
214A	Organ Pipe Nat baz=134	21.65	320	P	P	07 22 34.8	-0.2
T43A	Greenville baz=196,SNR=16	21.65	14	P	P	07 22 34.4	-0.5
X52A	Dahlonega baz=214	21.67	29	P	P	07 22 35.5	+0.3
S39A	Bolivar baz=188,SNR=6.1	21.72	7	P	P	07 22 35.1	-0.6
S39A	Bolivar 8.2nm,0.9s	21.72	7	eP	P	07 22 35.3	-0.4
S40A	Lebanon baz=190,SNR=13	21.74	9	P	P	07 22 37.2	+1.3
V49A	McMinnville baz=208	21.80	24	P	P	07 22 35.9	-0.6
T44A	Benton baz=198	21.82	15	P	P	07 22 36.3	-0.4
S41A	Jillco Farms, baz=192,SNR=6.7	21.85	10	P	P	07 22 37.5	+0.4
U47A	Clarksville baz=204	21.90	20	P	P	07 22 36.2	-1.3
X18A	Snowflake 11nm,0.9s	21.97	329	eP	P	07 22 40.1	+1.5
T45A	Paducah baz=200	22.01	17	P	P	07 22 38.1	-0.7
V50A	Pikeville baz=210	22.04	26	P	P	07 22 39.2	+0.1
T25A	Trinidad baz=160,SNR=7.3	22.11	343	P	P	07 22 40.5	+0.4
T25A	Trinidad 15nm,1.1s	22.11	343	eP	P	07 22 41.3	+1.2
R38A	Fenwick Farm, baz=187,SNR=12	22.15	6	P	P	07 22 39.9	-0.4
S43A	Fulton Ridge, baz=197	22.17	14	P	P	07 22 39.8	-0.7
S42A	Caledonia baz=195,SNR=6.9	22.20	12	P	P	07 22 40.2	-0.7
U48A	Cassie Pea, Po baz=206	22.22	22	P	P	07 22 40.0	-1.1
T46A	Princeton baz=202	22.25	19	P	P	07 22 40.1	-1.2
R39A	Chumby, Stover baz=189	22.37	7	P	P	07 22 41.2	-1.5
CCM	Cathedral Cave baz=193	22.39	11	P	P	07 22 42.5	-0.3
CCM	Cathedral Cave 20nm,0.8s	22.39	11	eP	P	07 22 42.6	-0.3
BG3	Lake Jocassee 14nm,1.0s	22.45	30	eP	P	07 22 45.8	+2.3
R40A	Maddies Statio baz=191,SNR=21	22.45	9	P	P	07 22 43.4	-0.2
R40A	Maddies Statio 25nm,0.8s	22.45	9	eP	P	07 22 43.9	+0.4
T47A	Sharon Grove baz=204,SNR=7.3	22.45	20	P	P	07 22 42.5	-1.1
T47A	Sharon Grove 30nm,0.8s	22.45	20	eP	P	07 22 42.9	-0.7
V51A	Loudon baz=212	22.46	27	P	P	07 22 42.6	-1.1
V51A	Loudon 20nm,0.9s	22.46	27	eP	P	07 22 44.6	+0.9
S44A	Carbondale baz=198,SNR=7.7	22.48	15	P	P	07 22 44.0	+0.2
U49A	Red Boiling Sp baz=208,SNR=5.8	22.50	23	P	P	07 22 43.9	-0.2
SIUC	Southern Illin 19nm,0.8s	22.51	15	eP	P	07 22 44.8	+0.7
TKL	Tuckaleechee C 7.6nm,0.9s,baz=189,slow=11,SNR=4.5	22.60	28	P	P	07 22 45.3	+0.2
R41A	Rosebud baz=193,SNR=10	22.60	11	P	P	07 22 45.1	0.0
X16A	Lo Mia Camp, P 5.7nm,0.8s	22.64	327	eP	P	07 22 47.2	+1.3
R42A	Luebbering baz=194	22.70	12	P	P	07 22 45.8	-0.3
Q37A	Longview Farm, baz=185	22.79	4	P	P	07 22 46.7	-0.4
113A	Mohawk Valley, 4.3nm,1.0s	22.79	320	eP	P	07 22 47.4	+0.2
T48A	Bowling Green baz=206,SNR=8.7	22.80	21	P	P	07 22 46.6	-0.6
HELC	Santa Helena	22.82	113	eP	P	07 22 50.3	+2.2
CBKS	Cedar Bluff baz=172	22.83	354	P	P	07 22 47.3	-0.3
V52A	Sevierville baz=213	22.83	28	P	P	07 22 47.8	+0.2
R43A	Red Bud baz=196	22.87	13	P	P	07 22 47.9	-0.1
S46A	Don Dixon Farm baz=202	22.90	18	P	P	07 22 48.0	-0.3
KSU1	Kansas State U baz=180	22.94	360	P	P	07 22 48.4	-0.3
KSU1	Kansas State U 14nm,0.9s	22.94	360	eP	P	07 22 48.8	+0.1
Q38A	Cooks Store, C baz=187,SNR=9.7	22.95	6	P	P	07 22 48.6	-0.1
SDCO	Great Sand Dun baz=158,SNR=8.1	22.99	342	P	P	07 22 48.9	-0.7
SDCO	Great Sand Dun 4.2nm,1.0s	22.99	342	eP	P	07 22 49.8	+0.3
R44A	Waltonville baz=198,SNR=5.9	23.05	15	P	P	07 22 49.4	-0.4
V53A	Saluda baz=215	23.05	30	P	P	07 22 49.6	-0.4
Q39A	Willow Grove F baz=189	23.10	7	P	P	07 22 49.8	-0.5
T49A	Edmonton baz=208	23.11	23	P	P	07 22 50.1	-0.4
Y14A	Wickenburg 3.9nm,0.9s	23.16	323	eP	P	07 22 51.4	+0.4
Q40A	Laux Farm, Aux baz=191,SNR=6.0	23.17	9	P	P	07 22 50.1	-1.0
YOTC	Yotoco, Valle	23.21	119	eP	P	07 22 54.2	+2.4
Q41A	Truxton baz=193,SNR=16	23.27	11	P	P	07 22 51.6	-0.4
R45A	Skylar, Fairfi baz=200	23.30	17	P	P	07 22 52.1	-0.3
T50A	Nancy baz=209	23.31	24	P	P	07 22 51.2	-1.2
Q42A	Golden Eagle	23.36	12	P	P	07 22 51.6	-1.4
S48A	Wiedeman Farm, baz=206,SNR=5.4	23.41	21	P	P	07 22 51.4	-2.2
S22A	4UR Ranch, Cre baz=155	23.42	339	P	P	07 22 53.3	-0.7
S22A	4UR Ranch, Cre 2.4nm,1.0s	23.42	339	eP	P	07 22 55.1	+1.1
TZTN	Tazewell baz=213	23.44	27	P	P	07 22 53.3	-0.5
WUAZ	Wupatki baz=142,SNR=8.3	23.46	328	P	P	07 22 52.9	-1.3
WUAZ	Wupatki 8.4nm,0.9s	23.46	328	eP	P	07 22 55.7	+1.4
KSCO	Kaye Shedlock' baz=166	23.47	348	P	P	07 22 53.5	-0.8
P37A	Lathrop baz=185	23.51	4	P	P	07 22 53.9	-0.6
P39B	Salisbury baz=189,SNR=8.1	23.56	7	P	P	07 22 53.3	-1.7
MVCO	Mesa Verde baz=151	23.57	336	P	P	07 22 55.1	-0.3
MVCO	Mesa Verde 8.3nm,1.0s	23.57	336	eP	P	07 22 55.7	+0.4
P38A	Dawn baz=187	23.61	6	P	P	07 22 54.2	-1.4
P38A	Dawn 9.0nm,0.8s	23.61	6	eP	P	07 22 54.1	-1.4
PTBC	PUERTO BERRIO,	23.62	111	eP	P	07 22 53.3	-2.6
GLA	Glamis baz=132	23.64	319	P	P	07 22 55.4	-0.6
Q44A	Meyer Farm, Va baz=198	23.68	15	P	P	07 22 55.4	-0.9
P40A	Paris baz=191	23.70	9	P	P	07 22 55.7	-0.6
P40A	Paris 20nm,1.0s	23.70	9	eP	P	07 22 55.9	-0.5
OLIL	Olney 24nm,0.6s	23.76	17	eP	P	07 22 56.3	-0.7
R47A	Wooly Knot Far baz=204,SNR=8.9	23.83	20	P	P	07 22 56.9	-0.8
WCI	Wyandotte Cave baz=205	23.85	20	P	P	07 22 56.9	-1.0
WCI	Wyandotte Cave 38nm,1.0s	23.85	20	eP	P	07 22 56.9	-1.0
Q45A	Warren Harvey, baz=200	23.90	16	P	P	07 22 56.8	-1.5
P41A	Barry, Barry baz=193	24.00	10	P	P	07 22 58.2	-1.0
Q24A	Divide baz=160	24.02	343	P	P	07 22 59.4	-0.4
P42A	Winchester baz=195	24.05	12	P	P	07 22 58.8	-0.8
P42A	Winchester 14nm,1.0s	24.05	12	eP	P	07 22 58.9	-0.8
PDMCI	Parker Dam,Lak baz=135	24.08	322	P	P	07 22 59.3	-0.7
O38A	Galt baz=187	24.11	6	P	P	07 22 59.2	-1.1
R48A	Northridge Ran baz=206,SNR=9.2	24.14	21	P	P	07 22 59.4	-1.2
P43A	Skaggs, Pawnee baz=196	24.27	13	P	P	07 23 00.8	-1.0
O40A	La Belle baz=191	24.30	9	P	P	07 23 00.9	-1.1
P44A	Sand Creek, Wi baz=199	24.32	15	P	P	07 23 01.1	-1.1
S51A	Beattyville baz=211	24.34	26	P	P	07 23 01.5	-1.0
O39A	Kirksville baz=189	24.34	7	P	P	07 23 01.7	-0.7
PV01	Paradox Valley 23nm,1.1s	24.40	337	eP	P	07 23 04.0	+0.8
BC3	Big Chuckawall baz=132	24.44	319	P	P	07 23 02.5	-1.0
Q47A	Bedord North L baz=204	24.45	19	P	P	07 23 02.7	-0.7
O41A	Passleys Farm, baz=193	24.46	11	P	P	07 23 02.7	-0.8
PV02	Paradox Valley 17nm,1.1s	24.52	336	eP	P	07 23 05.4	+1.0
PV15	Paradox Valley 18nm,1.1s	24.54	337	eP	P	07 23 06.4	+1.8
MONP2	Monument Peak baz=129	24.57	317	P	P	07 23 04.1	-0.8
IRM	Iron Mountain baz=133,SNR=8.9	24.58	321	P	P	07 23 04.3	-0.4
PRAC	Prado 8.2nm,0.9s	24.58	118	eP	P	07 23 08.5	+3.5
S52A	Salyersville baz=212	24.59	26	P	P	07 23 03.5	-1.3
P45A	Graceland, Par baz=200	24.60	17	P	P	07 23 03.8	-1.0
PV03	Paradox Valley 14nm,1.2s	24.61	336	eP	P	07 23 05.8	+0.7
BLO	Bloomington 14nm,0.8s	24.63	19	eP	P	07 23 04.2	-0.8
U15A	North Rim 8.3nm,1.0s	24.64	328	eP	P	07 23 07.3	+1.8
O42A	Bath baz=195	24.69	12	P	P	07 23 04.7	-0.9
PV07	Paradox Valley 17nm,1.0s	24.69	337	eP	P	07 23 07.6	+1.7
N36A	Muff Farm, Cla baz=184	24.69	3	P	P	07 23 05.0	-0.6
BARC	Barichara	24.75	110	eP	P	07 23 03.6	-3.0
PV04	Paradox Valley 30nm,1.1s	24.75	336	eP	P	07 23 07.0	+0.6
N38A	Joes South For baz=188	24.80	6	P	P	07 23 06.0	-0.6
P46A	Rosedale baz=202,SNR=7.7	24.84	17	P	P	07 23 06.1	-0.9
ISCO	Idaho Springs baz=159,SNR=5.2	24.93	343	P	P	07 23 07.8	-0.3
ISCO	Idaho Springs 2.8nm,0.8s	24.93	343	eP	P	07 23 08.4	+0.2
PV09	Paradox Valley	24.93	336	eP	P	07 23 09.7	+1.6
N39A	Derby Farms, D baz=189	24.96	7	P	P	07 23 07.7	-0.4
N39A	Derby Farms, D 8.8nm,0.9s	24.96	7	eP	P	07 23 07.8	-0.2
P47A	Martinsville baz=204	25.00	19	P	P	07 23 08.3	-0.1
BELC	Belle Mtn. Jos baz=131	25.00	319	P	P	07 23 08.3	-0.4
N40A	Mertquake, Sal baz=191	25.09	9	P	P	07 23 08.1	-1.1
CHIC	Chingaza	25.13	114	eP	P	07 23 13.9	+3.6
RUSC	La Rusia 7.3nm,1.1s	25.13	111	eP	P	07 23 11.6	+1.3
RUSC	La Rusia	25.13	111	eP	P	07 23 07.8	-2.5
HDIL	Hopedale baz=196	25.20	13	P	P	07 23 09.7	-0.5
OGNE	Ogallala baz=168	25.24	350	P	P	07 23 11.6	+1.0
OGNE	Ogallala 20nm,1.0s	25.24	350	eP	P	07 23 12.4	+1.7
O45A	Potomac baz=200	25.28	16	P	P	07 23 10.3	-0.6
N42A	Yates City baz=195	25.31	12	P	P	07 23 10.2	-1.0
GMRC	Granite Mounta baz=133	25.32	321	P	P	07 23 10.7	-0.8
M37A	Trindle Farm, baz=186,SNR=8.4	25.33	4	P	P	07 23 10.5	-0.9
M36A	Felix, Anita baz=184	25.34	3	P	P	07 23 11.2	-0.2
KNB	Kanab 6.3nm,1.1s	25.36	328	eP	P	07 23 13.7	+1.8
M38A	Pleasantville baz=188,SNR=7.3	25.42	6	P	P	07 23 10.9	-1.2
SFIN	Lafayette baz=201,SNR=5.3	25.58	17	P	P	07 23 12.2	-1.4
SFIN	Lafayette 13nm,0.8s	25.58	17	eP	P	07 23 12.8	-0.8
N43A	Stutzman Famil baz=196	25.59	13	P	P	07 23 12.6	-1.1
M39A	Webster baz=190,SNR=6.1	25.60	8	P	P	07 23 12.4	-1.4
M40A	Post Highland baz=191,SNR=6.1	25.62	9	P	P	07 23 12.6	-1.4
N44A	Piper City baz=199	25.69	15	P	P	07 23 13.3	-1.3
O47A	Sheridan baz=203	25.71	19	P	P	07 23 13.3	-1.5
M41A	Milan baz=193,SNR=8.1	25.74	10	P	P	07 23 14.0	-1.1
MTPU	Mount Pierson 7.4nm,0.9s	25.86	331	eP	P	07 23 19.8	+3.2

SCIA	State Center	25.91	6	P	P	07 23 15.6	-1.0
	baz=187						
SCIA	State Center	25.91	6	eP	P	07 23 15.5	-1.1
	27nm,0.8s						
TUQ	Turquoise Moun	25.92	322	P	P	07 23 16.8	-0.2
	baz=134						
P50A	Jamestown	25.96	23	P	P	07 23 15.6	-1.5
	baz=209,SNR=6.1						
SRU	San Rafael Swe	26.01	335	eP	P	07 23 21.0	+3.2
	5.4nm,0.9s						
N23A	Red Feather La	26.04	344	P	P	07 23 17.9	-0.2
	baz=159						
N23A	Red Feather La	26.04	344	eP	P	07 23 21.2	+3.1
	5.0nm,1.1s						
O20A	White River Ci	26.05	339	P	P	07 23 17.7	-0.4
	baz=154						
O20A	White River Ci	26.05	339	eP	P	07 23 18.4	+0.3
	16nm,1.4s						
M43A	Waltham Townsh	26.11	13	P	P	07 23 17.6	-0.8
	baz=197						
N46A	Monticello	26.16	17	P	P	07 23 18.2	-0.6
	baz=202						
L38A	Oak Wood Farm,	26.16	6	P	P	07 23 18.3	-0.6
	baz=188						
SHPR	Sheep Range	26.22	324	eP	P	07 23 20.4	+0.7
	2.3nm,1.0s						
SDV	Santo Domingo	26.27	103	P	P	07 23 19.3	-1.1
	3.4nm,0.3s,baz=320,slow=5.1,SNR=4.1						
L40A	Anamosa	26.30	9	P	P	07 23 18.9	-1.2
	baz=192						
L40A	Anamosa	26.30	9	eP	P	07 23 19.0	-1.2
	7.3nm,0.7s						
L41A	Preston	26.43	10	P	P	07 23 20.4	-0.9
	baz=193,SNR=6.8						
O50A	Cable	26.50	23	P	P	07 23 21.0	-1.0
	baz=209						
L42A	Oliver, Polo	26.51	12	P	P	07 23 21.1	-1.0
	baz=195						
L42A	Oliver, Polo	26.51	12	eP	P	07 23 20.8	-1.3
	20nm,0.7s						
K38A	Parkersburg	26.68	6	P	P	07 23 22.5	-1.1
	baz=188						
K38A	Parkersburg	26.68	6	eP	P	07 23 22.5	-1.1
	14nm,0.8s						
K37A	Belmond	26.72	5	P	P	07 23 23.1	-0.8
	baz=186						
ACSO	Alum Creek Sta	26.81	23	P	P	07 23 23.9	-0.9
	baz=210						
ACSO	Alum Creek Sta	26.81	23	eP	P	07 23 24.3	-0.5
	14nm,0.8s						
K39A	Oelwein	26.84	8	P	P	07 23 24.0	-1.1
	baz=190						
L43A	Garden Prairie	26.87	13	P	P	07 23 24.0	-1.3
	baz=197						
K41A	Shullsburg	26.98	10	P	P	07 23 24.8	-1.5
	baz=193						
L44A	Lake County Fo	27.06	14	P	P	07 23 26.2	-0.8
	baz=198						
TPNV	Topopah Spring	27.15	324	P	P	07 23 27.2	-0.9
	baz=135						
TPNV	Topopah Spring	27.15	324	eP	P	07 23 28.8	+0.6
	2.3nm,1.1s						
N50A	Nevada	27.22	23	P	P	07 23 27.4	-1.1
	baz=209						
J36A	Seneca 1, Swea	27.23	4	P	P	07 23 27.4	-1.2
	baz=185						
J36A	Seneca 1, Swea	27.23	4	eP	P	07 23 27.4	-1.2
	19nm,1.1s						
J37A	Redenius Farm,	27.27	5	P	P	07 23 27.5	-1.4
	baz=186						
MPMC	Manual Prospec	27.28	321	P	P	07 23 28.9	-0.3
	baz=132						
JFWS	Jewell Farm	27.29	10	P	P	07 23 28.4	-0.6
	baz=193						
JFWS	Jewell Farm	27.29	10	eP	P	07 23 28.8	-0.3
	11nm,0.6s						
K42A	Prairie Point,	27.32	12	P	P	07 23 28.6	-0.8
	baz=195						
J38A	Wedel Dairy, R	27.38	6	P	P	07 23 28.7	-1.2
	baz=188						
K43A	Burlington	27.46	13	P	P	07 23 29.9	-0.7
	baz=197						
ECSD	EROS Data Cent	27.57	360	P	P	07 23 31.7	0.0
	baz=180						
MCWV	Mont Chateau	27.66	29	P	P	07 23 31.4	-1.0
	baz=216						
J40A	Soldiers Grove	27.68	9	P	P	07 23 31.9	-0.6
	baz=192						
J41A	Loganville	27.77	10	P	P	07 23 32.7	-0.6
	baz=194						
R11A	Troy Canyon, C	27.80	327	P	P	07 23 33.5	-0.4
	baz=138						
K22A	Casper	27.83	344	P	P	07 23 34.2	+0.1
	baz=159						
J42A	Columbus	27.89	12	P	P	07 23 33.6	-0.8
	baz=195						
CWC	Cottonwood Cre	27.89	321	P	P	07 23 34.0	-0.7
	baz=132						
DUG	Dugway, Tooele	27.89	333	P	P	07 23 34.4	-0.3
	baz=145						
I39A	Houston	28.02	8	eP	P	07 23 38.1	+2.5
	6.0nm,0.7s						
TCUT	Toone Canyon	28.07	336	eP	P	07 23 37.8	+1.4
	10nm,1.0s						
J43A	Natural Harves	28.09	13	P	P	07 23 35.1	-1.1
	baz=197						
I38A	Scanlan Farm,	28.11	6	P	P	07 23 35.3	-1.1
	baz=189						
I40A	Norwalk	28.18	9	P	P	07 23 36.2	-0.9
	baz=192						
H32A	Carlson Farm,	28.35	359	P	P	07 23 37.5	-1.1
	baz=178						
N54A	Moraine State	28.65	27	P	P	07 23 41.0	-0.3
	baz=215						
N54A	Moraine State	28.65	27	eP	P	07 23 41.3	0.0
	26nm,1.1s						
PDAR	Pinedale Array	28.84	340	P	P	07 23 42.4	-0.9
	0.8nm,0.7s,baz=128,slow=9.6,SNR=8.8						
PDAR				LR	LR	07 36 28.4	
	comp=Z,60nm,21.1s,baz=165,slow=39						
H39A	Augusta	28.86	8	P	P	07 23 42.4	-0.7
	baz=190						
G32A	Webster	29.10	359	P	P	07 23 45.0	-0.3
	baz=178						
HVU	Hansel Valley	29.18	335	eP	P	07 23 46.8	+0.6
	3.8nm,1.0s						
SPMN	Marine on St.	29.23	5	P	P	07 23 44.7	-1.6
	baz=187,SNR=5.1						
SPMN	Marine on St.	29.23	5	eP	P	07 23 45.4	-1.0
	10nm,0.8s						
M54A	Oil Creek Stat	29.24	27	P	P	07 23 45.7	-0.8
	baz=215						
M54A	Oil Creek Stat	29.24	27	eP	P	07 23 46.1	-0.4
	19nm,0.8s						
NV11	Mina Array Sit	29.27	324	eP	P	07 23 47.9	+0.9
	0.3nm,0.9s						
G38A	Ridgeland	29.27	7	P	P	07 23 45.3	-1.4
	baz=189						
SSPA	Standing Stone	29.35	30	P	P	07 23 46.3	-1.2
	baz=219						
NV01	Mina Array Sit	29.35	324	eP	P	07 23 48.2	+0.4
NVAR	Mina Array Bea	29.35	324	P	P	07 23 48.1	+0.3
	2.3nm,0.8s,baz=153,slow=9.5,SNR=19						
NVAR				LR	LR	07 35 12.6	
	comp=Z,57nm,18.1s,baz=282,slow=36						
ELK	Elko	29.44	330	P	P	07 23 51.4	+2.8
	0.6nm,0.7s,baz=186,slow=8.8,SNR=4.3						
G40A	Rib Lake	29.59	9	P	P	07 23 48.2	-1.3
	baz=192						
KVN	Kaiserville	29.67	325	eP	P	07 23 51.1	+0.5
	2.7nm,0.9s						
F37A	Hinrichs Farm,	29.74	6	P	P	07 23 49.5	-1.4
	baz=188						
F36A	Milaca	29.81	4	P	P	07 23 49.5	-1.9
	baz=186						
F36A	Milaca	29.81	4	eP	P	07 23 50.3	-1.1
	4.3nm,0.9s						
REDW	Red Top Meadow	29.81	339	eP	P	07 23 52.1	+0.3
	6.3nm,0.9s						
SNOW	Snow King Moun	29.86	339	eP	P	07 23 52.9	+0.5
	11nm,0.8s						
LOHW	Long Hollow	29.94	339	eP	P	07 23 53.3	+0.3
	5.3nm,0.8s						
TPAW	Teton Pass	29.96	339	eP	P	07 23 54.3	+1.1
	3.7nm,0.9s						
F38A	Pierce - Schro	30.05	7	P	P	07 23 51.9	-1.8
	baz=189						
MOOW	Moose Ponds	30.11	339	eP	P	07 23 54.5	+0.1
	2.5nm,1.0s						
F40A	Park Falls	30.24	9	P	P	07 23 54.5	-0.8
	baz=192						
E36A	McGregor	30.48	4	P	P	07 23 56.1	-1.3
	baz=186						
E39A	Mellen	30.63	8	P	P	07 23 57.7	-1.1
	baz=191						
E38A	The Farm, Brul	30.73	7	P	P	07 23 58.3	-1.3
	baz=189						
E38A	The Farm, Brul	30.73	7	eP	P	07 23 59.0	-0.6
	5.8nm,0.8s						
RLMT	Red Lodge	30.88	342	P	P	07 24 00.2	-1.0
	baz=156,SNR=6.5						
RLMT	Red Lodge	30.88	342	eP	P	07 24 01.4	+0.1
	9.5nm,1.0s						
D35A	Remer	30.99	3	P	P	07 24 00.8	-1.1
	baz=185						
MMNY	Mt. Morris Dam	30.99	27	eP	P	07 24 01.9	-0.1
	27nm,0.9s						
D37A	Cotton	31.18	5	P	P	07 24 02.4	-1.2
	baz=188						
HLID	Hailey	31.34	335	P	P	07 24 04.4	-0.9
	baz=146						
HLID	Hailey	31.34	335	eP	P	07 24 05.6	+0.3
	3.4nm,0.9s						
BEKR	Beckworth	31.50	324	eP	P	07 24 07.8	+1.0
	2.5nm,1.1s						
D41A	Chassel	31.60	10	P	P	07 24 05.8	-1.5
	baz=195						
GCMT	Greycliff	31.60	342	eP	P	07 24 07.4	-0.1
C35A	Jirik Farms, M	31.61	3	P	P	07 24 05.9	-1.4
	baz=185						
C36A	Pine Crest Far	31.74	5	P	P	07 24 07.4	-1.2
	baz=187						
C37A	Embarrass	31.77	6	P	P	07 24 07.5	-1.3
	baz=188						
MCMT	McKenzie Canyo	31.79	338	eP	P	07 24 10.6	+1.2
BOZ	Bozeman (W)	32.04	340	P	P	07 24 11.1	-0.3
	baz=152						
BOZ	Bozeman (W)	32.04	340	eP	P	07 24 11.8	+0.4
	2.8nm,1.0s						
AGMN	Agassiz Nation	32.14	1	P	P	07 24 10.7	-1.3
	baz=181						
AGMN	Agassiz Nation	32.14	1	eP	P	07 24 10.8	-1.2
	8.1nm,1.1s						
DLMT	Dillon	32.16	339	eP	P	07 24 13.4	+0.9
	11nm,0.8s						
B35A	Bob, Littlefor	32.28	4	P	P	07 24 11.6	-1.7
	baz=185						
B34A	Aery, Baudette	32.36	2	P	P	07 24 12.4	-1.6
	baz=184						
LRM	Limekiln Ridge	32.51	339	eP	P	07 24 15.9	+0.2
O03D	Paynes Creek	32.61	323	P	P	07 24 14.7	-1.7
	baz=131						
A33A	Warroad	32.79	1	P	P	07 24 17.2	-0.5
	baz=182						
J08A	Circle Bar Ran	32.99	330	eP	P	07 24 19.9	+0.2
	3.0nm,0.8s						
HRY	Holter Researc	33.09	341	eP	P	07 24 20.7	+0.2
M04C	Macdoel	33.62	325	P	P	07 24 24.2	-1.0
	baz=133						
EGMT	Eagleton	33.67	344	P	P	07 24 24.8	-0.7
	baz=157						
MSO	Missoula	33.90	338	P	P	07 24 26.4	-1.2
	baz=149						
MSO	Missoula	33.90	338	eP	P	07 24 26.6	-1.0
	3.8nm,0.8s						
YBH	Yreka Blue Hor	34.07	324	P	P	07 24 27.2	-1.9
	0.5nm,0.5s,baz=175,slow=7.7,SNR=4.7						
YBH				LR	LR	07 39 13.3	
	comp=Z,59nm,19.5s,baz=164,slow=38						
FDF	Fort de France	34.13	87	eP	P	07 24 33.1	+3.2
	91nm,1.1s						
F10A	Beach Ranch, E	34.46	334	eP	P	07 24 32.0	-0.5
	6.9nm,0.7s						
H04A	Detroit Lake	35.79	328	eP	P	07 24 43.4	-0.5
	7.0nm,1.0s						
NEW	Newport	36.28	337	P	P	07 24 46.9	-1.1
	baz=146						
LON	Longmire	37.09	331	eP	P	07 24 55.1	+0.1
	3.6nm,0.9s						
A04D	Lummi Island	38.95	332	P	P	07 25 09.5	-1.0
	baz=138						
LPAZ	La Paz	42.66	138	P	P	07 25 42.9	+0.6
	1.4nm,0.7s,baz=6.7,slow=7.5,SNR=7.5						
YKA	Yellowknife Ar	48.08	349	P	P	07 26 22.2	-1.7
	1.2nm,0.7s,baz=154,slow=7.3,SNR=5.8						
DLBC	Dease Lake	49.02	337	eP	P	07 26 33.5	+2.2
	3.0nm,0.8s						
TAOE	Nuku Hiva Isla	49.76	243	eLR	LR	07 40 20.2	
	51nm,27.4s						
TAOE	Nuku Hiva Isla	49.76	243	eT	T	08 19 21.5	
	31nm,0.2s						
JIS	Juneau Island	50.59	335	eP	P	07 26 40.5	-2.7
	21nm,0.5s						
BESE	Bessie Mountai	50.98	335	eP	P	07 26 46.0	-0.2
	3.4nm,0.6s						
RKT	Rikitea	54.13	225	eT	T	08 24 47.4	
	17nm,0.3s						
RIDG	Independ'e Rid	57.93	337	eP	P	07 27 36.8	+0.1
	5.5nm,1.0s						
RES	Resolute Bay	58.62	1	LR	LR	07 54 26.7	
	comp=Z,40nm,20.1s,baz=17,slow=38						
KDAK	Kodiak Island	58.66	329	LR	LR	07 52 45.3	
	comp=Z,72nm,18.6s,baz=117,slow=36						
SFJD	Kangerlussuaq	58.95	19	LR	LR	07 57 22.7	
	comp=Z,32nm,18.5s,baz=237,slow=40						
IL1	Eielson Array	59.23	337	eP	P	07 27 43.8	-1.9
ILAR	Eielson Array	59.23	337	P	P	07 27 44.4	-1.3
	1.8nm,1.0s,baz=134,slow=4.3,SNR=15						
ILB	Eielson Array	59.23	337	eP	P	07 27 44.9	-0.8
TRF	Thorofare Moun	59.91	335	eP	P	07 27 50.0	-0.7
	4.9nm,0.9s						
MLY	Manley	60.80	337	eP	P	07 27 55.8	-0.7
	3.3nm,0.8s						
PPT2	Papeete2	62.04	240	eLR	LR	07 46 00.4	
	47nm,23.0s						
WRA	Warramunga Arr	131.59	257	PKP	PKPdf	07 36 54.8	-3.7
	0.2nm,0.7s,baz=83,slow=2.5,SNR=5.1						

*ISCJB **28** 07:36:50.6±0.6, 5°.33S±0°.08×151°.6E±0°.1, h57km, mb4.2/10, Error ellipse: s-maj=18.5km s-min=5.9km az=34.8*
*NEIC **28** 07:36:51.1±0.9, 5°.34S×151°.74E, h55km±8km, mb4.2/6, Error ellipse: s-maj=13.9km s-min=6.1km az=118.0*
*IDC **28** 07:36:52.2±5.3, 5°.35S×151°.66E, h61km±45km, mb3.9/5, mb1 4.2/6, mb1mx3.7/55, mbtmp4.2/6, ML2.2/1, MS3.1/1, Ms1 3.1/1, ms1mx2.5/42, Error ellipse: s-maj=54.0km s-min=27.2km az=121.0*

ISC 28 07:36:51.7±0.7, 5°.31S±0°.08×151°.7E±0°.1, h57km, n25, σ0s97/30, mb4.2/10, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	1.22	25	ePn	Pn	07 37 12.4	-0.3
RABL				eSn	Sn	07 37 30.9	+2.6
MANU	Manus Island	5.37	307	ePn	Pn	07 38 08.8	-0.5
PMG	Port Moresby	6.04	227	P	Pn	07 38 20.4	+2.0
	4.2nm,0.3s,baz=17,slow=10,SNR=12						
PMG				S	Sn	07 39 25.9	-0.3
	3.6nm,0.3s,baz=164,slow=19,SNR=3.2						
PMG				LR	LR	07 40 20.0	
	comp=Z,142nm,18.6s,baz=44,slow=34						
PMG	Port Moresby	6.04	227	ePn	Pn	07 38 20.0	+1.6
PMG				eSn	Sn	07 39 25.9	-0.3
EIDS	Eidsvold	19.95	182	eP	P	07 41 17.1	-2.1
	13nm,0.9s						
WRAB	Tennant Creek	22.24	228	eP	P	07 41 43.8	-0.2
	7.4nm,0.7s						
WB2	Warramunga Arr	22.25	228	eP	P	07 41 43.6	-0.4
	6.7nm,0.7s						
WR1	Warramunga Arr	22.25	228	eP	P	07 41 43.4	-0.7
	14nm,1.1s						
WR1				ePcP	PcP	07 45 38.8	+0.1
WRA	Warramunga Arr	22.26	228	P	P	07 41 43.4	-0.7
	5.8nm,0.7s,baz=53,slow=10,SNR=50						
WRA				PcP	PcP	07 45 38.8	+0.1
	0.3nm,0.6s,baz=44,slow=1.9,SNR=4.0						
AS01	Alice Springs	24.98	221	eP	P	07 42 11.4	+1.2
AS31	Alice Springs	25.01	221	eP	P	07 42 10.7	+0.1
	2.6nm,0.5s						
ASAR	Alice Springs	25.01	221	P	P	07 42 10.3	-0.2
	6.6nm,0.7s,baz=54,slow=9.3,SNR=51						
FITZ	Fitzroy Crossi	28.41	241	eP	P	07 42 41.2	+0.1
	6.8nm,1.0s						
SONA0	Songino Array	66.15	328	eP	P	07 47 33.9	+0.6
SONM	Songino Array	66.15	328	P	P	07 47 33.9	+0.6
	2.0nm,0.6s,baz=122,slow=7.6,SNR=2.8						
SONA1	Songino Array	66.16	328	eP	P	07 47 33.9	+0.5
IL1	Eielson Array	83.06	22	eP	P	07 49 09.7	-1.1
ILAR	Eielson Array	83.06	22	P	P	07 49 09.8	-1.0
	0.6nm,0.6s,baz=246,slow=4.8,SNR=11						
ILB	Eielson Array	83.06	22	eP	P	07 49 09.8	-1.0
NV01	Mina Array Sit	93.30	52	eP	P	07 50 00.2	-0.7
NVAR	Mina Array Bea	93.30	52	P	P	07 50 01.6	+0.6
	0.8nm,0.7s,baz=265,slow=6.1,SNR=9.1						
GEC2	GERESS Array S	123.88	328	ePKPdf	PKPdf	07 55 43.7	0.0
GERES	GERESS Array B	123.88	328	PKP	PKPdf	07 55 43.7	0.0
	0.7nm,0.6s,baz=64,slow=4.5,SNR=3.8						
TORD	Torodi Ar. Bea	149.37	287	PKPbc	PKPbc	07 56 35.4	0.0
	baz=73,slow=3.0						
TOA1	Torodi Ar. Sit	149.37	287	ePKPbc	PKPbc	07 56 35.4	0.0

*ISK **28** 07:39:06.5, 37°.17N×28°.51E, h17km, ML2.5/9*
*CSEM **28** 07:39:07.8±0.2, 37°.13N×28°.48E, h20km, ML2.5, Error ellipse: s-maj=4.9km s-min=4.4km az=18.0*
*ISCJB **28** 07:39:08.1±0.5, 37°.12N±0°.03×28°.45E±0°.03, h24km±7km, Error ellipse: s-maj=5.3km s-min=4.6km az=17.1*
*DDA **28** 07:39:08.2, 37°.12N×28°.48E, h7km, Ml2.9*

ISC 28 07:39:07.7±0.9, 37°.16N±0°.02×28°.50E±0°.02, h16km±6km, n39, σ1s33/60, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	Yerkesik	0.17	261	PG	Pg	07 39 12.4	+0.3
YER				SG	Sg	07 39 15.4	+0.3
YER	Yerkesik	0.17	261	ePg	Pg	07 39 12.4	+0.3
YER				eSg	Sg	07 39 15.4	+0.3
TURN	Turunc	0.30	164	PG	Pn	07 39 15.7	-1.7
TURN				SG	Sb	07 39 22.7	+3.3
TURN	Turunc	0.30	164	iP	Pn	07 39 15.7	-1.7
TURN				iS	Sb	07 39 22.6	+3.2
TURN	Turunc	0.30	164	P	Pn	07 39 15.7	-1.7
TURN				S	Sb	07 39 22.6	+3.2
DALY	Dalyan (Mu¨la	0.37	160	PG	Pb	07 39 14.9	-0.9
DALY				SG	Sb	07 39 20.7	-0.6
DALY	Dalyan (Mu¨la	0.37	160	iP	Pb	07 39 15.1	-0.7
DALY				iS	Sb	07 39 20.6	-0.6
DALY	Dalyan (Mu¨la	0.37	160	ePg	Pb	07 39 14.9	-0.9
DALY				S	Sb	07 39 20.6	-0.7
TAVA	DENIZLI_Tavas	0.45	48	iP	Pb	07 39 17.4	+0.2
TAVA				iS	Sb	07 39 24.9	+1.1
TAVA	DENIZLI_Tavas	0.45	48	P	Pb	07 39 17.5	+0.2
TAVA				S	Sb	07 39 24.9	+1.1
MRSB	Marmaris-Mugla	0.51	208	PG	Pg	07 39 16.8	-1.0
MRSB	Marmaris-Mugla	0.51	208	ePg	Pg	07 39 16.8	-1.0
MLSB	Milas	0.59	283	PG	Pg	07 39 18.6	-0.8
MLSB				SG	Sb	07 39 27.2	-0.6
MLSB	Milas	0.59	283	ePg	Pg	07 39 18.6	-0.8
MLSB				eSg	Sb	07 39 27.2	-0.6
DNZL	Cakiroluk	0.68	40	iP	Pn	07 39 21.7	-1.2
DNZL				iS	Sn	07 39 33.3	0.0
DNZL	Cakiroluk	0.68	40	P	Pn	07 39 21.7	-1.2
DNZL				S	Sn	07 39 33.3	0.0
AYDN	Tasoluk	0.70	315	iP	Pn	07 39 22.5	-0.5
AYDN				iS	Sb	07 39 31.7	+0.7
AYDN	Tasoluk	0.70	315	P	Pn	07 39 22.5	-0.5
AYDN				S	Sb	07 39 31.7	+0.7
FETY	Fethiye	0.71	138	PG	Pg	07 39 20.2	-1.3
FETY	Fethiye	0.71	138	P	Pg	07 39 18.9	-2.6
FETY	Fethiye	0.71	138	ePg	Pg	07 39 20.2	-1.3
GOLH	Golhisar	0.85	85	iP	Pn	07 39 24.7	-0.4
GOLH				iS	Sn	07 39 37.8	+0.5
GOLH	Golhisar	0.85	85	P	Pn	07 39 24.7	-0.4
GOLH				S	Sn	07 39 37.8	+0.5
DAT	Datca	0.85	240	PG	Pb	07 39 23.9	-0.3
DAT	Datca	0.85	240	iP	Pn	07 39 24.7	-0.5
DAT				iS	Sn	07 39 38.5	+1.2
DAT	Datca	0.85	240	ePg	Pb	07 39 23.9	-0.3
DAT	Datca	0.85	240	P	Pn	07 39 24.7	-0.5
DAT				S	Sn	07 39 38.5	+1.2
AYDB	Zeytinkoy-Aydi	0.92	329	PG	Pn	07 39 25.2	-0.8
AYDB	Zeytinkoy-Aydi	0.92	329	ePg	Pn	07 39 25.2	-0.8
BODT	Bodrum	0.95	264	PG	Pb	07 39 25.6	-0.2
BODT	Bodrum	0.95	264	ePg	Pb	07 39 25.6	-0.2
ARG	Arkhangelos	0.99	198	PG	Pb	07 39 25.9	-0.5
ARG	Arkhangelos	0.99	198	ePg	Pb	07 39 25.9	-0.5
AKAS	Kas	1.29	136	PN	Pn	07 39 30.6	-0.5
AKAS	Kas	1.29	136	iP	Pg	07 39 32.4	-0.1
AKAS				iS	Sn	07 39 53.2	+5.1
AKAS	Kas	1.29	136	ePn	Pn	07 39 30.6	-0.5
AKAS	Kas	1.29	136	P	Pg	07 39 32.4	-0.1
KULA	Kula-Manisa	1.35	5	PN	Pn	07 39 31.0	-1.0
KULA	Kula-Manisa	1.35	5	ePn	Pn	07 39 31.0	-1.0

*NIED **28** 07:41:00, 40°.90N×143°.20E, h26km, Mw4.5 Best double couple: M0:6.87000×10^15 NP1:φ0=257.00000°, δ23.00000°, λ150.00000°. NP2:φ0=14.00000°, δ79.00000°, λ70.00000°.*
*JMA **28** 07:41:13.2±0.3, 40°.94N×143°.15E, h21km±5km, M4.4*
JMA Felt I J1.
*ISCJB **28** 07:41:14.5±0.4, 40°.99N±0°.02×143°.13E±0°.03, h40km±3km, mb4.6/134, MS3.9/42, Error ellipse: s-maj=4.7km s-min=2.6km az=36.5*
*BJI **28** 07:41:14.8, 40°.98N×143°.02E, h51km, mb4.8/50, mB4.8/34, Ms4.2/38, Ms7 3.9/34*
*MOS **28** 07:41:14.6±0.9, 41°.05N×143°.05E, h39km, mb5.0/57, Error ellipse: s-maj=6.6km s-min=4.1km az=102.9*
*NEIC **28** 07:41:15.7±0.2, 40°.99N×143°.01E, h35km, mb4.5/54, Error ellipse: s-maj=5.5km s-min=3.8km az=145.0*
NEIC Recorded [1 JMA] in Aomori and Iwate. Also recorded [1 JMA] in southwestern Hokkaido.
*IDC **28** 07:41:17.1±2.0, 40°.99N×143°.06E, h47km±19km, mb4.2/29, mb1 4.3/33, mb1mx4.1/72, mbtmp4.4/33, ML3.9/3, MS3.8/38, Ms1 3.8/38, ms1mx3.6/66, Error ellipse: s-maj=14.0km s-min=12.2km az=143.0*

ISC 28 07:41:14.7±0.6, 40°.98N±0°.03×143°.12E±0°.04, h31km±3km, n342, σ1s55/359, mb4.7/136, MS4.0/43, 24C-23D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEM	Erimo	1.03	1	P	Pn	07 41 32.8	-0.2
JEM				eS	Sb	07 41 47.3	+0.1
JNBK	Urakawa-nobuka	1.32	348	⇑P	Pn	07 41 37.4	+0.4
JNBK				eS	Sb	07 41 56.2	+0.7
JANG	Nango	1.37	244	⇓P	Pn	07 41 37.3	-0.3
JTM	Tenmabayashi	1.57	263	⇓P	Pn	07 41 40.5	+0.2
JTM				S	Sb	07 42 01.1	-1.4
JOT	Ohata	1.61	285	⇓P	Pn	07 41 41.1	+0.1
JOT				S	Sb	07 42 02.3	-1.5
JCH	Churui	1.64	6	P	Pn	07 41 41.5	+0.2
JCH				eS	Sn	07 42 01.6	+0.3
JKB	Kayabe	1.81	301	⇑P	Pn	07 41 44.2	+0.5
JKB				S	Sn	07 42 07.0	+1.4
JBT2	Biratori 2	1.88	343	⇑P	Pn	07 41 45.4	+0.8
JBT2				eS	Sn	07 42 09.0	+1.7
JOM	Ohasama	2.06	223	⇑P	Pn	07 41 48.0	+0.9

GLVR				pmax	pmax	
	comp=E,139nm,0.3s					
GLVR				smax	smax	
	comp=N,4μm,0.5s					
GLVR				smax	smax	
	comp=E,4μm,0.4s					
GRPR	**Tuman**	**3.59**	**32***d i* P	**Pn**	**07 42 07.5 -0.6**	
GRPR			*i* S	**Sn**	**07 42 47.1 -2.3**	
GRPR			pmax	pmax		
	comp=Z,471nm,0.4s					
GRPR			pmax	pmax		
	comp=N,193nm,0.2s					
GRPR			pmax	pmax		
	comp=E,149nm,0.1s					
GRPR			smax	smax		
	comp=N,2μm,0.4s					
GRPR			smax	smax		
	comp=E,3μm,0.4s					
LAGR	**Lagunnoye**	**3.65**	**32***c i* P	**Pn**	**07 42 07.7 -1.2**	
LAGR			*e*S	**Sn**	**07 42 49.0 -1.8**	
LAGR			pmax	pmax		
	comp=N,165nm,0.4s					
LAGR			pmax	pmax		
	comp=E,227nm,0.4s					
LAGR			pmax	pmax		
	comp=Z,737nm,0.4s					
LAGR			smax	smax		
	comp=N,2μm,0.4s					
LAGR			smax	smax		
	comp=E,4μm,0.5s					
YUK	**Yuzh-Kuril'sk**	**3.66**	**33***c i* P	**Pn**	**07 42 08.4 -0.7**	
YUK			*i* S	**Sn**	**07 42 48.0 -3.1**	
YUK			pmax	pmax		
	comp=Z,470nm,0.4s					
YUK			pmax	pmax		
	comp=N,285nm,0.5s					
YUK			pmax	pmax		
	comp=E,262nm,0.2s					
YUK			smax	smax		
	comp=E,2μm,0.4s					
YUK			smax	smax		
	comp=N,3μm,0.3s					
YUK			MLR	MLR		
	comp=Z,625nm,14.0s					
YUK			MLR	MLR		
	comp=N,612nm,13.0s					
SHO	**Shikotan**	**3.98**	**42***d i* P	**Pn**	**07 42 12.1 -1.4**	
SHO			*i* S	**Sn**	**07 42 54.5 -4.6**	
SHO			pmax	pmax		
	comp=Z,135nm,0.4s					
SHO			pmax	pmax		
	comp=N,122nm,0.3s					
SHO			pmax	pmax		
	comp=E,120nm,0.5s					
SHO			smax	smax		
	comp=E,902nm,0.5s					
SHO			smax	smax		
	comp=N,711nm,0.4s					
SHO			MLR	MLR		
	comp=Z,765nm,14.0s					
KUR	**Kuril'sk**	**5.49**	**38***de*P	**Pn**	**07 42 34.7 +0.6**	
KUR			*i* S	**Sn**	**07 43 34.0 -2.1**	
KUR			pmax	pmax		
	comp=E,105nm,0.5s					
KUR			pmax	pmax		
	comp=Z,375nm,0.5s					
KUR			pmax	pmax		
	comp=N,89nm,0.8s					
KUR			smax	smax		
	comp=N,651nm,1.7s					
KUR			smax	smax		
	comp=E,496nm,1.6s					
KUR			smax	smax		
	comp=E,386nm,0.4s					
KUR			smax	smax		
	comp=N,202nm,0.5s					
MAJO	**Matsushiro**	**5.87**	**222** *e*Pn	**Pn**	**07 42 41.0 +1.6**	
MAJO			*e*Sn	**Sn**	**07 43 48.6 +2.9**	
MAJO	**Matsushiro**	**5.87**	**222***ce*P	**Pn**	**07 42 41.2 +1.8**	
MAJO			pmax	pmax		
	comp=Z,31nm,0.5s					
MJAR	**Matsushiro Arr**	**5.87**	**222** P	**Pn**	**07 42 41.7 +2.3**	
	comp=Z,3.1nm,0.3s,baz=27,slow=13,SNR=43					
MJAR			S	**Sn**	**07 43 48.6 +3.0**	
	baz=91,slow=31,SNR=2.1					
MJAR			LR	LR	07 45 19.7	
	comp=Z,719nm,20.0s,baz=45,slow=42					
MJB9	**Matsu-Tunnel**	**5.87**	**223** *e*Pn	**Pn**	**07 42 41.1 +1.6**	
MAT	**Matsushiro**	**5.87**	**222** P	**Pn**	**07 42 41.7 +2.3**	
MAT			S	**Sn**	**07 43 50.7 +5.1**	
YSS	**Yuzh-Sakhalins**	**5.97**	**358** *e*Pn	**Pn**	**07 42 43.0 +2.2**	
YSS	**Yuzh-Sakhalins**	**5.97**	**358** *e*P	**Pn**	**07 42 42.3 +1.4**	
YSS			*e*S	**Sn**	**07 43 49.9 +1.7**	
YSS			pmax	pmax		
	comp=Z,30nm,0.8s					
YSS			smax	smax		
	comp=N,50nm,0.9s					
YSS			smax	smax		
	comp=E,50nm,1.0s					
YSS			MLR	MLR		
	comp=Z,500nm,11.0s					
YSS			MLR	MLR		
	comp=N,600nm,15.0s					
TEY	**Ternei**	**6.26**	**312** *e*P	**Pn**	**07 42 45.0 +0.2**	
INU	**Inuyama**	**7.40**	**222** *e*Pn	**Pn**	**07 43 04.2 +3.7**	
UGL	**Uglegorsk**	**8.13**	**355** P	**Pn**	**07 43 12.6 +2.2**	
UGL			*e*S	**Sn**	**07 44 45.6 +4.5**	
UGL			pmax	pmax		
	comp=Z,50nm,0.8s					
UGL			smax	smax		
	comp=N,103nm,1.1s					
JHJ	**Hachijo jima 2**	**8.29**	**200** P	**Pn**	**07 43 11.1 -1.6**	
	comp=N,19nm,0.3s,baz=104,slow=23,SNR=6.8					
JHJ			S	**Sn**	**07 44 38.8 -6.5**	
	comp=N,12nm,0.3s,baz=253,slow=19,SNR=4.2					
JHJ			LR	LR	07 46 50.2	
	comp=N,232nm,19.5s,baz=68,slow=40					
USA0B	**Ussuriysk Arra**	**8.82**	**295** *e*Pn	**Pn**	**07 43 21.9 +2.0**	
USRK	**Ussuriysk Ar.**	**8.82**	**295** P	**Pn**	**07 43 22.3 +2.4**	
	baz=102,slow=13					
USRK			LR	LR	07 46 52.5	
	comp=N,818nm,18.9s,baz=93,slow=38					
MSHR	**Mys Shultsa**	**9.08**	**284** *i* P	**Pn**	**07 43 25.7 +2.2**	
TYV	**Tymovskoe**	**9.89**	**358** *e*P	**Pn**	**07 43 37.1 +2.6**	
TYV			*e*S	**Sn**	**07 45 23.2 -1.1**	
TYV			pmax	pmax		
	comp=Z,10.0nm,0.8s					
TYV			pmax	pmax		
	comp=Z,100nm,2.6s					
TYV			smax	smax		
	comp=E,19nm,0.8s					
MDJ	**Mudanjiang**	**10.58**	**295** *e*Pn	**Pn**	**07 43 47.5 +3.5**	
GRNR	**Gornyy**	**10.84**	**337** *e*P	**Pn**	**07 43 43.0 -4.5**	
KLR	**Kul'dur**	**11.50**	**320**↑ *e*P	**Pn**	**07 43 59.2 +2.6**	
NKL	**Nikolayevsk**	**12.28**	**353** *e*P	**Pn**	**07 44 05.0 -2.2**	
NKL			pmax	pmax		
	comp=Z,26nm,1.0s					
NKL			MLR	MLR		
	comp=Z,400nm,15.0s					
KSRS	**Korea Array**	**12.30**	**258** P	**Pn**	**07 44 09.6 +2.0**	
	comp=Z,0.6nm,0.3s,baz=73,slow=13,SNR=14					
KSRS			LR	LR	07 48 43.7	
	comp=Z,598nm,18.3s,baz=65,slow=36					
KS15	**Wonju Array Si**	**12.34**	**258** *e*Pn	**Pn**	**07 44 09.6 +1.5**	
KSAR	**Wonju Array Be**	**12.34**	**258** P	**Pn**	**07 44 09.6 +1.5**	
KSAR	**Wonju Array Be**	**12.34**	**258** P	**Pn**	**07 44 09.6 +1.5**	
JNU	**Nakatsue**	**12.53**	**235** LR	LR	07 49 31.2	
	comp=Z,292nm,18.7s,baz=124,slow=40					
CN2	**Changchun**	**13.36**	**288** *e*P	**Pn**	**07 44 24.0 +1.9**	
CN2			*es*P	P	07 44 39.0 +7.8	
CN2			*e*S	**Sn**	**07 46 50.3 +0.8**	
CN2			pmax	pmax		
	comp=Z,10.0nm,0.6s					
CN2			pmax	pmax		
	comp=Z,200nm,3.0s					
CN2			LR	LR		
	comp=Z,350nm,17.0s					
CN2			LR	LR		
	comp=Z,330nm,17.0s					
CN2			LR	LR		
	comp=Z,490nm,19.0s					
PETK	**Petropavlovsk-**	**15.64**	**34** LR	LR	07 51 11.7	
	comp=Z,160nm,19.3s,baz=218,slow=38					
ZEA	**Zeya**	**16.63**	**325** *e*P	**Pn**	**07 45 03.0 -2.3**	
ZEA			pmax	pmax		
	comp=N,35nm,1.0s					
ZEA			pmax	pmax		
	comp=E,24nm,1.0s					
ZEA			pmax	pmax		
	comp=Z,35nm,1.0s					
ZEA			MLR	MLR		
	comp=N,400nm,16.0s					
ZEA			MLR	MLR		
	comp=E,400nm,16.0s					
ZEA			MLR	MLR		
	comp=Z,800nm,16.0s					
HIA	**Hailar**	**18.40**	**305** *e*P	**P**	**07 45 25.2 -1.9**	
	comp=Z,13nm,0.7s					
HIA	**Hailar**	**18.40**	**305** *e*P	**P**	**07 45 25.2 -1.9**	
HIA			pmax	pmax		
	comp=Z,13nm,0.7s					
MA2	**Magadan**	**19.22**	**12** LR	LR	07 54 26.2	
	comp=Z,109nm,18.1s,baz=190,slow=41					
BJI	**Beijing**	**20.48**	**276**↓↓ *e*P	**P**	**07 45 48.0 -1.8**	
BJI			pmax	pmax		
	comp=Z,20nm,1.7s					
BJI			LR	LR		
	comp=Z,250nm,19.1s					
BJI			LR	LR		
	comp=Z,510nm,17.6s					
BJI			LR	LR		
	comp=Z,360nm,21.8s					
BJT	**Baijiatuau**	**20.50**	**276** *e*P	**P**	**07 45 47.3 -2.6**	
	comp=Z,14nm,0.8s					
BJT	**Baijiatuau**	**20.50**	**276** *e*P	**P**	**07 45 47.3 -2.6**	
BJT			pmax	pmax		
	comp=Z,14nm,0.8s					
TIA	**Tai'an**	**20.84**	**265** P	**P**	**07 45 53.5 -0.2**	
TIA			pmax	pmax		
	comp=Z,22nm,0.9s					
TIA			LR	LR		
	comp=Z,69nm,15.3s					
TIA			LR	LR		
	comp=Z,120nm,18.9s					
NJ2	**Nanjing**	**21.39**	**253** *e*P	**P**	**07 45 58.5 -1.1**	
NJ2			pmax	pmax		
	comp=Z,27nm,1.0s					
NJ2			LR	LR		
	comp=Z,430nm,14.1s					
NJ2			LR	LR		
	comp=Z,590nm,16.3s					
NJ2			LR	LR		
	comp=Z,390nm,16.3s					
YAK	**Yakutsk**	**22.58**	**343** P	**P**	**07 46 08.1 -4.1**	
	comp=Z,27nm,0.6s,baz=154,slow=2.9,SNR=6.8					
YAK			LR	LR	07 55 47.6	
	comp=Z,197nm,19.7s,baz=114,slow=39					
YAK	**Yakutsk**	**22.58**	**343** *e*P	**P**	**07 46 08.1 -4.1**	
	comp=Z,46nm,0.7s					
YAK	**Yakutsk**	**22.58**	**343** *e*P	**P**	**07 46 08.1 -4.1**	
YAK			*e**PP	**pP**	**07 46 17.4 -3.1**	
YAK			*e*		07 50 03.0	
YAK			*e*S	**S**	**07 50 09.4 -8.1**	
YAK			*e*		07 57 22.7	
YAK			pmax	pmax		
	comp=Z,42nm,0.9s					
YAK			pmax	pmax		
	comp=N,12nm,1.0s					
YAK			pmax	pmax		
	comp=E,7.0nm,1.1s					
YAK			pmax	pmax		
	comp=Z,38nm,0.9s					
YAK			pmax	pmax		
	comp=N,16nm,1.0s					
YAK			pmax	pmax		
	comp=E,11nm,1.2s					
YAK			smax	smax		
	comp=N,46nm,2.0s					
YAK			MLR	MLR		
	comp=Z,251nm,20.0s					
YAK			MLR	MLR		
	comp=N,134nm,14.0s					
YAK			MLR	MLR		
	comp=E,52nm,16.0s					
SEY	**Seymchan**	**22.66**	**11** P	**P**	**07 46 09.8 -3.2**	
	comp=E,7.3nm,0.9s,baz=194,slow=8.4,SNR=16					
SEY	**Seymchan**	**22.66**	**11** *i* P	**P**	**07 46 11.0 -2.0**	
BOD	**Bodaibo**	**25.06**	**322** *e*P	**P**	**07 46 35.0 -0.9**	
BOD			pmax	pmax		
	comp=Z,19nm,0.8s					
WHN	**Wuhan**	**25.46**	**255**↓↓ *i*P	**P**	**07 46 40.0 +0.2**	
WHN			S	**S**	**07 51 05.0 +0.2**	
WHN			pmax	pmax		
	comp=Z,66nm,0.7s					
WHN			LR	LR		
	comp=Z,660nm,11.9s					
WHN			LR	LR		
	comp=Z,1μm,15.6s					
WHN			LR	LR		
	comp=Z,1μm,18.7s					
ULN	**Ulaanbaatar**	**26.48**	**297** *e*P	**P**	**07 46 49.0 -0.1**	
	comp=Z,6.5nm,0.7s					
ULN	**Ulaanbaatar**	**26.48**	**297***de*P	**P**	**07 46 49.5 +0.4**	
ULN			pmax	pmax		
	comp=Z,9.0nm,0.8s					
SONA1	**Songino Array**	**26.92**	**297** *e*P	**P**	**07 46 52.8 -0.2**	
SONA0	**Songino Array**	**26.92**	**297** *e*P	**P**	**07 46 53.2 +0.1**	
SONM	**Songino Array**	**26.92**	**297** P	**P**	**07 46 53.2 +0.1**	
	comp=Z,5.9nm,0.5s,baz=76,slow=9.4,SNR=41					
SONM			LR	LR	07 58 20.0	
	comp=Z,383nm,19.0s,baz=78,slow=38					
GUMO	**Guam**	**27.34**	**176** LR	LR	07 56 35.3	
	comp=Z,71nm,21.9s,baz=68,slow=34					
TLY	**Talaya**	**28.95**	**305** P	**P**	**07 47 11.4 +0.4**	
	comp=Z,5.1nm,0.6s,baz=89,slow=4.3,SNR=9.9					
TLY			LR	LR	07 59 43.2	
	comp=Z,234nm,18.5s,baz=100,slow=38					
TLY	**Talaya**	**28.95**	**305** *e*P	**P**	**07 47 10.9 -0.1**	
	comp=Z,6.9nm,0.9s					
TLY			*e*P	**P**	**07 47 11.4 +0.4**	
TLY	**Talaya**	**28.95**	**305** *e*P	**P**	**07 47 11.8 +0.9**	
TLY			pmax	pmax		
	comp=Z,8.0nm,0.9s					
TLY			MLR	MLR		
	comp=Z,211nm,18.0s					
ZAK	**Zakamensk**	**29.07**	**302** *e*P	**P**	**07 47 11.4 -0.7**	
ZAK			pmax	pmax		
	comp=Z,11nm,1.4s					
ENH	**Enshi**	**29.19**	**259** *e*P	**P**	**07 47 12.5 -0.8**	
	comp=Z,14nm,0.6s					
H11N2	**WAKE ISLAND Hy**	**29.32**	**129** T	T	08 18 09.1	
	baz=322					
H11N1	**WAKE ISLAND Hy**	**29.33**	**129** T	T	08 18 03.1	
	baz=322,slow=74					
H11N3	**WAKE ISLAND Hy**	**29.34**	**129** T	T	08 18 04.3	
	baz=322,slow=74					
BILL	**Bilibino**	**29.87**	**17** *e*P	**P**	**07 47 18.2 -0.6**	
	comp=Z,7.7nm,1.0s					
BILL	**Bilibino**	**29.87**	**17***ce*P	**P**	**07 47 19.8 +0.9**	
BILL			*e*		07 48 17.6	
BILL			pmax	pmax		
	comp=Z,7.0nm,1.0s					
BILL			MLR	MLR		
	comp=Z,147nm,20.0s					
H11S1	**WAKE ISLAND Hy**	**30.17**	**131** T	T	08 19 05.7	
	baz=323,slow=76					
H11S3	**WAKE ISLAND Hy**	**30.17**	**131** T	T	08 19 06.5	
	baz=323,slow=76					
H11S2	**WAKE ISLAND Hy**	**30.18**	**131** T	T	08 19 09.7	
	baz=323,slow=76					
LZH	**Lanzhou**	**30.93**	**274** *e*P	**P**	**07 47 28.8 0.0**	
LZH			pP	sP	07 47 42.3 +0.6	
LZH			sP	pP	07 47 47.3 +9.4	
LZH			*e*PP	**PnPn**	**07 48 30.8 +0.9**	
LZH			pmax	pmax		
	comp=Z,22nm,1.0s					
LZH			pmax	pmax		
	comp=Z,76nm,4.9s					
LZH			LR	LR		
	comp=Z,340nm,13.0s					
LZH			LR	LR		
	comp=Z,350nm,13.2s					
LZH			LR	LR		
	comp=Z,440nm,16.7s					
TIXI	**Tiksi**	**31.56**	**351** LR	LR	08 01 57.5	
	comp=Z,74nm,18.3s,baz=178,slow=39					
GTA	**Gaotai**	**32.87**	**282** *e*P	**P**	**07 47 46.0 +0.2**	
GTA			pP	sP	07 47 57.3 -1.4	
GTA			sP	pP	07 48 03.3 +8.4	
GTA			S	**S**	**07 52 56.0 -5.4**	
GTA			SS	**SnSn**	**07 54 57.0 -2.2**	
GTA			pmax	pmax		
	comp=Z,5.0nm,1.2s					
GTA			pmax	pmax		
	comp=Z,60nm,6.9s					
GTA			LR	LR		
	comp=Z,120nm,14.6s					
GTA			LR	LR		
	comp=Z,300nm,18.2s					
GTA			LR	LR		
	comp=Z,420nm,16.5s					
GYA	**Guiyang**	**33.34**	**256** *e*P	**P**	**07 47 51.3 +1.3**	
GYA			pmax	pmax		
	comp=Z,10.0nm,0.8s					
KRAR	**Krasnoyarsk**	**35.66**	**312** *e*P	**P**	**07 48 10.8 +1.2**	
KMI	**Kunming**	**37.00**	**257** P	**P**	**07 48 21.8 +0.1**	
KMI			pmax	pmax		
	comp=Z,29nm,0.6s					
KMI			pmax	pmax		
	comp=Z,110nm,4.7s					
DGZ	**Jazzator, Alta**	**39.29**	**302** *i* P	**P**	**07 48 41.4 +0.8**	
DGZ			pmax	pmax		
	comp=Z,10.0nm,0.7s					
ZAA0	**Zalesovo Array**	**40.35**	**309** *e*P	**P**	**07 48 49.0 -0.1**	
	comp=Z,10nm,0.6s					
ZAA1	**Zalesovo Array**	**40.35**	**309** *e*P	**P**	**07 48 48.8 -0.3**	
ZALV	**Zalesovo Beam**	**40.35**	**309** P	**P**	**07 48 48.8 -0.3**	
	comp=Z,12nm,0.5s,baz=96,slow=7.7,SNR=16					
ZALV			LR	LR	08 06 44.4	
	comp=Z,188nm,18.6s,baz=71,slow=38					
ZALV	**Zalesovo Beam**	**40.35**	**309** *e*P	**P**	**07 48 48.8 -0.3**	
ZALV			*e*PcP	**PcP**	**07 50 52.4 +0.5**	
ZALV	**Zalesovo Beam**	**40.35**	**309** *e*P	**P**	**07 48 48.8 -0.3**	
ZALV			*e*		07 50 52.4	
WMQ	**Urumqi**	**40.38**	**293** P	**P**	**07 48 50.5 +0.9**	
WMQ			pP	pP	07 48 59.0 +0.1	
WMQ			sP	sP	07 49 03.5 +0.9	
WMQ			pmax	pmax		
	comp=Z,41nm,0.8s					
WMQ			pmax	pmax		
	comp=Z,160nm,4.3s					
WMQ			LR	LR		
	comp=Z,240nm,15.1s					
WMQ			LR	LR		
	comp=Z,470nm,18.1s					
WMQ			LR	LR		
	comp=Z,370nm,16.5s					
NONG	**Nongkai**	**41.13**	**248** P	**P**	**07 48 57.0 +1.1**	
	comp=Z,25nm,1.7s					
NVS	**Novosibirsk**	**41.18**	**311** *e*P	**P**	**07 49 00.0 +4.0**	
CMAI	**Chiengmai2**	**42.85**	**254** P	**P**	**07 49 11.7 +1.5**	
	comp=Z,80nm,1.3s					
CAST	**Castle Rocks**	**43.24**	**36** *e*P	**P**	**07 49 15.0 +2.3**	
	comp=Z,3.1nm,0.7s					
MK01	**Makanchi Array**	**43.26**	**299** *e*P	**P**	**07 49 12.4 -0.7**	
MK31	**Makanchi Array**	**43.26**	**299** *e*P	**P**	**07 49 12.9 -0.2**	
MK31	**Makanchi Array**	**43.26**	**299** *i* P	**P**	**07 49 12.9 -0.2**	
MK31			pmax	pmax		
	comp=Z,9.0nm,0.7s					
MK32	**Makanchi Array**	**43.26**	**299** *e*P	**P**	**07 49 12.9 -0.2**	
MKAR	**Makanchi Array**	**43.26**	**299** P	**P**	**07 49 12.9 -0.2**	
	comp=Z,6.4nm,0.6s,baz=85,slow=9.7,SNR=51					
MKAR			LR	LR	08 08 35.3	
	comp=Z,207nm,18.8s,baz=78,slow=38					
MKAR	**Makanchi Array**	**43.26**	**299** *e*P	**P**	**07 49 12.8 -0.2**	
	comp=Z,61nm,0.6s					
MKAR	**Makanchi Array**	**43.26**	**299** *e*P	**P**	**07 49 12.9 -0.2**	
MKAR			pmax	pmax		
	comp=Z,61nm,0.6s					
KDAK	**Kodiak Island**	**43.31**	**45** P	**P**	**07 49 13.4 +0.1**	
	comp=Z,1.8nm,0.4s,baz=256,slow=3.9,SNR=15					
KDAK	**Kodiak Island**	**43.31**	**45** *e*P	**P**	**07 49 13.9 +0.6**	
	comp=Z,6.3nm,1.0s					
KDAK	**Kodiak Island**	**43.31**	**45** *i* P	**P**	**07 49 14.1 +0.8**	
JAY	**Jayapura**	**43.35**	**184** LR	LR	08 11 57.6	
	comp=Z,17nm,18.2s,baz=295,slow=42					
MAKZ	**Makanchi**	**43.47**	**299** *e*P	**P**	**07 49 14.7 0.0**	
	comp=Z,12nm,0.8s					
MAKZ	**Makanchi**	**43.47**	**299** *e*P	**P**	**07 49 14.7 0.0**	
MAKZ			pmax	pmax		
	comp=Z,12nm,0.8s					
CHTO	**Chiang Mai**	**43.64**	**253** P	**P**	**07 49 17.4 +1.0**	
	comp=Z,58nm,0.9s					
CHTO	**Chiang Mai**	**43.64**	**253** *e*P	**P**	**07 49 16.4 0.0**	
	comp=Z,9.3nm,0.8s					
CHTO	**Chiang Mai**	**43.64**	**253** *e*P	**P**	**07 49 16.4 0.0**	
CHTO			pmax	pmax		
	comp=Z,9.0nm,0.8s					
CM31	**Chiang Mai Arr**	**43.87**	**253** *e*P	**P**	**07 49 18.3 +0.1**	
CMAR	**Chiang Mai Arr**	**43.87**	**253** P	**P**	**07 49 18.3 +0.1**	
	comp=Z,3.4nm,0.7s,baz=46,slow=6.7,SNR=12					
COLD	**Coldfoot**	**44.07**	**31** *e*P	**P**	**07 49 20.8 +1.5**	
	comp=Z,2.1nm,0.8s					
KURK	**Kurchatov**	**44.64**	**305** *e*P	**P**	**07 49 23.7 -0.4**	
	comp=Z,20nm,0.8s					
KURK	**Kurchatov**	**44.64**	**305***ce*P	**P**	**07 49 23.7 -0.4**	
KURK			pmax	pmax		
	comp=Z,151nm,0.8s					
KURBB	**Kurchatov Arra**	**44.72**	**305** P	**P**	**07 49 24.4 -0.3**	
	comp=Z,19nm,0.6s,baz=78,slow=8.7,SNR=91					
MDM	**Murphy Dome**	**44.88**	**34** *e*P	**P**	**07 49 27.0 +1.2**	
	comp=Z,2.1nm,0.8s					
SHL	**Shillong**	**44.88**	**266** *e*P	**P**	**07 49 27.0 +0.5**	
SHL	**Shillong**	**44.88**	**266** P	**P**	**07 49 25.7 -0.8**	
SHL			pmax	pmax		
	comp=Z,14nm,0.9s					
WRH	**Wood River Hil**	**44.97**	**35** *e*P	**P**	**07 49 27.4 +1.0**	
	comp=Z,2.3nm,0.8s					
DHY	**Denali Highway**	**45.38**	**37** *e*P	**P**	**07 49 30.1 +0.2**	
	comp=Z,3.4nm,0.7s					
IL1	**Eielson Array**	**45.47**	**34** *e*P	**P**	**07 49 31.7 +1.2**	
ILAR	**Eielson Array**	**45.47**	**34** P	**P**	**07 49 31.6 +1.2**	
	comp=Z,2.0nm,0.8s,baz=266,slow=6.3,SNR=9.8					
ILAR			LR	LR	08 10 48.1	
	comp=Z,39nm,18.8s,baz=309,slow=39					
ILB	**Eielson Array**	**45.47**	**34** *e*P	**P**	**07 49 31.9 +1.5**	
FYU	**Fort Yukon**	**46.04**	**32** *e*P	**P**	**07 49 38.1 +3.2**	
	comp=Z,6.8nm,1.0s					
SCRK	**Sand Creek**	**46.80**	**35** *e*P	**P**	**07 49 41.8 +0.8**	
	comp=Z,2.2nm,0.8s					
PHET	**Kaeng Krachan**	**47.11**	**246** P	**P**	**07 49 46.0 +2.1**	
	comp=Z,11nm,0.7s					
EGAK	**Eagle**	**47.91**	**34** *e*P	**P**	**07 49 51.7 +2.2**	
	comp=Z,2.2nm,0.8s					
TARG	**Taragay, Kyrgy**	**47.94**	**294** *e*P	**P**	**07 49 50.2 -0.4**	
	comp=Z,6.5nm,0.7s					
BALM	**Baldy**	**48.01**	**39** *e*P	**P**	**07 49 52.8 +2.3**	
	comp=Z,6.8nm,1.0s					
BALM	**Baldy**	**48.01**	**39** *e*P	**P**	**07 49 52.8 +2.3**	
BALM			pmax	pmax		
	comp=Z,7.0nm,1.0s					
JIRN	**Jiri**	**48.08**	**273** *e*P	**P**	**07 49 52.0 +0.2**	
	comp=Z,29nm,0.5s					
RAMN	**Ramite**	**48.14**	**272** *e*P	**P**	**07 49 51.5 -0.6**	
	comp=Z,39nm,0.6s					
GUN	**Gumba**	**48.18**	**273** *e*P	**P**	**07 49 52.5 -0.1**	
	comp=Z,84nm,0.4s					
KKN	**Kakani**	**48.70**	**273** *e*P	**P**	**07 49 56.1 -0.3**	
	comp=Z,31nm,0.7s					
PKIN	**Phulchoki**	**48.72**	**273** *e*P	**P**	**07 49 56.7 +0.1**	
	comp=Z,17nm,0.3s					
DMN	**Daman**	**48.92**	**273** *e*P	**P**	**07 49 58.3 +0.1**	
	comp=Z,15nm,0.4s					
BVA0	**Borovoye Array**	**48.97**	**310** *i* P	**P**	**07 49 57.9 0.0**	
BVA0			pmax	pmax		
	comp=Z,7.0nm,0.4s					
BVAR	**Borovoye Array**	**48.97**	**310** P	**P**	**07 49 58.0 +0.1**	
	comp=Z,5.0nm,0.7s,baz=76,slow=8.1,SNR=20					
BVAR			LR	LR	08 12 02.1	
	comp=Z,167nm,19.5s,baz=82,slow=38					
BVAR	**Borovoye Array**	**48.97**	**310** P	**P**	**07 49 58.0 +0.1**	
TKM2	**Tokmak 2**	**49.01**	**296** P	**P**	**07 49 58.8 +0.2**	
TKM2			pmax	pmax		
	comp=Z,13nm,1.0s					
BRVK	**Borovoye**	**49.02**	**310** *e*P	**P**	**07 49 58.3 0.0**	
	comp=Z,13nm,0.5s					
BRVK	**Borovoye**	**49.02**	**310** P	**P**	**07 49 58.2 0.0**	
BRVK			pmax	pmax		
	comp=Z,7.0nm,0.5s					
GKN	**Gorkha**	**49.08**	**274** *e*P	**P**	**07 49 59.3 +0.1**	
	comp=Z,19nm,0.4s					
OTUK	**Ortayu**	**49.27**	**304** P	**P**	**07 49 59.8 -0.5**	
OTUK			pmax	pmax		
	comp=Z,8.0nm,0.7s					
DANN	**Dangsing**	**49.56**	**275** *e*P	**P**	**07 50 03.5 +0.4**	
	comp=Z,146nm,0.7s					
KOLN	**Koldanda**	**49.98**	**274** *e*P	**P**	**07 50 06.1 -0.1**	
	comp=Z,10nm,0.4s					
KSH	**Kashi**	**50.10**	**292** P	**P**	**07 50 10.3 +3.5**	

KSH pP sP 07 50 25.0 +5.0
KSH pmax pmax
comp=Z,150nm,5.9s
PYUN Piuthan 50.27 275 *e*P **P 07 50 08.5 +0.1**
comp=Z,112nm,1.0s
INK Inuvik 50.28 29 P **P 07 50 08.9 +1.3**
comp=Z,2.2nm,0.4s,baz=296,slow=8.6,SNR=11
INK Inuvik 50.28 29 *e*P **P 07 50 09.0 +1.4**
comp=Z,3.8nm,0.8s
INK Inuvik 50.28 29 *e*P **P 07 50 09.0 +1.4**
INK pmax pmax
comp=Z,4.0nm,0.8s
MNAS Manas 51.28 297 P **P 07 50 15.9 +0.2**
MNAS pmax pmax
comp=Z,12nm,0.9s
IPM Ipoh 52.36 238 *e*P **P 07 50 22.1 -1.8**
comp=Z,9.8nm,1.0s
KK31 Karatay Array 52.37 298 *e*P **P 07 50 23.2 -0.5**
KK31 Karatay Array 52.37 298 *e*P **P 07 50 23.2 -0.5**
KKAR Karatay Array 52.37 298 *e*P **P 07 50 23.2 -0.5**
KKAR Karatay Array 52.37 298 *e*P **P 07 50 23.2 -0.5**
HNR Honiara 52.51 159 LR LR 08 08 28.4
comp=Z,44nm,22.0s,baz=280,slow=31
SVE Sverdlovsk 53.12 317 *e*P **P 07 50 30.1 +1.2**
SVE pmax pmax
comp=Z,20nm,0.8s
SOEI Soe 53.40 203 *e*P **P 07 50 31.7 +0.1**
comp=Z,7.8nm,0.9s
ARU Arti 54.33 317 P **P 07 50 37.9 0.0**
comp=Z,3.6nm,0.3s,baz=70,slow=4.5,SNR=16
ARU Arti 54.33 317 *e*P **P 07 50 36.9 -0.9**
comp=Z,18nm,1.0s
ARU Arti 54.33 317*c i*P **P 07 50 38.0 +0.2**
ARU *PP **sP** 07 50 52.2 +1.2
ARU 07 51 37.7
ARU S **S 07 58 14.1 +0.7**
ARU SS **SKiKP 08 01 47.5 +1.8**
ARU pmax pmax
comp=Z,24nm,1.2s
ARU MLR MLR
comp=Z,204nm,18.0s
NIL Nilore 54.71 286 *e*P **P 07 50 41.1 +0.2**
comp=Z,13nm,0.7s
NIL Nilore 54.71 286 *e*P **P 07 50 41.2 +0.2**
NIL pmax pmax
comp=Z,13nm,0.7s
AB31 Akbulak array 56.46 309 *i* P **P 07 50 53.1 -0.2**
AB31 pmax pmax
comp=Z,7.0nm,0.7s
ABKAR Akbulak array 56.46 309 *e*P **P 07 50 53.3 0.0**
SPA0 Spitsbergen Ar 56.91 349 *e*P **P 07 50 56.7 +0.6**
SPITS Spitsbergen Ar 56.91 349 P **P 07 50 57.5 +1.4**
comp=Z,2.0nm,0.6s,baz=335,slow=6.4,SNR=4.3
SPITS LR LR 08 18 07.5
comp=Z,60nm,19.6s,baz=290,slow=39
AKTO Aktyubinsk 57.07 311 P **P 07 50 57.8 +0.2**
comp=Z,4.3nm,0.8s,baz=61,slow=7.7,SNR=11
AKTO LR LR 08 17 10.6
comp=Z,120nm,19.4s,baz=53,slow=38
KBL Kabul 57.30 289 P **P 07 50 58.9 -0.9**
KBL pmax pmax
comp=Z,7.0nm,1.1s
PRGR Permogore 58.21 326 *e*P **P 07 51 04.2 -1.2**
PRGR pmax pmax
comp=Z,19nm,0.9s
RES Resolute Bay 58.45 15 P **P 07 51 07.0 +0.1**
comp=Z,4.4nm,0.7s,baz=315,slow=7.2,SNR=10
RES Resolute Bay 58.45 15 *e*P **P 07 51 07.3 +0.5**
comp=Z,4.9nm,0.7s
RES Resolute Bay 58.45 15 *e*P **P 07 51 07.3 +0.5**
RES pmax pmax
comp=Z,5.0nm,0.7s
YKA Yellowknife Ar 59.74 32 P **P 07 51 16.7 +0.7**
comp=Z,0.8nm,0.9s,baz=305,slow=6.7,SNR=3.2
YKA LR LR 08 18 52.9
comp=Z,5.0nm,20.5s,baz=312,slow=38
YKB5 Yellowknife Ar 59.74 32 *e*P **P 07 51 16.7 +0.7**
ARA0 ARCESS Array S 60.78 339 *e*P **P 07 51 22.9 -0.1**
ARCES ARCESS Array B 60.78 339 P **P 07 51 22.9 -0.1**
comp=Z,4.9nm,1.0s,baz=46,slow=8.7,SNR=4.1
KLMR Klimovskoe 61.15 327 *e*P **P 07 51 24.2 -1.4**
KLMR *e* 07 53 38.9
KLMR pmax pmax
comp=Z,22nm,1.3s
KLMR Klimovskoe 61.15 327 *e*P **P 07 51 24.3 -1.4**
KLMR AMP 07 51 26.1
comp=Z,22nm,1.3s
KLMR *e*PP **PP 07 53 38.9 -1.1**
WRAB Tennant Creek 61.15 189 *e*P **P 07 51 25.8 -0.3**
comp=Z,4.7nm,1.1s
WRAB Tennant Creek 61.15 189 *e*P **P 07 51 25.8 -0.3**
WRAB pmax pmax
comp=Z,5.0nm,1.1s
WB2 Warramunga Arr 61.16 189 *e*P **P 07 51 24.5 -1.6**
WR1 Warramunga Arr 61.16 189 *e*P **P 07 51 26.1 0.0**
comp=Z,7.7nm,1.0s
WRA Warramunga Arr 61.16 189 P **P 07 51 26.1 0.0**
comp=Z,3.6nm,0.6s,baz=6.7,slow=6.9,SNR=72
SGF Sodankyl 61.84 337 P **P 07 51 30.1 -0.1**
SGF pmax pmax
comp=Z,21nm,2.4s
JOF Joensuu 63.12 332 P **P 07 51 39.0 +0.2**
JOF pmax pmax
comp=Z,14nm,0.9s
GEYT Alibeck 63.12 298 LR LR 08 21 29.4
comp=Z,164nm,18.4s,baz=35,slow=38
GYA0B ALIBECK ARRAY 63.12 298 *e*P **P 07 51 39.3 0.0**
comp=Z,6.0nm,0.7s
OUL Oulu 63.57 335 P **P 07 51 41.6 -0.1**
OUL pmax pmax
comp=Z,12nm,2.0s
AS01 Alice Springs 64.88 189 *e*P **P 07 51 51.1 +0.2**
AS31 Alice Springs 64.89 189 *e*P **P 07 51 51.1 +0.2**
comp=Z,1.2nm,0.8s
ASAR Alice Springs 64.89 189 P **P 07 51 51.5 +0.6**
comp=Z,2.6nm,0.6s,baz=7.1,slow=5.5,SNR=21
H04A Detroit Lake 65.56 51 *e*P **P 07 51 56.2 +1.0**
comp=Z,1.9nm,0.8s
OBN Obninsk 65.74 323*ce*P **P 07 51 55.7 -0.4**
OBN *e* 07 52 27.2
OBN *e* 07 54 18.3
OBN *e*S **S 08 00 45.3 +5.3**
OBN pmax pmax
comp=Z,35nm,0.5s
OBN MLR MLR
comp=Z,124nm,16.0s
FIA1 FINESS Array S 65.95 332 *e*P **P 07 51 57.0 -0.3**
FIA0 FINESS Array S 65.95 332 *e*P **P 07 51 57.0 -0.3**
FIA0 FINESS Array S 65.95 332 *e*P **P 07 51 57.0 -0.3**
FINES FINESS Array B 65.95 332 P **P 07 51 57.0 -0.3**
comp=Z,8.4nm,0.7s,baz=48,slow=7.7,SNR=24
FINES LR LR 08 23 48.2
comp=Z,199nm,18.3s,baz=55,slow=39
BLTW Bickleton 66.04 49 *e*P **P 07 51 58.6 +0.3**
DZM Mont Dzumac 66.37 156 LR LR 08 21 11.8
comp=Z,95nm,18.6s,baz=18,slow=36
SUMG Summit 66.73 1 *i* P **P 07 52 03.4 +0.8**
comp=Z,9.3nm,0.9s
SUMG Summit 66.73 1 *e*P **P 07 52 03.5 +0.8**
comp=Z,9.6nm,0.9s
SUMG Summit 66.73 1 *e*P **P 07 52 03.5 +0.8**
SUMG pmax pmax
comp=Z,10.0nm,0.9s
PINE Pine Mountain 66.81 52 *e*P **P 07 52 05.4 +2.0**
comp=Z,3.0nm,0.9s
VSR Storozhevoye 66.85 318 *e*P **P 07 52 03.0 -0.3**
VSR pmax pmax
comp=Z,20nm,0.6s
K05A Summer Lake 67.45 53 *e*P **P 07 52 09.2 +1.7**
comp=Z,2.4nm,0.9s
VSU Vasula 67.73 329*c i*P **P 07 52 09.5 +0.8**
VSU pmax pmax
comp=Z,32nm,1.0s
AFI Afiamalu 68.72 132 LR LR 08 16 09.9
comp=Z,46nm,21.4s,baz=168,slow=30
NCK Nalchik 69.09 310 *i* P **P 07 52 18.5 +1.0**
NCK pmax pmax
comp=Z,19nm,0.9s
KVAR Kislovodsk Arr 69.33 311 P **P 07 52 20.1 +1.0**
comp=Z,27nm,0.8s,baz=245,slow=4.2,SNR=12
KIV Kislovodsk 69.34 311 *e*P **P 07 52 19.2 +0.1**
comp=Z,55nm,1.0s
KIV Kislovodsk 69.34 311 *e*P **P 07 52 20.2 +1.1**
KIV pmax pmax
comp=Z,59nm,1.0s
KBZ Khabaz 69.35 310 P **P 07 52 20.4 +1.3**
comp=Z,17nm,0.9s,baz=58,slow=4.2,SNR=22
NEY Neytrino 69.75 310 *e*P **P 07 52 23.4 +1.6**
NEY pmax pmax
comp=Z,3.0nm,0.9s
GNI Garni 70.43 306 *e*P **P 07 52 26.0 0.0**
GNI pmax pmax
comp=Z,23nm,1.1s
NC405 NORSAR Array S 70.85 337 *e*P **P 07 52 26.1 -1.9**
NC204 NORSAR Array S 71.00 338 *e*P **P 07 52 28.3 -0.7**
BOZ Bozeman (W) 71.01 46 *e*P **P 07 52 30.9 +1.5**
comp=Z,2.0nm,0.8s
BOZ Bozeman (W) 71.01 46 *e*P **P 07 52 30.9 +1.5**
BOZ pmax pmax
comp=Z,2.0nm,0.8s
HFS Hagfors 71.04 336 P **P 07 52 29.4 +0.2**
comp=Z,2.4nm,0.4s,baz=46,slow=8.3,SNR=15
HFS LR LR 08 27 39.4
comp=Z,99nm,18.3s,baz=29,slow=39
NB2 NORSAR Subarra 71.06 337 P **P 07 52 29.1 -0.2**
comp=Z,1.3nm,0.6s,baz=35,slow=6.5
NB2 NORSAR Subarra 71.06 337 P **P 07 52 29.1 -0.2**
NOA NORSAR Array B 71.06 337 LR LR 08 27 12.7
comp=Z,104nm,21.0s,baz=30,slow=39
KVN Kaiserville 71.34 54 *e*P **P 07 52 33.4 +1.8**
comp=Z,2.2nm,0.8s
KVN Kaiserville 71.34 54 *e*P **P 07 52 33.4 +1.8**
KVN pmax pmax
comp=Z,2.0nm,0.8s
NV01 Mina Array Sit 71.59 55 *e*P **P 07 52 34.8 +1.6**
NVAR Mina Array Bea 71.59 55 P **P 07 52 33.5 +0.4**
comp=Z,0.5nm,0.7s,baz=300,slow=7.2,SNR=5.9
YHB Horse Butte 71.78 46 *e*P **P 07 52 36.3 +2.1**
comp=Z,2.3nm,0.8s
SFJD Kangerlussuaq 71.84 6 LR LR 08 27 38.6
comp=Z,55nm,18.6s,baz=336,slow=39
AKASG Malin Array Be 71.99 322 P **P 07 52 34.8 -0.2**
comp=Z,3.6nm,0.4s,baz=43,slow=6.0,SNR=29
AKASG LR LR 08 27 27.8
comp=Z,94nm,18.7s,baz=50,slow=38
AKBB Malin Array Si 71.99 322 *e*P **P 07 52 35.2 +0.2**
comp=Z,15nm,0.8s
KIEV Kiev 72.00 322 *e*P **P 07 52 34.9 -0.2**
comp=Z,15nm,0.9s
KIEV Kiev 72.00 322*ce*P **P 07 52 34.8 -0.2**
KIEV pmax pmax
comp=Z,19nm,1.0s
AK11 Malin Array Si 72.03 322 *e*P **P 07 52 35.2 -0.1**
DUG Dugway, Tooele 73.80 51 P **P 07 52 46.9 +0.8**
DUG pmax pmax
comp=Z,4.0nm,1.2s
BORG Borgarnes 73.90 353 LR LR 08 26 11.7
comp=Z,20nm,18.2s,baz=67,slow=36
PD31 Pinedale Array 73.98 47 *e*P **P 07 52 47.8 +0.5**
PDAR Pinedale Array 73.98 47 P **P 07 52 47.8 +0.5**
comp=Z,0.4nm,0.6s,baz=283,slow=2.6,SNR=6.5
SORM Soroca 74.18 321 ⇓*i*P **P 07 52 48.0 0.0**
SORM Soroca 74.18 321 ⇓P **P 07 52 48.0 0.0**
ULM Lac du Bonnet 75.49 35 LR LR 08 29 22.8
comp=Z,28nm,18.3s,baz=8.5,slow=38
LCMT Little Creek M 75.60 53 *e*P **P 07 53 00.1 +3.5**
KWP Kalwaria Pacla 75.69 325 *e*P **P 07 52 57.8 +1.0**
KWP Kalwaria Pacla 75.69 325 *e*P **P 07 52 57.6 +0.9**
KWP Kalwaria Pacla 75.69 325 *e*P **P 07 52 57.6 +0.9**
BUR08 Bucovina Ar. S 76.02 322 *e*P **P 07 52 59.5 +0.7**
RSSD Black Hills 76.02 43 *e*P **P 07 52 59.3 +0.3**
comp=Z,2.0nm,0.9s
RSSD Black Hills 76.02 43 *e*P **P 07 52 59.3 +0.3**
RSSD pmax pmax
comp=Z,2.0nm,0.9s
BUR04 Bucovina Ar. S 76.03 322 *e*P **P 07 52 59.1 +0.3**
BURAR Bucovina Array 76.03 322 ⇓*i*P **P 07 52 59.7 +0.8**
BURAR Bucovina Array 76.03 322 ⇓P **P 07 52 59.7 +0.8**
BIZ Bicaz 76.10 321 ⇓*i*P **P 07 53 00.1 +1.0**
TESR Tescani 76.15 320 ⇓*i*P **P 07 52 59.2 -0.2**
OJC Ojcow 76.50 326 *e*P **P 07 53 01.8 +0.5**
comp=Z,9.7nm,0.9s
OJC Ojcow 76.50 326 *e*P **P 07 53 01.8 +0.5**
OJC pmax pmax
comp=Z,10.0nm,0.9s
VRI Vrincioaia 76.57 320 ⇑*i*P **P 07 53 03.9 +2.1**
VRI Vrincioaia 76.57 320 ⇑P **P 07 53 03.9 +2.1**
TIRR Tirgusor 76.74 318 ⇑*i*P **P 07 53 03.5 +0.8**
TIRR Tirgusor 76.74 318 ⇑P **P 07 53 03.5 +0.8**
TLB Topalu 76.83 318 ⇓*i*P **P 07 53 04.7 +1.4**
TLB Topalu 76.83 318 ⇓P **P 07 53 04.7 +1.4**
TRPA Tarpa 76.88 324 ⇓*i*P **P 07 53 04.8 +1.3**
NIE Niedzica 76.89 326 *e*P **P 07 53 04.7 +1.1**
BR101 Keskin Array S 77.22 312 *e*P **P 07 53 06.1 +0.3**
BRTR Keskin Array B 77.22 312 P **P 07 53 06.1 +0.3**
comp=Z,1.1nm,0.6s,baz=64,slow=4.3,SNR=5.2
BRTR LR LR 08 32 52.7
comp=Z,21nm,18.2s,baz=73,slow=40
MLR Muntele Rosu 77.22 320 ⇓*i*P **P 07 53 07.1 +1.4**
MLR Muntele Rosu 77.22 320 ⇓P **P 07 53 07.1 +1.4**
PV17 East Wray Mesa 77.31 50 *e*P **P 07 53 05.8 -0.6**
comp=Z,4.8nm,1.2s
ANTO Ankara 77.60 312 P **P 07 53 08.4 +0.6**
VOIR 77.69 321 ⇑*i*P **P 07 53 09.7 +1.5**
VOIR 77.69 321 ⇑P **P 07 53 09.7 +1.5**
DRGR 77.80 323 ⇑*i*P **P 07 53 09.7 +0.9**
DRGR 77.80 323 ⇑P **P 07 53 09.7 +0.9**
ARR Arges 77.95 321 ⇓*i*P **P 07 53 12.0 +2.4**
PSZ Piszkesteto 78.21 325 *e*P **P 07 53 12.0 +1.0**
comp=Z,7.9nm,1.1s
PSZ Piszkesteto 78.21 325 *e*P **P 07 53 12.0 +1.0**
PSZ pmax pmax
comp=Z,8.0nm,1.1s
CLL Collm 78.32 331 *i* P **P 07 53 11.8 +0.3**
comp=Z,7.0nm,1.0s
CLL L L 08 30 00.0
comp=Z,100nm,21.0s
CLL Collm 78.32 331 *i* P **P 07 53 11.8 +0.3**
CLL pmax pmax
comp=Z,7.0nm,1.0s
PRU Pruhonice 78.80 329 P **P 07 53 14.8 +0.7**
CONA Conrad Observa 79.91 327 *e*P **P 07 53 21.5 +1.2**
comp=Z,5.1nm,1.0s
CONA *e*P **sP 07 53 35.0 +1.1**
comp=Z,5.7nm,0.9s
GEC2 GERESS Array S 80.04 329 *e*P **P 07 53 20.9 -0.2**
comp=Z,4.1nm,0.9s
GEC2 GERESS Array S 80.04 329 *e*P **P 07 53 20.9 -0.2**
GEC2 pmax pmax
comp=Z,4.0nm,0.9s
GERES GERESS Array B 80.04 329 P **P 07 53 21.1 0.0**
comp=Z,0.6nm,0.3s,baz=46,slow=11,SNR=11
GERES LR LR 08 33 05.9
comp=Z,71nm,18.8s,baz=327,slow=39
GEA0 GERESS Array S 80.05 329 *e*P **P 07 53 21.1 0.0**
WET Wettzell 80.12 329 P **P 07 53 22.0 +0.6**
RAYN Ar Rayn 80.38 293 *e*P **P 07 53 22.8 -0.5**
comp=Z,3.8nm,0.8s
ARSA Arzberg 80.58 327 *e*PcP **P 07 53 27.0 +3.1**
comp=Z,2.3nm,0.4s
ARSA *e*P **sP 07 53 38.2 +0.8**
comp=Z,8.8nm,1.0s
MOA Molln 80.62 328 *e*pP pP 07 53 35.3 +1.3
comp=Z,2.9nm,0.5s
VTS Vitosha 80.69 320 *e*P **P 07 53 24.9 +0.1**
comp=Z,5.5nm,1.0s
VTS Vitosha 80.69 320 *e*P **P 07 53 24.9 +0.1**
VTS pmax pmax
comp=Z,6.0nm,1.0s
MMAI Mount Meron Ar 80.75 306 P **P 07 53 25.9 +0.8**
comp=Z,8.1nm,0.8s,baz=42,slow=6.6,SNR=6.0
DIVS Divibare 81.09 322 *e*P **P 07 53 26.8 0.0**
comp=Z,5.4nm,1.0s
SCHQ Schefferville 81.18 17 LR LR 08 34 19.9
comp=Z,27nm,18.0s,baz=25,slow=39
SOKA Soboth 81.24 327 *e*P **P 07 53 27.9 +0.4**
comp=Z,11nm,1.2s
OBKA Obir 81.58 327 *e*P **P 07 53 29.8 +0.4**
comp=Z,5.8nm,0.8s
KBA Koelnbreinsper 81.61 328 *e*P **P 07 53 30.8 +1.2**
comp=Z,3.2nm,0.6s
KBA Koelnbreinsper 81.61 328 P **P 07 53 30.6 +1.0**
KBA pmax pmax
comp=Z,7.0nm,1.0s
ABTA Abfaltersbach 82.21 328 *e*P **P 07 53 33.4 +0.7**
comp=Z,1.9nm,0.6s
MOTA Moosalm 82.28 329 *e*P **P 07 53 33.8 +0.8**
comp=Z,9.4nm,0.9s
RETA Reutte 82.29 330 *e*P **P 07 53 33.8 +0.8**
comp=Z,6.6nm,0.8s
FETA Feichten 82.69 329 *e*P **P 07 53 35.4 +0.1**
comp=Z,4.6nm,1.1s
DAVA Damuels 82.79 330 *e*P **P 07 53 36.6 +0.9**
comp=Z,7.7nm,0.8s
ECH Echery 83.01 332 *e*P **P 07 53 35.6 -1.1**
comp=Z,3.7nm,0.7s
ECH Echery 83.01 332 *e*P **P 07 53 35.6 -1.1**
ECH pmax pmax
comp=Z,4.0nm,0.7s
FUORN Ofenpass-Fuorn 83.20 329 *e*P **P 07 53 38.9 +0.9**
DAVOX Davos/Dischmat 83.21 330 P **P 07 53 38.8 +0.8**
comp=Z,2.3nm,0.5s,baz=310,slow=6.4,SNR=4.3
DAVOX LR LR 08 34 54.0
comp=Z,109nm,18.1s,baz=80,slow=39
EIL Elat 83.32 304 P **P 07 53 42.3 +3.7**
comp=Z,4.9nm,0.7s,baz=99,slow=1.5,SNR=4.7
HAU Haudompre 83.47 332 *e*P **P 07 53 39.4 +0.3**
HAU pmax pmax
comp=Z,10.0nm,1.1s
PMOR Pomariorio Ree 84.59 115 *e*T T 09 26 39.9
comp=Z,4.1nm,0.2s
K43A Burlington 84.62 35 *e*P **P 07 53 42.9 -2.1**
comp=Z,11nm,1.0s
LDF La Druitiere 85.07 336 *e*P **P 07 53 48.1 +1.0**
LDF pmax pmax
comp=Z,8.0nm,1.0s
PPT Papeete 85.26 118 LR LR 08 26 59.3
comp=Z,102nm,20.6s,baz=344,slow=32
PPT2 Papeete2 85.27 118 *e*LR LR 08 20 46.0
comp=Z,132nm,21.0s,baz=305
LPL La Plagne 85.46 331 *e*P **P 07 53 49.4 0.0**
LPL pmax pmax
comp=Z,7.0nm,0.8s
LPG La Plagne 85.47 331 *e*P **P 07 53 49.6 0.0**
LPG pmax pmax
comp=Z,9.0nm,0.8s
GRR Gorron 85.48 337 *e*P **P 07 53 49.2 0.0**
GRR pmax pmax
comp=Z,13nm,1.1s
SMF Signal de Mont 85.51 333 *e*P **P 07 53 49.3 -0.1**
AVF Avril sur Loir 85.55 334 *e*P **P 07 53 49.5 -0.1**
AVF pmax pmax
comp=Z,11nm,0.8s
BNI Bardonecchia 85.87 331 *e*P **P 07 53 51.3 -0.1**
comp=Z,6.3nm,1.0s
BNI Bardonecchia 85.87 331 *e*P **P 07 53 51.3 -0.1**
BNI pmax pmax
comp=Z,6.0nm,1.0s
TAOE Nuku Hiva Isla 85.88 105 *e*LR LR 08 21 02.7
comp=Z,113nm,22.1s,baz=315
SGMF Saint Gilles 86.09 338 *e*P **P 07 53 52.4 +0.2**
SGMF pmax pmax
comp=Z,96nm,1.9s
ORIF Oris-en-Rattie 86.28 331 *e*P **P 07 53 53.3 -0.1**
ORIF pmax pmax
comp=Z,4.0nm,0.7s
TCF Toulx Ste Croi 86.37 334 *e*P **P 07 53 53.9 +0.2**
TCF pmax pmax
comp=Z,14nm,1.3s
TX31 Lajitas Ar. Si 86.68 54 *e*P **P 07 53 55.6 0.0**
TXAR Lajitas Array 86.68 53 P **P 07 53 57.2 +1.6**
comp=Z,0.5nm,0.7s,baz=305,slow=3.2,SNR=6.2
TXAR LR LR 08 32 44.5
comp=Z,33nm,19.3s,baz=0.0,slow=36
VIVF Saint-Julien-l 86.77 332 *e*P **P 07 53 56.6 +0.9**
VIVF pmax pmax
comp=Z,7.0nm,1.2s
RJF Les Rejaudoux 87.47 334 *e*P **P 07 53 59.3 +0.3**
CAF Calviac 87.62 333 *e*P **P 07 54 00.5 +0.7**
CAF pmax pmax
comp=Z,9.0nm,1.0s
ETSF Etsaut 90.29 334 *e*P **P 07 54 13.4 +0.9**
SJPF Ste Jean 90.32 335 *e*P **P 07 54 10.9 -1.6**
SJPF pmax pmax
comp=Z,3.0nm,0.7s
TKL Tuckaleechee C 92.41 37 LR LR 08 37 35.1
comp=Z,34nm,20.6s,baz=350,slow=36
ESDC Sonseca Array 94.31 335 LR LR 08 43 08.6
comp=Z,57nm,18.2s,baz=285,slow=39

IDC 28 08:25:29.3±11.0, 23.70S×66.05W, h176km±85km, mb3.3/1, mb1 3.2/2, mb1mx2.8/35, mbtmp3.6/2, Error ellipse: s-maj=128.6km s-min=77.7km az=43.0, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**7.63**	**345**	P	Pn	08 27 18.3	-0.1
	0.4nm,0.3s,baz=157,slow=8.8,SNR=19						
LPAZ				S	Sn	08 28 45.1	+0.7
	0.1nm,0.3s,baz=294,slow=12,SNR=3.1						
TORD	**Torodi Ar. Bea**	**75.65**	**69**	P	P	08 36 55.6	+0.1
	0.9nm,1.2s,baz=255,slow=6.0						
MKAR	**Makanchi Array**	**145.74**	**40**	PKPbc	PKPdf	08 44 46.5	-0.2
	0.3nm,0.7s,baz=304,slow=4.4,SNR=2.7						

MEX 28 08:28:13.3±0.4, 16.50N×98.23W, h16km±27km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.11**	**343**	*e*P	Pb	08 28 30.5	-3.6
TLIG				*e*S	Sb	08 28 43.9	-4.5
VHO	**Vista Hermosa**	**1.54**	**68**	*e*P	Pn	08 28 36.8	-3.6
VHO				*i* S	Sn	08 28 56.5	-3.7
ARIG	**Puente Sto Nin**	**2.69**	**312**	*e*P	Pn	08 28 57.4	+1.5
ARIG				*i* S	Sb	08 29 35.3	+1.5

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*IDC **28** 08:39:14.6±0.9, 38.69N×43.21E, h0km, mb3.8/11, mb1 3.8/16, mb1mx3.7/58, mbtmp3.7/16, ML3.0/3, MS3.0/7, Ms1 3.0/7, ms1mx2.6/63, Error ellipse: s-maj=16.2km s-min=9.9km az=149.0*
*AZER **28** 08:39:14.6±1.4, 38.58N×43.00E, h4km±42km, ml3.8/18, Error ellipse: s-maj=44.2km s-min=10.6km az=59.0*
*MOS **28** 08:39:15.1±0.9, 38.54N×43.26E, h13km, mb4.3/9, Error ellipse: s-maj=10.2km s-min=5.6km az=88.8*
*NEIC **28** 08:39:16.2±0.0, 38.72N×43.35E, h5km, mb3.9/3, ML4.0(ISK), ML4.2(DDA), After ISK.*
*DDA **28** 08:39:16.4, 38.75N×43.35E, h22km, Ml4.2*
*ISK **28** 08:39:16.3, 38.72N×43.35E, h5km, ML4.0/15*
*CSEM **28** 08:39:17.5±0.1, 38.71N×43.29E, h10km, mb4.0/9, Error ellipse: s-maj=4.4km s-min=3.5km az=152.0*
*ISCJB **28** 08:39:17.3±0.4, 38.75N±0.02×43.34E±0.02, h6km±3km, mb3.8/16, Error ellipse: s-maj=2.9km s-min=2.4km az=138.3*

ISC 28 08:39:17.6±0.8, 38.74N±0.01×43.34E±0.01, h13km±5km, n203, σ1$46/262, mb4.0/16, 33C-30D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.15**	**163**	PG	**Pb**	**08 39 22.4**	**+0.1**
VANB				SG	**Sb**	**08 39 24.5**	**-0.9**
VANB	**Van**	**0.15**	**163**	Pg	**Pb**	**08 39 22.4**	**+0.1**
VANB	**Van**	**0.15**	**163**	*i* Pg	**Pb**	**08 39 22.4**	**+0.1**
VANB				*e*Sg	**Sb**	**08 39 24.5**	**-0.9**
TVAN	**Van**	**0.21**	**165**	⇓*i*P	**Pg**	**08 39 22.3**	**-0.2**
TVAN				*i* S	**Sb**	**08 39 26.4**	**-1.1**
TVAN	**Van**	**0.21**	**165**	P	**Pg**	**08 39 22.3**	**-0.2**
TVAN				S	**Sb**	**08 39 26.4**	**-1.1**
ERCV	**ERCIS-VAN**	**0.28**	**0**	PG	**Pg**	**08 39 22.6**	**-1.0**
ERCV				SG	**Sg**	**08 39 27.3**	**-0.3**
ERCV	**ERCIS-VAN**	**0.28**	**0**	*i* Pg	**Pg**	**08 39 22.6**	**-1.0**
ERCV				*e*Sg	**Sg**	**08 39 27.3**	**-0.3**
VMUR	**Van-Muradiye**	**0.31**	**36**	⇓*i*P	**Pg**	**08 39 23.6**	**-0.5**
VMUR				*i* S	**Sg**	**08 39 29.2**	**+0.7**
VMUR	**Van-Muradiye**	**0.31**	**36**	P	**Pg**	**08 39 23.6**	**-0.5**
VMUR				S	**Sg**	**08 39 29.2**	**+0.7**
GEVA	**Gevas**	**0.48**	**207**	⇓*i*P	**Pg**	**08 39 26.2**	**-0.8**
GEVA				*i* S	**Sb**	**08 39 34.7**	**-0.2**
GEVA	**Gevas**	**0.48**	**207**	P	**Pg**	**08 39 26.2**	**-0.8**
GEVA				S	**Sb**	**08 39 34.7**	**-0.2**
ADCV	**BITLIS_Adilcev**	**0.48**	**279**	⇑*i*P	**Pg**	**08 39 26.9**	**-0.3**
ADCV				*i* S	**Sb**	**08 39 34.4**	**-0.8**
ADCV	**BITLIS_Adilcev**	**0.48**	**279**	P	**Pg**	**08 39 26.9**	**-0.3**
ADCV				S	**Sb**	**08 39 34.4**	**-0.8**
CLDR	**Caldiran**	**0.61**	**48**	PG	**Pg**	**08 39 27.7**	**-1.9**
CLDR				SG	**Sg**	**08 39 37.1**	**-0.6**
CLDR	**Caldiran**	**0.61**	**48**	⇓*i*P	**Pg**	**08 39 27.6**	**-1.9**
CLDR				*i* S	**Sg**	**08 39 37.2**	**-0.6**
CLDR	**Caldiran**	**0.61**	**48**	Pg	**Pg**	**08 39 27.7**	**-1.9**
CLDR	**Caldiran**	**0.61**	**48**	*i* Pg	**Pg**	**08 39 27.7**	**-1.9**

CLDR				S		Sg	08 39 37.2	-0.5
DYDN	**Diyadin**	**0.85**	**19**	*i* P		**Pg**	08 39 32.7	-1.5
DYDN				*i* S		**Sg**	08 39 44.2	-1.2
DYDN	**Diyadin**	**0.85**	**19**	P		**Pg**	08 39 32.7	-1.5
DYDN				S		**Sg**	08 39 44.2	-1.2
GURO	**Guroymak-BITLI**	**1.04**	**260**	PG		**Pb**	08 39 36.2	-1.3
GURO				SG		**Sg**	08 39 50.6	-0.6
GURO	**Guroymak-BITLI**	**1.04**	**260**	*i* Pg		**Pb**	08 39 36.2	-1.3
GURO				*e*Sg		**Sg**	08 39 50.6	-0.6
EKAR	**Karacoban**	**1.12**	**298**	⇑*i*P		**Pb**	08 39 37.2	-1.8
EKAR				*i* S		**Sn**	08 39 56.2	+1.6
EKAR	**Karacoban**	**1.12**	**298**	P		**Pb**	08 39 37.2	-1.8
EKAR				S		**Sn**	08 39 56.2	+1.6
HAKT	**HAKKARI**	**1.21**	**166**	⇓*i*P		**Pn**	08 39 39.0	-1.5
HAKT				*i* S		**Sn**	08 40 00.8	+3.8
HAKT	**HAKKARI**	**1.21**	**166**	P		**Pn**	08 39 39.0	-1.5
IGDI	**IGDIR**	**1.27**	**27**	*i* P		**Pn**	08 39 40.6	-0.6
IGDI				*i* S		**Sg**	08 40 01.0	+2.4
EATA	**Eleskirt**	**1.30**	**330**	⇑*i*P		**Pn**	08 39 41.0	-0.8
EATA				*i* S		**Sg**	08 39 59.6	0.0
EATA	**Eleskirt**	**1.30**	**330**	P		**Pn**	08 39 41.0	-0.8
EATA				S		**Sg**	08 39 59.6	0.0
SRTM	**Siirt_Merkez**	**1.34**	**237**	⇓*i*P		**Pn**	08 39 41.6	-0.5
SRTM				*i* S		**Sg**	08 40 02.4	+1.7
SRTM	**Siirt_Merkez**	**1.34**	**237**	P		**Pn**	08 39 41.6	-0.5
SRTM				S		**Sg**	08 40 02.4	+1.7
YOVA	**Hakkari_Y¨...kse**	**1.37**	**146**	*i* P		**Pb**	08 39 42.7	-0.6
YOVA				*i* S		**Sg**	08 40 02.5	+0.6
YOVA	**Hakkari_Y¨...kse**	**1.37**	**146**	P		**Pb**	08 39 42.7	-0.6
YOVA				S		**Sg**	08 40 02.5	+0.6
SIRT	**Sirnak**	**1.42**	**210**	PN		**Pn**	08 39 42.8	-0.4
SIRT	**Sirnak**	**1.42**	**210**	*e*Pn		**Pn**	08 39 42.8	-0.4
SIRN	**S¨–rnak**	**1.44**	**211**	⇑*i*P		**Pb**	08 39 43.9	-0.4
SIRN				*i* S		**Sg**	08 40 05.8	+1.9
SIRN	**S¨–rnak**	**1.44**	**211**	P		**Pb**	08 39 43.9	-0.4
SIRN				S		**Sg**	08 40 05.8	+1.9
CUKT	**Cukurca**	**1.50**	**172**	PN		**Pn**	08 39 43.4	-1.0
CUKT	**Cukurca**	**1.50**	**172**	*i* P		**Pn**	08 39 43.2	-1.2
CUKT				*i* S		**Sg**	08 40 08.0	+2.0
CUKT	**Cukurca**	**1.50**	**172**	*e*Pn		**Pn**	08 39 43.4	-1.0
CUKT				S		**Sg**	08 40 08.0	+2.0
VRTB	**Varto-Mus**	**1.52**	**287**	PN		**Pb**	08 39 45.2	-0.7
VRTB	**Varto-Mus**	**1.52**	**287**	*i* P		**Pn**	08 39 44.1	-0.6
VRTB				*i* S		**Sg**	08 40 09.1	+2.3
VRTB	**Varto-Mus**	**1.52**	**287**	P		**Pn**	08 39 44.1	-0.6
VRTB	**Varto-Mus**	**1.52**	**287**	*e*Pn		**Pb**	08 39 45.2	-0.7
HYR	**Heyderabad**	**1.53**	**50**	⇓P		**Pb**	08 39 45.8	-0.1
HYR	**Heyderabad**	**1.53**	**50**	⇓P		**Pb**	08 39 45.8	-0.1
HYR				⇑S		**Sg**	08 40 11.3	+4.3
DIGO	**Kars**	**1.68**	**1**	*e*P		**Pn**	08 39 47.3	+0.4
DIGO				*i* S		**Sg**	08 40 13.8	+2.3
DIGO	**Kars**	**1.68**	**1**	P		**Pn**	08 39 47.3	+0.4
DIGO				S		**Sg**	08 40 13.9	+2.3
HOMI	**Horasan**	**1.71**	**320**	⇑*i*P		**Pn**	08 39 47.2	-0.2
HOMI				*i* S		**Sb**	08 40 11.7	+1.0
BNGL	**BINGOL**	**1.72**	**278**	⇑*i*P		**Pb**	08 39 48.1	-1.1
BNGL				*i* S		**Sg**	08 40 12.8	-0.2
NAX	**Nakhchivan**	**1.74**	**75**	⇓P		**Pb**	08 39 49.8	+0.3
	SNR=44							
NAX	**Nakhchivan**	**1.74**	**75**	⇓P		**Pb**	08 39 49.8	+0.3
	SNR=44							
SVAN	**Silvan-Diyarba**	**1.78**	**251**	PN		**Pn**	08 39 47.5	-0.6
SVAN	**Silvan-Diyarba**	**1.78**	**251**	*i* P		**Pb**	08 39 49.4	-0.7
SVAN				*i* S		**Sg**	08 40 14.2	-0.6
SVAN	**Silvan-Diyarba**	**1.78**	**251**	*e*Pn		**Pn**	08 39 47.5	-0.6
SVAN	**Silvan-Diyarba**	**1.78**	**251**	P		**Pb**	08 39 49.4	-0.7
SVAN				S		**Sg**	08 40 14.2	-0.6
GNI	**Garni**	**1.78**	**37**	Pn		**Pn**	08 39 49.3	+1.0
	36nm,0.3s,baz=207,slow=2.6,SNR=40							
GNI				Sn		**Sg**	08 40 14.3	-0.7
	49nm,0.3s,baz=344,slow=15,SNR=4.4							
GNI	**Garni**	**1.78**	**37**	PN		**Pn**	08 39 49.0	+0.7
GNI	**Garni**	**1.78**	**37**	*ce*P		**Pn**	08 39 49.0	+0.7
GNI				pmax	pmax			
	comp=Z,3μm,1.0s							
BTMN	**Batman**	**1.83**	**243**	⇑*i*P		**Pb**	08 39 50.5	-0.5
BTMN				*i* S		**Sg**	08 40 16.5	0.0
BTMN	**Batman**	**1.83**	**243**	P		**Pb**	08 39 50.5	-0.5
SBZ	**Shahbuz**	**1.85**	**68**	⇓P		**Pb**	08 39 51.4	+0.1
SBZ	**Shahbuz**	**1.85**	**68**	⇓P		**Pb**	08 39 51.4	+0.1
SBZ				⇑S		**Sg**	08 40 20.1	+3.0
KARS	**Kars**	**1.90**	**354**	PN		**Pn**	08 39 50.6	+0.7
KARS	**Kars**	**1.90**	**354**	P		**Pn**	08 39 50.5	+0.7
KARS	**Kars**	**1.90**	**354**	P		**Pn**	08 39 50.5	+0.7
ERZM	**Erzurum**	**1.92**	**308**	⇓*i*P		**Pn**	08 39 50.6	+0.3
ERZM				*i* S		**Sg**	08 40 18.7	-0.8
ERZM	**Erzurum**	**1.92**	**308**	P		**Pn**	08 39 50.6	+0.3
ERZM				S		**Sg**	08 40 18.7	-0.8
EAK	**Akyaka**	**1.96**	**6**	*i* P		**Pn**	08 39 51.3	+0.6
EAK				*i* S		**Sg**	08 40 23.2	+2.6
EAK	**Akyaka**	**1.96**	**6**	P		**Pn**	08 39 51.3	+0.6
SENK	**Senkaya-Erzuru**	**1.98**	**338**	PN		**Pn**	08 39 51.9	+0.9
SENK	**Senkaya-Erzuru**	**1.98**	**338**	*e*Pn		**Pn**	08 39 51.9	+0.9
ECAT	**Cat-ERZURUM**	**2.03**	**296**	⇑*i*P		**Pn**	08 39 52.4	+0.7
ECAT				*i* S		**Sg**	08 40 21.7	-1.2
ECAT	**Cat-ERZURUM**	**2.03**	**296**	P		**Pn**	08 39 52.4	+0.7
ORD	**Ordubad**	**2.08**	**84**	⇑P		**Pb**	08 39 54.0	-1.3
ORD	**Ordubad**	**2.08**	**84**	⇑P		**Pb**	08 39 54.0	-1.3
BNGB	**Bing¨ll**	**2.09**	**278**	PN		**Pn**	08 39 52.9	+0.5
BGOL	**Bingol**	**2.10**	**278**	*i* P		**Pb**	08 39 55.0	-0.5
BGOL				*i* S		**Sb**	08 40 21.2	-0.3
BGOL	**Bingol**	**2.10**	**278**	P		**Pb**	08 39 55.0	-0.5
BGOL				S		**Sb**	08 40 21.2	-0.3
BINT	**Bingol**	**2.23**	**274**	P		**Pn**	08 39 52.9	-1.5
BINT	**Bingol**	**2.23**	**274**	*e*Pn		**Pn**	08 39 52.9	-1.5
YEDI	**Yedisu-Bingol**	**2.28**	**289**	PN		**Pn**	08 39 56.6	+1.5
YEDI	**Yedisu-Bingol**	**2.28**	**289**	*e*Pn		**Pn**	08 39 56.6	+1.5
HANI	**Diyarbakir_Han**	**2.32**	**263**	*i* P		**Pn**	08 39 57.1	+1.5
HANI				*i* S		**Sb**	08 40 28.2	+0.2
HANI	**Diyarbakir_Han**	**2.32**	**263**	P		**Pn**	08 39 57.1	+1.5
HANI				S		**Sb**	08 40 28.2	+0.2
MARD	**Mardin**	**2.47**	**236**	*i* P		**Pn**	08 39 57.2	-0.5
MARD				*i* S		**Sg**	08 40 36.4	-0.5
BGD	**Bogdanovka**	**2.53**	**4**	P		**Pb**	08 40 04.7	+1.6
KOPT	**Kop Dagi**	**2.54**	**301**	*i* P		**Pb**	08 40 03.7	+0.4
KOPT				*i* S		**Sg**	08 40 41.1	+1.7
MAZI	**Mazidag**	**2.61**	**242**	PN		**Pn**	08 40 00.8	+1.2
MAZI	**Mazidag**	**2.61**	**242**	*e*Pn		**Pn**	08 40 00.8	+1.2
AKH	**Akhalkalaki**	**2.67**	**3**	PN		**Pn**	08 40 01.9	+1.4
AKH	**Akhalkalaki**	**2.67**	**3**	P		**Pb**	08 40 07.0	+1.6
AKH	**Akhalkalaki**	**2.67**	**3**	*e*Pn		**Pn**	08 40 02.4	+1.8
AKH	**Akhalkalaki**	**2.67**	**3**	*e*P		**Pn**	08 40 02.4	+1.8
AKH	**Akhalkalaki**	**2.67**	**3**	*e*Pn		**Pn**	08 40 01.9	+1.4
AKH	**Akhalkalaki**	**2.67**	**3**	*e*P		**Pn**	08 40 02.4	+1.8
GDB	**GEDABAY**	**2.72**	**42**	⇑P		**Pn**	08 40 03.5	+2.3
	SNR=18							
GDB	**GEDABAY**	**2.72**	**42**	⇑P		**Pn**	08 40 03.5	+2.3
	SNR=18							
GDB				⇑S		**Sb**	08 40 41.1	+1.5
QZX	**Qazax, Azerbai**	**2.80**	**33**	⇑P		**Pn**	08 40 03.6	+1.5
	SNR=25							
QZX	**Qazax, Azerbai**	**2.80**	**33**	⇑P		**Pn**	08 40 03.6	+1.5
	SNR=25							
QZX				⇓S		**Sb**	08 40 42.6	+0.9
ERZN	**Erzincan**	**2.93**	**288**	PN		**Pn**	08 40 05.8	+1.7
BAYT	**Ayd¨–ntepe-Bay**	**2.97**	**305**	PN		**Pn**	08 40 06.3	+1.7
BAYT	**Ayd¨–ntepe-Bay**	**2.97**	**305**	*e*Pn		**Pn**	08 40 06.3	+1.7
GANJ	**Ganja**	**2.99**	**49**	⇓P		**Pn**	08 40 07.2	+2.4
	SNR=14							
GANJ	**Ganja**	**2.99**	**49**	⇓P		**Pn**	08 40 07.2	+2.4
	SNR=14							
GANJ				⇑S		**Sb**	08 40 47.2	-0.1
BCA	**Borcka**	**3.01**	**335**	PN		**Pn**	08 40 06.6	+1.6
BCA	**Borcka**	**3.01**	**335**	*e*Pn		**Pn**	08 40 06.6	+1.6
CHOM	**Cayeli-Rize**	**3.08**	**321**	PN		**Pn**	08 40 08.1	+2.1
CHOM	**Cayeli-Rize**	**3.08**	**321**	*e*Pn		**Pn**	08 40 08.1	+2.1
PTK	**Pertek**	**3.08**	**274**	PN		**Pn**	08 40 07.9	+1.7
PTK	**Pertek**	**3.08**	**274**	*e*Pn		**Pn**	08 40 07.9	+1.7
DGRG	**David-gareji**	**3.13**	**29**	P		**Pn**	08 40 08.2	+1.5
DGRG	**David-gareji**	**3.13**	**29**	*e*P		**Pn**	08 40 08.2	+1.5
DGRG	**David-gareji**	**3.13**	**29**	*e*P		**Pn**	08 40 08.2	+1.5
TBLG	**Delisi**	**3.18**	**19**	PN		**Pn**	08 40 08.9	+1.6
TBLG	**Delisi**	**3.18**	**19**	P		**Pb**	08 40 14.9	+0.9
TBLG	**Delisi**	**3.18**	**19**	*e*Pn		**Pn**	08 40 08.6	+1.2
TBLG	**Delisi**	**3.18**	**19**	*e*P		**Pn**	08 40 08.6	+1.2
TBLG	**Delisi**	**3.18**	**19**	*e*P		**Pn**	08 40 08.6	+1.2
SVRC	**Sivrice-ELAZID**	**3.18**	**265**	PN		**Pn**	08 40 09.3	+1.8
SVRC	**Sivrice-ELAZID**	**3.18**	**265**	*e*Pn		**Pn**	08 40 09.3	+1.8
EZC	**Erzincan**	**3.25**	**289**	P		**Pn**	08 40 05.7	-2.7
EZC	**Erzincan**	**3.25**	**289**	*e*Pn		**Pn**	08 40 05.8	-2.7
BRDA	**Brd**	**3.34**	**62**	⇑S		**Sb**	08 40 55.3	-2.0
BRDA	**Brd**	**3.34**	**62**	⇑S		**Sb**	08 40 55.3	-2.0
DDFL	**Dedoflistskaro**	**3.45**	**37**	P		**Pg**	08 40 23.4	-0.3
MNGR	**Mingechevir, A**	**3.53**	**54**	⇓P		**Pn**	08 40 14.7	+2.5
	SNR=11							
MNGR	**Mingechevir, A**	**3.53**	**54**	⇓P		**Pn**	08 40 14.7	+2.5
	SNR=11							
MNGR				⇓S		**Sb**	08 41 01.5	-1.3
ZRD	**Zardab**	**3.70**	**64**	⇑S		**Sb**	08 41 05.4	-2.1
ZKTA	**Zakatala**	**3.84**	**40**	⇓S		**Sb**	08 41 08.4	-3.2
SEKA	**Sheki**	**3.86**	**49**	⇓P		**Pn**	08 40 19.7	+2.9
	SNR=12							
SEKA	**Sheki**	**3.86**	**49**	⇓P		**Pn**	08 40 19.7	+2.9
	SNR=12							
SEKA				⇓S		**Sb**	08 41 10.7	-1.6
LRK	**Lerik**	**3.92**	**90**	⇑P		**Pn**	08 40 18.7	+1.0
	SNR=5.3							
LRK	**Lerik**	**3.92**	**90**	⇑P		**Pn**	08 40 18.7	+1.0
	SNR=5.3							
GLBA	**Cilalbad**	**3.97**	**81**	⇑P		**Pn**	08 40 20.0	+1.8
	SNR=4.4							
GLBA	**Cilalbad**	**3.97**	**81**	⇑P		**Pn**	08 40 20.0	+1.8
	SNR=4.4							
GLBA				⇓S		**Sb**	08 41 11.6	-3.9
KDMR	**Kurdemir**	**4.09**	**65**	⇓S		**Sb**	08 41 14.9	-3.9
QBL	**Gabala**	**4.11**	**56**	⇑S		**Sb**	08 41 15.9	-3.5
ASTR	**Astara**	**4.28**	**91**	⇓P		**Pn**	08 40 23.6	+1.2
	SNR=3.0							
ASTR	**Astara**	**4.28**	**91**	⇓P		**Pn**	08 40 23.6	+1.2
	SNR=3.0							
XNQ	**Khinaliq**	**4.42**	**55**	⇓P		**Pn**	08 40 26.6	+2.0
	SNR=12							
XNQ	**Khinaliq**	**4.42**	**55**	⇓P		**Pn**	08 40 26.6	+2.0
	SNR=12							
NEY	**Neytrino**	**4.53**	**354**	*i* P		**Pn**	08 40 28.6	+2.5
QSAR	**Qusar**	**4.69**	**52**	⇑P		**Pn**	08 40 30.1	+2.0
	SNR=7.0							
QSAR	**Qusar**	**4.69**	**52**	⇑P		**Pn**	08 40 30.1	+2.0
	SNR=7.0							
NCK	**Nalchik**	**4.76**	**2**	*e*P		**Pn**	08 40 31.7	+2.6
NCK	**Nalchik**	**4.76**	**2**	*e*P		**Pn**	08 40 31.7	+2.6
KBZ	**Khabaz**	**5.00**	**356**	Pn		**Pn**	08 40 34.0	+1.7
	baz=198,slow=13,SNR=1.9							
KBZ				LR		LR	08 42 57.3	
	comp=Z,170nm,21.1s,baz=158,slow=44							
KIV	**Kislovodsk**	**5.24**	**355**	*e*Pn		**Pn**	08 40 37.6	+1.9
KIV	**Kislovodsk**	**5.24**	**355**	*e*P		**Pn**	08 40 37.7	+2.0
KIV				pmax	pmax			
	comp=Z,10.0nm,1.1s							
KIV	**Kislovodsk**	**5.24**	**355**	*e*Pn		**Pn**	08 40 37.6	+1.9
KVAR	**Kislovodsk Arr**	**5.24**	**355**	Pn		**Pn**	08 40 37.6	+1.9
	baz=180,slow=14,SNR=2.5							
KVAR				LR		LR	08 43 04.1	
	comp=Z,231nm,18.2s,baz=116,slow=44							
BR101	**Keskin Array S**	**7.59**	**281**	*e*Pn		**Pn**	08 41 06.5	-1.6
BR101	**Keskin Array S**	**7.59**	**281**	*e*Pn		**Pn**	08 41 06.5	-1.6
BRTR	**Keskin Array B**	**7.59**	**281**	Pn		**Pn**	08 41 06.5	-1.6
	comp=Z,0.1nm,0.3s,baz=108,slow=14,SNR=2.5							
ASF	**Jabal al Asfar**	**8.39**	**221**	Pn		**Pn**	08 41 16.2	-2.8
	comp=Z,0.4nm,0.3s,baz=162,slow=22,SNR=5.8							
MMAI	**Mount Meron Ar**	**8.60**	**231**	Pn		**Pn**	08 41 18.4	-3.5
	baz=43,slow=17,SNR=2.6							
MMAI				LR		LR	08 45 16.6	
	comp=Z,121nm,18.7s,baz=30,slow=43							
AKASG	**Malin Array Be**	**15.58**	**325**	Pn		**Pn**	08 42 57.2	+0.5
	comp=Z,0.2nm,0.3s,baz=132,slow=11,SNR=6.6							
KIEV	**Kiev**	**15.58**	**325**	*i* P		**Pn**	08 42 57.3	+0.5
KIEV				pmax	pmax			
	comp=Z,8.0nm,1.3s							
AKTO	**Aktyubinsk**	**15.65**	**37**	Pn		**Pn**	08 42 58.3	+0.5
	comp=Z,0.2nm,0.3s,baz=231,slow=13,SNR=4.2							
AKTO				LR		LR	08 50 35.1	
	comp=Z,52nm,18.4s,baz=228,slow=43							
BUR04	**Bucovina Ar. S**	**15.89**	**310**	*e*Pn		**Pn**	08 43 01.1	+0.1
BUR04	**Bucovina Ar. S**	**15.89**	**310**	*e*Pn		**Pn**	08 43 01.1	+0.1
BUR08	**Bucovina Ar. S**	**15.91**	**310**	*e*Pn		**Pn**	08 43 01.2	-0.1
BUR08	**Bucovina Ar. S**	**15.91**	**310**	*e*Pn		**Pn**	08 43 01.2	-0.1
OBN	**Obninsk**	**17.01**	**347**	*de*P		**P**	08 43 17.0	+0.2
OBN				*e*S		**S**	08 46 31.9	-1.8
OBN				pmax	pmax			
	comp=Z,14nm,0.6s							
OBN				MLR		MLR		
	comp=Z,62nm,15.0s							
ARU	**Arti**	**20.38**	**25**	P		**P**	08 43 52.7	-1.1
	comp=Z,3.8nm,0.4s,baz=265,slow=5.5,SNR=5.2							
ARU	**Arti**	**20.38**	**25**	*c i* P		**P**	08 43 52.4	-1.5
ARU				S		**S**	08 47 40.8	-1.0
ARU				pmax	pmax			
	comp=Z,6.0nm,1.0s							
KLMR	**Klimovskoe**	**22.27**	**355**	*e*P		**P**	08 44 13.7	-0.4
KLMR				pmax	pmax			
	comp=Z,13nm,1.1s							
KLMR	**Klimovskoe**	**22.27**	**355**	*e*P		**P**	08 44 13.7	-0.4
KLMR				AMP			08 44 23.3	
	comp=Z,13nm,1.1s							
VSU	**Vasula**	**22.47**	**337**	*e*P		**P**	08 44 18.3	+2.0
VSU				pmax	pmax			
	comp=Z,23nm,1.0s							
BRVK	**Borovoye**	**23.41**	**43**	*e*P		**P**	08 44 27.3	+1.1
BRVK				pmax	pmax			
	comp=Z,3.0nm,1.0s							
GEC2	**GERESS Array S**	**23.52**	**305**	*e*P		**P**	08 44 26.8	-0.6
	comp=Z,1.6nm,0.8s							
GEC2	**GERESS Array S**	**23.52**	**305**	*e*P		**P**	08 44 26.8	-0.6
GEC2				pmax	pmax			
	comp=Z,2.0nm,0.8s							
GERES	**GERESS Array B**	**23.52**	**305**	P		**P**	08 44 26.8	-0.6
	comp=Z,0.6nm,0.5s,baz=100,slow=14,SNR=4.2							
FIA0	**FINESS Array S**	**25.12**	**340**	*e*P		**P**	08 44 40.8	-1.1
FIA0	**FINESS Array S**	**25.12**	**340**	*e*P		**P**	08 44 40.8	-1.1
FINES	**FINESS Array B**	**25.12**	**340**	P		**P**	08 44 40.8	-1.1
	comp=Z,4.1nm,0.9s,baz=153,slow=17,SNR=5.3							
KURBB	**Kurchatov Arra**	**27.44**	**53**	P		**P**	08 45 04.2	+1.2
	comp=Z,0.9nm,0.7s,baz=263,slow=9.1,SNR=6.1							
KURK	**Kurchatov**	**27.52**	**53**	*e*P		**P**	08 45 05.0	+1.4
	comp=Z,1.4nm,0.8s							
KURK	**Kurchatov**	**27.52**	**53**	*e*P		**P**	08 45 04.4	+0.7
KURK				pmax	pmax			
	comp=Z,1.0nm,0.9s							
HFS	**Hagfors**	**28.39**	**329**	P		**P**	08 45 11.7	+0.3
	comp=Z,5.4nm,0.8s,baz=126,slow=7.5,SNR=9.4							
MK32	**Makanchi Array**	**29.46**	**61**	*e*P		**P**	08 45 21.7	+0.6
MKAR	**Makanchi Array**	**29.46**	**61**	P		**P**	08 45 21.7	+0.6
	comp=Z,0.8nm,0.8s,baz=251,slow=6.3,SNR=5.6							
MKAR	**Makanchi Array**	**29.46**	**61**	*e*P		**P**	08 45 20.5	-0.7
	comp=Z,4.9nm,0.8s							
MK01	**Makanchi Array**	**29.47**	**61**	*e*P		**P**	08 45 21.9	+0.7
NOA	**NORSAR Array B**	**29.91**	**329**	LR		LR	08 59 26.7	
	comp=Z,13nm,18.2s,baz=100,slow=40							
ESDC	**Sonseca Array**	**36.33**	**287**	P		**P**	08 46 19.9	-1.3
	comp=Z,0.2nm,0.3s,baz=73,slow=9.2,SNR=5.6							
SPITS	**Spitsbergen Ar**	**41.10**	**352**	LR		LR	09 04 43.6	
	comp=Z,16nm,18.9s,baz=40,slow=37							
JMIC	**Jan Mayen**	**41.66**	**337**	LR		LR	09 04 25.8	
	comp=Z,20nm,21.6s,baz=246,slow=36							
TOA1	**Torodi Ar. Sit**	**44.75**	**247**	*e*P		**P**	08 47 28.4	-2.5
TORD	**Torodi Ar. Bea**	**44.75**	**247**	P		**P**	08 47 28.4	-2.5
	comp=Z,0.7nm,1.1s,baz=34,slow=7.4							
ULN	**Ulaanbaatar**	**46.06**	**57**	*ce*P		**P**	08 47 42.0	+0.8
ULN				pmax	pmax			
	comp=Z,4.0nm,1.7s							
CM31	**Chiang Mai Arr**	**52.02**	**96**	*e*P		**P**	08 48 26.0	-1.0
CMAR	**Chiang Mai Arr**	**52.02**	**96**	P		**P**	08 48 26.0	-1.0
	comp=Z,0.7nm,0.4s,baz=307,slow=7.4,SNR=2.7							
CMAR	**Chiang Mai Arr**	**52.02**	**96**	P		**P**	08 48 26.0	-1.0
TIXI	**Tiksi**	**52.38**	**23**	*e*P		**P**	08 48 30.7	+1.8
TIXI				pmax	pmax			
	comp=Z,2.0nm,1.0s							
SEY	**Seymchan**	**64.06**	**29**	*ce*P		**P**	08 49 52.4	+1.6
KS15	**Wonju Array Si**	**64.13**	**62**	*e*P		**P**	08 49 52.2	+0.6
KSAR	**Wonju Array Be**	**64.13**	**62**	P		**P**	08 49 52.2	+0.6
KSAR	**Wonju Array Be**	**64.13**	**62**	P		**P**	08 49 52.2	+0.6
KSRS	**Korea Array**	**64.15**	**62**	P		**P**	08 49 52.2	+0.5
	comp=Z,0.9nm,0.6s,baz=287,slow=6.4,SNR=4.8							
ILAR	**Eielson Array**	**76.52**	**4**	P		**P**	08 51 07.6	+0.7
	comp=Z,0.5nm,1.0s,baz=347,slow=3.7,SNR=3.3							
ILB	**Eielson Array**	**76.52**	**4**	*e*P		**P**	08 51 07.6	+0.7
KDAK	**Kodiak Island**	**82.92**	**9**	*ce*P		**P**	08 51 42.4	+0.7

MEX 28 08:40:39.5±0.5, 14°.77N×92°.99W, h16km±20km, MD3.9,
Near coast of Chipas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.95**	**347**	*e*P	Pb	08 40 54.3	-3.3
PCIG				*i* S	Sb	08 41 06.3	-3.7
CCIG	**Comitan**	**1.72**	**29**	*e*P	Pn	08 41 06.2	-2.6
CCIG				*e*S	Sn	08 41 25.5	-5.0
TGIG		**2.00**	**356**	*e*P	Pn	08 41 08.6	-4.1
TGIG				*e*S	Sn	08 41 33.0	-4.4

MEX 28 08:43:46.3±0.5, 14°.14N×92°.00W, h49km±64km, MD3.8,
Near coast of Chipas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.95**	**323**	*e*P	Pn	08 44 15.7	-1.3
PCIG				*e*S	Sn	08 44 37.9	-2.3
CCIG	**Comitan**	**2.13**	**357**	*e*P	Pn	08 44 21.7	+2.1
CCIG				*e*S	Sn	08 44 46.1	+1.1

*SKHL **28** 08:53:30.5±0.3, 44°.24N×148°.00E, h40km±1km, mb4.4/6*
*JMA **28** 08:53:31.1±0.3, 43°.95N×147°.81E, h15km, M3.8*
ISC 28 08:53:27.1±2.5, 44°.21N±0°.08×147°.9E±0°.1, h3km±14km,
n18, σ1°.61/33, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.82**	**246**	*i* P	**Pn**	**08 53 47.0**	**+1.5**
SHO				AMB	AMB	08 53 49.7	
	128nm,0.4s						
SHO				*e*S	**Sn**	**08 53 57.9**	**-0.2**
SHO				A	A	08 54 02.4	
	178nm,0.2s						
SHO				A	A	08 54 02.4	
	535nm,0.2s						
KUR	**Kuril'sk**	**1.02**	**360**	*i* P	**Pn**	**08 53 48.0**	**-0.3**
KUR				AMB	AMB	08 53 51.0	
	204nm,0.2s						
KUR				AMB	AMB	08 53 51.0	
	51nm,0.2s						
KUR				AMB	AMB	08 53 51.0	
	127nm,0.2s						
KUR				*i* S	**Sb**	**08 54 01.0**	**-0.2**
KUR				A	A	08 54 03.0	
	519nm,0.2s						
KUR				A	A	08 54 03.0	
	364nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.46**	**264**	*i* P	**Pb**	**08 53 55.0**

mb3.3/2, Error ellipse: s-maj=9.8km s-min=6.9km az=0.4
*JMA **28** 09:05:31.4±0.1, 36°.37N×141°.20E, h43km±2km, M3.1*
ISC 28 09:05:31.0±1.6, 36°.37N±0°.05×141°.17E±0°.08, h25km±12km, n10, σ1§00/18, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.55**	**297**	P	**Pn**	**09 05 42.9**	**-0.3**
JHO				S	**Sb**	**09 05 50.6**	**+1.1**
CHOJ	**Chosi**	**0.71**	**201**	P	**Pn**	**09 05 45.2**	**-0.2**
CHOJ				S	**Sb**	**09 05 54.7**	**+0.6**
ONAJ	**Iwakimizuishiy**	**0.80**	**338**	P	**Pb**	**09 05 45.8**	**-0.4**
ONAJ				*e*S	**Sn**	**09 05 56.8**	**-1.0**
JYT	**Yasato**	**0.80**	**260**	P	**Pn**	**09 05 46.7**	**0.0**
JYT				*e*S	**Sb**	**09 05 57.3**	**+0.5**
JFT	**Otama**	**1.33**	**330**	P	**Pb**	**09 05 54.7**	**-0.6**
JFT				S	**Sn**	**09 06 11.1**	**+0.1**
JAG	**Ashikaga**	**1.39**	**273**	P	**Pn**	**09 05 55.3**	**+0.5**
JAG				S	**Sn**	**09 06 12.2**	**-0.2**
MJAR	**Matsushiro Arr**	**2.40**	**275**	Pn	**Pn**	**09 06 09.7**	**+1.0**
	2.4nm,0.3s,baz=122,slow=7.6,SNR=21						
MJAR				Sn	**Sb**	**09 06 41.5**	**-1.1**
	2.6nm,0.3s,baz=311,slow=30,SNR=5.4						
MAT	**Matsushiro**	**2.40**	**275**	P	**Pn**	**09 06 10.9**	**+2.2**
MAT				S	**Sb**	**09 06 41.6**	**-1.1**
ILAR	**Eielson Array**	**50.16**	**32**	P	**P**	**09 14 25.1**	**+1.1**
	0.3nm,0.7s,baz=265,slow=6.6,SNR=4.1						
WRA	**Warramunga Arr**	**56.37**	**188**	P	**P**	**09 15 09.3**	**-0.8**
	0.2nm,0.7s,baz=2.5,slow=7.6,SNR=2.9						

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*ISCJB **28** 09:17:35.3±0.4, 39°.53N±0°.03×141°.14E±0°.08, h111km±3km, mb3.7/8, Error ellipse: s-maj=10.4km s-min=5.1km az=14.9*
*JMA **28** 09:17:36.9±0.1, 39°.52N×141°.05E, h101km±1km, M3.1*
*IDC **28** 09:17:36.8±1.7, 39°.61N×141°.19E, h109km±15km, mb3.5/8, mb1 3.5/12, mb1mx3.2/69, mbtmp3.7/12, Error ellipse: s-maj=20.9km s-min=12.1km az=102.0*
ISC 28 09:17:36.6±0.8, 39°.53N±0°.04×141°.16E±0°.07, h106km±6km, n26, σ1§04/35, mb3.8/8, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOM	**Ohasama**	**0.12**	**119**	P	**Pn**	**09 17 51.0**	**-0.3**
JOM				S	**Sn**	**09 18 01.9**	**-0.5**
JRG	**Rokugo**	**0.43**	**252**	P	**Pn**	**09 17 51.8**	**-0.7**
JRG				*e*S	**Sn**	**09 18 03.3**	**-1.2**
JMK	**Ichinoseki**	**0.58**	**175**	P	**Pn**	**09 17 53.3**	**-0.3**
JMK				S	**Sn**	**09 18 05.5**	**-0.9**
JAH	**Hinai**	**0.77**	**329**	P	**Pn**	**09 17 55.1**	**-0.1**
JAH				S	**Sn**	**09 18 08.6**	**-0.6**
JYK	**Kaneyama**	**0.87**	**226**	P	**Pn**	**09 17 55.6**	**-0.6**
JYK				S	**Sn**	**09 18 09.8**	**-1.1**
JANG	**Nango**	**0.89**	**18**	P	**Pn**	**09 17 56.6**	**+0.3**
JANG				S	**Sn**	**09 18 11.1**	**-0.1**
JIO	**Ouri**	**1.09**	**172**	P	**Pn**	**09 17 58.5**	**+0.1**
JIO				S	**Sn**	**09 18 14.2**	**-0.6**
JOU	**Okura**	**1.23**	**198**	P	**Pn**	**09 18 00.1**	**+0.1**
JOU				S	**Sn**	**09 18 18.3**	**+0.6**
JTM	**Tenmabayashi**	**1.25**	**357**	P	**Pn**	**09 18 00.5**	**+0.3**
JTM				S	**Sn**	**09 18 18.5**	**+0.3**
JAW	**Awa shima**	**1.83**	**235**	P	**Pn**	**09 18 06.9**	**-0.3**
JAW				*e*S	**Sn**	**09 18 29.3**	**-1.3**
MJAR	**Matsushiro Arr**	**3.78**	**219**	P	**Pn**	**09 18 33.6**	**+0.6**
	0.7nm,0.3s,baz=21,slow=13,SNR=13						
MAT	**Matsushiro**	**3.79**	**219**	P	**Pn**	**09 18 34.2**	**+1.2**
MAT				S	**Sn**	**09 19 14.7**	**-1.9**
ASAJ	**Asahikawa**	**4.71**	**13**	P	**Pn**	**09 18 44.7**	**-0.6**
	2.0nm,0.3s,baz=224,slow=8.2,SNR=15						
ASAJ				S	**Sn**	**09 19 36.3**	**-2.4**
	0.6nm,0.3s,baz=188,slow=15,SNR=2.1						
USRK	**Ussuriysk Ar.**	**8.28**	**307**	P	**Pn**	**09 19 35.3**	**+1.6**
	baz=118,slow=15						
KSRS	**Korea Array**	**10.58**	**263**	P	**Pn**	**09 20 07.8**	**+2.8**
	0.1nm,0.3s,baz=78,slow=14,SNR=5.7						
H11N2	**WAKE ISLAND Hy**	**29.66**	**124**	T	T	09 54 23.0	
	baz=318,slow=76,SNR=8.2						
H11N1	**WAKE ISLAND Hy**	**29.67**	**124**	T	T	09 54 26.0	
	baz=318,slow=76,SNR=6.9						
H11N3	**WAKE ISLAND Hy**	**29.68**	**124**	T	T	09 54 24.4	
	baz=318,slow=76,SNR=7.2						
ZALV	**Zalesovo Beam**	**40.12**	**310**	P	**P**	**09 25 01.1**	**-0.4**
	0.6nm,0.3s,baz=79,slow=7.8,SNR=2.5						
MKAR	**Makanchi Array**	**42.66**	**300**	P	**P**	**09 25 21.9**	**-0.6**
	0.3nm,0.6s,baz=81,slow=8.9,SNR=3.6						
KURBB	**Kurchatov Arra**	**44.34**	**306**	P	**P**	**09 25 35.2**	**-0.6**
	0.7nm,0.5s,baz=81,slow=8.5,SNR=5.4						
ILAR	**Eielson Array**	**47.51**	**34**	P	**P**	**09 26 01.2**	**+0.7**
	0.5nm,0.6s,baz=264,slow=5.6,SNR=7.4						
WRA	**Warramunga Arr**	**59.51**	**187**	P	**P**	**09 27 28.5**	**-0.1**
	1.8nm,0.8s,baz=6.7,slow=6.9,SNR=20						
ASAR	**Alice Springs**	**63.23**	**187**	P	**P**	**09 27 54.2**	**+0.6**
	1.2nm,0.8s,baz=0.8,slow=7.1,SNR=14						
FINES	**FINESS Array B**	**66.52**	**332**	P	**P**	**09 28 13.4**	**-1.1**
	1.1nm,0.9s,baz=23,slow=7.5,SNR=3.4						
HFS	**Hagfors**	**71.73**	**335**	P	**P**	**09 28 46.3**	**-0.4**
	0.5nm,0.4s,baz=69,slow=7.9,SNR=6.2						

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*NNC **28** 09:31:00.9±5.7, 49°.54N×83°.96E, h0km, mb3.3, mpv2.9, Error ellipse: s-maj=51.1km s-min=21.9km az=53.0, Suspected Mining explosion.*
*SOME **28** 09:31:04.0, 49°.50N×83°.55E, h0km*
ISC 28 09:31:01.8±2.5, 49°.8N±0°.1×84°.3E±0°.2, h0km, n5, σ1§21/7, 4C-2D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZSN	**Zaisan**	**2.36**	**170**	*e*P	**Pg**	**09 31 46.2**	**-0.8**
	10nm,0.4s						
ZSN				*e*S	**Sg**	**09 32 18.0**	**+0.5**
	19nm,0.6s						
MK31	**Makanchi Array**	**3.26**	**205**	⇑Pg	**Pn**	**09 31 55.7**	**+1.6**
	1.4nm,0.4s,baz=26,slow=17,SNR=51						
MK31				⇓Lg	Lg	09 32 34.4	
	10nm,0.5s,baz=22,slow=29,SNR=22						
KURK	**Kurchatov**	**3.74**	**287**	⇑Pg	**Pb**	**09 32 08.7**	**0.0**
	1.3nm,0.3s						
KURK				⇑Lg	Lg	09 32 52.0	
	3.7nm,0.4s						
KURBB	**Kurchatov Arra**	**3.78**	**285**	⇓Pg	**Pb**	**09 32 08.2**	**-1.1**
	1.5nm,0.3s						
KURBB				⇑Lg	Lg	09 32 53.2	
	11nm,0.3s						
KAPS	**Kapalarasan**	**5.58**	**218**	*e*P	**Pb**	**09 32 39.0**	**-1.1**
	0.9nm,0.4s						
KAPS				*e*S	**Sb**	**09 33 47.8**	**+0.2**
	1.6nm,0.4s						

MEX 28 09:39:58.0±0.3, 18°.15N×100°.61W, h57km±6km, MD3.9, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARIG	**Puente Sto Nin**	**0.28**	**62**	*i* P	Pn	09 40 06.3	-1.4
ARIG				*e*S	Sn	09 40 12.8	-1.9
MEIG	**Mezcala**	**0.96**	**103**	*e*P	Pn	09 40 14.1	-1.4
MEIG				*i* S	Sn	09 40 26.4	-2.1
CAIG	**El Cayaco**	**1.14**	**163**	*e*P	Pn	09 40 16.3	-1.5
CAIG				*e*S	Sn	09 40 30.2	-2.3

IDC 28 09:51:39.1±1.9, 1°.39N×127°.20E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/51, mbtmp3.6/4, MS3.0/2, Ms1 3.0/2, ms1mx2.3/51, Error ellipse: s-maj=176.6km s-min=20.7km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.32**	**162**	P	P	09 56 38.0	-0.6
	0.5nm,0.3s,baz=341,slow=11,SNR=27						
ASAR	**Alice Springs**	**25.74**	**166**	P	P	09 57 12.0	+0.4
	0.5nm,0.3s,baz=343,slow=11,SNR=14						
ASAJ	**Asahikawa**	**44.70**	**16**	LR	LR	10 20 38.6	
	comp=Z,12nm,18.2s,baz=155,slow=39						
MKAR	**Makanchi Array**	**59.74**	**326**	P	P	10 01 45.5	-0.3
	0.5nm,0.4s,baz=123,slow=8.4,SNR=6.8						
ZALV	**Zalesovo Beam**	**62.88**	**333**	LR	LR	10 30 25.7	
	comp=Z,16nm,21.4s,baz=248,slow=37						
KURBB	**Kurchatov Arra**	**63.95**	**328**	P	P	10 02 14.3	+0.2
	0.5nm,0.4s,baz=123,slow=6.5,SNR=5.0						

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*IDC **28** 09:54:58.9±0.7, 4°.67N×126°.59E, h0km, mb4.0/10, mb1 4.1/10, mb1mx3.9/53, mbtmp4.0/10, MS3.0/3, Ms1 3.1/3, ms1mx2.5/54, Error ellipse: s-maj=47.3km s-min=15.0km az=71.0*
*ISCJB **28** 09:55:07.4±0.4, 4°.73N±0°.06×126°.83E±0°.10, h85km, mb4.0/13, Error ellipse: s-maj=14.4km s-min=6.9km az=159.8*
*NEIC **28** 09:55:09.9±1.4, 4°.69N×126°.78E, h89km±14km, mb4.4/5, Error ellipse: s-maj=16.1km s-min=6.4km az=61.0*
ISC 28 09:55:09.5±0.6, 4°.67N±0°.09×126°.7E±0°.1, h85km, n34, σ0§86/34, mb4.1/13, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**3.92**	**170**	*e*Pn	**Pn**	**09 56 07.5**	**0.0**
MYLDM	**Lahad Datu**	**8.20**	**274**	*e*Pn	**Pn**	**09 57 07.1**	**+1.3**
SBUM	**Sibu**	**14.64**	**262**	*e*Pn	**P**	**09 58 35.1**	**-1.3**
MTN	**Manton Dam**	**17.94**	**166**	*e*P	**P**	**09 59 12.6**	**-0.4**
	13nm,1.0s						
WRAB	**Tennant Creek**	**25.57**	**163**	*e*P	**P**	**10 00 31.1**	**+0.3**
	9.4nm,0.8s						
WRA	**Warramunga Arr**	**25.58**	**163**	P	**P**	**10 00 30.2**	**-0.7**
	6.8nm,0.8s,baz=342,slow=10,SNR=14						
WB2	**Warramunga Arr**	**25.58**	**163**	*e*P	**P**	**10 00 31.6**	**+0.7**
WB2				*e*P	**P**	**10 00 31.8**	**+0.9**
AS31	**Alice Springs**	**29.02**	**166**	*e*P	**P**	**10 01 01.4**	**-0.2**
	1.6nm,1.1s						
AS31				*e*PcP	**PcP**	**10 04 08.6**	**+0.2**
ASAR	**Alice Springs**	**29.02**	**166**	P	**P**	**10 01 01.4**	**-0.2**
	0.9nm,0.5s,baz=351,slow=6.8,SNR=18						
ASAR				PcP	**PcP**	**10 04 08.6**	**+0.2**
	0.2nm,0.5s,baz=347,slow=2.2,SNR=4.1						
AS01	**Alice Springs**	**29.03**	**166**	*e*P	**P**	**10 01 02.1**	**+0.3**
CMAR	**Chiang Mai Arr**	**30.40**	**299**	LR	LR	10 14 09.3	
	comp=Z,14nm,18.4s,baz=178,slow=38						
KSRS	**Korea Array**	**32.65**	**2**	LR	LR	10 16 41.6	
	comp=Z,18nm,18.8s,baz=185,slow=40						
STKA	**Stephens Creek**	**39.00**	**160**	P	**P**	**10 02 28.0**	**+0.2**
	2.9nm,0.4s,baz=343,slow=8.2,SNR=10.0						
SONA0	**Songino Array**	**46.41**	**341**	*e*P	**P**	**10 03 28.3**	**+0.5**
SONM	**Songino Array**	**46.41**	**341**	P	**P**	**10 03 28.3**	**+0.5**
	0.8nm,0.7s,baz=162,slow=8.5,SNR=4.4						
PETK	**Petropavlovsk-**	**54.57**	**22**	P	**P**	**10 04 28.5**	**-0.4**
	1.5nm,0.8s,baz=193,slow=5.9						
PEA1	**Petropavlovsk-**	**54.58**	**22**	*e*P	**P**	**10 04 28.5**	**-0.5**
MK01	**Makanchi Array**	**56.77**	**325**	*e*P	**P**	**10 04 43.9**	**-0.9**
MK31	**Makanchi Array**	**56.79**	**325**	*e*P	**P**	**10 04 44.7**	**-0.2**
MK32	**Makanchi Array**	**56.79**	**325**	*e*P	**P**	**10 04 44.0**	**-0.9**
MKAR	**Makanchi Array**	**56.79**	**325**	P	**P**	**10 04 44.0**	**-0.9**
	0.7nm,0.6s,baz=118,slow=8.0,SNR=8.3						
MKAR	**Makanchi Array**	**56.79**	**325**	*e*P	**P**	**10 04 44.8**	**-0.1**
	12nm,0.6s						
ZALV	**Zalesovo Beam**	**59.76**	**333**	P	**P**	**10 05 04.0**	**-1.4**
	0.4nm,0.3s,baz=122,slow=7.0,SNR=2.4						
ZAA1	**Zalesovo Array**	**59.76**	**333**	*e*P	**P**	**10 05 04.0**	**-1.4**
KURBB	**Kurchatov Arra**	**60.95**	**327**	P	**P**	**10 05 15.0**	**+1.3**
	1.2nm,0.7s,baz=127,slow=6.5,SNR=9.9						
KURK	**Kurchatov**	**60.95**	**327**	*e*P	**P**	**10 05 14.9**	**+1.3**
BVAR	**Borovoye Array**	**66.53**	**327**	P	**P**	**10 05 48.7**	**-1.6**
	0.8nm,0.6s,baz=134,slow=8.3,SNR=4.3						
ABKAR	**Akbulak array**	**71.42**	**321**	*e*P	**P**	**10 06 20.4**	**-0.3**
MLY	**Manley**	**82.64**	**25**	*e*P	**P**	**10 07 23.5**	**+0.1**
	5.5nm,0.4s						
ILAR	**Eielson Array**	**84.27**	**25**	P	**P**	**10 07 33.4**	**+1.7**
	0.2nm,0.6s,baz=247,slow=5.1,SNR=4.2						
ILB	**Eielson Array**	**84.27**	**25**	*e*P	**P**	**10 07 32.2**	**+0.5**
HFS	**Hagfors**	**97.19**	**332**	LR	LR	10 54 44.7	
	comp=Z,20nm,19.0s,baz=80,slow=37						
TORD	**Torodi Ar. Bea**	**122.61**	**289**	PKP	**PKPdf**	**10 13 56.8**	**+0.4**
	0.3nm,0.6s,baz=96,slow=3.0						
TOA1	**Torodi Ar. Sit**	**122.61**	**289**	*e*PKPdf	**PKPdf**	**10 13 56.8**	**+0.4**

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*GUC **28** 10:01:03.3±0.6, 32°.85S×72°.00W, h34km±5km, ML3.5*
*SJA **28** 10:01:10.6±0.9, 32°.60S×71°.45W, h10km, ML3.4, MW3.6*
ISC 28 10:00:59.4±2.0, 32°.67S±0°.06×72°.10W±0°.08, h8km±12km, n18, σ1§35/23, 5C-2D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROC1	**El Roble**	**0.96**	**109**	*e*P	**Pg**	**10 01 18.4**	**+0.5**
ROC1				⇓*e*S	**Sg**	**10 01 29.4**	**-1.0**
ROCH	**El Roble**	**0.96**	**108**	IAML		10 01 30.1	
	comp=E,3μm,0.5s						
PEL	**Peldehue**	**1.28**	**112**	⇑*i*P	**Pn**	**10 01 23.5**	**-0.2**
PEL				*i* S	**Sg**	**10 01 38.6**	**-1.9**
PEL				IAML		10 01 44.4	
	comp=E,3μm,0.5s						
CLCH	**Cerro Calan**	**1.50**	**119**	⇑*i*P	**Pn**	**10 01 27.0**	**+0.2**
CLCH				*i* S	**Sn**	**10 01 44.6**	**-1.9**
CLCH				IAML		10 01 52.7	
	comp=E,2μm,0.8s						
FCH	**Farellones**	**1.65**	**114**	⇑*i*P	**Pn**	**10 01 29.4**	**+0.3**
FCH				*i* S	**Sn**	**10 01 48.7**	**-2.0**
FCH				IAML		10 01 54.2	
	comp=N,797nm,0.7s						
LMEL	**Las Melosas**	**1.97**	**127**	⇑*i*P	**Pn**	**10 01 34.5**	**+1.2**
LMEL				*i* S	**Sn**	**10 01 58.4**	**-0.1**
LMEL				IAML		10 02 02.5	
	comp=N,838nm,0.5s						
AUSP	**Uspallata**	**2.33**	**80**	*e*P	**Pg**	**10 01 43.5**	**-0.7**
GO05	**HualaæØ**	**2.34**	**177**	⇓*i*P	**Pn**	**10 01 39.0**	**+0.7**
GO05				*i* S	**Sn**	**10 02 05.6**	**-1.6**
GO05				IAML		10 02 13.5	
	comp=E,240nm,0.6s						
RTLS	**Leoncito**	**2.53**	**71**	*e*P	**Pg**	**10 01 47.0**	**-0.9**
ARCO	**CERRO ARCO**	**2.67**	**94**	*e*P	**Pb**	**10 01 48.5**	**+0.9**
ARCO				IAML		10 02 25.7	
	comp=Z,144nm,0.5s						
GO04	**Tololo Observa**	**2.73**	**24**	⇑*i*P	**Pb**	**10 01 48.7**	**+0.1**
ASAL	**Salagasta**	**2.75**	**89**	*e*P	**Pb**	**10 01 50.0**	**+1.0**
ASAL				*e*S	**Sb**	**10 02 25.5**	**+2.5**
AAGR	**Agrelo**	**2.78**	**99**	*e*P	**Pb**	**10 01 50.6**	**+1.1**
RTCV	**Cerro Valdivia**	**3.12**	**76**	*e*P	**Pb**	**10 01 55.5**	**+0.3**
RTLL	**Cerro Villicun**	**3.36**	**67**	IAML		10 02 58.4	
	comp=Z,103nm,0.4s						
AMOG	**MOGNA**	**3.52**	**62**	*e*P	**Pb**	**10 02 00.7**	**-1.4**
ACDV	**Cuesta del Vie**	**3.56**	**46**	*e*P	**Pb**	**10 02 02.1**	**-0.7**
ACDV				*e*S	**Sg**	**10 02 56.0**	**+2.0**
VCA	**Vinchina**	**5.16**	**42**	IAML		10 03 45.8	
	comp=Z,66nm,0.4s						

IDC 28 10:06:15.2±1.6, 15°.54N×142°.96E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.4/56, mbtmp3.6/5, ML3.8/1, Error ellipse: s-maj=59.8km s-min=22.3km az=66.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.67**	**136**	Pn	Pn	10 06 59.6	+0.1
	16nm,0.3s,baz=68,slow=3.7,SNR=9.0						
GUMO				Sn	Sn	10 07 29.4	-3.3
	34nm,0.3s,baz=181,slow=21,SNR=7.4						
WRA	**Warramunga Arr**	**36.26**	**194**	P	P	10 13 20.1	-0.3
	0.4nm,0.8s,baz=14,slow=8.6,SNR=5.0						
ASAR	**Alice Springs**	**39.96**	**193**	P	P	10 13 51.5	0.0
	0.2nm,0.4s,baz=18,slow=6.7,SNR=8.9						
MKAR	**Makanchi Array**	**58.82**	**316**	P	P	10 16 16.6	+1.1
	0.3nm,0.3s,baz=93,slow=9.3,SNR=5.6						
KURBB	**Kurchatov Arra**	**61.95**	**319**	P	P	10 16 35.8	-1.1
	0.7nm,0.5s,baz=97,slow=7.2,SNR=4.8						

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*ISN **28** 10:07:08.3±0.7, 32°.49N×46°.82E, h0km±2km, ML3.0*
*CSEM **28** 10:07:08.3, 32°.49N×46°.82E, h0km, ML3.0*
TEH 28 10:07:09.0, 32°.49N×46°.94E, h10km, ML3.0, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKFM	**Kafar-mosalman**	**1.28**	**36**	*e*Pg	Pn	10 07 30.9	-2.1
IKFM				*e*Sg	Sb	10 07 49.4	-0.4
IKFM				*e*		10 07 56.5	
	comp=E,99nm,0.3s						
IKFM				*e*		10 07 57.0	
	comp=Z,99nm,0.2s						
IKFM				*e*		10 08 00.9	
	comp=N,99nm,0.2s						
NSR	**Nassriya**	**1.63**	**205**	*e*Pn	Pn	10 07 37.7	0.0
	SNR=3.0						
NSR				*e*Sn	Sn	10 07 58.5	-0.2
	SNR=3.0						
IKOM	**Komasi**	**1.75**	**16**	*e*Pn	Pn	10 07 39.4	-0.1
IKOM				*e*		10 08 06.0	
	comp=Z,99nm,0.3s						
KCHF	**Cheshme Sefid,**	**1.78**	**3**	*e*Pn	Pn	10 07 40.3	+0.3
KCHF				*e*		10 08 06.2	
	comp=Z,99nm,0.2s						
IVIS	**Veis**	**2.03**	**358**	*e*Pn	Pn	10 07 43.0	-0.4
IVIS				*e*		10 08 15.0	
	comp=N,3μm,0.1s						
IVIS				*e*		10 08 15.6	
	comp=E,2μm,0.2s						
IVIS				*e*		10 08 15.7	
	comp=Z,1μm,0.2s						
IBZA	**Bozab**	**2.12**	**21**	*e*Pn	Pn	10 07 44.8	0.0
IBZA				*e*		10 07 54.2	
	comp=Z,737nm,0.2s						
HSAM	**Samen**	**2.21**	**39**	*e*Pn	Pn	10 07 45.7	-0.3
HSAM				*e*		10 08 22.6	
	comp=N,99nm,0.2s						
HSAM				*e*		10 08 23.3	
	comp=E,99nm,0.4s						
HSAM				*e*		10 08 24.6	
	comp=Z,99nm,0.3s						
BHD	**Baghdad**	**2.29**	**291**	*e*Pn	Pn	10 07 47.0	+0.2
	SNR=3.0						
BHD				*e*Sn	Sn	10 08 14.0	-1.0
	SNR=3.0						
HKZM	**Kohzaman**	**3.31**	**29**	*e*Pn	Pn	10 08 01.2	+0.1
IKLH	**Kolahrood**	**3.99**	**77**	*e*Pn	Pn	10 08 10.5	0.0
IKLH				*e*		10 08 12.2	
	comp=Z,193nm,0.1s						
IKLH				*e*		10 09 00.2	
	comp=E,310nm,0.2s						
IKLH				*e*		10 09 00.2	
	comp=N,330nm,0.2s						
IKAZ	**Kazeroun**	**5.00**	**121**	*e*Pn	Pn	10 08 23.4	-1.0
IKAZ				*e*		10 08 24.3	
	comp=Z,162nm,0.2s						
RTB	**Rutbah**	**5.61**	**277**	*e*Pn	Pn	10 08 34.0	+1.4
	SNR=3.0						
RTB				*e*Sn	Sn	10 09 34.0	-3.1
	SNR=3.0						

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*ISCJB **28** 10:18:58.0±0.3, 15°.35S±0°.08×174°.96W±0°.06, h250km, mb4.2/51, Error ellipse: s-maj=12.0km s-min=5.8km az=152.1*
*NEIC **28** 10:18:58.6±0.8, 15°.35S×174°.94W, h244km±7km, mb4.0/27, Error ellipse: s-maj=9.7km s-min=4.8km az=149.0*
*IDC **28** 10:18:58.1±1.1, 15°.37S×174°.87W, h239km±10km, mb4.0/22, mb1 4.1/23, mb1mx4.0/47, mbtmp4.5/23, Error ellipse: s-maj=13.1km s-min=8.7km az=144.0*
ISC 28 10:18:59.1±0.4, 15°.43S±0°.10×174°.81W±0°.08, h250km, n126, σ1§10/127, mb4.2/51, 1C-2D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.30**	**63**	P	**Pn**	**10 19 54.8**	**-0.2**
	69nm,0.3s,baz=106,slow=0.9,SNR=111						
AFI				S	**S**	**10 20 37.6**	**-1.7**
	22nm,0.3s,baz=355,slow=23,SNR=3.6						
AFI	**Afiamalu**	**3.30**	**63**	*e*Pn	**Pn**	**10 19 54.5**	**-0.5**
AFI				*e*		10 19 54.8	
AFI				*e*S	**S**	**10 20 37.6**	**-1.7**
DZM	**Mont Dzumac**	**18.93**	**247**	*e*P	**P**	**10 23 00.7**	**-1.3**
	501nm,0.6s						
URZ	**Urewera**	**23.84**	**196**	P	**P**	**10 23 48.3**	**-1.4**
	8.4nm,0.3s,baz=20,slow=8.6,SNR=4.4						
URZ	**Urewera**	**23.84**	**196**	*e*P	**P**	**10 23 48.3**	**-1.4**
URZ				*e*P	**P**	**10 23 48.6**	**-1.1**
CTA	**Charters Tower**	**37.31**	**257**	P	**P**	**10 25 47.1**	**-0.7**
	3.7nm,0.5s,baz=79,slow=13,SNR=8.4						
PMG	**Port Moresby**	**37.58**	**275**	P	**P**	**10 25 49.6**	**-0.5**
	13nm,0.8s,baz=90,slow=7.1,SNR=3.7						
COEN	**Coen**	**40.62**	**266**	*e*P	**P**	**10 26 15.2**	**-0.1**
	14nm,0.8s						
STKA	**Stephens Creek**	**42.85**	**240**	P	**P**	**10 26 32.5**	**-0.5**
	5.0nm,0.5s,baz=92,slow=10,SNR=20						
STKA	**Stephens Creek**	**42.85**	**240**	*e*P	**P**	**10 26 32.9**	**-0.1**
	1.4nm,0.6s						
JAY	**Jayapura**	**45.66**	**282**	P	**P**	**10 26 55.9**	**+0.4**
	9.6nm,0.6s,baz=132,slow=3.7,SNR=11						
WB2	**Warramunga Arr**	**48.50**	**257**	*e*P	**P**	**10 27 16.3**	**-1.1**
WB2				*e*P	**P**	**10 27 16.5**	**-0.8**
WRAB	**Tennant Creek**	**48.50**	**257**	*e*P	**P**	**10 27 16.5**	**-0.8**
	13nm,0.8s						
WR1	**Warramunga Arr**	**48.51**	**257**	*e*P	**P**	**10 27 16.7**	**-0.7**
	18nm,0.8s						
WRA	**Warramunga Arr**	**48.51**	**257**	P	**P**	**10 27 16.7**	**-0.7**
	12nm,0.8s,baz=88,slow=7.2,SNR=102						
AS01	**Alice Springs**	**48.77**	**252**	*e*P	**P**	**10 27 18.5**	**-0.8**
AS31	**Alice Springs**	**48.81**	**252**	*e*P	**P**	**10 27 19.4**	**-0.3**
	24nm,0.6s						
ASAR	**Alice Springs**	**48.81**	**252**	P	**P**	**10 27 19.4**	**-0.2**
	86nm,0.7s,baz=86,slow=8.0,SNR=850						
MTN	**Manton Dam**	**52.37**	**266**	*e*P	**P**	**10 27 45.7**	**-0.5**
	14nm,0.8s						
SIJI	**Sorong**	**55.12**	**280**	P	**P**	**10 28 06.0**	**-0.2**
	44nm,0.7s,baz=78,slow=5.3,SNR=13						
SOEI	**Soe**	**59.57**	**268**	*e*P	**P**	**10 28 36.9**	**-0.4**
	53nm,0.8s						
VNDA	**Vanda**	**63.22**	**186**	P	**P**	**10 29 01.6**	**+1.2**
	3.2nm,0.9s,baz=9.8,slow=6.3,SNR=16						
VNDA	**Vanda**	**63.22**	**186**	*e*P	**P**	**10

3.7nm,0.8s
YHB Horse Butte 83.11 40 *e*P **P 10 30 58.5 +1.2**
3.3nm,0.8s
BW06 Boulder Array 83.20 42 *e*P **P 10 30 57.8 0.0**
2.1nm,0.8s
PD31 Pinedale Array 83.20 42 *e*P **P 10 30 57.7 0.0**
PDAR Pinedale Array 83.20 42 P **P 10 30 57.6 -0.2**
2.3nm,0.8s,baz=208,slow=3.7,SNR=17
PDAR Pinedale Array 83.20 42 *e*P **P 10 30 57.3 -0.4**
SMCO Snowmass 83.31 46 *e*P **P 10 31 01.0 +2.4**
2.2nm,0.8s
HRY Holter Researc 83.70 38 *e*P **P 10 31 00.2 +0.1**
DAWY Dawson 83.79 15 *e*P **P 10 31 00.1 +0.1**
4.9nm,1.1s
EGAK Eagle 83.96 14 *e*P **P 10 31 00.7 -0.1**
2.6nm,0.8s
COLD Coldfoot 84.38 9 *e*P **P 10 31 03.4 +0.5**
3.2nm,1.0s
MAW Mawson 87.33 199 P **P 10 31 17.8 +0.4**
7.4nm,0.7s,baz=127,slow=7.5,SNR=8.5
HHC Hu-ho-hao-te 88.05 313 *e*P **P 10 31 20.5 -0.9**
HHC pmax pmax
comp=Z,8.0nm,1.0s
HHC pmax pmax
comp=Z,57nm,6.8s
CD2 Chengdu 90.66 302 P **P 10 31 32.5 -1.3**
CD2 pmax pmax
comp=Z,10.0nm,0.6s
CMAR Chiang Mai Arr 91.33 289 P **P 10 31 37.8 +0.7**
comp=Z,3.4nm,0.7s,baz=97,slow=3.0,SNR=12
LZH Lanzhou 92.15 307 ⇑P **P 10 31 41.5 +0.8**
LZH pP pP 10 32 41.5 +0.2
LZH sP sP 10 33 07.0 -0.4
LZH PP **PP 10 35 26.5 +1.8**
LZH pmax pmax
comp=Z,19nm,1.3s
LZH pmax pmax
comp=Z,42nm,9.2s
SYO Syowa Base 92.30 192‖*e*P **P 10 31 39.4 -1.2**
SYO Syowa Base 92.30 192‖*e*sP sP 10 33 05.0 -2.3
MK32 Makanchi Array 109.88 315 *e*PKiKP **PKiKP 10 36 59.6 -1.0**
MKAR Makanchi Array 109.88 315 PKiKP **PKiKP 10 36 59.6 -1.0**
comp=Z,0.8nm,0.6s,baz=145,slow=0.5,SNR=9.6
KURK Kurchatov 112.26 319 *e*PKiKP **PKiKP 10 37 03.8 -1.1**
KURBB Kurchatov Arra 112.33 319 PKiKP **PKiKP 10 37 03.8 -1.2**
comp=Z,0.3nm,0.5s,baz=96,slow=1.8,SNR=8.4
KSH Kashi 114.40 307 PKP PKPdf 10 37 12.3 +2.7
KSH PP **PP 10 38 13.8 +3.9**
KSH AMB AMB
comp=Z,140nm,4.4s
BVAR Borovoye Array 117.07 322 PKP **PKPdf 10 37 13.3 -0.8**
comp=Z,2.4nm,0.6s,baz=101,slow=1.6,SNR=11
ARU Arti 122.64 328 PKP **PKPdf 10 37 23.8 -0.9**
comp=Z,3.9nm,0.5s,baz=74,slow=1.1,SNR=6.3
ARA0 ARCESS Array S 124.44 351 *e*PKPdf **PKPdf 10 37 27.4 -0.4**
ARCES ARCESS Array B 124.44 351 PKP **PKPdf 10 37 27.4 -0.4**
comp=Z,3.4nm,0.7s,baz=58,slow=2.2,SNR=7.8
AKTO Aktyubinsk 125.16 321 PKP **PKPdf 10 37 29.3 -0.5**
comp=Z,1.1nm,0.6s,baz=78,slow=3.5,SNR=4.8
FIA0 FINESS Array S 131.66 347 *e*PKPdf **PKPdf 10 37 41.8 0.0**
FINES FINESS Array B 131.66 347 PKP **PKPdf 10 37 41.8 0.0**
comp=Z,1.3nm,0.7s,baz=14,slow=5.4,SNR=4.8
AKASG Malin Array Be 139.83 336 PKP **PKPdf 10 37 56.6 -0.7**
comp=Z,0.8nm,0.5s,baz=48,slow=2.2,SNR=2.9
TSUM Tsumeb 143.49 200 PKPbc 10 38 03.8 +0.9
comp=Z,2.3nm,0.7s,baz=207,slow=4.5,SNR=3.9
DPC Dobruska-Polom 144.02 348 *e*PKP **PKPab 10 38 03.4 +0.5**
MORC Moravsky Berou 144.29 346 *e*PKP **PKPab 10 38 03.6 -0.4**
PRU Pruhonice 144.70 350 *e*PKP PKPbc 10 38 05.5 +0.1
GOPC GO Pecny, Ondr 144.73 349 *e*PKP PKPbc 10 38 05.3 -0.3
VRAC Vranov 144.95 347 *e*PKP PKPbc 10 38 06.1 -0.2
JAVC Velka Javorina 145.12 346 *e*PKP **PKPdf 10 38 07.7 +0.9**
VYHS Vyhne 145.16 344 *e*PKP **PKPdf 10 38 07.1 +0.3**
KRUC Moravsky 145.22 347 *e*PKP **PKPdf 10 38 06.6 -0.3**
BR101 Keskin Array S 145.31 320 *e*PKPdf **PKPdf 10 38 07.4 -0.1**
BRTR Keskin Array B 145.31 320 PKPbc **PKPdf 10 38 07.4 -0.1**
comp=Z,4.0nm,0.7s,baz=92,slow=2.7,SNR=21
MLR Muntele Rosu 145.31 334 PKPbc **PKPdf 10 38 07.3 0.0**
comp=Z,2.9nm,0.7s,baz=201,slow=2.5,SNR=19
MODS Modra-Piesok 145.67 346 *e*PKP **PKPdf 10 38 08.0 +0.3**
KHC Kasperske Hory 145.69 350 *e*PKP **PKPdf 10 38 08.5 +0.7**
GEC2 GERESS Array S 145.95 350 *e*PKPdf **PKPdf 10 38 08.2 -0.1**
GERES GERESS Array B 145.95 350 PKPbc **PKPdf 10 38 09.1 +0.8**
comp=Z,1.8nm,0.5s,baz=12,slow=3.1,SNR=14
CONA Conrad Observa 146.41 347 *i* PKPab **PKPdf 10 38 10.7 +1.6**
comp=Z,10nm,0.8s
ASF Jabal al Asfar 146.71 306 PKPbc **PKPdf 10 38 11.6 +1.6**
comp=Z,1.7nm,0.5s,baz=15,slow=4.6,SNR=4.1
MOA Molln 146.81 349 *i* PKPab **PKPdf 10 38 11.5 +1.8**
comp=Z,5.8nm,0.7s
ARSA Arzberg 147.12 347 *i* PKPbc **PKPdf 10 38 12.2 +2.0**
comp=Z,3.4nm,0.7s
MMAI Mount Meron Ar 147.52 308 PKPbc **PKPbc 10 38 14.6 +0.3**
comp=Z,2.6nm,0.4s,baz=80,slow=6.0,SNR=5.6
RETA Reutte 147.70 353 *i* PKPbc **PKPbc 10 38 13.9 -0.4**
comp=Z,3.2nm,0.6s
KBA Koelnbreinsper 147.72 350 *i* PKPbc **PKPdf 10 38 13.7 +2.3**
comp=Z,4.4nm,0.5s
SOKA Soboth 147.78 347 *i* PKPbc **PKPdf 10 38 13.8 +2.4**
comp=Z,5.6nm,1.0s
MOTA Moosalm 147.80 352 *i* PKPbc **PKPdf 10 38 13.9 +2.5**
comp=Z,2.6nm,0.5s
WTTA Wattenberg 147.81 352 *i* PKPbc **PKPbc 10 38 14.4 -0.4**
comp=Z,7.0nm,0.6s
DAVA Damuels 147.99 354 *i* PKPbc **PKPbc 10 38 15.0 -0.2**
comp=Z,8.1nm,0.8s
OBKA Obir 148.04 348 *i* PKiKP **PKPbc 10 38 15.3 0.0**
comp=Z,7.1nm,1.0s
MYKA Terra Mystica 148.10 349 *i* PKPbc **PKPdf 10 38 14.4 +2.5**
comp=Z,3.9nm,0.4s
FETA Feichten 148.16 353 *i* PKPbc **PKPbc 10 38 15.0 -0.7**
comp=Z,6.0nm,1.0s
ABTA Abfaltersbach 148.18 350 *i* PKPbc **PKPdf 10 38 14.5 +2.5**
comp=Z,1.4nm,1.1s
DAVOX Davos/Dischmat 148.49 354 PKPbc **PKPbc 10 38 16.3 -0.3**
comp=Z,11nm,0.7s,baz=349,slow=2.9,SNR=14
EIL Elat 149.18 303 PKPbc **PKPbc 10 38 19.8 +1.2**
comp=Z,2.9nm,0.6s,baz=62,slow=5.2,SNR=3.9
IDI Anoyia 153.48 322 PKPbc **PKPbc 10 38 28.8 +0.4**
comp=Z,6.7nm,0.8s,baz=328,slow=9.5,SNR=3.4
TORD Torodi Ar. Bea 175.93 123 PKP **PKPdf 10 38 39.1 -1.0**
comp=Z,0.9nm,1.1s,baz=326,slow=2.2
TOA1 Torodi Ar. Sit 175.93 123 *e*PKPdf **PKPdf 10 38 39.1 -1.0**

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*SJA **28** 10:33:12.0±0.5, 35°.91S×73°.69W, h10km, ML4.3, MW4.0*
*IDC **28** 10:33:14.1±0.9, 36°.06S×73°.36W, h0km, mb3.8/8,*
mb1 4.1/10, mb1mx3.9/36, mbtmp3.9/10, ML4.1/2, MS3.9/19,
Ms1 3.9/19, ms1mx3.7/32, Error ellipse: s-maj=31.3km
s-min=21.1km az=91.0
*ISCJB **28** 10:33:17.4±0.4, 36°.05S±0°.03×73°.31W±0°.07, h35km,*
mb4.1/11, MS3.9/18, Error ellipse: s-maj=7.9km
s-min=3.8km az=12.3
*NEIC **28** 10:33:17.0±0.0, 36°.09S×73°.27W, h30km, mb4.3/8,*
ML4.7(GUC), After GUC.
NEIC Felt [IV] at Tome and [III] at Cauquenes, Concepcion, San
Pedro de la Paz and Talcahuano.
*GUC **28** 10:33:17.4±0.6, 36°.09S×73°.27W, h30km±4km, ML4.7*
ISC 28 10:33:18.9±0.6, 36°.04S±0°.04×73°.40W±0°.09, h35km, n80,
σ1s27/60, mb4.3/11, MS4.0/18, 3D, Near coast of central
Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCSP	**San Pedro de C**	**0.83**	**164**	*e*P	**Pn**	**10 33 30.6**	**-3.6**
CCSP				*e*S	**Sn**	**10 33 41.8**	**-3.5**
CCSP				IAML		10 33 43.7	
comp=N,28μm,0.3s							
GO05	**HualaæØ**	**1.58**	**50**	*e*Pn	**Pn**	**10 33 43.1**	**-1.4**
GO05				*e*Sn	**Sn**	**10 34 02.7**	**-1.0**
GO05	**HualaæØ**	**1.58**	**50**	*e*P	**Pn**	**10 33 43.0**	**-1.4**
GO05				*i* S	**Sn**	**10 34 02.1**	**-1.6**
TMU	**Temuco**	**2.76**	**167**	‖*i*P	**Pn**	**10 33 59.3**	**-1.4**
TMU				*i* S	**Sn**	**10 34 31.3**	**-1.5**
TMU				IAML		10 34 52.8	
comp=E,1μm,1.0s							
LMEL	**Las Melosas**	**3.42**	**51**	IAML		10 35 06.8	
comp=N,2μm,1.0s							
CLCH	**Cerro Calan**	**3.54**	**43**	‖*i*P	**Pn**	**10 34 11.0**	**-0.4**
CLCH				*e*S	**Sn**	**10 34 51.5**	**-0.6**
CLCH				IAML		10 35 16.1	
comp=E,3μm,0.8s							
ROC1	**El Roble**	**3.64**	**33**	*e*Pn	**Pn**	**10 34 11.8**	**-1.2**
ROC1	**El Roble**	**3.64**	**33**	*e*P	**Pn**	**10 34 11.4**	**-1.5**
PEL	**Peldehue**	**3.66**	**39**	*e*Pn	**Pn**	**10 34 12.3**	**-0.7**
PEL	**Peldehue**	**3.66**	**39**	‖*i*P	**Pn**	**10 34 12.7**	**-0.3**
ARCO	**CERRO ARCO**	**4.88**	**50**	IAML		10 35 58.7	
comp=Z,116nm,0.9s							
AUSP	**Uspallata**	**5.06**	**42**	*e*P	**Pn**	**10 34 33.2**	**+0.7**
ASAL	**Salagasta**	**5.11**	**49**	*e*P	**Pn**	**10 34 34.1**	**+1.0**
PLCA	**Paso Flores**	**5.19**	**155**	Pn	**Pn**	**10 34 34.4**	**+0.2**
comp=Z,1.4nm,0.3s,baz=0.2,slow=13,SNR=25							
PLCA				Sn	Sn	10 35 43.8	+11
comp=Z,1.3nm,0.3s,baz=37,slow=19,SNR=1.5							
PLCA	**Paso Flores**	**5.19**	**155**	*e*Pn	**Pn**	**10 34 34.2**	**+0.1**
PLCA				*e*Sn	**Sn**	**10 35 34.2**	**+1.4**
PLCA				Sn	Sn	10 35 43.8	+11
RTLS	**Leoncito**	**5.43**	**40**	*e*P	**Pn**	**10 34 38.4**	**+0.7**
RTCV	**Cerro Valdivia**	**5.80**	**45**	*e*P	**Pn**	**10 34 42.7**	**+0.2**
RTLL	**Cerro Villicun**	**6.24**	**43**	*e*P	**Pn**	**10 34 48.5**	**-0.1**
RTLL				*e*S	**Sn**	**10 35 59.9**	**+1.2**
GO04	**Tololo Observa**	**6.25**	**21**	*e*Pn	**Pn**	**10 34 47.0**	**-1.8**
ACAN	**Cantantal**	**6.37**	**56**	*e*P	**Pn**	**10 34 50.7**	**+0.3**
AMOG	**MOGNA**	**6.53**	**40**	*e*P	**Pn**	**10 34 52.0**	**-0.6**
ACDV	**Cuesta del Vie**	**6.87**	**33**	*e*P	**Pn**	**10 34 56.9**	**-0.4**
MRA	**San Martin**	**7.32**	**63**	*e*P	**Pn**	**10 35 04.0**	**+0.6**
LCO	**Las Campanas**	**7.37**	**19**	*e*Pn	**Pn**	**10 35 02.2**	**-2.1**
AGUA	**GUANDACOL**	**7.73**	**34**	*e*P	**Pn**	**10 35 08.7**	**-0.4**
VCA	**Vinchina**	**8.50**	**33**	*e*P	**Pn**	**10 35 18.3**	**-1.4**
VCA				IAML		10 37 30.7	
comp=Z,34nm,0.7s							
ACLC	**CERRO LA CRUZ**	**8.54**	**41**	*e*P	**Pn**	**10 35 17.4**	**-2.9**
GO03	**Copiap**	**8.84**	**19**	*e*Pn	**Pn**	**10 35 22.1**	**-2.2**
TRQA	**Tornquist**	**9.35**	**106**	*e*Pn	**Pn**	**10 35 32.5**	**+1.3**
PB04	**IPOC Station P**	**13.95**	**13**	*e*Pn	**Pn**	**10 36 33.6**	**-0.7**
PB01	**IPOC Station P**	**15.33**	**14**	*e*Pn	**Pn**	**10 36 52.3**	**-0.5**
comp=Z,9.7nm,0.7s							
CPUP	**Villa Florida**	**16.80**	**59**	Pn	**P**	**10 37 11.8**	**-1.5**
comp=Z,0.2nm,0.3s,baz=227,slow=12,SNR=3.8							
CPUP				LR	LR	10 43 38.8	
comp=Z,343nm,19.4s,baz=234,slow=37							
CPUP	**Villa Florida**	**16.80**	**59**	*e*Pn	**Pn**	**10 37 09.8**	**-1.6**
comp=Z,3.9nm,1.1s							
MNMC	**Minye Minye**	**17.18**	**12**	*e*Pn	**Pn**	**10 37 16.2**	**-0.2**
comp=Z,16nm,0.9s							
LPAZ	**La Paz**	**20.23**	**15**	P	Pn	10 37 52.8	-1.0
comp=Z,1.4nm,0.8s,baz=200,slow=6.4,SNR=7.0							
LPAZ	**La Paz**	**20.23**	**15**	*e*P	Pn	10 37 52.6	-1.1
comp=Z,4.4nm,0.9s							
SIV	**San Ignacio**	**22.79**	**32**	P	**P**	**10 38 18.2**	**-0.4**
comp=Z,6.2nm,0.9s,baz=231,slow=12,SNR=25							
NNA	**Nana**	**24.15**	**352**	LR	LR	10 46 02.1	
comp=Z,221nm,18.0s,baz=173,slow=32							
SPB	**Sao Paulo**	**25.63**	**68**	*e*P	**P**	**10 38 45.1**	**-0.1**
comp=Z,15nm,0.9s							
PMSA	**Palmer Station**	**29.31**	**172**	LR	LR	10 50 48.8	
comp=Z,414nm,18.5s,baz=306,slow=36							
RPN	**Rapa Nui**	**31.73**	**276**	LR	LR	10 49 41.8	
comp=Z,302nm,18.1s,baz=120,slow=31							
HELC	**Santa Helena**	**42.05**	**357**	*e*P	**P**	**10 41 07.7**	**-0.1**
comp=Z,20nm,1.1s							
JTS	**JuntasAbangare**	**47.35**	**344**	LR	LR	10 57 16.7	
comp=Z,74nm,19.9s,baz=191,slow=30							
VNA3	**Neumayer Olymp**	**47.91**	**157**	P	**P**	**10 41 54.0**	**+0.7**
VNA1	**Neumayer--Stat**	**48.25**	**156**	P	**P**	**10 41 57.5**	**+1.6**
VNA2	**Neumayer--Watz**	**48.58**	**156**	P	**P**	**10 41 59.6**	**+1.2**
baz=291,slow=9.4							
SNAA	**Sanae**	**50.13**	**157**	LR	LR	11 03 07.4	
comp=Z,74nm,18.6s,baz=82,slow=36							
QSPA	**South Pole Qui**	**54.20**	**180**	P	**P**	**10 42 41.5**	**+0.7**
comp=Z,2.4nm,0.8s,baz=154,slow=9.1,SNR=5.8							
VNDA	**Vanda**	**61.88**	**192**	LR	LR	11 05 38.2	
comp=Z,34nm,21.0s,baz=151,slow=31							
TAOE	**Nuku Hiva Isla**	**66.06**	**277**	*e*LR	LR	11 04 00.4	
comp=Z,85nm,27.3s							
PPT2	**Papeete2**	**68.86**	**263**	*e*LR	LR	11 05 22.0	
comp=Z,138nm,24.2s							
PPT	**Papeete**	**68.87**	**263**	LR	LR	11 05 37.1	
comp=Z,69nm,18.6s,baz=155,slow=28							
LPIG	**La Paz**	**69.25**	**324**	LR	LR	11 08 11.3	
comp=Z,76nm,18.2s,baz=202,slow=30							
TXAR	**Lajitas Array**	**70.99**	**332**	P	**P**	**10 44 34.2**	**+1.2**
comp=Z,0.6nm,0.6s,baz=151,slow=8.6,SNR=9.8							
TXAR				LR	LR	11 11 15.0	
comp=Z,104nm,18.1s,baz=0.0,slow=32							
TX31	**Lajitas Ar. Si**	**70.99**	**332**	*e*P	**P**	**10 44 33.9**	**+0.8**
MAW	**Mawson**	**71.54**	**164**	LR	LR	11 16 33.9	
comp=Z,146nm,18.4s,baz=243,slow=36							
V48A	**Smith Brothers**	**72.50**	**349**	*e*P	**P**	**10 44 41.7**	**-0.1**
comp=Z,7.2nm,0.8s							
DBIC	**Dimbokro**	**76.89**	**72**	LR	LR	11 17 48.1	
comp=Z,72nm,18.3s,baz=194,slow=35							
ANMO	**Albuquerque**	**77.06**	**333**	LR	LR	11 14 42.3	
comp=Z,76nm,18.1s,baz=160,slow=32							
BOSA	**Boshof**	**80.11**	**118**	LR	LR	11 16 33.9	
comp=Z,90nm,18.5s,baz=200,slow=32							
ECSD	**EROS Data Cent**	**82.16**	**343**	*e*P	**P**	**10 45 36.2**	**+0.4**
comp=Z,3.0nm,0.9s							
KOWA	**Kowa**	**82.49**	**66**	P	**P**	**10 45 38.9**	**+0.8**
comp=Z,1.8nm,0.6s,baz=253,slow=7.7,SNR=4.5							
KOWA				LR	LR	11 22 14.5	
comp=Z,65nm,18.4s,baz=220,slow=36							
NV01	**Mina Array Sit**	**84.94**	**326**	*e*P	**P**	**10 45 51.5**	**+1.1**
NVAR	**Mina Array Bea**	**84.94**	**326**	P	**P**	**10 45 51.9**	**+1.5**
comp=Z,0.3nm,0.6s,baz=142,slow=6.6,SNR=4.4							
NVAR				LR	LR	11 16 08.6	
comp=Z,32nm,20.7s,baz=244,slow=30							
PD31	**Pinedale Array**	**85.09**	**334**	*e*P	**P**	**10 45 51.7**	**+0.6**
PDAR	**Pinedale Array**	**85.09**	**334**	P	**P**	**10 45 51.7**	**+0.6**
comp=Z,0.1nm,0.3s,baz=120,slow=6.3,SNR=2.9							
TORD	**Torodi Ar. Bea**	**85.95**	**71**	P	**P**	**10 45 55.3**	**-0.4**
comp=Z,1.0nm,0.9s,baz=207,slow=4.8							
TORD				LR	LR	11 23 38.0	
comp=Z,57nm,18.4s,baz=255,slow=35							
TOA1	**Torodi Ar. Sit**	**85.95**	**71**	*e*P	**P**	**10 45 55.3**	**-0.4**
SCHQ	**Schefferville**	**90.69**	**4**	LR	LR	11 29 49.1	
comp=Z,20nm,18.2s,baz=3.5,slow=37							
MDT	**Midelt**	**93.96**	**52**	LR	LR	11 28 33.3	
comp=Z,75nm,19.7s,baz=213,slow=35							
DZM	**Mont Dzumac**	**99.14**	**234**	*e*LR	LR	11 19 46.8	
comp=Z,426nm,23.1s							
WR1	**Warramunga Arr**	**118.44**	**210**	*e*PKPdf	**PKPdf**	**10 52 02.6**	**-0.6**
WRA	**Warramunga Arr**	**118.44**	**210**	PKP	**PKPdf**	**10 52 02.6**	**-0.7**
comp=Z,0.5nm,0.8s,baz=156,slow=1.7,SNR=7.2							
H11S2	**WAKE ISLAND Hyl**	**24.61**	**268**	T	T	13 09 42.4	
baz=118,slow=74,SNR=5.0							
H11S1	**WAKE ISLAND Hyl**	**24.62**	**269**	T	T	13 09 27.3	
baz=118,slow=74,SNR=3.9							
H11S3	**WAKE ISLAND Hyl**	**24.63**	**268**	T	T	13 09 16.2	
baz=118,slow=74,SNR=3.5							
H11N3	**WAKE ISLAND Hyl**	**25.08**	**270**	T	T	13 09 47.1	
baz=115							
H11N1	**WAKE ISLAND Hyl**	**25.09**	**270**	T	T	13 09 46.2	
baz=115							
H11N2	**WAKE ISLAND Hyl**	**25.09**	**270**	T	T	13 09 44.8	
baz=115							
ZALV	**Zalesovo Beam**	**156.54**	**33**	PKPab	**PKPab**	**10 53 38.8**	**+0.3**
comp=Z,0.6nm,0.6s,baz=219,slow=1.8,SNR=3.4							

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*CSEM **28** 10:34:54.5±0.1, 41°.08N×43°.90E, h2km, ML2.6, Error*
ellipse: s-maj=3.9km s-min=2.3km az=144.0
*DDA **28** 10:34:54.1, 41°.09N×43°.89E, h7km, Ml3.2*
*TIF **28** 10:34:54.3, 41°.11N×43°.91E, h16km±2km*
ISC 28 10:34:54.7±1.0, 41°.10N±0°.02×43°.88E±0°.02, h10km±9km,
n27, σ0s74/53, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BGD	**Bogdanovka**	**0.27**	**309**	P	**Pg**	**10 34 59.8**	**-0.5**
BGD				S	**Sg**	**10 35 04.4**	**+0.4**
BGD	**Bogdanovka**	**0.27**	**309**	P	**Pg**	**10 34 59.8**	**-0.5**
BGD				S	**Sg**	**10 35 04.4**	**+0.4**
AKH	**Akhalkalaki**	**0.43**	**318**	P	**Pg**	**10 35 03.3**	**+0.1**
AKH				S	**Sg**	**10 35 09.8**	**+0.9**
AKH	**Akhalkalaki**	**0.43**	**318**	P	**Pg**	**10 35 03.3**	**+0.1**
AKH				S	**Sg**	**10 35 09.8**	**+0.9**
EAK	**Akyaka**	**0.46**	**207**	*i* P	**Pg**	**10 35 03.0**	**-0.7**
EAK				*i* S	**Sg**	**10 35 10.1**	**+0.3**
EAK	**Akyaka**	**0.46**	**207**	P	**Pg**	**10 35 03.0**	**-0.7**
EAK				S	**Sg**	**10 35 10.1**	**+0.3**
KZR	**Kazreti**	**0.50**	**55**	P	**Pg**	**10 35 04.3**	**-0.1**
KZR				S	**Sg**	**10 35 11.3**	**+0.2**
KZR	**Kazreti**	**0.50**	**55**	P	**Pg**	**10 35 04.3**	**-0.1**
KZR				S	**Sg**	**10 35 11.3**	**+0.2**
DIGO	**Kars**	**0.78**	**209**	*i* P	**Pg**	**10 35 09.1**	**-0.7**
DIGO				*i* S	**Sg**	**10 35 20.2**	**+0.2**
DIGO	**Kars**	**0.78**	**209**	P	**Pg**	**10 35 09.1**	**-0.7**
DIGO				S	**Sg**	**10 35 20.2**	**+0.2**
TBLG	**Delisi**	**0.91**	**45**	P	**Pg**	**10 35 11.6**	**-0.6**
TBLG				S	**Sb**	**10 35 24.3**	**-0.5**
TBLG	**Delisi**	**0.91**	**45**	P	**Pg**	**10 35 11.6**	**-0.6**
TBLG				S	**Sb**	**10 35 24.2**	**-0.5**
EPOS	**Posof**	**0.96**	**296**	*i* P	**Pg**	**10 35 12.4**	**-0.7**
EPOS				*i* S	**Sg**	**10 35 26.0**	**+0.4**
EPOS	**Posof**	**0.96**	**296**	P	**Pg**	**10 35 12.4**	**-0.7**
EPOS				S	**Sg**	**10 35 26.0**	**+0.4**
SEAG	**Tbilisi Sea**	**0.97**	**46**	P	**Pg**	**10 35 13.0**	**-0.3**
SEAG				S	**Sb**	**10 35 26.0**	**-0.5**
SEAG	**Tbilisi Sea**	**0.97**	**46**	P	**Pg**	**10 35 13.0**	**-0.3**
SEAG				S	**Sb**	**10 35 26.0**	**-0.5**
DUS	**Dusheti**	**1.17**	**32**	P	**Pn**	**10 35 17.4**	**+0.1**
DUS				S	**Sn**	**10 35 33.4**	**0.0**
DUS	**Dusheti**	**1.17**	**32**	P	**Pn**	**10 35 17.4**	**+0.1**
DUS				S	**Sn**	**10 35 33.4**	**0.0**
DGRG	**David-gareji**	**1.18**	**72**	P	**Pg**	**10 35 16.4**	**-1.1**
DGRG				S	**Sn**	**10 35 33.7**	**+0.1**
IGDI	**IGDIR**	**1.23**	**173**	*i* P	**Pg**	**10 35 17.6**	**-0.9**
IGDI				*i* S	**Sb**	**10 35 34.1**	**-0.1**
DDEM	**Demirkent**	**1.62**	**264**	*i* P	**Pg**	**10 35 25.3**	**-0.5**
DDEM				*i* S	**Sg**	**10 35 47.6**	**+0.7**
DDEM	**Demirkent**	**1.62**	**264**	P	**Pg**	**10 35 25.3**	**-0.5**
DDEM				S	**Sg**	**10 35 47.6**	**+0.7**
EATA	**Eleskirt**	**1.62**	**221**	*i* P	**Pg**	**10 35 25.3**	**-0.6**
EATA				*i* S	**Sg**	**10 35 49.5**	**+2.6**
EATA	**Eleskirt**	**1.62**	**221**	P	**Pg**	**10 35 25.3**	**-0.6**
EATA				S	**Sg**	**10 35 49.5**	**+2.6**
DBOC	**Borcka**	**1.69**	**279**	*i* P	**Pb**	**10 35 25.9**	**+0.1**
DBOC				*i* S	**Sg**	**10 35 48.6**	**-0.3**
DBOC	**Borcka**	**1.69**	**279**	P	**Pb**	**10 35 25.9**	**+0.1**
DBOC				S	**Sg**	**10 35 48.6**	**-0.3**
DDFL	**Dedoflistskaro**	**1.73**	**78**	P	**Pg**	**10 35 28.7**	**+0.8**

IDC 28 10:49:25.8±1.7, 6°.18S×129°.39E, h0km, mb3.5/1,
mb1 3.5/4, mb1mx3.3/49, mbtmp3.4/4, ML2.9/3, Error
ellipse: s-maj=65.7km s-min=28.4km az=80.0, Banda
Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.59**	**20**	Pn	Pn	10 50 52.0	+1.7
1.2nm,0.3s,baz=287,slow=23,SNR=18							
SIJI				Sn	Sn	10 51 46.4	-9.0
1.4nm,0.3s,baz=259,slow=23,SNR=11							
WRA	**Warramunga Arr**	**14.51**	**161**	Pn	Pn	10 52 51.6	-1.0
0.0nm,0.3s,baz=348,slow=13,SNR=1.7							
WRA				Sn	Sn	10 55 21.9	-12
0.1nm,0.3s,baz=332,slow=24,SNR=6.2							
ASAR	**Alice Springs**	**17.93**	**166**	P	P	10 53 37.6	+0.2
0.1nm,0.3s,baz=344,slow=11,SNR=8.4							
MKAR	**Makanchi Array**	**67.21**	**327**	P	P	11 00 21.5	-0.4
0.2nm,0.4s,baz=132,slow=8.5,SNR=3.0							

MAN 28 11:07:48.5, 7°.16N×125°.58E, h24km, mb4.2, ML3.0, MS2.7,
2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMPH	**Davao City--Mi**	**0.11**	**224**	⇑*i*P	Pn	11 07 59.6	+4.8
DMPH				*i* S	Sb	11 08 05.4	+9.2
MATI	**Mati**	**0.70**	**108**	*e*P	Pb	11 08 02.5	+0.4
MATI				*e*S	Sn	11 08 13.9	+0.8
BUKP	**Musuan**	**0.88**	**324**	*e*P	Pb	11 08 04.5	-0.7
BUKP				*e*S	Sn	11 08 17.1	-0.5
SKMP	**Bagumbayan, Su**	**1.22**	**238**	*e*P	Pn	11 08 10.2	+0.2
SKMP				*e*S	Sn	11 08 25.5	-0.2
CGP	**Cagayan de Oro**	**1.56**	**326**	⇑*e*P	Pn	11 08 15.4	+0.6
CGP				*e*S	Sn	11 08 35.1	+0.9
PAGZ	**Pagadian**	**2.29**	**287**	*e*P	Pn	11 08 24.2	-0.6
PAGZ				*e*S	Sn	11 08 54.4	+2.1

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*ISK **28** 11:13:40.4, 38°.31N×27°.49E, h6km, ML2.6/5*
*CSEM **28** 11:13:41.2±0.1, 38°.30N×27°.48E, h8km, ML2.6, Error*
ellipse: s-maj=2.8km s-min=2.4km az=105.0
*DDA **28** 11:13:41.4, 38°.29N×27°.49E, h7km, Ml2.9*
ISC 28 11:13:41.2±1.0, 38°.30N±0°.02×27°.49E±0°.02, h8km±10km,
n32, σ0s47/53, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYDB	**Zeytinkoy-Aydi**	**0.48**	**138**	PG	**Pg**	**11 13 50.5**	**+0.1**
AYDB				SG	**Sg**	**11 13 56.7**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**0.48**	**138**	*i* Pg	**Pg**	**11 13 50.5**	**+0.1**
AYDB				*e*Sg	**Sg**	**11 13 56.7**	**0.0**
DGB	**˜zmir**	**0.54**	**243**	*i* P	**Pb**	**11 13 52.3**	**-0.5**
DGB				*i* S	**Sg**	**11

BATI Baumata 56.31 268 LR LR 11 47 31.6
comp=Z,518nm,21.2s,baz=266,slow=33

IDC 28 11:22:43.0±2.8, 21°.17S×168°.58E, h0km, mb3.6/3, mb1 3.9/4, mb1mx3.6/44, mbtmp3.6/4, ML4.1/1, MS2.9/1, Ms1 2.9/1, ms1mx2.5/29, Error ellipse: s-maj=150.1km s-min=25.6km az=153.0, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.18**	**245**	Pn	Pn	11 23 20.8	+0.1
	54nm,0.3s,baz=124,slow=12,SNR=6.3						
DZM				Sn	Sn	11 23 49.7	+1.2
	59nm,0.3s,baz=152,slow=14,SNR=3.7						
AFI	**Afiamalu**	**20.06**	**72**	LR	LR	11 32 59.1	
	comp=Z,33nm,21.3s,baz=247,slow=31						
WRA	**Warramunga Arr**	**32.05**	**266**	P	P	11 29 11.5	-0.3
	0.3nm,0.6s,baz=96,slow=8.4,SNR=1.7						
ASAR	**Alice Springs**	**32.11**	**259**	P	P	11 29 11.8	-0.5
	0.7nm,0.7s,baz=84,slow=9.2,SNR=8.2						
NVAR	**Mina Array Bea**	**90.53**	**49**	P	P	11 35 46.5	-0.8
	0.2nm,0.5s,baz=238,slow=7.5,SNR=3.5						
GERES	**GERESS Array B**	**145.87**	**330**	PKPbc	PKPab	11 42 24.9	+0.1
	0.8nm,0.6s,baz=49,slow=4.1,SNR=5.4						

*TEH **28** 11:27:37.5, 28°.28N×59°.01E, h10km, ML3.7*
*THR **28** 11:27:37.5±0.3, 28°.21N×58°.96E, h15km, ML3.5*
*ISCJB **28** 11:27:39.9±1.2, 28°.32N±0°.09×58°.99E±0°.10, h10km, Error ellipse: s-maj=16.8km s-min=6.8km az=136.3*
*CSEM **28** 11:27:40.4±0.8, 28°.29N×59°.01E, h10km, ML3.7, Error ellipse: s-maj=25.0km s-min=9.6km az=135.0*

ISC 28 11:27:40.6±1.6, 28°28N±0°.08×59°.03E±0°.07, h10km, n31, σ1§20/32, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZHSF	**Zahedan**	**2.03**	**49**	*e*Pn	**Pn**	**11 28 14.6**	**-0.4**
ZHSF	**Zahedan**	**2.03**	**49**	*e*Pn	**Pn**	**11 28 14.6**	**-0.4**
ZHSF	**Zahedan**	**2.03**	**49**	*e*Pn	**Pn**	**11 28 14.6**	**-0.4**
CHMN	**Cheshme madani**	**2.04**	**321**	*e*Pn	**Pn**	**11 28 14.5**	**-0.9**
CHMN				*e*		11 28 46.6	
	comp=Z,99nm,0.2s						
NIAN	**Nian**	**2.07**	**250**	*e*Pn	**Pn**	**11 28 15.4**	**+0.1**
NIAN				*e*Sg	**Sb**	**11 28 44.9**	**+0.9**
NIAN				*e*		11 28 47.4	
	comp=E,99nm,0.1s						
NIAN				*e*		11 28 47.7	
	comp=Z,99nm,0.1s						
NIAN				*e*		11 28 48.0	
	comp=N,99nm,0.2s						
NIAN	**Nian**	**2.07**	**250**	*e*Pn	**Pn**	**11 28 15.4**	**+0.1**
NIAN				*e*Sg	**Sb**	**11 28 44.9**	**+0.9**
IBND	**Bandar-abas**	**2.35**	**250**	*e*Pn	**Pn**	**11 28 21.1**	**+1.9**
NGRK	**Negar Kerman**	**2.43**	**305**	*e*Pn	**Pn**	**11 28 21.6**	**+0.9**
NGRK				*e*		11 28 56.9	
	comp=Z,99nm,0.1s						
NGRK	**Negar Kerman**	**2.43**	**305**	*e*Pn	**Pn**	**11 28 21.6**	**+0.9**
KRBR	**Kerman**	**2.61**	**311**	*e*Pn	**Pn**	**11 28 21.6**	**-1.5**
KRBR				AML	AML	11 29 08.0	
	comp=N,141nm,0.3s						
KRBR				AML	AML	11 29 09.7	
	comp=E,143nm,0.5s						
KRBR	**Kerman**	**2.61**	**311**	*e*Pn	**Pn**	**11 28 21.6**	**-1.5**
KRBR	**Kerman**	**2.61**	**311**	*e*Pn	**Pn**	**11 28 21.6**	**-1.5**
TVBK	**TV Kerman**	**2.61**	**311**	*e*Pn	**Pn**	**11 28 23.4**	**+0.2**
TVBK				*e*		11 29 09.0	
	comp=Z,99nm,0.1s						
TVBK	**TV Kerman**	**2.61**	**311**	*e*Pn	**Pn**	**11 28 23.4**	**+0.2**
GENO	**Geno**	**2.67**	**252**	*e*Pn	**Pn**	**11 28 23.7**	**-0.2**
GENO				*e*		11 29 04.2	
	comp=Z,99nm,0.3s						
GENO				*e*		11 29 04.4	
	comp=N,99nm,0.3s						
GENO				*e*		11 29 05.1	
	comp=E,99nm,0.1s						
GENO	**Geno**	**2.67**	**252**	*e*Pn	**Pn**	**11 28 23.7**	**-0.2**
BNDS	**Bandar-Abbas**	**2.68**	**252**	*e*Pn	**Pn**	**11 28 21.1**	**-2.8**
BNDS				AML	AML	11 29 02.8	
	comp=E,249nm,0.4s						
BNDS	**Bandar-Abbas**	**2.68**	**252**	*e*Pn	**Pn**	**11 28 21.1**	**-2.8**
BNDS	**Bandar-Abbas**	**2.68**	**252**	*e*Pn	**Pn**	**11 28 21.1**	**-2.8**
IKOO	**Kooshah**	**4.13**	**360**	*e*Pn	**Pn**	**11 28 43.4**	**-0.6**
IKOO				*e*		11 28 44.1	
	comp=Z,3μm,0.1s						
IKOO				*e*		11 28 44.1	
	comp=N,2μm,0.1s						
IKOO				*e*		11 28 44.1	
	comp=E,2μm,0.1s						
IKOO	**Kooshah**	**4.13**	**360**	*e*Pn	**Pn**	**11 28 43.4**	**-0.6**
IDAH	**Dahanechah**	**4.50**	**9**	*e*Pn	**Pn**	**11 28 49.2**	**+0.1**
IDAH				*e*		11 28 49.7	
	comp=Z,788nm,0.2s						
IDAH				*e*		11 28 50.6	
	comp=N,872nm,0.2s						
IDAH				*e*		11 28 59.5	
	comp=E,507nm,0.2s						
IDAH	**Dahanechah**	**4.50**	**9**	*e*Pn	**Pn**	**11 28 49.2**	**+0.1**
ITEG	**Tejag**	**4.61**	**357**	*e*Pn	**Pn**	**11 28 50.0**	**-0.5**
ITEG				*e*		11 28 50.4	
	comp=Z,2μm,0.1s						
ITEG				*e*		11 28 51.2	
	comp=N,1μm,0.2s						
ITEG				*e*		11 29 07.5	
	comp=E,1μm,0.2s						
ITEG	**Tejag**	**4.61**	**357**	*e*Pn	**Pn**	**11 28 50.0**	**-0.5**
IMON	**Monand**	**4.93**	**6**	*e*Pn	**Pn**	**11 28 55.6**	**+0.7**
IMON				*e*		11 28 56.1	
	comp=E,1μm,0.2s						
IMON	**Monand**	**4.93**	**6**	*e*Pn	**Pn**	**11 28 55.6**	**+0.7**
TABS	**Tabas**	**5.60**	**343**	*e*Pn	**Pn**	**11 29 03.2**	**-0.8**
TABS				AML	AML	11 30 50.4	
	comp=N,27nm,0.6s						
TABS	**Tabas**	**5.60**	**343**	*e*Pn	**Pn**	**11 29 03.2**	**-0.8**
TABS	**Tabas**	**5.60**	**343**	*e*Pn	**Pn**	**11 29 03.2**	**-0.8**
ICHK	**Chekchek**	**5.62**	**316**	*e*		11 30 46.0	
	comp=N,164nm,0.3s						
ICHK				*e*		11 30 51.3	
	comp=E,184nm,0.2s						
ICHK				*e*		11 31 13.2	
	comp=Z,177nm,0.3s						

IDC 28 11:32:54.2±16.0, 18°.00S×175°.01W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.5/50, mbtmp3.8/3, Error ellipse: s-maj=402.5km s-min=53.1km az=118.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**47.80**	**259**	P	P	11 41 33.8	-0.1
	0.4nm,0.3s,baz=98,slow=7.5,SNR=15						
ASAR	**Alice Springs**	**47.88**	**254**	P	P	11 41 34.4	-0.1
	0.4nm,0.4s,baz=86,slow=8.4,SNR=21						
MJAR	**Matsushiro Arr**	**69.96**	**321**	P	P	11 44 07.4	-0.2
	0.5nm,0.3s,baz=127,slow=5.4,SNR=4.0						

*ISCJB **28** 11:36:36.1±0.6, 26°.36S±0°.08×178°.39E±0°.10, h650km, mb4.1/14, Error ellipse: s-maj=12.0km s-min=9.7km az=153.6*
*IDC **28** 11:36:39.9±2.1, 26°.20S×178°.17E, h660km±23km, mb3.6/13, mb1 3.7/14, mb1mx3.4/45, mbtmp4.7/14, Error ellipse: s-maj=16.3km s-min=15.6km az=162.0*

ISC 28 11:36:37.7±0.6, 26°43S±0°.09×178°37E±0°.09, h650km, n28, σ1§29/30, mb4.1/14, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.32**	**131**	P	**P**	**11 38 08.7**	**-0.1**
	114nm,0.3s,baz=71,slow=11,SNR=5.9						
DZM	**Mont Dzumac**	**11.72**	**289**	P	**P**	**11 39 12.2**	**-1.7**
	2.9nm,0.3s,baz=118,slow=13,SNR=9.7						
URZ	**Urewera**	**11.84**	**185**	P	**P**	**11 39 13.9**	**-0.7**
	1.5nm,0.3s,baz=270,slow=4.6,SNR=17						
URZ				S	**S**	**11 41 19.2**	**-3.8**
	1.0nm,0.3s,baz=92,slow=21,SNR=20						
RAR	**Rarotonga**	**20.65**	**80**	P	**P**	**11 40 33.0**	**-2.1**
	6.6nm,0.4s,baz=311,slow=20,SNR=5.2						
CTA	**Charters Tower**	**30.12**	**275**	P	**P**	**11 41 58.9**	**+0.8**
	12nm,0.4s,baz=98,slow=13,SNR=36						
STKA	**Stephens Creek**	**32.47**	**252**	P	**P**	**11 42 19.1**	**+1.3**
	3.5nm,0.8s,baz=90,slow=11,SNR=6.5						
ASAR	**Alice Springs**	**40.23**	**264**	P	**P**	**11 43 21.8**	**+0.6**
	6.7nm,0.5s,baz=93,slow=7.4,SNR=62						
ASAR				S	**S**	**11 48 43.4**	**-0.8**
	1.6nm,1.0s,baz=101,slow=16,SNR=4.9						
WRA	**Warramunga Arr**	**40.84**	**270**	P	**P**	**11 43 25.8**	**-0.2**
	6.3nm,0.4s,baz=104,slow=7.3,SNR=41						
WRA				S	**S**	**11 48 51.3**	**-1.6**
	0.8nm,0.8s,baz=98,slow=16,SNR=3.7						
JAY	**Jayapura**	**43.25**	**297**	P	**P**	**11 43 44.5**	**-0.3**
	5.5nm,0.5s,baz=174,slow=6.7,SNR=5.4						
FITZ	**Fitzroy Crossi**	**49.22**	**268**	P	**P**	**11 44 30.6**	**+1.1**
	4.6nm,0.5s,baz=94,slow=7.6,SNR=3.6						
GUMO	**Guam**	**51.42**	**317**	P	**P**	**11 44 44.4**	**-1.0**
	40nm,0.8s,baz=180,slow=20,SNR=2.6						
VNDA	**Vanda**	**51.74**	**185**	P	**P**	**11 44 49.7**	**+2.9**
	0.3nm,0.4s,baz=8.8,slow=8.7,SNR=7.3						
SIJI	**Sorong**	**51.91**	**291**	P	**P**	**11 44 49.0**	**0.0**
	29nm,0.6s,baz=93,slow=5.1,SNR=12						
MJAR	**Matsushiro Arr**	**73.18**	**327**	P	**P**	**11 47 04.0**	**-0.6**
	2.0nm,0.6s,baz=168,slow=6.3,SNR=6.3						
KSRS	**Korea Array**	**79.27**	**321**	P	**P**	**11 47 38.0**	**+0.3**
	1.7nm,0.7s,baz=139,slow=5.4,SNR=7.9						
PETK	**Petropavlovsk-**	**81.23**	**348**	P	**P**	**11 47 47.2**	**-0.2**
	3.6nm,0.7s,baz=106,slow=6.2						
USRK	**Ussuriysk Ar.**	**82.11**	**328**	P	**P**	**11 47 51.5**	**-0.6**
	4.6nm,0.7s,baz=112,slow=3.7						
ILAR	**Eielson Array**	**94.83**	**14**	P	**P**	**11 48 51.3**	**-0.1**
	0.3nm,0.9s,baz=219,slow=5.8,SNR=3.9						
BVAR	**Borovoye Array**	**121.34**	**318**	PKP	**PKPdf**	**11 54 18.8**	**+0.4**
	1.2nm,0.4s,baz=101,slow=2.9,SNR=8.9						
SPITS	**Spitsbergen Ar**	**127.52**	**355**	PKP	**PKPdf**	**11 54 30.7**	**+1.1**
	2.4nm,0.7s,baz=12,slow=7.4,SNR=6.4						
ARCES	**ARCESS Array B**	**134.04**	**347**	PKhKP	PKPpre	11 54 36.6	
	2.3nm,0.8s,baz=69,slow=4.0,SNR=4.0						
FINES	**FINESS Array B**	**140.33**	**340**	PKhKP	PKPpre	11 54 48.0	
	1.2nm,0.4s,baz=50,slow=4.9,SNR=14						
HFS	**Hagfors**	**144.70**	**347**	PKP	**PKPdf**	**11 55 02.1**	**+0.6**
	8.5nm,0.5s,baz=64,slow=3.4,SNR=56						
AKASG	**Malin Array Be**	**146.22**	**324**	PKPbc	**PKPbc**	**11 55 07.0**	**+0.2**
	3.7nm,0.6s,baz=42,slow=3.6,SNR=6.2						
MMAI	**Mount Meron Ar**	**147.30**	**291**	PKPbc	**PKPbc**	**11 55 11.1**	**+0.7**
	1.8nm,0.3s,baz=48,slow=5.0,SNR=4.6						
BRTR	**Keskin Array B**	**147.83**	**303**	PKPbc	**PKPbc**	**11 55 12.3**	**+0.7**
	1.2nm,0.5s,baz=117,slow=3.9,SNR=6.0						
MLR	**Muntele Rosu**	**150.90**	**318**	PKPbc	**PKPbc**	**11 55 19.0**	**+0.3**
	0.6nm,0.6s,baz=78,slow=13,SNR=4.2						
TORD	**Torodi Ar. Bea**	**166.42**	**194**	PKP	**PKPdf**	**11 55 31.4**	**+0.6**
	0.6nm,0.8s,baz=186,slow=7.1						
TORD				PKPab	**PKPab**	**11 56 38.5**	**+1.3**
	baz=193,slow=3.8						

*IDC **28** 11:36:55.6±0.7, 9°.48S×113°.03E, h0km, mb4.4/18, mb1 4.5/18, mb1mx4.2/58, mbtmp4.4/18, MS3.4/14, Ms1 3.4/14, ms1mx3.1/52, Error ellipse: s-maj=26.2km s-min=13.4km az=57.0*
*ISCJB **28** 11:36:58.5±0.3, 9°.65S±0°.04×113°.01E±0°.03, h36km, mb4.6/50, MS3.6/15, Error ellipse: s-maj=6.9km s-min=3.8km az=26.0*
*MOS **28** 11:36:59.8±1.3, 9°.39S×113°.08E, h41km, mb5.0/14, Error ellipse: s-maj=16.0km s-min=8.0km az=111.6*
*DJA **28** 11:36:59.6±0.3, 10°.S±3°×11°.3E±°, h10km, M4.7/26, mb4.9/8, mB5.2/5, MLv4.7/26, Mw(mB)4.5/5*
*NEIC **28** 11:37:01.2±0.6, 9°.54S×113°.06E, h40km±5km, mb4.8/15, Error ellipse: s-maj=9.0km s-min=4.2km az=215.0*

ISC 28 11:37:00.2±0.4, 9°74S±0°.06×113°01E±0°.04, h36km, n164, σ2§01/168, mb4.7/50, MS3.4/15, 3C-3D, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMJI	**Gumukmas**	**1.52**	**16**	P	**Pn**	**11 37 25.8**	**+1.0**
JAGI	**Jajag, Banyuwa**	**1.69**	**42**	P	**Pn**	**11 37 28.8**	**+1.6**
JAGI	**Jajag, Banyuwa**	**1.69**	**42**	*e*Pn	**Pn**	**11 37 27.9**	**+0.7**
JAGI				*e*Sn	**Sn**	**11 37 45.7**	**-1.9**
BLJI	**Banyuglugur**	**2.06**	**16**	P	**Pn**	**11 37 35.0**	**+2.7**
PWJI	**Pagerwojo**	**2.08**	**325**	P	**Pn**	**11 37 33.2**	**+0.6**
PWJI				S	**Sn**	**11 37 55.8**	**-1.4**
PWJI				Sg		11 38 03.3	
IGBI	**Denpasar**	**2.30**	**67**	P	**Pn**	**11 37 38.3**	**+2.8**
PCJI	**Pacitan**	**2.37**	**310**	P	**Pn**	**11 37 37.5**	**+0.9**
DNP	**Denpasar**	**2.41**	**64**	P	**Pn**	**11 37 40.7**	**+3.6**
DNP	**Denpasar**	**2.41**	**64**	P	**Pn**	**11 37 40.5**	**+3.4**
SRBI	**Singaraja**	**2.72**	**53**	P	**Pn**	**11 37 44.5**	**+3.1**
WOJI	**Wonogiri, Jawa**	**2.79**	**312**	P	**Pn**	**11 37 43.4**	**+1.0**
NGJI	**Ngawi**	**2.81**	**327**	P	**Pn**	**11 37 46.2**	**+3.6**
GRJI	**Gresik**	**2.85**	**349**	P	**Pn**	**11 37 45.6**	**+2.4**
UGM	**Wanagama**	**3.05**	**306**	P	**Pn**	**11 37 47.1**	**+1.1**
UGM	**Wanagama**	**3.05**	**306**	*e*Pn	**Pn**	**11 37 46.9**	**+0.9**
TBJI	**Tambak Boyo**	**3.12**	**338**	P	**Pn**	**11 37 49.2**	**+2.3**
SMRI	**Semarang**	**3.69**	**316**	P	**Pn**	**11 37 57.8**	**+3.1**
SMRI	**Semarang**	**3.69**	**316**	*e*Pn	**Pn**	**11 37 56.0**	**+1.3**
TWSI	**Taliwang, Sumb**	**3.95**	**76**	P	**Pn**	**11 38 01.8**	**+3.5**
KPJI	**Karang Pucung**	**4.69**	**300**	P	**Pn**	**11 38 09.9**	**+1.4**
PLAI	**Plampang**	**4.79**	**80**	P	**Pn**	**11 38 12.9**	**+3.0**
CMJI	**Cimerak**	**4.91**	**293**	P	**Pn**	**11 38 11.6**	**+0.1**
CISI	**Cisompet, Garu**	**5.58**	**292**	P	**Pn**	**11 38 21.7**	**+1.0**
CISI	**Cisompet, Garu**	**5.58**	**292**	*e*Pn	**Pn**	**11 38 21.5**	**+0.7**
LEM	**Lembang**	**6.07**	**298**	Pn	Pn	11 38 32.4	+4.8
	4.3nm,0.3s,baz=119,slow=19,SNR=2.9						
LEM				Sn	**Sn**	**11 39 33.0**	**-3.0**
	5.5nm,0.3s,baz=311,slow=19,SNR=2.0						
LEM				LR	LR	11 41 14.9	
	comp=Z,195nm,21.0s,baz=112,slow=43						
LEM	**Lembang**	**6.07**	**298**	P	**Pn**	**11 38 29.4**	**+1.8**
WBSI	**Waikabubak, Su**	**6.29**	**90**	P	**Pn**	**11 38 33.4**	**+2.8**
PBKI	**Pangkalan Bun**	**7.11**	**349**	P	**Pn**	**11 38 43.7**	**+1.9**
KBKI	**Kotabaru**	**7.12**	**26**	P	**Pn**	**11 38 43.9**	**+2.0**
CGJI	**Cibinong**	**7.88**	**293**	P	**Pn**	**11 38 54.2**	**+1.9**
BKSI	**Bulukumba**	**8.30**	**59**	P	**Pn**	**11 39 01.3**	**+3.2**
	22nm,0.9s						
EDFI	**Ende, Flores**	**8.62**	**84**	P	**Pn**	**11 39 03.3**	**+0.6**
MMRI	**Maumere**	**9.18**	**84**	*e*Pn	**Pn**	**11 39 09.1**	**-1.0**
BATI	**Baumata**	**10.50**	**93**	Pn	**Pn**	**11 39 30.0**	**+1.6**
	5.7nm,0.3s,baz=276,slow=19,SNR=3.2						
BATI				Sn	**Sn**	**11 41 17.7**	**-7.1**
	2.4nm,0.3s,baz=186,slow=18,SNR=1.9						
SOEI	**Soe**	**11.10**	**91**	*e*Pn	**Pn**	**11 39 36.5**	**-0.1**
MNAI	**Manna**	**11.32**	**297**	*e*Pn	**Pn**	**11 39 37.7**	**-1.8**
KSM	**Kuching**	**11.46**	**346**	*e*Pn	**Pn**	**11 39 39.8**	**-1.6**
SBUM	**Sibu**	**12.13**	**356**	*e*Pn	**Pn**	**11 39 48.6**	**-2.0**
MBWA	**Marble Bar**	**13.07**	**151**	*e*Pn	**Pn**	**11 40 01.4**	**-2.0**
MBWA				*e*Sn	Sn	11 42 16.9	-11
FITZ	**Fitzroy Crossi**	**14.80**	**126**	Pn	**Pn**	**11 40 25.7**	**-1.3**
	0.4nm,0.3s,baz=285,slow=7.9,SNR=17						
FITZ				Sn	Sn	11 42 59.2	-11
	0.7nm,0.3s,baz=153,slow=19,SNR=6.2						
FITZ	**Fitzroy Crossi**	**14.80**	**126**	*e*Pn	**Pn**	**11 40 26.8**	**-0.2**
FITZ				*e*Sn	**Sn**	**11 43 03.1**	**-6.8**
MTN	**Manton Dam**	**18.04**	**102**	*e*Pn	**P**	**11 41 09.5**	**+1.1**
	24nm,1.1s						
PSI	**Prapat**	**18.76**	**311**	LR	LR	11 48 45.5	
	comp=Z,165nm,21.4s,baz=92,slow=38						
SIJI	**Sorong**	**20.18**	**65**	P	**P**	**11 41 29.4**	**-2.6**
	15nm,0.7s,baz=127,slow=20,SNR=6.4						
FAKI	**Fak Fak**	**20.27**	**72**	*e*P	**P**	**11 41 32.2**	**-0.7**
	34nm,0.6s						
WR1	**Warramunga Arr**	**22.95**	**119**	*e*P	**P**	**11 42 02.5**	**+0.9**
	4.1nm,0.8s						
WR1				*e*S	**S**	**11 46 13.9**	**+4.4**
WRA	**Warramunga Arr**	**22.95**	**119**	P	**P**	**11 42 02.5**	**+0.9**
	6.6nm,1.0s,baz=291,slow=12,SNR=24						
WRA				S	**S**	**11 46 13.9**	**+4.4**
	0.9nm,1.0s,baz=167,slow=22,SNR=3.8						
WRAB	**Tennant Creek**	**22.96**	**119**	*e*P	**P**	**11 42 02.7**	**+1.0**
	6.9nm,1.0s						
WRAB	**Tennant Creek**	**22.96**	**119**	*c*e*P	**P**	**11 42 00.5**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,5.0nm,1.1s						
WB2	**Warramunga Arr**	**22.96**	**119**	*e*P	**P**	**11 42 02.3**	**+0.6**
NWAO	**Narrogin (SRO)**	**23.41**	**171**	LR	LR	11 52 17.4	
	comp=Z,112nm,18.5s,baz=218,slow=39						
ASAR	**Alice Springs**	**24.29**	**127**	P	**P**	**11 42 16.4**	**+1.9**
	comp=Z,2.5nm,0.6s,baz=303,slow=8.4,SNR=43						
ASAR				PcP	**PcP**	**11 45 55.7**	**+1.7**
	comp=Z,1.4nm,0.4s,baz=303,slow=1.7,SNR=10						
ASAR				S	S	11 46 48.3	+17
	comp=Z,0.9nm,0.9s,baz=293,slow=22,SNR=3.9						
ASAR				LR	LR	11 52 25.7	
	comp=Z,96nm,19.0s,baz=306,slow=38						
AS31	**Alice Springs**	**24.29**	**127**	*e*P	**P**	**11 42 16.1**	**+1.7**
	comp=Z,1.3nm,0.8s						
AS01	**Alice Springs**	**24.32**	**127**	*e*P	**P**	**11 42 15.5**	**+0.7**
CM01	**Chiang Mai Arr**	**31.23**	**334**	*e*P	**P**	**11 43 15.7**	**-0.8**
CM31	**Chiang Mai Arr**	**31.27**	**334**	*e*P	**P**	**11 43 16.7**	**-0.2**
CMAR	**Chiang Mai Arr**	**31.27**	**334**	P	**P**	**11 43 17.1**	**+0.3**
	comp=Z,4.1nm,0.9s,baz=165,slow=8.2,SNR=16						
CMAR				LR	LR	11 57 16.0	
	comp=Z,49nm,18.9s,baz=172,slow=39						
PMG	**Port Moresby**	**33.67**	**92**	LR	LR	12 01 05.0	
	comp=Z,90nm,18.6s,baz=278,slow=43						
STKA	**Stephens Creek**	**34.44**	**134**	P	**P**	**11 43 46.8**	**+2.3**
	comp=Z,2.4nm,0.5s,baz=308,slow=11,SNR=7.6						
STKA				PcP	**PcP**	**11 46 20.0**	**+0.5**
	comp=Z,1.7nm,0.4s,baz=358,slow=3.7,SNR=5.4						
STKA				LR	LR	11 58 29.2	
	comp=Z,156nm,20.4s,baz=254,slow=37						
KMI	**Kunming**	**36.06**	**344**	P	**P**	**11 44 02.3**	**+3.5**
KMI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KMI				pmax	pmax		
	comp=Z,77nm,4.3s						
PALK	**Pallekele**	**36.35**	**297**	LR	LR	11 58 28.8	
	comp=Z,55nm,19.1s,baz=107,slow=36						
PALK	**Pallekele**	**36.35**	**297**	*e*P	**P**	**11 44 01.2**	**0.0**
	comp=Z,9.3nm,1.0s						
PALK	**Pallekele**	**36.35**	**297**	*e*P	**P**	**11 44 01.2**	**0.0**
PALK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GYA	**Guiyang**	**36.50**	**350**	*e*P	**P**	**11 44 05.8**	**+3.4**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GUMO	**Guam**	**39.20**	**54**	LR	LR	12 00 52.6	
	comp=Z,26nm,21.1s,baz=174,slow=37						
WHN	**Wuhan**	**40.07**	**2**	P	**P**	**11 44 36.0**	**+3.9**
H08S2	**Diego Garcia H**	**40.09**	**270**	T	T	12 27 39.7	
	baz=91						
H08S3	**Diego Garcia H**	**40.10**	**270**	T	T	12 27 44.7	
	baz=91						
H08S1	**Diego Carcia H**	**40.11**	**270**	T	T	12 27 33.2	
	baz=91						
SHL	**Shillong**	**40.68**	**330**	*e*P	**P**	**11 44 36.6**	**-0.8**
	comp=Z,19nm,0.7s						
SHL	**Shillong**	**40.68**	**330**	*e*P	**P**	**11 44 36.7**	**-0.8**
SHL				pmax	pmax		
	comp=Z,19nm,0.7s						
CD2	**Chengdu**	**41.38**	**348**	P	**P**	**11 44 42.5**	**-0.5**
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
NJ2	**Nanjing**	**41.92**	**7**	*e*P	**P**	**11 44 48.5**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
LZH	**Lanzhou**	**46.39**	**350**	*e*P	**P**	**11 45 23.8**	**+0.4**
LZH				pP	pP	11 45 33.3	-0.7
LZH				sP	sP	11 45 37.3	-1.0
LZH				*e*PP	**PP**	**11 47 12.5**	**-0.4**
LZH				pmax	pmax		
	comp=Z,22nm,1.3s						
LZH				pmax	pmax		
	comp=Z,86nm,6.5s						
LZH				LR	LR		
	comp=Z,370nm,14.2s						
LZH				LR	LR		
	comp=Z,380nm,14.5s						
LZH				LR	LR		
	comp=Z,470nm,18.1s						
KS15	**Wonju Array Si**	**48.96**	**16**	*e*P	**P**	**11 45 43.2**	**+0.2**
KSAR	**Wonju Array Be**	**48.96**	**16**	P	**P**	**11 45 43.2**	**+0.2**
KSAR	**Wonju Array Be**	**48.96**	**16**	P	**P**	**11 45 43.2**	**+0.2**
KSRS	**Korea Array**	**48.98**	**16**	P	**P**	**11 45 43.2**	**0.0**
	comp=Z,4.3nm,0.8s,baz=194,slow=6.9,SNR=19						
KSRS				LR	LR	12 07 42.4	
	comp=Z,20nm,20.2s,baz=166,slow=38						
KS01	**Wonju Array Si**	**48.99**	**16**	*e*P	**P**	**11 45 43.3**	**0.0**
BJI	**Beijing**	**49.61**	**3**	‖*e*P	**P**	**11 45 47.5**	**-0.5**
BJI				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC	**Hu-ho-hao-te**	**50.35**	**359**	*e*P	**P**	**11 45 57.0**	**+3.3**
HHC				sP	sP	11 46 14.5	+5.8
HHC				S	**S**	**11 53 10.5**	**+6.1**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,44nm,6.0s						
GTA	**Gaotai**	**50.41**	**347**	*e*P	**P**	**11 45 54.8**	**+0.5**
GTA				pP	pP	11 46 04.3	-0.7
GTA				sP	sP	11 46 09.0	-0.3
GTA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MAJO	**Matsushiro**	**51.77**	**26**	*e*P	**P**	**11 46 02.5**	**-1.9**
	comp=Z,6.3nm,0.8s						
MAJO	**Matsushiro**	**51.77**	**26**	*i* P	**P**	**11 46 00.7**	**-3.7**
MAJO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MAT	**Matsushiro**	**51.77

ZEA					pmax	pmax		
	comp=Z,12nm,1.0s							
KURBB	**Kurchatov Arra**	**67.16**	**337**		P	**P**	**11 47 49.5**	**-0.8**
	comp=Z,1.2nm,0.3s,baz=147,slow=5.2,SNR=5.1							
KURK	**Kurchatov**	**67.20**	**337**	*e*P		**P**	**11 47 49.5**	**-1.1**
KURK	**Kurchatov**	**67.20**	**337**	*i* P		**P**	**11 47 49.4**	**-1.2**
KURK					pmax	pmax		
	comp=Z,3.0nm,0.9s							
ZAA0	**Zalesovo Array**	**67.79**	**342**	*e*P		**P**	**11 47 52.6**	**-1.5**
	comp=Z,7.7nm,1.1s							
ZALV	**Zalesovo Beam**	**67.79**	**342**	P		**P**	**11 47 52.6**	**-1.6**
	comp=Z,3.7nm,0.4s,baz=151,slow=4.3,SNR=12							
ZALV	**Zalesovo Beam**	**67.79**	**342**	*e*P		**P**	**11 47 52.4**	**-1.8**
ZALV	**Zalesovo Beam**	**67.79**	**342**	*e*P		**P**	**11 47 52.4**	**-1.8**
ZAA1	**Zalesovo Array**	**67.79**	**342**	*e*P		**P**	**11 47 52.6**	**-1.6**
VNDA	**Vanda**	**72.23**	**170**	P		**P**	**11 48 23.8**	**+2.5**
	comp=Z,0.7nm,0.6s,baz=292,slow=8.6,SNR=5.5							
VNDA					LR	LR	12 19 42.0	
	comp=Z,40nm,18.1s,baz=326,slow=35							
VNDA	**Vanda**	**72.23**	**170**	*e*P		**P**	**11 48 23.7**	**+2.4**
BVAR	**Borovoye Array**	**72.29**	**335**	P		**P**	**11 48 20.1**	**-1.8**
	comp=Z,1.5nm,0.8s,baz=145,slow=8.8,SNR=7.9							
BRVK	**Borovoye**	**72.35**	**335**	*i* P		**P**	**11 48 20.8**	**-1.5**
BRVK					pmax	pmax		
	comp=Z,2.0nm,1.0s							
YAK	**Yakutsk**	**72.72**	**8**	*e*P		**P**	**11 48 23.4**	**-0.8**
YAK					pmax	pmax		
	comp=Z,19nm,0.9s							
YAK					pmax	pmax		
	comp=N,4.0nm,1.0s							
YAK					pmax	pmax		
	comp=E,3.0nm,1.0s							
PET	**Petropavlovsk**	**73.59**	**27**	*e*P		**P**	**11 48 29.1**	**-0.5**
PET					pmax	pmax		
	comp=Z,10.0nm,1.0s							
MA2	**Magadan**	**75.40**	**19**	LR		LR	12 24 09.2	
	comp=Z,16nm,18.9s,baz=208,slow=38							
AKTO	**Aktyubinsk**	**76.56**	**327**	P		**P**	**11 48 46.4**	**-0.3**
	comp=Z,2.4nm,0.7s,baz=91,slow=9.1,SNR=7.6							
SEY	**Seymchan**	**78.51**	**17**	*e*P		**P**	**11 48 57.4**	**0.0**
ARU	**Arti**	**79.70**	**333**	P		**P**	**11 49 03.7**	**-0.3**
	comp=Z,2.1nm,0.3s,baz=150,slow=1.3,SNR=7.0							
ARU	**Arti**	**79.70**	**333**	*e*P		**P**	**11 49 03.7**	**-0.3**
	comp=Z,7.4nm,1.0s							
ARU	**Arti**	**79.70**	**333**	*d i*P		**P**	**11 49 03.8**	**-0.3**
ARU					*PP	**pP**	**11 49 14.3**	**-1.0**
ARU							11 52 00.7	
ARU					S	**S**	**11 59 06.0**	**+2.2**
ARU					SS	**SS**	**12 04 13.5**	**+0.2**
ARU					pmax	pmax		
	comp=Z,10.0nm,1.2s							
TIXI	**Tiksi**	**81.89**	**5**	*e*P		**P**	**11 49 14.4**	**-1.0**
	comp=Z,7.7nm,0.9s							
TIXI	**Tiksi**	**81.89**	**5**	*e*P		**P**	**11 49 13.4**	**-2.0**
TIXI					pmax	pmax		
	comp=Z,7.0nm,1.0s							
BILL	**Bilibino**	**86.21**	**18**	*e*P		**P**	**11 49 35.4**	**-2.0**
	comp=Z,3.9nm,0.4s							
BILL	**Bilibino**	**86.21**	**18**	⇑*e*P		**P**	**11 49 39.7**	**+2.2**
BILL				*e*			11 52 55.6	
BILL					pmax	pmax		
	comp=Z,1.0nm,1.2s							
BILL					MLR	MLR		
	comp=Z,44nm,19.0s							
VSR	**Storozhevoye**	**87.60**	**323**	*e*P		**P**	**11 49 44.0**	**-0.6**
VSR					pmax	pmax		
	comp=Z,9.0nm,1.2s							
BR101	**Keskin Array S**	**88.09**	**311**	*e*P		**P**	**11 49 47.9**	**+0.4**
BRTR	**Keskin Array B**	**88.09**	**311**	P		**P**	**11 49 47.9**	**+0.4**
	comp=Z,2.6nm,0.9s,baz=128,slow=5.7,SNR=8.0							
KLMR	**Klimovskoe**	**90.54**	**332**	*e*P		**P**	**11 49 56.3**	**-1.9**
KLMR					pmax	pmax		
	comp=Z,11nm,1.4s							
KLMR	**Klimovskoe**	**90.54**	**332**	*e*P		**P**	**11 49 56.4**	**-1.8**
KLMR					AMP		11 50 00.4	
	comp=Z,11nm,1.4s							
NVAR	**Mina Array Bea**	**126.01**	**49**	PKP		**PKPdf**	**11 56 01.7**	**+2.4**
	comp=Z,0.2nm,0.6s,baz=298,slow=3.9,SNR=3.1							
TXAR	**Lajitas Array**	**140.55**	**55**	PKhKP		PKPpre	11 56 21.3	
	comp=Z,0.3nm,0.6s,baz=246,slow=3.1,SNR=4.9							
CCM	**Cathedral Cave**	**144.35**	**34**	*e*PKPdf		PKPbc	11 56 31.6	+0.3
CCM	**Cathedral Cave**	**144.35**	**34**	*e*PKIKP		PKPbc	11 56 31.6	+0.2
V40A	**Witts Springs**	**144.99**	**38**	*e*PKPdf		**PKPab**	**11 56 34.0**	**+0.5**
P45A	**Graceland, Par**	**145.03**	**29**	*e*PKPbc		**PKPdf**	**11 56 34.4**	**+0.2**
T42A	**Van Buren**	**145.17**	**35**	*e*PKPbc		**PKPdf**	**11 56 34.5**	**+0.1**
W40A	**Ferguson Farm,**	**145.24**	**39**	*e*PKPbc		**PKPbc**	**11 56 34.5**	**+0.3**
NCB	**Newcomb**	**145.32**	**9**	*e*PKPbc		**PKPdf**	**11 56 35.3**	**+0.8**
MIAR	**Mount Ida**	**145.34**	**41**	*e*PKPbc		**PKPab**	**11 56 36.0**	**+1.2**
MIAR	**Mount Ida**	**145.34**	**41**	*e*PKIKP		**PKPab**	**11 56 36.0**	**+1.2**
OLIL	**Olney**	**145.48**	**30**	*e*PKPbc		**PKPdf**	**11 56 35.0**	**+0.1**
LNIG	**Linares**	**145.65**	**60**	*e*PKPdf		**PKPdf**	**11 56 35.7**	**+0.1**
WHAR	**Wooly Hollow**	**145.66**	**38**	*e*PKPdf		**PKPbc**	**11 56 35.9**	**+0.3**
MMNY	**Mt. Morris Dam**	**145.77**	**14**	*e*PKPdf		**PKPbc**	**11 56 36.1**	**+0.4**
WCI	**Wyandotte Cave**	**146.75**	**28**	*e*PKPdf		**PKPdf**	**11 56 38.0**	**+0.9**
WCI	**Wyandotte Cave**	**146.75**	**28**	*e*PKP2		**PKPdf**	**11 56 38.0**	**+0.9**
WVT	**Waverly**	**147.62**	**33**	*e*PKPbc		**PKPbc**	**11 56 42.1**	**+0.8**
WVT	**Waverly**	**147.62**	**33**	*e*PKP2		**PKPbc**	**11 56 42.1**	**+0.8**
TKL	**Tuckaleechee C**	**150.01**	**28**	PKPbc		**PKPbc**	**11 56 48.6**	**+1.2**
	comp=Z,6.1nm,0.6s,baz=31,slow=5.9,SNR=10							
TKL	**Tuckaleechee C**	**150.01**	**28**	*e*PKPdf		**PKPdf**	**11 56 43.1**	**+0.6**
TKL				PKPbc		**PKPbc**	**11 56 48.6**	**+1.2**
W52A	**Murphy**	**150.40**	**29**	*e*PKPdf		**PKPdf**	**11 56 43.5**	**+0.3**

HLW 28 11:38:21.6, 29°.85N×36°.62E, h10km±14km, MI3.7, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HBST	**Basata**	**1.76**	**249**	P	Pn	11 38 51.3	-0.9
	baz=250						
HBST				AMP		11 39 00.0	
	baz=250						
HBST				S	Sn	11 39 13.1	-1.6
	baz=250						
HNKL	**Nakhl**	**2.29**	**273**	P	Pn	11 38 58.7	-0.9
	baz=273						
HNKL				S	Sn	11 39 26.4	-1.5
	baz=273						
HKAT	**Jabal Katrina**	**2.65**	**241**	P	Pn	11 39 04.1	-0.5
	baz=241						
TR2	**Tor 2**	**2.93**	**241**	P	Pn	11 39 07.6	-0.7
	baz=241						
SH2	**Sharm el Sheik**	**2.97**	**229**	P	Pn	11 39 08.5	-0.3
	baz=230						

AZER ***28*** *11:45:33.6±1.6, 37°.79N×47°.73E, h2km, ml3.4/18, Error ellipse: s-maj=2.9km s-min=0.4km az=339.0*
ISN ***28*** *11:45:35.2±1.1, 37°.70N×47°.51E, h14km±6km, ML3.6*
TEH ***28*** *11:45:36.6, 37°.75N×47°.59E, h10km, ML3.6*
THR ***28*** *11:45:36.2±0.4, 37°.77N×47°.81E, h14km±3km, ML3.5*
CSEM ***28*** *11:45:38.3±0.3, 37°.74N×47°.79E, h10km, ML3.6, Error ellipse: s-maj=8.9km s-min=5.5km az=61.0*

ISC 28 11:45:35.0±1.2, 37°.73N±0°.02×47°.61E±0°.02, h2km±11km, n75, σ1§41/95, 32C-25D, Northwestern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBST	**Bostanabad**	**0.57**	**267**	*e*Pg	**Pg**	**11 45 45.8**	**-0.1**
IBST				*e*Sg	**Sg**	**11 45 53.8**	**+0.5**
IBST				*e*		11 45 54.1	
	comp=N,7μm,0.1s						
IBST				*e*		11 45 54.2	
	comp=E,46μm,0.1s						
IBST				*e*		11 45 54.3	
	comp=Z,60μm,0.1s						
IHRS	**Heris**	**0.74**	**323**	*e*Pg	**Pg**	**11 45 49.0**	**-0.2**
IHRS				*e*Sg	**Sg**	**11 45 59.7**	**+0.9**
IHRS				*e*		11 46 02.6	
	comp=Z,46μm,0.1s						
IHRS				*e*		11 46 02.9	
	comp=N,6μm,0.1s						
IHRS				*e*		11 46 03.5	
	comp=E,73μm,0.1s						
LRK	**Lerik**	**1.08**	**32**	⇓P	**Pg**	**11 45 55.5**	**-0.2**
	SNR=116						
LRK				⇓S	**Sg**	**11 46 10.8**	**+1.1**
LRK	**Lerik**	**1.08**	**32**	⇓P	**Pg**	**11 45 55.5**	**-0.2**
	SNR=116						
LRK				⇓S	**Sg**	**11 46 10.8**	**+1.1**
GRMI	**Germi**	**1.10**	**12**	*e*Pg	**Pg**	**11 45 55.7**	**-0.4**
GRMI				AML	AML	11 46 17.9	
	comp=N,754nm,0.4s						
GRMI	**Germi**	**1.10**	**12**	*e*Pg	**Pg**	**11 45 55.7**	**-0.4**
GRMI	**Germi**	**1.10**	**12**	*e*Pg	**Pg**	**11 45 55.7**	**-0.4**
ASTR	**Astara**	**1.25**	**48**	⇑P	**Pn**	**11 45 58.4**	**-1.1**
	SNR=8.6						
ASTR				⇑S	**Sb**	**11 46 15.2**	**-0.6**
ASTR	**Astara**	**1.25**	**48**	⇑P	**Pn**	**11 45 58.4**	**-1.1**
	SNR=8.6						
ASTR				⇑S	**Sb**	**11 46 15.2**	**-0.6**
ITBZ	**Tabriz**	**1.26**	**294**	*e*Pg	**Pn**	**11 45 58.8**	**-1.0**
ITBZ				*e*		11 46 17.6	
	comp=Z,25μm,0.2s						
ITBZ				*e*		11 46 17.7	
	comp=E,34μm,0.2s						
ITBZ				*e*		11 46 18.7	
	comp=N,33μm,0.1s						
LKRN	**Lenkeran, Azer**	**1.35**	**43**	⇓P	**Pn**	**11 46 00.4**	**-0.4**
LKRN				⇓S	**Sn**	**11 46 19.1**	**-0.2**
LKRN	**Lenkeran, Azer**	**1.35**	**43**	⇓P	**Pn**	**11 46 00.4**	**-0.4**
LKRN				⇓S	**Sn**	**11 46 19.1**	**-0.2**
ZNJK	**Zanjan**	**1.36**	**141**	*e*Sg	**Sb**	**11 46 18.1**	**-1.3**
ZNJK	**Zanjan**	**1.36**	**141**	*e*Sg	**Sb**	**11 46 18.1**	**-1.3**
GLBA	**Clilabad**	**1.63**	**22**	⇓P	**Pb**	**11 46 06.4**	**+0.6**
	SNR=46						
GLBA				⇑S	**Sg**	**11 46 30.2**	**+2.7**
GLBA	**Clilabad**	**1.63**	**22**	⇓P	**Pb**	**11 46 06.4**	**+0.6**
	SNR=46						
GLBA				⇑S	**Sg**	**11 46 30.2**	**+2.7**
ISHB	**Shabestar**	**1.67**	**290**	*e*Sg	**Sg**	**11 46 29.3**	**+0.7**
ISHB				*e*Pg	**Pn**	**11 46 05.9**	**+0.4**
ISHB				*e*		11 46 31.0	
	comp=N,32μm,0.3s						
ISHB				*e*		11 46 31.7	
	comp=Z,14μm,0.2s						
ISHB				*e*		11 46 31.9	
	comp=E,24μm,0.2s						
ORD	**Ordubad**	**1.75**	**314**	⇑P	**Pn**	**11 46 07.4**	**+1.0**
ORD				⇑S	**Sg**	**11 46 31.4**	**+0.4**
ORD	**Ordubad**	**1.75**	**314**	⇑P	**Pn**	**11 46 07.4**	**+1.0**
ORD				⇑S	**Sg**	**11 46 31.4**	**+0.4**
NAX	**Nakhchivan**	**2.20**	**312**	⇓P	**Pb**	**11 46 15.4**	**-0.1**
	SNR=8.5						
NAX				⇑S	**Sg**	**11 46 45.4**	**-0.2**
NAX	**Nakhchivan**	**2.20**	**312**	⇓P	**Pb**	**11 46 15.4**	**-0.1**
	SNR=8.5						
NAX				⇑S	**Sg**	**11 46 45.4**	**-0.2**
SBZ	**Shahbuz**	**2.32**	**317**	⇑P	**Pb**	**11 46 17.9**	**+0.3**
SBZ				⇑S	**Sg**	**11 46 49.4**	**0.0**
SBZ	**Shahbuz**	**2.32**	**317**	⇑P	**Pb**	**11 46 17.9**	**+0.3**
SBZ				⇑S	**Sg**	**11 46 49.4**	**0.0**
IGZV	**Ghazvin**	**2.48**	**122**	*e*Pn	**Pn**	**11 46 17.4**	**+0.7**
IGZV				*e*		11 46 56.2	
	comp=Z,6μm,0.2s						
IGZV				*e*		11 46 57.0	
	comp=N,9μm,0.2s						
IGZV				*e*		11 47 00.0	
	comp=E,7μm,0.2s						
IGZV	**Ghazvin**	**2.48**	**122**	*e*Pn	**Pn**	**11 46 17.4**	**+0.7**
BRDA	**Brd**	**2.55**	**353**	⇑P	**Pb**	**11 46 21.0**	**-0.5**
BRDA	**Brd**	**2.55**	**353**	⇑P	**Pb**	**11 46 21.0**	**-0.5**
BRDA				⇑S	**Sg**	**11 46 55.7**	**-1.3**
QABG	**Abgarm-Qazvin**	**2.57**	**141**	*e*Pn	**Pn**	**11 46 18.4**	**+0.6**
QABG				*e*		11 47 00.4	
	comp=Z,99nm,0.5s						
QABG	**Abgarm-Qazvin**	**2.57**	**141**	*e*Pn	**Pn**	**11 46 18.4**	**+0.6**
HKZM	**Kohzaman**	**2.57**	**156**	*e*Pn	**Pn**	**11 46 19.8**	**+1.9**
HKZM				*e*		11 46 26.5	
	comp=Z,99nm,0.2s						
HKZM				*e*		11 46 53.2	
	comp=N,99nm,0.3s						
HKZM				*e*		11 46 58.8	
	comp=E,99nm,0.3s						
HKZM	**Kohzaman**	**2.57**	**156**	*e*Pn	**Pn**	**11 46 19.8**	**+1.9**
QALM	**Alamut, Qazvin**	**2.75**	**117**	*e*Pn	**Pn**	**11 46 21.8**	**+1.4**
QALM				*e*		11 47 08.7	
	comp=Z,99nm,0.3s						
QALM	**Alamut, Qazvin**	**2.75**	**117**	*e*Pn	**Pn**	**11 46 21.8**	**+1.4**
MAKU	**Maku**	**2.81**	**306**	*e*Pn	**Pb**	**11 46 24.3**	**-1.7**
MAKU	**Maku**	**2.81**	**306**	*e*Pn	**Pb**	**11 46 24.3**	**-1.7**
MAKU	**Maku**	**2.81**	**306**	*e*Pn	**Pb**	**11 46 24.3**	**-1.7**
HYR	**Heyderabad**	**2.93**	**314**	⇓P	**Pb**	**11 46 27.5**	**-0.6**
HYR				⇑S	**Sb**	**11 47 04.9**	**+0.5**
HYR	**Heyderabad**	**2.93**	**314**	⇓P	**Pb**	**11 46 27.5**	**-0.6**
HYR				⇑S	**Sb**	**11 47 04.9**	**+0.5**
IRAZ	**Razeghan**	**2.98**	**140**	*e*Pn	**Pn**	**11 46 24.3**	**+0.8**
IRAZ				*e*		11 47 18.7	
	comp=Z,3μm,0.5s						
IRAZ	**Razeghan**	**2.98**	**140**	*e*Pn	**Pn**	**11 46 24.3**	**+0.8**
GBS	**Qobustan**	**2.99**	**20**	⇓P	**Pn**	**11 46 24.7**	**+1.2**
GBS	**Qobustan**	**2.99**	**20**	⇓P	**Pn**	**11 46 24.7**	**+1.2**
GANJ	**Ganja**	**3.08**	**341**	⇑P	**Pn**	**11 46 27.6**	**+2.9**
	SNR=18						
GANJ				⇑S	**Sb**	**11 47 07.5**	**-1.1**
GANJ	**Ganja**	**3.08**	**341**	⇑P	**Pn**	**11 46 27.6**	**+2.9**
	SNR=18						
GANJ				⇑S	**Sb**	**11 47 07.5**	**-1.1**
HAGD	**Aghdareh**	**3.15**	**156**	*e*Pn	**Pn**	**11 46 29.4**	**+3.5**
HAGD				*e*		11 46 38.5	
	comp=Z,99nm,0.0s						
HAGD	**Aghdareh**	**3.15**	**156**	*e*Pn	**Pn**	**11 46 29.4**	**+3.5**
THKV	**Tehran--Karaj**	**3.19**	**124**	*e*Pn	**Pn**	**11 46 26.8**	**+0.4**
THKV				*e*Sg	**Sb**	**11 47 12.4**	**+0.5**
THKV				AML	AML	11 47 19.4	
	comp=N,230nm,0.7s						
THKV				AML	AML	11 47 19.8	
	comp=E,171nm,0.4s						
THKV	**Tehran--Karaj**	**3.19**	**124**	*e*Pn	**Pn**	**11 46 26.8**	**+0.4**
THKV	**Tehran--Karaj**	**3.19**	**124**	*e*Pn	**Pn**	**11 46 26.8**	**+0.4**
IMHD	**Mahdasht**	**3.19**	**129**	*e*		11 47 16.4	
	comp=E,3μm,0.2s						
IMHD				*e*		11 47 16.5	
	comp=N,5μm,0.1s						
IMHD				*e*		11 47 17.7	
	comp=Z,1μm,0.1s						
IVIS	**Veis**	**3.25**	**191**	*e*		11 47 24.6	
	comp=N,894nm,0.3s						
IVIS				*e*		11 47 24.9	
	comp=Z,734nm,0.3s						
IVIS				*e*		11 47 32.2	
	comp=E,1μm,0.4s						
ATGJ	**Altiaghaj**	**3.29**	**18**	⇑P	**Pb**	**11 46 32.3**	**-1.9**
ATGJ	**Altiaghaj**	**3.29**	**18**	⇑P	**Pb**	**11 46 32.3**	**-1.9**
GDB	**GEDABAY**	**3.32**	**335**	⇓P	**Pb**	**11 46 32.5**	**-2.2**
	SNR=50						
GDB				⇓S	**Sb**	**11 47 14.5**	**-1.1**
GDB	**GEDABAY**	**3.32**	**335**	⇓P	**Pb**	**11 46 32.5**	**-2.2**
	SNR=50						
GDB				⇓S	**Sb**	**11 47 14.5**	**-1.1**
CHTH	**Charan**	**3.36**	**122**	*e*Pn	**Pn**	**11 46 29.0**	**+0.3**
CHTH	**Charan**	**3.36**	**122**	*e*Pn	**Pn**	**11 46 29.0**	**+0.3**
CHTH	**Charan**	**3.36**	**122**	*e*Pn	**Pn**	**11 46 29.0**	**+0.3**
XNQ	**Khinaliq**	**3.46**	**7**	⇓P	**Pn**	**11 46 30.8**	**+0.6**
XNQ	**Khinaliq**	**3.46**	**7**	⇓P	**Pn**	**11 46 30.8**	**+0.6**
SEKA	**Sheki**	**3.49**	**355**	⇑P	**Pn**	**11 46 31.8**	**+1.4**
SEKA	**Sheki**	**3.49**	**355**	⇑P	**Pn**	**11 46 31.8**	**+1.4**
SIZA	**Siyzn**	**3.49**	**16**	⇑P	**Pn**	**11 46 33.5**	**+3.1**
SIZA	**Siyzn**	**3.49**	**16**	⇑P	**Pn**	**11 46 33.5**	**+3.1**
IKOM	**Komasi**	**3.55**	**181**	*e*Pn	**Pn**	**11 46 33.8**	**+2.5**
IKOM	**Komasi**	**3.55**	**181**	*e*Pn	**Pn**	**11 46 33.8**	**+2.5**
HSAM	**Samen**	**3.60**	**167**	*e*Pn	**Pb**	**11 46 37.4**	**-2.2**
HSAM				*e*		11 46 41.9	
	comp=Z,99nm,0.3s						
HSAM				*e*		11 47 31.2	
	comp=E,99nm,0.3s						
HSAM				*e*		11 47 32.6	
	comp=N,99nm,0.4s						
QZX	**Qazax, Azerbai**	**3.75**	**333**	⇑P	**Pb**	**11 46 41.8**	**-0.1**
	SNR=14						
QZX				⇓S	**Sg**	**11 47 33.8**	**-1.6**
QSAR	**Qusar**	**3.81**	**7**	⇓P	Pn	11 46 39.4	+4.6
QSAR	**Qusar**	**3.81**	**7**	⇓P	Pn	11 46 39.4	+4.6
IPRN	**Peran**	**4.07**	**110**	*e*		11 47 35.6	
	comp=N,3μm,0.2s						
IPRN				*e*		11 47 35.6	
	comp=E,4μm,0.2s						
IPRN				*e*		11 47 36.5	
	comp=Z,1μm,0.2s						
IVRN	**Varamin**	**4.30**	**128**	*e*		11 47 08.0	
	comp=E,359nm,0.2s						
IVRN				*e*		11 47 52.8	
	comp=Z,611nm,0.1s						
IKIA	**Kiasar**	**5.10**	**105**	*e*Pn	**Pn**	**11 46 55.2**	**+2.5**
IKIA				*e*		11 48 03.4	
	comp=Z,142nm,0.3s						
IKIA	**Kiasar**	**5.10**	**105**	*e*Pn	**Pn**	**11 46 55.2**	**+2.5**
IGLO	**Ghaloghah**	**5.12**	**102**	*e*Pn	**Pn**	**11 46 53.1**	**+0.1**
IGLO				*e*		11 48 00.4	
	comp=E,1μm,0.3s						
IGLO				*e*		11 48 03.6	
	comp=Z,455nm,0.3s						
IGLO				*e*		11 48 06.2	
	comp=N,2μm,0.4s						

IDC ***28*** *11:49:10.5±2.5, 31°.43S×66°.88W, h109km±21km, mb4.2/16, mb1 4.4/20, mb1mx4.2/36, mbtmp4.6/20, MS3.1/2, Ms1 3.1/2, ms1mx2.6/37, Error ellipse: s-maj=19.1km s-min=11.1km az=79.0*
ISCJB ***28*** *11:49:11.6±0.2, 31°.42S±0°.02×66°.81W±0°.03, h136km±1km, mb4.5/120, Error ellipse: s-maj=3.9km s-min=3.5km az=2.5*
NEIC ***28*** *11:49:11.3±0.4, 31°.45S×66°.75W, h116km±3km, mb4.6/106, MD4.8(SJA), Error ellipse: s-maj=5.2km s-min=3.4km az=80.0*
NEIC Felt [III] at San Juan.
GUC ***28*** *11:49:12.7±0.5, 31°.47S×66°.88W, h93km±6km, ML5.0*
SJA ***28*** *11:49:12.5±0.8, 31°.50S×66°.90W, h132km±7km, ML4.8, MW4.2, Fault plane solution: NP1:φs223.00000°, δ79.70000°, λ115.40000°.*

ISC 28 11:49:12.7±0.3, 31°.48S±0°.03×66°.82W±0°.03, h132km±2km, h132km: pP-P, n529, σ0§89/600, mb4.6/120, 16C-19D, La Rioja Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACAN	**Cantantal**	**0.85**	**201**	⇓*e*P	**Pn**	**11 49 35.2**	**+0.6**
ACAN				*e*S	**Sn**	**11 49 47.7**	**-3.5**
APLL	**PUNTA DE LOS L**	**1.11**	**13**	⇑*e*P	**Pn**	**11 49 37.5**	**+0.6**
APLL				IAML		11 49 38.0	
	comp=Z,13μm,0.3s						
APLL				*e*S	**Sn**	**11 49 55.4**	**+0.1**
MRA	**San Martin**	**1.33**	**135**	⇓*e*P	**Pn**	**11 49 40.0**	**+0.9**
MRA				IAML		11 49 40.3	
	comp=Z,9μm,0.2s						
MRA				*e*S	**Sn**	**11 49 59.6**	**+0.2**
RTLL	**Cerro Villicun**	**1.42**	**276**	⇑*i*P	**Pn**	**11 49 40.2**	**+0.1**
RTLL				*e*P	**Pn**	**11 49 40.4**	**+0.3**
RTLL				*e*S	**Sn**	**11 50 00.1**	**-0.9**
SJA	**San Juan**	**1.49**	**268**	*e*P	**Pn**	**11 49 41.1**	**+0.3**
SJA				*e*S	**Sn**	**11 50 00.3**	**-1.9**
SJA				IAML		11 50 02.8	
	comp=Z,9μm,0.2s						
RTCV	**Cerro Valdivia**	**1.51**	**255**	⇑*i*P	**Pn**	**11 49 41.2**	**0.0**
AMOG	**MOGNA**	**1.53**	**290**	⇑*e*P	**Pn**	**11 49 41.6**	**+0.3**
AMOG				*e*S	**Sn**	**11 50 02.7**	**-0.5**
ZON	**Zonda**	**1.59**	**267**	⇓*i*P	**Pn**	**11 49 42.0**	**0.0**
TCA	**Tanti**	**1.91**	**86**	⇓*i*P	**Pn**	**11 49 46.6**	**+0.9**
TCA				*e*P	**Pn**	**11 49 46.7**	**+0.9**
TCA				*e*S	**Sn**	**11 50 10.6**	**-0.5**
TCA				IAML		11 50 11.5	
	comp=Z,3μm,0.4s						
TCA	**Tanti**	**1.91**	**86**	*e*P	**Pn**	**11 49 46.5**	**+0.8**
TCA				*i* S	**Sn**	**11 50 10.9**	**-0.2**
TCA				IAML		11 50 11.9	
	comp=E,8μm,0.3s						
ASAL	**Salagasta**	**2.04**	**236**	⇓*e*P	**Pn**	**11 49 47.6**	**+0.3**
ASAL				*e*S	**Sn**	**11 50 11.9**	**-2.0**
ACLC	**CERRO LA CRUZ**	**2.05**	**357**	⇑*e*P	**Pn**	**11 49 48.0**	**+0.4**
RTLS	**Leoncito**	**2.13**	**261**	⇓*i*P	**Pn**	**11 49 49.2**	**+0.4**
RTLS				IAML		11 49 49.3	
	comp=Z,6μm,0.2s						
ARCO	**CERRO ARCO**	**2.25**	**232**	⇓*e*P	**Pn**	**11 49 50.2**	**+0.2**
ARCO				*e*S	**Sn**	**11 50 17.6**	**-1.0**
ARCO				IAML		11 50 19.5	
	comp=Z,5μm,0.4s						
AUSP	**Uspallata**	**2.31**	**250**	⇓*e*P	**Pn**	**11 49 51.1**	**+0.3**
AUSP				*e*S	**Sn**	**11 50 18.3**	**-1.8**
AAGR	**Agrelo**	**2.34**	**226**	⇓*e*P	**Pn**	**11 49 51.3**	**+0.2**
ACDV	**Cuesta del Vie**	**2.37**	**303**	⇑*e*P	**Pn**	**11 49 52.0**	**+0.5**
ACDV				*e*S	**Sn**	**11 50 19.5**	**-1.8**
AGUA	**GUANDACOL**	**2.45**	**324**	⇑*e*P	**Pn**	**11 49 53.2**	**+0.7**
AGUA				*e*S	**Sn**	**11 50 22.7**	**-0.3**
AVIZ	**Vizcacheras**	**2.45**	**215**	⇓*e*P	**Pn**	**11 49 52.8**	**+0.3**
SUCO	**SUCO**	**2.48**	**139**	⇓*e*P	**Pn**	**11 49 52.4**	**-0.4**
SUCO				*e*S	**Sn**	**11 50 20.6**	**-3.1**
AROD	**Rodeo**	**2.63**	**299**	*e*P	**Pn**	**11 49 55.6**	**+0.7**
AROD				*e*S	**Sn**	**11 50 27.7**	**+0.3**
VCA	**Vinchina**	**2.98**	**336**	⇑*e*P	**Pn**	**11 50 00.2**	**+0.8**
VCA	**Vinchina**	**2.98**	**336**	*e*P	**Pn**	**11 50 00.1**	**+0.8**
VCA				*i* S	**Sn**	**11 50 35.0**	**-0.3**

YOTC	Yotoco, Valle	36.41	344	eP	P	11 56 04.6	-0.1
ROSC	El Rosal	36.81	347	LR	LR	12 13 36.6	
	comp=N,42nm,20.2s,baz=53,slow=40						
RUSC	La Rusia	37.64	350	eP	P	11 56 15.0	-0.5
	comp=N,18nm,0.6s						
RUSC				epP	pP	11 56 45.0	+0.3
RUSC	La Rusia	37.64	350	eP	P	11 56 15.7	+0.2
HELC	Santa Helena	38.37	346	eP	P	11 56 21.5	0.0
	comp=N,54nm,0.7s						
HELC				epP	pP	11 56 50.9	+0.2
PTBC	PUERTO BERRIO,	38.50	348	eP	P	11 56 20.1	-2.1
ZARC	Zaragoza, Cauc	39.50	347	eP	P	11 56 28.9	-1.6
CRPR	Cabo Rojo, PR	49.20	360	eP	P	11 57 48.9	+1.4
	comp=N,26nm,0.9s						
CRPR				epP	pP	11 58 16.6	-1.4
OBIP	Obispado Ponce	49.24	0	eP	P	11 57 47.5	-0.3
	comp=N,18nm,1.0s						
OBIP				epP	pP	11 58 17.0	-1.3
VNA3	Neumayer Olymp	50.09	159	P	P	11 57 54.9	+1.1
VNA1	Neumayer--Stat	50.32	158	P	P	11 57 57.1	+1.7
VNA2	Neumayer--Watz	50.69	159	P	P	11 57 59.4	+1.2
	baz=286,slow=9.4						
SNAA	Sanae	52.30	159	P	P	11 58 11.0	+0.7
	comp=N,8.4nm,0.4s,baz=280,slow=7.4,SNR=53						
061Z	Ochoppi	58.59	345	P	P	11 58 55.9	+0.3
	baz=166						
QSPA	South Pole Qui	58.76	180	P	P	11 58 57.5	+1.0
	comp=N,21nm,0.7s,baz=158,slow=2.9,SNR=75						
957A	Wimauma	60.63	344	P	P	11 59 09.6	0.0
	baz=165						
555A	McAlpin	63.15	344	P	P	11 59 26.2	-0.2
	baz=165						
LNIG	Linares	64.16	327	eP	P	11 59 33.3	+0.1
	comp=N,9.9nm,1.1s						
353A	Camilla	64.62	344	P	P	11 59 35.5	-0.5
	baz=164						
154A	Montrose	65.58	345	P	P	11 59 41.5	-0.6
	baz=165						
251A	Midway	65.63	343	P	P	11 59 41.9	-0.6
	baz=163						
249A	Camden	65.97	341	P	P	11 59 44.3	-0.4
	baz=161						
152A	Waverly Hall	66.01	344	P	P	11 59 44.2	-0.7
	baz=163						
151A	Opelika	66.02	343	P	P	11 59 44.4	-0.6
	baz=163						
Z54A	Sparta	66.12	345	P	P	11 59 45.2	-0.4
	baz=165						
150A	Eclectic	66.27	342	P	P	11 59 45.9	-0.7
	baz=162						
Z53A	Monticello	66.32	345	P	P	11 59 45.9	-1.0
	baz=164						
GOGA	Godfrey	66.43	345	P	P	11 59 46.9	-0.6
	baz=164						
Z52A	Williamson	66.43	344	P	P	11 59 47.1	-0.6
	baz=164						
149A	Jones	66.47	342	P	P	11 59 47.0	-0.8
	baz=161						
SYO	Syowa Base	66.56	158	epP	pP	12 00 17.3	-2.9
SYO	Syowa Base	66.56	158	esP	sP	12 00 32.2	-2.3
Y54A	Tignall	66.69	346	P	P	11 59 48.7	-0.5
	baz=165						
245A	Little AP, Sta	66.84	339	P	P	11 59 50.5	+0.3
	baz=159						
Z50A	Ashland	66.86	343	P	P	11 59 49.9	-0.4
	baz=162,SNR=7.9						
Z50A	Ashland	66.86	343	eP	P	11 59 50.1	-0.3
	comp=N,14nm,0.8s						
Z50A				epP	pP	12 00 22.8	+0.3
Y53A	Monroe	66.88	345	P	P	11 59 50.0	-0.4
	baz=164						
LRAL	Lakeview Retre	66.94	342	P	P	11 59 50.5	-0.3
	baz=161						
Z49A	Columbiana	66.96	342	P	P	11 59 50.5	-0.4
	baz=162						
Y52A	Lilburn	67.00	344	P	P	11 59 50.8	-0.4
	baz=164						
342A	Flagon Creek P	67.02	336	P	P	11 59 51.9	+0.5
	baz=156						
833A	Chaparral WMA,	67.08	329	P	P	11 59 52.8	+1.0
	baz=150,SNR=5.6						
833A	Chaparral WMA,	67.08	329	eP	P	11 59 52.5	+0.7
	comp=N,33nm,0.6s						
244A	Avery, Jackson	67.09	338	P	P	11 59 52.3	+0.5
	baz=158						
243A	Waterproof	67.20	337	P	P	11 59 53.5	+1.0
	baz=157						
Y51A	Rockmart	67.27	344	P	P	11 59 52.5	-0.5
	baz=163						
Z47A	Carrollton	67.39	341	P	P	11 59 53.2	-0.4
	baz=160						
VNDA	Vanda	67.39	190	P	P	11 59 55.0	+1.7
	comp=N,3.1nm,0.8s,baz=141,slow=6.5,SNR=23						
VNDA	Vanda	67.39	190	eP	P	11 59 54.8	+1.6
	comp=N,4.4nm,0.9s						
Z48A	Northport	67.41	341	P	P	11 59 53.3	-0.5
	baz=161						
Y50A	Piedmont	67.42	343	P	P	11 59 53.5	-0.3
	baz=163						
X53A	Estanollee	67.44	345	P	P	11 59 53.7	-0.3
	baz=165						
Y49A	Blount Mountai	67.56	342	P	P	11 59 54.4	-0.4
	baz=162						
Z46A	Louisville	67.63	340	P	P	11 59 55.3	+0.1
	baz=160						
X52A	Dahlonega	67.67	345	P	P	11 59 54.3	-1.2
	baz=164						
X51A	Calhoun	67.85	344	P	P	11 59 56.4	-0.1
	baz=163						
X51A	Calhoun	67.85	344	eP	P	11 59 56.5	-0.1
	comp=N,24nm,0.8s						
143A	Socs Landing,	67.93	338	P	P	11 59 57.9	+0.8
	baz=158						
143A	Socs Landing,	67.93	338	eP	P	11 59 58.0	+1.0
	comp=N,65nm,0.6s						
X50B	Fort Payne	67.94	343	P	P	11 59 56.8	-0.4
	baz=163						
Y47A	UCPARC, Winfie	67.99	341	P	P	11 59 57.0	-0.4
	baz=161,SNR=8.6						
W53A	Cullowhee	68.05	346	P	P	11 59 57.3	-0.6
	baz=165						
X49A	Woodville	68.16	343	P	P	11 59 58.0	-0.5
	baz=162						
Y46A	Houston	68.25	340	P	P	11 59 58.6	-0.5
	baz=160						
X48A	Hartselle	68.29	342	P	P	11 59 59.1	-0.2
	baz=162						
X48A	Hartselle	68.29	342	eP	P	11 59 59.0	-0.2
	comp=N,12nm,0.8s						
V53A	Saluda	68.46	346	P	P	12 00 00.2	-0.2
	baz=165						
W50A	Signal Mountai	68.57	344	P	P	12 00 00.8	-0.2
	baz=163						
W50A	Signal Mountai	68.57	344	eP	P	12 00 01.0	0.0
	comp=N,11nm,0.8s						
TKL	Tuckaleechee C	68.65	345	P	P	12 00 01.1	-0.4
	comp=N,3.5nm,0.5s,baz=155,slow=11,SNR=7.3						
TKL	Tuckaleechee C	68.65	345	eP	P	12 00 01.1	-0.4
	comp=N,6.6nm,0.7s						
W49A	Belvidere	68.72	343	P	P	12 00 01.6	-0.4
	baz=162,SNR=5.2						
SWET	Sewanee	68.73	343	eP	P	12 00 02.0	-0.1
	comp=N,19nm,1.0s						
V52A	Sevierville	68.79	345	P	P	12 00 02.2	-0.2
	baz=165						
Y43A	Makayla and Ka	68.90	339	P	P	12 00 03.4	+0.3
	baz=158						
HPIG		68.90	323	eP	P	12 00 03.9	+0.3
	comp=N,7.6nm,0.6s						
W48A	Pulaski	68.91	342	P	P	12 00 03.0	-0.1
	baz=162,SNR=8.2						
V51A	Loudon	68.92	345	P	P	12 00 02.5	-0.6
	baz=164						
V50A	Pikevile	68.97	344	P	P	12 00 03.2	-0.2
	baz=163,SNR=5.0						
OXF	Oxford	69.00	340	P	P	12 00 02.8	-0.8
	baz=159						
PLAL	Pickwick Lake	69.06	341	eP	P	12 00 03.6	-0.5
	comp=N,6.9nm,0.6s						
U53A	Fall Branch	69.08	346	P	P	12 00 03.6	-0.6
	baz=166						
JCT	Junction City	69.11	330	P	P	12 00 04.7	+0.1
	baz=150,SNR=6.3						
JCT	Junction City	69.11	330	eP	P	12 00 05.1	+0.5
	comp=N,9.0nm,0.6s						
W47A	Westpoint	69.19	342	P	P	12 00 04.5	-0.3
	baz=161						
X44A	Crenshaw	69.20	340	P	P	12 00 04.7	-0.2
	baz=159						
V49A	McMinnville	69.25	343	P	P	12 00 04.5	-0.7
	baz=163,SNR=5.2						
X43A	Marvell	69.44	339	P	P	12 00 07.1	+0.6
	baz=158						
X43A	Marvell	69.44	339	eP	P	12 00 07.3	+0.9
	comp=N,37nm,0.6s						
V48A	Smith Brothers	69.45	343	P	P	12 00 06.0	-0.5
	baz=162,SNR=5.9						
V48A	Smith Brothers	69.45	343	eP	P	12 00 06.2	-0.2
	comp=N,14nm,0.7s						
TZTN	Tazewell	69.46	346	P	P	12 00 05.8	-0.7
	baz=165						
WHTX	Lake Whitney,	69.47	332	P	P	12 00 06.5	-0.2
	baz=152						
W45A	Hickory Valley	69.54	341	P	P	12 00 06.5	-0.5
	baz=160						
IP05	Hopewell Churc	69.70	351	eP	P	12 00 08.7	+0.8
	comp=N,14nm,0.9s						
V47A	Nunnelly	69.71	342	P	P	12 00 07.4	-0.7
	baz=161,SNR=8.6						
Y40A	Okolona	69.75	337	P	P	12 00 08.6	+0.3
	baz=156						
IP07	Quail	69.83	351	eP	P	12 00 09.2	+0.5
	comp=N,13nm,1.0s						
IP07				epP	pP	12 00 41.8	+0.7
V46A	Holladay	69.85	342	P	P	12 00 08.1	-0.8
	baz=161,SNR=12						
TX31	Lajitas Ar. Si	69.89	326	eP	P	12 00 09.9	+0.4
TXAR	Lajitas Array	69.89	326	P	P	12 00 09.9	+0.5
	comp=N,3.7nm,0.8s,baz=155,slow=7.7,SNR=50						
TXAR				pP	pP	12 00 42.1	+0.3
	comp=N,1.3nm,0.8s,baz=155,slow=7.5,SNR=3.0						
TXAR				sP	sP	12 00 56.1	0.0
	comp=N,0.9nm,0.7s,baz=142,slow=6.3,SNR=2.4						
U49A	Red Boiling Sp	69.93	344	P	P	12 00 08.6	-0.8
	baz=163						
V45A	Humboldt	70.02	341	P	P	12 00 09.8	-0.1
	baz=160						
WVT	Waverly	70.08	342	P	P	12 00 09.7	-0.6
	baz=161						
WVT	Waverly	70.08	342	eP	P	12 00 09.9	-0.4
	comp=N,29nm,0.8s						
U48A	Cassie Pea, Po	70.11	343	P	P	12 00 09.9	-0.6
	baz=162						
T50A	Nancy	70.20	345	P	P	12 00 10.2	-0.8
	baz=164						
U47A	Clarksville	70.23	343	P	P	12 00 10.6	-0.6
	baz=162						
MIAR	Mount Ida	70.34	337	P	P	12 00 11.7	-0.2
	baz=156						
T49A	Edmonton	70.44	344	P	P	12 00 11.8	-0.6
	baz=163						
W41B	Gary Mavity, V	70.48	338	P	P	12 00 12.6	-0.1
	baz=157						
W41B	Gary Mavity, V	70.48	338	eP	P	12 00 12.5	-0.1
	comp=N,5.5nm,0.8s						
X39A	Fountain Ranch	70.49	336	P	P	12 00 13.3	+0.4
	baz=156						
S51A	Beattyville	70.52	346	P	P	12 00 12.5	-0.5
	baz=165						
U45A	Rockin P Farm,	70.54	341	P	P	12 00 13.0	-0.1
	baz=160						
T48A	Bowling Green	70.64	344	P	P	12 00 12.6	-1.1
	baz=162						
U44B	Burton Farm, H	70.69	341	P	P	12 00 14.0	0.0
	baz=160						
T47A	Sharon Grove	70.71	343	P	P	12 00 13.2	-0.8
	baz=162						
T47A	Sharon Grove	70.71	343	eP	P	12 00 13.5	-0.6
	comp=N,9.5nm,0.8s						
W40A	Ferguson Farm,	70.76	337	P	P	12 00 15.0	+0.5
	baz=156						
V42A	Cord	70.79	339	P	P	12 00 14.2	-0.5
	baz=158						
ABTX	Abilene, Hawle	70.91	331	P	P	12 00 15.4	0.0
	baz=151						
ABTX	Abilene, Hawle	70.91	331	eP	P	12 00 15.8	+0.4
	comp=N,15nm,1.1s						
T46A	Princeton	70.96	342	P	P	12 00 15.1	-0.5
	baz=161						
W39A	Magazine	71.00	337	P	P	12 00 16.6	+0.7
	baz=156,SNR=5.9						
W39A	Magazine	71.00	337	eP	P	12 00 16.6	+0.7
	comp=N,13nm,0.8s						
V41A	Mountainview	71.01	338	P	P	12 00 15.7	-0.3
	baz=157,SNR=7.6						
U43A	Rector	71.02	340	P	P	12 00 15.9	-0.1
	baz=159						
S48A	Wiedeman Farm,	71.09	344	P	P	12 00 15.7	-0.6
	baz=163						
PARMO	Parma	71.11	341	eP	P	12 00 16.8	+0.3
	comp=N,103nm,0.8s						
V40A	Witts Springs	71.24	338	P	P	12 00 17.0	-0.4
	baz=157						
V40A	Witts Springs	71.24	338	eP	P	12 00 17.5	+0.1
	comp=N,5.8nm,0.7s						
U42A	Revenden	71.25	339	P	P	12 00 17.2	-0.2
	baz=158,SNR=7.2						
PBMO	Poplar Bluff	71.41	340	eP	P	12 00 18.3	0.0
	comp=N,22nm,0.8s						
U41A	Viola	71.45	339	P	P	12 00 18.5	-0.1
	baz=158,SNR=6.2						
T44A	Benton	71.46	341	P	P	12 00 18.0	-0.6
	baz=160						
S46A	Don Dixon Farm	71.52	343	P	P	12 00 17.8	-1.2
	baz=161						
V39A	Pettigrew	71.54	337	P	P	12 00 19.3	+0.1
	baz=156,SNR=8.1						
T43A	Greenville	71.65	340	P	P	12 00 19.4	-0.4
	baz=159,SNR=13						
WCI	Wyandotte Cave	71.69	344	P	P	12 00 19.0	-1.0
	baz=162						
WCI	Wyandotte Cave	71.69	344	eP	P	12 00 19.3	-0.7
	comp=N,17nm,0.8s						
S45A	Carrier Mills	71.74	342	P	P	12 00 19.6	-0.7
	baz=160						
R48A	Northridge Ran	71.75	344	P	P	12 00 19.8	-0.5
	baz=163						
U40A	Yellville	71.76	338	P	P	12 00 20.3	-0.2
	baz=157,SNR=7.5						
T42A	Van Buren	71.84	340	P	P	12 00 20.4	-0.5
	baz=158						
T42A	Van Buren	71.84	340	eP	P	12 00 20.5	-0.4
	comp=N,3.4nm,0.7s						
S44A	Carbondale	71.93	341	P	P	12 00 20.8	-0.6
	baz=160						
R46A	Gibon Southern	71.97	343	P	P	12 00 20.4	-1.2
	baz=162						
U39A	Green Forest	71.98	338	P	P	12 00 21.6	-0.2
	baz=156,SNR=9.7						
HHAR	Hobbs	72.04	337	eP	P	12 00 22.2	+0.1
	comp=N,7.4nm,0.8s						
S43A	Fulton Ridge,	72.05	341	P	P	12 00 21.4	-0.8
	baz=159,SNR=6.6						
T41A	Mountain View	72.05	339	P	P	12 00 21.9	-0.3
	baz=158,SNR=18						
R45A	Skylar, Fairfi	72.24	342	P	P	12 00 22.4	-0.8
	baz=161						
T40A	Mansfield	72.38	339	P	P	12 00 23.9	-0.2
	baz=157						
WMOK	Wichita Mounta	72.41	333	P	P	12 00 23.8	-0.6
	baz=152						
WMOK	Wichita Mounta	72.41	333	eP	P	12 00 24.2	-0.2
	comp=N,3.0nm,0.6s						
S42A	Caledonia	72.44	340	P	P	12 00 23.6	-0.8
	baz=159,SNR=5.9						
P50A	Jamestown	72.46	346	P	P	12 00 24.1	-0.5
	baz=165						
N59A	State Game Lan	72.51	353	P	P	12 00 25.7	+0.9
	baz=172						
FVM	French Village	72.53	341	eP	P	12 00 24.8	-0.2
	comp=N,13nm,0.6s						
T39A	Clever	72.53	338	P	P	12 00 25.0	-0.1
	baz=156,SNR=6.1						
S41A	Jillco Farms,	72.55	339	P	P	12 00 25.1	-0.1
	baz=158,SNR=16						
GDL2	Guadalupe Moun	72.61	327	eP	P	12 00 26.3	+0.5
R43A	Red Bud	72.66	341	P	P	12 00 24.9	-0.9
	baz=159						
MNTX	Cornudas Mount	72.67	326	P	P	12 00 25.2	-0.8
	baz=146,SNR=9.8						
MNTX	Cornudas Mount	72.67	326	eP	P	12 00 25.0	-1.1
	comp=N,5.7nm,0.9s						
MNTX				epP	pP	12 00 59.1	+0.4
Q45A	Warren Harvey,	72.78	343	P	P	12 00 25.4	-1.0
	baz=161,SNR=5.3						
S40A	Lebanon	72.79	339	P	P	12 00 26.6	+0.1
	baz=157,SNR=13						
CCM	Cathedral Cave	72.83	340	P	P	12 00 26.3	-0.4
	baz=158						
CCM	Cathedral Cave	72.83	340	eP	P	12 00 26.6	-0.2
	comp=N,9.0nm,0.6s						
T38A	Diamond	72.84	337	P	P	12 00 26.8	-0.1
	baz=156,SNR=9.5						
R42A	Luebbering	72.91	340	P	P	12 00 26.9	-0.4
	baz=159						
O50A	Cable	72.95	347	P	P	12 00 27.0	-0.4
	baz=165						
Q44A	Meyer Farm, Va	73.01	342	P	P	12 00 26.6	-1.2
	baz=160						
R41A	Rosebud	73.10	340	P	P	12 00 28.0	-0.3
	baz=158,SNR=5.8						
N54A	Moraine State	73.10	350	P	P	12 00 28.3	0.0
	baz=168						
S39A	Bolivar	73.13	338	P	P	12 00 28.6	+0.1
	baz=156,SNR=14						
S39A	Bolivar	73.13	338	eP	P	12 00 28.7	+0.1
	comp=N,21nm,0.9s						
S39A				epP	pP	12 01 01.7	+0.5
P46A	Rosedale	73.22	344	P	P	12 00 28.1	-1.0
	baz=162						
S38A	Stockton	73.26	338	P	P	12 00 29.2	-0.1
	baz=156,SNR=26						
P45A	Graceland, Par	73.27	343	P	P	12 00 28.2	-1.1
	baz=161						
R40A	Maddies Statio	73.35	339	P	P	12 00 29.7	-0.1
	baz=158,SNR=11						
R40A	Maddies Statio	73.35	339	eP	P	12 00 29.7	-0.1
	comp=N,19nm,0.8s						
R40A				epP	pP	12 01 02.6	+0.1
MSTX	Muleshoe	73.39	329	P	P	12 00 30.3	0.0
	baz=148,SNR=6.1						
MSTX	Muleshoe	73.39	329	eP	P	12 00 30.5	+0.1
	comp=N,12nm,0.8s						
Q42A	Golden Eagle	73.42	341	P	P	12 00 29.9	-0.3
	baz=159						
P44A	Sand Creek, Wi	73.43	343	P	P	12 00 29.2	-1.1
	baz=161						
N50A	Nevada	73.46	347	P	P	12 00 29.8	-0.6
	baz=166						
O47A	Sheridan	73.57	345	P	P	12 00 30.1	-1.0
	baz=163						
M54A	Oil Creek Stat	73.58	350	P	P	12 00 31.1	-0.1
	baz=169						
R39A	Chumby, Stover	73.61	339	P	P	12 00 31.2	-0.1
	baz=157,SNR=8.6						
Q41A	Truxton	73.66	340	P	P	12 00 31.1	-0.5
	baz=158						
AMTX	Amarillo	73.71	331	P	P	12 00 32.2	+0.1
	baz=150						
AMTX	Amarillo	73.71	331	eP	P	12 00 32.3	+0.2
	comp=N,11nm,0.9s						
R38A	Fenwick Farm,	73.77	338	P	P	12 00 31.9	-0.3
	baz=156,SNR=7.9						
P43A	Skaggs, Pawnee	73.83	342	P	P	12 00 32.0	-0.6
	baz=160						
SFIN	Lafayette	73.92	344	P	P	12 00 31.8	-1.3
	baz=162						
Q40A	Laux Farm, Aux	73.95	340	P	P	12 00 32.9	-0.3
	baz=158,SNR=6.6						
O45A	Potomac	73.95	343	P	P	12 00 32.0	-1.3
	baz=162						
P42A	Winchester	74.00	341	P	P	12 00 32.7	-0.8
	baz=159						
O44A	Mansfield	74.04	343	P	P	12 00 32.7	-1.0
	baz=161						
ERPA	Erie	74.23	350	P	P	12 00 34.4	-0.5
	baz=168						
Q39A	Willow Grove F	74.26	339	P	P	12 00 34.8	-0.3
	baz=157						
P41A	Barry, Barry	74.28	341	P	P	12 00 34.7	-0.5
	baz=159,SNR=8.0						
MAW	Mawson	74.29	162	P	P	12 00 35.6	+0.6
	comp=N,12nm,0.8s,baz=201,slow=7.7,SNR=11						
MAW	Mawson	74.29	162	eP	P	12 00 36.0	+1.0
	comp=N,2.2nm,0.7s						
319A	Douglas	74.34	323	eP	P	12 00 35.8	-0.1
	comp=N,14nm,0.8s						
319A				epP	pP	12 01 11.0	+2.3
O43A	Sugar Creek Fa	74.38	342	P	P	12 00 35.0	-0.7
	baz=160						
Q38A	Cooks Store, C	74.38	339	P	P	12 00 35.8	-0.1
	baz=156,SNR=7.2						
P40A	Paris	74.43	340	P	P	12 00 35.8	-0.3
	baz=158						
P40A	Paris	74.43	340	eP	P	12 00 36.0	0.0
	comp=N,23nm,0.7s						
O42A	Bath	74.50	342	P	P	12 00 36.2	-0.2
	baz=160						
121A	Cookes Peak, D	74.52	325	P	P	12 00 38.2	+1.2
	baz=144,SNR=6.7						
N44A	Piper City	74.56	343	P	P	12 00 36.1	-0.8
	baz=161						
Q37A	Longview Farm,	74.57	338	P	P	12 00 36.3	-0.6
	baz=156						
P39B	Salisbury	74.60	339	P	P	12 00 36.7	-0.3
	baz=157,SNR=8.4						
HDIL	Hopedale	74.63	342	P	P	12 00 36.5	-0.7
	baz=160						
O41A	Passleys Farm,	74.64	341	P	P	12 00 36.5	-0.7
	baz=159						
M46A	Old House Fiel	74.73	345	P	P	12 00 37.1	-0.7
	baz=163						
O40A	La Belle	74.93	340	P	P	12 00 38.6	-0.4
	baz=158						
N43A	Stutzman Famil	74.96	343	P	P	12 00 38.6	-0.5
	baz=160						
P38A	Dawn	74.97	339	P	P	12 00 38.6	-0.5
	baz=157						
P37A	Lathrop	75.19	338	P	P	12 00 39.7	-0.7
	baz=156						
N41A	Harden Midland	75.19	341	P	P	12 00 39.7	-0.7
	baz=159						
N41A	Harden Midland	75.19	341	eP	P	12 00 40.0	-0.4
	comp=N,31nm,1.0s						
M43A	Waltham Townsh	75.38	343	P	P	12 00 40.7	-0.7
	baz=161						
O38A	Galt	75.40	339	P	P	12 00 41.3	-0.4
	baz=157						
KSU1	Kansas State U	75.49	336	P	P	12 00 41.8	-0.3
	baz=154						
LBNH	Lisbon	75.50	356	P	P	12 00 43.0	+0.9
	baz=175						
N40A	Mertquake, Sal	75.55	341	P	P	12 00 42.0	-0.5
	baz=158						
KOWA	Kowa	75.58	63	P	P	12 00 43.6	+0.4
	comp=N,1.5nm,0.4s,baz=206,slow=8.0,SNR=3.8						
O37A	Wolven Farm, M	75.65	339	P	P	12 00 42.8	-0.2
	baz=156						
LAZ	Ladron	75.73	326	eP	P	12 00 45.0	+1.0
N39A	Derby Farms, D	75.81	340	P	P	12 00 43.5	-0.5
	baz=158						
N39A	Derby Farms, D	75.81	340	eP	P	12 00 43.7	-0.2
	comp=N,24nm,1.1s						
N39A				epP	pP	12 01 16.8	-0.1
TUC	Tucson	75.86	323	P	P	12 00 45.4	+0.8
	baz=142						
ANMO	Albuquerque	75.86	327	P	P	12 00 45.1	+0.5
	comp=N,3.1nm,0.8s,baz=139,slow=9.6,SNR=12						
ANMO	Albuquerque	75.86	327	P	P	12 00 45.3	+0.6
	baz=146						
ANMO	Albuquerque	75.86	327	eP	P	12 00 45.2	+0.5
	comp=N,5.0nm,1.1s						
TASL	Snake Pit, Alb	75.86	327	P	P	12 00 45.3	+0.7
	baz=146,SNR=6.4						
TASM	ASL Pad, Albuq	75.86	327	P	P	12 00 45.6	+0.9
	baz=146,SNR=6.1						
N38A	Joes South For	75.95	340	P	P	12 00 44.3	-0.4
	baz=157						
M40A	Post Highland	76.02	341	P	P	12 00 44.5	-0.6
	baz=158						
L43A	Garden Prairie	76.03	343	P	P	12 00 44.7	-0.5
	baz=161						
LONY	Lake Ozonia	76.06	354	P	P	12 00 45.6	+0.3
	baz=173						
N37A	Lee Faris, Mou	76.21	339	P	P	12 00 45.9	-0.4
	baz=156						
N37A	Lee Faris, Mou	76.21	339	eP	P	12 00 46.2	-0.1
	comp=N,21nm,0.5s						
M39A	Webster	76.27	341	P	P	12 00 46.6	+0.1
	baz=158						
L41A	Preston	76.37	342	P	P	12 00 46.5	-0.6
	baz=159						
PKME	Peaks-Kenny

N36A	Muff Farm, Cla	76.50 338	P	P	12 00 47.6	-0.3
	baz=156					
M38A	Pleasantville	76.51 340	P	P	12 00 47.7	-0.2
	baz=157					
L40A	Anamosa	76.55 342	P	P	12 00 47.5	-0.6
	baz=159					
L40A	Anamosa	76.55 342	eP	P	12 00 48.1	0.0
	comp=N,26nm,0.8s					
L40A			epP	pP	12 01 21.0	-0.1
214A	Organ Pipe Nat	76.65 321	P	P	12 00 49.8	+0.8
	baz=141					
SADO	Sadowa	76.71 351	eP	P	12 00 49.2	+0.3
	comp=N,5.0nm,1.1s					
K42A	Prairie Point,	76.73 343	P	P	12 00 48.9	-0.3
	baz=160					
M37A	Trindle Farm,	76.75 339	P	P	12 00 49.3	+0.1
	baz=156					
T25A	Trinidad	76.78 330	P	P	12 00 50.7	+0.9
	baz=148,SNR=8.2					
T25A	Trinidad	76.78 330	eP	P	12 00 50.7	+0.9
	comp=N,8.8nm,0.8s					
T25A			epP	pP	12 01 24.8	+2.0
K41A	Shullsburg	76.82 342	P	P	12 00 49.2	-0.4
	baz=160					
L39A	Vinton	76.82 341	P	P	12 00 49.0	-0.6
	baz=158					
M36A	Felix, Anita	77.03 339	P	P	12 00 50.6	-0.3
	baz=156					
J43A	Natural Harves	77.08 344	P	P	12 00 50.8	-0.2
	baz=161					
JFWS	Jewell Farm	77.09 343	P	P	12 00 50.9	-0.3
	baz=160					
L38A	Oak Wood Farm,	77.11 340	P	P	12 00 50.6	-0.6
	baz=157					
K40A	Colesburg	77.12 342	P	P	12 00 51.3	0.0
	baz=159					
J42A	Columbus	77.19 343	P	P	12 00 51.2	-0.5
	baz=161					
BOSA	Boshof	77.27 116	P	P	12 00 52.5	-0.3
	comp=N,4.6nm,0.8s,baz=232,slow=4.0,SNR=5.7					
BOSA			pP	pP	12 01 26.1	+0.2
	comp=N,3.3nm,0.8s,baz=255,slow=7.1,SNR=2.2					
L37A	Phoenix Point,	77.32 340	P	P	12 00 51.7	-0.7
	baz=157					
K39A	Oelwein	77.33 341	P	P	12 00 51.8	-0.6
	baz=158					
J41A	Loganville	77.45 343	P	P	12 00 52.8	-0.3
	baz=160					
I43A	Langenfeld Bro	77.49 344	P	P	12 00 52.9	-0.5
	baz=161					
L36A	Harm Buss Farm	77.58 339	P	P	12 00 53.3	-0.5
	baz=156					
TRQ	Mont Tremblant	77.65 355	eP	P	12 00 54.8	+0.5
J40A	Soldiers Grove	77.67 342	P	P	12 00 53.9	-0.4
	baz=159					
I42A	Draeger Farm,	77.68 344	P	P	12 00 53.8	-0.6
	baz=161					
SDCO	Great Sand Dun	77.76 330	P	P	12 00 56.2	+0.9
	baz=147,SNR=8.1					
SDCO	Great Sand Dun	77.76 330	eP	P	12 00 56.3	+0.9
	comp=N,3.3nm,0.8s					
X16A	Lo Mia Camp, P	77.85 324	eP	P	12 00 57.2	+1.3
	comp=N,6.9nm,0.8s					
X16A			epP	pP	12 01 30.8	+2.0
J39A	Decorah	77.86 342	P	P	12 00 55.0	-0.4
	baz=158					
K37A	Belmond	77.88 340	P	P	12 00 55.2	-0.3
	baz=157					
H43A	Windswept, Lux	77.96 345	P	P	12 00 55.8	-0.1
	baz=162					
K36A	Gilmore City	78.00 340	P	P	12 00 56.0	-0.2
	baz=156					
I41A	Arkdale	78.07 343	P	P	12 00 56.1	-0.4
	baz=160					
BGNE	Belgrade	78.08 336	P	P	12 00 56.7	0.0
	baz=153					
H42A	Shiocton	78.17 344	P	P	12 00 56.8	-0.2
	baz=161					
Y14A	Wickenburg	78.28 322	eP	P	12 00 58.9	+0.9
	comp=N,3.6nm,0.8s					
I39A	Houston	78.30 342	P	P	12 00 57.3	-0.5
	baz=159					
S22A	4UR Ranch, Cre	78.34 329	P	P	12 00 59.6	+1.0
	baz=146					
S22A	4UR Ranch, Cre	78.34 329	eP	P	12 00 59.5	+0.9
	comp=N,3.3nm,0.9s					
J37A	Redenius Farm,	78.35 340	P	P	12 00 57.6	-0.6
	baz=157					
H41A	Junction City	78.54 344	P	P	12 00 58.7	-0.5
	baz=160					
J36A	Seneca 1, Swea	78.60 340	P	P	12 00 59.1	-0.4
	baz=156					
J36A	Seneca 1, Swea	78.60 340	eP	P	12 00 59.6	+0.1
	comp=N,13nm,0.9s					
Q24A	Divide	78.63 330	P	P	12 01 01.0	+0.8
	baz=147					
MVCO	Mesa Verde	78.66 327	P	P	12 01 01.0	+0.8
	baz=145					
MVCO	Mesa Verde	78.66 327	eP	P	12 01 01.5	+1.2
	comp=N,4.0nm,0.8s					
WUAZ	Wupatki	78.69 324	P	P	12 01 01.5	+1.1
	baz=142					
WUAZ	Wupatki	78.69 324	eP	P	12 01 01.6	+1.3
	comp=N,6.7nm,1.1s					
I38A	Scanlan Farm,	78.69 342	P	P	12 00 59.6	-0.4
	baz=158					
H40A	Chili	78.73 343	P	P	12 00 59.7	-0.5
	baz=160					
G42A	Mountain	78.84 345	P	P	12 01 00.7	-0.1
	baz=161					
I37A	Lemond, Waseca	78.96 341	P	P	12 01 01.3	-0.1
	baz=157,SNR=7.4					
I37A	Lemond, Waseca	78.96 341	eP	P	12 01 01.4	0.0
	comp=N,23nm,0.6s					
I37A			epP	pP	12 01 35.0	+0.4
H39A	Augusta	79.01 342	P	P	12 01 01.0	-0.6
	baz=159					
I36A	Fitzsimmons Fa	79.14 340	P	P	12 01 02.2	-0.2
	baz=157					
TOA0	Torodi Ar. Sit	79.20 67	eP	P	12 01 03.8	+0.4
TOA0			eP	P	12 01 04.0	+0.6
TOA1	Torodi Ar. Sit	79.20 67	eP	P	12 01 04.2	+0.7
TORD	Torodi Ar. Bea	79.20 67	P	P	12 01 04.2	+0.8
	comp=N,4.9nm,0.7s,baz=259,slow=5.2					
TORD			sP	sP	12 01 49.6	-1.0
	baz=269,slow=5.2					
E45A	Wooded Hills,	79.23 347	P	P	12 01 03.2	+0.3
	baz=164					
BC3	Big Chuckawall	79.38 320	P	P	12 01 04.9	+0.8
	baz=139					
F41A	Three Lakes	79.47 344	P	P	12 01 04.2	+0.1
	baz=161					
ISCO	Idaho Springs	79.53 331	P	P	12 01 05.8	+0.9
	baz=147					
ISCO	Idaho Springs	79.53 331	eP	P	12 01 05.9	+0.9
	comp=N,4.2nm,0.8s					
PV13	Radium Mtn., P	79.58 328	eP	P	12 01 06.4	+1.1
	comp=N,7.1nm,1.1s					
IRM	Iron Mountain	79.59 321	P	P	12 01 05.9	+0.8
	baz=140					
SMCO	Snowmass	79.59 329	eP	P	12 01 06.6	+1.1
	comp=N,8.1nm,0.8s					
G38A	Ridgeland	79.61 342	P	P	12 01 04.9	-0.1
	baz=158					
E43A	Lone Tree Farm	79.61 346	P	P	12 01 04.9	0.0
	baz=163					
E43A	Lone Tree Farm	79.61 346	eP	P	12 01 04.9	0.0
	comp=N,4.9nm,0.8s					
W13A	Hualapai Mount	79.64 322	eP	P	12 01 06.8	+1.1
	comp=N,2.6nm,0.7s					
W13A			epP	pP	12 01 40.6	+1.8
ECSD	EROS Data Cent	79.66 339	P	P	12 01 05.2	-0.1
	baz=154,SNR=9.2					
ECSD	EROS Data Cent	79.66 339	eP	P	12 01 05.2	-0.1
	comp=N,9.4nm,0.9s					
ECSD			epP	pP	12 01 38.6	+0.2
PV16	Nyswonger Mesa	79.75 328	eP	P	12 01 06.5	+0.4
	comp=N,4.0nm,1.0s					
E42A	Champion	79.86 345	P	P	12 01 06.3	+0.1
	baz=162					
U15A	North Rim	79.86 324	eP	P	12 01 08.5	+1.6
	comp=N,4.1nm,0.9s					
PV22	Blue Mesa, Par	79.87 328	eP	P	12 01 07.7	+0.9
	comp=N,3.8nm,1.0s					
F40A	Park Falls	79.88 344	P	P	12 01 06.5	+0.1
	baz=160					
PFO	Pinyon Flats O	79.89 320	P	P	12 01 06.9	0.0
	baz=139					
BELC	Belle Mtn. Jos	79.93 320	P	P	12 01 07.5	+0.4
	baz=139					
SNDA	J Saunders Pla	79.93 320	eP	P	12 01 10.8	+3.6
H35A	Sunnyside Ranc	80.00 340	P	P	12 01 06.7	-0.3
	baz=156,SNR=6.1					
F39A	Loretta	80.07 343	P	P	12 01 07.2	-0.2
	baz=159					
E40A	Wakefield	80.32 344	P	P	12 01 08.8	0.0
	baz=160,SNR=6.7					
F37A	Hinrichs Farm,	80.33 342	P	P	12 01 08.7	0.0
	baz=158					
GMRC	Granite Mounta	80.34 321	P	P	12 01 10.3	+1.0
	baz=139					
F38A	Pierce - Schro	80.35 343	P	P	12 01 08.8	-0.1
	baz=158					
E39A	Mellen	80.41 344	P	P	12 01 09.2	0.0
	baz=160					
N23A	Red Feather La	80.58 331	P	P	12 01 11.3	+0.7
	baz=147					
KNB	Kanab	80.59 324	eP	P	12 01 12.3	+1.7
	comp=N,10nm,0.9s					
D41A	Chassel	80.60 345	P	P	12 01 10.5	+0.3
	baz=161,SNR=6.4					
D41A	Chassel	80.60 345	eP	P	12 01 10.7	+0.5
	comp=N,26nm,0.8s					
H32A	Carlson Farm,	80.61 338	P	P	12 01 10.1	-0.3
	baz=154					
F36A	Milaca	80.69 341	P	P	12 01 10.3	-0.5
	baz=157					
F36A	Milaca	80.69 341	eP	P	12 01 10.5	-0.2
	comp=N,4.6nm,0.8s					
HEC	Hector,Ludlow	80.74 321	P	P	12 01 11.4	0.0
	baz=139					
LCMT	Little Creek M	80.79 324	eP	P	12 01 12.5	+0.9
	comp=N,3.4nm,1.1s					
G33A	Ortonville	80.92 339	P	P	12 01 11.3	-0.6
	baz=155					
O20A	White River Ci	80.93 329	P	P	12 01 13.2	+0.8
	baz=145					
O20A	White River Ci	80.93 329	eP	P	12 01 13.4	+1.0
	comp=N,4.6nm,0.9s					
TUQ	Turquoise Moun	80.97 321	P	P	12 01 13.1	+0.5
	baz=139					
BFSC	Mount Baldy Ra	81.02 319	P	P	12 01 13.1	+0.1
	baz=138					
MTPU	Mount Pierson	81.08 325	eP	P	12 01 14.1	+0.6
	comp=N,3.2nm,0.8s					
SRU	San Rafael Swe	81.14 327	eP	P	12 01 13.9	+0.4
	comp=N,5.9nm,0.8s					
SRU			epP	pP	12 01 48.3	+1.5
E36A	McGregor	81.23 342	P	P	12 01 13.3	-0.2
	baz=157,SNR=5.9					
CCUT	Cedar City	81.27 324	eP	P	12 01 15.8	+1.5
	comp=N,5.9nm,0.9s					
GSC	Goldstone, Bar	81.35 321	P	P	12 01 14.1	-0.5
	baz=139					
P18A	Preston Nutter	81.42 328	eP	P	12 01 16.1	+1.0
	comp=N,6.3nm,0.8s					
MSU	Marysvale	81.44 326	eP	P	12 01 16.5	+1.3
E35A	Pequot Lakes	81.58 341	P	P	12 01 14.8	-0.5
	baz=156					
TMUT	Trail Mountain	81.60 327	eP	P	12 01 17.1	+1.0
	comp=N,3.0nm,0.9s					
D37A	Cotton	81.60 343	P	P	12 01 15.1	-0.4
	baz=158					
EDW2	Edwards Air Fo	81.69 320	P	P	12 01 16.7	+0.4
	baz=138					
RWWY	Rawlins	81.77 331	eP	P	12 01 17.8	+0.9
	comp=N,12nm,0.9s					
C38A	Sawbill Land.	81.84 344	P	P	12 01 16.2	-0.6
	baz=159,SNR=5.8					
D35A	Remer	81.96 342	P	P	12 01 17.3	0.0
	baz=157,SNR=6.1					
C37A	Embarrass	82.07 343	P	P	12 01 17.6	-0.4
	baz=158					
EYMN	Ely	82.11 344	P	P	12 01 18.6	+0.5
	baz=159					
FURC	Furnace Creek,	82.25 321	P	P	12 01 20.0	+0.9
	baz=139					
C36A	Pine Crest Far	82.27 343	P	P	12 01 18.7	-0.2
	baz=158					
PSUT	Pine Spring	82.28 325	eP	P	12 01 21.0	+1.4
	comp=N,2.7nm,0.9s					
PSUT			epP	pP	12 01 54.9	+2.0
MPMC	Manual Prospec	82.28 321	P	P	12 01 19.9	+0.4
	baz=138					
K22A	Casper	82.29 332	P	P	12 01 20.1	+0.7
	baz=147					
K22A	Casper	82.29 332	eP	P	12 01 20.3	+0.9
	comp=N,10nm,1.0s					
TPNV	Topopah Spring	82.29 322	P	P	12 01 20.6	+1.0
	baz=139					
TPNV	Topopah Spring	82.29 322	eP	P	12 01 20.5	+1.0
TPNV			epP	pP	12 01 55.0	+2.1
C35A	Jirik Farms, M	82.51 342	P	P	12 01 20.1	-0.1
	baz=157					
CASY	Casey	82.54 179	eP	P	12 01 21.3	+1.0
	comp=N,8.9nm,0.8s					
RSSD	Black Hills	82.56 334	P	P	12 01 21.1	+0.3
	baz=149					
E31A	Nome	82.59 339	P	P	12 01 20.7	0.0
	baz=154					
JLU	Jordanelle	82.75 327	epP	pP	12 01 57.0	+1.6
CWC	Cottonwood Cre	82.88 321	P	P	12 01 23.5	+0.8
	baz=138					
GRAC	Grapevine Rang	82.91 321	P	P	12 01 23.7	+1.0
	baz=138					
VES	Vestal, Richgr	82.99 320	P	P	12 01 23.6	+0.6
	baz=137					
R11A	Troy Canyon, C	83.01 323	P	P	12 01 24.3	+1.0
	baz=140					
R11A	Troy Canyon, C	83.01 323	eP	P	12 01 24.1	+0.8
	comp=N,2.9nm,0.9s					
R11A			epP	pP	12 01 58.4	+1.7
B35A	Bob, Littlefor	83.05 342	P	P	12 01 22.7	-0.3
	baz=157,SNR=8.6					
B35A	Bob, Littlefor	83.05 342	eP	P	12 01 22.7	-0.3
	comp=N,10nm,0.6s					
C33A	Trail	83.05 341	P	P	12 01 22.7	-0.3
	baz=155					
DUG	Dugway, Tooele	83.07 326	P	P	12 01 24.0	+0.5
	baz=142					
TCUT	Toone Canyon	83.14 328	eP	P	12 01 24.3	+0.3
	comp=N,4.9nm,0.8s					
B34A	Aery, Baudette	83.41 342	P	P	12 01 24.6	-0.2
	baz=156					
AGMN	Agassiz Nation	83.57 341	P	P	12 01 25.4	-0.2
	baz=155					
AGMN	Agassiz Nation	83.57 341	eP	P	12 01 25.7	+0.1
	comp=N,7.6nm,0.6s					
HWUT	Hardware Ranch	83.61 328	eP	P	12 01 26.2	0.0
	comp=N,5.4nm,1.0s					
HWUT			epP	pP	12 02 00.9	+1.2
BW06	Boulder Array	83.65 330	eP	P	12 01 26.9	+0.3
	comp=N,1.5nm,0.6s					
BW06			epP	pP	12 02 00.8	+0.9
PD31	Pinedale Array	83.65 330	eP	P	12 01 26.8	+0.3
PD31			epP	pP	12 02 00.9	+0.9
PDAR	Pinedale Array	83.65 330	P	P	12 01 26.6	0.0
	comp=N,1.1nm,0.6s,baz=131,slow=4.9,SNR=14					
PDAR			pP	pP	12 02 00.8	+0.9
	comp=N,1.8nm,0.7s,baz=126,slow=7.1,SNR=8.4					
PDAR	Pinedale Array	83.65 330	eP	P	12 01 26.3	-0.2
PDAR			epP	pP	12 01 59.7	-0.3
A33A	Warroad	84.02 342	P	P	12 01 27.9	0.0
	baz=156					
MLAC	Mammoth, Mammo	84.17 321	P	P	12 01 29.3	+0.1
	baz=137					
OMMB	Old Mammoth Mi	84.25 321	eP	P	12 01 30.3	+0.5
	comp=N,4.3nm,0.8s					
HVU	Hansel Valley	84.30 327	eP	P	12 01 29.7	0.0
	comp=N,3.4nm,0.9s					
HVU			epP	pP	12 02 04.2	+1.0
MDPB	Devils Postpil	84.30 321	eP	P	12 01 30.0	0.0
	comp=N,3.0nm,0.9s					
NV01	Mina Array Sit	84.47 322	eP	P	12 01 31.3	+0.5
NV01			epP	pP	12 02 04.8	+0.5
NVAR	Mina Array Bea	84.47 322	P	P	12 01 31.0	+0.2
	comp=N,1.2nm,0.8s,baz=158,slow=6.9,SNR=10.0					
NVAR			pP	pP	12 02 04.8	+0.5
	comp=N,0.5nm,0.7s,baz=165,slow=6.2,SNR=3.0					
KVN	Kaiserville	84.83 322	eP	P	12 01 32.8	+0.3
	comp=N,2.5nm,1.0s					
WAKR	Walker	85.13 321	eP	P	12 01 35.1	+1.0
	comp=N,5.5nm,1.1s					
IMW	Indian Meadow	85.16 330	eP	P	12 01 34.5	+0.3
	comp=N,2.7nm,0.8s					
ULM	Lac du Bonnet	85.35 342	P	P	12 01 34.0	-0.6
	comp=N,7.2nm,0.8s,baz=130,slow=4.3,SNR=5.9					
RLMT	Red Lodge	85.45 331	P	P	12 01 35.8	+0.3
	baz=145					
LAO	LASA Array	85.55 334	P	P	12 01 35.8	+0.1
	baz=147					
PNTR	Pine Nut	85.65 322	eP	P	12 01 37.7	+1.1
	comp=N,7.8nm,0.8s					
PAHR	Pah Rah Range	85.98 322	eP	P	12 01 39.2	+1.0
	comp=N,4.7nm,1.0s					
DGMT	Dagmar	86.33 336	P	P	12 01 40.2	+0.7
	baz=149					
HLID	Hailey	86.44 327	P	P	12 01 41.3	+1.0
	baz=141					
HLID	Hailey	86.44 327	eP	P	12 01 41.4	+1.0
	comp=N,4.8nm,0.9s					
HLID			epP	pP	12 02 15.8	+1.8
BEKR	Beckworth	86.61 322	eP	P	12 01 42.3	+1.0
	comp=N,4.1nm,1.0s					
MCMT	McKenzie Canyo	86.73 329	eP	P	12 01 42.9	+1.1
MCMT			epP	pP	12 02 17.4	+2.0
BOZ	Bozeman (W)	86.81 330	P	P	12 01 42.5	+0.5
	baz=143					
MDT	Midelt	86.84 48	P	P	12 01 44.4	+1.9
	comp=N,1.9nm,0.8s,baz=257,slow=4.4,SNR=5.3					
MDT			pP	pP	12 02 16.5	+0.3
	comp=N,2.2nm,0.7s,baz=236,slow=7.0,SNR=4.8					
DLMT	Dillon	87.04 330	eP	P	12 01 44.4	+1.2
	comp=N,2.4nm,0.8s					
LRM	Limekiln Ridge	87.34 330	eP	P	12 01 45.8	+1.1
O03D	Paynes Creek	87.69 321	P	P	12 01 45.9	-0.4
	baz=136					
EGMT	Eagleton	88.00 333	P	P	12 01 47.5	-0.1
	baz=144					
MOD	Modoc Plateau	88.06 323	eP	P	12 01 48.8	+0.6
	comp=N,4.6nm,0.8s					
MOD			epP	pP	12 02 23.4	+1.5
J08A	Circle Bar Ran	88.21 325	eP	P	12 01 49.9	+1.1
	comp=N,11nm,0.8s					
J08A			epP	pP	12 02 24.4	+1.8
N02D	Trinity Center	88.66 321	P	P	12 01 51.3	+0.4
	baz=135					
BMO	Blue Mountains	88.77 327	eP	P	12 01 49.4	-2.0
	comp=N,20nm,0.7s					
K05A	Summer Lake	88.96 323	eP	P	12 01 53.6	+1.2
	comp=N,11nm,0.8s					
K05A			epP	pP	12 02 28.2	+2.0
M02C	Callahan	89.03 321	P	P	12 01 53.4	+0.7
	baz=135					
YBH	Yreka Blue Hor	89.19 322	P	P	12 01 52.5	-0.8
	comp=N,1.5nm,0.7s,baz=87,slow=5.0,SNR=10.0					
YBH			pP	pP	12 02 26.6	-0.6
	comp=N,1.1nm,0.7s,baz=88,slow=1.4,SNR=4.2					
J05D	Fort Rock, OR	89.53 324	P	P	12 01 55.8	+0.8
	baz=136					
PINE	Pine Mountain	89.75 324	eP	P	12 01 57.2	+1.1
	comp=N,7.2nm,0.8s					
PINE			epP	pP	12 02 32.0	+2.0
J04D	Umpqua Nationa	89.95 323	P	P	12 01 57.7	+0.6
	baz=135					
I05D	Terrebonne, OR	90.34 324	P	P	12 01 59.6	+1.0
	baz=136					
H04A	Detroit Lake	91.02 324	eP	P	12 02 02.2	+0.5
	comp=N,3.1nm,0.8s					
YKA	Yellowknife Ar	101.17 339	P	Pdif	12 02 47.5	+0.2
	comp=N,0.9nm,0.6s,baz=142,slow=4.7,SNR=8.3					
ASAR	Alice Springs	121.69 202	PKP	PKPdf	12 07 50.8	-0.7
	comp=N,0.9nm,0.6s,baz=135,slow=1.5,SNR=15					
AS31	Alice Springs	121.69 202	ePKPdf	PKPdf	12 07 50.8	-0.7
WR1	Warramunga Arr	124.99 204	ePKPdf	PKPdf	12 07 57.5	-0.3
WRA	Warramunga Arr	124.99 204	PKP	PKPdf	12 07 57.5	-0.3
	comp=N,1.9nm,0.3s,baz=160,slow=1.8,SNR=58					
WRA			pPKP	pPKPdf	12 08 32.8	-0.4
	comp=N,0.7nm,0.5s,baz=166,slow=1.6,SNR=3.1					
SIJI	Sorong	143.54 211	PKP	PKPdf	12 08 31.4	-1.0
	comp=N,8.1nm,0.6s,baz=123,slow=14,SNR=4.2					
YAK	Yakutsk	147.61 346	PKPbc	PKPbc	12 08 41.1	+0.3
	comp=N,7.8nm,0.3s,baz=226,slow=0.8,SNR=4.1					
KURBB	Kurchatov Arra	148.03 43	PKPbc	PKPbc	12 08 43.0	+0.8
	comp=N,1.2nm,0.5s,baz=296,slow=3.6,SNR=10					
KURBB			pPKPbc	pPKPbc	12 09 17.6	+0.3
	comp=N,3.6nm,0.6s,baz=294,slow=3.9,SNR=11					
KURK	Kurchatov	148.04 43	ePKPbc	PKPbc	12 08 43.0	+0.7
PSI	Prapat	148.47 152	PKPbc	PKPbc	12 08 44.1	-0.6
	comp=N,3.8nm,0.2s,baz=3.3,slow=2.8,SNR=3.7					
KSH	Kashi	148.84 65	PKPbc	PKPdf	12 08 37.5	-3.3
KSH			pPKP	pPKPbc	12 09 18.8	-1.2
KSH			PP	PP	12 12 11.8	-5.1
KSH			AMB	AMB		
	comp=Z,190nm,6.4s					
ZAA1	Zalesovo Array	149.71 34	ePKPbc	PKPbc	12 08 47.3	+0.9
ZALV	Zalesovo Beam	149.72 34	PKPbc	PKPbc	12 08 47.3	+0.9
	comp=Z,1.8nm,0.5s,baz=292,slow=3.7,SNR=6.2					
ZALV			pPKPbc	pPKPbc	12 09 22.1	+0.6
	comp=Z,3.5nm,0.6s,baz=292,slow=3.3,SNR=5.6					
ZALV			sPKPbc	sPKPdf	12 09 29.5	-1.0
	comp=Z,1.9nm,0.5s,baz=304,slow=4.8,SNR=3.2					
MK32	Makanchi Array	151.80 48	ePKPbc	PKPbc	12 08 52.0	+0.4
MKAR	Makanchi Array	151.80 48	PKPbc	PKPbc	12 08 52.0	+0.4
	comp=Z,0.6nm,0.4s,baz=272,slow=1.1,SNR=7.5					
MKAR			pPKPbc	pPKPbc	12 09 27.1	+0.3
	comp=Z,3.0nm,0.8s,baz=300,slow=2.6,SNR=8.0					
MKAR			sPKPbc	sPKPdf	12 09 34.3	+0.2
	comp=Z,1.9nm,0.5s,baz=282,slow=2.7,SNR=6.3					
SONA0	Songino Array	162.86 16	ePKPab	PKPab	12 09 49.0	+0.3
SONM	Songino Array	162.86 16	PKPab	PKPab	12 09 49.0	+0.3
	comp=Z,1.1nm,0.7s,baz=322,slow=5.8,SNR=5.8					
LZH	Lanzhou	170.97 57	ePKP	PKPdf	12 09 04.8	-0.6
LZH			pPKP	pPKPdf	12 09 43.0	+1.9
LZH			sPKP		12 09 54.5	
LZH			PKP	PKPab	12 10 26.3	+1.2
LZH			LR	LR		
	comp=N,65nm,18.0s					
LZH			LR	LR		
	comp=E,60nm,18.5s					
LZH			LR	LR		
	comp=Z,76nm,20.2s					
CD2	Chengdu	171.91 92	PKP	PKPdf	12 09 05.3	-0.6

*ISCJB **28** 12:00:24.8±0.7, 31°.9N±0°.1×82°.2E±0°.1, h10km, mb3.7/12, MS2.9/3, Error ellipse: s-maj=16.7km s-min=12.1km az=35.9*

*IDC **28** 12:00:24.3±0.9, 31°.82N×82°.16E, h0km, mb3.8/12, mb1 3.9/13, mb1mx3.7/70, mbtmp3.8/13, ML3.1/1, MS3.0/3, Ms1 3.1/3, ms1mx2.6/62, Error ellipse: s-maj=26.0km s-min=17.1km az=48.0*

ISC 28 12:00:26.4±1.0, 31°.9N±0°.1×82°.3E±0°.1, h10km, n18, σ1§09/15, mb3.9/12, MS3.0/3, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	8.93	285	P	Pn	12 02 36.7	+1.2
MKAR	Makanchi Array	14.86	0	Pn	Pn	12 03 56.6	+0.1
	0.1nm,0.3s,baz=186,slow=14,SNR=4.4						
KURBB	Kurchatov Arra	18.90	353	P	P	12 04 44.4	-2.5
	0.1nm,0.3s,baz=175,slow=11,SNR=15						
CMAR	Chiang Mai Arr	20.14	128	P	Pn	12 05 05.4	+2.8
	4.4nm,0.6s,baz=312,slow=10,SNR=16						
CMAR				LR	LR	12 14 51.7	
	comp=Z,28nm,19.8s,baz=315,slow=43						
ZALV	Zalesovo Beam	22.10	4	P	P	12 05 21.8	+0.2
	1.8nm,0.5s,baz=202,slow=14,SNR=7.6						
BVAR	Borovoye Array	22.79	341	P	P	12 05 28.5	-0.5
	2.9nm,0.7s,baz=148,slow=12,SNR=12						
SONM	Songino Array	24.25	42	P	P	12 05 45.6	+1.9
	1.1nm,0.5s,baz=226,slow=10,SNR=7.9						
TLY	Talaya	25.21	32	LR	LR	12 16 50.9	
	comp=Z,65nm,19.7s,baz=224,slow=39						
AKTO	Aktyubinsk	25.80	323	P	P	12 05 57.1	-0.4
	1.9nm,0.5s,baz=118,slow=7.9,SNR=7.8						
KSRS	Korea Array	37.66	69	P	P	12 07 41.7	0.0
	0.4nm,0.5s,baz=275,slow=8.1,SNR=2.7						
FINES	FINESS Array B	46.47	327	P	P	12 08 53.

0.3nm,0.6s,baz=295,slow=4.4,SNR=5.7
YKA Yellowknife Ar 84.94 8 P **P 12 13 01.3 -0.1**
0.8nm,0.8s,baz=338,slow=4.5,SNR=3.8

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*IDC **28** 12:02:23.6±2.1,9.39S×113.16E,h0km,mb3.6/4, mb1 3.7/5,mb1mx3.5/55,mbtmp3.6/5,ML3.4/1,Error ellipse: s-maj=104.8km s-min=22.1km az=51.0*
*ISCJB **28** 12:02:27.5±0.9,9.87S±0.07×113.00E±0.07,h33km, mb3.6/4,Error ellipse: s-maj=11.0km s-min=8.3km az=36.6*
*DJA **28** 12:02:28.1±0.6,10.5S±6.6×11.3E±.,h10km,M4.0/12, mb4.5/1,MLv3.8/12*
ISC 28 12:02:28.7±1.0,**9.75S**±0.09×**113.04E**±0.06,**h35**km,**n15,** σ2§**00**/17,**mb3.6/4,South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMJI	**Gumukmas**	**1.52**	**15**	P	**Pn**	**12 02 52.2**	**-1.2**
JAGI	**Jajag, Banyuwa**	**1.68**	**41**	P	**Pn**	**12 02 55.6**	**0.0**
JAGI				S	**Sn**	**12 03 19.1**	**+3.1**
BLJI	**Banyuglugur**	**2.07**	**16**	P	**Pn**	**12 03 02.3**	**+1.4**
PWJI	**Pagerwojo**	**2.10**	**325**	P	**Pn**	**12 03 01.0**	**-0.4**
PCJI	**Pacitan**	**2.40**	**310**	P	**Pn**	**12 03 06.9**	**+1.4**
SRBI	**Singaraja**	**2.71**	**53**	P	**Pn**	**12 03 12.1**	**+2.3**
WOJI	**Wonogiri, Jawa**	**2.82**	**312**	P	**Pn**	**12 03 15.4**	**+4.1**
NGJI	**Ngawi**	**2.83**	**327**	P	**Pn**	**12 03 13.1**	**+1.6**
TWSI	**Taliwang, Sumb**	**3.93**	**75**	P	**Pn**	**12 03 28.3**	**+1.8**
PLAI	**Plampang**	**4.77**	**79**	P	**Pn**	**12 03 39.8**	**+1.7**
FITZ	**Fitzroy Crossi**	**14.78**	**126**	Pn	**Pn**	**12 05 53.6**	**-1.6**
	0.1nm,0.3s,baz=317,slow=14,SNR=6.7						
FITZ				Sn	Sn	12 08 27.6	-10
	0.1nm,0.3s,baz=154,slow=18,SNR=5.6						
WRA	**Warramunga Arr**	**22.92**	**119**	P	**P**	**12 07 30.2**	**+0.3**
	0.6nm,0.7s,baz=298,slow=11,SNR=7.1						
ASAR	**Alice Springs**	**24.26**	**127**	P	**P**	**12 07 43.7**	**+0.9**
	0.8nm,0.7s,baz=302,slow=8.6,SNR=16						
ASAR				PcP	**PcP**	**12 11 23.2**	**+0.7**
	0.2nm,0.4s,baz=305,slow=1.7,SNR=4.9						
SONM	**Songino Array**	**57.63**	**355**	P	**P**	**12 12 13.8**	**-1.6**
	0.6nm,0.5s,baz=185,slow=8.7,SNR=4.1						
MKAR	**Makanchi Array**	**62.62**	**337**	P	**P**	**12 12 47.6**	**-1.9**
	0.7nm,0.6s,baz=142,slow=8.1,SNR=4.7						

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*IDC **28** 12:09:59.6±0.7,9.51S×113.06E,h0km,mb4.2/16, mb1 4.3/18,mb1mx4.1/59,mbtmp4.2/18,ML3.9/2,MS3.4/21, Ms1 3.5/21,ms1mx3.3/58,Error ellipse: s-maj=24.8km s-min=13.2km az=51.0*
*ISCJB **28** 12:10:02.5±0.3,9.77S±0.04×112.98E±0.03,h36km, mb4.5/29,MS3.5/20,Error ellipse: s-maj=6.7km s-min=3.7km az=21.5*
*DJA **28** 12:10:03.1±0.4,10.5S±6.6×11.3E±.,h10km,M4.7/23, mb4.9/7,mB5.2/4,MLv4.7/23,Mw(mB)4.6/4*
*NEIC **28** 12:10:05.4±0.6,9.57S×113.07E,h44km±6km,mb4.6/9, Error ellipse: s-maj=10.0km s-min=4.6km az=213.0*
ISC 28 12:10:04.5±0.5,**9.74S**±0.06×**113.03E**±0.05,**h36**km,**n110,** σ1§**61**/101,**mb4.5**/29,**MS3.5**/20,**2C,South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMJI	**Gumukmas**	**1.51**	**16**	P	**Pn**	**12 10 28.7**	**-0.4**
JAGI	**Jajag, Banyuwa**	**1.68**	**41**	P	**Pn**	**12 10 32.6**	**+1.2**
JAGI	**Jajag, Banyuwa**	**1.68**	**41**	*e*Pn	**Pn**	**12 10 31.4**	**0.0**
JAGI				*e*Sn	**Sn**	**12 10 50.8**	**-0.9**
BLJI	**Banyuglugur**	**2.06**	**16**	P	**Pn**	**12 10 38.7**	**+2.1**
IGBI	**Denpasar**	**2.28**	**66**	P	**Pn**	**12 10 42.5**	**+2.9**
PCJI	**Pacitan**	**2.39**	**310**	P	**Pn**	**12 10 41.5**	**+0.3**
DNP	**Denpasar**	**2.40**	**64**	P	**Pn**	**12 10 44.8**	**+3.6**
SRBI	**Singaraja**	**2.71**	**53**	P	**Pn**	**12 10 48.8**	**+3.2**
WOJI	**Wonogiri, Jawa**	**2.81**	**312**	P	**Pn**	**12 10 47.4**	**+0.4**
NGJI	**Ngawi**	**2.82**	**327**	P	**Pn**	**12 10 50.8**	**+3.7**
GRJI	**Gresik**	**2.86**	**349**	P	**Pn**	**12 10 50.7**	**+3.0**
UGM	**Wanagama**	**3.07**	**306**	P	**Pn**	**12 10 51.1**	**+0.5**
UGM	**Wanagama**	**3.07**	**306**	*e*Pn	**Pn**	**12 10 50.9**	**+0.2**
UGM				*e*Sn	**Sn**	**12 11 26.0**	**-0.2**
TBJI	**Tambak Boyo**	**3.13**	**338**	P	**Pn**	**12 10 54.3**	**+2.9**
SMRI	**Semarang**	**3.71**	**316**	P	**Pn**	**12 11 00.8**	**+1.5**
SMRI	**Semarang**	**3.71**	**316**	*e*Pn	**Pn**	**12 11 00.1**	**+0.9**
TWSI	**Taliwang, Sumb**	**3.93**	**76**	P	**Pn**	**12 11 04.7**	**+2.3**
KPJI	**Karang Pucung**	**4.71**	**300**	P	**Pn**	**12 11 13.9**	**+0.8**
PLAI	**Plampang**	**4.77**	**79**	P	**Pn**	**12 11 16.6**	**+2.7**
CMJI	**Cimerak**	**4.93**	**293**	P	**Pn**	**12 11 16.6**	**+0.5**
CISI	**Cisompet, Garu**	**5.60**	**292**	P	**Pn**	**12 11 25.3**	**0.0**
CISI	**Cisompet, Garu**	**5.60**	**292**	*e*Pn	**Pn**	**12 11 25.5**	**+0.2**
LEM	**Lembang**	**6.09**	**298**	Pn	Pn	12 11 38.2	+6.0
	5.8nm,0.3s,baz=66,slow=18,SNR=2.5						
LEM				Sn	**Sn**	**12 12 43.4**	**+2.6**
	5.7nm,0.3s,baz=311,slow=20,SNR=2.3						
LEM				LR	LR	12 14 30.0	
	comp=Z,249nm,20.4s,baz=101,slow=45						
WBSI	**Waikabubak, Su**	**6.27**	**90**	P	**Pn**	**12 11 37.7**	**+3.1**
CGJI	**Cibinong**	**7.90**	**293**	P	**Pn**	**12 11 57.7**	**+0.8**
BKSI	**Bulukumba**	**8.29**	**59**	P	**Pn**	**12 12 05.6**	**+3.4**
EDFI	**Ende, Flores**	**8.60**	**84**	P	**Pn**	**12 12 08.5**	**+1.8**
TTSI	**Tana Toraja**	**9.47**	**46**	P	Pn	12 12 29.9	+11
STKI	**Sintang**	**9.86**	**351**	P	Pn	12 12 35.0	+11
BATI	**Baumata**	**10.48**	**93**	Pn	**Pn**	**12 12 31.8**	**-0.7**
	1.2nm,0.3s,baz=351,slow=19,SNR=2.3						
BATI				Sn	**Sn**	**12 14 26.9**	**-1.8**
	2.9nm,0.3s,baz=270,slow=20,SNR=2.2						
MNAI	**Manna**	**11.34**	**297**	*e*Pn	**Pn**	**12 12 43.8**	**-0.3**
MASI	**Maura Aman, Be**	**12.56**	**301**	P	**Pn**	**12 12 59.9**	**-1.0**
MBWA	**Marble Bar**	**13.06**	**151**	*e*Pn	**Pn**	**12 13 05.8**	**-1.7**
MBWA				*e*Sn	Sn	12 15 20.2	-11
FITZ	**Fitzroy Crossi**	**14.78**	**126**	Pn	**Pn**	**12 13 29.8**	**-1.3**
	0.4nm,0.3s,baz=330,slow=13,SNR=11						
FITZ				Sn	Sn	12 16 03.5	-10
	0.4nm,0.3s,baz=175,slow=20,SNR=6.6						
FITZ				LR	LR	12 18 12.3	
	comp=Z,97nm,19.1s,baz=311,slow=33						
FITZ	**Fitzroy Crossi**	**14.78**	**126**	*e*Pn	**Pn**	**12 13 30.9**	**-0.2**
FITZ				*e*Sn	Sn	12 16 03.5	-10
MTN	**Manton Dam**	**18.02**	**102**	*e*Pn	**P**	**12 14 13.6**	**+1.1**
	19nm,1.1s						
SIJI	**Sorong**	**20.17**	**65**	P	**P**	**12 14 36.2**	**+0.1**
	5.9nm,0.4s,baz=253,slow=7.6,SNR=4.7						
SIJI				LR	LR	12 23 09.7	
	comp=Z,156nm,21.1s,baz=268,slow=39						
FAKI	**Fak Fak**	**20.26**	**72**	*e*P	**P**	**12 14 36.6**	**-0.5**
	30nm,0.8s						
DAV	**Davao City (W)**	**20.86**	**37**	LR	LR	12 23 06.3	
	comp=Z,132nm,21.8s,baz=201,slow=38						
WR1	**Warramunga Arr**	**22.93**	**119**	*e*P	**P**	**12 15 06.1**	**+0.4**
	5.2nm,0.8s						
WR1				*e*S	**S**	**12 19 15.3**	**+1.8**
WRA	**Warramunga Arr**	**22.93**	**119**	P	**P**	**12 15 06.1**	**+0.4**
	5.7nm,1.1s,baz=290,slow=12,SNR=14						
WRA				S	**S**	**12 19 15.3**	**+1.8**
	0.8nm,1.1s,baz=282,slow=24,SNR=3.0						
WRA				LR	LR	12 24 54.0	
	comp=Z,159nm,20.9s,baz=160,slow=39						
WRAB	**Tennant Creek**	**22.94**	**119**	*e*P	**P**	**12 15 07.2**	**+1.4**
	9.3nm,1.1s						
WB2	**Warramunga Arr**	**22.94**	**119**	*e*P	**P**	**12 15 06.8**	**+1.0**
NWAO	**Narrogin (SRO)**	**23.40**	**171**	LR	LR	12 25 19.5	
	comp=Z,231nm,18.4s,baz=190,slow=39						
ASAR	**Alice Springs**	**24.27**	**127**	P	**P**	**12 15 20.1**	**+1.5**
	2.7nm,0.7s,baz=303,slow=8.8,SNR=34						
ASAR				PcP	**PcP**	**12 18 59.7**	**+1.4**
	0.4nm,0.4s,baz=305,slow=1.7,SNR=8.1						
ASAR				S	S	12 19 50.4	+15
	0.4nm,0.7s,baz=307,slow=23,SNR=3.0						
CM01	**Chiang Mai Arr**	**31.24**	**334**	*e*P	**P**	**12 16 19.8**	**-1.2**
CMAR	**Chiang Mai Arr**	**31.28**	**334**	P	**P**	**12 16 21.4**	**+0.1**
	4.6nm,0.9s,baz=170,slow=8.4,SNR=15						
CMAR				LR	LR	12 29 10.5	
	comp=Z,56nm,20.0s,baz=171,slow=37						
PMG	**Port Moresby**	**33.65**	**92**	LR	LR	12 33 37.9	
	comp=Z,157nm,18.6s,baz=290,slow=42						
STKA	**Stephens Creek**	**34.42**	**134**	P	**P**	**12 16 49.8**	**+1.1**
	2.4nm,0.8s,baz=286,slow=15,SNR=3.2						
KMI	**Kunming**	**36.08**	**344**	P	**P**	**12 17 06.0**	**+2.8**
KMI				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,70nm,4.0s						
PALK	**Palleke**	**36.37**	**297**	LR	LR	12 32 03.1	
	comp=Z,70nm,19.4s,baz=111,slow=36						
GYA	**Guiyang**	**36.51**	**350**	*e*P	**P**	**12 17 09.0**	**+2.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GUMO	**Guam**	**39.19**	**54**	LR	LR	12 33 57.5	
	comp=Z,20nm,20.8s,baz=216,slow=37						
H08S2	**Diego Garcia H**	**40.11**	**270**	T	T	13 00 33.4	
	baz=94						
H08S3	**Diego Garcia H**	**40.12**	**270**	T	T	13 00 50.0	
	baz=94						
H08S1	**Diego Carcia H**	**40.13**	**270**	T	T	13 00 47.2	
	baz=94						
SHL	**Shillong**	**40.69**	**330**	*e*P	**P**	**12 17 40.8**	**-1.2**
	15nm,0.9s						
CD2	**Chengdu**	**41.39**	**348**	P	**P**	**12 17 47.5**	**+0.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2	**Nanjing**	**41.93**	**7**	*e*P	**P**	**12 17 52.5**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
JNU	**Nakatsue**	**45.89**	**21**	LR	LR	12 40 14.0	
	comp=Z,49nm,18.3s,baz=313,slow=40						
HNR	**Honiara**	**46.23**	**94**	LR	LR	12 40 24.8	
	comp=Z,62nm,18.2s,baz=188,slow=40						
LZH	**Lanzhou**	**46.40**	**350**	*e*P	**P**	**12 18 27.8**	**+0.1**
LZH				pP	sP	12 18 41.3	-1.4
LZH				sP	pP	12 18 47.3	+8.9
LZH				*e*PP	**PP**	**12 20 17.5**	**+0.2**
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
LZH				pmax	pmax		
	comp=Z,65nm,6.2s						
LZH				LR	LR		
	comp=N,320nm,14.5s						
LZH				LR	LR		
	comp=E,330nm,14.2s						
LZH				LR	LR		
	comp=Z,390nm,18.0s						
KSAR	**Wonju Array Be**	**48.96**	**16**	P	**P**	**12 18 47.0**	**-0.4**
KSRS	**Korea Array**	**48.98**	**16**	P	**P**	**12 18 47.0**	**-0.6**
	4.3nm,1.0s,baz=194,slow=7.0,SNR=18						
KSRS				LR	LR	12 40 26.4	
	comp=Z,22nm,20.7s,baz=182,slow=38						
KS01	**Wonju Array Si**	**48.99**	**16**	*e*P	**P**	**12 18 46.5**	**-1.1**
BJI	**Beijing**	**49.61**	**3**	*e*P	**P**	**12 18 51.8**	**-0.5**
BJI				pmax	pmax		
	comp=Z,12nm,1.1s						
HHC	**Hu-ho-hao-te**	**50.35**	**359**	*e*P	**P**	**12 19 00.8**	**+2.7**
HHC				pP	sP	12 19 12.3	-0.8
HHC				sP	pP	12 19 23.0	+14
HHC				S	**S**	**12 26 07.5**	**-1.3**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,51nm,5.0s						
MAJO	**Matsushiro**	**51.77**	**26**	*e*P	**P**	**12 19 05.9**	**-2.8**
MAT	**Matsushiro**	**51.77**	**26**	P	**P**	**12 19 06.5**	**-2.2**
MJAR	**Matsushiro Arr**	**51.77**	**26**	P	**P**	**12 19 05.9**	**-2.8**
	7.8nm,1.0s,baz=205,slow=7.9,SNR=16						
MJAR				LR	LR	12 41 45.6	
	comp=Z,15nm,19.2s,baz=225,slow=37						
USRK	**Ussuriysk Ar.**	**56.37**	**16**	P	**P**	**12 19 41.1**	**-1.0**
	3.5nm,0.8s,baz=167,slow=6.8						
NIL	**Nilore**	**57.37**	**321**	*e*P	**P**	**12 19 47.4**	**-2.0**
	8.3nm,0.6s						
ULN	**Ulaanbaatar**	**57.60**	**355**	*e*P	**P**	**12 19 50.1**	**-0.8**
SONA0	**Songino Array**	**57.62**	**355**	*e*P	**P**	**12 19 50.3**	**-0.8**
SONM	**Songino Array**	**57.62**	**355**	P	**P**	**12 19 50.3**	**-0.8**
	3.6nm,0.7s,baz=175,slow=8.8,SNR=24						
SONM				LR	LR	12 46 39.3	
	comp=Z,45nm,19.2s,baz=178,slow=38						
SONA1	**Songino Array**	**57.63**	**355**	*e*P	**P**	**12 19 50.0**	**-1.2**
WMQ	**Urumqi**	**58.07**	**339**	P	**P**	**12 19 56.0**	**+1.8**
KSH	**Kashi**	**59.87**	**327**	P	**P**	**12 20 08.0**	**+1.1**
KSH				pmax	pmax		
	comp=Z,250nm,4.6s						
ASAJ	**Asahikawa**	**59.94**	**24**	LR	LR	12 49 58.4	
	comp=Z,31nm,18.2s,baz=156,slow=40						
ASAJ	**Asahikawa**	**59.94**	**24**	*e*P	**P**	**12 20 06.0**	**-1.1**
	7.2nm,0.9s						
MK01	**Makanchi Array**	**62.59**	**337**	*e*P	**P**	**12 20 23.6**	**-1.4**
MK31	**Makanchi Array**	**62.61**	**337**	*e*P	**P**	**12 20 24.2**	**-1.0**
MK32	**Makanchi Array**	**62.61**	**337**	*e*P	**P**	**12 20 24.1**	**-1.1**
MKAR	**Makanchi Array**	**62.61**	**337**	P	**P**	**12 20 24.1**	**-1.1**
	2.3nm,0.6s,baz=148,slow=7.0,SNR=26						
MKAR	**Makanchi Array**	**62.61**	**337**	*e*P	**P**	**12 20 24.2**	**-1.0**
	16nm,0.7s						
KURBB	**Kurchatov Arra**	**67.18**	**337**	P	**P**	**12 20 52.4**	**-2.3**
	1.2nm,0.9s,baz=147,slow=5.2,SNR=8.5						
KURK	**Kurchatov**	**67.22**	**337**	*e*P	**P**	**12 20 52.4**	**-2.5**
KURK				*e*P	**P**	**12 20 53.9**	**-1.0**
ZALV	**Zalesovo Beam**	**67.80**	**342**	P	**P**	**12 20 57.1**	**-1.5**
	0.9nm,0.3s,baz=127,slow=6.7,SNR=5.5						
ZALV	**Zalesovo Beam**	**67.80**	**342**	*e*P	**P**	**12 20 56.6**	**-2.0**
ZAA1	**Zalesovo Array**	**67.80**	**342**	*e*P	**P**	**12 20 57.1**	**-1.5**
GEYT	**Alibeck**	**69.81**	**316**	P	**P**	**12 21 12.3**	**+0.8**
	216nm,0.8s,baz=138,slow=6.9,SNR=6.0						
VNDA	**Vanda**	**72.23**	**170**	P	**P**	**12 21 27.6**	**+2.1**
	0.6nm,1.0s,baz=328,slow=7.8,SNR=2.6						
VNDA				LR	LR	12 51 46.4	
	comp=Z,46nm,18.1s,baz=306,slow=35						
VNDA	**Vanda**	**72.23**	**170**	*e*P	**P**	**12 21 26.5**	**+1.0**
BVAR	**Borovoye Array**	**72.30**	**335**	P	**P**	**12 21 25.1**	**-1.1**
	0.7nm,0.6s,baz=159,slow=14,SNR=4.4						
ATD	**Arta Tunnel**	**72.89**	**285**	LR	LR	12 49 09.8	
	comp=Z,23nm,18.2s,baz=330,slow=32						
SYO	**Syowa Base**	**75.05**	**201**	*e*P	**P**	**12 21 40.1**	**-2.0**
AKTO	**Aktyubinsk**	**76.57**	**327**	LR	LR	12 58 58.5	
	comp=Z,14nm,20.6s,baz=121,slow=38						
TIXI	**Tiksi**	**81.90**	**5**	*e*P	**P**	**12 22 17.9**	**-1.8**
	6.6nm,0.9s						
BOSA	**Boshof**	**83.47**	**242**	LR	LR	12 51 48.4	
	comp=Z,65nm,21.7s,baz=70,slow=30						
ASF	**Jabal al Asfar**	**83.61**	**304**	P	**P**	**12 22 31.2**	**+1.5**
	1.0nm,0.3s,baz=45,slow=4.3,SNR=3.1						
BR101	**Keskin Array S**	**88.11**	**311**	*e*P	**P**	**12 22 50.7**	**-1.2**
BR131	**Keskin Array S**	**88.11**	**311**	*e*P	**P**	**12 22 51.9**	**+0.1**
BRTR	**Keskin Array B**	**88.11**	**311**	P	**P**	**12 22 50.7**	**-1.2**
	2.0nm,0.9s,baz=128,slow=8.0,SNR=7.7						
PPT	**Papeete**	**94.05**	**108**	LR	LR	13 08 16.8	
	comp=Z,17nm,18.7s,baz=163,slow=37						
V40A	**Witts Springs**	**144.99**	**38**	*e*PKPdf	PKPbc	12 29 37.9	0.0
T42A	**Van Buren**	**145.16**	**35**	*e*PKPbc	**PKPbc**	**12 29 38.3**	**0.0**
NCB	**Newcomb**	**145.32**	**9**	*e*PKPbc	**PKPdf**	**12 29 39.0**	**+0.2**
MIAR	**Mount Ida**	**145.33**	**41**	*e*PKPbc	**PKPdf**	**12 29 39.3**	**+0.2**
ACSO	**Alum Creek Sta**	**146.46**	**22**	*e*PKPdf	**PKPbc**	**12 29 42.0**	**-0.2**
WVT	**Waverly**	**147.61**	**33**	*e*PKPbc	**PKPbc**	**12 29 46.2**	**+0.6**

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*ISK **28** 12:16:20.8,37.19N×38.96E,h10km,ML2.2/4*
*ISCJB **28** 12:16:21.5±0.7,37.22N±0.04×39.02E±0.05,h0km,Error ellipse: s-maj=6.2km s-min=5.5km az=155.1*
*CSEM **28** 12:16:21.5±0.4,37.23N×39.02E,h1km,ML2.2,Error ellipse: s-maj=10.6km s-min=7.9km az=108.0,Suspected Mining explosion.*
*DDA **28** 12:16:22.2,37.17N×39.05E,h7km,Md2.6,Suspected Mining explosion.*
ISC 28 12:16:21.7±0.9,**37.22N**±0.03×**39.01E**±0.04,**h0**km,**n17,** σ0§**85**/27,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANL	**SANLIURFA_Merk**	**0.05**	**194**	*i* P	**Pg**	**12 16 23.9**	**+1.2**
SANL	**SANLIURFA_Merk**	**0.05**	**194**	P	**Pg**	**12 16 23.9**	**+1.2**
URFA	**Urfa**	**0.26**	**326**	PG	**Pg**	**12 16 26.8**	**+0.1**
URFA				SG	**Sg**	**12 16 30.6**	**+0.5**
URFA	**Urfa**	**0.26**	**326**	*i* Pg	**Pg**	**12 16 26.8**	**+0.1**
URFA				*e*Sg	**Sg**	**12 16 30.6**	**+0.5**
SURC	**SANLIURFA_SURC**	**0.47**	**223**	*i* P	**Pg**	**12 16 31.5**	**+0.9**
SURC	**SANLIURFA_SURC**	**0.47**	**223**	P	**Pg**	**12 16 31.5**	**+0.9**
MAZI	**Mazidag**	**1.17**	**78**	PN	**Pb**	**12 16 44.5**	**-0.4**
MAZI				SN	**Sn**	**12 17 01.3**	**-0.9**
MAZI	**Mazidag**	**1.17**	**78**	*e*Pn	**Pb**	**12 16 44.5**	**-0.4**
MAZI				*e*Sn	**Sn**	**12 17 01.3**	**-0.9**
SVRC	**Sivrice-ELAZID**	**1.18**	**12**	PN	**Pb**	**12 16 44.7**	**-0.3**
SVRC				SN	**Sn**	**12 17 01.9**	**-0.5**
SVRC	**Sivrice-ELAZID**	**1.18**	**12**	*e*Pn	**Pb**	**12 16 44.7**	**-0.3**
SVRC				*e*Sn	**Sn**	**12 17 01.9**	**-0.5**
MALT	**Malatya**	**1.18**	**337**	PN	**Pb**	**12 16 44.9**	**-0.1**
MALT				SN	**Sb**	**12 17 01.1**	**+0.2**
MALT	**Malatya**	**1.18**	**337**	*e*Pn	**Pb**	**12 16 44.9**	**-0.1**
MALT				*e*Sn	**Sb**	**12 17 01.1**	**+0.2**
ELZG	**Elazig**	**1.27**	**359**	*i* P	**Pn**	**12 16 47.5**	**+0.6**
ELZG				*i* S	**Sn**	**12 17 05.7**	**+0.9**
ELZG	**Elazig**	**1.27**	**359**	P	**Pn**	**12 16 47.5**	**+0.6**
ELZG				S	**Sn**	**12 17 05.7**	**+0.9**
MARD	**Mardin**	**1.42**	**86**	*i* P	**Pn**	**12 16 48.3**	**-0.5**
TAHT	**Tahtakopru-Hat**	**2.42**	**250**	PN	**Pn**	**12 17 00.6**	**-1.8**
TAHT	**Tahtakopru-Hat**	**2.42**	**250**	*e*Pn	**Pn**	**12 17 00.6**	**-1.8**

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*IDC **28** 12:20:01.9±1.5,9.50S×113.05E,h0km,mb3.9/8, mb1 4.1/10,mb1mx3.9/58,mbtmp4.0/10,ML4.0/2,MS3.0/4, Ms1 3.0/4,ms1mx2.6/54,Error ellipse: s-maj=51.9km s-min=14.2km az=50.0*
*ISCJB **28** 12:20:05.4±0.7,9.87S±0.08×112.92E±0.05,h35km, mb4.0/8,MS3.6/3,Error ellipse: s-maj=12.5km s-min=5.1km az=27.4*
*DJA **28** 12:20:07.2±0.6,10.5S±6.6×11.3E±.,h10km,M4.2/16, MLv4.2/16*
ISC 28 12:20:06.4±0.8,**9.77S**±0.08×**113.03E**±0.05,**h35**km,**n29,** σ3§**08**/33,**mb4.0/8,MS3.2**/3,**South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMJI	**Gumukmas**	**1.54**	**15**	P	**Pn**	**12 20 31.1**	**-0.3**
JAGI	**Jajag, Banyuwa**	**1.70**	**41**	P	**Pn**	**12 20 34.5**	**+0.9**
JAGI				S	**Sn**	**12 20 52.4**	**-1.8**
BLJI	**Banyuglugur**	**2.09**	**15**	P	**Pn**	**12 20 41.2**	**+2.3**
IGBI	**Denpasar**	**2.29**	**66**	P	**Pn**	**12 20 44.6**	**+2.9**
DNP	**Denpasar**	**2.41**	**63**	P	**Pn**	**12 20 47.5**	**+4.2**
PCJI	**Pacitan**	**2.41**	**310**	P	**Pn**	**12 20 43.5**	**+0.1**
PCJI				S	**Sn**	**12 21 11.8**	**+0.1**
SRBI	**Singaraja**	**2.73**	**52**	P	**Pn**	**12 20 50.6**	**+2.9**
WOJI	**Wonogiri, Jawa**	**2.84**	**313**	P	**Pn**	**12 20 50.0**	**+0.8**
WOJI				S	**Sn**	**12 21 22.5**	**+0.3**
NGJI	**Ngawi**	**2.85**	**327**	P	**Pn**	**12 20 54.0**	**+4.6**
GRJI	**Gresik**	**2.89**	**349**	P	**Pn**	**12 20 53.5**	**+3.5**
UGM	**Wanagama**	**3.09**	**307**	P	**Pn**	**12 20 53.5**	**+0.7**
SMRI	**Semarang**	**3.73**	**316**	P	**Pn**	**12 21 05.4**	**+3.9**
TWSI	**Taliwang, Sumb**	**3.94**	**75**	P	**Pn**	**12 21 07.8**	**+3.5**
KPJI	**Karang Pucung**	**4.73**	**301**	P	Pn	12 21 21.7	+6.5
PLAI	**Plampang**	**4.78**	**79**	P	**Pn**	**12 21 19.1**	**+3.2**
LEM	**Lembang**	**6.11**	**298**	Sn	**Sn**	**12 22 39.5**	**-3.6**
	3.7nm,0.3s,baz=119,slow=22,SNR=1.6						
LEM				LR	LR	12 24 20.5	
	comp=Z,89nm,18.8s,baz=64,slow=43						
BATI	**Baumata**	**10.48**	**93**	Pn	**Pn**	**12 22 35.5**	**+1.3**
	2.6nm,0.3s,baz=256,slow=4.2,SNR=2.5						
BATI				Sn	**Sn**	**12 24 26.1**	**-4.4**
	6.5nm,0.3s,baz=11,slow=10,SNR=1.7						
SOEI	**Soe**	**11.07**	**91**	P	**Pn**	**12 22 47.1**	**+4.6**
FITZ	**Fitzroy Crossi**	**14.76**	**125**	Pn	**Pn**	**12 23 32.8**	**+0.1**
	0.3nm,0.3s,baz=308,slow=14,SNR=10						
FITZ				Sn	**Sn**	**12 26 08.4**	**-6.8**
	0.3nm,0.3s,baz=165,slow=16,SNR=3.0						
FITZ				LR	LR	12 28 50.3	
	comp=Z,63nm,21.5s,baz=308,slow=35						
DAV	**Davao City (W)**	**20.89**	**37**	LR	LR	12 33 29.1	
	comp=Z,40nm,21.4s,baz=180,slow=39						
WRA	**Warramunga Arr**	**22.91**	**119**	P	**P**	**12 25 08.9**	**+1.5**
	4.1nm,1.0s,baz=290,slow=12,SNR=11						
ASAR	**Alice Springs**	**24.25**	**127**	P	**P**	**12 25 22.8**	**+2.4**
	2.1nm,0.7s,baz=302,slow=8.6,SNR=27						
ASAR				PcP	**PcP**	**12 29 02.0**	**+1.8**
	0.5nm,0.6s,baz=301,slow=1.2,SNR=4.5						
ASAR				S	**S**	**12 29 43.8**	**+6.8**
	1.2nm,0.7s,baz=309,slow=21,SNR=2.8						
ASAR				LR	LR	12 34 34.9	
	comp=Z,68nm,18.7s,baz=314,slow=36						
CMAR	**Chiang Mai Arr**	**31.31**	**334**	P	**P**	**12 26 22.5**	**-1.0**
	0.4nm,0.3s,baz=168,slow=8.8,SNR=2.6						
KSRS	**Korea Array**	**49.01**	**16**	P	**P**	**12 28 49.4**	**-0.3**
	0.7nm,0.7s,baz=211,slow=9.3,SNR=4.2						
MJAR	**Matsushiro Arr**	**51.80**	**26**	P	**P**	**12 29 08.5**	**-2.4**
	2.0nm,0.7s,baz=212,slow=9.2,SNR=8.0						
SONM	**Songino Array**	**57.66**	**355**	P	**P**

RMQ	Roma	31.39	248	P	P	12 28 52.1 +0.7
	baz=31,SNR=22					
CTA	Charters Tower	33.23	260	P	P	12 29 06.8 -0.4
	14nm,0.7s,baz=86,slow=10,SNR=24					
CTAO	Charters Tower	33.23	260	eP	P	12 29 06.7 -0.4
	17nm,0.8s					
PMG	Port Moresby	34.10	279	P	P	12 29 15.3 +0.8
	44nm,0.8s,baz=78,slow=5.5,SNR=11					
PMG	Port Moresby	34.10	279	eP	P	12 29 15.3 +0.8
	34nm,0.7s					
CMSA	Cobar Meteorol	35.11	240	P	P	12 29 23.0 +0.3
	baz=35,SNR=30					
MTSU	Mount Surprise	35.16	263	P	P	12 29 22.9 -0.5
	baz=35,SNR=12					
QLP	Quilpie	35.41	249	P	P	12 29 25.2 -0.2
	baz=35,SNR=20					
COEN	Coen	36.81	270	P	P	12 29 37.3 +0.2
	baz=37,SNR=4.5					
COEN	Coen	36.81	270	eP	P	12 29 37.4 +0.4
	33nm,0.7s					
TOO	Toolangi	37.22	230	P	P	12 29 41.0 +0.9
	baz=37,SNR=12					
STKA	Stephens Creek	38.58	241	P	P	12 29 51.8 +0.5
	9.7nm,0.4s,baz=91,slow=10,SNR=22					
STKA	Stephens Creek	38.58	241	P	P	12 29 52.1 +0.8
	baz=39,SNR=12					
STKA	Stephens Creek	38.58	241	eP	P	12 29 52.0 +0.8
	5.8nm,1.0s					
QIS	Mount Isa	39.45	259	P	P	12 29 57.6 -0.8
	baz=39,SNR=6.0					
ARPS	Mount Arapiles	39.67	233	P	P	12 30 00.5 +0.5
	baz=40,SNR=6.2					
HTT	Hallett	41.11	239	P	P	12 30 12.2 +0.6
	baz=41,SNR=10					
JAY	Jayapura	42.51	286	P	P	12 30 23.3 +0.5
	21nm,0.5s,baz=134,slow=5.0,SNR=35					
BBOO	Buckleboo	43.36	241	P	P	12 30 29.4 +0.2
	baz=43,SNR=22					
WB2	Warramunga Arr	44.41	259	eP	P	12 30 36.5 -1.0
	15nm,0.7s					
WRAB	Tennant Creek	44.41	259	eP	P	12 30 36.5 -1.1
	13nm,0.8s					
WR1	Warramunga Arr	44.42	259	eP	P	12 30 36.5 -1.1
	18nm,0.6s					
WR1				ePcP	PcP	12 32 09.4 -0.1
WR1				eS	S	12 36 27.9 -5.1
WRA	Warramunga Arr	44.42	259	P	P	12 30 36.5 -1.1
	6.5nm,0.3s,baz=95,slow=8.3,SNR=64					
WRA				PcP	PcP	12 32 09.4 -0.1
	1.5nm,0.6s,baz=91,slow=3.7,SNR=4.2					
WRA				ScP	ScP	12 35 11.2 +1.6
	1.5nm,0.7s,baz=89,slow=4.4,SNR=5.6					
WRA				S	S	12 36 27.9 -5.1
	0.4nm,0.8s,baz=104,slow=14,SNR=3.7					
AS01	Alice Springs	44.58	254	eP	P	12 30 38.1 -0.7
AS31	Alice Springs	44.63	254	eP	P	12 30 39.0 -0.2
	31nm,0.5s					
ASAR	Alice Springs	44.63	254	P	P	12 30 38.9 -0.3
	70nm,0.4s,baz=89,slow=7.9,SNR=915					
ASAR				PcP	PcP	12 32 10.4 +0.3
	2.3nm,0.5s,baz=99,slow=4.5,SNR=4.8					
ASAR				ScP	ScP	12 35 12.5 +2.0
	1.7nm,0.8s,baz=97,slow=4.8,SNR=5.6					
ASAR				S	S	12 36 32.3 -3.6
	2.5nm,0.9s,baz=90,slow=15,SNR=11					
KDU	Kakadu	47.27	269	P	P	12 30 58.8 -0.5
	baz=47,SNR=61					
GUMO	Guam	47.38	308	P	P	12 31 00.4 +0.4
	38nm,0.7s,baz=172,slow=23,SNR=4.3					
MTN	Manton Dam	48.52	268	P	P	12 31 07.8 -0.8
	baz=48,SNR=16					
MTN	Manton Dam	48.52	268	eP	P	12 31 08.1 -0.5
	19nm,0.7s					
WRKA	Warakurna	49.70	252	P	P	12 31 17.3 0.0
	baz=50,SNR=71					
FORT	Forrest	49.93	244	P	P	12 31 18.4 -0.4
	baz=50,SNR=16					
KNRA	Kununurra	50.24	264	P	P	12 31 20.8 -0.5
	baz=50,SNR=14					
SIJI	Sorong	51.85	283	P	P	12 31 33.2 +0.2
	71nm,0.6s,baz=104,slow=5.0,SNR=32					
FITZ	Fitzroy Crossi	52.81	260	P	P	12 31 39.9 +0.1
	8.5nm,0.3s,baz=70,slow=6.1,SNR=41					
SOEI	Soe	55.78	270	eP	P	12 32 01.8 +0.9
	50nm,0.7s					
BATI	Baumata	56.24	269	P	P	12 32 04.5 +0.6
	18nm,0.4s,baz=169,slow=1.1,SNR=4.8					
MEEK	Meekatharra	58.31	249	P	P	12 32 17.4 -0.5
	baz=58,SNR=3.6					
KLBR	Kellerberrin	58.76	243	P	P	12 32 20.3 -0.5
	baz=59,SNR=11					
BLDU	Ballidu	59.70	244	P	P	12 32 26.7 -0.4
	baz=60,SNR=7.3					
MORW	Morawa	60.39	246	P	P	12 32 31.4 -0.3
	baz=60,SNR=5.7					
SBA	Scott Base	60.83	183	eP	P	12 32 36.0 +2.3
	5.1nm,0.8s					
VNDA	Vanda	60.85	185	P	P	12 32 36.0 +2.1
	1.3nm,0.7s,baz=358,slow=6.7,SNR=9.0					
VNDA	Vanda	60.85	185	eP	P	12 32 35.9 +2.0
	1.9nm,0.8s					
GIRL	Giralia	62.74	253	P	P	12 32 48.1 +1.0
	baz=63,SNR=6.3					
MJAR	Matsushiro Arr	67.39	323	P	P	12 33 15.6 -0.4
	3.4nm,0.5s,baz=161,slow=5.9,SNR=15					
MAJO	Matsushiro	67.39	323	eP	P	12 33 15.6 -0.4
MAT	Matsushiro	67.39	323	P	P	12 33 15.9 -0.1
ASAJ	Asahikawa	70.76	332	P	P	12 33 37.4 +1.4
	5.6nm,0.6s,baz=275,slow=3.0,SNR=12					
QSPA	South Pole Qui	72.58	180	eP	P	12 33 47.8 +1.3
	9.6nm,0.8s					
PETK	Petropavlovsk-	73.19	345	P	P	12 33 50.0 0.0
	2.6nm,0.6s,baz=125,slow=7.0					
PEA1	Petropavlovsk-	73.19	345	eP	P	12 33 50.0 0.0
KSRS	Korea Array	74.18	318	P	P	12 33 56.9 +1.0
	1.3nm,0.6s,baz=127,slow=6.5,SNR=8.4					
KSAR	Wonju Array Be	74.20	318	P	P	12 33 56.9 +0.8
KS01	Wonju Array Si	74.22	318	eP	P	12 33 56.4 +0.2
KDAK	Kodiak Island	78.05	14	P	P	12 34 17.2 +0.4
	1.4nm,0.7s,baz=211,slow=1.2,SNR=5.1					
NV01	Mina Array Sit	79.32	44	eP	P	12 34 22.4 -1.9
NVAR	Mina Array Bea	79.32	44	P	P	12 34 22.4 -1.9
	0.7nm,0.8s,baz=230,slow=8.4,SNR=5.8					
IPM	Ipoh	82.08	277	eP	P	12 34 39.1 +0.2
	15nm,0.7s					
CAST	Castle Rocks	83.27	12	eP	P	12 34 42.8 -0.9
	4.4nm,0.7s					
PSI	Prapat	83.55	275	P	P	12 34 46.3 -0.2
	4.4nm,0.3s,baz=0.7,slow=4.5,SNR=4.7					
PSI	Prapat	83.55	275	eP	P	12 34 45.8 -0.7
	9.0nm,0.9s					
TRF	Thorofare Moun	83.65	12	eP	P	12 34 45.5 -0.3
	5.6nm,0.7s					
ENH	Enshi	83.79	304	eP	P	12 34 47.9 +0.8
	12nm,0.9s					
GSI	Gunungsitoli	84.39	273	eP	P	12 34 51.1 +0.7
	18nm,0.6s					
IL1	Eielson Array	85.53	13	eP	P	12 34 54.3 -0.5
ILAR	Eielson Array	85.53	13	P	P	12 34 54.2 -0.5
	0.7nm,0.4s,baz=222,slow=5.2,SNR=16					
ILB	Eielson Array	85.53	13	eP	P	12 34 54.2 -0.5
TXAR	Lajitas Array	86.01	58	P	P	12 35 00.8 +2.8
	0.3nm,0.8s,baz=258,slow=8.2,SNR=2.9					
PDAR	Pinedale Array	87.24	44	P	P	12 35 03.1 -0.5
	0.4nm,0.5s,baz=208,slow=3.1,SNR=4.2					
CM01	Chiang Mai Arr	88.44	290	eP	P	12 35 10.6 +1.1
CMAR	Chiang Mai Arr	88.46	290	P	P	12 35 11.1 +1.4
	1.6nm,0.8s,baz=115,slow=3.5,SNR=7.8					
VNA3	Neumayer Olymp	91.19	176	P	P	12 35 22.2 +1.0
INK	Inuvik	91.55	15	P	P	12 35 22.9 +0.1
	1.2nm,0.7s,baz=233,slow=10,SNR=2.6					
VNA2	Neumayer--Watz	91.62	177	P	P	12 35 24.5 +1.2
	baz=191,slow=3.7					
VNA1	Neumayer--Stat	91.85	177	P	P	12 35 25.7 +1.4
SONA0	Songino Array	93.03	319	eP	P	12 35 29.9 -0.3
SONM	Songino Array	93.03	319	P	P	12 35 29.9 -0.3
	0.5nm,0.5s,baz=106,slow=6.0,SNR=3.5					
MK32	Makanchi Array	108.62	314	ePKiKP	PKiKP	12 40 41.0 -0.7
MKAR	Makanchi Array	108.62	314	PKiKP	PKiKP	12 40 41.0 -0.7
	0.4nm,0.5s,baz=216,slow=0.9,SNR=4.6					
KURK	Kurchatov	111.31	318	ePKiKP	PKiKP	12 40 44.8 -1.8
KURBB	Kurchatov Arra	111.36	318	PKiKP	PKiKP	12 40 44.8 -2.0
	0.6nm,0.7s,baz=84,slow=1.3,SNR=5.2					
BVAR	Borovoye Array	116.33	321	PKP	PKPdf	12 40 55.9 -0.3
	1.0nm,0.5s,baz=83,slow=3.0,SNR=5.0					
ARA0	ARCESS Array S	125.84	350	ePKPdf	PKPdf	12 41 14.1 +0.1
ARCES	ARCESS Array B	125.84	350	PKP	PKPdf	12 41 14.1 +0.1
	3.5nm,0.9s,baz=29,slow=2.1,SNR=4.6					
FIA0	FINESS Array S	132.69	344	ePKPdf	PKPdf	12 41 27.6 +0.4
FINES	FINESS Array B	132.69	344	PKP	PKPdf	12 41 27.6 +0.4
	1.5nm,0.8s,baz=46,slow=4.0,SNR=3.2					
DSB	Dublin	143.81	8	ePKPbc	PKPbc	12 41 46.1 -0.7
BUR08	Bucovina Ar. S	144.08	332	ePKPbc	PKPdf	12 41 48.7 +0.2
BUR04	Bucovina Ar. S	144.09	332	ePKPbc	PKPdf	12 41 48.6 +0.1
BURAR	Bucovina Array	144.10	332 ↑	iP	PKPdf	12 41 49.0 +0.5
BIZ	Bicaz	144.19	331 ↑	iP	PKPdf	12 41 49.5 +0.9
TESR	Tescani	144.24	330 ↓	iP	PKPbc	12 41 48.2 -0.2
BR101	Keskin Array S	144.27	315	ePKPbc	PKPab	12 41 49.4 +0.1
BR131	Keskin Array S	144.27	315	ePKPbc	PKPab	12 41 49.5 +0.2
BRTR	Keskin Array B	144.27	315	PKP	PKPab	12 41 49.4 +0.2
	1.7nm,0.4s,baz=99,slow=2.6,SNR=12					
CFR	Carcaliu	144.41	327 ↑	iP	PKPab	12 41 50.4 +1.0
ASF	Jabal al Asfar	144.70	301	PKP	PKPbc	12 41 50.7 +0.3
	2.8nm,0.6s,baz=72,slow=2.6,SNR=6.1					
TIRR	Tirgusor	144.75	326 ↑	iP	PKPab	12 41 50.8 +0.1
TLB	Topalu	144.86	326 ↓	iP	PKPab	12 41 51.5 +0.4
CLL	Collm	144.98	347	i PKPbc	PKPbc	12 41 50.9 +0.4
	comp=Z,11nm,0.7s					
CLL	Collm	144.98	347	ePKPdf	PKPab	12 41 51.0 -0.4
LANS	Liptovska Anna	145.13	339	ePKP	PKPab	12 41 52.7 +0.6
BRG	Bergigiesshubel	145.18	346	eP	PKPbc	12 41 51.5 +0.5
	comp=Z,5.5nm,0.6s					
MORC	Moravsky Berou	145.21	341 ↑	iP	PKPab	12 41 52.2 -0.2
MORC	Moravsky Berou	145.21	341	ePKP	PKPab	12 41 52.0 -0.4
DOPR	Dopca	145.24	330 ↑	iP	PKPab	12 41 53.0 +0.4
MLR	Muntele Rosu	145.31	329	PKPbc	PKPdf	12 41 51.2 +0.5
	comp=Z,0.7nm,0.6s,baz=124,slow=7.3,SNR=4.4					
CJR	Cluj-Napoca	145.50	333 ↑	iP	PKPbc	12 41 52.8 +0.5
MMAI	Mount Meron Ar	145.66	303	PKPbc	PKPdf	12 41 52.0 +0.3
	comp=Z,6.6nm,0.5s,baz=53,slow=5.5,SNR=7.1					
VOIR		145.79	330 ↓	iP	PKPbc	12 41 53.8 +0.6
DRGR		145.82	333 ↑	iP	PKPbc	12 41 54.0 +0.8
VRAC	Vranov	145.91	342 ↑	iP	PKPab	12 41 53.3 0.0
ARR	Arges	146.04	330 ↓	iP	PKPab	12 41 55.6 -0.2
KRUC	Moravsky	146.19	342	ePKP	PKPbc	12 41 54.8 +0.7
KHC	Kasperske Hory	146.88	345	ePKPbc	PKPbc	12 41 55.4 -0.6
GEC2	GERESS Array S	147.12	345	ePKPbc	PKPbc	12 41 56.7 0.0
GERES	GERESS Array B	147.12	345	PKPbc	PKPbc	12 41 57.2 +0.5
	comp=Z,3.3nm,0.6s,baz=29,slow=3.0,SNR=21					
GEA0	GERESS Array S	147.13	345	ePKPbc	PKPbc	12 41 57.1 +0.4
CONA	Conrad Observa	147.36	342	i PKiKP	PKPbc	12 41 58.0 +0.7
	comp=Z,5.9nm,0.6s					
HERR	Herculane	147.44	332 ↓	iP	PKPbc	12 41 58.0 +0.5
MDVR	Moldovita	147.83	332 ↑	iP	PKPab	12 42 02.9 -0.2
MOA	Molln	147.89	343	i PKiKP	PKPbc	12 41 59.2 +0.6
	comp=Z,1.3nm,0.5s					
ARSA	Arzberg	148.07	342	i PKPdf	PKPdf	12 41 55.2 0.0
	comp=Z,1.5nm,0.4s					
SOKA	Soboth	148.73	342	i PKPbc	PKPbc	12 42 00.2 -0.6
	comp=Z,1.7nm,0.6s					
VTS	Vitosha	148.77	328 ↓	iP	PKPbc	12 42 01.3 +0.1
KBA	Koelnbreinsper	148.84	344	i PKPbc	PKPbc	12 42 00.2 -1.0
	comp=Z,4.5nm,0.5s					
WATA	Walderalm	149.04	346	i PKiKP	PKiKP	12 42 02.1 -0.4
	comp=Z,3.3nm,0.4s					
RETA	Reute	149.07	347	i PKPbc	PKPbc	12 42 01.7 0.0
	comp=Z,2.4nm,0.4s					
WTTA	Wattenberg	149.09	346	i PKiKP	PKPbc	12 42 02.1 +0.3
	comp=Z,6.0nm,0.5s					
DIVS	Divibare	149.12	333	ePKPbc	PKPbc	12 42 02.3 +0.4
MOTA	Moosalm	149.13	347	i PKiKP	PKPbc	12 42 02.1 +0.3
	comp=Z,2.8nm,0.4s					
MYKA	Terra Mystica	149.18	343	i PKPbc	PKPbc	12 42 01.6 -0.3
	comp=Z,5.5nm,0.5s					
ABTA	Abfaltersbach	149.37	345	i PKPbc	PKPbc	12 42 00.9 -1.5
	comp=Z,7.1nm,0.6s					
DAVA	Damuels	149.44	348	i PKPbc	PKPbc	12 42 02.2 -0.4
	comp=Z,3.0nm,0.6s					
FETA	Feichten	149.52	347	i PKiKP	PKiKP	12 42 03.2 -0.4
	comp=Z,3.0nm,0.5s					
DAVOX	Davos/Dischmat	149.92	348	PKPbc	PKPbc	12 42 04.6 +0.8
	comp=Z,9.7nm,0.4s,baz=236,slow=2.5,SNR=16					
FUORN	Ofenpass-Fuorn	150.00	348	ePKPbc	PKPbc	12 42 05.2 +1.1
TUE	Stuetta	150.32	349	ePKPbc	PKPbc	12 42 04.9 +0.1
FNA	Florina	151.03	327	ePKPbc	PKPbc	12 42 06.5 +0.1

TRN 28 12:26:12.4, 14°.02N×60°.56W, h16km, MD3.9, 2C, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLB	Belfond	0.50	248	eP	Pn	12 26 26.2	+1.2
SLB				eS	Sn	12 26 33.4	0.0
MVM	Montagne Vaucl	0.62	329	eP	Pn	12 26 26.1	-0.5
LPMF	Morne Lapointe	0.67	325	eP	Pn	12 26 27.1	-0.3
BIM	Bigot	0.70	315 ↑	eP	Pn	12 26 27.7	0.0
BIM				eS	Sn	12 26 38.5	+0.3
TRMF	Trois Ilets	0.70	317 ↑	eP	Pn	12 26 27.7	0.0
ZAM	Aeronautique	0.71	321	eP	Pn	12 26 27.7	-0.1
FDF	Fort de France	0.91	321	eP	Pn	12 26 30.9	+0.2
FDF				eS	Sn	12 26 46.4	+3.0
SSV	Crater Summit	0.92	222	eP	Pn	12 26 32.5	+1.7
SVCV	St. Vincent, C	0.93	217	eP	Pn	12 26 31.6	+0.7
SVCV				eS	Sn	12 26 45.9	+1.8
SVV	Soufriere Volc	0.94	222	eP	Pn	12 26 33.0	+1.9
SVV				eS	Sn	12 26 47.1	+2.9
PML	Morne Lenard	0.96	322	eP	Pn	12 26 32.4	+1.0
GBMF	Grand Be	0.97	323	eP	Pn	12 26 31.8	+0.3
BAMF	Morne Balai	0.97	324	eP	Pn	12 26 31.8	+0.2
CXM	Morne La Croix	0.98	323	eP	Pn	12 26 31.7	0.0
CXM				eS	Sn	12 26 46.7	+1.3
SVB	Belmont	1.00	222	eP	Pn	12 26 32.7	+0.8
SVB				eS	Sn	12 26 47.0	+1.3
PCM	Pelee Case Pet	1.01	322	eP	Pb	12 26 31.3	-0.2
PCM	Pelee Case Pet	1.01	322	eP	Pg	12 26 32.5	+0.4
FCV	Fort Charlotte	1.08	218	eP	Pg	12 26 34.5	+1.1
FCV				eS	Sn	12 26 49.4	+1.6
BBGH	Gun Hill	1.31	132	eP	Pg	12 26 37.5	-0.3
BBGH				eS	Sg	12 26 55.2	+0.4
BBSP	Saint Philip	1.41	130	eP	Pb	12 26 38.8	+0.4
DLPL	La Plaine	1.46	333	eP	Pg	12 26 40.2	-0.4
DLPL				eS	Sg	12 26 59.6	-0.1
BBL	Barber's Block	1.73	330	eP	Pb	12 26 43.4	-0.5
BBL				eS	Sg	12 27 07.2	-1.2
MDPO	Dominica; Chan	1.77	331	eP	Pb	12 26 44.5	0.0
MDPO				eS	Sb	12 27 06.6	+0.2
MDVC	Dominica, Viel	1.78	333	eP	Pb	12 26 44.3	-0.4
MDVC				eS	Sb	12 27 07.6	+0.8
MDPV	Dominica, Penn	1.80	333	eP	Pb	12 26 45.0	-0.1
MDPV				eS	Sb	12 27 07.5	+0.1
GRSS	Sisters	1.99	211	eP	Pb	12 26 47.6	-0.8
GRSS				eS	Sb	12 27 12.0	-1.0
MGG	Marie-Galante	2.02	339	eP	Pb	12 26 47.4	-1.5
GRHS	Sauteurs	2.07	211	eP	Pb	12 26 48.2	-1.5
GRHS				eS	Sb	12 27 13.9	-1.3
TBG	Guadaloupe-3	2.10	330	eP	Pb	12 26 49.5	-0.7
TBG				eS	Sb	12 27 15.3	-0.7
GRGR	Grenville	2.16	210	eP	Pb	12 26 50.0	-1.2
GRGR				eS	Sn	12 27 15.0	+0.8
DEG	La Desirade	2.33	348	eP	Pn	12 26 51.2	+1.0
TOSP	Speyside	2.71	179	eP	Pn	12 26 56.5	+1.2
TOSP				eS	Sn	12 27 29.3	+1.6
MLYT	Lee's Yard	3.11	330	eP	Pn	12 27 03.6	+2.7
MLYT				eS	Sn	12 27 38.9	+1.2
BPA	Boggy Peak	3.26	338	eP	Pn	12 27 04.5	+1.6
BPA				eS	Sn	12 27 42.1	+0.7
NEV	Hard Times	3.65	328	eP	Pn	12 27 10.8	+2.5
NEV				eS	Sn	12 27 52.2	+1.0
ANWB	Willy Bob	3.81	342	eP	Pn	12 27 12.7	+2.2
ANWB				eS	Sn	12 27 55.6	+0.6

IDC 28 12:31:32.1±2.2, 19°.22S×169°.83W, h0km, mb3.6/2, mb1 3.9/3, mb1mx3.5/50, mbtmp3.8/3, ML3.3/1, Error ellipse: s-maj=66.2km s-min=39.7km az=124.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	5.60	340	Pn	Pn	12 32 56.6	-0.1
	0.8nm,0.3s,baz=286,slow=18,SNR=3.2						
ASAR	Alice Springs	52.28	255	P	P	12 40 44.2	-1.5
	0.5nm,0.8s,baz=91,slow=8.5,SNR=6.7						
WRA	Warramunga Arr	52.39	259	P	P	12 40 47.5	+0.9
	0.3nm,0.4s,baz=100,slow=8.3,SNR=11						
MKAR	Makanchi Array	115.92	313	PKP	PKPdf	12 50 18.6	+1.7
	0.2nm,0.3s,baz=78,slow=0.6,SNR=12						
GERES	GERESS Array B	150.31	355	PKPbc	PKPbc	12 51 23.1	-2.3
	0.6nm,0.7s,baz=31,slow=2.3,SNR=3.7						

MEX 28 12:59:12.9±0.5, 13°.88N×91°.91W, h5km, MD3.6, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		2.21	325	eP	Pn	12 59 47.6	-2.6
PCIG				eS	Sn	13 00 13.2	-4.8
CCIG	Comitan	2.40	355	i S	Sn	13 00 22.7	-0.3

DDA ***28*** *13:01:29.6, 41°.11N×43°.88E, h7km, Ml2.7*
ISCJB ***28*** *13:01:30.6±0.8, 41°.08N±0°.03×43°.9E±0°.1, h11km±15km, Error ellipse: s-maj=14.8km s-min=5.5km az=6.6*
CSEM ***28*** *13:01:30.0±0.2, 41°.07N×43°.89E, h8km, ML2.2, Error ellipse: s-maj=4.2km s-min=2.9km az=132.0*
TIF ***28*** *13:01:30.3, 41°.12N×43°.93E, h13km±1km*
ISC 28 13:01:30.4±1.0, 41°.10N±0°.03×43°.88E±0°.04, h12km±9km, n15, σ0°72/25, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BGD	Bogdanovka	0.27	309	P	Pg	13 01 36.2	+0.1
BGD				S	Sg	13 01 40.4	+0.5
BGD	Bogdanovka	0.27	309	P	Pg	13 01 36.2	+0.1
BGD				S	Sg	13 01 40.4	+0.5
AKH	Akhalkalaki	0.43	317	P	Pb	13 01 39.2	-0.8
AKH				S	Sb	13 01 45.5	-0.9
AKH	Akhalkalaki	0.43	317	P	Pb	13 01 39.2	-0.8
AKH				S	Sb	13 01 45.5	-0.9
EAK	Akyaka	0.46	207	i P	Pg	13 01 38.8	-0.6
EAK				i S	Sg	13 01 45.9	+0.4
EAK	Akyaka	0.46	207	P	Pg	13 01 38.8	-0.6
EAK				S	Sg	13 01 45.9	+0.4
DIGO	Kars	0.78	209	i P	Pg	13 01 45.0	-0.5
DIGO	Kars	0.78	209	P	Pg	13 01 45.0	-0.5
TBLG	Delisi	0.91	45	P	Pb	13 01 47.5	-0.6
TBLG				S	Sb	13 02 00.3	+0.2
TBLG	Delisi	0.91	45	P	Pb	13 01 47.5	-0.6
TBLG				S	Sb	13 02 00.3	+0.2
DUS	Dusheti	1.17	32	P	Pn	13 01 53.5	+0.8
DUS	Dusheti	1.17	32	P	Pn	13 01 53.5	+0.8
DGRG	David-gareji	1.18	72	P	Pg	13 01 52.1	-1.0
DGRG				S	Sn	13 02 10.1	+1.2
DGRG	David-gareji	1.18	72	P	Pg	13 01 52.1	-1.0
DGRG				S	Sn	13 02 09.1	+0.3
IGDI	IGDIR	1.24	173	i P	Pb	13 01 53.8	+0.1

SKO ***28*** *13:11:15.2, 38°.16N×24°.07E, h0km*
ATH ***28*** *13:11:30.0, 39°.01N×23°.17E, h25km, ML4.3/40, Error ellipse: s-maj=0.9km s-min=0.6km az=130.0*
MOS ***28*** *13:11:30.6±1.1, 39°.07N×23°.29E, h17km, mb4.4/26, Error ellipse: s-maj=5.9km s-min=3.0km az=92.6*
THE ***28*** *13:11:30.8, 39°.00N×23°.14E, h14km, ML4.3/26, Error ellipse: s-maj=0.4km s-min=0.3km az=324.0*
ISCJB ***28*** *13:11:30.8±0.2, 39°.041N±0°.010×23°.21E±0°.01, h22km±2km, mb4.2/42, MS3.5/22, Error ellipse: s-maj=1.8km s-min=1.6km az=156.3*
CSEM ***28*** *13:11:30.7±0.1, 39°.01N×23°.21E, h10km, mb4.1/15, Error ellipse: s-maj=2.0km s-min=1.7km az=84.0*
PDG ***28*** *13:11:30.0±0.5, 39°.03N×23°.23E, h14km, ML4.2/11, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
IDC ***28*** *13:11:33.1±1.7, 38°.96N×23°.16E, h35km±15km, mb3.8/17, mb1 4.0/29, mb1mx3.9/66, mbtmp4.0/29, ML3.8/11, MS3.4/28, Ms1 3.4/28, ms1mx3.3/64, Error ellipse: s-maj=11.4km s-min=10.0km az=146.0*
ISC 28 13:11:31.5±0.7, 39°.00N±0°.01×23°.15E±0°.01, h10km±5km, n591, σ1°55/701, mb4.3/42, MS3.6/22, 46C-37D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMIA	Simia	0.13	159	P	Pg	13 11 34.3	-0.2
SMIA				AML	AML	13 11 39.7	
SMIA				AML	AML	13 11 40.3	
SMIA	Simia	0.13	159	P	Pg	13 11 34.5	0.0
SMIA				S	Sg	13 11 37.1	+0.4
SMIA	Simia	0.13	159	P	Pg	13 11 34.5	0.0
SMIA				S	Sg	13 11 37.1	+0.4
SKIA	Skiathos	0.30	56	P	Pg	13 11 37.6	+0.1
SKIA				S	Sg	13 11 41.8	+0.2
SKIA				AML	AML	13 11 42.5	
SKIA				AML	AML	13 11 42.5	
SKIA	Skiathos	0.30	56	P	Pg	13 11 37.1	-0.4
SKIA				S	Sg	13 11 42.0	+0.5
SKIA	Skiathos	0.30	56	P	Pg	13 11 37.1	-0.4
SKIA				S	Sg	13 11 41.7	+0.2
NEO	Neokhori	0.31	10	P	Pg	13 11 37.7	-0.1
NEO				S	Sg	13 11 41.5	-0.5
NEO				AML	AML	13 11 44.2	
NEO				AML	AML	13 11 45.8	
NEO	Neokhori	0.31	10	P	Pg	13 11 37.3	-0

LRSO			S	Sg	13 12 00.7	+0.4
LRSO	**Larissa Observ**	**0.89 319**	P	Pg	13 11 48.0	-0.7
LRSO			S	Sg	13 12 00.7	+0.4
LTK	**Loutraki**	**0.98 188**	P	Pb	13 11 48.5	-2.1
LTK			S	Sb	13 12 03.7	+0.1
LTK			AML	AML	13 12 11.0	
	comp=E,41446µm,0.7s					
LTK			AML	AML	13 12 13.5	
	comp=N,27882µm,0.6s					
LTK	**Loutraki**	**0.98 188**	P	Pb	13 11 48.9	-1.7
LTK			S	Sg	13 12 03.9	+0.7
LTK	**Loutraki**	**0.98 188**	P	Pb	13 11 48.9	-1.7
LTK			S	Sb	13 12 03.5	-0.1
PAIG	**Paliouri**	**1.01 24**	P	Pb	13 11 50.1	-1.0
PAIG			AML	AML	13 12 05.7	
	comp=E,24618µm,0.7s					
PAIG			AML	AML	13 12 06.0	
	comp=N,26649µm,0.6s					
PAIG	**Paliouri**	**1.01 24**	P	Pb	13 11 49.4	-1.7
PAIG			S	Sb	13 12 04.2	-0.3
PAIG	**Paliouri**	**1.01 24**	P	Pb	13 11 49.6	-1.5
PAIG	**Paliouri**	**1.01 24**	P	Pb	13 11 49.6	-1.5
PAIG			S	Sb	13 12 04.2	-0.3
THAL	**Thalero**	**1.03 202**	P	Pb	13 11 49.4	-2.0
THAL			AML	AML	13 12 10.8	
	comp=N,44087µm,0.9s					
THAL			AML	AML	13 12 13.1	
	comp=E,33309µm,0.6s					
THAL	**Thalero**	**1.03 202**	P	Pb	13 11 49.8	-1.6
THAL			S	Sb	13 12 04.5	-0.5
THAL	**Thalero**	**1.03 202**	P	Pb	13 11 49.8	-1.6
THAL			S	Sb	13 12 04.5	-0.5
SERG	**Sergoula**	**1.04 236**	P	Pb	13 11 49.0	-2.5
SERG			S	Sb	13 12 03.7	-1.5
SERG			AML	AML	13 12 08.1	
	comp=N,23995µm,0.3s					
SERG			AML	AML	13 12 12.3	
	comp=E,22878µm,1.0s					
SERG	**Sergoula**	**1.04 236**	P	Pb	13 11 49.9	-1.6
SERG			S	Sb	13 12 04.2	-0.9
SERG	**Sergoula**	**1.04 236**	P	Pb	13 11 49.9	-1.6
SERG			S	Sb	13 12 04.3	-0.9
ANX	**Ano Chora**	**1.04 248**	P	Pb	13 11 50.3	-1.4
ANX			AML	AML	13 12 13.6	
	comp=N,31961µm,1.1s					
ANX			AML	AML	13 12 17.0	
	comp=E,17681µm,0.6s					
ANX	**Ano Chora**	**1.04 248**	P	Pb	13 11 50.1	-1.5
ANX			S	Sb	13 12 05.2	-0.2
ANX	**Ano Chora**	**1.04 248**	P	Pb	13 11 50.3	-1.4
ANX			S	Sb	13 12 05.2	-0.2
THL	**Klokotos Trika**	**1.05 303**	P	Pb	13 11 49.8	-1.9
THL			S	Sb	13 12 05.6	+0.2
THL			AML	AML	13 12 09.7	
	comp=N,19242µm,1.0s					
THL			AML	AML	13 12 10.8	
	comp=E,10953µm,1.1s					
THL	**Klokotos Trika**	**1.05 303**	P	Pb	13 11 49.6	-2.1
THL			S	Sb	13 12 05.1	-0.3
THL	**Klokotos Trika**	**1.05 303**	P	Pb	13 11 50.0	-1.7
THL			S	Sb	13 12 05.3	-0.1
EVR	**Evrytania**	**1.05 266**	P	Pb	13 11 48.2	-3.6
EVR			S	Sn	13 12 07.6	+0.5
EVR	**Evrytania**	**1.05 266**	P	Pb	13 11 50.1	-1.7
EVR	**Evrytania**	**1.05 266**	P	Pb	13 11 50.1	-1.7
EVR			S	Sg	13 12 06.4	+1.1
TRIZ	**Trizonia**	**1.05 233**	P	Pb	13 11 49.2	-2.6
TRIZ			S	Sb	13 12 04.8	-0.8
TRIZ	**Trizonia**	**1.05 233**	P	Pb	13 11 49.8	-2.0
TRIZ			S	Sb	13 12 04.9	-0.7
TRIZ	**Trizonia**	**1.05 233**	P	Pb	13 11 49.9	-1.9
TRIZ			S	Sb	13 12 05.2	-0.4
SKY	**Skiros Island**	**1.10 96**	P	Pb	13 11 51.7	-0.9
SKY			S	Sn	13 12 07.3	-0.8
SKY			AML	AML	13 12 08.6	
	comp=E,37751µm,0.2s					
SKY			AML	AML	13 12 10.0	
	comp=N,47694µm,0.3s					
SKY	**Skiros Island**	**1.10 96**	P	Pb	13 11 51.0	-1.5
SKY			S	Sg	13 12 06.8	-0.1
SKY	**Skiros Island**	**1.10 96**	P	Pb	13 11 51.0	-1.5
SKY			S	Sg	13 12 06.6	-0.3
PTL	**Penteli**	**1.10 149**	P	Pb	13 11 52.3	-0.3
PTL			S	Sb	13 12 05.9	-1.1
PTL			AML	AML	13 12 07.8	
	comp=E,60816µm,0.6s					
PTL			AML	AML	13 12 09.2	
	comp=N,47006µm,0.8s					
PTL	**Penteli**	**1.10 149**	P	Pb	13 11 51.5	-1.1
PTL			S	Sb	13 12 06.8	-0.2
PTL	**Penteli**	**1.10 149**	P	Pb	13 11 51.5	-1.1
PTL			S	Sb	13 12 06.2	-0.8
DION	**Dionisos Attik**	**1.11 146**	P	Pb	13 11 52.4	-0.3
DION			S	Sn	13 12 07.8	-0.6
DION			AML	AML	13 12 08.1	
	comp=N,73315µm,0.5s					
DION			AML	AML	13 12 10.6	
	comp=E,76873µm,0.4s					
DION	**Dionisos Attik**	**1.11 146**	P	Pb	13 11 51.8	-0.9
DION			S	Sg	13 12 07.2	+0.1
ATH	**Athens Observa**	**1.12 156**	P	Pb	13 11 52.4	-0.4
ATH			S	Sn	13 12 08.1	-0.4
ATH			AML	AML	13 12 08.4	
	comp=E,68877µm,0.6s					
ATH			AML	AML	13 12 09.8	
	comp=N,42199µm,0.4s					
ATH	**Athens Observa**	**1.12 156**	P	Pb	13 11 52.0	-0.9
ATH			S	Sb	13 12 06.9	-0.5
ATH	**Athens Observa**	**1.12 156**	P	Pb	13 11 52.3	-0.5
ATH			S	Sn	13 12 07.9	-0.6
ATH	**Athens Observa**	**1.12 156**	P	Pb	13 11 51.9	-0.9
ATH			S	Sg	13 12 07.6	+0.2
EFP	**Efpalio**	**1.13 240**	P	Pb	13 11 51.4	-1.7
EFP			S	Sb	13 12 08.2	+0.5
EFP			AML	AML	13 12 12.2	
	comp=E,15639µm,0.5s					
EFP			AML	AML	13 12 13.4	
	comp=N,22287µm,1.0s					
EFP	**Efpalio**	**1.13 240**	P	Pb	13 11 51.3	-1.7
EFP			S	Sb	13 12 07.5	-0.2
EFP	**Efpalio**	**1.13 240**	P	Pb	13 11 51.6	-1.4
EFP			S	Sb	13 12 08.1	+0.4
ATHU	**Athens Univers**	**1.14 154**	P	Pb	13 11 53.0	-0.3
ATHU	**Athens Univers**	**1.14 154**	P	Pb	13 11 52.1	-1.2
ATHU			S	Sg	13 12 08.5	+0.2
ATHU	**Athens Univers**	**1.14 154**	P	Pb	13 11 52.1	-1.2
LAKA	**Lakka**	**1.19 231**	P	Pn	13 11 53.4	-0.8
LAKA	**Lakka**	**1.19 231**	P	Pn	13 11 53.2	-1.0
LIT	**Litokhoron**	**1.21 335**	P	Pn	13 11 52.4	-2.1
LIT			S	Sg	13 12 11.5	+0.9
LIT			AML	AML	13 12 14.1	
	comp=N,23405µm,0.8s					
LIT			AML	AML	13 12 16.3	
	comp=E,17564µm,0.5s					
LIT	**Litokhoron**	**1.21 335**	P	Pn	13 11 52.6	-1.9
LIT			S	Sb	13 12 09.4	-0.9
LIT	**Litokhoron**	**1.21 335**	P	Pn	13 11 52.7	-1.8
LIT	**Litokhoron**	**1.21 335**	P	Pn	13 11 52.7	-1.8
LIT			S	Sb	13 12 09.4	-0.9
KLV	**Kalavryta, Ach**	**1.23 220**	P	Pn	13 11 52.9	-1.9
KLV			S	Sb	13 12 10.0	-0.9
KLV			AML	AML	13 12 18.9	
	comp=E,9441µm,1.2s					
KLV			AML	AML	13 12 20.2	
	comp=N,10291µm,0.8s					
KLV	**Kalavryta, Ach**	**1.23 220**	P	Pn	13 11 53.3	-1.5
KLV			S	Sb	13 12 10.5	-0.4
GUR	**Goura**	**1.24 211**	P	Pn	13 11 53.1	-1.8
GUR			S	Sg	13 12 13.3	+2.0
GUR	**Goura**	**1.24 211**	P	Pn	13 11 53.1	-1.8
GUR	**Goura**	**1.24 211**	P	Pn	13 11 53.4	-1.5
GUR			S	Sg	13 12 12.2	+0.9
VLY	**Voula,Athens**	**1.25 156**	P	Pn	13 11 54.2	-0.7
VLY			S	Sb	13 12 09.3	-2.0
VLY			AML	AML	13 12 15.2	
	comp=N,37238µm,0.7s					
VLY			AML	AML	13 12 16.9	
	comp=E,47000µm,0.7s					
VLY	**Voula,Athens**	**1.25 156**	P	Pn	13 11 53.5	-1.5
VLY			S	Sb	13 12 10.2	-1.1
VLY	**Voula,Athens**	**1.25 156**	P	Pn	13 11 54.0	-1.0
VLY			S	Sb	13 12 10.2	-1.1
UPR	**University Cam**	**1.28 237**	P	Pb	13 11 56.3	+0.6
UPR	**University Cam**	**1.28 237**	P	Pn	13 11 55.4	0.0
UPR	**Paravola**	**1.32 254**	P	Pn	13 11 56.0	0.0
PVO			AML	AML	13 12 22.6	
	comp=N,5102µm,0.7s					
PVO			AML	AML	13 12 26.6	
	comp=E,5526µm,0.8s					
PVO	**Paravola**	**1.32 254**	P	Pn	13 11 55.6	-0.4
PLG	**Polygyros**	**1.39 9**	P	Pn	13 11 54.8	-2.2
PLG			S	Sn	13 12 12.4	-3.0
PLG			AML	AML	13 12 15.2	
	comp=N,6811µm,0.4s					
PLG			AML	AML	13 12 18.7	
	comp=E,8530µm,0.5s					
PLG	**Polygyros**	**1.39 9**	P	Pn	13 11 55.1	-1.9
PLG			S	Sn	13 12 13.4	-2.0
PLG	**Polygyros**	**1.39 9**	P	Pn	13 11 55.0	-1.9
PLG			S	Sn	13 12 12.7	-2.7
PLG	**Polygyros**	**1.39 9**	P	Pn	13 11 55.2	-1.8
PLG			S	Sn	13 12 13.4	-2.0
KARY	**Karystos**	**1.40 133**	P	Pn	13 11 55.8	-1.2
KARY			S	Sn	13 12 14.3	-1.2
KARY	**Karystos**	**1.40 133**	P	Pn	13 11 55.8	-1.2
KARY			S	Sn	13 12 14.3	-1.2
OUR	**Ouranopolis**	**1.48 25**	*i* P	Pn	13 11 54.9	-3.2
DID	**Didima**	**1.49 177**	P	Pn	13 11 56.7	-1.6
DID			AML	AML	13 12 23.2	
	comp=N,22727µm,0.5s					
DID			AML	AML	13 12 27.7	
	comp=E,18351µm,0.4s					
DID	**Didima**	**1.49 177**	P	Pn	13 11 56.8	-1.6
DID	**Didima**	**1.49 177**	P	Pn	13 11 57.1	-1.2
DRO	**Drossia**	**1.54 228**	P	Pn	13 11 58.2	-0.8
DRO			AML	AML	13 12 27.7	
	comp=E,11728µm,0.6s					
DRO			AML	AML	13 12 30.9	
	comp=N,10881µm,0.9s					
DRO	**Drossia**	**1.54 228**	P	Pn	13 11 58.2	-0.8
PDO	**Prodromos**	**1.59 256**	P	Pb	13 12 01.1	+0.2
PDO			AML	AML	13 12 30.9	
	comp=E,4744µm,0.7s					
PDO			AML	AML	13 12 33.8	
	comp=N,5080µm,0.6s					
PDO	**Prodromos**	**1.59 256**	P	Pn	13 12 00.0	+0.4
HORT	**Hortiatis**	**1.60 359**	*i* P	Pn	13 11 58.8	-1.0
HORT	**Hortiatis**	**1.60 359**	P	Pn	13 11 57.0	-2.8
HORT	**Hortiatis**	**1.60 359**	P	Pn	13 11 57.7	-2.1
HORT	**Hortiatis**	**1.60 359**	P	Pn	13 11 57.8	-2.1
KRND	**KRANIDI**	**1.61 180**	P	Pn	13 11 58.7	-1.3
KRND			AML	AML	13 12 26.4	
	comp=E,14301µm,0.7s					
KRND			AML	AML	13 12 33.5	
	comp=N,11106µm,1.1s					
KRND	**KRANIDI**	**1.61 180**	P	Pn	13 11 58.7	-1.3
KRND			S	Sn	13 12 19.1	-1.7
KRND	**KRANIDI**	**1.61 180**	P	Pn	13 11 58.9	-1.1
KRND			S	Sn	13 12 19.1	-1.7
RLS	**Riolos of Patr**	**1.62 235**	P	Pn	13 12 00.5	+0.4
RLS			AML	AML	13 12 28.1	
	comp=E,6043µm,1.1s					
RLS			AML	AML	13 12 31.1	
	comp=N,4418µm,1.5s					
RLS	**Riolos of Patr**	**1.62 235**	P	Pn	13 11 59.9	-0.1
THE	**Thessaloniki**	**1.64 355**	P	Pn	13 11 58.7	-1.6
THE	**Thessaloniki**	**1.64 355**	P	Pn	13 11 58.3	-2.0
THE	**Thessaloniki**	**1.64 355**	P	Pn	13 11 58.9	-1.4
THE	**Thessaloniki**	**1.64 355**	P	Pn	13 11 58.9	-1.4
KPRO	**Kipourio**	**1.68 305**	P	Pn	13 12 00.5	-0.5
KPRO			AML	AML	13 12 33.4	
	comp=N,9646µm,1.0s					
KPRO			AML	AML	13 12 38.0	
	comp=E,15440µm,0.8s					
KPRO	**Kipourio**	**1.68 305**	P	Pn	13 12 00.2	-0.8
KZN	**Kozani**	**1.69 321**	P	Pn	13 12 00.2	-0.9
KZN			AML	AML	13 12 34.1	
	comp=N,9459µm,0.9s					
KZN			AML	AML	13 12 37.4	
	comp=E,8194µm,1.1s					
KZN	**Kozani**	**1.69 321**	P	Pn	13 12 00.1	-0.9
KZN	**Kozani**	**1.69 321**	P	Pn	13 12 00.1	-0.9
VLX	**Vlachokerasia**	**1.73 201**	P	Pn	13 12 01.2	-0.5
VLX			AML	AML	13 12 30.4	
	comp=N,11168µm,0.8s					
VLX			AML	AML	13 12 32.1	
	comp=E,15239µm,0.8s					
VLX	**Vlachokerasia**	**1.73 201**	P	Pn	13 12 01.1	-0.6
LIA	**Limnos Island**	**1.81 60**	P	Pn	13 12 00.1	-2.6
LIA			S	Sn	13 12 22.0	-3.7
LIA			AML	AML	13 12 30.6	
	comp=N,13277µm,1.0s					
LIA			AML	AML	13 12 34.3	
	comp=E,8868µm,0.9s					
LIA	**Limnos Island**	**1.81 60**	P	Pn	13 12 00.8	-1.9
LIA	**Limnos Island**	**1.81 60**	P	Pn	13 12 00.8	-1.9
LIA			S	Sn	13 12 23.2	-2.5
AMT	**Artemida-Makis**	**1.85 218**	P	Pn	13 12 03.8	+0.5
AMT			AML	AML	13 12 39.1	
	comp=N,8363µm,0.9s					
AMT			AML	AML	13 12 42.7	
	comp=E,7596µm,0.9s					
AMT	**Artemida-Makis**	**1.85 218**	P	Pn	13 12 03.2	-0.1
GRG	**Griva**	**2.04 344**	P	Pn	13 12 04.8	-1.1
GRG	**Griva**	**2.04 344**	P	Pn	13 12 03.1	-2.7
GRG	**Griva**	**2.04 344**	P	Pn	13 12 04.5	-1.4
GRG	**Griva**	**2.04 344**	P	Pn	13 12 04.5	-1.4
KFL	**Anninata**	**2.05 245**	P	Pb	13 12 07.8	-1.0
KFL			AML	AML	13 12 46.1	
	comp=N,3337µm,0.6s					
KFL			AML	AML	13 12 46.5	
	comp=E,5360µm,1.2s					
KFL	**Anninata**	**2.05 245**	P	Pn	13 12 06.6	+0.6
ITM	**Ithomi**	**2.06 208**	P	Pn	13 12 04.9	-1.2
ITM	**Ithomi**	**2.06 208**	P	Pn	13 12 06.9	+0.8
ITM	**Ithomi**	**2.06 208**	P	Pn	13 12 06.2	+0.1
FSK	**Fiskardo**	**2.09 256**	P	Pb	13 12 09.1	-0.4
SERI	**Serifos**	**2.12 150**	P	Pn	13 12 05.8	-1.1
SERI	**Serifos**	**2.12 150**	P	Pn	13 12 05.8	-1.1
SRS	**Serrai**	**2.14 9**	P	Pn	13 12 05.7	-1.6
SRS	**Serrai**	**2.14 9**	P	Pn	13 12 05.6	-1.7
SRS	**Serrai**	**2.14 9**	P	Pn	13 12 05.9	-1.4
SRS	**Serrai**	**2.14 9**	P	Pn	13 12 05.9	-1.4
NEST	**Nestorio**	**2.15 312**	P	Pn	13 12 07.8	+0.4
NEST	**Nestorio**	**2.15 312**	P	Pn	13 12 07.2	-0.3
KNT	**Kendrikon**	**2.17 355**	P	Pn	13 12 07.1	-0.5
KNT	**Kendrikon**	**2.17 355**	P	Pn	13 12 06.7	-0.9
KNT			AML	AML	13 12 16.9	
	comp=N,4831µm,0.6s					
KNT			AML	AML	13 12 43.6	
	comp=E,3188µm,0.8s					
KNT	**Kendrikon**	**2.17 355**	P	Pn	13 12 06.7	-0.9
KNT	**Kendrikon**	**2.17 355**	P	Pn	13 12 06.7	-0.9
FNA	**Florina**	**2.25 323**	P	Pn	13 12 08.9	+0.2
FNA	**Florina**	**2.25 323**	P	Pn	13 12 08.3	-0.4
FNA			AML	AML	13 12 48.5	
	comp=N,3459µm,1.4s					
FNA			AML	AML	13 12 53.4	
	comp=E,4443µm,1.5s					
FNA	**Florina**	**2.25 323**	P	Pn	13 12 08.3	-0.4
FNA	**Florina**	**2.25 323**	P	Pn	13 12 08.3	-0.4
IGT	**Igoumenitsa**	**2.25 285**	P	Pn	13 12 10.4	+1.6
IGT	**Igoumenitsa**	**2.25 285**	P	Pn	13 12 10.4	+1.6
KAVA	**Kavala**	**2.25 27**	P	Pn	13 12 05.2	-3.6
KAVA	**Kavala**	**2.25 27**	P	Pn	13 12 06.4	-2.4
VLI	**Veliai**	**2.28 184**	P	Pn	13 12 07.4	-1.8
VLI	**Veliai**	**2.28 184**	P	Pn	13 12 08.0	-1.2
DYR	**Agios Nikonas**	**2.32 196**	P	Pn	13 12 10.8	+1.0
DYR	**Agios Nikonas**	**2.32 196**	P	Pn	13 12 10.0	+0.2
CHOS	**Chios island**	**2.35 104**	P	Pn	13 12 09.1	-1.1
CHOS	**Chios island**	**2.35 104**	P	Pn	13 12 09.1	-1.1
VAY	**Valandovo**	**2.36 349**	*i* Pn	Pn	13 12 09.0	-1.3
VAY	**Valandovo**	**2.36 349**	P	Pn	13 12 09.5	-0.8
VAY	**Valandovo**	**2.36 349**	P	Pn	13 12 09.5	-0.8
PYL	**PYLOS**	**2.38 208**	P	Pn	13 12 12.4	+2.0
PYL	**PYLOS**	**2.38 208**	P	Pn	13 12 11.2	+0.7
BOZC	**Bozcaada**	**2.40 69**	P	Pn	13 12 09.2	-1.6
BOZC	**Bozcaada**	**2.40 69**	*i* P	Pn	13 12 09.5	-1.3
NVR	**Nevrokopi**	**2.41 13**	P	Pn	13 12 09.0	-2.0
NVR	**Nevrokopi**	**2.41 13**	P	Pn	13 12 09.5	-1.5
GADA	**Gvkgeada**	**2.44 60**	P	Pn	13 12 09.4	-1.9
PRK	**Paraskevi**	**2.44 83**	P	Pn	13 12 09.9	-1.5
PRK			AML	AML	13 12 54.3	
	comp=E,19607µm,1.0s					
PRK			AML	AML	13 12 54.8	
	comp=N,10077µm,0.8s					
PRK	**Paraskevi**	**2.44 83**	P	Pn	13 12 09.8	-1.5
PRK	**Paraskevi**	**2.44 83**	P	Pn	13 12 10.1	-1.2
GOKC	**Gokceada-Canak**	**2.45 60**	P	Pn	13 12 10.2	-1.3
BIA	**Bitola**	**2.46 326**	*i* Pn	Pn	13 12 12.4	+0.8
MHLA	**Plaka, Milos I**	**2.46 156**	P	Pn	13 12 10.8	-0.8
MHLA	**Plaka, Milos I**	**2.46 156**	P	Pn	13 12 10.9	-0.8
MHLO	**Agia Marina, M**	**2.51 156**	P	Pn	13 12 12.4	+0.2
MHLO	**Agia Marina, M**	**2.51 156**	P	Pn	13 12 12.0	-0.3
EZN	**Ezine**	**2.59 70**	*eP*	Pn	13 12 12.2	-1.2
EZN	**Ezine**	**2.59 70**	P	Pn	13 12 12.1	-1.3
EZN	**Ezine**	**2.59 70**	P	Pn	13 12 12.1	-1.3
MMB	**Musomiste**	**2.62 10**	P	Pn	13 12 12.2	-1.7
MMB	**Musomiste**	**2.62 10**	P	Pn	13 12 12.2	-1.7
APE	**Apeiranthos**	**2.69 135**	*eP*	Pn	13 12 13.1	-1.7
APE	**Apeiranthos**	**2.69 135** ⇓	*iP*	Pn	13 12 14.8	0.0
APE	**Apeiranthos**	**2.69 135**	P	Pn	13 12 13.8	-1.0
APE			AML	AML	13 12 56.6	
	comp=N,8975µm,0.6s					
APE			AML	AML	13 12 58.1	
	comp=E,5888µm,0.8s					
APE	**Apeiranthos**	**2.69 135**	*eP*	Pn	13 12 14.0	-0.8
APE	**Apeiranthos**	**2.69 135**	P	Pn	13 12 13.9	-1.0
KEK	**Kerkira**	**2.69 286**	P	Pn	13 12 17.4	+2.5
KEK			AML	AML	13 13 06.5	
	comp=E,1937µm,0.9s					
KEK			AML	AML	13 13 12.3	
	comp=N,1969µm,0.8s					
KEK	**Kerkira**	**2.69 286**	P	Pn	13 12 15.9	+1.1
KYTH	**Kithira**	**2.73 182**	P	Pn	13 12 14.0	-1.3
ZEY	**˜zmir**	**2.73 105**	*i* P	Pn	13 12 14.4	-0.9
BAYC	**CANAKKALE_Bayr**	**2.73 73**	*i* P	Pn	13 12 13.4	-2.0
BAYC	**CANAKKALE_Bayr**	**2.73 73**	P	Pn	13 12 13.4	-2.0
AYVA	**Ayvalik**	**2.77 82**	*i* P	Pn	13 12 14.8	-1.1
AYVA	**Ayvalik**	**2.77 82**	P	Pn	13 12 14.8	-1.1
URLA	**Izmir**	**2.77 102**	P	Pn	13 12 13.5	-2.4
URLA	**Izmir**	**2.77 102**	*i* P	Pn	13 12 14.0	-1.9
URLA	**Izmir**	**2.77 102**	P	Pn	13 12 14.0	-1.9
OHR	**Ohrid**	**2.78 320**	*i* Pn	Pn	13 12 16.0	-0.1
OHR			*e*Sn	Sg	13 13 01.4	+0.7
OHR	**Ohrid**	**2.78 320**	P	Pn	13 12 15.5	-0.5
OHR	**Ohrid**	**2.78 320**	P	Pn	13 12 15.5	-0.5
KRUS	**Krusevo**	**2.78 329**	*i* Pn	Pn	13 12 15.4	-0.7
STIP	**Stip**	**2.79 345**	*i* Pn	Pn	13 12 14.7	-1.5
RDO	**Rodhopi**	**2.82 40**	*eP*	Pn	13 12 15.0	-1.6
RDO	**Rodhopi**	**2.82 40**	P	Pn	13 12 12.7	-3.9
RDO	**Rodhopi**	**2.82 40**	P	Pn	13 12 14.1	-2.5
KKB	**Krupnik**	**2.87 359**	P	Pn	13 12 15.9	-1.3
KKB	**Krupnik**	**2.87 359**	P	Pn	13 12 15.9	-1.3
ENEZ	**Enez**	**2.89 52**	*eP*	Pn	13 12 15.6	-1.9
GELI	**Tayfur-Gelibol**	**2.92 60**	*eP*	Pn	13 12 16.5	-1.4
ALN	**Alexandroupoli**	**2.92 49**	*eP*	Pn	13 12 15.9	-2.1
ALN	**Alexandroupoli**	**2.92 49**	P	Pn	13 12 15.9	-2.1
ALN	**Alexandroupoli**	**2.92 49**	P	Pn	13 12 15.9	-2.1
DKL	**Dikili**	**2.92 87**	*eP*	Pn	13 12 16.3	-1.7
RZN	**Rozhen**	**2.94 24**	P	Pn	13 12 17.2	-1.2
RZN	**Rozhen**	**2.94 24**	P	Pn	13 12 17.2	-1.2
DGB	**˜zmir**	**3.08 107**	*i* P	Pn	13 12 19.7	-0.4
ERIK	**Erikli-Kesan**	**3.08 56**	*eP*	Pn	13 12 17.9	-2.2
LPK	**Lapseki**	**3.10 63**	*eP*	Pn	13 12 18.5	-2.0
ANKY	**Antikythira Is**	**3.13 178**	P	Pn	13 12 20.0	-0.8
ANKY	**Antikythira Is**	**3.13 178**	P	Pn	13 12 20.2	-0.6
KDZ	**Kurdzhali**	**3.17 32**	*eP*	Pn	13 12 18.6	-2.8
KDZ	**Kurdzhali**	**3.17 32**	P	Pn	13 12 18.5	-2.8
KDZ	**Kurdzhali**	**3.17 32**	P	Pn	13 12 18.5	-2.8
SANT	**Santorini**	**3.20 144** ⇓	*iP*	Pn	13 12 24.7	+2.9
SANT	**Santorini**	**3.20 144** ⇓	*iP*	Pn	13 12 24.7	+2.9
SKO	**Skopje**	**3.24 337**	*e*Pn	Pn	13 12 21.7	-0.7
SKO	**Skopje**	**3.24 337**	P	Pn	13 12 22.9	+0.5
SKO	**Skopje**	**3.24 337**	P	Pn	13 12 22.9	+0.5
KESN	**Edirne-Kesan**	**3.27 55**	*i* P	Pn	13 12 19.2	-3.9
KESN	**Edirne-Kesan**	**3.27 55**	P	Pn	13 12 19.2	-3.9
PLD	**Plovdiv**	**3.32 20**	*eP*	Pn	13 12 21.9	-1.5
PLD	**Plovdiv**	**3.32 20**	P	Pn	13 12 22.4	-1.0
PLD	**Plovdiv**	**3.32 20**	P	Pn	13 12 22.4	-1.0
TIR	**Tirane**	**3.44 314** ⇑	*iP*	Pn	13 12 26.2	+1.1
TIR	**Tirane**	**3.44 314**	P	Pn	13 12 26.2	+1.1
TIR	**Tirane**	**3.44 314**	P	Pn	13 12 26.2	+1.1
GCAM	**G?zelcaml?**	**3.46 111**	*eP*	Pn	13 12 24.5	-0.9
KRBG	**Karabiga-Canak**	**3.49 65**	*eP*	Pn	13 12 24.6	-1.1
RKY	**Sarkoy-Tekirda**	**3.53 60**	*eP*	Pn	13 12 24.8	-1.6
SART	**Tekirdag**	**3.53 60**	*i* P	Pn	13 12 23.1	-3.3
SART	**Tekirdag**	**3.53 60**	P	Pn	13 12 23.1	-3.3
DIM	**Dimitrovgrad**	**3.55 30**	P	Pn	13 12 25.1	-1.5
DIM	**Dimitrovgrad**	**3.55 30**	P	Pn	13 12 25.1	-1.5
STEP	**BALIKESIR_Sava**	**3.57 82**	*i* P	Pn	13 12 27.3	+0.4
STEP	**BALIKESIR_Sava**	**3.57 82**	P	Pn	13 12 27.3	+0.4
VTS	**Vitosha**	**3.59 1** ⇑	*iP*	Pn	13 12 27.1	-0.2
VTS	**Vitosha**	**3.59 1**	P	Pn	13 12 26.7	-0.6
VTS	**Vitosha**	**3.59 1**	P	Pn	13 12 26.7	-0.6
PGB	**Panagyurishte**	**3.63 12**	P	Pn	13 12 27.1	-0.7
PGB	**Panagyurishte**	**3.63 12**	P	Pn	13 12 27.1	-0.7
GONE	**Gonen-Balikesi**	**3.66 72**	*eP*	Pn	13 12 27.1	-1.0
VAM	**Vamos**	**3.68 167**	P	Pn	13 12 30.3	+1.9
VAM	**Vamos**	**3.68 167**	P	Pn	13 12 30.3	+1.9
BODT	**Bodr

CEME *i* Sn **Sn** **13 13 38.8 -0.3**
TAVA DENIZLI_Tavas 4.79 107 *i* P **Pn** **13 12 44.2 +0.5**
TAVA DENIZLI_Tavas 4.79 107 P **Pn** **13 12 44.2 +0.5**
TURN Turunc 4.80 115 *eP* **Pn** **13 12 40.5 -3.3**
TURN Turunc 4.80 115 *i* P **Pn** **13 12 41.4 -2.4**
TURN Turunc 4.80 115 P **Pn** **13 12 41.4 -2.4**
FASA Fasano 4.81 294 *eP* **Pn** **13 12 44.2 +0.3**
ZAGS Zajecar 4.86 352 *eP* **Pn** **13 12 43.6 -1.0**
DALY Dalyan (Mu¨la 4.87 115 *eP* **Pn** **13 12 44.5 -0.2**
MASS Massafra 4.90 291 *eP* **Pn** **13 12 45.4 +0.2**
TVSB Tavsanli 4.92 83 *eP* **Pn** **13 12 44.9 -0.7**
NKME Niksic 4.93 321 ⇓*i*Pn **Pn** **13 12 45.4 -0.2**
NKME *i* Sn **Sn** **13 13 42.5 -0.1**
NKME Niksic 4.93 321 ⇓*i*Pn **Pn** **13 12 45.4 -0.2**
NKME *i* Sn **Sn** **13 13 42.5 -0.1**
HCY Herceg Novi 4.94 316 ⇓*i*Pn **Pn** **13 12 45.6 -0.1**
HCY *i* Sn **Sn** **13 13 42.8 0.0**
HCY Herceg Novi 4.94 316 P **Pn** **13 12 46.2 +0.5**
HCY S **Sn** **13 13 43.0 +0.2**
HCY Herceg Novi 4.94 316 ⇓*i*Pn **Pn** **13 12 45.6 -0.1**
HCY Herceg Novi 4.94 316 P **Pn** **13 12 46.2 +0.5**
HCY *i* Sn **Sn** **13 13 42.8 0.0**
NKY Niksic 4.94 322 ⇑*i*Pn **Pn** **13 12 45.5 -0.3**
NKY *i* Sn **Sn** **13 13 42.8 -0.3**
NKY Niksic 4.94 322 P **Pn** **13 12 46.4 +0.6**
NKY S **Sn** **13 13 43.0 -0.1**
NKY Niksic 4.94 322 ⇑*i*Pn **Pn** **13 12 45.5 -0.3**
NKY Niksic 4.94 322 P **Pn** **13 12 46.4 +0.6**
NKY S **Sn** **13 13 43.0 -0.1**
TIP Timpagrande 4.98 274 ⇓*i*P **Pn** **13 12 48.1 +1.8**
TIP Timpagrande 4.98 274 ⇓*i*P **Pn** **13 12 48.1 +1.8**
YLV Yalova 5.04 70 *eP* **Pn** **13 12 46.3 -0.9**
IVAS Ivanjica 5.10 335 *eP* **Pn** **13 12 46.9 -1.1**
PLE Pljevlja 5.17 328 ⇓*i*Pn **Pn** **13 12 48.6 -0.4**
PLE *i* Sn **Sn** **13 13 48.1 -0.7**
PLE Pljevlja 5.17 328 P **Pn** **13 12 49.0 0.0**
PLE S **Sn** **13 13 49.0 +0.2**
PLE Pljevlja 5.17 328 ⇓*i*Pn **Pn** **13 12 48.6 -0.4**
PLE Pljevlja 5.17 328 P **Pn** **13 12 49.0 0.0**
PLE *i* Sn **Sn** **13 13 48.1 -0.7**
PLE S **Sn** **13 13 49.0 +0.2**
TREB Trebinje 5.20 317 *ePn* **Pn** **13 12 48.3 -1.0**
GRUS Gruza 5.22 340 *eP* **Pn** **13 12 48.8 -0.7**
MATE Matera 5.23 290 ⇓*i*P **Pn** **13 12 50.2 +0.6**
MATE Matera 5.23 290 ⇓*i*P **Pn** **13 12 50.2 +0.6**
BRY Bratogost 5.23 320 ⇑*i*Pn **Pn** **13 12 49.6 -0.3**
BRY *i* Sn **Sn** **13 13 49.8 -0.5**
BRY Bratogost 5.23 320 P **Pn** **13 12 49.9 0.0**
BRY S **Sn** **13 13 49.0 -1.3**
BRY Bratogost 5.23 320 ⇑*i*Pn **Pn** **13 12 49.6 -0.3**
BRY Bratogost 5.23 320 P **Pn** **13 12 49.9 0.0**
BRY S **Sn** **13 13 49.0 -1.3**
BAI Bari 5.25 296 *eP* **Pn** **13 12 50.1 +0.1**
ADVT Abdulvahap 5.28 72 *eP* **Pn** **13 12 49.7 -0.6**
UPM Unac-Piva 5.28 324 ⇑*i*Pn **Pn** **13 12 50.4 -0.2**
UPM *i* Sn **Sn** **13 13 51.0 -0.6**
UPM Unac-Piva 5.28 324 ⇑*i*Pn **Pn** **13 12 50.4 -0.2**
UPM *i* Sn **Sn** **13 13 51.0 -0.6**
SG1 Sgolgore (BA) 5.30 292 *eP* **Pn** **13 12 50.6 -0.1**
AUBOZ BOZOYUK 5.40 78 *eP* **Pn** **13 12 51.0 -1.1**
STON Ston 5.66 315 *ePn* **Pn** **13 12 53.6 -1.9**
STON Sn **Sn** **13 13 56.9 -3.6**
STON Ston 5.66 315 *ePn* **Pn** **13 12 53.6 -1.9**
HUMR Humele 5.69 13 ⇓*i*P **Pn** **13 12 55.7 -0.3**
GEYV SAKARYA_Geyve 5.70 73 *i* P **Pn** **13 12 56.1 -0.1**
AKAS Kas 5.82 116 *eP* **Pn** **13 12 56.5 -1.4**
MDVR Moldovita 5.88 350 ⇓*i*P **Pn** **13 12 57.5 -1.1**
HERR Herculane 5.90 355 ⇓*i*P **Pn** **13 12 57.6 -1.3**
ISP Isparta 5.91 99 ⇑*i*P **Pn** **13 12 59.7 +0.7**
ISP Isparta 5.91 99 *ceP* **Pn** **13 12 59.8 +0.7**
ISP pmax pmax
comp=Z,12nm,0.7s
ISP Isparta 5.91 99 *eP* **Pn** **13 12 59.8 +0.7**
comp=Z,12nm,0.7s
GOLR 5.99 12 ⇓*i*P **Pn** **13 12 58.9 -1.2**
ESKT Eskisehir 6.00 83 *i* P **Pn** **13 12 59.9 -0.4**
SULR 6.13 21 ⇓*i*P **Pn** **13 13 01.8 -0.2**
ICOR Ion Corvin 6.19 33 ⇓*i*P **Pn** **13 13 01.7 -1.1**
MTUR Matau 6.38 12 ⇑*i*P **Pn** **13 13 04.7 -0.9**
SECR 6.41 19 ⇓*i*P **Pn** **13 13 05.3 -0.6**
ARR Arges 6.46 9 ⇓*i*P **Pn** **13 13 06.0 -0.6**
LOT Lotru 6.46 4 ⇑*i*P **Pn** **13 13 05.5 -1.2**
VOIR 6.59 12 ⇑*i*P **Pn** **13 13 07.8 -0.6**
VOIR 6.59 12 P **Pn** **13 13 07.4 -1.0**
VOIR pmax pmax
comp=Z,127nm,0.9s
VOIR 6.59 12 P **Pn** **13 13 07.4 -1.0**
comp=Z,127nm,0.9s
ISR Istrita 6.62 21 ⇓*i*P **Pn** **13 13 07.3 -1.5**
ISR Istrita 6.62 21 P **Pn** **13 13 10.1 +1.3**
ISR pmax pmax
comp=Z,98nm,1.0s
ISR Istrita 6.62 21 P **Pn** **13 13 10.1 +1.3**
comp=Z,98nm,1.0s
TLB Topalu 6.67 32 ⇑*i*P **Pn** **13 13 08.4 -1.0**
TLB Topalu 6.67 32 P **Pn** **13 13 08.3 -1.1**
TLB Topalu 6.67 32 P **Pn** **13 13 08.3 -1.1**
BZS Buzias 6.71 351 ⇓*i*P **Pn** **13 13 09.1 -0.9**
BZS Buzias 6.71 351 P **Pn** **13 13 08.3 -1.7**
BZS pmax pmax
comp=Z,25nm,0.5s
BZS Buzias 6.71 351 P **Pn** **13 13 08.3 -1.7**
comp=Z,25nm,0.5s
HARR Harsova 6.71 31 ⇓*i*P **Pn** **13 13 09.8 -0.3**
HARR Harsova 6.71 31 P **Pn** **13 13 09.7 -0.3**
HARR Harsova 6.71 31 P **Pn** **13 13 09.7 -0.3**
TIRR Tirgusor 6.73 34 ⇑*i*P **Pn** **13 13 08.7 -1.5**
TIRR Tirgusor 6.73 34 P **Pn** **13 13 07.5 -2.7**
TIRR pmax pmax
comp=Z,18nm,0.6s
TIRR Tirgusor 6.73 34 P **Pn** **13 13 07.5 -2.7**
comp=Z,18nm,0.6s
MLR Muntele Rosu 6.81 17 Pn **Pn** **13 13 10.6 -0.9**
comp=Z,0.7nm,0.3s,baz=189,slow=5.5,SNR=28
MLR Sn **Sn** **13 14 27.0 -2.1**
baz=253,slow=18,SNR=1.4
MLR Lg Lg 13 15 15.6
baz=139,slow=9.3,SNR=2.1
MLR LR LR 13 16 20.4
comp=Z,298nm,18.1s,baz=217,slow=42
MLR Muntele Rosu 6.81 17 ⇓*i*P **Pn** **13 13 10.9 -0.6**
DEV Deva 6.88 359 ⇑*i*P **Pn** **13 13 10.3 -2.1**
GRER 6.98 23 ⇓*i*P Pn 13 13 19.1 +5.4
VAE Valguarnera 7.04 260 Pn **Pn** **13 13 15.2 +0.5**
comp=Z,7.6nm,0.3s,baz=99,slow=19,SNR=2.3
VAE Sn **Sn** **13 14 35.1 +0.3**
baz=99,slow=13,SNR=2.2
DOPR Dopca 7.16 13 ⇑*i*P **Pn** **13 13 16.2 0.0**
CFR Carcaliu 7.20 29 ⇑*i*P **Pn** **13 13 15.2 -1.5**
CFR Carcaliu 7.20 29 P **Pn** **13 13 14.4 -2.3**
CFR pmax pmax
comp=Z,23nm,0.9s
CFR Carcaliu 7.20 29 P **Pn** **13 13 14.4 -2.3**
comp=Z,23nm,0.9s
PLOR Plostina 7.32 20 ⇓*i*P **Pn** **13 13 18.0 -0.5**
PLOR Plostina 7.32 20 P **Pn** **13 13 17.9 -0.5**
PLOR Plostina 7.32 20 P **Pn** **13 13 17.9 -0.5**
VRI Vrincioaia 7.36 20 ⇑*i*P **Pn** **13 13 18.1 -0.8**
VRI Vrincioaia 7.36 20 P **Pn** **13 13 20.0 +1.1**
VRI Vrincioaia 7.36 20 P **Pn** **13 13 20.0 +1.1**
DRGR 7.80 358 ⇓*i*P **Pn** **13 13 23.7 -1.3**
DRGR 7.80 358 P **Pn** **13 13 23.0 -2.0**
DRGR pmax pmax
comp=Z,34nm,0.8s
DRGR 7.80 358 P **Pn** **13 13 23.0 -2.0**
comp=Z,34nm,0.8s
UDBI Udbina 7.81 317 *ePn* **Pn** **13 13 24.6 -0.5**
UDBI Sn **Sn** **13 14 49.9 -3.7**
UDBI Udbina 7.81 317 *ePn* **Pn** **13 13 24.6 -0.5**
TESR Tescani 7.94 18 ⇓*i*P **Pn** **13 13 25.4 -1.4**
TESR Tescani 7.94 18 ⇓*i*P **Pn** **13 13 25.4 -1.4**
MORH M¨ˇr¡gy, Hung 7.94 337 *ex* **Pn** **13 13 26.3 -0.5**
MORH M¨ˇr¡gy, Hung 7.94 337 *eP* **Pn** **13 13 26.3 -0.5**
BRTR Keskin Array B 8.16 82 Pn **Pn** **13 13 29.9 -0.1**
comp=Z,0.9nm,0.3s,baz=261,slow=12,SNR=21
BRTR Sn **Sn** **13 14 58.0 -4.4**
comp=Z,0.3nm,0.3s,baz=263,slow=24,SNR=2.8
BRTR Lg Lg 13 15 54.8
comp=Z,0.0nm,0.3s,baz=247,slow=33,SNR=3.5
BRTR LR LR 13 16 36.7
comp=Z,119nm,20.2s,baz=262,slow=37
BRTR Keskin Array B 8.16 82 P **Pn** **13 13 30.0 -0.1**
BRTR 13 14 58.0
BRTR pmax pmax
comp=Z,1.0nm,0.3s
BRTR MLR MLR
comp=Z,119nm,20.2s
BRTR Keskin Array B 8.16 82 P **Pn** **13 13 30.0 -0.1**
comp=Z,1.0nm,0.3s
BIZ Bicaz 8.23 14 ⇓*i*P **Pn** **13 13 30.8 0.0**
BIZ Bicaz 8.23 14 ⇓*i*P **Pn** **13 13 30.8 0.0**
NVLJ Novalja 8.31 315 *ePn* **Pn** **13 13 30.4 -1.6**
NVLJ Sn **Sn** **13 14 59.9 -6.0**
NVLJ Novalja 8.31 315 *ePn* **Pn** **13 13 30.4 -1.6**
BURAR Bucovina Array 8.74 9 ⇑*i*P **Pn** **13 13 38.1 +0.1**
BURAR Bucovina Array 8.74 9 P **Pn** **13 13 38.1 +0.1**
BURAR Bucovina Array 8.74 9 ⇑*i*P **Pn** **13 13 38.1 +0.1**
CRES Cresnjev 8.88 323 *ePn* **Pn** **13 13 37.8 -2.0**
KIS Kishinev 9.01 26 *eP* Pn 13 13 50.0 +8.5
KIS *eS* Sn 13 15 40.0 +17
KIS LRM MLR 13 18 50.0
comp=Z,400nm,10.0s
KIS Kishinev 9.01 26 *eP* Pn 13 13 50.0 +8.5
KIS *e* 13 15 20.0
KIS MLR MLR
comp=Z,500nm,12.0s
KIS MLR MLR
comp=Z,400nm,10.0s
KIS Kishinev 9.01 26 *eP* Pn 13 13 50.0 +8.5
KIS *eS* **Sn** **13 15 20.0 -2.9**
comp=Z,400nm,10.0s
CSKK Cs¨ˇtkako 9.09 338 *ex* **Pn** **13 13 45.1 +2.5**
TRPA Tarpa 9.14 357 ⇑*i*P **Pn** **13 13 43.2 -0.1**
TRPA Tarpa 9.14 357 ⇑*i*P **Pn** **13 13 43.2 -0.1**
PSZ Piszkesteto 9.22 346 ⇑*i*P **Pn** **13 13 44.8 +0.3**
PSZ Piszkesteto 9.22 346 *ex* **Pn** **13 13 46.3 +1.8**
PSZ Piszkesteto 9.22 346 P **Pn** **13 13 44.8 +0.3**
PSZ Piszkesteto 9.22 346 P **Pn** **13 13 44.8 +0.3**
CEY Cerknica 9.32 319 *ePn* **Pn** **13 13 43.9 -2.0**
UZH Uzhgorod 9.65 357 *eP* Pn 13 13 43.2 -7.1
KECS Kecovo 9.68 349 *eP* **Pn** **13 13 52.6 +2.0**
KECS Kecovo 9.68 349 *ePN* **Pn** **13 13 52.6 +2.0**
KECS Kecovo 9.68 349 *eP* **Pn** **13 13 52.6 +2.0**
SOKA Soboth 9.71 325 Pn **Pn** **13 13 50.0 -1.2**
comp=Z,9.8nm,1.0s
SOKA Soboth 9.71 325 Pn **Pn** **13 13 50.0 -1.2**
comp=Z,9.8nm,1.0s
OBKA Obir 9.81 323 *ePn* **Pn** **13 13 55.4 +2.8**
comp=Z,2.1nm,0.5s
ARSA Arzberg 9.95 328 Pn **Pn** **13 13 54.8 +0.3**
comp=Z,4.9nm,0.7s
ARSA Arzberg 9.95 328 Pn **Pn** **13 13 54.8 +0.3**
comp=Z,4.9nm,0.7s
VYHS Vyhne 9.99 343 *eP* **Pn** **13 13 56.2 +1.2**
VYHS Vyhne 9.99 343 *ePN* **Pn** **13 13 56.2 +1.2**
VYHS Vyhne 9.99 343 *eP* **Pn** **13 13 56.2 +1.2**
MODS Modra-Piesok 10.29 338 *eP* **Pn** **13 14 00.8 +1.7**
MODS Modra-Piesok 10.29 338 *ePN* **Pn** **13 14 00.8 +1.7**
MODS Modra-Piesok 10.29 338 *eP* **Pn** **13 14 00.8 +1.7**
CONA Conrad Observa 10.37 332 *ePn* **Pn** **13 14 00.0 -0.3**
comp=Z,9.6nm,1.0s
CONA Conrad Observa 10.37 332 Pn **Pn** **13 14 00.0 -0.3**
comp=Z,9.6nm,1.0s
JAVC Velka Javorina 10.62 340 *ePN* **Pn** **13 14 06.1 +2.5**
KBA Koelnbreinsper 10.79 322 Pn **Pn** **13 14 05.5 -0.7**
comp=Z,5.9nm,0.7s
KBA Koelnbreinsper 10.79 322 P **Pn** **13 14 04.2 -2.0**
KBA pmax pmax
comp=Z,9.0nm,1.3s
KBA Koelnbreinsper 10.79 322 P **Pn** **13 14 04.2 -2.0**
comp=Z,9.0nm,1.3s
KBA Koelnbreinsper 10.79 322 Pn **Pn** **13 14 05.5 -0.7**
comp=Z,5.9nm,0.7s
LVV L¨vov 10.84 3 *eP* Pn 13 14 14.2 +7.7
LVV MLR MLR
comp=Z,200nm,10.0s
MOA Molln 10.95 327 Pn **Pn** **13 14 07.3 -0.8**
comp=Z,7.5nm,0.8s
MOA Molln 10.95 327 Pn **Pn** **13 14 07.3 -0.8**
comp=Z,7.5nm,0.8s
ABTA Abfaltersbach 10.99 318 Pn **Pn** **13 14 07.1 -1.6**
comp=Z,4.5nm,0.9s
ABTA Abfaltersbach 10.99 318 Pn **Pn** **13 14 07.1 -1.6**
comp=Z,4.5nm,0.9s
OKC Ostrava-Krasne 11.41 343 AMS AMS 13 19 30.0
comp=Z,700nm,11.2s
KEST Kesra 11.46 258 Pn **Pn** **13 14 16.2 +1.1**
comp=Z,0.3nm,0.3s,baz=191,slow=3.2,SNR=7.5
KEST LR LR 13 20 12.0
comp=Z,158nm,20.6s,baz=40,slow=45
MORC Moravsky Berou 11.49 341 ⇓*i*P **Pn** **13 14 16.1 +0.5**
MORC Moravsky Berou 11.49 341 *ePn* **Pn** **13 14 15.8 +0.2**
MORC Moravsky Berou 11.49 341 ⇓*i*P **Pn** **13 14 16.1 +0.5**
MORC Moravsky Berou 11.49 341 *ePN* **Pn** **13 14 15.8 +0.2**
MMAI Mount Meron Ar 11.58 117 Pn **Pn** **13 14 15.5 -1.3**
comp=Z,1.9nm,0.3s,baz=311,slow=11,SNR=3.3
MMAI LR LR 13 19 41.4
comp=Z,203nm,18.3s,baz=320,slow=42
GERES GERESS Array B 11.96 328 Pn **Pn** **13 14 22.1 +0.1**
comp=Z,0.2nm,0.3s,baz=148,slow=17,SNR=3.4
FETA Feichten 12.11 315 *ePn* Pn 13 14 29.3 +5.1
comp=Z,6.0nm,0.9s
KHC Kasperske Hory 12.23 329 *eP* **Pn** **13 14 29.4 +3.7**
KHC AMS AMS 13 20 30.0
comp=Z,600nm,14.2s
KHC Kasperske Hory 12.23 329 *eP* **Pn** **13 14 29.4 +3.7**
KHC MLR MLR
comp=Z,600nm,14.2s
DPC Dobruska-Polom 12.34 339 *eP* **Pn** **13 14 31.1 +4.0**
DPC AMS AMS 13 20 00.0
comp=Z,500nm,9.8s
DPC Dobruska-Polom 12.34 339 *eP* **Pn** **13 14 31.1 +4.0**
DPC MLR MLR
comp=Z,500nm,9.8s
GOPC GO Pecny, Ondr 12.43 334 AMS AMS 13 21 00.0
comp=Z,400nm,11.0s
DAVOX Davos/Dischmat 12.45 313 Pn **Pn** **13 14 29.1 +0.4**
comp=Z,0.4nm,0.3s,baz=126,slow=19,SNR=2.6
DAVOX Sn **Sn** **13 16 42.9 -4.6**
comp=Z,0.1nm,0.3s,baz=153,slow=18,SNR=2.0
DAVOX LR LR 13 19 49.4
comp=Z,160nm,20.1s,baz=262,slow=40
KIEV Kiev 12.45 18 *ceP* **Pn** **13 14 30.7 +2.1**
KIEV pmax pmax
comp=Z,10.0nm,1.7s
AKASG Malin Array Be 12.46 18 Pn **Pn** **13 14 27.6 -1.2**
comp=Z,0.6nm,0.3s,baz=204,slow=13,SNR=2.7
AKASG LR LR 13 19 27.8
comp=Z,144nm,18.2s,baz=205,slow=38
UPC Upice 12.57 339 AMS AMS 13 20 10.0
comp=Z,400nm,13.0s
PRU Pruhonice 12.58 334 AMS AMS 13 20 00.0
comp=Z,400nm,9.9s
DAVA Damuels 12.73 315 Pn **Pn** **13 14 37.1 +4.4**
comp=Z,6.3nm,1.0s
PVCC Panska Ves 13.03 335 AMS AMS 13 20 20.0
comp=Z,300nm,12.1s
EIL Elat 13.47 130 Pn **P** **13 14 49.5 -2.5**
comp=Z,0.4nm,0.3s,baz=344,slow=9.5,SNR=8.8
BRG Berggiesshubel 13.53 334 *e*(P) **P** **13 14 57.2 +4.7**
comp=Z,3.4nm,0.9s
BRG Berggiesshubel 13.53 334 *eP* **P** **13 14 57.2 +4.7**
BRG pmax pmax
comp=Z,3.0nm,0.9s
LPG La Plagne 13.76 303 *eP* **Pn** **13 14 50.0 +3.2**
LPG pmax pmax
comp=Z,10.0nm,0.8s
BFO Black Forest 14.19 316 *i* P **Pn** **13 14 55.7 +3.3**
BFO Black Forest 14.19 316 *i* P **Pn** **13 14 55.7 +3.3**
CLL Collm 14.22 333 *i* sPP 13 15 05.2
CLL Collm 14.22 333 *i* P P 13 15 05.2 +5.0
CABF La Chapelle 14.64 307 *eP* **P** **13 15 04.9 -0.1**
CABF pmax pmax
comp=Z,11nm,0.9s
CABF La Chapelle 14.64 307 *eP* **P** **13 15 04.9 -0.1**
comp=Z,11nm,0.9s
HAU Haudompre 15.13 312 *eP* **P** **13 15 10.0 -0.4**
HAU pmax pmax
comp=Z,3.0nm,0.4s
HAU Haudompre 15.13 312 *eP* **P** **13 15 10.0 -0.4**
comp=Z,3.0nm,0.4s
KIV Kislovodsk 15.45 65 *eP* **P** **13 15 13.6 -0.4**
KIV pmax pmax
comp=Z,14nm,0.9s
KIV MLR MLR
comp=Z,43nm,13.0s
KIV Kislovodsk 15.45 65 *eP* **P** **13 15 13.6 -0.4**
comp=Z,43nm,13.0s
KVAR Kislovodsk Arr 15.46 65 Pn **P** **13 15 12.3 -1.8**
baz=153,slow=4.5,SNR=3.5
KBZ Khabaz 15.55 66 Pn **P** **13 15 13.3 -1.7**
comp=Z,0.2nm,0.3s,baz=258,slow=9.3,SNR=7.7
ZEI Tsey 16.14 70 *eP* **P** **13 15 22.4 +0.6**
ZEI pmax pmax
comp=Z,18nm,1.2s
AVF Avril sur Loir 16.44 305 *eP* **P** **13 15 24.5 -0.3**
AVF Avril sur Loir 16.44 305 *eP* **P** **13 15 24.5 -0.3**
SSF Saint Saulge 16.44 306 *eP* **P** **13 15 24.1 -0.8**
VSR Storozhevoye 16.60 37 *eP* **Pn** **13 15 23.5 -0.6**
VSR pmax pmax
comp=Z,7.0nm,0.5s
VSR Storozhevoye 16.60 37 *eP* **Pn** **13 15 23.5 -0.6**
comp=Z,7.0nm,0.5s
GNI Garni 16.69 79 Pn **P** **13 15 28.3 +0.4**
comp=Z,1.1nm,0.3s,baz=235,slow=6.5,SNR=3.8
GNI LR LR 13 23 02.3
comp=Z,140nm,18.2s,baz=286,slow=41
GNI Garni 16.69 79 *i* P **P** **13 15 28.5 +0.7**
GNI Garni 16.69 79 *i* P **P** **13 15 28.5 +0.7**
CAF Calviac 16.75 297 *eP* **P** **13 15 28.2 -0.1**
CAF pmax pmax
comp=Z,35nm,1.8s
OBN Obninsk 18.48 25 ⇑*eP* **P** **13 15 45.9 -1.4**
OBN pmax pmax
comp=Z,11nm,0.8s
OBN MLR MLR
comp=Z,1µm,23.0s
AKT Akhty 18.91 75 *eP* **Pn** **13 15 55.8 +2.9**
AKT pmax pmax
comp=Z,4.0nm,1.0s
MOS Moscow 19.34 25 *eP* **P** **13 15 56.6 -0.1**
VSU Vasula 19.62 6 *i* P **Pn** **13 16 03.3 +2.2**
VSU pmax pmax
comp=Z,61nm,0.9s
SGMF Saint Gilles 20.70 305 *eP* **P** **13 16 12.3 +0.7**
SGMF pmax pmax
comp=Z,78nm,1.6s
ESDC Sonseca Array 20.96 280 P **P** **13 16 14.0 -0.6**
comp=Z,2.4nm,0.6s,baz=76,slow=11,SNR=19
HFS Hagfors 21.98 347 P **P** **13 16 23.4 -1.9**
comp=Z,3.9nm,0.7s,baz=151,slow=13,SNR=12
HFS LR LR 13 27 17.8
comp=Z,42nm,18.0s,baz=162,slow=43
TAM Tamanrasset 22.07 228 P **P** **13 16 26.6 -0.1**
TAM pmax pmax
comp=Z,7.0nm,1.1s
TAM Tamanrasset 22.07 228 P **P** **13 16 26.6 -0.1**
comp=Z,7.0nm,1.1s
KONO Kongsberg 22.39 342 *ceP* **P** **13 16 33.0 +3.3**
KONO pmax pmax
comp=Z,17nm,1.0s
FINES FINESS Array B 22.54 4 P **P** **13 16 30.5 -0.8**
comp=Z,8.7nm,0.8s,baz=169,slow=8.1,SNR=5.4
PBRG Braganca 22.88 287 *eP* **P** **13 16 37.9 +2.7**
comp=Z,25nm,1.4s
MVO Moncorvo 23.14 285 *eP* **P** **13 16 38.3 +0.5**
comp=Z,21nm,1.4s
MDT Midelt 23.27 263 P **P** **13 16 36.8 -2.5**
comp=Z,2.7nm,0.8s,baz=90,slow=3.0,SNR=2.5
MDT LR LR 13 28 06.3
comp=Z,53nm,19.1s,baz=18,slow=43
NB2 NORSAR Subarra 23.28 345 P **P** **13 16 37.3 -1.8**
comp=Z,9.3nm,0.8s,baz=153,slow=11
NOA NORSAR Array B 23.28 345 LR LR 13 27 56.2
comp=Z,16nm,19.8s,baz=150,slow=42
PBAR Barrancos 23.57 278 *eP* **P** **13 16 43.6 +1.6**
comp=Z,19nm,1.6s
PBAR Barrancos 23.57 278 *eP* **P** **13 16 43.6 +1.6**
MTE Manteigas 23.60 283 *eP* **P** **13 16 43.4 +0.9**
comp=Z,13nm,1.5s
MTE Manteigas 23.60 283 *eP* **P** **13 16 43.4 +0.9**
PMRV Marv??o 23.62 281 *eP* **P** **13 16 43.3 +0.7**
comp=Z,20nm,1.4s
PMRV Marv??o 23.62 281 *eP* **P** **13 16 43.3 +0.7**
PCBR Castelo Branco 23.62 282 *eP* **P** **13 16 44.7 +2.1**
comp=Z,12nm,2.0s
PCBR Castelo Branco 23.62 282 *eP* **P** **13 16 44.7 +2.1**
PVIS Viseu 23.84 284 *eP* **P** **13 16 45.4 +0.7**
comp=Z,19nm,1.2s
PVIS Viseu 23.84 284 *eP* **P** **13 16 45.4 +0.7**
KLMR Klimovskoe 24.15 20 *eP* **P** **13 16 49.2 +1.9**
KLMR pmax pmax
comp=Z,13nm,1.1s
KLMR Klimovskoe 24.15 20 *eP* **P** **13 16 49.2 +1.9**
KLMR AMP 13 17 05.9
comp=Z,13nm,1.1s
PVAQ Vaqueiros 24.26 276 *eP* **P** **13 16 49.8 +1.2**
comp=Z,20nm,1.5s
PVAQ Vaqueiros 24.26 276 *eP* **P** **13 16 49.8 +1.2**
PMTG Montargil 24.31 280 *eP* **P** **13 16 47.2 -1.9**
comp=Z,16nm,1.7s
PMTG Montargil 24.31 280 *eP* **P** **13 16 47.2 -1.9**
JOF Joensuu 24.46 9 P **P** **13 16 48.3 -1.9**
JOF pmax pmax
comp=Z,14nm,2.5s
PBDV Barranco-do-Ve 24.46 276 *eP* **P** **13 16 50.5 0.0**
comp=Z,36nm,0.9s
PBDV Barranco-do-Ve 24.46 276 *eP* **P** **13 16 50.5 0.0**
ALMR Almeirim 24.57 280 *eP* **P** **13 16 53.5 +2.1**
ALMR Almeirim 24.57 280 *eP* **P** **13 16 53.5 +2.1**
PNCL Nicolau / Gran 24.73 278 *eP* **P** **13 16 54.3 +1.4**
comp=Z,22nm,1.5s
PNCL Nicolau / Gran 24.73 278 *eP* **P** **13 16 54.3 +1.4**
PTEO Sao Teotonio 25.00 277 *eP* **P** **13 16 56.6 +1.2**
comp=Z,59nm,1.6s
PTEO Sao Teotonio 25.00 277 *eP* **P** **13 16 56.6 +1.2**
PRGR Permogore 26.55 24 *eP* **P** **13 17 10.5 +1.3**
PRGR pmax pmax
comp=Z,14nm,1.1s
AKTO Aktyubinsk 27.04 54 P **P** **13 17 12.9 -0.8**
comp=Z,1.8nm,0.8s,baz=258,slow=14,SNR=5.2
AKTO LR LR 13 30 05.0
comp=Z,56nm,20.1s,baz=268,slow=41
GEYT Alibeck 27.30 81 LR LR 13 31 23.6
comp=Z,39nm,19.9s,baz=250,slow=44
ARU Arti 29.08 41 *d iP* **P** **13 17 34.5 +2.7**
ARU 13 18 24.9
ARU 13 20 37.4
ARU S **S** **13 22 28.2 +5.0**
ARU SS **SnSn** **13 23 48.9 +2.2**
ARU pmax pmax
comp=Z,15nm,2.5s
TORD Torodi Ar. Bea 31.99 222 P **P** **13 17 55.8 -2.1**
comp=Z,4.3nm,1.0s,baz=21,slow=10
TORD LR LR 13 32 15.2
comp=Z,74nm,18.1s,baz=295,slow=39
KOWA Kowa 34.17 232 LR LR 13 33 57.4
comp=Z,154nm,18.0s,baz=40,slow=39
BRVK Borovoye 34.95 51 *eP* **P** **13 18 26.9 +3.6**
BRVK pmax pmax
comp=Z,18nm,2.5s
BVAR Borovoye Array 35.01 51 P **P** **13 18 22.0 -1.9**
comp=Z,0.7nm,0.8s,baz=267,slow=2.9,SNR=3.6
BVAR Borovoye Array 35.01 51 P **P** **13 18 22.0 -1.9**
BORG Borgarnes 36.42 330 LR LR 13 35 36.2
comp=Z,50nm,18.3s,baz=126,slow=40
MNAS Manas 37.13 68 P **P** **13 18 39.8 -2.6**
MNAS pmax pmax
comp=Z,3.0nm,0.5s
SPITS Spitsbergen Ar 39.39 358 LR LR 13 35 59.0
comp=Z,62nm,19.9s,baz=335,slow=37
KURBB Kurchatov Arra 40.08 55 P **P** **13 19 04.1 -2.7**
comp=Z,1.1nm,0.7s,baz=279,slow=8.5,SNR=6.5
KURBB PcP **PcP** **13 21 14.5 +3.2**
comp=Z,0.9nm,0.8s,baz=272,slow=4.1,SNR=3.3
KURK Kurchatov 40.13 54 P **P** **13 19 04.1 -3.1**
KURK 13 21 14.5
KURK pmax pmax
comp=Z,1.0nm,0.2s
KURK pmax pmax
comp=Z,1.0nm,0.8s
DBIC Dimbokro 40.91 225 P **P** **13 19 11.9 -2.2**
comp=Z,5.4nm,0.7s,baz=45,slow=20,SNR=2.1
NVS Novosibirsk 42.60 48 *eP* **P** **13 19 26.4 -1.1**
MKAR Makanchi Array 43.11 60 P **P** **13 19 30.6 -1.1**
comp=Z,1.4nm,0.6s,baz=292,slow=6.4,SNR=14
ZALV Zalesovo Beam 43.60 49 P **P** **13 19 34.5 -1.1**
comp=Z,3.2nm,0.7s,baz=271,slow=9.4,SNR=8.9
ZALV PP **PP** **13 21 17.5 +0.7**
comp=Z,1.6nm,0.9s,baz=269,slow=9.8,SNR=2.6
ZALV LR LR 13 39 27.5
comp=Z,30nm,20.1s,baz=251,slow=38
DGZ Jazzator, Alta 45.88 55 *eP* **P** **13 19 57.5 +3.5**

DGZ pmax pmax
comp=Z,1.0nm,0.8s
SFJD Kangerlussuaq 48.55 330 LR LR 13 41 44.2
comp=Z,43nm,18.2s,baz=96,slow=37
SONM Songino Array 58.34 52 P **P 13 21 24.0 -2.7**
comp=Z,0.3nm,0.3s,baz=316,slow=4.0,SNR=3.6
SONM PcP **PcP 13 22 20.9 +3.3**
comp=Z,0.4nm,0.5s,baz=298,slow=3.1,SNR=3.1
ULN Ulaanbaatar 58.73 52 *i* P **P 13 21 32.7 +3.2**
ULN pmax pmax
comp=Z,5.0nm,1.4s
BOSA Boshof 67.29 178 LR LR 13 55 59.9
comp=Z,48nm,19.7s,baz=0.0,slow=40
BILL Bilibino 69.74 14 *eP* **P 13 22 45.5 +4.4**
BILL *e* 13 25 19.6
BILL pmax pmax
comp=Z,4.0nm,1.1s
BILL MLR MLR
comp=Z,33nm,16.0s
SADO Sadowa 71.23 313 LR LR 13 54 44.4
comp=Z,43nm,18.9s,baz=79,slow=36
KLR Kul'dur 71.92 41 *i* P **P 13 22 57.4 +2.7**
YKA Yellowknife Ar 73.31 341 P **P 13 23 01.4 -1.2**
comp=Z,1.7nm,0.6s,baz=33,slow=5.4,SNR=9.9
ULM Lac du Bonnet 76.24 325 LR LR 14 00 05.8
comp=Z,26nm,18.8s,baz=320,slow=38
ILAR Eielson Array 76.27 356 P **P 13 23 18.0 -1.8**
comp=Z,0.6nm,0.8s,baz=356,slow=4.5,SNR=4.4
KSRS Korea Array 77.21 52 P **P 13 23 22.7 -2.9**
comp=Z,1.0nm,0.8s,baz=324,slow=7.7,SNR=4.6
KSRS LR LR 14 00 15.2
comp=Z,26nm,18.7s,baz=299,slow=38
YSS Yuzh-Sakhalins 78.88 37 *eP* **P 13 23 38.7 +4.0**
YSS pmax pmax
comp=Z,22nm,2.5s
PETK Petropavlovsk- 80.18 26 LR LR 14 03 33.8
comp=Z,49nm,18.4s,baz=267,slow=39
ASAJ Asahikawa 80.86 39 LR LR 14 03 24.2
comp=Z,42nm,18.6s,baz=317,slow=38
JNU Nakatsue 81.85 54 LR LR 14 07 29.0
comp=Z,24nm,18.1s,baz=307,slow=41
MJAR Matsushiro Arr 83.93 47 P **P 13 23 58.8 -2.9**
comp=Z,1.5nm,0.9s,baz=291,slow=5.8,SNR=3.7
MJAR Matsushiro Arr 83.93 47 P **P 13 23 58.8 -2.9**
MJAR pmax pmax
comp=Z,1.0nm,0.8s
PDAR Pinedale Array 88.00 327 P **P 13 24 19.4 -2.7**
comp=Z,0.5nm,0.9s,baz=67,slow=5.0,SNR=4.1
PDAR LR LR 14 06 47.9
comp=Z,34nm,18.7s,baz=52,slow=38
ANMO Albuquerque 92.91 321 *ceP* **P 13 24 49.4 +4.4**
ANMO pmax pmax
comp=Z,1.0nm,0.9s
YBH Yreka Blue Hor 93.85 335 LR LR 14 10 20.8
comp=Z,51nm,18.7s,baz=3.5,slow=38
NVAR Mina Array Bea 95.20 331 LR LR 14 09 26.1
comp=Z,45nm,19.5s,baz=278,slow=36
WRA Warramunga Arr 118.52 93 PKP **PKPdf 13 30 16.7 -3.1**
comp=Z,0.8nm,1.1s,baz=310,slow=1.8,SNR=4.8
ASAR Alice Springs 120.22 97 PKP **PKPdf 13 30 21.0 -2.0**
comp=Z,1.0nm,0.8s,baz=326,slow=1.7,SNR=4.9
ASAR Alice Springs 120.22 97 PKIKP **PKPdf 13 30 21.0 -2.0**
ASAR pmax pmax
comp=Z,1.0nm,0.8s

ISCJB ***28*** *13:43:22.6±1.5, 38°.56N×0°.07×28°.7E±0°.1, h11km±8km, Error ellipse: s-maj=20.9km s-min=6.4km az=31.2*
DDA ***28*** *13:43:23.4, 38°.59N×28°.62E, h7km, Ml2.6*
ISC 28 13:43:23.4±1.3, 38°.57N±0°.06×28°.67E±0°.07, h6km±11km, n6, σ0§27/10, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULA	**Kula-Manisa**	**0.05**	**185**	*i* PG	**Pg**	**13 43 24.8**	**-0.2**
KULA				*i* SG	**Sg**	**13 43 26.2**	**+0.1**
MANT	**Manisa**	**0.11**	**229**	*i* P	**Pg**	**13 43 25.8**	**-0.2**
MANT				*i* S	**Sg**	**13 43 27.9**	**+0.2**
DEMI	**Demirci**	**0.48**	**5**	*i* P	**Pg**	**13 43 32.7**	**+0.1**
DEMI				*i* S	**Sg**	**13 43 39.1**	**+0.2**
AKHS	**Akhisar**	**0.74**	**295**	*i* P	**Pg**	**13 43 37.3**	**-0.3**
AYDB	**Zeytinkoy-Aydi**	**0.87**	**225**	*e*PG	**Pb**	**13 43 41.1**	**+0.1**
AYDB				*e*SG	**Sg**	**13 43 51.6**	**+0.2**
TVSB	**Tavsanli**	**1.08**	**35**	*e*PG	**Pg**	**13 43 43.8**	**-0.3**

IDC 28 14:22:15.4±2.5, 5°.34S×133°.24E, h0km, mb3.5/1, mb1 4.1/4, mb1mx3.6/55, mbtmp3.9/4, ML3.8/3, MS2.9/3, Ms1 2.9/3, ms1mx2.5/35, Error ellipse: s-maj=88.3km s-min=16.5km az=82.0, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.55**	**176**	Pn	Pn	14 25 41.1	-1.8
	0.3nm,0.3s,baz=359,slow=13,SNR=27						
WRA				Sn	Sn	14 28 20.5	-4.5
	0.3nm,0.3s,baz=351,slow=24,SNR=3.8						
FITZ	**Fitzroy Crossi**	**14.69**	**210**	Pn	Pn	14 25 45.5	+0.8
	0.6nm,0.3s,baz=33,slow=13,SNR=22						
FITZ				Sn	Sn	14 28 29.1	+0.7
	0.4nm,0.3s,baz=210,slow=18,SNR=5.3						
ASAR	**Alice Springs**	**18.23**	**178**	P	P	14 26 30.6	+0.2
	0.4nm,0.3s,baz=355,slow=7.6,SNR=20						
ASAR				S	Sn	14 29 55.5	+1.2
	0.2nm,0.3s,baz=359,slow=28,SNR=5.0						
ASAR				LR	LR	14 33 05.4	
	comp=Z,94nm,21.8s,baz=24,slow=36						
GUMO	**Guam**	**22.07**	**31**	LR	LR	14 36 30.2	
	comp=Z,18nm,18.5s,baz=153,slow=39						
KSRS	**Korea Array**	**42.86**	**354**	LR	LR	14 50 27.3	
	comp=Z,11nm,18.4s,baz=190,slow=40						
MKAR	**Makanchi Array**	**68.66**	**325**	P	P	14 33 20.7	0.0
	0.3nm,0.5s,baz=113,slow=8.2,SNR=4.0						

IDC 28 14:25:27.7±436.0, 47°.48N×47°.38E, h0km, Error ellipse: s-maj=183.4km s-min=144.7km az=179.0, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	**7.60**	**63**	*i*		15 14 15.0	
	baz=250,slow=305,SNR=4.1						
I43RU	**DUBNA INFRASONI**	**11.15**	**330**	*i*		15 30 30.0	
	baz=142,slow=370,SNR=1.6						
I26DE	**FREYUNG INFRAS**	**22.40**	**286**	*i*		16 43 40.0	
	baz=82,slow=317,SNR=1.3						

NIED ***28*** *14:26:00, 37°.90N×144°.50E, h50km, Mw3.5 Best double couple: M0=2.03000×10^14 NP1:φs=31.00000°, δ=17.00000°, λ=-90.00000°. NP2:φs=211.00000°, δ=73.00000°, λ=-90.00000°.*
JMA 28 14:26:47.6±0.1, 37°.89N×144°.48E, h39km, M3.6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.51**	**299**	P	Pn	14 27 27.0	+1.2
OFUJ				S	Sn	14 27 56.9	+1.8
JIO	**Ouri**	**2.53**	**284**	P	Pn	14 27 27.8	+1.7
JIO				S	Sn	14 27 57.3	+1.6
MIYJ	**Miyakonagasawa**	**2.68**	**310**	P	Pn	14 27 29.4	+1.3
MIYJ				*e*S	Sn	14 28 01.1	+1.8
JMK	**Ichinoseki**	**2.77**	**293**	P	Pn	14 27 31.4	+2.0
JMK				*e*S	Sn	14 28 03.5	+1.9
JOM	**Ohasama**	**2.95**	**303**	P	Pn	14 27 34.0	+2.1
JOM				*e*S	Sn	14 28 09.1	+3.0
JFT	**Otama**	**3.31**	**265**	P	Pn	14 27 39.2	+2.4
JFT				*e*S	Sn	14 28 17.0	+2.1
JANG	**Nango**	**3.39**	**318**	P	Pn	14 27 40.0	+2.1
JANG				*e*S	Sn	14 28 18.8	+2.0
JYK	**Kaneyama**	**3.40**	**289**	P	Pn	14 27 40.5	+2.5
JYK				*e*S	Sn	14 28 20.1	+3.0
JOT	**Ohata**	**4.38**	**324**	P	Pn	14 27 54.1	+2.6
JOT				*e*S	Sn	14 28 41.9	+0.6
JKB	**Kayabe**	**4.79**	**327**	P	Pn	14 27 59.4	+2.2
JKB				*e*S	Sn	14 28 50.6	-0.8
JRY	**Ryogami san**	**4.84**	**249**	P	Pn	14 27 59.1	+1.1
JRY				*e*S	Sn	14 28 50.6	-2.2
NEM2	**Nemuro 2**	**5.55**	**10**	P	Pn	14 28 05.4	-2.2
NEM2				S	Sn	14 29 05.0	-5.1
JTKR	**Abashiri--Toko**	**6.09**	**356**	P	Pn	14 28 15.1	+0.1
JTKR				S	Sn	14 29 19.8	-3.6

CSEM ***28*** *14:30:06.6±0.2, 40°.83N×27°.49E, h1km, ML2.4, Error ellipse: s-maj=6.7km s-min=4.7km az=149.0, Suspected Mining explosion.*
ISK 28 14:30:06.5, 40°.82N×27°.48E, h18km, ML2.4/15, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKR	**Tekirdag**	**0.18**	**14**	PG	Pb	14 30 11.5	+0.2
TKR				SG	Sb	14 30 14.4	-0.1
TKR	**Tekirdag**	**0.18**	**14**	*e*Pg	Pb	14 30 11.5	+0.2
TKR				*e*Sg	Sb	14 30 14.4	-0.1
RKY	**Sarkoy-Tekirda**	**0.27**	**241**	PG	Pb	14 30 13.0	+0.2
RKY				SG	Sb	14 30 17.3	+0.2
RKY	**Sarkoy-Tekirda**	**0.27**	**241**	*e*Pg	Pb	14 30 13.0	+0.2
RKY				*e*Sg	Sb	14 30 17.3	+0.2
SBT3	**Marmara-Eregli**	**0.38**	**80**	PG	Pb	14 30 15.5	+0.8
SBT3	**Marmara-Eregli**	**0.38**	**80**	*e*Pg	Pb	14 30 15.5	+0.8
KRBG	**Karabiga-Canak**	**0.45**	**198**	PG	Pb	14 30 16.4	+0.5
KRBG				SG	Sb	14 30 22.6	+0.4
KRBG	**Karabiga-Canak**	**0.45**	**198**	*e*Pg	Pb	14 30 16.4	+0.5
KRBG				*e*Sg	Sb	14 30 22.6	+0.4
EDC	**Edincik**	**0.55**	**148**	PG	Pb	14 30 18.1	+0.4
EDC				SG	Sb	14 30 25.9	+0.6
EDC	**Edincik**	**0.55**	**148**	*e*Pg	Pb	14 30 18.1	+0.4
EDC				*e*Sg	Sb	14 30 25.9	+0.6
SLVT	**Silivri**	**0.69**	**53**	PG	Pg	14 30 20.7	+0.7
SLVT				SG	Sn	14 30 30.6	-1.1
SLVT	**Silivri**	**0.69**	**53**	*e*Pg	Pg	14 30 20.7	+0.7
SLVT				*e*Sg	Sn	14 30 30.6	-1.1
LPK	**Lapseki**	**0.71**	**231**	PG	Pb	14 30 20.1	-0.2
LPK	**Lapseki**	**0.71**	**231**	*e*Pg	Pb	14 30 20.1	-0.2
ERIK	**Erikli-Kesan**	**0.75**	**259**	PG	Pn	14 30 21.9	-0.3
ERIK	**Erikli-Kesan**	**0.75**	**259**	*e*Pg	Pn	14 30 21.9	-0.3
GONE	**Gonen-Balikesi**	**0.79**	**168**	PG	Pn	14 30 22.6	-0.1
GONE	**Gonen-Balikesi**	**0.79**	**168**	*e*Pg	Pn	14 30 22.6	-0.1
KCTX	**Karacabey (Bur**	**0.87**	**129**	PG	Pn	14 30 23.8	-0.1
KCTX	**Karacabey (Bur**	**0.87**	**129**	*e*Pg	Pn	14 30 23.8	-0.1
GELI	**Tayfur-Gelibol**	**0.87**	**242**	PG	Pn	14 30 23.9	0.0
GELI	**Tayfur-Gelibol**	**0.87**	**242**	*e*Pg	Pn	14 30 23.9	0.0
CTKS	**Kestanelik-??a**	**0.88**	**61**	PG	Pg	14 30 23.8	+0.1
CTKS	**Kestanelik-??a**	**0.88**	**61**	*e*Pg	Pg	14 30 23.8	+0.1
CTYL	**Yalikoy Yolu**	**0.90**	**43**	PG	Pg	14 30 24.1	+0.2
CTYL	**Yalikoy Yolu**	**0.90**	**43**	*e*Pg	Pg	14 30 24.1	+0.2
ENEZ	**Enez**	**1.01**	**266**	PG	Pg	14 30 26.2	+0.1
ENEZ	**Enez**	**1.01**	**266**	*e*Pg	Pg	14 30 26.2	+0.1
SBT5	**Esenkoy-Cinarc**	**1.08**	**99**	PN	Pg	14 30 27.5	+0.1
SBT5	**Esenkoy-Cinarc**	**1.08**	**99**	*e*Pn	Pg	14 30 27.5	+0.1
ALN	**Alexandroupoli**	**1.09**	**275**	PN	Pg	14 30 27.7	+0.1
ALN	**Alexandroupoli**	**1.09**	**275**	*e*Pn	Pg	14 30 27.7	+0.1
EDRB	**Edirne**	**1.17**	**332**	PN	Pb	14 30 28.3	+0.1
EDRB	**Edirne**	**1.17**	**332**	*e*Pn	Pb	14 30 28.3	+0.1
BALB	**Balikesir**	**1.22**	**165**	PN	Pb	14 30 28.9	-0.1
BALB	**Balikesir**	**1.22**	**165**	*e*Pn	Pb	14 30 28.9	-0.1
ISK	**Istanbul-Kandi**	**1.22**	**78**	PN	Pb	14 30 29.1	0.0
ISK	**Istanbul-Kandi**	**1.22**	**78**	*e*Pn	Pb	14 30 29.1	0.0
KAVV	**Kandilli-Istan**	**1.22**	**78**	PN	Pb	14 30 29.2	+0.1
KAVV	**Kandilli-Istan**	**1.22**	**78**	*e*Pn	Pb	14 30 29.2	+0.1
KLYT	**Kilyos**	**1.26**	**69**	PN	Pb	14 30 30.1	+0.4
KLYT	**Kilyos**	**1.26**	**69**	*e*Pn	Pb	14 30 30.1	+0.4
YLV	**Yalova**	**1.46**	**99**	PN	Pb	14 30 32.7	-0.5
YLV	**Yalova**	**1.46**	**99**	*e*Pn	Pb	14 30 32.7	-0.5
RDO	**Rodhopi**	**1.51**	**283**	PN	Pb	14 30 33.8	-0.2
RDO	**Rodhopi**	**1.51**	**283**	*e*Pn	Pb	14 30 33.8	-0.2

IDC ***28*** *14:56:40.5±2.2, 21°.78S×168°.81E, h0km, mb3.7/5, mb1 4.0/6, mb1mx3.7/43, mbtmp3.7/6, ML3.9/1, MS3.4/5, Ms1 3.4/5, ms1mx2.9/45, Error ellipse: s-maj=104.8km s-min=22.4km az=160.0*
ISC 28 14:56:44.9±1.8, 22°.0S±0°.6×168°.9E±0°.2, h31km, n13, σ1§72/13, mb3.8/6, MS3.4/5, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.27**	**267**	Pn	**Pn**	**14 57 19.0**	**-1.3**
	34nm,0.3s,baz=80,slow=19,SNR=430						
DZM				Sn	**Sn**	**14 57 46.6**	**-0.7**
	60nm,0.3s,baz=171,slow=18,SNR=17						
AFI	**Afiamalu**	**20.06**	**70**	LR	LR	15 07 38.4	
	comp=Z,84nm,18.7s,baz=248,slow=33						
CTA	**Charters Tower**	**21.20**	**271**	P	**P**	**15 01 33.0**	**+4.8**
	2.6nm,0.7s,baz=98,slow=12,SNR=5.6						
STKA	**Stephens Creek**	**26.19**	**242**	LR	LR	15 11 11.8	
	comp=Z,54nm,20.6s,baz=36,slow=33						
ASAR	**Alice Springs**	**32.24**	**260**	P	**P**	**15 03 10.4**	**-0.4**
	0.6nm,0.8s,baz=85,slow=8.2,SNR=11						
ASAR				LR	LR	15 15 11.2	
	comp=Z,69nm,19.2s,baz=116,slow=34						
WRA	**Warramunga Arr**	**32.28**	**267**	P	**P**	**15 03 10.0**	**-1.2**
	0.2nm,0.6s,baz=97,slow=8.6,SNR=4.0						
WRA				LR	LR	15 16 33.9	
	comp=Z,74nm,21.4s,baz=275,slow=37						
FITZ	**Fitzroy Crossi**	**40.71**	**267**	P	**P**	**15 04 22.9**	**-0.2**
	2.3nm,1.1s,baz=112,slow=5.4,SNR=2.7						
FITZ				LR	LR	15 19 40.7	
	comp=Z,65nm,18.7s,baz=134,slow=34						
SONM	**Songino Array**	**89.21**	**323**	P	**P**	**15 09 37.7**	**-0.1**
	0.4nm,0.8s,baz=126,slow=7.3,SNR=3.0						
NVAR	**Mina Array Bea**	**90.86**	**49**	P	**P**	**15 09 45.0**	**-0.8**
	0.5nm,0.6s,baz=229,slow=7.8,SNR=5.6						
BRG	**Berggiesshubel**	**145.15**	**332**	*e*PKP	**PKPdf**	**15 16 19.1**	**-0.1**
	7.5nm,1.0s						
BRG				*e*		15 16 24.5	
	6.6nm,1.4s						
CLL	**Collm**	**145.23**	**333**	*i* PKPbc	**PKPab**	**15 16 18.8**	**-0.3**
	comp=Z,10.0nm,1.0s						
CLL				*i* PKPab	**PKiKP**	**15 16 24.6**	**+1.4**
GERES	**GERESS Array B**	**146.71**	**330**	PKPbc	**PKPbc**	**15 16 23.7**	**0.0**
	comp=Z,1.7nm,0.8s,baz=48,slow=2.0,SNR=12						
DAVOX	**Davos/Dischmat**	**149.98**	**331**	PKPbc	**PKPbc**	**15 16 32.2**	**-0.3**
	comp=Z,3.1nm,0.7s,baz=336,slow=3.6,SNR=4.1						

MEX 28 15:35:43.3±0.7, 16°.85N×100°.33W, h14km±2km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.20**	**18**	*i* P	Pg	15 35 47.4	-0.5
CAIG				*i* S	Sg	15 35 50.5	-0.5
ACP2	**Acapulco**	**0.43**	**87**	*i* P	Pg	15 35 50.6	-1.2
ACP2				*i* S	Sg	15 35 56.3	-1.3
ACX	**Acapulco**	**0.45**	**88**	*i* P	Pg	15 35 51.2	-1.2
ACX				*i* S	Sg	15 35 56.9	-1.6
MEIG	**Mezcala**	**1.27**	**32**	*i* P	Pn	15 36 02.5	-4.2
MEIG				*i* S	Sb	15 36 17.7	-5.6
ARIG	**Puente Sto Nin**	**1.42**	**359**	*e*P	Pn	15 36 05.2	-3.6
ARIG				*i* S	Sn	15 36 21.9	-5.5
PLIG	**Platanillo**	**1.72**	**27**	*e*P	Pn	15 36 10.2	-2.9
PLIG				*i* S	Sn	15 36 30.7	-4.3
TLIG	**Tlapa**	**1.83**	**67**	*e*P	Pn	15 36 10.9	-3.6

IDC 28 15:42:16.1±1.9, 2°.69N×128°.38E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.3/57, mbtmp3.4/4, Error ellipse: s-maj=146.3km s-min=21.0km az=68.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.24**	**166**	P	P	15 47 25.3	+0.1
	1.1nm,0.5s,baz=345,slow=10,SNR=18						
ASAR	**Alice Springs**	**26.75**	**169**	P	P	15 47 57.1	-0.6
	0.2nm,0.6s,baz=349,slow=8.3,SNR=6.1						
MKAR	**Makanchi Array**	**59.34**	**325**	P	P	15 52 20.5	+0.4
	0.1nm,0.4s,baz=112,slow=7.0,SNR=3.4						
KURBB	**Kurchatov Arra**	**63.50**	**327**	P	P	15 52 48.0	-0.1
	0.2nm,0.4s,baz=125,slow=5.8,SNR=3.3						

WEL 28 15:50:39.3, 38°±5°, 18°0E±°, h60km±18km, ML3.5/12, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.03**	**275**	P	Pn	15 50 58.1	+0.4
WMGZ				S	Sn	15 51 11.4	+0.1
PUZ	**Puketiti**	**1.15**	**262**	P	Pn	15 50 59.5	+0.1
PUZ				S	Sn	15 51 15.1	+0.8
MXZ	**Matakaoa Point**	**1.17**	**288**	P	Pn	15 50 60.0	+0.4
MXZ				S	Sn	15 51 15.0	+0.4
PKGZ	**Pakihiroa**	**1.29**	**271**	P	Pn	15 51 01.3	+0.1
CNGZ	**Carnagh Statio**	**1.31**	**244**	P	Pn	15 51 02.7	+1.4
TWGZ	**Tauwhareparae**	**1.39**	**259**	P	Pn	15 51 03.0	+0.5
HAZ	**Te Kaha**	**1.53**	**276**	P	Pn	15 51 04.9	+0.5
HAZ				S	Sn	15 51 23.5	+0.2
TKGZ	**Te Karaka**	**1.55**	**250**	P	Pn	15 51 05.7	+1.0
TKGZ				S	Sn	15 51 25.3	+1.5
RUGZ	**Raukumara Rang**	**1.60**	**268**	P	Pn	15 51 05.7	+0.2
RUGZ				S	Sn	15 51 25.4	+0.1
RIGZ	**Rimuhau**	**1.72**	**242**	P	Pn	15 51 08.5	+1.5
RIGZ				S	Sn	15 51 29.5	+1.6
PRGZ	**Paritu Road**	**1.74**	**235**	P	Pn	15 51 08.8	+1.4
MWZ	**Matawai**	**1.77**	**256**	P	Pn	15 51 08.0	+0.4
MWZ				S	Sn	15 51 29.6	+0.5
MHGZ	**Mahia Peninsul**	**1.87**	**228**	P	Pn	15 51 10.5	+1.5
URZ	**Urewera**	**2.08**	**260**	P	Pn	15 51 12.7	+1.0
URZ				S	Sn	15 51 37.6	+1.1
RAHZ	**Arahi**	**2.28**	**243**	P	Pn	15 51 16.2	+1.6
RAHZ				S	Sn	15 51 42.7	+1.0
MUGZ	**Murupara**	**2.38**	**256**	P	Pn	15 51 17.8	+1.9
MTHZ	**Maungataniwha**	**2.43**	**247**	P	Pn	15 51 17.9	+1.2
MTHZ				S	Sn	15 51 46.7	+1.3
OPRZ	**Ohinepanea**	**2.49**	**271**	P	Pn	15 51 18.0	+0.6
OPRZ				S	Sn	15 51 46.1	-0.6
ARHZ	**Aropaoanui**	**2.51**	**237**	P	Pn	15 51 19.4	+1.7
ARHZ				S	Sn	15 51 49.7	+2.5
TARZ	**Mount Tarawera**	**2.54**	**262**	P	Pn	15 51 19.9	+1.7
NMHZ	**Naumai**	**2.56**	**242**	P	Pn	15 51 19.2	+0.7
ALRZ	**Allen Road**	**2.72**	**255**	P	Pn	15 51 22.2	+1.6
MRHZ	**Matea Rd**	**2.74**	**250**	P	Pn	15 51 22.0	+1.2
MCHZ	**McNeill Hill**	**2.80**	**236**	P	Pn	15 51 23.0	+1.3
BKZ	**Black Stump Fm**	**2.81**	**243**	P	Pn	15 51 22.9	+1.1
KAHZ	**Kahuranaki**	**2.89**	**229**	P	Pn	15 51 24.6	+1.6
KWHZ	**Kaweka Forest**	**2.97**	**239**	P	Pn	15 51 25.0	+0.9
KRHZ	**Kereru**	**3.12**	**236**	P	Pn	15 51 26.5	+0.4
BHHZ	**Black Hill Sta**	**3.25**	**240**	P	Pn	15 51 28.8	+0.9
WPHZ	**Waipukurau**	**3.32**	**229**	P	Pn	15 51 29.2	+0.4
PNHZ	**Pukenui**	**3.38**	**233**	P	Pn	15 51 30.0	+0.4
MOVZ	**Moawhango**	**3.43**	**243**	P	Pn	15 51 32.1	+1.7
NGZ	**Ngauruhoe**	**3.45**	**248**	P	Pn	15 51 33.6	+2.9
TSZ	**Takapari Road**	**3.61**	**233**	P	Pn	15 51 32.8	0.0
DVHZ	**Dannevirke**	**3.63**	**228**	P	Pn	15 51 33.0	-0.1
MKAZ	**Moumakai**	**3.71**	**281**	P	Pn	15 51 35.0	+0.9
PRWZ	**Pori Road**	**3.91**	**227**	P	Pn	15 51 37.1	+0.2
ETAZ	**East Tamaki Re**	**3.92**	**283**	P	Pn	15 51 38.6	+1.6
POWZ	**Post Office Ro**	**3.93**	**230**	P	Pn	15 51 38.4	+1.3
WAZ	**Wanganui**	**4.11**	**242**	P	Pn	15 51 41.8	+2.1
WCZ	**Waipu Caves**	**4.73**	**293**	P	Pn	15 51 50.4	+2.3
CAW	**Cannon Point**	**4.79**	**227**	P	Pn	15 51 48.6	-0.3

GCMT ***28*** *15:51:58.6±0.1, 13°.58S×166°.33E, h21km, MW5.4/112, Moment Tensor Solution. s112,c186; s102,c192; Duration: 1§2 Moment tensor: Scale 10^17Nm; Mrr=1.32±.02; Mθθ=0.06±.02; Mφφ=-1.26±.02; Mrθ=0.49±.03; Mrφ=0.47±.01; Mθφ=0.37±.03; Best double couple: M0=1.50400×10^17 NP1:φs=147.00000°, δ=57.00000°, λ=74.00000°. NP2:φs=355.00000°, δ=36.00000°, λ=113.00000°. Principal axes: T 1.4940, Plg=73.0000°, Azm=16.0000°; N 0.0210, Plg=13.0000°, Azm=156.0000°; P -1.5140, Plg=10.0000°, Azm=249.0000°; nsta=1 refers to body waves, cutoff=40s. nsta=2 refers to surface waves, cutoff=50s.*
NEIC ***28*** *15:51:58.6±0.1, 13°.50S×166°.63E, h10km, mb5.3/16, MW5.3 Error ellipse: s-maj=5.0km s-min=3.9km az=118.0 Best double couple: NP1:φs=185.00000°, δ=62.00000°, λ=76.00000°. NP2:φs=34.00000°, δ=32.00000°, λ=115.00000°. Principal axes: T 1.0300, Plg=70.0000°, Azm=65.0000°; N 0.0800, Plg=13.0000°, Azm=192.0000°; P -1.1100, Plg=15.0000°, Azm=286.0000°;*
BJI ***28*** *15:51:58.3, 13°.09S×166°.83E, h8km, mb4.9/59, mB5.4/51, Ms5.0/51, Ms7 4.7/48*
MOS ***28*** *15:52:00.8±1.0, 13°.56S×166°.55E, h33km, mb5.3/25, MS4.8/8, Error ellipse: s-maj=8.4km s-min=7.4km az=96.1*
ISCJB ***28*** *15:52:01.4±0.1, 13°.55S±0°.03×166°.62E±0°.03, h39km, mb4.9/77, MS4.7/59, Error ellipse: s-maj=4.7km s-min=3.6km az=28.6*
IDC ***28*** *15:52:04.9±2.8, 13°.56S×166°.50E, h50km±24km, mb4.4/28, mb1 4.4/31, mb1mx4.4/50, mbtmp4.6/31, ML2.5/1, MS4.7/40, Ms1 4.7/40, ms1mx4.6/46, Error ellipse: s-maj=15.7km s-min=11.1km az=77.0*
ISC 28 15:52:03.0±0.3, 13°.62S±0°.04×166°.69E±0°.05, h39km, n419, σ1§62/428, mb4.9/76, MS4.7/60, 11C-1D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.81**	**301**	*e*P	**Pn**	**15 53 53.0**	**-1.1**
HNR				*e*S	Sn	15 55 10.0	-11
HNR	**Honiara**	**7.81**	**301**	P	**Pn**	**15 53 53.3**	**-0.8**
	11nm,0.3s,baz=170,slow=5.6,SNR=18						
HNR				S	**Sn**	**15 55 17.3**	**-4.0**
	57nm,0.3s,baz=316,slow=22,SNR=5.7						
HNR				LR	LR	15 56 32.5	
	comp=Z,6μm,19.2s,baz=138,slow=35						
HNR	**Honiara**	**7.81**	**301**	*e*Pn	**Pn**	**15 53 51.9**	**-2.2**
HNR	**Honiara**	**7.81**	**301**	*e*P	**Pn**	**15 53 51.9**	**-2.2**
DZM	**Mont Dzumac**	**8.41**	**182**	P	**Pn**	**15 54 05.0**	**+2.5**
	3.2nm,0.3s,baz=348,slow=21,SNR=12						
DZM				S	**Sn**	**15 55 36.4**	**+0.1**
	1.7nm,0.3s,baz=153,slow=16,SNR=2.5						
DZM				LR	LR	15 57 17.2	
	comp=Z,12μm,18.6s,baz=14,slow=37						
DZM	**Mont Dzumac**	**8.41**	**182**	*e*Pn	Pn	15 54 10.3	+7.8
	272nm,1.1s						
DZM		

comp=Z,827nm,20.9s,baz=166,slow=34
THZ Tophouse 28.56 170 *e*P **P 15 57 58.5 +3.2**
STKA Stephens Creek 29.30 227 P **P 15 58 02.6 +0.6**
comp=Z,13nm,0.6s,baz=48,slow=8.7,SNR=29
STKA LR LR 16 09 51.4
comp=Z,4μm,18.4s,baz=56,slow=36
STKA Stephens Creek 29.30 227 P **P 15 58 02.8 +0.9**
baz=29,SNR=27
STKA Stephens Creek 29.30 227 *e*P **P 15 58 02.4 +0.5**
STKA Stephens Creek 29.30 227 *e*P **P 15 58 02.4 +0.5**
FOZ Fox Glacier 29.93 175 *e*P **P 15 58 08.8 +1.5**
OXZ Oxford 29.96 172 *e*P **P 15 58 08.1 +0.5**
RPZ Rata Peaks 30.23 174 P **P 15 58 13.1 +3.1**
comp=Z,8.0nm,0.6s,baz=335,slow=5.1,SNR=4.0
RPZ Rata Peaks 30.23 174 *e*P **P 15 58 12.0 +2.0**
MQZ McQueen's Vall 30.42 171 *e*P **P 15 58 12.9 +1.2**
TOO Toolangi 30.42 215 P **P 15 58 15.6 +3.8**
baz=31,SNR=4.0
LBZ Lake Benmore 30.81 175 *e*P **P 15 58 16.7 +1.6**
WKZ Wanaka 31.17 177 *e*P **P 15 58 19.6 +1.3**
WB2 Warramunga Arr 31.55 254 *e*P **P 15 58 20.4 -1.6**
WRAB Tennant Creek 31.55 254 *e*P **P 15 58 20.8 -1.2**
comp=Z,26nm,1.0s
WRAB Tennant Creek 31.55 254 *e*P **P 15 58 20.4 -1.6**
WRAB pmax pmax
comp=Z,18nm,1.1s
WR1 Warramunga Arr 31.57 254 *e*P **P 15 58 20.3 -1.8**
WRA Warramunga Arr 31.57 254 P **P 15 58 20.3 -1.8**
comp=Z,6.3nm,0.7s,baz=86,slow=9.2,SNR=75
WRA LR LR 16 10 47.7
comp=Z,5μm,18.5s,baz=85,slow=36
MLZ Mavora Lakes 31.67 178 *e*P **P 15 58 25.3 +2.6**
DCZ Deep Cove 31.75 179 *e*P **P 15 58 23.1 -0.2**
HTT Hallett 32.04 227 P **P 15 58 27.8 +1.7**
baz=32,SNR=6.9
WHZ Wether Hill Ro 32.19 178 *e*P **P 15 58 27.6 +0.4**
AS01 Alice Springs 32.52 247 *e*P **P 15 58 29.1 -1.3**
AS31 Alice Springs 32.56 247 *e*P **P 15 58 29.5 -1.3**
ASAR Alice Springs 32.56 247 P **P 15 58 29.3 -1.5**
comp=Z,5.2nm,0.7s,baz=74,slow=9.5,SNR=92
ASAR LR LR 16 11 43.7
comp=Z,3μm,18.0s,baz=77,slow=36
RAR Rarotonga 32.83 108 LR LR 16 09 30.4
comp=Z,1μm,19.7s,baz=282,slow=32
TAU Tasmania Unive 33.63 206 *e*P **P 15 58 40.9 +1.1**
TAU Tasmania Unive 33.63 206 *e*P **P 15 58 40.9 +1.1**
BBOO Buckleboo 33.83 230 P **P 15 58 42.7 +0.9**
baz=34,SNR=6.8
BBOO Buckleboo 33.83 230 *e*P **P 15 58 41.4 -0.4**
MTN Manton Dam 34.60 267 P **P 15 58 48.7 0.0**
baz=35,SNR=328
GUMO Guam 34.61 320 LR LR 16 11 30.7
comp=Z,1μm,21.3s,baz=136,slow=34
WRKA Warakurna 37.84 247 P **P 15 59 15.8 -0.4**
baz=38,SNR=4.9
FORT Forrest 39.39 238 *e*P **P 15 59 29.3 +0.2**
FITZ Fitzroy Crossi 39.68 258 P **P 15 59 30.6 -1.1**
comp=Z,6.6nm,0.9s,baz=98,slow=8.6,SNR=12
FITZ LR LR 16 15 43.1
comp=Z,2μm,18.1s,baz=75,slow=36
FITZ Fitzroy Crossi 39.68 258 P **P 15 59 31.1 -0.6**
baz=40,SNR=13
FITZ Fitzroy Crossi 39.68 258 *e*P **P 15 59 31.2 -0.5**
MCQ Macquarie Isla 41.24 187 *e*P **P 15 59 43.5 -0.5**
MCQ Macquarie Isla 41.24 187 *e*P **P 15 59 43.5 -0.5**
SOEI Soe 41.68 271 *e*P **P 15 59 48.2 -0.2**
BATI Baumata 42.20 270 LR LR 16 17 46.0
comp=Z,2μm,19.7s,baz=146,slow=37
PPT Papeete 42.24 101 LR LR 16 13 31.1
comp=Z,489nm,19.9s,baz=270,slow=30
PPT Papeete 42.24 101 *e*P **P 15 59 54.4 +1.5**
PPT Papeete 42.24 101 *e*P **P 15 59 54.4 +1.5**
PPT2 Papeete2 42.24 101 *e*S S 16 06 31.8 +21
comp=Z,268nm,21.8s
PPT2 *e*LQ LQ 16 10 15.2
comp=Z,3μm,28.8s
PPT2 *e*LR LR 16 12 06.5
comp=Z,1μm,24.5s,baz=268
PPTF Pamatai, Papee 42.25 101 *e*P **P 15 59 54.4 +1.4**
TBI Tubuai 42.56 110 *e*S S 16 06 37.6 +22
comp=Z,550nm,26.0s
TBI *e*LQ LQ 16 10 21.3
comp=Z,2μm,30.2s
TBI *e*LR LR 16 12 20.1
comp=Z,2μm,24.0s,baz=282
MMRI Maumere 43.85 272 *e*P **P 16 00 03.4 -2.4**
KMBL Kambalda 44.66 239 P **P 16 00 11.4 -0.8**
baz=45,SNR=4.6
MBWA Marble Bar 45.30 254 *e*P **P 16 00 16.5 -0.9**
comp=Z,190nm,1.0s
DAV Davao City (W) 45.70 294 LR LR 16 19 44.4
comp=Z,407nm,18.3s,baz=109,slow=36
MEEK Meekatharra 46.70 246 P **P 16 00 27.9 -0.5**
baz=47,SNR=10
KEKH Kekaha 48.35 43 *e*P **P 16 00 39.8 -1.4**
NWAO Narrogin (SRO) 48.84 238 P **P 16 00 44.4 -0.5**
comp=Z,7.4nm,0.8s,baz=310,slow=7.9,SNR=3.0
NWAO LR LR 16 20 33.9
comp=Z,927nm,21.1s,baz=317,slow=35
BLDU Ballidu 48.89 241 P **P 16 00 47.2 +1.9**
baz=49,SNR=4.0
MORW Morawa 49.25 243 P **P 16 00 48.7 +0.7**
baz=49,SNR=4.4
KHU Kahuku 49.45 49 *e*P **P 16 00 49.6 -0.2**
KHU Kahuku 49.45 49 *e*P **P 16 00 49.6 -0.2**
MUN Mundaring 49.53 240 P **P 16 00 52.0 +1.8**
baz=50,SNR=5.3
HMH Humu'ula Sheep 49.76 49 *e*P **P 16 00 52.7 +0.4**
TAOE Nuku Hiva Isla 52.28 91 *e*S S 16 08 53.0 +19
comp=Z,661nm,25.7s
TAOE *e*LR LR 16 16 49.5
comp=Z,964nm,21.0s
TGY Tagaytay City 53.02 300 LR LR 16 24 08.2
comp=Z,328nm,19.2s,baz=194,slow=36
JHJ Hachijo jima 2 53.10 332 LR LR 16 24 38.6
comp=Z,287nm,18.6s,baz=98,slow=37
UGM Wanagama 55.37 270 *e*P **P 16 01 29.2 -4.6**
RKT Rikitea 55.86 109 *e*S S 16 09 42.1 +20
comp=Z,597nm,28.8s
RKT *e*LQ LQ 16 15 53.2
comp=Z,603nm,28.5s
RKT *e*LR LR 16 18 27.7
comp=Z,722nm,24.8s
SBUM Sibu 56.32 282 *e*P **P 16 01 39.7 -0.8**
MJAR Matsushiro Arr 56.66 333 P **P 16 01 41.6 -0.9**
comp=Z,7.7nm,1.1s,baz=171,slow=7.1,SNR=4.7
MAJO Matsushiro 56.67 333 *e*P **P 16 01 40.2 -2.3**
comp=Z,18nm,1.2s
MAJO Matsushiro 56.67 333*c i*P **P 16 01 41.2 -1.3**
MAJO pmax pmax
comp=Z,26nm,1.4s
MJB9 Matsu-Tunnel 56.67 333 *e*P **P 16 01 40.8 -1.8**
JNU Nakatsue 57.70 324 P **P 16 01 49.4 -0.5**
comp=Z,3.6nm,0.7s,baz=163,slow=8.3,SNR=2.7
JNU LR LR 16 23 33.6
comp=Z,269nm,21.3s,baz=126,slow=33
JNU Nakatsue 57.70 324 *e*P **P 16 01 47.6 -2.3**
KSM Kuching 57.85 281 *e*P **P 16 01 50.9 -0.4**
CISI Cisompet, Garu 58.07 270 *e*P **P 16 01 51.9 -1.0**
TPUB Ta-pu 58.11 309 *e*P **P 16 01 52.2 -0.8**
YHNB Yeheng 58.34 311 *e*P **P 16 01 51.8 -2.8**
LEM Lembang 58.41 270 P **P 16 01 55.0 -0.4**
comp=Z,24nm,0.7s,baz=110,slow=9.4,SNR=2.7
LEM LR LR 16 27 09.5
comp=Z,359nm,21.3s,baz=96,slow=36
LEM Lembang 58.41 270 *e*P **P 16 01 55.0 -0.4**
LEM Lembang 58.41 270 *e*P **P 16 01 55.0 -0.4**
YUK Yuzh-Kuril'sk 60.44 343*c i*P P 16 02 02.7 -5.9
YUK *e* 16 04 24.1
YUK *e*S S 16 10 10.7 -10
YUK pmax pmax
comp=Z,38nm,0.8s
YUK pmax pmax
comp=N,15nm,0.7s
YUK pmax pmax
comp=E,15nm,0.6s
YUK pmax pmax
comp=Z,85nm,3.2s
QZH Quanzhou 60.57 309⇑*i*P **P 16 02 11.0 +1.1**
QZH S **S 16 10 25.8 +2.4**
KUR Kuril'sk 61.01 345*c i*P **P 16 02 13.1 +0.7**
KUR *e* 16 02 52.5
KUR *e* 16 04 28.1
KUR *i*S S 16 10 37.0 +8.8
KUR pmax pmax
comp=Z,57nm,1.7s
KUR pmax pmax
comp=Z,307nm,10.0s
KUR MLR MLR
comp=Z,688nm,16.0s
KUR MLR MLR
comp=E,124nm,15.0s
KUR MLR MLR
comp=N,622nm,16.0s
ASAJ Asahikawa 61.51 340 P **P 16 02 16.4 +0.5**
comp=N,19nm,0.7s,baz=203,slow=6.7,SNR=52
ASAJ LR LR 16 25 34.8
comp=N,742nm,20.6s,baz=168,slow=33
ASAJ Asahikawa 61.51 340 *e*P **P 16 02 16.2 +0.3**
KSRS Korea Array 62.51 326 P **P 16 02 22.8 +0.1**
comp=N,2.9nm,0.9s,baz=139,slow=7.5,SNR=14
KSRS LR LR 16 26 59.8
comp=N,231nm,20.7s,baz=130,slow=34
KS15 Wonju Array Si 62.52 326 *e*P **P 16 02 23.1 +0.3**
KSAR Wonju Array Be 62.52 326 P **P 16 02 22.8 0.0**
KSAR Wonju Array Be 62.52 326 P **P 16 02 22.8 0.0**
KS01 Wonju Array Si 62.54 326 *e*P **P 16 02 22.7 -0.2**
VNDA Vanda 63.95 181 P **P 16 02 32.9 +1.1**
comp=N,2.1nm,0.7s,baz=5.1,slow=6.2,SNR=14
YSS Yuzh-Sakhalins 64.00 342 *e*P **P 16 02 33.3 +0.9**
comp=N,28nm,1.0s
YSS Yuzh-Sakhalins 64.00 342 *e*P **P 16 02 32.8 +0.4**
YSS *e* 16 03 01.7
YSS *e* 16 04 55.7
YSS *e*PPP PPP 16 06 28.0
YSS *e*PS **PnS 16 11 27.0 -0.2**
YSS pmax pmax
comp=Z,300nm,4.5s
YSS pmax pmax
comp=N,100nm,2.3s
YSS pmax pmax
comp=E,100nm,2.2s
YSS pmax pmax
comp=Z,30nm,1.1s
YSS pmax pmax
comp=N,10.0nm,1.2s
YSS pmax pmax
comp=E,20nm,0.9s
YSS MLR MLR
comp=E,200nm,15.0s
MYKOM Kota Tinggi 64.13 279 *e*P **P 16 02 33.0 -1.0**
SBA Scott Base 64.24 180 *e*P **P 16 02 34.8 +1.2**
comp=E,163nm,1.9s
SBA Scott Base 64.24 180 *e*P **P 16 02 34.8 +1.2**
SBA pmax pmax
comp=Z,163nm,1.9s
CASY Casey 64.34 202 *e*P **P 16 02 34.2 -0.2**
comp=Z,46nm,1.5s
NJ2 Nanjing 64.49 316 *e*P **P 16 02 36.0 +0.1**
NJ2 pmax pmax
comp=Z,22nm,1.4s
NJ2 LR LR
comp=Z,480nm,18.4s
SKR Severo-Kuril's 64.69 353 *e*P **P 16 02 33.5 -3.3**
SKR pmax pmax
comp=Z,100nm,7.1s
SKR pmax pmax
comp=Z,300nm,8.4s
QIZ Qiongzhong 64.71 299 P **P 16 02 39.0 +1.4**
QIZ S **S 16 11 20.0 +4.4**
QIZ pmax pmax
comp=Z,190nm,6.6s
QIZ LR LR
comp=Z,170nm,15.7s
QIZ LR LR
comp=Z,210nm,17.6s
QIZ Qiongzhong 64.71 299 *e*P **P 16 02 37.1 -0.5**
USRK Ussuriysk Ar. 65.64 333 P **P 16 02 43.9 +0.7**
comp=Z,22nm,0.9s,baz=129,slow=5.3
USRK LR LR 16 29 28.1
comp=Z,251nm,20.2s,baz=138,slow=34
SMY Shemya 66.38 5 *e*P **P 16 02 46.5 -1.2**
SMY Shemya 66.38 5 *e*P **P 16 02 46.5 -1.2**
BKNI Bangkinang 66.45 276 *e*P **P 16 02 47.7 -1.3**
KIWB Kanaga Island 66.69 11 *e*P **P 16 02 49.0 -0.8**
PET Petropavlovsk 66.73 355 *e*P **P 16 02 49.8 -0.1**
PET *e* 16 03 18.6
PET *e* 16 05 20.8
PET *e*S **S 16 11 37.7 -1.2**
PET *e*SS **SS 16 16 02.3 +4.7**
PET pmax pmax
comp=Z,200nm,9.6s
PET pmax pmax
comp=Z,200nm,14.0s
WHN Wuhan 66.78 312 P **P 16 02 51.0 +0.2**
WHN S **S 16 11 41.0 +0.5**
WHN LR LR
comp=Z,970nm,18.5s
PEA0B Petropavlovsk- 66.90 354 *e*P **P 16 02 52.5 +1.4**
PETK Petropavlovsk- 66.90 354 P **P 16 02 52.4 +1.3**
comp=Z,3.4nm,0.8s,baz=122,slow=10
PETK LR LR 16 26 42.7
comp=Z,478nm,21.3s,baz=165,slow=31
PETK Petropavlovsk- 66.90 354 *e*P **P 16 02 51.9 +0.8**
PETK Petropavlovsk- 66.90 354 *e*P **P 16 02 51.9 +0.8**
PEA1 Petropavlovsk- 66.91 354 *e*P **P 16 02 52.4 +1.3**
UBPT Khong Chiam 67.01 293 P P 16 02 59.1 +6.6
comp=Z,32nm,1.1s
MDJ Mudanjiang 67.04 332 *e*P **P 16 02 52.2 +0.1**
comp=Z,23nm,0.9s
DL2 Dalian 67.08 323 P **P 16 02 52.5 0.0**
DL2 S **S 16 11 45.5 +1.8**
DL2 pmax pmax
comp=Z,19nm,0.9s
DL2 pmax pmax
comp=Z,260nm,4.8s
DL2 LR LR
comp=Z,300nm,17.5s
DL2 LR LR
comp=Z,280nm,16.7s
DL2 LR LR
comp=Z,340nm,19.5s
TYV Tymovskoe 67.56 344 *e*P **P 16 02 55.6 +0.4**
TYV pmax pmax
comp=Z,200nm,5.8s
TYV pmax pmax
comp=Z,13nm,1.7s
TYV MLR MLR
comp=Z,600nm,16.0s
IPM Ipoh 67.58 281 *e*P **P 16 02 55.6 -0.6**
ATKA Átka Island 67.61 13 *e*P **P 16 02 55.7 +0.2**
COCO West Island 67.88 262 *e*P **P 16 02 57.1 -1.0**
COCO West Island 67.88 262 *e*P **P 16 02 57.1 -1.0**
MNSI Mandailing Nat 67.98 276 P **P 16 02 58.8 +0.1**
CN2 Changchun 68.41 329 *e*P **P 16 03 01.0 +0.2**
CN2 *e*sP pP 16 03 08.0 -4.5
CN2 *e*S **S 16 12 00.5 +1.0**
CN2 SS **SS 16 16 25.5 +1.4**
CN2 pmax pmax
comp=Z,20nm,1.0s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=Z,210nm,18.0s
CN2 LR LR
comp=Z,170nm,18.0s
CN2 LR LR
comp=Z,290nm,22.0s
SKNT Sakolnakorn 68.97 294 P **P 16 03 05.7 +0.8**
comp=Z,20nm,1.7s
PSI Prapat 69.14 278 P **P 16 03 06.5 +0.4**
comp=Z,9.3nm,0.6s,baz=179,slow=2.0,SNR=6.9
PSI Prapat 69.14 278 *e*P **P 16 03 04.8 -1.3**
PSI Prapat 69.14 278 *e*P **P 16 03 04.8 -1.3**
GRNR Gornyy 69.36 340 *e*P **P 16 03 08.8 +2.2**
GRNR pmax pmax
comp=Z,66nm,1.1s
NIKH Nikolski High 69.58 15 *e*P **P 16 03 07.3 -0.6**
KLR Kul'dur 69.77 336*c i*P **P 16 03 09.5 +0.4**
GSI Gunungsitoli 70.05 276 P P 16 03 17.7 +6.1
GSI Gunungsitoli 70.05 276 *e*P **P 16 03 09.7 -1.9**
NONG Nongkai 70.12 295 P P 16 03 19.0 +7.1
comp=Z,22nm,1.7s
NKL Nikolayevsk 70.15 344 *e*P P 16 03 06.0 -5.3
NKL pmax pmax
comp=Z,200nm,2.0s
NKL pmax pmax
comp=Z,400nm,8.0s
ENH Enshi 70.23 309 *e*P **P 16 03 10.8 -1.6**
comp=Z,159nm,1.9s
KCSI Kotacane, Aceh 70.44 279 P **P 16 03 13.5 -0.5**
GYA Guiyang 70.62 305 *e*P **P 16 03 16.8 +1.8**
GYA PP **PP 16 05 55.5 +3.6**
GYA S **S 16 12 30.5 +4.0**
GYA SKS **ScS 16 13 15.0 -0.8**
GYA SS **SS 16 17 02.8 +3.7**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,120nm,5.8s
GYA LR LR
comp=Z,610nm,18.2s
GYA LR LR
comp=Z,590nm,18.7s
GYA LR LR
comp=Z,2μm,18.4s
UNV Unalaska Valle 70.99 16 *e*P **P 16 03 17.7 +1.3**
BJI Beijing 71.05 321⇑*e*P **P 16 03 17.3 +0.2**
BJI PP **PP 16 05 51.5 -3.7**
BJI S **S 16 12 32.5 +1.8**
BJI SS **SS 16 17 05.3 +0.4**
BJI pmax pmax
comp=Z,22nm,2.0s
BJI pmax pmax
comp=Z,450nm,6.4s
BJI LR LR
comp=Z,580nm,20.0s
BJI LR LR
comp=Z,570nm,19.2s
BJI LR LR
comp=Z,620nm,20.8s
AKUT Akutan 71.45 17 *e*P **P 16 03 18.7 -0.5**
PBKT Sadao Pong 71.51 293 P P 16 03 26.7 +6.3
comp=Z,21nm,1.7s
MLSI Meulaboh, Aceh 71.95 279 P P 16 03 30.0 +6.9
TIY Taiyuan 72.06 317 *e*P **P 16 03 24.0 +0.6**
TIY pmax pmax
comp=Z,270nm,6.7s
TIY LR LR
comp=Z,270nm,15.3s
XAN Xi'an 72.53 313 P **P 16 03 27.0 +0.8**
XAN S **SKiKP 16 12 53.8 -4.5**
XAN pmax pmax
comp=Z,270nm,3.9s
XAN LR LR
comp=Z,310nm,16.3s
XAN LR LR
comp=Z,180nm,19.7s
XAN LR LR
comp=Z,350nm,20.6s
UTHA Uthaitani 72.53 291 P P 16 03 34.8 +8.3
NANT Nan 72.55 295 P **P 16 03 29.7 +3.1**
comp=Z,4.5nm,1.6s,comp=Z,479nm
KMI Kunming 73.24 302 P **P 16 03 31.8 +0.9**
KMI pP pP 16 03 35.8 -6.9
KMI sP sP 16 03 37.5 -10
KMI PP **PP 16 06 12.5 -2.1**
KMI S **S 16 12 56.8 -0.1**
KMI sS SKiKP 16 13 04.5 +4.7
KMI SS **SS 16 17 42.3 +2.8**
KMI pmax pmax
comp=Z,17nm,1.7s
KMI pmax pmax
comp=Z,300nm,6.6s
KMI LR LR
comp=Z,230nm,17.4s
KMI LR LR
comp=Z,250nm,21.0s
BSI Banda Aceh 73.35 280 P P 16 03 38.4 +7.0
CM01 Chiang Mai Arr 73.96 294 *e*P **P 16 03 35.1 +0.2**
CM31 Chiang Mai Arr 73.98 294 *e*P **P 16 03 35.7 +0.6**
CMAR Chiang Mai Arr 73.98 294 P **P 16 03 36.0 +0.9**
comp=Z,4.6nm,0.8s,baz=123,slow=4.6,SNR=28
CMAR LR LR 16 38 24.7
comp=Z,102nm,18.5s,baz=145,slow=38
CMAR Chiang Mai Arr 73.98 294 P **P 16 03 36.0 +0.9**
SDPT Sand Point 74.06 19 *e*P **P 16 03 34.4 -0.3**
CHTO Chiang Mai 74.11 294 P **P 16 03 38.2 +2.4**
comp=Z,154nm,1.5s
CHTO Chiang Mai 74.11 294 *e*P **P 16 03 36.0 +0.2**
CHTO Chiang Mai 74.11 294 *e*P **P 16 03 36.0 +0.2**
HHC Hu-ho-hao-te 74.38 320 *e*P **P 16 03 38.0 +1.0**
HHC sP pP 16 03 44.5 -4.4
HHC S **S 16 13 15.0 +6.1**
HHC sS pS 16 13 17.8 -5.7
HHC pmax pmax
comp=Z,9.0nm,1.0s
HHC pmax pmax
comp=Z,150nm,5.9s
HHC LR LR
comp=Z,1μm,15.7s
HHC LR LR
comp=Z,1μm,16.3s
HHC LR LR
comp=Z,1μm,16.7s
CMAI Chiengmai2 74.42 295 P **P 16 03 40.4 +2.6**
comp=Z,428nm,0.9s
CD2 Chengdu 74.89 308 P **P 16 03 41.5 +1.4**
CD2 sP pP 16 03 46.0 -6.0
CD2 PP **PP 16 06 28.5 +0.3**
CD2 S **S 16 13 19.3 +4.4**
CD2 sS pS 16 13 25.0 -4.5
CD2 SS **SS 16 18 06.8 +2.8**
CD2 pmax pmax
comp=Z,30nm,0.8s
CD2 pmax pmax
comp=Z,510nm,7.7s
CD2 LR LR
comp=Z,390nm,16.2s
CD2 LR LR
comp=Z,310nm,18.0s
HIA Hailar 75.05 330 *e*P **P 16 03 40.3 -0.3**
HIA Hailar 75.05 330 *e*P **P 16 03 40.3 -0.3**
ZEA Zeya 75.06 337 *e*P **P 16 03 41.3 +0.8**
ZEA *e* 16 03 53.5
ZEA *e*S **S 16 13 20.0 +4.3**
ZEA pmax pmax
comp=N,84nm,2.0s
ZEA pmax pmax
comp=E,63nm,2.0s
ZEA pmax pmax
comp=Z,100nm,2.0s
ZEA pmax pmax
comp=N,200nm,5.0s
ZEA pmax pmax
comp=Z,200nm,5.0s
ZEA smax smax
comp=E,500nm,10.0s
ZEA smax smax
comp=N,400nm,12.0s
ZEA MLR MLR
comp=E,200nm,16.0s
ZEA MLR MLR
comp=Z,400nm,16.0s
BTO Baotou 75.22 319 *e*P **P 16 03 41.3 -0.6**
CHGN Chignik 75.51 19 *e*P **P 16 03 43.2 +0.2**
QSPA South Pole Qui 76.40 180 *e*P **P 16 03 48.9 +0.5**
SEY Seymchan 77.12 353*c i*P **P 16 03 51.8 -0.2**
LZH Lanzhou 77.16 312 *e*P **P 16 03 54.0 +0.9**
LZH pP PcP 16 03 57.3 -6.5
LZH sP pP 16 03 58.8 -6.2
LZH PP **PP 16 06 49.5 +2.1**
LZH S **S 16 13 42.5 +2.6**
LZH sS pS 16 13 49.5 -5.2
LZH SKS **SKSac 16 14 01.5 -1.6**
LZH SS **SS 16 18 42.0 +3.5**
LZH pmax pmax
comp=Z,32nm,1.5s
LZH pmax pmax
comp=Z,280nm,8.6s
LZH LR LR
comp=Z,550nm,15.5s
LZH LR LR
comp=Z,580nm,15.2s
LZH LR LR
comp=Z,760nm,18.1s
PBA Port Blair 77.50 285 *e*P P 16 03 53.8 -1.4
OHAK Old Harbor 77.96 21 *e*P **P 16 03 56.8 0.0**
CLNS Chul'man 78.29 338 *e*P **P 16 03 58.9 +0.1**
CLNS pmax pmax
comp=N,8.0nm,0.9s
CLNS pmax pmax
comp=Z,19nm,0.9s
CLNS pmax pmax
comp=E,6.0nm,0.9s

KDAK	Kodiak Island	78.63	21	eP	P	16 03 59.7	-0.8
KDAK	Kodiak Island	78.63	21	eP	P	16 03 59.7	-0.8
RPN	Rapa Nui	78.64	115	LR	LR	16 37 00.2	
comp=E,191nm,18.1s,baz=272,slow=34							
GAMB	Gambell	78.93	10	eP	P	16 04 02.1	+0.1
SVW2	Sparrevohn	80.27	18	eP	P	16 04 11.4	+2.0
CNPM	China Point	80.41	20	eP	P	16 04 09.4	-0.9
RSO	Redoubt South	80.63	19	eP	P	16 04 11.8	+0.1
BRLK	Bradley Lake	80.71	20	eP	P	16 04 11.6	-0.3
ANM	Nome	80.80	12	eP	P	16 04 12.4	+0.2
ANM	Nome	80.80	12	eP	P	16 04 12.4	+0.2
YAK	Yakutsk	80.81	343	eP	P	16 04 11.0	-1.3
YAK	Yakutsk	80.81	343	c iP	P	16 04 11.6	-0.7
YAK				e*PP	pP	16 04 22.7	-1.5
YAK				e		16 07 15.9	
YAK				eS	S	16 14 17.8	+0.5
YAK				pmax	pmax		
comp=Z,22nm,1.1s							
YAK				pmax	pmax		
comp=N,4.0nm,1.2s							
YAK				pmax	pmax		
comp=E,3.0nm,1.1s							
YAK				pmax	pmax		
comp=Z,33nm,2.8s							
YAK				smax	smax		
comp=E,86nm,5.2s							
YAK				smax	smax		
comp=N,67nm,4.7s							
YAK				MLR	MLR		
comp=Z,1μm,21.0s							
YAK				MLR	MLR		
comp=E,281nm,18.0s							
YAK				MLR	MLR		
comp=N,661nm,18.0s							
ULN	Ulaanbaatar	80.91	324	eP	P	16 04 13.0	-0.4
comp=N,27nm,1.3s							
ULN	Ulaanbaatar	80.91	324	c iP	P	16 04 13.5	+0.1
ULN				pmax	pmax		
comp=Z,32nm,1.6s							
SONA0	Songino Array	81.27	324	eP	P	16 04 15.3	0.0
SONM	Songino Array	81.27	324	P	P	16 04 15.3	0.0
comp=Z,4.9nm,0.9s,baz=137,slow=5.1,SNR=20							
SONM				LR	LR	16 41 12.2	
comp=Z,232nm,18.9s,baz=118,slow=36							
SONA1	Songino Array	81.27	324	eP	P	16 04 14.4	-0.9
BILL	Bilibino	81.44	360	eP	P	16 04 14.5	-1.0
comp=Z,8.9nm,0.8s							
BILL	Bilibino	81.44	360	c eP	P	16 04 14.7	-0.8
BILL				eS	S	16 14 32.1	+8.4
BILL				pmax	pmax		
comp=Z,9.0nm,1.0s							
GTA	Gaotai	81.50	314	eP	P	16 04 17.3	+0.7
GTA				pP	PcP	16 04 21.5	-1.1
GTA				sP	pP	16 04 24.5	-4.1
GTA				S	S	16 14 28.8	+3.1
GTA				sS	SKKSac	16 14 36.5	+0.2
GTA				pmax	pmax		
comp=Z,16nm,2.1s							
GTA				pmax	pmax		
comp=Z,310nm,6.9s							
GTA				LR	LR		
comp=Z,160nm,14.8s							
GTA				LR	LR		
comp=Z,220nm,17.2s							
GTA				LR	LR		
comp=Z,340nm,17.2s							
SUA	Susitna One	82.03	19	eP	P	16 04 19.6	+0.7
RC01	Rabbit Creek A	82.08	20	eP	P	16 04 17.1	-1.9
SKT	Skwentna	82.17	19	eP	P	16 04 17.6	-1.9
SHL	Shillong	82.54	298	eP	P	16 04 23.0	+0.5
SHL	Shillong	82.54	298	eP	P	16 04 21.4	-1.2
PMR	Palmer	82.65	20	eP	P	16 04 19.7	-2.2
PMR	Palmer	82.65	20	eP	P	16 04 19.7	-2.2
PPLA	Purkeypile	82.68	18	eP	P	16 04 23.1	+0.8
MAW	Mawson	82.70	202	P	P	16 04 21.9	-0.4
comp=Z,2.9nm,0.8s,baz=58,slow=9.5,SNR=2.8							
MAW				LR	LR	16 37 08.8	
comp=Z,367nm,19.6s,baz=86,slow=33							
MAW	Mawson	82.70	202	eP	P	16 04 21.4	-0.9
MAW	Mawson	82.70	202	eP	P	16 04 21.4	-0.9
GHO	Glory Hole Cre	82.85	20	eP	P	16 04 23.1	-0.1
CAST	Castle Rocks	83.11	17	eP	P	16 04 24.0	-0.4
BOD	Bodaibo	83.24	335	eP	P	16 04 24.6	-0.5
BOD				pmax	pmax		
comp=Z,23nm,2.1s							
RAGM	Ragged Mountai	83.34	22	eP	P	16 04 26.4	+0.8
GNAM	Navarro Ridge	83.39	47	eP	P	16 04 24.3	-2.1
SCM	Sheep Creek Mo	83.42	20	eP	P	16 04 26.0	-0.1
SCM	Sheep Creek Mo	83.42	20	eP	P	16 04 26.0	-0.1
DIV	Divide	83.45	21	eP	P	16 04 27.2	+0.9
KTH	Kantishna Hill	83.55	18	eP	P	16 04 27.6	+0.9
KCPM	Cahto Peak	83.62	47	eP	P	16 04 26.8	-0.9
KLU	Klutina	83.66	21	eP	P	16 04 28.0	+0.7
TRF	Thorofare Moun	83.66	18	eP	P	16 04 27.6	+0.2
KMRM	Mail Ridge	83.75	46	eP	P	16 04 27.0	-1.3
BMRM	Bremner River	83.76	22	eP	P	16 04 27.2	-0.6
JCC	Jacoby Creek,	83.76	46	eP	P	16 04 25.9	-2.3
GDXM	Geysers	83.84	48	eP	P	16 04 26.5	-2.3
BPAW	Bear Paw Mtn.	83.94	17	eP	P	16 04 28.8	+0.1
KHMM	Horse Mountain	83.99	46	eP	P	16 04 30.3	+0.7
CRQM	Cirque	84.15	22	eP	P	16 04 30.2	+0.3
SNCC	San Nicolas Is	84.27	54	eP	P	16 04 29.0	-2.0
MCK	McKinley	84.28	18	eP	P	16 04 29.7	-0.7
MCK	McKinley	84.28	18	eP	P	16 04 29.7	-0.7
DHY	Denali Highway	84.29	19	eP	P	16 04 30.0	-0.6
ZAK	Zakamensk	84.32	325	eP	P	16 04 29.6	-1.4
ZAK				pmax	pmax		
comp=Z,21nm,1.9s							
ZAK				pmax	pmax		
comp=Z,8.0nm,1.3s							
RDOG	Red Dog Mine	84.35	11	eP	P	16 04 29.9	-0.8
DIB	Dawson Inlet,	84.37	32	eP	P	16 04 29.5	-1.5
BWN	Browne	84.44	18	eP	P	16 04 28.5	-2.7
LSA	Lhasa	84.50	302	eP	P	16 04 32.8	0.0
comp=Z,36nm,1.5s							
HARP	HAARP	84.55	20	eP	P	16 04 32.4	+0.6
BALM	Baldy	84.63	22	eP	P	16 04 32.2	-0.1
BALM	Baldy	84.63	22	eP	P	16 04 32.2	-0.1
YKU2	Yakutat	84.69	24	eP	P	16 04 32.0	-0.5
IRK	Irkutsk	84.70	327	eP	P	16 04 32.8	0.0
IRK				pmax	pmax		
comp=Z,63nm,2.0s							
MLY	Manley	84.72	17	eP	P	16 04 32.0	-0.6
TLY	Talaya	84.76	326	eP	P	16 04 32.5	-0.6
comp=Z,16nm,0.8s							
TLY	Talaya	84.76	326	eP	P	16 04 32.5	-0.6
TLY				e		16 07 48.6	
TLY				eS	S	16 14 52.4	-5.7
TLY				pmax	pmax		
comp=Z,31nm,1.4s							
TLY				MLR	MLR		
comp=Z,223nm,19.0s							
YBH	Yreka Blue Hor	85.03	45	P	P	16 04 36.0	+1.3
comp=Z,1.1nm,0.8s,baz=288,slow=3.2,SNR=2.4							
YBH				LR	LR	16 34 29.1	
comp=Z,152nm,21.0s,baz=246,slow=30							
YBH	Yreka Blue Hor	85.03	45	eP	P	16 04 33.3	-1.5
YBH	Yreka Blue Hor	85.03	45	eP	P	16 04 33.3	-1.5
WRH	Wood River Hil	85.07	18	eP	P	16 04 33.0	-1.3
AFDM	Forest Hills D	85.21	48	eP	P	16 04 35.9	+0.2
CCB	Clear Creek Bu	85.28	18	eP	P	16 04 34.1	-1.3
HDA	Harding Lake	85.37	18	eP	P	16 04 35.2	-0.6
MDM	Murphy Dome	85.38	18	eP	P	16 04 35.0	-0.9
MENT	Mentasta	85.40	20	eP	P	16 04 35.4	-0.7
COLA	College	85.44	18	eP	P	16 04 35.5	-0.6
COLA	College	85.44	18	eP	P	16 04 35.5	-0.6
RIDG	Independ'e Rid	85.57	21	eP	P	16 04 38.2	+1.3
IL1	Eielson Array	85.65	18	eP	P	16 04 35.4	-1.8
ILAR	Eielson Array	85.65	18	P	P	16 04 36.0	-1.2
comp=Z,2.4nm,0.5s,baz=238,slow=5.4,SNR=31							
ILAR				LR	LR	16 41 41.4	
comp=Z,670nm,18.1s,baz=240,slow=35							
ILAR	Eielson Array	85.65	18	P	P	16 04 36.0	-1.2
ILB	Eielson Array	85.65	18	eP	P	16 04 36.7	-0.5
ISA	Isabella, Lake	85.91	52	eP	P	16 04 39.5	+0.3
ISA	Isabella, Lake	85.91	52	eP	P	16 04 39.6	+0.3
BEKR	Beckworth	85.99	48	eP	P	16 04 37.1	-2.6
SCRK	Sand Creek	86.01	20	eP	P	16 04 39.6	+0.4
WRAK	Wrangell Islan	86.12	29	eP	P	16 04 39.0	-0.6
MDPB	Devils Postpil	86.13	50	eP	P	16 04 39.5	-1.1
MOY	Mondy	86.20	325	eP	P	16 04 40.6	+0.2
MOY				pmax	pmax		
comp=Z,59nm,2.3s							
COLD	Coldfoot	86.51	15	eP	P	16 04 41.4	0.0
ODAN	Odare	86.78	298	eP	P	16 04 43.3	-0.7
comp=Z,45nm,0.9s							
NV01	Mina Array Sit	86.98	49	eP	P	16 04 44.2	-0.4
NVAR	Mina Array Bea	86.98	49	P	P	16 04 45.5	+0.8
comp=Z,0.7nm,0.7s,baz=236,slow=8.4,SNR=5.4							
EGAK	Eagle	87.47	20	eP	P	16 04 46.2	+0.2
comp=Z,6.8nm,0.9s							
RAMN	Ramite	87.48	298	eP	P	16 04 46.8	-0.6
comp=Z,132nm,1.8s							
PALK	Pallekele	87.82	278	LR	LR	16 48 23.3	
comp=Z,306nm,18.0s,baz=119,slow=39							
JIRN	Jiri	88.03	299	eP	P	16 04 49.1	-1.0
comp=Z,27nm,0.7s							
WVOR	Wild Horse Val	88.11	46	eP	P	16 04 49.2	-0.7
comp=Z,3.5nm,0.7s							
WVOR	Wild Horse Val	88.11	46	eP	P	16 04 49.2	-0.7
WVOR				pmax	pmax		
comp=Z,4.0nm,0.7s							
GUN	Gumba	88.37	299	eP	P	16 04 51.1	-0.6
comp=Z,38nm,1.0s							
PKIN	Phulchoki	88.69	299	eP	P	16 04 52.9	-0.2
comp=Z,26nm,0.7s							
TIXI	Tiksi	88.78	349	eP	P	16 04 50.5	-1.6
TIXI				pmax	pmax		
comp=Z,4.0nm,1.0s							
KKN	Kakani	88.84	299	eP	P	16 04 53.2	-0.6
comp=Z,41nm,0.9s							
DMN	Daman	88.94	299	eP	P	16 04 54.0	-0.3
comp=Z,45nm,0.7s							
LPIG	La Paz	89.24	65	LR	LR	16 39 18.3	
comp=Z,170nm,18.6s,baz=230,slow=32							
GKN	Gorkha	89.45	299	eP	P	16 04 55.9	-0.6
comp=Z,45nm,0.9s							
SYO	Syowa Base	89.60	197	eP	P	16 04 55.2	-1.0
KOLN	Koldanda	90.27	298	eP	P	16 04 59.5	-1.0
comp=Z,15nm,0.9s							
DANN	Dangsing	90.29	299	eP	P	16 04 59.3	-1.3
comp=Z,42nm,0.9s							
PYUN	Piuthan	90.88	299	eP	P	16 05 02.6	-0.7
comp=Z,17nm,0.9s							
WMQ	Urumqi	91.55	315	P	P	16 05 06.5	+0.6
WMQ				pP	pP	16 05 12.5	-5.5
WMQ				SKS	SKSac	16 15 41.0	+5.5
WMQ				S	S	16 16 03.8	+0.7
WMQ				pmax	pmax		
comp=Z,24nm,1.3s							
WMQ				LR	LR		
comp=Z,250nm,17.5s							
WMQ				LR	LR		
comp=Z,430nm,15.1s							
WMQ				LR	LR		
comp=Z,430nm,19.9s							
DGZ	Jazzator, Alta	93.45	320	i P	P	16 05 13.9	-0.7
DGZ				pmax	pmax		
comp=Z,4.0nm,1.2s							
NVL	N'lazarevskaya	94.07	188	eP	P	16 05 14.9	-2.0
NVL				eS	SKSac	16 15 51.0	+2.5
NVL				pmax	pmax		
comp=Z,3.0nm,0.6s							
LKWY	Lake	94.47	45	eP	P	16 05 16.1	-3.5
LKWY	Lake	94.47	45	eP	P	16 05 16.1	-3.5
PDAR	Pinedale Array	94.61	47	LR	LR	16 44 23.2	
comp=Z,433nm,18.0s,baz=276,slow=33							
SNAA	Sanae	94.62	183	P	P	16 05 19.2	-0.4
comp=Z,7.6nm,1.0s,baz=184,slow=5.9,SNR=18							
SNAA				LR	LR	16 46 48.3	
comp=Z,633nm,18.9s,baz=178,slow=35							
ANMO	Albuquerque	95.14	55	LR	LR	16 40 46.6	
comp=Z,687nm,20.1s,baz=268,slow=31							
VNA3	Neumayer Olymp	95.31	181	P	P	16 05 23.0	+0.4
VNA2	Neumayer--Watz	95.57	182	P	P	16 05 24.6	+0.8
baz=176,slow=4.2							
VNA1	Neumayer--Stat	95.87	182	P	P	16 05 25.7	+0.5
MK31	Makanchi Array	96.01	317	eP	P	16 05 26.1	-0.2
MK32	Makanchi Array	96.01	317	eP	P	16 05 26.0	-0.3
MKAR	Makanchi Array	96.01	317	P	P	16 05 26.0	-0.3
comp=Z,8.2nm,0.4s,baz=97,slow=6.0,SNR=2.8							
MKAR				LR	LR	16 49 54.1	
comp=Z,141nm,19.9s,baz=75,slow=36							
MKAR	Makanchi Array	96.01	317	eP	P	16 05 25.6	-0.6
ZAA0	Zalesovo Array	96.17	324	eP	P	16 05 25.5	-1.2
ZALV	Zalesovo Beam	96.17	324	P	P	16 05 26.0	-0.7
comp=Z,3.3nm,0.7s,baz=114,slow=5.0,SNR=14							
ZALV				LR	LR	16 50 30.3	
comp=Z,130nm,18.8s,baz=70,slow=36							
ZALV	Zalesovo Beam	96.17	324	eP	P	16 05 25.2	-1.4
ZALV	Zalesovo Beam	96.17	324	eP	P	16 05 25.3	-1.4
ZAA1	Zalesovo Array	96.17	324	eP	P	16 05 26.0	-0.7
MAKZ	Makanchi	96.23	317	eP	P	16 05 27.0	-0.2
MAKZ	Makanchi	96.23	317	eP	P	16 05 27.0	-0.2
TXAR	Lajitas Array	96.25	61	P	P	16 05 28.6	+0.8
comp=Z,0.1nm,0.4s,baz=224,slow=3.8,SNR=2.8							
TXAR				LR	LR	16 41 09.9	
comp=Z,294nm,19.9s,baz=0.0,slow=31							
YKA	Yellowknife Ar	96.82	27	P	P	16 05 28.9	-0.6
comp=Z,0.4nm,0.6s,baz=261,slow=4.1,SNR=3.1							
YKA				LR	LR	16 44 49.1	
comp=Z,18nm,19.2s,baz=276,slow=33							
NVS	Novosibirsk	97.28	325	eP	P	16 05 29.7	-2.0
NVS				pmax	pmax		
comp=Z,26nm,2.1s							
NVS				pmax	pmax		
comp=N,5.0nm,1.3s							
NVS				pmax	pmax		
comp=E,9.0nm,1.8s							
KSH	Kashi	99.07	308	P	Pdif	16 05 42.5	+2.1
KURK	Kurchatov	99.19	320	eP	Pdif	16 05 40.1	-0.3
KURK	Kurchatov	99.19	320	eP	Pdif	16 05 39.8	-0.6
KURK				pmax	pmax		
comp=Z,1.0nm,1.0s							
KURBB	Kurchatov Arra	99.23	320	P	Pdif	16 05 40.1	-0.5
comp=Z,1.1nm,1.1s,baz=102,slow=3.7,SNR=7.2							
BVAR	Borovoye Array	104.53	322	Pdiff	Pdif	16 06 03.9	-0.3
comp=Z,0.4nm,0.6s,baz=100,slow=7.5,SNR=4.0							
ARA0	ARCESS Array S	119.04	345	ePKPdf	PKPdf	16 10 46.4	-0.6
ARCES	ARCESS Array B	119.04	345	PKP	PKPdf	16 10 46.4	-0.6
comp=Z,2.7nm,0.6s,baz=60,slow=2.5,SNR=15							
MVL	Millersville	119.24	52	ePKPdf	PKPdf	16 10 46.7	-1.5
OBN	Obninsk	123.47	328	i PKIKP	PKPdf	16 10 56.5	+0.6
OBN				e		16 12 40.4	
OBN				eSS	SS	16 29 35.7	+15
OBN				pmax	pmax		
comp=Z,10.0nm,0.7s							
VSR	Storozhevoye	123.66	323	ePKIKP	PKPdf	16 10 56.1	-0.3
VSR				pmax	pmax		
comp=Z,6.0nm,0.5s							
KIV	Kislovodsk	123.67	314	i PKIKP	PKPdf	16 10 57.5	+0.7
KIV				e		16 12 37.1	
KIV				ePS	PS	16 22 33.2	-4.4
KIV				pmax	pmax		
comp=Z,11nm,1.1s							
KIV				MLR	MLR		
comp=Z,182nm,21.0s							
NEY	Neytrino	123.82	313	ePKIKP	PKPdf	16 10 57.6	+0.4
FIA0	FINESS Array S	124.49	338	ePKPdf	PKPdf	16 10 57.1	-0.6
FIA0	FINESS Array S	124.49	338	eP	PKPdf	16 10 57.1	-0.6
FINES	FINESS Array B	124.49	338	PKP	PKPdf	16 10 57.1	-0.6
comp=Z,4.2nm,0.9s,baz=54,slow=3.6,SNR=10							
FINES	FINESS Array B	124.49	338	P	PKPdf	16 10 57.1	-0.6
SOC	Sochi	125.85	314	i PKIKP	PKPdf	16 10 57.1	-3.7
SOC				ePS	SP	16 22 45.2	-5.8
NB2	NORSAR Subarra	129.41	345	PKPdf	PKPdf	16 11 07.1	-0.1
comp=Z,8.1nm,1.2s,baz=31,slow=1.9							
NB2	NORSAR Subarra	129.41	345	PKPdf	PKPdf	16 11 07.1	-0.1
baz=31,slow=1.9							
AKASG	Malin Array Be	129.50	326	PKP	PKPdf	16 11 07.0	-0.6
comp=Z,1.5nm,0.6s,baz=60,slow=3.0,SNR=7.1							
AKBB	Malin Array Si	129.50	326	ePKPdf	PKPdf	16 11 06.6	-1.0
AKBB	Malin Array Si	129.50	326	ePKIKP	PKPdf	16 11 06.6	-1.0
KIEV	Kiev	129.51	326	ePKIKP	PKPdf	16 11 07.4	-0.2
AK11	Malin Array Si	129.55	326	ePKPdf	PKPdf	16 11 05.2	-2.4
BR101	Keskin Array S	131.36	311	ePKPdf	PKPdf	16 11 11.8	+0.1
BRTR	Keskin Array B	131.36	311	PKP	PKPdf	16 11 11.8	+0.1
comp=Z,0.7nm,0.7s,baz=50,slow=2.4,SNR=4.4							
KOLS	Kolonicke sedl	134.21	328	eP	PKPdf	16 11 18.7	+2.1
KOLS	Kolonicke sedl	134.21	328	ePKP	PKPdf	16 11 18.7	+2.1
VYHS	Vyhne	136.24	329	eP	PKPdf	16 11 22.1	+1.7
VYHS	Vyhne	136.24	329	ePKP	PKPdf	16 11 22.1	+1.7
BRG	Berggiesshubel	136.77	335	eP	PKPdf	16 11 23.6	+2.3
comp=Z,5.8nm,1.2s							
BRG				e		16 11 52.3	
comp=Z,7.9nm,1.2s							
BRG				PP	PP	16 14 08.0	+4.4
BRG	Berggiesshubel	136.77	335	ePKIKP	PKPdf	16 11 23.5	+2.2
BRG						16 14 08.0	
BRG				pmax	pmax		
comp=Z,6.0nm,1.2s							
CLL	Collm	136.82	336	ePKPdf	PKPdf	16 11 22.0	+0.7
MODS	Modra-Piesok	137.09	330	ePKIKP	PKPdf	16 11 23.9	+1.9
MODS	Modra-Piesok	137.09	330	ePKP	PKPdf	16 11 23.9	+1.9
DIVS	Divibare	138.39	323	ePKPdf	PKPdf	16 11 24.1	-0.5
GEC2	GERESS Array S	138.40	333	ePKPdf	PKPdf	16 11 22.5	-2.0
GEC2	GERESS Array S	138.40	333	ePKIKP	PKPdf	16 11 22.5	-2.0
GERES	GERESS Array B	138.40	333	PKP	PKPdf	16 11 23.5	-1.0
comp=Z,1.5nm,0.8s,baz=66,slow=1.6,SNR=9.0							
GEA0	GERESS Array S	138.41	333	ePKPdf	PKPdf	16 11 22.5	-2.0
FNA	Florina	139.40	318	ePKPdf	PKPdf	16 11 24.2	-2.3
FNA	Florina	139.40	318	ePKIKP	PKPdf	16 11 24.2	-2.3
BOJS	Bojanci	140.07	328	i PKPdf	PKPdf	16 11 29.0	+1.5
VISS	Visnje	140.07	329	i PKPdf	PKPdf	16 11 29.2	+1.7
TUE	Stuetta	142.11	334	ePKPdf	PKPdf	16 11 34.2	+2.8
TIP	Timpagrande	143.24	319	ePKPdf	PKPbc	16 11 31.1	+0.6
CEL	Celeste	144.33	319	ePKPdf	PKPab	16 11 33.3	-0.1
BNI	Bardonecchia	144.36	335	ePKPdf	PKPab	16 11 32.9	-0.5
BNI	Bardonecchia	144.36	335	ePKIKP	PKPab	16 11 32.9	-0.5
SSB	Saint Sauveur	144.99	338	ePKPdf	PKPab	16 11 34.2	-1.4
SSB	Saint Sauveur	144.99	338	ePKIKP	PKPab	16 11 34.2	-1.4
CLTB	Caltabellotta	146.43	320	ePKPdf	PKPdf	16 11 38.1	-1.0
KEST	Kesra	150.00	321	PKPbc	PKPbc	16 11 50.1	+0.2
comp=Z,22nm,0.7s,baz=11,slow=0.5,SNR=28							
KEST	Kesra	150.00	321	ePKPdf	PKPdf	16 11 45.7	+0.8
KEST				ePKPbc	PKPbc	16 11 49.8	-0.1
THTN	Thala	150.51	322	ePKPbc	PKPbc	16 11 51.6	+0.4
CMAH	Djebel Manchou	150.51	325	P	PKPbc	16 11 50.7	-0.4
ABSA	Djebel Ababsia	150.73	324	P	PKPbc	16 11 51.3	-0.4
CKFL	Kef-Lekhel	151.06	325	P	PKPbc	16 11 53.3	+0.8
PBRG	Braganca	151.34	350	ePKPdf	PKPbc	16 11 53.2	+0.4
PGAV	Gavieira, Arco	151.42	352	ePKPdf	PKPbc	16 11 54.0	+0.9
PGAV	Gavieira, Arco	151.42	352	eLR	LR	17 19 32.7	
comp=Z,206nm,18.0s							
DFRA	Djebel Bou Aff	151.42	326	P	PKPbc	16 11 54.8	+1.5
POLO	Lamas de Olo	151.93	351	ePKPdf	PKPbc	16 11 54.3	0.0
MVO	Moncorvo	152.01	350	ePKPdf	PKPbc	16 11 55.8	+1.4
MVO	Moncorvo	152.01	350	eLR	LR	17 16 15.2	
comp=Z,249nm,20.0s							
PVRL	Vila Real	152.02	351	ePKPdf	PKPbc	16 11 55.8	+1.4
ES19	SONSECA Array	152.73	344	ePKPdf	PKPdf	16 11 48.2	-0.8
ES19				ePKPbc	PKPbc	16 11 55.6	-0.4
ESDC	Sonseca Array	152.77	344	PKPbc	PKPbc	16 11 56.0	-0.1
comp=Z,1.9nm,0.7s,baz=19,slow=2.8,SNR=12							
MTE	Manteigas	152.84	350	ePKPdf	PKPbc	16 11 57.4	+1.1
MTE	Manteigas	152.84	350	eLR	LR	17 15 08.9	
comp=Z,261nm,18.0s							
PCBR	Castelo Branco	153.38	350	ePKPdf	PKPbc	16 11 58.7	+1.3
PMRV	Marv??o	153.76	350	ePKPdf	PKPbc	16 11 58.8	+0.5
PMRV	Marv??o	153.76	350	eLR	LR	17 18 15.7	
comp=Z,332nm,18.0s							
PVAQ	Vaqueiros	155.79	349	eLR	LR	17 19 19.1	
comp=Z,289nm,20.0s							
PMOZ	Porto Moniz, M	160.56	10	eLR	LR	17 14 07.7	
comp=Z,230nm,18.0s							
TOA0	Torodi Ar. Sit	165.39	270	ePKPdf	PKPdf	16 12 02.5	-1.8
TOA0				ePKPdf	PKPdf	16 12 03.0	-1.3
TORD	Torodi Ar. Bea	165.39	270	PKP	PKPdf	16 12 04.3	-0.1
comp=Z,2.3nm,0.9s,baz=122,slow=1.0							
TOA1	Torodi Ar. Sit	165.39	270	ePKPdf	PKPdf	16 12 04.3	-0.1

IDC ***28*** *15:52:57.0±1.1,36°.08N×22°.19E,h0km,mb3.6/6, mb1 3.6/8,mb1mx3.5/57,mbtmp3.6/8,ML2.9/2,MS2.5/3, Ms1 2.5/3,ms1mx2.3/65,Error ellipse: s-maj=23.9km s-min=19.0km az=0.0*

ATH ***28*** *15:52:56.8,35°.81N×22°.17E,h10km±1km,ML3.3/21,Error ellipse: s-maj=4.2km s-min=1.1km az=47.0*

THE ***28*** *15:52:57.7,35°.87N×22°.16E,h0km±1km,ML3.3/4,Error ellipse: s-maj=2.0km s-min=0.7km az=237.0*

CSEM ***28*** *15:52:58.0±0.3,35°.83N×22°.19E,h2km,ML3.3,Error ellipse: s-maj=8.6km s-min=3.9km az=43.0*

ISC 28 15:52:57.3±1.4,35°.86N±0°.04×22°.19E±0°.04,h5km±9km, n116,σ1§20/133,mb3.7/6,Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTHR	Kythira	0.77	58	P	Pg	15 53 12.2	0.0
KTHR				S	Sb	15 53 24.1	-0.1
KTHR	Kythira	0.77	58	P	Pg	15 53 12.2	0.0
KTHR				S	Sb	15 53 24.1	-0.1
KYTH	Kithira	0.81	59	P	Pg	15 53 12.8	0.0
KYTH				AML	AML	15 53 27.4	
comp=E,4339μm,0.4s							
KYTH				AML	AML	15 53 27.9	
comp=N,5238μm,0.4s							
KYTH	Kithira	0.81	59	P	Pg	15 53 12.8	0.0
KYTH				S	Sb	15 53 25.1	0.0
KYTH	Kithira	0.81	59	P	Pg	15 53 12.8	0.0
KYTH				S	Sb	15 53 25.1	0.0
ANKY	Antikythira Is	0.90	89	P	Pg	15 53 14.8	+0.2
ANKY				AML	AML	15 53 30.6	
comp=N,5467μm,0.

KRND	KRANIDI	1.71	27	P	Pb	15 53 28.9	-0.4
AMT	Artemida-Makis	1.72	347	P	Pb	15 53 29.6	+0.2
AMT				S	Sg	15 53 53.2	+0.7
AMT				AML	AML	15 54 00.2	
	comp=N,3790μm,0.4s						
AMT				AML	AML	15 54 08.3	
	comp=E,3182μm,0.6s						
AMT	Artemida-Makis	1.72	347	P	Pb	15 53 29.6	+0.2
AMT				S	Sg	15 53 53.2	+0.7
DID	Didima	1.85	27	P	Pb	15 53 31.3	-0.4
DID	Didima	1.85	27	P	Pb	15 53 31.3	-0.4
GVDS	Gavdos	1.85	122	P	Pn	15 53 30.1	+0.3
GVDS	Gavdos	1.85	122	P	Pn	15 53 30.1	+0.3
GVD	Gavdhos	1.85	123	P	Pn	15 53 29.9	+0.1
GVD	Gavdhos	1.85	123	P	Pn	15 53 30.4	+0.6
GVD	Gavdhos	1.85	123	P	Pn	15 53 30.4	+0.6
PRNS	Prines Rethymn	1.95	104	P	Pn	15 53 31.2	+0.1
PRNS	Prines Rethymn	1.95	104	P	Pn	15 53 31.2	+0.1
MHLO	Agia Marina, M	1.97	64	P	Pn	15 53 31.5	0.0
MHLO	Agia Marina, M	1.97	64	P	Pn	15 53 32.4	+1.0
MHLO				S	Sb	15 53 59.0	+0.4
MHLO	Agia Marina, M	1.97	64	P	Pn	15 53 32.2	+0.8
MHLO				S	Sb	15 53 59.0	+0.4
MHLA	Plaka, Milos I	2.01	63	P	Pn	15 53 33.0	+1.0
MHLA	Plaka, Milos I	2.01	63	P	Pn	15 53 33.2	+1.2
GUR	Goura	2.08	3	P	Pg	15 53 36.7	-0.5
GUR	Goura	2.08	3	P	Pb	15 53 35.7	0.0
DRO	Drossia	2.13	350	P	Pn	15 53 34.4	+0.8
DRO				AML	AML	15 54 18.7	
	comp=E,1762μm,0.5s						
DRO				AML	AML	15 54 25.0	
	comp=N,1798μm,0.5s						
DRO	Drossia	2.13	350	P	Pn	15 53 34.8	+1.2
KLV	Kalavryta, Ach	2.18	359	P	Pn	15 53 34.6	+0.2
KLV				AML	AML	15 54 19.9	
	comp=E,559μm,0.7s						
KLV				AML	AML	15 54 27.5	
	comp=N,570μm,1.5s						
KLV	Kalavryta, Ach	2.18	359	P	Pn	15 53 35.3	+0.9
THAL	Thalero	2.21	10	P	Pn	15 53 35.7	+1.0
THAL	Thalero	2.21	10	P	Pn	15 53 36.1	+1.4
LTK	Loutraki	2.25	16	P	Pn	15 53 36.2	+0.9
LTK	Loutraki	2.25	16	P	Pn	15 53 36.6	+1.3
SERI	Serifos	2.26	54	P	Pn	15 53 35.8	+0.3
SERI	Serifos	2.26	54	P	Pn	15 53 36.4	+0.9
RLS	Riolos of Patr	2.27	345	P	Pn	15 53 37.0	+1.5
RLS	Riolos of Patr	2.27	345	P	Pn	15 53 37.1	+1.5
IDI	Anoyia	2.27	104	Pn	Pn	15 53 37.0	+1.3
	comp=N,5.3nm,0.3s,baz=295,slow=11,SNR=25						
IDI				Sn	Sb	15 54 08.3	+0.9
	comp=N,7.0nm,0.3s,baz=112,slow=20,SNR=4.3						
ATHU	Athens Univers	2.46	31	P	Pb	15 53 41.6	-0.5
ATHU				AML	AML	15 54 29.5	
	comp=N,215μm,1.0s						
ATHU				AML	AML	15 54 30.5	
	comp=E,136μm,0.6s						
ATHU	Athens Univers	2.46	31	P	Pb	15 53 40.8	-1.3
PROD	Prodromos	2.46	13	P	Pb	15 53 40.8	-1.4
PROD	Prodromos	2.46	13	P	Pb	15 53 40.4	-1.8
VILL	Villia	2.47	21	P	Pb	15 53 41.2	-1.1
VIL2	Platees	2.50	20	P	Pb	15 53 42.3	-0.5
SERG	Sergoula	2.55	358	P	Pb	15 53 43.6	-0.1
SERG				AML	AML	15 54 33.6	
	comp=E,288μm,1.0s						
SERG				AML	AML	15 54 39.2	
	comp=N,318μm,1.0s						
SERG	Sergoula	2.55	358	P	Pb	15 53 42.5	-1.2
DSF	Desfina	2.56	6	P	Pn	15 53 40.6	+1.0
DSF				AML	AML	15 54 31.3	
	comp=N,516μm,0.7s						
DSF				AML	AML	15 54 33.0	
	comp=E,410μm,0.9s						
DSF	Desfina	2.56	6	P	Pn	15 53 41.1	+1.4
PTL	Penteli	2.57	31	P	Pb	15 53 43.8	-0.1
PTL	Penteli	2.57	31	P	Pb	15 53 42.6	-1.3
EFP	Efpalio	2.58	355	P	Pb	15 53 42.6	-1.4
EFP				AML	AML	15 54 38.3	
	comp=E,569μm,1.2s						
EFP				AML	AML	15 54 50.4	
	comp=N,402μm,1.3s						
EFP	Efpalio	2.58	355	P	Pb	15 53 42.1	-1.9
DION	Dionisos Attik	2.62	32	P	Pn	15 53 40.5	+0.1
DION				AML	AML	15 54 21.9	
	comp=E,368μm,0.8s						
DION				AML	AML	15 54 33.7	
	comp=N,374μm,1.3s						
DION	Dionisos Attik	2.62	32	P	Pn	15 53 41.4	+1.0
IOSP	Ios island	2.65	70	P	Pn	15 53 40.7	-0.1
IOSP	Ios island	2.65	70	P	Pn	15 53 41.5	+0.7
ANX	Ano Chora	2.74	356	P	Pb	15 53 45.0	-1.9
ANX				AML	AML	15 54 40.1	
	comp=N,611μm,0.8s						
ANX				AML	AML	15 54 43.4	
	comp=E,554μm,0.8s						
ANX	Ano Chora	2.74	356	P	Pn	15 53 44.4	+2.3
LAST	Lasithi	2.77	104	P	Pn	15 53 44.9	+2.4
LAST				AML	AML	15 54 37.1	
	comp=N,486μm,1.1s						
LAST				AML	AML	15 54 46.7	
	comp=E,471μm,0.8s						
LAST	Lasithi	2.77	104	P	Pn	15 53 44.4	+1.9
PVO	Paravola	2.81	349	P	Pn	15 53 45.4	+2.5
PVO	Paravola	2.81	349	P	Pn	15 53 45.1	+2.2
PDO	Prodromos	2.85	344	P	Pb	15 53 46.6	-2.1
PDO	Prodromos	2.85	344	P	Pn	15 53 46.0	+2.4
LKR	Lokris	2.86	13	P	Pn	15 53 44.9	+1.2
LKR				AML	AML	15 54 39.5	
	comp=E,251μm,0.9s						
LKR				AML	AML	15 54 44.0	
	comp=N,241μm,0.9s						
LKR	Lokris	2.86	13	P	Pn	15 53 45.3	+1.6
AGG	Agios Georgios	3.16	2	P	Pn	15 53 50.9	+3.0
AGG				AML	AML	15 54 53.5	
	comp=E,492μm,0.7s						
AGG				AML	AML	15 54 54.9	
	comp=N,390μm,1.1s						
AGG	Agios Georgios	3.16	2	P	Pn	15 53 50.4	+2.5
DSL	Palaion Diasel	3.38	345	P	Pn	15 53 54.0	+3.1
DSL	Palaion Diasel	3.38	345	P	Pn	15 53 53.5	+2.6
SKIA	Skiathos	3.46	17	P	Pn	15 53 55.5	+3.6
SKIA	Skiathos	3.46	17	P	Pn	15 53 54.8	+2.9
BARS	Barje	6.96	358	*e*P	Pn	15 54 40.6	+0.6
SJES	Sjenica	7.59	348	*e*P	Pn	15 54 50.8	+2.1
IVAS	Ivanjica	7.87	349	*e*P	Pn	15 54 53.1	+0.6
ZAGS	Zajecar	7.95	0	*e*P	Pn	15 54 53.9	+0.4
GRUS	Gruza	8.10	352	*e*P	Pn	15 54 56.4	+0.7
BBLS	Lazići	8.28	346	*e*P	Pn	15 54 58.0	-0.2
DIVS	Divibare	8.40	349	*e*P	Pn	15 54 59.1	-0.8
BRTR	Keskin Array B	9.85	64	Pn	Pn	15 55 21.2	+1.4
	comp=N,0.1nm,0.3s,baz=238,slow=12,SNR=4.8						
MLR	Muntele Rosu	10.04	15	LR	LR	15 59 51.1	
	comp=N,13nm,18.5s,baz=172,slow=42						
DAVOX	Davos/Dischmat	14.29	324	LR	LR	16 03 01.7	
	comp=N,20nm,19.7s,baz=272,slow=43						
GERES	GERESS Array B	14.40	337	LR	LR	16 03 34.2	
	comp=N,44nm,18.0s,baz=144,slow=45						
ESDC	Sonseca Array	21.00	288	P	P	15 57 41.1	-0.6
	comp=N,0.2nm,0.4s,baz=84,slow=11,SNR=6.9						
HFS	Hagfors	24.91	350	P	P	15 58 19.9	-1.1
	comp=N,0.8nm,0.4s,baz=163,slow=11,SNR=7.3						
FINES	FINESS Array B	25.73	4	P	P	15 58 26.9	-1.5
	comp=N,1.2nm,0.7s,baz=179,slow=9.3,SNR=3.1						
TORD	Torodi Ar. Bea	29.19	224	P	P	15 59 01.7	+1.8
	comp=N,0.9nm,0.7s,baz=26,slow=8.3						
ARCES	ARCESS Array B	33.78	2	P	P	15 59 38.5	-1.4
	comp=N,1.8nm,0.8s,baz=185,slow=12,SNR=4.5						
KURBB	Kurchatov Arra	42.58	52	P	P	16 00 52.5	-1.6
	comp=N,0.4nm,0.7s,baz=276,slow=8.8,SNR=4.3						
MKAR	Makanchi Array	45.42	57	P	P	16 01 15.6	-1.4
	comp=N,11nm,0.5s,baz=278,slow=3.4,SNR=9.6						

BJI ***28*** *15:57:21.1, 7°.21S×129°.43E, h181km, mb4.6/17, mB4.7/12*
MOS ***28*** *15:57:21.1±1.2, 7°.21S×129°.25E, h172km, mb5.1/36, Error ellipse: s-maj=12.1km s-min=6.0km az=114.5*
NEIC ***28*** *15:57:22.8±0.5, 7°.17S×129°.39E, h172km±5km, mb4.9/48, Error ellipse: s-maj=6.3km s-min=4.9km az=71.0*
ISCJB ***28*** *15:57:22.4±0.3, 7°.27S±0°.03×129°.43E±0°.02, h188km±3km, mb4.8/82, Error ellipse: s-maj=4.2km s-min=4.0km az=169.0*
DJA ***28*** *15:57:23.0±0.2, 7°S±3°×12°9E±°, h180km±5km, M4.8/37, mb5.0/37, mB5.3/28, MLv5.5/12, Mw(mB)4.7/28*

IDC ***28*** *15:57:23.5±1.3, 7°.09S×129°.32E, h170km±11km, mb4.3/20, mb1 4.3/25, mb1mx4.2/50, mbtmp4.8/25, MS3.6/3, Ms1 3.6/3, ms1mx3.2/47, Error ellipse: s-maj=11.5km s-min=9.9km az=90.0*

ISC 28 15:57:22.1±0.5, 7°.19S±0°.04×129°.44E±0°.04, h170km±4km, n261, σ1§90/284, mb4.9/82, 9C-3D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time (h m s)	Res
SAUI	Saumlaki	2.00	113	P		Pn	Pn	15 58 01.9	+3.4
SAUI	Saumlaki	2.00	113	*e*Pn		Pn	Pn	15 58 01.7	+3.2
SAUI				*e*Sn		Sn	Sn	15 58 28.5	+1.8
BNDI	Bandanaira	2.69	10	P		Pn	Pn	15 58 09.4	+2.8
AAI	Ambon	3.70	340	P		Pn	Pn	15 58 21.3	+2.2
MSAI	Masohi	3.85	352	P		Pn	Pn	15 58 24.2	+3.1
FAKI	Fak Fak	5.08	34	P		Pn	Pn	15 58 36.4	-0.6
FAKI	Fak Fak	5.08	34	*e*Pn		Pn	Pn	15 58 36.6	-0.4
FAKI				*e*Sn		Sn	Sn	15 59 29.0	-6.7
KMPI	Kaimana, Papua	5.50	51	P		Pn	Pn	15 58 43.9	+1.4
SOEI	Soe	5.72	243	P		Pn	Pn	15 58 46.7	+1.2
SOEI	Soe	5.72	243	*e*Pn		Pn	Pn	15 58 46.9	+1.4
BATI	Baumata	6.45	242	P		Pn	Pn	15 58 56.2	+1.1
	141nm,0.3s,baz=83,slow=1.1,SNR=136								
BATI				S		Sn	Sn	16 00 07.4	-0.8
	95nm,0.3s,baz=186,slow=14,SNR=18								
BATI				LR		LR	LR	16 00 57.3	
	comp=Z,321nm,19.1s,baz=268,slow=33								
BATI	Baumata	6.45	242	P		Pn	Pn	15 58 56.4	+1.3
SIJI	Sorong	6.54	16	P		Pn	Pn	15 58 55.3	-0.9
	21nm,0.3s,baz=201,slow=8.1,SNR=69								
SIJI				S		Sn	Sn	16 00 05.0	-5.2
	20nm,0.3s,baz=16,slow=23,SNR=19								
SIJI				LR		LR	LR	16 01 38.2	
	comp=Z,406nm,18.6s,baz=132,slow=39								
LBMI	Labuha	6.79	343	P		Pn	Pn	15 59 02.2	+2.6
MMRI	Maumere	7.28	258	P		Pn	Pn	15 59 04.5	-1.5
MMRI	Maumere	7.28	258	*e*Pn		Pn	Pn	15 59 03.4	-2.6
MMRI				*e*Sn		Sn	Sn	16 00 30.4	+2.5
RKPI	Ransiki, Papua	7.36	40	P		Pn	Pn	15 59 08.1	+1.1
KDI	Kendari	7.51	295	P		Pn	Pn	15 59 11.3	+2.2
EDFI	Ende, Flores	7.83	258	P		Pn	Pn	15 59 14.5	+1.1
TNTI	Ternate	8.18	345	*e*Pn		Pn	Pn	15 59 19.0	+1.1
SRPI	Serui, Papua	8.59	52	P		Pn	Pn	15 59 24.5	+1.1
BAKI	Biak	8.92	48	P		Pn	Pn	15 59 30.4	+2.6
BASI	Baing, Sumba	9.27	250	P		Pn	Pn	15 59 32.3	0.0
WSI	Waingapu	9.38	254	P		Pn	Pn	15 59 33.7	0.0
KMSI	Cibinong	9.44	325	P		Pn	Pn	15 59 39.8	+5.2
BKSI	Bulukumba	9.45	281	P		Pn	Pn	15 59 36.2	+1.5
APSI	Ampana	9.96	308	P		Pn	Pn	15 59 45.3	+3.8
SPSI	Sidrap Palu	10.15	288	P		Pn	Pn	15 59 45.1	+1.2
WBSI	Waikabubak, Su	10.24	256	P		Pn	Pn	15 59 44.1	-1.0
TTSI	Tana Toraja	10.43	293	P		Pn	Pn	15 59 48.6	+1.0
MRSI	Marisa	10.68	315	P		Pn	Pn	15 59 54.0	+3.2
PCI	Palu	11.43	303	P		P	P	16 00 04.4	-3.1
PCI	Palu	11.43	303	P		P	P	16 00 05.3	-2.2
FITZ	Fitzroy Crossi	11.46	199	P		Pn	Pn	16 00 00.0	-0.9
	9.5nm,0.3s,baz=34,slow=10,SNR=106								
FITZ				S		Sn	Sn	16 02 02.2	-5.8
	8.3nm,0.3s,baz=100,slow=12,SNR=12								
FITZ	Fitzroy Crossi	11.46	199	*e*Pn		Pn	Pn	15 59 59.4	-1.5
FITZ				*e*Sn		Sn	Sn	16 02 02.2	-5.8
PLAI	Plampang	11.67	261	P		Pn	Pn	16 00 01.3	-2.4
MPSI	Mapaga	12.11	308	P		Pn	Pn	16 00 12.0	+2.7
JAY	Jayapura	12.14	68	P		P	P	16 00 13.6	-1.8
	0.6nm,0.3s,baz=214,slow=10,SNR=3.9								
JAY				S		S	S	16 02 31.9	-2.5
	1.1nm,0.3s,baz=87,slow=18,SNR=5.4								
TWSI	Taliwang, Sumb	12.54	262	P		Pn	Pn	16 00 12.9	-1.9
WRAB	Tennant Creek	13.53	160	*e*Pn		Pn	Pn	16 00 26.2	-1.3
WRAB	Tennant Creek	13.53	160	*ce*P		Pn	Pn	16 00 25.4	-2.1
WRAB				pmax		pmax	pmax		
	comp=Z,69nm,1.7s								
WRA	Warramunga Arr	13.54	160	P		Pn	Pn	16 00 26.4	-1.1
	comp=Z,3.4nm,0.3s,baz=336,slow=13,SNR=54								
WRA				S		Sn	Sn	16 02 50.6	-7.4
	comp=Z,5.1nm,0.3s,baz=330,slow=23,SNR=7.7								
WR1	Warramunga Arr	13.54	160	*e*Pn		Pn	Pn	16 00 26.4	-1.1
WR1				*e*Sn		Sn	Sn	16 02 50.6	-7.4
WB2	Warramunga Arr	13.54	160	*e*Pn		Pn	Pn	16 00 26.3	-1.3
KBKI	Kotabaru	13.77	286	P		P	P	16 00 34.2	+0.7
COEN	Coen	15.07	118	*e*Pn		P	P	16 00 49.0	+1.0
	comp=Z,28nm,0.8s								
JAGI	Jajag, Banyuwa	15.20	264	P		P	P	16 00 49.1	-0.3
MTKI	Muara Teweh, K	15.78	293	P		P	P	16 00 58.3	+2.6
GMJI	Gumukmas	15.89	265	P		Pn	Pn	16 00 56.2	-0.5
MYLDM	Lahad Datu	16.44	318	*e*P		Pn	Pn	16 01 06.1	+2.8
	comp=Z,247nm,1.5s								
MBWA	Marble Bar	16.77	213	*e*P		Pn	Pn	16 01 07.0	-0.2
	comp=Z,41nm,0.9s								
AS31	Alice Springs	16.93	166	*e*P		Pn	Pn	16 01 10.9	+1.6
	comp=Z,31nm,0.6s								
ASAR	Alice Springs	16.93	166	P		Pn	Pn	16 01 11.1	+1.8
	comp=Z,9.4nm,0.3s,baz=339,slow=9.8,SNR=384								
ASAR				S		S	S	16 04 14.9	-1.4
	comp=Z,1.9nm,0.3s,baz=342,slow=20,SNR=10								
ASAR				ScP		ScP	ScP	16 09 04.4	-0.2
	comp=Z,0.6nm,0.3s,baz=3.2,slow=1.8,SNR=7.6								
AS01	Alice Springs	16.94	166	*e*P		Pn	Pn	16 01 11.0	+1.6
PWJI	Pagerwojo	17.50	266	P		P	P	16 01 14.3	-0.4
PMG	Port Moresby	17.67	98	P		Pn	Pn	16 01 20.8	+2.8
	comp=Z,0.3nm,0.3s,baz=292,slow=7.6,SNR=3.7								
PCJI	Pacitan	18.13	266	P		Pn	Pn	16 01 22.4	-1.1
PBKI	Pangkalan Bun	18.26	283	P		Pn	Pn	16 01 24.4	-0.6
WOJI	Wonogiri, Jawa	18.37	267	P		P	P	16 01 24.7	+0.5
KKM	Kota Kinabalu	18.63	315	*e*P		P	P	16 01 27.9	+0.8
	comp=Z,88nm,1.1s								
UGM	Wanagama	18.77	267	P		Pn	Pn	16 01 29.8	-1.2
STKI	Sintang	19.32	291	P		Pn	Pn	16 01 36.5	-0.9
KPJI	Karang Pucung	20.35	268	P		P	P	16 01 44.6	-1.0
CTA	Charters Tower	20.74	130	P		Pn	Pn	16 01 52.9	-1.7
	comp=Z,4.6nm,0.8s,baz=306,slow=12,SNR=3.6								
CTAO	Charters Tower	20.74	130	*e*P		Pn	Pn	16 01 53.1	-1.4
	comp=Z,105nm,2.0s								
CTAO	Charters Tower	20.74	130	*e*P		Pn	Pn	16 01 53.1	-1.5
CTAO				pmax		pmax	pmax		
	comp=Z,105nm,2.0s								
CISI	Cisompet, Garu	21.45	268	P		P	P	16 01 55.3	-2.1
FORT	Forrest	23.50	183	*e*P		P	P	16 02 18.2	+1.4
	comp=Z,139nm,1.2s								
CGJI	Cibinong	23.59	270	P		P	P	16 02 14.3	-3.4
KASI	Kota Agung	24.85	272	P		P	P	16 02 23.8	-5.3
MDSI	Maura Dua	25.27	275	P		P	P	16 02 26.0	-7.0
LWLI	Liwa	25.33	273	P		P	P	16 02 27.8	-5.9
MYKOM	Kota Tinggi	27.05	288	*e*P		P	P	16 02 51.5	+2.5
	comp=Z,33nm,0.8s								
STKA	Stephens Creek	27.05	157	P		P	P	16 02 51.2	+2.5
	comp=Z,5.7nm,1.1s,baz=324,slow=10,SNR=3.9								
STKA	Stephens Creek	27.05	157	*e*P		P	P	16 02 48.8	0.0
	comp=Z,3.1nm,0.8s								
STKA	Stephens Creek	27.05	157	*e*P		P	P	16 02 48.8	0.0
STKA				pmax		pmax	pmax		
	comp=Z,3.0nm,0.8s								
HNR	Honiara	30.26	96	LR		LR	LR	16 14 16.6	
	comp=Z,162nm,21.8s,baz=336,slow=33								
PSI	Prapat	32.03	287	P		P	P	16 03 33.3	+0.2
	comp=Z,13nm,0.5s,baz=180,slow=5.2,SNR=7.9								
PSI	Prapat	32.03	287	*e*P		P	P	16 03 33.5	+0.4
	comp=Z,42nm,1.1s								
PSI	Prapat	32.03	287	*e*P		P	P	16 03 33.5	+0.4
PSI				pmax		pmax	pmax		
	comp=Z,42nm,1.1s								
UBPT	Khong Chiam	32.60	313	P		P	P	16 03 37.1	-0.8
	comp=Z,60nm,1.1s								
TRTT	Trang	33.21	296	P		P	P	16 03 44.5	+1.3
	comp=Z,21nm,0.9s								
SKNT	Sakolnakorn	34.79	314	P		P	P	16 03 56.0	-0.8
	comp=Z,26nm,0.8s								
NONG	Nongkai	36.11	314	P		P	P	16 04 07.9	-0.1
	comp=Z,43nm,0.9s								
PHIT	Phitsanulok	37.55	310	P		P	P	16 04 21.4	+1.2
	comp=Z,52nm,1.0s								
CM31	Chiang Mai Arr	39.43	311	*e*P		P	P	16 04 36.1	+0.2
CM31				*e*PcP		PcP	PcP	16 06 41.8	+1.2
CMAR	Chiang Mai Arr	39.43	311	P		P	P	16 04 36.0	+0.1
	comp=Z,18nm,0.8s,baz=137,slow=7.2,SNR=23								
CMAR				PcP		PcP	PcP	16 06 41.8	+1.2
	comp=Z,3.6nm,1.0s,baz=161,slow=2.9,SNR=5.1								
CHTO	Chiang Mai	39.65	311	P		P	P	16 04 38.4	+0.7
	comp=Z,248nm,1.1s								
CHTO	Chiang Mai	39.65	311	*e*P		P	P	16 04 37.9	+0.2
	comp=Z,45nm,0.9s								
CHTO	Chiang Mai	39.65	311	*e*P		P	P	16 04 37.9	+0.2
CHTO				pmax		pmax	pmax		
	comp=Z,45nm,0.9s								
JNU	Nakatsue	40.11	2	P		P	P	16 04 41.3	-0.1
	comp=Z,6.5nm,0.8s,baz=166,slow=4.2,SNR=3.5								
JNU	Nakatsue	40.11	2	*e*P		P	P	16 04 41.5	+0.2
	comp=Z,73nm,2.0s								
CMAI	Chiengmai2	40.27	313	P		P	P	16 04 43.1	+0.1
TJN	Taejon	43.38	358	*ce*P		P	P	16 05 08.1	+0.4
MAJO	Matsushiro	44.27	10	*e*P		P	P	16 05 13.9	-1.0
	comp=Z,14nm,0.8s								
MAJO	Matsushiro	44.27	10	*e*P		P	P	16 05 13.9	-1.0
MAJO				pmax		pmax	pmax		
	comp=Z,14nm,0.8s								
MAT	Matsushiro	44.27	10	P		P	P	16 05 13.8	-1.1
MJAR	Matsushiro Arr	44.27	10	P		P	P	16 05 14.3	-0.6
	comp=Z,9.1nm,0.8s,baz=195,slow=10,SNR=16								
MJB9	Matsu-Tunnel	44.27	10	*e*P		P	P	16 05 13.8	-1.1
	comp=Z,14nm,0.8s								
KS15	Wonju Array Si	44.42	358	*e*P		P	P	16 05 16.1	0.0
KSAR	Wonju Array Be	44.42	358	P		P	P	16 05 16.7	+0.6
KSAR	Wonju Array Be	44.42	358	P		P	P	16 05 16.7	+0.6
KSRS	Korea Array	44.43	358	P		P	P	16 05 16.7	+0.6
	comp=Z,3.1nm,0.7s,baz=173,slow=8.1,SNR=16								
KS01	Wonju Array Si	44.46	358	*e*P		P	P	16 05 16.4	+0.1
KS01				*e*PcP		PcP	PcP	16 06 57.1	+0.3
SHL	Shillong	48.92	313	*e*P		P	P	16 05 50.8	-0.7
	comp=Z,42nm,0.8s								
SHL				*e*PcP		PcP	PcP	16 07 14.0	+0.8
SHL	Shillong	48.92	313	*e*P		P	P	16 05 50.8	-0.7
SHL				*e*				16 07 14.0	
SHL				pmax		pmax	pmax		
	comp=Z,42nm,0.8s								
MSHR	Mys Shultsa	49.55	2	*ce*P		P	P	16 05 56.2	+0.5
USRK	Ussuriysk Ar.	51.20	2	P		P	P	16 06 08.8	+0.7
	comp=Z,11nm,0.8s,baz=184,slow=7.2								
MDJ	Mudanjiang	51.57	0	*e*P		P	P	16 06 10.8	0.0
	comp=Z,14nm,1.0s								
LSA	Lhasa	51.96	317	P		P	P	16 06 14.8	+0.3
LSA				pmax		pmax	pmax		
	comp=Z,18nm,1.1s								
LSA	Lhasa	51.96	317	*e*P		P	P	16 06 15.3	+0.8
	comp=Z,14nm,0.7s								
LSA	Lhasa	51.96	317	*e*P		P	P	16 06 15.3	+0.8
LSA				pmax		pmax	pmax		
	comp=Z,14nm,0.7s								
ASAJ	Asahikawa	52.44	12	P		P	P	16 06 18.0	+0.8
	comp=Z,6.7nm,0.7s,baz=234,slow=10,SNR=11								
ASAJ	Asahikawa	52.44	12	*e*P		P	P	16 06 17.6	+0.4
	comp=Z,6.3nm,0.8s								
ODAN	Odare	52.97	311	*e*P		P	P	16 06 21.3	-0.4
	comp=Z,78nm,0.6s								
RAMN	Ramite	53.60	311	*e*P		P	P	16 06 26.6	+0.2
	comp=Z,203nm,0.6s								
JIRN	Jiri	54.30	312	*e*P		P	P	16 06 31.5	-0.1
	comp=Z,115nm,0.7s								
GUN	Gumba	54.66	312	*e*P		P	P	16 06 34.1	-0.1
	comp=Z,164nm,0.6s								
PKIN	Phulchoki	54.84	311	*e*P		P	P	16 06 35.6	+0.2
	comp=Z,56nm,0.6s								
KKN	Kakani	55.04	311	*e*P		P	P	16 06 36.4	-0.4
	comp=Z,66nm,0.7s								
DMN	Daman	55.08	311	*e*P		P	P	16 06 37.1	+0.1
	comp=Z,75nm,0.8s								
YSS	Yuzh-Sakhalins	55.19	11	*e*P		P	P	16 06 36.6	-0.5
YSS				pmax		pmax	pmax		
	comp=Z,10.0nm,0.8s								
GKN	Gorkha	55.64	311	*e*P		P	P	16 06 40.9	0.0
	comp=Z,114nm,0.7s								
KLR	Kul'dur	56.22	2	*c i*P		P	P	16 06 44.7	+0.3
KOLN	Koldanda	56.30	310	*e*P		P	P	16 06 45.8	+0.1
	comp=Z,140nm,0.7s								
DANN	Dangsing	56.48	311	*e*P		P	P	16 06 46.9	-0.1
	comp

TKM2	**Tokmak 2**	69.78	321	P	**P**	16 08 15.2 +0.9
	SNR=12					
TKM2	**Tokmak 2**	69.78	321	P	**P**	16 08 14.1 -0.2
TKM2				pmax	pmax	
	comp=Z,10.0nm,0.8s					
UCH	**Uchtor**	70.11	320	P	**P**	16 08 18.4 +1.7
	SNR=12					
AAK	**Ala-Archa**	70.33	320	P	**P**	16 08 19.0 +1.4
	SNR=6.1					
CHMS	**Chumysh**	70.35	321	P	**P**	16 08 18.2 +0.7
	SNR=5.3					
KBL	**Kabul**	70.46	310	*e*P	**P**	16 08 18.9 +0.2
	comp=Z,10nm,0.8s					
KBL	**Kabul**	70.46	310	*e*P	**P**	16 08 18.9 +0.2
KBL				pmax	pmax	
	comp=Z,10.0nm,0.8s					
AML	**Almayashu**	70.59	319	P	**P**	16 08 21.2 +1.7
	SNR=7.1					
USP	**Ospenovka**	70.65	321	P	**P**	16 08 20.3 +0.9
	SNR=14					
EKS2	**Erkin-Say**	70.80	320	P	**P**	16 08 21.9 +1.5
	SNR=16					
ZAA0	**Zalesovo Array**	71.51	334	*e*P	**P**	16 08 23.9 -0.4
	comp=Z,32nm,0.8s					
ZALV	**Zalesovo Beam**	71.51	334	P	**P**	16 08 24.4 +0.1
	comp=Z,38nm,0.9s,baz=123,slow=4.7,SNR=71					
ZALV	**Zalesovo Beam**	71.51	334	*e*P	**P**	16 08 23.6 -0.6
ZALV	**Zalesovo Beam**	71.51	334	*e*P	**P**	16 08 23.6 -0.6
ZAA1	**Zalesovo Array**	71.51	334	*e*P	**P**	16 08 24.4 +0.1
MNAS	**Manas**	71.54	319	P	**P**	16 08 25.2 +0.3
MNAS				pmax	pmax	
	comp=Z,19nm,0.9s					
SEY	**Seymchan**	72.09	11	*ce*P	**P**	16 08 29.3 +1.8
KURBB	**Kurchatov Arra**	72.38	329	P	**P**	16 08 30.2 +0.7
	comp=Z,21nm,0.7s,baz=130,slow=4.9,SNR=181					
KURK	**Kurchatov**	72.39	329	*e*P	**P**	16 08 29.5 0.0
	comp=Z,35nm,0.9s					
KURK	**Kurchatov**	72.39	329	P	**P**	16 08 29.2 -0.3
KURK				pmax	pmax	
	comp=Z,42nm,1.1s					
NVS	**Novosibirsk**	72.80	334	⇓*i*P	**P**	16 08 32.3 +0.5
NVS				pmax	pmax	
	comp=Z,31nm,0.9s					
NVS				pmax	pmax	
	comp=N,14nm,0.9s					
NVS				pmax	pmax	
	comp=E,16nm,0.9s					
KK31	**Karatay Array**	73.12	319	*e*P	**P**	16 08 34.5 +0.4
KK31	**Karatay Array**	73.12	319	*e*P	**P**	16 08 34.5 +0.4
KKAR	**Karatay Array**	73.12	319	*e*P	**P**	16 08 34.5 +0.4
KKAR	**Karatay Array**	73.12	319	*e*P	**P**	16 08 34.5 +0.4
OTUK	**Ortayu**	74.47	324	P	**P**	16 08 42.4 +0.6
OTUK				pmax	pmax	
	comp=Z,35nm,0.9s					
WSAR	**Wadi Sarin**	75.45	296	P	**P**	16 08 48.5 +0.6
	comp=Z,9.8nm,0.7s,baz=161,slow=5.9,SNR=9.3					
BVA0	**Borovoye Array**	77.93	328	*i*P	**P**	16 09 01.4 +0.2
BVA0				pmax	pmax	
	comp=Z,30nm,1.1s					
BVAR	**Borovoye Array**	77.93	328	P	**P**	16 09 01.8 +0.6
	comp=Z,18nm,0.8s,baz=123,slow=5.3,SNR=86					
BRVK	**Borovoye**	78.00	328	*e*P	**P**	16 09 01.7 +0.1
	comp=Z,27nm,0.9s					
BRVK	**Borovoye**	78.00	328	*e*P	**P**	16 09 01.7 +0.1
BRVK				pmax	pmax	
	comp=Z,27nm,0.9s					
TIXI	**Tiksi**	78.68	360	*e*P	**P**	16 09 04.3 -0.5
	comp=Z,8.3nm,0.6s					
TIXI	**Tiksi**	78.68	360	*ce*P	**P**	16 09 05.0 +0.1
TIXI				pmax	pmax	
	comp=Z,8.0nm,1.0s					
BILL	**Bilibino**	79.42	13⇑	*e*P	**P**	16 09 10.1 +1.1
BILL				*e**PP	**pP**	16 09 50.4 -0.3
BILL				*e*		16 12 08.7
BILL				*e*S	**SPn**	16 19 36.9 -2.0
BILL				pmax	pmax	
	comp=Z,1.0nm,0.9s					
OPO	**Ambohidratompo**	80.43	252	P	**P**	16 09 16.8 +1.0
	comp=Z,3.5nm,0.8s,baz=82,slow=7.1,SNR=5.7					
UNV	**Unalaska Valle**	80.96	33	*e*P	**P**	16 09 18.7 +1.2
	comp=Z,12nm,0.9s					
AB31	**Akbulak array**	82.31	322	*i*P	**P**	16 09 24.7 0.0
AB31				pmax	pmax	
	comp=Z,15nm,0.8s					
ABKAR	**Akbulak array**	82.31	322	*e*P	**P**	16 09 24.8 0.0
QSPA	**South Pole Qui**	82.79	180	P	**P**	16 09 27.6 +0.5
	comp=Z,1.8nm,0.7s,baz=315,slow=2.9,SNR=5.2					
GAMB	**Gambell**	83.30	23	*e*P	**P**	16 09 29.9 +0.4
	comp=Z,19nm,1.2s					
AKTO	**Aktyubinsk**	83.89	322	P	**P**	16 09 33.5 +0.7
	comp=Z,11nm,0.8s,baz=110,slow=6.0,SNR=23					
AKTO	**Aktyubinsk**	83.89	322	P	**P**	16 09 32.9 +0.1
AKTO				pmax	pmax	
	comp=Z,14nm,0.8s					
SVE	**Sverdlovsk**	84.64	329	*de*P	**P**	16 09 37.1 +0.6
SVE				pmax	pmax	
	comp=Z,66nm,1.1s					
SDPT	**Sand Point**	84.78	33	*e*P	**P**	16 09 37.0 -0.1
	comp=Z,90nm,0.6s					
ARU	**Arti**	85.58	328	*e*P	**P**	16 09 40.1 -1.0
	comp=Z,31nm,0.8s					
ARU	**Arti**	85.58	328	*c i*P	**P**	16 09 40.4 -0.7
ARU				*PP	**pP**	16 10 22.5 -0.8
ARU				S	S	16 19 48.9 -10
ARU				SS	**SS**	16 25 31.0 -7.5
ARU				pmax	pmax	
	comp=Z,43nm,1.0s					
RAYN	**Ar Rayn**	87.32	294	*e*P	**P**	16 09 49.8 -0.6
	comp=Z,13nm,1.1s					
RAYN	**Ar Rayn**	87.32	294	*e*P	**P**	16 09 49.8 -0.6
RAYN				pmax	pmax	
	comp=Z,13nm,1.1s					
SKT	**Skwentna**	91.17	28	*e*P	**P**	16 10 07.4 -0.1
	comp=Z,6.1nm,1.1s					
TRF	**Thorofare Moun**	92.05	26	*e*P	**P**	16 10 12.3 +0.5
	comp=Z,19nm,1.6s					
MLY	**Manley**	92.19	25	*e*P	**P**	16 10 12.2 0.0
	comp=Z,4.7nm,0.8s					
KIV	**Kislovodsk**	92.61	314	*e*P	**P**	16 10 14.5 -0.2
KIV				pmax	pmax	
	comp=Z,7.0nm,0.9s					
SML	**Sawmill**	92.62	28	*e*P	**P**	16 10 14.5 +0.3
	comp=Z,12nm,1.0s					
SML	**Sawmill**	92.62	28	*e*P	**P**	16 10 14.5 +0.3
SML				pmax	pmax	
	comp=Z,12nm,1.0s					
MCK	**McKinley**	92.69	26	*e*P	**P**	16 10 14.6 0.0
	comp=Z,9.9nm,0.9s					
MCK	**McKinley**	92.69	26	*e*P	**P**	16 10 14.6 0.0
MCK				pmax	pmax	
	comp=Z,10.0nm,0.9s					
COLD	**Coldfoot**	92.86	23	*e*P	**P**	16 10 15.9 +0.7
	comp=Z,5.3nm,1.1s					
WRH	**Wood River Hil**	93.19	25	*e*P	**P**	16 10 16.1 -0.7
	comp=Z,10nm,1.0s					
MDM	**Murphy Dome**	93.22	25	*e*P	**P**	16 10 16.2 -0.8
	comp=Z,5.7nm,1.2s					
DHY	**Denali Highway**	93.27	27	*e*P	**P**	16 10 17.7 +0.3
	comp=Z,7.5nm,0.8s					
PRGR	**Permogore**	93.34	332	*e*P	**P**	16 10 15.3 -2.2
PRGR				pmax	pmax	
	comp=Z,6.0nm,0.6s					
CCB	**Clear Creek Bu**	93.34	25	*e*P	**P**	16 10 16.8 -0.7
	comp=Z,12nm,1.0s					
IL1	**Eielson Array**	93.75	25	*e*P	**P**	16 10 17.9 -1.5
ILAR	**Eielson Array**	93.75	25	P	**P**	16 10 18.8 -0.6
	comp=Z,3.2nm,0.9s,baz=266,slow=4.2,SNR=20					
ILB	**Eielson Array**	93.75	25	*e*P	**P**	16 10 18.1 -1.3
RIDG	**Independ'e Rid**	94.50	26	*e*P	**P**	16 10 23.0 +0.1
	comp=Z,10nm,0.9s					
SCRK	**Sand Creek**	94.90	26	*e*P	**P**	16 10 25.0 +0.2
	comp=Z,5.0nm,1.0s					
VSR	**Storozhevoye**	95.72	321	*e*P	**P**	16 10 27.3 -1.3
VSR				pmax	pmax	
	comp=Z,10.0nm,0.7s					
KLMR	**Klimovskoe**	96.19	331	*e*P	**P**	16 10 27.6 -2.9
KLMR				pmax	pmax	
	comp=Z,9.0nm,1.2s					
KLMR	**Klimovskoe**	96.19	331	*e*P	**P**	16 10 27.6 -2.9
KLMR				AMP		16 10 30.9
	comp=Z,9.0nm,1.2s					
EGAK	**Eagle**	96.19	26	*e*P	**P**	16 10 30.8 +0.3
	comp=Z,8.1nm,1.1s					
DAWY	**Dawson**	96.92	26	*e*P	**P**	16 10 34.5 +0.6
	comp=Z,12nm,1.1s					
OBN	**Obninsk**	97.49	325	⇓*e*P	**P**	16 10 35.2 -1.3
OBN				*e**PP	**pP**	16 11 21.5 +2.2
OBN				*e*		16 14 32.4
OBN				pmax	pmax	
	comp=Z,6.0nm,0.8s					
ILGA	**Ilgaz**	98.99	310	*e*P	**P**	16 10 43.4 -0.5
	comp=Z,122nm,0.4s					
BUR04	**Bucovina Ar. S**	104.87	317	*e*Pdif	**Pdif**	16 11 10.1 +0.3
CLL	**Collm**	111.97	323	*i* P	**Pdif**	16 11 50.4 +9.3
CLL	**Collm**	111.97	323	*i* P	**Pdif**	16 11 50.4 +9.3
PDAR	**Pinedale Array**	117.42	45	PKP	**PKPdf**	16 15 49.4 +1.2
	comp=Z,0.8nm,0.7s,baz=266,slow=2.1,SNR=8.0					
PDAR	**Pinedale Array**	117.42	45	*e*PKPdf	**PKPdf**	16 15 48.8 +0.6
P17A	**Butcher Ranch,**	117.43	49	*e*PKPdf	**PKPdf**	16 15 46.1 -2.1
S22A	**4UR Ranch, Cre**	120.83	50	*e*PKPdf	**PKPdf**	16 15 56.0 +1.1
ANMO	**Albuquerque**	121.86	53	*i* PKIKP	**PKPdf**	16 15 55.7 -1.2
ANMO				pmax	pmax	
	comp=Z,5.0nm,2.5s					
MNTX	**Cornudas Mount**	123.52	57	*e*PKPdf	**PKPdf**	16 16 01.8 +1.8
TX31	**Lajitas Ar. Si**	125.50	59	*e*PKPdf	**PKPdf**	16 16 05.0 +1.1
TXAR	**Lajitas Array**	125.50	59	PKP	**PKPdf**	16 16 05.2 +1.4
	comp=Z,1.2nm,0.8s,baz=270,slow=0.4,SNR=10					
TOA0	**Torodi Ar. Sit**	128.30	281	*e*PKPdf	**PKPdf**	16 16 09.7 +0.2
TORD	**Torodi Ar. Bea**	128.30	281	PKP	**PKPdf**	16 16 10.2 +0.7
	comp=Z,4.4nm,0.7s,baz=80,slow=1.8					
TOA1	**Torodi Ar. Sit**	128.31	281	*e*PKPdf	**PKPdf**	16 16 10.2 +0.7
JCT	**Junction City**	128.46	57	*e*PKPdf	**PKPdf**	16 16 11.1 +1.6
JCT	**Junction City**	128.46	57	*e*PKIKP	**PKPdf**	16 16 11.1 +1.6
SCHQ	**Schefferville**	130.73	12	SKPbc	**SKPbc**	16 19 20.6 -0.7
	comp=Z,3.4nm,0.8s,baz=2.0,slow=4.0,SNR=3.9					
S39A	**Bolivar**	130.81	45	*e*PKPdf	**PKPdf**	16 16 14.4 +0.8
V40A	**Witts Springs**	132.01	47	*e*PKPdf	**PKPdf**	16 16 17.2 +1.2
KOWA	**Kowa**	133.79	283	SKPbc	**SKPbc**	16 19 32.5 -0.6
	comp=Z,2.5nm,0.7s,baz=65,slow=5.8,SNR=3.9					
DBIC	**Dimbokro**	134.65	272	PKP	**PKPdf**	16 16 22.4 +0.9
	comp=Z,9.7nm,1.0s,baz=164,slow=2.6,SNR=5.1					
DBIC				SKPbc	**SKPbc**	16 19 35.0 -0.9
	comp=Z,4.9nm,0.8s,baz=56,slow=3.6,SNR=4.7					
JTS	**JuntasAbangare**	145.88	82	PKPbc	**PKPab**	16 16 44.3 +0.9
	comp=Z,11nm,0.9s,baz=346,slow=7.1,SNR=5.1					
CPUP	**Villa Florida**	146.04	169	PKPbc	**PKPab**	16 16 44.5 +0.9
	comp=Z,9.2nm,0.9s,baz=222,slow=2.8,SNR=11					
CPUP	**Villa Florida**	146.04	169	*e*PKPdf	**PKPab**	16 16 43.8 +0.3
CPUP	**Villa Florida**	146.04	169	*e*PKP2	**PKPab**	16 16 43.8 +0.3
MNMC	**Minye Minye**	147.81	145	*e*PKPdf	**PKPbc**	16 16 47.6 -0.7
LPAZ	**La Paz**	150.90	143	PKP	**PKPdf**	16 16 52.7 +2.1
	comp=Z,2.4nm,0.9s,baz=162,slow=3.2,SNR=6.7					
LPAZ				PKPbc	**PKiKP**	16 16 58.0 +1.0
	comp=Z,8.5nm,1.0s,baz=75,slow=1.5,SNR=16					
LPAZ	**La Paz**	150.90	143	*e*PKIKP	**PKPdf**	16 16 52.5 +1.9

*CSEM **28** 16:09:46.3,58°.79N×15°.09E,h1km,ML1.1,Mining explosion.*

UPP 28 16:09:46.3,58°.79N×15°.09E,h1km,ML1.1,Mining explosion.,Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASKU	**Askersund**	0.17	307	P	Pg	16 09 49.7	+0.1
ASKU				S	Sg	16 09 52.4	+0.6
LNKU	**Linkoeping**	0.61	159	P	Pg	16 09 57.8	-0.2
LNKU				S	Sg	16 10 06.0	+0.1
NRAU	**Nora**	0.78	358	P	Pg	16 10 01.1	-0.1
NRAU				S	Sg	16 10 11.3	0.0
ESKU	**Eskilstuna**	0.81	56	P	Pg	16 10 01.3	-0.4
ESKU				S	Sg	16 10 12.7	+0.6
VIKU	**Vikbolandet**	0.89	108	P	Pg	16 10 02.7	-0.6
VIKU				S	Sg	16 10 14.4	-0.4
FKPU	**Falk**	0.96	229	P	Pg	16 10 04.4	-0.2
FKPU				S	Sg	16 10 16.6	-0.5
NASU	**Vaermlandsnaes**	1.00	279	P	Pg	16 10 05.0	-0.4
EKSU	**Eksjoe**	1.23	175	P	Pg	16 10 09.0	-0.8
EKSU				S	Sg	16 10 25.7	0.0
VSTU	**Vaestervik**	1.37	145	P	Pg	16 10 11.4	-1.1
FINU	**Finntorp**	1.48	296	P	Pn	16 10 13.1	-1.0
FIBU	**Brunna**	1.60	45	P	Pn	16 10 16.1	+0.3
VANU	**Vaenersborg**	1.61	260	P	Pn	16 10 16.0	+0.2
GNOU	**Gnosjoe**	1.67	206	S	Sg	16 10 39.7	-0.1

*ISN **28** 16:20:19.9±0.3,37°.16N×42°.61E,h0km,ML2.8*
*ISK **28** 16:20:19.3,37°.25N×42°.54E,h5km,ML2.8/5*
*CSEM **28** 16:20:20.3±0.2,37°.25N×42°.61E,h2km,ML2.8,Error ellipse: s-maj=6.1km s-min=3.2km az=30.0*
*DDA **28** 16:20:20.1,37°.22N×42°.62E,h5km,Ml2.7*

ISC 28 16:20:20.8±1.3,37°.27N±0°.05×42°.61E±0°.03,h2km±10km, n33,σ1§39/52,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRT	**Sirnak**	0.27	330	PG	**Pg**	16 20 25.5	-0.6
SIRT				SG	**Sg**	16 20 30.4	+0.8
SIRT	**Sirnak**	0.27	330	*e*Pg	**Pg**	16 20 25.5	-0.6
SIRT				*e*Sg	**Sg**	16 20 30.4	+0.8
SIRN	**S¨–rnak**	0.28	326	*i* P	**Pg**	16 20 25.0	-1.2
SIRN				*i* S	**Sg**	16 20 30.6	+0.8
SIRN	**S¨–rnak**	0.28	326	P	**Pg**	16 20 25.0	-1.2
SIRN				S	**Sg**	16 20 30.6	+0.8
CUKT	**Cukurca**	0.80	91	PG	**Pb**	16 20 35.9	-1.5
CUKT				SG	**Sn**	16 20 50.1	-1.5
CUKT	**Cukurca**	0.80	91	*i* P	**Pg**	16 20 35.6	-0.5
CUKT				*i* S	**Sn**	16 20 51.4	-0.3
CUKT	**Cukurca**	0.80	91	P	**Pg**	16 20 35.6	-0.5
CUKT	**Cukurca**	0.80	91	*e*Pg	**Pb**	16 20 35.9	-1.5
SRTM	**Siirt_Merkez**	0.91	323	*i* P	**Pg**	16 20 37.5	-0.7
SRTM				*i* S	**Sn**	16 20 52.5	-1.9
SRTM	**Siirt_Merkez**	0.91	323	P	**Pg**	16 20 37.5	-0.7
SRTM				S	**Sn**	16 20 52.5	-1.9
HAKT	**HAKKARI**	0.92	71	*i* P	**Pg**	16 20 38.3	-0.2
HAKT	**HAKKARI**	0.92	71	P	**Pg**	16 20 38.3	-0.2
BTMN	**Batman**	1.23	301	*i* P	**Pn**	16 20 45.1	0.0
BTMN				*i* S	**Sn**	16 21 04.0	+1.6
BTMN	**Batman**	1.23	301	P	**Pn**	16 20 45.1	0.0
BTMN				S	**Sn**	16 21 04.0	+1.6
GURO	**Guroymak-BITLI**	1.36	341	PN	**Pn**	16 20 46.0	-0.9
GURO				SN	**Sn**	16 21 06.4	+0.8
GURO	**Guroymak-BITLI**	1.36	341	*e*Pn	**Pn**	16 20 46.0	-0.9
GURO				*e*Sn	**Sn**	16 21 06.4	+0.8
YOVA	**Hakkari_Y¨...kse**	1.38	76	*i* P	**Pg**	16 20 47.1	-0.1
YOVA				*i* S	**Sn**	16 21 10.7	+4.7
YOVA	**Hakkari_Y¨...kse**	1.38	76	P	**Pg**	16 20 47.1	-0.1
SVAN	**Silvan-Diyarba**	1.43	309	PN	**Pn**	16 20 47.1	-0.6
SVAN				SN	**Sg**	16 21 07.3	+0.7
SVAN	**Silvan-Diyarba**	1.43	309	*i* P	**Pg**	16 20 48.1	0.0
SVAN				*i* S	**Sg**	16 21 10.2	+3.6
SVAN	**Silvan-Diyarba**	1.43	309	*e*Pn	**Pn**	16 20 47.1	-0.6
SVAN	**Silvan-Diyarba**	1.43	309	P	**Pg**	16 20 48.1	0.0
SVAN				*e*Sn	**Sg**	16 21 07.3	+0.7
SVAN				S	**Sg**	16 21 10.2	+3.6
MARD	**Mardin**	1.46	272	*i* P	**Pb**	16 20 47.8	-1.0
MARD				*i* S	**Sg**	16 21 10.1	+2.3
MAZI	**Mazidag**	1.73	277	PN	**Pn**	16 20 50.9	-1.1
MAZI	**Mazidag**	1.73	277	*e*Pn	**Pn**	16 20 50.9	-1.1
HANI	**Diyarbakir_Han**	2.09	304	*i* P	**Pg**	16 21 00.4	-0.5
HANI				*i* S	**Sg**	16 21 30.3	+2.2
HANI	**Diyarbakir_Han**	2.09	304	P	**Pg**	16 21 00.4	-0.5
AGRB	**Hanur-Agry**	2.33	7	PN	**Pn**	16 21 00.6	+0.4
AGRB	**Hanur-Agry**	2.33	7	*e*Pn	**Pn**	16 21 00.6	+0.4
PTK	**Pertek**	3.01	304	PN	**Pn**	16 21 09.5	-0.2
PTK	**Pertek**	3.01	304	*e*Pn	**Pn**	16 21 09.5	-0.2
MALT	**Malatya**	3.48	289	PN	**Pn**	16 21 16.1	+0.1
MALT	**Malatya**	3.48	289	*e*Pn	**Pn**	16 21 16.1	+0.1

*IDC **28** 16:21:30.7±2.3,35°.93N×141°.22E,h0km,mb3.4/3, mb1 3.4/4,mb1mx3.2/61,mbtmp3.2/4,ML2.7/1,Error ellipse: s-maj=64.2km s-min=26.6km az=50.0*
*ISCJB **28** 16:21:33.3±1.1,36°.06N±0°.05×141°.28E±0°.10,h31km, mb3.4/3,Error ellipse: s-maj=11.5km s-min=7.4km az=0.5*
*JMA **28** 16:21:35.0±0.1,36°.06N×141°.14E,h42km±1km,M2.8*

ISC 28 16:21:34.8±1.4,36°.05N±0°.07×141°.2E±0°.1,h31km,n15, σ1§15/12,mb3.4/3,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	0.45	220	P	**Pb**	16 21 44.6	+0.1
CHOJ				S	**Sn**	16 21 51.6	-0.6
JHO	**Hitachi**	0.76	317	P	**Pn**	16 21 48.7	-0.8
JYT	**Yasato**	0.84	282	P	**Pn**	16 21 49.8	-0.8
JYT				S	**Sn**	16 22 00.2	-1.7
ONAJ	**Iwakimizuishiy**	1.10	342	P	**Pn**	16 21 53.4	-0.8
MJAR	**Matsushiro Arr**	2.48	282	Pn	**Pn**	16 22 12.5	-0.5
	1.5nm,0.3s,baz=112,slow=7.0,SNR=18					
MJAR				Sn	**Sn**	16 22 44.1	+1.8
	0.9nm,0.3s,baz=90,slow=16,SNR=3.8					
JHJ	**Hachijo jima 2**	3.15	202	Sn	**Sn**	16 22 59.2	+0.3
	6.2nm,0.3s,baz=72,slow=19,SNR=4.3					
H11N2	**WAKE ISLAND Hy 27.80 119**			T	T	16 56 36.8	
	baz=311,slow=74,SNR=4.1					
H11N1	**WAKE ISLAND Hy 27.81 119**			T	T	16 56 36.3	
	baz=311,slow=74,SNR=5.0					
H11N3	**WAKE ISLAND Hy 27.82 119**			T	T	16 56 42.4	
	baz=311,slow=74,SNR=3.9					
H11S1	**WAKE ISLAND Hy 28.48 121**			T	T	16 57 27.1	
	baz=314,slow=75,SNR=7.1					
H11S3	**WAKE ISLAND Hy 28.48 121**			T	T	16 57 28.1	
	baz=314,slow=75,SNR=8.5					
H11S2	**WAKE ISLAND Hy 28.49 121**			T	T	16 57 27.6	
	baz=314,slow=75,SNR=4.1					
MKAR	**Makanchi Array**	44.51	303	P	**P**	16 29 45.0	+1.6
	0.3nm,0.6s,baz=82,slow=12,SNR=3.3					
KURBB	**Kurchatov Arra**	46.48	309	P	**P**	16 29 59.4	+0.5
	0.4nm,0.6s,baz=82,slow=7.5,SNR=4.9					
WRA	**Warramunga Arr**	56.07	188	P	**P**	16 31 10.6	-0.4
	0.4nm,1.0s,baz=5.4,slow=7.4,SNR=3.0					

*ISCJB **28** 16:47:41.2±0.6,7°.18S±0°.04×129°.11E±0°.07,h150km, mb3.2/3,Error ellipse: s-maj=10.3km s-min=6.2km az=7.5*
*IDC **28** 16:47:43.4±2.0,7°.23S×129°.06E,h160km±22km,mb3.1/3, mb1 3.6/7,mb1mx3.2/48,mbtmp4.0/7,Error ellipse: s-maj=29.9km s-min=18.4km az=126.0*

ISC 28 16:47:41.9±0.8,7°.31S±0°.06×129°.21E±0°.10,h150km,n8, σ2§96/13,mb3.3/3,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	6.19	242	P	**Pn**	16 49 13.1	+1.8
	15nm,0.3s,baz=73,slow=6.1,SNR=24						
BATI				S	**Sn**	16 50 19.9	-1.3
	18nm,0.3s,baz=136,slow=16,SNR=12						
SIJI	**Sorong**	6.72	18	P	**Pn**	16 49 19.2	+0.9
	4.4nm,0.3s,baz=234,slow=19,SNR=49						
SIJI				S	**Sn**	16 50 30.9	-2.9
	3.1nm,0.3s,baz=252,slow=23,SNR=7.9						
FITZ	**Fitzroy Crossi**	11.28	198	P	**Pn**	16 50 20.1	+1.3
	1.3nm,0.3s,baz=26,slow=11,SNR=91						
FITZ				S	**Sn**	16 52 17.9	-5.6
	1.3nm,0.3s,baz=74,slow=15,SNR=3.9						
WRA	**Warramunga Arr**	13.51	159	P	**P**	16 50 50.7	-0.9
	0.9nm,0.3s,baz=339,slow=13,SNR=34						
WRA				S	**Sn**	16 53 16.2	-1.1
	2.1nm,0.3s,baz=333,slow=23,SNR=10						
ASAR	**Alice Springs**	16.88	165	P	**Pn**	16 51 35.2	+5.8
	0.2nm,0.3s,baz=335,slow=9.5,SNR=27						
ASAR				S	**S**	16 54 35.2	-2.0
	0.4nm,0.3s,baz=348,slow=26,SNR=7.7						
KSRS	**Korea Array**	44.55	359	P	**P**	16 55 38.4	-0.3
	0.4nm,0.4s,baz=177,slow=9.3,SNR=4.4						
MKAR	**Makanchi Array**	68.06	327	P	**P**	16 58 24.9	-0.4
	0.2nm,0.5s,baz=139,slow=5.4,SNR=5.0						
KURBB	**Kurchatov Arra**	72.37	329	P	**P**	16 58 50.7	-0.7
	0.4nm,0.7s,baz=131,slow=5.1,SNR=5.0						

*DDA **28** 17:05:40.6,40°.45N×41°.82E,h5km,Ml3.5*
*AZER **28** 17:05:41.0±99.0,40°.91N×41°.38E,h6km±196km,ml3.1/5, Error ellipse: s-maj=474.1km s-min=31.9km az=282.0*
*TIF **28** 17:05:40.0,40°.39N×41°.76E,h5km±3km*
*ISK **28** 17:05:41.3,40°.50N×41°.80E,h11km,ML3.5/17*
*CSEM **28** 17:05:41.7±0.2,40°.47N×41°.77E,h2km,ML3.5,Error ellipse: s-maj=4.0km s-min=3.5km az=111.0*
*IDC **28** 17:05:43.6±0.8,40°.60N×41°.90E,h0km,mb3.2/3, mb1 3.3/8,mb1mx3.2/67,mbtmp3.2/8,ML2.3/4,MS3.5/1, Ms1 3.5/1,ms1mx2.4/38,Error ellipse: s-maj=10.7km s-min=8.7km az=16.0*

ISC 28 17:05:41.5±1.1,40°.48N±0°.02×41°.81E±0°.02,h1km±9km, n116,σ1§47/154,mb3.2/3,8C-10D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDEM	**Demirkent**	0.41	354	*i* P	**Pb**	17 05 50.6	-1.1
DDEM				*i* S	**Sb**	17 05 57.8	-0.8
DDEM	**Demirkent**	0.41	354	P	**Pb**	17 05 50.6	-1.1
DDEM				S	**Sb**	17 05 57.8	-0.8
SENK	**Senkaya-Erzuru**	0.42	79	PG	**Pg**	17 05 49.9	+0.3
SENK				SG	**Sg**	17 05 56.3	+1.2
SENK	**Senkaya-Erzuru**	0.42	79	*e*Pg	**Pg**	17 05 49.9	+0.3
SENK				*e*Sg	**Sg**	17 05 56.3	+1.2
HOMI	**Horasan**	0.44

GUMT	**Gumushane**	**1.77**	**270**	PN	**Pn**	**17 06 13.1**	**-0.4**
GUMT	**Gumushane**	**1.77**	**270**	*e*Pn	**Pn**	**17 06 13.1**	**-0.4**
EUZM	**Uzumlu**	**1.79**	**245**	*i* P	**Pb**	**17 06 14.8**	**-0.5**
EUZM	**Uzumlu**	**1.79**	**245**	P	**Pb**	**17 06 14.8**	**-0.5**
ERZN	**Erzincan**	**1.83**	**241**	PN	**Pn**	**17 06 13.7**	**-0.6**
IGDI	**IGDIR**	**1.84**	**109**	*i* P	**Pg**	**17 06 17.0**	**+0.2**
GURO	**Guroymak-BITLI**	**1.94**	**175**	PN	**Pn**	**17 06 15.6**	**-0.2**
GURO	**Guroymak-BITLI**	**1.94**	**175**	*e*Pn	**Pn**	**17 06 15.6**	**-0.2**
VMUR	**Van-Muradiye**	**2.02**	**137**	*i* P	**Pb**	**17 06 19.1**	**0.0**
VMUR	**Van-Muradiye**	**2.02**	**137**	P	**Pb**	**17 06 19.1**	**0.0**
CLDR	**Caldiran**	**2.10**	**129**	PN	**Pn**	**17 06 18.1**	**-0.1**
CLDR	**Caldiran**	**2.10**	**129**	*i* P	**Pb**	**17 06 20.8**	**+0.2**
CLDR	**Caldiran**	**2.10**	**129**	*e*Pn	**Pn**	**17 06 18.1**	**-0.1**
CLDR	**Caldiran**	**2.10**	**129**	P	**Pb**	**17 06 20.8**	**+0.2**
VANB	**Van**	**2.25**	**147**	PN	**Pn**	**17 06 21.5**	**-1.5**
VANB	**Van**	**2.25**	**147**	*e*Pn	**Pb**	**17 06 21.5**	**-1.5**
GNI	**Garni**	**2.27**	**97**	Pn	**Pb**	**17 06 23.3**	**-0.1**
	11nm,0.3s,baz=283,slow=8.1,SNR=20						
GNI				Pg	**Pg**	**17 06 25.2**	**+0.3**
	11nm,0.3s,baz=284,slow=8.3,SNR=21						
GNI				Lg	Lg	17 06 58.4	
	10.0nm,0.3s,baz=29,slow=21,SNR=2.6						
GEVA	**Gevas**	**2.37**	**155**	*i* P	**Pb**	**17 06 24.3**	**-0.9**
GEVA				*i* S	**Sg**	**17 06 59.0**	**+1.3**
GEVA	**Gevas**	**2.37**	**155**	P	**Pb**	**17 06 24.3**	**-0.9**
SVAN	**Silvan-Diyarba**	**2.38**	**192**	PN	**Pn**	**17 06 21.7**	**0.0**
SVAN	**Silvan-Diyarba**	**2.38**	**192**	*e*Pn	**Pn**	**17 06 21.7**	**0.0**
ESPY	**Espiye-Giresun**	**2.38**	**282**	PN	**Pn**	**17 06 21.1**	**-0.7**
ESPY	**Espiye-Giresun**	**2.38**	**282**	*e*Pn	**Pn**	**17 06 21.1**	**-0.7**
PTK	**Pertek**	**2.45**	**230**	PN	**Pn**	**17 06 22.9**	**+0.1**
PTK	**Pertek**	**2.45**	**230**	*e*Pn	**Pn**	**17 06 22.9**	**+0.1**
TBLG	**Delisi**	**2.54**	**60**	PN	**Pn**	**17 06 23.0**	**-1.0**
TBLG	**Delisi**	**2.54**	**60**	P	**Pb**	**17 06 25.4**	**-2.6**
TBLG				S	**Sg**	**17 07 05.4**	**+2.3**
TBLG	**Delisi**	**2.54**	**60**	*e*Pn	**Pn**	**17 06 23.0**	**-1.0**
TBLG	**Delisi**	**2.54**	**60**	P	**Pb**	**17 06 25.4**	**-2.6**
QZX	**Qazax, Azerbai**	**2.77**	**77**	⇑P	**Pg**	**17 06 33.5**	**-1.1**
	SNR=5.0						
QZX				⇓S	**Sg**	**17 07 12.3**	**+1.9**
QZX	**Qazax, Azerbai**	**2.77**	**77**	⇑P	**Pg**	**17 06 33.5**	**-1.1**
	SNR=5.0						
QZX				⇓S	**Sg**	**17 07 12.3**	**+1.9**
GUDG	**Gudauri**	**2.82**	**44**	P	**Pb**	**17 06 30.4**	**-2.4**
GUDG	**Gudauri**	**2.82**	**44**	P	**Pb**	**17 06 30.4**	**-2.4**
DGRG	**David-gareji**	**2.87**	**69**	P	**Pb**	**17 06 30.3**	**-3.3**
DGRG	**David-gareji**	**2.87**	**69**	P	**Pb**	**17 06 30.3**	**-3.3**
GDB	**GEDABAY**	**3.02**	**84**	⇑P	**Pb**	**17 06 37.2**	**+1.1**
	SNR=6.4						
GDB				⇓S	**Sg**	**17 07 18.9**	**+0.5**
GDB	**GEDABAY**	**3.02**	**84**	⇑P	**Pb**	**17 06 37.2**	**+1.1**
	SNR=6.4						
GDB				⇓S	**Sg**	**17 07 18.9**	**+0.5**
SIRT	**Sirnak**	**3.02**	**170**	PN	**Pn**	**17 06 30.8**	**+0.2**
SIRT	**Sirnak**	**3.02**	**170**	*e*Pn	**Pn**	**17 06 30.8**	**+0.2**
SBZ	**Shahbuz**	**3.08**	**109**	⇓P	**Pg**	**17 06 39.3**	**-1.2**
SBZ				⇑S	**Sg**	**17 07 25.4**	**+5.0**
SBZ	**Shahbuz**	**3.08**	**109**	⇓P	**Pg**	**17 06 39.3**	**-1.2**
SBZ				⇑S	**Sg**	**17 07 25.4**	**+5.0**
MAZI	**Mazidag**	**3.20**	**200**	PN	**Pn**	**17 06 33.8**	**+0.7**
MAZI	**Mazidag**	**3.20**	**200**	*e*Pn	**Pn**	**17 06 33.8**	**+0.7**
KBZ	**Khabaz**	**3.34**	**14**	Pn	**Pb**	**17 06 37.6**	**-4.0**
	0.6nm,0.3s,baz=195,slow=4.5,SNR=7.3						
KBZ				Pg	**Pg**	**17 06 42.5**	**-3.1**
	1.0nm,0.3s,baz=199,slow=13,SNR=9.6						
KBZ				Lg	Lg	17 07 26.4	
	0.3nm,0.3s,baz=146,slow=3.5,SNR=5.5						
MALT	**Malatya**	**3.40**	**231**	PN	**Pn**	**17 06 35.9**	**+0.1**
MALT	**Malatya**	**3.40**	**231**	*e*Pn	**Pn**	**17 06 35.9**	**+0.1**
RSDY	**Resadiye-TOKAT**	**3.42**	**270**	PN	**Pn**	**17 06 36.4**	**+0.3**
RSDY	**Resadiye-TOKAT**	**3.42**	**270**	*e*Pn	**Pn**	**17 06 36.4**	**+0.3**
GANJ	**Ganja**	**3.44**	**86**	⇓P	**Pb**	**17 06 43.9**	**+0.5**
	SNR=5.8						
GANJ				⇓S	**Sg**	**17 07 30.4**	**-1.7**
GANJ	**Ganja**	**3.44**	**86**	⇓P	**Pb**	**17 06 43.9**	**+0.5**
	SNR=5.8						
GANJ				⇓S	**Sg**	**17 07 30.4**	**-1.7**
KVAR	**Kislovodsk Arr**	**3.53**	**10**	Pn	**Pn**	**17 06 39.3**	**+1.6**
	baz=204,slow=17,SNR=4.6						
KVAR				Pg	**Pb**	**17 06 45.6**	**+0.7**
	baz=193,slow=6.6,SNR=9.5						
KVAR				Lg	Lg	17 07 40.7	
	baz=186,slow=11,SNR=2.5						
ORD	**Ordubad**	**3.58**	**114**	⇑P	**Pb**	**17 06 47.1**	**+1.3**
ORD	**Ordubad**	**3.58**	**114**	⇑P	**Pb**	**17 06 47.1**	**+1.3**
SVSK	**Karacayir**	**3.73**	**263**	PN	**Pn**	**17 06 40.6**	**+0.4**
SVSK	**Karacayir**	**3.73**	**263**	*e*Pn	**Pn**	**17 06 40.6**	**+0.4**
BRTR	**Keskin Array B**	**6.31**	**266**	Pn	Pn	17 07 21.2	+5.4
	0.1nm,0.3s,baz=76,slow=12,SNR=2.5						
BRTR				Pg	**Pb**	**17 07 35.4**	**+3.1**
	0.1nm,0.3s,baz=84,slow=15,SNR=7.2						
BRTR				Lg	Lg	17 09 06.0	
	0.1nm,0.3s,baz=77,slow=25,SNR=2.3						
AKASG	**Malin Array Be**	**13.47**	**324**	Pn	**Pn**	**17 08 53.6**	**-0.1**
	0.9nm,0.3s,baz=135,slow=14,SNR=4.0						
GERES	**GERESS Array B**	**21.57**	**302**	P	**P**	**17 10 34.7**	**+2.2**
	0.3nm,0.5s,baz=102,slow=9.1,SNR=2.5						
BVAR	**Borovoye Array**	**23.08**	**47**	P	**P**	**17 10 50.5**	**+2.0**
	0.6nm,0.8s,baz=246,slow=11,SNR=3.6						
BVAR				LR	LR	17 21 18.1	
	comp=Z,118nm,18.1s,baz=276,slow=41						
MKAR	**Makanchi Array**	**29.72**	**64**	P	**P**	**17 11 49.9**	**+0.7**
	0.6nm,0.9s,baz=270,slow=8.4,SNR=3.1						

MEX 28 17:08:15.0±0.3, 14°.74N×93°.02W, h16km±46km, MD3.5, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.98**	**349**	*e*P	Pb	17 08 30.4	-3.2
PCIG				*e*S	Sb	17 08 41.8	-4.5

MAN 28 17:12:43.9, 16°.72N×120°.93E, h24km, mb4.6, ML3.4, MS3.3, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAUP	**Cauayan**	**0.88**	**75**	*e*P	Pb	17 12 59.4	-1.2
CAUP				*e*S	Sn	17 13 13.2	+0.3
ABRA	**Dolores**	**0.95**	**347**	*e*P	Pb	17 13 01.3	-0.5
ABRA				*e*S	Sb	17 13 14.2	+0.2
BALP	**Baler**	**1.15**	**147**	*e*P	Pn	17 13 02.9	-1.6
BALP				*e*S	Sn	17 13 17.6	-1.9
PCPH	**Palayan**	**1.16**	**172**	*e*P	Pn	17 13 04.8	+0.1
PCPH				*e*S	Sb	17 13 20.1	+0.3
APYP	**Conner**	**1.18**	**15**	*e*P	Pb	17 13 05.5	-0.2
APYP				*e*S	Sb	17 13 24.4	+3.9
CVP	**Callao Caves**	**1.30**	**41**	*e*P	Pn	17 13 06.0	-0.6

IDC ***28*** *17:15:32.7±1.5, 27°.97N×53°.63E, h0km, mb3.6/7, mb1 3.6/8, mb1mx3.4/70, mbtmp3.6/8, ML3.2/1, Error ellipse: s-maj=30.7km s-min=25.4km az=176.0*
ISCJB ***28*** *17:15:34.6±0.5, 27°.91N±0°.05×53°.85E±0°.08, h26km, mb3.6/6, Error ellipse: s-maj=10.4km s-min=6.8km az=153.6*
TEH ***28*** *17:15:38.4, 28°.26N×53°.55E, h21km, ML2.9*
ISC 28 17:15:36.1±0.8, 27°.96N±0°.06×53°.75E±0°.08, h26km, n15, σ1§51/17, mb3.7/6, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHRM	**Jahrom**	**0.56**	**345**	*e*Pg	**Pb**	**17 15 45.4**	**-2.2**
JHRM				*e*		17 16 00.0	
	comp=Z,99nm,0.2s						
IKAZ	**Kazeroun**	**2.47**	**318**	*e*Pn	**Pn**	**17 16 16.2**	**+1.2**
IKAZ				*e*Sg	**Sb**	**17 16 50.6**	**+0.5**
IKAZ				*e*		17 17 02.5	
	comp=Z,1μm,0.2s						
IMEH	**Mehriz**	**3.50**	**12**	*e*Pn	**Pn**	**17 16 31.5**	**+2.3**
IMEH				*e*		17 16 33.6	
	comp=Z,320nm,0.1s						
IRAM	**Ramesheh**	**4.02**	**343**	*e*Pn	**Pn**	**17 16 38.0**	**+1.8**
IRAM				*e*		17 16 59.8	
	comp=Z,133nm,0.1s						
BOQSS		**4.42**	**243**	P	**Pn**	**17 16 43.3**	**+1.7**
BTHS		**4.69**	**214**	P	**Pn**	**17 16 47.2**	**+2.0**
IZEF	**Zefreh**	**5.07**	**346**	*e*Pn	**Pn**	**17 16 51.5**	**+0.8**
IZEF				*e*		17 16 55.8	
	comp=Z,77nm,0.1s						
WSAR	**Wadi Sarin**	**6.44**	**136**	Pn	**Pn**	**17 17 10.4**	**+1.0**
	comp=Z,0.5nm,0.3s,baz=312,slow=11,SNR=8.9						
WSAR				Sn	**Sn**	**17 18 19.9**	**-2.2**
	comp=Z,0.3nm,0.3s,baz=346,slow=11,SNR=1.7						
BRTR	**Keskin Array B**	**20.36**	**310**	P	**P**	**17 20 09.6**	**-1.2**
	comp=Z,0.4nm,0.7s,baz=134,slow=10,SNR=1.7						
BVAR	**Borovoye Array**	**27.92**	**22**	P	**P**	**17 21 24.9**	**+0.9**
	comp=Z,0.3nm,0.5s,baz=206,slow=9.5,SNR=3.0						
MKAR	**Makanchi Array**	**29.22**	**42**	P	**P**	**17 21 36.2**	**+0.5**
	comp=Z,0.2nm,0.4s,baz=231,slow=8.0,SNR=2.0						
ZALV	**Zalesovo Beam**	**34.51**	**33**	P	**P**	**17 22 22.7**	**+0.7**
	comp=Z,0.9nm,0.5s,baz=251,slow=9.0,SNR=4.0						
FINES	**FINESS Array B**	**38.24**	**339**	P	**P**	**17 22 54.0**	**+0.3**
	comp=Z,0.8nm,0.3s,baz=144,slow=10,SNR=9.6						
HFS	**Hagfors**	**42.04**	**331**	P	**P**	**17 23 25.2**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=134,slow=8.4,SNR=5.8						
TORD	**Torodi Ar. Bea**	**50.56**	**264**	P	**P**	**17 24 32.4**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=67,slow=8.7						

IDC 28 17:17:08.5±4.9, 60°.29N×29°.24E, h0km, Error ellipse: s-maj=38.5km s-min=27.1km az=38.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FINES	**FINESS Array B**	**1.94**	**308**	Pg	Pn	17 17 43.2	+0.6
	0.3nm,0.3s,baz=128,slow=16,SNR=7.2						
FINES				Lg	Lg	17 18 09.2	
	0.4nm,0.3s,baz=124,slow=27,SNR=4.5						
I43RU	**DUBNA INFRASON**	**5.50**	**127**	*i*		17 52 35.0	
	baz=315,slow=312,SNR=2.8						
I26DE	**FREYUNG INFRAS**	**14.52**	**225**	*i*		18 39 20.0	
	baz=31,slow=373,SNR=1.9						

ISCJB ***28*** *17:19:05.3±0.5, 10°.04S±0°.07×116°.76E±0°.04, h10km, mb3.9/7, Error ellipse: s-maj=10.4km s-min=4.7km az=18.5*
DJA ***28*** *17:19:07.8±0.4, 10°.5±6°.×11°.7E±°, h10km, M4.5/20, mB4.7/2, mb4.6/7, MLv4.5/20, Mw(mB)3.9/2*
IDC ***28*** *17:19:09.8±1.2, 10°.49S×116°.84E, h0km, mb3.9/7, mb1 4.0/10, mb1mx3.7/62, mbtmp3.9/10, ML4.1/3, Error ellipse: s-maj=48.5km s-min=18.1km az=46.0*
ISC 28 17:19:06.6±1.0, 10°.07S±0°.09×116°.80E±0°.07, h10km, n32, σ2§38/26, mb4.0/7, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWSI	**Taliwang, Sumb**	**1.32**	**4**	P	**Pn**	**17 19 28.1**	**-3.0**
PLAI	**Plampang**	**1.56**	**38**	P	**Pn**	**17 19 32.4**	**-2.1**
IGBI	**Denpasar**	**2.05**	**307**	P	**Pn**	**17 19 39.0**	**-2.1**
DNP	**Denpasar**	**2.09**	**311**	P	**Pn**	**17 19 40.6**	**-1.1**
SRBI	**Singaraja**	**2.52**	**321**	P	**Pn**	**17 19 47.6**	**+0.1**
WBSI	**Waikabubak, Su**	**2.59**	**81**	P	**Pn**	**17 19 49.7**	**+1.1**
JAGI	**Jajag, Banyuwa**	**3.06**	**301**	P	**Pn**	**17 19 53.5**	**-1.5**
WSI	**Waingapu**	**3.47**	**84**	P	**Pn**	**17 20 01.8**	**+1.1**
GMJI	**Gumukmas**	**3.76**	**298**	P	**Pn**	**17 20 04.0**	**-0.7**
BLJI	**Banyuglugur**	**3.92**	**306**	P	**Pn**	**17 20 07.1**	**+0.3**
EDFI	**Ende, Flores**	**5.00**	**75**	P	**Pn**	**17 20 22.9**	**+1.0**
PWJI	**Pagerwojo**	**5.33**	**292**	P	**Pn**	**17 20 26.4**	**+0.1**
MMRI	**Maumere**	**5.55**	**76**	P	**Pn**	**17 20 30.7**	**+1.3**
BKSI	**Bulukumba**	**5.75**	**35**	P	**Pn**	**17 20 32.3**	**+0.2**
PCJI	**Pacitan**	**5.85**	**288**	P	**Pn**	**17 20 33.0**	**-0.5**
WOJI	**Wonogiri, Jawa**	**6.21**	**290**	P	**Pn**	**17 20 38.9**	**+0.5**
UGM	**Wanagama**	**6.56**	**289**	P	**Pn**	**17 20 43.9**	**+0.7**
BATI	**Baumata**	**6.76**	**92**	Pn	**Pn**	**17 20 48.0**	**+2.0**
	10.0nm,0.3s,baz=164,slow=1.7,SNR=18						
BATI				Sn	**Sn**	**17 22 00.4**	**-2.8**
	0.1nm,0.3s,baz=295,slow=23,SNR=1.0						
SOEI	**Soe**	**7.37**	**88**	P	**Pn**	**17 20 55.7**	**+1.3**
FITZ	**Fitzroy Crossi**	**11.71**	**134**	Pn	**Pn**	**17 21 54.4**	**+0.5**
	1.0nm,0.3s,baz=324,slow=8.4,SNR=49						
FITZ				Sn	**Sn**	**17 23 58.4**	**-6.5**
	0.6nm,0.3s,baz=134,slow=21,SNR=2.5						
WRA	**Warramunga Arr**	**19.56**	**122**	P	**P**	**17 23 36.2**	**+1.4**
	0.4nm,0.3s,baz=296,slow=12,SNR=29						
WRA				S	Sn	17 27 02.9	-13
	0.1nm,0.3s,baz=299,slow=23,SNR=3.8						
ASAR	**Alice Springs**	**21.20**	**132**	P	**P**	**17 23 55.1**	**+2.5**
	2.6nm,0.6s,baz=304,slow=9.6,SNR=61						
ASAR				S	**S**	**17 27 44.2**	**-4.3**
	1.0nm,0.9s,baz=300,slow=21,SNR=3.8						
H08S2	**Diego Garcia H**	**43.82**	**269**	T	T	18 14 19.7	
	baz=95						
H08S3	**Diego Garcia H**	**43.83**	**269**	T	T	18 14 22.2	
	baz=95						
H08S1	**Diego Carcia H**	**43.84**	**269**	T	T	18 14 21.1	
	baz=95						
KSRS	**Korea Array**	**48.41**	**12**	P	P	17 27 57.7	+8.8
	1.2nm,0.6s,baz=188,slow=8.6,SNR=7.3						
SONM	**Songino Array**	**58.38**	**352**	P	P	17 29 10.2	+8.0
	1.0nm,0.7s,baz=157,slow=7.8,SNR=5.9						
MKAR	**Makanchi Array**	**64.44**	**334**	P	P	17 29 50.5	+7.2
	0.7nm,0.5s,baz=159,slow=7.0,SNR=7.9						
KURBB	**Kurchatov Arra**	**68.98**	**335**	P	P	17 30 19.0	+7.0
	0.5nm,0.5s,baz=149,slow=6.0,SNR=5.7						
ZALV	**Zalesovo Beam**	**69.28**	**340**	P	P	17 30 20.4	+6.5
	0.8nm,0.5s,baz=145,slow=5.3,SNR=4.9						
BVAR	**Borovoye Array**	**74.23**	**333**	P	P	17 30 51.8	+8.2
	0.5nm,0.5s,baz=142,slow=8.2,SNR=4.5						
TORD	**Torodi Ar. Bea**	**116.50**	**280**	PKP	**PKPdf**	**17 37 56.4**	**+4.5**
	0.7nm,1.1s,baz=225,slow=1.1						

IDC ***28*** *17:19:47.7±5.2, 36°.77N×141°.50E, h0km, mb3.2/2, mb1 3.0/3, mb1mx2.9/77, mbtmp3.0/3, ML2.3/1, Error ellipse: s-maj=82.6km s-min=46.1km az=140.0*
JMA ***28*** *17:19:52.0±0.1, 36°.71N×141°.24E, h37km±1km, M2.6*
ISC 28 17:19:48.5±2.6, 36°.69N±0°.06×141°.4E±0°.1, h3km±11km, n17, σ1§03/19, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.65**	**309**	P	**Pb**	**17 20 02.6**	**+0.1**
ONAJ				S	**Sg**	**17 20 10.2**	**+0.9**
JHO	**Hitachi**	**0.69**	**263**	P	**Pb**	**17 20 02.9**	**-0.3**
JHO				S	**Sg**	**17 20 11.2**	**+0.5**
JFK	**Kawauchi**	**0.80**	**327**	P	**Pb**	**17 20 05.3**	**+0.2**
JFK				S	**Sg**	**17 20 14.9**	**+0.6**
JYT	**Yasato**	**1.09**	**245**	P	**Pg**	**17 20 09.4**	**-0.1**
JYT				S	**Sg**	**17 20 22.0**	**-1.6**
JFT	**Otama**	**1.20**	**314**	P	**Pg**	**17 20 11.7**	**+0.3**
JFT				S	**Sg**	**17 20 25.7**	**-1.3**
JMM	**Marumori**	**1.27**	**337**	P	**Pg**	**17 20 12.7**	**-0.2**
JMM				S	**Sg**	**17 20 28.4**	**-1.1**
JFY	**Yanaizu**	**1.55**	**298**	S	**Sn**	**17 20 35.6**	**-2.0**
MJAR	**Matsushiro Arr**	**2.59**	**268**	Pn	**Pn**	**17 20 32.3**	**+1.0**
	0.5nm,0.3s,baz=88,slow=15,SNR=9.2						
MJAR				Sn	**Sn**	**17 21 04.0**	**+0.7**
	1.1nm,0.3s,baz=82,slow=16,SNR=8.4						
MAT	**Matsushiro**	**2.59**	**268**	P	**Pn**	**17 20 32.9**	**+1.5**
MAT				*e*S	**Sn**	**17 21 03.5**	**+0.1**
H11N2	**WAKE ISLAND Hy**	**27.97**	**120**	T	T	17 55 11.3	
	baz=313,slow=75						
H11N1	**WAKE ISLAND Hy**	**27.98**	**120**	T	T	17 55 09.2	
	baz=313,slow=75						
SONM	**Songino Array**	**27.98**	**304**	P	**P**	**17 25 39.6**	**-0.9**
	0.2nm,0.4s,baz=116,slow=9.8,SNR=2.5						
H11N3	**WAKE ISLAND Hy**	**27.99**	**120**	T	T	17 55 11.3	
	baz=313,slow=75						
H11S1	**WAKE ISLAND Hy**	**28.67**	**122**	T	T	17 56 07.1	
	baz=314,slow=76						
H11S3	**WAKE ISLAND Hy**	**28.67**	**122**	T	T	17 56 00.8	
	baz=314,slow=76						
H11S2	**WAKE ISLAND Hy**	**28.69**	**122**	T	T	17 56 24.7	
	baz=314,slow=76						
MKAR	**Makanchi Array**	**44.31**	**302**	P	**P**	**17 27 59.6**	**0.0**
	0.1nm,0.4s,baz=69,slow=7.9,SNR=2.3						

KRSC ***28*** *17:20:11.5±1.6, 55°.30N×166°.58E, h37km±10km, ML4.0*
ISCJB ***28*** *17:20:13.0±0.6, 55°.28N±0°.04×166°.54E±0°.06, h20km, mb3.3/4, Error ellipse: s-maj=6.2km s-min=4.9km az=156.8*
IDC ***28*** *17:20:12.4±1.8, 55°.60N×166°.40E, h0km, mb3.3/4, mb1 3.6/5, mb1mx3.3/83, mbtmp3.4/5, Error ellipse: s-maj=62.8km s-min=21.7km az=167.0*
MOS ***28*** *17:20:14.5±1.2, 55°.35N×166°.50E, h32km, mb4.2/1, Error ellipse: s-maj=11.5km s-min=7.2km az=168.0*
ISC 28 17:20:14.5±1.1, 55°.35N±0°.06×166°.54E±0°.07, h20km, n67, σ1§08/99, mb3.3/4, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.36**	**246**	*e*P	**Pb**	**17 20 21.1**	**-1.0**
BKI				*e*S	**Sb**	**17 20 26.9**	**-0.3**
BKI	**Bering**	**0.36**	**246**	PN	**Pb**	**17 20 21.1**	**-1.0**
BKI				S	**Sb**	**17 20 26.9**	**-0.3**
KBTR	**Krutoberegovo**	**2.27**	**294**	*e*P	**Pn**	**17 20 47.9**	**-3.0**
KBTR	**Krutoberegovo**	**2.27**	**294**	PN	**Pn**	**17 20 47.9**	**-3.0**
MKZ	**Mys Kozlova**	**2.89**	**256**	*e*P	**Pn**	**17 20 58.2**	**-1.1**
MKZ				*e*S	**Sn**	**17 21 32.5**	**-0.8**
MKZ	**Mys Kozlova**	**2.89**	**256**	PN	**Pn**	**17 20 58.2**	**-1.1**
MKZ				S	**Sn**	**17 21 32.5**	**-0.8**
SMKR	**Semkarok**	**3.11**	**296**	*e*P	**Pn**	**17 21 00.9**	**-1.5**
SMKR				*e*S	**Sn**	**17 21 39.0**	**0.0**
SMKR	**Semkarok**	**3.11**	**296**	PN	**Pn**	**17 21 00.9**	**-1.5**
SMKR				S	**Sn**	**17 21 39.0**	**0.0**
BDR	**Baidarnaya**	**3.24**	**294**	*e*P	**Pn**	**17 21 03.4**	**-0.8**
BDR				*e*S	**Sn**	**17 21 41.8**	**-0.4**
BDR	**Baidarnaya**	**3.24**	**294**	PN	**Pn**	**17 21 03.4**	**-0.8**
BDR				S	**Sn**	**17 21 41.8**	**-0.4**
SRKR	**Sorokina**	**3.29**	**296**	*e*P	**Pn**	**17 21 03.6**	**-1.3**
SRKR	**Sorokina**	**3.29**	**296**	PN	**Pn**	**17 21 03.6**	**-1.3**
ZLN	**Zelenaya**	**3.32**	**284**	*e*P	**Pn**	**17 21 05.1**	**-0.2**
ZLN				*e*S	**Sn**	**17 21 45.0**	**+0.9**
ZLN	**Zelenaya**	**3.32**	**284**	PN	**Pn**	**17 21 05.1**	**-0.2**
ZLN				S	**Sn**	**17 21 45.0**	**+0.9**
BZGR	**Bezymyannyi-Gr**	**3.36**	**283**	*e*P	**Pn**	**17 21 06.8**	**+0.8**
BZGR				*e*S	**Sn**	**17 21 47.1**	**+1.8**
BZGR	**Bezymyannyi-Gr**	**3.36**	**283**	PN	**Pn**	**17 21 06.8**	**+0.8**
BZGR				S	**Sn**	**17 21 47.1**	**+1.8**
CIRR	**Tsirk**	**3.36**	**286**	*e*P	**Pn**	**17 21 07.8**	**+1.8**
CIRR	**Tsirk**	**3.36**	**286**	PN	**Pn**	**17 21 07.8**	**+1.8**
BZMR	**Bezymyannaya**	**3.48**	**282**	*e*P	**Pn**	**17 21 06.8**	**-0.8**
BZMR	**Bezymyannaya**	**3.48**	**282**	PN	**Pn**	**17 21 06.8**	**-0.8**
BZWR	**Bezymyannyi-We**	**3.48**	**283**	*e*P	**Pn**	**17 21 07.9**	**+0.3**
BZWR				*e*S	**Sn**	**17 21 49.7**	**+1.4**
BZWR	**Bezymyannyi-We**	**3.48**	**283**	PN	**Pn**	**17 21 07.9**	**+0.3**
BZWR				S	**Sn**	**17 21 49.7**	**+1.4**
TUMD	**Tumrok D**	**3.52**	**270**	*e*P	**Pn**	**17 21 08.0**	**0.0**
TUMD				*e*S	**Sn**	**17 21 49.2**	**+0.2**
KIRR	**Kirishev**	**3.56**	**282**	*e*P	**Pn**	**17 21 09.1**	**+0.3**
KIRR				*e*S	**Sn**	**17 21 51.3**	**+1.0**
KIRR	**Kirishev**	**3.56**	**282**	PN	**Pn**	**17 21 09.1**	**+0.3**
KIRR				S	**Sn**	**17 21 51.3**	**+1.0**
KMNR	**Kamenistaya**	**3.60**	**279**	*e*P	**Pn**	**17 21 09.2**	**-0.1**
KMNR				*e*S	**Sn**	**17 21 51.6**	**+0.4**
KMNR	**Kamenistaya**	**3.60**	**279**	PN	**Pn**	**17 21 09.2**	**-0.1**
KMNR				S	**Sn**	**17 21 51.6**	**+0.4**
KPT	**Kopyto**	**3.63**	**282**	*e*P	**Pn**	**17 21 10.3**	**+0.7**
KPT	**Kopyto**	**3.63**	**282**	PN	**Pn**	**17 21 10.3**	**+0.7**
TUMR	**Tumrok**	**3.65**	**272**	*e*P	**Pn**	**17 21 10.4**	**+0.4**
TUMR				*e*S	**Sn**	**17 21 53.7**	**+1.2**
TUMR	**Tumrok**	**3.65**	**272**	PN	**Pn**	**17 21 08.0**	**-2.0**
KOZ	**Kozyrevsk**	**3.84**	**283**	*e*P	**Pn**	**17 21 13.9**	**+1.5**
KOZ				*e*S	**Sn**	**17 21 59.4**	**+2.5**
KOZ	**Kozyrevsk**	**3.84**	**283**	PN	**Pn**	**17 21 13.9**	**+1.5**
KOZ				S	**Sn**	**17 21 59.4**	**+2.5**
SPN	**Mys Shipunski**	**4.44**	**242**	*e*P	**Pn**	**17 21 20.0**	**-0.6**
SPN				*e*S	**Sn**	**17 22 09.7**	**-2.0**
SPN	**Mys Shipunski**	**4.44**	**242**	PN	**Pn**	**17 21 20.0**	**-0.6**
NLC	**Nalytchevo**	**4.75**	**246**	*e*P	**Pn**	**17 21 25.3**	**+0.4**
NLC				*e*S	**Sn**	**17 22 19.1**	**-0.2**
NLC	**Nalytchevo**	**4.75**	**246**	PN	**Pn**	**17 21 25.3**	**+0.4**
SDLR	**

KRSR	**Krestovskiy**	**3.48 287**	PN	**Pn**	**17 24 27.5**	**+1.8**
TUMD	**Tumrok D**	**3.52 270**	*e*P	**Pn**	**17 24 27.0**	**+0.8**
TUMD			*e*S	**Sn**	**17 25 08.2**	**+1.1**
KIRR	**Kirishev**	**3.56 282**	*e*P	**Pn**	**17 24 27.5**	**+0.6**
KIRR	**Kirishev**	**3.56 282**	PN	**Pn**	**17 24 27.5**	**+0.6**
KZV	**Kizimen**	**3.58 269**	*e*P	**Pn**	**17 24 27.9**	**+0.7**
KZV	**Kizimen**	**3.58 269**	PN	**Pn**	**17 24 27.9**	**+0.7**
KMNR	**Kamenistaya**	**3.60 279**	*e*P	**Pn**	**17 24 29.1**	**+1.7**
KMNR	**Kamenistaya**	**3.60 279**	PN	**Pn**	**17 24 29.1**	**+1.7**
KPT	**Kopyto**	**3.63 282**	*e*P	**Pn**	**17 24 28.6**	**+0.8**
KPT	**Kopyto**	**3.63 282**	PN	**Pn**	**17 24 28.6**	**+0.8**
TUMR	**Tumrok**	**3.65 271**	*e*P	**Pn**	**17 24 29.3**	**+1.2**
TUMR			*e*S	**Sn**	**17 25 12.3**	**+1.6**
TUMR	**Tumrok**	**3.65 271**	PN	**Pn**	**17 24 29.3**	**+1.2**
TUMR			S	**Sn**	**17 25 12.3**	**+1.6**
KOZ	**Kozyrevsk**	**3.83 283**	*e*P	**Pn**	**17 24 32.7**	**+2.2**
KOZ	**Kozyrevsk**	**3.83 283**	PN	**Pn**	**17 24 32.7**	**+2.2**
SPN	**Mys Shipunski**	**4.45 242**	*e*P	**Pn**	**17 24 38.3**	**-0.6**
SPN			*e*S	**Sn**	**17 25 27.5**	**-2.5**
SPN	**Mys Shipunski**	**4.45 242**	PN	**Pn**	**17 24 38.3**	**-0.6**
NLC	**Nalytchevo**	**4.75 245**	*e*S	**Sn**	**17 25 36.4**	**-1.2**
SDLR	**Sedlovina**	**4.95 248**	*e*P	**Pn**	**17 24 47.2**	**+1.3**
SDLR			*e*S	**Sn**	**17 25 42.3**	**-0.2**
SDLR	**Sedlovina**	**4.95 248**	PN	**Pn**	**17 24 47.2**	**+1.3**
KRER	**Koryakskii**	**5.00 249**	*e*P	**Pn**	**17 24 48.2**	**+1.4**
KRER			*e*S	**Sn**	**17 25 45.5**	**+1.4**
KRER	**Koryakskii**	**5.00 249**	PN	**Pn**	**17 24 48.2**	**+1.4**
KRER			S	**Sn**	**17 25 45.5**	**+1.4**
UGLR	**Uglovaya**	**5.01 248**	*e*P	**Pn**	**17 24 48.0**	**+1.2**
UGLR			*e*S	**Sn**	**17 25 43.9**	**-0.2**
UGLR	**Uglovaya**	**5.01 248**	PN	**Pn**	**17 24 48.0**	**+1.2**
AVH	**Avacha**	**5.03 248**	*e*P	**Pn**	**17 24 48.7**	**+1.7**
AVH			*e*S	**Sn**	**17 25 46.1**	**+1.6**
AVH	**Avacha**	**5.03 248**	PN	**Pn**	**17 24 48.7**	**+1.7**
AVH			S	**Sn**	**17 25 46.1**	**+1.6**
KRX	**Arik**	**5.03 250**	*e*P	**Pn**	**17 24 48.5**	**+1.4**
KRX			*e*S	**Sn**	**17 25 44.8**	**+0.1**
KRX	**Arik**	**5.03 250**	PN	**Pn**	**17 24 48.5**	**+1.4**
KOK	**Koryaka**	**5.07 249**	*e*P	**Pn**	**17 24 49.1**	**+1.5**
KOK			*e*S	**Sn**	**17 25 46.3**	**+0.8**
KOK	**Koryaka**	**5.07 249**	PN	**Pn**	**17 24 49.1**	**+1.5**
KOK			S	**Sn**	**17 25 46.3**	**+0.8**
DALK	**Dalny**	**5.13 246**	*e*P	**Pn**	**17 24 49.3**	**+1.0**
DALK			*e*S	**Sn**	**17 25 46.6**	**-0.3**
DALK	**Dalny**	**5.13 246**	PN	**Pn**	**17 24 49.3**	**+1.0**
PET	**Petropavlovsk**	**5.19 246**	*e*P	**Pn**	**17 24 50.4**	**+1.3**
PET	**Petropavlovsk**	**5.19 246**	*e*PN	**Pn**	**17 24 50.5**	**+1.3**
GNL	**Ganaly**	**5.28 255**	*e*P	**Pn**	**17 24 52.1**	**+1.6**
GNL	**Ganaly**	**5.28 255**	PN	**Pn**	**17 24 52.1**	**+1.6**
KRMR	**Karymshinskiy**	**5.56 246**	*e*S	**Sn**	**17 25 58.7**	**+1.2**
RUS	**Russkaya**	**5.58 242**	*e*P	**Pn**	**17 24 55.8**	**+1.3**
RUS	**Russkaya**	**5.58 242**	PN	**Pn**	**17 24 55.8**	**+1.3**
PETK	**Petropavlovsk-**	**5.66 250**	Pn	Pn	17 24 50.4	-5.1
	baz=54,slow=14					
PETK			Sn	**Sn**	**17 25 54.3**	**-5.5**
	baz=70,slow=42					
PETK			LR	LR	17 26 59.1	
	comp=Z,41nm,20.5s,baz=335,slow=39					
MTVR	**Mutnovka**	**5.72 243**	*e*P	**Pn**	**17 24 57.6**	**+1.1**
MTVR	**Mutnovka**	**5.72 243**	PN	**Pn**	**17 24 57.6**	**+1.1**
ASAK	**Asacha**	**5.92 243**	*e*P	**Pn**	**17 25 00.2**	**+1.0**
ASAK	**Asacha**	**5.92 243**	PN	**Pn**	**17 25 00.2**	**+1.0**
KDTR	**Khodutka, Kamc**	**6.17 238**	*e*P	**Pn**	**17 25 03.4**	**+0.8**
ILAR	**Eielson Array**	**24.50 49**	P	**P**	**17 28 50.9**	**+0.7**
	1.2nm,1.0s,baz=258,slow=9.4,SNR=7.7					
H11N2	**WAKE ISLAND Hy**	**35.58 179**	T	T	18 07 47.8	
	baz=0.4,slow=76,SNR=28					
H11N3	**WAKE ISLAND Hy**	**35.59 179**	T	T	18 07 50.9	
	baz=0.4,slow=76,SNR=22					
H11N1	**WAKE ISLAND Hy**	**35.59 179**	T	T	18 07 52.2	
	baz=0.4,slow=76,SNR=20					
KURK	**Kurchatov**	**49.69 304**	P	**P**	**17 32 20.4**	**-2.4**
KURBB	**Kurchatov Arra**	**49.79 304**	P	**P**	**17 32 20.4**	**-3.2**
	0.2nm,0.2s,baz=56,slow=6.6,SNR=5.5					
TXAR	**Lajitas Array**	**66.30 72**	P	**P**	**17 34 21.7**	**+2.0**
	0.4nm,0.5s,baz=304,slow=4.9,SNR=7.4					

*CSEM **28** 17:26:24.4±0.3,34°.34N×26°.43E, h10km, ML2.8, Error ellipse: s-maj=8.6km s-min=6.4km az=51.0*
*HLW **28** 17:26:24.8,34°.32N×26°.52E, h8km±6km, Md3.1, Ml3.2*
*ATH **28** 17:26:25.3,34°.38N×26°.28E, h14km±4km, ML2.8/5, Error ellipse: s-maj=5.9km s-min=1.9km az=357.0*
ISC 28 17:26:24.2±1.4,34°.31N±0°.04×26°.38E±0°.04,h15km±10km, n35,σ1°.40/47,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.81**	**350**	P	**Pg**	**17 26 39.5**	**-0.5**
ZKR				AML	AML	17 26 59.6	
	comp=E,2051μm,0.4s						
ZKR				AML	AML	17 27 00.9	
	comp=N,767μm,0.5s						
ZKR	**Zakros**	**0.81**	**350**	P	**Pg**	**17 26 39.5**	**-0.5**
LAST	**Lasithi**	**1.13**	**319**	P	**Pb**	**17 26 43.8**	**-1.6**
LAST				S	**Sg**	**17 27 00.1**	**-0.7**
LAST				AML	AML	17 27 07.3	
	comp=N,1011μm,0.6s						
LAST				AML	AML	17 27 15.6	
	comp=E,838μm,0.6s						
LAST	**Lasithi**	**1.13**	**319**	P	**Pb**	**17 26 44.3**	**-1.1**
LAST				S	**Sg**	**17 26 59.5**	**-1.3**
NPS	**Neapolis**	**1.14**	**326**	P	**Pb**	**17 26 44.0**	**-1.7**
NPS				S	**Sb**	**17 26 58.1**	**-2.1**
NPS				AML	AML	17 27 05.8	
	comp=E,787μm,0.4s						
NPS				AML	AML	17 27 06.1	
	comp=N,730μm,0.8s						
NPS	**Neapolis**	**1.14**	**326**	P	**Pb**	**17 26 44.5**	**-1.1**
KARP	**Karpathos**	**1.39**	**27**	P	**Pg**	**17 26 51.4**	**+0.4**
KARP				S	**Sg**	**17 27 10.9**	**+1.8**
KARP				AML	AML	17 27 24.6	
	comp=E,560μm,1.0s						
KARP				AML	AML	17 27 29.8	
	comp=N,575μm,0.6s						
KARP	**Karpathos**	**1.39**	**27**	P	**Pg**	**17 26 51.3**	**+0.3**
KARP				S	**Sg**	**17 27 10.5**	**+1.4**
SIVA	**Sivas**	**1.47**	**299**	P	**Pn**	**17 26 52.1**	**+1.9**
SIVA				S	**Sn**	**17 27 10.1**	**+0.9**
SIVA				AML	AML	17 27 25.1	
	comp=N,1013μm,0.8s						
SIVA				AML	AML	17 27 31.1	
	comp=E,1371μm,0.8s						
SIVA	**Sivas**	**1.47**	**299**	P	**Pn**	**17 26 51.6**	**+1.4**
SIVA				S	**Sn**	**17 27 10.1**	**+0.9**
VAM	**Vamos**	**2.10**	**302**	P	**Pb**	**17 27 02.4**	**+0.4**
VAM	**Vamos**	**2.10**	**302**	P	**Pn**	**17 27 01.6**	**+2.8**
IMMV	**Iera Moni Meta**	**2.28**	**301**	P	**Pn**	**17 27 01.9**	**+0.6**
IMMV	**Iera Moni Meta**	**2.28**	**301**	P	**Pn**	**17 27 02.7**	**+1.4**
MHLO	**Agia Marina, M**	**2.87**	**326**	P	**Pn**	**17 27 10.7**	**+1.3**
MHLO	**Agia Marina, M**	**2.87**	**326**	P	**Pn**	**17 27 11.2**	**+1.8**
ANKY	**Antikythira Is**	**2.96**	**302**	P	**Pn**	**17 27 12.2**	**+1.6**
ANKY	**Antikythira Is**	**2.96**	**302**	P	**Pn**	**17 27 12.6**	**+1.9**
SLUM	**Salum**	**2.98**	**200**	P	**Pn**	**17 27 12.4**	**+1.5**
	baz=202						
SLUM				AMP		17 27 00.0	
	baz=202						
SLUM	**Salum**	**2.98**	**200**	P	**Pn**	**17 27 12.4**	**+1.5**
AKAS	**Kas**	**3.26**	**53**	*i* P	**Pn**	**17 27 13.2**	**-1.7**
AKAS				*i* S	**Sn**	**17 27 54.9**	**+1.5**
AKAS	**Kas**	**3.26**	**53**	P	**Pn**	**17 27 13.2**	**-1.7**
AKAS				S	**Sn**	**17 27 54.9**	**+1.5**
KYTH	**Kithira**	**3.35**	**306**	P	**Pn**	**17 27 18.1**	**+2.0**
KEPZ	**Antalya-Kepez**	**4.98**	**57**	*i* P	**Pn**	**17 27 39.1**	**+0.8**
KEPZ				*i* S	Sn	17 28 26.6	-9.1
KEPZ	**Antalya-Kepez**	**4.98**	**57**	P	**Pn**	**17 27 39.2**	**+0.8**
SWA2		**5.12**	**189**	P	**Pn**	**17 27 42.0**	**+1.7**
	baz=191						
SWA2				S	**Sn**	**17 28 38.1**	**-0.9**
	baz=191						
SWA2		**5.12**	**189**	P	**Pn**	**17 27 42.0**	**+1.7**
SWA2				S	**Sn**	**17 28 38.1**	**-0.9**
GAZI	**Gazipasa**	**5.22**	**67**	*i* P	**Pn**	**17 27 41.7**	**0.0**
GAZI				*i* S	**Sn**	**17 28 39.6**	**-2.0**
HHAG	**Hagoal**	**6.51**	**130**	P	**Pn**	**17 27 59.9**	**+0.4**
	baz=131						
HHAG	**Hagoal**	**6.51**	**130**	P	**Pn**	**17 27 59.9**	**+0.4**
GLL	**Jalalah**	**6.54**	**135**	P	**Pn**	**17 28 00.3**	**+0.4**
	baz=135						
HFRF	**Wahat Farafira**	**7.33**	**166**	P	**Pn**	**17 28 11.9**	**+1.2**
	baz=167						
HFRF	**Wahat Farafira**	**7.33**	**166**	P	**Pn**	**17 28 11.9**	**+1.2**
HKAT	**Jabal Katrina**	**8.69**	**130**	P	**Pn**	**17 28 30.2**	**+0.6**
	baz=130						
HKAT	**Jabal Katrina**	**8.69**	**130**	P	**Pn**	**17 28 30.2**	**+0.6**

*GII **28** 17:34:21.9±0.0,36°.17N×23°.77E, h28km*
*HLW **28** 17:34:21.8,36°.16N×24°.11E, h10km±12km, Md3.4, Ml4.0*
*ISCJB **28** 17:34:25.2±0.2,36°.11N±0°.02×23°.78E±0°.02, h85km±2km, mb3.7/9, Error ellipse: s-maj=3.0km s-min=1.7km az=40.0*
*ATH **28** 17:34:26.2,36°.16N×23°.79E, h60km±2km, ML3.6/31, Error ellipse: s-maj=2.7km s-min=0.4km az=209.0*
*IDC **28** 17:34:26.8±1.0,35°.98N×23°.93E, h92km±14km, mb3.6/9, mb1 3.7/14, mb1mx3.3/63, mbtmp3.8/14, Error ellipse: s-maj=20.6km s-min=17.7km az=116.0*
*CSEM **28** 17:34:27.4±0.1,36°.14N×23°.78E, h60km, ML3.6, Error ellipse: s-maj=2.1km s-min=1.2km az=35.0*
*THE **28** 17:34:27.8,36°.16N×23°.78E, h52km±1km, ML3.7/19, Error ellipse: s-maj=1.7km s-min=0.3km az=227.0*
ISC 28 17:34:27.0±0.8,36°.15N±0°.02×23°.78E±0°.02,h67km±7km, n359,σ1°.23/469,mb3.6/9,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANKY	**Antikythira Is**	**0.48**	**235**	P	**Pn**	**17 34 39.6**	**+0.3**
ANKY				S	**Sn**	**17 34 47.9**	**-0.3**
ANKY				AML	AML	17 34 48.1	
	comp=N,32411μm,0.5s						
ANKY				AML	AML	17 34 49.7	
	comp=E,12017μm,0.2s						
ANKY	**Antikythira Is**	**0.48**	**235**	P	**Pn**	**17 34 38.9**	**-0.3**
ANKY				S	**Sn**	**17 34 47.7**	**-0.5**
ANKY	**Antikythira Is**	**0.48**	**235**	P	**Pn**	**17 34 38.9**	**-0.3**
ANKY				S	**Sn**	**17 34 47.7**	**-0.5**
KYTH	**Kithira**	**0.61**	**282**	P	**Pn**	**17 34 40.8**	**+0.2**
KYTH				S	**Sn**	**17 34 48.3**	**-2.3**
KYTH				AML	AML	17 34 49.8	
	comp=N,7009μm,0.3s						
KYTH				AML	AML	17 34 52.6	
	comp=E,9911μm,0.2s						
KYTH	**Kithira**	**0.61**	**282**	P	**Pn**	**17 34 40.3**	**-0.3**
KYTH				S	**Sn**	**17 34 49.5**	**-1.1**
KTHR	**Kythira**	**0.64**	**281**	P	**Pn**	**17 34 40.8**	**-0.1**
KTHR				S	**Sn**	**17 34 50.3**	**-0.9**
KTHR	**Kythira**	**0.64**	**281**	P	**Pn**	**17 34 40.8**	**-0.1**
KTHR				S	**Sn**	**17 34 50.3**	**-0.9**
CHAN	**Chania**	**0.66**	**161**	P	**Pn**	**17 34 40.9**	**-0.2**
CHAN				S	**Sn**	**17 34 50.8**	**-0.7**
CHAN	**Chania**	**0.66**	**161**	P	**Pn**	**17 34 40.9**	**-0.2**
CHAN				S	**Sn**	**17 34 50.8**	**-0.7**
IMMV	**Iera Moni Meta**	**0.70**	**167**	P	**Pn**	**17 34 41.8**	**+0.2**
IMMV				S	**Sn**	**17 34 52.7**	**+0.3**
IMMV				AML	AML	17 35 00.2	
	comp=N,10413μm,0.3s						
IMMV				AML	AML	17 35 00.3	
	comp=E,8300μm,0.3s						
IMMV	**Iera Moni Meta**	**0.70**	**167**	P	**Pn**	**17 34 41.5**	**-0.2**
IMMV				S	**Sn**	**17 34 52.5**	**+0.1**
IMMV	**Iera Moni Meta**	**0.70**	**167**	P	**Pn**	**17 34 41.5**	**-0.2**
IMMV				S	**Sn**	**17 34 52.5**	**+0.1**
MHLO	**Agia Marina, M**	**0.74**	**42**	P	**Pn**	**17 34 43.3**	**+1.2**
MHLO				S	**Sn**	**17 34 54.2**	**+1.0**
MHLO				AML	AML	17 34 55.5	
	comp=N,15708μm,0.3s						
MHLO				AML	AML	17 34 56.2	
	comp=E,11626μm,0.4s						
MHLO	**Agia Marina, M**	**0.74**	**42**	P	**Pn**	**17 34 41.7**	**-0.4**
MHLO				S	**Sn**	**17 34 53.1**	**-0.1**
MHLO	**Agia Marina, M**	**0.74**	**42**	P	**Pn**	**17 34 41.7**	**-0.4**
MHLO				S	**Sn**	**17 34 53.1**	**-0.1**
MHLA	**Plaka, Milos I**	**0.79**	**41**	P	**Pn**	**17 34 43.9**	**+1.2**
MHLA				S	**Sn**	**17 34 54.6**	**+0.3**
MHLA				AML	AML	17 34 58.5	
	comp=E,3796μm,0.3s						
MHLA				AML	AML	17 35 00.2	
	comp=N,2957μm,0.5s						
MHLA	**Plaka, Milos I**	**0.79**	**41**	P	**Pn**	**17 34 43.0**	**+0.3**
MHLA				S	**Sn**	**17 34 54.2**	**-0.1**
MNVA	**Monemvasia**	**0.81**	**312**	P	**Pn**	**17 34 42.9**	**0.0**
MNVA				S	**Sn**	**17 34 52.5**	**-2.1**
MNVA	**Monemvasia**	**0.81**	**312**	P	**Pn**	**17 34 42.7**	**-0.2**
MNVA				S	**Sn**	**17 34 53.4**	**-1.2**
VAM	**Vamos**	**0.81**	**155**	P	**Pn**	**17 34 42.5**	**-0.5**
VAM				S	**Sn**	**17 34 52.8**	**-1.9**
VAM				AML	AML	17 35 01.7	
	comp=E,9498μm,0.2s						
VAM				AML	AML	17 35 01.9	
	comp=N,15051μm,0.2s						
VAM	**Vamos**	**0.81**	**155**	P	**Pn**	**17 34 42.4**	**-0.5**
VAM				S	**Sn**	**17 34 55.2**	**+0.5**
VAM	**Vamos**	**0.81**	**155**	P	**Pn**	**17 34 42.6**	**-0.3**
VAM				S	**Sn**	**17 34 53.7**	**-1.0**
VLI	**Veliai**	**0.89**	**310**	P	**Pn**	**17 34 43.7**	**-0.2**
VLI				S	**Sn**	**17 34 54.9**	**-1.6**
VLI				AML	AML	17 34 56.0	
	comp=N,6405μm,0.3s						
VLI				AML	AML	17 34 56.1	
	comp=E,3913μm,0.2s						
VLI	**Veliai**	**0.89**	**310**	P	**Pn**	**17 34 43.5**	**-0.3**
VLI				S	**Sn**	**17 34 55.3**	**-1.1**
VLI	**Veliai**	**0.89**	**310**	P	**Pn**	**17 34 43.6**	**-0.3**
VLI				S	**Sn**	**17 34 55.5**	**-0.9**
PRNS	**Prines Rethymn**	**0.97**	**143**	P	**Pn**	**17 34 44.5**	**-0.4**
PRNS				S	**Sn**	**17 34 57.5**	**-0.8**
PRNS	**Prines Rethymn**	**0.97**	**143**	P	**Pn**	**17 34 44.5**	**-0.4**
PRNS				S	**Sn**	**17 34 57.5**	**-0.8**
SERI	**Serifos**	**1.16**	**29**	P	**Pn**	**17 34 47.2**	**-0.2**
SERI				S	**Sn**	**17 35 02.2**	**-0.4**
SERI	**Serifos**	**1.16**	**29**	P	**Pn**	**17 34 47.2**	**-0.2**
SERI				S	**Sn**	**17 35 02.2**	**-0.4**
YDRA	**Hydra**	**1.23**	**348**	P	**Pn**	**17 34 48.5**	**+0.3**
YDRA	**Hydra**	**1.23**	**348**	P	**Pn**	**17 34 48.3**	**+0.1**
IDI	**Anoyia**	**1.24**	**133**	P	**Pn**	**17 34 47.7**	**-0.7**
	comp=E,42nm,0.3s,baz=218,slow=4.7,SNR=249						
IDI				S	**Sn**	**17 35 02.7**	**-1.8**
	comp=E,191nm,0.3s,baz=299,slow=19,SNR=21						
THR9	**Santorini-Faro**	**1.29**	**80**	P	**Pn**	**17 34 50.6**	**+1.6**
THR9	**Santorini-Faro**	**1.29**	**80**	P	**Pn**	**17 34 49.5**	**+0.5**
THR9	**Santorini-Faro**	**1.29**	**80**	P	**Pn**	**17 34 49.5**	**+0.5**
THR5	**Thira Island,**	**1.29**	**77**	P	**Pn**	**17 34 50.0**	**+0.9**
THR5	**Thira Island,**	**1.29**	**77**	P	**Pn**	**17 34 49.3**	**+0.2**
THR5	**Thira Island,**	**1.29**	**77**	P	**Pn**	**17 34 49.3**	**+0.2**
SAP3	**Santorini-Thir**	**1.30**	**77**	P	**Pn**	**17 34 50.2**	**+1.1**
SAP3				S	**Sn**	**17 35 06.9**	**+1.2**
SAP3	**Santorini-Thir**	**1.30**	**77**	P	**Pn**	**17 34 49.5**	**+0.4**
SAP3	**Santorini-Thir**	**1.30**	**77**	P	**Pn**	**17 34 49.5**	**+0.4**
DYR	**Agios Nikonas**	**1.32**	**298**	P	**Pn**	**17 34 52.0**	**+2.6**
DYR				S	**Sn**	**17 35 09.2**	**+2.9**
DYR				AML	AML	17 35 12.7	
	comp=N,2067μm,0.5s						
DYR				AML	AML	17 35 14.4	
	comp=E,2355μm,0.6s						
DYR	**Agios Nikonas**	**1.32**	**298**	P	**Pn**	**17 34 50.7**	**+1.3**
DYR	**Agios Nikonas**	**1.32**	**298**	P	**Pn**	**17 34 50.7**	**+1.3**
DYR				S	**Sn**	**17 35 07.8**	**+1.5**
SAP1	**Santorini-Akro**	**1.32**	**80**	P	**Pn**	**17 34 50.7**	**+1.3**
SAP1				S	**Sn**	**17 35 06.9**	**+0.6**
SAP1	**Santorini-Akro**	**1.32**	**80**	P	**Pn**	**17 34 50.1**	**+0.7**
SAP1	**Santorini-Akro**	**1.32**	**80**	P	**Pn**	**17 34 50.1**	**+0.7**
GVDS	**Gavdos**	**1.32**	**169**	P	**Pn**	**17 34 50.5**	**+1.0**
GVDS	**Gavdos**	**1.32**	**169**	P	**Pn**	**17 34 50.5**	**+1.0**
THR6	**Thira Island,**	**1.32**	**80**	P	**Pn**	**17 34 50.0**	**+0.6**
THR6	**Thira Island,**	**1.32**	**80**	P	**Pn**	**17 34 50.0**	**+0.6**
GVD	**Gavdhos**	**1.33**	**169**	P	**Pn**	**17 34 49.8**	**+0.3**
GVD				S	**Sn**	**17 35 06.7**	**+0.3**
GVD				AML	AML	17 35 15.7	
	comp=N,8949μm,0.3s						
GVD				AML	AML	17 35 17.8	
	comp=E,4907μm,0.4s						
GVD	**Gavdhos**	**1.33**	**169**	P	**Pn**	**17 34 49.8**	**+0.3**
GVD	**Gavdhos**	**1.33**	**169**	P	**Pn**	**17 34 49.8**	**+0.3**
GVD				S	**Sn**	**17 35 06.8**	**+0.3**
SAP4	**Santorini-Oia**	**1.33**	**75**	P	**Pn**	**17 34 50.4**	**+0.9**
SAP4				S	**Sn**	**17 35 08.0**	**+1.6**
THR3	**Thira Island,**	**1.33**	**78**	P	**Pn**	**17 34 51.1**	**+1.5**
THR3	**Thira Island,**	**1.33**	**78**	P	**Pn**	**17 34 50.1**	**+0.5**
THR3	**Thira Island,**	**1.33**	**78**	P	**Pn**	**17 34 50.1**	**+0.5**
KRND	**KRANIDI**	**1.34**	**338**	P	**Pn**	**17 34 50.0**	**+0.4**
KRND				S	**Sn**	**17 35 07.6**	**+0.9**
KRND				AML	AML	17 35 09.9	
	comp=E,4348μm,0.2s						
KRND				AML	AML	17 35 11.5	
	comp=N,4885μm,0.3s						
KRND	**KRANIDI**	**1.34**	**338**	P	**Pn**	**17 34 49.7**	**+0.1**
KRND				S	**Sn**	**17 35 07.0**	**+0.4**
KRND	**KRANIDI**	**1.34**	**338**	P	**Pn**	**17 34 49.8**	**+0.1**
KRND				S	**Sn**	**17 35 07.0**	**+0.4**
STAX	**Taxiarchis Har**	**1.34**	**79**	P	**Pn**	**17 34 50.3**	**+0.7**
STAX	**Taxiarchis Har**	**1.34**	**79**	P	**Pn**	**17 34 50.3**	**+0.7**
IACM	**Heraklion**	**1.34**	**128**	P	**Pn**	**17 34 49.0**	**-0.7**
IACM				S	**Sn**	**17 35 06.2**	**-0.6**
IACM	**Heraklion**	**1.34**	**128**	P	**Pn**	**17 34 49.7**	**0.0**
IACM				S	**Sn**	**17 35 06.7**	**-0.1**
IACM	**Heraklion**	**1.34**	**128**	P	**Pn**	**17 34 49.7**	**0.0**
IACM				S	**Sn**	**17 35 06.7**	**-0.1**
IOSP	**Ios island**	**1.35**	**64**	P	**Pn**	**17 34 50.1**	**+0.4**
IOSP				S	**Sn**	**17 35 04.9**	**-2.0**
IOSP				AML	AML	17 35 08.1	
	comp=E,5756μm,0.3s						
IOSP				AML	AML	17 35 09.2	
	comp=N,6577μm,0.2s						
IOSP	**Ios island**	**1.35**	**64**	P	**Pn**	**17 34 50.1**	**+0.4**
IOSP				S	**Sn**	**17 35 06.7**	**-0.2**
IOSP	**Ios island**	**1.35**	**64**	P	**Pn**	**17 34 49.9**	**+0.1**
IOSP				S	**Sn**	**17 35 06.7**	**-0.2**
CMBO	**Columbo, Santo**	**1.35**	**76**	P	**Pn**	**17 34 48.7**	**-1.1**
CMBO				S	**Sn**	**17 35 07.1**	**+0.1**
CMBO	**Columbo, Santo**	**1.35**	**76**	P	**Pn**	**17 34 49.5**	**-0.3**
CMBO				S	**Sn**	**17 35 06.9**	**-0.1**
CMBO	**Columbo, Santo**	**1.35**	**76**	P	**Pn**	**17 34 49.5**	**-0.3**
CMBO				S	**Sn**	**17 35 06.9**	**-0.1**
THT1	**Athinios (Pele**	**1.35**	**79**	P	**Pn**	**17 34 50.6**	**+0.8**
THT1				S	**Sn**	**17 35 05.9**	**-1.1**
THT1	**Athinios (Pele**	**1.35**	**79**	P	**Pn**	**17 34 50.0**	**+0.2**
THT1				S	**Sn**	**17 35 06.9**	**-0.1**
THT1	**Athinios (Pele**	**1.35**	**79**	P	**Pn**	**17 34 50.0**	**+0.2**
THT1				S	**Sn**	**17 35 06.9**	**-0.1**
THT2	**Imerovigli**	**1.36**	**77**	P	**Pn**	**17 34 51.9**	**+2.0**
THT2	**Imerovigli**	**1.36**	**77**	P	**Pn**	**17 34 50.9**	**+1.0**
THR7	**Fira-Santorini**	**1.36**	**78**	P	**Pn**	**17 34 51.0**	**+1.1**
THR7	**Fira-Santorini**	**1.36**	**78**	P	**Pn**	**17 34 50.5**	**+0.6**
THR2	**Thira island,**	**1.37**	**77**	P	**Pn**	**17 34 51.2**	**+1.2**
THR2	**Thira island,**	**1.37**	**77**	P	**Pn**	**17 34 50.7**	**+0.6**
SAP2K	**Karterados**	**1.37**	**78**	P	**Pn**	**17 34 52.2**	**+2.1**
SAP2K	**Karterados**	**1.37**	**78**	P	**Pn**	**17 34 50.1**	**0.0**
SAP2K				S	**Sn**	**17 35 07.3**	**-0.2**
SANT	**Santorini**	**1.37**	**80**	P	**Pn**	**17 34 51.3**	**+1.1**
SANT	**Santorini**	**1.37**	**80**	P	**Pn**	**17 34 50.7**	**+0.5**
SANT	**Santorini**	**1.37**	**80**	P	**Pn**	**17 34 50.7**	**+0.5**
SIVA	**Sivas**	**1.40**	**143**	P	**Pn**	**17 34 51.4**	**+0.8**
SIVA				S	**Sn**	**17 35 07.0**	**-1.1**
SIVA				AML	AML	17 35 16.8	
	comp=N,4971μm,0.6s						
SIVA				AML	AML	17 35 17.3	
	comp=E,6649μm,0.6s						
SIVA	**Sivas**	**1.40**	**143**	P	**Pn**	**17 34 51.3**	**+0.8**
SIVA				S	**Sn**	**17 35 09.0**	**+0.8**
SIVA	**Sivas**	**1.40**	**143**	P	**Pn**	**17 34 51.1**	**+0.6**
SIVA				S	**Sn**	**17 35 07.9**	**-0.3**
DID	**Didima**	**1.43**	**342**	P	**Pn**	**17 34 50.7**	**-0.1**
DID				S	**Sn**	**17 35 07.7**	**-1.2**
DID				AML	AML	17 35 10.6	
	comp=E,4113μm,0.3s						
DID				AML	AML	17 35 10.7	
	comp=N,2533μm,0.2s						
DID	**Didima**	**1.43**	**342**	P	**Pn**	**17 34 50.7**	**-0.1**
DID				S	**Sn**	**17 35 09.0**	**+0.1**
DID	**Didima**	**1.43**	**342**	P	**Pn**	**17 34 50.8**	**-0.1**
DID				S	**Sn**	**17 35 09.0**	**+0.1**
ANAF	**Anafi Island**	**1.62**	**82**	P	**Pn**	**17 34 54.3**	**+0.8**
ANAF				S	**Sn**	**17 35 11.2**	**-2.3**
ANAF				AML	AML	17 35 16.8	
	comp=N,6536μm,0.4s						
ANAF				AML	AML	17 35 17.0	
	comp=E,5519μm,0.4s						
ANAF	**Anafi Island**	**1.62**	**82**	P	**Pn**	**17 34 54.0**	**+0.5**
ANAF	**Anafi Island**	**1.62**	**82**	P	**Pn**	**17 34 54

PTL				AML	AML	17 35 19.9	
	comp=E,1029μm,0.2s						
PTL				AML	AML	17 35 20.7	
	comp=N,1848μm,0.4s						
PTL	**Penteli**	**1.90**	**2**	P	**Pn**	**17 34 57.4**	**+0.2**
PTL	**Penteli**	**1.90**	**2**	P	**Pn**	**17 34 57.6**	**+0.4**
PTL				S	**Sn**	**17 35 19.9**	**-0.3**
DION	**Dionisos Attik**	**1.93**	**4**	P	**Pn**	**17 34 58.5**	**+0.9**
DION				S	**Sn**	**17 35 19.5**	**-1.5**
DION				AML	AML	17 35 22.1	
	comp=N,1859μm,0.2s						
DION				AML	AML	17 35 22.1	
	comp=E,2290μm,0.3s						
DION	**Dionisos Attik**	**1.93**	**4**	P	**Pn**	**17 34 58.2**	**+0.5**
DION				S	**Sn**	**17 35 20.3**	**-0.7**
LOUT	**Loutraki**	**1.95**	**341**	P	**Pn**	**17 34 58.4**	**+0.5**
LOUT				S	**Sn**	**17 35 21.6**	**+0.3**
LOUT	**Loutraki**	**1.95**	**341**	P	**Pn**	**17 34 58.3**	**+0.4**
LOUT	**Loutraki**	**1.95**	**341**	P	**Pn**	**17 34 58.3**	**+0.4**
LOUT				S	**Sn**	**17 35 21.6**	**+0.3**
KARY	**Karystos**	**1.96**	**15**	P	**Pn**	**17 34 58.4**	**+0.5**
KARY	**Karystos**	**1.96**	**15**	P	**Pn**	**17 34 58.4**	**+0.5**
LTK	**Loutraki**	**1.98**	**341**	P	**Pn**	**17 34 59.0**	**+0.7**
LTK				S	**Sn**	**17 35 21.6**	**-0.6**
LTK				AML	AML	17 35 28.8	
	comp=E,2328μm,0.5s						
LTK				AML	AML	17 35 30.3	
	comp=N,1954μm,0.4s						
LTK	**Loutraki**	**1.98**	**341**	P	**Pn**	**17 34 58.8**	**+0.5**
LTK	**Loutraki**	**1.98**	**341**	P	**Pn**	**17 34 58.8**	**+0.5**
LTK				S	**Sn**	**17 35 21.9**	**-0.3**
MES3	**Kyparissia**	**2.02**	**304**	P	**Pn**	**17 34 59.8**	**+1.0**
MES3				S	**Sn**	**17 35 24.0**	**+0.9**
MES3	**Kyparissia**	**2.02**	**304**	P	**Pn**	**17 34 59.5**	**+0.7**
MES3				S	**Sn**	**17 35 23.6**	**+0.5**
VILL	**Villia**	**2.05**	**350**	P	**Pn**	**17 34 59.5**	**+0.3**
VILL				S	**Sn**	**17 35 24.1**	**+0.3**
VILL	**Villia**	**2.05**	**350**	P	**Pn**	**17 34 59.6**	**+0.3**
VILL				S	**Sn**	**17 35 24.1**	**+0.3**
THAL	**Thalero**	**2.09**	**335**	P	**Pn**	**17 35 00.3**	**+0.6**
THAL				S	**Sn**	**17 35 23.2**	**-1.6**
THAL				AML	AML	17 35 32.5	
	comp=N,5158μm,0.4s						
THAL				AML	AML	17 35 34.6	
	comp=E,7665μm,0.4s						
THAL	**Thalero**	**2.09**	**335**	P	**Pn**	**17 35 00.6**	**+0.9**
THAL	**Thalero**	**2.09**	**335**	P	**Pn**	**17 35 00.2**	**+0.5**
THAL				S	**Sn**	**17 35 24.0**	**-0.7**
VIL2	**Platees**	**2.10**	**349**	P	**Pn**	**17 34 59.7**	**-0.2**
VIL2				S	**Sn**	**17 35 22.7**	**-2.4**
VIL2				AML	AML	17 35 27.6	
	comp=E,3026μm,0.4s						
VIL2				AML	AML	17 35 28.8	
	comp=N,3390μm,0.5s						
GUR	**Goura**	**2.13**	**328**	P	**Pn**	**17 35 01.0**	**+0.6**
GUR				S	**Sn**	**17 35 25.7**	**-0.1**
GUR				AML	AML	17 35 28.5	
	comp=E,5270μm,0.5s						
GUR				AML	AML	17 35 30.6	
	comp=N,7789μm,0.4s						
GUR	**Goura**	**2.13**	**328**	P	**Pn**	**17 35 00.8**	**+0.5**
GUR	**Goura**	**2.13**	**328**	P	**Pn**	**17 35 00.8**	**+0.5**
GUR				S	**Sn**	**17 35 25.8**	**0.0**
AMT	**Artemida-Makis**	**2.16**	**310**	P	**Pn**	**17 35 03.1**	**+2.4**
AMT				S	**Sn**	**17 35 26.1**	**-0.5**
AMT	**Artemida-Makis**	**2.16**	**310**	P	**Pn**	**17 35 02.4**	**+1.6**
AMT	**Artemida-Makis**	**2.16**	**310**	P	**Pn**	**17 35 02.2**	**+1.4**
AMT				S	**Sn**	**17 35 26.4**	**-0.2**
PROD	**Prodromos**	**2.22**	**342**	P	**Pn**	**17 35 01.5**	**-0.1**
PROD				S	**Sn**	**17 35 27.7**	**-0.3**
PROD				AML	AML	17 35 33.0	
	comp=E,1545μm,0.2s						
PROD				AML	AML	17 35 34.0	
	comp=N,1860μm,0.2s						
PROD	**Prodromos**	**2.22**	**342**	P	**Pn**	**17 35 01.8**	**+0.2**
PROD				S	**Sn**	**17 35 27.9**	**-0.1**
ZKR	**Zakros**	**2.23**	**117**	P	**Pn**	**17 35 02.4**	**+0.7**
ZKR				S	**Sn**	**17 35 26.8**	**-1.5**
ZKR				AML	AML	17 35 36.1	
	comp=N,366μm,0.3s						
ZKR				AML	AML	17 35 39.8	
	comp=E,701μm,0.5s						
ZKR	**Zakros**	**2.23**	**117**	P	**Pn**	**17 35 02.4**	**+0.7**
ZKR	**Zakros**	**2.23**	**117**	P	**Pn**	**17 35 02.3**	**+0.6**
ZKR				S	**Sn**	**17 35 27.7**	**-0.5**
KLV	**Kalavryta, Ach**	**2.30**	**326**	P	**Pn**	**17 35 03.6**	**+1.0**
KLV				S	**Sn**	**17 35 30.4**	**+0.4**
KLV	**Kalavryta, Ach**	**2.30**	**326**	P	**Pn**	**17 35 03.0**	**+0.3**
KLV				S	**Sn**	**17 35 30.2**	**+0.3**
KLV	**Kalavryta, Ach**	**2.30**	**326**	P	**Pn**	**17 35 03.0**	**+0.3**
KLV				S	**Sn**	**17 35 30.2**	**+0.3**
DRO	**Drossia**	**2.45**	**318**	P	**Pn**	**17 35 07.4**	**+2.7**
DRO	**Drossia**	**2.45**	**318**	P	**Pn**	**17 35 06.6**	**+2.0**
DRO	**Drossia**	**2.45**	**318**	P	**Pn**	**17 35 06.3**	**+1.7**
DSF	**Desfina**	**2.47**	**337**	P	**Pn**	**17 35 05.2**	**+0.2**
DSF				S	**Sn**	**17 35 32.7**	**-1.4**
DSF	**Desfina**	**2.47**	**337**	P	**Pn**	**17 35 05.2**	**+0.2**
DSF	**Desfina**	**2.47**	**337**	P	**Pn**	**17 35 05.3**	**+0.3**
DSF				S	**Sn**	**17 35 33.5**	**-0.6**
LAKA	**Lakka**	**2.54**	**326**	P	**Pn**	**17 35 06.6**	**+0.8**
LAKA	**Lakka**	**2.54**	**326**	P	**Pn**	**17 35 06.4**	**+0.5**
LAKA	**Lakka**	**2.54**	**326**	P	**Pn**	**17 35 06.4**	**+0.5**
DLFA	**Delphi**	**2.54**	**337**	P	**Pn**	**17 35 05.7**	**-0.2**
DLFA				S	**Sn**	**17 35 35.5**	**-0.3**
DLFA	**Delphi**	**2.54**	**337**	P	**Pn**	**17 35 06.1**	**+0.2**
DLFA				S	**Sn**	**17 35 35.7**	**-0.1**
LKR	**Lokris**	**2.58**	**346**	P	**Pn**	**17 35 07.0**	**+0.6**
LKR				S	**Sn**	**17 35 36.9**	**+0.3**
LKR	**Lokris**	**2.58**	**346**	P	**Pn**	**17 35 06.7**	**+0.4**
LKR				S	**Sn**	**17 35 37.2**	**+0.6**
LKR	**Lokris**	**2.58**	**346**	P	**Pn**	**17 35 06.7**	**+0.4**
LKR				S	**Sn**	**17 35 36.8**	**+0.2**
TRIZ	**Trizonia**	**2.60**	**329**	P	**Pn**	**17 35 07.3**	**+0.6**
TRIZ				S	**Sn**	**17 35 38.9**	**+1.8**
TRIZ	**Trizonia**	**2.60**	**329**	P	**Pn**	**17 35 07.2**	**+0.6**
TRIZ	**Trizonia**	**2.60**	**329**	P	**Pn**	**17 35 07.2**	**+0.6**
TRIZ				S	**Sn**	**17 35 38.1**	**+0.9**
SERG	**Sergoula**	**2.65**	**329**	P	**Pn**	**17 35 08.1**	**+0.7**
SERG				S	**Sn**	**17 35 38.1**	**-0.3**
SERG	**Sergoula**	**2.65**	**329**	P	**Pn**	**17 35 08.0**	**+0.7**
SERG	**Sergoula**	**2.65**	**329**	P	**Pn**	**17 35 08.0**	**+0.7**
SERG				S	**Sn**	**17 35 38.3**	**-0.1**
RLS	**Riolos of Patr**	**2.66**	**317**	P	**Pn**	**17 35 09.4**	**+1.9**
RLS	**Riolos of Patr**	**2.66**	**317**	P	**Pn**	**17 35 08.8**	**+1.4**
UPR	**University Cam**	**2.66**	**324**	P	**Pn**	**17 35 10.3**	**+2.8**
UPR	**University Cam**	**2.66**	**324**	P	**Pn**	**17 35 09.2**	**+1.7**
EFP	**Efpalio**	**2.73**	**327**	P	**Pn**	**17 35 07.8**	**-0.5**
EFP	**Efpalio**	**2.73**	**327**	P	**Pn**	**17 35 09.3**	**+1.0**
EFP	**Efpalio**	**2.73**	**327**	P	**Pn**	**17 35 08.4**	**+0.1**
SMIA	**Simia**	**2.77**	**351**	P	**Pn**	**17 35 10.1**	**+1.2**
SMIA	**Simia**	**2.77**	**351**	P	**Pn**	**17 35 09.8**	**+0.8**
SMIA	**Simia**	**2.77**	**351**	P	**Pn**	**17 35 09.8**	**+0.8**
SKY	**Skiros Island**	**2.80**	**12**	P	**Pn**	**17 35 09.3**	**0.0**
SKY	**Skiros Island**	**2.80**	**12**	P	**Pn**	**17 35 09.7**	**+0.4**
SKY	**Skiros Island**	**2.80**	**12**	P	**Pn**	**17 35 09.7**	**+0.4**
KARP	**Karpathos**	**2.81**	**101**	P	**Pn**	**17 35 08.9**	**-0.7**
KARP				S	**Sn**	**17 35 39.8**	**-2.5**
KARP	**Karpathos**	**2.81**	**101**	P	**Pn**	**17 35 09.9**	**+0.4**
KARP	**Karpathos**	**2.81**	**101**	P	**Pn**	**17 35 09.9**	**+0.4**
KARP				S	**Sn**	**17 35 41.2**	**-1.1**
ANX	**Ano Chora**	**2.86**	**329**	P	**Pn**	**17 35 10.0**	**-0.3**
ANX				S	**Sn**	**17 35 43.7**	**+0.1**
ANX	**Ano Chora**	**2.86**	**329**	P	**Pn**	**17 35 11.2**	**+0.9**
ANX	**Ano Chora**	**2.86**	**329**	P	**Pn**	**17 35 10.5**	**+0.2**
ANX				S	**Sn**	**17 35 43.6**	**0.0**
CHOS	**Chios island**	**2.88**	**38**	P	**Pn**	**17 35 10.6**	**0.0**
CHOS	**Chios island**	**2.88**	**38**	P	**Pn**	**17 35 10.9**	**+0.4**
SMG	**Samos**	**2.90**	**57**	P	**Pn**	**17 35 11.1**	**+0.3**
SMG	**Samos**	**2.90**	**57**	P	**Pn**	**17 35 11.3**	**+0.5**
ALNA	**Alonissos**	**3.00**	**1**	P	**Pn**	**17 35 12.2**	**+0.1**
ALNA	**Alonissos**	**3.00**	**1**	P	**Pn**	**17 35 12.5**	**+0.4**
ZEY	**˜zmir**	**3.02**	**45**	*i* P	**Pn**	**17 35 12.5**	**+0.2**
ZEY				*i* S	**Sn**	**17 35 48.9**	**+1.6**
AOS	**Alonnisos**	**3.02**	**1**	P	**Pn**	**17 35 12.5**	**+0.1**
AOS	**Alonnisos**	**3.02**	**1**	P	**Pn**	**17 35 12.5**	**+0.1**
SKIA	**Skiathos**	**3.03**	**355**	P	**Pn**	**17 35 13.3**	**+0.8**
SKIA				S	**Sn**	**17 35 45.4**	**-2.2**
SKIA				AML	AML	17 35 48.0	
	comp=E,656μm,0.3s						
SKIA				AML	AML	17 35 48.0	
	comp=N,534μm,0.6s						
SKIA	**Skiathos**	**3.03**	**355**	P	**Pn**	**17 35 13.3**	**+0.8**
SKIA	**Skiathos**	**3.03**	**355**	P	**Pn**	**17 35 13.3**	**+0.8**
SKIA				S	**Sn**	**17 35 46.5**	**-1.1**
PVO	**Paravola**	**3.05**	**325**	P	**Pn**	**17 35 16.2**	**+3.4**
PVO	**Paravola**	**3.05**	**325**	P	**Pn**	**17 35 14.9**	**+2.1**
BDRM	**Kayabasi**	**3.09**	**72**	*i* P	**Pn**	**17 35 12.7**	**-0.6**
BDRM	**Kayabasi**	**3.09**	**72**	P	**Pn**	**17 35 12.7**	**-0.6**
KFL	**Anninata**	**3.09**	**310**	P	**Pn**	**17 35 15.4**	**+2.0**
KFL	**Anninata**	**3.09**	**310**	P	**Pn**	**17 35 14.9**	**+1.5**
AGG	**Agios Georgios**	**3.10**	**339**	P	**Pn**	**17 35 13.7**	**+0.3**
AGG				S	**Sn**	**17 35 48.0**	**-1.2**
AGG	**Agios Georgios**	**3.10**	**339**	P	**Pn**	**17 35 13.9**	**+0.5**
AGG	**Agios Georgios**	**3.10**	**339**	P	**Pn**	**17 35 13.9**	**+0.5**
AGG				S	**Sn**	**17 35 48.6**	**-0.7**
DAT	**Datca**	**3.12**	**78**	*i* P	**Pn**	**17 35 11.5**	**-2.3**
DAT				*i* S	**Sn**	**17 35 50.7**	**+0.8**
DAT	**Datca**	**3.12**	**78**	P	**Pn**	**17 35 11.5**	**-2.3**
DAT				S	**Sn**	**17 35 50.7**	**+0.8**
URLA	**Izmir**	**3.15**	**45**	*i* P	**Pn**	**17 35 11.5**	**-2.7**
URLA				*i* S	**Sn**	**17 35 50.8**	**+0.2**
URLA	**Izmir**	**3.15**	**45**	P	**Pn**	**17 35 11.5**	**-2.7**
URLA				S	**Sn**	**17 35 50.8**	**+0.2**
EVR	**Evrytania**	**3.18**	**331**	P	**Pn**	**17 35 16.7**	**+2.0**
EVR				S	**Sn**	**17 35 50.0**	**-1.5**
EVR	**Evrytania**	**3.18**	**331**	P	**Pn**	**17 35 16.1**	**+1.4**
EVR				S	**Sn**	**17 35 50.7**	**-0.8**
NEO	**Neokhori**	**3.19**	**352**	P	**Pn**	**17 35 15.8**	**+1.1**
NEO	**Neokhori**	**3.19**	**352**	P	**Pn**	**17 35 15.6**	**+0.9**
NEO	**Neokhori**	**3.19**	**352**	P	**Pn**	**17 35 15.6**	**+0.9**
PDO	**Prodromos**	**3.21**	**321**	P	**Pn**	**17 35 18.3**	**+3.3**
PDO	**Prodromos**	**3.21**	**321**	P	**Pn**	**17 35 17.0**	**+2.1**
XOR	**Xorichti**	**3.25**	**352**	P	**Pn**	**17 35 14.2**	**-1.4**
XOR	**Xorichti**	**3.25**	**352**	P	**Pn**	**17 35 16.1**	**+0.6**
XOR	**Xorichti**	**3.25**	**352**	P	**Pn**	**17 35 16.1**	**+0.6**
VLS	**Valsamata**	**3.26**	**309**	P	**Pn**	**17 35 16.1**	**+0.5**
VLS	**Valsamata**	**3.26**	**309**	P	**Pn**	**17 35 16.4**	**+0.8**
FYTO	**Fytoko, Volos**	**3.33**	**349**	P	**Pn**	**17 35 17.3**	**+0.8**
FYTO	**Fytoko, Volos**	**3.33**	**349**	P	**Pn**	**17 35 17.4**	**+0.9**
FSK	**Fiskardo**	**3.45**	**313**	P	**Pn**	**17 35 19.1**	**+0.9**
MGNA	**Meganis¸,,**	**3.46**	**317**	P	**Pn**	**17 35 18.1**	**-0.3**
MGNA	**Meganis¸,,**	**3.46**	**317**	P	**Pn**	**17 35 18.7**	**+0.4**
SIGR	**SIGRI**	**3.48**	**28**	P	**Pn**	**17 35 17.3**	**-1.3**
SIGR	**SIGRI**	**3.48**	**28**	P	**Pn**	**17 35 18.4**	**-0.2**
ARG	**Arkhangelos**	**3.52**	**88**	P	**Pn**	**17 35 20.7**	**+1.6**
ARG				S	**Sn**	**17 36 00.1**	**+0.6**
ARG	**Arkhangelos**	**3.52**	**88**	P	**Pn**	**17 35 20.4**	**+1.3**
ARG				S	**Sn**	**17 35 59.9**	**+0.4**
AYDN	**Tasoluk**	**3.62**	**64**	*i* P	**Pn**	**17 35 22.4**	**+1.8**
AYDN	**Tasoluk**	**3.62**	**64**	P	**Pn**	**17 35 22.4**	**+1.8**
LKD2	**Lefkada island**	**3.62**	**318**	P	**Pn**	**17 35 20.7**	**0.0**
LKD2	**Lefkada island**	**3.62**	**318**	P	**Pn**	**17 35 21.2**	**+0.5**
DSL	**Palaion Diasel**	**3.67**	**325**	P	**Pn**	**17 35 22.6**	**+1.4**
DSL				S	**Sn**	**17 36 03.5**	**+0.2**
DSL	**Palaion Diasel**	**3.67**	**325**	P	**Pn**	**17 35 22.3**	**+1.1**
DSL	**Palaion Diasel**	**3.67**	**325**	P	**Pn**	**17 35 22.3**	**+1.1**
DSL				S	**Sn**	**17 36 03.4**	**+0.2**
PRK	**Paraskevi**	**3.67**	**32**	P	**Pn**	**17 35 20.1**	**-1.2**
PRK	**Paraskevi**	**3.67**	**32**	P	**Pn**	**17 35 21.2**	**-0.1**
THL	**Klokotos Trika**	**3.69**	**338**	P	**Pn**	**17 35 21.2**	**-0.3**
THL	**Klokotos Trika**	**3.69**	**338**	P	**Pn**	**17 35 21.9**	**+0.4**
PAIG	**Paliouri**	**3.78**	**359**	P	**Pn**	**17 35 21.7**	**-1.0**
PAIG	**Paliouri**	**3.78**	**359**	P	**Pn**	**17 35 22.8**	**+0.1**
LIA	**Limnos Island**	**3.91**	**16**	P	**Pn**	**17 35 23.8**	**-0.7**
LIA	**Limnos Island**	**3.91**	**16**	P	**Pn**	**17 35 24.7**	**+0.2**
TURN	**Turunc**	**3.95**	**78**	*i* P	Pn	17 35 20.9	-4.1
TURN	**Turunc**	**3.95**	**78**	P	Pn	17 35 21.0	-4.1
DALY	**Dalyan (Mu¨la**	**3.98**	**79**	*i* P	**Pn**	**17 35 26.8**	**+1.3**
DALY				*i* S	Sn	17 36 01.3	-1.0
DALY	**Dalyan (Mu¨la**	**3.98**	**79**	P	**Pn**	**17 35 26.8**	**+1.3**
LIT	**Litokhoron**	**4.08**	**346**	P	**Pn**	**17 35 26.8**	**-0.1**
LIT	**Litokhoron**	**4.08**	**346**	P	**Pn**	**17 35 27.4**	**+0.5**
JAN	**Janina**	**4.20**	**327**	P	**Pn**	**17 35 29.1**	**+0.6**
JAN	**Janina**	**4.20**	**327**	P	**Pn**	**17 35 29.5**	**+0.9**
PLG	**Polygyros**	**4.23**	**357**	P	**Pn**	**17 35 28.3**	**-0.6**
PLG	**Polygyros**	**4.23**	**357**	P	**Pn**	**17 35 29.2**	**+0.3**
KPRO	**Kipourio**	**4.26**	**334**	P	**Pn**	**17 35 29.1**	**-0.2**
KPRO	**Kipourio**	**4.26**	**334**	P	**Pn**	**17 35 29.8**	**+0.5**
FETY	**Fethiye**	**4.30**	**82**	P	**Pn**	**17 35 28.9**	**-1.1**
FETY				S	**Sn**	**17 36 16.0**	**-2.9**
IGT	**Igoumenitsa**	**4.35**	**322**	P	**Pn**	**17 35 29.3**	**-1.2**
IGT	**Igoumenitsa**	**4.35**	**322**	P	**Pn**	**17 35 30.6**	**+0.1**
KZN	**Kozani**	**4.45**	**340**	P	**Pn**	**17 35 30.4**	**-1.5**
KZN	**Kozani**	**4.45**	**340**	P	**Pn**	**17 35 31.8**	**-0.1**
SGD	**Sagiada**	**4.46**	**322**	P	**Pn**	**17 35 31.9**	**-0.1**
SGD	**Sagiada**	**4.46**	**322**	P	**Pn**	**17 35 32.6**	**+0.6**
HORT	**Hortiatis**	**4.48**	**353**	P	**Pn**	**17 35 32.5**	**+0.1**
HORT	**Hortiatis**	**4.48**	**353**	P	**Pn**	**17 35 33.1**	**+0.7**
SMTH	**Samothraki Isl**	**4.53**	**17**	P	**Pn**	**17 35 31.6**	**-1.4**
SMTH	**Samothraki Isl**	**4.53**	**17**	P	**Pn**	**17 35 33.0**	**0.0**
PENT	**Pentalofos**	**4.55**	**334**	P	**Pn**	**17 35 33.5**	**+0.1**
PENT	**Pentalofos**	**4.55**	**334**	P	**Pn**	**17 35 34.1**	**+0.8**
AKAS	**Kas**	**4.71**	**87**	*i* P	**Pn**	**17 35 35.6**	**0.0**
AKAS	**Kas**	**4.71**	**87**	P	**Pn**	**17 35 35.6**	**0.0**
GOLH	**Golhisar**	**4.77**	**75**	*i* P	**Pn**	**17 35 38.4**	**+2.0**
GOLH				*i* S	**Sn**	**17 36 33.2**	**+2.8**
GOLH	**Golhisar**	**4.77**	**75**	P	**Pn**	**17 35 38.4**	**+2.0**
GOLH				S	**Sn**	**17 36 33.2**	**+2.8**
NEST	**Nestorio**	**4.77**	**334**	P	**Pn**	**17 35 35.5**	**-1.0**
NEST	**Nestorio**	**4.77**	**334**	P	**Pn**	**17 35 36.7**	**+0.3**
SLUM	**Salum**	**4.79**	**165**	P	Pn	17 35 33.3	-3.3
	baz=168						
SLUM				AMP		17 36 00.0	
	baz=168						
SLUM				S	Sn	17 36 25.2	-5.6
	baz=168						
SLUM	**Salum**	**4.79**	**165**	P	Pn	17 35 33.3	-3.3
KAVA	**Kavala**	**4.88**	**7**	P	**Pn**	**17 35 36.3**	**-1.4**
KAVA	**Kavala**	**4.88**	**7**	P	**Pn**	**17 35 37.8**	**+0.1**
GRG	**Griva**	**4.92**	**348**	P	**Pn**	**17 35 36.5**	**-1.9**
GRG	**Griva**	**4.92**	**348**	P	**Pn**	**17 35 38.2**	**-0.2**
SRS	**Serrai**	**4.97**	**358**	P	**Pn**	**17 35 39.0**	**0.0**
SRS	**Serrai**	**4.97**	**358**	P	**Pn**	**17 35 39.6**	**+0.6**
SRS	**Serrai**	**4.97**	**358**	P	**Pn**	**17 35 39.6**	**+0.6**
FNA	**Florina**	**5.00**	**339**	P	**Pn**	**17 35 37.9**	**-1.6**
FNA	**Florina**	**5.00**	**339**	P	**Pn**	**17 35 39.5**	**0.0**
KNT	**Kendrikon**	**5.06**	**352**	P	**Pn**	**17 35 41.5**	**+1.3**
KNT	**Kendrikon**	**5.06**	**352**	P	**Pn**	**17 35 41.5**	**+1.3**
ALN	**Alexandroupoli**	**5.07**	**20**	P	**Pn**	**17 35 39.2**	**-1.1**
ALN	**Alexandroupoli**	**5.07**	**20**	P	**Pn**	**17 35 40.6**	**+0.3**
KEPZ	**Antalya-Kepez**	**6.34**	**81**	*i* P	**Pn**	**17 35 59.6**	**+1.7**
KEPZ				*i* S	**Sn**	**17 37 05.2**	**-3.7**
KEPZ	**Antalya-Kepez**	**6.34**	**81**	P	**Pn**	**17 35 59.6**	**+1.7**
MASS	**Massafra**	**6.87**	**313**	*e*Pn	**Pn**	**17 36 03.4**	**-1.6**
SWA2		**7.03**	**168**	P	Pn	17 36 04.4	-2.8
	baz=170						
SWA2				AMP		17 37 00.0	
	baz=170						
SG1	**Sgolgore (BA)**	**7.28**	**312**	*e*Pn	**Pn**	**17 36 09.4**	**-1.2**
BAI	**Bari**	**7.33**	**315**	*e*Pn	**Pn**	**17 36 10.9**	**-0.3**
ZAGS	**Zajecar**	**7.75**	**352**	*e*Pn	**Pn**	**17 36 19.2**	**+2.2**
CSS	**Mathiatis**	**7.87**	**96**	Pn	Pn	17 36 14.4	-4.3
GULN	**MERSIN_Gulnar**	**7.90**	**87**	*i* P	**Pn**	**17 36 18.4**	**-0.7**
GULN				*i* S	**Sn**	**17 37 41.2**	**-5.6**
GULN	**MERSIN_Gulnar**	**7.90**	**87**	P	**Pn**	**17 36 18.4**	**-0.7**
STON	**Ston**	**8.20**	**327**	*i* Pn	Pn	17 36 18.2	-4.8
STON				Sn	Sn	17 37 41.7	-12
DIVS	**Divibare**	**8.46**	**341**	*e*Pn	**Pn**	**17 36 25.2**	**-1.5**
BRTR	**Keskin Array B**	**8.57**	**62**	P	**Pn**	**17 36 31.2**	**+2.8**
	comp=N,0.1nm,0.3s,baz=244,slow=14,SNR=2.4						
KOT	**Kottamia**	**9.17**	**130**	P	Pn	17 36 32.2	-4.3
	baz=131						
HSAF	**As Saff**	**9.22**	**133**	P	Pn	17 36 33.2	-3.9
	baz=134						
HHAG	**Hagoal**	**9.32**	**129**	P	Pn	17 36 34.3	-4.2
	baz=130						
MLR	**Muntele Rosu**	**9.48**	**9**	P	**Pn**	**17 36 42.8**	**+2.1**
	comp=N,0.2nm,0.3s,baz=312,slow=17,SNR=5.0						
HFRF	**Wahat Farafira**	**9.76**	**155**	P	Pn	17 36 41.1	-3.5
	baz=157						
RSH		**9.77**	**119**	P	Pn	17 36 40.3	-4.4
	baz=120						
MMAI	**Mount Meron Ar**	**10.08**	**105**	P	Pn	17 36 45.0	-3.9
	comp=N,2.0nm,0.3s,baz=307,slow=12,SNR=19						
MMAI				S	**Sn**	**17 38 33.9**	**-6.5**
	comp=N,2.5nm,0.3s,baz=305,slow=20,SNR=5.8						
MMA0B	**Mount Meron ar**	**10.08**	**105**	Pn	Pn	17 36 44.7	-4.2
SLTI	**Sal'it**	**10.10**	**109**	Pn	Pn	17 36 45.2	-4.0
KSDI	**Kefar Szold**	**10.21**	**103**	Pn	Pn	17 36 46.6	-4.1
KZIT	**Kziot**	**10.28**	**117**	Pn	Pn	17 36 48.2	-3.5
MMLI	**Mount Malkishu**	**10.31**	**108**	Pn	Pn	17 36 48.6	-3.5
AMAZ	**Amatzia**	**10.34**	**113**	Pn	Pn	17 36 49.1	-3.3
UDBI	**Udbina**	**10.37**	**326**	*e*Pn	**Pn**	**17 36 49.9**	**-2.9**
UDBI				Sn	**Sn**	**17 38 40.6**	**-6.7**
TAMRE	**El Minia**	**10.39**	**142**	P	Pn	17 36 49.8	-3.3
	baz=143						
KSHT	**Keshet**	**10.41**	**104**	Pn	Pn	17 36 49.3	-4.1
HMDT	**Nahal Hemdat**	**10.47**	**108**	Pn	Pn	17 36 50.9	-3.3
YTIR	**Yattir**	**10.57**	**114**	Pn	Pn	17 36 52.4	-3.3
DSI	**Dead Sea**	**10.67**	**112**	Pn	Pn	17 36 53.7	-3.2
NVLJ	**Novalja**	**10.81**	**324**	*e*Pn	**Pn**	**17 36 55.6**	**-3.1**
NVLJ				Sn	**Sn**	**17 38 50.0**	**-8.0**
PRNI	**Paran**	**11.03**	**118**	Pn	Pn	17 36 58.6	-3.2
HRFI	**Mount Harif**	**11.23**	**120**	Pn	Pn	17 37 01.6	-3.0
MBRI	**Mt Berech**	**11.29**	**121**	Pn	Pn	17 37 01.5	-4.0
EIL	**Elat**	**11.39**	**121**	P	Pn	17 37 04.0	-2.8
	comp=N,0.4nm,0.3s,baz=229,slow=1.3,SNR=16						
EIL				S	Sn	17 39 01.6	-11
	comp=N,1.0nm,0.3s,baz=22,slow=10.0,SNR=7.0						
EIL	**Elat**	**11.39**	**121**	Pn	Pn	17 37 02.8	-4.0
GERES	**GERESS Array B**	**14.69**	**333**	P	**Pn**	**17 37 54.3**	**+3.2**
	comp=N,0.6nm,0.3s,baz=142,slow=11,SNR=23						
AKASG	**Malin Array Be**	**15.07**	**13**	P	**Pn**	**17 37 57.3**	**+1.5**
	comp=N,2.6nm,0.3s,baz=203,slow=9.1,SNR=8.6						
CLL	**Collm**	**17.01**	**336**	*i* P	**P**	**17 38 25.5**	**+4.3**
MDT	**Midelt**	**23.61**	**270**	P	**P**	**17 39 30.6**	**-1.5**
	comp=N,2.8nm,0.8s,baz=251,slow=9.6,SNR=5.1						
HFS	**Hagfors**	**24.87**	**348**	P	**P**	**17 39 41.3**	**-1.8**
	comp=N,1.1nm,0.4s,baz=153,slow=10.0,SNR=16						
FINES	**FINESS Array B**	**25.36**	**3**	P	**P**	**17 39 45.5**	**-2.0**
	comp=N,1.4nm,0.9s,baz=181,slow=7.0,SNR=3.8						
ARCES	**ARCESS Array B**	**33.46**	**1**	P	**P**	**17 40 58.2**	**-1.0**
	comp=N,3.5nm,0.9s,baz=183,slow=6.3,SNR=2.7						
DBIC	**Dimbokro**	**39.34**	**229**	P	P	17 41 47.1	-2.8
	comp=N,2.6nm,0.7s,baz=7.1,slow=8.1,SNR=5.8						
KURBB	**Kurchatov Arra**	**41.39**	**52**	P	P	17 42 04.3	-2.1
	comp=N,0.3nm,0.4s,baz=272,slow=8.7,SNR=3.2						
MKAR	**Makanchi Array**	**44.18**	**57**	P	P	17 42 26.6	-2.5
	comp=N,0.4nm,0.5s,baz=269,slow=8.6,SNR=7.6						
YKA	**Yellowknife Ar**	**76.16**	**341**	P	P	17

0.1nm,0.3s,baz=305,slow=24,SNR=1.4
KSRS Korea Array 10.20 286 Pn Pn 17 46 36.2 +5.5
0.1nm,0.3s,baz=100,slow=14,SNR=4.8
KSRS LR LR 17 50 24.9
comp=Z,347nm,21.1s,baz=95,slow=37
KSAR Wonju Array Be 10.22 286 Pn Pn 17 46 36.2 +5.1
USRK Ussuriysk Ar. 11.00 327 Pn Pn 17 46 47.7 +6.0
baz=135,slow=14
USRK LR LR 17 50 53.9
comp=Z,311nm,18.2s,baz=134,slow=37
PETK Petropavlovsk- 21.74 29 LR LR 17 58 22.2
comp=Z,26nm,19.9s,baz=206,slow=40
GUMO Guam 21.92 168 LR LR 17 57 00.8
comp=Z,93nm,18.1s,baz=12,slow=36
YAK Yakutsk 27.66 349 LR LR 17 59 35.2
comp=Z,44nm,19.7s,baz=248,slow=34
SONM Songino Array 28.08 307 P **P 17 49 57.2 +1.2**
0.4nm,0.7s,baz=111,slow=8.6,SNR=3.0
SONM LR LR 18 01 49.3
comp=Z,270nm,18.4s,baz=115,slow=38
H11N2 WAKE ISLAND Hy 28.11 116 T T 18 19 14.9
baz=309,slow=75,SNR=319
H11N1 WAKE ISLAND Hy 28.11 116 T T 18 19 15.2
baz=309,slow=75,SNR=207
H11N3 WAKE ISLAND Hy 28.12 116 T T 18 19 15.9
baz=309,slow=75,SNR=237
H11S3 WAKE ISLAND Hy 28.74 119 T T 18 20 00.3
baz=311
H11S1 WAKE ISLAND Hy 28.74 118 T T 18 20 00.8
baz=311
H11S2 WAKE ISLAND Hy 28.75 118 T T 18 20 01.5
baz=311
DAV Davao City (W) 31.08 209 LR LR 18 03 05.1
comp=Z,42nm,20.1s,baz=332,slow=37
CMAR Chiang Mai Arr 40.14 256 LR LR 18 09 37.7
comp=Z,105nm,18.8s,baz=58,slow=38
ZALV Zalesovo Beam 42.47 314 P **P 17 51 59.1 0.0**
1.1nm,0.5s,baz=72,slow=6.4,SNR=4.9
ZALV LR LR 18 10 06.8
comp=Z,52nm,20.4s,baz=248,slow=37
BRDH Bariadhala 43.94 267 LR LR 18 13 32.4
comp=Z,136nm,20.1s,baz=100,slow=40
MKAR Makanchi Array 44.31 304 P **P 17 52 14.6 +0.4**
1.7nm,0.7s,baz=88,slow=10,SNR=14
MKAR LR LR 18 11 33.9
comp=Z,170nm,18.8s,baz=42,slow=37
KURK Kurchatov 46.34 309 *e*P **P 17 52 29.7 -0.4**
KURBB Kurchatov Arra 46.40 309 P **P 17 52 30.7 +0.1**
5.7nm,0.6s,baz=85,slow=7.6,SNR=30
BVAR Borovoye Array 51.12 313 P **P 17 53 06.8 0.0**
1.3nm,0.6s,baz=79,slow=7.5,SNR=7.5
BRVK Borovoye 51.18 313 *e*P **P 17 53 07.2 -0.1**
5.3nm,1.0s
FITZ Fitzroy Crossi 54.80 197 P **P 17 53 33.9 -0.3**
1.3nm,0.8s,baz=22,slow=9.6,SNR=4.4
WRAB Tennant Creek 55.12 187 *e*P **P 17 53 35.8 -0.8**
15nm,1.3s
WRA Warramunga Arr 55.13 187 P **P 17 53 36.0 -0.6**
2.4nm,0.5s,baz=4.1,slow=7.7,SNR=85
ASAR Alice Springs 58.86 187 P **P 17 54 02.5 -0.6**
4.5nm,1.3s,baz=21,slow=11,SNR=20
AKTO Aktyubinsk 59.20 312 P **P 17 54 05.0 -0.2**
1.8nm,0.7s,baz=77,slow=12,SNR=3.7
AKTO LR LR 18 21 10.9
comp=Z,96nm,19.0s,baz=50,slow=38
GEYT Alibeck 63.90 299 LR LR 18 24 32.7
comp=Z,117nm,18.1s,baz=95,slow=38
BBB Bella Bella 64.03 43 LR LR 18 21 29.2
comp=Z,35nm,18.3s,baz=110,slow=35
AFI Afiamalu 66.72 128 LR LR 18 21 49.6
comp=Z,17nm,18.9s,baz=242,slow=34
FINES FINESS Array B 69.99 332 P **P 17 55 15.3 -0.1**
2.9nm,1.1s,baz=49,slow=5.8,SNR=5.1
AKASG Malin Array Be 75.16 322 P **P 17 55 45.9 -0.6**
0.8nm,0.3s,baz=40,slow=5.0,SNR=4.7
AKASG LR LR 18 31 50.6
comp=Z,132nm,18.3s,baz=50,slow=38
NOA NORSAR Array B 75.50 337 LR LR 18 32 11.3
comp=Z,42nm,19.6s,baz=325,slow=38
BRTR Keskin Array B 79.35 311 P **P 17 56 10.4 0.0**
0.6nm,0.9s,baz=58,slow=3.6,SNR=3.0
BRTR LR LR 18 35 38.6
comp=Z,24nm,18.2s,baz=72,slow=39
RAR Rarotonga 79.87 125 LR LR 18 29 57.5
comp=Z,69nm,18.5s,baz=292,slow=34
MLR Muntele Rosu 80.16 319 LR LR 18 35 35.6
comp=Z,9.7nm,18.4s,baz=44,slow=38
GERES GERESS Array B 83.76 328 LR LR 18 35 42.9
comp=Z,32nm,18.8s,baz=32,slow=37
PPT Papeete 84.68 116 LR LR 18 29 18.1
comp=Z,55nm,20.0s,baz=328,slow=32

*GRAL **28** 17:56:37.3±0.3, 33°.80N×35°.77E, h14km±3km, MD2.7*
*NSSC **28** 17:56:40.0±1.4, 33°.64N×35°.77E, h3km±8km, ML1.6*
ISC 28 17:56:36.8±1.0, 33°.80N±0°.04×35°.79E±0°.08, h15km±11km, n8, σ0s53/14, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHL	**Bhannes**	**0.15**	**313**	*e*P	**Pg**	**17 56 40.8**	**0.0**
BHL				*e*S	**Sg**	**17 56 43.3**	**-0.1**
DQRL	**Deir Qamar**	**0.20**	**243**	*e*P	**Pg**	**17 56 41.5**	**-0.1**
DQRL				*e*S	**Sg**	**17 56 44.6**	**-0.2**
RCY	**Rachaya**	**0.31**	**173**	*e*P	**Pg**	**17 56 43.4**	**+0.1**
RCY				*e*S	**Sg**	**17 56 47.9**	**+0.2**
BRBR	**Barbar**	**0.41**	**161**	*e*P	**Pg**	**17 56 45.5**	**+0.4**
BRBR				*e*S	**Sg**	**17 56 49.8**	**-1.0**
BRBR				AML	AML	17 56 54.9	
	comp=N,46nm,0.3s						
BRBR				AML	AML	17 56 56.1	
	comp=E,21nm,0.5s						
QASN	**Qassioun**	**0.49**	**123**	*e*P	**Pn**	**17 56 49.4**	**0.0**
QASN				*e*S	**Sb**	**17 56 54.3**	**+0.1**
QASN				AML	AML	17 56 56.3	
	comp=N,69nm,0.4s						
QASN				AML	AML	17 56 58.5	
	comp=E,84nm,0.6s						
HWQ	**Hawqa**	**0.49**	**15**	*e*P	**Pg**	**17 56 46.4**	**-0.3**
TOTH	**TOTAH**	**0.69**	**129**	*e*P	**Pn**	**17 56 52.2**	**+0.1**
TOTH				*e*S	**Sn**	**17 57 01.8**	**-0.9**
TOTH				AML	AML	17 57 10.3	
	comp=E,11nm,0.7s						
TOTH				AML	AML	17 57 13.7	
	comp=N,12nm,0.4s						
SLMH	**Al Salmeh**	**2.98**	**36**	*e*P	**Pb**	**17 57 30.4**	**+0.8**
SLMH				AML	AML	17 57 42.7	
	comp=N,16nm,0.7s						
SLMH				AML	AML	17 58 04.7	
	comp=E,15nm,0.4s						

DJA 28 18:25:56.9±0.3, 7°.5S±3°.×11°.8E±°, h10km, M3.8/13, MLv3.8/13, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**1.45**	**201**	P	Pn	18 26 23.2	0.0
TWSI	**Taliwang, Sumb**	**1.89**	**228**	P	Pn	18 26 29.0	-0.3
WBSI	**Waikabubak, Su**	**2.41**	**154**	P	Pn	18 26 36.6	+0.2
BKSI	**Bulukumba**	**2.79**	**40**	P	Pn	18 26 41.4	-0.3
SRBI	**Singaraja**	**3.13**	**259**	P	Pn	18 26 46.0	-0.3
IGBI	**Denpasar**	**3.41**	**247**	P	Pn	18 26 50.0	-0.1
EDFI	**Ende, Flores**	**3.58**	**111**	P	Pn	18 26 52.5	-0.1
SPSI	**Sidrap Palu**	**3.77**	**23**	P	Pn	18 26 54.8	-0.4
MMRI	**Maumere**	**4.06**	**107**	P	Pn	18 26 58.8	-0.3
JAGI	**Jajag, Banyuwa**	**4.24**	**256**	P	Pn	18 27 01.2	-0.4
TTSI	**Tana Toraja**	**4.64**	**19**	P	Pn	18 27 08.3	+1.1

*NIED **28** 18:26:00, 38°.40N×142°.20E, h50km, Mw3.5 Best double couple: M0=1.98000×10^14 NP1:φ=207.00000°, δ=21.00000°, λ=104.00000°. NP2:φ=12.00000°, δ=70.00000°, λ=85.00000°.*
JMA 28 18:26:18.3±0.1, 38°.41N×142°.14E, h35km±1km, M3.7, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**0.62**	**274**	P	Pn	18 26 30.7	+0.1
JIO				S	Sn	18 26 39.0	-0.4
OFUJ	**Ofunato**	**0.76**	**331**	P	Pn	18 26 32.7	+0.1
OFUJ				S	Sn	18 26 42.6	-0.3
JMK	**Ichinoseki**	**0.90**	**307**	P	Pn	18 26 34.9	+0.4
JMK				S	Sn	18 26 46.6	+0.4
JOU	**Okura**	**1.16**	**268**	P	Pn	18 26 38.8	+0.7
JOU				S	Sn	18 26 53.6	+0.9
JMM	**Marumori**	**1.19**	**243**	P	Pn	18 26 38.3	-0.2
JMM				S	Sn	18 26 53.2	-0.2
JOM	**Ohasama**	**1.25**	**328**	P	Pn	18 26 40.1	+0.8
JOM				S	Sn	18 26 56.0	+1.1
JFK	**Kawauchi**	**1.45**	**224**	P	Pn	18 26 41.5	-0.5
JYK	**Kaneyama**	**1.48**	**291**	P	Pn	18 26 43.5	+1.0
JYK				*e*S	Sn	18 27 02.4	+1.8
JRG	**Rokugo**	**1.53**	**310**	P	Pn	18 26 44.5	+1.3
JYS	**Shiratake**	**1.64**	**264**	P	Pn	18 26 45.6	+0.9
JYS				S	Sn	18 27 06.1	+1.5
JFT	**Otama**	**1.68**	**239**	P	Pn	18 26 46.0	+0.8

IDC 28 18:27:52.7±2.6, 6°.19N×123°.59E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/54, mbtmp3.4/3, Error ellipse: s-maj=311.5km s-min=27.2km az=63.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**28.04**	**158**	P	P	18 33 45.3	-0.5
	0.4nm,1.0s,baz=337,slow=9.8,SNR=3.7						
ASAR	**Alice Springs**	**31.34**	**162**	P	P	18 34 15.6	+0.5
	0.3nm,0.4s,baz=341,slow=7.5,SNR=9.8						
MKAR	**Makanchi Array**	**53.77**	**326**	P	P	18 37 16.9	-0.1
	0.1nm,0.4s,baz=118,slow=7.1,SNR=4.5						

*ISK **28** 18:28:09.9, 36°.97N×27°.56E, h7km, ML2.6/7*
*ISCJB **28** 18:28:10.4±0.5, 36°.98N±0°.03×27°.57E±0°.05, h8km±7km, Error ellipse: s-maj=6.4km s-min=4.1km az=165.7*
*DDA **28** 18:28:10.2, 36°.98N×27°.60E, h7km, Ml2.7*
*CSEM **28** 18:28:10.5±0.2, 36°.98N×27°.55E, h2km, ML2.6, Error ellipse: s-maj=5.4km s-min=3.8km az=57.0*
ISC 28 18:28:09.9±1.0, 36°.96N±0°.02×27°.57E±0°.03, h17km±7km, n39, σ1s65/53, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.14**	**314**	*i* P	**Pg**	**18 28 13.8**	**-0.2**
BDRM				*i* S	**Sg**	**18 28 16.6**	**-0.2**
BDRM	**Kayabasi**	**0.14**	**314**	P	**Pg**	**18 28 13.8**	**-0.2**
BDRM				S	**Sg**	**18 28 16.6**	**-0.2**
DATC	**Datca-Mugla**	**0.22**	**161**	PG	**Pg**	**18 28 15.0**	**0.0**
DATC	**Datca-Mugla**	**0.22**	**161**	*e*Pg	**Pg**	**18 28 15.0**	**0.0**
BODT	**Bodrum**	**0.23**	**295**	PG	**Pg**	**18 28 14.5**	**-0.8**
BODT				SG	**Sg**	**18 28 18.5**	**-0.5**
BODT	**Bodrum**	**0.23**	**295**	*e*Pg	**Pg**	**18 28 14.5**	**-0.8**
BODT				*e*Sg	**Sg**	**18 28 18.5**	**-0.5**
DAT	**Datca**	**0.23**	**179**	PG	**Pg**	**18 28 15.3**	**0.0**
DAT				SG	**Sg**	**18 28 19.2**	**0.0**
DAT	**Datca**	**0.23**	**179**	*i* P	**Pg**	**18 28 15.4**	**0.0**
DAT				*i* S	**Sg**	**18 28 19.1**	**0.0**
DAT	**Datca**	**0.23**	**179**	P	**Pg**	**18 28 15.4**	**0.0**
DAT				S	**Sg**	**18 28 19.1**	**0.0**
MLSB	**Milas**	**0.37**	**26**	PG	**Pg**	**18 28 17.8**	**+0.2**
MLSB				SG	**Sg**	**18 28 23.1**	**+0.3**
MLSB	**Milas**	**0.37**	**26**	*e*Pg	**Pg**	**18 28 17.8**	**+0.2**
MLSB				*e*Sg	**Sg**	**18 28 23.1**	**+0.3**
MRSB	**Marmaris-Mugla**	**0.56**	**116**	PG	**Pb**	**18 28 21.7**	**+0.5**
MRSB	**Marmaris-Mugla**	**0.56**	**116**	*e*Pg	**Pb**	**18 28 21.7**	**+0.5**
YER	**Yerkesik**	**0.59**	**73**	PG	**Pb**	**18 28 22.4**	**+0.6**
YER	**Yerkesik**	**0.59**	**73**	*e*Pg	**Pb**	**18 28 22.4**	**+0.6**
AYDN	**Tasoluk**	**0.74**	**19**	*i* P	**Pg**	**18 28 24.3**	**-0.1**
AYDN				*i* S	**Sg**	**18 28 34.1**	**0.0**
AYDN	**Tasoluk**	**0.74**	**19**	P	**Pg**	**18 28 24.3**	**-0.1**
AYDN				S	**Sg**	**18 28 34.2**	**0.0**
GCAM	**G?zelcaml?**	**0.78**	**340**	PG	**Pg**	**18 28 25.5**	**+0.3**
GCAM	**G?zelcaml?**	**0.78**	**340**	*i* P	**Pg**	**18 28 23.0**	**-2.2**
GCAM				*i* S	**Sb**	**18 28 36.2**	**+0.9**
GCAM	**G?zelcaml?**	**0.78**	**340**	P	**Pg**	**18 28 23.0**	**-2.2**
GCAM	**G?zelcaml?**	**0.78**	**340**	*e*Pg	**Pg**	**18 28 25.5**	**+0.3**
GCAM				S	**Sb**	**18 28 36.2**	**+0.9**
TURN	**Turunc**	**0.83**	**96**	PG	Pg	18 28 20.9	-5.2
TURN	**Turunc**	**0.83**	**96**	*i* P	Pg	18 28 20.8	-5.3
TURN				*i* S	**Sg**	**18 28 29.7**	**-7.4**
TURN	**Turunc**	**0.83**	**96**	*e*Pg	Pg	18 28 20.9	-5.2
TURN				S	**Sg**	**18 28 29.7**	**-7.4**
ARG	**Arkhangelos**	**0.87**	**149**	PG	**Pb**	**18 28 26.9**	**+0.4**
ARG	**Arkhangelos**	**0.87**	**149**	*e*Pg	**Pb**	**18 28 26.9**	**+0.4**
DALY	**Dalyan (Mu¨la**	**0.88**	**99**	PG	**Pg**	**18 28 27.6**	**+0.6**
DALY	**Dalyan (Mu¨la**	**0.88**	**99**	*e*Pg	**Pg**	**18 28 27.6**	**+0.6**
AYDB	**Zeytinkoy-Aydi**	**1.01**	**14**	PG	**Pb**	**18 28 29.2**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**1.01**	**14**	*e*Pg	**Pb**	**18 28 29.2**	**+0.2**
TAVA	**DENIZLI_Tavas**	**1.18**	**65**	*i* P	**Pg**	**18 28 34.3**	**+1.6**
TAVA				*i* S	**Sb**	**18 28 47.6**	**+0.7**
TAVA	**DENIZLI_Tavas**	**1.18**	**65**	P	**Pg**	**18 28 34.3**	**+1.6**
TAVA				S	**Sb**	**18 28 47.6**	**+0.7**
DGB	**¨zmir**	**1.22**	**333**	*i* P	Pg	18 28 39.8	+6.4
FETY	**Fethiye**	**1.26**	**105**	PN	**Pg**	**18 28 34.8**	**+0.7**
FETY	**Fethiye**	**1.26**	**105**	*e*Pn	**Pg**	**18 28 34.8**	**+0.7**
FETY				S	**Sg**	**18 28 50.7**	**+0.1**
AKAS	**Kas**	**1.79**	**113**	PN	**Pb**	**18 28 42.5**	**+0.2**
AKAS	**Kas**	**1.79**	**113**	*i* P	**Pg**	**18 28 45.1**	**+0.8**
AKAS	**Kas**	**1.79**	**113**	*e*Pn	**Pb**	**18 28 42.5**	**+0.2**
AKAS	**Kas**	**1.79**	**113**	P	**Pg**	**18 28 45.1**	**+0.8**

*ISCJB **28** 18:51:04.2±0.5, 39°.61N±0°.03×26°.50E±0°.04, h0km, Error ellipse: s-maj=4.8km s-min=3.7km az=165.7*
*DDA **28** 18:51:04.0, 39°.60N×26°.46E, h7km, Ml2.5, Suspected Mining explosion.*
*ISK **28** 18:51:04.0, 39°.60N×26°.47E, h10km, ML2.3/10*
*CSEM **28** 18:51:04.4±0.2, 39°.61N×26°.50E, h1km, ML2.5, Error ellipse: s-maj=4.2km s-min=3.4km az=70.0, Suspected Mining explosion.*
ISC 28 18:51:03.4±0.9, 39°.55N±0°.04×26°.49E±0°.03, h0km, n33, σ0s40/44, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYC	**CANAKKALE_Bayr**	**0.20**	**13**	*i* P	**Pg**	**18 51 07.9**	**+0.7**
BAYC				*i* S	**Sg**	**18 51 10.6**	**+0.8**
BAYC	**CANAKKALE_Bayr**	**0.20**	**13**	P	**Pg**	**18 51 07.9**	**+0.7**
BAYC				S	**Sg**	**18 51 10.6**	**+0.8**
AYVA	**Ayvalik**	**0.28**	**146**	*i* P	**Pb**	**18 51 11.3**	**-0.1**
AYVA				*i* S	**Sb**	**18 51 16.3**	**-0.4**
AYVA	**Ayvalik**	**0.28**	**146**	P	**Pb**	**18 51 11.3**	**-0.1**
AYVA				S	**Sb**	**18 51 16.3**	**-0.4**
EZN	**Ezine**	**0.31**	**336**	PG	**Pg**	**18 51 09.8**	**+0.5**
EZN				SG	**Sg**	**18 51 13.6**	**+0.4**
EZN	**Ezine**	**0.31**	**336**	*e*Pg	**Pg**	**18 51 09.8**	**+0.5**
EZN				*e*Sg	**Sg**	**18 51 13.6**	**+0.4**
BOZC	**Bozcaada**	**0.45**	**311**	PG	**Pg**	**18 51 12.3**	**+0.4**
BOZC				SG	**Sg**	**18 51 18.1**	**+0.3**
BOZC	**Bozcaada**	**0.45**	**311**	*i* P	**Pg**	**18 51 12.4**	**+0.5**
BOZC				*i* S	**Sg**	**18 51 18.0**	**+0.3**
BOZC	**Bozcaada**	**0.45**	**311**	*e*Pg	**Pg**	**18 51 12.3**	**+0.4**
BOZC				*e*Sg	**Sg**	**18 51 18.1**	**+0.3**
DKL	**Dikili**	**0.57**	**146**	PG	**Pb**	**18 51 16.8**	**+0.5**
DKL	**Dikili**	**0.57**	**146**	*e*Pg	**Pb**	**18 51 16.8**	**+0.5**
SIGR	**SIGRI**	**0.59**	**236**	PG	**Pb**	**18 51 16.5**	**-0.1**
SIGR				SG	**Sb**	**18 51 25.4**	**-0.1**
SIGR	**SIGRI**	**0.59**	**236**	*e*Pg	**Pb**	**18 51 16.5**	**-0.1**
SIGR				*e*Sg	**Sb**	**18 51 25.4**	**-0.1**
GADA	**Gvkgeada**	**0.79**	**325**	PG	**Pg**	**18 51 18.8**	**+0.3**
GADA	**Gvkgeada**	**0.79**	**325**	*e*Pg	**Pg**	**18 51 18.8**	**+0.3**
GELI	**Tayfur-Gelibol**	**0.85**	**359**	PG	**Pg**	**18 51 19.9**	**+0.2**
GELI	**Tayfur-Gelibol**	**0.85**	**359**	*e*Pg	**Pg**	**18 51 19.9**	**+0.2**
LPK	**Lapseki**	**0.85**	**14**	PG	**Pg**	**18 51 19.4**	**-0.3**
LPK	**Lapseki**	**0.85**	**14**	*e*Pg	**Pg**	**18 51 19.4**	**-0.3**
GONE	**Gonen-Balikesi**	**1.05**	**61**	PG	**Pb**	**18 51 24.2**	**-0.2**
GONE	**Gonen-Balikesi**	**1.05**	**61**	*e*Pg	**Pb**	**18 51 24.2**	**-0.2**
KRBG	**Karabiga-Canak**	**1.05**	**36**	PG	**Pg**	**18 51 23.9**	**+0.4**
KRBG	**Karabiga-Canak**	**1.05**	**36**	*e*Pg	**Pg**	**18 51 23.9**	**+0.4**
BALB	**Balikesir**	**1.08**	**85**	PN	**Pb**	**18 51 25.1**	**+0.2**
BALB	**Balikesir**	**1.08**	**85**	*e*Pn	**Pb**	**18 51 25.1**	**+0.2**
ERIK	**Erikli-Kesan**	**1.12**	**1**	PG	**Pg**	**18 51 24.9**	**0.0**
ERIK	**Erikli-Kesan**	**1.12**	**1**	*e*Pg	**Pg**	**18 51 24.9**	**0.0**
ENEZ	**Enez**	**1.22**	**348**	PN	**Pg**	**18 51 26.8**	**+0.1**
ENEZ	**Enez**	**1.22**	**348**	*e*Pn	**Pg**	**18 51 26.8**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.26**	**25**	PN	**Pg**	**18 51 27.4**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.26**	**25**	*e*Pn	**Pg**	**18 51 27.4**	**-0.1**
ALN	**Alexandroupoli**	**1.39**	**346**	PN	**Pn**	**18 51 29.4**	**-0.6**
ALN	**Alexandroupoli**	**1.39**	**346**	*e*Pn	**Pn**	**18 51 29.4**	**-0.6**

*CSEM **28** 18:55:58.3, 27°.67N×18°.11W, h21km, ML3.5*
ISC 28 18:55:57.2±1.5, 27°.92N±0°.05×18°.19W±0°.09, h19km±2km, n10, σ0s78/18, Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTAN	**El Hierro**	**0.20**	**144**	P	**Pb**	**18 56 02.2**	**+0.6**
	SNR=7.9						
CTAN				S	**Sb**	**18 56 05.1**	**+0.7**
	SNR=7.9						
CJUL	**El Julon, El H**	**0.21**	**153**	P	**Pb**	**18 56 02.2**	**+0.2**
	SNR=7.9						
CJUL				S	**Sb**	**18 56 05.1**	**0.0**
	SNR=7.9						
CORC	**Orchilla, El H**	**0.21**	**170**	P	**Pb**	**18 56 02.0**	**0.0**
	SNR=7.9						
CORC				S	**Sb**	**18 56 04.9**	**-0.2**
	SNR=7.9						
CCUM	**Cumbre, El Hie**	**0.22**	**141**	P	**Pb**	**18 56 02.3**	**+0.1**
	SNR=7.9						
CCUM				S	**Sb**	**18 56 05.2**	**-0.2**
	SNR=7.9						
CMCL	**Mercadel, El H**	**0.25**	**144**	P	**Pb**	**18 56 02.0**	**-1.0**
	SNR=7.9						
CMCL				S	**Sb**	**18 56 05.3**	**-1.6**
	SNR=7.9						
CTIG	**El Hierro**	**0.27**	**118**	P	**Pg**	**18 56 03.6**	**+0.3**
	SNR=7.9						
CTIG				S	**Sg**	**18 56 07.3**	**-0.1**
	1μm,0.1s,SNR=7.9						
CHIE	**El Hierro**	**0.28**	**133**	P	**Pg**	**18 56 02.8**	**-0.6**
	SNR=7.9						
PMAR	**Madeira**	**4.92**	**13**	*e*Pn	**Pn**	**18 57 11.1**	**+0.9**
PMAR				*e*Sn	**Sn**	**18 58 05.9**	**-0.8**
PMAR				A	A	18 58 14.2	
	11nm,0.5s						
PMOZ	**Porto Moniz, M**	**4.96**	**10**	*e*Pn	**Pn**	**18 57 12.0**	**+1.2**
PMOZ				*e*Sn	**Sn**	**18 58 07.1**	**-0.7**
PMOZ				A	A	18 58 13.3	
	26nm,0.6s						
PMPS	**Porto Santo**	**5.37**	**17**	*e*Sn	**Sn**	**18 58 17.0**	**-0.5**

MAN 28 18:58:27.8, 10°.85N×122°.80E, h80km, mb3.8, ML2.5, MS2.0, 1C, Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIM	**Jordan**	**0.30**	**223**	*e*P	Pn	18 58 42.2	+2.1
GUIM				*e*S	Sn	18 58 52.0	+2.9
RCP	**Roxas**	**0.71**	**356⇑**	*e*P	Pn	18 58 44.7	+1.1
RCP				*e*S	Sn	18 58 58.1	+2.8
CUYO	**Cuyo Island**	**1.75**	**270**	*e*P	Pn	18 58 56.7	+0.3
SJMP	**San Jose**	**2.29**	**314**	*e*P	Pn	18 59 05.0	+1.4

MAN 28 19:32:03.0, 10°.36N×126°.75E, h39km, mb4.2, ML3.1, MS2.8, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.37**	**245⇓**	*e*P	Pn	19 32 25.7	+0.1
SCPH				*e*S	Sn	19 32 40.7	-1.8
BESP	**Borongan**	**1.79**	**314**	*e*P	Pn	19 32 36.9	+5.5
MSLP	**Maasin**	**1.88**	**263**	*e*P	Pn	19 32 34.0	+1.3
MSLP				*e*S	Sn	19 32 56.2	+1.2
CNP	**Catarman**	**2.96**	**316**	*e*P	Pn	19 32 48.9	+1.3
CNP				*e*S	Sn	19 33 23.5	+1.7

GUC 28 19:33:55.2±0.6, 20°.45S×68°.88W, h109km±4km, ML3.5, 6C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**0.40**	**320⇑**	*i* P	Pn	19 34 12.6	+0.7
PB08				*e*S	Sn	19 34 25.4	+1.1
PB08				IAML		19 34 25.5	
	comp=N,4μm,0.2s						
PB01	**IPOC Station P**	**0.82**	**224⇑**	*i* P	Pn	19 34 15.0	+0.3
PB01				*e*S	Sn	19 34 29.9	+0.6
PB01				IAML		19 34 30.7	
	comp=E,2μm,0.3s						
PB02	**IPOC Station P**	**1.28**	**227⇑**	*i* P	Pn	19 34 19.9	+0.4
PB02				*e*S	Sn	19 34 39.2	+1.2
PB02				IAML		19 34 40.2	
	comp=E,1μm,0.3s						
PB09	**IPOC Station P**	**1.38**	**194⇑**	*i* P	Pn	19 34 21.3	+0.6
PB09				*e*S	Sn	19 34 41.3	+1.2
PB09				IAML		19 34 43.8	
	comp=E,461nm,0.3s						
PSGC	**Pisagua**	**1.44**	**306⇑**	*i* P	Pn	19 34 22.0	+0.6
PSGC				*e*S	Sn	19 34 42.4	+1.1
PSGC				IAML		19 34 44.0	
	comp=E,419nm,0.2s						
PB07	**IPOC Station P**	**1.58**	**216⇑**	*i* P	Pn	19 34 23.2	+0.1
PB07				*e*S	Sn	19 34 44.4	+0.1
PB07				IAML		19 34 45.5	
	comp=E,505nm,0.2s						

*IDC **28** 19:34:23.9±1.6, 22°.79S×179°.28W, h471km±16km, mb3.5/16, mb1 3.7/18, mb1mx3.4/53, mbtmp4.3/18, Error ellipse: s-maj=14.0km s-min=12.0km az=121.0*
*WEL **28** 19:34:26.6±1.4, 23°.5S±12°.×17°.9W±4°.4, h541km±16km*
*ISCJB **28** 19:34:29.3±0.5, 23°.01S±0°.06×179°.5W±0°.1, h550km, mb3.8/16, Error ellipse: s-maj=13.6km s-min=7.3km az=7.2*
ISC 28 19:34:30.5±0.5, 23°.00S±0°.07×179°.4W±0°.1, h550km, n60, σ2s30/66, mb4.0/15, 1C-1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**6.37**	**169**	P	P	19 36 06.5	-5.9
GLKZ				S	**S**	**19 37 30.7**	**-5.3**
AFI	**Afiamalu**	**11.55**	**40**	P	P	19 36 55.0	-10
	2.8nm,0.3s,baz=166,slow=4.2,SNR=3.0						
AFI				S	S	19 38 57.9	-13
	1.5nm,0.3s,baz=135,slow=19,SNR=2.5						
OUZ	**Omahuta**	**13.64**	**205**	P	**P**	**19 37 24.6**	**-1.2**
TOZ	**Tahuroa Road**	**15.33**	**196**	P	**P**	**19 37 44.2**	**+1.0**
URZ	**Urewera**	**15.51**	**190**	P	**P**	**19 37 43.1**	**-1.9**
	2.0nm,0.3s,baz=208,slow=2.6,SNR=8.3						
URZ				S	**S**	**19 40 26.9**	**+2.4**
	0.7nm,0.3s,baz=9.0,slow=19,SNR=3.8						
URZ	**Urewera**	**15.51**	**190**	P	**P**	**19 37 43.1**	**-1.9**
URZ				S	**S**	**19 40 26.8**	**+2.4**
VRZ	**Vera Road**	**16.84**	**196**	P	**P**

1.6nm,0.9s,baz=96,slow=3.8,SNR=9.5
FITZ Fitzroy Crossi 51.48 265 P **P** **19 42 46.1 +0.4**
4.8nm,0.8s,baz=125,slow=9.5,SNR=9.3
VNDA Vanda 55.32 185 P **P** **19 43 13.9 +2.0**
0.6nm,0.7s,baz=8.0,slow=7.7,SNR=6.1
QSPA South Pole Qui 67.08 180 P **P** **19 44 30.9 +1.6**
1.9nm,0.6s,baz=18,slow=10.0
PETK Petropavlovsk- 78.36 346 P **P** **19 45 33.7 -0.2**
4.6nm,0.8s,baz=133,slow=9.3
NVAR Mina Array Bea 83.70 44 P **P** **19 46 02.2 +0.2**
0.7nm,0.8s,baz=225,slow=8.0,SNR=4.1
SNAA Sanae 85.56 179 P **P** **19 46 10.6 +0.2**
0.4nm,0.6s,baz=189,slow=14,SNR=5.2
TXAR Lajitas Array 89.46 58 P **P** **19 46 30.5 +0.9**
0.6nm,0.8s,baz=235,slow=3.2,SNR=3.2
ILAR Eielson Array 91.02 13 P **P** **19 46 36.8 +1.1**
0.5nm,0.6s,baz=230,slow=6.8,SNR=6.2
PDAR Pinedale Array 91.64 44 P **P** **19 46 39.0 -0.5**
0.2nm,0.4s,baz=228,slow=3.5,SNR=3.1
YKA Yellowknife Ar 99.30 25 P **Pdif** **19 47 10.9 -2.3**
0.2nm,0.4s,baz=231,slow=4.7,SNR=3.1
MKAR Makanchi Array 111.97 313 PKiKP **PKiKP** **19 52 03.0 -0.4**
0.2nm,0.5s,baz=108,slow=1.1,SNR=2.2
KURBB Kurchatov Arra 115.00 317 PKP **PKPdf** **19 52 08.2 -0.8**
0.2nm,0.6s,baz=109,slow=1.9,SNR=3.1
ARCES ARCESS Array B 131.12 349 PKP **PKPdf** **19 52 38.8 -0.5**
4.4nm,1.0s,baz=57,slow=3.3,SNR=3.8
FINES FINESS Array B 137.77 342 PKhKP PKPpre 19 52 40.8
0.4nm,0.6s,baz=177,slow=2.6,SNR=3.2
FINES PKP **PKiKP** **19 52 52.4 -1.7**
1.7nm,0.8s,baz=113,slow=3.8,SNR=6.1
NB2 NORSAR Subarra141.28 352 PKP PKPpre 19 52 52.7
comp=Z,0.4nm,0.6s,baz=5.8,slow=3.0
HFS Hagfors 141.77 349 PKhKP PKPpre 19 52 54.6
comp=Z,1.2nm,0.6s,baz=46,slow=4.2,SNR=12
AKASG Malin Array Be 144.52 328 PKP **PKPab** **19 53 03.6 -1.3**
comp=Z,1.4nm,0.4s,baz=44,slow=4.3,SNR=15
ASF Jabal al Asfar 146.71 294 PKPbc **PKPab** **19 53 12.4 -2.0**
comp=Z,2.2nm,0.6s,baz=53,slow=5.1,SNR=4.5
BRTR Keskin Array B 147.49 309 PKPbc **PKPab** **19 53 13.3 -4.0**
comp=Z,1.3nm,0.6s,baz=131,slow=4.2,SNR=7.4
MMAI Mount Meron Ar 147.85 296 PKPbc **PKPab** **19 53 15.6 -3.4**
comp=Z,3.4nm,0.4s,baz=71,slow=6.2,SNR=8.6
MLR Muntele Rosu 149.55 324 PKPbc **PKPbc** **19 53 18.7 +0.5**
comp=Z,0.3nm,0.6s,baz=294,slow=1.9,SNR=4.1
CLL Collm 150.16 344 ⇑*i*PKPbc **PKPbc** **19 53 19.5 +0.3**
comp=Z,6.0nm,0.9s
CLL ⇓*i*PKPab **PKPab** **19 53 27.4 -0.3**
comp=Z,4.0nm,0.7s
BRG Berggiesshubel 150.31 343 *e*PKP **PKPbc** **19 53 20.0 +0.3**
comp=Z,4.0nm,0.9s
BRG *i* 19 53 28.4
comp=Z,2.5nm,0.7s
GERES GERESS Array B 152.20 341 PKPbc **PKPbc** **19 53 24.3 +0.2**
comp=Z,0.2nm,0.4s,baz=354,slow=3.9,SNR=4.6
GERES PKPab **PKPab** **19 53 36.5 0.0**
comp=Z,0.2nm,0.4s,baz=35,slow=4.9,SNR=4.6
DAVOX Davos/Dischmat 155.12 345 PKPab **PKPab** **19 53 49.5 +0.3**
comp=Z,2.5nm,0.6s,baz=333,slow=4.5,SNR=4.7
TORD Torodi Ar. Bea 170.15 186 PKPab **PKPab** **19 54 56.7 +1.1**
baz=170,slow=2.7

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*IDC **28** 19:34:59.7±0.9,21°.56S×168°.80E, h0km, mb4.0/8, mb1 4.2/9, mb1mx3.9/50, mbtmp4.0/9, ML4.2/1, MS2.6/1, Ms1 2.6/1, ms1mx2.3/45, Error ellipse: s-maj=31.5km s-min=23.8km az=175.0*
*ISCJB **28** 19:35:01.5±0.7,21°.5S±0°.2×168°.74E±0°.08, h20km, mb4.2/12, Error ellipse: s-maj=22.1km s-min=10.7km az=170.2*
*NEIC **28** 19:35:05.0±0.8,21°.65S×168°.65E, h35km, mb4.5/6, Error ellipse: s-maj=23.2km s-min=17.0km az=179.0*
ISC 28 19:35:02.5±0.7,21°.6S±0°.2×168°.60E±0°.09, h20km, n22, σ1§91/23, mb4.2/11, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.04**	**257**	Pn	**Pb**	**19 35 37.1**	**-1.9**
	71nm,0.3s,baz=116,slow=8.5,SNR=373						
DZM				Sn	**Sb**	**19 36 05.3**	**+1.2**
	108nm,0.3s,baz=180,slow=17,SNR=12						
DZM				LR	LR	19 36 05.7	
	comp=Z,142nm,21.6s,baz=154,slow=29						
CTA	**Charters Tower**	**20.93**	**270**	P	Pn	19 39 48.4	+1.6
	3.4nm,0.5s,baz=80,slow=16,SNR=3.1						
CTAO	**Charters Tower**	**20.93**	**270**	*e*P	**P**	**19 39 43.1**	**-1.1**
	9.0nm,0.6s						
WRAB	**Tennant Creek**	**32.02**	**267**	*e*P	**P**	**19 41 30.4**	**+2.4**
	8.0nm,1.3s						
WRA	**Warramunga Arr**	**32.03**	**267**	P	**P**	**19 41 29.4**	**+1.3**
	1.0nm,0.9s,baz=97,slow=8.1,SNR=2.0						
ASAR	**Alice Springs**	**32.03**	**260**	P	**P**	**19 41 28.9**	**+0.8**
	1.1nm,0.8s,baz=85,slow=9.2,SNR=13						
MBWA	**Marble Bar**	**45.34**	**261**	*e*P	**P**	**19 43 17.6**	**-2.1**
	16nm,0.5s						
SBA	**Scott Base**	**56.28**	**180**	*e*P	**P**	**19 44 40.0**	**-1.1**
	6.8nm,1.4s						
QSPA	**South Pole Qui**	**68.43**	**180**	P	**P**	**19 46 03.8**	**+0.9**
	1.9nm,0.7s,baz=143,slow=0.9,SNR=5.3						
QSPA	**South Pole Qui**	**68.43**	**180**	*e*P	**P**	**19 46 03.6**	**+0.7**
	12nm,0.9s						
ENH	**Enshi**	**76.74**	**310**	*e*P	**P**	**19 46 53.4**	**+0.7**
	1.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**78.95**	**295**	P	**P**	**19 47 07.4**	**+2.2**
	0.6nm,0.9s,baz=118,slow=4.5,SNR=3.7						
SNAA	**Sanae**	**86.75**	**183**	P	**P**	**19 47 46.8**	**+1.9**
	2.3nm,0.8s,baz=179,slow=7.6,SNR=9.1						
VNA3	**Neumayer Olymp**	**87.36**	**181**	P	**P**	**19 47 51.0**	**+3.1**
VNA2	**Neumayer--Watz**	**87.65**	**181**	P	**P**	**19 47 52.6**	**+3.3**
	baz=187,slow=4.1						
VNA1	**Neumayer--Stat**	**87.94**	**181**	P	**P**	**19 47 47.2**	**-3.4**
SONM	**Songino Array**	**88.77**	**323**	P	**P**	**19 47 56.0**	**+1.1**
	0.7nm,0.7s,baz=130,slow=4.5,SNR=5.1						
NVAR	**Mina Array Bea**	**90.83**	**49**	P	**P**	**19 48 03.3**	**-1.6**
	0.6nm,0.6s,baz=237,slow=7.8,SNR=4.6						
ARCES	**ARCESS Array B 127.21 345**			PKP	**PKPdf**	**19 54 04.3**	**-0.6**
	2.6nm,0.8s,baz=60,slow=3.6,SNR=3.9						
BRG	**Berggiesshubel**	**144.72**	**332**	*i* PKP	**PKPdf**	**19 54 37.3**	**-0.4**
	9.7nm,0.9s						
BRG				*i*		19 54 43.1	
	7.4nm,1.1s						
CLL	**Collm**	**144.80**	**333**	*i* PKPdf	**PKPdf**	**19 54 37.2**	**-0.6**
	comp=Z,11nm,1.0s						
CLL				*i* PKiKP	**pPKPdf**	**19 54 42.3**	**-2.4**
	comp=Z,5.0nm,0.9s						
GERES	**GERESS Array B 146.28 330**			PKPbc	**PKPab**	**19 54 42.2**	**-0.3**
	comp=Z,2.4nm,0.8s,baz=35,slow=3.3,SNR=17						

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*IDC **28** 19:40:22.5±1.6,36°.93S×177°.20E, h314km±20km, mb3.4/3, mb1 3.6/4, mb1mx3.2/43, mbtmp4.2/4, Error ellipse: s-maj=61.0km s-min=36.1km az=169.0*
*ISCJB **28** 19:40:24.2±0.6,36°.99S±0°.05×176°.96E±0°.08, h319km±4km, mb3.5/3, Error ellipse: s-maj=10.8km s-min=8.0km az=12.4*
*NEIC **28** 19:40:26.3±0.0,36°.72S×176°.79E, h279km, ML4.5(WEL), After WEL.*
*WEL **28** 19:40:27.5±0.9,37°.S±11°.×17°.7E±°, h287km±7km*
ISC 28 19:40:23.6±1.0,36°.95S±0°.07×176°.90E±0°.07, h319km±7km, n161, σ1§40/185, mb3.6/3, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WHRZ	**Whale Island**	**0.91**	**176**	P	**Pn**	**19 41 07.2**	**+1.6**
WHRZ				S	**S**	**19 41 38.9**	**-0.3**
OPRZ	**Ohinepanea**	**0.94**	**197**	P	**Pn**	**19 41 06.2**	**+0.5**
MARZ	**Manawahe**	**1.05**	**190**	P	**Pn**	**19 41 07.2**	**+1.0**
HAZ	**Te Kaha**	**1.07**	**139**	P	**Pn**	**19 41 06.0**	**-0.2**
HAZ				S	**S**	**19 41 37.6**	**-2.6**
KMRZ	**Kaimai**	**1.18**	**220**	P	**Pn**	**19 41 08.2**	**+1.4**
RUGZ	**Raukumara Rang**	**1.19**	**149**	P	**Pn**	**19 41 06.5**	**-0.4**
RUGZ				S	**S**	**19 41 38.0**	**-3.6**
KARZ	**Kaharoa**	**1.19**	**206**	P	**Pn**	**19 41 08.6**	**+1.8**
OMRZ	**Omania**	**1.23**	**200**	P	**Pn**	**19 41 08.3**	**+1.2**
MXZ	**Matakaoa Point**	**1.27**	**119**	Pn	**Pn**	**19 41 07.1**	**-0.2**
MXZ				Sn	**S**	**19 41 39.2**	**-3.0**
MXZ	**Matakaoa Point**	**1.27**	**119**	P	**Pn**	**19 41 07.1**	**-0.2**
MXZ				S	**S**	**19 41 39.6**	**-2.6**
URZ	**Urewera**	**1.32**	**173**	P	**Pn**	**19 41 07.7**	**+0.2**
	16nm,0.3s,baz=348,slow=3.1,SNR=128						
URZ				S	**S**	**19 41 40.7**	**-1.9**
	22nm,0.3s,baz=144,slow=20,SNR=18						
URZ	**Urewera**	**1.32**	**173**	Pn	**Pn**	**19 41 07.7**	**+0.2**
URZ				Sn	**S**	**19 41 40.2**	**-2.3**
URZ	**Urewera**	**1.32**	**173**	P	**Pn**	**19 41 07.7**	**+0.2**
URZ				S	**S**	**19 41 40.6**	**-2.0**
TARZ	**Mount Tarawera**	**1.32**	**194**	P	**Pn**	**19 41 09.0**	**+1.4**
PKGZ	**Pakihiroa**	**1.32**	**135**	P	**Pn**	**19 41 08.1**	**+0.5**
PKGZ				S	**S**	**19 41 41.3**	**-1.5**
TOZ	**Tahuroa Road**	**1.36**	**235**	P	**Pn**	**19 41 09.2**	**+1.4**
HLRZ	**Highlands Stat**	**1.37**	**198**	P	**Pn**	**19 41 09.8**	**+1.9**
MKAZ	**Moumakai**	**1.40**	**263**	P	**Pn**	**19 41 08.8**	**+0.8**
RRRZ	**Republican Roa**	**1.42**	**192**	Pn	**Pn**	**19 41 09.0**	**+0.9**
RRRZ	**Republican Roa**	**1.42**	**192**	P	**Pn**	**19 41 09.4**	**+1.3**
WIAZ	**Waiheke Island**	**1.43**	**276**	P	**Pn**	**19 41 08.6**	**+0.4**
MWZ	**Matawai**	**1.47**	**160**	Pn	**Pn**	**19 41 08.9**	**+0.5**
MWZ				Sn	**S**	**19 41 42.5**	**-1.8**
MWZ	**Matawai**	**1.47**	**160**	P	**Pn**	**19 41 09.1**	**+0.7**
MWZ				S	**S**	**19 41 42.7**	**-1.5**
WMGZ	**Waiomatatini S**	**1.48**	**126**	Pn	**Pn**	**19 41 09.0**	**+0.6**
WMGZ				Sn	**S**	**19 41 42.8**	**-1.5**
WMGZ	**Waiomatatini S**	**1.48**	**126**	P	**Pn**	**19 41 09.0**	**+0.6**
WMGZ				S	**S**	**19 41 43.3**	**-1.0**
TWGZ	**Tauwhareparae**	**1.49**	**145**	Pn	**Pn**	**19 41 09.8**	**+1.2**
TWGZ	**Tauwhareparae**	**1.49**	**145**	P	**Pn**	**19 41 09.8**	**+1.2**
TWGZ				S	**S**	**19 41 44.3**	**-0.3**
HRRZ	**Handcock Road**	**1.52**	**199**	P	**Pn**	**19 41 10.2**	**+1.5**
MUGZ	**Murupara**	**1.53**	**184**	P	**Pn**	**19 41 09.4**	**+0.6**
MUGZ				S	**S**	**19 41 42.8**	**-2.1**
GRRZ	**Galatos Road**	**1.53**	**204**	P	**Pn**	**19 41 10.3**	**+1.5**
PUZ	**Puketiti**	**1.55**	**137**	Pn	**Pn**	**19 41 09.4**	**+0.5**
PUZ	**Puketiti**	**1.55**	**137**	P	**Pn**	**19 41 09.4**	**+0.5**
PUZ				S	**S**	**19 41 43.1**	**-2.1**
RAGZ	**Rawiri**	**1.59**	**165**	Pn	**Pn**	**19 41 10.3**	**+1.1**
RAGZ	**Rawiri**	**1.59**	**165**	P	**Pn**	**19 41 10.3**	**+1.1**
RAGZ				S	**S**	**19 41 45.0**	**-0.8**
RTZ	**Ruatahuna**	**1.66**	**178**	P	**Pn**	**19 41 10.4**	**+0.7**
RTZ				S	**S**	**19 41 44.8**	**-1.8**
TKGZ	**Te Karaka**	**1.66**	**154**	Pn	**Pn**	**19 41 10.6**	**+1.0**
TKGZ	**Te Karaka**	**1.66**	**154**	P	**Pn**	**19 41 10.6**	**+1.0**
TKGZ				S	**S**	**19 41 45.0**	**-1.4**
ALRZ	**Allen Road**	**1.67**	**195**	P	**Pn**	**19 41 10.8**	**+1.2**
AWAZ	**Awhitu Peninsu**	**1.81**	**266**	P	**Pn**	**19 41 11.5**	**+0.9**
CNGZ	**Carnagh Statio**	**1.85**	**146**	Pn	**Pn**	**19 41 12.2**	**+1.4**
CNGZ	**Carnagh Statio**	**1.85**	**146**	P	**Pn**	**19 41 12.3**	**+1.4**
SNGZ	**Shannon Statio**	**1.86**	**169**	Pn	**Pn**	**19 41 12.2**	**+1.3**
SNGZ				Sn	**S**	**19 41 47.8**	**-1.1**
SNGZ	**Shannon Statio**	**1.86**	**169**	P	**Pn**	**19 41 12.3**	**+1.3**
RIGZ	**Rimuhau**	**1.88**	**159**	P	**Pn**	**19 41 12.5**	**+1.3**
MTHZ	**Maungataniwha**	**1.90**	**181**	P	**Pn**	**19 41 12.3**	**+1.1**
MRHZ	**Matea Rd**	**1.92**	**191**	P	**Pn**	**19 41 12.6**	**+1.2**
RAHZ	**Arahi**	**1.97**	**176**	P	**Pn**	**19 41 13.3**	**+1.5**
RATZ	**Rangitukua**	**2.11**	**205**	Pn	**Pn**	**19 41 14.4**	**+1.5**
RATZ	**Rangitukua**	**2.11**	**205**	P	**Pn**	**19 41 14.5**	**+1.6**
PRGZ	**Paritu Road**	**2.12**	**159**	P	**Pn**	**19 41 14.7**	**+1.8**
WHHZ	**Waihua**	**2.14**	**173**	P	**Pn**	**19 41 14.6**	**+1.6**
NMHZ	**Naumai**	**2.15**	**182**	Pn	**Pn**	**19 41 15.0**	**+1.8**
NMHZ	**Naumai**	**2.15**	**182**	P	**Pn**	**19 41 15.0**	**+1.8**
KNZ	**Kokohu**	**2.16**	**164**	Pn	**Pn**	**19 41 14.2**	**+1.1**
KNZ	**Kokohu**	**2.16**	**164**	P	**Pn**	**19 41 14.3**	**+1.1**
RITZ	**Rihia Road**	**2.19**	**202**	P	**Pn**	**19 41 15.5**	**+2.0**
BKZ	**Black Stump Fm**	**2.23**	**188**	Pn	**Pn**	**19 41 14.7**	**+0.8**
BKZ	**Black Stump Fm**	**2.23**	**188**	P	**Pn**	**19 41 14.8**	**+1.0**
KATZ	**Kakaramea**	**2.24**	**205**	P	**Pn**	**19 41 16.2**	**+2.2**
HIZ	**Hauiti**	**2.25**	**226**	P	**Pn**	**19 41 16.9**	**+3.0**
ARHZ	**Aropaoanui**	**2.31**	**178**	Pn	**Pn**	**19 41 16.0**	**+1.6**
ARHZ	**Aropaoanui**	**2.31**	**178**	P	**Pn**	**19 41 16.0**	**+1.6**
MHGZ	**Mahia Peninsul**	**2.34**	**161**	Pn	**Pn**	**19 41 16.3**	**+1.7**
MHGZ	**Mahia Peninsul**	**2.34**	**161**	P	**Pn**	**19 41 16.3**	**+1.7**
KRVZ	**Karewarewa**	**2.36**	**205**	Pn	**Pn**	**19 41 16.5**	**+1.6**
KRVZ	**Karewarewa**	**2.36**	**205**	P	**Pn**	**19 41 16.6**	**+1.6**
WTVZ	**West Tongariro**	**2.40**	**205**	P	**Pn**	**19 41 16.9**	**+1.6**
TWVZ	**Taurewa**	**2.41**	**208**	P	**Pn**	**19 41 16.9**	**+1.5**
OTVZ	**Oturere**	**2.42**	**204**	Pn	**Pn**	**19 41 17.2**	**+1.7**
NGZ	**Ngauruhoe**	**2.45**	**204**	P	**Pn**	**19 41 17.8**	**+2.0**
COVZ	**Chateau Observ**	**2.49**	**205**	P	**Pn**	**19 41 17.5**	**+1.4**
MCHZ	**McNeill Hill**	**2.50**	**184**	Pn	**Pn**	**19 41 17.6**	**+1.7**
MCHZ	**McNeill Hill**	**2.50**	**184**	P	**Pn**	**19 41 17.7**	**+1.7**
KWHZ	**Kaweka Forest**	**2.50**	**189**	P	**Pn**	**19 41 17.4**	**+1.3**
FWVZ	**Far West T-bar**	**2.54**	**204**	Pn	**Pn**	**19 41 17.9**	**+1.3**
FWVZ	**Far West T-bar**	**2.54**	**204**	P	**Pn**	**19 41 18.2**	**+1.6**
WHVZ	**Whangaehu Hut**	**2.55**	**204**	Pn	**Pn**	**19 41 18.2**	**+1.5**
WHVZ	**Whangaehu Hut**	**2.55**	**204**	P	**Pn**	**19 41 18.2**	**+1.5**
TRVZ	**Turoa**	**2.58**	**204**	P	**Pn**	**19 41 18.6**	**+1.6**
MOVZ	**Moawhango**	**2.62**	**200**	Pn	**Pn**	**19 41 18.2**	**+1.1**
MOVZ	**Moawhango**	**2.62**	**200**	P	**Pn**	**19 41 18.4**	**+1.3**
BHHZ	**Black Hill Sta**	**2.62**	**194**	Pn	**Pn**	**19 41 18.3**	**+1.1**
BHHZ	**Black Hill Sta**	**2.62**	**194**	P	**Pn**	**19 41 18.2**	**+1.1**
PKVZ	**Pokaka**	**2.64**	**207**	Pn	**Pn**	**19 41 18.9**	**+1.6**
PKVZ	**Pokaka**	**2.64**	**207**	P	**Pn**	**19 41 19.0**	**+1.7**
MTVZ	**Mangateitei**	**2.68**	**204**	Pn	**Pn**	**19 41 19.5**	**+1.8**
MTVZ	**Mangateitei**	**2.68**	**204**	P	**Pn**	**19 41 19.6**	**+1.9**
CKHZ	**Cape Kidnapper**	**2.71**	**177**	P	**Pn**	**19 41 19.6**	**+1.7**
KRHZ	**Kereru**	**2.72**	**189**	P	**Pn**	**19 41 19.1**	**+1.1**
VRZ	**Vera Road**	**2.75**	**217**	P	**Pn**	**19 41 20.8**	**+2.5**
KAHZ	**Kahuranaki**	**2.84**	**180**	Pn	**Pn**	**19 41 20.7**	**+1.6**
KAHZ	**Kahuranaki**	**2.84**	**180**	P	**Pn**	**19 41 20.8**	**+1.6**
PNHZ	**Pukenui**	**3.01**	**190**	Pn	**Pn**	**19 41 21.6**	**+0.9**
PNHZ				Sn	**S**	**19 42 05.9**	**-0.6**
PNHZ	**Pukenui**	**3.01**	**190**	P	**Pn**	**19 41 21.6**	**+0.9**
PXZ	**Pawanui**	**3.08**	**181**	P	**Pn**	**19 41 22.8**	**+1.6**
WPHZ	**Waipukurau**	**3.13**	**187**	P	**Pn**	**19 41 23.6**	**+1.8**
WAZ	**Wanganui**	**3.18**	**208**	Pn	**Pn**	**19 41 24.6**	**+2.3**
WAZ	**Wanganui**	**3.18**	**208**	P	**Pn**	**19 41 25.0**	**+2.7**
OUZ	**Omahuta**	**3.19**	**302**	P	**Pn**	**19 41 22.1**	**-0.4**
TSZ	**Takapari Road**	**3.19**	**193**	Pn	**Pn**	**19 41 23.3**	**+0.9**
TSZ	**Takapari Road**	**3.19**	**193**	P	**Pn**	**19 41 23.3**	**+0.9**
PKE	**Puketi**	**3.21**	**225**	P	**Pn**	**19 41 25.9**	**+3.2**
PRHZ	**Porangahau**	**3.32**	**184**	Pn	**Pn**	**19 41 25.4**	**+1.8**
PRHZ	**Porangahau**	**3.32**	**184**	P	**Pn**	**19 41 25.4**	**+1.8**
DVHZ	**Dannevirke**	**3.39**	**190**	Pn	**Pn**	**19 41 25.6**	**+1.3**
DVHZ	**Dannevirke**	**3.39**	**190**	P	**Pn**	**19 41 25.7**	**+1.3**
ANWZ	**Angora Road**	**3.52**	**185**	P	**Pn**	**19 41 27.1**	**+1.4**
POWZ	**Post Office Ro**	**3.55**	**194**	Pn	**Pn**	**19 41 27.5**	**+1.5**
POWZ	**Post Office Ro**	**3.55**	**194**	P	**Pn**	**19 41 27.7**	**+1.8**
BFZ	**Birch Farm**	**3.76**	**188**	Pn	**Pn**	**19 41 29.2**	**+1.0**
BFZ				Sn	**S**	**19 42 20.3**	**+0.2**
BFZ	**Birch Farm**	**3.76**	**188**	P	**Pn**	**19 41 29.3**	**+1.2**
MRZ	**Mangatainoka R**	**3.85**	**195**	Pn	**Pn**	**19 41 30.1**	**+1.0**
MRZ	**Mangatainoka R**	**3.85**	**195**	P	**Pn**	**19 41 29.6**	**+0.5**
TIWZ	**Tintock**	**3.90**	**191**	P	**Pn**	**19 41 32.0**	**+2.3**
HOWZ	**Holdsworth Sta**	**4.09**	**195**	Pn	**Pn**	**19 41 32.5**	**+0.9**
HOWZ	**Holdsworth Sta**	**4.09**	**195**	P	**Pn**	**19 41 32.6**	**+0.9**
OGWZ	**Otaki Gorge**	**4.09**	**199**	Pn	**Pn**	**19 41 32.4**	**+0.8**
OGWZ				Sn	**S**	**19 42 25.9**	**-0.5**
OGWZ	**Otaki Gorge**	**4.09**	**199**	P	**Pn**	**19 41 32.9**	**+1.2**
KIW	**Kapiti Island**	**4.20**	**201**	Pn	**Pn**	**19 41 33.7**	**+0.8**
KIW	**Kapiti Island**	**4.20**	**201**	P	**Pn**	**19 41 33.7**	**+0.8**
TMWZ	**Te Maipa**	**4.22**	**190**	P	**Pn**	**19 41 34.5**	**+1.4**
CAW	**Cannon Point**	**4.39**	**198**	Pn	**Pn**	**19 41 35.7**	**+0.8**
CAW	**Cannon Point**	**4.39**	**198**	P	**Pn**	**19 41 35.9**	**+1.0**
DUWZ	**D'Urville Isla**	**4.50**	**210**	Pn	**Pn**	**19 41 36.5**	**+0.4**
DUWZ	**D'Urville Isla**	**4.50**	**210**	P	**Pn**	**19 41 36.7**	**+0.6**
PAWZ	**Paruwai Farm**	**4.57**	**194**	Pn	**Pn**	**19 41 38.0**	**+1.0**
PAWZ	**Paruwai Farm**	**4.57**	**194**	P	**Pn**	**19 41 38.1**	**+1.1**
MSWZ	**Moikau Station**	**4.64**	**196**	*e*Pn	**Pn**	**19 41 37.7**	**0.0**
TCW	**Tory Channel**	**4.72**	**205**	Pn	**Pn**	**19 41 39.4**	**+0.8**
TCW	**Tory Channel**	**4.72**	**205**	P	**Pn**	**19 41 39.3**	**+0.8**
TUWZ	**Tuamarina**	**5.03**	**206**	Pn	**Pn**	**19 41 42.8**	**+0.8**
TUWZ	**Tuamarina**	**5.03**	**206**	P	**Pn**	**19 41 42.7**	**+0.7**
NNZ	**Nelson**	**5.07**	**212**	P	**Pn**	**19 41 43.0**	**+0.5**
QRZ	**Quartz Range**	**5.16**	**220**	Pn	**Pn**	**19 41 43.3**	**-0.2**
QRZ	**Quartz Range**	**5.16**	**220**	P	**Pn**	**19 41 43.3**	**-0.2**
BSWZ	**Blackbirch Sta**	**5.30**	**205**	P	**Pn**	**19 41 46.0**	**+0.8**
THZ	**Tophouse**	**5.72**	**212**	Pn	**Pn**	**19 41 50.0**	**0.0**
THZ	**Tophouse**	**5.72**	**212**	P	**Pn**	**19 41 50.6**	**+0.5**
KHZ	**Kahutara**	**6.04**	**204**	Pn	**Pn**	**19 41 54.9**	**+1.2**
KHZ	**Kahutara**	**6.04**	**204**	P	**Pn**	**19 41 55.0**	**+1.2**
LTZ	**Lake Taylor**	**6.83**	**210**	Pn	**Pn**	**19 42 03.5**	**+0.4**
LTZ	**Lake Taylor**	**6.83**	**210**	P	**Pn**	**19 42 03.3**	**+0.2**
OXZ	**Oxford**	**7.38**	**209**	Pn	**Pn**	**19 42 09.6**	**-0.1**
OXZ	**Oxford**	**7.38**	**209**	P	**Pn**	**19 42 09.4**	**-0.2**
MQZ	**McQueen's Vall**	**7.49**	**204**	Pn	**Pn**	**19 42 10.9**	**0.0**
MQZ	**McQueen's Vall**	**7.49**	**204**	P	**Pn**	**19 42 10.9**	**0.0**
WVZ	**Waitaha Valley**	**7.73**	**216**	P	**Pn**	**19 42 13.3**	**-0.6**
RPZ	**Rata Peaks**	**8.10**	**212**	P	**Pn**	**19 42 18.2**	**-0.2**
	1.5nm,0.3s,baz=49,slow=11,SNR=10						
RPZ				S	**S**	**19 43 46.9**	**-4.8**
	3.0nm,0.3s,baz=66,slow=20,SNR=16						
RPZ	**Rata Peaks**	**8.10**	**212**	P	**Pn**	**19 42 18.2**	**-0.2**
FOZ	**Fox Glacier**	**8.52**	**217**	Pn	**Pn**	**19 42 23.1**	**-0.3**
FOZ	**Fox Glacier**	**8.52**	**217**	P	**Pn**	**19 42 23.2**	**-0.3**
LBZ	**Lake Benmore**	**9.01**	**212**	P	**Pn**	**19 42 29.8**	**+0.4**
ODZ	**Otahua Downs**	**9.37**	**208**	P	**Pn**	**19 42 35.0**	**+1.3**
JCZ	**Jackson Bay**	**9.42**	**218**	Pn	**Pn**	**19 42 34.4**	**-0.1**
JCZ	**Jackson Bay**	**9.42**	**218**	P	**Pn**	**19 42 34.5**	**-0.1**
WKZ	**Wanaka**	**9.87**	**215**	Pn	**Pn**	**19 42 39.1**	**-0.8**
WKZ	**Wanaka**	**9.87**	**215**	P	**Pn**	**19 42 39.6**	**-0.3**
ASAR	**Alice Springs**	**39.10**	**277**	P	**P**	**19 47 22.2**	**+1.3**
	3.5nm,0.5s,baz=119,slow=8.0,SNR=64						
WRA	**Warramunga Arr**	**40.71**	**283**	P	**P**	**19 47 34.9**	**+0.8**
	2.4nm,0.6s,baz=120,slow=7.8,SNR=15						
FITZ	**Fitzroy Crossi**	**48.58**	**278**	P	**P**	**19 48 37.0**	**+1.2**
	0.9nm,0.9s,baz=122,slow=9.5,SNR=3.8						
FINES	**FINESS Array B**	**149.43**	**333**	PKPbc	**PKPbc**	**19 59 33.0**	**-1.1**
	0.9nm,0.7s,baz=46,slow=4.0,SNR=7.0						

IDC 28 19:43:38.0±3.5,20°.85S×168°.07E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/45, mbtmp3.6/3, MS3.8/2, Ms1 3.8/2, ms1mx2.9/30, Error ellipse: s-maj=84.9km s-min=33.6km az=129.0, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**1.94**	**231**	Pn	Pn	19 44 11.9	-0.5
	8.2nm,0.3s,baz=52,slow=20,SNR=30						
DZM				Sn	Sb	19 44 39.6	+0.6
	33nm,0.3s,baz=141,slow=17,SNR=11						
RPZ	**Rata Peaks**	**22.93**	**174**	LR	LR	19 57 20.5	
	comp=Z,323nm,18.1s,baz=28,slow=36						
WRA	**Warramunga Arr**	**31.59**	**266**	P	P	19 50 02.5	-0.2
	0.3nm,0.6s,baz=97,slow=8.0,SNR=4.6						
ASAR	**Alice Springs**	**31.70**	**258**	P	P	19 50 03.1	-0.5
	0.4nm,0.7s,baz=82,slow=9.4,SNR=7.4						
FITZ	**Fitzroy Crossi**	**40.01**	**266**	P	P	19 51 15.2	+0.3
	1.7nm,1.0s,baz=82,slow=7.1,SNR=3.3						
LEM	**Lembang**	**60.01**	**274**	LR	LR	20 23 01.0	
	comp=Z,47nm,18.6s,baz=111,slow=39						
GERES	**GERESS Array B 145.36 330**			PKPbc	PKPbc	20 03 17.2	-0.6
	0.1nm,0.3s,baz=49,slow=4.1,SNR=3.4						

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*IDC **28** 19:44:47.6±1.0,22°.01S×168°.76E, h0km, mb4.1/10, mb1 4.

*NNC **28** 20:29:36.5±5.8, 39.°40N×72.°59E, h0km, mb4.1, mpv3.9, Error ellipse: s-maj=48.8km s-min=20.7km az=172.0*

ISC 28 20:29:34.0±2.1, 39.°19N±0.°09×73.°08E±0.°05, h12km±12km, n38, σ1§44/49, mb3.7/4, 19C-13D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**0.89**	**22**	⇑P	**Pn**	**20 29 54.1**	**+1.5**
SFK	58nm,0.2s			⇑S	**Sn**	**20 30 08.9**	**+3.4**
SFK	**Sufi-Kurgan**	**0.89**	**22**	⇑*i*P	**Pn**	**20 29 54.0**	**+1.5**
SFK	993nm,0.3s baz=18			⇑*i*S	**Sn**	**20 30 08.3**	**+2.8**
DRK	**Karamyk**	**1.03**	**287**	⇓*i*P	**Pb**	**20 29 55.5**	**+1.5**
DRK	baz=92			⇓*i*S	**Sn**	**20 30 10.6**	**+1.4**
BTK	**Batken**	**1.95**	**297**	⇓*i*P	**Pn**	**20 30 07.8**	**+0.8**
BTK	baz=92 baz=0.0			⇓*i*S	**Sn**	**20 30 31.8**	**+0.3**
ARSB	**Arslanbob**	**2.14**	**358**	⇓*i*P	**Pn**	**20 30 09.9**	**+0.2**
ARSB	baz=0.0 baz=58			⇓*i*S	**Sn**	**20 30 36.2**	**0.0**
ARK	**Arkit**	**2.74**	**342**	⇓*i*P	**Pn**	**20 30 17.9**	**-0.1**
ARK	baz=58 baz=43			⇓*i*S	**Sn**	**20 30 50.9**	**-0.2**
AML	**Almayashu**	**2.98**	**9**	P	**Pn**	**20 30 21.8**	**+0.3**
NRN	**Naryn**	**3.17**	**44**	⇑*e*P	**Pn**	**20 30 23.4**	**-0.6**
NRN	SNR=22 baz=42			⇑*e*S	**Sn**	**20 31 00.0**	**-1.8**
UCH	**Uchtor**	**3.23**	**19**	P	**Pn**	**20 30 25.4**	**+0.4**
UCH	**Uchtor**	**3.23**	**19**	⇑*i*P	**Pn**	**20 30 25.2**	**+0.3**
UCH	SNR=6.8 baz=18			⇑*i*S	**Sn**	**20 31 03.3**	**-0.2**
MNAS	**Manas**	**3.33**	**353**	⇓Pn	**Pn**	**20 30 26.5**	**+0.5**
MNAS	21nm,0.4s			⇓Sn	**Sn**	**20 31 04.9**	**-0.6**
MNAS	**Manas**	**3.33**	**353**	⇓*i*P	**Pn**	**20 30 26.5**	**+0.5**
MNAS	25nm,0.3s baz=53			⇓*i*S	**Sn**	**20 31 05.4**	**-0.1**
KZA	**Kyzart**	**3.33**	**29**	P	**Pn**	**20 30 26.1**	**-0.2**
KZA	**Kyzart**	**3.33**	**29**	⇑*i*P	**Pn**	**20 30 25.9**	**-0.4**
KZA	SNR=15 baz=28			⇑*e*S	**Sn**	**20 31 04.6**	**-1.3**
EKS2	**Erkin-Say**	**3.51**	**8**	P	**Pn**	**20 30 30.3**	**+1.7**
EKS2	**Erkin-Say**	**3.51**	**8**	⇑*i*P	**Pn**	**20 30 29.7**	**+1.2**
EKS2	SNR=5.6 baz=8.0			⇑*i*S	**Sn**	**20 31 09.1**	**-1.0**
MRKS	**Merke**	**3.56**	**2**	*e*P	**Pb**	**20 30 36.2**	**-0.8**
MRKS	baz=8.0 7.9nm,0.2s			*e*S	**Sb**	**20 31 20.5**	**+0.4**
TAS	**Tashkent**	**3.61**	**308**	⇑*i*P	**Pn**	**20 30 30.1**	**+0.4**
TAS	14nm,0.3s baz=9.0			⇑*i*S	**Sn**	**20 31 10.7**	**-1.5**
IUG	**Iuzhnay**	**3.76**	**323**	*e*P	**Pn**	**20 30 33.6**	**+1.7**
IUG	18nm,0.2s			*e*S	**Sn**	**20 31 15.7**	**-0.4**
ULHL	**Ulahol**	**3.89**	**37**	P	**Pn**	**20 30 33.9**	**+0.1**
CHMS	**Chumysh**	**4.01**	**18**	⇑*i*P	**Pn**	**20 30 35.5**	**+0.2**
CHMS	SNR=7.7 baz=17			⇑*i*S	**Sn**	**20 31 20.5**	**-1.8**
KK31	**Karatay Array**	**4.37**	**334**	⇑Pn	**Pn**	**20 30 39.9**	**-0.3**
KK31	baz=17 3.7nm,0.3s,baz=157,slow=13,SNR=139			⇑Sn	**Sn**	**20 31 29.9**	**-1.1**
KST	**Kastek**	**4.43**	**29**	*e*P	**Pb**	**20 30 56.0**	**+4.3**
KST	7.2nm,0.4s,baz=148,slow=24,SNR=5.1 16nm,0.7s			*e*S	**Sg**	**20 31 54.7**	**-1.4**
DGS	**Degeres**	**4.53**	**26**	*e*P	**Pg**	**20 30 59.8**	**-1.1**
DGS	3.8nm,0.7s 18nm,0.7s			*e*S	**Sg**	**20 32 00.8**	**+1.3**
BRLS	**Borolday**	**4.55**	**329**	*e*P	**Pn**	**20 30 45.0**	**+2.3**
BRLS	0.5nm,0.7s 7.8nm,0.7s			*e*S	**Sn**	**20 31 36.0**	**+0.4**
MKAR	**Makanchi Array**	**10.16**	**39**	P	**Pn**	**20 31 59.3**	**-0.4**
GEYT	**Alibeck**	**11.78**	**269**	P	Pn	20 32 16.0	-5.9
GEYT	0.2nm,0.3s,baz=224,slow=15,SNR=8.7 0.2nm,0.3s,baz=109,slow=10,SNR=5.9			S	Sn	20 34 18.6	-15
KURBB	**Kurchatov Arra**	**12.07**	**17**	P	**Pn**	**20 32 23.2**	**-2.4**
AB31	**Akbulak array**	**13.77**	**321**	⇑P	Pn	20 32 43.1	-5.7
BVAR	**Borovoye Array**	**13.97**	**353**	P	Pn	20 32 47.2	-4.4
AKTO	**Aktyubinsk**	**15.48**	**321**	P	Pn	20 33 05.8	-6.2
AKTO	**Aktyubinsk**	**15.48**	**321**	⇓P	**Pn**	**20 33 11.7**	**-0.4**
ZALV	**Zalesovo Beam**	**16.79**	**25**	P	**Pn**	**20 33 26.2**	**-2.6**
FINES	**FINESS Array B**	**36.24**	**324**	P	P	20 36 30.1	-6.4
HFS	**Hagfors**	**42.02**	**320**	P	P	20 37 18.5	-6.4
TGY	**Tagaytay City**	**48.83**	**107**	LR	LR	21 02 32.1	
TORD	**Torodi Ar. Bea**	**67.42**	**269**	P	P	20 40 20.9	-8.8
WRA	**Warramunga Arr**	**82.06**	**124**	P	P	20 41 44.5	-10

IDC 28 20:33:11.1±4.5, 20.°92S×168.°24E, h0km, mb3.8/3, mb1 3.9/4, mb1mx3.6/47, mbtmp3.7/4, ML2.9/1, Error ellipse: s-maj=132.9km s-min=34.1km az=137.0, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.03**	**235**	Pn	Pn	20 33 46.1	-0.5
DZM	4.3nm,0.3s,baz=101,slow=20,SNR=3.1 41nm,0.3s,baz=296,slow=23,SNR=8.7			Sn	Sb	20 34 14.2	-0.5
WRA	**Warramunga Arr**	**31.75**	**266**	P	P	20 39 36.6	-0.5
ASAR	**Alice Springs**	**31.84**	**259**	P	P	20 39 37.5	-0.5
FITZ	**Fitzroy Crossi**	**40.17**	**266**	P	P	20 40 50.1	+0.8
GERES	**GERESS Array B**	**145.49**	**330**	PKPbc	PKPdf	20 52 50.4	-0.8

MAN 28 20:33:54.0, 5.°85N×124.°57E, h38km, mb4.2, ML3.0, MS2.6, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKMP	**Bagumbayan, Su**	**0.66**	**358**	*e*P	Pn	20 34 08.0	+1.1
SKMP				*e*S	Sn	20 34 17.8	+1.7
MATI	**Mati**	**2.00**	**57**	*e*P	Pn	20 34 25.7	+0.5
BUKP	**Musuan**	**2.07**	**14**	*e*P	Pn	20 34 27.1	+0.9
PAGZ	**Pagadian**	**2.31**	**329**	*e*P	Pn	20 34 30.5	+1.1
PAGZ				*e*S	Sn	20 34 57.1	+0.5

IDC 28 20:36:54.4±4.2, 20.°77S×168.°01E, h0km, mb3.2/2, mb1 3.5/2, mb1mx3.3/52, mbtmp3.2/2, Error ellipse: s-maj=113.1km s-min=33.4km az=128.0, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**1.95**	**228**	Pn	Pn	20 37 28.3	-0.6
DZM	7.7nm,0.3s,baz=129,slow=16,SNR=18 21nm,0.3s,baz=233,slow=22,SNR=5.8			Sn	Sb	20 37 56.5	+0.5
WRA	**Warramunga Arr**	**31.55**	**265**	P	P	20 43 19.0	+0.3
ASAR	**Alice Springs**	**31.66**	**258**	P	P	20 43 19.3	-0.4
GERES	**GERESS Array B**	**145.25**	**330**	PKPbc	PKPbc	20 56 33.2	-0.6

0.2nm,0.7s,baz=78,slow=9.1,SNR=3.3
0.3nm,0.5s,baz=38,slow=4.0,SNR=3.9

*ISCJB **28** 20:40:07.6±0.6, 40.°33N±0.°03×42.°24E±0.°07, h7km±10km, Error ellipse: s-maj=10.1km s-min=4.2km az=160.2*
*CSEM **28** 20:40:07.3, 40.°31N×42.°20E, h7km, ML2.6*
*DDA **28** 20:40:07.3, 40.°31N×42.°20E, h7km, Ml2.6*

ISC 28 20:40:07.3±1.2, 40.°31N±0.°03×42.°19E±0.°04, h7km±11km, n13, σ0§79/25, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SENK	**Senkaya-Erzuru**	**0.28**	**26**	PG	**Pg**	**20 40 11.9**	**-1.0**
SENK				SG	**Sg**	**20 40 17.4**	**+0.8**
EATA	**Eleskirt**	**0.51**	**153**	*i*P	**Pg**	**20 40 17.1**	**0.0**
EATA				*i*S	**Sb**	**20 40 25.0**	**-1.4**
EATA	**Eleskirt**	**0.51**	**153**	P	**Pg**	**20 40 17.1**	**0.0**
EATA				S	**Sb**	**20 40 25.0**	**-1.4**
DDEM	**Demirkent**	**0.67**	**330**	*i*P	**Pg**	**20 40 20.4**	**+0.1**
DDEM				*i*S	**Sb**	**20 40 31.1**	**+0.1**
DDEM	**Demirkent**	**0.67**	**330**	P	**Pg**	**20 40 20.4**	**+0.1**
DDEM				S	**Sb**	**20 40 31.0**	**+0.1**
KARS	**Kars**	**0.75**	**65**	*e*PG	**Pg**	**20 40 21.3**	**-0.4**
ERZM	**Erzurum**	**0.75**	**238**	*i*P	**Pg**	**20 40 22.0**	**+0.2**
ERZM				*i*S	**Sn**	**20 40 35.2**	**-1.2**
ERZM	**Erzurum**	**0.75**	**238**	P	**Pg**	**20 40 22.0**	**+0.2**
ERZM				S	**Sn**	**20 40 35.2**	**-1.2**
DBAD	**Bademkaya**	**0.80**	**332**	*i*P	**Pg**	**20 40 22.7**	**0.0**
DBAD				*i*S	**Sb**	**20 40 34.7**	**0.0**
DBAD	**Bademkaya**	**0.80**	**332**	P	**Pg**	**20 40 22.7**	**0.0**
DBAD				S	**Sb**	**20 40 34.7**	**0.0**
AGRB	**Hanur-Agry**	**0.96**	**140**	*e*PG	**Pb**	**20 40 26.4**	**0.0**
AGRB				*e*SG	**Sb**	**20 40 40.1**	**+0.8**
TUTA	**Tutak**	**1.03**	**152**	*i*P	**Pg**	**20 40 26.9**	**-0.1**
TUTA				*i*S	**Sn**	**20 40 44.5**	**+1.4**
TUTA	**Tutak**	**1.03**	**152**	P	**Pg**	**20 40 27.0**	**-0.1**
TUTA				S	**Sn**	**20 40 44.5**	**+1.4**

*IGQ **28** 20:56:41.2±0.8, 2.°S±5.°×8.°1W±.°, h10km, MLv5.0/7*

ISC 28 20:56:46.1±2.4, 1.°63S±0.°07×80.°9W±0.°1, h11km, n51, σ1§88/54, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MILO	**Milagro-Astudi**	**1.44**	**117**	P	**Pb**	**20 57 11.6**	**-1.4**
QUEV	**Quevedo**	**1.66**	**69**	P	**Pn**	**20 57 14.7**	**-0.4**
QUEV				S	**Sg**	**20 57 39.9**	**+0.5**
COHC	**Cochancay**	**1.79**	**118**	P	**Pn**	**20 57 17.0**	**-0.1**
COHC				S	**Sg**	**20 57 45.8**	**+1.9**
MAG1	**Magdalena**	**1.88**	**35**	P	**Pn**	**20 57 17.7**	**-0.5**
RIOE1	**Riobamba**	**2.22**	**93**	P	**Pb**	**20 57 24.6**	**-1.9**
ILLI	**Illinizas Sur**	**2.31**	**67**	P	**Pn**	**20 57 25.2**	**+0.7**
BIL2	**Estacion Bilba**	**2.35**	**86**	P	**Pb**	**20 57 27.6**	**-1.1**
BBIL	**Ulba Tungurahu**	**2.37**	**86**	P	**Pb**	**20 57 27.3**	**-1.7**
BMAS	**Trigal station**	**2.37**	**87**	P	**Pb**	**20 57 27.2**	**-1.8**
BMAS				S	**Sg**	**20 58 03.2**	**+0.8**
JUI6	**Juive**	**2.39**	**85**	P	**Pb**	**20 57 27.0**	**-2.3**
PAST	**Pastocalle**	**2.39**	**67**	P	**Pb**	**20 57 27.5**	**-1.9**
ARRY	**Arrayan**	**2.39**	**87**	P	**Pb**	**20 57 27.4**	**-2.0**
RETU	**Refugio**	**2.41**	**86**	P	**Pb**	**20 57 27.9**	**-1.8**
BPAT	**Tungurahua Vol**	**2.42**	**87**	P	**Pb**	**20 57 28.0**	**-1.9**
RUN5	**Runtun**	**2.43**	**85**	P	**Pb**	**20 57 28.2**	**-1.9**
BRUN	**Tungurahua Vol**	**2.44**	**85**	P	**Pb**	**20 57 28.1**	**-2.1**
BULB	**Ulba Tungurahu**	**2.44**	**86**	P	**Pb**	**20 57 28.4**	**-1.9**
PIS1	**Pisayambo**	**2.52**	**77**	P	**Pb**	**20 57 29.3**	**-2.4**
PISA	**Pisayambo**	**2.52**	**77**	P	**Pb**	**20 57 29.6**	**-2.2**
NINA	**Atacazo Ninahu**	**2.54**	**61**	P	**Pb**	**20 57 30.4**	**-1.7**
BMOR	**Cotopaxi Volca**	**2.55**	**70**	P	**Pb**	**20 57 30.3**	**-1.9**
BNAS	**Cotopaxi Volca**	**2.55**	**68**	P	**Pb**	**20 57 31.1**	**-1.1**
NAS2	**Nasa**	**2.57**	**68**	P	**Pb**	**20 57 30.9**	**-1.7**
BREF	**Cotopaxi Volca**	**2.59**	**68**	P	**Pb**	**20 57 30.7**	**-2.2**
BVC2	**Cotopaxi Volca**	**2.62**	**68**	P	**Pb**	**20 57 31.4**	**-2.0**
BTAM	**Cotopaxi Volca**	**2.63**	**69**	P	**Pn**	**20 57 31.0**	**+2.0**
VC1	**Cotopaxi 1**	**2.63**	**68**	P	**Pb**	**20 57 31.8**	**-1.8**
PITA	**Cotopaxi Volc**	**2.64**	**66**	P	**Pn**	**20 57 30.6**	**+1.6**
GGPC	**Guagua Pichinc**	**2.67**	**57**	P	**Pn**	**20 57 29.9**	**+0.3**
PINO	**Pino**	**2.67**	**57**	P	**Pn**	**20 57 29.4**	**-0.2**
COV1	**Cotopaxi Volc**	**2.68**	**69**	P	**Pn**	**20 57 31.4**	**+1.6**
ANTG	**Antisana-Guama**	**2.82**	**67**	P	**Pb**	**20 57 34.5**	**-2.4**
ANTM	**Antisana-La Mi**	**2.84**	**68**	P	**Pn**	**20 57 30.6**	**-1.2**
ANTS	**Antisana-Sarah**	**2.90**	**67**	P	**Pn**	**20 57 35.2**	**+2.4**
OTAV	**Otavalo**	**3.03**	**52**	*e*P	**Pn**	**20 57 35.4**	**+1.0**
CUIC	**Cuicocha-Domo**	**3.14**	**52**	P	**Pn**	**20 57 36.9**	**+1.0**
IMBA	**Imbabura, San**	**3.25**	**54**	P	**Pn**	**20 57 40.0**	**+2.6**
URCU	**Urcuqui**	**3.31**	**52**	P	**Pn**	**20 57 39.2**	**+1.0**
CAYA	**Cayambe**	**3.32**	**59**	P	**Pn**	**20 57 39.6**	**+1.2**
YAHU	**Yahuarcocha**	**3.41**	**54**	P	**Pn**	**20 57 42.5**	**+2.9**
CONE	**Cono NE Rev Vo**	**3.56**	**64**	P	**Pb**	**20 57 46.4**	**-2.9**
CMBC	**Cumbal**	**3.96**	**50**	*e*P	**Pn**	**20 57 48.2**	**+1.1**
GCUF	**Volcan Galeras**	**4.50**	**51**	*e*P	**Pn**	**20 57 57.3**	**+2.5**
CRUC	**La Cruz**	**5.03**	**51**	*e*P	**Pn**	**20 58 04.0**	**+2.2**
GRGC	**Isla de Gorgon**	**5.32**	**30**	*e*P	**Pn**	**20 58 06.1**	**+0.5**
SOTA	**Rioblanco**	**5.65**	**49**	*e*P	**Pn**	**20 58 11.0**	**+0.4**
POPC	**Popayan, Colom**	**5.88**	**45**	*e*P	**Pn**	**20 58 12.1**	**-1.3**
FLOC	**Florencia**	**6.09**	**58**	*e*P	**Pn**	**20 58 19.4**	**+3.2**
MARP	**Paez Belalcaza**	**6.61**	**48**	*e*P	**Pn**	**20 58 23.8**	**+0.4**
MALC	**Bahia Malaga**	**6.61**	**32**	*e*P	**Pn**	**20 58 27.1**	**+3.9**
YOTC	**Yotoco, Valle**	**7.16**	**39**	*e*P	**Pn**	**20 58 33.7**	**+2.7**

MEX 28 20:58:36.8±1.1, 17.°84N×99.°55W, h4km±10km, MD3.6, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEIG	**Mezcala**	**0.11**	**324**	*e*P	Pg	20 58 38.6	-0.5
MEIG				*e*S	Sg	20 58 41.0	+0.3
PLIG	**Platanillo**	**0.56**	**5**	*e*P	Pg	20 58 46.4	-1.1
PLIG				*e*S	Sg	20 58 54.3	-0.5
ARIG	**Puente Sto Nin**	**0.88**	**300**	*e*P	Pg	20 58 52.6	-1.0
ARIG				*e*S	Sg	20 59 03.3	-1.8
TLIG	**Tlapa**	**0.98**	**106**	*e*P	Pg	20 58 53.6	-1.9
TLIG				*e*S	Sg	20 59 06.9	-1.3
ACX	**Acapulco**	**1.00**	**197**	*e*P	Pg	20 58 53.5	-2.6
ACX				*i*S	Sg	20 59 06.3	-2.9
CAIG	**El Cayaco**	**1.04**	**221**	*e*P	Pg	20 58 54.0	-2.7
CAIG				*e*S	Sg	20 59 07.1	-3.2
PPM	**Popocatepetl**	**1.51**	**35**	*i*P	Pb	20 59 05.4	-0.2
PPM				*e*S	Sn	20 59 27.8	+2.4
ZIIG	**Zihuatanejo**	**1.84**	**263**	*e*P	Pn	20 59 08.4	-0.7

*IGQ **28** 21:00:22.3±0.9, 2.°S±5.°×8.°1W±.°, h10km, MLv4.3/7*

ISC 28 21:00:22.2±3.9, 1.°71S±0.°10×81.°1W±0.°2, h11km, n36, σ1§36/38, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MILO	**Milagro-Astudi**	**1.61**	**111**	P	**Pn**	**21 00 50.2**	**-0.4**
MILO				S	**Sn**	**21 01 10.5**	**-0.9**
QUEV	**Quevedo**	**1.89**	**69**	P	**Pn**	**21 00 51.7**	**-2.8**
QUEV				S	**Sn**	**21 01 16.9**	**-1.4**
COHC	**Cochancay**	**1.96**	**113**	P	**Pn**	**21 00 54.9**	**-0.5**
MAG1	**Magdalena**	**2.08**	**39**	P	**Pn**	**21 00 56.2**	**-0.8**
RIOE1	**Riobamba**	**2.44**	**91**	P	**Pn**	**21 01 03.2**	**+0.9**
ILLI	**Illinizas Sur**	**2.54**	**67**	P	**Pn**	**21 01 03.7**	**-0.1**
BBIL	**Ulba Tungurahu**	**2.59**	**84**	P	**Pn**	**21 01 05.2**	**+0.8**
BMAS	**Trigal station**	**2.60**	**86**	P	**Pn**	**21 01 04.4**	**-0.1**
JUI6	**Juive**	**2.62**	**84**	P	**Pn**	**21 01 05.8**	**+1.1**
PAST	**Pastocalle**	**2.63**	**67**	P	**Pn**	**21 01 05.0**	**0.0**
POND	**Pondoa**	**2.63**	**84**	P	**Pn**	**21 01 05.8**	**+0.9**
RETU	**Refugio**	**2.63**	**84**	P	**Pn**	**21 01 07.1**	**+2.0**
BPAT	**Tungurahua Vol**	**2.64**	**86**	P	**Pn**	**21 01 06.2**	**+1.0**
RUN5	**Runtun**	**2.66**	**84**	P	**Pn**	**21 01 07.4**	**+2.0**
BRUN	**Tungurahua Vol**	**2.67**	**84**	P	**Pn**	**21 01 06.2**	**+0.8**
BULB	**Ulba Tungurahu**	**2.67**	**84**	P	**Pn**	**21 01 06.4**	**+0.9**
PISA	**Pisayambo**	**2.76**	**76**	P	**Pn**	**21 01 08.3**	**+1.4**
NINA	**Atacazo Ninahu**	**2.78**	**62**	P	**Pn**	**21 01 07.0**	**-0.1**
BNAS	**Cotopaxi Volca**	**2.79**	**68**	P	**Pn**	**21 01 09.1**	**+1.9**
BREF	**Cotopaxi Volca**	**2.82**	**69**	P	**Pn**	**21 01 09.1**	**+1.3**
BVC2	**Cotopaxi Volca**	**2.85**	**69**	P	**Pn**	**21 01 09.7**	**+1.5**
BTAM	**Cotopaxi Volca**	**2.86**	**69**	P	**Pn**	**21 01 09.7**	**+1.4**
VC1	**Cotopaxi 1**	**2.87**	**68**	P	**Pn**	**21 01 10.9**	**+2.5**
PITA	**Cotopaxi Volc**	**2.87**	**67**	P	**Pn**	**21 01 09.6**	**+1.2**
PINO	**Pino**	**2.90**	**58**	P	**Pn**	**21 01 07.5**	**-1.4**
COV1	**Cotopaxi Volc**	**2.92**	**69**	P	**Pn**	**21 01 10.1**	**+1.0**
ANTS	**Antisana-Sarah**	**3.14**	**67**	P	**Pn**	**21 01 13.0**	**+0.9**
OTAV	**Otavalo**	**3.25**	**54**	*e*P	**Pn**	**21 01 12.8**	**-0.8**
OTAV	**Otavalo**	**3.25**	**54**	P	**Pn**	**21 01 12.6**	**-1.0**
CUIC	**Cuicocha-Domo**	**3.37**	**54**	P	**Pn**	**21 01 15.0**	**-0.1**
IMBA	**Imbabura, San**	**3.48**	**56**	P	**Pn**	**21 01 17.7**	**+1.0**
URCU	**Urcuqui**	**3.53**	**53**	P	**Pn**	**21 01 18.2**	**+0.8**
YAHU	**Yahuarcocha**	**3.64**	**55**	P	**Pn**	**21 01 18.5**	**-0.4**
CMBC	**Cumbal**	**4.18**	**51**	*e*P	**Pn**	**21 01 28.4**	**+2.1**
CRUC	**La Cruz**	**5.25**	**52**	*e*P	**Pn**	**21 01 42.0**	**+1.0**
SOTA	**Rioblanco**	**5.87**	**49**	*e*P	**Pn**	**21 01 52.2**	**+2.6**

IDC 28 21:22:46.6±8.1, 30.°90S×179.°87W, h453km±97km, mb2.6/2, mb1 3.0/3, mb1mx2.6/44, mbtmp3.7/3, Error ellipse: s-maj=94.7km s-min=36.8km az=12.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.75**	**198**	P	P	21 24 38.4	-0.8
URZ	3.3nm,0.3s,baz=266,slow=4.9,SNR=21 2.5nm,0.3s,baz=37,slow=20,SNR=14			S	S	21 26 12.7	+1.1
ASAR	**Alice Springs**	**41.48**	**268**	P	P	21 29 52.8	-0.1
WRA	**Warramunga Arr**	**42.52**	**274**	P	P	21 30 01.0	-0.1
FINES	**FINESS Array B**	**145.04**	**338**	PKPbc	PKPdf	21 41 30.5	-0.2
HFS	**Hagfors**	**149.39**	**347**	PKPbc	PKPbc	21 41 42.4	-0.5

0.6nm,0.6s,baz=111,slow=7.9,SNR=12
0.9nm,0.5s,baz=50,slow=4.2,SNR=10
1.1nm,0.9s,baz=74,slow=5.2,SNR=3.9

*NIED **28** 22:01:00, 36.°40N×141.°00E, h5km, Mw3.9 Best double couple: M0 7.91000×10^14 NP1:φ0 7.00000°, δ27.00000°, λ-53.00000°. NP2:φ0 147.00000°, δ69.0000°, λ-107.00000°.*
*ISCJB **28** 22:01:08.3±1.1, 36.°38N±0.°04×141.°21E±0.°06, h17km±7km, mb3.7/16, MS2.5/1, Error ellipse: s-maj=8.2km s-min=6.1km az=28.6*
*JMA **28** 22:01:10.7, 36.°39N×141.°02E, h20km±1km, M4.2*
JMA Felt II J1.
*IDC **28** 22:01:13.7±1.6, 36.°42N×141.°14E, h44km±15km, mb3.5/16, mb1 3.7/20, mb1mx3.6/68, mbtmp3.8/20, ML3.6/3, MS2.9/4, Ms1 2.9/4, ms1mx2.5/58, Error ellipse: s-maj=13.9km s-min=9.3km az=81.0*

ISC 28 22:01:09.3±1.8, 36.°41N±0.°05×141.°07E±0.°06, h11km±11km, n38, σ1§27/37, mb3.8/16, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.45**	**297**	P	**Pb**	**22 01 19.3**	**0.0**
JHO				S	**Sb**	**22 01 25.3**	**-0.7**
ONAJ	**Iwakimizuishiy**	**0.73**	**343**	P	**Pb**	**22 01 24.3**	**+0.3**
JYT	**Yasato**	**0.73**	**256**	P	**Pb**	**22 01 23.8**	**-0.2**
JYT				S	**Sb**	**22 01 33.2**	**-0.7**
JFK	**Kawauchi**	**0.97**	**351**	P	**Pg**	**22 01 28.1**	**+0.1**
JSB	**Shiboa**	**1.08**	**302**	P	**Pn**	**22 01 30.5**	**+0.1**
JSB				S	**Sn**	**22 01 44.8**	**-0.6**
JFT	**Otama**	**1.26**	**332**	P	**Pg**	**22 01 33.4**	**0.0**
JAG	**Ashikaga**	**1.30**	**271**	P	**Pn**	**22 01 32.7**	**-0.7**
MJAR	**Matsushiro Arr**	**2.31**	**274**	P	**Pn**	**22 01 48.7**	**+1.4**
MJAR	19nm,0.3s,baz=86,slow=14,SNR=72 41nm,0.3s,baz=108,slow=14,SNR=9.1			S	**Sb**	**22 02 17.8**	**-1.7**
MJAR	comp=Z,242nm,18.1s,baz=90,slow=46			LR	LR	22 03 02.4	
MAT	**Matsushiro**	**2.31**	**274**	P	**Pn**	**22 01 48.4**	**+1.1**
MAT				S	**Sb**	**22 02 19.4**	**-0.1**
JHJ	**Hachijo jima 2**	**3.45**	**198**	P	**Pn**	**22 02 05.0**	**+2.2**
JHJ	16nm,0.3s,baz=328,slow=19,SNR=14 31nm,0.3s,baz=2.8,slow=15,SNR=4.2			S	**Sn**	**22 02 45.4**	**+1.8**
ASAJ	**Asahikawa**	**7.79**	**8**	P	**Pn**	**22 03 03.9**	**+1.4**
ASAJ	0.7nm,0.3s,baz=196,slow=15,SNR=4.4 0.4nm,0.3s,baz=66,slow=20,SNR=2.9			S	**Sn**	**22 04 32.0**	**+1.4**
JNU	**Nakatsue**	**9.00**	**252**	P	**Pn**	**22 03 19.2**	**0.0**
JNU	0.2nm,0.3s,baz=54,slow=8.7,SNR=2.3 comp=Z,116nm,19.3s,baz=133,slow=38			LR	LR	22 07 00.5	
JCJ	**Chichijima**	**9.33**	**174**	P	**Pn**	**22 03 22.0**	**-1.7**
USRK	**Ussuriysk Ar.**	**10.42**	**321**	P	Pn	22 03 45.5	+7.0
KSRS	**Korea Array**	**10.58**	**280**	P	**Pn**	**22 03 45.1**	**+4.3**
KSRS	baz=121,slow=13 baz=96,slow=13,SNR=2.8 comp=Z,66nm,20.0s,baz=79,slow=35			LR	LR	22 07 30.9	
PETK	**Petropavlovsk-**	**20.37**	**30**	LR	LR	22 14 44.2	
SONM	**Songino Array**	**27.91**	**305**	P	**P**	**22 06 58.2**	**-1.1**
H11N2	**WAKE ISLAND Hy 28.07**	**119**		T	T	22 36 24.9	
H11N1	**WAKE ISLAND Hy 28.08**	**119**		T	T	22 36 29.1	
H11N3	**WAKE ISLAND Hy 28.09**	**119**		T	T	22 36 29.7	
H11S1	**WAKE ISLAND Hy 28.76**	**121**		T	T	22 37 16.2	
H11S3	**WAKE ISLAND Hy 28.76**	**121**		T	T	22 37 11.8	
H11S2	**WAKE ISLAND Hy 28.77**	**121**		T	T	22 37 18.8	
ZALV	**Zalesovo Beam**	**42.14**	**313**	P	**P**	**22 09 02.2**	**+0.9**
MKAR	**Makanchi Array**	**44.22**	**303**	P	**P**	**22 09 19.5**	**+1.2**
KURBB	**Kurchatov Arra**	**46.17**	**308**	P	**P**	**22 09 34.6**	**+0.9**
ILAR	**Eielson Array**	**50.17**	**32**	P	**P**	**22 10 04.5**	**0.0**
BVAR	**Borovoye Array**	**50.79**	**313**	P	**P**	**22 10 08.4**	**-0.9**
FITZ	**Fitzroy Crossi**	**56.14**	**198**	P	**P**	**22 10 47.8**	**-1.0**
WRA	**Warramunga Arr**	**56.40**	**188**	P	**P**	**22 10 50.9**	**+0.2**
ASAR	**Alice Springs**	**60.13**	**188**	P	**P**	**22 11 17.1**	**+0.4**
YKA	**Yellowknife Ar**	**64.49**	**30**	P	**P**	**22 11 44.1**	**-1.4**
FINES	**FINESS Array B**	**69.24**	**332**	P	**P**	**22 12 15.8**	**0.0**

KMO	**Kumora**	**0.59**	**13**	⇓*i*Pg	Pg	22 06 16.9	-0.3
KMO				*e*Sg	Sg	22 06 24.8	-0.2
KMO				Pmax			
	comp=N,263nm,0.2s						
KMO				Smax			
	comp=N,693nm,0.2s						
KMO	**Kumora**	**0.59**	**13**	*e*PG	Pg	22 06 16.8	-0.4
KMO				*e*		22 06 24.8	
KMO				pmax	pmax		
	comp=Z,265nm,0.2s						
KMO				smax	smax		
	comp=N,579nm,0.5s						
YOA	**Uoyan**	**0.93**	**27**	*e*Pg	Pg	22 06 23.2	-0.4
YOA				*e*Sg	Sg	22 06 35.6	-0.1
YOA				*e*Sb	Sn	22 06 38.9	0.0
YOA				Pmax			
	comp=N,268nm,0.2s						
YOA				max			
	comp=N,2μm,0.2s						
YOA	**Uoyan**	**0.93**	**27**	*e*PG	Pg	22 06 23.3	-0.3
YOA				*i*		22 06 36.6	
YOA				pmax	pmax		
	comp=Z,285nm,0.2s						
YOA				smax	smax		
	comp=N,2μm,0.3s						
NIZ	**Nizh Angarsk**	**0.94**	**300**	*e*Pg	Pg	22 06 23.4	-0.4
NIZ				*e*Sg	Sg	22 06 35.8	-0.1
NIZ				*e*Sb	Sn	22 06 41.4	+2.3
NIZ				Pmax			
	comp=N,311nm,0.2s						
NIZ				max			
	comp=N,626nm,0.2s						
NIZ	**Nizh Angarsk**	**0.94**	**300**	⇓*i*PG	Pg	22 06 23.4	-0.4
NIZ				*e*		22 06 36.5	
NIZ				pmax	pmax		
	comp=Z,309nm,0.4s						
NIZ				smax	smax		
	comp=E,621nm,0.2s						
SVKR	**Severomuysk**	**1.67**	**60**	*e*Pg	Pb	22 06 36.4	-0.5
SVKR				*e*Sg	Sg	22 06 58.9	-0.6
SVKR				Pmax			
	comp=E,204nm,0.2s						
SVKR				Smax			
	comp=E,2μm,0.3s						
SYVR	**Suvo**	**1.75**	**199**	*e*Pn	Pn	22 06 36.9	+0.3
SYVR				*e*Pg	Pb	22 06 37.5	-0.7
SYVR				*e*		22 06 40.9	
SYVR				*e*		22 06 42.8	
SYVR				*e*Sg	Sg	22 07 01.2	-0.8
SYVR				max			
	comp=E,64nm,0.4s						
SYVR				Smax			
	comp=E,177nm,0.6s						
MXMB	**Maximikha**	**2.43**	**213**	*e*Pn	Pn	22 06 46.1	+0.2
MXMB				*e*Pg	Pb	22 06 49.5	-0.3
MXMB				*e*Sg	Sg	22 07 22.0	-1.8
OGRR	**Ongureny**	**2.58**	**231**	*e*Pn	Pn	22 06 48.7	+0.7
OGRR				*e*Pg	Pb	22 06 52.1	-0.3
OGRR				*e*Sn	Sn	22 07 18.1	-1.5
OGRR				*e*Sg	Sb	22 07 25.5	+1.2
OGRR				Pmax			
	comp=E,24nm,0.2s						
OGRR				Smax			
	comp=E,184nm,0.2s						
OGRR	**Ongureny**	**2.58**	**231**	*e*PN	Pn	22 06 48.2	+0.2
OGRR				*e*		22 06 52.5	
OGRR				*e*		22 07 26.2	
OGRR				pmax	pmax		
	comp=Z,30nm,0.6s						
OGRR				smax	smax		
	comp=E,183nm,0.3s						
NLYR	**Nelyaty**	**2.92**	**64**	*e*Pn	Pn	22 06 52.9	+0.3
NLYR				*e*Pg	Pb	22 06 57.7	-0.4
NLYR				*e*Sn	Sn	22 07 26.8	-1.1
NLYR				*e*Sg	Sb	22 07 34.5	+0.6
NLYR				Pmax			
	comp=E,38nm,0.3s						
NLYR				Smax			
	comp=E,213nm,0.9s						
BOD	**Bodaibo**	**3.02**	**32**	*e*Pn	Pn	22 06 53.8	-0.2
BOD				*e*Pg	Pb	22 06 59.4	-0.5
BOD				*e*Sn	Sn	22 07 28.4	-2.1
BOD				*e*Sg	Sb	22 07 37.8	+0.8
BOD				Pmax			
	comp=E,9.0nm,0.3s						
BOD				Smax			
	comp=E,93nm,0.3s						
KELR	**Kotokel**	**3.07**	**215**	*e*Pn	Pn	22 06 53.9	-0.8
KELR				*e*Pg	Pb	22 07 00.1	-0.6
KELR				*e*Sn	Sn	22 07 30.0	-1.7
KELR				*e*Sg	Sb	22 07 40.7	+2.3
CIT	**Chita**	**3.63**	**154**	*e*Sg	Sb	22 07 58.2	+3.6
CIT				Smax			
	comp=E,165nm,0.2s						
TRG	**Tyrgan**	**3.73**	**229**	*e*Pn	Pn	22 07 04.6	+0.7
TRG				*e*Pg	Pb	22 07 12.8	+0.7
TRG				*e*Sg	Sb	22 08 01.0	+3.5
TRG				Pmax			
	comp=E,9.0nm,0.2s						
TRG				Smax			
	comp=E,84nm,0.3s						
UUDB	**Ulan-Yde**	**3.97**	**211**	*e*Pg	Pb	22 07 17.5	+1.4
UUDB				*e*Sg	Sg	22 08 09.0	-4.3
UUDB				Pmax			
	comp=E,22nm,0.6s						
UUDB				Smax			
	comp=E,111nm,0.9s						
HRMR	**Khuramsha**	**4.40**	**215**	*e*Pn	Pn	22 07 13.5	+0.5
HRMR				*e*Pg	Pb	22 07 25.4	+2.0
HRMR				*e*Sn	Sn	22 08 04.0	-0.5
HRMR				*e*Sg	Sg	22 08 22.7	-4.3
BGT	**Bolshoye Golou**	**4.65**	**228**	*e*Pn	Pn	22 07 15.9	-0.5
BGT				*e*Pg	Pb	22 07 29.0	+1.4
BGT				*e*Sn	Sn	22 08 08.2	-2.4
BGT				*e*Sg	Sb	22 08 29.1	+5.3
BGT				Pmax			
	comp=E,4.0nm,0.1s						
BGT				Smax			
	comp=E,47nm,0.7s						
LSTR	**Listvyanka**	**5.03**	**229**	*e*Pn	Pn	22 07 23.0	+1.5
LSTR				*e*Pg	Pb	22 07 35.6	+1.6
LSTR				*e*Sn	Sn	22 08 18.6	-1.2
LSTR				*e*Sg	Sb	22 08 40.4	+5.8
LSTR				Pmax			
	comp=E,4.0nm,0.2s						
LSTR				Smax			
	comp=E,32nm,0.6s						
IVK	**Ivanovka**	**5.25**	**231**	*e*Pn	Pn	22 07 24.9	+0.2
IVK				*e*Pg	Pb	22 07 39.8	+1.9
IVK				*e*Sn	Sn	22 08 22.9	-2.6
IVK				*e*Sg	Sb	22 08 47.0	+5.8
IVK				Pmax			
	comp=E,4.0nm,0.2s						
IVK				Smax			
	comp=E,32nm,0.4s						
TUP	**Tupik**	**5.26**	**96**	*e*Pn	Pn	22 07 24.1	-0.8
TUP				*e*Pg	Pb	22 07 39.5	+1.4
TUP				*e*Sn	Sn	22 08 22.3	-3.4
TUP				*e*Sg	Sg	22 08 48.9	-5.8
TUP				Pmax			
	comp=E,7.0nm,0.2s						
TUP				Smax			
	comp=E,73nm,0.7s						
TUP	**Tupik**	**5.26**	**96**	*e*PN	Pn	22 07 24.4	-0.5
TUP				*e*		22 07 40.2	
TUP				*e*S	Sn	22 08 25.4	-0.3
TUP				*e*		22 08 49.5	
TUP				pmax	pmax		
	comp=Z,7.0nm,0.4s						
TUP				smax	smax		
	comp=N,73nm,0.9s						
KPC	**Khapcheranga**	**5.68**	**171**	*e*Pn	Pn	22 07 31.8	+1.2
KPC				*e*Pg	Pb	22 07 47.4	+2.2
KPC				*e*Sn	Sn	22 08 33.5	-2.6
KPC				*e*Sg	Sg	22 09 01.1	-7.0
KPC				Pmax			
	comp=N,2.0nm,0.4s						
KPC				Smax			
	comp=N,38nm,0.5s						
TLY	**Talaya**	**5.69**	**233**	*e*Pn	Pn	22 07 32.5	+1.9
TLY				*e*Pg	Pb	22 07 47.6	+2.3
TLY				*e*Sn	Sn	22 08 33.5	-2.6
TLY				*e*Sg	Sb	22 08 59.7	+6.1
TLY				Pmax			
	comp=N,3.0nm,0.1s						
TLY				Smax			
	comp=N,26nm,0.4s						
TLY	**Talaya**	**5.69**	**233**	*e*PN	Pb	22 07 49.1	+3.8
TLY				*e*		22 08 59.1	
TLY				pmax	pmax		
	comp=Z,4.0nm,0.4s						
TLY				smax	smax		
	comp=E,20nm,0.3s						
ARS	**Arshan**	**6.11**	**240**	*e*Pn	Pn	22 07 38.2	+1.6
ARS				*e*Pg	Pb	22 07 56.4	+3.8
ARS				*e*Sn	Sn	22 08 44.3	-2.4
ARS				*e*Sg	Sg	22 09 14.7	-7.3
ARS				Pmax			
	comp=E,15nm,0.4s						
ARS				Smax			
	comp=E,115nm,0.7s						
ZAK	**Zakamensk**	**6.78**	**226**	*e*Pn	Pn	22 07 48.3	+2.5
ZAK				*e*Pg	Pb	22 08 08.8	+4.8
ZAK				*e*Sg	Sg	22 09 37.1	-6.3
ZAK				Pmax			
	comp=E,3.0nm,0.2s						
ZAK				Smax			
	comp=E,14nm,0.6s						
MOY	**Mondy**	**6.98**	**243**	*e*Pn	Pn	22 07 49.0	+0.5
MOY				*e*Pg	Pb	22 08 11.6	+4.2
MOY				*e*Sn	Sn	22 09 05.3	-2.8
MOY				*e*Sg	Sg	22 09 41.2	-8.5
MOY				Pmax			
	comp=E,5.0nm,0.3s						
MOY				Smax			
	comp=E,42nm,1.4s						
MOY	**Mondy**	**6.98**	**243**	*e*PN	Pn	22 07 48.5	0.0
MOY				*e*		22 08 10.4	
MOY				*e*S	Sn	22 09 05.1	-3.0
MOY				*e*		22 09 38.9	
MOY				pmax	pmax		
	comp=Z,6.0nm,0.4s						
MOY				smax	smax		
	comp=E,42nm,0.8s						
ORL	**Orlik**	**7.15**	**252**	*e*Pn	Pn	22 07 52.2	+1.4
ORL				*e*Sn	Sn	22 09 09.8	-2.5
ORL				*e*Sg	Sg	22 09 46.2	-9.0
ORL				Smax			
	comp=E,26nm,1.4s						
ORL	**Orlik**	**7.15**	**252**	*e*PN	Pn	22 07 50.6	-0.2
ORL				*e*		22 08 13.9	
ORL				*e*		22 09 46.1	
ORL				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ORL				smax	smax		
	comp=N,26nm,1.4s						

KRSC 28 22:14:31.9±1.7, 47°.89N×156°.03E, h60km±25km, ML4.3,
East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.79**	**1**	*e*P	Pn	22 15 15.8	+1.7
PAU	**Pauzhetka**	**3.62**	**8**	*e*P	Pn	22 15 28.4	+3.1
PAU				*e*S	Sn	22 16 10.2	+3.5
MIPR	**Malaya Ipel'ka**	**4.42**	**6**	*e*P	Pn	22 15 38.4	+2.1
ASAK	**Asacha**	**4.66**	**14**	*e*P	Pn	22 15 43.7	+4.1
MTVR	**Mutnovka**	**4.80**	**16**	*e*P	Pn	22 15 45.2	+3.5
RUS	**Russkaya**	**4.82**	**18**	*e*P	Pn	22 15 44.9	+3.2
RUS				*e*S	Sn	22 16 39.2	+3.0
KRMR	**Karymshinskiy**	**5.12**	**14**	*e*P	Pn	22 15 50.3	+4.4
UGLR	**Uglovaya**	**5.61**	**17**	*e*P	Pn	22 15 57.0	+4.2
AVH	**Avacha**	**5.65**	**17**	*e*P	Pn	22 15 57.7	+4.5
KOK	**Koryaka**	**5.66**	**16**	*e*P	Pn	22 15 58.7	+5.4
KRER	**Koryakskii**	**5.69**	**17**	*e*P	Pn	22 15 58.3	+4.4
SDLR	**Sedlovina**	**5.69**	**18**	*e*P	Pn	22 15 57.4	+3.6
KRX	**Arik**	**5.72**	**16**	*e*P	Pn	22 15 58.2	+3.9
SPN	**Mys Shipunski**	**5.80**	**25**	*e*P	Pn	22 15 59.4	+4.2
SPN				*e*S	Sn	22 17 04.0	+3.7
GNL	**Ganaly**	**5.94**	**11**	*e*P	Pn	22 16 00.4	+3.2
MKZ	**Mys Kozlova**	**7.57**	**26**	*e*P	Pn	22 16 22.8	+3.4

*ISCJB **28** 22:26:20.4±0.7, 51°.49N±0°.03×16°.13E±0°.03, h0km, Error ellipse: s-maj=4.7km s-min=2.8km az=20.3*
*CSEM **28** 22:26:20.8±0.5, 51°.58N×16°.16E, h1km, ML2.6, Error ellipse: s-maj=7.9km s-min=6.6km az=159.0, Suspected Mining induced.*
*VIE **28** 22:26:22.8±0.6, 51°.42N×15°.96E, h0km, mb2.1/4, ml2.6/5, Error ellipse: s-maj=5.0km s-min=4.3km az=149.0 82 km WNW of Wroclaw Suspected Mining induced.*
*PRU **28** 22:26:22.3, 51°.53N×16°.10E, h0km*
ISC 28 22:26:20.8±1.2, 51°.57N±0°.05×16°.14E±0°.03, h0km, n35,
σ0s92/67, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.73**	**172**	*e*Pg	**Pg**	**22 26 35.5**	**+0.7**
KSP				*e*Sg	**Sg**	**22 26 45.1**	**+0.8**
KSP	**Ksiaz**	**0.73**	**172**	*e*Pg	**Pg**	**22 26 35.5**	**+0.7**
KSP				*e*Sg	**Sg**	**22 26 45.1**	**+0.8**
UPC	**Upice**	**1.07**	**184**	*e*PG	**Pb**	**22 26 41.7**	**-0.4**
UPC				*e*SG	**Sb**	**22 26 55.6**	**-1.0**
	comp=Z,42nm,0.3s						
DPC	**Dobruska-Polom**	**1.23**	**175**	*e*PG	**Pb**	**22 26 44.6**	**-0.2**
DPC				*e*SG	**Sb**	**22 27 00.3**	**-0.9**
	comp=Z,14nm,0.3s						
PVCC	**Panska Ves**	**1.44**	**224**	*e*PG	**Pb**	**22 26 48.9**	**+0.5**
PVCC				*e*SG	**Sn**	**22 27 07.6**	**-0.1**
	comp=Z,83nm,0.4s						
BRG	**Berggiesshubel**	**1.55**	**244**	PG	**Pb**	**22 26 50.3**	**0.0**
BRG				SG	**Sg**	**22 27 10.9**	**+0.4**
	44nm,0.4s						
KRLC	**Kraliky**	**1.55**	**165**	*e*PG	**Pb**	**22 26 50.2**	**-0.2**
KRLC				*e*SG	**Sb**	**22 27 10.1**	**-0.4**
	comp=Z,6.3nm,0.2s						
PRA	**Prague**	**1.85**	**216**	*e*PN	**Pn**	**22 26 54.1**	**+0.4**
GOPC	**GO Pecny, Ondr**	**1.87**	**208**	*e*PN	**Pn**	**22 26 54.2**	**+0.2**
GOPC				*e*PG	**Pg**	**22 26 56.5**	**0.0**
GOPC				*e*SG	**Sb**	**22 27 19.5**	**-0.1**
	comp=Z,9.5nm,0.2s						
PRU	**Pruhonice**	**1.88**	**213**	*e*PN	**Pn**	**22 26 54.6**	**+0.4**
PRU				*e*PG	**Pg**	**22 26 56.5**	**-0.3**
PRU				*e*SG	**Sg**	**22 27 20.9**	**-0.2**
	comp=Z,13nm,0.3s						
CLL	**Collm**	**1.98**	**264**	*i* Pn	**Pn**	**22 26 54.8**	**-0.7**
CLL				*i* Pg	**Pb**	**22 26 58.0**	**+0.3**
CLL				*i*		22 26 59.1	
CLL				*i* Sg	**Sb**	**22 27 23.8**	**+0.9**
	comp=Z,16nm,0.4s						
MORC	**Moravsky Berou**	**2.00**	**153**	*e*Pn	**Pn**	**22 26 55.7**	**-0.2**
MORC				*e*Sg	**Sb**	**22 27 23.7**	**+0.1**
MORC	**Moravsky Berou**	**2.00**	**153**	*e*PN	**Pn**	**22 26 55.7**	**-0.2**
MORC				*e*SG	**Sb**	**22 27 23.7**	**+0.1**
OKC	**Ostrava-Krasne**	**2.15**	**143**	*e*PG	**Pg**	**22 27 01.9**	**-0.1**
OKC				*e*SG	**Sg**	**22 27 29.0**	**-0.9**
	comp=Z,13nm,0.5s						
VRAC	**Vranov**	**2.28**	**173**	*e*Pn	**Pn**	**22 27 00.3**	**+0.6**
VRAC				*e*Sg	**Sb**	**22 27 30.5**	**-1.1**
VRAC	**Vranov**	**2.28**	**173**	*e*PN	**Pn**	**22 27 00.3**	**+0.6**
VRAC				*e*SG	**Sb**	**22 27 30.5**	**-1.1**
KRUC	**Moravsky**	**2.52**	**176**	*e*PN	**Pn**	**22 27 04.4**	**+1.5**
KRUC				*e*SG	**Sg**	**22 27 40.2**	**-1.3**
OJC	**Ojcow**	**2.68**	**119**	*e*Pg	**Pg**	**22 27 12.5**	**+0.4**
OJC				*e*Sg	**Sg**	**22 27 47.6**	**+0.8**
OJC	**Ojcow**	**2.68**	**119**	*e*Pg	**Pg**	**22 27 12.5**	**+0.4**
OJC				*e*Sg	**Sg**	**22 27 47.6**	**+0.8**
NKC	**Novy Kostel**	**2.69**	**242**	*e*PN	**Pn**	**22 27 06.2**	**+0.8**
NKC				*e*PG	**Pg**	**22 27 12.1**	**-0.3**
NKC				*e*SG	**Sg**	**22 27 47.4**	**+0.1**
	comp=Z,23nm,0.3s						
KHC	**Kasperske Hory**	**2.94**	**215**	*e*PN	**Pn**	**22 27 09.0**	**+0.2**
KHC				*e*PG	**Pb**	**22 27 15.0**	**+0.9**
KHC				*e*SN	**Sn**	**22 27 43.2**	**-1.6**
KHC				*e*SG	**Sg**	**22 27 53.4**	**-1.8**
	comp=Z,5.5nm,0.4s						
SMOL	**Smolenice**	**3.17**	**164**	*e*SG	**Sg**	**22 28 04.1**	**+1.6**
SMOL	**Smolenice**	**3.17**	**164**	*e*Sg	**Sg**	**22 28 04.1**	**+1.6**
LANS	**Liptovska Anna**	**3.23**	**137**	*e*PG	**Pg**	**22 27 22.6**	**+0.1**
LANS				*e*SG	**Sg**	**22 28 03.1**	**-1.2**
LANS	**Liptovska Anna**	**3.23**	**137**	*e*Pg	**Pg**	**22 27 22.6**	**+0.1**
LANS				*e*Sg	**Sg**	**22 28 03.1**	**-1.2**
MODS	**Modra-Piesok**	**3.28**	**167**	*e*SG	**Sg**	**22 28 07.5**	**+1.4**
MODS				*e*LG	Lg	22 28 11.5	
MODS	**Modra-Piesok**	**3.28**	**167**	*e*Sg	**Sg**	**22 28 07.6**	**+1.4**
VYHS	**Vyhne**	**3.53**	**150**	*e*SG	**Sg**	**22 28 14.0**	**-0.3**
VYHS				*e*LG	Lg	22 28 20.6	
VYHS	**Vyhne**	**3.53**	**150**	*e*Sg	**Sg**	**22 28 14.0**	**-0.3**
CONA	**Conrad Observa**	**3.65**	**183**	*i* Pn	**Pn**	**22 27 18.2**	**-0.3**
	comp=Z,0.1nm,0.1s						
CONA				Sg	**Sg**	**22 28 17.4**	**-0.6**
	comp=Z,3.2nm,0.4s						
CONA	**Conrad Observa**	**3.65**	**183**	Pn	**Pn**	**22 27 18.2**	**-0.3**
	comp=Z,0.1nm,0.1s						
CONA				Sg	**Sg**	**22 28 17.4**	**-0.6**
	comp=Z,3.2nm,0.4s						
MOA	**Molln**	**3.92**	**199**	*i* Pn	**Pn**	**22 27 22.2**	**0.0**
	comp=Z,0.8nm,0.2s						
MOA				*e*Sg	**Sg**	**22 28 26.5**	**-0.1**
	comp=Z,1.6nm,0.2s						
MOA	**Molln**	**3.92**	**199**	Pn	**Pn**	**22 27 22.2**	**0.0**
	comp=Z,0.8nm,0.2s						
MOA				Sg	**Sg**	**22 28 26.5**	**-0.1**
	comp=Z,1.6nm,0.2s						
ARSA	**Arzberg**	**4.34**	**186**	Sg	**Sg**	**22 28 43.1**	**+2.9**
	comp=Z,2.3nm,0.4s						
ARSA	**Arzberg**	**4.34**	**186**	Sg	**Sg**	**22 28 43.1**	**+2.9**
	comp=Z,2.3nm,0.4s						

*CSEM **28** 22:45:56.8±0.2, 38°.67N×43°.18E, h15km, ML2.3, Error ellipse: s-maj=4.5km s-min=4.0km az=119.0*
*ISK **28** 22:45:56.3, 38°.65N×43°.15E, h5km, ML2.3/7*
*ISCJB **28** 22:45:57.2±0.4, 38°.66N±0°.03×43°.15E±0°.03, h12km±4km, Error ellipse: s-maj=4.8km s-min=4.2km az=162.7*
*DDA **28** 22:45:57.5, 38°.64N×43°.20E, h7km, Ml2.7*
ISC 28 22:45:57.4±0.9, 38°.65N±0°.02×43°.17E±0°.02, h14km±7km,
n28, σ1s00/46, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.18**	**108**	PG	**Pg**	**22 46 01.8**	**+0.1**
VANB				SG	**Sg**	**22 46 05.7**	**+1.1**
VANB	**Van**	**0.18**	**108**	*e*Pg	**Pg**	**22 46 01.8**	**+0.1**
VANB				*e*Sg	**Sg**	**22 46 05.7**	**+1.1**
TVAN	**Van**	**0.22**	**124**	*i* P	**Pg**	**22 46 01.5**	**-0.9**
TVAN				*i* S	**Sg**	**22 46 05.9**	**+0.1**
TVAN	**Van**	**0.22**	**124**	P	**Pg**	**22 46 01.5**	**-0.9**
TVAN				S	**Sg**	**22 46 05.9**	**+0.1**
GEVA	**Gevas**	**0.35**	**195**	*i* P	**Pg**	**22 46 04.0**	**-0.6**
GEVA				*i* S	**Sb**	**22 46 10.8**	**-0.3**
GEVA	**Gevas**	**0.35**	**195**	P	**Pg**	**22 46 04.0**	**-0.6**
GEVA				S	**Sb**	**22 46 10.8**	**-0.3**
ADCV	**BITLIS_Adilcev**	**0.38**	**294**	*i* P	**Pg**	**22 46 05.2**	**0.0**
ADCV				*i* S	**Sb**	**22 46 12.4**	**+0.3**
ADCV	**BITLIS_Adilcev**	**0.38**	**294**	P	**Pg**	**22 46 05.2**	**0.0**
ADCV				S	**Sb**	**22 46 12.4**	**+0.3**
ERCV	**ERCIS-VAN**	**0.39**	**19**	PG	**Pg**	**22 46 04.7**	**-0.7**
ERCV	**ERCIS-VAN**	**0.39**	**19**	*e*Pg	**Pg**	**22 46 04.7**	**-0.7**
VMUR	**Van-Muradiye**	**0.46**	**43**	*i* P	**Pb**	**22 46 06.7**	**-0.8**
VMUR				*i* S	**Sb**	**22 46 14.8**	**+0.5**
VMUR	**Van-Muradiye**	**0.46**	**43**	P	**Pb**	**22 46 06.7**	**-0.8**
CLDR	**Caldiran**	**0.76**	**50**	PG	**Pg**	**22 46 11.5**	**-0.8**
CLDR				SG	**Sb**	**22 46 23.2**	**+0.2**
CLDR	**Caldiran**	**0.76**	**50**	*i* P	**Pg**	**22 46 10.6**	**-1.7**
CLDR				*i* S	**Sb**	**22 46 23.0**	**+0.1**
CLDR	**Caldiran**	**0.76**	**50**	P	**Pg**	**22 46 10.6**	**-1.7**
CLDR	**Caldiran**	**0.76**	**50**	*e*Pg	**Pg**	**22 46 11.5**	**-0.8**
CLDR				*e*Sg	**Sb**	**22 46 23.2**	**+0.2**
TUTA	**Tutak**	**0.80**	**340**	*i* P	**Pg**	**22 46 12.3**	**-0.7**
TUTA	**Tutak**	**0.80**	**340**	P	**Pg**	**22 46 12.3**	**-0.7**
GURO	**Guroymak-BITLI**	**0.90**	**264**	PG	**Pg**	**22 46 13.9**	**-1.0**
GURO				SG	**Sg**	**22 46 26.0**	**-0.6**
GURO	**Guroymak-BITLI**	**0.90**	**264**	*e*Pg	**Pg**	**22 46 13.9**	**-1.0**
GURO				*e*Sg	**Sg**	**22 46 26.0**	**-0.6**
AGRB	**Hanur-Agry**	**0.93**	**351**	PG	**Pg**	**22 46 14.7**	**-0.8**
AGRB				SG	**Sb**	**22 46 28.3**	**+0.4**
AGRB	**Hanur-Agry**	**0.93**	**351**	*e*Pg	**Pg**	**22 46 14.7**	**-0.8**
AGRB				*e*Sg	**Sb**	**22 46 28.3**	**+0.4**
SIRT	**Sirnak**	**1.29**	**207**	PN	**Pn**	**22 46 21.2**	**+0.1**
SIRT	**Sirnak**	**1.29**	**207**	*e*Pn	**Pn**	**22 46 21.2**	**+0.1**
EATA	**Eleskirt**	**1.32**	**337**	*i* P	**Pn**	**22 46 20.7**	**-1.1**
EATA				*i* S	**Sn**	**22 46 42.5**	**+3.1**
EATA	**Eleskirt**	**1.32**	**337**	P	**Pn**	**22 46 20.7**	**-1.1**
EATA				S	**Sn**	**22 46 42.5**	**+3.1**
CUKT	**Cukurca**	**1.44**	**166**	PN	**Pb**	**22 46 23.8**	**-0.4**
CUKT	**Cukurca**	**1.44**	**166**	*e*Pn	**Pb**	**22 46 23.8**	**-0.4**

*MDD **28** 23:08:56.6±2.3, 35°.21N×12°.63W, h0km, mb3.7/4, Error ellipse: s-maj=34.6km s-min=18.8km az=136.0, PRXIMO*
*INMG **28** 23:08:56.6±1.1, 35°.01N×13°.09W, h10km, ML2.3, Error ellipse: s-maj=4.9km s-min=2.1km az=132.0*
*IGIL **28** 23:08:57.3, 35°.15N×12°.59W, h0km, ML2.1*
*CSEM **28** 23:08:59.8±0.4, 35°.39N×12°.43W, h10km, mb3.7, Error ellipse: s-maj=12.8km s-min=7.3km az=132.0*
ISC 28 23:08:49.0±1.6, 35°.07N±0°.09×12°.99W±0°.07, h10km, n67,
σ3s14/115, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMPS	**Porto Santo**	**3.43**	**235**	*e*Pn	**Pn**	**23 09 42.4**	**0.0**
PMPS				*e*Sn	**Sn**	**23 10 17.1**	**-6.0**
PMPS				A	A	23 10 22.0	
	9.7nm,0.9s						
PFVI	**Vila Bisbo**	**3.95**	**57**	*e*Pn	**Pn**	**23 09 52.7**	**+3.1**
PFVI				*e*Sn	**Sn**	**23 10 34.6**	**-1.4**
PFVI				A	A	23 10 36.6	
	4.7nm,0.2s						
PFVI	**Vila Bisbo**	**3.95**	**57**	*e*Pn	**Pn**	**23 09 52.7**	**+3.1**
PFVI				*e*Sn	**Sn**	**23 10 34.6**	**-1.4**
PMAR	**Madeira**	**4.02**	**235**	*e*Pn	**Pn**	**23 09 50.9**	**+0.2**
PMAR				*e*Sn	**Sn**	**23 10 31.4**	**-6.6**
PMAR				A	A	23 10 38.4	
	9.4nm,0.7s						
MORF	**Marmelete**	**4.16**	**56**	*e*Pn	**Pn**	**23 09 57.1**	**+4.6**
MORF				*e*Sn	**Sn**	**23 10 39.4**	**-1.8**
MORF	**Marmelete**	**4.16**	**56**	P	**Pn**	**23 09 57.1**	**+4.6**
MORF				S	**Sn**	**23 10 39.4**	**-1.8**
MORF	**Marmelete**	**4.16**	**56**	P	**Pn**	**23 09 57.1**	**+4.6**
MORF				S	**Sn**	**23 10 39.4**	**-1.8**
PMOZ	**Porto Moniz, M**	**4.16**	**239**	*e*Pn	**Pn**	**23 09 53.2**	**+0.6**
PTEO	**Sao Teotonio**	**4.24**	**53**	*e*Pn	**Pn**	**23 09 57.3**	**+3.7**
PTEO				*e*Sn	**Sn**	**23 10 41.9**	**-1.2**
PTEO				A	A	23 10 45.8	
	2.7nm,0.1s						
PTEO	**Sao Teotonio**	**4.24**	**53**	P	**Pn**	**23 09 57.3**	**+3.7**
PTEO				S	**Sn**	**23 10 41.9**	**-1.2**
	1.4nm,0.1s						
PTEO	**Sao Teotonio**	**4.24**	**53**	P	**Pn**	**23 09

comp=N,2.3nm,0.4s
PVAQ Vaqueiros 4.85 60 *e*Pn **Pn 23 10 05.1 +3.0**
PVAQ *e*Sn **Sn 23 10 55.8 -2.5**
PVAQ A A 23 11 02.6
comp=N,2.9nm,0.9s
PVAQ Vaqueiros 4.85 60 P **Pn 23 10 05.1 +3.0**
PVAQ S **Sn 23 10 55.8 -2.5**
comp=N,2.9nm,0.9s
PVAQ Vaqueiros 4.85 60 P **Pn 23 10 05.1 +3.0**
PVAQ S **Sn 23 10 55.8 -2.5**
comp=N,2.9nm,0.9s
PMAFR Mafra 4.88 36 *e*Sn **Sn 23 10 57.5 -1.5**
PMAFR A A 23 10 59.5
comp=N,11nm,0.9s
PMAFR Mafra 4.88 36 P **Pn 23 10 05.6 +3.2**
comp=N,1.7nm,0.2s,SNR=4.0
PMAFR S **Sn 23 10 56.9 -2.0**
comp=N,4.6nm,0.2s,SNR=7.9
PMAFR Mafra 4.88 36 P **Pn 23 10 05.6 +3.2**
comp=N,1.7nm,0.2s,SNR=4.0
PMAFR S **Sn 23 10 56.9 -2.0**
comp=N,4.6nm,0.2s,SNR=7.9
PMAFR *e*Sn **Sn 23 10 57.5 -1.5**
PBEJ Beja 5.07 53 *e*Pn **Pn 23 10 09.3 +4.3**
PBEJ *e*Sn **Sn 23 11 01.3 -2.3**
PBEJ A A 23 11 03.0
comp=N,2.1nm,0.4s
PBEJ Beja 5.07 53 P **Pn 23 10 09.3 +4.3**
PBEJ S **Sn 23 11 01.3 -2.3**
comp=N,1.1nm,0.4s
PBEJ Beja 5.07 53 P **Pn 23 10 09.3 +4.3**
PBEJ S **Sn 23 11 01.3 -2.3**
comp=N,1.1nm,0.4s
EGRO El Granado 5.08 59 P **Pn 23 10 08.6 +3.4**
comp=N,1.2nm,0.2s,SNR=7.9
EGRO S **Sn 23 11 01.6 -2.2**
comp=N,1.1nm,0.1s,SNR=7.9
EGRO El Granado 5.08 59 P **Pn 23 10 08.6 +3.4**
comp=N,1.2nm,0.2s,SNR=7.9
EGRO S **Sn 23 11 01.6 -2.2**
comp=N,1.1nm,0.1s,SNR=7.9
EVO Evora 5.28 48 *e*Sn **Sn 23 11 06.3 -2.5**
EVO A A 23 11 08.4
comp=N,2.5nm,0.1s
EVO Evora 5.28 48 S **Sn 23 11 06.3 -2.5**
comp=N,2.5nm,0.1s
EVO Evora 5.28 48 S **Sn 23 11 06.3 -2.5**
comp=N,2.5nm,0.1s
ALMR Almeirim 5.39 40 *e*Sn **Sn 23 11 09.4 -2.1**
ALMR Almeirim 5.39 40 S **Sn 23 11 09.4 -2.1**
ALMR Almeirim 5.39 40 S **Sn 23 11 09.4 -2.1**
PMTG Montargil 5.51 42 *e*Pn **Pn 23 10 14.7 +3.6**
PMTG *e*Sn **Sn 23 11 12.5 -2.1**
PMTG A A 23 11 14.7
comp=N,1.2nm,0.4s
PMTG Montargil 5.51 42 *e*Pn **Pn 23 10 14.7 +3.6**
PMTG *e*Sn **Sn 23 11 12.5 -2.1**
PBAR Barrancos 5.70 55 *e*Pn **Pn 23 10 16.8 +3.1**
PBAR *e*Sn **Sn 23 11 16.9 -2.2**
PBAR A A 23 11 20.2
comp=N,3.1nm,0.4s
PBAR Barrancos 5.70 55 P **Pn 23 10 16.8 +3.1**
PBAR S **Sn 23 11 16.9 -2.2**
comp=N,3.1nm,0.4s
PBAR Barrancos 5.70 55 P **Pn 23 10 16.8 +3.1**
PBAR S **Sn 23 11 16.9 -2.2**
comp=N,3.1nm,0.4s
PESTR Estremoz 5.75 47 *e*Sn **Sn 23 11 17.8 -2.5**
PESTR A A 23 11 24.7
comp=N,1.6nm,0.6s
PESTR Estremoz 5.75 47 *e*Sn **Sn 23 11 17.8 -2.5**
EMIN Mina Concepcio 5.76 60 P **Pn 23 10 17.2 +2.7**
comp=N,0.7nm,0.4s,SNR=6.6
EMIN S **Sn 23 11 17.4 -3.2**
comp=N,0.6nm,0.2s,SNR=7.9
EMIN Mina Concepcio 5.76 60 P **Pn 23 10 17.2 +2.7**
comp=N,0.7nm,0.4s,SNR=6.6
EMIN S **Sn 23 11 17.4 -3.2**
comp=N,0.6nm,0.2s,SNR=7.9
PTOM Tomar 5.82 37 *e*Sn **Sn 23 11 20.4 -1.7**
PTOM A A 23 11 29.4
comp=N,2.4nm,0.7s
PTOM Tomar 5.82 37 S **Sn 23 11 20.4 -1.7**
comp=N,1.2nm,0.7s
PTOM Tomar 5.82 37 S **Sn 23 11 20.4 -1.7**
comp=N,1.2nm,0.7s
EBAD Badajoz 6.04 51 P **Pn 23 10 21.3 +3.0**
comp=N,0.7nm,0.1s,SNR=6.8
EBAD S **Sn 23 11 23.9 -3.5**
comp=N,2.3nm,0.2s,SNR=7.9
EBAD Badajoz 6.04 51 P **Pn 23 10 21.3 +3.0**
comp=N,0.7nm,0.1s,SNR=6.8
EBAD S **Sn 23 11 23.9 -3.5**
comp=N,2.3nm,0.2s,SNR=7.9
PMRV Marv??o 6.23 44 *e*Pn **Pn 23 10 24.8 +3.8**
PMRV *e*Sn **Sn 23 11 29.3 -3.0**
PMRV A A 23 11 31.0
comp=N,1.4nm,0.7s
PMRV Marv??o 6.23 44 P **Pn 23 10 24.8 +3.8**
PMRV S **Sn 23 11 29.3 -3.0**
comp=N,1.4nm,0.7s
PMRV Marv??o 6.23 44 P **Pn 23 10 24.8 +3.8**
PMRV S **Sn 23 11 29.3 -3.0**
comp=N,1.4nm,0.7s
ECAB El Cabril 6.79 62 P **Pn 23 10 31.2 +2.5**
comp=N,0.4nm,0.2s,SNR=6.2
ECAB S **Sn 23 11 41.6 -4.4**
comp=N,1.2nm,0.3s,SNR=7.9
ECAB El Cabril 6.79 62 P **Pn 23 10 31.2 +2.5**
comp=N,0.4nm,0.2s,SNR=6.2
ECAB S **Sn 23 11 41.6 -4.4**
comp=N,1.2nm,0.3s,SNR=7.9
PVIS Viseu 6.92 34 *e*Sn **Sn 23 11 45.8 -3.6**
PVIS Viseu 6.92 34 Sn **Sn 23 11 45.8 -3.6**
PVIS Viseu 6.92 34 *e*Sn **Sn 23 11 45.8 -3.6**
EADA Adamuz 7.43 63 P **Pn 23 10 40.1 +2.5**
comp=N,0.2nm,0.1s,SNR=7.9
EADA S **Sn 23 11 57.0 -4.9**
comp=N,0.9nm,0.2s,SNR=7.9
EADA Adamuz 7.43 63 P **Pn 23 10 40.1 +2.5**
comp=N,0.2nm,0.1s,SNR=7.9
EADA S **Sn 23 11 57.0 -4.9**
comp=N,0.9nm,0.2s,SNR=7.9
POLO Lamas de Olo 7.50 31 *e*Sn **Sn 23 11 59.1 -4.6**
MVO Moncorvo 7.68 36 *e*Sn **Sn 23 12 04.2 -3.9**
MVO Moncorvo 7.68 36 *e*Sn **Sn 23 12 04.2 -3.9**
PGAV Gavieira, Arco 7.81 27 *e*Sn **Sn 23 12 05.5 -5.8**

MRB 28 23:11:47.9±0.4, 42°.30N×2°.14E, h5km±3km, ML0.0/3, Error ellipse: s-maj=2.6km s-min=1.5km az=56.0, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBRU	**Bruguera**	**0.04**	**121**	P	Pg	23 11 49.2	0.0
CBRU				S	Sg	23 11 50.2	+0.1
	6.4nm,0.2s						
CLLI	**Llivia**	**0.21**	**325**	P	Pg	23 11 52.3	+0.2
CLLI				S	Sg	23 11 55.3	+0.3
CORI	**Orista**	**0.34**	**191**	S	Sg	23 11 59.4	+0.6
	1.4nm,0.2s						
CBEU	**Beuda**	**0.40**	**97**	P	Pg	23 11 55.8	+0.1
CBEU				S	Sg	23 12 01.1	+0.1
	5.9nm,3.0s						
SJAF	**Saint Jean de**	**0.58**	**72**	P	Pg	23 11 58.5	-0.5
SJAF				S	Sg	23 12 06.5	-0.1
CORG	**Organya**	**0.61**	**263**	P	Pg	23 11 59.6	-0.1
CORG	**Organya**	**0.61**	**263**	P	Pg	23 11 59.6	-0.1
CORG	**Organya**	**0.61**	**263**	P	Pg	23 11 59.6	-0.1
CORG				S	Sg	23 12 08.0	+0.3
CEST	**Esterri de Car**	**0.72**	**295**	S	Sg	23 12 11.3	+0.3
CSOR	**Sort**	**0.75**	**276**	P	Pg	23 12 01.5	-0.8
CSOR	**Sort**	**0.75**	**276**	P	Pg	23 12 01.5	-0.8
CSOR	**Sort**	**0.75**	**276**	P	Pg	23 12 01.6	-0.7
CPAL	**Palau Saverder**	**0.76**	**89**	S	Sg	23 12 12.9	+0.6

*CSEM **28** 23:16:41.8, 36°.96N×27°.53E, h19km, ML2.0*
ISK 28 23:16:41.8, 36°.96N×27°.53E, h19km, ML2.0/5, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BODT	**Bodrum**	**0.20**	**300**	PG	Pg	23 16 46.9	0.0
BODT				SG	Sg	23 16 51.0	+0.6
BODT	**Bodrum**	**0.20**	**300**	*e*Pg	Pg	23 16 46.9	0.0
BODT				*e*Sg	Sg	23 16 51.0	+0.6
DAT	**Datca**	**0.23**	**171**	PG	Pg	23 16 47.9	+0.5
DAT				SG	Sg	23 16 51.8	+0.5
DAT	**Datca**	**0.23**	**171**	*e*Pg	Pg	23 16 47.9	+0.5
DAT				*e*Sg	Sg	23 16 51.8	+0.5
MLSB	**Milas**	**0.39**	**30**	PG	Pb	23 16 50.5	+0.3
MLSB	**Milas**	**0.39**	**30**	*e*Pg	Pb	23 16 50.5	+0.3
YER	**Yerkesik**	**0.63**	**74**	PG	Pg	23 16 54.9	+0.6
YER	**Yerkesik**	**0.63**	**74**	*e*Pg	Pg	23 16 54.9	+0.6
TURN	**Turunc**	**0.86**	**95**	PG	Pb	23 16 53.4	-4.8
TURN	**Turunc**	**0.86**	**95**	*e*Pg	Pb	23 16 53.4	-4.8
AYDB	**Zeytinkoy-Aydi**	**1.03**	**16**	PG	Pg	23 17 01.6	-0.2
AYDB	**Zeytinkoy-Aydi**	**1.03**	**16**	*e*Pg	Pg	23 17 01.6	-0.2

*MAN **28** 23:19:22.7, 8°.40N×126°.77E, h3km, mb4.6, ML3.5, MS3.4*
*IDC **28** 23:19:29.7±2.1, 8°.48N×126°.55E, h85km±21km, mb3.6/15, mb1 3.8/16, mb1mx3.6/54, mbtmp4.0/16, MS3.1/11, Ms1 3.1/11, ms1mx2.8/57, Error ellipse: s-maj=24.2km s-min=13.0km az=80.0*
ISC 28 23:19:21.7±1.2, 8°.42N±0°.03×126°.91E±0°.05, h18km±4km, n45, σ1§87/44, mb4.0/16, MS3.1/10, 4C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.59**	**246**	⇑*i*P	**Pg**	**23 19 33.2**	**-0.2**
BIPH				*e*S	**Sg**	**23 19 38.5**	**-2.9**
BUTP	**Butuan**	**1.38**	**293**	*e*P	**Pn**	**23 19 45.7**	**-0.4**
BUTP				*e*S	**Sb**	**23 20 03.8**	**-0.6**
MATI	**Mati**	**1.60**	**204**	*e*P	**Pn**	**23 19 50.1**	**+1.0**
MATI				*e*S	**Sn**	**23 20 06.9**	**-2.4**
DAV	**Davao City (W)**	**1.88**	**225**	P	**Pb**	**23 19 56.5**	**+1.0**
	94nm,0.3s,baz=48,slow=3.9,SNR=22						
DAV				S	**Sg**	**23 20 21.7**	**-0.7**
	230nm,0.3s,baz=276,slow=18,SNR=12						
DAV				LR	LR	23 20 52.5	
	comp=Z,897nm,19.2s,baz=332,slow=49						
BUKP	**Musuan**	**1.91**	**254**	*e*P	**Pn**	**23 19 54.4**	**+1.1**
BUKP				*e*S	**Sb**	**23 20 18.6**	**-0.8**
DMPH	**Davao City--Mi**	**1.92**	**226**	⇑*e*P	**Pg**	**23 20 01.8**	**+3.1**
DMPH				*e*S	**Sb**	**23 20 21.4**	**+1.6**
SCPH	**Surigao**	**1.95**	**314**	⇑*e*P	**Pb**	**23 19 55.8**	**-0.8**
SCPH				*e*S	**Sb**	**23 20 20.9**	**+0.3**
MSLP	**Maasin**	**2.64**	**310**	*e*P	**Pn**	**23 20 05.8**	**+2.4**
MSLP				*e*S	**Sb**	**23 20 39.9**	**-0.7**
SKMP	**Bagumbayan, Su**	**3.01**	**231**	*e*P	**Pb**	**23 20 16.2**	**+1.4**
TBP	**Tagbilaran**	**3.26**	**293**	*e*P	**Pn**	**23 20 13.1**	**+1.1**
TBP				*i* S	**Sn**	**23 20 53.0**	**+2.7**
PLP	**Palo**	**3.32**	**325**	⇓*e*P	**Pn**	**23 20 14.9**	**+2.1**
PLP				*e*S	**Sn**	**23 20 54.6**	**+2.8**
LLP	**Lapu-Lapu**	**3.46**	**303**	⇓*e*P	**Pn**	**23 20 17.7**	**+3.0**
LLP				*e*S	**Sn**	**23 20 57.2**	**+2.0**
PAGZ	**Pagadian**	**3.54**	**261**	*e*P	**Pb**	**23 20 21.3**	**-2.5**
CNP	**Cataman**	**4.62**	**332**	*e*P	**Pn**	**23 20 31.3**	**+0.6**
CNP				*e*S	**Sn**	**23 21 24.1**	**+0.2**
RCP	**Roxas**	**5.15**	**308**	⇑*e*P	**Pn**	**23 20 41.4**	**+3.5**
SIJI	**Sorong**	**10.20**	**155**	P	Pn	23 21 57.9	+11
	1.5nm,0.3s,baz=309,slow=14,SNR=5.3						
SIJI				S	**Sn**	**23 23 39.5**	**-1.8**
	0.8nm,0.3s,baz=204,slow=19,SNR=2.6						
GUMO	**Guam**	**18.36**	**72**	LR	LR	23 31 55.3	
	comp=Z,14nm,18.8s,baz=156,slow=40						
LEM	**Lembang**	**24.48**	**232**	LR	LR	23 34 29.0	
	comp=Z,53nm,20.7s,baz=74,slow=37						
JNU	**Nakatsue**	**24.85**	**8**	P	**P**	**23 24 44.5**	**+1.3**
	16nm,0.9s,baz=155,slow=9.3,SNR=11						
JNU				LR	LR	23 33 33.2	
	comp=Z,29nm,21.6s,baz=305,slow=34						
FITZ	**Fitzroy Crossi**	**26.38**	**183**	P	**P**	**23 24 58.8**	**+1.6**
	3.9nm,0.6s,baz=0.4,slow=11,SNR=16						
KSRS	**Korea Array**	**28.92**	**2**	P	**P**	**23 25 20.7**	**+1.0**
	3.2nm,0.8s,baz=178,slow=10,SNR=16						
KSRS				LR	LR	23 39 34.6	
	comp=Z,24nm,18.4s,baz=192,slow=42						
CMAR	**Chiang Mai Arr**	**28.93**	**293**	P	**P**	**23 25 19.8**	**-0.3**
	1.2nm,0.3s,baz=90,slow=7.2,SNR=3.9						
CMAR				LR	LR	23 37 14.5	
	comp=Z,32nm,18.5s,baz=135,slow=37						
WRA	**Warramunga Arr**	**29.12**	**166**	P	**P**	**23 25 25.1**	**+3.4**
	0.2nm,0.3s,baz=345,slow=11,SNR=8.9						
MJAR	**Matsushiro Arr**	**29.82**	**19**	P	**P**	**23 25 28.4**	**+0.6**
	0.6nm,0.4s,baz=190,slow=10,SNR=4.0						
MJAR				LR	LR	23 38 55.6	
	comp=Z,18nm,18.0s,baz=210,slow=39						
ASAR	**Alice Springs**	**32.62**	**168**	P	**P**	**23 25 53.5**	**+1.0**
	0.3nm,0.3s,baz=341,slow=7.9,SNR=4.5						
USRK	**Ussuriysk Ar.**	**35.91**	**6**	P	**P**	**23 26 23.1**	**+2.3**
	17nm,0.7s,baz=192,slow=8.3						
ASAJ	**Asahikawa**	**38.09**	**18**	LR	LR	23 41 00.6	
	comp=Z,34nm,21.8s,baz=172,slow=34						
H11S3	**WAKE ISLAND Hy**	**39.88**	**71**	T	T	00 10 01.4	
	baz=266,slow=76						
H11S1	**WAKE ISLAND Hy**	**39.89**	**71**	T	T	00 10 01.9	
	baz=266,slow=76						
H11S2	**WAKE ISLAND Hy**	**39.89**	**71**	T	T	00 10 05.6	
	baz=266,slow=76						
H11N1	**WAKE ISLAND Hy**	**40.27**	**69**	T	T	00 10 39.4	
	baz=264,slow=74						
H11N2	**WAKE ISLAND Hy**	**40.28**	**69**	T	T	00 10 47.1	
	baz=264,slow=74						
H11N3	**WAKE ISLAND Hy**	**40.29**	**69**	T	T	00 10 39.4	
	baz=264,slow=74						
SONM	**Songino Array**	**42.96**	**340**	P	**P**	**23 27 18.4**	**-1.3**
	0.5nm,0.7s,baz=146,slow=6.9,SNR=4.3						
MKAR	**Makanchi Array**	**53.87**	**323**	P	**P**	**23 28 42.1**	**-1.7**
	0.5nm,0.6s,baz=118,slow=8.7,SNR=8.1						
ZALV	**Zalesovo Beam**	**56.54**	**332**	P	**P**	**23 29 00.7**	**-2.2**
	1.1nm,0.8s,baz=97,slow=7.6,SNR=3.9						
KURBB	**Kurchatov Arra**	**57.94**	**326**	P	**P**	**23 29 10.8**	**-2.0**
	0.7nm,0.5s,baz=122,slow=7.0,SNR=5.1						
BVAR	**Borovoye Array**	**63.54**	**326**	P	**P**	**23 29 49.7**	**-1.2**
	1.4nm,0.7s,baz=116,slow=6.6,SNR=14						
AKTO	**Aktyubinsk**	**70.14**	**321**	LR	LR	00 03 04.0	
	comp=Z,28nm,20.1s,baz=98,slow=37						
ILAR	**Eielson Array**	**80.82**	**26**	P	**P**	**23 31 34.0**	**-0.1**
	0.6nm,0.7s,baz=240,slow=6.1,SNR=7.7						
SPITS	**Spitsbergen Ar**	**85.94**	**349**	LR	LR	00 16 13.4	
	comp=Z,10nm,18.9s,baz=50,slow=40						
FINES	**FINESS Array B**	**87.81**	**332**	P	**P**	**23 32 08.2**	**-1.4**
	0.5nm,0.5s,baz=66,slow=7.8,SNR=5.0						
HFS	**Hagfors**	**93.97**	**333**	LR	LR	00 16 53.1	
	comp=Z,16nm,21.2s,baz=60,slow=37						
NOA	**NORSAR Array B**	**94.68**	**334**	LR	LR	00 18 18.1	
	comp=Z,12nm,21.1s,baz=45,slow=37						
YKA	**Yellowknife Ar**	**95.18**	**24**	P	**P**	**23 32 41.9**	**-1.9**
	0.4nm,0.7s,baz=294,slow=4.9,SNR=2.9						

WEL 28 23:49:32.3±0.4, 45°S±3°×16°9E±°, h5km, ML3.6/11, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WKZ	**Wanaka**	**0.22**	**116**	P	Pg	23 49 37.6	+1.0
WKZ				S	Sg	23 49 41.0	+1.5
MSZ	**Milford Sound**	**0.58**	**275**	P	Pg	23 49 44.1	+0.6
MSZ				S	Sg	23 49 51.6	+0.4
EAZ	**Earnscleugh**	**0.64**	**141**	P	Pg	23 49 45.2	+0.5
EAZ				S	Sg	23 49 52.7	-0.3
JCZ	**Jackson Bay**	**0.66**	**3**	P	Pg	23 49 45.0	+0.1
JCZ				S	Sg	23 49 53.4	-0.1
MLZ	**Mavora Lakes**	**0.77**	**215**	P	Pg	23 49 47.6	+0.4
MLZ				S	Sg	23 49 57.8	+0.5
LBZ	**Lake Benmore**	**1.09**	**72**	P	Pg	23 49 53.2	+0.1
WHZ	**Wether Hill Ro**	**1.29**	**205**	P	Pn	23 49 56.6	-0.4
WHZ				S	Sb	23 50 14.0	0.0
DCZ	**Deep Cove**	**1.34**	**236**	P	Pn	23 49 57.7	0.0
DCZ				S	Sb	23 50 15.2	-0.2
TUZ	**Tuapeka**	**1.38**	**153**	P	Pn	23 49 58.0	-0.2
TUZ				S	Sb	23 50 15.4	-1.0
ODZ	**Otahua Downs**	**1.39**	**104**	P	Pn	23 49 58.2	-0.1
ODZ				P	Pb	23 49 58.4	-0.3
ODZ				S	Sb	23 50 16.3	-0.5
FOZ	**Fox Glacier**	**1.43**	**33**	P	Pn	23 49 58.3	-0.5
HHSZ	**Highcliff Hill**	**1.75**	**132**	S	Sn	23 50 26.1	+0.2
RPZ	**Rata Peaks**	**1.95**	**59**	P	Pn	23 50 05.4	-0.6
WVZ	**Waitaha Valley**	**2.20**	**42**	P	Pn	23 50 10.4	+1.0
LTZ	**Lake Taylor**	**3.21**	**54**	P	Pn	23 50 22.5	-1.0
DSZ	**Denniston Nort**	**3.73**	**38**	P	Pn	23 50 29.8	-0.8
QRZ	**Quartz Range**	**4.79**	**37**	P	Pn	23 50 44.5	-0.7

*IGQ **28** 23:57:26.9±1.0, 1°S±4°×8°1W±°, h10km, MLv4.0*
ISC 28 23:57:29.4±3.2, 0°.83S±0°.07×81°.0W±0°.2, h10km, n39, σ1§20/42, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAG1	**Magdalena**	**1.41**	**58**	P	**Pn**	**23 57 53.5**	**-1.7**
QUEV	**Quevedo**	**1.68**	**97**	P	**Pn**	**23 57 56.7**	**-2.2**
QUEV				S	**Sn**	**23 58 19.5**	**-1.0**
MILO	**Milagro-Astudi**	**2.01**	**136**	P	**Pn**	**23 58 02.1**	**-1.3**
MILO				S	**Sn**	**23 58 29.3**	**+0.6**
ILLI	**Illinizas Sur**	**2.24**	**87**	P	**Pn**	**23 58 05.7**	**-1.3**
ILLI				S	**Sn**	**23 58 35.0**	**-0.1**
PAST	**Pastocalle**	**2.33**	**87**	P	**Pn**	**23 58 07.5**	**-0.7**
COHC	**Cochancay**	**2.36**	**134**	P	**Pn**	**23 58 07.7**	**-0.5**
COHC				S	**Sn**	**23 58 36.9**	**-0.3**
NINA	**Atacazo Ninahu**	**2.39**	**79**	P	**Pn**	**23 58 08.5**	**-0.6**
GGPC	**Guagua Pichinc**	**2.46**	**75**	P	**Pn**	**23 58 09.5**	**-0.6**
BNAS	**Cotopaxi Volca**	**2.49**	**86**	P	**Pn**	**23 58 10.3**	**-0.2**
YANA	**Yana**	**2.50**	**73**	P	**Pn**	**23 58 08.8**	**-1.8**
NAS2	**Nasa**	**2.50**	**86**	P	**Pn**	**23 58 11.1**	**+0.4**
RIOE1	**Riobamba**	**2.51**	**111**	P	**Pn**	**23 58 11.3**	**+0.7**
BREF	**Cotopaxi Volca**	**2.53**	**86**	P	**Pn**	**23 58 11.5**	**+0.4**
PITA	**Cotopaxi Volc**	**2.55**	**84**	P	**Pn**	**23 58 11.5**	**+0.2**
BVC2	**Cotopaxi Volca**	**2.56**	**86**	P	**Pn**	**23 58 11.1**	**-0.4**
VC1	**Cotopaxi 1**	**2.57**	**86**	P	**Pn**	**23 58 12.0**	**+0.4**
BMAS	**Trigal station**	**2.57**	**105**	P	**Pn**	**23 58 12.2**	**+0.7**
BTAM	**Cotopaxi Volca**	**2.57**	**86**	P	**Pn**	**23 58 11.8**	**+0.2**
POND	**Pondoa**	**2.58**	**103**	P	**Pn**	**23 58 13.3**	**+1.7**
PISA	**Pisayambo**	**2.59**	**95**	P	**Pn**	**23 58 13.5**	**+1.7**
RUN5	**Runtun**	**2.60**	**103**	P	**Pn**	**23 58 13.1**	**+1.2**
BPAT	**Tungurahua Vol**	**2.62**	**105**	P	**Pn**	**23 58 13.0**	**+0.8**
BRUN	**Tungurahua Vol**	**2.62**	**103**	P	**Pn**	**23 58 13.0**	**+0.9**
BULB	**Ulba Tungurahu**	**2.62**	**103**	P	**Pn**	**23 58 13.3**	**+1.1**
COV1	**Cotopaxi Volc**	**2.63**	**86**	P	**Pn**	**23 58 11.9**	**-0.6**
ANTG	**Antisana-Guama**	**2.73**	**83**	P	**Pn**	**23 58 13.8**	**0.0**
OTAV	**Otavalo**	**2.73**	**67**	*e*P	**Pn**	**23 58 10.9**	**-2.8**
ANTM	**Antisana-La Mi**	**2.76**	**84**	P	**Pn**	**23 58 14.2**	**0.0**
ANTS	**Antisana-Sarah**	**2.81**	**83**	P	**Pn**	**23 58 15.3**	**+0.2**
CUIC	**Cuicocha-Domo**	**2.84**	**67**	P	**Pn**	**23 58 13.5**	**-1.7**
IMBA	**Imbabura, San**	**2.98**	**68**	P	**Pn**	**23 58 17.5**	**+0.3**
URCU	**Urcuqui**	**2.99**	**65**	P	**Pn**	**23 58 17.7**	**+0.4**
LITE1	**Lita**	**3.06**	**58**	P	**Pn**	**23 58 17.7**	**-0.4**
YAHU	**Yahuarcocha**	**3.13**	**68**	P	**Pn**	**23 58 18.9**	**-0.3**
CMBC	**Cumbal**	**3.60**	**61**	*e*P	**Pn**	**23 58 26.7**	**+1.0**
GCUF	**Volcan Galeras**	**4.16**	**61**	*e*P	**Pn**	**23 58 36.3**	**+2.9**
CRUC	**La Cruz**	**4.67**	**59**	*e*P	Pn	23 58 45.7	+5.3
SOTA	**Rioblanco**	**5.26**	**56**	*e*P	**Pn**	**23 58 48.4**	**-0.2**
PCON	**Cinco Dias**	**5.54**	**55**	*e*P	**Pn**	**23 58 55.1**	**+2.6**

*NEIC **29** 00:00:23.4±2.4, 24°.93S×179°.89E, h490km±25km, mb4.2/3, Error ellipse: s-maj=19.5km s-min=14.4km az=211.0*
*IDC **29** 00:00:23.7±1.6, 24°.88S×179°.81E, h486km±17km, mb3.8/14, mb1 4.0/15, mb1mx3.6/46, mbtmp4.6/15, Error ellipse: s-maj=15.4km s-min=12.3km az=164.0*
*ISCJB **29** 00:00:24.1±0.6, 24°.88S±0°.08×179°.7E±0°.1, h501km, mb4.1/17, Error ellipse: s-maj=13.6km s-min=10.7km az=3.2*
ISC 29 00:00:24.8±0.7, 24°.96S±0°.09×179°.8E±0°.1, h501km, n29, σ1§01/31, mb4.1/17, 1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**13.46**	**189**	P	**P**	**00 03 17.0**	**-1.6**
	1.1nm,0.3s,baz=6.3,slow=9.2,SNR=5.1						
URZ				S	**S**	**00 05 42.3**	**+0.4**
	3.5nm,0.3s,baz=44,slow=22,SNR=9.5						
CTA	**Charters Tower**	**31.35**	**272**	P	**P**	**00 06 04.3**	**+0.4**
	26nm,0.5s,baz=96,slow=11,SNR=94						
CTAO	**Charters Tower**	**31.35**	**272**	*e*P	**P**	**00 06 03.9**	**0.0**
	21nm,0.4s						
STKA	**Stephens Creek**	**34.20**	**250**	P	**P**	**00 06 28.4**	**+0.4**
	5.6nm,0.4s,baz=93,slow=11,SNR=21						
ASAR	**Alice Springs**	**41.73**	**262**	P	**P**	**00 07 29.1**	**-0.6**
	7.0nm,0.5s,baz=86,slow=8.2,SNR=53						
ASAR				ScP	**ScP**	**00 12 18.6**	**+1.6**
	0.3nm,0.5s,baz=111,slow=5.1,SNR=2.8						
ASAR				S	**S**	**00 13 11.9**	**+1.6**
	0.7nm,0.7s,baz=90,slow=10,SNR=5.8						
WRAB	**Tennant Creek**	**42.19**	**267**	*e*P	**P**	**00 07 32.2**	**-1.1**
	2.1nm,0.4s						
WRA	**Warramunga Arr**	**42.20**	**267**	P	**P**	**00 07 32.2**	**-1.2**
	7.6nm,0.4s,baz=99,slow=7.1,SNR=225						
WRA				ScP	**ScP**	**00 12 21.5**	**+2.6**
	2.1nm,0.9s,baz=100,slow=3.7,SNR=11						
WRA				S	**S**	**00 13 15.8**	**-1.2**
	2.2nm,1.0s,baz=100,slow=15,SNR=6.6						
FITZ	**Fitzroy Crossi**	**50.61**	**267**	P	**P**	**00 08 36.9**	**-0.4**
	10nm,0.6s						
SIJI	**Sorong**	**52.64**	**289**	P	**P**	**00 08 51.3**	**-0.8**
	36nm,0.7s,baz=103,slow=6.9,SNR=16						
VNDA	**Vanda**	**53.31**	**185**	P	**P**	**00 08 56.8**	**+0.9**
	0.3nm,0.4s,baz=12,slow=9.0,SNR=5.5						
MBWA	**Marble Bar**	**55.05**	**261**	P	**P**	**00 09 08.8**	**-0.2**
	4.1nm,0.4s						
BATI	**Baumata**	**55.16**	**275**	P	**P**	**00 09 10.8**	**+0.8**
	15nm,0.3s,baz=135,slow=2.9,SNR=4.2						
MJAR	**Matsushiro Arr**	**72.69**	**326**	P	**P**	**00 11 00.3**	**-1.0**
	3.6nm,0.8s,baz=163,slow=6.1,SNR=9.0						
MAW	**Mawson**	**76.71**	**201**	P	**P**	**00 11 24.1**	**+0.7**
	2.6nm,0.6s,baz=122,slow=13,SNR=4.8						
KSRS	**Korea Array**	**78.97**	**320**	P	**P**	**00 11 36.9**	**+0.8**
	1.2nm,0.7s,baz=130,slow=5.7,SNR=5.9						
KSAR	**Wonju Array Be**	**78.98**	**320**	P	**P**	**00 11 36.9**	**+0.7**
PETK	**Petropavlovsk-**	**80.10**	**347**	P	**P**	**00

LBZ	**Lake Benmore**	**1.99**	**244**	Pn	Pn	00 11 30.1	+0.7
LBZ	**Lake Benmore**	**1.99**	**244**	P	Pn	00 11 30.1	+0.8
BSWZ	**Blackbirch Sta**	**2.03**	**26**	Pn	Pn	00 11 29.5	-0.4
BSWZ	**Blackbirch Sta**	**2.03**	**26**	P	Pn	00 11 29.7	-0.2
FOZ	**Fox Glacier**	**2.09**	**270**	Pn	Pb	00 11 32.3	-1.3
FOZ	**Fox Glacier**	**2.09**	**270**	P	Pb	00 11 32.4	-1.3
ODZ	**Otahua Downs**	**2.09**	**224**	Pn	Pn	00 11 31.3	+0.6
ODZ	**Otahua Downs**	**2.09**	**224**	P	Pn	00 11 31.2	+0.5
TUWZ	**Tuamarina**	**2.31**	**24**	Pn	Pn	00 11 33.1	-0.7
TUWZ	**Tuamarina**	**2.31**	**24**	P	Pn	00 11 33.1	-0.6
NNZ	**Nelson**	**2.39**	**13**	Pn	Pn	00 11 34.9	+0.2
NNZ	**Nelson**	**2.39**	**13**	P	Pn	00 11 35.0	+0.3
TCW	**Tory Channel**	**2.62**	**27**	P	Pn	00 11 38.0	+0.1
QRZ	**Quartz Range**	**2.73**	**357**	Pn	Pn	00 11 39.7	+0.3
QRZ	**Quartz Range**	**2.73**	**357**	P	Pn	00 11 39.5	+0.1
JCZ	**Jackson Bay**	**2.88**	**258**	Pn	Pn	00 11 42.3	+0.8
JCZ	**Jackson Bay**	**2.88**	**258**	P	Pn	00 11 42.2	+0.7
DUWZ	**D'Urville Isla**	**2.90**	**19**	P	Pn	00 11 42.3	+0.5
WKZ	**Wanaka**	**2.94**	**243**	Pn	Pn	00 11 42.8	+0.5
WKZ	**Wanaka**	**2.94**	**243**	P	Pn	00 11 42.7	+0.4
EAZ	**Earnscleugh**	**2.95**	**234**	Pn	Pn	00 11 43.0	+0.5
EAZ	**Earnscleugh**	**2.95**	**234**	P	Pn	00 11 43.0	+0.5
KIW	**Kapiti Island**	**3.15**	**32**	Pn	Pn	00 11 44.4	-1.0
KIW	**Kapiti Island**	**3.15**	**32**	P	Pn	00 11 44.6	-0.7
TUZ	**Tuapeka**	**3.24**	**221**	Pn	Pn	00 11 47.0	+0.4
TUZ	**Tuapeka**	**3.24**	**221**	P	Pn	00 11 47.0	+0.5
OGWZ	**Otaki Gorge**	**3.30**	**35**	*e*Pn	Pn	00 11 45.6	-1.6
OGWZ	**Otaki Gorge**	**3.30**	**35**	P	Pn	00 11 46.1	-1.1
HOWZ	**Holdsworth Sta**	**3.38**	**39**	P	Pn	00 11 47.8	-0.6
MRZ	**Mangatainoka R**	**3.60**	**38**	*e*Pn	Pn	00 11 49.0	-2.5
MRZ	**Mangatainoka R**	**3.60**	**38**	P	Pn	00 11 50.0	-1.4
MLZ	**Mavora Lakes**	**3.74**	**239**	*e*Pn	Pn	00 11 53.1	-0.3
MLZ	**Mavora Lakes**	**3.74**	**239**	P	Pn	00 11 53.8	+0.4
PRWZ	**Pori Road**	**3.86**	**40**	P	Pn	00 11 54.7	-0.4
BFZ	**Birch Farm**	**3.90**	**44**	P	Pn	00 11 53.9	-1.6
WHZ	**Wether Hill Ro**	**4.11**	**234**	*e*Pn	Pn	00 11 57.7	-0.8
WHZ	**Wether Hill Ro**	**4.11**	**234**	P	Pn	00 11 58.0	-0.5
WAZ	**Wanganui**	**4.17**	**25**	P	Pn	00 12 00.9	+1.6
TSZ	**Takapari Road**	**4.26**	**36**	P	Pn	00 11 58.7	-1.8
KHEZ	**Kahui Hut**	**4.37**	**14**	P	Pn	00 12 03.8	+1.7
DCZ	**Deep Cove**	**4.40**	**242**	P	Pn	00 12 03.2	+0.8
PKE	**Pukeiti**	**4.46**	**13**	P	Pn	00 12 04.9	+1.5
PNHZ	**Pukenui**	**4.48**	**37**	P	Pn	00 12 02.4	-1.2
APZ	**The Paps**	**4.67**	**224**	P	Pn	00 12 06.9	+0.7
VRZ	**Vera Road**	**4.69**	**20**	P	Pn	00 12 08.0	+1.6
PKVZ	**Pokaka**	**4.70**	**26**	P	Pn	00 12 07.4	+0.7
MOVZ	**Moawhango**	**4.74**	**30**	P	Pn	00 12 06.7	-0.4
WNVZ	**Wahianoa**	**4.75**	**28**	Pn	Pn	00 12 07.5	+0.1
KRHZ	**Kereru**	**4.78**	**36**	P	Pn	00 12 05.9	-1.8
BHHZ	**Black Hill Sta**	**4.78**	**33**	P	Pn	00 12 07.5	-0.3
WHVZ	**Whangaehu Hut**	**4.79**	**28**	P	Pn	00 12 08.5	+0.5
FWVZ	**Far West T-bar**	**4.80**	**28**	P	Pn	00 12 08.5	+0.4
NGZ	**Ngauruhoe**	**4.89**	**28**	P	Pn	00 12 09.5	+0.2
OTVZ	**Oturere**	**4.92**	**28**	*e*Pn	Pn	00 12 09.0	-0.7
WTVZ	**West Tongariro**	**4.94**	**27**	P	Pn	00 12 10.5	+0.5
HIZ	**Hauiti**	**5.29**	**19**	P	Pn	00 12 14.8	+0.1

*ISK **29** 00:49:27.8, 41.°23N×43.°80E, h9km, ML2.8/3*
*DDA **29** 00:49:27.1, 41.°20N×43.°83E, h7km, Ml3.2*
*TIF **29** 00:49:27.6, 41.°24N×43.°85E, h8km±1km*
*CSEM **29** 00:49:28.2±0.2, 41.°18N×43.°80E, h2km, ML2.7, Error ellipse: s-maj=5.8km s-min=3.4km az=149.0*
*MOS **29** 00:49:29.4±1.9, 41.°07N×43.°84E, h18km, mb4.0/2, Error ellipse: s-maj=10.8km s-min=5.0km az=77.9*

ISC 29 00:49:27.5±1.0, 41.°20N±0.°02×43.°82E±0.°01, h5km±8km, n85, σ1°07/133, 4C-1D, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BGD	**Bogdanovka**	**0.18**	**293**	P	**Pg**	**00 49 31.2**	**0.0**
BGD				S	**Sg**	**00 49 34.0**	**+0.4**
BGD	**Bogdanovka**	**0.18**	**293**	P	**Pg**	**00 49 31.2**	**0.0**
BGD				S	**Sg**	**00 49 34.0**	**+0.4**
AKH	**Akhalkalaki**	**0.33**	**311**	PG	**Pg**	**00 49 34.2**	**+0.3**
AKH				SG	**Sg**	**00 49 38.7**	**+0.4**
AKH	**Akhalkalaki**	**0.33**	**311**	P	**Pg**	**00 49 34.4**	**+0.5**
AKH				S	**Sg**	**00 49 38.7**	**+0.4**
AKH	**Akhalkalaki**	**0.33**	**311**	*i* PG	**Pg**	**00 49 34.4**	**+0.5**
AKH	**Akhalkalaki**	**0.33**	**311**	P	**Pg**	**00 49 34.4**	**+0.5**
AKH				S	**Sg**	**00 49 38.7**	**+0.4**
KZR	**Kazreti**	**0.49**	**67**	P	**Pg**	**00 49 37.0**	**+0.1**
KZR				S	**Sg**	**00 49 43.1**	**-0.2**
KZR	**Kazreti**	**0.49**	**67**	P	**Pg**	**00 49 37.0**	**+0.1**
KZR				S	**Sg**	**00 49 43.1**	**-0.2**
EAK	**Akyaka**	**0.53**	**197**	*i* P	**Pg**	**00 49 37.6**	**-0.2**
EAK				*i* S	**Sg**	**00 49 45.7**	**+1.0**
EAK	**Akyaka**	**0.53**	**197**	P	**Pg**	**00 49 37.6**	**-0.2**
EAK				S	**Sg**	**00 49 45.7**	**+1.0**
KARS	**Kars**	**0.80**	**225**	PG	**Pb**	**00 49 43.9**	**0.0**
KARS				SG	**Sb**	**00 49 55.7**	**+0.7**
KARS	**Kars**	**0.80**	**225**	PG	**Pb**	**00 49 43.9**	**0.0**
DIGO	**Kars**	**0.85**	**203**	*i* P	**Pg**	**00 49 44.2**	**+0.3**
DIGO				*i* S	**Sg**	**00 49 55.8**	**+0.9**
DIGO	**Kars**	**0.85**	**203**	P	**Pg**	**00 49 44.2**	**+0.3**
DIGO				S	**Sg**	**00 49 55.8**	**+0.9**
TBLG	**Delisi**	**0.88**	**52**	PG	**Pb**	**00 49 44.8**	**-0.4**
TBLG				SG	**Sb**	**00 49 57.2**	**0.0**
TBLG	**Delisi**	**0.88**	**52**	P	**Pg**	**00 49 44.0**	**-0.3**
TBLG				S	**Sg**	**00 49 56.0**	**+0.3**
TBLG	**Delisi**	**0.88**	**52**	⇑*i* PG	**Pg**	**00 49 44.0**	**-0.3**
TBLG	**Delisi**	**0.88**	**52**	P	**Pg**	**00 49 44.1**	**-0.3**
TBLG	**Delisi**	**0.88**	**52**	*e*Pg	**Pb**	**00 49 44.8**	**-0.4**
TBLG				S	**Sg**	**00 49 56.2**	**+0.5**
TBLG				*e*Sg	**Sb**	**00 49 57.2**	**0.0**
EPOS	**Posof**	**0.88**	**291**	*i* P	**Pg**	**00 49 43.8**	**-0.6**
EPOS				*i* S	**Sg**	**00 49 55.4**	**-0.3**
EPOS	**Posof**	**0.88**	**291**	P	**Pg**	**00 49 43.8**	**-0.6**
EPOS				S	**Sg**	**00 49 55.4**	**-0.3**
SEAG	**Tbilisi Sea**	**0.93**	**52**	P	**Pg**	**00 49 45.3**	**-0.1**
SEAG				S	**Sb**	**00 49 58.6**	**-0.3**
SEAG	**Tbilisi Sea**	**0.93**	**52**	P	**Pg**	**00 49 45.3**	**-0.1**
SEAG				S	**Sb**	**00 49 58.6**	**-0.3**
DUS	**Dusheti**	**1.11**	**36**	P	**Pg**	**00 49 49.0**	**+0.1**
DUS				S	**Sb**	**00 50 04.0**	**-0.1**
DUS	**Dusheti**	**1.11**	**36**	*e*PG	**Pg**	**00 49 49.0**	**+0.1**
DUS	**Dusheti**	**1.11**	**36**	P	**Pg**	**00 49 49.0**	**+0.1**
DUS				S	**Sb**	**00 50 04.1**	**-0.1**
DGRG	**David-gareji**	**1.20**	**77**	P	**Pb**	**00 49 49.0**	**-1.7**
DGRG				S	**Sn**	**00 50 07.0**	**-0.6**
DGRG	**David-gareji**	**1.20**	**77**	*e*PG	**Pb**	**00 49 49.0**	**-1.7**
DGRG				*e*S	**Sn**	**00 50 07.0**	**-0.6**
DGRG	**David-gareji**	**1.20**	**77**	P	**Pb**	**00 49 49.7**	**-1.0**
DGRG				S	**Sb**	**00 50 06.3**	**-0.3**
SENK	**Senkaya-Erzuru**	**1.28**	**241**	PN	**Pb**	**00 49 52.4**	**+0.2**
SENK				SN	**Sn**	**00 50 10.5**	**+0.7**
IGDI	**IGDIR**	**1.34**	**171**	*i* P	**Pg**	**00 49 52.6**	**-0.3**
IGDI				*i* S	**Sg**	**00 50 11.1**	**+0.5**
GUDG	**Gudauri**	**1.36**	**21**	P	**Pn**	**00 49 53.0**	**-0.3**
GUDG				S	**Sb**	**00 50 11.0**	**-0.4**
GUDG	**Gudauri**	**1.36**	**21**	P	**Pn**	**00 49 53.0**	**-0.3**
GUDG				S	**Sb**	**00 50 11.0**	**-0.4**
ARTV	**Artvin**	**1.43**	**270**	*i* P	**Pn**	**00 49 53.7**	**-0.6**
ARTV				*i* S	**Sb**	**00 50 12.1**	**-1.1**
ARTV	**Artvin**	**1.43**	**270**	P	**Pn**	**00 49 53.7**	**-0.6**
ARTV				S	**Sb**	**00 50 12.1**	**-1.1**
DDEM	**Demirkent**	**1.59**	**260**	*i* P	**Pb**	**00 49 57.7**	**+0.2**
DDEM	**Demirkent**	**1.59**	**260**	P	**Pb**	**00 49 57.7**	**+0.2**
ZEI	**Tsey**	**1.59**	**2**	*e*PN	**Pb**	**00 49 57.4**	**-0.2**
DBAD	**Bademkaya**	**1.61**	**264**	*i* P	**Pb**	**00 49 57.7**	**-0.1**
DBAD	**Bademkaya**	**1.61**	**264**	P	**Pb**	**00 49 57.7**	**-0.1**
DBOC	**Borcka**	**1.63**	**276**	*i* P	**Pb**	**00 49 57.8**	**-0.3**
DBOC	**Borcka**	**1.63**	**276**	P	**Pb**	**00 49 57.8**	**-0.3**
BCA	**Borcka**	**1.67**	**279**	PN	**Pn**	**00 49 57.8**	**+0.4**
BCA				SN	**Sn**	**00 50 19.6**	**+0.4**
BCA	**Borcka**	**1.67**	**279**	*e*Pn	**Pn**	**00 49 57.8**	**+0.4**
BCA				*e*Sn	**Sn**	**00 50 19.6**	**+0.4**
EATA	**Eleskirt**	**1.67**	**218**	*i* P	**Pb**	**00 49 59.3**	**+0.4**
EATA	**Eleskirt**	**1.67**	**218**	P	**Pb**	**00 49 59.3**	**+0.4**
DIGR	**Digorskoe uzhe**	**1.71**	**354**	*e*PN	**Pg**	**00 50 00.1**	**-0.3**
AGRB	**Hanur-Agry**	**1.74**	**202**	PN	**Pb**	**00 49 59.4**	**-0.6**
DDFL	**Dedoflistskaro**	**1.75**	**81**	P	**Pg**	**00 50 01.0**	**-0.1**
DDFL	**Dedoflistskaro**	**1.75**	**81**	P	**Pg**	**00 50 01.0**	**-0.1**
KORR	**Kora**	**1.90**	**6**	*e*PN	**Pg**	**00 50 03.8**	**-0.1**
VLKR	**Vladikavkaz**	**1.96**	**19**	*e*PN	**Pg**	**00 50 05.6**	**+0.5**
VLKR				*e*S	**Sg**	**00 50 32.1**	**+1.7**
VLKR	**Vladikavkaz**	**1.96**	**19**	*e*Sb	**Sg**	**00 50 32.1**	**+1.7**
ARNR	**Ardon**	**2.01**	**10**	*e*PN	**Pg**	**00 50 05.8**	**-0.3**
ARNR				*e*S	**Sg**	**00 50 33.1**	**+0.9**
ARNR	**Ardon**	**2.01**	**10**	*e*Sb	**Sg**	**00 50 33.1**	**+0.9**
KMGR	**Komgaron**	**2.02**	**22**	*e*PN	**Pg**	**00 50 05.5**	**-0.7**
KMGR				*e*S	**Sg**	**00 50 33.8**	**+1.4**
KMGR	**Komgaron**	**2.02**	**22**	*e*Sb	**Sg**	**00 50 33.8**	**+1.4**
LSNR	**Lesken**	**2.08**	**0**	*e*PN	**Pg**	**00 50 06.7**	**-0.7**
LSNR				*e*S	**Sg**	**00 50 35.1**	**+0.7**
LSNR	**Lesken**	**2.08**	**0**	*e*Pn	**Pg**	**00 50 06.7**	**-0.7**
LSNR				*e*Sn	**Sg**	**00 50 35.1**	**+0.7**
STDR	**Stavd-Durt**	**2.18**	**5**	*e*PN	**Pg**	**00 50 09.6**	**+0.3**
STDR				*e*S	**Sg**	**00 50 40.1**	**+2.5**
STDR	**Stavd-Durt**	**2.18**	**5**	*e*Pn	**Pg**	**00 50 09.6**	**+0.3**
NEY	**Neytrino**	**2.21**	**339**	*e*PN	**Pb**	**00 50 08.3**	**+0.3**
NEY	**Neytrino**	**2.21**	**339**	*e*Pn	**Pb**	**00 50 08.3**	**+0.3**
BTKR	**Batakoyurt**	**2.24**	**14**	*e*PN	**Pg**	**00 50 10.0**	**-0.5**
BTKR				*e*S	**Sg**	**00 50 39.8**	**+0.3**
NCK	**Nalchik**	**2.31**	**356**	*i* PN	**Pb**	**00 50 09.8**	**+0.2**
NCK	**Nalchik**	**2.31**	**356**	*i* Pn	**Pb**	**00 50 09.8**	**+0.2**
CHOM	**Cayeli-Rize**	**2.31**	**269**	PN	**Pn**	**00 50 06.6**	**+0.4**
CHOM	**Cayeli-Rize**	**2.31**	**269**	*e*Pn	**Pn**	**00 50 06.6**	**+0.4**
BTLR	**Botlikh**	**2.32**	**50**⇑	*e*PN	**Pn**	**00 50 07.8**	**+1.4**
BTLR				*e*		00 50 40.2	
BTLR	comp=Z,7.0nm,0.7s			pmax	pmax		
BTLR	comp=N,41nm,2.3s			smax	smax		
BTLR	**Botlikh**	**2.32**	**50**	*e*Sn	**Sb**	**00 50 40.2**	**+1.4**
BTLR	comp=N,41nm,2.3s						
DVE	**Vedeno**	**2.46**	**44**	*e*PN	**Pb**	**00 50 11.1**	**-1.2**
DVE				*e*S	**Sb**	**00 50 44.1**	**+1.2**
DVE	**Vedeno**	**2.46**	**44**	*e*Sn	**Sb**	**00 50 44.1**	**+1.2**
GROC	**Groznyy**	**2.49**	**36**	*e*PN	**Pb**	**00 50 13.6**	**+0.9**
GROC				*e*S	**Sg**	**00 50 47.5**	**+0.1**
GROC	comp=Z,7.0nm,0.4s			pmax	pmax		
GROC	comp=N,65nm,0.6s			smax	smax		
GROC	comp=N,69nm,0.6s			smax	smax		
GNBR	**Gunib**	**2.64**	**62**⇑	*e*PN	**Pb**	**00 50 14.5**	**-0.8**
GNBR				*e*		00 50 53.4	
GNBR	comp=Z,9.0nm,0.7s			pmax	pmax		
GNBR	comp=N,24nm,2.8s			smax	smax		
GNBR	**Gunib**	**2.64**	**62**	*e*Sb	**Sg**	**00 50 53.4**	**+1.1**
SHA1	**Shidzhatmaz**	**2.68**	**342**	*i* PN	**Pb**	**00 50 16.8**	**+0.7**
SHA1				*i* S	**Sg**	**00 50 51.8**	**-1.9**
SHA1	**Shidzhatmaz**	**2.68**	**342**	*i* Pn	**Pb**	**00 50 16.8**	**+0.7**
DBC	**Dubki**	**2.89**	**50**⇑	*e*PN	**Pb**	**00 50 19.8**	**+0.2**
DBC				*e*		00 50 56.9	
AKT	**Akhty**	**2.96**	**83**	*e*PN	**Pb**	**00 50 18.2**	**-2.6**
AKT				*e*		00 50 23.3	
AKT				*e*S	**Sn**	**00 50 53.7**	**+2.5**
AKT				*e*S	**Sg**	**00 51 00.5**	**-2.1**
AKT				*e*		00 51 07.0	
AKT	comp=Z,3.0nm,0.3s			pmax	pmax		
AKT	comp=E,9.0nm,0.4s			smax	smax		
AKT	comp=N,12nm,0.4s			smax	smax		
AKT	comp=N,9.0nm,0.4s			smax	smax		
AKT	**Akhty**	**2.96**	**83**	*e*Pn	**Pb**	**00 50 18.2**	**-2.6**
AKT	comp=N,3.0nm,0.3s						
AKT				*e*Sn	**Sn**	**00 50 53.7**	**+2.5**
AKT	comp=N,9.0nm,0.4s						
AKT				*e*Sb	**Sg**	**00 51 00.5**	**-2.1**
AKT				*e*Sg	Sb	00 51 07.0	+10
SOC	**Sochi**	**3.86**	**310**	*e*PN	**Pb**	**00 50 33.1**	**-3.0**
SOC				*e*		00 51 19.5	
SOC	comp=Z,40nm,1.2s			pmax	pmax		
SOC	**Sochi**	**3.86**	**310**	*e*Pn	**Pb**	**00 50 33.1**	**-3.0**
SOC	comp=Z,40nm,1.2s						
SOC				*e*Sn	**Sb**	**00 51 19.5**	**-3.6**
OBN	**Obninsk**	**14.73**	**343**	*i* P	**P**	**00 52 59.8**	**-2.7**
BRVK	**Borovoye**	**21.43**	**47**	*i* P	**P**	**00 54 19.6**	**+3.4**
BRVK	comp=Z,1.0nm,0.8s			pmax	pmax		
KURK	**Kurchatov**	**25.79**	**57**	*i* P	**P**	**00 55 01.1**	**+2.0**
KURK	comp=Z,1.0nm,0.9s			pmax	pmax		

*IDC **29** 01:22:41.3±0.9, 13.°41N×120.°11E, h0km, mb3.8/8, mb1 4.1/8, mb1mx3.7/62, mbtmp3.9/8, MS3.3/13, Ms1 3.3/13, ms1mx3.0/64, Error ellipse: s-maj=17.0km s-min=11.8km az=141.0*
*ISCJB **29** 01:22:42.2±1.1, 13.°46N±0.°03×120.°02E±0.°05, h12km±6km, mb3.9/8, MS3.2/11, Error ellipse: s-maj=8.9km s-min=5.4km az=177.6*
*MAN **29** 01:22:43.5, 13.°47N×120.°12E, h4km, mb4.8, ML3.8, MS3.7*
*NEIC **29** 01:22:46.1±2.3, 13.°46N×120.°23E, h35km±25km, mb4.2/1, Error ellipse: s-maj=23.2km s-min=10.2km az=61.0*
NEIC Felt [III PIVS] at Lubang and [II PIVS] at Looc, Lubang Island.

ISC 29 01:22:43.2±1.4, 13.°44N±0.°04×120.°11E±0.°07, h9km±10km, n34, σ1°74/32, mb3.7/8, MS3.0/11, 2C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.33**	**24**	*e*P	**Pg**	**01 22 49.5**	**-0.2**
LUBP				*e*S	**Sg**	**01 22 53.0**	**-1.1**
TGY	**Tagaytay City**	**1.04**	**50**	Pg	**Pg**	**01 23 03.0**	**-0.3**
TGY	789nm,0.3s,baz=251,slow=3.9,SNR=43			Lg	Lg	01 23 15.4	
TGY	715nm,0.3s,baz=345,slow=20,SNR=11			LR	LR	01 23 18.8	
TGY	**Tagaytay City**	**1.04**	**50**⇑	*i* P	**Pg**	**01 23 03.0**	**-0.3**
TGY				*i* S	**Sg**	**01 23 17.0**	**+0.1**
SJMP	**San Jose**	**1.38**	**134**	*e*P	**Pb**	**01 23 10.2**	**+1.0**
BUSP	**Coron**	**1.43**	**177**	*e*P	**Pb**	**01 23 11.1**	**+1.1**
BUSP				*e*S	**Sb**	**01 23 30.0**	**+1.7**
LQP	**Lukban**	**1.54**	**64**⇑	*e*P	Pn	01 23 02.6	-8.5
BOAC	**Boac**	**1.69**	**89**	*e*P	**Pn**	**01 23 14.0**	**+1.1**
OTRP	**Odiongan**	**2.15**	**120**	*e*P	**Pn**	**01 23 19.8**	**+0.6**
PCPH	**Palayan**	**2.32**	**24**	*e*P	Pn	01 23 04.8	-17
PCPH				*e*S	**Sn**	**01 23 48.1**	**-2.2**
SCZP	**Santa Cruz**	**2.33**	**355**	*e*P	**Pn**	**01 23 23.6**	**+1.7**
SCZP				*e*S	**Sg**	**01 23 57.7**	**-0.7**
BALP	**Baler**	**2.70**	**32**	*e*P	**Pn**	**01 23 26.9**	**+0.1**
CUYO	**Cuyo Island**	**2.72**	**161**	*e*P	**Pn**	**01 23 28.7**	**+1.5**
CUYO				*e*S	**Sn**	**01 24 00.1**	**-0.1**
BOLP	**Bolinao**	**2.94**	**356**	*e*P	**Pn**	**01 23 30.2**	**+0.1**
BOLP				*e*S	**Sn**	**01 24 06.9**	**+1.4**
APYP	**Conner**	**4.54**	**14**	*e*P	**Pn**	**01 23 54.9**	**+2.8**
APYP				*e*S	**Sn**	**01 24 51.2**	**+6.2**
DAV	**Davao City (W)**	**8.30**	**139**	LR	LR	01 28 49.8	
DAVO	comp=Z,459nm,18.7s,baz=307,slow=44						
SIJI	**Sorong**	**18.01**	**141**	LR	LR	01 33 38.9	
SIJI	comp=Z,43nm,20.7s,baz=172,slow=37						
CMAR	**Chiang Mai Arr**	**20.95**	**287**	P	**P**	**01 27 27.3**	**+0.6**
CMAR	3.8nm,0.3s,baz=87,slow=8.3,SNR=6.4			LR	LR	01 34 21.0	
CMAR	comp=Z,53nm,20.4s,baz=140,slow=33						
JNU	**Nakatsue**	**21.92**	**25**	LR	LR	01 34 54.1	
JNU	comp=Z,49nm,21.1s,baz=123,slow=33						
GUMO	**Guam**	**24.07**	**87**	LR	LR	01 37 06.7	
GUMO	comp=Z,52nm,19.8s,baz=142,slow=36						
KSRS	**Korea Array**	**24.92**	**15**	LR	LR	01 37 59.7	
KSRS	comp=Z,35nm,20.0s,baz=200,slow=37						
MJAR	**Matsushiro Arr**	**28.16**	**32**	LR	LR	01 40 20.8	
MJAR	comp=Z,27nm,19.8s,baz=170,slow=38						
BRDH	**Bariadhala**	**28.54**	**293**	LR	LR	01 40 14.0	
BRDH	comp=Z,119nm,19.8s,baz=143,slow=37						
WRAB	**Tennant Creek**	**36.00**	**157**	*e*P	**P**	**01 29 43.4**	**-1.4**
WRAB	1.2nm,0.3s						
WRA	**Warramunga Arr**	**36.00**	**157**	P	**P**	**01 29 43.6**	**-1.2**
WRA	5.0nm,0.7s,baz=336,slow=9.5,SNR=10.0						
SONM	**Songino Array**	**36.15**	**344**	P	**P**	**01 29 44.5**	**-1.6**
SONM	0.7nm,0.8s,baz=157,slow=7.8,SNR=3.9			LR	LR	01 44 21.2	
SONM	comp=Z,70nm,20.6s,baz=158,slow=36						
ASAR	**Alice Springs**	**39.26**	**160**	P	**P**	**01 30 12.1**	**-0.4**
ASAR	2.7nm,0.6s,baz=336,slow=7.6,SNR=15						
HNR	**Honiara**	**45.61**	**118**	LR	LR	01 47 03.7	
HNR	comp=Z,54nm,21.5s,baz=310,slow=32						
MKAR	**Makanchi Array**	**45.91**	**324**	P	**P**	**01 31 05.8**	**-0.5**
MKAR	0.3nm,0.6s,baz=131,slow=6.1,SNR=4.9			PcP	**PcP**	**01 32 41.0**	**-2.3**
MKAR	0.8nm,0.9s,baz=116,slow=3.4,SNR=3.6			LR	LR	01 51 30.7	
MKAR	comp=Z,64nm,19.0s,baz=40,slow=38						
ZALV	**Zalesovo Beam**	**49.03**	**333**	P	**P**	**01 31 31.1**	**+0.7**
ZALV	0.5nm,0.6s,baz=132,slow=8.2,SNR=2.3			LR	LR	01 53 06.3	
ZALV	comp=Z,34nm,18.5s,baz=82,slow=37						
PETK	**Petropavlovsk-**	**49.53**	**29**	LR	LR	01 55 36.8	
PETK	comp=Z,15nm,18.5s,baz=179,slow=40						
KURBB	**Kurchatov Arra**	**50.09**	**327**	P	**P**	**01 31 37.3**	**-1.3**
KURBB	0.7nm,0.9s,baz=121,slow=7.8,SNR=5.2						
KURK	**Kurchatov**	**50.09**	**327**	P	**P**	**01 31 37.3**	**-1.3**
BVAR	**Borovoye Array**	**55.67**	**326**	P	**P**	**01 32 19.8**	**0.0**
BVAR	0.4nm,0.5s,baz=126,slow=7.3,SNR=2.9						
BRVK	**Borovoye**	**55.74**	**326**	*e*P	**P**	**01 32 18.8**	**-1.5**

*IDC **29** 01:40:39.7±1.2, 33.°30S×178.°39W, h0km, mb4.5/4, mb1 4.6/5, mb1mx4.0/45, mbtmp4.5/5, ML4.2/1, MS3.6/7, Ms1 3.6/7, ms1mx3.2/50, Error ellipse: s-maj=44.6km s-min=26.5km az=151.0*
*NEIC **29** 01:40:41.4±0.6, 33.°20S×178.°40W, h10km, mb4.3/2, Error ellipse: s-maj=17.2km s-min=14.6km az=105.0*
*WEL **29** 01:40:42.6±1.2, 33.°S±18.°×17.°9W±4.°3, h111km±73km*

ISC 29 01:40:44.6±0.8, 33.°12S±0.°08×178.°6W±0.°2, h32km, n52, σ1°82/53, mb4.5/6, MS3.6/6, 1C, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.88**	**8**	P	**Pn**	**01 41 39.4**	**-2.6**
GLKZ				S	**Sn**	**01 42 22.4**	**-4.0**
MXZ	**Matakaoa Point**	**5.13**	**209**	P	**Pn**	**01 41 58.0**	**-1.1**
MXZ				S	**Sn**	**01 42 55.9**	**-1.3**
WMGZ	**Waiomatatini S**	**5.31**	**207**	P	**Pn**	**01 42 00.7**	**-0.9**
WMGZ				S	**Sn**	**01 43 02.0**	**+0.4**
PKGZ	**Pakihiroa**	**5.50**	**209**	P	**Pn**	**01 42 01.3**	**-3.0**
PKGZ				S	**Sn**	**01 43 04.8**	**-1.7**
HAZ	**Te Kaha**	**5.51**	**212**	P	**Pn**	**01 42 03.1**	**-1.3**
PUZ	**Puketiti**	**5.59**	**207**	P	**Pn**	**01 42 04.0**	**-1.5**
PUZ				S	**Sn**	**01 43 07.0**	**-1.6**
RUGZ	**Raukumara Rang**	**5.74**	**211**	P	**Pn**	**01 42 05.4**	**-2.2**
RUGZ				S	**Sn**	**01 43 11.8**	**-0.6**
TWGZ	**Tauwhareparae**	**5.79**	**208**	P	**Pn**	**01 42 04.8**	**-3.4**
TWGZ				S	**Sn**	**01 43 12.5**	**-1.0**
CNGZ	**Carnagh Statio**	**5.97**	**205**	P	**Pn**	**01 42 08.3**	**-2.4**
TKGZ	**Te Karaka**	**6.07**	**208**	P	**Pn**	**01 42 10.7**	**-1.3**
TKGZ				S	**Sn**	**01 43 17.7**	**-2.6**
MWZ	**Matawai**	**6.11**	**210**	P	**Pn**	**01 42 09.5**	**-3.1**
URZ	**Urewera**	**6.23**	**213**	Pn	**Pn**	**01 42 13.2**	**-1.1**
URZ	5.5nm,0.3s,baz=240,slow=5.0,SNR=45			Sn	**Sn**	**01 43 22.2**	**-2.1**
URZ	**Urewera**	**6.23**	**213**	P	**Pn**	**01 42 12.3**	**-2.0**
URZ				S	**Sn**	**01 43 22.4**	**-2.0**
RAGZ	**Rawiri**	**6.29**	**210**	P	**Pn**	**01 42 14.3**	**-0.9**
RAGZ				S	**Sn**	**01 43 23.0**	**-3.0**
RIGZ	**Rimuhau**	**6.33**	**207**	P	**Pn**	**01 42 14.0**	**-1.7**
MUGZ	**Murupara**	**6.56**	**214**	P	**Pn**	**01 42 17.4**	**-1.4**
SNGZ	**Shannon Statio**	**6.56**	**209**	P	**Pn

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**4.08**	**52**	⇑Pn	**Pn**	**01 59 15.9**	**+3.2**
	2.5nm,0.4s						
SFK				⇑Sn	**Sg**	**02 00 20.1**	**-2.1**
	178nm,0.9s						
CEP	**Cherat**	**4.29**	**150**	P	**Pb**	**01 59 26.0**	**-0.9**
THW	**Thamme Wali**	**5.16**	**157**	P	Pb	01 59 34.0	-7.6
MNAS	**Manas**	**5.49**	**25**	⇑Pn	**Pn**	**01 59 36.7**	**+3.6**
	3.8nm,1.1s						
MNAS				⇓Sn	**Sb**	**02 00 59.8**	**+6.6**
	83nm,1.2s						
KK31	**Karatay Array**	**5.60**	**9**	⇓Pn	Pn	01 59 39.4	+4.8
	0.9nm,0.4s,baz=173,slow=13,SNR=7.4						
KK31				⇓Sn	**Sg**	**02 01 07.6**	**-3.5**
	29nm,0.7s,baz=180,slow=27,SNR=5.8						
TKM2	**Tokmak 2**	**7.18**	**40**	⇓Pn	**Pn**	**01 59 57.5**	**+0.9**
	9.0nm,1.0s						
TKM2				⇓Sn	**Sb**	**02 01 40.6**	**-1.4**
	29nm,1.3s						
GEYT	**Alibeck**	**8.88**	**276**	Pn	**Pn**	**02 00 20.3**	**+0.6**
	0.5nm,0.3s,baz=103,slow=12,SNR=9.8						
GEYT				Sn	**Sn**	**02 02 00.3**	**+0.5**
	1.7nm,0.3s,baz=79,slow=24,SNR=4.0						
MKAR	**Makanchi Array**	**13.31**	**42**	Pn	**Pn**	**02 01 18.8**	**-1.4**
	0.1nm,0.3s,baz=229,slow=12,SNR=25						
KURBB	**Kurchatov Arra**	**14.62**	**24**	Pn	**Pn**	**02 01 34.9**	**-3.1**
	0.0nm,0.3s,baz=216,slow=12,SNR=2.6						
KURBB				Lg	Lg	02 05 57.3	
	0.0nm,0.3s,baz=204,slow=27,SNR=5.8						
PYUN	**Piuthan**	**14.86**	**125**	*e*P	P	02 01 42.4	-5.1
	20nm,0.7s						
AKTO	**Aktyubinsk**	**15.19**	**331**	Pn	**Pn**	**02 01 44.0**	**-1.8**
	0.3nm,0.3s,baz=145,slow=16,SNR=7.4						
AKTO				Lg	Lg	02 06 21.8	
	0.3nm,0.3s,baz=131,slow=20,SNR=3.0						
DANN	**Dangsing**	**15.20**	**123**	*e*P	**P**	**02 01 48.4**	**-2.9**
	7.6nm,0.5s						
BVAR	**Borovoye Array**	**15.47**	**2**	Pn	**Pn**	**02 01 49.9**	**+0.4**
	0.2nm,0.3s,baz=165,slow=12,SNR=3.7						
KOLN	**Koldanda**	**15.48**	**125**	*e*P	**P**	**02 01 50.9**	**-3.5**
	8.2nm,0.5s						
GKN	**Gorkha**	**16.01**	**122**	*e*P	**P**	**02 01 59.4**	**-0.8**
	21nm,0.6s						
DMN	**Daman**	**16.58**	**122**	*e*P	**P**	**02 02 06.7**	**0.0**
	35nm,0.9s						
KKN	**Kakani**	**16.58**	**121**	*e*P	**P**	**02 02 07.0**	**+0.4**
	32nm,0.9s						
PKIN	**Phulchoki**	**16.80**	**122**	*e*P	**P**	**02 02 09.8**	**+0.7**
	22nm,0.8s						
GUN	**Gumba**	**16.92**	**120**	*e*P	**P**	**02 02 12.0**	**+1.5**
	40nm,0.8s						
JIRN	**Jiri**	**17.29**	**120**	*e*P	**P**	**02 02 16.4**	**+1.8**
	15nm,0.4s						
ODAN	**Odare**	**18.62**	**120**	*e*P	**Pn**	**02 02 32.0**	**+2.6**
	32nm,0.8s						
ZALV	**Zalesovo Beam**	**19.55**	**28**	P	**P**	**02 02 37.3**	**-1.6**
	0.3nm,0.3s,baz=218,slow=9.4,SNR=9.7						
CMAR	**Chiang Mai Arr**	**32.15**	**118**	P	**P**	**02 04 39.0**	**-0.1**
	1.1nm,0.4s,baz=317,slow=9.1,SNR=3.6						
FINES	**FINESS Array B**	**35.85**	**326**	P	**P**	**02 05 10.8**	**+0.1**
	1.1nm,0.9s,baz=128,slow=9.0,SNR=3.8						
HFS	**Hagfors**	**41.39**	**321**	P	**P**	**02 05 57.3**	**0.0**
	0.9nm,0.6s,baz=104,slow=6.1,SNR=3.1						
ESDC	**Sonseca Array**	**55.77**	**297**	P	**P**	**02 07 46.9**	**-1.6**
	0.6nm,0.7s,baz=60,slow=7.4,SNR=5.0						
TORD	**Torodi Ar. Bea**	**64.41**	**267**	P	**P**	**02 08 48.7**	**+0.8**
	0.7nm,0.9s,baz=56,slow=5.4						
YKA	**Yellowknife Ar**	**80.23**	**2**	P	**P**	**02 10 22.1**	**+0.4**
	0.2nm,0.6s,baz=346,slow=5.3,SNR=4.5						

IDC ***29*** *02:00:04.0±2.4, 37°.35N×69°.78E, h0km, mb3.7/5, mb1 3.8/8, mb1mx3.5/72, mbtmp3.8/8, ML3.3/3, Error ellipse: s-maj=50.2km s-min=21.9km az=147.0*
ISCJB ***29*** *02:00:07.7±2.0, 37°.7N±0°.3×69°.7E±0°.2, h30km, mb3.6/5, Error ellipse: s-maj=37.5km s-min=16.2km az=152.6*
ISC 29 02:00:10.2±2.2, 37°.7N±0°.3×69°.6E±0°.2, h30km, n8, σ1§09/8, mb3.7/5, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**13.06**	**42**	Pn	**Pn**	**02 03 13.3**	**-0.3**
	0.1nm,0.3s,baz=227,slow=12,SNR=6.5						
AKTO	**Aktyubinsk**	**15.22**	**331**	Pn	**Pn**	**02 03 41.8**	**-1.1**
	0.2nm,0.3s,baz=143,slow=12,SNR=2.8						
ZALV	**Zalesovo Beam**	**19.34**	**28**	P	**P**	**02 04 33.5**	**+0.6**
	0.3nm,0.3s,baz=220,slow=10.0,SNR=3.4						
BRTR	**Keskin Array B**	**26.05**	**285**	P	**P**	**02 06 00.6**	**+1.7**
	0.4nm,0.7s,baz=88,slow=8.8,SNR=2.6						
ARCES	**ARCESS Array B**	**39.64**	**337**	P	**P**	**02 07 39.4**	**+0.6**
	3.8nm,0.9s,baz=97,slow=7.7,SNR=1.9						
HFS	**Hagfors**	**41.47**	**321**	P	**P**	**02 07 53.8**	**-0.2**
	1.0nm,0.6s,baz=106,slow=7.7,SNR=2.0						
ESDC	**Sonseca Array**	**55.95**	**297**	P	**P**	**02 09 45.7**	**+0.1**
	0.8nm,0.8s,baz=56,slow=8.7,SNR=4.7						
TORD	**Torodi Ar. Bea**	**64.67**	**267**	P	**P**	**02 10 44.3**	**-1.1**
	0.3nm,0.7s,baz=42,slow=8.4						

SFS ***29*** *02:00:59.0, 36°.41N×7°.28W, h60km, ML3.6*
MDD ***29*** *02:01:01.3±0.8, 36°.50N×7°.20W, h30km±20km, mbLg2.2/21, Error ellipse: s-maj=11.2km s-min=3.9km az=24.0, PRXIMO*
CSEM ***29*** *02:01:01.5±0.2, 36°.58N×7°.17W, h40km, ML2.2, Error ellipse: s-maj=4.7km s-min=2.2km az=24.0*
INMG ***29*** *02:01:01.1±1.6, 36°.53N×7°.25W, h17km±5km, ML2.0, Error ellipse: s-maj=6.9km s-min=2.9km az=40.0*
IGIL ***29*** *02:01:01.0, 36°.42N×7°.29W, h39km, ML1.8*
ISC 29 02:00:59.8±1.4, 36°.54N±0°.05×7°.17W±0°.02, h31km±12km, n96, σ1§18/179, 3C-5D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBDV	**Barranco-do-Ve**	**0.93**	**319**	⇓*e*P	**Pn**	**02 01 17.3**	**+0.6**
PBDV				*e*S	**Sn**	**02 01 29.4**	**+0.4**
PBDV				A	A	02 01 30.2	
	12nm,0.2s						
PBDV	**Barranco-do-Ve**	**0.93**	**319**	P	**Pn**	**02 01 17.3**	**+0.6**
PBDV				S	**Sn**	**02 01 29.4**	**+0.4**
	12nm,0.2s						
PBDV	**Barranco-do-Ve**	**0.93**	**319**	⇓*e*P	**Pn**	**02 01 17.3**	**+0.6**
PBDV				S	**Sn**	**02 01 29.4**	**+0.4**
	12nm,0.2s						
PVAQ	**Vaqueiros**	**0.96**	**333**	⇓*e*P	**Pn**	**02 01 18.2**	**+1.0**
PVAQ				*e*S	**Sb**	**02 01 30.9**	**+0.6**
PVAQ				A	A	02 01 31.7	
	29nm,0.6s						
PVAQ	**Vaqueiros**	**0.96**	**333**	P	**Pn**	**02 01 18.2**	**+1.0**
PVAQ				S	**Sb**	**02 01 30.9**	**+0.6**
	29nm,0.6s						
PVAQ	**Vaqueiros**	**0.96**	**333**	⇓*e*P	**Pn**	**02 01 18.2**	**+1.0**
PVAQ				S	**Sb**	**02 01 30.9**	**+0.6**
	29nm,0.6s						
EGRO	**El Granado**	**1.02**	**346**	P	**Pb**	**02 01 19.3**	**+0.5**
	1.9nm,0.0s,SNR=20						
EGRO				S	**Sb**	**02 01 32.6**	**+0.7**
	36nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**1.02**	**346**	P	**Pb**	**02 01 19.3**	**+0.5**
	1.9nm,0.0s,SNR=20						
EGRO				S	**Sb**	**02 01 32.6**	**+0.7**
	36nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**1.28**	**18**	⇓P	**Pn**	**02 01 22.9**	**+1.3**
	0.9nm,0.1s,SNR=18						
EMIN				S	**Sb**	**02 01 39.1**	**-0.4**
	4.3nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**1.28**	**18**	P	**Pn**	**02 01 22.9**	**+1.3**
	0.9nm,0.1s,SNR=18						
EMIN				S	**Sb**	**02 01 39.1**	**-0.4**
	4.3nm,0.1s,SNR=7.9						
PCVE	**Castro Verde**	**1.29**	**328**	*e*P	**Pn**	**02 01 22.6**	**+0.9**
PCVE				*e*S	**Sn**	**02 01 38.4**	**+0.5**
PCVE				A	A	02 01 39.3	
	16nm,0.4s						
PCVE	**Castro Verde**	**1.29**	**328**	P	**Pn**	**02 01 22.6**	**+0.9**
PCVE				S	**Sn**	**02 01 38.4**	**+0.5**
	16nm,0.4s						
PCVE	**Castro Verde**	**1.29**	**328**	*e*P	**Pn**	**02 01 22.6**	**+0.9**
PCVE				S	**Sn**	**02 01 38.4**	**+0.5**
	16nm,0.4s						
EJIF	**Jimena Fronter**	**1.38**	**93**	⇑P	**Pn**	**02 01 24.0**	**+1.2**
	SNR=18						
EJIF	**Jimena Fronter**	**1.38**	**93**	P	**Pn**	**02 01 24.0**	**+1.2**
	SNR=18						
PFVI	**Vila Bisbo**	**1.45**	**294**	*e*S	**Sn**	**02 01 40.3**	**-1.6**
PFVI				A	A	02 01 41.8	
	9.1nm,0.3s						
PFVI	**Vila Bisbo**	**1.45**	**294**	P	**Pn**	**02 01 25.3**	**+1.4**
	1.0nm,0.0s,SNR=7.9						
PFVI				S	**Sn**	**02 01 40.2**	**-1.7**
	15nm,0.1s,SNR=8.5						
PFVI	**Vila Bisbo**	**1.45**	**294**	P	**Pn**	**02 01 25.3**	**+1.4**
	1.0nm,0.0s,SNR=7.9						
PFVI				*e*S	**Sn**	**02 01 40.3**	**-1.6**
MESJ	**Messejana**	**1.54**	**327**	*e*P	**Pn**	**02 01 25.9**	**+0.8**
MESJ				*e*S	**Sn**	**02 01 44.2**	**+0.1**
MESJ				AML	AML	02 01 46.4	
	comp=N,9.5nm,0.1s						
MESJ	**Messejana**	**1.54**	**327**	P	**Pn**	**02 01 25.9**	**+0.8**
MESJ				S	**Sn**	**02 01 44.2**	**+0.1**
	comp=N,9.5nm,0.1s						
MESJ	**Messejana**	**1.54**	**327**	P	**Pn**	**02 01 25.9**	**+0.8**
MESJ				S	**Sn**	**02 01 44.2**	**+0.1**
	comp=N,9.5nm,0.1s						
PBEJ	**Beja**	**1.58**	**340**	*e*P	**Pn**	**02 01 26.9**	**+1.2**
PBEJ				*e*S	**Sn**	**02 01 45.5**	**+0.4**
PBEJ				A	A	02 01 47.0	
	comp=N,8.3nm,0.1s						
PBEJ	**Beja**	**1.58**	**340**	P	**Pn**	**02 01 26.9**	**+1.2**
PBEJ				S	**Sn**	**02 01 45.5**	**+0.4**
	comp=N,4.2nm,0.1s						
PBEJ	**Beja**	**1.58**	**340**	*e*P	**Pn**	**02 01 26.9**	**+1.2**
PBEJ				S	**Sn**	**02 01 45.5**	**+0.4**
	comp=N,4.2nm,0.1s						
PTEO	**Sao Teotonio**	**1.59**	**309**	⇑*i*P	**Pn**	**02 01 26.3**	**+0.5**
PTEO				*e*S	**Sn**	**02 01 45.2**	**-0.2**
PTEO				A	A	02 01 46.3	
	comp=N,6.3nm,0.3s						
PTEO	**Sao Teotonio**	**1.59**	**309**	P	**Pn**	**02 01 26.3**	**+0.5**
PTEO				S	**Sn**	**02 01 45.2**	**-0.2**
	comp=N,3.2nm,0.3s						
PTEO	**Sao Teotonio**	**1.59**	**309**	⇑*i*P	**Pn**	**02 01 26.3**	**+0.5**
PTEO				S	**Sn**	**02 01 45.2**	**-0.2**
	comp=N,3.2nm,0.3s						
PBAR	**Barrancos**	**1.63**	**4**	*e*Pn	**Pn**	**02 01 27.9**	**+1.5**
PBAR				*e*Sn	**Sb**	**02 01 48.1**	**-1.3**
PBAR				A	A	02 01 49.2	
	comp=N,16nm,0.4s						
PBAR	**Barrancos**	**1.63**	**4**	P	**Pn**	**02 01 27.9**	**+1.5**
PBAR				S	**Sb**	**02 01 48.1**	**-1.3**
	comp=N,16nm,0.4s						
PBAR	**Barrancos**	**1.63**	**4**	P	**Pn**	**02 01 27.9**	**+1.5**
PBAR				S	**Sb**	**02 01 48.1**	**-1.3**
	comp=N,16nm,0.4s						
PNCL	**Nicolau / Gran**	**1.90**	**326**	*e*Pn	**Pn**	**02 01 30.8**	**+0.7**
PNCL				*e*Sn	**Sn**	**02 01 53.2**	**+0.2**
PNCL				A	A	02 01 53.5	
	comp=N,3.2nm,0.3s						
PNCL	**Nicolau / Gran**	**1.90**	**326**	*e*Pn	**Pn**	**02 01 30.8**	**+0.7**
PNCL				*e*Sn	**Sn**	**02 01 53.2**	**+0.2**
EMIJ	**Mijas**	**1.93**	**89**	P	**Pn**	**02 01 30.9**	**+0.4**
	comp=N,1.3nm,0.4s,SNR=7.9						
EMIJ				S	**Sn**	**02 01 53.6**	**-0.2**
	comp=N,0.5nm,0.2s,SNR=7.9						
EMIJ	**Mijas**	**1.93**	**89**	P	**Pn**	**02 01 30.9**	**+0.4**
	comp=N,1.3nm,0.4s,SNR=7.9						
EMIJ				S	**Sn**	**02 01 53.6**	**-0.2**
	comp=N,0.5nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**2.07**	**42**	P	**Pn**	**02 01 33.3**	**+0.9**
	comp=N,0.8nm,0.2s,SNR=7.9						
ECAB				S	**Sn**	**02 01 57.2**	**0.0**
	comp=N,0.8nm,0.0s,SNR=7.9						
ECAB	**El Cabril**	**2.07**	**42**	P	**Pn**	**02 01 33.3**	**+0.9**
	comp=N,0.8nm,0.2s,SNR=7.9						
ECAB				S	**Sn**	**02 01 57.2**	**0.0**
	comp=N,0.8nm,0.0s,SNR=7.9						
EVO	**Evora**	**2.09**	**342**	*e*Pn	**Pn**	**02 01 34.1**	**+1.4**
EVO				*e*Sn	**Sn**	**02 01 57.9**	**+0.2**
EVO				A	A	02 01 59.7	
	comp=N,14nm,0.1s						
EVO	**Evora**	**2.09**	**342**	Pn	**Pn**	**02 01 34.1**	**+1.4**
EVO				S	**Sn**	**02 01 57.8**	**0.0**
EVO	**Evora**	**2.09**	**342**	*e*Pn	**Pn**	**02 01 34.1**	**+1.4**
EVO				*e*Sn	**Sn**	**02 01 57.9**	**+0.2**
EBAD	**Badajoz**	**2.21**	**3**	P	**Pn**	**02 01 35.7**	**+1.4**
	comp=N,1.4nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**02 02 01.4**	**+0.8**
	comp=N,4.7nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**2.21**	**3**	P	**Pn**	**02 01 35.7**	**+1.4**
	comp=N,1.4nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**02 02 01.4**	**+0.8**
	comp=N,4.7nm,0.1s,SNR=7.9						
PESTR	**Estremoz**	**2.34**	**352**	*e*Pn	**Pn**	**02 01 37.4**	**+1.2**
PESTR				*e*Sn	**Sn**	**02 02 03.9**	**0.0**
PESTR				A	A	02 02 05.5	
	comp=N,2.3nm,0.2s						
PESTR	**Estremoz**	**2.34**	**352**	*e*Pn	**Pn**	**02 01 37.4**	**+1.2**
PESTR				*e*Sn	**Sn**	**02 02 03.9**	**0.0**
EGOR	**Sierra Gorda,**	**2.52**	**76**	P	**Pn**	**02 01 41.0**	**+2.3**
	comp=N,0.3nm,0.1s,SNR=7.9						
EGOR				S	**Sn**	**02 02 07.3**	**-1.2**
	comp=N,2.1nm,0.3s,SNR=7.9						
EGOR	**Sierra Gorda,**	**2.52**	**76**	P	**Pn**	**02 01 41.0**	**+2.3**
	comp=N,0.3nm,0.1s,SNR=7.9						
EGOR				S	**Sn**	**02 02 07.3**	**-1.2**
	comp=N,2.1nm,0.3s,SNR=7.9						
EADA	**Adamuz**	**2.63**	**51**	P	**Pn**	**02 01 41.3**	**+1.2**
	comp=N,2.5nm,0.0s,SNR=32						
EADA				S	**Sn**	**02 02 10.1**	**-0.9**
	comp=N,4.7nm,0.1s						
EADA	**Adamuz**	**2.63**	**51**	P	**Pn**	**02 01 41.3**	**+1.2**
	comp=N,2.5nm,0.0s,SNR=32						
EADA				S	**Sn**	**02 02 10.1**	**-0.9**
	comp=N,4.7nm,0.1s						
PMTG	**Montargil**	**2.66**	**342**	*e*Pn	**Pn**	**02 01 41.6**	**+1.2**
PMTG				*e*Sn	**Sn**	**02 02 12.1**	**+0.5**
PMTG				A	A	02 02 14.4	
	comp=N,3.1nm,0.2s						
PMTG	**Montargil**	**2.66**	**342**	*e*Pn	**Pn**	**02 01 41.6**	**+1.2**
PMTG				*e*Sn	**Sn**	**02 02 12.1**	**+0.5**
ALMR	**Almeirim**	**2.83**	**337**	*e*Pn	**Pn**	**02 01 44.2**	**+1.3**
ALMR				*e*Sn	**Sn**	**02 02 16.5**	**+0.5**
ALMR	**Almeirim**	**2.83**	**337**	P	**Pn**	**02 01 44.2**	**+1.3**
ALMR				S	**Sn**	**02 02 16.5**	**+0.5**
ALMR	**Almeirim**	**2.83**	**337**	P	**Pn**	**02 01 44.2**	**+1.3**
ALMR				S	**Sn**	**02 02 16.5**	**+0.5**
ELGU	**Los Guajares,**	**2.87**	**82**	P	**Pn**	**02 01 44.2**	**+0.8**
	comp=N,0.7nm,0.1s,SNR=7.9						
ELGU				S	**Sn**	**02 02 17.9**	**+1.0**
	comp=N,3.1nm,0.2s,SNR=7.9						
ELGU	**Los Guajares,**	**2.87**	**82**	P	**Pn**	**02 01 44.2**	**+0.8**
	comp=N,0.7nm,0.1s,SNR=7.9						
ELGU				S	**Sn**	**02 02 17.9**	**+1.0**
	comp=N,3.1nm,0.2s,SNR=7.9						
PMRV	**Marv??o**	**2.88**	**357**	*e*Pn	**Pn**	**02 01 44.9**	**+1.3**
PMRV				*e*Sn	**Sn**	**02 02 17.1**	**-0.2**
PMRV				A	A	02 02 19.4	
	comp=N,2.8nm,0.2s						
PMRV	**Marv??o**	**2.88**	**357**	P	**Pn**	**02 01 44.9**	**+1.3**
PMRV				S	**Sn**	**02 02 17.1**	**-0.2**
	comp=N,2.8nm,0.2s						
PMRV	**Marv??o**	**2.88**	**357**	P	**Pn**	**02 01 44.9**	**+1.3**
PMRV				S	**Sn**	**02 02 17.1**	**-0.2**
	comp=N,2.8nm,0.2s						
PMAFR	**Mafra**	**2.93**	**326**	*e*Pn	**Pn**	**02 01 48.8**	**+4.6**
PMAFR				*e*Sn	**Sn**	**02 02 17.9**	**-0.5**
PMAFR				A	A	02 02 24.6	
	comp=N,8.8nm,0.4s						
PMAFR	**Mafra**	**2.93**	**326**	P	**Pb**	**02 01 49.0**	**-2.3**
	comp=N,0.3nm,0.1s,SNR=7.9						
PMAFR				S	**Sn**	**02 02 18.2**	**-0.2**
	comp=N,14nm,0.3s,SNR=7.9						
PMAFR	**Mafra**	**2.93**	**326**	P	**Pb**	**02 01 49.0**	**-2.3**
	comp=N,0.3nm,0.1s,SNR=7.9						
PMAFR				*e*Sn	**Sn**	**02 02 17.9**	**-0.5**
PMAFR				S		02 02 18.2	
	comp=N,14nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**3.06**	**76**	P	**Pn**	**02 01 47.8**	**+1.7**
	comp=N,0.7nm,0.1s,SNR=12						
EQUE				S	**Sn**	**02 02 22.9**	**+1.1**
	comp=N,1.7nm,0.2s						
EQUE	**Quentar**	**3.06**	**76**	P	**Pn**	**02 01 47.8**	**+1.7**
	comp=N,0.7nm,0.1s,SNR=12						
EQUE				S	**Sn**	**02 02 22.9**	**+1.1**
	comp=N,1.7nm,0.2s						
PTOM	**Tomar**	**3.22**	**343**	*e*Pn	**Pn**	**02 01 49.5**	**+1.3**
PTOM				*e*Sn	**Sn**	**02 02 25.7**	**+0.2**
PTOM				A	A	02 02 41.0	
	comp=N,2.9nm,0.4s						
PTOM	**Tomar**	**3.22**	**343**	P	**Pn**	**02 01 49.5**	**+1.3**
PTOM				S	**Sn**	**02 02 25.7**	**+0.2**
	comp=N,1.4nm,0.4s						
PTOM	**Tomar**	**3.22**	**343**	P	**Pn**	**02 01 49.5**	**+1.3**
PTOM				S	**Sn**	**02 02 25.7**	**+0.2**
	comp=N,1.4nm,0.4s						
PCBR	**Castelo Branco**	**3.30**	**356**	*e*Pn	**Pn**	**02 01 50.8**	**+1.5**
PCBR				*e*Sn	**Sn**	**02 02 26.8**	**-0.7**
PCBR				A	A	02 02 29.3	
	comp=N,2.6nm,0.2s						
PCBR	**Castelo Branco**	**3.30**	**356**	P	**Pn**	**02 01 50.8**	**+1.5**
PCBR				S	**Sn**	**02 02 26.8**	**-0.7**
	comp=N,1.3nm,0.2s						
PCBR	**Castelo Branco**	**3.30**	**356**	P	**Pn**	**02 01 50.8**	**+1.5**
PCBR				S	**Sn**	**02 02 26.8**	**-0.7**
	comp=N,1.3nm,0.2s						
GORA	**Gorafe**	**3.44**	**73**	P	**Pn**	**02 01 53.9**	**+2.7**
	SNR=7.9						
GORA				S	**Sn**	**02 02 32.0**	**+1.1**
	comp=N,3.2nm,0.2s,SNR=7.9						
GORA	**Gorafe**	**3.44**	**73**	P	**Pn**	**02 01 53.9**	**+2.7**
	SNR=7.9						
GORA				S	**Sn**	**02 02 32.0**	**+1.1**
	comp=N,3.2nm,0.2s,SNR=7.9						
EQES	**Quesada**	**3.51**	**68**	P	**Pn**	**02 01 52.9**	**+0.6**
	comp=N,0.9nm,0.1s,SNR=15						
EQES				S	**Sn**	**02 02 34.4**	**+1.6**
	comp=N,0.8nm,0.3s						
EQES	**Quesada**	**3.51**	**68**	P	**Pn**	**02 01 52.9**	**+0.6**
	comp=N,0.9nm,0.1s,SNR=15						
EQES				S	**Sn**	**02 02 34.4**	**+1.6**
	comp=N,0.8nm,0.3s						
EPLA	**Plasencia**	**3.62**	**13**	P	**Pn**	**02 01 55.6**	**+1.9**
	SNR=7.9						
EPLA				S	**Sn**	**02 02 35.7**	**+0.3**
	comp=N,1.1nm,0.1s,SNR=7.9						
EPLA	**Plasencia**	**3.62**	**13**	P	**Pn**	**02 01 55.6**	**+1.9**
	SNR=7.9						
EPLA				S	**Sn**	**02 02 35.7**	**+0.3**
	comp=N,1.1nm,0.1s,SNR=7.9						
PAB	**San Pablo**	**3.73**	**36**	P	**Pn**	**02 01 56.7**	**+1.3**
	comp=N,0.5nm,0.0s,SNR=7.9						
PAB				S	**Sn**	**02 02 36.7**	**-1.6**
	comp=N,0.6nm,0.1s,SNR=7.9						
PAB	**San Pablo**	**3.73**	**36**	P	**Pn**	**02 01 56.7**	**+1.3**
	comp=N,0.5nm,0.0s,SNR=7.9						
PAB				S	**Sn**	**02 02 36.7**	**-1.6**
	comp=N,0.6nm,0.1s,SNR=7.9						
MTE	**Manteigas**	**3.86**	**356**	*e*Pn	**Pn**	**02 01 57.1**	**0.0**
MTE				*e*Sn	**Sn**	**02 02 40.7**	**-0.7**
MTE	**Manteigas**	**3.86**	**356**	P	**Pn**	**02 01 57.1**	**0.0**
MTE				S	**Sn**	**02 02 40.7**	**-0.7**
MTE	**Manteigas**	**3.86**	**356**	P	**Pn**	**02 01 57.1**	**0.0**
MTE				S	**Sn**	**02 02 40.7**	**-0.7**
SESP	**Santiago Espad**	**4.01**	**66**	P	**Pn**	**02 02 00.2**	**+1.0**
	comp=N,0.8nm,0.1s,SNR=7.9						
SESP				S	**Sn**	**02 02 44.0**	**-1.2**
	comp=N,0.7nm,0.1s,SNR=7.9						
SESP	**Santiago Espad**	**4.01**	**66**	P	**Pn**	**02 02 00.2**	**+1.0**
	comp=N,0.8nm,0.1s,SNR=7.9						
SESP				S	**Sn**	**02 02 44.0**	**-1.2**
	comp=N,0.7nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**4.62**	**1**	*e*Pn	**Pn**	**02 02 08.7**	**+1.3**
MVO				*e*Sn	**Sn**	**02 02 59.2**	**-0.8**
MVO				A	A	02 03 01.4	
	comp=N,3.0nm,0.2s						
MVO	**Moncorvo**	**4.62**	**1**	*e*Pn	**Pn**	**02 02 08.7**	**+1.3**
MVO				*e*Sn	**Sn**	**02 02 59.2**	**-0.8**
POLO	**Lamas de Olo**	**4.85**	**354**	*e*Sn	**Sn**	**02 03 04.5**	**-1.3**
POLO				A	A	02 03 07.7	
	comp=N,0.9nm,0.3s						
POLO	**Lamas de Olo**	**4.85**	**354**	*e*Sn	**Sn**	**02 03 04.5**	**-1.3**
ETOB	**Tobarra**	**4.93**	**63**	P	**Pn**	**02 02 12.0**	**+0.2**
	comp=N,0.9nm,0.1s,SNR=15						
ETOB				S	**Sn**	**02 03 05.4**	**-2.5**
	comp=N,0.3nm,0.1s						
ETOB	**Tobarra**	**4.93**	**63**	P	**Pn**	**02 02 12.0**	**+0.2**
	comp=N,0.9nm,0.1s,SNR=15						
ETOB				S	**Sn**	**02 03 05.4**	**-2.5**
	comp=N,0.3nm,0.1s						
PBRG	**Braganca**	**5.26**	**4**	*e*Sn	**Sn**	**02 03 15.2**	**-0.8**
PBRG				A	A	02 03 16.8	
	comp=N,1.3nm,0.2s						
PBRG	**Braganca**	**5.26**	**4**	Sn	**Sn**	**02 03 15.2**	**-0.8**
	comp=N,0.6nm,0.2s						
PBRG	**Braganca**	**5.26**	**4**	Sn	**Sn**	**02 03 15.2**	**-0.8**
	comp=N,0.6nm,0.2s						
ELOB	**Lobios**	**5.36**	**353**	S	**Sn**	**02 03 17.5**	**-0.9**
	comp=N,0.9nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.36**	**353**	S	**Sn**	**02 03 17.

comp=N,768nm,0.3s
SFK Sufi-Kurgan 3.90 54 ⇓Pn **Pn 02 07 59.2 +2.5**
comp=N,21nm,0.4s
SFK ⇑Pg **Pg 02 08 09.4 -2.0**
comp=N,409nm,0.6s
SFK ⇓Sn **Sn 02 08 47.5 +5.0**
comp=N,553nm,0.7s
SFK ⇑Lg Lg 02 09 02.5
comp=N,2μm,0.9s
SFK Sufi-Kurgan 3.90 54 PN **Pn 02 07 59.2 +2.5**
SFK 02 08 47.4
SFK pmax pmax
comp=Z,21nm,0.4s
SFK pmax pmax
comp=Z,409nm,0.6s
SFK smax smax
comp=N,553nm,0.7s
CEP Cherat 4.43 152 P **Pn 02 08 06.8 +2.9**
CEP S **Sb 02 09 12.0 +4.1**
CHCP Chirah Chowk 5.16 142 P **Pn 02 08 16.3 +2.5**
NIL Nilore 5.16 142 *e*Pn **Pn 02 08 16.7 +2.9**
NIL *e*Pg **Pb 02 08 31.5 +4.6**
NIL *e*Sg **Sg 02 09 37.4 -5.0**
NIL Nilore 5.16 142 *e*PN **Pn 02 08 16.7 +2.9**
MNAS Manas 5.27 26 ⇑Pn **Pn 02 08 17.0 +1.5**
comp=N,22nm,0.5s
MNAS ⇓Pg **Pg 02 08 35.7 -2.1**
comp=N,84nm,0.6s
MNAS ⇑Lg Lg 02 09 43.8
comp=N,919nm,1.3s
MNAS Manas 5.27 26 PN **Pn 02 08 17.3 +1.8**
MNAS pmax pmax
comp=Z,18nm,0.6s
MNAS pmax pmax
comp=Z,191nm,1.2s
THW Thamme Wali 5.32 158 P **Pn 02 08 17.1 +1.1**
KK31 Karatay Array 5.39 9 Pn **Pn 02 08 18.9 +1.8**
comp=Z,9.5nm,0.4s,baz=198,slow=15,SNR=130
KK31 ⇑Pg **Pg 02 08 36.8 -3.2**
comp=Z,55nm,0.6s,baz=197,slow=17,SNR=18
KK31 ⇑Sn **Sn 02 09 19.4 +0.3**
comp=Z,69nm,0.4s
KK31 ⇑Lg Lg 02 09 46.3
comp=Z,240nm,0.5s,baz=189,slow=29
KK31 Karatay Array 5.39 9 *e*Pn **Pn 02 08 19.2 +2.1**
KK31 Karatay Array 5.39 9 PN **Pn 02 08 18.8 +1.8**
KK31 02 09 19.2
KK31 pmax pmax
comp=Z,6.0nm,0.4s
KK31 pmax pmax
comp=Z,55nm,0.6s
KK31 smax smax
comp=N,69nm,0.4s
KKAR Karatay Array 5.39 9 *e*Pn **Pn 02 08 19.2 +2.2**
KKAR Karatay Array 5.39 9 *e*PN **Pn 02 08 19.2 +2.2**
KSH Kashi 5.42 69 P **Pn 02 08 14.8 -2.7**
KSH pP Pb 02 08 19.0 -12
KSH S **Sn 02 09 15.0 -4.9**
KSH sS Sb 02 09 25.8 -11
KSH smax smax
comp=N,2μm,0.9s
KSH smax smax
comp=E,2μm,1.0s
KSH LR LR
comp=N,8μm,3.2s
KSH LR LR
comp=E,6μm,3.3s
KSH LR LR
comp=Z,9μm,9.8s
AML Almayashu 5.46 36 P **Pn 02 08 21.5 +3.3**
SNR=12
EKS2 Erkin-Say 5.92 33 P **Pn 02 08 27.6 +3.2**
SNR=15
UCH Uchtor 5.93 40 P **Pn 02 08 26.5 +1.7**
SNR=53
KZA Kyzart 6.21 44 P **Pn 02 08 30.4 +1.7**
SNR=86
AAK Ala-Archa 6.22 37 ⇑Pn **Pn 02 08 30.9 +2.3**
comp=Z,58nm,0.7s
AAK ⇓Lg Lg 02 10 14.8
comp=Z,431nm,0.9s
AAK Ala-Archa 6.22 37 P **Pn 02 08 31.2 +2.6**
SNR=48
AAK Ala-Archa 6.22 37 PN **Pn 02 08 30.8 +2.3**
AAK pmax pmax
comp=Z,58nm,0.7s
NRN Naryn 6.26 52 *e*Pn **Pn 02 08 29.6 +0.3**
NRN Naryn 6.26 52 *e*PN **Pn 02 08 29.6 +0.3**
SARP Sargodha 6.42 154 P **Pn 02 08 31.8 +0.7**
FRU Bishkek 6.43 37 *e*PN **Pn 02 08 34.0 +2.7**
FRU *e* 02 09 50.0
FRU pmax pmax
comp=Z,330nm,1.8s
FRU smax smax
comp=E,2μm,2.0s
KBK Karagaybulak 6.46 39 P **Pn 02 08 34.5 +2.7**
SNR=34
CHMS Chumysh 6.62 36 P **Pn 02 08 36.6 +2.7**
SNR=18
ULHL Ulahol 6.89 47 P **Pn 02 08 39.6 +1.9**
SNR=18
TKM2 Tokmak 2 6.98 41 ⇑Pn **Pn 02 08 40.3 +1.3**
comp=E,56nm,0.9s
TKM2 ⇓Lg Lg 02 10 41.6
comp=E,148nm,0.8s
TKM2 Tokmak 2 6.98 41 P **Pn 02 08 41.5 +2.5**
SNR=19
TKM2 Tokmak 2 6.98 41 PN **Pn 02 08 40.4 +1.3**
TKM2 pmax pmax
comp=Z,56nm,0.9s
AAA Alma-Ata 7.88 44 *i* P **Pn 02 08 53.7 +2.5**
AAA *i* S Sn 02 10 30.2 +10
AAA pmax pmax
comp=Z,100nm,0.7s
AAA smax smax
comp=N,200nm,1.7s
AAA MLR MLR
comp=Z,2μm,9.0s
DHRM DHARAMSHALA 7.88 132 *e*P **Pn 02 08 50.7 -0.8**
DHRM *e*S **Sn 02 10 16.5 -4.3**
DHRM IAML 02 11 20.5
comp=N,264nm,0.5s
DHRM IAML 02 11 22.7
comp=E,364nm,0.5s
MDOK Medeo 7.93 45 ⇓Pn **Pn 02 08 53.7 +1.7**
comp=E,78nm,0.9s
MDOK Lg Lg 02 11 07.4
comp=E,218nm,1.1s
GEYT Alibeck 8.94 274 Pn **Pn 02 09 04.4 -1.3**
comp=E,5.7nm,0.3s,baz=125,slow=12,SNR=6.1
GEYT Sn **Sn 02 10 42.0 -4.4**
comp=E,6.3nm,0.3s,baz=81,slow=26,SNR=3.8
GEYT LR LR 02 13 48.7
comp=E,1μm,18.9s,baz=90,slow=46
GYA0B ALIBECK ARRAY 8.94 274 ⇑Pn **Pn 02 09 04.4 -1.3**
comp=E,45nm,0.7s
GYA0B ALIBECK ARRAY 8.94 274 *e*Pn **Pn 02 09 04.4 -1.3**
SMLA Simla 9.21 134 *e*P **Pn 02 09 09.4 0.0**
SMLA *e*S **Sn 02 10 50.8 -2.1**
PDGK Podgornoye 9.46 51 ⇓Pn **Pn 02 09 13.1 +0.2**
comp=E,23nm,0.8s
PDGK ⇓Lg Lg 02 11 57.8
comp=E,128nm,1.3s
PDGK Podgornoye 9.46 51 P **Pn 02 09 13.4 +0.4**
PDGK pmax pmax
comp=Z,23nm,0.8s
DDI Dehra Dun 10.32 134 *ex* **Pn 02 09 20.9 -3.7**
DDI *ex* x 02 11 12.2
DDI IAML 02 12 07.3
comp=E,113nm,0.8s
DDI IAML 02 12 08.1
comp=N,113nm,0.2s
OTUK Ortayu 10.69 11 ⇑Pn **Pn 02 09 32.1 +2.5**
comp=N,17nm,0.8s
OTUK ⇓Lg Lg 02 12 37.3
comp=N,202nm,1.1s
OTUK Ortayu 10.69 11 P **Pn 02 09 30.6 +1.0**
OTUK pmax pmax
comp=Z,6.0nm,0.8s
NDI New Delhi 11.16 142 *e*P **Pn 02 09 38.0 +1.8**
NDI *ex* x 02 11 42.0
MAKZ Makanchi 12.95 42 ⇓Pn **Pn 02 09 59.8 -0.8**
comp=Z,22nm,1.1s
MAKZ ⇓Lg Lg 02 13 50.9
comp=Z,54nm,1.4s
MAKZ Makanchi 12.95 42 *e*Pn **Pn 02 09 60.0 -0.5**
MAKZ Makanchi 12.95 42 *e*P **Pn 02 10 00.0 -0.5**
MK01 Makanchi Array 13.10 43 *e*Pn **Pn 02 10 01.4 -1.2**
MK31 Makanchi Array 13.11 42 ⇑Pn **Pn 02 10 02.1 -0.6**
comp=Z,24nm,0.8s,baz=230,slow=12,SNR=110
MK31 ⇓Lg Lg 02 13 53.9
comp=Z,36nm,1.2s
MK31 Makanchi Array 13.11 42 *e*Pn **Pn 02 10 02.6 0.0**
MK31 Makanchi Array 13.11 42 *e*P **Pn 02 10 02.7 0.0**
MKAR Makanchi Array 13.11 42 Pn **Pn 02 10 02.5 -0.2**
comp=Z,0.8nm,0.3s,baz=230,slow=13,SNR=118
MKAR Lg Lg 02 13 56.4
comp=Z,0.3nm,0.3s,baz=233,slow=23,SNR=3.9
MKAR LR LR 02 15 43.1
comp=Z,313nm,20.1s,baz=231,slow=40
AB31 Akbulak array 13.37 332 P **Pn 02 10 03.9 -2.3**
AB31 pmax pmax
comp=Z,9.0nm,0.4s
ABKAR Akbulak array 13.37 332 *e*Pn **Pn 02 10 04.0 -2.1**
KURBB Kurchatov Arra 14.40 24 Pn **Pn 02 10 17.7 -2.6**
comp=Z,0.1nm,0.3s,baz=211,slow=12,SNR=8.8
KURBB Lg Lg 02 14 33.9
comp=Z,0.2nm,0.3s,baz=206,slow=27,SNR=4.8
KURBB Kurchatov Arra 14.40 24 ⇑Pn **Pn 02 10 22.0 +1.7**
comp=Z,11nm,0.8s
KURBB ⇑Lg Lg 02 14 37.5
comp=Z,129nm,1.1s
KURK Kurchatov 14.51 24 ⇑Pn **Pn 02 10 22.2 +0.5**
comp=Z,10.0nm,1.0s
KURK ⇑Lg Lg 02 14 37.9
comp=Z,109nm,1.1s
KURK Kurchatov 14.51 24 Pn Pn 02 10 17.7 -4.1
KURK Lg Lg 02 14 33.9
KURK Kurchatov 14.51 24 *ce*P **Pn 02 10 18.2 -3.6**
KURK pmax pmax
comp=Z,37nm,0.7s
PYUN Piuthan 14.91 126 *e*P Pn 02 10 22.6 -5.0
comp=Z,67nm,0.5s
AKTO Aktyubinsk 15.05 331 Pn **Pn 02 10 27.7 -1.5**
comp=Z,3.0nm,0.3s,baz=149,slow=13,SNR=40
AKTO Sn **Sn 02 13 06.6 -9.2**
comp=Z,1.5nm,0.3s,baz=348,slow=20,SNR=3.4
AKTO Lg Lg 02 14 57.9
comp=Z,0.5nm,0.3s,baz=252,slow=19,SNR=2.3
AKTO LR LR 02 16 47.1
comp=Z,267nm,18.1s,baz=146,slow=39
WMQ Urumqi 15.10 61 P **Pn 02 10 28.5 -1.3**
WMQ pP P 02 10 34.8 -0.3
WMQ sP pP 02 10 39.0 +0.5
WMQ PP **sP 02 10 43.5 +3.5**
WMQ S **Sn 02 13 18.0 +1.1**
WMQ pmax pmax
comp=Z,94nm,0.7s
WMQ pmax pmax
comp=Z,250nm,3.6s
WMQ LR LR
comp=Z,2μm,15.5s
WMQ LR LR
comp=Z,2μm,12.5s
WMQ LR LR
comp=Z,3μm,13.9s
DANN Dangsing 15.24 124 *e*P **Pn 02 10 27.4 -4.7**
comp=Z,118nm,0.8s
BVAR Borovoye Array 15.27 2 Pn **Pn 02 10 32.3 +0.3**
comp=Z,2.2nm,0.3s,baz=162,slow=9.7,SNR=20
BVAR Sn **Sn 02 13 13.9 -7.1**
comp=Z,1.2nm,0.3s,baz=168,slow=22,SNR=3.9
BVAR Lg Lg 02 15 03.1
baz=183,slow=26,SNR=2.6
BRVK Borovoye 15.30 2 ⇑Pn **Pn 02 10 33.9 +1.5**
comp=Z,18nm,1.0s
BRVK Borovoye 15.30 2 *e*Pn **Pn 02 10 30.7 -1.7**
comp=Z,17nm,0.8s
BRVK Borovoye 15.30 2 *ce*P **Pn 02 10 33.8 +1.4**
BRVK pmax pmax
comp=Z,23nm,0.6s
KOLN Koldanda 15.53 126 *e*P **Pn 02 10 31.5 -4.3**
comp=Z,51nm,0.6s
BHPL Bhopal 16.03 152 *e*P **Pn 02 10 43.6 +1.5**
GKN Gorkha 16.05 123 *e*P **Pn 02 10 37.8 -4.7**
comp=Z,293nm,0.8s
KKN Kakani 16.62 122 *e*P **Pn 02 10 45.0 -4.8**
comp=Z,169nm,0.9s
DMN Daman 16.62 123 *e*P **Pn 02 10 45.4 -4.5**
comp=Z,221nm,0.9s
PKIN Phulchoki 16.84 122 *e*P **Pn 02 10 48.0 -4.6**
comp=Z,186nm,0.9s
GUN Gumba 16.95 121 *e*P **Pn 02 10 49.9 -4.2**
comp=Z,479nm,0.9s
AKT Akhty 17.11 289 *e*P **Pn 02 10 54.7 -1.0**
AKT *e*S **Sn 02 14 05.9 0.0**
AKT pmax pmax
comp=Z,15nm,0.5s
AKT smax smax
comp=N,5.0nm,0.9s
AKT smax smax
comp=E,19nm,0.5s
JIRN Jiri 17.32 121 *e*P **Pn 02 10 54.1 -4.7**
comp=E,91nm,0.4s
MAK Makhachkala 17.47 294 *e*P **Pn 02 10 59.1 -1.0**
MAK *e*S **Sn 02 14 12.3 -2.1**
MAK pmax pmax
comp=Z,152nm,1.2s
MAK MLR MLR
comp=Z,452nm,15.0s
DGZ Jazzator, Alta 17.60 42 *i* P **Pn 02 10 59.2 -2.7**
DGZ pmax pmax
comp=Z,13nm,1.0s
RAMN Ramite 18.06 122 *e*P **Pn 02 11 03.8 -4.0**
comp=Z,188nm,0.7s
NGP Nagpur 18.54 151 *e*P **P 02 11 13.4 +0.1**
NGP IAmb IAmb 02 11 14.5
comp=Z,349nm,3.4s
TAPN Taplejung 18.56 119 *e*P **P 02 11 10.2 -3.6**
comp=Z,34nm,0.4s
ODAN Odare 18.65 120 *e*P **P 02 11 12.1 -2.6**
comp=Z,121nm,0.6s
GROC Groznyy 18.74 294 *e*P **P 02 11 14.9 -0.4**
GROC pmax pmax
comp=Z,110nm,1.1s
GTK Tadong 19.20 117 *e*P **P 02 11 20.6 -0.1**
GNI Garni 19.32 285 *e*P **Pn 02 11 24.1 +1.1**
comp=Z,289nm,0.8s
ZAA0 Zalesovo Array 19.34 28 *e*P **P 02 11 20.8 -1.1**
comp=Z,28nm,0.8s
ZALV Zalesovo Beam 19.34 28 P **P 02 11 20.7 -1.2**
comp=Z,3.7nm,0.3s,baz=221,slow=10,SNR=72
ZALV S **S 02 15 06.5 +6.1**
comp=Z,0.1nm,0.3s,baz=211,slow=18,SNR=3.4
ZALV Lg Lg 02 17 09.6
comp=Z,0.2nm,0.3s,baz=212,slow=27,SNR=2.5
ZALV LR LR 02 19 35.5
comp=Z,236nm,19.5s,baz=250,slow=39
ZALV Zalesovo Beam 19.34 28 *e*P **P 02 11 20.4 -1.5**
ZALV S **S 02 15 06.5 +6.1**
ZALV Lg Lg 02 17 09.7
TBLG Delisi 19.36 290 *e*P **Pn 02 11 23.6 +0.3**
comp=Z,52nm,0.9s
TBLG Delisi 19.36 290 *e*P **Pn 02 11 23.6 +0.3**
TBLG pmax pmax
comp=Z,52nm,0.9s
NVS Novosibirsk 19.50 24 ⇑*i*P **P 02 11 22.8 -0.7**
NVS *e*S **Sn 02 14 59.1 -4.2**
NVS pmax pmax
comp=N,10.0nm,0.8s
NVS pmax pmax
comp=E,10.0nm,0.8s
NVS pmax pmax
comp=Z,14nm,0.8s
NVS smax smax
comp=N,16nm,1.2s
NVS smax smax
comp=E,20nm,1.2s
POO Poona 19.56 167 *e*P **P 02 11 22.8 -1.7**
LSA Lhasa 19.76 108 P **P 02 11 27.3 +0.2**
LSA pmax pmax
comp=E,8.0nm,0.8s
LSA Lhasa 19.76 108 *e*P **P 02 11 27.9 +0.8**
comp=E,40nm,0.9s
LSA Lhasa 19.76 108 *e*P **P 02 11 27.9 +0.8**
LSA pmax pmax
comp=Z,40nm,0.9s
BOK Bokaro 19.81 130 *e*P **P 02 11 26.9 -0.3**
BOK IAmb IAmb 02 11 30.6
comp=Z,75nm,0.2s
SVE Sverdlovsk 19.94 346 *e*P **P 02 11 28.6 +0.2**
SVE *e*S **S 02 15 02.9 -9.5**
SVE pmax pmax
comp=Z,23nm,1.0s
ARU Arti 20.03 342 P **P 02 11 30.3 +1.0**
comp=Z,20nm,0.5s,baz=165,slow=5.2,SNR=14
ARU S S 02 15 03.8 -10
comp=Z,6.7nm,0.5s,baz=97,slow=19,SNR=4.3
ARU Lg Lg 02 17 42.3
comp=Z,3.3nm,0.4s,baz=282,slow=19,SNR=2.0
ARU LR LR 02 20 00.4
comp=Z,302nm,18.6s,baz=150,slow=39
ARU Arti 20.03 342 *e*P **P 02 11 28.4 -0.9**
comp=Z,29nm,0.7s
ARU S S 02 15 03.8 -10
ARU Lg Lg 02 17 42.3
ARU Arti 20.03 342 *d i*P **P 02 11 30.0 +0.7**
ARU pmax pmax
comp=Z,20nm,1.0s
ARU MLR MLR
comp=Z,315nm,14.0s
ZEI Tsey 20.07 292 *e*P Pn 02 11 31.9 0.0
ZEI pmax pmax
comp=Z,17nm,0.6s
AKH Akhalkalaki 20.28 288 *e*P Pn 02 11 34.4 0.0
comp=Z,34nm,0.8s
AKH Akhalkalaki 20.28 288 *e*P Pn 02 11 34.4 0.0
AKH pmax pmax
comp=Z,35nm,0.8s
NCK Nalchik 20.37 294 *ce*P **P 02 11 32.2 -1.0**
KBZ Khabaz 20.91 295 P **P 02 11 39.1 +0.2**
comp=Z,21nm,0.8s,baz=130,slow=7.5,SNR=22
KBZ S **S 02 15 26.7 -4.9**
comp=Z,4.2nm,0.8s,baz=90,slow=20,SNR=2.7
KBZ LR LR 02 22 03.0
comp=Z,288nm,18.8s,baz=90,slow=43
NEY Neytrino 20.98 294 *ce*P **P 02 11 41.3 +1.4**
DHUB DHUBRI 20.99 118 *e*P **P 02 11 39.1 -0.8**
DHUB IAmb IAmb 02 11 40.4
comp=Z,26nm,0.7s
KVAR Kislovodsk Arr 21.08 295 P **P 02 11 40.9 -0.1**
comp=Z,40nm,0.9s,baz=279,slow=5.0,SNR=13
KVAR S **S 02 15 29.3 -6.1**
comp=Z,9.0nm,0.8s,baz=260,slow=17,SNR=3.4
KVAR LR LR 02 22 07.1
comp=Z,420nm,18.9s,baz=82,slow=43
KIV Kislovodsk 21.09 295 *e*P **P 02 11 41.2 +0.2**
KIV Kislovodsk 21.09 295 *e*P **P 02 11 40.8 -0.2**
KIV *e*S **S 02 15 36.1 +0.6**
KIV pmax pmax
comp=Z,42nm,0.9s
KIV MLR MLR
comp=Z,329nm,14.0s
TURI Tura 21.52 118 *e*P **P 02 11 44.3 -1.3**
HVS Khovu-Aksy 21.76 44 *i* P **P 02 11 44.9 -3.3**
HYB Hyderabad 21.81 156 *i* P **P 02 11 49.0 +0.2**
HYB Hyderabad 21.81 156 *e*P **P 02 11 49.2 +0.4**
HYB IAmb IAmb 02 11 53.5
comp=Z,21nm,1.2s
GUWA GUWAHATI 22.08 115 *e*P **P 02 11 51.4 -0.3**
SHL Shillong 22.60 116 *e*P **P 02 11 56.9 -0.6**
SHL *e*S **S 02 16 05.5 +0.4**
SHL Shillong 22.60 116 *e*P **P 02 11 57.1 -0.4**
SHL Shillong 22.60 116 *e*P **P 02 11 57.1 -0.4**
TEZP TEZPUR 22.64 113 *e*P **P 02 11 56.6 -1.0**
ZIRO ZIRO 22.91 109 *e*P **P 02 12 01.8 +1.1**
AGT Agartala 23.23 120 *e*P **P 02 12 03.2 -0.6**
GTA Gaotai 23.77 77 *e*P **P 02 12 09.3 +0.1**
GTA pP pP 02 12 13.5 +0.7
GTA sP sP 02 12 16.5 +2.2
GTA S **S 02 16 23.3 -1.2**
GTA sS sS 02 16 31.0 +0.5
GTA pmax pmax
comp=Z,16nm,0.8s
GTA pmax pmax
comp=Z,150nm,4.5s
GTA LR LR
comp=Z,350nm,13.4s
GTA LR LR
comp=Z,630nm,14.9s
GTA LR LR
comp=Z,870nm,13.6s
BELO BELONIA 23.79 121 *e*P **P 02 12 10.1 +0.8**
MOKO MOKOCHONG 24.07 111 *e*P **P 02 12 11.3 -0.8**
KOHI KOHIMA 24.11 113 *e*P **P 02 12 15.0 +2.5**
IMP Imphal 24.53 115 *e*P **P 02 12 17.0 +0.7**
RAYN Ar Rayn 24.91 242 *e*P **P 02 12 20.2 +0.5**
comp=Z,13nm,0.8s
ANN Anapa 24.93 297 *e*P **P 02 12 19.8 +0.2**
ANN *e**PP **pP 02 12 24.6 +1.4**
ANN *e*S **S 02 16 46.3 +3.6**
ANN pmax pmax
comp=Z,33nm,0.9s
ANN MLR MLR
comp=Z,270nm,16.0s
ANN MLR MLR
comp=N,144nm,16.0s
VORD Divnogorie 25.05 311 *e*P **P 02 12 20.5 -0.2**
VORD pmax pmax
comp=Z,10.0nm,1.1s
VSR Storozhevoye 25.21 312 *e*P **P 02 12 22.6 +0.5**
VSR pmax pmax
comp=Z,30nm,1.1s
VSR MLR MLR
comp=Z,630nm,16.0s
SAIH SAIHA 25.35 120 *e*P **P 02 12 25.5 +1.8**
MOY Mondy 26.15 48 *e*P **P 02 12 32.3 +1.5**
MOY pmax pmax
comp=Z,17nm,1.6s
ASF Jabal al Asfar 27.14 268 P **P 02 12 42.0 +2.1**
comp=Z,1.6nm,0.9s,baz=50,slow=7.9,SNR=2.5
ZAK Zakamensk 27.15 51 *e*P **P 02 12 40.3 +0.5**
ZAK pmax pmax
comp=Z,7.0nm,1.1s
SIM Simferopol' 27.29 296 *de*P **P 02 12 45.2 +4.2**
SIM pmax pmax
comp=Z,37nm,0.9s
LZH Lanzhou 27.48 83 ⇑P **P 02 12 44.0 +0.9**
LZH pP sP 02 12 48.8 +0.6
LZH sP pP 02 12 51.5 +4.8
LZH PP **PnPn 02 13 30.5 +2.9**
LZH sS sS 02 17 28.8 -1.0
LZH SS **SnSn 02 18 37.0 +3.5**
LZH pmax pmax
comp=Z,45nm,1.0s
LZH pmax pmax
comp=Z,240nm,6.0s
LZH LR LR
comp=Z,710nm,12.6s
LZH LR LR
comp=Z,850nm,13.0s
LZH LR LR
comp=Z,1μm,14.8s
TLY Talaya 27.72 49 LR LR 02 23 14.5
comp=Z,36nm,20.7s,baz=249,slow=35
TLY Talaya 27.72 49 *e*P **P 02 12 45.3 +0.5**
TLY *e* 02 13 26.9
TLY *e*S **S 02 17 23.0 -3.9**
TLY pmax pmax
comp=Z,6.0nm,0.8s
TLY MLR MLR
comp=Z,178nm,16.0s
BR131 Keskin Array S 27.86 285 *e*P **P 02 12 47.6 +1.3**
BRTR Keskin Array B 27.86 285 P **P 02 12 47.4 +1.0**
comp=Z,2.3nm,0.9s,baz=97,slow=8.3,SNR=11
BRTR LR LR 02 26 01.6
comp=Z,71nm,18.5s,baz=93,slow=41
MOS Moscow 27.88 320 *e*P **P 02 12 50.0 +3.9**
MOS pmax pmax
comp=Z,37nm,0.8s
MMAI Mount Meron Ar 28.04 271 LR LR 02 26 26.0
comp=Z,45nm,18.2s,baz=80,slow=42
PRGR Permogore 28.10 336 *e*P **P 02 12 48.0 0.0**
PRGR pmax pmax
comp=Z,14nm,1.3s
OBN Obninsk 28.15 319 ⇑*e*P **P 02 12 49.2 +0.6**
OBN pmax pmax
comp=Z,17nm,1.0s
SONM Songino Array 28.69 58 P **P 02 12 53.4 -0.2**
comp=Z,1.8nm,1.0s,baz=268,slow=11,SNR=9.1
SONM LR LR 02 25 29.9
comp=Z,733nm,18.0s,baz=254,slow=39
SONA1 Songino Array 28.70 58 *e*P **P 02 12 53.6 -0.1**
CD2 Chengdu 29.06 93 P **P 02 12 56.5 -0.5**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
ULN Ulaanbaatar 29.13 58 *e*P **P 02 12 57.8 +0.1**

comp=Z,3.5nm,0.8s
ULN Ulaanbaatar 29.13 58 *cePP* **P 02 12 57.6 0.0**
ULN pmax pmax
comp=Z,5.0nm,1.0s
EIL Elat 29.66 265 LR LR 02 28 06.4
comp=Z,485nm,18.5s,baz=64,slow=43
KLMR Klimovskoe 29.76 331 *eP* **P 02 13 02.2 -0.6**
KLMR pmax pmax
comp=Z,9.0nm,1.3s
KLMR Klimovskoe 29.76 331 *eP* **P 02 13 02.2 -0.6**
KLMR AMP 02 13 09.7
comp=Z,9.0nm,1.3s
KMI Kunming 30.93 104 P **P 02 13 15.0 +1.2**
KMI pmax pmax
comp=Z,9.0nm,0.8s
KMI LR LR
comp=Z,200nm,15.4s
KMI LR LR
comp=Z,200nm,18.5s
KMI LR LR
comp=Z,300nm,17.0s
KIS Kishinev 31.07 300 *eP* **P 02 13 16.0 +1.4**
KIS LRM MLR 02 30 35.0
comp=Z,300nm,13.0s
KIS Kishinev 31.07 300 *eP* **P 02 13 16.0 +1.4**
AKASG Malin Array Be 31.17 308 P **P 02 13 15.7 +0.3**
comp=Z,0.7nm,0.5s,baz=82,slow=7.1,SNR=11
AKASG LR LR 02 28 30.0
comp=Z,115nm,18.2s,baz=100,slow=41
AKASG Malin Array Be 31.17 308 P **P 02 13 15.7 +0.3**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKASG MLR MLR
comp=Z,115nm,18.2s
KIEV Kiev 31.18 308 *eP* **P 02 13 15.4 -0.1**
comp=Z,3.9nm,0.7s
KIEV Kiev 31.18 308 *ceP* **P 02 13 16.1 +0.7**
KIEV pmax pmax
comp=Z,2.0nm,0.7s
CFR Carcaliu 31.53 297⇑ *iP* P 02 13 23.8 +5.2
CFR Carcaliu 31.53 297⇑ P P 02 13 23.8 +5.2
CHTO Chiang Mai 31.93 118 *eP* **P 02 13 23.2 +0.8**
comp=Z,3.5nm,0.7s
PALK Pallekele 32.04 159 LR LR 02 26 23.6
comp=Z,119nm,19.3s,baz=298,slow=37
XAN Xi'an 32.05 85 P **P 02 13 23.5 +0.1**
XAN pP pP 02 13 27.8 +0.7
XAN pmax pmax
comp=Z,16nm,0.8s
XAN LR LR
comp=Z,320nm,9.1s
XAN LR LR
comp=Z,420nm,16.3s
XAN LR LR
comp=Z,500nm,15.4s
CMAR Chiang Mai Arr 32.17 119 P **P 02 13 22.8 -1.7**
comp=Z,3.2nm,0.3s,baz=310,slow=9.3,SNR=13
VRI Vrincioaia 32.51 298⇑ *iP* **P 02 13 29.2 +2.0**
VRI Vrincioaia 32.51 298⇑ P **P 02 13 29.2 +2.0**
PLOR Plostina 32.56 298⇓ *iP* **P 02 13 30.2 +2.5**
PLOR Plostina 32.56 298⇓ P **P 02 13 30.2 +2.5**
ISR Istrita 32.66 297⇑ *iP* **P 02 13 31.9 +3.3**
ISR Istrita 32.66 297⇑ P **P 02 13 31.9 +3.3**
MLR Muntele Rosu 33.06 298 P **P 02 13 34.3 +2.1**
comp=Z,1.8nm,1.0s,baz=181,slow=3.3,SNR=12
MLR Muntele Rosu 33.06 298⇓ *iP* **P 02 13 34.8 +2.5**
MLR Muntele Rosu 33.06 298 *eP* **P 02 13 33.8 +1.5**
comp=Z,12nm,0.9s
MLR Muntele Rosu 33.06 298 *eP* **P 02 13 33.8 +1.5**
MLR pmax pmax
comp=Z,12nm,0.9s
NANT Nan 33.18 116 P **P 02 13 35.9 +2.5**
comp=Z,5.5nm,0.9s
BURAR Bucovina Array 33.54 301⇓ *iP* **P 02 13 37.4 +1.1**
BURAR Bucovina Array 33.54 301 ⇓P **P 02 13 37.4 +1.1**
BUR04 Bucovina Ar. S 33.54 301 *eP* **P 02 13 37.1 +0.7**
BUR08 Bucovina Ar. S 33.55 301 *eP* **P 02 13 37.6 +1.2**
VOIR 33.70 297⇑ *iP* **P 02 13 39.4 +1.7**
VOIR 33.70 297⇑ P **P 02 13 39.4 +1.7**
PHIT Phitsanulok 34.06 118 P P 02 13 46.4 +5.4
comp=Z,21nm,1.0s
ARCR ARCALIA 34.13 300⇑ *iP* **P 02 13 43.9 +2.6**
LOT Lotru 34.60 298⇑ *iP* **P 02 13 47.1 +1.6**
PBKT Sadao Pong 34.87 119 P **P 02 13 51.8 +3.8**
comp=Z,14nm,1.2s
BOD Bodaibo 35.19 41 *eP* **P 02 13 49.4 -1.0**
BOD pmax pmax
comp=Z,12nm,1.0s
SRS Serrai 35.23 290 P **P 02 13 53.8 +2.8**
KWP Kalwaria Pacla 35.24 305 *eP* **P 02 13 50.6 -0.3**
KWP Kalwaria Pacla 35.24 305 *eP* **P 02 13 50.6 -0.3**
DRGR 35.26 300⇓ *iP* **P 02 13 51.9 +0.7**
DRGR 35.26 300 ⇓P **P 02 13 51.9 +0.7**
VTS Vitosha 35.29 293⇓ *iP* **P 02 13 51.2 -0.4**
VTS Vitosha 35.29 293 *eP* **P 02 13 51.8 +0.2**
comp=Z,6.1nm,1.2s
VTS Vitosha 35.29 293 *eP* **P 02 13 51.8 +0.2**
VTS pmax pmax
comp=Z,6.0nm,1.2s
ATD Arta Tunnel 35.33 229 LR LR 02 31 23.4
comp=Z,86nm,18.4s,baz=196,slow=42
TRPA Tarpa 35.34 302⇓ *iP* **P 02 13 53.5 +1.7**
NONG Nongkai 35.42 114 P **P 02 13 55.3 +2.6**
comp=Z,29nm,1.0s,comp=Z,2μm
KOLS Kolonicke sedl 35.52 304 *eP* **P 02 13 54.7 +1.4**
KOLS *e* 02 15 12.1
KOLS Kolonicke sedl 35.52 304 *eP* **P 02 13 54.7 +1.4**
KOLS *e*PP **PnPn 02 15 12.1 0.0**
FIA1 FINESS Array S 35.72 326 *eP* **P 02 13 54.8 -0.1**
FINES FINESS Array B 35.73 326 P **P 02 13 55.2 +0.3**
comp=Z,1.1nm,0.3s,baz=124,slow=10,SNR=24
FINES LR LR 02 29 21.6
comp=Z,288nm,18.5s,baz=112,slow=38
APA Apatity 35.98 337⇓ *iP* P 02 14 01.8 +4.8
APA pmax pmax
comp=Z,9.0nm,1.2s
APA MLR MLR
comp=Z,600nm,16.0s
BZS Buzias 36.09 298⇓ *iP* **P 02 14 00.0 +1.7**
BZS Buzias 36.09 298 ⇓P **P 02 14 00.0 +1.7**
MDVR Moldovita 36.10 297⇓ *iP* **P 02 14 00.4 +2.0**
NIE Niedzica 36.81 305 *eP* **P 02 14 05.9 +1.5**
NIE Niedzica 36.81 305 *eP* **P 02 14 05.9 +1.5**
FNA Florina 36.95 290 *eP* **P 02 14 06.5 +0.8**
comp=Z,5.6nm,0.8s
FNA Florina 36.95 290 *eP* **P 02 14 06.5 +0.8**
FNA pmax pmax
comp=Z,6.0nm,0.8s
PSZ Piszkesteto 37.12 302 *eP* **P 02 14 07.9 +0.8**
comp=Z,6.3nm,1.0s
OJC Ojcow 37.13 306 *eP* **P 02 14 07.9 +0.8**
OJC Ojcow 37.13 306 *eP* **P 02 14 07.4 +0.3**
comp=Z,9.4nm,0.7s
OJC Ojcow 37.13 306 *eP* **P 02 14 07.9 +0.8**
LANS Liptovska Anna 37.36 304 *eP* **P 02 14 11.1 +2.0**
LANS Liptovska Anna 37.36 304 *eP* **P 02 14 11.1 +2.0**
DIVS Divibare 37.41 296 *eP* **P 02 14 10.7 +1.1**
comp=Z,11nm,1.1s
WHN Wuhan 37.59 87⇑P P 02 14 17.0 +5.8
VYHS Vyhne 37.80 303 *eP* **P 02 14 14.1 +1.3**
VYHS Vyhne 37.80 303 *eP* **P 02 14 14.1 +1.3**
JAVC Velka Javorina 38.55 304 *eP* **P 02 14 21.3 +2.1**
MORC Moravsky Berou 38.59 305⇑ *iP* **P 02 14 20.7 +1.2**
MORC Moravsky Berou 38.59 305 *eP* **P 02 14 20.5 +1.0**
comp=Z,20nm,1.1s
MORC Moravsky Berou 38.59 305 *eP* **P 02 14 20.5 +1.0**
MORC pmax pmax
comp=Z,20nm,1.1s
MORC Moravsky Berou 38.59 305 *eP* **P 02 14 20.6 +1.1**
GKP Gorka Klasztor 38.78 311 *eP* **P 02 14 22.1 +1.1**
GKP Gorka Klasztor 38.78 311 *eP* **P 02 14 22.1 +1.1**
VRAC Vranov 39.23 304⇑ *iP* **P 02 14 26.7 +1.9**
VRAC Vranov 39.23 304⇑P **P 02 14 26.7 +1.9**
VRAC Vranov 39.23 304 *eP* **P 02 14 25.3 +0.5**
DPC Dobruska-Polom 39.36 306 *eP* **P 02 14 27.4 +1.5**
DPC *e*pP **sP 02 14 32.1 +1.0**
DPC Dobruska-Polom 39.36 306 *eP* **P 02 14 27.4 +1.5**
KRUC Moravsky 39.38 304 *eP* **P 02 14 26.6 +0.6**
ARCES ARCESS Array B 39.49 337 P **P 02 14 27.1 +0.4**
comp=Z,7.5nm,0.8s,baz=110,slow=7.1,SNR=21
ARCES ARCESS Array B 39.49 337 *eP* **P 02 14 26.2 -0.4**
UPC Upice 39.55 306 AMS AMS 02 34 10.0
comp=Z,200nm,13.6s
CONA Conrad Observa 39.83 302 *i* pP **P 02 14 31.4 +1.5**
comp=Z,6.8nm,1.0s
ARSA Arzberg 40.13 301 *i* pP pP 02 14 35.1 -1.0
comp=Z,1.7nm,0.6s
GOPC GO Pecny, Ondr 40.37 306 AMS AMS 02 34 10.0
comp=Z,200nm,17.0s
PVCC Panska Ves 40.47 306 AMS AMS 02 34 40.0
comp=Z,200nm,13.4s
PRU Pruhonice 40.52 306 *eP* **P 02 14 37.2 +1.7**
PRU AMS AMS 02 34 20.0
comp=Z,200nm,14.8s
PRU Pruhonice 40.52 306 *eP* **P 02 14 37.2 +1.7**
PRU MLR MLR
comp=Z,200nm,14.8s
SOKA Soboth 40.53 301 *ep*P **P 02 14 36.8 +1.1**
comp=Z,2.8nm,0.6s
NJ2 Nanjing 40.56 83 *eP* **P 02 14 36.0 0.0**
NJ2 pmax pmax
comp=Z,11nm,0.6s
BRG Berggiesshubel 40.85 307 *eP* **P 02 14 39.0 +0.8**
comp=Z,4.9nm,0.9s
BRG *i* 02 14 43.7
comp=Z,5.5nm,0.8s
BRG S S 02 22 02.0 +73
comp=N,118nm,13.2s
comp=E,148nm,17.2s
comp=Z,244nm,13.3s
BRG Berggiesshubel 40.85 307 *eP* **P 02 14 39.0 +0.8**
BRG pmax pmax
comp=Z,5.0nm,0.9s
BRG MLR MLR
comp=N,118nm,13.2s
BRG MLR MLR
comp=E,148nm,17.2s
BRG MLR MLR
comp=Z,244nm,13.3s
OBKA Obir 40.88 300 *ep*P **P 02 14 40.3 +1.6**
comp=Z,2.1nm,0.9s
MOA Molln 40.90 302 *ep*P **P 02 14 39.7 +1.0**
comp=Z,2.9nm,0.9s
GERES GERESS Array B 41.17 304 P **P 02 14 40.7 -0.3**
comp=Z,0.7nm,0.6s,baz=72,slow=8.6,SNR=9.3
GERES LR LR 02 34 08.5
comp=Z,76nm,19.1s,baz=76,slow=40
GEA0 GERESS Array S 41.17 304 *eP* **P 02 14 41.6 +0.7**
KHC Kasperske Hory 41.22 304 *eP* **P 02 14 41.8 +0.5**
KHC *ep*P **sP 02 14 47.8 +1.2**
KHC AMS AMS 02 34 40.0
KHC Kasperske Hory 41.22 304 *eP* **P 02 14 41.8 +0.5**
KHC *e* 02 14 47.8
KHC MLR MLR
comp=E,100nm,16.8s
CUC Castrocucco 41.26 290 *eP* **P 02 14 43.4 +1.6**
comp=E,7.4nm,0.8s
HFS Hagfors 41.29 321 P **P 02 14 41.6 -0.1**
comp=E,4.6nm,0.5s,baz=98,slow=11,SNR=40
HFS LR LR 02 34 41.6
comp=E,168nm,20.0s,baz=96,slow=40
CLL Collm 41.41 308 *eP* **P 02 14 44.0 +1.2**
comp=Z,4.0nm,1.0s
CLL L L 02 33 00.0
comp=Z,100nm,19.2s
CLL Collm 41.41 308 *eP* **P 02 14 43.0 +0.3**
comp=Z,3.0nm,0.8s
CLL Collm 41.41 308 *eP* **P 02 14 43.1 +0.3**
CLL pmax pmax
comp=Z,3.0nm,0.8s
MYKA Terra Mystica 41.48 301 *ep*P pP 02 14 46.3 -1.0
comp=Z,2.2nm,0.6s
CN2 Changchun 42.16 63 *eP* **P 02 14 49.3 +0.3**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
ABTA Abfaltersbach 42.24 301 *ep*P pP 02 14 53.8 +0.3
comp=Z,2.3nm,1.1s
NB2 NORSAR Subarra 42.60 322 P **P 02 14 52.0 -0.5**
comp=Z,1.3nm,0.5s,baz=96,slow=8.6
NB2 NORSAR Subarra 42.60 322 P **P 02 14 49.9 -2.6**
NOA NORSAR Array B 42.60 322 LR LR 02 35 43.3
comp=Z,147nm,19.0s,baz=115,slow=40
GRFO Grafenberg 42.69 306 *eP* **P 02 14 53.1 -0.2**
comp=Z,2.7nm,0.6s
GRFO Grafenberg 42.69 306 *eP* **P 02 14 53.1 -0.2**
GRFO pmax pmax
comp=Z,3.0nm,0.6s
WTTA Wattenberg 42.75 302 *ep*P **P 02 14 56.5 +2.5**
comp=Z,3.2nm,0.5s
MOTA Moosalm 43.09 302 *eP* **P 02 14 55.1 -1.6**
comp=Z,4.7nm,1.0s
RETA Reute 43.30 302 *eP* **P 02 14 58.1 -0.2**
comp=Z,2.4nm,0.9s
FETA Feichten 43.40 302 *eP* **P 02 14 58.9 -0.4**
comp=Z,2.1nm,0.7s
YAK Yakutsk 43.68 36 *eP* **P 02 15 01.1 0.0**
YAK Yakutsk 43.68 36[] *eP* **P 02 15 01.5 +0.4**
YAK pmax pmax
comp=Z,20nm,0.6s
DAVA Damuels 43.92 302 *eP* **P 02 15 02.0 -1.5**
comp=Z,8.6nm,1.1s
DAVOX Davos/Dischmat 44.01 302 P **P 02 15 04.2 0.0**
comp=Z,1.5nm,0.5s,baz=108,slow=14,SNR=3.6
DAVOX LR LR 02 37 06.1
comp=Z,83nm,18.8s,baz=82,slow=41
PSI Prapat 44.07 135 P **P 02 15 02.7 -2.2**
comp=Z,4.8nm,0.5s,baz=0.4,slow=4.4,SNR=8.5
PSI LR LR 02 34 40.2
comp=Z,77nm,18.4s,baz=85,slow=38
PSI Prapat 44.07 135 *eP* **P 02 15 03.0 -1.9**
comp=Z,11nm,0.9s
PSI Prapat 44.07 135 *eP* **P 02 15 03.0 -1.9**
PSI pmax pmax
comp=Z,11nm,0.9s
TIXI Tiksi 45.08 23 P **P 02 15 11.9 -0.3**
comp=Z,6.9nm,0.6s,baz=271,slow=5.9,SNR=8.8
TIXI Tiksi 45.08 23 *eP* **P 02 15 11.5 -0.6**
TIXI Tiksi 45.08 23 *ceP* **P 02 15 11.2 -1.0**
TIXI pmax pmax
comp=Z,4.0nm,0.8s
KLR Kul'dur 45.43 55 P **P 02 15 14.8 -0.5**
comp=Z,0.2nm,0.5s,baz=288,slow=9.7,SNR=12
KLR LR LR 02 36 11.3
comp=Z,18nm,19.3s,slow=39
KLR Kul'dur 45.43 55 *ceP* **P 02 15 15.3 0.0**
PGF Pioggiola 45.57 296 *eP* **P 02 15 16.3 -0.3**
PGF pmax pmax
comp=Z,16nm,1.1s
KS01 Wonju Array Si 45.64 72 *eP* **P 02 15 17.2 +0.1**
KS01 *e*S **S 02 21 56.9 -2.6**
KSAR Wonju Array Be 45.65 72 P **P 02 15 16.9 -0.1**
KSAR Wonju Array Be 45.65 72 P **P 02 15 17.0 -0.1**
KSRS Korea Array 45.67 72 P **P 02 15 16.9 -0.3**
comp=Z,2.9nm,0.8s,baz=286,slow=6.1,SNR=10
KSRS LR LR 02 36 51.1
comp=Z,269nm,18.3s,baz=294,slow=39
KSRS Korea Array 45.67 72 P **P 02 15 17.0 -0.3**
KSRS pmax pmax
comp=Z,3.0nm,0.9s
KSRS MLR MLR
comp=Z,269nm,18.3s
WLF Walferdange 45.95 306 *eP* **P 02 15 20.5 +1.1**
comp=Z,34nm,1.6s
WLF Walferdange 45.95 306 *eP* **P 02 15 20.5 +1.1**
WLF pmax pmax
comp=Z,34nm,1.6s
SPITS Spitsbergen Ar 45.97 347 P **P 02 15 20.1 +0.9**
comp=Z,11nm,1.0s,baz=98,slow=8.5,SNR=11
SBF Sospel 46.34 298 *eP* **P 02 15 22.9 +0.3**
SBF pmax pmax
comp=Z,9.0nm,0.9s
LPG La Plagne 46.41 300 *eP* **P 02 15 24.3 +0.9**
LPG pmax pmax
comp=Z,5.0nm,0.8s
LPL La Plagne 46.42 300 *eP* **P 02 15 24.0 +0.6**
LPL pmax pmax
comp=Z,2.0nm,0.4s
USRK Ussuriysk Ar. 46.66 61 P **P 02 15 24.0 -1.1**
comp=Z,2.2nm,0.6s,baz=290,slow=5.7
USRK LR LR 02 37 23.8
comp=Z,223nm,21.6s,baz=280,slow=39
KBS Kingsbay 47.10 347 *eP* **P 02 15 28.4 +0.4**
KBS Kingsbay 47.10 347 *eP* **P 02 15 28.4 +0.4**
BAIF Baives 47.12 307 *eP* **P 02 15 30.3 +1.8**
BAIF pmax pmax
comp=Z,10.0nm,1.1s
KEST Kesra 47.44 287 P **P 02 15 32.6 +1.3**
comp=Z,4.4nm,0.9s,baz=303,slow=5.7,SNR=5.0
KEST Kesra 47.44 287 *eP* **P 02 15 33.1 +1.7**
comp=Z,19nm,1.5s
VIVF Saint-Julien-l 47.99 300 *eP* **P 02 15 34.8 -0.6**
VIVF pmax pmax
comp=Z,9.0nm,1.4s
SMF Signal de Mont 48.10 303 *eP* **P 02 15 36.1 -0.1**
SMF pmax pmax
comp=Z,7.0nm,1.1s
AVF Avril sur Loir 48.39 303 *eP* **P 02 15 37.4 -1.0**
AVF pmax pmax
comp=Z,53nm,2.0s
KMBO Kilima Mbogo 48.79 225 LR LR 02 39 46.3
comp=Z,65nm,18.3s,baz=4.5,slow=40
TCF Toulx Ste Croi 49.28 302 *eP* **P 02 15 45.6 +0.3**
TCF pmax pmax
comp=Z,19nm,1.4s
JNU Nakatsue 49.50 76 P **P 02 15 45.8 -1.5**
comp=Z,13nm,0.8s,baz=150,slow=1.8,SNR=5.4
JNU LR LR 02 38 14.4
comp=Z,39nm,18.1s,baz=308,slow=38
JNU Nakatsue 49.50 76 *eP* **P 02 15 47.7 +0.5**
comp=Z,18nm,0.9s
NKL Nikolayevsk 50.20 48 *eP* **P 02 15 51.2 -0.9**
NKL pmax pmax
comp=Z,30nm,1.0s
ETSF Etsaut 52.19 299 *eP* **P 02 16 07.9 +0.5**
ETSF pmax pmax
comp=Z,6.0nm,0.8s
DAG Danmarks Havn 53.16 343 *i* P **P 02 16 14.1 +0.2**
comp=Z,4.8nm,0.9s
MJAR Matsushiro Arr 53.67 69 P **P 02 16 17.8 -0.5**
comp=Z,1.6nm,0.5s,baz=290,slow=9.3,SNR=7.3
MJAR LR LR 02 40 15.7
comp=Z,61nm,21.0s,baz=270,slow=37
ES19 SONSECA Array 55.70 297 *eP* **P 02 16 33.5 +0.4**
ESDC Sonseca Array 55.75 297 P **P 02 16 33.6 +0.2**
comp=Z,4.5nm,0.8s,baz=59,slow=7.3,SNR=26
TAM Tamanrasset 56.17 274 *eP* **P 02 16 39.2 +2.5**
comp=Z,4.0nm,0.8s
TAM Tamanrasset 56.17 274 *eP* **P 02 16 39.2 +2.5**
TAM pmax pmax
comp=Z,4.0nm,0.8s
BORG Borgarnes 56.87 329 LR LR 02 43 44.8
comp=Z,39nm,18.8s,baz=23,slow=39
MTE Manteigas 57.97 299 *eP* **P 02 16 50.4 +1.2**
comp=Z,27nm,1.7s
MTE Manteigas 57.97 299 *eP* **P 02 16 48.3 -0.9**
comp=Z,14nm,1.0s
BILL Bilibino 58.03 26 *i* P **P 02 16 49.3 +0.3**
BILL *e* 02 18 58.5
BILL *e*S S 02 25 00.1 +11
BILL pmax pmax
comp=Z,2.0nm,0.9s
PVIS Viseu 58.09 299 *eP* **P 02 16 51.3 +1.3**
comp=Z,18nm,1.2s
PMRV Marv??o 58.27 298 *eP* **P 02 16 52.4 +1.2**
comp=Z,24nm,1.8s
PBAR Barrancos 58.55 296 *eP* **P 02 16 54.3 +1.1**
comp=Z,48nm,1.6s
SUMG Summit 59.45 341 *i* P **P 02 17 00.1 +0.8**
comp=Z,5.6nm,0.8s
SUMG Summit 59.45 341 *eP* **P 02 17 00.4 +1.0**
comp=Z,6.1nm,0.8s
SUMG Summit 59.45 341 *eP* **P 02 17 00.4 +1.0**
SUMG pmax pmax
comp=Z,6.0nm,0.8s
PETK Petropavlovsk- 59.94 44 P **P 02 17 02.0 -0.5**
comp=Z,2.5nm,0.7s,baz=297,slow=7.9
PETK LR LR 02 44 17.7
comp=Z,55nm,18.4s,baz=252,slow=37
PETK Petropavlovsk- 59.94 44 *eP* **P 02 17 03.2 +0.7**
PETK Petropavlovsk- 59.94 44 *eP* **P 02 17 03.2 +0.7**
TOA0 Torodi Ar. Sit 64.50 267 *eP* **P 02 17 33.2 -0.5**
TORD Torodi Ar. Bea 64.50 267 P **P 02 17 32.9 -0.7**
comp=Z,2.9nm,0.8s,baz=50,slow=6.1
TORD LR LR 02 50 11.4
comp=Z,72nm,18.2s,baz=225,slow=40
LSZ Lusaka 65.45 224 *eP* **P 02 17 39.6 -0.1**
comp=Z,1.7nm,0.7s
LSZ Lusaka 65.45 224 *eP* **P 02 17 39.7 -0.1**
LSZ pmax pmax
comp=Z,2.0nm,0.7s
KOWA Kowa 68.25 272 P **P 02 17 57.1 -0.5**
comp=Z,3.7nm,0.8s,baz=51,slow=8.4,SNR=7.6
KOWA LR LR 02 51 58.2
comp=Z,64nm,18.0s,baz=46,slow=40
GUMO Guam 70.37 88 LR LR 02 51 22.9
comp=Z,26nm,19.2s,baz=88,slow=38
COLD Coldfoot 71.09 15 *eP* **P 02 18 16.0 +1.7**
comp=Z,4.1nm,0.8s
DBIC Dimbokro 73.52 266 LR LR 02 55 34.8
comp=Z,117nm,18.8s,baz=56,slow=40
CAST Castle Rocks 73.88 18 *eP* **P 02 18 32.9 +1.8**
comp=Z,4.9nm,0.8s
IL1 Eielson Array 73.90 15 *eP* **P 02 18 31.1 -0.1**
ILAR Eielson Array 73.90 15 P **P 02 18 31.4 +0.2**
comp=Z,2.1nm,0.9s,baz=319,slow=5.0,SNR=7.6
PPLA Purkeypile 74.29 18 *eP* **P 02 18 35.0 +1.3**
comp=Z,5.0nm,0.8s
TSUM Tsumeb 74.73 230 *eP* **P 02 18 37.0 +0.2**
comp=Z,4.6nm,0.8s
DAWY Dawson 75.97 13 *eP* **P 02 18 44.6 +1.4**
comp=Z,4.7nm,1.1s
SML Sawmill 76.16 17 *eP* **P 02 18 44.8 +0.4**
comp=Z,8.8nm,0.8s
SML Sawmill 76.16 17 *eP* **P 02 18 44.8 +0.4**
SML pmax pmax
comp=Z,9.0nm,0.8s
SCM Sheep Creek Mo 76.38 17 *eP* **P 02 18 45.2 -0.4**
comp=Z,10nm,0.9s
SCM Sheep Creek Mo 76.38 17 *eP* **P 02 18 45.2 -0.4**
SCM pmax pmax
comp=Z,10.0nm,0.9s
YKA Yellowknife Ar 80.03 2 P **P 02 19 06.1 +0.4**
comp=Z,2.0nm,0.8s,baz=351,slow=5.4,SNR=16
SCHQ Schefferville 80.43 336 LR LR 02 54 42.1
comp=Z,54nm,18.7s,baz=34,slow=36
WRA Warramunga Arr 83.73 121 P **P 02 19 23.8 -2.0**
comp=Z,0.5nm,0.7s,baz=326,slow=5.0,SNR=10
WRAB Tennant Creek 83.73 121 *eP* **P 02 19 26.5 +0.7**
WRAB Tennant Creek 83.73 121 *eP* **P 02 19 26.5 +0.7**
ASAR Alice Springs 86.02 124 P **P 02 19 34.5 -2.8**
comp=Z,0.6nm,0.7s,baz=312,slow=5.1,SNR=5.0
FFC Flin Flon 87.58 355 *eP* **P 02 19 44.7 +0.2**
comp=Z,6.6nm,1.0s
FFC Flin Flon 87.58 355 *eP* **P 02 19 44.7 +0.2**
FFC pmax pmax
comp=Z,7.0nm,1.0s
NEW Newport 94.15 4 LR LR 03 08 38.3
comp=Z,37nm,18.6s,baz=350,slow=39
TRQA Tornquist 142.00 254[] *e*PKIKP **PKPdf 02 26 27.8 -0.7**
TRQA pmax pmax
comp=Z,17nm,2.5s

IDC ***29*** *02:40:36.2±1.9, 33°.23S×178°.38W, h0km, mb4.2/4, mb1 4.3/5, mb1mx3.9/49, mbtmp4.2/5, ML3.7/1, Error ellipse: s-maj=53.2km s-min=39.1km az=152.0*
NEIC ***29*** *02:40:37.4±1.1, 33°.29S×178°.31W, h10km, mb4.1/2, Error ellipse: s-maj=24.9km s-min=17.6km az=97.0*
ISCJB ***29*** *02:40:40.5±2.5, 33°.4S±0°.1×178°.5W±0°.4, h41km, mb4.1/6, Error ellipse: s-maj=46.4km s-min=13.3km az=12.7*
ISC 29 02:40:43.1±1.8, 33°.4S±0°.1×178°.5W±0°.3, h41km, n11, σ0=86/12, mb4.1/6, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.02**	**215**	Pn	**Pn**	**02 42 09.1**	**-0.5**
	1.8nm,0.3s,baz=254,slow=2.5,SNR=12						
URZ				Sn	**Sn**	**02 43 18.1**	**+0.9**
	6.0nm,0.3s,baz=252,slow=3.0,SNR=14						
CTA	**Charters Tower**	**33.95**	**284**	P	**P**	**02 47 23.7**	**+1.1**
	3.0nm,0.7s,baz=105,slow=10,SNR=4.4						
CTAO	**Charters Tower**	**33.95**	**284**	*eP*	**P**	**02 47 23.3**	**+0.6**
ASAR	**Alice Springs**	**42.58**	**270**	P	**P**	**02 48 34.9**	**-0.4**
	4.2nm,0.7s,baz=108,slow=7.4,SNR=21						
WRAB	**Tennant Creek**	**43.83**	**276**	*eP*	**P**	**02 48 44.5**	**-0.9**
	1.4nm,0.5s						
WRA	**Warramunga Arr**	**43.84**	**276**	P	**P**	**02 48 44.7**	**-0.8**
	2.2nm,0.6s,baz=116,slow=7.8,SNR=36						
FITZ	**Fitzroy Crossi**	**51.96**	**272**	P	**P**	**02 49 47.4**	**-0.9**
	1.1nm,0.8s,baz=140,slow=7.9,SNR=5.1						
CASY	**Casey**	**52.31**	**209**	*eP*	**P**	**02 49 50.1**	**-0.2**
	1.5nm,0.6s						
FINES	**FINESS Array B**	**147.75**	**338**	PKPbc	**PKPdf**	**03 00 20.9**	**+1.2**
	2.0nm,0.8s,baz=48,slow=2.1,SNR=6.1						
MMAI	**Mount Meron Ar**	**151.66**	**279**	PKPbc	**PKPbc**	**03 00 33.5**	**+0.2**
	1.8nm,0.6s,baz=69,slow=4.8,SNR=4.3						
BRTR	**Keskin Array B**	**153.48**	**293**	PKPbc	**PKPbc**	**03 00 36.6**	**-0.6**

0.5nm,0.6s,baz=128,slow=3.9,SNR=4.0

*ISCJB **29** 02:45:21.6±0.4,51°.47N±0°.02×16°.14E±0°.03,h0km,Error ellipse: s-maj=3.1km s-min=2.5km az=153.4*
*CSEM **29** 02:45:23.4±0.2,51°.49N×16°.06E,h1km,ML2.8/4,Error ellipse: s-maj=6.3km s-min=2.6km az=77.0,Suspected Mining induced.*
*PRU **29** 02:45:25.1,51°.44N×16°.10E,h0km*
*VIE **29** 02:45:25.4±0.7,51°.31N×16°.00E,h0km,mb2.3/2,ml2.4/6,Error ellipse: s-maj=5.8km s-min=4.3km az=160.0 74 km WNW of Wroclaw Suspected Mining induced.*
*UPP **29** 02:45:27.8±3.1,51°.70N×15°.51E,h0km,ML1.8*

ISC 29 02:45:22.7±0.8,51°.54N±0°.03×16°.12E±0°.03,h0km,n49,σ1º33/82,1D,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.71**	**171**	*i* Pg	**Pg**	**02 45 36.8**	**+0.6**
KSP				*i* Sg	**Sg**	**02 45 45.3**	**-0.1**
KSP	**Ksiaz**	**0.71**	**171**	⇓*i*Pg	**Pg**	**02 45 36.8**	**+0.6**
KSP				*i* Sg	**Sg**	**02 45 45.3**	**-0.1**
UPC	**Upice**	**1.04**	**184**	*e*PG	**Pg**	**02 45 43.0**	**+0.5**
UPC				*e*SG	**Sg**	**02 45 55.7**	**-0.2**
	comp=Z,55nm,0.3s						
DPC	**Dobruska-Polom**	**1.20**	**174**	*e*PG	**Pg**	**02 45 45.6**	**0.0**
DPC				*e*SG	**Sg**	**02 46 00.3**	**-0.8**
	comp=Z,14nm,0.2s						
PVCC	**Panska Ves**	**1.41**	**225**	*e*PG	**Pb**	**02 45 50.5**	**+0.6**
PVCC				*e*SG	**Sg**	**02 46 08.2**	**+0.2**
	comp=Z,76nm,0.2s						
KRLC	**Kraliky**	**1.52**	**164**	*e*PG	**Pn**	**02 45 51.9**	**+0.6**
KRLC				*e*SG	**Sg**	**02 46 09.8**	**-1.8**
	comp=Z,5.5nm,0.4s						
BRG	**Berggiesshubel**	**1.52**	**245**	PG	**Pb**	**02 45 52.5**	**+0.6**
BRG				SG	**Sn**	**02 46 12.7**	**+0.9**
	34nm,0.4s						
GOPC	**GO Pecny, Ondr**	**1.83**	**208**	*e*PG	**Pb**	**02 45 57.3**	**+0.1**
PRU	**Pruhonice**	**1.85**	**213**	*e*PG	**Pb**	**02 45 57.3**	**-0.1**
PRU				*e*SG	**Sn**	**02 46 19.9**	**+0.2**
	comp=Z,13nm,0.4s						
CLL	**Collm**	**1.97**	**264**	*i* Pn	**Pn**	**02 45 56.1**	**-1.2**
CLL				*i* Pg	**Pb**	**02 46 00.3**	**+0.9**
CLL				*i*		02 46 04.6	
CLL				*e*Sg	**Sg**	**02 46 27.0**	**+1.1**
	comp=Z,19nm,0.3s						
MORC	**Moravsky Berou**	**1.98**	**152**	*e*Pn	**Pn**	**02 45 57.6**	**0.0**
MORC				*e*Sg	**Sb**	**02 46 24.9**	**0.0**
MORC	**Moravsky Berou**	**1.98**	**152**	*e*PN	**Pn**	**02 45 57.6**	**0.0**
MORC				*e*SG	**Sb**	**02 46 24.9**	**0.0**
OKC	**Ostrava-Krasne**	**2.14**	**142**	*e*SG	**Sb**	**02 46 29.1**	**-0.2**
	comp=Z,15nm,0.5s						
VRAC	**Vranov**	**2.25**	**172**	*e*Pn	**Pn**	**02 46 02.4**	**+1.1**
VRAC				*e*Sg	**Sg**	**02 46 34.3**	**-0.8**
VRAC	**Vranov**	**2.25**	**172**	*e*PN	**Pn**	**02 46 02.4**	**+1.1**
VRAC				*e*SG	**Sg**	**02 46 34.3**	**-0.8**
KRUC	**Moravsky**	**2.49**	**176**	*e*PN	**Pn**	**02 46 04.6**	**+0.2**
KRUC				*e*SG	**Sg**	**02 46 41.5**	**-1.1**
NKC	**Novy Kostel**	**2.67**	**242**	*e*PN	**Pn**	**02 46 08.0**	**+1.0**
NKC				*e*PG	**Pg**	**02 46 14.3**	**+0.4**
NKC				*e*SG	**Sg**	**02 46 49.7**	**+1.3**
	comp=Z,17nm,0.3s						
OJC	**Ojcow**	**2.68**	**118**	*e*Pg	**Pg**	**02 46 15.7**	**+1.7**
OJC				*e*Sg	**Sg**	**02 46 50.2**	**+1.5**
OJC	**Ojcow**	**2.68**	**118**	*e*Pg	**Pg**	**02 46 15.7**	**+1.7**
OJC				*e*Sg	**Sg**	**02 46 50.2**	**+1.5**
KHC	**Kasperske Hory**	**2.91**	**215**	*e*PN	**Pn**	**02 46 10.9**	**+0.6**
KHC				*e*PG	**Pb**	**02 46 16.7**	**+1.2**
KHC				*e*SN	**Sn**	**02 46 45.0**	**-1.0**
KHC				*e*SG	**Sg**	**02 46 54.3**	**-1.9**
	comp=Z,6.2nm,0.3s						
LANS	**Liptovska Anna**	**3.21**	**137**	*e*PG	**Pg**	**02 46 24.7**	**+0.5**
LANS				*e*SG	**Sg**	**02 47 04.0**	**-1.8**
LANS	**Liptovska Anna**	**3.21**	**137**	*e*Pg	**Pg**	**02 46 24.7**	**+0.5**
LANS				*e*Sg	**Sg**	**02 47 04.0**	**-1.8**
MODS	**Modra-Piesok**	**3.26**	**166**	*e*SG	**Sg**	**02 47 06.1**	**-1.2**
MODS				*e*LG	Lg	02 47 20.5	
MODS	**Modra-Piesok**	**3.26**	**166**	*e*Sg	**Sg**	**02 47 06.1**	**-1.2**
VYHS	**Vyhne**	**3.52**	**149**	*e*SG	**Sg**	**02 47 14.4**	**-1.2**
VYHS	**Vyhne**	**3.52**	**149**	*e*Sg	**Sg**	**02 47 14.4**	**-1.2**
CONA	**Conrad Observa**	**3.62**	**183**	*i* Pn	**Pn**	**02 46 19.3**	**-0.8**
	comp=Z,0.1nm,0.1s						
CONA				Sg	**Sg**	**02 47 17.5**	**-1.4**
	comp=Z,6.9nm,0.4s						
CONA	**Conrad Observa**	**3.62**	**183**	Pn	**Pn**	**02 46 19.3**	**-0.8**
	comp=Z,0.1nm,0.1s						
CONA				Sg	**Sg**	**02 47 17.5**	**-1.4**
	comp=Z,6.9nm,0.4s						
BSD	**Bornholm Skovb**	**3.65**	**349**	*i* P	**Pn**	**02 46 21.0**	**+0.6**
BSD				*i* S	**Sn**	**02 47 01.9**	**-2.3**
BSD	**Bornholm Skovb**	**3.65**	**349**	*e*P	**Pn**	**02 46 21.1**	**+0.6**
	SNR=91						
BSD				*i* S	**Sn**	**02 47 01.9**	**-2.3**
MOA	**Molln**	**3.88**	**199**	*i* Pn	**Pn**	**02 46 23.1**	**-0.6**
	comp=Z,0.2nm,0.1s						
MOA				Sg	**Sg**	**02 47 24.5**	**-3.0**
	comp=Z,0.8nm,0.2s						
MOA	**Molln**	**3.88**	**199**	Pn	**Pn**	**02 46 23.1**	**-0.6**
	comp=Z,0.2nm,0.1s						
MOA				Sg	**Sg**	**02 47 24.5**	**-3.0**
	comp=Z,0.8nm,0.2s						
ARSA	**Arzberg**	**4.31**	**185**	Sg	**Sg**	**02 47 40.9**	**-0.3**
	comp=Z,1.9nm,0.4s						
ARSA	**Arzberg**	**4.31**	**185**	Sg	**Sg**	**02 47 40.9**	**-0.3**
	comp=Z,1.9nm,0.4s						
KBA	**Koelnbreinsper**	**4.82**	**203**	*e*Sg	**Sg**	**02 47 58.4**	**+0.9**
	comp=Z,1.0nm,0.1s						
KBA	**Koelnbreinsper**	**4.82**	**203**	Sg	**Sg**	**02 47 58.4**	**+0.9**
	comp=Z,1.0nm,0.1s						
BJUU	**Bjuv**	**4.90**	**339**	P	**Pn**	**02 46 37.8**	**+0.2**
BJUU				S	**Sn**	**02 47 32.0**	**-2.9**
BJUU	**Bjuv**	**4.90**	**339**	P	**Pn**	**02 46 37.8**	**+0.2**
BJUU				S	**Sn**	**02 47 32.0**	**-2.9**
VXJU	**Vaexsjoe**	**5.44**	**353**	P	**Pn**	**02 46 46.2**	**+1.3**
VXJU				S	**Sn**	**02 47 45.2**	**-3.0**
VXJU	**Vaexsjoe**	**5.44**	**353**	P	**Pn**	**02 46 46.2**	**+1.3**
BYXU	**Byxelkrok**	**5.79**	**5**	P	**Pn**	**02 46 51.0**	**+1.3**
BYXU	**Byxelkrok**	**5.79**	**5**	P	**Pn**	**02 46 51.0**	**+1.3**
ASPU	**Aespoe**	**5.90**	**3**	P	**Pn**	**02 46 53.2**	**+2.0**
ASPU	**Aespoe**	**5.90**	**3**	P	**Pn**	**02 46 53.2**	**+2.0**
GNOU	**Gnosjoe**	**5.93**	**347**	P	**Pn**	**02 46 52.7**	**+1.0**
EKSU	**Eksjoe**	**6.07**	**356**	P	**Pn**	**02 46 54.9**	**+1.4**
EKSU	**Eksjoe**	**6.07**	**356**	P	**Pn**	**02 46 54.9**	**+1.4**
VSTU	**Vaestervik**	**6.14**	**2**	P	**Pn**	**02 46 56.7**	**+2.2**
VSTU	**Vaestervik**	**6.14**	**2**	P	**Pn**	**02 46 56.7**	**+2.2**

MAN 29 02:57:07.8,6°.73N×126°.68E,h116km,mb4.6,ML3.5,MS3.3,1C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.47**	**297**	*e*P	Pn	02 57 26.9	+1.8
MATI				*e*S	Sn	02 57 40.6	+2.5
DMPH	**Davao City--Mi**	**1.21**	**287**	⇑*e*P	Pn	02 57 37.4	+5.6
DMPH				*i* S	Sn	02 57 59.1	+9.2
BIPH	**Bislig**	**1.48**	**348**	⇓*i*P	Pn	02 57 36.0	+1.3
BIPH				*i* S	Sn	02 57 53.4	-1.8
BUKP	**Musuan**	**1.97**	**306**	*e*P	Pn	02 57 42.2	+1.5
BUKP				*e*S	Sn	02 58 06.5	+0.6
CGP	**Cagayan de Oro**	**2.61**	**311**	*e*P	Sn	02 58 21.0	+0.5
PAGZ	**Pagadian**	**3.45**	**289**	*e*P	Pn	02 58 00.5	+0.5

*IDC **29** 03:15:53.9±1.4,36°.37S×179°.79E,h0km,mb4.1/3,mb1 4.3/4,mb1mx3.9/42,mbtmp4.1/4,ML3.9/1,MS3.5/3,Ms1 3.5/3,ms1mx2.9/43,Error ellipse: s-maj=62.2km s-min=30.1km az=158.0*
*WEL **29** 03:15:57.5,37°.8S×18°.0E±1°.2,h107km±18km*
*NEIC **29** 03:15:59.5±0.0,36°.59S×179°.85E,h33km,mb4.1/2,ML4.3(WEL),After WEL.*

ISC 29 03:15:54.0±2.9,36°.73S±0°.07×179°.98W±0°.08,h6km±16km,n95,σ1º36/110,mb4.1/5,East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.60**	**238**	Pn	**Pb**	**03 16 23.6**	**-0.3**
MXZ				Sn	**Sn**	**03 16 42.0**	**-1.8**
MXZ	**Matakaoa Point**	**1.60**	**238**	P	**Pb**	**03 16 23.7**	**-0.3**
MXZ				S	**Sn**	**03 16 43.2**	**-0.6**
WMGZ	**Waiomatatini S**	**1.68**	**229**	Pn	**Pb**	**03 16 26.2**	**+0.9**
WMGZ				Sn	**Sg**	**03 16 48.2**	**+0.2**
WMGZ	**Waiomatatini S**	**1.68**	**229**	P	**Pb**	**03 16 26.3**	**+0.9**
WMGZ				S	**Sb**	**03 16 47.5**	**+0.8**
PKGZ	**Pakihiroa**	**1.93**	**233**	P	**Pb**	**03 16 29.1**	**-0.5**
PKGZ				S	**Sn**	**03 16 52.2**	**+0.1**
PUZ	**Puketiti**	**1.94**	**226**	Pn	**Pb**	**03 16 29.5**	**-0.2**
PUZ				Sn	**Sb**	**03 16 53.5**	**-0.7**
PUZ	**Puketiti**	**1.94**	**226**	P	**Pb**	**03 16 29.5**	**-0.2**
PUZ				S	**Sb**	**03 16 53.7**	**-0.5**
HAZ	**Te Kaha**	**2.06**	**240**	P	**Pb**	**03 16 31.1**	**-0.7**
TWGZ	**Tauwhareparae**	**2.17**	**228**	Pn	**Pb**	**03 16 32.9**	**-0.8**
TWGZ	**Tauwhareparae**	**2.17**	**228**	P	**Pb**	**03 16 32.8**	**-1.0**
TWGZ				S	**Sb**	**03 16 59.6**	**-1.3**
RUGZ	**Raukumara Rang**	**2.24**	**236**	P	**Pb**	**03 16 34.0**	**-0.9**
CNGZ	**Carnagh Statio**	**2.27**	**219**	Pn	**Pb**	**03 16 34.7**	**-0.6**
CNGZ	**Carnagh Statio**	**2.27**	**219**	P	**Pb**	**03 16 34.7**	**-0.6**
TKGZ	**Te Karaka**	**2.42**	**225**	Pn	**Pn**	**03 16 35.7**	**+1.6**
TKGZ				Sn	**Sn**	**03 17 04.9**	**+0.8**
TKGZ	**Te Karaka**	**2.42**	**225**	P	**Pn**	**03 16 35.8**	**+1.6**
TKGZ				S	**Sn**	**03 17 04.9**	**+0.8**
MWZ	**Matawai**	**2.55**	**230**	Pn	**Pn**	**03 16 37.4**	**+1.6**
MWZ	**Matawai**	**2.55**	**230**	P	**Pn**	**03 16 37.6**	**+1.8**
MWZ				S	**Sn**	**03 17 06.6**	**-0.6**
RIGZ	**Rimuhau**	**2.66**	**222**	P	**Pn**	**03 16 39.3**	**+1.9**
RIGZ				S	**Sn**	**03 17 10.4**	**+0.4**
WHRZ	**Whale Island**	**2.68**	**244**	P	**Pb**	**03 16 40.1**	**-2.2**
RAGZ	**Rawiri**	**2.72**	**229**	Pn	**Pn**	**03 16 40.0**	**+1.8**
RAGZ	**Rawiri**	**2.72**	**229**	P	**Pn**	**03 16 40.3**	**+2.0**
RAGZ				S	**Sn**	**03 17 11.2**	**-0.2**
PRGZ	**Paritu Road**	**2.77**	**217**	Pn	**Pn**	**03 16 40.3**	**+1.5**
PRGZ	**Paritu Road**	**2.77**	**217**	P	**Pn**	**03 16 40.6**	**+1.8**
PRGZ				S	**Sn**	**03 17 13.3**	**+0.7**
URZ	**Urewera**	**2.77**	**236**	Pn	**Pn**	**03 16 40.3**	**+1.4**
	16nm,0.3s,baz=272,slow=2.6,SNR=67						
URZ				Sn	**Sn**	**03 17 12.0**	**-0.6**
	24nm,0.3s,baz=259,slow=18,SNR=9.3						
URZ	**Urewera**	**2.77**	**236**	P	**Pn**	**03 16 40.1**	**+1.2**
URZ				S	**Sn**	**03 17 11.6**	**-1.1**
KNZ	**Kokohu**	**2.94**	**218**	Pn	**Pn**	**03 16 42.7**	**+1.5**
SNGZ	**Shannon Statio**	**2.95**	**225**	Pn	**Pn**	**03 16 43.0**	**+1.7**
SNGZ	**Shannon Statio**	**2.95**	**225**	P	**Pn**	**03 16 43.0**	**+1.7**
SNGZ				S	**Sn**	**03 17 17.0**	**-0.1**
EDRZ	**Edgecumbe**	**2.95**	**241**	P	**Pn**	**03 16 43.1**	**+1.7**
RTZ	**Ruatahuna**	**3.06**	**231**	P	**Pn**	**03 16 45.4**	**+2.5**
MUGZ	**Murupara**	**3.11**	**235**	P	**Pn**	**03 16 44.7**	**+1.1**
TARZ	**Mount Tarawera**	**3.17**	**241**	Pn	**Pn**	**03 16 46.4**	**+1.8**
RAHZ	**Arahi**	**3.19**	**226**	P	**Pn**	**03 16 46.4**	**+1.7**
OMRZ	**Omania**	**3.21**	**244**	P	**Pn**	**03 16 47.3**	**+2.3**
RRRZ	**Republican Roa**	**3.22**	**239**	P	**Pn**	**03 16 46.8**	**+1.8**
KARZ	**Kaharoa**	**3.27**	**246**	P	**Pn**	**03 16 47.4**	**+1.6**
HLRZ	**Highlands Stat**	**3.29**	**241**	P	**Pn**	**03 16 47.6**	**+1.5**
NMHZ	**Naumai**	**3.47**	**226**	Pn	**Pn**	**03 16 50.3**	**+1.7**
NMHZ	**Naumai**	**3.47**	**226**	P	**Pn**	**03 16 50.4**	**+1.7**
ARHZ	**Aropaoanui**	**3.48**	**223**	Pn	**Pn**	**03 16 49.7**	**+1.1**
MRHZ	**Matea Rd**	**3.54**	**233**	P	**Pn**	**03 16 51.6**	**+2.0**
BKZ	**Black Stump Fm**	**3.70**	**228**	Pn	**Pn**	**03 16 52.4**	**+0.7**
BKZ	**Black Stump Fm**	**3.70**	**228**	P	**Pn**	**03 16 53.1**	**+1.4**
TOZ	**Tahuroa Road**	**3.74**	**253**	P	**Pn**	**03 16 52.9**	**+0.7**
MCHZ	**McNeill Hill**	**3.77**	**223**	Pn	**Pn**	**03 16 53.8**	**+1.2**
MCHZ	**McNeill Hill**	**3.77**	**223**	P	**Pn**	**03 16 53.9**	**+1.2**
KWHZ	**Kaweka Forest**	**3.91**	**226**	P	**Pn**	**03 16 55.8**	**+1.2**
MKAZ	**Moumakai**	**3.91**	**263**	Pn	**Pn**	**03 16 53.4**	**-1.2**
WIAZ	**Waiheke Island**	**3.93**	**268**	P	**Pn**	**03 16 55.4**	**+0.6**
RATZ	**Rangitukua**	**3.98**	**236**	P	**Pn**	**03 16 58.2**	**+2.6**
KRHZ	**Kereru**	**4.09**	**224**	P	**Pn**	**03 16 57.8**	**+0.7**
ETAZ	**East Tamaki Re**	**4.09**	**265**	P	**Pn**	**03 16 58.0**	**+1.0**
BHHZ	**Black Hill Sta**	**4.16**	**227**	Pn	**Pn**	**03 16 59.3**	**+1.2**
BHHZ	**Black Hill Sta**	**4.16**	**227**	P	**Pn**	**03 16 59.4**	**+1.3**
BHHZ				P	**Pn**	**03 16 59.4**	**+1.3**
ABAZ	**Army Bay**	**4.18**	**270**	P	**Pn**	**03 17 00.5**	**+2.3**
KRVZ	**Karewarewa**	**4.19**	**234**	Pn	**Pn**	**03 16 59.6**	**+1.1**
KRVZ	**Karewarewa**	**4.19**	**234**	P	**Pn**	**03 17 00.3**	**+1.7**
OTVZ	**Oturere**	**4.21**	**234**	Pn	**Pn**	**03 16 59.1**	**+0.2**
WTVZ	**West Tongariro**	**4.24**	**235**	P	**Pn**	**03 17 01.9**	**+2.7**
NGZ	**Ngauruhoe**	**4.26**	**234**	Pn	**Pn**	**03 16 59.8**	**+0.3**
NGZ	**Ngauruhoe**	**4.26**	**234**	P	**Pn**	**03 17 00.8**	**+1.3**
MOVZ	**Moawhango**	**4.30**	**230**	P	**Pn**	**03 17 01.1**	**+1.1**
AWAZ	**Awhitu Peninsu**	**4.33**	**264**	P	**Pn**	**03 17 02.6**	**+2.4**
WHVZ	**Whangaehu Hut**	**4.33**	**233**	Pn	**Pn**	**03 17 00.4**	**-0.1**
WHVZ	**Whangaehu Hut**	**4.33**	**233**	P	**Pn**	**03 17 01.5**	**+0.9**
FWVZ	**Far West T-bar**	**4.34**	**233**	P	**Pn**	**03 17 02.4**	**+1.7**
WNVZ	**Wahianoa**	**4.35**	**232**	Pn	**Pn**	**03 17 00.5**	**-0.2**
PNHZ	**Pukenui**	**4.37**	**222**	Pn	**Pn**	**03 17 00.5**	**-0.4**
PNHZ	**Pukenui**	**4.37**	**222**	P	**Pn**	**03 17 00.6**	**-0.4**
HIZ	**Hauiti**	**4.47**	**245**	P	**Pn**	**03 17 04.7**	**+2.4**
TSZ	**Takapari Road**	**4.60**	**223**	P	**Pn**	**03 17 04.1**	**0.0**
DVHZ	**Dannevirke**	**4.67**	**219**	P	**Pn**	**03 17 05.3**	**+0.3**
VRZ	**Vera Road**	**4.80**	**239**	P	**Pn**	**03 17 09.8**	**+3.0**
BFZ	**Birch Farm**	**4.92**	**216**	Pn	**Pn**	**03 17 07.7**	**-0.8**
BFZ	**Birch Farm**	**4.92**	**216**	P	**Pn**	**03 17 07.8**	**-0.7**
WAZ	**Wanganui**	**4.98**	**231**	P	**Pn**	**03 17 11.9**	**+2.6**
MRZ	**Mangatainoka R**	**5.24**	**220**	Pn	**Pn**	**03 17 11.1**	**-1.7**
LTZ	**Lake Taylor**	**8.49**	**222**	P	**Pn**	**03 17 57.4**	**-0.1**
DZM	**Mont Dzumac**	**18.77**	**317**	LR	LR	03 26 24.2	
	comp=Z,263nm,19.0s,baz=280,slow=34						
HNR	**Honiara**	**32.71**	**321**	LR	LR	03 31 48.5	
	comp=Z,82nm,21.4s,baz=252,slow=30						
ASAR	**Alice Springs**	**41.56**	**275**	P	**P**	**03 23 41.1**	**-1.5**
	3.5nm,0.7s,baz=118,slow=7.8,SNR=38						
WRAB	**Tennant Creek**	**43.12**	**280**	*e*P	**P**	**03 23 53.3**	**-1.9**
	2.1nm,0.6s						
WRA	**Warramunga Arr**	**43.12**	**280**	P	**P**	**03 23 53.3**	**-2.0**
	1.3nm,0.6s,baz=120,slow=7.6,SNR=28						
CASY	**Casey**	**48.81**	**210**	*e*P	**P**	**03 24 40.4**	**+0.8**
	1.3nm,0.6s						
FITZ	**Fitzroy Crossi**	**51.03**	**276**	P	**P**	**03 24 57.7**	**+0.6**
	1.0nm,0.7s,baz=124,slow=7.3,SNR=3.6						
RPN	**Rapa Nui**	**59.51**	**103**	LR	LR	03 46 39.4	
	comp=Z,18nm,20.5s,baz=150,slow=31						
MKAR	**Makanchi Array**	**120.46**	**308**	PKP	**PKPdf**	**03 34 45.8**	**-0.2**
	0.5nm,0.8s,baz=78,slow=1.7,SNR=4.3						
KURK	**Kurchatov**	**124.10**	**311**	PKP	**PKPdf**	**03 34 51.3**	**-1.5**
KURBB	**Kurchatov Arra**	**124.13**	**311**	PKP	**PKPdf**	**03 34 51.3**	**-1.5**
	0.6nm,0.5s,baz=104,slow=1.8,SNR=6.5						
ARCES	**ARCESS Array B**	**144.34**	**345**	PKP	**PKPab**	**03 35 27.9**	**0.0**
	4.6nm,1.0s,baz=46,slow=2.6,SNR=7.9						
FINES	**FINESS Array B**	**150.35**	**335**	PKPbc	**PKPbc**	**03 35 45.5**	**+0.2**
	3.0nm,0.5s,baz=40,slow=3.4,SNR=21						
MMAI	**Mount Meron Ar**	**150.84**	**273**	PKPbc	**PKPbc**	**03 35 49.0**	**+1.5**
	0.4nm,0.3s,baz=266,slow=40,SNR=3.6						
BRTR	**Keskin Array B**	**153.51**	**287**	PKPbc	**PKPbc**	**03 35 53.6**	**+0.2**
	0.5nm,0.5s,baz=144,slow=4.6,SNR=4.3						
AKASG	**Malin Array Be**	**154.90**	**313**	PKPbc	**PKPbc**	**03 35 55.9**	**+0.1**
	0.6nm,0.5s,baz=52,slow=2.0,SNR=2.9						
HFS	**Hagfors**	**154.99**	**344**	PKPbc	**PKPbc**	**03 35 56.2**	**+0.5**
	2.1nm,0.9s,baz=300,slow=3.2,SNR=3.1						

*ISCJB **29** 03:16:58.1±0.7,6°.84N±0°.03×73°.13W±0°.04,h152km±6km,mb3.3/1,Error ellipse: s-maj=7.3km s-min=5.2km az=26.5*
*IDC **29** 03:16:58.1±0.9,6°.73N×72°.93W,h165km±14km,mb3.0/1,mb1 3.2/3,mb1mx2.8/41,mbtmp3.4/3,Error ellipse: s-maj=70.6km s-min=8.2km az=132.0*
*RSNC **29** 03:16:59.7±0.8,6°.81N×73°.15W,h145km±5km,ML3.1*

ISC 29 03:16:58.0±1.0,6°.84N±0°.04×73°.12W±0°.05,h153km±7km,n22,σ0º82/36,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.25**	**195**	*i* P	**Pn**	**03 17 19.4**	**+0.3**
BARC				*i*		03 17 19.6	
	comp=Z,276nm,0.2s						
BARC				*e*S	**Sn**	**03 17 34.5**	**-0.8**
PAMC	**Pamplona, Colo**	**0.65**	**40**	*e*P	**Pn**	**03 17 22.2**	**+1.1**
PAMC				*i*		03 17 22.7	
	comp=Z,217nm,0.2s						
PAMC				*e*S	**Sn**	**03 17 38.9**	**+0.1**
BRRC	**Barranca, Sant**	**0.65**	**294**	*e*P	**Pn**	**03 17 21.3**	**+0.8**
BRRC				*i*		03 17 21.6	
	comp=Z,322nm,0.3s						
BRRC				*e*S	**Sn**	**03 17 37.8**	**0.0**
RUSC	**La Rusia**	**0.94**	**178**	*e*P	**Pn**	**03 17 23.3**	**+0.1**
RUSC				*e*S	**Sn**	**03 17 41.6**	**-0.8**
RUSC				*i*		03 17 43.4	
	comp=Z,144nm,0.5s						
PTBC	**PUERTO BERRIO,**	**1.36**	**258**	*e*P	**Pn**	**03 17 25.9**	**-0.5**
PTBC				*i*		03 17 28.9	
	comp=Z,84nm,0.2s						
PTBC				*e*S	**Sn**	**03 17 47.1**	**-1.1**
OCAC	**Ocana**	**1.41**	**352**	*e*P	**Pn**	**03 17 27.6**	**+0.5**
OCAC				*e*S	**Sn**	**03 17 49.4**	**0.0**
YOPC	**Yopal, Colombi**	**1.63**	**155**	*e*P	**Pn**	**03 17 30.0**	**+0.7**
YOPC				*e*S	**Sn**	**03 17 53.5**	**+0.1**
YOPC				*i*		03 17 55.1	
	comp=Z,75nm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.85**	**291**	*e*P	**Pn**	**03 17 32.2**	**+0.6**
ZARC				*e*S	**Sn**	**03 17 57.4**	**0.0**
ZARC				*i*		03 18 03.5	
	comp=Z,206nm,0.3s						
NORC	**Norcasia**	**2.15**	**234**	*e*P	**Pn**	**03 17 35.3**	**+0.1**
NORC				*e*S	**Sn**	**03 18 03.5**	**-0.4**
CHIC	**Chingaza**	**2.28**	**196**	*e*P	**Pn**	**03 17 37.5**	**+0.5**
CHIC				*i*		03 17 40.4	
	comp=Z,42nm,0.3s						
ROSC	**El Rosal**	**2.32**	**211**	P	**Pn**	**03 17 39.3**	**+1.8**
	comp=Z,13nm,0.3s,baz=94,slow=1.8,SNR=42						
ROSC				S	**Sn**	**03 18 09.7**	**+1.8**
	comp=Z,12nm,0.3s,baz=255,slow=17,SNR=11						
ROSC	**El Rosal**	**2.32**	**211**	*e*S	**Sn**	**03 18 08.3**	**+0.4**
ROSC				*i*		03 18 13.3	
	comp=Z,131nm,0.4s						
HELC	**Santa Helena**	**2.48**	**255**	*e*P	**Pn**	**03 17 40.0**	**+0.5**
HELC				*i*		03 18 19.0	
	comp=Z,49nm,0.2s						
UREC	**San Jos¨ de U**	**2.56**	**291**	*e*P	**Pn**	**03 17 40.2**	**+0.1**
UREC				*i*		03 18 23.0	
	comp=Z,192nm,0.3s						
VILC	**Villavicencio,**	**2.77**	**192**	*e*P	**Pn**	**03 17 42.7**	**-0.1**
VILC				*e*S	**Sn**	**03 18 16.5**	**-0.8**
DBBC	**Dabeiba**	**3.08**	**274**	*e*P	**Pn**	**03 17 47.9**	**+1.4**
TOLC	**Tolima**	**3.13**	**225**	*e*P	**Pn**	**03 17 48.9**	**+1.3**
TOLC				*e*S	**Sn**	**03 18 26.2**	**+0.4**
SDV	**Santo Domingo**	**3.19**	**50**	P	**Pn**	**03 17 49.1**	**+1.0**
	comp=Z,2.9nm,0.3s,baz=231,slow=6.5,SNR=5.4						
SDV				S	**Sn**	**03 18 26.4**	**-0.5**
	comp=Z,6.4nm,0.3s,baz=72,slow=20,SNR=12						
PRAC	**Prado**	**3.57**	**210**	*e*P	**Pn**	**03 17 52.8**	**-0.1**
PRAC				*e*S	**Sn**	**03 18 35.8**	**+0.4**
YOTC	**Yotoco, Valle**	**4.29**	**229**	*e*P	**Pn**	**03 18 02.7**	**+0.5**
YKA	**Yellowknife Ar**	**63.25**	**340**	P	**P**	**03 27 09.8**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=135,slow=6.2,SNR=4.1						
WRA	**Warramunga Arr**	**150.35**	**241**	PKPbc	**PKPbc**	**03 36 30.8**	**-1.4**
	comp=Z,0.2nm,0.4s,baz=107,slow=2.5,SNR=12						

NNC 29 03:36:03.3±2.7,37°.98N×71°.41E,h0km,mb3.6,mpv3.2,4C-2D,Error ellipse: s-maj=20.5km s-min=15.2km az=4.0,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**2.60**	**38**	⇑Pn	Pn	03 36 46.4	-0.4
	3.1nm,0.3s						
SFK				⇑Sn	Sn	03 37 20.8	+1.5
	6.9nm,0.3s						
MNAS	**Manas**	**4.58**	**10**	⇑Pn	Pn	03 37 14.1	+0.2
	1.6nm,0.5s						
MNAS				⇑Sn	Sn	03 38 08.1	+0.3
	8

KRUC	**Moravsky**	**1.57 242**	*e*Pn	**Pn**	**03 53 08.3**	**-0.6**
KRUC			*e*Pg	**Pb**	**03 53 09.6**	**-0.1**
KRUC			*e*Sg	**Sg**	**03 53 31.5**	**+1.4**
KRUC	**Moravsky**	**1.57 242**	Pn	**Pn**	**03 53 08.3**	**-0.6**
KRUC	**Moravsky**	**1.57 242**	Pg	**Pb**	**03 53 09.6**	**-0.1**
KRUC			*e*Sg	**Sg**	**03 53 30.9**	**+0.8**
	66nm,0.2s					
KRUC	**Moravsky**	**1.57 242**	*e*PG	**Pb**	**03 53 09.5**	**-0.1**
KRUC			*e*SG	**Sg**	**03 53 30.9**	**+0.8**
KRUC	**Moravsky**	**1.57 242**	*e*Pg	**Pb**	**03 53 09.4**	**-0.2**
	baz=61					
KRUC			*e*Sg	**Sg**	**03 53 30.9**	**+0.8**
	66nm,0.2s,baz=61					
MODS	**Modra-Piesok**	**1.66 209**	*e*PN	**Pn**	**03 53 09.1**	**-1.0**
MODS			*e*SN	**Sn**	**03 53 31.1**	**-0.9**
MODS			*e*LG	Lg	03 53 33.9	
MODS	**Modra-Piesok**	**1.66 209**	*e*Pn	**Pn**	**03 53 09.1**	**-1.0**
MODS			*e*Sn	**Sn**	**03 53 31.1**	**-0.9**
UPC	**Upice**	**1.74 294**⇓	*e*PG	**Pg**	**03 53 12.9**	**-0.2**
UPC			*e*SG	**Sg**	**03 53 36.0**	**+0.4**
	comp=Z,51nm,0.6s					
KSP	**Ksiaz**	**1.75 307**	*e*Pb	**Pn**	**03 53 11.4**	**+0.1**
KSP			*e*Pg	**Pg**	**03 53 13.4**	**+0.2**
KSP			*e*Sg	**Sg**	**03 53 36.1**	**+0.3**
KSP	**Ksiaz**	**1.75 307**	*e*Pn	**Pn**	**03 53 11.6**	**+0.3**
KSP			*e*Pg	**Pg**	**03 53 13.7**	**+0.5**
KSP	**Ksiaz**	**1.75 307**	Pn	**Pn**	**03 53 11.6**	**+0.3**
PSZ	**Piszkesteto**	**2.12 154**⇓	*i*P	**Pn**	**03 53 17.1**	**+0.7**
PSZ	**Piszkesteto**	**2.12 154**⇓	*e*-Pn		03 53 17.0	
PSZ			*e*Pg	**Pg**	**03 53 20.9**	**+0.6**
PSZ			Sn	**Sn**	**03 53 44.3**	**+0.8**
PSZ	**Piszkesteto**	**2.12 154**⇓	*i*P	**Pn**	**03 53 17.1**	**+0.7**
PSZ	**Piszkesteto**	**2.12 154**	*e*Pg	**Pg**	**03 53 20.9**	**+0.6**
PSZ			*e*Sn	**Sn**	**03 53 44.3**	**+0.8**
PSZ			S	**Sb**	**03 53 45.2**	**-0.6**
CRVS	**Cervenica-Dubn**	**2.14 114**	*e*PN	**Pb**	**03 53 19.6**	**+0.1**
CRVS			*e*LG	Lg	03 53 59.5	
CSKK	**Cs^‡kako**	**2.46 184**	*e*Sn	**Sn**	**03 53 50.5**	**-1.4**
CSKK	**Cs^‡kako**	**2.46 184**	*e*Sn	**Sn**	**03 53 50.5**	**-1.4**
PRU	**Pruhonice**	**2.56 275**	*e*Sg	**Sg**	**03 54 01.0**	**-1.1**
PRU	**Pruhonice**	**2.56 275**⇓	*e*PG	**Pb**	**03 53 27.6**	**+1.0**
PRU			*e*SG	**Sg**	**03 54 00.8**	**-1.3**
	comp=Z,23nm,0.4s					
PRU	**Pruhonice**	**2.56 275**	Sg	**Sg**	**03 54 01.0**	**-1.1**
CONA	**Conrad Observa**	**2.57 224**	Pn	**Pn**	**03 53 22.4**	**-0.3**
	2.6nm,0.3s					
CONA			*e*Sn	**Sn**	**03 53 54.9**	**+0.2**
	3.2nm,0.3s					
CONA	**Conrad Observa**	**2.57 224**	Pn	**Pn**	**03 53 22.4**	**-0.3**
	2.6nm,0.3s					
CONA			Sn	**Sn**	**03 53 54.9**	**+0.2**
	3.2nm,0.3s					
PVCC	**Panska Ves**	**2.62 287**	*e*Pg	**Pg**	**03 53 30.2**	**+0.2**
PVCC			*e*Sg	**Sg**	**03 54 05.1**	**+1.1**
PVCC	**Panska Ves**	**2.62 287**⇓	*e*PG	**Pg**	**03 53 29.6**	**-0.4**
PVCC			*e*SG	**Sg**	**03 54 04.3**	**+0.3**
	comp=Z,45nm,0.3s					
PVCC	**Panska Ves**	**2.62 287**	Pg	**Pg**	**03 53 30.2**	**+0.2**
PVCC			Sg	**Sg**	**03 54 05.1**	**+1.1**
BRG	**Berggiesshubel**	**3.10 292**	PG	**Pg**	**03 53 37.5**	**-1.7**
BRG			SG	**Sg**	**03 54 18.2**	**-1.2**
	18nm,0.7s					
BRG	**Berggiesshubel**	**3.10 292**	*e*Pg	**Pg**	**03 53 37.8**	**-1.4**
BRG			*e*Sg	**Sg**	**03 54 19.2**	**-0.2**
BRG	**Berggiesshubel**	**3.10 292**	Pg	**Pg**	**03 53 37.8**	**-1.4**
BRG			Sg	**Sg**	**03 54 19.2**	**-0.2**
TRPA	**Tarpa**	**3.15 121**⇑	*i*P	**Pn**	**03 53 31.5**	**+0.9**
TRPA	**Tarpa**	**3.15 121**⇑	*i*P	**Pn**	**03 53 31.5**	**+0.9**
TRPA			S	**Sn**	**03 54 07.8**	**-1.1**
ARSA	**Arzberg**	**3.24 219**	*e*Pn	**Pn**	**03 53 30.4**	**-1.5**
	0.7nm,0.3s					
ARSA			*e*Sn	**Sn**	**03 54 11.3**	**+0.1**
	1.3nm,0.3s					
ARSA	**Arzberg**	**3.24 219**	Pn	**Pn**	**03 53 30.4**	**-1.5**
	0.7nm,0.3s					
ARSA			Sn	**Sn**	**03 54 11.3**	**+0.1**
	1.3nm,0.3s					
KHC	**Kasperske Hory**	**3.28 260**	*e*Pn	**Pn**	**03 53 32.8**	**+0.4**
KHC			*e*Sg	**Sg**	**03 54 23.7**	**-1.5**
KHC	**Kasperske Hory**	**3.28 260**	*e*PN	**Pn**	**03 53 32.9**	**+0.4**
KHC			*e*PG	**Pb**	**03 53 40.2**	**+1.3**
KHC			*e*SG	**Sg**	**03 54 23.6**	**-1.5**
	comp=Z,22nm,0.3s					
KHC	**Kasperske Hory**	**3.28 260**	Pn	**Pn**	**03 53 32.8**	**+0.4**
KHC			Sg	**Sg**	**03 54 23.7**	**-1.5**
GEC2	**GERESS Array S**	**3.29 255**	*e*Pg	**Pg**	**03 53 41.7**	**-1.0**
GEC2	**GERESS Array S**	**3.29 255**	Pg	**Pg**	**03 53 41.7**	**-1.0**
MOA	**Molln**	**3.42 236**	*i* Pn	**Pn**	**03 53 34.2**	**-0.1**
	0.6nm,0.1s					
MOA			*i* Sn	**Sn**	**03 54 15.8**	**+0.2**
	3.1nm,0.3s					
MOA	**Molln**	**3.42 236**	Pn	**Pn**	**03 53 34.2**	**-0.1**
	0.6nm,0.1s					
MOA			Sn	**Sn**	**03 54 15.8**	**+0.2**
	3.1nm,0.3s					
FBE	**Freiberg**	**3.47 290**	*e*Sg	**Sg**	**03 54 30.8**	**-0.4**
FBE	**Freiberg**	**3.47 290**	Sg	**Sg**	**03 54 30.8**	**-0.4**
WET	**Wettzell**	**3.73 262**	*e*Pg	**Pg**	**03 53 49.8**	**-1.3**
WET			*e*Sg	**Sg**	**03 54 38.3**	**-1.1**
WET	**Wettzell**	**3.73 262**	Pg	**Pg**	**03 53 49.8**	**-1.3**
WET			Sg	**Sg**	**03 54 38.3**	**-1.1**
CLL	**Collm**	**3.81 295**	*e*Sg	**Sg**	**03 54 40.9**	**-1.1**
CLL	**Collm**	**3.81 295**	*e*Pg	**Pg**	**03 53 53.0**	**+0.3**
CLL			*e*Sg	**Sg**	**03 54 42.0**	**0.0**
	comp=Z,21nm,0.7s					
CLL	**Collm**	**3.81 295**	Sg	**Sg**	**03 54 40.9**	**-1.1**
TANN	**Tannenbergstha**	**3.93 281**	*e*Pg	**Pg**	**03 53 53.6**	**-1.4**
TANN			*e*Sg	**Sg**	**03 54 45.6**	**-0.3**
TANN	**Tannenbergstha**	**3.93 281**	Pg	**Pg**	**03 53 53.6**	**-1.4**
TANN			Sg	**Sg**	**03 54 45.6**	**-0.3**
GUNZ	**Gunzen**	**4.01 280**	*e*Pg	**Pg**	**03 53 56.8**	**+0.3**
GUNZ			*e*Sg	**Sg**	**03 54 48.1**	**-0.3**
GUNZ	**Gunzen**	**4.01 280**	Pg	**Pg**	**03 53 56.8**	**+0.3**
GUNZ			Sg	**Sg**	**03 54 48.1**	**-0.3**
WERD	**Werda**	**4.03 281**	*e*Pg	**Pg**	**03 53 55.6**	**-1.4**
WERD			*e*Sg	**Sg**	**03 54 47.6**	**-1.6**
WERD	**Werda**	**4.03 281**	Pg	**Pg**	**03 53 55.6**	**-1.4**
WERD			Sg	**Sg**	**03 54 47.6**	**-1.6**
DRGR		**4.13 136**⇓	*i*P	**Pn**	**03 53 44.1**	**-0.1**
DRGR		**4.13 136**⇓	*i*P	**Pn**	**03 53 44.1**	**-0.1**
DRGR			S	**Sn**	**03 54 31.9**	**-1.3**
KBA	**Koelnbreinsper**	**4.39 233**	*e*Pn	**Pn**	**03 53 46.7**	**-1.1**
KBA			*i* Sn	**Sn**	**03 54 39.3**	**-0.4**
	comp=Z,1.5nm,0.5s					
KBA	**Koelnbreinsper**	**4.39 233**	Pn	**Pn**	**03 53 46.7**	**-1.1**
KBA			Sn	**Sn**	**03 54 39.3**	**-0.4**
	comp=Z,1.5nm,0.5s					
BZS	**Buzias**	**4.70 152**⇑	*i*P	**Pn**	**03 53 52.5**	**+0.6**
BZS	**Buzias**	**4.70 152**⇑	*i*P	**Pn**	**03 53 52.5**	**+0.6**
GRA1	**Grafenberg Arr**	**4.72 271**	Sg	**Sg**	**03 55 10.1**	**-1.2**
GRF	**Grafenberg Arr**	**4.72 271**	*e*Sg	**Sg**	**03 55 10.1**	**-1.2**
BURAR	**Bucovina Array**	**4.96 114**⇓	*i*P	**Pn**	**03 53 56.0**	**+0.4**
BURAR	**Bucovina Array**	**4.96 114**⇓	*i*P	**Pn**	**03 53 56.0**	**+0.4**
ABTA	**Abfaltersbach**	**5.04 235**	*e*Pn	**Pn**	**03 53 56.4**	**-0.2**
	comp=Z,0.3nm,0.3s					
ABTA			*e*Sn	**Sn**	**03 54 54.9**	**-0.7**
	comp=Z,2.0nm,0.5s					
ABTA	**Abfaltersbach**	**5.04 235**	Pn	**Pn**	**03 53 56.4**	**-0.2**
	comp=Z,0.3nm,0.3s					
ABTA			Sn	**Sn**	**03 54 54.9**	**-0.7**
	comp=Z,2.0nm,0.5s					
WATA	**Walderalm**	**5.22 244**	*e*Sn	**Sn**	**03 55 01.1**	**+0.9**
	comp=Z,3.7nm,0.4s					
WATA	**Walderalm**	**5.22 244**	Sn	**Sn**	**03 55 01.1**	**+0.9**
	comp=Z,3.7nm,0.4s					
WTTA	**Wattenberg**	**5.23 243**	*e*Sn	**Sn**	**03 55 01.8**	**+1.5**
	comp=Z,3.1nm,0.5s					
WTTA	**Wattenberg**	**5.23 243**	Sn	**Sn**	**03 55 01.8**	**+1.5**
	comp=Z,3.1nm,0.5s					
MDVR	**Moldovita**	**5.49 155**⇑	*i*P	**Pn**	**03 54 02.5**	**-0.4**
MDVR	**Moldovita**	**5.49 155**⇑	*i*P	**Pn**	**03 54 02.5**	**-0.4**
MDVR			S	**Sn**	**03 55 06.6**	**-0.1**
MOTA	**Moosalm**	**5.50 246**	*e*Pg	**Pg**	**03 54 25.2**	**+0.1**
	comp=Z,0.5nm,0.2s					
MOTA			Sg	**Sg**	**03 55 37.7**	**+1.5**
	comp=Z,2.7nm,0.5s					
MOTA	**Moosalm**	**5.50 246**	Pg	**Pg**	**03 54 25.2**	**+0.1**
	comp=Z,0.5nm,0.2s					
MOTA			Sg	**Sg**	**03 55 37.7**	**+1.5**
	comp=Z,2.7nm,0.5s					
RETA	**Reutte**	**5.63 248**	*e*Sg	**Sg**	**03 55 44.2**	**+3.6**
	comp=Z,2.5nm,0.2s					
FETA	**Feichten**	**5.88 245**	Pg	**Pg**	**03 54 31.9**	**-0.5**
	comp=Z,0.1nm,0.1s					
FETA			Sg	**Sg**	**03 55 51.8**	**+3.3**
	comp=Z,1.1nm,0.5s					
FETA	**Feichten**	**5.88 245**	Pg	**Pg**	**03 54 31.9**	**-0.5**
	comp=Z,0.1nm,0.1s					
DAVA	**Damuels**	**6.26 249**	Sg	**Sg**	**03 56 05.6**	**+5.0**
	comp=Z,2.7nm,0.4s					

*SJA **29** 04:00:21.4±1.1, 31°.67S×68°.83W, h10km±8km, ML3.4, MW3.8*
*GUC **29** 04:00:22.8±0.5, 31°.69S×68°.87W, h10km±5km, ML3.8*

ISC 29 04:00:21.8±1.1, 31°.67S±0°.02×68°.85W±0°.03, h5km±12km, n23, σ0°.90/33, 3C-2D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJA	**San Juan**	**0.29**	**60**	*e*P	**Pg**	**04 00 27.8**	**+0.4**
SJA				*e*S	**Sg**	**04 00 31.8**	**+0.5**
RTCV	**Cerro Valdivia**	**0.33**	**125**	*e*P	**Pg**	**04 00 28.0**	**-0.2**
RTLS	**Leoncito**	**0.40**	**251**	*e*P	**Pg**	**04 00 30.4**	**+0.8**
RTLS				IAML		04 00 30.6	
	comp=Z,3μm,0.3s						
RTLL	**Cerro Villicun**	**0.47**	**44**	*e*P	**Pg**	**04 00 30.7**	**-0.2**
RTLL				⇓*e*S	**Sg**	**04 00 37.2**	**+0.2**
AUSP	**Uspallata**	**0.71**	**219**	*e*P	**Pg**	**04 00 35.6**	**+0.1**
AUSP				*e*S	**Sg**	**04 00 45.4**	**+0.6**
AMOG	**MOGNA**	**0.79**	**23**	*e*P	**Pg**	**04 00 37.3**	**+0.2**
ASAL	**Salagasta**	**0.92**	**179**	*e*P	**Pg**	**04 00 39.4**	**+0.1**
ASAL				*e*S	**Sb**	**04 00 52.5**	**-0.2**
ARCO	**CERRO ARCO**	**1.17**	**183**	*e*P	**Pb**	**04 00 44.1**	**-0.5**
ARCO				IAML		04 01 08.1	
	comp=Z,562nm,0.2s						
AAGR	**Agrelo**	**1.41**	**179**	*e*P	**Pb**	**04 00 48.6**	**0.0**
ACDV	**Cuesta del Vie**	**1.51**	**351**	*e*P	**Pn**	**04 00 49.7**	**0.0**
ACDV				IAML		04 01 12.8	
	comp=Z,130nm,0.7s						
ACAN	**Cantantal**	**1.54**	**113**	*e*P	**Pn**	**04 00 49.4**	**-0.5**
AROD	**Rodeo**	**1.59**	**340**	*e*P	**Pb**	**04 00 52.3**	**+0.5**
AVIZ	**Vizcacheras**	**1.82**	**171**	*e*P	**Pb**	**04 00 55.2**	**-0.4**
PEL	**Peldehue**	**2.13**	**226**	⇑*i*P	**Pb**	**04 01 00.6**	**-0.3**
PEL				*i* S	**Sg**	**04 01 29.1**	**-1.2**
PEL				IAML		04 01 33.7	
	comp=N,428nm,0.4s						
CLCH	**Cerro Calan**	**2.23**	**219**	*e*P	**Pb**	**04 01 02.6**	**0.0**
CLCH				*i* S	**Sg**	**04 01 32.5**	**-0.9**
CLCH				IAML		04 01 35.2	
	comp=E,958nm,0.6s						
ROCH	**El Roble**	**2.24**	**234**	*e*P	**Pb**	**04 01 02.5**	**-0.3**
ROCH				*i* S	**Sg**	**04 01 32.8**	**-0.9**
ROCH				IAML		04 01 37.9	
	comp=E,912nm,0.6s						
GO04	**Tololo Observa**	**2.24**	**311**	⇑*i*P	**Pb**	**04 01 02.9**	**0.0**
GO04				*i* S	**Sg**	**04 01 33.6**	**-0.3**
ROC1	**El Roble**	**2.24**	**234**	*e*P	**Pb**	**04 01 03.9**	**+1.0**
APLL	**PUNTA DE LOS L**	**2.37**	**58**	*e*P	**Pn**	**04 01 02.8**	**+1.5**
MRA	**San Martin**	**2.77**	**106**	*e*P	**Pn**	**04 01 07.4**	**+0.6**
MRA				IAML		04 01 52.1	
	comp=Z,277nm,0.6s						
VCA	**Vinchina**	**2.98**	**11**	*e*P	**Pb**	**04 01 14.2**	**-1.2**
VCA				⇓*e*S	**Sb**	**04 01 54.0**	**+1.9**
VCA				IAML		04 01 57.5	
	comp=Z,382nm,0.3s						
VCA	**Vinchina**	**2.98**	**11**	*e*P	**Pb**	**04 01 13.3**	**-2.1**
VCA				IAML		04 01 59.7	
	comp=N,512nm,0.3s						
LCO	**Las Campanas**	**3.10**	**328**	⇑*i*P	**Pb**	**04 01 15.5**	**-1.9**
LCO				*i* S	**Sb**	**04 01 55.0**	**-0.6**
LCO				IAML		04 02 06.7	
	comp=E,179nm,0.3s						

MAN 29 04:14:50.8, 15°.71N×119°.70E, h20km, mb4.5, ML3.3, MS3.1, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCZP	**Santa Cruz**	**0.22**	**72**	*e*P	Pb	04 14 57.8	+1.6
SCZP				*e*S	Sb	04 15 04.8	+5.0
BOLP	**Bolinao**	**0.70**	**17**	*e*P	Pb	04 15 04.2	-0.1
PCPH	**Palayan**	**1.36**	**96**	*e*P	Pn	04 15 14.0	-0.6
PCPH				*e*S	Sb	04 15 32.6	+0.2
BALP	**Baler**	**1.81**	**89**	*e*P	Pn	04 15 21.1	+0.2
BALP				*e*S	Sb	04 15 47.3	+1.9
ABRA	**Dolores**	**2.16**	**27**	*e*P	Pn	04 15 26.3	+0.7
APYP	**Conner**	**2.60**	**34**	*e*P	Pn	04 15 32.0	+0.3
APYP				*e*S	Sb	04 16 06.9	-1.4

*ISCJB **29** 04:38:42.1±1.6, 34°.32S±0°.04×72°.60W±0°.09, h17km±13km, Error ellipse: s-maj=12.5km s-min=6.8km az=8.2*
*GUC **29** 04:38:42.7±0.6, 34°.29S×72°.61W, h32km±3km, ML3.7*

ISC 29 04:38:42.4±2.5, 34°.35S±0°.04×72°.6W±0°.1, h12km±14km, n24, σ1°.72/32, 1C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO05	**HualaæØ**	**0.85**	**141**	*e*P	**Pb**	**04 38 58.7**	**-0.4**
GO05				*e*S	**Sg**	**04 39 09.8**	**-0.1**
GO05	**HualaæØ**	**0.85**	**141**	*e*P	**Pb**	**04 38 58.4**	**-0.7**
GO05				*i* S	**Sg**	**04 39 09.6**	**-0.3**
GO05				IAML		04 39 10.7	
	comp=E,5μm,0.2s						
NICH	**Los Niches**	**1.29**	**121**	⇑*i*P	**Pn**	**04 39 05.4**	**-0.7**
NICH				*e*S	**Sg**	**04 39 22.5**	**-1.3**
NICH				IAML		04 39 23.5	
	comp=E,4μm,0.5s						
ROC1	**El Roble**	**1.89**	**44**	*e*P	**Pn**	**04 39 13.8**	**-0.9**
ROC1				*e*S	**Sg**	**04 39 47.1**	**+4.1**
ROCH	**El Roble**	**1.89**	**44**	*e*P	**Pn**	**04 39 13.8**	**-0.9**
ROCH				*e*S	**Sb**	**04 39 41.9**	**+1.3**
ROCH				IAML		04 39 51.9	
	comp=E,1μm,0.5s						
CLCH	**Cerro Calan**	**1.94**	**61**	*i* P	**Pn**	**04 39 14.5**	**-0.8**
CLCH				*i* S	**Sn**	**04 39 38.7**	**-0.9**
CLCH				IAML		04 39 47.8	
	comp=E,1μm,0.3s						
PEL	**Peldehue**	**1.98**	**53**	*e*P	**Pn**	**04 39 15.0**	**-0.8**
PEL				*i* S	**Sn**	**04 39 40.1**	**-0.4**
PEL				IAML		04 39 50.9	
	comp=E,706nm,0.9s						
FCH	**Farellones**	**2.15**	**63**	*e*P	**Pn**	**04 39 17.5**	**-0.9**
FCH				*i* S	**Sn**	**04 39 44.3**	**-1.0**
FCH				IAML		04 39 53.8	
	comp=E,407nm,0.4s						
CCHI	**Chillan**	**2.29**	**170**	*e*P	**Pn**	**04 39 21.0**	**+1.1**
CCHI	**Chillan**	**2.29**	**170**	*e*P	**Pn**	**04 39 21.1**	**+1.1**
CCHI				*i* S	**Sn**	**04 39 48.1**	**+0.1**
CCHI				IAML		04 39 56.7	
	comp=E,853nm,0.5s						
AAGR	**Agrelo**	**3.37**	**69**	*e*P	**Pn**	**04 39 38.6**	**+3.7**
ARCO	**CERRO ARCO**	**3.39**	**65**	*e*P	**Pn**	**04 39 38.2**	**+3.0**
ARCO				IAML		04 39 46.5	
	comp=Z,128nm,0.6s						
AUSP	**Uspallata**	**3.41**	**52**	*e*P	**Pn**	**04 39 37.3**	**+1.7**
RFA	**San Rafael**	**3.42**	**98**	IAML		04 40 03.5	
	comp=Z,45nm,0.7s						
ASAL	**Salagasta**	**3.58**	**62**	*e*P	**Pn**	**04 39 41.0**	**+3.2**
RTLS	**Leoncito**	**3.74**	**48**	*e*P	**Pn**	**04 39 42.1**	**+1.8**
RTLS				*e*S	**Sg**	**04 40 40.1**	**-2.6**
RTLS				IAML		04 40 42.6	
	comp=Z,63nm,0.5s						
RTCV	**Cerro Valdivia**	**4.19**	**55**	*e*P	**Pn**	**04 39 47.2**	**+1.0**
GO04	**Tololo Observa**	**4.42**	**20**	*e*P	**Pn**	**04 39 48.5**	**-1.1**
RTLL	**Cerro Villicun**	**4.58**	**50**	IAML		04 41 05.4	
	comp=N,252nm,0.5s						
AMOG	**MOGNA**	**4.84**	**46**	*e*P	**Pn**	**04 39 55.7**	**+0.7**
AROD	**Rodeo**	**4.92**	**33**	*e*P	**Pn**	**04 39 57.9**	**+1.4**
ACAN	**Cantantal**	**4.96**	**67**	*e*P	**Pn**	**04 39 57.5**	**+0.8**
APLL	**PUNTA DE LOS L**	**6.46**	**54**	*e*P	**Pn**	**04 40 15.8**	**-1.5**
VCA	**Vinchina**	**6.72**	**35**	*e*P	**Pn**	**04 40 20.3**	**-0.8**
VCA				IAML		04 42 11.2	
	comp=Z,25nm,0.6s						

*NIED **29** 04:48:00, 37°.80N×142°.20E, h23km, Mw3.6 Best double couple: M0=2.59000×10^14 NP1:φs=27.00000°, δ=44.00000°, λ=80.00000°. NP2:φs=220.00000°, δ=46.00000°, λ=99.00000°.*
*JMA **29** 04:48:06.3±0.3, 37°.77N×142°.24E, h33km±4km, M3.8*
*IDC **29** 04:48:11.0±3.9, 37°.73N×142°.30E, h64km±34km, mb3.4/8, mb1 3.6/10, mb1mx3.3/66, mbtmp3.7/10, ML3.1/1, MS2.6/3, Ms1 2.6/3, ms1mx2.3/45, Error ellipse: s-maj=30.4km s-min=18.2km az=79.0*

ISC 29 04:48:05.3±2.3, 37°.81N±0°.05×142°.28E±0°.07, h15km±13km, n30, σ1°.14/31, mb3.9/8, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**0.98**	**312**	P	**Pg**	**04 48 24.2**	**-0.1**
JIO				S	**Sb**	**04 48 36.6**	**-0.1**
JMM	**Marumori**	**1.18**	**273**	P	**Pn**	**04 48 26.6**	**-0.7**
JMM				S	**Sb**	**04 48 41.1**	**-1.4**
JFK	**Kawauchi**	**1.20**	**249**	P	**Pn**	**04 48 26.4**	**-1.2**
JFK				*e*S	**Sb**	**04 48 40.8**	**-2.3**
JOU	**Okura**	**1.39**	**294**	P	**Pn**	**04 48 30.5**	**+0.3**
JOU				*e*S	**Sb**	**04 48 48.8**	**+0.1**
JMK	**Ichinoseki**	**1.42**	**324**	P	**Pn**	**04 48 30.5**	**0.0**
JMK				*e*S	**Sn**	**04 48 48.4**	**-0.5**
JFT	**Otama**	**1.57**	**260**	P	**Pn**	**04 48 32.9**	**+0.2**
JFT				*e*S	**Sn**	**04 48 52.1**	**-0.6**
JOM	**Ohasama**	**1.84**	**335**	P	**Pn**	**04 48 36.7**	**+0.4**
JOM				*e*S	**Sn**	**04 48 59.1**	**-0.2**
JYK	**Kaneyama**	**1.88**	**307**	P	**Pn**	**04 48 37.3**	**+0.5**
JRG	**Rokugo**	**2.05**	**321**	P	**Pn**	**04 48 40.3**	**+1.1**
JFY	**Yanaizu**	**2.08**	**260**	P	**Pn**	**04 48 40.5**	**+0.8**
JFY				*e*S	**Sn**	**04 49 06.0**	**+0.6**
MJAR	**Matsushiro Arr**	**3.49**	**250**	P	**Pn**	**04 49 02.2**	**+3.2**
	1.7nm,0.3s,baz=60,slow=9.8,SNR=8.7						
MJAR				S	**Sn**	**04 49 40.1**	**+0.1**
	1.5nm,0.3s,baz=56,slow=21,SNR=4.7						
MJAR				LR	LR	04 50 32.1	
	comp=Z,55nm,19.1s,baz=100,slow=41						
MAT	**Matsushiro**	**3.49**	**250**	P	**Pn**	**04 49 01.5**	**+2.4**
MAT				*e*S	**Sn**	**04 49 41.7**	**+1.6**
USRK	**Ussuriysk Ar.**	**10.06**	**313**	P	Pn	04 50 34.1	+4.9
	baz=138,slow=13						
PETK	**Petropavlovsk-**	**18.67**	**30**	LR	LR	05 00 49.6	
	comp=Z,18nm,18.6s,baz=113,slow=40						
YAK	**Yakutsk**	**25.48**	**346**	LR	LR	05 04 00.0	
	comp=Z,23nm,18.5s,baz=358,slow=37						
SONM	**Songino Array**	**27.94**	**303**	P	**P**	**04 53 56.5**	**+1.4**
	0.4nm,0.4s,baz=108,slow=9.3,SNR=3.1						
H11N2	**WAKE ISLAND Hy**	**27.97**	**123**	T	T	05 23 04.2	
	baz=316,slow=75,SNR=56						
H11N1	**WAKE ISLAND Hy**	**27.98**	**123**	T	T	05 23 05.1	
	baz=316,slow=75,SNR=46						
H11N3	**WAKE ISLAND Hy**	**27.99**	**123**	T	T	05 23 06.3	
	baz=316,slow=75,SNR=37						
H11S1	**WAKE ISLAND Hy**	**28.72**	**125**	T	T	05 24 10.4	
	baz=317,slow=76,SNR=18						
H11S3	**WAKE ISLAND Hy**	**28.72**	**125**	T	T	05 24 07.5	
	baz=317,slow=76,SNR=19						
H11S2	**WAKE ISLAND Hy**	**28.73**	**125**	T	T	05 23 58.8	
	baz=317,slow=76,SNR=14						
ZALV	**Zalesovo Beam**	**41.91**	**312**	P	**P**	**04 55 55.0**	**+0.1**
	1.0nm,0.3s,baz=81,slow=9.1,SNR=8.1						
MKAR	**Makanchi Array**	**44.30**	**302**	P	**P**	**04 56 14.5**	**+0.1**
	0.3nm,0.6s,baz=89,slow=9.8,SNR=4.1						
KURBB	**Kurchatov Arra**	**46.08**	**308**	P	**P**	**04 56 28.5**	**+0.1**
	0.5nm,0.3s,baz=81,slow=8.0,SNR=6.3						
ILAR	**Eielson Array**	**48.47**	**33**	P	**P**	**04 56 46.7**	**-0.2**
	0.2nm,0.7s,baz=260,slow=5.4,SNR=3.6						
WRA	**Warramunga Arr**	**57.92**	**189**	P	**P**	**04 57 55.8**	**-1.1**
	1.3nm,0.6s,baz=6.3,slow=7.1,SNR=23						
ASAR	**Alice Springs**	**61.65**	**189**	P	**P**	**04 58 21.9**	**-0.6**
	0.7nm,0.7s,baz=16,slow=5.1,SNR=4.3						
FINES	**FINESS Array B**	**68.45**	**332**	P	**P**	**04 59 06.2**	**-0.1**
	0.5nm,0.4s,baz=57,slow=5.1,SNR=4.4						
LPAZ	**La Paz**	**145.71**	**60**	PKPbc	**PKPdf**	**05 07 44.3**	**0.0**
	0.7nm,0.8s,baz=315,slow=2.9,SNR=3.9						

*ISK **29** 05:15:03.3, 38°.70N×43°.61E, h26km, ML2.5/3*
*DDA **29** 05:15:04.8, 38°.70N×43°.58E, h7km, Ml2.2*
*CSEM **29** 05:15:04.6±0.4, 38°.72N×43°.59E, h8km, ML2.5, Error ellipse: s-maj=7.9km s-min=5.6km az=101.0*
*ISCJB **29** 05:15:05.1±0.7, 38°.76N±0°.03×43°.59E±0°.05, h4km±6km, Error ellipse: s-maj=7.4km s-min=5.1km az=20.6*

ISC 29 05:15:05.3±1.0, 38°.74N±0°.02×43°.58E±0°.03, h12km±8km, n21, σ1°.24/39, Turkey

| Code | Station Name | Δ° | AZ

comp=N,15μm,0.3s
BELO BELONIA 0.99 205 *eP* **Pn 05 30 17.9 -0.2**
BELO *eS* **Sn 05 30 32.1 -0.2**
SHL Shillong 1.41 359 *eP* **Pb 05 30 24.3 -0.3**
SHL *eS* **Sg 05 30 42.9 -0.5**
SHL IAML 05 30 44.5
comp=E,2μm,0.2s
SHL IAML 05 30 44.6
comp=N,1μm,0.2s
BRDH Bariadhala 1.49 190 Pg **Pn 05 30 25.1 +0.2**
comp=N,108nm,0.3s,baz=40,slow=8.3,SNR=18
BRDH Lg Lg 05 30 44.6
comp=N,361nm,0.3s,baz=76,slow=22,SNR=21
SAIH SAIHA 1.93 149 *eP* **Pn 05 30 31.7 +0.6**
SAIH *eS* **Sn 05 30 55.6 0.0**
SAIH IAML 05 30 59.8
comp=E,472nm,0.2s
SAIH IAML 05 30 59.8
comp=N,231nm,0.4s
IMP Imphal 1.98 70 *eP* **Pn 05 30 32.4 +0.6**
TURI Tura 2.00 315 *eP* **Pb 05 30 34.5 0.0**
TURI *eS* **Sn 05 30 56.4 -0.8**
TURI IAML 05 31 01.8
comp=E,1μm,0.2s
TURI IAML 05 31 02.0
comp=N,1μm,0.2s
GUWA GUWAHATI 2.04 354 *eP* **Pn 05 30 32.3 -0.3**
GUWA *eS* **Sn 05 30 57.6 -0.7**
KOHI KOHIMA 2.54 51 *ex* **Sn 05 31 10.7 0.0**
KOHI IAML 05 31 15.1
comp=N,173nm,0.3s
KOHI IAML 05 31 15.1
comp=E,209nm,0.2s
DHUB DHUBRI 2.54 317 *eP* **Pn 05 30 41.2 +1.7**
DHUB *eS* **Sn 05 31 11.0 +0.3**
DHUB IAML 05 31 17.6
comp=N,580nm,0.1s
DHUB IAML 05 31 17.6
comp=E,376nm,0.1s
TEZP TEZPUR 2.58 18 *eP* **Pn 05 30 39.8 -0.2**
TEZP *eS* **Sn 05 31 10.5 -1.1**
MOKO MOKOCHONG 3.20 47 *eS* **Sn 05 31 26.4 -0.7**
MOKO IAML 05 31 31.4
comp=E,458nm,0.3s
MOKO IAML 05 31 31.5
comp=N,478nm,0.2s
ZIRO ZIRO 3.79 27 *eS* **Sn 05 31 40.0 -1.6**
ZIRO IAML 05 31 42.3
comp=E,459nm,0.2s
ZIRO IAML 05 31 42.4
comp=N,514nm,0.2s
MKAR Makanchi Array 23.88 344 P **P 05 35 13.1 +1.2**
comp=N,0.3nm,0.6s,baz=164,slow=9.9,SNR=3.1
KURBB Kurchatov Arra 28.39 342 P **P 05 35 55.1 +2.4**
comp=N,0.1nm,0.2s,baz=159,slow=9.8,SNR=2.5
TLY Talaya 28.93 15 LR LR 05 49 16.5
comp=N,23nm,18.6s,baz=305,slow=40
KSRS Korea Array 33.45 58 LR LR 05 52 26.1
comp=N,15nm,18.1s,baz=165,slow=41
JNU Nakatsue 35.19 66 LR LR 05 52 54.2
comp=N,16nm,21.8s,baz=127,slow=39
WRA Warramunga Arr 60.24 133 P **P 05 40 05.8 -1.2**
comp=N,0.7nm,0.6s,baz=323,slow=7.2,SNR=6.7
ASAR Alice Springs 62.61 136 P **P 05 40 21.9 -1.0**
comp=N,0.6nm,0.7s,baz=318,slow=6.6,SNR=4.9
HFS Hagfors 63.54 327 LR LR 06 07 55.7
comp=N,25nm,18.6s,baz=316,slow=36

IDC 29 06:26:43.1±3.8, 47°22N×152°75E, h0km, mb3.6/6, mb1 3.7/6, mb1mx3.4/65, mbtmp3.6/6, Error ellipse: s-maj=120.7km s-min=34.5km az=6.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11N2	**WAKE ISLAND Hy 29.75 152**			T	T	07 04 29.3	
baz=340,slow=76,SNR=7.6							
H11N1	**WAKE ISLAND Hy 29.76 152**			T	T	07 04 41.4	
baz=340,slow=76,SNR=6.5							
H11N3	**WAKE ISLAND Hy 29.76 152**			T	T	07 04 29.8	
baz=340,slow=76,SNR=5.8							
H11S1	**WAKE ISLAND Hy 30.84 153**			T	T	07 05 49.2	
baz=341,slow=76,SNR=9.9							
H11S3	**WAKE ISLAND Hy 30.84 154**			T	T	07 05 48.1	
baz=341,slow=76,SNR=7.5							
H11S2	**WAKE ISLAND Hy 30.85 153**			T	T	07 05 50.5	
baz=341,slow=76,SNR=5.9							
MKAR	**Makanchi Array 46.51 297**			P	P	06 35 11.9	-0.1
0.4nm,0.6s,baz=79,slow=8.0,SNR=4.9							
KURBB	**Kurchatov Arra 46.99 303**			P	P	06 35 15.6	0.0
0.2nm,0.4s,baz=74,slow=8.0,SNR=2.8							
FINES	**FINESS Array B 63.51 334**			P	P	06 37 14.8	+0.3
0.5nm,0.5s,baz=46,slow=8.0,SNR=3.5							
HFS	**Hagfors 67.93 339**			P	P	06 37 43.1	-0.1
1.1nm,0.5s,baz=71,slow=9.3,SNR=5.2							
AKASG	**Malin Array Be 71.02 326**			P	P	06 38 02.1	-0.2
0.3nm,0.4s,baz=34,slow=6.3,SNR=2.5							
TXAR	**Lajitas Array 77.48 60**			P	P	06 38 40.6	+0.1
0.2nm,0.5s,baz=316,slow=3.8,SNR=5.1							

PRU 29 06:33:20.3, 49°86N×18°51E, h0km, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne 0.24 265**			*eP*G	Pg	06 33 24.9	+0.1
OKC				*eS*G	Sg	06 33 28.9	+1.0
comp=Z,7.3nm,0.3s							
MORC	**Moravsky Berou 0.63 263**			*eP*G	Pg	06 33 32.6	+0.2
MORC				*eS*G	Sg	06 33 41.0	+0.4
LANS	**Liptovska Anna 0.95 138**			*eP*G	Pg	06 33 37.7	-0.7
LANS				*eS*G	Sg	06 33 51.4	+0.8
JAVC	**Velka Javorina 1.14 209**			*eP*G	Pg	06 33 42.5	+0.3
VRAC	**Vranov 1.36 247**			*eP*G	Pg	06 33 45.4	-1.0
VRAC				*eS*G	Sg	06 34 03.6	-0.5
VYHS	**Vyhne 1.38 171**			*eP*G	Pg	06 33 45.1	-1.7
VYHS				*eS*G	Sg	06 34 03.5	-1.2
VYHS				*eL*G	Lg	06 34 06.3	
DPC	**Dobruska-Polom 1.49 290**			*eP*G	Pn	06 33 46.9	-1.5
DPC				*eS*G	Sg	06 34 07.8	-0.4
2.6nm,0.3s							
KRUC	**Moravsky 1.59 241**			*eS*G	Sn	06 34 10.1	-0.9

*NEIC **29** 06:45:22.8±0.0, 19°58N×63°70W, h43km, MD3.5(RSPR), After RSPR.*

RSPR 29 06:45:22.8, 19°58N×63°70W, h43km±10km, MD3.5/8, 28C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	**Anegada 1.04 216**			*eP*	Pn	06 45 38.8	-2.1
ABV				*eS*	Sn	06 45 53.2	-1.0
ABVI	**Anegada Island 1.04 216**			*eP*	Pn	06 45 38.8	-2.1
TBVI	**Tortola 1.45 217**			*eP*	Pn	06 45 45.0	-1.6
TBVI	**Tortola 1.45 217**			*eP*	Pn	06 45 45.0	-1.6
STVI	**Saint Thomas 1.71 225**			*eP*	Pn	06 45 48.7	-1.3
STVI				*eS*	Sn	06 46 09.6	-1.0
STVI	**Saint Thomas 1.71 225**			*eP*	Pn	06 45 48.7	-1.3
CDVI	**St. Croix 2.08 209**			*eP*	Pn	06 45 54.4	-0.8
CDVI				*eS*	Sn	06 46 19.3	-0.6
CDVI	**St. Croix 2.08 209**			*eP*	Pn	06 45 54.4	-0.8
MTP	**Monte Pirata 2.29 230**			*eP*	Pn	06 45 57.3	-0.9
MTP				*eS*	Sn	06 46 24.3	-0.9
MTP	**Monte Pirata 2.29 230**			*eP*	Pn	06 45 57.3	-0.9
CBYP	**Canovanas 2.42 238**			*eP*	Pn	06 45 59.1	-0.9
CBYP				*eS*	Sn	06 46 27.8	-0.7
CBYP	**Canovanas 2.42 238**			*eP*	Pn	06 45 59.1	-0.9
HUMP	**Col San Antoni 2.49 235**			*eS*	Sn	06 46 29.5	-0.5
HUMP	**Col San Antoni 2.49 235**			*eP*	Pn	06 46 00.5	-0.3
HUMP	**Col San Antoni 2.49 235**			*eP*	Pn	06 46 00.5	-0.3
HUMP				*eS*	Sn	06 46 29.5	-0.5
SJG	**San Juan 2.74 238**			*eP*	Pn	06 46 03.8	-0.6
SJG				*eS*	Sn	06 46 35.2	-1.0
SJG	**San Juan 2.74 238**			*eP*	Pn	06 46 03.8	-0.6
EMPR	**Esperanza - Ma 2.90 248**			*eP*	Pn	06 46 06.0	-0.4
EMPR	**Esperanza - Ma 2.90 248**			*eP*	Pn	06 46 06.0	-0.4
AOPR	**Arecibo Observ 3.14 248**			*eP*	Pn	06 46 08.8	-1.1
AOPR	**Arecibo Observ 3.14 248**			*eP*	Pn	06 46 08.8	-1.1
OBIP	**Obispado Ponce 3.15 241**			*eP*	Pn	06 46 09.5	-0.5
OBIP				*eS*	Sn	06 46 45.4	-0.9
OBIP	**Obispado Ponce 3.15 241**			*eP*	Pn	06 46 09.5	-0.5
AGPR	**Aguadilla, PR 3.42 252**			*eP*	Pn	06 46 12.9	-0.6
AGPR	**Aguadilla, PR 3.42 252**			*eP*	Pn	06 46 12.9	-0.6
LSP	**Las Mesas 3.50 247**			*eP*	Pn	06 46 14.6	-0.2
LSP				*eS*	Sn	06 46 54.4	-0.6
LSP	**Las Mesas 3.50 247**			*eP*	Pn	06 46 14.6	-0.2
CRPR	**Cabo Rojo, PR 3.59 245**			*eP*	Pn	06 46 15.8	-0.2
CRPR	**Cabo Rojo, PR 3.59 245**			*eP*	Pn	06 46 15.8	-0.2

*DJA **29** 06:48:54.9±0.4, 7°S±4°×10°5E±°, h10km, M4.5/13, MLv4.5/13*
*ISCJB **29** 06:48:55.5±0.8, 7°07S±0°07×105°22E±0°05, h69km±5km, mb4.4/39, Error ellipse: s-maj=13.7km s-min=4.5km az=33.6*
*BJI **29** 06:48:55.4, 7°10S×105°20E, h55km, mb4.8/15, mB5.0/11, Ms4.6/2, Ms7 4.3/2*
*NEIC **29** 06:48:58.0±0.8, 6°82S×105°40E, h64km±6km, mb4.5/13, Error ellipse: s-maj=14.6km s-min=5.1km az=219.0*
*IDC **29** 06:49:00.4±3.0, 6°75S×105°52E, h87km±25km, mb3.9/21, mb1 4.0/22, mb1mx3.8/59, mbtmp4.2/22, MS3.1/7, Ms1 3.1/7, ms1mx2.8/58, Error ellipse: s-maj=24.9km s-min=12.5km az=56.0*

ISC 29 06:48:56.0±1.4, 7°07S±0°08×105°20E±0°06, h51km±11km, n131, σ1§45/131, mb4.5/39, MS3.2/7, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGJI	**Cibinong 0.67 47**			P	Pn	06 49 07.8	-1.6
CGJI				S	Sn	06 49 15.8	-3.3
SBJI	**Serang 1.32 44**			P	Pn	06 49 17.4	-0.7
SBJI				S	Sn	06 49 36.6	+1.9
SKJI	**Sukabumi 1.35 87**			P	Pn	06 49 17.4	-1.1
SKJI				S	Sn	06 49 37.4	+2.1
DBJI	**Dramaga 1.63 72**			P	Pn	06 49 21.8	-0.4
KASI	**Kota Agung 1.69 336**			P	Pn	06 49 24.0	+0.9
BLSI	**Bandar Lampung 1.69 2**			P	Pn	06 49 23.9	+0.7
TNG	**Tangerang 1.70 58**			P	Pn	06 49 23.6	+0.4
TNG				P	Pn	06 49 23.6	+0.4
KLI	**Kotabumi 2.22 351**			P	Pn	06 49 31.7	+1.3
LWLI	**Liwa 2.33 331**			P	Pn	06 49 34.4	+2.3
LEM	**Lembang 2.42 84**			P	Pn	06 49 34.8	+1.6
70nm,0.3s,baz=206,slow=19,SNR=21							
LEM				S	Sn	06 50 03.0	+1.4
50nm,0.3s,baz=294,slow=20,SNR=4.4							
LEM				LR	LR	06 50 35.4	
comp=Z,390nm,21.2s,baz=240,slow=46							
LEM	**Lembang 2.42 84**			P	Pn	06 49 34.8	+1.6
CISI	**Cisompet, Garu 2.64 101**			P	Pn	06 49 36.0	-0.2
CISI	**Cisompet, Garu 2.64 101**			*eP*n	Pn	06 49 36.0	-0.2
CISI				*eS*n	Sn	06 50 06.1	-1.0
MDSI	**Maura Dua 2.76 338**			P	Pn	06 49 39.1	+1.3
JCJI	**Jatiwangi 3.11 79**			P	Pn	06 49 54.4	+12
CMJI	**Cimerak 3.30 103**			P	Pn	06 49 45.6	+0.4
MNAI	**Manna 3.50 320**			P	Pn	06 49 48.7	+0.8
MNAI	**Manna 3.50 320**			*eP*n	Pn	06 49 48.8	+0.8
MNAI				*eS*n	Sn	06 50 27.6	-0.6
KPJI	**Karang Pucung 3.71 94**			P	Pn	06 49 54.5	+3.7
MASI	**Maura Aman, Be 4.89 323**			P	Pn	06 50 18.8	+12
UGM	**Wanagama 5.35 99**			*eP*n	Pn	06 50 14.4	+1.1
JAGI	**Jajag, Banyuwa 8.98 99**			*eP*n	Pn	06 51 03.2	+0.1
GSI	**Gunungsitoli 11.27 317**			*eP*n	Pn	06 51 34.7	+0.2
KKM	**Kota Kinabalu 17.05 40**			*eP*	P	06 52 53.0	+0.8
16nm,0.8s							
MYLDM	**Lahad Datu 18.01 48**			*eP*n	Pn	06 53 07.4	+4.6
31nm,1.3s							
MRSI	**Marisa 18.31 66**			P	Pn	06 53 07.3	+0.8
SOEI	**Soe 19.05 99**			*eP*	P	06 53 12.7	-1.6
19nm,0.6s							
FITZ	**Fitzroy Crossi 22.73 121**			P	P	06 53 54.0	+0.1
2.1nm,0.7s,baz=306,slow=4.4,SNR=7.3							
CMAR	**Chiang Mai Arr 26.11 346**			P	P	06 54 24.8	-0.5
1.5nm,0.3s,baz=177,slow=8.2,SNR=5.2							
CMAR				LR	LR	07 04 48.3	
comp=Z,20nm,18.7s,baz=180,slow=37							
MTN	**Manton Dam 26.17 105**			*eP*	P	06 54 24.1	-1.8
10nm,0.4s							
H01W3	**Cape Leeuwin H 28.88 165**			T	T	07 25 11.7	
baz=344,slow=76,SNR=152							
H01W1	**Cape Leeuwin H 28.89 165**			T	T	07 25 13.4	
baz=344,slow=76,SNR=134							
H01W2	**Cape Leeuwin H 28.89 165**			T	T	07 25 13.0	
baz=344,slow=76,SNR=186							
WRA	**Warramunga Arr 31.02 117**			P	P	06 55 08.4	-0.7
1.7nm,0.6s,baz=286,slow=11,SNR=33							
WRA				PcP	PcP	06 58 04.2	-0.1
0.5nm,0.5s,baz=300,slow=2.0,SNR=6.9							
WRAB	**Tennant Creek 31.03 117**			*eP*	P	06 55 09.0	-0.1
8.0nm,1.2s							
WB2	**Warramunga Arr 31.03 117**			*eP*	P	06 55 08.9	-0.3
8.0nm,1.3s							
ASAR	**Alice Springs 32.12 124**			P	P	06 55 18.1	-0.7
0.6nm,0.7s,baz=303,slow=8.4,SNR=5.4							
BRDH	**Bariadhala 32.41 336**			LR	LR	07 10 25.6	
comp=Z,56nm,18.4s,baz=179,slow=40							
H08S2	**Diego Garcia H 32.44 267**			T	T	07 29 39.6	
baz=90,slow=75,SNR=24							
H08S3	**Diego Garcia H 32.45 267**			T	T	07 29 43.9	
baz=90,slow=75,SNR=85							
H08S1	**Diego Garcia H 32.45 267**			T	T	07 29 38.4	
baz=90,slow=75,SNR=11							
GYA	**Guiyang 33.36 2**			*eP*	P	06 55 33.0	+3.4
GYA				pmax	pmax		
comp=Z,10.0nm,1.0s							
CD2	**Chengdu 37.79 358**			P	P	06 56 08.5	+1.0
CD2				pmax	pmax		
comp=Z,20nm,0.6s							
COEN	**Coen 37.92 104**			*eP*	P	06 56 07.6	-1.2
3.2nm,0.6s							
RAMN	**Ramite 38.32 333**			*eP*	P	06 56 12.2	-0.1
8.0nm,0.3s							
JIRN	**Jiri 39.12 333**			*eP*	P	06 56 18.8	-0.3
14nm,0.5s							
GUN	**Gumba 39.47 333**			*eP*	P	06 56 21.4	-0.6
12nm,0.4s							
GKN	**Gorkha 40.13 331**			*eP*	P	06 56 26.2	-1.1
12nm,0.4s							
KOLN	**Koldanda 40.45 330**			*eP*	P	06 56 29.4	-0.5
16nm,0.7s							
DANN	**Dangsing 40.85 330**			*eP*	P	06 56 32.5	-0.8
11nm,0.5s							
PYUN	**Piuthan 41.02 329**			*eP*	P	06 56 34.1	-0.6
18nm,1.0s							
NJ2	**Nanjing 41.03 18**			*eP*	P	06 56 37.5	+3.1
NJ2				pmax	pmax		
comp=Z,11nm,0.7s							
PMG	**Port Moresby 41.58 96**			*eP*	P	06 56 39.0	-0.3
8.4nm,0.6s							
STKA	**Stephens Creek 41.93 131**			P	P	06 56 42.2	+0.3
2.2nm,0.5s,baz=272,slow=5.2,SNR=3.8							
STKA	**Stephens Creek 41.93 131**			*eP*	P	06 56 42.2	+0.3
3.7nm,1.4s							
LZH	**Lanzhou 42.95 358**			*eP*	P	06 56 54.3	+4.1
LZH				pP	sP	06 57 05.8	-3.9
LZH				sP	pP	06 57 13.5	+10
LZH				*eP*P	PcP	06 58 37.5	-2.6
LZH				pmax	pmax		
comp=Z,20nm,1.2s							
LZH				pmax	pmax		
comp=Z,64nm,5.6s							
LZH				LR	LR		
comp=N,320nm,14.0s							
LZH				LR	LR		
comp=E,330nm,13.8s							
LZH				LR	LR		
comp=Z,380nm,17.3s							
GUMO	**Guam 44.42 62**			LR	LR	07 15 12.6	
comp=Z,9.9nm,21.5s,baz=92,slow=36							
JNU	**Nakatsue 46.84 30**			P	P	06 57 18.5	-2.5
2.6nm,0.4s,baz=214,slow=3.6,SNR=5.0							
KSAR	**Wonju Array Be 49.10 24**			P	P	06 57 36.2	-2.2
KSRS	**Korea Array 49.12 24**			P	P	06 57 36.2	-2.3
1.3nm,0.5s,baz=220,slow=7.0,SNR=4.8							
NIL	**Nilore 50.58 325**			*eP*	P	06 57 49.4	-0.4
10nm,0.6s							
WMQ	**Urumqi 53.08 344**			P	P	06 58 10.8	+2.6
WMQ				pP	sP	06 58 24.3	-3.7
WMQ				sP	pP	06 58 30.0	+7.8
WMQ				pmax	pmax		
comp=Z,7.0nm,1.3s							
WMQ				pmax	pmax		
comp=Z,200nm,6.3s							
MJAR	**Matsushiro Arr 53.29 33**			P	P	06 58 06.5	-3.4
2.7nm,0.6s,baz=218,slow=8.6,SNR=6.4							
KSH	**Kashi 53.67 332**			P	P	06 58 15.5	+2.8
KSH				pmax	pmax		
comp=Z,190nm,6.1s							
CN2	**Changchun 53.85 18**			*eP*	P	06 58 18.3	+4.5
CN2				pmax	pmax		
comp=Z,10.0nm,0.6s							
SONM	**Songino Array 54.68 1**			P	P	06 58 18.7	-1.2
0.9nm,0.4s,baz=188,slow=12,SNR=5.9							
SONM				PcP	PcP	06 59 21.6	-0.6
1.4nm,0.5s,baz=192,slow=3.2,SNR=6.2							
SONM				LR	LR	07 22 38.2	
comp=Z,41nm,19.6s,baz=130,slow=37							
SONA1	**Songino Array 54.69 1**			*eP*	P	06 58 19.4	-0.7
USRK	**Ussuriysk Ar. 56.48 23**			P	P	06 58 30.5	-2.3
4.5nm,0.5s,baz=191,slow=5.3							
MK01	**Makanchi Array 57.34 341**			*eP*	P	06 58 37.3	-1.6
MK31	**Makanchi Array 57.37 341**			*eP*	P	06 58 37.7	-1.3
MKAR	**Makanchi Array 57.37 341**			P	P	06 58 37.4	-1.7
0.8nm,0.4s,baz=157,slow=7.7,SNR=20							
MKAR	**Makanchi Array 57.37 341**			*eP*	P	06 58 37.7	-1.3
6.3nm,0.6s							
TLY	**Talaya 58.53 359**			LR	LR	07 27 16.1	
comp=Z,19nm,18.1s,baz=166,slow=39							
KK31	**Karatay Array 59.04 331**			*eP*	P	06 58 50.7	-0.2
KKAR	**Karatay Array 59.04 331**			*eP*	P	06 58 50.8	0.0
ASAJ	**Asahikawa 61.12 30**			LR	LR	07 29 31.8	
comp=Z,15nm,18.3s,baz=143,slow=40							
KURBB	**Kurchatov Arra 61.92 341**			P	P	06 59 08.8	-1.5
0.7nm,0.4s,baz=151,slow=6.4,SNR=10							
KURBB				PcP	PcP	06 59 50.6	0.0
0.3nm,0.4s,baz=144,slow=3.3,SNR=4.4							
KURK	**Kurchatov 61.98 341**			P	P	06 59 08.8	-1.9
KURK				PcP	PcP	06 59 50.6	-0.2
GEYT	**Alibeck 62.64 319**			P	P	06 59 15.4	-0.1
0.9nm,0.3s,baz=104,slow=4.6,SNR=3.4							
ZAA0	**Zalesovo Array 63.17 347**			*eP*	P	06 59 16.7	-1.8
3.0nm,0.7s							
ZALV	**Zalesovo Beam 63.17 347**			P	P	06 59 16.8	-1.7
2.8nm,0.4s,baz=148,slow=3.6,SNR=9.9							
BVAR	**Borovoye Array 66.75 338**			P	P	06 59 40.9	-0.9
3.7nm,0.5s,baz=144,slow=9.2,SNR=24							
BRVK	**Borovoye 66.82 338**			*eP*	P	06 59 41.6	-0.6
4.8nm,0.5s							
ABKAR	**Akbulak array 68.57 330**			*eP*	P	06 59 53.1	-0.3
AKTO	**Aktyubinsk 70.28 330**			P	P	07 00 03.9	-0.1
1.3nm,0.4s,baz=130,slow=11,SNR=4.6							
ARU	**Arti 73.93 335**			P	P	07 00 25.0	-0.6
7.4nm,0.2s,baz=132,slow=4.9,SNR=4.5							
PETK	**Petropavlovsk- 74.53 30**			P	P	07 00 27.2	-2.0
2.7nm,0.6s,baz=145,slow=5.3							
BRTR	**Keskin Array B 80.55 312**			P	P	07 01 03.5	+0.2
0.9nm,0.6s,baz=126,slow=6.7,SNR=4.6							
MLR	**Muntele Rosu 87.52 316**			P	P	07 01 39.7	+1.1
0.4nm,0.5s,baz=90,slow=11,SNR=3.5							
BUR04	**Bucovina Ar. S 88.47 318**			*eP*	P	07 01 45.0	+2.0
BUR08	**Bucovina Ar. S 88.48 318**			*eP*	P	07 01 47.9	+4.8
SNAA	**Sanae 88.92 198**			P	P	07 01 47.0	+2.3
0.4nm,0.4s,baz=166,slow=9.1,SNR=3.9							
FIA1	**FINESS Array S 90.99 332**			*eP*	P	07 01 55.5	+1.2
FINES	**FINESS Array B 90.99 332**			P	P	07 01 55.5	+1.1
1.3nm,0.5s,baz=97,slow=6.1,SNR=8.0							
ARCES	**ARCESS Array B 92.98 340**			P	P	07 02 02.5	-1.0
4.0nm,1.0s,baz=98,slow=6.5,SNR=8.4							
ARCES	**ARCESS Array B 92.98 340**			*eP*	P	07 02 04.4	+0.9
ARE0	**ARCESS Array S 92.98 340**			*eP*	P	07 02 04.4	+1.0
45nm,1.5s							
SPITS	**Spitsbergen Ar 96.63 348**			P	P	07 02 18.6	-1.4
6.3nm,1.0s,baz=81,slow=13,SNR=4.4							
SPUT	**South Promonto 132.26 38**			*e*PKPdf	PKPdf	07 08 05.0	0.0
QUA2	**Belchertown 144.87 357**			*e*PKPdf	PKPdf	07 08 26.8	-0.9
TX31	**Lajitas Ar. Si 144.94 47**			*e*PKPbc	PKPdf	07 08 28.0	-0.3
TXAR	**Lajitas Array 144.94 47**			PKP	PKPdf	07 08 27.8	-0.6
0.9nm,0.5s,baz=308,slow=1.1,SNR=24							
BINY	**Binghamton 145.00 2**			*e*PKPbc	PKPab	07 08 27.0	-0.3
SFIN	**Lafayette 145.06 16**			*e*PKPbc	PKPab	07 08 27.2	-0.3
R40A	**Maddies Statio 145.13 24**			*e*PKPbc	PKPbc	07 08 26.8	-1.0
S39A	**Bolivar 145.19 26**			*e*PKPbc	PKPbc	07 08 26.2	-1.8
M54A	**Oil Creek Stat 145.44 6**			*e*PKPdf	PKPbc	07 08 28.3	-0.4
TUL1	**Leonard 145.46 31**			*e*PKPdf	PKPab	07 08 29.2	+0.1
KSPA	**Keystone Colle 145.65 1**			*e*PKPdf	PKPbc	07 08 28.9	-0.5
P45A	**Graceland, Par 145.66 18**			*e*PKPdf	PKPbc	07 08 28.9	-0.5
CCM	**Cathedral Cave 145.75 23**			*e*PKPdf	PKPdf	07 08 28.6	-0.8
CCM				*e*PKPbc	PKPab	07 08 30.2	+0.1
N54A	**Moraine State 145.94 7**			*e*PKPdf	PKPdf	07 08 28.5	-1.1
HHAR	**Hobbs 146.07 28**			*e*PKPdf	PKPbc	07 08 30.4	-0.5
OLIL	**Olney 146.27 19**			*e*PKPdf	PKPab	07 08 32.0	-0.1
N59A	**State Game Lan 146.29 1**			*e*PKPdf	PKPbc	07 08 31.1	-0.3
BRNJ	**Basking Ridge 146.53 360**			*e*PKPbc	PKPab	07 08 33.5	+0.5
T42A	**Van Buren 146.69 24**			*e*PKPdf	PKPbc	07 08 31.5	-1.2
O56A	**Blue Knob Stat 146.78 5**			*e*PKPdf	PKPbc	07 08 32.3	-0.5
V40A	**Witts Springs 146.98 27**			*e*PKPbc	PKPab	07 08 34.3	-0.7
PBMO	**Poplar Bluff 147.17 24**			*e*PKPdf	PKPdf	07 08 32.2	+0.4
MVL	**Millersville 147.19 2**			*e*PKPbc	PKPbc	07 08 33.1	-0.8
W40A	**Ferguson Farm, 147.36 28**			*e*PKPdf	PKPab	07 08 36.3	-0.1
MIAR	**Mount Ida 147.64 30**			*e*PKPbc	PKPab	07 08 37.1	-0.5
WHAR	**Wooly Hollow 147.65 27**			*e*PKPbc	PKPab	07 08 37.2	-0.4
WVT	**Waverly 148.72 21**			*e*PKPbc	PKPbc	07 08 37.8	-0.3
V52A	**Sevierville 150.25 14**			*e*PKPbc	PKPbc	07 08 41.8	-0.2
CPCT	**Cooper Cave 150.38 16**			*e*PKPbc	PKPbc	07 08 41.8	-0.5
TKL	**Tuckaleechee C 150.38 15**			PKPbc	PKPbc	07 08 41.2	-1.1
1.8nm,0.6s,baz=241,slow=3.1,SNR=4.9							
TKL	**Tuckaleechee C 150.38 15**			*e*PKPbc	PKPbc	07 08 42.0	-0.3
Y49A	**Blount Mountai 151.26 20**			*e*PKPbc	PKPbc	07 08 43.6	-0.8
PB01	**IPOC Station P 151.57 190**			*e*PKPbc	PKPbc	07 08 44.8	-0.8

*NIED **29

IDC 29 07:06:18.4±1.8, 1°.35N×126°.89E, h0km, mb3.2/4, mb1 3.3/4, mb1mx3.2/55, mbtmp3.2/4, Error ellipse: s-maj=178.0km s-min=21.3km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.39**	**161**	P	P	07 11 17.7	-0.8
	0.2nm,0.3s,baz=340,slow=11,SNR=7.4						
ASAR	**Alice Springs**	**25.79**	**165**	P	P	07 11 51.9	+0.6
	0.1nm,0.3s,baz=354,slow=8.4,SNR=3.1						
MKAR	**Makanchi Array**	**59.59**	**326**	P	P	07 16 24.2	+0.1
	0.1nm,0.4s,baz=114,slow=8.6,SNR=3.5						
KURBB	**Kurchatov Arra**	**63.82**	**328**	P	P	07 16 52.3	-0.2
	0.3nm,0.7s,baz=133,slow=5.7,SNR=2.4						

*CSEM **29** 07:14:36.4±0.6, 41°.00N×38°.04E, h0km±4km, ML2.6, Error ellipse: s-maj=7.5km s-min=4.4km az=179.0*
*ISK **29** 07:14:36.4, 41°.04N×38°.05E, h8km, ML2.6/5*
*ISCJB **29** 07:14:37.7±0.6, 40°.97N±0°.05×38°.06E±0°.04, h10km, Error ellipse: s-maj=7.7km s-min=3.8km az=4.3*
ISC 29 07:14:36.8±0.9, 41°.00N±0°.04×38°.03E±0°.02, h10km, n26, σ0§73/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESPY	**Espiye-Giresun**	**0.54**	**99**	PG	**Pg**	07 14 47.1	-0.1
ESPY				SG	**Sb**	07 14 55.0	-1.1
ESPY	**Espiye-Giresun**	**0.54**	**99**	*e*Pg	**Pg**	07 14 47.1	-0.1
ESPY				*e*Sg	**Sb**	07 14 55.0	-1.1
CUZAR	**Zara_SIVAS**	**1.13**	**190**	*i* S	**Sb**	07 15 11.3	-1.9
CUZAR	**Zara_SIVAS**	**1.13**	**190**	S	**Sb**	07 15 11.3	-1.9
KELT	**Kelkit**	**1.26**	**132**	*i* S	**Sb**	07 15 16.9	-0.3
KELT	**Kelkit**	**1.26**	**132**	S	**Sb**	07 15 16.9	-0.3
TOKT	**Tokat**	**1.32**	**239**	PN	**Pg**	07 15 02.3	+0.3
TOKT	**Tokat**	**1.32**	**239**	*e*Pn	**Pg**	07 15 02.3	+0.3
KTUT	**Trabzon**	**1.32**	**90**	PN	**Pg**	07 15 01.7	-0.3
KTUT				SN	**Sg**	07 15 20.2	+1.1
KTUT	**Trabzon**	**1.32**	**90**	*e*Pn	**Pg**	07 15 01.7	-0.3
KTUT				*e*Sn	**Sg**	07 15 20.2	+1.1
MACK	**Trabzon**	**1.32**	**92**	*i* S	**Sb**	07 15 18.1	-0.6
MACK	**Trabzon**	**1.32**	**92**	S	**Sb**	07 15 18.1	-0.6
SVSK	**Karacayir**	**1.34**	**216**	PN	**Pg**	07 15 02.8	+0.4
SVSK	**Karacayir**	**1.34**	**216**	*e*Pn	**Pg**	07 15 02.8	+0.4
SAMS	**Samsun-Alacam**	**1.44**	**285**	*i* S	**Sg**	07 15 23.7	+0.8
SAMS	**Samsun-Alacam**	**1.44**	**285**	S	**Sg**	07 15 23.7	+0.8
KVT	**Kavak**	**1.50**	**274**	PN	**Pb**	07 15 04.5	-0.2
KVT				SN	**Sg**	07 15 25.1	+0.1
KVT	**Kavak**	**1.50**	**274**	*e*Pn	**Pb**	07 15 04.5	-0.2
KVT				*e*Sn	**Sg**	07 15 25.1	+0.1
ILIC	**ilic-Erzincan**	**1.60**	**165**	PN	**Pb**	07 15 06.5	0.0
ILIC	**ilic-Erzincan**	**1.60**	**165**	*e*Pn	**Pb**	07 15 06.5	0.0
BAYT	**Ayd¨–ntepe-Bay**	**1.72**	**110**	PN	**Pn**	07 15 07.0	+0.1
BAYT	**Ayd¨–ntepe-Bay**	**1.72**	**110**	*e*Pn	**Pn**	07 15 07.0	+0.1
KEMA	**Kemaliye**	**1.76**	**168**	*i* S	**Sg**	07 15 33.9	+0.4
KEMA	**Kemaliye**	**1.76**	**168**	S	**Sg**	07 15 33.9	+0.4
PTK	**Pertek**	**2.35**	**153**	PN	**Pn**	07 15 16.3	+0.7
PTK	**Pertek**	**2.35**	**153**	*e*Pn	**Pn**	07 15 16.3	+0.7

*IDC **29** 07:27:00.6±1.0, 6°.13S×147°.73E, h0km, mb3.9/9, mb1 4.0/11, mb1mx3.9/45, mbtmp3.9/11, ML3.3/2, MS2.8/7, Ms1 2.8/7, ms1mx2.6/44, Error ellipse: s-maj=40.5km s-min=17.1km az=99.0*
*NEIC **29** 07:27:06.5±0.4, 6°.15S×147°.63E, h35km, mb4.2/8, Error ellipse: s-maj=11.9km s-min=5.9km az=91.0*
*ISCJB **29** 07:27:09.7±0.6, 6°.32S±0°.04×147°.4E±0°.1, h77km, mb3.6/13, Error ellipse: s-maj=14.6km s-min=6.1km az=0.6*
ISC 29 07:27:11.5±0.7, 6°.33S±0°.06×147°.4E±0°.1, h77km, n38, σ1§05/39, mb3.8/13, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.06**	**184**	Pn	**Pn**	07 27 55.6	-2.0
	28nm,0.3s,baz=28,slow=10,SNR=28						
PMG				Sn	**Sn**	07 28 32.4	-0.8
	20nm,0.3s,baz=41,slow=20,SNR=6.0						
PMG				LR	LR	07 29 02.6	
	comp=Z,79nm,21.7s,baz=47,slow=37						
PMG	**Port Moresby**	**3.06**	**184**	*e*Pn	**Pn**	07 27 56.1	-1.6
PMG				*e*Sn	**Sn**	07 28 32.4	-0.8
JAY	**Jayapura**	**7.64**	**299**	Pn	**Pn**	07 28 59.3	-0.9
	0.6nm,0.3s,baz=135,slow=4.3,SNR=2.2						
JAY				LR	LR	07 32 36.3	
	comp=Z,103nm,20.2s,baz=186,slow=43						
COEN	**Coen**	**8.62**	**208**	*e*Pn	**Pn**	07 29 13.5	0.0
COEN				*e*Sn	**Sn**	07 30 48.0	-1.3
CTA	**Charters Tower**	**13.72**	**184**	Pn	**Pn**	07 30 22.6	-0.1
	baz=11,slow=16,SNR=3.3						
SIJI	**Sorong**	**16.95**	**288**	LR	LR	07 38 28.9	
	comp=Z,62nm,21.3s,baz=318,slow=40						
WRAB	**Tennant Creek**	**18.50**	**222**	*e*P	**Pn**	07 31 22.4	-0.3
	16nm,1.4s						
WB2	**Warramunga Arr**	**18.51**	**222**	*e*P	**Pn**	07 31 22.6	-0.3
	52nm,0.9s						
WR1	**Warramunga Arr**	**18.52**	**222**	*e*P	**Pn**	07 31 22.6	-0.3
	40nm,0.9s						
WR1				*e*PcP	**PcP**	07 35 50.4	+1.4
WRA	**Warramunga Arr**	**18.52**	**222**	P	**Pn**	07 31 22.6	-0.3
	0.4nm,0.3s,baz=51,slow=11,SNR=20						
WRA				PcP	**PcP**	07 35 50.4	+1.4
	0.0nm,0.3s,baz=29,slow=2.1,SNR=3.5						
EIDS	**Eidsvold**	**19.26**	**170**	*e*P	**P**	07 31 30.8	+0.8
	15nm,1.4s						
GUMO	**Guam**	**19.95**	**353**	LR	LR	07 37 56.3	
	comp=Z,24nm,19.4s,baz=126,slow=33						
AS01	**Alice Springs**	**21.52**	**215**	*e*P	**P**	07 31 56.4	+2.0
AS31	**Alice Springs**	**21.55**	**215**	*e*P	**P**	07 31 56.4	+1.7
	1.4nm,0.8s						
ASAR	**Alice Springs**	**21.55**	**215**	P	**P**	07 31 54.9	+0.1
	2.1nm,0.7s,baz=56,slow=9.2,SNR=32						
ASAR				S	**S**	07 35 48.6	-1.0
	0.5nm,0.8s,baz=32,slow=23,SNR=2.6						
FITZ	**Fitzroy Crossi**	**24.20**	**239**	P	**P**	07 32 23.2	+2.2
	2.4nm,0.3s,baz=58,slow=9.5,SNR=25						
ARMA	**Armidale**	**24.30**	**171**	*e*P	**P**	07 32 21.9	0.0
	16nm,1.2s						
STKA	**Stephens Creek**	**25.98**	**191**	P	**P**	07 32 37.0	0.0
	2.1nm,0.4s,baz=26,slow=12,SNR=6.2						
STKA	**Stephens Creek**	**25.98**	**191**	*e*P	**P**	07 32 37.3	+0.2
	2.6nm,1.3s						
KSRS	**Korea Array**	**47.19**	**339**	LR	LR	07 54 11.4	
	comp=Z,8.4nm,18.6s,baz=164,slow=35						
ASAJ	**Asahikawa**	**50.40**	**356**	LR	LR	07 54 59.1	
	comp=Z,14nm,21.2s,baz=154,slow=33						
PETK	**Petropavlovsk-**	**59.86**	**7**	LR	LR	07 59 28.1	
	comp=Z,6.7nm,21.7s,baz=183,slow=33						
SONA0	**Songino Array**	**64.86**	**331**	*e*P	**P**	07 37 43.0	+0.4
SONM	**Songino Array**	**64.86**	**331**	P	**P**	07 37 43.0	+0.4
	0.2nm,0.4s,baz=126,slow=7.3,SNR=2.8						
VNDA	**Vanda**	**71.56**	**177**	*e*P	**P**	07 38 24.7	+0.8
	0.1nm,1.0s						
MK01	**Makanchi Array**	**77.96**	**320**	*e*P	**P**	07 39 01.6	+0.2
MK32	**Makanchi Array**	**77.98**	**320**	*e*P	**P**	07 39 01.3	-0.2
MKAR	**Makanchi Array**	**77.98**	**320**	P	**P**	07 39 01.3	-0.2
	0.5nm,0.8s,baz=101,slow=7.5,SNR=4.2						
MAKZ	**Makanchi**	**78.18**	**320**	*e*P	**P**	07 39 02.9	+0.3
	3.3nm,1.5s						
ZALV	**Zalesovo Beam**	**79.48**	**328**	P	**P**	07 39 08.4	-1.1
	0.7nm,0.4s,baz=111,slow=6.9,SNR=2.4						
ZAA1	**Zalesovo Array**	**79.48**	**328**	*e*P	**P**	07 39 08.4	-1.2
QSPA	**South Pole Qui**	**83.64**	**180**	P	**P**	07 39 31.7	+0.2
	0.7nm,0.6s,baz=321,slow=4.4,SNR=3.7						
ILAR	**Eielson Array**	**85.64**	**23**	P	**P**	07 39 39.0	-2.4
	0.3nm,0.5s,baz=256,slow=5.4,SNR=5.8						
BVAR	**Borovoye Array**	**87.24**	**324**	P	**P**	07 39 48.3	-1.2
	0.5nm,0.6s,baz=106,slow=3.7,SNR=2.7						
TORD	**Torodi Ar. Bea**	**145.51**	**284**	PKPbc	**PKPab**	07 46 42.9	+0.5
	baz=87,slow=2.5						
TOA1	**Torodi Ar. Sit**	**145.52**	**284**	*e*PKPdf	**PKPab**	07 46 42.9	+0.5
SAML	**Samuel**	**145.98**	**116**	*e*PKPdf	**PKPdf**	07 46 43.1	+0.4
KOWA	**Kowa**	**150.73**	**288**	PKPbc	**PKPbc**	07 46 56.6	+0.6
	0.9nm,0.3s,baz=117,slow=4.5,SNR=3.0						

IDC 29 08:01:27.0±2.9, 52°.56N×34°.78E, h0km, mb1 3.6/2, mb1mx3.1/58, mbtmp3.5/2, ML2.9/3, Error ellipse: s-maj=32.2km s-min=11.6km az=111.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKASG	**Malin Array Be**	**3.93**	**244**	Pn	Pn	08 02 27.1	-1.4
	0.9nm,0.3s,baz=62,slow=15,SNR=4.2						
AKASG				Pg	Pb	08 02 37.1	0.0
	2.1nm,0.3s,baz=58,slow=16,SNR=5.0						
AKASG				Sn	Sn	08 03 11.4	-3.9
	1.1nm,0.3s,baz=58,slow=20,SNR=2.5						
AKASG				Lg	Lg	08 03 29.9	
	1.7nm,0.3s,baz=60,slow=30,SNR=2.9						
I43RU	**DUBNA INFRASON**	**4.40**	**18**	*i*		08 30 00.0	
	baz=197,slow=320,SNR=1.0						
FINES	**FINESS Array B**	**10.08**	**335**	Pn	Pn	08 03 47.7	-5.3
	0.1nm,0.3s,baz=142,slow=16,SNR=3.3						
FINES				Sn	Sn	08 05 37.7	-8.9
	0.1nm,0.3s,baz=148,slow=21,SNR=3.0						
FINES				Lg	Lg	08 06 43.1	
	0.1nm,0.3s,baz=145,slow=27,SNR=2.3						
ARCES	**ARCESS Array B**	**17.58**	**349**	Pn	Pn	08 05 26.9	-6.2
	0.1nm,0.3s,baz=154,slow=11,SNR=2.8						

*IDC **29** 08:13:09.4±0.8, 37°.29N×72°.48E, h0km, mb3.9/17, mb1 4.0/22, mb1mx3.9/72, mbtmp3.9/22, ML3.6/6, MS3.1/12, Ms1 3.2/12, ms1mx2.9/68, Error ellipse: s-maj=18.0km s-min=14.3km az=170.0*
*ISCJB **29** 08:13:10.5±0.2, 37°.38N±0°.02×72°.20E±0°.04, h10km, mb4.1/36, MS3.2/11, Error ellipse: s-maj=4.9km s-min=3.1km az=150.3*
*NNC **29** 08:13:14.2±2.4, 37°.54N×72°.03E, h0km, mb4.6, mpv4.2, Error ellipse: s-maj=19.1km s-min=16.9km az=124.0*
*BJI **29** 08:13:15.6, 37°.60N×72°.20E, h54km, mb4.5/10, mB4.4/5, ML4.0/4, Ms3.7/3*
*NEIC **29** 08:13:19.0±0.6, 37°.58N×72°.36E, h62km±6km, mb4.2/22, Error ellipse: s-maj=7.1km s-min=5.9km az=140.0*
ISC 29 08:13:13.3±0.4, 37°.48N±0°.04×72°.16E±0°.05, h10km, n120, σ2§10/112, mb4.3/39, MS3.1/11, 8C-7D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**2.74**	**22**	⇑Pn	**Pn**	08 13 59.8	+2.2
	135nm,0.5s						
SFK				⇓Lg	Lg	08 14 40.9	
	421nm,0.7s						
KSH	**Kashi**	**3.62**	**55**	P	Pn	08 14 05.5	-4.1
KSH				S	Sn	08 14 45.5	-6.9
KSH				smax	smax		
	comp=N,2μm,0.7s						
KSH				smax	smax		
	comp=E,4μm,1.0s						
CEP	**Cherat**	**3.65**	**183**	P	**Pb**	08 14 19.2	+1.2
KBL	**Kabul**	**3.87**	**222**	*e*Pn	**Pb**	08 14 19.3	-2.4
NIL	**Nilore**	**3.92**	**167**	*e*Pn	**Pn**	08 14 18.1	+4.5
THW	**Thamme Wali**	**4.68**	**184**	P	**Pn**	08 14 28.2	+4.1
NRN	**Naryn**	**4.95**	**36**	*e*Pn	**Pn**	08 14 28.6	+0.7
MNAS	**Manas**	**5.01**	**3**	⇑Pn	**Pn**	08 14 30.2	+1.5
	19nm,0.5s						
MNAS				⇓Sn	**Sn**	08 15 28.8	+2.0
	55nm,0.6s						
MNAS				⇓Lg	Lg	08 15 51.8	
	78nm,1.2s						
UCH	**Uchtor**	**5.08**	**20**	P	**Pn**	08 14 33.1	+3.2
	SNR=7.2						
KZA	**Kyzart**	**5.18**	**26**	P	**Pn**	08 14 33.0	+1.8
	SNR=7.3						
EKS2	**Erkin-Say**	**5.33**	**13**	P	**Pn**	08 14 36.5	+3.5
	SNR=7.8						
AAK	**Ala-Archa**	**5.46**	**18**	⇑Pn	**Pn**	08 14 37.2	+2.4
	15nm,0.8s						
AAK				⇓Pg	**Pb**	08 14 52.2	+3.3
	47nm,1.0s						
AAK				⇓Sn	**Sn**	08 15 41.1	+3.3
	54nm,0.8s						
AAK				⇑Lg	Lg	08 16 05.9	
	57nm,0.8s						
AAK	**Ala-Archa**	**5.46**	**18**	P	**Pn**	08 14 38.2	+3.4
	SNR=7.0						
ULHL	**Ulahol**	**5.71**	**32**	P	**Pn**	08 14 40.5	+2.2
	SNR=7.9						
KK31	**Karatay Array**	**5.76**	**348**	⇓Pn	**Pn**	08 14 40.6	+1.7
	12nm,0.6s,baz=172,slow=15						
KK31				⇑Sn	**Sn**	08 15 48.7	+3.7
	37nm,0.8s,baz=165,slow=23						
KK31				⇑Lg	Lg	08 16 14.9	
	25nm,0.5s,baz=166,slow=26						
KK31	**Karatay Array**	**5.76**	**348**	*e*Pn	**Pn**	08 14 40.8	+2.0
KKAR	**Karatay Array**	**5.76**	**348**	*e*Pn	**Pn**	08 14 40.9	+2.0
TKM2	**Tokmak 2**	**6.04**	**25**	P	**Pn**	08 14 45.2	+2.3
	SNR=11						
TARG	**Taragay, Kyrgy**	**6.09**	**44**	*e*Pn	**Pn**	08 14 45.0	+1.3
DHRM	**DHARAMSHALA**	**6.22**	**146**	*e*P	**Pn**	08 14 47.9	+2.4
DHRM				*e*S	**Sn**	08 15 56.6	-0.2
PRZ	**Przheval'sk**	**6.93**	**42**	*e*Pn	**Pn**	08 14 53.5	-1.5
SMLA	**Simla**	**7.56**	**145**	*e*P	**Pn**	08 15 03.8	+0.2
SMLA				*e*S	**Sn**	08 16 25.1	-4.3
DDI	**Dehra Dun**	**8.65**	**144**	*e*P	**Pn**	08 15 22.4	+3.7
GEYT	**Alibeck**	**11.14**	**277**	Pn	**Pn**	08 15 52.5	-0.1
	3.4nm,0.3s,baz=114,slow=9.6,SNR=5.1						
GEYT				Sn	**Sn**	08 17 56.4	-0.8
	baz=70,slow=22,SNR=1.0						
GYA0B	**ALIBECK ARRAY**	**11.14**	**277**	*e*Pn	**Pn**	08 15 52.8	+0.2
MAKZ	**Makanchi**	**11.82**	**35**	*e*Pn	**Pn**	08 16 02.3	+0.3
MK01	**Makanchi Array**	**11.95**	**36**	*e*Pn	**Pn**	08 16 04.0	+0.4
MK31	**Makanchi Array**	**11.96**	**36**	*e*Pn	**Pn**	08 16 04.7	+0.9
MKAR	**Makanchi Array**	**11.96**	**36**	Pn	**Pn**	08 16 03.8	0.0
	0.1nm,0.3s,baz=216,slow=12,SNR=13						
MKAR				Lg	Lg	08 19 22.7	
	0.1nm,0.3s,baz=233,slow=29,SNR=2.9						
MKAR				LR	LR	08 20 60.0	
	comp=Z,29nm,21.6s,baz=216,slow=39						
MKAR	**Makanchi Array**	**11.96**	**36**	*e*Pn	**Pn**	08 16 04.6	+0.8
MKAR				Lg	Lg	08 19 22.7	
PYUN	**Piuthan**	**13.04**	**133**	*e*P	Pn	08 16 15.6	-3.3
DANN	**Dangsing**	**13.32**	**130**	*e*P	**Pn**	08 16 20.6	-2.1
WMQ	**Urumqi**	**13.38**	**57**	P	**Pn**	08 16 27.0	+3.7
KOLN	**Koldanda**	**13.65**	**132**	*e*P	Pn	08 16 24.0	-3.1
KURBB	**Kurchatov Arra**	**13.91**	**17**	Pn	**Pn**	08 16 26.9	-3.4
	0.0nm,0.3s,baz=206,slow=12,SNR=6.0						
KURBB				Lg	Lg	08 20 29.8	
	baz=204,slow=24,SNR=4.7						
KURK	**Kurchatov**	**14.02**	**17**	*e*Pn	**Pn**	08 16 31.9	+0.1
KURK				Lg	Lg	08 20 29.8	
GKN	**Gorkha**	**14.11**	**128**	*e*P	Pn	08 16 30.5	-2.9
KKN	**Kakani**	**14.66**	**127**	*e*P	Pn	08 16 37.7	-3.3
DMN	**Daman**	**14.68**	**128**	*e*P	Pn	08 16 37.7	-3.6
AB31	**Akbulak array**	**14.73**	**327**	⇑Pn	**Pn**	08 16 39.0	-2.5
	3.3nm,0.6s						
AB31				⇑Sn	**Sn**	08 19 22.7	-2.0
	4.7nm,0.5s						
ABKAR	**Akbulak array**	**14.73**	**327**	*e*Pn	**Pn**	08 16 39.7	-1.9
PKIN	**Phulchoki**	**14.89**	**128**	*e*P	**Pn**	08 16 40.6	-3.5
BHPL	**Bhopal**	**14.89**	**161**	*e*P	**Pn**	08 16 44.7	+0.8
BHPL				IAmb	IAmb	08 16 47.4	
	comp=Z,4.1nm,0.7s						
GUN	**Gumba**	**14.96**	**126**	*e*P	**Pn**	08 16 41.6	-3.6
JIRN	**Jiri**	**15.34**	**126**	*e*P	**Pn**	08 16 46.6	-3.6
BVAR	**Borovoye Array**	**15.60**	**356**	Pn	**Pn**	08 16 49.8	-3.4
	comp=Z,0.2nm,0.3s,baz=163,slow=16,SNR=4.9						
BVAR				LR	LR	08 23 05.0	
	comp=Z,76nm,19.8s,baz=88,slow=38						
BRVK	**Borovoye**	**15.64**	**356**	*e*Pn	**P**	08 16 55.8	-2.0
	comp=Z,7.2nm,1.1s						
RAMN	**Ramite**	**16.09**	**127**	*e*P	**Pn**	08 16 55.7	-4.1
AKTO	**Aktyubinsk**	**16.44**	**326**	Pn	**Pn**	08 17 02.6	-1.3
	comp=Z,1.0nm,0.3s,baz=129,slow=14,SNR=12						
AKTO	**Aktyubinsk**	**16.44**	**326**	⇓Pn	**Pn**	08 17 02.3	-1.6
	comp=Z,12nm,0.7s						
ODAN	**Odare**	**16.66**	**125**	*e*P	**Pn**	08 17 03.1	-4.0
GTK	**Tadong**	**17.16**	**121**	*e*P	**Pn**	08 17 13.5	+0.1
GTK				IAmb	IAmb	08 17 20.9	
	comp=Z,30nm,0.2s						
BOK	**Bokaro**	**18.01**	**135**	*e*P	**Pn**	08 17 23.4	-0.4
BOK				IAmb	IAmb	08 17 26.0	
	comp=Z,10.0nm,0.9s						
ZAA0	**Zalesovo Array**	**18.65**	**24**	*e*P	**P**	08 17 29.1	-1.9
	comp=Z,9.7nm,1.0s						
ZALV	**Zalesovo Beam**	**18.65**	**24**	P	**P**	08 17 28.1	-3.0
	comp=Z,0.5nm,0.3s,baz=222,slow=8.8,SNR=9.9						
ZALV	**Zalesovo Beam**	**18.65**	**24**	*e*P	**P**	08 17 28.6	-2.5
TURI	**Tura**	**19.49**	**122**	*e*P	**P**	08 17 39.6	-0.9
TEZP	**TEZPUR**	**20.53**	**116**	*e*P	**P**	08 17 49.8	-2.0
SHL	**Shillong**	**20.54**	**120**	*e*P	**P**	08 17 53.7	+1.6
	comp=Z,8.5nm,1.0s						
HYB	**Hyderabad**	**20.76**	**163**	*e*P	**P**	08 17 54.5	+0.1
HYB				IAmb	IAmb	08 17 55.8	
ZIRO	**ZIRO**	**20.77**	**112**	*e*P	**P**	08 17 54.2	-0.4
BWNR	**Bhubaneshwar**	**20.83**	**141**	*e*P	**P**	08 17 54.5	-0.6
ITAN	**ITANAGAR**	**20.89**	**113**	*e*P	**P**	08 17 53.3	-2.4
ARU	**Arti**	**21.04**	**339**	P	**P**	08 17 57.3	+0.2
	comp=Z,3.6nm,0.7s,baz=124,slow=11,SNR=3.2						
ARU				LR	LR	08 26 38.0	
	comp=Z,57nm,20.2s,baz=126,slow=38						
ARU	**Arti**	**21.04**	**339**	*e*P	**P**	08 17 57.2	+0.2
	comp=Z,8.8nm,1.1s						
AGT	**Agartala**	**21.23**	**124**	*e*P	**P**	08 17 59.7	+0.3
AGT				IAmb	IAmb	08 18 06.3	
	comp=Z,154nm,0.2s						
GNI	**Garni**	**21.50**	**286**	P	**P**	08 18 04.5	+2.1
	comp=Z,8.5nm,0.7s,baz=94,slow=14,SNR=4.3						
BELO	**BELONIA**	**21.80**	**125**	*e*P	**P**	08 18 06.6	+1.0
MOKO	**MOKOCHONG**	**21.94**	**114**	*e*P	**P**	08 18 06.1	-1.1
MOKO				IAmb	IAmb	08 18 08.0	
	comp=Z,20nm,1.3s						
IMP	**Imphal**	**22.44**	**118**	*e*P	**P**	08 18 13.9	+1.4
KBZ	**Khabaz**	**23.01**	**295**	P	**P**	08 18 19.1	+0.9
	comp=Z,2.0nm,0.7s,baz=104,slow=8.0,SNR=3.0						
KVAR	**Kislovodsk Arr**	**23.18**	**295**	LR	LR	08 29 32.8	
	comp=Z,45nm,18.3s,baz=100,slow=42						
SAIH	**SAIHA**	**23.34**	**124**	*e*P	**P**	08 18 23.0	+1.0
SAIH				IAmb	IAmb	08 18 26.0	
	comp=Z,7.5nm,0.6s						
LZH	**Lanzhou**	**25.36**	**83**	*e*P	**P**	08 18 39.8	-0.9
LZH				pP	sP	08 18 52.5	+7.5
LZH				sP	pP	08 18 59.0	+15
LZH				*e*PP	**PnPn**	08 19 19.3	+4.0
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
LZH				pmax	pmax		
	comp=Z,45nm,4.7s						
LZH				LR	LR		
	comp=Z,67nm,11.7s						
LZH				LR	LR		
	comp=Z,56nm,12.5s						
RAYN	**Ar Rayn**	**26.74**	**246**	*e*P	**P**	08 18 53.5	+0.4
	comp=Z,8.2nm,1.4s						
SONM	**Songino Array**	**27.02**	**57**	P	**P**	08 18 53.5	-2.1
	comp=Z,0.3nm,0.4s,baz=262,slow=10.0,SNR=3.0						
SONA1	**Songino Array**	**27.03**	**57**	*e*P	**P**	08 18 55.0	-0.7
CMAR	**Chiang Mai Arr**	**30.14**	**122**	LR	LR	08 32 11.4	
	comp=Z,19nm,20.8s,baz=180,slow=38						
MMAI	**Mount Meron Ar**	**30.22**	**273**	LR	LR	08 34 14.4	
	comp=Z,25nm,18.9s,baz=15,slow=42						
GYA	**Guiyang**	**31.11**	**101**	*e*P	**P**	08 19 34.3	+2.2
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
AKASG	**Malin Array Be**	**33.07**	**307**	P	**P**	08 19 50.0	+1.1
	comp=Z,0.3nm,0.3s,baz=110,slow=8.4,SNR=3.2						
MLR	**Muntele Rosu**	**35.13**	**298**	P	**P**	08 20 09.2	+2.2
	comp=Z,0.6nm,0.7s,baz=121,slow=12,SNR=4.1						
FIA1	**FINESS Array S**	**37.20**	**325**	*e*P	**P**	08 20 24.0	-0.4
FINES	**FINESS Array B**	**37.20**	**325**	P	**P**	08 20 24.2	-0.1
	comp=Z,1.2nm,0.5s,baz=95,slow=9.6,SNR=8.6						
DIVS	**Divibare**	**39.49**	**297**	*e*P	**P**	08 20 42.5	-1.5
	comp=Z,2.9nm,1.0s						
CN2	**Changchun**	**40.34**	**64**	*e*P	**P**	08 20 52.3	+1.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MORC	**Moravsky Berou**	**40.54**	**306**	*e*P	**P**	08 20 53.6	+1.0
	comp=Z,5.2nm,0.6s						
ARCES	**ARCESS Array B**	**40.61**	**337**	P	**P**	08 20 52.8	0.0
	comp=Z,4.0nm,0.9s,baz=99,slow=7.5,SNR=6.4						
ARCES	**ARCESS Array B**	**40.61**	**337**	*e*P	**P**	08 20 53.6	+0.8
ARE0	**ARCESS Array S**	**40.61**	**337**	*e*P	**P**	08 20 53.4	+0.6
	comp=Z,17nm,1.3s						
HFS	**Hagfors**	**42.88**	**321**	P	**P**	08 21 11.4	-0.1
	comp=Z,1.9nm,0.5s,baz=95,slow=12,SNR=11						
KSRS	**Korea Array**	**43.69**	**72**	LR	LR	08 42 21.7	
	comp=Z,18nm,18.7s,baz=265,slow=40						
NC204	**NORSAR Array S**	**44.40**	**323**	*e*P	**P**	08 21 23.8	-0.1
TIXI	**Tiksi**	**44.52**	**22**	P	**

PMG			Lg	Lg	08 23 41.5	
	41nm,0.3s,baz=53,slow=20,SNR=9.9					
PMG			LR	LR	08 23 46.5	
	comp=Z,210nm,20.5s,baz=108,slow=35					
COEN	**Coen**	**6.83 208**	*e*Pn	**Pn**	**08 24 27.5**	**-2.9**
JAY	**Jayapura**	**7.87 313**	LR	LR	08 28 36.0	
	comp=Z,73nm,18.2s,baz=348,slow=44					
CTA	**Charters Tower**	**12.11 181**	Pn	**Pn**	**08 25 43.9**	**+1.3**
	0.2nm,0.3s,baz=2.8,slow=15,SNR=3.7					
MTN	**Manton Dam**	**15.88 251**	*e*Pn	**P**	**08 26 36.8**	**-0.1**
	14nm,0.7s					
MTN			*e*S	**S**	**08 29 46.4**	**+4.4**
WRAB	**Tennant Creek**	**16.77 223**	*e*Pn	**P**	**08 26 45.8**	**-0.9**
	14nm,1.4s					
WB2	**Warramunga Arr**	**16.77 223**	*e*Pn	**P**	**08 26 45.8**	**-1.0**
WR1	**Warramunga Arr**	**16.78 223**	*e*Pn	**Pn**	**08 26 44.8**	**-0.2**
	28nm,0.8s					
WRA	**Warramunga Arr**	**16.78 223**	Pn	**Pn**	**08 26 44.8**	**-0.2**
	0.1nm,0.3s,baz=46,slow=11,SNR=18					
AS01	**Alice Springs**	**19.75 216**	*e*P	**Pn**	**08 27 20.5**	**-0.7**
AS31	**Alice Springs**	**19.77 216**	*e*P	**P**	**08 27 20.0**	**+0.2**
	3.0nm,1.2s					
ASAR	**Alice Springs**	**19.77 216**	P	**P**	**08 27 20.0**	**+0.1**
	0.3nm,0.3s,baz=54,slow=9.6,SNR=33					
BATI	**Baumata**	**22.66 262**	LR	LR	08 38 59.9	
	comp=Z,138nm,19.2s,baz=172,slow=43					
FITZ	**Fitzroy Crossi**	**22.67 241**	P	**P**	**08 27 50.5**	**-0.6**
	1.9nm,0.7s,baz=48,slow=7.1,SNR=4.6					
MAJO	**Matsuhiro**	**44.90 351**	*e*P	**P**	**08 31 03.7**	**-0.1**
	4.0nm,0.9s					
MJB9	**Matsu-Tunnel**	**44.90 351**	*e*P	**P**	**08 31 03.9**	**0.0**
	4.1nm,0.9s					
CMAR	**Chiang Mai Arr**	**53.73 300**	P	**P**	**08 32 12.4**	**+0.7**
	1.5nm,0.3s,baz=118,slow=5.6,SNR=4.3					
SONA0	**Songino Array**	**65.83 332**	*e*P	**P**	**08 33 33.9**	**-0.6**
SONM	**Songino Array**	**65.83 332**	P	**P**	**08 33 33.9**	**-0.6**
	0.4nm,0.5s,baz=152,slow=6.5,SNR=3.1					
MK01	**Makanchi Array**	**78.63 321**	*e*P	**P**	**08 34 51.8**	**+0.9**
MK32	**Makanchi Array**	**78.65 321**	*e*P	**P**	**08 34 51.7**	**+0.7**
MKAR	**Makanchi Array**	**78.65 321**	P	**P**	**08 34 51.7**	**+0.7**
	1.2nm,0.8s,baz=104,slow=5.8,SNR=7.4					
ZAA0	**Zalesovo Array**	**80.36 328**	*e*P	**P**	**08 34 60.0**	**-0.1**
ZALV	**Zalesovo Beam**	**80.36 328**	*e*P	**P**	**08 35 01.6**	**+1.6**
QSPA	**South Pole Qui**	**82.07 180**	P	**P**	**08 35 08.8**	**-0.4**
	0.9nm,0.6s,baz=354,slow=3.1,SNR=3.8					
QSPA	**South Pole Qui**	**82.07 180**	*e*P	**P**	**08 35 09.2**	**0.0**
	2.7nm,1.1s					
ILAR	**Eielson Array**	**87.43 23**	P	**P**	**08 35 35.5**	**-0.5**
	0.9nm,0.7s,baz=251,slow=4.9,SNR=12					
IL1	**Eielson Array**	**87.43 23**	*e*P	**P**	**08 35 35.7**	**-0.3**
CRZF	**Crozet Islands**	**87.51 224**	*e*P	**P**	**08 35 36.5**	**-0.3**
	48nm,0.7s					
TOA0	**Torodi Ar. Sit**	**145.03 282**	*e*PKPbc	**PKPdf**	**08 42 26.9**	**-0.3**
TORD	**Torodi Ar. Bea**	**145.03 282**	PKPbc	**PKPdf**	**08 42 26.7**	**-0.5**
	baz=79,slow=3.4					
TOA1	**Torodi Ar. Sit**	**145.03 282**	*e*PKPbc	**PKPdf**	**08 42 26.7**	**-0.5**

IDC 29 08:26:11.2±3.5, 55°.41N×86°.12E, h0km, mb1 2.8/2, mb1mx2.7/73, mbtmp2.8/2, ML2.4/2, Error ellipse: s-maj=27.3km s-min=25.5km az=40.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.65**	**208**	*i*		08 37 43.3	
	baz=28,slow=280,SNR=4.4						
ZALV	**Zalesovo Beam**	**1.65**	**208**	Pg	Pn	08 26 40.0	-1.4
	2.3nm,0.3s,baz=28,slow=16,SNR=19						
ZALV				Lg	Lg	08 27 04.1	
	2.1nm,0.3s,baz=22,slow=26,SNR=6.2						
KURBB	**Kurchatov Arra**	**6.63**	**227**	Pn	Pn	08 27 50.5	+0.6
	0.1nm,0.3s,baz=46,slow=14,SNR=4.3						
KURBB				Lg	Lg	08 29 41.1	
	baz=46,slow=32,SNR=3.0						
MKAR	**Makanchi Array**	**8.96**	**197**	Pn	Pn	08 28 21.6	-0.2
	0.1nm,0.3s,baz=7.8,slow=12,SNR=3.8						
MKAR				Lg	Lg	08 30 56.4	
	baz=14,slow=31,SNR=2.7						

*JMA **29** 08:52:26.7±0.4, 37°.05N×142°.27E, h15km±4km, M3.3*
*IDC **29** 08:52:26.8±2.5, 36°.99N×142°.36E, h0km, mb3.6/4, mb1 3.6/5, mb1mx3.4/69, mbtmp3.5/5, ML2.9/1, Error ellipse: s-maj=68.1km s-min=28.2km az=64.0*
*ISCJB **29** 08:52:28.2±1.0, 37°.05N±0°.07×142°.21E±0°.08, h19km, mb3.4/4, Error ellipse: s-maj=10.4km s-min=9.1km az=6.8*
ISC 29 08:52:29.9±1.4, 37°.12N±0°.08×142°.16E±0°.09, h19km, n21, σ1§38/19, mb3.3/4, Off east of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.06**	**284**	P	**Pb**	**08 52 48.0**	**-1.6**
JFK				*e*S	**Sb**	**08 53 03.1**	**0.0**
ONAJ	**Iwakimizuishiy**	**1.09**	**269**	P	**Pn**	**08 52 48.3**	**-1.9**
JMM	**Marumori**	**1.32**	**305**	P	**Pn**	**08 52 52.0**	**-1.3**
JMM				*e*S	**Sb**	**08 53 10.3**	**-0.3**
JHO	**Hitachi**	**1.38**	**249**	P	**Pn**	**08 52 52.1**	**-2.0**
JIO	**Ouri**	**1.48**	**334**	P	**Pn**	**08 52 54.1**	**-1.4**
JFT	**Otama**	**1.51**	**286**	P	**Pn**	**08 52 55.7**	**-0.2**
JOU	**Okura**	**1.72**	**317**	P	**Pn**	**08 52 58.6**	**-0.2**
JFY	**Yanaizu**	**1.98**	**279**	P	**Pn**	**08 53 02.7**	**+0.3**
JYS	**Shiratake**	**1.99**	**304**	P	**Pn**	**08 53 03.0**	**+0.4**
MJAR	**Matsushiro Arr**	**3.23**	**261**	Pn	**Pn**	**08 53 20.3**	**+0.8**
	1.3nm,0.3s,baz=83,slow=14,SNR=7.8						
MJAR				Sn	**Sn**	**08 53 58.5**	**+1.1**
	0.6nm,0.3s,baz=100,slow=28,SNR=4.1						
MAT	**Matsushiro**	**3.23**	**261**	P	**Pn**	**08 53 22.0**	**+2.5**
MAT				*e*S	**Sn**	**08 53 56.3**	**-1.2**
H11N2	**WAKE ISLAND Hy**	**27.68**	**122**	T	T	09 27 13.1	
	baz=314						
H11N1	**WAKE ISLAND Hy**	**27.69**	**122**	T	T	09 27 16.1	
	baz=314						
H11N3	**WAKE ISLAND Hy**	**27.70**	**122**	T	T	09 27 17.0	
	baz=314						
SONM	**Songino Array**	**28.23**	**304**	P	**P**	**08 58 22.6**	**+0.9**
	0.3nm,0.5s,baz=104,slow=9.2,SNR=3.3						
H11S1	**WAKE ISLAND Hy**	**28.41**	**124**	T	T	09 28 10.1	
	baz=316						
H11S3	**WAKE ISLAND Hy**	**28.41**	**124**	T	T	09 28 08.1	
	baz=316						
H11S2	**WAKE ISLAND Hy**	**28.42**	**124**	T	T	09 28 00.7	
	baz=316						
MKAR	**Makanchi Array**	**44.58**	**302**	P	**P**	**09 00 42.4**	**+1.8**
	0.3nm,0.7s,baz=85,slow=8.5,SNR=3.4						
KURBB	**Kurchatov Arra**	**46.42**	**308**	P	**P**	**09 00 56.7**	**+1.6**
	0.4nm,0.3s,baz=84,slow=7.9,SNR=4.2						
WRA	**Warramunga Arr**	**57.23**	**189**	P	**P**	**09 02 15.1**	**-0.9**
	0.3nm,0.9s,baz=8.5,slow=6.7,SNR=3.8						

NNC 29 09:06:19.2±4.6, 53°.45N×90°.11E, h0km, mb3.9, mpv3.6, 5C-6D, Error ellipse: s-maj=40.3km s-min=28.0km az=70.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**3.18**	**281**	⇓Pn	Pn	09 07 11.8	+1.3
	6.2nm,0.7s						
ZAA0				⇓Lg	Lg	09 08 01.0	
	17nm,0.8s						
KURK	**Kurchatov**	**7.59**	**253**	⇑Pn	Pn	09 08 08.3	-2.6
	1.9nm,0.6s						
KURK				⇓Pg	Pg	09 08 39.1	-5.4
	4.0nm,0.5s						
KURK				⇑Lg	Lg	09 10 20.4	
	13nm,0.9s						
KURBB	**Kurchatov Arra**	**7.68**	**253**	⇑Pn	Pn	09 08 10.0	-2.2
	2.1nm,0.6s						
KURBB				⇑Pg	Pb	09 08 39.4	+6.3
	9.9nm,0.9s						
KURBB				⇓Lg	Lg	09 10 22.3	
	34nm,1.0s						
MK31	**Makanchi Array**	**8.34**	**220**	⇓Pn	Pn	09 08 19.7	-1.6
	0.8nm,0.7s,baz=36,slow=14,SNR=8.9						
MK31				⇓Sn	Sn	09 09 58.8	+2.7
	1.3nm,0.8s,baz=40,slow=28,SNR=4.3						
MK31				⇑Lg	Lg	09 10 47.5	
	6.4nm,0.9s,baz=30,slow=29,SNR=5.4						

*IDC **29** 09:20:46.5±0.5, 1°.11N×97°.22E, h0km, mb4.5/32, mb1 4.6/35, mb1mx4.4/65, mbtmp4.5/35, ML4.1/3, MS3.9/19, Ms1 3.9/19, ms1mx3.5/71, Error ellipse: s-maj=15.0km s-min=11.9km az=35.0*

*BJI **29** 09:20:47.3, 0°.71N×97°.17E, h38km, mb5.0/53, mB4.9/37, Ms4.5/32, Ms7 4.3/31*
*ISCJB **29** 09:20:48.9±0.2, 1°.12N±0°.03×97°.23E±0°.03, h25km, mb4.7/81, MS4.2/28, Error ellipse: s-maj=5.0km s-min=3.4km az=137.6*
*DJA **29** 09:20:49.3±1.0, 1°N±4°×9°7E±°, h19km±7km, M4.8/11, mB5.3/2, mb4.7/6, MLv4.9/11, Mw(mB)4.7/2*
*MOS **29** 09:20:50.8±0.9, 1°.16N×97°.23E, h42km, mb5.0/26, Error ellipse: s-maj=10.3km s-min=5.6km az=101.6*
*NEIC **29** 09:20:52.3±0.9, 1°.13N×97°.26E, h37km±7km, mb4.9/24, Error ellipse: s-maj=8.0km s-min=4.9km az=223.0*
NEIC Felt [III] at Gunungsitoli.
ISC 29 09:20:50.5±0.3, 1°.13N±0°.04×97°.17E±0°.05, h25km, n417, σ1§42/395, mb4.8/85, MS4.2/29, 12C-6D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.44**	**67**	P	**Pn**	**09 21 00.7**	**-0.6**
SNSI	**Sinabang, Aceh**	**1.52**	**326**	P	**Pn**	**09 21 16.0**	**-0.2**
PBSI	**Pulau Batu**	**1.62**	**137**	P	**Pn**	**09 21 17.3**	**-0.2**
TPTI		**2.11**	**0**	P	**Pn**	**09 21 23.5**	**-0.8**
PSI	**Prapat**	**2.41**	**47**	Pn	**Pn**	**09 21 28.0**	**-0.5**
	15nm,0.3s,baz=180,slow=8.8,SNR=106						
PSI				LR	LR	09 22 17.3	
	comp=Z,2μm,20.6s,baz=270,slow=39						
PSI	**Prapat**	**2.41**	**47**	*e*Pn	**Pn**	**09 21 28.3**	**-0.2**
PSI	**Prapat**	**2.41**	**47**	*e*P	**Pn**	**09 21 28.3**	**-0.2**
MNSI	**Mandailing Nat**	**2.43**	**98**	P	**Pn**	**09 21 28.8**	**+0.1**
KCSI	**Kotacane, Aceh**	**2.45**	**14**	P	**Pn**	**09 21 28.9**	**0.0**
TSI	**Tuntungan**	**2.73**	**31**	P	**Pn**	**09 21 34.0**	**+1.2**
SISI	**Saibi**	**3.11**	**142**	P	**Pn**	**09 21 37.7**	**-0.3**
MLSI	**Meulaboh, Aceh**	**3.21**	**346**	P	**Pn**	**09 21 39.0**	**-0.3**
BKNI	**Bangkinang**	**3.95**	**102**	P	**Pn**	**09 21 50.9**	**+1.3**
LHMI	**Lhok Sumawe**	**4.08**	**357**	P	**Pn**	**09 21 51.2**	**-0.1**
BSI	**Banda Aceh**	**4.72**	**337**	P	**Pn**	**09 21 58.4**	**-1.8**
IPM	**Ipoh**	**5.09**	**49**	*e*Pn	**Pn**	**09 22 06.0**	**+0.8**
KRJI	**Kerinci**	**5.35**	**127**	P	Pb	09 22 28.9	+5.4
KULM	**Kulim**	**5.40**	**40**	*e*Pn	**Pn**	**09 22 09.8**	**+0.3**
MASI	**Maura Aman, Be**	**6.61**	**130**	P	**Pb**	**09 22 45.8**	**+0.9**
MYKOM	**Kota Tinggi**	**6.71**	**84**	*e*Pn	**Pn**	**09 22 27.7**	**+0.2**
TRTT	**Trang**	**7.12**	**21**	P	**Pn**	**09 22 31.6**	**-1.5**
	33nm,0.7s						
KRAB	**Krabi**	**7.33**	**16**	P	**Pn**	**09 22 35.5**	**-0.5**
	100nm,0.9s,0.4nm						
MDSI	**Maura Dua**	**8.96**	**129**	P	**Pn**	**09 22 57.8**	**-0.6**
	34nm,0.9s						
PBA	**Port Blair**	**11.34**	**337**	*e*P	Pn	09 23 25.7	-5.4
KSM	**Kuching**	**13.14**	**88**	*e*Pn	**Pn**	**09 23 54.2**	**-1.5**
SRAK	**Srakaew**	**13.68**	**20**	P	**Pn**	**09 24 07.1**	**+4.1**
	115nm,0.7s,1μm						
UTHA	**Uthaitani**	**14.51**	**9**	P	**P**	**09 24 21.3**	**+0.5**
SBUM	**Sibu**	**15.10**	**85**	*e*Pn	**Pn**	**09 24 23.5**	**+1.1**
SBUM				*e*Sn	**Sn**	**09 27 01.6**	**-7.4**
PBKT	**Sadao Pong**	**15.79**	**14**	P	**Pn**	**09 24 32.6**	**+1.3**
	59nm,1.1s,2μm						
UBPT	**Khong Chiam**	**16.27**	**30**	P	**Pn**	**09 24 37.7**	**+0.2**
	32nm,1.0s						
PHIT	**Phitsanulok**	**16.27**	**11**	P	**P**	**09 24 40.6**	**+0.2**
	73nm,1.0s,823nm						
SKNT	**Sakolnakorn**	**17.11**	**23**	P	**Pn**	**09 24 46.0**	**-2.1**
	12nm,1.0s						
CM01	**Chiang Mai Arr**	**17.27**	**6**	*e*Pn	**P**	**09 24 51.4**	**0.0**
CMAR	**Chiang Mai Arr**	**17.30**	**6**	P	**Pn**	**09 24 49.7**	**-0.9**
	0.5nm,0.3s,baz=195,slow=13,SNR=25						
CMAR				LR	LR	09 32 54.6	
	comp=Z,663nm,18.1s,baz=200,slow=42						
PALK	**Pallekele**	**17.51**	**291**	P	**P**	**09 24 55.0**	**+0.8**
	0.8nm,0.3s,baz=115,slow=11,SNR=4.0						
PALK				LR	LR	09 31 08.9	
	comp=Z,472nm,19.2s,baz=115,slow=35						
CHTO	**Chiang Mai**	**17.66**	**6**	P	**Pn**	**09 24 55.0**	**+0.1**
	90nm,0.8s						
CHTO	**Chiang Mai**	**17.66**	**6**	*e*Pn	**Pn**	**09 24 53.9**	**-1.1**
	12nm,0.7s						
CHTO	**Chiang Mai**	**17.66**	**6**	*e*P	**Pn**	**09 24 53.9**	**-1.1**
CHTO				pmax	pmax		
	comp=Z,12nm,0.7s						
NONG	**Nongkai**	**17.82**	**19**	P	**Pn**	**09 24 55.0**	**-1.9**
	comp=Z,36nm,0.8s						
PAYA	**Payao**	**18.31**	**8**	P	**Pn**	**09 25 03.3**	**+0.4**
	comp=Z,23nm,0.8s,comp=Z,198nm						
CMAI	**Chiengmai2**	**18.77**	**5**	P	**Pn**	**09 25 09.8**	**+1.0**
	comp=Z,208nm,0.8s,comp=Z,11μm						
KKM	**Kota Kinabalu**	**19.62**	**75**	*e*P	**P**	**09 25 16.4**	**-1.1**
	comp=Z,27nm,0.8s						
SAIH	**SAIHA**	**21.61**	**349**	*e*P	**P**	**09 25 39.3**	**+0.3**
SAIH				IAmb	IAmb	09 25 40.3	
	comp=Z,41nm,0.7s						
MYLDM	**Lahad Datu**	**21.67**	**79**	*e*P	**P**	**09 25 38.7**	**-0.8**
	comp=Z,50nm,1.0s						
QIZ	**Qiongzhong**	**21.70**	**34**	*e*P	**P**	**09 25 39.0**	**-0.7**
	comp=Z,54nm,1.4s						
BELO	**BELONIA**	**22.68**	**346**	*e*P	**P**	**09 25 50.0**	**-0.2**
MPSI	**Mapaga**	**22.74**	**92**	P	**P**	**09 25 51.1**	**+0.1**
	comp=Z,13nm,1.0s						
TTSI	**Tana Toraja**	**23.02**	**100**	P	P	09 26 05.2	+11
AGT	**Agartala**	**23.33**	**346**	*e*P	**P**	**09 25 58.6**	**+1.7**
IMP	**Imphal**	**23.77**	**353**	*e*P	**P**	**09 26 01.5**	**+0.2**
HYB	**Hyderabad**	**24.43**	**313**	*i* P	**P**	**09 26 12.0**	**+4.5**
HYB				*e*pP	**sP**	**09 26 19.0**	**+1.0**
KMI	**Kunming**	**24.45**	**12**	P	**P**	**09 26 09.0**	**+1.2**
KMI				pP	pP	09 26 15.5	+0.3
KMI				sP	sP	09 26 19.5	+1.2
KMI				S	**S**	**09 30 28.3**	**+1.6**
KMI				sS	sS	09 30 40.0	+1.2
KMI				SS	SnSn	09 31 29.0	+17
KMI				pmax	pmax		
	comp=Z,100nm,1.2s						
KMI				pmax	pmax		
	comp=Z,420nm,4.3s						
KMI				LR	LR		
	comp=Z,1μm,16.0s						
KMI				LR	LR		
	comp=Z,360nm,12.5s						
KMI				LR	LR		
	comp=Z,1μm,14.8s						
MRSI	**Marisa**	**24.78**	**91**	P	**P**	**09 26 10.3**	**-0.3**
	comp=Z,29nm,0.8s,comp=Z,721nm						
SHL	**Shillong**	**24.82**	**349**	*e*P	**P**	**09 26 11.4**	**+0.4**
SHL	**Shillong**	**24.82**	**349**	⇑*i*P	**P**	**09 26 10.5**	**-0.6**
SHL	**Shillong**	**24.82**	**349**	*e*P	**P**	**09 26 11.5**	**+0.4**
	comp=Z,78nm,0.8s						
SHL	**Shillong**	**24.82**	**349**	*e*P	**P**	**09 26 11.5**	**+0.4**
SHL				pmax	pmax		
	comp=Z,78nm,0.8s						
BOK	**Bokaro**	**25.04**	**335**	*e*P	**P**	**09 26 14.9**	**+2.0**
TURI	**Tura**	**25.16**	**345**	*e*P	**P**	**09 26 15.8**	**+1.9**
MOKO	**MOKOCHONG**	**25.17**	**354**	*e*P	**P**	**09 26 14.7**	**+0.5**
GUWA	**GUWAHATI**	**25.47**	**348**	*e*P	**P**	**09 26 17.4**	**+0.7**
GUWA				IAmb	IAmb	09 26 18.4	
	comp=Z,37nm,0.5s						
TEZP	**TEZPUR**	**25.68**	**351**	*e*P	**P**	**09 26 18.9**	**+0.2**
TEZP				IAmb	IAmb	09 26 21.1	
	comp=Z,80nm,1.7s						
DHUB	**DHUBRI**	**25.69**	**345**	*e*P	**P**	**09 26 18.0**	**-0.8**
LUWI	**Luwuk**	**25.69**	**95**	P	P	09 26 30.2	+11
ITAN	**ITANAGAR**	**26.07**	**353**	*e*P	**P**	**09 26 23.5**	**+1.3**
LKP	**Lekhapani**	**26.08**	**357**	*e*P	**P**	**09 26 23.3**	**+1.0**
H08S2	**Diego Garcia H**	**26.11**	**250**	T	T	09 53 26.7	
	baz=70,slow=75,SNR=651						
H08S3	**Diego Garcia H**	**26.11**	**250**	T	T	09 53 26.4	
	baz=70,slow=75,SNR=4474						
H08S1	**Diego Carcia H**	**26.13**	**250**	T	T	09 53 30.8	
	baz=70,slow=75,SNR=210						
ZIRO	**ZIRO**	**26.44**	**353**	*e*P	**P**	**09 26 25.8**	**+0.1**
GYA	**Guiyang**	**26.79**	**19**	⇑*i*P	**P**	**09 26 28.0**	**-0.8**
GYA				pP	sP	09 26 41.5	+2.2
GYA				PP	**PnPn**	**09 27 18.3**	**+7.5**
GYA				S	**S**	**09 31 04.0**	**+0.4**
GYA				sS	sS	09 31 21.3	+5.4
GYA				SS	**SnSn**	**09 32 18.8**	**+10**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,4.9s						
GYA				LR	LR		
	comp=Z,510nm,16.2s						
GYA				LR	LR		
	comp=Z,490nm,16.7s						
GYA				LR	LR		
	comp=Z,1μm,16.4s						
ODAN	**Odare**	**27.25**	**341**	*e*P	**P**	**09 26 34.6**	**+1.5**
GTK	**Tadong**	**27.30**	**343**	*e*P	**P**	**09 26 34.0**	**+0.6**
RAMN	**Ramite**	**27.61**	**339**	*e*P	**P**	**09 26 38.1**	**+1.8**
JIRN	**Jiri**	**28.40**	**339**	*e*P	**P**	**09 26 45.1**	**+1.6**
PKIN	**Phulchoki**	**28.61**	**338**	*e*P	**P**	**09 26 47.8**	**+2.5**
BATI	**Baumata**	**28.67**	**114**	LR	LR	09 39 19.6	
	comp=Z,570nm,19.9s,baz=278,slow=39						
GUN	**Gumba**	**28.74**	**339**	*e*P	**P**	**09 26 47.9**	**+1.4**
DMN	**Daman**	**28.75**	**337**	*e*P	**P**	**09 26 49.2**	**+2.6**
KKN	**Kakani**	**28.85**	**338**	*e*P	**P**	**09 26 48.6**	**+1.2**
LSA	**Lhasa**	**28.98**	**349**	P	**P**	**09 26 49.8**	**+1.0**
LSA				pmax	pmax		
	comp=Z,4.0nm,0.4s						
LSA	**Lhasa**	**28.98**	**349**	*e*P	**P**	**09 26 50.7**	**+1.9**
	comp=Z,18nm,0.8s						
LSA	**Lhasa**	**28.98**	**349**	*e*P	**P**	**09 26 50.7**	**+1.9**
LSA				pmax	pmax		
	comp=Z,17nm,0.8s						
GKN	**Gorkha**	**29.29**	**337**	*e*P	**P**	**09 26 52.6**	**+1.4**
KOLN	**Koldanda**	**29.51**	**335**	*e*P	**P**	**09 26 54.8**	**+1.6**
DANN	**Dangsing**	**29.95**	**336**	*e*P	**P**	**09 26 58.5**	**+1.3**
PYUN	**Piuthan**	**30.05**	**334**	*e*P	**P**	**09 26 59.4**	**+1.3**
ENH	**Enshi**	**31.25**	**21**	*e*P	**P**	**09 27 07.2**	**-1.2**
	comp=Z,38nm,0.6s						
QZH	**Quanzhou**	**31.44**	**39**	*e*P	**P**	**09 27 13.3**	**+3.2**
QZH				LR	LR		
	comp=Z,670nm,15.4s						
WHN	**Wuhan**	**33.49**	**28**	⇓P	**P**	**09 27 28.0**	**+0.1**
WHN				S	**S**	**09 32 46.0**	**-2.3**
WHN				LR	LR		
	comp=Z,1μm,11.7s						
FITZ	**Fitzroy Crossi**	**33.91**	**126**	P	**P**	**09 27 29.9**	**-1.9**
	comp=Z,2.6nm,0.7s,baz=278,slow=7.1,SNR=7.7						
FITZ	**Fitzroy Crossi**	**33.91**	**126**	P	**P**	**09 27 30.6**	**-1.2**
	baz=34,SNR=4.5						
DDI	**Dehra Dun**	**34.24**	**330**	*e*P	**P**	**09 27 32.0**	**-2.6**
XAN	**Xi'an**	**34.54**	**17**	P	**P**	**09 27 36.0**	**-1.1**
XAN				pmax	pmax		
	comp=Z,25nm,0.4s						
XAN				LR	LR		
	comp=Z,580nm,15.8s						
XAN				LR	LR		
	comp=Z,500nm,12.5s						
LZH	**Lanzhou**	**35.33**	**9**	*e*P	**P**	**09 27 43.5**	**-0.5**
LZH				pP	sP	09 27 54.3	-0.3
LZH				sP	pP	09 27 58.8	+7.3
LZH				*e*PP	**PP**	**09 29 03.8**	**-0.7**
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
LZH				pmax	pmax		
	comp=Z,92nm,4.9s						
LZH				LR	LR		
	comp=Z,380nm,13.2s						
LZH				LR	LR		
	comp=Z,400nm,13.5s						
LZH				LR	LR		
	comp=Z,510nm,16.8s						
SMLA	**Simla**	**35.34**	**330**	*e*P	**P**	**09 27 44.7**	**+0.8**
SMLA				IAmb	IAmb	09 27 46.0	
	comp=Z,20nm,1.1s						
KNRA	**Kununurra**	**35.41**	**119**	P	**P**	**09 27 42.9**	**-1.8**
	baz=35						
DHRM	**DHARAMSHALA**	**36.68**	**330**	*e*P	**P**	**09 27 55.7**	**0.0**
NJ2	**Nanjing**	**36.94**	**31**	*e*P	**P**	**09 27 59.3**	**+1.7**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KDU	**Kakadu**	**37.63**	**113**	P	**P**	**09 28 01.5**	**-2.3**
	baz=38						
KLBR	**Kellerberrin**	**37.95**	**151**	P	**P**	**09 28 07.7**	**+1.4**
	baz=38						
GTA	**Gaotai**	**38.17**	**3**	*e*P	**P**	**09 28 08.3**	**+0.1**
GTA				pP	sP	09 28 17.5	-1.3
GTA				sP	pP	09 28 21.5	+5.8
GTA				S	**S**	**09 33 59.5**	**-0.8**
GTA				sS	sS	09 34 18.5	+5.8
GTA				SS	**SnSn**	**09 36 46.5**	**+1.4**
GTA				pmax	pmax		
	comp=Z,31nm,1.0s						
GTA				pmax	pmax		
	comp=Z,78nm,6.4s						
GTA				LR	LR		
	comp=Z,200nm,16.1s						
GTA				LR	LR		
	comp=Z,180nm,14.9s						
GTA				LR	LR		
	comp=Z,310nm,14.8s						
H01W3	**Cape Leeuwin H**	**39.19**	**158**	T	T	10 09 44.9	
	baz=334,slow=76,SNR=63						
H01W2	**Cape Leeuwin H**	**39.21**	**158**	T	T	10 09 47.3	
	baz=334,slow=76,SNR=75						
H01W1	**Cape Leeuwin H**	**39.21**	**158**	T	T	10 09 43.1	
	baz=334,slow=76,SNR=62						
NIL	**Nilore**	**39.36**	**328**	*e*P	**P**	**09 28 18.7**	**+0.6**
	comp=Z,21nm,0.7s						
NIL	**Nilore**	**39.36**	**328**	*e*P	**P**	**09 28 18.7**	**+0.6**
NIL				pmax	pmax		
	comp=Z,21nm,0.7s						
WRKA	**Warakurna**	**39.82**	**133**	P	**P**	**09 28 22.4**	**+0.4**
	baz=40,SNR=5.6						
WRA	**Warramunga Arr**	**42.02**	**122**	P	**P**	**09 28 39.4**	**-1.0**
	comp=Z,4.9nm,0.8s,baz=299,slow=9.1,SNR=61						
WRAB	**Tennant Creek**	**42.03**	**122**	*e*P	**P**	**09 28 39.3**	**-1.1**
	comp=Z,6.1nm,0.7s						
WRAB	**Tennant Creek**

KSAR **Wonju Array Be** 45.89 34 P P 09 29 10.9 -0.2
KBK **Karagaybulak** 45.89 337 P P 09 29 13.5 +2.3
SNR=6.9
KS01 **Wonju Array Si** 45.92 34 *e*P P 09 29 10.8 -0.5
KSRS **Korea Array** 45.92 35 P P 09 29 10.9 -0.4
comp=Z,25nm,0.8s,baz=221,slow=9.1,SNR=76
KSRS LR LR 09 48 56.0
comp=Z,94nm,20.1s,baz=222,slow=37
AAK **Ala-Archa** 46.05 337 P P 09 29 13.7 +1.2
AAK pmax pmax
comp=Z,7.0nm,0.8s
EKS2 **Erkin-Say** 46.36 336 P P 09 29 16.9 +2.0
SNR=8.1
USP **Ospenovka** 46.58 337 P P 09 29 17.7 +1.2
SNR=12
MNAS **Manas** 46.74 335 P P 09 29 18.3 +0.4
SONM **Songino Array** 47.20 8 P P 09 29 21.8 +0.4
comp=Z,18nm,0.8s,baz=190,slow=9.8,SNR=40
SONM PcP PcP 09 30 52.2 -0.3
comp=Z,4.2nm,0.7s,baz=176,slow=3.3,SNR=6.0
SONM LR LR 09 51 48.3
comp=Z,455nm,18.9s,baz=194,slow=39
SONA1 **Songino Array** 47.22 8 *e*P P 09 29 21.8 +0.3
MK01 **Makanchi Array** 47.27 346 *e*P P 09 29 22.3 +0.5
MK31 **Makanchi Array** 47.30 346 *e*P P 09 29 22.4 +0.4
MK31 **Makanchi Array** 47.30 346 *e*P P 09 29 22.4 +0.4
MKAR **Makanchi Array** 47.30 346 P P 09 29 22.6 +0.5
comp=Z,12nm,0.7s,baz=159,slow=7.8,SNR=106
MKAR LR LR 09 53 14.4
comp=Z,86nm,19.9s,baz=78,slow=41
MKAR **Makanchi Array** 47.30 346 *e*P P 09 29 22.4 +0.4
comp=Z,66nm,0.7s
MKAR **Makanchi Array** 47.30 346 *e*P P 09 29 22.4 +0.4
MKAR pmax pmax
comp=Z,66nm,0.7s
MAKZ **Makanchi** 47.39 346 *e*P P 09 29 23.1 +0.4
comp=Z,8.5nm,0.7s
MAKZ **Makanchi** 47.39 346 *e*P P 09 29 23.1 +0.4
MAKZ pmax pmax
comp=Z,9.0nm,0.7s
COEN **Coen** 47.97 110 P P 09 29 26.4 -1.3
baz=48,SNR=6.4
COEN **Coen** 47.97 110 *e*P P 09 29 26.2 -1.5
comp=Z,9.7nm,0.9s
KK31 **Karatay Array** 48.10 334 *e*P P 09 29 29.0 +0.7
KK31 **Karatay Array** 48.10 334 *i*P P 09 29 28.6 +0.3
KK31 pmax pmax
comp=Z,12nm,1.1s
KKAR **Karatay Array** 48.10 334 *e*P P 09 29 29.2 +0.9
KKAR **Karatay Array** 48.10 334 *e*P P 09 29 29.2 +0.9
ZAK **Zakamensk** 49.34 5 *e*P P 09 29 35.9 -1.9
ZAK pmax pmax
comp=Z,6.0nm,1.0s
CN2 **Changchun** 49.38 27 *e*P P 09 29 40.0 +2.0
CN2 pmax pmax
comp=Z,20nm,0.7s
MTSU **Mount Surprise** 50.17 115 P P 09 29 44.3 -0.2
baz=50
TLY **Talaya** 50.66 5 *e*P P 09 29 48.6 +0.9
comp=Z,7.8nm,0.7s
TLY **Talaya** 50.66 5 *e*P P 09 29 48.3 +0.6
TLY *e*PPP PPP 09 32 45.0
TLY *e*S S 09 37 08.6 +7.4
TLY pmax pmax
comp=Z,8.0nm,0.7s
TLY MLR MLR
comp=Z,268nm,19.0s
GEYT **Alibeck** 51.25 320 P P 09 29 53.4 +1.0
comp=Z,34nm,0.6s,baz=105,slow=11,SNR=2.3
MSHR **Mys Shultsa** 51.28 32⇑ *e*P P 09 29 52.0 -0.4
OTUK **Ortayu** 51.60 339 P P 09 29 54.9 +0.1
HIA **Hailar** 51.71 19 *e*P P 09 29 55.8 +0.2
comp=Z,11nm,0.7s
MAT **Matsushiro** 51.76 42 P P 09 29 54.8 -1.4
MJAR **Matsushiro Arr** 51.76 42 P P 09 29 55.4 -0.8
comp=Z,2.7nm,0.8s,baz=218,slow=5.8,SNR=10.0
MJAR LR LR 09 52 03.2
comp=Z,63nm,21.6s,baz=235,slow=36
KURBB **Kurchatov Arra** 51.79 345 P P 09 29 56.6 +0.5
comp=Z,9.0nm,0.7s,baz=164,slow=7.0,SNR=86
KURK **Kurchatov** 51.85 345 *e*P P 09 29 57.1 +0.6
comp=Z,17nm,1.0s
KURK **Kurchatov** 51.85 345 *c e*P P 09 29 57.0 +0.4
KURK pmax pmax
comp=Z,19nm,1.0s
MDJ **Mudanjiang** 51.94 29 P P 09 29 54.5 -2.9
MDJ pP pP 09 30 05.3 +0.2
MDJ sP sP 09 30 10.0 +1.9
MDJ S S 09 37 20.8 +1.8
MDJ sS sS 09 37 39.3 +7.6
MDJ ScS ScS 09 39 41.0 -5.0
MDJ pmax pmax
comp=Z,21nm,0.7s
MDJ pmax pmax
comp=Z,120nm,4.1s
MDJ LR LR
comp=Z,270nm,17.5s
MDJ LR LR
comp=Z,160nm,18.3s
MDJ LR LR
comp=Z,390nm,17.5s
USRK **Ussuriysk Ar.** 52.84 31 P P 09 30 04.4 +0.4
comp=Z,20nm,0.8s,baz=225,slow=3.9
USRK LR LR 09 52 57.8
comp=Z,167nm,21.8s,baz=221,slow=37
OPO **Ambohidratompo** 52.87 246 P P 09 30 06.6 +1.7
comp=Z,7.6nm,1.1s,baz=70,slow=14,SNR=4.1
QLP **Quilpie** 53.05 125 P P 09 30 06.8 +0.9
baz=53,SNR=5.9
STKA **Stephens Creek** 53.33 132 P P 09 30 08.1 +0.1
comp=Z,10nm,0.9s,baz=314,slow=7.2,SNR=9.9
STKA LR LR 09 54 37.3
comp=Z,152nm,21.4s,baz=246,slow=38
STKA **Stephens Creek** 53.33 132 P P 09 30 08.6 +0.7
baz=53,SNR=6.9
ZAA0 **Zalesovo Array** 53.62 351 *e*P P 09 30 10.0 +0.4
comp=Z,32nm,1.0s
ZALV **Zalesovo Beam** 53.62 351 P P 09 30 10.0 +0.4
comp=Z,27nm,0.8s,baz=178,slow=5.7,SNR=61
ZALV LR LR 09 58 14.3
comp=Z,85nm,18.6s,baz=236,slow=42
ZALV **Zalesovo Beam** 53.62 351 *e*P P 09 30 09.8 +0.3
NVS **Novosibirsk** 54.74 350 *e*P P 09 30 17.5 -0.2
NVS pmax pmax
comp=N,11nm,1.2s
NVS pmax pmax
comp=E,6.0nm,1.2s
NVS pmax pmax
comp=Z,16nm,1.2s
CMSA **Cobar Meteorol** 56.27 130 P P 09 30 30.1 +0.8
baz=56,SNR=12
BVA0 **Borovoye Array** 56.30 341 *i*P P 09 30 28.2 -0.9
BVA0 pmax pmax
comp=Z,8.0nm,0.7s
BVAR **Borovoye Array** 56.30 341 P P 09 30 29.1 +0.1
comp=Z,6.3nm,0.8s,baz=141,slow=7.4,SNR=34
BVAR LR LR 09 58 18.9
comp=Z,96nm,20.7s,baz=140,slow=40
KLR **Kul'dur** 56.33 27 P P 09 30 29.8 +0.5
comp=Z,1.7nm,0.9s,baz=267,slow=6.6,SNR=50
KLR **Kul'dur** 56.33 27 *c i*P P 09 30 29.4 +0.1
BRVK **Borovoye** 56.37 341 *e*P P 09 30 29.6 +0.1
comp=Z,9.9nm,0.7s
BRVK **Borovoye** 56.37 341 *c i*P P 09 30 28.9 -0.6
BRVK pmax pmax
comp=Z,9.0nm,1.0s
RMQ **Roma** 56.77 123 P P 09 30 34.5 +1.6
baz=57,SNR=7.6
AB31 **Akbulak array** 57.56 332 P P 09 30 37.3 -0.7
AB31 pmax pmax
comp=Z,10.0nm,0.8s
ABKAR **Akbulak array** 57.56 332 *e*P P 09 30 37.9 -0.1
EIDS **Eidsvold** 58.37 121 P P 09 30 44.7 +0.5
baz=58,SNR=5.2
EIDS **Eidsvold** 58.37 121 *e*P P 09 30 44.9 +0.7
comp=Z,12nm,0.8s
ASAJ **Asahikawa** 58.73 37 P P 09 30 45.9 -0.4
comp=Z,5.1nm,0.7s,baz=230,slow=4.8,SNR=5.5
TOO **Toolangi** 58.91 136 P P 09 30 49.1 +1.3
baz=59
AKTO **Aktyubinsk** 59.28 332 P P 09 30 50.0 0.0
comp=Z,2.4nm,0.5s,baz=137,slow=7.0,SNR=7.0
YNG **Young** 59.51 131 P P 09 30 52.6 +0.6
baz=60
YSS **Yuzh-Sakhalins** 60.42 34⇑ *e*P P 09 30 58.1 +0.2
YSS *e* 09 31 10.0
YSS *e* 09 31 19.2
YSS pmax pmax
comp=Z,20nm,0.9s
YSS MLR MLR
comp=Z,100nm,10.0s
GNI **Garni** 61.32 316 LR LR 09 59 57.5
comp=Z,33nm,21.2s,baz=108,slow=38
GNI **Garni** 61.32 316⇑ *e*P P 09 31 01.9 -2.5
GNI pmax pmax
comp=Z,46nm,2.5s
ARU **Arti** 63.23 337 LR LR 10 01 33.5
comp=Z,73nm,18.8s,baz=143,slow=39
ARU **Arti** 63.23 337 *c i*P P 09 31 16.1 -0.6
ARU 09 31 52.8
ARU 09 33 33.0
ARU S S 09 39 47.8 +1.0
ARU SS SS 09 43 48.5 -4.9
ARU pmax pmax
comp=Z,5.0nm,1.0s
KBZ **Khabaz** 64.10 319 P P 09 31 23.0 +0.4
comp=Z,5.2nm,0.8s,baz=138,slow=4.2,SNR=7.3
KVAR **Kislovodsk Arr** 64.33 319 P P 09 31 24.4 0.0
baz=172,slow=7.1
KIV **Kislovodsk** 64.34 319 *e*P P 09 31 24.4 +0.1
KIV pmax pmax
comp=Z,10.0nm,1.0s
ASF **Jabal al Asfar** 64.48 305 P P 09 31 26.4 +0.9
comp=Z,2.3nm,0.9s,baz=117,slow=4.5,SNR=4.1
EIL **Elat** 65.47 302 LR LR 10 00 40.1
comp=Z,104nm,18.2s,baz=55,slow=36
YAK **Yakutsk** 65.49 16 P P 09 31 30.7 -0.7
comp=Z,23nm,0.4s,baz=135,slow=2.5,SNR=5.5
YAK **Yakutsk** 65.49 16 *e*P P 09 31 30.0 -1.3
YAK *e**PP sP 09 31 44.9 +2.7
YAK *e* 09 32 05.2
YAK *e*S S 09 40 11.4 -3.1
YAK *e**SS sS 09 40 27.9 +0.3
YAK *e* 09 41 20.0
YAK *e*SS SS 09 44 25.0 -3.4
YAK pmax pmax
comp=Z,42nm,0.9s
YAK pmax pmax
comp=N,10.0nm,1.0s
YAK pmax pmax
comp=E,10.0nm,1.0s
YAK pmax pmax
comp=Z,96nm,3.9s
YAK pmax pmax
comp=N,27nm,3.8s
YAK pmax pmax
comp=E,39nm,3.8s
YAK smax smax
comp=N,11nm,1.6s
YAK smax smax
comp=E,8.0nm,1.2s
YAK MLR MLR
comp=Z,203nm,16.0s
YAK MLR MLR
comp=N,242nm,16.0s
YAK MLR MLR
comp=E,52nm,16.0s
BRTR **Keskin Array B** 69.13 312 P P 09 31 54.6 -0.4
comp=E,1.7nm,0.8s,baz=132,slow=7.6,SNR=9.3
MA2 **Magadan** 71.41 26 *e*P P 09 32 08.4 0.0
comp=E,11nm,0.8s
MA2 **Magadan** 71.41 26⇑ *e*P P 09 32 09.1 +0.7
MA2 pmax pmax
comp=Z,15nm,1.7s
PRGR **Permogore** 71.69 337 *e*P P 09 32 09.0 -1.0
PRGR *e**PP pP 09 32 16.5 -1.5
PRGR pmax pmax
comp=Z,21nm,0.9s
PETK **Petropavlovsk-** 71.81 34 P P 09 32 10.8 -0.2
comp=Z,3.2nm,0.7s,baz=194,slow=4.0
MAW **Mawson** 72.64 193 LR LR 09 57 40.1
comp=Z,93nm,18.6s,baz=48,slow=30
OBN **Obninsk** 72.66 328⇓ *e*P P 09 32 15.9 0.0
OBN pmax pmax
comp=Z,7.0nm,0.8s
TIXI **Tiksi** 73.26 10 P P 09 32 18.4 -0.8
comp=Z,7.7nm,0.7s,baz=184,slow=4.5,SNR=15
TIXI **Tiksi** 73.26 10 *e*P P 09 32 18.3 -0.8
comp=Z,9.7nm,0.8s
TIXI **Tiksi** 73.26 10 *c i*P P 09 32 18.1 -1.1
TIXI pmax pmax
comp=Z,11nm,0.8s
KLMR **Klimovskoe** 73.80 334 *e*P P 09 32 19.3 -3.3
KLMR pmax pmax
comp=Z,8.0nm,1.3s
KLMR **Klimovskoe** 73.80 334 *e*P P 09 32 19.4 -3.2
KLMR AMP 09 32 34.2
comp=Z,8.0nm,1.3s
BOSA **Boshof** 74.72 240 P P 09 32 28.8 0.0
comp=Z,2.4nm,0.7s,baz=31,slow=12,SNR=3.8
BOSA LR LR 10 00 52.1
comp=Z,79nm,19.3s,baz=180,slow=32
AKASG **Malin Array Be** 75.29 322 P P 09 32 30.6 -0.8
comp=Z,0.5nm,0.4s,baz=86,slow=5.3,SNR=8.6
KIEV **Kiev** 75.30 322⇓ *e*P P 09 32 30.9 -0.6
KIEV pmax pmax
comp=Z,4.0nm,1.0s
MLR **Muntele Rosu** 76.09 317 P P 09 32 36.6 +0.2
comp=Z,0.8nm,0.8s,baz=111,slow=8.6,SNR=4.0
BUR04 **Bucovina Ar. S** 77.06 319 *e*P P 09 32 41.9 +0.1
BUR08 **Bucovina Ar. S** 77.07 319 *e*P P 09 32 43.0 +1.2
CRVS **Cervenica-Dubn** 79.77 319 *e* 09 34 01.1
CRVS *e* 09 34 16.4
SYO **Syowa Base** 79.93 198⇑ *e*P P 09 32 47.1 -10
FINES **FINESS Array B** 80.04 333 P P 09 32 57.6 -0.1
comp=Z,2.3nm,0.7s,baz=85,slow=4.8,SNR=6.7
BILL **Bilibino** 81.24 21⇓ *e*P P 09 33 03.5 -0.5
BILL *e*S S 09 43 17.4 +4.8
BILL pmax pmax
comp=Z,2.0nm,0.9s
BILL MLR MLR
comp=Z,175nm,17.0s
ARCES **ARCESS Array B** 82.59 340 P P 09 33 11.0 -0.1
comp=Z,5.2nm,0.9s,baz=92,slow=5.7,SNR=13
DPC **Dobruska-Polom** 83.28 320 *e*P P 09 33 16.9 +1.7
DPC **Dobruska-Polom** 83.28 320 *e*P P 09 33 16.9 +1.7
BRG **Berggiesshubel** 84.84 321 *e*(P) P 09 33 23.2 +0.2
comp=Z,4.0nm,0.6s
BRG **Berggiesshubel** 84.84 321 *e*P P 09 33 23.2 +0.2
BRG pmax pmax
comp=Z,4.0nm,0.6s
GEA0 **GERESS Array S** 84.84 319 *e*P P 09 33 23.4 +0.2
GERES **GERESS Array B** 84.84 319 P P 09 33 23.4 +0.1
comp=Z,2.1nm,0.8s,baz=83,slow=4.2,SNR=9.5
KHC **Kasperske Hory** 84.95 319 *e*P P 09 33 24.2 +0.5
KHC **Kasperske Hory** 84.95 319 *e*P P 09 33 24.2 +0.5
CLL **Collm** 85.47 321 *e*P P 09 33 26.0 -0.2
CLL **Collm** 85.47 321 *e*P P 09 33 26.0 -0.2
HFS **Hagfors** 85.77 330 P P 09 33 27.3 -0.2
comp=Z,1.0nm,0.6s,baz=63,slow=14,SNR=3.5
SPITS **Spitsbergen Ar** 87.01 348 P P 09 33 33.4 +0.1
comp=Z,5.2nm,0.9s,baz=42,slow=15,SNR=3.0
SPITS LR LR 10 19 47.0
comp=Z,62nm,20.0s,baz=90,slow=41
NB2 **NORSAR Subarra** 87.05 331 P P 09 33 33.4 -0.4
comp=Z,4.0nm,1.0s,baz=92,slow=5.6
DAVOX **Davos/Dischmat** 87.32 317 P P 09 33 36.0 +0.4
comp=Z,1.9nm,0.6s,baz=122,slow=10,SNR=4.2
KEST **Kesra** 87.58 306 P P 09 33 38.0 +1.0
comp=Z,2.3nm,0.6s,baz=23,slow=7.7,SNR=4.3
TOLK **Toolik Lake Re** 97.26 20 P Pdif 09 34 21.1 -0.1
baz=292
NEW **Newport** 122.50 27 P PKPdf 09 39 43.0 -1.1
baz=318
I03D **Drain, OR** 122.53 34 P PKPdf 09 39 43.1 -1.1
baz=310
MSO **Missoula** 124.99 26 P PKPdf 09 39 48.7 -0.3
baz=321
MOD **Modoc Plateau** 125.40 34 *e*PKPdf PKPdf 09 39 50.7 +0.8
EGMT **Eagleton** 125.72 22 P PKPdf 09 39 50.1 -0.2
baz=326
DLMT **Dillon** 126.72 26 *e*PKPdf PKPdf 09 39 52.9 +0.5
BOZ **Bozeman (W)** 126.95 25 P PKPdf 09 39 52.7 -0.1
baz=323
DGMT **Dagmar** 127.23 18 P PKPdf 09 39 53.0 0.0
baz=333
HLID **Hailey** 127.28 29 P PKPdf 09 39 53.4 -0.1
baz=319
LAO **LASA Array** 128.13 20 P PKPdf 09 39 55.2 +0.3
baz=330
RLMT **Red Lodge** 128.31 24 P PKPdf 09 39 55.3 -0.2
baz=325
NV01 **Mina Array Sit** 128.85 36 *e*PKPdf PKPdf 09 39 57.9 +1.1
NVAR **Mina Array Bea** 128.85 36 PKP PKPdf 09 39 57.5 +0.8
comp=Z,1.0nm,0.9s,baz=267,slow=3.6,SNR=7.3
SNOW **Snow King Moun** 129.03 26 *e*PKPdf PKPdf 09 39 58.4 +1.4
PDAR **Pinedale Array** 130.11 26 PKP PKPdf 09 39 58.0 -1.0
comp=Z,0.5nm,0.7s,baz=264,slow=1.3,SNR=4.3
R11A **Troy Canyon, C** 130.47 34 *e*PKPdf PKPdf 09 40 01.8 +2.0
K22A **Casper** 131.47 23 P PKPdf 09 40 01.9 +0.3
baz=328
GSC **Goldstone, Bar** 131.83 38 P PKPdf 09 40 01.7 -0.5
baz=311
E38A **The Farm, Brul** 131.84 8 P PKPdf 09 40 02.1 +0.2
baz=348
CIS **Catalina Islan** 132.02 41 P PKPdf 09 40 02.5 -0.2
baz=308
SCI2 **San Clemente I** 132.20 41 P PKPdf 09 40 02.7 -0.2
baz=308
E39A **Mellen** 132.20 7 P PKPdf 09 40 02.7 +0.1
baz=350
E40A **Wakefield** 132.22 7 P PKPdf 09 40 02.7 +0.1
baz=350
F36A **Milaca** 132.26 10 P PKPdf 09 40 02.9 +0.2
baz=345
E43A **Lone Tree Farm** 132.55 4 P PKPdf 09 40 03.8 +0.6
baz=354
F39A **Loretta** 132.61 8 P PKPdf 09 40 03.5 +0.2
baz=349
G35A **Watkins** 132.70 11 *e*PKPpre PKPpre 09 39 50.5
O20A **White River Ci** 132.82 27 P PKPdf 09 40 04.6 +0.4
baz=324
H35A **Sunnyside Ranc** 133.13 12 P PKPdf 09 40 05.2 +0.8
baz=343
ECSD **EROS Data Cent** 133.66 14 P PKPdf 09 40 05.8 +0.4
baz=341
ECSD **EROS Data Cent** 133.66 14 *e*PKPdf PKPdf 09 40 06.3 +0.9
W18A **Petrified Fore** 136.03 32 *e*PKPdf PKPdf 09 40 12.6 +2.3
V41A **Mountainview** 142.25 12 P PKPpre 09 40 16.7
baz=345
W39A **Magazine** 142.44 15 P PKPpre 09 40 17.4
baz=342
WVT **Waverly** 142.64 7 P PKPpre 09 40 18.6
baz=352
ABTX **Abilene, Hawle** 142.85 24 P PKPpre 09 40 18.6
baz=331
X39A **Fountain Ranch** 143.00 16 P PKPpre 09 40 19.0
baz=341,SNR=6.9
MIAR **Mount Ida** 143.10 15 P PKPbc 09 40 19.5 -0.2
baz=342
MIAR **Mount Ida** 143.10 15 *e*PKPpre PKPbc 09 40 19.4 -0.3
MIAR **Mount Ida** 143.10 15 *e*PKIKP PKPbc 09 40 19.4 -0.3
V48A **Smith Brothers** 143.13 5 P PKPbc 09 40 19.2 -0.6
baz=353
X40A **Basin Creek Fa** 143.34 14 P PKPbc 09 40 19.9 -0.5
baz=343
V53A **Saluda** 143.39 360 P PKPbc 09 40 20.0 -0.5
baz=360
W45A **Hickory Valley** 143.41 9 P PKPab 09 40 19.6 +0.1
baz=349
X41A **Kaden, Bauxite** 143.41 13 P PKPab 09 40 19.8 +0.2
baz=344
W47A **Westpoint** 143.53 7 P PKPbc 09 40 20.7 -0.2
baz=352
W48A **Pulaski** 143.71 6 P PKPab 09 40 20.9 +0.2
baz=353
PLAL **Pickwick Lake** 143.74 7 *e*PKPpre PKPab 09 40 20.6 -0.2
TX31 **Lajitas Ar. Si** 143.74 32 *e*PKPdf PKPbc 09 40 21.8 -0.1
TXAR **Lajitas Array** 143.74 32 PKP PKPbc 09 40 22.1 +0.2
comp=Z,0.9nm,0.8s,baz=147,slow=0.5,SNR=10.0
W49A **Belvidere** 143.79 5 P PKPab 09 40 20.9 -0.1
baz=354
X44A **Crenshaw** 143.90 10 P PKPab 09 40 21.5 +0.1
baz=347
Y41A **Eaglette Beard** 143.98 14 P PKPab 09 40 21.5 -0.2
baz=343
X45A **UM Field Stati** 144.10 9 P PKPab 09 40 21.5 -0.7
baz=349
Y42A **Garnett, Star** 144.21 13 P PKPab 09 40 22.5 -0.1
baz=344
X47A **Russelville** 144.22 7 P PKPab 09 40 21.7 -0.9
baz=351,SNR=9.1
WHTX **Lake Whitney,** 144.26 22 P PKPab 09 40 22.2 -0.7
baz=334
Y43A **Makayla and Ka** 144.32 12 P PKPbc 09 40 23.4 +0.1
baz=346,SNR=5.2
Z40A **Long Farm, Mag** 144.37 15 P PKPbc 09 40 23.4 -0.1
baz=342
X48A **Hartselle** 144.38 6 P PKPab 09 40 22.5 -0.7
baz=353,SNR=5.2
X48A **Hartselle** 144.38 6 *e*PKPdf PKPab 09 40 22.9 -0.3
X49A **Woodville** 144.39 5 P PKPab 09 40 22.5 -0.7
baz=354
X51A **Calhoun** 144.44 3 P PKPab 09 40 23.1 -0.3
baz=356
HPIG 144.47 37 *e*PKPdf PKPdf 09 40 25.2 -0.6
Z41A **Richland Creek** 144.52 14 P PKPbc 09 40 23.9 -0.1
baz=343
X53A **Estanollee** 144.55 1 P PKPab 09 40 23.6 -0.2
baz=359
Y45A **Yeager Farm, C** 144.62 10 P PKPab 09 40 24.1 0.0
baz=348
JCT **Junction City** 144.65 26 P PKPab 09 40 24.3 -0.1
baz=330
JCT **Junction City** 144.65 26 *e*PKPdf PKPbc 09 40 25.1 +0.5
JCT **Junction City** 144.65 26 *e*PKIKP PKPbc 09 40 25.1 +0.5
Y46A **Houston** 144.71 9 P PKPab 09 40 23.6 -0.8
baz=349,SNR=6.0
Z42A **Norrel Spur, H** 144.71 13 P PKPab 09 40 23.8 -0.6
baz=344
Y47A **UCPARC, Winfie** 144.83 7 P PKPab 09 40 23.9 -1.0
baz=351,SNR=8.5
Y48A **Jasper** 144.90 6 P PKPab 09 40 24.0 -1.1
baz=352,SNR=9.1
140A **Cam and Jess,** 144.91 16 P PKPbc 09 40 25.3 0.0
baz=341
140A **Cam and Jess,** 144.91 16 *e*PKPdf PKPdf 09 40 25.8 -0.3
CPUP **Villa Florida** 144.94 222 PKP PKPdf 09 40 26.2 -0.1
comp=Z,2.0nm,0.8s,baz=117,slow=2.3,SNR=3.0
Z44A **Pea Ridge, Bel** 145.03 11 P PKPbc 09 40 25.4 -0.2
baz=347,SNR=9.5
Y49A **Blount Mountai** 145.03 5 P PKPbc 09 40 24.8 -0.9
baz=354,SNR=8.9
Y49A **Blount Mountai** 145.03 5 *e*PKPbc PKPbc 09 40 25.2 -0.4
Y50A **Piedmont** 145.06 4 P PKPbc 09 40 25.0 -0.7
baz=355
Z45A **Winona** 145.08 10 P PKPbc 09 40 25.3 -0.5
baz=348
Y51A **Rockmart** 145.09 3 P PKPbc 09 40 25.1 -0.7
baz=356
141A **Papa Simpson,** 145.12 15 P PKPab 09 40 26.1 +0.1
baz=342
Y52A **Lilburn** 145.17 2 P PKPbc 09 40 25.7 -0.4
baz=358,SNR=6.4
Y52A **Lilburn** 145.17 2 *e*PKPbc PKPdf 09 40 26.4 -0.2
Y53A **Monroe** 145.19 1 P PKPbc 09 40 26.1 0.0
baz=358
Y54A **Tignall** 145.19 360 P PKPab 09 40 26.1 -0.1
baz=0.1
Z46A **Louisville** 145.38 9 P PKPbc 09 40 26.6 -0.2
baz=349,SNR=5.1
143A **Socs Landing,** 145.38 13 P PKPbc 09 40 26.7 -0.1
baz=345,SNR=5.1
143A **Socs Landing,** 145.38 13 *e*PKPbc PKPdf 09 40 27.4 +0.5
Z48A **Northport** 145.39 7 P PKPbc 09 40 25.7 -1.1
baz=352,SNR=8.5
142A **Monroe** 145.41 14 P PKPbc 09 40 26.8 -0.1
baz=344
NATX **Nacogdoches** 145.42 18 P PKPab 09 40 27.1 0.0
baz=339
240A **Hunter Patters** 145.42 16 P PKPbc 09 40 26.7 -0.2
baz=340
Z47A **Carrollton** 145.50 8 P PKPbc 09 40 26.5 -0.6
baz=351,SNR=9.6
GOGA **Godfrey** 145.63 1 P PKPdf 09 40 27.2 -0.1
baz=359,SNR=6.8
GOGA **Godfrey** 145.63 1 *e*PKPdf PKPab 09 40 27.8 -0.1
GOGA **Godfrey** 145.63 1 *e*PKP2 PKPab 09 40 27.8 -0.1
Z51A **Franklin** 145.66 3 P PKPdf 09 40 27.4 0.0
baz=356
241A **Mo Tay, Goldon** 145.67 15 P PKPab 09 40 28.1 +0.1
baz=342
241A **Mo Tay, Goldon** 145.67 15 *e*PKPdf PKPab 09 40 28.5 +0.5
Z50A **Ashland** 145.67 5 P PKPdf 09 40 26.8 -0.6
baz=354,SNR=12
Z50A **Ashland** 145.67 5 *e*PKPdf PKPdf 09 40 27.2 -0.2
Z49A **Columbiana** 145.68 6 P PKPdf 09 40 27.0 -0.5
baz=353,SNR=24
Z53A **Monticello** 145.76 1 P PKPdf 09 40 27.5 -0.1

	baz=358,SNR=7.9							
145A	Houston Renfro	145.78	11	P		PKPbc	09 40 27.9	-0.1
	baz=347							
LRAL	Lakeview Retre	145.79	6	P		PKPdf	09 40 27.3	-0.3
	baz=352,SNR=12							
LRAL	Lakeview Retre	145.79	6	*e*PKPdf		PKPdf	09 40 27.8	+0.1
Z54A	Sparta	145.81	0	P		PKPdf	09 40 27.7	+0.1
	baz=360,SNR=7.3							
Z55A	Blythe	145.82	359	P		PKPbc	09 40 28.0	-0.1
	baz=1.1							
242A	Grayson	145.82	14	P		PKPbc	09 40 28.2	+0.1
	baz=343							
Z52A	Williamson	145.83	2	P		PKPbc	09 40 28.1	-0.1
	baz=357,SNR=18							
NHSC	New Hope	145.85	356	P		PKPdf	09 40 27.8	+0.1
	baz=4.5							
146A	Union	145.90	9	P		PKPbc	09 40 28.4	0.0
	baz=349,SNR=6.2							
147A	Livingston	145.99	8	P		PKPdf	09 40 28.3	+0.3
	baz=350							
147A	Livingston	145.99	8	*e*PKPdf		PKPbc	09 40 28.9	+0.2
VBMS	Vicksburg	146.04	12	P		PKPbc	09 40 29.0	+0.1
	baz=346							
148A	Greensboro	146.10	7	P		PKPbc	09 40 28.6	-0.4
	baz=351							
243A	Waterproof	146.16	13	P		PKPbc	09 40 28.9	-0.3
	baz=344							
244A	Avery, Jackson	146.18	12	P		PKPbc	09 40 29.4	+0.1
	baz=346,SNR=5.9							
149A	Jones	146.24	6	P		PKPdf	09 40 28.8	+0.4
	baz=353							
150A	Eclectic	146.31	5	P		PKPbc	09 40 29.2	-0.4
	baz=354,SNR=7.5							
152A	Waverly Hall	146.33	3	P		PKPbc	09 40 29.5	-0.2
	baz=356							
152A	Waverly Hall	146.33	3	*e*PKPdf		PKPbc	09 40 29.7	0.0
245A	Little AP, Sta	146.34	11	P		PKPbc	09 40 29.9	+0.2
	baz=347							
153A	Fort Valley	146.39	2	P		PKPbc	09 40 29.5	-0.4
	baz=358							
155A	Kite	146.43	359	P		PKPbc	09 40 29.9	-0.1
	baz=0.5,SNR=5.4							
154A	Montrose	146.44	0	P		PKPbc	09 40 30.2	+0.2
	baz=359							
154A	Montrose	146.44	0	*e*PKPdf		PKPab	09 40 30.5	-0.3
151A	Opelika	146.44	4	P		PKPbc	09 40 29.8	-0.3
	baz=355,SNR=11							
247A	Quitman	146.54	9	P		PKPbc	09 40 30.7	+0.4
	baz=349							
248A	Dixon Mills	146.63	8	P		PKPbc	09 40 30.9	+0.2
	baz=351							
833A	Chaparral WMA,	146.68	27	P		PKPbc	09 40 31.3	+0.4
	baz=329							
343A	Vidalia	146.70	14	P		PKPbc	09 40 31.2	+0.4
	baz=344							
344A	Westbrook Farm	146.74	12	P		PKPab	09 40 31.6	-0.4
	baz=345							
344A	Westbrook Farm	146.74	12	*e*PKPdf		PKPab	09 40 31.9	-0.1
441A	DeRidder	146.80	16	P		PKPbc	09 40 31.6	+0.5
	baz=341							
249A	Camden	146.82	7	P		PKPbc	09 40 31.3	+0.2
	baz=352,SNR=9.1							
251A	Midway	146.87	4	P		PKPbc	09 40 31.3	0.0
	baz=355,SNR=16							
250A	Grady	146.91	5	P		PKPbc	09 40 31.2	-0.2
	baz=354							
253A	Americus	146.96	2	P		PKPbc	09 40 31.6	0.0
	baz=358							
252A	Lumpkin	147.00	3	P		PKPbc	09 40 31.7	0.0
	baz=356,SNR=6.3							
345A	Thompson Farm,	147.02	11	P		PKPbc	09 40 32.0	+0.2
	baz=347							
346A	Big Creek Wild	147.05	10	P		PKPbc	09 40 32.0	+0.2
	baz=348							
256A	Glennville	147.06	359	P		PKPbc	09 40 32.0	+0.1
	baz=1.6							
254A	Abbeville	147.10	1	P		PKPbc	09 40 31.7	-0.2
	baz=359							
255A	Hazlehurst	147.12	359	P		PKPbc	09 40 32.1	+0.1
	baz=0.5							
347A	Saraland	147.19	9	P		PKPbc	09 40 32.6	+0.3
	baz=349,SNR=5.2							
350A	Dozier	147.46	6	P		PKPbc	09 40 33.3	+0.3
	baz=353							
352A	Blakely	147.51	3	P		PKPbc	09 40 32.7	-0.4
	baz=356							
352A	Blakely	147.51	3	*e*PKPbc		PKPbc	09 40 33.4	+0.3
TIGA	Tifton	147.60	1	P		PKPbc	09 40 33.1	-0.3
	baz=358							
BRAL	Brewton	147.63	7	P		PKPbc	09 40 33.6	+0.1
	baz=352							
351A	Pinckard	147.66	4	P		PKPbc	09 40 33.8	+0.3
	baz=355							
353A	Camilla	147.67	2	P		PKPbc	09 40 33.8	+0.2
	baz=357							
356A	Blackshear	147.71	359	P		PKPbc	09 40 33.7	+0.1
	baz=1.1							
447A	Lucedale	147.77	9	P		PKPbc	09 40 33.5	-0.3
	baz=349							
453A	Whigham	148.16	2	P		PKPbc	09 40 35.3	+0.4
	baz=357							
451A	Vernon	148.31	5	P		PKPbc	09 40 35.7	+0.4
	baz=354							
456A	Hilliard	148.31	359	P		PKPbc	09 40 36.0	+0.7
	baz=1.4							
555A	McAlpin	148.92	0	P		PKPbc	09 40 37.0	+0.1
	baz=360							
554A	Perry	148.95	1	P		PKPbc	09 40 36.6	-0.4
	baz=358							
556A	Lake Butler	149.04	359	P		PKPbc	09 40 37.4	+0.2
	baz=0.6							
657A	Interlachen	149.44	358	P		PKPbc	09 40 38.4	+0.2
	baz=1.7							
LNIG	Linares	149.51	31	*e*PKPbc		PKPbc	09 40 38.1	-0.4
656A	Willston	149.67	359	P		PKPbc	09 40 38.9	+0.1
	baz=0.4							
758A	Lake Helen	150.03	357	P		PKPbc	09 40 38.9	-0.7
	baz=3.1							
DWPF	Disney Wildern	150.89	357	P		PKPbc	09 40 41.0	-0.7
	baz=2.7							
958A	Wauchula	151.43	358	P		PKPbc	09 40 42.2	-0.8
	baz=2.0							
061Z	Ochoppi	153.10	356	P		PKPbc	09 40 44.8	-2.0
	baz=4.0							

MEX 29 09:21:50.6±0.5, 17°.25N×101°.13W, h16km±41km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.85	104	*e*P	Pb	09 22 03.9	-3.0
CAIG				*e*S	Sb	09 22 14.5	-3.6
ARIG	Puente Sto Nin	1.27	36	*e*P	Pn	09 22 10.0	-3.6
ARIG				*e*S	Sb	09 22 25.1	-5.0
MEIG	Mezcala	1.59	65	*e*P	Pn	09 22 14.5	-3.6
PLIG	Platanillo	1.92	54	*e*P	Pn	09 22 19.2	-3.5
TLIG	Tlapa	2.47	82	*e*P	Pn	09 22 28.0	-2.3
YAIG	Yautepec	2.53	50	*e*P	Pn	09 22 29.7	-1.5

JMA ***29*** *09:29:30.9±0.3, 22°.71N×122°.72E, h45km, M3.1*
TAP ***29*** *09:29:31.7, 22°.69N×122°.71E, h53km±2km, ML3.5, D*
ISC 29 09:29:26.9±1.3, 22°.70N±0°.04×122°.67E±0°.03, h9km±10km, n71, σ0.95/137, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWH	Lutao	1.10	271	P	Pg	09 29 50.3	+2.2
	baz=278						
TWH				*e*S	Sg	09 30 03.2	+0.7
	baz=278						
LAY	Lan-yu	1.23	238	P	Pg	09 29 52.1	+1.6
	baz=239						
LAY				*e*S	Sg	09 30 06.2	-0.2
	baz=239						
CHKT	Chengkung	1.27	289	P	Pg	09 29 52.7	+1.4
	baz=293						
CHKT				*e*S	Sg	09 30 07.5	-0.3
	baz=293						
FULB	Fuli	1.36	292	P	Pg	09 29 54.0	+0.9
	baz=296						
FULB				*e*S	Sg	09 30 10.3	-0.6
	baz=296						
HGSD	Ruisui	1.40	305	P	Pg	09 29 54.3	+0.5
	baz=304						
HGSD				*e*S	Sb	09 30 10.4	-0.8
	baz=304						
TWF1	Yuli	1.42	297	P	Pg	09 29 55.0	+0.7
	baz=304						
TWF1				*e*S	Sg	09 30 12.9	+0.1
	baz=304						
YULB	Yu-li	1.44	299	P	Pg	09 29 55.5	+0.8
	baz=299						
YULB				*e*S	Sg	09 30 12.8	-0.6
	baz=299						
TWGBT	Beinan	1.47	275	P	Pg	09 29 56.5	+1.3
	baz=281						
TWGBT				*e*S	Sg	09 30 14.3	-0.1
	baz=281						
EHY	Hungye	1.48	303	P	Pg	09 29 55.9	+0.5
	baz=303						
EHY				*e*S	Sg	09 30 14.3	-0.3
	baz=303						
TWG	Pinlang	1.48	275	P	Pg	09 29 56.6	+1.2
	baz=281						
TWG				*e*S	Sg	09 30 14.5	-0.1
	baz=281						
EGFH	Guangfu	1.50	310	*e*P	Pg	09 29 56.5	+0.8
	baz=310						
EGFH				*e*S	Sb	09 30 13.4	-0.7
	baz=310						
ESL	Shilin	1.59	315	*e*S	Sn	09 30 15.7	-0.5
	baz=314						
ELDTW	Lidau	1.60	288	P	Pg	09 29 58.0	+0.3
	baz=288						
ELDTW				*e*S	Sb	09 30 16.2	-1.0
	baz=288						
TAW	Tawu	1.68	259	*e*P	Pg	09 30 00.0	+0.9
	baz=248						
TAW				*e*S	Sg	09 30 20.6	-0.3
	baz=248						
TWD	Chiawan	1.69	325	*e*P	Pb	09 29 58.9	+0.6
	baz=324						
TWD				*e*S	Sn	09 30 18.1	-0.6
	baz=324						
HATJ	Hateruma jima	1.71	37	P	Pb	09 29 58.6	+0.1
HATJ				S	Sn	09 30 18.5	-0.4
EAST	Anshuo	1.71	260	P	Pg	09 30 00.3	+0.5
	baz=270						
EAST				*e*S	Sg	09 30 21.2	-0.9
	baz=270						
VWDT	VWDT	1.76	307	P	Pg	09 30 00.5	-0.1
	baz=307						
VWDT				*e*S	Sb	09 30 21.3	-0.3
	baz=307						
JYNG	Yonagunijimaku	1.76	8	P	Pb	09 30 00.3	+0.8
JYNG				S	Sb	09 30 21.8	0.0
NACB	Ninganchiao	1.77	326	*e*P	Pb	09 29 59.7	+0.1
	baz=325						
NACB				*e*S	Sn	09 30 19.8	-0.7
	baz=325						
YOJ	Yonaguni jima	1.78	10	*e*P	Pb	09 30 00.5	+0.7
	baz=18						
YOJ				*e*S	Sn	09 30 21.7	+1.0
	baz=18						
YOJ	Yonaguni jima	1.78	10	P	Pb	09 30 00.6	+0.7
YOJ				S	Sn	09 30 21.8	+1.0
STYT	Tauyuan	1.82	285	P	Pg	09 30 02.0	+0.1
	baz=285						
STYT				*e*S	Sb	09 30 23.3	-0.3
	baz=285						
TWKBT	Hengchun	1.88	247	*e*P	Pg	09 30 03.2	+0.1
	baz=247						
TWKBT				*e*S	Sg	09 30 25.2	-2.2
	baz=247						
TWK1	Hengchun	1.89	247	*e*P	Pg	09 30 03.3	+0.2
	baz=247						
TWK1				*e*S	Sg	09 30 25.2	-2.3
	baz=247						
MASBT	Mashibuluo	1.89	268	P	Pg	09 30 02.7	-0.4
	baz=274						
MASBT				*e*S	Sg	09 30 26.2	-1.4
	baz=274						
SLGT	Liugui	1.89	279	P	Pg	09 30 03.4	+0.1
	baz=278						
SLGT				*e*S	Sb	09 30 25.7	+0.2
	baz=278						
IRIF	Iriomote-Funau	1.90	31	P	Pb	09 30 01.3	-0.5
IRIF				S	Sn	09 30 22.9	-0.7
ALS	Alishan	1.90	296	*e*P	Pg	09 30 03.7	+0.3
	baz=300						
ALS				*e*S	Sg	09 30 26.7	-1.4
	baz=300						
EOS1	EOS1	1.91	345	*e*P	Pb	09 30 02.3	+0.3
	baz=335						
EOS1				*e*S	Sn	09 30 24.4	+0.6
	baz=335						
SSLB	Suanglung	1.92	305	*e*P	Pb	09 30 02.8	+0.6
	baz=304						
SSLB				*e*S	Sb	09 30 25.0	-1.2
	baz=304						
HEN	Hengchun	1.92	249	*e*P	Pg	09 30 04.1	+0.4
	baz=250						
HEN				*e*S	Sg	09 30 26.4	-2.3
	baz=250						
NANB	Nanao	1.92	334	*e*P	Pb	09 30 02.5	+0.3
	baz=325						
NANB				*e*S	Sn	09 30 24.7	+0.5
	baz=325						
ENA	Nanau	1.92	334	*e*P	Pb	09 30 02.3	+0.1
	baz=325						
ENA				*e*S	Sn	09 30 24.7	+0.4
	baz=325						
SCZT	Fangliau	1.93	261	*e*P	Pg	09 30 03.5	-0.4
	baz=251						
SCZT				*e*S	Sg	09 30 28.1	-0.7
	baz=251						
CHGB	Renai	1.93	315	*e*P	Pb	09 30 03.1	+0.5
	baz=323						
CHGB				*e*S	Sn	09 30 24.9	0.0
	baz=323						
JKRS	Kuro-shima	1.96	38	P	Pb	09 30 02.3	-0.6
JKRS				*e*S	Sn	09 30 24.9	-0.4
SGST	Jiashian	1.96	282	*e*P	Pg	09 30 05.3	+0.6
	baz=281						
SGST				*e*S	Sg	09 30 30.2	+0.1
	baz=281						
WTP	Ta-pu	1.97	286	P	Pg	09 30 05.3	+0.5
	baz=285						
WTP				*e*S	Sg	09 30 29.9	-0.6
	baz=285						
TPUB	Ta-pu	1.98	288	P	Pg	09 30 05.1	+0.3
	baz=297						
TPUB				*e*S	Sg	09 30 30.5	0.0
	baz=297						
SMLT	Sun Moon Lake	2.01	306	*e*P	Pb	09 30 04.6	+0.8
	baz=306						
SMLT				*e*S	Sb	09 30 29.3	+0.3
	baz=306						
CHN1	Nanshi	2.04	284	P	Pg	09 30 06.7	+0.7
	baz=285						
CHN1				*e*S	Sg	09 30 31.7	-0.7
	baz=285						
CHN5	Tsauling	2.04	296	P	Pg	09 30 06.7	+0.5
	baz=301						
CHN5				*e*S	Sg	09 30 31.3	-1.3
	baz=301						
TWC	Suao	2.05	339	*e*P	Pb	09 30 04.7	+0.4
	baz=338						
TWC				*e*S	Sn	09 30 27.4	+0.1
	baz=338						
TYC	Yuchr	2.06	306	*e*P	Pb	09 30 05.4	+1.0
	baz=306						
TYC				*e*S	Sb	09 30 30.5	+0.3
	baz=306						
TWT	Tachien	2.07	319	*e*P	Pg	09 30 06.0	-0.7
	baz=326						
TWT				*e*S	Sb	09 30 29.3	-1.5
	baz=326						
TDCB	Techi	2.08	318	*e*P	Pb	09 30 05.4	+0.4
	baz=325						
TDCB				*e*S	Sb	09 30 29.3	-1.8
	baz=325						
DPDB	Guoxing	2.08	310	*e*P	Pb	09 30 05.5	+0.5
	baz=315						
DPDB				*e*S	Sb	09 30 31.4	+0.4
	baz=315						
NNSB	Datong	2.09	326	*e*P	Pb	09 30 05.2	+0.1
	baz=325						
NNSB				*e*S	Sn	09 30 28.9	+0.3
	baz=325						
NNSH	Datong	2.09	326	*e*P	Pb	09 30 05.1	0.0
	baz=325						
NNSH				*e*S	Sn	09 30 28.9	+0.3
	baz=325						
TWK	Hsinying	2.09	286	P	Pg	09 30 07.3	+0.3
	baz=296						
TWK				*e*S	Sg	09 30 34.0	-0.2
	baz=296						
NNS	Nan Shan	2.10	326	*e*P	Pb	09 30 05.5	+0.1
	baz=325						
NNS				*e*S	Sn	09 30 29.4	+0.5
	baz=325						
WJS	Zhushan	2.11	302	*e*S	Sg	09 30 33.0	-1.7
	baz=308						
JIJ	Ishigaki jima	2.14	39	P	Pn	09 30 04.3	+1.4
JIJ				S	Sn	09 30 27.9	-1.7
WNT	Mingjian	2.17	303	*e*P	Pg	09 30 09.2	+0.6
	baz=303						
WNT				*e*S	Sg	09 30 35.8	-1.0
	baz=303						
WGK	Gukeng	2.18	297	*e*P	Pg	09 30 08.9	+0.2
	baz=297						
WGK				*e*S	Sg	09 30 35.9	-1.0
	baz=297						
WDLH	Douliu	2.20	297	*e*P	Pg	09 30 09.1	+0.1
	baz=306						
WDLH				*e*S	Sb	09 30 35.2	+0.9
	baz=306						
TWE	Neicheng	2.21	336	*e*P	Pb	09 30 07.5	+0.3
	baz=327						
TWE				*e*S	Sb	09 30 32.9	-1.8
	baz=327						
EGS		2.24	343	*e*S	Sn	09 30 32.5	+0.4
	baz=342						
YHNB	Yeheng	2.29	329	*e*P	Pb	09 30 08.3	-0.3
	baz=328						
YHNB				*e*S	Sn	09 30 33.6	0.0
	baz=328						
NSK	Sanguang	2.31	329	*e*P	Pb	09 30 08.5	-0.4
	baz=328						
NSK				*e*S	Sn	09 30 34.6	+0.7
	baz=328						
NWLT	Wulai	2.33	333	*e*P	Pb	09 30 09.0	-0.2
	baz=332						
NWLT				*e*S	Sn	09 30 35.8	+1.4
	baz=332						
TIPB	Shuangxi	2.39	341	*e*P	Pb	09 30 08.6	-1.6
	baz=349						
TIPB				*e*S	Sn	09 30 35.8	-0.1
	baz=349						
JISG	Ishigakijimahi	2.41	38	P	Pn	09 30 08.1	+1.5
JISG				S	Sn	09 30 35.8	-0.4
NSTT	Nanjuang	2.46	322	*e*P	Pb	09 30 12.0	+0.7
	baz=328						
NSTT				*e*S	Sb	09 30 39.9	-1.9
	baz=328						
LIOB	Emei	2.46	322	*e*P	Pb	09 30 12.2	+0.7
	baz=329						
LIOB				*e*S	Sb	09 30 40.6	-1.3
	baz=329						
WFSB	Wu-fen Shan	2.50	341	*e*S	Sn	09 30 38.9	+0.4
	baz=352						
YM07	YM07	2.65	339	*e*P	Pb	09 30 13.7	-0.9
	baz=338						
YM07				*e*S	Sn	09 30 42.0	-0.2
	baz=338						
JTJ	Tarama	2.68	44	P	Pn	09 30 12.0	+1.6
JTJ				S	Sn	09 30 41.7	-1.3
WDGT	Dungji	2.83	282	*e*P	Pb	09 30 16.6	-1.1
	baz=282						
VWUC	VWUC	3.73	308	*e*P	Pb	09 30 28.5	-4.5
	baz=308						
VWUC				*e*S	Sn	09 31 09.6	+0.7
	baz=308						

NNC 29 09:33:26.1±4.8, 37°.15N×70°.37E, h0km, mb3.8, mpv3.4, 6D, Error ellipse: s-maj=36.4km s-min=31.4km az=1.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.77	40	⇓Pn	Pn	09 34 24.8	-0.9
	7.4nm,0.4s						
SFK				⇓Sn	Sn	09 35 12.6	+1.7
	15nm,0.4s						
MNAS	Manas	5.58	16	⇓Pn	Pn	09 34 50.3	-0.2
	2.5nm,0.4s						
MNAS				⇓Sn	Sn	09 35 55.9	+0.6
	20nm,0.5s						
AML	Almayashu	5.60	26	P	Pn	09 34 49.5	-1.4
	SNR=7.2						
KK31	Karatay Array	5.95	1	⇓Pn	Pn	09 34 57.7	+2.3
	0.4nm,0°.3s,baz=185,slow=13,SNR=7.2						
KK31				⇓Sn	Sn	09 36 05.3	+1.0
	6.5nm,0.5s,baz=191,slow=25,SNR=15						
UCH	Uchtor	6.00	31	P	Pn	09 34 53.9	-2.6
	SNR=12						
EKS2	Erkin-Say	6.10	24	P	Pn	09 34 56.9	-0.7
	SNR=8.4						
KZA	Kyzart	6.20	36	P	Pn	09 34 55.1	-4.1
	SNR=5.2						
KBK	Karagaybulak	6.53	31	P	Pn	09 35 05.6	+2.1
	SNR=5.3						
TKM2	Tokmak 2	7.02	33	P	Pn	09 35 06.6	-3.8
	SNR=10						

MOS ***29*** *10:01:41.2±0.7, 25°.68S×177°.56W, h155km, mb5.2/31, Error ellipse: s-maj=9.2km s-min=8.1km az=56.1*
ISCJB ***29*** *10:01:41.2±0.8, 25°.80S±0°.04×177°.57W±0°.03, h159km±7km, mb5.0/161, Error ellipse: s-maj=7.2km s-min=3.8km az=156.0*
BJI ***29*** *10:01:42.0, 25°.80S×177°.50W, h164km, mb5.2/32, mB5.2/18*
NEIC ***29*** *10:01:42.7±0.5, 25°.73S×177°.55W, h160km±4km, mb4.9/112, Error ellipse: s-maj=4.8km s-min=3.0km az=141.0*
GCMT ***29*** *10:01:42.7±0.2, 25°.75S×177°.17W, h168km±1km, MW5.2/101, Moment Tensor Solution. s69,c90; s101,c157; Duration: 0 Moment tensor: Scale 10^16 Nm; M_{rr}5.17±.13; $M_{\theta\theta}$-5.55±.17; $M_{\phi\phi}$0.38±.16; $M_{r\theta}$-0.89±.13; $M_{\theta\phi}$-3.39±.15; $M_{\phi r}$2.37±.11; Best double couple: $M_0$6.82100×10^16 NP1:ϕ_s40.00000°, δ52.00000°, λ53.00000°. NP2:ϕ_s271.00000°, δ51.00000°, λ128.00000°. Principal axes: T 6.5510, Plg61.0000°, Azm247.0000°; N 0.5450, Plg29.0000°, Azm65.0000°; P -7.0900, Plg1.0000°, Azm155.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
IDC ***29*** *10:01:42.6±0.6, 25°.61S×177°.46W, h161km±5km, mb4.8/30, mb1 4.9/31, mb1mx4.8/45, mbtmp5.2/31, MS3.7/17, Ms1 3.7/17, ms1mx3.5/46 Error ellipse: s-maj=10.4km s-min=9.3km az=175.0*
ISC 29 10:01:42.9±0.3, 25°.80S±0°.04×177°.40W±0°.05, h166km±2km, h166km:pP-P, n755, σ1.39/845, mb5.0/159, 26C-15D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	Raoul Island	3.47	188	P	Pn	10 02 36.2	-0.5
RIZ				S	Sn	10 03 20.4	+1.7
RAO	Raoul Island	3.47	188	P	Pn	10 02 35.8	-0.9
	457nm,0.3s,baz=208,slow=18,SNR=21						
RAO				S	Sn	10 03 17.2	-1.6
	2μm,0.3s,baz=106,slow=22,SNR=13						
GLKZ	Green Lake	3.48	188	P	Pn	10 02 36.3	-0.6
GLKZ				S	Sn	10 03 20.2	+1.2
MXZ	Matakaoa Point	12.28	196	P	Pn	10 04 23.0	-9.2
MXZ				S	Sn	10 06 35.1	-13
WMGZ	Waiomatatini S	12.50	195	P	Pn	10 04 26.8	-8.2
WMGZ				S	Sn	10 06 41.1	-12
HAZ	Te Kaha	12.61	198	P	Pn	10 04 27.8	-8.6
HAZ				S	Sn	10 06 46.1	-10
PKGZ	Pakihiroa	12.65	197	P	Pn	10 04 26.6	-10
PKGZ				S	Sn	10 06 44.1	-13
PUZ	Puketiti	12.78	196	P	Pn	10 04 28.8	-10
PUZ				S	Sn	10 06 46.5	-14
TWGZ	Tauwhareparae	12.95	196	P	Pn	10 04 32.9	-7.9
TWGZ				S	Sn	10 06 54.7	-10
AFI	Afiamalu	12.95	25	P	Pn	10 04 31.4	-10
	93nm,0.3s,baz=150,slow=1.8,SNR=69						
AFI	Afiamalu	12.95	25	*e*Pn	Pn	10 04 31.2	-10
CNGZ	Carnagh Statio	13.18	195	P	Pn	10 04 35.1	-8.6
CNGZ				S	Sn	10 06 58.2	-12
MWZ	Matawai	13.22	198	P	Pn	10 04 33.9	-10
MWZ				S	Sn	10 06 58.7	-12

URZ	Urewera	13.27 199	P		Pn	10 04 35.3	-9.5
	0.7nm,0.3s,baz=267,slow=3.6,SNR=8.7						
URZ			S		Sn	10 06 55.0	-17
	3.8nm,0.3s,baz=0.0,slow=20,SNR=3.2						
URZ	Urewera	13.27 199	*e*Pn		Pn	10 04 38.6	-6.1
URZ			S		Sn	10 06 55.0	-17
URZ	Urewera	13.27 199	P		Pn	10 04 35.3	-9.4
URZ			S		Sn	10 07 00.6	-11
TOZ	Tahuroa Road	13.34 205	P		P	10 04 51.5	+2.1
MUGZ	Murupara	13.57 200	P		Pn	10 04 40.4	-8.3
MUGZ			S		Sn	10 07 06.8	-12
RAHZ	Arahi	13.88 198	P		Pn	10 04 45.5	-7.0
RAHZ			S		Sn	10 07 14.2	-12
MTHZ	Maungataniwha	13.89 199	P		Pn	10 04 45.4	-7.3
MTHZ			S		Sn	10 07 15.4	-12
MRHZ	Matea Rd	14.01 200	P		Pn	10 04 48.1	-6.0
NMHZ	Naumai	14.13 199	P		Pn	10 04 52.6	-3.1
HIZ	Hauiti	14.27 205	*e*Pn		P	10 05 01.0	+1.3
HIZ	Hauiti	14.27 205	P		P	10 05 01.3	+1.6
BKZ	Black Stump Fm	14.29 200	P		Pn	10 04 52.3	-5.3
WTVZ	West Tongariro	14.53 202	P		P	10 05 01.9	-0.9
KWHZ	Kaweka Forest	14.54 199	P		Pn	10 04 58.0	-2.9
NGZ	Ngauruhoe	14.58 202	P		Pn	10 05 02.4	+1.0
FWVZ	Far West T-bar	14.67 202	P		Pn	10 05 02.0	-0.6
WHVZ	Whangaehu Hut	14.68 202	P		Pn	10 05 02.7	-0.1
BHHZ	Black Hill Sta	14.71 200	P		Pn	10 04 58.2	-4.8
MOVZ	Moawhango	14.74 201	P		Pn	10 05 01.8	-1.5
KAHZ	Kahuranaki	14.76 198	P		Pn	10 04 59.9	-3.6
KRHZ	Kereru	14.76 199	P		Pn	10 04 58.1	-5.4
PKVZ	Pokaka	14.77 203	P		Pn	10 05 03.5	-0.2
VRZ	Vera Road	14.84 204	P		Pn	10 05 04.8	+0.4
PXZ	Pawanui	14.98 197	P		Pn	10 05 05.7	-0.5
PNHZ	Pukenui	15.06 199	P		Pn	10 05 00.4	-6.9
DZM	Mont Dzumac	15.23 281	P		P	10 05 14.6	+3.9
	3.1nm,0.3s,baz=98,slow=14,SNR=22						
DZM	Mont Dzumac	15.23 281	*e*P		P	10 05 14.5	+3.9
	213nm,1.6s						
DZM	Mont Dzumac	15.23 281	*e*Pn		P	10 05 13.9	+3.3
	55nm,0.8s						
TSZ	Takapari Road	15.27 200	P		Pn	10 05 02.7	-7.1
DVHZ	Dannevirke	15.43 199	P		Pn	10 05 04.8	-6.9
BFZ	Birch Farm	15.76 198	P		Pn	10 05 08.7	-7.1
HOWZ	Holdsworth Sta	16.17 200	P		Pn	10 05 15.7	-5.1
TMWZ	Te Maipa	16.25 198	P		P	10 05 14.6	-7.1
DUWZ	D'Urville Isla	16.62 204	P		P	10 05 21.3	-4.4
RAR	Rarotonga	16.79 78	P		P	10 05 27.7	-0.1
	0.9nm,0.3s,baz=266,slow=14,SNR=2.1						
RAR			S		S	10 08 22.3	-12
	1.1nm,0.3s,baz=132,slow=16,SNR=3.2						
RAR			LR		LR	10 09 45.5	
	comp=Z,239nm,21.9s,baz=288,slow=29						
RAR	Rarotonga	16.79 78	*e*P		Pn	10 05 31.8	+3.4
	89nm,1.1s						
RAR			S		S	10 08 22.3	-12
RAR	Rarotonga	16.79 78	*e*P		Pn	10 05 31.8	+3.4
RAR			S		S	10 08 22.3	-12
RAR			pmax		pmax		
	comp=Z,89nm,1.1s						
TCW	Tory Channel	16.85 202	P		P	10 05 24.5	-3.8
TUWZ	Tuamarina	17.16 203	P		P	10 05 25.7	-6.0
QRZ	Quartz Range	17.17 207	P		P	10 05 28.1	-3.7
NNZ	Nelson	17.18 204	P		P	10 05 26.9	-5.0
FUNA	Funafuti	17.48 349	*e*P		P	10 05 34.0	-1.4
	comp=Z,406nm,0.8s						
THZ	Tophouse	17.83 204	*e*P		P	10 05 34.6	-4.4
	comp=Z,166nm,1.8s						
THZ	Tophouse	17.83 204	P		P	10 05 33.4	-5.7
KHZ	Kahutara	18.18 202	*e*P		P	10 05 38.5	-4.2
	comp=Z,67nm,0.7s						
KHZ	Kahutara	18.18 202	P		P	10 05 38.6	-4.2
DSZ	Denniston Nort	18.24 207	P		P	10 05 42.8	-0.7
LTZ	Lake Taylor	18.95 204	*e*P		P	10 05 49.5	-1.7
	comp=Z,26nm,0.7s						
LTZ	Lake Taylor	18.95 204	P		P	10 05 49.3	-1.9
INZ	Inchbonnie	19.21 206	P		P	10 05 50.2	-3.8
OXZ	Oxford	19.50 204	*e*P		P	10 05 55.5	-1.6
	comp=Z,44nm,0.7s						
OXZ	Oxford	19.50 204	P		P	10 05 55.2	-1.9
RPZ	Rata Peaks	20.20 205	P		P	10 06 00.5	-4.1
	comp=Z,25nm,0.8s,baz=250,slow=2.6,SNR=4.4						
RPZ			S		S	10 09 28.1	-14
	comp=Z,29nm,0.5s,baz=103,slow=20,SNR=9.2						
RPZ	Rata Peaks	20.20 205	*e*P		P	10 06 05.7	+1.0
RPZ			S		S	10 09 28.1	-14
FOZ	Fox Glacier	20.54 207	*e*P		P	10 06 08.7	+0.5
	comp=Z,34nm,0.7s						
LBZ	Lake Benmore	21.10 205	*e*P		P	10 06 15.2	+0.9
	comp=Z,43nm,1.2s						
LHI	Lord Howe Isla	21.41 249	*e*P		P	10 06 21.1	+3.4
	comp=Z,552nm,0.9s						
ODZ	Otahua Downs	21.49 204	*e*P		P	10 06 19.2	+0.8
	comp=Z,33nm,0.9s						
WKZ	Wanaka	21.93 207	*e*P		P	10 06 22.3	-0.6
	comp=Z,87nm,1.3s						
MLZ	Mavora Lakes	22.74 207	*e*P		P	10 06 31.8	+1.1
	comp=Z,116nm,1.7s						
DCZ	Deep Cove	23.22 208	*e*P		P	10 06 34.5	-0.5
	comp=Z,72nm,1.3s						
WHZ	Wether Hill Ro	23.24 207	*e*P		P	10 06 34.6	-0.6
	comp=Z,44nm,0.9s						
KNTN	Kanton	23.53 14	*e*P		P	10 06 36.3	-1.8
	comp=Z,396nm,1.1s						
TBI	Tubuai	25.50 91	*e*LQ		LQ	10 12 08.3	
	comp=Z,794nm,30.0s						
TBI	Tubuai	25.50 91	*e*T		T	10 31 04.6	
	comp=Z,43nm,0.3s						
HNR	Honiara	26.96 303	P		P	10 07 07.0	-2.1
	comp=Z,32nm,0.5s,baz=90,slow=4.0,SNR=3.0						
HNR	Honiara	26.96 303	P		P	10 07 07.0	-2.1
HNR	Honiara	26.96 303	P		P	10 07 07.0	-2.1
PAE	Paea	27.04 78	*e*T		T	10 33 01.5	
	comp=Z,18nm,0.3s						
PPT2	Papeete2	27.07 78	*e*LQ		LQ	10 12 24.5	
	comp=Z,406nm,31.8s						
PPT2			*e*LR		LR	10 13 56.3	
	comp=Z,265nm,24.5s						
PPT2	Papeete2	27.07 78	*e*T		T	10 33 01.8	
	comp=Z,18nm,0.4s						
PPT	Papeete	27.08 78	LR		LR	10 15 47.3	
	comp=Z,159nm,18.7s,baz=304,slow=31						
TVO	Taravao	27.28 79	*e*T		T	10 33 55.7	
	comp=Z,7.4nm,0.3s						
TIAR	Tiarei	27.28 78	*e*T		T	10 33 11.6	
	comp=Z,3.6nm,0.3s						
ARMA	Armidale	27.66 253	P		P	10 07 17.1	+1.8
	baz=27,SNR=21						
ARMA	Armidale	27.66 253	*e*P		P	10 07 17.5	+2.1
	comp=Z,28nm,0.7s						
MGCD	Mangrove Creek	28.31 247	P		P	10 07 23.4	+2.4
	baz=28,SNR=28						
EIDS	Eidsvold	28.40 264	P		P	10 07 23.3	+1.4
	baz=28,SNR=56						
EIDS	Eidsvold	28.40 264	*e*P		P	10 07 23.0	+1.1
	comp=Z,140nm,0.8s						
TARA	Tarawa	28.57 339	*e*P		P	10 07 21.1	-2.3
	comp=Z,188nm,0.8s						
CNB	Canberra Magne	30.04 244	P		P	10 07 37.9	+1.6
	baz=30,SNR=21						
CAN	Canberra	30.33 244	*e*P		P	10 07 40.7	+1.8
	comp=Z,69nm,1.3s						
CAN	Canberra	30.33 244	*e*P		P	10 07 40.7	+1.8
CAN			pmax		pmax		
	comp=Z,69nm,1.3s						
RMQ	Roma	30.34 261	P		P	10 07 39.7	+0.7
	baz=30,SNR=83						
MILA	Mila	30.52 240	P		P	10 07 42.4	+1.8
	baz=30,SNR=11						
YNG	Young	30.68 246	P		P	10 07 43.9	+1.9
	baz=30,SNR=45						
CMSA	Cobar Meteorol	32.78 251	P		P	10 08 01.0	+0.7
	baz=32,SNR=29						
TOO	Toolangi	33.49 240	P		P	10 08 07.3	+0.9
	baz=33,SNR=23						
TOO	Toolangi	33.49 240	P		P	10 08 07.6	+1.2
TOO			pmax		pmax		
	comp=Z,79nm,1.1s						
CTA	Charters Tower	33.88 272	P		P	10 08 10.5	+0.5
	comp=Z,55nm,0.7s,baz=103,slow=11,SNR=104						
CTAO	Charters Tower	33.88 272	*e*P		P	10 08 10.2	+0.2
	comp=Z,129nm,1.0s						
CTAO	Charters Tower	33.88 272	*e*P		P	10 08 10.2	+0.2
CTAO			pmax		pmax		
	comp=Z,129nm,1.0s						
QLP	Quilpie	34.35 260	P		P	10 08 14.2	+0.3
	baz=34,SNR=42						
MTSU	Mount Surprise	36.22 274	P		P	10 08 30.4	+0.4
	baz=36,SNR=168						
ARPS	Mount Arapiles	36.27 242	P		P	10 08 31.0	+0.8
	baz=36,SNR=23						
STKA	Stephens Creek	36.27 251	P		P	10 08 30.9	+0.6
	comp=Z,20nm,0.5s,baz=95,slow=11,SNR=36						
STKA			PcP		PcP	10 10 53.0	+1.3
	comp=Z,16nm,0.7s,baz=55,slow=5.3,SNR=5.5						
STKA	Stephens Creek	36.27 251	P		P	10 08 30.8	+0.5
	baz=36,SNR=46						
PMG	Port Moresby	37.35 289	P		P	10 08 38.7	-0.8
	comp=Z,77nm,0.7s,baz=107,slow=4.8,SNR=26						
PMG			PcP		PcP	10 10 56.3	+1.1
	comp=Z,26nm,1.0s,baz=45,slow=1.5,SNR=3.9						
PMG	Port Moresby	37.35 289	*e*P		P	10 08 39.0	-0.5
	comp=Z,76nm,0.8s						
PMG			*e*pP		pP	10 09 19.2	+4.0
PMG			PcP		PcP	10 10 56.3	+1.1
PMG	Port Moresby	37.35 289	*e*P		P	10 08 39.0	-0.5
PMG						10 10 56.3	
PMG			pmax		pmax		
	comp=Z,76nm,0.8s						
HTT	Hallett	38.51 248	P		P	10 08 49.2	0.0
	baz=38,SNR=29						
RKT	Rikitea	38.59 95	*e*T		T	10 48 35.8	
	comp=Z,10nm,0.4s						
COEN	Coen	38.76 280	P		P	10 08 51.6	+0.2
	baz=38,SNR=66						
COEN	Coen	38.76 280	*e*P		P	10 08 51.3	-0.1
	comp=Z,82nm,1.2s						
QIS	Mount Isa	39.74 268	P		P	10 08 58.9	-0.6
	baz=39,SNR=35						
BBOO	Buckleboo	40.93 249	P		P	10 09 08.3	-0.8
	baz=41,SNR=14						
BBOO	Buckleboo	40.93 249	*e*P		P	10 09 08.3	-0.8
	comp=Z,105nm,0.9s						
AS01	Alice Springs	44.04 262	*e*P		P	10 09 33.1	-1.3
AS31	Alice Springs	44.09 262	*e*P		P	10 09 33.4	-1.4
	comp=Z,56nm,0.5s						
ASAR	Alice Springs	44.09 262	P		P	10 09 34.6	-0.1
	comp=Z,99nm,0.5s,baz=91,slow=7.3,SNR=445						
ASAR			PcP		PcP	10 11 17.0	-0.1
	comp=Z,8.0nm,0.8s,baz=111,slow=4.8,SNR=3.9						
ASAR			S		S	10 15 51.0	-4.0
	comp=Z,2.4nm,0.7s,baz=99,slow=17,SNR=5.5						
ASAR			PKiKP		PKiKP	10 18 16.4	-1.3
	comp=Z,0.5nm,0.6s,baz=101,slow=1.3,SNR=5.2						
ASAR			LR		LR	10 26 37.9	
	comp=Z,172nm,18.6s,baz=114,slow=34						
WB2	Warramunga Arr	44.65 267	*e*P		P	10 09 37.4	-1.8
	comp=Z,112nm,0.9s						
WB2			*e*pP		pP	10 10 18.9	+3.0
WRAB	Tennant Creek	44.65 267	*e*P		P	10 09 37.6	-1.6
	comp=Z,96nm,0.9s						
WRAB	Tennant Creek	44.65 267	*e*P		P	10 09 38.0	-1.2
WRAB			pmax		pmax		
	comp=Z,88nm,0.8s						
WRA	Warramunga Arr	44.66 267	P		P	10 09 38.5	-0.8
	comp=Z,83nm,0.7s,baz=103,slow=8.0,SNR=260						
WRA			PcP		PcP	10 11 19.5	+0.4
	comp=Z,12nm,0.7s,baz=101,slow=4.0,SNR=7.7						
WRA			S		S	10 15 58.6	-4.5
	comp=Z,4.1nm,1.0s,baz=100,slow=15,SNR=3.7						
WRA			PKiKP		PKiKP	10 18 15.3	-2.9
	comp=Z,0.9nm,0.6s,baz=110,slow=0.6,SNR=4.7						
WRA			LR		LR	10 27 40.7	
	comp=Z,136nm,19.0s,baz=90,slow=35						
JAY	Jayapura	46.43 293	P		P	10 09 51.8	-1.5
	comp=Z,20nm,0.5s,baz=102,slow=2.3,SNR=13						
FORT	Forrest	47.90 251	P		P	10 10 03.2	-1.2
	baz=48,SNR=97						
FORT	Forrest	47.90 251	*e*P		P	10 10 02.8	-1.6
	comp=Z,311nm,0.6s						
WRKA	Warakurna	48.76 258	P		P	10 10 09.8	-1.3
	baz=48,SNR=53						
KDU	Kakadu	48.82 276	P		P	10 10 09.9	-1.7
	baz=48,SNR=35						
MTN	Manton Dam	49.96 275	*e*P		P	10 10 19.9	-0.4
	comp=Z,14nm,0.6s						
KNRA	Kununurra	51.05 270	P		P	10 10 27.7	-0.7
	baz=51,SNR=82						
SBA	Scott Base	52.65 184	*e*P		P	10 10 42.8	+3.4
	comp=Z,41nm,0.9s						
SBA	Scott Base	52.65 184	P		P	10 10 42.5	+3.2
SBA			pmax		pmax		
	comp=Z,60nm,1.0s						
VNDA	Vanda	52.71 186	P		P	10 10 42.1	+2.3
	comp=Z,15nm,0.7s,baz=6.2,slow=8.6,SNR=38						
VNDA	Vanda	52.71 186	*e*P		P	10 10 42.2	+2.5
	comp=Z,17nm,0.8s						
VNDA	Vanda	52.71 186	*e*P		P	10 10 42.3	+2.5
VNDA			pmax		pmax		
	comp=Z,17nm,0.8s						
KMBL	Kambalda	53.04 249	P		P	10 10 41.7	-1.3
	baz=53,SNR=26						
FITZ	Fitzroy Crossi	53.05 266	P		P	10 10 43.1	-0.1
	comp=Z,94nm,0.9s,baz=90,slow=8.7,SNR=157						
FITZ			LR		LR	10 33 56.1	
	comp=Z,64nm,18.7s,baz=122,slow=36						
FITZ	Fitzroy Crossi	53.05 266	P		P	10 10 41.4	-1.8
	baz=53,SNR=15						
FAKI	Fak Fak	53.39 287	P		P	10 10 40.5	-5.2
SIJI	Sorong	55.27 288	LR		LR	10 33 46.1	
	comp=Z,80nm,19.1s,baz=82,slow=35						
KLBR	Kellerberrin	56.45 248	P		P	10 11 06.3	-1.2
	baz=56,SNR=48						
NWAO	Narrogin (SRO)	56.62 246	P		P	10 11 09.4	+0.7
	comp=Z,14nm,0.7s,baz=335,slow=8.4,SNR=11						
NWAO	Narrogin (SRO)	56.62 246	P		P	10 11 07.6	-1.1
	baz=56,SNR=9.1						
MEEK	Meekatharra	56.85 254	P		P	10 11 08.8	-1.6
	baz=56,SNR=10						
SOEI	Soe	57.36 275	P		P	10 11 15.9	+1.6
	comp=Z,108nm,0.9s						
MBWA	Marble Bar	57.38 260	*e*P		P	10 11 13.1	-1.1
	comp=Z,35nm,0.7s						
BLDU	Ballidu	57.54 249	P		P	10 11 13.8	-1.3
	baz=57,SNR=62						
MUN	Mundaring	57.66 247	P		P	10 11 14.4	-1.6
	baz=57,SNR=9.2						
BATI	Baumata	57.72 274	P		P	10 11 16.3	-0.4
	comp=Z,58nm,0.6s,baz=187,slow=3.2,SNR=8.1						
BATI			LR		LR	10 33 42.0	
	comp=Z,262nm,21.2s,baz=142,slow=33						
BATI	Baumata	57.72 274	P		P	10 11 19.1	+2.5
NLAI	Namlea	57.72 283	P		P	10 11 16.7	+0.1
	comp=Z,107nm,0.9s,comp=Z,982nm						
MORW	Morawa	58.46 250	P		P	10 11 20.5	-1.1
	baz=58,SNR=41						
CASY	Casey	59.46 207	*e*P		P	10 11 28.0	+0.2
	comp=Z,139nm,0.8s						
EDFI	Ende, Flores	60.09 275	P		P	10 11 33.6	+0.5
	comp=Z,77nm,0.9s,comp=Z,642nm						
GIRL	Giralia	61.79 257	P		P	10 11 43.0	-1.3
	baz=62,SNR=25						
WBSI	Waikabubak, Su	61.79 273	P		P	10 11 43.7	-0.8
	comp=Z,62nm,0.8s						
BKSI	Bulukumba	62.96 277	P		P	10 11 51.0	-1.2
	comp=Z,92nm,0.7s,comp=Z,635nm						
PLAI	Plampang	63.58 273	P		P	10 11 55.2	-1.1
	comp=Z,203nm,1.0s,comp=Z,2μm						
SPSI	Sidrap Palu	63.87 279	P		P	10 11 56.8	-1.4
QSPA	South Pole Qui	64.30 180	P		P	10 12 02.0	+1.7
	comp=Z,62nm,0.9s,baz=43,slow=2.9,SNR=175						
QSPA	South Pole Qui	64.30 180	P		P	10 12 02.0	+1.7
LEM	Lembang	73.56 270	LR		LR	10 43 57.1	
	comp=Z,80nm,21.1s,baz=152,slow=34						
KSM	Kuching	74.75 279	*e*P		P	10 13 03.6	-1.4
MJAR	Matsushiro Arr	74.80 324	P		P	10 13 03.7	-1.1
	comp=Z,4.3nm,0.7s,baz=168,slow=6.1,SNR=15						
MJAR			LR		LR	10 44 59.0	
	comp=Z,24nm,19.1s,baz=230,slow=35						
MAJO	Matsushiro	74.80 324	*e*P		P	10 13 04.5	-0.3
	comp=Z,8.0nm,0.8s						
MAJO	Matsushiro	74.80 324	*de*P		P	10 13 04.6	-0.3
MAJO			pmax		pmax		
	comp=Z,9.0nm,0.8s						
MAT	Matsushiro	74.80 324	P		P	10 13 03.9	-0.9
MAT			*e*S		S	10 22 29.0	+1.1
MJB9	Matsu-Tunnel	74.81 324	*e*P		P	10 13 05.0	+0.1
	comp=Z,8.2nm,0.8s						
JNU	Nakatsue	76.51 317	P		P	10 13 13.3	-1.3
	comp=Z,19nm,1.0s,baz=108,slow=5.6,SNR=9.2						
JNU	Nakatsue	76.51 317	*e*P		P	10 13 15.2	+0.6
	comp=Z,28nm,1.1s						
MAW	Mawson	76.79 200	P		P	10 13 17.2	+1.5
	comp=Z,50nm,0.6s,baz=136,slow=6.3,SNR=103						
MAW	Mawson	76.79 200	P		P	10 13 17.2	+1.5
	baz=77,SNR=51						
MAW	Mawson	76.79 200	*e*P		P	10 13 17.1	+1.5
	comp=Z,12nm,0.6s						
ASAJ	Asahikawa	78.63 332	P		P	10 13 27.7	+1.6
	comp=Z,38nm,0.8s,baz=224,slow=5.0,SNR=52						
ASAJ			LR		LR	10 43 39.4	
	comp=Z,63nm,21.6s,baz=166,slow=32						
ASAJ	Asahikawa	78.63 332	*e*P		P	10 13 26.9	+0.9
	comp=Z,36nm,0.8s						
UNV	Unalaska Valle	79.87 7	*e*P		P	10 13 32.2	-0.3
	comp=Z,24nm,1.0s						
SNCC	San Nicolas Is	80.47 46	P		P	10 13 36.4	+0.1
	baz=231						
TJN	Taejon	80.84 318	*d i*P		P	10 13 38.9	+0.8
YSS	Yuzh-Sakhalins	80.86 334	*e*P		P	10 13 39.2	+1.2
	comp=Z,44nm,0.8s						
YSS	Yuzh-Sakhalins	80.86 334	⇓*i*P		P	10 13 39.5	+1.5
YSS			*e*			10 14 19.2	
SCZ2	Santa Cruz Isl	80.87 45	P		P	10 13 39.2	+0.8
	baz=231						
SCI2	San Clemente I	80.94 47	P		P	10 13 39.6	+0.8
	baz=231						
SBC	Santa Barbara	81.11 45	P		P	10 13 40.9	+1.4
	baz=230						
KSRS	Korea Array	81.22 319	P		P	10 13 40.4	+0.3
	comp=Z,7.4nm,0.7s,baz=135,slow=6.0,SNR=28						
KSAR	Wonju Array Be	81.23 319	P		P	10 13 40.4	+0.2
KSAR	Wonju Array Be	81.23 319	P		P	10 13 40.4	+0.2
KS01	Wonju Array Si	81.25 319	*e*P		P	10 13 40.7	+0.4
CIS	Catalina Islan	81.29 46	P		P	10 13 41.0	+0.3
	baz=231						
BLG	Laguna Peak, P	81.31 46	P		P	10 13 41.5	+0.7
	baz=231						
PKM	Mcpherson Peak	81.33 45	P		P	10 13 42.2	+1.2
	baz=230						
SMMC	Simmler	81.48 44	P		P	10 13 42.7	+1.1
	baz=230						
PEA0B	Petropavlovsk-	81.51 345	*e*P		P	10 13 41.4	+0.1
	comp=Z,61nm,1.5s						
PETK	Petropavlovsk-	81.51 345	P		P	10 13 41.2	-0.1
	comp=Z,12nm,0.7s,baz=120,slow=6.9						
PETK			LR		LR	10 45 06.0	
	comp=Z,38nm,20.1s,baz=145,slow=32						
PETK	Petropavlovsk-	81.51 345	*e*P		P	10 13 41.2	-0.1
PETK			*e*pP		pP	10 14 22.3	0.0
PETK	Petropavlovsk-	81.51 345	*e*P		P	10 13 41.3	0.0
PETK			*e**PP		pP	10 14 22.3	0.0
FMP	Fort Macarthur	81.56 46	P		P	10 13 42.9	+0.9
	baz=232						
PAGB	Antelope Grade	81.59 44	*e*P		P	10 13 44.5	+2.4
	comp=Z,55nm,1.7s						
SYO	Syowa Base	81.70 193	⇓*i*P		P	10 13 41.0	-1.2
SLBS	Sierra La Lagu	81.72 59	*e*P		P	10 13 44.3	+1.1
	comp=Z,17nm,0.8s						
109C	Camp Elliot, M	81.84 48	P		P	10 13 43.9	+0.4
	baz=232						
CPE	Camp Elliot	81.84 48	*e*P		P	10 13 44.5	+1.0
	comp=Z,16nm,1.1s						
OSI	Osito Audit: C	81.85 45	P		P	10 13 44.2	+0.6
	baz=231						
DECC	Green Verdugo	81.87 46	P		P	10 13 43.9	+0.2
	baz=231						
PASC	Pasadena Art C	81.92 46	*e*P		P	10 13 44.6	+0.7
	comp=Z,14nm,0.8s						
MWC	Mount Wilson	82.03 46	*e*P		P	10 13 45.4	+0.7
	comp=Z,22nm,1.0s						
MWC	Mount Wilson	82.03 46	*e*P		P	10 13 45.4	+0.7
MWC			pmax		pmax		
	comp=Z,22nm,1.0s						
HOPS	Hopland Field	82.04 40	*e*P		P	10 13 45.5	+1.1
	comp=Z,12nm,0.9s						
GDXM	Geysers	82.08 40	*e*P		P	10 13 46.9	+2.2
	comp=Z,14nm,1.4s						
ARVC	Arvin	82.10 45	P		P	10 13 45.7	+0.8
	baz=231						
MURC	Murrieta	82.21 47	P		P	10 13 46.2	+0.7
	baz=232,SNR=11						
KCPM	Cahto Peak	82.22 39	*e*P		P	10 13 47.0	+1.5
	comp=Z,23nm,1.2s						
MONP2	Monument Peak	82.30 48	P		P	10 13 47.1	+0.9
	baz=233,SNR=16						
BFSC	Mount Baldy Ra	82.30 46	P		P	10 13 46.4	+0.4
	baz=232,SNR=8.6						
IKP	In-Ko-Pah, Jac	82.36 48	P		P	10 13 47.2	+0.9
	baz=233,SNR=8.7						
VES	Vestal, Richgr	82.39 44	P		P	10 13 46.8	+0.6
	baz=231,SNR=8.6						
EDW2	Edwards Air Fo	82.48 46	P		P	10 13 47.7	+0.8
	baz=232,SNR=13						
KMRM	Mail Ridge	82.51 38	*e*P		P	10 13 48.7	+1.8
	comp=Z,51nm,1.1s						
KMRM			*e*pP		pP	10 14 28.4	+0.3
ISA	Isabella, Lake	82.66 45	P		P	10 13 48.8	+1.0
	baz=231,SNR=18						
ISA	Isabella, Lake	82.66 45	*e*P		P	10 13 48.8	+1.0
	comp=Z,39nm,1.3s						
ISA			*e*pP		pP	10 14 28.4	-0.5
ISA	Isabella, Lake	82.66 45	P		P	10 13 48.8	+1.0
ISA			*e*AP		pP	10 14 28.4	-0.5
PFO	Pinyon Flats O	82.71 47	P		P	10 13 48.9	+0.8
	baz=233,SNR=12						
PFO	Pinyon Flats O	82.71 47	*e*P		P	10 13 49.0	+0.8
	comp=Z,18nm,1.1s						
PFO	Pinyon Flats O	82.71 47	P		P	10 13 49.0	+0.8
XPFO	Piæon Flat	82.71 47	*e*P		P	10 13 49.0	+0.8
	comp=Z,15nm,1.1s						
SNAA	Sanae	82.72 178	P		P	10 13 48.2	+0.5
	comp=Z,44nm,0.8s,baz=191,slow=4.8,SNR=164						
SWSC	Sam W. Stewart	82.75 48	P		P	10 13 48.9	+0.7
	baz=233						
BBRC	Big Bear Solar	82.80 47	P		P	10 13 49.6	+0.8
	baz=232						
VNA3	Neumayer Olymp	82.84 176	P		P	10 13 48.4	+0.2
MSHR	Mys Shultsa	82

baz=233,SNR=20
MDPB Devils Postpil 83.53 43 *e*P **P 10 13 53.3 +0.8**
comp=Z,15nm,1.0s
MDPB *e*pP **pP 10 14 34.0 +0.3**
MPMC Manual Prospec 83.53 45 P **P 10 13 53.2 +0.8**
baz=232,SNR=20
OMMB Old Mammoth Mi 83.56 43 *e*P **P 10 13 53.8 +1.1**
comp=Z,7.2nm,1.0s
N02D Trinity Center 83.58 38 P **P 10 13 53.6 +1.1**
baz=228,SNR=5.4
O03D Paynes Creek 83.64 39 P **P 10 13 53.2 +0.5**
baz=228,SNR=22
O03D Paynes Creek 83.64 39 *e*P **P 10 13 53.2 +0.5**
USRK Ussuriysk Ar. 83.64 326 P **P 10 13 53.2 +0.7**
comp=Z,20nm,0.9s,baz=134,slow=5.1
MLAC Mammoth, Mammo 83.67 43 P **P 10 13 54.0 +0.8**
baz=231
NJ2 Nanjing 83.68 310 *e*P **P 10 13 54.8 +1.8**
NJ2 pmax pmax
comp=Z,14nm,0.7s
TIN Tinemaha, Big 83.69 44 P **P 10 13 53.8 +0.7**
baz=231
M02C Callahan 83.78 38 P **P 10 13 54.7 +1.3**
baz=228
RUBR Rubicon Trail 83.79 41 *e*P **P 10 13 54.8 +1.1**
comp=Z,19nm,0.8s
WAKR Walker 83.86 42 *e*P **P 10 13 54.9 +0.8**
comp=Z,16nm,0.8s
HSIG 83.88 54 *e*P **P 10 13 54.1 0.0**
comp=Z,26nm,0.9s
IRM Iron Mountain 83.91 48 P **P 10 13 55.5 +1.3**
baz=233,SNR=31
GMRC Granite Mounta 83.94 47 P **P 10 13 55.3 +0.9**
baz=233,SNR=15
TYV Tymovskoe 84.08 336 *e*P **P 10 13 54.9 +0.4**
TYV *e*S **S 10 24 01.1 -3.7**
TYV pmax pmax
comp=Z,200nm,4.7s
TYV pmax pmax
comp=Z,27nm,0.9s
TYV smax smax
comp=E,400nm,11.8s
Y12C Blythe 84.08 48 P **P 10 13 56.1 +1.1**
baz=234,SNR=6.2
Y12C Blythe 84.08 48 *e*P **P 10 13 56.6 +1.6**
comp=E,26nm,1.2s
YBH Yreka Blue Hor 84.09 38 P **P 10 13 56.1 +1.1**
comp=E,20nm,0.8s,baz=135,slow=4.3,SNR=4.9
YBH LR LR 10 48 31.5
comp=E,29nm,18.2s,baz=272,slow=33
PNTR Pine Nut 84.14 41 *e*P **P 10 13 56.4 +0.9**
comp=E,46nm,0.8s
TUQ Turquoise Moun 84.16 46 P **P 10 13 56.2 +0.6**
baz=233
FURC Furnace Creek, 84.18 45 P **P 10 13 56.1 +0.6**
baz=232
GRAC Grapevine Rang 84.19 44 P **P 10 13 56.4 +0.8**
baz=232,SNR=22
BEKR Beckworth 84.19 40 *e*P **P 10 13 56.2 +0.5**
comp=E,12nm,0.7s
BEKR *e*pP **pP 10 14 36.1 -0.9**
214A Organ Pipe Nat 84.21 51 P **P 10 13 56.8 +1.0**
baz=235,SNR=6.9
SHOC Shoshone, Teco 84.21 46 P **P 10 13 56.3 +0.6**
baz=232,SNR=6.3
VCNR Virginia City 84.24 41 *e*P **P 10 13 56.8 +0.8**
comp=E,15nm,0.8s
VCNR *e*pP **pP 10 14 37.0 -0.2**
YERR Yerington 84.29 42 *e*P **P 10 13 56.8 +0.5**
comp=E,20nm,0.7s
LDFC Landfair 84.48 47 *e*P **P 10 13 58.9 +1.8**
comp=E,77nm,1.1s
RYN Ryan 84.50 42 *e*P **P 10 13 57.8 +0.6**
comp=E,38nm,1.7s
NV01 Mina Array Sit 84.50 43 *e*P **P 10 13 57.1 -0.2**
NVAR Mina Array Bea 84.50 43 P **P 10 13 58.0 +0.6**
comp=E,16nm,0.7s,baz=222,slow=8.8,SNR=130
NVAR pP **pP 10 14 38.3 -0.4**
comp=E,4.4nm,0.7s,baz=224,slow=8.6,SNR=3.8
NVAR PKKPbc **PKKPbc 10 32 09.6 +0.9**
comp=E,0.3nm,0.5s,baz=106,slow=2.3,SNR=4.0
HUMO Hull Mountain 84.54 37 *e*P **P 10 13 58.5 +1.3**
comp=E,41nm,1.5s
NV11 Mina Array Sit 84.60 43 *e*P **P 10 13 58.4 +0.7**
comp=E,1.6nm,0.8s
M04C Macdoel 84.61 38 P **P 10 13 58.3 +0.7**
baz=228
PDMCI Parker Dam,Lak 84.66 48 P **P 10 13 58.9 +1.0**
baz=234,SNR=6.6
PAHR Pah Rah Range 84.67 41 *e*P **P 10 13 58.9 +0.9**
comp=E,18nm,1.0s
TPNV Topopah Spring 84.87 45 P **P 10 13 59.8 +0.7**
baz=232,SNR=17
TPNV Topopah Spring 84.87 45 *e*P **P 10 14 00.0 +0.9**
comp=E,21nm,1.0s
TPNV Topopah Spring 84.87 45 *e*P **P 10 14 00.0 +0.9**
TPNV pmax pmax
comp=Z,21nm,1.0s
KVN Kaiserville 85.02 42 *e*P **P 10 14 00.3 +0.4**
comp=Z,18nm,0.8s
KVN Kaiserville 85.02 42 *e*P **P 10 14 00.3 +0.4**
KVN pmax pmax
comp=Z,18nm,0.8s
I03D Drain, OR 85.07 36 P **P 10 14 00.5 +0.8**
baz=227
MDJ Mudanjiang 85.16 325 P **P 10 13 57.8 -2.3**
MDJ pmax pmax
comp=Z,31nm,0.7s
K04D Chiloquin, OR 85.21 38 P **P 10 14 01.2 +0.6**
baz=228
Y14A Wickenburg 85.22 49 *e*P **P 10 14 01.9 +1.1**
PLCA Paso Flores 85.25 133 P **P 10 14 02.4 +1.4**
comp=Z,14nm,0.9s,baz=259,slow=5.6,SNR=19
PLCA Paso Flores 85.25 133 *e*P **P 10 14 02.4 +1.4**
comp=Z,31nm,1.2s
PLCA Paso Flores 85.25 133 *e*P **P 10 14 02.4 +1.4**
PLCA pmax pmax
comp=Z,31nm,1.2s
SHPR Sheep Range 85.30 46 *e*P **P 10 14 02.8 +1.5**
comp=Z,26nm,1.4s
SHPR *e*pP **pP 10 14 42.4 -0.2**
J04D Umpqua Nationa 85.43 37 P **P 10 14 02.5 +0.7**
baz=228,SNR=5.1
PSI Prapat 85.52 275 P **P 10 14 01.9 -0.9**
comp=Z,7.6nm,0.7s,baz=180,slow=6.7,SNR=4.9
PSI LR LR 10 53 12.8
comp=Z,43nm,19.0s,baz=94,slow=36
PSI Prapat 85.52 275 *e*P **P 10 14 01.5 -1.3**
comp=Z,19nm,1.2s
PSI Prapat 85.52 275 P **P 10 14 02.0 -0.9**
PSI pmax pmax
comp=Z,8.0nm,0.7s
PSI MLR MLR
comp=Z,43nm,19.0s
MOD Modoc Plateau 85.55 39 *e*P **P 10 14 02.9 +0.5**
comp=Z,13nm,0.9s
I04A Tendick Farm, 85.64 36 P **P 10 14 02.8 +0.2**
baz=228
K05A Summer Lake 85.76 38 *e*P **P 10 14 04.2 +0.8**
comp=Z,19nm,0.9s
TUC Tucson 85.83 51 P **P 10 14 05.3 +1.4**
baz=236
TUC Tucson 85.83 51 *e*P **P 10 14 05.5 +1.6**
comp=Z,33nm,0.9s
TUC Tucson 85.83 51 *e*P **P 10 14 05.5 +1.6**
TUC pmax pmax
comp=Z,33nm,0.9s
J05D Fort Rock, OR 85.94 37 P **P 10 14 04.9 +0.7**
baz=229,SNR=11
WHN Wuhan 86.03 307 ⇑P **P 10 14 06.3 +1.5**
WHN pmax pmax
comp=Z,68nm,0.9s
R11A Troy Canyon, C 86.14 44 P **P 10 14 05.7 +0.3**
baz=233
R11A Troy Canyon, C 86.14 44 *e*P **P 10 14 05.5 +0.2**
comp=Z,3.7nm,0.9s
R11A *e*pP **pP 10 14 46.7 -0.1**
G03D McMinnville, O 86.15 35 P **P 10 14 05.5 +0.5**
baz=227
319A Douglas 86.38 53 *e*P **P 10 14 08.1 +1.4**
PINE Pine Mountain 86.43 37 *e*P **P 10 14 08.0 +1.3**
comp=Z,20nm,1.0s
X16A Lo Mia Camp, P 86.55 49 *e*P **P 10 14 08.8 +1.3**
I05D Terrebonne, OR 86.58 37 P **P 10 14 08.0 +0.8**
baz=229
HPIG 86.72 58 *e*P **P 10 14 08.1 -0.4**
comp=Z,9.4nm,0.9s

CN2 Changchun 86.82 322 *e*P **P 10 14 11.0 +2.7**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
LCMT Little Creek M 86.84 46 *e*P **P 10 14 09.8 +1.0**
comp=Z,21nm,1.4s
LCMT *e*pP **pP 10 14 49.5 -0.8**
WVOR Wild Horse Val 86.84 39 *e*P **P 10 14 09.0 +0.4**
WVOR *e*pP **pP 10 14 49.5 -0.6**
WVOR Wild Horse Val 86.84 39 *e*P **P 10 14 09.0 +0.4**
WVOR *e**PP **pP 10 14 49.5 -0.6**
F04D Rainier, OR 86.87 35 P **P 10 14 09.8 +1.3**
baz=227
TRTT Trang 87.04 280 P **P 10 14 12.7 +2.6**
comp=Z,10nm,1.1s
ZAIG Zacatecas 87.07 63 *e*P **P 10 14 11.6 +1.2**
comp=Z,10nm,0.8s
ZAIG *e*pP **pP 10 14 51.5 -0.4**
CCUT Cedar City 87.08 46 *e*P **P 10 14 11.2 +1.2**
comp=Z,21nm,1.3s
CCUT *e*pP **pP 10 14 51.4 -0.2**
KNB Kanab 87.12 46 *e*P **P 10 14 11.3 +1.1**
comp=Z,29nm,1.4s
KNB Kanab 87.12 46 *e*P **P 10 14 11.3 +1.1**
KNB pmax pmax
comp=Z,29nm,1.4s
WUAZ Wupatki 87.22 48 P **P 10 14 11.7 +1.1**
baz=236
WUAZ Wupatki 87.22 48 *e*P **P 10 14 11.8 +1.1**
WUAZ *e*pP **pP 10 14 53.8 +1.5**
SZCU Shurtz Canyon 87.28 46 *e*P **P 10 14 12.5 +1.5**
comp=Z,16nm,1.2s
SZCU *e*pP **pP 10 14 52.4 -0.1**
PSUT Pine Spring 87.34 45 *e*P **P 10 14 12.2 +1.0**
comp=Z,7.8nm,0.9s
KLR Kul'dur 87.35 329 LR LR 10 48 49.9
comp=Z,5.6nm,19.9s,baz=170,slow=32
KLR Kul'dur 87.35 329 *c*e**P 10 14 11.7 +1.0**
SKNT Sakolnakorn 87.44 290 P **P 10 14 12.9 +1.0**
comp=Z,37nm,0.8s,comp=Z,910nm
J08A Circle Bar Ran 87.52 39 *e*P **P 10 14 12.3 +0.5**
comp=Z,5.5nm,0.7s
J08A *e*pP **pP 10 14 54.0 +0.6**
CNPM China Poot 87.71 13 *e*P **P 10 14 12.8 +0.6**
LON Longmire 87.93 35 *e*P **P 10 14 14.2 +0.5**
comp=Z,8.7nm,0.8s
LON Longmire 87.93 35 *e*P **P 10 14 14.2 +0.5**
LON pmax pmax
comp=Z,9.0nm,0.8s
BRLK Bradley Lake 88.00 13 *e*P **P 10 14 14.0 +0.5**
121A Cookes Peak, D 88.07 52 P **P 10 14 16.1 +1.3**
baz=238,SNR=8.5
W18A Petrified Fore 88.11 49 P **P 10 14 15.9 +1.0**
baz=237
MTPU Mount Pierson 88.12 46 *e*P **P 10 14 16.7 +1.5**
comp=Z,14nm,0.9s
D05A Enumclaw 88.14 34 *e*P **P 10 14 16.1 +1.7**
comp=Z,91nm,1.1s
RSO Redoubt South 88.28 12 *e*P **P 10 14 14.8 -0.3**
RSO *e*pP **pP 10 14 56.2 -0.6**
SVW2 Sparrevohn 88.38 10 *e*P **P 10 14 15.3 -0.1**
MSU Marysvale 88.39 45 *e*P **P 10 14 17.5 +1.2**
MSU Marysvale 88.39 45 *e*P **P 10 14 17.5 +1.2**
PGC Sidney 88.40 32 *e*P **P 10 14 16.6 +0.9**
G08A Pilot Rock 88.48 37 *e*P **P 10 14 17.4 +1.0**
comp=Z,32nm,1.2s
EPT El Paso 88.59 54 *e*P **P 10 14 18.6 +1.4**
NONG Nongkai 88.65 291 P **P 10 14 19.7 +2.1**
comp=Z,47nm,0.9s
B05A Bryant 88.80 33 P **P 10 14 18.4 +0.8**
baz=228
A04D Lummi Island 88.81 33 P **P 10 14 18.7 +1.2**
baz=227
LTY Liberty 88.85 35 *e*P **P 10 14 18.8 +0.8**
HAWA Hanford 88.88 36 *e*P **P 10 14 19.4 +1.3**
comp=Z,34nm,1.0s
DUG Dugway, Tooele 88.96 44 P **P 10 14 18.9 +0.1**
baz=235
PEL Peldehue 88.97 127 *e*P **P 10 14 19.6 +0.6**
PEL Peldehue 88.97 127 *e*P **P 10 14 19.6 +0.6**
MA2 Magadan 89.01 344 LR LR 10 49 44.9
comp=Z,32nm,21.1s,baz=140,slow=32
MA2 Magadan 89.01 344 *e*P **P 10 14 18.2 -0.2**
comp=Z,16nm,0.9s
MA2 Magadan 89.01 344⇑*e*P **P 10 14 18.5 +0.2**
MA2 pmax pmax
comp=Z,40nm,1.7s
MFID Camas Ranch 89.06 40 *e*P **P 10 14 19.5 +0.4**
comp=Z,31nm,1.6s
BMO Blue Mountains 89.11 38 *e*P **P 10 14 19.8 +0.5**
comp=Z,7.0nm,0.9s
BMO Blue Mountains 89.11 38 *e*P **P 10 14 19.8 +0.5**
BMO pmax pmax
comp=Z,7.0nm,0.9s
BGU Big Grassy Mou 89.25 43 *e*P **P 10 14 21.8 +1.7**
comp=Z,7.4nm,1.3s
Q16A Castle Valley 89.27 46 *e*P **P 10 14 21.8 +1.4**
comp=Z,7.7nm,0.9s
B06A Marblemount 89.28 33 *e*P **P 10 14 20.6 +0.8**
comp=Z,27nm,1.0s
PHET Kaeng Krachan 89.34 285 P **P 10 14 24.9 +4.0**
comp=Z,18nm,0.9s,comp=Z,215nm
MNTX Cornudas Mount 89.37 54 P **P 10 14 21.4 +0.7**
baz=239
MNTX Cornudas Mount 89.37 54 *e*P **P 10 14 20.6 -0.2**
comp=Z,10nm,0.8s
RC01 Rabbit Creek A 89.44 13 *e*P **P 10 14 20.4 +0.1**
RC01 *e*pP **pP 10 15 01.8 -0.2**
TX31 Lajitas Ar. Si 89.45 57 *e*P **P 10 14 21.9 +0.7**
TX31 *e*pP **pP 10 15 02.1 -0.8**
TXAR Lajitas Array 89.45 57 P **P 10 14 21.8 +0.5**
comp=Z,6.7nm,0.9s,baz=212,slow=7.4,SNR=54
TXAR pP **pP 10 15 00.6 -2.4**
comp=Z,2.6nm,1.1s,baz=230,slow=5.9,SNR=2.5
TXAR PKKP **PKKPbc 10 31 57.1 +1.1**
comp=Z,0.5nm,0.6s,baz=101,slow=4.0,SNR=6.6
TXAR PKPPKP **P'P'df 10 40 04.6 +0.3**
comp=Z,0.3nm,0.9s,baz=97,slow=2.8,SNR=3.9
ENH Enshi 89.46 304 *e*P **P 10 14 22.2 +1.0**
comp=Z,70nm,1.3s
TMUT Trail Mountain 89.46 45 *e*P **P 10 14 22.6 +1.2**
TMUT *e*pP **pP 10 15 03.1 +0.1**
LAZ Ladron 89.52 51 *e*P **P 10 14 22.9 +1.3**
SUA Susitna One 89.59 12 *e*P **P 10 14 20.9 -0.2**
MPU Maple Canyon 89.60 44 *e*P **P 10 14 22.9 +1.1**
comp=Z,38nm,2.0s
D08A Wollman Farm, 89.63 36 *e*P **P 10 14 22.3 +0.8**
comp=Z,40nm,0.9s
D08A *e*pP **pP 10 15 03.5 +0.2**
E09A Wood Farm, Sta 89.70 36 *e*P **P 10 14 22.6 +0.8**
E09A *e*pP **pP 10 15 03.3 -0.3**
GYA Guiyang 89.74 300 *e*P **P 10 14 23.8 +1.1**
GYA pP pP 10 15 04.3 -0.1
GYA sP sP 10 15 23.0 +1.2
GYA PP **PP 10 18 00.5 +2.9**
GYA SKS **SKSac 10 24 36.5 -1.4**
GYA S **S 10 24 59.0 -1.5**
GYA sS sS 10 26 12.3 -0.7
GYA pmax pmax
comp=Z,10.0nm,1.0s
BNM Barren Site 89.75 52 *e*P **P 10 14 23.7 +1.0**
SRU San Rafael Swe 89.80 46 *e*P **P 10 14 23.4 +0.6**
comp=Z,30nm,1.4s
PBKT Sadao Pong 89.82 288 P **P 10 14 25.0 +1.9**
comp=Z,33nm,1.2s,comp=Z,1µm
LPM Los Pinos Moun 89.83 51 *e*P **P 10 14 24.3 +1.3**
F10A Beach Ranch, E 89.85 37 *e*P **P 10 14 22.9 +0.1**
P17A Butcher Ranch, 89.86 45 *e*P **P 10 14 24.2 +1.2**
P17A *e*pP **pP 10 15 04.2 -0.6**
HVU Hansel Valley 89.90 43 *e*P **P 10 14 23.9 +0.8**
CTU Camp Tracy 89.91 44 *e*P **P 10 14 23.9 +0.7**
SKT Skwentna 89.91 12 *e*P **P 10 14 21.7 -0.8**
RAGM Ragged Mountai 89.94 16 *e*P **P 10 14 24.1 +1.4**
HLID Hailey 89.97 40 P **P 10 14 24.2 +0.8**
baz=234
HLID Hailey 89.97 40 *e*P **P 10 14 24.2 +0.8**
comp=Z,12nm,1.0s
PMR Palmer 90.02 13 *e*P **P 10 14 22.1 -0.8**
PMR Palmer 90.02 13 *e*P **P 10 14 22.1 -0.8**
JLU Jordanelle 90.05 44 *e*P **P 10 14 24.8 +0.8**
MVCO Mesa Verde 90.09 48 P **P 10 14 24.3 +0.1**
baz=237
MVCO Mesa Verde 90.09 48 *e*P **P 10 14 25.0 +0.8**
comp=Z,6.9nm,1.0s
PV05 Paradox Valley 90.16 47 *e*P **P 10 14 26.3 +1.8**
B08A Colville Reser 90.25 34 *e*P **P 10 14 24.8 +0.3**

comp=Z,17nm,0.8s
P18A Preston Nutter 90.26 45 *e*P **P 10 14 25.6 +0.5**
comp=Z,12nm,1.6s
TASM ASL Pad, Albuq 90.28 51 P **P 10 14 25.7 +0.6**
baz=238,SNR=20
ANMO Albuquerque 90.28 51 P **P 10 14 25.7 +0.6**
comp=Z,7.7nm,0.9s,baz=225,slow=6.2,SNR=28
ANMO Albuquerque 90.28 51 P **P 10 14 25.7 +0.6**
baz=238
ANMO Albuquerque 90.28 51 *e*P **P 10 14 25.8 +0.6**
ANMO *e*pP **pP 10 15 05.9 -1.0**
ANMO Albuquerque 90.28 51*c i*P **P 10 14 25.7 +0.6**
ANMO *i* *PP **pP 10 15 05.8 -1.0**
ANMO pmax pmax
comp=Z,18nm,1.2s
TASL Snake Pit, Alb 90.28 51 P **P 10 14 25.7 +0.6**
baz=238,SNR=20
DIV Divide 90.34 15 *e*P **P 10 14 24.7 +0.1**
DIV *e*pP **pP 10 15 06.2 -0.1**
WRAK Wrangell Islan 90.34 23 *e*P **P 10 14 25.9 +1.4**
comp=Z,22nm,0.9s
PV09 Paradox Valley 90.36 47 *e*P **P 10 14 26.4 +0.8**
TCUT Toone Canyon 90.37 44 *e*P **P 10 14 26.4 +1.0**
TCUT *e*pP **pP 10 15 07.9 +0.8**
GDL2 Guadalupe Moun 90.37 54 *e*P **P 10 14 26.6 +1.1**
SML Sawmill 90.38 13 *e*P **P 10 14 25.5 +0.8**
SML Sawmill 90.38 13 *e*P **P 10 14 25.5 +0.8**
PV03 Paradox Valley 90.42 47 *e*P **P 10 14 26.3 +0.5**
C09A Chrisman Ranch 90.44 35 *e*P **P 10 14 26.1 +0.7**
PV02 Paradox Valley 90.47 47 *e*P **P 10 14 27.1 +1.2**
BMRM Bremner River 90.47 15 *e*P **P 10 14 25.5 +0.4**
LLLB Lillooet 90.48 32 *e*P **P 10 14 26.3 +0.9**
PV01 Paradox Valley 90.54 47 *e*P **P 10 14 26.7 +0.4**
HWUT Hardware Ranch 90.55 43 *e*P **P 10 14 26.6 +0.4**
PHIT Phitsanulok 90.57 289 P **P 10 14 30.4 +3.8**
comp=Z,26nm,0.9s
LNIG Linares 90.58 63 *e*P **P 10 14 26.0 -0.5**
LNIG *e*pP **pP 10 15 06.8 -1.4**
SCM Sheep Creek Mo 90.62 14 *e*P **P 10 14 26.5 +0.6**
SCM Sheep Creek Mo 90.62 14 *e*P **P 10 14 26.5 +0.6**
KLU Klutina 90.63 15 *e*P **P 10 14 26.5 +0.6**
KLU *e*pP **pP 10 15 08.3 +0.6**
PV07 Paradox Valley 90.65 47 *e*P **P 10 14 28.0 +1.2**
PV15 Paradox Valley 90.71 47 *e*P **P 10 14 27.7 +0.6**
NANT Nan 91.05 290 P **P 10 14 32.2 +3.4**
comp=Z,5.1nm,1.0s
CAST Castle Rocks 91.14 11 *e*P **P 10 14 27.2 -1.0**
CAST *e*pP **pP 10 15 08.6 -1.3**
TIY Taiyuan 91.21 312 *e*P **P 10 14 30.5 +1.3**
TIY pmax pmax
comp=Z,36nm,0.5s
AHID Auburn Hatcher 91.49 42 *e*P **P 10 14 31.4 +0.9**
TRF Thorofare Moun 91.49 12 *e*P **P 10 14 29.2 -0.8**
S22A 4UR Ranch, Cre 91.50 48 P **P 10 14 31.5 +0.7**
baz=238
S22A 4UR Ranch, Cre 91.50 48 *e*P **P 10 14 31.4 +0.7**
S22A *e*pP **pP 10 15 11.6 -1.0**
MCMT McKenzie Canyo 91.63 40 *e*P **P 10 14 31.9 +0.7**
MCMT *e*pP **pP 10 15 12.5 -0.5**
SKAG Skagway 91.74 20 *e*P **P 10 14 32.3 +1.3**
XAN Xi'an 91.77 307 P **P 10 14 32.8 +1.0**
XAN pmax pmax
comp=Z,13nm,1.1s
O20A White River Ci 91.83 46 P **P 10 14 32.1 -0.1**
baz=238
O20A White River Ci 91.83 46 *e*P **P 10 14 32.3 +0.1**
REDW Red Top Meadow 91.97 42 *e*P **P 10 14 33.4 +0.6**
REDW *e*pP **pP 10 15 14.0 -0.5**
TPAW Teton Pass 91.98 42 *e*P **P 10 14 33.5 +0.6**
TPAW *e*pP **pP 10 15 13.9 -0.8**
MCK McKinley 92.00 12 *e*P **P 10 14 32.1 -0.1**
MCK McKinley 92.00 12 *e*P **P 10 14 32.1 -0.1**
PAYA Payao 92.00 290 P **P 10 14 36.5 +3.3**
comp=Z,7.9nm,1.0s,comp=Z,361nm
FXWY Fox Creek 92.02 42 *e*P **P 10 14 33.5 +0.5**
FXWY *e*pP **pP 10 15 15.4 +0.6**
DLMT Dillon 92.08 40 *e*P **P 10 14 33.8 +0.7**
DLMT *e*pP **pP 10 15 14.4 -0.6**
SNOW Snow King Moun 92.09 42 *e*P **P 10 14 34.1 +0.7**
SNOW *e*pP **pP 10 15 14.7 -0.4**
SMCO Snowmass 92.15 47 *e*P **P 10 14 34.3 +0.3**
MSO Missoula 92.18 38 P **P 10 14 32.7 -0.8**
baz=234
MSO Missoula 92.18 38 *e*P **P 10 14 34.0 +0.5**
IMW Indian Meadow 92.22 42 *e*P **P 10 14 34.7 +0.7**
IMW *e*pP **pP 10 15 15.1 -0.7**
KMI Kunming 92.23 297 P **P 10 14 35.5 +1.1**
KMI pP pP 10 15 17.0 +0.8
KMI sP sP 10 15 34.0 +0.4
KMI pmax pmax
comp=Z,21nm,1.4s
KMI pmax pmax
comp=Z,170nm,3.3s
833A Chaparral WMA, 92.24 60 P **P 10 14 33.9 -0.2**
baz=242
833A Chaparral WMA, 92.24 60 *e*P **P 10 14 34.6 +0.5**
MOOW Moose Ponds 92.25 42 *e*P **P 10 14 33.6 -0.5**
LOHW Long Hollow 92.26 42 *e*P **P 10 14 34.5 +0.4**
LOHW *e*pP **pP 10 15 14.9 -1.0**
TRQA Tornquist 92.28 134 *e*P **P 10 14 35.3 +1.0**
TRQA Tornquist 92.28 134 *e*P **P 10 14 35.3 +1.0**
CM01 Chiang Mai Arr 92.36 289 *e*P **P 10 14 35.9 +1.1**
CMAR Chiang Mai Arr 92.39 289 P **P 10 14 36.3 +1.3**
comp=Z,12nm,0.9s,baz=136,slow=3.0,SNR=19
MENT Mentasta 92.39 15 *e*P **P 10 14 34.5 +0.5**
SDCO Great Sand Dun 92.39 49 P **P 10 14 35.2 +0.2**
baz=239,SNR=10
SDCO Great Sand Dun 92.39 49 *e*P **P 10 14 35.5 +0.5**
SDCO *e*pP **pP 10 15 15.6 -1.1**
MSTX Muleshoe 92.41 53 P **P 10 14 34.8 -0.1**
baz=240
BW06 Boulder Array 92.43 43 P **P 10 14 34.7 -0.2**
baz=237,SNR=8.6
BW06 Boulder Array 92.43 43 *e*P **P 10 14 34.8 -0.2**
BW06 *e*pP **pP 10 15 15.2 -1.5**
PD31 Pinedale Array 92.43 43 *e*P **P 10 14 34.8 -0.2**
PD31 *e*pP **pP 10 15 15.5 -1.2**
PDAR Pinedale Array 92.43 43 P **P 10 14 34.8 -0.2**
comp=Z,7.8nm,0.7s,baz=212,slow=3.3,SNR=75
PDAR pP **pP 10 15 15.1 -1.7**
comp=Z,4.3nm,0.9s,baz=217,slow=4.7,SNR=5.5
PDAR PKKP **PKKPbc 10 31 48.5 -0.9**
comp=Z,0.8nm,0.7s,baz=93,slow=4.2,SNR=9.9
PDAR Pinedale Array 92.43 43 *e*P **P 10 14 34.5 -0.4**
PDAR *e*pP **pP 10 15 14.6 -2.1**
PDAR PKKP **PKKPbc 10 31 48.5 -0.9**
LRM Limekiln Ridge 92.43 39 *e*P **P 10 14 35.4 +0.5**
QLMT Earthquake Lak 92.46 41 *e*P **P 10 14 36.5 +1.5**
QLMT *e*pP **pP 10 15 16.8 +0.1**
FLWY Flagg Ranch 92.47 41 *e*P **P 10 14 36.0 +0.9**
FLWY *e*pP **pP 10 15 16.7 -0.1**
ZEA Zeya 92.50 331 *e*P **P 10 14 34.8 +0.1**
ZEA pmax pmax
comp=Z,36nm,1.2s
YPP Pitchstone Pla 92.51 41 *e*P **P 10 14 36.7 +1.4**
CHTO Chiang Mai 92.55 290 P **P 10 14 37.9 +2.2**
comp=Z,101nm,1.1s
CHTO Chiang Mai 92.55 290 *e*P **P 10 14 37.3 +1.5**
YHB Horse Butte 92.55 41 *e*P **P 10 14 36.9 +1.4**
YFT Old Faithful 92.59 41 *e*P **P 10 14 38.0 +2.3**
YMR Madison River 92.64 41 *e*P **P 10 14 37.4 +1.5**
H17A Grant Village 92.72 41 P **P 10 14 37.6 +1.3**
baz=236,SNR=7.6
H17A Grant Village 92.72 41 *e*P **P 10 14 38.4 +2.1**
BOZ Bozeman (W) 92.78 40 P **P 10 14 36.9 +0.5**
baz=235,SNR=20
BOZ Bozeman (W) 92.78 40 *e*P **P 10 14 36.8 +0.5**
BOZ Bozeman (W) 92.78 40 *e*P **P 10 14 36.8 +0.5**
T25A Trinidad 92.83 50 P **P 10 14 36.9 0.0**
baz=240
WRH Wood River Hil 92.83 12 *e*P **P 10 14 35.4 -0.5**
RIDG Independ'e Rid 92.85 14 *e*P **P 10 14 36.4 +0.3**
RIDG *e*pP **pP 10 15 18.4 +0.5**
MLY Manley 92.86 11 *e*P **P 10 14 35.5 -0.6**
JCT Junction City 92.94 58 P **P 10 14 36.8 -0.6**
baz=242
JCT Junction City 92.94 58 *e*P **P 10 14 37.1 -0.3**
JCT Junction City 92.94 58 *e*P **P 10 14 37.1 -0.3**
CMAI Chiengmai2 92.95 291 P **P 10 14 41.0 +3.2**
HDA Harding Lake 93.00 13 *e*P **P 10 14 36.7 -0.1**
CCB Clear Creek Bu 93.05 12 *e*P **P 10 14 36.1 -0.8**
SCRK Sand Creek 93.24 14 *e*P **P 10 14 38.4 +0.4**
MDM Murphy Dome 93.25 12 *e*P **P 10 14 37.3 -0.6**

Q24A Divide 93.25 48 P **P 10 14 39.2 +0.3**
baz=239
HRY Holter Researc 93.29 39 *eP* **P 10 14 39.3 +0.6**
RWWY Rawlins 93.32 45 *eP* **P 10 14 39.4 +0.3**
ILAR Eielson Array 93.34 13 P **P 10 14 37.5 -0.7**
comp=Z,4.3nm,0.8s,baz=219,slow=5.5,SNR=58
ILAR pP **pP 10 15 17.9 -2.2**
comp=Z,2.3nm,1.0s,baz=223,slow=5.5,SNR=2.3
ILAR PP **PP 10 18 21.6 -3.3**
comp=Z,2.1nm,1.0s,baz=224,slow=7.3,SNR=6.9
ILAR PKiKP **PKiKP 10 19 23.1 -0.6**
comp=Z,0.4nm,0.6s,baz=300,slow=2.6,SNR=5.1
ILB Eielson Array 93.34 13 *eP* **P 10 14 37.2 -1.0**
IL1 Eielson Array 93.34 13 *eP* **P 10 14 37.3 -1.0**
ISCO Idaho Springs 93.37 47 P **P 10 14 39.5 +0.1**
baz=239,SNR=5.5
ISCO Idaho Springs 93.37 47 *eP* **P 10 14 40.0 +0.6**
ISCO Idaho Springs 93.37 47 *eP* **P 10 14 40.0 +0.6**
AMTX Amarillo 93.64 53 P **P 10 14 40.3 -0.3**
baz=241
AMTX Amarillo 93.64 53 *eP* **P 10 14 40.9 +0.3**
N23A Red Feather La 93.72 46 P **P 10 14 41.1 +0.1**
baz=239,SNR=6.9
N23A Red Feather La 93.72 46 *eP* **P 10 14 41.5 +0.6**
RLMT Red Lodge 93.89 41 P **P 10 14 41.8 +0.2**
baz=237
ABTX Abilene, Hawle 94.06 56 P **P 10 14 42.1 -0.3**
baz=242
ABTX Abilene, Hawle 94.06 56 *eP* **P 10 14 42.5 +0.1**
ABTX *ep*P **pP 10 15 23.6 -0.6**
CD2 Chengdu 94.09 302 P **P 10 14 43.0 +0.4**
CD2 pmax pmax
comp=Z,50nm,0.9s
NNA Nana 94.14 105 LR LR 10 50 53.2
comp=Z,40nm,18.1s,baz=208,slow=31
K22A Casper 94.26 44 P **P 10 14 43.2 -0.1**
baz=239,SNR=5.0
K22A Casper 94.26 44 *eP* **P 10 14 43.7 +0.4**
BILL Bilibino 94.34 354 *eP* **P 10 14 43.3 +0.5**
BILL Bilibino 94.34 354 *c iP* **P 10 14 42.7 -0.1**
BILL pmax pmax
comp=Z,20nm,1.1s
DAWY Dawson 94.38 16 *eP* **P 10 14 43.7 +0.6**
EGAK Eagle 94.56 15 *eP* **P 10 14 44.2 +0.4**
KSCO Kaye Shedlock' 94.98 49 P **P 10 14 46.9 +0.3**
baz=241
WHTX Lake Whitney, 95.42 57 P **P 10 14 48.3 -0.3**
baz=243
HKT Hockley 95.75 60⇑*eP* **P 10 14 50.1 0.0**
HKT pmax pmax
comp=Z,10.0nm,1.0s
TOLK Toolik Lake Re 96.35 10 P **P 10 14 51.9 -0.1**
baz=205
LZH Lanzhou 96.40 307 ⇑P **P 10 14 53.5 +0.3**
LZH pP pP 10 15 35.5 +0.5
LZH sP sP 10 15 52.8 +0.4
LZH PP **PP 10 18 52.0 +2.4**
LZH pmax pmax
comp=Z,18nm,1.4s
LZH pmax pmax
comp=Z,83nm,9.5s
LAO LASA Array 96.53 41 P **P 10 14 54.0 +0.6**
baz=239
RSSD Black Hills 96.57 44 P **P 10 14 53.6 -0.2**
baz=240
RSSD Black Hills 96.57 44 *eP* **P 10 14 54.1 +0.3**
RSSD *ep*P **pP 10 15 34.2 -1.5**
RSSD Black Hills 96.57 44 *eP* **P 10 14 54.1 +0.3**
RSSD *e**PP **pP 10 15 34.2 -1.5**
YAK Yakutsk 97.21 338 *eP* **P 10 14 55.2 -0.7**
YAK pmax pmax
comp=Z,11nm,0.8s
DGMT Dagmar 98.61 40 Pdiff Pdif 10 15 03.7 +1.0
baz=241
DGMT Dagmar 98.61 40 *eP* Pdif 10 15 03.9 +1.3
LPAZ La Paz 99.50 113 P **Pdif 10 15 09.8 +1.7**
comp=Z,1.8nm,0.9s,baz=183,slow=3.0,SNR=6.8
LPAZ PKKPbc **PKKPbc 10 31 28.8 -0.5**
comp=Z,0.7nm,0.6s,baz=45,slow=4.3,SNR=3.9
T38A Diamond 99.96 54 Pdiff **Pdif 10 15 10.0 +1.0**
baz=245
SONM Songino Array 100.08 318 P **Pdif 10 15 09.2 -0.2**
comp=Z,0.9nm,0.5s,baz=99,slow=6.3,SNR=5.7
SONM PKKPbc **PKKPbc 10 31 28.0 -0.5**
comp=Z,3.0nm,0.9s,baz=264,slow=2.7,SNR=9.4
SONM LR LR 10 56 18.5
comp=Z,31nm,19.8s,baz=76,slow=33
SONA1 Songino Array 100.08 318 *e*Pdif **Pdif 10 15 09.3 0.0**
YKA Yellowknife Ar 101.07 25 P **Pdif 10 15 12.5 -0.7**
comp=Z,0.6nm,0.7s,baz=236,slow=4.9,SNR=7.0
YKA PKiKP **PKiKP 10 19 36.5 -0.8**
comp=Z,0.4nm,0.7s,baz=235,slow=1.1,SNR=4.2
YKA PKKPbc **PKKPbc 10 31 22.3 -3.7**
comp=Z,1.5nm,0.8s,baz=48,slow=2.9,SNR=10
WMQ Urumqi 110.76 310 PKP **PKiKP 10 19 56.0 +0.1**
WMQ LR LR
comp=Z,400nm,22.5s
WMQ LR LR
comp=Z,200nm,23.9s
WMQ LR LR
comp=Z,460nm,22.1s
N59A State Game Lan 114.84 55 PKiKP PKPdf 10 20 03.4 -0.4
baz=257
ZALV Zalesovo Beam 114.92 320 PKP PKPdf 10 20 02.4 -1.1
comp=Z,6.6nm,0.6s,baz=141,slow=0.5,SNR=28
MKAR Makanchi Array 115.17 312 PKP **PKPdf 10 20 03.2 -1.0**
comp=Z,8.4nm,0.7s,baz=80,slow=1.3,SNR=65
MKAR PKKPbc **PKKPbc 10 30 40.4 -0.3**
comp=Z,1.3nm,0.6s,baz=267,slow=4.4,SNR=9.4
NVS Novosibirsk 115.97 321 *e*PKIKP **PKPdf 10 20 03.3 -2.1**
OPO Ambohidratompo 118.17 229 PKP **PKPdf 10 20 11.3 +0.2**
comp=Z,11nm,0.9s,baz=174,slow=1.4,SNR=13
KURK Kurchatov 118.20 316 PKP **PKPdf 10 20 08.8 -1.1**
KURK pPKP **pPKPdf 10 20 52.3 -1.2**
KURK Kurchatov 118.20 316⇑*i*PKIKP **PKPdf 10 20 09.1 -0.7**
KURK pmax pmax
comp=Z,24nm,1.3s
KURBB Kurchatov Arra 118.25 315 PKP **PKPdf 10 20 08.8 -1.2**
comp=Z,9.9nm,0.6s,baz=103,slow=1.9,SNR=61
KURBB pPKP **pPKPdf 10 20 52.3 -1.3**
comp=Z,1.1nm,0.6s,baz=109,slow=1.8,SNR=1.9
LBNH Lisbon 118.28 52 PKiKP **PKPdf 10 20 09.7 -0.6**
baz=261
KSH Kashi 118.29 303 PKP **PKPdf 10 20 13.5 +2.9**
KSH PP **PP 10 21 36.0 +6.7**
KSH AMB AMB
comp=Z,300nm,4.6s
PKME Peaks-Kenny Pk 120.28 51 PKiKP **PKPdf 10 20 13.4 -0.7**
baz=263
BOSA Boshof 121.69 203 PKP **PKPdf 10 20 17.9 +0.3**
comp=Z,4.7nm,0.6s,baz=148,slow=2.9,SNR=14
SCHQ Schefferville 122.43 40 PKP **PKPdf 10 20 16.2 -1.7**
comp=Z,3.8nm,0.6s,baz=243,slow=9.0,SNR=4.2
BVAR Borovoye Array 123.42 318 PKP **PKPdf 10 20 18.9 -1.0**
comp=Z,15nm,0.7s,baz=106,slow=5.1,SNR=35
BRVK Borovoye 123.49 318 *c i*PKIKP **PKPdf 10 20 19.3 -0.7**
BRVK pmax pmax
comp=Z,16nm,0.7s
KBS Kingsbay 126.63 358 *e*PKPdf **PKPdf 10 20 25.0 -0.3**
KBS Kingsbay 126.63 358 *e*PKIKP **PKPdf 10 20 25.0 -0.3**
KBS Kingsbay 126.63 358 *eP* **PKPdf 10 20 25.8 +0.5**
SPA0 Spitsbergen Ar 127.16 356 *eP* **PKPdf 10 20 26.4 +0.1**
SPITS Spitsbergen Ar 127.16 356 PKP **PKPdf 10 20 26.1 -0.3**
comp=Z,30nm,0.9s,baz=12,slow=7.4,SNR=18
ARU Arti 129.81 323 *i* PKIKP **PKPdf 10 20 32.1 +0.2**
AKTO Aktyubinsk 131.30 316 PKP **PKPdf 10 20 35.0 +0.1**
comp=Z,9.0nm,0.7s,baz=94,slow=5.9,SNR=5.4
LSZ Lusaka 132.17 214 *e*PKPdf **PKPdf 10 20 38.0 +0.2**
PRGR Permogore 134.03 333 *e*PKIKP **PKPdf 10 20 39.2 -0.5**
PRGR pmax pmax
comp=Z,14nm,0.7s
ARCES ARCESS Array B 134.21 349 PKhKP PKPpre 10 20 31.8
comp=Z,4.2nm,0.9s,baz=68,slow=0.7,SNR=9.0
ARCES PKP **PKPdf 10 20 39.2 -0.7**
comp=Z,18nm,0.6s,baz=48,slow=1.3,SNR=44
ARE0 ARCESS Array S 134.21 349 *eP* **PKPdf 10 20 39.7 -0.2**
TRO Tromso 135.10 352 *eP* **PKPdf 10 20 40.9 -0.6**
KIF Kilpisjarvi 135.43 351 *eP* **PKPdf 10 20 41.4 -0.7**
HEF Hetta 135.52 349 *eP* **PKPdf 10 20 41.8 -0.6**
KLMR Klimovskoe 136.91 335 *e*PKIKP PKPpre 10 20 40.5
KLMR pmax pmax
comp=Z,33nm,1.4s
KLMR Klimovskoe 136.91 335 *e*PKPdf PKPpre 10 20 40.5
KLMR AMP 10 20 46.9
comp=Z,33nm,1.4s
KLMR *e*SKP 10 24 01.0

FINES FINESS Array B 140.98 342 PKhKP PKPpre 10 20 45.4
comp=Z,5.8nm,0.6s,baz=60,slow=3.3,SNR=20
FINES PKP **PKPdf 10 20 52.8 +0.3**
comp=Z,11nm,0.7s,baz=93,slow=5.6,SNR=15
GNI Garni 142.22 303 *d i*PKIKP **PKPdf 10 20 59.0 +3.3**
ZEI Tsey 142.33 307 *i* PKHKP PKPpre 10 20 51.5
VSR Storozhevoye 142.36 322 *e*PKHKP PKPpre 10 20 49.4
VSR pmax pmax
comp=Z,10.0nm,0.5s
KBZ Khabaz 142.81 309 PKhKP PKPpre 10 20 52.0
comp=Z,5.3nm,0.8s,baz=148,slow=3.6,SNR=8.4
KIV Kislovodsk 142.89 310 *i* PKIKP **PKPdf 10 21 00.1 +3.4**
KIV pmax pmax
comp=Z,19nm,1.1s
KIV MLR MLR
comp=Z,39nm,24.0s
DOMB Dombas 143.50 355 *eP* PKPab 10 20 54.0 +0.2
NC303 NORSAR Array S 144.08 353 *eP* PKPbc 10 20 56.5 -0.1
NC204 NORSAR Array S 144.10 353 *eP* **PKPab 10 20 56.1 0.0**
NB201 NORSAR Array S 144.26 353 *eP* **PKPab 10 20 55.9 -0.9**
NB2 NORSAR Subarra144.28 353 PKP **PKPab 10 20 56.4 -0.5**
comp=Z,59nm,0.7s,baz=12,slow=3.4
NB2 NORSAR Subarra144.28 353 PKP **PKPab 10 20 56.4 -0.5**
baz=12,slow=3.4
NBO00 NORSAR Array S 144.34 353 *eP* **PKPab 10 20 57.0 0.0**
NAO01 NORSAR Array S 144.51 353 *eP* PKPbc 10 20 57.8 -0.1
NC602 NORSAR Array S 144.54 352 *eP* **PKPab 10 20 57.5 -0.3**
HYA Hoyanger 144.56 357 *eP* **PKPab 10 20 57.5 -0.2**
SUE Sulen 144.72 358 *eP* **PKPab 10 20 58.4 0.0**
HFS Hagfors 144.83 350 PKP PKPbc 10 20 58.0 -0.8
comp=Z,108nm,0.7s,baz=46,slow=4.2,SNR=241
HFS pPKP pPKPdf 10 21 39.4 -3.8
comp=Z,21nm,0.8s,baz=87,slow=3.0,SNR=2.7
SOC Sochi 145.06 310 *e*PKIKP **PKPbc 10 20 59.6 -0.5**
SOC *e* 10 24 22.2
SOC *e*PPP PPP 10 27 39.4
SOC pmax pmax
comp=Z,45nm,0.5s
SOC pmax pmax
comp=Z,31nm,0.9s
ASK Askoy 145.28 358 *eP* **PKPbc 10 21 00.3 +0.1**
BER Bergen 145.38 358 *eP* **PKPab 10 21 00.7 -0.1**
OSL Oslo 145.41 353 *eP* **PKPdf 10 21 00.2 -0.2**
OSL *eP* **PKPbc 10 21 00.6 -0.1**
ODD1 Odda 145.79 356 *eP* **PKPbc 10 21 02.0 +0.1**
MNK Minsk 145.79 334⇑*e*PKIKP **PKPdf 10 21 01.0 -0.2**
MNK *e* 10 21 46.0
KONO Kongsberg 145.82 354 *c e*PKP2 **PKPdf 10 21 01.4 +0.3**
KONO pmax pmax
comp=Z,262nm,2.5s
KONO Kongsberg 145.82 354 *eP* **PKPbc 10 21 01.7 -0.2**
ANN Anapa 146.18 313 *c i*PKP2 **PKPbc 10 21 03.2 -0.3**
ANN pmax pmax
comp=Z,122nm,0.8s
BLS5 Blasjo 146.28 356 *eP* **PKPbc 10 21 03.5 +0.2**
KMY Karmoy 146.55 358 *eP* **PKPbc 10 21 04.4 +0.3**
STAV Stavanger 146.81 357 *eP* **PKPbc 10 21 04.3 -0.5**
BIGH Upper Bighouse 147.00 6 *eP* **PKPbc 10 21 04.7 -0.6**
HOMB Homborsund 147.28 354 *eP* **PKPbc 10 21 06.3 +0.1**
AKASG Malin Array Be 147.84 328 PKPbc **PKPbc 10 21 07.2 -0.7**
comp=Z,24nm,0.5s,baz=44,slow=3.9,SNR=102
AKASG pPKPbc **pPKPbc 10 21 50.4 -0.9**
comp=Z,5.8nm,0.6s,baz=37,slow=4.0,SNR=1.9
KIEV Kiev 147.85 328 *e*PKPdf **PKPdf 10 21 03.9 -0.9**
KIEV *e*PKPbc **PKPbc 10 21 07.2 -0.7**
KIEV *e*PKPab **PKPab 10 21 10.8 -0.1**
KIEV Kiev 147.85 328 *c e*PKP2 **PKPbc 10 21 07.0 -0.9**
KPL Plockton 147.93 8 *eP* **PKPbc 10 21 07.7 -0.2**
SUW Suwalki 147.94 337 *e*PKP **PKPbc 10 21 08.2 +0.1**
SUW Suwalki 147.94 337 *e*PKP2 **PKPbc 10 21 08.2 +0.1**
MCD Coleburn Disti 147.96 6 *eP* **PKPbc 10 21 07.6 -0.4**
MDO Dochfour 147.99 7 *eP* **PKPbc 10 21 07.8 -0.4**
MME1 Meikle Cairn 148.25 6 *eP* **PKPbc 10 21 08.2 -0.6**
SIM Simferopol' 148.26 315 *i* PKP2 **PKPbc 10 21 09.0 -0.2**
SIM pmax pmax
comp=Z,113nm,0.8s
KLNR Kaliningrad 148.42 340 *c e*PKP2 **PKPbc 10 21 08.8 -0.5**
DRUM Mains of Drumt 148.69 5 *eP* **PKPbc 10 21 08.7 -1.2**
INVG Invergeldie, C 149.02 7 *eP* **PKPbc 10 21 10.3 -0.4**
COP Copenhagen 149.29 349 *i P* **PKPbc 10 21 11.5 +0.1**
BSD Bornholm Skovb 149.35 346⇑*i P* **PKPbc 10 21 11.2 -0.4**
comp=Z,73nm,1.0s
ASF Jabal al Asfar 149.42 290 PKPbc **PKPbc 10 21 13.5 +0.8**
comp=Z,25nm,0.8s,baz=89,slow=1.0,SNR=43
PGBU Glenifferbraes 149.57 8 *eP* **PKPbc 10 21 11.2 -0.9**
EDI Edinburgh 149.61 6 *eP* **PKPbc 10 21 11.4 -0.7**
LLD Lille Linde 149.66 349 *i P* **PKPbc 10 21 12.4 +0.1**
comp=Z,123nm,0.9s
ESY Stoneypath 149.67 6 *eP* **PKPbc 10 21 12.1 -0.2**
CLGH Cloghs, Cushen 150.05 10 *eP* **PKPbc 10 21 12.7 -0.7**
EKA Eskdalemuir Ar 150.19 7 PKPbc **PKPbc 10 21 13.4 -0.3**
comp=Z,15nm,0.8s,baz=318,slow=1.0,SNR=12
GKP Gorka Klasztor 150.45 342 *e*PKP **PKPbc 10 21 14.7 +0.4**
GKP Gorka Klasztor 150.45 342 *e*PKIKP **PKPbc 10 21 14.7 +0.4**
BEL Belsk 150.56 337 *e*PKP **PKPbc 10 21 15.2 +0.6**
BEL Belsk 150.56 337 *e*PKIKP **PKPbc 10 21 15.2 +0.6**
BRTR Keskin Array B 150.60 306 PKP **PKPdf 10 21 09.2 -0.6**
comp=Z,4.2nm,1.1s,baz=151,slow=2.8,SNR=12
BRTR PKPbc **PKPbc 10 21 14.9 -0.4**
comp=Z,22nm,0.7s,baz=136,slow=3.0,SNR=65
MMAI Mount Meron Ar 150.62 292 PKPbc **PKPbc 10 21 16.2 +0.7**
comp=Z,66nm,0.7s,baz=74,slow=6.2,SNR=108
BBO1 Bothel 150.77 7 *eP* **PKPbc 10 21 14.7 -0.3**
EDMD Edmundbyers 150.80 5 *eP* **PKPbc 10 21 14.5 -0.6**
LVV L'vov 150.84 331 *e*PKIKP **PKPbc 10 21 15.1 -0.3**
KESW Keswick, Cumbr 150.93 7 *eP* **PKPbc 10 21 15.1 -0.3**
IOMK Kirk Michael 151.07 9 *eP* **PKPbc 10 21 15.3 -0.4**
ANTO Ankara 151.17 307 *e*PKPdf **PKPdf 10 21 10.4 -0.1**
ANTO *e*PKPbc **PKiKP 10 21 16.9 -0.2**
ANTO *e*PKPab **PKPab 10 21 25.5 +0.5**
ANTO Ankara 151.17 307 *e*PKIKP **PKPdf 10 21 10.4 -0.1**
WIM Isle of Man 151.17 9 *eP* **PKPbc 10 21 15.3 -0.7**
KWP Kalwaria Pacla 151.56 332 *e*PKP **PKPbc 10 21 17.4 +0.4**
KWP Kalwaria Pacla 151.56 332 *e*PKIKP **PKPbc 10 21 17.4 +0.4**
OJC Ojcow 152.24 336 *e*PKP **PKPbc 10 21 18.8 +0.2**
OJC Ojcow 152.24 336 *e*PKIKP **PKPbc 10 21 18.8 +0.2**
KOLS Kolonicke sedl 152.27 332 *e*PKIKP **PKPbc 10 21 19.4 +0.7**
KOLS Kolonicke sedl 152.27 332 *e*PKP **PKPbc 10 21 19.4 +0.7**
UZH Uzhgorod 152.49 331 *e*PKIKP **PKPdf 10 21 11.3 -0.8**
UZH *i* 10 21 27.3
LLW Llanuwychllyn 152.57 8 *eP* **PKPbc 10 21 18.3 -0.9**
FOEL Foel Wylfa 152.59 8 *eP* **PKPbc 10 21 17.6 -1.6**
CRVS Cervenica-Dubn 152.64 332 *e*PKIKP **PKPbc 10 21 20.0 +0.5**
CRVS *e* 10 21 30.6
CRVS Cervenica-Dubn 152.64 332 *e*PKP **PKPbc 10 21 20.0 +0.5**
CRVS *e* 10 21 30.6
NIE Niedzica 152.70 334 *e*PKP **PKPbc 10 21 20.4 +0.7**
NIE Niedzica 152.70 334 *e*PKIKP **PKPbc 10 21 20.4 +0.7**
TRPA Tarpa 152.76 330 ⇑*i P* **PKPbc 10 21 19.6 -0.1**
MLR Muntele Rosu 152.85 322 PKPbc **PKPbc 10 21 19.9 -0.4**
comp=Z,1.9nm,0.6s,baz=359,slow=5.9,SNR=14
KSP Ksiaz 152.88 341 *e*PKP **PKPbc 10 21 20.4 +0.5**
KSP Ksiaz 152.88 341 *e*PKIKP **PKPbc 10 21 20.4 +0.5**
LANS Liptovska Anna 153.24 335 *e*PKIKP **PKPbc 10 21 22.0 +1.1**
LANS Liptovska Anna 153.24 335 *e*PKP **PKPbc 10 21 22.0 +1.1**
UPC Upice 153.26 341⇑*e*PKP **PKPbc 10 21 21.1 +0.3**
UPC *e*PKPAB **PKPab 10 21 34.0 +0.7**
UPC Upice 153.26 341 *e*PKIKP **PKPbc 10 21 21.1 +0.3**
CJR Cluj-Napoca 153.28 327 ⇓*i P* **PKPbc 10 21 21.2 +0.2**
DPC Dobruska-Polom 153.30 340⇑*e*PKP **PKPbc 10 21 21.6 +0.6**
DPC *e*PKPAB **PKPab 10 21 34.6 +1.1**
DPC Dobruska-Polom 153.30 340 *e*PKIKP **PKPbc 10 21 21.6 +0.6**
CLL Collm 153.31 345 *i* PKPdf **PKPdf 10 21 12.9 -0.3**
comp=Z,19nm,1.5s
CLL *i* PKPbc **PKiKP 10 21 21.0 0.0**
comp=Z,51nm,0.8s
CLL *e*PKPab **PKPab 10 21 33.0 -0.5**
comp=Z,26nm,0.8s
CLL *ep*PKPbc **pPKPbc 10 22 05.0 +0.5**
comp=Z,10.0nm,0.7s
CLL Collm 153.31 345 *i* PKIKP **PKPdf 10 21 12.9 -0.3**
CLL *e* 10 21 33.0
CLL pmax pmax
comp=Z,19nm,1.5s
CLL pmax pmax
comp=Z,51nm,0.8s
CLL pmax pmax
comp=Z,26nm,0.8s
KRLC Kraliky 153.40 339⇑*e*PKP **PKPbc 10 21 21.7 +0.5**
KRLC Kraliky 153.40 339 *e*PKIKP **PKPbc 10 21 21.7 +0.5**
MORC Moravsky Berou 153.41 338 ⇓*i P* **PKPbc 10 21 20.9 -0.3**
MORC Moravsky Berou 153.41 338 *e*PKP **PKPdf 10 21 12.7 -0.8**
MORC *e* 10 21 21.3

MORC *e* 10 21 34.2
BRG Berggiesshubel 153.49 344 *i* PKP **PKPdf 10 21 13.6 +0.1**
comp=Z,16nm,1.2s
BRG *i* 10 21 21.6
comp=Z,26nm,0.7s
BRG *i* 10 21 34.2
comp=Z,24nm,0.9s
BRG *ep*PKP **sPKPdf 10 22 15.2 +0.9**
comp=Z,10.0nm,0.9s
BRG Berggiesshubel 153.49 344 *i* PKIKP **PKPdf 10 21 13.6 +0.1**
BRG *i* 10 21 34.2
BRG *e* 10 22 15.2
BRG pmax pmax
comp=Z,16nm,1.2s
BRG pmax pmax
comp=Z,10.0nm,0.9s
MCH1 Michaelchurch 153.49 8 *eP* **PKPbc 10 21 19.6 -1.6**
PVCC Panska Ves 153.65 343⇑*e*PKP **PKPbc 10 21 22.3 +0.7**
PVCC *e*PKPAB **PKPab 10 21 35.9 +1.0**
PVCC Panska Ves 153.65 343 *e*PKIKP **PKPbc 10 21 22.3 +0.7**
DRGR 153.65 328⇑*i P* **PKPbc 10 21 21.6 -0.3**
VYHS Vyhne 154.02 335 *e*PKIKP **PKPbc 10 21 22.9 +0.4**
VYHS *e* 10 21 37.0
VYHS Vyhne 154.02 335 *e*PKP **PKPbc 10 21 22.9 +0.4**
VYHS *e* 10 21 37.0
VRAC Vranov 154.13 339 *e*PKP **PKPdf 10 21 12.9 -1.6**
VRAC *e* 10 21 37.5
GOPC GO Pecny, Ondr 154.14 342⇑*e*PKP **PKPbc 10 21 23.1 +0.4**
GOPC GO Pecny, Ondr 154.14 342 *e*PKIKP **PKPbc 10 21 23.1 +0.4**
PRU Pruhonice 154.14 342⇑*e*PKP **PKPbc 10 21 22.3 -0.4**
PRU *e*PKPAB **PKPab 10 21 37.4 +0.4**
PRU Pruhonice 154.14 342 *e*PKIKP **PKPbc 10 21 22.3 -0.4**
PRU *e* 10 21 37.4
JAVC Velka Javorina 154.14 337 *e*PKP **PKPdf 10 21 15.0 +0.4**
JAVC *e* 10 21 23.6
JAVC *e* 10 21 38.8
KRUC Moravsky 154.41 339 *e*PKP **PKPdf 10 21 13.9 -0.9**
KRUC *e* 10 21 23.3
KRUC *e* 10 21 38.5
NKC Novy Kostel 154.45 345 *e*PKPAB **PKPab 10 21 38.9 +0.6**
NKC Novy Kostel 154.45 345 *e*PKP2 **PKPab 10 21 38.9 +0.6**
MODS Modra-Piesok 154.69 337 *e*PKIKP **PKPbc 10 21 23.4 -0.6**
MODS *e* 10 21 39.3
MODS Modra-Piesok 154.69 337 *e*PKP **PKPbc 10 21 23.4 -0.6**
MODS *e* 10 21 39.3
BZS Buzias 155.03 327 ⇓*i P* PKPdf 10 21 24.3 +8.5
HERR Herculane 155.14 325 ⇓*i P* PKPdf 10 21 25.0 +9.0
KHC Kasperske Hory 155.18 343 *e*PKPDF **PKPdf 10 21 15.5 -0.5**
KHC ⇑*e*PKP PKP 10 21 25.2
KHC *e*PKPAB **PKPab 10 21 42.1 +0.5**
KHC Kasperske Hory 155.18 343 *e*PKIKP **PKPdf 10 21 15.5 -0.5**
KHC *e* 10 21 42.1
GERES GERESS Array B 155.41 342 PKP **PKPdf 10 21 15.4 -1.0**
comp=Z,1.9nm,0.8s,baz=17,slow=1.4,SNR=8.6
GERES PKPbc PKPbc 10 21 25.7
comp=Z,4.8nm,0.9s,baz=38,slow=2.4,SNR=12
GERES PKPab **PKPab 10 21 41.9 -0.8**
comp=Z,3.6nm,0.7s,baz=32,slow=5.3,SNR=9.0
CONA Conrad Observa 155.56 338 *i* PKPdf **PKPdf 10 21 16.2 -0.3**
comp=Z,11nm,1.5s
CONA *i* PKPab **PKPab 10 21 44.3 +1.0**
comp=Z,19nm,1.1s
CONA *i* pPKPab **pPKPab 10 22 22.8 -2.6**
comp=Z,8.0nm,0.9s
MDVR Moldovita 155.57 326 ⇓*i P* PKPdf 10 21 25.8 +9.2
WLF Walferdange 156.01 354⇑PKP **PKPab 10 21 45.3 +0.3**
MOA Molln 156.15 340 *i* PKPdf **PKPdf 10 21 15.3 -1.9**
comp=Z,5.8nm,1.4s
MOA *i* PKPab **PKPab 10 21 46.0 +0.3**
comp=Z,6.0nm,0.8s
MOA *i* pPKPab **pPKPab 10 22 28.1 +0.2**
comp=Z,16nm,1.3s
VTS Vitosha 156.20 320 ⇓*i P* **PKPab 10 21 47.1 +0.8**
ARSA Arzberg 156.27 338 *i* PKPdf **PKPdf 10 21 16.5 -1.0**
comp=Z,6.9nm,1.3s
ARSA *i* PKPab **PKPab 10 21 46.6 +0.4**
comp=Z,7.0nm,1.0s
SOKA Soboth 156.93 338 *i* PKPdf **PKPdf 10 21 17.7 -0.7**
comp=Z,9.1nm,1.2s
SOKA *i* PKPab **PKPab 10 21 49.5 +0.3**
comp=Z,22nm,1.5s
SOKA *i* pPKPab **pPKPab 10 22 31.1 -0.2**
comp=Z,10nm,1.3s
KBA Koelnbreinsper 157.11 341 *i* PKPdf **PKPdf 10 21 17.9 -0.8**
comp=Z,6.3nm,1.2s
KBA *i* PKPab **PKPab 10 21 50.7 +0.7**
comp=Z,6.5nm,0.7s
OBKA Obir 157.24 338 *i* PKPdf **PKPdf 10 21 19.3 +0.5**
comp=Z,3.6nm,0.9s
OBKA *i* PKPab **PKPab 10 21 50.6 +0.1**
comp=Z,8.0nm,0.9s
OBKA *i* pPKPab **pPKPab 10 22 30.5 -2.2**
comp=Z,4.5nm,0.8s
STIP Stip 157.35 319 *i P* **PKPab 10 21 50.2 -0.9**
WATA Walderalm 157.36 344 *i* PKPab **PKPab 10 21 50.6 -0.5**
comp=Z,6.3nm,0.6s
WATA *i* pPKPab **pPKPab 10 22 33.8 +0.6**
comp=Z,3.5nm,0.5s
RETA Reutte 157.41 345 *i* PKPab **PKPab 10 21 51.0 -0.2**
comp=Z,7.1nm,0.9s
RETA *i* pPKPab **pPKPab 10 22 32.1 -1.2**
comp=Z,5.5nm,0.8s
WTTA Wattenberg 157.41 344 *i* PKPdf **PKPdf 10 21 19.2 +0.1**
comp=Z,8.1nm,1.0s
WTTA *i* PKPab **PKPab 10 21 51.7 +0.4**
comp=Z,19nm,0.8s
WTTA *i* pPKPab **pPKPab 10 22 34.2 +0.7**
comp=Z,2.9nm,0.6s
MYKA Terra Mystica 157.43 340 *i* PKPdf **PKPdf 10 21 17.9 -1.1**
comp=Z,5.3nm,1.2s
MYKA *i* PKPab **PKPab 10 21 50.6 -0.7**
comp=Z,4.6nm,0.5s
MYKA *i* pPKPab **pPKPab 10 22 32.0 -1.4**
comp=Z,7.6nm,1.1s
MOTA Moosalm 157.47 345 *i* PKPdf **PKPdf 10 21 18.6 -0.6**
comp=Z,5.0nm,0.9s
MOTA *i* PKPab **PKPab 10 21 51.6 +0.1**
comp=Z,11nm,0.9s
MOTA *i* pPKPab **pPKPab 10 22 32.1 -1.6**
comp=Z,10nm,1.1s
SKO Skopje 157.61 321 *i P* **PKPab 10 21 53.8 +1.5**
ABTA Abfaltersbach 157.65 342 *i* PKPdf **PKPdf 10 21 17.5 -1.8**
comp=Z,4.5nm,0.7s
ABTA *i* PKPab **PKPab 10 21 52.0 -0.3**
comp=Z,11nm,0.7s
ABTA *i* pPKPab **pPKPab 10 22 32.2 -2.2**
comp=Z,8.2nm,1.1s
LJU Ljubljana 157.66 338 *e*PKPdf **PKPdf 10 21 18.3 -1.0**
DAVA Damuels 157.79 347 *i* PKPdf **PKPdf 10 21 19.4 -0.1**
comp=Z,5.2nm,1.2s
DAVA *i* PKPab **PKPab 10 21 52.8 -0.1**
comp=Z,10.0nm,1.0s
FETA Feichten 157.86 345 *i* PKPdf **PKPdf 10 21 19.3 -0.3**
comp=Z,6.2nm,1.0s
FETA *i* PKPab **PKPab 10 21 53.8 +0.5**
comp=Z,5.5nm,1.0s
BOJS Bojanci 157.86 336 *e*PKPdf **PKPdf 10 21 19.1 -0.3**
BOJS *i* PKPab **PKPab 10 21 52.9 -0.3**
CEY Cerknica 157.96 338 *e*PKPdf **PKPdf 10 21 17.9 -1.8**
CEY *e* 10 21 29.4
CEY *i* PKPab **PKPab 10 21 52.9 -0.6**
CEY *i* 10 22 35.1
KRUS Krusevo 158.10 320 *i P* **PKPab 10 21 54.8 +0.3**
DAVOX Davos/Dischmat 158.27 346 PKP **PKPdf 10 21 20.0 -0.2**
comp=Z,1.6nm,0.5s,baz=221,slow=11,SNR=3.4
DAVOX Davos/Dischmat 158.27 346 PKIKP **PKPdf 10 21 20.0 -0.2**
DAVOX pmax pmax
comp=Z,2.0nm,0.5s
PDG Podgorica 158.49 325 ⇓*i P* **PKPab 10 21 55.8 -0.2**
OHR Ohrid 158.53 320 *i P* **PKPab 10 21 56.5 +0.2**
DBIC Dimbokro 159.69 158 PKP **PKPdf 10 21 21.4 -1.2**
comp=Z,9.5nm,0.9s,baz=9.2,slow=3.7,SNR=4.5
DBIC PKPab **PKPab 10 22 02.4 +0.6**
comp=Z,16nm,0.8s,baz=164,slow=6.2,SNR=10
MATE Matera 161.10 325 ⇓*i P* **PKPab 10 22 07.6 +0.2**
POLO Lamas de Olo 162.24 26 *e*PKPdf **PKPdf 10 21 24.9 +0.3**
MVO Moncorvo 162.72 25 *e*PKPdf **PKPdf 10 21 26.3 +1.2**
MTE Manteigas 163.16 28 *e*PKPdf **PKPdf 10 21 26.4 +0.9**
PCBR Castelo Branco 163.65 29 *e*PKPdf **PKPdf 10 21 26.8 +0.9**
ALMR Almeirim 163.70 32 *e*PKPdf **PKPdf 10 21 27.2 +1.2**
PMRV Marv??o 164.03 29 *e*PKPdf **PKPdf 10 21 27.0 +0.7**
PESTR Estremoz 164.39 31 *e*PKPdf **PKPdf 10 21 28.3 +1.7**
EVO Evora 164.46 33 *e*PKPdf **PKPdf 10 21 28.0 +1.3**
PNCL Nicolau / Gran 164.53 35 *e*PKPdf **PKPdf 10 21 27.6 +0.9**
MESJ Messejana 164.89 35 *eP* **PKPdf 10 21 27.7 +0.6**

MORF	**Marmelete**	**165.06**	**37**	*e*P	**PKPdf**	**10 21 27.6**	**+0.3**
MORF	**Marmelete**	**165.06**	**37**	*e*PKPdf	**PKPdf**	**10 21 28.3**	**+1.0**
PFVI	**Vila Bisbo**	**165.09**	**38**	*e*PKPdf	**PKPdf**	**10 21 28.5**	**+1.2**
PAB	**San Pablo**	**165.10**	**21**	*e*PKPdf	**PKPdf**	**10 21 27.6**	**+0.3**
PAB	**San Pablo**	**165.10**	**21**	*e*PKIKP	**PKPdf**	**10 21 27.6**	**+0.3**
ESDC	**Sonseca Array**	**165.11**	**20**	PKP	**PKPdf**	**10 21 27.4**	**+0.1**
	comp=Z,2.1nm,0.7s,baz=348,slow=2.9,SNR=12						
ESDC				PKPab	**PKPab**	**10 22 23.1**	**-1.9**
	comp=Z,2.3nm,0.6s,baz=333,slow=3.4,SNR=9.1						
PCVE	**Castro Verde**	**165.14**	**35**	*e*PKPdf	**PKPdf**	**10 21 28.6**	**+1.3**
PBAR	**Barrancos**	**165.21**	**31**	*e*PKPdf	**PKPdf**	**10 21 28.4**	**+1.1**
PVAQ	**Vaqueiros**	**165.48**	**35**	*e*PKPdf	**PKPdf**	**10 21 28.8**	**+1.2**
PBDV	**Barranco-do-Ve**	**165.49**	**36**	*e*PKPdf	**PKPdf**	**10 21 29.4**	**+1.8**
KOWA	**Kowa**	**167.16**	**150**	PKP	**PKPdf**	**10 21 28.0**	**-1.6**
	comp=Z,6.6nm,0.8s,baz=286,slow=0.7,SNR=9.4						
KOWA				PKPab	**PKPab**	**10 22 34.8**	**+0.3**
	comp=Z,11nm,1.1s,baz=208,slow=3.8,SNR=5.1						
TORD	**Torodi Ar. Bea**	**167.39**	**176**	PKP	**PKPdf**	**10 21 29.0**	**-0.7**
	comp=Z,12nm,1.0s,baz=191,slow=0.4						
TORD				PKPab	**PKPab**	**10 22 35.9**	**+0.4**
	baz=177,slow=3.6						
TORD				pPKPab	**pPKPab**	**10 23 17.1**	**-0.3**
	baz=193,slow=3.5						
TORD				PP	**PP**	**10 26 24.5**	**+1.8**
	baz=162,slow=5.1						
KEST	**Kesra**	**168.53**	**331**	PKP	**PKPdf**	**10 21 29.3**	**-0.7**
	comp=Z,2.6nm,0.6s,baz=117,slow=1.8,SNR=4.0						
KEST				PKPab	**PKPab**	**10 22 39.6**	**-0.7**
	comp=Z,5.2nm,0.8s,baz=51,slow=3.4,SNR=6.6						
MDT	**Midelt**	**170.59**	**40**	PKP	**PKPdf**	**10 21 32.6**	**+1.2**
	comp=Z,11nm,0.9s,baz=354,slow=3.1,SNR=17						

*IDC **29** 10:09:00.6±1.2, 21°.90S×168°.85E, h0km, mb3.9/8, mb1 4.0/9, mb1mx3.8/45, mbtmp3.9/9, ML3.5/1, Error ellipse: s-maj=44.1km s-min=22.1km az=161.0*
*ISCJB **29** 10:09:03.5±1.0, 21°.9S±0°.2×168°.85E±0°.10, h31km, mb3.8/8, Error ellipse: s-maj=35.2km s-min=11.5km az=168.5*

ISC 29 10:09:05.2±1.0, 21°.9S±0°.3×168°.8E±0°.1, h31km, n11, σ0s78/12, mb3.9/8, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.22**	**265**	Pn	**Pn**	**10 09 39.6**	**-0.5**
	14nm,0.3s,baz=80,slow=18,SNR=3.8						
DZM				Sn	**Sn**	**10 10 06.8**	**+0.3**
	42nm,0.3s,baz=183,slow=23,SNR=6.3						
CTA	**Charters Tower**	**21.15**	**271**	P	**P**	**10 13 47.5**	**-0.5**
	1.8nm,0.7s,baz=98,slow=14,SNR=2.0						
ASAR	**Alice Springs**	**32.20**	**260**	P	**P**	**10 15 31.4**	**+0.6**
	1.5nm,0.8s,baz=88,slow=9.6,SNR=1.5						
WRA	**Warramunga Arr**	**32.24**	**267**	P	**P**	**10 15 30.1**	**-1.0**
	0.4nm,0.5s,baz=99,slow=8.6,SNR=1.3						
FITZ	**Fitzroy Crossi**	**40.67**	**267**	P	**P**	**10 16 42.6**	**-0.4**
	2.7nm,0.8s,baz=74,slow=15,SNR=3.0						
PETK	**Petropavlovsk-**	**75.31**	**353**	P	**P**	**10 20 44.7**	**-0.4**
	0.9nm,0.7s,baz=178,slow=11						
SNAA	**Sanae**	**86.50**	**183**	P	**P**	**10 21 44.7**	**-0.1**
	1.6nm,0.9s,baz=188,slow=4.4,SNR=3.4						
SONM	**Songino Array**	**89.11**	**323**	P	**P**	**10 21 59.0**	**+1.4**
	0.4nm,0.5s,baz=134,slow=6.2,SNR=0.9						
NVAR	**Mina Array Bea**	**90.84**	**49**	P	**P**	**10 22 05.4**	**-0.6**
	0.4nm,0.7s,baz=231,slow=7.8,SNR=2.7						
KVAR	**Kislovodsk Arr**	**130.69**	**310**	PKP	**PKPdf**	**10 28 14.2**	**+0.8**
	3.0nm,0.4s,baz=135,slow=7.1,SNR=1.7						
GERES	**GERESS Array B**	**146.61**	**330**	PKPbc	**PKPab**	**10 28 44.5**	**-0.3**
	1.3nm,0.6s,baz=82,slow=7.0,SNR=5.3						

MEX 29 10:12:52.4±0.4, 17°.52N×101°.16W, h17km±970km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.97**	**119**	*e*P	Pb	10 13 07.6	-3.3
CAIG				*e*S	Sb	10 13 19.4	-4.0
ARIG	**Puente Sto Nin**	**1.08**	**45**	*e*P	Pb	10 13 09.2	-3.6
ARIG				*e*S	Sb	10 13 22.1	-4.6
MEIG	**Mezcala**	**1.52**	**74**	*e*P	Pn	10 13 15.5	-3.5
MEIG				*e*S	Sn	10 13 34.6	-3.9
PLIG	**Platanillo**	**1.80**	**61**	*e*P	Pn	10 13 20.0	-2.8
PLIG				*i* S	Sn	10 13 41.1	-4.3

VIE 29 10:20:24.4±0.9, 46°.31N×14°.16E, h14km±15km, mb0.8/1, ml1.0/3, Error ellipse: s-maj=2.3km s-min=1.7km az=156.0 15 km SSE of Jesenice, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OBKA	**Obir**	**0.34**	**54**	*e*Pg	Pg	10 20 31.2	-0.1
	0.8nm,0.1s						
OBKA				*e*Sg	Sb	10 20 36.9	-0.6
	5.5nm,0.3s						
MYKA	**Terra Mystica**	**0.48**	**312**	*i* Pg	Pb	10 20 34.4	-0.2
	1.8nm,0.2s						
MYKA				*e*Sg	Sg	10 20 40.3	0.0
	2.7nm,0.2s						
SOKA	**Soboth**	**0.71**	**58**	*e*Sg	Sb	10 20 48.4	+0.2
	0.2nm,0.1s						

MEX 29 10:43:37.6±0.5, 14°.37N×92°.41W, h16km±999km, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.54**	**330**	*e*P	Pn	10 44 00.8	-3.6
PCIG				*i* S	Sn	10 44 19.0	-5.2
CCIG	**Comitan**	**1.92**	**8**	*e*P	Pn	10 44 08.2	-1.6

*CSEM **29** 10:48:13.8, 63°.98N×28°.08E, h0km, ML1.4, Mining explosion.*

HEL 29 10:48:13.8±0.1, 63°.98N×28°.08E, h0km, ML1.4, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OUL	**Oulu**	**1.45**	**321**	PN	Pn	10 48 41.0	-0.3
OUL	**Oulu**	**1.45**	**321**	Pn	Pn	10 48 41.0	-0.3
OUF	**Merijarvi**	**1.52**	**286**	PN	Pn	10 48 41.8	-0.3
	baz=106						
OUF				MSG		10 48 59.2	
	comp=Z,1.5nm,0.2s						
OUF				SN	Sg	10 49 02.1	-0.3
OUF	**Merijarvi**	**1.52**	**286**	Pn	Pn	10 48 41.8	-0.3
OUF				Sn	Sg	10 49 02.1	-0.3
JOF	**Joensuu**	**1.80**	**125**	PG	Pn	10 48 46.0	-0.1
JOF				SG	Sn	10 49 09.8	+0.2
JOF	**Joensuu**	**1.80**	**125**	Pg	Pn	10 48 46.0	-0.1
JOF				Sg	Sn	10 49 09.8	+0.2
KEF	**Keuruu**	**2.34**	**220**	MSG		10 49 23.0	
	comp=Z,1.0nm,0.2s						
KEF				SG	Sb	10 49 26.2	+0.1
VAF	**Ylistaro**	**2.60**	**251**	PG	Pb	10 48 59.9	-1.3
VAF				MSG		10 49 30.5	
	comp=Z,1.1nm,0.2s						
VAF				SG	Sb	10 49 33.9	+0.2
VAF	**Ylistaro**	**2.60**	**251**	Pg	Pb	10 48 59.9	-1.3
VAF				Sg	Sb	10 49 33.9	+0.2
	comp=Z,1.1nm,0.2s						
TOF	**Tornio**	**2.64**	**325**	SB	Sn	10 49 30.2	0.0
TOF				MSG		10 49 31.5	
	comp=Z,2.3nm,0.2s						
TOF	**Tornio**	**2.64**	**325**	Sb	Sn	10 49 30.2	0.0
FIA0	**FINESS Array S**	**2.71**	**201**	PG	Pb	10 49 01.0	-2.1
	baz=14						
FIA0				SG	Sb	10 49 36.8	-0.1
FIA0	**FINESS Array S**	**2.71**	**201**	Pg	Pb	10 49 01.0	-2.1
FIA0				Sg	Sb	10 49 36.8	-0.1
ARBE	**Arbavere**	**4.67**	**193**	SN	Sn	10 50 15.2	-5.1

*ISCJB **29** 11:31:48.8±0.6, 36°.21N±0°.04×140°.42E±0°.07, h80km±5km, mb3.8/4, Error ellipse: s-maj=9.4km s-min=6.0km az=15.8*
*IDC **29** 11:31:49.9±2.3, 36°.23N×140°.44E, h74km±18km, mb3.5/4, mb1 3.5/6, mb1mx3.1/71, mbtmp3.7/6, Error ellipse: s-maj=25.8km s-min=9.6km az=63.0*
*JMA **29** 11:31:50.4, 36°.25N×140°.32E, h70km±1km, M3.1*

ISC 29 11:31:50.1±1.0, 36°.23N±0°.05×140°.35E±0°.06, h73km±8km, n17, σ1s04/27, mb3.8/4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.13**	**269**	P	**Pn**	**11 32 00.8**	**+0.1**
JYT				S	**Sn**	**11 32 08.4**	**-0.1**
JAG	**Ashikaga**	**0.75**	**285**	P	**Pn**	**11 32 05.8**	**0.0**
JAG				S	**Sn**	**11 32 17.3**	**-0.1**
JKT	**Katashina**	**1.04**	**301**	P	**Pn**	**11 32 09.5**	**+0.2**
JRY	**Ryogami san**	**1.19**	**260**	P	**Pn**	**11 32 11.4**	**+0.2**
JRY				S	**Sn**	**11 32 27.5**	**+0.5**
JFK	**Kawauchi**	**1.21**	**20**	P	**Pn**	**11 32 11.3**	**-0.1**
JFK				S	**Sn**	**11 32 27.3**	**-0.1**
JFY	**Yanaizu**	**1.28**	**336**	P	**Pn**	**11 32 12.7**	**+0.4**
JFY				*e*S	**Sn**	**11 32 29.9**	**+0.9**
JFT	**Otama**	**1.29**	**359**	P	**Pn**	**11 32 12.6**	**+0.2**
JOD2	**Odawara 2**	**1.41**	**227**	P	**Pn**	**11 32 14.4**	**+0.4**
JOD2				S	**Sn**	**11 32 31.7**	**-0.2**
JHK	**Hiroka**	**1.48**	**314**	P	**Pn**	**11 32 15.4**	**+0.6**
JHK				S	**Sn**	**11 32 34.7**	**+1.2**
MJAR	**Matsushiro Arr**	**1.76**	**281**	P	**Pn**	**11 32 18.7**	**+0.1**
	23nm,0.3s,baz=99,slow=9.2,SNR=242						
MJAR				S	**Sn**	**11 32 41.3**	**+1.2**
	8.7nm,0.3s,baz=107,slow=22,SNR=5.5						
MAT	**Matsushiro**	**1.76**	**281**	P	**Pn**	**11 32 19.4**	**+0.8**
MAT				*e*S	**Sn**	**11 32 35.9**	**-4.3**
JHJ	**Hachijo jima 2**	**3.14**	**189**	P	**Pn**	**11 32 37.7**	**+0.5**
	24nm,0.3s,baz=311,slow=22,SNR=10						
JHJ				S	**Sn**	**11 33 13.9**	**+0.3**
	65nm,0.3s,baz=94,slow=23,SNR=9.9						
ASAJ	**Asahikawa**	**8.06**	**12**	P	**Pn**	**11 33 43.6**	**-0.8**
	0.2nm,0.3s,baz=239,slow=11,SNR=1.7						
MKAR	**Makanchi Array**	**43.83**	**303**	P	**P**	**11 39 48.6**	**-0.2**
	0.5nm,0.8s,baz=101,slow=7.5,SNR=4.1						
KURBB	**Kurchatov Arra**	**45.83**	**308**	P	**P**	**11 40 04.6**	**+0.1**
	0.7nm,0.4s,baz=84,slow=8.1,SNR=7.3						
FITZ	**Fitzroy Crossi**	**55.80**	**197**	P	**P**	**11 41 19.9**	**+0.3**
	3.0nm,1.2s,baz=14,slow=8.3,SNR=2.0						
WRA	**Warramunga Arr**	**56.16**	**187**	P	**P**	**11 41 21.8**	**-0.5**
	0.4nm,0.4s,baz=1.3,slow=7.6,SNR=19						

*IDC **29** 11:47:06.7±2.2, 16°.79N×85°.05W, h0km, mb3.5/5, mb1 3.9/6, mb1mx3.6/47, mbtmp3.5/6, ML3.5/1, MS2.8/3, Ms1 2.8/3, ms1mx2.5/30, Error ellipse: s-maj=80.6km s-min=31.4km az=74.0*

ISC 29 11:47:12.8±1.3, 16°.6N±0°.2×85°.7W±0°.3, h35km, n8, σ2s19/8, mb3.7/4, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTS	**JuntasAbangare**	**6.32**	**173**	Pn	**Pn**	**11 48 43.3**	**-0.4**
	1.1nm,0.3s,baz=26,slow=9.9,SNR=4.7						
JTS				Sn	Sn	11 50 06.3	+12
	3.9nm,0.3s,baz=292,slow=17,SNR=7.0						
JTS				LR	LR	11 50 33.4	
	comp=Z,51nm,19.1s,baz=44,slow=32						
TKL	**Tuckaleechee C**	**19.06**	**5**	LR	LR	11 58 04.4	
	comp=Z,18nm,18.2s,baz=341,slow=35						
TXAR	**Lajitas Array**	**20.78**	**311**	P	**P**	**11 51 52.8**	**+1.7**
	0.5nm,0.8s,baz=129,slow=11,SNR=7.4						
TXAR				S	**S**	**11 55 37.8**	**-3.5**
	0.1nm,0.6s,baz=113,slow=16,SNR=3.8						
PDAR	**Pinedale Array**	**33.07**	**327**	P	**P**	**11 53 46.4**	**+0.9**
	0.3nm,0.2s,baz=118,slow=9.4,SNR=2.1						
PDAR				LR	LR	12 09 14.3	
	comp=Z,31nm,19.6s,baz=41,slow=40						
NVAR	**Mina Array Bea**	**35.87**	**314**	P	**P**	**11 54 12.1**	**+2.4**
	0.7nm,0.7s,baz=114,slow=10.0,SNR=7.6						
YKA	**Yellowknife Ar**	**50.11**	**343**	P	**P**	**11 56 03.0**	**-1.2**
	0.4nm,0.8s,baz=138,slow=7.9,SNR=4.0						
ILAR	**Eielson Array**	**62.95**	**335**	P	**P**	**11 57 35.6**	**+0.1**
	0.4nm,0.6s,baz=118,slow=4.7,SNR=6.4						
ASAR	**Alice Springs**	**142.23**	**253**	PKhKP	PKPpre	12 06 35.4	
	0.2nm,0.4s,baz=103,slow=4.0,SNR=4.6						
ASAR				PKP	**PKPdf**	**12 06 41.6**	**-0.7**
	0.4nm,0.8s,baz=101,slow=4.0,SNR=3.6						

*IDC **29** 12:06:41.7±1.2, 46°.01N×150°.94E, h0km, mb3.9/9, mb1 4.0/9, mb1mx3.7/70, mbtmp3.9/9, Error ellipse: s-maj=31.2km s-min=28.1km az=40.0*
*SKHL **29** 12:06:53.9±0.3, 45°.19N×150°.83E, h137km±6km, mb5.0/4, msh5.9/6*
*MOS **29** 12:06:54.2±1.4, 45°.65N×150°.69E, h67km, mb4.0/4, Error ellipse: s-maj=15.6km s-min=11.6km az=143.4*
*JMA **29** 12:06:56.8±0.5, 44°.95N×150°.74E, h112km, M3.9*

ISC 29 12:06:52.2±1.0, 45°.31N±0°.08×150°.98E±0°.09, h100km, n58, σ2s45/64, mb3.9/11, 7D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.20**	**269**	*i* P	**Pn**	**12 07 29.0**	**+1.7**
KUR				AMB	AMB	12 07 31.0	
	207nm,0.4s						
KUR				AMB	AMB	12 07 31.0	
	330nm,0.4s						
KUR				AMB	AMB	12 07 31.0	
	198nm,0.4s						
KUR				*e*S	**Sn**	**12 07 55.1**	**+1.0**
KUR				A	A	12 07 56.6	
	107nm,0.4s						
KUR				A	A	12 07 56.6	
	959nm,0.4s						
KUR	**Kuril'sk**	**2.20**	**269**	*d* iPN	**Pn**	**12 07 29.4**	**+2.1**
KUR				*i* S	**Sn**	**12 07 55.1**	**+1.0**
KUR				pmax	pmax		
	comp=Z,198nm,0.4s						
KUR				pmax	pmax		
	comp=N,207nm,0.2s						
KUR				pmax	pmax		
	comp=E,333nm,0.2s						
KUR				smax	smax		
	comp=E,959μm,0.3s						
KUR				smax	smax		
	comp=N,1μm,0.2s						
SHO	**Shikotan**	**3.30**	**246**	*i* P	**Pn**	**12 07 43.0**	**+1.2**
SHO				AMB	AMB	12 07 53.0	
	comp=N,15nm,0.2s						
SHO				AMB	AMB	12 07 53.0	
	comp=N,16nm,0.2s						
SHO				AMB	AMB	12 07 53.0	
	comp=N,25nm,0.2s						
SHO				*i* S	**Sn**	**12 08 20.0**	**-0.1**
SHO				A	A	12 08 22.0	
	comp=N,107nm,0.3s						
SHO				A	A	12 08 22.0	
	comp=N,284nm,0.3s						
SHO	**Shikotan**	**3.30**	**246**	*d* iPN	**Pn**	**12 07 43.5**	**+1.7**
SHO				*i* S	**Sn**	**12 08 20.1**	**-0.1**
SHO				pmax	pmax		
	comp=N,15nm,0.2s						
SHO				pmax	pmax		
	comp=E,16nm,0.2s						
SHO				pmax	pmax		
	comp=Z,25nm,0.2s						
SHO				smax	smax		
	comp=N,107nm,0.3s						
SHO				smax	smax		
	comp=E,284nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**3.87**	**253**	*i* P	**Pn**	**12 07 52.0**	**+2.5**
YUK				AMB	AMB	12 07 53.0	
	comp=E,41nm,0.3s						
YUK				AMB	AMB	12 07 53.0	
	comp=E,35nm,0.3s						
YUK				AMB	AMB	12 07 53.0	
	comp=E,74nm,0.3s						
YUK				*i* S	**Sn**	**12 08 36.2**	**+2.3**
YUK				A	A	12 08 41.3	
	comp=E,149nm,0.3s						
YUK				A	A	12 08 41.3	
	comp=E,416nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**3.87**	**253**	*d* iPN	**Pn**	**12 07 52.3**	**+2.8**
YUK				*i* S	**Sn**	**12 08 35.2**	**+1.3**
YUK				pmax	pmax		
	comp=E,35nm,0.3s						
YUK				pmax	pmax		
	comp=Z,74nm,0.3s						
YUK				pmax	pmax		
	comp=N,41nm,0.2s						
YUK				smax	smax		
	comp=N,149μm,0.2s						
YUK				smax	smax		
	comp=E,416μm,0.3s						
LAGR	**Lagunnoye**	**3.91**	**253**	*e*P	**Pn**	**12 07 52.0**	**+1.9**
LAGR				*i* S	**Sn**	**12 08 37.0**	**+2.0**
LAGR				A	A	12 08 43.0	
	comp=E,525nm,0.3s						
LAGR				A	A	12 08 43.0	
	comp=E,278nm,0.3s						
LAGR	**Lagunnoye**	**3.91**	**253**	PN	**Pn**	**12 07 52.9**	**+2.8**
LAGR				*i* S	**Sn**	**12 08 37.3**	**+2.3**
LAGR				smax	smax		
	comp=E,278nm,0.3s						
LAGR				smax	smax		
	comp=N,525nm,0.2s						
GRPR	**Tuman**	**3.94**	**252**	*i* P	**Pn**	**12 07 53.0**	**+2.5**
GRPR				AMB	AMB	12 07 56.0	
	comp=N,25nm,0.2s						
GRPR				AMB	AMB	12 07 56.0	
	comp=N,27nm,0.2s						
GRPR				AMB	AMB	12 07 56.0	
	comp=N,79nm,0.2s						
GRPR				*i* S	**Sn**	**12 08 37.0**	**+1.2**
GRPR				A	A	12 08 41.0	
	comp=N,358nm,0.4s						
GRPR				A	A	12 08 41.0	
	comp=N,421nm,0.4s						
GRPR	**Tuman**	**3.94**	**252**	‖ *i* PN	**Pn**	**12 07 53.8**	**+3.3**
GRPR				*i* S	**Sn**	**12 08 37.3**	**+1.5**
GRPR				pmax	pmax		
	comp=Z,79nm,0.2s						
GRPR				pmax	pmax		
	comp=N,25nm,0.1s						
GRPR				pmax	pmax		
	comp=E,27nm,0.1s						
GRPR				smax	smax		
	comp=N,358nm,0.3s						
GRPR				smax	smax		
	comp=E,421nm,0.3s						
GLVR	**Golovnino**	**4.21**	**250**	*i* P	**Pn**	**12 07 57.0**	**+2.9**
GLVR				*i* S	**Sn**	**12 08 43.0**	**+0.8**
GLVR				A	A	12 08 51.0	
	comp=E,431nm,0.3s						
GLVR				A	A	12 08 51.0	
	comp=E,182nm,0.3s						
GLVR	**Golovnino**	**4.21**	**250**	*d* iPN	**Pn**	**12 07 57.1**	**+2.9**
GLVR				*i* S	**Sn**	**12 08 43.8**	**+1.6**
GLVR				smax	smax		
	comp=N,431nm,0.2s						
GLVR				smax	smax		
	comp=E,182nm,0.2s						
NEM2	**Nemuro 2**	**4.23**	**244**	P	**Pn**	**12 07 56.1**	**+1.7**
NEM2				*e*S	**Sn**	**12 08 42.7**	**0.0**
JRA	**Rausu**	**4.40**	**254**	P	**Pn**	**12 07 59.4**	**+2.7**
JNK	**Nakash**	**4.80**	**251**	P	**Pn**	**12 08 05.0**	**+2.8**
JAK	**Akkeshi**	**5.08**	**245**	P	**Pn**	**12 08 07.4**	**+1.5**
JAK				*e*S	**Sn**	**12 09 02.1**	**-1.2**
JTKR	**Abashiri--Toko**	**5.22**	**258**	P	**Pn**	**12 08 10.2**	**+2.4**
JMP	**Maruseppu**	**5.59**	**259**	P	**Pn**	**12 08 15.9**	**+3.0**
JOB	**Onbets**	**5.68**	**247**	*e*S	**Sn**	**12 09 17.3**	**-0.6**
YSS	**Yuzh-Sakhalins**	**5.95**	**289**	*e*P	**Pn**	**12 08 21.1**	**+3.5**
YSS	**Yuzh-Sakhalins**	**5.95**	**289**	PN	**Pn**	**12 08 19.9**	**+2.3**
JCH	**Churui**	**6.12**	**247**	P	**Pn**	**12 08 22.5**	**+2.4**
JCH				*e*S	**Sn**	**12 09 27.2**	**-1.5**
MYR	**Moyori**	**6.33**	**244**	*e*P	**Pn**	**12 08 25.5**	**+2.6**
JEM	**Erimo**	**6.56**	**243**	P	**Pn**	**12 08 30.0**	**+4.0**
JEM				*e*S	**Sn**	**12 09 39.2**	**-0.1**
JNBK	**Urakawa-nobuka**	**6.68**	**246**	P	**Pn**	**12 08 29.4**	**+1.8**
JNBK				*e*S	**Sn**	**12 09 37.9**	**-4.3**
JNB	**Noboribetsu**	**7.72**	**252**	*e*S	**Sn**	**12 10 06.3**	**-1.3**
TYV	**Tymovskoe**	**7.86**	**318**	*e*P	**Pn**	**12 08 47.6**	**+4.0**
JKB	**Kayabe**	**7.99**	**248**	P	**Pn**	**12 08 46.6**	**+1.2**
JKB				*e*S	**Sn**	**12 10 10.1**	**-4.0**
JTM	**Tenmabayashi**	**8.55**	**242**	*e*S	**Sn**	**12 10 22.5**	**-5.2**
JTH	**Tanohata**	**8.60**	**235**	*e*S	**Sn**	**12 10 23.9**	**-5.1**
MAJO	**Matsushiro**	**13.03**	**232**	‖ *e*PN	**Pn**	**12 09 54.5**	**+1.2**
YAK	**Yakutsk**	**20.80**	**331**	*e*P	**P**	**12 11 21.4**	**-3.6**
YAK	**Yakutsk**	**20.80**	**331**	*e*P	**P**	**12 11 21.4**	**-3.6**
TIK	**Tiksi**	**28.44**	**345**	*e*P	P	12 12 34.5	-2.5
TIXI	**Tiksi**	**28.46**	**346**	P	P	12 12 31.7	-5.4
	comp=E,1.8nm,0.4s,baz=146,slow=7.8,SNR=6.3						
TIXI	**Tiksi**	**28.46**	**346**	‖ *e*P	P	12 12 34.5	-2.6
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**28.72**	**147**	T	T	12 43 46.2	
	baz=336,slow=76,SNR=93						
H11N1	**WAKE ISLAND Hy**	**28.73**	**147**	T	T	12 43 49.2	
	baz=336,slow=76,SNR=48						
H11N3	**WAKE ISLAND Hy**	**28.73**	**147**	T	T	12 43 47.4	
	baz=336,slow=76,SNR=52						
H11S1	**WAKE ISLAND Hy**	**29.76**	**149**	T	T	12 45 02.7	
	baz=337,slow=76,SNR=62						
H11S3	**WAKE ISLAND Hy**	**29.77**	**149**	T	T	12 45 01.7	
	baz=337,slow=76,SNR=91						
H11S2	**WAKE ISLAND Hy**	**29.78**	**149**	T	T	12 44 58.8	
	baz=337,slow=76,SNR=68						
SONM	**Songino Array**	**30.43**	**291**	P	**P**	**12 12 55.4**	**+0.4**
	comp=Z,0.2nm,0.4s,baz=97,slow=6.2,SNR=2.9						
MKAR	**Makanchi Array**	**46.29**	**298**	P	**P**	**12 15 05.8**	**-1.7**
	comp=Z,0.2nm,0.5s,baz=72,slow=4.7,SNR=2.4						
KURK	**Kurchatov**	**46.93**	**304**	*e*P	**P**	**12 15 10.5**	**-1.9**
KURK	**Kurchatov**	**46.93**	**304**	P	**P**	**12 15 10.5**	**-1.9**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KURBB	**Kurchatov Arra**	**47.02**	**304**	P	**P**	**12 15 10.5**	**-2.6**
	comp=Z,1.2nm,0.6s,baz=69,slow=8.5,SNR=6.3						
FINES	**FINESS Array B**	**64.69**	**334**	P	P	12 17 16.1	-2.9
	comp=Z,1.9nm,0.6s,baz=34,slow=8.7,SNR=11						
FINES	**FINESS Array B**	**64.69**	**334**	*e*P	**P**	**12 17 16.9**	**-2.1**
FINES	**FINESS Array B**	**64.69**	**334**	*e*P	**P**	**12 17 16.9**	**-2.1**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NB2	**NORSAR Subarra**	**69.09**	**340**	P	**P**	**12 17 45.3**	**-1.6**
	comp=Z,0.8nm,0.4s,baz=30,slow=6.5						
HFS	**Hagfors**	**69.27**	**339**	P	P	12 17 45.3	-2.7
	comp=Z,2.4nm,0.6s,baz=46,slow=8.3,SNR=6.1						
ASAR	**Alice Springs**	**70.39**	**197**	P	P	12 18 00.8	+5.6
	comp=Z,0.3nm,0.6s,baz=17,slow=6.8,SNR=4.3						
ASAR	**Alice Springs**	**70.39**	**197**	*e*P	**P**	**12 17 59.5**	**+4.3**
GERES	**GERESS Array B**	**79.08**	**333**	P	**P**	**12 18 44.9**	**-0.4**
	comp=Z,0.6nm,0.3s,baz=58,slow=8.2,SNR=4.6						
GERES	**GERESS Array B**	**79.08**	**333**	*e*P	**P**	**12 18 45.4**	**+0.1**
GERES	**GERESS Array B**	**79.08**	**333**	*e*P	**P**	**12 18 45.4**	**+0.

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MGG	**Marie-Galante**	**3.96**	**155**	*eP*		Pn		12 09 51.4	+1.9
MDVC	**Dominica, Viel**	**4.21**	**158**	*eS*		Sn		12 10 42.7	+1.6
MDPO	**Dominica; Chan**	**4.23**	**158**	*eP*		Pn		12 09 55.3	+2.2
MDPO	**Dominica; Chan**	**4.23**	**158**	*eS*		Sn		12 10 42.8	+1.1
BBL	**Barber's Block**	**4.27**	**159**	*eP*		Pn		12 09 55.3	+1.7
BBL				*eS*		Sn		12 10 44.2	+1.5
BBL	**Barber's Block**	**4.27**	**159**	*eP*		Pn		12 09 55.3	+1.7
SDDR	**Presa de Saban** 65nm,0.6s	**7.79**	**267**	*e*Pn		Pn		12 10 40.1	-1.9
SDDR				*e*Sn		Sn		12 12 01.7	-7.7

CSEM ***29*** *12:08:59.9±0.3, 39°.19N×42°.24E, h10km, ML2.5, Error ellipse: s-maj=8.7km s-min=6.1km az=131.0*
ISK ***29*** *12:09:00.1, 39°.05N×42°.51E, h25km, ML2.4/8*
DDA ***29*** *12:09:00.4, 39°.19N×42°.27E, h7km, Ml2.5*
ISC 29 12:08:59.2±1.2, 39°.15N±0°.03×42°.35E±0°.03, h7km±12km, n24, σ1§04/36, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EKAR	**Karacoban**	**0.25**	**296**	*i*	P		**Pg**	**12 09 03.9**	**-0.3**
EKAR				*i*	S		**Sg**	**12 09 07.9**	**+0.4**
EKAR	**Karacoban**	**0.25**	**296**		P		**Pg**	**12 09 03.9**	**-0.3**
TUTA	**Tutak**	**0.44**	**55**	*i*	P		**Pb**	**12 09 09.6**	**0.0**
TUTA				*i*	S		**Sb**	**12 09 17.0**	**+0.5**
TUTA	**Tutak**	**0.44**	**55**		P		**Pb**	**12 09 09.6**	**0.0**
TUTA					S		**Sb**	**12 09 17.0**	**+0.5**
ADCV	**BITLIS_Adilcev**	**0.45**	**139**	*i*	P		**Pb**	**12 09 10.4**	**+0.8**
ADCV				*i*	S		**Sb**	**12 09 19.0**	**+2.4**
ADCV	**BITLIS_Adilcev**	**0.45**	**139**		P		**Pb**	**12 09 10.4**	**+0.8**
ADCV					S		**Sb**	**12 09 19.0**	**+2.4**
GURO	**Guroymak-BITLI**	**0.65**	**203**		PG		**Pb**	**12 09 13.2**	**+0.2**
GURO					SG		**Sb**	**12 09 22.7**	**+0.5**
GURO	**Guroymak-BITLI**	**0.65**	**203**	*e*Pg			**Pb**	**12 09 13.2**	**+0.2**
GURO				*e*Sg			**Sb**	**12 09 22.7**	**+0.5**
AGRB	**Hanur-Agry**	**0.66**	**49**		PG		**Pb**	**12 09 13.5**	**+0.3**
AGRB					SG		**Sb**	**12 09 23.3**	**+0.7**
AGRB	**Hanur-Agry**	**0.66**	**49**	*e*Pg			**Pb**	**12 09 13.5**	**+0.3**
AGRB				*e*Sg			**Sb**	**12 09 23.3**	**+0.7**
VRTB	**Varto-Mus**	**0.69**	**271**		PG		**Pn**	**12 09 16.4**	**+0.7**
EATA	**Eleskirt**	**0.72**	**9**	*i*	P		**Pg**	**12 09 13.4**	**+0.2**
EATA				*i*	S		**Sb**	**12 09 24.8**	**+0.1**
EATA	**Eleskirt**	**0.72**	**9**		P		**Pg**	**12 09 13.4**	**+0.2**
EATA					S		**Sb**	**12 09 24.8**	**+0.1**
BNGL	**BINGOL**	**0.95**	**259**	*i*	P		**Pg**	**12 09 17.3**	**-0.3**
BNGL				*i*	S		**Sb**	**12 09 31.1**	**-0.1**
VANB	**Van**	**0.98**	**124**		PG		**Pg**	**12 09 17.4**	**-0.7**
VANB	**Van**	**0.98**	**124**	*e*Pg			**Pg**	**12 09 17.4**	**-0.7**
BNGB	**Bing^¶|**	**1.31**	**264**		PN		**Pn**	**12 09 23.7**	**-0.4**
SVAN	**Silvan-Diyarba**	**1.34**	**223**		PN		**Pn**	**12 09 24.5**	**0.0**
SVAN	**Silvan-Diyarba**	**1.34**	**223**	*e*Pn			**Pn**	**12 09 24.5**	**0.0**
YEDI	**Yedisu-Bingol**	**1.43**	**282**		PN		**Pg**	**12 09 27.0**	**+0.3**
YEDI	**Yedisu-Bingol**	**1.43**	**282**	*e*Pn			**Pg**	**12 09 27.0**	**+0.3**
BINT	**Bingol**	**1.48**	**260**	*e*Pn			**Pn**	**12 09 23.7**	**-2.7**
SIRT	**Sirnak**	**1.65**	**178**		PN		**Pn**	**12 09 26.5**	**-2.2**
SIRT	**Sirnak**	**1.65**	**178**	*e*Pn			**Pn**	**12 09 26.5**	**-2.2**

SOME ***29*** *12:10:07.4, 40°.73N×78°.57E, h10km*
KRNET ***29*** *12:10:08.0±0.1, 40°.82N×78°.49E, mb3.2*
NNC ***29*** *12:10:13.8±4.1, 45°.36N×77°.81E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=38.5km s-min=26.4km az=2.0*
ISC 29 12:10:10.0±1.8, 40°.88N±0°.08×78°.45E±0°.04, h10km, n33, σ1§96/60, 23C-10D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy** baz=30	**0.98**	**330**	⇓*iP*			**Pg**	**12 10 27.9**	**-1.0**
TARG				⇓*iS*			**Sb**	**12 10 42.9**	**+0.5**
PRZ	**Przheval'sk** baz=58	**1.60**	**359**	⇑*iP*			**Pb**	**12 10 38.9**	**-0.9**
PRZ				⇑*iS*			**Sg**	**12 11 01.5**	**-0.1**
NRN	**Naryn** baz=88	**1.93**	**287**	⇑*iP*			**Pb**	**12 10 44.4**	**-1.1**
NRN				⇑*iS*			**Sg**	**12 11 11.2**	**-0.9**
ULHL	**Ulahol** baz=11	**2.15**	**310**	⇑*iP*			**Pb**	**12 10 48.2**	**-0.9**
ULHL				⇑*iS*			**Sb**	**12 11 17.1**	**+1.2**
SATY	**Saty** 47nm,0.5s	**2.18**	**359**	*eP*			**Pg**	**12 10 50.4**	**-1.4**
SATY				⇑*iS*			**Sg**	**12 11 19.7**	**-0.3**
ZHN	**Zhinishke** 25nm,0.2s	**2.29**	**360**	*eP*			**Pb**	**12 10 50.8**	**-0.7**
ZHN				⇓*iS*			**Sb**	**12 11 20.6**	**+0.7**
UZB	**Uzynbulak** 10.0nm,0.4s	**2.31**	**10**	*eP*			**Pb**	**12 10 51.4**	**-0.4**
UZB				⇓*iS*			**Sb**	**12 11 21.6**	**+1.2**
SHLS	**Shalkode** 16nm,0.3s	**2.40**	**18**	*eP*			**Pg**	**12 10 55.6**	**-0.4**
SHLS				*e*S			**Sg**	**12 11 27.8**	**+0.8**
BOOM	**Boomskoye usch** baz=12	**2.48**	**311**	⇑*iP*			**Pb**	**12 10 52.6**	**-2.1**
BOOM				⇑*iS*			**Sb**	**12 11 24.9**	**-0.4**
MDOK	**Medeo** 17nm,0.5s	**2.51**	**336**		Pn		**Pb**	**12 10 55.1**	**-0.2**
MDOK				⇑Lg			Lg	12 11 28.0	
MDOK	**Medeo** 22nm,0.4s	**2.51**	**336**	*eP*			**Pb**	**12 10 55.2**	**0.0**
MDOK				*e*S			**Sb**	**12 11 27.4**	**+1.1**
KOTS	**Kotyrbulak** 10nm,0.3s	**2.56**	**338**	*eP*			**Pg**	**12 10 57.2**	**-1.7**
KOTS				*e*S			**Sg**	**12 11 30.9**	**-1.2**
PDGK	**Podgornoye** 6.9nm,0.4s	**2.57**	**17**	⇑Pn			**Pb**	**12 10 53.0**	**-3.2**
PDGK				⇓Lg			Lg	12 11 27.8	
PDGK	**Podgornoye** baz=16	**2.57**	**17**	⇓*iP*			**Pb**	**12 10 53.5**	**-2.7**
PDGK				⇓*iS*			**Sb**	**12 11 26.7**	**-1.2**
KPKS	**Kokpek** 36nm,0.4s	**2.59**	**4**	*eP*			**Pb**	**12 10 56.0**	**-0.6**
KPKS				*e*S			**Sb**	**12 11 29.1**	**+0.6**
KURS	**Kuram** 6.1nm,0.4s	**2.62**	**356**	*eP*			**Pg**	**12 10 58.0**	**-2.1**
KURS				⇑*e*S			**Sg**	**12 11 32.4**	**-1.6**
MTBS	**Maitube** 6.4nm,0.3s	**2.71**	**327**	*eP*			**Pg**	**12 11 00.3**	**-1.6**
MTBS				*e*S			**Sg**	**12 11 36.2**	**-0.7**
KST	**Kastek** 29nm,0.6s	**2.85**	**320**	*eP*			**Pg**	**12 11 02.8**	**-1.8**
KST				*e*S			**Sg**	**12 11 40.2**	**-1.3**
KTMS	**Ketmen** 5.3nm,0.3s	**2.93**	**28**	*eP*			**Pb**	**12 11 01.8**	**-0.6**
KTMS				*e*S			**Sb**	**12 11 38.8**	**+0.5**
TKM2	**Tokmak 2** 8.5nm,0.3s	**2.95**	**315**	⇑Pn			**Pb**	**12 10 59.5**	**-3.3**
TKM2				⇑Lg			Lg	12 11 43.2	
TKM2	**Tokmak 2** baz=15	**2.95**	**315**	⇓*iP*			**Pb**	**12 10 59.1**	**-3.7**
TKM2				⇓*iS*			**Sb**	**12 11 36.4**	**-2.5**
DGS	**Degeres** 10.0nm,0.6s	**3.09**	**321**	*eP*			**Pb**	**12 11 05.2**	**+0.1**
DGS				*e*S			**Sb**	**12 11 45.1**	**+2.2**
KTBS	**Karatobe** 5.0nm,0.3s	**3.12**	**336**	*eP*			**Pb**	**12 11 06.7**	**+1.1**
KTBS				*e*S			**Sb**	**12 11 46.7**	**+3.0**
CHKK	**Chushkaly** 6.8nm,0.4s	**3.16**	**340**	*eP*			**Pg**	**12 11 08.1**	**-2.5**
CHKK				*e*S			**Sg**	**12 11 49.6**	**-2.0**
KBK	**Karagaybulak** baz=6.0	**3.17**	**305**	⇑*iP*			**Pn**	**12 11 02.2**	**+2.2**
KBK				⇑*iS*			**Sb**	**12 11 41.4**	**-3.7**
UCH	**Uchtor** baz=97	**3.25**	**296**	⇑*iP*			**Pn**	**12 11 03.1**	**+1.7**
UCH				⇑*iS*			**Sn**	**12 11 43.4**	**+3.1**
ARXS	**Arharly** 12nm,0.4s	**3.36**	**352**	*eP*			**Pb**	**12 11 11.2**	**+1.4**
ARXS				*e*S			**Sg**	**12 11 55.1**	**-2.9**
KUU	**Kurty** 3.7nm,0.2s	**3.39**	**333**	*eP*			**Pb**	**12 11 11.3**	**+1.1**
KUU				*e*S			**Sb**	**12 11 54.9**	**+3.3**
AAK	**Ala-Archa** 4.6nm,0.8s	**3.44**	**302**	⇑Pn			**Pb**	**12 11 12.0**	**+0.9**
AAK				⇑Lg			Lg	12 12 06.9	
AAK	**Ala-Archa** baz=3.0	**3.44**	**302**	⇑*iP*			**Pn**	**12 11 05.9**	**+2.1**
AAK				⇑*iS*			**Sn**	**12 11 47.5**	**+2.8**
DJR	**Jarkent** 2.1nm,0.1s	**3.59**	**16**	*eP*			**Pb**	**12 11 14.7**	**+1.0**
DJR				*e*S			**Sb**	**12 12 00.4**	**+3.2**
KAPS	**Kapalarasan** 1.8nm,0.5s	**4.45**	**8**	*eP*			**Pg**	**12 11 31.6**	**-3.6**
KAPS				*e*S			**Sg**	**12 12 29.1**	**-3.9**
MNAS	**Manas** 1.5nm,0.6s	**4.73**	**292**	⇓Pn			Pb	12 11 27.4	-5.7
MNAS				⇑Lg			Lg	12 12 45.3	
	4.3nm,0.9s								

IDC 29 12:11:27.0±1.8, 1°.52N×127°.39E, h0km, mb3.5/4, mb1 3.6/5, mb1mx3.4/61, mbtmp3.5/5, ML2.9/1, Error ellipse: s-maj=121.0km s-min=20.8km az=70.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi** 0.0nm,0.3s,baz=15,slow=12,SNR=2.2	**19.57**	**185**		P		P	12 15 56.4	-0.2
WRA	**Warramunga Arr** 0.5nm,0.6s,baz=342,slow=11,SNR=15	**22.39**	**163**		P		P	12 16 27.2	0.0
ASAR	**Alice Springs** 0.6nm,0.8s,baz=347,slow=10.0,SNR=5.7	**25.82**	**166**		P		P	12 17 00.3	+0.1
MKAR	**Makanchi Array** 0.4nm,0.4s,baz=117,slow=7.3,SNR=6.7	**59.74**	**326**		P		P	12 21 33.9	+0.1
KURBB	**Kurchatov Arra** 0.3nm,0.4s,baz=131,slow=6.5,SNR=3.4	**63.95**	**328**		P		P	12 22 01.7	-0.3

IDC 29 12:21:11.8±23.0, 17°.74S×177°.81W, h480km±220km, mb3.6/6, mb1 3.7/6, mb1mx3.0/48, mbtmp4.5/6, Error ellipse: s-maj=152.6km s-min=66.7km az=97.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CTA	**Charters Tower** 1.2nm,0.3s,baz=91,slow=12,SNR=7.5	**34.03**	**260**		P		P	12 27 15.3	+0.2
PMG	**Port Moresby** 7.7nm,0.7s,baz=63,slow=6.8,SNR=2.6	**34.99**	**279**		P		P	12 27 23.3	+0.2
WRA	**Warramunga Arr** 2.3nm,0.5s,baz=95,slow=7.2,SNR=34	**45.22**	**259**		P		P	12 28 44.7	-0.7
ASAR	**Alice Springs** 10nm,0.6s,baz=88,slow=7.9,SNR=13	**45.38**	**254**		P		P	12 28 46.7	+0.1
SIJI	**Sorong** 15nm,0.7s,baz=134,slow=11,SNR=5.2	**52.75**	**283**		P		P	12 29 41.3	-0.2
FITZ	**Fitzroy Crossi** 0.6nm,0.3s,baz=98,slow=7.1,SNR=2.0	**53.62**	**260**		P		P	12 29 47.6	0.0
BRTR	**Keskin Array B** 0.8nm,0.5s,baz=101,slow=5.2,SNR=3.8	**145.06**	**315**		PKPbc		PKPdf	12 39 53.8	-0.5
MMAI	**Mount Meron Ar** 0.6nm,0.3s,baz=100,slow=5.0,SNR=2.3	**146.53**	**303**		PKPbc		PKPbc	12 39 59.3	+0.1
GERES	**GERESS Array B** 0.2nm,0.3s,baz=344,slow=3.3,SNR=4.5	**147.59**	**346**		PKPbc		PKPbc	12 40 00.7	-0.9

MEX 29 12:22:25.3±0.8, 17°.19N×91°.88W, h5km, MD3.9, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CCIG	**Comitan**	**0.93**	**195**	*eP*			Pg	12 22 38.9	-4.3
CCIG				*i*	S		Sg	12 22 50.8	-4.5
TGIG		**1.26**	**251**	*i*	P		Pg	12 22 45.3	-4.1
TGIG				*i*	S		Sg	12 23 02.4	-3.3
PCIG		**1.96**	**221**	*eP*			Pn	12 22 55.8	-3.3
PCIG				*e*S			Sn	12 23 19.4	-4.7

IDC 29 12:27:40.6±408.0, 47°.57N×48°.40E, h0km, Error ellipse: s-maj=161.3km s-min=135.3km az=21.0, Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF** baz=251,slow=310,SNR=2.4	**6.94**	**62**	*i*				13 09 30.0	
I43RU	**DUBNA INFRASONI** baz=140,slow=324,SNR=1.3	**1.44**	**327**	*i*				13 41 40.0	
I26DE	**FREYUNG INFRAS** baz=82,slow=309,SNR=0.8	**23.04**	**286**	*i*				14 48 50.0	

ISCJB ***29*** *12:28:54.3±0.7, 23°.90S±0°.05×136°.99E±0°.04, h10km, Error ellipse: s-maj=7.9km s-min=5.8km az=13.9*
IDC ***29*** *12:28:55.0±1.8, 23°.90S×137°.02E, h0km, mb1 3.9/5, mb1mx3.6/47, mbtmp3.7/5, ML3.8/5, Error ellipse: s-maj=21.8km s-min=18.2km az=35.0*
AUST ***29*** *12:28:56.4±0.3, 23°.93S×136°.88E, h10km, Error ellipse: s-maj=4.2km s-min=2.7km az=178.0*
ISC 29 12:28:54.2±0.8, 23°.96S±0°.06×136°.91E±0°.05, h10km, n18, σ2§92/28, Northern Territory

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AS01	**Alice Springs** baz=2.7	**2.73**	**276**		P		**Pn**	**12 29 40.7**	**+2.5**
AS01					S		**Sn**	**12 30 13.5**	**+2.2**
AS04	**Alice Springs** baz=2.7	**2.75**	**276**		P		**Pn**	**12 29 40.6**	**+2.1**
AS04					S		**Sn**	**12 30 13.4**	**+1.6**
AS14	**Alice Springs** baz=2.7	**2.77**	**276**		P		**Pn**	**12 29 40.0**	**+1.3**
AS15	**Alice Springs** baz=2.7	**2.77**	**276**		P		**Pn**	**12 29 41.3**	**+2.6**
ASAR	**Alice Springs** 23nm,0.3s,baz=96,slow=17,SNR=302	**2.77**	**275**		Pn		**Pb**	**12 29 43.9**	**0.0**
ASAR					Sn		**Sn**	**12 30 16.9**	**+4.6**
QIS	**Mount Isa** baz=4.2	**4.21**	**37**		P		**Pn**	**12 30 02.0**	**+3.5**
QIS					S		**Sn**	**12 30 51.2**	**+3.5**
WR8	**Warramunga Arr** baz=4.5	**4.57**	**330**		P		**Pn**	**12 30 04.7**	**+1.2**
WR8					S		**Sn**	**12 30 58.7**	**+1.9**
WR6	**Warramunga Arr** baz=4.6	**4.59**	**330**		P		**Pn**	**12 30 05.0**	**+1.2**
WC3	**Warramunga Arr** baz=4.6	**4.63**	**329**		P		**Pn**	**12 30 07.1**	**+2.8**
WRA	**Warramunga Arr** 1.4nm,0.3s,baz=141,slow=14,SNR=16	**4.66**	**329**		Pn		**Pn**	**12 30 05.7**	**+1.0**
WRA	2.0nm,0.3s,baz=151,slow=18,SNR=11				Pg		**Pg**	**12 30 20.7**	**-2.8**
WRA	4.5nm,0.3s,baz=153,slow=24,SNR=6.6				Sn		**Sn**	**12 30 58.6**	**-0.2**
WC1	**Warramunga Arr** baz=4.6	**4.67**	**329**		P		**Pn**	**12 30 06.3**	**+1.4**
WB4	**Warramunga Arr** baz=4.7	**4.68**	**329**		P		**Pn**	**12 30 06.3**	**+1.3**
QLP	**Quilpie** baz=7.2	**7.12**	**113**		P		**Pn**	**12 30 40.5**	**+1.9**
STKA	**Stephens Creek** 0.6nm,0.3s,baz=336,slow=14,SNR=3.2	**8.91**	**153**		Pn		**Pn**	**12 31 04.3**	**+1.3**
STKA	1.5nm,0.3s,baz=328,slow=19,SNR=4.0				Sn		**Sn**	**12 32 38.3**	**-5.1**
STKA					Lg		Lg	12 33 35.4	
STKA	**Stephens Creek** 0.9nm,0.3s,baz=270,slow=20,SNR=1.4	**8.91**	**153**		P		**Pn**	**12 31 05.8**	**+2.8**
CTA	**Charters Tower** baz=9.0	**9.48**	**68**		Pn		**Pn**	**12 31 13.2**	**+2.2**
CTA	1.0nm,0.3s,baz=247,slow=13,SNR=15				Sn		**Sn**	**12 32 52.9**	**-4.8**
CTA	0.4nm,0.3s,baz=257,slow=18,SNR=1.4				Lg		Lg	12 33 52.3	
CTA	**Charters Tower** baz=9.5	**9.48**	**68**		P		**Pn**	**12 31 12.7**	**+1.7**
FITZ	**Fitzroy Crossi** 0.6nm,0.3s,baz=97,slow=11,SNR=13	**12.03**	**297**		Pn		**Pn**	**12 31 47.0**	**+1.2**
FITZ	0.2nm,0.3s,baz=293,slow=6.9,SNR=4.0				Sn		**Sn**	**12 33 53.7**	**-6.5**
FITZ	0.6nm,0.3s,baz=47,slow=12,SNR=6.1				Lg		Lg	12 35 05.9	

DDA ***29*** *12:39:43.6, 37°.09N×28°.52E, h7km, Ml2.3, Suspected Mining explosion.*
ISCJB ***29*** *12:39:44.1±0.5, 37°.08N±0°.03×28°.55E±0°.04, h0km, Error ellipse: s-maj=5.3km s-min=4.0km az=138.8*
CSEM ***29*** *12:39:44.4±0.3, 37°.09N×28°.54E, h1km, ML2.5, Error ellipse: s-maj=8.2km s-min=5.8km az=43.0, Suspected Mining explosion.*
ISK ***29*** *12:39:44.1, 37°.02N×28°.50E, h12km, ML2.5/6*
ISC 29 12:39:44.9±1.1, 37°.11N±0°.02×28°.54E±0°.03, h0km, n26, σ1§61/40, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.20**	**277**		PG		**Pg**	**12 39 49.1**	**+0.3**
YER					SG		**Sg**	**12 39 52.7**	**+1.2**
YER	**Yerkesik**	**0.20**	**277**	*e*Pg			**Pg**	**12 39 49.1**	**+0.3**
YER				*e*Sg			**Sg**	**12 39 52.7**	**+1.2**
TURN	**Turunc**	**0.24**	**167**		PG		**Pg**	**12 39 51.0**	**+1.5**
TURN					SG		**Sg**	**12 39 56.1**	**+3.4**
TURN	**Turunc**	**0.24**	**167**	*i*	P		**Pg**	**12 39 50.6**	**+1.1**
TURN				*i*	S		**Sg**	**12 39 57.5**	**+4.8**
TURN	**Turunc**	**0.24**	**167**		P		**Pg**	**12 39 50.7**	**+1.1**
TURN	**Turunc**	**0.24**	**167**	*e*Pg			**Pg**	**12 39 51.0**	**+1.5**
TURN				*e*Sg			**Sg**	**12 39 56.1**	**+3.4**
TURN					S			12 39 57.5	
DALY	**Dalyan (Mu¨la**	**0.31**	**162**		PG		**Pg**	**12 39 49.4**	**-1.4**
DALY					SG		**Sg**	**12 39 53.6**	**-1.1**
DALY	**Dalyan (Mu¨la**	**0.31**	**162**	*i*	P		**Pg**	**12 39 48.5**	**-2.3**
DALY				*i*	S		**Sg**	**12 39 54.7**	**0.0**
DALY	**Dalyan (Mu¨la**	**0.31**	**162**		P		**Pg**	**12 39 48.5**	**-2.3**
DALY	**Dalyan (Mu¨la**	**0.31**	**162**	*e*Pg			**Pg**	**12 39 49.4**	**-1.4**
DALY				*e*Sg			**Sg**	**12 39 53.6**	**-1.1**
DALY					S		**Sg**	**12 39 54.7**	**0.0**
TAVA	**DENIZLI_Tavas**	**0.47**	**40**	*i*	P		**Pg**	**12 39 53.6**	**-0.3**
TAVA				*i*	S		**Sg**	**12 40 00.4**	**+0.5**
TAVA	**DENIZLI_Tavas**	**0.47**	**40**		P		**Pg**	**12 39 53.6**	**-0.3**
TAVA					S		**Sg**	**12 40 00.4**	**+0.5**
MRSB	**Marmaris-Mugla**	**0.48**	**215**		PG		**Pg**	**12 39 52.2**	**-1.9**
MRSB	**Marmaris-Mugla**	**0.48**	**215**	*e*Pg			**Pg**	**12 39 52.2**	**-1.9**
FETY	**Fethiye**	**0.65**	**137**		PG		**Pg**	**12 39 56.5**	**-0.8**
FETY	**Fethiye**	**0.65**	**137**	*e*Pg			**Pg**	**12 39 56.5**	**-0.8**
AYDN	**Tasoluk**	**0.76**	**317**	*i*	P		**Pg**	**12 39 59.2**	**-0.3**
AYDN				*i*	S		**Sb**	**12 40 11.1**	**-0.9**
AYDN	**Tasoluk**	**0.76**	**317**		P		**Pg**	**12 39 59.2**	**-0.3**
AYDN					S		**Sb**	**12 40 11.1**	**-0.9**
DAT	**Datca**	**0.86**	**244**		PG		**Pg**	**12 39 59.7**	**-1.6**
DAT	**Datca**	**0.86**	**244**	*e*Pg			**Pg**	**12 39 59.7**	**-1.6**
BODT	**Bodrum**	**0.98**	**268**		PG		**Pg**	**12 40 03.0**	**-0.7**
BODT	**Bodrum**	**0.98**	**268**	*e*Pg			**Pg**	**12 40 03.0**	**-0.7**
AKAS	**Kas**	**1.23**	**135**		PN		**Pg**	**12 40 07.1**	**-1.3**
AKAS	**Kas**	**1.23**	**135**	*i*	P		**Pg**	**12 40 07.4**	**-1.0**
AKAS				*i*	S		**Sn**	**12 40 27.6**	**+0.8**
AKAS	**Kas**	**1.23**	**135**	*e*Pn			**Pg**	**12 40 07.1**	**-1.3**
AKAS	**Kas**	**1.23**	**135**		P		**Pg**	**12 40 07.4**	**-1.0**

MOS ***29*** *13:00:22.5±0.9, 15°.01N×92°.96W, h53km, mb5.4/45, Error ellipse: s-maj=11.3km s-min=4.6km az=110.5*
MEX ***29*** *13:00:24.2±1.0, 14°.76N×93°.31W, h20km±90km, MD5.3*
ISCJB ***29*** *13:00:24.8±0.2, 15°.03N±0°.02×93°.06W±0°.01, h73km±2km, mb5.1/315, Error ellipse: s-maj=3.0km s-min=1.8km az=35.0*
IDC ***29*** *13:00:25.6±2.1, 14°.98N×92°.90W, h73km±18km, mb4.4/27, mb1 4.6/29, mb1mx4.4/50, mbtmp4.8/29, MS4.2/41, Ms1 4.2/41, ms1mx4.1/48, Error ellipse: s-maj=18.0km s-min=9.0km az=49.0*
NEIC ***29*** *13:00:26.1±0.4, 14°.94N×93°.06W, h71km±3km, mb5.2/300, MD4.8(MEX), Error ellipse: s-maj=4.2km s-min=2.6km az=215.0*
NEIC Felt at Acapetahua, San Cristobal de Las Casas, Tapachula and Villa Corzo. Felt [II] at San Salvador, El Salvador. Also felt at Delgado. Felt at Huehuetenango, Jocotenango, Panajachel, Quetzaltenango, San Pedro La Laguna and Santa Cruz La Laguna, Guatemala.
GCMT ***29*** *13:00:26.2±0.2, 14°.92N×93°.34W, h49km±1km, MW5.2/105, Moment Tensor Solution. s86,c120; s105,c170; Duration: 1§0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.79±.17; $M_{\theta\theta}$-2.70±.15; $M_{\phi\phi}$5.49±.16; $M_{r\theta}$-2.03±.13; $M_{\theta\phi}$-4.39±.13; $M_{\phi r}$-4.70±.16; Best double couple: $M_0$8.22800×10^{16} NP1:ϕ_s14.00000°, δ76.00000°, λ-45.00000°. NP2:ϕ_s117.00000°, δ47.00000°, λ-161.00000°. Principal axes: T 8.5860, Plg19.0000°, Azm72.0000°; N -0.7160, Plg44.0000°, Azm181.0000°; P -7.8700, Plg41.0000°, Azm325.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 29 13:00:25.0±0.7, 14°.92N±0°.04×93°.16W±0°.04, h68km±5km, n1148, σ1§54/1161, mb5.2/316, 6C-7D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PCIG		**0.79**	**356**	*eP*			**Pn**	**13 00 39.0**	**-1.7**
PCIG				*e*S			**Sn**	**13 00 50.0**	**-2.3**
PCIG		**0.79**	**356**	*eP*			**Pn**	**13 00 39.0**	**-1.7**
PCIG				*e*S			**Sn**	**13 00 50.0**	**-2.3**
THIG		**0.86**	**90**	*eP*			**Pn**	**13 00 40.4**	**-1.2**
THIG				*e*S			**Sn**	**13 00 52.4**	**-1.6**
THIG		**0.86**	**90**	*eP*			**Pn**	**13 00 40.4**	**-1.2**
THIG				*e*S			**Sn**	**13 00 52.4**	**-1.6**
CCIG	**Comitan**	**1.68**	**36**	*e*Pn			**Pn**	**13 00 54.4**	**+2.0**
CCIG				*e*Sn			**Sn**	**13 01 14.4**	**+1.3**
CCIG	**Comitan**	**1.68**	**36**	*eP*			**Pn**	**13 00 53.7**	**+1.3**
CCIG				*e*S			**Sn**	**13 01 15.4**	**+2.3**
TGBT	**Tuxtla Gutierr**	**1.85**	**2**	*eP*			**Pn**	**13 00 54.9**	**+0.3**
TGBT				*e*S			**Sn**	**13 01 17.1**	**+0.1**
TGIG		**1.85**	**1**	*eP*			**Pn**	**13 00 54.7**	**0.0**
TGIG				*i* S			**Sn**	**13 01 18.6**	**+1.5**
IXG	**Ixpaco**	**2.72**	**105**	*eP*			**Pn**	**13 01 06.5**	**+0.1**
HUIG	**Huatulco**	**2.97**	**287**	*eP*			**Pn**	**13 01 05.9**	**-3.9**
HUIG	**Huatulco**	**2.97**	**287**	*eP*			**Pn**	**13 01 05.9**	**-3.9**
HUIG				*i* S			**Sn**	**13 01 39.7**	**-4.6**
RTR	**El Retiro**	**3.55**	**106**	*eP*			**Pn**	**13 01 18.5**	**+0.7**
SBLS	**San Blas**	**3.59**	**107**	*eP*			**Pn**	**13 01 19.2**	**+0.8**
SNJE	**San Jose**	**3.59**	**106**	*eP*			**Pn**	**13 01 18.9**	**+0.4**
CEDA	**San Andres**	**3.81**

LFRS El Faro 4.17 107 eP Pn 13 01 26.1 -0.2
SNVI San Vicente 4.38 107 eP Pn 13 01 31.1 +2.0
SNVI eS Sn 13 02 21.8 +2.7
TECA Tecapa 4.73 107 eP Pn 13 01 33.8 -0.1
VSM San Miguel 4.96 107 eP Pn 13 01 39.0 +1.7
TPIG Tehuac#an 5.33 311 eP Pn 13 01 41.8 -0.3
TPIG i S Sn 13 02 41.0 -1.3
LVIG Laguna Verde 5.71 327 ePn Pn 13 01 45.0 -2.2
LVIG eSn Sn 13 02 44.1 -7.1
LVIG Laguna Verde 5.71 327 eP Pn 13 01 44.2 -2.9
LVIG eS Sn 13 02 45.7 -5.5
TGUH Tegucigalpa,Un 5.76 98 ePn Pn 13 01 48.6 +0.7
TGUH Tegucigalpa,Un 5.76 98 eP Pn 13 01 48.5 +0.7
TGUH eS Sn 13 02 53.6 +0.9
TLIG Tlapa 5.82 298 ePn Pn 13 01 49.2 +0.3
TLIG eSn Sn 13 02 49.4 -5.0
TLIG Tlapa 5.82 298 eP Pn 13 01 48.9 -0.1
TLIG i S Sn 13 02 55.5 +1.1
HMTT Tlapaneco 5.92 300 eP Pn 13 01 49.9 -0.4
HMTT eS Sn 13 02 54.9 -1.9
PHPU Puebla 6.31 311 eP Pn 13 01 59.1 +3.4
PPM Popocatepetl 6.66 309 eP Pn 13 02 02.6 +1.8
PPM eS Sn 13 03 15.8 +0.2
CNGN Cerro Negro 6.72 110 eP Pn 13 02 02.0 +0.9
CNGN eS Sn 13 03 20.8 +4.5
ESTN Estel 6.83 104 ePn Pn 13 02 03.7 +1.1
ESTN eSn Sn 13 03 14.8 -4.3
ESTN Estel 6.83 104 eP Pn 13 02 03.2 +0.6
ESTN eS Sn 13 03 26.0 +6.9
MYIG MØrida 6.83 28 ePn Pn 13 02 03.1 +0.6
MYIG eSn Sn 13 03 08.8 -10
MYIG MØrida 6.83 28 eP Pn 13 02 02.6 +0.1
MYIG i S Sn 13 03 22.2 +3.4
YAIG Yautepec 6.88 306 eP Pn 13 02 04.3 +0.8
YAIG i S Sn 13 03 21.2 +0.7
MOMN Momotombo 6.90 110 eP Pn 13 02 03.5 0.0
RCON San Juan de Ri 6.94 101 eP Pn 13 02 04.5 +0.3
RCON eS Sn 13 03 28.0 +6.3
COPN Copaltepe 6.94 112 eP Pn 13 02 03.8 -0.3
PLIG Platanillo 7.00 300 i P Pn 13 02 05.6 +0.7
PLIG eS Sn 13 03 25.6 +2.5
APYN Apoyeque 7.13 111 eP Pn 13 02 07.0 +0.2
CAIG El Cayaco 7.16 288 eP Pn 13 02 05.7 -1.4
CAIG eS Sn 13 03 29.6 +2.6
XAVN Gruta Xavier 7.19 112 eP Pn 13 02 09.4 +1.9
UNM Universidad Na 7.24 308 eP Pn 13 02 10.3 +1.9
UNM eS Sn 13 03 28.2 -1.1
MGAN Managua 7.26 111 eP Pn 13 02 10.1 +1.7
MGAN eS Sn 13 03 32.0 +2.5
MGAN IAML 13 03 50.6
comp=Z,506nm,0.8s
MATN Matagalpa 7.29 105 eP Pn 13 02 09.4 +0.4
MATN eS Sn 13 03 35.1 +4.6
ARIG Puente Sto Nin 7.66 297 eP Pn 13 02 14.6 +0.6
ARIG eS Sn 13 03 38.4 -0.9
BOAB BOACO BROADBAN 7.68 108 eP Pn 13 02 15.4 +1.2
DEIG Demacu 7.75 315 eP Pn 13 02 14.7 -0.6
DEIG eS Sn 13 03 40.4 -1.4
CONN Concepcion 8.05 114 eP Pn 13 02 22.3 +3.0
CRZ1 La Cruz 8.27 117 eP Pn 13 02 22.5 +0.3
VCR Vista de Mar 8.75 122 eP Pn 13 02 29.8 +0.8
MESS Mesas 8.80 117 eP Pn 13 02 29.6 0.0
MOIG Morelia 9.01 303 ePn Pn 13 02 34.6 +2.0
MOIG Morelia 9.01 303 eP Pn 13 02 34.6 +2.0
MOIG eS Sn 13 04 12.0 -0.8
JRQG Juriquilla Cam 9.02 311 ePn Pn 13 02 35.0 +2.3
ESPN Las Esperanzas 9.03 106 ePn Pn 13 02 32.4 -0.2
ESPN Las Esperanzas 9.03 106 eP Pn 13 02 33.0 +0.4
JTS JuntasAbangare 9.23 119 P Pn 13 02 35.4 -0.1
comp=Z,21nm,0.3s,baz=346,slow=6.1,SNR=30
JTS S Sn 13 04 18.9 +1.0
comp=Z,3.4nm,0.3s,baz=294,slow=19,SNR=1.3
JTS JuntasAbangare 9.23 119 eP Pn 13 02 37.2 +1.8
SRA1 San Ram^‡n 9.74 119 eP Pn 13 02 44.2 +1.7
CGA2 Cerro Gallo 2 9.78 119 eP Pn 13 02 44.9 +1.8
HDC Heredia 10.09 118 ePn Pn 13 02 49.7 +2.4
HDC eSn Sn 13 04 50.5 +12
HDC Heredia 10.09 118 eP Pn 13 02 49.0 +1.7
HDC eS Sn 13 04 42.6 +3.6
MMIG Aquila 10.33 290 i P Pn 13 02 52.2 -0.1
MMIG eS Sn 13 04 43.0 -1.5
QCR1 Quepos 10.34 121 eP Pn 13 02 50.9 +0.3
CVTR Volcan Turrial 10.39 117 eP Pn 13 02 52.0 +0.5
VTR0 Volcan Turrial 10.39 117 eP Pn 13 02 53.8 +2.2
URSC Urasca 10.46 118 eP Pn 13 02 53.4 +1.0
BUS Buena Vista 10.62 119 eP Pn 13 02 55.3 +0.5
LNIG Linares 11.56 330 ePn Pn 13 03 07.9 +0.6
ZAIG Zacatecas 11.84 313 ePn Pn 13 03 12.6 +1.3
TBS2 11.94 119 eP Pn 13 03 12.7 +0.1
TBS2 eS Sn 13 05 27.3 +3.1
WBCY West Bay, Gran 12.08 67 ePn Pn 13 03 13.3 -1.0
FSCY Frank Sound, G 12.25 67 ePn Pn 13 03 16.7 +0.1
KVTX Kingsville 13.32 341 ePn Pn 13 03 30.6 -0.5
LCCY Blossom Villag 13.35 67 eP Pn 13 03 32.5 +1.0
CBCY The Bluff, Cay 13.66 68 ePn Pn 13 03 35.5 -0.2
BCIP Isla Barro Col 14.22 112 ePn Pn 13 03 45.3 +2.2
BCIP Isla Barro Col 14.22 112 eP Pn 13 03 42.7 -0.4
BCIP Isla Barro Col 14.22 112 eP Pn 13 03 43.3 +0.1
ZANG Zanguenga, Cho 14.28 113 eP Pn 13 03 43.0 -0.9
AZU Azuero 14.47 118 eP Pn 13 03 46.9 +0.5
833A Chaparral WMA, 14.54 338 P Pn 13 03 46.6 -0.6
baz=155,SNR=29
833A Chaparral WMA, 14.54 338 ePn Pn 13 03 47.7 +0.5
062Z Marathon 14.99 48 P Pn 13 03 50.6 -2.3
baz=231
541A Lake Charles 15.07 360 P Pn 13 03 54.4 +0.4
baz=180
541A Lake Charles 15.07 360 ePn Pn 13 03 54.6 +0.6
comp=Z,283nm,1.0s
MCJ Malvern 15.14 76 i P P 13 03 58.1 -0.7
543A St. Martinvill 15.14 4 P Pn 13 03 54.9 -0.1
baz=184
543A St. Martinvill 15.14 4 ePn P 13 03 57.0 -1.7
comp=Z,448nm,0.4s
542A Morse 15.15 2 P Pn 13 03 54.7 -0.3
baz=182
HKT Hockley 15.16 351 ePn Pn 13 03 55.8 +0.7
comp=Z,805nm,1.8s
HKT Hockley 15.16 351 eP Pn 13 03 55.8 +0.7
HKT i pmax pmax
comp=Z,805nm,1.8s
MTDJ Mount Denham 15.33 75 ePn Pn 13 03 56.5 -1.1
comp=Z,287nm,0.8s
BBJ Bamboo Saint A 15.61 75 i P Pn 13 04 01.5 +0.5
PCJ Portland Cotta 15.61 77 i P Pn 13 04 01.4 +0.4
442A Mamou 15.74 2 P Pn 13 04 02.2 -0.3
baz=182
PAYG Puerto Ayora 15.75 169 ePn Pn 13 04 03.1 +0.3
comp=Z,208nm,1.5s
441A DeRidder 15.76 360 P Pn 13 04 02.8 0.0
baz=180,SNR=6.9
059Z Ave Maria 15.78 42 P Pn 13 04 01.3 -1.7
baz=226
061Z Ochoppi 15.81 45 P Pn 13 04 02.0 -1.5
baz=228,SNR=12
443A Delano Plantat 15.82 4 P Pn 13 04 02.8 -0.8
baz=184
444A Pine Grove 15.88 8 P Pn 13 04 03.8 -0.6
baz=188
445A Amite 15.95 9 P Pn 13 04 04.4 -0.8
baz=190
STH Stony Hill 15.99 76 i P Pn 13 04 04.7 -1.2
058A Arcadia 16.06 39 P Pn 13 04 05.1 -1.5
baz=223,SNR=7.2
GWJ Greenwich 16.06 76 i P Pn 13 04 07.5 +0.6
446A Poplarville 16.18 12 P Pn 13 04 07.9 -0.1
baz=193,SNR=7.7
957A Wimauma 16.25 37 P Pn 13 04 08.8 -0.3
baz=220,SNR=8.2
957A Wimauma 16.25 37 ePn Pn 13 04 09.7 +0.7
comp=Z,329nm,0.9s
435B Jarrell 16.31 346 P Pn 13 04 08.9 -0.8
baz=164,SNR=16
435B Jarrell 16.31 346 ePn Pn 13 04 09.6 -0.2
comp=Z,175nm,0.8s
447A Lucedale 16.34 14 P Pn 13 04 09.6 -0.4
baz=195
447A Lucedale 16.34 14 ePn Pn 13 04 05.4 -4.7
comp=Z,252nm,1.0s
341A Kurthwood 16.34 360 P Pn 13 04 09.5 -0.6
baz=180,SNR=9.8
341A Kurthwood 16.34 360 ePn Pn 13 04 08.8 -1.4
comp=Z,174nm,0.8s

343A Vidalia 16.35 5 P Pn 13 04 09.7 -0.5
baz=185,SNR=6.4
342A Flagon Creek P 16.40 3 P Pn 13 04 10.4 -0.4
baz=182,SNR=8.1
342A Flagon Creek P 16.40 3 ePn Pn 13 04 10.5 -0.3
comp=Z,126nm,0.8s
059A Moore Haven 16.41 41 ePn Pn 13 04 10.6 -0.4
comp=Z,188nm,0.8s
060Z West Palm Beac 16.41 44 P Pn 13 04 09.7 -1.3
baz=228,SNR=6.4
958A Wauchula 16.47 38 P Pn 13 04 10.0 -1.8
baz=222,SNR=6.3
345A Thompson Farm, 16.57 9 P Pn 13 04 12.9 0.0
baz=190,SNR=8.9
344A Westbrook Farm 16.61 7 P Pn 13 04 13.4 0.0
baz=188,SNR=10.0
344A Westbrook Farm 16.61 7 ePn Pn 13 04 14.1 +0.6
comp=Z,176nm,1.0s
JCT Junction City 16.65 340 P Pn 13 04 13.0 -1.0
baz=157,SNR=50
JCT Junction City 16.65 340 ePn Pn 13 04 14.3 +0.2
comp=Z,128nm,1.0s
JCT Junction City 16.65 340 eP Pn 13 04 14.3 +0.2
JCT pmax pmax
comp=Z,128nm,1.0s
448A Bay Minette 16.66 16 P Pn 13 04 14.1 -0.1
baz=198
CAPC Capurgana 16.68 110 eP Pn 13 04 11.8 -2.6
449A Pace 16.69 18 P Pn 13 04 14.3 -0.1
baz=200
HPIG 16.70 318 ePn P 13 04 15.7 -0.5
comp=Z,77nm,1.0s
857A Zephyrhills 16.71 36 P Pn 13 04 13.5 -1.2
baz=219
346A Big Creek Wild 16.74 11 P Pn 13 04 14.0 -1.1
baz=192
346A Big Creek Wild 16.74 11 ePn Pn 13 04 15.4 +0.3
comp=Z,183nm,0.9s
552A Lynn Haven 16.79 24 P Pn 13 04 15.9 +0.3
baz=207
NATX Nacogdoches 16.82 356 P Pn 13 04 15.0 -1.1
baz=175,SNR=6.6
NATX Nacogdoches 16.82 356 ePn P 13 04 16.9 -0.3
comp=Z,351nm,1.4s
450A Crestview 16.92 20 P P 13 04 18.0 -0.4
baz=202
347A Saraland 16.95 14 P Pn 13 04 17.7 +0.1
baz=195
243A Waterproof 16.96 5 P Pn 13 04 17.3 -0.4
baz=185
060A Indiantown 16.96 43 P P 13 04 18.4 -0.4
baz=227
060A Indiantown 16.96 43 ePn P 13 04 18.5 -0.2
comp=Z,301nm,0.8s
959A Okeechobee 16.96 40 P Pn 13 04 16.3 -1.6
baz=224
241A Mo Tay, Goldon 17.03 1 P Pn 13 04 18.1 -0.5
baz=180,SNR=7.2
241A Mo Tay, Goldon 17.03 1 ePn Pn 13 04 18.9 +0.2
comp=Z,223nm,1.0s
451A Vernon 17.04 22 P Pn 13 04 18.1 -0.8
baz=205
DWPF Disney Wildern 17.05 38 P Pn 13 04 16.9 -2.1
baz=222
DWPF Disney Wildern 17.05 38 ePn P 13 04 19.9 +0.1
comp=Z,1µm,2.0s
240A Hunter Patters 17.05 358 P Pn 13 04 18.2 -0.8
baz=178,SNR=11
240A Hunter Patters 17.05 358 ePn P 13 04 20.4 +0.7
comp=Z,252nm,1.0s
242A Grayson 17.09 3 P Pn 13 04 19.1 -0.3
baz=183,SNR=9.5
348A Jackson 17.11 15 P Pn 13 04 19.7 0.0
baz=197
348A Jackson 17.11 15 ePn P 13 04 20.5 +0.1
comp=Z,352nm,1.3s
BRAL Brewton 17.12 18 P Pn 13 04 19.8 +0.1
baz=200,SNR=6.4
BRAL Brewton 17.12 18 ePn P 13 04 20.6 +0.1
comp=Z,215nm,0.9s
655A Horseshoe Beac 17.16 31 P Pn 13 04 19.8 -0.4
baz=214
858A St. Cloud 17.17 38 P Pn 13 04 19.8 -0.6
baz=222
553A Crawfordville 17.19 26 P Pn 13 04 19.5 -1.1
baz=209,SNR=11
244A Avery, Jackson 17.20 7 P Pn 13 04 20.9 +0.2
baz=188,SNR=20
349A Repton 17.25 17 P Pn 13 04 21.1 -0.3
baz=199,SNR=22
245A Little AP, Sta 17.30 9 P Pn 13 04 21.6 -0.3
baz=190
757A Oxford 17.32 34 P Pn 13 04 21.9 -0.4
baz=218,SNR=8.0
TX31 Lajitas Ar. Si 17.32 328 eP P 13 04 23.8 +0.9
TXAR Lajitas Array 17.32 328 P P 13 04 23.5 +0.6
comp=Z,1.0nm,0.3s,baz=148,slow=13,SNR=187
TXAR LR LR 13 12 09.8
comp=Z,489nm,18.1s,baz=0.0,slow=40
859A Kempfer Cattle 17.33 39 P Pn 13 04 20.8 -1.7
baz=223,SNR=10
VBMS Vicksburg 17.39 8 P Pn 13 04 22.7 -0.4
baz=188,SNR=5.6
VBMS Vicksburg 17.39 8 ePn P 13 04 24.8 +1.3
comp=Z,161nm,0.8s
656A Willston 17.41 33 P Pn 13 04 22.2 -1.2
baz=216,SNR=17
656A Willston 17.41 33 eP P 13 04 24.1 +0.4
comp=Z,274nm,1.0s
246A Jackson Lee, B 17.41 12 P Pn 13 04 23.1 -0.3
baz=193
554A Perry 17.43 28 P P 13 04 25.1 +1.1
baz=212
WHTX Lake Whitney, 17.45 348 P Pn 13 04 23.2 -0.6
baz=166,SNR=16
WHTX Lake Whitney, 17.45 348 eP P 13 04 25.6 +1.5
comp=Z,175nm,1.0s
452A Marianna 17.46 23 P P 13 04 24.7 +0.4
baz=206,SNR=12
247A Quitman 17.56 13 P Pn 13 04 24.4 -0.7
baz=194
350A Dozier 17.57 20 P Pn 13 04 24.9 -0.5
baz=202
142A Monroe 17.59 3 P Pn 13 04 24.8 -0.7
baz=184,SNR=8.9
141A Papa Simpson, 17.61 1 P Pn 13 04 25.1 -0.7
baz=180,SNR=9.5
140A Cam and Jess, 17.65 359 P P 13 04 26.4 0.0
baz=178,SNR=11
140A Cam and Jess, 17.65 359 eP P 13 04 28.5 +2.1
comp=Z,462nm,1.1s
351A Pinckard 17.69 22 P Pn 13 04 24.9 -1.9
baz=204,SNR=9.1
143A Socs Landing, 17.78 5 P P 13 04 26.9 -0.9
baz=185,SNR=6.3
143A Socs Landing, 17.78 5 eP Pn 13 04 28.0 +0.1
comp=Z,205nm,0.9s
248A Dixon Mills 17.80 15 P P 13 04 26.6 -1.4
baz=197
555A McAlpin 17.80 30 P P 13 04 27.6 -0.5
baz=214,SNR=10
555A McAlpin 17.80 30 eP Pn 13 04 29.5 +1.3
comp=Z,162nm,0.7s
144A Alexander Plac 17.81 8 P P 13 04 27.9 -0.2
baz=188
453A Whigham 17.82 26 P P 13 04 25.7 -2.5
baz=209
453A Whigham 17.82 26 eP Pn 13 04 31.7 +3.4
comp=Z,214nm,1.0s
758A Lake Helen 17.82 36 P Pn 13 04 29.4 +0.9
baz=220
145A Houston Renfro 17.85 9 P P 13 04 28.4 -0.2
baz=190
249A Camden 17.85 17 P P 13 04 27.5 -1.1
baz=199,SNR=10
GTBY Guantanamo Bay 17.92 71 eP Pn 13 04 30.3 +0.6
comp=Z,174nm,0.9s
657A Interlachen 17.93 34 P Pn 13 04 30.3 +0.6
baz=218
556A Lake Butler 17.98 32 P P 13 04 30.1 +0.1
baz=215,SNR=17
454A Quitman 17.99 27 P Pn 13 04 30.5 0.0
baz=211,SNR=24
146A Union 18.03 11 P P 13 04 30.3 -0.3
baz=193
146A Union 18.03 11 eP Pn 13 04 32.5 +1.6
comp=Z,173nm,1.2s
SLBS Sierra La Lagu 18.07 301 eP Pn 13 04 31.7 +0.1

comp=Z,88nm,1.3s
250A Grady 18.11 19 P P 13 04 31.3 -0.2
baz=202
250A Grady 18.11 19 eP Pn 13 04 33.6 +1.7
comp=Z,95nm,0.8s
352A Blakely 18.12 23 P P 13 04 31.5 -0.1
baz=206,SNR=6.8
352A Blakely 18.12 23 eP Pn 13 04 35.0 +3.0
comp=Z,154nm,0.7s
658A Bunnell 18.14 35 P P 13 04 31.1 -0.6
baz=219
MOTC Monteria, Cord 18.17 108 eP P 13 04 31.8 -0.5
147A Livingston 18.23 13 P Pn 13 04 33.2 -0.1
baz=195,SNR=16
147A Livingston 18.23 13 eP Pn 13 04 34.4 +1.1
comp=Z,322nm,1.3s
SJCC San Jacinto, C 18.25 104 eP P 13 04 32.4 -0.7
Z40A Long Farm, Mag 18.26 359 P P 13 04 33.3 +0.2
baz=179,SNR=15
Z41A Richland Creek 18.26 1 P P 13 04 33.0 -0.1
baz=181,SNR=6.4
Z41A Richland Creek 18.26 1 eP Pn 13 04 34.6 +0.9
comp=Z,361nm,1.2s
353A Camilla 18.29 25 P Pn 13 04 34.5 +0.5
baz=208,SNR=20
455A Stateville 18.29 29 P Pn 13 04 34.0 -0.1
baz=212
Z43A Armstrong Fami 18.30 5 P Pn 13 04 33.8 -0.3
baz=186
Z42A Norrel Spur, H 18.31 3 P Pn 13 04 34.0 -0.2
baz=183
557A Orange Park 18.34 33 P P 13 04 33.8 -0.3
baz=217
148A Greensboro 18.37 15 P Pn 13 04 34.7 -0.3
baz=197
Z44A Pea Ridge, Bel 18.45 7 P P 13 04 34.9 -0.2
baz=188
251A Midway 18.50 21 P P 13 04 36.0 +0.2
baz=204,SNR=13
149A Jones 18.53 17 P P 13 04 34.9 -1.2
baz=199,SNR=13
LPIG La Paz 18.55 302 P Pn 13 04 38.8 +1.5
comp=Z,3.8nm,0.3s,baz=132,slow=2.3,SNR=14
LPIG LR LR 13 11 45.2
comp=Z,783nm,18.3s,baz=130,slow=36
ABTX Abilene, Hawle 18.59 343 P P 13 04 37.3 +0.5
baz=160,SNR=23
ABTX Abilene, Hawle 18.59 343 eP Pn 13 04 37.5 -0.2
comp=Z,114nm,0.9s
Z46A Louisville 18.59 11 P P 13 04 35.9 -0.8
baz=192,SNR=13
TIGA Tifton 18.63 26 P P 13 04 35.7 -1.5
baz=210,SNR=11
TIGA Tifton 18.63 26 eP Pn 13 04 38.4 +0.2
comp=Z,448nm,1.3s
Z45A Winona 18.64 9 P P 13 04 36.4 -0.8
baz=190
Z45A Winona 18.64 9 eP Pn 13 04 39.4 +1.2
comp=Z,161nm,0.9s
252A Lumpkin 18.66 23 P P 13 04 36.1 -1.4
baz=206,SNR=25
456A Hilliard 18.76 31 P P 13 04 37.8 -0.8
baz=215
150A Eclectic 18.77 19 P Pn 13 04 40.0 +0.1
baz=202,SNR=42
Z47A Carrollton 18.78 13 P Pn 13 04 40.5 +0.6
baz=195,SNR=9.4
355A Pearson 18.88 28 P Pn 13 04 40.6 -0.6
baz=212
Y42A Garnett, Star 18.88 4 P P 13 04 39.9 0.0
baz=184
LRAL Lakeview Retre 18.89 16 P P 13 04 40.0 +0.1
baz=198,SNR=21
LRAL Lakeview Retre 18.89 16 eP Pn 13 04 41.8 +0.6
comp=Z,53nm,0.8s
Y41A Eaglette Beard 18.89 1 P P 13 04 39.6 -0.3
baz=181
151A Opelika 18.93 21 P P 13 04 40.1 -0.3
baz=204,SNR=25
253A Americus 18.95 24 P P 13 04 40.8 +0.1
baz=208
253A Americus 18.95 24 eP Pn 13 04 44.5 +2.5
comp=Z,268nm,1.4s
CCAR Cane Creek 18.96 4 eP Pn 13 04 42.6 +0.5
comp=Z,587nm,1.6s
Y40A Okolona 19.01 360 P Pn 13 04 42.2 -0.5
baz=179,SNR=10
Y43A Makayla and Ka 19.02 6 P P 13 04 41.4 0.0
baz=186
Z48A Northport 19.07 14 P Pn 13 04 43.3 0.0
baz=196,SNR=18
Y45A Yeager Farm, C 19.15 9 P P 13 04 42.0 -0.8
baz=190,SNR=12
Y44A Strider, Charl 19.15 7 P Pn 13 04 44.1 -0.2
baz=188,SNR=6.5
Z49A Columbiana 19.16 17 P Pn 13 04 44.2 -0.3
baz=200,SNR=57
254A Abbeville 19.20 26 P Pn 13 04 44.8 -0.1
baz=210,SNR=22
356A Blackshear 19.20 30 P P 13 04 42.2 -1.2
baz=214
152A Waverly Hall 19.27 22 P Pn 13 04 45.3 -0.4
baz=205,SNR=16
152A Waverly Hall 19.27 22 eP P 13 04 44.4 +0.3
comp=Z,69nm,0.9s
Y46A Houston 19.28 11 P Pn 13 04 45.9 0.0
baz=192,SNR=33
PLMC San Jos¨ del 19.35 119 eP P 13 04 44.4 -0.9
HELC Santa Helena 19.36 115 eP P 13 04 46.1 +0.4
comp=Z,260nm,1.0s
HELC Santa Helena 19.36 115 eP Pn 13 04 47.7 +0.3
ZARC Zaragoza, Cauc 19.40 110 eP P 13 04 43.7 -2.0
Z50A Ashland 19.40 19 P Pn 13 04 47.4 +0.1
baz=201,SNR=16
Z50A Ashland 19.40 19 eP Pn 13 04 47.7 +0.3
comp=Z,90nm,1.0s
X40A Basin Creek Fa 19.49 1 P P 13 04 46.1 -0.4
baz=181,SNR=7.6
X40A Basin Creek Fa 19.49 1 eP P 13 04 46.2 -0.3
comp=Z,76nm,1.2s
X41A Kaden, Bauxite 19.50 2 P P 13 04 46.5 -0.2
baz=182
Y47A UCPARC, Winfie 19.50 13 P P 13 04 46.2 -0.5
baz=195,SNR=27
X39A Fountain Ranch 19.53 358 P P 13 04 46.9 -0.1
baz=177,SNR=24
255A Hazlehurst 19.54 28 P Pn 13 04 48.3 -0.7
baz=212,SNR=8.1
255A Hazlehurst 19.54 28 eP Pn 13 04 51.0 +2.1
comp=Z,14nm,1.0s
MIAR Mount Ida 19.55 359 P P 13 04 46.5 -0.6
baz=178,SNR=71
MIAR Mount Ida 19.55 359 eP P 13 04 46.7 -0.5
comp=Z,348nm,1.0s
MIAR Mount Ida 19.55 359 eP P 13 04 46.7 -0.5
MIAR pmax pmax
comp=Z,348nm,1.0s
153A Fort Valley 19.59 24 P P 13 04 46.9 -0.7
baz=208
X42A Stuttgart 19.60 4 P P 13 04 47.7 0.0
baz=184
X43A Marvell 19.62 6 P P 13 04 48.3 +0.3
baz=186,SNR=6.6
X43A Marvell 19.62 6 eP Pn 13 04 53.1 +3.1
comp=Z,715nm,1.4s
Y48A Jasper 19.67 15 P Pn 13 04 50.4 -0.2
baz=197,SNR=8.8
X44A Crenshaw 19.69 7 P P 13 04 48.5 -0.1
baz=188
Z51A Franklin 19.70 20 P P 13 04 48.7 -0.1
baz=203
X45A UM Field Stati 19.72 9 P Pn 13 04 50.1 -1.0
baz=190,SNR=8.1
UALR University of 19.79 2 eP P 13 04 49.8 0.0
comp=Z,220nm,1.3s
OXF Oxford 19.80 9 P P 13 04 50.2 +0.2
baz=190,SNR=8.3
OXF Oxford 19.80 9 eP P 13 04 49.6 -0.3
comp=Z,199nm,0.9s
OXF Oxford 19.80 9 eP P 13 04 49.6 -0.3
OXF pmax pmax
comp=Z,199nm,0.9s
YOTC Yotoco, Valle 19.80 122 eP P 13 04 50.4 +0.1
Y49A Blount Mountai 19.82 17 P P 13 04 49.0 -1.2
baz=199,SNR=5.7
Y49A Blount Mountai 19.82 17 eP P 13 04 49.7 -0.5
comp=Z,95nm,0.9s
Z52A Williamson 19.85 22 P P 13 04 49.3 -1.1

baz=205,SNR=14
154A Montrose 19.85 26 P P 13 04 49.6 -0.8
baz=209,SNR=6.4
154A Montrose 19.85 26 eP Pn 13 04 53.7 +1.1
comp=Z,267nm,0.9s
256A Glennville 19.86 29 P P 13 04 49.4 -1.1
baz=213
CODC Agust'n Codaz 19.87 102 eP P 13 04 47.7 -3.2
X46A Booneville 19.99 11 P P 13 04 51.9 0.0
baz=193,SNR=7.9
LGNH LOogne 20.00 77 eP Pn 13 04 53.5 -1.0
comp=Z,135nm,0.8s
Y50A Piedmont 20.05 18 P P 13 04 52.2 -0.4
baz=201,SNR=15
X47A Russelville 20.09 13 P P 13 04 53.4 +0.3
baz=195,SNR=26
MNTX Cornudas Mount 20.10 328 P P 13 04 53.8 +0.6
baz=143,SNR=98
MNTX Cornudas Mount 20.10 328 eP P 13 04 54.1 +0.9
comp=Z,128nm,1.1s
155A Kite 20.13 27 P P 13 04 53.3 -0.3
baz=211,SNR=7.1
PTBC PUERTO BERRIO, 20.16 112 eP P 13 04 52.4 -1.6
W41B Gary Mavity, V 20.19 2 P P 13 04 53.3 -0.8
baz=182,SNR=19
W41B Gary Mavity, V 20.19 2 eP P 13 04 53.6 -0.5
comp=Z,187nm,1.2s
W40A Ferguson Farm, 20.19 0 P P 13 04 53.3 -0.8
baz=180,SNR=9.2
W40A Ferguson Farm, 20.19 0 eP P 13 04 55.1 +1.0
comp=Z,253nm,1.2s
W39A Magazine 20.20 359 P P 13 04 54.2 0.0
baz=178,SNR=36
W39A Magazine 20.20 359 eP P 13 04 53.8 -0.4
comp=Z,151nm,1.2s
W43A Forest City 20.21 6 P P 13 04 54.0 -0.3
baz=187
X48A Hartselle 20.22 15 P P 13 04 53.3 -1.1
baz=197,SNR=30
X48A Hartselle 20.22 15 eP P 13 04 53.1 -1.3
comp=Z,77nm,0.8s
Z53A Monticello 20.25 24 P P 13 04 53.7 -1.1
baz=207,SNR=15
Y51A Rockmart 20.27 20 P P 13 04 54.6 -0.4
baz=203,SNR=10
257A Skidaway Islan 20.27 31 P P 13 04 54.1 -1.0
baz=216
WHAR Wooly Hollow 20.30 2 eP P 13 04 55.3 0.0
comp=Z,202nm,1.3s
W42A Bald Knob 20.32 4 P P 13 04 54.5 -1.0
baz=184
TOLC Tolima 20.34 119 eP Pn 13 04 59.0 +0.2
W44A Shelby Farms P 20.36 8 P P 13 04 54.0 -1.9
baz=189
WMOK Wichita Mounta 20.38 347 P P 13 04 55.6 -0.6
baz=164,SNR=9.4
WMOK Wichita Mounta 20.38 347 eP P 13 04 55.7 -0.6
comp=Z,99nm,1.1s
WMOK Wichita Mounta 20.38 347 eP P 13 04 55.7 -0.5
WMOK pmax pmax
comp=Z,99nm,1.1s
GOGA Godfrey 20.40 24 P P 13 04 55.3 -1.1
baz=208,SNR=15
GOGA Godfrey 20.40 24 eP P 13 04 57.3 +0.8
comp=Z,83nm,1.1s
X49A Woodville 20.46 16 P P 13 04 57.9 +0.8
baz=199,SNR=56
W45A Hickory Valley 20.47 9 P Pn 13 04 58.6 -1.3
baz=191,SNR=8.8
PLAL Pickwick Lake 20.50 12 eP P 13 04 58.8 +1.3
comp=Z,100nm,0.8s
Z54A Sparta 20.50 25 P P 13 04 56.5 -1.0
baz=209,SNR=24
Y52A Lilburn 20.58 22 P P 13 04 57.7 -0.7
baz=205,SNR=17
Y52A Lilburn 20.58 22 eP P 13 04 58.7 +0.3
comp=Z,144nm,0.7s
W46A Michie 20.59 11 P Pn 13 05 00.2 -1.0
baz=193,SNR=16
OTAV Otavalo 20.59 134 eP Pn 13 05 00.9 -1.0
comp=Z,75nm,1.0s
OTAV Otavalo 20.59 134 P Pn 13 05 00.9 -1.1
OTAV pmax pmax
comp=Z,75nm,1.0s
156A Sylvania 20.60 29 P P 13 04 58.7 +0.1
baz=213
X50B Fort Payne 20.61 18 P P 13 04 57.8 -0.8
baz=201,SNR=20
GCUF Volcan Galeras 20.71 130 eP Pn 13 05 04.3 +0.9
Y53A Monroe 20.75 23 P P 13 04 59.0 -1.2
baz=207,SNR=12
CRUC La Cruz 20.78 128 eP Pn 13 05 03.6 -0.5
Z55A Blythe 20.79 27 P P 13 04 60.0 -0.6
baz=211
V41A Mountainview 20.80 2 P P 13 04 59.6 -1.2
baz=182,SNR=30
V40A Witts Springs 20.80 1 P P 13 05 00.1 -0.6
baz=181,SNR=28
V40A Witts Springs 20.80 1 eP P 13 05 00.2 -0.6
comp=Z,84nm,0.8s
V39A Pettigrew 20.84 359 P P 13 04 59.7 -1.5
baz=178,SNR=24
W47A Westpoint 20.86 13 P P 13 05 01.1 -0.2
baz=195,SNR=8.1
V42A Cord 20.86 4 P P 13 04 59.1 -2.3
baz=184,SNR=19
MSTX Muleshoe 20.87 337 P P 13 05 01.7 +0.1
baz=153,SNR=34
MSTX Muleshoe 20.87 337 eP P 13 05 01.4 -0.2
comp=Z,241nm,1.0s
W48A Pulaski 20.90 14 P P 13 05 02.7 +0.9
baz=197,SNR=16
V43A Jonesboro 20.91 6 P P 13 05 02.9 +1.0
baz=187
X51A Calhoun 20.95 19 P P 13 05 03.6 +1.3
baz=203,SNR=13
X51A Calhoun 20.95 19 eP Pn 13 05 05.7 +0.2
comp=Z,81nm,0.9s
V44A Blytheville 21.03 7 P P 13 05 02.5 -0.7
baz=188
TUL1 Leonard 21.04 354 P P 13 05 04.3 +1.0
baz=179,SNR=19
TUL1 Leonard 21.04 354 eP P 13 05 04.6 +1.3
comp=Z,142nm,1.0s
W49A Belvidere 21.05 16 P P 13 05 04.2 +0.8
baz=198,SNR=12
ROSC El Rosal 21.07 116 P P 13 05 05.5 +1.4
comp=Z,85nm,0.8s,baz=114,slow=2.9,SNR=55
ROSC El Rosal 21.07 116 eP P 13 05 06.3 +2.1
comp=Z,134nm,1.1s
V45A Humboldt 21.07 10 P P 13 05 04.3 +0.7
baz=191
Y54A Tignall 21.11 25 P P 13 05 04.3 +0.3
baz=209,SNR=28
PRAC Prado 21.16 120 eP P 13 05 06.2 +1.3
comp=Z,382nm,1.0s
SWET Sewanee 21.23 17 eP P 13 05 06.8 +1.4
comp=Z,56nm,0.8s
V46A Holladay 21.28 11 P P 13 05 04.9 -1.0
baz=193,SNR=13
HHAR Hobbs 21.29 358 eP P 13 05 05.8 -0.2
comp=Z,88nm,1.0s
SDDR Presa de Saban 21.30 76 eP P 13 05 06.4 +0.1
comp=Z,120nm,0.8s
X52A Dahlonega 21.31 21 P P 13 05 06.7 +0.5
baz=205,SNR=14
AMTX Amarillo 21.31 340 P P 13 05 06.7 +0.4
baz=157
AMTX Amarillo 21.31 340 eP P 13 05 06.7 +0.4
comp=Z,211nm,0.6s
U40A Yellville 21.35 1 P P 13 05 05.0 -1.6
baz=180,SNR=23
U41A Viola 21.37 3 P P 13 05 05.6 -1.2
baz=183,SNR=26
U39A Green Forest 21.38 359 P P 13 05 05.6 -1.3
baz=179,SNR=16
W50A Signal Mountai 21.39 18 P P 13 05 07.3 +0.1
baz=201,SNR=20
W50A Signal Mountai 21.39 18 eP P 13 05 09.7 +2.5
comp=Z,58nm,0.8s
U42A Revenden 21.41 4 P P 13 05 05.7 -1.6
baz=185,SNR=23
PAMC Pamplona, Colo 21.42 108 eP P 13 05 09.0 +0.9
V47A Nunnelly 21.43 13 P P 13 05 07.2 -0.2
baz=195,SNR=40
X53A Estanollee 21.43 23 P P 13 05 06.9 -0.6
baz=207,SNR=14
V48A Smith Brothers 21.50 14 P P 13 05 06.9 -1.3
baz=197
V48A Smith Brothers 21.50 14 eP P 13 05 08.4 +0.2
comp=Z,67nm,0.9s
U43A Rector 21.50 6 P P 13 05 06.4 -1.9
baz=187
GLAT Glass 21.54 9 eP P 13 05 13.4 +4.7
comp=Z,312nm,1.0s
HODGE Hodges 21.60 25 eP P 13 05 13.7 +4.4
comp=Z,24nm,0.8s
U44B Burton Farm, H 21.60 8 P P 13 05 09.6 +0.3
baz=190
NHSC New Hope 21.61 31 P P 13 05 08.0 -1.3
baz=216,SNR=12
NHSC New Hope 21.61 31 eP P 13 05 10.8 +1.5
comp=Z,1µm,1.3s
HSIG 21.62 313 eP P 13 05 10.5 +0.9
comp=Z,95nm,1.2s
SRIG Santa Rosalia 21.62 308 eP P 13 05 11.5 +1.9
WVT Waverly 21.66 12 P P 13 05 09.9 0.0
baz=194
WVT Waverly 21.66 12 eP P 13 05 10.3 +0.4
comp=Z,68nm,0.6s
WVT Waverly 21.66 12 eP P 13 05 10.3 +0.4
WVT pmax pmax
comp=Z,68nm,0.6s
RUSC La Rusia 21.66 112 eP P 13 05 08.6 -2.1
comp=Z,45nm,0.8s
CHIC Chingaza 21.68 116 eP P 13 05 12.3 +1.6
U45A Rockin P Farm, 21.70 10 P P 13 05 09.0 -1.3
baz=191
U44A Portageville 21.72 8 P P 13 05 08.2 -2.3
baz=189
W52A Murphy 21.74 21 P P 13 05 09.3 -1.5
baz=204
W52A Murphy 21.74 21 eP P 13 05 13.5 +2.7
comp=Z,55nm,0.8s
V49A McMinnville 21.76 16 P P 13 05 10.6 -0.3
baz=199
U46A Springville 21.81 11 P P 13 05 10.2 -1.4
baz=193
CPCT Cooper Cave 21.87 19 eP P 13 05 13.9 +1.7
comp=Z,71nm,1.0s
PARMO Parma 21.87 7 eP P 13 05 15.9 +3.7
comp=Z,157nm,0.9s
V50A Pikevile 21.89 18 P P 13 05 12.7 +0.2
baz=201
PBMO Poplar Bluff 21.91 6 eP P 13 05 13.3 +0.8
comp=Z,97nm,1.0s
GRTK Grand Turk 21.91 69 eP P 13 05 12.7 0.0
comp=Z,292nm,1.0s
BG3 Lake Jocassee 22.01 23 eP P 13 05 15.9 +2.3
comp=Z,153nm,1.2s
T39A Clever 22.02 360 P P 13 05 12.6 -1.2
baz=179,SNR=20
121A Cookes Peak, D 22.02 325 P P 13 05 15.7 +1.7
baz=139,SNR=267
319A Douglas 22.05 321 eP P 13 05 16.3 +2.0
comp=Z,228nm,1.1s
T38A Diamond 22.05 358 P P 13 05 12.6 -1.6
baz=177,SNR=19
U47A Clarksville 22.07 13 P P 13 05 13.4 -0.8
baz=195,SNR=6.8
JSC Jenkinsville 22.07 27 eP P 13 05 18.6 +4.2
comp=Z,141nm,1.1s
T41A Mountain View 22.07 3 P P 13 05 12.7 -1.7
baz=183,SNR=29
W53A Cullowhee 22.08 22 P P 13 05 14.5 0.0
baz=206,SNR=20
T42A Van Buren 22.10 4 P P 13 05 12.6 -2.0
baz=185,SNR=19
T42A Van Buren 22.10 4 eP P 13 05 12.6 -2.0
comp=Z,61nm,0.8s
T40A Mansfield 22.15 1 P P 13 05 12.7 -2.5
baz=181,SNR=14
T43A Greenville 22.22 6 P P 13 05 15.9 -0.1
baz=187,SNR=13
V51A Loudon 22.25 19 P P 13 05 17.1 +0.9
baz=203,SNR=6.6
V51A Loudon 22.25 19 eP P 13 05 18.0 +1.8
comp=Z,54nm,0.8s
PAULI Pauline 22.30 25 eP P 13 05 23.9 +7.1
comp=Z,30nm,0.8s
U48A Cassie Pea, Po 22.30 14 P P 13 05 16.7 -0.1
baz=197,SNR=7.8
TKL Tuckaleechee C 22.30 20 P P 13 05 18.5 +1.6
comp=Z,7.7nm,0.4s,baz=186,slow=11,SNR=16
TKL LR LR 13 15 03.4
comp=Z,298nm,19.0s,baz=206,slow=40
TKL Tuckaleechee C 22.30 20 eP P 13 05 18.1 +1.2
comp=Z,76nm,0.8s
TKL Tuckaleechee C 22.30 20 eP P 13 05 18.1 +1.2
TKL pmax pmax
comp=Z,76nm,0.8s
T44A Benton 22.31 8 P P 13 05 17.5 +0.7
baz=189
T45A Paducah 22.38 10 P P 13 05 16.2 -1.4
baz=191
U49A Red Boiling Sp 22.49 16 P P 13 05 20.2 +1.3
baz=199,SNR=14
T46A Princeton 22.53 11 P P 13 05 20.3 +1.1
baz=193,SNR=24
V52A Sevierville 22.53 21 P P 13 05 19.5 +0.2
baz=204
V52A Sevierville 22.53 21 eP P 13 05 21.1 +1.8
comp=Z,75nm,1.1s
S40A Lebanon 22.60 1 P P 13 05 18.3 -1.7
baz=181,SNR=19
S41A Jillco Farms, 22.61 3 P P 13 05 18.3 -1.9
baz=183,SNR=20
S38A Stockton 22.63 358 P P 13 05 17.5 -2.8
baz=178,SNR=20
T47A Sharon Grove 22.63 13 P P 13 05 18.4 -2.0
baz=195
T47A Sharon Grove 22.63 13 eP P 13 05 18.6 -1.8
comp=Z,81nm,0.8s
V53A Saluda 22.65 22 P P 13 05 20.7 0.0
baz=206,SNR=25
S39A Bolivar 22.68 360 P P 13 05 18.4 -2.5
baz=179,SNR=28
S39A Bolivar 22.68 360 eP P 13 05 19.1 -1.8
comp=Z,56nm,0.8s
BNM Barren Site 22.69 330 eP P 13 05 22.6 +1.3
S43A Fulton Ridge, 22.73 6 P P 13 05 18.1 -3.3
baz=187,SNR=7.4
Y22D IRIS PASSCAL I 22.77 329 eP P 13 05 24.6 +2.6
comp=Z,413nm,1.0s
Y22E IRIS PASSCAL I 22.77 329 P P 13 05 23.1 +1.1
baz=143
KMSC Kings Mountain 22.77 26 P P 13 05 18.8 -3.0
baz=210,SNR=6.9
LPM Los Pinos Moun 22.82 330 eP P 13 05 23.8 +1.2
SDV Santo Domingo 22.83 103 P P 13 05 19.7 -3.1
comp=Z,58nm,0.8s,baz=284,slow=4.9,SNR=8.7
SDV Santo Domingo 22.83 103 eP P 13 05 19.9 -3.0
S42A Caledonia 22.86 5 P P 13 05 20.1 -2.6
baz=186,SNR=9.7
LENM Lemitar 22.87 329 eP P 13 05 24.3 +1.2
T48A Bowling Green 22.91 14 P P 13 05 23.1 -0.1
baz=197
S44A Carbondale 22.95 8 P P 13 05 22.9 -0.7
baz=189
SIUC Southern Illin 22.98 8 eP P 13 05 23.6 -0.3
comp=Z,142nm,0.9s
S45A Carrier Mills 23.03 9 P P 13 05 24.2 -0.2
baz=191
FVM French Village 23.10 6 eP P 13 05 23.5 -1.6
comp=Z,30nm,0.8s
CCM Cathedral Cave 23.11 4 P P 13 05 22.0 -3.2
baz=184
CCM Cathedral Cave 23.11 4 eP P 13 05 22.4 -2.8
comp=Z,60nm,0.8s
CCM Cathedral Cave 23.11 4 eP P 13 05 22.4 -2.8
CCM pmax pmax
comp=Z,61nm,0.8s
T49A Edmonton 23.12 16 P P 13 05 25.4 +0.1
baz=199,SNR=7.6
LAZ Ladron 23.14 329 eP P 13 05 27.2 +1.4
TZTN Tazewell 23.18 20 P P 13 05 26.4 +0.5
baz=204
TZTN Tazewell 23.18 20 eP P 13 05 25.9 -0.1
comp=Z,91nm,0.9s
S46A Don Dixon Farm 23.19 11 P P 13 05 25.4 -0.5
baz=193
R38A Fenwick Farm, 23.19 358 P P 13 05 23.6 -2.4
baz=178,SNR=32
T50A Nancy 23.23 17 P P 13 05 26.7 +0.4
baz=200,SNR=8.2
TASL Snake Pit, Alb 23.26 331 P P 13 05 27.3 +0.4
baz=146,SNR=80
ANMO Albuquerque 23.26 331 P P 13 05 27.7 +0.8
comp=Z,17nm,0.7s,baz=142,slow=12,SNR=43
ANMO LR LR 13 15 37.6
comp=Z,322nm,19.4s,baz=146,slow=39
ANMO Albuquerque 23.26 331 P P 13 05 27.4 +0.5
baz=146
ANMO Albuquerque 23.26 331 eP P 13 05 27.7 +0.8
comp=Z,67nm,1.0s
ANMO Albuquerque 23.26 331 d iP P 13 05 27.6 +0.8
ANMO pmax pmax
comp=Z,54nm,1.7s
TASM ASL Pad, Albuq 23.26 331 P P 13 05 27.2 +0.2
baz=146,SNR=80
R40A Maddies Statio 23.30 2 P P 13 05 24.4 -2.6
baz=182,SNR=12
R40A Maddies Statio 23.30 2 eP P 13 05 24.8 -2.2
comp=Z,45nm,0.8s
R39A Chumby, Stover 23.31 0 P P 13 05 24.8 -2.3
baz=180,SNR=24
R41A Rosebud 23.34 4 P P 13 05 24.6 -2.8
baz=184,SNR=17
U53A Fall Branch 23.36 22 P P 13 05 26.9 -0.7
baz=206
R42A Luebbering 23.37 5 P P 13 05 25.8 -1.8
baz=186,SNR=6.2
R43A Red Bud 23.44 6 P P 13 05 26.9 -1.4
baz=188,SNR=7.4
S48A Wiedeman Farm, 23.51 14 P P 13 05 30.1 +1.2
baz=197
R44A Waltonville 23.52 8 P P 13 05 28.3 -0.7
baz=190
TUC Tucson 23.62 320 P P 13 05 31.3 +1.2
baz=133
TUC Tucson 23.62 320 eP P 13 05 31.6 +1.5
comp=Z,186nm,1.3s
R45A Skylar, Fairfi 23.68 10 P P 13 05 30.8 +0.3
baz=192
R46A Gibon Southern 23.73 11 P P 13 05 30.9 -0.1
baz=193
SLM Saint Louis 23.77 6 eP P 13 05 31.3 +0.1
comp=Z,66nm,0.9s
SLM Saint Louis 23.77 6 eP P 13 05 31.3 +0.1
SLM pmax pmax
comp=Z,66nm,0.9s
T52A Hallie 23.88 20 P P 13 05 32.6 +0.2
baz=205
Q37A Longview Farm, 23.89 358 P P 13 05 30.1 -2.3
baz=177
Q38A Cooks Store, C 23.95 359 P P 13 05 30.9 -2.0
baz=179,SNR=15
WCI Wyandotte Cave 24.00 13 P P 13 05 33.0 -0.3
baz=196
WCI Wyandotte Cave 24.00 13 eP P 13 05 31.6 -1.8
comp=Z,80nm,0.9s
WCI Wyandotte Cave 24.00 13 eP P 13 05 31.6 -1.8
WCI pmax pmax
comp=Z,80nm,0.9s
Q40A Laux Farm, Aux 24.00 2 P P 13 05 32.3 -1.1
baz=182,SNR=7.9
Q41A Truxton 24.00 4 P P 13 05 31.0 -2.4
baz=184,SNR=23
Q42A Golden Eagle 24.01 5 P P 13 05 31.5 -2.0
baz=186
R47A Wooly Knot Far 24.01 13 P P 13 05 34.9 +1.4
baz=196,SNR=8.7
Q39A Willow Grove F 24.04 0 P P 13 05 31.5 -2.2
baz=180,SNR=6.6
Q43A New Douglas 24.12 7 P P 13 05 33.8 -0.6
baz=188,SNR=8.0
OLIL Olney 24.14 10 eP P 13 05 35.1 +0.5
comp=Z,82nm,0.8s
S51A Beattyville 24.17 19 P P 13 05 37.1 +2.2
baz=203
Q44A Meyer Farm, Va 24.17 8 P P 13 05 35.1 +0.2
baz=190
R48A Northridge Ran 24.26 14 P P 13 05 37.0 +1.3
baz=197
KSU1 Kansas State U 24.28 353 P P 13 05 34.3 -1.5
baz=172
KSU1 Kansas State U 24.28 353 eP P 13 05 34.4 -1.5
comp=Z,103nm,1.0s
Q45A Warren Harvey, 24.29 10 P P 13 05 33.7 -2.2
baz=192
T25A Trinidad 24.29 338 P P 13 05 38.2 +1.9
baz=153,SNR=81
T25A Trinidad 24.29 338 eP P 13 05 38.1 +1.9
comp=Z,144nm,1.0s
S52A Salyersville 24.37 20 P P 13 05 37.3 +0.5
baz=204
CNNC Cliffs of the 24.45 31 P P 13 05 36.0 -1.4
baz=218
P39B Salisbury 24.48 1 P P 13 05 36.0 -1.7
baz=181,SNR=16
CBKS Cedar Bluff 24.50 348 P P 13 05 37.4 -0.6
baz=164
CBKS Cedar Bluff 24.50 348 eP P 13 05 38.2 +0.2
comp=Z,95nm,0.9s
CBKS Cedar Bluff 24.50 348 eP P 13 05 38.2 +0.2
CBKS pmax pmax
comp=Z,95nm,0.9s
P40A Paris 24.54 2 P P 13 05 35.7 -2.5
baz=182,SNR=24
P40A Paris 24.54 2 eP P 13 05 36.2 -2.1
comp=Z,58nm,0.8s
Q46A CEJHS Indians, 24.55 11 P P 13 05 35.7 -2.7
baz=193
P37A Lathrop 24.60 358 P P 13 05 36.8 -2.0
baz=177,SNR=10
P38A Dawn 24.62 359 P P 13 05 37.5 -1.4
baz=179
P38A Dawn 24.62 359 eP P 13 05 39.2 +0.3
comp=Z,53nm,0.9s
Q47A Bedord North L 24.65 13 P P 13 05 36.9 -2.3
baz=196
214A Organ Pipe Nat 24.68 317 P P 13 05 40.8 +1.1
baz=129,SNR=36
P42A Winchester 24.70 5 P P 13 05 37.7 -2.0
baz=186
P42A Winchester 24.70 5 eP P 13 05 38.5 -1.2
comp=Z,53nm,0.8s
X18A Snowflake 24.71 325 eP P 13 05 42.1 +2.0
comp=Z,85nm,1.0s
P41A Barry, Barry 24.73 4 P P 13 05 38.5 -1.5
baz=185
P44A Sand Creek, Wi 24.78 8 P P 13 05 40.6 +0.2
baz=190
P43A Skaggs, Pawnee 24.84 7 P P 13 05 40.4 -0.6
baz=188
BLO Bloomington 24.86 12 eP P 13 05 40.6 -0.5
BLO Bloomington 24.86 12 eP P 13 05 40.6 -0.5
BLA Blacksburg 24.93 25 P P 13 05 43.4 +1.6
baz=210
P45A Graceland, Par 24.97 10 P P 13 05 41.6 -0.6
baz=192
P45A Graceland, Par 24.97 10 eP P 13 05 42.8 +0.6
comp=Z,72nm,0.8s
W18A Petrified Fore 25.04 326 P P 13 05 44.5 +1.4
baz=139,SNR=22
W18A Petrified Fore 25.04 326 eP P 13 05 44.9 +1.9
comp=Z,59nm,1.0s
O38A Galt 25.11 359 P P 13 05 42.0 -1.5
baz=179
O40A La Belle 25.14 2 P P 13 05 42.1 -1.5
baz=183,SNR=6.7
VWCC Virginia Weste 25.14 25 eP P 13 05 47.6 +3.8
P46A Rosedale 25.16 11 P P 13 05 42.4 -1.5
baz=193
O37A Wolven Farm, M 25.17 358 P P 13 05 42.7 -1.3
baz=178,SNR=8.0
O41A Passleys Farm, 25.18 4 P P 13 05 43.2 -0.9
baz=185,SNR=7.1
P47A Martinsville 25.21 13 P P 13 05 43.7 -0.7
baz=196
SDCO Great Sand Dun 25.24 337 P P 13 05 46.5 +1.5
baz=151,SNR=146
SDCO Great Sand Dun 25.24 337 eP P 13 05 46.5 +1.5
O39A Kirksville 25.25 1 P P 13 05 42.6 -2.1
baz=181
O42A Bath 25.33 6 P P 13 05 45.1 -0.3
baz=187
KSCO Kaye Shedlock' 25.41 343 P P 13 05 46.7 +0.3
baz=158,SNR=11
KSCO Kaye Shedlock' 25.41 343 eP P 13 05 47.0 +0.7
comp=Z,80nm,0.9s
O44A Mansfield 25.47 8 P P 13 05 48.4 +1.6
baz=190
X16A Lo Mia Camp, P 25.48 323 eP P 13 05 48.8 +1.7

comp=Z,46nm,1.0s
O43A Sugar Creek Fa 25.50 7 P P 13 05 47.8 +0.9
baz=188
AOPR Arecibo Observ 25.52 79 eP P 13 05 47.8 +0.4
comp=Z,42nm,0.9s
OBIP Obispado Ponce 25.64 79 eP P 13 05 48.9 +0.4
comp=Z,99nm,1.6s
O45A Potomac 25.68 10 P P 13 05 48.2 -0.4
baz=192
N37A Lee Faris, Mou 25.76 358 P P 13 05 47.5 -1.9
baz=177
N37A Lee Faris, Mou 25.76 358 eP P 13 05 48.4 -0.9
comp=Z,153nm,0.9s
HDIL Hopedale 25.77 7 P P 13 05 48.6 -0.8
baz=188
HDIL Hopedale 25.77 7 eP P 13 05 49.6 +0.3
comp=Z,65nm,0.8s
S22A 4UR Ranch, Cre 25.77 334 P P 13 05 51.5 +1.7
baz=148,SNR=92
S22A 4UR Ranch, Cre 25.77 334 eP P 13 05 51.5 +1.7
comp=Z,120nm,1.4s
N41A Harden Midland 25.77 4 P P 13 05 47.9 -1.5
baz=185
N38A Joes South For 25.78 360 P P 13 05 48.4 -1.2
baz=180,SNR=11
113A Mohawk Valley, 25.82 317 eP P 13 05 51.5 +1.5
comp=Z,77nm,1.4s
N39A Derby Farms, D 25.87 1 P P 13 05 50.3 -0.1
baz=181
N39A Derby Farms, D 25.87 1 eP P 13 05 48.9 -1.5
comp=Z,54nm,0.9s
N40A Mertquake, Sal 25.91 3 P P 13 05 51.4 +0.7
baz=183
SFIN Lafayette 25.91 11 P P 13 05 50.5 -0.2
baz=193
SFIN Lafayette 25.91 11 eP P 13 05 52.7 +2.0
comp=Z,52nm,0.9s
P50A Jamestown 25.93 17 P P 13 05 49.5 -1.4
baz=201
O47A Sheridan 25.95 12 P P 13 05 52.8 +1.7
baz=195
N42A Yates City 25.96 5 P P 13 05 50.6 -0.5
baz=187
MVCO Mesa Verde 26.06 331 P P 13 05 53.4 +1.1
baz=144,SNR=83
MVCO Mesa Verde 26.06 331 eP P 13 05 53.9 +1.5
comp=Z,75nm,0.8s
SJG San Juan 26.08 79 P P 13 05 49.3 -3.1
comp=Z,15nm,0.5s,baz=260,slow=10,SNR=6.9
SJG San Juan 26.08 79 eP P 13 05 51.6 -0.8
SJG San Juan 26.08 79 eP P 13 05 51.6 -0.8
Y14A Wickenburg 26.09 320 eP P 13 05 53.9 +1.5
comp=Z,48nm,1.1s
N44A Piper City 26.15 9 P P 13 05 54.1 +1.2
baz=191
N43A Stutzman Famil 26.16 7 P P 13 05 51.3 -1.6
baz=188,SNR=7.0
Q24A Divide 26.18 338 P P 13 05 54.5 +1.0
baz=153,SNR=17
WUAZ Wupatki 26.23 325 P P 13 05 55.4 +1.6
baz=137,SNR=38
WUAZ Wupatki 26.23 325 eP P 13 05 55.6 +1.8
comp=Z,73nm,1.0s
N45A Kentland 26.30 10 P P 13 05 55.0 +0.8
baz=192
HUMP Col San Antoni 26.36 79 eP P 13 05 52.2 -2.8
comp=Z,61nm,1.4s
CBYP Canovanas 26.36 79 eP P 13 05 52.0 -3.1
comp=Z,45nm,1.0s
M37A Trindle Farm, 26.40 358 P P 13 05 53.9 -1.2
baz=178
M38A Pleasantville 26.41 360 P P 13 05 52.9 -2.2
baz=180,SNR=24
M40A Post Highland 26.43 3 P P 13 05 53.1 -2.3
baz=183
M41A Milan 26.46 4 P P 13 05 55.5 -0.1
baz=185
M36A Felix, Anita 26.48 357 P P 13 05 54.1 -1.7
baz=176,SNR=14
IP07 Quail 26.54 28 eP P 13 06 00.3 +4.0
comp=Z,28nm,0.9s
IP05 Hopewell Churc 26.59 28 eP P 13 06 01.2 +4.4
comp=Z,51nm,1.0s
M42A Sheffield 26.61 6 P P 13 05 55.2 -1.8
baz=187
IP01 Cuckoo 26.62 28 eP P 13 06 01.6 +4.5
comp=Z,45nm,1.1s
IP03 Louisa 26.63 27 eP P 13 06 01.4 +4.2
MTP Monte Pirata 26.64 79 eP P 13 05 54.5 -3.0
comp=Z,74nm,1.0s
IP04 Greensprings 26.66 27 eP P 13 06 01.4 +4.0
comp=Z,30nm,1.0s
M43A Waltham Townsh 26.67 7 P P 13 05 58.4 +0.9
baz=189
GLA Glamis 26.70 316 P P 13 05 59.5 +1.6
baz=127,SNR=32
GLA Glamis 26.70 316 eP P 13 05 59.6 +1.6
comp=Z,155nm,1.5s
GLA Glamis 26.70 316 eP P 13 05 59.6 +1.6
GLA pmax pmax
comp=Z,155nm,1.5s
BGNE Belgrade 26.75 352 P P 13 05 57.5 -0.8
baz=169
PV01 Paradox Valley 26.85 332 eP P 13 06 01.6 +2.1
comp=Z,134nm,1.3s
SCIA State Center 26.89 360 P P 13 05 59.7 +0.2
baz=180
Y12C Blythe 26.93 318 P P 13 06 01.5 +1.6
baz=129,SNR=9.8
Y12C Blythe 26.93 318 eP P 13 06 01.7 +1.7
comp=Z,28nm,0.9s
PV15 Paradox Valley 26.98 333 eP P 13 06 02.8 +2.1
comp=Z,132nm,1.3s
PV02 Paradox Valley 26.98 332 eP P 13 06 02.6 +1.9
comp=Z,204nm,1.4s
PDMCI Parker Dam,Lak 27.04 319 P P 13 06 02.4 +1.5
baz=130,SNR=22
PV05 Paradox Valley 27.04 332 eP P 13 06 03.0 +1.8
comp=Z,63nm,0.9s
SMCO Snowmass 27.05 336 eP P 13 06 02.8 +1.3
comp=Z,56nm,1.1s
OGNE Ogallala 27.06 345 P P 13 06 01.5 +0.4
baz=161,SNR=7.9
OGNE Ogallala 27.06 345 eP P 13 06 01.8 +0.6
comp=Z,163nm,1.4s
PV03 Paradox Valley 27.07 332 eP P 13 06 03.2 +1.8
comp=Z,162nm,1.3s
ISCO Idaho Springs 27.09 339 P P 13 06 02.7 +1.0
baz=153,SNR=20
ISCO Idaho Springs 27.09 339 eP P 13 06 02.7 +1.0
comp=Z,32nm,1.2s
ISCO Idaho Springs 27.09 339 eP P 13 06 02.7 +1.0
ISCO pmax pmax
comp=Z,32nm,1.2s
L40A Anamosa 27.10 3 P P 13 06 00.1 -1.3
baz=184,SNR=20
L40A Anamosa 27.10 3 eP P 13 05 59.8 -1.6
comp=Z,52nm,0.8s
L37A Phoenix Point, 27.12 359 P P 13 06 01.9 +0.4
baz=178
L36A Harm Buss Farm 27.12 358 P P 13 05 59.7 -1.8
baz=177
L38A Oak Wood Farm, 27.13 0 P P 13 05 60.0 -1.7
baz=180
L39A Vinton 27.13 2 P P 13 06 00.8 -0.9
baz=182
PV07 Paradox Valley 27.13 333 eP P 13 06 04.0 +2.0
comp=Z,120nm,1.2s
L42A Oliver, Polo 27.16 6 P P 13 05 59.8 -2.2
baz=187
L42A Oliver, Polo 27.16 6 eP P 13 06 00.2 -1.7
comp=Z,44nm,0.8s
L41A Preston 27.16 4 P P 13 06 02.0 +0.1
baz=185
PV04 Paradox Valley 27.21 332 eP P 13 06 04.5 +1.8
comp=Z,253nm,1.4s
STVI Saint Thomas 27.22 79 eP P 13 06 05.0 +2.3
comp=Z,68nm,1.1s
PV10 Paradox Valley 27.26 332 eP P 13 06 04.5 +1.4
comp=Z,75nm,1.0s
SWSC Sam W. Stewart 27.29 315 P P 13 06 04.9 +1.7
baz=126,SNR=13
IKP In-Ko-Pah, Jac 27.34 314 P P 13 06 05.6 +1.8
baz=125,SNR=21
PV09 Paradox Valley 27.40 332 eP P 13 06 06.1 +1.6
U15A North Rim 27.40 325 eP P 13 06 06.4 +1.9
comp=Z,45nm,1.1s
W13A Hualapai Mount 27.40 321 eP P 13 06 06.4 +1.9
comp=Z,62nm,1.4s
BC3 Big Chuckawall 27.48 317 P P 13 06 06.7 +1.6
baz=127,SNR=64
IRM Iron Mountain 27.59 318 P P 13 06 07.6 +1.7
baz=128,SNR=40
K38A Parkersburg 27.64 1 P P 13 06 05.1 -1.1
baz=181
K38A Parkersburg 27.64 1 eP P 13 06 05.4 -0.8
comp=Z,31nm,0.8s
MONP2 Monument Peak 27.69 314 P P 13 06 08.6 +1.6
baz=125,SNR=13
K41A Shullsburg 27.70 5 P P 13 06 06.1 -0.7
baz=186
K39A Oelwein 27.71 2 P P 13 06 07.2 +0.3
baz=182
K40A Colesburg 27.74 3 P P 13 06 05.1 -2.0
baz=184,SNR=12
BAR Barrett 27.74 314 eP P 13 06 08.8 +1.5
comp=Z,24nm,1.1s
K37A Belmond 27.76 359 P P 13 06 04.6 -2.7
baz=179
K42A Prairie Point, 27.96 6 P P 13 06 07.7 -1.4
baz=188
K43A Burlington 28.00 8 P P 13 06 08.1 -1.4
baz=190
JFWS Jewell Farm 28.01 5 P P 13 06 08.6 -1.0
baz=186
JFWS Jewell Farm 28.01 5 eP P 13 06 08.5 -1.0
comp=Z,53nm,0.8s
JFWS Jewell Farm 28.01 5 eP P 13 06 08.5 -1.0
JFWS pmax pmax
comp=Z,53nm,0.8s
BELC Belle Mtn. Jos 28.05 317 P P 13 06 11.8 +1.6
baz=127,SNR=30
KNB Kanab 28.12 325 eP P 13 06 12.8 +2.0
comp=Z,101nm,1.5s
XPFO Pion Flat 28.13 316 eP P 13 06 12.6 +1.8
comp=Z,28nm,1.1s
PFO Pinyon Flats O 28.13 316 P P 13 06 12.5 +1.7
baz=126,SNR=14
PFO Pinyon Flats O 28.13 316 eP P 13 06 12.6 +1.7
comp=Z,32nm,1.1s
PFO Pinyon Flats O 28.13 316 eP P 13 06 12.6 +1.7
PFO pmax pmax
comp=Z,32nm,1.1s
LDFC Landfair 28.15 319 eP P 13 06 13.7 +2.7
comp=Z,137nm,1.3s
109C Camp Elliot, M 28.16 314 P P 13 06 12.1 +1.1
baz=124
CPE Camp Elliot 28.16 314 eP P 13 06 13.1 +2.1
comp=Z,84nm,1.5s
N23A Red Feather La 28.18 339 P P 13 06 12.2 +0.9
baz=153,SNR=11
N23A Red Feather La 28.18 339 eP P 13 06 12.3 +0.9
comp=Z,25nm,0.9s
PCRV Puerto La Cruz 28.22 96 LR LR 13 19 01.6
comp=Z,919nm,20.9s,baz=302,slow=40
O56A Blue Knob Stat 28.29 24 P P 13 06 12.1 0.0
baz=211
J37A Redenius Farm, 28.30 359 P P 13 06 13.9 +1.8
baz=179
GMRC Granite Mounta 28.31 318 P P 13 06 14.3 +1.8
baz=129,SNR=35
J38A Wedel Dairy, R 28.31 1 P P 13 06 13.2 +1.0
baz=181
J36A Seneca 1, Swea 28.33 358 P P 13 06 12.0 -0.4
baz=177
J36A Seneca 1, Swea 28.33 358 eP P 13 06 10.9 -1.5
comp=Z,45nm,1.0s
J39A Decorah 28.35 2 P P 13 06 11.9 -0.7
baz=183
LCMT Little Creek M 28.35 325 eP P 13 06 14.6 +1.8
comp=Z,18nm,1.1s
N54A Moraine State 28.37 21 P P 13 06 12.4 -0.3
baz=207
O20A White River Ci 28.38 335 P P 13 06 14.5 +1.5
baz=148,SNR=12
O20A White River Ci 28.38 335 eP P 13 06 14.7 +1.6
comp=Z,68nm,1.3s
PHWY Pilot Hill 28.38 340 eP P 13 06 14.1 +0.9
comp=Z,26nm,1.1s
J40A Soldiers Grove 28.46 4 P P 13 06 12.8 -0.7
baz=185
J41A Loganville 28.48 5 P P 13 06 12.2 -1.5
baz=186
J42A Columbus 28.52 6 P P 13 06 12.4 -1.6
baz=188
MTPU Mount Pierson 28.53 327 eP P 13 06 16.4 +1.8
comp=Z,109nm,1.9s
SRU San Rafael Swe 28.53 331 eP P 13 06 16.0 +1.5
comp=Z,50nm,1.5s
SRU San Rafael Swe 28.53 331 eP P 13 06 16.0 +1.5
SRU pmax pmax
comp=Z,50nm,1.5s
MURC Murrieta 28.62 315 P P 13 06 16.8 +1.7
baz=125,SNR=6.4
SZCU Shurtz Canyon 28.68 326 eP P 13 06 18.0 +2.2
comp=Z,154nm,1.8s
Q16A Castle Valley 28.69 330 eP P 13 06 17.8 +1.9
comp=Z,71nm,1.4s
HEC Hector,Ludlow 28.77 318 P P 13 06 17.7 +1.2
baz=128,SNR=15
CCUT Cedar City 28.80 325 eP P 13 06 19.2 +2.3
comp=Z,52nm,1.3s
P18A Preston Nutter 28.82 332 eP P 13 06 18.7 +1.6
comp=Z,61nm,1.4s
BBRC Big Bear Solar 28.82 316 P P 13 06 19.1 +2.0
baz=126,SNR=5.8
ECSD EROS Data Cent 28.87 355 P P 13 06 15.7 -1.5
baz=173,SNR=21
ECSD EROS Data Cent 28.87 355 eP P 13 06 16.0 -1.2
comp=Z,25nm,1.0s
I39A Houston 28.87 2 P P 13 06 17.0 -0.2
baz=183,SNR=9.4
I39A Houston 28.87 2 eP P 13 06 17.1 -0.2
comp=Z,40nm,0.8s
SSPA Standing Stone 28.87 25 P P 13 06 16.6 -0.6
baz=212
MSU Marysvale 28.88 328 eP P 13 06 19.3 +1.7
MSU Marysvale 28.88 328 eP P 13 06 19.3 +1.7
TUQ Turquoise Moun 28.89 319 P P 13 06 19.3 +1.7
baz=129,SNR=17
P17A Butcher Ranch, 28.92 331 eP P 13 06 19.6 +1.7
comp=Z,38nm,1.2s
M54A Oil Creek Stat 28.96 21 P P 13 06 19.3 +1.3
baz=208
I37A Lemond, Waseca 29.00 360 P P 13 06 18.9 +0.6
baz=179
I37A Lemond, Waseca 29.00 360 eP P 13 06 19.9 +1.5
comp=Z,32nm,0.9s
TMUT Trail Mountain 29.00 330 eP P 13 06 20.5 +1.7
comp=Z,20nm,1.0s
I38A Scanlan Farm, 29.04 1 P P 13 06 18.4 -0.3
baz=181
I42A Draeger Farm, 29.10 6 P P 13 06 17.5 -1.8
baz=188
I42A Draeger Farm, 29.10 6 eP P 13 06 17.9 -1.3
comp=Z,26nm,0.9s
SHPR Sheep Range 29.11 322 eP P 13 06 21.5 +1.9
comp=Z,61nm,1.3s
I41A Arkdale 29.18 5 P P 13 06 19.2 -0.7
baz=186
I41A Arkdale 29.18 5 eP P 13 06 21.8 +1.9
comp=Z,20nm,0.5s
I43A Langenfeld Bro 29.19 7 P P 13 06 19.2 -0.8
baz=190
SCI2 San Clemente I 29.23 312 P P 13 06 21.9 +1.4
baz=122
RRX Edison Barstow 29.23 317 P P 13 06 21.0 +0.4
baz=127
BFSC Mount Baldy Ra 29.30 315 P P 13 06 22.8 +1.5
baz=125,SNR=8.9
RWWY Rawlins 29.32 338 eP P 13 06 23.1 +1.6
comp=Z,89nm,1.0s
CIS Catalina Islan 29.36 313 P P 13 06 23.2 +1.5
baz=123,SNR=8.4
GSC Goldstone, Bar 29.37 318 P P 13 06 23.5 +1.8
baz=128,SNR=10.0
GSC Goldstone, Bar 29.37 318 eP P 13 06 23.6 +1.8
comp=Z,76nm,1.8s
GSC Goldstone, Bar 29.37 318 eP P 13 06 23.6 +1.8
GSC pmax pmax
comp=Z,77nm,1.8s
ERPA Erie 29.39 20 P P 13 06 22.4 +0.5
baz=206
SHOC Shoshone, Teco 29.40 320 P P 13 06 23.8 +1.8
baz=129,SNR=7.6
FMP Fort Macarthur 29.45 314 P P 13 06 23.2 +0.9
baz=123
MWC Mount Wilson 29.57 315 eP P 13 06 25.6 +1.9
comp=Z,55nm,1.3s
MWC Mount Wilson 29.57 315 eP P 13 06 25.6 +1.9
MWC pmax pmax
comp=Z,55nm,1.3s
H36A Jessenland, He 29.57 359 P P 13 06 21.7 -1.6
baz=178
PASC Pasadena Art C 29.63 315 eP P 13 06 26.2 +2.2
comp=Z,82nm,1.5s
H38A Maiden Rock 29.67 1 P P 13 06 22.2 -2.1
baz=182
H40A Chili 29.70 4 P P 13 06 24.9 +0.4
baz=185,SNR=5.6
H39A Augusta 29.71 3 P P 13 06 24.7 +0.1
baz=183,SNR=8.7
H32A Carlson Farm, 29.71 354 P P 13 06 22.7 -1.9
baz=172,SNR=8.3
H35A Sunnyside Ranc 29.72 358 P P 13 06 23.7 -1.0
baz=177
H41A Junction City 29.75 5 P P 13 06 24.2 -0.7
baz=187
MPU Maple Canyon 29.77 331 eP P 13 06 27.4 +2.0
comp=Z,18nm,0.8s
DECC Green Verdugo 29.77 315 P P 13 06 26.7 +1.4
baz=124
PSUT Pine Spring 29.78 326 eP P 13 06 27.6 +2.1
comp=Z,23nm,1.0s
EDW2 Edwards Air Fo 29.90 316 P P 13 06 27.2 +0.8
baz=125,SNR=8.3
K22A Casper 29.94 340 P P 13 06 27.5 +0.7
baz=153,SNR=14
K22A Casper 29.94 340 eP P 13 06 27.6 +0.8
comp=Z,50nm,1.0s
LRMC Laurel Mtn Rad 30.05 317 P P 13 06 28.8 +1.0
baz=127,SNR=5.8
TPNV Topopah Spring 30.06 321 P P 13 06 30.1 +2.1
baz=131,SNR=26
TPNV Topopah Spring 30.06 321 eP P 13 06 30.3 +2.3
comp=Z,40nm,1.2s
TPNV Topopah Spring 30.06 321 eP P 13 06 30.3 +2.3
TPNV pmax pmax
comp=Z,40nm,1.2s
SNCC San Nicolas Is 30.07 312 P P 13 06 29.2 +1.2
baz=121
FURC Furnace Creek, 30.13 320 P P 13 06 30.3 +1.9
baz=129,SNR=17
JLU Jordanelle 30.15 332 eP P 13 06 30.8 +1.9
comp=Z,60nm,1.8s
G38A Ridgeland 30.18 2 P P 13 06 27.4 -1.3
baz=182,SNR=7.8
BLG Laguna Peak, P 30.20 314 P P 13 06 30.3 +1.2
baz=123
SPMN Marine on St. 30.21 0 P P 13 06 29.2 +0.2
baz=180,SNR=8.5
SPMN Marine on St. 30.21 0 eP P 13 06 29.7 +0.7
comp=Z,32nm,0.5s
G36A St. Michael 30.23 359 P P 13 06 29.1 0.0
baz=179
OSI Osito Audit: C 30.24 315 P P 13 06 30.3 +0.8
baz=124
MPMC Manual Prospec 30.27 319 P P 13 06 31.3 +1.4
baz=128,SNR=35
G34A Benson 30.30 357 P P 13 06 29.4 -0.4
baz=175
G33A Ortonville 30.31 355 P P 13 06 28.1 -1.8
baz=174
G39A Holcombe 30.32 3 P P 13 06 27.3 -2.6
baz=184,SNR=14
G40A Rib Lake 30.36 4 P P 13 06 28.4 -1.9
baz=185
G40A Rib Lake 30.36 4 eP P 13 06 30.6 +0.3
comp=Z,11nm,0.9s
CTU Camp Tracy 30.36 331 eP P 13 06 32.2 +1.6
comp=Z,41nm,1.3s
G32A Webster 30.46 354 P P 13 06 28.1 -3.2
baz=172,SNR=5.2
G32A Webster 30.46 354 eP P 13 06 29.7 -1.6
comp=Z,59nm,0.9s
DAC Darwin (Calif) 30.47 319 eP P 13 06 33.0 +1.3
comp=Z,46nm,1.3s
DUG Dugway, Tooele 30.48 329 P P 13 06 33.1 +1.4
baz=140,SNR=11
DUG Dugway, Tooele 30.48 329 eP P 13 06 32.1 +0.5
comp=Z,35nm,1.6s
DUG Dugway, Tooele 30.48 329 eP P 13 06 32.1 +0.5
DUG pmax pmax
comp=Z,35nm,1.6s
G42A Mountain 30.49 7 P P 13 06 28.9 -2.6
baz=189
G42A Mountain 30.49 7 eP P 13 06 29.9 -1.6
comp=Z,21nm,1.0s
SCZ2 Santa Cruz Isl 30.54 313 P P 13 06 33.1 +1.0
baz=122
TCUT Toone Canyon 30.55 332 eP P 13 06 28.3 -4.1
comp=Z,239nm,1.4s
RSSD Black Hills 30.55 344 P P 13 06 32.7 +0.5
baz=159
RSSD Black Hills 30.55 344 eP P 13 06 32.8 +0.5
comp=Z,23nm,0.8s
RSSD Black Hills 30.55 344 eP P 13 06 32.8 +0.5
RSSD pmax pmax
comp=Z,23nm,0.8s
G43A Wallace 30.59 8 P P 13 06 32.4 +0.1
baz=190
G43A Wallace 30.59 8 eP P 13 06 32.7 +0.3
comp=Z,16nm,0.8s
ARVC Arvin 30.60 316 P P 13 06 34.4 +1.8
baz=125,SNR=5.6
R11A Troy Canyon, C 30.61 324 P P 13 06 34.9 +2.0
baz=134,SNR=42
R11A Troy Canyon, C 30.61 324 eP P 13 06 34.3 +1.4
comp=Z,26nm,1.2s
ISA Isabella, Lake 30.67 317 P P 13 06 35.2 +1.9
baz=126,SNR=10
ISA Isabella, Lake 30.67 317 eP P 13 06 34.6 +1.3
comp=Z,80nm,1.8s
ISA Isabella, Lake 30.67 317 eP P 13 06 34.7 +1.3
ISA pmax pmax
comp=Z,80nm,1.8s
GRAC Grapevine Rang 30.78 320 P P 13 06 36.4 +2.2
baz=129,SNR=13
F36A Milaca 30.85 359 P P 13 06 34.0 -0.6
baz=179
F36A Milaca 30.85 359 eP P 13 06 33.1 -1.6
comp=Z,16nm,0.9s
CWC Cottonwood Cre 30.88 319 P P 13 06 36.7 +1.5
baz=127
F39A Loretta 30.96 3 P P 13 06 33.9 -1.7
baz=184
F38A Pierce - Schro 30.96 2 P P 13 06 33.8 -1.9
baz=182
HWUT Hardware Ranch 31.01 333 eP P 13 06 36.5 +0.1
comp=Z,30nm,1.2s
F40A Park Falls 31.01 4 P P 13 06 34.7 -1.3
baz=186
BW06 Boulder Array 31.13 336 P P 13 06 37.9 +0.5
baz=148,SNR=25
BW06 Boulder Array 31.13 336 eP P 13 06 37.7 +0.3
comp=Z,22nm,1.1s
PD31 Pinedale Array 31.13 336 eP P 13 06 37.9 +0.5
PDAR Pinedale Array 31.13 336 P P 13 06 38.0 +0.5
comp=Z,12nm,0.9s,baz=132,slow=8.9,SNR=63
PDAR ScP ScP 13 13 10.6 +2.1
comp=Z,0.5nm,0.7s,baz=159,slow=5.6,SNR=2.8
PDAR Pinedale Array 31.13 336 eP P 13 06 37.2 -0.3
PDAR ScP ScP 13 13 10.6 +2.1
PKM Mcpherson Peak 31.14 315 P P 13 06 39.2 +1.6
baz=123,SNR=7.3
BGU Big Grassy Mou 31.15 330 eP P 13 06 39.2 +1.6
comp=Z,14nm,0.8s
SPUT South Promonto 31.17 331 eP P 13 06 38.6 +0.9
comp=Z,49nm,1.3s
VES Vestal, Richgr 31.18 317 P P 13 06 39.8 +2.1
baz=125,SNR=27
F43A Flat Rock, Esc 31.23 8 P P 13 06 38.3 +0.4
baz=191,SNR=6.1
NNA Nana 31.23 148 LR LR 13 17 02.4
comp=Z,356nm,22.0s,baz=327,slow=32
COWI Conover 31.27 5 eP P 13 06 38.4 +0.1
comp=Z,15nm,1.0s
CRGC Crocker Grade 31.27 315 eP P 13 06 41.1 +2.4
TIN Tinemaha, Big 31.35 319 P P 13 06 40.6 +1.3
baz=128
E39A Mellen 31.44 3 P P 13 06 39.5 -0.3
baz=185
F44A Big Bay de Noc 31.47 9 P P 13 06 40.7 +0.6
baz=192

SMMC	Simmler	31.50	315	P	P	13 06 41.7 +1.2
	baz=123					
E36A	McGregor	31.50	360	P	P	13 06 41.2 +0.8
	baz=180					
E34A	Wadena	31.55	357	P	P	13 06 38.3 -2.4
	baz=176					
E40A	Wakefield	31.55	4	P	P	13 06 40.5 -0.3
	baz=186,SNR=12					
E35A	Pequot Lakes	31.56	358	P	P	13 06 39.5 -1.4
	baz=178					
E38A	The Farm, Brul	31.62	2	P	P	13 06 37.7 -3.7
	baz=183					
E38A	The Farm, Brul	31.62	2	eP	P	13 06 41.6 +0.2
	comp=Z,62nm,1.5s					
HVU	Hansel Valley	31.69	331	eP	P	13 06 44.0 +1.7
	comp=Z,46nm,1.2s					
HVU	Hansel Valley	31.69	331	eP	P	13 06 44.0 +1.7
HVU				pmax	pmax	
	comp=Z,46nm,1.2s					
E42A	Champion	31.72	7	P	P	13 06 40.5 -1.8
	baz=190					
AHID	Auburn Hatcher	31.75	334	eP	P	13 06 44.0 +1.1
	comp=Z,169nm,1.6s					
E43A	Lone Tree Farm	31.79	8	P	P	13 06 41.3 -1.6
	baz=191					
PAGB	Antelope Grade	31.90	315	eP	P	13 06 46.5 +2.4
	comp=Z,121nm,1.5s					
D35A	Remer	32.08	359	P	P	13 06 43.8 -1.7
	baz=178					
MLAC	Mammoth, Mammo	32.09	320	P	P	13 06 47.8 +1.9
	baz=128,SNR=8.7					
ELK	Elko	32.12	328	P	P	13 06 50.5 +4.4
	comp=Z,9.7nm,0.9s,baz=181,slow=5.1,SNR=37					
REDW	Red Top Meadow	32.14	335	eP	P	13 06 47.7 +1.3
	comp=Z,225nm,1.1s					
D37A	Cotton	32.15	1	P	P	13 06 44.4 -1.7
	baz=181,SNR=13					
D36A	Goodland	32.16	360	P	P	13 06 44.9 -1.3
	baz=180					
D36A	Goodland	32.16	360	eP	P	13 06 48.0 +1.8
	comp=Z,18nm,1.0s					
NV11	Mina Array Sit	32.17	321	eP	P	13 06 49.0 +2.4
	comp=Z,7.4nm,1.2s					
OMMB	Old Mammoth Mi	32.18	319	eP	P	13 06 48.8 +2.0
	comp=Z,61nm,1.4s					
SNOW	Snow King Moun	32.19	336	eP	P	13 06 48.5 +1.7
	comp=Z,21nm,1.0s					
MDPB	Devils Postpil	32.24	319	eP	P	13 06 49.4 +2.1
	comp=Z,60nm,1.2s					
LOHW	Long Hollow	32.25	336	eP	P	13 06 48.6 +1.3
	comp=Z,102nm,1.2s					
NV01	Mina Array Sit	32.26	321	eP	P	13 06 48.3 +0.9
NVAR	Mina Array Bea	32.26	321	P	P	13 06 49.9 +2.5
	comp=Z,68nm,1.0s,baz=137,slow=8.6,SNR=292					
NVAR				PcP	PcP	13 09 35.4 +0.9
	comp=Z,4.9nm,0.8s,baz=132,slow=2.7,SNR=4.3					
NVAR				LR	LR	13 20 31.9
	comp=Z,1µm,20.1s,baz=227,slow=37					
TPAW	Teton Pass	32.29	335	eP	P	13 06 49.1 +1.4
	comp=Z,140nm,1.2s					
MOOW	Moose Ponds	32.42	336	eP	P	13 06 50.0 +1.2
	comp=Z,52nm,1.0s					
FXWY	Fox Creek	32.44	335	eP	P	13 06 50.2 +1.3
	comp=Z,49nm,1.1s					
RYN	Ryan	32.52	321	eP	P	13 06 51.8 +2.2
	comp=Z,33nm,1.1s					
KVN	Kaiserville	32.54	322	eP	P	13 06 51.8 +2.0
	comp=Z,48nm,1.1s					
KVN	Kaiserville	32.54	322	eP	P	13 06 51.8 +2.0
KVN				pmax	pmax	
	comp=Z,48nm,1.1s					
PMPB	Monarch Peak	32.54	316	eP	P	13 06 51.8 +2.1
	comp=Z,102nm,1.2s					
IMW	Indian Meadow	32.62	336	eP	P	13 06 51.7 +1.1
	comp=Z,73nm,1.4s					
C34A	RKJ Ranch, Bem	32.67	358	P	P	13 06 50.4 -0.2
	baz=177					
FLWY	Flagg Ranch	32.69	336	eP	P	13 06 52.5 +1.5
	comp=Z,38nm,0.9s					
C35A	Jirik Farms, M	32.70	359	P	P	13 06 48.3 -2.6
	baz=178,SNR=14					
C37A	Embarrass	32.73	1	P	P	13 06 48.6 -2.5
	baz=182					
C38A	Sawbill Land.	32.74	2	P	P	13 06 49.3 -1.9
	baz=183					
C36A	Pine Crest Far	32.75	0	P	P	13 06 49.4 -1.9
	baz=180					
YPP	Pitchstone Pla	32.89	336	eP	P	13 06 54.8 +1.9
	comp=Z,28nm,1.2s					
C39A	Grand Marais	32.90	4	P	P	13 06 52.3 -0.3
	baz=185					
H17A	Grant Village	32.90	337	P	P	13 06 54.3 +1.3
	baz=148,SNR=22					
H17A	Grant Village	32.90	337	eP	P	13 06 55.1 +2.1
	comp=Z,48nm,1.1s					
BMN	Battle Mountai	32.96	325	eP	P	13 06 55.4 +1.9
	comp=Z,33nm,1.0s					
EYMN	Ely	32.96	2	P	P	13 06 51.0 -2.1
	baz=183					
WAKR	Walker	33.00	320	eP	P	13 06 56.2 +2.4
	comp=Z,69nm,1.4s					
RLMT	Red Lodge	33.05	339	P	P	13 06 54.8 +0.6
	baz=150,SNR=22					
RLMT	Red Lodge	33.05	339	eP	P	13 06 55.0 +0.8
	comp=Z,114nm,1.7s					
YFT	Old Faithful	33.05	336	eP	P	13 06 56.9 +2.6
	comp=Z,62nm,1.1s					
C40A	Isle Royale Na	33.07	5	P	P	13 06 53.3 -0.7
	baz=187					
NCB	Newcomb	33.15	25	eP	P	13 06 57.5 +2.6
	comp=Z,20nm,1.0s					
YERR	Yerington	33.18	321	eP	P	13 06 57.6 +2.2
	comp=Z,138nm,1.7s					
YNR	Norris Junctio	33.21	337	eP	P	13 06 58.1 +2.4
	comp=Z,22nm,0.9s					
MDND	Maddock	33.27	352	P	P	13 06 54.8 -1.0
	baz=168,SNR=14					
MDND	Maddock	33.27	352	eP	P	13 06 55.0 -0.9
	comp=Z,119nm,1.1s					
SAO	San Andreas Ge	33.28	316	eP	P	13 06 54.8 -1.3
	comp=Z,41nm,1.5s					
SAO	San Andreas Ge	33.28	316	eP	P	13 06 54.8 -1.3
SAO				pmax	pmax	
	comp=Z,41nm,1.5s					
CMB	Columbia Colle	33.31	319	eP	P	13 06 57.8 +1.4
	comp=Z,23nm,1.0s					
CMB	Columbia Colle	33.31	319	eP	P	13 06 57.8 +1.4
CMB				pmax	pmax	
	comp=Z,23nm,1.0s					
B35A	Bob, Littlefor	33.35	359	P	P	13 06 54.6 -1.9
	baz=179					
B35A	Bob, Littlefor	33.35	359	eP	P	13 06 54.5 -2.0
	comp=Z,18nm,0.8s					
AGMN	Agassiz Nation	33.36	357	P	P	13 06 56.0 -0.6
	baz=175					
AGMN	Agassiz Nation	33.36	357	eP	P	13 06 55.8 -0.8
	comp=Z,16nm,0.8s					
YHB	Horse Butte	33.44	336	eP	P	13 06 59.4 +1.8
	comp=Z,25nm,1.0s					
PNTR	Pine Nut	33.46	321	eP	P	13 07 00.2 +2.3
	comp=Z,177nm,1.7s					
B34A	Aery, Baudette	33.50	358	P	P	13 06 56.5 -1.3
	baz=177					
LAO	LASA Array	33.51	344	P	P	13 06 58.0 0.0
	baz=157,SNR=17					
LAO	LASA Array	33.51	344	eP	P	13 06 58.5 +0.5
	comp=Z,43nm,1.0s					
LONY	Lake Ozonia	33.54	24	P	P	13 06 56.4 -1.9
	baz=214					
QLMT	Earthquake Lak	33.60	336	eP	P	13 07 01.1 +2.1
VCNR	Virginia City	33.62	321	eP	P	13 07 01.5 +2.2
	comp=Z,47nm,1.4s					
PAHR	Pah Rah Range	33.72	322	eP	P	13 07 02.1 +2.1
	comp=Z,31nm,1.0s					
RUBR	Rubicon Trail	33.78	321	eP	P	13 07 03.4 +2.7
	comp=Z,66nm,1.0s					
HLID	Hailey	33.84	332	P	P	13 07 02.2 +1.2
	baz=141,SNR=41					
HLID	Hailey	33.84	332	eP	P	13 07 02.5 +1.4
	comp=Z,22nm,1.0s					
A33A	Warroad	33.98	357	P	P	13 07 00.3 -1.6
	baz=176,SNR=6.9					
MCMT	McKenzie Canyo	34.17	335	eP	P	13 07 06.2 +2.2
AFDM	Forest Hills D	34.22	320	eP	P	13 07 05.8 +1.6
	comp=Z,45nm,1.9s					
BOZ	Bozeman (W)	34.32	337	P	P	13 07 06.4 +1.2
	baz=147,SNR=34					
BOZ	Bozeman (W)	34.32	337	eP	P	13 07 06.7 +1.5
	comp=Z,63nm,1.4s					
BOZ	Bozeman (W)	34.32	337	eP	P	13 07 06.7 +1.5
BOZ				pmax	pmax	
	comp=Z,63nm,1.4s					
MFID	Camas Ranch	34.39	330	eP	P	13 07 06.5 +0.8
	comp=Z,14nm,0.8s					
BEKR	Beckworth	34.41	321	eP	P	13 07 08.0 +2.0
	comp=Z,45nm,1.2s					
DLMT	Dillon	34.50	336	eP	P	13 07 08.0 +1.2
	comp=Z,137nm,1.3s					
LCCM	Lewis and Clar	34.62	337	eP	P	13 07 09.3 +1.5
DGMT	Dagmar	34.68	347	P	P	13 07 07.6 -0.5
	baz=161,SNR=7.5					
DGMT	Dagmar	34.68	347	eP	P	13 07 08.3 +0.2
	comp=Z,33nm,0.9s					
LRM	Limekiln Ridge	34.82	336	eP	P	13 07 11.0 +1.4
ORV	Oroville	34.91	320	eP	P	13 07 12.3 +2.1
	comp=Z,36nm,1.3s					
MCCM	Maroni Confer	34.99	317	eP	P	13 07 13.1 +2.3
	comp=Z,131nm,1.6s					
WVOR	Wild Horse Val	35.11	326	eP	P	13 07 13.3 +1.3
	comp=Z,61nm,1.2s					
GDXM	Geysers	35.30	318	eP	P	13 07 16.1 +2.5
	comp=Z,18nm,1.2s					
ULM	Lac du Bonnet	35.31	357	P	P	13 07 11.1 -2.3
	comp=Z,11nm,0.8s,baz=174,slow=9.6,SNR=6.5					
ULM				LR	LR	13 24 52.3
	comp=Z,246nm,18.4s,baz=177,slow=42					
ULM	Lac du Bonnet	35.31	357	eP	P	13 07 11.2 -2.3
	comp=Z,13nm,0.9s					
ULM	Lac du Bonnet	35.31	357	eP	P	13 07 11.2 -2.2
ULM				pmax	pmax	
	comp=Z,13nm,0.9s					
HRY	Holter Researc	35.33	338	eP	P	13 07 14.9 +1.0
O03D	Paynes Creek	35.54	321	P	P	13 07 16.4 +0.8
	baz=127,SNR=9.3					
HOPS	Hopland Field	35.58	318	eP	P	13 07 18.0 +2.1
	comp=Z,53nm,1.5s					
J08A	Circle Bar Ran	35.67	328	eP	P	13 07 18.4 +1.6
	comp=Z,175nm,1.4s					
MOD	Modoc Plateau	35.67	324	eP	P	13 07 18.0 +1.1
	comp=Z,28nm,1.0s					
EGMT	Eagleton	35.76	341	P	P	13 07 18.1 +0.6
	baz=152,SNR=45					
EGMT	Eagleton	35.76	341	eP	P	13 07 18.3 +0.9
	comp=Z,106nm,1.1s					
WDC	Whiskeytown Da	36.16	321	eP	P	13 07 20.1 -0.8
	comp=Z,13nm,1.1s					
WDC	Whiskeytown Da	36.16	321	eP	P	13 07 20.1 -0.8
WDC				pmax	pmax	
	comp=Z,13nm,1.1s					
BMO	Blue Mountains	36.17	330	eP	P	13 07 21.2 +0.2
	comp=Z,39nm,1.4s					
BMO	Blue Mountains	36.17	330	eP	P	13 07 21.3 +0.2
BMO				pmax	pmax	
	comp=Z,39nm,1.4s					
MSO	Missoula	36.24	336	P	P	13 07 22.5 +0.9
	baz=144,SNR=15					
MSO	Missoula	36.24	336	eP	P	13 07 22.6 +1.0
	comp=Z,64nm,1.2s					
PTGA	Pitinga	36.32	112	eP	P	13 07 20.6 -1.9
	comp=Z,101nm,0.8s					
M04C	Macdoel	36.48	323	P	P	13 07 24.8 +1.0
	baz=129,SNR=11					
N02D	Trinity Center	36.50	321	P	P	13 07 22.4 -1.4
	baz=127					
K05A	Summer Lake	36.54	325	eP	P	13 07 25.6 +1.2
	comp=Z,33nm,1.3s					
I07A	Izee	36.71	328	eP	P	13 07 26.7 +1.0
	comp=Z,10.0nm,0.9s					
M02C	Callahan	36.84	322	P	P	13 07 26.3 -0.4
	baz=127,SNR=7.6					
YBH	Yreka Blue Hor	36.96	322	P	P	13 07 27.3 -0.4
	comp=Z,6.9nm,0.5s,baz=137,slow=4.2,SNR=38					
YBH				LR	LR	13 23 16.2
	comp=Z,807nm,21.7s,baz=147,slow=37					
F10A	Beach Ranch, E	36.98	332	eP	P	13 07 28.4 +0.6
	comp=Z,51nm,0.8s					
J05D	Fort Rock, OR	37.10	325	P	P	13 07 28.9 -0.1
	baz=131,SNR=11					
JTMT	Jette	37.12	336	eP	P	13 07 30.4 +1.3
	comp=Z,55nm,1.1s					
JCC	Jacoby Creek,	37.22	320	eP	P	13 07 31.6 +1.7
	comp=Z,147nm,1.4s					
PINE	Pine Mountain	37.27	326	eP	P	13 07 31.1 +0.6
	comp=Z,24nm,1.1s					
G08A	Pilot Rock	37.29	330	eP	P	13 07 31.4 +0.8
	comp=Z,19nm,1.5s					
J04D	Umpqua Nationa	37.55	325	P	P	13 07 33.6 +0.7
	baz=130,SNR=5.9					
L02D	Cave Junction,	37.75	322	P	P	13 07 34.2 -0.1
	baz=127					
E09A	Wood Farm, Sta	37.80	332	eP	P	13 07 35.1 +0.4
	comp=Z,16nm,0.8s					
I05D	Terrebonne, OR	37.85	326	P	P	13 07 36.3 +1.1
	baz=132,SNR=6.1					
SAML	Samuel	38.02	127	eP	P	13 07 35.5 -1.4
	comp=Z,33nm,0.8s					
WALA	Waterton Lakes	38.06	338	eP	P	13 07 38.0 +1.0
	comp=Z,49nm,1.3s					
I04A	Tendick Farm,	38.08	325	P	P	13 07 37.6 +0.4
	baz=130					
G06A	Carlson Farm,	38.09	328	eP	P	13 07 39.9 +2.6
	comp=Z,26nm,1.3s					
KBO	Bosley Butte	38.15	322	eP	P	13 07 40.1 +2.3
	comp=Z,136nm,1.2s					
G05D	Wamic, OR	38.45	328	P	P	13 07 41.3 +1.1
	baz=133					
H04A	Detroit Lake	38.53	326	eP	P	13 07 41.7 +0.8
	comp=Z,82nm,1.0s					
I03D	Drain, OR	38.54	324	P	P	13 07 41.7 +0.7
	baz=129					
D08A	Wollman Farm,	38.56	332	eP	P	13 07 42.0 +0.9
	comp=Z,12nm,0.8s					
KEBM	Edson Butte	38.61	322	eP	P	13 07 44.0 +2.4
	comp=Z,157nm,1.2s					
NEW	Newport	38.69	334	P	P	13 07 42.2 +0.1
	comp=Z,4.1nm,0.7s,baz=152,slow=11,SNR=7.5					
NEW	Newport	38.69	334	P	P	13 07 42.5 +0.3
	baz=141					
NEW	Newport	38.69	334	eP	P	13 07 42.6 +0.3
NEW	Newport	38.69	334	eP	P	13 07 42.6 +0.4
C09A	Chrisman Ranch	38.83	333	eP	P	13 07 44.4 +1.0
	comp=Z,25nm,0.8s					
COR	Corvallis	39.08	325	eP	P	13 07 47.0 +1.6
	comp=Z,145nm,1.3s					
COR	Corvallis	39.08	325	eP	P	13 07 47.0 +1.6
COR				pmax	pmax	
	comp=Z,145nm,1.3s					
G03D	McMinnville, O	39.46	326	P	P	13 07 49.1 +0.5
	baz=130					
LTY	Liberty	39.53	330	eP	P	13 07 50.7 +1.4
	comp=Z,34nm,1.3s					
LPAZ	La Paz	39.65	140	P	P	13 07 51.3 +0.1
	comp=Z,8.5nm,0.8s,baz=336,slow=6.5,SNR=32					
LPAZ				LR	LR	13 23 43.0
	comp=Z,240nm,19.2s,baz=324,slow=35					
LPAZ	La Paz	39.65	140	eP	P	13 07 51.3 +0.1
	comp=Z,11nm,0.8s					
LPAZ	La Paz	39.65	140	eP	P	13 07 51.3 +0.1
LPAZ				pmax	pmax	
	comp=Z,11nm,0.8s					
B08A	Colville Reser	39.72	333	eP	P	13 07 51.4 +0.6
	comp=Z,12nm,0.9s					
LON	Longmire	39.73	329	eP	P	13 07 52.0 +1.1
	comp=Z,22nm,0.9s					
LON	Longmire	39.73	329	eP	P	13 07 52.0 +1.1
LON				pmax	pmax	
	comp=Z,22nm,0.9s					
F04D	Rainier, OR	39.89	327	P	P	13 07 52.9 +0.7
	baz=131					
C06D	Leavenworth	40.11	331	P	P	13 07 54.9 +0.9
	baz=136					
D05A	Enumclaw	40.12	329	eP	P	13 07 53.1 -1.0
	comp=Z,51nm,1.3s					
FFC	Flin Flon	40.31	352	eP	P	13 07 55.2 -0.3
	comp=Z,13nm,0.8s					
FFC	Flin Flon	40.31	352	eP	P	13 07 55.2 -0.3
FFC				pmax	pmax	
	comp=Z,13nm,0.8s					
B06A	Marblemount	40.81	331	eP	P	13 08 00.5 +0.8
	comp=Z,18nm,0.8s					
B05A	Bryant	40.92	330	P	P	13 08 00.6 -0.1
	baz=134					
MNMC	Minye Minye	41.02	145	eP	P	13 08 03.1 +1.0
	comp=Z,67nm,1.0s					
A04D	Lummi Island	41.53	330	P	P	13 08 06.3 +0.7
	baz=134					
PGC	Sidney	41.84	330	eP	P	13 08 09.5 +1.4
	comp=Z,28nm,1.0s					
LLLB	Lilloet	42.50	333	eP	P	13 08 14.7 +1.2
	comp=Z,30nm,1.0s					
PB01	IPOC Station P	42.63	146	eP	P	13 08 15.4 +0.4
	comp=Z,24nm,1.1s					
RPN	Rapa Nui	44.65	201	LR	LR	13 22 26.0
	comp=Z,101nm,21.0s,baz=28,slow=30					
SCHQ	Schefferville	44.77	21	P	P	13 08 32.0 +0.3
	comp=Z,2.1nm,0.6s,baz=233,slow=15,SNR=2.7					
SCHQ				PcP	PcP	13 10 12.8 +0.1
	comp=Z,13nm,0.7s,baz=257,slow=4.3,SNR=6.4					
SCHQ				LR	LR	13 29 21.6
	comp=Z,450nm,18.1s,baz=222,slow=39					
GO02	Mina Guanaco	45.99	150	eP	P	13 08 43.0 +0.9
	comp=Z,24nm,0.8s					
LCO	Las Campanas	48.77	154	eP	P	13 09 04.0 +0.5
	comp=Z,36nm,1.1s					
GO04	Tololo Observa	49.74	154	eP	P	13 09 11.8 +0.9
	comp=Z,19nm,0.8s					
YKA	Yellowknife Ar	49.88	347	P	P	13 09 10.8 -0.4
	comp=Z,8.8nm,0.6s,baz=135,slow=8.9,SNR=29					
YKA				LR	LR	13 34 13.9
	comp=Z,18nm,18.7s,baz=182,slow=41					
YKW3	Yellowknife Ar	49.95	347	eP	P	13 09 11.4 -0.3
	comp=Z,136nm,1.9s					
CRAG	Craig	50.79	332	eP	P	13 09 20.7 +2.5
	comp=Z,168nm,2.0s					
DLBC	Dease Lake	51.37	336	P	P	13 09 24.3 +1.7
	comp=Z,24nm,0.8s,baz=145,slow=6.3,SNR=52					
DLBC				LR	LR	13 34 32.3
	comp=Z,469nm,18.8s,baz=148,slow=40					
DLBC	Dease Lake	51.37	336	eP	P	13 09 24.8 +2.1
	comp=Z,240nm,1.9s					
FRB	Frobisher Bay	51.68	14	P	P	13 09 25.0 +0.3
	comp=Z,2.7nm,0.4s,baz=226,slow=11,SNR=4.6					
ROC1	El Roble	52.11	156	eP	P	13 09 28.8 +0.1
	comp=Z,19nm,0.8s					
TAOE	Nuku Hiva Isla	52.23	246	eS	S	13 17 02.2 +12
	comp=Z,163nm,29.2s					
TAOE				eLR	LR	13 24 14.0
	comp=Z,848nm,26.4s					
TAOE	Nuku Hiva Isla	52.23	246	eT	T	14 04 53.8
	comp=Z,68nm,0.3s					
JIS	Juneau Island	53.03	334	eP	P	13 09 37.1 +2.3
	comp=Z,11nm,0.9s					
BESE	Bessie Mountai	53.41	334	eP	P	13 09 39.7 +2.0
	comp=Z,37nm,1.5s					
CPUP	Villa Florida	53.80	139	P	P	13 09 39.6 -1.3
	comp=Z,16nm,0.9s,baz=326,slow=8.5,SNR=22					
CPUP				LR	LR	13 31 55.3
	comp=Z,224nm,20.1s,baz=337,slow=35					
CPUP	Villa Florida	53.80	139	eP	P	13 09 39.9 -1.1
	comp=Z,22nm,1.0s					
CPUP	Villa Florida	53.80	139	eP	P	13 09 39.9 -1.1
CPUP				pmax	pmax	
	comp=Z,22nm,1.0s					
SKAG	Skagway	54.14	335	eP	P	13 09 44.1 +1.1
	comp=Z,33nm,1.6s					
RKT	Rikitea	55.71	228	eS	S	13 17 51.2 +15
	comp=Z,317nm,31.8s					
RKT				eLR	LR	13 26 10.5
	comp=Z,683nm,27.2s					
RKT	Rikitea	55.71	228	eT	T	14 09 24.9
	comp=Z,10nm,0.2s					
DAWY	Dawson	58.41	338	eP	P	13 10 13.8 +0.4
	comp=Z,6.8nm,0.8s					
RAGM	Ragged Mountai	58.62	333	eP	P	13 10 16.8 +2.0
	comp=Z,54nm,1.1s					
BMRM	Bremner River	58.85	334	eP	P	13 10 18.1 +1.6
	comp=Z,23nm,0.8s					
SFJD	Kangerlussuaq	58.99	18	LR	LR	13 37 12.2
	comp=Z,313nm,19.8s,baz=225,slow=38					
PLCA	Paso Flores	59.21	160	P	P	13 10 18.7 -0.5
	comp=Z,10.0nm,0.9s,baz=352,slow=9.1,SNR=11					
PLCA				LR	LR	13 30 55.7
	comp=Z,157nm,18.1s,baz=13,slow=31					
PLCA	Paso Flores	59.21	160	eP	P	13 10 19.9 +0.7
INK	Inuvik	59.25	344	LR	LR	13 40 28.7
	comp=Z,649nm,18.8s,baz=138,slow=40					
INK	Inuvik	59.25	344	eP	P	13 10 19.6 +0.6
	comp=Z,84nm,1.1s					
INK	Inuvik	59.25	344	eP	P	13 10 19.6 +0.6
INK				pmax	pmax	
	comp=Z,84nm,1.1s					
DIV	Divide	59.43	333	eP	P	13 10 21.9 +1.4
	comp=Z,30nm,1.0s					
EGAK	Eagle	59.45	338	eP	P	13 10 20.4 0.0
	comp=Z,12nm,0.9s					
KLU	Klutina	59.66	334	eP	P	13 10 23.6 +1.5
	comp=Z,36nm,1.0s					
HARP	HAARP	59.77	335	eP	P	13 10 24.4 +1.7
	comp=Z,57nm,0.8s					
RES	Resolute Bay	59.77	359	P	P	13 10 22.1 -0.3
	comp=Z,15nm,0.7s,baz=189,slow=9.6,SNR=27					
RES	Resolute Bay	59.77	359	eP	P	13 10 22.2 -0.3
	comp=Z,19nm,0.8s					
RES	Resolute Bay	59.77	359	eP	P	13 10 22.2 -0.3
RES				pmax	pmax	
	comp=Z,19nm,0.8s					
SCRK	Sand Creek	60.07	337	eP	P	13 10 25.8 +0.9
	comp=Z,23nm,1.2s					
PAX	Paxson	60.16	335	eP	P	13 10 26.1 +0.6
	comp=Z,28nm,0.8s					
PAX	Paxson	60.16	335	eP	P	13 10 26.1 +0.6
PAX				pmax	pmax	
	comp=Z,28nm,0.8s					
RIDG	Independ'e Rid	60.28	336	eP	P	13 10 27.2 +0.9
	comp=Z,47nm,1.0s					
RCBR	Riachuelo	60.37	106	eP	P	13 10 28.6 +0.9
	comp=Z,122nm,0.8s					
SCM	Sheep Creek Mo	60.42	334	eP	P	13 10 28.1 +0.9
	comp=Z,25nm,0.9s					
SCM	Sheep Creek Mo	60.42	334	eP	P	13 10 28.1 +0.9
SCM				pmax	pmax	
	comp=Z,25nm,0.9s					
SML	Sawmill	60.84	333	eP	P	13 10 31.2 +1.1
	comp=Z,113nm,1.6s					
SML	Sawmill	60.84	333	eP	P	13 10 31.2 +1.1
SML				pmax	pmax	
	comp=Z,113nm,1.6s					
DHY	Denali Highway	60.98	335	eP	P	13 10 31.9 +0.7
GHO	Glory Hole Cre	61.08	333	eP	P	13 10 32.6 +0.8
	comp=Z,54nm,1.0s					
PMR	Palmer	61.10	333	eP	P	13 10 32.5 +0.8
	comp=Z,20nm,0.9s					
PMR	Palmer	61.10	333	eP	P	13 10 32.5 +0.8
PMR				pmax	pmax	
	comp=Z,20nm,0.9s					
RC01	Rabbit Creek A	61.16	332	eP	P	13 10 33.0 +0.8
	comp=Z,39nm,0.9s					
BRLK	Bradley Lake	61.19	331	eP	P	13 10 33.5 +0.9
	comp=Z,61nm,1.2s					
CNPM	China Poot	61.27	330	eP	P	13 10 34.1 +1.1
	comp=Z,27nm,1.0s					
KDAK	Kodiak Island	61.35	328	P	P	13 10 33.9 +0.4
	comp=Z,11nm,0.6s,baz=115,slow=3.5,SNR=15					
KDAK				LR	LR	13 38 02.4
	comp=Z,203nm,19.6s,baz=129,slow=37					
KDAK	Kodiak Island	61.35	328	eP	P	13 10 34.5 +1.0
KDAK	Kodiak Island	61.35	328	i P	P	13 10 34.2 +0.7
HDA	Harding Lake	61.42	336	eP	P	13 10 34.2 +0.3
	comp=Z,116nm,1.8s					
OHAK	Old Harbor	61.54	328	eP	P	13 10 35.7 +0.9
IL1	Eielson Array	61.56	337	eP	P	13 10 34.1 -0.8
ILAR	Eielson Array	61.56	337	P	P	13 10 35.1 +0.3
	comp=Z,19nm,0.9s,baz=136,slow=4.6,SNR=168					
ILAR				LR	LR	13 41 14.9
	comp=Z,415nm,18.1s,baz=140,slow=40					
ILB	Eielson Array	61.56	337	eP	P	13 10 35.1 +0.3
KIP	Kipapa	61.60	286

COLA College 61.98 337 *eP* **P 13 10 38.0 +0.4**
COLA pmax pmax
comp=Z,29nm,0.8s
MDM Murphy Dome 62.16 337 *eP* **P 13 10 39.0 +0.1**
comp=Z,12nm,0.8s
BWN Browne 62.30 336 *eP* **P 13 10 40.2 +0.4**
comp=Z,167nm,0.9s
SKT Skwentna 62.30 333 *eP* **P 13 10 40.5 +0.7**
comp=Z,53nm,1.2s
RSO Redoubt South 62.31 331 *eP* **P 13 10 40.9 +0.6**
TRF Thorofare Moun 62.34 335 *eP* **P 13 10 40.9 +0.6**
comp=Z,56nm,0.8s
PPLA Purkeypile 62.92 334 *eP* **P 13 10 44.4 +0.2**
comp=Z,129nm,1.6s
TULEG Thule 62.93 6 *eP* **P 13 10 43.8 0.0**
CAST Castle Rocks 63.07 334 *eP* **P 13 10 45.0 +0.1**
comp=Z,32nm,0.8s
MLY Manley 63.15 336 *eP* **P 13 10 46.1 +0.5**
comp=Z,34nm,0.8s
SVW2 Sparrevohn 63.83 331 *eP* **P 13 10 50.0 0.0**
comp=Z,16nm,0.7s
COLD Coldfoot 63.87 339 *eP* **P 13 10 51.6 +1.4**
comp=Z,16nm,1.0s
CHGN Chignik 64.03 326 *eP* **P 13 10 51.5 +0.2**
comp=Z,51nm,1.0s
TIAR Tiarei 64.12 242 *eT* T 14 19 46.9
comp=Z,2.1nm,0.3s
TVO Taravao 64.14 241 *eT* T 14 19 48.4
comp=Z,1.0nm,0.3s
TOLK Toolik Lake Re 64.28 340 P **P 13 10 53.3 +0.4**
baz=116
TOLK Toolik Lake Re 64.28 340 *eP* **P 13 10 53.9 +1.0**
comp=Z,19nm,0.7s
PPT Papeete 64.32 242 LR LR 13 30 59.0
comp=Z,241nm,20.6s,baz=74,slow=28
PPT2 Papeete2 64.33 242 *e*LR LR 13 29 51.6
comp=Z,690nm,27.5s
IM3 Indian Mountai 64.68 337 *eP* **P 13 10 54.2 -1.3**
SDPT Sand Point 64.98 324 *eP* **P 13 10 58.2 +0.6**
SUMG Summit 65.66 16 *i* P **P 13 11 02.9 +0.7**
comp=Z,8.6nm,0.9s
SUMG Summit 65.66 16 *eP* **P 13 11 02.8 +0.7**
SUMG Summit 65.66 16 *eP* **P 13 11 02.8 +0.6**
TBI Tubuai 66.91 236 *e*LR LR 13 31 18.4
comp=Z,489nm,28.2s
TBI Tubuai 66.91 236 *eT* T 14 23 19.0
comp=Z,8.3nm,0.3s
UNV Unalaska Valle 68.27 322 *eP* **P 13 11 19.1 +0.6**
RDOG Red Dog Mine 68.73 338 *eP* **P 13 11 22.0 +0.8**
BORG Borgarnes 68.88 26 LR LR 13 39 57.4
comp=Z,190nm,21.9s,baz=261,slow=34
DAG Danmarks Havn 72.04 13⇓ *iP* **P 13 11 40.9 -0.3**
comp=Z,15nm,0.7s
EFI East Falkland 73.00 158⇑ *eP* **P 13 11 48.7 +1.5**
EFI pmax pmax
comp=Z,64nm,1.3s
RAR Rarotonga 74.58 243 LR LR 13 34 09.6
comp=Z,50nm,21.5s,baz=93,slow=27
EKA Eskdalemuir Ar 77.88 36 P **P 13 12 13.2 -2.1**
comp=Z,4.0nm,0.6s,baz=280,slow=5.4,SNR=14
EKA LR LR 13 47 22.3
comp=Z,115nm,18.3s,baz=280,slow=36
KBS Kingsbay 78.33 11 *eP* **P 13 12 19.1 +1.7**
comp=Z,24nm,1.0s
KBS Kingsbay 78.33 11 *eP* **P 13 12 19.1 +1.7**
KBS pmax pmax
comp=Z,24nm,1.0s
SPITS Spitsbergen Ar 79.42 11 P **P 13 12 23.5 +0.1**
comp=Z,5.8nm,0.5s,baz=270,slow=4.0,SNR=26
SPITS LR LR 13 49 42.3
comp=Z,216nm,21.5s,baz=310,slow=37
HSPB Hornsund (broa 79.69 13 *eP* **P 13 12 27.0 +2.2**
HSPB MLR MLR
comp=Z,300nm,23.0s
ESDC Sonseca Array 80.03 52 P **P 13 12 25.6 -1.9**
comp=Z,1.8nm,0.7s,baz=288,slow=5.6,SNR=9.7
ESDC LR LR 13 42 14.3
comp=Z,127nm,21.8s,baz=335,slow=31
BILL Bilibino 80.19 338 *eP* **P 13 12 28.5 +0.7**
BILL Bilibino 80.19 338 *d iP* **P 13 12 28.4 +0.7**
BILL *e* 13 15 31.1
BILL pmax pmax
comp=Z,116nm,1.7s
BILL MLR MLR
comp=Z,260nm,22.0s
MDT Midelt 80.87 58 P **P 13 12 30.4 -1.8**
comp=Z,4.6nm,0.9s,baz=306,slow=3.6,SNR=8.1
MDT LR LR 13 41 36.1
comp=Z,155nm,21.8s,baz=306,slow=31
PMSA Palmer Station 82.48 168 LR LR 13 42 57.3
comp=Z,116nm,20.8s,baz=311,slow=31
AFI Afiamalu 82.87 254 LR LR 13 40 39.8
comp=Z,169nm,20.3s,baz=76,slow=29
NB2 NORSAR Subarra 83.88 28 P **P 13 12 47.5 +0.3**
comp=Z,1.6nm,0.6s,baz=292,slow=5.1
NOA NORSAR Array B 83.88 28 LR LR 13 48 48.7
comp=Z,156nm,21.0s,baz=285,slow=35
HFS Hagfors 85.34 29 P **P 13 12 53.7 -0.8**
comp=Z,4.1nm,0.7s,baz=228,slow=1.7,SNR=6.4
KOWA Kowa 85.54 76 LR LR 13 45 55.6
comp=Z,157nm,21.5s,baz=224,slow=32
ARCES ARCESS Array B 85.62 18 P **P 13 12 55.8 +0.1**
comp=Z,10nm,0.6s,baz=293,slow=4.6,SNR=53
ARCES LR LR 13 51 05.4
comp=Z,136nm,21.2s,baz=290,slow=36
TIC Toumodi 86.52 84 *eP* **P 13 13 01.1 -0.2**
LIC Lamto 86.62 84 *eP* **P 13 13 01.4 -0.4**
comp=Z,125nm,1.8s
DBIC Dimbokro 86.67 84 P **P 13 13 01.3 -0.7**
comp=Z,4.9nm,0.7s,baz=289,slow=3.2,SNR=4.4
DBIC LR LR 13 51 34.8
comp=Z,88nm,18.8s,baz=266,slow=36
KIC Kosan Boka 86.86 84 *eP* **P 13 13 02.8 -0.2**
comp=Z,38nm,0.9s
DAVOX Davos/Dischmat 87.94 42 LR LR 13 50 38.0
comp=Z,130nm,19.1s,baz=266,slow=34
CLL Collm 88.27 37 *eP* **P 13 13 08.0 -0.9**
CLL L L 13 51 00.0
comp=Z,200nm,22.0s
CLL Collm 88.27 37 *eP* **P 13 13 08.0 -0.9**
PET Petropavlovsk 88.77 325 *eP* **P 13 13 13.3 +2.1**
PET *e* 13 16 48.2
PET *e* 13 23 36.8
PET *e*S **S 13 23 56.1 +3.1**
PET *e*PS **PS 13 25 10.1 +4.9**
PET *e*SS **SS 13 29 49.1 +3.9**
PET pmax pmax
comp=Z,100nm,16.6s
PET MLR MLR
comp=Z,100nm,19.0s
TIXI Tiksi 89.13 348 *eP* **P 13 13 11.1 -1.5**
comp=Z,8.9nm,0.6s
TIXI Tiksi 89.13 348 *d iP* **P 13 13 11.9 -0.7**
TIXI pmax pmax
comp=Z,55nm,2.5s
PETK Petropavlovsk- 89.26 325 P **P 13 13 14.1 +0.5**
comp=Z,4.0nm,0.9s,baz=82,slow=10
PETK LR LR 13 50 56.7
comp=Z,52nm,21.8s,baz=72,slow=34
KHC Kasperske Hory 89.42 39 *eP* **P 13 13 14.3 -0.2**
KHC *ex* x 13 13 24.0
KHC Kasperske Hory 89.42 39 *eP* **P 13 13 14.3 -0.2**
GERES GERESS Array B 89.61 39 P **P 13 13 15.1 -0.4**
comp=Z,1.2nm,0.8s,baz=325,slow=1.6,SNR=5.0
GERES LR LR 13 51 41.2
comp=Z,149nm,21.4s,baz=288,slow=34
MA2 Magadan 89.78 333 *eP* **P 13 13 14.9 -0.9**
comp=Z,21nm,0.8s
MA2 Magadan 89.78 333⇑ *eP* **P 13 13 17.3 +1.4**
MA2 pmax pmax
comp=Z,27nm,2.5s
FINES FINESS Array B 90.14 25 P **P 13 13 17.4 -0.2**
comp=Z,2.7nm,0.7s,baz=270,slow=1.9,SNR=8.6
FINES LR LR 13 52 23.8
comp=Z,136nm,21.8s,baz=300,slow=35
KLNR Kaliningrad 90.86 32⇓ *eP* **P 13 13 19.2 -1.8**
KLNR pmax pmax
comp=Z,28nm,1.4s
KEST Kesra 91.23 53 LR LR 13 49 59.9
comp=Z,72nm,20.6s,baz=268,slow=33
TORD Torodi Ar. Bea 91.25 76 P **P 13 13 21.3 -2.3**
comp=Z,0.4nm,0.5s,baz=296,slow=5.2
TORD LR LR 13 50 11.6
comp=Z,131nm,21.9s,baz=280,slow=33
VAE Valguarnera 94.42 50 LR LR 13 51 29.5
comp=Z,214nm,21.0s,baz=322,slow=32
KLMR Klimovskoe 95.61 21 *eP* **P 13 13 40.5 -2.2**
KLMR pmax pmax
comp=Z,7.0nm,1.1s
KLMR Klimovskoe 95.61 21 *eP* **P 13 13 40.5 -2.2**
KLMR AMP 13 13 41.9
comp=Z,7.0nm,1.1s
YAK Yakutsk 96.23 341⇑ *eP* **P 13 13 45.7 +0.2**
YAK pmax pmax
comp=Z,8.0nm,0.8s
PRGR Permogore 97.04 18 *eP* **P 13 13 48.2 -1.0**
PRGR pmax pmax
comp=Z,35nm,0.6s
AKASG Malin Array Be 97.57 33 LR LR 14 01 54.2
comp=Z,76nm,18.0s,baz=305,slow=38
MLR Muntele Rosu 98.56 38 LR LR 14 00 04.3
comp=Z,19nm,20.3s,baz=305,slow=36
DZM Mont Dzumac 104.92 251 *e*LR LR 13 48 56.8
comp=Z,458nm,23.6s
BRTR Keskin Array B 106.48 40 PKiKP **PKiKP 13 18 42.0 -0.7**
comp=Z,0.8nm,0.7s,baz=310,slow=1.3,SNR=3.6
BVAR Borovoye Array 110.86 11 PKiKP **PKiKP 13 18 50.2 -0.2**
comp=Z,1.0nm,0.7s,baz=343,slow=1.5,SNR=6.0
ZALV Zalesovo Beam 111.39 1 PKiKP **PKiKP 13 18 50.3 -1.0**
comp=Z,1.2nm,0.6s,baz=319,slow=2.8,SNR=5.3
KURK Kurchatov 114.25 6 PKiKP **PKiKP 13 18 56.6 -0.2**
KURK Kurchatov 114.25 6⇓ *i*PKIKP PKPdf 13 18 57.0 +0.2
KURK pmax pmax
comp=Z,6.0nm,1.7s
KURBB Kurchatov Arra 114.34 6 PKiKP **PKiKP 13 18 56.6 -0.4**
comp=Z,2.1nm,0.7s,baz=347,slow=2.1,SNR=22
SONM Songino Array 115.13 346 PKP **PKPdf 13 18 58.5 -0.3**
comp=Z,0.9nm,0.6s,baz=55,slow=1.9,SNR=5.3
SONM PKKPbc **PKKPbc 13 29 33.2 -2.6**
comp=Z,0.3nm,0.4s,baz=185,slow=2.8,SNR=4.2
KSRS Korea Array 115.15 325 PKP **PKPdf 13 18 58.7 -0.2**
comp=Z,1.2nm,0.6s,baz=36,slow=2.2,SNR=3.7
KSAR Wonju Array Be 115.18 325 PKP **PKPdf 13 18 58.7 -0.3**
KSAR Wonju Array Be 115.18 325 PKiKP **PKPdf 13 18 58.7 -0.3**
DGZ Jazzator, Alta 115.67 360 *e*PKiKP **PKPdf 13 18 59.8 0.0**
MKAR Makanchi Array 118.44 4 PKKPbc PKKPbc 13 29 21.3 -2.8
comp=Z,0.6nm,0.7s,baz=201,slow=2.9,SNR=5.4
WMQ Urumqi 121.55 359 PKP **PKPdf 13 19 12.0 +0.8**
WMQ LR LR
comp=Z,300nm,21.3s
WMQ LR LR
comp=Z,350nm,20.1s
WMQ LR LR
comp=Z,320nm,22.5s
BOSA Boshof 121.75 115 PKP **PKPdf 13 19 11.8 -0.2**
comp=Z,9.8nm,0.8s,baz=273,slow=1.4,SNR=12
CTA Charters Tower 123.35 256 PKP **PKPdf 13 19 15.0 -0.1**
comp=Z,2.5nm,0.7s,baz=77,slow=3.6,SNR=5.2
NJ2 Nanjing 124.12 327 *e*PKP **PKPdf 13 19 17.3 +0.9**
KSH Kashi 124.91 10 PKP **PKPdf 13 19 19.0 +1.1**
KSH sPKP 13 19 53.0
KSH PP **PP 13 21 09.0 +3.7**
KSH SKS **SKSdf 13 26 19.8 -4.4**
KSH SKKS **SKKSac 13 27 50.0 -9.1**
KSH AMB AMB
comp=Z,210nm,4.8s
KSH LR LR
comp=Z,170nm,4.7s
KSH LR LR
comp=Z,220nm,4.9s
KSH LR LR
comp=Z,330nm,6.8s
MAW Mawson 125.08 169 PKP **PKPdf 13 19 16.9 -0.1**
comp=Z,4.6nm,0.6s,baz=138,slow=5.2,SNR=8.0
LZH Lanzhou 126.79 343 *e*PKP **PKPdf 13 19 22.0 +0.4**
LZH LR LR
comp=Z,310nm,18.3s
LZH LR LR
comp=Z,300nm,18.0s
LZH LR LR
comp=Z,380nm,20.1s
XAN Xi'an 126.97 337 PKP **PKPdf 13 19 20.8 -1.0**
STKA Stephens Creek 127.52 241 PKP **PKPdf 13 19 22.7 -0.1**
comp=Z,10nm,0.8s,baz=82,slow=3.2,SNR=10.0
ENH Enshi 130.06 334 *e*PKPdf **PKPdf 13 19 28.5 +0.7**
CD2 Chengdu 131.62 340 PKP **PKPdf 13 19 29.3 -1.5**
WSAR Wadi Sarin 133.09 37 PKP **PKPdf 13 19 33.3 -0.4**
comp=Z,5.2nm,0.6s,baz=234,slow=2.7,SNR=9.2
WRAB Tennant Creek 134.51 257 *e*PKPdf **PKPdf 13 19 36.0 -0.3**
WRAB Tennant Creek 134.51 257⇑ *i*PKIKP **PKPdf 13 19 36.7 +0.3**
WRAB pmax pmax
comp=Z,9.0nm,0.8s
WRA Warramunga Arr 134.52 257 PKhKP PKPpre 13 19 27.1
comp=Z,1.3nm,0.8s,baz=95,slow=2.9,SNR=7.8
WRA PKP **PKPdf 13 19 35.6 -0.8**
comp=Z,5.5nm,0.8s,baz=83,slow=1.6,SNR=10
GYA Guiyang 134.58 335 *e*Pdif **Pdif 13 16 36.0 -1.2**
GYA PKP **PKPdf 13 19 35.5 -1.1**
GYA PP **PP 13 22 13.0 +4.4**
GYA AMB AMB
comp=Z,120nm,8.2s
ASAR Alice Springs 134.91 251 PKhKP PKPpre 13 19 25.9
comp=Z,1.3nm,0.7s,baz=101,slow=3.7,SNR=10
ASAR PKP **PKPdf 13 19 37.1 +0.1**
comp=Z,3.3nm,0.8s,baz=88,slow=1.3,SNR=17
KMI Kunming 137.29 339 PKP **PKPdf 13 19 41.0 -0.8**
KMI LR LR
comp=Z,130nm,32.4s
FITZ Fitzroy Crossi 142.71 260 PKhKP PKPpre 13 19 47.8
comp=Z,5.7nm,0.7s,baz=128,slow=2.4,SNR=17
CHTO Chiang Mai 144.43 340 *e*PKPdf **PKPab 13 19 52.6 -0.1**
CHTO Chiang Mai 144.43 340 *e*PKIKP **PKPab 13 19 52.6 -0.1**
CM31 Chiang Mai Arr 144.76 340 *e*PKPdf PKPbc 13 19 54.4 +0.3
CMAR Chiang Mai Arr 144.76 340 PKP **PKPab 13 19 53.9 0.0**
comp=Z,44nm,0.8s,baz=340,slow=3.6,SNR=188
CM01 Chiang Mai Arr 144.79 340 *e*PKPdf **PKPab 13 19 52.9 -1.1**
HYB Hyderabad 146.85 15 *i* PKP **PKPbc 13 20 00.0 -0.5**
HYB *e* 13 20 17.0
MBWA Marble Bar 148.16 254 *e*PKPdf **PKPdf 13 20 00.2 -0.5**
RER Riviere de l'E 149.82 106 *e*PKPbc **PKPbc 13 20 09.9 +1.6**
PSI Prapat 158.72 325 PKP **PKPdf 13 20 15.8 -0.4**
comp=Z,5.4nm,0.8s,baz=360,slow=19,SNR=5.3
PSI PKPab **PKPab 13 20 51.9 +0.2**
comp=Z,16nm,0.8s,baz=360,slow=2.9,SNR=13

ISCJB ***29*** *13:15:21.6±0.5, 23°.84S±0°.03×179°.73E±0°.03, h544km±6km, mb4.7/170, Error ellipse: s-maj=5.5km s-min=3.8km az=152.6*
IDC ***29*** *13:15:22.3±0.8, 23°.78S×179°.84E, h540km±8km, mb4.1/36, mb1 4.1/38, mb1mx4.1/53, mbtmp5.0/38, Error ellipse: s-maj=8.4km s-min=7.7km az=8.0*
NEIC ***29*** *13:15:23.5±0.5, 23°.86S×179°.79E, h557km±6km, mb4.8/144, Error ellipse: s-maj=4.8km s-min=3.5km az=153.0*
WEL ***29*** *13:15:23.0, 23°.86S×179°.79E, h557km*
BJI ***29*** *13:15:25.1, 23°.21S×179°.62E, h555km, mb4.6/14, mB4.9/10*
ISC 29 13:15:23.2±0.4, 23°.92S±0°.05×179°.90E±0°.05, h556km±4km, h557km:pP-P, n422, σ1°21/457, mb4.7/170, 7C-2D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**5.65**	**160**	P	**P**	**13 16 59.6**	**+0.7**
RIZ				S	**S**	**13 18 17.8**	**+0.7**
RAO	**Raoul Island**	**5.66**	**160**	P	**P**	**13 16 59.5**	**+0.6**
RAO				S	**S**	**13 18 14.7**	**-2.6**
RAO	**Raoul Island**	**5.66**	**160**	*eP*	**P**	**13 16 59.0**	**0.0**
RAO				S	**S**	**13 18 14.7**	**-2.6**
GLKZ	**Green Lake**	**5.67**	**160**	P	**P**	**13 16 58.2**	**-0.8**
GLKZ				S	**S**	**13 18 13.5**	**-3.9**
OUZ	**Omahuta**	**12.52**	**204**	*eP*	**P**	**13 18 08.6**	**+1.7**
OUZ	**Omahuta**	**12.52**	**204**	P	**P**	**13 18 08.3**	**+1.4**
DZM	**Mont Dzumac**	**12.53**	**276**	P	**P**	**13 18 06.5**	**-0.9**
	2.1nm,0.3s,baz=40,slow=20,SNR=7.8						
DZM	**Mont Dzumac**	**12.53**	**276**	*eP*	**P**	**13 18 08.0**	**+0.7**
AFI	**Afiamalu**	**12.69**	**40**	P	**P**	**13 18 07.9**	**-1.2**
	11nm,0.3s,baz=215,slow=16,SNR=7.7						
AFI				S	S	13 20 15.3	-10
	6.8nm,0.3s,baz=184,slow=19,SNR=5.2						
AFI	**Afiamalu**	**12.69**	**40**	*eP*	**P**	**13 18 10.0**	**+1.0**
AFI				S	S	13 20 15.3	-10
GRZ	**Great Barrier**	**12.87**	**196**	P	**P**	**13 18 11.2**	**+0.6**
WCZ	**Waipu Caves**	**12.91**	**201**	P	**P**	**13 18 12.8**	**+1.9**
TOZ	**Tahuroa Road**	**14.27**	**194**	P	**P**	**13 18 25.5**	**+0.5**
URZ	**Urewera**	**14.49**	**189**	P	**P**	**13 18 24.2**	**-2.9**
	4.5nm,0.3s,baz=314,slow=2.6,SNR=20						
URZ				S	**S**	**13 20 53.5**	**-5.1**
	1.2nm,0.3s,baz=49,slow=20,SNR=5.0						
URZ	**Urewera**	**14.49**	**189**	*eP*	**P**	**13 18 24.6**	**-2.6**
URZ				*eS*	**S**	**13 20 58.1**	**-0.5**
MUGZ	**Murupara**	**14.76**	**190**	P	**P**	**13 18 28.3**	**-1.6**
MUGZ				S	**S**	**13 21 00.5**	**-3.1**
PRRZ	**Plateau Road**	**14.84**	**191**	P	**P**	**13 18 30.6**	**-0.1**
KUTZ	**Kaahu Road**	**14.94**	**192**	P	**P**	**13 18 33.4**	**+1.7**
HIZ	**Hauiti**	**15.17**	**195**	*eP*	**P**	**13 18 34.8**	**+0.7**
	253nm,1.4s						
RATZ	**Rangitukua**	**15.31**	**192**	P	**P**	**13 18 34.2**	**-1.4**
BKZ	**Black Stump Fm**	**15.47**	**190**	*eP*	**P**	**13 18 35.8**	**-1.4**
	198nm,1.8s						
BKZ				*eS*	**S**	**13 21 14.9**	**-1.3**
BKZ	**Black Stump Fm**	**15.47**	**190**	P	**P**	**13 18 34.3**	**-3.0**
BKZ				S	**S**	**13 21 11.6**	**-4.6**
WHVZ	**Whangaehu Hut**	**15.75**	**192**	P	**P**	**13 18 37.2**	**-2.9**
WHVZ				S	**S**	**13 21 20.2**	**-0.9**
VRZ	**Vera Road**	**15.78**	**195**	P	**P**	**13 18 35.4**	**-4.7**
BHHZ	**Black Hill Sta**	**15.86**	**191**	P	**P**	**13 18 36.9**	**-4.1**
KAHZ	**Kahuranaki**	**16.03**	**188**	P	**P**	**13 18 41.2**	**-1.5**
LREZ	**Lake Rotokare**	**16.18**	**195**	P	**P**	**13 18 42.7**	**-1.3**
PNHZ	**Pukenui**	**16.25**	**190**	P	**P**	**13 18 42.6**	**-2.1**
NMEZ	**Namu Road**	**16.27**	**197**	P	**P**	**13 18 47.5**	**+2.7**
PXZ	**Pawanui**	**16.27**	**188**	P	**P**	**13 18 44.1**	**-0.7**
TSZ	**Takapari Road**	**16.43**	**191**	P	**P**	**13 18 44.8**	**-1.5**
DVHZ	**Dannevirke**	**16.63**	**190**	P	**P**	**13 18 46.4**	**-1.8**
ANWZ	**Angora Road**	**16.74**	**189**	P	**P**	**13 18 48.1**	**-1.0**
PRWZ	**Pori Road**	**16.91**	**190**	P	**P**	**13 18 49.6**	**-1.1**
BFZ	**Birch Farm**	**17.00**	**190**	*eP*	**P**	**13 18 50.2**	**-1.2**
	182nm,1.4s						
BFZ	**Birch Farm**	**17.00**	**190**	P	**P**	**13 18 50.1**	**-1.2**
MRZ	**Mangatainoka R**	**17.08**	**191**	P	**P**	**13 18 49.8**	**-2.4**
OGWZ	**Otaki Gorge**	**17.31**	**192**	P	**P**	**13 18 52.5**	**-1.8**
HOWZ	**Holdsworth Sta**	**17.32**	**191**	P	**P**	**13 18 52.9**	**-1.5**
DUWZ	**D'Urville Isla**	**17.57**	**195**	P	**P**	**13 18 55.9**	**-0.7**
MTW	**Mount Morrison**	**17.58**	**191**	P	**P**	**13 18 55.2**	**-1.5**
CAW	**Cannon Point**	**17.61**	**192**	P	**P**	**13 18 56.1**	**-0.9**
TRWZ	**Traveller**	**17.78**	**190**	P	**P**	**13 18 58.0**	**-0.6**
PAWZ	**Paruwai Farm**	**17.81**	**191**	P	**P**	**13 18 57.6**	**-1.3**
TCW	**Tory Channel**	**17.87**	**194**	P	**P**	**13 18 59.0**	**-0.4**
MSWZ	**Moikau Station**	**17.88**	**191**	P	**P**	**13 18 58.5**	**-0.9**
QRZ	**Quartz Range**	**17.96**	**198**	P	**P**	**13 19 01.3**	**+1.1**
PLWZ	**Palliser**	**18.02**	**191**	P	**P**	**13 19 00.1**	**-0.7**
NNZ	**Nelson**	**18.09**	**196**	P	**P**	**13 19 01.3**	**-0.1**
TUWZ	**Tuamarina**	**18.16**	**194**	P	**P**	**13 19 01.6**	**-0.4**
THZ	**Tophouse**	**18.73**	**196**	*eP*	**P**	**13 19 07.3**	**0.0**
	236nm,1.9s						
KHZ	**Kahutara**	**19.19**	**194**	*eP**	**P**	**13 19 11.8**	**+0.4**
	333nm,1.9s						
LTZ	**Lake Taylor**	**19.84**	**197**	*eP**	**P**	**13 19 16.4**	**-1.0**
	54nm,0.5s						
OXZ	**Oxford**	**20.41**	**197**	*eP**	**P**	**13 19 22.8**	**+0.2**
	58nm,0.5s						
RPZ	**Rata Peaks**	**21.04**	**198**	P	**P**	**13 19 28.4**	**+0.2**
	25nm,0.5s,baz=344,slow=0.5,SNR=26						
RPZ	**Rata Peaks**	**21.04**	**198**	*eP**	**P**	**13 19 28.3**	**+0.1**
	32nm,0.7s						
FOZ	**Fox Glacier**	**21.25**	**201**	*eP**	**P**	**13 19 30.9**	**+0.9**
	135nm,1.7s						
LBZ	**Lake Benmore**	**21.91**	**199**	*eP**	**P**	**13 19 34.5**	**-1.5**
	60nm,1.4s						
WKZ	**Wanaka**	**22.67**	**200**	*eP**	**P**	**13 19 42.3**	**-0.5**
	262nm,2.0s						
MLZ	**Mavora Lakes**	**23.44**	**201**	*eP**	**P**	**13 19 49.7**	**+0.1**
	123nm,1.8s						
DCZ	**Deep Cove**	**23.85**	**203**	*eP**	**P**	**13 19 54.0**	**+0.7**
	49nm,1.3s						
HNR	**Honiara**	**23.88**	**304**	P	**P**	**13 19 52.1**	**-1.8**
	105nm,0.8s,baz=176,slow=0.9,SNR=17						
HNR	**Honiara**	**23.88**	**304**	*eP**	**P**	**13 19 52.2**	**-1.8**
	96nm,0.7s						
WHZ	**Wether Hill Ro**	**23.96**	**201**	*eP**	**P**	**13 19 56.0**	**+1.8**
	70nm,0.6s						
ARMA	**Armidale**	**25.93**	**249**	*eP**	**P**	**13 20 11.6**	**-0.3**
	20nm,0.8s						
EIDS	**Eidsvold**	**26.21**	**261**	*eP**	**P**	**13 20 14.7**	**+0.3**
	38nm,0.5s						
CAN	**Canberra**	**29.05**	**240**	*eP**	**P**	**13 20 40.6**	**+1.5**
	43nm,1.0s						
CTA	**Charters Tower**	**31.38**	**270**	P	**P**	**13 20 59.6**	**+0.2**
	99nm,0.4s,baz=95,slow=11,SNR=298						
CTA				ScP	**ScP**	**13 26 30.5**	**+4.0**
	5.0nm,0.8s,baz=171,slow=3.7,SNR=7.1						
CTAO	**Charters Tower**	**31.38**	**270**	*eP**	**P**	**13 20 59.5**	**+0.2**
	123nm,0.4s						
PMG	**Port Moresby**	**34.41**	**289**	P	**P**	**13 21 24.6**	**-0.4**
	91nm,0.9s,baz=80,slow=5.9,SNR=30						
PMG	**Port Moresby**	**34.41**	**289**	*eP**	**P**	**13 21 24.6**	**-0.4**
	85nm,0.8s						
STKA	**Stephens Creek**	**34.63**	**248**	P	**P**	**13 21 27.4**	**+0.8**
	8.6nm,0.5s,baz=96,slow=11,SNR=28						
STKA	**Stephens Creek**	**34.63**	**248**	*eP**	**P**	**13 21 27.2**	**+0.7**
	9.9nm,1.4s						
COEN	**Coen**	**36.02**	**279**	*eP**	**P**	**13 21 38.3**	**0.0**
	24nm,0.8s						
MANU	**Manus Island**	**38.25**	**300**	*eP**	**P**	**13 21 55.5**	**-1.1**
	46nm,1.3s						
BBOO	**Buckleboo**	**39.35**	**247**	*eP**	**P**	**13 22 05.0**	**-0.3**
	67nm,1.3s						
TAOE	**Nuku Hiva Isla**	**40.98**	**75**	*eP**	**P**	**13 22 18.2**	**-0.5**
	114nm,1.1s						
AS01	**Alice Springs**	**41.90**	**261**	*eP**	**P**	**13 22 25.6**	**-0.1**
AS31	**Alice Springs**	**41.94**	**261**	*eP**	**P**	**13 22 25.7**	**-0.3**
	20nm,1.2s						
ASAR	**Alice Springs**	**41.94**	**261**	P	**P**	**13 22 25.8**	**-0.3**
	24nm,0.5s,baz=99,slow=7.2,SNR=187						
ASAR				PcP	**pP**	**13 24 05.8**	**+1.4**
	3.4nm,0.7s,baz=96,slow=7.5,SNR=4.4						
ASAR				ScP	**ScP**	**13 27 09.8**	**+3.7**
	11nm,0.6s,baz=110,slow=4.3,SNR=30						
ASAR				S	**S**	**13 28 04.2**	**-0.7**
	1.9nm,0.7s,baz=97,slow=14,SNR=6.4						
WB2	**Warramunga Arr**	**42.30**	**266**	*eP**	**P**	**13 22 27.1**	**-1.7**
WB2				*eP*	P	13 22 28.0	-0.9
WRAB	**Tennant Creek**	**42.30**	**266**	*eP**	**P**	**13 22 28.0**	**-0.9**
	52nm,0.4s						
WRA	**Warramunga Arr**	**42.31**	**266**	P	**P**	**13 22 28.0**	**-0.9**
	29nm,0.3s,baz=95,slow=8.4,SNR=422						
WRA				ScP	**ScP**	**13 27 11.7**	**+4.1**
	9.4nm,0.8s,baz=98,slow=4.0,SNR=18						
WRA				S	**S**	**13 28 07.2**	**-3.0**
	2.7nm,0.8s,baz=101,slow=14,SNR=6.9						
JAY	**Jayapura**	**43.44**	**293**	P	**P**	**13 22 37.0**	**-0.8**
	49nm,0.5s,baz=132,slow=3.6,SNR=49						
JAY	**Jayapura**	**43.44**	**293**	P	**P**	**13 22 36.5**	**-1.3**
	494nm,0.6s						
GENI	**Genyem**	**43.85**	**293**	P	**P**	**13 22 39.5**	**-1.4**
WAKE	**Wake Island**	**44.84**	**342**	*eP**	**P**	**13 22 47.8**	**-0.6**
	386nm,1.5s						
FORT	**Forrest**	**46.22**	**250**	*eP**	**P**	**13 22 58.2**	**-0.7**
	78nm,0.6s						
MTN	**Manton Dam**	**47.36**	**274**	*eP**	**P**	**13 23 06.3**	**-1.4**
	23nm,0.6s						
BAKI	**Biak**	**48.03**	**291**	P	**P**	**13 23 12.6**	**-0.1**
	114nm,0.9s						
HPAH	**Hawaii Prepara**	**49.74**	**31**	*eP**	**P**	**13 23 23.9**	**-1.3**
	81nm,0.7s						
FAKI	**Fak Fak**	**50.50**	**287**	P	**P**	**13 23 29.1**	**-1.8**
FAKI	**Fak Fak**	**50.50**	**287**	*eP**	**P**	**13 23 30.0**	**-0.9**
	68nm,1.4s						
GUMO	**Guam**	**50.62**	**314**	P	**P**	**13 23 30.7**	**-0.9**
	49nm,0.6s,baz=184,slow=19,SNR=5.6						
GUMO	**Guam**	**50.62**	**314**	*eP**	**P**	**13 23 30.8**	**-0.9**
	166nm,1.3s						
FITZ	**Fitzroy Crossi**	**50.73**	**266**	P	**P**	**13 23 32.8**	**+0.2**
	24nm,0.8s,baz=127,slow=8.8,SNR=78						
FITZ	**Fitzroy Crossi**	**50.73**	**266**	*eP**	**P**	**13 23 32.7**	**+0.2**
	26nm,0.8s						
SIJI	**Sorong**	**52.35**	**289**	P	**P**	**13 23 43.6**	**-0.7**
	86nm,0.6s,baz=118,slow=3.7,SNR=44						
AAI	**Ambon**	**53.72**	**284**	P	**P**	**13 23 52.9**	**-1.1**
SBA	**Scott Base**	**54.35**	**183**	*eP**	**P**	**13 23 59.8**	**+2.3**
	22nm,0.9s						
VNDA	**Vanda**	**54.35**	**185**	P	**P**	**13 23 59.7**	**+2.3**
	3.0nm,0.

MBWA	Marble Bar	55.28	260	eP	P	13 24 04.0 -0.9
	40nm,1.2s					
SANI	Sanana	56.42	284	P	P	13 24 11.8 -1.1
MMRI	Maumere	57.03	275	P	P	13 24 16.5 -0.5
MMRI	Maumere	57.03	275	eP	P	13 24 16.5 -0.5
	39nm,0.9s					
CASY	Casey	60.05	206	eP	P	13 24 36.9 +0.5
	14nm,0.8s					
BKSI	Bulukumba	60.27	278	P	P	13 24 37.9 -0.9
APSI	Anppana	60.80	283	P	P	13 24 42.5 +0.2
PLAI	Plampang	61.03	273	P	P	13 24 43.0 -0.8
SPSI	Sidrap Palu	61.16	279	P	P	13 24 43.3 -1.3
MRSI	Marisa	61.17	285	P	P	13 24 43.6 -1.1
TTSI	Tana Toraja	61.50	280	P	P	13 24 45.9 -1.0
TWSI	Taliwang, Sumb	61.88	273	P	P	13 24 49.1 -0.2
MPSI	Mapaga	62.92	283	P	P	13 24 55.3 -0.8
JAGI	Jajag, Banyuwa	64.48	272	P	P	13 25 04.5 -1.5
JAGI	Jajag, Banyuwa	64.48	272	eP	P	13 25 04.7 -1.3
	45nm,1.4s					
GMJI	Gumukmas	65.20	272	P	P	13 25 09.5 -1.0
QSPA	South Pole Qui	66.16	180	P	P	13 25 17.7 +1.9
	21nm,0.7s,baz=72,slow=19,SNR=63					
QSPA	South Pole Qui	66.16	180	eP	P	13 25 17.6 +1.7
	24nm,0.8s					
QSPA				epP	pP	13 27 12.4 +4.3
PWJI	Pagerwojo	66.80	271	P	P	13 25 19.6 -0.9
WOJI	Wonogiri, Jawa	67.67	271	P	P	13 25 25.7 -0.1
UGM	Wanagama	68.01	271	P	P	13 25 27.4 -0.5
KKM	Kota Kinabalu	68.82	287	eP	P	13 25 32.4 -0.5
	18nm,0.6s					
KPJI	Karang Pucung	69.69	271	P	P	13 25 37.3 -0.7
LEM	Lembang	71.08	271	P	P	13 25 46.6 +0.1
	30nm,0.6s,baz=144,slow=18,SNR=5.4					
MJAR	Matsushiro Arr	71.86	326	P	P	13 25 49.2 -1.0
	3.8nm,0.7s,baz=170,slow=6.0,SNR=14					
MAT	Matsushiro	71.86	326	P	P	13 25 49.2 -1.1
KSM	Kuching	72.02	280	eP	P	13 25 51.2 -0.5
	21nm,0.7s					
JNU	Nakatsue	73.48	319	P	P	13 25 59.5 -0.2
	4.8nm,0.7s,baz=70,slow=12,SNR=4.9					
ASAJ	Asahikawa	75.84	333	P	P	13 26 13.4 +0.9
	7.0nm,0.8s,baz=213,slow=5.5,SNR=12					
ASAJ	Asahikawa	75.84	333	eP	P	13 26 13.9 +1.3
	7.9nm,0.7s					
MAW	Mawson	77.70	200	P	P	13 26 24.0 +1.5
	10.0nm,0.9s,baz=129,slow=5.7,SNR=12					
MAW	Mawson	77.70	200	eP	P	13 26 24.1 +1.7
	3.9nm,1.0s					
KSRS	Korea Array	78.20	320	P	P	13 26 26.1 +0.6
	2.7nm,0.7s,baz=134,slow=5.7,SNR=11					
KSAR	Wonju Array Be	78.22	320	P	P	13 26 26.1 +0.5
KS01	Wonju Array Si	78.23	320	eP	P	13 26 25.9 +0.2
PETK	Petropavlovsk-	79.10	347	P	P	13 26 29.3 -0.7
	2.7nm,0.5s,baz=124,slow=6.4					
NJ2	Nanjing	80.60	311	eP	P	13 26 40.0 +1.6
NJ2				pmax	pmax	
	comp=Z,9.0nm,0.7s					
USRK	Ussuriysk Ar.	80.73	327	P	P	13 26 38.5 -0.2
	2.0nm,0.5s,baz=192,slow=2.9					
SNCC	San Nicolas Is	80.98	48	P	P	13 26 41.7 +1.4
	baz=234					
SCZ2	Santa Cruz Isl	81.35	47	P	P	13 26 42.8 +0.5
	baz=234					
SBC	Santa Barbara	81.56	47	P	P	13 26 44.1 +0.8
	baz=234					
IPM	Ipoh	81.67	279	eP	P	13 26 44.2 -0.2
	13nm,0.6s					
PKM	Mcpherson Peak	81.76	46	P	P	13 26 45.2 +0.7
	baz=233					
BLG	Laguna Peak, P	81.80	47	P	P	13 26 44.7 +0.1
	baz=234					
CIS	Catalina Islan	81.83	48	P	P	13 26 44.7 0.0
	baz=234					
SAO	San Andreas Ge	81.84	44	eP	P	13 26 45.5 +0.8
	18nm,1.0s					
FMP	Fort Macarthur	82.09	48	P	P	13 26 46.5 +0.6
	baz=234					
HOPS	Hopland Field	82.22	41	eP	P	13 26 47.5 +1.0
	33nm,1.3s					
GDXM	Geysers	82.27	42	eP	P	13 26 48.2 +1.3
	20nm,1.3s					
KCPM	Cahto Peak	82.35	40	eP	P	13 26 48.5 +1.1
	39nm,1.4s					
109C	Camp Elliot, M	82.43	49	P	P	13 26 48.0 +0.3
	baz=235					
ARVC	Arvin	82.55	46	P	P	13 26 48.5 +0.2
	baz=234					
BAR	Barrett	82.61	50	eP	P	13 26 49.4 +0.7
	32nm,1.7s					
KMRM	Mail Ridge	82.62	40	eP	P	13 26 50.0 +1.4
	35nm,1.2s					
MURC	Murrieta	82.77	49	P	P	13 26 49.7 +0.2
	baz=235					
VES	Vestal, Richgr	82.81	46	P	P	13 26 49.4 -0.1
	baz=234,SNR=5.8					
BFSC	Mount Baldy Ra	82.82	48	P	P	13 26 49.5 -0.4
	baz=235					
PSI	Prapat	82.89	276	P	P	13 26 49.5 -1.1
	3.1nm,0.4s,baz=180,slow=12,SNR=6.0					
SLBS	Sierra La Lagu	82.89	60	eP	P	13 26 51.3 +0.9
	16nm,0.8s					
MONP2	Monument Peak	82.91	49	P	P	13 26 50.9 +0.5
	baz=236,SNR=10.0					
EDW2	Edwards Air Fo	82.97	47	P	P	13 26 50.7 +0.2
	baz=235,SNR=7.2					
SYO	Syowa Base	82.97	193⇑	eP	P	13 26 47.4 -2.4
SYO	Syowa Base	82.97	193⇓	ePcP	PcP	13 26 53.4 +0.4
IKP	In-Ko-Pah, Jac	82.99	50	P	P	13 26 51.4 +0.7
	baz=236,SNR=6.7					
KHMM	Horse Mountain	83.02	40	eP	P	13 26 51.8 +1.0
ISA	Isabella, Lake	83.10	46	P	P	13 26 51.4 +0.3
	baz=234,SNR=14					
ISA	Isabella, Lake	83.10	46	eP	P	13 26 51.7 +0.6
	18nm,0.9s					
CMB	Columbia Colle	83.28	43	eP	P	13 26 52.2 +0.2
	19nm,1.0s					
PFO	Pinyon Flats O	83.29	49	P	P	13 26 52.6 +0.4
	baz=236,SNR=5.8					
PFO	Pinyon Flats O	83.29	49	eP	P	13 26 53.0 +0.8
	18nm,1.4s					
XPFO	Piæon Flat	83.29	49	eP	P	13 26 52.7 +0.5
	16nm,1.4s					
BBRC	Big Bear Solar	83.34	48	P	P	13 26 52.6 +0.1
	baz=235					
SWSC	Sam W. Stewart	83.37	50	P	P	13 26 52.8 +0.4
	baz=236,SNR=5.2					
AFDM	Forest Hills D	83.47	42	eP	P	13 26 53.4 +0.5
	19nm,1.1s					
GSI	Gunungsitoli	83.50	274	eP	P	13 26 54.1 +0.5
	16nm,0.5s					
ORV	Oroville	83.52	42	eP	P	13 26 53.7 +0.6
	16nm,1.1s					
LRMC	Laurel Mtn Rad	83.52	47	P	P	13 26 53.8 +0.5
	baz=235					
WDC	Whiskeytown Da	83.53	40	eP	P	13 26 54.0 +1.0
	23nm,1.3s					
RRX	Edison Barstow	83.64	48	P	P	13 26 54.1 +0.3
	baz=235					
N02D	Trinity Center	83.69	40	P	P	13 26 54.7 +0.8
	baz=231,SNR=10					
O03D	Paynes Creek	83.80	41	P	P	13 26 54.4 -0.1
	baz=232,SNR=11					
CWC	Cottonwood Cre	83.81	46	P	P	13 26 54.7 -0.1
	baz=234					
BELC	Belle Mtn. Jos	83.82	49	P	P	13 26 55.3 +0.5
	baz=236,SNR=12					
CN2	Changchun	83.85	324	eP	P	13 26 54.8 +0.3
CN2				pmax	pmax	
	comp=Z,10.0nm,0.5s					
M02C	Callahan	83.86	40	P	P	13 26 55.7 +1.0
	baz=231,SNR=15					
OMMB	Old Mammoth Mi	83.91	44	eP	P	13 26 55.9 +0.5
	21nm,1.5s					
L02D	Cave Junction,	83.92	39	P	P	13 26 55.6 +0.7
	baz=230					
MPMC	Manual Prospec	83.98	46	P	P	13 26 55.8 +0.1
	baz=235,SNR=8.6					
BC3	Big Chuckawall	84.01	49	P	P	13 26 56.3 +0.6
	baz=236,SNR=8.8					
GSC	Goldstone, Bar	84.01	47	P	P	13 26 55.6 -0.1
	baz=235,SNR=12					
GSC	Goldstone, Bar	84.01	47	eP	P	13 26 55.9 +0.2
	13nm,0.9s					
MLAC	Mammoth, Mammo	84.02	44	P	P	13 26 56.2 +0.3
	baz=234					
RUBR	Rubicon Trail	84.04	43	eP	P	13 26 56.6 +0.7
	30nm,1.3s					
DAC	Darwin (Calif)	84.04	46	eP	P	13 26 56.5 +0.6
	4.9nm,0.9s					
HEC	Hector,Ludlow	84.06	48	P	P	13 26 55.9 0.0
	baz=236,SNR=14					
TIN	Tinemaha, Big	84.07	45	P	P	13 26 56.6 +0.7
	baz=234					
GLA	Glamis	84.11	50	P	P	13 26 56.9 +0.8
	baz=237,SNR=12					
GLA	Glamis	84.11	50	eP	P	13 26 57.4 +1.2
	24nm,0.9s					
WAKR	Walker	84.16	43	eP	P	13 26 57.3 +0.8
	33nm,1.3s					
YBH	Yreka Blue Hor	84.16	39	P	P	13 26 56.7 +0.5
	6.2nm,0.9s,baz=170,slow=1.8,SNR=17					
YBH	Yreka Blue Hor	84.16	39	eP	P	13 26 56.9 +0.6
	16nm,1.3s					
BEKR	Beckworth	84.41	42	eP	P	13 26 57.8 +0.1
	45nm,1.8s					
PNTR	Pine Nut	84.41	43	eP	P	13 26 58.4 +0.7
	31nm,1.2s					
GMRC	Granite Mounta	84.49	48	P	P	13 26 58.5 +0.4
	baz=236,SNR=10					
IRM	Iron Mountain	84.50	49	P	P	13 26 58.7 +0.6
	baz=236,SNR=19					
VCNR	Virginia City	84.50	43	eP	P	13 26 58.8 +0.7
	29nm,1.6s					
YERR	Yerington	84.57	43	eP	P	13 26 58.6 +0.2
	21nm,1.3s					
HUMO	Hull Mountain	84.57	39	eP	P	13 26 59.5 +1.3
	31nm,1.4s					
KDAK	Kodiak Island	84.59	14	P	P	13 26 56.9 -0.9
	3.9nm,0.8s,baz=185,slow=11,SNR=4.5					
GRAC	Grapevine Rang	84.60	46	P	P	13 26 58.9 +0.4
	baz=235					
FURC	Furnace Creek,	84.63	46	P	P	13 26 58.6 +0.1
	baz=235					
SNAA	Sanae	84.65	179	P	P	13 26 57.9 -0.3
	3.5nm,0.5s,baz=199,slow=11,SNR=32					
TUQ	Turquoise Moun	84.68	48	P	P	13 26 59.0 0.0
	baz=236,SNR=6.9					
M04C	Macdoel	84.70	40	P	P	13 26 59.4 +0.4
	baz=231					
Y12C	Blythe	84.70	50	P	P	13 26 59.5 +0.6
	baz=237					
Y12C	Blythe	84.70	50	eP	P	13 27 00.2 +1.2
	14nm,1.0s					
HSIG		84.80	55	eP	P	13 27 00.6 +1.0
	16nm,0.7s					
RYN	Ryan	84.81	44	eP	P	13 26 59.6 0.0
	26nm,1.8s					
NV01	Mina Array Sit	84.83	44	eP	P	13 26 59.6 -0.1
NV01				epP	pP	13 29 03.6 +3.7
NVAR	Mina Array Bea	84.83	44	P	P	13 26 59.8 0.0
	4.3nm,0.8s,baz=223,slow=7.5,SNR=28					
VNA3	Neumayer Olymp	84.86	177	P	P	13 26 59.3 +0.1
PAHR	Pah Rah Range	84.91	42	eP	P	13 27 00.2 +0.2
	42nm,1.8s					
NV11	Mina Array Sit	84.93	44	eP	P	13 27 00.6 +0.4
	0.7nm,1.0s					
214A	Organ Pipe Nat	84.95	52	P	P	13 27 01.3 +0.9
	baz=238					
LDFC	Landfair	85.03	48	eP	P	13 27 02.0 +1.3
	30nm,0.8s					
I03D	Drain, OR	85.05	38	P	P	13 27 01.1 +0.7
	baz=230					
NEE2	Needles Airpor	85.19	49	P	P	13 27 01.7 +0.3
	baz=237					
PDMCI	Parker Dam,Lak	85.27	49	P	P	13 27 02.2 +0.5
	baz=237					
K04D	Chiloquin, OR	85.27	39	P	P	13 27 01.9 +0.2
	baz=231					
VNA2	Neumayer--Watz	85.28	178	P	P	13 27 01.6 +0.4
	baz=180,slow=3.6					
TPNV	Topopah Spring	85.31	46	P	P	13 27 02.3 +0.2
	baz=236,SNR=13					
TPNV	Topopah Spring	85.31	46	eP	P	13 27 02.2 +0.2
	6.9nm,0.7s					
KVN	Kaiserville	85.32	44	eP	P	13 27 02.0 -0.1
	6.9nm,0.8s					
J04D	Umpqua Nationa	85.45	38	P	P	13 27 03.1 +0.5
	baz=231					
VNA1	Neumayer--Stat	85.52	177	P	P	13 27 02.6 +0.3
I04A	Tendick Farm,	85.63	38	P	P	13 27 03.6 +0.3
	baz=231					
SHPR	Sheep Range	85.79	47	eP	P	13 27 05.0 +0.6
	5.5nm,0.9s					
K05A	Summer Lake	85.83	39	eP	P	13 27 05.1 +0.6
	124nm,2.0s					
W13A	Hualapai Mount	85.88	49	eP	P	13 27 05.5 +0.6
J05D	Fort Rock, OR	85.98	39	P	P	13 27 05.4 +0.3
	baz=232,SNR=6.3					
H04A	Detroit Lake	86.32	37	eP	P	13 27 06.9 +0.4
	42nm,1.6s					
PINE	Pine Mountain	86.46	39	eP	P	13 27 08.3 +0.9
	88nm,1.6s					
R11A	Troy Canyon, C	86.53	45	P	P	13 27 07.8 -0.1
	baz=236					
R11A	Troy Canyon, C	86.53	45	eP	P	13 27 08.0 +0.1
	2.6nm,1.0s					
I05D	Terrebonne, OR	86.58	38	P	P	13 27 08.3 +0.5
	baz=232					
TUC	Tucson	86.60	53	P	P	13 27 09.5 +1.3
	baz=239					
TUC	Tucson	86.60	53	eP	P	13 27 09.4 +1.2
	20nm,1.0s					
BMN	Battle Mountai	86.68	43	eP	P	13 27 09.0 +0.5
	8.6nm,0.9s					
GYA	Guiyang	86.68	301	eP	P	13 27 09.0 +0.3
GYA				pP	pP	13 29 10.3 +0.8
GYA				sP	sP	13 30 05.0 -0.6
GYA				PP	PP	13 30 43.5 +1.8
GYA				SKS	SKSac	13 36 42.8 -0.2
GYA				S	S	13 36 59.8 -0.3
GYA				sS	sS	13 40 33.5 -1.8
GYA				pmax	pmax	
	comp=Z,10.0nm,1.0s					
F04D	Rainier, OR	86.76	36	P	P	13 27 09.2 +0.7
	baz=230					
WVOR	Wild Horse Val	86.99	41	eP	P	13 27 10.6 +0.8
	38nm,1.5s					
X16A	Lo Mia Camp, P	87.22	50	eP	P	13 27 12.1 +0.9
319A	Douglas	87.23	54	eP	P	13 27 12.9 +1.6
LCMT	Little Creek M	87.35	47	eP	P	13 27 12.6 +0.9
	12nm,1.2s					
I07A	Izee	87.46	39	eP	P	13 27 13.1 +1.0
	15nm,1.0s					
G06A	Carlson Farm,	87.52	38	eP	P	13 27 12.8 +0.6
	86nm,2.0s					
CCUT	Cedar City	87.56	47	eP	P	13 27 13.9 +1.1
	26nm,1.7s					
J08A	Circle Bar Ran	87.63	40	eP	P	13 27 13.6 +0.8
	33nm,1.3s					
KNB	Kanab	87.64	48	eP	P	13 27 13.9 +0.8
	31nm,1.5s					
U15A	North Rim	87.69	48	eP	P	13 27 14.2 +0.8
PSUT	Pine Spring	87.77	46	eP	P	13 27 14.3 +0.6
	3.9nm,0.9s					
SZCU	Shurtz Canyon	87.77	47	eP	P	13 27 14.8 +1.1
	41nm,1.8s					
WUAZ	Wupatki	87.84	50	P	P	13 27 14.6 +0.5
	baz=239					
WUAZ	Wupatki	87.84	50	eP	P	13 27 15.0 +1.0
	17nm,1.3s					
HPIG		87.85	59	eP	P	13 27 15.0 +0.6
	9.0nm,0.7s					
D05A	Enumclaw	88.00	35	eP	P	13 27 15.7 +1.4
	43nm,1.1s					
ELK	Elko	88.10	43	P	P	13 27 16.8 +1.5
	3.9nm,0.9s,baz=287,slow=5.4,SNR=14					
RC01	Rabbit Creek A	88.20	14	eP	P	13 27 14.0 -0.9
	28nm,1.4s					
SUA	Susitna One	88.32	14	eP	P	13 27 14.7 -0.8
	11nm,0.8s					
PLCA	Paso Flores	88.32	134	P	P	13 27 17.8 +1.6
	2.3nm,0.9s,baz=236,slow=7.3,SNR=3.5					
BBB	Bella Bella	88.32	29	P	P	13 27 15.6 0.0
	13nm,0.9s,baz=204,slow=4.9,SNR=3.2					
G08A	Pilot Rock	88.50	38	eP	P	13 27 17.6 +0.7
	45nm,1.5s					
A04D	Lummi Island	88.60	34	P	P	13 27 17.6 +0.6
	baz=230					
MTPU	Mount Pierson	88.61	47	eP	P	13 27 19.1 +1.3
	51nm,1.7s					
SKT	Skwentna	88.62	13	eP	P	13 27 15.1 -1.7
	4.4nm,1.0s					
B05A	Bryant	88.62	35	P	P	13 27 17.6 +0.4
	baz=231					
W18A	Petrified Fore	88.79	51	P	P	13 27 18.8 +0.3
	baz=240					
W18A	Petrified Fore	88.79	51	eP	P	13 27 19.4 +0.9
	19nm,1.4s					
PMR	Palmer	88.79	14	eP	P	13 27 16.1 -1.4
	42nm,1.8s					
MSU	Marysvale	88.87	47	eP	P	13 27 19.8 +0.9
121A	Cookes Peak, D	88.91	54	P	P	13 27 20.2 +1.1
	baz=241					
BMO	Blue Mountains	89.19	39	eP	P	13 27 19.8 -0.3
	19nm,1.8s					
KMI	Kunming	89.19	298	P	P	13 27 21.8 +1.1
KMI				pmax	pmax	
	comp=Z,17nm,0.6s					
KMI				pmax	pmax	
	comp=Z,54nm,3.6s					
MFID	Camas Ranch	89.23	41	eP	P	13 27 20.9 +0.6
	16nm,1.0s					
BMRM	Bremner River	89.34	16	eP	P	13 27 19.9 -0.3
	26nm,1.4s					
DUG	Dugway, Tooele	89.34	45	P	P	13 27 21.0 +0.1
	baz=238					
DUG	Dugway, Tooele	89.34	45	eP	P	13 27 21.4 +0.5
	19nm,1.6s					
SCM	Sheep Creek Mo	89.41	15	eP	P	13 27 20.3 -0.4
	8.2nm,0.8s					
CMAR	Chiang Mai Arr	89.44	290	P	P	13 27 23.5 +1.8
	2.9nm,0.8s,baz=141,slow=3.3,SNR=11					
KLU	Klutina	89.46	16	eP	P	13 27 21.0 +0.2
	22nm,1.7s					
BGU	Big Grassy Mou	89.60	44	eP	P	13 27 23.0 +0.9
	16nm,1.6s					
Q16A	Castle Valley	89.75	47	eP	P	13 27 24.1 +1.2
	11nm,0.9s					
CAST	Castle Rocks	89.81	12	eP	P	13 27 20.5 -1.9
	7.4nm,1.0s					
F10A	Beach Ranch, E	89.88	38	eP	P	13 27 23.2 0.0
	7.1nm,0.8s					
TMUT	Trail Mountain	89.92	46	eP	P	13 27 24.8 +1.0
	23nm,0.8s					
MPU	Maple Canyon	90.02	46	eP	P	13 27 25.0 +0.9
	7.7nm,0.9s					
HLID	Hailey	90.17	41	P	P	13 27 25.2 +0.5
	baz=236					
HLID	Hailey	90.17	41	eP	P	13 27 25.1 +0.5
	16nm,1.5s					
TRF	Thorofare Moun	90.19	13	eP	P	13 27 23.0 -1.3
	6.3nm,1.0s					
HVU	Hansel Valley	90.22	44	eP	P	13 27 25.3 +0.3
	56nm,1.6s					
SRU	San Rafael Swe	90.28	47	eP	P	13 27 26.0 +0.6
	19nm,0.9s					
LAZ	Ladron	90.29	52	eP	P	13 27 26.2 +0.7
CTU	Camp Tracy	90.30	45	eP	P	13 27 25.9 +0.6
	12nm,0.8s					
LENM	Lemitar	90.30	53	eP	P	13 27 26.4 +0.9
MNTX	Cornudas Mount	90.30	55	P	P	13 27 26.0 +0.6
	baz=242					
MNTX	Cornudas Mount	90.30	55	eP	P	13 27 26.0 +0.6
	42nm,2.0s					
P17A	Butcher Ranch,	90.32	46	eP	P	13 27 26.4 +0.9
	18nm,1.2s					
JLU	Jordanelle	90.44	45	eP	P	13 27 25.1 -1.0
	49nm,1.9s					
TX31	Lajitas Ar. Si	90.52	58	eP	P	13 27 27.1 +0.6
TX31				eP	P	13 27 27.2 +0.6
TX31				epP	pP	13 29 27.2 -1.1
TXAR	Lajitas Array	90.52	58	P	P	13 27 27.3 +0.8
	4.8nm,0.7s,baz=215,slow=6.4,SNR=81					
TXAR				PKKPbc	PKKPbc	13 44 51.6 +0.7
	0.2nm,0.5s,baz=80,slow=5.0,SNR=3.8					
BNM	Barren Site	90.54	53	eP	P	13 27 27.5 +0.8
LPM	Los Pinos Moun	90.61	53	eP	P	13 27 27.8 +0.8
MVCO	Mesa Verde	90.70	49	P	P	13 27 27.1 -0.3
	baz=240					
P18A	Preston Nutter	90.73	46	eP	P	13 27 28.1 +0.6
	6.1nm,0.9s					
TCUT	Toone Canyon	90.74	45	eP	P	13 27 28.2 +0.7
	28nm,0.9s					
HWUT	Hardware Ranch	90.89	44	eP	P	13 27 28.1 0.0
	5.7nm,0.7s					
PV09	Paradox Valley	90.91	48	eP	P	13 27 28.9 +0.5
PV03	Paradox Valley	90.98	48	eP	P	13 27 28.7 +0.1
	7.3nm,1.3s					
CD2	Chengdu	91.01	303	P	P	13 27 28.5 -0.2
TASM	ASL Pad, Albuq	91.04	52	P	P	13 27 29.0 0.0
	baz=241					
ANMO	Albuquerque	91.04	52	P	P	13 27 29.2 +0.3
	2.9nm,0.7s,baz=206,slow=8.7,SNR=11					
ANMO	Albuquerque	91.04	52	P	P	13 27 28.9 -0.1
	baz=241					
ANMO	Albuquerque	91.04	52	eP	P	13 27 29.5 +0.5
	4.7nm,0.9s					
TASL	Snake Pit, Alb	91.04	52	P	P	13 27 29.0 0.0
	baz=241					
WRH	Wood River Hil	91.55	13	eP	P	13 27 29.1 -1.2
	11nm,1.4s					
HDA	Harding Lake	91.74	14	eP	P	13 27 30.1 -1.1
	6.3nm,1.0s					
CCB	Clear Creek Bu	91.77	13	eP	P	13 27 29.9 -1.4
	2.9nm,0.9s					
CCB				epP	pP	13 29 31.0 -2.2
MCMT	McKenzie Canyo	91.80	41	eP	P	13 27 32.8 +0.5
LNIG	Linares	91.92	64	eP	P	13 27 32.7 -0.3
	7.2nm,1.1s					
MDM	Murphy Dome	91.95	13	eP	P	13 27 30.8 -1.4
MDM				epP	pP	13 29 35.3 +1.1
IL1	Eielson Array	92.07	14	eP	P	13 27 30.8 -1.9
ILAR	Eielson Array	92.07	14	P	P	13 27 30.7 -2.0
	0.8nm,0.8s,baz=230,slow=5.8,SNR=11					
S22A	4UR Ranch, Cre	92.12	49	P	P	13 27 34.1 +0.1
	baz=241					
S22A	4UR Ranch, Cre	92.12	49	eP	P	13 27 34.6 +0.7
	9.3nm,1.0s					
MSO	Missoula	92.24	39	P	P	13 27 34.4 +0.3
	baz=237					
REDW	Red Top Meadow	92.26	43	eP	P	13 27 34.4 0.0
	20nm,1.6s					
FXWY	Fox Creek	92.29	43	eP	P	13 27 35.7 +1.2
	9.6nm,1.6s					
O20A	White River Ci	92.32	47	P	P	13 27 34.6 -0.2
	baz=240					
IMW	Indian Meadow	92.48	43	eP	P	13 27 36.0 +0.5
	20nm,1.8s					
LOHW	Long Hollow	92.54	43	eP	P	13 27 35.8 +0.1
	16nm,1.7s					
SMCO	Snowmass	92.71	48	eP	P	13 27 37.0 +0.3
	3.7nm,0.8s					
BW06	Boulder Array	92.77	44	P	P	13 27 36.4 -0.4
	baz=240					
BW06	Boulder Array	92.77	44	eP	P	13 27 36.4 -0.4
	3.0nm,0.8s					
PD31	Pinedale Array	92.77	44	eP	P	13 27 36.5 -0.3
PDAR	Pinedale Array	92.77	44	P	P	13 27 36.5 -0.3
	1.8nm,0.6s,baz=212,slow=3.6,SNR=20					
PDAR	Pinedale Array	92.77	44	eP	P	13 27 35.9 -0.8
BOZ	Bozeman (W)	92.94	41	P	P	13 27 37.5 +0.2
	baz=238					
BOZ	Bozeman (W)	92.94	41	eP	P	13 27 37.8 +0.4
	2.6nm,0.9s					
SDCO	Great Sand Dun	93.05	50	P	P	13 27 38.0 -0.3
	baz=242					
SDCO	Great Sand Dun	93.05	50	eP	P	13 27 38.4 +0.2
	3.8nm,0.9s					
DAWY	Dawson	93.27	17	eP	P	13 27 38.0 -0.3
LZH	Lanzhou	93.31	308	⇓P	P	13 27 40.5 +1.2
LZH				pP	pP	13 29 43.0 +1.7
LZH				sP	sP	13 30 37.3 +0.4
LZH				pmax	pmax	
	comp=Z,18nm,1.4s					
LZH				pmax	pmax	
	comp=Z,83nm,6.5s					
EGAK	Eagle

RSSD	**Black Hills**	96.95	45	Pdiff	P	13 27 55.5	-0.1
	baz=244						
SONM	**Songino Array**	97.06	319	PKKPbc	PKKPbc	13 44 34.3	-0.4
	0.6nm,0.5s,baz=285,slow=2.6,SNR=3.7						
ZALV	**Zalesovo Beam**	111.91	321	PKiKP	PKiKP	13 32 53.6	-1.5
	0.9nm,0.4s,baz=69,slow=1.2,SNR=3.5						
MKAR	**Makanchi Array**	112.10	313	PKiKP	PKiKP	13 32 54.5	-1.1
	0.6nm,0.4s,baz=102,slow=0.4,SNR=11						
MKAR				PKKPbc	PKKPbc	13 43 49.2	-0.3
	0.5nm,0.7s,baz=287,slow=3.8,SNR=4.3						
MKAR				PKKPab	PKKPab	13 43 59.5	+1.1
	0.8nm,0.7s,baz=272,slow=5.0,SNR=6.9						
KURK	**Kurchatov**	115.15	316	PKP	PKPdf	13 32 59.9	-1.4
KURBB	**Kurchatov Arra**	115.19	316	PKP	PKPdf	13 32 59.9	-1.5
	1.8nm,0.7s,baz=106,slow=1.9,SNR=20						
KSH	**Kashi**	115.20	304	PKP	PKPdf	13 33 04.8	+2.8
KSH				PP	PP	13 34 19.3	+6.1
KSH				AMB	AMB		
	comp=Z,160nm,5.1s						
PTGA	**Pitinga**	117.02	104	PKP	PKPdf	13 33 04.9	-1.2
	1.3nm,0.5s,baz=145,slow=2.2,SNR=3.9						
BVAR	**Borovoye Array**	120.39	319	PKP	PKPdf	13 33 10.6	-0.7
	3.0nm,0.4s,baz=115,slow=1.3,SNR=19						
SUR	**Sutherland**	120.56	201	PKP	PKPdf	13 33 12.7	-0.1
	6.3nm,0.7s,baz=248,slow=2.3,SNR=8.8						
SPITS	**Spitsbergen Ar**	125.13	356	PKP	PKPdf	13 33 18.8	-1.1
	4.1nm,0.7s,baz=64,slow=3.4,SNR=5.8						
AKTO	**Aktyubinsk**	128.25	316	PKP	PKPdf	13 33 25.6	-0.9
	2.2nm,0.6s,baz=96,slow=2.4,SNR=5.0						
GEYT	**Alibeck**	128.90	300	PKP	PKPdf	13 33 28.1	-0.1
	92nm,0.6s,baz=104,slow=3.0,SNR=0.7						
ARCES	**ARCESS Array B**	131.89	348	PKP	PKPdf	13 33 32.1	-0.7
	5.8nm,0.8s,baz=56,slow=1.9,SNR=17						
ARCES				SKPab	SKPab	13 36 08.2	-0.5
	3.8nm,0.8s,baz=35,slow=3.3,SNR=7.6						
KLMR	**Klimovskoe**	134.16	334	*e*PKPdf	PKPdf	13 33 33.9	-3.4
KLMR				AMP		13 33 37.6	
	comp=Z,5.0nm,0.9s						
KLMR				*e*PP	PP	13 36 12.6	-4.0
FINES	**FINESS Array B**	138.43	341	PKhKP	PKPpre	13 33 34.7	
	comp=Z,0.8nm,0.3s,baz=45,slow=6.2,SNR=8.7						
FINES				PKP	PKPdf	13 33 45.1	-0.1
	comp=Z,1.8nm,0.5s,baz=67,slow=3.6,SNR=11						
FINES				SKPbc	SKPbc	13 36 28.4	+0.7
	comp=Z,3.9nm,0.7s,baz=46,slow=4.0,SNR=9.3						
NB2	**NORSAR Subarra**	142.09	351	PKP	PKPpre	13 33 47.4	
	comp=Z,2.4nm,0.8s,baz=16,slow=3.1						
NB2	**NORSAR Subarra**	142.09	351	PKP	SKPdf	13 36 32.2	-1.8
	comp=Z,0.3nm,0.4s,baz=17,slow=2.6						
HFS	**Hagfors**	142.55	349	PKhKP	PKPpre	13 33 48.7	
	comp=Z,10nm,0.3s,baz=66,slow=4.9,SNR=143						
AKASG	**Malin Array Be**	144.94	327	PKP	PKPdf	13 33 56.7	-0.4
	comp=Z,2.9nm,0.4s,baz=42,slow=4.1,SNR=14						
AKASG				SKPbc	SKiKP	13 36 45.7	+0.9
	comp=Z,5.2nm,0.7s,baz=46,slow=2.6,SNR=11						
BRTR	**Keskin Array B**	147.51	307	PKPbc	PKPbc	13 34 04.5	-1.0
	comp=Z,2.7nm,0.6s,baz=108,slow=4.7,SNR=9.2						
MMAI	**Mount Meron Ar**	147.62	294	PKPbc	PKPbc	13 34 06.7	+0.8
	comp=Z,10nm,0.5s,baz=70,slow=5.1,SNR=32						
EKA	**Eskdalemuir Ar**	148.54	3	PKPbc	PKPbc	13 34 07.0	-0.4
	comp=Z,1.9nm,0.3s,baz=20,slow=2.3,SNR=21						
KWP	**Kalwaria Pacla**	148.74	331	*e*PKP	PKPbc	13 34 08.1	+0.1
KOLS	**Kolonicke sedl**	149.44	330	*e*PKP	PKPbc	13 34 10.0	+0.2
OJC	**Ojcow**	149.51	334	*e*PKP	PKPbc	13 34 09.7	-0.2
CRVS	**Cervenica-Dubn**	149.83	331	*e*PKP	PKPbc	13 34 10.7	0.0
MLR	**Muntele Rosu**	149.87	322	PKPbc	PKPbc	13 34 10.8	-0.3
	comp=Z,0.5nm,0.3s,baz=350,slow=11,SNR=6.4						
NIE	**Niedzica**	149.94	330	*e*PKP	PKPbc	13 34 11.6	+0.6
KSP	**Ksiaz**	150.27	339	*e*PKP	PKPbc	13 34 11.9	+0.3
LANS	**Liptovska Anna**	150.49	333	*e*PKP	PKPbc	13 34 13.1	+0.8
UPC	**Upice**	150.65	339⇑	*e*PKP	PKPbc	13 34 12.5	0.0
DPC	**Dobruska-Polom**	150.68	338⇑	*e*PKP	PKPbc	13 34 13.0	+0.3
MORC	**Moravsky Berou**	150.73	336	*e*PKP	PKPbc	13 34 12.7	-0.1
KRLC	**Kraliky**	150.75	337⇑	*e*PKP	PKPbc	13 34 12.4	-0.5
KRLC				*e*PKPAB	PKPab	13 34 22.6	+0.1
CLL	**Collm**	150.84	343	*e*PKPdf	PKPdf	13 34 07.0	+0.3
	comp=Z,3.0nm,0.4s						
CLL				*i* PKPbc	PKPbc	13 34 12.8	-0.1
	comp=Z,19nm,0.6s						
CLL				*e*PKPab	PKPab	13 34 22.0	-0.7
	comp=Z,5.0nm,0.6s						
CLL				*i* pPKPbc	pPKPbc	13 36 23.6	+1.7
BRG	**Berggiesshubel**	150.97	342	*i* PKP	PKPbc	13 34 13.3	0.0
	comp=Z,18nm,0.5s						
BRG				*e*		13 36 22.3	
	comp=Z,7.1nm,1.2s						
PVCC	**Panska Ves**	151.09	340⇑	*e*PKP	PKPbc	13 34 14.0	+0.5
VYHS	**Vyhne**	151.26	333	*e*PKP	PKPbc	13 34 14.0	0.0
JAVC	**Velka Javorina**	151.43	335	*e*PKP	PKPbc	13 34 15.2	+0.8
VRAC	**Vranov**	151.46	337	*e*PKP	PKPbc	13 34 14.4	0.0
GOPC	**GO Pecny, Ondr**	151.56	340⇑	*e*PKP	PKPbc	13 34 14.4	-0.2
PRU	**Pruhonice**	151.57	340⇑	*e*PKP	PKPbc	13 34 14.2	-0.4
KRUC	**Moravsky**	151.74	337	*e*PKP	PKPbc	13 34 14.6	-0.4
GERES	**GERESS Array B**	152.84	340	PKPbc	PKPbc	13 34 16.9	-0.6
	comp=Z,1.2nm,0.6s,baz=40,slow=2.3,SNR=6.9						
CONA	**Conrad Observa**	152.88	336	*e*PKPbc	PKPbc	13 34 17.5	-0.2
	comp=Z,4.7nm,1.0s						
MOA	**Molin**	153.52	338	*e*PKPbc	PKPbc	13 34 18.3	-0.7
	comp=Z,1.0nm,0.4s						
SOKA	**Soboth**	154.24	336	*e*PKPab	PKPab	13 34 36.8	-0.6
	comp=Z,5.1nm,1.3s						
FETA	**Feichten**	155.37	342	*e*PKPdf	PKPdf	13 34 11.4	-2.1
	comp=Z,4.2nm,1.2s						
DAVOX	**Davos/Dischmat**	155.82	343	PKPab	PKPab	13 34 44.1	-0.2
	comp=Z,2.6nm,0.5s,baz=72,slow=6.4,SNR=5.0						
DBIC	**Dimbokro**	162.25	164	PKP	PKPdf	13 34 22.3	+0.1
	comp=Z,3.3nm,0.8s,baz=71,slow=3.0,SNR=4.0						
ESDC	**Sonseca Array**	163.96	11	PKPab	PKPab	13 35 19.2	-0.7
	comp=Z,0.2nm,0.3s,baz=350,slow=4.4,SNR=5.4						
TORD	**Torodi Ar. Bea**	169.15	189	PKP	PKPdf	13 34 26.9	-0.8
	comp=Z,1.6nm,0.9s,baz=38,slow=0.8						
TORD				PKPab	PKPab	13 35 43.6	+0.3
	baz=178,slow=2.4						
KOWA	**Kowa**	169.93	158	PKPab	PKPab	13 35 47.9	+1.2
	comp=Z,1.8nm,0.7s,baz=169,slow=5.2,SNR=4.7						
MDT	**Midelt**	170.29	23	PKP	PKPdf	13 34 28.7	+0.7
	comp=Z,1.7nm,0.7s,baz=211,slow=5.9,SNR=4.3						

*SOME **29** 13:18:03.2, 44°.37N×80°.95E, h20km*
*NNC **29** 13:18:04.4±2.1, 44°.56N×80°.76E, h0km, mb3.2, mpv2.8,*
Error ellipse: s-maj=41.7km s-min=7.8km az=135.0
ISC 29 13:17:59.8±1.8, 44°.39N±0°.05×81°.17E±0°.06, h2km±12km, n18, σ1°58/32, 6C-7D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	0.99	267	*e*P	Pg	13 18 18.5	-0.2
	9.7nm,0.1s						
DJR				*e*S	Sg	13 18 29.6	-2.0
	12nm,0.2s						
KTMS	**Ketmen**	1.11	212	*e*P	Pb	13 18 22.6	+0.9
	20nm,0.1s						
KTMS				*e*S	Sg	13 18 36.6	+1.2
	42nm,0.2s						
SHLS	**Shalkode**	1.74	226	⇑*i*P	Pn	13 18 29.6	-1.5
	63nm,0.3s						
SHLS				⇓*i*S	Sn	13 18 49.1	-4.9
	163nm,0.4s						
UZB	**Uzynbulak**	1.98	232	⇑*i*P	Pb	13 18 36.7	0.0
	21nm,0.2s						
UZB				⇑*i*S	Sn	13 19 01.5	+1.5
	32nm,0.4s						
MNBS	**Baschi**	2.01	262	*e*P	Pb	13 18 37.2	+0.1
	22nm,0.3s						
MNBS				*e*S	Sn	13 19 01.8	+1.2
	50nm,0.4s						
KPKS	**Kokpek**	2.01	244	*e*P	Pb	13 18 37.0	-0.1
	48nm,0.4s						
KPKS				*e*S	Sn	13 19 02.1	+1.4
	218nm,0.5s						
TDK	**Taldyqorghan**	2.06	288	*e*P	Pg	13 18 39.8	+0.4
	47nm,0.6s						
TDK				*e*S	Sg	13 19 06.5	+0.5
	96nm,0.5s						
ZHN	**Zhinishke**	2.32	239	*e*P	Pb	13 18 42.2	-0.2
	18nm,0.2s						
ZHN				⇓*i*S	Sb	13 19 11.3	-0.3
	78nm,0.3s						
KURS	**Kuram**	2.34	249	*e*P	Pb	13 18 42.4	-0.3
	7.3nm,0.7s						
KURS				*e*S	Sb	13 19 11.2	-0.9
	18nm,0.3s						
SATY	**Saty**	2.40	237	*e*P	Pb	13 18 43.1	-0.7
	45nm,0.3s						
SATY				*e*S	Sn	13 19 12.4	+2.2
	87nm,0.3s						

MAKZ	**Makanchi**	2.49	13	⇑Pn	Pb	13 18 45.5	+0.3
	1.7nm,0.6s						
MAKZ				⇓Lg	Lg	13 19 20.1	
	5.2nm,0.5s						
MK31	**Makanchi Array**	2.54	18	⇓Pn	Pb	13 18 46.5	+0.4
	0.6nm,0.2s,baz=199,slow=13,SNR=53						
MK31				⇓Lg	Lg	13 19 20.7	
	7.7nm,0.5s,baz=200,slow=27,SNR=15						
CHKK	**Chushkaly**	3.05	261	*e*P	Pb	13 18 53.6	-1.3
	6.7nm,0.3s						
CHKK				*e*S	Sb	13 19 30.7	-1.9
	20nm,0.3s						
MDOK	**Medeo**	3.22	249	⇑Pg	Pb	13 18 59.3	+1.5
	5.2nm,0.5s						
MDOK				⇓Lg	Lg	13 19 39.5	
	7.7nm,0.6s						
MDOK	**Medeo**	3.22	249	*e*P	Pb	13 18 59.4	+1.5
	8.4nm,0.4s						
MDOK				*e*S	Sb	13 19 40.5	+2.9
	8.9nm,0.5s						
KUU	**Kurty**	3.51	264	*e*P	Pb	13 19 02.9	+0.3
	1.8nm,0.1s						
KUU				*e*S	Sb	13 19 46.2	+0.6
	8.8nm,0.3s						
DGS	**Degeres**	4.07	256	*e*P	Pb	13 19 12.6	+0.4
	5.9nm,0.3s						
DGS				*e*S	Sb	13 20 03.3	+1.5
	7.5nm,0.5s						
TKM2	**Tokmak 2**	4.30	252	⇑Pg	Pb	13 19 18.1	+1.9
	3.7nm,0.8s						
TKM2				⇓Lg	Lg	13 20 16.4	
	4.5nm,0.6s						

MAN 29 13:36:28.9, 10°.45N×124°.95E, h9km, mb4.1, ML2.9, MS2.6, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	0.33	196	*e*P	Pg	13 36 36.0	+0.6
MSLP				*e*S	Sb	13 36 42.4	+0.1
OCLP	**Ormoc**	0.69	331	*e*P	Pg	13 36 42.4	+0.1
OCLP				*e*S	Sn	13 36 55.1	-0.6
PLP	**Palo**	0.71	2	⇓*e*P	Pg	13 36 42.5	-0.2
PLP				*e*S	Sb	13 36 53.5	+0.1
LLP	**Lapu-Lapu**	0.98	262	*e*P	Pb	13 36 48.5	+0.4
LLP				*e*S	Sn	13 37 02.9	0.0
BESP	**Borongan**	1.24	23	*e*P	Pn	13 36 52.2	-0.3

*ISCJB **29** 13:43:15.5±0.3, 6°.71S±0°.04×126°.98E±0°.05, h407km,*
mb3.7/12, Error ellipse: s-maj=7.1km s-min=5.4km
az=22.6
*IDC **29** 13:43:16.2±2.1, 6°.69S×126°.85E, h401km±29km, mb3.4/11,*
mb1 3.5/16, mb1mx3.3/53, mbtmp4.3/16, Error ellipse:
s-maj=23.9km s-min=16.0km az=99.0
*DJA **29** 13:43:17.2±0.3, 7°.5±3°.×12°.7E±°, h404km±5km, M4.4/12,*
mB5.2/2, mb4.2/12, MLv4.5/12, Mw(mB)4.6/2
ISC 29 13:43:16.3±0.6, 6°.76S±0°.06×126°.97E±0°.08, h407km, n32, σ1°35/36, mb3.8/12, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	3.50	2	P	P	13 44 26.6	+2.4
NLAI				S	S	13 45 21.2	+1.9
BNDI	**Bandanaira**	3.67	53	P	P	13 44 27.9	+2.2
SOEI	**Soe**	4.00	222	P	P	13 44 29.7	+0.9
SOEI				S	S	13 45 28.1	+0.2
SANI	**Sanana**	4.78	348	P	P	13 44 37.0	+0.8
MMRI	**Maumere**	5.05	248	P	P	13 44 40.0	+1.1
EDFI	**Ende, Flores**	5.59	249	P	P	13 44 44.6	-0.1
	13nm,0.5s,0.1nm						
LBMI	**Labuha**	6.10	5	P	P	13 44 52.1	+2.0
	67nm,0.8s						
FAKI	**Fak Fak**	6.50	54	P	P	13 44 54.2	-0.1
BKSI	**Bulukumba**	6.96	281	P	P	13 45 01.0	+0.9
BASI	**Baing, Sumba**	7.20	241	P	P	13 45 02.1	-0.7
WSI	**Waingapu**	7.21	246	P	P	13 45 02.6	-0.3
SIJI	**Sorong**	7.25	36	P	P	13 45 02.9	-0.6
	2.1nm,0.3s,baz=318,slow=19,SNR=7.5						
SIJI				S	S	13 46 26.7	-3.6
	1.3nm,0.3s,baz=90,slow=20,SNR=2.6						
TTSI	**Tana Toraja**	8.02	297	P	P	13 45 13.6	+1.8
WBSI	**Waikabubak, Su**	8.03	249	P	P	13 45 10.0	-2.0
MRSI	**Marisa**	8.77	325	P	P	13 45 20.8	+0.7
RKPI	**Ransiki, Papua**	8.88	54	P	P	13 45 12.2	-9.2
FITZ	**Fitzroy Crossi**	11.34	186	P	P	13 45 49.6	+1.0
	0.9nm,0.3s,baz=24,slow=10,SNR=25						
JAY	**Jayapura**	14.32	74	P	P	13 46 23.0	+1.6
	1.1nm,0.3s,baz=300,slow=3.7,SNR=7.3						
WRA	**Warramunga Arr**	14.93	152	P	P	13 46 28.9	+1.1
	1.2nm,0.3s,baz=325,slow=11,SNR=101						
WRA				S	S	13 49 04.5	-1.9
	0.6nm,0.3s,baz=330,slow=17,SNR=17						
ASAR	**Alice Springs**	18.08	159	P	P	13 47 02.8	+1.3
	1.3nm,0.3s,baz=341,slow=12,SNR=62						
ASAR				S	S	13 50 06.9	-0.7
	0.1nm,0.3s,baz=341,slow=20,SNR=4.3						
CMAR	**Chiang Mai Arr**	37.31	313	P	P	13 49 51.3	-0.6
	0.5nm,0.7s,baz=140,slow=7.1,SNR=3.9						
KSRS	**Korea Array**	43.99	1	P	P	13 50 45.7	+0.3
	1.4nm,0.6s,baz=172,slow=9.1,SNR=5.5						
XAN	**Xi'an**	44.03	338	P	P	13 50 44.5	-1.4
XAN				pP	pP	13 50 54.0	-71
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MJAR	**Matsushiro Arr**	44.34	13	P	P	13 50 47.3	-1.0
	comp=Z,4.8nm,0.7s,baz=198,slow=9.5,SNR=16						
USRK	**Ussuriysk Ar.**	50.92	5	P	P	13 51 37.9	0.0
	comp=Z,3.0nm,0.7s,baz=159,slow=6.2						
ASAJ	**Asahikawa**	52.57	14	P	P	13 51 50.0	+0.1
	comp=Z,2.2nm,0.6s,baz=170,slow=4.4,SNR=5.7						
SONM	**Songino Array**	57.31	344	P	P	13 52 23.4	-0.2
	comp=Z,1.8nm,0.9s,baz=164,slow=8.2,SNR=8.2						
PETK	**Petropavlovsk-**	65.08	20	P	P	13 53 16.0	+1.2
	comp=Z,3.3nm,0.6s,baz=184,slow=4.2						
MKAR	**Makanchi Array**	66.41	328	P	P	13 53 23.4	+0.1
	comp=Z,1.5nm,0.7s,baz=133,slow=7.7,SNR=13						
ZALV	**Zalesovo Beam**	70.07	335	P	P	13 53 44.4	-1.1
	comp=Z,2.3nm,0.5s,baz=129,slow=5.6,SNR=12						
KURBB	**Kurchatov Arra**	70.76	330	P	P	13 53 49.6	-0.1
	comp=Z,2.5nm,0.6s,baz=133,slow=5.0,SNR=28						
BVAR	**Borovoye Array**	76.28	329	P	P	13 54 21.2	-0.2
	comp=Z,0.6nm,0.5s,baz=114,slow=6.5,SNR=4.9						

IDC 29 13:50:21.5±1.8, 3°.78S×135°.81E, h0km, mb3.4/1, mb1 3.8/5, mb1mx3.4/47, mbtmp3.7/5, ML3.7/4, MS3.8/2, Ms1 3.8/2, ms1mx2.9/27, Error ellipse: s-maj=57.4km s-min=25.5km az=74.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	12.58	117	LR	LR	14 00 00.8	
	comp=Z,185nm,19.8s,baz=79,slow=46						
WRA	**Warramunga Arr**	16.12	185	Pn	Pn	13 54 09.1	-0.7
	0.2nm,0.3s,baz=7.2,slow=12,SNR=12						
WRA				Sn	Sn	13 56 57.9	-11
	0.2nm,0.3s,baz=5.4,slow=23,SNR=5.2						
FITZ	**Fitzroy Crossi**	17.36	214	P	Pn	13 54 24.3	-1.1
	0.2nm,0.3s,baz=38,slow=12,SNR=8.6						
FITZ				S	Sn	13 57 27.4	-12
	0.2nm,0.3s,baz=301,slow=5.9,SNR=5.0						
CTA	**Charters Tower**	19.14	149	P	P	13 54 46.4	-0.1
	0.1nm,0.3s,baz=318,slow=16,SNR=2.3						
CTA				S	Sn	13 58 12.7	-10
	0.1nm,0.3s,baz=342,slow=19,SNR=2.0						
CTA				LR	LR	14 01 29.2	
	comp=Z,575nm,21.0s,baz=121,slow=35						
ASAR	**Alice Springs**	19.85	185	P	Pn	13 54 55.2	-0.6
	0.8nm,0.3s,baz=7.8,slow=11,SNR=27						
ASAR				S	S	13 58 30.0	-8.8
	0.1nm,0.3s,baz=5.0,slow=29,SNR=3.1						
MKAR	**Makanchi Array**	68.90	324	P	P	14 01 28.3	0.0
	0.2nm,0.5s,baz=121,slow=7.6,SNR=2.9						

MAN 29 13:59:57.7, 11°.44N×126°.24E, h21km, mb4.5, ML3.4, MS3.2, 1C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	0.80	282	*e*P	Pb	14 00 13.0	+0.1
BESP				*e*S	Sn	14 00 25.7	+0.7
PLP	**Palo**	1.26	258	⇓*e*P	Pn	14 00 18.7	-1.4
PLP				*e*S	Sn	14 00 33.7	-2.7
OCLP	**Ormoc**	1.64	257	*e*P	Pn	14 00 26.0	+0.7
SCPH	**Surigao**	1.80	204	⇑*e*P	Pn	14 00 26.9	-0.6
CNP	**Catarman**	1.87	305	*e*P	Pn	14 00 28.8	+0.3
CNP				*e*S	Sn	14 00 52.5	+1.0
MSLP	**Maasin**	1.87	226	*e*P	Pn	14 00 28.9	+0.4
MSLP				*e*S	Sb	14 00 53.3	-0.9
LLP	**Lapu-Lapu**	2.49	244	⇓*i*P	Pb	14 00 39.8	-2.0
LLP				*e*S	Sb	14 01 19.1	+7.0

MAN 29 14:14:49.1, 16°.40N×119°.75E, h9km, mb4.3, ML3.1, MS2.9, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	**Bolinao**	0.15	97	*e*P	Pg	14 14 55.1	+2.7
BOLP				*e*S	Sg	14 15 01.3	+6.6
SCZP	**Santa Cruz**	0.64	166	*e*P	Pg	14 15 01.3	-0.1
PCPH	**Palayan**	1.54	123	*e*P	Pn	14 15 16.1	-0.6
PCPH				*e*S	Sn	14 15 33.2	-3.6
ABRA	**Dolores**	1.54	36	*e*P	Pn	14 15 16.3	-0.6
ABRA				*e*S	Sg	14 15 42.0	+3.2
BALP	**Baler**	1.87	110	*e*P	Pn	14 15 21.9	+0.6
BALP				*e*S	Sg	14 15 50.9	+1.6
APYP	**Conner**	2.04	44	*e*P	Pn	14 15 23.4	-0.2
APYP				*e*S	Sn	14 15 50.2	+1.0
CAUP	**Cauayan**	2.06	74	*e*P	Pb	14 15 25.9	-0.7

*JMA **29** 14:15:21.4±0.2, 38°.07N×142°.53E, h32km±2km, M3.5*
*IDC **29** 14:15:25.0±3.7, 38°.12N×142°.60E, h38km±31km, mb3.4/5,*
mb1 3.5/8, mb1mx3.3/63, mbtmp3.6/8, ML3.1/3, Error
ellipse: s-maj=36.5km s-min=18.3km az=82.0
ISC 29 14:15:20.6±3.6, 38°.14N±0°.05×142°.44E±0°.08, h3km±22km, n23, σ1°40/28, mb3.5/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	0.91	290	P	Pb	14 15 39.5	+0.4
JIO				*e*S	Sb	14 15 52.0	+0.3
OFUJ	**Ofunato**	1.11	327	P	Pb	14 15 42.6	0.0
JMK	**Ichinoseki**	1.25	311	P	Pn	14 15 44.9	-0.2
JMM	**Marumori**	1.33	259	P	Pn	14 15 44.9	-1.2
JMM				*e*S	Sb	14 16 01.9	-1.8
JOU	**Okura**	1.42	280	P	Pn	14 15 47.2	-0.1
JOU				*e*S	Sn	14 16 05.7	-0.8
JFK	**Kawauchi**	1.46	239	P	Pn	14 15 46.2	-1.8
JOM	**Ohasama**	1.60	326	P	Pn	14 15 50.3	+0.4
JFT	**Otama**	1.78	250	P	Pn	14 15 52.2	-0.1
JFT				*e*S	Sn	14 16 13.8	-1.7
JYK	**Kaneyama**	1.81	296	P	Pn	14 15 53.0	+0.3
JYK				*e*S	Sn	14 16 15.9	-0.3
JYS	**Shiratake**	1.87	273	P	Pn	14 15 53.8	+0.2
JRG	**Rokugo**	1.89	312	P	Pb	14 15 55.2	-0.5
MJAR	**Matsushiro Arr**	3.73	246	Pn	Pn	14 16 21.3	+2.1
	1.3nm,0.3s,baz=56,slow=9.1,SNR=21						
MJAR				Sn	Sn	14 17 04.3	+0.6
	0.1nm,0.3s,baz=54,slow=28,SNR=2.9						
MAT	**Matsushiro**	3.73	246	P	Pn	14 16 21.1	+1.9
MAT				*e*S	Sn	14 17 07.9	+4.2
JHJ	**Hachijo jima 2**	5.46	204	Pn	Pn	14 16 44.6	+1.7
	7.9nm,0.3s,baz=112,slow=22,SNR=5.5						
ASAJ	**Asahikawa**	5.97	1	Pn	Pn	14 16 50.9	+1.0
	0.2nm,0.3s,baz=227,slow=15,SNR=5.6						
ASAJ				Sn	Sn	14 17 58.9	+0.1
	0.3nm,0.3s,baz=246,slow=33,SNR=3.0						
SONM	**Songino Array**	27.87	302	P	P	14 21 12.8	+1.2
	0.3nm,0.3s,baz=98,slow=8.2,SNR=2.5						
H11N2	**WAKE ISLAND Hy**	28.05	124	T	T	14 50 21.6	
	baz=318,slow=76						
H11N1	**WAKE ISLAND Hy**	28.06	124	T	T	14 50 35.7	
	baz=318						
H11N3	**WAKE ISLAND Hy**	28.07	124	T	T	14 50 28.4	
	baz=318,slow=76						
MKAR	**Makanchi Array**	44.23	301	P	P	14 23 31.3	+0.2
	0.3nm,0.7s,baz=79,slow=9.1,SNR=3.0						
KURBB	**Kurchatov Arra**	45.97	307	P	P	14 23 44.6	-0.3
	1.1nm,0.4s,baz=81,slow=8.0,SNR=13						
WRA	**Warramunga Arr**	58.28	189	P	P	14 25 14.9	-1.7
	1.6nm,1.2s,baz=7.1,slow=7.1,SNR=6.4						
ASAR	**Alice Springs**	62.00	189	P	P	14 25 42.0	-0.2
	0.2nm,0.7s,baz=354,slow=5.2,SNR=3.9						

*CSEM **29** 14:15:20.7±0.2, 38°.61N×43°.15

AUBOZ	**BOZOYUK**	**0.12**	**18**	*i* P		**Pg**	**14 44 19.4**	**+0.4**
AUBOZ				*i* S		**Sg**	**14 44 21.5**	**+0.9**
AUBOZ	**BOZOYUK**	**0.12**	**18**	P		**Pg**	**14 44 19.4**	**+0.4**
AUBOZ				*e*Sg		**Sg**	**14 44 21.1**	**+0.5**
BORA	**Eskisehir**	**0.37**	**77**	PG		**Pb**	**14 44 25.4**	**-0.8**
BORA	**Eskisehir**	**0.37**	**77**	*i* P		**Pb**	**14 44 25.5**	**-0.8**
BORA				*i* S		**Sb**	**14 44 32.5**	**-0.1**
BORA	**Eskisehir**	**0.37**	**77**	P		**Pb**	**14 44 25.5**	**-0.8**
BORA				S		**Sb**	**14 44 32.5**	**-0.1**
CAVI	**Cavuskoy**	**0.42**	**345**	PG		**Pg**	**14 44 24.4**	**-0.4**
CAVI				SG		**Sg**	**14 44 29.9**	**-0.3**
CAVI	**Cavuskoy**	**0.42**	**345**	*e*Pg		**Pg**	**14 44 24.4**	**-0.4**
CAVI				*e*Sg		**Sg**	**14 44 29.9**	**-0.3**
TVSB	**Tavsanli**	**0.53**	**230**	PG		**Pb**	**14 44 28.6**	**-0.4**
TVSB				SG		**Sb**	**14 44 37.2**	**-0.1**
TVSB	**Tavsanli**	**0.53**	**230**	*e*Pg		**Pb**	**14 44 28.6**	**-0.4**
TVSB				*e*Sg		**Sb**	**14 44 37.2**	**-0.1**
ESKT	**Eskisehir**	**0.72**	**112**	*i* P		**Pg**	**14 44 30.7**	**+0.1**
SEYT	**Eskypehyr**	**0.72**	**112**	P		**Pg**	**14 44 30.7**	**+0.1**
GEYV	**SAKARYA_Geyve**	**0.73**	**19**	*i* P		**Pg**	**14 44 30.5**	**-0.2**
GEYV	**SAKARYA_Geyve**	**0.73**	**19**	P		**Pg**	**14 44 30.5**	**-0.2**
YLV	**Yalova**	**0.90**	**329**	PG		**Pg**	**14 44 34.2**	**+0.2**
YLV	**Yalova**	**0.90**	**329**	*e*Pg		**Pg**	**14 44 34.2**	**+0.2**
SAUV	**Serdivan-Sakar**	**0.98**	**15**	PG		**Pg**	**14 44 35.7**	**+0.2**
SAUV	**Serdivan-Sakar**	**0.98**	**15**	*e*Pg		**Pg**	**14 44 35.7**	**+0.2**
HRT	**Hereke**	**1.05**	**347**	PG		**Pg**	**14 44 36.6**	**-0.3**
HRT	**Hereke**	**1.05**	**347**	*e*Pg		**Pg**	**14 44 36.6**	**-0.3**
MDUB	**Mudurnu**	**1.15**	**54**	PN		**Pb**	**14 44 39.5**	**0.0**
MDUB	**Mudurnu**	**1.15**	**54**	*e*Pn		**Pb**	**14 44 39.5**	**0.0**
AUMIH	**MIHALICIK**	**1.16**	**86**	PN		**Pn**	**14 44 40.5**	**+0.2**
AUMIH	**MIHALICIK**	**1.16**	**86**	*e*Pn		**Pn**	**14 44 40.5**	**+0.2**
DURS	**Dursunbey**	**1.18**	**261**	*i* P		**Pb**	**14 44 40.2**	**+0.1**
DURS	**Dursunbey**	**1.18**	**261**	P		**Pb**	**14 44 40.2**	**+0.1**
SBT5	**Esenkoy-Cinarc**	**1.19**	**315**	PN		**Pg**	**14 44 39.7**	**+0.2**
SBT5	**Esenkoy-Cinarc**	**1.19**	**315**	*e*Pn		**Pg**	**14 44 39.7**	**+0.2**
KAND	**Kocaeli-Kandir**	**1.31**	**7**	*i* P		**Pb**	**14 44 42.1**	**0.0**
KAND	**Kocaeli-Kandir**	**1.31**	**7**	P		**Pb**	**14 44 42.1**	**0.0**
KCTX	**Karacabey (Bur**	**1.34**	**291**	PN		**Pn**	**14 44 42.9**	**+0.2**
KCTX	**Karacabey (Bur**	**1.34**	**291**	*e*Pn		**Pn**	**14 44 42.9**	**+0.2**
SILT	**Sile**	**1.38**	**349**	PN		**Pg**	**14 44 42.7**	**-0.5**
SILT	**Sile**	**1.38**	**349**	*e*Pn		**Pg**	**14 44 42.7**	**-0.5**
KAVV	**Kandilli-Istan**	**1.45**	**331**	PN		**Pn**	**14 44 44.2**	**0.0**
KAVV	**Kandilli-Istan**	**1.45**	**331**	*e*Pn		**Pn**	**14 44 44.2**	**0.0**
ISK	**Istanbul-Kandi**	**1.45**	**331**	PN		**Pn**	**14 44 44.1**	**-0.1**
ISK	**Istanbul-Kandi**	**1.45**	**331**	*e*Pn		**Pn**	**14 44 44.1**	**-0.1**
KLYT	**Kilyos**	**1.62**	**334**	PN		**Pn**	**14 44 46.4**	**-0.2**
KLYT	**Kilyos**	**1.62**	**334**	*e*Pn		**Pn**	**14 44 46.4**	**-0.2**

*ISK **29** 15:01:07.7, 37°.23N×28°.20E, $h6^{km}$, ML2.3/10*
*ISCJB **29** 15:01:08.1±0.5, 37°.25N±0°.03×28°.22E±0°.04, $h0^{km}$, Error ellipse: s-maj=5.7km s-min=3.2km az=38.4*
*CSEM **29** 15:01:08.2±0.1, 37°.24N×28°.21E, $h1^{km}$, ML2.3, Error ellipse: s-maj=3.6km s-min=2.1km az=35.0, Suspected Mining explosion.*
*DDA **29** 15:01:08.1, 37°.23N×28°.21E, $h7^{km}$, Md2.5, Suspected Mining explosion.*

ISC 29 15:01:07.1±0.8, 37°.24N±0°.03×28°.11E±0°.03, $h0^{km}$, n30, σ0§68/47, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.18**	**128**	PG	**Pg**	**15 01 10.7**	**+0.2**
YER				SG	**Sg**	**15 01 12.7**	**-0.1**
YER	**Yerkesik**	**0.18**	**128**	*e*Pg	**Pg**	**15 01 10.7**	**+0.2**
YER				*e*Sg	**Sg**	**15 01 12.7**	**-0.1**
MLSB	**Milas**	**0.27**	**281**	PG	**Pb**	**15 01 15.1**	**+0.2**
MLSB				SG	**Sb**	**15 01 20.5**	**+0.4**
MLSB	**Milas**	**0.27**	**281**	*e*Pg	**Pb**	**15 01 15.1**	**+0.2**
MLSB				*e*Sg	**Sb**	**15 01 20.5**	**+0.4**
AYDN	**Tasoluk**	**0.46**	**336**	*i* P	**Pb**	**15 01 18.0**	**0.0**
AYDN				*i* S	**Sb**	**15 01 25.5**	**+0.1**
AYDN	**Tasoluk**	**0.46**	**336**	P	**Pb**	**15 01 18.0**	**0.0**
AYDN				S	**Sb**	**15 01 25.5**	**+0.1**
TURN	**Turunc**	**0.54**	**133**	PG	**Pg**	**15 01 16.8**	**-0.7**
TURN				SG	**Sg**	**15 01 23.8**	**-0.7**
TURN	**Turunc**	**0.54**	**133**	*i* P	**Pg**	**15 01 16.7**	**-0.7**
TURN				*i* S	**Sg**	**15 01 24.4**	**-0.1**
TURN	**Turunc**	**0.54**	**133**	*e*Pg	**Pg**	**15 01 16.8**	**-0.7**
TURN				*e*Sg	**Sg**	**15 01 23.8**	**-0.7**
TURN				S	**Sg**	**15 01 24.4**	**-0.1**
DALY	**Dalyan (Mu¨la**	**0.61**	**134**	PG	**Pg**	**15 01 18.9**	**+0.1**
DALY	**Dalyan (Mu¨la**	**0.61**	**134**	*i* P	**Pg**	**15 01 18.8**	**0.0**
DALY				*i* S	**Sb**	**15 01 29.5**	**-0.2**
DALY	**Dalyan (Mu¨la**	**0.61**	**134**	P	**Pg**	**15 01 18.8**	**0.0**
DALY				S	**Sb**	**15 01 29.5**	**-0.2**
BODT	**Bodrum**	**0.66**	**254**	PG	**Pb**	**15 01 21.5**	**-0.1**
BODT				SG	**Sb**	**15 01 32.4**	**+1.1**
BODT	**Bodrum**	**0.66**	**254**	*e*Pg	**Pb**	**15 01 21.5**	**-0.1**
BODT				*e*Sg	**Sb**	**15 01 32.4**	**+1.1**
DAT	**Datca**	**0.67**	**220**	PG	**Pb**	**15 01 21.9**	**+0.2**
DAT	**Datca**	**0.67**	**220**	*i* P	**Pn**	**15 01 22.9**	**-1.0**
DAT				*i* S	**Sn**	**15 01 35.4**	**+0.3**
DAT	**Datca**	**0.67**	**220**	*e*Pg	**Pb**	**15 01 21.9**	**+0.2**
DAT	**Datca**	**0.67**	**220**	P	**Pn**	**15 01 22.9**	**-1.0**
DAT				S	**Sn**	**15 01 35.4**	**+0.3**
TAVA	**DENIZLI_Tavas**	**0.68**	**71**	*i* P	**Pg**	**15 01 20.2**	**+0.1**
TAVA	**DENIZLI_Tavas**	**0.68**	**71**	P	**Pg**	**15 01 20.2**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**0.72**	**346**	PG	**Pb**	**15 01 22.8**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**0.72**	**346**	*e*Pg	**Pb**	**15 01 22.8**	**+0.1**
GCAM	**G?zelcaml?**	**0.83**	**303**	PG	**Pb**	**15 01 25.1**	**+0.7**
GCAM	**G?zelcaml?**	**0.83**	**303**	*e*Pg	**Pb**	**15 01 25.1**	**+0.7**
FETY	**Fethiye**	**0.99**	**128**	PG	**Pg**	**15 01 25.9**	**-0.2**
FETY	**Fethiye**	**0.99**	**128**	*e*Pg	**Pg**	**15 01 25.9**	**-0.2**
AKAS	**Kas**	**1.57**	**130**	PN	**Pn**	**15 01 35.9**	**-0.5**
AKAS	**Kas**	**1.57**	**130**	*i* P	**Pb**	**15 01 37.1**	**0.0**
AKAS				*i* S	**Sb**	**15 02 00.9**	**+3.4**
AKAS	**Kas**	**1.57**	**130**	*e*Pn	**Pn**	**15 01 35.9**	**-0.5**
AKAS	**Kas**	**1.57**	**130**	P	**Pb**	**15 01 37.1**	**0.0**

*IDC **29** 15:11:00.3±3.9, 9°.84S×113°.28E, $h0^{km}$, mb3.2/3, mb1 3.4/3, mb1mx3.2/54, mbtmp3.2/3, Error ellipse: s-maj=228.8km s-min=26.4km az=46.0*
*ISCJB **29** 15:11:06.5±0.8, 9°.78S±0°.06×113°.59E±0°.05, $h26^{km}$, mb3.2/3, Error ellipse: s-maj=9.6km s-min=7.4km az=24.0*
*DJA **29** 15:11:07.9±0.4, 10°S±4°×11°4E±°, $h10^{km}$, M3.9/13, mb4.0/2, MLv3.8/13*

ISC 29 15:11:06.7±1.2, 9°.69S±0°.09×113°.62E±0°.06, $h26^{km}$, n14, σ1§66/15, mb3.1/3, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAGI	**Jajag, Banyuwa**	**1.32**	**24**	P	**Pb**	**15 11 30.8**	**-0.1**
JAGI				S	**Sb**	**15 11 47.7**	**+0.3**
GMJI	**Gumukmas**	**1.42**	**353**	P	**Pb**	**15 11 32.1**	**-0.4**
GMJI				S	**Sb**	**15 11 50.3**	**+0.2**
IGBI	**Denpasar**	**1.74**	**60**	P	**Pb**	**15 11 37.6**	**-0.4**
DNP	**Denpasar**	**1.87**	**58**	P	**Pb**	**15 11 39.7**	**-0.5**
BLJI	**Banyuglugur**	**1.93**	**359**	P	Pb	15 11 46.1	+4.9
PWJI	**Pagerwojo**	**2.44**	**313**	P	**Pn**	**15 11 45.5**	**+0.6**
WOJI	**Wonogiri, Jawa**	**3.23**	**304**	P	**Pn**	**15 11 57.4**	**+1.6**
TWSI	**Taliwang, Sumb**	**3.36**	**74**	P	**Pn**	**15 11 59.6**	**+2.0**
UGM	**Wanagama**	**3.53**	**300**	P	**Pn**	**15 12 01.5**	**+1.6**
PLAI	**Plampang**	**4.20**	**79**	P	**Pn**	**15 12 11.3**	**+2.2**
KPJI	**Karang Pucung**	**5.19**	**296**	P	**Pn**	**15 12 26.1**	**+3.4**
WRA	**Warramunga Arr**	**22.45**	**119**	P	**P**	**15 16 03.2**	**-0.8**
	0.4nm,0.5s,baz=294,slow=12,SNR=6.8						
ASAR	**Alice Springs**	**23.85**	**128**	P	**P**	**15 16 17.6**	**-0.6**
	0.3nm,0.7s,baz=302,slow=9.2,SNR=6.3						
MKAR	**Makanchi Array**	**62.79**	**336**	P	**P**	**15 21 27.6**	**-2.4**
	0.2nm,0.4s,baz=153,slow=8.2,SNR=5.9						

*IDC **29** 15:31:44.9±0.3, 24°.81S×9°.69W, $h0^{km}$, mb5.6/46, mb1 5.6/46, mb1mx5.5/51, mbtmp5.5/46, MS5.1/48, Ms1 5.1/48, ms1mx5.1/49, Error ellipse: s-maj=8.9km s-min=8.0km az=158.0*
*MOS **29** 15:31:45.2±1.0, 24°.66S×9°.66W, $h10^{km}$, mb6.1/92, MS5.1/40, Error ellipse: s-maj=9.4km s-min=3.8km az=73.0*
*ISCJB **29** 15:31:45.4±0.1, 24°.72S±0°.03×9°.74W±0°.02, $h14^{km}$, mb5.9/206, MS5.2/196, Error ellipse: s-maj=4.3km s-min=2.3km az=151.3*
*BJI **29** 15:31:46.6, 24°.67S×9°.66W, $h11^{km}$, mB5.9/29, Ms5.7/38, Ms7 5.5/37*
*GCMT **29** 15:31:46.7±0.1, 24°.63S×9°.67W, $h12^{km}$, MW5.8/130, Moment Tensor Solution. s119,c235; s130,c427; Duration: 1§9 Moment tensor: Scale 10^{17}Nm; M_{rr}5.57±.04; $M_{\theta\theta}$-0.04±.04; $M_{\phi\phi}$-5.53±.04; $M_{r\theta}$0.04±.11; $M_{\theta\phi}$2.19±.03; $M_{\phi r}$1.59±.11; Best double couple: $M_0$6.14800×10^{17} NP1:ϕ_s347.00000°, δ52.00000°, λ98.00000°. NP2:ϕ_s154.00000°, δ38.00000°, λ80.00000°. Principal axes: T 5.8150, Plg81.0000°, Azm293.0000°; N 0.6710, Plg6.0000°, Azm162.0000°; P -6.4810, Plg7.0000°, Azm71.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **29** 15:31:46.0±0.0, 24°.64S×9°.72W, $h11^{km}$, Moment Tensor Solution. s26 Moment tensor: Scale 10^{17}Nm; M_{rr}4.54; $M_{\theta\theta}$-1.08; $M_{\phi\phi}$-3.45; $M_{r\theta}$2.47; $M_{\theta\phi}$2.37; $M_{\phi r}$1.42; Best double couple: $M_0$5.50000×10^{17} NP1:ϕ_s124.00000°, δ51.00000°, λ55.00000°. NP2:ϕ_s352.00000°, δ50.00000°, λ126.00000°. Principal axes: T 5.9800, Plg63.0000°, Azm329.0000°; N -1.0600, Plg26.0000°, Azm147.0000°; P -4.9100, Plg0.0000°, Azm237.0000°;*
*NEIC **29** 15:31:46.7±0.1, 24°.75S×9°.66W, $h10^{km}$, mb6.0/40, MS5.2/116, MW5.8, MW5.8 Error ellipse: s-maj=4.3km s-min=2.9km az=152.0, Moment Tensor Solution. s29 Moment tensor: Scale 10^{17}Nm; M_{rr}3.63; $M_{\theta\theta}$-2.92; $M_{\phi\phi}$-0.70; $M_{r\theta}$3.95; $M_{\theta\phi}$-3.94; $M_{\phi r}$3.48; Best double couple: $M_0$7.40000×10^{17} NP1:ϕ_s242.00000°, δ22.00000°, λ103.00000°. NP2:ϕ_s48.00000°, δ69.00000°, λ85.00000°. Principal axes: T 5.9800, Plg66.0000°, Azm310.0000°; N 2.2500, Plg5.0000°, Azm50.0000°; P -8.2300, Plg24.0000°, Azm142.0000°; Complex event observed on broadband displacement seismograms.*

ISC 29 15:31:47.3±0.5, 24°.74S±0°.04×9°.68W±0°.04, $h14^{km}$±2km, $h15^{km}$: pP-P, n1726, σ1§43/1828, mb6.0/222, MS5.2/197, 76C-43D, South Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHEL	**Horse Pasture**	**9.48**	**24**	*e*Pn	**Pn**	**15 34 00.7**	**-2.8**
SHEL	**Horse Pasture**	**9.48**	**24**	*i* P	**Pn**	**15 34 03.7**	**+0.2**
H09N1	**TRISTAN DA CUN**	**12.50**	**190**	T	T	15 47 40.7	
	SNR=11						
H10S2	**ASCENSION HYDR**	**16.39**	**342**	T	T	15 52 14.8	
	baz=164,slow=75,SNR=75						
H10S3	**ASCENSION HYDR**	**16.40**	**342**	T	T	15 52 15.6	
	baz=164,slow=75,SNR=62						
H10S1	**ASCENSION HYDR**	**16.41**	**342**	T	T	15 52 16.2	
	baz=164,slow=75,SNR=65						
ASCN	**Ascension**	**17.30**	**344**	*e*Pn	**P**	**15 35 50.8**	**+0.9**
H10N1	**ASCENSION HYDR**	**17.41**	**344**	T	T	15 53 33.6	
	SNR=3.4						
H10N3	**ASCENSION HYDR**	**17.42**	**344**	T	T	15 53 32.5	
	SNR=14						
H10N2	**ASCENSION HYDR**	**17.43**	**344**	T	T	15 53 34.4	
	SNR=5.9						
WIN	**Windhoek**	**24.61**	**90**	P	**P**	**15 37 06.3**	**-1.2**
TSUM	**Tsumeb**	**25.85**	**83**	P	**P**	**15 37 17.3**	**-1.4**
	630nm,1.0s,baz=242,slow=8.1,SNR=145						
TSUM				S	**S**	**15 41 49.5**	**+1.2**
	6.9nm,0.7s,baz=82,slow=14,SNR=1.8						
TSUM				LR	LR	15 45 34.5	
	comp=Z,10μm,21.2s,baz=262,slow=32						
TSUM				PKiKP	**PKiKP**	**15 48 27.3**	**-0.6**
	5.4nm,0.9s,baz=359,slow=7.5,SNR=4.2						
TSUM	**Tsumeb**	**25.85**	**83**	*e*P	**P**	**15 37 17.3**	**-1.4**
	650nm,1.0s						
TSUM				S	**S**	**15 41 49.5**	**+1.2**
TSUM				PKiKP	**PKiKP**	**15 48 27.4**	**-0.6**
SUR	**Sutherland**	**27.78**	**113**	P	**P**	**15 37 36.5**	**+0.5**
	121nm,1.0s,baz=278,slow=12,SNR=27						
SUR				S	**S**	**15 42 19.5**	**+0.9**
	10.0nm,1.0s,baz=114,slow=9.1,SNR=1.3						
SUR				LR	LR	15 46 33.3	
	comp=Z,3μm,18.4s,baz=272,slow=32						
SUR	**Sutherland**	**27.78**	**113**	*e*P	**P**	**15 37 37.0**	**+1.0**
	216nm,1.1s						
SUR				S	**S**	**15 42 19.5**	**+0.9**
LIC	**Lamto**	**31.11**	**9**	*e*P	**P**	**15 38 05.3**	**-0.1**
	727nm,1.3s						
KIC	**Kosan Boka**	**31.28**	**9**	*e*P	**P**	**15 38 06.5**	**-0.5**
	473nm,1.1s						
BOSA	**Boshof**	**31.39**	**105**	P	**P**	**15 38 07.0**	**-1.0**
	81nm,1.0s,baz=260,slow=6.6,SNR=35						
BOSA				S	**S**	**15 43 15.7**	**+0.4**
	6.5nm,0.9s,baz=58,slow=18,SNR=2.1						
BOSA				PKiKP	**PKiKP**	**15 48 30.5**	**-0.7**
	2.3nm,0.8s,baz=138,slow=2.6,SNR=4.3						
BOSA				LR	LR	15 49 05.8	
	comp=Z,6μm,18.6s,baz=262,slow=33						
BOSA	**Boshof**	**31.39**	**105**	*i* P	**P**	**15 38 07.2**	**-0.8**
BOSA	**Boshof**	**31.39**	**105**	*i* P	**P**	**15 38 07.2**	**-0.8**
RCBR	**Riachuelo**	**31.40**	**302**	PcP	**PcP**	**15 41 04.3**	**+2.6**
	106nm,0.8s,baz=70,slow=2.8,SNR=5.0						
RCBR				S	**S**	**15 43 17.2**	**+1.8**
	30nm,0.7s,baz=228,slow=0.9,SNR=2.2						
RCBR	**Riachuelo**	**31.40**	**302**	*e*P	**P**	**15 38 07.9**	**-0.2**
RCBR				PcP	**PcP**	**15 41 04.3**	**+2.6**
RCBR				S	**S**	**15 43 17.2**	**+1.8**
RCBR				LR	LR		
	comp=Z,23μm,20.0s						
TIC	**Toumodi**	**31.52**	**9**	*e*P	**P**	**15 38 08.7**	**-0.4**
DBIC	**Dimbokro**	**31.57**	**9**	P	**P**	**15 38 08.9**	**-0.6**
	comp=Z,104nm,0.8s,baz=167,slow=10.0,SNR=29						
DBIC				S	**S**	**15 43 17.2**	**-0.7**
	comp=Z,3.9nm,0.8s,baz=99,slow=22,SNR=2.3						
DBIC				LR	LR	15 48 50.1	
	comp=Z,2μm,18.2s,baz=171,slow=32						
LBTB	**Lobatse**	**31.95**	**98**	*e*P	**P**	**15 38 11.8**	**-1.1**
LBTB	**Lobatse**	**31.95**	**98**	*e*P	**P**	**15 38 11.9**	**-1.1**
SPB	**Sao Paulo**	**34.39**	**264**	*e*P	**P**	**15 38 33.7**	**-0.4**
ITZ	**Itezhi-Tezhi**	**34.58**	**82**	*i* P	**P**	**15 38 37.0**	**+1.0**
ITZ				*i*		15 38 38.4	
	baz=252,slow=11						
ITZ				*i* S	**S**	**15 44 03.9**	**-1.1**
HOPE	**Hope Point**	**35.61**	**207**	*e*P	**P**	**15 38 44.4**	**+0.2**
	comp=Z,471nm,1.6s						
LSZ	**Lusaka**	**36.70**	**82**	*e*P	**P**	**15 38 54.2**	**-0.1**
	comp=Z,210nm,1.0s						
LSZ				LR	LR		
	comp=Z,12μm,22.0s						
LSZ	**Lusaka**	**36.70**	**82**	P	**P**	**15 38 55.3**	**+1.0**
	SNR=44						
LSZ	**Lusaka**	**36.70**	**82**	*e*P	**P**	**15 38 54.2**	**-0.1**
LSZ				pmax	pmax		
	comp=Z,210nm,1.0s						
LSZ				MLR	MLR		
	comp=Z,12μm,22.0s						
TOA0	**Torodi Ar. Sit**	**39.26**	**18**	*e*P	**P**	**15 39 14.5**	**-1.1**
TORD	**Torodi Ar. Bea**	**39.26**	**18**	P	**P**	**15 39 14.7**	**-0.8**
	comp=Z,78nm,1.0s						
TORD				PcP	**PcP**	**15 41 26.2**	**+1.7**
TORD				S	**S**	**15 45 15.3**	**-0.6**
	baz=207,slow=14						
TORD				LR	LR	15 51 56.3	
	comp=Z,4μm,21.8s,baz=225,slow=31						
KOWA	**Kowa**	**39.39**	**9**	P	**P**	**15 39 16.5**	**-0.1**
	comp=Z,287nm,1.0s,baz=187,slow=6.9,SNR=130						
KOWA				S	**S**	**15 45 18.1**	**+0.3**
	comp=Z,3.1nm,0.9s,baz=185,slow=15,SNR=2.3						
KOWA				LR	LR	15 51 39.0	
	comp=Z,3μm,22.0s,baz=192,slow=30						
KOWA	**Kowa**	**39.39**	**9**	*e*P	**P**	**15 39 16.1**	**-0.5**
KOWA				S	**S**	**15 45 18.1**	**+0.3**
SACV	**Santiago Islan**	**41.74**	**340**	*e*P	**P**	**15 39 35.4**	**-0.7**
	comp=Z,116nm,1.1s						
SACV				LR	LR		
	comp=Z,1μm,22.0s						
CPUP	**Villa Florida**	**42.83**	**257**	P	**P**	**15 39 44.5**	**-0.5**
	comp=Z,81nm,1.0s,baz=103,slow=8.0,SNR=24						
CPUP				S	**S**	**15 46 09.4**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=140,slow=17,SNR=1.7						
CPUP				LR	LR	15 54 43.8	
	comp=Z,2μm,20.8s,baz=102,slow=32						
EFI	**East Falkland**	**45.44**	**221**	*e*P	**P**	**15 40 06.1**	**+0.5**
	comp=Z,257nm,1.1s						
EFI				LR	LR		
	comp=Z,2μm,21.0s						
EFI	**East Falkland**	**45.44**	**221**	*e*P	**P**	**15 40 04.8**	**-0.8**
EFI				pmax	pmax		
	comp=Z,66nm,0.7s						
EFI				MLR	MLR		
	comp=Z,1μm,19.0s						
VNA1	**Neumayer--Stat**	**45.95**	**179**	P	**P**	**15 40 09.3**	**0.0**
TRQA	**Tornquist**	**46.02**	**240**	*e*P	**P**	**15 40 09.1**	**-1.3**
	comp=Z,284nm,0.9s						
TRQA				LR	LR		
	comp=Z,7μm,19.0s						
VNA2	**Neumayer--Watz**	**46.23**	**179**	P	**P**	**15 40 10.7**	**-0.9**
	baz=351,slow=8.3						
VNA2				S	**S**	**15 46 53.3**	**-4.1**
VNA3	**Neumayer Olymp**	**46.53**	**180**	P	**P**	**15 40 12.8**	**-1.2**
VNA3				S	**S**	**15 46 57.2**	**-4.6**
SNAA	**Sanae**	**47.12**	**177**	P	**P**	**15 40 17.9**	**-0.7**
	comp=Z,60nm,1.0s,baz=344,slow=7.4,SNR=86						
SNAA				PcP	**PcP**	**15 41 51.6**	**+1.4**
	comp=Z,20nm,1.0s,baz=346,slow=7.9,SNR=3.2						
SNAA				S	**S**	**15 47 11.2**	**+0.9**
	comp=Z,1.8nm,0.9s,baz=298,slow=19,SNR=2.8						
SNAA				LR	LR	15 56 02.1	
	comp=Z,2μm,18.0s,baz=354,slow=31						
NVL	**N'lazarevskaya**	**47.70**	**171**	*i* P	**P**	**15 40 21.8**	**-1.2**
NVL				*i* S	**S**	**15 47 13.9**	**-4.4**
NVL				pmax	pmax		
	comp=Z,72nm,1.3s						
TCA	**Tanti**	**48.50**	**249**	*e*P	**P**	**15 40 28.6**	**-1.3**
SIV	**San Ignacio**	**48.73**	**270**	P	**P**	**15 40 31.5**	**-0.3**
	comp=Z,32nm,0.7s,baz=107,slow=9.5,SNR=84						
MRA	**San Martin**	**49.33**	**248**	*e*P	**P**	**15 40 38.9**	**+2.5**
TAM	**Tamanrasset**	**49.50**	**19**	*e*P	**P**	**15 40 38.3**	**+0.7**
TAM	**Tamanrasset**	**49.50**	**19**	*e*P	**P**	**15 40 38.3**	**+0.7**
AHML	**Horco Molle**	**49.82**	**255**	*e*P	**P**	**15 40 39.3**	**-0.8**
CYA	**Choya**	**49.94**	**253**	*e*P	**P**	**15 40 40.0**	**-1.0**
APLL	**PUNTA DE LOS L**	**50.27**	**250**	*e*P	**P**	**15 40 41.5**	**-2.0**
ACAN	**Cantantal**	**50.59**	**248**	*e*P	**P**	**15 40 45.1**	**-0.7**
ACLC	**CERRO LA CRUZ**	**50.78**	**251**	*e*P	**P**	**15 40 45.5**	**-1.9**
KMBO	**Kilima Mbogo**	**51.03**	**70**	P	**P**	15 41 04.2	+15
	comp=Z,26nm,1.1s,baz=228,slow=8.6,SNR=33						
KMBO				LR	LR	16 00 45.0	
	comp=Z,4μm,21.5s,baz=242,slow=34						
RTCV	**Cerro Valdivia**	**51.77**	**248**	*e*P	**P**	**15 40 53.9**	**-0.9**
RTLL	**Cerro Villicun**	**51.79**	**249**	*e*P	**P**	**15 40 54.0**	**-0.9**
AAGR	**Agrelo**	**51.86**	**246**	*e*P	**P**	**15 40 55.3**	**-0.2**
AMOG	**MOGNA**	**51.87**	**249**	*e*P	**P**	**15 40 55.0**	**-0.5**
LODK	**Lodwar**	**51.93**	**64**	*i* P	**P**	**15 40 56.9**	**+0.9**
ASAL	**Salagasta**	**51.93**	**247**	*e*P	**P**	**15 40 55.6**	**-0.3**
ZON	**Zonda**	**51.94**	**248**	*e*P	**P**	**15 40 53.9**	**-2.1**
ARCO	**CERRO ARCO**	**51.98**	**247**	*e*P	**P**	**15 40 55.8**	**-0.6**
VCA	**Vinchina**	**51.98**	**252**	*e*P	**P**	**15 40 55.8**	**-0.6**
AGUA	**GUANDACOL**	**52.09**	**251**	*e*P	**P**	**15 40 57.4**	**+0.2**
RTLS	**Leoncito**	**52.42**	**248**	*e*P	**P**	**15 40 59.8**	**0.0**
AUSP	**Uspallata**	**52.44**	**247**	*e*P	**P**	**15 40 58.9**	**-1.1**
ACDV	**Cuesta del Vie**	**52.52**	**250**	*e*P	**P**	**15 41 00.3**	**-0.2**
PLCA	**Paso Flores**	**52.64**	**237**	P	**P**	**15 41 01.0**	**0.0**
	comp=Z,69nm,0.9s,baz=115,slow=5.9,SNR=27						
ABPO	**Ambohimpanom**	**52.81**	**96**	*e*P	**P**	**15 41 03.5**	**+0.8**
	comp=Z,492nm,1.2s						
ABPO				LR	LR		
	comp=Z,2μm,21.0s						
ABPO	**Ambohimpanom**	**52.81**	**96**	*e*P	**P**	**15 41 03.5**	**+0.8**
ABPO				pmax	pmax		
	comp=Z,492nm,1.2s						
ABPO				MLR	MLR		
	comp=Z,2μm,21.0s						
AROD	**Rodeo**	**52.82**	**250**	*e*P	**P**	**15 41 03.6**	**+0.7**
OPO	**Ambohidratompo**	**52.90**	**95**	P	**P**	**15 41 04.0**	**+0.6**
	comp=Z,52nm,1.0s,baz=254,slow=7.4,SNR=29						
OPO				LR	LR	16 02 23.7	
	comp=Z,4μm,18.8s,baz=244,slow=35						
PMSA	**Palmer Station**	**52.91**	**206**	P	**P**	**15 41 02.7**	**+0.2**
	comp=Z,62nm,0.9s,baz=56,slow=5.4,SNR=8.7						
PMSA				LR	LR	15 58 33.5	
	comp=Z,1μm,22.0s,baz=68,slow=30						
MACI	**Morro de la Ar**	**53.09**	**352**	*e*

PBAR eS S 15 50 44.0 +5.2
ATD Arta Tunnel 62.64 61 P P 15 42 12.8 +1.1
comp=Z,11nm,0.7s,baz=252,slow=5.9,SNR=6.3
ATD LR LR 16 06 54.1
comp=Z,2µm,21.1s,baz=224,slow=34
ATD Arta Tunnel 62.64 61 eP P 15 42 13.3 +1.5
DFRA Djebel Bou Aff 62.70 14 P P 15 42 12.8 +1.1
CKFL Kef-Lekhel 62.75 15 P P 15 42 12.2 +0.1
KEST Kesra 62.78 17 P P 15 42 13.2 +0.9
comp=Z,113nm,1.0s,baz=144,slow=3.7,SNR=82
KEST LR LR 16 06 55.2
comp=Z,3µm,21.0s,baz=150,slow=34
KEST Kesra 62.78 17 eP P 15 42 12.9 +0.7
ABSA Djebel Ababsia 62.81 16 P P 15 42 12.8 +0.3
SVB Belmont 62.91 301 eP P 15 42 13.9 +0.5
EVO Evora 62.96 1 eP P 15 42 13.6 +0.3
comp=Z,548nm,1.1s
PSMN Pico do Norte, 63.10 346 eP P 15 42 14.0 -0.2
PSMA Santa Maria 63.10 346 eP P 15 42 12.3 -2.0
LIS Lisbon 63.12 0 eP P 15 42 14.7 +0.3
LIS AMb AMB 15 42 16.7
comp=Z,278nm,1.3s
LIS Lisbon 63.12 0⇑ iP P 15 42 14.5 +0.2
comp=Z,470nm,1.4s
CMAH Djebel Manchou 63.13 15 P P 15 42 14.5 0.0
CAEH 'Ain El Ouahch 63.14 15 P P 15 42 14.3 -0.3
PMST Lisbon--Monsan 63.14 0 eP P 15 42 15.0 +0.5
comp=Z,362nm,1.4s
PESTR Estremoz 63.30 2 eP P 15 42 16.2 +0.6
comp=Z,508nm,1.4s
PESTR eS S 15 50 52.4 +5.2
PESTR Estremoz 63.30 2 eP P 15 42 15.5 -0.1
PMAFR Mafra 63.36 0 eP P 15 42 16.3 +0.4
comp=Z,406nm,1.9s
PMAFR eS S 15 50 52.8 +4.9
PMTG Montargil 63.49 1 eP P 15 42 17.4 +0.6
comp=Z,382nm,1.1s
PMTG eS S 15 50 53.9 +4.4
ALMR Almeirim 63.57 1 eP P 15 42 17.6 +0.3
ALMR AMb AMB 15 42 19.6
comp=Z,420nm,1.4s
ALMR Almeirim 63.57 1 eP P 15 42 17.8 +0.5
comp=Z,937nm,1.3s
FDF Fort de France 63.71 302 eP P 15 42 20.3 +1.5
FDF Fort de France 63.71 302 eP P 15 42 19.2 +0.4
FDF Fort de France 63.71 302 eP P 15 42 20.3 +1.5
BAMF Morne Balai 63.76 302 eP P 15 42 17.9 -1.2
CXM Morne La Croix 63.77 302 eP P 15 42 20.6 +1.3
PCRV Puerto La Cruz 63.83 296 P P 15 42 20.4 +0.8
comp=Z,57nm,0.9s,baz=42,slow=4.4,SNR=12
PCRV LR LR 16 08 16.4
comp=Z,2µm,19.9s,baz=114,slow=34
PMRV Marv??o 63.87 2 eP P 15 42 19.5 +0.2
comp=Z,438nm,1.9s
PMRV eS S 15 50 57.1 +2.9
PMRV eLQ LQ 15 57 54.0
PMRV eLR LR 16 04 41.8
comp=Z,1µm,20.5s
CMLA Cha da Macela 63.93 346 eP P 15 42 20.7 +1.0
comp=Z,162nm,0.7s
CMLA Cha da Macela 63.93 346 PFAKE 15 42 30.0 +10
CMLA LR LR
comp=Z,927nm,21.0s
TAMR Tamra 63.95 17 eP P 15 42 21.3 +1.4
PSET Sete Cidades 64.03 346 eP P 15 42 19.8 -0.6
comp=Z,287nm,1.1s
PTOM Tomar 64.03 1 eP P 15 42 21.3 +1.0
comp=Z,458nm,1.2s
PAB San Pablo 64.14 5 eP P 15 42 20.6 -0.6
comp=Z,92nm,1.1s
PAB LR LR
comp=Z,981nm,19.0s
PAB San Pablo 64.14 5 eP P 15 42 20.6 -0.6
PAB pmax pmax
comp=Z,92nm,1.1s
PAB MLR MLR
comp=Z,981nm,19.0s
PCBR Castelo Branco 64.28 2 eP P 15 42 22.0 +0.1
comp=Z,291nm,1.3s
ESDC Sonseca Array 64.30 5 P P 15 42 22.0 -0.2
comp=Z,50nm,0.8s,baz=184,slow=7.1,SNR=115
ESDC LR LR 16 08 35.3
comp=Z,857nm,20.6s,baz=160,slow=34
ESDC PKP2bc 16 11 18.2
comp=Z,0.1nm,0.3s,baz=45,slow=2.0,SNR=5.1
ESLA Sonseca Array 64.30 5 eP P 15 42 22.5 +0.3
ES19 SONSECA Array 64.33 5 eP P 15 42 21.5 -0.9
NNA Nana 64.45 268 P P 15 42 23.7 -0.1
comp=Z,70nm,1.0s,baz=138,slow=2.9,SNR=7.6
NNA PP PP 15 44 48.9 +3.3
comp=Z,13nm,0.7s,baz=97,slow=7.5,SNR=3.8
NNA LR LR 16 09 55.5
comp=Z,2µm,18.6s,baz=104,slow=36
NNA Nana 64.45 268 eP P 15 42 23.6 -0.1
comp=Z,238nm,1.1s
NNA PP PP 15 44 48.9 +3.3
PCAS Casmilo, Conde 64.47 1 eP P 15 42 23.3 +0.1
comp=Z,379nm,1.3s
PCAS eS S 15 51 04.1 +2.5
MTE Manteigas 64.83 2 eP P 15 42 25.7 0.0
comp=Z,292nm,1.1s
MTE eS S 15 51 09.7 +3.5
MTE eLQ LQ 15 58 18.6
MTE eLR LR 16 04 18.4
comp=Z,2µm,18.0s
MTE Manteigas 64.83 2 eP P 15 42 26.2 +0.5
PVIS Viseu 65.14 1 eP P 15 42 28.2 +0.6
comp=Z,237nm,2.4s
QSPA South Pole Qui 65.47 180 P P 15 42 30.1 +0.3
comp=Z,56nm,0.9s,baz=222,slow=3.3,SNR=119
QSPA LR LR 16 07 27.2
comp=Z,2µm,18.8s,baz=232,slow=33
QSPA PKP2bc 16 11 16.2
comp=Z,6.6nm,1.1s,baz=20,slow=2.0,SNR=4.9
ROSA Rosais 65.48 344 eP P 15 42 29.0 -0.8
comp=Z,250nm,1.0s
ROSA Rosais 65.48 344 eP P 15 42 32.0 +2.2
MSEY Mahe Island 65.52 84 PFAKE 15 42 40.0 +9.3
MSEY LR LR
comp=Z,7µm,21.0s
MSEY Mahe Island 65.52 84 P P 15 42 33.3 +2.6
MVO Moncorvo 65.61 2 eP P 15 42 31.1 +0.4
comp=Z,567nm,1.2s
MVO eS S 15 51 20.8 +5.0
MVO eLQ LQ 15 58 40.7
MVO eLR LR 16 05 20.3
comp=Z,1µm,20.4s
CLTB Caltabellotta 65.62 20 eP P 15 42 31.6 +0.8
PVRL Vila Real 65.70 2 eP P 15 42 32.1 +0.8
comp=Z,153nm,1.3s
PGRA Graciosa 65.71 344 eP P 15 42 34.0 +2.7
comp=Z,246nm,1.3s
POLO Lamas de Olo 65.80 2 eP P 15 42 31.7 -0.2
comp=Z,61nm,1.5s
POLO eS S 15 51 25.8 +7.7
EBR Ebro Roquetas 65.91 8 P P 15 42 33.8 +1.3
EBR pmax pmax
comp=Z,651nm,0.9s
VAE Valguarnera 65.91 21 P P 15 42 33.1 +0.4
comp=Z,42nm,1.0s,baz=353,slow=2.9,SNR=30
VAE LR LR 16 07 40.9
comp=Z,1µm,20.2s,baz=177,slow=33
ANWB Willy Bob 65.99 305 PFAKE 15 42 50.0 +17
ANWB LR LR
comp=Z,861nm,22.0s
PCAB Cabril 66.13 1 eP P 15 42 34.2 +0.2
comp=Z,312nm,1.1s
PBRG Braganca 66.26 2 eP P 15 42 35.1 +0.2
comp=Z,259nm,1.9s
PGAV Gavieira, Arco 66.38 1 eP P 15 42 35.4 -0.3
comp=Z,288nm,1.1s
PGAV Gavieira, Arco 66.38 1 eLR LR 16 04 49.6
comp=Z,922nm,17.5s
H07S1 FLORES T-PHASE 66.88 342 eP P 15 42 34.0 -4.8
SABA Saba 67.06 304 eP P 15 42 41.1 +0.7
CEL Celeste 67.10 22 eP P 15 42 40.9 +0.6
SMRT St. Maarten 67.19 304 eP P 15 42 40.6 -0.6
ETSF Etsaut 67.82 7 eP P 15 42 44.4 -0.4
ETSF pmax pmax
comp=Z,123nm,1.0s
IMMV Iera Moni Meta 67.82 29 P P 15 42 45.1 +0.2
SIVA Sivas 67.83 30 eP P 15 42 45.0 +0.1
SIVA Sivas 67.83 30 P P 15 42 45.0 +0.1
ANKY Antikythira Is 67.86 29 eP P 15 42 45.9 +0.8
ANKY Antikythira Is 67.86 29 P P 15 42 45.9 +0.8

VAM Vamos 67.88 29 eP P 15 42 45.4 +0.2
VAM Vamos 67.88 29 P P 15 42 45.4 +0.2
VAM Vamos 67.88 29 eP P 15 42 45.4 +0.2
CHAN Chania 67.90 29 P P 15 42 45.9 +0.6
SJPF Ste Jean 67.96 7 eP P 15 42 45.4 -0.2
SJPF pmax pmax
comp=Z,151nm,0.9s
KTHR Kythira 68.07 28 P P 15 42 46.6 +0.2
PYL PYLOS 68.08 27 eP P 15 42 45.0 -1.5
PYL PYLOS 68.08 27 P P 15 42 45.0 -1.5
IDI Anoyia 68.09 30 P P 15 42 47.3 +0.7
comp=Z,53nm,0.7s,baz=210,slow=12,SNR=23
IDI LR LR 16 12 56.0
comp=Z,492nm,19.7s,baz=206,slow=36
IDI Anoyia 68.09 30⇑ iP P 15 42 47.1 +0.5
IDI Anoyia 68.09 30 eP P 15 42 47.5 +0.9
KYTH Kithira 68.09 28 eP P 15 42 47.0 +0.4
KYTH Kithira 68.09 28 P P 15 42 47.0 +0.4
SDV Santo Domingo 68.14 291 P P 15 42 48.2 +0.7
comp=Z,83nm,0.8s,baz=114,slow=3.7,SNR=57
SDV PP PP 15 45 21.5 +3.5
comp=Z,3.5nm,0.3s,baz=146,slow=5.2,SNR=4.3
SDV LR LR 16 10 03.0
comp=Z,4µm,21.1s,baz=112,slow=34
SDV Santo Domingo 68.14 291 eP P 15 42 48.0 +0.5
comp=Z,108nm,0.9s
SDV PP PP 15 45 21.5 +3.5
DYR Agios Nikonas 68.21 27 P P 15 42 47.2 -0.1
TIP Timpagrande 68.22 22⇑ iP P 15 42 47.4 0.0
TIP Timpagrande 68.22 22 eP P 15 42 47.3 -0.1
TIP Timpagrande 68.22 22 P P 15 42 47.3 -0.1
CDVI St. Croix 68.29 303 eP P 15 42 48.1 -0.1
NPS Neapolis 68.40 31 eP P 15 42 48.5 0.0
NPS Neapolis 68.40 31 P P 15 42 48.5 0.0
NPS Neapolis 68.40 31 eP P 15 42 48.5 0.0
ITM Ithomi 68.40 27 eP P 15 42 48.1 -0.4
ITM Ithomi 68.40 27 P P 15 42 48.1 -0.4
VILC Villavicencio, 68.42 285 eP P 15 42 50.8 +1.5
VLI Veliai 68.43 28 eP P 15 42 49.3 +0.7
VLI Veliai 68.43 28 P P 15 42 49.3 +0.7
ABVI Anegada Island 68.55 304 eP P 15 42 49.0 -0.7
AMT Artemida-Makis 68.62 26 P P 15 42 50.2 +0.4
MTLF Montolieu 68.62 9 eP P 15 42 48.4 -1.3
MTLF pmax pmax
comp=Z,99nm,1.2s
CUC Castrocucco 68.65 21 eP P 15 42 49.4 -0.6
CHIC Chingaza 68.70 286 eP P 15 42 50.1 -1.2
VLS Valsamata 68.73 25 eP P 15 42 50.0 -0.5
VLS Valsamata 68.73 25 P P 15 42 50.0 -0.5
VLS Valsamata 68.73 25 eP P 15 42 50.0 -0.5
RUSC La Rusia 68.74 287 eP P 15 42 51.1 -0.7
RUSC La Rusia 68.74 287 eP P 15 42 50.8 -0.9
KFL Anninata 68.75 25 P P 15 42 50.3 -0.3
VLX Vlachokerasia 68.75 27 eP P 15 42 51.6 +0.8
VLX Vlachokerasia 68.75 27 P P 15 42 51.6 +0.8
STVI Saint Thomas 68.79 303 eP P 15 42 50.4 -0.9
FSK Fiskardo 68.97 25 P P 15 42 51.4 -0.5
RLS Riolos of Patr 68.97 26 eP P 15 42 52.8 +0.8
RLS Riolos of Patr 68.97 26 P P 15 42 52.8 +0.8
DRO Drossia 68.98 26 P P 15 42 53.1 +1.0
FLOC Florencia 68.98 282 eP P 15 42 51.5 -1.2
KRND KRANIDI 69.08 28 P P 15 42 51.8 -0.9
MTP Monte Pirata 69.10 303 eP P 15 42 52.9 -0.3
PGF Pioggiola 69.14 15 eP P 15 42 52.0 -1.1
PGF pmax pmax
comp=Z,121nm,1.1s
GUR Goura 69.22 27 eP P 15 42 53.5 -0.2
GUR Goura 69.22 27 P P 15 42 53.5 -0.2
DID Didima 69.22 28 eP P 15 42 52.6 -1.0
DID Didima 69.22 28 P P 15 42 52.6 -1.0
KLV Kalavryta, Ach 69.23 26 eP P 15 42 54.3 +0.6
KLV Kalavryta, Ach 69.23 26 P P 15 42 54.3 +0.6
SANT Santorini 69.24 30 eP P 15 42 55.2 +1.4
PRAC Prado 69.28 284 eP P 15 42 53.5 -1.1
LKD2 Lefkada island 69.29 25 eP P 15 42 53.8 -0.2
LKD2 Lefkada island 69.29 25 P P 15 42 53.8 -0.2
BETC Betania 69.29 283 eP P 15 42 54.8 +0.1
ROSC El Rosal 69.31 286 P P 15 42 55.3 +0.1
comp=Z,52nm,0.8s,baz=144,slow=2.5,SNR=24
ROSC LR LR 16 12 05.9
comp=Z,3µm,18.5s,baz=135,slow=35
ROSC El Rosal 69.31 286 eP P 15 42 56.0 +0.8
PDO Prodromos 69.33 25 P P 15 42 54.3 +0.1
LAKA Lakka 69.33 26 eP P 15 42 55.0 +0.7
LAKA Lakka 69.33 26 P P 15 42 55.0 +0.7
HUMP Col San Antoni 69.35 302 eP P 15 42 53.7 -1.0
KARP Karpathos 69.36 32 eP P 15 42 55.1 +0.6
CBYP Canovanas 69.44 303 eP P 15 42 54.2 -1.2
EFP Efpalio 69.46 26 P P 15 42 55.6 +0.6
PVO Paravola 69.48 26 P P 15 42 55.8 +0.7
TRIZ Trizonia 69.48 26 P P 15 42 55.8 +0.7
SERG Sergoula 69.51 26 P P 15 42 55.9 +0.5
MATE Matera 69.53 21⇑ iP P 15 42 53.5 -1.9
LTK Loutraki 69.55 27 eP P 15 42 55.0 -0.6
LTK Loutraki 69.55 27 P P 15 42 55.0 -0.6
FRF La Foret Royal 69.60 13 eP P 15 42 55.0 -0.8
FRF pmax pmax
comp=Z,119nm,1.0s
ANX Ano Chora 69.61 26 P P 15 42 56.3 +0.2
DSF Desfina 69.70 27 eP P 15 42 56.4 -0.2
DSF Desfina 69.70 27 P P 15 42 56.4 -0.2
PROD Prodromos 69.72 27 P P 15 42 56.0 -0.7
ICMP Isla Caja de M 69.72 302 eP P 15 42 56.1 -1.0
VLY Voula,Athens 69.75 28 eP P 15 42 55.8 -1.0
VLY Voula,Athens 69.75 28 P P 15 42 55.8 -1.0
DSL Palaion Diasel 69.76 25 eP P 15 42 57.0 +0.1
DSL Palaion Diasel 69.76 25 P P 15 42 57.0 +0.1
KEK Kerkira 69.77 24 eP P 15 42 56.5 -0.4
KEK Kerkira 69.77 24 P P 15 42 56.5 -0.4
IGT Igoumenitsa 69.81 24 eP P 15 42 56.2 -1.0
IGT Igoumenitsa 69.81 24 P P 15 42 56.2 -1.0
IGT Igoumenitsa 69.81 24 eP P 15 42 56.2 -1.0
VILL Villia 69.81 27 P P 15 42 57.0 -0.3
ATH Athens Observa 69.82 28 eP P 15 42 57.0 -0.2
ATH Athens Observa 69.82 28 P P 15 42 57.0 -0.2
ATH Athens Observa 69.82 28 eP P 15 42 57.0 -0.2
ATHU Athens Univers 69.84 28 eP P 15 42 56.8 -0.6
ATHU Athens Univers 69.84 28 P P 15 42 56.8 -0.6
EVR Evrytania 69.85 26 eP P 15 42 58.3 +0.8
EVR Evrytania 69.85 26 P P 15 42 58.3 +0.8
SGD Sagiada 69.85 24 P P 15 42 57.4 0.0
APE Apeiranthos 69.85 29⇑ iP P 15 42 59.2 +1.7
OBIP Obispado Ponce 69.88 302 eP P 15 42 56.9 -1.1
PTL Penteli 69.95 28 eP P 15 42 57.9 -0.2
PTL Penteli 69.95 28 P P 15 42 57.9 -0.2
SBF Sospel 70.05 13 eP P 15 42 59.4 +0.8
SBF pmax pmax
comp=Z,209nm,1.2s
AQU L'Aquila 70.08 18 eP P 15 42 59.2 +0.5
AQU L'Aquila 70.08 18 eP P 15 42 59.3 +0.5
LKR Lokris 70.10 27 eP P 15 42 58.3 -0.6
LKR Lokris 70.10 27 P P 15 42 58.3 -0.6
JAN Janina 70.12 25 eP P 15 42 59.6 +0.5
JAN Janina 70.12 25 P P 15 42 59.6 +0.5
JAN Janina 70.12 25 eP P 15 42 59.6 +0.5
CRUC La Cruz 70.13 281 eP P 15 43 04.8 +4.6
NORC Norcasia 70.14 286 eP P 15 42 56.8 -3.1
AGG Agios Georgios 70.14 26 eP P 15 43 00.0 +0.7
AGG Agios Georgios 70.14 26 P P 15 42 59.0 -0.3
AGG Agios Georgios 70.14 26 eP P 15 43 00.0 +0.7
CAF Calviac 70.15 9 eP P 15 42 58.3 -0.9
CAF pmax pmax
comp=Z,113nm,1.2s
AOPR Arecibo Observ 70.17 302 eP P 15 42 58.7 -1.1
CRPR Cabo Rojo, PR 70.25 302 eP P 15 42 59.8 -0.4
PTBC PUERTO BERRIO, 70.25 287 eP P 15 42 58.1 -2.4
ARG Arkhangelos 70.36 32 eP P 15 43 00.8 +0.2
ARG Arkhangelos 70.36 32 P P 15 43 00.8 +0.2
ARG Arkhangelos 70.36 32 eP P 15 43 00.8 +0.2
SMIA Simia 70.38 27 P P 15 43 00.6 -0.1
MPR Mayaguez 70.39 302 eP P 15 42 58.9 -2.2
GUYC Guyana, Colomb 70.43 286 eP P 15 43 00.8 -1.4
RJF Les Rejaudoux 70.45 8 eP P 15 43 00.1 -0.9
RJF pmax pmax
comp=Z,184nm,1.2s
THL Klokotos Trika 70.49 26 P P 15 43 01.2 -0.1
VIVF Saint-Julien-l 70.49 11 eP P 15 43 00.8 -0.4
VIVF pmax pmax
comp=Z,122nm,1.0s
AGP Aguadilla 70.50 302 eP P 15 43 00.5 -1.4
KPRO Kipourio 70.57 25 P P 15 43 02.3 +0.4

BODT Bodrum 70.66 31 eP P 15 43 00.7 -1.7
BODT Bodrum 70.66 31 P P 15 43 00.7 -1.7
YOTC Yotoco, Valle 70.69 284 eP P 15 43 01.4 -1.9
FYTO Fytoko, Volos 70.72 26 eP P 15 43 01.8 -0.9
FYTO Fytoko, Volos 70.72 26 P P 15 43 01.8 -0.9
SKIA Skiathos 70.73 27 P P 15 43 02.8 0.0
MBDF Montbardon 70.75 12 eP P 15 43 02.9 -0.1
MBDF pmax pmax
comp=Z,181nm,1.0s
NEO Neokhori 70.75 27 eP P 15 43 02.4 -0.5
NEO Neokhori 70.75 27 P P 15 43 02.4 -0.5
ORIF Oris-en-Rattie 70.76 12 eP P 15 43 02.8 -0.2
ORIF pmax pmax
comp=Z,164nm,1.1s
XOR Xorichti 70.78 26 eP P 15 43 02.4 -0.8
XOR Xorichti 70.78 26 P P 15 43 02.4 -0.8
NEST Nestorio 70.85 24 P P 15 43 04.5 +0.9
SSB Saint Sauveur 70.88 11 eP P 15 43 03.4 -0.2
SSB Saint Sauveur 70.88 11 eP P 15 43 03.4 -0.2
OTAV Otavalo 70.88 279 eP P 15 43 05.1 +0.2
comp=Z,30nm,1.0s
OTAV LR LR
comp=Z,3µm,19.0s
OTAV Otavalo 70.88 279 P P 15 43 04.1 -0.8
OTAV pmax pmax
comp=Z,30nm,1.3s
AOS Alonnisos 70.90 27 eP P 15 43 02.6 -1.2
AOS Alonnisos 70.90 27 P P 15 43 02.6 -1.2
SMG Samos 70.97 30 eP P 15 43 04.5 +0.2
SMG Samos 70.97 30 P P 15 43 04.5 +0.2
VLC Villacollemand 70.99 15 eP P 15 43 03.1 -1.2
KSL Kastellorizon 71.01 33 eP P 15 43 04.2 -0.4
KSL Kastellorizon 71.01 33 P P 15 43 04.2 -0.4
HELC Santa Helena 71.01 286 eP P 15 43 04.7 -0.8
KZN Kozani 71.03 25 eP P 15 43 04.5 -0.2
KZN Kozani 71.03 25 P P 15 43 04.5 -0.2
KZN Kozani 71.03 25 eP P 15 43 04.5 -0.2
BNI Bardonecchia 71.04 12 eP P 15 43 04.9 +0.2
BNI Bardonecchia 71.04 12 eP P 15 43 04.9 +0.2
ZARC Zaragoza, Cauc 71.06 288 eP P 15 43 04.8 -0.6
CFF Clermont-Ferra 71.12 9 P P 15 43 04.5 -0.5
LIT Litokhoron 71.13 26 eP P 15 43 04.9 -0.4
LIT Litokhoron 71.13 26 P P 15 43 04.6 -0.7
LIT Litokhoron 71.13 26 eP P 15 43 04.9 -0.4
FETY Fethiye 71.15 32 eP P 15 43 04.8 -0.7
FETY Fethiye 71.15 32 P P 15 43 04.8 -0.7
YER Yerkesik 71.17 31 eP P 15 43 05.4 -0.2
YER Yerkesik 71.17 31 P P 15 43 05.4 -0.2
YER Yerkesik 71.17 31 eP P 15 43 05.4 -0.2
TIR Tirane 71.23 23⇑ iP P 15 43 06.5 +0.7
TIR Tirane 71.23 23 eP P 15 43 06.8 +1.0
FNA Florina 71.30 24 eP P 15 43 06.6 +0.3
FNA Florina 71.30 24 P P 15 43 05.9 -0.4
FNA Florina 71.30 24 eP P 15 43 06.6 +0.3
OHR Ohrid 71.36 24 eP P 15 43 06.4 -0.3
PPCY Paphos 71.44 35 P P 15 43 06.3 -0.9
PAIG Paliouri 71.46 26 eP P 15 43 07.1 -0.1
PAIG Paliouri 71.46 26 P P 15 43 07.1 -0.1
PAIG Paliouri 71.46 26 eP P 15 43 07.1 -0.1
BIA Bitola 71.48 24 eP P 15 43 09.2 +1.8
LPG La Plagne 71.48 12 eP P 15 43 07.4 -0.2
LPG pmax pmax
comp=Z,148nm,0.9s
LPL La Plagne 71.50 12 eP P 15 43 07.3 -0.3
LPL pmax pmax
comp=Z,146nm,0.8s
TCF Toulx Ste Croi 71.51 9 eP P 15 43 06.9 -0.5
TCF pmax pmax
comp=Z,123nm,1.0s
AKMC Akamas 71.54 35 P P 15 43 07.3 -0.5
ULC Ulcinj 71.56 22⇓ iP P 15 43 07.7 -0.1
SZAC Souni 71.62 36 P P 15 43 09.9 +1.5
MMAI Mount Meron Ar 71.72 39 P P 15 43 10.7 +1.7
comp=Z,39nm,0.9s,baz=216,slow=5.2,SNR=26
MMAI LR LR 16 14 20.6
comp=Z,799nm,19.1s,baz=230,slow=36
HCY Herceg Novi 71.73 22⇓ iP P 15 43 08.7 -0.1
PHP Peshkopia 71.74 23 eP P 15 43 09.3 +0.4
PHP Peshkopia 71.74 23 P P 15 43 09.3 +0.4
DRME Dracevica, Mon 71.74 22⇓ iP P 15 43 09.0 +0.2
BUM Brajici-Budva 71.74 22⇓ iP P 15 43 09.0 +0.1
PLG Polygyros 71.75 26 eP P 15 43 08.2 -0.8
PLG Polygyros 71.75 26 P P 15 43 08.2 -0.8
KRUS Krusevo 71.76 24 eP P 15 43 08.8 -0.3
SIGR SIGRI 71.77 28 eP P 15 43 09.5 +0.4
SIGR SIGRI 71.77 28 P P 15 43 09.5 +0.4
THE Thessaloniki 71.78 26 eP P 15 43 08.5 -0.6
THE Thessaloniki 71.78 26 P P 15 43 08.5 -0.6
ALFC Alefka 71.78 35 P P 15 43 08.8 -0.5
HORT Hortiatis 71.80 26 eP P 15 43 09.1 -0.2
HORT Hortiatis 71.80 26 P P 15 43 09.1 -0.2
GRG Griva 71.83 25 eP P 15 43 09.1 -0.4
GRG Griva 71.83 25 P P 15 43 09.1 -0.4
GRG Griva 71.83 25 eP P 15 43 09.3 -0.2
STON Ston 71.85 21 P P 15 43 08.6 -0.8
RAYN Ar Rayn 71.86 52 eP P 15 43 11.4 +1.4
comp=Z,91nm,1.2s
RAYN LR LR
comp=Z,6µm,22.0s
RAYN Ar Rayn 71.86 52 i P P 15 43 11.4 +1.4
SNR=57
RAYN Ar Rayn 71.86 52 P P 15 43 11.4 +1.4
OUR Ouranopolis 71.93 26 eP P 15 43 07.8 -2.2
OUR Ouranopolis 71.93 26 P P 15 43 07.8 -2.2
OUR Ouranopolis 71.93 26 eP P 15 43 07.8 -2.2
CEME Cevo 71.97 22⇓ iP P 15 43 10.1 -0.2
ASF Jabal al Asfar 71.97 40 P P 15 43 12.4 +1.8
comp=Z,8.6nm,1.0s,baz=151,slow=3.5,SNR=20
ASF LR LR 16 12 11.0
comp=Z,671nm,21.9s,baz=173,slow=34
PDG Podgorica 71.98 22⇑ iP P 15 43 10.4 +0.2
PDG Podgorica 71.98 22 P P 15 43 10.2 0.0
TTG Podgorica 71.98 22⇓ iP P 15 43 10.3 0.0
TTG Podgorica 71.98 22 eP P 15 43 10.0 -0.2
TTG Podgorica 71.98 22 eP P 15 43 10.0 -0.2
PRK Paraskevi 71.98 29 eP P 15 43 10.9 +0.6
PRK Paraskevi 71.98 29 P P 15 43 10.9 +0.6
PRK Paraskevi 71.98 29 eP P 15 43 10.9 +0.6
CSS Mathiatis 72.02 36 eP P 15 43 09.8 -0.9
CSS Mathiatis 72.02 36 P P 15 43 11.7 +1.0
CSS Mathiatis 72.02 36 P P 15 43 09.8 -0.9
LIA Limnos Island 72.06 28 eP P 15 43 10.2 -0.6
LIA Limnos Island 72.06 28 P P 15 43 10.2 -0.6
SMF Signal de Mont 72.09 10 eP P 15 43 10.2 -0.7
SMF pmax pmax
comp=Z,167nm,1.0s
SHBL Chebaa 72.15 39 eP P 15 43 12.5 +0.8
BRY Bratogost 72.15 21⇓ iP P 15 43 11.0 -0.5
AVF Avril sur Loir 72.16 9 eP P 15 43 10.7 -0.6
AVF pmax pmax
comp=Z,225nm,1.2s
NKME Niksic 72.17 22⇓ iP P 15 43 11.3 -0.2
KNT Kendrikon 72.20 25 eP P 15 43 11.8 +0.1
KNT Kendrikon 72.20 25 P P 15 43 11.8 +0.1
VAY Valandovo 72.21 25 eP P 15 43 11.1 -0.6
VAY Valandovo 72.21 25 P P 15 43 11.1 -0.6
VAY Valandovo 72.21 25 eP P 15 43 11.1 -0.6
BRBR Barbar 72.32 39 eP P 15 43 16.5 +3.7
SKO Skopje 72.35 24 eP P 15 43 12.1 -0.4
SKO Skopje 72.35 24 P P 15 43 12.1 -0.4
SKO Skopje 72.35 24 eP P 15 43 12.6 +0.1
SKO Skopje 72.35 24 eP P 15 43 12.1 -0.4
PVO Plav 72.36 23⇓ iP P 15 43 13.3 +0.6
STIP Stip 72.39 25 eP P 15 43 13.1 +0.3
MANT Manisa 72.39 31 eP P 15 43 14.6 +1.5
SENIN Lac Senin/Sane 72.42 12 eP P 15 43 12.7 -0.4
CABF La Chapelle 72.44 11 eP P 15 43 12.0 -1.0
CABF pmax pmax
comp=Z,214nm,1.0s
SRS Serrai 72.44 26 eP P 15 43 12.7 -0.4
SRS Serrai 72.44 26 P P 15 43 12.7 -0.4
SRS Serrai 72.44 26 eP P 15 43 12.7 -0.4
KOME Kolasin 72.44 22⇓ iP P 15 43 13.6 +0.5
SSF Saint Saulge 72.45 9 eP P 15 43 12.3 -0.7
SSF pmax pmax
comp=Z,228nm,1.2s
EZN Ezine 72.48 28 eP P 15 43 13.6 +0.3
EZN Ezine 72.48 28 P P 15 43 13.6 +0.3
EZN Ezine 72.48 28 eP P 15 43 13.6 +0.3
BHL Bhannes 72.51 38 eP P 15 43 14.1 +0.3
NVLJ Novalja 72.53 18 P P 15 43 13.5 0.0

UPM	Unac-Piva	72.55	22⇓	iP	P	15 43 13.8	-0.1
TOTH	TOTAH	72.55	39	eP	P	15 43 13.4	-0.6
QUIF	Quistinic	72.56	5	eP	P	15 43 14.0	+0.4
QUIF				pmax	pmax		
	comp=Z,226nm,1.5s						
IVA	Berane	72.59	22⇓	iP	P	15 43 14.2	+0.2
QASN	Qassioun	72.59	39	eP	P	15 43 10.1	-4.2
GADA	Gvkgeada	72.60	28	eP	P	15 43 13.7	-0.3
GADA	Gvkgeada	72.60	28	P	P	15 43 13.7	-0.3
SMTH	Samothraki Isl	72.68	27	eP	P	15 43 13.9	-0.6
SMTH	Samothraki Isl	72.68	27	P	P	15 43 13.9	-0.6
SDD	Santo Domingo	72.69	300	eP	P	15 43 14.7	-0.3
NVR	Nevrokopi	72.74	26	eP	P	15 43 14.5	-0.4
NVR	Nevrokopi	72.74	26	P	P	15 43 14.5	-0.4
UDBI	Udbina	72.75	19	P	P	15 43 15.7	+0.7
ISP	Isparta	72.79	32⇓	iP	P	15 43 15.8	+0.4
ISP	Isparta	72.79	32	eP	P	15 43 16.4	+1.0
ISP	Isparta	72.79	32	P	P	15 43 15.8	+0.4
ISP	Isparta	72.79	32	ceP	P	15 43 15.4	0.0
ISP				pmax	pmax		
	comp=Z,53nm,1.8s						
ISP				MLR	MLR		
	comp=Z,419nm,18.0s						
PLE	Pljevlja	72.82	22⇓	iP	P	15 43 15.4	0.0
KKB	Krupnik	72.88	25	P	P	15 43 16.3	+0.6
MMB	Musomiste	72.89	26	P	P	15 43 15.3	-0.5
TUE	Stuetta	72.94	14	eP	P	15 43 14.5	-1.7
SKDS	Skadanscina	73.20	17	eP	P	15 43 17.2	-0.3
RDO	Rodhopi	73.25	27	eP	P	15 43 17.4	-0.4
RDO	Rodhopi	73.25	27	P	P	15 43 17.4	-0.4
ALN	Alexandroupoli	73.25	28	eP	P	15 43 18.4	+0.6
ALN	Alexandroupoli	73.25	28	P	P	15 43 17.4	-0.4
ALN	Alexandroupoli	73.25	28	P	P	15 43 17.5	-0.4
ALN				pmax	pmax		
	comp=Z,90nm,1.6s						
LOMF	Lomont	73.28	12	P	P	15 43 18.1	+0.1
FUORN	Ofenpass-Fuorn	73.28	14	eP	P	15 43 17.6	-0.7
TRI	Trieste	73.28	17	eP	P	15 43 17.6	-0.3
TRI	Trieste	73.28	17	eP	P	15 43 17.6	-0.3
DAVOX	Davos/Dischmat	73.35	14	P	P	15 43 18.7	+0.1
	comp=Z,106nm,0.9s,baz=192,slow=5.8,SNR=59						
DAVOX				LR	LR	16 13 12.1	
	comp=Z,2μm,21.7s,baz=206,slow=34						
RZN	Rozhen	73.37	26	P	P	15 43 18.4	-0.4
BLY	Banja Luka	73.38	20⇑	iP	P	15 43 18.2	-0.3
BLY	Banja Luka	73.38	20	eP	P	15 43 18.3	-0.2
LDF	La Druitiere	73.50	7	eP	P	15 43 18.6	-0.5
LDF				pmax	pmax		
	comp=Z,186nm,1.4s						
BOJS	Bojanci	73.50	18⇑	iP	P	15 43 19.2	0.0
BOJS				ePP	PP	15 46 03.4	-0.1
BOJS				eS	SKiKP	15 52 50.1	+0.5
VTS	Vitosha	73.55	25⇑	iP	P	15 43 19.9	+0.1
VTS	Vitosha	73.55	25	eP	P	15 43 19.8	+0.1
VTS	Vitosha	73.55	25	P	P	15 43 19.9	+0.1
VTS	Vitosha	73.55	25	P	P	15 43 18.6	-1.2
VTS	Vitosha	73.55	25	eP	P	15 43 19.8	0.0
KDZ	Kurdzhali	73.62	27	P	P	15 43 19.9	-0.2
FLN	La Foliniere	73.63	6	eP	P	15 43 19.0	-0.9
FLN				pmax	pmax		
	comp=Z,156nm,1.0s						
OZLJ	Ozalj	73.66	18	P	P	15 43 20.3	+0.2
DIVS	Divibare	73.70	22	eP	P	15 43 20.4	-0.2
PLD	Plovdiv	73.71	26	P	P	15 43 20.7	+0.1
HINF	Hinteralfeld	73.74	12	eP	P	15 43 19.1	-1.5
HINF				pmax	pmax		
	comp=Z,156nm,1.6s						
CADS	Cadrg	73.76	17⇑	iP	P	15 43 20.4	-0.4
FETA	Feichten	73.77	14	iP	P	15 43 19.9	-1.1
	comp=Z,160nm,1.5s,SNR=63						
LJU	Ljubljana	73.80	17⇑	iP	P	15 43 21.1	+0.1
LJU				e		15 43 35.2	
LJU				ePP	PP	15 46 05.4	-0.6
LJU				eS	S	15 52 53.2	+1.4
MOF	Molkenrain	73.82	12	P	P	15 43 20.5	-0.7
DAVA	Damuels	73.83	14	iP	P	15 43 20.3	-1.1
	comp=Z,224nm,0.9s,SNR=66						
PGB	Panagyurishte	73.88	25	P	P	15 43 21.2	-0.4
JSA	Saint Aubin	73.89	5	eP	P	15 43 19.7	-1.7
ABTA	Abfaltersbach	73.93	16	iP	P	15 43 21.9	0.0
	comp=Z,376nm,1.7s,SNR=137						
SLE	Schleitheim	74.00	13	P	P	15 43 22.2	0.0
DIM	Dimitrovgrad	74.00	27	P	P	15 43 22.5	+0.2
SDDR	Presa de Saban	74.06	300	eP	P	15 43 23.1	-0.1
	comp=Z,100nm,1.3s						
SDDR				LR	LR		
	comp=Z,1μm,20.0s						
MYKA	Terra Mystica	74.11	16	iP	P	15 43 22.8	0.0
	comp=Z,271nm,1.8s,SNR=68						
MOTA	Moosalm	74.16	15	iP	P	15 43 21.9	-1.4
	comp=Z,55nm,0.9s,SNR=29						
ECH	Echery	74.18	12	eP	P	15 43 22.1	-1.1
ECH	Echery	74.18	12	eP	P	15 43 22.1	-1.1
WTTA	Wattenberg	74.20	15	iP	P	15 43 22.8	-0.8
	comp=Z,193nm,1.0s,SNR=41						
RETA	Reutte	74.21	14	iP	P	15 43 22.2	-1.3
	comp=Z,96nm,1.0s,SNR=57						
OBKA	Obir	74.23	17	iP	P	15 43 23.7	0.0
	comp=Z,151nm,1.7s,SNR=59						
WATA	Walderalm	74.26	15	iP	P	15 43 22.8	-1.0
	comp=Z,201nm,1.3s,SNR=34						
CDF	Champ du Feu	74.39	12	eP	P	15 43 23.0	-1.5
CDF				pmax	pmax		
	comp=Z,136nm,1.4s						
KBA	Koelnbreinsper	74.45	16	iP	P	15 43 24.5	-0.5
	comp=Z,137nm,1.1s,SNR=96						
KBA	Koelnbreinsper	74.45	16	P	P	15 43 24.7	-0.3
KBA				pmax	pmax		
	comp=Z,126nm,1.2s						
BEO	Beograd	74.49	22	P	P	15 43 24.6	-0.4
BEO				pmax	pmax		
	comp=Z,294nm,1.0s						
PERS	Pernice	74.50	17⇑	iP	P	15 43 25.2	0.0
PERS				eS	S	15 52 59.6	-0.1
PERS				e		15 53 38.8	
PERS				eSS	SS	15 57 41.5	-5.7
BFO	Black Forest	74.51	12	eP	P	15 43 23.4	-1.7
	comp=Z,28nm,1.1s						
BFO				LR	LR		
	comp=Z,52nm,20.0s						
BFO	Black Forest	74.51	12	iP	P	15 43 24.5	-0.6
SOKA	Soboth	74.52	17	iP	P	15 43 25.5	+0.2
	comp=Z,217nm,1.0s,SNR=138						
KOGS	Kog	74.65	18⇑	iP	P	15 43 26.3	+0.4
CCA1	Carnmenellis	74.69	3	eP	P	15 43 25.5	-0.6
CCA1				IAmb	IAmb	15 43 29.9	
	comp=Z,219nm,1.1s						
JMB	Yambol	74.78	27	P	P	15 43 26.4	-0.4
BEHE	Becsehely	74.82	19⇑	eP	P	15 43 27.4	+0.5
MDVR	Moldovita	74.89	23⇓	iP	P	15 43 27.3	-0.2
FUR	Furstenfeldbru	74.97	14	P	P	15 43 28.0	+0.2
FUR				pmax	pmax		
	comp=Z,222nm,1.1s						
DYA	Yadsworthy	75.01	4	eP	P	15 43 26.1	-1.8
DYA				IAmb	IAmb	15 43 31.5	
	comp=Z,202nm,1.1s						
LANF	Langenberg	75.03	12	P	P	15 43 27.7	-0.4
STU	Stuttgart	75.10	13	eP	P	15 43 28.4	-0.1
STU	Stuttgart	75.10	13	eP	P	15 43 28.4	-0.1
MORH	M¨‡r¡gy, Hung	75.15	20⇑	eP	P	15 43 28.6	-0.2
ARSA	Arzberg	75.18	17	iP	P	15 43 29.0	0.0
	comp=Z,266nm,1.3s,SNR=106						
SZH	Strazhica	75.18	26	P	P	15 43 28.7	-0.4
HERR	Herculane	75.23	23⇑	iP	P	15 43 29.3	0.0
SRE	Strehaia	75.32	24⇓	iP	P	15 43 30.2	+0.3
SRE	Strehaia	75.32	24	P	P	15 43 30.2	+0.3
GRTK	Grand Turk	75.35	302	eP	P	15 43 29.4	-1.1
	comp=Z,187nm,0.8s						
GRTK				LR	LR		
	comp=Z,951nm,21.0s						
MOA	Molln	75.40	16	iP	P	15 43 29.4	-0.9
	comp=Z,199nm,1.0s,SNR=115						
WLF	Walferdange	75.40	11	⇑P	P	15 43 30.5	+0.3
	comp=Z,185nm,1.5s						
WLF	Walferdange	75.40	11	eP	P	15 43 30.0	-0.2
WLF	Walferdange	75.40	11	eP	P	15 43 30.0	-0.2
SLMH	Al Salmeh	75.47	38	eP	P	15 43 24.8	-6.2
BR231	Keskin MP Arra	75.47	32	eP	P	15 43 34.3	+3.3
BAIF	Baives	75.48	9	eP	P	15 43 29.7	-0.9
BAIF				pmax	pmax		
	comp=Z,168nm,1.1s						
ANTO	Ankara	75.50	32	iP	P	15 43 31.7	+0.6
ANTO	Ankara	75.50	32	eP	P	15 43 32.0	+0.9
	comp=Z,905nm,1.6s						
ANTO				LR	LR		
	comp=Z,462nm,22.0s						
ANTO	Ankara	75.50	32	P	P	15 43 33.6	+2.5
	SNR=37						
ANTO	Ankara	75.50	32	eP	P	15 43 32.0	+0.9
ANTO				pmax	pmax		
	comp=Z,905nm,1.6s						
ANTO				MLR	MLR		
	comp=Z,462nm,22.0s						
DOU	Dourbes	75.57	9	⇑P	P	15 43 30.4	-0.7
BZS	Buzias	75.59	22⇓	iP	P	15 43 30.9	-0.5
GIVF	Givet	75.61	10	eP	P	15 43 30.4	-1.0
GIVF				pmax	pmax		
	comp=Z,137nm,1.0s						
HEX	Exmoor	75.65	4	eP	P	15 43 31.3	-0.3
PRD	Provadia	75.72	27	P	P	15 43 31.8	-0.4
BRTR	Keskin Array B	75.80	33	P	P	15 43 33.8	+0.9
	comp=Z,22nm,0.9s,baz=201,slow=6.3,SNR=53						
BR131	Keskin Array S	75.80	33	eP	P	15 43 32.9	-0.1
SOP	Sopron	75.86	18⇑	eP	P	15 43 33.0	+0.1
HUMR	Humele	75.87	25⇑	iP	P	15 43 33.0	0.0
CONA	Conrad Observa	75.89	17	iP	P	15 43 33.2	+0.1
	comp=Z,346nm,1.4s,SNR=176						
SNF	Seneffe	75.93	9	⇓P	P	15 43 33.6	+0.4
	comp=Z,88nm,1.1s						
BCLA	Clavier	75.99	10	⇑P	P	15 43 33.1	-0.4
	comp=Z,134nm,1.6s						
CSKK	Cs¨‡kako	76.06	19⇑	eP	P	15 43 35.0	+1.0
GOLR		76.13	25⇑	iP	P	15 43 35.3	+0.8
ELSH	Elham, Standar	76.15	7	eP	P	15 43 34.2	-0.2
GEA0	GERESS Array S	76.17	16	eP	P	15 43 32.8	-1.9
BCIP	Isla Barro Col	76.18	287	PFAKE		15 43 50.0	+15
BCIP				LR	LR		
	comp=Z,3μm,21.0s						
GEC2	GERESS Array S	76.18	16	eP	P	15 43 34.0	-0.8
GEC2	GERESS Array S	76.18	16	eP	P	15 43 34.0	-0.8
GERES	GERESS Array B	76.18	16	P	P	15 43 34.9	+0.1
	comp=Z,32nm,0.7s,baz=189,slow=3.5,SNR=107						
GERES				PP	PP	15 46 27.3	+1.0
	comp=Z,10nm,0.8s,baz=197,slow=8.2,SNR=6.9						
GERES				LR	LR	16 15 45.4	
	comp=Z,1μm,20.8s,baz=208,slow=35						
LOT	Lotru	76.20	24⇓	iP	P	15 43 34.9	-0.1
UCC	Uccle	76.22	9	⇑P	P	15 43 34.8	-0.1
UCC	Uccle	76.22	9	eP	P	15 43 35.4	+0.6
WET	Wettzell	76.26	15	P	P	15 43 34.4	-0.8
WET				pmax	pmax		
	comp=Z,154nm,0.9s						
DEV	Deva	76.27	23⇑	iP	P	15 43 34.9	-0.3
DEV	Deva	76.27	23	P	P	15 43 36.4	+1.2
DEV				pmax	pmax		
	comp=Z,123nm,1.5s						
HGH	Gray Hill	76.28	4	eP	P	15 43 34.8	-0.4
MEM	Membach	76.29	10	⇑P	P	15 43 35.4	+0.2
	comp=Z,78nm,1.8s						
MEM	Membach	76.29	10	P	P	15 43 36.1	+0.9
MEM				pmax	pmax		
	comp=Z,117nm,1.1s						
OLDB	Oldbury-Upon-S	76.32	5	eP	P	15 43 33.9	-1.5
VAL	Valentia	76.35	360	eP	P	15 43 36.2	+0.7
GRFO	Grafenberg	76.40	14	eP	P	15 43 35.4	-0.5
	comp=Z,214nm,1.1s						
GRFO	Grafenberg	76.40	14	eP	P	15 43 35.4	-0.5
GRFO				pmax	pmax		
	comp=Z,214nm,1.1s						
GRF	Grafenberg Arr	76.40	14	P	P	15 43 36.0	+0.1
GRF				pmax	pmax		
	comp=Z,208nm,1.1s						
BUD	Budapest	76.40	20⇑	eP	P	15 43 35.8	-0.1
BUD	Budapest	76.40	20	P	P	15 43 36.5	+0.6
BUD				pmax	pmax		
	comp=Z,175nm,0.9s						
KHC	Kasperske Hory	76.41	15	eP	P	15 43 36.2	+0.1
KHC				ex	x	15 43 44.9	
KHC				ex	x	15 46 18.4	
KHC				ePP	PP	15 46 26.5	-1.7
KHC				eS	S	15 53 18.6	-2.2
KHC				ePS	PnS	15 53 57.6	-1.7
KHC				AMS	AMS	16 14 30.0	
	comp=Z,2μm,22.9s						
KHC	Kasperske Hory	76.41	15	eP	P	15 43 36.2	+0.1
KHC				e		15 43 44.9	
KHC				e		15 46 26.5	
KHC				eS	S	15 53 18.6	-2.2
KHC				e		15 53 57.6	
KHC				MLR	MLR		
	comp=Z,2μm,22.9s						
BEBN	Eben Emael	76.42	10	⇑P	P	15 43 36.0	0.0
HGN	Heimansgroeve	76.43	10	eP	P	15 43 35.4	-0.6
	comp=Z,252nm,1.6s						
HGN				eS	S	15 53 23.8	+3.1
PSN	Preselentsi	76.44	27	P	P	15 43 35.7	-0.6
STRD	Stroud	76.47	5	eP	P	15 43 35.8	-0.4
STRD				IAmb	IAmb	15 43 38.3	
	comp=Z,887nm,2.2s						
MONM	Monmouth	76.48	4	eP	P	15 43 35.7	-0.6
MONM				IAmb	IAmb	15 43 37.0	
	comp=Z,208nm,1.2s						
SULR		76.49	26⇓	iP	P	15 43 37.2	+0.7
MCH1	Michaelchurch	76.63	4	eP	P	15 43 36.5	-0.6
MCH1				IAmb	IAmb	15 43 37.9	
	comp=Z,218nm,1.2s						
ICOR	Ion Corvin	76.64	27⇑	iP	P	15 43 37.4	0.0
VOIR		76.67	24⇑	iP	P	15 43 36.9	-0.7
VOIR		76.67	24	P	P	15 43 37.0	-0.7
VOIR				pmax	pmax		
	comp=Z,100nm,0.9s						
MODS	Modra-Piesok	76.69	18	eP	P	15 43 36.5	-1.1
MODS				pmax	pmax		
	comp=Z,472nm,1.4s						
MODS	Modra-Piesok	76.69	18	eP	P	15 43 36.5	-1.1
MODS				eS	S	15 53 21.6	-2.2
MODS				eSS	SS	15 58 24.4	+4.2
SECR		76.72	25⇓	iP	P	15 43 38.5	+0.7
ILGA	Ilgaz	76.86	32	eP	P	15 43 39.9	+0.9
SMOL	Smolenice	76.86	18	eP	P	15 43 38.1	-0.4
SMOL	Smolenice	76.86	18	eP	P	15 43 38.1	-0.4
PGOR	Pogoanele	76.97	26⇓	iP	P	15 43 40.5	+1.3
ISR	Istrita	76.97	25⇑	iP	P	15 43 40.1	+0.8
DRGR		76.99	22⇑	iP	P	15 43 38.8	-0.6
MLR	Muntele Rosu	77.05	25	P	P	15 43 40.0	+0.2
	comp=Z,45nm,1.0s,baz=219,slow=2.2,SNR=131						
MLR				LR	LR	16 16 41.3	
	comp=Z,145nm,20.9s,baz=200,slow=35						
MLR	Muntele Rosu	77.05	25⇓	iP	P	15 43 39.4	-0.5
MLR	Muntele Rosu	77.05	25	eP	P	15 43 38.8	-1.1
PSZ	Piszkesteto	77.06	20⇑	iP	P	15 43 39.3	-0.5
PSZ	Piszkesteto	77.06	20⇑	eP	P	15 43 39.2	-0.5
PSZ	Piszkesteto	77.06	20	eP	P	15 43 39.3	-0.5
PSZ	Piszkesteto	77.06	20	eP	P	15 43 39.3	-0.5
KRUC	Moravsky	77.07	17⇑	iP	P	15 43 38.7	-1.0
KRUC				eS	S	15 53 26.1	-1.8
TLB	Topalu	77.13	27⇑	iP	P	15 43 39.8	-0.3
HLM1	Long Mynd	77.15	4	eP	P	15 43 39.3	-0.8
HLM1				IAmb	IAmb	15 43 44.0	
	comp=Z,187nm,1.0s						
NKC	Novy Kostel	77.18	14	eP	P	15 43 40.7	+0.4
NKC				AMS	AMS	16 14 20.0	
	comp=Z,1μm,16.9s						
NKC	Novy Kostel	77.18	14	eP	P	15 43 40.7	+0.4
NKC				MLR	MLR		
	comp=Z,1μm,16.9s						
CJR	Cluj-Napoca	77.23	23⇑	iP	P	15 43 40.7	0.0
LTVH	L¨tav¨rtes,	77.23	21⇑	eP	P	15 43 40.4	-0.2
JAVC	Velka Javorina	77.24	18⇑	iP	P	15 43 40.4	-0.3
JAVC				eS	S	15 53 28.7	-1.2
DOPR	Dopca	77.24	24⇑	iP	P	15 43 40.3	-0.5
VYHS	Vyhne	77.25	19	eP	P	15 43 40.2	-0.5
VYHS				pmax	pmax		
	comp=Z,252nm,1.5s						
VYHS	Vyhne	77.25	19	eP	P	15 43 40.2	-0.5
VYHS				eS	S	15 53 23.4	-6.5
VYHS				eSS	SS	15 58 24.1	-4.6
BUG	Bochum--Univer	77.30	11	P	P	15 43 41.5	+0.6
BBSR	BB Station	77.32	315	PFAKE		15 43 50.0	+8.5
BBSR				LR	LR		
	comp=Z,2μm,21.0s						
VRAC	Vranov	77.35	17⇑	iP	P	15 43 40.5	-0.8
VRAC	Vranov	77.35	17⇑	iP	P	15 43 40.5	-0.8
VRAC				eS	S	15 53 30.7	-0.2
GRER		77.36	26⇓	iP	P	15 43 42.2	+0.8
MOX	Moxa	77.38	14	P	P	15 43 41.0	-0.4
MOX				pmax	pmax		
	comp=Z,63nm,1.0s						
LLW	Llanuwychllyn	77.43	4	eP	P	15 43 41.1	-0.6
GOPC	GO Pecny, Ondr	77.44	16	eP	P	15 43 42.1	+0.3
GOPC				eS	S	15 53 28.0	-3.9
GOPC				AMS	AMS	16 15 00.0	
	comp=Z,1μm,21.9s						
GOPC	GO Pecny, Ondr	77.44	16	eP	P	15 43 42.1	+0.3
GOPC				eS	S	15 53 28.0	-3.9
GOPC				MLR	MLR		
	comp=Z,1μm,21.9s						
PRU	Pruhonice	77.44	16	eP	P	15 43 42.3	+0.5
PRU				epP	sP	15 43 48.1	-0.1
PRU				eS	S	15 53 30.2	-1.7
PRU				eSS	SS	15 58 33.3	+1.8
PRU				AMS	AMS	16 15 20.0	
	comp=Z,2μm,20.1s						
PRU	Pruhonice	77.44	16	eP	P	15 43 42.3	+0.5
PRU				e		15 43 48.1	
PRU				eS	S	15 53 30.2	-1.7
PRU				eSS	SS	15 58 33.3	+1.8
PRU				MLR	MLR		
	comp=Z,2μm,20.1s						
CWF	Charnwood Fore	77.49	5	eP	P	15 43 41.3	-0.7
CWF				IAmb	IAmb	15 43 43.3	
	comp=Z,309nm,1.6s						
MZR	Muzera	77.49	57	iP	P	15 43 44.3	+1.6
	SNR=8.7						
PRA	Prague	77.49	16	eP	P	15 43 43.0	+1.0
PRA				ex	x	15 43 50.8	
PRA				eS	S	15 53 30.6	-1.8
PRA				AMS	AMS	16 15 10.0	
	comp=Z,2μm,20.4s						
PRA	Prague	77.49	16	eP	P	15 43 43.0	+1.0
PRA				e		15 43 50.8	
PRA				eS	S	15 53 30.6	-1.8
PRA				MLR	MLR		
	comp=Z,2μm,20.4s						
FOEL	Foel Wylfa	77.50	4	eP	P	15 43 40.5	-1.5
FOEL				IAmb	IAmb	15 43 45.1	
	comp=Z,225nm,1.0s						
GTBY	Guantanamo Bay	77.60	299	eP	P	15 43 43.8	+0.4
	comp=Z,105nm,1.0s						
GTBY				LR	LR		
	comp=Z,792nm,20.0s						
SBA	Scott Base	77.61	179	eP	P	15 43 43.2	+0.7
	comp=Z,141nm,1.4s						
SBA				LR	LR		
	comp=Z,1μm,19.0s						
SBA	Scott Base	77.61	179	eP	P	15 43 43.2	+0.7
SBA				pmax	pmax		
	comp=Z,141nm,1.4s						
SBA				MLR	MLR		
	comp=Z,1μm,19.0s						
PLOR	Plostina	77.62	25⇑	iP	P	15 43 41.8	-1.1
CFR	Carcaliu	77.65	26⇑	iP	P	15 43 42.7	-0.3
WACR	West Acre	77.66	6	eP	P	15 43 42.1	-0.7
WACR				IAmb	IAmb	15 43 46.8	
	comp=Z,552nm,0.9s						
VRI	Vrincioaia	77.67	25⇓	iP	P	15 43 42.2	-0.9
YLL	Llanberis	77.70	3	eP	P	15 43 43.0	-0.1
DSB	Dublin	77.71	2	eP	P	15 43 44.2	+1.0
WTSB	Winterswijk	77.73	10	iP	P	15 43 43.2	-0.1
	comp=Z,789nm,1.8s						
KECS	Kecovo	77.74	20	eP	P	15 43 44.4	+0.9
KECS	Kecovo	77.74	20	eP	P	15 43 44.4	+0.9
ARCR	ARCALIA	77.81	23⇑	iP	P	15 43 43.7	-0.2
WPM1	Penmaenmawr	77.83	4	eP	P	15 43 43.7	-0.2
WLF1	Llynfaes	77.83	3	eP	P	15 43 43.4	-0.5
WLF1				IAmb	IAmb	15 43 47.5	
	comp=Z,284nm,0.9s						
VNDA	Vanda	77.85	178	P	P	15 43 43.9	0.0
	comp=Z,22nm,0.9s,baz=215,slow=5.7,SNR=66						
VNDA				LR	LR	16 14 08.1	
	comp=Z,764nm,18.4s,baz=178,slow=33						
TLCR		77.93	27⇑	iP	P	15 43 44.6	0.0
WME	Myndd Eilian	77.94	3	eP	P	15 43 44.0	-0.4
PVCC	Panska Ves	77.95	16	eP	P	15 43 45.4	+0.8
PVCC				AMS	AMS	16 15 30.0	
	comp=Z,1μm,19.6s						
PVCC	Panska Ves	77.95	16	eP	P	15 43 45.4	+0.8
PVCC				MLR	MLR		
	comp=Z,1μm,19.6s						
BMR	Baia Mare	78.02	22⇓	iP	P	15 43 44.9	-0.1
LANS	Liptovska Anna	78.02	19	eP	P	15 43 45.1	0.0
LANS	Liptovska Anna	78.02	19	eP	P	15 43 45.1	0.0
MORC	Moravsky Berou	78.03	18⇑	iP	P	15 43 44.7	-0.5
MORC	Moravsky Berou	78.03	18	eP	P	15 43 44.6	-0.5
MORC	Moravsky Berou	78.03	18	eP	P	15 43 44.6	-0.6
MORC	Moravsky Berou	78.03	18⇑	iP	P	15 43 44.5	-0.6
MORC				eS	S	15 53 38.8	+0.4
TRPA	Tarpa	78.09	21⇓	iP	P	15 43 44.6	-0.8
KRLC	Kraliky	78.10	17	eP	P	15 43 46.3	+0.8
KRLC	Kraliky	78.10	17	eP	P	15 43 46.3	+0.8
LBWR	Ladybower, Pea	78.12	5	eP	P	15 43 44.4	-1.1
LBWR				IAmb	IAmb	15 43 49.5	
	comp=Z,145nm,1.1s						
BRG	Berggiesshubel	78.12	15	iP	P	15 43 45.1	-0.4
	comp=Z,138nm,1.5s						
BRG				iPCP	PcP	15 43 54.9	-0.1
	comp=Z,94nm,1.1s						
BRG				iPP	PP	15 46 37.3	-5.2
	comp=Z,39nm,1.4s						
BRG				S	S	15 53 37.0	-2.2
BRG				SS	SS	15 58 20.0	-22
BRG				ePKPPKP	P'P'df	16 10 47.7	+5.1
	comp=Z,20nm,1.8s						
	comp=N,666nm,21.3s						
	comp=E,865nm,20.9s						
	comp=Z,790nm,24.0s						
BRG	Berggiesshubel	78.12	15	iP	P	15 43 45.1	-0.4
BRG				i		15 43 54.9	
BRG				i		15 46 37.3	
BRG				S	S	15 53 37.0	-2.2
BRG				pmax	pmax		
	comp=Z,138nm,1.5s						
BRG				pmax	pmax		
	comp=Z,39nm,1.4s						
TESR	Tescani	78.17	25⇑	iP	P	15 43 44.2	-1.7
DPC	Dobruska-Polom	78.23	17	eP	P	15 43 47.0	+0.8
DPC				ex	x	15 43 54.3	
DPC				eS	S	15 53 39.4	-1.1
DPC				ePS	PnS	15 54 21.9

comp=E,500nm,11.2s
CLL *e*SS **SS** **15 58 42.0 -2.5**
CLL L L 16 16 00.0
comp=Z,700nm,21.9s
CLL Collm 78.31 14 *e*P **P** **15 43 46.0 -0.5**
CLL Collm 78.31 14⇑*i*P **P** **15 43 45.6 -0.9**
CLL *e*S **S** **15 53 40.0 -1.1**
CLL pmax pmax
comp=Z,217nm,1.7s
CLL MLR MLR
comp=Z,700nm,21.9s
BIZ Bicaz 78.33 24⇑*i*P **P** **15 43 47.0 +0.2**
CRVS Cervenica-Dubn 78.42 20 *e*P **P** **15 43 47.2 0.0**
CRVS pmax pmax
comp=Z,271nm,1.4s
CRVS Cervenica-Dubn 78.42 20 *e*P **P** **15 43 47.2 0.0**
CRVS *e*S **S** **15 53 43.0 +0.5**
UZH Uzhgorod 78.44 21⇓*i*P **P** **15 43 46.7 -0.7**
UZH *i* 15 43 52.5
NIE Niedzica 78.51 19 *e*P **P** **15 43 47.6 -0.2**
NIE *e*S **S** **15 53 46.0 +2.5**
NIE Niedzica 78.51 19⇑*e*P **P** **15 43 47.6 -0.2**
NIE *e*S **S** **15 53 46.0 +2.5**
BURAR Bucovina Array 78.57 23⇑*i*P **P** **15 43 48.2 -0.1**
BURAR Bucovina Array 78.57 23 P **P** **15 43 48.2 -0.1**
BUR04 Bucovina Ar. S 78.57 23 *e*P **P** **15 43 47.5 -0.7**
BUR08 Bucovina Ar. S 78.59 23 *e*P **P** **15 43 48.8 +0.4**
KSP Ksiaz 78.67 16 *e*P **P** **15 43 48.1 -0.5**
KSP *e*S **S** **15 53 48.0 +2.9**
KSP Ksiaz 78.67 16⇑*e*P **P** **15 43 48.1 -0.5**
KSP *e*S **S** **15 53 48.0 +2.9**
MTDJ Mount Denham 78.67 296 *e*P **P** **15 43 50.1 +0.7**
comp=Z,159nm,1.2s
MTDJ LR LR
comp=Z,1μm,22.0s
WIM Isle of Man 78.68 3 *e*P **P** **15 43 48.5 0.0**
HPK Haverah Park 78.68 5 *e*P **P** **15 43 48.1 -0.4**
HPK IAmb IAmb 15 43 50.3
comp=Z,713nm,1.7s
KOLS Kolonicke sedl 78.70 21 *e*P **P** **15 43 48.7 -0.1**
KOLS *e*S **S** **15 53 44.1 -1.5**
KOLS Kolonicke sedl 78.70 21 *e*P **P** **15 43 48.7 -0.1**
KOLS *e*S **S** **15 53 44.0 -1.5**
GMM Mts of Mourne 78.72 2 *e*P **P** **15 43 47.9 -0.8**
PRAR RASCA 78.73 24⇑*i*P **P** **15 43 49.0 0.0**
CASY Casey 78.73 159 *e*P **P** **15 43 49.3 +0.4**
comp=Z,46nm,0.9s
CASY LR LR
comp=Z,354nm,21.0s
LEOM Leova 78.76 26⇓*i*P **P** **15 43 48.5 -0.6**
LEOM Leova 78.76 26 P **P** **15 43 48.5 -0.6**
OJC Ojcow 79.07 19 *e*P **P** **15 43 50.3 -0.5**
OJC *e*S **S** **15 53 51.3 +1.9**
OJC Ojcow 79.07 19 *e*P **P** **15 43 50.3 -0.5**
OJC Ojcow 79.07 19⇑*e*P **P** **15 43 50.3 -0.5**
OJC *e*S **S** **15 53 51.3 +1.9**
BBO1 Bothel 79.34 4 *e*P **P** **15 43 51.8 -0.3**
KIS Kishinev 79.42 26⇑*i*P **P** **15 43 50.0 -2.7**
comp=Z,700nm,1.6s
KIS Kishinev 79.42 26 *e*PcP **PcP** **15 44 06.0 +5.2**
KIS Kishinev 79.42 26 *i*PP PP 15 46 52.0 -1.3
comp=Z,500nm,7.0s
KIS *i*S **S** **15 53 48.0 -5.2**
comp=Z,1μm,8.0s
KIS Kishinev 79.42 26α*i*P **P** **15 43 50.0 -2.7**
KIS *e* 15 44 06.0
KIS *i* 15 46 52.0
KIS *e* 15 48 40.0
KIS *i*S **S** **15 53 48.0 -5.2**
KIS *e* 15 54 10.0
KIS *e*PS **PnS** **15 54 36.0 -1.4**
KIS *e*SS **SS** **15 59 00.0 -1.3**
KIS pmax pmax
comp=Z,700nm,1.6s
KIS pmax pmax
comp=Z,2μm,6.0s
KIS pmax pmax
comp=N,700nm,4.0s
KIS pmax pmax
comp=Z,500nm,7.0s
KIS smax smax
comp=N,1μm,8.0s
KWP Kalwaria Pacla 79.45 21 *e*P **P** **15 43 52.9 +0.1**
KWP Kalwaria Pacla 79.45 21 *e*P **P** **15 43 53.0 +0.1**
KWP Kalwaria Pacla 79.45 21 *e*P **P** **15 43 53.0 +0.1**
AJN Ajban 79.50 57 *i*P **P** **15 43 55.3 +1.6**
SNR=7.9
EDMD Edmundbyers 79.52 5 *e*P **P** **15 43 53.0 -0.1**
EDMD IAmb IAmb 15 43 56.6
comp=Z,92nm,0.9s
CLGH Cloghs, Cushen 79.55 2 *e*P **P** **15 43 52.8 -0.5**
CLGH IAmb IAmb 15 43 56.9
comp=Z,82nm,1.1s
BHH Howats Hill 79.70 4 *e*P **P** **15 43 53.1 -1.0**
ECK Cauldkaine Hil 79.79 4 *e*P **P** **15 43 53.9 -0.7**
ASUD Al Ashush, Dub 79.80 57 P **P** **15 43 59.0 +3.6**
SNR=8.7
ASUD Al Ashush, Dub 79.80 57 *i*P **P** **15 43 56.5 +1.1**
SNR=7.1
ALNE Al Ain 79.81 58 *i*P **P** **15 43 56.5 +1.1**
SNR=10
DGAR Diego Garcia 79.82 93 PFAKE 15 44 10.0 +14
DGAR LR LR
comp=Z,1μm,22.0s
ESK Eskdalemuir 79.92 4 *e*P **P** **15 43 54.6 -0.7**
comp=Z,186nm,1.3s
ESK LR LR
comp=Z,1μm,20.0s
ESK Eskdalemuir 79.92 4 *e*P **P** **15 43 54.2 -1.1**
ESK IAmb IAmb 15 43 59.0
comp=Z,149nm,1.2s
ESK Eskdalemuir 79.92 4 *e*P **P** **15 43 54.6 -0.7**
ESK pmax pmax
comp=Z,186nm,1.3s
ESK MLR MLR
comp=Z,1μm,20.0s
EKA Eskdalemuir Ar 79.94 4 P **P** **15 43 55.9 +0.5**
comp=Z,79nm,0.9s,baz=170,slow=5.1,SNR=42
EKA LR LR 16 19 10.6
comp=Z,741nm,18.4s,baz=205,slow=36
SIM Simferopol' 80.03 30 *e*P **P** **15 43 54.0 -2.2**
SIM *i*S **S** **15 54 02.0 +2.2**
SIM pmax pmax
comp=Z,58nm,1.8s
LVV L'vov 80.05 21 *e*P **P** **15 43 54.8 -1.3**
LVV *e*S **S** **15 53 52.4 -7.3**
LVV *e*SS **SS** **15 59 05.7 -5.0**
LVV MLR MLR
comp=Z,200nm,18.0s
SORM Soroca 80.17 25⇓*i*P **P** **15 43 55.8 -1.0**
SORM Soroca 80.17 25 P **P** **15 43 55.7 -1.0**
NAZ Nazwa, Dubai 80.25 57 P **P** **15 43 60.0 +2.2**
SNR=17
NAZ Nazwa, Dubai 80.25 57 *i*P **P** **15 43 58.4 +0.6**
SNR=20
SOHO SOHO 80.45 58 *i*P **P** **15 43 59.1 +0.2**
SNR=22
HATD Hatta, Dubai 80.52 57 P **P** **15 44 01.0 +1.7**
SNR=15
HATD Hatta, Dubai 80.52 57 *i*P **P** **15 44 00.1 +0.8**
SNR=14
UMQ Umm Al-Quwin 80.54 56 *i*P **P** **15 44 00.6 +1.3**
SNR=6.1
ESY Stoneypath 80.56 4 *e*P **P** **15 43 58.1 -0.6**
UOSS Minazif 80.64 57 *e*P **P** **15 43 58.3 -1.6**
UOSS Minazif 80.64 57 *i*P **P** **15 44 00.4 +0.5**
SNR=12
BEL Belsk 80.80 19 *e*P **P** **15 43 59.7 -0.4**
BEL Belsk 80.80 19 *e*P **P** **15 43 59.7 -0.4**
MSFE Esma-Masafi 80.83 57 *i*P **P** **15 44 02.6 +1.7**
SNR=7.2
MDH Madha 80.90 57 *i*P **P** **15 44 03.1 +1.8**
SNR=6.4
INVG Invergeldie, C 80.98 3 *e*P **P** **15 44 01.5 +0.5**
GKP Gorka Klasztor 81.13 16 *e*P **P** **15 44 01.9 +0.1**
GKP Gorka Klasztor 81.13 16 *e*P **P** **15 44 01.9 +0.1**
JTS JuntasAbangare 81.16 286 P **P** **15 44 02.7 -0.3**
comp=Z,26nm,0.9s,baz=104,slow=2.3,SNR=12
JTS PP **PP** **15 47 12.1 +3.6**
comp=Z,3.5nm,0.8s,baz=217,slow=4.0,SNR=4.1
JTS LR LR 16 20 34.7
comp=Z,2μm,18.4s,baz=180,slow=36
PAYG Puerto Ayora 81.18 273 PFAKE 15 44 10.0 +6.9
PAYG LR LR
comp=Z,2μm,21.0s
SHME Shamm 81.19 56 *i*P **P** **15 44 03.1 +0.3**
SNR=11
BANOM Banah 81.24 56 P **P** **15 44 04.9 +1.8**
CBCY The Bluff, Cay 81.25 296 *e*P **P** **15 44 02.7 -0.5**
BIDO Bidbid 81.37 59 P **P** **15 44 06.0 +2.2**
SNR=12
RGN Rugen 81.41 13 *e*P **P** **15 44 03.4 +0.2**
ANN Anapa 81.47 32 *e*P **P** **15 44 03.5 -0.3**
ANN *e*PP **pP** **15 44 06.6 -1.9**
ANN *e* 15 47 10.2
ANN *e*PPP PPP 15 48 58.8
ANN *e*S **S** **15 54 17.7 +2.9**
ANN pmax pmax
comp=E,52nm,1.5s
ANN pmax pmax
comp=Z,273nm,1.5s
ANN pmax pmax
comp=N,145nm,1.5s
ANN pmax pmax
comp=N,264nm,4.8s
ANN pmax pmax
comp=E,60nm,4.8s
ANN pmax pmax
comp=Z,796nm,4.8s
WSAR Wadi Sarin 81.61 60 P **P** **15 44 06.0 +0.8**
comp=Z,38nm,0.9s,baz=219,slow=5.2,SNR=14
WSAR LR LR 16 19 52.9
comp=Z,3μm,20.7s,baz=262,slow=35
SOC Sochi 81.71 34*c i*P **P** **15 44 04.5 -0.7**
SOC *e* 15 47 13.2
SOC *e*S **S** **15 54 20.1 +2.7**
SOC *e*SSS SSS 16 03 01.0
SOC pmax pmax
comp=Z,171nm,1.3s
SOC MLR MLR
comp=Z,258nm,14.0s
KPL Plockton 81.83 2 *e*P **P** **15 44 05.3 -0.1**
KPL IAmb IAmb 15 44 06.5
comp=Z,164nm,1.3s
LLD Lille Linde 81.92 12 *i*P **P** **15 44 06.6 +0.7**
GNI Garni 82.06 39 P **P** **15 44 08.8 +1.5**
comp=Z,20nm,0.9s,baz=243,slow=2.1,SNR=20
GNI LR LR 16 22 29.0
comp=Z,528nm,18.2s,baz=228,slow=37
GNI Garni 82.06 39 *e*P **P** **15 44 08.7 +1.4**
comp=Z,2μm,1.6s
GNI Garni 82.06 39 P **P** **15 44 09.0 +1.7**
SNR=18
GNI Garni 82.06 39 *i*P **P** **15 44 08.3 +1.0**
SNR=9.7
GNI Garni 82.06 39*ce*P **P** **15 44 07.9 +0.6**
GNI pmax pmax
comp=Z,612nm,1.7s
MCD Coleburn Disti 82.18 3 *e*P **P** **15 44 06.8 -0.5**
AKH Akhalkalaki 82.20 37⇑*i*P **P** **15 44 08.7 +0.7**
AKH Akhalkalaki 82.20 37 *e*P **P** **15 44 09.4 +1.4**
FSCY Frank Sound, G 82.20 295 *e*P **P** **15 44 09.5 +1.2**
BSD Bornholm Skovb 82.28 14 *i*P **P** **15 44 07.0 -0.8**
comp=Z,113nm,1.2s
comp=Z,900nm,21.0s
COP Copenhagen 82.29 12 *i*P **P** **15 44 07.9 0.0**
comp=Z,111nm,1.0s
WBCY West Bay, Gran 82.41 295 *e*P **P** **15 44 10.5 +1.2**
MUD Monsted U'grnd 82.44 10⇑*i*P **P** **15 44 09.4 +0.8**
comp=Z,451nm,1.4s
MUD Monsted U'grnd 82.44 10 P **P** **15 44 09.9 +1.3**
AK11 Malin Array Si 82.56 24 *e*P **P** **15 44 08.3 -1.1**
KIEV Kiev 82.59 24 *e*P **P** **15 44 08.3 -1.2**
comp=Z,277nm,1.4s
KIEV LR LR
comp=Z,445nm,19.0s
KIEV Kiev 82.59 24 *i*P **P** **15 44 08.6 -0.9**
SNR=67
KIEV Kiev 82.59 24*c i*P **P** **15 44 08.7 -0.9**
KIEV pmax pmax
comp=Z,102nm,1.1s
KIEV MLR MLR
comp=Z,379nm,19.0s
AKASG Malin Array Be 82.60 24 P **P** **15 44 10.1 +0.5**
comp=Z,42nm,0.8s,baz=216,slow=4.6,SNR=140
AKASG LR LR 16 20 31.0
comp=Z,371nm,20.4s,baz=215,slow=35
AKBB Malin Array Si 82.60 24 *e*P **P** **15 44 08.8 -0.7**
AKBB Malin Array Si 82.60 24 *e*P **P** **15 44 08.9 -0.7**
NEY Neytrino 83.04 36*de*P **P** **15 44 13.6 +1.3**
NEY pmax pmax
comp=Z,13nm,0.8s
NEY MLR MLR
comp=Z,251nm,17.0s
KLNR Kaliningrad 83.10 17*c i*P **P** **15 44 11.7 -0.4**
KLNR pmax pmax
comp=Z,213nm,1.0s
TBLG Delisi 83.11 38 *e*P **P** **15 44 13.1 +0.5**
TBLG Delisi 83.11 38 *e*P **P** **15 44 13.1 +0.5**
SUW Suwalki 83.41 19 *e*P **P** **15 44 13.2 -0.5**
SUW Suwalki 83.41 19 *e*P **P** **15 44 13.4 -0.3**
SUW Suwalki 83.41 19 *e*P **P** **15 44 13.4 -0.3**
KBZ Khabaz 83.46 35 P **P** **15 44 14.9 +0.6**
comp=Z,32nm,1.0s,baz=241,slow=4.8,SNR=30
KBZ LR LR 16 22 10.9
comp=Z,467nm,20.6s,baz=222,slow=36
KIV Kislovodsk 83.50 35 *e*P **P** **15 44 15.2 +0.5**
comp=Z,76nm,0.9s
KIV LR LR
comp=Z,648nm,21.0s
KIV Kislovodsk 83.50 35 P **P** **15 44 15.1 +0.5**
SNR=23
KIV Kislovodsk 83.50 35 *i*P **P** **15 44 14.9 +0.2**
SNR=11
KIV Kislovodsk 83.50 35 *e*P **P** **15 44 14.5 -0.1**
KIV *e* 15 47 26.9
KIV *e*PPP PPP 15 49 18.2
KIV *e*S **S** **15 54 35.8 -0.1**
KIV *e*SS **SS** **16 00 04.2 +1.6**
KIV pmax pmax
comp=Z,259nm,4.2s
KIV pmax pmax
comp=Z,81nm,1.1s
KIV MLR MLR
comp=Z,546nm,19.0s
ESTN Estel 83.67 287 *e*P **P** **15 44 15.6 -0.5**
NCK Nalchik 83.67 36⇓*e*P **P** **15 44 16.2 +0.8**
NCK pmax pmax
comp=Z,66nm,0.9s
NCK MLR MLR
comp=Z,587nm,20.0s
AKT Akhty 84.64 39 *e*P **P** **15 44 21.6 +1.1**
AKT *e* 15 47 37.8
AKT pmax pmax
comp=Z,45nm,1.1s
062Z Marathon 84.78 300 P **P** **15 44 21.5 +0.1**
baz=120
060Z West Palm Beac 85.23 302 P **P** **15 44 24.2 +0.5**
baz=121
061Z Ochoppi 85.23 301 P **P** **15 44 24.0 +0.4**
baz=120,SNR=5.1
NACGM Naroch 85.26 20 *e*P **P** **15 44 22.0 -1.1**
NACGM PM 15 44 27.0
comp=Z,0.9nm,1.0s
NACGM *e*S **S** **15 54 44.0 -8.7**
NACGM *e*PS **PnS** **15 55 46.0 -3.4**
NACGM *e*SS **SS** **16 00 26.0 -1.9**
MICGM Minsk 85.28 21⇓*i*P **P** **15 44 21.0 -2.2**
MICGM PM 15 44 22.0
comp=Z,0.8nm,1.2s
MICGM PM 15 44 26.0
comp=N,0.4nm,1.5s
MNK Minsk 85.28 21⇓*i*P **P** **15 44 21.0 -2.2**
060A Indiantown 85.40 302 P **P** **15 44 24.8 +0.3**
baz=121
MAK Makhachkala 85.46 38 *e*P **P** **15 44 24.7 +0.3**
MAK *e* 15 47 44.2
MAK *e*S **S** **15 54 49.8 -5.4**
MAK *e*SS **SS** **16 00 25.6 -5.7**
MAK pmax pmax
comp=Z,196nm,1.7s
MAK MLR MLR
comp=Z,890nm,18.0s
IIGN Ignalina 85.47 20 *e*P **P** **15 44 24.0 -0.2**
IIGN IAmb IAmb 15 44 29.2
comp=Z,116nm,1.0s
KONO Kongsberg 85.56 10⇓*e*P **P** **15 44 25.1 +0.6**
KONO pmax pmax
comp=Z,70nm,1.5s
KONO MLR MLR
comp=Z,766nm,17.0s
ISAL Salakas 85.62 19 *e*P **P** **15 44 24.7 -0.2**
ISAL IAmb IAmb 15 44 30.0
comp=Z,64nm,1.1s
IZAR Zarasai 85.81 19 *e*P **P** **15 44 25.6 -0.2**
IZAR IAmb IAmb 15 44 27.7
comp=Z,275nm,1.8s
059Z Ave Maria 85.89 301 P **P** **15 44 27.2 +0.3**
baz=120
059A Moore Haven 85.97 302 P **P** **15 44 27.5 +0.2**
baz=120
059A Moore Haven 85.97 302 *e*P **P** **15 44 29.1 +1.8**
959A Okeechobee 86.05 303 P **P** **15 44 28.0 +0.3**
baz=120,SNR=7.6
859A Kempfer Cattle 86.33 303 P **P** **15 44 29.4 +0.4**
baz=120
058A Arcadia 86.52 302 P **P** **15 44 30.2 +0.2**
baz=120,SNR=6.2
HFS Hagfors 86.71 11 P **P** **15 44 29.8 -0.4**
comp=Z,74nm,0.8s,baz=180,slow=4.2,SNR=49
HFS PP **PP** **15 47 53.5 +0.6**
comp=Z,6.4nm,0.8s,baz=202,slow=11,SNR=4.6
HFS LR LR 16 22 22.4
comp=Z,528nm,18.7s,baz=202,slow=35
958A Wauchula 86.75 302 P **P** **15 44 31.3 +0.2**
baz=120
858A St. Cloud 86.76 303 P **P** **15 44 31.2 +0.1**
baz=120
DWPF Disney Wildern 86.76 303 P **P** **15 44 31.3 +0.1**
baz=120
DWPF Disney Wildern 86.76 303 *e*P **P** **15 44 32.4 +1.2**
comp=Z,294nm,0.9s
M65A Busby, Falmout 86.78 319 P **P** **15 44 30.9 -0.1**
baz=127
VORD Divnogorie 86.85 29 *e*P **P** **15 44 30.8 -0.2**
VORD pmax pmax
comp=Z,180nm,1.5s
NAO01 NORSAR Array S 86.90 10 *e*P **P** **15 44 31.9 +0.8**
NC602 NORSAR Array S 86.90 10 *e*P **P** **15 44 32.5 +1.3**
EMMW East Machias 86.91 323 *e*P **P** **15 44 31.9 +0.4**
RPN Rapa Nui 86.97 242 LR LR 16 16 09.2
comp=Z,1μm,21.8s,baz=98,slow=31
VSR Storozhevoye 86.97 28 *e*P **P** **15 44 31.1 -0.6**
VSR *e* 15 44 31.4
VSR *e*S **S** **15 55 07.1 -2.5**
VSR pmax pmax
comp=Z,330nm,1.6s
VSR smax smax
comp=N,700nm,4.4s
758A Lake Helen 87.01 304 P **P** **15 44 32.7 +0.3**
baz=120,SNR=6.5
NBO00 NORSAR Array S 87.06 10 *e*P **P** **15 44 33.0 +1.1**
NB2 NORSAR Subarra 87.14 10 P **P** **15 44 33.0 +0.7**
comp=Z,157nm,1.1s,baz=201,slow=5.6
NB2 NORSAR Subarra 87.14 10 P **P** **15 44 30.2 -2.1**
NB2 NORSAR Subarra 87.14 10 P **P** **15 44 33.0 +0.7**
baz=201,slow=5.6
NOA NORSAR Array B 87.14 10 LR LR 16 23 04.5
comp=Z,389nm,18.9s,baz=200,slow=35
957A Wimauma 87.16 302 P **P** **15 44 33.6 +0.5**
baz=120,SNR=15
957A Wimauma 87.16 302 *e*P **P** **15 44 34.1 +1.0**
NB201 NORSAR Array S 87.16 10 *e*P **P** **15 44 32.2 -0.2**
658A Bunnell 87.29 304 P **P** **15 44 33.6 -0.2**
baz=120
NC405 NORSAR Array S 87.29 10 *e*P **P** **15 44 32.9 -0.2**
NC204 NORSAR Array S 87.29 10 *e*P **P** **15 44 34.4 +1.3**
VORR Voronezh 87.32 28 *e*P **P** **15 44 35.0 +1.7**
VORR pmax pmax
comp=Z,500nm,1.6s
NC303 NORSAR Array S 87.34 10 *e*P **P** **15 44 34.5 +1.2**
857A Zephyrhills 87.45 303 P **P** **15 44 35.0 +0.4**
baz=120,SNR=13
BRYW Bryant College 87.53 319 *e*P **P** **15 44 35.2 +0.6**
BCX Boston College 87.56 319 *e*P **P** **15 44 35.9 +1.2**
757A Oxford 87.66 303 P **P** **15 44 35.9 +0.3**
baz=120,SNR=7.7
WES Weston 87.68 319 *e*P **P** **15 44 36.2 +0.9**
WES Weston 87.68 319 *e*P **P** **15 44 36.2 +0.9**
657A Interlachen 87.83 304 P **P** **15 44 36.6 +0.3**
baz=120,SNR=14
CNNC Cliffs of the 87.86 310 P **P** **15 44 36.4 0.0**
baz=122
CNNC Cliffs of the 87.86 310 PFAKE 15 44 50.0 +14
CNNC LR LR
comp=Z,983nm,21.0s
HRV Adam Dziewonsk 87.89 319 P **P** **15 44 36.3 0.0**
baz=127
HRV Adam Dziewonsk 87.89 319 *e*P **P** **15 44 37.3 +1.0**
comp=Z,159nm,1.0s
HRV Adam Dziewonsk 87.89 319 *e*P **P** **15 44 37.3 +1.0**
HRV pmax pmax
comp=Z,159nm,1.0s
557A Orange Park 87.94 304 P **P** **15 44 36.9 0.0**
baz=120
YLE Yale 88.02 318 *e*P **P** **15 44 38.1 +1.2**
WVL Waterville 88.04 322 *e*P **P** **15 44 37.5 +0.5**
CSU Charleston Sou 88.22 308 *e*P **P** **15 44 39.8 +1.6**
656A Willston 88.23 303 P **P** **15 44 38.2 0.0**
baz=120,SNR=13
656A Willston 88.23 303 *e*P **P** **15 44 39.6 +1.4**
QUA2 Belchertown 88.23 319 *e*P **P** **15 44 38.9 +0.9**
VSU Vasula 88.25 18*de*P **P** **15 44 37.7 +0.1**
VSU pmax pmax
comp=Z,464nm,1.7s
VSU MLR MLR
comp=Z,2μm,19.0s
PKME Peaks-Kenny Pk 88.27 322 P **P** **15 44 37.8 -0.3**
baz=128
PKME Peaks-Kenny Pk 88.27 322 *e*P **P** **15 44 38.5 +0.5**
comp=Z,63nm,1.2s
PKME LR LR
comp=Z,592nm,20.0s
CPNY Central Park 88.35 317 *e*P **P** **15 44 39.3 +0.8**
NHSC New Hope 88.36 308 P **P** **15 44 39.0 +0.2**
baz=121
NHSC New Hope 88.36 308 PFAKE 15 44 50.0 +11
NHSC LR LR
comp=Z,802nm,21.0s
257A Skidaway Islan 88.40 306 P **P** **15 44 39.7 +0.7**
baz=121
PAL Palisades 88.44 317 P **P** **15 44 38.9 0.0**
baz=125
PAL Palisades 88.44 317 *e*P **P** **15 44 39.8 +0.9**
PAL Palisades 88.44 317 *e*P **P** **15 44 39.8 +0.9**
556A Lake Butler 88.44 304 P **P** **15 44 39.9 +0.6**
baz=120,SNR=19
357A Townsend 88.46 306 P **P** **15 44 39.5 +0.2**
baz=120
456A Hilliard 88.51 305 P **P** **15 44 39.9 +0.4**
baz=120
456A Hilliard 88.51 305 *e*P **P** **15 44 41.1 +1.6**
FFD Franklin Falls 88.52 320 *e*P **P** **15 44 40.4 +1.1**
BRNJ Basking Ridge 88.67 316 *e*P **P** **15 44 41.4 +1.4**
PSUB Penn St. - Bra 88.80 315 *e*P **P** **15 44 41.1 +0.4**
OBN Obninsk 88.82 25 *e*P **P** **15 44 40.7 +0.4**
comp=Z,1μm,1.4s
OBN LR LR
comp=Z,331nm,19.0s
655A Horseshoe Beac 88.84 303 P **P** **15 44 41.3 +0.2**
baz=119,SNR=12
URVA University of 88.87 313 *e*P **P** **15 44 42.1 +1.0**
356A Blackshear 88.89 305 P **P** **15 44 41.9 +0.6**
baz=120
ODNJ Ogdensburg 88.92 317 *e*P **P** **15 44 42.1 +0.9**
555A McAlpin 88.92 304 P **P** **15 44 41.9 +0.4**
baz=120,SNR=17
555A McAlpin 88.92 304 *e*P **P** **15 44 42.7 +1.2**
GEYT Alibeck 89.03 47 LR LR 16 23 32.1
comp=Z,1μm,20.8s,baz=230,slow=35
GYA0B ALIBECK ARRAY 89.03 47 *e*P **P** **15 44 43.1 +1.2**
256A Glennville 89.04 306 P **P** **15 44 42.4 +0.4**
baz=120
156A Sylvania 89.09 307 P **P** **15 44 42.8 +0.6**
baz=120
CBN Corbin Frederi 89.11 313 P **P** **15 44 42.3 +0.1**
baz=123
CBN Corbin Frederi 89.11 313 PFAKE 15 44 50.0 +7.8
CBN LR LR
comp=Z,591nm,19.0s
LUPA Lehigh Univers 89.13 316 *e*P **P** **15 44 43.2 +1.0**
LBNH Lisbon 89.14 320 P **P** **15 44 42.5 +0.3**
baz=126
LBNH Lisbon 89.14 320 *e*P **P** **15 44 43.0 +0.8**
IP05 Hopewell Churc 89.16 313 *e*P **P** **15 44 43.4 +0.9**

JSRW **J. Sargeant Re** 89.17 313 *eP* P 15 44 43.3 +0.8
455A **Stateville** 89.27 304 P P 15 44 42.5 -0.6
baz=120
TRY **Troy** 89.28 319 *eP* P 15 44 43.4 +0.6
CVRD **Centerville Ro** 89.32 313 *eP* P 15 44 44.1 +0.9
IP01 **Cuckoo** 89.33 313 *eP* P 15 44 44.2 +1.0
SPRD **Spring Road, M** 89.34 313 *eP* P 15 44 44.3 +1.0
IP06 **Yanceyville** 89.36 313 *eP* P 15 44 44.3 +0.9
IP07 **Quail** 89.39 313 *eP* P 15 44 44.5 +0.9
SDMD **Soldier's Deli** 89.41 314 *eP* P 15 44 44.8 +1.2
MVL **Millersville** 89.42 315 *eP* P 15 44 44.7 +1.1
IP03 **Louisa** 89.43 313 *eP* P 15 44 44.5 +0.8
355A **Pearson** 89.44 305 P P 15 44 44.4 +0.5
baz=120,SNR=7.2
255A **Hazlehurst** 89.44 306 P P 15 44 44.0 +0.1
baz=120,SNR=8.4
255A **Hazlehurst** 89.44 306 *eP* P 15 44 45.4 +1.5
554A **Perry** 89.45 304 P P 15 44 44.3 +0.4
baz=119,SNR=7.2
IP04 **Greensprings** 89.53 313 *eP* P 15 44 45.0 +0.8
N59A **State Game Lan** 89.55 316 P P 15 44 44.5 +0.2
baz=124,SNR=11
N59A **State Game Lan** 89.55 316 *eP* P 15 44 45.2 +1.0
BORG **Borgarnes** 89.65 355 P P 15 44 45.4 +1.3
comp=Z,38nm,1.3s,baz=216,slow=1.4,SNR=5.0
BORG LR LR 16 19 30.6
comp=Z,547nm,18.5s,baz=170,slow=32
BORG **Borgarnes** 89.65 355 *eP* P 15 44 41.2 -2.8
ACCN **Adirondack Com** 89.66 319 *eP* P 15 44 45.3 +0.6
VT1 **Waterbury** 89.67 320 *eP* P 15 44 45.4 +0.7
MOS **Moscow** 89.69 25 *eP* P 15 44 43.8 -0.6
MOS *e* 15 48 13.6
MOS *eS* S 15 55 37.0 +1.9
MOS pmax pmax
comp=Z,1μm,1.7s
MOS pmax pmax
comp=Z,652nm,1.6s
454A **Quitman** 89.71 304 P P 15 44 45.2 0.0
baz=119,SNR=20
JSC **Jenkinsville** 89.74 308 *eP* P 15 44 46.6 +1.4
JSC **Jenkinsville** 89.74 308 *eP* P 15 44 46.6 +1.4
PAGS **Pennsylvania G** 89.78 315 *eP* P 15 44 46.1 +0.8
155A **Kite** 89.78 306 P P 15 44 46.0 +0.6
baz=120
Z55A **Blythe** 89.84 307 P P 15 44 45.7 0.0
baz=120
KSPA **Keystone Colle** 89.91 317 *eP* P 15 44 46.7 +0.9
TIGA **Tifton** 90.03 305 P P 15 44 46.8 +0.1
baz=119,SNR=8.0
TIGA **Tifton** 90.03 305 *eP* P 15 44 48.1 +1.4
254A **Abbeville** 90.06 305 P P 15 44 47.4 +0.6
baz=119,SNR=15
553A **Crawfordville** 90.06 303 P P 15 44 47.0 +0.2
baz=119,SNR=8.5
CCIG **Comitan** 90.07 288 *eP* P 15 44 49.0 +1.6
KMSC **Kings Mountain** 90.22 309 P P 15 44 47.7 +0.2
baz=120
KMSC **Kings Mountain** 90.22 309 *eP* P 15 44 48.5 +1.0
154A **Montrose** 90.25 306 P P 15 44 47.8 +0.1
baz=120,SNR=5.4
154A **Montrose** 90.25 306 *eP* P 15 44 49.5 +1.8
453A **Whigham** 90.30 304 P P 15 44 48.2 +0.3
baz=119,SNR=12
453A **Whigham** 90.30 304 *eP* P 15 44 49.4 +1.4
NCB **Newcomb** 90.33 319 *eP* P 15 44 48.3 +0.5
NRS **Narsarsuaq** 90.35 344 P P 15 44 49.1 +1.7
VWCC **Virginia Weste** 90.35 311 *eP* P 15 44 49.2 +1.2
Z54A **Sparta** 90.36 307 P P 15 44 48.1 0.0
baz=120
PUL **Pulkovo** 90.37 19 *de*P P 15 44 48.6 +1.1
PUL pmax pmax
comp=Z,425nm,1.4s
BINY **Binghamton** 90.40 317 P P 15 44 48.2 0.0
baz=124
BINY **Binghamton** 90.40 317 *eP* P 15 44 49.0 +0.8
comp=Z,154nm,1.2s
BINY LR LR
comp=Z,742nm,21.0s
PAULI **Pauline** 90.40 308 *eP* P 15 44 49.4 +1.1
FRNY **Flat Rock** 90.45 320 *eP* P 15 44 48.6 +0.3
353A **Camilla** 90.46 304 P P 15 44 48.9 +0.2
baz=119,SNR=20
Y54A **Tignall** 90.55 307 P P 15 44 49.1 0.0
baz=120
FINES **FINESS Array B** 90.60 16 P P 15 44 49.2 +0.7
comp=Z,114nm,1.0s,baz=174,slow=3.8,SNR=52
FINES PP PP 15 48 25.5 +1.5
comp=Z,15nm,1.1s,baz=193,slow=5.7,SNR=5.0
FINES LR LR 16 24 03.5
comp=Z,1μm,21.8s,baz=217,slow=35
FIA1 **FINESS Array S** 90.60 16 *eP* P 15 44 48.8 +0.2
BLA **Blacksburg** 90.64 311 P P 15 44 49.6 +0.2
baz=121
BLA **Blacksburg** 90.64 311 *eP* P 15 44 50.7 +1.2
comp=Z,118nm,1.3s
BLA LR LR
comp=Z,723nm,21.0s
BLA **Blacksburg** 90.64 311 *eP* P 15 44 50.7 +1.2
BLA pmax pmax
comp=Z,118nm,1.3s
BLA MLR MLR
comp=Z,723nm,21.0s
552A **Lynn Haven** 90.69 303 P P 15 44 49.8 0.0
baz=118
253A **Americus** 90.74 305 P P 15 44 50.0 +0.1
baz=119,SNR=5.5
253A **Americus** 90.74 305 *eP* P 15 44 51.4 +1.5
SSPA **Standing Stone** 90.75 315 P P 15 44 49.7 -0.1
baz=122
SSPA **Standing Stone** 90.75 315 *eP* P 15 44 48.7 -1.1
comp=Z,274nm,1.2s
153A **Fort Valley** 90.80 306 P P 15 44 50.1 -0.2
baz=119
GOGA **Godfrey** 90.90 307 P P 15 44 50.1 -0.5
baz=119
GOGA **Godfrey** 90.90 307 *eP* P 15 44 51.6 +0.9
GOGA LR LR
comp=Z,642nm,20.0s
GOGA **Godfrey** 90.90 307 *eP* P 15 44 51.6 +0.9
GOGA MLR MLR
comp=Z,642nm,20.0s
LONY **Lake Ozonia** 90.91 320 P P 15 44 50.4 -0.1
baz=125
LONY **Lake Ozonia** 90.91 320 *eP* P 15 44 50.0 -0.5
comp=Z,65nm,1.1s
LONY LR LR
comp=Z,640nm,22.0s
Z53A **Monticello** 90.91 306 P P 15 44 50.2 -0.5
baz=119,SNR=14
452A **Marianna** 90.95 304 P P 15 44 50.7 -0.3
baz=118
O56A **Blue Knob Stat** 90.99 314 P P 15 44 50.9 -0.1
baz=122,SNR=19
O56A **Blue Knob Stat** 90.99 314 *eP* P 15 44 51.3 +0.3
352A **Blakely** 91.05 304 P P 15 44 51.5 0.0
baz=118,SNR=6.9
352A **Blakely** 91.05 304 *eP* P 15 44 52.6 +1.1
252A **Lumpkin** 91.16 305 P P 15 44 51.4 -0.5
baz=119,SNR=13
VAF **Ylistaro** 91.17 14 P P 15 44 52.3 +1.2
VAF pmax pmax
comp=Z,135nm,1.1s
Y53A **Monroe** 91.20 307 P P 15 44 52.0 -0.1
baz=119,SNR=5.4
451A **Vernon** 91.27 303 P P 15 44 52.4 0.0
baz=118
451A **Vernon** 91.27 303 *eP* P 15 44 53.9 +1.4
BG3 **Lake Jocassee** 91.28 308 *eP* P 15 44 53.5 +1.0
X53A **Estanollee** 91.31 308 P P 15 44 52.5 -0.1
baz=119
152A **Waverly Hall** 91.46 305 P P 15 44 52.7 -0.7
baz=119,SNR=9.3
152A **Waverly Hall** 91.46 305 *eP* P 15 44 53.8 +0.4
351A **Pinckard** 91.47 304 P P 15 44 52.9 -0.5
baz=118
Z52A **Williamson** 91.49 306 P P 15 44 52.6 -0.8
baz=119,SNR=15
MCWV **Mont Chateau** 91.51 313 P P 15 44 53.1 -0.2
baz=121
MCWV **Mont Chateau** 91.51 313 *eP* P 15 44 54.2 +0.8
V53A **Saluda** 91.53 309 P P 15 44 53.0 -0.6
baz=120
W53A **Cullowhee** 91.54 308 P P 15 44 53.1 -0.7
baz=119
Y52A **Lilburn** 91.55 307 P P 15 44 53.0 -0.7
baz=119,SNR=10

Y52A **Lilburn** 91.55 307 *eP* P 15 44 54.3 +0.6
251A **Midway** 91.71 305 P P 15 44 53.9 -0.6
baz=118,SNR=7.9
U53A **Fall Branch** 91.71 309 P P 15 44 54.0 -0.4
baz=120
X52A **Dahlonega** 91.79 307 P P 15 44 54.3 -0.5
baz=119,SNR=25
TRQ **Mont Tremblant** 91.80 321 *eP* P 15 44 54.7 +0.1
151A **Opelika** 91.85 305 P P 15 44 54.7 -0.4
baz=118,SNR=12
MMNY **Mt. Morris Dam** 91.88 317 *eP* P 15 44 55.6 +0.6
450A **Crestview** 91.99 303 P P 15 44 55.2 -0.6
baz=118
W52A **Murphy** 92.05 308 P P 15 44 55.3 -0.8
baz=119,SNR=7.4
W52A **Murphy** 92.05 308 *eP* P 15 44 56.4 +0.4
350A **Dozier** 92.09 304 P P 15 44 55.6 -0.6
baz=118
Z51A **Franklin** 92.11 306 P P 15 44 55.7 -0.6
baz=118
V52A **Sevierville** 92.17 309 P P 15 44 55.3 -1.2
baz=119
V52A **Sevierville** 92.17 309 *eP* P 15 44 56.5 0.0
TKL **Tuckaleechee C** 92.21 308 P P 15 44 56.7 -0.1
comp=Z,7.1nm,0.8s,baz=163,slow=5.8,SNR=7.3
TKL LR LR 16 20 41.8
comp=Z,525nm,18.9s,baz=133,slow=32
TKL **Tuckaleechee C** 92.21 308 *eP* P 15 44 56.5 -0.2
N54A **Moraine State** 92.28 314 P P 15 44 56.7 -0.2
baz=121,SNR=17
N54A **Moraine State** 92.28 314 *eP* P 15 44 57.5 +0.5
250A **Grady** 92.30 304 P P 15 44 56.6 -0.6
baz=118,SNR=6.2
250A **Grady** 92.30 304 *eP* P 15 44 57.7 +0.5
Y51A **Rockmart** 92.30 306 P P 15 44 56.4 -0.8
baz=118,SNR=9.6
M54A **Oil Creek Stat** 92.35 315 P P 15 44 57.1 -0.1
baz=121,SNR=26
M54A **Oil Creek Stat** 92.35 315 *eP* P 15 44 57.0 -0.2
T52A **Hallie** 92.36 310 P P 15 44 57.2 -0.2
baz=119
150A **Eclectic** 92.40 305 P P 15 44 57.2 -0.5
baz=118,SNR=17
449A **Pace** 92.45 303 P P 15 44 57.4 -0.6
baz=117
X51A **Calhoun** 92.47 307 P P 15 44 57.0 -1.0
baz=118,SNR=9.2
X51A **Calhoun** 92.47 307 *eP* P 15 44 58.1 +0.2
TZTN **Tazewell** 92.48 309 P P 15 44 57.1 -0.9
baz=119
TZTN **Tazewell** 92.48 309 *eP* P 15 44 58.5 +0.6
BRAL **Brewton** 92.52 303 P P 15 44 57.7 -0.5
baz=118
BRAL **Brewton** 92.52 303 PFAKE 15 45 10.0 +12
BRAL LR LR
comp=Z,896nm,20.0s
Z50A **Ashland** 92.63 305 P P 15 44 57.7 -1.0
baz=118,SNR=15
Z50A **Ashland** 92.63 305 *eP* P 15 44 58.9 +0.2
CPCT **Cooper Cave** 92.64 308 *eP* P 15 44 58.7 -0.1
V51A **Loudon** 92.69 308 P P 15 44 58.1 -0.8
baz=119,SNR=9.8
V51A **Loudon** 92.69 308 *eP* P 15 44 59.0 0.0
S52A **Salyersville** 92.70 310 P P 15 44 58.1 -0.9
baz=119
349A **Repton** 92.71 303 P P 15 44 58.5 -0.6
baz=117
ALLY **Alegheny Colle** 92.73 315 *eP* P 15 45 00.2 +1.2
Y50A **Piedmont** 92.79 306 P P 15 44 58.5 -1.0
baz=118
ERPA **Erie** 92.87 315 P P 15 44 59.0 -0.6
baz=121
ERPA **Erie** 92.87 315 *eP* P 15 45 00.1 +0.5
249A **Camden** 92.94 304 P P 15 44 59.1 -1.0
baz=117
149A **Jones** 92.98 305 P P 15 44 58.9 -1.4
baz=118,SNR=5.8
X50B **Fort Payne** 93.00 307 P P 15 44 59.4 -1.0
baz=118,SNR=24
448A **Bay Minette** 93.03 303 P P 15 44 59.8 -0.8
baz=117
S51A **Beattyville** 93.04 310 P P 15 45 00.1 -0.4
baz=119
Z49A **Columbiana** 93.06 305 P P 15 44 59.7 -0.9
baz=118,SNR=9.1
W50A **Signal Mountai** 93.10 307 P P 15 45 00.0 -0.9
baz=118,SNR=14
W50A **Signal Mountai** 93.10 307 *eP* P 15 45 01.0 +0.1
SCHQ **Schefferville** 93.10 331 P P 15 45 00.8 +0.4
comp=Z,45nm,0.9s,baz=112,slow=6.5,SNR=12
SCHQ LR LR 16 19 22.1
comp=Z,840nm,20.8s,baz=142,slow=31
SCHQ **Schefferville** 93.10 331 *eP* P 15 45 00.9 +0.5
V50A **Pikevile** 93.17 308 P P 15 45 00.3 -0.8
baz=118,SNR=17
JOF **Joensuu** 93.20 18 P P 15 45 01.2 +0.6
Y49A **Blount Mountai** 93.27 306 P P 15 45 00.6 -1.0
baz=118,SNR=8.4
Y49A **Blount Mountai** 93.27 306 *eP* P 15 45 01.6 -0.1
348A **Jackson** 93.28 303 P P 15 45 01.1 -0.6
baz=117
LRAL **Lakeview Retre** 93.33 305 P P 15 45 00.8 -1.2
baz=117
LRAL **Lakeview Retre** 93.33 305 *eP* P 15 45 01.5 -0.5
comp=Z,24nm,1.1s
PALK **Pallekele** 93.35 84 LR LR 16 21 45.1
comp=Z,3μm,21.5s,baz=299,slow=32
248A **Dixon Mills** 93.46 304 P P 15 45 01.5 -1.1
baz=117
X49A **Woodville** 93.51 306 P P 15 45 01.8 -0.9
baz=118,SNR=14
SWET **Sewanee** 93.55 307 *eP* P 15 45 02.9 -0.1
447A **Lucedale** 93.57 302 P P 15 45 03.1 0.0
baz=117
148A **Greensboro** 93.58 304 P P 15 45 02.1 -1.0
baz=117
T50A **Nancy** 93.62 309 P P 15 45 02.1 -1.0
baz=118,SNR=16
OUL **Oulu** 93.65 14 P P 15 45 03.9 +1.3
OUL pmax pmax
comp=Z,50nm,0.9s
SADO **Sadowa** 93.72 318 P P 15 45 03.5 0.0
comp=Z,36nm,1.1s,baz=121,slow=3.1,SNR=12
SADO **Sadowa** 93.72 318 *eP* P 15 45 03.4 0.0
comp=Z,60nm,1.2s
W49A **Belvidere** 93.75 307 P P 15 45 02.8 -1.0
baz=118,SNR=18
347A **Saraland** 93.76 303 P P 15 45 03.2 -0.7
baz=117
V49A **Minnville** 93.79 308 P P 15 45 02.5 -1.5
baz=118,SNR=11
Y48A **Jasper** 93.86 306 P P 15 45 03.3 -1.1
baz=117,SNR=7.1
ACSO **Alum Creek Sta** 93.88 313 P P 15 45 03.4 -1.0
baz=119
ACSO **Alum Creek Sta** 93.88 313 *eP* P 15 45 04.5 +0.2
ACSO LR LR
comp=Z,623nm,22.0s
Z48A **Northport** 93.90 305 P P 15 45 03.1 -1.4
baz=117,SNR=9.2
X48A **Hartselle** 94.01 306 P P 15 45 03.5 -1.6
baz=117,SNR=12
X48A **Hartselle** 94.01 306 *eP* P 15 45 04.9 -0.1
U49A **Red Boiling Sp** 94.05 308 P P 15 45 04.0 -1.1
baz=118,SNR=10
247A **Quitman** 94.10 303 P P 15 45 04.8 -0.7
baz=117
446A **Poplarville** 94.12 302 P P 15 45 05.0 -0.6
baz=116
147A **Livingston** 94.12 304 P P 15 45 04.1 -1.5
baz=117
147A **Livingston** 94.12 304 *eP* P 15 45 06.0 +0.5
KLMR **Klimovskoe** 94.13 22 *eP* P 15 45 03.8 -1.1
KLMR *e* 15 48 49.4
KLMR *eS* SKSac 15 55 38.4 -0.5
KLMR pmax pmax
comp=Z,89nm,1.3s
KLMR **Klimovskoe** 94.13 22 *eP* P 15 45 03.9 -1.0
KLMR AMP 15 45 06.5
comp=Z,89nm,1.3s
KLMR *e*PP PP 15 48 49.4 -2.4
KLMR *e*S SKSac 15 55 38.5 -0.5
KLMR LQ LQ 16 20 08.4
P50A **Jamestown** 94.13 312 P P 15 45 04.5 -1.0
baz=119
T49A **Edmonton** 94.15 309 P P 15 45 04.4 -1.2
baz=118,SNR=19

546A **Slidell** 94.15 301 P P 15 45 05.8 0.0
baz=116
Z47A **Carrollton** 94.21 305 P P 15 45 04.8 -1.2
baz=117
W48A **Pulaski** 94.24 307 P P 15 45 05.1 -1.0
baz=117,SNR=16
N50A **Nevada** 94.25 313 P P 15 45 05.3 -0.7
baz=119,SNR=11
O50A **Cable** 94.27 312 P P 15 45 04.9 -1.2
baz=119
Y47A **UCPARC, Winfie** 94.36 305 P P 15 45 04.8 -1.8
baz=117,SNR=11
V48A **Smith Brothers** 94.44 307 P P 15 45 05.7 -1.2
baz=117,SNR=20
V48A **Smith Brothers** 94.44 307 *eP* P 15 45 06.9 -0.1
346A **Big Creek Wild** 94.46 302 P P 15 45 06.6 -0.5
baz=116
246A **Jackson Lee, B** 94.48 303 P P 15 45 06.4 -0.8
baz=116
U48A **Cassie Pea, Po** 94.59 308 P P 15 45 06.6 -1.0
baz=117,SNR=12
X47A **Russelville** 94.64 306 P P 15 45 06.4 -1.5
baz=117
146A **Union** 94.70 304 P P 15 45 06.9 -1.4
baz=116
T48A **Bowling Green** 94.76 309 P P 15 45 07.4 -1.0
baz=118,SNR=9.0
S48A **Wiedeman Farm,** 94.77 309 P P 15 45 06.8 -1.6
baz=118,SNR=8.3
W47A **Westpoint** 94.78 307 P P 15 45 07.2 -1.3
baz=117,SNR=26
445A **Amite** 94.85 301 P P 15 45 08.6 -0.4
baz=116
Z46A **Louisville** 94.86 304 P P 15 45 07.7 -1.2
baz=116
345A **Thompson Farm,** 94.86 302 P P 15 45 07.9 -1.1
baz=116
V47A **Nunnelly** 94.98 307 P P 15 45 07.6 -1.9
baz=117,SNR=18
R48A **Northridge Ran** 94.98 310 P P 15 45 08.1 -1.4
baz=118
PLAL **Pickwick Lake** 95.01 306 *eP* P 15 45 08.7 -0.9
245A **Little AP, Sta** 95.07 303 P P 15 45 09.1 -0.8
baz=116
U47A **Clarksville** 95.09 308 P P 15 45 08.8 -1.1
baz=117,SNR=19
Y46A **Houston** 95.10 305 P P 15 45 08.0 -2.0
baz=116
444A **Pine Grove** 95.16 301 P P 15 45 09.3 -1.0
baz=116
X46A **Booneville** 95.19 306 P P 15 45 08.6 -1.9
baz=116
WCI **Wyandotte Cave** 95.20 310 P P 15 45 09.1 -1.3
baz=117
WCI **Wyandotte Cave** 95.20 310 *eP* P 15 45 09.9 -0.5
WCI **Wyandotte Cave** 95.20 310 *eP* P 15 45 09.9 -0.5
T47A **Sharon Grove** 95.21 308 P P 15 45 09.0 -1.5
baz=117,SNR=10.0
T47A **Sharon Grove** 95.21 308 *eP* P 15 45 10.1 -0.4
W46A **Michie** 95.30 306 P P 15 45 08.9 -2.0
baz=116
AAM **Ann Arbor** 95.33 314 P P 15 45 10.2 -0.7
baz=119
AAM **Ann Arbor** 95.33 314 PFAKE 15 45 20.0 +9.1
AAM LR LR
comp=Z,749nm,20.0s
WVT **Waverly** 95.34 307 P P 15 45 09.8 -1.3
baz=117
WVT **Waverly** 95.34 307 *eP* P 15 45 10.3 -0.8
WVT **Waverly** 95.34 307 *eP* P 15 45 10.3 -0.8
145A **Houston Renfro** 95.34 303 P P 15 45 10.4 -0.8
baz=116
R47A **Wooly Knot Far** 95.39 310 P P 15 45 09.9 -1.4
baz=117,SNR=6.2
V46A **Holladay** 95.41 307 P P 15 45 09.3 -2.1
baz=117,SNR=9.7
344A **Westbrook Farm** 95.46 302 P P 15 45 10.9 -0.8
baz=116
344A **Westbrook Farm** 95.46 302 *eP* P 15 45 12.9 +1.2
Z45A **Winona** 95.50 304 P P 15 45 10.3 -1.6
baz=116
Y45A **Yeager Farm, C** 95.60 305 P P 15 45 11.3 -1.1
baz=116
Q47A **Bedord North L** 95.62 310 P P 15 45 11.0 -1.3
baz=117
VBMS **Vicksburg** 95.63 303 P P 15 45 11.3 -1.1
baz=116
244A **Avery, Jackson** 95.68 303 P P 15 45 11.7 -1.0
baz=116
U46A **Springville** 95.70 307 P P 15 45 11.6 -1.1
baz=116
AKTO **Aktyubinsk** 95.70 36 P P 15 45 12.5 +0.1
comp=Z,12nm,1.0s,baz=200,slow=3.3,SNR=36
AKTO LR LR 16 29 19.8
comp=Z,409nm,21.0s,baz=214,slow=36
144A **Alexander Plac** 95.73 303 P P 15 45 12.1 -0.9
baz=116
X45A **UM Field Stati** 95.74 305 P P 15 45 11.4 -1.6
baz=116
543A **St. Martinvill** 95.75 300 P P 15 45 12.8 -0.3
baz=115
P47A **Martinsville** 95.76 311 P P 15 45 11.3 -1.6
baz=117
OXF **Oxford** 95.79 305 P P 15 45 11.3 -1.9
baz=116
OXF **Oxford** 95.79 305 *eP* P 15 45 12.4 -0.7
OXF **Oxford** 95.79 305 *eP* P 15 45 12.4 -0.7
T46A **Princeton** 95.80 308 P P 15 45 11.2 -1.9
baz=117,SNR=9.3
W45A **Hickory Valley** 95.90 306 P P 15 45 11.7 -2.0
baz=116
S46A **Don Dixon Farm** 95.96 309 P P 15 45 12.1 -1.8
baz=117
443A **Delano Plantat** 95.98 301 P P 15 45 12.7 -1.4
baz=115
V45A **Humboldt** 95.99 307 P P 15 45 12.1 -2.0
baz=116
Z44A **Pea Ridge, Bel** 96.02 304 P P 15 45 12.4 -1.8
baz=116
O47A **Sheridan** 96.04 312 P P 15 45 11.9 -2.3
baz=117,SNR=7.0
R46A **Gibon Southern** 96.05 309 P P 15 45 12.6 -1.6
baz=117
343A **Vidalia** 96.08 302 P P 15 45 14.1 -0.4
baz=115
U45A **Rockin P Farm,** 96.12 307 P P 15 45 13.2 -1.4
baz=116
ABKAR **Akbulak array** 96.14 38 *eP* P 15 45 14.4 0.0
Y44A **Strider, Charl** 96.15 304 P P 15 45 13.4 -1.4
baz=116
243A **Waterproof** 96.22 302 P P 15 45 14.2 -1.0
baz=115
Q46A **CEJHS Indians,** 96.30 310 P P 15 45 14.0 -1.4
baz=117
542A **Morse** 96.32 300 P P 15 45 15.9 +0.2
baz=115
T45A **Paducah** 96.33 308 P P 15 45 14.2 -1.3
baz=116
X44A **Crenshaw** 96.33 305 P P 15 45 13.9 -1.7
baz=116
P46A **Rosedale** 96.47 311 P P 15 45 14.5 -1.6
baz=117
SFJD **Kangerlussuaq** 96.47 345 LR LR 16 20 56.3
comp=Z,657nm,19.1s,baz=148,slow=31
143A **Socs Landing,** 96.51 303 P P 15 45 15.2 -1.3
baz=115
U44B **Burton Farm, H** 96.54 307 P P 15 45 15.2 -1.4
baz=116
S45A **Carrier Mills** 96.57 308 P P 15 45 15.5 -1.2
baz=116
R45A **Skylar, Fairfi** 96.63 309 P P 15 45 15.6 -1.3
baz=116
342A **Flagon Creek P** 96.66 301 P P 15 45 16.1 -1.1
baz=115
Y43A **Makayla and Ka** 96.66 304 P P 15 45 16.0 -1.2
baz=115
M46A **Old House Fiel** 96.69 313 P P 15 45 15.9 -1.2
baz=117
M46A **Old House Fiel** 96.69 313 *eP* P 15 45 17.0 -0.1
OLIL **Olney** 96.69 310 *eP* P 15 45 16.9 -0.3
V44A **Blytheville** 96.72 306 P P 15 45 16.3 -1.1
baz=116
N46A **Monticello** 96.72 312 P P 15 45 15.5 -1.7
baz=117
SFIN **Lafayette** 96.73 311 P P 15 45 15.5 -1.8
baz=117
SFIN **Lafayette** 96.73 311 *eP* P 15 45 16.0 -1.3
541A **Lake Charles** 96.79 300 P P 15 45 17.0 -0.8

baz=115
P45A Graceland, Par 96.80 310 P P 15 45 15.5 -2.2
baz=116
Q45A Warren Harvey, 96.80 310 P P 15 45 16.0 -1.7
baz=116
PRGR Permogore 96.81 23 *e*P **P 15 45 16.4 -0.7**
PRGR pmax pmax
comp=Z,73nm,0.9s
242A Grayson 96.82 302 P P 15 45 16.6 -1.3
baz=115
U44A Portageville 96.85 307 P P 15 45 16.2 -1.7
baz=116
142A Monroe 96.86 303 P P 15 45 16.5 -1.5
baz=115
X43A Marvell 96.89 305 P P 15 45 16.3 -1.8
baz=115
W43A Forest City 97.00 305 P P 15 45 16.8 -1.8
baz=115
T44A Benton 97.03 308 P P 15 45 16.9 -1.8
baz=116
SIUC Southern Illin 97.04 308 *e*P **P 15 45 18.5 -0.3**
S44A Carbondale 97.06 308 P P 15 45 17.1 -1.8
baz=116
441A DeRidder 97.08 300 P P 15 45 18.1 -1.0
baz=114
O45A Potomac 97.10 311 P P 15 45 16.3 -2.7
baz=116
Z42A Norrel Spur, H 97.17 303 P P 15 45 17.8 -1.6
baz=115
R44A Waltonville 97.17 309 P P 15 45 17.4 -2.0
baz=116
V43A Jonesboro 97.17 306 P P 15 45 17.6 -1.8
baz=115
N45A Kentland 97.22 312 P P 15 45 17.4 -2.2
baz=116
Y42A Garnett, Star 97.28 304 P P 15 45 17.9 -2.0
baz=115
M45A Boilermakers S 97.29 312 P P 15 45 18.2 -1.6
baz=116
341A Kurthwood 97.30 301 P P 15 45 19.0 -1.1
baz=114
U43A Rector 97.32 307 P P 15 45 18.1 -2.0
baz=115
ARCES ARCESS Array B 97.37 12 P Pdif 15 45 19.9 +0.3
comp=Z,6.8nm,0.9s,baz=53,slow=24,SNR=11
ARCES PP **PP 15 49 14.9 -1.9**
comp=Z,6.1nm,0.7s,baz=197,slow=1.3,SNR=8.7
ARCES PKKPbc **PKKPbc 16 01 57.6 -2.7**
comp=Z,1.2nm,0.8s,baz=83,slow=4.0,SNR=3.7
ARCES LR LR 16 27 19.1
comp=Z,808nm,21.3s,baz=215,slow=34
P44A Sand Creek, Wi 97.38 310 P P 15 45 18.3 -2.0
baz=116
Q44A Meyer Farm, Va 97.41 309 P P 15 45 18.7 -1.7
baz=116
APA Apatity 97.44 15⇑ *i*P Pdif 15 45 27.9 +8.0
APA *i* 15 55 54.0
APA *i* S **S 15 56 49.0 +5.6**
APA *i* PS **PS 15 58 06.0 -1.9**
APA pmax pmax
comp=Z,15nm,1.0s
X42A Stuttgart 97.46 304 P P 15 45 19.0 -1.7
baz=115
T43A Greenville 97.54 307 P P 15 45 19.2 -1.8
baz=115
O44A Mansfield 97.57 311 P P 15 45 19.3 -1.8
baz=116
S43A Fulton Ridge, 97.59 308 P P 15 45 19.7 -1.6
baz=115,SNR=6.8
141A Papa Simpson, 97.62 302 P P 15 45 20.3 -1.2
baz=114
N44A Piper City 97.62 311 P P 15 45 19.6 -1.7
baz=116
F46A Macinaw City C 97.66 317 P P 15 45 20.2 -1.2
baz=118
W42A Bald Knob 97.68 305 P P 15 45 19.9 -1.8
baz=115
R43A Red Bud 97.79 308 P P 15 45 21.0 -1.2
baz=115
V42A Cord 97.81 306 P P 15 45 20.6 -1.6
baz=115,SNR=16
Z41A Richland Creek 97.81 303 P P 15 45 21.0 -1.4
baz=114
M44A Midewin, Midew 97.82 312 P P 15 45 20.4 -1.8
baz=116
M44A Midewin, Midew 97.82 312 *e*P **P 15 45 21.6 -0.6**
NIL Nilore 97.83 57 *e*P Pdif 15 45 24.2 +1.6
NIL LR LR
comp=Z,1μm,21.0s
KEV Kevo 97.83 12 PFAKE 15 45 30.0 +8.4
KEV LR LR
comp=Z,2μm,20.0s
Q43A New Douglas 97.91 309 P P 15 45 21.3 -1.4
baz=115
U42A Revenden 97.92 306 P P 15 45 20.9 -1.9
baz=115,SNR=9.5
Y41A Eaglette Beard 97.92 304 P P 15 45 21.3 -1.5
baz=114
FVM French Village 98.02 308 *e*P Pdif 15 45 23.6 +0.4
FVM French Village 98.02 308 *e*P Pdif 15 45 23.7 +0.4
240A Hunter Patters 98.05 301 P P 15 45 22.4 -1.1
baz=114
L44A Lake County Fo 98.08 313 P P 15 45 21.5 -1.8
baz=116
P43A Skaggs, Pawnee 98.08 310 P P 15 45 21.9 -1.5
baz=115
UALR University of 98.09 304 *e*P Pdif 15 45 25.9 +2.3
F45A CMU Biological 98.09 317 P P 15 45 22.4 -1.0
baz=117
T42A Van Buren 98.10 307 P P 15 45 21.7 -1.9
baz=115
T42A Van Buren 98.10 307 *e*P **P 15 45 22.6 -0.9**
140A Cam and Jess, 98.15 302 P P 15 45 22.6 -1.3
baz=114
W41B Gary Mavity, V 98.18 305 P P 15 45 22.4 -1.5
baz=114,SNR=9.1
W41B Gary Mavity, V 98.18 305 *e*P **P 15 45 23.3 -0.7**
E45A Wooded Hills, 98.19 317 P P 15 45 22.2 -1.5
baz=117
S42A Caledonia 98.19 308 P P 15 45 22.4 -1.6
baz=115,SNR=8.5
O43A Sugar Creek Fa 98.21 311 P P 15 45 22.1 -1.9
baz=115
WHAR Wooly Hollow 98.26 305 *e*P **P 15 45 24.1 -0.3**
Z40A Long Farm, Mag 98.27 303 Pdiff **P 15 45 22.4 -2.0**
baz=114
HDIL Hopedale 98.31 311 Pdiff **P 15 45 22.3 -2.2**
baz=115
HDIL Hopedale 98.31 311 PFAKE 15 45 40.0 +16
HDIL LR LR
comp=Z,644nm,19.0s
X40A Basin Creek Fa 98.34 304 Pdiff **P 15 45 22.4 -2.3**
baz=114
V41A Mountainview 98.36 305 Pdiff **P 15 45 22.8 -2.1**
baz=114
N43A Stutzman Famil 98.40 311 Pdiff **P 15 45 23.0 -1.8**
baz=115
R42A Luebbering 98.41 308 Pdiff **P 15 45 23.2 -1.7**
baz=115
U41A Viola 98.42 306 Pdiff **P 15 45 22.6 -2.4**
baz=114
M43A Waltham Townsh 98.46 312 Pdiff **P 15 45 23.2 -1.9**
baz=116
Y40A Okolona 98.48 303 Pdiff **P 15 45 23.2 -2.1**
baz=114
Q42A Golden Eagle 98.48 309 Pdiff **P 15 45 23.5 -1.8**
baz=115
T41A Mountain View 98.59 307 Pdiff **P 15 45 24.3 -1.5**
baz=114
P42A Winchester 98.63 310 Pdiff **P 15 45 24.2 -1.7**
baz=115
P42A Winchester 98.63 310 *e*P **P 15 45 22.6 -3.3**
CCM Cathedral Cave 98.64 308 Pdiff **P 15 45 24.1 -1.8**
baz=115
CCM Cathedral Cave 98.64 308 *e*P **P 15 45 25.7 -0.3**
comp=Z,290nm,1.4s
CCM Cathedral Cave 98.64 308 *e*P **P 15 45 25.7 -0.3**
CCM pmax pmax
comp=Z,290nm,1.4s
L43A Garden Prairie 98.64 312 Pdiff **P 15 45 23.1 -2.7**
baz=116
NATX Nacogdoches 98.64 301 Pdiff **P 15 45 24.9 -1.2**
baz=114
NATX Nacogdoches 98.64 301 PFAKE 15 45 40.0 +14
NATX LR LR
comp=Z,691nm,20.0s
O42A Bath 98.71 310 Pdiff **P 15 45 24.8 -1.4**
baz=115
E44A Grand Marais A 98.77 317 Pdiff **P 15 45 25.5 -0.8**
baz=117
F44A Big Bay de Noc 98.79 317 Pdiff **P 15 45 25.4 -1.0**
baz=116
W40A Ferguson Farm, 98.80 305 Pdiff **P 15 45 25.2 -1.6**
baz=114
S41A Jillco Farms, 98.80 307 Pdiff **P 15 45 24.7 -2.0**
baz=114
R41A Rosebud 98.83 308 Pdiff **P 15 45 24.7 -2.1**
baz=114
V40A Witts Springs 98.87 305 Pdiff **P 15 45 24.9 -2.3**
baz=114
V40A Witts Springs 98.87 305 *e*P **P 15 45 26.4 -0.7**
MIAR Mount Ida 98.92 304 Pdiff **P 15 45 25.7 -1.6**
baz=114
MIAR Mount Ida 98.92 304 PFAKE 15 45 40.0 +13
MIAR LR LR
comp=Z,693nm,20.0s
J43A Natural Harves 98.94 314 Pdiff **P 15 45 25.7 -1.5**
baz=116
N42A Yates City 98.94 311 Pdiff **P 15 45 25.1 -2.2**
baz=115
I43A Langenfeld Bro 98.97 314 Pdiff **P 15 45 25.7 -1.6**
baz=116
H43A Windswept, Lux 98.98 315 Pdiff **P 15 45 26.1 -1.2**
baz=116
Q41A Truxton 99.00 309 Pdiff **P 15 45 26.1 -1.5**
baz=114
M42A Sheffield 99.01 311 Pdiff **Pdif 15 45 25.6 -2.0**
baz=115
U40A Yellville 99.11 306 Pdiff **Pdif 15 45 26.6 -1.6**
baz=114
ARU Arti 99.14 32 *e*P **Pdif 15 45 27.6 -0.1**
comp=Z,67nm,1.7s
ARU LR LR
comp=Z,602nm,21.0s
ARU Arti 99.14 32 *e*P **Pdif 15 45 27.5 -0.2**
ARU 15 49 30.8
ARU PPP PPP 15 51 37.3
ARU S **SKSac 15 56 06.0 +0.7**
ARU PS **PS 15 58 24.3 -2.4**
ARU SS **SS 16 03 46.3 -1.0**
ARU SSS SSS 16 07 32.2
ARU MLR MLR
comp=Z,543nm,20.0s
P41A Barry, Barry 99.17 309 Pdiff **Pdif 15 45 26.5 -1.9**
baz=114
L42A Oliver, Polo 99.18 312 Pdiff **Pdif 15 45 26.4 -1.9**
baz=115
T40A Mansfield 99.19 307 Pdiff **Pdif 15 45 26.9 -1.6**
baz=114
F43A Flat Rock, Esc 99.19 316 Pdiff **Pdif 15 45 27.9 -0.4**
baz=116
O41A Passleys Farm, 99.23 310 Pdiff **Pdif 15 45 26.7 -1.8**
baz=114
G43A Wallace 99.27 316 Pdiff **Pdif 15 45 27.2 -1.4**
baz=116
X39A Fountain Ranch 99.31 304 Pdiff **Pdif 15 45 27.7 -1.4**
baz=114
E43A Lone Tree Farm 99.33 317 Pdiff **Pdif 15 45 27.5 -1.3**
baz=116
W39A Magazine 99.34 304 Pdiff **Pdif 15 45 28.2 -1.0**
baz=114
W39A Magazine 99.34 304 *e*P **Pdif 15 45 29.0 -0.2**
S40A Lebanon 99.36 307 Pdiff **Pdif 15 45 28.0 -1.2**
baz=114
J42A Columbus 99.37 313 Pdiff **Pdif 15 45 27.7 -1.4**
baz=115
N41A Harden Midland 99.46 310 Pdiff **Pdif 15 45 27.6 -2.0**
baz=114
R40A Maddies Statio 99.47 308 Pdiff **Pdif 15 45 27.9 -1.8**
baz=114
R40A Maddies Statio 99.47 308 *e*P **Pdif 15 45 29.5 -0.2**
I42A Draeger Farm, 99.48 314 Pdiff **Pdif 15 45 27.9 -1.7**
baz=115
V39A Pettigrew 99.49 305 Pdiff **Pdif 15 45 28.3 -1.7**
baz=114
H42A Shiocton 99.49 315 Pdiff **Pdif 15 45 28.1 -1.5**
baz=115
M41A Milan 99.52 311 Pdiff **Pdif 15 45 27.6 -2.2**
baz=114
KVTX Kingsville 99.57 296 PFAKE 15 45 40.0 +10
KVTX LR LR
comp=Z,625nm,19.0s
U39A Green Forest 99.58 306 Pdiff **Pdif 15 45 28.8 -1.5**
baz=114
Q40A Laux Farm, Aux 99.61 308 Pdiff **Pdif 15 45 29.1 -1.2**
baz=114
G42A Mountain 99.74 315 Pdiff **Pdif 15 45 29.1 -1.6**
baz=115
T39A Clever 99.77 306 Pdiff **Pdif 15 45 29.2 -1.8**
baz=114
F42A Maple Grove Fa 99.77 316 Pdiff **Pdif 15 45 29.9 -1.0**
baz=115
L41A Preston 99.78 312 Pdiff **Pdif 15 45 29.0 -1.9**
baz=114
P40A Paris 99.81 309 Pdiff **Pdif 15 45 30.3 -0.8**
baz=114
K41A Shullsburg 99.86 312 Pdiff **Pdif 15 45 30.1 -1.2**
baz=114
E42A Champion 99.92 317 Pdiff **Pdif 15 45 30.2 -1.3**
baz=115
O40A La Belle 99.93 310 Pdiff **Pdif 15 45 30.6 -1.1**
baz=114
JFWS Jewell Farm 99.95 313 Pdiff **Pdif 15 45 30.0 -1.7**
baz=114
JFWS Jewell Farm 99.95 313 PFAKE 15 45 40.0 +8.3
JFWS LR LR
comp=Z,511nm,20.0s
J41A Loganville 99.98 313 Pdiff **Pdif 15 45 30.2 -1.7**
baz=114
S39A Bolivar 99.99 307 Pdiff **Pdif 15 45 29.7 -2.3**
baz=114
R39A Churay, Stover 100.03 307 Pdiff **Pdif 15 45 31.1 -1.1**
baz=114
N40A Mertquake, Sal 100.03 310 Pdiff **Pdif 15 45 30.6 -1.5**
baz=114
I41A Arkdale 100.18 314 Pdiff **Pdif 15 45 31.3 -1.4**
baz=114
M40A Post Highland 100.19 311 Pdiff **Pdif 15 45 30.7 -2.1**
baz=114
G41A Antigo 100.21 315 Pdiff **Pdif 15 45 31.8 -1.0**
baz=115
L40A Anamosa 100.26 312 Pdiff **Pdif 15 45 32.1 -1.0**
baz=114
H41A Junction City 100.27 314 Pdiff **Pdif 15 45 32.5 -0.6**
baz=115
Q39A Willow Grove F 100.28 308 Pdiff **Pdif 15 45 32.2 -1.1**
baz=114
P39B Salisbury 100.30 309 Pdiff **Pdif 15 45 32.6 -0.8**
baz=114
F41A Three Lakes 100.38 316 Pdiff **Pdif 15 45 33.2 -0.4**
baz=115
S38A Stockton 100.39 307 Pdiff **Pdif 15 45 32.8 -1.0**
baz=113
T38A Diamond 100.44 306 Pdiff **Pdif 15 45 33.2 -0.9**
baz=113
O39A Kirksville 100.45 309 Pdiff **Pdif 15 45 33.4 -0.6**
baz=114
K40A Colesburg 100.46 312 Pdiff **Pdif 15 45 33.1 -0.9**
baz=114
J40A Soldiers Grove 100.48 313 Pdiff **Pdif 15 45 32.9 -1.1**
baz=114
COWI Conover 100.55 316 PFAKE 15 45 50.0 +16
COWI LR LR
comp=Z,850nm,20.0s
435B Jarrell 100.56 299 Pdiff **Pdif 15 45 33.8 -0.9**
baz=112
E41A Kenton 100.59 316 Pdiff **Pdif 15 45 33.8 -0.7**
baz=115
D41A Chassel 100.59 317 Pdiff **Pdif 15 45 33.8 -0.6**
baz=115
I40A Norwalk 100.60 313 Pdiff **Pdif 15 45 34.1 -0.5**
baz=114
R38A Fenwick Farm, 100.61 307 Pdiff **Pdif 15 45 33.9 -0.8**
baz=113
N39A Derby Farms, D 100.67 310 Pdiff **Pdif 15 45 34.0 -1.0**
baz=113
M39A Webster 100.68 311 Pdiff **Pdif 15 45 34.0 -1.0**
baz=114
Q38A Cooks Store, C 100.70 308 Pdiff **Pdif 15 45 34.5 -0.6**
baz=113
H40A Chili 100.75 314 Pdiff **Pdif 15 45 34.4 -0.9**
baz=114
L39A Vinton 100.82 311 Pdiff **Pdif 15 45 34.8 -0.8**
baz=114
G40A Rib Lake 100.89 315 Pdiff **Pdif 15 45 35.4 -0.4**
baz=114
P38A Dawn 100.90 309 Pdiff **Pdif 15 45 35.1 -1.0**
baz=113
WHTX Lake Whitney, 100.92 300 Pdiff **Pdif 15 45 35.0 -1.3**
baz=112
K39A Oelwein 100.97 312 Pdiff **Pdif 15 45 34.8 -1.4**
baz=114
O38A Galt 101.05 309 Pdiff **Pdif 15 45 35.7 -1.0**
baz=113
833A Chaparral WMA, 101.09 296 Pdiff **Pdif 15 45 35.7 -1.5**
baz=112
J39A Decorah 101.10 313 Pdiff **Pdif 15 45 35.7 -1.1**
baz=114
F40A Park Falls 101.10 315 Pdiff **Pdif 15 45 36.2 -0.6**
baz=114
TUL1 Leonard 101.12 304 Pdiff **Pdif 15 45 36.1 -1.0**
baz=112
N38A Joes South For 101.15 310 Pdiff **Pdif 15 45 36.4 -0.7**
baz=113
E40A Wakefield 101.17 316 Pdiff **Pdif 15 45 36.4 -0.7**
baz=114
I39A Houston 101.18 313 Pdiff **Pdif 15 45 36.3 -0.9**
baz=114
Q37A Longview Farm, 101.27 308 Pdiff **Pdif 15 45 36.9 -0.8**
baz=113
C40A Isle Royale Na 101.31 318 Pdiff **Pdif 15 45 37.3 -0.3**
baz=114
H39A Augusta 101.36 314 Pdiff **Pdif 15 45 37.1 -0.8**
baz=114
M38A Pleasantville 101.36 310 Pdiff **Pdif 15 45 37.5 -0.6**
baz=113
P37A Lathrop 101.47 308 Pdiff **Pdif 15 45 37.2 -1.3**
baz=113
L38A Oak Wood Farm, 101.48 311 Pdiff **Pdif 15 45 37.1 -1.4**
baz=113
G39A Holcombe 101.52 315 Pdiff **Pdif 15 45 37.5 -1.2**
baz=114
O37A Wolven Farm, M 101.55 309 Pdiff **Pdif 15 45 37.4 -1.5**
baz=113
K38A Parkersburg 101.55 312 Pdiff **Pdif 15 45 37.4 -1.4**
baz=113
E39A Mellen 101.56 316 Pdiff **Pdif 15 45 37.8 -1.1**
baz=114
SCIA State Center 101.56 311 Pdiff **Pdif 15 45 38.2 -0.7**
baz=113
SCIA State Center 101.56 311 PFAKE 15 45 50.0 +11
SCIA LR LR
comp=Z,749nm,21.0s
F39A Loretta 101.61 315 Pdiff **Pdif 15 45 38.2 -0.8**
baz=114
I38A Scanlan Farm, 101.79 313 Pdiff **Pdif 15 45 39.0 -0.9**
baz=113
C39A Grand Marais 101.87 317 Pdiff **Pdif 15 45 40.3 +0.1**
baz=114
G38A Ridgeland 101.92 314 Pdiff **Pdif 15 45 39.7 -0.7**
baz=113
M37A Trindle Farm, 101.95 310 Pdiff **Pdif 15 45 39.6 -1.0**
baz=112
H38A Maiden Rock 102.01 314 Pdiff **Pdif 15 45 40.1 -0.8**
baz=113
L37A Phoenix Point, 102.02 311 Pdiff **Pdif 15 45 40.4 -0.6**
baz=112
KSH Kashi 102.15 52 P **Pdif 15 45 43.3 +1.5**
KSH PP **PP 15 49 51.8 -2.3**
KSH SKS 15 56 21.3
KSH S **Sdif 15 57 21.5 -3.0**
KSH sS sS 15 57 27.5 -5.3
KSH SS **SS 16 04 24.5 -5.8**
KSH pmax pmax
comp=Z,530nm,5.3s
KSH LR LR
comp=Z,670nm,13.7s
KSH LR LR
comp=Z,2μm,16.1s
KSH LR LR
comp=Z,2μm,18.5s
K37A Belmond 102.19 311 Pdiff **Pdif 15 45 41.0 -0.7**
baz=112
JCT Junction City 102.22 298 Pdiff **Pdif 15 45 41.3 -0.9**
baz=112
JCT Junction City 102.22 298 PFAKE 15 45 50.0 +7.8
JCT LR LR
comp=Z,398nm,21.0s
E38A The Farm, Brul 102.29 316 Pdiff **Pdif 15 45 41.1 -1.0**
baz=113
J37A Redenius Farm, 102.33 312 Pdiff **Pdif 15 45 41.3 -1.0**
baz=112
N36A Muff Farm, Cla 102.37 309 Pdiff **Pdif 15 45 41.6 -0.9**
baz=112
H37A Dierke Farm, C 102.39 313 Pdiff **Pdif 15 45 41.8 -0.8**
baz=112
FRU Bishkek 102.44 49 *e*P **Pdif 15 45 44.0 +1.1**
I37A Lemond, Waseca 102.50 313 Pdiff **Pdif 15 45 42.5 -0.5**
baz=112
C38A Sawbill Land. 102.54 317 Pdiff **Pdif 15 45 42.5 -0.7**
baz=113
SPMN Marine on St. 102.56 314 Pdiff **Pdif 15 45 42.2 -1.0**
baz=112
F37A Hinrichs Farm, 102.64 315 Pdiff **Pdif 15 45 42.9 -0.7**
baz=112
K36A Gilmore City 102.69 311 Pdiff **Pdif 15 45 43.1 -0.9**
baz=112
EYMN Ely 102.77 317 Pdiff **Pdif 15 45 43.2 -0.9**
baz=113
EYMN Ely 102.77 317 PFAKE 15 46 00.0 +16
EYMN LR LR
comp=Z,567nm,20.0s
E37A Wrenshall 102.81 315 Pdiff **Pdif 15 45 43.6 -0.8**
baz=112
ABTX Abilene, Hawle 102.87 300 Pdiff **Pdif 15 45 43.4 -1.6**
baz=111
J36A Seneca 1, Swea 102.87 312 Pdiff **Pdif 15 45 44.0 -0.7**
baz=112
I36A Fitzsimmons Fa 102.91 313 Pdiff **Pdif 15 45 44.2 -0.6**
baz=112
KSU1 Kansas State U 102.91 307 Pdiff **Pdif 15 45 43.9 -1.1**
baz=111
KSU1 Kansas State U 102.91 307 PFAKE 15 46 00.0 +15
KSU1 LR LR
comp=Z,623nm,22.0s
WMOK Wichita Mounta 102.96 302 Pdiff **Pdif 15 45 44.4 -0.9**
baz=111
WMOK Wichita Mounta 102.96 302 PFAKE 15 46 00.0 +15
WMOK LR LR
comp=Z,712nm,22.0s
D37A Cotton 103.05 316 Pdiff **Pdif 15 45 45.1 -0.3**
baz=112
H36A Jessenland, He 103.06 313 Pdiff **Pdif 15 45 45.2 -0.3**
baz=112
C37A Embarrass 103.12 317 Pdiff **Pdif 15 45 45.0 -0.7**
baz=112
F36A Milaca 103.27 314 Pdiff **Pdif 15 45 46.3 -0.1**
baz=112
E36A McGregor 103.34 315 Pdiff **Pdif 15 45 46.6 -0.1**
baz=112
D36A Goodland 103.53 316 Pdiff **Pdif 15 45 47.3 -0.2**
baz=112
C36A Pine Crest Far 103.53 316 Pdiff **Pdif 15 45 47.4 -0.1**
baz=112
BRVK Borovoye 103.66 38 PFAKE 15 46 00.0 +12
BRVK LR LR
comp=Z,348nm,20.0s
G35A Watkins 103.66 314 Pdiff **Pdif 15 45 47.8 -0.3**
baz=111
H35A Sunnyside Ranc 103.70 313 Pdiff **Pdif 15 45 47.8 -0.6**
baz=111
SPITS Spitsbergen Ar 103.81 5 PP PP 15 50 05.9 +0.5
comp=Z,10nm,1.0s,baz=332,slow=11,SNR=3.2
F35A Swanville 103.95 314 Pdiff **Pdif 15 45 48.8 -0.6**
baz=111
D35A Remer 104.06 315 Pdiff **Pdif 15 45 49.5 -0.4**
baz=111
KBS Kingsbay 104.17 4 PFAKE 15 46 00.0 +10
KBS LR LR
comp=Z,565nm,19.0s
B35A Bob, Littlefor 104.31 317 Pdiff **Pdif 15 45 50.5 -0.5**
baz=111
ECSD EROS Data Cent 104.56 312 Pdiff **Pdif 15 45 52.1 -0.1**
baz=110
ECSD EROS Data Cent 104.56 312 PFAKE 15 46 00.0 +7.8
ECSD LR LR
comp=Z,499nm,20.0s
B34A Aery, Baudette 104.93 317 PKiKP **PKiKP 15 50 09.0 +0.4**
baz=110
G33A Ortonville 104.95 313 PKiKP **PKiKP 15 50 09.2 +0.4**
baz=110
TXAR Lajitas Array 104.95 296 Pdiff **Pdif 15 45 54.1 -0.3**
comp=Z,0.9nm,0.9s,baz=131,slow=5.5,SNR=7.2

TXAR PP **PKiKP** **15 50 05.5 -3.9**
comp=Z,6.1nm,0.9s,baz=115,slow=6.1,SNR=8.2
TXAR PKKPbc **PKKPbc** **16 01 37.5 +0.6**
comp=Z,1.0nm,0.9s,baz=241,slow=2.6,SNR=6.9
TXAR PKKP **PKKPdf** **16 01 46.7 -0.9**
comp=Z,0.8nm,0.9s,baz=270,slow=3.8,SNR=4.2
AMTX Amarillo 105.25 302 PKiKP **PKiKP** **15 50 10.2 +0.4**
baz=110
H32A Carlson Farm, 105.38 312 PKiKP **PKiKP** **15 50 10.3 +0.7**
baz=110
C33A Trail 105.39 316 PKiKP **PKiKP** **15 50 10.6 +1.1**
baz=110
A33A Warroad 105.55 317 PKiKP **PKiKP** **15 50 11.7 +1.9**
baz=110
AGMN Agassiz Nation 105.62 316 PKiKP **PKiKP** **15 50 11.7 +1.7**
baz=110
AGMN Agassiz Nation 105.62 316 PFAKE 15 50 20.0
AGMN LR LR
comp=Z,718nm,20.0s
G32A Webster 105.67 313 PKiKP **PKiKP** **15 50 11.4 +1.2**
baz=109
MSTX Muleshoe 105.80 300 PKiKP **PKiKP** **15 50 11.6 +0.8**
baz=109
MNTX Cornudas Mount 107.13 297 PKiKP **PKiKP** **15 50 14.7 +1.4**
baz=109
MNTX Cornudas Mount 107.13 297 PFAKE 15 50 30.0
MNTX LR LR
comp=Z,401nm,22.0s
OGNE Ogallala 107.45 307 PFAKE 15 50 30.0
OGNE LR LR
comp=Z,673nm,19.0s
KURBB Kurchatov Arra 107.62 42 Pdiff **Pdif** **15 46 08.1 +2.5**
comp=Z,0.3nm,0.7s,baz=237,slow=6.0,SNR=4.3
KURBB PP PP 15 50 25.8 -8.4
comp=Z,2.4nm,1.0s,baz=264,slow=6.6,SNR=6.4
KURBB PKKPbc **PKKPbc** **16 01 27.0 -2.2**
comp=Z,1.3nm,0.8s,baz=77,slow=3.0,SNR=9.9
KURBB PKKP **PKKPab** **16 01 41.6 +1.2**
comp=Z,4.7nm,1.0s,baz=76,slow=3.4,SNR=8.3
KURK Kurchatov 107.70 42 Pdif **Pdif** **15 46 08.2 +2.2**
KURK PP PP 15 50 25.8 -9.0
KURK PKKPbc **PKKPbc** **16 01 27.0 -1.9**
KURK PKKP **PKKPdf** **16 01 41.6 -1.4**
KURK LR LR
comp=Z,1μm,20.0s
MDND Maddock 107.86 315 PKiKP **PKiKP** **15 50 14.9 +0.8**
baz=107
RKT Rikitea 108.73 233 *e*SKSac **SKSac** **15 56 51.4 +0.1**
comp=Z,221nm,27.2s
RKT Rikitea 108.73 233 *e*PS PS 16 00 08.7 +0.9
comp=Z,904nm,28.2s
RKT *e*SS SS 16 06 01.6 +2.5
comp=Z,1μm,28.2s
RKT Rikitea 108.73 233 *e*LR LR 16 22 15.7
comp=Z,2μm,26.8s
MKAR Makanchi Array 108.90 47 Pdiff **Pdif** **15 46 13.0 +1.6**
comp=Z,0.4nm,0.2s,baz=224,slow=4.0,SNR=2.4
MKAR PKiKP **PKiKP** **15 50 15.6 -0.6**
comp=Z,1.9nm,1.0s,baz=246,slow=1.5,SNR=4.8
MKAR PKKPbc **PKKPbc** **16 01 23.7 -1.4**
comp=Z,0.9nm,0.9s,baz=83,slow=3.8,SNR=3.9
MKAR PKKPab **PKKPab** **16 01 36.1 +1.0**
comp=Z,7.3nm,1.0s,baz=71,slow=5.6,SNR=14
TASL Snake Pit, Alb 108.99 300 PKiKP **PKiKP** **15 50 16.2 -0.7**
baz=107
ANMO Albuquerque 108.99 300 Pdiff **Pdif** **15 46 22.5 +10**
comp=Z,2.1nm,0.9s,baz=165,slow=4.8,SNR=3.7
ANMO PKiKP **PKiKP** **15 50 16.2 -0.7**
comp=Z,0.6nm,0.3s,baz=135,slow=1.4,SNR=2.7
ANMO PP **PP** **15 50 40.9 -4.0**
comp=Z,1.4nm,0.6s,baz=122,slow=9.0,SNR=3.7
ANMO PKKPab **PKKPab** **16 01 33.3 -2.1**
comp=Z,0.6nm,0.4s,baz=307,slow=9.7,SNR=3.4
ANMO PKKP **PKKPdf** **16 01 39.1 -1.3**
comp=Z,0.9nm,0.6s,baz=267,slow=1.7,SNR=6.0
ANMO Albuquerque 108.99 300 PKiKP **PKiKP** **15 50 16.1 -0.8**
baz=107
ANMO Albuquerque 108.99 300 Pdif **Pdif** **15 46 22.6 +10**
ANMO PKiKP **PKiKP** **15 50 16.2 -0.7**
ANMO PP **PP** **15 50 40.9 -4.0**
ANMO PKKPab **PKKPab** **16 01 33.3 -2.1**
ANMO PKKP **PKKPdf** **16 01 39.0 -1.3**
ANMO LR LR
comp=Z,625nm,20.0s
TASM ASL Pad, Albuq 108.99 300 PKiKP **PKiKP** **15 50 16.4 -0.5**
baz=107
SDCO Great Sand Dun 109.07 303 PFAKE 15 50 30.0
SDCO LR LR
comp=Z,687nm,21.0s
Q24A Divide 109.16 305 PKiKP **PKiKP** **15 50 16.6 -0.7**
baz=107
ISCO Idaho Springs 109.74 306 PKiKP **PKiKP** **15 50 17.6 -0.7**
baz=106
ISCO Idaho Springs 109.74 306 PFAKE 15 50 30.0
ISCO LR LR
comp=Z,723nm,21.0s
RSSD Black Hills 109.78 310 PKiKP **PKiKP** **15 50 17.6 -0.5**
baz=106
S22A 4UR Ranch, Cre 110.08 303 PKiKP **PKiKP** **15 50 19.1 +0.1**
baz=106
N23A Red Feather La 110.28 307 PKiKP **PKiKP** **15 50 19.3 0.0**
baz=106
LSA Lhasa 110.72 66 PFAKE 15 50 30.0
LSA LR LR
comp=Z,1μm,19.0s
LSA Lhasa 110.72 66 P **PKiKP** **15 50 20.7 +0.1**
DGMT Dagmar 110.99 315 PFAKE 15 50 30.0
DGMT LR LR
comp=Z,792nm,21.0s
FFC Flin Flon 111.11 322 PFAKE 15 50 30.0
FFC LR LR
comp=Z,614nm,21.0s
K22A Casper 111.15 308 PKiKP **PKiKP** **15 50 21.2 +0.5**
baz=105
MVCO Mesa Verde 111.22 302 PFAKE 15 50 30.0
MVCO LR LR
comp=Z,511nm,20.0s
NVS Novosibirsk 111.48 38 *e*PKIKP **PKiKP** **15 50 13.8 -6.9**
NVS pmax pmax
comp=N,19nm,2.1s
NVS pmax pmax
comp=Z,40nm,2.1s
TUC Tucson 111.69 297 PFAKE 15 50 30.0
TUC LR LR
comp=Z,745nm,19.0s
WMQ Urumqi 111.82 51 PKP **PKiKP** **15 50 22.0 +0.2**
WMQ LR LR
comp=Z,2μm,19.3s
WMQ LR LR
comp=Z,2μm,25.5s
WMQ LR LR
comp=Z,3μm,26.1s
LAO LASA Array 111.91 313 PFAKE 15 50 30.0
LAO LR LR
comp=Z,649nm,21.0s
ZALV Zalesovo Beam 112.20 40 Pdiff **Pdif** **15 46 34.5 +8.6**
comp=Z,0.2nm,0.3s,baz=263,slow=1.2,SNR=2.5
ZALV PKiKP **PKiKP** **15 50 22.2 +0.1**
comp=Z,1.9nm,0.8s,baz=256,slow=5.6,SNR=5.1
ZALV PP **PP** **15 51 03.6 -3.6**
comp=Z,4.4nm,0.9s,baz=270,slow=5.9,SNR=4.3
ZALV PKKPbc **PKKPbc** **16 01 12.9 -1.5**
comp=Z,2.8nm,0.9s,baz=64,slow=3.4,SNR=6.4
ZALV PKKPab **PKKPab** **16 01 19.6 -0.5**
comp=Z,3.6nm,0.8s,baz=109,slow=3.4,SNR=6.5
ZALV PKKP **PKKPdf** **16 01 33.9 -0.7**
comp=Z,0.6nm,0.5s,baz=242,slow=18,SNR=2.6
RES Resolute Bay 112.40 343 PKiKP **PKiKP** **15 50 20.5 -1.4**
comp=Z,2.4nm,0.9s,baz=103,slow=3.7,SNR=2.7
RES PP **PP** **15 51 04.4 -3.7**
comp=Z,5.7nm,1.1s,baz=90,slow=4.2,SNR=3.9
MBWA Marble Bar 112.92 128 PFAKE 15 50 40.0
MBWA LR LR
comp=Z,626nm,21.0s
DGZ Jazzator, Alta 112.93 44⇑ *e*PKIKP **PKiKP** **15 50 25.4 +1.6**
WUAZ Wupatki 113.02 300 PFAKE 15 50 40.0
WUAZ LR LR
comp=Z,344nm,20.0s
BW06 Boulder Array 113.35 308 PKiKP **PKiKP** **15 50 23.7 -1.2**
baz=103
BW06 Boulder Array 113.35 308 PFAKE 15 50 40.0
BW06 LR LR
comp=Z,654nm,20.0s
PDAR Pinedale Array 113.35 308 Pdiff **Pdif** **15 46 37.1 +5.5**
comp=Z,0.1nm,0.2s,baz=92,slow=8.1,SNR=3.8
PDAR PKiKP **PKiKP** **15 50 23.1 -1.9**
comp=Z,1.4nm,0.6s,baz=107,slow=3.7,SNR=10
PDAR PP **PP** **15 51 11.2 -5.0**
comp=Z,2.2nm,0.8s,baz=98,slow=7.6,SNR=4.1
RLMT Red Lodge 113.65 310 PKiKP **PKiKP** **15 50 24.7 -0.7**
baz=102
RLMT Red Lodge 113.65 310 PFAKE 15 50 40.0
RLMT LR LR
comp=Z,631nm,21.0s
CMAR Chiang Mai Arr 113.99 80 PKP **PKiKP** **15 50 26.4 -0.2**
comp=Z,4.8nm,0.9s,baz=251,slow=3.4,SNR=16
CMAR PP **PP** **15 51 24.2 +3.4**
comp=Z,6.4nm,1.1s,baz=258,slow=7.3,SNR=6.5
CMAR PKKPbc **PKKPab** **16 01 13.8 -0.3**
comp=Z,2.8nm,1.1s,baz=78,slow=2.1,SNR=7.7
CMAR PKKP **PKKPdf** **16 01 30.7 +0.6**
comp=Z,1.6nm,1.0s,baz=64,slow=3.3,SNR=4.1
CHTO Chiang Mai 114.11 80 PKP PKPdf 15 50 28.1 +1.3
CHTO Chiang Mai 114.11 80 PFAKE 15 50 40.0 +13
CHTO LR LR
comp=Z,1μm,19.0s
LKWY Lake 114.33 310 PFAKE 15 50 40.0 +13
LKWY LR LR
comp=Z,2μm,20.0s
AHID Auburn Hatcher 114.46 308 PFAKE 15 50 40.0 +13
AHID LR LR
comp=Z,888nm,20.0s
EGMT Eagleton 114.53 313 PKiKP PKPdf 15 50 26.8 -0.1
baz=100
EGMT Eagleton 114.53 313 PFAKE 15 50 40.0 +13
EGMT LR LR
comp=Z,597nm,20.0s
HWUT Hardware Ranch 114.56 306 PFAKE 15 50 40.0 +13
HWUT LR LR
comp=Z,766nm,20.0s
PDMCI Parker Dam,Lak 114.92 298 PKiKP **PKiKP** **15 50 28.1 +0.2**
baz=104
Y12C Blythe 115.10 297 PKiKP **PKiKP** **15 50 28.4 +0.1**
baz=104
DUG Dugway, Tooele 115.20 304 PKiKP **PKPdf** **15 50 28.4 -0.1**
baz=102
DUG Dugway, Tooele 115.20 304 PFAKE 15 50 40.0 +12
DUG LR LR
comp=Z,568nm,22.0s
BOZ Bozeman (W) 115.37 311 PKiKP **PKiKP** **15 50 29.2 +0.5**
baz=100
BOZ Bozeman (W) 115.37 311 PFAKE 15 50 40.0 +11
BOZ LR LR
comp=Z,582nm,19.0s
IRM Iron Mountain 115.70 298 PKiKP **PKiKP** **15 50 29.7 +0.2**
baz=104
BC3 Big Chuckawall 115.83 297 PKiKP **PKiKP** **15 50 29.9 0.0**
baz=104
IKP In-Ko-Pah, Jac 116.13 296 PKiKP **PKPdf** **15 50 30.3 -0.2**
baz=104
GMRC Granite Mounta 116.25 298 PKiKP **PKiKP** **15 50 31.1 +0.4**
baz=103
BELC Belle Mtn. Jos 116.35 297 PKiKP **PKiKP** **15 50 31.0 +0.1**
baz=103
MONP2 Monument Peak 116.44 296 PKiKP **PKiKP** **15 50 31.3 +0.1**
baz=104
TUQ Turquoise Moun 116.61 299 PKiKP **PKPdf** **15 50 31.2 -0.1**
baz=102
PFO Pinyon Flats O 116.64 297 PKiKP **PKiKP** **15 50 31.6 +0.2**
baz=103
PFO Pinyon Flats O 116.64 297 PFAKE 15 50 40.0 +8.6
PFO LR LR
comp=Z,429nm,21.0s
HEC Hector,Ludlow 116.81 298 PKiKP **PKiKP** **15 50 31.7 +0.1**
baz=103
R11A Troy Canyon, C 116.94 302 PKiKP **PKiKP** **15 50 32.1 +0.2**
baz=101
R11A Troy Canyon, C 116.94 302 *e*PKPdf **PKiKP** **15 50 32.1 +0.2**
SHOC Shoshone, Teco 116.99 299 PKiKP **PKiKP** **15 50 32.1 +0.2**
baz=102
HLID Hailey 116.99 308 PKiKP **PKiKP** **15 50 32.2 +0.4**
baz=99
HLID Hailey 116.99 308 PFAKE 15 50 40.0 +8.1
HLID LR LR
comp=Z,673nm,20.0s
109C Camp Elliot, M 117.00 296 PKiKP **PKiKP** **15 50 32.0 0.0**
baz=103
MSO Missoula 117.15 312 PKiKP **PKiKP** **15 50 32.9 +0.9**
baz=98
TPNV Topopah Spring 117.18 300 PKiKP **PKiKP** **15 50 32.7 +0.3**
baz=102
TPNV Topopah Spring 117.18 300 *e*PKPdf **PKPdf** **15 50 33.4 +0.9**
MURC Murrieta 117.23 296 PKiKP **PKiKP** **15 50 32.5 +0.1**
baz=103
GSC Goldstone, Bar 117.28 298 PKiKP **PKiKP** **15 50 32.6 0.0**
baz=102
STKA Stephens Creek 117.37 153 PKP **PKPdf** **15 50 32.3 -0.6**
comp=Z,10nm,0.9s,baz=134,slow=4.0,SNR=9.0
STKA PKKPbc **PKKPbc** **16 00 57.0 +0.7**
comp=Z,6.7nm,0.8s,baz=13,slow=8.7,SNR=3.4
FURC Furnace Creek, 117.57 300 PKiKP **PKiKP** **15 50 33.5 +0.6**
baz=102
MPMC Manual Prospec 117.98 299 PKiKP **PKiKP** **15 50 34.3 +0.3**
baz=101
LRMC Laurel Mtn Rad 118.02 298 PKiKP **PKiKP** **15 50 34.3 +0.2**
baz=102
SKNT Sakolnakorn 118.03 83 PKP **PKPdf** **15 50 34.1 -0.3**
EDW2 Edwards Air Fo 118.15 298 PKiKP **PKiKP** **15 50 34.5 +0.3**
baz=102
CIS Catalina Islan 118.19 296 PKiKP **PKiKP** **15 50 34.7 +0.4**
baz=102
TWSI Taliwang, Sumb 118.21 116 PKP **PKPdf** **15 50 32.6 -2.3**
TWSI PKP **PKiKP** **15 50 35.7 +0.8**
TBI Tubuai 118.30 222 *e*PP PP 15 51 48.0 -1.8
comp=Z,127nm,36.0s
TBI Tubuai 118.30 222 *e*PS PS 16 01 36.9 +0.5
comp=Z,794nm,27.5s
TBI *e*SS SS 16 08 08.0 +2.9
comp=Z,2μm,29.5s
TBI Tubuai 118.30 222 *e*LR LR 16 26 35.3
comp=Z,2μm,30.8s
YKA Yellowknife Ar 118.51 329 PKP **PKPdf** **15 50 32.4 -1.5**
comp=Z,5.5nm,0.9s,baz=82,slow=1.8,SNR=28
YKA PP **PP** **15 51 48.6 -2.6**
comp=Z,3.6nm,1.0s,baz=88,slow=7.7,SNR=5.2
YKA PKKPbc **PKKPab** **16 00 51.7 -0.3**
comp=Z,3.4nm,0.8s,baz=277,slow=3.6,SNR=18
YKA SKKP 16 04 54.7
comp=Z,0.8nm,0.9s,baz=273,slow=4.3,SNR=4.2
YKW3 Yellowknife Ar 118.51 329 *e*PKPdf **PKPdf** **15 50 33.4 -0.5**
CWC Cottonwood Cre 118.53 299 PKiKP **PKiKP** **15 50 35.1 +0.1**
baz=101
ISA Isabella, Lake 118.69 299 PKiKP **PKiKP** **15 50 35.8 +0.5**
baz=101
ISA Isabella, Lake 118.69 299 *e*PKPdf **PKPdf** **15 50 36.2 +0.9**
NV11 Mina Array Sit 118.94 302 *e*PKPdf **PKPdf** **15 50 36.9 +1.1**
KVN Kaiserville 119.00 302 *e*PKPdf **PKPdf** **15 50 36.9 +1.0**
NV01 Mina Array Sit 119.06 302 *e*PKPdf **PKPdf** **15 50 35.7 -0.4**
NVAR Mina Array Bea 119.06 302 PKP **PKPdf** **15 50 35.0 -1.0**
comp=Z,3.3nm,0.8s,baz=124,slow=2.7,SNR=14
NVAR PP **PP** **15 51 55.5 -0.7**
comp=Z,2.9nm,0.9s,baz=132,slow=3.7,SNR=3.4
NVAR PKKPbc **PKKPab** **16 00 51.1 -0.1**
comp=Z,1.0nm,0.6s,baz=276,slow=3.9,SNR=5.3
NVAR SKKP 16 04 55.3
comp=Z,0.4nm,0.5s,baz=253,slow=4.0,SNR=4.5
FITZ Fitzroy Crossi 119.11 130 PKP **PKPdf** **15 50 35.5 -1.0**
comp=Z,15nm,0.9s,baz=249,slow=2.4,SNR=25
FITZ PKKPbc **PKKPab** **16 00 52.8 -1.0**
comp=Z,3.0nm,0.9s,baz=171,slow=4.7,SNR=5.8
FITZ Fitzroy Crossi 119.11 130 *e*PKPdf **PKPdf** **15 50 36.5 0.0**
FITZ PKKPbc **PKKPab** **16 00 52.8 -1.0**
BMO Blue Mountains 119.23 309 *e*PKPdf **PKPdf** **15 50 34.9 -1.1**
BMO LR LR
comp=Z,618nm,22.0s
BMO Blue Mountains 119.23 309 *e*PKIKP **PKPdf** **15 50 34.9 -1.1**
BMO MLR MLR
comp=Z,618nm,22.0s
RYN Ryan 119.26 302 *e*PKPdf **PKPdf** **15 50 37.8 +1.4**
MLAC Mammoth, Mammo 119.33 301 PKiKP **PKiKP** **15 50 37.0 +0.2**
baz=100
KMI Kunming 119.35 74 PKP **PKPdf** **15 50 37.3 +0.3**
KMI sPKP 15 50 40.5
KMI PP **PP** **15 52 02.5 +4.0**
KMI SKKS 15 58 57.8
KMI SS **SS** **16 08 23.3 +2.1**
KMI LR LR
comp=Z,650nm,19.9s
KMI LR LR
comp=Z,990nm,20.4s
KMI LR LR
comp=Z,1μm,36.4s
SBC Santa Barbara 119.45 297 PKiKP **PKiKP** **15 50 36.8 +0.2**
baz=101
NEW Newport 119.45 313 PFAKE 15 50 50.0 +14
NEW LR LR
comp=Z,779nm,19.0s
OMMB Old Mammoth Mi 119.46 301 *e*PKPdf **PKPdf** **15 50 38.3 +1.3**
SBUM Sibu 119.85 102 *e*PKPdf **PKPdf** **15 50 37.8 -0.2**
YERR Yerington 119.87 302 *e*PKPdf **PKPdf** **15 50 39.1 +1.6**
GTA Gaotai 119.88 57 *e*PKP **PKPdf** **15 50 36.5 -1.0**
GTA PP **PP** **15 52 05.0 +3.3**
GTA SKKS 15 58 57.8
GTA SS **SS** **16 08 28.5 +1.2**
GTA AMB AMB
comp=Z,190nm,8.2s
GTA LR LR
comp=Z,530nm,22.7s
GTA LR LR
comp=Z,840nm,24.7s
GTA LR LR
comp=Z,2μm,25.2s
WVOR Wild Horse Val 119.90 306 *e*PKPdf **PKPdf** **15 50 38.5 +1.1**
WVOR LR LR
comp=Z,745nm,19.0s
WAKR Walker 119.94 302 *e*PKPdf **PKPdf** **15 50 39.5 +1.8**
ASAR Alice Springs 120.32 141 PKP **PKPdf** **15 50 38.0 -0.8**
comp=Z,12nm,0.9s,baz=205,slow=1.5,SNR=114
ASAR PKKPbc **PKKPbc** **16 00 44.0 -1.4**
comp=Z,5.5nm,1.0s,baz=43,slow=3.5,SNR=18
ASAR SKKPbc SKKPbc 16 04 29.0 -2.1
comp=Z,3.1nm,1.1s,baz=62,slow=2.9,SNR=4.4
AS31 Alice Springs 120.32 141 *e*PKPdf **PKPdf** **15 50 37.9 -0.9**
B08A Colville Reser 120.93 313 *e*PKPdf **PKPdf** **15 50 38.9 -0.2**
HAWA Hanford 120.94 311 PFAKE 15 50 50.0 +11
HAWA LR LR
comp=Z,648nm,20.0s
MOD Modoc Plateau 121.06 305 *e*PKPdf **PKPdf** **15 50 40.3 +0.6**
AFDM Forest Hills D 121.20 302 *e*PKPdf **PKPdf** **15 50 40.7 +0.8**
TAOE Nuku Hiva Isla 121.30 242 *e*PS PS 16 02 03.5 -0.7
comp=Z,372nm,26.1s
TAOE Nuku Hiva Isla 121.30 242 *e*LR LR 16 27 59.6
comp=Z,2μm,34.6s
CD2 Chengdu 121.57 68 PKP **PKPdf** **15 50 40.0 -0.9**
CD2 PP **PP** **15 52 12.5 -0.9**
CD2 SKS **SKSdf** **15 57 52.0 -0.7**
CD2 SKKS **SKKSac** **15 59 10.5 -1.9**
CD2 SS **SS** **16 08 50.5 +1.2**
CD2 AMB AMB
comp=Z,290nm,4.4s
CD2 LR LR
comp=Z,1μm,24.0s
CD2 LR LR
comp=Z,1μm,21.6s
K05A Summer Lake 121.58 306 *e*PKPdf **PKPdf** **15 50 40.9 +0.1**
MOY Mondy 121.70 43 *e*PKIKP **PKPdf** **15 50 40.1 -0.5**
MOY pmax pmax
comp=Z,63nm,1.8s
PINE Pine Mountain 121.72 307 *e*PKPdf **PKPdf** **15 50 42.5 +1.5**
J05D Fort Rock, OR 121.89 307 PKiKP **PKiKP** **15 50 41.6 +0.1**
baz=95
O03D Paynes Creek 122.00 303 PKiKP **PKPdf** **15 50 41.2 -0.3**
baz=97
I05D Terrebonne, OR 122.05 308 PKiKP **PKiKP** **15 50 41.6 0.0**
baz=94
G05D Wamic, OR 122.10 309 PKiKP **PKiKP** **15 50 41.5 -0.1**
baz=94
M04C Macdoel 122.19 305 PKiKP **PKPdf** **15 50 41.9 0.0**
baz=96
K04D Chiloquin, OR 122.21 306 PKiKP **PKiKP** **15 50 42.3 +0.2**
baz=95
J04D Umpqua Nationa 122.52 307 PKiKP **PKiKP** **15 50 42.6 -0.1**
baz=95
LON Longmire 122.53 311 *e*PKPdf **PKPdf** **15 50 42.2 0.0**
LON Longmire 122.53 311 *e*PKIKP **PKPdf** **15 50 42.2 0.0**
LZH Lanzhou 122.55 62 *e*PKP **PKPdf** **15 50 43.0 +0.2**
LZH sPKP 15 50 49.5
LZH PP **PP** **15 52 21.5 +1.4**
LZH PKS **PKSdf** **15 54 18.3 -1.3**
LZH SKS **SKSdf** **15 57 47.3 -7.3**
LZH SKKS **SKKSac** **15 59 11.8 -7.0**
LZH SS **SS** **16 09 03.0 +1.3**
LZH AMB AMB
comp=Z,410nm,9.7s
LZH LR LR
comp=Z,2μm,18.0s
LZH LR LR
comp=Z,1μm,18.1s
LZH LR LR
comp=Z,3μm,20.3s
PPT2 Papeete2 122.57 227 *e*PP PP 15 52 17.4 -2.0
comp=Z,191nm,25.0s
PPT2 Papeete2 122.57 227 *e*PS PS 16 02 14.8 -0.1
comp=Z,454nm,25.5s
PPT2 *e*SS SS 16 08 59.9 -0.6
comp=Z,3μm,34.0s
PPT2 Papeete2 122.57 227 *e*LR LR 16 28 30.8
comp=Z,2μm,29.8s
WDC Whiskeytown Da 122.60 304 *e*PKPdf **PKPdf** **15 50 42.4 -0.1**
WDC Whiskeytown Da 122.60 304 *e*PKIKP **PKPdf** **15 50 42.4 -0.1**
KAPI Kappang 122.63 114 PFAKE 15 50 50.0 +6.6
KAPI LR LR
comp=Z,634nm,21.0s
N02D Trinity Center 122.76 304 PKiKP **PKPdf** **15 50 42.8 -0.1**
baz=96
B05A Bryant 122.77 313 PKiKP **PKPdf** **15 50 42.1 -0.4**
baz=91
I04A Tendick Farm, 122.78 307 PKiKP **PKPdf** **15 50 42.8 0.0**
baz=94
YBH Yreka Blue Hor 122.83 305 PKP **PKPdf** **15 50 42.6 -0.4**
comp=Z,4.0nm,0.8s,baz=7.3,slow=3.2,SNR=11
M02C Callahan 122.91 305 PKiKP **PKPdf** **15 50 43.1 -0.1**
baz=95
HUMO Hull Mountain 123.09 306 *e*PKPdf **PKPdf** **15 50 43.8 +0.4**
GYA Guiyang 123.10 74 Pdif **Pdif** **15 47 16.0 +0.8**
GYA PKP **PKiKP** **15 50 44.8 +0.5**
GYA PKS **PKSdf** **15 54 19.3 -1.6**
GYA SKKS 15 59 20.0
GYA SS **SS** **16 09 10.0 +0.9**
GYA AMB AMB
comp=Z,160nm,7.9s
GYA LR LR
comp=Z,210nm,20.2s
GYA LR LR
comp=Z,190nm,20.7s
ZAK Zakamensk 123.15 45 *e*PKIKP **PKPdf** **15 50 41.8 -1.6**
ZAK pmax pmax
comp=Z,20nm,1.1s
ZAK pmax pmax
comp=Z,8.0nm,1.8s
A04D Lummi Island 123.19 313 PKiKP **PKiKP** **15 50 43.9 +0.4**
baz=91
SPSI Sidrap Palu 123.22 113 PKP **PKPdf** **15 50 43.6 -0.9**
SPSI PKP **PKiKP** **15 50 46.1 +1.4**
KCPM Cahto Peak 123.30 302 *e*PKPdf **PKPdf** **15 50 45.3 +1.2**
F04D Rainier, OR 123.33 310 PKiKP **PKiKP** **15 50 44.4 +0.4**
baz=92
TLY Talaya 123.35 43 *e*PKPdf **PKPdf** **15 50 43.4 -0.2**
TLY LR LR
comp=Z,1μm,20.0s
TLY Talaya 123.35 43 P **PKPdf** **15 50 43.7 +0.1**
SNR=8.9
TLY Talaya 123.35 43 *i* PKIKP **PKPdf** **15 50 43.7 +0.1**
TLY pmax pmax
comp=Z,22nm,0.9s
WRA Warramunga Arr 123.44 139 PKP **PKPdf** **15 50 43.5 -1.3**
comp=Z,8.7nm,0.8s,baz=244,slow=2.0,SNR=79
WRA PP **PP** **15 52 26.4 +1.4**
comp=Z,1.9nm,0.9s,baz=217,slow=5.2,SNR=4.8
WRA PKKPbc **PKKPbc** **16 00 33.0 -0.4**
comp=Z,2.1nm,1.0s,baz=42,slow=5.2,SNR=9.7
WRA SKKPbc SKKPbc 16 04 21.8 +0.9
comp=Z,1.7nm,0.9s,baz=352,slow=3.0,SNR=5.6
KMRM Mail Ridge 123.45 303 *e*PKPdf **PKPdf** **15 50 45.9 +1.6**
WB2 Warramunga Arr 123.45 139 *e*PKPdf **PKPdf** **15 50 43.6 -1.2**
WRAB Tennant Creek 123.46 139 *e*PKPdf **PKPdf** **15 50 42.5 -2.4**
WRAB LR LR
comp=Z,2μm,19.0s
WRAB Tennant Creek 123.46 139⇑ *i* PKIKP **PKPdf** **15 50 44.8 -0.1**
WRAB pmax pmax
comp=Z,25nm,1.7s
SOEI Soe 123.50 122 PKP **PKPdf** **15 50 45.3 +0.1**
SOEI PKP **sPKPdf** **15 50 51.6 -0.2**
KHMM Horse Mountain 123.52 304 *e*PKPdf **PKPdf** **15 50 45.6 +1.1**
L02D Cave Junction, 123.53 305 PKiKP **PKiKP** **15 50 44.8 +0.3**
baz=94
IRK Irkutsk 123.72 43 *e*PKIKP **PKPdf** **15 50 44.6 +0.3**
IRK pmax pmax
comp=Z,73nm,1.8s

NLWA	**Neilton Lookou**	**123.95**	**312**	PFAKE		15 51 00.0	+15
NLWA				LR	LR		
	comp=Z,931nm,20.0s						
QIZ	**Qiongzhong**	**123.97**	**83**	PKP	**PKPdf**	**15 50 46.5**	**+0.8**
QIZ				PP	**PP**	**15 52 29.0**	**-0.8**
QIZ				SS	SS	16 09 24.5	+4.5
QIZ				LR	LR		
	comp=Z,610nm,18.6s						
QIZ				LR	LR		
	comp=Z,1μm,21.1s						
QIZ				LR	LR		
	comp=Z,2μm,20.6s						
QIZ	**Qiongzhong**	**123.97**	**83**	PFAKE		15 51 00.0	+14
QIZ				LR	LR		
	comp=Z,2μm,20.0s						
INK	**Inuvik**	**125.07**	**338**	PKP	**PKPdf**	**15 50 45.7**	**-0.6**
	comp=Z,26nm,0.9s,baz=63,slow=1.5,SNR=21						
INK	**Inuvik**	**125.07**	**338**	*e*PKPdf	**PKPdf**	**15 50 45.6**	**-0.7**
SONM	**Songino Array**	**125.23**	**48**	PKP	**PKPdf**	**15 50 47.2**	**-0.3**
	comp=Z,20nm,0.9s,baz=221,slow=2.0,SNR=42						
SONM				PP	**PP**	**15 52 41.7**	**+4.0**
	comp=Z,2.0nm,0.8s,baz=289,slow=4.5,SNR=3.6						
SONA1	**Songino Array**	**125.23**	**48**	*e*PKPdf	**PKPdf**	**15 50 46.2**	**-1.3**
MPSI	**Mapaga**	**125.58**	**109**	PKP	**PKPdf**	**15 50 47.2**	**-1.8**
MPSI				PKP	**PKiKP**	**15 50 50.3**	**+0.9**
RAR	**Rarotonga**	**125.86**	**215**	PKP	**PKPdf**	**15 50 49.7**	**+0.3**
	comp=Z,30nm,0.9s,baz=208,slow=8.5,SNR=5.1						
ENH	**Enshi**	**126.31**	**70**	*e*PKPdf	**PKPdf**	**15 50 49.8**	**-0.2**
ENH				LR	LR		
	comp=Z,981nm,22.0s						
XAN	**Xi'an**	**126.39**	**65**	PKP	**PKPdf**	**15 50 49.3**	**-0.8**
APSI	**Ampana**	**126.43**	**111**	PKP	**PKPdf**	**15 50 52.4**	**+1.7**
APSI				PKP	**pPKPdf**	**15 50 55.6**	**+0.1**
DLBC	**Dease Lake**	**126.55**	**326**	*e*PKPdf	**PKPdf**	**15 50 50.8**	**+1.2**
MYLDM	**Lahad Datu**	**126.67**	**103**	*e*PKPdf	**PKPdf**	**15 50 53.1**	**+2.0**
LUWI	**Luwuk**	**127.31**	**112**	PKP	**PKPdf**	**15 50 53.4**	**+1.1**
LUWI				PKP	**PKiKP**	**15 50 54.8**	**+1.9**
LUWI	**Luwuk**	**127.31**	**112**	*e*PKPdf	**PKPdf**	**15 50 53.7**	**+1.4**
TIXI	**Tiksi**	**127.63**	**15**	PP	PP	15 52 51.5	-0.9
	comp=Z,3.4nm,0.9s,baz=324,slow=5.0,SNR=3.8						
TIXI	**Tiksi**	**127.63**	**15**	*e*PKPdf	**PKPdf**	**15 50 50.0**	**-1.2**
TIXI				PP	**PP**	**15 52 51.5**	**-0.9**
TIXI				LR	LR		
	comp=Z,390nm,20.0s						
TIXI	**Tiksi**	**127.63**	**15**	⇓*i*PKIKP	**PKPdf**	**15 50 49.9**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,32nm,1.7s						
BTO	**Baotou**	**127.80**	**57**	*e*PKP	**PKPdf**	**15 50 50.3**	**-2.3**
WRAK	**Wrangell Islan**	**128.22**	**323**	PFAKE		15 51 00.0	+7.3
WRAK				LR	LR		
	comp=Z,654nm,19.0s						
BOD	**Bodaibo**	**128.42**	**35**	*e*PKIKP	**PKPdf**	**15 50 51.1**	**-2.0**
BOD				pmax	pmax		
	comp=Z,59nm,1.4s						
JIS	**Juneau Island**	**128.82**	**326**	*e*PKPdf	**PKPdf**	**15 50 55.1**	**+1.3**
SKAG	**Skagway**	**128.93**	**328**	*e*PKPdf	**PKPdf**	**15 50 55.3**	**+1.3**
BESE	**Bessie Mountai**	**128.97**	**327**	*e*PKPdf	**PKPdf**	**15 50 55.6**	**+1.4**
DAWY	**Dawson**	**128.99**	**334**	*e*PKPdf	**PKPdf**	**15 50 53.8**	**-0.3**
EGAK	**Eagle**	**129.35**	**335**	*e*PKPdf	**PKPdf**	**15 50 54.1**	**-0.5**
EGAK				LR	LR		
	comp=Z,702nm,19.0s						
CIT	**Chita**	**129.43**	**42**	*e*PKIKP	**PKPdf**	**15 50 55.8**	**+0.5**
SANI	**Sanana**	**129.44**	**115**	PKP	**PKPdf**	**15 50 54.1**	**-2.3**
SANI				PKP	**PKiKP**	**15 50 58.4**	**+1.3**
TIY	**Taiyuan**	**129.56**	**61**	*e*PKP	**PKPdf**	**15 50 56.0**	**0.0**
CTA	**Charters Tower**	**129.66**	**150**	PKP	**PKPdf**	**15 50 56.7**	**0.0**
	comp=Z,35nm,0.9s,baz=195,slow=2.2,SNR=36						
CTA				PP	**PP**	**15 53 08.0**	**+2.1**
	comp=Z,4.9nm,1.0s,baz=229,slow=10,SNR=3.4						
CTAO	**Charters Tower**	**129.66**	**150**	*e*PKPdf	**PKPdf**	**15 50 56.5**	**-0.2**
CTAO				LR	LR		
	comp=Z,2μm,22.0s						
FYU	**Fort Yukon**	**129.87**	**339**	*e*PKPdf	**PKPdf**	**15 50 56.6**	**+1.1**
TOLK	**Toolik Lake Re**	**129.94**	**342**	PKiKP	**PKPdf**	**15 50 55.9**	**+0.2**
	baz=50						
WHN	**Wuhan**	**130.50**	**70**	⇓PKP	**PKPdf**	**15 50 58.8**	**+0.9**
WHN				PP	**PP**	**15 53 17.3**	**+4.5**
WHN				LR	LR		
	comp=Z,3μm,22.6s						
SCRK	**Sand Creek**	**130.82**	**335**	*e*PKPdf	**PKPdf**	**15 50 57.6**	**0.0**
COLD	**Coldfoot**	**131.04**	**341**	*e*PKPdf	**PKPdf**	**15 50 57.9**	**+0.1**
RIDG	**Independ'e Rid**	**131.26**	**335**	*e*PKPdf	**PKPdf**	**15 50 58.4**	**0.0**
ILAR	**Eielson Array**	**131.45**	**337**	PKhKP	PKPpre	15 50 47.4	
	comp=Z,0.8nm,0.7s,baz=27,slow=3.1,SNR=4.9						
ILAR				PKP	**PKPdf**	**15 50 58.9**	**+0.2**
	comp=Z,16nm,1.1s,baz=15,slow=3.2,SNR=15						
ILAR				SKP		15 54 30.2	
	comp=Z,0.8nm,0.8s,baz=57,slow=1.6,SNR=4.5						
HDA	**Harding Lake**	**131.68**	**337**	*e*PKPdf	**PKPdf**	**15 50 58.5**	**-0.6**
PAX	**Paxson**	**131.91**	**335**	*e*PKPdf	**PKPdf**	**15 51 00.2**	**+0.5**
PAX	**Paxson**	**131.91**	**335**	*e*PKIKP	**PKPdf**	**15 51 00.2**	**+0.5**
HARP	**HAARP**	**132.08**	**334**	*e*PKPdf	**PKPdf**	**15 51 01.0**	**+1.1**
BJT	**Baijiatuan**	**132.49**	**58**	*e*PKPdf	**PKPdf**	**15 51 02.1**	**+0.7**
BJT				LR	LR		
	comp=Z,1μm,20.0s						
BJI	**Beijing**	**132.50**	**58**	PKP	**PKPdf**	**15 51 01.3**	**-0.1**
BJI				LR	LR		
	comp=Z,1μm,21.1s						
BJI				LR	LR		
	comp=Z,2μm,25.5s						
BMRM	**Bremner River**	**132.57**	**332**	*e*PKPdf	**PKPdf**	**15 51 01.4**	**+0.4**
DHY	**Denali Highway**	**132.58**	**335**	*e*PKPdf	**PKPdf**	**15 51 01.8**	**+0.7**
MLY	**Manley**	**132.61**	**339**	*e*PKPpre	PKPpre	15 50 53.1	
BWN	**Browne**	**132.71**	**337**	*e*PKPdf	**PKPdf**	**15 51 00.9**	**-0.1**
MCK	**McKinley**	**132.78**	**337**	*e*PKPdf	**PKPdf**	**15 51 00.9**	**-0.3**
MCK	**McKinley**	**132.78**	**337**	*e*PKIKP	**PKPdf**	**15 51 00.9**	**-0.3**
KLU	**Klutina**	**132.86**	**333**	*e*PKPdf	**PKPdf**	**15 50 59.2**	**-2.4**
RAGM	**Ragged Mountai**	**132.88**	**331**	*e*PKPdf	**PKPdf**	**15 51 03.3**	**+1.8**
IM3	**Indian Mountai**	**132.93**	**341**	*e*PKPpre	PKPpre	15 50 49.8	
DIV	**Divide**	**132.98**	**333**	*e*PKPdf	**PKPdf**	**15 51 03.1**	**+1.4**
SCM	**Sheep Creek Mo**	**133.25**	**334**	*e*PKPdf	**PKPdf**	**15 51 02.9**	**+0.7**
SCM	**Sheep Creek Mo**	**133.25**	**334**	*e*PKIKP	**PKPdf**	**15 51 02.9**	**+0.7**
TIA	**Tai'an**	**133.26**	**63**	PKP	**PKPdf**	**15 51 03.0**	**0.0**
COEN	**Coen**	**133.30**	**143**	*e*PKPdf	**PKPdf**	**15 51 04.4**	**+0.7**
DZM	**Mont Dzumac**	**133.32**	**175**	PKP	**PKPdf**	**15 51 04.6**	**+0.9**
	comp=Z,19nm,0.9s,baz=25,slow=8.6,SNR=7.8						
DZM	**Mont Dzumac**	**133.32**	**175**	*e*PP	PP	15 53 28.9	-0.2
	comp=Z,161nm,24.4s						
DZM	**Mont Dzumac**	**133.32**	**175**	*e*LR	LR	16 33 33.2	
	comp=Z,1μm,23.3s						
DZM	**Mont Dzumac**	**133.32**	**175**	*e*PKPdf	**PKPdf**	**15 51 05.4**	**+1.7**
TRF	**Thorofare Moun**	**133.44**	**337**	*e*PKPdf	**PKPdf**	**15 51 02.4**	**-0.3**
SML	**Sawmill**	**133.66**	**334**	*e*PKPdf	**PKPdf**	**15 51 03.4**	**+0.4**
SML	**Sawmill**	**133.66**	**334**	*e*PKIKP	**PKPdf**	**15 51 03.4**	**+0.4**
RDOG	**Red Dog Mine**	**133.69**	**346**	*e*PKPdf	**PKPdf**	**15 51 02.9**	**0.0**
DAV	**Davao City (W)**	**133.78**	**105**	PFAKE		15 51 20.0	+15
DAV				LR	LR		
	comp=Z,389nm,22.0s						
YAK	**Yakutsk**	**133.81**	**25**	*e*PKPdf	**PKPdf**	**15 51 03.5**	**+0.3**
YAK				LR	LR		
	comp=Z,733nm,21.0s						
YAK	**Yakutsk**	**133.81**	**25**	*e*PKIKP	**PKPdf**	**15 51 02.1**	**-1.0**
YAK				*e*		15 53 32.2	
YAK				*e*		15 58 14.0	
YAK				pmax	pmax		
	comp=Z,23nm,0.9s						
YAK				pmax	pmax		
	comp=Z,79nm,1.6s						
YAK				pmax	pmax		
	comp=N,24nm,1.5s						
YAK				pmax	pmax		
	comp=E,18nm,1.4s						
YAK				MLR	MLR		
	comp=Z,517nm,22.0s						
YAK				MLR	MLR		
	comp=N,876nm,20.0s						
YAK				MLR	MLR		
	comp=E,205nm,22.0s						
HIA	**Hailar**	**133.84**	**45**	*e*PKPdf	**PKPdf**	**15 51 04.3**	**+0.6**
HIA				LR	LR		
	comp=Z,821nm,19.0s						
HIA	**Hailar**	**133.84**	**45**	*e*PKIKP	**PKPdf**	**15 51 04.3**	**+0.6**
HIA				MLR	MLR		
	comp=Z,821nm,19.0s						
GHO	**Glory Hole Cre**	**133.91**	**334**	*e*PKPdf	**PKPdf**	**15 51 03.8**	**+0.3**
FAKI	**Fak Fak**	**133.94**	**121**	PKP	**PKPdf**	**15 51 07.5**	**+2.6**
FAKI				PKP	**pPKPdf**	**15 51 08.4**	**-1.4**
CAST	**Castle Rocks**	**134.09**	**338**	*e*PKPdf	**PKPdf**	**15 51 03.8**	**+0.1**
PPLA	**Purkeypile**	**134.46**	**337**	*e*PKPdf	**PKPdf**	**15 51 04.4**	**-0.2**
NJ2	**Nanjing**	**134.49**	**69**	*e*PKP	**PKPdf**	**15 51 06.3**	**+0.9**
NJ2				PP	**PP**	**15 53 38.0**	**-0.3**
NJ2				SKKS		16 00 31.5	
NJ2				AMB	AMB		
	comp=Z,580nm,9.2s						
NJ2				LR	LR		
	comp=Z,690nm,16.8s						
NJ2				LR	LR		
	comp=Z,630nm,14.6s						
NJ2				LR	LR		
	comp=Z,1μm,17.9s						
RC01	**Rabbit Creek A**	**134.63**	**334**	*e*PKPdf	**PKPdf**	**15 51 05.7**	**+0.9**
SKT	**Skwentna**	**134.79**	**336**	*e*PKPpre	PKPpre	15 50 55.5	
SUA	**Susitna One**	**134.80**	**335**	*e*PKPpre	PKPpre	15 50 59.3	
BRLK	**Bradley Lake**	**135.86**	**333**	*e*PKPdf	**PKPdf**	**15 51 07.9**	**+0.8**
TATO	**Taipei**	**135.89**	**79**	PFAKE		15 51 20.0	+12
TATO				LR	LR		
	comp=Z,1μm,21.0s						
CNPM	**China Poot**	**136.14**	**333**	*e*PKPdf	**PKPdf**	**15 51 08.3**	**+0.7**
BILL	**Bilibino**	**136.62**	**2**	PFAKE		15 51 20.0	+12
BILL				LR	LR		
	comp=Z,553nm,21.0s						
BILL	**Bilibino**	**136.62**	**2***c*	*i*PKIKP	**PKPdf**	**15 51 08.0**	**-0.3**
BILL				*e*PS	**PS**	**16 04 07.2**	**-8.6**
BILL				*e*SS	SS	16 11 55.7	+3.9
BILL				pmax	pmax		
	comp=Z,89μm,1.3s						
DL2	**Dalian**	**136.77**	**59**	PKP	**PKPdf**	**15 51 09.8**	**+0.4**
DL2				PP	**PP**	**15 53 56.5**	**+4.1**
DL2				PKS	**PKSdf**	**15 54 49.3**	**+3.7**
DL2				AMB	AMB		
	comp=Z,250nm,5.9s						
DL2				LR	LR		
	comp=Z,710nm,22.8s						
DL2				LR	LR		
	comp=Z,730nm,23.1s						
DL2				LR	LR		
	comp=Z,1μm,22.4s						
ZEA	**Zeya**	**136.84**	**36**	*i*PKIKP	**PKPdf**	**15 51 09.6**	**+0.5**
ZEA				*e*		15 53 52.0	
ZEA				*e*		16 17 07.0	
ZEA				pmax	pmax		
	comp=Z,500nm,6.0s						
ZEA				pmax	pmax		
	comp=Z,55nm,1.4s						
KDAK	**Kodiak Island**	**137.72**	**331**	PKhKP	PKPpre	15 51 04.8	
KDAK				PKP	**PKPdf**	**15 51 11.0**	**+0.4**
	comp=Z,21nm,1.0s						
KDAK	**Kodiak Island**	**137.72**	**331**	PKPpre	PKPpre	15 51 04.8	
KDAK				PKP	**PKPdf**	**15 51 11.0**	**+0.4**
KDAK				LR	LR		
	comp=Z,295nm,19.0s						
AFI	**Afiamalu**	**137.80**	**206**	PKP	**PKPdf**	**15 51 11.9**	**-0.2**
	comp=Z,35nm,0.9s,baz=88,slow=23,SNR=2.7						
SNY	**Shenyang**	**137.92**	**54**	⇓PKP	PKPdf	15 51 02.3	-9.1
SNY				PP	**PP**	**15 54 00.5**	**+1.0**
SNY				SKKS		16 00 30.8	
OHAK	**Old Harbor**	**138.36**	**331**	*e*PKPdf	**PKPdf**	**15 51 13.0**	**+1.2**
CN2	**Changchun**	**138.91**	**51**	*e*PKP	**PKPdf**	**15 51 06.0**	**-7.2**
CN2				*e*PP	**PP**	**15 54 02.5**	**-3.0**
PMG	**Port Moresby**	**139.23**	**144**	PKhKP	PKPpre	15 51 07.1	
	comp=Z,4.4nm,0.7s,baz=200,slow=12,SNR=2.7						
PMG				PKP	**PKiKP**	**15 51 16.6**	**-0.4**
	comp=Z,22nm,0.9s,baz=348,slow=5.2,SNR=7.0						
PMG	**Port Moresby**	**139.23**	**144**	PKPpre	PKPpre	15 51 07.1	
PMG				PKP	**PKiKP**	**15 51 16.6**	**-0.4**
PMG				LR	LR		
	comp=Z,958nm,19.0s						
SEY	**Seymchan**	**139.98**	**13**	PKhKP	PKPpre	15 51 06.9	
	comp=Z,7.4nm,0.8s,baz=327,slow=2.8,SNR=20						
SEY				PKP	**PKiKP**	**15 51 16.2**	**-0.8**
	comp=Z,37nm,0.9s,baz=261,slow=1.2,SNR=23						
INCN	**Inchon**	**140.83**	**60**	PFAKE		15 51 30.0	+13
INCN				LR	LR		
	comp=Z,58nm,19.0s						
CHGN	**Chignik**	**141.15**	**333**	*e*PKPpre	PKPpre	15 51 10.5	
KLR	**Kul'dur**	**141.29**	**41**	PKhKP	PKPpre	15 51 10.7	
	comp=Z,3.2nm,0.9s,baz=301,slow=3.4,SNR=24						
KLR				PP	**PP**	**15 54 20.6**	**+0.9**
	comp=Z,0.5nm,1.1s,baz=303,slow=1.5,SNR=4.5						
MDJ	**Mudanjiang**	**141.58**	**49**	PKP	PKPdf	15 51 10.0	-8.0
MDJ				PP	**PP**	**15 54 20.5**	**-1.3**
MDJ	**Mudanjiang**	**141.58**	**49**	*e*PKPpre	PKPpre	15 51 12.7	
MDJ				LR	LR		
	comp=Z,779nm,19.0s						
KSAR	**Wonju Array Be**	**141.82**	**60**	PKPpre	PKPpre	15 51 14.5	
KS01	**Wonju Array Si**	**141.82**	**60**	*e*PKPpre	PKPpre	15 51 14.1	
KSRS	**Korea Array**	**141.85**	**60**	PKhKP	PKPpre	15 51 14.5	
	comp=Z,1.3nm,0.8s,baz=276,slow=3.0,SNR=4.1						
MA2	**Magadan**	**142.59**	**16**	PKP	**PKPdf**	**15 51 18.0**	**-1.4**
	comp=Z,28nm,0.9s,baz=346,slow=0.5,SNR=19						
MA2	**Magadan**	**142.59**	**16**	*e*PKPpre	PKPpre	15 51 15.6	
MA2				LR	LR		
	comp=Z,610nm,21.0s						
MA2	**Magadan**	**142.59**	**16**	PKIKP	**PKPdf**	**15 51 18.0**	**-1.4**
MA2				pmax	pmax		
	comp=Z,28nm,0.9s						
SDPT	**Sand Point**	**142.65**	**333**	*e*PKPpre	PKPpre	15 51 16.1	
GRNR	**Gornyy**	**143.20**	**36**	*e*PKIKP	PKPbc	15 51 17.1	-0.6
GRNR				pmax	pmax		
	comp=Z,120nm,1.4s						
USRK	**Ussuriysk Ar.**	**143.34**	**48**	PKP	PKPbc	15 51 19.5	+1.2
	comp=Z,18nm,0.9s,baz=273,slow=2.9						
NKL	**Nikolayevsk**	**143.92**	**30**	*e*PKHKP	PKPpre	15 51 17.0	
NKL				pmax	pmax		
	comp=Z,220nm,1.5s						
NKL				pmax	pmax		
	comp=E,300nm,5.0s						
NKL				pmax	pmax		
	comp=Z,600nm,5.0s						
NKL				MLR	MLR		
	comp=Z,500nm,15.0s						
HNR	**Honiara**	**144.56**	**162**	*e*P	**PKPab**	**15 51 22.0**	**-0.6**
HNR	**Honiara**	**144.56**	**162**	PKP	**PKPab**	**15 51 22.6**	**0.0**
	comp=Z,700nm,0.9s,baz=197,slow=5.3,SNR=58						
HNR	**Honiara**	**144.56**	**162**	*e*PKPdf	**PKPab**	**15 51 22.2**	**-0.4**
HNR				LR	LR		
	comp=Z,805nm,19.0s						
JNU	**Nakatsue**	**144.65**	**67**	PKP	**PKPab**	**15 51 22.6**	**+0.1**
	comp=Z,65nm,1.1s,baz=25,slow=1.8,SNR=17						
JNU				PP	**PP**	**15 54 43.0**	**+2.1**
	comp=Z,19nm,1.3s,baz=268,slow=6.6,SNR=2.4						
JNU	**Nakatsue**	**144.65**	**67**	*e*PKPdf	**PKPab**	**15 51 21.8**	**-0.7**
JNU				PP	**PP**	**15 54 43.0**	**+2.1**
MANU	**Manus Island**	**145.29**	**137**	*e*PKPbc	**PKPdf**	**15 51 26.4**	**+0.9**
AKUT	**Akutan**	**145.65**	**335**	*e*PKPdf	**PKPdf**	**15 51 24.9**	**+0.1**
TEY	**Ternei**	**146.07**	**45**	*e*PKIKP	**PKPdf**	**15 51 24.0**	**-1.8**
TEY				pmax	pmax		
	comp=Z,3μm,4.0s						
TEY				pmax	pmax		
	comp=Z,280nm,1.2s						
UNV	**Unalaska Valle**	**146.15**	**335**	*e*PKPdf	**PKPbc**	**15 51 26.6**	**-0.1**
RABL	**Rabaul**	**146.26**	**146**	*e*PKPdf	**PKPbc**	**15 51 28.5**	**+0.3**
TYV	**Tymovskoe**	**146.34**	**32**	*e*PKP2	**PKPdf**	**15 51 26.6**	**+0.5**
TYV				pmax	pmax		
	comp=Z,248nm,1.2s						
TYV				pmax	pmax		
	comp=Z,3μm,4.2s						
NIKH	**Nikolski High**	**147.72**	**336**	*e*PKPdf	**PKPdf**	**15 51 26.5**	**-1.9**
MLH	**Mauna Loa**	**147.86**	**268**	*e*PKPdf	**PKPbc**	**15 51 32.0**	**-0.9**
HMH	**Humu'ula Sheep**	**147.97**	**268**	*e*PKPbc	**PKPbc**	**15 51 34.5**	**+1.3**
YSS	**Yuzh-Sakhalins**	**148.80**	**38**	*e*PKPdf	**PKPdf**	**15 51 29.4**	**-0.9**
YSS				LR	LR		
	comp=Z,402nm,20.0s						
YSS	**Yuzh-Sakhalins**	**148.80**	**38**	⇑*e*PKIKP	**PKPdf**	**15 51 28.8**	**-1.5**
YSS				*i*		15 51 33.1	
YSS				*i*		15 55 06.4	
YSS				*e*		15 58 25.0	
YSS				*e*PPS	PPS	16 07 50.0	
YSS				*e*SS	SS	16 14 19.3	+5.2
YSS				pmax	pmax		
	comp=Z,120μm,1.6s						
INU	**Inuyama**	**149.42**	**62**	*e*PKPdf	**PKPdf**	**15 51 32.1**	**+0.4**
MJB9	**Matsu-Tunnel**	**150.10**	**59**	*e*PKPdf	**PKPdf**	**15 51 33.0**	**+0.2**
MAJO	**Matsushiro**	**150.11**	**59**	*e*PKPdf	**PKPdf**	**15 51 33.0**	**+0.2**
MAJO				LR	LR		
	comp=Z,423nm,20.0s						
MJAR	**Matsushiro Arr**	**150.11**	**59**	PKP	**PKPdf**	**15 51 32.3**	**-0.5**
	comp=Z,8.0nm,0.9s,baz=275,slow=2.2,SNR=21						
MJAR				PKPbc	**PKPbc**	**15 51 37.8**	**0.0**
	comp=Z,39nm,0.9s,baz=260,slow=1.7,SNR=54						
MJAR				PP	**PP**	**15 55 15.8**	**+3.0**
	comp=Z,6.2nm,1.1s,baz=292,slow=5.2,SNR=4.3						
PEA0B	**Petropavlovsk-**	**150.11**	**15**	*e*PKPdf	**PKPdf**	**15 51 33.0**	**+0.7**
PETK	**Petropavlovsk-**	**150.11**	**15**	PKP	**PKPdf**	**15 51 31.9**	**-0.4**
	comp=Z,18nm,0.9s,baz=43,slow=2.6						
PETK				PKPbc	**PKPbc**	**15 51 37.1**	**-0.2**
PETK	**Petropavlovsk-**	**150.11**	**15**	*e*PKPdf	**PKPdf**	**15 51 31.5**	**-0.8**
PETK				PKPbc	**PKPbc**	**15 51 37.1**	**-0.2**
ASAJ	**Asahikawa**	**150.28**	**43**	PKP	**PKPdf**	**15 51 33.1**	**+0.3**
	comp=Z,9.9nm,1.2s,baz=291,slow=8.1,SNR=9.5						
ASAJ				PKPbc	**PKPbc**	**15 51 37.9**	**-0.1**
	comp=Z,44nm,0.8s,baz=266,slow=14,SNR=31						
ASAJ	**Asahikawa**	**150.28**	**43**	*e*PKPdf	**PKPdf**	**15 51 32.3**	**-0.5**
ASAJ				PKPbc	**PKPbc**	**15 51 37.9**	**-0.1**
ASAJ	**Asahikawa**	**150.28**	**43**	PKIKP	**PKPdf**	**15 51 33.1**	**+0.3**
ASAJ						15 51 37.9	
ASAJ				pmax	pmax		
	comp=Z,38nm,0.9s						
ASAJ				pmax	pmax		
	comp=Z,44nm,0.8s						
PET	**Petropavlovsk**	**150.41**	**14**	*e*PKPdf	**PKPdf**	**15 51 32.8**	**+0.1**
PET				LR	LR		
	comp=Z,675nm,22.0s						
PET	**Petropavlovsk**	**150.41**	**14**	*i*PKIKP	**PKPdf**	**15 51 32.2**	**-0.5**
PET				*e*		15 55 15.0	
PET				*e*SS	SS	16 14 23.9	-6.9
PET				*e*SSS	SSS	16 20 16.9	
PET				pmax	pmax		
	comp=Z,220nm,1.6s						
PET				pmax	pmax		
	comp=Z,207nm,1.2s						
PET				pmax	pmax		
	comp=Z,400nm,15.7s						
PET				pmax	pmax		
	comp=Z,600nm,14.3s						
PET				MLR	MLR		
	comp=Z,700nm,21.0s						
KIP	**Kipapa**	**150.72**	**270**	⇑*e*PKIKP	**PKPdf**	**15 51 33.0**	**-1.1**
SKR	**Severo-Kuril's**	**151.87**	**19**	*e*PKIKP	**PKPdf**	**15 51 33.5**	**-1.5**
SKR				pmax	pmax		
	comp=Z,300nm,4.9s						
SKR				pmax	pmax		
	comp=Z,1μm,5.1s						
SKR				pmax	pmax		
	comp=Z,163nm,2.6s						
SKR				MLR	MLR		
	comp=Z,600nm,20.0s						
SMY	**Shemya**	**151.90**	**355**	*e*PKPbc	**PKPbc**	**15 51 41.3**	**-0.1**
SMY	**Shemya**	**151.90**	**355**	*e*PKIKP	**PKPbc**	**15 51 41.3**	**-0.1**
YUK	**Yuzh-Kuril'sk**	**152.28**	**40***c*	*i*PKIKP	**PKPdf**	**15 51 34.8**	**-1.0**
YUK				*i*		15 55 24.9	
YUK				*e*PPP	PPP	15 58 56.5	
YUK				*e*SSS	SSS	16 20 39.7	
YUK				pmax	pmax		
	comp=Z,367nm,1.0s						
YUK				pmax	pmax		
	comp=E,144nm,0.9s						
YUK				MLR	MLR		
	comp=Z,638nm,20.0s						
KUR	**Kuril'sk**	**152.66**	**36**	*i*PKIKP	**PKPbc**	**15 51 42.6**	**-0.8**
KUR				*i*		15 55 27.8	
KUR				*i*SS	SS	16 15 02.8	+6.1
KUR				*i*SSS	SSS	16 20 38.9	
JOHN	**Johnston Islan**	**159.56**	**251**	PFAKE		15 52 00.0	+14
JOHN				LR	LR		
	comp=Z,96nm,19.0s						
WAKE	**Wake Island**	**173.59**	**147**	PFAKE		15 52 10.0	+13
WAKE				LR	LR		
	comp=Z,924nm,21.0s						

MEX 29 15:49:57.4±0.8, 17°.33N×100°.44W, h12km, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.33**	**150**	*e*P	Pg	15 50 03.3	-0.7
CAIG				*e*S	Sg	15 50 09.2	+0.7
ACP2	**Acapulco**	**0.70**	**131**	*e*P	Pg	15 50 08.6	-2.3
ACP2				*e*S	Sg	15 50 17.3	-2.8
ARIG	**Puente Sto Nin**	**0.94**	**5**	*e*P	Pg	15 50 12.6	-3.1
ARIG				*e*S	Sg	15 50 25.3	-2.7
MEIG	**Mezcala**	**0.98**	**53**	*e*P	Pg	15 50 12.9	-3.4
MEIG				*i* S	Sg	15 50 26.1	-3.0
PLIG	**Platanillo**	**1.38**	**40**	*e*P	Pn	15 50 18.2	-4.4
PLIG				*e*S	Sn	15 50 37.4	-3.4
TLIG	**Tlapa**	**1.80**	**82**	*e*P	Pn	15 50 24.7	-3.7
TLIG				*e*S	Sn	15 50 47.5	-3.7
YAIG	**Yautepec**	**2.00**	**40**	*e*P	Pn	15 50 26.9	-4.3
YAIG				*e*S	Sn	15 50 53.6	-2.7

*IDC **29** 15:55:41.8±1.3, 59°.27S×24°.31W, h0km, mb4.0/3, mb1 4.1/4, mb1mx3.9/33, mbtmp4.1/4, ML4.2/1, Error ellipse: s-maj=51.7km s-min=31.0km az=103.0*

**ISC 29 15:55:44.2±1.2, 59°.4S±0°.1×23°.7W±0

JOM	Ohasama	1.52 202	P	Pn	16 06 19.2	+0.2
JOM			S	Sn	16 06 37.8	0.0
JIW	Iwasaki	1.56 260	P	Pn	16 06 20.0	+0.5
JNB	Noboribetsu	1.74 335	P	Pn	16 06 21.3	-0.7
JNB			S	Sn	16 06 42.6	-0.5
JYM2	Yakumo 2	1.75 315	⇓P	Pn	16 06 22.3	+0.3
ASAJ	Asahikawa	3.25 7	P	Pn	16 06 43.2	+0.6
	1.8nm,0.3s,baz=223,slow=8.7,SNR=33					
ASAJ			S	Sn	16 07 21.0	+1.0
	1.4nm,0.3s,baz=325,slow=27,SNR=4.0					
MKAR	Makanchi Array	42.58 299	P	P	16 13 44.2	+0.1
	0.3nm,0.4s,baz=94,slow=9.8,SNR=7.5					
KURBB	Kurchatov Arra	44.09 305	P	P	16 13 56.0	-0.2
	0.4nm,0.5s,baz=79,slow=9.0,SNR=6.9					
BVAR	Borovoye Array	48.40 310	P	P	16 14 30.3	+0.3
	0.8nm,0.3s,baz=82,slow=9.1,SNR=7.5					
WRA	Warramunga Arr	60.94 188	P	P	16 16 00.2	-0.8
	0.2nm,0.7s,baz=5.9,slow=6.8,SNR=6.4					
ASAR	Alice Springs	64.67 188	P	P	16 16 24.8	-1.0
	0.2nm,0.7s,baz=0.6,slow=6.8,SNR=4.1					
FINES	FINESS Array B	65.64 332	P	P	16 16 31.6	0.0
	1.3nm,0.7s,baz=44,slow=6.3,SNR=6.5					

IDC 29 16:12:08.7±1.8, 2°.63N×127°.44E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.2/53, mbtmp3.3/4, Error ellipse: s-maj=148.2km s-min=21.0km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.43	163	P	P	16 17 19.6	-0.1
	0.2nm,0.3s,baz=343,slow=10.0,SNR=11						
ASAR	Alice Springs	26.88	167	P	P	16 17 51.1	-0.4
	0.5nm,1.0s,baz=351,slow=7.3,SNR=7.4						
MKAR	Makanchi Array	58.86	325	P	P	16 22 09.7	+0.3
	0.2nm,0.5s,baz=106,slow=4.4,SNR=3.4						
KURBB	Kurchatov Arra	63.04	327	P	P	16 22 37.7	0.0
	0.3nm,0.5s,baz=124,slow=6.5,SNR=3.8						

*MEX **29** 16:40:01.0±0.4, 13°.56N×92°.17W, h0km±202km, MD4.2*
*ISCJB **29** 16:40:05.9±1.1, 13°.8N±0°.1×92°.1W±0°.1, h54km, mb3.6/3, Error ellipse: s-maj=22.0km s-min=6.7km az=137.7*
*IDC **29** 16:40:14.8±4.2, 14°.14N×91°.65W, h116km±35km, mb3.2/3, mb1 3.6/5, mb1mx3.3/46, mbtmp3.7/5, Error ellipse: s-maj=92.1km s-min=21.5km az=44.0*
ISC 29 16:40:07.6±1.0, 13°.9N±0°.1×92°.2W±0°.1, h54km, n12, σ1§74/16, mb3.7/3, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		1.05	356	eP	Pn	16 40 23.4	-2.7
THIG				eS	Sn	16 40 40.5	+0.7
PCIG		2.09	332	eP	Pn	16 40 38.0	-2.3
PCIG				eS	Sn	16 41 05.8	+0.7
CCIG	Comitan	2.42	1	eP	Pn	16 40 43.7	-1.2
TGIG		3.04	343	eP	Pn	16 40 52.5	-0.9
JTS	JuntasAbangare	7.92	116	P	Pn	16 42 02.5	+2.3
	0.9nm,0.3s,baz=343,slow=9.2,SNR=4.8						
JTS				S	Sn	16 43 28.0	-0.4
	0.3nm,0.3s,baz=360,slow=19,SNR=2.3						
TXAR	Lajitas Array	18.72	327	P	Pn	16 44 25.3	+2.5
	0.0nm,0.3s,baz=147,slow=12,SNR=14						
TXAR				S	Sn	16 47 24.0	-28
	0.0nm,0.3s,baz=0.6,slow=20,SNR=2.4						
NVAR	Mina Array Bea	33.67	321	P	P	16 46 45.6	+1.9
	0.4nm,0.6s,baz=135,slow=10,SNR=2.5						
YKA	Yellowknife Ar	51.13	347	P	P	16 49 03.4	-1.3
	0.5nm,0.6s,baz=148,slow=7.6,SNR=5.6						
YKA				PcP	PcP	16 50 20.0	+0.4
	0.3nm,0.7s,baz=145,slow=4.5,SNR=2.6						
ILAR	Eielson Array	62.90	337	P	P	16 50 28.3	+0.4
	0.5nm,0.7s,baz=93,slow=6.2,SNR=5.3						
MKAR	Makanchi Array	119.43	4	PKP	PKPdf	16 58 48.9	-2.4
	0.1nm,0.4s,baz=2.9,slow=2.9,SNR=2.5						
WRA	Warramunga Arr	135.18	256	PKP	PKPdf	16 59 22.0	0.0
	0.3nm,1.0s,baz=107,slow=2.9,SNR=2.7						
CMAR	Chiang Mai Arr	146.07	341	PKPbc	PKPdf	16 59 40.9	-0.8
	0.6nm,0.6s,baz=338,slow=3.2,SNR=5.8						

IDC 29 16:44:05.8±30.0, 18°.86S×176°.10W, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.7/45, mbtmp4.0/4, Error ellipse: s-maj=576.1km s-min=146.1km az=87.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	40.12	243	P	P	16 51 43.6	+0.1
	3.1nm,1.0s,baz=89,slow=11,SNR=5.8						
WRA	Warramunga Arr	46.62	260	P	P	16 52 36.2	0.0
	0.7nm,0.3s,baz=96,slow=7.5,SNR=80						
ASAR	Alice Springs	46.65	255	P	P	16 52 36.2	-0.2
	2.0nm,0.6s,baz=98,slow=7.7,SNR=38						
FITZ	Fitzroy Crossi	55.04	261	P	P	16 53 39.2	-0.4
	0.7nm,0.6s,baz=90,slow=9.1,SNR=5.7						

IDC 29 16:47:07.9±9.0, 20°.51S×82°.29E, h0km, mb3.6/6, mb1 3.7/6, mb1mx3.4/61, mbtmp3.6/6, Error ellipse: s-maj=310.2km s-min=27.9km az=45.0, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	Diego Garcia H	15.92	322	T	T	17 06 30.8	
	baz=148,slow=75,SNR=32						
H08S1	Diego Garcia H	15.93	322	T	T	17 06 27.5	
	baz=148,slow=75,SNR=18						
H08S3	Diego Garcia H	15.94	322	T	T	17 06 29.4	
	baz=148,slow=75,SNR=39						
H08N1	Diego Garcia H	17.83	321	T	T	17 08 47.4	
	baz=139,slow=75,SNR=7.4						
H08N3	Diego Garcia H	17.84	321	T	T	17 08 48.7	
	baz=139,slow=75,SNR=6.3						
H08N2	Diego Garcia H	17.86	321	T	T	17 08 50.6	
	baz=139,slow=75,SNR=6.6						
ASAR	Alice Springs	47.72	104	P	P	16 55 46.8	0.0
	0.4nm,0.8s,baz=268,slow=7.3,SNR=6.1						
WRA	Warramunga Arr	48.67	99	P	P	16 55 54.0	-0.2
	0.4nm,1.0s,baz=265,slow=7.8,SNR=3.7						
MKAR	Makanchi Array	66.99	360	P	P	16 58 03.2	+0.9
	1.1nm,0.7s,baz=171,slow=6.9,SNR=11						
KURBB	Kurchatov Arra	70.90	357	P	P	16 58 26.1	-0.4
	0.3nm,0.3s,baz=188,slow=5.9,SNR=5.7						
BVAR	Borovoye Array	73.95	353	P	P	16 58 44.4	-0.4
	0.3nm,0.5s,baz=144,slow=5.2,SNR=3.4						
ZALV	Zalesovo Beam	74.18	2	P	P	16 58 45.7	-0.3
	0.8nm,0.6s,baz=198,slow=4.4,SNR=4.9						

*ISCJB **29** 16:59:52.7±0.5, 16°.49N±0°.06×145°.7E±0°.1, h500km, mb3.6/22, Error ellipse: s-maj=18.1km s-min=7.5km az=175.9*
*IDC **29** 16:59:52.5±0.7, 16°.52N×145°.74E, h482km±8km, mb3.2/22, mb1 3.4/24, mb1mx3.2/62, mbtmp4.1/24, Error ellipse: s-maj=16.8km s-min=7.5km az=85.0*
ISC 29 16:59:53.7±0.6, 16°.47N±0°.07×145°.7E±0°.2, h500km, n24, σ1§04/27, mb3.6/22, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	2.97	195	P	P	17 01 03.3	-1.4
	25nm,0.3s,baz=134,slow=2.1,SNR=24						
GUMO				S	S	17 01 58.4	-3.7
	107nm,0.3s,baz=181,slow=24,SNR=22						
JCJ	Chichijima	11.06	344	P	P	17 02 21.9	-0.3
	6.0nm,0.3s,baz=302,slow=21,SNR=3.2						
MJAR	Matsushiro Arr	21.06	343	P	P	17 04 01.5	-0.4
	2.1nm,0.5s,baz=168,slow=10,SNR=14						
PMG	Port Moresby	25.73	177	P	P	17 04 44.6	+0.5
	23nm,1.1s,baz=40,slow=6.2,SNR=5.6						
KSRS	Korea Array	26.12	327	P	P	17 04 46.3	-0.7
	1.6nm,0.8s,baz=144,slow=9.9,SNR=4.0						
ASAJ	Asahikawa	27.68	355	P	P	17 05 00.8	+0.1
	0.8nm,0.5s,baz=146,slow=11,SNR=4.3						
CTA	Charters Tower	36.34	179	P	P	17 06 16.0	+1.1
	1.4nm,0.4s,baz=352,slow=8.9,SNR=5.3						
PETK	Petropavlovsk-	37.76	12	P	P	17 06 26.3	+0.1
	1.6nm,1.0s,baz=170,slow=6.5						
WRA	Warramunga Arr	37.86	198	P	P	17 06 28.1	+0.6
	3.5nm,0.5s,baz=25,slow=8.5,SNR=72						
WRA				ScP	ScP	17 11 31.4	+0.5
	0.7nm,1.0s,baz=14,slow=2.5,SNR=3.3						

FITZ	Fitzroy Crossi	39.61	211	P	P	17 06 42.4	+0.7
	1.2nm,0.3s,baz=33,slow=10,SNR=43						
ASAR	Alice Springs	41.52	196	P	P	17 06 57.4	+0.4
	2.2nm,0.5s,baz=21,slow=6.3,SNR=86						
ASAR				ScP	ScP	17 11 45.5	+0.3
	0.4nm,1.0s,baz=11,slow=2.9,SNR=4.1						
DZM	Mont Dzumac	43.38	151	P	P	17 07 11.7	+0.1
	9.4nm,1.1s,baz=263,slow=5.1,SNR=7.8						
CMAR	Chiang Mai Arr	44.53	280	P	P	17 07 21.6	+0.9
	0.8nm,0.6s,baz=94,slow=6.4,SNR=6.5						
SONM	Songino Array	44.88	323	P	P	17 07 23.7	+0.7
	0.5nm,0.4s,baz=123,slow=8.2,SNR=3.6						
STKA	Stephens Creek	48.23	185	P	P	17 07 49.0	+0.5
	4.4nm,1.0s,baz=27,slow=8.3,SNR=5.1						
ZALV	Zalesovo Beam	59.77	323	P	P	17 09 10.0	+0.2
	0.3nm,0.4s,baz=95,slow=7.2,SNR=2.2						
MKAR	Makanchi Array	59.99	315	P	P	17 09 11.9	+0.4
	0.2nm,0.3s,baz=87,slow=8.1,SNR=4.8						
KURBB	Kurchatov Arra	62.96	319	P	P	17 09 30.9	+0.1
	1.3nm,0.7s,baz=98,slow=6.7,SNR=13						
ILAR	Eielson Array	65.65	26	P	P	17 09 46.4	-1.3
	0.8nm,0.5s,baz=249,slow=6.1,SNR=10						
BVAR	Borovoye Array	68.17	321	P	P	17 10 03.6	+0.1
	0.7nm,0.6s,baz=101,slow=7.5,SNR=5.9						
YKA	Yellowknife Ar	79.96	28	P	P	17 11 10.1	0.0
	1.0nm,0.6s,baz=289,slow=5.2,SNR=6.8						
NVAR	Mina Array Bea	84.53	52	P	P	17 11 35.1	+0.9
	1.0nm,0.6s,baz=268,slow=5.6,SNR=6.3						
ARCES	ARCESS Array B	84.59	342	P	P	17 11 33.7	+0.1
	1.1nm,0.6s,baz=51,slow=7.9,SNR=4.1						
FINES	FINESS Array B	88.89	335	P	P	17 11 52.6	-1.4
	1.2nm,0.7s,baz=44,slow=5.8,SNR=5.2						

*IDC **29** 17:24:37.9±1.2, 43°.73N×87°.83E, h0km, mb3.5/2, mb1 3.6/6, mb1mx3.2/72, mbtmp3.4/6, ML3.0/4, MS3.5/1, Ms1 3.5/1, ms1mx2.6/50, Error ellipse: s-maj=52.3km s-min=14.5km az=50.0*
*ISCJB **29** 17:24:38.3±0.9, 43°.97N±0°.07×87°.93E±0°.10, h18km, mb3.4/2, MS3.6/1, Error ellipse: s-maj=11.9km s-min=7.5km az=137.1*
*NNC **29** 17:24:42.3±2.1, 43°.90N×87°.46E, h0km, mb3.7, mpv3.2, Error ellipse: s-maj=15.8km s-min=12.4km az=96.0*
ISC 29 17:24:39.8±1.3, 43°.83N±0°.09×87°.9E±0°.1, h18km, n13, σ1§28/19, 9C-6D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	Makanchi Array	4.92	309	⇑Pn	Pn	17 25 54.8	+2.0
	0.3nm,0.2s,baz=127,slow=14,SNR=106						
MK31				⇓Sn	Sn	17 26 51.0	+1.8
	2.1nm,0.3s,baz=191,slow=85,SNR=5.3						
MK31				⇑Lg	Lg	17 27 08.2	
	9.7nm,0.6s,baz=125,slow=27,SNR=6.5						
MKAR	Makanchi Array	4.92	309	Pn	Pn	17 25 54.9	+2.1
	1.0nm,0.3s,baz=127,slow=14,SNR=103						
MKAR				Sn	Sn	17 26 50.4	+1.2
	3.1nm,0.3s,baz=130,slow=26,SNR=5.9						
MKAR				Lg	Lg	17 27 09.4	
	2.9nm,0.3s,baz=120,slow=21,SNR=3.7						
MAKZ	Makanchi	5.10	308	⇑Pn	Pn	17 25 57.0	+1.7
	3.7nm,0.4s						
MAKZ				⇑Sn	Sn	17 26 54.6	+0.8
	4.7nm,0.5s						
MAKZ				⇓Lg	Lg	17 27 14.9	
	12nm,0.9s						
PDGK	Podgornoye	6.09	268	⇓Pn	Pn	17 26 09.5	+0.4
	2.6nm,0.6s						
PDGK				⇑Sn	Sn	17 27 18.1	-0.3
	5.9nm,0.6s						
PDGK				⇓Lg	Lg	17 27 46.7	
	19nm,0.7s						
KURBB	Kurchatov Arra	9.29	320	Pn	Pn	17 26 53.9	+1.1
	0.2nm,0.3s,baz=133,slow=12,SNR=10						
KURBB				Sn	Sn	17 28 35.0	-1.6
	0.1nm,0.3s,baz=123,slow=27,SNR=4.3						
KURBB				Lg	Lg	17 29 28.4	
	0.0nm,0.3s,baz=132,slow=32,SNR=3.7						
KURBB	Kurchatov Arra	9.29	320	⇑Pn	Pn	17 26 53.4	+0.7
	1.1nm,0.3s						
KURBB				⇑Sn	Sn	17 28 35.9	-0.7
	4.5nm,0.7s						
KURBB				⇓Lg	Lg	17 29 30.8	
	11nm,0.7s						
KURK	Kurchatov	9.31	321	⇓Pn	Pn	17 26 53.0	0.0
	0.9nm,0.5s						
KURK				⇑Sn	Sn	17 28 36.7	-0.5
	1.9nm,0.5s						
KURK				⇑Lg	Lg	17 29 30.9	
	7.0nm,0.7s						
ZALV	Zalesovo Beam	10.32	350	Pn	Pn	17 27 06.5	-0.3
	0.2nm,0.3s,baz=166,slow=12,SNR=3.5						
ZALV				Sn	Sn	17 29 01.1	-0.9
	0.4nm,0.3s,baz=163,slow=27,SNR=4.0						
ZALV				Lg	Lg	17 30 10.8	
	0.3nm,0.3s,baz=174,slow=27,SNR=2.0						
SONM	Songino Array	13.53	66	Lg	Lg	17 31 50.5	
	0.2nm,0.3s,baz=256,slow=31,SNR=3.6						
BVAR	Borovoye Array	14.76	315	Pn	Pn	17 28 05.9	-1.6
	0.1nm,0.3s,baz=122,slow=16,SNR=3.0						
BVAR				Lg	Lg	17 32 30.6	
	0.1nm,0.3s,baz=155,slow=34,SNR=2.3						
GERES	GERESS Array B	49.56	303	LR	LR	17 56 35.4	
	comp=Z,59nm,21.3s,baz=38,slow=39						
WRA	Warramunga Arr	76.42	135	P	P	17 36 29.0	+0.7
	0.4nm,0.8s,baz=339,slow=6.3,SNR=5.2						
ASAR	Alice Springs	79.34	138	P	P	17 36 44.9	+0.5
	0.4nm,0.8s,baz=331,slow=4.4,SNR=4.0						

MAN 29 17:32:58.3, 16°.40N×119°.34E, h7km, mb4.7, ML3.5, MS3.4, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	Bolinao	0.55	92	eP	Pg	17 33 08.9	-0.2
SCZP	Santa Cruz	0.83	138	eP	Pb	17 33 14.9	-0.2
SCZP				eS	Sn	17 33 28.8	-0.2
ABRA	Dolores	1.81	47	eP	Pn	17 33 29.5	-0.4
ABRA				eS	Sb	17 33 54.1	-0.5
BALP	Baler	2.25	107	eP	Pn	17 33 35.5	-0.5
BALP				eS	Sn	17 34 05.1	+1.0
APYP	Conner	2.33	51	eP	Pn	17 33 37.2	+0.2
APYP				eS	Sn	17 34 04.0	-2.0
CAUP	Cauayan	2.44	77	eP	Pn	17 33 40.2	+1.6

*ISCJB **29** 17:47:22.8±0.2, 4°.95S±0°.03×152°.36E±0°.04, h55km, mb4.7/51, MS3.2/4, Error ellipse: s-maj=6.2km s-min=4.5km az=2.6*
*NEIC **29** 17:47:25.5±0.6, 4°.94S×152°.34E, h67km±5km, mb5.0/39, Error ellipse: s-maj=5.5km s-min=4.2km az=87.0*
*IDC **29** 17:47:27.6±3.5, 5°.01S×152°.30E, h84km±31km, mb4.0/19, mb1 4.2/21, mb1mx3.9/45, mbtmp4.3/21, MS3.2/5, Ms1 3.2/5, ms1mx2.8/41, Error ellipse: s-maj=18.8km s-min=14.4km az=64.0*
ISC 29 17:47:24.5±0.4, 4°.91S±0°.05×152°.37E±0°.07, h55km, n87, σ1§05/88, mb4.6/50, MS3.2/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	0.74	344	ePn	Pn	17 47 38.9	-0.1
RABL				eSn	Sn	17 47 51.0	+1.4
MANU	Manus Island	5.75	300	ePn	Pn	17 48 50.0	+2.7
PMG	Port Moresby	6.83	229	P	Pn	17 49 04.5	+2.3
	8.1nm,0.3s,baz=43,slow=6.2,SNR=37						
PMG				S	Sn	17 50 19.6	+1.0
	9.7nm,0.3s,baz=201,slow=18,SNR=7.5						
PMG				LR	LR	17 51 48.1	
	comp=Z,91nm,19.8s,baz=122,slow=39						
PMG	Port Moresby	6.83	229	ePn	Pn	17 49 03.7	+1.5
PMG				eSn	Sn	17 50 19.6	+1.0
PMG				e		17 50 20.5	
PMG				e		17 51 48.1	
HNR	Honiara	8.76	121	ePn	Pn	17 49 31.0	+2.5
COEN	Coen	12.77	225	ePn	Pn	17 50 24.5	+1.1
PATS	Pohnpei	13.09	27	ePn	Pn	17 50 27.6	-0.2
CTA	Charters Tower	16.22	201	P	Pn	17 51 09.0	+0.2
	0.1nm,0.3s,baz=74,slow=15,SNR=3.0						
FAKI	Fak Fak	20.17	275	eP	P	17 51 55.8	+1.1
	22nm,1.1s						
EIDS	Eidsvold	20.38	183	eP	P	17 51 57.2	+0.4
	6.8nm,0.8s						
DZM	Mont Dzumac	21.84	143	P	P	17 52 14.1	+1.5
	6.6nm,0.6s,baz=273,slow=6.8,SNR=9.6						
DZM				LR	LR	17 59 13.1	
	comp=Z,118nm,20.1s,baz=322,slow=32						
DZM	Mont Dzumac	21.84	143	eP	P	17 52 13.5	+1.0
	101nm,2.0s						
MTN	Manton Dam	22.40	248	eP	P	17 52 18.8	+0.2
	7.7nm,0.6s						
WRAB	Tennant Creek	23.04	228	eP	P	17 52 24.3	-0.9
	21nm,0.6s						
WB2	Warramunga Arr	23.04	228	eP	P	17 52 23.0	-2.3
WR1	Warramunga Arr	23.05	228	eP	P	17 52 24.3	-1.1
	23nm,0.6s						
WRA	Warramunga Arr	23.05	228	P	P	17 52 24.3	-1.1
	21nm,0.6s,baz=53,slow=10,SNR=199						
ARMA	Armidale	25.39	181	eP	P	17 52 45.2	-1.7
	58nm,1.6s						
AS01	Alice Springs	25.75	222	eP	P	17 52 49.5	-0.7
AS31	Alice Springs	25.78	222	eP	P	17 52 50.0	-0.5
	3.6nm,0.4s						
ASAR	Alice Springs	25.78	222	P	P	17 52 49.8	-0.7
	6.5nm,0.4s,baz=54,slow=9.2,SNR=49						
LHI	Lord Howe Isla	27.21	167	eP	P	17 53 01.4	-1.7
	188nm,1.1s						
SOEI	Soe	28.28	259	eP	P	17 53 11.9	-1.2
	15nm,1.1s						
STKA	Stephens Creek	28.67	199	P	P	17 53 14.9	-1.3
	2.1nm,0.6s,baz=41,slow=15,SNR=6.3						
STKA	Stephens Creek	28.67	199	eP	P	17 53 14.9	-1.3
	12nm,1.9s						
FITZ	Fitzroy Crossi	29.23	241	P	P	17 53 20.1	-1.3
	11nm,0.6s,baz=50,slow=5.9,SNR=83						
FITZ	Fitzroy Crossi	29.23	241	eP	P	17 53 20.2	-1.2
	12nm,0.7s						
DAV	Davao City (W)	29.27	294	LR	LR	18 06 22.8	
	comp=Z,38nm,18.0s,baz=296,slow=39						
BBOO	Buckleboo	31.66	207	eP	P	17 53 42.1	-0.6
	79nm,1.5s						
FORT	Forrest	34.44	219	eP	P	17 54 05.8	-1.1
	31nm,0.9s						
MBWA	Marble Bar	35.55	240	eP	P	17 54 15.5	-1.1
	72nm,1.7s						
KKM	Kota Kinabalu	37.70	286	eP	P	17 54 36.1	+1.0
	22nm,1.2s						
TAU	Tasmania Unive	38.11	186	eP	P	17 54 38.7	+0.6
	299nm,2.0s						
URZ	Urewera	40.11	149	P	P	17 54 53.6	-1.3
	6.0nm,0.8s,baz=24,slow=18,SNR=4.1						
BKZ	Black Stump Fm	40.50	151	eP	P	17 54 58.4	+0.2
	147nm,1.7s						
YOJ	Yonaguni jima	40.85	317	eP	P	17 55 01.3	+0.1
	184nm,1.3s						
THZ	Tophouse	41.02	156	eP	P	17 55 02.9	+0.5
	76nm,1.3s						
BFZ	Birch Farm	41.58	152	eP	P	17 55 05.2	-1.8
	229nm,1.5s						
SSLB	Suanglung	41.85	314	eP	P	17 55 09.5	+0.1
	53nm,1.8s						
RPZ	Rata Peaks	42.02	160	LR	LR	18 10 49.0	
	comp=Z,55nm,21.6s,baz=346,slow=33						
RPZ	Rata Peaks	42.02	160	eP	P	17 55 11.9	+1.4
	92nm,1.4s						
RPZ				e		18 10 49.0	
OXZ	Oxford	42.03	158	eP	P	17 55 10.5	-0.1
	136nm,1.9s						
LBZ	Lake Benmore	42.32	161	eP	P	17 55 13.4	+0.5
	94nm,1.8s						
DCZ	Deep Cove	42.41	165	eP	P	17 55 12.6	-1.0
	80nm,1.7s						
KSM	Kuching	42.50	278	eP	P	17 55 13.9	-1.0
	9.9nm,1.2s						
MLZ	Mavora Lakes	42.58	164	eP	P	17 55 14.4	-0.7
	89nm,1.7s						
JNU	Nakatsue	42.96	333	P	P	17 55 19.1	+0.8
	6.5nm,1.1s,baz=18,slow=3.2,SNR=4.8						
JNU				LR	LR	18 10 18.7	
	comp=Z,20nm,21.6s,baz=299,slow=32						
JNU	Nakatsue	42.96	333	eP	P	17 55 18.6	+0.3
	22nm,1.4s						
JNU				e		18 10 18.7	
WHZ	Wether Hill Ro	43.02	164	eP	P	17 55 18.3	-0.2
	85nm,1.7s						
ODZ	Otahua Downs	43.06	161	eP	P	17 55 19.4	+0.5
	152nm,2.0s						
MAJO	Matsushiro	43.31	343	eP	P	17 55 21.6	+0.5
	18nm,1.6s						
MJB9	Matsu-Tunnel	43.31	343	eP	P	17 55 21.7	+0.6
	20nm,1.7s						
CISI	Cisompet, Garu	44.35	264	eP	P	17 55 27.0	-2.9
	54nm,1.2s						
CM01	Chiang Mai Arr	57.51	295	eP	P	17 57 09.0	+0.4
CM31	Chiang Mai Arr	57.53	295	eP	P	17 57 08.7	-0.1
CMAR	Chiang Mai Arr	57.53	295	P	P	17 57 09.3	+0.5
	1.2nm,0.7s,baz=123,slow=5.2,SNR=10						
PEA0B	Petropavlovsk-	57.97	4	eP	P	17 57 12.1	+0.9
	18nm,1.4s						
PETK	Petropavlovsk-	57.97	4	eP	P	17 57 12.1	+0.9
VNDA	Vanda	72.74	178	P	P	17 58 46.4	0.0
	1.1nm,0.8s,baz=330,slow=6.6,SNR=8.7						
VNDA	Vanda	72.74	178	eP	P	17 58 46.9	+0.5
MK32	Makanchi Array	80.12	319	eP	P	17 59 29.1	+0.3
MKAR	Makanchi Array	80.12	319	P	P	17 59 29.1	+0.3
	0.9nm,0.5s,baz=95,slow=6.6,SNR=12						
ZALV	Zalesovo Beam	81.00	326	P	P	17 59 33.4	+0.2
	1.3nm,0.4s,baz=127,slow=4.9,SNR=8.1						
ZAA1	Zalesovo Array	81.01	326	eP	P	17 59 33.4	+0.1
MCK	McKinley	81.13	23	eP	P	17 59 32.9	-0.8
	6.1nm,1.0s						
MLY	Manley	81.14	21	eP	P	17 59 33.5	-0.3
	2.5nm,0.9s						
WRH	Wood River Hil	81.82	22	eP	P	17 59 36.1	-1.2
	3.4nm,1.1s						
IL1	Eielson Array	82.42	22	eP	P	17 59 39.0	-1.5
ILAR	Eielson Array	82.42	22	P	P	17 59 39.6	-0.8
	1.3nm,0.8s,baz=254,slow=5.8,SNR=10						
ILB	Eielson Array	82.42	22	eP	P	17 59 39.5	-0.9
KURK	Kurchatov	83.59	322	eP	P	17 59 46.9	+0.1
KURBB	Kurchatov Arra	83.62	322	P	P	17 59 46.9	-0.1
	1.2nm,0.9s,baz=93,slow=4.3,SNR=

ATKA eSn Sn 18 08 01.8 -0.3
KOKL Mount Kliuchef 1.73 278 ePn Pn 18 07 41.8 +0.3
KOWE Korovin West 1.77 280 ePn Pn 18 07 42.8 +0.8
NIKH Nikolski High 1.78 60 ePn Pn 18 07 40.5 -1.7
NIKH eSn Sn 18 08 04.1 +0.5
OKTU Okmok Mt. Tuli 2.41 57 ePn Pn 18 07 51.1 +0.3
OKER Okmok East Rim 2.44 55 ePn Pn 18 07 51.8 +0.5
GSTR Great Sitkin T 2.87 272 ePn Pn 18 07 57.3 +0.2
GSTR eSn Sn 18 08 33.6 +3.2
GSTD Great Sitkin T 2.92 271 ePn Pn 18 07 57.8 -0.2
GSTD eSn Sn 18 08 33.2 +1.3
ADAG Mount Adagdak 3.21 270 ePn Pn 18 08 02.4 +0.6
MTBL Makushin Table 3.41 55 ePn Pn 18 08 05.3 +0.8
UNV Unalaska Valle 3.44 58 ePn Pn 18 08 04.9 0.0
UNV eSn Sn 18 08 45.8 +1.5
KIRH Kanaga Island 3.52 269 ePn Pn 18 08 07.5 +1.5
KIWB Kanaga Island 3.56 268 ePn Pn 18 08 06.5 0.0
KIWB eSn Sn 18 08 49.1 +1.8
KIKV Kanaga Island 3.57 269 ePn Pn 18 08 08.0 +1.3
KICM Kanaga Island 3.58 269 ePn Pn 18 08 07.8 +0.9
AKMO Akutan Morgan 3.81 56 ePn Pn 18 08 11.3 +1.4
AKMO eSn Sn 18 08 56.3 +2.8
AKUT Akutan 3.95 57 ePn Pn 18 08 14.0 +2.1
TAPA Tanaga Point A 3.98 268 ePn Pn 18 08 13.4 +1.2
GALAA Gareloi Lava P 4.57 269 ePn Pn 18 08 21.6 +1.1
WESP Westdahl Peak 4.67 57 ePn Pn 18 08 23.6 +1.9
SPIA Saint Paul Isl 5.13 7 ePn Pn 18 08 28.2 +0.2
FALS False Pass 5.51 57 ePn Pn 18 08 35.4 +2.1
CERAA Semis' Rag'd T 5.51 271 P Pn 18 08 33.9 +0.6
CEAP Semis' Anvil P 5.57 272 P Pn 18 08 34.7 +0.6
AMKA Amchitka 5.82 266 ePn Pn 18 08 37.6 0.0
LSSE Little Sitkin 6.19 272 P Pn 18 08 44.0 +1.3
SDPT Sand Point 7.25 59 ePn Pn 18 08 57.9 +0.8
CHGN Chignik 8.69 56 ePn Pn 18 09 16.6 -0.2
CHGN eSn Sn 18 10 52.6 -0.8
SMY Shemya 8.88 280 ePn Pn 18 09 17.1 -2.4
SMY eSn Sn 18 10 51.5 -6.7
SMY Shemya 8.88 280 eP Pn 18 09 17.1 -2.4
SMY e 18 10 51.5
OHAK Old Harbor 11.66 57 ePn Pn 18 09 53.7 -3.7
GAMB Gambell 11.70 359 ePn Pn 18 09 55.4 -2.6
KDAK Kodiak Island 12.20 55 P Pn 18 10 02.4 -2.4
1.5nm,0.3s,baz=229,slow=4.5,SNR=17
KDAK Kodiak Island 12.20 55 ePn Pn 18 10 01.8 -3.0
KDAK Kodiak Island 12.20 55 *i* P Pn 18 10 03.5 -1.3
SVW2 Sparrevohn 12.50 38 ePn Pn 18 10 12.1 +3.2
ANM Nome 12.88 12 ePn Pn 18 10 17.3 +3.2
ANM Nome 12.88 12 eP Pn 18 10 17.3 +3.2
RSO Redoubt South 13.27 44 ePn Pn 18 10 21.6 +2.0
CNPM China Poot 13.51 49 ePn Pn 18 10 20.0 -2.8
BRLK Bradley Lake 13.78 48 ePn Pn 18 10 25.9 -0.5
SKT Skwentna 14.59 40 ePn Pn 18 10 39.6 +2.4
SUA Susitna One 14.63 42 ePn Pn 18 10 38.8 +0.9
RC01 Rabbit Creek A 14.87 44 ePn Pn 18 10 40.3 -0.7
PPLA Purkeypile 14.88 36 ePn P 18 10 45.5 -0.7
CAST Castle Rocks 15.24 34 ePn Pn 18 10 48.2 +2.4
11nm,0.6s
PMR Palmer 15.37 43 ePn Pn 18 10 46.4 -1.0
6.0nm,0.6s
PMR Palmer 15.37 43 eP Pn 18 10 46.4 -1.0
PMR pmax pmax
comp=Z,6.0nm,0.6s
GHO Glory Hole Cre 15.54 43 ePn Pn 18 10 48.5 -1.2
comp=Z,10nm,0.8s
KTH Kantishna Hill 15.73 35 ePn Pn 18 10 52.2 +0.1
comp=Z,14nm,0.9s
SML Sawmill 15.80 43 ePn Pn 18 10 51.5 -1.6
comp=Z,9.6nm,0.6s
SML Sawmill 15.80 43 eP Pn 18 10 51.5 -1.6
SML pmax pmax
comp=Z,10.0nm,0.6s
MID Middleton Isla 15.82 53 ePn Pn 18 10 55.4 +2.2
comp=Z,146nm,1.3s
MID Middleton Isla 15.82 53 eP Pn 18 10 55.4 +2.2
MID pmax pmax
comp=Z,146nm,1.3s
TRF Thorofare Moun 15.90 36 ePn Pn 18 10 56.1 +1.7
comp=Z,40nm,1.6s
TRF epP pP 18 11 04.9 -3.0
BPAW Bear Paw Mtn. 16.05 34 ePn P 18 10 59.5 +0.5
comp=Z,16nm,0.8s
SCM Sheep Creek Mo 16.24 44 ePn Pn 18 10 57.1 -1.6
comp=Z,21nm,0.9s
SCM Sheep Creek Mo 16.24 44 eP Pn 18 10 57.1 -1.6
SCM pmax pmax
comp=Z,21nm,0.9s
IM3 Indian Mountai 16.52 26 ePn Pn 18 11 01.2 -0.8
RDOG Red Dog Mine 16.52 11 ePn P 18 11 04.7 +0.5
comp=Z,11nm,1.0s
MCK McKinley 16.56 37 ePn Pn 18 11 01.1 -1.5
comp=Z,10nm,0.8s
MCK McKinley 16.56 37 eP Pn 18 11 01.1 -1.5
MCK pmax pmax
comp=Z,10.0nm,0.8s
DIV Divide 16.64 47 ePn Pn 18 11 03.3 -0.4
comp=Z,6.8nm,0.6s
KLU Klutina 16.71 46 ePn Pn 18 11 02.1 -2.5
comp=Z,8.7nm,0.5s
MLY Manley 16.73 31 ePn P 18 11 06.8 +0.3
comp=Z,13nm,0.8s
DHY Denali Highway 16.80 40 ePn Pn 18 11 04.7 -1.2
comp=Z,5.9nm,0.6s
RAGM Ragged Mountai 16.90 50 ePn Pn 18 11 06.9 -0.1
comp=Z,12nm,0.7s
BMRM Bremner River 17.12 48 ePn Pn 18 11 07.8 -1.9
comp=Z,14nm,1.1s
WRH Wood River Hil 17.28 35 ePn Pn 18 11 10.7 -0.9
comp=Z,6.1nm,0.8s
HARP HAARP 17.41 43 ePn Pn 18 11 11.5 -1.8
comp=Z,11nm,0.7s
CCB Clear Creek Bu 17.48 35 ePn Pn 18 11 12.8 -1.3
comp=Z,7.4nm,1.0s
MDM Murphy Dome 17.52 34 ePn Pn 18 11 13.3 -1.2
comp=Z,5.8nm,0.6s
PAX Paxson 17.52 42 ePn Pn 18 11 12.6 -2.1
comp=Z,9.7nm,1.3s
PAX Paxson 17.52 42 eP Pn 18 11 12.6 -2.1
PAX pmax pmax
comp=Z,10.0nm,1.3s
HDA Harding Lake 17.66 36 ePn Pn 18 11 14.8 -1.5
comp=Z,7.2nm,0.7s
CRQM Cirque 17.74 50 ePn Pn 18 11 17.1 -0.3
comp=Z,14nm,0.6s
ILAR Eielson Array 17.88 35 P Pn 18 11 17.0 -2.0
comp=Z,0.6nm,0.3s,baz=230,slow=10,SNR=16
ILAR PcP PcP 18 15 51.6 -1.4
comp=Z,0.1nm,0.3s,baz=281,slow=3.4,SNR=4.4
ILB Eielson Array 17.88 35 ePn Pn 18 11 16.8 -2.2
IL1 Eielson Array 17.88 35 ePn Pn 18 11 18.7 -0.3
TGL Tana Glacier 17.88 50 ePn Pn 18 11 16.8 -2.4
comp=Z,12nm,0.6s
RIDG Independ'e Rid 18.12 40 eP P 18 11 22.3 +0.3
comp=Z,7.6nm,0.6s
PET Petropavlovsk 18.17 285 eP Pn 18 11 23.1 +0.5
comp=Z,9.2nm,0.6s
PET Petropavlovsk 18.17 285 eP Pn 18 11 23.4 +0.9
BALM Baldy 18.19 49 eP Pn 18 11 24.0 +1.1
comp=Z,7.4nm,0.5s
BALM Baldy 18.19 49 eP Pn 18 11 24.0 +1.1
BALM pmax pmax
comp=Z,7.0nm,0.5s
COLD Coldfoot 18.39 26 eP Pn 18 11 26.9 +1.7
comp=Z,3.9nm,0.7s
SCRK Sand Creek 18.57 40 eP P 18 11 25.2 -1.7
comp=Z,5.7nm,0.7s
PEA1 Petropavlovsk- 18.72 285 eP Pn 18 11 30.2 +1.0
PEA0B Petropavlovsk- 18.72 285 eP P 18 11 28.9 +0.4
comp=Z,12nm,0.6s
PETK Petropavlovsk- 18.72 285 P Pn 18 11 30.2 +1.0
baz=88,slow=14
PETK Petropavlovsk- 18.72 285 eP Pn 18 11 29.5 +0.2
BILL Bilibino 19.27 334 eP Pn 18 11 36.7 +0.9
comp=Z,12nm,0.7s
BILL Bilibino 19.27 334‖ eP Pn 18 11 36.5 +0.7
BILL pmax pmax
comp=Z,8.0nm,0.5s
FYU Fort Yukon 19.47 32 eP Pn 18 11 38.7 +0.7
comp=Z,26nm,1.4s
TOLK Toolik Lake Re 19.58 24 eP Pn 18 11 39.0 -0.5
comp=Z,16nm,0.8s
EGAK Eagle 20.03 39 eP P 18 11 42.5 -0.2
comp=Z,8.2nm,0.6s
SKR Severo-Kuril's 20.23 279 eP P 18 11 45.2 +0.3
SKR pmax pmax
comp=Z,10.0nm,0.4s
SKR MLR MLR
comp=Z,100nm,16.0s
SKR MLR MLR
comp=Z,200nm,15.0s
DAWY Dawson 20.46 42 eP P 18 11 47.2 -0.2
comp=Z,14nm,1.4s
SKAG Skagway 21.36 56 eP P 18 11 57.7 +0.7
comp=Z,16nm,0.5s
BESE Bessie Mountai 21.56 58 eP P 18 11 58.8 -0.5
comp=Z,11nm,1.0s
JIS Juneau Island 21.80 59 eP P 18 12 02.9 +1.2
comp=Z,16nm,1.1s
SEY Seymchan 21.94 314 P P 18 12 03.5 +0.2
comp=Z,5.9nm,0.5s,baz=116,slow=8.3,SNR=50
MA2 Magadan 22.25 304 P P 18 12 06.7 +0.1
comp=Z,8.5nm,0.7s,baz=89,slow=10,SNR=7.7
MA2 Magadan 22.25 304 eP P 18 12 06.6 0.0
comp=Z,8.7nm,0.7s
MA2 Magadan 22.25 304‖ eP P 18 12 08.6 +1.9
MA2 pmax pmax
comp=Z,10.0nm,0.8s
CRAG Craig 22.67 66 eP P 18 12 13.1 +2.0
comp=Z,66nm,2.0s
DIB Dawson Inlet, 23.45 72 eP P 18 12 18.1 -0.8
comp=Z,91nm,1.8s
DLBC Dease Lake 24.09 58 P P 18 12 27.6 +2.6
comp=Z,9.4nm,0.6s,baz=190,slow=16,SNR=14
DLBC LR LR 18 22 02.2
comp=Z,68nm,19.4s,baz=98,slow=37
DLBC Dease Lake 24.09 58 eP P 18 12 27.3 +2.3
comp=Z,26nm,1.0s
INK Inuvik 24.26 34 P P 18 12 26.5 +0.2
comp=Z,3.8nm,0.4s,baz=264,slow=9.3,SNR=21
INK PcP PcP 18 16 05.9 +0.8
comp=Z,1.8nm,0.7s,baz=267,slow=3.6,SNR=3.0
INK Inuvik 24.26 34 eP P 18 12 25.1 -1.2
comp=Z,4.7nm,0.8s
INK PcP PcP 18 16 05.9 +0.8
MIDW Midway 24.28 193 eP P 18 12 28.6 +1.8
comp=Z,93nm,0.8s
BBB Bella Bella 26.28 72 LR LR 18 20 45.5
comp=Z,52nm,20.4s,baz=282,slow=31
YUK Yuzh-Kuril'sk 29.31 271 P P 18 12 58.8 -13
YUK MLR MLR
comp=Z,114nm,16.0s
YSS Yuzh-Sakhalins 29.80 279 eP P 18 13 18.2 +2.0
comp=Z,43nm,1.8s
YSS Yuzh-Sakhalins 29.80 279‖ eP P 18 13 17.7 +1.5
YSS pmax pmax
comp=Z,5.0nm,0.4s
NLWA Neilton Lookou 30.63 80 eP P 18 13 23.9 +0.3
comp=Z,51nm,1.6s
E03A Lebam 31.21 81 eP P 18 13 29.3 +0.6
comp=Z,31nm,1.2s
ASAJ Asahikawa 31.28 274 P P 18 13 29.5 +0.1
comp=Z,10nm,0.5s,baz=41,slow=8.0,SNR=39
ASAJ LR LR 18 24 50.7
comp=Z,78nm,21.9s,baz=32,slow=34
ASAJ Asahikawa 31.28 274 eP P 18 13 29.3 0.0
comp=Z,16nm,0.6s
YKW3 Yellowknife Ar 31.34 48 eP P 18 13 29.5 -0.1
comp=Z,4.1nm,1.0s
YKA Yellowknife Ar 31.35 48 P P 18 13 30.4 +0.6
comp=Z,1.6nm,0.3s,baz=273,slow=8.0,SNR=28
YKA PcP PcP 18 16 23.2 +0.8
comp=Z,0.6nm,0.7s,baz=275,slow=2.4,SNR=4.6
YKA LR LR 18 28 13.1
comp=Z,10nm,18.4s,baz=273,slow=40
ERK Elk Rock 32.06 81 eP P 18 13 36.8 +0.4
TIXI Tiksi 32.32 329 PcP PcP 18 16 25.5 +0.6
comp=Z,2.9nm,0.3s,baz=118,slow=5.5,SNR=6.4
YAK Yakutsk 32.40 311‖ eP P 18 13 39.0 0.0
YAK pmax pmax
comp=Z,4.0nm,0.7s
LTY Liberty 32.63 78 eP P 18 13 41.9 +0.6
comp=Z,15nm,1.6s
B08A Colville Reser 32.93 75 eP P 18 13 45.0 +1.2
comp=Z,5.3nm,0.7s
JCC Jacoby Creek, 33.95 90 eP P 18 13 54.8 +2.1
comp=Z,36nm,1.5s
E08A Dider Farm, El 33.96 78 eP P 18 13 54.6 +1.8
comp=Z,4.7nm,0.7s
KHMM Horse Mountain 34.10 90 eP P 18 13 56.1 +1.8
comp=Z,15nm,1.4s
YBH Yreka Blue Hor 34.24 88 P P 18 13 57.1 +1.7
comp=Z,0.7nm,0.5s,baz=335,slow=14,SNR=3.3
YBH LR LR 18 24 50.2
comp=Z,70nm,20.9s,baz=315,slow=31
YBH Yreka Blue Hor 34.24 88 eP P 18 13 57.4 +2.0
comp=Z,3.0nm,1.0s
NEW Newport 34.29 74 P P 18 13 56.5 +0.9
comp=Z,7.1nm,0.9s,baz=316,slow=5.8,SNR=4.1
NEW Newport 34.29 74 eP P 18 13 55.6 0.0
comp=Z,8.0nm,0.8s
KMRM Mail Ridge 34.50 91 eP P 18 13 59.8 +2.2
comp=Z,16nm,1.5s
E09A Wood Farm, Sta 34.50 78 eP P 18 13 59.1 +1.6
comp=Z,21nm,1.8s
MLH Mauna Loa 34.88 153 eP P 18 14 00.8 -0.4
comp=Z,184nm,1.6s
MLH Mauna Loa 34.88 153 eP P 18 14 00.8 -0.4
MLH pmax pmax
comp=Z,184nm,1.6s
KLR Kul'dur 35.36 288‖ eP P 18 14 03.7 -1.1
MOD Modoc Plateau 35.62 86 eP P 18 14 08.3 +1.0
comp=Z,5.0nm,1.0s
WALA Waterton Lakes 35.81 71 eP P 18 14 09.5 +0.6
comp=Z,8.8nm,1.2s
BMO Blue Mountains 35.85 80 eP P 18 14 09.2 +0.1
comp=Z,8.4nm,1.7s
BMO Blue Mountains 35.85 80 eP P 18 14 09.3 +0.1
BMO pmax pmax
comp=Z,8.0nm,1.7s
J08A Circle Bar Ran 35.94 83 eP P 18 14 10.6 +0.6
comp=Z,8.7nm,1.2s
WVOR Wild Horse Val 36.35 84 eP P 18 14 13.1 -0.4
comp=Z,7.2nm,1.1s
WVOR Wild Horse Val 36.35 84 eP P 18 14 13.1 -0.4
WVOR pmax pmax
comp=Z,7.0nm,1.1s
H11N2 WAKE ISLAND Hy 36.49 216 T T 18 52 46.2
baz=21,slow=76,SNR=52
H11N3 WAKE ISLAND Hy 36.49 216 T T 18 52 48.9
baz=21,slow=76,SNR=205
H11N1 WAKE ISLAND Hy 36.51 216 T T 18 52 46.4
baz=21,slow=76,SNR=80
MSO Missoula 36.87 75 eP P 18 14 18.5 +0.7
RES Resolute Bay 37.15 25 eP P 18 14 19.5 -0.2
comp=Z,4.7nm,1.0s
RES Resolute Bay 37.15 25 eP P 18 14 19.5 -0.2
RES pmax pmax
comp=Z,5.0nm,1.0s
EMB Emerald Bay 37.47 90 eP P 18 14 26.6 +3.4
PAHR Pah Rah Range 37.47 88 eP P 18 14 23.5 +0.4
comp=Z,5.7nm,1.2s
H11S1 WAKE ISLAND Hy 37.68 215 T T 18 54 14.5
baz=21,slow=75,SNR=485
H11S2 WAKE ISLAND Hy 37.70 215 T T 18 54 24.2
baz=21,slow=75,SNR=214
H11S3 WAKE ISLAND Hy 37.70 215 T T 18 54 22.3
baz=21,slow=75,SNR=156
PNTR Pine Nut 37.71 89 eP P 18 14 26.5 +1.3
comp=Z,6.3nm,0.7s
USRK Ussuriysk Ar. 37.72 281 P P 18 14 25.3 +0.3
comp=Z,1.6nm,0.6s,baz=66,slow=12
USRK PcP PcP 18 16 41.1 0.0
baz=224,slow=4.0
CMB Columbia Colle 37.88 91 eP P 18 14 27.0 +0.6
comp=Z,4.0nm,1.4s
CMB Columbia Colle 37.88 91 eP P 18 14 27.0 +0.6
CMB pmax pmax
comp=Z,4.0nm,1.4s
YERR Yerington 38.00 89 eP P 18 14 28.7 +1.1
comp=Z,4.4nm,0.8s
WAKR Walker 38.17 90 eP P 18 14 30.4 +1.3
comp=Z,2.6nm,0.8s
HLID Hailey 38.30 80 eP P 18 14 30.1 +0.1
comp=Z,2.1nm,0.8s
BMN Battle Mountai 38.37 86 eP P 18 14 32.3 +1.6
comp=Z,5.7nm,1.4s
MAJO Matsushiro 38.43 266 eP P 18 14 31.4 +0.3
comp=Z,16nm,1.0s
MAJO ePcP PcP 18 16 43.9 +0.3
MAJO Matsushiro 38.43 266 deP P 18 14 31.7 +0.6
MAJO pmax pmax
comp=Z,12nm,0.9s
MAT Matsushiro 38.43 266 P P 18 14 31.5 +0.4
MJAR Matsushiro Arr 38.43 266 P P 18 14 31.1 0.0
comp=Z,3.8nm,0.7s,baz=48,slow=7.3,SNR=12
MJAR PcP PcP 18 16 43.9 +0.3
comp=Z,2.0nm,0.8s,baz=83,slow=2.0,SNR=5.7
MJAR LR LR 18 28 47.9
comp=Z,57nm,21.6s,baz=60,slow=34
MJB9 Matsu-Tunnel 38.43 266 eP P 18 14 31.3 +0.2
comp=Z,16nm,1.0s
MCMT McKenzie Canyo 38.56 77 eP P 18 14 32.7 +0.4
RYN Ryan 38.66 89 eP P 18 14 34.2 +1.1
comp=Z,3.1nm,1.0s
KVN Kaiserville 38.66 88 eP P 18 14 33.3 +0.1
comp=Z,10nm,1.7s
KVN Kaiserville 38.66 88 eP P 18 14 33.3 +0.1
KVN pmax pmax
comp=Z,10.0nm,1.7s
EGMT Eagleton 38.74 71 eP P 18 14 34.1 +0.5
comp=Z,8.5nm,0.8s
BOZ Bozeman (W) 38.88 75 eP P 18 14 34.9 0.0
comp=Z,4.4nm,0.8s
BOZ Bozeman (W) 38.88 75 eP P 18 14 34.9 0.0
BOZ pmax pmax
comp=Z,4.0nm,0.8s
NV01 Mina Array Sit 38.91 89 eP P 18 14 36.0 +0.7
NVAR Mina Array Bea 38.91 89 P P 18 14 36.6 +1.3
comp=Z,1.0nm,0.6s,baz=292,slow=8.8,SNR=10
NVAR LR LR 18 27 20.6
comp=Z,52nm,21.4s,baz=85,slow=31
MDPB Devils Postpil 38.93 91 eP P 18 14 34.8 -0.8
comp=Z,3.9nm,0.8s
NV11 Mina Array Sit 39.01 89 eP P 18 14 36.9 +0.9
comp=Z,1.0nm,1.9s
ELK Elko 39.40 84 P P 18 14 41.4 +2.0
comp=Z,1.2nm,0.5s,baz=357,slow=7.7,SNR=7.5
JHJ2 Mitsune 39.73 261 eP P 18 14 44.7 +2.8
comp=Z,645nm,1.2s
TPAW Teton Pass 40.43 77 eP P 18 14 49.2 +1.3
comp=Z,8.0nm,1.4s
RLMT Red Lodge 40.54 74 eP P 18 14 49.3 +0.5
comp=Z,11nm,0.9s
R11A Troy Canyon, C 40.64 87 eP P 18 14 50.3 +0.7
comp=Z,11nm,1.8s
DAC Darwin (Calif) 40.71 91 eP P 18 14 51.4 +1.1
comp=Z,3.7nm,1.0s
DAC Darwin (Calif) 40.71 91 eP P 18 14 51.4 +1.1
DAC pmax pmax
comp=Z,4.0nm,1.0s
TPNV Topopah Spring 41.11 89 eP P 18 14 54.0 +0.6
comp=Z,5.5nm,0.7s
TPNV Topopah Spring 41.11 89 eP P 18 14 54.1 +0.6
TPNV pmax pmax
comp=Z,6.0nm,0.7s
BOD Bodaibo 41.18 308 eP P 18 14 52.4 -1.2
BOD pmax pmax
comp=Z,6.0nm,0.9s
DUG Dugway, Tooele 41.22 83 eP P 18 14 54.0 -0.2
comp=Z,6.7nm,1.1s
DUG Dugway, Tooele 41.22 83 eP P 18 14 54.1 -0.2
DUG pmax pmax
comp=Z,7.0nm,1.1s
LAO LASA Array 41.48 71 eP P 18 14 57.2 +0.9
comp=Z,26nm,1.6s
PSUT Pine Spring 41.59 86 eP P 18 14 57.7 +0.2
comp=Z,4.1nm,0.9s
BW06 Boulder Array 41.68 78 eP P 18 14 58.0 -0.2
comp=Z,5.6nm,0.7s
PD31 Pinedale Array 41.68 78 eP P 18 14 58.2 0.0
PD31 eScP ScP 18 20 40.8 +0.3
PDAR Pinedale Array 41.68 78 P P 18 14 58.6 +0.4
comp=Z,2.1nm,0.7s,baz=306,slow=5.1,SNR=19
PDAR ScP ScP 18 20 40.8 +0.3
comp=Z,1.2nm,1.1s,baz=260,slow=4.4,SNR=4.3
PDAR LR LR 18 30 16.8
comp=Z,44nm,19.2s,baz=292,slow=33
PDAR Pinedale Array 41.68 78 eP P 18 14 58.2 0.0
PDAR ScP ScP 18 20 40.8 +0.3
FCC Fort Churchill 42.06 49 eP P 18 15 00.9 +0.1
comp=Z,12nm,0.8s
FCC Fort Churchill 42.06 49 eP P 18 15 00.9 +0.1
FCC pmax pmax
comp=Z,12nm,0.8s
HIA Hailar 42.23 295 eP P 18 15 01.7 -0.6
comp=Z,19nm,0.8s
HIA Hailar 42.23 295 eP P 18 15 01.7 -0.6
HIA pmax pmax
comp=Z,19nm,0.8s
CCUT Cedar City 42.51 86 eP P 18 15 05.7 +0.7
comp=Z,2.1nm,0.8s
JCJ Chichijima 42.63 252 LR LR 18 29 55.3
comp=Z,45nm,21.1s,baz=74,slow=32
MSU Marysvale 42.63 84 eP P 18 15 07.4 +1.4
MSU Marysvale 42.63 84 eP P 18 15 07.4 +1.4
TMUT Trail Mountain 42.74 83 eP P 18 15 08.1 +1.1
comp=Z,6.2nm,0.9s
TULEG Thule 42.80 20 eP P 18 15 04.8 -1.7
comp=Z,41nm,1.7s
P17A Butcher Ranch, 42.92 82 eP P 18 15 07.4 -0.9
comp=Z,4.7nm,0.8s
MTPU Mount Pierson 42.92 85 eP P 18 15 06.6 -1.9
comp=Z,5.4nm,1.3s
P18A Preston Nutter 43.13 82 eP P 18 15 11.3 +1.2
comp=Z,8.6nm,1.1s
PFO Pinyon Flats O 43.17 93 eP P 18 15 10.5 +0.2
comp=Z,3.9nm,0.8s
PFO Pinyon Flats O 43.17 93 eP P 18 15 10.5 +0.2
PFO pmax pmax
comp=Z,4.0nm,0.8s
XPFO Piæon Flat 43.17 93 eP P 18 15 11.1 +0.8
comp=Z,4.0nm,0.8s
SRU San Rafael Swe 43.28 83 eP P 18 15 12.6 +1.4
comp=Z,7.4nm,0.8s
SRU San Rafael Swe 43.28 83 eP P 18 15 12.6 +1.4
SRU pmax pmax
comp=Z,7.0nm,0.8s
K22A Casper 43.57 76 eP P 18 15 13.9 +0.4
comp=Z,4.9nm,0.8s
RWWY Rawlins 43.73 77 eP P 18 15 16.0 +1.2
comp=Z,9.1nm,1.1s
W13A Hualapai Mount 43.77 89 eP P 18 15 15.9 +0.8
comp=Z,7.7nm,1.1s
U15A North Rim 43.88 87 eP P 18 15 16.9 +0.7
comp=Z,4.7nm,0.8s
O20A White River Ci 44.04 80 eP P 18 15 17.3 0.0
comp=Z,13nm,0.8s
KSRS Korea Array 44.19 275 P P 18 15 18.9 +0.8
comp=Z,5.1nm,0.7s,baz=54,slow=7.7,SNR=16
KSRS LR LR 18 32 59.2
comp=Z,32nm,21.0s,baz=40,slow=35
KSRS Korea Array 44.19 275 P P 18 15 19.0 +0.8
KSRS pmax pmax
comp=Z,5.0nm,0.7s
KSRS MLR MLR
comp=Z,32nm,21.0s
RSSD Black Hills 44.19 72 eP P 18 15 18.0 -0.5
comp=Z,3.3nm,0.6s
RSSD Black Hills 44.19 72 eP P 18 15 18.0 -0.5
RSSD pmax pmax
comp=Z,3.0nm,0.6s
KS01 Wonju Array Si 44.19 276 eP P 18 15 18.0 -0.3
KS15 Wonju Array Si 44.22 276 eP P 18 15 18.4 -0.1
KSAR Wonju Array Be 44.22 276 P P 18 15 18.9 +0.5
KSAR Wonju Array Be 44.22 276 P P 18 15 19.0 +0.5
PV09 Paradox Valley 44.51 82 eP P 18 15 21.6 +0.5
GLA Glamis 44.55 92 eP P 18 15 20.9 -0.4
comp=Z,3.6nm,0.6s
GLA Glamis 44.55 92 eP P 18 15 20.9 -0.4
GLA pmax pmax
comp=Z,4.0nm,0.6s
PV21 Cone Mtn., Par 44.56 82 eP P 18 15 21.7 +0.1
comp=Z,4.3nm,0.6s
PV23 Carpenter Ridg 44.61 82 eP P 18 15 21.5 -0.5
comp=Z,13nm,1.5s
MDND Maddock 44.64 66 eP P 18 15 22.7 +1.0
comp=Z,14nm,0.8s
PV10 Paradox Valley 44.64 82 eP P 18 15 22.8 +0.6
PV22 Blue Mesa, Par 44.70 82 eP P 18 15 23.1 +0.6
comp=Z,3.9nm,0.8s
PV20 West Nyswonger 44.71 82 eP P 18 15 22.9 +0.3
comp=Z,5.2nm,0.8s
PV17 East Wray Mesa 44.75 82 eP P 18 15 21.5 -1.5
comp=Z,10.0nm,0.7s
PV16 Nyswonger Mesa 44.76 82 eP P 18 15 23.1 0.0
comp=Z,5.0nm,0.8s
PV11 David Mesa, Pa 44.79 82 eP P 18 15 23.1 -0.2
comp=Z,13nm,0.5s
PV05 Paradox Valley 44.79 83 eP P 18 15 24.3 +0.9
PV18 Skein Mesa, Pa 44.80 82 eP P 18 15 23.6 +0.2

comp=Z,10nm,1.1s
PV12 Saucer Basin, 44.82 82 *e*P **P 18 15 24.1 +0.5**
comp=Z,6.5nm,0.9s
PV03 Paradox Valley 44.84 82 *e*P **P 18 15 24.0 +0.3**
PV13 Radium Mtn., P 44.91 82 *e*P **P 18 15 24.7 +0.4**
comp=Z,13nm,0.8s
PV02 Paradox Valley 44.93 82 *e*P **P 18 15 24.9 +0.4**
comp=Z,9.1nm,0.9s
INCN Inchon 44.96 276 *e*P **P 18 15 24.5 +0.1**
comp=Z,132nm,1.8s
N23A Red Feather La 44.97 77 *e*P **P 18 15 25.2 +0.4**
comp=Z,5.2nm,1.0s
PV15 Paradox Valley 45.00 82 *e*P **P 18 15 25.4 +0.4**
WUAZ Wupatki 45.04 87 *e*P **P 18 15 26.1 +0.9**
comp=Z,3.8nm,0.6s
Y14A Wickenburg 45.08 90 *e*P **P 18 15 26.1 +0.7**
comp=Z,2.4nm,0.7s
PV01 Paradox Valley 45.08 82 *e*P **P 18 15 25.9 +0.2**
JNU Nakatsue 45.21 269 P **P 18 15 26.7 +0.2**
comp=Z,3.5nm,0.4s,baz=29,slow=18,SNR=11
JNU LR LR 18 32 22.4
comp=Z,59nm,21.4s,baz=124,slow=33
JNU Nakatsue 45.21 269 *e*P **P 18 15 26.0 -0.5**
comp=Z,10nm,1.0s
TJN Taejon 45.22 275 *c e*P **P 18 15 26.7 +0.2**
ULM Lac du Bonnet 45.37 61 P **P 18 15 28.9 +1.3**
comp=Z,4.1nm,0.5s,baz=306,slow=8.7,SNR=4.2
ULM LR LR 18 34 23.3
comp=Z,48nm,18.4s,baz=188,slow=36
ULM Lac du Bonnet 45.37 61 *e*P **P 18 15 27.3 -0.3**
comp=Z,4.8nm,0.6s
113A Mohawk Valley, 45.40 92 *e*P **P 18 15 28.3 +0.4**
comp=Z,10nm,1.8s
SMCO Snowmass 45.40 80 *e*P **P 18 15 28.0 -0.4**
comp=Z,2.6nm,1.1s
MVCO Mesa Verde 45.71 83 *e*P **P 18 15 29.4 -1.2**
comp=Z,2.8nm,0.6s
X16A Lo Mia Camp, P 45.73 88 *e*P **P 18 15 30.1 -0.6**
comp=Z,1.9nm,0.9s
ISCO Idaho Springs 45.84 78 *e*P **P 18 15 30.0 -1.7**
comp=Z,7.7nm,1.7s
ISCO Idaho Springs 45.84 78 *e*P **P 18 15 30.0 -1.7**
ISCO pmax pmax
comp=Z,8.0nm,1.7s
W18A Petrified Fore 46.31 86 *e*P **P 18 15 34.1 -1.2**
comp=Z,3.1nm,0.8s
S22A 4UR Ranch, Cre 46.39 81 *e*P **P 18 15 36.9 +0.8**
comp=Z,7.8nm,1.5s
AGMN Agassiz Nation 46.47 63 *e*P **P 18 15 35.9 -0.3**
comp=Z,8.9nm,0.9s
SDCO Great Sand Dun 47.20 80 *e*P **P 18 15 42.6 +0.2**
comp=Z,3.5nm,0.9s
TUC Tucson 47.55 90 *e*P **P 18 15 44.2 -0.7**
comp=Z,5.0nm,1.4s
TUC Tucson 47.55 90 *e*P **P 18 15 44.2 -0.7**
TUC pmax pmax
comp=Z,5.0nm,1.4s
KSCO Kaye Shedlock' 48.13 77 *e*P **P 18 15 49.5 +0.1**
comp=Z,27nm,1.3s
T25A Trinidad 48.25 80 *e*P **P 18 15 51.8 +1.3**
comp=Z,14nm,1.0s
LAZ Ladron 48.38 85 *e*P **P 18 15 52.7 +1.2**
ANMO Albuquerque 48.44 84 LR LR 18 33 46.3
comp=Z,49nm,20.6s,baz=356,slow=33
ANMO Albuquerque 48.44 84 *e*P **P 18 15 52.7 +0.8**
comp=Z,1.4nm,0.9s
ANMO Albuquerque 48.44 84⇓ *e*P **P 18 15 53.3 +1.4**
ANMO pmax pmax
comp=Z,1.0nm,0.9s
D36A Goodland 48.60 63 *e*P **P 18 15 51.9 -0.8**
comp=Z,15nm,1.4s
LENM Lemitar 48.64 85 *e*P **P 18 15 54.1 +0.6**
ECSD EROS Data Cent 48.73 69 *e*P **P 18 15 53.0 -0.9**
comp=Z,12nm,1.6s
LPM Los Pinos Moun 48.76 85 *e*P **P 18 15 54.8 +0.5**
BNM Barren Site 48.87 85 *e*P **P 18 15 55.4 +0.1**
EYMN Ely 49.05 61 *e*P **P 18 15 55.8 -0.4**
comp=Z,10nm,1.0s
319A Douglas 49.12 90 *e*P **P 18 15 57.8 +0.7**
comp=Z,4.7nm,0.6s
F36A Milaca 49.19 65 *e*P **P 18 15 56.5 -0.8**
comp=Z,3.0nm,0.8s
KBS Kingsbay 49.21 359 *e*P **P 18 15 57.9 +0.9**
comp=Z,16nm,1.0s
KBS Kingsbay 49.21 359 *e*P **P 18 15 57.9 +0.9**
KBS pmax pmax
comp=Z,16nm,1.0s
BJT Baijiatuau 49.67 286 *e*P **P 18 16 01.1 +0.1**
comp=Z,15nm,1.1s
BJT Baijiatuau 49.67 286 *e*P **P 18 16 01.1 +0.1**
BJT pmax pmax
comp=Z,15nm,1.1s
SPA0 Spitsbergen Ar 49.89 358 *e*P **P 18 16 01.8 -0.4**
SPA0 *e*PcP **PcP 18 17 21.0 -0.9**
SPITS Spitsbergen Ar 49.89 358 P **P 18 16 02.0 -0.2**
comp=Z,1.9nm,0.5s,baz=354,slow=7.2,SNR=10
SPITS PcP **PcP 18 17 22.0 +0.1**
comp=Z,1.1nm,0.4s,baz=52,slow=2.4,SNR=5.9
FRB Frobisher Bay 49.91 35 P **P 18 16 02.9 +0.5**
comp=Z,4.6nm,0.6s,baz=303,slow=7.7,SNR=4.5
DAG Danmarks Havn 50.23 8 *i* P **P 18 16 02.4 -2.3**
comp=Z,5.2nm,0.6s
SONA1 Songino Array 50.34 300 *e*P **P 18 16 06.6 +0.4**
SONA1 *e*PcP **PcP 18 17 24.3 0.0**
SONA0 Songino Array 50.35 300 *e*P **P 18 16 06.3 +0.1**
SONA0 *e*PcP **PcP 18 17 24.3 0.0**
SONM Songino Array 50.35 300 P **P 18 16 06.3 +0.1**
comp=Z,4.0nm,0.6s,baz=55,slow=6.2,SNR=19
SONM PcP **PcP 18 17 24.3 0.0**
comp=Z,0.9nm,0.4s,baz=68,slow=1.5,SNR=4.6
SONM LR LR 18 37 59.7
comp=Z,81nm,20.1s,baz=54,slow=37
I37A Lemond, Waseca 50.39 66 *e*P **P 18 16 06.3 -0.1**
comp=Z,22nm,1.4s
ZAK Zakamensk 50.44 304 *e*P **P 18 16 06.8 0.0**
ZAK pmax pmax
comp=Z,3.0nm,1.3s
MOY Mondy 50.81 307 *e*P **P 18 16 10.3 +0.7**
MNTX Cornudas Mount 51.30 86 *e*P **P 18 16 13.4 0.0**
comp=Z,1.6nm,0.8s
SUMG Summit 51.39 16 *i* P **P 18 16 14.0 0.0**
comp=Z,8.2nm,1.0s
SUMG Summit 51.39 16 *e*P **P 18 16 13.8 -0.2**
comp=Z,8.4nm,1.0s
SUMG Summit 51.39 16 *e*P **P 18 16 13.8 -0.2**
SUMG pmax pmax
comp=Z,8.0nm,1.0s
I39A Houston 51.55 65 *e*P **P 18 16 14.8 -0.3**
comp=Z,8.5nm,0.6s
F41A Three Lakes 51.70 62 *e*P **P 18 16 15.9 -0.3**
comp=Z,7.8nm,0.9s
GUMO Guam 51.89 239 *e*P **P 18 16 15.9 -2.0**
comp=Z,338nm,1.6s
GUMO Guam 51.89 239 *e*P **P 18 16 15.9 -2.0**
GUMO pmax pmax
comp=Z,338nm,1.6s
E43A Lone Tree Farm 52.44 60 *e*P **P 18 16 21.6 -0.2**
comp=Z,9.1nm,0.7s
L40A Anamosa 52.86 67 *e*P **P 18 16 22.9 -2.0**
comp=Z,5.5nm,0.8s
N39A Derby Farms, D 52.90 69 *e*P **P 18 16 24.5 -0.7**
comp=Z,12nm,0.6s
P38A Dawn 53.12 71 *e*P **P 18 16 26.2 -0.7**
comp=Z,8.0nm,0.5s
WMOK Wichita Mounta 53.26 79 *e*P **P 18 16 28.1 +0.1**
comp=Z,4.5nm,1.0s
WMOK Wichita Mounta 53.26 79 *e*P **P 18 16 28.1 +0.1**
WMOK pmax pmax
comp=Z,5.0nm,1.0s
NJ2 Nanjing 53.34 277 *e*P **P 18 16 29.0 +0.5**
NJ2 pmax pmax
comp=Z,13nm,0.7s
N41A Harden Midland 53.96 68 *e*P **P 18 16 31.9 -1.0**
comp=Z,6.7nm,0.9s
TX31 Lajitas Ar. Si 54.01 87 *e*P **P 18 16 33.0 -0.5**
TX31 *e*PcP **PcP 18 17 38.7 +0.5**
TXAR Lajitas Array 54.01 87 P **P 18 16 33.6 +0.1**
comp=Z,1.5nm,0.7s,baz=300,slow=5.6,SNR=21
TXAR LR LR 18 37 36.1
comp=Z,45nm,19.4s,baz=0.0,slow=34
P40A Paris 54.05 70 *e*P **P 18 16 32.5 -1.1**
comp=Z,12nm,0.6s
KNTN Kanton 54.68 180 *e*P **P 18 16 36.1 -2.2**
comp=Z,90nm,1.1s
R40A Maddies Statio 54.74 71 *e*P **P 18 16 37.1 -1.5**
comp=Z,10nm,1.3s
P42A Winchester 54.99 69 *e*P **P 18 16 40.0 -0.4**
comp=Z,5.2nm,0.6s
M44A Midewin, Midew 55.10 66 *e*P **P 18 16 40.5 -0.7**
comp=Z,11nm,0.9s
W39A Magazine 55.95 75 *e*P **P 18 16 47.5 +0.1**
comp=Z,8.3nm,1.2s
V40A Witts Springs 56.10 74 *e*P **P 18 16 47.0 -1.6**
comp=Z,6.5nm,1.0s
MIAR Mount Ida 56.52 75 *e*P **P 18 16 50.6 -0.9**
comp=Z,11nm,1.3s
MIAR Mount Ida 56.52 75 *e*P **P 18 16 50.6 -0.9**
MIAR pmax pmax
comp=Z,11nm,1.3s
ZAA1 Zalesovo Array 56.76 317 *e*P **P 18 16 52.6 -0.2**
ZAA1 *e*PcP **PcP 18 17 48.0 -0.4**
ZALV Zalesovo Beam 56.76 317 P **P 18 16 52.6 -0.2**
comp=Z,1.9nm,0.5s,baz=20,slow=6.4,SNR=9.4
ZALV PcP **PcP 18 17 48.0 -0.4**
comp=Z,2.4nm,0.6s,baz=18,slow=4.1,SNR=5.9
ZALV LR LR 18 44 59.0
comp=Z,51nm,18.0s,baz=70,slow=40
ZALV Zalesovo Beam 56.76 317 *e*P **P 18 16 52.3 -0.6**
ZALV *e*PcP **PcP 18 17 48.3 0.0**
NVS Novosibirsk 56.80 318 *e*P **P 18 16 53.0 -0.1**
NVS pmax pmax
comp=N,2.0nm,0.6s
NVS pmax pmax
comp=E,2.0nm,0.6s
NVS pmax pmax
comp=Z,4.0nm,0.6s
XAN Xi'an 57.97 285 P **P 18 17 01.8 0.0**
XAN pP pP 18 17 15.5 +1.2
XAN pmax pmax
comp=Z,11nm,0.8s
ARA0 ARCESS Array S 58.04 353 *e*P **P 18 17 01.1 -0.6**
ARA0 *e*PcP **PcP 18 17 53.1 0.0**
ARCES ARCESS Array B 58.04 353 P **P 18 17 01.1 -0.6**
comp=Z,1.6nm,0.4s,baz=22,slow=9.7,SNR=23
ARCES PcP **PcP 18 17 53.1 0.0**
comp=Z,1.8nm,0.6s,baz=20,slow=4.7,SNR=7.5
DGZ Jazzator, Alta 58.59 312 *i* P **P 18 17 06.4 +0.4**
DGZ pmax pmax
comp=Z,2.0nm,0.8s
T47A Sharon Grove 58.63 69 *e*P **P 18 17 05.7 -0.6**
comp=Z,8.2nm,0.9s
PLAL Pickwick Lake 59.46 71 *e*P **P 18 17 11.3 -0.8**
comp=Z,5.6nm,0.7s
GTA Gaotai 59.48 296 *e*P **P 18 17 12.0 -0.3**
GTA pP pP 18 17 24.8 -0.1
GTA sP sP 18 17 30.8 +0.9
GTA pmax pmax
comp=Z,8.0nm,0.8s
LZH Lanzhou 59.52 291 *e*P **P 18 17 13.5 +0.9**
LZH pP pP 18 17 27.0 +1.8
LZH sP sP 18 17 32.8 +2.5
LZH *e*PP **PP 18 19 26.8 +2.8**
LZH pmax pmax
comp=Z,19nm,1.2s
LZH pmax pmax
comp=Z,63nm,6.5s
LZH LR LR
comp=Z,200nm,14.5s
LZH LR LR
comp=Z,200nm,14.8s
LZH LR LR
comp=Z,280nm,18.2s
ENH Enshi 60.29 282 *e*P **P 18 17 17.5 -0.4**
comp=Z,6.8nm,0.6s
KURK Kurchatov 61.73 317 *e*P **P 18 17 27.2 -0.1**
comp=Z,8.2nm,0.7s
KURK Kurchatov 61.73 317 *c i*P **P 18 17 27.1 -0.1**
KURK *i* *PP **pP 18 17 41.2 +1.3**
KURK pmax pmax
comp=Z,5.0nm,0.7s
KURBB Kurchatov Arra 61.83 317 P **P 18 17 28.2 +0.2**
comp=Z,6.4nm,0.7s,baz=44,slow=7.7,SNR=69
Z50A Ashland 61.95 71 *e*P **P 18 17 27.6 -1.4**
comp=Z,5.8nm,0.8s
WMQ Urumqi 62.70 307 P **P 18 17 36.8 +2.9**
WMQ pP pP 18 17 50.0 +3.4
WMQ sP sP 18 17 55.3 +3.6
WMQ pmax pmax
comp=Z,44nm,1.1s
WMQ pmax pmax
comp=Z,200nm,4.1s
WMQ LR LR
comp=Z,74nm,22.5s
WMQ LR LR
comp=Z,77nm,20.3s
IP03 Louisa 63.00 62 *e*P **P 18 17 35.9 0.0**
comp=Z,9.9nm,0.9s
MK31 Makanchi Array 63.06 312 *e*P **P 18 17 35.0 -1.3**
MK31 Makanchi Array 63.06 312 *e*P **P 18 17 35.0 -1.3**
MK32 Makanchi Array 63.06 312 *e*P **P 18 17 35.9 -0.5**
MKAR Makanchi Array 63.06 312 P **P 18 17 35.9 -0.5**
comp=Z,2.4nm,0.4s,baz=48,slow=6.2,SNR=32
MKAR Makanchi Array 63.06 312 *e*P **P 18 17 35.0 -1.3**
comp=Z,22nm,0.8s
MK01 Makanchi Array 63.08 312 *e*P **P 18 17 35.2 -1.1**
BVAR Borovoye Array 63.18 323 P **P 18 17 37.3 +0.4**
comp=Z,10nm,0.5s,baz=56,slow=6.0,SNR=91
BVAR Borovoye Array 63.18 323 P **P 18 17 37.3 +0.4**
BVAR pmax pmax
comp=Z,11nm,0.5s
BRVK Borovoye 63.19 323 *e*P **P 18 17 36.9 0.0**
comp=Z,4.4nm,0.7s
BRVK Borovoye 63.19 323 *c i*P **P 18 17 37.3 +0.3**
BRVK pmax pmax
comp=Z,9.0nm,2.5s
CD2 Chengdu 63.25 287 P **P 18 17 36.0 -1.8**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
ARU Arti 64.27 332 *e*P **P 18 17 43.3 -0.7**
comp=Z,9.2nm,0.5s
ARU Arti 64.27 332 *d i*P **P 18 17 43.7 -0.3**
ARU *PP **pP 18 17 56.4 -0.3**
ARU 18 18 16.5
ARU 18 20 02.2
ARU S **S 18 26 19.3 +1.2**
ARU SS **SS 18 30 26.3 -0.8**
ARU pmax pmax
comp=Z,7.0nm,0.7s
GYA Guiyang 64.76 281 *e*P **P 18 17 49.0 +1.2**
GYA pmax pmax
comp=Z,10.0nm,1.0s
FIA0 FINESS Array S 65.94 351 *e*P **P 18 17 53.9 -0.9**
FIA0 FINESS Array S 65.94 351 *e*P **P 18 17 53.9 -0.9**
FINES FINESS Array B 65.94 351 P **P 18 17 53.9 -0.9**
comp=Z,1.8nm,0.4s,baz=12,slow=8.3,SNR=23
NB2 NORSAR Subarra 67.18 359 P **P 18 18 02.3 -0.5**
comp=Z,0.7nm,0.5s,baz=1.8,slow=6.5
NB2 NORSAR Subarra 67.18 359 P **P 18 18 02.2 -0.5**
NOA NORSAR Array B 67.18 359 LR LR 18 48 06.0
comp=Z,14nm,20.2s,baz=15,slow=36
HFS Hagfors 68.04 357 P **P 18 18 07.6 -0.5**
comp=Z,3.4nm,0.4s,baz=14,slow=3.0,SNR=34
KMI Kunming 68.11 283 P **P 18 18 09.8 +0.4**
KMI pP pP 18 18 23.5 +1.3
KMI sP sP 18 18 29.5 +2.3
KMI pmax pmax
comp=Z,17nm,1.0s
KMI pmax pmax
comp=Z,160nm,4.3s
VSU Vasula 68.80 350 *de*P **P 18 18 13.0 +0.1**
VSU pmax pmax
comp=Z,16nm,0.8s
TARG Taragay, Kyrgy 69.02 311 *e*P **P 18 18 15.3 +0.3**
comp=Z,3.5nm,0.5s
AKTO Aktyubinsk 69.60 329 P **P 18 18 18.0 0.0**
comp=Z,10nm,0.6s,baz=59,slow=9.7,SNR=52
AKTO Aktyubinsk 69.60 329 *e*P **P 18 18 18.0 0.0**
ABKAR Akbulak array 69.98 327 *e*P **P 18 18 19.9 -0.4**
NRN Naryn 70.08 312 *e*P **P 18 18 22.0 +0.5**
comp=Z,4.2nm,0.6s
NRN Naryn 70.08 312 *e*P **P 18 18 22.0 +0.5**
NRN pmax pmax
comp=Z,4.0nm,0.6s
OBN Obninsk 70.65 343⇓ *e*P **P 18 18 24.7 +0.4**
OBN pmax pmax
comp=Z,5.0nm,0.8s
PMG Port Moresby 70.83 224 LR LR 18 48 09.9
comp=Z,45nm,18.7s,baz=117,slow=35
LSA Lhasa 71.43 294 P **P 18 18 31.5 +1.4**
LSA pmax pmax
comp=Z,17nm,0.8s
LSA Lhasa 71.43 294 *e*P **P 18 18 31.1 +1.1**
comp=Z,14nm,0.8s
LSA Lhasa 71.43 294 *e*P **P 18 18 31.1 +1.1**
LSA pmax pmax
comp=Z,14nm,0.8s
KSH Kashi 71.62 311 P **P 18 18 34.3 +3.7**
KSH pP pP 18 18 46.3 +2.8
KSH S **S 18 27 45.8 -0.9**
KSH sS sS 18 28 12.5 +4.4
KSH ScS **ScS 18 28 32.8 +0.6**
SHL Shillong 74.17 291 *e*P **P 18 18 45.3 -0.7**
comp=Z,12nm,0.5s
SHL Shillong 74.17 291 *e*P **P 18 18 45.3 -0.7**
SHL pmax pmax
comp=Z,12nm,0.5s
CHTO Chiang Mai 75.17 282 *e*P **P 18 18 51.1 -0.6**
comp=Z,5.7nm,0.6s
CHTO Chiang Mai 75.17 282 *e*P **P 18 18 51.1 -0.6**
CHTO pmax pmax
comp=Z,6.0nm,0.6s
CM31 Chiang Mai Arr 75.45 281 *e*P **P 18 18 53.8 +0.6**
CMAR Chiang Mai Arr 75.45 281 P **P 18 18 53.9 +0.6**
comp=Z,9.9nm,0.7s,baz=26,slow=6.7,SNR=52
CMAR LR LR 18 52 45.3
comp=Z,14nm,21.1s,baz=180,slow=36
CM01 Chiang Mai Arr 75.47 281 *e*P **P 18 18 53.4 0.0**
GUN Gumba 75.74 297 *e*P **P 18 18 55.9 +0.7**
comp=Z,33nm,0.4s
JIRN Jiri 75.76 297 *e*P **P 18 18 56.1 +0.7**
comp=Z,41nm,0.3s
AKASG Malin Array Be 76.09 347 P **P 18 18 55.0 -1.4**
comp=Z,1.1nm,0.4s,baz=16,slow=5.7,SNR=6.8
AKASG LR LR 18 59 24.0
comp=Z,25nm,18.0s,baz=40,slow=41
AKASG Malin Array Be 76.09 347 P **P 18 18 55.0 -1.4**
AKBB Malin Array Si 76.09 347 *e*P **P 18 18 55.7 -0.7**
comp=Z,2.3nm,0.6s
AKBB Malin Array Si 76.09 347 *e*P **P 18 18 55.7 -0.7**
AKBB pmax pmax
comp=Z,2.0nm,0.6s
RAMN Ramite 76.09 296 *e*P **P 18 18 57.5 +0.4**
comp=Z,54nm,0.8s
KIEV Kiev 76.10 347⇑ *e*P **P 18 18 56.0 -0.4**
KIEV pmax pmax
comp=Z,2.0nm,0.9s
KKN Kakani 76.16 297 *e*P **P 18 18 57.8 +0.3**
comp=Z,20nm,0.5s
PKIN Phulchoki 76.26 297 *e*P **P 18 18 58.3 +0.2**
comp=Z,8.3nm,0.4s
GKN Gorkha 76.34 298 *e*P **P 18 18 58.8 +0.3**
comp=Z,14nm,0.3s
DMN Daman 76.40 297 *e*P **P 18 18 59.8 +0.9**
comp=Z,10nm,0.4s
BRDH Bariadhala 76.54 289 LR LR 18 55 45.5
comp=Z,33nm,18.4s,baz=254,slow=38
DANN Dangsing 76.55 299 *e*P **P 18 19 00.4 +0.6**
comp=Z,61nm,0.7s
KOLN Koldanda 77.09 299 *e*P **P 18 19 02.9 +0.2**
comp=Z,6.7nm,0.4s
PYUN Piuthan 77.16 299 *e*P **P 18 19 03.2 +0.1**
comp=Z,40nm,0.7s
BRG Berggiesshubel 77.30 357 *e*P **P 18 19 03.7 +0.5**
comp=Z,2.9nm,0.7s
BRG Berggiesshubel 77.30 357 *e*P **P 18 19 03.7 +0.5**
BRG pmax pmax
comp=Z,3.0nm,0.7s
NIL Nilore 77.65 309 *e*P **P 18 19 05.3 -0.2**
comp=Z,14nm,0.6s
NIL Nilore 77.65 309 *e*P **P 18 19 05.3 -0.2**
NIL pmax pmax
comp=Z,14nm,0.6s
DPC Dobruska-Polom 77.71 355 *e*P **P 18 19 05.9 +0.3**
DPC Dobruska-Polom 77.71 355 *e*P **P 18 19 05.9 +0.3**
KRLC Kraliky 77.96 355 *e*P **P 18 19 07.4 +0.4**
KRLC Kraliky 77.96 355 *e*P **P 18 19 07.4 +0.4**
KHC Kasperske Hory 79.05 357 *e*P **P 18 19 13.6 +0.6**
KHC Kasperske Hory 79.05 357 *e*P **P 18 19 13.6 +0.6**
GEC2 GERESS Array S 79.33 357 *e*P **P 18 19 14.3 -0.3**
comp=Z,2.5nm,1.1s
GEC2 GERESS Array S 79.33 357 *e*P **P 18 19 14.3 -0.3**
GEC2 pmax pmax
comp=Z,3.0nm,1.1s
GERES GERESS Array B 79.33 357 P **P 18 19 15.1 +0.5**
comp=Z,1.1nm,0.7s,baz=12,slow=6.8,SNR=10
GEA0 GERESS Array S 79.34 357 *e*P **P 18 19 14.8 +0.1**
VYHS Vyhne 79.40 353 *e*P **P 18 19 15.1 +0.2**
VYHS Vyhne 79.40 353 *e*P **P 18 19 15.1 +0.2**
BUR08 Bucovina Ar. S 79.62 349 *e*P **P 18 19 15.5 -0.7**
BUR04 Bucovina Ar. S 79.64 349 *e*P **P 18 19 16.0 -0.4**
KBZ Khabaz 80.05 335 LR LR 18 58 44.8
comp=Z,42nm,19.1s,baz=141,slow=39
CONA Conrad Observa 80.15 355 *i* P **P 18 19 19.9 +0.8**
comp=Z,2.9nm,0.6s
MOTA Moosalm 80.90 358 *i* P **P 18 19 23.6 +0.4**
comp=Z,9.9nm,1.3s
KBA Koelnbreinsper 81.11 357 *i* P **P 18 19 25.7 +1.3**
comp=Z,11nm,1.0s
FETA Feichten 81.23 359 *i* P **P 18 19 25.7 +0.7**
comp=Z,6.4nm,1.1s
MTN Manton Dam 81.39 236 *e*P **P 18 19 25.4 -0.5**
comp=Z,16nm,0.8s
SOKA Soboth 81.44 356 *e*P **P 18 19 27.1 +1.1**
comp=Z,4.8nm,1.2s
ABTA Abfaltersbach 81.47 357 *i* P **P 18 19 26.9 +0.8**
comp=Z,6.7nm,1.2s
DAVOX Davos/Dischmat 81.48 359 P **P 18 19 27.9 +1.5**
comp=Z,1.9nm,0.5s,baz=139,slow=9.3,SNR=5.3
WR1 Warramunga Arr 85.87 230 *e*P **P 18 19 47.6 -1.2**
comp=Z,4.4nm,1.0s
WRA Warramunga Arr 85.87 230 P **P 18 19 47.6 -1.2**
comp=Z,1.6nm,0.8s,baz=34,slow=6.0,SNR=20
BR101 Keskin Array S 85.98 341 *e*P **P 18 19 49.1 -0.3**
BRTR Keskin Array B 85.98 341 P **P 18 19 49.1 -0.3**
comp=Z,0.9nm,0.7s,baz=34,slow=2.7,SNR=5.7
PSI Prapat 87.61 271 *e*P **P 18 19 57.1 -0.5**
comp=Z,14nm,0.9s
PSI Prapat 87.61 271 *e*P **P 18 19 57.1 -0.5**
PSI pmax pmax
comp=Z,14nm,0.9s
ES19 SONSECA Array 87.92 10 *e*P **P 18 19 58.6 -0.2**
ESDC Sonseca Array 87.94 10 P **P 18 19 58.9 +0.1**
comp=Z,1.1nm,0.5s,baz=352,slow=4.4,SNR=7.6
AS01 Alice Springs 89.25 228 *e*P **P 18 20 04.5 -0.4**
AS31 Alice Springs 89.27 228 *e*P **P 18 20 04.4 -0.7**
comp=Z,2.3nm,0.7s
ASAR Alice Springs 89.28 228 P **P 18 20 04.8 -0.3**
comp=Z,6.9nm,0.7s,baz=33,slow=4.8,SNR=94
MMAI Mount Meron Ar 92.04 338 P **P 18 20 18.6 +0.5**
comp=Z,0.6nm,0.5s,baz=45,slow=2.2,SNR=2.8
TOA1 Torodi Ar. Sit 114.74 7 *e* PKiKP **PKiKP 18 25 48.8 -0.8**
TORD Torodi Ar. Bea 114.74 7 PKiKP **PKiKP 18 25 48.8 -0.8**
baz=337,slow=2.6
MAW Mawson 149.89 218 PKPbc **PKPbc 18 26 57.5 -0.1**
comp=Z,6.8nm,0.9s,baz=17,slow=0.2,SNR=8.1
MAW Mawson 149.89 218 *e* PKPbc **PKPbc 18 26 58.0 +0.4**
BOSA Boshof 153.45 326 PKPbc **PKPbc 18 27 07.5 +0.3**
comp=Z,1.6nm,0.5s,baz=311,slow=1.9,SNR=10.0

MEX 29 18:30:40.5±0.3, 20°.34N×105°.15W, h36km±22km, MD3.5, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CJM	**Chamela**	**0.84**	**173**	*e*P	Pn	18 30 54.1	-1.7
CJM				*e*S	Sn	18 31 04.8	-2.2
ANIG	**Ahuacatlan**	**0.93**	**40**	*e*P	Pn	18 30 55.8	-1.3
ANIG				*e*S	Sn	18 31 07.5	-1.7
R15V		**1.60**	**136**	*e*P	Pn	18 31 04.8	-1.5
R15V				*e*S	Sn	18 31 24.1	-1.7

*IDC **29** 19:05:25.3±1.6, 33°.38S×178°.29W, h0km, mb4.2/4, mb1 4.3/6, mb1mx3.8/48, mbtmp4.2/6, ML3.8/2, Error ellipse: s-maj=43.9km s-min=27.4km az=134.0*
*ISCJB **29** 19:05:30.1±1.0, 33°.71S±0°.06×178°.6W±0°.2, h37km, mb4.8/15, Error ellipse: s-maj=22.5km s-min=7.4km az=15.4*
*NEIC **29** 19:05:37.7±1.9, 34°.17S×178°.50W, h105km±16km, mb4.8/13, Error ellipse: s-maj=18.9km s-min=17.1km az=86.0*

ISC 29 19:05:32.5±1.0, **33°.70S**±0°.10×**178°.7W**±0°.2, **h37**km, **n39**, σ2°.25/41, **mb4.7**/15, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**5.70**	**216**	Pn	**Pn**	**19 06 57.9**	**+3.3**

2.4nm,0.3s,baz=264,slow=3.0,SNR=17
URZ Sn Sn 19 08 09.0 +10
5.4nm,0.3s,baz=174,slow=19,SNR=8.1
OUZ Omahuta 6.57 254 *e*Pn Pn 19 07 13.1 +6.5
BKZ Black Stump Fm 6.71 214 *e*Pn **Pn** 19 07 08.2 -0.3
BFZ Birch Farm 8.07 209 *e*Pn **Pn** 19 07 28.8 +1.6
BFZ *e*Sn **Sn** 19 09 03.4 +6.4
SNZO South Karori 9.24 213 *e*Pn **Pn** 19 07 43.7 +0.5
SNZO *e*Sn **Sn** 19 09 28.8 +2.9
THZ Tophouse 10.46 217 *e*Pn **Pn** 19 08 03.1 +3.2
KHZ Kahutara 10.65 213 *e*Pn **Pn** 19 08 03.2 +0.7
LTZ Lake Taylor 11.53 215 *e*Pn **Pn** 19 08 16.2 +1.7
OXZ Oxford 12.05 214 *e*Pn **Pn** 19 08 21.5 -0.1
OXZ *e*Sn **Sn** 19 10 30.8 -3.9
RPZ Rata Peaks 12.82 216 Pn **Pn** 19 08 32.8 +0.7
0.4nm,0.3s,baz=72,slow=9.3,SNR=2.5
RPZ Sn **Sn** 19 10 48.7 -4.7
0.3nm,0.3s,baz=48,slow=12,SNR=3.0
WKZ Wanaka 14.63 217 *e*Pn **Pn** 19 08 54.3 -2.5
WHZ Wether Hill Ro 15.92 216 *e*Pn **Pn** 19 09 09.4 -4.3
156nm,1.9s
DCZ Deep Cove 16.02 219 *e*Pn **Pn** 19 09 10.8 -4.2
134nm,2.0s
DZM Mont Dzumac 17.51 308 *e*P **P** 19 09 38.4 +3.6
39nm,1.5s
STKA Stephens Creek 33.32 262 *e*P **P** 19 12 08.0 +1.1
15nm,1.9s
CTA Charters Tower 33.92 285 P **P** 19 12 13.0 +0.8
1.8nm,0.5s,baz=110,slow=9.9,SNR=8.9
CTAO Charters Tower 33.92 285 *e*P **P** 19 12 13.5 +1.2
11nm,1.4s
PMG Port Moresby 39.63 300 *e*P P 19 13 05.7 +4.9
16nm,1.2s
AS01 Alice Springs 42.44 271 *e*P **P** 19 13 24.3 +0.3
AS31 Alice Springs 42.48 271 *e*P **P** 19 13 24.8 +0.5
1.4nm,0.9s
ASAR Alice Springs 42.48 271 P **P** 19 13 24.8 +0.5
3.7nm,0.8s,baz=110,slow=7.6,SNR=54
WB2 Warramunga Arr 43.76 276 *e*P **P** 19 13 34.6 0.0
15nm,1.4s
WR1 Warramunga Arr 43.77 276 *e*P **P** 19 13 34.6 0.0
26nm,1.7s
WRA Warramunga Arr 43.77 276 P **P** 19 13 34.6 -0.1
1.1nm,0.3s,baz=115,slow=8.1,SNR=51
MTN Manton Dam 50.03 282 *e*P **P** 19 14 22.3 -1.3
18nm,1.6s
JOHN Johnston Islan 50.90 11 *e*P **P** 19 14 30.6 +0.6
164nm,0.9s
FITZ Fitzroy Crossi 51.88 273 P **P** 19 14 37.6 +0.1
1.6nm,0.8s,baz=140,slow=7.9,SNR=3.8
FITZ Fitzroy Crossi 51.88 273 *e*P **P** 19 14 36.3 -1.2
27nm,1.9s
FAKI Fak Fak 55.03 293 *e*P **P** 19 14 59.5 -1.1
39nm,1.4s
MBWA Marble Bar 55.38 266 *e*P **P** 19 15 00.5 -2.6
71nm,1.8s
KHLU Kahalu'u 57.27 26 *e*P **P** 19 15 16.7 +0.2
254nm,1.6s
SOEI Soe 57.34 281 *e*P **P** 19 15 15.7 -1.6
19nm,1.1s
FIA0 FINESS Array S 148.01 338 *e*PKPbc **PKPdf** 19 25 10.1 +0.1
FINES FINESS Array B 148.01 338 PKPbc **PKPdf** 19 25 10.1 +0.1
1.2nm,0.5s,baz=43,slow=3.9,SNR=19
MMAI Mount Meron Ar 151.61 278 PKPbc **PKPbc** 19 25 22.6 -0.4
0.3nm,0.4s,baz=105,slow=6.3,SNR=3.7
HFS Hagfors 152.33 347 PKPbc **PKPbc** 19 25 22.1 -1.6
3.0nm,0.9s,baz=66,slow=7.0,SNR=2.7
BR101 Keskin Array S 153.51 293 *e*PKPbc **PKPbc** 19 25 26.4 -0.7
BRTR Keskin Array B 153.51 293 PKPbc **PKPbc** 19 25 26.4 -0.7
0.4nm,0.5s,baz=152,slow=5.6,SNR=4.0
CLL Collm 160.46 338 *e*PKPab **PKPab** 19 26 10.0 +1.1

NIED ***29*** *19:06:00, 37°.20N×142°.20E, h11km, Mw3.5 Best double couple: M0=2.32000×10^14 NP1:φ=205.00000°, δ=19.00000°, λ=71.00000°. NP2:φ=44.00000°, δ=72.00000°, λ=96.00000°.*
ISCJB ***29*** *19:06:07.7±0.7, 37°.20N±0°.04×142°.40E±0°.05, h9km, mb3.6/7, Error ellipse: s-maj=6.9km s-min=5.3km az=138.6*
IDC ***29*** *19:06:08.4±1.0, 37°.14N×142°.33E, h0km, mb3.6/7, mb1 3.7/10, mb1mx3.5/73, mbtmp3.7/10, ML3.4/3, MS2.5/1, Ms1 2.5/1, ms1mx2.1/64, Error ellipse: s-maj=25.2km s-min=17.9km az=101.0*
JMA ***29*** *19:06:12.5±0.2, 37°.20N×142°.24E, h41km, M3.5*
ISC 29 19:06:09.2±0.9, 37°.16N±0°.05×142°.35E±0°.06, h9km, n24, σ1=68/24, mb3.6/7, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.19**	**281**	P	**Pg**	**19 06 32.1**	**0.0**
JFK				*e*S	**Sg**	**19 06 45.9**	**-1.7**
ONAJ	**Iwakimizuishiy**	**1.24**	**268**	P	**Pb**	**19 06 32.7**	**-0.1**
ONAJ				*e*S	**Sg**	**19 06 47.7**	**-1.4**
JIO	**Ouri**	**1.52**	**329**	P	**Pn**	**19 06 36.5**	**0.0**
JIO				*e*S	**Sn**	**19 06 54.5**	**-1.9**
JHO	**Hitachi**	**1.53**	**250**	*e*S	**Sn**	**19 06 55.2**	**-1.4**
JFT	**Otama**	**1.64**	**283**	P	**Pn**	**19 06 38.8**	**+0.5**
JOU	**Okura**	**1.80**	**313**	*e*S	**Sn**	**19 07 01.4**	**-2.0**
MJAR	**Matsushiro Arr**	**3.38**	**261**	Pn	**Pn**	**19 07 02.6**	**+0.5**
	2.2nm,0.3s,baz=90,slow=13,SNR=15						
MJAR				Sn	**Sn**	**19 07 43.8**	**+1.5**
	1.9nm,0.3s,baz=42,slow=28,SNR=5.9						
MAT	**Matsushiro**	**3.38**	**261**	P	**Pn**	**19 07 04.2**	**+2.1**
MAT				S	**Sn**	**19 07 43.6**	**+1.3**
JHJ	**Hachijo jima 2**	**4.54**	**208**	Pn	**Pn**	**19 07 18.4**	**+0.3**
	8.5nm,0.3s,baz=108,slow=20,SNR=6.0						
JHJ				Sn	**Sn**	**19 08 05.8**	**-5.2**
	9.5nm,0.3s,baz=223,slow=18,SNR=3.0						
ASAJ	**Asahikawa**	**6.96**	**1**	Pn	**Pn**	**19 07 51.3**	**0.0**
	0.6nm,0.3s,baz=202,slow=12,SNR=8.6						
ASAJ				Sn	**Sn**	**19 09 09.6**	**-0.9**
	0.3nm,0.3s,baz=323,slow=20,SNR=2.6						
KSRS	**Korea Array**	**11.49**	**276**	LR	LR	19 12 55.7	
	comp=Z,23nm,18.9s,baz=60,slow=35						
SEY	**Seymchan**	**26.53**	**10**	P	**P**	**19 11 49.5**	**+2.6**
	0.8nm,0.6s,baz=157,slow=8.4,SNR=5.3						
H11N2	**WAKE ISLAND Hy 27.57**	**122**		T	T	19 41 11.3	
	baz=315,slow=75,SNR=26						
H11N1	**WAKE ISLAND Hy 27.58**	**122**		T	T	19 41 21.1	
	baz=315,slow=75,SNR=16						
H11N3	**WAKE ISLAND Hy 27.59**	**122**		T	T	19 40 59.7	
	baz=315,slow=75,SNR=16						
H11S1	**WAKE ISLAND Hy 28.30**	**124**		T	T	19 42 21.3	
	baz=317,slow=76,SNR=14						
H11S3	**WAKE ISLAND Hy 28.31**	**124**		T	T	19 42 08.4	
	baz=317,slow=76,SNR=16						
H11S2	**WAKE ISLAND Hy 28.32**	**124**		T	T	19 42 00.7	
	baz=317,slow=76,SNR=13						
SONM	**Songino Array**	**28.34**	**304**	P	**P**	**19 12 03.7**	**+0.3**
	0.9nm,0.8s,baz=103,slow=8.9,SNR=4.7						
MKAR	**Makanchi Array**	**44.69**	**302**	P	**P**	**19 14 22.7**	**+0.4**
	0.6nm,0.7s,baz=86,slow=9.6,SNR=3.3						
KURBB	**Kurchatov Arra**	**46.52**	**308**	P	**P**	**19 14 36.6**	**0.0**
	1.4nm,0.5s,baz=82,slow=8.2,SNR=17						
ILAR	**Eielson Array**	**48.99**	**32**	P	**P**	**19 14 55.5**	**-0.2**
	0.5nm,0.8s,baz=270,slow=7.0,SNR=4.3						
WRA	**Warramunga Arr**	**57.29**	**189**	P	**P**	**19 15 57.5**	**+0.2**
	0.2nm,0.4s,baz=6.8,slow=7.1,SNR=6.0						
ASAR	**Alice Springs**	**61.02**	**189**	P	**P**	**19 16 23.9**	**+0.8**
	0.5nm,1.0s,baz=16,slow=7.2,SNR=4.1						

ISCJB ***29*** *19:09:36.4±0.2, 51°.58N±0°.01×16°.11E±0°.02, h0km, mb3.4/3, Error ellipse: s-maj=2.1km s-min=1.8km az=19.1*
CSEM ***29*** *19:09:38.3±0.1, 51°.58N×16°.12E, h2km, ML3.2, Error ellipse: s-maj=2.5km s-min=2.2km az=29.0*
BGR ***29*** *19:09:39.0±0.3, 51°.62N×16°.10E, h1km, ML3.3/18, Error ellipse: s-maj=4.4km s-min=3.3km az=14.0*
IDC ***29*** *19:09:39.8±0.6, 51°.53N×16°.01E, h0km, mb3.4/3, mb1 3.5/9, mb1mx3.3/70, mbtmp3.5/9, ML2.9/5, Error ellipse: s-maj=10.7km s-min=6.3km az=119.0*
PRU ***29*** *19:09:39.5, 51°.56N×16°.09E, h0km*
UPP ***29*** *19:09:42.4±3.0, 51°.76N×15°.46E, h0km, ML1.7*
VIE ***29*** *19:09:43.6±0.7, 51°.28N×15°.72E, h0km, mb3.0/6, ml3.2/6, Error ellipse: s-maj=7.9km s-min=3.3km az=64.0 69 km NE of Liberec Suspected Mining induced.*
ISC 29 19:09:37.8±0.6, 51°.62N±0°.03×16°.13E±0°.02, h0km, n125, σ1=20/206, mb3.6/3, 5C-6D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.78**	**172**	*i* Pg	**Pg**	**19 09 53.4**	**+0.6**
KSP				*e*Sg	**Sg**	**19 10 02.8**	**-0.2**
KSP	**Ksiaz**	**0.78**	**172**	*e*Pg	**Pg**	**19 09 53.4**	**+0.6**
KSP				*e*Sg	**Sg**	**19 10 03.0**	**0.0**
KSP	**Ksiaz**	**0.78**	**172**	Pg	**Pg**	**19 09 53.4**	**+0.6**
KSP				Sg	**Sg**	**19 10 03.0**	**0.0**
UPC	**Upice**	**1.12**	**184**	*e*PG	**Pg**	**19 09 59.4**	**+0.2**
UPC				*e*SG	**Sg**	**19 10 13.2**	**-0.4**
DPC	**Dobruska-Polom**	**1.28**	**174**	*e*PG	**Pg**	**19 10 02.2**	**-0.1**
DPC				*e*SG	**Sg**	**19 10 16.9**	**-1.9**
	comp=Z,76nm,0.4s						
PVCC	**Panska Ves**	**1.47**	**223**	*e*SG	**Sg**	**19 10 24.8**	**-0.3**
	comp=Z,325nm,0.5s						
BRG	**Berggiesshubel**	**1.56**	**242**	PN	**Pn**	**19 10 06.4**	**-0.4**
BRG				PG	**Pg**	**19 10 08.1**	**+0.3**
BRG				SG	**Sg**	**19 10 28.1**	**0.0**
	363nm,0.6s						
BRG	**Berggiesshubel**	**1.56**	**242**	*e*Pn	**Pn**	**19 10 06.5**	**-0.4**
BRG				*e*Pg	**Pb**	**19 10 07.8**	**+0.2**
BRG				*e*Sg	**Sg**	**19 10 28.1**	**0.0**
BRG	**Berggiesshubel**	**1.56**	**242**	Pn	**Pn**	**19 10 06.5**	**-0.4**
KRLC	**Kraliky**	**1.60**	**165**	*e*PG	**Pn**	**19 10 07.4**	**0.0**
KRLC				*e*SG	**Sn**	**19 10 27.9**	**-0.9**
	comp=Z,36nm,0.7s						
RUE	**Ruedersdorf**	**1.69**	**302**	*e*Pg	**Pn**	**19 10 09.1**	**+0.5**
RUE				*e*Sg	**Sn**	**19 10 30.3**	**-0.5**
RUE	**Ruedersdorf**	**1.69**	**302**	Pg	**Pn**	**19 10 09.1**	**+0.5**
RUE				Sg	**Sn**	**19 10 30.3**	**-0.5**
FBE	**Freiberg**	**1.88**	**249**	*e*Pg	**Pb**	**19 10 13.2**	**+0.2**
FBE				*e*Sg	**Sg**	**19 10 38.0**	**-0.2**
FBE	**Freiberg**	**1.88**	**249**	Pg	**Pb**	**19 10 13.2**	**+0.2**
FBE				Sg	**Sg**	**19 10 38.0**	**-0.2**
PRA	**Prague**	**1.89**	**215**	*e*PN	**Pn**	**19 10 11.2**	**-0.1**
PRA				*e*PG	**Pb**	**19 10 13.5**	**+0.4**
PRA				*e*SG	**Sb**	**19 10 36.9**	**-0.4**
	comp=Z,133nm,0.8s						
GOPC	**GO Pecny, Ondr**	**1.91**	**207**	*e*PN	**Pn**	**19 10 11.3**	**-0.3**
PRU	**Pruhonice**	**1.92**	**212**	*e*PN	**Pn**	**19 10 11.4**	**-0.4**
PRU				*e*PG	**Pb**	**19 10 13.5**	**-0.2**
PRU				*e*SG	**Sb**	**19 10 37.7**	**-0.5**
	comp=Z,90nm,0.6s						
CLL	**Collm**	**1.98**	**262**	*e*Pn	**Pn**	**19 10 12.5**	**-0.1**
CLL				*e*Sg	**Sg**	**19 10 41.6**	**+0.1**
CLL	**Collm**	**1.98**	**262**	*i* Pn	**Pn**	**19 10 12.4**	**-0.1**
	comp=Z,36nm,0.4s						
CLL				*i* Pg	**Pg**	**19 10 16.1**	**+0.3**
CLL				*i*		19 10 19.6	
CLL				*i* Sg	**Sg**	**19 10 41.5**	**+0.1**
	comp=Z,55nm,0.5s						
CLL	**Collm**	**1.98**	**262**	Pn	**Pn**	**19 10 12.5**	**-0.1**
CLL				Sg	**Sg**	**19 10 41.6**	**+0.1**
OKC	**Ostrava-Krasne**	**2.20**	**144**	*e*PG	**Pg**	**19 10 20.0**	**+0.1**
OKC				*e*SG	**Sg**	**19 10 47.7**	**-0.6**
	comp=Z,172nm,0.7s						
CHZP	**Chorzow**	**2.25**	**125**	*e*Pg	**Pg**	**19 10 21.8**	**+1.0**
CHZP				*e*Sg	**Sg**	**19 10 50.9**	**+1.0**
VRAC	**Vranov**	**2.33**	**173**	⇑*i* P	**Pn**	**19 10 17.8**	**+0.3**
VRAC	**Vranov**	**2.33**	**173**	*e*Pn	**Pn**	**19 10 17.7**	**+0.3**
VRAC				S	**Sn**	**19 10 47.7**	**+0.9**
VRAC				*e*Sg	**Sb**	**19 10 50.3**	**+0.2**
VRAC	**Vranov**	**2.33**	**173**	*e*PN	**Pn**	**19 10 17.7**	**+0.3**
VRAC				*e*SG	**Sb**	**19 10 50.3**	**+0.2**
KRUC	**Moravsky**	**2.57**	**176**	*e*PN	**Pn**	**19 10 20.6**	**0.0**
KRUC				*e*SG	**Sb**	**19 10 56.9**	**+0.1**
TANN	**Tannenbergstha**	**2.61**	**244**	*e*Pn	**Pn**	**19 10 21.6**	**+0.2**
TANN				*e*Pg	**Pg**	**19 10 28.7**	**+0.8**
TANN				*e*Sg	**Sg**	**19 11 00.5**	**-1.3**
TANN	**Tannenbergstha**	**2.61**	**244**	Pn	**Pn**	**19 10 21.6**	**+0.2**
WERD	**Werda**	**2.69**	**246**	*e*Pn	**Pn**	**19 10 22.6**	**+0.3**
WERD				*e*Pg	**Pg**	**19 10 28.6**	**-0.7**
WERD				*e*Sg	**Sg**	**19 11 03.1**	**-0.9**
WERD	**Werda**	**2.69**	**246**	Pn	**Pn**	**19 10 22.6**	**+0.3**
GUNZ	**Gunzen**	**2.71**	**244**	*e*Pn	**Pn**	**19 10 23.0**	**+0.3**
GUNZ				*e*Pg	**Pg**	**19 10 30.6**	**+0.8**
GUNZ				*e*Sg	**Sg**	**19 11 03.9**	**-0.9**
GUNZ	**Gunzen**	**2.71**	**244**	Pn	**Pn**	**19 10 23.0**	**+0.3**
OJC	**Ojcow**	**2.71**	**120**	*e*Pn	**Pn**	**19 10 21.6**	**-1.0**
OJC				*e*Pg	**Pg**	**19 10 29.8**	**0.0**
OJC				*e*Sg	**Sg**	**19 11 05.6**	**+0.7**
OJC	**Ojcow**	**2.71**	**120**	*e*Pn	**Pn**	**19 10 21.6**	**-1.0**
OJC				*e*Pg	**Pg**	**19 10 29.8**	**0.0**
OJC	**Ojcow**	**2.71**	**120**	Pn	**Pn**	**19 10 21.6**	**-1.0**
NKC	**Novy Kostel**	**2.71**	**241**	*e*PN	**Pn**	**19 10 23.1**	**+0.4**
NKC				*e*PG	**Pg**	**19 10 29.6**	**-0.2**
NKC				*e*SG	**Sg**	**19 11 05.7**	**+0.8**
	comp=Z,132nm,0.6s						
WERN	**Wernitzgruen**	**2.72**	**242**	*e*Pn	**Pn**	**19 10 23.3**	**+0.4**
WERN				*e*Pg	**Pg**	**19 10 29.5**	**-0.5**
WERN	**Wernitzgruen**	**2.72**	**242**	Pn	**Pn**	**19 10 23.3**	**+0.4**
PLN	**Plauen**	**2.75**	**247**	*e*Pn	**Pn**	**19 10 23.3**	**+0.1**
PLN				*e*Pg	**Pg**	**19 10 31.0**	**+0.5**
PLN				*e*Sg	**Sg**	**19 11 05.4**	**-0.8**
PLN	**Plauen**	**2.75**	**247**	Pn	**Pn**	**19 10 23.3**	**+0.1**
NEUB	**Neuenburg**	**2.76**	**263**	*e*Pg	**Pg**	**19 10 30.7**	**+0.1**
NEUB				*e*Sg	**Sg**	**19 11 07.3**	**+0.9**
NEUB	**Neuenburg**	**2.76**	**263**	Pg	**Pg**	**19 10 30.7**	**+0.1**
NEUB				Sg	**Sg**	**19 11 07.3**	**+0.9**
JAVC	**Velka Javorina**	**2.94**	**160**	*e*PN	**Pn**	**19 10 27.0**	**+1.2**
JAVC				*e*SG	**Sg**	**19 11 12.8**	**+0.7**
KHC	**Kasperske Hory**	**2.98**	**214**	*e*PN	**Pn**	**19 10 26.2**	**-0.2**
KHC				*e*PG	**Pb**	**19 10 32.8**	**+1.0**
KHC				*e*SN	**Sn**	**19 11 02.1**	**-0.7**
KHC				*e*SG	**Sg**	**19 11 12.7**	**-0.8**
	comp=Z,27nm,0.4s						
MOX	**Moxa**	**3.01**	**253**	*e*Pn	**Pn**	**19 10 26.8**	**+0.1**
MOX				*e*Sg	**Sg**	**19 11 13.9**	**-0.5**
MOX	**Moxa**	**3.01**	**253**	Pn	**Pn**	**19 10 26.8**	**+0.1**
MOX				Sg	**Sg**	**19 11 13.9**	**-0.5**
MANZ	**Manzenberg**	**3.03**	**239**	*e*Pn	**Pn**	**19 10 27.4**	**+0.3**
MANZ				*e*Pg	**Pg**	**19 10 36.2**	**+0.3**
MANZ	**Manzenberg**	**3.03**	**239**	Pn	**Pn**	**19 10 27.4**	**+0.3**
ROTZ	**Rotzenmuhle**	**3.11**	**235**	*e*Pn	**Pn**	**19 10 28.3**	**+0.2**
ROTZ	**Rotzenmuhle**	**3.11**	**235**	Pn	**Pn**	**19 10 28.3**	**+0.2**
GEC2	**GERESS Array S**	**3.19**	**210**	*e*Pn	**Pn**	**19 10 30.1**	**+0.8**
GEC2	**GERESS Array S**	**3.19**	**210**	Pn	**Pn**	**19 10 30.1**	**+0.8**
GERES	**GERESS Array B**	**3.19**	**210**	Pn	**Pn**	**19 10 29.8**	**+0.5**
	comp=Z,3.3nm,0.3s,baz=30,slow=13,SNR=88						
GERES				Pg	**Pb**	**19 10 35.5**	**+0.1**
	comp=Z,6.5nm,0.3s,baz=31,slow=17,SNR=38						
GERES				Sn	**Sn**	**19 11 07.2**	**-0.8**
	comp=Z,3.8nm,0.3s,baz=42,slow=18,SNR=6.0						
GERES				Lg	Lg	19 11 16.6	
	comp=Z,9.7nm,0.3s,baz=36,slow=27,SNR=14						
SMOL	**Smolenice**	**3.22**	**164**	*e*SG	**Sg**	**19 11 21.6**	**+0.4**
SMOL	**Smolenice**	**3.22**	**164**	*e*Sg	**Sg**	**19 11 21.6**	**+0.4**
WET	**Wettzell**	**3.24**	**221**	*e*Pn	**Pn**	**19 10 30.5**	**+0.6**
WET				*e*Sg	**Sg**	**19 11 20.6**	**-1.2**
WET	**Wettzell**	**3.24**	**221**	Pn	**Pn**	**19 10 30.5**	**+0.6**
WET				Sg	**Sg**	**19 11 20.6**	**-1.2**
LANS	**Liptovska Anna**	**3.27**	**138**	*e*	**Pn**	**19 10 31.3**	**+1.0**
LANS	**Liptovska Anna**	**3.27**	**138**	*e*SG	**Sg**	**19 11 21.7**	**-1.0**
MODS	**Modra-Piesok**	**3.33**	**167**	*e*	**Pn**	**19 10 31.2**	**0.0**
MODS	**Modra-Piesok**	**3.33**	**167**	*e*PG	**Pg**	**19 10 40.1**	**-1.6**
MODS				*e*SG	**Sg**	**19 11 23.5**	**-1.3**
MODS				*e*LG	Lg	19 11 28.9	
MODS	**Modra-Piesok**	**3.33**	**167**	*e*Pg	**Pg**	**19 10 40.1**	**-1.6**
NIE	**Niedzica**	**3.45**	**128**	*e*Pn	**Pn**	**19 10 34.0**	**+1.1**
NIE				*e*Pg	**Pg**	**19 10 44.1**	**+0.1**
NIE				*e*Sg	**Sg**	**19 11 30.0**	**+1.3**
NIE	**Niedzica**	**3.45**	**128**	*e*Pn	**Pn**	**19 10 34.0**	**+1.1**
BSD	**Bornholm Skovb**	**3.58**	**349**	*i* P	**Pn**	**19 10 35.1**	**+0.6**
BSD				*i* S	**Sn**	**19 11 15.0**	**-2.4**
BSD	**Bornholm Skovb**	**3.58**	**349**	*i* P	**Pn**	**19 10 35.2**	**+0.7**
	SNR=56						
BSD				*i* S	**Sn**	**19 11 15.0**	**-2.4**
	SNR=56						
VYHS	**Vyhne**	**3.58**	**150**	*e*	**Pn**	**19 10 34.7**	**+0.1**
VYHS	**Vyhne**	**3.58**	**150**	*e*PG	**Pb**	**19 10 44.4**	**+2.4**
VYHS				*e*SG	**Sg**	**19 11 31.0**	**-1.8**
VYHS				*e*LG	Lg	19 11 53.3	
VYHS	**Vyhne**	**3.58**	**150**	*e*Pg	**Pb**	**19 10 44.4**	**+2.4**
VYHS				*e*Sg	**Sg**	**19 11 31.0**	**-1.8**
GRA1	**Grafenberg Arr**	**3.67**	**240**	Pn	**Pn**	**19 10 36.5**	**+0.6**
GRA1				Sg	**Sg**	**19 11 35.5**	**-0.2**
GRF	**Grafenberg Arr**	**3.67**	**240**	*e*Pn	**Pn**	**19 10 36.5**	**+0.6**
GRF				*e*Sg	**Sg**	**19 11 35.5**	**-0.2**
CONA	**Conrad Observa**	**3.70**	**183**	*i* Pn	**Pn**	**19 10 36.8**	**+0.5**
	comp=Z,5.7nm,0.4s,SNR=9.1						
CONA				*e*Sg	**Sg**	**19 11 34.3**	**-2.3**
	comp=Z,38nm,0.6s						
CONA	**Conrad Observa**	**3.70**	**183**	Pn	**Pn**	**19 10 36.8**	**+0.5**
	comp=Z,5.7nm,0.4s,SNR=9.1						
CONA				Sg	**Sg**	**19 11 34.3**	**-2.3**
	comp=Z,38nm,0.6s						
MOA	**Molln**	**3.96**	**198**	*i* Pn	**Pn**	**19 10 40.3**	**+0.4**
	comp=Z,13nm,0.3s,SNR=17						
MOA				Sg	**Sb**	**19 11 40.8**	**+3.8**
	comp=Z,16nm,0.3s						
MOA	**Molln**	**3.96**	**198**	Pn	**Pn**	**19 10 40.3**	**+0.4**
	comp=Z,13nm,0.3s,SNR=17						
MOA				Sg	**Sb**	**19 11 40.8**	**+3.8**
	comp=Z,16nm,0.3s						
LUNU	**Lund**	**4.33**	**339**	P	**Pn**	**19 10 45.1**	**+0.4**
LUNU				S	**Sn**	**19 11 33.4**	**-2.5**
LUNU	**Lund**	**4.33**	**339**	P	**Pn**	**19 10 45.2**	**+0.4**
LUNU				S	**Sn**	**19 11 33.4**	**-2.5**
CRVS	**Cervenica-Dubn**	**4.37**	**126**	*e*PG	**Pg**	**19 10 59.9**	**-1.6**
CRVS				*e*SG	**Sg**	**19 11 59.1**	**+1.0**
CRVS				*e*LG	Lg	19 12 15.8	
CRVS	**Cervenica-Dubn**	**4.37**	**126**	*e*Pg	**Pg**	**19 10 59.9**	**-1.6**
CRVS				*e*Sg	**Sg**	**19 11 59.1**	**+1.0**
ARSA	**Arzberg**	**4.39**	**185**	*i* Pn	**Pn**	**19 10 47.0**	**+1.3**
	comp=Z,3.6nm,0.3s						
ARSA				Sg	**Sg**	**19 11 56.7**	**-2.1**
	comp=Z,18nm,0.5s						
ARSA	**Arzberg**	**4.39**	**185**	Pn	**Pn**	**19 10 47.0**	**+1.3**
	comp=Z,3.6nm,0.3s						
ARSA				Sg	**Sg**	**19 11 56.7**	**-2.1**
	comp=Z,18nm,0.5s						
LLD	**Lille Linde**	**4.39**	**329**	*i* P	**Pn**	**19 10 47.1**	**+1.4**
LLD	**Lille Linde**	**4.39**	**329**	*e*P	**Pn**	**19 10 47.1**	**+1.4**
PSZ	**Piszkesteto**	**4.43**	**145**	⇓*i*P	**Pn**	**19 10 47.3**	**+0.9**
PSZ	**Piszkesteto**	**4.43**	**145**	⇓*i*P	**Pn**	**19 10 47.3**	**+0.9**
KOLS	**Kolonicke sedl**	**4.77**	**122**	*e*PN	**Pn**	**19 10 51.1**	**+0.2**
KOLS	**Kolonicke sedl**	**4.77**	**122**	*e*Pn	**Pn**	**19 10 51.1**	**+0.2**
BJUU	**Bjuv**	**4.83**	**339**	P	**Pn**	**19 10 51.3**	**-0.4**
BJUU	**Bjuv**	**4.83**	**339**	P	**Pn**	**19 10 51.3**	**-0.4**
KBA	**Koelnbreinsper**	**4.90**	**203**	*i* Pn	**Pn**	**19 10 53.5**	**+0.7**
	comp=Z,10nm,0.4s,SNR=10						
KBA				*e*Sg	**Sg**	**19 12 12.6**	**-2.4**
	comp=Z,26nm,0.7s						
KBA	**Koelnbreinsper**	**4.90**	**203**	Pn	**Pn**	**19 10 53.5**	**+0.7**
	comp=Z,10nm,0.4s,SNR=10						
KBA				Sg	**Sg**	**19 12 12.6**	**-2.4**
	comp=Z,26nm,0.7s						
DEL	**Delary**	**5.04**	**346**	P	**Pn**	**19 10 54.8**	**+0.2**
DEL				S	**Sn**	**19 11 49.8**	**-3.7**
DEL	**Delary**	**5.04**	**346**	P	**Pn**	**19 10 54.8**	**+0.2**
DEL				S	**Sn**	**19 11 49.8**	**-3.7**
VXJU	**Vaexsjoe**	**5.36**	**353**	P	**Pn**	**19 10 60.0**	**+1.0**
VXJU	**Vaexsjoe**	**5.36**	**353**	P	**Pn**	**19 11 00.0**	**+1.0**
TRPA	**Tarpa**	**5.42**	**128**	⇑*i*P	**Pn**	**19 11 00.1**	**+0.3**
TRPA	**Tarpa**	**5.42**	**128**	⇑*i*P	**Pn**	**19 11 00.1**	**+0.3**
OSKU	**Oskarshamn**	**5.59**	**360**	P	**Pn**	**19 11 03.5**	**+1.4**
OSKU	**Oskarshamn**	**5.59**	**360**	P	**Pn**	**19 11 03.5**	**+1.4**
BYXU	**Byxelkrok**	**5.71**	**5**	P	**Pn**	**19 11 05.2**	**+1.5**
BYXU	**Byxelkrok**	**5.71**	**5**	P	**Pn**	**19 11 05.2**	**+1.5**
GNOU	**Gnosjoe**	**5.85**	**347**	P	**Pn**	**19 11 06.7**	**+1.0**
GNOU	**Gnosjoe**	**5.85**	**347**	P	**Pn**	**19 11 06.7**	**+1.0**
EKSU	**Eksjoe**	**5.99**	**356**	P	**Pn**	**19 11 08.7**	**+1.1**
EKSU	**Eksjoe**	**5.99**	**356**	P	**Pn**	**19 11 08.7**	**+1.1**
VSTU	**Vaestervik**	**6.06**	**2**	P	**Pn**	**19 11 10.4**	**+1.8**
VSTU	**Vaestervik**	**6.06**	**2**	P	**Pn**	**19 11 10.4**	**+1.8**
BORU	**Boraas**	**6.33**	**343**	P	**Pn**	**19 11 12.9**	**+0.5**
BORU	**Boraas**	**6.33**	**343**	P	**Pn**	**19 11 12.9**	**+0.5**
DAVOX	**Davos/Dischmat**	**6.34**	**223**	Pn	**Pn**	**19 11 13.9**	**+1.2**
	comp=Z,0.6nm,0.3s,baz=34,slow=17,SNR=4.5						
DAVOX				Lg	Lg	19 12 57.1	
	comp=Z,0.3nm,0.3s,baz=355,slow=9.3,SNR=3.5						
DRGR		**6.47**	**136**	⇓*i*

SPN				*e*S	Sn	19 58 00.0	+4.1
GNL	**Ganaly**	**4.19**	**8**	*e*P	Pn	19 57 15.2	+4.2

IDC 29 19:58:37.0±3.2, 32°.88S×178°.88W, h0km, mb3.5/2, mb1 3.8/3, mb1mx3.5/41, mbtmp3.6/3, ML3.5/1, Error ellipse: s-maj=71.1km s-min=36.8km az=110.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.28**	**210**	Pn	Pn	20 00 10.8	0.0
	1.1nm,0.3s,baz=283,slow=3.8,SNR=7.2						
URZ				Sn	Sn	20 01 22.7	-0.6
	0.9nm,0.3s,baz=287,slow=22,SNR=5.7						
ASAR	**Alice Springs**	**42.29**	**270**	P	P	20 06 32.9	+0.3
	0.4nm,0.8s,baz=102,slow=7.3,SNR=5.3						
WRA	**Warramunga Arr**	**43.50**	**275**	P	P	20 06 42.2	-0.3
	0.3nm,0.3s,baz=115,slow=7.9,SNR=16						
FINES	**FINESS Array B**	**147.19**	**338**	PKPbc	PKPbc	20 18 20.5	-0.9
	1.3nm,0.8s,baz=20,slow=4.4,SNR=4.0						

*ISCJB **29** 20:03:39.3±0.3, 12°.02S±0°.04×166°.17E±0°.05, h30km, mb4.9/60, MS3.9/13, Error ellipse: s-maj=7.3km s-min=5.3km az=166.0*
*NEIC **29** 20:03:39.7±2.6, 11°.97S×166°.23E, h22km±17km, mb4.9/39, Error ellipse: s-maj=8.0km s-min=5.5km az=66.0*
*BJI **29** 20:03:39.1, 11°.57S×166°.84E, h27km, mb4.9/47, mB5.0/26, Ms4.8/4, Ms7 4.6/5*
*IDC **29** 20:03:42.9±3.3, 12°.05S×166°.16E, h43km±28km, mb4.2/19, mb1 4.3/22, mb1mx4.1/47, mbtmp4.5/22, ML2.2/1, MS3.8/14, Ms1 3.8/14, ms1mx3.6/44, Error ellipse: s-maj=24.2km s-min=13.0km az=77.0*
ISC 29 20:03:41.0±0.4, 12°.00S±0°.06×166°.20E±0°.07, h30km, n123, σ1§32/120, mb4.9/60, MS3.9/13, 2C-1D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.65**	**292**	*e*P	**Pn**	**20 05 17.0**	**+0.3**
HNR				*e*S	**Sn**	**20 06 31.0**	**-0.6**
HNR	**Honiara**	**6.65**	**292**	P	**Pn**	**20 05 17.4**	**+0.6**
	62nm,0.3s,baz=150,slow=2.1,SNR=25						
HNR				S	**Sn**	**20 06 28.6**	**-3.0**
	9.9nm,0.3s,baz=207,slow=22,SNR=8.2						
HNR				LR	LR	20 07 41.1	
	comp=Z,637nm,21.9s,baz=129,slow=36						
HNR	**Honiara**	**6.65**	**292**	*e*Pn	**Pn**	**20 05 17.1**	**+0.3**
HNR				*e*Sn	**Sn**	**20 06 28.6**	**-3.0**
DZM	**Mont Dzumac**	**10.02**	**179**	P	**Pn**	**20 06 03.8**	**+0.8**
	1.5nm,0.3s,baz=340,slow=14,SNR=14						
DZM				LR	LR	20 09 28.2	
	comp=Z,326nm,21.9s,baz=17,slow=35						
DZM	**Mont Dzumac**	**10.02**	**179**	*e*Pn	**Pn**	**20 06 03.6**	**+0.6**
	13nm,0.3s						
DZM				*e*LR	LR	20 08 22.5	
	592nm,24.6s						
DZM	**Mont Dzumac**	**10.02**	**179**	*e*Pn	**Pn**	**20 06 03.5**	**+0.4**
RABL	**Rabaul**	**15.90**	**298**	*e*Pn	**Pn**	**20 07 19.6**	**-3.2**
	52nm,0.5s						
PMG	**Port Moresby**	**18.88**	**276**	P	**Pn**	**20 08 00.2**	**+0.3**
	0.3nm,0.3s,baz=152,slow=22,SNR=4.6						
PMG				LR	LR	20 14 39.4	
	comp=Z,415nm,21.8s,baz=138,slow=35						
PMG	**Port Moresby**	**18.88**	**276**	*e*P	**P**	**20 07 56.1**	**-3.1**
EIDS	**Eidsvold**	**19.51**	**225**	*e*P	**Pn**	**20 08 07.4**	**0.0**
	24nm,1.0s						
PATS	**Pohnpei**	**20.29**	**337**	*e*P	**P**	**20 08 15.0**	**+0.5**
	75nm,1.1s						
CTA	**Charters Tower**	**20.77**	**245**	P	**P**	**20 08 20.6**	**+0.8**
	10nm,0.9s,baz=66,slow=14,SNR=15						
CTAO	**Charters Tower**	**20.77**	**245**	*e*P	**P**	**20 08 20.3**	**+0.6**
	27nm,1.0s						
MANU	**Manus Island**	**21.12**	**296**	*e*P	**P**	**20 08 23.9**	**+0.3**
	46nm,1.1s						
AFI	**Afiamalu**	**21.55**	**97**	LR	LR	20 15 34.7	
	comp=Z,442nm,18.1s,baz=280,slow=33						
COEN	**Coen**	**22.52**	**263**	*e*P	**P**	**20 08 38.9**	**+0.3**
	18nm,1.0s						
RAO	**Raoul Island**	**22.66**	**142**	*e*P	**P**	**20 08 37.8**	**-2.1**
	364nm,0.8s						
ARMA	**Armidale**	**22.76**	**214**	*e*P	**P**	**20 08 41.1**	**-0.1**
	24nm,1.0s						
KNTN	**Kanton**	**23.72**	**69**	*e*P	**P**	**20 08 50.2**	**-0.5**
	206nm,1.5s						
OUZ	**Omahuta**	**24.07**	**165**	*e*P	**P**	**20 08 54.5**	**+0.7**
	53nm,1.7s						
STKA	**Stephens Creek**	**30.07**	**225**	P	**P**	**20 09 49.4**	**+1.6**
	3.6nm,0.9s,baz=62,slow=7.9,SNR=3.2						
STKA				LR	LR	20 21 13.8	
	comp=Z,327nm,20.1s,baz=28,slow=35						
STKA	**Stephens Creek**	**30.07**	**225**	*e*P	**P**	**20 09 49.8**	**+2.0**
	3.4nm,1.1s						
THZ	**Tophouse**	**30.22**	**170**	*e*P	**P**	**20 09 50.2**	**+1.1**
	21nm,1.1s						
FOZ	**Fox Glacier**	**31.57**	**175**	*e*P	**P**	**20 10 02.4**	**+1.5**
	149nm,1.7s						
WB2	**Warramunga Arr**	**31.57**	**251**	*e*P	**P**	**20 10 00.5**	**-0.7**
WR1	**Warramunga Arr**	**31.59**	**251**	*e*P	**P**	**20 10 00.2**	**-1.1**
	5.5nm,0.8s						
WRA	**Warramunga Arr**	**31.59**	**251**	P	**P**	**20 10 00.2**	**-1.1**
	1.9nm,0.8s,baz=81,slow=8.9,SNR=11						
RPZ	**Rata Peaks**	**31.88**	**173**	P	**P**	**20 10 04.3**	**+0.8**
	13nm,0.7s,baz=307,slow=3.2,SNR=5.7						
LBZ	**Lake Benmore**	**32.45**	**175**	*e*P	**P**	**20 10 06.8**	**-1.8**
	20nm,1.1s						
AS01	**Alice Springs**	**32.73**	**245**	*e*P	**P**	**20 10 10.1**	**-1.2**
AS31	**Alice Springs**	**32.77**	**245**	*e*P	**P**	**20 10 10.5**	**-1.3**
	2.0nm,0.8s						
ASAR	**Alice Springs**	**32.77**	**245**	P	**P**	**20 10 10.2**	**-1.5**
	2.0nm,0.6s,baz=71,slow=9.5,SNR=42						
ASAR				LR	LR	20 23 22.1	
	comp=Z,160nm,19.8s,baz=104,slow=36						
WKZ	**Wanaka**	**32.80**	**176**	*e*P	**P**	**20 10 09.7**	**-1.9**
	74nm,1.4s						
GUMO	**Guam**	**33.07**	**320**	LR	LR	20 23 50.7	
	comp=Z,164nm,20.3s,baz=180,slow=36						
ODZ	**Otahua Downs**	**33.15**	**174**	*e*P	**P**	**20 10 16.2**	**+1.5**
	53nm,1.5s						
DCZ	**Deep Cove**	**33.36**	**179**	*e*P	**P**	**20 10 16.9**	**+0.5**
	52nm,1.3s						
WHZ	**Wether Hill Ro**	**33.81**	**178**	*e*P	**P**	**20 10 20.2**	**-0.2**
	147nm,1.9s						
MTN	**Manton Dam**	**34.24**	**265**	*e*P	**P**	**20 10 24.6**	**+0.1**
	7.1nm,0.7s						
BBOO	**Buckleboo**	**34.51**	**228**	*e*P	**P**	**20 10 27.2**	**+0.5**
	103nm,1.5s						
SAUI	**Saumlaki**	**34.58**	**273**	*e*P	**P**	**20 10 27.4**	**-0.1**
	141nm,0.8s						
FITZ	**Fitzroy Crossi**	**39.57**	**256**	P	**P**	**20 11 08.4**	**-1.4**
	2.4nm,0.8s,baz=83,slow=13,SNR=3.3						
FITZ				LR	LR	20 27 32.9	
	comp=Z,164nm,18.0s,baz=92,slow=36						
FITZ	**Fitzroy Crossi**	**39.57**	**256**	*e*P	**P**	**20 11 09.8**	**-0.1**
	4.0nm,0.8s						
FORT	**Forrest**	**39.87**	**236**	*e*P	**P**	**20 11 11.7**	**-0.5**
	153nm,1.8s						
SOEI	**Soe**	**41.21**	**269**	*e*P	**P**	**20 11 25.6**	**+2.0**
	16nm,1.0s						
PPT	**Papeete**	**43.05**	**103**	LR	LR	20 26 34.7	
	comp=Z,208nm,20.9s,baz=308,slow=32						
PPT2	**Papeete2**	**43.05**	**103**	*e*LQ	LQ	20 21 52.9	
	497nm,30.5s						
PPT2				*e*LR	LR	20 23 48.2	
	191nm,22.0s						
DAV	**Davao City (W)**	**44.61**	**293**	LR	LR	20 30 31.5	
	comp=Z,55nm,18.3s,baz=116,slow=36						
MBWA	**Marble Bar**	**45.32**	**252**	*e*P	**P**	**20 11 56.7**	**+0.1**
	38nm,1.4s						
CBIJ	**Chichi jima**	**45.32**	**329**	*e*P	**P**	**20 11 57.8**	**+1.3**
	205nm,1.6s						
RIM	**Rim**	**49.13**	**51**	*e*P	**P**	**20 12 25.4**	**-1.1**
	258nm,1.0s						
JHJ	**Hachijo jima 2**	**51.46**	**331**	LR	LR	20 33 49.8	
	comp=Z,40nm,19.6s,baz=119,slow=35						
MJAR	**Matsushiro Arr**	**55.02**	**333**	P	**P**	**20 13 09.3**	**-0.5**
	2.5nm,0.9s,baz=166,slow=8.8,SNR=9.5						
MAJO	**Matsushiro**	**55.02**	**333**	*e*P	**P**	**20 13 09.3**	**-0.5**
MAT	**Matsushiro**	**55.02**	**333**	P	**P**	**20 13 09.2**	**-0.7**
JNU	**Nakatsue**	**56.11**	**324**	P	**P**	**20 13 18.4**	**+0.6**
	15nm,0.9s,baz=98,slow=3.2,SNR=8.5						
JNU	**Nakatsue**	**56.11**	**324**	*e*P	**P**	**20 13 17.7**	**-0.1**
	23nm,1.0s						
ASAJ	**Asahikawa**	**59.84**	**341**	P	**P**	**20 13 44.1**	**+0.5**
	3.2nm,0.8s,baz=229,slow=16,SNR=3.9						
ASAJ				LR	LR	20 35 02.4	
	comp=Z,89nm,21.7s,baz=170,slow=31						
ASAJ	**Asahikawa**	**59.84**	**341**	*e*P	**P**	**20 13 43.4**	**-0.2**
	8.0nm,1.0s						
KSRS	**Korea Array**	**60.91**	**326**	P	**P**	**20 13 52.3**	**+1.2**
	3.5nm,0.7s,baz=137,slow=8.1,SNR=12						
KS15	**Wonju Array Si**	**60.92**	**326**	*e*P	**P**	**20 13 51.9**	**+0.7**
KSAR	**Wonju Array Be**	**60.92**	**326**	P	**P**	**20 13 52.3**	**+1.1**
KS01	**Wonju Array Si**	**60.94**	**326**	*e*P	**P**	**20 13 51.4**	**0.0**
NJ2	**Nanjing**	**63.01**	**316**	*e*P	**P**	**20 14 07.5**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,16nm,0.7s						
USRK	**Ussuriysk Ar.**	**63.99**	**333**	P	**P**	**20 14 11.8**	**+0.2**
	3.8nm,0.7s,baz=124,slow=7.5						
PETK	**Petropavlovsk-**	**65.25**	**354**	LR	LR	20 38 30.1	
	comp=Z,41nm,21.9s,baz=164,slow=32						
MDJ	**Mudanjiang**	**65.40**	**332**	P	**P**	**20 14 18.5**	**-2.2**
MDJ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,130nm,5.1s						
VNDA	**Vanda**	**65.55**	**181**	P	**P**	**20 14 21.2**	**-0.1**
	7.6nm,1.2s,baz=360,slow=7.4,SNR=14						
VNDA	**Vanda**	**65.55**	**181**	*e*P	**P**	**20 14 21.7**	**+0.3**
	8.9nm,1.1s						
SBA	**Scott Base**	**65.85**	**180**	*e*P	**P**	**20 14 24.6**	**+1.4**
	18nm,0.9s						
CN2	**Changchun**	**66.78**	**329**	*e*P	**P**	**20 14 33.0**	**+3.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PSI	**Prapat**	**68.44**	**278**	*e*P	**P**	**20 14 39.1**	**-1.8**
	7.2nm,0.9s						
GYA	**Guiyang**	**69.32**	**304**	*e*P	**P**	**20 14 49.8**	**+3.7**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BJT	**Baijiatuan**	**69.49**	**321**	*e*P	**P**	**20 14 47.8**	**+1.0**
	21nm,1.2s						
XAN	**Xi'an**	**71.09**	**312**	P	**P**	**20 14 57.5**	**+0.8**
XAN				pP	sP	20 15 11.5	+1.8
XAN				pmax	pmax		
	comp=Z,5.0nm,1.7s						
KMI	**Kunming**	**71.99**	**301**	P	**P**	**20 15 07.0**	**+4.4**
KMI				pP	pP	20 15 13.3	+1.2
KMI				sP	sP	20 15 16.5	+0.9
KMI				pmax	pmax		
	comp=Z,11nm,0.6s						
KMI				pmax	pmax		
	comp=Z,28nm,3.4s						
CM01	**Chiang Mai Arr**	**72.87**	**294**	*e*P	**P**	**20 15 08.5**	**+0.8**
CM31	**Chiang Mai Arr**	**72.90**	**294**	*e*P	**P**	**20 15 08.2**	**+0.4**
CMAR	**Chiang Mai Arr**	**72.90**	**294**	P	**P**	**20 15 08.7**	**+0.8**
	1.5nm,0.7s,baz=128,slow=5.0,SNR=11						
CD2	**Chengdu**	**73.53**	**307**	P	**P**	**20 15 11.5**	**+0.1**
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
LZH	**Lanzhou**	**75.72**	**312**	*e*P	**P**	**20 15 26.3**	**+2.1**
LZH				pP	PcP	20 15 36.3	-0.5
LZH				sP	sP	20 15 40.0	+2.8
LZH				*e*PP	**PP**	**20 18 18.5**	**+4.1**
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,93nm,7.8s						
LZH				LR	LR		
	comp=N,310nm,16.2s						
LZH				LR	LR		
	comp=E,300nm,16.5s						
LZH				LR	LR		
	comp=Z,430nm,19.3s						
QSPA	**South Pole Qui**	**78.01**	**180**	P	**P**	**20 15 36.4**	**-0.1**
	11nm,1.0s,baz=13,slow=3.4,SNR=17						
SONA0	**Songino Array**	**79.69**	**324**	*e*P	**P**	**20 15 47.2**	**+1.2**
SONM	**Songino Array**	**79.69**	**324**	P	**P**	**20 15 47.2**	**+1.2**
	4.8nm,0.7s,baz=137,slow=5.2,SNR=37						
SONA1	**Songino Array**	**79.69**	**324**	*e*P	**P**	**20 15 46.8**	**+0.7**
RPN	**Rapa Nui**	**79.76**	**116**	LR	LR	20 45 23.6	
	comp=Z,95nm,18.0s,baz=250,slow=31						
GTA	**Gaotai**	**80.03**	**314**	P	**P**	**20 15 49.5**	**+1.4**
GTA				pP	sP	20 15 59.5	-1.6
GTA				sP	pP	20 16 04.0	+6.4
GTA				pmax	pmax		
	comp=Z,12nm,1.3s						
TRF	**Thorofare Moun**	**82.28**	**18**	*e*P	**P**	**20 15 59.5**	**0.0**
	5.9nm,1.2s						
TLY	**Talaya**	**83.16**	**326**	*e*P	**P**	**20 16 04.5**	**+0.4**
	13nm,0.9s						
HDA	**Harding Lake**	**84.00**	**19**	*e*P	**P**	**20 16 07.4**	**-0.7**
	2.8nm,0.7s						
ILAR	**Eielson Array**	**84.27**	**18**	P	**P**	**20 16 08.9**	**-0.6**
	0.9nm,0.7s,baz=232,slow=5.9,SNR=9.7						
ILB	**Eielson Array**	**84.27**	**18**	*e*P	**P**	**20 16 07.7**	**-1.8**
IL1	**Eielson Array**	**84.28**	**18**	*e*P	**P**	**20 16 07.3**	**-2.2**
EGAK	**Eagle**	**86.12**	**20**	*e*P	**P**	**20 16 18.3**	**-0.5**
	3.4nm,0.9s						
WMQ	**Urumqi**	**90.08**	**315**	P	**P**	**20 16 40.0**	**+1.8**
WMQ				pP	sP	20 16 50.3	-1.1
WMQ				sP	pP	20 16 54.0	+6.1
WMQ				pmax	pmax		
	comp=Z,43nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,290nm,5.3s						
WMQ				LR	LR		
	comp=N,120nm,21.7s						
WMQ				LR	LR		
	comp=E,100nm,20.5s						
WMQ				LR	LR		
	comp=Z,87nm,19.3s						
SYO	**Syowa Base**	**91.00**	**197⇑**	*e*P	**P**	**20 16 40.8**	**-1.2**
SYO	**Syowa Base**	**91.00**	**197⇓**	*e*pP	pP	20 16 51.2	-0.4
SYO	**Syowa Base**	**91.00**	**197⇓**	*e*sP	sP	20 16 56.4	+1.3
MK01	**Makanchi Array**	**94.50**	**317**	*e*P	**P**	**20 16 59.1**	**+0.5**
MK31	**Makanchi Array**	**94.52**	**317**	*e*P	**P**	**20 16 58.9**	**+0.3**
MKAR	**Makanchi Array**	**94.52**	**317**	*e*P	**P**	**20 16 58.9**	**+0.3**
	94nm,0.7s						
ZAA0	**Zalesovo Array**	**94.58**	**324**	*e*P	**P**	**20 16 58.0**	**-0.7**
	6.3nm,0.9s						
ZALV	**Zalesovo Beam**	**94.58**	**324**	P	**P**	**20 16 58.6**	**-0.1**
	4.1nm,0.8s,baz=113,slow=4.8,SNR=20						
ZALV	**Zalesovo Beam**	**94.58**	**324**	*e*P	**P**	**20 16 57.7**	**-1.0**
ZAA1	**Zalesovo Array**	**94.59**	**324**	*e*P	**P**	**20 16 58.6**	**-0.1**
SNAA	**Sanae**	**96.20**	**183**	P	**P**	**20 17 04.7**	**-1.3**
	2.2nm,0.9s,baz=187,slow=8.4,SNR=5.7						
KURK	**Kurchatov**	**97.65**	**320**	*e*P	**P**	**20 17 12.1**	**-0.7**
KSH	**Kashi**	**97.69**	**309**	P	Pdif	20 17 17.5	+4.0
KURBB	**Kurchatov Arra**	**97.69**	**320**	P	**P**	**20 17 12.1**	**-0.8**
	1.0nm,0.6s,baz=95,slow=5.0,SNR=8.9						
BVAR	**Borovoye Array**	**102.97**	**322**	P	**Pdif**	**20 17 35.5**	**-0.9**
	1.0nm,0.6s,baz=262,slow=40,SNR=4.5						
ARA0	**ARCESS Array S**	**117.36**	**345**	*e*PKPdf	**PKPdf**	**20 22 22.2**	**-0.9**
ARCES	**ARCESS Array B**	**117.36**	**345**	PKP	**PKPdf**	**20 22 22.2**	**-0.9**
	2.7nm,0.8s,baz=87,slow=1.6,SNR=12						
FIA0	**FINESS Array S**	**122.82**	**338**	*e*PKPdf	**PKPdf**	**20 22 33.2**	**-0.5**
FINES	**FINESS Array B**	**122.82**	**338**	PKP	**PKPdf**	**20 22 33.2**	**-0.5**
	1.4nm,0.8s,baz=48,slow=2.8,SNR=7.7						
BOSA	**Boshof**	**124.72**	**222**	PKP	**PKPdf**	**20 22 38.7**	**+0.1**
	1.7nm,0.6s,baz=171,slow=1.5,SNR=5.1						
AKASG	**Malin Array Be**	**127.90**	**327**	PKP	**PKPdf**	**20 22 43.9**	**+0.1**
	0.4nm,0.5s,baz=75,slow=3.6,SNR=2.9						
DIVS	**Divibare**	**136.81**	**324**	*e*PKPdf	**PKPdf**	**20 23 01.1**	**+0.2**
CLTB	**Caltabellotta**	**144.88**	**321**	*e*PKPdf	**PKPab**	**20 23 13.6**	**-1.2**
KEST	**Kesra**	**148.44**	**322**	PKPbc	**PKPbc**	**20 23 25.1**	**-0.2**
	7.0nm,0.8s,baz=245,slow=4.0,SNR=9.6						
ES19	**SONSECA Array**	**151.05**	**344**	*e*PKPdf	**PKPdf**	**20 23 24.2**	**-1.5**
ES19				*e*PKPbc	**PKPbc**	**20 23 31.6**	**+0.1**
ESDC	**Sonseca Array**	**151.09**	**344**	PKPbc	**PKPbc**	**20 23 32.3**	**+0.7**
	0.2nm,0.4s,baz=282,slow=29,SNR=4.1						
TOA0	**Torodi Ar. Sit**	**164.83**	**276**	*e*PKPdf	**PKPdf**	**20 23 42.6**	**-0.5**
TOA0				*e*PKPab	**PKPab**	**20 24 39.0**	**-0.2**
TORD	**Torodi Ar. Bea**	**164.83**	**276**	PKP	**PKPdf**	**20 23 42.9**	**-0.2**
	2.4nm,1.0s,baz=47,slow=3.9						
TORD				PKPab	**PKPab**	**20 24 39.3**	**+0.1**
	baz=79,slow=5.4						
TOA1	**Torodi Ar. Sit**	**164.83**	**276**	*e*PKPdf	**PKPdf**	**20 23 42.9**	**-0.2**
TOA1				*e*PKPab	**PKPab**	**20 24 39.3**	**+0.1**

*IDC **29** 20:06:18.2±1.3, 12°.05S×166°.31E, h0km, mb4.1/12, mb1 4.2/13, mb1mx4.0/45, mbtmp4.1/13, ML5.3/1, Error ellipse: s-maj=39.0km s-min=22.7km az=128.0*
*ISCJB **29** 20:06:21.9±0.3, 12°.05S±0°.05×166°.03E±0°.05, h30km, mb4.8/30, Error ellipse: s-maj=7.6km s-min=7.0km az=0.6*
*NEIC **29** 20:06:25.3±1.2, 12°.04S×166°.08E, h45km±11km, mb4.8/21, Error ellipse: s-maj=7.8km s-min=6.4km az=108.0*
ISC 29 20:06:23.8±0.5, 12°.03S±0°.08×166°.04E±0°.07, h30km, n60, σ1§27/65, mb4.6/30, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.51**	**293**	*e*P	**Pn**	**20 07 59.0**	**+1.3**
HNR				*e*S	**Sn**	**20 09 07.0**	**-4.0**
HNR	**Honiara**	**6.51**	**293**	Pn	**Pn**	**20 08 00.1**	**+2.4**
	53nm,0.3s,baz=139,slow=6.6,SNR=5.9						
HNR				Sn	**Sn**	**20 09 10.6**	**-0.4**
	7.4nm,0.3s,baz=6.1,slow=19,SNR=3.9						
HNR	**Honiara**	**6.51**	**293**	*e*Pn	**Pn**	**20 07 59.7**	**+2.0**
HNR				*e*Sn	**Sn**	**20 09 09.0**	**-2.0**
TARA	**Tarawa**	**14.95**	**28**	*e*Pn	**Pn**	**20 09 54.6**	**+1.4**
RABL	**Rabaul**	**15.78**	**298**	*e*Pn	**Pn**	**20 10 03.0**	**-1.0**
	49nm,0.6s						
EIDS	**Eidsvold**	**19.38**	**225**	*e*P	**P**	**20 10 47.1**	**-0.2**
	48nm,2.0s						
PATS	**Pohnpei**	**20.25**	**337**	*e*P	**P**	**20 10 58.8**	**+1.9**
	133nm,1.5s						
CTA	**Charters Tower**	**20.62**	**245**	P	**P**	**20 11 02.6**	**+1.8**
	3.7nm,1.0s,baz=80,slow=7.5,SNR=2.6						
CTAO	**Charters Tower**	**20.62**	**245**	*e*P	**P**	**20 11 00.3**	**-0.6**
	6.5nm,0.8s						
COEN	**Coen**	**22.36**	**263**	*e*P	**P**	**20 11 19.2**	**-0.5**
	29nm,1.8s						
ARMA	**Armidale**	**22.66**	**214**	*e*P	**P**	**20 11 23.8**	**+1.0**
	18nm,1.1s						
OUZ	**Omahuta**	**24.09**	**165**	*e*P	**P**	**20 11 37.0**	**+0.3**
	50nm,1.5s						
URZ	**Urewera**	**27.93**	**161**	*e*P	**P**	**20 12 12.7**	**+1.2**
	92nm,1.6s						
STKA	**Stephens Creek**	**29.94**	**225**	P	**P**	**20 12 30.6**	**+1.2**
	1.4nm,0.7s,baz=102,slow=15,SNR=1.2						
STKA	**Stephens Creek**	**29.94**	**225**	*e*P	**P**	**20 12 30.2**	**+0.8**
	12nm,1.8s						
THZ	**Tophouse**	**30.23**	**170**	*e*P	**P**	**20 12 31.7**	**-0.1**
	102nm,1.7s						
KHZ	**Kahutara**	**30.97**	**169**	*e*P	**P**	**20 12 38.8**	**+0.5**
	80nm,1.4s						
WB2	**Warramunga Arr**	**31.42**	**251**	*e*P	**P**	**20 12 42.3**	**-0.3**
WR1	**Warramunga Arr**	**31.43**	**251**	*e*P	**P**	**20 12 42.7**	**0.0**
	27nm,1.9s						
WR1				*e*PcP	**PcP**	**20 15 36.9**	**+1.1**
WRA	**Warramunga Arr**	**31.43**	**251**	P	**P**	**20 12 42.7**	**0.0**
	0.5nm,0.5s,baz=82,slow=8.9,SNR=2.7						
WRA				PcP	**PcP**	**20 15 36.9**	**+1.0**
	0.7nm,0.9s,baz=82,slow=3.3,SNR=5.2						
RPZ	**Rata Peaks**	**31.87**	**173**	*e*P	**P**	**20 12 44.3**	**-2.0**
	62nm,1.4s						
LBZ	**Lake Benmore**	**32.44**	**174**	*e*P	**P**	**20 12 49.9**	**-1.4**
	132nm,1.8s						
AS01	**Alice Springs**	**32.58**	**245**	*e*P	**P**	**20 12 53.5**	**+0.7**
AS31	**Alice Springs**	**32.62**	**245**	*e*P	**P**	**20 12 52.5**	**-0.7**
	1.4nm,0.6s						
ASAR	**Alice Springs**	**32.62**	**245**	P	**P**	**20 12 53.0**	**-0.2**
	2.1nm,0.8s,baz=70,slow=9.6,SNR=4.6						
ASAR				PcP	**PcP**	**20 15 38.9**	**-0.2**
	0.6nm,0.6s,baz=76,slow=2.2,SNR=6.0						
WKZ	**Wanaka**	**32.79**	**176**	*e*P	**P**	**20 12 54.4**	**+0.1**
	128nm,1.7s						
MTN	**Manton Dam**	**34.08**	**265**	*e*P	P	20 13 01.8	-4.1
	5.4nm,0.8s						
XMAS	**Kiritimati**	**38.88**	**71**	*e*P	**P**	**20 13 47.4**	**+0.4**
	67nm,0.9s						
FITZ	**Fitzroy Crossi**	**39.41**	**256**	P	**P**	**20 13 52.7**	**+1.4**
	1.8nm,0.8s,baz=78,slow=12,SNR=2.1						
FITZ	**Fitzroy Crossi**	**39.41**	**256**	*e*P	**P**	**20 13 52.7**	**+1.4**
	17nm,1.6s						
HLP	**Hilina Pali**	**49.19**	**51**	*e*P	**P**	**20 15 09.8**	**+0.2**
	160nm,1.0s						
WRMHI	**West Rim**	**49.26**	**51**	*e*P	**P**	**20 15 07.3**	**-2.9**
	798nm,1.6s						
UWE	**Uwekahuna**	**49.27**	**51**	*e*P	**P**	**20 15 08.1**	**-2.2**
	879nm,1.7s						
JNU	**Nakatsue**	**56.04**	**324**	P	**P**	**20 16 00.9**	**+0.8**
	2.6nm,0.6s,baz=228,slow=21,SNR=1.8						
JNU	**Nakatsue**	**56.04**	**324**	*e*P	**P**	**20 16 00.9**	**+0.8**
	13nm,1.2s						
KSRS	**Korea Array**	**60.84**	**326**	P	**P**	**20 16 34.0**	**+0.6**
	1.1nm,0.6s,baz=136,slow=7.8,SNR=5.0						
KS15	**Wonju Array Si**	**60.86**	**326**	*e*P	**P**	**20 16 33.0**	**-0.5**
KSAR	**Wonju Array Be**	**60.86**	**326**	P	**P**	**20 16 34.0**	**+0.5**
VNDA	**Vanda**	**65.52**	**181**	*e*P	**P**	**20 17 04.0**	**+0.1**
	8.5nm,1.4s						
CM31	**Chiang Mai Arr**	**72.76**	**294**	*e*P	**P**	**20 17 48.4**	**-1.4**
CMAR	**Chiang Mai Arr**	**72.76**	**294**	P	**P**	**20 17 49.3**	**-0.5**

PB10				IAML		20 19 46.2
	comp=E,89nm,0.1s					
VCA	**Vinchina**	**3.36 133**	*e*P		**Pn**	**20 18 56.2 +2.2**
VCA			*e*S		**Sn**	**20 19 33.9 -0.5**
PB05	**IPOC Station P**	**3.65 11**	*e*P		**Pn**	**20 18 58.6 +0.6**
PB05			*e*S		**Sn**	**20 19 39.1 -2.5**
GO04	**Tololo Observa**	**3.71 177**	*e*P		**Pn**	**20 18 59.6 +0.7**
GO04			*e*S		**Sn**	**20 19 40.3 -2.9**
AGUA	**GUANDACOL**	**3.75 144**	*e*P		**Pn**	**20 19 01.7 +2.5**
AROD	**Rodeo**	**3.94 161**	*e*P		**Pn**	**20 19 05.7 +3.6**
ACDV	**Cuesta del Vie**	**4.06 156**	*e*P		**Pn**	**20 19 06.6 +3.0**
ACLC	**CERRO LA CRUZ**	**4.64 131**	*e*P		**Pn**	**20 19 12.0 +0.4**
AMOG	**MOGNA**	**4.98 154**	*e*P		**Pn**	**20 19 17.5 +1.4**
CYA	**Choya**	**5.02 114**		IAML		20 19 50.4
	comp=Z,8.4nm,0.4s					
RTLL	**Cerro Villicun**	**5.34 156**		IAML		20 19 23.2
	comp=Z,60nm,0.3s					
RTLS	**Leoncito**	**5.53 165**		IAML		20 20 58.0
	comp=Z,22nm,0.6s					
APLL	**PUNTA DE LOS L**	**5.55 136**	*e*P		**Pn**	**20 19 24.1 +0.1**
APLL				IAML		20 20 33.8
	comp=Z,9.5nm,0.5s					
RTCV	**Cerro Valdivia**	**5.80 159**	*e*P		**Pn**	**20 19 28.7 +1.3**
ARCO	**CERRO ARCO**	**6.62 165**		IAML		20 19 43.6
	comp=Z,11nm,0.3s					
ACAN	**Cantantal**	**6.68 151**	*e*P		**Pn**	**20 19 40.5 +0.9**
MRA	**San Martin**	**7.51 144**		IAML		20 21 49.3
	comp=Z,6.0nm,0.5s					

ISK ***29*** *21:01:40.0, 36°.45N×28°.92E, h24km, ML3.3/18*
ATH ***29*** *21:01:40.2, 36°.41N×28°.91E, h41km±2km, ML3.1/6, Error ellipse: s-maj=2.4km s-min=0.9km az=156.0*
CSEM ***29*** *21:01:40.6±0.1, 36°.41N×28°.96E, h27km±1km, ML3.6, Error ellipse: s-maj=3.0km s-min=2.1km az=15.0*
DDA ***29*** *21:01:40.4, 36°.51N×28°.91E, h7km, Ml3.6*
THE ***29*** *21:01:41.2, 36°.47N×28°.89E, h14km±1km, ML3.0/3, Error ellipse: s-maj=1.5km s-min=0.6km az=92.0*
NIC ***29*** *21:01:41.7±0.5, 36°.42N×29°.05E, h25km, ML3.3*
GII ***29*** *21:01:43.3±0.0, 36°.18N×29°.20E, h30km*
ISC 29 21:01:39.7±0.9,**36°.39N**±0°.02×**28°.97E**±0°.02,**h26**km±7km,
n137,σ1º**08**/202,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.26**	**21**	PG	**Pb**	**21 01 46.1**	**-0.2**
FETY				SG	**Sb**	**21 01 50.9**	**+0.2**
FETY	**Fethiye**	**0.26**	**21**	P	**Pb**	**21 01 46.1**	**-0.2**
FETY				S	**Sb**	**21 01 50.8**	**+0.1**
FETY	**Fethiye**	**0.26**	**21**	*e*Pg	**Pb**	**21 01 46.1**	**-0.2**
FETY				*e*Sg	**Sb**	**21 01 50.9**	**+0.2**
FETY				S	**Sn**	**21 01 51.5**	**-1.7**
DALY	**Dalyan (Mu¨la**	**0.49**	**329**	PG	**Pb**	**21 01 49.8**	**0.0**
DALY				SG	**Sb**	**21 01 56.4**	**-0.3**
DALY	**Dalyan (Mu¨la**	**0.49**	**329**	*i* P	**Pb**	**21 01 49.9**	**0.0**
DALY				*i* S	**Sb**	**21 01 56.7**	**0.0**
DALY	**Dalyan (Mu¨la**	**0.49**	**329**	P	**Pb**	**21 01 49.9**	**+0.1**
DALY				*e*Sg	**Sb**	**21 01 56.4**	**-0.3**
AKAS	**Kas**	**0.54**	**107**	PG	**Pn**	**21 01 51.9**	**0.0**
AKAS				SG	**Sn**	**21 02 01.4**	**+1.2**
AKAS	**Kas**	**0.54**	**107**	*i* P	**Pn**	**21 01 52.0**	**+0.1**
AKAS				*i* S	**Sn**	**21 02 02.4**	**+2.2**
AKAS	**Kas**	**0.54**	**107**	*e*Pg	**Pn**	**21 01 51.9**	**0.0**
AKAS				*e*Sg	**Sn**	**21 02 01.4**	**+1.2**
AKAS				S	**Sn**	**21 02 02.4**	**+2.2**
KSL	**Kastellorizon**	**0.55**	**116**	P	**Pn**	**21 01 53.3**	**+1.3**
KSL				S	**Sn**	**21 02 03.3**	**+2.9**
KSL				AML	AML	21 02 03.9	
	comp=E,3590μm,0.4s						
KSL				AML	AML	21 02 06.6	
	comp=N,2270μm,0.5s						
KSL	**Kastellorizon**	**0.55**	**116**	P	**Pn**	**21 01 53.2**	**+1.3**
KSL				S	**Sn**	**21 02 03.8**	**+3.4**
TURN	**Turunc**	**0.56**	**329**	PG	**Pn**	**21 01 53.2**	**+1.1**
TURN	**Turunc**	**0.56**	**329**	*i* P	**Pn**	**21 01 53.5**	**+1.4**
TURN				*i* S	**Sn**	**21 02 03.3**	**+2.7**
TURN	**Turunc**	**0.56**	**329**	*e*Pg	**Pn**	**21 01 53.2**	**+1.1**
MRSB	**Marmaris-Mugla**	**0.70**	**298**	PG	**Pb**	**21 01 53.5**	**+0.2**
MRSB	**Marmaris-Mugla**	**0.70**	**298**	*e*Pg	**Pb**	**21 01 53.5**	**+0.2**
ARG	**Arkhangelos**	**0.70**	**256**	PG	**Pn**	**21 01 54.0**	**0.0**
ARG				SG	**Sn**	**21 02 04.8**	**+0.7**
ARG	**Arkhangelos**	**0.70**	**256**	P	**Pn**	**21 01 53.8**	**-0.2**
ARG				S	**Sn**	**21 02 04.5**	**+0.5**
ARG				AML	AML	21 02 04.9	
	comp=N,1558μm,0.4s						
ARG				AML	AML	21 02 07.4	
	comp=E,1805μm,0.4s						
ARG	**Arkhangelos**	**0.70**	**256**	P	**Pn**	**21 01 54.0**	**0.0**
ARG				S	**Sn**	**21 02 04.2**	**+0.1**
ARG	**Arkhangelos**	**0.70**	**256**	*e*Pg	**Pn**	**21 01 54.0**	**0.0**
ARG				S	**Sn**	**21 02 04.2**	**+0.1**
ELL	**Elmali**	**0.84**	**65**	PG	**Pn**	**21 01 56.8**	**+0.8**
ELL	**Elmali**	**0.84**	**65**	*e*Pg	**Pn**	**21 01 56.8**	**+0.8**
YER	**Yerkesik**	**0.92**	**324**	PG	**Pb**	**21 01 56.9**	**-0.2**
YER	**Yerkesik**	**0.92**	**324**	P	**Pb**	**21 01 56.9**	**-0.2**
YER				S	**Sb**	**21 02 08.2**	**-0.8**
YER	**Yerkesik**	**0.92**	**324**	P	**Pb**	**21 01 56.9**	**-0.2**
YER				S	**Sb**	**21 02 08.2**	**-0.8**
GOLH	**Golhisar**	**0.97**	**29**	*i* P	**Pn**	**21 01 57.7**	**-0.1**
GOLH				*i* S	**Sn**	**21 02 11.0**	**+0.3**
GOLH	**Golhisar**	**0.97**	**29**	P	**Pn**	**21 01 57.7**	**-0.1**
GOLH				S	**Sn**	**21 02 11.0**	**+0.3**
TAVA	**DENIZLI_Tavas**	**1.07**	**358**	*i* P	**Pb**	**21 01 59.7**	**0.0**
TAVA				*i* S	**Sn**	**21 02 13.3**	**0.0**
TAVA	**DENIZLI_Tavas**	**1.07**	**358**	P	**Pb**	**21 01 59.7**	**0.0**
TAVA				S	**Sn**	**21 02 13.3**	**0.0**
DATC	**Datca-Mugla**	**1.11**	**289**	PG	**Pb**	**21 02 00.1**	**-0.2**
DATC	**Datca-Mugla**	**1.11**	**289**	*e*Pg	**Pb**	**21 02 00.1**	**-0.2**
DAT	**Datca**	**1.17**	**287**	PN	**Pn**	**21 02 00.9**	**+0.4**
DAT	**Datca**	**1.17**	**287**	*i* P	**Pn**	**21 02 00.9**	**+0.4**
DAT				*i* S	**Sb**	**21 02 17.0**	**+0.9**
DAT	**Datca**	**1.17**	**287**	P	**Pn**	**21 02 00.9**	**+0.4**
DAT				S	**Sb**	**21 02 17.0**	**+0.9**
KORT	**Korkueli**	**1.27**	**61**	PN	**Pb**	**21 02 03.8**	**+0.8**
KORT	**Korkueli**	**1.27**	**61**	*e*Pn	**Pb**	**21 02 03.8**	**+0.8**
DNZL	**Cakiroluk**	**1.29**	**3**	*i* P	**Pb**	**21 02 03.5**	**-0.1**
DNZL				*i* S	**Sb**	**21 02 19.5**	**-0.3**
DNZL	**Cakiroluk**	**1.29**	**3**	P	**Pb**	**21 02 03.5**	**-0.1**
DNZL				S	**Sb**	**21 02 19.5**	**-0.3**
MLSB	**Milas**	**1.31**	**314**	PN	**Pn**	**21 02 02.9**	**+0.4**
MLSB	**Milas**	**1.31**	**314**	*e*Pn	**Pn**	**21 02 02.9**	**+0.4**
DENT	**Denizli**	**1.36**	**2**	PN	**Pn**	**21 02 03.6**	**+0.5**
DENT	**Denizli**	**1.36**	**2**	*e*Pn	**Pn**	**21 02 03.6**	**+0.5**
ANTB	**Antalya**	**1.45**	**69**	PN	**Pb**	**21 02 05.9**	**-0.1**
ANTB	**Antalya**	**1.45**	**69**	*e*Pn	**Pb**	**21 02 05.9**	**-0.1**
BODT	**Bodrum**	**1.49**	**297**	PN	**Pn**	**21 02 04.2**	**-0.7**
BODT	**Bodrum**	**1.49**	**297**	P	**Pn**	**21 02 04.2**	**-0.7**
BODT				S	**Sn**	**21 02 23.0**	**-0.5**
BODT	**Bodrum**	**1.49**	**297**	P	**Pn**	**21 02 04.2**	**-0.7**
BODT				S	**Sn**	**21 02 23.0**	**-0.5**
NISR	**Nisiros**	**1.50**	**279**	P	**Pn**	**21 02 04.9**	**-0.1**
NISR	**Nisiros**	**1.50**	**279**	P	**Pn**	**21 02 05.2**	**+0.2**
AYDN	**Tasoluk**	**1.54**	**326**	*i* P	**Pb**	**21 02 07.0**	**-0.5**
AYDN				*i* S	**Sb**	**21 02 27.1**	**+0.4**
AYDN	**Tasoluk**	**1.54**	**326**	P	**Pb**	**21 02 07.0**	**-0.5**
AYDN				S	**Sb**	**21 02 27.0**	**+0.4**
BCK	**Bucak**	**1.68**	**50**	PN	**Pn**	**21 02 08.9**	**+1.3**
BCK	**Bucak**	**1.68**	**50**	*e*Pn	**Pn**	**21 02 08.9**	**+1.3**
KARP	**Karpathos**	**1.69**	**241**	PN	**Pn**	**21 02 08.7**	**+1.0**
KARP	**Karpathos**	**1.69**	**241**	P	**Pn**	**21 02 08.2**	**+0.6**
KARP				AML	AML	21 02 30.0	
	comp=N,415μm,0.1s						
KARP				AML	AML	21 02 30.6	
	comp=E,475μm,0.1s						
KARP	**Karpathos**	**1.69**	**241**	P	**Pn**	**21 02 08.7**	**+1.0**
KARP				S	**Sn**	**21 02 29.1**	**+0.5**
KARP	**Karpathos**	**1.69**	**241**	P	**Pn**	**21 02 08.3**	**+0.6**
KARP	**Karpathos**	**1.69**	**241**	*e*Pn	**Pn**	**21 02 08.7**	**+1.0**
KARP				S	**Sn**	**21 02 29.1**	**+0.5**
AYDB	**Zeytinkoy-Aydi**	**1.77**	**331**	PN	**Pn**	**21 02 08.5**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**1.77**	**331**	*e*Pn	**Pn**	**21 02 08.5**	**-0.4**
ISP	**Isparta**	**1.89**	**41**	PN	**Pn**	**21 02 11.8**	**+1.3**
ISP	**Isparta**	**1.89**	**41**	Pn	**Pb**	**21 02 14.0**	**+0.4**
ISP	**Isparta**	**1.89**	**41**	*e*Pn	**Pn**	**21 02 11.8**	**+1.3**
GCAM	**G?zelcaml?**	**1.90**	**314**	PN	**Pn**	**21 02 10.9**	**+0.3**
GCAM	**G?zelcaml?**	**1.90**	**314**	*i* P	**Pn**	**21 02 11.2**	**+0.7**
GCAM				*i* S	**Sn**	**21 02 34.6**	**+0.9**
GCAM	**G?zelcaml?**	**1.90**	**314**	*e*Pn	**Pn**	**21 02 10.9**	**+0.3**
GCAM	**G?zelcaml?**	**1.90**	**314**	P	**Pn**	**21 02 11.2**	**+0.7**
GCAM				S	**Sn**	**21 02 34.6**	**+0.9**
SUTC	**Sutluce-Ispart**	**1.95**	**56**	PN	**Pn**	**21 02 12.8**	**+1.4**
SUTC	**Sutluce-Ispart**	**1.95**	**56**	*e*Pn	**Pn**	**21 02 12.8**	**+1.4**
MANT	**Manisa**	**2.12**	**351**	*i* P	**Pn**	**21 02 13.0**	**-0.7**
MANT	**Manisa**	**2.12**	**351**	P	**Pn**	**21 02 13.0**	**-0.7**
KULA	**Kula-Manisa**	**2.13**	**354**	PN	**Pn**	**21 02 13.5**	**-0.3**
KULA	**Kula-Manisa**	**2.13**	**354**	*e*Pn	**Pn**	**21 02 13.5**	**-0.3**
SMG	**Samos**	**2.15**	**308**	P	**Pn**	**21 02 14.2**	**+0.2**
SMG				S	**Sn**	**21 02 41.8**	**+1.9**
SMG				AML	AML	21 02 42.0	
	comp=N,1411μm,0.6s						
SMG				AML	AML	21 02 42.5	
	comp=E,1122μm,0.4s						
SMG	**Samos**	**2.15**	**308**	P	**Pn**	**21 02 14.2**	**+0.2**
SMG				S	**Sn**	**21 02 38.9**	**-1.0**
SMG	**Samos**	**2.15**	**308**	P	**Pn**	**21 02 14.4**	**+0.4**
SMG				S	**Sn**	**21 02 40.7**	**+0.8**
DGB	**¯zmir**	**2.35**	**315**	*i* P	**Pn**	**21 02 16.6**	**-0.1**
DGB				*i* S	**Sn**	**21 02 44.5**	**-0.1**
ZKR	**Zakros**	**2.58**	**241**	P	**Pn**	**21 02 20.5**	**+0.7**
ZKR				S	**Sn**	**21 02 52.1**	**+1.8**
ZKR	**Zakros**	**2.58**	**241**	P	**Pn**	**21 02 20.7**	**+0.9**
ZKR				S	**Sn**	**21 02 51.3**	**+1.0**
ANAF	**Anafi Island**	**2.58**	**270**	P	**Pn**	**21 02 19.3**	**-0.6**
ANAF	**Anafi Island**	**2.58**	**270**	P	**Pn**	**21 02 20.0**	**+0.1**
GAZI	**Gazipasa**	**2.71**	**92**	PN	**Pn**	**21 02 21.9**	**+0.2**
GAZI	**Gazipasa**	**2.71**	**92**	*e*Pn	**Pn**	**21 02 21.9**	**+0.2**
URLA	**Izmir**	**2.72**	**317**	PN	**Pn**	**21 02 21.8**	**-0.1**
URLA	**Izmir**	**2.72**	**317**	*e*Pn	**Pn**	**21 02 21.8**	**-0.1**
APE	**Apeiranthos**	**2.84**	**285**	P	**Pn**	**21 02 24.6**	**+1.1**
APE				S	**Sn**	**21 02 57.1**	**+0.1**
APE	**Apeiranthos**	**2.84**	**285**	P	**Pn**	**21 02 24.5**	**+1.0**
APE				S	**Sn**	**21 02 56.9**	**-0.1**
NPS	**Neapolis**	**2.95**	**248**	P	**Pn**	**21 02 24.2**	**-0.8**
NPS				S	**Sn**	**21 03 00.1**	**+0.5**
NPS	**Neapolis**	**2.95**	**248**	P	**Pn**	**21 02 25.2**	**+0.2**
NPS				S	**Sn**	**21 02 59.8**	**+0.2**
CHOS	**Chios island**	**3.06**	**311**	P	**Pn**	**21 02 27.2**	**+0.8**
CHOS				S	**Sn**	**21 03 01.6**	**-0.6**
CHOS				AML	AML	21 03 05.1	
	comp=N,436μm,0.4s						
CHOS				AML	AML	21 03 05.8	
	comp=E,503μm,0.2s						
CHOS	**Chios island**	**3.06**	**311**	P	**Pn**	**21 02 27.3**	**+0.8**
CHOS				S	**Sn**	**21 03 01.8**	**-0.5**
AKMC	**Akamas**	**3.06**	**116**	P	**Pn**	**21 02 26.3**	**-0.2**
	baz=298						
AKMC	**Akamas**	**3.06**	**116**	P	**Pn**	**21 02 26.3**	**-0.2**
LAST	**Lasithi**	**3.09**	**248**	P	**Pn**	**21 02 26.5**	**-0.5**
LAST	**Lasithi**	**3.09**	**248**	P	**Pn**	**21 02 27.3**	**+0.3**
PPCY	**Paphos**	**3.14**	**118**	P	**Pn**	**21 02 27.9**	**+0.4**
	baz=300						
PPCY	**Paphos**	**3.14**	**118**	P	**Pn**	**21 02 27.9**	**+0.4**
ALFC	**Alefka**	**3.20**	**112**	P	**Pn**	**21 02 28.2**	**-0.2**
	baz=294						
ALFC				S	**Sn**	**21 03 05.2**	**-0.6**
ALFC	**Alefka**	**3.20**	**112**	P	**Pn**	**21 02 28.2**	**-0.2**
ALFC				S	**Sn**	**21 03 05.2**	**-0.6**
PSRA	**Psara**	**3.45**	**309**	P	**Pn**	**21 02 33.4**	**+1.5**
PSRA				S	**Sn**	**21 03 11.0**	**-0.9**
PSRA	**Psara**	**3.45**	**309**	P	**Pn**	**21 02 33.2**	**+1.3**
PSRA				S	**Sn**	**21 03 11.3**	**-0.6**
PRK	**Paraskevi**	**3.56**	**324**	P	**Pn**	**21 02 34.3**	**+1.0**
PRK				S	**Sn**	**21 03 14.9**	**+0.4**
PRK				AML	AML	21 03 39.5	
	comp=E,234μm,0.8s						
PRK				AML	AML	21 03 39.8	
	comp=N,148μm,0.8s						
PRK	**Paraskevi**	**3.56**	**324**	P	**Pn**	**21 02 34.4**	**+1.1**
PRK				S	**Sn**	**21 03 14.6**	**+0.1**
SZAC	**Souni**	**3.58**	**116**	P	**Pn**	**21 02 34.2**	**+0.5**
	baz=299						
SZAC	**Souni**	**3.58**	**116**	P	**Pn**	**21 02 34.2**	**+0.5**
SIVA	**Sivas**	**3.65**	**249**	P	**Pn**	**21 02 36.4**	**+1.8**
SIVA	**Sivas**	**3.65**	**249**	P	**Pn**	**21 02 36.2**	**+1.6**
MAMC	**Mammari**	**3.67**	**108**	P	**Pn**	**21 02 35.7**	**+0.9**
	baz=291						
MAMC	**Mammari**	**3.67**	**108**	P	**Pn**	**21 02 35.7**	**+0.9**
SIGR	**SIGRI**	**3.74**	**320**	P	**Pn**	**21 02 35.1**	**-0.7**
SIGR				S	**Sn**	**21 03 18.9**	**-0.1**
SIGR	**SIGRI**	**3.74**	**320**	P	**Pn**	**21 02 36.1**	**+0.3**
SIGR				S	**Sn**	**21 03 18.7**	**-0.3**
CSS	**Mathiatis**	**3.83**	**111**	P	**Pn**	**21 02 36.5**	**-0.6**
	baz=293						
CSS	**Mathiatis**	**3.83**	**111**	P	**Pn**	**21 02 36.5**	**-0.6**
IMMV	**Iera Moni Meta**	**4.15**	**259**	P	**Pn**	**21 02 42.4**	**+0.9**
IMMV	**Iera Moni Meta**	**4.15**	**259**	P	**Pn**	**21 02 42.7**	**+1.2**
GVD	**Gavdhos**	**4.27**	**250**	P	**Pn**	**21 02 44.5**	**+1.4**
GVD	**Gavdhos**	**4.27**	**250**	P	**Pn**	**21 02 44.5**	**+1.4**
LIA	**Limnos Island**	**4.60**	**321**	P	**Pn**	**21 02 49.6**	**+2.0**
LIA	**Limnos Island**	**4.60**	**321**	P	**Pn**	**21 02 49.4**	**+1.8**
SMTH	**Samothraki Isl**	**4.88**	**327**	P	**Pn**	**21 02 51.8**	**+0.2**
SMTH				S	**Sn**	**21 03 47.4**	**+0.2**
SMTH	**Samothraki Isl**	**4.88**	**327**	P	**Pn**	**21 02 52.5**	**+1.0**
SMTH				S	**Sn**	**21 03 47.0**	**-0.2**
HNTI	**Hanita**	**6.08**	**121**	Pn	**Pn**	**21 03 07.0**	**-1.0**
HNTI				Sn	**Sn**	**21 04 13.4**	**-3.4**
OFRI	**'Ofer**	**6.23**	**125**	Pn	**Pn**	**21 03 08.3**	**-1.8**
OFRI				Sn	**Sn**	**21 04 17.3**	**-3.2**
MMAOB	**Mount Meron ar**	**6.28**	**121**	Pn	**Pn**	**21 03 10.0**	**-0.8**
BLGI	**Bet Lehem HaGe**	**6.30**	**124**	Pn	**Pn**	**21 03 11.0**	**0.0**
KSDI	**Kefar Szold**	**6.36**	**118**	Pn	**Pn**	**21 03 11.2**	**-0.7**
SLTI	**Sal'it**	**6.51**	**128**	Pn	**Pn**	**21 03 12.9**	**-1.0**
KSHT	**Keshet**	**6.58**	**119**	Pn	**Pn**	**21 03 15.0**	**0.0**
MMLI	**Mount Malkishu**	**6.63**	**125**	Pn	**Pn**	**21 03 14.4**	**-1.2**
MMLI				Sn	**Sn**	**21 04 27.0**	**-3.4**
HMDT	**Nahal Hemdat**	**6.82**	**125**	Pn	**Pn**	**21 03 17.8**	**-0.3**
HMDT				Sn	**Sn**	**21 04 31.8**	**-3.1**
AMAZ	**Amatzia**	**6.92**	**133**	Pn	**Pn**	**21 03 19.1**	**-0.5**
KZIT	**Kziot**	**7.10**	**139**	Pn	**Pn**	**21 03 21.2**	**-0.8**
KZIT				Sn	**Sn**	**21 04 38.0**	**-3.9**
DSI	**Dead Sea**	**7.18**	**130**	Pn	**Pn**	**21 03 22.3**	**-0.7**
PRNI	**Paran**	**7.86**	**138**	Pn	**Pn**	**21 03 31.4**	**-1.1**
HRFI	**Mount Harif**	**8.12**	**140**	Pn	**Pn**	**21 03 34.9**	**-1.2**
HRFI				Sn	**Sn**	**21 05 03.2**	**-4.0**
MBRI	**Mt Berech**	**8.26**	**141**	Pn	**Pn**	**21 03 37.4**	**-0.6**
MBRI				Sn	**Sn**	**21 05 07.0**	**-3.5**
EIL	**Elat**	**8.38**	**141**	Pn	**Pn**	**21 03 38.6**	**-0.9**

IDC ***29*** *21:03:28.6±1.5, 55°.10N×165°.67E, h0km, mb3.6/7, mb1 3.9/8, mb1mx3.5/74, mbtmp3.6/8, MS2.5/1, Ms1 2.5/1, ms1mx2.5/74, Error ellipse: s-maj=62.9km s-min=21.4km az=165.0*
KRSC ***29*** *21:03:30.9±1.8, 54°.93N×165°.35E, h41km±14km, ML4.2*
MOS ***29*** *21:03:31.1±0.8, 54°.97N×165°.68E, h34km, mb4.1/3, Error ellipse: s-maj=8.2km s-min=6.4km az=174.5*
ISCJB ***29*** *21:03:32.3±0.5, 54°.92N±0°.03×165°.45E±0°.05, h48km±7km, mb3.6/7, Error ellipse: s-maj=5.4km s-min=4.2km az=154.8*
ISC 29 21:03:33.1±1.2,**54°.96N**±0°.05×**165°.58E**±0°.04,**h35**km±4km,
n89,σ1º**39**/127,**mb3.5/7**,**Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.33**	**42**	*e*P	**Pb**	**21 03 40.5**	**-0.9**
BKI				*e*S	**Sn**	**21 03 46.3**	**-0.5**
BKI	**Bering**	**0.33**	**42**	PN	**Pb**	**21 03 40.5**	**-0.9**
BKI				S	**Sn**	**21 03 46.3**	**-0.5**
KBTR	**Krutoberegovo**	**2.01**	**310**	*e*P	**Pn**	**21 04 01.5**	**-3.0**
KBTR				*e*S	**Sn**	**21 04 24.2**	**-4.2**
KBTR	**Krutoberegovo**	**2.01**	**310**	PN	**Pn**	**21 04 01.5**	**-3.0**
MKZ	**Mys Kozlova**	**2.27**	**261**	*e*P	**Pn**	**21 04 07.3**	**-0.8**
MKZ				*e*S	**Sn**	**21 04 33.0**	**-1.8**
MKZ	**Mys Kozlova**	**2.27**	**261**	PN	**Pn**	**21 04 07.3**	**-0.8**
MKZ				S	**Sn**	**21 04 33.0**	**-1.8**
SMKR	**Semkarok**	**2.84**	**307**	*e*P	**Pn**	**21 04 15.0**	**-1.0**
SMKR				*e*S	**Sn**	**21 04 46.0**	**-2.9**
SMKR	**Semkarok**	**2.84**	**307**	PN	**Pn**	**21 04 15.0**	**-1.0**
ZLN	**Zelenaya**	**2.92**	**293**	*e*P	**Pn**	**21 04 17.0**	**-0.1**
ZLN				*e*S	**Sn**	**21 04 49.1**	**-1.9**
ZLN	**Zelenaya**	**2.92**	**293**	PN	**Pn**	**21 04 17.0**	**-0.1**
BDR	**Baidarnaya**	**2.95**	**305**	*e*P	**Pn**	**21 04 17.1**	**-0.5**
BDR	**Baidarnaya**	**2.95**	**305**	PN	**Pn**	**21 04 17.1**	**-0.5**
BZGR	**Bezymyannyi-Gr**	**2.95**	**291**	*e*P	**Pn**	**21 04 18.1**	**+0.5**
BZGR				*e*S	**Sn**	**21 04 51.7**	**-0.1**
BZGR	**Bezymyannyi-Gr**	**2.95**	**291**	PN	**Pn**	**21 04 18.1**	**+0.5**
BZGR				S	**Sn**	**21 04 51.7**	**-0.1**
CIRR	**Tsirk**	**2.98**	**295**	*e*P	**Pn**	**21 04 18.5**	**+0.5**
CIRR				*e*S	**Sn**	**21 04 53.2**	**+0.6**
CIRR	**Tsirk**	**2.98**	**295**	PN	**Pn**	**21 04 18.5**	**+0.5**
CIRR				S	**Sn**	**21 04 53.2**	**+0.6**
TUMD	**Tumrok D**	**2.99**	**277**	*e*P	**Pn**	**21 04 18.2**	**+0.2**
TUMD				*e*S	**Sn**	**21 04 51.3**	**-1.3**
LGNR	**Loginova**	**3.00**	**294**	*e*P	**Pn**	**21 04 19.0**	**+0.6**
LGNR				*e*S	**Sn**	**21 04 52.4**	**-0.9**
LGNR	**Loginova**	**3.00**	**294**	PN	**Pn**	**21 04 19.0**	**+0.6**
LGNR				S	**Sn**	**21 04 52.4**	**-0.9**
SRKR	**Sorokina**	**3.02**	**306**	*e*P	**Pn**	**21 04 18.5**	**+0.1**
SRKR				*e*S	**Sn**	**21 04 51.7**	**-1.6**
SRKR	**Sorokina**	**3.02**	**306**	PN	**Pn**	**21 04 18.5**	**+0.1**
KZV	**Kizimen**	**3.05**	**275**	*e*P	**Pn**	**21 04 18.7**	**-0.2**
KZV				*e*S	**Sn**	**21 04 52.6**	**-1.6**
KZV	**Kizimen**	**3.05**	**275**	PN	**Pn**	**21 04 18.7**	**-0.2**
BZMR	**Bezymyannaya**	**3.06**	**291**	*e*P	**Pn**	**21 04 19.4**	**+0.3**
BZMR				*e*S	**Sn**	**21 04 53.9**	**-0.7**
BZMR	**Bezymyannaya**	**3.06**	**291**	PN	**Pn**	**21 04 19.4**	**+0.3**
BZMR				S	**Sn**	**21 04 53.9**	**-0.7**
BZWR	**Bezymyannyi-We**	**3.07**	**291**	*e*P	**Pn**	**21 04 19.9**	**+0.7**
BZWR				*e*S	**Sn**	**21 04 53.5**	**-1.2**
BZWR	**Bezymyannyi-We**	**3.07**	**291**	PN	**Pn**	**21 04 19.9**	**+0.7**
BZWR				S	**Sn**	**21 04 53.5**	**-1.2**
KLY	**Klyuchi**	**3.11**	**298**	*e*P	Pn	21 04 16.1	-3.5
KLY				*e*S	**Sn**	**21 04 51.4**	**-4.0**
KLY	**Klyuchi**	**3.11**	**298**	PN	Pn	21 04 16.1	-3.5
KRSR	**Krestovskiy**	**3.11**	**296**	*e*P	**Pn**	**21 04 19.1**	**-0.7**
KRSR				*e*S	**Sn**	**21 04 53.8**	**-2.0**
KRSR	**Krestovskiy**	**3.11**	**296**	PN	**Pn**	**21 04 19.1**	**-0.7**
TUMR	**Tumrok**	**3.14**	**278**	*e*P	**Pn**	**21 04 20.6**	**+0.4**
TUMR				*e*S	**Sn**	**21 04 55.4**	**-1.0**
TUMR	**Tumrok**	**3.14**	**278**	PN	**Pn**	**21 04 18.2**	**-2.0**
KIRR	**Kirishev**	**3.15**	**291**	*e*P	**Pn**	**21 04 20.8**	**+0.5**
KIRR				*e*S	**Sn**	**21 04 56.7**	**0.0**
KIRR	**Kirishev**	**3.15**	**291**	PN	**Pn**	**21 04 20.8**	**+0.5**
KIRR				S	**Sn**	**21 04 56.7**	**0.0**
KMNR	**Kamenistaya**	**3.15**	**287**	*e*P	**Pn**	**21 04 21.2**	**+0.8**
KMNR				*e*S	**Sn**	**21 04 57.1**	**+0.3**
KMNR	**Kamenistaya**	**3.15**	**287**	PN	**Pn**	**21 04 21.2**	**+0.8**
KMNR				S	**Sn**	**21 04 57.1**	**+0.3**
KPT	**Kopyto**	**3.21**	**290**	*e*P	**Pn**	**21 04 21.6**	**+0.4**
KPT				*e*S	**Sn**	**21 04 57.3**	**-1.0**
KPT	**Kopyto**	**3.21**	**290**	PN	**Pn**	**21 04 21.6**	**+0.4**
KOZ	**Kozyrevsk**	**3.43**	**291**	*e*P	**Pn**	**21 04 25.7**	**+1.7**
KOZ				*e*S	**Sn**	**21 05 05.2**	**+1.8**
KOZ	**Kozyrevsk**	**3.43**	**291**	PN	**Pn**	**21 04 25.7**	**+1.7**
KOZ				S	**Sn**	**21 05 05.2**	**+1.8**
KII	**Karymskiy**	**3.69**	**258**	*e*P	**Pn**	**21 04 28.9**	**+1.1**

MAT				S	Sg	21 06 41.9	-1.3
JHJ	**Hachijo jima 2**	**3.23**	**196**	P	**Pn**	**21 06 27.4**	**+2.3**
	4.4nm,0.3s,baz=259,slow=19,SNR=1.9						
JHJ				S	Sn	21 07 00.6	-3.0
	3.8nm,0.3s,baz=30,slow=20,SNR=2.0						
H11N2	**WAKE ISLAND Hy**	**28.16**	**119**	T	T	21 40 37.4	
	baz=312,slow=75,SNR=20						
H11N1	**WAKE ISLAND Hy**	**28.17**	**119**	T	T	21 40 40.6	
	baz=312,slow=75,SNR=20						
H11N3	**WAKE ISLAND Hy**	**28.18**	**119**	T	T	21 40 38.8	
	baz=312,slow=75,SNR=22						
H11S1	**WAKE ISLAND Hy**	**28.84**	**121**	T	T	21 41 32.9	
	baz=314,slow=75,SNR=46						
H11S3	**WAKE ISLAND Hy**	**28.84**	**121**	T	T	21 41 30.5	
	baz=314,slow=75,SNR=32						
H11S2	**WAKE ISLAND Hy**	**28.86**	**121**	T	T	21 41 34.1	
	baz=314,slow=75,SNR=42						
ILAR	**Eielson Array**	**50.42**	**32**	P	**P**	**21 14 32.5**	**+0.8**
	0.4nm,0.7s,baz=270,slow=7.2,SNR=4.2						
WRA	**Warramunga Arr**	**56.21**	**187**	P	**P**	**21 15 13.3**	**-1.4**
	0.3nm,0.7s,baz=5.2,slow=7.8,SNR=3.5						
KIS	**Kishinev**	**77.19**	**319**	*i* PPP	PPP	21 16 40.0	

SOME ***29*** *21:07:26.9, 43.°25N×84.°48E, h10km, MS6.4*

IDC ***29*** *21:07:30.3±0.3, 43.°49N×84.°76E, h0km, mb5.7/60, mb1 5.7/65, mb1mx5.7/68, mbtmp5.7/65, ML5.2/5, MS6.2/58, Ms1 6.2/58, ms1mx6.1/66, Error ellipse: s-maj=8.7km s-min=6.3km az=32.0*

ISCJB ***29*** *21:07:31.1±0.4, 43.°40N±0.°01×84.°70E±0.°01, h12km±2km, mb6.0/347, MS6.3/249, Error ellipse: s-maj=2.0km s-min=1.5km az=23.8*

BJI ***29*** *21:07:31.5, 43.°42N×84.°74E, h7km, mb5.7/54, mB6.4/57, ML6.5/10, Ms6.6/83, Ms7 6.6/70*

NEIC ***29*** *21:07:32.0±0.0, 43.°44N×84.°73E, h12km, Moment Tensor Solution. s8 Moment tensor: Scale 10^18Nm; Mrr1.26; Mθθ-2.81; Mφφ 1.54; Mrθ0.80; Mθφ0.09; Mφr2.30; Best double couple: M0 3.40000×10^18 NP1:φs52.00000°, δ71.00000°, λ44.00000°. NP2:φs305.00000°, δ49.00000°, λ155.00000°. Principal axes: T 3.7600, Plg43.0000°, Azm277.0000°; N -0.7700, Plg43.0000°, Azm71.0000°; P -2.9900, Plg13.0000°, Azm174.0000°;*

MOS ***29*** *21:07:32.8±0.9, 43.°44N×84.°71E, h23km, mb6.4/103, MS6.5/70 Error ellipse: s-maj=4.5km s-min=3.2km az=134.3*

MOS Felt (II-III) at Almaty; (II) at Ust'-Kamenogorsk.

NNC ***29*** *21:07:33.8±1.6, 43.°53N×84.°65E, h0km, mb6.8, mpv6.5, Error ellipse: s-maj=16.7km s-min=7.3km az=113.0*

NEIC ***29*** *21:07:33.9±0.1, 43.°43N×84.°70E, h18km, mb6.2/157, ME6.5, MS6.4/136, MW6.2, MW6.3, MW6.3, Error ellipse: s-maj=2.6km s-min=2.1km az=27.0, Moment Tensor Solution. s61 Moment tensor: Scale 10^18Nm; Mrr0.76; Mθθ-2.33; Mφφ 1.57; Mrθ-0.20; Mθφ-0.92; Mφr0.84; Best double couple: M0 2.40000×10^18 NP1:φs36.00000°, δ69.00000°, λ22.00000°. NP2:φs298.00000°, δ70.00000°, λ158.00000°. Principal axes: T 2.2800, Plg30.0000°, Azm257.0000°; N 0.2600, Plg60.0000°, Azm78.0000°; P -2.5400, Plg0.0000°, Azm347.0000°; Broadband fault plane solution: P waves. NP1:φs294.00000°, δ62.00000°, λ157.00000°. NP2:φs35.00000°, δ70.00000°, λ30.00000°. Principal axes: T Plg35.0000°, Azm257.0000°; N Plg0.0000°, Azm0.0000°; P Plg5.0000°, Azm163.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC At least 52 people injured, 48,000 people displaced, more than 7,500 rooms collapsed, 64,000 rooms damaged and 2,217 livestock killed in Xinyuan. Rockslides blocked roads in the area. Preliminary estimate of damage is about 68 million U.S. dollars. Felt [VI] at Shihezi and [IV] at Urumqi. Also felt at Changji, Karamay and in Hejing. Felt [IV] at Almaty, Kazakhstan.

GCMT ***29*** *21:07:33.9±0.1, 43.°42N×84.°72E, h28km, MW6.3/143, Moment Tensor Solution. s138,c311; s143,c575; Duration: 36 Moment tensor: Scale 10^18Nm; Mrr1.16±.02; Mθθ-3.55±.02; Mφφ 2.39±.02; Mrθ0.31±.04; Mθφ-1.24±.02; Mφr1.95±.05; Best double couple: M0 3.90700×10^18 NP1:φs39.00000°, δ73.00000°, λ32.00000°. NP2:φs298.00000°, δ60.00000°, λ160.00000°. Principal axes: T 3.9120, Plg34.0000°, Azm262.0000°; N -0.0090, Plg54.0000°, Azm64.0000°; P -3.9020, Plg9.0000°, Azm166.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

NEIC ***29*** *21:07:46.0±0.0, 43.°70N×84.°30E, h10km, Moment Tensor Solution. s52 Moment tensor: Scale 10^18Nm; Mrr0.79; Mθθ-2.66; Mφφ 1.87; Mrθ-0.12; Mθφ-1.01; Mφr1.62; Best double couple: M0 3.00000×10^18 NP1:φs297.00000°, δ64.00000°, λ157.00000°. NP2:φs38.00000°, δ70.00000°, λ28.00000°. Principal axes: T 3.1700, Plg34.0000°, Azm259.0000°; N -0.2800, Plg56.0000°, Azm71.0000°; P -2.8900, Plg4.0000°, Azm167.0000°;*

ISC 29 21:07:33.0±0.3, 43.°43N±0.°02×84.°61E±0.°02, h17km±1km, h17km; pP-P, n2242, σ1s76/2438, mb6.1/374, MS6.5/290, 191C-47D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**2.27**	**79**	Pn	**Pb**	**21 08 11.5**	**-2.0**
WMQ				Sg	**Sb**	**21 08 39.8**	**-1.6**
WMQ				smax	smax		
	comp=N,187μm,0.7s						
WMQ				smax	smax		
	comp=E,167μm,0.9s						
DJR	**Jarkent**	**3.60**	**286**	*e*P	**Pb**	**21 08 32.5**	**-3.7**
	7μm,0.3s						
DJR				*e*S	**Sg**	**21 09 25.2**	**-3.3**
	100μm,0.8s						
MK01	**Makanchi Array**	**3.72**	**335**	*e*Pn	**Pn**	**21 08 31.3**	**+1.7**
PDGK	**Podgornoye**	**3.74**	**270**	⇑Pn	**Pb**	**21 08 34.3**	**-4.2**
	19μm,0.9s						
PDGK	**Podgornoye**	**3.74**	**270**	P	**Pb**	**21 08 34.3**	**-4.2**
PDGK				pmax	pmax		
	comp=Z,19μm,0.9s						
MK31	**Makanchi Array**	**3.74**	**335**	⇓Pn	**Pn**	**21 08 32.1**	**+2.2**
	comp=Z,331nm,0.3s						
MK31				⇓Pg	**Pg**	**21 08 42.1**	**-2.5**
	comp=Z,6μm,0.5s						
MK31				⇑Lg	Lg	21 09 29.3	
	comp=Z,33μm,0.8s						
MK31	**Makanchi Array**	**3.74**	**335**	*e*Pn	**Pn**	**21 08 31.9**	**+2.0**
MK31	**Makanchi Array**	**3.74**	**335**	*e*P	**Pn**	**21 08 31.9**	**+2.0**
MKAR	**Makanchi Array**	**3.74**	**335**	*e*Pn	**Pn**	**21 08 31.9**	**+2.0**
MKAR	**Makanchi Array**	**3.74**	**335**	*e*P	**Pn**	**21 08 31.9**	**+2.0**
SHLS	**Shalkode**	**3.77**	**268**	*e*P	**Pn**	**21 08 30.6**	**+0.1**
	comp=Z,4μm,0.5s						
SHLS				*e*S	**Sb**	**21 09 21.9**	**-2.6**
	comp=Z,191μm,0.8s						
MAKZ	**Makanchi**	**3.85**	**332**	⇓Pn	**Pn**	**21 08 33.7**	**+2.2**
	comp=Z,10μm,1.1s						
MAKZ				⇓Pg	**Pg**	**21 08 43.9**	**-2.9**
	comp=Z,17μm,0.8s						
MAKZ				⇓Lg	Lg	21 09 34.3	
	comp=Z,90μm,0.8s						
MAKZ	**Makanchi**	**3.85**	**332**	*e*Pn	**Pn**	**21 08 33.6**	**+2.2**
MAKZ	**Makanchi**	**3.85**	**332**	*e*P	**Pn**	**21 08 33.6**	**+2.1**
ZSN	**Zaisan**	**4.02**	**2**	*e*P	**Pb**	**21 08 42.0**	**-1.3**
	comp=Z,4μm,0.7s						
ZSN				*e*S	**Sg**	**21 09 42.5**	**+0.5**
	comp=Z,18μm,0.3s						
UZB	**Uzynbulak**	**4.09**	**268**	*e*P	**Pb**	**21 08 41.6**	**-3.0**
	comp=Z,6μm,0.9s						
UZB				*e*S	**Sg**	**21 09 42.3**	**-2.0**
	comp=Z,95μm,1.0s						
KAPS	**Kapalarasan**	**4.20**	**298**	*e*P	**Pb**	**21 08 42.5**	**-3.8**
	comp=Z,9μm,0.5s						
KAPS				*e*S	**Sg**	**21 09 44.2**	**-3.5**
	comp=Z,125μm,0.8s						
KPKS	**Kokpek**	**4.32**	**272**	*e*P	Pb	21 08 44.0	-4.4
	comp=Z,7μm,0.7s						
KPKS				*e*S	**Sg**	**21 09 46.5**	**-5.0**
	comp=Z,185μm,0.7s						
ZHN	**Zhinishke**	**4.52**	**269**	*e*P	**Pn**	**21 08 44.3**	**+3.6**
	comp=Z,2μm,0.6s						
ZHN				*e*S	**Sb**	**21 09 46.5**	**+0.5**
	comp=Z,6μm,0.3s						
SATY	**Saty**	**4.55**	**267**	*e*P	**Pn**	**21 08 45.4**	**+4.3**
	comp=Z,3μm,0.5s						
SATY				*e*S	**Sb**	**21 09 49.2**	**+2.2**
	comp=Z,22μm,0.8s						
PRZ	**Przheval'sk**	**4.66**	**260**	*e*Pn	**Pn**	**21 08 46.1**	**+3.4**
PRZ	**Przheval'sk**	**4.66**	**260**	*e*P	**Pn**	**21 08 46.1**	**+3.4**
KURS	**Kuram**	**4.69**	**273**	*e*P	**Pb**	**21 08 52.7**	**-2.0**
	comp=Z,10μm,1.1s						
KURS				*e*S	**Sg**	**21 10 01.7**	**-1.8**
	comp=Z,97μm,1.1s						
TDK	**Taldygorghan**	**4.73**	**292**	*e*P	**Pb**	**21 08 51.7**	**-3.7**
	comp=Z,30μm,0.7s						
TDK				*e*S	**Sg**	**21 10 00.6**	**-4.1**
	comp=Z,139μm,0.7s						
MDOK	**Medeo**	**5.53**	**270**	⇓Pn	**Pn**	**21 08 58.0**	**+3.5**
	comp=Z,5μm,0.8s						
MDOK				⇓Pg	**Pg**	**21 09 17.3**	**-1.4**
	comp=Z,10μm,0.8s						
MDOK				⇓Lg	Lg	21 10 30.4	
	comp=Z,62μm,1.5s						
MDOK	**Medeo**	**5.53**	**270**	*e*P	**Pb**	**21 09 06.3**	**-2.8**
	comp=Z,3μm,1.1s						
MDOK				*e*S	**Sg**	**21 10 26.5**	**-3.8**
	comp=Z,39μm,1.0s						
CHKK	**Chushkaly**	**5.55**	**277**	*e*P	**Pb**	**21 09 07.8**	**-1.6**
	comp=Z,3μm,0.5s						
CHKK				*e*S	**Sg**	**21 10 29.6**	**-1.4**
	comp=Z,50μm,0.6s						
TNSS	**Tian-Shan**	**5.61**	**269**	*e*P	**Pb**	**21 09 08.4**	**-2.3**
	comp=Z,4μm,0.5s						
TNSS				*e*S	**Sg**	**21 10 29.6**	**-3.5**
	comp=Z,30μm,0.9s						
AAA	**Alma-Ata**	**5.62**	**270**	*i* P	**Pb**	**21 09 08.7**	**-1.9**
AAA				pmax	pmax		
	comp=Z,4μm,0.6s						
AAA	**Alma-Ata**	**5.62**	**270**	*e*P	**Pb**	**21 09 08.2**	**-2.4**
	comp=Z,2μm,0.7s						
AAA				*e*S	**Sg**	**21 10 29.5**	**-3.8**
	comp=Z,49μm,1.1s						
MTBS	**Maitube**	**5.98**	**270**	*e*P	**Pb**	**21 09 17.1**	**+0.4**
	comp=Z,1μm,0.4s						
MTBS				*e*S	**Sg**	**21 10 46.1**	**+1.2**
	comp=Z,19μm,0.9s						
KUU	**Kurty**	**6.02**	**277**	*e*P	**Pb**	**21 09 15.8**	**-1.6**
	comp=Z,4μm,0.6s						
KUU				*e*S	**Sg**	**21 10 43.6**	**-2.5**
	comp=Z,50μm,0.7s						
ULHL	**Ulahol**	**6.27**	**262**	P	**Pn**	**21 09 07.3**	**+2.5**
	SNR=185						
KST	**Kastek**	**6.33**	**269**	*e*P	**Pb**	**21 09 20.0**	**-2.7**
	comp=Z,5μm,0.6s						
KST				*e*S	**Sg**	**21 10 51.5**	**-4.5**
	comp=Z,14μm,0.8s						
DGZ	**Jazzator, Alta**	**6.56**	**16**	*i* P	**Pn**	**21 09 10.8**	**+2.0**
TKM2	**Tokmak 2**	**6.61**	**269**	⇑Pn	**Pn**	**21 09 13.1**	**+3.6**
	comp=Z,6μm,0.8s						
TKM2				⇑Lg	Lg	21 11 02.2	
	comp=Z,68μm,1.4s						
TKM2	**Tokmak 2**	**6.61**	**269**	P	**Pn**	**21 09 12.6**	**+3.1**
	SNR=1252						
TKM2	**Tokmak 2**	**6.61**	**269**	P	**Pn**	**21 09 13.1**	**+3.6**
TKM2				pmax	pmax		
	comp=Z,6μm,0.8s						
NRN	**Naryn**	**6.68**	**256**	*e*Pn	**Pn**	**21 09 13.2**	**+2.7**
NRN	**Naryn**	**6.68**	**256**	*e*P	**Pn**	**21 09 13.3**	**+2.7**
KZA	**Kyzart**	**7.02**	**262**	P	**Pn**	**21 09 18.4**	**+3.0**
	SNR=858						
KBK	**Karagaybulak**	**7.12**	**267**	P	**Pn**	**21 09 19.7**	**+3.2**
	SNR=420						
CHMS	**Chumysh**	**7.22**	**270**	P	**Pn**	**21 09 20.4**	**+2.8**
	SNR=452						
FRU	**Bishkek**	**7.34**	**269**	⇑*i*P	**Pn**	**21 09 22.0**	**+2.7**
FRU				pmax	pmax		
	comp=E,23μm,2.0s						
FRU				MLR	MLR		
	comp=E,380μm,4.0s						
USP	**Osponovka**	**7.37**	**272**	P	**Pn**	**21 09 22.4**	**+2.5**
	SNR=408						
AAK	**Ala-Archa**	**7.46**	**267**	⇑Pn	**Pn**	**21 09 24.0**	**+2.9**
	comp=E,2μm,1.1s						
AAK				⇑Pg	Pg	21 09 51.2	-4.4
	comp=E,3μm,0.8s						
AAK				⇑Lg	Lg	21 11 30.2	
	comp=E,29μm,1.4s						
AAK	**Ala-Archa**	**7.46**	**267**	P	**Pn**	**21 09 23.8**	**+2.8**
	SNR=156						
AAK	**Ala-Archa**	**7.46**	**267**	P	**Pn**	**21 09 24.0**	**+2.9**
AAK				pmax	pmax		
	comp=Z,2μm,1.1s						
UCH	**Uchtor**	**7.52**	**264**	P	**Pn**	**21 09 25.4**	**+3.2**
	SNR=917						
KSH	**Kashi**	**7.57**	**242**	⇑*i*P	Pn	21 09 32.8	+10
KSH				sP	sP	21 09 44.5	
KSH				S	**Sb**	**21 11 06.0**	**-7.9**
KSH				sS	sS	21 11 11.3	
KSH				pmax	pmax		
	comp=Z,1μm,0.7s						
KSH				LR	LR		
	comp=Z,283μm,4.0s						
EKS2	**Erkin-Say**	**7.97**	**268**	P	**Pn**	**21 09 30.5**	**+2.4**
	SNR=328						
AML	**Almayashu**	**8.14**	**265**	P	**Pn**	**21 09 34.7**	**+4.1**
	SNR=226						
KURBB	**Kurchatov Arra**	**8.30**	**332**	Pn	**Pn**	**21 09 31.9**	**-0.6**
	comp=Z,28nm,0.3s,baz=145,slow=13,SNR=933						
KURBB				Sn	**Sn**	**21 11 04.7**	**-1.1**
	comp=Z,158nm,0.3s,baz=158,slow=22,SNR=7.1						
KURBB				Lg	Lg	21 11 53.1	
	comp=Z,132nm,0.3s,baz=152,slow=24,SNR=5.3						
KURBB	**Kurchatov Arra**	**8.30**	**332**	⇓Pn	**Pn**	**21 09 32.5**	**0.0**
	comp=Z,2μm,0.7s						
KURBB				⇓Pg		21 10 05.3	
	comp=Z,4μm,1.4s						
KURBB				⇑Lg	Lg	21 11 54.9	
	comp=Z,62μm,1.0s						
KURK	**Kurchatov**	**8.35**	**333**	⇑Pn	**Pn**	**21 09 32.6**	**-0.5**
	comp=Z,2μm,1.5s						
KURK				⇑Lg	Lg	21 11 56.1	
	comp=Z,51μm,1.1s						
KURK	**Kurchatov**	**8.35**	**333**	*e*Pn	**Pn**	**21 09 33.7**	**+0.6**
KURK				Sn	**Sn**	**21 11 04.7**	**-2.3**
KURK	**Kurchatov**	**8.35**	**333**	P	**Pn**	**21 09 33.2**	**+0.1**
	SNR=566						
KURK	**Kurchatov**	**8.35**	**333**	*de*P	**Pn**	**21 09 32.8**	**-0.3**
KURK				pmax	pmax		
	comp=Z,748nm,1.7s						
MNAS	**Manas**	**8.93**	**268**	⇑Pn	**Pn**	**21 09 44.2**	**+2.9**
	comp=Z,650nm,0.8s						
MNAS				⇓Lg	Lg	21 12 19.2	
	comp=Z,21μm,1.3s						
MNAS	**Manas**	**8.93**	**268**	P	**Pn**	**21 09 44.2**	**+2.9**
MNAS				pmax	pmax		
	comp=Z,650nm,0.8s						
SFK	**Sufi-Kurgan**	**8.98**	**251**	⇑Pn	**Pn**	**21 09 44.5**	**+2.4**
	comp=Z,406nm,0.8s						
SFK				⇓Pg		21 10 17.5	
	comp=Z,3μm,1.3s						
SFK				⇑Lg	Lg	21 12 20.8	
	comp=Z,13μm,1.1s						
SFK	**Sufi-Kurgan**	**8.98**	**251**	P	**Pn**	**21 09 44.5**	**+2.4**
SFK				pmax	pmax		
	comp=Z,406nm,0.8s						
OTUK	**Ortayu**	**9.82**	**304**	⇓Pn	**Pn**	**21 09 54.4**	**+1.0**
	comp=Z,3μm,1.5s						
OTUK				⇑Lg	Lg	21 12 44.2	
	comp=Z,40μm,1.2s						
OTUK	**Ortayu**	**9.82**	**304**	P	**Pn**	**21 09 54.4**	**+1.0**
OTUK				pmax	pmax		
	comp=Z,3μm,1.5s						
HVS	**Khovu-Aksy**	**9.87**	**36**	⇑*e*P	**Pn**	**21 09 53.6**	**-0.4**
HVS				pmax	pmax		
	comp=Z,633nm,0.9s						
KK31	**Karatay Array**	**10.29**	**273**	⇑Pn	**Pn**	**21 10 02.6**	**+2.8**
	comp=Z,1μm,0.9s,baz=86,slow=16,SNR=5545						
KK31				⇑Pg		21 10 41.2	
	comp=Z,2μm,1.1s,baz=67,slow=16,SNR=3.1						
KK31				⇑Lg	Lg	21 12 59.0	
	comp=Z,16μm,1.1s,baz=76,slow=29,SNR=4.4						
KK31	**Karatay Array**	**10.29**	**273**	*e*Pn	**Pn**	**21 10 03.3**	**+3.5**
KK31	**Karatay Array**	**10.29**	**273**	P	**Pn**	**21 10 02.6**	**+2.8**
KK31				pmax	pmax		
	comp=Z,1μm,0.9s						
KKAR	**Karatay Array**	**10.29**	**273**	*e*Pn	**Pn**	**21 10 03.3**	**+3.5**
ZAA0	**Zalesovo Array**	**10.52**	**1**	*e*Pn	**Pn**	**21 10 02.6**	**-0.3**
ZALV	**Zalesovo Beam**	**10.52**	**1**	Pn	**Pn**	**21 10 01.4**	**-1.5**
	comp=Z,218nm,0.3s,baz=185,slow=13,SNR=831						
ZALV				Sn	**Sn**	**21 11 56.9**	**-3.4**
	comp=Z,495nm,0.3s,baz=174,slow=26,SNR=17						
ZALV				Lg	Lg	21 12 54.6	
	baz=188,slow=20,SNR=2.0						
ZALV				LR	LR	21 14 11.5	
	comp=Z,86μm,20.1s,baz=168,slow=38						
ZALV	**Zalesovo Beam**	**10.52**	**1**	*e*Pn	**Pn**	**21 10 02.4**	**-0.5**
ZALV				Sn	**Sn**	**21 11 56.9**	**-3.4**
ZALV	**Zalesovo Beam**	**10.52**	**1**	*e*P	**Pn**	**21 10 02.4**	**-0.5**
ZALV						21 11 56.9	
NVS	**Novosibirsk**	**11.45**	**356**	⇑*i*P	**Pn**	**21 10 13.9**	**-1.7**
NVS				*e*S	**Sn**	**21 12 19.1**	**-3.9**
NVS				pmax	pmax		
	comp=N,381nm,0.6s						
NVS				pmax	pmax		
	comp=E,233nm,0.6s						
NVS				pmax	pmax		
	comp=Z,301nm,0.6s						
NVS				smax	smax		
	comp=N,6μm,1.2s						
NVS				smax	smax		
	comp=E,6μm,1.2s						
TAS	**Tashkent**	**11.53**	**265**	P	**Pn**	**21 10 18.9**	**+2.1**
TAS				pmax	pmax		
	comp=Z,809nm,0.8s						
GTA	**Gaotai**	**12.10**	**104**	⇓P	**Pn**	**21 10 23.3**	**-1.3**
GTA				pP	pP	21 10 27.0	
GTA				sP	sP	21 10 30.0	
GTA				S	**Sn**	**21 12 38.8**	**-0.3**
GTA				sS	sS	21 12 44.0	
GTA				SS	**SnSn**	**21 12 55.5**	**+4.6**
GTA				pmax	pmax		
	comp=Z,120nm,1.4s						
GTA				pmax	pmax		
	comp=Z,3μm,7.9s						
GTA				LR	LR		
	comp=Z,171μm,9.1s						
GTA				LR	LR		
	comp=Z,260μm,10.0s						
DHRM	**DHARAMSHALA**	**12.94**	**213**	*e*P	**Pn**	**21 10 35.2**	**-1.1**
DHRM				IAmb	IAmb	21 10 39.6	
	comp=Z,1μm,0.7s						
CHCP	**Chirah Chowk**	**13.18**	**226**	P	**Pn**	**21 10 39.0**	**-0.4**
BVAR	**Borovoye Array**	**13.46**	**320**	Pn	**Pn**	**21 10 42.7**	**-0.4**
	comp=Z,13nm,0.3s,baz=134,slow=12,SNR=112						
BVAR				Sn	**Sn**	**21 13 08.6**	**-3.7**
	comp=Z,36nm,0.3s,baz=139,slow=23,SNR=3.6						
BVAR				Lg	Lg	21 14 36.9	
	comp=Z,63nm,0.3s,baz=135,slow=20,SNR=4.5						
BVAR				LR	LR	21 15 56.6	
	comp=Z,225μm,18.5s,baz=128,slow=38						
BRVK	**Borovoye**	**13.54**	**320**	*e*Pn	**Pn**	**21 10 43.8**	**-0.2**
BRVK	**Borovoye**	**13.54**	**320**	P	**Pn**	**21 10 43.6**	**-0.4**
	SNR=471						
BRVK	**Borovoye**	**13.54**	**320**	*d i*P	**Pn**	**21 10 43.3**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,162nm,1.3s						
SMLA	**Simla**	**13.63**	**208**	*e*P	**Pn**	**21 10 43.5**	**-1.9**
MOY	**Mondy**	**13.77**	**48**	*e*P	**Pn**	**21 10 49.8**	**+2.5**
MOY				pmax	pmax		
	comp=Z,1μm,2.1s						
CEP	**Cherat**	**13.79**	**230**	⇑P	**Pn**	**21 10 46.8**	**-1.0**
CEP				S	**Sn**	**21 13 19.0**	**-1.6**
DDI	**Dehra Dun**	**14.09**	**204**	*e*P	**Pn**	**21 10 50.4**	**-1.4**
DDI				IAmb	IAmb	21 10 54.8	
	comp=Z,497nm,0.4s						
ZAK	**Zakamensk**	**14.51**	**55**	*e*P	**Pn**	**21 11 00.4**	**+2.9**
ZAK				pmax	pmax		
	comp=Z,403nm,1.6s						
THW	**Thamme Wali**	**14.66**	**228**	P	**Pn**	**21 10 57.3**	**-2.2**
LSA	**Lhasa**	**14.67**	**157**	P	**Pn**	**21 11 02.0**	**+1.9**
LSA				S	**Sn**	**21 13 45.8**	**+3.3**
LSA				pmax	pmax		
	comp=Z,480nm,1.6s						
LSA				pmax	pmax		
	comp=Z,10μm,7.0s						
LSA				LR	LR		
	comp=Z,70μm,13.8s						
LSA	**Lhasa**	**14.67**	**157**	*e*Pn	**Pn**	**21 11 01.4**	**+1.3**
	comp=Z,738nm,0.8s						
LSA	**Lhasa**	**14.67**	**157**	*i* P	**Pn**	**21 11 01.4**	**+1.3**
	SNR=339						
LSA	**Lhasa**	**14.67**	**157**	*e*P	**Pn**	**21 11 01.4**	**+1.3**
LSA				pmax	pmax		
	comp=Z,738nm,0.8s						
SARP	**Sargodha**	**14.86**	**223**	P	**Pn**	**21 11 00.2**	**-2.1**
KBL	**Kabul**	**14.99**	**239**	*e*Pn	**Pn**	**21 11 03.6**	**-0.6**
	comp=Z,2μm,1.4s						
KBL	**Kabul**	**14.99**	**239**	*e*P	**Pn**	**21 11 03.6**	**-0.6**
KBL				pmax	pmax		
	comp=Z,2μm,1.4s						
DANN	**Dangsing**	**15.07**	**183**	*e*P	**Pn**	**21 11 03.3**	**-2.0**
	comp=Z,901nm,1.0s						
TLY	**Talaya**	**15.23**	**51**	Pn	**Pn**	**21 11 06.3**	**-0.8**
	comp=Z,0.0nm,0.3s,baz=240,slow=12,SNR=10						
TLY				Lg	Lg	21 15 26.2	
	comp=Z,0.1nm,0.3s,baz=333,slow=18,SNR=4.8						
TLY	**Talaya**	**15.23**	**51**	*e*Pn	**Pn**	**21 11 06.7**	**-0.5**
	comp=Z,331nm,1.2s						
TLY	**Talaya**	**15.23**	**51**	P	**Pn**	**21 11 07.5**	**+0.3**
	SNR=97						
TLY	**Talaya**	**15.23**	**51**	*d i*P	**P**	**21 11 11.9**	**-0.1**
TLY				MLR	MLR		
	comp=Z,240μm,16.0s						
PYUN	**Piuthan**	**15.36**	**185**	*e*P	**Pn**	**21 11 05.7**	**-3.4**
	comp=Z,1μm,0.9s						
GKN	**Gorkha**	**15.40**	**180**	*e*P	**Pn**	**21 11 07.5**	**-2.0**
	comp=Z,658nm,0.8s						
GUN	**Gumba**	**15.52**	**176**	*e*P	**Pn**	**21 11 09.3**	**-2.1**
KKN	**Kakani**	**15.62**	**178**	*e*P	**Pn**	**21 11 10.0**	**-2.5**
	comp=Z,2μm,1.2s						
KOLN	**Koldanda**	**15.65**	**183**	*e*P	**Pn**	**21 11 10.4**	**-2.5**
	comp=Z,832nm,1.0s						
JIRN	**Jiri**	**15.79**	**175**	*e*P	**Pn**	**21 11 12.4**	**-2.5**
	comp=Z,7μm,1.7s						
DMN	**Daman**	**15.79**	**178**	*e*P	**Pn**	**21 11 12.5**	**-2.3**
	comp=Z,3μm,1.3s						
IRK	**Irkutsk**	**15.83**	**49**	*e*P	**Pn**	**21 11 15.5**	**+0.6**
IRK				pmax	pmax		
	comp=Z,75nm,1.7s						
PKIN	**Phulchoki**	**15.84**	**177**	*e*P	**Pn**	**21 11 12.7**	**-2.6**
	comp=Z,10μm,1.8s						
SONM	**Songino Array**	**15.84**	**66**	Pn	**Pn**	**21 11 13.8**	**-1.4**
	comp=Z,4.3nm,0.3s,baz=258,slow=13,SNR=282						
SONM				Lg	Lg	21 15 46.6	
	comp=Z,7.6nm,0.3s,baz=254,slow=25,SNR=4.3						
SONM				LR	LR	21 17 54.5	
	comp=Z,387μm,18.8s,baz=263,slow=40						
I34MN	**SONGINO INFRAS**	**15.85**	**66**	Lg	Lg	21 15 41.2	
	baz=268,slow=26,SNR=2.5						
SONA1	**Songino Array**	**15.85**	**66**	*e*Pn	**Pn**	**21 11 14.2**	**-1.1**
NDI	**New Delhi**	**15.88**	**204**	*e*P

SHL	**Shillong**	**18.79 159**	*e*P	**P**	**21 11 50.0 -1.7**
SHL			*i* PDN		21 11 50.0
	comp=Z,87nm,1.0s				
SHL			IAmb	IAmb	21 11 52.7
SHL			*e*S	**Sn**	**21 15 21.0 -1.0**
SHL	**Shillong**	**18.79 159**	*e*P	**P**	**21 11 50.0 -1.7**
	comp=Z,1μm,0.9s				
SHL	**Shillong**	**18.79 159**	*e*P	**P**	**21 11 50.0 -1.7**
SHL			pmax	pmax	
	comp=Z,1μm,0.9s				
MOKO	**MOKOCHONG**	**18.88 152**	*e*P	**P**	**21 11 52.1 -0.5**
BTO	**Baotou**	**19.07 90**	*e*P	**P**	**21 11 52.3 -2.2**
BTO			S	**Sn**	**21 15 24.5 -4.0**
BTO			LR	LR	
	comp=Z,63μm,16.2s				
BTO			LR	LR	
	comp=Z,40μm,14.2s				
KOHI	**KOHIMA**	**19.30 153**	*e*P	**P**	**21 11 56.9 -0.2**
KOHI			IAmb	IAmb	21 12 00.6
I31KZ	**AKTYUBINSK INF**	**19.38 300**	P	**P**	**21 11 55.9 -1.9**
	baz=108,slow=13,SNR=3.0				
I31KZ			Lg	Lg	21 17 44.6
	baz=104,slow=16,SNR=21				
AKTO	**Aktyubinsk**	**19.40 300**	P	**Pn**	**21 11 59.0 -0.2**
	comp=Z,4.6nm,0.3s,baz=102,slow=10,SNR=126				
AKTO			S	**Sn**	**21 15 34.2 -1.9**
	comp=Z,7.0nm,0.3s,baz=18,slow=19,SNR=3.4				
AKTO			Lg	Lg	21 17 45.5
	comp=Z,30nm,0.3s,baz=176,slow=19,SNR=27				
AKTO			LR	LR	21 18 39.1
	comp=Z,57μm,18.7s,baz=110,slow=34				
BOK	**Bokaro**	**19.62 177**	*e*P	**P**	**21 12 00.3 -0.2**
BOK			IAmb	IAmb	21 12 03.2
	comp=Z,479nm,0.9s				
CD2	**Chengdu**	**19.67 123**	⇓P	**P**	**21 12 01.5 +0.4**
CD2			sP	sP	21 12 08.8 +0.7
CD2			PP	**PnPn**	**21 12 18.5 +2.4**
CD2			S	**S**	**21 15 39.5 -2.8**
CD2			SS	**SnSn**	**21 16 04.3 +7.1**
CD2			pmax	pmax	
	comp=Z,1μm,1.7s				
CD2			pmax	pmax	
	comp=Z,11μm,4.3s				
CD2			LR	LR	
	comp=Z,254μm,16.8s				
CD2			LR	LR	
	comp=Z,292μm,13.1s				
HHC	**Hu-ho-hao-te**	**20.12 88**	*e*P	**P**	**21 12 06.0 0.0**
HHC			sP	sP	21 12 13.3 +0.2
HHC			S	**S**	**21 15 49.5 -1.9**
HHC			sS	Sn	21 15 55.8 +1.9
HHC			pmax	pmax	
	comp=Z,130nm,1.1s				
HHC			pmax	pmax	
	comp=Z,19μm,4.4s				
HHC			LR	LR	
	comp=Z,45μm,12.2s				
HHC			LR	LR	
	comp=Z,59μm,13.2s				
HHC			LR	LR	
	comp=Z,75μm,15.7s				
SVE	**Sverdlovsk**	**20.25 320**	*ce*P	**P**	**21 12 08.1 +0.9**
SVE			*e*S	**S**	**21 15 47.1 -6.4**
SVE			pmax	pmax	
	comp=Z,1μm,0.9s				
SVE			MLR	MLR	
	comp=Z,208μm,15.0s				
SVE			MLR	MLR	
	comp=N,86μm,15.0s				
SVE			MLR	MLR	
	comp=E,108μm,15.0s				
AGT	**Agartala**	**20.25 162**	*e*P	**P**	**21 12 06.2 -1.2**
AGT			IAmb	IAmb	21 12 11.1
	comp=Z,742nm,0.4s				
ASHT	**Ashkhabad**	**20.59 263**	P	Pn	21 12 13.6 +0.3
ASHT			pmax	pmax	
	comp=Z,3μm,1.4s				
GEYT	**Alibeck**	**20.79 264**	P	**P**	**21 12 11.6 -1.6**
	comp=Z,267nm,0.7s,baz=66,slow=5.0,SNR=15				
GEYT			S	Sn	21 16 10.1 +0.2
	comp=Z,49nm,0.8s,baz=54,slow=7.4,SNR=2.9				
GEYT			LR	LR	21 21 18.6
	comp=Z,97μm,19.8s,baz=50,slow=40				
GYA0B	**ALIBECK ARRAY**	**20.79 264**	*e*P	Pn	21 12 14.7 -1.0
	comp=Z,846nm,0.9s				
BELO	**BELONIA**	**20.91 162**	*e*P	**P**	**21 12 15.3 +0.8**
BHPL	**Bhopal**	**21.00 199**	*e*P	**P**	**21 12 14.4 -1.1**
BHPL			IAmb	IAmb	21 12 18.4
	comp=Z,1μm,0.9s				
ARU	**Arti**	**21.06 317**	P	**P**	**21 12 16.4 +0.5**
	comp=Z,206nm,0.6s,baz=105,slow=6.4,SNR=122				
ARU			S	Sn	21 16 14.5 -1.5
	comp=Z,118nm,0.7s,baz=261,slow=19,SNR=2.8				
ARU			Lg	Lg	21 18 34.7
	comp=Z,1μm,1.0s,baz=90,slow=11,SNR=6.7				
ARU			LR	LR	21 20 57.8
	comp=Z,170μm,19.9s,baz=108,slow=38				
ARU	**Arti**	**21.06 317**	*e*P	**P**	**21 12 16.5 +0.5**
	comp=Z,5μm,1.9s				
ARU			S	Sn	21 16 14.5 -1.5
ARU			LR	LR	
	comp=Z,219μm,21.0s				
ARU	**Arti**	**21.06 317**	*c i*P	**P**	**21 12 16.3 +0.4**
ARU					21 12 36.9
ARU			*e*S	**S**	**21 16 12.6 +3.1**
ARU			SS	**SnSn**	**21 16 34.3 +3.5**
ARU			pmax	pmax	
	comp=Z,869nm,1.2s				
ARU			MLR	MLR	
	comp=Z,185μm,21.0s				
XAN	**Xi'an**	**21.09 108**	P	**P**	**21 12 15.8 -0.7**
XAN			pP	pP	21 12 21.5 +0.1
XAN			S	**S**	**21 16 03.8 -6.9**
XAN			LR	LR	
	comp=Z,106μm,14.4s				
XAN			LR	LR	
	comp=Z,69μm,12.0s				
CIT	**Chita**	**21.16 56**	*e*P	**P**	**21 12 17.6 +0.5**
CIT			*e*		21 12 36.8
CIT			*e*		21 12 57.5
CIT			*e*		21 16 10.4
CIT			pmax	pmax	
	comp=Z,3μm,1.6s				
BRDH	**Bariadhala**	**21.51 162**	P	**P**	**21 12 21.8 +0.8**
	comp=Z,3μm,0.7s,baz=34,slow=9.6,SNR=180				
BRDH			S	**S**	**21 16 17.6 -1.1**
	comp=Z,81nm,0.4s,baz=246,slow=19,SNR=3.4				
BRDH			LR	LR	21 22 33.9
	comp=Z,34μm,20.5s,baz=350,slow=42				
TIY	**Taiyuan**	**21.84 96**	*e*P	**P**	**21 12 24.3 -0.2**
TIY			pP	**pP**	**21 12 28.5 -0.9**
TIY			PP	**PnPn**	**21 12 51.0 +5.2**
TIY			S	**S**	**21 16 23.3 -2.0**
TIY			pmax	pmax	
	comp=Z,640nm,1.0s				
TIY			pmax	pmax	
	comp=Z,12μm,4.9s				
TIY			LR	LR	
	comp=Z,26μm,6.7s				
TIY			LR	LR	
	comp=Z,62μm,8.4s				
TIY			LR	LR	
	comp=Z,98μm,16.0s				
SAIH	**SAIHA**	**22.01 159**	*e*P	**P**	**21 12 26.0 -0.5**
NGP	**Nagpur**	**22.70 194**	*e*P	**P**	**21 12 34.4 +0.7**
NGP			IAmb	IAmb	21 12 38.4
	comp=Z,1μm,0.5s				
NGP			*ex*	**S**	**21 16 38.6 -2.9**
BWNR	**Bhubaneshwar**	**23.09 177**	*ex*	**P**	**21 12 37.6 -0.2**
BWNR			IAmb	IAmb	21 12 48.0
	comp=Z,1μm,1.1s				
BOD	**Bodaibo**	**23.31 42**	*e*P	**P**	**21 12 39.7 -0.1**
BOD			pmax	pmax	
	comp=Z,1μm,1.5s				
KMI	**Kunming**	**23.53 135**	P	**P**	**21 12 41.8 -0.7**
KMI			pP	pP	21 12 47.0 -0.5
KMI			sP	sP	21 12 48.5 -1.2
KMI			PP	**PnPn**	**21 13 14.0 +4.7**
KMI			S	**S**	**21 16 48.0 -7.9**
KMI			pmax	pmax	
	comp=Z,290nm,2.0s				
KMI			pmax	pmax	
	comp=Z,4μm,4.0s				
KMI			LR	LR	
	comp=Z,102μm,16.5s				
KMI			LR	LR	
	comp=Z,194μm,15.2s				
KMI			LR	LR	
	comp=Z,64μm,14.9s				
BHJ	**Bhuj**	**23.62 216**	*e*P	**P**	**21 12 45.6 +2.5**
BJI	**Beijing**	**23.72 87**	P	**P**	**21 12 44.5 +0.6**
BJI			S	**S**	**21 16 57.8 -0.4**
BJI			LR	LR	
	comp=N,580nm,19.1s				
BJI			LR	LR	
	comp=E,190nm,22.1s				
BJI			LR	LR	
	comp=Z,10μm,24.5s				
BJI	**Beijing**	**23.72 87**	P	**P**	**21 12 44.0 +0.1**
BJT	**Baijiatuau**	**23.72 87**	*e*P	**P**	**21 12 44.7 +0.7**
	comp=Z,459nm,0.9s				
BJT			LR	LR	
	comp=Z,176μm,19.0s				
BJT	**Baijiatuau**	**23.72 87**	*e*P	**P**	**21 12 44.7 +0.7**
BJT			pmax	pmax	
	comp=Z,459nm,0.9s				
BJT			MLR	MLR	
	comp=Z,176μm,19.0s				
ENH	**Enshi**	**23.74 115**	*e*P	**P**	**21 12 44.2 -0.1**
	comp=Z,6.0nm,0.6s				
ENH			LR	LR	
	comp=Z,128μm,22.0s				
GYA	**Guiyang**	**24.65 126**	⇓*i*P	**P**	**21 12 52.5 -0.3**
GYA			pP	sP	21 12 59.0 -1.2
GYA			PP	**PnPn**	**21 13 29.5 +5.0**
GYA			PcP	**PcP**	**21 16 32.3 +2.3**
GYA			S	**S**	**21 17 09.5 -4.1**
GYA			SS	**SnSn**	**21 18 06.0 +6.4**
GYA			ScP	**ScP**	**21 20 08.0 +0.1**
GYA			pmax	pmax	
	comp=Z,1μm,1.1s				
GYA			pmax	pmax	
	comp=Z,7μm,9.3s				
GYA			LR	LR	
	comp=Z,86μm,16.8s				
GYA			LR	LR	
	comp=Z,93μm,17.7s				
GYA			LR	LR	
	comp=Z,103μm,16.6s				
HIA	**Hailar**	**24.78 64**	*e*P	**P**	**21 12 54.5 +0.7**
	comp=Z,671nm,1.2s				
HIA			LR	LR	
	comp=Z,233μm,19.0s				
HIA	**Hailar**	**24.78 64**	*e*P	**P**	**21 12 54.5 +0.7**
HIA			pmax	pmax	
	comp=Z,671nm,1.2s				
HIA			MLR	MLR	
	comp=Z,233μm,19.0s				
CHLP	**Challavanipeta**	**24.86 181**	*e*P	**P**	**21 12 55.0 +0.5**
CHLP			IAmb	IAmb	21 13 13.3
	comp=Z,2μm,1.2s				
CHLP			*e*S	**S**	**21 17 16.6 -0.1**
CHLP			IVMs_BB	IVMs_BB	21 24 32.8
	comp=Z,27μm,9.8s				
RPR	**Rampur**	**24.91 192**	*e*P	**P**	**21 12 55.5 +0.5**
RPR			IAmb	IAmb	21 13 00.1
	comp=Z,3μm,1.1s				
RPR			*e*S	**S**	**21 17 17.3 -0.3**
RPR			IVMs_BB	IVMs_BB	21 24 49.1
	comp=Z,41μm,10.1s				
SRSP	**Sriramsagar**	**25.00 194**	*e*P	**P**	**21 12 55.6 -0.3**
SRSP			IAmb	IAmb	21 12 59.5
	comp=Z,2μm,1.0s				
SRSP			*e*S	**S**	**21 17 17.2 -1.8**
SRSP			IVMs_BB	IVMs_BB	21 24 11.8
	comp=Z,60μm,11.1s				
VIS	**Vishakhapatnam**	**25.66 183**	*i* P	**P**	**21 13 02.5 +0.8**
VIS			⇓*i*S	**S**	**21 17 31.0 +1.6**
TIA	**Tai'an**	**25.87 95**	P	**P**	**21 13 04.3 +0.6**
TIA			S	**S**	**21 17 35.5 +2.7**
TIA			pmax	pmax	
	comp=Z,7μm,6.2s				
TIA			LR	LR	
	comp=Z,49μm,17.5s				
TIA			LR	LR	
	comp=Z,29μm,15.3s				
TIA			LR	LR	
	comp=Z,54μm,16.2s				
KLRI	**Killari**	**26.18 197**	*e*P	**P**	**21 13 06.7 +0.1**
KLRI			IAmb	IAmb	21 13 11.5
	comp=Z,1μm,1.0s				
KLRI			*e*S	**S**	**21 17 36.8 -1.0**
KLRI			IVMsBB		21 26 52.1
	comp=Z,39μm,10.3s				
PVM	**Polavaram**	**26.22 186**	*e*P	**P**	**21 13 07.4 +0.4**
PVM			IAmb	IAmb	21 13 19.5
	comp=Z,498nm,1.0s				
PVM			*e*S	**S**	**21 17 37.5 -0.9**
PVM			IVMsBB		21 25 23.9
	comp=Z,22μm,8.3s				
CMAI	**Chiengmai2**	**26.38 148**	P	**P**	**21 13 09.4 +0.9**
	comp=Z,5μm,1.2s				
BOM	**Bombay**	**26.41 206**	*i* P	**P**	**21 13 10.1 +1.5**
BOM			IAmb	IAmb	21 13 11.8
	comp=Z,325nm,1.4s				
BOM			*e*S	**S**	**21 17 43.3 +2.0**
HYBB	**Hyderabad (bro**	**26.44 193**	*e*P	**P**	**21 13 09.1 +0.2**
HYBB			IAmb	IAmb	21 13 14.1
	comp=Z,493nm,1.1s				
HYBB			*e*S	**S**	**21 17 40.5 -1.4**
HYBB			IVMs_BB	IVMs_BB	21 24 58.4
	comp=Z,55μm,14.3s				
POO	**Poona**	**26.44 203**	*e*P	**P**	**21 13 10.3 +1.3**
HYB	**Hyderabad**	**26.44 193**	*i* P	**P**	**21 13 10.0 +1.1**
HYB			*e*S	**S**	**21 17 42.0 +0.1**
HYB			LR	LR	
	comp=Z,60nm,16.0s				
HYB	**Hyderabad**	**26.44 193**	*e*P	**P**	**21 13 07.7 -1.3**
HYB			IAmb	IAmb	21 13 13.3
WHN	**Wuhan**	**26.86 109**	⇓*i*P	**P**	**21 13 13.0 +0.4**
WHN			pP	**sP**	**21 13 18.3 -1.6**
WHN			S	**S**	**21 17 47.5 -0.8**
WHN			pmax	pmax	
	comp=Z,330nm,0.7s				
WHN			LR	LR	
	comp=Z,151μm,13.0s				
MAK	**Makhachkala**	**26.91 282**	*c i*P	**P**	**21 13 15.4 +2.4**
MAK			*e*S	**S**	**21 17 52.3 +3.3**
MAK			pmax	pmax	
	comp=Z,3μm,3.1s				
MAK			pmax	pmax	
	comp=Z,699nm,1.7s				
MAK			smax	smax	
	comp=N,22μm,8.7s				
MAK			MLR	MLR	
	comp=N,102μm,12.0s				
MAK			MLR	MLR	
	comp=Z,121μm,13.0s				
MAK			MLR	MLR	
	comp=E,130μm,11.0s				
AKT	**Akhty**	**27.14 279**	⇑*i*P	**P**	**21 13 16.3 +1.0**
AKT			*e*		21 13 56.7
AKT			*e*S	**S**	**21 17 58.5 +5.5**
AKT			*e*SS	**SnSn**	**21 19 05.4 +5.3**
AKT			pmax	pmax	
	comp=Z,877nm,1.1s				
NJS	**Nagarjunasagar**	**27.17 191**	*e*P	**P**	**21 13 15.7 +0.2**
NJS			IAmb	IAmb	21 13 31.6
	comp=Z,221nm,0.9s				
NJS			*e*S	**S**	**21 17 52.0 -1.4**
NJS			IVMs_BB	IVMs_BB	21 25 51.2
	comp=Z,34μm,11.5s				
CHTO	**Chiang Mai**	**27.36 149**	P	**P**	**21 13 17.3 +0.1**
	comp=Z,1μm,1.3s,comp=Z,22μm				
CHTO	**Chiang Mai**	**27.36 149**	*e*P	**P**	**21 13 17.6 +0.4**
	comp=Z,650nm,1.4s				
CHTO			LR	LR	
	comp=Z,36μm,20.0s				
CHTO	**Chiang Mai**	**27.36 149**	P	**P**	**21 13 17.8 +0.6**
	SNR=69				
CHTO	**Chiang Mai**	**27.36 149**	*e*P	**P**	**21 13 17.6 +0.4**
CHTO			pmax	pmax	
	comp=Z,650nm,1.4s				
CHTO			MLR	MLR	
	comp=Z,36μm,20.0s				
SRLM	**Srisailam**	**27.68 192**	*e*P	**P**	**21 13 19.9 -0.2**
SRLM			IAmb	IAmb	21 13 38.0
	comp=Z,409nm,0.9s				
SRLM			*e*S	**S**	**21 18 00.4 -1.0**
SRLM			IVMsBB		21 25 37.9
	comp=Z,46μm,13.9s				
CM31	**Chiang Mai Arr**	**27.68 150**	*e*P	**P**	**21 13 20.9 +0.8**
CMAR	**Chiang Mai Arr**	**27.68 150**	P	**P**	**21 13 20.8 +0.7**
	comp=Z,135nm,1.0s,baz=326,slow=7.3,SNR=124				
CMAR			S	**S**	**21 17 59.6 -1.9**
	comp=Z,17nm,1.0s,baz=317,slow=9.1,SNR=2.2				
CMAR			ScP	**ScP**	**21 20 17.2 +0.6**
	comp=Z,28nm,1.0s,baz=327,slow=5.2,SNR=5.4				
CMAR			P3KPbc		21 45 50.2
	comp=Z,3.2nm,1.0s,baz=189,slow=3.1,SNR=14				
CM01	**Chiang Mai Arr**	**27.72 150**	*e*P	**P**	**21 13 20.1 -0.4**
ADKI	**Addanki**	**27.78 190**	*e*P	**P**	**21 13 21.3 +0.4**
ADKI			IAmb	IAmb	21 13 36.7
	comp=Z,373nm,1.3s				
ADKI			*e*S	**S**	**21 18 03.2 +0.2**
ADKI			IVMsBB		21 25 27.5
	comp=Z,24μm,9.4s				
GROC	**Groznyy**	**28.07 283**	*e*P	**P**	**21 13 24.8 +1.4**
GROC			*e*		21 14 12.8
GROC			*e*		21 16 38.0
GROC			*e*S	**S**	**21 18 11.0 +3.7**
GROC			*e*SS	**SnSn**	**21 19 23.8 +1.3**
GROC			pmax	pmax	
	comp=Z,866nm,1.1s				
DL2	**Dalian**	**28.07 86**	⇑*i*P	**P**	**21 13 24.0 +0.6**
DL2			S	**S**	**21 18 10.5 +3.1**
DL2			pmax	pmax	
	comp=Z,5μm,5.9s				
DL2			LR	LR	
	comp=Z,38μm,18.4s				
DL2			LR	LR	
	comp=Z,57μm,18.8s				
DL2			LR	LR	
	comp=Z,102μm,20.6s				
SNY	**Shenyang**	**28.54 80**	⇑P	**P**	**21 13 27.5 -0.1**
SNY			S	**S**	**21 18 14.0 -0.7**
SNY			pmax	pmax	
	comp=Z,7μm,6.5s				
SNY			LR	LR	
	comp=Z,86μm,13.1s				
CLNS	**Chul'man**	**28.63 48**	*e*P	**P**	**21 13 29.2 +0.9**
CLNS			*e**PP	**sP**	**21 13 39.0 +3.4**
CLNS			*e*		21 14 23.6
CLNS			*e*		21 16 34.2
CLNS			*e*S	**S**	**21 18 20.5 +4.6**
CLNS			*e*SS	**SnSn**	**21 19 38.6 +2.8**
CLNS			*e*		21 24 05.1
CLNS			pmax	pmax	
	comp=Z,474nm,1.1s				
CLNS			pmax	pmax	
	comp=E,292nm,1.1s				
CLNS			pmax	pmax	
	comp=N,294nm,1.2s				
CLNS			pmax	pmax	
	comp=Z,129nm,1.3s				
CLNS			pmax	pmax	
	comp=E,153nm,1.5s				
CLNS			pmax	pmax	
	comp=N,96nm,1.2s				
CLNS			MLR	MLR	
	comp=E,107μm,13.0s				
CLNS			MLR	MLR	
	comp=N,30μm,11.0s				
CLNS			MLR	MLR	
	comp=Z,120μm,12.0s				
BANOM	**Banah**	**28.91 242**	P	**P**	**21 13 34.7 +3.6**
	SNR=27				
BANOM	**Banah**	**28.91 242**	*i* P	**P**	**21 13 32.9 +1.9**
	SNR=30				
SHME	**Shamm**	**28.92 242**	*i* P	**P**	**21 13 32.7 +1.6**
	SNR=51				
URV	**Uravakonda**	**29.08 195**	*e*P	**P**	**21 13 32.5 -0.1**
URV			IAmb	IAmb	21 13 35.3
	comp=Z,380nm,0.9s				
URV			*e*S	**S**	**21 18 22.3 -1.2**
URV			IVMs_BB	IVMs_BB	21 26 34.3
	comp=Z,32μm,10.2s				
NJ2	**Nanjing**	**29.17 101**	*e*P	**P**	**21 13 33.5 +0.2**
NJ2			pP	**pP**	**21 13 36.3 -2.2**
NJ2			S	**S**	**21 18 20.3 -4.4**
NJ2			sS	**pS**	**21 18 30.3 -0.5**
NJ2			pmax	pmax	
	comp=Z,150nm,1.4s				
NJ2			pmax	pmax	
	comp=Z,5μm,5.2s				
NJ2			LR	LR	
	comp=Z,77μm,11.1s				
NJ2			LR	LR	
	comp=Z,81μm,11.4s				
NJ2			LR	LR	
	comp=Z,133μm,12.7s				
TBLG	**Delisi**	**29.22 281**	*e*P	**P**	**21 13 35.8 +2.1**
	comp=Z,418nm,1.1s				
TBLG	**Delisi**	**29.22 281**	*e*P	**P**	**21 13 35.8 +2.1**
TBLG			pmax	pmax	
	comp=Z,418nm,1.1s				
PRGR	**Permogore**	**29.27 322**	⇑*i*P	**P**	**21 13 33.8 0.0**
PRGR			*e*S	**S**	**21 18 31.4 +5.6**
PRGR			pmax	pmax	
	comp=Z,145nm,0.6s				
MDH	**Madha**	**29.35 241**	*i* P	**P**	**21 13 35.9 +1.1**
	SNR=14				
CN2	**Changchun**	**29.36 75**	⇑P	**P**	**21 13 34.8 0.0**
CN2			*es*P	sP	21 13 41.0 -1.2
CN2			*e*S	**S**	**21 18 25.3 -2.2**
CN2			pmax	pmax	
	comp=Z,5μm,6.0s				
CN2			LR	LR	
	comp=Z,95μm,15.0s				
CN2			LR	LR	
	comp=Z,117μm,15.0s				
MSFE	**Esma-Masafi**	**29.39 241**	*i* P	**P**	**21 13 37.1 +1.8**
	SNR=24				
PHIT	**Phitsanulok**	**29.40 148**	P	**P**	**21 13 37.9 +2.6**
	comp=Z,128nm,1.0s,comp=Z,2μm				
WSAR	**Wadi Sarin**	**29.41 235**	P	**P**	**21 13 37.7 +2.2**
	comp=Z,123nm,0.9s,baz=72,slow=10,SNR=46				
WSAR			S	**S**	**21 18 31.9 +3.2**
	comp=Z,30nm,1.0s,baz=196,slow=18,SNR=1.8				
WSAR			LR	LR	21 28 22.0
	comp=Z,35μm,21.3s,baz=84,slow=42				
BIDO	**Bidbid**	**29.50 236**	P	**P**	**21 13 41.0 +4.7**
	SNR=14				
ZEI	**Tsey**	**29.52 283**	*e*P	**P**	**21 13 35.9 -0.7**
ZEI			pmax	pmax	
	comp=Z,128nm,0.9s				
NCK	**Nalchik**	**29.56 284**	*c i*P	**P**	**21 13 38.3 +1.6**
NCK			pmax	pmax	
	comp=Z,97nm,0.8s				
NCK			MLR	MLR	
	comp=Z,100μm,18.0s				
UMQ	**Umm Al-Quwin**	**29.60 242**	*i* P	**P**	**21 13 39.6 +2.5**
	SNR=16				
ZEA	**Zeya**	**29.61 55**	*ce*P	**P**	**21 13 38.2 +1.3**
ZEA			*e*S	**S**	**21 18 34.0 +2.8**
ZEA			pmax	pmax	
	comp=N,370nm,1.4s				
ZEA			pmax	pmax	
	comp=E,76nm,1.6s				
ZEA			pmax	pmax	
	comp=Z,2μm,1.6s				
ZEA			pmax	pmax	
	comp=N,2μm,5.0s				
ZEA			pmax	pmax	
	comp=E,4μm,5.0s				
ZEA			pmax	pmax	
	comp=Z,6μm,5.0s				
ZEA			smax	smax	
	comp=E,8μm,14.0s				
UOSS	**Minazif**	**29.66 241**	*e*P	**P**	**21 13 39.9 +2.2**
	comp=E,209nm,1.1s				
UOSS	**Minazif**	**29.66 241**	*i* P	**P**	**21 13 38.9 +1.3**
	SNR=12				
GNI	**Garni**	**29.71 278**	P	**P**	**21 13 39.3 +1.1**
	comp=E,90nm,0.6s,baz=63,slow=7.5,SNR=56				
GNI			S	**S**	**21 18 26.5 -7.0**
	comp=E,112nm,0.9s,baz=139,slow=11,SNR=2.0				
GNI	**Garni**	**29.71 278**	*e*P	**P**	**21 13 41.4 +3.2**
	comp=E,714nm,1.0s				
GNI			S	**S**	**21 18 26.5 -7.0**
GNI			LR	LR	
	comp=Z,33μm,22.0s				
GNI	**Garni**	**29.71 278**	P	**P**	**21 13 42.1 +3.9**
	SNR=138				
GNI	**Garni**	**29.71 278**	*i* P	**P**	**21 13 40.2 +2.0**
	SNR=72				
GNI	**Garni**	**29.71 278**	*c i*P	**P**	**21 13 41.0 +2.8**

GNI			pmax	pmax	
	comp=Z,2μm,1.7s				
GNI			MLR	MLR	
	comp=Z,157μm,15.0s				
UMPA	**Umpang Tak**	**29.73 152**	P	**P**	**21 13 41.5 +3.2**
	comp=Z,61nm,1.0s,comp=Z,525nm				
HATD	**Hatta, Dubai**	**29.79 241**	P	**P**	**21 13 43.0 +4.1**
	SNR=16				
HATD	**Hatta, Dubai**	**29.79 241**	*i* P	**P**	**21 13 40.6 +1.8**
	SNR=19				
SKHT	**Srikalahasti**	**29.89 190**	*e*P	**P**	**21 13 40.1 +0.4**
SKHT			IAmb	IAmb	21 13 43.0
	comp=Z,213nm,1.2s				
SKHT			*e*S	**S**	**21 18 36.6 +0.4**
SKHT			IVMs_BB	IVMs_BB	21 27 18.8
	comp=Z,31μm,18.4s				
HOQ	**Hoqain**	**29.95 237**	P	P	21 13 47.0 +6.7
	SNR=17				
NAZ	**Nazwa, Dubai**	**29.97 242**	P	**P**	**21 13 44.0 +3.5**
	SNR=38				
NAZ	**Nazwa, Dubai**	**29.97 242**	*i* P	**P**	**21 13 42.4 +2.0**
	SNR=31				
KBZ	**Khabaz**	**29.99 285**	P	**P**	**21 13 41.7 +1.3**
	comp=Z,37nm,0.6s,baz=88,slow=6.4,SNR=49				
KBZ			S	**S**	**21 18 38.8 +1.4**
	comp=Z,131nm,1.0s,baz=270,slow=20,SNR=2.6				
KBZ			LR	LR	21 27 55.6
	comp=Z,161μm,18.3s,baz=64,slow=41				
SOHO	**SOHO**	**30.03 239**	*i* P	**P**	**21 13 42.7 +1.8**
	SNR=16				
KIV	**Kislovodsk**	**30.09 286**	*e*P	**P**	**21 13 44.0 +2.6**
	comp=Z,516nm,0.8s				
KIV			LR	LR	
	comp=Z,142μm,20.0s				
KIV	**Kislovodsk**	**30.09 286**	P	**P**	**21 13 43.6 +2.2**
	SNR=61				
KIV	**Kislovodsk**	**30.09 286**	*i* P	**P**	**21 13 43.0 +1.6**
	SNR=45				
KIV	**Kislovodsk**	**30.09 286**	*e*P	**P**	**21 13 42.7 +1.3**
KIV			*e*		21 14 39.3
KIV			*e*S	**S**	**21 18 42.5 +3.3**
KIV			pmax	pmax	
	comp=Z,2μm,4.7s				
KIV			pmax	pmax	
	comp=Z,236nm,0.9s				
KIV			MLR	MLR	
	comp=Z,143μm,15.0s				
PBKT	**Sadao Pong**	**30.18 147**	P	**P**	**21 13 42.1 -0.1**
	comp=Z,205nm,1.0s,comp=Z,3μm				
AKH	**Akhalkalaki**	**30.21 281⇑**	*i*P	**P**	**21 13 45.3 +2.7**
AKH	**Akhalkalaki**	**30.21 281**	*e*P	**P**	**21 13 45.6 +3.0**
	comp=Z,215nm,0.9s				
AKH	**Akhalkalaki**	**30.21 281**	*e*P	**P**	**21 13 45.6 +3.0**
AKH			pmax	pmax	
	comp=Z,215nm,0.9s				
NEY	**Neytrino**	**30.24 284***c*	*i*P	**P**	**21 13 45.5 +2.7**
NEY			pmax	pmax	
	comp=Z,20nm,0.9s				
NEY			MLR	MLR	
	comp=Z,57μm,17.0s				
ASUD	**Al Ashush, Dub**	**30.44 241**	P	**P**	**21 13 48.0 +3.4**
	SNR=33				
ASUD	**Al Ashush, Dub**	**30.44 241**	*i* P	**P**	**21 13 44.8 +0.2**
	SNR=28				
UTHA	**Uthaitani**	**30.53 151**	P	**P**	**21 13 46.9 +1.5**
	comp=Z,211nm,0.8s,comp=Z,2μm				
ALNE	**Al Ain**	**30.58 240**	*i* P	**P**	**21 13 48.2 +2.3**
	SNR=34				
ARQ	**Araqi**	**30.62 238**	P	P	21 13 51.0 +4.8
	SNR=43				
BSY	**Bisya**	**30.64 236**	P	P	21 13 54.0 +7.6
	SNR=15				
AJN	**Ajban**	**30.71 242**	*i* P	**P**	**21 13 48.7 +1.8**
	SNR=30				
SKNT	**Sakolnakorn**	**31.08 142**	P	**P**	**21 13 49.4 -0.8**
	comp=Z,247nm,0.9s,comp=Z,3μm				
GZH	**Guangzhou**	**31.20 121**	P	**P**	**21 13 49.5 -1.8**
GZH			PP	**PnPn**	**21 14 51.5 -1.7**
GZH			S	**S**	**21 18 51.8 -4.9**
GZH			SS	**SnSn**	**21 20 37.0 -2.2**
GZH			LR	LR	
	comp=Z,58μm,15.5s				
GZH			LR	LR	
	comp=Z,54μm,15.1s				
VORD	**Divnogorie**	**31.28 300**	*e*P	**P**	**21 13 52.7 +1.0**
VORD			pmax	pmax	
	comp=Z,450nm,0.8s				
VORD			pmax	pmax	
	comp=Z,370nm,0.7s				
VORD			MLR	MLR	
	comp=Z,68μm,14.0s				
VORR	**Voronezh**	**31.29 301⇑**	*i*P	**P**	**21 13 53.0 +1.2**
VORR			pmax	pmax	
	comp=Z,750nm,1.6s				
VSR	**Storozhevoye**	**31.34 301**	*e*P	**P**	**21 13 52.8 +0.5**
VSR			*e*S	**S**	**21 18 58.2 -0.3**
VSR			pmax	pmax	
	comp=Z,1μm,1.3s				
VSR			pmax	pmax	
	comp=Z,390nm,0.6s				
VSR			smax	smax	
	comp=N,2μm,2.2s				
VSR			MLR	MLR	
	comp=Z,68μm,18.0s				
SSE	**Sheshan**	**31.36 101**	P	**P**	**21 13 53.0 +0.4**
SSE			pP	**pP**	**21 13 57.5 -0.3**
SSE			S	**S**	**21 18 59.0 0.0**
SRDT	**SRDT**	**31.54 152**	P	**P**	**21 13 54.5 +0.2**
	comp=Z,413nm,0.9s,comp=Z,6μm				
KLMR	**Klimovskoe**	**31.88 319**	*e*P	**P**	**21 13 57.3 +0.4**
KLMR			*e*S	**S**	**21 19 07.0 +0.4**
KLMR			pmax	pmax	
	comp=Z,958nm,0.9s				
KLMR			MLR	MLR	
	comp=Z,91μm,11.0s				
KLMR	**Klimovskoe**	**31.88 319**	*e*P	**P**	**21 13 57.3 +0.4**
KLMR			AMP		21 14 15.3
	comp=Z,958nm,0.9s				
KLMR			*e*S	**S**	**21 19 07.1 +0.4**
KLMR			*e*S	**S**	**21 19 07.1 +0.4**
KLMR			LQ	LQ	21 23 44.8
KLMR			LQ	LQ	21 23 44.8
KLMR			LR	LR	21 25 29.5
KLMR			AMP		21 27 01.2
	comp=Z,91μm,11.1s				
MCO	**Taipa Grande**	**32.05 122**	P	**P**	**21 14 00.0 +1.3**
MDJ	**Mudanjiang**	**32.05 72**	P	**P**	**21 13 56.0 -2.6**
MDJ			pP	pP	21 14 01.5 -2.4
MDJ			sP	sP	21 14 03.8 -2.2
MDJ			PP	**PnPn**	**21 15 01.0 -3.0**
MDJ			S	**S**	**21 19 10.5 +0.8**
MDJ			sS	sS	21 19 20.0 +1.6
MDJ			pmax	pmax	
	comp=Z,140nm,1.1s				
MDJ			pmax	pmax	
	comp=Z,7μm,4.3s				
MDJ			LR	LR	
	comp=Z,57μm,8.4s				
MDJ	**Mudanjiang**	**32.05 72**	*e*P	**P**	**21 13 59.0 +0.3**
	comp=Z,218nm,1.4s				
MDJ			LR	LR	
	comp=Z,30μm,22.0s				
YAK	**Yakutsk**	**32.14 39**	P	**P**	**21 13 58.0 -1.2**
	comp=Z,277nm,0.7s,baz=304,slow=2.6,SNR=79				
YAK			S	**S**	**21 19 07.9 -2.8**
	comp=Z,56nm,0.9s,baz=197,slow=19,SNR=2.1				
YAK	**Yakutsk**	**32.14 39**	*e*P	**P**	**21 13 58.2 -1.0**
YAK			*e*pP	**pP**	**21 13 59.1 -5.3**
YAK			S	**S**	**21 19 07.9 -2.8**
YAK			LR	LR	
	comp=Z,37μm,22.0s				
YAK	**Yakutsk**	**32.14 39**	*e*P	**P**	**21 13 57.4 -1.8**
YAK			*e**PP	**sP**	**21 14 05.5 -1.0**
YAK			*e*PPP	PPP	21 15 12.3
YAK			*e*S	**S**	**21 19 08.9 -1.8**
YAK			*e**SS	**sS**	**21 19 18.6 -0.7**
YAK			*e*SSS	SSS	21 21 11.3
YAK			pmax	pmax	
	comp=Z,536nm,1.1s				
YAK			pmax	pmax	
	comp=N,130nm,1.1s				
YAK			pmax	pmax	
	comp=E,318nm,1.1s				
YAK			smax	smax	
	comp=N,3μm,2.1s				
YAK			smax	smax	
	comp=E,2μm,2.0s				
YAK			MLR	MLR	
	comp=Z,79μm,13.0s				
YAK			MLR	MLR	
	comp=E,48μm,11.0s				
MOS	**Moscow**	**32.22 309**α	*i*P	**P**	**21 14 00.2 +0.3**
MOS			*i*		21 14 09.3
MOS			*i* S	**S**	**21 19 10.3 -1.7**
MOS			*e*		21 19 19.4
MOS			*e*SS	**SnSn**	**21 21 03.0 -0.1**
MOS			pmax	pmax	
	comp=Z,4μm,3.4s				
MOS			pmax	pmax	
	comp=N,1μm,3.5s				
MOS			pmax	pmax	
	comp=E,3μm,3.5s				
MOS			pmax	pmax	
	comp=E,252nm,0.9s				
MOS			pmax	pmax	
	comp=Z,560nm,1.1s				
MOS			smax	smax	
	comp=N,8μm,5.0s				
MOS			MLR	MLR	
	comp=Z,205μm,15.0s				
MOS			MLR	MLR	
	comp=E,163μm,14.0s				
INCN	**Inchon**	**32.26 86**	PFAKE		21 14 10.0 +9.5
INCN			LR	LR	
	comp=Z,41nm,22.0s				
SOC	**Sochi**	**32.26 286***c*	*i*P	**P**	**21 14 02.3 +1.9**
SOC			*i*		21 15 05.5
SOC			*i* S	**S**	**21 19 15.3 +2.3**
SOC			*e*SSS	SSS	21 21 36.1
SOC			pmax	pmax	
	comp=Z,312nm,0.6s				
SOC			MLR	MLR	
	comp=Z,84μm,14.0s				
QIZ	**Qiongzhong**	**32.28 131**	P	**P**	**21 13 59.8 -1.0**
QIZ			S	**S**	**21 19 11.0 -2.6**
QIZ			pmax	pmax	
	comp=Z,550nm,4.4s				
QIZ			LR	LR	
	comp=Z,62μm,16.7s				
QIZ			LR	LR	
	comp=Z,36μm,22.1s				
QIZ	**Qiongzhong**	**32.28 131**	*e*P	**P**	**21 14 00.9 +0.1**
	comp=Z,185nm,0.8s				
QIZ			LR	LR	
	comp=Z,35μm,20.0s				
PBA	**Port Blair**	**32.44 165**	*e*P	P	21 14 02.2 0.0
	comp=Z,380nm,0.7s				
KLR	**Kul'dur**	**32.63 63**	P	**P**	**21 14 02.8 -0.8**
	comp=Z,12nm,1.1s,baz=277,slow=8.9,SNR=115				
KLR			S	**S**	**21 19 15.9 -2.7**
	comp=Z,1.4nm,1.0s,baz=306,slow=16,SNR=1.6				
KLR	**Kul'dur**	**32.63 63***c*	*i*P	**P**	**21 14 04.0 +0.4**
MZR	**Muzera**	**32.78 242**	*i* P	**P**	**21 14 06.6 +1.4**
	SNR=100				
OBN	**Obninsk**	**32.80 308**	*e*P	**P**	**21 14 05.8 +0.8**
OBN			*e*pP	**P**	**21 14 06.1 +1.1**
OBN			LR	LR	
	comp=Z,72μm,20.0s				
OBN	**Obninsk**	**32.80 308**	*i* P	**P**	**21 14 05.8 +0.8**
OBN			pmax	pmax	
	comp=Z,471nm,1.2s				
SRAK	**Srakaew**	**32.92 148**	P	**P**	**21 14 10.3 +3.9**
	comp=Z,303nm,0.8s,comp=Z,3μm				
PHET	**Kaeng Krachan**	**33.06 152**	P	**P**	**21 14 09.3 +1.7**
	comp=Z,238nm,0.9s,comp=Z,2μm				
KS01	**Wonju Array Si**	**33.18 85**	*e*P	**P**	**21 14 07.2 -1.3**
KS15	**Wonju Array Si**	**33.19 85**	*e*P	**P**	**21 14 08.5 -0.1**
KSAR	**Wonju Array Be**	**33.19 85**	P	**P**	**21 14 08.2 -0.4**
KSAR			S	**S**	**21 19 25.0 -2.5**
KSAR	**Wonju Array Be**	**33.19 85**	P	**P**	**21 14 08.2 -0.4**
KSAR			S	**S**	**21 19 25.0 -2.5**
KSRS	**Korea Array**	**33.21 85**	P	**P**	**21 14 08.2 -0.6**
	comp=Z,42nm,0.8s,baz=281,slow=8.5,SNR=63				
KSRS			S	**S**	**21 19 25.0 -2.8**
	comp=Z,8.2nm,1.0s,baz=285,slow=14,SNR=3.6				
KSRS			LR	LR	21 28 20.4
	comp=Z,36μm,19.4s,baz=287,slow=38				
KSRS	**Korea Array**	**33.21 85**	P	**P**	**21 14 08.2 -0.6**
KSRS			S	**S**	**21 19 25.0 -2.8**
KSRS			pmax	pmax	
	comp=Z,45nm,0.8s				
KSRS			smax	smax	
	comp=N,8.0nm,1.0s				
KSRS			MLR	MLR	
	comp=Z,36μm,19.4s				
UBPT	**Khong Chiam**	**33.24 141**	P	**P**	**21 14 07.6 -1.6**
	comp=Z,422nm,1.0s,comp=Z,6μm				
TJN	**Taejon**	**33.25 87***ce*P		**P**	**21 14 08.3 -0.9**
QZH	**Quanzhou**	**33.31 113**⇓	*i*P	P	21 14 14.5 +4.7
QZH			S	**S**	**21 19 28.3 -1.3**
QZH			pmax	pmax	
	comp=Z,100nm,2.1s				
QZH			pmax	pmax	
	comp=Z,4μm,5.3s				
QZH			LR	LR	
	comp=Z,54μm,15.6s				
QZH			LR	LR	
	comp=Z,44μm,13.7s				
ANN	**Anapa**	**33.53 289***c*	*i*P	**P**	**21 14 13.3 +1.8**
ANN			*e**PP	**pP**	**21 14 16.3 -0.4**
ANN			*e*		21 15 21.3
ANN			*i* S	**S**	**21 19 36.2 +3.6**
ANN			*e*SS	**SnSn**	**21 21 37.3 +2.1**
ANN			pmax	pmax	
	comp=E,232nm,1.1s				
ANN			pmax	pmax	
	comp=Z,956nm,1.2s				
ANN			pmax	pmax	
	comp=N,300nm,1.3s				
ANN			pmax	pmax	
	comp=Z,3μm,5.8s				
ANN			pmax	pmax	
	comp=N,1μm,5.8s				
ANN			pmax	pmax	
	comp=E,500nm,5.8s				
ANN			MLR	MLR	
	comp=Z,87μm,14.0s				
ANN			MLR	MLR	
	comp=N,34μm,14.0s				
ANN			MLR	MLR	
	comp=E,10μm,14.0s				
MSHR	**Mys Shultsa**	**33.70 75***de*P		**P**	**21 14 14.2 +1.1**
USRK	**Ussuriysk Ar.**	**33.82 72**	P	**P**	**21 14 13.6 -0.5**
	comp=E,37nm,0.9s,baz=286,slow=7.3				
USRK			S	**S**	**21 19 32.7 -4.5**
	baz=279,slow=14				
USRK			LR	LR	21 29 37.9
	comp=E,61μm,19.6s,baz=275,slow=39				
GRSN	**GIRESUNGRSN**	**34.10 282**	*i* P	**P**	**21 14 16.9 +0.4**
REFA	**Refahiye_ERZ¯**	**34.28 279**	*i* P	**P**	**21 14 20.1 +1.7**
ORDU	**Ordu-Boztepe**	**34.37 282**	*i* P	**P**	**21 14 19.6 +0.7**
SUSE	**Susehri**	**34.39 281**	*i* P	**P**	**21 14 20.6 +1.3**
CUZAR	**Zara_SIVAS**	**34.82 281**	*i* P	**P**	**21 14 25.0 +2.1**
HEKM	**Malatya_Hekimh**	**35.06 279**	*i* P	**P**	**21 14 27.6 +2.4**
CUKAN	**kangal_SIVAS**	**35.25 280**	*i* P	**P**	**21 14 29.3 +2.7**
ERBA	**Erbaa**	**35.26 282**	*i* P	**P**	**21 14 28.6 +2.0**
TATO	**Taipei**	**35.26 109**	*e*P	**P**	**21 14 27.9 +1.2**
	comp=E,527nm,1.3s				
TATO			LR	LR	
	comp=Z,15μm,19.0s				
SCER	**sogukcermik**	**35.29 281**	*i* P	**P**	**21 14 30.2 +3.3**
YHNB	**Yeheng**	**35.38 110**	*e*P	**P**	**21 14 28.9 +1.1**
	comp=Z,502nm,1.1s				
GRNR	**Gornyy**	**35.39 60**⇑	*i*P	**P**	**21 14 30.0 +2.4**
GRNR			*e*		21 20 05.7
GRNR			pmax	pmax	
	comp=E,160nm,1.0s				
GRNR			pmax	pmax	
	comp=Z,290nm,1.0s				
TIXI	**Tiksi**	**35.41 22**	P	**P**	**21 14 26.9 -0.5**
	comp=Z,252nm,0.9s,baz=237,slow=5.8,SNR=81				
TIXI	**Tiksi**	**35.41 22**	*e*P	**P**	**21 14 27.2 -0.2**
	comp=Z,291nm,0.9s				
TIXI			LR	LR	
	comp=Z,173μm,20.0s				
TIXI	**Tiksi**	**35.41 22***de*P		**P**	**21 14 27.4 0.0**
TIXI			pmax	pmax	
	comp=Z,367nm,1.0s				
TIXI			MLR	MLR	
	comp=Z,164μm,18.0s				
SAMS	**Samsun-Alacam**	**35.42 284**	*i* P	**P**	**21 14 29.4 +1.5**
TOKA	**Tokat**	**35.58 282**	*i* P	**P**	**21 14 32.5 +3.1**
SSLB	**Suanglung**	**35.68 111**	*e*P	**P**	**21 14 31.6 +1.3**
	comp=Z,690nm,1.3s				
SIM	**Simferopol'**	**35.77 290***ce*P		**P**	**21 14 32.8 +2.0**
SIM			*i* S	**S**	**21 20 09.0 +1.9**
SIM			pmax	pmax	
	comp=Z,618nm,0.9s				
SIM			MLR	MLR	
	comp=Z,31μm,15.0s				
CUALT	**Altinyayla-SIV**	**35.77 280**	*i* P	**P**	**21 14 34.2 +3.1**
TPUB	**Ta-pu**	**35.79 112**	*e*P	**P**	**21 14 32.1 +0.9**
	comp=Z,188nm,1.0s				
HAVZ	**Havza**	**35.86 283**	*i* P	**P**	**21 14 33.6 +1.8**
NACB	**Ninganchiao**	**35.86 110**	*e*P	**P**	**21 14 33.9 +2.1**
	comp=Z,734nm,1.3s				
SINO	**SINOP_Merkez**	**35.90 285**	*i* P	**P**	**21 14 33.0 +1.0**
JOF	**Joensuu**	**36.06 321**	P	**P**	**21 14 34.5 +1.3**
CUSAR	**Sarkisla-SIVAS**	**36.09 281**	*i* P	**P**	**21 14 35.8 +1.9**
APA	**Apatity**	**36.12 330**⇓	*i*P	**P**	**21 14 34.2 +0.6**
APA			*i*		21 16 01.4
APA			*i* S	**S**	**21 20 11.0 -1.1**
APA			pmax	pmax	
	comp=Z,56nm,1.5s				
APA			MLR	MLR	
	comp=Z,36μm,16.0s				
YULB	**Yu-li**	**36.18 112**	*e*P	**P**	**21 14 36.0 +1.4**
	comp=Z,375nm,1.6s				
PALK	**Pallekele**	**36.18 187**	P	**P**	**21 14 35.9 +1.2**
	comp=Z,109nm,0.8s,baz=296,slow=4.6,SNR=33				
PALK			S	**S**	**21 20 10.1 -3.8**
	comp=Z,23nm,1.1s,baz=295,slow=3.9,SNR=2.1				
PALK			LR	LR	21 31 37.9
	comp=Z,42μm,18.8s,baz=298,slow=40				
PALK	**Pallekele**	**36.18 187**	*e*P	**P**	**21 14 36.5 +1.8**
	comp=Z,257nm,1.2s				
PALK			S	**S**	**21 20 10.1 -3.8**
PALK	**Pallekele**	**36.18 187**	P	**P**	**21 14 37.2 +2.6**
	SNR=13				
PALK	**Pallekele**	**36.18 187**	*i* P	**P**	**21 14 35.7 +1.0**
	SNR=19				
PALK	**Pallekele**	**36.18 187**	*i* P	**P**	**21 14 37.0 +2.3**
SLMH	**Al Salmeh**	**36.19 275**	*e*P	**P**	**21 14 36.6 +2.0**
PUL	**Pulkovo**	**36.29 316***ce*P		**P**	**21 14 36.8 +1.7**
PUL			pmax	pmax	
	comp=Z,465nm,0.5s				
PUL			MLR	MLR	
	comp=Z,99μm,17.0s				
BOYT	**Boyabat**	**36.31 284**	*i* P	**P**	**21 14 36.7 +1.0**
WHFO	**Wadi Hawf**	**36.39 235**	P	**P**	**21 14 41.0 +4.6**
	SNR=9.7				
TWG	**Pinlang**	**36.41 113**	*e*P	**P**	**21 14 38.7 +2.1**
	comp=Z,4μm,1.2s				
RBK	**Rabkut**	**36.45 234**	P	**P**	**21 14 41.1 +4.1**
	SNR=12				
SURT	**Suratani**	**36.51 156**	P	P	21 14 45.8 +8.4
CTAK	**Corum_Osmancik**	**36.66 283**	*i* P	**P**	**21 14 41.2 +2.4**
COAL	**Corum-Alaca**	**36.67 283**	*i* P	**P**	**21 14 41.2 +2.5**
TEY	**Ternei**	**36.76 69**⇓	*e*P	**P**	**21 14 39.7 +0.4**
TEY			*e*		21 16 04.0
TEY			pmax	pmax	
	comp=E,30nm,0.8s				
TEY			pmax	pmax	
	comp=Z,60nm,0.8s				
TEY			pmax	pmax	
	comp=N,10.0nm,1.0s				
TEY			pmax	pmax	
	comp=E,3μm,4.6s				
TEY			pmax	pmax	
	comp=N,900nm,4.3s				
TEY			pmax	pmax	
	comp=Z,6μm,6.2s				
TEY			MLR	MLR	
	comp=Z,101μm,13.0s				
SAIM	**ADANA**	**36.77 278**	*i* P	**P**	**21 14 43.3 +3.7**
ILGA	**Ilgaz**	**37.28 284**	*i* P	**P**	**21 14 46.3 +2.2**
ILGA	**Ilgaz**	**37.28 284**	*e*P	**P**	**21 14 46.3 +2.2**
	comp=Z,850nm,1.2s				
AVNS	**Nevsehir-Avano**	**37.32 280**	*i* P	**P**	**21 14 46.7 +2.3**
JNU	**Nakatsue**	**37.33 90**	P	**P**	**21 14 43.3 -1.0**
	comp=Z,40nm,0.9s,baz=326,slow=4.4,SNR=21				
JNU			PP	**PP**	**21 16 08.1 -1.3**
	comp=Z,50nm,1.0s,baz=319,slow=13,SNR=1.6				
JNU			S	**S**	**21 20 28.8 -2.5**
	comp=Z,8.3nm,0.9s,baz=108,slow=19,SNR=2.0				
JNU			LR	LR	21 31 12.7
	comp=Z,75μm,18.6s,baz=298,slow=38				
JNU	**Nakatsue**	**37.33 90**	*e*P	**P**	**21 14 43.9 -0.4**
	comp=Z,474nm,1.4s				
JNU			PP	**PP**	**21 16 08.1 -1.3**
JNU			S	**S**	**21 20 28.8 -2.5**
CDAG	**Cicekdag**	**37.34 282**	*i* P	**P**	**21 14 45.6 +1.1**
MSF	**Maaselka**	**37.46 326**	P	**P**	**21 14 46.3 +1.2**
MSF			pmax	pmax	
	comp=Z,171nm,1.1s				
AKASG	**Malin Array Be**	**37.64 301**	P	**P**	**21 14 46.7 0.0**
	comp=Z,112nm,0.6s,baz=66,slow=8.7,SNR=176				
AKASG			PP	**PP**	**21 16 12.8 +0.3**
	comp=Z,28nm,0.6s,baz=68,slow=8.8,SNR=1.7				
AKASG			S	**S**	**21 20 35.4 -0.2**
	comp=Z,8.6nm,0.8s,baz=84,slow=12,SNR=3.5				
AKASG			LR	LR	21 31 10.9
	comp=Z,41μm,19.0s,baz=75,slow=38				
AKBB	**Malin Array Si**	**37.64 301**	*e*P	**P**	**21 14 47.1 +0.3**
	comp=Z,436nm,0.8s				
NKL	**Nikolayevsk**	**37.65 55**	*i* P	**P**	**21 14 48.0 +1.3**
NKL			*e*S	**S**	**21 20 27.0 -8.6**
NKL			pmax	pmax	
	comp=Z,4μm,2.0s				
NKL			pmax	pmax	
	comp=E,4μm,5.0s				
NKL			pmax	pmax	
	comp=Z,7μm,6.0s				
NKL			smax	smax	
	comp=N,8μm,13.0s				
NKL			smax	smax	
	comp=E,6μm,13.0s				
KIEV	**Kiev**	**37.65 301**	*e*P	**P**	**21 14 47.0 +0.2**
	comp=E,451nm,0.9s				
KIEV			LR	LR	
	comp=Z,57μm,21.0s				
KIEV	**Kiev**	**37.65 301**	*i* P	**P**	**21 14 46.8 -0.1**
	SNR=204				
KIEV	**Kiev**	**37.65 301***c*	*i*P	**P**	**21 14 47.5 +0.7**
KIEV			pmax	pmax	
	comp=Z,275nm,1.2s				
KIEV			MLR	MLR	
	comp=Z,39μm,19.0s				
AK11	**Malin Array Si**	**37.68 301**	*e*P	**P**	**21 14 47.5 +0.4**
ELDT	**Eldivan**	**37.69 284**	*i* P	**P**	**21 14 49.3 +1.8**
RAYN	**Ar Rayn**	**37.75 251**	*e*P	**P**	**21 14 49.1 +1.0**
	comp=Z,383nm,0.8s				
RAYN			LR	LR	
	comp=Z,74μm,19.0s				
RAYN	**Ar Rayn**	**37.75 251**	*i* P	**P**	**21 14 48.9 +0.9**
	SNR=564				
RAYN	**Ar Rayn**	**37.75 251**	P	**P**	**21 14 49.0 +1.0**
BR131	**Keskin Array S**	**37.83 282**	*e*P	**P**	**21 14 50.1 +1.4**
BRTR	**Keskin Array B**	**37.83 282**	P	**P**	**21 14 49.7 +1.1**
	comp=Z,158nm,0.8s,baz=86,slow=6.3,SNR=272				
BRTR			PP	**PnPn**	**21 16 19.5 +3.4**
	comp=Z,44nm,0.8s,baz=79,slow=7.5,SNR=4.6				
BRTR			S	**S**	**21 20 38.5 -0.5**
	comp=Z,9.4nm,0.9s,baz=96,slow=5.8,SNR=2.4				
BRTR			LR	LR	21 33 47.9
	comp=Z,32μm,18.5s,baz=52,slow=42				
BRTR			P3KPbc		21 45 04.7
	comp=Z,0.5nm,0.8s,baz=270,slow=1.4,SNR=2.8				
TRTT	**Trang**	**37.84 155**	P	**P**	**21 14 48.8 +0.1**
	comp=Z,121nm,1.1s,comp=Z,2μm				
MICGM	**Minsk**	**37.85 307**⇓	*e*P	**P**	**21 14 48.0 -0.5**
MICGM			PM		21 14 50.0
	comp=Z,7.0nm,4.0s				
MICGM			PM		21 14 51.0
	comp=Z,0.9nm,1.0s				
MICGM			*e*PP	**PP**	**21 16 14.0 -0.8**
MICGM			*e*PPP	PPP	21 16 42.0
MICGM			*e*S	**S**	**21 20 38.0 -0.7**
MICGM			*e*SS	**SnSn**	**21 23 12.0 -7.6**
MICGM			*e*SSS	SSS	21 23 58.0
MICGM			*e*LQ	LQ	21 26 20.0
MICGM			LRM	MLR	21 30 30.0
	comp=Z,99nm,10.0s				
MICGM			LRM	MLR	21 30 30.0
	comp=E,75nm,12.0s				
MICGM			LRM	MLR	21 30 30.0
	comp=N,42nm,7.0s				
MNK	**Minsk**	**37.85 307**⇓	*e*P	**P**	**21 14 48.0 -0.5**

MNK e 21 16 14.0
MNK ePPP PPP 21 16 42.0
MNK eS **S** **21 20 38.0 -0.7**
MNK eSS **SnSn** **21 23 12.0 -7.6**
MNK pmax pmax
comp=Z,7µm,4.0s
MNK MLR MLR
comp=Z,99µm,10.0s
MNK MLR MLR
comp=E,75µm,12.0s
MNK MLR MLR
comp=N,42µm,7.0s
BTIN Bart¨–n 38.10 286 i P **P** **21 14 52.9 +2.1**
VSU Vasula 38.15 314 deP **P** **21 14 51.6 +0.7**
VSU pmax pmax
comp=Z,375nm,0.6s
VSU MLR MLR
comp=Z,326µm,17.0s
AKSY AKSARAY - Alti 38.16 281 i P **P** **21 14 53.6 +2.2**
FKH Fakeheh 38.19 273 eP **P** **21 14 53.6 +1.8**
CMDR Camlidere-ANKA 38.36 284 i P **P** **21 14 54.5 +1.4**
ANTO Ankara 38.37 283⇑ iP **P** **21 14 54.9 +1.7**
ANTO Ankara 38.37 283 eP **P** **21 14 55.0 +1.9**
comp=Z,483nm,1.2s
ANTO LR LR
comp=Z,31µm,20.0s
ANTO Ankara 38.37 283 P **P** **21 14 55.3 +2.1**
SNR=100
BR231 Keskin MP Arra 38.40 283 eP **P** **21 14 55.6 +2.2**
FIA1 FINESS Array S 38.42 319 eP **P** **21 14 54.0 +0.9**
FIA1 epP **P** **21 14 54.2 +1.1**
FINES FINESS Array B 38.42 319 P **P** **21 14 53.5 +0.4**
comp=Z,46nm,0.4s,baz=99,slow=9.0,SNR=289
FINES S **S** **21 20 47.5 +0.4**
comp=Z,40nm,0.8s,baz=80,slow=16,SNR=2.0
FINES LR LR 21 31 26.8
comp=Z,86µm,20.2s,baz=90,slow=37
NACGM Naroch 38.44 308 eP **P** **21 14 53.0 -0.4**
NACGM PM 21 14 57.0
comp=Z,1.3nm,1.0s
NACGM ePP **PP** **21 16 16.0 -5.2**
NACGM ePPP PPP 21 16 52.0
NACGM eS **S** **21 20 46.0 -1.5**
NACGM eSS SnSn 21 23 06.0 -28
NACGM eSSS SSS 21 23 36.0
NACGM ePsP 21 24 22.0
NACGM eScS **ScS** **21 25 02.0 -1.2**
NACGM eLQ LQ 21 26 56.0
NACGM LRM MLR 21 30 45.0
comp=Z,73nm,12.0s
HWQ Hawqa 38.51 273 eP **P** **21 14 56.2 +1.7**
BCAM Yenicaga 38.53 285 i P **P** **21 14 56.5 +2.0**
KKUL Konya-Kulu 38.56 282 i P **P** **21 14 57.0 +2.3**
TOTH TOTAH 38.61 272 eP **P** **21 14 57.5 +2.4**
QASN Qassioun 38.63 272 eP **P** **21 14 57.5 +2.1**
IZAR Zarasai 38.64 310 eP **P** **21 14 56.3 +1.2**
IZAR IAmb IAmb 21 15 11.9
comp=Z,194nm,1.1s
OUL Oulu 38.66 325 P **P** **21 14 56.2 +1.0**
OUL pmax pmax
comp=Z,266nm,0.9s
SGF Sodankyl 38.68 328 P **P** **21 14 56.7 +1.4**
SGF pmax pmax
comp=Z,323nm,0.9s
IIGN Ignalina 38.70 309 eP **P** **21 14 56.7 +1.1**
IIGN IAmb IAmb 21 15 07.0
comp=Z,197nm,0.7s
ISAL Salakas 38.73 309 eP **P** **21 14 56.9 +1.1**
ISAL IAmb IAmb 21 15 13.6
comp=Z,148nm,0.8s
KIS Kishinev 38.76 295⇑ iP **P** **21 14 56.0 -0.2**
comp=Z,2µm,2.0s
KIS Kishinev 38.76 295 i PP PP 21 16 22.0 -2.9
comp=Z,7µm,13.0s
KIS Kishinev 38.76 295 i PcP **PcP** **21 17 07.0 -0.5**
KIS i S **S** **21 20 51.0 -1.6**
comp=Z,6µm,8.0s
KIS i SS SnSn 21 23 18.0 -24
KIS Kishinev 38.76 295⇓ iP **P** **21 14 58.1 +1.9**
KIS Kishinev 38.76 295α iP **P** **21 14 56.0 -0.2**
KIS i 21 17 07.0
KIS i S **S** **21 20 51.0 -1.6**
KIS i 21 25 10.0
KIS pmax pmax
comp=E,1µm,2.0s
KIS pmax pmax
comp=Z,2µm,2.0s
KIS pmax pmax
comp=N,2µm,10.0s
KIS pmax pmax
comp=E,4µm,10.0s
KIS pmax pmax
comp=Z,4µm,10.0s
KIS pmax pmax
comp=Z,4µm,20.0s
KIS smax smax
comp=N,6µm,8.0s
KIS smax smax
comp=E,5µm,9.0s
KIS MLR MLR
comp=Z,63µm,15.0s
KIS MLR MLR
comp=E,38µm,16.0s
KIS MLR MLR
comp=Z,58µm,16.0s
SORM Soroca 38.77 297⇑ iP **P** **21 14 57.4 +1.1**
SORM Soroca 38.77 297 P **P** **21 14 57.4 +1.1**
ASF Jabal al Asfar 38.86 270 P **P** **21 14 59.0 +1.6**
comp=Z,108nm,0.9s,baz=14,slow=8.3,SNR=80
ASF PP **PP** **21 16 26.7 +0.3**
comp=Z,49nm,1.1s,baz=90,slow=8.1,SNR=2.0
ASF S **S** **21 20 54.6 0.0**
comp=Z,8.5nm,0.9s,baz=68,slow=5.8,SNR=1.7
ASF LR LR 21 35 11.6
comp=Z,15µm,18.1s,baz=356,slow=43
JOW Kunigami 38.88 101 eP **P** **21 14 56.9 -0.6**
JOW epP **P** **21 14 57.6 +0.2**
KEV Kevo 38.91 332 eP **P** **21 14 57.8 +0.6**
comp=Z,285nm,0.9s
KEV LR LR
comp=Z,87µm,20.0s
KEV Kevo 38.91 332 eP **P** **21 14 57.8 +0.6**
KEV pmax pmax
comp=Z,285nm,0.9s
KEV MLR MLR
comp=Z,87µm,20.0s
BRBR Barbar 38.93 272 eP **P** **21 15 00.5 +2.4**
RCY Rachaya 38.97 272 eP **P** **21 15 00.1 +1.8**
BEYL Beirut 39.04 273 eP **P** **21 14 59.8 +1.1**
QRWL Qaraoun 39.06 272 eP **P** **21 15 01.0 +2.0**
SHBL Chebaa 39.11 272 eP **P** **21 15 01.2 +1.7**
TYV Tymovskoe 39.26 58 eP **P** **21 15 02.4 +2.1**
TYV eS **S** **21 21 04.1 +4.1**
TYV pmax pmax
comp=Z,577nm,1.4s
TYV pmax pmax
comp=Z,8µm,6.5s
TYV smax smax
comp=E,31nm,2.4s
TYV smax smax
comp=N,6µm,4.9s
LEOM Leova 39.29 295⇓ iP **P** **21 15 02.3 +1.7**
LEOM Leova 39.29 295 P **P** **21 15 02.3 +1.7**
TLCR 39.29 293⇑ iP **P** **21 15 02.2 +1.5**
ARCES ARCESS Array B 39.39 332 P **P** **21 15 01.8 +0.6**
comp=N,50nm,0.6s,baz=89,slow=7.3,SNR=107
ARCES S **S** **21 21 01.2 -0.4**
comp=N,20nm,0.9s,baz=122,slow=18,SNR=2.2
ARCES LR LR 21 32 20.7
comp=N,63µm,18.1s,baz=102,slow=38
ARE0 ARCESS Array S 39.39 332 eP **P** **21 15 02.0 +0.8**
comp=N,320nm,1.0s
ARE0 ARCESS Array S 39.39 332 eP **P** **21 15 01.8 +0.6**
ARE0 IVmBBB 21 15 11.9
comp=Z,2µm,1.0s
MMAI Mount Meron Ar 39.52 272 P **P** **21 15 03.0 +0.1**
comp=Z,38nm,0.6s,baz=53,slow=7.4,SNR=81
MMAI S **S** **21 21 04.9 +0.3**
comp=Z,12nm,0.9s,baz=67,slow=11,SNR=2.6
MMAI LR LR 21 34 06.1
comp=Z,15µm,18.5s,baz=65,slow=40
IAS Iasi 39.53 296⇑ iP **P** **21 15 04.2 +1.5**
IAS Iasi 39.53 296 P **P** **21 15 03.6 +0.9**
IAS pmax pmax
comp=Z,559nm,1.2s

PHNC Paralimni 39.56 275 P **P** **21 15 04.0 +0.9**
LHMI Lhok Sumawe 39.58 160 eP **P** **21 15 05.2 +1.9**
comp=Z,933nm,0.9s
CFR Carcaliu 39.75 293⇑ iP **P** **21 15 05.8 +1.3**
CFR Carcaliu 39.75 293 P **P** **21 15 05.7 +1.3**
CFR pmax pmax
comp=Z,336nm,1.3s
TIRR Tirgusor 39.79 292⇑ iP **P** **21 15 06.2 +1.4**
TIRR Tirgusor 39.79 292 eP **P** **21 15 05.6 +0.8**
comp=Z,238nm,1.1s
TIRR Tirgusor 39.79 292 eP **P** **21 15 05.6 +0.8**
TIRR pmax pmax
comp=Z,239nm,1.1s
ABRA Dolores 39.85 119 eP **P** **21 15 08.1 +2.5**
TLB Topalu 40.00 292⇑ iP **P** **21 15 08.5 +1.9**
VAF Ylistaro 40.01 321 P **P** **21 15 07.9 +1.5**
APYP Conner 40.04 118 eP **P** **21 15 08.9 +1.8**
HARR Harsova 40.04 292⇑ iP **P** **21 15 08.8 +1.9**
MAMC Mammari 40.07 276 P **P** **21 15 08.5 +1.2**
CSS Mathiatis 40.09 276 eP **P** **21 15 10.6 +3.2**
comp=Z,56nm,0.9s
CSS Mathiatis 40.09 276 P **P** **21 15 09.1 +1.6**
KTK1 Kautokeino 40.11 331 eP **P** **21 15 07.7 +0.5**
PETR Petresti 40.19 294⇑ iP **P** **21 15 11.1 +3.0**
HAMF Hammerfest 40.19 333 eP **P** **21 15 08.9 +1.1**
PSN Preselentsi 40.20 291 P **P** **21 15 10.6 +2.3**
YSS Yuzh-Sakhalins 40.32 64 eP **P** **21 15 09.6 +0.5**
comp=Z,296nm,1.4s
YSS LR LR
comp=Z,96µm,19.0s
YSS Yuzh-Sakhalins 40.32 64c iP **P** **21 15 09.9 +0.7**
YSS e 21 16 46.5
YSS ePPP PPP 21 17 06.3
YSS eS **S** **21 21 12.1 -3.8**
YSS pmax pmax
comp=Z,150nm,1.7s
YSS pmax pmax
comp=E,4µm,7.0s
YSS pmax pmax
comp=Z,8µm,7.0s
YSS pmax pmax
comp=N,2µm,8.6s
YSS pmax pmax
comp=Z,6µm,8.8s
YSS pmax pmax
comp=E,3µm,6.5s
YSS smax smax
comp=N,3µm,7.3s
YSS smax smax
comp=E,4µm,10.5s
YSS MLR MLR
comp=E,125µm,16.0s
YSS MLR MLR
comp=Z,113µm,16.0s
YSS MLR MLR
comp=N,40µm,15.0s
ICOR Ion Corvin 40.32 291⇑ iP **P** **21 15 11.6 +2.4**
TESR Tescani 40.33 295⇑ iP **P** **21 15 09.9 +0.6**
GRER 40.46 293⇑ iP **P** **21 15 13.3 +2.9**
VRI Vrincioaia 40.48 294⇑ iP **P** **21 15 12.8 +2.2**
VRI Vrincioaia 40.48 294 P **P** **21 15 12.6 +2.0**
SZAC Souni 40.51 276 P **P** **21 15 12.4 +1.4**
ALFC Alefka 40.53 276 P **P** **21 15 12.4 +1.3**
PLOR Plostina 40.53 294⇑ iP **P** **21 15 13.5 +2.5**
KULM Kulim 40.54 155 eP **P** **21 15 11.4 +0.1**
comp=N,377nm,1.0s
BIZ Bicaz 40.56 296⇑ iP **P** **21 15 13.3 +2.1**
SUW Suwalki 40.66 307 eP **P** **21 15 12.8 +0.9**
SUW eS **S** **21 21 20.8 0.0**
SUW LMZ LR 21 32 23.4
comp=N,140µm,18.5s
SUW Suwalki 40.66 307 eP **P** **21 15 12.9 +0.9**
comp=N,953nm,1.1s
SUW Suwalki 40.66 307⇑ eP **P** **21 15 12.8 +0.9**
SUW eS **S** **21 21 20.8 0.0**
SUW MLR MLR
comp=Z,140µm,18.5s
INU Inuyama 40.72 83 eP **P** **21 15 12.0 -0.7**
comp=Z,189nm,1.3s
AKMC Akamas 40.78 276 P **P** **21 15 13.7 +0.5**
ISP Isparta 40.83 281⇑ iP **P** **21 15 14.9 +1.2**
ISP Isparta 40.83 281 eP **P** **21 15 14.8 +1.1**
comp=Z,1µm,1.3s
ISP Isparta 40.83 281 P **P** **21 15 14.5 +0.8**
ISP Isparta 40.83 281c iP **P** **21 15 15.4 +1.7**
ISP pmax pmax
comp=Z,556nm,1.0s
ISP MLR MLR
comp=Z,35µm,16.0s
ISR Istrita 40.84 293⇑ iP **P** **21 15 16.9 +3.3**
ISR Istrita 40.84 293 P **P** **21 15 16.5 +2.9**
ISR pmax pmax
comp=Z,1µm,1.2s
PPCY Paphos 40.84 276 P **P** **21 15 13.6 0.0**
PRD Provadia 40.91 290 P **P** **21 15 16.3 +2.2**
BURAR Bucovina Array 40.94 297⇑ iP **P** **21 15 16.0 +1.5**
BURAR Bucovina Array 40.94 297 P **P** **21 15 16.0 +1.5**
BUR04 Bucovina Ar. S 40.94 297 eP **P** **21 15 15.4 +1.0**
BUR08 Bucovina Ar. S 40.94 297 eP **P** **21 15 15.4 +0.9**
MJB9 Matsu-Tunnel 41.03 81 eP **P** **21 15 14.6 -0.7**
comp=Z,94nm,1.0s
MAJO Matsushiro 41.03 81 eP **P** **21 15 14.5 -0.8**
comp=Z,89nm,0.9s
MAJO LR LR
comp=Z,45µm,20.0s
MAJO Matsushiro 41.03 81d iP **P** **21 15 14.3 -1.0**
MAJO pmax pmax
comp=Z,20nm,1.1s
MAJO MLR MLR
comp=Z,43µm,19.0s
MAT Matsushiro 41.03 81 P **P** **21 15 13.3 -2.0**
MAT S **S** **21 21 27.2 +0.3**
MJAR Matsushiro Arr 41.04 81 P **P** **21 15 14.0 -1.3**
comp=Z,13nm,1.0s,baz=291,slow=10,SNR=36
MJAR PcP **PcP** **21 17 15.8 +0.8**
comp=Z,40nm,1.0s,baz=289,slow=3.5,SNR=5.0
MJAR ScP **ScP** **21 21 03.4 -0.4**
comp=Z,13nm,1.1s,baz=300,slow=5.3,SNR=4.4
MJAR S **S** **21 21 27.2 +0.2**
comp=Z,4.3nm,0.9s,baz=302,slow=30,SNR=2.4
MJAR LR LR 21 32 56.7
comp=Z,44µm,19.7s,baz=295,slow=37
LVV L'vov 41.09 301 eP **P** **21 15 17.4 +1.9**
LVV e 21 17 21.8
LVV eS **S** **21 21 25.0 -2.4**
LVV MLR MLR
comp=Z,20µm,15.0s
ASAJ Asahikawa 41.11 68 P **P** **21 15 15.2 -0.6**
comp=Z,46nm,0.7s,baz=278,slow=10,SNR=39
ASAJ PcP **PcP** **21 17 15.3 +0.3**
comp=Z,42nm,0.8s,baz=321,slow=5.1,SNR=3.1
ASAJ S **S** **21 21 26.6 -1.2**
comp=Z,4.0nm,0.8s,baz=48,slow=18,SNR=3.3
ASAJ LR LR 21 31 43.4
comp=Z,29µm,19.9s,baz=296,slow=36
ASAJ Asahikawa 41.11 68 eP **P** **21 15 14.9 -0.9**
comp=Z,398nm,1.0s
ASAJ PcP **PcP** **21 17 15.3 +0.3**
ASAJ S **S** **21 21 26.6 -1.2**
MLR Muntele Rosu 41.12 294 P **P** **21 15 17.3 +1.3**
comp=Z,23nm,0.6s,baz=183,slow=3.1
MLR PP **PP** **21 16 52.6 +1.9**
comp=Z,14nm,0.8s,baz=48,slow=6.9,SNR=1.6
MLR S **S** **21 21 29.2 +1.0**
comp=Z,6.6nm,0.9s,baz=82,slow=14,SNR=2.2
MLR LR LR 21 34 48.7
comp=Z,16µm,19.8s,baz=55,slow=40
MLR Muntele Rosu 41.12 294⇓ iP **P** **21 15 18.5 +2.5**
MLR Muntele Rosu 41.12 294 eP **P** **21 15 17.7 +1.8**
comp=Z,1µm,1.6s
MLR PP **PP** **21 16 52.6 +1.9**
MLR S **S** **21 21 29.2 +1.0**
SULR 41.17 293⇑ iP **P** **21 15 18.9 +2.6**
SECR 41.18 293⇑ iP **P** **21 15 19.6 +3.2**
DOPR Dopca 41.33 295⇑ iP **P** **21 15 20.3 +2.7**
IPM Ipoh 41.42 155 eP **P** **21 15 18.0 -0.6**
comp=Z,314nm,1.0s
SGRR Singureni 41.52 292⇑ iP **P** **21 15 21.8 +2.7**
ARCR ARCALIA 41.66 297⇑ iP **P** **21 15 23.5 +3.2**
TRO Tromso 41.69 331 P **P** **21 15 22.2 +2.0**
TRO Tromso 41.69 331 eP **P** **21 15 21.4 +1.2**
VOIR 41.73 294⇑ iP **P** **21 15 22.8 +1.9**
VOIR 41.73 294 P **P** **21 15 22.4 +1.5**
JMB Yambol 41.73 289 P **P** **21 15 23.0 +2.1**
BALP Baler 41.82 120 eP **P** **21 15 22.9 +1.1**

SZH Strazhica 41.88 291 P **P** **21 15 23.5 +1.3**
MUKL Al Mukalla 41.92 238 eP **P** **21 15 25.5 +2.9**
MANT Manisa 41.94 283 eP **P** **21 15 25.1 +2.2**
comp=Z,752nm,1.2s
KWP Kalwaria Pacla 41.97 301 eP **P** **21 15 24.8 +2.1**
KWP eS **S** **21 21 41.4 +1.0**
KWP LMZ LR 21 31 42.0
comp=Z,26µm,27.9s
KWP Kalwaria Pacla 41.97 301 eP **P** **21 15 24.2 +1.4**
comp=Z,12µm,1.0s
KWP Kalwaria Pacla 41.97 301 eP **P** **21 15 24.2 +1.4**
ARR Arges 42.03 294⇑ iP **P** **21 15 25.2 +1.8**
BMR Baia Mare 42.03 298⇑ iP **P** **21 15 25.8 +2.5**
HUMR Humele 42.08 293⇑ iP **P** **21 15 25.6 +1.9**
BJO Bjornoya 42.16 339 eP **P** **21 15 25.1 +1.1**
BJO IVmBBB 21 15 35.0
comp=Z,4µm,1.1s
KLNR Kaliningrad 42.24 309ceP **P** **21 15 26.0 +1.1**
KLNR pmax pmax
comp=Z,536nm,0.7s
KLNR MLR MLR
comp=Z,115µm,20.0s
KSL Kastellorizon 42.24 279 P **P** **21 15 22.7 -2.4**
CJR Cluj-Napoca 42.27 297⇓ iP **P** **21 15 27.8 +2.5**
CJR Cluj-Napoca 42.27 297 P **P** **21 15 27.7 +2.5**
MA2 Magadan 42.30 44 eP **P** **21 15 25.0 -0.3**
comp=Z,709nm,0.9s
MA2 LR LR
comp=Z,56µm,19.0s
MA2 Magadan 42.30 44⇓ eP **P** **21 15 25.8 +0.5**
MA2 pmax pmax
comp=Z,527nm,1.3s
MA2 MLR MLR
comp=Z,33µm,14.3s
PVL Pavlikeni 42.31 291 P **P** **21 15 28.7 +3.1**
FETY Fethiye 42.38 280 P **P** **21 15 24.7 -1.6**
PSI Prapat 42.41 159 eP **P** **21 15 25.9 -0.9**
PSI esP **P** **21 15 26.3 -0.5**
PSI Prapat 42.41 159 eP **P** **21 15 25.9 -0.9**
KOLS Kolonicke sedl 42.44 300 eP **P** **21 15 28.0 +1.4**
KOLS e 21 17 11.2
KOLS eS **S** **21 21 47.9 +0.5**
KOLS MLR MLR
comp=Z,31µm,19.1s
KOLS Kolonicke sedl 42.44 300 eP **P** **21 15 28.0 +1.4**
KOLS ePP **PP** **21 17 11.2 +6.4**
KOLS eS **S** **21 21 47.9 +0.5**
KOLS eL L 21 33 43.9
TRPA Tarpa 42.51 299⇑ iP **P** **21 15 29.0 +1.9**
TRPA Tarpa 42.51 299⇑ eP **P** **21 15 28.6 +1.5**
UZH Uzhgorod 42.51 300⇑ iP **P** **21 15 28.2 +1.0**
UZH i 21 17 09.3
UZH i 21 17 22.3
UZH ePPP PPP 21 17 37.9
UZH i S **S** **21 21 50.3 +1.8**
UZH eSSS SSS 21 25 25.5
UZH MLR MLR
comp=N,10µm,16.0s
UZH MLR MLR
comp=Z,12µm,16.0s
LUBP Lubang 42.52 123 eP **P** **21 15 27.7 +0.1**
BEL Belsk 42.55 305 eP **P** **21 15 29.3 +1.8**
BEL eS **S** **21 21 51.0 +2.0**
BEL LMZ LR 21 33 39.5
comp=Z,106µm,17.2s
BEL Belsk 42.55 305⇑ eP **P** **21 15 29.3 +1.8**
BEL eS **S** **21 21 51.0 +2.0**
BEL MLR MLR
comp=Z,106µm,17.2s
LOT Lotru 42.57 295⇑ iP **P** **21 15 30.2 +2.3**
DIM Dimitrovgrad 42.61 289 P **P** **21 15 29.9 +1.8**
TGY Tagaytay City 42.67 122 P **P** **21 15 28.4 -0.5**
comp=Z,165nm,0.3s,baz=280,slow=15,SNR=3.2
TGY S **S** **21 21 48.9 -2.6**
comp=Z,132nm,0.3s,baz=123,slow=15,SNR=1.8
TGY LR LR 21 33 35.2
comp=Z,41µm,20.0s,baz=318,slow=37
ALN Alexandroupoli 42.71 288 eP **P** **21 15 30.6 +1.7**
comp=Z,270nm,1.4s
ALN Alexandroupoli 42.71 288 P **P** **21 15 29.1 +0.2**
ALN Alexandroupoli 42.71 288 eP **P** **21 15 30.6 +1.7**
ALN pmax pmax
comp=Z,270nm,1.4s
YER Yerkesik 42.73 281 P **P** **21 15 29.9 +0.7**
DRGR 42.82 297⇑ iP **P** **21 15 31.8 +2.0**
DRGR 42.82 297 P **P** **21 15 31.6 +1.8**
DRGR pmax pmax
comp=Z,579nm,1.1s
KDZ Kurdzhali 42.85 289 P **P** **21 15 32.1 +2.1**
EZN Ezine 42.95 286 P **P** **21 15 32.3 +1.4**
CRVS Cervenica-Dubn 42.96 300 eP **P** **21 15 32.0 +1.2**
CRVS pmax pmax
comp=Z,220nm,1.4s
CRVS Cervenica-Dubn 42.96 300 eP **P** **21 15 32.0 +1.2**
CRVS ePP **PcP** **21 17 16.7 -4.4**
CRVS eS **S** **21 21 54.0 -1.1**
CRVS eL L 21 34 08.1
RDO Rodhopi 42.96 288 P **P** **21 15 32.1 +1.2**
DEV Deva 43.00 296⇑ iP **P** **21 15 34.5 +3.3**
DEV Deva 43.00 296 P **P** **21 15 34.3 +3.1**
STEI Steigen 43.01 329 eP **P** **21 15 31.3 +0.4**
STEI IVmBBB 21 15 34.6
comp=Z,3µm,1.4s
GADA Gvkgeada 43.10 287 P **P** **21 15 33.2 +1.1**
LTVH L¨tav¨rtes, 43.15 298⇑ eP **P** **21 15 34.9 +2.5**
PLD Plovdiv 43.16 290 P **P** **21 15 33.6 +1.1**
PLD Plovdiv 43.16 290 P **P** **21 15 34.6 +2.1**
PRK Paraskevi 43.23 285 P **P** **21 15 34.1 +1.0**
SMTH Samothraki Isl 43.24 287 P **P** **21 15 34.1 +0.9**
ARG Arkhangelos 43.26 280 P **P** **21 15 33.8 +0.4**
ARG Arkhangelos 43.26 280 P **P** **21 15 34.9 +1.5**
ARG pmax pmax
comp=Z,509nm,1.5s
RZN Rozhen 43.32 289 P **P** **21 15 35.9 +1.9**
MPEP Malo Peshtene 43.34 292 P **P** **21 15 35.7 +1.7**
YUK Yuzh-Kuril'sk 43.34 67c iP **P** **21 15 33.7 -0.2**
YUK i 21 17 15.2
YUK i 21 17 23.7
YUK PPP PPP 21 17 49.0
YUK i S **S** **21 21 59.8 -0.9**
YUK eSSS SSS 21 25 53.4
YUK pmax pmax
comp=Z,998nm,1.1s
YUK pmax pmax
comp=Z,2µm,5.1s
YUK MLR MLR
comp=N,57µm,14.0s
YUK MLR MLR
comp=E,18µm,14.0s
YUK MLR MLR
comp=Z,73µm,14.0s
MOR8 Moi Rana 43.42 326 eP **P** **21 15 34.4 +0.1**
HSPB Hornsund (broa 43.43 342 eP **P** **21 15 36.0 +1.7**
HSPB e*PP **sP** **21 15 43.9 +2.2**
HSPB e 21 17 31.5
HSPB eS **S** **21 22 03.5 +2.2**
HSPB MLR MLR
comp=Z,52µm,22.0s
HSPB Hornsund (broa 43.43 342 eP **P** **21 15 35.7 +1.5**
HSPB IVmB_BB 21 15 44.6
comp=Z,4µm,1.4s
SPA0 Spitsbergen Ar 43.45 344 eP **P** **21 15 36.7 +2.3**
SPA0 Spitsbergen Ar 43.45 344 eP **P** **21 15 36.0 +1.5**
SPA0 IVmBBB 21 15 45.6
comp=Z,4µm,1.8s
SPITS Spitsbergen Ar 43.45 344 P **P** **21 15 35.1 +0.7**
comp=Z,232nm,1.1s,baz=72,slow=9.3,SNR=57
SPITS S **S** **21 22 02.4 +0.8**
comp=Z,20nm,0.9s,baz=73,slow=16,SNR=1.8
SPITS LR LR 21 38 40.5
comp=Z,63µm,19.4s,baz=85,slow=43
BODT Bodrum 43.46 282 P **P** **21 15 34.6 -0.4**
SMG Samos 43.50 283 P **P** **21 15 37.1 +1.7**
GSI Gunungsitoli 43.51 161 P **P** **21 15 35.9 +0.3**
GSI Gunungsitoli 43.51 161 eP **P** **21 15 36.1 +0.5**
comp=Z,543nm,0.8s
NIE Niedzica 43.53 301 eP **P** **21 15 37.7 +2.2**
NIE eS **S** **21 22 05.8 +2.4**
NIE LMZ LR 21 37 20.2
comp=Z,35µm,19.4s
NIE Niedzica 43.53 301⇑ eP **P** **21 15 37.7 +2.2**
NIE eS **S** **21 22 05.9 +2.4**
NIE MLR MLR

comp=Z,35μm,19.4s
SIGR SIGRI 43.54 285 P P 21 15 36.6 +1.0
OJC Ojcow 43.60 303 *eP* **P 21 15 37.5 +1.6**
OJC *eS* **S 21 22 05.1 +0.7**
OJC LMZ LR 21 34 33.7
comp=Z,62μm,18.4s
OJC Ojcow 43.60 303 *eP* **P 21 15 36.8 +0.8**
comp=Z,1μm,1.3s
OJC Ojcow 43.60 303 *eP* **P 21 15 36.8 +0.8**
OJC pmax pmax
comp=Z,1μm,1.3s
LOF Lofoten 43.64 329 *eP* **P 21 15 36.4 +0.4**
LOF IVmBBB 21 15 50.7
comp=Z,3μm,0.8s
HERR Herculane 43.67 294⇓ *i P* **P 21 15 38.3 +1.7**
KECS Kecovo 43.70 300 *eP* **P 21 15 39.5 +2.7**
KECS Kecovo 43.70 300 *eP* **P 21 15 39.5 +2.7**
LIA Limnos Island 43.72 287 P **P 21 15 37.6 +0.5**
CHOS Chios island 43.76 284 P **P 21 15 37.8 +0.3**
NISR Nisiros 43.79 281 P **P 21 15 38.2 +0.5**
JHJ Hachijo jima 2 43.80 84 LR LR 21 35 09.6
comp=Z,38μm,18.2s,baz=302,slow=38
BUSP Coron 43.85 125 *eP* **P 21 15 38.7 +0.4**
KONS Konsvik 43.92 327 *eP* **P 21 15 39.4 +1.2**
KONS IVmBBB 21 15 43.3
comp=Z,1μm,0.6s
BZS Buzias 43.93 296⇓ *i P* **P 21 15 40.6 +1.9**
BZS Buzias 43.93 296 P **P 21 15 40.4 +1.7**
VTS Vitosha 43.99 291⇑ *i P* **P 21 15 41.3 +1.9**
VTS Vitosha 43.99 291 *eP* **P 21 15 41.0 +1.6**
comp=Z,344nm,1.1s
VTS Vitosha 43.99 291 P **P 21 15 41.1 +1.6**
VTS Vitosha 43.99 291 P **P 21 15 41.1 +1.6**
VTS Vitosha 43.99 291 *eP* **P 21 15 41.0 +1.6**
VTS pmax pmax
comp=Z,344nm,1.1s
ENPP El Nido 44.02 126 *eP* **P 21 15 39.7 0.0**
MMB Musomiste 44.03 289 P **P 21 15 41.4 +1.8**
NVR Nevrokopi 44.04 289 P **P 21 15 41.0 +1.3**
SJMP San Jose 44.04 123 *eP* **P 21 15 40.4 +0.5**
LANS Liptovska Anna 44.13 301 *eP* **P 21 15 43.1 +2.8**
LANS *e* 21 17 28.6
LANS Liptovska Anna 44.13 301 *eP* **P 21 15 43.1 +2.8**
LANS *ePP* **PcP 21 17 28.6 +3.5**
TIM Timisoara 44.15 296⇑ *i P* **P 21 15 42.7 +2.3**
TIM Timisoara 44.15 296 P **P 21 15 42.7 +2.3**
MDVR Moldovita 44.17 295⇑ *i P* **P 21 15 42.7 +2.0**
KUR Kuril'sk 44.24 65 *d i P* **P 21 15 45.2 +4.1**
KUR *e* 21 17 33.3
KUR *i S* **S 21 22 22.1 +8.3**
KUR pmax pmax
comp=Z,370nm,1.5s
KUR pmax pmax
comp=Z,6μm,6.6s
KUR pmax pmax
comp=E,3μm,5.5s
KUR pmax pmax
comp=N,2μm,6.0s
KUR MLR MLR
comp=Z,80μm,17.0s
KUR MLR MLR
comp=E,38μm,15.0s
KUR MLR MLR
comp=N,29μm,13.0s
PSZ Piszkesteto 44.26 299⇑ *i P* **P 21 15 43.6 +2.2**
PSZ Piszkesteto 44.26 299⇑ *eP* **P 21 15 43.2 +1.8**
PSZ Piszkesteto 44.26 299 *eP* **P 21 15 42.6 +1.2**
comp=N,417nm,1.4s
PSZ Piszkesteto 44.26 299 *eP* **P 21 15 42.6 +1.2**
PSZ pmax pmax
comp=Z,417nm,1.4s
KARP Karpathos 44.27 280 *eP* **P 21 15 42.3 +0.8**
comp=Z,182nm,1.1s
KARP Karpathos 44.27 280 P **P 21 15 42.0 +0.5**
GKP Gorka Klasztor 44.27 307 *eP* **P 21 15 43.0 +1.7**
GKP *eS* **S 21 22 15.8 +1.7**
GKP LMZ LR 21 34 43.9
comp=Z,179μm,17.9s
GKP Gorka Klasztor 44.27 307⇑ *eP* **P 21 15 43.0 +1.7**
GKP *eS* **S 21 22 15.8 +1.7**
GKP MLR MLR
comp=Z,179μm,17.9s
SRS Serrai 44.32 289 P **P 21 15 43.0 +1.1**
SRS Serrai 44.32 289 P **P 21 15 43.4 +1.5**
BANR Banloc 44.33 296⇑ *i P* **P 21 15 44.0 +2.1**
KKB Krupnik 44.37 290 P **P 21 15 44.2 +1.9**
OUR Ouranopolis 44.37 288 P **P 21 15 39.9 -2.4**
KBS Kingsbay 44.43 345 *eP* **P 21 15 44.0 +1.7**
comp=Z,154nm,0.9s
KBS LR LR
comp=Z,31μm,20.0s
KBS Kingsbay 44.43 345 *eP* **P 21 15 44.4 +2.1**
KBS IVmBBB 21 15 54.2
comp=Z,2μm,1.9s
AMGA Amorgos Island 44.57 282 P **P 21 15 45.4 +1.5**
HFS Hagfors 44.58 318 P **P 21 15 43.5 -0.2**
comp=Z,79nm,0.6s,baz=88,slow=8.8,SNR=165
HFS S **S 21 22 16.5 -1.9**
comp=Z,24nm,0.9s,baz=123,slow=16,SNR=1.9
HFS LR LR 21 34 57.8
comp=Z,92μm,18.1s,baz=78,slow=37
SKY Skiros Island 44.60 286 P **P 21 15 45.4 +1.2**
RAC Raciborz 44.62 303 *eP* **P 21 15 46.4 +2.2**
RAC *eS* **S 21 22 20.6 +1.3**
RAC MLR MLR
comp=N,217μm,20.6s
RAC MLR MLR
comp=E,72μm,19.8s
RAC MLR MLR
comp=Z,29μm,20.8s
NSS Namsos 44.63 324 *eP* **P 21 15 44.1 +0.1**
APE Apeiranthos 44.72 283⇑ *i P* **P 21 15 45.6 +0.4**
APE Apeiranthos 44.72 283 P **P 21 15 45.7 +0.5**
APE Apeiranthos 44.72 283 *c i P* **P 21 15 46.3 +1.1**
APE pmax pmax
comp=Z,446nm,1.4s
APE MLR MLR
comp=Z,33μm,18.0s
PLG Polygyros 44.73 288 P **P 21 15 45.1 -0.1**
OKC Ostrava-Krasne 44.73 302 *i P* **P 21 15 46.6 +1.6**
OKC *ex* x 21 15 56.4
OKC *ePP* **PP 21 17 35.5 +6.2**
OKC *eS* **S 21 22 23.7 +2.8**
OKC AMS AMS 21 35 00.0
comp=Z,77μm,16.1s
OKC Ostrava-Krasne 44.73 302 *i P* **P 21 15 46.6 +1.6**
OKC *e* 21 15 56.4
OKC *e* 21 17 35.5
OKC *eS* **S 21 22 23.7 +2.8**
OKC MLR MLR
comp=Z,77μm,16.1s
VYHS Vyhne 44.74 300 *eP* **P 21 15 47.1 +2.0**
VYHS pmax pmax
comp=Z,224nm,1.5s
VYHS Vyhne 44.74 300 *eP* **P 21 15 47.1 +2.0**
VYHS *eS* **S 21 22 21.8 +0.8**
VYHS *eL* L 21 34 40.9
PAIG Paliouri 44.76 287 P **P 21 15 45.9 +0.5**
PAIG Paliouri 44.76 287 P **P 21 15 46.8 +1.4**
DAMY Dhamar 44.78 243 *eP* **P 21 15 48.4 +2.2**
comp=Z,213nm,0.9s
KNT Kendrikon 44.78 289 P **P 21 15 46.7 +1.1**
MYKOM Kota Tinggi 44.87 152 *eP* **P 21 15 47.5 +1.1**
comp=Z,323nm,1.2s
HORT Hortiatis 44.88 288 P **P 21 15 49.0 +2.6**
ANAF Anafi Island 44.88 282 P **P 21 15 46.6 +0.2**
VAY Valandovo 44.94 290 P **P 21 15 47.9 +1.1**
VAY Valandovo 44.94 290 *eP* **P 21 15 48.8 +2.0**
AOS Alonnisos 44.94 286 P **P 21 15 47.8 +0.9**
THE Thessaloniki 44.95 289 P **P 21 15 47.4 +0.5**
BUD Budapest 44.96 299⇑ *eP* **P 21 15 48.7 +1.8**
BUD Budapest 44.96 299 P **P 21 15 49.5 +2.6**
BUD pmax pmax
comp=Z,228nm,1.2s
BEO Beograd 44.98 295 *eP* **P 21 15 48.0 +0.9**
BEO Beograd 44.98 295 *eP* **P 21 15 48.0 +0.9**
PBSI Pulau Batu 44.99 160 P **P 21 15 48.5 +1.1**
BATP Bataraza 45.04 130 *eP* **P 21 15 47.6 -0.2**
STIP Stip 45.05 290 *i P* **P 21 15 47.4 -0.3**
IOSP Ios island 45.05 282 P **P 21 15 47.4 -0.4**
PVCP Virac 45.07 119 *eP* **P 21 15 48.2 +0.1**
CMBO Columbo, Santo 45.09 282 P **P 21 15 47.1 -0.9**
SANT Santorini 45.09 282 *eP* **P 21 15 49.1 +0.9**
comp=Z,655nm,1.1s
SANT Santorini 45.09 282 P **P 21 15 47.9 -0.3**
BSD Bornholm Skovb 45.09 310⇑ *i P* **P 21 15 48.2 +0.4**
comp=Z,171nm,0.9s
BSD *i* 21 17 30.5
THT1 Athinios (Pele 45.11 282 P **P 21 15 47.6 -0.6**
THR3 Thira Island, 45.12 282 P **P 21 15 49.4 +1.1**
STAX Taxiarchis Har 45.12 282 P **P 21 15 48.6 +0.3**
SAP3 Santorini-Thir 45.14 282 P **P 21 15 49.0 +0.5**
THR6 Thira Island, 45.14 282 P **P 21 15 49.6 +1.1**
SAP1 Santorini-Akro 45.15 282 P **P 21 15 48.1 -0.4**
ZKR Zakros 45.15 280 P **P 21 15 50.4 +1.8**
THR5 Thira Island, 45.15 282 P **P 21 15 50.0 +1.4**
THR9 Santorini-Faro 45.17 282 P **P 21 15 49.9 +1.2**
GRG Griva 45.21 289 P **P 21 15 49.3 +0.3**
SKIA Skiathos 45.23 286 P **P 21 15 50.0 +0.8**
CUYO Cuyo Island 45.24 125 *eP* **P 21 15 50.1 +0.6**
XOR Xorichti 45.34 287 P **P 21 15 50.5 +0.5**
NC405 NORSAR Array S 45.34 319 *eP* **P 21 15 49.4 -0.4**
NEO Neokhori 45.34 287 P **P 21 15 50.4 +0.3**
JAVC Velka Javorina 45.34 301⇑ *i P* **P 21 15 53.0 +3.0**
JAVC *ePP* **PP 21 17 38.5 +2.6**
JAVC *eS* **S 21 22 33.9 +4.0**
JAVC *eSCS* **ScS 21 25 45.8 +0.1**
BKNI Bangkinang 45.36 157 P **P 21 15 52.4 +2.0**
BKNI Bangkinang 45.36 157 *eP* **P 21 15 52.3 +1.9**
comp=Z,620nm,1.0s
SKO Skopje 45.44 291 P **P 21 15 52.6 +1.8**
SKO Skopje 45.44 291 *eP* **P 21 15 53.5 +2.6**
PTL Penteli 45.45 285 P **P 21 15 50.4 -0.6**
NC303 NORSAR Array S 45.48 319 *eP* **P 21 15 51.2 +0.4**
CSKK Cs˘tkako 45.49 299⇑ *eP* **P 21 15 53.1 +2.0**
KRLC Kraliky 45.49 303 *i P* **P 21 15 52.8 +1.7**
KRLC *epP* **sP 21 16 01.5 +2.9**
KRLC *eS* **S 21 22 32.1 +0.1**
KRLC AMS AMS 21 35 20.0
comp=Z,17μm,15.0s
KRLC Kraliky 45.49 303 *i P* **P 21 15 52.8 +1.7**
KRLC *e* 21 16 01.5
KRLC *eS* **S 21 22 32.1 +0.1**
KRLC MLR MLR
comp=Z,17μm,15.0s
NC602 NORSAR Array S 45.50 319 *eP* **P 21 15 51.2 +0.2**
NC602 NORSAR Array S 45.50 319 *eP* **P 21 15 51.5 +0.5**
NC602 IVmBBB 21 15 54.8
comp=Z,23μm,0.7s
LIT Litokhoron 45.51 288 *eP* **P 21 15 52.7 +1.3**
comp=Z,349nm,1.1s
LIT Litokhoron 45.51 288 P **P 21 15 50.9 -0.5**
LIT Litokhoron 45.51 288 *eP* **P 21 15 52.7 +1.3**
LIT pmax pmax
comp=Z,349nm,1.1s
NPS Neapolis 45.51 280 P **P 21 15 51.5 +0.1**
KSP Ksiaz 45.54 304 *eP* **P 21 15 53.1 +1.6**
KSP *eS* **S 21 22 32.7 +0.1**
KSP LMZ LR 21 35 34.0
comp=Z,113μm,16.9s
KSP Ksiaz 45.54 304⇑ *eP* **P 21 15 53.1 +1.6**
KSP *eS* **S 21 22 32.7 +0.1**
KSP MLR MLR
comp=Z,113μm,16.9s
SMIA Simia 45.54 286 P **P 21 15 53.3 +1.7**
ATHU Athens Univers 45.55 285 P **P 21 15 52.3 +0.6**
NB201 NORSAR Array S 45.55 319 *eP* **P 21 15 51.0 -0.5**
DIVS Divibare 45.57 294 *eP* **P 21 15 52.7 +0.8**
DIVS *epP* **P 21 15 53.7 +1.8**
TBLU Trondheim 45.59 322 *eP* **P 21 15 50.9 -0.7**
TBLU IVmB_BB 21 15 53.1
comp=Z,2μm,0.7s
VLY Voula,Athens 45.59 285 P **P 21 15 52.6 +0.6**
ATH Athens Observa 45.59 285 P **P 21 15 52.9 +0.9**
NB2 NORSAR Subarra 45.59 319 P **P 21 15 52.3 +0.5**
comp=Z,416nm,1.2s,baz=78,slow=7.9
NB2 NORSAR Subarra 45.59 319 P **P 21 15 52.3 +0.5**
baz=78,slow=7.9
NOA NORSAR Array B 45.59 319 LR LR 21 35 48.7
comp=Z,71μm,18.5s,baz=85,slow=37
SMOL Smolenice 45.61 301 *eP* **P 21 15 54.8 +2.7**
SMOL Smolenice 45.61 301 *eP* **P 21 15 54.8 +2.7**
LAST Lasithi 45.66 280 P **P 21 15 52.0 -0.7**
DPC Dobruska-Polom 45.68 304 *i P* **P 21 15 54.7 +2.1**
DPC *epP* **sP 21 16 02.8 +2.7**
DPC *ePP* **PP 21 17 39.2 -0.2**
DPC *eS* **S 21 22 36.9 +2.2**
DPC AMS AMS 21 35 30.0
comp=Z,70μm,13.9s
DPC Dobruska-Polom 45.68 304 *i P* **P 21 15 54.7 +2.1**
DPC *e* 21 16 02.8
DPC *e* 21 17 39.2
DPC *eS* **S 21 22 36.9 +2.2**
DPC MLR MLR
comp=Z,70μm,13.9s
MODS Modra-Piesok 45.76 301 *eP* **P 21 15 54.4 +1.2**
MODS pmax pmax
comp=Z,422nm,1.3s
MODS Modra-Piesok 45.76 301 *eP* **P 21 15 54.4 +1.2**
MODS *ePP* **PP 21 17 40.2 0.0**
MODS *eS* **S 21 22 36.8 +1.0**
MODS *eL* L 21 36 03.9
NC204 NORSAR Array S 45.76 320 *eP* **P 21 15 53.7 +0.6**
VILL Villia 45.79 285 P **P 21 15 53.8 +0.2**
LKR Lokris 45.79 286 P **P 21 15 52.9 -0.7**
NAO01 NORSAR Array S 45.79 319 *eP* **P 21 15 53.4 0.0**
NBO00 NORSAR Array S 45.80 319 *eP* **P 21 15 53.9 +0.4**
UPC Upice 45.82 304 *i P* **P 21 15 55.6 +1.9**
UPC *epP* **sP 21 16 03.7 +2.6**
UPC *ex* x 21 16 04.3
UPC AMS AMS 21 35 40.0
comp=Z,102μm,14.3s
UPC Upice 45.82 304 *i P* **P 21 15 55.6 +1.9**
UPC *e* 21 16 03.7
UPC *e* 21 16 04.3
UPC MLR MLR
comp=Z,102μm,14.3s
KRUS Krusevo 45.82 290 *eP* **P 21 15 56.8 +2.8**
VRAC Vranov 45.86 302⇑ *i P* **P 21 15 56.0 +1.9**
VRAC Vranov 45.86 302 P **P 21 15 56.0 +1.9**
VRAC Vranov 45.86 302⇑ *i P* **P 21 15 55.9 +1.9**
VRAC *ePP* **PP 21 17 40.7 -0.6**
VRAC *eS* **S 21 22 38.5 +1.3**
VRAC *eSCS* **ScS 21 25 51.3 +2.2**
TPRI Tanjung Pinang 45.91 152 P **P 21 15 56.7 +2.0**
KZN Kozani 45.92 289 P **P 21 15 54.2 -0.5**
BIA Bitola 45.92 290 *eP* **P 21 15 56.9 +2.2**
FNA Florina 45.98 289 *eP* **P 21 15 56.4 +1.2**
comp=Z,224nm,1.0s
FNA Florina 45.98 289 P **P 21 15 55.1 -0.1**
FNA Florina 45.98 289 *eP* **P 21 15 56.4 +1.2**
FNA pmax pmax
comp=Z,225nm,1.0s
IDI Anoyia 46.02 281 P **P 21 15 55.4 -0.1**
comp=Z,146nm,0.5s,baz=37,slow=13,SNR=114
IDI S **S 21 22 37.4 -2.6**
comp=Z,30nm,0.8s,baz=319,slow=20,SNR=6.9
IDI LR LR 21 39 40.0
comp=Z,24μm,18.3s,baz=62,slow=42
IDI Anoyia 46.02 281⇑ *i P* **P 21 15 55.9 +0.4**
IDI Anoyia 46.02 281 *eP* **P 21 15 56.2 +0.7**
comp=Z,351nm,0.9s
IDI S **S 21 22 37.4 -2.6**
PROD Prodromos 46.03 286 P **P 21 15 54.5 -1.0**
KRUC Moravsky 46.07 302⇑ *i P* **P 21 15 57.5 +1.9**
KRUC *ePP* **PP 21 17 44.6 +1.1**
KRUC *eS* **S 21 22 43.3 +3.1**
KRUC *eSCS* **ScS 21 25 54.4 +4.1**
THL Klokotos Trika 46.07 288 P **P 21 15 55.7 -0.1**
OSL Oslo 46.08 318 *eP* **P 21 15 56.7 +1.2**
OSL IVmBBB 21 15 58.5
comp=Z,1μm,0.5s
AGG Agios Georgios 46.09 287 *eP* **P 21 15 56.6 +0.6**
comp=Z,2μm,1.3s
AGG Agios Georgios 46.09 287 P **P 21 15 55.4 -0.6**
AGG Agios Georgios 46.09 287 *eP* **P 21 15 56.6 +0.6**
AGG pmax pmax
comp=Z,2μm,1.3s
LTK Loutraki 46.09 285 P **P 21 15 55.1 -0.9**
LOUT Loutraki 46.11 285 P **P 21 15 55.1 -1.0**
IVA Berane 46.12 293⇑ *i P* **P 21 15 57.8 +1.5**
RGN Rugen 46.14 310 *eP* **P 21 15 59.0 +3.0**
comp=Z,477nm,0.9s
DID Didima 46.14 285 P **P 21 15 55.2 -1.2**
PVY Plav 46.19 292⇑ *i P* **P 21 15 58.5 +1.6**
SIVA Sivas 46.20 281 P **P 21 15 58.3 +1.4**
TMBK Timbaki Herakl 46.21 281 P **P 21 15 58.7 +1.8**
DSF Desfina 46.23 286 P **P 21 15 56.7 -0.4**
OHR Ohrid 46.24 290 *eP* **P 21 15 58.3 +1.2**
OHR Ohrid 46.24 290 P **P 21 16 01.2 +4.0**
PHP Peshkopia 46.24 291 P **P 21 15 57.5 +0.3**
KRND KRANIDI 46.26 284 P **P 21 15 55.5 -1.8**
PLE Pljevlja 46.27 294⇑ *i P* **P 21 15 59.1 +1.6**
COP Copenhagen 46.30 312⇑ *i P* **P 21 15 59.1 +1.8**
comp=Z,124nm,0.9s
COP *i* 21 17 45.5
THAL Thalero 46.30 285 P **P 21 15 57.5 -0.1**
KPRO Kipourio 46.35 288 P **P 21 15 57.9 -0.2**
NEST Nestorio 46.37 289 P **P 21 15 58.1 -0.1**
DOMB Dombas 46.38 321 *eP* **P 21 15 58.6 +0.7**
DOMB IVmBBB 21 16 01.4
comp=Z,2μm,0.9s
PDSI Padang 46.38 158 P **P 21 15 57.2 -1.2**
KOME Kolasin 46.38 293⇑ *i P* **P 21 16 00.1 +1.8**
RGRI Rengat 46.39 155 P **P 21 16 00.1 +1.6**
PENT Pentalofos 46.40 289 P **P 21 15 58.4 -0.1**
SISI Saibi 46.42 160 P **P 21 15 59.9 +1.2**
SOP Sopron 46.45 300⇑ *eP* **P 21 16 00.6 +1.9**
SOP Sopron 46.45 300 P **P 21 16 00.7 +2.0**
SOP pmax pmax
comp=Z,407nm,1.3s
VAM Vamos 46.45 281 P **P 21 15 58.3 -0.5**
KBN Korca 46.46 290 P **P 21 15 58.8 -0.1**
KKM Kota Kinabalu 46.47 134 *eP* **P 21 16 00.3 +1.0**
comp=Z,308nm,1.4s
EVR Evrytania 46.50 287 P **P 21 15 59.0 -0.3**
CHAN Chania 46.51 282 P **P 21 15 58.2 -1.1**
LLD Lille Linde 46.52 311 *i P* **P 21 16 00.7 +1.6**
comp=Z,188nm,0.8s
TRIZ Trizonia 46.57 286 P **P 21 15 59.4 -0.3**
GUR Goura 46.57 285 P **P 21 15 58.9 -1.0**
IMMV Iera Moni Meta 46.58 282 P **P 21 15 58.6 -1.3**
UPM Unac-Piva 46.65 294 *eP* **P 21 16 01.4 +0.9**
EFP Efpalio 46.66 286 P **P 21 16 00.5 +0.1**
KLV Kalavryta, Ach 46.66 286 P **P 21 15 59.5 -1.0**
PVCC Panska Ves 46.68 304 *i P* **P 21 16 02.4 +2.0**
PVCC *epP* **sP 21 16 11.3 +3.4**
PVCC *eS* **S 21 22 51.5 +2.6**
PVCC AMS AMS 21 36 10.0
comp=Z,101μm,13.6s
PVCC Panska Ves 46.68 304 *i P* **P 21 16 02.4 +2.0**
PVCC *e* 21 16 11.3
PVCC *eS* **S 21 22 51.5 +2.6**
PVCC MLR MLR
comp=Z,101μm,13.6s
LAKA Lakka 46.69 286 P **P 21 16 00.0 -0.7**
KONO Kongsberg 46.70 318 *eP* **P 21 16 01.4 +0.9**
comp=Z,284nm,1.0s
KONO Kongsberg 46.70 318 *c i P* **P 21 16 01.6 +1.1**
KONO pmax pmax
comp=Z,72nm,1.2s
KONO MLR MLR
comp=Z,69μm,17.0s
KONO Kongsberg 46.70 318 *eP* **P 21 16 01.5 +1.1**
KONO IVmBBB 21 16 25.5
comp=Z,3μm,1.2s
VLI Veliai 46.72 284 P **P 21 15 58.6 -2.3**
PDG Podgorica 46.73 292⇑ *i P* **P 21 16 02.1 +1.2**
PDG Podgorica 46.73 292 P **P 21 16 00.9 0.0**
TTG Podgorica 46.73 292⇑ *i P* **P 21 16 02.1 +1.2**
TTG Podgorica 46.73 292 *eP* **P 21 16 02.4 +1.5**
comp=Z,216nm,1.0s
TTG Podgorica 46.73 292 *eP* **P 21 16 02.4 +1.5**
TTG pmax pmax
comp=Z,216nm,1.0s
NKY Niksic 46.75 293⇑ *i P* **P 21 16 03.0 +1.8**
GOPC GO Pecny, Ondr 46.76 304 *i P* **P 21 16 03.0 +1.9**
GOPC *ex* x 21 16 12.1
GOPC *eS* **S 21 22 51.8 +1.7**
GOPC AMS AMS 21 36 10.0
comp=Z,100μm,14.0s
GOPC GO Pecny, Ondr 46.76 304 *i P* **P 21 16 03.0 +1.9**
GOPC *e* 21 16 12.1
GOPC *eS* **S 21 22 51.8 +1.7**
GOPC MLR MLR
comp=Z,100μm,14.0s
BEHE Becsehely 46.76 299⇑ *eP* **P 21 16 02.8 +1.7**
NKME Niksic 46.80 293⇑ *i P* **P 21 16 03.2 +1.7**
CONA Conrad Observa 46.80 301 *i P* **P 21 16 03.6 +2.1**
comp=Z,688nm,1.2s,SNR=318
CONA *ePP* **PP 21 17 54.9 +3.5**
comp=Z,179nm,1.5s
UPR University Cam 46.80 286 P **P 21 16 04.3 +2.7**
GVD Gavdhos 46.81 281 P **P 21 16 00.9 -0.7**
VLX Vlachokerasia 46.81 285 P **P 21 16 01.3 -0.4**
PVO Paravola 46.83 287 P **P 21 16 02.0 +0.2**
JAN Janina 46.84 288 P **P 21 16 02.1 +0.3**
KYTH Kithira 46.86 283 P **P 21 16 00.9 -1.2**
ANKY Antikythira Is 46.87 282 P **P 21 16 01.8 -0.3**
PRU Pruhonice 46.88 304 *i P* **P 21 16 03.8 +1.8**
PRU *epP* **sP 21 16 12.8 +3.3**
PRU *ePP* **PP 21 17 50.9 -1.2**
PRU *eS* **S 21 22 52.3 +0.5**
PRU AMS AMS 21 36 20.0
comp=Z,91μm,14.0s
PRU Pruhonice 46.88 304 *i P* **P 21 16 03.8 +1.8**
PRU *e* 21 16 12.8
PRU *e* 21 17 50.9
PRU *eS* **S 21 22 52.3 +0.5**
PRU MLR MLR
comp=Z,91μm,14.0s
DRME Dracevica, Mon 46.88 292⇑ *i P* **P 21 16 03.1 +1.0**
KTHR Kythira 46.89 283 P **P 21 16 01.4 -0.9**
DSL Palaion Diasel 46.90 288 P **P 21 16 02.2 -0.1**
CEME Cevo 46.91 293⇑ *i P* **P 21 16 03.2 +0.8**
PRA Prague 46.92 304 *i P* **P 21 16 04.3 +2.0**
PRA *epP* **sP 21 16 12.8 +3.0**
PRA *ePP* **PP 21 17 54.1 +1.6**
PRA AMS AMS 21 36 10.0
comp=Z,90μm,14.7s
PRA Prague 46.92 304 *i P* **P 21 16 04.3 +2.0**
PRA *e* 21 16 12.8
PRA *e* 21 17 54.1
PRA MLR MLR
comp=Z,90μm,14.7s
ULC Ulcinj 46.94 292⇑ *i P* **P 21 16 04.0 +1.4**
BRG Berggiesshubel 46.94 305 *i P* **P 21 16 04.1 +1.7**
comp=Z,378nm,1.4s
BRG PP **PP 21 17 53.0 +0.4**
BRG S **S 21 22 55.0 +2.4**
BRG SS **ScS 21 25 59.0 +3.1**
comp=N,44μm,14.0s
comp=E,114μm,13.5s
comp=Z,83μm,14.3s
BRG Berggiesshubel 46.94 305 *i P* **P 21 16 04.1 +1.7**
BRG 21 17 53.0
BRG S **S 21 22 55.0 +2.4**
BRG SS **ScS 21 25 59.0 +3.1**
BRG pmax pmax
comp=Z,378nm,1.4s
BRG MLR MLR
comp=N,44μm,14.0s
BRG MLR MLR
comp=E,114μm,13.5s
BRG MLR MLR
comp=Z,83μm,14.3s
DRO Drossia 47.01 286 P **P 21 16 03.3 +0.1**
BRY Bratogost 47.02 293⇑ *i P* **P 21 16 04.2 +0.8**
BUM Brajici-Budva 47.03 292⇑ *i P* **P 21 16 05.1 +1.7**
PDO Prodromos 47.08 287 P **P 21 16 03.1 -0.6**
KOGS Kog 47.10 299⇑ *i P* **P 21 16 05.2 +1.4**
KOGS *e* 21 16 13.5
KOGS *ePP* **PP 21 17 57.4 +3.0**
DYR Agios Nikonas 47.13 284 P **P 21 16 03.1 -1.0**
RLS Riolos of Patr 47.13 286 P **P 21 16 03.6 -0.5**
BLY Banja Luka 47.16 296⇑ *i P* **P 21 16 05.4 +1.1**
BLY Banja Luka 47.16 296 *eP* **P 21 16 05.3 +1.1**
comp=Z,197nm,1.1s
AMT Artemida-Makis 47.20 285 P **P 21 16 04.7 -0.1**
ITM Ithomi 47.22 285 *eP* **P 21 16 04.4 -0.4**
comp=Z,375nm,1.3s
ITM Ithomi 47.22 285 P **P 21 16 03.7 -1.1**
HCY Herceg Novi 47.24 293⇑ *i P* **P 21 16 06.2 +1.3**
IGT Igoumenitsa 47.25 288 P **P 21 16 03.4 -1.6**
IGT Igoumenitsa 47.25 288 P **P 21 16 04.8 -0.2**
ARSA Arzberg 47.26 300 *i P* **P 21 16 06.7 +1.6**
comp=Z,315nm,1.1s,SNR=104
ARSA *ePP* **PP 21 17 59.3 +3.3**

comp=Z,58nm,0.9s
SGD Sagiada 47.28 289 P **P 21 16 04.0 -1.3**
OCLP Ormoc 47.29 121 *e*P **P 21 16 06.0 +0.4**
AKN Aaknes 47.29 321 *e*P **P 21 16 06.3 +1.3**
CLL Collm 47.35 306 *i* P **P 21 16 06.9 +1.3**
comp=Z,241nm,1.1s
CLL *i* Pmax 21 16 15.4
CLL *i* 21 16 17.3
comp=Z,410nm,0.8s
CLL *e*PP **PP 21 17 55.0 -1.6**
CLL *e*S **S 21 22 59.0 +0.6**
CLL *e*S **S 21 22 59.0 +0.6**
comp=E,3μm,13.7s
CLL *e*ScS **ScS 21 26 00.0 +1.5**
CLL *e*SS **SS 21 26 18.0 -7.5**
CLL Lmax 21 36 00.0
CLL Collm 47.35 306 *e*P **P 21 16 06.3 +0.7**
comp=E,363nm,0.8s
CLL Collm 47.35 306 *i* P **P 21 16 06.9 +1.3**
CLL *e*S **S 21 22 59.0 +0.6**
CLL pmax pmax
comp=Z,241nm,1.1s
LKD2 Lefkada island 47.36 287 P **P 21 16 05.3 -0.6**
VLO Vlora 47.41 290 P **P 21 16 07.0 +0.8**
PLP Palo 47.43 120⇓*e*P **P 21 16 10.4 +3.7**
LLP Lapu-Lapu 47.45 122⇓*e*P **P 21 16 07.2 +0.4**
LLP *e*S **PcP 21 17 41.0 +3.9**
PYL PYLOS 47.48 285 P **P 21 16 05.3 -1.6**
SKR Severo-Kuril's 47.50 55*c i*P **P 21 16 05.9 -0.9**
SKR *e* 21 18 05.2
SKR *e*PPP PPP 21 18 43.8
SKR pmax pmax
comp=Z,4μm,4.5s
SKR pmax pmax
comp=Z,349nm,1.5s
SKR pmax pmax
comp=Z,3μm,6.2s
SKR pmax pmax
comp=Z,5μm,5.9s
SKR pmax pmax
comp=Z,4μm,7.4s
SKR MLR MLR
comp=Z,76μm,15.0s
SKR MLR MLR
comp=Z,80μm,15.0s
KEK Kerkira 47.54 289 P **P 21 16 06.6 -0.7**
KFL Anninata 47.58 286 P **P 21 16 06.8 -0.8**
BILL Bilibino 47.58 30 *e*P **P 21 16 07.8 +0.5**
BILL *e*sP **P 21 16 07.9 +0.7**
BILL LR LR
comp=Z,76μm,19.0s
BILL Bilibino 47.58 30*c i*P **P 21 16 08.5 +1.3**
BILL *i* 21 18 01.6
BILL *i* S **S 21 23 02.6 +1.2**
BILL *i* SS **SS 21 26 28.2 -0.6**
BILL pmax pmax
comp=Z,212nm,0.9s
BILL MLR MLR
comp=Z,75μm,19.0s
STON Ston 47.59 294 P **P 21 16 06.2 -1.5**
PEA0B Petropavlovsk- 47.60 51 *e*P **P 21 16 08.5 +1.0**
comp=Z,751nm,1.1s
PETK Petropavlovsk- 47.60 51 P **P 21 16 06.1 -1.4**
comp=Z,55nm,0.9s,baz=351,slow=4.7
PETK S **S 21 22 58.5 -3.4**
baz=44,slow=13
PETK LR LR 21 37 42.0
comp=Z,55μm,18.9s,baz=289,slow=38
PETK Petropavlovsk- 47.60 51 *e*P **P 21 16 07.5 0.0**
PETK *e*sP **P 21 16 08.1 +0.5**
PETK S **S 21 22 58.5 -3.4**
PETK Petropavlovsk- 47.60 51 *e*P **P 21 16 07.5 0.0**
PETK S **S 21 22 58.6 -3.4**
SBUM Sibu 47.62 141 *e*P **P 21 16 09.6 +1.5**
comp=Z,754nm,0.9s
HOMB Homborsund 47.62 316 *e*P **P 21 16 08.8 +1.1**
HOMB IVmB_BB 21 16 17.6
comp=Z,5μm,3.8s
KSM Kuching 47.65 144 *e*P **P 21 16 09.3 +1.0**
KSM *e*pP **P 21 16 09.6 +1.3**
VLS Valsamata 47.69 287 P **P 21 16 07.2 -1.3**
PERS Pernice 47.76 299⇑*i*P **P 21 16 10.2 +1.3**
PERS *i* PP **PP 21 18 04.2 +3.7**
PERS *e*S **S 21 23 02.9 -1.6**
KHC Kasperske Hory 47.77 303 *i* P **P 21 16 10.7 +1.7**
KHC *e*pP **sP 21 16 19.8 +3.3**
KHC *e*PCP **PcP 21 17 40.5 +2.7**
KHC *e*PP **PP 21 18 02.8 +2.2**
KHC *e*S **S 21 23 07.4 +2.8**
KHC AMS AMS 21 36 40.0
comp=Z,80μm,13.6s
KHC Kasperske Hory 47.77 303 *i* P **P 21 16 10.7 +1.7**
KHC *e* 21 16 19.8
KHC *e* 21 17 40.5
KHC *e* 21 18 02.8
KHC *e*S **S 21 23 07.4 +2.8**
KHC MLR MLR
comp=Z,80μm,13.6s
KRJI Kerinci 47.78 157 P **P 21 16 07.6 -1.9**
SOKA Soboth 47.79 299 *i* P **P 21 16 10.6 +1.3**
comp=Z,385nm,1.2s,SNR=343
SOKA *e*PP **PP 21 18 04.8 +3.9**
comp=Z,117nm,1.3s
GEC2 GERESS Array S 47.80 303 *e*P **P 21 16 11.0 +1.7**
comp=Z,134nm,1.0s
GEC2 GERESS Array S 47.80 303 *e*P **P 21 16 11.0 +1.7**
GEC2 pmax pmax
comp=Z,134nm,1.0s
GERES GERESS Array B 47.80 303 P **P 21 16 10.9 +1.6**
comp=Z,24nm,0.6s,baz=67,slow=7.4,SNR=114
GERES PP **PP 21 18 01.5 +0.6**
comp=Z,29nm,1.1s,baz=73,slow=13,SNR=2.2
GERES S **S 21 23 04.8 -0.4**
comp=Z,2.1nm,0.9s,baz=85,slow=11,SNR=2.1
GERES LR LR 21 37 09.7
comp=Z,29μm,18.5s,baz=80,slow=37
GEA0 GERESS Array S 47.80 303 *e*P **P 21 16 10.5 +1.2**
MUD Monsted U'grnd 47.82 314 *i* P **P 21 16 10.9 +1.7**
comp=Z,212nm,1.0s
MUD *i* 21 18 01.4
comp=Z,165μm,14.0s
MOA Molln 47.83 301 *i* P **P 21 16 11.4 +1.9**
comp=Z,193nm,1.4s,SNR=87
MOA *e*PP **PP 21 18 03.8 +2.7**
comp=Z,103nm,1.4s
HYA Hoyanger 47.93 320 *e*P **P 21 16 11.7 +1.7**
HYA IVmBBB 21 16 14.2
comp=Z,843nm,0.5s
OZLJ Ozalj 47.93 298 P **P 21 16 11.8 +1.5**
PPSI Pulau Pagai 48.03 159 P **P 21 16 13.4 +2.2**
ATD Arta Tunnel 48.04 241 P **P 21 16 12.9 +1.4**
comp=Z,55nm,0.9s,baz=358,slow=6.1,SNR=25
ATD PP **PP 21 18 04.8 +1.1**
comp=Z,50nm,1.1s,baz=278,slow=14,SNR=1.6
ATD S **S 21 23 06.9 -2.2**
comp=Z,11nm,1.1s,baz=45,slow=19,SNR=1.8
ATD LR LR 21 40 14.9
comp=Z,31μm,18.2s,baz=46,slow=41
ATD Arta Tunnel 48.04 241 *e*P **P 21 16 13.6 +2.1**
comp=Z,230nm,1.4s
ATD PP **PP 21 18 04.8 +1.1**
ATD S **S 21 23 06.9 -2.2**
NKC Novy Kostel 48.05 305 *i* P **P 21 16 12.7 +1.5**
NKC *e*pP **sP 21 16 21.6 +3.0**
NKC *e*PP **PP 21 18 04.7 +1.6**
NKC *e*S **S 21 23 11.6 +3.0**
NKC AMS AMS 21 37 00.0
comp=Z,110μm,13.4s
NKC Novy Kostel 48.05 305 *i* P **P 21 16 12.7 +1.5**
NKC *e* 21 16 21.6
NKC *e* 21 18 04.7
NKC *e*S **S 21 23 11.6 +3.0**
NKC MLR MLR
comp=Z,110μm,13.4s
ODD1 Odda 48.07 319 IVmB_BB 21 16 13.6
comp=Z,7μm,4.9s
ODD1 *e*P **P 21 16 13.8 +2.6**
BOJS Bojanci 48.12 298⇑*i*P **P 21 16 12.6 +0.9**
BOJS *e*PP **PP 21 18 07.5 +3.8**
BOJS *i* S **S 21 23 10.6 +1.1**
BOJS *e*ScS **ScS 21 26 06.3 +2.5**
MSLP Maasin 48.15 121 *e*P **P 21 16 12.2 -0.1**
OBKA Obir 48.16 299 *i* P **P 21 16 13.5 +1.3**
comp=Z,321nm,1.2s,SNR=154
OBKA *e*PP **PP 21 18 08.2 +3.9**
comp=Z,56nm,1.4s
PET Petropavlovsk 48.17 51 *e*P **P 21 16 11.0 -0.9**
PET *e*sP **pP 21 16 12.8 -4.5**
PET LR LR
comp=Z,43μm,21.0s
PET Petropavlovsk 48.17 51*c i*P **P 21 16 11.6 -0.3**
PET *e* 21 18 07.1
PET *e*S **S 21 23 06.9 -3.1**
PET *e*SS **SS 21 26 35.6 -3.1**
PET pmax pmax
comp=Z,336nm,1.0s
PET pmax pmax
comp=Z,4μm,6.7s
PET pmax pmax
comp=Z,5μm,8.6s
PET pmax pmax
comp=Z,4μm,10.3s
PET pmax pmax
comp=Z,300nm,1.5s
PET pmax pmax
comp=Z,7μm,10.7s
PET MLR MLR
comp=Z,76μm,16.0s
PET MLR MLR
comp=Z,75μm,16.0s
UDBI Udbina 48.18 296 P **P 21 16 12.1 -0.2**
WET Wettzell 48.20 303 P **P 21 16 14.1 +1.8**
WET pmax pmax
comp=Z,187nm,1.1s
SNART Snartemo 48.25 316 *e*P **P 21 16 13.7 +1.1**
SNART IVmB_BB 21 16 15.8
comp=Z,1μm,0.5s
BLS5 Blasjo 48.30 318 *e*P **P 21 16 14.6 +1.7**
BLS5 IVmBBB 21 16 23.6
comp=Z,1μm,1.9s
LJU Ljubljana 48.36 299⇑*i*P **P 21 16 14.9 +1.3**
LJU *e*PP **PP 21 18 09.1 +3.2**
LJU *e*S **S 21 23 11.8 -1.3**
LJU *e*ScS **ScS 21 26 07.2 +1.7**
LJU *e*SS SS 21 26 60.0 +18
MOX Moxa 48.40 305 P **P 21 16 15.0 +1.2**
MOX pmax pmax
comp=Z,277nm,1.0s
MYLDM Lahad Datu 48.41 132 *e*P **P 21 16 16.8 +2.6**
comp=Z,700nm,1.4s
BER Bergen 48.55 319 P **P 21 16 16.6 +1.8**
BER pmax pmax
comp=Z,138nm,0.8s
BER Bergen 48.55 319 *e*P **P 21 16 16.4 +1.6**
ASK Askoy 48.59 320 *e*P **P 21 16 16.1 +1.0**
SUE Sulen 48.62 320 *e*P **P 21 16 13.7 -1.6**
SUE IVmB_BB 21 16 17.4
comp=Z,3μm,3.5s
MYKA Terra Mystica 48.69 300 *i* P **P 21 16 17.2 +1.0**
comp=Z,170nm,1.3s,SNR=35
MYKA *e*PP **PP 21 18 12.2 +3.2**
comp=Z,63nm,1.1s
KBA Koelnbreinsper 48.70 301 *i* P **P 21 16 17.7 +1.4**
comp=Z,316nm,1.1s,SNR=88
KBA PP **PP 21 18 12.7 +3.5**
comp=Z,88nm,1.2s
KBA Koelnbreinsper 48.70 301 P **P 21 16 17.8 +1.4**
KBA pmax pmax
comp=Z,308nm,1.1s
NVLJ Novalja 48.75 297 P **P 21 16 16.9 +0.4**
CADS Cadrg 48.79 299⇑*i*P **P 21 16 17.3 +0.4**
CADS *i* PP **PP 21 18 12.0 +2.1**
JCJ Chichijima 48.80 90 LR LR 21 39 13.1
comp=Z,26μm,18.0s,baz=320,slow=39
STAV Stavanger 48.82 317 *e*P **P 21 16 17.9 +1.1**
STAV IVmBBB 21 16 20.3
comp=Z,2μm,1.0s
KMY Karmoy 48.96 318 *e*P **P 21 16 20.4 +2.5**
TRI Trieste 48.99 299 *e*P **P 21 16 19.3 +1.0**
comp=Z,216nm,0.8s
TRI Trieste 48.99 299 *e*P **P 21 16 19.3 +1.0**
TRI pmax pmax
comp=Z,216nm,0.8s
GRF Grafenberg Arr 48.99 304 P **P 21 16 20.4 +2.0**
GRF pmax pmax
comp=Z,712nm,1.2s
GRFO Grafenberg 48.99 304 *e*P **P 21 16 20.2 +1.8**
GRFO *e*pP **pP 21 16 20.8 -3.0**
GRFO Grafenberg 48.99 304 *e*P **P 21 16 20.2 +1.8**
MASI Maura Aman, Be 49.01 156 P **P 21 16 17.7 -1.1**
PAGZ Pagadian 49.03 125 *e*P **P 21 16 18.3 -0.7**
MATE Matera 49.23 291⇑*i*P **P 21 16 21.3 +1.0**
PPBI Pangkal Pinang 49.34 151 P **P 21 16 30.5 +9.2**
ABTA Abfaltersbach 49.36 300 *i* P **P 21 16 22.0 +0.7**
comp=Z,183nm,1.3s,SNR=44
STKI Sintang 49.41 143 P **P 21 16 23.6 +1.7**
HARA HARA 49.48 239 *i* P P 21 16 30.2 +7.5
HARA *i* S S 21 23 44.1 +14
HARA HARA 49.48 239 *i* P P 21 16 30.2 +7.5
HARA *i* S S 21 23 44.1 +14
BUTP Butuan 49.52 122 *e*P **P 21 16 22.9 +0.1**
FUR Furstenfeldbru 49.55 303 P **P 21 16 25.4 +2.7**
PMBI Palembang 49.59 153 P **P 21 16 26.4 +3.2**
WTTA Wattenberg 49.69 301 *i* P **P 21 16 25.5 +1.5**
comp=Z,584nm,1.3s,SNR=162
WATA Walderalm 49.70 301 *i* P **P 21 16 25.1 +1.1**
comp=Z,1μm,1.5s,SNR=213
TIP Timpagrande 49.87 290⇑*i*P **P 21 16 26.7 +1.4**
TIP Timpagrande 49.87 290 *e*P **P 21 16 25.9 +0.6**
comp=Z,812nm,1.2s
TIP Timpagrande 49.87 290 P **P 21 16 26.1 +0.8**
MOTA Moosalm 49.99 302 *i* P **P 21 16 27.4 +1.2**
comp=Z,856nm,1.2s,SNR=228
BUKP Musuan 50.02 123 *e*P **P 21 16 27.5 +0.8**
CUC Castrocucco 50.14 291 *e*P **P 21 16 28.2 +0.9**
comp=Z,320nm,0.9s
RETA Reutte 50.14 302 *i* P **P 21 16 28.9 +1.6**
comp=Z,638nm,1.5s,SNR=178
FETA Feichten 50.36 301 *i* P **P 21 16 30.5 +1.5**
comp=Z,736nm,1.2s,SNR=279
TNS Taunus Mts 50.44 306 P **P 21 16 31.1 +1.7**
TNS pmax pmax
comp=Z,204nm,1.0s
TOD Tromm 50.47 305 P **P 21 16 31.2 +1.5**
STU Stuttgart 50.58 304 *e*P **P 21 16 31.4 +1.0**
comp=Z,253nm,1.0s
STU Stuttgart 50.58 304 *e*P **P 21 16 31.4 +1.0**
STU pmax pmax
comp=Z,253nm,1.0s
JMIC Jan Mayen 50.64 335 *e*P **P 21 16 32.7 +2.1**
JMIC IVmB_BB 21 16 48.5
comp=Z,4μm,2.2s
BUG Bochum--Univer 50.64 308 P **P 21 16 32.9 +2.1**
AQU L'Aquila 50.67 295 *e*P **P 21 16 33.0 +1.7**
comp=Z,324nm,0.9s
AQU L'Aquila 50.67 295 *e*P **P 21 16 33.0 +1.7**
AQU pmax pmax
comp=Z,324nm,0.9s
WTSB Winterswijk 50.70 309 *e*P **P 21 16 32.7 +1.4**
comp=Z,1μm,2.0s
DAVA Damuels 50.77 302 *i* P **P 21 16 33.7 +1.5**
comp=Z,293nm,1.2s,SNR=100
DAVA *e*PP **PP 21 18 31.5 +3.4**
comp=Z,80nm,0.8s
FUORN Ofenpass-Fuorn 50.82 301 *e*P **P 21 16 33.4 +0.8**
comp=Z,643nm,1.4s
MDSI Maura Dua 50.87 155 P **P 21 16 31.7 -1.2**
CEL Celeste 50.91 289 *e*P **P 21 16 34.7 +1.5**
comp=Z,997nm,1.1s
DAV Davao City (W) 50.97 123 P **P 21 16 33.3 -0.5**
comp=Z,126nm,0.4s,baz=87,slow=19,SNR=1.8
DAV S **S 21 23 47.5 -2.6**
comp=Z,92nm,0.3s,baz=75,slow=20,SNR=2.2
DAV LR LR 21 39 34.4
comp=Z,42μm,20.3s,baz=1.0,slow=38
DAV Davao City (W) 50.97 123⇓*e*P **P 21 16 32.9 -0.8**
DAV Davao City (W) 50.97 123 P **P 21 16 33.3 -0.5**
DAV S **S 21 23 47.5 -2.6**
DAV LR LR
comp=Z,26μm,21.0s
DAVOX Davos/Dischmat 50.99 301 P **P 21 16 34.5 +0.7**
comp=Z,142nm,0.6s,baz=119,slow=2.9,SNR=207
DAVOX S **S 21 23 47.8 -2.2**
comp=Z,8.3nm,1.0s,baz=324,slow=19,SNR=1.6
DAVOX LR LR 21 38 48.7
comp=Z,44μm,21.1s,baz=59,slow=37
KTD Kalmit 51.02 305 P **P 21 16 35.8 +2.0**
DAG Danmarks Havn 51.09 343⇑*i*P **P 21 16 34.8 +0.9**
comp=Z,130nm,1.0s
comp=Z,34μm,18.0s
DAG Danmarks Havn 51.09 343 P **P 21 16 34.8 +0.9**
DAG pmax pmax
comp=Z,323nm,0.9s
BFO Black Forest 51.28 304 *e*P **P 21 16 36.4 +0.6**
comp=Z,43nm,1.1s
BFO LR LR
comp=Z,2μm,22.0s
BFO Black Forest 51.28 304 *i* P **P 21 16 37.0 +1.2**
LANF Langenberg 51.32 305 P **P 21 16 38.1 +2.0**
LWLI Liwa 51.33 155 P **P 21 16 35.0 -1.5**
SLE Schleitheim 51.42 303 P **P 21 16 38.4 +1.5**
TUE Stuetta 51.45 301 *e*P **P 21 16 37.4 +0.1**
comp=Z,296nm,0.8s
ANKE Ethiopia-Afar 51.50 243 *i* P **P 21 16 39.7 +1.5**
ANKE *i* S **S 21 24 05.4 +7.2**
ANKE Ethiopia-Afar 51.50 243 *i* P **P 21 16 39.7 +1.5**
ANKE *i* S **S 21 24 05.4 +7.2**
HGN Heimansgroeve 51.68 307 *e*P **P 21 16 39.9 +1.2**
comp=Z,861nm,1.9s
HGN *e*S **S 21 24 02.6 +3.4**
LRW Lerwick 51.69 321 IAMs_20 IAMs_20 21 39 10.4
comp=Z,90μm,16.4s
MEM Membach 51.70 307⇑P **P 21 16 40.0 +1.2**
comp=Z,107nm,1.2s
MEM Membach 51.70 307 P **P 21 16 40.8 +1.9**
MEM pmax pmax
comp=Z,181nm,1.3s
DGAR Diego Garcia 51.80 195 PFAKE 21 16 50.0 +10
DGAR LR LR
comp=Z,13μm,21.0s
BEBN Eben Emael 51.82 308⇑P **P 21 16 40.9 +1.3**
VLC Villacollemand 51.82 298 *e*P **P 21 16 41.5 +1.6**
comp=Z,718nm,0.9s
MTKI Muara Teweh, K 51.84 140 P **P 21 16 42.0 +1.7**
KASI Kota Agung 51.95 155 P **P 21 16 39.7 -1.3**
PBKI Pangkalan Bun 51.98 145 P **P 21 16 43.8 +2.5**
WLF Walferdange 52.02 306⇓P **P 21 16 43.0 +1.8**
comp=Z,156nm,1.7s
WLF Walferdange 52.02 306 *e*P **P 21 16 43.0 +1.8**
comp=Z,226nm,1.1s
ECH Echery 52.04 304 *e*P **P 21 16 41.0 -0.4**
comp=Z,259nm,1.3s
ECH Echery 52.04 304 *e*P **P 21 16 41.0 -0.4**
ECH pmax pmax
comp=Z,259nm,1.3s
BCLA Clavier 52.19 307⇑P **P 21 16 43.8 +1.3**
comp=Z,153nm,1.4s
VAE Valguarnera 52.31 289 P **P 21 16 45.0 +1.4**
comp=Z,29nm,0.5s,baz=342,slow=4.4,SNR=27
VAE LR LR 21 42 20.1
comp=Z,9μm,19.0s,baz=338,slow=40
SMKI Samarinda 52.52 137 P **P 21 16 47.9 +2.6**
AAE Adis Abeba 52.55 243 *i* P P 21 16 40.8 -5.1
AAE *i* S **S 21 24 12.0 -0.4**
AAE Adis Abeba 52.55 243 *i* P P 21 16 40.8 -5.1
AAE *i* S **S 21 24 12.0 -0.4**
AAE Adis Abeba 52.55 243 *i* P P 21 16 40.8 -5.1
AAE *i* S **S 21 24 12.0 -0.4**
AAE Adis Abeba 52.55 243 *i* P P 21 16 40.8 -5.1
AAE *i* S **S 21 24 12.0 -0.4**
UCC Uccle 52.58 308⇑P **P 21 16 45.9 +0.6**
UCC Uccle 52.58 308 *e*P **P 21 16 47.1 +1.8**
UCC *e*sP **P 21 16 47.4 +2.1**
UCC Uccle 52.58 308 *e*P **P 21 16 47.1 +1.8**
SNF Seneffe 52.74 308⇑P **P 21 16 48.3 +1.7**
comp=Z,77nm,1.0s
SENIN Lac Senin/Sane 52.77 302 *e*P **P 21 16 47.8 +0.6**
comp=Z,290nm,1.2s
BKB Balikpapan 53.08 138 P **P 21 16 50.8 +1.4**
CLTB Caltabellotta 53.08 290 *e*P **P 21 16 49.6 +0.2**
comp=Z,178nm,1.1s
MPSI Mapaga 53.23 134 P **P 21 16 51.2 +0.7**
CGJI Cibinong 53.35 154 P **P 21 16 48.5 -2.9**
MLA1 Latheron 53.46 319⇑*e*P **P 21 16 52.7 +1.0**
DRUM Mains of Drumt 53.63 317⇑*e*P **P 21 16 53.6 +0.7**
DRUM IAmb IAmb 21 16 57.5
comp=Z,363nm,1.5s
DRUM IAMs_20 IAMs_20 21 40 31.7
comp=Z,76μm,16.0s
BIGH Upper Bighouse 53.64 319⇑*e*P **P 21 16 53.6 +0.5**
BIGH IAMs_20 IAMs_20 21 41 59.8
comp=Z,83μm,12.6s
MME1 Meikle Cairn 53.69 318⇑*e*P **P 21 16 54.6 +1.1**
MCD Coleburn Disti 53.72 318⇑*e*P **P 21 16 54.4 +0.8**
BNI Bardonecchia 53.76 301 *e*P **P 21 16 55.1 +0.8**
comp=Z,736nm,1.2s
BNI Bardonecchia 53.76 301 *e*P **P 21 16 55.1 +0.8**
BNI pmax pmax
comp=Z,736nm,1.2s
WACR West Acre 53.83 311⇑*e*P **P 21 16 54.2 -0.3**
WACR IAmb IAmb 21 16 59.1
comp=Z,262nm,1.0s
WACR IAMs_20 IAMs_20 21 41 34.9
comp=Z,121μm,14.4s
LMK Market Rasen 54.02 313 IAMs_20 IAMs_20 21 41 33.2
comp=Z,117μm,15.9s
EDU Dundee 54.05 317⇑*e*P **P 21 16 56.8 +0.7**
ESY Stoneypath 54.12 316⇑*e*P **P 21 16 57.1 +0.4**
MRSI Marisa 54.20 132 P **P 21 16 58.1 +0.4**
PCI Palu 54.25 135 P **P 21 16 59.9 +1.9**
comp=Z,353nm,1.9s,comp=Z,7μm
ELSH Elham, Standar 54.25 310 *e*P **P 21 16 58.7 +1.1**
ELSH IAMs_20 IAMs_20 21 41 45.8
comp=Z,194μm,16.1s
EDMD Edmundbyers 54.27 315⇑*e*P **P 21 16 58.2 +0.5**
EDMD IAmb IAmb 21 17 02.5
comp=Z,324nm,1.7s
EDMD IAMs_20 IAMs_20 21 41 56.0
comp=Z,116μm,14.9s
MDO Dochfour 54.31 318⇑*e*P **P 21 16 58.5 +0.5**
EDI Edinburgh 54.41 316⇑*e*P **P 21 16 58.6 0.0**
EDI IAMs_20 IAMs_20 21 41 18.1
comp=Z,72μm,13.7s
HPK Haverah Park 54.49 314⇑*e*P **P 21 17 00.0 +0.7**
HPK IAMs_20 IAMs_20 21 41 46.4
comp=Z,75μm,18.5s
KBKI Kotabaru 54.51 140 P **P 21 17 01.1 +1.2**
INVG Invergeldie, C 54.61 317⇑*e*P **P 21 17 00.9 +0.7**
INVG IAMs_20 IAMs_20 21 41 11.3
comp=Z,49μm,15.0s
MSEY Mahe Island 54.63 217 *e*P **P 21 17 01.7 +0.9**
comp=Z,97nm,1.2s
MSEY LR LR
comp=Z,15μm,22.0s
EKA Eskdalemuir Ar 54.66 316 P **P 21 17 00.6 0.0**
comp=Z,48nm,0.7s,baz=62,slow=7.0,SNR=67
EKA S **S 21 24 38.8 -0.7**
comp=Z,1.1nm,0.7s,baz=66,slow=35,SNR=2.7
EKA LR LR 21 39 25.7
comp=Z,31μm,18.6s,baz=60,slow=35
ESK Eskdalemuir 54.69 316 *e*P **P 21 17 01.8 +1.1**
comp=Z,171nm,0.8s
ESK LR LR
comp=Z,36μm,20.0s
ESK Eskdalemuir 54.69 316⇑*e*P **P 21 17 00.4 -0.4**
ESK IAmb IAmb 21 17 04.0
comp=Z,131nm,1.1s
ESK IAMs_20 IAMs_20 21 41 37.9
comp=Z,65μm,15.5s
ESK Eskdalemuir 54.69 316 *e*P **P 21 17 01.8 +1.1**
ESK pmax pmax
comp=Z,171nm,0.8s
ESK MLR MLR
comp=Z,36μm,20.0s
LBWR Ladybower, Pea 54.79 313 *e*P **P 21 17 02.8 +1.2**
LBWR IAMs_20 IAMs_20 21 41 57.7
comp=Z,111μm,16.8s
BHH Howats Hill 54.80 315 *e*P **P 21 17 02.0 +0.5**
DILA Dilla 54.82 242 *i* P **P 21 17 02.8 +0.4**
DILA *i* S **S 21 24 46.9 +4.0**
DILA Dilla 54.82 242 *i* P **P 21 17 02.8 +0.4**
DILA *i* S **S 21 24 46.9 +4.0**
HMNX Herstmonceux 54.83 310⇑*e*P **P 21 17 02.0 +0.2**
HMNX IAMs_20 IAMs_20 21 42 12.1
comp=Z,174μm,16.4s
EAB Aberfoyle 54.87 317⇑*e*P **P 21 17 03.0 +1.0**
CWF Charnwood Fore 54.87 312 *e*P **P 21 17 01.4 -0.7**
CWF IAMs_20 IAMs_20 21 42 15.6
comp=Z,117μm,14.0s
CISI Cisompet, Garu 54.95 152 P P 21 17 08.0 +4.9
CISI Cisompet, Garu 54.95 152 *e*P **P 21 17 04.2 +1.1**
CISI *e*pP **P 21 17 06.2 +3.1**
KESW Keswick, Cumbr 54.97 315 *e*P **P 21 17 03.9 +1.1**
KESW IAMs_20 IAMs_20 21 42 18.2

comp=Z,129µm,14.7s
SSB Saint Sauveur 54.98 302 *e*P **P 21 17 03.5 +0.4**
comp=Z,630nm,1.6s
SSB Saint Sauveur 54.98 302 *e*P **P 21 17 03.5 +0.4**
SSB pmax pmax
comp=Z,630nm,1.6s
KPL Plockton 54.98 319 *e*P **P 21 17 03.6 +0.8**
KPL IAMs_20 IAMs_20 21 41 20.7
comp=Z,84µm,15.8s
PGBU Glenifferbraes 55.11 317⇑ *e*P **P 21 17 05.1 +1.3**
PGBU IAmb IAmb 21 17 08.3
comp=Z,615nm,1.8s
PGBU IAMs_20 IAMs_20 21 41 28.7
comp=Z,54µm,18.7s
KPJI Karang Pucung 55.14 150 P **P 21 17 02.6 -1.8**
STNC Stoke 55.19 313⇑ *e*P **P 21 17 05.6 +1.2**
STNC IAMs_20 IAMs_20 21 42 09.5
comp=Z,109µm,18.2s
APSI Ampana 55.21 133 P **P 21 17 05.3 +0.4**
KMSI Cibinong 55.25 129 P **P 21 17 06.6 +1.3**
comp=Z,520nm,1.0s,comp=Z,4µm
SMRI Semarang 55.44 148 P **P 21 17 08.5 +1.9**
SMRI Semarang 55.44 148 *e*P **P 21 17 07.7 +1.1**
SMRI *e*pP **P 21 17 08.4 +1.8**
BUW Bucklebury Wes 55.45 311⇑ *e*P **P 21 17 07.1 +0.9**
HEA Headley 55.49 311 *e*P **P 21 17 06.2 -0.3**
GAL1 Galloway 55.67 316 *e*P **P 21 17 08.7 +0.9**
GAL1 IAMs_20 IAMs_20 21 42 08.8
comp=Z,33µm,15.0s
STRD Stroud 55.79 311 *e*P **P 21 17 09.2 +0.5**
STRD IAmb IAmb 21 17 13.7
comp=Z,298nm,1.0s
STRD IAMs_20 IAMs_20 21 43 12.7
comp=Z,74µm,14.3s
FOEL Foel Wylfa 55.82 313 *e*P **P 21 17 08.9 0.0**
FOEL IAMs_20 IAMs_20 21 42 37.4
comp=Z,100µm,17.7s
HLM1 Long Mynd 55.82 312 *e*P **P 21 17 09.8 +0.8**
HLM1 IAmb IAmb 21 17 13.6
comp=Z,208nm,1.2s
HLM1 IAMs_20 IAMs_20 21 42 47.7
comp=Z,88µm,14.8s
IOMK Kirk Michael 55.88 315⇑ *e*P **P 21 17 09.4 0.0**
IOMK IAmb IAmb 21 17 14.7
comp=Z,258nm,1.3s
IOMK IAMs_20 IAMs_20 21 42 36.4
comp=Z,91µm,15.8s
LUWI Luwuk 55.92 132 P **P 21 17 09.3 -0.8**
LUWI Luwuk 55.92 132 *e*P **P 21 17 10.5 +0.4**
LUWI *e*pP **P 21 17 11.8 +1.7**
WIM Isle of Man 55.99 315 *e*P **P 21 17 10.8 +0.7**
WPM1 Penmaenmawr 56.02 314⇑ *e*P **P 21 17 11.6 +1.2**
BATH Bath 56.04 311⇑ *e*P **P 21 17 11.3 +0.8**
BATH IAMs_20 IAMs_20 21 43 03.4
comp=Z,115µm,14.4s
TTSI Tana Toraja 56.07 136 P **P 21 17 12.1 +1.0**
LLW Llanuwychllyn 56.08 313 *e*P **P 21 17 11.7 +0.9**
MONM Monmouth 56.11 312 *e*P **P 21 17 11.6 +0.6**
MONM IAmb IAmb 21 17 16.1
comp=Z,272nm,1.0s
MONM IAMs_20 IAMs_20 21 42 48.4
comp=Z,66µm,15.9s
NGJI Ngawi 56.12 147 P **P 21 17 14.1 +2.6**
MCH1 Michaelchurch 56.14 312⇑ *e*P **P 21 17 11.9 +0.7**
MCH1 IAmb IAmb 21 17 22.7
comp=Z,601nm,1.3s
MCH1 IAMs_20 IAMs_20 21 42 50.3
comp=Z,96µm,14.8s
WME Myndd Eilian 56.16 314 *e*P **P 21 17 11.1 -0.2**
WLF1 Llynfaes 56.26 314⇑ *e*P **P 21 17 12.2 +0.1**
WLF1 IAmb IAmb 21 17 16.5
comp=Z,946nm,1.6s
WLF1 IAMs_20 IAMs_20 21 43 25.5
comp=Z,133µm,14.9s
WPS Cemaes, Angles 56.26 314 *e*P **P 21 17 11.7 -0.3**
WPS IAMs_20 IAMs_20 21 43 16.9
comp=Z,72µm,15.2s
UGM Wanagama 56.26 149 *e*P **P 21 17 12.1 -0.4**
comp=Z,545nm,1.6s
CLGH Cloghs, Cushen 56.27 316 IAMs_20 IAMs_20 21 42 13.9
comp=Z,42µm,15.3s
WOJI Wonogiri, Jawa 56.35 148 P **P 21 17 13.3 +0.3**
YRC Rhoscolyn 56.37 314⇑ *e*P **P 21 17 14.2 +1.4**
COCO West Island 56.47 166 PFAKE 21 17 30.0 +16
COCO LR LR
comp=Z,15µm,19.0s
GMM Mts of Mourne 56.60 315 *e*P **P 21 17 15.5 +1.0**
KEST Kesra 56.70 290 P **P 21 17 16.0 +0.4**
comp=Z,31nm,0.6s,baz=357,slow=3.1,SNR=63
KEST S **S 21 25 09.2 +1.8**
comp=Z,10nm,1.1s,baz=218,slow=18,SNR=1.7
KEST LR LR 21 47 30.3
comp=Z,11µm,18.7s,baz=359,slow=42
KEST Kesra 56.70 290 *e*P **P 21 17 16.9 +1.3**
KEST *es*P **P 21 17 17.4 +1.8**
KEST S **S 21 25 09.2 +1.8**
SMY Shemya 56.78 47 *e*P **P 21 17 15.6 -0.2**
SMY *es*P **P 21 17 16.6 +0.8**
SMY Shemya 56.78 47 *e*P **P 21 17 15.6 -0.2**
SPSI Sidrap Palu 56.83 137 P **P 21 17 17.2 +0.7**
PWJI Pagerwojo 56.86 147 P **P 21 17 16.5 -0.2**
TNTI Ternate 57.04 126 *e*P **P 21 17 18.0 -0.1**
TNTI *es*P **P 21 17 18.3 +0.2**
JSA Saint Aubin 57.05 309⇑ *e*P **P 21 17 17.1 -0.7**
JSA IAMs_20 IAMs_20 21 43 10.9
comp=Z,80µm,16.5s
DSB Dublin 57.32 314 *e*P **P 21 17 19.7 +0.1**
DSB *es*P **P 21 17 20.9 +1.3**
BLJI Banyuglugur 57.33 145 P **P 21 17 22.3 +2.3**
comp=Z,122nm,1.1s,comp=Z,4µm
DYA Yadsworthy 57.42 311 *e*P **P 21 17 18.6 -1.8**
DYA IAMs_20 IAMs_20 21 44 05.6
comp=Z,82µm,13.9s
HTL Hartland 57.44 311⇑ *e*P **P 21 17 20.9 +0.5**
HTL IAMs_20 IAMs_20 21 43 48.1
comp=Z,40µm,15.4s
CMAH Djebel Manchou 57.53 292 P **P 21 17 21.9 +0.5**
ABSA Djebel Ababsia 57.68 291 P **P 21 17 24.0 +1.5**
KAPI Kappang 57.73 137 PFAKE 21 17 40.0 +17
KAPI LR LR
comp=Z,13µm,21.0s
GMJI Gumukmas 57.74 146 P **P 21 17 21.2 -1.8**
SUMG Summit 57.76 343⇑ *i*P **P 21 17 24.4 +1.5**
comp=Z,433nm,1.4s
SUMG Summit 57.76 343 *e*P **P 21 17 23.8 +0.9**
comp=Z,428nm,1.4s
SUMG Summit 57.76 343 *e*P **P 21 17 23.8 +0.9**
SUMG pmax pmax
comp=Z,428nm,1.4s
BORG Borgarnes 57.79 331 P **P 21 17 24.1 +1.4**
comp=Z,43nm,0.8s,baz=69,slow=3.9,SNR=12
BORG Borgarnes 57.79 331 *e*P **P 21 17 25.9 +3.2**
comp=Z,224nm,1.4s
BORG LR LR
comp=Z,6µm,20.0s
CAEH 'Ain El Ouahch 57.83 292 P **P 21 17 24.4 +0.9**
RDOG Red Dog Mine 57.99 24 *e*P **P 21 17 23.9 -0.2**
RDOG *es*P **P 21 17 24.5 +0.4**
CKFL Kef-Lekhel 58.13 292 P **P 21 17 26.8 +1.1**
BKSI Bulukumba 58.17 137 P **P 21 17 26.4 +0.4**
comp=Z,179nm,1.2s,comp=Z,3µm
JAGI Jajag, Banyuwa 58.22 145 P **P 21 17 25.5 -0.8**
JAGI Jajag, Banyuwa 58.22 145 *e*P **P 21 17 25.6 -0.7**
comp=Z,155nm,0.9s
LBMI Labuha 58.26 127 P **P 21 17 27.9 +1.3**
CCA1 Carnmenellis 58.26 311⇑ *e*P **P 21 17 26.7 +0.5**
CCA1 IAMs_20 IAMs_20 21 44 35.6
comp=Z,104µm,14.6s
CASM Ain Smara 58.36 292 P **P 21 17 28.3 +1.1**
CTEI Djebel Teioual 58.52 292 P **P 21 17 30.1 +1.6**
SANI Sanana 58.54 129 P **P 21 17 28.0 -0.6**
DFRA Djebel Bou Aff 58.62 292 P **P 21 17 30.1 +1.0**
IGBI Denpasar 58.95 144 P P 21 17 37.3 +5.9
LODK Lodwar 58.98 242 *i*P **P 21 17 32.5 +0.7**
LODK Lodwar 58.98 242 *e*P **P 21 17 31.6 -0.2**
LODK *e* 21 17 39.8
baz=30,slow=11
LODK 21 35 20.4
LODK AMP 21 45 03.8
comp=N,3µm,17.1s
LODK AMP 21 46 45.6
comp=E,5µm,9.0s
TULEG Thule 59.11 353 *e*P **P 21 17 29.8 -2.0**
TULEG *es*P **P 21 17 31.5 -0.3**

SET Setif 59.13 292 P **P 21 17 35.0 +2.4**
CKHR Kef el Ahmar 59.15 292 P **P 21 17 34.4 +1.5**
GUMO Guam 59.24 101 P **P 21 17 33.7 +0.2**
comp=E,82nm,0.8s,baz=336,slow=10.0,SNR=2.9
GUMO LR LR 21 44 52.7
comp=E,11µm,18.1s,baz=310,slow=38
GUMO Guam 59.24 101 *e*P **P 21 17 33.8 +0.2**
comp=E,872nm,1.5s
GUMO LR LR
comp=Z,9µm,19.0s
GUMO Guam 59.24 101 *e*P **P 21 17 33.8 +0.2**
GUMO pmax pmax
comp=Z,872nm,1.5s
GUMO MLR MLR
comp=Z,9µm,19.0s
ANM Nome 59.32 28 *e*P **P 21 17 34.5 +1.1**
ANM *es*P **P 21 17 34.7 +1.3**
ANM Nome 59.32 28 *e*P **P 21 17 34.5 +1.1**
KULLO Kullorsuaq 59.55 349⇑ *i*P **P 21 17 35.7 +0.9**
comp=Z,215nm,1.2s
comp=Z,46µm,16.0s
TWSI Taliwang, Sumb 59.63 142 P **P 21 17 34.6 -1.5**
VAL Valentia 60.01 315 *e*P P 21 17 45.2 +6.9
VAL *i*S **S 21 25 52.4 +2.5**
PLAI Plampang 60.12 141 P **P 21 17 39.5 +0.1**
comp=Z,103nm,1.1s,comp=Z,2µm
NLAI Namlea 60.14 129 P **P 21 17 38.5 -1.1**
EMHD Djebel Mahouad 60.77 294 P **P 21 17 46.0 +2.0**
AAI Ambon 61.13 128 P **P 21 17 46.8 +0.4**
TOLK Toolik Lake Re 61.23 20 P **P 21 17 46.4 -0.1**
baz=318,SNR=151
TOLK S **S 21 26 05.7 +0.5**
baz=318
TOLK Toolik Lake Re 61.23 20 *e*P **P 21 17 47.4 +0.9**
comp=Z,279nm,0.9s
MSAI Masohi 61.27 127 P **P 21 17 50.4 +3.0**
KMBO Kilima Mbogo 61.32 237 P P 21 18 02.2 +14
comp=Z,102nm,1.1s,baz=19,slow=9.3,SNR=38
KMBO LR LR 21 46 33.5
comp=Z,23µm,21.7s,baz=35,slow=38
KMBO Kilima Mbogo 61.32 237 PFAKE 21 18 00.0 +12
KMBO LR LR
comp=Z,20µm,19.0s
EBNR Beni Rached 61.67 294 P **P 21 17 52.0 +2.1**
ECHA Ech Chlef 61.85 294 P **P 21 17 53.2 +2.1**
SPIA Saint Paul Isl 61.91 37 *e*P **P 21 17 52.3 +1.2**
comp=Z,793nm,1.6s
WSI Waingapu 62.02 139 P **P 21 17 50.9 -1.5**
MMRI Maumere 62.08 137 P **P 21 17 51.9 -0.8**
MMRI Maumere 62.08 137 *e*P **P 21 17 51.6 -1.1**
comp=Z,420nm,1.1s
COLD Coldfoot 62.12 21 *e*P **P 21 17 52.3 -0.1**
COLD *es*P **P 21 17 53.0 +0.6**
EANR 'Ain N'Sour 62.15 294 P **P 21 17 54.7 +1.5**
RES Resolute Bay 62.17 360 *e*P **P 21 17 52.6 0.0**
comp=Z,54nm,0.9s
RES Resolute Bay 62.17 360 *e*P **P 21 17 52.6 0.0**
RES pmax pmax
comp=Z,54nm,0.9s
ETRT Tiaret 62.34 294 P **P 21 17 57.1 +2.6**
ANGG Ammassalik, Gr 62.49 337 *e*P **P 21 17 55.2 +0.4**
ANGG *es*P **P 21 17 55.8 +1.0**
CART Cartagena 62.59 297 *e*P **P 21 17 57.6 +1.6**
comp=Z,167nm,0.8s
FAKI Fak Fak 62.90 124 P **P 21 17 57.8 -0.5**
FAKI Fak Fak 62.90 124 *e*P **P 21 17 57.4 -0.9**
comp=Z,533nm,1.2s
RKPI Ransiki, Papua 62.98 121 P **P 21 18 00.5 +1.7**
comp=Z,323nm,1.3s,comp=Z,6µm
ILULI Ilulissat 63.02 344⇑ *i*P **P 21 17 59.0 +0.7**
comp=Z,110nm,0.9s
comp=Z,25µm,16.0s
ILULI Ilulissat 63.02 344 *e*P **P 21 17 59.7 +1.4**
comp=Z,412nm,1.2s
ILULI Ilulissat 63.02 344 *e*P **P 21 17 59.7 +1.4**
ILULI pmax pmax
comp=Z,412nm,1.2s
ATKA Atka Island 63.07 43 *e*P **P 21 17 59.9 +1.0**
comp=Z,102nm,0.9s
ES19 SONSECA Array 63.23 300 *e*P **P 21 18 00.9 +0.5**
ES19 *es*P **P 21 18 01.8 +1.5**
ESDC Sonseca Array 63.28 300 P **P 21 18 00.2 -0.5**
comp=Z,35nm,0.6s,baz=51,slow=6.5,SNR=187
ESDC S **S 21 26 31.6 -0.3**
comp=Z,1.4nm,0.9s,baz=52,slow=8.3,SNR=2.8
ESDC LR LR 21 46 50.0
comp=Z,16µm,19.5s,baz=70,slow=37
ESDC PKP2bc 21 47 06.2
comp=Z,1.6nm,0.9s,baz=244,slow=2.5,SNR=7.2
ESLA Sonseca Array 63.28 300 *e*P **P 21 18 01.5 +0.8**
comp=Z,273nm,1.2s
ODJA Bouhanifia 63.34 294 P **P 21 18 02.0 +0.9**
USTO Oran 63.37 295 P **P 21 18 05.0 +3.8**
PAB San Pablo 63.60 300 *e*P **P 21 18 03.4 +0.6**
comp=Z,265nm,1.2s
PAB LR LR
comp=Z,28µm,20.0s
PAB San Pablo 63.60 300 *e*P **P 21 18 03.4 +0.6**
PAB pmax pmax
comp=Z,265nm,1.2s
PAB MLR MLR
comp=Z,28µm,20.0s
MLY Manley 63.61 23 *e*P **P 21 18 02.8 +0.4**
comp=Z,259nm,1.0s
PBRG Braganca 63.76 304 *e*P **P 21 18 05.3 +1.5**
comp=Z,267nm,1.3s
PBRG Braganca 63.76 304 *e*PP PP 21 20 25.0 +1.3
FYU Fort Yukon 63.90 20 *e*P **P 21 18 05.4 +1.2**
comp=Z,484nm,1.3s
BAKI Biak 63.94 119 P **P 21 18 06.4 +1.2**
SOEI Soe 64.05 136 P **P 21 18 05.7 -0.3**
comp=Z,438nm,0.9s,comp=Z,6µm
SOEI Soe 64.05 136 *e*P **P 21 18 04.9 -1.2**
comp=Z,429nm,1.0s
BPAW Bear Paw Mtn. 64.23 24 *e*P **P 21 18 07.0 +0.5**
comp=Z,239nm,0.9s
MVO Moncorvo 64.31 303 *e*P **P 21 18 09.0 +1.5**
comp=Z,434nm,1.3s
MVO *e*S **S 21 26 45.3 +0.6**
MVO *e*LQ LQ 21 33 56.4
MVO *e*LR LR 21 38 58.3
comp=Z,21µm,20.0s
MDM Murphy Dome 64.36 22 *e*P **P 21 18 08.0 +0.6**
comp=Z,160nm,1.0s
KMPI Kaimana, Papua 64.37 123 P **P 21 18 10.7 +2.7**
CAST Castle Rocks 64.41 25 *e*P **P 21 18 08.8 +1.0**
comp=Z,343nm,1.0s
COLA College 64.53 22 *e*P **P 21 18 09.5 +1.1**
comp=Z,267nm,0.8s
COLA LR LR
comp=Z,1.0nm,22.0s
COLA College 64.53 22 *e*P **P 21 18 09.5 +1.1**
COLA pmax pmax
comp=Z,267nm,0.8s
SRPI Serui, Papua 64.55 120 P **P 21 18 12.5 +3.3**
PGAV Gavieira, Arco 64.59 304 *e*P **P 21 18 10.4 +1.1**
comp=Z,293nm,1.1s
PGAV Gavieira, Arco 64.59 304 *e*PP PP 21 20 32.6 +1.6
PGAV *e*S **S 21 26 50.5 +2.3**
PGAV *e*LQ LQ 21 36 39.1
PGAV *e*LR LR 21 42 12.4
comp=Z,18µm,20.0s
PCAB Cabril 64.60 304 *e*P **P 21 18 11.2 +1.9**
comp=Z,576nm,1.2s
PCAB Cabril 64.60 304 *e*PP PP 21 20 31.6 +0.6
POLO Lamas de Olo 64.66 304 *e*P **P 21 18 10.8 +1.1**
comp=Z,93nm,1.6s
POLO Lamas de Olo 64.66 304 *e*PP PP 21 20 33.7 +2.1
KTH Kantishna Hill 64.66 24 *e*P **P 21 18 10.4 +1.0**
comp=Z,478nm,1.0s
PVRL Vila Real 64.67 304 *e*P **P 21 18 10.9 +1.1**
comp=Z,161nm,1.3s
CCB Clear Creek Bu 64.72 22 *e*P **P 21 18 09.4 -0.2**
comp=Z,227nm,1.2s
SFJD Kangerlussuaq 64.74 342 P **P 21 18 09.7 0.0**
comp=Z,40nm,0.5s,baz=46,slow=6.5,SNR=12
SFJD S **S 21 26 48.5 -0.5**
comp=Z,9.9nm,0.6s,baz=166,slow=19,SNR=1.9
SFJD LR LR 21 50 09.7
comp=Z,26µm,18.6s,baz=36,slow=40
SFJD Kangerlussuaq 64.74 342⇑ *i*P **P 21 18 10.4 +0.7**
comp=Z,27µm,17.0s
SFJD Kangerlussuaq 64.74 342 *e*P **P 21 18 11.0 +1.2**
comp=Z,270nm,1.1s
SFJD S **S 21 26 48.5 -0.5**
SFJD LR LR

comp=Z,27µm,19.0s
PPLA Purkeypile 64.77 25 *e*P **P 21 18 10.2 0.0**
comp=Z,1µm,1.8s
WRH Wood River Hil 64.78 22 *e*P **P 21 18 09.6 -0.4**
comp=Z,192nm,1.0s
IL1 Eielson Array 64.87 22 *e*P **P 21 18 09.6 -1.1**
ILAR Eielson Array 64.87 22 P **P 21 18 10.1 -0.6**
comp=Z,104nm,0.9s,baz=313,slow=5.1,SNR=302
ILAR PP **PP 21 20 33.5 +0.6**
comp=Z,28nm,1.0s,baz=314,slow=7.3,SNR=5.1
ILAR PKPPKP P'P'df 21 46 52.0 -11
comp=Z,5.9nm,1.0s,baz=179,slow=2.2,SNR=10
ILAR LR LR 21 50 14.2
comp=Z,46µm,19.7s,baz=314,slow=40
ILB Eielson Array 64.87 22 *e*P **P 21 18 09.8 -0.9**
TRF Thorofare Moun 64.93 24 *e*P **P 21 18 11.6 +0.3**
comp=Z,174nm,1.1s
INK Inuvik 64.98 15 P **P 21 18 11.1 -0.2**
comp=Z,364nm,1.0s,baz=349,slow=8.2,SNR=188
INK Inuvik 64.98 15 *e*P **P 21 18 11.0 -0.2**
comp=Z,464nm,1.0s
SVW2 Sparrevohn 64.98 28 *e*P **P 21 18 12.7 +1.3**
MBAR Mbarara 65.02 243 *e*P **P 21 18 12.8 +0.3**
comp=Z,190nm,1.1s
MBAR LR LR
comp=Z,715nm,19.0s
MBAR Mbarara 65.02 243 *e*P **P 21 18 12.8 +0.3**
MBAR pmax pmax
comp=Z,190nm,1.1s
MTE Manteigas 65.08 303 *e*P **P 21 18 14.3 +1.8**
comp=Z,301nm,1.1s
MTE Manteigas 65.08 303 *e*PP PP 21 20 36.7 +1.4
MTE *e*S **S 21 26 55.0 +0.8**
MTE *e*LQ LQ 21 34 15.8
MTE *e*LR LR 21 39 35.2
comp=Z,21µm,20.0s
MTE Manteigas 65.08 303 *e*P **P 21 18 14.4 +1.9**
comp=Z,227nm,1.1s
MCK McKinley 65.11 23 *e*P **P 21 18 12.7 +0.5**
comp=Z,153nm,1.0s
MCK McKinley 65.11 23 *e*P **P 21 18 12.7 +0.5**
MCK pmax pmax
comp=Z,153nm,1.0s
PVIS Viseu 65.11 303 *e*P **P 21 18 14.3 +1.7**
comp=Z,230nm,1.2s
PVIS Viseu 65.11 303 *e*PP PP 21 20 36.4 +0.9
NIKH Nikolski High 65.15 40 *e*P **P 21 18 11.6 -1.0**
comp=Z,121nm,0.8s
PTO Porto 65.28 304 *e*P **P 21 18 15.7 +2.0**
comp=Z,311nm,1.3s
PCBR Castelo Branco 65.37 302 *e*P **P 21 18 15.8 +1.5**
comp=Z,133nm,1.3s
PCBR Castelo Branco 65.37 302 *e*PP PP 21 20 36.5 -1.3
PMRV Marv??o 65.57 302 *e*P **P 21 18 17.0 +1.4**
comp=Z,416nm,1.3s
PMRV Marv??o 65.57 302 *e*PP PP 21 20 37.9 -1.6
PMRV *e*S **S 21 27 03.4 +3.3**
PMRV *e*LQ LQ 21 34 20.4
PMRV *e*LR LR 21 39 40.7
comp=Z,20µm,18.0s
SKT Skwentna 65.66 25 *e*P **P 21 18 15.4 -0.4**
comp=Z,268nm,1.0s
UNV Unalaska Valle 65.66 38 *e*P **P 21 18 15.8 0.0**
comp=Z,117nm,1.0s
AKUT Akutan 65.80 37 *e*P **P 21 18 17.1 +0.3**
comp=Z,122nm,1.0s
PCAS Casmilo, Conde 65.87 303 *e*P **P 21 18 19.4 +1.8**
comp=Z,486nm,1.3s
PCAS Casmilo, Conde 65.87 303 *e*PP PP 21 20 50.6 +8.4
PESTR Estremoz 66.03 301 *e*P **P 21 18 19.7 +1.1**
comp=Z,226nm,1.3s
PESTR Estremoz 66.03 301 *e*PP PP 21 20 43.7 +0.1
PESTR Estremoz 66.03 301 *e*P **P 21 18 20.0 +1.4**
comp=Z,103nm,1.2s
DHY Denali Highway 66.06 23 *e*P **P 21 18 17.8 -0.7**
comp=Z,197nm,0.8s
PTOM Tomar 66.08 302 *e*P **P 21 18 20.5 +1.6**
comp=Z,257nm,1.4s
PTOM Tomar 66.08 302 *e*PP PP 21 20 44.0 0.0
PBAR Barrancos 66.10 300 *e*P **P 21 18 20.6 +1.6**
comp=Z,672nm,1.2s
PBAR Barrancos 66.10 300 *e*PP PP 21 20 45.2 +1.0
RIDG Independ'e Rid 66.24 22 *e*P **P 21 18 18.7 -0.9**
SUA Susitna One 66.29 26 *e*P **P 21 18 19.7 -0.3**
comp=Z,173nm,1.0s
PMTG Montargil 66.30 302 *e*P **P 21 18 21.8 +1.5**
comp=Z,199nm,1.2s
PMTG Montargil 66.30 302 *e*PP PP 21 20 44.6 -1.3
EGAK Eagle 66.34 20 *e*P **P 21 18 19.2 -1.0**
comp=Z,192nm,0.9s
EGAK LR LR
comp=Z,37µm,21.0s
SAUI Saumlaki 66.39 128 P **P 21 18 23.3 +2.2**
comp=Z,2µm,1.1s,comp=Z,22µm
SAUI Saumlaki 66.39 128 *e*P **P 21 18 22.4 +1.3**
comp=Z,2µm,1.1s
RSO Redoubt South 66.40 27 *e*P **P 21 18 22.2 +1.4**
ALMR Almeirim 66.47 302 *e*P **P 21 18 21.8 +0.4**
ALMR *e*S **S 21 27 12.4 +1.5**
ALMR AMS AMS 21 47 11.4
comp=N,24µm,17.1s
ALMR Almeirim 66.47 302 *e*P **P 21 18 23.1 +1.8**
comp=N,437nm,1.2s
ALMR Almeirim 66.47 302 *e*PP PP 21 20 44.6 -2.7
EVO Evora 66.49 301 *e*P **P 21 18 23.1 +1.6**
comp=N,157nm,1.2s
EVO Evora 66.49 301 *e*PP PP 21 20 48.7 +1.1
DOT Dot Lake 66.52 21 *e*P **P 21 18 22.9 +1.5**
comp=N,1µm,1.8s
SFS San Fernando 66.61 299 *e*P **P 21 18 26.2 +3.9**
comp=N,352nm,1.1s
SFS San Fernando 66.61 299 P **P 21 18 24.9 +2.6**
PAX Paxson 66.68 22 *e*P **P 21 18 21.9 -0.5**
PAX Paxson 66.68 22 *e*P **P 21 18 21.9 -0.5**
PMR Palmer 66.69 25 *e*P **P 21 18 22.1 -0.3**
comp=N,144nm,0.9s
PMR Palmer 66.69 25 *e*P **P 21 18 22.1 -0.3**
PMR pmax pmax
comp=Z,145nm,0.9s
PBEJ Beja 66.71 301 *e*P **P 21 18 24.2 +1.3**
comp=Z,268nm,1.3s
SML Sawmill 66.77 24 *e*P **P 21 18 22.7 -0.3**
comp=Z,398nm,0.9s
SML Sawmill 66.77 24 *e*P **P 21 18 22.7 -0.3**
SML pmax pmax
comp=Z,398nm,0.9s
RC01 Rabbit Creek A 66.89 25 *e*P **P 21 18 24.2 +0.5**
TAM Tamanrasset 66.98 280 *e*P **P 21 18 26.1 +1.1**
TAM Tamanrasset 66.98 280 *e*P **P 21 18 26.1 +1.1**
PVAQ Vaqueiros 67.00 300 *e*P **P 21 18 26.2 +1.4**
comp=Z,245nm,1.4s
PVAQ Vaqueiros 67.00 300 *e*PP PP 21 20 52.9 +0.9
PVAQ *e*S **S 21 27 20.6 +3.2**
PVAQ *e*LQ LQ 21 34 57.9
PVAQ *e*LR LR 21 40 15.2
comp=Z,15µm,18.0s
PMAFR Mafra 67.02 302 *e*P **P 21 18 26.5 +1.6**
comp=Z,571nm,1.3s
PMAFR Mafra 67.02 302 *e*PP PP 21 20 53.9 +1.7
MESJ Messejana 67.05 301 *e*P **P 21 18 25.4 +0.4**
MESJ *e*PP **PP 21 20 53.1 +0.7**
MESJ *e*S **S 21 27 19.4 +1.4**
MESJ *e*SS **SS 21 31 39.8 +3.6**
MESJ AMS AMS 21 45 20.0
comp=N,51µm,23.5s
SCM Sheep Creek Mo 67.05 24 *e*P **P 21 18 24.5 -0.3**
SCM Sheep Creek Mo 67.05 24 *e*P **P 21 18 24.5 -0.3**
PCVE Castro Verde 67.06 301 *e*P **P 21 18 26.4 +1.2**
comp=N,186nm,1.3s
PCVE Castro Verde 67.06 301 *e*PP PP 21 20 53.5 +0.9
PNCL Nicolau / Gran 67.07 301 *e*P **P 21 18 26.9 +1.7**
comp=N,291nm,1.3s
PNCL Nicolau / Gran 67.07 301 *e*PP PP 21 20 53.9 +1.2
LIS Lisbon 67.09 302 *e*P **P 21 18 25.6 +0.3**
LIS *e*PP **PP 21 20 53.5 +0.7**
LIS *e*S **S 21 27 19.9 +1.5**
LIS AMS AMS 21 48 33.4
comp=N,32µm,23.0s
LIS Lisbon 67.09 302 *e*P **P 21 18 27.3 +2.0**
comp=N,506nm,1.2s
LIS Lisbon 67.09 302 *e*PP PP 21 20 54.4 +1.6
PMST Lisbon--Monsan 67.09 302 *e*P **P 21 18 27.4 +2.0**
comp=N,444nm,1.3s
PMST Lisbon--Monsan 67.09 302 *e*PP PP 21 20 54.6 +1.8
HARP HAARP 67.22 23 *e*P **P 21 18 26.5 +0.6**
comp=N,918nm,1.3s

SDPT **Sand Point** 67.23 34 eP P 21 18 25.9 0.0
comp=N,108nm,0.7s
PBDV **Barranco-do-Ve** 67.23 300 eP P 21 18 27.4 +1.1
comp=N,349nm,1.2s
PBDV **Barranco-do-Ve** 67.23 300 ePP PP 21 20 55.9 +1.8
DAWY **Dawson** 67.36 19 eP P 21 18 26.1 -0.6
HOM **Homer** 67.37 27 eP P 21 18 28.7 +2.0
BRLK **Bradley Lake** 67.54 27 eP P 21 18 27.9 0.0
comp=N,82nm,0.8s
PTEO **Sao Teotonio** 67.54 301 eP P 21 18 29.8 +1.6
comp=N,176nm,1.7s
CNPM **China Poot** 67.61 27 eP P 21 18 29.5 +1.2
comp=N,260nm,0.9s
GENI **Genyem** 67.61 117 P P 21 18 30.8 +1.9
comp=N,821nm,1.6s,comp=N,16µm
MORF **Marmelete** 67.64 301 eP P 21 18 29.2 +0.3
MORF ePP PP 21 20 58.5 +0.8
MORF eSS S 21 27 26.8 +1.5
MORF eSS SS 21 31 48.9 +3.3
MORF AMS AMS 21 45 46.0
comp=N,48µm,21.7s
MORF **Marmelete** 67.64 301 eP P 21 18 30.4 +1.5
comp=N,178nm,1.3s
MORF **Marmelete** 67.64 301 ePP PP 21 20 53.7 -4.0
KLU **Klutina** 67.73 24 eP P 21 18 29.1 0.0
MDT **Midelt** 67.80 295 P P 21 18 30.6 +0.5
comp=N,94nm,1.1s,baz=82,slow=9.1,SNR=56
MDT S S 21 27 28.0 +0.5
comp=N,4.1nm,1.1s,baz=218,slow=17,SNR=1.7
MDT PKPPKP P'P'df 21 46 50.3 -5.7
comp=N,8.9nm,1.1s,baz=255,slow=19,SNR=4.6
MDT LR LR 21 51 16.7
comp=N,9µm,18.1s,baz=55,slow=39
PFVI **Vila Bisbo** 67.86 301 eP P 21 18 31.8 +1.6
comp=N,370nm,1.4s
PFVI **Vila Bisbo** 67.86 301 ePP PP 21 20 49.0 -11
PFVI **Vila Bisbo** 67.86 301 eP P 21 18 31.8 +1.6
comp=N,171nm,1.0s
DIV **Divide** 68.06 24 eP P 21 18 31.9 +0.7
comp=N,219nm,1.3s
MRIV **Mauritius Mete** 68.14 207 eP P 21 18 31.5 -0.5
comp=N,143nm,0.9s
NRS **Narsarsuaq** 68.16 336 i P P 21 18 32.3 +0.6
KDAK **Kodiak Island** 68.47 29 P P 21 18 33.1 -0.5
comp=N,273nm,0.9s,baz=4.1,slow=5.3,SNR=99
KDAK **Kodiak Island** 68.47 29 eP P 21 18 33.7 +0.1
comp=N,319nm,0.8s
KDAK LR LR
comp=Z,11µm,20.0s
KDAK **Kodiak Island** 68.47 29 i P P 21 18 33.6 0.0
BMRM **Bremner River** 68.53 23 eP P 21 18 34.7 +0.5
comp=Z,287nm,1.0s
OHAK **Old Harbor** 68.64 30 eP P 21 18 35.0 +0.3
IVI **Ivigtut** 68.91 338 eP P 21 18 37.4 +1.1
RAGM **Ragged Mountai** 68.98 24 eP P 21 18 37.9 +0.9
MID **Middleton Isla** 69.25 25 eP P 21 18 40.6 +2.1
comp=Z,406nm,1.0s
MID **Middleton Isla** 69.25 25 eP P 21 18 40.6 +2.1
MID pmax pmax
comp=Z,406nm,1.0s
RER **Riviere de l'E** 69.54 209 eP P 21 18 41.9 +1.1
comp=Z,140nm,0.9s
MTN **Manton Dam** 70.27 131 eP P 21 18 44.4 -0.9
comp=Z,98nm,0.9s
OPO **Ambohidratompo** 70.62 218 P P 21 18 48.7 +1.1
comp=Z,80nm,1.1s,baz=36,slow=6.8,SNR=46
OPO S S 21 28 04.0 +3.2
comp=Z,1.3nm,0.8s,baz=299,slow=19,SNR=1.6
OPO LR LR 21 47 47.7
comp=Z,13µm,20.4s,baz=20,slow=34
ABPO **Ambohimpanom** 70.99 217 PFAKE
ABPO LR LR 21 19 00.0 +10
comp=Z,5µm,20.0s
WAKE **Wake Island** 71.33 81 eP P 21 18 52.0 +0.2
comp=Z,285nm,1.1s
WAKE LR LR
comp=Z,11µm,22.0s
FITZ **Fitzroy Crossi** 71.87 139 P P 21 18 54.6 -0.3
comp=Z,72nm,0.7s,baz=332,slow=5.2,SNR=117
FITZ PKPPKP P'P'df 21 46 43.2 +3.7
comp=Z,3.0nm,1.0s,baz=203,slow=9.9,SNR=2.9
FITZ LR LR 21 54 42.5
comp=Z,6µm,20.7s,baz=332,slow=39
FITZ **Fitzroy Crossi** 71.87 139 eP P 21 18 55.0 0.0
FITZ P'P' 21 46 43.2
MBWA **Marble Bar** 71.92 146 eP P 21 18 55.3 +0.1
MBWA LR LR
comp=Z,6µm,21.0s
MBWA **Marble Bar** 71.92 146 P P 21 18 56.8 +1.6
SNR=14
MANU **Manus Island** 72.00 111 eP P 21 18 57.3 +1.3
comp=Z,572nm,1.5s
SKAG **Skagway** 72.31 20 eP P 21 18 57.9 +0.8
BESE **Bessie Mountai** 73.21 20 eP P 21 19 04.4 +1.8
YKA **Yellowknife Ar** 73.30 9 P P 21 19 01.9 -1.0
comp=Z,181nm,1.0s,baz=343,slow=5.6,SNR=255
YKA PKPPKP P'P'df 21 46 39.3 -9.2
comp=Z,1.4nm,0.9s,baz=174,slow=2.0,SNR=3.6
YKA LR LR 21 53 39.6
comp=Z,2µm,20.1s,baz=332,slow=38
YKA **Yellowknife Ar** 73.30 9 P P 21 19 02.0 -1.0
PATS **Pohnpei** 73.50 96 eP P 21 19 06.1 +1.2
JIS **Juneau Island** 73.59 20 eP P 21 19 06.7 +2.0
DLBC **Dease Lake** 74.49 18 eP P 21 19 10.8 +0.6
PMPS **Porto Santo** 75.18 301 eP P 21 19 16.0 +1.6
comp=Z,322nm,1.7s
PMPS **Porto Santo** 75.18 301 ePP PP 21 22 01.9 -0.5
WRAK **Wrangell Islan** 75.75 20 eP P 21 19 18.9 +1.6
WRAK LR LR
comp=Z,24µm,22.0s
PMAR **Madeira** 75.77 302 eP P 21 19 19.4 +1.4
comp=Z,395nm,1.4s
PMAR **Madeira** 75.77 302 ePP PP 21 22 10.3 +2.8
FUL **Funchal** 75.80 301 eP P 21 19 20.1 +2.1
FUL **Funchal** 75.80 301 ePP PP 21 22 08.7 +1.1
PMOZ **Porto Moniz, M** 75.87 302 eP P 21 19 19.4 +0.8
comp=Z,269nm,1.4s
PMOZ **Porto Moniz, M** 75.87 302 ePP PP 21 22 08.3 -0.1
PMOZ eS S 21 29 05.8 +5.4
PMOZ **Porto Moniz, M** 75.87 302 eLQ LQ 21 41 02.9
PMOZ eLR LR 21 46 32.1
TORD **Torodi Ar. Bea** 75.98 275 P P 21 19 18.5 -0.7
comp=Z,47nm,0.5s,baz=41,slow=4.8
TORD S S 21 28 53.7 -8.0
baz=359,slow=6.1
TORD LR LR 21 58 37.1
comp=Z,12µm,18.1s,baz=50,slow=40
CRAG **Craig** 76.40 21 eP P 21 19 22.6 +1.6
MIDW **Midway** 76.55 64 PFAKE
MIDW LR LR 21 19 30.0 +7.7
comp=Z,11µm,22.0s
RABL **Rabaul** 76.84 109 eP P 21 19 26.1 +2.0
BART **Pico Bartolome** 77.14 310 eP P 21 19 29.4 +3.8
comp=Z,34nm,0.4s
PMG **Port Moresby** 77.28 116 P P 21 19 27.0 +0.5
comp=Z,105nm,1.1s,baz=272,slow=4.7,SNR=27
PMG **Port Moresby** 77.28 116 eP P 21 19 27.2 +0.7
comp=Z,536nm,1.4s
PMG LR LR
comp=Z,4µm,20.0s
PMG **Port Moresby** 77.28 116 eP P 21 19 27.2 +0.7
PMG pmax pmax
comp=Z,536nm,1.4s
PMG MLR MLR
comp=Z,4µm,20.0s
CMLA **Cha da Macela** 77.35 310 eP P 21 19 29.7 +3.0
comp=Z,55nm,0.6s
CMLA **Cha da Macela** 77.35 310 eLR LR 21 43 35.7
comp=Z,1µm,22.7s
CMLA **Cha da Macela** 77.35 310 eP P 21 19 30.6 +3.9
CMLA LR LR
comp=Z,41µm,19.0s
CMLA **Cha da Macela** 77.35 310 i P P 21 19 31.8 +5.1
PSET **Sete Cidades** 77.42 310 eP P 21 19 29.0 +1.9
comp=Z,29nm,0.5s
PSET **Sete Cidades** 77.42 310 eLR LR 21 43 37.8
comp=Z,1µm,19.9s
PSMN **Pico do Norte,** 77.63 309 eP P 21 19 29.8 +1.5
comp=Z,36nm,0.7s
PSMN **Pico do Norte,** 77.63 309 eLR LR 21 43 52.8
comp=Z,3µm,20.5s
ADH **Angra Heroismo** 77.65 312 eP P 21 19 32.0 +3.7
comp=Z,5.7nm,0.1s
PSMA **Santa Maria** 77.67 310 eP P 21 19 32.0 +3.5
comp=Z,7.4nm,0.1s
PGRA **Graciosa** 77.78 313 eP P 21 19 29.0 -0.1
comp=Z,22nm,0.4s
PGRA **Graciosa** 77.78 313 eLR LR 21 44 07.7
comp=Z,3µm,20.5s
WRAB **Tennant Creek** 77.83 133 eP P 21 19 29.2 -0.3
WRAB LR LR
comp=Z,4µm,19.0s
WRAB **Tennant Creek** 77.83 133 c iP P 21 19 30.2 +0.7
WRAB pmax pmax
comp=Z,334nm,1.0s
WRA **Warramunga Arr** 77.83 133 P P 21 19 28.7 -0.8
comp=Z,332nm,1.1s,baz=329,slow=4.3,SNR=338
WRA S S 21 29 18.6 -3.0
comp=Z,34nm,1.4s,baz=334,slow=11,SNR=20
WRA PKKPbc PKKPbc 21 38 31.4 +0.9
comp=Z,3.9nm,1.0s,baz=146,slow=2.0,SNR=15
WRA PKPPKP P'P'df 21 46 34.4 +4.6
comp=Z,6.4nm,1.1s,baz=152,slow=1.4,SNR=6.6
WRA LR LR 21 57 13.2
comp=Z,3µm,19.4s,baz=325,slow=38
WB2 **Warramunga Arr** 77.84 133 eP P 21 19 29.2 -0.3
LSZ **Lusaka** 77.91 235 eP P 21 19 30.6 +0.5
LSZ LR LR
comp=Z,10µm,21.0s
LSZ **Lusaka** 77.91 235 P P 21 19 31.1 +1.0
SNR=65
LSZ **Lusaka** 77.91 235 eP P 21 19 30.6 +0.5
LSZ MLR MLR
comp=Z,10µm,21.0s
PMAN **Manadas** 78.13 312 eP P 21 19 33.4 +2.4
comp=Z,17nm,0.3s
ROSA **Rosais** 78.14 313 eP P 21 19 33.1 +2.0
comp=Z,24nm,0.5s
ROSA **Rosais** 78.14 313 eLR LR 21 43 42.1
comp=Z,1µm,18.5s
COEN **Coen** 78.19 122 eP P 21 19 31.1 -0.4
PICO **Pico** 78.40 313 eP P 21 19 33.9 +1.3
comp=Z,39nm,0.5s
PCED **Cedros** 78.46 313 eP P 21 19 34.3 +1.5
comp=Z,39nm,0.2s
PCAN **Candelaria** 78.46 313 eP P 21 19 34.9 +2.0
comp=Z,39nm,0.4s
CALA **Caldeira** 78.49 313 eP P 21 19 34.2 +1.1
DIB **Dawson Inlet,** 78.60 22 eP P 21 19 35.0 +1.7
H07N1 **FLORES T-PHASE** 78.95 315 eP P 21 19 39.8 +4.2
SCHQ **Schefferville** 79.13 344 P P 21 19 35.7 -0.6
comp=Z,34nm,0.7s,baz=25,slow=5.5,SNR=17
SCHQ S S 21 29 31.1 -3.6
comp=Z,1.6nm,0.3s,baz=128,slow=19,SNR=1.9
SCHQ LR LR 21 58 31.1
comp=Z,18µm,20.1s,baz=20,slow=39
SCHQ **Schefferville** 79.13 344 eP P 21 19 36.0 -0.3
SCHQ S S 21 29 31.1 -3.6
KOWA **Kowa** 79.20 280 P P 21 19 37.0 -0.2
comp=Z,180nm,0.9s,baz=53,slow=6.7,SNR=108
KOWA S S 21 29 31.2 -5.5
comp=Z,2.5nm,0.9s,baz=43,slow=6.0,SNR=1.8
KOWA PKKPbc PKKPbc 21 38 26.7 +0.7
comp=Z,1.2nm,0.5s,baz=231,slow=6.5,SNR=2.5
KOWA **Kowa** 79.20 280 eP P 21 19 38.0 +0.7
KOWA S S 21 29 31.2 -5.5
KOWA PKKPbc PKKPbc 21 38 26.7 +0.7
H07S1 **FLORES T-PHASE** 79.22 315 eP P 21 19 40.5 +3.4
ITZ **Itezhi-Tezhi** 79.59 237 i P P 21 19 40.9 +1.6
ITZ i 21 19 41.5
ITZ i 21 19 41.6
ITZ i 21 19 52.3
ITZ **Itezhi-Tezhi** 79.59 237 i i P P 21 19 41.0 +1.6
ITZ **Itezhi-Tezhi** 79.59 237 i P P 21 19 40.9 +1.6
ITZ i 21 19 41.5
ITZ i 21 19 41.6
ITZ i 21 19 52.3
BBB **Bella Bella** 80.65 20 eP P 21 19 45.7 +1.2
AS31 **Alice Springs** 80.67 135 eP P 21 19 44.8 -0.2
ASAR **Alice Springs** 80.67 135 P P 21 19 44.2 -0.7
comp=Z,94nm,0.8s,baz=329,slow=5.4,SNR=221
ASAR S S 21 29 49.6 -1.9
comp=Z,2.9nm,1.1s,baz=229,slow=25,SNR=4.5
ASAR PKKPbc PKKPbc 21 38 25.6 +1.3
comp=Z,2.5nm,0.8s,baz=139,slow=2.2,SNR=9.1
ASAR PKPPKP P'P'df 21 46 23.8 -0.7
comp=Z,3.6nm,1.1s,baz=127,slow=3.9,SNR=8.0
AS01 **Alice Springs** 80.69 135 eP P 21 19 43.7 -1.3
NWAO **Narrogin (SRO)** 81.64 153 P P 21 19 49.5 -0.4
comp=Z,54nm,0.9s,baz=221,slow=4.4,SNR=20
NWAO S S 21 29 58.6 -2.6
comp=Z,6.6nm,0.8s,baz=90,slow=20,SNR=9.4
NWAO LR LR 21 59 37.2
comp=Z,6µm,18.7s,baz=215,slow=38
NWAO **Narrogin (SRO)** 81.64 153 eP P 21 19 50.2 +0.4
NWAO S S 21 29 58.6 -2.6
NWAO LR LR
comp=Z,7µm,21.0s
FFC **Flin Flon** 82.05 4 eP P 21 19 51.1 -0.8
FFC LR LR
comp=Z,16µm,19.0s
FFC **Flin Flon** 82.05 4 eP P 21 19 51.1 -0.8
FFC MLR MLR
comp=Z,16µm,19.0s
LLLB **Lillooet** 83.53 17 eP P 21 20 00.3 +0.6
FORT **Forrest** 83.89 143 eP P 21 20 01.9 +0.3
CTA **Charters Tower** 84.76 124 P P 21 20 05.8 -0.4
comp=Z,70nm,0.9s,baz=309,slow=9.9,SNR=66
CTA S SKSac 21 30 24.6 -5.2
comp=Z,1.0nm,0.7s,baz=212,slow=8.2,SNR=4.2
CTA PKPPKP P'P'df 21 46 20.5 +2.1
comp=Z,2.6nm,1.0s,baz=209,slow=9.3,SNR=1.9
CTA LR LR 21 58 52.5
comp=Z,4µm,20.6s,baz=314,slow=36
CTAO **Charters Tower** 84.76 124 eP P 21 20 05.9 -0.4
CTAO LR LR
comp=Z,7µm,22.0s
CTAO **Charters Tower** 84.76 124 eP P 21 20 05.9 -0.4
CTAO MLR MLR
comp=Z,7µm,22.0s
PGC **Sidney** 85.04 18 eP P 21 20 08.8 +1.4
DBIC **Dimbokro** 85.08 274 P P 21 20 08.8 +0.7
comp=Z,104nm,1.1s,baz=30,slow=5.3,SNR=31
DBIC S SKSac 21 30 25.3 -7.0
comp=Z,3.1nm,0.9s,baz=34,slow=12,SNR=1.5
DBIC LR LR 22 03 49.3
comp=Z,11µm,18.2s,baz=24,slow=40
A04D **Lummi Island** 85.14 18 P P 21 20 08.3 +0.5
baz=340,SNR=15
KIC **Kosan Boka** 85.21 274 eP P 21 20 09.3 +0.6
comp=Z,809nm,1.3s
TIC **Toumodi** 85.22 275 eP P 21 20 09.2 +0.4
LIC **Lamto** 85.51 274 eP P 21 20 10.6 +0.4
comp=Z,860nm,1.3s
B06A **Marblemount** 85.60 17 eP P 21 20 10.9 +0.8
B05A **Bryant** 85.71 18 P P 21 20 11.1 +0.4
baz=341,SNR=20
B05A S SKSac 21 30 33.2 -2.1
baz=341
HNR **Honiara** 85.96 107 P P 21 20 12.2 -0.2
comp=Z,32nm,0.3s,baz=236,slow=7.3,SNR=3.2
HNR S SKSac 21 30 32.6 -5.0
comp=Z,22nm,0.4s,baz=218,slow=20,SNR=2.6
HNR LR LR 21 57 00.5
comp=Z,4µm,21.2s,baz=312,slow=35
HNR **Honiara** 85.96 107 P P 21 20 12.2 -0.2
HNR S SKSac 21 30 32.6 -5.0
HNR LR LR
comp=Z,4µm,20.0s
HNR **Honiara** 85.96 107 P P 21 20 12.2 -0.2
HNR S SKSac 21 30 32.7 -5.0
HNR MLR MLR
comp=Z,4µm,20.0s
NLWA **Neilton Lookou** 86.12 19 eP P 21 20 14.7 +1.8
NLWA LR LR
comp=Z,18µm,20.0s
B08A **Colville Reser** 86.19 16 eP P 21 20 13.9 +0.8
C06D **Leavenworth** 86.29 17 P P 21 20 13.8 +0.2
baz=342
WALA **Waterton Lakes** 86.47 12 eP P 21 20 14.8 +0.2
ULM **Lac du Bonnet** 86.70 0 P P 21 20 14.4 -1.1
comp=Z,46nm,0.9s,baz=353,slow=5.3,SNR=31
NEW **Newport** 86.70 14 P P 21 20 15.6 -0.1
baz=344,SNR=40
NEW **Newport** 86.70 14 eP P 21 20 16.6 +0.9
NEW LR LR
comp=Z,18µm,20.0s
D05A **Enumclaw** 86.75 18 eP P 21 20 18.0 +2.1
C09A **Chrisman Ranch** 86.93 15 eP P 21 20 18.0 +1.2
E03A **Lebam** 86.99 19 eP P 21 20 19.0 +2.0
LBTB **Lobatse** 87.01 231 eP P 21 20 18.0 +0.6
LBTB **Lobatse** 87.01 231 eP P 21 20 18.0 +0.6
BMW **Boistfort Moun** 87.14 19 eP P 21 20 19.9 +2.0
LON **Longmire** 87.20 18 eP P 21 20 19.1 +0.9
LON **Longmire** 87.20 18 eP P 21 20 19.1 +0.9
NAC **Naches** 87.43 17 eP P 21 20 20.4 +1.1
TSUM **Tsumeb** 87.44 241 eP P 21 20 19.8 +0.1
TSUM LR LR
comp=Z,16µm,22.0s
BSMT **Bassoo Peak** 87.50 13 eP P 21 20 20.8 +1.0
D08A **Wollman Farm,** 87.52 16 eP P 21 20 20.6 +1.0
F04D **Rainier, OR** 87.56 19 P P 21 20 20.8 +1.0
baz=340
F03A **Seaside** 87.57 19 eP P 21 20 22.6 +2.7
JTMT **Jette** 87.69 13 eP P 21 20 21.1 +0.6
TARA **Tarawa** 87.85 90 PFAKE 21 20 30.0 +8.3
TARA LR LR
comp=Z,342nm,19.0s
A33A **Warroad** 88.01 0 P P 21 20 21.2 -0.8
baz=360
HAWA **Hanford** 88.03 16 eP P 21 20 24.2 +2.1
HAWA LR LR
comp=Z,17µm,20.0s
E08A **Dider Farm, El** 88.03 16 eP P 21 20 23.6 +1.5
EGMT **Eagleton** 88.05 10 P P 21 20 21.6 -0.6
baz=350
EGMT **Eagleton** 88.05 10 eP P 21 20 21.3 -0.9
EGMT LR LR
comp=Z,21µm,21.0s
DGMT **Dagmar** 88.15 6 P P 21 20 22.7 0.0
baz=354
DGMT **Dagmar** 88.15 6 eP P 21 20 23.0 +0.4
DGMT LR LR
comp=Z,18µm,19.0s
E09A **Wood Farm, Sta** 88.19 16 eP P 21 20 23.9 +1.1
G03D **McMinnville, O** 88.31 19 P P 21 20 23.8 +0.4
baz=340,SNR=10
B34A **Aery, Baudette** 88.46 360 P P 21 20 23.4 -0.6
baz=0.5
B35A **Bob, Littlefor** 88.58 359 P P 21 20 23.8 -0.8
baz=1.1
B35A **Bob, Littlefor** 88.58 359 eP P 21 20 23.1 -1.6
MSO **Missoula** 88.63 13 P P 21 20 24.7 -0.4
baz=347,SNR=50
MSO **Missoula** 88.63 13 eP P 21 20 25.4 +0.3
AGMN **Agassiz Nation** 88.65 0 P P 21 20 23.5 -1.5
baz=360
AGMN **Agassiz Nation** 88.65 0 PFAKE 21 20 40.0 +15
AGMN LR LR
comp=Z,22µm,20.0s
PKME **Peaks-Kenny Pk** 88.68 342 P P 21 20 24.9 -0.3
baz=19,SNR=20
PKME **Peaks-Kenny Pk** 88.68 342 eP P 21 20 26.1 +1.0
PKME LR LR
comp=Z,23µm,20.0s
G05D **Wamic, OR** 88.74 18 P P 21 20 25.1 -0.4
baz=341,SNR=8.8
EMMW **East Machias** 88.77 340 eP P 21 20 26.9 +1.3
C40A **Isle Royale Na** 88.87 356 P P 21 20 25.7 -0.3
baz=4.5
C40A **Isle Royale Na** 88.87 356 eP P 21 20 25.7 -0.3
F10A **Beach Ranch, E** 88.89 15 eP P 21 20 27.2 +0.9
COR **Corvallis** 88.89 20 eP P 21 20 28.7 +2.6
COR **Corvallis** 88.89 20 eP P 21 20 28.7 +2.6
G06A **Carlson Farm,** 88.90 18 eP P 21 20 27.9 +1.6
EYMN **Ely** 88.94 357 P P 21 20 25.6 -0.7
baz=2.8
EYMN **Ely** 88.94 357 eP P 21 20 25.8 -0.5
EYMN LR LR
comp=Z,25µm,19.0s
C39A **Grand Marais** 89.02 356 P P 21 20 25.4 -1.3
baz=3.8
MDND **Maddock** 89.03 3 P P 21 20 26.6 -0.1
baz=357
MDND **Maddock** 89.03 3 eP P 21 20 27.1 +0.3
HRY **Holter Researc** 89.06 11 eP P 21 20 27.7 +0.6
H04A **Detroit Lake** 89.07 19 eP P 21 20 28.1 +1.1
C38A **Sawbill Land.** 89.16 357 P P 21 20 26.0 -1.4
baz=2.9
C36A **Pine Crest Far** 89.16 358 P P 21 20 26.8 -0.6
baz=1.8
C37A **Embarrass** 89.18 358 P P 21 20 26.6 -0.8
baz=2.3
C33A **Trail** 89.19 0 P P 21 20 26.5 -1.0
baz=360
G08A **Pilot Rock** 89.20 16 eP P 21 20 29.0 +1.2
C35A **Jirik Farms, M** 89.24 359 P P 21 20 26.0 -1.7
baz=1.0
BBOO **Buckleboo** 89.26 139 eP P 21 20 28.1 +0.3
C34A **RKJ Ranch, Bem** 89.30 360 P P 21 20 26.5 -1.5
baz=0.3
WVL **Waterville** 89.43 342 eP P 21 20 29.5 +0.9
I05D **Terrebonne, OR** 89.59 18 P P 21 20 29.9 +0.4
baz=341,SNR=15
D41A **Chassel** 89.69 355 P P 21 20 29.5 -0.3
baz=4.9,SNR=8.0
D41A **Chassel** 89.69 355 eP P 21 20 30.2 +0.4
JOHN **Johnston Islan** 89.70 67 PFAKE 21 20 40.0 +10
JOHN LR LR
comp=Z,570nm,21.0s
I03D **Drain, OR** 89.72 20 P P 21 20 30.0 0.0
baz=340,SNR=43
LAO **LASA Array** 89.75 7 P P 21 20 29.6 -0.6
baz=352
LAO **LASA Array** 89.75 7 PFAKE 21 20 40.0 +10
LAO LR LR
comp=Z,18µm,21.0s
D36A **Goodland** 89.75 358 P P 21 20 29.2 -1.0
baz=1.6
D36A **Goodland** 89.75 358 eP P 21 20 29.5 -0.7
D37A **Cotton** 89.75 358 P P 21 20 28.9 -1.2
baz=2.1
LRM **Limekiln Ridge** 89.84 12 eP P 21 20 31.5 +0.5
I04A **Tendick Farm,** 89.86 19 P P 21 20 31.3 +0.5
baz=341,SNR=38
D35A **Remer** 89.86 359 P P 21 20 29.6 -1.1
baz=0.9
E44A **Grand Marais A** 89.94 353 P P 21 20 30.2 -0.9
baz=6.8
E44A **Grand Marais A** 89.94 353 eP P 21 20 32.4 +1.4
BMO **Blue Mountains** 89.95 15 eP P 21 20 31.5 +0.2
BMO LR LR
comp=Z,23µm,20.0s
BMO **Blue Mountains** 89.95 15 eP P 21 20 31.5 +0.2
BMO MLR MLR
comp=Z,23µm,20.0s
FRNY **Flat Rock** 89.99 345 eP P 21 20 32.0 +0.7
BOSA **Boshof** 90.00 229 P P 21 20 31.9 +0.4
comp=Z,125nm,1.1s,baz=33,slow=4.5,SNR=37
BOSA LR LR 22 01 16.4
comp=Z,8µm,22.0s,baz=38,slow=36
BOSA **Boshof** 90.00 229 i P P 21 20 33.4 +1.8
BOSA **Boshof** 90.00 229 eP P 21 20 32.7 +1.2
BOSA **Boshof** 90.00 229 i P P 21 20 33.4 +1.8
BOSA **Boshof** 90.00 229 eP P 21 20 32.7 +1.2
E45A **Wooded Hills,** 90.14 353 P P 21 20 31.3 -0.7
baz=7.3
BOZ **Bozeman (W)** 90.18 11 P P 21 20 32.2 -0.2
baz=348,SNR=43
BOZ **Bozeman (W)** 90.18 11 PFAKE 21 20 40.0 +7.6
BOZ LR LR
comp=Z,15µm,19.0s
PINE **Pine Mountain** 90.20 18 eP P 21 20 33.8 +1.2
LBNH **Lisbon** 90.23 343 P P 21 20 32.9 +0.4
baz=17,SNR=14
LBNH **Lisbon** 90.23 343 eP P 21 20 33.5 +1.1
LBNH **Lisbon** 90.23 343 eP P 21 20 33.5 +1.1
KEBM **Edson Butte** 90.24 21 eP P 21 20 35.8 +3.2
I07A **Izee** 90.24 17 eP P 21 20 34.3 +1.6
GCMT **Greycliff** 90.26 10 eP P 21 20 33.7 +1.0
E43A **Lone Tree Farm** 90.27 354 P P 21 20 32.0 -0.6
baz=6.0,SNR=9.6
DLMT **Dillon** 90.27 12 eP P 21 20 33.5 +0.7
E42A **Champion** 90.28 355 P P 21 20 32.1 -0.5
baz=5.4,SNR=15
E38A **The Farm, Brul** 90.28 357 P P 21 20 31.8 -0.8
baz=2.7
E38A **The Farm, Brul** 90.28 357 eP P 21 20 32.3 -0.4
E41A **Kenton** 90.31 356 P P 21 20 31.5 -1.3
baz=4.6,SNR=20
E37A **Wrenshall** 90.35 358 P P 21 20 31.8 -1.2
baz=2.1
E40A **Wakefield** 90.37 356 P P 21 20 32.7 -0.3
baz=3.9,SNR=49
LONY **Lake Ozonia** 90.39 345 P P 21 20 33.4 +0.2
baz=15,SNR=54
LONY **Lake Ozonia** 90.39 345 eP P 21 20 34.1 +0.9

LONY LR LR
comp=Z,15µm,21.0s
E35A Pequot Lakes 90.39 359 P P 21 20 32.2 -0.9
baz=0.7
E36A McGregor 90.41 359 P P 21 20 32.6 -0.7
baz=1.5
E34A Wadena 90.44 360 P P 21 20 32.8 -0.6
baz=0.1
J04D Umpqua Nationa 90.45 19 P P 21 20 33.9 +0.2
baz=341,SNR=36
E39A Mellen 90.47 357 P P 21 20 33.1 -0.5
baz=3.4,SNR=32
J05D Fort Rock, OR 90.61 19 P P 21 20 35.3 +0.9
baz=342,SNR=79
F44A Big Bay de Noc 90.62 354 P P 21 20 33.9 -0.4
baz=6.4,SNR=11
F46A Macinaw City C 90.68 353 P P 21 20 33.9 -0.6
baz=7.6
COWI Conover 90.68 356 eP P 21 20 34.1 -0.4
COWI LR LR
comp=Z,23µm,20.0s
MCMT McKenzie Canyo 90.75 12 eP P 21 20 36.2 +1.0
F43A Flat Rock, Esc 90.82 354 P P 21 20 34.4 -0.7
baz=5.9,SNR=21
F45A CMU Biological 90.83 353 P P 21 20 34.6 -0.6
baz=7.1
HUMO Hull Mountain 90.84 20 eP P 21 20 37.5 +2.1
KBO Bosley Butte 90.89 21 eP P 21 20 38.6 +2.9
FFD Franklin Falls 90.91 343 eP P 21 20 37.4 +1.8
F40A Park Falls 90.91 356 P P 21 20 34.9 -0.7
baz=3.8,SNR=16
F38A Pierce - Schro 90.94 358 P P 21 20 35.9 +0.2
baz=2.5,SNR=33
NCB Newcomb 90.95 345 eP P 21 20 36.8 +1.0
F39A Loretta 90.95 357 P P 21 20 35.5 -0.3
baz=3.2,SNR=27
F42A Maple Grove Fa 90.96 355 P P 21 20 34.6 -1.2
baz=5.2
QLMT Earthquake Lak 90.96 11 eP P 21 20 37.2 +1.1
RLMT Red Lodge 90.97 10 P P 21 20 36.2 +0.1
baz=350,SNR=55
RLMT Red Lodge 90.97 10 eP P 21 20 36.5 +0.3
RLMT LR LR
comp=Z,25µm,21.0s
SADO Sadowa 90.99 349 eP P 21 20 36.0 +0.1
comp=Z,65nm,1.3s
F41A Three Lakes 91.04 356 P P 21 20 35.5 -0.7
baz=4.5,SNR=18
F41A Three Lakes 91.04 356 eP P 21 20 35.4 -0.7
F32A Veblen 91.07 1 P P 21 20 35.3 -1.0
baz=359
F36A Milaca 91.07 359 P P 21 20 35.5 -0.8
baz=1.3,SNR=20
F36A Milaca 91.07 359 eP P 21 20 36.3 0.0
YHB Horse Butte 91.08 11 eP P 21 20 38.4 +1.7
F35A Swanville 91.09 359 P P 21 20 35.3 -1.1
baz=0.5
L02D Cave Junction, 91.10 21 P P 21 20 37.1 +0.5
baz=340,SNR=27
K04D Chiloquin, OR 91.12 19 P P 21 20 37.3 +0.5
baz=341,SNR=7.5
J08A Circle Bar Ran 91.15 17 eP P 21 20 37.7 +0.8
F34A Alexandria 91.16 360 P P 21 20 36.0 -0.7
YNR Norris Junctio 91.18 11 eP P 21 20 39.1 +1.9
YMR Madison River 91.19 11 eP P 21 20 39.3 +2.1
F37A Hinrichs Farm, 91.19 358 P P 21 20 36.4 -0.5
baz=1.9
K05A Summer Lake 91.22 19 eP P 21 20 39.5 +2.2
STKA Stephens Creek 91.28 134 P P 21 20 36.8 -0.5
comp=Z,80nm,0.9s,baz=324,slow=5.1,SNR=57
STKA Stephens Creek 91.28 134 eP P 21 20 35.6 -1.6
LKWY Lake 91.37 11 PFAKE 21 20 50.0 +12
LKWY LR LR
comp=Z,986nm,19.0s
ACCN Adirondack Com 91.40 344 eP P 21 20 39.2 +1.3
YFT Old Faithful 91.42 11 eP P 21 20 41.3 +3.0
G43A Wallace 91.43 355 P P 21 20 37.7 -0.2
baz=5.5,SNR=28
G43A Wallace 91.43 355 eP P 21 20 38.4 +0.4
G42A Mountain 91.49 355 P P 21 20 37.9 -0.3
baz=5.0,SNR=18
G42A Mountain 91.49 355 eP P 21 20 38.4 +0.1
H17A Grant Village 91.51 11 P P 21 20 39.5 +0.8
baz=349,SNR=26
H17A Grant Village 91.51 11 eP P 21 20 41.4 +2.6
G40A Rib Lake 91.56 356 P P 21 20 38.3 -0.3
baz=3.7,SNR=21
G40A Rib Lake 91.56 356 eP P 21 20 38.5 -0.2
G41A Antigo 91.57 356 P P 21 20 37.5 -1.1
baz=4.4
G39A Holcombe 91.58 357 P P 21 20 38.0 -0.7
baz=3.0,SNR=14
YPP Pitchstone Pla 91.60 11 eP P 21 20 41.5 +2.4
MFID Camas Ranch 91.62 15 eP P 21 20 40.3 +1.2
EIDS Eidsvold 91.65 124 eP P 21 20 39.9 +0.8
G32A Webster 91.67 1 P P 21 20 37.9 -1.3
baz=358
SPMN Marine on St. 91.70 358 P P 21 20 38.4 -0.8
baz=1.8
SPMN Marine on St. 91.70 358 eP P 21 20 39.3 +0.1
G34A Benson 91.71 0 P P 21 20 37.9 -1.4
baz=360
YBH Yreka Blue Hor 91.72 20 P P 21 20 39.2 -0.4
comp=Z,29nm,0.9s,baz=341,slow=2.3,SNR=38
YBH S **SKSac 21 31 10.1 -1.5**
comp=Z,0.4nm,0.3s,baz=126,slow=17,SNR=3.1
YBH LR LR 22 04 41.0
comp=Z,14µm,19.6s,baz=341,slow=37
YBH Yreka Blue Hor 91.72 20 eP P 21 20 40.9 +1.3
YBH S **SKSac 21 31 10.1 -1.5**
G38A Ridgeland 91.73 358 P P 21 20 38.8 -0.6
baz=2.5,SNR=8.0
G35A Watkins 91.73 359 P P 21 20 38.4 -1.0
baz=0.6
G35A Watkins 91.73 359 eP P 21 20 40.3 +0.9
HLID Hailey 91.73 14 P P 21 20 40.0 +0.3
baz=346,SNR=54
HLID Hailey 91.73 14 eP P 21 20 40.6 +0.9
HLID LR LR
comp=Z,24µm,21.0s
G33A Ortonville 91.75 1 P P 21 20 38.7 -0.8
baz=359,SNR=8.7
FLWY Flagg Ranch 91.80 11 eP P 21 20 41.3 +1.3
HRV Adam Dziewonsk 91.81 343 P P 21 20 39.1 -0.7
baz=17
HRV Adam Dziewonsk 91.81 343 eP P 21 20 40.2 +0.4
HRV Adam Dziewonsk 91.81 343 eP P 21 20 40.2 +0.4
M04C Macdoel 91.89 19 P P 21 20 41.4 +1.0
baz=341,SNR=26
IMW Indian Meadow 91.95 11 eP P 21 20 42.6 +1.8
WVOR Wild Horse Val 92.00 17 eP P 21 20 42.0 +1.1
WVOR LR LR
comp=Z,14µm,21.0s
WVOR Wild Horse Val 92.00 17 eP P 21 20 42.0 +1.1
WVOR MLR MLR
comp=Z,14µm,21.0s
M02C Callahan 92.01 20 P P 21 20 42.1 +1.3
baz=340,SNR=33
TRY Troy 92.03 344 eP P 21 20 42.2 +1.4
MOOW Moose Ponds 92.12 11 eP P 21 20 42.7 +1.1
MOD Modoc Plateau 92.14 18 eP P 21 20 43.0 +1.5
H41A Junction City 92.19 356 P P 21 20 40.8 -0.7
baz=4.1
FXWY Fox Creek 92.19 11 eP P 21 20 43.2 +1.4
H39A Augusta 92.19 357 P P 21 20 41.7 +0.1
baz=2.9,SNR=5.8
QUA2 Belchertown 92.20 343 eP P 21 20 42.8 +1.2
H40A Chili 92.22 356 P P 21 20 40.8 -0.8
baz=3.6,SNR=21
H43A Windswept, Lux 92.22 355 P P 21 20 41.4 -0.2
baz=5.5,SNR=9.5
H43A Windswept, Lux 92.22 355 eP P 21 20 42.0 +0.3
H42A Shiocton 92.23 355 P P 21 20 40.3 -1.4
baz=4.9
H42A Shiocton 92.23 355 eP P 21 20 42.7 +1.0
H38A Maiden Rock 92.23 358 P P 21 20 41.4 -0.3
baz=2.2,SNR=17
JCC Jacoby Creek, 92.24 21 eP P 21 20 44.3 +2.5
H35A Sunnyside Ranc 92.25 360 P P 21 20 41.3 -0.5
baz=0.3
KHMM Horse Mountain 92.27 21 eP P 21 20 44.2 +2.0
LOHW Long Hollow 92.27 11 eP P 21 20 43.5 +1.3
H37A Dierke Farm, C 92.34 358 P P 21 20 41.5 -0.7
baz=1.7,SNR=11
TPAW Teton Pass 92.34 11 eP P 21 20 44.1 +1.4
H36A Jessenland, He 92.36 359 P P 21 20 42.3 0.0
baz=1.0,SNR=14
SNOW Snow King Moun 92.40 11 eP P 21 20 45.3 +2.4
H32A Carlson Farm, 92.43 1 P P 21 20 41.8 -0.9
baz=358,SNR=45
N02D Trinity Center 92.44 20 P P 21 20 43.7 +0.8
baz=340,SNR=30
SUSD Miller 92.45 3 P P 21 20 42.2 -0.6
baz=357
REDW Red Top Meadow 92.48 11 eP P 21 20 45.0 +1.8
RSSD Black Hills 92.49 6 P P 21 20 43.4 +0.2
baz=354
RSSD Black Hills 92.49 6 eP P 21 20 43.7 +0.5
RSSD Black Hills 92.49 6 eP P 21 20 43.7 +0.5
M65A Busby, Falmout 92.50 342 P P 21 20 42.4 -0.6
baz=18
SACV Santiago Islan 92.54 293 eP P 21 20 44.9 +1.3
SACV LR LR
comp=Z,4µm,20.0s
I41A Arkdale 92.75 356 P P 21 20 44.1 0.0
baz=3.9,SNR=12
I41A Arkdale 92.75 356 eP P 21 20 44.7 +0.6
MMNY Mt. Morris Dam 92.80 347 eP P 21 20 44.8 +0.5
I43A Langenfeld Bro 92.83 355 P P 21 20 43.9 -0.5
baz=5.2,SNR=11
WDC Whiskeytown Da 92.85 20 eP P 21 20 45.1 +0.4
WDC Whiskeytown Da 92.85 20 eP P 21 20 45.1 +0.4
I42A Draeger Farm, 92.87 355 P P 21 20 44.5 -0.1
baz=4.6,SNR=32
I38A Scanlan Farm, 92.87 358 P P 21 20 44.3 -0.4
baz=2.2,SNR=16
KMRM Mail Ridge 92.89 21 eP P 21 20 43.1 -1.8
I37A Lemond, Waseca 92.92 359 P P 21 20 44.2 -0.7
baz=1.4,SNR=12
I36A Fitzsimmons Fa 92.92 359 P P 21 20 44.8 -0.1
baz=0.9,SNR=8.8
I40A Norwalk 92.95 357 P P 21 20 44.8 -0.3
baz=3.4,SNR=12
BINY Binghamton 92.99 346 P P 21 20 45.4 +0.1
baz=14,SNR=18
BINY Binghamton 92.99 346 eP P 21 20 45.9 +0.6
BINY LR LR
comp=Z,24µm,21.0s
I39A Houston 93.03 357 P P 21 20 45.1 -0.3
baz=2.7,SNR=9.9
I39A Houston 93.03 357 eP P 21 20 46.0 +0.5
AHID Auburn Hatcher 93.03 12 eP P 21 20 46.7 +0.9
AHID LR LR
comp=Z,16µm,20.0s
ECSD EROS Data Cent 93.21 1 P P 21 20 46.1 -0.2
baz=359,SNR=98
ECSD EROS Data Cent 93.21 1 eP P 21 20 45.6 -0.7
ECSD LR LR
comp=Z,19µm,20.0s
YLE Yale 93.24 343 eP P 21 20 47.6 +1.2
BW06 Boulder Array 93.25 10 P P 21 20 46.0 -0.7
baz=350,SNR=18
BW06 Boulder Array 93.25 10 eP P 21 20 46.9 +0.2
BW06 LR LR
comp=Z,22µm,22.0s
PD31 Pinedale Array 93.25 10 eP P 21 20 46.9 +0.1
PDAR Pinedale Array 93.25 10 P P 21 20 46.3 -0.5
comp=Z,10nm,0.8s,baz=29,slow=3.4,SNR=45
PDAR S **SKSac 21 31 18.9 -1.5**
comp=Z,0.4nm,0.6s,baz=82,slow=34,SNR=2.7
PDAR PKKP **PKKPdf 21 37 49.9 0.0**
comp=Z,2.5nm,1.0s,baz=174,slow=4.0,SNR=6.5
PDAR PKPPKP **P'P'df 21 46 04.7 -7.1**
comp=Z,2.3nm,1.1s,baz=126,slow=2.0,SNR=9.2
PDAR LR LR 22 06 48.8
comp=Z,15µm,20.8s,baz=344,slow=38
O03D Paynes Creek 93.31 20 P P 21 20 46.7 -0.2
baz=341,SNR=14
J43A Natural Harves 93.34 355 P P 21 20 45.9 -1.0
baz=5.0,SNR=17
KCPM Cahto Peak 93.42 21 eP P 21 20 49.9 +2.4
J41A Loganville 93.45 356 P P 21 20 47.0 -0.3
baz=3.8,SNR=36
J42A Columbus 93.45 355 P P 21 20 46.7 -0.6
baz=4.5,SNR=12
J40A Soldiers Grove 93.45 357 P P 21 20 46.9 -0.5
baz=3.3,SNR=30
J39A Decorah 93.55 357 P P 21 20 47.1 -0.7
baz=2.6,SNR=19
KSPA Keystone Colle 93.57 345 eP P 21 20 48.4 +0.4
J38A Wedel Dairy, R 93.59 358 P P 21 20 46.9 -1.1
baz=2.0,SNR=15
J36A Seneca 1, Swea 93.62 359 P P 21 20 48.0 -0.1
baz=0.7,SNR=18
J36A Seneca 1, Swea 93.62 359 eP P 21 20 48.2 0.0
J37A Redenius Farm, 93.62 359 P P 21 20 48.1 0.0
baz=1.3,SNR=23
KIP Kipapa 93.63 56 PFAKE 21 21 00.0 +11
KIP LR LR
comp=Z,12µm,21.0s
KIP Kipapa 93.63 56 eP P 21 20 50.4 +1.9
KIP pmax pmax
comp=Z,291nm,1.0s
ERPA Erie 93.72 349 P P 21 20 48.3 -0.3
baz=11
ERPA Erie 93.72 349 eP P 21 20 49.2 +0.6
K22A Casper 93.72 8 P P 21 20 48.0 -0.8
baz=352,SNR=13
K22A Casper 93.72 8 eP P 21 20 49.1 +0.3
HVU Hansel Valley 93.74 13 eP P 21 20 49.8 +0.9
PAL Palisades 93.74 344 P P 21 20 48.2 -0.5
baz=15
PAL Palisades 93.74 344 eP P 21 20 49.4 +0.7
PAL Palisades 93.74 344 P P 21 20 49.4 +0.7
ODNJ Ogdensburg 93.81 344 eP P 21 20 49.3 +0.2
JFWS Jewell Farm 93.91 356 P P 21 20 49.2 -0.3
baz=3.7,SNR=45
JFWS Jewell Farm 93.91 356 eP P 21 20 49.0 -0.5
JFWS LR LR
comp=Z,24µm,20.0s
JFWS Jewell Farm 93.91 356 eP P 21 20 49.0 -0.5
JFWS MLR MLR
comp=Z,24µm,20.0s
AAM Ann Arbor 94.00 351 P P 21 20 48.7 -1.2
baz=8.4
AAM Ann Arbor 94.00 351 eP P 21 20 50.2 +0.3
AAM LR LR
comp=Z,17µm,19.0s
AAM Ann Arbor 94.00 351 eP P 21 20 50.2 +0.3
AAM MLR MLR
comp=Z,17µm,19.0s
K42A Prairie Point, 94.00 356 P P 21 20 49.4 -0.5
baz=4.3,SNR=10
K43A Burlington 94.01 355 P P 21 20 49.7 -0.3
baz=5.1,SNR=8.9
K43A Burlington 94.01 355 eP P 21 20 50.1 +0.2
BEKR Beckworth 94.06 19 eP P 21 20 51.7 +1.2
ORV Oroville 94.08 20 eP P 21 20 51.2 +0.8
ORV Oroville 94.08 20 eP P 21 20 51.2 +0.8
HWUT Hardware Ranch 94.10 12 eP P 21 20 51.8 +1.2
HWUT LR LR
comp=Z,25µm,22.0s
K40A Colesburg 94.17 357 P P 21 20 50.2 -0.4
baz=3.0,SNR=41
K37A Belmond 94.17 359 P P 21 20 50.2 -0.4
baz=1.2,SNR=15
BRNJ Basking Ridge 94.18 344 eP P 21 20 52.0 +1.2
K39A Oelwein 94.19 357 P P 21 20 49.6 -1.1
baz=2.5,SNR=33
N59A State Game Lan 94.19 345 P P 21 20 50.6 -0.3
baz=14,SNR=13
ALLY Alegheny Colle 94.20 349 eP P 21 20 51.1 +0.2
HOPS Hopland Field 94.21 21 eP P 21 20 52.8 +1.9
BMN Battle Mountai 94.22 17 eP P 21 20 52.7 +1.5
BMN Battle Mountai 94.22 17 eP P 21 20 52.7 +1.5
K41A Shullsburg 94.22 356 P P 21 20 50.2 -0.7
baz=3.6,SNR=15
SPUT South Promonto 94.25 13 eP P 21 20 52.5 +1.2
M54A Oil Creek Stat 94.26 348 P P 21 20 51.3 +0.1
baz=11,SNR=27
K38A Parkersburg 94.27 358 P P 21 20 50.7 -0.4
baz=1.8,SNR=8.5
K38A Parkersburg 94.27 358 eP P 21 20 51.2 +0.1
K36A Gilmore City 94.31 359 P P 21 20 51.3 -0.1
baz=0.6,SNR=13
LUPA Lehigh Univers 94.42 345 eP P 21 20 52.4 +0.6
PAHR Pah Rah Range 94.44 18 eP P 21 20 53.5 +1.3
L44A Lake County Fo 94.51 354 P P 21 20 51.1 -1.1
baz=5.4
BGU Big Grassy Mou 94.53 13 eP P 21 20 53.8 +1.3
L43A Garden Prairie 94.56 355 P P 21 20 51.3 -1.1
baz=4.8
RWWY Rawlins 94.59 9 eP P 21 20 53.7 +0.7
TCUT Toone Canyon 94.60 12 eP P 21 20 54.5 +1.5
L41A Preston 94.76 356 P P 21 20 52.2 -1.2
baz=3.5,SNR=18
L39A Vinton 94.77 357 P P 21 20 52.4 -1.0
baz=2.4,SNR=16
VCNR Virginia City 94.77 19 eP P 21 20 56.0 +2.3
L38A Oak Wood Farm, 94.78 358 P P 21 20 53.0 -0.5
baz=1.7,SNR=9.6
L42A Oliver, Polo 94.79 356 P P 21 20 52.9 -0.6
baz=4.1,SNR=24
L40A Anamosa 94.81 357 P P 21 20 52.6 -1.0
baz=3.0,SNR=12
L37A Phoenix Point, 94.81 359 P P 21 20 53.2 -0.4
baz=1.1,SNR=10
SSPA Standing Stone 94.84 347 P P 21 20 53.4 -0.3
baz=13
SSPA Standing Stone 94.84 347 eP P 21 20 54.0 +0.2
L36A Harm Buss Farm 94.85 359 P P 21 20 53.2 -0.6
baz=0.5
N54A Moraine State 94.85 348 P P 21 20 54.0 +0.2
baz=11,SNR=21
N54A Moraine State 94.85 348 eP P 21 20 54.0 +0.2
CTU Camp Tracy 94.97 12 eP P 21 20 56.0 +1.5
PNTR Pine Nut 94.98 19 eP P 21 20 56.3 +1.5
SCIA State Center 95.02 358 P P 21 20 53.4 -1.2
baz=1.5
SCIA State Center 95.02 358 PFAKE 21 21 10.0 +15
SCIA LR LR
comp=Z,30µm,19.0s
PSUB Penn St. - Bra 95.09 345 eP P 21 20 54.9 0.0
JLU Jordanelle 95.10 12 eP P 21 20 57.0 +1.7
M46A Old House Fiel 95.15 353 P P 21 20 54.8 -0.4
baz=6.5,SNR=12
PHWY Pilot Hill 95.16 8 eP P 21 20 56.2 +0.6
YERR Yerington 95.16 18 eP P 21 20 57.1 +1.5
MVL Millersville 95.19 345 eP P 21 20 55.8 +0.5
M45A Boilermakers S 95.24 354 P P 21 20 54.8 -0.8
baz=5.9
DUG Dugway, Tooele 95.28 13 P P 21 20 56.2 +0.2
baz=347,SNR=80
DUG Dugway, Tooele 95.28 13 eP P 21 20 56.8 +0.8
DUG LR LR
comp=Z,16µm,19.0s
DUG Dugway, Tooele 95.28 13 eP P 21 20 56.8 +0.8
DUG MLR MLR
comp=Z,16µm,19.0s
M44A Midewin, Midew 95.30 354 P P 21 20 55.8 -0.1
baz=5.3
O56A Blue Knob Stat 95.31 347 P P 21 20 56.1 +0.1
baz=12,SNR=17
M43A Waltham Townsh 95.31 355 P P 21 20 55.8 -0.2
baz=4.6,SNR=16
SUR Sutherland 95.34 230 eP P 21 20 58.4 +2.3
SUR LR LR
comp=Z,34µm,19.0s
M42A Sheffield 95.34 356 P P 21 20 55.3 -0.7
baz=4.0
KVN Kaiserville 95.36 18 eP P 21 20 57.6 +1.2
KVN Kaiserville 95.36 18 eP P 21 20 57.6 +1.2
M39A Webster 95.42 358 P P 21 20 55.9 -0.6
baz=2.3,SNR=19
N50A Nevada 95.45 351 P P 21 20 56.3 -0.3
baz=8.8,SNR=19
M41A Milan 95.46 356 P P 21 20 56.0 -0.6
baz=3.5,SNR=11
M40A Post Highland 95.47 357 P P 21 20 56.1 -0.6
baz=2.8,SNR=14
M36A Felix, Anita 95.49 360 P P 21 20 56.3 -0.5
baz=0.4,SNR=9.0
BGNE Belgrade 95.50 2 P P 21 20 56.7 -0.1
baz=358,SNR=8.2
M38A Pleasantville 95.51 358 P P 21 20 56.6 -0.2
baz=1.5,SNR=19
N23A Red Feather La 95.52 8 P P 21 20 57.6 +0.3
baz=352,SNR=31
M37A Trindle Farm, 95.54 359 P P 21 20 56.5 -0.5
baz=0.9
WAKR Walker 95.58 19 eP P 21 20 58.9 +1.5
MPU Maple Canyon 95.64 12 eP P 21 20 59.5 +1.7
RYN Ryan 95.67 18 eP P 21 20 59.0 +1.2
N46A Monticello 95.69 353 P P 21 20 57.4 -0.2
baz=6.2,SNR=12
ARMA Armidale 95.71 127 eP P 21 20 59.1 +1.3
OGNE Ogallala 95.79 5 P P 21 20 57.2 -1.1
baz=355,SNR=8.1
OGNE Ogallala 95.79 5 eP P 21 20 59.0 +0.8
OGNE LR LR
comp=Z,22µm,20.0s
CMB Columbia Colle 95.80 20 eP P 21 21 00.4 +2.1
CMB Columbia Colle 95.80 20 eP P 21 21 00.4 +2.1
N45A Kentland 95.80 354 P P 21 20 58.1 0.0
baz=5.7,SNR=16
N43A Stutzmann Famil 95.82 355 P P 21 20 57.8 -0.5
baz=4.5,SNR=5.7
SDMD Soldier's Deli 95.85 346 eP P 21 20 59.1 +0.7
N44A Piper City 95.90 354 P P 21 20 58.8 +0.2
baz=5.2,SNR=14
NV01 Mina Array Sit 95.91 18 eP P 21 20 60.0 +1.0
NVAR Mina Array Bea 95.91 18 P P 21 20 59.3 +0.3
comp=Z,14nm,0.8s,baz=333,slow=3.1,SNR=92
NVAR PKKPbc **PKKPbc 21 37 46.6 +0.4**
comp=Z,5.4nm,1.1s,baz=173,slow=4.5,SNR=9.5
NVAR PKPPKP P'P'df 21 45 58.0 -8.4
comp=Z,0.3nm,0.7s,baz=187,slow=2.4,SNR=4.0
NVAR LR LR 22 09 06.7
comp=Z,18µm,19.1s,baz=22,slow=39
NV11 Mina Array Sit 95.94 18 eP P 21 21 00.3 +1.2
ACSO Alum Creek Sta 95.97 350 P P 21 20 58.8 -0.2
baz=9.0,SNR=9.1
ACSO Alum Creek Sta 95.97 350 eP P 21 20 59.1 +0.2
ACSO LR LR
comp=Z,15µm,20.0s
N42A Yates City 95.98 356 P P 21 20 58.5 -0.5
baz=3.8,SNR=14
N40A Mertquake, Sal 96.00 357 P P 21 20 58.8 -0.3
baz=2.7,SNR=15
O20A White River Ci 96.01 10 P P 21 20 59.2 -0.2
baz=351,SNR=12
N39A Derby Farms, D 96.03 358 P P 21 20 58.7 -0.5
baz=2.0,SNR=38
MCWV Mont Chateau 96.10 348 P P 21 20 59.3 -0.2
baz=11
MCWV Mont Chateau 96.10 348 eP P 21 20 00.3 +0.8
O50A Cable 96.12 351 P P 21 20 59.1 -0.6
baz=8.5,SNR=10.0
N36A Muff Farm, Cla 96.13 360 P P 21 20 59.8 +0.1
baz=0.2,SNR=13
N38A Joes South For 96.13 358 P P 21 20 59.3 -0.4
baz=1.5,SNR=8.0
N41A Harden Midland 96.14 357 P P 21 20 58.7 -1.0
baz=3.2,SNR=14
N41A Harden Midland 96.14 357 eP P 21 20 59.4 -0.3
N37A Lee Faris, Mou 96.18 359 P P 21 20 59.6 -0.3
baz=0.8,SNR=7.2
HDIL Hopedale 96.21 355 P P 21 20 59.0 -1.0
baz=4.4,SNR=12
HDIL Hopedale 96.21 355 eP P 21 20 00.3 +0.2
HDIL LR LR
comp=Z,23µm,19.0s
P18A Preston Nutter 96.23 11 eP P 21 21 01.7 +1.1
SFIN Lafayette 96.23 354 P P 21 20 59.8 -0.3
baz=6.0,SNR=5.3
O47A Sheridan 96.30 353 P P 21 20 59.9 -0.5
baz=6.7,SNR=17
P17A Butcher Ranch, 96.31 12 eP P 21 21 02.0 +1.3
POHA Pohakuloa 96.39 55 PFAKE 21 21 10.0 +8.5
POHA LR LR
comp=Z,14µm,20.0s
O45A Potomac 96.41 354 P P 21 21 00.6 -0.3
baz=5.5,SNR=9.5
TMUT Trail Mountain 96.41 12 eP P 21 21 02.6 +1.2
O43A Sugar Creek Fa 96.48 355 P P 21 21 00.6 -0.7
baz=4.4,SNR=7.2
MDPB Devils Postpil 96.49 19 eP P 21 21 04.2 +2.4
OMMB Old Mammoth Mi 96.53 19 eP P 21 21 04.4 +2.4
MLAC Mammoth, Mammo 96.55 19 P P 21 21 02.1 +0.1
baz=343
O44A Mansfield 96.56 355 P P 21 21 01.0 -0.6
baz=5.0,SNR=12
R11A Troy Canyon, C 96.56 16 P P 21 21 02.4 +0.5
baz=345,SNR=23
O42A Bath 96.61 356 P P 21 21 00.8 -1.0
baz=3.8
ISCO Idaho Springs 96.63 8 P P 21 21 02.4 +0.1
baz=352,SNR=24

ISCO	Idaho Springs	96.63	8	eP	P	21 21 03.3	+0.9
ISCO				LR	LR		
	comp=Z,22µm,19.0s						
ISCO	Idaho Springs	96.63	8	eP	P	21 21 03.3	+0.9
ISCO				MLR	MLR		
	comp=Z,22µm,19.0s						
O39A	Kirksville	96.65	358	P	P	21 21 02.1	0.0
	baz=2.0,SNR=6.9						
P50A	Jamestown	96.68	351	P	P	21 21 01.0	-1.2
	baz=8.4						
SRU	San Rafael Swe	96.70	12	eP	P	21 21 03.4	+0.8
SRU	San Rafael Swe	96.70	12	eP	P	21 21 03.4	+0.8
PSUT	Pine Spring	96.71	14	eP	P	21 21 04.1	+1.5
O41A	Passleys Farm,	96.73	357	P	P	21 21 01.3	-1.1
	baz=3.2,SNR=53						
O40A	La Belle	96.77	357	P	P	21 21 01.7	-0.9
	baz=2.5,SNR=22						
O37A	Wolven Farm, M	96.77	359	P	P	21 21 02.5	-0.1
	baz=0.8,SNR=15						
Q16A	Castle Valley	96.79	12	eP	P	21 21 04.5	+1.6
O38A	Galt	96.81	359	P	P	21 21 02.7	-0.1
	baz=1.3,SNR=13						
P46A	Rosedale	97.00	354	P	P	21 21 03.4	-0.2
	baz=5.9,SNR=19						
MSU	Marysvale	97.03	13	eP	Pdif	21 21 05.8	+1.6
MSU	Marysvale	97.03	13	eP	Pdif	21 21 05.8	+1.6
SMCO	Snowmass	97.10	9	eP	Pdif	21 21 05.5	+0.8
CBN	Corbin Frederi	97.11	346	P	P	21 21 03.3	-0.8
	baz=13						
CBN	Corbin Frederi	97.11	346	PFAKE		21 21 20.0	+16
CBN				LR	LR		
	comp=Z,19µm,20.0s						
P45A	Graceland, Par	97.13	354	P	P	21 21 03.9	-0.3
	baz=5.5,SNR=15						
P43A	Skaggs, Pawnee	97.14	355	P	P	21 21 04.1	-0.2
	baz=4.2,SNR=29						
P41A	Barry, Barry	97.18	357	P	P	21 21 04.1	-0.4
	baz=3.1,SNR=23						
P42A	Winchester	97.24	356	P	P	21 21 04.1	-0.5
	baz=3.6,SNR=24						
TIN	Tinemaha, Big	97.24	18	P	P	21 21 04.8	-0.2
	baz=343						
P44A	Sand Creek, Wi	97.25	355	P	P	21 21 04.7	-0.1
	baz=4.9,SNR=23						
P38A	Dawn	97.31	359	P	P	21 21 04.7	-0.3
	baz=1.3,SNR=23						
CVRD	Centerville Ro	97.32	346	eP	Pdif	21 21 05.6	+0.4
IP04	Greensprings	97.35	346	eP	Pdif	21 21 05.7	+0.4
P37A	Lathrop	97.35	359	P	P	21 21 05.0	-0.2
	baz=0.7,SNR=16						
P40A	Paris	97.36	357	P	P	21 21 04.8	-0.4
	baz=2.4,SNR=36						
SPRD	Spring Road, M	97.38	346	eP	Pdif	21 21 06.1	+0.7
BLO	Bloomington	97.38	353	eP	Pdif	21 21 06.0	+0.6
BLO	Bloomington	97.38	353	eP	Pdif	21 21 06.0	+0.6
P39B	Salisbury	97.42	358	P	P	21 21 05.1	-0.4
	baz=1.9,SNR=22						
MTPU	Mount Pierson	97.48	13	eP	Pdif	21 21 08.8	+2.5
IP06	Yanceyville	97.48	346	eP	Pdif	21 21 06.3	+0.4
GRAC	Grapevine Rang	97.49	18	P	Pdif	21 21 06.6	+0.6
	baz=344,SNR=6.2						
PV09	Paradox Valley	97.50	11	eP	Pdif	21 21 07.7	+1.3
IP07	Quail	97.51	346	eP	Pdif	21 21 06.4	+0.4
Q24A	Divide	97.51	8	P	P	21 21 05.9	-0.4
	baz=353,SNR=15						
IP05	Hopewell Churc	97.55	346	eP	Pdif	21 21 06.5	+0.4
Q46A	CEJHS Indians,	97.60	354	P	P	21 21 05.9	-0.5
	baz=5.8						
Q47A	Bedord North L	97.61	353	P	P	21 21 06.0	-0.4
	baz=6.5,SNR=8.1						
PV07	Paradox Valley	97.62	10	eP	Pdif	21 21 08.0	+1.1
PV10	Paradox Valley	97.63	11	eP	Pdif	21 21 09.2	+2.3
PV04	Paradox Valley	97.64	11	eP	Pdif	21 21 07.9	+1.1
KSCO	Kaye Shedlock'	97.67	6	P	P	21 21 06.8	-0.1
	baz=355,SNR=13						
JSRW	J. Sargeant Re	97.70	346	eP	Pdif	21 21 08.1	+1.2
PV15	Paradox Valley	97.74	10	eP	Pdif	21 21 08.2	+0.8
CCUT	Cedar City	97.76	14	eP	Pdif	21 21 09.7	+2.2
URVA	University of	97.76	346	eP	Pdif	21 21 07.6	+0.5
SZCU	Shurtz Canyon	97.76	14	eP	Pdif	21 21 09.8	+2.4
TPNV	Topopah Spring	97.78	17	P	P	21 21 07.2	-0.3
	baz=345						
TPNV	Topopah Spring	97.78	17	eP	Pdif	21 21 09.5	+2.0
PV03	Paradox Valley	97.78	11	eP	Pdif	21 21 09.0	+1.5
Q45A	Warren Harvey,	97.79	354	P	P	21 21 07.0	-0.2
	baz=5.2,SNR=29						
KSU1	Kansas State U	97.84	1	P	P	21 21 07.3	-0.2
	baz=359,SNR=11						
KSU1	Kansas State U	97.84	1	eP	Pdif	21 21 07.8	+0.3
KSU1				LR	LR		
	comp=Z,14µm,20.0s						
PV02	Paradox Valley	97.84	11	eP	Pdif	21 21 09.3	+1.5
Q44A	Meyer Farm, Va	97.84	355	P	Pdif	21 21 07.5	0.0
	baz=4.6,SNR=17						
Q43A	New Douglas	97.84	356	P	Pdif	21 21 07.6	+0.1
	baz=4.1,SNR=16						
CWC	Cottonwood Cre	97.86	18	P	P	21 21 07.1	-0.7
	baz=344						
Q39A	Willow Grove F	97.87	358	P	P	21 21 07.2	-0.3
	baz=1.7,SNR=13						
Q40A	Laux Farm, Aux	97.90	357	P	P	21 21 07.2	-0.5
	baz=2.4,SNR=19						
Q41A	Truxton	97.91	357	P	P	21 21 07.3	-0.5
	baz=3.0,SNR=15						
Q42A	Golden Eagle	97.92	356	P	P	21 21 07.4	-0.4
	baz=3.5,SNR=19						
PV05	Paradox Valley	97.92	11	eP	Pdif	21 21 10.0	+1.8
PV01	Paradox Valley	97.93	10	eP	Pdif	21 21 09.2	+0.9
OLIL	Olney	97.95	354	eP	Pdif	21 21 08.7	+0.8
Q38A	Cooks Store, C	97.97	359	P	P	21 21 07.2	-0.9
	baz=1.2,SNR=17						
CBKS	Cedar Bluff	98.04	3	P	P	21 21 07.6	-0.8
	baz=357,SNR=14						
CBKS	Cedar Bluff	98.04	3	eP	Pdif	21 21 08.8	+0.4
CBKS				LR	LR		
	comp=Z,21µm,21.0s						
CBKS	Cedar Bluff	98.04	3	eP	Pdif	21 21 08.8	+0.4
CBKS				MLR	MLR		
	comp=Z,21µm,21.0s						
Q37A	Longview Farm,	98.07	359	P	P	21 21 08.2	-0.3
	baz=0.6,SNR=8.8						
R48A	Northridge Ran	98.09	352	P	Pdif	21 21 08.6	0.0
	baz=6.9,SNR=6.3						
FURC	Furnace Creek,	98.11	17	P	Pdif	21 21 08.9	+0.2
	baz=344,SNR=5.4						
VES	Vestal, Richgr	98.20	19	P	P	21 21 07.9	-1.2
	baz=343						
R47A	Wooly Knot Far	98.25	353	P	P	21 21 08.9	-0.4
	baz=6.4,SNR=8.1						
WCI	Wyandotte Cave	98.30	353	P	Pdif	21 21 09.6	+0.1
	baz=6.6						
WCI	Wyandotte Cave	98.30	353	eP	Pdif	21 21 10.0	+0.4
WCI	Wyandotte Cave	98.30	353	eP	Pdif	21 21 10.0	+0.5
LCMT	Little Creek M	98.30	14	eP	Pdif	21 21 12.6	+2.9
MPMC	Manual Prospec	98.36	18	P	Pdif	21 21 10.9	+0.7
	baz=344,SNR=14						
KNB	Kanab	98.37	14	eP	Pdif	21 21 12.6	+2.5
R45A	Skylar, Fairfi	98.40	354	P	Pdif	21 21 10.1	+0.2
	baz=5.1						
R46A	Gibon Southern	98.42	354	P	P	21 21 09.2	-0.8
	baz=5.7						
SHPR	Sheep Range	98.43	16	eP	Pdif	21 21 12.7	+2.4
SMMC	Simmler	98.48	20	P	Pdif	21 21 10.9	+0.5
	baz=342						
S52A	Salyersville	98.50	350	P	P	21 21 09.6	-0.8
	baz=8.9						
R44A	Waltonville	98.50	355	P	P	21 21 10.0	-0.3
	baz=4.6,SNR=17						
ISA	Isabella, Lake	98.52	19	P	Pdif	21 21 10.8	+0.1
	baz=343						
R43A	Red Bud	98.52	356	P	P	21 21 10.5	0.0
	baz=3.9,SNR=12						
R42A	Luebbering	98.56	356	P	P	21 21 10.2	-0.4
	baz=3.3,SNR=14						
R41A	Rosebud	98.57	357	P	P	21 21 10.1	-0.6
	baz=2.9,SNR=16						
BLA	Blacksburg	98.59	348	P	P	21 21 10.2	-0.7
	baz=11						
BLA	Blacksburg	98.59	348	PFAKE		21 21 20.0	+9.1
BLA				LR	LR		
	comp=Z,13µm,20.0s						
S51A	Beattyville	98.60	351	P	P	21 21 09.0	-1.8
	baz=8.6						
R39A	Chumby, Stover	98.60	358	P	P	21 21 10.6	-0.3
	baz=1.7,SNR=44						
R40A	Maddies Statio	98.61	358	P	P	21 21 10.4	-0.5
	baz=2.2,SNR=11						
USIN	University of	98.68	354	eP	Pdif	21 21 12.8	+1.6
SDCO	Great Sand Dun	98.68	8	P	Pdif	21 21 11.7	+0.1
	baz=352,SNR=56						
SDCO	Great Sand Dun	98.68	8	eP	P	21 21 11.3	-0.3
SDCO				LR	LR		
	comp=Z,19µm,21.0s						
R38A	Fenwick Farm,	98.75	359	P	P	21 21 10.8	-0.8
	baz=1.0,SNR=21						
SHOC	Shoshone, Teco	98.78	17	Pdiff	Pdif	21 21 12.4	+0.6
	baz=345						
CCM	Cathedral Cave	98.80	357	Pdiff	P	21 21 11.2	-0.6
	baz=3.0						
CCM	Cathedral Cave	98.80	357	eP	P	21 21 11.6	-0.2
CCM	Cathedral Cave	98.80	357	eP	P	21 21 11.6	-0.2
FVM	French Village	98.84	356	eP	Pdif	21 21 12.7	+0.7
FVM	French Village	98.84	356	eP	Pdif	21 21 12.7	+0.8
S48A	Wiedeman Farm,	98.84	353	Pdiff	P	21 21 11.7	-0.2
	baz=6.8						
MVCO	Mesa Verde	98.85	11	Pdiff	Pdif	21 21 12.8	+0.5
	baz=350						
MVCO	Mesa Verde	98.85	11	eP	Pdif	21 21 14.2	+1.8
MVCO				LR	LR		
	comp=Z,18µm,21.0s						
LRMC	Laurel Mtn Rad	98.87	18	Pdiff	Pdif	21 21 12.9	+0.6
	baz=344						
PKM	Mcpherson Peak	98.93	20	Pdiff	Pdif	21 21 13.0	+0.4
	baz=342						
ARVC	Arvin	98.94	19	Pdiff	Pdif	21 21 13.1	+0.6
	baz=343						
S46A	Don Dixon Farm	98.96	354	Pdiff	P	21 21 11.2	-1.3
	baz=5.6						
S45A	Carrier Mills	99.03	355	Pdiff	Pdif	21 21 11.2	-1.6
	baz=4.9						
SIUC	Southern Illin	99.04	355	eP	Pdif	21 21 13.9	+1.1
T52A	Hallie	99.05	350	Pdiff	Pdif	21 21 13.4	+0.5
	baz=9.0						
S44A	Carbondale	99.06	355	Pdiff	Pdif	21 21 12.2	-0.7
	baz=4.4						
S42A	Caledonia	99.07	356	Pdiff	Pdif	21 21 11.9	-1.0
	baz=3.3						
FUNA	Funafuti	99.12	93	PFAKE		21 21 30.0	+17
FUNA				LR	LR		
	comp=Z,14µm,20.0s						
DZM	Mont Dzumac	99.20	112	LR	LR	22 03 35.1	
	comp=Z,3µm,21.3s,baz=325,slow=34						
DZM	Mont Dzumac	99.20	112	eP	Pdif	21 21 06.7	-7.1
	comp=Z,222nm,24.9s						
DZM	Mont Dzumac	99.20	112	ePP	PP	21 25 14.2	-2.6
	comp=Z,519nm,25.1s						
DZM	Mont Dzumac	99.20	112	eSS	SS	21 39 35.9	+1.9
	comp=Z,6µm,28.4s						
S43A	Fulton Ridge,	99.23	356	Pdiff	Pdif	21 21 12.8	-0.9
	baz=3.8						
S39A	Bolivar	99.23	358	Pdiff	Pdif	21 21 12.9	-0.8
	baz=1.4						
GSC	Goldstone, Bar	99.24	18	Pdiff	Pdif	21 21 14.1	+0.2
	baz=344						
GSC	Goldstone, Bar	99.24	18	eP	Pdif	21 21 16.2	+2.3
GSC	Goldstone, Bar	99.24	18	eP	Pdif	21 21 16.2	+2.3
TUQ	Turquoise Moun	99.30	17	Pdiff	Pdif	21 21 14.7	+0.5
	baz=345						
S38A	Stockton	99.30	359	Pdiff	Pdif	21 21 12.8	-1.2
	baz=1.0						
S40A	Lebanon	99.30	358	Pdiff	Pdif	21 21 13.7	-0.3
	baz=2.1						
T49A	Edmonton	99.34	352	Pdiff	Pdif	21 21 13.2	-1.0
	baz=7.2						
T50A	Nancy	99.35	351	Pdiff	Pdif	21 21 13.1	-1.1
	baz=7.7						
EDW2	Edwards Air Fo	99.37	19	Pdiff	Pdif	21 21 15.2	+0.7
	baz=344						
T25A	Trinidad	99.39	7	Pdiff	Pdif	21 21 14.5	-0.2
	baz=353						
T48A	Bowling Green	99.42	353	Pdiff	Pdif	21 21 14.1	-0.4
	baz=6.5						
OSI	Osito Audit: C	99.46	19	Pdiff	Pdif	21 21 14.7	-0.2
	baz=343						
BBSR	BB Station	99.50	334	PFAKE		21 21 30.0	+15
BBSR				LR	LR		
	comp=Z,7µm,21.0s						
T47A	Sharon Grove	99.60	353	Pdiff	Pdif	21 21 15.1	-0.3
	baz=6.0						
RRX	Edison Barstow	99.61	18	Pdiff	Pdif	21 21 15.5	0.0
	baz=344						
T46A	Princeton	99.61	354	Pdiff	Pdif	21 21 14.7	-0.7
	baz=5.4						
TZTN	Tazewell	99.67	350	Pdiff	Pdif	21 21 14.4	-1.3
	baz=8.6						
T44A	Benton	99.68	355	Pdiff	Pdif	21 21 15.4	-0.3
	baz=4.2						
T45A	Paducah	99.69	355	Pdiff	Pdif	21 21 14.4	-1.3
	baz=4.9						
T43A	Greenville	99.73	356	Pdiff	Pdif	21 21 15.5	-0.4
	baz=3.7						
U53A	Fall Branch	99.73	350	Pdiff	Pdif	21 21 14.8	-1.2
	baz=9.3						
T40A	Mansfield	99.75	358	Pdiff	Pdif	21 21 15.0	-1.1
	baz=2.0						
HEC	Hector,Ludlow	99.80	17	Pdiff	Pdif	21 21 16.6	+0.2
	baz=345						
T42A	Van Buren	99.82	357	Pdiff	Pdif	21 21 16.0	-0.3
	baz=3.1						
T41A	Mountain View	99.83	357	Pdiff	Pdif	21 21 15.2	-1.2
	baz=2.6						
BLG	Laguna Peak, P	99.86	20	Pdiff	Pdif	21 21 16.6	0.0
	baz=343						
DECC	Green Verdugo	99.89	19	Pdiff	Pdif	21 21 15.7	-1.0
	baz=343						
T39A	Clever	99.90	358	Pdiff	Pdif	21 21 15.8	-0.9
	baz=1.4						
T38A	Diamond	99.90	359	Pdiff	Pdif	21 21 15.2	-1.5
	baz=0.7						
U49A	Red Boiling Sp	99.95	352	Pdiff	Pdif	21 21 14.7	-2.2
	baz=7.0						
GMRC	Granite Mounta	99.99	17	Pdiff	Pdif	21 21 17.6	+0.3
	baz=345						
U48A	Cassie Pea, Po	100.03	353	Pdiff	Pdif	21 21 17.0	-0.3
	baz=6.4						
BFSC	Mount Baldy Ra	100.07	19	Pdiff	Pdif	21 21 17.5	-0.1
	baz=344						
WUAZ	Wupatki	100.08	13	Pdiff	Pdif	21 21 18.4	+0.7
	baz=348						
WUAZ	Wupatki	100.08	13	ePdif	Pdif	21 21 18.9	+1.2
WUAZ				LR	LR		
	comp=Z,30nm,1.1s						
CNNC	Cliffs of the	100.09	346	Pdiff	Pdif	21 21 18.2	+0.7
	baz=13						
CNNC	Cliffs of the	100.09	346	PFAKE		21 21 30.0	+12
CNNC				LR	LR		
	comp=Z,19µm,21.0s						
U47A	Clarksville	100.16	353	Pdiff	Pdif	21 21 17.3	-0.6
	baz=5.9						
BBRC	Big Bear Solar	100.21	18	Pdiff	Pdif	21 21 17.6	-0.9
	baz=344						
NEE2	Needles Airpor	100.22	16	Pdiff	Pdif	21 21 17.7	-0.4
	baz=346						
U44A	Portageville	100.27	355	Pdiff	Pdif	21 21 17.0	-1.3
	baz=4.1						
U46A	Springville	100.31	354	Pdiff	Pdif	21 21 18.1	-0.4
	baz=5.2						
U45A	Rockin P Farm,	100.36	355	Pdiff	Pdif	21 21 18.2	-0.6
	baz=4.8						
V52A	Sevierville	100.37	350	Pdiff	Pdif	21 21 17.7	-1.2
	baz=8.6						
U44B	Burton Farm, H	100.41	355	Pdiff	Pdif	21 21 18.7	-0.3
	baz=4.4						
FMP	Fort Macarthur	100.42	19	Pdiff	Pdif	21 21 19.7	+0.6
	baz=343						
V53A	Saluda	100.44	350	Pdiff	Pdif	21 21 19.1	0.0
	baz=9.2						
U43A	Rector	100.44	356	Pdiff	Pdif	21 21 18.4	-0.7
	baz=3.6						
V51A	Loudon	100.50	351	Pdiff	Pdif	21 21 18.2	-1.2
	baz=8.1						
U42A	Revenden	100.50	357	Pdiff	Pdif	21 21 19.0	-0.3
	baz=3.0						
WVT	Waverly	100.51	354	Pdiff	Pdif	21 21 18.7	-0.7
	baz=5.5						
WVT	Waverly	100.51	354	eP	Pdif	21 21 20.3	+0.9
WVT	Waverly	100.51	354	eP	Pdif	21 21 20.3	+0.9
U41A	Viola	100.53	357	Pdiff	Pdif	21 21 18.5	-1.1
	baz=2.5						
U39A	Green Forest	100.54	358	Pdiff	Pdif	21 21 18.8	-0.8
	baz=1.3						
U40A	Yellville	100.55	358	Pdiff	Pdif	21 21 18.7	-0.9
	baz=1.8						
SNCC	San Nicolas Is	100.56	20	Pdiff	Pdif	21 21 18.4	-1.3
	baz=342						
BELC	Belle Mtn. Jos	100.67	17	Pdiff	Pdif	21 21 19.2	-1.2
	baz=345						
CIS	Catalina Islan	100.69	19	Pdiff	Pdif	21 21 20.3	0.0
	baz=343						
IRM	Iron Mountain	100.70	17	Pdiff	Pdif	21 21 20.8	+0.4
	baz=346						
V49A	McMinnville	100.70	352	Pdiff	Pdif	21 21 19.7	-0.6
	baz=6.9						
V50A	Pikevile	100.71	351	Pdiff	Pdif	21 21 19.0	-1.3
	baz=7.5						
W18A	Petrified Fore	100.73	12	Pdiff	Pdif	21 21 21.0	+0.4
	baz=349						
KMSC	Kings Mountain	100.75	348	Pdiff	Pdif	21 21 21.1	+0.6
	baz=10						
PDMCI	Parker Dam,Lak	100.76	16	Pdiff	Pdif	21 21 20.0	-0.5
	baz=346						
MURC	Murrieta	100.79	18	Pdiff	Pdif	21 21 20.9	+0.1
	baz=344						
V47A	Nunnelly	100.79	353	Pdiff	Pdif	21 21 20.6	0.0
	baz=5.7						
V48A	Smith Brothers	100.81	353	Pdiff	Pdif	21 21 20.0	-0.7
	baz=6.2						
V46A	Holladay	100.86	354	Pdiff	Pdif	21 21 20.7	-0.3
	baz=5.3						
PFO	Pinyon Flats O	100.94	18	Pdiff	Pdif	21 21 22.1	+0.6
	baz=344						
PFO	Pinyon Flats O	100.94	18	ePdif	Pdif	21 21 23.0	+1.5
	comp=Z,18nm,1.2s						
PFO				LR	LR		
	comp=Z,16µm,22.0s						
PFO	Pinyon Flats O	100.94	18	eP	Pdif	21 21 23.0	+1.5
PFO				pmax	pmax		
	comp=Z,18nm,1.2s						
PFO				MLR	MLR		
	comp=Z,16µm,22.0s						
V44A	Blytheville	100.95	355	Pdiff	Pdif	21 21 21.1	-0.3
	baz=4.0						
W53A	Cullowhee	100.98	350	Pdiff	Pdif	21 21 22.4	+0.7
	baz=8.9						
V45A	Humboldt	100.98	355	Pdiff	Pdif	21 21 20.9	-0.6
	baz=4.7						
TUL1	Leonard	101.03	0	Pdiff	Pdif	21 21 21.4	-0.4
	baz=360						
V43A	Jonesboro	101.03	356	Pdiff	Pdif	21 21 21.4	-0.3
	baz=3.5						
SHEL	Horse Pasture	101.05	259	PFAKE		21 21 30.0	+8.0
SHEL				LR	LR		
	comp=Z,4µm,22.0s						
V42A	Cord	101.05	357	Pdiff	Pdif	21 21 20.9	-0.9
	baz=2.9						
SCI2	San Clemente I	101.06	20	Pdiff	Pdif	21 21 22.1	+0.2
	baz=343						
V39A	Pettigrew	101.09	359	Pdiff	Pdif	21 21 21.8	-0.3
	baz=1.2						
V41A	Mountainview	101.10	357	Pdiff	Pdif	21 21 21.6	-0.5
	baz=2.3						
V40A	Witts Springs	101.10	358	Pdiff	Pdif	21 21 21.6	-0.5
	baz=1.8						
BC3	Big Chuckawall	101.12	17	Pdiff	Pdif	21 21 23.1	+0.8
	baz=345						
W52A	Murphy	101.15	350	Pdiff	Pdif	21 21 22.0	-0.3
	baz=8.4						
W50A	Signal Mountai	101.20	352	Pdiff	Pdif	21 21 21.9	-0.6
	baz=7.4						
Y12C	Blythe	101.22	16	Pdiff	Pdif	21 21 23.2	+0.6
	baz=346						
ANMO	Albuquerque	101.34	9	P	Pdif	21 21 24.3	+0.9
	comp=Z,8.4nm,0.9s,baz=354,slow=4.3,SNR=25						
ANMO				PP	PP	21 25 31.8	+0.3
	comp=Z,16nm,1.2s,baz=328,slow=15,SNR=3.3						
ANMO				PKKPab	PKKPab	21 37 55.9	
	comp=Z,7.8nm,1.0s,baz=197,slow=5.4,SNR=8.8						
ANMO				PKPPKP	P'P'df	21 45 50.0	-6.0
	comp=Z,0.9nm,0.8s,baz=193,slow=6.7,SNR=3.8						
ANMO	Albuquerque	101.34	9	Pdiff	Pdif	21 21 23.9	+0.5
	baz=352						
ANMO	Albuquerque	101.34	9	P	Pdif	21 21 24.3	+0.9
ANMO				PP	PP	21 25 31.8	+0.3
ANMO				P'P'		21 45 50.0	
ANMO				LR	LR		
	comp=Z,17µm,20.0s						
ANMO	Albuquerque	101.34	9c	iP	Pdif	21 21 24.6	+1.2
ANMO				pmax	pmax		
	comp=Z,12nm,1.1s						
ANMO				MLR	MLR		
	comp=Z,17µm,20.0s						
TASL	Snake Pit, Alb	101.34	9	Pdiff	Pdif	21 21 24.3	+0.9
	baz=352						
TASM	ASL Pad, Albuq	101.34	9	Pdiff	Pdif	21 21 23.6	+0.2
	baz=352						
W47A	Westpoint	101.37	354	Pdiff	Pdif	21 21 22.5	-0.7
	baz=5.7						
W49A	Belvidere	101.38	352	Pdiff	Pdif	21 21 22.2	-1.0
	baz=6.7						
W48A	Pulaski	101.42	353	Pdiff	Pdif	21 21 22.3	-1.2
	baz=6.2						
109C	Camp Elliot, M	101.49	19	Pdiff	Pdif	21 21 23.9	+0.1
	baz=344						
W46A	Michie	101.55	354	Pdiff	Pdif	21 21 24.0	0.0
	baz=5.1						
W45A	Hickory Valley	101.58	355	Pdiff	Pdif	21 21 24.1	0.0
	baz=4.5						
W42A	Bald Knob	101.59	357	Pdiff	Pdif	21 21 23.7	-0.5
	baz=2.8						
X52A	Dahlonega	101.63	350	Pdiff	Pdif	21 21 24.7	+0.3
	baz=8.4						
W44A	Shelby Farms P	101.64	355	Pdiff	Pdif	21 21 24.5	+0.1
	baz=4.1						
MONP2	Monument Peak	101.64	18	Pdiff	Pdif	21 21 25.5	+0.7
	baz=344						
X53A	Estanollee	101.65	350	Pdiff	Pdif	21 21 23.8	-0.7
	baz=8.9						
PLAL	Pickwick Lake	101.67	354	eP	Pdif	21 21 25.4	+0.8
W41B	Gary Mavity, V	101.71	357	Pdiff	Pdif	21 21 24.3	-0.5
	baz=2.3						
W40A	Ferguson Farm,	101.72	358	Pdiff	Pdif	21 21 24.3	-0.5
	baz=1.6						
SWSC	Sam W. Stewart	101.73	17	Pdiff	Pdif	21 21 24.5	-0.4
	baz=345						
W39A	Magazine	101.73	359	Pdiff	Pdif	21 21 24.5	-0.3
	baz=1.1						
W43A	Forest City	101.73	356	Pdiff	Pdif	21 21 24.1	-0.8
	baz=3.4						
X51A	Calhoun	101.78	351	Pdiff	Pdif	21 21 24.5	-0.6
	baz=7.7						
GLA	Glamis	101.83	17	Pdiff	Pdif	21 21 25.5	+0.1
	baz=346						
AMTX	Amarillo	101.84	5	Pdiff	Pdif	21 21 25.6	+0.1
	ba

baz=4.4
Y53A Monroe 102.33 350 Pdiff **Pdif** **21 21 28.6 +1.0**
baz=8.7
MIAR Mount Ida 102.38 358 Pdiff **Pdif** **21 21 28.0 +0.2**
baz=1.3
MIAR Mount Ida 102.38 358 PFAKE 21 21 40.0 +12
MIAR LR LR
comp=Z,23µm,19.0s
Y52A Lilburn 102.38 350 Pdiff **Pdif** **21 21 27.6 -0.2**
baz=8.3
X41A Kaden, Bauxite 102.40 358 Pdiff **Pdif** **21 21 27.6 -0.2**
baz=2.1
X40A Basin Creek Fa 102.42 358 Pdiff **Pdif** **21 21 27.3 -0.6**
baz=1.8
X39A Fountain Ranch 102.42 359 Pdiff **Pdif** **21 21 28.0 +0.1**
baz=0.9
Y51A Rockmart 102.46 351 Pdiff **Pdif** **21 21 28.1 0.0**
baz=7.6
Y50A Piedmont 102.54 352 Pdiff **Pdif** **21 21 28.2 -0.3**
baz=7.1
NHSC New Hope 102.57 347 PFAKE 21 21 40.0 +11
NHSC LR LR
comp=Z,18µm,19.0s
Y49A Blount Mountai 102.64 352 Pdiff **Pdif** **21 21 28.8 -0.2**
baz=6.6
TAU Tasmania Unive 102.67 138 PFAKE 21 21 40.0 +11
TAU LR LR
comp=Z,6µm,19.0s
MSTX Muleshoe 102.67 6 Pdiff **Pdif** **21 21 28.4 -0.8**
baz=354
Y47A UCPARC, Winfie 102.73 354 Pdiff **Pdif** **21 21 29.4 +0.1**
baz=5.5
Z55A Blythe 102.76 349 Pdiff **Pdif** **21 21 28.9 -0.6**
baz=9.8
Y46A Houston 102.82 354 Pdiff **Pdif** **21 21 29.1 -0.6**
baz=4.8
Y44A Strider, Charl 102.83 356 Pdiff **Pdif** **21 21 29.4 -0.3**
baz=3.8
Z54A Sparta 102.84 349 Pdiff **Pdif** **21 21 29.7 -0.1**
baz=9.2
Y45A Yeager Farm, C 102.89 355 Pdiff **Pdif** **21 21 30.3 +0.3**
baz=4.3
Z53A Monticello 102.89 350 Pdiff **Pdif** **21 21 29.9 -0.1**
baz=8.7
Y40A Okolona 102.90 358 Pdiff **Pdif** **21 21 30.1 +0.1**
baz=1.5
Y43A Makayla and Ka 102.92 356 Pdiff **Pdif** **21 21 30.1 0.0**
baz=3.2
Y41A Eaglette Beard 103.01 358 Pdiff **Pdif** **21 21 30.8 +0.2**
baz=2.0
Y42A Garnett, Star 103.03 357 Pdiff **Pdif** **21 21 30.6 -0.1**
baz=2.6
Z51A Franklin 103.05 351 Pdiff **Pdif** **21 21 30.6 -0.2**
baz=7.5
Z52A Williamson 103.09 351 Pdiff **Pdif** **21 21 31.2 +0.3**
baz=8.1
Z50A Ashland 103.19 352 Pdiff **Pdif** **21 21 31.2 -0.2**
baz=7.0
Z48A Northport 103.22 353 Pdiff **Pdif** **21 21 31.0 -0.5**
baz=5.8
214A Organ Pipe Nat 103.30 15 Pdiff **Pdif** **21 21 33.0 +1.1**
baz=347
Z49A Columbiana 103.31 352 Pdiff **Pdif** **21 21 31.3 -0.6**
baz=6.5
TUC Tucson 103.31 13 Pdiff **Pdif** **21 21 32.5 +0.5**
baz=348
TUC Tucson 103.31 13 PFAKE 21 21 40.0 +7.9
TUC LR LR
comp=Z,25µm,20.0s
TUC Tucson 103.31 13 P **Pdif** **21 21 34.9 +2.8**
Z45A Winona 103.39 355 Pdiff **Pdif** **21 21 32.6 +0.4**
baz=4.2
155A Kite 103.39 349 Pdiff **Pdif** **21 21 31.8 -0.4**
baz=9.5
Z47A Carrollton 103.44 354 Pdiff **Pdif** **21 21 32.2 -0.3**
baz=5.4
154A Montrose 103.49 349 Pdiff **Pdif** **21 21 32.0 -0.7**
baz=9.1
LRAL Lakeview Retre 103.51 353 Pdiff **Pdif** **21 21 31.6 -1.2**
baz=6.2
Z46A Louisville 103.51 354 Pdiff **Pdif** **21 21 32.8 -0.1**
baz=4.7
Z44A Pea Ridge, Bel 103.52 356 Pdiff **Pdif** **21 21 32.8 0.0**
baz=3.6
153A Fort Valley 103.55 350 Pdiff **Pdif** **21 21 32.9 -0.1**
baz=8.5
121A Cookes Peak, D 103.55 11 Pdiff **Pdif** **21 21 33.3 0.0**
baz=351
Z42A Norrel Spur, H 103.60 357 Pdiff **Pdif** **21 21 32.8 -0.3**
baz=2.5
Z43A Armstrong Fami 103.63 356 Pdiff **Pdif** **21 21 33.1 -0.2**
baz=3.0
152A Waverly Hall 103.64 351 Pdiff **Pdif** **21 21 32.6 -0.8**
baz=7.9
Z41A Richland Creek 103.64 358 Pdiff **Pdif** **21 21 33.1 -0.2**
baz=1.9
Z40A Long Farm, Mag 103.66 358 Pdiff **Pdif** **21 21 33.5 +0.1**
baz=1.4
257A Skidaway Islan 103.81 347 Pdiff **Pdif** **21 21 34.5 +0.3**
baz=11
150A Eclectic 103.84 352 Pdiff **Pdif** **21 21 34.1 -0.2**
baz=6.9
151A Opelika 103.85 351 Pdiff **Pdif** **21 21 33.8 -0.5**
baz=7.4
149A Jones 103.93 353 Pdiff **Pdif** **21 21 34.5 -0.2**
baz=6.3
256A Glennville 103.94 348 Pdiff **Pdif** **21 21 34.4 -0.3**
baz=10.0
148A Greensboro 103.95 353 Pdiff **Pdif** **21 21 34.1 -0.6**
baz=5.8
147A Livingston 103.98 354 Pdiff **Pdif** **21 21 34.7 -0.2**
baz=5.2
146A Union 104.08 354 Pdiff **Pdif** **21 21 35.8 +0.5**
baz=4.7
255A Hazlehurst 104.08 349 Pdiff **Pdif** **21 21 35.0 -0.3**
baz=9.6
143A Socs Landing, 104.14 357 Pdiff **Pdif** **21 21 35.8 +0.2**
baz=2.9
145A Houston Renfro 104.17 355 Pdiff **Pdif** **21 21 36.1 +0.4**
baz=4.0
144A Alexander Plac 104.17 356 Pdiff **Pdif** **21 21 36.4 +0.7**
baz=3.6
253A Americus 104.17 350 Pdiff **Pdif** **21 21 36.4 +0.7**
baz=8.3
ABTX Abilene, Hawle 104.21 4 Pdiff **Pdif** **21 21 36.1 +0.1**
baz=357
140A Cam and Jess, 104.27 358 Pdiff **Pdif** **21 21 35.4 -0.8**
baz=1.3
251A Midway 104.28 351 Pdiff **Pdif** **21 21 36.4 +0.1**
baz=7.4
141A Papa Simpson, 104.29 358 Pdiff **Pdif** **21 21 35.2 -1.1**
baz=1.8
252A Lumpkin 104.30 351 Pdiff **Pdif** **21 21 36.6 +0.3**
baz=7.9
142A Monroe 104.32 357 Pdiff **Pdif** **21 21 37.2 +0.8**
baz=2.5
250A Grady 104.49 352 Pdiff **Pdif** **21 21 36.8 -0.3**
baz=6.8
248A Dixon Mills 104.51 353 Pdiff **Pdif** **21 21 37.8 +0.5**
baz=5.7
249A Camden 104.58 353 Pdiff **Pdif** **21 21 37.4 -0.2**
baz=6.1
VBMS Vicksburg 104.58 356 Pdiff **Pdif** **21 21 37.2 -0.4**
baz=3.6
247A Quitman 104.62 354 Pdiff **Pdif** **21 21 37.8 +0.1**
baz=5.0
MNTX Cornudas Mount 104.67 9 Pdiff **Pdif** **21 21 36.1 -2.0**
baz=352
MNTX Cornudas Mount 104.67 9 PFAKE 21 21 50.0 +12
MNTX LR LR
comp=Z,18µm,21.0s
246A Jackson Lee, B 104.70 355 Pdiff **Pdif** **21 21 37.7 -0.4**
baz=4.6
355A Pearson 104.70 349 Pdiff **Pdif** **21 21 37.5 -0.7**
baz=9.3
TIGA Tifton 104.71 350 Pdiff **Pdif** **21 21 37.6 -0.6**
baz=8.8
245A Little AP, Sta 104.73 355 Pdiff **Pdif** **21 21 38.3 +0.1**
baz=4.0
244A Avery, Jackson 104.77 356 Pdiff **Pdif** **21 21 38.0 -0.4**
baz=3.5
242A Grayson 104.81 357 Pdiff **Pdif** **21 21 38.5 -0.1**
baz=2.4
241A Mo Tay, Goldon 104.88 358 Pdiff **Pdif** **21 21 38.8 -0.1**
baz=1.8
240A Hunter Patters 104.88 359 Pdiff **Pdif** **21 21 39.1 +0.2**
baz=1.1
353A Camilla 104.88 350 Pdiff **Pdif** **21 21 39.0 +0.1**
baz=8.3
WHTX Lake Whitney, 104.92 2 Pdiff **Pdif** **21 21 38.9 -0.1**
baz=358
243A Waterproof 104.97 357 Pdiff **Pdif** **21 21 38.5 -0.8**
baz=2.9
350A Dozier 105.05 352 Pdiff **Pdif** **21 21 39.2 -0.5**
baz=6.7
351A Pinckard 105.11 351 Pdiff **Pdif** **21 21 39.5 -0.5**
baz=7.3
NATX Nacogdoches 105.17 359 Pdiff **Pdif** **21 21 40.1 -0.1**
baz=0.5
NATX Nacogdoches 105.17 359 PFAKE 21 26 10.0
NATX LR LR
comp=Z,29µm,19.0s
348A Jackson 105.20 353 Pdiff **Pdif** **21 21 40.1 -0.2**
baz=5.5
344A Westbrook Farm 105.36 356 Pdiff **Pdif** **21 21 41.5 +0.5**
baz=3.4
BRAL Brewton 105.37 353 PKiKP **PKiKP** **21 25 56.1 +1.2**
baz=6.2
BRAL Brewton 105.37 353 PFAKE 21 26 10.0
BRAL LR LR
comp=Z,24µm,19.0s
453A Whigham 105.38 350 PKiKP **PKiKP** **21 25 56.5 +1.7**
baz=8.2
454A Quitman 105.43 350 PKiKP **PKiKP** **21 25 56.8 +1.8**
baz=8.8
345A Thompson Farm, 105.46 355 PKiKP **PKiKP** **21 25 55.2 +0.2**
baz=4.0
452A Marianna 105.49 351 PKiKP **PKiKP** **21 25 56.3 +1.2**
baz=7.6
342A Flagon Creek P 105.50 357 PKiKP **PKiKP** **21 25 54.1 -1.0**
baz=2.2
343A Vidalia 105.56 357 PKiKP **PKiKP** **21 25 55.4 +0.3**
baz=2.8
341A Kurthwood 105.57 358 PKiKP **PKiKP** **21 25 56.0 +0.8**
baz=1.6
448A Bay Minette 105.68 353 PKiKP **PKiKP** **21 25 55.2 -0.2**
baz=5.6
450A Crestview 105.68 352 PKiKP **PKiKP** **21 25 55.4 0.0**
baz=6.5
451A Vernon 105.78 351 PKiKP **PKiKP** **21 25 57.3 +1.7**
baz=7.2
449A Pace 105.79 353 PKiKP **PKiKP** **21 25 55.4 -0.2**
baz=6.1
557A Orange Park 105.84 348 PKiKP **PKiKP** **21 25 57.2 +1.5**
baz=10
447A Lucedale 105.88 354 PKiKP **PKiKP** **21 25 56.3 +0.5**
baz=5.0
555A McAlpin 105.92 349 PKiKP **PKiKP** **21 25 57.0 +1.1**
baz=9.3
446A Poplarville 105.93 355 PKiKP **PKiKP** **21 25 57.0 +1.1**
baz=4.5
556A Lake Butler 105.96 348 PKiKP **PKiKP** **21 25 55.9 0.0**
baz=9.7
553A Crawfordville 106.05 350 PKiKP **PKiKP** **21 25 55.6 -0.5**
baz=8.2
445A Amite 106.05 355 PKiKP **PKiKP** **21 25 56.1 0.0**
baz=3.7
554A Perry 106.06 349 PKiKP **PKiKP** **21 25 57.5 +1.4**
baz=8.7
443A Delano Plantat 106.09 357 PKiKP **PKiKP** **21 25 55.9 -0.3**
baz=2.6
444A Pine Grove 106.09 356 PKiKP **PKiKP** **21 25 55.9 -0.3**
baz=3.4
435B Jarrell 106.12 2 PKiKP **PKiKP** **21 25 56.7 +0.4**
baz=358
441A DeRidder 106.15 358 PKiKP **PKiKP** **21 25 57.6 +1.3**
baz=1.6
442A Mamou 106.17 357 PKiKP **PKiKP** **21 25 55.4 -0.9**
baz=2.2
552A Lynn Haven 106.21 351 PKiKP **PKiKP** **21 25 56.6 +0.2**
baz=7.5
657A Interlachen 106.29 348 PKiKP **PKiKP** **21 25 57.0 +0.5**
baz=10
JCT Junction City 106.34 4 PKiKP **PKiKP** **21 25 57.3 +0.6**
baz=357
JCT Junction City 106.34 4 PFAKE 21 26 10.0
JCT LR LR
comp=Z,23µm,20.0s
658A Bunnell 106.35 347 PKiKP **PKiKP** **21 25 58.2 +1.5**
baz=11
546A Slidell 106.51 355 PKiKP **PKiKP** **21 25 57.2 +0.2**
baz=4.2
656A Willston 106.60 348 PKiKP **PKiKP** **21 25 56.3 -0.9**
baz=9.6
758A Lake Helen 106.79 347 PKiKP **PKiKP** **21 25 58.5 +1.0**
baz=11
757A Oxford 106.95 348 PKiKP **PKiKP** **21 25 58.5 +0.7**
baz=10.0
TXAR Lajitas Array 107.19 8 Pdiff **Pdif** **21 21 50.0 +0.6**
comp=Z,0.8nm,0.7s,baz=31,slow=2.9,SNR=5.1
TXAR PKiKP **PKiKP** **21 25 59.8 +1.4**
comp=Z,7.5nm,1.0s,baz=5.3,slow=3.4,SNR=3.6
TXAR PP **PP** **21 26 19.3 +4.4**
comp=Z,16nm,1.0s,baz=353,slow=6.4,SNR=6.2
TXAR PKKPbc **PKKPbc** **21 37 14.5 +1.0**
comp=Z,5.9nm,1.0s,baz=165,slow=5.2,SNR=15
TXAR PKKPab **PKKPab** **21 37 29.9 -2.9**
comp=Z,14nm,1.0s,baz=172,slow=7.3,SNR=16
TXAR PKPPKP **P'P'df** **21 45 38.4 -6.1**
comp=Z,2.9nm,1.0s,baz=188,slow=5.1,SNR=8.6
857A Zephyrhills 107.64 348 PKiKP **PKiKP** **21 26 01.1 +2.1**
baz=9.9
DWPF Disney Wildern 107.66 347 *e*P **PKiKP** **21 26 02.4 +3.3**
XMAS Kiritimati 108.47 69 PFAKE 21 26 10.0
XMAS LR LR
comp=Z,3.0nm,20.0s
AFI Afiamalu 109.28 91 PFAKE 21 26 10.0
AFI LR LR
comp=Z,4µm,20.0s
KVTX Kingsville 109.33 2 PFAKE 21 26 10.0
KVTX LR LR
comp=Z,23µm,19.0s
CASY Casey 111.19 169 PFAKE 21 26 20.0
CASY LR LR
comp=Z,2µm,22.0s
LPIG La Paz 111.41 15 PKKPab PKKPab 21 37 12.0 -1.7
comp=Z,21nm,0.4s,baz=195,slow=2.7,SNR=5.1
GRTK Grand Turk 111.64 336 PFAKE 21 26 20.0
GRTK LR LR
comp=Z,11µm,21.0s
ANWB Willy Bob 111.83 325 PFAKE 21 26 20.0
ANWB LR LR
comp=Z,8µm,21.0s
ANWB Willy Bob 111.83 325 *e*P **PP** **21 26 48.8 -0.1**
ANWB Willy Bob 111.83 325 *e* **SP** **21 36 17.0 -3.0**
MAW Mawson 111.93 189 PKiKP **PKiKP** **21 26 05.7 -0.1**
comp=Z,9.0nm,1.0s,baz=344,slow=1.6,SNR=7.4
MAW PKKPab **PKKPab** **21 37 04.5 +0.6**
comp=Z,6.7nm,0.9s,baz=166,slow=0.9,SNR=6.2
SMRT St. Maarten 112.01 327 *e*P **PP** **21 26 47.3 -2.9**
SMRT St. Maarten 112.01 327 *e* **SP** **21 36 21.4 -0.2**
SABA Saba 112.46 327 *e*P **PP** **21 26 47.3 -6.2**
SABA Saba 112.46 327 *e* **SP** **21 36 22.5 -3.3**
SEUS St. Eustatius 112.47 326 *e*P PP 21 26 40.7 -13
SEUS St. Eustatius 112.47 326 *e* **SP** **21 36 28.2 +2.3**
MLYT Lee's Yard 112.84 325 *e*P PP 21 26 47.5 -8.7
MLYT Lee's Yard 112.84 325 *e* **SP** **21 36 17.9 -11**
SJG San Juan 113.13 330 PFAKE 21 26 20.0
SJG LR LR
comp=Z,6µm,20.0s
SJG San Juan 113.13 330 *e*P **PP** **21 26 53.9 -4.2**
SDDR Presa de Saban 114.06 335 PFAKE 21 26 20.0 +8.5
SDDR LR LR
comp=Z,15µm,22.0s
FDF Fort de France 114.18 323 *e*P **PP** **21 27 05.1 -0.7**
FDF Fort de France 114.18 323 *e* 21 36 11.2
GTBY Guantanamo Bay 114.26 339 PFAKE 21 26 20.0 +8.2
GTBY LR LR
comp=Z,9µm,21.0s
RAO Raoul Island 114.57 108 PFAKE 21 26 20.0 +8.0
RAO LR LR
comp=Z,5µm,21.0s
BBGH Gun Hill 114.87 321 PFAKE 21 26 30.0 +17
BBGH LR LR
comp=Z,15µm,22.0s
SVB Belmont 115.52 323 *e* 21 36 56.6
RCBR Riachuelo 115.92 288 PFAKE 21 26 30.0 +15
RCBR LR LR
comp=Z,18µm,20.0s
MTDJ Mount Denham 116.49 341 PFAKE 21 26 30.0 +14
MTDJ LR LR
comp=Z,7µm,19.0s
GRGR Grenville 116.70 323 PFAKE 21 26 30.0 +13
GRGR LR LR
comp=Z,5µm,20.0s
GRGR Grenville 116.70 323 *e* 21 37 53.5
SNZO South Karori 116.83 122 PFAKE 21 26 30.0 +14
SNZO LR LR
comp=Z,3µm,20.0s
SYO Syowa Base 116.97 197⇓ *e*X **PKPdf** **21 26 13.2 -2.1**
SYO Syowa Base 116.97 197⇑ *e*X PKPdf 21 26 27.0 +12
RAR Rarotonga 122.70 89 PFAKE 21 26 40.0 +12
RAR LR LR
comp=Z,9µm,20.0s
SDV Santo Domingo 123.27 330 PKP **PKPdf** **21 26 28.1 -1.4**
comp=Z,64nm,0.9s,baz=17,slow=1.7,SNR=32
SDV Santo Domingo 123.27 330 *e*PKPdf **PKPdf** **21 26 28.8 -0.7**
SDV LR LR
comp=Z,6µm,21.0s
SDV Santo Domingo 123.27 330 *e*P **PKPdf** **21 26 28.7 -0.9**
SJCC San Jacinto, C 123.82 336 *e*P **PKPdf** **21 26 30.7 +0.3**
OCAC Ocana 124.80 333 *e*P **PKPdf** **21 26 31.8 -0.6**
MOTC Monteria, Cord 125.03 336 *e*P **PKPdf** **21 26 32.8 +0.1**
NVL N'lazarevskaya 125.09 203 *e*PKIKP **PKPdf** **21 26 31.7 +0.8**
NVL *e* 21 28 21.9
NVL *e*SS SS 21 45 17.7 +1.3
NVL pmax pmax
comp=Z,53nm,1.0s
PAMC Pamplona, Colo 125.43 332 *e*P **PKPdf** **21 26 33.3 -0.7**
JTS JuntasAbangare 125.69 347 PFAKE 21 26 50.0 +16
JTS LR LR
comp=Z,12µm,20.0s
BCIP Isla Barro Col 125.77 341 *e*PKPdf **PKPdf** **21 26 34.3 +0.3**
BCIP LR LR
comp=Z,6µm,21.0s
BCIP Isla Barro Col 125.77 341 *e*P **PKPdf** **21 26 33.4 -0.7**
BRRC Barranca, Sant 125.99 333 *e*P **PKPdf** **21 26 34.1 -0.4**
ZARC Zaragoza, Cauc 126.00 335 *e*P **PKPdf** **21 26 34.1 -0.4**
BARC Barichara 126.29 332 *e*P **PKPdf** **21 26 34.7 -0.6**
PTBC PUERTO BERRIO 126.76 334 *e*P **PKPdf** **21 26 35.2 -0.8**
RUSC La Rusia 126.91 332 *e*P **PKPdf** **21 26 36.3 -0.6**
PTGA Pitinga 127.03 313 PKP **PKPdf** **21 26 36.8 +0.3**
comp=Z,44nm,1.1s,baz=3.6,slow=3.4,SNR=29
PTGA Pitinga 127.03 313 PKP **PKPdf** **21 26 36.8 +0.3**
PTGA LR LR
comp=Z,15µm,21.0s
PMOR Pomariorio Ree 127.21 74 *e*PKiKP **PKiKP** **21 26 38.7 +1.6**
comp=Z,124nm,1.2s
HELC Santa Helena 127.43 335 *e*P **PKPdf** **21 26 36.7 -1.0**
VAH Vaihoa 127.56 74 *e*PKiKP **PKiKP** **21 26 39.1 +1.3**
comp=Z,105nm,1.3s
PPT Papeete 127.74 78 PKP **PKPdf** **21 26 38.2 +0.6**
comp=Z,47nm,0.9s,baz=38,slow=22,SNR=4.3
PPT2 Papeete2 127.76 78 *e*PKiKP **PKiKP** **21 26 40.3 +2.0**
comp=Z,80nm,1.3s
PPT2 Papeete2 127.76 78 *e*PP PP 21 28 43.1 +3.5
comp=Z,2µm,25.2s
PPT2 Papeete2 127.76 78 *e*SS SS 21 45 50.9 -0.4
comp=Z,7µm,33.5s
PAE Paea 127.80 78 *e*PKiKP **PKiKP** **21 26 39.7 +1.4**
comp=Z,16nm,1.4s
NORC Norcasia 127.81 334 *e*P **PKPdf** **21 26 38.0 -0.1**
TIAR Tiarei 127.90 78 *e*PKiKP **PKiKP** **21 26 39.9 +1.4**
comp=Z,25nm,1.3s
TAOE Nuku Hiva Isla 128.02 62 *e*PKiKP **PKiKP** **21 26 39.9 +0.9**
comp=Z,202nm,1.3s
TAOE Nuku Hiva Isla 128.02 62 *e*PP PP 21 28 44.2 +3.1
comp=Z,1µm,24.8s
TVO Taravao 128.12 78 *e*PKiKP **PKiKP** **21 26 40.4 +1.4**
comp=Z,26nm,1.2s
CHIC Chingaza 128.31 332 *e*P **PKPdf** **21 26 38.7 -0.7**
ROSC El Rosal 128.31 333 PKP **PKPdf** **21 26 40.2 +0.8**
comp=Z,130nm,1.0s,baz=118,slow=1.9,SNR=52
ROSC El Rosal 128.31 333 *e*P **PKPdf** **21 26 41.0 +1.6**
VNDA Vanda 129.32 164 PKP **PKPdf** **21 26 39.1 +0.3**
comp=Z,14nm,1.0s,baz=287,slow=5.0,SNR=28
VNDA PP **PP** **21 28 47.3 -1.5**
comp=Z,5.5nm,0.9s,baz=277,slow=6.9,SNR=3.4
PRAC Prado 129.56 333 *e*P **PKPdf** **21 26 41.8 +0.4**
SNAA Sanae 129.76 204 PKP **PKPdf** **21 26 40.3 +0.3**
comp=Z,26nm,1.1s,baz=129,slow=1.4,SNR=33
YOTC Yotoco, Valle 129.77 335 *e*P **PKPdf** **21 26 41.4 -0.5**
HORQ Saladito 130.33 335 *e*P **PKPdf** **21 26 42.0 -1.1**
SBA Scott Base 130.42 164 PFAKE 21 26 50.0 +9.0
SBA LR LR
comp=Z,4µm,20.0s
VNA2 Neumayer--Watz 130.95 206 P **PKPdf** **21 26 42.7 +0.5**
slow=4.0
VNA1 Neumayer--Stat 131.15 206 P **PKPdf** **21 26 43.3 +0.8**
POPC Popayan, Colom 131.23 335 *e*P **PKPdf** **21 26 45.4 +0.6**
GRGC Isla de Gorgon 131.24 337 *e*P **PKPdf** **21 26 45.4 +0.9**
TBI Tubuai 131.51 84 *e*PKiKP **PKiKP** **21 26 46.7 +1.1**
comp=Z,179nm,1.1s
TBI Tubuai 131.51 84 *e*PP PP 21 29 03.3 -0.8
comp=Z,2µm,27.0s
TBI Tubuai 131.51 84 *e*SS SS 21 46 43.0 +5.5
comp=Z,3µm,30.8s
VNA3 Neumayer Olymp 131.75 206 P **PKPdf** **21 26 44.4 +0.8**
FLOC Florencia 131.81 333 *e*P **PKPdf** **21 26 46.0 +0.4**
QSPA South Pole Qui 133.21 180 PKhKP PKPpre 21 26 30.4
comp=Z,5.2nm,1.0s,baz=166,slow=0.0,SNR=6.5
QSPA South Pole Qui 133.21 180 PFAKE 21 27 00.0 +13
QSPA LR LR
comp=Z,10µm,21.0s
OTAV Otavalo 133.95 336 PFAKE 21 27 00.0 +10
OTAV LR LR
comp=Z,3µm,20.0s
OTAV Otavalo 133.95 336 *e*P **PKPdf** **21 26 51.3 +1.1**
SAML Samuel 135.63 311 PFAKE 21 27 10.0 +17
SAML LR LR
comp=Z,14µm,22.0s
PAYG Puerto Ayora 137.18 352 PFAKE 21 27 10.0 +14
PAYG LR LR
comp=Z,5µm,20.0s
SIV San Ignacio 140.02 302 PKhKP PKPpre 21 26 55.4
SIV PKP **PKPdf** **21 27 01.2 +0.4**
baz=42,slow=1.2
HOPE Hope Point 140.86 233 PFAKE 21 27 10.0 +9.0
HOPE LR LR
comp=Z,4µm,19.0s
RKT Rikitea 141.66 71 *e*PP PP 21 30 07.4 -0.1
comp=Z,580nm,31.2s
LPAZ La Paz 144.38 311 PKP PKPbc 21 27 07.8 +0.2
comp=Z,102nm,1.0s,baz=24,slow=4.5,SNR=139
LPAZ La Paz 144.38 311 *e*P **PKPab** **21 27 06.8 -0.5**
LPAZ La Paz 144.38 311⇑ *i*P **PKPab** **21 27 06.6 -0.7**
CPUP Villa Florida 144.78 286 PKP PKPbc 21 27 08.2 +0.4
comp=Z,501nm,1.1s,baz=51,slow=3.0,SNR=248
NNA Nana 144.80 327 PKP PKPbc 21 27 08.5 +0.2
comp=Z,321nm,1.0s,baz=353,slow=3.4,SNR=57
NNA Nana 144.80 327 *e*PKPdf **PKPdf** **21 27 08.9 -0.4**
NNA LR LR
comp=Z,2µm,20.0s
PB16 IPOC Station P 146.80 311⇑ *i*P **PKPdf** **21 27 14.0 +0.7**
YJA Yavi 147.42 301 *e*P **PKPbc** **21 27 15.8 -0.7**
PB12 IPOC Station P 147.48 312⇑ *i*P **PKPdf** **21 27 11.2 -2.5**
MNMCX Minye Minye 147.49 310⇑ *i*P **PKPdf** **21 27 14.7 +0.7**
PB08 IPOC Station P 148.04 308⇑ *i*P **PKPdf** **21 27 15.9 +0.8**
HJA Humahuaca 148.10 300 *e*P **PKPbc** **21 27 17.3 -1.0**
PSGCX Pisagua 148.16 310⇑ *i*P **PKPdf** **21 27 14.0 -0.8**
PB01 IPOC Station P 148.95 308 *i*P **PKPdf** **21 27 17.8 +1.7**
SLA San Lorenzo 149.24 298 *e*P **PKPbc** **21 27 18.8 -2.1**
PB09 IPOC Station P 149.39 306⇑ *i*P PKPpre 21 27 11.1
PB09 *i*P PKPpre 21 27 13.6
PB02 IPOC Station P 149.40 308 *i*P **PKPdf** **21 27 18.8 +1.9**
PB07 IPOC Station P 149.71 307⇑ *i*P PKPpre 21 27 10.3
PB03 IPOC Station P 149.88 307⇑ *i*P **PKPbc** **21 27 22.7 +0.2**
PB06 IPOC Station P 150.28 306 *i*P **PKPbc** **21 27 23.9 +0.4**
PB04 IPOC Station P 150.33 307⇑ *i*P **PKPdf** **21 27 16.4 -2.0**
AHML Horco Molle 150.54 294 *e*P **PKPdf** **21 27 19.4 +0.9**
PB15 IPOC Station P 150.60 305⇑ *i*P **PKPdf** **21 27 19.6 +0.7**
PB05 IPOC Station P 150.77 307⇓ *i*P **PKPdf** **21 27 21.0 +2.0**
PB10 IPOC Station P 151.48 306⇓ *i*P **PKPdf** **21 27 21.5 +1.6**
CYA Choya 151.94 292 *e*P **PKPdf** **21 27 21.4 +0.9**
PB14 IPOC Station P 152.23 304⇓ *i*P **PKPdf** **21 27 23.2 +1.7**
PMSA Palmer Station 152.33 209 PKPbc **PKPbc** **21 27 25.1 -1.5**
comp=Z,87nm,1.1s,baz=123,slow=7.5,SNR=4.4
PMSA Palmer Station 152.33 209 *e*PKPdf **PKPdf** **21 27 21.6 +1.8**
PMSA *e*PKPbc **PKiKP** **21 27 28.2 +1.3**
PMSA LR LR
comp=Z,7µm,22.0s
TCA Tanti 152.87 286 *e*P **PKPdf** **21 27 22.0 +0.1**
ACLC CERRO LA CRUZ 153.34 292 *e*P **PKPdf** **21 27 23.9 +1.2**
APLL PUNTA DE LOS L 153.66 290 *e*P **PKPdf** **21 27 23.5 +0.5**
VCA Vinchina 153.74 295 *e*P **PKPdf** **21 27 25.3 +2.0**
EFI East Falkland 153.74 239 PFAKE 21 27 30.0 -0.2
EFI LR LR
comp=Z,7µm,19.0s
TRQA Tornquist 154.24 271 *e*PKPdf **PKPdf** **21 27 23.9 +0.4**

TRQA				LR	LR		
	comp=Z,9μm,20.0s						
MRA	**San Martin**	**154.27**	**285**	*e*P	**PKPdf**	**21 27 25.1**	**+1.2**
AGUA	**GUANDACOL**	**154.41**	**294**	*e*P	**PKPdf**	**21 27 25.0**	**+0.8**
ACAN	**Cantantal**	**155.22**	**287**	*e*P	**PKPdf**	**21 27 26.9**	**+1.7**
ACDV	**Cuesta del Vie**	**155.27**	**294**	*e*P	**PKPdf**	**21 27 26.4**	**+1.0**
LCO	**Las Campanas**	**155.55**	**298**	*e*PKPdf	**PKPdf**	**21 27 26.9**	**+1.0**
LCO				LR	LR		
	comp=Z,7μm,21.0s						
RTCV	**Cerro Valdivia**	**155.91**	**290**	*e*P	**PKPdf**	**21 27 27.8**	**+1.7**
RTLS	**Leoncito**	**156.39**	**291**	*e*P	**PKPdf**	**21 27 28.1**	**+1.1**
ASAL	**Salagasta**	**156.54**	**289**	*e*P	**PKPdf**	**21 27 28.1**	**+1.2**
AUSP	**Uspallata**	**156.71**	**290**	*e*P	**PKPdf**	**21 27 28.6**	**+1.2**
ARCO	**CERRO ARCO**	**156.75**	**288**	*e*P	**PKPdf**	**21 27 29.2**	**+1.9**
AAGR	**Agrelo**	**156.82**	**288**	*e*P	**PKPdf**	**21 27 29.0**	**+1.7**
ROC1	**El Roble**	**158.26**	**291**	*e*P	**PKPdf**	**21 27 29.3**	**0.0**
PLCA	**Paso Flores**	**161.39**	**270**	PKP	**PKPdf**	**21 27 32.6**	**+0.2**
	comp=Z,36nm,1.1s,baz=80,slow=1.8,SNR=14						
PLCA				PP	**PP**	**21 32 01.4**	**+0.8**
	comp=Z,23nm,1.1s,baz=272,slow=4.9,SNR=3.1						

BJI 29 21:21:33.5, 43.°41N×84.°88E, h7km, ML3.7/5, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**2.08**	**78**	*e*Pn	Pb	21 22 11.5	-0.2
WMQ				smax	smax		
	comp=N,2μm,0.7s						
WMQ				smax	smax		
	comp=E,2μm,0.9s						

*SOME **29** 21:24:50.1, 43.°48N×84.°85E, h5km*
*BJI **29** 21:24:55.6, 43.°35N×84.°72E, h6km, ML3.5/6*
ISC 29 21:24:55.1±1.3, 43.°3N±0.°1×84.°70E±0.°04, h10km, n8, σ2°60/16, 1D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**2.25**	**74**	Pn	**Pn**	**21 25 33.0**	**+0.5**
WMQ				Sg	**Sb**	**21 26 04.3**	**+0.5**
WMQ				smax	smax		
	comp=N,1μm,0.7s						
WMQ				smax	smax		
	comp=E,720nm,0.7s						
KTMS	**Ketmen**	**3.18**	**275**	*e*P	**Pb**	**21 25 49.3**	**-2.5**
	79nm,0.3s						
KTMS				*e*S	**Sb**	**21 26 31.5**	**+0.9**
	131nm,0.4s						
DJR	**Jarkent**	**3.72**	**289**	*e*P	**Pb**	**21 25 59.3**	**-1.6**
	19nm,0.2s						
DJR				*e*S	**Sb**	**21 26 49.3**	**+3.3**
	76nm,0.5s						
SHLS	**Shalkode**	**3.83**	**270**	*e*P	**Pn**	**21 25 57.8**	**+3.5**
	61nm,0.2s						
SHLS				*e*S	**Sb**	**21 26 46.5**	**-2.9**
	395nm,0.4s						
UZB	**Uzynbulak**	**4.15**	**270**	*e*P	**Pb**	**21 26 09.5**	**+1.1**
	18nm,0.3s						
UZB				*e*S	**Sg**	**21 27 06.4**	**-2.1**
	57nm,0.4s						
KAPS	**Kapalarasan**	**4.34**	**300**	*e*P	**Pb**	**21 26 09.6**	**-2.0**
	17nm,0.6s						
KAPS				⇓*i*S	**Sb**	**21 27 07.2**	**+3.2**
	71nm,0.5s						
KPKS	**Kokpek**	**4.39**	**275**	*e*P	**Pb**	**21 26 12.8**	**+0.4**
	20nm,0.2s						
KPKS				*e*S	**Sg**	**21 27 12.2**	**-4.0**
	101nm,0.4s						
MNBS	**Baschi**	**4.64**	**282**	*e*P	**Pb**	**21 26 17.8**	**+1.1**
	36nm,0.6s						
MNBS				*e*S	**Sg**	**21 27 21.3**	**-2.9**
	51nm,0.4s						

*SOME **29** 21:30:23.2, 43.°15N×84.°82E, h0km*
*IDC **29** 21:30:30.4±0.7, 43.°54N×84.°91E, h0km, mb3.7/13, mb1 3.9/18, mb1mx3.7/71, mbtmp3.8/18, ML3.5/5, Error ellipse: s-maj=20.8km s-min=10.5km az=52.0*
*BJI **29** 21:30:33.1, 43.°46N×84.°74E, h6km, mb4.3/2, ML4.1/12*
*NNC **29** 21:30:35.3±1.8, 43.°61N×84.°64E, h0km, mb4.6, mpv4.3, Error ellipse: s-maj=17.0km s-min=8.1km az=100.0*
ISC 29 21:30:32.0±0.6, 43.°41N±0.°05×84.°73E±0.°03, h10km, n42, σ2°58/66, mb3.7/14, 9C-11D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**2.20**	**78**	Pn	**Pb**	**21 31 12.0**	**+0.1**
WMQ				Sg	**Sg**	**21 31 41.5**	**-1.1**
WMQ				smax	smax		
	comp=N,3μm,0.9s						
WMQ				smax	smax		
	comp=E,3μm,0.9s						
DJR	**Jarkent**	**3.69**	**286**	*e*P	**Pn**	**21 31 32.6**	**+3.5**
	26nm,0.2s						
DJR				*e*S	**Sb**	**21 32 24.5**	**+2.4**
	237nm,0.7s						
MK31	**Makanchi Array**	**3.80**	**334**	⇑Pn	**Pn**	**21 31 31.8**	**+1.3**
	4.6nm,0.3s,baz=149,slow=15,SNR=38						
MK31				⇑Pg	**Pb**	**21 31 40.9**	**+1.8**
	19nm,0.3s,baz=146,slow=18,SNR=29						
MK31				⇓Sn	**Sn**	**21 32 17.0**	**+1.6**
	20nm,0.2s,baz=148,slow=27,SNR=5.3						
MK31				⇓Lg	Lg	21 32 29.1	
	406nm,0.8s,baz=151,slow=30,SNR=5.5						
PDGK	**Podgornoye**	**3.82**	**271**	⇓Pn	**Pn**	**21 31 35.2**	**+4.2**
	114nm,0.9s						
PDGK				⇑Lg	Lg	21 32 31.9	
	343nm,0.6s						
SHLS	**Shalkode**	**3.85**	**268**	*e*P	**Pn**	**21 31 31.1**	**-0.3**
	59nm,0.3s						
SHLS				*e*S	**Sn**	**21 32 22.1**	**+5.3**
	1μm,0.5s						
MAKZ	**Makanchi**	**3.92**	**331**	⇑Pn	**Pn**	**21 31 33.8**	**+1.6**
	18nm,0.7s						
MAKZ				⇓Pg	**Pb**	**21 31 43.7**	**+2.6**
	116nm,0.8s						
MAKZ				⇓Sn	**Sn**	**21 32 20.4**	**+2.2**
	40nm,0.3s						
MAKZ				⇓Lg	Lg	21 32 34.7	
	99nm,0.6s						
ZSN	**Zaisan**	**4.04**	**1**	*e*P	**Pb**	**21 31 42.8**	**-0.5**
	11nm,0.2s						
ZSN				*e*S	**Sg**	**21 32 42.1**	**+0.3**
	247nm,0.8s						
UZB	**Uzynbulak**	**4.17**	**268**	*e*P	**Pb**	**21 31 42.8**	**-2.8**
	12nm,0.3s						
UZB				*e*S	**Sb**	**21 32 42.4**	**+6.3**
	254nm,0.8s						
KAPS	**Kapalarasan**	**4.28**	**298**	*e*P	**Pb**	**21 31 45.8**	**-1.6**
	31nm,0.6s						
KAPS				*e*S	**Sg**	**21 32 47.6**	**-1.8**
	304nm,0.9s						
KPKS	**Kokpek**	**4.40**	**273**	*e*P	**Pb**	**21 31 46.4**	**-3.0**
	128nm,0.7s						
KPKS				*e*S	**Sb**	**21 32 48.8**	**+6.2**
	534nm,0.7s						
ZHN	**Zhinishke**	**4.60**	**269**	*e*P	**Pb**	**21 31 51.2**	**-1.6**
	14nm,0.3s						
ZHN				*e*S	**Sg**	**21 32 57.4**	**-2.2**
	252nm,0.3s						
MNBS	**Baschi**	**4.63**	**280**	*e*P	**Pb**	**21 31 51.3**	**-2.1**
	38nm,0.6s						
MNBS				*e*S	**Sg**	**21 32 57.3**	**-3.3**
	274nm,0.6s						
SATY	**Saty**	**4.63**	**268**	*e*P	**Pb**	**21 31 51.0**	**-2.4**
	22nm,0.2s						
SATY				*e*S	**Sg**	**21 32 57.2**	**-3.5**
	282nm,0.4s						
KURS	**Kuram**	**4.77**	**273**	*e*P	**Pb**	**21 31 52.3**	**-3.5**
	7.5nm,0.3s						
KURS				*e*S	**Sb**	**21 32 59.0**	**+5.7**
	118nm,1.0s						
TDK	**Taldyqorghan**	**4.81**	**291**	*e*P	**Pb**	**21 31 55.4**	**-1.1**
	186nm,0.4s						
TDK				*e*S	**Sg**	**21 33 04.8**	**-1.7**
	1μm,1.1s						
ARXS	**Arharly**	**5.06**	**282**	*e*P	**Pb**	**21 32 00.0**	**-0.6**
	74nm,0.8s						
ARXS				*e*S	**Sg**	**21 33 12.7**	**-1.6**
	199nm,0.8s						
MDOK	**Medeo**	**5.61**	**270**	⇑Pn	**Pn**	**21 31 59.7**	**+4.1**
	44nm,1.2s						
MDOK				⇓Lg	Lg	21 33 31.1	
	226nm,0.8s						
MDOK	**Medeo**	**5.61**	**270**	*e*P	**Pb**	**21 32 10.3**	**+0.3**
	27nm,1.0s						
MDOK				*e*S	**Sg**	**21 33 30.9**	**-1.2**
	161nm,0.8s						
CHKK	**Chushkaly**	**5.63**	**277**	*e*P	**Pb**	**21 32 09.9**	**-0.5**
	16nm,0.3s						
CHKK				*e*S	**Sg**	**21 33 29.9**	**-3.0**
	135nm,0.3s						
TNSS	**Tian-Shan**	**5.70**	**269**	*e*P	**Pb**	**21 32 10.7**	**-1.0**
	18nm,0.5s						
TNSS				*e*S	**Sg**	**21 33 31.6**	**-3.3**
	115nm,0.7s						
TKM2	**Tokmak 2**	**6.69**	**269**	⇑Pn	Pn	21 32 15.9	+5.3
	43nm,1.4s						
TKM2				⇓Lg	Lg	21 34 03.9	
	91nm,0.9s						
KURBB	**Kurchatov Arra**	**8.36**	**332**	Pn	**Pn**	**21 32 31.8**	**-1.4**
	0.6nm,0.3s,baz=224,slow=9.4,SNR=19						
KURBB				Sn	**Sn**	**21 34 04.2**	**-3.4**
	2.9nm,0.3s,baz=129,slow=26,SNR=12						
KURBB				Lg	Lg	21 34 52.9	
	0.9nm,0.3s,baz=156,slow=27,SNR=5.2						
KURBB	**Kurchatov Arra**	**8.36**	**332**	⇓Pn	**Pn**	**21 32 33.4**	**+0.2**
	64nm,1.5s						
KURBB				⇑Sn	**Sn**	**21 34 06.9**	**-0.7**
	65nm,0.8s						
KURBB				⇑Lg	Lg	21 34 56.4	
	155nm,0.7s						
KURK	**Kurchatov**	**8.41**	**332**	⇓Pn	**Pn**	**21 32 34.3**	**+0.4**
	33nm,1.4s						
KURK				⇓Sn	**Sn**	**21 34 07.3**	**-1.5**
	60nm,1.2s						
KURK				⇑Lg	Lg	21 34 58.7	
ZALV	**Zalesovo Beam**	**10.55**	**0**	Pn	**Pn**	**21 33 01.5**	**-1.6**
	1.9nm,0.3s,baz=182,slow=14,SNR=12						
ZALV				Sn	**Sn**	**21 34 55.6**	**-5.6**
	6.4nm,0.3s,baz=182,slow=25,SNR=17						
ZALV				Lg	Lg	21 36 02.2	
	baz=187,slow=23,SNR=2.7						
BVAR	**Borovoye Array**	**13.54**	**320**	Pn	**Pn**	**21 33 43.6**	**-0.4**
	0.3nm,0.3s,baz=111,slow=13,SNR=5.8						
BVAR				Sn	**Sn**	**21 36 08.3**	**-6.0**
	0.6nm,0.3s,baz=128,slow=26,SNR=4.4						
BVAR				Lg	Lg	21 37 40.7	
	0.1nm,0.3s,baz=130,slow=26,SNR=2.7						
SONM	**Songino Array**	**15.78**	**66**	Pn	**Pn**	**21 34 13.4**	**-0.9**
	0.1nm,0.3s,baz=274,slow=10,SNR=4.7						
SONM				Lg	Lg	21 38 46.7	
	0.2nm,0.3s,baz=259,slow=28,SNR=2.7						
AKTO	**Aktyubinsk**	**19.48**	**300**	P	**Pn**	**21 35 01.1**	**+1.0**
	0.2nm,0.3s,baz=100,slow=6.1,SNR=2.9						
ARU	**Arti**	**21.13**	**317**	P	**P**	**21 35 15.5**	**-1.3**
	1.0nm,0.3s,baz=86,slow=19,SNR=1.8						
CMAR	**Chiang Mai Arr**	**27.62**	**150**	P	**P**	**21 36 21.7**	**+2.0**
	0.2nm,0.4s,baz=324,slow=8.9,SNR=3.4						
AKASG	**Malin Array Be**	**37.73**	**301**	P	**P**	**21 37 47.5**	**-0.1**
	0.2nm,0.2s,baz=63,slow=8.9,SNR=2.8						
BRTR	**Keskin Array B**	**37.91**	**282**	P	**P**	**21 37 50.6**	**+1.1**
	1.0nm,0.8s,baz=119,slow=10.0,SNR=6.6						
FINES	**FINESS Array B**	**38.49**	**319**	P	**P**	**21 37 54.4**	**+0.5**
	1.1nm,0.7s,baz=109,slow=8.8,SNR=7.2						
ARCES	**ARCESS Array B**	**39.45**	**332**	P	**P**	**21 38 01.1**	**-0.8**
	2.2nm,0.8s,baz=90,slow=7.2,SNR=4.1						
SPITS	**Spitsbergen Ar**	**43.49**	**344**	P	**P**	**21 38 35.2**	**+0.2**
	3.2nm,0.8s,baz=150,slow=13,SNR=2.5						
HFS	**Hagfors**	**44.65**	**318**	P	**P**	**21 38 44.5**	**+0.1**
	1.7nm,0.9s,baz=90,slow=5.8,SNR=4.6						
NB2	**NORSAR Subarra**	**45.66**	**319**	P	**P**	**21 38 52.4**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=78,slow=8.6						
ILAR	**Eielson Array**	**64.87**	**22**	P	**P**	**21 41 09.8**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=297,slow=4.0,SNR=3.8						
YKA	**Yellowknife Ar**	**73.31**	**9**	P	**P**	**21 42 02.0**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=335,slow=6.5,SNR=3.4						
TORD	**Torodi Ar. Bea**	**76.06**	**275**	P	**P**	**21 42 19.4**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=39,slow=5.6						
WRA	**Warramunga Arr**	**77.76**	**133**	P	**P**	**21 42 28.3**	**-0.9**
	comp=Z,1.4nm,0.9s,baz=330,slow=4.4,SNR=10						
ASAR	**Alice Springs**	**80.59**	**135**	P	**P**	**21 42 44.4**	**-0.4**
	comp=Z,0.6nm,0.9s,baz=330,slow=4.8,SNR=3.7						

*SOME **29** 21:49:07.3, 43.°15N×85.°05E, h0km*
*NNC **29** 21:49:30.0±3.8, 43.°65N×84.°14E, h0km, mb3.4, mpv3.1, Error ellipse: s-maj=37.3km s-min=20.0km az=107.0*
ISC 29 21:49:27.9±2.4, 43.°56N±0.°10×84.°22E±0.°09, h10km, n15, σ2°29/23, 8C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**2.82**	**269**	*e*P	**Pn**	**21 50 10.9**	**-2.3**
	7.9nm,0.3s						
KTMS				*e*S	**Sg**	**21 50 58.2**	**-0.2**
	40nm,0.3s						
DJR	**Jarkent**	**3.29**	**285**	*e*P	**Pn**	**21 50 21.4**	**+1.7**
	7.4nm,0.4s						
DJR				*e*S	**Sg**	**21 51 16.8**	**+3.2**
	17nm,0.5s						
PDGK	**Podgornoye**	**3.45**	**268**	⇑Pn	**Pn**	**21 50 23.7**	**+1.9**
	3.2nm,0.4s						
PDGK				⇑Lg	Lg	21 51 19.4	
	27nm,0.5s						
SHLS	**Shalkode**	**3.49**	**265**	*e*P	Pn	21 50 18.6	-3.9
	13nm,0.5s						
SHLS				*e*S	**Sb**	**21 51 11.5**	**-1.0**
	91nm,0.4s						
MK31	**Makanchi Array**	**3.51**	**338**	⇓Pn	**Pn**	**21 50 23.2**	**+0.6**
	1.1nm,0.3s,baz=152,slow=15,SNR=2.9						
MK31				⇑Lg	Lg	21 51 18.9	
	9.4nm,0.4s,baz=148,slow=29,SNR=14						
MAKZ	**Makanchi**	**3.61**	**335**	⇑Pn	**Pb**	**21 50 28.5**	**-3.5**
	6.3nm,0.9s						
MAKZ				⇑Lg	Lg	21 51 23.5	
	26nm,0.7s						
UZB	**Uzynbulak**	**3.81**	**266**	*e*P	**Pn**	**21 50 29.2**	**+2.3**
	3.6nm,0.4s						
UZB				*e*S	**Sg**	**21 51 31.1**	**+0.7**
	14nm,0.3s						
KAPS	**Kapalarasan**	**3.89**	**298**	*e*P	**Pn**	**21 50 31.3**	**+3.5**
	3.0nm,0.4s						
KAPS				*e*S	**Sg**	**21 51 34.7**	**+2.0**
	16nm,0.9s						
ZSN	**Zaisan**	**3.92**	**6**	*e*P	**Pn**	**21 50 30.7**	**+2.5**
	0.3nm,0.1s						
ZSN				*e*S	**Sg**	**21 51 33.4**	**-0.3**
	13nm,0.6s						
KPKS	**Kokpek**	**4.03**	**271**	*e*P	**Pn**	**21 50 32.8**	**+3.0**
	5.7nm,0.2s						
KPKS				*e*S	**Sg**	**21 51 37.2**	**0.0**
	30nm,0.5s						
MNBS	**Baschi**	**4.24**	**279**	*e*P	**Pn**	**21 50 34.9**	**+2.1**
	19nm,0.3s						
MNBS				*e*S	**Sg**	**21 51 41.0**	**-3.1**
	11nm,0.5s						
SATY	**Saty**	**4.27**	**265**	*e*P	**Pn**	**21 50 37.1**	**+3.9**
	7.2nm,0.2s						
SATY				*e*S	**Sg**	**21 51 43.8**	**-1.3**
	24nm,0.2s						
CHKK	**Chushkaly**	**5.25**	**276**	*e*P	Pb	21 50 55.1	-4.7
	2.2nm,0.4s						
CHKK				*e*S	**Sg**	**21 52 16.3**	**-0.2**
	12nm,0.3s						
KURBB	**Kurchatov Arra**	**8.06**	**333**	⇑Sn	**Sn**	**21 52 56.9**	**+0.8**
	5.8nm,0.7s						
KURBB				⇓Lg	Lg	21 53 44.1	
	16nm,0.6s						
KURK	**Kurchatov**	**8.11**	**334**	⇑Sn	**Sn**	**21 52 57.7**	**+0.3**
	4.2nm,0.9s						
KURK				⇑Lg	Lg	21 53 44.2	
	12nm,0.8s						

*SOME **29** 22:01:02.1, 43.°75N×84.°92E, h15km*
*NNC **29** 22:01:28.8±5.3, 43.°78N×83.°70E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=57.0km s-min=26.8km az=118.0*
ISC 29 22:00:58.0±2.9, 43.°6N±0.°1×85.°1E±0.°1, h10km, n13, σ2°40/20, 1C-5D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**3.78**	**329**	⇑Pn	Pg	22 02 20.3	+10
	1.0nm,0.4s,baz=142,slow=17,SNR=12						
MK31				⇓Lg	Lg	22 03 07.4	
	4.1nm,0.3s,baz=144,slow=30,SNR=11						
ZSN	**Zaisan**	**3.87**	**357**	*e*P	**Pg**	**22 02 10.8**	**-1.3**
	0.3nm,0.1s						
ZSN				*e*S	**Sg**	**22 03 00.2**	**-1.9**
	2.3nm,0.6s						
MAKZ	**Makanchi**	**3.91**	**327**	⇓Pn	Pg	22 02 22.1	+9.2
	3.0nm,0.6s						
MAKZ				⇓Lg	Lg	22 03 11.2	
	11nm,0.8s						
DJR	**Jarkent**	**3.92**	**283**	*e*P	**Pb**	**22 02 10.6**	**+3.4**
	2.7nm,0.4s						
DJR				*e*S	**Sg**	**22 03 00.6**	**-3.2**
	12nm,0.4s						
PDGK	**Podgornoye**	**4.10**	**268**	⇓Pn	**Pg**	**22 02 18.0**	**+1.4**
	1.9nm,0.7s						
PDGK				⇓Lg	Lg	22 03 08.3	
	28nm,0.6s						
SHLS	**Shalkode**	**4.14**	**266**	*e*P	**Pb**	**22 02 10.8**	**-0.2**
	3.7nm,0.3s						
SHLS				*e*S	**Sb**	**22 02 60.0**	**-1.2**
	96nm,0.4s						
KAPS	**Kapalarasan**	**4.46**	**294**	*e*P	**Pg**	**22 02 24.0**	**+0.6**
	1.9nm,0.2s						
KAPS				*e*S	**Sg**	**22 03 22.9**	**+1.7**
	22nm,0.5s						
UZB	**Uzynbulak**	**4.46**	**266**	*e*P	**Pg**	**22 02 22.2**	**-1.2**
	1.1nm,0.2s						
UZB				*e*S	**Sg**	**22 03 19.8**	**-1.5**
	18nm,0.4s						
KPKS	**Kokpek**	**4.68**	**271**	*e*P	**Pb**	**22 02 24.7**	**+4.5**
	7.1nm,0.3s						
KPKS				*e*S	**Sg**	**22 03 24.1**	**-4.1**
	32nm,0.4s						
SATY	**Saty**	**4.92**	**266**	*e*P	**Pg**	**22 02 31.0**	**-1.3**
	3.0nm,0.3s						
SATY				*e*S	**Sg**	**22 03 34.9**	**-1.1**
	34nm,0.3s						
KURS	**Kuram**	**5.05**	**271**	*e*P	**Pg**	**22 02 33.2**	**-1.5**
	3.0nm,0.8s						
KURS				*e*S	**Sg**	**22 03 38.8**	**-1.3**
	7.1nm,0.4s						
MDOK	**Medeo**	**5.89**	**269**	*e*P	**Pg**	**22 02 50.8**	**0.0**
MDOK				*e*S	**Sg**	**22 04 08.8**	**+1.6**
TNSS	**Tian-Shan**	**5.99**	**268**	*e*P	Pb	22 02 49.1	+6.5
	2.3nm,0.3s						
TNSS				*e*S	**Sg**	**22 04 06.5**	**-3.6**
	7.1nm,0.6s						

*ISCJB **29** 22:01:56.1±0.7, 33.°30S±0.°06×178.°6W±0.°1, h33km, mb4.7/21, Error ellipse: s-maj=14.0km s-min=7.8km az=6.4*
*NEIC **29** 22:01:57.6±0.5, 33.°20S×178.°48W, h35km, mb4.8/9, Error ellipse: s-maj=12.2km s-min=8.9km az=91.0*
*IDC **29** 22:02:01.2±2.9, 33.°20S×178.°42W, h66km±25km, mb4.3/11, mb1 4.3/11, mb1mx4.1/39, mbtmp4.6/11, Error ellipse: s-maj=18.9km s-min=16.1km az=26.0*
*BJI **29** 22:02:16.6, 34.°07S×178.°49E, h47km, mb5.0/7, mB5.5/1, Ms5.3/2, Ms7 5.1/2*
ISC 29 22:01:57.1±0.7, 33.°20S±0.°07×178.°5W±0.°1, h32km, n71, σ1°09/63, mb4.8/21, 2D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**5.07**	**210**	*e*Pn	**Pn**	**22 03 12.3**	**+1.4**
TWGZ	**Tauwhareparae**	**5.73**	**209**	P	**Sn**	**22 04 25.4**	**+0.8**
TKGZ	**Te Karaka**	**6.01**	**209**	P	**Sn**	**22 04 29.6**	**-1.8**
MWZ	**Matawai**	**6.05**	**211**	P	**Sn**	**22 04 34.0**	**+1.5**
URZ	**Urewera**	**6.18**	**214**	P	Pn	22 03 23.9	-2.2
	7.2nm,0.3s,baz=271,slow=10.0,SNR=32						
URZ				S	**Sn**	**22 04 34.5**	**-1.1**
	41nm,0.3s,baz=171,slow=21,SNR=16						
URZ	**Urewera**	**6.18**	**214**	*e*Pn	Pn	22 03 25.2	-0.8
URZ				S	**Sn**	**22 04 34.5**	**-1.1**
RAGZ	**Rawiri**	**6.24**	**211**	P	**Sn**	**22 04 37.9**	**+0.8**
RIGZ	**Rimuhau**	**6.27**	**208**	P	**Sn**	**22 04 37.1**	**-0.8**
PRGZ	**Paritu Road**	**6.41**	**206**	P	Sn	22 04 38.9	-2.5
SNGZ	**Shannon Statio**	**6.51**	**210**	P	**Sn**	**22 04 42.8**	**-0.9**
MUGZ	**Murupara**	**6.51**	**215**	P	**Sn**	**22 04 41.5**	**-2.4**
RTZ	**Ruatahuna**	**6.53**	**213**	P	**Sn**	**22 04 44.3**	**0.0**
RRRZ	**Republican Roa**	**6.53**	**217**	P	**Sn**	**22 04 46.7**	**+2.3**
MHGZ	**Mahia Peninsul**	**6.61**	**205**	P	Sn	22 04 42.1	-4.1
PRRZ	**Plateau Road**	**6.71**	**217**	P	**Sn**	**22 04 49.7**	**+0.8**
RAHZ	**Arahi**	**6.73**	**211**	P	**Sn**	**22 04 47.8**	**-1.4**
MTHZ	**Maungataniwha**	**6.78**	**212**	P	**Sn**	**22 04 49.8**	**-0.7**
WHHZ	**Waihua**	**6.80**	**209**	P	**Sn**	**22 04 50.3**	**-0.6**
BKZ	**Black Stump Fm**	**7.19**	**213**	*e*Pn	**Pn**	**22 03 40.0**	**0.0**
RPZ	**Rata Peaks**	**13.29**	**215**	P	Pn	22 04 58.4	-5.1
	0.9nm,0.3s,baz=29,slow=1.9,SNR=6.1						
RPZ				S	Sn	22 07 15.3	-15
	2.8nm,0.3s,baz=352,slow=21,SNR=16						
DZM	**Mont Dzumac**	**17.32**	**306**	*e*Pn	**P**	**22 05 55.7**	**-2.1**
	47nm,0.9s						
TBI	**Tubuai**	**27.32**	**76**	*e*LR	LR	22 08 33.4	
	9μm,23.5s						
EIDS	**Eidsvold**	**27.58**	**278**	*e*P	**P**	**22 07 40.8**	**-0.6**
	9.4nm,0.8s						
EIDS				*e*PcP	PcP	22 11 11.1	+12
STKA	**Stephens Creek**	**33.52**	**261**	P	**P**	**22 08 35.4**	**+1.6**
	2.8nm,0.7s,baz=76,slow=8.8,SNR=4.0						
STKA				PcP	**PcP**	**22 11 14.0**	**-0.2**
	3.1nm,0.9s,baz=305,slow=2.7,SNR=3.6						
CTA	**Charters Tower**	**33.93**	**284**	P	**P**	**22 08 39.5**	**+2.0**
	8.9nm,0.8s,baz=111,slow=11,SNR=16						
CTAO	**Charters Tower**	**33.93**	**284**	*e*P	**P**	**22 08 39.5**	**+2.0**
	9.9nm,0.6s						
COEN	**Coen**	**39.71**	**290**	*e*P	**P**	**22 09 27.1**	**+0.4**
	9.4nm,0.8s						
AS01	**Alice Springs**	**42.57**	**270**	*e*P	**P**	**22 09 49.5**	**-0.7**
AS31	**Alice Springs**	**42.61**	**270**	*e*P	**P**	**22 09 50.9**	**+0.4**
	8.3nm,0.7s						
ASAR	**Alice Springs**	**42.61**	**270**	P	**P**	**22 09 51.5**	**+1.0**
	26nm,0.8s,baz=111,slow=7.5,SNR=149						
ASAR				PcP	**PcP**	**22 11 42.4**	**-0.1**
	3.7nm,1.0s,baz=118,slow=4.3,SNR=6.1						
ASAR				S	**S**	**22 16 10.8**	**-0.7**
	1.3nm,0.9s,baz=115,slow=16,SNR=5.9						
WB2	**Warramunga Arr**	**43.84**	**275**	*e*P	**P**	**22 10 00.2**	**-0.2**
WRAB	**Tennant Creek**	**43.84**	**275**	*e*P	**P**	**22 10 00.7**	**+0.2**
	24nm,1.2s						
WRA	**Warramunga Arr**	**43.85**	**275**	P	**P

1.6nm,0.6s,baz=62,slow=3.4,SNR=3.4
KBZ Khabaz 146.23 300 PKPbc **PKPbc 22 21 34.7 +0.6**
5.2nm,0.9s,baz=310,slow=2.3,SNR=6.4
FINES FINESS Array B 147.60 338 PKPbc **PKPbc 22 21 37.0 -0.3**
12nm,0.9s,baz=54,slow=3.3,SNR=20
ASF Jabal al Asfar 150.27 278 PKPbc **PKPbc 22 21 45.5 +0.3**
1.9nm,0.8s,baz=117,slow=6.8,SNR=3.9
EIL Elat 151.31 272 PKPbc **PKPbc 22 21 48.2 +0.6**
8.0nm,0.7s,baz=21,slow=4.1,SNR=10.0
NB2 NORSAR Subarra151.44 350 PKP **PKPbc 22 21 46.9 -0.1**
comp=Z,7.6nm,1.2s,baz=17,slow=2.6
MMAI Mount Meron Ar 151.67 279 PKPbc **PKPbc 22 21 49.4 +0.9**
comp=Z,9.2nm,0.7s,baz=90,slow=4.3,SNR=25
HFS Hagfors 151.88 347 PKPbc **PKPbc 22 21 47.4 -0.5**
comp=Z,3.3nm,0.8s,baz=46,slow=4.2,SNR=4.3
AKASG Malin Array Be 153.20 319 PKPbc **PKPbc 22 21 51.5 +0.3**
comp=Z,1.5nm,0.6s,baz=63,slow=2.7,SNR=6.5
BRTR Keskin Array B 153.44 293 PKPbc **PKPbc 22 21 52.5 +0.2**
comp=Z,4.3nm,0.8s,baz=135,slow=3.5,SNR=20
TORD Torodi Ar. Bea 160.04 181 PKPab **PKPab 22 22 32.4 -0.8**
baz=176,slow=3.5
CLL Collm 160.05 338 *i* PKPab **PKPab 22 22 31.7 -0.7**
comp=Z,6.0nm,1.0s
BRG Berggiesshubel 160.12 336 *e*PKP **PKPab 22 22 33.4 +0.7**
comp=Z,8.1nm,1.3s
GERES GERESS Array B 161.90 333 PKPab **PKPab 22 22 38.6 -2.1**
comp=Z,0.5nm,0.6s,baz=30,slow=6.8,SNR=3.7

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*SOME **29** 22:09:28.2, 43.°00N×85.°60E, h0km*
*IDC **29** 22:09:53.3±1.2, 43.°50N×84.°83E, h0km, mb3.5/3, mb1 3.7/6, mb1mx3.4/68, mbtmp3.6/6, ML3.3/2, Error ellipse: s-maj=39.0km s-min=17.2km az=58.0*
*BJI **29** 22:09:56.0, 43.°47N×84.°74E, h5km, mb3.7/1, ML3.6/9*
*NNC **29** 22:10:14.0±3.2, 43.°83N×83.°71E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=34.5km s-min=16.1km az=117.0*
ISC 29 22:09:56.0±0.8, 43.°57N±0.°06×84.°75E±0.°03, h10km, n23, σ3§36/35, mb3.4/3, 4C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**2.15**	**82**	Pn	**Pb**	**22 10 36.3**	**+1.1**
WMQ				Sg	**Sg**	**22 11 06.3**	**+1.1**
WMQ	comp=N,990nm,0.7s			smax	smax		
WMQ	comp=E,960nm,0.7s			smax	smax		
DJR	**Jarkent**	**3.66**	**284**	*e*P	**Pn**	**22 10 49.9**	**-2.9**
DJR	15nm,0.4s 112nm,0.3s			*e*S	**Sb**	**22 11 48.2**	**+2.9**
MK31	**Makanchi Array**	**3.66**	**333**	⇑Pn	**Pb**	**22 11 04.4**	**+3.5**
MK31	9.1nm,0.3s,baz=152,slow=17,SNR=7.7 15nm,0.3s,baz=145,slow=28,SNR=7.1			⇑Lg	Lg	22 11 52.1	
MAKZ	**Makanchi**	**3.79**	**330**	⇓Pn	**Pb**	**22 11 06.4**	**+3.5**
MAKZ	26nm,0.4s 53nm,0.6s			⇑Lg	Lg	22 11 57.1	
PDGK	**Podgornoye**	**3.83**	**268**	⇓Pn	**Pb**	**22 11 04.4**	**+0.5**
PDGK	32nm,0.8s 104nm,0.4s			⇑Lg	Lg	22 11 52.5	
SHLS	**Shalkode**	**3.87**	**266**	*e*P	Pn	22 10 46.7	-9.0
SHLS	22nm,0.5s 548nm,0.8s			*e*S	**Sn**	**22 11 43.2**	**+1.8**
ZSN	**Zaisan**	**3.88**	**1**	*e*P	**Pn**	**22 10 52.7**	**-3.1**
ZSN	2.5nm,0.3s 24nm,0.6s			*e*S	**Sb**	**22 11 53.7**	**+2.0**
UZB	**Uzynbulak**	**4.20**	**266**	*e*P	**Pn**	**22 10 59.5**	**-0.6**
UZB	7.1nm,0.4s 97nm,0.6s			*e*S	**Sg**	**22 12 05.5**	**-5.2**
KAPS	**Kapalarasan**	**4.22**	**296**	*e*P	**Pn**	**22 11 01.3**	**+0.8**
KAPS	20nm,0.7s 53nm,0.6s			*e*S	**Sg**	**22 12 08.1**	**-3.5**
KPKS	**Kokpek**	**4.41**	**271**	*e*P	**Pn**	**22 11 02.8**	**-0.3**
KPKS	31nm,0.3s 303nm,0.5s			*e*S	**Sb**	**22 12 10.6**	**+3.7**
SATY	**Saty**	**4.65**	**266**	*e*P	**Pn**	**22 11 08.4**	**+2.0**
SATY	16nm,0.3s 99nm,0.5s			*e*S	**Sg**	**22 12 20.4**	**-5.1**
TDK	**Taldyqorghan**	**4.77**	**290**	*e*P	**Pn**	**22 11 10.6**	**+2.7**
TDK	72nm,0.5s 302nm,0.8s			*e*S	**Sg**	**22 12 24.9**	**-4.3**
KURS	**Kuram**	**4.78**	**271**	*e*P	**Pn**	**22 11 10.7**	**+2.5**
KURS	5.3nm,0.7s 94nm,0.7s			*e*S	**Sg**	**22 12 24.7**	**-4.8**
MDOK	**Medeo**	**5.63**	**269**	*e*P	Pn	22 11 26.9	+7.0
MDOK	3.9nm,0.4s 51nm,0.7s			*e*S	**Sg**	**22 12 52.6**	**-4.0**
CHKK	**Chushkaly**	**5.63**	**276**	*e*P	**Pn**	**22 11 24.5**	**+4.7**
CHKK	7.5nm,0.3s 73nm,0.5s			*e*S	**Sb**	**22 12 48.7**	**+6.8**
TNSS	**Tian-Shan**	**5.71**	**267**	*e*P	**Pn**	**22 11 25.9**	**+4.6**
TNSS	7.1nm,0.3s 49nm,0.7s			*e*S	**Sb**	**22 12 50.8**	**+6.0**
KSH	**Kashi**	**7.72**	**241**	P	Pb	22 11 59.8	-10
KURBB	**Kurchatov Arra**	**8.23**	**331**	Pn	**Pn**	**22 11 56.2**	**+0.8**
KURBB	0.6nm,0.3s,baz=147,slow=12,SNR=28 0.9nm,0.3s,baz=145,slow=12,SNR=8.1			Sn	**Sn**	**22 13 27.1**	**-1.3**
ZALV	**Zalesovo Beam**	**10.39**	**0**	Pn	**Pn**	**22 12 25.2**	**+0.2**
ZALV	0.8nm,0.3s,baz=185,slow=14,SNR=8.7 2.1nm,0.3s,baz=183,slow=24,SNR=6.8			Sn	**Sn**	**22 14 19.8**	**-1.6**
SONM	**Songino Array**	**15.70**	**67**	Pn	**Pn**	**22 13 34.1**	**-3.3**
FINES	baz=256,slow=12,SNR=2.3 **FINESS Array B**	**38.38**	**319**	P	**P**	**22 17 17.2**	**+0.2**
TORD	0.4nm,0.5s,baz=81,slow=8.6,SNR=3.9 **Torodi Ar. Bea**	**76.06**	**275**	P	**P**	**22 21 42.9**	**-1.0**
WRA	0.1nm,0.3s,baz=56,slow=5.3 **Warramunga Arr** 0.8nm,1.2s,baz=332,slow=4.9,SNR=3.5	**77.86**	**133**	P	**P**	**22 21 52.3**	**-1.5**

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*IDC **29** 22:11:10.7±0.9, 43.°44N×84.°88E, h0km, mb3.8/7, mb1 3.9/12, mb1mx3.6/70, mbtmp3.8/12, ML3.6/4, Error ellipse: s-maj=31.9km s-min=13.1km az=52.0*
*ISCJB **29** 22:11:10.7±0.5, 43.°50N±0.°05×84.°73E±0.°06, h10km, mb3.8/12, Error ellipse: s-maj=7.5km s-min=6.0km az=28.9*
*MOS **29** 22:11:12.4±1.5, 43.°46N×84.°70E, h23km, mb4.2/3, Error ellipse: s-maj=16.3km s-min=6.8km az=92.0*
*NEIC **29** 22:11:12.3±0.5, 43.°44N×84.°79E, h10km, mb4.0/4, Error ellipse: s-maj=11.3km s-min=9.1km az=55.0*
*BJI **29** 22:11:12.9, 43.°42N×84.°81E, h9km, mb4.2/6, ML4.1/10*
*NNC **29** 22:11:30.8±3.8, 43.°79N×83.°78E, h0km, mb4.7, mpv4.4, Error ellipse: s-maj=40.6km s-min=19.5km az=118.0*
ISC 29 22:11:12.3±0.6, 43.°43N±0.°06×84.°78E±0.°04, h10km, n37, σ1§64/41, mb3.8/12, 2C-4D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**2.15**	**79**	Pn	**Pb**	**22 11 52.0**	**+0.6**
WMQ				Sg	**Sg**	**22 12 21.3**	**-0.1**
WMQ	comp=N,5μm,0.7s			smax	smax		
WMQ	comp=E,3μm,0.7s			smax	smax		
MK31	**Makanchi Array**	**3.80**	**333**	⇑Pn	**Pb**	**22 12 21.7**	**+2.3**
MK31	31nm,0.3s,baz=145,slow=17,SNR=5.2 49nm,0.3s,baz=147,slow=29,SNR=7.8			⇓Lg	Lg	22 13 11.9	
PDGK	**Podgornoye**	**3.86**	**270**	⇓Pn	**Pb**	**22 12 21.7**	**+1.2**
PDGK	130nm,0.8s 465nm,0.9s			⇓Lg	Lg	22 13 10.1	
MAKZ	**Makanchi**	**3.92**	**331**	⇑Pn	**Pb**	**22 12 24.0**	**+2.6**
MAKZ	110nm,0.8s 199nm,0.8s			⇓Lg	Lg	22 13 14.1	
DGZ	**Jazzator, Alta**	**6.53**	**15**	*i* P	**Pn**	**22 12 47.4**	**-1.1**
CHBI	**Chibit, Altay**	**7.13**	**14**	*i* P	**Pn**	**22 12 59.3**	**+2.6**
AKAR	**Aktash**	**7.16**	**15**	*i* P	**Pn**	**22 13 00.4**	**+3.3**
UKR	**Ust'-Kan**	**7.51**	**360**	*i* P	**Pn**	**22 13 03.5**	**+1.6**
ULGR	**Ulagan, Altay**	**7.51**	**16**	*i* P	**Pn**	**22 13 05.2**	**+3.2**
KURBB	**Kurchatov Arra**	**8.36**	**332**	Pn	**Pn**	**22 13 13.2**	**-0.3**
KURBB	0.7nm,0.3s,baz=144,slow=13,SNR=6.4 1.5nm,0.3s,baz=135,slow=21,SNR=4.7			Sn	**Sn**	**22 14 47.2**	**-0.7**
KURBB	1.1nm,0.3s,baz=148,slow=28,SNR=5.6			Lg	Lg	22 15 34.8	
KURK	**Kurchatov**	**8.41**	**332**	Pn	**Pn**	**22 13 13.2**	**-1.0**
KURK				Sn	**Sn**	**22 14 47.2**	**-1.8**
KURK	**Kurchatov**	**8.41**	**332**	P	**Pn**	**22 13 13.2**	**-1.0**
KURK						22 14 47.2	
ERNS	**Erzin**	**9.85**	**42**	*i* P	Pn	22 13 44.2	+10
ELT	**Eltsovka**	**9.88**	**5**	*i* P	**Pn**	**22 13 35.5**	**+1.2**
ZALV	**Zalesovo Beam**	**10.53**	**0**	Pn	**Pn**	**22 13 42.0**	**-1.1**
ZALV	1.8nm,0.3s,baz=182,slow=13,SNR=13 2.2nm,0.3s,baz=183,slow=24,SNR=6.3			Sn	**Sn**	**22 15 36.2**	**-4.7**
ZALV	baz=189,slow=26,SNR=2.4			Lg	Lg	22 16 43.0	
NVS	**Novosibirsk**	**11.46**	**355**	*e*P	**Pn**	**22 13 54.6**	**-1.3**
NVS	comp=N,2.0nm,0.6s			pmax	pmax		
NVS	comp=E,2.0nm,0.6s			pmax	pmax		
NVS	comp=Z,3.0nm,0.6s			pmax	pmax		
NIL	**Nilore**	**13.28**	**227**	*e*Pn	**Pn**	**22 14 20.1**	**-0.9**
NIL	comp=Z,17nm,0.6s **Nilore**	**13.28**	**227**	*e*P	**Pn**	**22 14 20.1**	**-0.9**
NIL	comp=Z,17nm,0.6s			pmax	pmax		
BVAR	**Borovoye Array**	**13.55**	**320**	Pn	**Pn**	**22 14 24.0**	**-0.4**
BVAR	baz=130,slow=13,SNR=2.8 comp=Z,0.8nm,0.3s,baz=144,slow=20,SNR=4.9			Sn	**Sn**	**22 16 51.1**	**-3.8**
BVAR	comp=Z,0.4nm,0.3s,baz=138,slow=30,SNR=2.6			Lg	Lg	22 18 17.5	
SONM	**Songino Array**	**15.73**	**66**	Pn	**Pn**	**22 14 54.8**	**+0.8**
SONM	comp=Z,0.1nm,0.3s,baz=257,slow=13,SNR=3.0 comp=Z,0.1nm,0.3s,baz=266,slow=23,SNR=2.4			Lg	Lg	22 19 22.7	
AKTO	**Aktyubinsk**	**19.50**	**300**	P	**Pn**	**22 15 41.9**	**+1.2**
AKTO	comp=Z,0.3nm,0.3s,baz=140,slow=7.3,SNR=3.6 comp=Z,0.1nm,0.3s,baz=220,slow=12,SNR=2.1			Lg	Lg	22 21 26.4	
ARU	**Arti**	**21.14**	**317**	*e*P	**P**	**22 15 57.4**	**+0.2**
ARU	comp=Z,1.6nm,0.5s **Arti**	**21.14**	**317**	*e*P	**P**	**22 15 57.4**	**+0.2**
ARU	comp=Z,2.0nm,0.5s			pmax	pmax		
CHTO	**Chiang Mai**	**27.29**	**150**	*e*P	**P**	**22 16 57.1**	**+0.1**
CHTO	comp=Z,1.5nm,0.9s **Chiang Mai**	**27.29**	**150**	*e*P	**P**	**22 16 57.1**	**+0.1**
CHTO	comp=Z,2.0nm,0.9s			pmax	pmax		
BRTR	**Keskin Array B**	**37.95**	**282**	P	**P**	**22 18 31.2**	**+1.1**
FINES	comp=Z,1.0nm,0.9s,baz=90,slow=6.2,SNR=5.3 **FINESS Array B**	**38.50**	**319**	P	**P**	**22 18 34.1**	**-0.2**
ARCES	comp=Z,0.6nm,0.5s,baz=79,slow=9.9,SNR=5.8 **ARCESS Array B**	**39.45**	**332**	P	**P**	**22 18 41.6**	**-0.6**
HFS	comp=Z,3.4nm,1.0s,baz=91,slow=7.2,SNR=2.8 **Hagfors**	**44.66**	**318**	P	**P**	**22 19 25.5**	**+0.7**
NB2	comp=Z,2.1nm,0.8s,baz=98,slow=10,SNR=3.5 **NORSAR Subarra**	**45.67**	**319**	P	**P**	**22 19 32.7**	**-0.2**
TORD	comp=Z,4.7nm,1.0s,baz=77,slow=7.9 **Torodi Ar. Bea**	**76.10**	**275**	P	**P**	**22 22 59.6**	**-0.9**
WRA	comp=Z,0.7nm,0.9s,baz=41,slow=4.8 **Warramunga Arr**	**77.74**	**133**	P	**P**	**22 23 08.7**	**-0.8**
FCC	comp=Z,0.2nm,0.5s,baz=338,slow=6.4,SNR=2.5 **Fort Churchill**	**78.17**	**359**	P	**P**	**22 23 11.2**	**-0.2**
FCC	comp=Z,2.9nm,0.9s **Fort Churchill**	**78.17**	**359**	P	**P**	**22 23 11.2**	**-0.2**
FCC	comp=Z,3.0nm,0.9s			pmax	pmax		
ASAR	**Alice Springs**	**80.58**	**135**	P	**P**	**22 23 26.0**	**+1.0**
ASAR	comp=Z,0.5nm,0.7s,baz=324,slow=4.6,SNR=2.5 **Alice Springs**	**80.58**	**135**	P	**P**	**22 23 26.0**	**+1.0**
LAO	**LASA Array** comp=Z,2.0nm,0.7s	**89.74**	**8**	P	**P**	**22 24 10.0**	**-0.7**

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*IDC **29** 22:22:26.9±0.9, 28.°09N×101.°07E, h0km, mb3.8/7, mb1 3.9/8, mb1mx3.6/68, mbtmp3.8/8, ML3.9/1, Error ellipse: s-maj=29.0km s-min=17.7km az=77.0*
*BJI **29** 22:22:28.6, 28.°13N×101.°18E, h11km, ML3.8/14, Ms3.8/1, Ms7 3.7/1*
ISC 29 22:22:28.8±0.7, 28.°14N±0.°05×101.°08E±0.°06, h10km, n21, σ0§97/25, mb3.7/6, 1C-1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**3.36**	**153**	⇓Pg	**Pn**	**22 23 23.3**	**+1.7**
KMI				Sg	**Sb**	**22 24 08.0**	**-1.6**
KMI	comp=N,190nm,1.4s			smax	smax		
KMI	comp=E,170nm,1.0s			smax	smax		
KMI	comp=N,1μm,14.3s			LR	LR		
KMI	comp=E,2μm,12.9s			LR	LR		
KMI	comp=Z,1μm,11.3s			LR	LR		
CD2	**Chengdu**	**3.61**	**40**	Pn	**Pn**	**22 23 25.0**	**+0.1**
CD2				Sn	**Sn**	**22 24 06.3**	**-1.4**
CD2				Sg	**Sg**	**22 24 24.3**	**-0.6**
CD2	comp=N,130nm,0.8s			smax	smax		
CD2	comp=E,110nm,0.7s			smax	smax		
GYA	**Guiyang**	**5.25**	**107**	⇑*i*Pn	**Pn**	**22 23 48.8**	**+1.3**
GYA				Pg	**Pb**	**22 24 02.0**	**+1.2**
GYA				Sn	Sn	22 24 32.0	-16
GYA				Sg	Sb	22 24 48.0	-16
GYA	comp=N,160nm,0.8s			smax	smax		
GYA	comp=E,180nm,0.8s			smax	smax		
CMAR	**Chiang Mai Arr**	**9.84**	**192**	Pn	**Pn**	**22 24 49.3**	**-1.1**
CMAR	comp=E,0.3nm,0.3s,baz=13,slow=12,SNR=3.2			Pg		22 25 33.4	
CMAR	comp=E,0.5nm,0.3s,baz=11,slow=15,SNR=12 comp=E,0.9nm,0.3s,baz=8.0,slow=26,SNR=3.6			Lg	Lg	22 27 41.1	
ODAN	**Odare**	**12.22**	**267**	*e*P	**Pn**	**22 25 23.6**	**+0.4**
RAMN	comp=E,16nm,0.8s **Ramite**	**12.90**	**268**	*e*P	**Pn**	**22 25 32.9**	**+0.4**
JIRN	comp=E,22nm,0.6s **Jiri**	**13.18**	**271**	*e*P	**Pn**	**22 25 36.2**	**-0.2**
PKIN	comp=E,20nm,0.5s **Phulchoki**	**13.88**	**271**	*e*P	**Pn**	**22 25 45.6**	**-0.4**
KKN	comp=E,14nm,0.6s **Kakani**	**13.97**	**272**	*e*P	**Pn**	**22 25 46.6**	**-0.5**
DMN	comp=E,17nm,0.7s **Daman**	**14.14**	**272**	*e*P	**Pn**	**22 25 49.7**	**+0.3**
GKN	comp=E,33nm,1.2s **Gorkha**	**14.52**	**273**	*e*P	**Pn**	**22 25 54.9**	**+0.4**
DANN	comp=E,7.3nm,0.6s **Dangsing**	**15.27**	**275**	*e*P	**Pn**	**22 26 06.2**	**+1.4**
KOLN	comp=E,10nm,0.6s **Koldanda**	**15.45**	**273**	*e*P	**Pn**	**22 26 07.7**	**+0.6**
WMQ	comp=E,6.2nm,0.6s **Urumqi**	**18.98**	**329**	*e*P	**Pn**	**22 26 52.5**	**+1.3**
SONM	**Songino Array**	**20.09**	**10**	P	**P**	**22 27 02.8**	**+0.2**
KSRS	comp=E,1.4nm,0.8s,baz=192,slow=12,SNR=6.7 **Korea Array**	**24.34**	**61**	P	**P**	**22 27 47.5**	**+0.7**
ARU	comp=E,1.2nm,0.7s,baz=243,slow=10,SNR=3.4 **Arti**	**41.26**	**325**	P	**P**	**22 30 14.0**	**+0.1**
AKASG	comp=E,3.3nm,0.7s,baz=120,slow=8.1,SNR=6.2 **Malin Array Be**	**57.52**	**314**	P	**P**	**22 32 18.0**	**-0.3**
WRA	comp=E,0.2nm,0.2s,baz=76,slow=6.4,SNR=4.0 **Warramunga Arr**	**57.62**	**142**	P	**P**	**22 32 18.1**	**-1.2**
ASAR	comp=E,2.9nm,0.6s,baz=331,slow=7.9,SNR=22 **Alice Springs**	**60.46**	**145**	P	**P**	**22 32 38.0**	**-1.0**
ILAR	comp=E,0.3nm,0.4s,baz=326,slow=6.7,SNR=6.2 **Eielson Array**	**73.62**	**24**	P	**P**	**22 34 01.5**	**-0.6**
	comp=E,0.7nm,0.9s,baz=298,slow=6.5,SNR=5.5						

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*IDC **29** 22:26:01.8±2.3, 33.°38S×178.°40W, h0km, mb4.0/3, mb1 4.2/4, mb1mx3.7/42, mbtmp4.0/4, ML3.5/1, Error ellipse: s-maj=59.4km s-min=34.4km az=128.0*
ISC 29 22:26:06.8±2.5, 33.°5S±0.°2×178.°3W±0.°4, h41km, n6, σ1§36/7, mb3.9/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.06**	**217**	Pn	**Pn**	**22 27 32.3**	**-1.5**
URZ	1.1nm,0.3s,baz=139,slow=11,SNR=6.0 6.7nm,0.3s,baz=324,slow=22,SNR=13			Sn	**Sn**	**22 28 43.4**	**+1.6**
ASAR	**Alice Springs**	**42.81**	**270**	P	**P**	**22 34 01.2**	**+0.4**
WRA	2.0nm,0.6s,baz=110,slow=7.6,SNR=20 **Warramunga Arr**	**44.07**	**275**	P	**P**	**22 34 10.9**	**-0.1**
FITZ	1.1nm,0.5s,baz=114,slow=7.9,SNR=26 **Fitzroy Crossi**	**52.19**	**272**	P	**P**	**22 35 13.2**	**-0.5**
FINES	1.4nm,1.0s,baz=128,slow=5.4,SNR=2.7 **FINESS Array B**	**147.94**	**338**	PKPbc	**PKPbc**	**22 45 46.9**	**+0.1**
BRTR	1.1nm,0.7s,baz=46,slow=5.5,SNR=6.4 **Keskin Array B** 0.3nm,0.5s,baz=112,slow=3.9,SNR=2.8	**153.73**	**293**	PKPbc	**PKPbc**	**22 46 02.8**	**+1.4**

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*SOME **29** 22:30:01.0, 43.°12N×84.°95E, h15km*
*IDC **29** 22:30:08.2±0.9, 43.°50N×84.°77E, h0km, mb3.8/13, mb1 3.9/17, mb1mx3.7/64, mbtmp3.8/17, ML3.4/4, Error ellipse: s-maj=23.2km s-min=12.4km az=58.0*
*NEIC **29** 22:30:09.9±0.3, 43.°49N×84.°74E, h10km, mb4.1/9, Error ellipse: s-maj=9.4km s-min=6.5km az=47.0*
*NNC **29** 22:30:09.9±2.3, 43.°57N×84.°88E, h0km, mb4.5, mpv4.2, Error ellipse: s-maj=22.1km s-min=12.1km az=125.0*
*BJI **29** 22:30:10.7, 43.°45N×84.°68E, h5km, mb4.2/5, ML4.2/11*
ISC 29 22:30:10.3±0.5, 43.°48N±0.°04×84.°67E±0.°03, h10km, n67, σ2§54/84, mb3.8/22, 15C-11D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**2.22**	**80**	Pn	**Pb**	**22 30 50.3**	**-0.3**
WMQ				Sg	**Sg**	**22 31 20.8**	**-0.9**
WMQ	comp=N,3μm,0.5s			smax	smax		
WMQ	comp=E,2μm,0.7s			smax	smax		
DJR	**Jarkent**	**3.63**	**285**	*e*P	**Pn**	**22 31 10.7**	**+4.1**
DJR	71nm,0.3s 207nm,0.3s			*e*S	**Sb**	**22 32 03.4**	**+4.8**
MK31	**Makanchi Array**	**3.72**	**334**	⇑Pn	**Pn**	**22 31 09.6**	**+1.9**
MK31	4.4nm,0.3s,baz=151,slow=14,SNR=236 14nm,0.3s,baz=151,slow=17,SNR=17			⇑Pg	**Pb**	**22 31 19.0**	**+3.0**
MK31	90nm,0.3s,baz=144,slow=29,SNR=20			⇑Lg	Lg	22 32 06.1	
PDGK	**Podgornoye**	**3.78**	**269**	⇓Pn	**Pn**	**22 31 11.3**	**+2.7**
PDGK	50nm,0.4s 320nm,0.6s			⇓Lg	Lg	22 32 12.6	
SHLS	**Shalkode**	**3.81**	**267**	*e*P	**Pn**	**22 31 08.6**	**-0.5**
SHLS	46nm,0.2s 1μm,0.5s			*e*S	**Sn**	**22 31 59.4**	**+5.3**
MAKZ	**Makanchi**	**3.83**	**331**	⇑Pn	**Pn**	**22 31 11.0**	**+1.7**
MAKZ	25nm,0.4s 318nm,0.9s			⇓Lg	Lg	22 32 11.1	
ZSN	**Zaisan**	**3.97**	**2**	*e*P	**Pb**	**22 31 20.9**	**+0.5**
ZSN	3.7nm,0.2s 180nm,0.9s			*e*S	**Sg**	**22 32 20.3**	**+2.5**
UZB	**Uzynbulak**	**4.13**	**267**	*e*P	**Pb**	**22 31 19.1**	**-4.0**
UZB	24nm,0.4s 182nm,0.3s			*e*S	**Sb**	**22 32 17.8**	**+4.5**
KAPS	**Kapalarasan**	**4.21**	**297**	*e*P	**Pb**	**22 31 22.1**	**-2.4**
KAPS	39nm,0.4s 208nm,0.4s			*e*S	**Sg**	**22 32 22.8**	**-2.7**
KPKS	**Kokpek**	**4.36**	**272**	*e*P	**Pb**	**22 31 23.5**	**-3.4**
KPKS	40nm,0.2s 392nm,0.5s			*e*S	**Sb**	**22 32 25.2**	**+5.7**
SATY	**Saty**	**4.59**	**267**	*e*P	**Pb**	**22 31 27.3**	**-3.7**
SATY	28nm,0.2s 179nm,0.3s			*e*S	**Sb**	**22 32 31.8**	**+5.4**
KURS	**Kuram**	**4.73**	**272**	*e*P	**Pb**	**22 31 31.3**	**-1.9**
KURS	12nm,0.4s 95nm,0.6s			⇓*e*S	**Sg**	**22 32 39.1**	**-3.0**
TDK	**Taldyqorghan**	**4.75**	**291**	*e*P	**Pb**	**22 31 32.8**	**-0.8**
TDK	149nm,0.5s 571nm,0.5s			*e*S	**Sg**	**22 32 42.1**	**-0.6**
MDOK	**Medeo**	**5.57**	**269**	⇓Pn	**Pn**	**22 31 36.0**	**+2.8**
MDOK	25nm,0.8s 30nm,0.6s			⇓Pg	**Pg**	**22 31 53.6**	**-3.3**
MDOK	125nm,0.8s			Lg	Lg	22 33 09.9	
ULHL	**Ulahol**	**6.31**	**262**	P	**Pn**	**22 31 46.0**	**+2.4**
TKM2	SNR=17 **Tokmak 2**	**6.65**	**268**	⇑Pn	**Pn**	**22 31 51.8**	**+3.5**
TKM2	22nm,0.8s 98nm,1.2s			⇑Lg	Lg	22 33 44.8	
TKM2	**Tokmak 2** SNR=20	**6.65**	**268**	P	**Pn**	**22 31 51.3**	**+3.1**
KZA	**Kyzart** SNR=11	**7.07**	**262**	P	**Pn**	**22 31 56.5**	**+2.4**
KBK	**Karagaybulak** SNR=7.6	**7.17**	**267**	P	**Pn**	**22 31 59.5**	**+4.3**
CHMS	**Chumysh** SNR=5.6	**7.26**	**270**	P	**Pn**	**22 31 59.1**	**+2.7**
USP	**Ospenovka** SNR=6.6	**7.41**	**272**	P	**Pn**	**22 32 02.1**	**+3.6**
AAK	**Ala-Archa** 22nm,0.8s	**7.50**	**267**	⇓Pg	Pg	22 32 28.0	-5.8
AAK	60nm,1.0s			Lg	Lg	22 34 11.3	
UCH	**Uchtor** SNR=6.2	**7.57**	**264**	P	**Pn**	**22 32 05.4**	**+4.4**
KSH	**Kashi**	**7.63**	**242**	Pn	**Pg**	**22 32 37.3**	**+0.9**
KSH				Sn	**Sb**	**22 34 01.8**	**+8.0**
KSH	comp=N,100nm,0.7s			smax	smax		
KSH	comp=E,160nm,1.0s			smax	smax		
KURBB	**Kurchatov Arra**	**8.28**	**332**	Pn	**Pn**	**22 32 10.4**	**+0.1**
KURBB	comp=E,0.8nm,0.3s,baz=147,slow=13,SNR=34			Sn	**Sn**	**22 33 42.9**	**-1.0**
KURBB	comp=E,1.5nm,0.3s,baz=150,slow=21,SNR=8.5			Lg	Lg	22 34 28.5	
KURBB	comp=E,0.9nm,0.3s,baz=315,slow=53,SNR=10 **Kurchatov Arra**	**8.28**	**332**	⇑Pn	**Pn**	**22 32 10.1**	**-0.2**
KURBB	comp=E,5.2nm,0.4s			⇓Lg	Lg	22 34 30.7	
KURK	comp=E,290nm,1.1s **Kurchatov**	**8.33**	**332**	⇑Pn	**Pn**	**22 32 10.7**	**-0.2**
KURK	comp=E,4.0nm,0.6s			⇑Lg	Lg	22 34 31.7	
KURK	comp=E,185nm,0.9s **Kurchatov**	**8.33**	**332**	*e*Pn	**Pn**	**22 32 10.9**	**-0.1**
KURK				Sn	**Sn**	**22 33 42.9**	**-2.1**
OTUK	**Ortayu**	**9.83**	**303**	⇑Pn	**Pn**	**22 32 32.1**	**+0.5**
OTUK	comp=E,3.1nm,0.7s			⇑Lg	Lg	22 35 23.8	
ZALV	comp=E,79nm,1.3s **Zalesovo Beam**	**10.48**	**0**	Pn	**Pn**	**22 32 39.6**	**-0.8**
ZALV	comp=E,1.5nm,0.3s,baz=184,slow=14,SNR=24 comp=E,7.5nm,0.3s,baz=176,slow=25,SNR=24			Sn	**Sn**	**22 34 33.7**	**-4.0**
ZALV	baz=194,slow=28,SNR=1.6			Lg	Lg	22 35 38.2	
BVAR	**Borovoye Array**	**13.46**	**320**	Pn	**Pn**	**22 33 18.8**	**-2.3**
BVAR	comp=E,0.2nm,0.3s,baz=124,slow=14,SNR=4.1			Sn	**Sn**	**22 35 44.2**	**-6.5**
BVAR	comp=E,0.5nm,0.3s,baz=119,slow=23,SNR=3.7			Lg	Lg	22 37 09.5	
BRVK	comp=E,0.5nm,0.3s,baz=160,slow=29,SNR=3.0 **Borovoye**	**13.53**	**320**	*e*Pn	**Pn**	**22 33 22.5**	**+0.4**
SONM	comp=E,8.4nm,0.6s **Songino Array**	**15.79**	**66**	Pn	**Pn**	**22 33 52.9**	**+0.2**
SONM	comp=E,0.1nm,0.3s,baz=243,slow=16,SNR=4.0			Lg	Lg	22 38 25.1	
AKTO	comp=E,0.2nm,0.3s,baz=268,slow=14,SNR=2.9 **Aktyubinsk**	**19.41**	**300**	P	**Pn**	**22 34 38.8**	**+1.3**
AKTO	comp=E,0.5nm,0.3s,baz=110,slow=8.3,SNR=6.2			S	**Sn**	**22 38 14.3**	**-0.7**
AKTO	comp=E,0.1nm,0.3s,baz=270

comp=E,32nm,0.7s,baz=74,slow=7.7,SNR=5.8
ARU Arti 21.05 317 P **P 22 34 54.2 +0.1**
comp=E,3.1nm,0.5s,baz=105,slow=3.9,SNR=7.2
ARU Arti 21.05 317 *eP* **P 22 34 54.2 +0.1**
comp=E,3.5nm,0.6s
CHTO Chiang Mai 27.38 149 P **P 22 35 54.7 -1.0**
comp=E,0.6nm,0.5s
KIV Kislovodsk 30.11 286 P **P 22 36 20.2 +0.2**
comp=E,1.4nm,0.6s
PALK Pallekele 36.23 187 P **P 22 37 13.3 -0.1**
comp=E,2.8nm,0.2s
AKASG Malin Array Be 37.65 301 P **P 22 37 25.1 -0.1**
comp=E,0.6nm,0.4s,baz=65,slow=8.4,SNR=4.9
BRTR Keskin Array B 37.86 282 P **P 22 37 27.8 +0.5**
comp=E,1.1nm,0.8s,baz=98,slow=8.9,SNR=7.6
FINES FINESS Array B 38.41 319 P **P 22 37 31.4 -0.1**
comp=E,0.7nm,0.3s,baz=95,slow=9.1,SNR=15
ARCES ARCESS Array B 39.37 332 P **P 22 37 39.4 -0.1**
comp=E,2.2nm,0.9s,baz=74,slow=8.9,SNR=5.3
GIRR Girov 40.31 296][*iP* **P 22 37 48.7 +1.1**
PLOR Plostina 40.55 294][*iP* **P 22 37 51.9 +2.3**
BIZ Bicaz 40.58 296][*iP* **P 22 37 49.8 0.0**
BURAR Bucovina Array 40.96 297][*iP* **P 22 37 53.1 +0.1**
MLR Muntele Rosu 41.13 294 P **P 22 37 55.7 +1.1**
comp=E,0.4nm,0.7s,baz=62,slow=15,SNR=5.2
MLR Muntele Rosu 41.13 294][*iP* **P 22 37 54.6 +0.1**
VOIR 41.75 294][*iP* **P 22 37 56.3 -3.2**
TRPA Tarpa 42.52 299][*iP* **P 22 38 07.2 +1.5**
HFS Hagfors 44.57 318 P **P 22 38 21.9 -0.2**
comp=E,1.7nm,0.5s,baz=90,slow=8.6,SNR=15
NB2 NORSAR Subarra 45.58 319 P **P 22 38 29.6 -0.5**
comp=Z,1.2nm,0.6s,baz=78,slow=7.9
IDI Anoyia 46.05 281 P **P 22 38 33.3 -0.9**
comp=Z,5.1nm,0.7s,baz=54,slow=14,SNR=4.8
CLL Collm 47.35 306 *eP* **P 22 38 44.0 -0.1**
GERES GERESS Array B 47.81 303 P **P 22 38 47.9 +0.1**
comp=Z,0.2nm,0.4s,baz=51,slow=8.0,SNR=2.5
RES Resolute Bay 62.12 360 P **P 22 40 30.3 -0.5**
comp=Z,1.0nm,0.8s
ESDC Sonseca Array 63.29 300 P **P 22 40 39.1 -0.1**
comp=Z,0.2nm,0.4s,baz=54,slow=6.3,SNR=3.4
COLA College 64.47 22 *eP* **P 22 40 45.8 -0.6**
INK Inuvik 64.92 15 P **P 22 40 48.4 -0.9**
comp=Z,2.0nm,1.1s
TORD Torodi Ar. Bea 76.01 275 P **P 22 41 56.8 -1.1**
comp=Z,0.3nm,0.5s,baz=44,slow=4.5
WRAB Tennant Creek 77.83 133 P **P 22 42 07.2 -0.7**
comp=Z,0.5nm,0.6s
WRA Warramunga Arr 77.84 133 P **P 22 42 06.9 -1.1**
comp=Z,0.5nm,0.6s,baz=332,slow=4.8,SNR=8.5
FCC Fort Churchill 78.12 359 P **P 22 42 08.5 -0.5**
comp=Z,1.4nm,0.7s
ASAR Alice Springs 80.67 135 P **P 22 42 22.8 -0.7**
comp=Z,0.4nm,0.7s,baz=318,slow=5.3,SNR=4.2
TSUM Tsumeb 87.50 241 P **P 22 42 58.8 +0.4**
comp=Z,3.4nm,1.0s

NEIC ***29*** *22:37:03.6±0.3, 33°.38S×178°.32W, h10km, mb4.8/10, Error ellipse: s-maj=9.0km s-min=4.5km az=124.0*
BJI ***29*** *22:37:05.0, 33°.40S×178°.40W, h20km, mb5.2/12, mB5.4/3, Ms5.3/2, Ms7 5.1/2*
ISCJB ***29*** *22:37:07.0±0.2, 33°.44S±0°.04×178°.46W±0°.05, h41km, mb4.9/39, MS4.8/7, Error ellipse: s-maj=6.8km s-min=4.1km az=33.6*
MOS ***29*** *22:37:06.6±0.9, 33°.19S×178°.45W, h33km, mb4.9/13, Error ellipse: s-maj=13.8km s-min=10.7km az=105.0*
IDC ***29*** *22:37:06.8±3.1, 33°.21S×178°.32W, h29km±20km, mb4.5/21, mb1 4.6/21, mb1mx4.5/42, mbtmp4.7/21, MS4.7/7, Ms1 4.7/7, ms1mx4.2/43, Error ellipse: s-maj=16.1km s-min=15.1km az=36.0*

ISC 29 22:37:08.0±0.4, 33°.38S±0°.05×178°.32W±0°.07, h41km, n232, σ1.91/238, mb4.9/37, MS4.8/7, 10C-10D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.13**	**5**	*e*Pn	**Pn**	**22 38 06.9**	**-1.7**
RAO	**Raoul Island**	**4.13**	**5**	*e*P	**P**	**22 38 06.9**	**-1.7**
MXZ	**Matakaoa Point**	**5.00**	**212**	*e*Pn	**Pn**	**22 38 19.7**	**-0.7**
URZ	**Urewera**	**6.12**	**216**	Pn	**Pn**	**22 38 33.5**	**-2.3**
13nm,0.3s,baz=46,slow=2.2,SNR=54							
URZ				Sn	**Sn**	**22 39 45.0**	**+0.5**
72nm,0.3s,baz=276,slow=3.8,SNR=16							
URZ				LR	LR	22 41 05.0	
comp=Z,3μm,20.7s,baz=28,slow=38							
URZ	**Urewera**	**6.12**	**216**	*e*Pn	**Pn**	**22 38 35.5**	**-0.3**
URZ				Sn	**Sn**	**22 39 45.0**	**+0.5**
OUZ	**Omahuta**	**6.94**	**252**	*e*Pn	**Pn**	**22 38 48.3**	**+1.3**
BKZ	**Black Stump Fm**	**7.13**	**214**	*e*Pn	**Pn**	**22 38 49.0**	**-0.8**
KRVZ	**Karewarewa**	**7.50**	**219**	P	**Sn**	**22 40 20.8**	**+2.2**
HIZ	**Hauiti**	**7.54**	**225**	*e*Pn	**Pn**	**22 38 55.6**	**+0.4**
WTVZ	**West Tongariro**	**7.54**	**219**	P	**Sn**	**22 40 22.6**	**+2.9**
COVZ	**Chateau Observ**	**7.63**	**219**	P	**Sn**	**22 40 27.0**	**+5.1**
FWVZ	**Far West T-bar**	**7.67**	**218**	P	**Sn**	**22 40 23.4**	**+0.5**
MOVZ	**Moawhango**	**7.68**	**217**	P	**Sn**	**22 40 22.4**	**-0.5**
PNHZ	**Pukenui**	**7.86**	**212**	P	**Sn**	**22 40 27.0**	**-0.4**
TSZ	**Takapari Road**	**8.09**	**213**	P	**Sn**	**22 40 33.2**	**+0.2**
DVHZ	**Dannevirke**	**8.19**	**211**	P	**Sn**	**22 40 33.8**	**-1.7**
ANWZ	**Angora Road**	**8.20**	**209**	P	**Sn**	**22 40 35.3**	**-0.3**
POWZ	**Post Office Ro**	**8.45**	**212**	P	**Sn**	**22 40 39.2**	**-2.5**
BFZ	**Birch Farm**	**8.48**	**209**	*e*Pn	**Pn**	**22 39 06.6**	**-1.6**
BFZ				*e*Sn	**Sn**	**22 40 42.0**	**-0.6**
BFZ	**Birch Farm**	**8.48**	**209**	P	**Sn**	**22 40 41.8**	**-0.8**
MRZ	**Mangatainoka R**	**8.75**	**212**	P	Sn	22 40 38.9	-10
SNZO	**South Karori**	**9.66**	**213**	*e*Sn	**Sn**	**22 41 06.9**	**-4.6**
THZ	**Tophouse**	**10.88**	**217**	*e*Pn	**Pn**	**22 39 39.9**	**-1.2**
THZ				*e*Sn	**Sn**	**22 41 35.6**	**-5.8**
KHZ	**Kahutara**	**11.07**	**213**	*e*Pn	**Pn**	**22 39 40.1**	**-3.5**
KHZ				*e*Sn	**Sn**	**22 41 39.5**	**-6.4**
LTZ	**Lake Taylor**	**11.95**	**216**	*e*Pn	**Pn**	**22 39 54.6**	**-1.1**
OXZ	**Oxford**	**12.47**	**214**	*e*Pn	**Pn**	**22 39 59.3**	**-3.5**
OXZ				*e*Sn	Sn	22 42 10.9	-9.5
RPZ	**Rata Peaks**	**13.24**	**216**	Pn	**Pn**	**22 40 09.1**	**-4.2**
3.1nm,0.3s,baz=49,slow=0.9,SNR=14							
RPZ				Sn	Sn	22 42 27.2	-12
3.5nm,0.3s,baz=237,slow=14,SNR=11							
RPZ	**Rata Peaks**	**13.24**	**216**	*e*Pn	**Pn**	**22 40 10.4**	**-2.8**
RPZ				*e*Sn	**Sn**	**22 42 30.4**	**-8.6**
FOZ	**Fox Glacier**	**13.74**	**219**	*e*Pn	**Pn**	**22 40 19.9**	**-0.1**
LBZ	**Lake Benmore**	**14.15**	**216**	*e*Pn	**Pn**	**22 40 25.6**	**-0.2**
ODZ	**Otahua Downs**	**14.43**	**213**	*e*Pn	**Pn**	**22 40 28.1**	**-1.3**
MLZ	**Mavora Lakes**	**15.88**	**217**	*e*Pn	**Pn**	**22 40 48.3**	**-0.3**
32nm,0.9s							
WHZ	**Wether Hill Ro**	**16.34**	**216**	*e*Pn	**Pn**	**22 40 52.8**	**-1.4**
30nm,0.9s							
DCZ	**Deep Cove**	**16.45**	**219**	*e*Pn	**Pn**	**22 40 55.3**	**-0.3**
89nm,1.6s							
DZM	**Mont Dzumac**	**17.55**	**306**	P	**P**	**22 41 11.2**	**+0.8**
0.9nm,0.3s,baz=118,slow=14,SNR=31							
DZM				LR	LR	22 46 60.0	
comp=Z,3μm,18.3s,baz=114,slow=34							
DZM	**Mont Dzumac**	**17.55**	**306**	*e*Pn	**P**	**22 41 11.5**	**+1.1**
94nm,1.0s							
AFI	**Afiamalu**	**20.28**	**19**	P	**P**	**22 41 38.8**	**-1.4**
93nm,0.9s,baz=225,slow=20,SNR=6.9							
AFI	**Afiamalu**	**20.28**	**19**	*e*P	**P**	**22 41 38.4**	**-1.8**
138nm,1.1s							
RAR	**Rarotonga**	**20.42**	**58**	P	**P**	**22 41 37.2**	**-4.5**
27nm,0.9s,baz=313,slow=19,SNR=3.2							
RAR	**Rarotonga**	**20.42**	**58**	*e*P	**P**	**22 41 39.6**	**-2.1**
58nm,1.3s							
RAR	**Rarotonga**	**20.42**	**58**	*e*P	**P**	**22 41 39.6**	**-2.1**
RAR				pmax	pmax		
comp=Z,58nm,1.3s							
ARMA	**Armidale**	**25.64**	**268**	P	**P**	**22 42 36.2**	**+2.3**
baz=26,SNR=5.2							
ARMA	**Armidale**	**25.64**	**268**	*e*P	**P**	**22 42 34.9**	**+1.0**
comp=Z,40nm,1.4s							
CNB	**Canberra Magne**	**26.69**	**257**	P	**P**	**22 42 44.5**	**+1.2**
baz=27,SNR=5.8							
YNG	**Young**	**27.59**	**259**	P	**P**	**22 42 53.9**	**+2.5**
baz=28,SNR=6.1							
EIDS	**Eidsvold**	**27.76**	**279**	P	**P**	**22 42 54.6**	**+1.7**
baz=28,SNR=7.2							
EIDS	**Eidsvold**	**27.76**	**279**	*e*P	**P**	**22 42 53.2**	**+0.3**
comp=Z,18nm,0.8s							
MOO	**Moorlands**	**28.51**	**241**	P	**P**	**22 43 01.4**	**+2.0**
baz=29,SNR=3.3							
RMQ	**Roma**	**29.26**	**275**	P	**P**	**22 43 08.5**	**+2.2**
baz=30,SNR=22							
CMSA	**Cobar Meteorol**	**30.33**	**264**	P	**P**	**22 43 17.4**	**+1.7**
baz=31,SNR=11							
QLP	**Quilpie**	**33.01**	**272**	P	**P**	**22 43 40.5**	**+1.2**
baz=33,SNR=5.8							
STKA	**Stephens Creek**	**33.65**	**261**	P	**P**	**22 43 45.8**	**+1.0**
comp=Z,5.6nm,0.8s,baz=96,slow=7.9,SNR=7.8							
STKA				LR	LR	22 56 11.8	
comp=Z,2μm,19.6s,baz=107,slow=34							
STKA	**Stephens Creek**	**33.65**	**261**	P	**P**	**22 43 46.3**	**+1.5**
baz=34,SNR=3.9							
STKA	**Stephens Creek**	**33.65**	**261**	*e*P	**P**	**22 43 46.1**	**+1.3**
STKA				pmax	pmax		
comp=Z,6.0nm,0.8s							
CTA	**Charters Tower**	**34.12**	**284**	P	**P**	**22 43 50.2**	**+1.2**
comp=Z,22nm,0.7s,baz=109,slow=10,SNR=44							
CTAO	**Charters Tower**	**34.12**	**284**	*e*P	**P**	**22 43 48.8**	**-0.2**
comp=Z,25nm,0.6s							
CTAO	**Charters Tower**	**34.12**	**284**	*e*P	**P**	**22 43 48.8**	**-0.2**
CTAO				pmax	pmax		
comp=Z,25nm,0.6s							
HTT	**Hallett**	**35.51**	**258**	P	**P**	**22 44 01.8**	**+0.9**
baz=36,SNR=5.6							
MTSU	**Mount Surprise**	**36.70**	**285**	P	**P**	**22 44 12.3**	**+1.1**
baz=37,SNR=17							
BBOO	**Buckleboo**	**37.99**	**258**	P	**P**	**22 44 21.9**	**0.0**
baz=38,SNR=5.0							
QIS	**Mount Isa**	**39.36**	**278**	P	**P**	**22 44 34.0**	**+0.4**
baz=40,SNR=12							
PMG	**Port Moresby**	**39.72**	**299**	P	**P**	**22 44 36.4**	**-0.2**
comp=Z,3.8nm,0.3s,baz=166,slow=8.7,SNR=4.0							
COEN	**Coen**	**39.92**	**290**	P	**P**	**22 44 38.8**	**+0.5**
baz=40,SNR=28							
COEN	**Coen**	**39.92**	**290**	*e*P	**P**	**22 44 38.3**	**0.0**
comp=Z,19nm,0.8s							
AS01	**Alice Springs**	**42.73**	**270**	*e*P	**P**	**22 45 00.3**	**-1.0**
AS31	**Alice Springs**	**42.76**	**270**	*e*P	**P**	**22 45 01.5**	**-0.2**
comp=Z,14nm,0.8s							
ASAR	**Alice Springs**	**42.76**	**270**	P	**P**	**22 45 01.4**	**-0.2**
comp=Z,42nm,0.7s,baz=109,slow=7.4,SNR=268							
ASAR				PcP	**PcP**	**22 46 51.7**	**-0.9**
comp=Z,4.1nm,0.8s,baz=113,slow=4.0,SNR=3.6							
ASAR				ScP	**ScP**	**22 50 40.4**	**+0.1**
comp=Z,0.8nm,0.8s,baz=119,slow=5.7,SNR=4.2							
ASAR				S	**S**	**22 51 21.5**	**-1.4**
comp=Z,3.0nm,0.8s,baz=117,slow=15,SNR=10							
ASAR				LR	LR	23 01 00.9	
comp=Z,655nm,20.0s,baz=62,slow=34							
WB2	**Warramunga Arr**	**44.01**	**275**	*e*P	**P**	**22 45 11.2**	**-0.5**
WRAB	**Tennant Creek**	**44.02**	**275**	*e*P	**P**	**22 45 11.0**	**-0.7**
comp=Z,12nm,0.7s							
WRAB	**Tennant Creek**	**44.02**	**275**	][*iP*	**P**	**22 45 11.5**	**-0.2**
WRAB				*i* *PP	**pP**	**22 45 17.5**	**-5.8**
WRA	**Warramunga Arr**	**44.02**	**275**	P	**P**	**22 45 11.2**	**-0.5**
comp=Z,22nm,0.8s,baz=114,slow=7.8,SNR=104							
WRA				PcP	**PcP**	**22 46 56.2**	**-0.7**
comp=Z,3.7nm,0.8s,baz=120,slow=3.1,SNR=3.7							
WRA				ScP	**ScP**	**22 50 48.3**	**+3.0**
comp=Z,1.1nm,0.8s,baz=125,slow=3.6,SNR=4.6							
WRA				S	**S**	**22 51 38.9**	**-2.4**
comp=Z,2.9nm,0.9s,baz=115,slow=14,SNR=7.3							
WRA				LR	LR	23 03 37.9	
comp=Z,628nm,18.1s,baz=125,slow=36							
FORT	**Forrest**	**45.09**	**258**	P	**P**	**22 45 20.0**	**-0.1**
baz=45,SNR=6.3							
FORT	**Forrest**	**45.09**	**258**	*e*P	**P**	**22 45 19.0**	**-1.2**
comp=Z,38nm,0.7s							
WRKA	**Warakurna**	**46.91**	**266**	P	**P**	**22 45 33.7**	**-0.9**
baz=47,SNR=32							
KDU	**Kakadu**	**49.23**	**283**	P	**P**	**22 45 51.6**	**-1.0**
baz=50,SNR=7.2							
KNRA	**Kununurra**	**50.73**	**277**	P	**P**	**22 46 03.7**	**-0.2**
baz=51,SNR=6.4							
FITZ	**Fitzroy Crossi**	**52.15**	**272**	P	**P**	**22 46 14.2**	**-0.3**
comp=Z,10nm,0.7s,baz=138,slow=7.1,SNR=34							
FITZ	**Fitzroy Crossi**	**52.15**	**272**	P	**P**	**22 46 14.3**	**-0.3**
baz=52,SNR=16							
FITZ	**Fitzroy Crossi**	**52.15**	**272**	*e*P	**P**	**22 46 13.3**	**-1.2**
comp=Z,13nm,0.8s							
CASY	**Casey**	**52.39**	**209**	*e*P	**P**	**22 46 15.8**	**+0.1**
comp=Z,35nm,0.8s							
KLBR	**Kellerberrin**	**53.18**	**253**	P	**P**	**22 46 21.7**	**-0.4**
baz=54,SNR=6.4							
MEEK	**Meekatharra**	**54.31**	**259**	P	**P**	**22 46 29.9**	**-0.5**
baz=55,SNR=5.9							
FAKI	**Fak Fak**	**55.17**	**292**	*e*P	**P**	**22 46 35.1**	**-1.6**
MBWA	**Marble Bar**	**55.68**	**266**	*e*P	**P**	**22 46 39.1**	**-1.2**
comp=Z,129nm,1.9s							
QSPA	**South Pole Qui**	**56.73**	**180**	P	**P**	**22 46 49.7**	**+2.3**
comp=Z,9.5nm,0.7s,baz=51,slow=2.0,SNR=28							
QSPA	**South Pole Qui**	**56.73**	**180**	*e*P	**P**	**22 46 49.3**	**+1.9**
comp=Z,87nm,0.7s							
SOEI	**Soe**	**57.56**	**280**	*e*P	**P**	**22 46 53.7**	**-0.2**
comp=Z,40nm,0.9s							
HON	**Honolulu**	**57.75**	**23**	*e*P	**P**	**22 46 53.1**	**-1.6**
comp=Z,229nm,1.0s							
HON	**Honolulu**	**57.75**	**23**	*e*P	**P**	**22 46 53.2**	**-1.6**
HON				pmax	pmax		
comp=Z,229nm,1.0s							
RPN	**Rapa Nui**	**58.95**	**104**	LR	LR	23 07 08.1	
comp=Z,780nm,19.1s,baz=92,slow=30							
LUWI	**Luwuk**	**63.77**	**287**	*e*P	**P**	**22 47 34.2**	**-1.9**
comp=Z,35nm,1.0s							
MAW	**Mawson**	**69.43**	**201**	P	**P**	**22 48 12.5**	**+1.2**
comp=Z,3.4nm,0.8s,baz=173,slow=8.1,SNR=4.4							
SYO	**Syowa Base**	**74.16**	**193**	][*eP*	**P**	**22 48 39.2**	**-0.5**
SNAA	**Sanae**	**75.19**	**179**	P	**P**	**22 48 46.5**	**+0.8**
comp=Z,2.7nm,1.0s,baz=194,slow=9.6,SNR=8.3							
VNA3	**Neumayer Olymp**	**75.36**	**176**	P	**P**	**22 48 47.5**	**+0.8**
VNA3	**Neumayer Olymp**	**75.36**	**176**	PcP	**PcP**	**22 48 59.5**	**-0.3**
VNA2	**Neumayer--Watz**	**75.78**	**177**	P	**P**	**22 48 50.4**	**+1.3**
slow=4.5							
VNA2	**Neumayer--Watz**	**75.78**	**177**	PcP	**PcP**	**22 49 02.4**	**+0.8**
baz=174,slow=4.3							
VNA1	**Neumayer--Stat**	**76.02**	**177**	P	**P**	**22 48 53.3**	**+3.0**
VNA1	**Neumayer--Stat**	**76.02**	**177**	PcP	**PcP**	**22 49 04.2**	**+1.6**
MJA0	**Matsu Arr-Jizo**	**80.52**	**326**	*e*P	**P**	**22 49 14.8**	**-0.9**
MJA0				pmax	pmax		
comp=Z,2.0nm,0.7s							
MJAR	**Matsushiro Arr**	**80.54**	**326**	P	**P**	**22 49 14.1**	**-1.7**
comp=Z,2.4nm,0.7s,baz=171,slow=5.7,SNR=8.3							
MAJO	**Matsushiro**	**80.54**	**326**	][*iP*	**P**	**22 49 15.6**	**-0.2**
MAJO				pmax	pmax		
comp=Z,17nm,2.2s							
PLCA	**Paso Flores**	**80.68**	**133**	P	**P**	**22 49 17.9**	**+1.0**
comp=Z,3.6nm,0.9s,baz=235,slow=1.9,SNR=5.4							
PLCA	**Paso Flores**	**80.68**	**133**	*e*P	**P**	**22 49 19.6**	**+2.8**
PLCA				pmax	pmax		
comp=Z,4.0nm,0.9s							
ASAJ	**Asahikawa**	**84.96**	**333**	P	**P**	**22 49 38.5**	**0.0**
comp=Z,7.0nm,0.8s,baz=238,slow=8.3,SNR=6.9							
PEL	**Peldehue**	**85.10**	**127**	P	**P**	**22 49 40.5**	**+0.6**
GSI	**Gunungsitoli**	**85.78**	**274**	*e*P	**P**	**22 49 44.2**	**+0.7**
KSRS	**Korea Array**	**86.44**	**320**	P	**P**	**22 49 45.2**	**-0.8**
comp=Z,2.7nm,0.8s,baz=149,slow=4.9,SNR=7.2							
KSAR	**Wonju Array Be**	**86.46**	**320**	P	**P**	**22 49 45.2**	**-0.9**
KSAR	**Wonju Array Be**	**86.46**	**320**	P	**P**	**22 49 45.2**	**-0.9**
KS01	**Wonju Array Si**	**86.48**	**320**	*e*P	**P**	**22 49 45.5**	**-0.7**
YSS	**Yuzh-Sakhalins**	**87.31**	**334**	*e*P	**P**	**22 49 51.0**	**+1.0**
YSS	**Yuzh-Sakhalins**	**87.31**	**334**	*i* P	**P**	**22 49 50.8**	**+0.8**
YSS				pmax	pmax		
comp=Z,26nm,0.9s							
NJ2	**Nanjing**	**87.98**	**311**	*e*P	**P**	**22 49 56.3**	**+2.7**
NJ2				pmax	pmax		
comp=Z,10.0nm,0.9s							
PET	**Petropavlovsk**	**88.36**	**346**	][*iP*	**P**	**22 49 54.5**	**-0.3**
PET				*e*AP	**pP**	**22 50 02.2**	**-5.1**
PET				*i* PP	**PP**	**22 53 21.1**	**-2.3**
PET				pmax	pmax		
comp=Z,8.0nm,0.9s							
PEA0B	**Petropavlovsk-**	**88.63**	**346**	*e*P	**P**	**22 49 56.7**	**+0.5**
PETK	**Petropavlovsk-**	**88.63**	**346**	P	**P**	**22 49 56.3**	**+0.1**
comp=Z,17nm,0.9s,baz=119,slow=8.4							
PETK	**Petropavlovsk-**	**88.63**	**346**	*e*P	**P**	**22 49 56.0**	**-0.1**
MSHR	**Mys Shultsa**	**88.64**	**325**	][*iP*	**P**	**22 49 56.4**	**0.0**
CMB	**Columbia Colle**	**89.16**	**42**	*e*P	**P**	**22 49 59.5**	**+0.4**
CMB	**Columbia Colle**	**89.16**	**42**	*e*P	**P**	**22 49 59.5**	**+0.4**
GSC	**Goldstone, Bar**	**89.35**	**46**	*e*P	**P**	**22 50 00.7**	**+0.6**
GSC	**Goldstone, Bar**	**89.35**	**46**	*e*P	**P**	**22 50 00.7**	**+0.6**
USRK	**Ussuriysk Ar.**	**89.50**	**327**	P	**P**	**22 50 00.3**	**-0.1**
comp=Z,3.5nm,0.8s,baz=132,slow=4.1							
WDC	**Whiskeytown Da**	**89.80**	**39**	*e*P	**P**	**22 50 03.1**	**+1.2**
WDC	**Whiskeytown Da**	**89.80**	**39**	*e*P	**P**	**22 50 03.1**	**+1.2**
WAKR	**Walker**	**90.02**	**42**	*e*P	**P**	**22 50 05.1**	**+1.8**
YERR	**Yerington**	**90.46**	**42**	*e*P	**P**	**22 50 06.7**	**+1.3**
YBH	**Yreka Blue Hor**	**90.54**	**38**	P	**P**	**22 50 06.1**	**+0.6**
comp=Z,2.6nm,1.1s,baz=190,slow=6.1,SNR=3.4							
NV01	**Mina Array Sit**	**90.61**	**43**	*e*P	**P**	**22 50 06.5**	**+0.4**
NVAR	**Mina Array Bea**	**90.61**	**43**	P	**P**	**22 50 06.5**	**+0.4**
comp=Z,2.5nm,0.9s,baz=219,slow=8.0,SNR=15							
NV11	**Mina Array Sit**	**90.69**	**43**	*e*P	**P**	**22 50 07.2**	**+0.9**
TPNV	**Topopah Spring**	**90.79**	**45**	*e*P	**P**	**22 50 07.9**	**+1.0**
TPNV	**Topopah Spring**	**90.79**	**45**	*e*P	**P**	**22 50 07.9**	**+1.0**
SHPR	**Sheep Range**	**91.15**	**46**	*e*P	**P**	**22 50 10.9**	**+2.3**
KVN	**Kaiserville**	**91.15**	**43**	*e*P	**P**	**22 50 09.3**	**+0.7**
KVN	**Kaiserville**	**91.15**	**43**	*e*P	**P**	**22 50 09.3**	**+0.7**
K05A	**Summer Lake**	**92.19**	**38**	*e*P	**P**	**22 50 14.0**	**+0.7**
GYA	**Guiyang**	**92.80**	**300**	*e*P	**P**	**22 50 18.3**	**+1.9**
GYA				pmax	pmax		
comp=Z,10.0nm,1.0s							
NNA	**Nana**	**92.86**	**106**	LR	LR	23 23 47.7	
comp=Z,748nm,20.5s,baz=215,slow=30							
WVOR	**Wild Horse Val**	**93.18**	**40**	*e*P	**P**	**22 50 18.8**	**+1.0**
KLR	**Kul'dur**	**93.47**	**330**	P	**P**	**22 50 18.4**	**-0.4**
comp=Z,0.2nm,1.0s,baz=58,slow=2.9,SNR=5.0							
KLR	**Kul'dur**	**93.47**	**330**	][*iP*	**P**	**22 50 18.7**	**0.0**
J08A	**Circle Bar Ran**	**93.91**	**39**	*e*P	**P**	**22 50 22.9**	**+1.8**
CMAR	**Chiang Mai Arr**	**94.13**	**289**	PP	PP	22 54 08.5	-1.2
comp=Z,1.1nm,0.5s,baz=133,slow=6.3,SNR=6.9							
TXAR	**Lajitas Array**	**94.22**	**58**	P	**P**	**22 50 22.1**	**-0.7**
comp=Z,0.6nm,1.0s,baz=226,slow=3.6,SNR=4.0							
TXAR	**Lajitas Array**	**94.22**	**58**	*e*P	**P**	**22 50 24.0**	**+1.2**
TXAR				pmax	pmax		
comp=Z,1.0nm,1.0s							
KMI	**Kunming**	**94.92**	**297**	P	**P**	**22 50 26.8**	**+0.5**
KMI				pmax	pmax		
comp=Z,5.0nm,0.7s							
MA2	**Magadan**	**96.09**	**345**	][*iP*	**P**	**22 50 29.4**	**-1.1**
LPAZ	**La Paz**	**97.16**	**115**	P	Pdif	22 50 37.7	+0.3
comp=Z,1.4nm,0.8s,baz=223,slow=6.7,SNR=5.7							
CD2	**Chengdu**	**97.44**	**302**	P	Pdif	22 50 37.5	0.0
CD2				pmax	pmax		
comp=Z,20nm,0.5s							
PDAR	**Pinedale Array**	**98.47**	**44**	P	Pdif	22 50 42.1	+0.1
comp=Z,0.3nm,0.6s,baz=188,slow=4.3,SNR=2.4							
HIA	**Hailar**	**98.97**	**324**	][*eP*	Pdif	22 50 43.6	-0.2
HIA				pmax	pmax		
comp=Z,3.0nm,1.0s							
LZH	**Lanzhou**	**100.27**	**306**	*e*P	**Pdif**	**22 50 51.5**	**+1.4**
LZH				pP	pPdif	22 50 57.5	-5.2
LZH				sP	pP	22 51 00.3	-2.4
LZH				*e*PP	**PP**	**22 55 01.0**	**+4.0**
LZH				pmax	pmax		
comp=Z,18nm,1.5s							
LZH				pmax	pmax		
comp=Z,67nm,9.4s							
LZH				LR	LR		
comp=Z,120nm,17.9s							
LZH				LR	LR		
comp=Z,130nm,18.0s							
LZH				LR	LR		
comp=Z,190nm,19.8s							
ILAR	**Eielson Array**	**100.89**	**13**	P	**Pdif**	**22 50 52.4**	**+0.5**
comp=Z,0.2nm,0.6s,baz=220,slow=4.1,SNR=2.7							
ILAR				PP	**PP**	**22 55 00.5**	**-0.3**
comp=Z,0.9nm,1.0s,baz=221,slow=8.1,SNR=5.0							
WMQ	**Urumqi**	**114.83**	**307**	PKP	PKPdf	22 55 45.0	+1.1
WMQ				LR	LR		
comp=Z,680nm,21.3s							
WMQ				LR	LR		
comp=Z,760nm,14.9s							
WMQ				LR	LR		
comp=Z,1μm,17.1s							
ZALV	**Zalesovo Beam**	**120.06**	**317**	PKP	**PKPdf**	**22 55 52.5**	**-1.0**
comp=Z,0.7nm,0.5s,baz=130,slow=2.0,SNR=3.7							
KURK	**Kurchatov**	**122.88**	**312**	PKP	**PKPdf**	**22 55 58.6**	**-0.5**
KURK	**Kurchatov**	**122.88**	**312**	PKIKP	**PKPdf**	**22 55 58.6**	**-0.5**
KURK				pmax	pmax		
comp=Z,3.0nm,0.7s							
KURBB	**Kurchatov Arra**	**122.92**	**312**	PKP	**PKPdf**	**22 55 58.6**	**-0.5**
comp=Z,3.5nm,

DPC	**Dobruska-Polom**	**159.91**	**332**	*e*PKP2	**PKPab**	**22 57 41.6**	**0.0**
VYHS	**Vyhne**	**160.17**	**325**	*e*PKP2	**PKPab**	**22 57 42.8**	**0.0**
VYHS	**Vyhne**	**160.17**	**325**	*e*PKP	**PKPab**	**22 57 42.8**	**0.0**
CLL	**Collm**	**160.27**	**339**	*i* PKPab	**PKPab**	**22 57 41.7**	**-1.4**
	comp=Z,15nm,1.0s						
CLL				*i*		22 57 55.3	
CLL	**Collm**	**160.27**	**339**	*i* PKP2	**PKPab**	**22 57 41.7**	**-1.4**
CLL				pmax	pmax		
	comp=Z,15nm,1.0s						
BRG	**Berggiesshubel**	**160.34**	**336**	*e*PKP	**PKPab**	**22 57 43.0**	**-0.4**
	comp=Z,10nm,1.1s						
BRG	**Berggiesshubel**	**160.34**	**336**	*e*PKP2	**PKPab**	**22 57 43.0**	**-0.4**
BRG				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BZS	**Buzias**	**160.42**	**314**	⇑*i*P	**PKPab**	**22 57 49.0**	**+5.0**
MDVR	**Moldovita**	**160.78**	**312**	⇑*i*P	PKPab	22 57 35.8	-10
NKC	**Novy Kostel**	**161.38**	**338**	*e*PKPAB	**PKPab**	**22 57 47.6**	**-0.4**
NKC	**Novy Kostel**	**161.38**	**338**	*e*PKP2	**PKPab**	**22 57 47.6**	**-0.4**
KHC	**Kasperske Hory**	**161.94**	**334**	*e*PKPAB	**PKPab**	**22 57 49.8**	**-0.7**
KHC				*ex*	x	22 58 00.8	
KHC	**Kasperske Hory**	**161.94**	**334**	*e*PKP2	**PKPab**	**22 57 49.8**	**-0.7**
CONA	**Conrad Observa**	**161.97**	**328**	*e*PKPab	**PKPab**	**22 57 50.8**	**+0.1**
	comp=Z,4.6nm,1.0s						
GERES	**GERESS Array B**	**162.13**	**333**	PKPab	**PKPab**	**22 57 50.6**	**-0.8**
	comp=Z,1.8nm,0.9s,baz=46,slow=5.8,SNR=10						
ARSA	**Arzberg**	**162.62**	**327**	*es*PKPab	**PKPab**	**22 57 57.9**	**+4.4**
	comp=Z,1.1nm,0.6s						
MOA	**Molln**	**162.71**	**330**	*i* PKPab	**PKPab**	**22 57 53.8**	**-0.1**
	comp=Z,5.0nm,1.4s						
ABTA	**Abfaltersbach**	**164.31**	**331**	*e*PKPab	**PKPab**	**22 57 59.7**	**-1.4**
	comp=Z,3.8nm,0.9s						
RETA	**Reutte**	**164.32**	**337**	*i* PKPab	**PKPab**	**22 58 01.1**	**+0.1**
	comp=Z,8.1nm,1.0s						
MOTA	**Moosalm**	**164.33**	**336**	*i* PKPab	**PKPab**	**22 58 00.9**	**-0.3**
	comp=Z,4.3nm,0.9s						
FETA	**Feichten**	**164.74**	**336**	*e*PKPab	**PKPab**	**22 58 02.9**	**-0.1**
	comp=Z,4.9nm,1.0s						
DAVA	**Damuels**	**164.78**	**338**	*i* PKPab	**PKPab**	**22 58 02.3**	**-0.9**
	comp=Z,13nm,1.0s						

JMA 29 22:51:41.5±0.2, 38°.24N×144°.48E, h43km, M3.6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.35**	**292**	P	Pn	22 52 19.2	+1.5
OFUJ				*e*S	Sn	22 52 47.4	+2.1
MIYJ	**Miyakonagasawa**	**2.47**	**304**	P	Pn	22 52 20.3	+1.1
MIYJ				*e*S	Sn	22 52 49.3	+1.2
JIO	**Ouri**	**2.47**	**276**	P	Pn	22 52 20.9	+1.7
JIO				S	Sn	22 52 49.3	+1.1
JMK	**Ichinoseki**	**2.65**	**287**	P	Pn	22 52 23.4	+1.7
JMK				S	Sn	22 52 54.6	+2.0
JOM	**Ohasama**	**2.78**	**297**	P	Pn	22 52 25.4	+2.0
JOM				S	Sn	22 52 57.9	+2.2
JANG	**Nango**	**3.13**	**314**	P	Pn	22 52 29.7	+1.3
JANG				S	Sn	22 53 05.7	+1.1
JYK	**Kaneyama**	**3.30**	**283**	P	Pn	22 52 33.1	+2.5
JYK				S	Sn	22 53 11.5	+2.9
JFT	**Otama**	**3.36**	**259**	P	Pn	22 52 33.3	+1.9
JFT				S	Sn	22 53 11.9	+1.9
JOT	**Ohata**	**4.10**	**321**	P	Pn	22 52 43.7	+2.1
JOT				*e*S	Sn	22 53 27.7	-0.6
JCH	**Churui**	**4.45**	**349**	P	Pn	22 52 46.7	+0.3
JCH				*e*S	Sn	22 53 35.3	-1.7
JKB	**Kayabe**	**4.50**	**325**	*e*S	Sn	22 53 38.1	-0.1
JRY	**Ryogami san**	**4.98**	**245**	P	Pn	22 52 54.7	+1.0
JRY				S	Sn	22 53 49.4	-0.6
JTKR	**Abashiri--Toko**	**5.74**	**356**	P	Pn	22 53 03.5	-0.6
JTKR				*e*S	Sn	22 54 05.1	-3.6

*NNC **29** 22:53:51.6±5.8, 43°.22N×84°.86E, h0km, mb4.1, mpv3.7, Error ellipse: s-maj=57.4km s-min=36.6km az=122.0*
*SOME **29** 22:54:01.3, 43°.45N×84°.58E, h0km*
*BJI **29** 22:54:56.9, 43°.39N×84°.77E, h8km, ML3.2/6*
ISC 29 22:53:58.7±1.2, 43°.35N±0°.07×84°.60E±0°.04, h10km, n17, σ1§56/28, 2C-4D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**2.29**	**77**	Pg	**Pb**	**22 54 41.0**	**+0.8**
WMQ				Sg	**Sb**	**22 55 10.0**	**+1.3**
WMQ				smax	smax		
	comp=N,320nm,0.5s						
WMQ				smax	smax		
	comp=E,480nm,0.5s						
DJR	**Jarkent**	**3.62**	**287**	*e*P	**Pb**	**22 55 07.1**	**+4.3**
	comp=E,18nm,0.4s						
DJR				*e*S	**Sg**	**22 55 54.6**	**-0.3**
	comp=E,28nm,0.4s						
PDGK	**Podgornoye**	**3.73**	**271**	⇓Pn	Pn	22 54 53.6	-2.9
	comp=E,8.9nm,0.6s						
PDGK				⇓Lg	Lg	22 55 58.7	
	comp=E,74nm,0.7s						
SHLS	**Shalkode**	**3.76**	**269**	*e*P	**Pb**	**22 55 04.3**	**-0.9**
	comp=E,34nm,0.4s						
SHLS				*e*S	**Sb**	**22 55 49.8**	**-1.1**
	comp=E,215nm,0.4s						
MK31	**Makanchi Array**	**3.81**	**335**	⇑Pn	Pn	22 54 52.7	-4.7
	comp=E,3.7nm,0.3s,baz=159,slow=16,SNR=9.7						
MK31				⇑Lg	Lg	22 55 58.9	
	comp=E,6.2nm,0.3s,baz=150,slow=30,SNR=4.4						
MAKZ	**Makanchi**	**3.92**	**333**	⇓Pn	**Pn**	**22 54 56.8**	**-2.2**
	comp=E,12nm,0.5s						
MAKZ				⇓Lg	Lg	22 56 03.6	
	comp=E,34nm,0.8s						
UZB	**Uzynbulak**	**4.08**	**269**	*e*P	**Pg**	**22 55 16.5**	**-0.4**
	comp=E,8.5nm,0.6s						
UZB				*e*S	**Sg**	**22 56 10.7**	**+1.0**
	comp=E,56nm,0.5s						
ZSN	**Zaisan**	**4.10**	**2**	*e*P	**Pg**	**22 55 16.9**	**-0.4**
	comp=E,2.5nm,0.3s						
ZSN				*e*S	**Sg**	**22 56 10.6**	**+0.2**
	comp=E,20nm,0.7s						
KAPS	**Kapalarasan**	**4.23**	**299**	*e*P	**Pg**	**22 55 19.4**	**-0.3**
	comp=E,15nm,0.5s						
KAPS				*e*S	**Sg**	**22 56 15.5**	**+0.9**
	comp=E,46nm,0.6s						
KPKS	**Kokpek**	**4.31**	**274**	*e*P	**Pg**	**22 55 21.8**	**+0.5**
	comp=E,27nm,0.3s						
KPKS				*e*S	**Sg**	**22 56 19.6**	**+2.4**
	comp=E,103nm,0.4s						
ZHN	**Zhinishke**	**4.51**	**270**	*e*P	**Pg**	**22 55 23.9**	**-1.1**
	comp=E,5.4nm,0.2s						
ZHN				*e*S	**Sg**	**22 56 23.9**	**+0.5**
	comp=E,38nm,0.3s						
SATY	**Saty**	**4.54**	**268**	*e*P	**Pg**	**22 55 26.3**	**+0.7**
	comp=E,27nm,0.4s						
SATY				*e*S	**Sg**	**22 56 26.9**	**+2.4**
	comp=E,44nm,0.4s						
KURS	**Kuram**	**4.69**	**274**	*e*P	Pb	22 55 26.9	+5.9
	comp=E,8.1nm,0.6s						
KURS				*e*S	**Sg**	**22 56 28.4**	**-0.8**
	comp=E,25nm,1.2s						
MDOK	**Medeo**	**5.52**	**271**	*e*P	**Pg**	**22 55 44.1**	**-0.3**
	comp=E,4.2nm,0.6s						
MDOK				*e*S	**Sg**	**22 56 57.8**	**+1.9**
	comp=E,15nm,0.7s						
CHKK	**Chushkaly**	**5.55**	**278**	*e*P	**Pg**	**22 55 42.9**	**-2.1**
	comp=E,4.8nm,0.4s						
CHKK				*e*S	**Sg**	**22 56 56.0**	**-0.9**
	comp=E,21nm,0.3s						
TNSS	**Tian-Shan**	**5.61**	**269**	*e*P	**Pg**	**22 55 44.5**	**-1.5**
	comp=E,3.8nm,0.4s						
TNSS				*e*S	**Sg**	**22 56 58.9**	**+0.2**
	comp=E,20nm,0.8s						
KST	**Kastek**	**6.32**	**270**	*e*P	**Pg**	**22 55 58.6**	**-1.1**
	comp=E,6.0nm,1.2s						
KST				*e*S	**Sg**	**22 57 23.6**	**+1.9**
	comp=E,14nm,0.9s						

PRU 29 22:56:32.8, 49°.89N×18°.39E, h0km, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.17**	**252**	*e*PG	Pg	22 56 36.2	+0.2
OKC				*e*SG	Sg	22 56 39.5	+1.4
	comp=Z,7.1nm,0.4s						
CHZP	**Chorzow**	**0.56**	**44**	*e*Pg	Pn	22 56 47.7	-0.4
CHZP				*e*Sg	Sg	22 56 49.7	-1.1
OJC	**Ojcow**	**0.97**	**69**	*e*Pg	Pn	22 56 54.3	+0.6
OJC				*e*Sg	Sg	22 57 01.0	-2.8
DPC	**Dobruska-Polom**	**1.41**	**290**	*e*SG	Sg	22 57 17.3	-0.7

*SOME **29** 23:04:10.4, 43°.17N×85°.18E, h5km*
*NNC **29** 23:04:41.3±2.9, 43°.79N×83°.76E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=31.0km s-min=14.8km az=118.0*
ISC 29 23:04:12.6±2.8, 43°.2N±0°.1×85°.0E±0°.1, h10km, n15, σ2§65/27, 5C-1D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**3.95**	**289**	*e*P	**Pb**	**23 05 23.8**	**+1.5**
	8.2nm,0.3s						
DJR				*e*S	**Sg**	**23 06 16.9**	**-2.5**
	54nm,0.5s						
PDGK	**Podgornoye**	**4.03**	**274**	⇓Pn	**Pg**	**23 05 31.9**	**+2.1**
	5.3nm,0.3s						
PDGK				⇑Lg	Lg	23 06 20.7	
	37nm,0.7s						
SHLS	**Shalkode**	**4.05**	**272**	*e*P	**Pb**	**23 05 21.9**	**-2.2**
	15nm,0.5s						
SHLS				*e*S	**Sb**	**23 06 13.5**	**+0.3**
	155nm,0.5s						
MK31	**Makanchi Array**	**4.10**	**333**	⇑Pn	**Pg**	**23 05 32.2**	**+1.2**
	3.8nm,0.6s,baz=152,slow=16,SNR=4.2						
MK31				⇑Lg	Lg	23 06 21.3	
	23nm,0.5s,baz=150,slow=30,SNR=12						
MAKZ	**Makanchi**	**4.22**	**330**	⇑Pn	**Pg**	**23 05 34.6**	**+1.3**
	4.6nm,0.4s						
MAKZ				⇑Lg	Lg	23 06 25.7	
	28nm,0.8s						
ZSN	**Zaisan**	**4.27**	**359**	*e*P	**Pb**	**23 05 29.1**	**+1.3**
	1.0nm,0.3s						
ZSN				*e*S	**Sg**	**23 06 25.5**	**-4.4**
	8.4nm,0.6s						
UZB	**Uzynbulak**	**4.38**	**272**	*e*P	**Pb**	**23 05 33.1**	**+3.4**
	9.3nm,0.4s						
UZB				*e*S	**Sg**	**23 06 32.9**	**-0.2**
	31nm,0.5s						
KAPS	**Kapalarasan**	**4.57**	**299**	*e*P	**Pg**	**23 05 37.0**	**-3.2**
	4.5nm,0.4s						
KAPS				*e*S	**Sg**	**23 06 39.3**	**-0.1**
	44nm,0.5s						
KPKS	**Kokpek**	**4.62**	**276**	*e*P	**Pb**	**23 05 36.7**	**+2.9**
	15nm,0.5s						
KPKS				*e*S	**Sg**	**23 06 39.2**	**-1.7**
	92nm,0.5s						
SATY	**Saty**	**4.83**	**271**	*e*P	**Pb**	**23 05 40.7**	**+3.3**
	2.8nm,0.2s						
SATY				*e*S	**Sg**	**23 06 45.8**	**-1.8**
	42nm,0.4s						
KURS	**Kuram**	**4.99**	**276**	*e*P	**Pg**	**23 05 45.6**	**-2.6**
	5.2nm,0.8s						
KURS				*e*S	**Sg**	**23 06 54.3**	**+1.4**
	19nm,0.6s						
TDK	**Taldyqorghan**	**5.09**	**293**	*e*P	**Pg**	**23 05 47.8**	**-2.3**
	46nm,0.6s						
TDK				*e*S	**Sg**	**23 06 57.9**	**+1.9**
	153nm,0.8s						
MDOK	**Medeo**	**5.82**	**273**	*e*P	**Pg**	**23 06 00.9**	**-3.1**
	3.8nm,0.5s						
MDOK				*e*S	**Sg**	**23 07 20.5**	**+1.2**
	9.9nm,0.8s						
CHKK	**Chushkaly**	**5.87**	**279**	*e*P	**Pb**	**23 05 59.8**	**+4.8**
	3.5nm,0.8s						
CHKK				*e*S	**Sg**	**23 07 17.9**	**-3.0**
	16nm,0.4s						
TNSS	**Tian-Shan**	**5.90**	**271**	*e*P	**Pg**	**23 06 01.4**	**-4.2**
	2.9nm,0.4s						
TNSS				*e*S	**Sg**	**23 07 21.1**	**-0.9**
	16nm,0.8s						

*ISCJB **29** 23:10:05.8±0.8, 38°.35N±0°.04×141°.98E±0°.09, h70km±4km, mb4.0/16, Error ellipse: s-maj=11.6km s-min=5.0km az=17.6*
*NEIC **29** 23:10:06.5±1.0, 38°.42N×142°.11E, h61km±7km, mb4.0/1, Error ellipse: s-maj=15.0km s-min=6.5km az=104.0*
NEIC Recorded [2 JMA] in Iwate.
*IDC **29** 23:10:06.3±2.5, 38°.37N×142°.06E, h59km±19km, mb3.8/14, mb1 3.9/19, mb1mx3.6/71, mbtmp4.1/19, ML3.9/4, Error ellipse: s-maj=23.3km s-min=12.9km az=96.0*
*JMA **29** 23:10:07.7±0.1, 38°.37N×141°.86E, h64km±1km, M4.0*
JMA Felt II J1.
ISC 29 23:10:06.9±1.3, 38°.36N±0°.05×142°.0E±0°.1, h61km±8km, n42, σ1§43/51, mb4.0/16, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**0.48**	**282**	P	**Pn**	**23 10 19.3**	**+0.6**
JIO				S	**Sn**	**23 10 27.5**	**+0.2**
OFUJ	**Ofunato**	**0.76**	**343**	P	**Pn**	**23 10 22.6**	**+0.8**
OFUJ				*e*S	**Sn**	**23 10 33.4**	**+0.6**
JMK	**Ichinoseki**	**0.82**	**316**	P	**Pn**	**23 10 23.5**	**+0.8**
JMK				S	**Sn**	**23 10 34.5**	**+0.2**
JOU	**Okura**	**1.01**	**271**	P	**Pn**	**23 10 25.3**	**+0.2**
JOU				S	**Sn**	**23 10 38.4**	**-0.2**
JMM	**Marumori**	**1.03**	**242**	P	**Pn**	**23 10 25.4**	**0.0**
JMM				S	**Sn**	**23 10 38.3**	**-0.8**
JOM	**Ohasama**	**1.23**	**336**	P	**Pn**	**23 10 28.7**	**+0.8**
JOM				S	**Sn**	**23 10 44.4**	**+0.8**
JFK	**Kawauchi**	**1.30**	**221**	P	**Pn**	**23 10 29.2**	**+0.2**
JFK				S	**Sn**	**23 10 45.5**	**0.0**
JYK	**Kaneyama**	**1.37**	**295**	P	**Pn**	**23 10 30.1**	**+0.3**
JYK				S	**Sn**	**23 10 46.5**	**-0.4**
JRG	**Rokugo**	**1.46**	**316**	P	**Pn**	**23 10 31.5**	**+0.5**
JRG				*e*S	**Sn**	**23 10 50.6**	**+1.4**
JYS	**Shirataka**	**1.49**	**265**	P	**Pn**	**23 10 31.9**	**+0.5**
JYS				S	**Sn**	**23 10 50.1**	**+0.2**
JFT	**Otama**	**1.52**	**237**	P	**Pn**	**23 10 32.6**	**+0.7**
JFT				S	**Sn**	**23 10 50.7**	**-0.1**
JYA	**Atsumi**	**1.77**	**278**	P	**Pn**	**23 10 35.6**	**+0.4**
MJAR	**Matsushiro Arr**	**3.48**	**240**	P	**Pn**	**23 11 00.5**	**+1.9**
	14nm,0.3s,baz=34,slow=12,SNR=126						
MJAR				S	**Sn**	**23 11 39.8**	**+1.1**
	baz=85,slow=14,SNR=2.5						
MAJO	**Matsushiro**	**3.48**	**240**	*e*Pn	**Pn**	**23 11 00.1**	**+1.5**
MAT	**Matsushiro**	**3.48**	**240**	P	**Pn**	**23 11 00.3**	**+1.7**
MAT				*e*S	**Sn**	**23 11 40.2**	**+1.5**
JHJ	**Hachijo jima 2**	**5.51**	**199**	P	**Pn**	**23 11 25.1**	**-1.3**
	49nm,0.3s,baz=303,slow=22,SNR=8.2						
JHJ				S	**Sn**	**23 12 23.9**	**-4.5**
	51nm,0.3s,baz=73,slow=19,SNR=6.8						
ASAJ	**Asahikawa**	**5.78**	**5**	P	**Pn**	**23 11 28.7**	**-1.2**
	3.2nm,0.3s,baz=314,slow=25,SNR=14						
ASAJ				S	**Sn**	**23 12 27.9**	**-6.8**
	2.5nm,0.3s,baz=256,slow=12,SNR=2.3						
USRK	**Ussuriysk Ar.**	**9.50**	**311**	P	**Pn**	**23 12 22.0**	**+1.1**
	baz=124,slow=14						
JNU	**Nakatsue**	**10.40**	**243**	P	**Pn**	**23 12 34.7**	**+1.4**
	0.4nm,0.3s,baz=20,slow=3.7,SNR=5.1						
KLR	**Kul'dur**	**13.12**	**329**	P	**Pn**	**23 13 09.6**	**-0.5**
	0.0nm,0.3s,baz=135,slow=17,SNR=3.3						
SONM	**Songino Array**	**27.43**	**302**	P	**P**	**23 15 48.0**	**+1.1**
	1.3nm,0.5s,baz=109,slow=8.7,SNR=8.9						
H11N2	**WAKE ISLAND Hy**	**28.49**	**124**	T	T	23 46 19.7	
	baz=316,slow=75,SNR=71						
H11N1	**WAKE ISLAND Hy**	**28.50**	**124**	T	T	23 46 21.5	
	baz=316,slow=75,SNR=83						
H11N3	**WAKE ISLAND Hy**	**28.51**	**124**	T	T	23 46 22.2	
	baz=316,slow=75,SNR=71						
H11S1	**WAKE ISLAND Hy**	**29.25**	**126**	T	T	23 47 12.9	
	baz=318,slow=76,SNR=30						
H11S3	**WAKE ISLAND Hy**	**29.25**	**126**	T	T	23 47 12.3	
	baz=318,slow=76,SNR=43						
H11S2	**WAKE ISLAND Hy**	**29.27**	**126**	T	T	23 47 16.6	
	baz=318,slow=76,SNR=20						
ZALV	**Zalesovo Beam**	**41.35**	**311**	P	**P**	**23 17 46.4**	**-0.1**
	3.4nm,0.5s,baz=84,slow=7.4,SNR=17						
KURK	**Kurchatov**	**45.46**	**307**	*e*P	**P**	**23 18 19.0**	**-0.7**
	0.9nm,0.4s						
KURBB	**Kurchatov Arra**	**45.53**	**307**	P	**P**	**23 18 19.8**	**-0.4**
	3.5nm,0.4s,baz=80,slow=8.0,SNR=38						
BVAR	**Borovoye Array**	**50.01**	**312**	P	**P**	**23 18 54.5**	**-0.3**
	0.9nm,0.5s,baz=81,slow=7.4,SNR=6.6						
AKTO	**Aktyubinsk**	**58.11**	**312**	P	**P**	**23 19 53.5**	**-0.4**
	0.4nm,0.3s,baz=79,slow=10,SNR=4.7						
WRA	**Warramunga Arr**	**58.43**	**189**	P	**P**	**23 19 56.0**	**-0.3**
	1.7nm,0.5s,baz=5.9,slow=7.1,SNR=31						
ASAR	**Alice Springs**	**62.16**	**188**	P	**P**	**23 20 21.9**	**+0.2**
	1.0nm,0.8s,baz=22,slow=6.2,SNR=6.6						
ARCES	**ARCESS Array B**	**62.91**	**339**	P	**P**	**23 20 26.4**	**+0.2**
	2.6nm,1.0s,baz=55,slow=8.1,SNR=10						
FINES	**FINESS Array B**	**67.84**	**332**	P	**P**	**23 20 57.9**	**-0.3**
	2.4nm,0.6s,baz=35,slow=7.7,SNR=9.2						
HFS	**Hagfors**	**73.06**	**336**	P	**P**	**23 21 29.2**	**-0.8**
	6.1nm,1.1s,baz=46,slow=6.2,SNR=5.8						
NB2	**NORSAR Subarra**	**73.13**	**337**	P	**P**	**23 21 30.1**	**-0.4**
	comp=Z,4.7nm,1.0s,baz=35,slow=6.2						
AKASG	**Malin Array Be**	**73.51**	**322**	P	**P**	**23 21 32.4**	**-0.4**
	comp=Z,0.8nm,0.4s,baz=47,slow=5.9,SNR=4.7						
BRTR	**Keskin Array B**	**78.29**	**312**	P	**P**	**23 22 00.4**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=39,slow=9.3,SNR=3.5						
MMAI	**Mount Meron Ar**	**81.55**	**305**	P	**P**	**23 22 18.6**	**+0.5**
	comp=Z,0.5nm,0.4s,baz=0.0,slow=4.8,SNR=5.2						
GERES	**GERESS Array B**	**81.81**	**328**	P	**P**	**23 22 19.1**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=27,slow=6.6,SNR=2.8						

*IDC **29** 23:15:21.4±0.6, 8°.52N×126°.16E, h0km, mb4.0/17, mb1 4.1/17, mb1mx3.9/59, mbtmp4.0/17, Error ellipse: s-maj=23.5km s-min=11.1km az=83.0*
*MAN **29** 23:15:25.6, 8°.37N×126°.00E, h9km, mb5.1, ML4.1, MS4.2*
*NEIC **29** 23:15:26.8±1.4, 8°.53N×126°.21E, h38km±13km, mb4.3/10, Error ellipse: s-maj=11.4km s-min=6.2km az=74.0*
NEIC Felt [III PIVS] at Barobo, [II PIVS] at Prosperidad and [I PIVS] at Bayugan.
ISC 29 23:15:24.1±1.5, 8°.53N±0°.03×126°.16E±0°.05, h16km±9km, n59, σ1§38/73, mb4.2/28, 5C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.39**	**149**	⇓*e*P	**Pb**	**23 15 32.9**	**+0.2**
BIPH				*e*S	**Sb**	**23 15 38.6**	**+0.2**
BUTP	**Butuan**	**0.69**	**310**	*e*P	**Pn**	**23 15 38.8**	**-0.4**
BUTP				*e*S	**Sn**	**23 15 50.1**	**+0.5**
BUKP	**Musuan**	**1.26**	**239**	*e*P	**Pn**	**23 15 46.2**	**-0.9**
BUKP				*e*S	**Sn**	**23 16 04.7**	**+1.0**
SCPH	**Surigao**	**1.41**	**332**	⇑*e*P	**Pg**	**23 15 51.2**	**-0.2**
SCPH				*e*S	**Sg**	**23 16 10.1**	**+0.3**
CGP	**Cagayan de Oro**	**1.45**	**267**	⇑*i*P	**Pn**	**23 15 48.3**	**-1.3**
CGP				*i* S	**Sn**	**23 16 08.0**	**-0.3**
DAV	**Davao City (W)**	**1.56**	**202**	Pn	**Pn**	**23 15 51.1**	**0.0**
	154nm,0.3s,baz=65,slow=3.0,SNR=19						
DAV				Sn	**Sn**	**23 16 11.7**	**+0.7**
	111nm,0.3s,baz=282,slow=23,SNR=5.8						
DAV	**Davao City (W)**	**1.56**	**202**	*e*Pn	**Pn**	**23 15 52.1**	**+1.0**
DAV				Sn	**Sn**	**23 16 11.7**	**+0.7**
DMPH	**Davao City--Mi**	**1.57**	**204**	⇑*e*P	**Pb**	**23 15 53.2**	**+0.4**
DMPH				*e*S	**Sn**	**23 16 12.1**	**+0.8**
MATI	**Mati**	**1.57**	**176**	*e*P	**Pn**	**23 15 50.2**	**-1.1**
MATI				*e*S	**Sn**	**23 16 11.4**	**0.0**
MSLP	**Maasin**	**2.05**	**321**	*e*P	**Pb**	**23 15 59.6**	**-1.4**
CTBH	**Cotabato--PC H**	**2.29**	**236**	*e*P	**Pn**	**23 16 02.0**	**+0.7**
CTBH				*i* S	**Sn**	**23 16 30.4**	**+1.3**
TBP	**Tagbilaran**	**2.55**	**297**	*e*P	**Pn**	**23 16 06.1**	**+1.3**
LLP	**Lapu-Lapu**	**2.80**	**310**	⇑*e*P	**Pn**	**23 16 10.1**	**+1.9**
LLP				*e*S	**Sb**	**23 16 46.0**	**-1.9**
PAGZ	**Pagadian**	**2.83**	**256**	*e*P	**Pn**	**23 16 11.2**	**+2.5**
PAGZ				*e*S	**Sb**	**23 16 49.6**	**+1.0**
PLP	**Palo**	**2.87**	**336**	⇓*e*P	**Pb**	**23 16 14.0**	**-0.9**
PLP				*e*S	**Sb**	**23 16 50.8**	**+1.0**
BESP	**Borongan**	**3.14**	**347**	*e*P	**Pb**	**23 16 18.2**	**-1.3**
CNP	**Catarman**	**4.22**	**340**	*e*P	**Pn**	**23 16 32.5**	**+4.7**
CNP				*e*S	**Sb**	**23 17 24.4**	**-4.5**
PVCP	**Virac**	**5.41**	**339**	*e*P	**Pn**	**23 16 48.3**	**+4.2**
JNU	**Nakatsue**	**24.86**	**9**	P	**P**	**23 20 44.8**	**-1.2**
	5.2nm,0.9s,baz=168,slow=4.2,SNR=3.8						
FITZ	**Fitzroy Crossi**	**26.46**	**181**	P	**P**	**23 20 59.8**	**-0.8**
	5.1nm,1.0s,baz=1.2,slow=12,SNR=4.5						
CMAR	**Chiang Mai Arr**	**28.21**	**293**	P	**P**	**23 21 17.4**	**+1.1**
	1.0nm,0.8s,baz=106,slow=7.2,SNR=6.4						
WRAB	**Tennant Creek**	**29.41**	**164**	P	**P**	**23 21 26.8**	**-0.1**
	0.7nm,0.9s						
WRA	**Warramunga Arr**	**29.41**	**164**	P	**P**	**23 21 28.2**	**+1.2**
	0.6nm,0.8s,baz=345,slow=9.3,SNR=3.6						
MAJO	**Matsushiro**	**29.97**	**20**	P	**P**	**23 21 31.6**	**-0.2**
	2.7nm,0.6s						
MJAR	**Matsushiro Arr**	**29.97**	**20**	P	**P**	**23 21 31.9**	**+0.1**
	0.8nm,0.5s,baz=200,slow=10,SNR=4.9						
ASAR	**Alice Springs**	**32.88**	**167**	P	**P**	**23 21 56.2**	**-1.3**
	0.3nm,0.4s,baz=343,slow=6.5,SNR=2.8						
CTA	**Charters Tower**	**34.64**	**145**	P	**P**	**23 22 13.3**	**+0.4**
	1.0nm,0.6s,baz=315,slow=11,SNR=2.7						
CTAO	**Charters Tower**	**34.64**	**145**	P	**P**	**23 22 13.1**	**+0.3**
	5.9nm,0.7s						
USRK	**Ussuriysk Ar.**	**35.90**	**7**	P	**P**	**23 22 24.4**	**+1.0**
	8.9nm,0.7s,baz=196,slow=7.8						
MDJ	**Mudanjiang**	**36.08**	**4**	P	**P**	**23 22 24.9**	**-0.1**
	1.2nm,0.4s						
KLR	**Kul'dur**	**40.84**	**6**	P	**P**	**23 23 05.1**	**+0.1**
	0.1nm,0.3s,baz=200,slow=4.0,SNR=4.8						
ODAN	**Odare**	**40.97**	**301**	*e*P	**P**	**23 23 08.4**

SVIS				*e*Sg	Sg	23 15 56.0	+0.6	DRME			*e*Sn	Sn	23 17 02.0	+1.2
TRUS	**Trudelj**		0.44	257 *e*Pg	Pg	23 15 57.9	0.0	**DRME**	**Dracevica, Mon**		2.52 212⇑*r*Pn	Pn	23 16 30.1	0.0
TRUS				*e*Sg	Sg	23 16 03.7	0.0	DRME			*e*Sn	Sn	23 17 00.1	-0.7
TRUS	**Trudelj**		0.44	257 *e*Pg	Pg	23 15 57.9	0.0	**BUM**	**Brajici-Budva**		2.54 218⇑*r*Pn	Pn	23 16 30.7	+0.2
TRUS				*e*Sg	Sg	23 16 03.7	0.0	BUM			*e*Sn	Sn	23 17 02.4	+0.9
GRUS	**Gruza**		0.48	205 *e*Pg	Pg	23 15 58.2	-0.5	**BUM**	**Brajici-Budva**		2.54 218⇑*r*Pn	Pn	23 16 30.7	+0.2
GRUS				*e*Sg	Sg	23 16 04.5	-0.6	BUM			*e*Sn	Sn	23 17 02.4	+0.9
GRUS	**Gruza**		0.48	205 *e*Pg	Pg	23 15 58.2	-0.5	**HCY**	**Herceg Novi**		2.62 225⇓*r*Pn	Pn	23 16 31.9	+0.4
GRUS				*e*Sg	Sg	23 16 04.5	-0.6	HCY			*e*Sn	Sn	23 17 04.0	+0.7
KUBS	**Kucevo**		0.49	80 *e*Pg	Pb	23 15 58.7	-1.2	**HCY**	**Herceg Novi**		2.62 225⇓*r*Pn	Pn	23 16 31.9	+0.4
KUBS	**Kucevo**		0.49	80 *e*Pg	Pb	23 15 58.7	-1.2	HCY			*e*Sn	Sn	23 17 04.0	+0.7
BEO	**Beograd**		0.61	322 *e*Pg	Pg	23 16 00.4	-0.7	**PHP**	**Peshkopia**		2.67 189 *i* PN	Pb	23 16 37.5	+0.4
BEO				*e*Sg	Sb	23 16 11.2	+0.6	PHP			*i* SN	Sg	23 17 14.4	-0.7
MDVR	**Moldovita**		0.68	48⇑*r*P	Pb	23 16 03.6	+0.4	**ULC**	**Ulcinj**		2.69 209⇓*r*Pn	Pn	23 16 32.8	+0.3
MDVR	**Moldovita**		0.68	48 S	Sn	23 16 13.5	-2.1	ULC			*e*Sn	Sn	23 17 05.8	+0.8
MDVR	**Moldovita**		0.68	48⇑*r*P	Pb	23 16 03.6	+0.4	**ULC**	**Ulcinj**		2.69 209⇓*r*Pn	Pn	23 16 32.8	+0.3
MDVR				S	Sn	23 16 13.5	-2.1	ULC			*e*Sn	Sn	23 17 05.8	+0.8
DIVS	**Divibare**		0.76	253 *e*Pg	Pg	23 16 03.8	-0.2	**DRGR**			2.74 25 *e*Pn	Pb	23 16 35.6	-2.7
DIVS				*e*Sg	Sg	23 16 15.1	+1.2	**DRGR**			2.74 25⇑*r*P	Pn	23 16 33.6	+0.4
DIVS	**Divibare**		0.76	253⇓*r*Pg	Pg	23 16 03.7	-0.2	**DRGR**			2.74 25 S	Sn	23 17 06.3	-0.1
DIVS				*e*Sg	Sg	23 16 14.6	+0.7	**DRGR**			2.74 25⇑*r*P	Pn	23 16 33.6	+0.4
BOVS	**Bovan**		0.86	143 *e*Pg	Pg	23 16 05.1	-0.7	**DRGR**			2.74 25 *e*Pn	Pb	23 16 35.6	-2.7
BOVS				*e*Sg	Sb	23 16 17.0	-0.7	DRGR			S	Sn	23 17 06.3	-0.1
BOVS	**Bovan**		0.86	143 *e*Pg	Pg	23 16 05.1	-0.7	**BLY**	**Banja Luka**		2.76 280⇑*r*P	Pn	23 16 33.0	-0.4
BOVS				*e*Sg	Sb	23 16 17.0	-0.7	**BLY**	**Banja Luka**		2.76 280 S	Sn	23 17 05.5	-1.3
IVAS	**Ivanjica**		0.97	220 *e*Pg	Pg	23 16 06.3	-1.6	**BLY**	**Banja Luka**		2.76 280⇑*r*P	Pn	23 16 33.0	-0.4
IVAS				*e*Sg	Sg	23 16 20.6	+0.1	**BLY**	**Banja Luka**		2.76 280 *e*Pn	Pn	23 16 35.0	+1.6
IVAS	**Ivanjica**		0.97	220 *e*Pg	Pg	23 16 06.3	-1.6	BLY			S	Sn	23 17 05.5	-1.3
IVAS				*e*Sg	Sg	23 16 20.6	+0.1	BLY			*e*Sn	Sb	23 17 08.6	-3.8
ZAGS	**Zajecar**		1.03	120 *e*Pg	Pb	23 16 08.7	-0.3	**STIP**	**Stip**		2.77 161 *e*Pn	Pn	23 16 31.9	-1.7
ZAGS				*e*Sg	Sb	23 16 22.7	+0.2	**ARR**	**Arges**		2.79 67⇓*r*P	Pn	23 16 36.3	-2.7
ZAGS	**Zajecar**		1.03	120 *e*Pg	Pb	23 16 08.7	-0.3	**ARR**	**Arges**		2.79 67⇓*r*P	Pb	23 16 36.3	-2.7
ZAGS				*e*Sg	Sb	23 16 22.7	+0.2	**STON**	**Ston**		2.81 240 *e*Pn	Pn	23 16 33.5	-0.3
BANR	**Banloc**		1.06	5⇑*r*P	Pn	23 16 10.6	+0.6	STON			S	Sn	23 17 09.6	+1.8
BANR	**Banloc**		1.06	5 S	Sn	23 16 25.9	+1.1	**STON**	**Ston**		2.81 240⇑*r*Pn	Pn	23 16 33.5	-0.5
BANR	**Banloc**		1.06	5⇑*r*P	Pn	23 16 10.6	+0.6	STON			*e*Sn	Sn	23 17 08.4	+0.6
BANR				S	Sn	23 16 25.9	+1.1	**HUMR**	**Humele**		2.86 85⇓*r*P	Pn	23 16 37.0	+2.3
TEKS	**Tekeris**		1.08	282 *e*Pg	Pg	23 16 10.0	+0.1	**HUMR**	**Humele**		2.86 85 S	Sn	23 17 11.2	+2.1
TEKS				*e*Sg	Sg	23 16 25.0	+1.0	**HUMR**	**Humele**		2.86 85⇓*r*P	Pn	23 16 37.0	+2.3
TEKS	**Tekeris**		1.08	282 *e*Pg	Pg	23 16 10.0	+0.1	HUMR			S	Sn	23 17 11.2	+2.1
TEKS				*e*Sg	Sg	23 16 24.7	+0.7	**GOLR**			2.88 78⇓*r*P	Pg	23 16 46.3	+2.0
SELS	**Selova**		1.11	176 *e*Pg	Pg	23 16 08.5	-2.1	**KKB**	**Krupnik**		2.89 147 P	Pn	23 16 35.8	+0.5
SELS				*e*Sg	Sg	23 16 24.9	-0.1	KKB			Pg	Pb	23 16 41.9	+1.0
DJES	**Djerdap**		1.14	72 *e*Sg	Sn	23 16 26.8	+0.1	**KKB**	**Krupnik**		2.89 147 P	Pn	23 16 35.8	+0.5
DJES	**Djerdap**		1.14	72 *e*Sg	Sn	23 16 26.8	+0.1	**KRUS**	**Krusevo**		2.96 176 *e*Pn	Pn	23 16 35.5	-0.7
HERR	**Herculane**		1.15	61⇑*r*P	Pg	23 16 10.0	-1.4	**CJR**	**Cluj-Napoca**		3.00 37⇑*r*P	Pn	23 16 39.0	+2.2
HERR	**Herculane**		1.15	61 S	Sn	23 16 28.5	+1.4	**CJR**	**Cluj-Napoca**		3.00 37⇑*r*P	Pn	23 16 39.0	+2.2
HERR	**Herculane**		1.15	61⇑*r*P	Pg	23 16 10.0	-1.4	**VOIR**			3.08 68⇓*r*P	Pn	23 16 40.5	+2.6
HERR				S	Sn	23 16 28.5	+1.4	**VOIR**			3.08 68⇓*r*P	Pn	23 16 40.5	+2.6
FGSL	**Fruska Gora**		1.19	315 *e*Pg	Pn	23 16 12.8	+1.0	**OHR**	**Ohrid**		3.22 183 *e*Pn	Pn	23 16 40.2	+0.4
FGSL				*e*Sg	Sn	23 16 29.0	+1.0	**VAY**	**Valandovo**		3.22 158 P	Pn	23 16 39.3	-0.4
FRGS	**Fruska Gora**		1.19	315 *e*Pg	Pn	23 16 12.8	+1.0	**VAY**	**Valandovo**		3.22 158 *e*Pn	Pn	23 16 39.4	-0.4
FRGS				*e*Sg	Sn	23 16 29.0	+1.0	**VAY**	**Valandovo**		3.22 158 P	Pn	23 16 39.3	-0.4
BBLS	**Lazići**		1.24	249 *e*Pg	Pn	23 16 12.1	-0.5	**ZIMR**			3.22 100⇑*r*P	Pn	23 16 42.0	+2.3
BBLS				*e*Sg	Sg	23 16 30.2	+1.1	**ZIMR**			3.22 100⇑*r*P	Pn	23 16 42.0	+2.3
BBLS	**Lazići**		1.24	249 *e*Pg	Pn	23 16 12.1	-0.5	**BIA**	**Bitola**		3.31 176 P	Pn	23 16 42.0	+0.9
BBLS				*e*Sg	Sg	23 16 27.8	-1.3	**BIA**	**Bitola**		3.31 176 *e*Pn	Pn	23 16 41.2	+0.1
SJES	**Sjenica**		1.30	215 *e*Pg	Pn	23 16 12.7	-0.7	**BIA**	**Bitola**		3.31 176 P	Pn	23 16 42.0	+0.9
SJES				*e*Sg	Sb	23 16 31.1	+0.6	**MMB**	**Musomiste**		3.39 143 P	Pn	23 16 42.9	+0.8
SJES	**Sjenica**		1.30	215 *e*Pg	Pn	23 16 12.7	-0.7	MMB			Pg	Pb	23 16 50.4	+1.1
SJES				*e*Sg	Sb	23 16 31.1	+0.6	**MMB**	**Musomiste**		3.39 143 P	Pn	23 16 42.9	+0.8
BLJ	**Bijeljina**		1.32	291⇓*r*Pg	Pg	23 16 15.4	+0.8	**BUD**	**Budapest**		3.44 337⇑*e*Pn	Pn	23 16 43.5	+0.7
BZS	**Buzias**		1.36	19 *e*Pn	Pg	23 16 16.0	+0.6	BUD			*e*Sn	Sn	23 17 24.5	+0.9
BZS	**Buzias**		1.36	19⇑*r*P	Pb	23 16 14.5	-0.2	**BUD**	**Budapest**		3.44 337⇑*e*Pn	Pn	23 16 43.5	+0.7
BZS	**Buzias**		1.36	19 S	Sn	23 16 34.7	+2.5	BUD			*e*Sn	Sn	23 17 24.5	+0.9
BZS	**Buzias**		1.36	19⇑*r*P	Pb	23 16 14.5	-0.2	**KNT**	**Kendrikon**		3.46 156 P	Pn	23 16 42.5	-0.5
BZS	**Buzias**		1.36	19 *e*Pn	Pg	23 16 16.0	+0.6	**KNT**	**Kendrikon**		3.46 156 P	Pn	23 16 42.5	-0.5
BZS				S	Sn	23 16 34.7	+2.5	**PLD**	**Plovdiv**		3.50 128 P	Pn	23 16 44.2	+0.6
TIM	**Timisoara**		1.42	6⇓*r*P	Pb	23 16 15.5	-0.2	**PLD**	**Plovdiv**		3.50 128 P	Pn	23 16 44.2	+0.6
TIM	**Timisoara**		1.42	6 S	Sg	23 16 35.4	+0.6	**DOPR**	**Dopca**		3.51 61⇑*r*P	Pn	23 16 46.1	+2.4
TIM	**Timisoara**		1.42	6⇓*r*P	Pb	23 16 15.5	-0.2	**DOPR**	**Dopca**		3.51 61⇑*r*P	Pn	23 16 46.1	+2.4
TIM				S	Sg	23 16 35.4	+0.6	**GRG**	**Griva**		3.52 162 P	Pn	23 16 43.7	-0.2
HAPS	**Han Pijesak,Bl**		1.49	261 *e*Pg	Pn	23 16 17.3	+1.2	**GRG**	**Griva**		3.52 162 P	Pn	23 16 43.7	-0.2
HAPS				*e*Sg	Sn	23 16 37.2	+1.5	**FNA**	**Florina**		3.55 175 P	Pn	23 16 44.5	+0.1
HAPS	**Han Pijesak,Bl**		1.49	261 *e*Pg	Pn	23 16 17.3	+1.2	**FNA**	**Florina**		3.55 175 P	Pn	23 16 44.5	+0.1
HAPS				*e*Sg	Sn	23 16 36.9	+1.2	**SGRR**	**Singureni**		3.57 90⇓*r*P	Pn	23 16 46.1	+1.5
PLE	**Pljevlja**		1.54	230⇓*r*Pg	Pn	23 16 16.1	-0.6	**SGRR**	**Singureni**		3.57 90⇓*r*P	Pn	23 16 46.1	+1.5
PLE				*e*Sg	Sn	23 16 38.5	+1.8	**CSKK**	**Cs^‡kako**		3.59 329⇓*e*Pn	Pn	23 16 45.5	+0.7
PLE	**Pljevlja**		1.54	230⇓*r*Pg	Pn	23 16 16.1	-0.6	CSKK			*e*Sn	Sn	23 17 28.4	+1.2
PLE				*e*Sg	Sn	23 16 38.5	+1.8	**CSKK**	**Cs^‡kako**		3.59 329⇓*e*Pn	Pn	23 16 45.5	+0.7
ZAPS	**Zavoj**		1.58	131 *e*Pg	Pn	23 16 17.6	+0.3	CSKK			*e*Sn	Sn	23 17 28.4	+1.2
ZAPS				*e*Sg	Sg	23 16 40.2	+0.1	**ARCR**	**ARCALIA**		3.62 39⇑*r*P	Pn	23 16 47.0	+1.7
SRE	**Strehaia**		1.61	77⇓*r*P	Pg	23 16 19.8	-0.3	**ARCR**	**ARCALIA**		3.62 39⇑*r*P	Pn	23 16 47.0	+1.7
SRE	**Strehaia**		1.61	77 S	Sg	23 16 41.8	+0.7	**NVR**	**Nevrokopi**		3.64 144 P	Pn	23 16 45.2	-0.4
SRE	**Strehaia**		1.61	77⇓*r*P	Pg	23 16 19.8	-0.3	**NVR**	**Nevrokopi**		3.64 144 P	Pn	23 16 45.2	-0.4
SRE				S	Sg	23 16 41.8	+0.7	**BEHE**	**Becsehely**		3.67 307⇑*e*Pn	Pn	23 16 46.4	+0.5
BARS	**Barje**		1.62	158 *e*Pg	Pn	23 16 18.2	+0.4	BEHE			*e*Sn	Sg	23 17 48.3	+1.4
BARS				*e*Sg	Sg	23 16 40.8	-0.6	**BEHE**	**Becsehely**		3.67 307 *e*Pn	Pn	23 16 47.1	+1.2
BARS	**Barje**		1.62	158 *e*Pg	Pn	23 16 18.2	+0.4	BEHE			*e*Sn	Sn	23 17 30.6	+1.5
BARS				*e*Sg	Sg	23 16 40.8	-0.6	**PSZ**	**Piszkesteto**		3.67 348⇓*r*P	Pn	23 16 46.3	+0.3
BEY	**Berane**		1.66	209⇑*r*Pn	Pn	23 16 18.1	-0.3	**PSZ**	**Piszkesteto**		3.67 348⇓*e*Pn	Pn	23 16 46.6	+0.6
BEY				*e*Sn	Sn	23 16 41.4	+1.6	PSZ			*e*Sn	Sn	23 17 28.1	-1.3
IVA	**Berane**		1.66	209⇑*r*Pn	Pn	23 16 18.1	-0.3	**PSZ**	**Piszkesteto**		3.67 348⇑*r*P	Pn	23 16 46.3	+0.3
IVA				*e*Sn	Sn	23 16 41.4	+1.6	**PSZ**	**Piszkesteto**		3.67 348⇓*e*Pn	Pn	23 16 46.6	+0.6
KOME	**Kolasin**		1.83	217⇓*r*Pn	Pn	23 16 20.3	-0.4	PSZ			*e*Sn	Sn	23 17 28.1	-1.3
KOME				*e*Sn	Sn	23 16 45.2	+1.3	**MLR**	**Muntele Rosu**		3.70 70⇑*r*P	Pn	23 16 49.0	+2.6
KOME	**Kolasin**		1.83	217⇓*r*Pn	Pn	23 16 20.3	-0.4	**MLR**	**Muntele Rosu**		3.70 70⇑*r*P	Pn	23 16 49.0	+2.6
KOME				*e*Sn	Sn	23 16 45.2	+1.3	**KBN**	**Korca**		3.71 183 *i* PN	Pb	23 16 54.7	0.0
UPM	**Unac-Piva**		1.89	234⇑*r*Pn	Pn	23 16 21.2	-0.4	KBN			*i* SN	Sb	23 17 41.3	+1.7
UPM				*e*Sn	Sn	23 16 46.9	+1.4	**SZH**	**Strazhica**		3.73 105 P	Pn	23 16 47.4	+0.7
UPM	**Unac-Piva**		1.89	234⇑*r*Pn	Pn	23 16 21.2	-0.4	**SZH**	**Strazhica**		3.73 105 P	Pn	23 16 47.4	+0.7
UPM				*e*Sn	Sn	23 16 45.2	-0.3	**SRS**	**Serrai**		3.73 148 P	Pn	23 16 46.2	-0.6
PVY	**Plav**		1.89	204⇓*r*Pn	Pn	23 16 21.4	-0.2	**SRS**	**Serrai**		3.73 148 P	Pn	23 16 46.2	-0.6
PVY				*e*Sn	Sn	23 16 46.8	+1.3	**UDBI**	**Udbina**		3.76 275 *e*Pn	Pn	23 16 48.3	+1.4
PVY	**Plav**		1.89	204⇓*r*Pn	Pn	23 16 21.4	-0.2	**UDBI**	**Udbina**		3.76 275 *e*Pn	Pn	23 16 48.5	+1.3
PVY				*e*Sn	Sn	23 16 46.8	+1.3	**BMR**	**Baia Mare**		3.77 27⇑*r*P	Pn	23 16 49.4	+2.1
DEV	**Deva**		2.06	40⇑*r*P	Pb	23 16 25.2	-1.4	**BMR**	**Baia Mare**		3.77 27⇑*r*P	Pn	23 16 49.4	+2.1
DEV	**Deva**		2.06	40 S	Sb	23 16 50.8	-1.4	**SULR**			3.77 83⇓*r*P	Pn	23 16 48.8	+1.5
DEV	**Deva**		2.06	40⇑*r*P	Pb	23 16 25.2	-1.4	**SULR**			3.77 83⇓*r*P	Pn	23 16 48.8	+1.5
DEV				S	Sb	23 16 50.8	-1.4	**RZN**	**Rozhen**		3.79 133 P	Pn	23 16 47.9	+0.1
BCI	**Bajram Curri**		2.08	199 *i* PN	Pb	23 16 27.5	+0.6	**RZN**	**Rozhen**		3.79 133 P	Pn	23 16 47.9	+0.1
BCI				*i* SN	Sg	23 16 55.7	-0.2	**NEST**	**Nestorio**		3.91 179 P	Pn	23 16 49.7	+0.4
BCI	**Bajram Curri**		2.08	199 *i* Pn	Pb	23 16 27.5	+0.6	**NEST**	**Nestorio**		3.91 179 P	Pn	23 16 49.7	+0.4
NKY	**Niksic**		2.10	225⇑*r*Pn	Pn	23 16 23.9	-0.6	**TRPA**	**Tarpa**		3.95 15⇑*r*P	Pn	23 16 49.9	+0.2
NKY				*e*Sn	Sn	23 16 51.9	+1.2	**TRPA**	**Tarpa**		3.95 15 *e*Pn	Pn	23 16 50.7	+1.0
NKY	**Niksic**		2.10	225⇑*r*Pn	Pn	23 16 23.9	-0.6	TRPA			*e*Sn	Sn	23 17 34.2	-1.8
NKY				*e*Sn	Sn	23 16 51.9	+1.2	**TRPA**	**Tarpa**		3.95 15⇑*r*P	Pn	23 16 49.9	+0.2
DOB	**Doboj**		2.11	282 *e*Pn	Pn	23 16 25.8	+1.3	**TRPA**	**Tarpa**		3.95 15 *e*Pn	Pn	23 16 50.7	+1.0
DOB				*e*Sn	Sn	23 16 52.0	+1.2	TRPA			*e*Sn	Sn	23 17 34.2	-1.8
NKME	**Niksic**		2.16	224⇓*r*Pn	Pn	23 16 24.9	-0.3	**DIM**	**Dimitrovgrad**		4.02 123 P	Pn	23 16 51.7	+1.0
NKME				*e*Sn	Sn	23 16 53.1	+1.2	**DIM**	**Dimitrovgrad**		4.02 123 P	Pn	23 16 51.7	+1.0
NKME	**Niksic**		2.16	224⇓*r*Pn	Pn	23 16 24.9	-0.3	**HORT**	**Hortiatis**		4.04 157 P	Pn	23 16 50.6	-0.4
NKME				*e*Sn	Sn	23 16 53.1	+1.2	**HORT**	**Hortiatis**		4.04 157 P	Pn	23 16 50.6	-0.4
MPEP	**Malo Peshtene**		2.21	115 P	Pn	23 16 26.1	+0.3	**OZLJ**	**Ozalj**		4.13 290 *e*Pn	Pn	23 16 52.9	+0.6
MPEP				Pg	Pg	23 16 30.5	-1.0	**OZLJ**	**Ozalj**		4.13 290 *e*Pn	Pn	23 16 52.8	+0.6
LOT	**Lotru**		2.26	59⇓*r*P	Pb	23 16 28.5	-1.7	**KECS**	**Kecovo**		4.17 355 *e*PN	Pn	23 16 54.0	+1.2
LOT	**Lotru**		2.26	59⇓*r*P	Pb	23 16 28.5	-1.7	**KECS**	**Kecovo**		4.17 355 *e*Pn	Pn	23 16 54.0	+1.2
PDG	**Podgorica**		2.28	214 *e*Pn	Pn	23 16 27.9	+1.1	**CRES**	**Cresnjev**		4.20 293 *e*Pn	Pn	23 16 53.9	+0.6
PDG	**Podgorica**		2.28	214⇓*r*P	Pn	23 16 26.4	-0.4	CRES			*e*Sn	Sn	23 17 42.6	+0.3
PDG	**Podgorica**		2.28	214 P	Pn	23 16 26.4	-0.4	**PLOR**	**Plostina**		4.28 67⇑*r*P	Pn	23 16 56.8	+2.5
PDG	**Podgorica**		2.28	214 P	Pn	23 16 26.4	-0.4	**PLOR**	**Plostina**		4.28 67⇑*r*P	Pn	23 16 56.8	+2.5
PDG	**Podgorica**		2.28	214⇑*r*Pn	Pn	23 16 26.6	-0.2	**VRI**	**Vrincioaia**		4.34 67⇑*r*P	Pn	23 16 57.5	+2.4
PDG				*e*Sn	Sn	23 16 53.7	-1.3	**VRI**	**Vrincioaia**		4.34 67⇑*r*P	Pn	23 16 57.5	+2.4
TTG	**Podgorica**		2.28	214⇑*r*Pn	Pn	23 16 26.6	-0.2	**PLG**	**Polygyros**		4.35 155 P	Pn	23 16 54.8	-0.5
TTG				*e*Sn	Sn	23 16 56.3	+1.3	**PLG**	**Polygyros**		4.35 155 P	Pn	23 16 54.8	-0.5
BRY	**Bratogost**		2.29	232⇑*r*Pn	Pn	23 16 26.3	-0.7	**LIT**	**Litokhoron**		4.37 165 P	Pn	23 16 55.0	-0.5
BRY				*e*Sn	Sn	23 16 56.1	+0.8	**LIT**	**Litokhoron**		4.37 165 P	Pn	23 16 55.0	-0.5
BRY	**Bratogost**		2.29	232⇓*r*Pn	Pn	23 16 26.3	-0.7	**KPRO**	**Kipourio**		4.38 176 P	Pn	23 16 56.3	+0.6
BRY				*e*Sn	Sn	23 16 56.1	+0.8	**KPRO**	**Kipourio**		4.38 176 P	Pn	23 16 56.3	+0.6
CEME	**Cevo**		2.34	221⇑*r*Pn	Pn	23 16 27.2	-0.5	**NVLJ**	**Novalja**		4.40 275 *e*Pn	Pn	23 16 57.1	+1.3
CEME				*e*Sn	Sn	23 16 57.7	+1.3	NVLJ			Sn	Sn	23 17 46.8	-0.2
CEME	**Cevo**		2.34	221⇑*r*Pn	Pn	23 16 27.2	-0.5	**NVLJ**	**Novalja**		4.40 275 *e*Pn	Pn	23 16 57.1	+1.3
CEME				*e*Sn	Sn	23 16 57.7	+1.3	NVLJ			Sn	Sn	23 17 46.8	-0.2
SOF	**Sofiya**		2.36	133 Pg	Pb	23 16 30.5	-1.3	**BURAR**	**Bucovina Array**		4.41 40⇑*r*P	Pn	23 16 58.4	+2.2
VTS	**Vitosha**		2.37	136 *e*Pn	Pn	23 16 29.1	+1.0	**BURAR**	**Bucovina Array**		4.41 40⇑*r*P	Pn	23 16 58.4	+2.2
VTS	**Vitosha**		2.37	136⇓*r*P	Pn	23 16 28.0	-0.2	**VYHS**	**Vyhne**		4.43 341 *e*PN	Pn	23 16 56.8	+0.5
VTS	**Vitosha**		2.37	136 P	Pn	23 16 27.9	-0.2	VYHS			*e*SN	Sn	23 17 47.8	-0.1
VTS				Pg	Pb	23 16 31.2	-0.7	**VYHS**	**Vyhne**		4.43 341 *e*Pn	Pn	23 16 56.8	+0.5
VTS	**Vitosha**		2.37	136 P	Pn	23 16 27.9	-0.2	VYHS			*e*Sn	Sn	23 17 47.8	-0.1
VTS	**Vitosha**		2.37	136 P	Pn	23 16 27.9	-0.2	**BIZ**	**Bicaz**		4.43 52⇑*r*P	Pb	23 17 07.0	0.0
VTS	**Vitosha**		2.37	136 *e*Pn	Pn	23 16 29.1	+1.0	**JMB**	**Yambol**		4.47 113 P	Pn	23 16 57.2	+0.3
SKO	**Skopje**		2.38	172 P	Pn	23 16 28.1	0.0	**JMB**	**Yambol**		4.47 113 P	Pn	23 16 57.2	+0.3
SKO	**Skopje**		2.38	172 *e*Pn	Pn	23 16 27.9	-0.2	**TESR**	**Tescani**		4.54 59⇓*r*P	Pn	23 16 58.3	+0.5
SKO	**Skopje**		2.38	172 P	Pn	23 16 28.1	0.0	**TESR**	**Tescani**		4.54 59⇓*r*P	Pn	23 16 58.3	+0.5
PUK	**Puka**		2.42	200 *i* PN	Pb	23 16 34.2	+1.3	**OUR**	**Ouranopolis**		4.56 150 P	Pn	23 16 54.9	-3.2
PUK				*i* SN	Sg	23 17 07.2	+0.1	**OUR**	**Ouranopolis**		4.56 150 P	Pn	23 16 54.9	-3.2
TREB	**Trebinje**		2.51	231 *e*Pn	Pn	23 16 29.8	-0.2	**SOP**	**Sopron**		4.56 319⇓*e*Pn	Pn	23 16 58.9	+0.7
TREB				*e*Sn	Sn	23 17 00.7	+0.1	SOP			*e*Sn	Sn	23 17 48.1	-3.1
DRME	**Dracevica, Mon**		2.52	212⇑*r*Pn	Pn	23 16 30.1	0.0	**SOP**	**Sopron**		4.56 319⇓*e*Pn	Pn	23 16 58.9	+0.7
SOP				*e*Sn	Sn	23 17 48.1	-3.1
CRVS	**Cervenica-Dubn**		4.59	4 *e*PN	Pn	23 16 59.6	+1.1
CRVS	**Cervenica-Dubn**		4.59	4 *e*Pn	Pn	23 16 59.6	+1.1
RDO	**Rodhopi**		4.61	132 P	Pn	23 16 59.2	+0.4
RDO	**Rodhopi**		4.61	132 P	Pn	23 16 59.2	+0.4
KOLS	**Kolonicke sedl**		4.69	10 *e*PN	Pn	23 17 01.9	+2.0
KOLS				*e*SN	Sn	23 17 52.6	-1.7
KOLS	**Kolonicke sedl**		4.69	10 *e*Pn	Pn	23 17 01.9	+2.0
KOLS				*e*Sn	Sn	23 17 52.6	-1.7
MODS	**Modra-Piesok**		4.80	329 *e*PN	Pn	23 17 00.8	-0.6
MODS				*e*SN	Sn	23 17 55.4	-1.6
MODS	**Modra-Piesok**		4.80	329 *e*Pn	Pn	23 17 00.8	-0.6
MODS				*e*Sn	Sn	23 17 55.4	-1.6
SOKA	**Soboth**		4.81	301 *i* Pn	Pn	23 17 01.9	+0.3
SOKA	4.8nm,0.3s			*e*Sn	Sn	23 17 54.1	-3.3
SOKA	20nm,0.5s			Sn	Sn	23 17 54.1	-3.3
SOKA	**Soboth**		4.81	301 Pn	Pn	23 17 01.9	+0.3
SOKA	4.8nm,0.3s			Sn	Sn	23 17 54.1	-3.3
SOKA	20nm,0.5s						
ARSA	**Arzberg**		4.82	309 *i* Pn	Pn	23 17 02.1	+0.4
ARSA	5.2nm,0.3s **Arzberg**		4.82	309 Pn	Pn	23 17 02.1	+0.4
THL	5.2nm,0.3s **Klokotos Trika**		4.82	171 P	Pn	23 17 01.6	-0.1
THL	**Klokotos Trika**		4.82	171 P	Pn	23 17 01.6	-0.1
PAIG	**Paliouri**		4.83	155 P	Pn	23 17 01.0	-0.8
PAIG	**Paliouri**		4.83	155 P	Pn	23 17 01.0	-0.8
SMOL	**Smolenice**		4.86	331 *e*SN	Sn	23 17 56.3	-2.2
SMOL	**Smolenice**		4.86	331 *e*Sn	Sn	23 17 56.3	-2.2
CEY	**Cerknica**		4.87	289 *e*Pn	Pn	23 17 04.1	+1.7
CEY				*e*Sn	Sn	23 17 58.1	-0.7
LANS	**Liptovska Anna**		4.94	348 *e*PN	Pn	23 17 04.9	+1.5
LANS	**Liptovska Anna**		4.94	348 *e*Pn	Pn	23

MAN 29 23:31:56.7, 8°.47N×126°.17E, h27km, mb5.0, ML3.9, MS3.9, 2C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.35**	**146**	⇓*e*P	Pb	23 32 04.9	+0.3
BIPH				*i* S	Sb	23 32 10.5	+0.6
BUTP	**Butuan**	**0.73**	**312**	*e*P	Pb	23 32 10.9	+0.1
BUTP				*e*S	Sn	23 32 21.9	+0.3
BUKP	**Musuan**	**1.24**	**242**	*e*P	Pn	23 32 18.2	-0.2
BUKP				*e*S	Sb	23 32 37.2	+1.9
CGP	**Cagayan de Oro**	**1.46**	**269**	⇑*i*P	Pn	23 32 21.9	+0.7
CGP				*i* S	Sn	23 32 39.7	+0.2
SCPH	**Surigao**	**1.46**	**333**	⇓*e*P	Pb	23 32 23.4	+0.1
SCPH				*e*S	Sb	23 32 42.3	+0.9
MATI	**Mati**	**1.52**	**177**	*e*P	Pn	23 32 21.3	-0.9
MATI				*e*S	Sn	23 32 41.8	+0.7
DMPH	**Davao City--Mi**	**1.53**	**205**	⇑*e*P	Pb	23 32 24.7	+0.3
DMPH				*e*S	Sb	23 32 50.1	+6.8
PAGZ	**Pagadian**	**2.83**	**257**	*e*P	Pn	23 32 43.0	+2.9
PAGZ				*e*S	Sb	23 33 22.4	+1.6
LLP	**Lapu-Lapu**	**2.84**	**310**	*e*P	Pn	23 32 43.0	+2.7
LLP				*e*S	Sn	23 33 14.8	+1.1
PLP	**Palo**	**2.92**	**336**	⇓*e*P	Pb	23 32 46.0	-2.1
PLP				*e*S	Sb	23 33 24.4	+1.0

MAN 29 23:36:07.8, 8°.54N×126°.27E, h29km, mb4.4, ML3.2, MS3.0, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.37**	**166**	⇑*e*P	Pb	23 36 16.5	+0.4
BIPH				*e*S	Sb	23 36 22.1	+0.3
BUTP	**Butuan**	**0.77**	**304**	*e*P	Pn	23 36 22.8	+0.1
BUTP				*e*S	Sn	23 36 33.8	+0.5
BUKP	**Musuan**	**1.36**	**241**	*e*P	Pn	23 36 31.2	+0.2
BUKP				*e*S	Sn	23 36 48.2	+0.1
CGP	**Cagayan de Oro**	**1.56**	**267**	⇑*i*P	Pn	23 36 33.5	0.0
CGP				*i* S	Sn	23 36 51.3	-1.6
MATI	**Mati**	**1.59**	**180**	*e*P	Pn	23 36 34.0	+0.1
MATI				*e*S	Sn	23 36 54.1	+0.6
PAGZ	**Pagadian**	**2.94**	**257**	*e*P	Pb	23 36 56.5	-3.0

NNC 29 23:43:45.0±2.6, 37°.82N×71°.34E, h0km, mb4.1, mpv3.7, 5C-2D, Error ellipse: s-maj=19.4km s-min=16.0km az=173.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**2.76**	**37**	⇑Pn	Pn	23 44 30.7	-0.1
SFK	6.7nm,0.3s			⇓Sn	Sn	23 45 06.8	+1.7
	41nm,0.5s						
AML	**Almayashu**	**4.67**	**22**	P	Pn	23 44 56.4	-0.7
	SNR=19						
MNAS	**Manas**	**4.74**	**11**	⇑Pn	Pn	23 44 58.3	+0.4
MNAS	5.4nm,0.4s			⇑Sn	Sn	23 45 54.8	+1.1
	7.3nm,0.6s						
UCH	**Uchtor**	**5.03**	**28**	P	Pn	23 45 00.7	-1.4
	SNR=5.4						
EKS2	**Erkin-Say**	**5.18**	**20**	P	Pn	23 45 03.6	-0.3
	SNR=8.0						
KK31	**Karatay Array**	**5.31**	**353**	Pn	Pn	23 45 06.7	+1.1
	6.2nm,0.5s,baz=175,slow=12,SNR=43						
KK31				⇓Sn	Sn	23 46 08.8	+1.3
	2.2nm,0.3s,baz=168,slow=24,SNR=12						
AAK	**Ala-Archa**	**5.38**	**26**	⇑Pn	Pn	23 45 05.3	-1.4
	5.1nm,0.4s						
AAK				⇑Sn	Sn	23 46 09.0	-0.4
	3.9nm,0.6s						
AAK	**Ala-Archa**	**5.38**	**26**	P	Pn	23 45 05.9	-0.8
	SNR=6.7						
CHMS	**Chumysh**	**5.79**	**26**	P	Pn	23 45 10.6	-1.6
	SNR=5.2						
TKM2	**Tokmak 2**	**6.04**	**31**	P	Pn	23 45 14.0	-1.8
	SNR=8.9						

*SOME **29** 23:53:28.5, 43°.53N×84°.00E, h5km*
*NNC **29** 23:53:38.5±5.3, 44°.00N×83°.58E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=55.1km s-min=28.5km az=124.0*
ISC 29 23:53:30.7±2.1, 43°.58N±0°.10×83°.91E±0°.08, h10km, n16, σ2°34/29, 1C-5D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**3.07**	**286**	*e*P	**Pb**	**23 54 24.4**	**-1.0**
DJR	8.1nm,0.3s			*e*S	**Sb**	**23 55 05.0**	**+1.9**
	46nm,0.4s						
PDGK	**Podgornoye**	**3.23**	**267**	⇓Pn	**Pb**	**23 54 27.2**	**-1.0**
PDGK	4.6nm,0.4s			⇓Lg	Lg	23 55 14.5	
	34nm,0.6s						
SHLS	**Shalkode**	**3.27**	**264**	*e*P	**Pn**	**23 54 22.9**	**+0.7**
SHLS	18nm,0.4s			*e*S	**Sn**	**23 55 02.0**	**+0.8**
	71nm,0.4s						
MK31	**Makanchi Array**	**3.41**	**341**	⇓Pn	**Pn**	**23 54 25.4**	**+1.4**
	2.8nm,0.3s,baz=155,slow=14,SNR=4.8						
MK31				⇓Lg	Lg	23 55 10.7	
	3.5nm,0.2s,baz=159,slow=27,SNR=8.3						
MAKZ	**Makanchi**	**3.51**	**338**	⇑Pn	**Pb**	**23 54 30.5**	**-2.3**
	6.0nm,0.6s						
MAKZ				⇓Lg	Lg	23 55 12.2	
	24nm,0.7s						
UZB	**Uzynbulak**	**3.59**	**265**	*e*P	**Pb**	**23 54 35.2**	**+0.9**
	3.4nm,0.6s						
UZB				*e*S	**Sg**	**23 55 23.6**	**-2.5**
	13nm,0.5s						
KAPS	**Kapalarasan**	**3.68**	**299**	*e*P	**Pb**	**23 54 34.6**	**-1.3**
	1.8nm,0.3s						
KAPS				*e*S	**Sb**	**23 55 22.1**	**+1.6**
	21nm,0.4s						
KPKS	**Kokpek**	**3.81**	**270**	*e*P	**Pg**	**23 54 40.0**	**-3.6**
	11nm,0.3s						
KPKS				*e*S	**Sg**	**23 55 31.3**	**-1.5**
	52nm,0.3s						
ZSN	**Zaisan**	**3.93**	**9**	*e*P	**Pb**	**23 54 39.7**	**-0.3**
	2.8nm,0.4s						
ZSN				*e*S	**Sb**	**23 55 30.9**	**+3.2**
	16nm,0.6s						
ZHN	**Zhinishke**	**4.01**	**266**	*e*P	**Pg**	**23 54 46.8**	**-0.8**
	2.4nm,0.1s						
ZHN				*e*S	**Sg**	**23 55 43.0**	**+3.4**
	42nm,0.3s						
SATY	**Saty**	**4.05**	**265**	*e*P	**Pg**	**23 54 45.5**	**-2.8**
	5.8nm,0.4s						
SATY				*e*S	**Sg**	**23 55 41.0**	**+0.2**
	27nm,0.4s						
KURS	**Kuram**	**4.18**	**271**	*e*P	**Pg**	**23 54 47.6**	**-3.1**
	4.4nm,0.5s						
KURS				*e*S	**Sg**	**23 55 44.5**	**-0.2**
	7.4nm,0.6s						
TDK	**Taldyqorghan**	**4.20**	**292**	*e*P	**Pb**	**23 54 45.0**	**+0.3**
	33nm,0.4s						
TDK				*e*S	**Sb**	**23 55 39.7**	**+4.2**
	89nm,0.5s						
MDOK	**Medeo**	**5.02**	**268**	*e*P	**Pg**	**23 55 04.2**	**-2.6**
	2.0nm,0.3s						
MDOK				*e*S	**Sg**	**23 56 13.0**	**+1.2**
	9.3nm,0.8s						
CHKK	**Chushkaly**	**5.03**	**276**	*e*P	**Pg**	**23 55 02.9**	**-4.0**
	3.1nm,0.6s						
CHKK				*e*S	**Sg**	**23 56 10.4**	**-1.7**
	25nm,0.5s						
TNSS	**Tian-Shan**	**5.11**	**266**	*e*P	**Pg**	**23 55 07.2**	**-1.4**
	2.4nm,0.5s						
TNSS				*e*S	**Sg**	**23 56 18.6**	**+3.8**
	11nm,0.5s						

*IDC **29** 23:58:03.4±8.3, 24°.07S×179°.92E, h391km±91km, mb3.5/7, mb1 3.7/8, mb1mx3.2/44, mbtmp4.3/8, Error ellipse: s-maj=65.0km s-min=24.4km az=180.0*
*ISCJB **29** 23:58:13.1±0.9, 24°.5S±0°.1×179°.8E±0°.1, h526km, mb3.9/7, Error ellipse: s-maj=17.5km s-min=13.4km az=178.2*
ISC 29 23:58:13.6±1.0, 24°.6S±0°.1×179°.9E±0°.1, h526km, n11, σ0°59/11, mb4.0/7, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.62**	**279**	P	**P**	**00 00 59.5**	**+0.7**
	0.3nm,0.3s,baz=85,slow=18,SNR=6.9						
URZ	**Urewera**	**13.78**	**189**	P	**P**	**00 01 10.6**	**0.0**
	1.8nm,0.3s,baz=3.6,slow=2.1,SNR=11						
URZ				S	**S**	**00 03 36.4**	**-0.1**
	0.3nm,0.3s,baz=47,slow=23,SNR=7.0						
CTA	**Charters Tower**	**31.40**	**272**	P	**P**	**00 03 51.6**	**0.0**
	8.8nm,0.4s,baz=95,slow=11,SNR=30						
STKA	**Stephens Creek**	**34.37**	**249**	P	**P**	**00 04 16.9**	**+0.2**
	2.3nm,0.4s,baz=90,slow=7.1,SNR=8.0						
ASAR	**Alice Springs**	**41.83**	**261**	P	**P**	**00 05 17.1**	**-0.4**
	1.4nm,0.5s,baz=94,slow=7.1,SNR=14						
WRA	**Warramunga Arr**	**42.27**	**267**	P	**P**	**00 05 20.1**	**-1.0**
	5.0nm,0.5s,baz=99,slow=8.3,SNR=68						
FITZ	**Fitzroy Crossi**	**50.69**	**266**	P	**P**	**00 06 24.8**	**0.0**
	3.5nm,0.6s,baz=120,slow=8.2,SNR=9.7						
NVAR	**Mina Array Bea**	**85.34**	**44**	P	**P**	**00 09 55.4**	**0.0**
	0.1nm,0.3s,baz=220,slow=8.2,SNR=2.9						
TXAR	**Lajitas Array**	**90.90**	**58**	P	**P**	**00 10 21.8**	**+0.3**
	0.4nm,0.7s,baz=214,slow=6.0,SNR=6.7						
HFS	**Hagfors**	**143.25**	**348**	PKhKP	PKPpre	00 16 44.1	
	0.9nm,0.4s,baz=29,slow=3.4,SNR=10						
BRTR	**Keskin Array B**	**147.94**	**306**	PKPbc	**PKPab**	**00 17 03.6**	**-1.0**
	0.4nm,0.5s,baz=95,slow=3.0,SNR=3.9						

*IDC **30** 00:01:55.1±3.3, 43°.38N×84°.53E, h0km, mb1 3.2/5, mb1mx3.0/66, mbtmp3.2/5, ML3.1/5, Error ellipse: s-maj=40.6km s-min=28.4km az=47.0*
*NNC **30** 00:02:08.9±1.3, 43°.84N×83°.84E, h30km±7km, mb3.5, mpv3.0, Error ellipse: s-maj=11.5km s-min=5.1km az=109.0*
ISC 30 00:01:55.6±1.7, 43°.49N±0°.09×84°.44E±0°.09, h10km, n14, σ2°72/19, 11C-7D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	**Podgornoye**	**3.61**	**269**	⇑Pn	**Pb**	**00 02 56.7**	**-2.8**
	2.5nm,0.5s						
PDGK				⇓Pg	**Pg**	**00 03 07.0**	**+2.2**
	5.1nm,0.5s						
PDGK				⇑Lg	Lg	00 03 51.6	
	44nm,0.5s						
MK31	**Makanchi Array**	**3.64**	**336**	Pn	**Pn**	**00 02 56.2**	**+4.2**
	0.2nm,0.1s,baz=151,slow=13,SNR=62						
MK31				⇑Pg	**Pg**	**00 03 05.9**	**+0.7**
	1.3nm,0.2s,baz=144,slow=16,SNR=11						
MK31				Sn	**Sn**	**00 03 33.6**	**-1.3**
	3.0nm,0.3s,baz=147,slow=17,SNR=4.8						
MK31				Lg	Lg	00 03 50.2	
	12nm,0.3s,baz=146,slow=29,SNR=19						
MKAR	**Makanchi Array**	**3.64**	**336**	Pn	**Pn**	**00 02 56.3**	**+4.3**
	1.2nm,0.3s,baz=154,slow=15,SNR=38						
MKAR				Pg	**Pg**	**00 03 05.3**	**+0.1**
	2.4nm,0.3s,baz=150,slow=18,SNR=18						
MKAR				Sn	**Sn**	**00 03 34.8**	**-0.1**
	4.6nm,0.3s,baz=151,slow=18,SNR=7.4						
MKAR				Lg	Lg	00 03 54.5	
	21nm,0.3s,baz=152,slow=29,SNR=12						
MAKZ	**Makanchi**	**3.75**	**333**	⇑Pn	**Pn**	**00 02 58.0**	**+4.6**
	0.9nm,0.3s						
MAKZ				⇓Pg	**Pg**	**00 03 09.2**	**+1.9**
	3.1nm,0.3s						
MAKZ				⇑Sn	**Sn**	**00 03 35.8**	**-1.8**
	3.8nm,0.3s						
MAKZ				⇑Lg	Lg	00 03 53.6	
	43nm,0.7s						
MDOK	**Medeo**	**5.40**	**269**	Pn	Pn	00 03 22.5	+6.2
	2.4nm,0.7s						
MDOK				⇑Lg	Lg	00 04 46.8	
	11nm,0.6s						
TKM2	**Tokmak 2**	**6.49**	**268**	⇑Pn	Pn	00 03 39.0	+7.7
	0.6nm,0.3s						
TKM2				⇑Lg	Lg	00 05 23.0	
	5.7nm,0.6s						
AAK	**Ala-Archa**	**7.33**	**267**	⇓Lg	Lg	00 05 48.1	
	4.1nm,0.6s						
KURBB	**Kurchatov Arra**	**8.19**	**333**	Pn	**Pn**	**00 03 57.1**	**+2.6**
	0.2nm,0.3s,baz=147,slow=13,SNR=5.3						
KURBB				Lg	Lg	00 06 18.3	
	0.2nm,0.3s,baz=147,slow=29,SNR=8.6						
KURBB	**Kurchatov Arra**	**8.19**	**333**	⇑Lg	Lg	00 06 13.6	
	28nm,0.8s						
KURK	**Kurchatov**	**8.24**	**333**	⇓Pn	**Pn**	**00 03 57.6**	**+2.5**
	0.9nm,0.6s						
KURK				⇓Sn	**Sn**	**00 05 27.2**	**-1.0**
	2.9nm,0.5s						
KURK				⇑Lg	Lg	00 06 14.1	
	16nm,0.7s						
OTUK	**Ortayu**	**9.69**	**304**	⇓Sn	**Sn**	**00 05 59.7**	**-4.1**
	1.9nm,0.5s						
OTUK				⇓Lg	Lg	00 06 58.7	
	5.6nm,0.9s						
ZALV	**Zalesovo Beam**	**10.47**	**1**	Pn	**Pn**	**00 04 26.3**	**+0.7**
	0.3nm,0.3s,baz=180,slow=12,SNR=4.2						
ZALV				Sn	**Sn**	**00 06 20.8**	**-2.1**
	1.3nm,0.3s,baz=174,slow=26,SNR=12						
ZALV				Lg	Lg	00 07 32.0	
	baz=189,slow=27,SNR=3.0						
BVAR	**Borovoye Array**	**13.34**	**321**	Pn	**Pn**	**00 05 05.8**	**+1.0**
	0.1nm,0.3s,baz=129,slow=12,SNR=3.1						
BVAR				Lg	Lg	00 09 05.7	
	0.2nm,0.3s,baz=120,slow=17,SNR=3.0						
SONM	**Songino Array**	**15.94**	**67**	Pn	**P**	**00 05 42.1**	**-1.4**
	0.2nm,0.3s,baz=256,slow=10,SNR=2.4						

*ISCJB **30** 00:02:12.5±1.1, 35°.16N±0°.06×27°.05E±0°.04, h2km±6km, Error ellipse: s-maj=11.0km s-min=3.7km az=152.9*
*ISK **30** 00:02:13.2, 35°.22N×27°.03E, h9km, ML2.6/5*
*ATH **30** 00:02:13.4, 35°.25N×26°.99E, h23km±1km, ML2.3/4, Error ellipse: s-maj=4.9km s-min=1.1km az=328.0*
*CSEM **30** 00:02:13.6±0.3, 35°.20N×27°.00E, h5km, ML2.4, Error ellipse: s-maj=9.9km s-min=3.1km az=158.0*
*THE **30** 00:02:13.8, 35°.25N×26°.98E, h0km±1km, ML2.3/5, Error ellipse: s-maj=6.8km s-min=1.1km az=147.0*
*DDA **30** 00:02:58.2, 35°.30N×27°.12E, h11km, Ml2.4*
ISC 30 00:02:13.7±1.2, 35°.24N±0°.06×27°.00E±0°.04, h11km±9km, n57, σ1°25/81, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.34**	**23**	PG	**Pg**	**00 02 20.4**	**-0.2**
KARP				SG	**Sb**	**00 02 26.0**	**-1.2**
KARP	**Karpathos**	**0.34**	**23**	P	**Pg**	**00 02 19.9**	**-0.7**
KARP				S	**Sb**	**00 02 26.4**	**-0.8**
KARP				AML	AML	00 02 27.4	
	comp=N,1907μm,0.2s						
KARP				AML	AML	00 02 27.5	
	comp=E,1597μm,0.4s						
KARP	**Karpathos**	**0.34**	**23**	P	**Pg**	**00 02 20.3**	**-0.3**
KARP				S	**Sb**	**00 02 26.3**	**-0.9**
KARP	**Karpathos**	**0.34**	**23**	*e*Pg	**Pg**	**00 02 20.4**	**-0.2**
KARP				*e*Sg	**Sb**	**00 02 26.0**	**-1.2**
ZKR	**Zakros**	**0.65**	**260**	P	**Pg**	**00 02 25.5**	**-0.9**
ZKR				S	**Sg**	**00 02 35.4**	**+0.5**
ZKR				AML	AML	00 02 41.0	
	comp=E,562μm,0.2s						
ZKR				AML	AML	00 02 42.0	
	comp=N,231μm,0.2s						
ZKR	**Zakros**	**0.65**	**260**	P	**Pg**	**00 02 25.7**	**-0.7**
ZKR				S	**Sb**	**00 02 36.2**	**0.0**
ZKR	**Zakros**	**0.65**	**260**	P	**Pg**	**00 02 25.7**	**-0.7**
ZKR				S	**Sg**	**00 02 35.6**	**+0.7**
NPS	**Neapolis**	**1.13**	**272**	P	**Pn**	**00 02 35.9**	**+0.4**
NPS				S	**Sn**	**00 02 51.1**	**0.0**
NPS				AML	AML	00 02 54.9	
	comp=N,420μm,0.6s						
NPS				AML	AML	00 02 59.6	
	comp=E,322μm,0.3s						
NPS	**Neapolis**	**1.13**	**272**	P	**Pb**	**00 02 35.5**	**+0.2**
NPS				S	**Sn**	**00 02 52.0**	**+0.9**
NPS	**Neapolis**	**1.13**	**272**	P	**Pb**	**00 02 35.5**	**+0.2**
NPS				S	**Sn**	**00 02 50.9**	**-0.2**
LAST	**Lasithi**	**1.25**	**267**	P	**Pn**	**00 02 37.5**	**+0.4**
LAST	**Lasithi**	**1.25**	**267**	P	**Pn**	**00 02 37.3**	**+0.2**
LAST				S	**Sn**	**00 02 55.4**	**+1.4**
LAST	**Lasithi**	**1.25**	**267**	P	**Pn**	**00 02 37.3**	**+0.2**
LAST				S	**Sn**	**00 02 55.4**	**+1.4**
ARG	**Arkhangelos**	**1.34**	**43**	PN	**Pb**	**00 02 39.1**	**+0.2**
ARG				SN	**Sg**	**00 02 57.2**	**+0.2**
ARG	**Arkhangelos**	**1.34**	**43**	P	**Pb**	**00 02 39.3**	**+0.4**
ARG				S	**Sg**	**00 02 56.9**	**0.0**
ARG				AML	AML	00 03 05.0	
	comp=E,123μm,0.3s						
ARG				AML	AML	00 03 06.7	
	comp=N,143μm,0.6s						
ARG	**Arkhangelos**	**1.34**	**43**	P	**Pn**	**00 02 38.6**	**+0.2**
ARG				S	**Sg**	**00 02 57.7**	**+0.7**
ARG	**Arkhangelos**	**1.34**	**43**	P	**Pn**	**00 02 38.6**	**+0.2**
ARG	**Arkhangelos**	**1.34**	**43**	*e*Pn	**Pb**	**00 02 39.1**	**+0.2**
ARG				S	**Sg**	**00 02 56.9**	**0.0**
ANAF	**Anafi Island**	**1.50**	**319**	P	**Pn**	**00 02 40.6**	**+0.1**
ANAF	**Anafi Island**	**1.50**	**319**	P	**Pn**	**00 02 40.7**	**+0.1**
DAT	**Datca**	**1.56**	**17**	PN	**Pn**	**00 02 41.5**	**0.0**
DAT	**Datca**	**1.56**	**17**	*i* P	**Pn**	**00 02 41.5**	**0.0**
DAT				*i* S	**Sg**	**00 03 03.3**	**-0.8**
DAT	**Datca**	**1.56**	**17**	*e*Pn	**Pn**	**00 02 41.5**	**0.0**
KSTL	**Kastelli Herak**	**1.58**	**273**	P	**Pn**	**00 02 37.9**	**-3.7**
KSTL				S	**Sn**	**00 02 57.9**	**-4.1**
KSTL	**Kastelli Herak**	**1.58**	**273**	P	**Pn**	**00 02 37.9**	**-3.7**
SANT	**Santorini**	**1.69**	**313**	PN	**Pn**	**00 02 43.7**	**+0.5**
SANT	**Santorini**	**1.69**	**313**	*e*Pn	**Pn**	**00 02 43.7**	**+0.5**
SAP1	**Santorini-Akro**	**1.72**	**311**	P	**Pn**	**00 02 44.2**	**+0.7**
IDI	**Anoyia**	**1.73**	**272**	PN	**Pb**	**00 02 45.1**	**-0.4**
IDI	**Anoyia**	**1.73**	**272**	*e*Pn	**Pb**	**00 02 45.1**	**-0.4**
SIVA	**Sivas**	**1.81**	**264**	P	**Pg**	**00 02 51.5**	**+3.1**
SIVA				S	**Sn**	**00 03 08.4**	**+0.8**
SIVA	**Sivas**	**1.81**	**264**	P	**Pg**	**00 02 48.4**	**0.0**
SIVA				S	**Sn**	**00 03 08.5**	**+0.8**
AMGA	**Amorgos Island**	**1.83**	**331**	P	**Pn**	**00 02 44.5**	**-0.6**
AMGA	**Amorgos Island**	**1.83**	**331**	P	**Pn**	**00 02 45.0**	**-0.1**
BDRM	**Kayabasi**	**1.86**	**11**	*i* P	**Pb**	**00 02 48.3**	**+0.5**
BDRM				*i* S	**Sg**	**00 03 13.0**	**-0.6**
BDRM	**Kayabasi**	**1.86**	**11**	P	**Pb**	**00 02 48.3**	**+0.5**
DALY	**Dalyan (Mu¨la**	**2.07**	**40**	PN	**Pn**	**00 02 49.2**	**+0.8**
DALY	**Dalyan (Mu¨la**	**2.07**	**40**	*i* P	**Pb**	**00 02 50.7**	**-0.6**
DALY				*i* S	**Sg**	**00 03 22.9**	**+2.6**
DALY	**Dalyan (Mu¨la**	**2.07**	**40**	*e*Pn	**Pn**	**00 02 49.2**	**+0.8**
DALY	**Dalyan (Mu¨la**	**2.07**	**40**	P	**Pb**	**00 02 50.7**	**-0.6**
TURN	**Turunc**	**2.09**	**38**	PN	**Pn**	**00 02 45.9**	**-2.7**
TURN	**Turunc**	**2.09**	**38**	*i* P	**Pn**	**00 02 46.6**	**-2.1**
TURN				*i* S	**Sn**	**00 03 12.6**	**-1.9**
TURN	**Turunc**	**2.09**	**38**	*e*Pn	**Pn**	**00 02 45.9**	**-2.7**
MLSB	**Milas**	**2.15**	**17**	PN	**Pn**	**00 02 50.2**	**+0.7**
MLSB	**Milas**	**2.15**	**17**	*e*Pn	**Pn**	**00 02 50.2**	**+0.7**
APE	**Apeiranthos**	**2.18**	**327**	PN	**Pn**	**00 02 50.9**	**+0.9**
APE	**Apeiranthos**	**2.18**	**327**	*e*Pn	**Pn**	**00 02 50.9**	**+0.9**
FETY	**Fethiye**	**2.19**	**50**	PN	**Pn**	**00 02 50.8**	**+0.7**
FETY	**Fethiye**	**2.19**	**50**	*e*Pn	**Pn**	**00 02 50.8**	**+0.7**
AKAS	**Kas**	**2.34**	**64**	PN	**Pn**	**00 02 52.5**	**+0.2**
AKAS	**Kas**	**2.34**	**64**	*e*Pn	**Pn**	**00 02 52.5**	**+0.2**
AYDN	**Tasoluk**	**2.52**	**16**	*i* P	**Pn**	**00 02 56.3**	**+1.6**
AYDN	**Tasoluk**	**2.52**	**16**	P	**Pn**	**00 02 56.3**	**+1.6**
TAVA	**DENIZLI_Tavas**	**2.71**	**34**	*i* P	**Pn**	**00 02 59.1**	**+1.8**
TAVA				*i* S	**Sb**	**00 03 36.3**	**+0.8**
TAVA	**DENIZLI_Tavas**	**2.71**	**34**	P	**Pn**	**00 02 59.1**	**+1.8**
ELL	**Elmali**	**2.80**	**57**	PN	**Pn**	**00 02 59.1**	**+0.5**
ELL	**Elmali**	**2.80**	**57**	*e*Pn	**Pn**	**00 02 59.1**	**+0.5**

*NIED **30** 00:09:00, 28°.10N×142°.70E, h53km, Mw4.6 Best double couple: M0 1.01000×10^16 NP1:φ=160.00000°, δ=39.00000°, λ=7.00000°. NP2:φ=65.00000°, δ=85.00000°, λ=129.00000°.*
*ISCJB **30** 00:09:07.6±0.5, 28°.23N±0°.02×143°.33E±0°.02, h34km±4km, mb5.0/318, MS4.2/21, Error ellipse: s-maj=3.8km s-min=3.1km az=44.8*
*MOS **30** 00:09:07.3±0.8, 28°.15N×143°.40E, h35km, mb5.3/77, Error ellipse: s-maj=7.0km s-min=4.2km az=105.9*
*BJI **30** 00:09:07.5, 28°.28N×142°.73E, h6km, mb4.9/68, mB5.0/39, Ms4.3/42, Ms7 4.1/38*
*IDC **30** 00:09:09.8±1.3, 28°.13N×143°.39E, h44km±12km, mb4.6/43, mb1 4.7/47, mb1mx4.6/66, mbtmp4.9/47, ML4.5/4, MS3.9/16, Ms1 3.9/16, ms1mx3.6/58, Error ellipse: s-maj=11.2km s-min=6.1km az=98.0*
*NEIC **30** 00:09:09.8±0.5, 28°.13N×143°.39E, h41km±4km, mb5.2/247, Error ellipse: s-maj=3.2km s-min=2.3km az=134.0*
NEIC Recorded [1 JMA] in the Chichijima-retto.
*JMA **30** 00:09:12.1±0.1, 28°.15N×142°.66E, h109km±3km, M4.9*
JMA Felt I J1.
ISC 30 00:09:06.6±0.5, 28°.23N±0°.03×143°.44E±0°.04, h18km±2km, h19km: pP-P, n800, σ1°21/828, mb5.1/328, MS4.1/21, 25C-19D, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.58**	**225**	*e*Pn	**Pn**	**00 09 34.5**	**+0.8**
CBIJ				S	**Sn**	**00 09 52.0**	**-1.7**
CBIJ	**Chichi jima**	**1.58**	**225**	P	**Pb**	**00 09 34.9**	**-0.4**
CBIJ				*e*S	**Sn**	**00 09 52.0**	**-1.7**
JCJ	**Chichijima**	**1.58**	**225**	P	**Pb**	**00 09 34.9**	**-0.4**
	261nm,0.3s,baz=15,slow=19,SNR=75						
JCJ				S	**Sn**	**00 09 52.0**	**-1.7**
	7μm,0.3s,baz=90,slow=20,SNR=79						
JHHJ	**Haha-jima-NKT**	**1.94**	**215**	P	**Pn**	**00 09 39.9**	**+1.2**
JHHJ				*e*S	**Sn**	**00 10 01.4**	**-1.3**
JHJ2	**Mitsune**	**5.78**	**328**	*e*Pn	**Pn**	**00 10 32.0**	**+0.5**
JHJ2				*e*Sn	**Sn**	**00 11 33.7**	**-3.6**
JHJ2	**Mitsune**	**5.78**	**328**	P	**Pn**	**00 10 32.8**	**+1.3**
JHJ2				S	**Sn**	**00 11 35.9**	**-1.5**
JHJ	**Hachijo jima 2**	**5.80**	**328**	P	**Pn**	**00 10 32.2**	**+0.5**
	117nm,0.3s,baz=66,slow=18,SNR=25						
JHJ				S	**Sn**	**00 11 32.7**	**-5.2**
	140nm,0.3s,baz=131,slow=19,SNR=5.0						
JKO	**Kozu shima**	**6.99**	**329**	P	**Pn**	**00 10 49.5**	**+1.4**
JKO				S	**Sn**	**00 12 04.8**	**-2.3**
JNIO	**Niijimaoohara**	**7.07**	**331**	P	**Pn**	**00 10 50.9**	**+1.7**
JNIO				S

comp=Z,1.6nm,0.3s,baz=122,slow=9.8,SNR=39
KSRS LR LR 00 18 39.5
comp=Z,399nm,20.4s,baz=126,slow=36
KS15 Wonju Array Si 15.96 309 *e*Pn **P** **00 12 52.9 -0.9**
KSAR Wonju Array Be 15.96 309 P **P** **00 12 52.5 -1.2**
KSAR Wonju Array Be 15.96 309 P **P** **00 12 52.5 -1.2**
KS01 Wonju Array Si 15.97 309 *e*Pn **Pn** **00 12 51.9 +1.5**
KUR Kuril'sk 17.34 11 *e*P **P** **00 13 11.5 +2.7**
KUR *e*S **Sn** **00 16 12.5 -7.5**
KUR MLR MLR
comp=Z,404nm,18.0s
KUR MLR MLR
comp=N,222nm,13.0s
MSHR Mys Shultsa 17.45 328 *d i*P **Pn** **00 13 09.4 +0.5**
USRK Ussuriysk Ar. 18.39 333 P **Pn** **00 13 21.2 +0.6**
baz=147,slow=11
USRK S **S** **00 16 48.8 -1.1**
baz=139,slow=7.7
USRK LR LR 00 21 31.6
comp=N,216nm,18.9s,baz=146,slow=40
YOJ Yonaguni jima 18.68 263 *e*P **Pn** **00 13 25.1 +0.8**
comp=N,478nm,1.8s
YOJ Yonaguni jima 18.68 263 *e*P **Pn** **00 13 25.1 +0.8**
YOJ pmax pmax
comp=Z,478nm,1.8s
YSS Yuzh-Sakhalins 18.70 359 *e*P **Pn** **00 13 26.2 +1.9**
comp=Z,48nm,0.9s
YSS Yuzh-Sakhalins 18.70 359 *ce*P **P** **00 13 22.0 -1.9**
YSS *e*S **Sn** **00 16 44.9 -8.1**
MDJ Mudanjiang 19.75 330 P **P** **00 13 36.0 +0.6**
MDJ pmax pmax
comp=Z,220nm,0.8s
MDJ Mudanjiang 19.75 330 *e*P **Pn** **00 13 37.6 +0.7**
comp=Z,159nm,0.9s
TATO Taipei 19.89 266 *e*P **P** **00 13 38.0 +0.9**
comp=Z,115nm,0.8s
NACB Ninganchiao 20.00 263 *e*P **P** **00 13 39.2 +0.8**
comp=Z,97nm,1.2s
YHNB Yeheng 20.07 265 *e*P **P** **00 13 38.6 -0.5**
comp=Z,74nm,0.7s
YULB Yu-li 20.50 261 *e*P **P** **00 13 44.0 +0.3**
comp=Z,150nm,1.6s
SSLB Suanglung 20.68 263 *e*P **P** **00 13 46.2 +0.5**
comp=Z,60nm,0.7s
SSLB *e*S **S** **00 17 36.7 +0.6**
UGL Uglegorsk 20.85 357 *e*P **P** **00 13 47.3 0.0**
UGL S Sn 00 17 42.3 -2.3
UGL pmax pmax
comp=Z,104nm,0.6s
UGL smax smax
comp=N,108nm,1.4s
UGL smax smax
comp=E,700nm,9.0s
UGL MLR MLR
comp=Z,1μm,13.0s
TWG Pinlang 20.88 260 *e*P Pn 00 13 50.0 -0.4
comp=Z,184nm,0.7s
DL2 Dalian 21.02 306 P **P** **00 13 48.3 -0.9**
DL2 pmax pmax
comp=Z,32nm,0.9s
DL2 LR LR
comp=Z,550nm,18.5s
DL2 LR LR
comp=Z,290nm,19.9s
DL2 LR LR
comp=Z,470nm,15.2s
TPUB Ta-pu 21.11 262 *e*P **P** **00 13 49.5 -0.8**
comp=Z,70nm,1.1s
SNY Shenyang 21.11 315 ⇑P **P** **00 13 50.5 +0.3**
SNY pmax pmax
comp=Z,61nm,1.3s
SNY pmax pmax
comp=Z,360nm,3.5s
SNY LR LR
comp=Z,370nm,21.2s
SNY LR LR
comp=Z,420nm,20.6s
SNY LR LR
comp=Z,420nm,16.3s
CN2 Changchun 21.22 322 *e*P **P** **00 13 54.5 +3.1**
CN2 pmax pmax
comp=Z,20nm,0.9s
CN2 pmax pmax
comp=Z,200nm,6.0s
CN2 LR LR
comp=Z,510nm,20.0s
CN2 LR LR
comp=Z,290nm,20.0s
CN2 LR LR
comp=Z,410nm,20.0s
NJ2 Nanjing 21.59 286 *e*P **P** **00 13 54.0 -1.4**
NJ2 pP **pP** **00 13 57.8 -2.8**
NJ2 pmax pmax
comp=Z,77nm,1.1s
KLR Kul'dur 22.82 340 P **P** **00 14 10.1 +1.7**
comp=Z,1.8nm,1.0s,baz=145,slow=7.5,SNR=27
KLR PcP **PcP** **00 17 59.5 +0.2**
comp=Z,0.5nm,0.8s,baz=90,slow=2.0,SNR=5.1
KLR Kul'dur 22.82 340 *c i*P **P** **00 14 09.7 +1.3**
KLR *i* 00 17 59.8
H11N2 WAKE ISLAND Hy 23.01 106 T T 00 39 30.2
baz=297,slow=75,SNR=9.9
H11N1 WAKE ISLAND Hy 23.02 106 T T 00 39 34.2
baz=297,slow=75,SNR=6.5
H11N3 WAKE ISLAND Hy 23.03 106 T T 00 39 31.3
baz=297,slow=75,SNR=10
GRNR Gornyy 23.13 349 *e*P P 00 14 21.6 +10
GRNR pmax pmax
comp=Z,76nm,1.0s
H11S3 WAKE ISLAND Hy 23.40 109 T T 00 40 06.4
baz=297,slow=75,SNR=6.0
H11S1 WAKE ISLAND Hy 23.41 109 T T 00 40 05.5
baz=297,slow=75,SNR=9.3
H11S2 WAKE ISLAND Hy 23.42 109 T T 00 40 08.1
baz=297,slow=75,SNR=5.8
TIA Tai'an 23.59 296 P **P** **00 14 13.3 -3.1**
TIA pmax pmax
comp=Z,14nm,1.2s
SKR Severo-Kuril's 24.40 20 *e*P **P** **00 14 26.1 +2.3**
SKR pmax pmax
comp=Z,54nm,0.9s
SKR MLR MLR
comp=Z,300nm,15.0s
SKR MLR MLR
comp=Z,300nm,15.0s
NKL Nikolayevsk 24.98 356 *e*P **P** **00 14 29.0 0.0**
NKL pmax pmax
comp=Z,84nm,1.2s
TGY Tagaytay City 25.19 241 LR LR 00 23 13.7
comp=Z,246nm,21.0s,baz=134,slow=34
BJI Beijing 25.36 305 P **P** **00 14 31.3 -1.2**
BJI pmax pmax
comp=Z,18nm,1.1s
WHN Wuhan 25.42 282 ⇓P **P** **00 14 33.3 +0.1**
WHN pmax pmax
comp=Z,140nm,1.2s
DAV Davao City (W) 26.99 222 LR LR 00 24 33.8
comp=Z,148nm,21.5s,baz=159,slow=34
PETK Petropavlovsk- 27.01 19 P **P** **00 14 48.1 +0.8**
comp=Z,4.2nm,0.9s,baz=224,slow=6.0
PETK Petropavlovsk- 27.01 19 *e*P **P** **00 14 47.5 +0.1**
HIA Hailar 27.77 326 *e*P **P** **00 14 56.4 +2.0**
comp=Z,60nm,0.9s
HIA Hailar 27.77 326 *e*P **P** **00 14 56.4 +2.0**
HIA pmax pmax
comp=Z,60nm,0.9s
ZEA Zeya 28.13 339 *e*P **P** **00 14 58.4 +1.0**
ZEA *e* 00 15 10.8
ZEA pmax pmax
comp=Z,15nm,0.8s
HHC Hu-ho-hao-te 28.95 304 *e*P **P** **00 15 04.5 -0.6**
HHC pP pP 00 15 08.8 -1.8
HHC sP sP 00 15 11.5 -1.4
HHC S **S** **00 19 53.8 -1.3**
HHC sS pS 00 20 01.0 -0.2
HHC pmax pmax
comp=Z,13nm,0.9s
HHC pmax pmax
comp=Z,60nm,5.1s
HHC LR LR
comp=Z,1μm,17.3s
HHC LR LR
comp=Z,1μm,13.8s
HHC LR LR
comp=Z,1μm,13.8s
ENH Enshi 29.63 282 *e*P **P** **00 15 10.2 -0.9**
comp=Z,42nm,0.8s
XAN Xi'an 30.01 290 P **P** **00 15 13.3 -1.2**
XAN pP pP 00 15 21.5 +1.5
XAN pmax pmax
comp=Z,18nm,0.8s
MA2 Magadan 31.74 7 P **P** **00 15 30.4 +1.1**
comp=Z,8.7nm,0.9s,baz=181,slow=6.4,SNR=7.8
MA2 Magadan 31.74 7 *e*P **P** **00 15 30.5 +1.2**
comp=Z,52nm,1.7s
MA2 Magadan 31.74 7 *i*P **P** **00 15 30.5 +1.2**
GYA Guiyang 32.64 276 ⇑*i*P **P** **00 15 36.5 -1.2**
GYA PP **PnPn** **00 16 48.0 +2.4**
GYA S **S** **00 20 54.3 +1.3**
GYA pmax pmax
comp=Z,30nm,0.8s
GYA pmax pmax
comp=Z,130nm,5.2s
GYA LR LR
comp=Z,610nm,17.2s
GYA LR LR
comp=Z,590nm,17.7s
GYA LR LR
comp=Z,560nm,17.4s
FAKI Fak Fak 32.78 201 *e*P **P** **00 15 37.9 -1.0**
comp=Z,17nm,0.8s
LZH Lanzhou 34.24 293 *e*P P 00 15 57.3 +5.6
LZH pP sP 00 16 00.8 +1.3
LZH sP pP 00 16 02.3 +5.0
LZH pmax pmax
comp=Z,21nm,1.0s
SONA1 Songino Array 34.69 315 *e*P **P** **00 15 56.4 +1.0**
SONM Songino Array 34.69 315 P **P** **00 15 56.8 +1.4**
comp=Z,7.8nm,0.7s,baz=112,slow=7.3,SNR=39
SONM PcP **PcP** **00 18 29.6 +0.5**
comp=Z,1.8nm,0.8s,baz=137,slow=5.0,SNR=3.4
YAK Yakutsk 35.02 349 ⇓*e*P **P** **00 15 58.0 +0.2**
YAK pmax pmax
comp=Z,19nm,0.8s
SEY Seymchan 35.20 7 P **P** **00 16 00.8 +1.4**
comp=Z,7.1nm,0.6s,baz=187,slow=6.6,SNR=30
LUWI Luwuk 35.22 218 *e*P **P** **00 15 59.8 -0.2**
comp=Z,272nm,1.9s
BOD Bodaibo 36.03 333 *e*P P 00 15 59.9 -6.7
BOD pmax pmax
comp=Z,13nm,1.2s
KMI Kunming 36.38 275 P **P** **00 16 09.8 -0.5**
KMI pP pP 00 16 13.5 -2.4
KMI sP sP 00 16 16.0 -2.1
KMI pmax pmax
comp=Z,22nm,1.0s
KMI pmax pmax
comp=Z,130nm,3.7s
ZAK Zakamensk 37.52 317 *e*P **P** **00 16 20.8 +1.3**
ZAK pmax pmax
comp=Z,35nm,1.3s
GTA Gaotai 37.59 299 *e*P **P** **00 16 19.8 -0.5**
GTA pP pP 00 16 24.0 -2.0
GTA sP sP 00 16 27.5 -0.7
GTA S **S** **00 22 08.5 -0.6**
GTA sS pS 00 22 17.0 +1.5
GTA pmax pmax
comp=Z,19nm,1.1s
GTA pmax pmax
comp=Z,250nm,6.0s
GTA LR LR
comp=Z,270nm,17.0s
GTA LR LR
comp=Z,240nm,16.7s
GTA LR LR
comp=Z,350nm,17.5s
IRK Irkutsk 37.66 321 *e*P P 00 16 30.1 +10
IRK pmax pmax
comp=Z,40nm,1.8s
TLY Talaya 37.79 319 *e*P **P** **00 16 22.9 +1.3**
comp=Z,18nm,0.8s
TLY Talaya 37.79 319 *e*P **P** **00 16 23.7 +2.1**
TLY pmax pmax
comp=Z,9.0nm,0.7s
MOY Mondy 39.32 318 *e*P P 00 16 39.8 +5.2
MOY pmax pmax
comp=Z,30nm,1.7s
CHTO Chiang Mai 41.66 267 *e*P **P** **00 16 54.6 +0.3**
CHTO *e*pP **pP** **00 16 55.4 -4.6**
CHTO Chiang Mai 41.66 267 *e*P **P** **00 16 54.6 +0.3**
CM01 Chiang Mai Arr 41.80 266 *e*P **P** **00 16 55.7 +0.3**
CMAR Chiang Mai Arr 41.80 266 P **P** **00 16 54.7 -0.7**
comp=Z,2.4nm,0.7s,baz=56,slow=8.1,SNR=9.2
COEN Coen 41.93 180 *e*P **P** **00 16 55.9 -0.5**
comp=Z,15nm,0.9s
SOEI Soe 42.06 209 P **P** **00 16 56.8 -0.8**
SOEI Soe 42.06 209 *e*P **P** **00 16 57.2 -0.4**
comp=Z,36nm,0.9s
BILL Bilibino 42.11 13 *e*P **P** **00 16 57.7 +0.4**
comp=Z,14nm,0.8s
BILL Bilibino 42.11 13 *c i*P **P** **00 16 58.4 +1.1**
BILL *SP **sP** **00 17 08.0 +2.7**
BILL *e* 00 26 52.2
BILL pmax pmax
comp=Z,41nm,1.7s
MTN Manton Dam 42.53 198 *e*P **P** **00 16 59.7 -1.5**
comp=Z,23nm,0.7s
NIKH Nikolski High 42.80 41 *e*P **P** **00 17 03.2 +0.2**
comp=Z,54nm,1.1s
TIXI Tiksi 44.21 353 ⇓*i*P **P** **00 17 14.9 +0.7**
TIXI pmax pmax
comp=Z,9.0nm,1.2s
SHL Shillong 45.77 279 P **P** **00 17 28.6 +1.1**
SHL pmax pmax
comp=Z,220nm,0.9s
BRDH Bariadhala 46.81 275 P **P** **00 17 36.6 +1.2**
comp=Z,57nm,0.6s,baz=73,slow=19,SNR=4.8
WMQ Urumqi 46.83 305 P **P** **00 17 37.3 +1.8**
WMQ pP sP 00 17 43.0 -0.5
WMQ sP pP 00 17 47.8 +6.6
WMQ pmax pmax
comp=Z,69nm,1.1s
WMQ pmax pmax
comp=Z,500nm,5.3s
WMQ LR LR
comp=Z,450nm,19.1s
WMQ LR LR
comp=Z,1μm,19.7s
WMQ LR LR
comp=Z,1μm,20.5s
DGZ Jazzator, Alta 47.30 313 *i* P **P** **00 17 40.2 +1.0**
DGZ *i* PP **PP** **00 19 30.2 0.0**
DGZ pmax pmax
comp=Z,9.0nm,0.8s
CTA Charters Tower 48.11 176 P **P** **00 17 44.6 -0.8**
comp=Z,4.2nm,0.7s,baz=343,slow=5.7,SNR=9.4
CTAO Charters Tower 48.11 176 *e*P **P** **00 17 45.0 -0.4**
comp=Z,52nm,1.9s
CTAO Charters Tower 48.11 176 *e*P **P** **00 17 45.0 -0.4**
CTAO pmax pmax
comp=Z,53nm,1.9s
SDPT Sand Point 48.13 40 *e*P **P** **00 17 45.4 +0.1**
comp=Z,50nm,0.7s
ANM Nome 48.46 27 *e*P **P** **00 17 49.6 +1.9**
comp=Z,46nm,0.8s
KPJI Karang Pucung 48.58 229 P **P** **00 17 48.5 -0.7**
WRAB Tennant Creek 48.68 191 *e*P **P** **00 17 48.6 -1.2**
comp=Z,58nm,0.6s
WRAB Tennant Creek 48.68 191 *c i*P **P** **00 17 49.0 -0.8**
WRAB pmax pmax
comp=Z,46nm,0.9s
WB2 Warramunga Arr 48.69 191 *e*P **P** **00 17 48.9 -1.0**
WRA Warramunga Arr 48.69 191 P **P** **00 17 48.8 -1.1**
comp=Z,62nm,0.8s,baz=13,slow=8.4,SNR=182
WRA PcP **PcP** **00 19 14.5 -0.6**
comp=Z,2.6nm,0.6s,baz=10,slow=3.7,SNR=3.1
FITZ Fitzroy Crossi 49.17 203 P **P** **00 17 52.8 -0.8**
comp=Z,11nm,0.8s,baz=28,slow=11,SNR=19
FITZ Fitzroy Crossi 49.17 203 *e*P **P** **00 17 53.1 -0.5**
ODAN Odare 49.33 282 *e*P **P** **00 17 54.7 -0.5**
comp=Z,26nm,0.6s
PSI Prapat 49.36 247 *e*P **P** **00 17 55.0 -0.5**
comp=Z,17nm,1.0s
PSI Prapat 49.36 247 P **P** **00 17 54.9 -0.5**
PSI pmax pmax
comp=Z,17nm,1.0s
ZAA0 Zalesovo Array 49.38 318 *e*P **P** **00 17 56.2 +1.3**
comp=Z,14nm,1.0s
ZALV Zalesovo Beam 49.38 318 P **P** **00 17 54.6 -0.3**
comp=Z,5.2nm,0.6s,baz=108,slow=7.1,SNR=14
ZALV PcP **PcP** **00 19 16.6 -0.5**
comp=Z,4.3nm,0.6s,baz=104,slow=3.5,SNR=5.2
ZALV Zalesovo Beam 49.38 318 P **P** **00 17 54.6 -0.3**
ZALV 00 19 16.6
ZALV pmax pmax
comp=Z,3.0nm,0.5s
ZALV pmax pmax
comp=Z,4.0nm,0.6s
CHGN Chignik 49.45 39 *e*P **P** **00 17 55.0 -0.4**
comp=Z,13nm,0.6s
MDSI Maura Dua 49.86 236 P **P** **00 17 58.0 -1.1**
RAMN Ramite 49.99 283 *e*P **P** **00 17 59.8 -0.5**
comp=Z,32nm,0.7s
MNSI Mandailing Nat 50.01 245 P **P** **00 17 59.2 -1.0**
JIRN Jiri 50.16 284 *e*P **P** **00 18 01.5 -0.2**
comp=Z,64nm,0.6s
GUN Gumba 50.36 284 *e*P **P** **00 18 03.0 -0.2**
comp=Z,62nm,0.8s
NVS Novosibirsk 50.40 319 *e*P **P** **00 18 02.9 +0.3**
NVS pmax pmax
comp=N,4.0nm,0.7s
NVS pmax pmax
comp=E,5.0nm,0.7s
NVS pmax pmax
comp=Z,12nm,0.7s
MK01 Makanchi Array 50.62 309 *e*P **P** **00 18 04.9 +0.4**
MK31 Makanchi Array 50.62 309 *e*P **P** **00 18 05.1 +0.6**
MK31 Makanchi Array 50.62 309 *e*P **P** **00 18 05.1 +0.6**
MKAR Makanchi Array 50.62 309 P **P** **00 18 05.3 +0.7**
comp=Z,11nm,0.8s,baz=90,slow=8.7,SNR=51
MKAR PcP **PcP** **00 19 20.3 -1.6**
comp=Z,5.3nm,0.8s,baz=87,slow=5.6,SNR=3.7
MKAR Makanchi Array 50.62 309 *e*P **P** **00 18 05.1 +0.6**
comp=Z,57nm,0.8s
MKAR PcP **PcP** **00 19 20.3 -1.6**
MKAR Makanchi Array 50.62 309 *e*P **P** **00 18 05.1 +0.6**
MKAR 00 19 20.3
MKAR pmax pmax
comp=Z,57nm,0.8s
RDOG Red Dog Mine 50.76 23 *e*P **P** **00 18 07.1 +1.8**
comp=Z,39nm,1.0s
MAKZ Makanchi 50.84 309 *e*P **P** **00 18 07.1 +0.9**
comp=Z,28nm,1.3s
MAKZ Makanchi 50.84 309 *e*P **P** **00 18 07.1 +0.9**
MAKZ pmax pmax
comp=Z,28nm,1.3s
PKIN Phulchoki 50.86 284 *e*P **P** **00 18 06.1 -0.8**
comp=Z,6.8nm,0.6s
KKN Kakani 50.90 284 *e*P **P** **00 18 06.6 -0.5**
comp=Z,22nm,0.8s
DMN Daman 51.10 284 *e*P **P** **00 18 08.1 -0.6**
comp=Z,14nm,0.5s
GKN Gorkha 51.40 285 *e*P **P** **00 18 10.2 -0.6**
comp=Z,16nm,0.6s
SVW2 Sparrevohn 51.74 33 *e*P **P** **00 18 14.2 +1.5**
comp=Z,18nm,0.8s
DANN Dangsing 52.05 285 *e*P **P** **00 18 15.2 -0.7**
comp=Z,51nm,0.8s
KOLN Koldanda 52.34 285 *e*P **P** **00 18 16.6 -1.3**
comp=Z,16nm,0.6s
OHAK Old Harbor 52.36 38 *e*P **P** **00 18 17.8 +0.5**
AS01 Alice Springs 52.39 191 *e*P **P** **00 18 15.6 -2.3**
AS31 Alice Springs 52.40 191 *e*P **P** **00 18 16.8 -1.2**
comp=Z,1.8nm,0.8s
ASAR Alice Springs 52.40 191 P **P** **00 18 16.4 -1.6**
comp=Z,4.4nm,0.6s,baz=5.9,slow=5.7,SNR=40
ASAR PcP **PcP** **00 19 28.2 -0.5**
comp=Z,2.8nm,0.7s,baz=12,slow=4.5,SNR=5.0
PYUN Piuthan 52.78 285 *e*P **P** **00 18 20.7 -0.4**
comp=Z,40nm,0.5s
KDAK Kodiak Island 52.80 37 P **P** **00 18 20.9 +0.5**
comp=Z,23nm,0.6s,baz=285,slow=5.0,SNR=25
KDAK Kodiak Island 52.80 37 *e*P **P** **00 18 21.2 +0.7**
comp=Z,97nm,1.4s
KDAK Kodiak Island 52.80 37 *ce*P **P** **00 18 20.8 +0.3**
PDGK Podgornoye 52.81 305 P **P** **00 18 21.4 +0.4**
PDGK pmax pmax
comp=Z,29nm,0.8s
KURK Kurchatov 53.00 314 *e*P **P** **00 18 22.2 +0.1**
comp=Z,36nm,1.0s
KURK Kurchatov 53.00 314 *c i*P **P** **00 18 22.3 +0.2**
KURK pmax pmax
comp=Z,24nm,1.3s
KURBB Kurchatov Arra 53.05 314 P **P** **00 18 22.6 +0.1**
comp=Z,15nm,0.5s,baz=91,slow=7.7,SNR=78
IM3 Indian Mountai 53.54 27 *e*P **P** **00 18 26.9 +1.0**
PPLA Purkeypile 53.63 31 *e*P **P** **00 18 28.2 +1.5**
comp=Z,98nm,1.6s
CNPM China Poot 53.66 35 *e*P **P** **00 18 27.4 +0.5**
comp=Z,29nm,0.8s
PRZ Przheval'sk 53.70 304 *e*P **P** **00 18 29.4 +1.8**
comp=Z,22nm,0.7s
PRZ Przheval'sk 53.70 304 *e*P **P** **00 18 29.4 +1.8**
PRZ pmax pmax
comp=Z,22nm,0.7s
CAST Castle Rocks 53.76 30 *e*P **P** **00 18 29.1 +1.5**
comp=Z,48nm,0.8s
EIDS Eidsvold 53.79 171 *e*P **P** **00 18 27.6 -0.5**
comp=Z,17nm,0.6s
SKT Skwentna 53.80 32 *e*P **P** **00 18 28.4 +0.5**
comp=Z,25nm,0.9s
SUA Susitna One 54.11 33 *e*P **P** **00 18 30.5 +0.3**
comp=Z,17nm,0.8s
KTH Kantishna Hill 54.29 30 *e*P **P** **00 18 32.8 +1.3**
comp=Z,18nm,0.9s
BPAW Bear Paw Mtn. 54.34 29 *e*P **P** **00 18 32.7 +0.9**
comp=Z,29nm,1.1s
RC01 Rabbit Creek A 54.55 33 *e*P **P** **00 18 33.8 +0.4**
comp=Z,30nm,1.2s
TRF Thorofare Moun 54.56 30 *e*P **P** **00 18 34.6 +1.0**
comp=Z,32nm,0.8s
MLY Manley 54.59 28 *e*P **P** **00 18 35.1 +1.5**
comp=Z,30nm,0.9s
DZM Mont Dzumac 54.72 154 P **P** **00 18 34.9 -0.1**
comp=Z,9.9nm,0.9s,baz=33,slow=9.7,SNR=6.0
DZM LR LR 00 38 34.3
comp=Z,162nm,21.7s,baz=34,slow=32
DZM Mont Dzumac 54.72 154 *e*P **P** **00 18 34.4 -0.7**
DZM *es*P **P** **00 18 35.5 +0.5**
BWN Browne 55.01 30 *e*P **P** **00 18 38.5 +1.9**
COLD Coldfoot 55.17 26 *e*P **P** **00 18 39.4 +1.7**
comp=Z,24nm,1.1s
MCK McKinley 55.20 30 *e*P **P** **00 18 38.6 +0.6**
comp=Z,44nm,1.0s
MCK McKinley 55.20 30 *e*P **P** **00 18 38.6 +0.6**
MCK pmax pmax
comp=Z,44nm,1.0s
SML Sawmill 55.29 32 *e*P **P** **00 18 39.3 +0.6**
comp=Z,47nm,0.9s
SML Sawmill 55.29 32 *e*P **P** **00 18 39.3 +0.6**
SML pmax pmax
comp=Z,47nm,0.9s
NRN Naryn 55.62 303 *e*P **P** **00 18 43.1 +1.3**
comp=Z,8.8nm,1.1s
NRN Naryn 55.62 303 P **P** **00 18 43.0 +1.3**
NRN pmax pmax
comp=Z,9.0nm,1.1s
MDM Murphy Dome 55.64 29 *e*P **P** **00 18 42.3 +1.1**
comp=Z,27nm,0.8s
WRH Wood River Hil 55.64 29 *e*P **P** **00 18 41.4 +0.2**
comp=Z,13nm,0.8s
TOLK Toolik Lake Re 55.66 24 P **P** **00 18 42.5 +1.2**
baz=260
TOLK Toolik Lake Re 55.66 24 *e*P **P** **00 18 43.1 +1.8**
comp=Z,18nm,0.9s
TKM2 Tokmak 2 55.69 305 P **P** **00 18 43.3 +1.2**
SNR=11
SCM Sheep Creek Mo 55.77 32 *e*P **P** **00 18 42.9 +0.7**
comp=Z,76nm,0.8s
SCM Sheep Creek Mo 55.77 32 *e*P **P** **00 18 42.9 +0.7**
SCM pmax pmax
comp=Z,76nm,0.8s
CCB Clear Creek Bu 55.78 29 *e*P **P** **00 18 42.5 +0.4**
comp=Z,10nm,0.8s
DHY Denali Highway 55.83 31 *e*P **P** **00 18 43.0 +0.3**
comp=Z,10nm,0.8s
KSH Kashi 55.96 300 P **P** **00 18 48.0 +4.0**
KSH sP sP 00 18 55.8 +3.7
KSH PP **PP** **00 20 55.3 +6.6**
KSH S **S** **00 26 35.5 +4.1**
KSH sS sS 00 26 43.5 +2.5
KSH SS **SS** **00 30 22.5 +5.3**
KSH pmax pmax
comp=Z,17nm,0.6s
KSH pmax pmax
comp=Z,330nm,5.5s
KSH LR LR
comp=Z,210nm,4.2s
KSH LR LR

comp=Z,290nm,5.7s
KSH LR LR
comp=Z,300nm,5.7s
KZA Kyzart 56.07 304 P **P 00 18 48.1 +3.0**
SNR=9.0
IL1 Eielson Array 56.19 29 *e*P **P 00 18 44.3 -0.8**
ILAR Eielson Array 56.19 29 P **P 00 18 44.7 -0.4**
comp=Z,25nm,0.9s,baz=260,slow=5.9,SNR=162
ILAR PcP **PcP 00 19 42.0 -0.7**
comp=Z,1.6nm,0.7s,baz=286,slow=4.4,SNR=3.0
ILB Eielson Array 56.19 29 *e*P **P 00 18 45.0 -0.1**
ILB *es*P **P 00 18 45.1 0.0**
KBK Karagaybulak 56.20 304 P **P 00 18 46.7 +1.0**
SNR=9.0
FRU Bishkek 56.41 305 *e*P **P 00 18 46.0 -1.1**
KLU Klutina 56.42 33 *e*P **P 00 18 47.8 +0.9**
comp=Z,30nm,0.8s
DIV Divide 56.48 33 *e*P **P 00 18 48.4 +1.1**
comp=Z,69nm,1.4s
UCH Uchtor 56.58 304 P **P 00 18 50.3 +1.4**
SNR=12
PAX Paxson 56.69 31 *e*P **P 00 18 49.6 +0.8**
comp=Z,65nm,1.5s
PAX Paxson 56.69 31 *e*P **P 00 18 49.6 +0.8**
PAX pmax pmax
comp=Z,65nm,1.5s
HARP HAARP 56.81 32 *e*P **P 00 18 51.1 +1.5**
comp=Z,57nm,0.9s
RAGM Ragged Mountai 57.00 34 *e*P **P 00 18 52.1 +1.1**
comp=Z,48nm,1.2s
RIDG Independ'e Rid 57.01 30 *e*P **P 00 18 49.8 -1.2**
comp=Z,26nm,1.0s
FYU Fort Yukon 57.03 27 *e*P **P 00 18 53.4 +2.4**
comp=Z,56nm,1.0s
BMRM Bremner River 57.04 34 *e*P **P 00 18 52.7 +1.4**
comp=Z,56nm,1.2s
AML Almayashu 57.20 304 P **P 00 18 54.5 +1.4**
SNR=14
DOT Dot Lake 57.35 30 *e*P **P 00 18 54.3 +0.9**
comp=Z,114nm,1.0s
SCRK Sand Creek 57.40 30 *e*P **P 00 18 54.4 +0.5**
comp=Z,48nm,0.8s
CRQM Cirque 57.76 34 *e*P **P 00 18 57.3 +0.8**
comp=Z,61nm,1.0s
TGL Tana Glacier 57.91 34 *e*P **P 00 18 58.4 +0.9**
comp=Z,42nm,1.1s
BVAR Borovoye Array 57.97 317 P **P 00 18 58.1 +0.2**
comp=Z,13nm,0.5s,baz=92,slow=7.4,SNR=32
BRVK Borovoye 58.03 317 *e*P **P 00 18 58.8 +0.5**
comp=Z,17nm,0.8s
BRVK Borovoye 58.03 317 *c i*P **P 00 18 58.6 +0.3**
BRVK *i* 00 19 49.7
BRVK pmax pmax
comp=Z,19nm,1.0s
BALM Baldy 58.14 33 *e*P **P 00 18 59.5 +0.5**
comp=Z,24nm,0.9s
BALM Baldy 58.14 33 *e*P **P 00 18 59.6 +0.5**
BALM pmax pmax
comp=Z,24nm,0.9s
EGAK Eagle 58.64 29 *e*P **P 00 19 02.9 +0.5**
comp=Z,14nm,0.8s
ARMA Armidale 58.84 172 *e*P **P 00 19 04.5 +0.3**
KK31 Karatay Array 59.33 306 *e*P **P 00 19 07.9 +0.3**
KK31 *es*P **P 00 19 08.2 +0.6**
KK31 Karatay Array 59.33 306 *e*P **P 00 19 07.9 +0.3**
KKAR Karatay Array 59.33 306 *e*P **P 00 19 08.2 +0.6**
KKAR Karatay Array 59.33 306 *e*P **P 00 19 08.2 +0.6**
NIL Nilore 59.40 294 *e*P **P 00 19 09.1 +0.9**
NIL Nilore 59.40 294 *e*P **P 00 19 09.1 +0.9**
DAWY Dawson 59.42 30 *e*P **P 00 19 09.0 +1.1**
comp=Z,32nm,0.8s
STKA Stephens Creek 59.80 182 P **P 00 19 09.8 -0.8**
comp=Z,14nm,0.8s,baz=332,slow=9.3,SNR=12
STKA Stephens Creek 59.80 182 *e*P **P 00 19 10.2 -0.5**
comp=Z,4.9nm,0.9s
STKA Stephens Creek 59.80 182 *e*P **P 00 19 10.2 -0.5**
STKA pmax pmax
comp=Z,5.0nm,0.9s
AFI Afiamalu 60.28 128 LR LR 00 39 13.5
comp=Z,145nm,21.2s,baz=189,slow=30
FORT Forrest 60.48 195 *e*P **P 00 19 14.5 -0.9**
comp=Z,33nm,0.8s
INK Inuvik 61.54 25 P **P 00 19 22.9 +0.8**
comp=Z,12nm,0.8s,baz=288,slow=6.7,SNR=14
INK Inuvik 61.54 25 *e*P **P 00 19 22.9 +0.8**
comp=Z,18nm,1.0s
INK Inuvik 61.54 25 P **P 00 19 23.0 +0.8**
INK pmax pmax
comp=Z,12nm,0.8s
SKAG Skagway 61.76 35 *e*P **P 00 19 24.6 +0.8**
comp=Z,27nm,1.1s
BESE Bessie Mountai 62.13 36 *e*P **P 00 19 27.1 +0.7**
comp=Z,49nm,1.4s
JIS Juneau Island 62.43 36 *e*P **P 00 19 30.0 +1.7**
comp=Z,45nm,1.1s
KBL Kabul 62.52 296 *e*P **P 00 19 29.7 +0.1**
comp=Z,17nm,0.9s
KBL Kabul 62.52 296 *e*P **P 00 19 29.7 +0.1**
KBL pmax pmax
comp=Z,17nm,0.9s
SVE Sverdlovsk 63.01 322 *e*P **P 00 19 32.5 +0.3**
SVE pmax pmax
comp=Z,19nm,0.9s
CAN Canberra 63.42 175 *e*P **P 00 19 34.8 -0.3**
comp=Z,40nm,1.3s
CAN Canberra 63.42 175 *e*P **P 00 19 34.8 -0.3**
CAN pmax pmax
comp=Z,40nm,1.3s
CRAG Craig 63.63 39 *e*P **P 00 19 38.0 +1.7**
comp=Z,22nm,1.0s
WRAK Wrangell Islan 63.86 38 *e*P **P 00 19 39.5 +1.7**
comp=Z,10nm,0.8s
ARU Arti 64.22 322 *e*P **P 00 19 39.9 -0.3**
comp=Z,21nm,0.8s
ARU Arti 64.22 322 *c i*P **P 00 19 39.9 -0.3**
ARU 00 20 12.9
ARU 00 22 01.1
ARU S **S 00 28 19.7 +3.1**
ARU SS **SS 00 32 29.6 +4.1**
ARU pmax pmax
comp=Z,23nm,1.0s
DIB Dawson Inlet, 64.50 42 *e*P **P 00 19 42.0 -0.1**
comp=Z,22nm,1.1s
DLBC Dease Lake 64.65 36 P **P 00 19 43.9 +0.8**
comp=Z,12nm,0.9s,baz=300,slow=9.4,SNR=18
DLBC Dease Lake 64.65 36 *e*P **P 00 19 44.8 +1.7**
comp=Z,19nm,1.0s
ABKAR Akbulak array 65.11 314 *e*P **P 00 19 45.9 -0.2**
NWAO Narrogin (SRO) 65.71 204 P **P 00 19 49.0 -1.0**
comp=Z,16nm,0.8s,baz=195,slow=15,SNR=10.0
AKTO Aktyubinsk 66.00 316 P **P 00 19 51.4 -0.5**
comp=Z,7.0nm,0.7s,baz=80,slow=14,SNR=24
PRGR Permogore 69.14 330 *e*P **P 00 20 11.1 -0.4**
PRGR pmax pmax
comp=Z,24nm,0.8s
SPITS Spitsbergen Ar 69.47 350 P **P 00 20 13.9 +0.5**
comp=Z,5.1nm,0.7s,baz=57,slow=9.0,SNR=5.1
KBS Kingsbay 69.60 351 ⇓ *i*P **P 00 20 15.5 +1.4**
GEYT Alibeck 69.82 303 P **P 00 20 16.4 +0.2**
comp=Z,2.6nm,0.8s,baz=63,slow=6.6,SNR=7.7
GYA0B ALIBECK ARRAY 69.82 303 *e*P **P 00 20 17.6 +1.3**
comp=Z,30nm,1.5s
YKW3 Yellowknife Ar 70.59 29 *e*P **P 00 20 20.2 -0.2**
comp=Z,22nm,1.0s
YKA Yellowknife Ar 70.62 29 P **P 00 20 20.6 0.0**
comp=Z,14nm,0.8s,baz=294,slow=5.9,SNR=54
RES Resolute Bay 70.70 14 *e*P **P 00 20 21.4 +0.6**
comp=Z,22nm,1.0s
RES *e*PcP **PcP 00 20 42.9 +1.2**
RES Resolute Bay 70.70 14 *e*P **P 00 20 21.5 +0.6**
RES *e* 00 20 42.9
RES pmax pmax
comp=Z,22nm,1.0s
APA Apatity 71.43 338 ⇓ *i*P **P 00 20 25.3 -0.1**
APA pmax pmax
comp=Z,35nm,0.7s
APA MLR MLR
comp=Z,400nm,16.0s
LLLB Lillooet 71.53 42 *e*P **P 00 20 26.6 +0.2**
comp=Z,19nm,1.0s
KLMR Klimovskoe 72.16 330 *e*P **P 00 20 28.6 -1.3**
KLMR pmax pmax
comp=Z,11nm,0.9s
KLMR Klimovskoe 72.16 330 *e*P **P 00 20 28.6 -1.3**
KLMR AMP 00 20 30.2
comp=Z,11nm,0.9s

B05A Bryant 72.30 44 P **P 00 20 32.0 +1.1**
baz=293
G03D McMinnville, O 72.73 48 P **P 00 20 34.5 +0.9**
baz=293
D05A Enumclaw 72.78 45 *e*P **P 00 20 35.8 +1.9**
comp=Z,21nm,0.9s
ARCES ARCESS Array B 72.84 341 P **P 00 20 34.2 +0.3**
comp=Z,12nm,0.9s,baz=54,slow=6.2,SNR=20
ARCES ARCESS Array B 72.84 341 *e*P **P 00 20 34.4 +0.5**
ARCES ARCESS Array B 72.84 341 *e*P **P 00 20 34.4 +0.5**
KEBM Edson Butte 72.92 50 *e*P **P 00 20 36.3 +1.4**
comp=Z,44nm,0.9s
LON Longmire 73.06 46 *e*P **P 00 20 36.5 +0.8**
comp=Z,6.1nm,0.9s
LON Longmire 73.06 46 *e*P **P 00 20 36.5 +0.8**
LON pmax pmax
comp=Z,6.0nm,0.9s
I03D Drain, OR 73.26 49 P **P 00 20 38.1 +1.3**
baz=293,SNR=7.2
LTY Liberty 73.58 45 *e*P **P 00 20 39.5 +0.8**
comp=Z,16nm,1.2s
RAR Rarotonga 73.64 126 LR LR 00 49 47.3
comp=Z,70nm,19.2s,baz=302,slow=33
H04A Detroit Lake 73.64 48 *e*P **P 00 20 39.9 +0.8**
comp=Z,22nm,0.9s
L02D Cave Junction, 73.70 51 P **P 00 20 40.6 +1.2**
baz=293,SNR=5.3
WTV Waterville 73.84 44 *e*P **P 00 20 40.4 +0.1**
I04A Tendick Farm, 73.85 49 P **P 00 20 40.8 +0.5**
baz=294,SNR=8.3
B08A Colville Reser 73.95 44 *e*P **P 00 20 41.5 +0.6**
comp=Z,18nm,0.9s
HUMO Hull Mountain 73.96 50 *e*P **P 00 20 42.4 +1.5**
comp=Z,6.7nm,1.0s
G05D Wamic, OR 73.98 47 P **P 00 20 42.0 +1.0**
baz=294
KHMM Horse Mountain 74.12 52 *e*P **P 00 20 43.9 +1.8**
comp=Z,30nm,1.2s
J04D Umpqua Nationa 74.27 49 P **P 00 20 44.1 +1.1**
baz=294,SNR=6.4
I05D Terrebonne, OR 74.33 48 P **P 00 20 43.9 +0.7**
baz=294
G06A Carlson Farm, 74.42 47 *e*P **P 00 20 44.9 +1.3**
comp=Z,13nm,0.9s
YBH Yreka Blue Hor 74.48 51 P **P 00 20 45.1 +1.0**
comp=Z,11nm,0.8s,baz=275,slow=3.3,SNR=37
YBH Yreka Blue Hor 74.48 51 *e*P **P 00 20 45.3 +1.2**
comp=Z,15nm,0.9s
YBH Yreka Blue Hor 74.48 51 *e*P **P 00 20 45.3 +1.2**
YBH pmax pmax
comp=Z,15nm,0.9s
M02C Callahan 74.52 51 P **P 00 20 45.5 +1.2**
baz=294,SNR=8.4
KCPM Cahto Peak 74.70 53 *e*P **P 00 20 47.0 +1.5**
comp=Z,43nm,1.2s
D08A Wollman Farm, 74.75 45 *e*P **P 00 20 46.5 +1.0**
comp=Z,17nm,0.9s
N02D Trinity Center 74.79 52 P **P 00 20 46.9 +1.0**
baz=294,SNR=9.2
PINE Pine Mountain 74.82 48 *e*P **P 00 20 47.4 +1.3**
comp=Z,41nm,0.9s
J05D Fort Rock, OR 74.83 49 P **P 00 20 47.3 +1.0**
baz=294,SNR=14
WSAR Wadi Sarin 75.05 289 P **P 00 20 47.7 +0.1**
comp=Z,11nm,1.0s,baz=63,slow=6.3,SNR=4.1
M04C Macdoel 75.05 50 P **P 00 20 48.2 +0.7**
baz=294,SNR=14
WDC Whiskeytown Da 75.06 52 *e*P **P 00 20 48.2 +0.8**
comp=Z,12nm,1.1s
WDC Whiskeytown Da 75.06 52 *e*P **P 00 20 48.2 +0.8**
WDC pmax pmax
comp=Z,12nm,1.1s
K05A Summer Lake 75.30 49 *e*P **P 00 20 49.6 +0.7**
comp=Z,44nm,1.0s
NEW Newport 75.33 43 P **P 00 20 49.3 +0.5**
baz=296
NEW Newport 75.33 43 *e*P **P 00 20 49.4 +0.6**
comp=Z,18nm,0.9s
NEW Newport 75.33 43 *e*P **P 00 20 49.4 +0.6**
NEW pmax pmax
comp=Z,18nm,0.9s
MOS Moscow 75.40 326 *e*P **P 00 20 49.0 0.0**
E09A Wood Farm, Sta 75.46 45 *e*P **P 00 20 50.6 +1.1**
comp=Z,21nm,1.0s
G08A Pilot Rock 75.47 46 *e*P **P 00 20 50.9 +1.1**
comp=Z,21nm,1.5s
O03D Paynes Creek 75.70 52 P **P 00 20 51.2 +0.1**
baz=295,SNR=7.6
AKT Akhty 75.85 310 ⇑ *i*P **P 00 20 52.0 0.0**
AKT *e* 00 21 03.6
AKT pmax pmax
comp=Z,35nm,0.7s
BANOM Banah 75.86 292 P **P 00 20 52.5 +0.2**
SHME Shamm 75.94 292 *i*P **P 00 20 53.3 +0.6**
SNR=14
MOD Modoc Plateau 76.04 50 *e*P **P 00 20 54.2 +1.0**
comp=Z,12nm,0.9s
MSFE Esma-Masafi 76.21 291 P **P 00 20 53.9 -0.4**
OBN Obninsk 76.23 326 *de*P **P 00 20 54.1 +0.4**
OBN *e**SP **sP 00 21 01.2 -0.7**
OBN *e*SS SS 00 35 37.2 +7.2
OBN pmax pmax
comp=Z,18nm,1.4s
OBN MLR MLR
comp=Z,238nm,20.0s
F10A Beach Ranch, E 76.27 45 *e*P **P 00 20 55.2 +0.9**
comp=Z,8.2nm,1.1s
UOSS Minazif 76.35 291 *e*P **P 00 20 55.3 +0.3**
comp=Z,17nm,1.1s
UOSS Minazif 76.35 291 P **P 00 20 54.8 -0.3**
GROC Groznyy 76.40 312 *e*P P 00 20 43.4 -12
GROC *e* 00 20 56.7
GROC *e*S **S 00 30 33.4 -6.0**
GROC pmax pmax
comp=Z,21nm,1.0s
SOHO SOHO 76.42 290 *i*P **P 00 20 55.1 -0.3**
SNR=14
HATD Hatta, Dubai 76.46 291 *i*P **P 00 20 55.6 -0.1**
SNR=6.8
KULLO Kullorsuaq 76.56 6 *i*P **P 00 20 55.2 -0.1**
comp=Z,71nm,1.3s
J08A Circle Bar Ran 76.63 48 *e*P **P 00 20 57.4 +1.0**
comp=Z,20nm,0.9s
BMO Blue Mountains 76.72 46 *e*P **P 00 20 56.8 -0.1**
comp=Z,17nm,0.9s
BMO Blue Mountains 76.72 46 *e*P **P 00 20 56.8 -0.1**
BMO pmax pmax
comp=Z,17nm,0.9s
VSR Storozhevoye 76.76 321 *e*P **P 00 20 56.1 -0.8**
VSR pmax pmax
comp=Z,20nm,1.3s
NAZ Nazwa, Dubai 76.78 291 P **P 00 20 57.3 -0.2**
VORD Divnogorie 76.81 321 *e*P **P 00 20 56.3 -0.8**
VORD pmax pmax
comp=Z,10.0nm,0.8s
AFDM Forest Hills D 76.85 53 *e*P **P 00 20 58.4 +0.7**
comp=Z,27nm,1.6s
WALA Waterton Lakes 76.86 41 *e*P **P 00 20 58.6 +1.0**
comp=Z,19nm,0.8s
BEKR Beckworth 76.88 52 *e*P **P 00 20 58.8 +0.8**
comp=Z,25nm,0.8s
WVOR Wild Horse Val 76.92 49 *e*P **P 00 20 58.7 +0.6**
comp=Z,22nm,1.4s
WVOR Wild Horse Val 76.92 49 *e*P **P 00 20 58.7 +0.6**
WVOR pmax pmax
comp=Z,23nm,1.4s
ASUD Al Ashush, Dub 77.20 291 P **P 00 20 59.6 -0.3**
JTMT Jette 77.26 43 *e*P **P 00 21 01.1 +1.2**
comp=Z,23nm,0.8s
RUBR Rubicon Trail 77.38 52 *e*P **P 00 21 01.2 +0.3**
comp=Z,70nm,0.8s
FIA1 FINESS Array S 77.42 334 *e*P **P 00 21 00.4 +0.1**
FINES FINESS Array B 77.42 334 P **P 00 20 60.0 -0.4**
comp=Z,12nm,0.8s,baz=79,slow=5.0,SNR=36
FINES FINESS Array B 77.42 334 P **P 00 21 00.0 -0.4**
VCNR Virginia City 77.62 52 *e*P **P 00 21 02.9 +0.6**
comp=Z,9.0nm,0.9s
PAHR Pah Rah Range 77.62 52 *e*P **P 00 21 03.0 +0.8**
comp=Z,18nm,1.0s
CMB Columbia Colle 77.66 53 *e*P **P 00 21 02.8 +0.6**
comp=Z,20nm,0.8s
CMB Columbia Colle 77.66 53 *e*P **P 00 21 02.8 +0.6**
CMB pmax pmax
comp=Z,20nm,0.8s
NCK Nalchik 77.71 313 ⇑ *i*P **P 00 21 02.5 +0.1**
NCK pmax pmax
comp=Z,12nm,1.0s

PNTR Pine Nut 77.75 52 *e*P **P 00 21 04.1 +1.2**
comp=Z,18nm,0.8s
TBLG Delisi 77.75 311 *e*P **P 00 21 03.4 +0.7**
comp=Z,10nm,0.8s
TBLG Delisi 77.75 311 *e*P **P 00 21 03.4 +0.7**
TBLG pmax pmax
comp=Z,10.0nm,0.8s
ZEI Tsey 77.83 312 *e*P **P 00 21 02.4 -0.9**
ZEI pmax pmax
comp=Z,6.0nm,0.3s
MSO Missoula 77.90 43 P **P 00 21 03.4 -0.1**
baz=298
MSO Missoula 77.90 43 *e*P **P 00 21 03.8 +0.3**
comp=Z,29nm,1.7s
YERR Yerington 78.05 52 *e*P **P 00 21 05.3 +0.7**
comp=Z,44nm,1.5s
KBZ Khabaz 78.05 313 P **P 00 21 04.9 +0.7**
comp=Z,29nm,0.8s,baz=84,slow=3.1,SNR=47
KIV Kislovodsk 78.08 314 *e*P **P 00 21 05.5 +0.9**
comp=Z,25nm,0.9s
KIV Kislovodsk 78.08 314 *i*P **P 00 21 05.3 +0.7**
SNR=11
KIV Kislovodsk 78.08 314 *e*P **P 00 21 05.2 +0.7**
KIV pmax pmax
comp=Z,32nm,1.1s
WAKR Walker 78.12 53 *e*P **P 00 21 05.9 +0.9**
comp=Z,9.8nm,0.8s
MFID Camas Ranch 78.32 47 *e*P **P 00 21 06.8 +0.9**
comp=Z,26nm,0.8s
NEY Neytrino 78.39 313 ⇓ *e*P **P 00 21 06.5 +0.2**
NEY pmax pmax
comp=Z,3.0nm,0.9s
GNI Garni 78.47 309 P **P 00 21 07.5 +0.7**
comp=Z,11nm,1.0s,baz=70,slow=12,SNR=5.9
GNI Garni 78.47 309 *e*P **P 00 21 08.3 +1.4**
comp=Z,60nm,1.5s
GNI Garni 78.47 309 *d i*P **P 00 21 08.4 +1.6**
GNI pmax pmax
comp=Z,54nm,1.1s
RYN Ryan 78.71 52 *e*P **P 00 21 09.0 +0.8**
comp=Z,13nm,0.9s
AKH Akhalkalaki 78.73 311 ⇓ *i*P **P 00 21 09.4 +1.1**
AKH Akhalkalaki 78.73 311 *e*P **P 00 21 09.7 +1.4**
comp=Z,22nm,1.1s
MDPB Devils Postpil 78.77 53 *e*P **P 00 21 09.5 +0.9**
comp=Z,9.4nm,1.2s
BMN Battle Mountai 78.78 50 *e*P **P 00 21 09.3 +0.8**
comp=Z,27nm,1.4s
BMN Battle Mountai 78.78 50 *e*P **P 00 21 09.3 +0.8**
BMN pmax pmax
comp=Z,27nm,1.4s
PAGB Antelope Grade 78.78 56 *e*P **P 00 21 09.8 +1.3**
comp=Z,26nm,0.9s
KVN Kaiserville 78.81 52 *e*P **P 00 21 09.3 +0.5**
comp=Z,23nm,1.1s
KVN Kaiserville 78.81 52 *e*P **P 00 21 09.3 +0.5**
KVN pmax pmax
comp=Z,23nm,1.1s
OMMB Old Mammoth Mi 78.83 53 *e*P **P 00 21 10.1 +1.0**
comp=Z,10nm,1.2s
VSU Vasula 78.94 331 *d i*P **P 00 21 09.0 +0.2**
VSU pmax pmax
comp=Z,92nm,1.3s
NV01 Mina Array Sit 78.95 52 *e*P **P 00 21 09.3 -0.3**
NVAR Mina Array Bea 78.95 52 P **P 00 21 10.0 +0.4**
comp=Z,9.6nm,0.7s,baz=285,slow=5.7,SNR=77
NVAR LR LR 00 50 26.5
comp=Z,94nm,21.0s,baz=68,slow=31
NV11 Mina Array Sit 79.05 52 *e*P **P 00 21 10.6 +0.5**
comp=Z,0.5nm,0.8s
SMMC Simmler 79.15 56 P **P 00 21 11.4 +0.9**
baz=297
HLID Hailey 79.16 46 P **P 00 21 11.2 +0.6**
baz=299
HLID Hailey 79.16 46 *e*P **P 00 21 11.3 +0.7**
comp=Z,8.8nm,0.8s
PPT Papeete 79.17 117 LR LR 00 49 08.7
comp=Z,103nm,22.0s,baz=347,slow=30
HRY Holter Researc 79.22 43 *e*P **P 00 21 11.8 +1.0**
LRM Limekiln Ridge 79.29 44 *e*P **P 00 21 11.9 +0.5**
DLMT Dillon 79.42 44 *e*P **P 00 21 12.7 +0.7**
comp=Z,10.0nm,0.8s
MZR Muzera 79.43 290 *i*P **P 00 21 12.0 -0.2**
SNR=7.1
SUMG Summit 79.46 1 ⇑ *i*P **P 00 21 13.1 +1.1**
comp=Z,20nm,0.8s
SUMG Summit 79.46 1 *e*P **P 00 21 12.2 +0.3**
comp=Z,22nm,0.8s
SUMG Summit 79.46 1 *e*P **P 00 21 12.2 +0.3**
SUMG pmax pmax
comp=Z,22nm,0.8s
PKM Mcpherson Peak 79.48 56 P **P 00 21 13.2 +0.7**
baz=297
MCMT McKenzie Canyo 79.53 45 *e*P **P 00 21 13.4 +0.7**
VES Vestal, Richgr 79.57 55 P **P 00 21 12.5 -0.2**
baz=297
TIN Tinemaha, Big 79.63 54 P **P 00 21 13.7 +0.5**
baz=298
EGMT Eagleton 79.78 41 P **P 00 21 14.2 +0.4**
baz=301
EGMT Eagleton 79.78 41 *e*P **P 00 21 14.2 +0.4**
comp=Z,12nm,1.0s
BOZ Bozeman (W) 79.90 44 P **P 00 21 15.1 +0.5**
baz=300
BOZ Bozeman (W) 79.90 44 *e*P **P 00 21 15.0 +0.5**
comp=Z,9.0nm,0.7s
BOZ Bozeman (W) 79.90 44 *e*P **P 00 21 15.0 +0.5**
BOZ pmax pmax
comp=Z,9.0nm,0.7s
CWC Cottonwood Cre 80.02 54 P **P 00 21 15.3 -0.1**
baz=298
ARVC Arvin 80.08 56 P **P 00 21 15.7 +0.1**
baz=298
ISA Isabella, Lake 80.10 55 P **P 00 21 15.3 -0.4**
baz=298
ISA Isabella, Lake 80.10 55 *e*P **P 00 21 15.8 +0.1**
comp=Z,15nm,1.4s
ISA Isabella, Lake 80.10 55 *e*P **P 00 21 15.8 +0.1**
ISA pmax pmax
comp=Z,15nm,1.4s
FFC Flin Flon 80.20 32 *e*P **P 00 21 16.1 +0.3**
comp=Z,21nm,0.9s
FFC Flin Flon 80.20 32 *e*P **P 00 21 16.1 +0.3**
FFC pmax pmax
comp=Z,21nm,0.9s
GRAC Grapevine Rang 80.27 53 P **P 00 21 17.1 +0.6**
baz=298
QLMT Earthquake Lak 80.41 44 *e*P **P 00 21 18.8 +1.4**
DAC Darwin (Calif) 80.44 54 *e*P **P 00 21 18.0 +0.3**
comp=Z,9.6nm,1.1s
DAC Darwin (Calif) 80.44 54 *e*P **P 00 21 18.0 +0.3**
DAC pmax pmax
comp=Z,10.0nm,1.1s
YHB Horse Butte 80.59 44 *e*P **P 00 21 20.1 +1.7**
comp=Z,26nm,0.9s
MPMC Manual Prospec 80.62 54 P **P 00 21 19.0 +0.3**
baz=298
LRMC Laurel Mtn Rad 80.75 55 P **P 00 21 19.6 +0.3**
baz=298
YMR Madison River 80.77 44 *e*P **P 00 21 21.2 +1.8**
comp=Z,26nm,0.8s
IZAR Zarasai 80.79 329 *e*P **P 00 21 19.0 +0.1**
IZAR IAmb IAmb 00 21 20.5
comp=Z,14nm,1.0s
EDW2 Edwards Air Fo 80.81 55 P **P 00 21 20.1 +0.6**
baz=298
FURC Furnace Creek, 80.88 54 P **P 00 21 20.2 +0.5**
baz=298
R11A Troy Canyon, C 80.88 51 P **P 00 21 20.3 +0.3**
baz=299
R11A Troy Canyon, C 80.88 51 *e*P **P 00 21 20.5 +0.5**
comp=Z,15nm,1.0s
ISAL Salakas 80.95 329 *e*P **P 00 21 19.8 +0.1**
ISAL IAmb IAmb 00 21 30.4
comp=Z,11nm,0.9s
GCMT Greycliff 80.98 43 *e*P **P 00 21 21.4 +1.1**
IIGN Ignalina 81.04 329 *e*P **P 00 21 20.3 0.0**
IIGN IAmb IAmb 00 21 30.7
comp=Z,7.2nm,0.9s
NACGM Naroch 81.06 328 *e* **P 00 21 20.0 -0.3**
MWC Mount Wilson 81.07 56 *e*P **P 00 21 21.7 +0.6**
comp=Z,27nm,1.3s
YPP Pitchstone Pla 81.08 44 *e*P **P 00 21 23.5 +2.4**
comp=Z,6.8nm,0.9s
TPNV Topopah Spring 81.08 53 P **P 00 21 21.3 +0.3**
baz=299
TPNV Topopah Spring 81.08 53 *e*P **P 00 21 21.4 +0.3**

comp=Z,17nm,0.8s
HVU Hansel Valley 81.08 47 eP P 00 21 22.3 +1.3
comp=Z,12nm,0.9s
FCC Fort Churchill 81.11 26 eP P 00 21 20.4 -0.1
comp=Z,15nm,1.1s
FCC Fort Churchill 81.11 26 eP P 00 21 20.4 -0.1
FCC pmax pmax
comp=Z,15nm,1.1s
H17A Grant Village 81.15 44 P P 00 21 23.4 +2.0
baz=301
H17A Grant Village 81.15 44 eP P 00 21 24.1 +2.7
comp=Z,27nm,1.0s
IMW Indian Meadow 81.18 45 eP P 00 21 22.3 +0.7
comp=Z,15nm,0.9s
FLWY Flagg Ranch 81.24 45 eP P 00 21 23.9 +2.1
comp=Z,78nm,1.8s
FXWY Fox Creek 81.26 45 eP P 00 21 23.1 +1.1
comp=Z,17nm,1.2s
BGU Big Grassy Mou 81.34 48 eP P 00 21 23.1 +0.7
comp=Z,4.6nm,0.8s
BFSC Mount Baldy Ra 81.35 56 P P 00 21 22.7 +0.2
baz=298
MOOW Moose Ponds 81.38 45 eP P 00 21 23.3 +0.7
comp=Z,27nm,1.6s
TPAW Teton Pass 81.38 45 eP P 00 21 23.8 +1.1
comp=Z,11nm,0.8s
GSC Goldstone, Bar 81.47 55 P P 00 21 23.3 +0.2
baz=298
GSC Goldstone, Bar 81.47 55 eP P 00 21 23.5 +0.4
comp=Z,12nm,0.9s
GSC Goldstone, Bar 81.47 55 eP P 00 21 23.5 +0.4
GSC pmax pmax
comp=Z,12nm,0.9s
REDW Red Top Meadow 81.51 45 eP P 00 21 24.6 +1.2
comp=Z,22nm,1.5s
SPUT South Promonto 81.53 48 eP P 00 21 24.1 +0.7
comp=Z,9.4nm,0.9s
RLMT Red Lodge 81.57 43 P P 00 21 24.6 +1.0
baz=302
RLMT Red Lodge 81.57 43 eP P 00 21 24.8 +1.1
comp=Z,97nm,1.9s
AHID Auburn Hatcher 81.66 46 eP P 00 21 25.2 +1.1
comp=Z,18nm,1.0s
DUG Dugway, Tooele 81.85 49 P P 00 21 25.5 +0.4
baz=300
DUG Dugway, Tooele 81.85 49 eP P 00 21 25.7 +0.6
comp=Z,17nm,0.8s
DUG Dugway, Tooele 81.85 49 eP P 00 21 25.7 +0.6
DUG pmax pmax
comp=Z,17nm,0.8s
HWUT Hardware Ranch 81.95 47 eP P 00 21 26.4 +0.8
comp=Z,20nm,1.0s
PSUT Pine Spring 81.97 51 eP P 00 21 26.2 +0.3
comp=Z,16nm,1.0s
MURC Murrieta 81.99 56 P P 00 21 25.6 -0.2
baz=298
HEC Hector,Ludlow 82.03 55 P P 00 21 26.5 +0.4
baz=299
TUQ Turquoise Moun 82.04 54 P P 00 21 26.4 +0.2
baz=299
SHPR Sheep Range 82.06 53 eP P 00 21 26.9 +0.7
comp=Z,8.8nm,0.9s
CTU Camp Tracy 82.30 48 eP P 00 21 28.2 +0.8
comp=Z,12nm,0.9s
TCUT Toone Canyon 82.30 47 eP P 00 21 28.5 +0.9
comp=Z,17nm,0.7s
AKASG Malin Array Be 82.36 324 P P 00 21 26.1 -1.2
comp=Z,2.0nm,0.6s,baz=45,slow=5.3,SNR=11
AKBB Malin Array Si 82.36 324 eP P 00 21 26.4 -0.9
comp=Z,6.3nm,0.6s
KIEV Kiev 82.37 324 eP P 00 21 26.4 -1.0
comp=Z,6.1nm,0.6s
KIEV Kiev 82.37 324 ⇓iP P 00 21 26.8 -0.6
KIEV pmax pmax
comp=Z,5.0nm,1.1s
LAO LASA Array 82.52 41 P P 00 21 28.9 +0.6
baz=304
PFO Pinyon Flats O 82.53 56 P P 00 21 28.5 -0.2
baz=299
PFO Pinyon Flats O 82.53 56 eP P 00 21 28.8 +0.1
comp=Z,20nm,1.0s
XPFO Piæon Flat 82.53 56 eP P 00 21 28.8 +0.1
comp=Z,16nm,1.0s
JLU Jordanelle 82.54 48 eP P 00 21 29.7 +0.9
comp=Z,61nm,1.8s
GMRC Granite Mounta 82.54 55 P P 00 21 29.0 +0.2
baz=299
BW06 Boulder Array 82.63 45 P P 00 21 29.0 -0.2
baz=302
BW06 Boulder Array 82.63 45 eP P 00 21 29.6 +0.3
comp=Z,6.8nm,1.0s
PD31 Pinedale Array 82.63 45 eP P 00 21 29.3 0.0
PDAR Pinedale Array 82.63 45 P P 00 21 29.1 -0.1
comp=Z,6.2nm,0.9s,baz=270,slow=2.7,SNR=35
PDAR LR LR 00 54 20.3
comp=Z,118nm,19.2s,baz=324,slow=33
PDAR Pinedale Array 82.63 45 eP P 00 21 28.9 -0.3
DGMT Dagmar 82.66 38 P P 00 21 28.9 -0.1
baz=305
BELC Belle Mtn. Jos 82.68 55 P P 00 21 29.4 -0.1
baz=299
MPU Maple Canyon 82.72 48 eP P 00 21 30.6 +0.9
comp=Z,30nm,1.5s
CCUT Cedar City 82.80 51 eP P 00 21 30.8 +0.6
comp=Z,20nm,1.3s
HFS Hagfors 82.82 337 P P 00 21 28.7 -0.9
comp=Z,5.9nm,0.8s,baz=66,slow=4.9,SNR=16
SIM Simferopol' 82.88 318 eP P 00 21 29.9 -0.3
SIM pmax pmax
comp=Z,12nm,0.8s
MONP2 Monument Peak 82.90 57 P P 00 21 30.7 -0.1
baz=299
SZCU Shurtz Canyon 82.96 51 eP P 00 21 31.8 +0.8
comp=Z,5.2nm,0.8s
NB2 NORSAR Subarra 82.97 339 P P 00 21 28.9 -1.5
comp=Z,20nm,1.1s,baz=39,slow=5.3
NB2 NORSAR Subarra 82.97 339 P P 00 21 28.7 -1.7
NB2 NORSAR Subarra 82.97 339 P P 00 21 28.9 -1.5
baz=39,slow=5.3
MSU Marysvale 83.12 50 eP P 00 21 32.5 +0.7
LCMT Little Creek M 83.15 52 eP P 00 21 32.9 +0.9
comp=Z,39nm,1.7s
IRM Iron Mountain 83.22 55 P P 00 21 32.4 +0.2
baz=300
BC3 Big Chuckawall 83.24 56 P P 00 21 32.6 +0.2
baz=299
IKP In-Ko-Pah, Jac 83.25 57 P P 00 21 32.5 +0.1
baz=299
SUW Suwalki 83.26 329 eP P 00 21 31.3 -0.6
SUW Suwalki 83.26 329 eP P 00 21 31.5 -0.4
comp=Z,32nm,1.0s
SUW Suwalki 83.26 329 eP P 00 21 31.5 -0.4
SUW pmax pmax
comp=Z,32nm,1.0s
MTPU Mount Pierson 83.36 50 eP P 00 21 34.4 +1.1
comp=Z,24nm,1.5s
TMUT Trail Mountain 83.37 49 eP P 00 21 33.9 +0.7
comp=Z,7.7nm,1.0s
KNB Kanab 83.44 52 eP P 00 21 32.7 -0.7
comp=Z,69nm,1.6s
KNB Kanab 83.44 52 eP P 00 21 32.7 -0.7
KNB pmax pmax
comp=Z,69nm,1.6s
P17A Butcher Ranch, 83.59 49 eP P 00 21 35.1 +0.9
comp=Z,36nm,1.3s
Q16A Castle Valley 83.59 49 eP P 00 21 35.1 +0.9
comp=Z,48nm,1.4s
W13A Hualapai Mount 83.66 54 eP P 00 21 35.2 +0.6
comp=Z,3.7nm,0.8s
P18A Preston Nutter 83.83 48 eP P 00 21 36.4 +0.8
comp=Z,37nm,1.6s
Y12C Blythe 83.87 55 P P 00 21 35.9 +0.4
baz=300
PDMCI Parker Dam,Lak 83.87 54 P P 00 21 35.8 +0.3
baz=300
SRU San Rafael Swe 83.92 49 eP P 00 21 36.5 +0.6
comp=Z,18nm,1.0s
SRU San Rafael Swe 83.92 49 eP P 00 21 36.5 +0.6
SRU pmax pmax
comp=Z,18nm,1.0s
GLA Glamis 83.99 56 P P 00 21 36.5 +0.3
baz=300
GLA Glamis 83.99 56 eP P 00 21 36.8 +0.6
comp=Z,13nm,0.8s
GLA Glamis 83.99 56 eP P 00 21 36.8 +0.6
GLA pmax pmax
comp=Z,13nm,0.8s
U15A North Rim 84.10 52 eP P 00 21 37.5 +0.6
comp=Z,7.2nm,0.9s
SORM Soroca 84.33 322 ⇓iP P 00 21 36.1 -1.4
K22A Casper 84.58 44 P P 00 21 39.3 +0.1
baz=304
K22A Casper 84.58 44 eP P 00 21 39.5 +0.3
comp=Z,29nm,1.3s
Y14A Wickenburg 84.87 54 eP P 00 21 41.0 +0.4
comp=Z,18nm,0.9s
O20A White River Ci 84.87 47 P P 00 21 40.7 0.0
baz=303
O20A White River Ci 84.87 47 eP P 00 21 41.1 +0.4
comp=Z,17nm,1.0s
PV09 Paradox Valley 85.17 49 eP P 00 21 43.0 +0.6
WUAZ Wupatki 85.21 52 P P 00 21 42.7 +0.2
baz=301
WUAZ Wupatki 85.21 52 eP P 00 21 42.9 +0.5
comp=Z,19nm,1.0s
RSSD Black Hills 85.24 42 P P 00 21 42.4 -0.1
baz=305
RSSD Black Hills 85.24 42 eP P 00 21 42.8 +0.3
comp=Z,17nm,1.4s
RSSD Black Hills 85.24 42 eP P 00 21 42.8 +0.3
RSSD pmax pmax
comp=Z,17nm,1.4s
ILGA Ilgaz 85.26 314 eP P 00 21 43.8 +1.1
comp=Z,11nm,0.8s
PV10 Paradox Valley 85.29 49 eP P 00 21 43.7 +0.8
comp=Z,55nm,1.0s
PV04 Paradox Valley 85.37 49 eP P 00 21 44.0 +0.7
comp=Z,59nm,1.4s
PV05 Paradox Valley 85.41 49 eP P 00 21 43.7 +0.2
comp=Z,42nm,1.3s
PV03 Paradox Valley 85.48 49 eP P 00 21 44.0 +0.2
comp=Z,35nm,1.1s
PV07 Paradox Valley 85.52 49 eP P 00 21 44.4 +0.4
comp=Z,23nm,1.6s
PV02 Paradox Valley 85.58 49 eP P 00 21 44.8 +0.5
comp=Z,38nm,1.4s
PV15 Paradox Valley 85.68 49 eP P 00 21 45.2 +0.3
comp=Z,10.0nm,1.0s
RAYN Ar Rayn 85.70 294 eP P 00 21 41.3 -3.6
comp=Z,25nm,0.9s
RAYN Ar Rayn 85.70 294 iP P 00 21 45.2 +0.2
SNR=20
X16A Lo Mia Camp, P 85.73 53 eP P 00 21 45.8 +0.6
comp=Z,15nm,1.3s
PV01 Paradox Valley 85.73 49 eP P 00 21 45.2 +0.1
comp=Z,42nm,1.4s
ULM Lac du Bonnet 85.89 34 P P 00 21 44.5 -0.8
comp=Z,6.0nm,0.9s,baz=340,slow=3.6,SNR=4.4
ULM LR LR 00 59 31.8
comp=Z,118nm,21.3s,baz=326,slow=35
N23A Red Feather La 85.91 45 P P 00 21 46.8 +0.9
baz=304
N23A Red Feather La 85.91 45 eP P 00 21 47.0 +1.0
comp=Z,62nm,1.3s
214A Organ Pipe Nat 86.01 56 P P 00 21 46.8 +0.5
baz=301
BR131 Keskin Array S 86.04 313 eP P 00 21 46.0 -0.5
BRTR Keskin Array B 86.05 313 P P 00 21 45.5 -1.0
comp=Z,6.2nm,0.9s,baz=101,slow=3.4,SNR=34
SMCO Snowmass 86.21 47 eP P 00 21 48.0 +0.3
comp=Z,22nm,1.2s
CFR Carcaliu 86.22 320 ⇑iP P 00 21 47.0 0.0
TESR Tescani 86.24 322 ⇑iP P 00 21 45.1 -2.0
BIZ Bicaz 86.27 322 ⇓iP P 00 21 46.2 -1.1
MVCO Mesa Verde 86.28 50 P P 00 21 47.8 -0.1
baz=303
MVCO Mesa Verde 86.28 50 eP P 00 21 48.1 +0.3
comp=Z,22nm,1.5s
BUR08 Bucovina Ar. S 86.31 323 eP P 00 21 47.1 -0.5
KWP Kalwaria Pacla 86.32 326 eP P 00 21 47.3 -0.2
KWP Kalwaria Pacla 86.32 326 eP P 00 21 47.2 -0.2
comp=Z,196nm,1.2s
KWP Kalwaria Pacla 86.32 326 eP P 00 21 47.2 -0.2
KWP pmax pmax
comp=Z,196nm,1.2s
BUR04 Bucovina Ar. S 86.32 323 eP P 00 21 46.8 -0.9
BURAR Bucovina Array 86.32 323 ⇑iP P 00 21 47.0 -0.6
TIRR Tirgusor 86.50 319 ⇑iP P 00 21 53.3 +4.9
VRI Vrincioaia 86.59 321 ⇑iP P 00 21 49.6 +0.7
TLB Topalu 86.63 320 ⇑iP P 00 21 48.2 -0.9
PLOR Plostina 86.64 321 ⇑iP P 00 21 41.5 -7.7
ISCO Idaho Springs 86.74 46 P P 00 21 50.6 +0.6
baz=304
ISCO Idaho Springs 86.74 46 eP P 00 21 50.7 +0.6
comp=Z,14nm,1.5s
ISCO Idaho Springs 86.74 46 eP P 00 21 50.7 +0.6
ISCO pmax pmax
comp=Z,14nm,1.5s
A33A Warroad 86.99 34 P P 00 21 50.2 -0.5
baz=311
S22A 4UR Ranch, Cre 87.10 48 P P 00 21 52.2 +0.3
baz=304
S22A 4UR Ranch, Cre 87.10 48 eP P 00 21 52.7 +0.8
comp=Z,7.4nm,1.1s
AGMN Agassiz Nation 87.17 35 P P 00 21 51.2 -0.5
baz=311
AGMN Agassiz Nation 87.17 35 eP P 00 21 51.6 0.0
comp=Z,25nm,1.1s
MLR Muntele Rosu 87.26 321 ⇑iP P 00 21 42.7 -10
DOPR Dopca 87.26 322 ⇓iP P 00 21 51.7 -0.5
TUC Tucson 87.30 55 P P 00 21 53.2 +0.5
baz=302
TUC Tucson 87.30 55 eP P 00 21 53.6 +0.9
comp=Z,11nm,1.1s
TUC Tucson 87.30 55 eP P 00 21 53.6 +0.9
TUC pmax pmax
comp=Z,11nm,1.1s
TRPA Tarpa 87.38 325 ⇑iP P 00 21 52.1 -0.5
B34A Aery, Baudette 87.66 34 P P 00 21 53.5 -0.5
baz=312
ASF Jabal al Asfar 87.92 306 P P 00 21 55.6 -0.1
comp=Z,4.7nm,1.0s,baz=34,slow=1.6,SNR=8.3
SDCO Great Sand Dun 87.97 48 P P 00 21 56.0 -0.1
baz=305
SDCO Great Sand Dun 87.97 48 eP P 00 21 56.0 -0.1
comp=Z,6.8nm,1.1s
ARR Arges 88.05 322 ⇓iP P 00 21 55.8 -0.2
DRGR 88.16 324 ⇓iP P 00 21 55.2 -1.3
B35A Bob, Littlefor 88.20 34 P P 00 21 56.5 -0.1
baz=312
B35A Bob, Littlefor 88.20 34 eP P 00 21 56.5 -0.1
comp=Z,18nm,1.1s
OGNE Ogallala 88.30 44 P P 00 21 57.1 -0.3
baz=307
LOT Lotru 88.47 322 ⇑iP P 00 21 57.0 -1.1
KSP Ksiaz 88.51 330 eP P 00 21 58.2 +0.2
KSP Ksiaz 88.51 330 eP P 00 21 58.2 +0.2
C35A Jirik Farms, M 88.52 35 P P 00 21 57.4 -0.7
baz=312
MMAI Mount Meron Ar 88.53 307 P P 00 21 57.9 -0.6
comp=Z,8.0nm,0.9s,baz=59,slow=9.0,SNR=11
LAZ Ladron 88.74 51 eP P 00 22 00.5 +0.8
H32A Carlson Farm, 88.78 39 P P 00 21 59.1 -0.3
baz=310
DPC Dobruska-Polom 88.85 329 eP P 00 21 59.0 -0.6
DPC Dobruska-Polom 88.85 329 eP P 00 21 59.0 -0.6
G33A Ortonville 88.88 38 P P 00 21 59.8 0.0
baz=310
319A Douglas 88.88 55 eP P 00 22 01.3 +1.0
D35A Remer 88.89 35 P P 00 21 59.2 -0.6
baz=312
TASM ASL Pad, Albuq 88.90 50 P P 00 22 00.6 +0.2
baz=304
ANMO Albuquerque 88.91 50 P P 00 21 59.3 -1.1
comp=Z,2.1nm,0.9s,baz=292,slow=6.6,SNR=7.5
ANMO Albuquerque 88.91 50 P P 00 22 00.4 0.0
baz=304
ANMO Albuquerque 88.91 50 eP P 00 22 01.2 +0.7
comp=Z,5.2nm,1.1s
ANMO Albuquerque 88.91 50c iP P 00 22 00.7 +0.3
ANMO pmax pmax
comp=Z,6.0nm,1.3s
TASL Snake Pit, Alb 88.91 50 P P 00 22 00.5 +0.1
baz=304
VYHS Vyhne 88.97 327 eP P 00 21 59.6 -0.6
VYHS Vyhne 88.97 327 eP P 00 21 59.6 -0.6
T25A Trinidad 89.03 48 P P 00 22 01.0 0.0
baz=305
T25A Trinidad 89.03 48 eP P 00 22 01.8 +0.8
comp=Z,18nm,1.6s
C36A Pine Crest Far 89.04 34 P P 00 22 00.3 -0.3
baz=313
E35A Pequot Lakes 89.06 36 P P 00 22 00.4 -0.2
baz=312
F34A Alexandria 89.12 37 P P 00 22 00.9 -0.1
baz=311
BNM Barren Site 89.23 51 eP P 00 22 02.8 +0.8
D36A Goodland 89.28 35 P P 00 22 01.0 -0.6
baz=313
G34A Benson 89.28 37 P P 00 22 01.9 +0.1
baz=311
121A Cookes Peak, D 89.32 53 P P 00 22 03.2 +0.8
baz=303
C37A Embarrass 89.39 34 P P 00 22 01.6 -0.6
baz=313
F35A Swanville 89.44 36 P P 00 22 02.5 0.0
baz=312
BZS Buzias 89.51 323 ⇑iP P 00 22 01.4 -1.4
EYMN Ely 89.57 33 P P 00 22 02.9 -0.2
baz=314
EYMN Ely 89.57 33 eP P 00 22 03.5 +0.4
comp=Z,19nm,1.1s
CLL Collm 89.60 331 iP P 00 22 02.6 -0.5
CLL Collm 89.60 331 iP P 00 22 02.6 -0.5
D37A Cotton 89.66 34 P P 00 22 02.8 -0.7
baz=313
E36A McGregor 89.67 35 P P 00 22 03.5 -0.1
baz=313
ECSD EROS Data Cent 89.73 39 P P 00 22 03.6 -0.3
baz=310
ECSD EROS Data Cent 89.73 39 eP P 00 22 04.0 +0.2
comp=Z,11nm,1.0s
C38A Sawbill Land. 89.84 33 P P 00 22 03.8 -0.5
baz=314
G35A Watkins 89.91 37 eP P 00 22 05.7 +1.0
comp=Z,32nm,1.0s
F36A Milaca 89.98 36 P P 00 22 05.0 0.0
baz=312
F36A Milaca 89.98 36 eP P 00 22 05.0 0.0
comp=Z,8.2nm,1.0s
MDVR Moldovita 90.01 323 ⇓iP P 00 22 03.5 -1.7
H35A Sunnyside Ranc 90.07 37 P P 00 22 05.5 +0.1
baz=311
G36A St. Michael 90.28 36 P P 00 22 06.5 +0.1
baz=312
BGNE Belgrade 90.33 41 P P 00 22 06.0 -0.7
baz=309
E38A The Farm, Brul 90.47 34 P P 00 22 06.9 -0.4
baz=314
F37A Hinrichs Farm, 90.53 36 P P 00 22 07.3 -0.3
baz=313
H36A Jesseland, He 90.63 37 P P 00 22 08.7 +0.7
baz=312
F38A Pierce - Schro 90.76 35 P P 00 22 08.7 +0.1
baz=314
SPMN Marine on St. 90.78 36 P P 00 22 08.7 -0.1
baz=313
SPMN Marine on St. 90.78 36 eP P 00 22 09.3 +0.5
comp=Z,18nm,1.0s
CONA Conrad Observa 90.79 328 ePcP P 00 22 08.5 -0.3
comp=Z,5.5nm,1.2s
KHC Kasperske Hory 90.96 330 eP P 00 22 08.4 -1.1
KHC epP sP 00 22 18.7 +0.9
KHC Kasperske Hory 90.96 330 eP P 00 22 08.4 -1.1
KHC e 00 22 18.7
CBKS Cedar Bluff 91.00 44 P P 00 22 09.2 -0.7
baz=308
GERES GERESS Array B 91.11 329 P P 00 22 08.5 -1.8
comp=Z,0.6nm,0.6s,baz=45,slow=4.0,SNR=6.5
GEA0 GERESS Array S 91.12 329 eP P 00 22 08.8 -1.5
E39A Mellen 91.13 34 P P 00 22 09.8 -0.5
baz=314
H37A Dierke Farm, C 91.16 37 P P 00 22 10.7 +0.2
baz=313
J36A Seneca 1, Swea 91.24 38 P P 00 22 10.8 -0.2
baz=312
J36A Seneca 1, Swea 91.24 38 eP P 00 22 11.3 +0.4
comp=Z,20nm,0.9s
F39A Loretta 91.27 35 P P 00 22 10.4 -0.6
baz=314
I37A Lemond, Waseca 91.29 37 P P 00 22 11.4 +0.2
baz=312
G38A Ridgeland 91.31 36 P P 00 22 10.8 -0.4
baz=314
DIVS Divibare 91.38 323 eP P 00 22 10.7 -1.0
comp=Z,3.6nm,1.2s
E40A Wakefield 91.40 34 P P 00 22 11.9 +0.2
baz=315
H38A Maiden Rock 91.43 36 P P 00 22 11.9 +0.1
baz=313
ARSA Arzberg 91.43 327 ePcP P 00 22 10.3 -1.5
comp=Z,1.9nm,0.9s
MNTX Cornudas Mount 91.47 53 P P 00 22 12.6 +0.3
baz=305
MNTX Cornudas Mount 91.47 53 eP P 00 22 12.0 -0.2
comp=Z,11nm,1.0s
G39A Holcombe 91.58 35 P P 00 22 12.2 -0.3
baz=314
MOA Molln 91.59 329 iPcP P 00 22 12.3 -0.2
comp=Z,7.9nm,1.9s
K36A Gilmore City 91.64 39 P P 00 22 12.7 -0.1
baz=312
F40A Park Falls 91.66 34 P P 00 22 12.3 -0.5
baz=315
J37A Redenius Farm, 91.68 38 P P 00 22 13.1 +0.2
baz=312
I38A Scanlan Farm, 91.84 37 P P 00 22 13.5 -0.2
baz=313
L36A Harm Buss Farm 91.87 39 P P 00 22 13.9 0.0
baz=312
H39A Augusta 91.94 36 P P 00 22 14.2 +0.1
baz=314
MSTX Muleshoe 91.96 50 P P 00 22 14.5 -0.1
baz=306
MSTX Muleshoe 91.96 50 eP P 00 22 14.6 -0.1
comp=Z,5.0nm,0.9s
LPIG La Paz 91.99 61 LR LR 00 58 30.9
comp=Z,190nm,19.1s,baz=277,slow=32
K37A Belmond 92.00 38 P P 00 22 14.5 +0.1
baz=312
PERS Pernice 92.07 327 eP P 00 22 13.8 -1.0
SOKA Soboth 92.08 327 eP P 00 22 12.7 -2.1
comp=Z,3.7nm,1.0s
G40A Rib Lake 92.08 35 P P 00 22 14.9 +0.1
baz=315
AMTX Amarillo 92.14 48 P P 00 22 15.7 +0.4
baz=307
AMTX Amarillo 92.14 48 eP P 00 22 16.0 +0.6
comp=Z,29nm,1.0s
M36A Felix, Anita 92.23 40 P P 00 22 15.4 -0.1
baz=311
J38A Wedel Dairy, R 92.25 37 P P 00 22 15.6 0.0
baz=313
F41A Three Lakes 92.29 34 P P 00 22 15.8 +0.1
baz=316
F41A Three Lakes 92.29 34 eP P 00 22 16.2 +0.4
comp=Z,10.0nm,1.1s
L37A Phoenix Point, 92.36 39 P P 00 22 15.8 -0.3
baz=312
I39A Houston 92.39 36 P P 00 22 15.6 -0.7
baz=314
I39A Houston 92.39 36 eP P 00 22 16.2 0.0
comp=Z,14nm,1.1s
H40A Chili 92.44 35 P P 00 22 16.4 -0.1
baz=315
K38A Parkersburg 92.55 38 eP P 00 22 16.7 -0.3
comp=Z,17nm,0.9s
N36A Muff Farm, Cla 92.56 40 P P 00 22 17.0 0.0
baz=311
J39A Decorah 92.65 37 P P 00 22 16.9 -0.5
baz=314
M37A Trindle Farm, 92.68 39 P P 00 22 17.7 +0.1
baz=312
L38A Oak Wood Farm, 92.79 38 P P 00 22 17.8 -0.3
baz=313
VISS Visnje 92.80 327 eP P 00 22 16.4 -1.7
BOJS Bojanci 92.82 326 eP P 00 22 17.1 -1.0
H41A Junction City 92.82 35 P P 00 22 17.9 -0.2
baz=315
H41A Junction City 92.82 35 eP P 00 22 18.3 +0.1
comp=Z,18nm,1.4s
I40A Norwalk 92.83 36 P P 00 22 18.0 -0.3
baz=314
E43A Lone Tree Farm 92.85 32 P P 00 22 18.1 -0.2
baz=317
G42A Mountain 92.98 34 P P 00 22 18.8 -0.1
baz=316
K39A Oelwein 92.99 37 P P 00 22 18.2 -0.8
baz=314
N37A Lee Faris, Mou 93.02 40 eP P 00 22 19.9 +0.6
comp=Z,40nm,0.8s
I41A Arkdale 93.10 35 P P 00 22 19.3 -0.2
baz=315

JAVS	Javornik	93.11	327	*e*P		P	00 22 17.6	-2.0
J40A	Soldiers Grove	93.12	36	P		P	00 22 19.0	-0.6
	baz=314							
M38A	Pleasantville	93.15	39	P		P	00 22 19.9	+0.2
	baz=312							
F43A	Flat Rock, Esc	93.16	33	P		P	00 22 19.4	-0.3
	baz=317							
L39A	Vinton	93.33	38	P		P	00 22 20.4	-0.2
	baz=313							
G43A	Wallace	93.33	33	P		P	00 22 20.7	+0.2
	baz=317							
K40A	Colesburg	93.39	37	P		P	00 22 20.6	-0.3
	baz=314							
RETA	Reutte	93.44	330	*e*PcP		P	00 22 20.2	-0.8
	comp=Z,6.2nm,1.2s							
O37A	Wolven Farm, M	93.45	40	P		P	00 22 20.7	-0.4
	baz=312							
J41A	Loganville	93.52	36	P		P	00 22 20.9	-0.5
	baz=315							
N38A	Joes South For	93.55	39	P		P	00 22 21.2	-0.4
	baz=312							
M39A	Webster	93.67	38	P		P	00 22 22.1	-0.1
	baz=313							
I42A	Draeger Farm,	93.71	35	P		P	00 22 22.0	-0.3
	baz=316							
I42A	Draeger Farm,	93.71	35	*e*P		P	00 22 22.2	0.0
	comp=Z,16nm,1.0s							
JFWS	Jewell Farm	93.71	36	P		P	00 22 21.8	-0.5
	baz=315							
P37A	Lathrop	93.72	41	P		P	00 22 21.8	-0.6
	baz=312							
L40A	Anamosa	93.79	38	P		P	00 22 22.5	-0.2
	baz=314							
L40A	Anamosa	93.79	38	*e*P		P	00 22 22.5	-0.2
	comp=Z,27nm,1.2s							
FETA	Feichten	93.81	330	*i* PcP		P	00 22 21.8	-1.1
	comp=Z,2.4nm,0.9s							
BFO	Black Forest	93.83	332	*i* P		P	00 22 23.0	+0.2
K41A	Shullsburg	93.90	37	P		P	00 22 22.7	-0.5
	baz=315							
N39A	Derby Farms, D	93.90	39	P		P	00 22 23.2	0.0
	baz=313							
N39A	Derby Farms, D	93.90	39	*e*P		P	00 22 23.3	0.0
	comp=Z,25nm,1.1s							
DAVA	Damuels	93.98	330	*e*PcP		P	00 22 21.9	-1.8
	comp=Z,8.4nm,1.4s							
J42A	Columbus	94.01	36	P		P	00 22 23.3	-0.4
	baz=316							
TX31	Lajitas Ar. Si	94.04	54	*e*P		P	00 22 24.7	+0.4
TXAR	Lajitas Array	94.04	54	P		P	00 22 24.5	+0.3
	comp=Z,8.6nm,0.8s,baz=315,slow=2.7,SNR=78							
I43A	Langenfeld Bro	94.10	35	P		P	00 22 24.0	-0.1
	baz=316							
WMOK	Wichita Mounta	94.12	47	P		P	00 22 24.4	0.0
	baz=309							
WMOK	Wichita Mounta	94.12	47	*e*P		P	00 22 24.4	0.0
	comp=Z,14nm,0.9s							
WMOK	Wichita Mounta	94.12	47	*e*P		P	00 22 24.4	0.0
WMOK				pmax		pmax		
	comp=Z,14nm,0.9s							
P38A	Dawn	94.17	40	P		P	00 22 24.2	-0.2
	baz=312							
P38A	Dawn	94.17	40	*e*P		P	00 22 24.3	-0.2
	comp=Z,30nm,1.2s							
L41A	Preston	94.17	37	P		P	00 22 23.6	-0.8
	baz=314							
K42A	Prairie Point,	94.28	36	P		P	00 22 24.0	-0.9
	baz=315							
FUORN	Ofenpass-Fuorn	94.32	330	*e*P		P	00 22 24.8	-0.6
	comp=Z,8.8nm,1.0s							
J43A	Natural Harves	94.32	35	P		P	00 22 25.1	0.0
	baz=316							
F46A	Macinaw City C	94.34	32	P		P	00 22 25.0	-0.1
	baz=319							
DAVOX	Davos/Dischmat	94.36	330	P		P	00 22 24.2	-1.3
	comp=Z,1.7nm,0.6s,baz=355,slow=12,SNR=3.6							
N40A	Mertquake, Sal	94.40	39	P		P	00 22 25.4	-0.1
	baz=314							
Q38A	Cooks Store, C	94.56	41	P		P	00 22 25.0	-1.3
	baz=312							
L42A	Oliver, Polo	94.66	37	P		P	00 22 26.1	-0.6
	baz=315							
P39B	Salisbury	94.70	40	P		P	00 22 26.5	-0.4
	baz=313							
O40A	La Belle	94.77	39	P		P	00 22 26.8	-0.4
	baz=313							
ABTX	Abilene, Hawle	94.86	49	P		P	00 22 28.0	+0.1
	baz=308							
ABTX	Abilene, Hawle	94.86	49	*e*P		P	00 22 28.4	+0.6
	comp=Z,15nm,0.9s							
Q39A	Willow Grove F	94.87	41	P		P	00 22 27.2	-0.6
	baz=313							
R38A	Fenwick Farm,	94.91	42	P		P	00 22 26.3	-1.6
	baz=312							
L43A	Garden Prairie	95.01	36	P		P	00 22 27.6	-0.7
	baz=316							
P40A	Paris	95.07	40	P		P	00 22 28.5	-0.2
	baz=313							
P40A	Paris	95.07	40	*e*P		P	00 22 28.8	+0.1
	comp=Z,12nm,0.9s							
TUL1	Leonard	95.26	44	P		P	00 22 29.2	-0.4
	baz=310							
S38A	Stockton	95.28	42	P		P	00 22 28.6	-1.0
	baz=312							
O41A	Passleys Farm,	95.32	39	P		P	00 22 29.4	-0.4
	baz=314							
R39A	Chumby, Stover	95.33	41	P		P	00 22 28.7	-1.2
	baz=312							
Q40A	Laux Farm, Aux	95.42	40	P		P	00 22 29.6	-0.6
	baz=313							
M43A	Waltham Townsh	95.43	37	P		P	00 22 29.7	-0.6
	baz=316							
T38A	Diamond	95.44	43	P		P	00 22 29.7	-0.7
	baz=312							
P41A	Barry, Barry	95.53	39	P		P	00 22 30.4	-0.3
	baz=314							
S39A	Bolivar	95.58	42	P		P	00 22 30.0	-1.0
	baz=312							
S39A	Bolivar	95.58	42	*e*P		P	00 22 30.2	-0.8
	comp=Z,5.2nm,0.8s							
R40A	Maddies Statio	95.79	41	P		P	00 22 30.9	-1.0
	baz=313							
R40A	Maddies Statio	95.79	41	*e*P		P	00 22 31.1	-0.9
	comp=Z,36nm,1.8s							
Q41A	Truxton	95.93	40	P		P	00 22 32.1	-0.5
	baz=314							
M44A	Midewin, Midew	95.95	36	P		P	00 22 31.9	-0.7
	baz=316							
P42A	Winchester	95.99	39	P		P	00 22 32.4	-0.4
	baz=314							
P42A	Winchester	95.99	39	*e*P		P	00 22 32.9	+0.1
	comp=Z,16nm,1.2s							
T39A	Clever	96.00	42	P		P	00 22 32.0	-0.9
	baz=312							
JCT	Junction City	96.06	51	P		P	00 22 33.0	-0.3
	baz=308							
S40A	Lebanon	96.12	41	P		P	00 22 32.6	-0.9
	baz=313							
R41A	Rosebud	96.30	40	P		P	00 22 33.7	-0.6
	baz=314							
N44A	Piper City	96.33	37	P		P	00 22 33.2	-1.1
	baz=316							
U39A	Green Forest	96.36	43	P		P	00 22 33.7	-0.9
	baz=312							
T40A	Mansfield	96.42	42	P		P	00 22 33.8	-1.1
	baz=313							
CCM	Cathedral Cave	96.54	40	P		P	00 22 34.2	-1.2
	baz=314							
CCM	Cathedral Cave	96.54	40	*e*P		P	00 22 34.9	-0.5
	comp=Z,18nm,1.5s							
CCM	Cathedral Cave	96.54	40	*e*P		P	00 22 34.9	-0.5
CCM				pmax		pmax		
	comp=Z,18nm,1.5s							
V39A	Pettigrew	96.62	43	P		P	00 22 34.7	-1.1
	baz=312							
U40A	Yellville	96.75	43	P		P	00 22 35.3	-1.1
	baz=312							
S42A	Caledonia	97.00	40	P		P	00 22 36.5	-1.0
	baz=314							
SFIN	Lafayette	97.17	36	P		P	00 22 37.4	-0.8
	baz=317							
Q44A	Meyer Farm, Va	97.20	39	P		P	00 22 37.6	-0.7
	baz=315							
T42A	Van Buren	97.33	41	P		P	00 22 37.9	-1.0
	baz=314							
MIAR	Mount Ida	97.53	44	P		P	00 22 39.3	-0.6
	baz=312							
V41A	Mountainview	97.56	43	P		P	00 22 38.8	-1.2
	baz=313							
SBA	Scott Base	106.75	175	*e*Pdif		Pdif	00 23 19.8	+0.1
	comp=Z,27nm,1.6s							
SBA	Scott Base	106.75	175	*e*P		Pdif	00 23 19.8	+0.1
SBA				pmax		pmax		
	comp=Z,27nm,1.6s							
QSPA	South Pole Qui	117.99	180	PKP		PKPdf	00 27 49.9	-1.6
	comp=Z,3.8nm,1.0s,baz=2.9,slow=2.4,SNR=3.6							
TORD	Torodi Ar. Bea	124.66	313	PKP		PKPdf	00 28 04.4	-1.5
	comp=Z,1.4nm,0.7s,baz=17,slow=2.9							
KOWA	Kowa	127.12	319	PKP		PKPdf	00 28 10.1	-0.4
	comp=Z,4.1nm,0.9s,baz=165,slow=1.4,SNR=5.5							
SDV	Santo Domingo	130.55	47	PKP		PKPdf	00 28 16.7	-0.6
	comp=Z,18nm,0.9s,baz=312,slow=2.5,SNR=18							
SDV	Santo Domingo	130.55	47	*e*PKPdf		PKPdf	00 28 16.8	-0.5
ROSC	El Rosal	130.98	54	PKP		PKPdf	00 28 17.9	-0.5
	comp=Z,3.2nm,0.3s,baz=270,slow=20,SNR=3.5							
DBIC	Dimbokro	133.74	314	PKP		PKPdf	00 28 22.6	-0.5
	comp=Z,2.0nm,0.6s,baz=14,slow=3.0,SNR=3.7							
SAML	Samuel	148.44	58	*e*PKPdf		PKPdf	00 28 49.3	0.0
LPAZ	La Paz	148.56	75	PKP		PKPdf	00 28 50.7	+0.5
	comp=Z,28nm,0.8s,baz=316,slow=3.4,SNR=50							
LPAZ				PKPbc		PKPbc	00 28 53.9	+0.1
	comp=Z,28nm,0.8s,baz=320,slow=3.1,SNR=21							
PLCA	Paso Flores	149.52	123	PKPbc		PKPbc	00 28 55.1	+0.1
	comp=Z,13nm,0.9s,baz=267,slow=3.2,SNR=16							
LCO	Las Campanas	150.08	100	*e*PKPdf		PKPdf	00 28 52.3	+0.4
LCO				*e*PKPbc		PKPbc	00 28 56.9	0.0

BJI ***30*** *00:14:45.7, 34°.23S×176°.76W, h35km, mb5.3/4, mB5.6/3, Ms4.9/2, Ms7 4.7/2*

NEIC ***30*** *00:14:56.2±0.4, 33°.42S×178°.28W, h10km, mb4.9/10, Error ellipse: s-maj=12.2km s-min=8.1km az=121.0*

ISCJB ***30*** *00:14:59.0±0.5, 33°.41S±0°.06×178°.47W±0°.09, h40km, mb4.7/24, MS4.3/14, Error ellipse: s-maj=12.1km s-min=6.8km az=27.6*

IDC ***30*** *00:15:00.8±0.5, 33°.27S×178°.42W, h38km±3km, mb4.4/13, mb1 4.6/14, mb1mx4.3/40, mbtmp4.6/14, ML4.6/1, MS4.3/13, Ms1 4.3/13, ms1mx3.9/40, Error ellipse: s-maj=15.1km s-min=13.0km az=72.0*

ISC 30 00:15:00.2±0.5, 33°.27S±0°.05×178°.27W±0°.08, h43km±3km, h43km:pP-P, n89, σ2°.13/102, mb4.9/24, MS4.4/14, 2C-1D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	4.01	4	Pn		Pn	00 15 53.0	-6.1
	78nm,0.3s,baz=198,slow=20,SNR=3.3						
RAO				Sn		Sn	00 16 39.5	-5.4
	149nm,0.3s,baz=107,slow=20,SNR=3.5						
RAO	Raoul Island	4.01	4	*e*Pn		Pn	00 16 00.0	+0.9
RAO				Sn		Sn	00 16 39.5	-5.4
MXZ	Matakaoa Point	5.12	212	*e*Pn		Pn	00 16 11.1	-3.2
URZ	Urewera	6.24	216	Pn		Pn	00 16 27.7	-1.9
	13nm,0.3s,baz=58,slow=3.1,SNR=28						
URZ				Sn		Sn	00 17 37.4	-2.3
	32nm,0.3s,baz=177,slow=21,SNR=14						
URZ	Urewera	6.24	216	*e*Pn		Pn	00 16 28.2	-1.4
URZ				Sn		Sn	00 17 37.4	-2.3
OUZ	Omahuta	7.01	252	*e*Pn		Pn	00 16 42.1	+1.8
BKZ	Black Stump Fm	7.25	214	*e*Pn		Pn	00 16 40.8	-2.8
OXZ	Oxford	12.59	214	*e*Pn		Pn	00 17 53.0	-3.6
OXZ				*e*Sn		Sn	00 20 02.1	-13
RPZ	Rata Peaks	13.36	216	Pn		Pn	00 18 01.3	-5.8
	2.4nm,0.3s,baz=41,slow=3.9,SNR=9.9						
RPZ				Sn		Sn	00 20 19.6	-14
	1.9nm,0.3s,baz=337,slow=21,SNR=10						
DZM	Mont Dzumac	17.52	306	P		P	00 19 04.3	+2.2
	1.0nm,0.3s,baz=121,slow=16,SNR=16						
DZM				LR		LR	00 24 33.5	
	comp=Z,1μm,18.2s,baz=177,slow=33						
DZM	Mont Dzumac	17.52	306	*e*P		P	00 19 05.5	+3.4
	213nm,1.4s						
DZM				*e*LR		LR	00 23 20.0	
	2μm,25.6s						
DZM	Mont Dzumac	17.52	306	*e*P		P	00 19 04.9	+2.9
	62nm,0.9s						
AFI	Afiamalu	20.16	19	P		Pn	00 19 33.9	+0.8
	38nm,0.5s,baz=156,slow=20,SNR=1.9						
RAR	Rarotonga	20.32	58	LR		LR	00 26 49.7	
	comp=Z,548nm,19.1s,baz=264,slow=35						
TBI	Tubuai	27.14	76	*e*LR		LR	00 26 44.3	
	437nm,23.0s						
EIDS	Eidsvold	27.79	278	*e*P		P	00 20 47.1	+1.9
	14nm,1.0s						
PPT2	Papeete2	30.12	66	*e*LR		LR	00 28 16.4	
	342nm,21.0s						
PPT	Papeete	30.13	66	LR		LR	00 31 15.1	
	comp=Z,383nm,19.3s,baz=200,slow=32						
STKA	Stephens Creek	33.71	261	P		P	00 21 37.2	-0.2
	1.8nm,0.5s,baz=108,slow=9.6,SNR=2.5						
STKA				LR		LR	00 33 53.0	
	comp=Z,335nm,19.3s,baz=58,slow=34						
CTA	Charters Tower	34.14	284	P		P	00 21 42.3	+1.1
	7.5nm,0.4s,baz=112,slow=10,SNR=22						
CTA				pP		pP	00 21 53.2	+0.3
	13nm,0.6s,baz=120,slow=6.1,SNR=10						
CTAO	Charters Tower	34.14	284	*e*P		P	00 21 42.3	+1.1
	15nm,0.6s						
RKT	Rikitea	39.24	86	*e*LR		LR	00 32 08.5	
	513nm,29.5s						
COEN	Coen	39.92	289	*e*P		P	00 22 30.4	+0.1
	64nm,1.8s						
AS01	Alice Springs	42.77	270	*e*P		P	00 22 52.8	-0.8
AS31	Alice Springs	42.81	270	*e*P		P	00 22 54.2	+0.2
	8.2nm,0.6s						
ASAR	Alice Springs	42.81	270	P		P	00 22 54.1	+0.2
	22nm,0.6s,baz=109,slow=7.5,SNR=122						
ASAR				pP		pP	00 23 05.6	-0.3
	13nm,0.7s,baz=112,slow=8.0,SNR=13						
WB2	Warramunga Arr	44.04	275	*e*P		P	00 23 03.3	-0.6
WB2				*e*S		S	00 29 39.8	+6.3
WRAB	Tennant Creek	44.05	275	*e*P		P	00 23 03.9	0.0
	33nm,1.3s						
WRA	Warramunga Arr	44.05	275	P		P	00 23 03.2	-0.9
	9.9nm,0.5s,baz=115,slow=7.9,SNR=71						
WRA				pP		pP	00 23 15.3	-0.7
	4.8nm,0.5s,baz=114,slow=7.8,SNR=6.6						
FORT	Forrest	45.16	258	*e*P		P	00 23 11.7	-0.9
	33nm,0.8s						
VNDA	Vanda	45.23	186	P		P	00 23 13.7	+1.1
	0.3nm,0.7s,baz=20,slow=11,SNR=2.9						
VNDA				pP		pP	00 23 25.4	+0.8
	0.9nm,0.8s,baz=2.1,slow=7.6,SNR=4.6						
MTN	Manton Dam	50.26	281	*e*P		P	00 23 52.1	-0.3
	8.6nm,0.6s						
FITZ	Fitzroy Crossi	52.19	272	P		P	00 24 06.2	-0.6
	5.5nm,0.7s,baz=150,slow=7.4,SNR=15						
FITZ				pP		pP	00 24 18.5	-0.5
	4.6nm,0.6s,baz=144,slow=9.5,SNR=4.6						
FITZ				LR		LR	00 47 12.8	
	comp=Z,442nm,18.1s,baz=116,slow=37						
FITZ	Fitzroy Crossi	52.19	272	*e*P		P	00 24 07.0	+0.2
	68nm,1.9s						
FITZ				pP		pP	00 24 18.5	-0.5
CASY	Casey	52.52	209	*e*P		P	00 24 01.8	-6.7
	15nm,0.8s						
SAUI	Saumlaki	52.85	287	*e*P		P	00 24 09.7	-2.0
	357nm,0.9s						
QSPA	South Pole Qui	56.85	180	P		P	00 24 42.1	+2.0
	5.8nm,0.7s,baz=17,slow=0.2,SNR=14						
QSPA				pP		pP	00 24 53.4	+0.9
	10nm,0.6s,baz=40,slow=1.5,SNR=11						
QSPA				LR		LR	00 48 16.6	
	comp=Z,298nm,18.1s,baz=9.5,slow=35						
QSPA	South Pole Qui	56.85	180	*e*P		P	00 24 40.1	-0.1
	7.6nm,0.6s						
QSPA				pP		pP	00 24 53.5	+0.9
RPN	Rapa Nui	58.94	104	LR		LR	00 45 30.5	
	comp=Z,223nm,19.1s,baz=249,slow=31						
DAV	Davao City (W)	66.65	296	LR		LR	00 54 04.0	
	comp=Z,72nm,18.9s,baz=38,slow=35						
MAW	Mawson	69.56	201	P		P	00 26 04.8	+0.8
	0.7nm,0.3s,baz=94,slow=19,SNR=2.9						
PMSA	Palmer Station	69.76	155	LR		LR	00 52 21.4	
	comp=Z,180nm,18.3s,baz=235,slow=32						
SYO	Syowa Base	74.28	193	*e*P		P	00 26 31.8	-0.5
SYO	Syowa Base	74.28	193	*e*X		P	00 26 38.0	+5.7
SYO	Syowa Base	74.28	193	*e*PcP		PcP	00 26 45.4	-1.6
SNAA	Sanae	75.30	179	P		P	00 26 50.8	+12
SNAA	Sanae	75.30	179	P		P	00 26 38.6	+0.2
	4.9nm,1.2s,baz=175,slow=12,SNR=14						
SNAA				pP		PcP	00 26 50.5	-1.0
	6.9nm,0.8s,baz=200,slow=8.4,SNR=17						
SNAA				LR		LR	00 59 21.7	
	comp=Z,154nm,18.1s,baz=164,slow=35						
VNA3	Neumayer Olymp	75.47	176	P		P	00 26 51.9	+13
VNA2	Neumayer--Watz	75.90	177	P		P	00 26 55.3	+14
	baz=173,slow=4.4						
VNA1	Neumayer--Stat	76.13	177	P		P	00 26 56.3	+13
ASAJ	Asahikawa	84.88	333	LR		LR	00 59 40.4	
	comp=Z,168nm,20.2s,baz=116,slow=32						
NJ2	Nanjing	87.94	311	*e*P		P	00 27 41.8	-3.5
NJ2				pmax		pmax		
	comp=Z,18nm,0.5s							
PETK	Petropavlovsk-	88.53	346	P		P	00 27 48.7	+1.1
	7.1nm,0.8s,baz=123,slow=7.7							
CMB	Columbia Colle	89.04	42	P		P	00 27 52.2	+1.7
	1.2nm,0.5s							
YBH	Yreka Blue Hor	90.42	38	P		P	00 27 58.2	+1.3
	1.7nm,1.0s,baz=187,slow=8.1,SNR=2.9							
NVAR	Mina Array Bea	90.49	43	P		P	00 27 59.1	+1.7
	2.0nm,1.0s,baz=215,slow=8.4,SNR=7.6							
GYA	Guiyang	92.78	300	*e*P		P	00 28 04.0	-4.2
GYA				pP		pP	00 28 15.5	-5.8
GYA				PP		PP	00 31 54.3	+3.2
GYA				SKS		SKSac	00 38 35.0	-3.7
GYA				S		ScS	00 39 10.8	-1.6
GYA				pmax		pmax		
	comp=Z,10.0nm,1.0s							
NNA	Nana	92.85	106	LR		LR	01 01 48.6	
	comp=Z,209nm,19.6s,baz=242,slow=30							
TXAR	Lajitas Array	94.12	58	P		P	00 28 17.8	+3.4
	0.5nm,0.8s,baz=204,slow=2.7,SNR=4.2							
CD2	Chengdu	97.41	302	P		P	00 28 24.0	-5.3
HHC	Hu-ho-hao-te	98.05	314	*e*P		P	00 28 27.3	-4.7
HHC				pP		Pdif	00 28 37.8	+5.8
HHC				sP		pP	00 28 41.8	-3.3
HHC				S		S	00 39 53.5	-2.1
HHC				sS		pS	00 40 12.0	-0.5
HHC				pmax		pmax		
	comp=Z,73nm,5.3s							
HHC				LR		LR		
	comp=N,92nm,17.3s							
HHC				LR		LR		
	comp=E,77nm,18.1s							
HHC				LR		LR		
	comp=Z,430nm,19.9s							
CPUP	Villa Florida	98.38	129	LR		LR	01 07 31.1	
	comp=Z,144nm,18.5s,baz=220,slow=32							
LZH	Lanzhou	100.24	306	*e*P		Pdif	00 28 38.5	-3.4
LZH				pP		pPdif	00 28 48.0	-7.0
LZH				sP		pP	00 28 52.8	-2.3
LZH				S		Sdif	00 40 12.0	-2.3
LZH				sS		sS	00 40 35.0	-1.4
WMQ	Urumqi	114.80	307	PKP		PKPdf	00 33 26.8	-9.0
WMQ				LR		LR		
	comp=N,210nm,25.1s							
WMQ				LR		LR		
	comp=E,140nm,24.1s							
WMQ				LR		LR		
	comp=Z,130nm,28.1s							
MKAR	Makanchi Array	119.41	309	PKP		PKPdf	00 33 44.6	+0.1
	1.2nm,0.8s,baz=89,slow=1.6,SNR=5.1							
MKAR				pPKP		pPKPdf	00 33 57.0	-1.1
	0.7nm,0.6s,baz=196,slow=1.5,SNR=4.0							
ZALV	Zalesovo Beam	120.00	317	PKP		PKPdf	00 33 45.1	-0.3
	0.5nm,0.4s,baz=75,slow=6.1,SNR=3.2							
ZALV				pPKP		pPKPdf	00 33 58.3	-0.5
	0.5nm,0.3s,baz=149,slow=3.4,SNR=2.1							
KSH	Kashi	121.47	299	PKP		PKPdf	00 33 41.5	-7.4
KSH				PP		PP	00 35 25.0	+3.5
KSH				AMB		AMB		
	comp=Z,240nm,7.2s							
KURK	Kurchatov	122.84	313	PKP		PKPdf	00 33 50.8	-0.1
KURK				pPKP		pPKPdf	00 34 04.1	-0.3
KURBB	Kurchatov Arra	122.87	312	PKP		PKPdf	00 33 50.8	-0.2
	1.8nm,0.6s,baz=109,slow=1.9,SNR=9.5							
KURBB				pPKP		pPKPdf	00 34 04.1	-0.4
	1.2nm,0.5s,baz=110,slow=2.1,SNR=5.0							
BVAR	Borovoye Array	128.26	314	PKP		PKPdf	00 34 03.1	+1.8
	1.2nm,0.5s,baz=69,slow=4.9,SNR=6.8							
BVAR				pPKP		pPKPdf	00 34 15.3	+0.5
	1.3nm,0.5s,baz=33,slow=5.5,SNR=5.1							
GEYT	Alibeck	134.50	293	PKP		PKPdf	00 34 15.8	+2.2
	26nm,0.8s,baz=348,slow=6.3,SNR=2.5							
AKTO	Aktyubinsk	135.82	310	PKP		PKPdf	00 34 18.0	+2.4
	1.1nm,0.7s,baz=76,slow=8.3,SNR=2.9							
ARCES	ARCESS Array B	141.33	347	PKhKP		PKPpre	00 34 18.4	
	2.1nm,0.9s,baz=28,slow=2.1,SNR=5.3							
ARCES				PKP		PKPdf	00 34 26.1	+0.9
	1.6nm,0.8s,baz=48,slow=1.8,SNR=5.3							
GNI	Garni	145.11	294	PKP		PKPdf	00 34 33.4	+0.4
	2.8nm,0.9s,baz=186,slow=10,SNR=4.5							
KBZ	Khabaz	146.44	300	PKPbc		PKPab	00 34 37.1	-0.2
	6.0nm,1.0s,baz=166,slow=4.7,SNR=7.2							
FINES	FINESS Array B	147.73	338	PKPbc		PKPbc	00 34 39.3	0.0
	18nm,0.8s,baz=45,slow=4.0,SNR=85							
FINES				pPKPbc		pPKPdf	00 34 50.8	+0.8
	12nm,0.6s,baz=45,slow=4.0,SNR=7.0							
ASF	Jabal al Asfar	150.48	278	PKPbc		PKPbc	00 34 48.7	+1.4
	1.3nm,0.6s,baz=153,slow=2.3,SNR=6.4							
ASF				PKPab		PKPab	00 34 55.1	+1.0
	3.2nm,0.8s,baz=108,slow=3.2,SNR=8.7							
NB2	NORSAR Subarra	151.54	350	PKP		PKPbc	00 34 49.0	+0.2
	comp=Z,4.8nm,0.7s,baz=22,slow=3.3							
MMAI	Mount Meron Ar	151.87	279	PKPbc		PKPbc	00 34 51.9	+1.4
	comp=Z,6.5nm,0.5s,baz=86,slow=5.5,SNR=28							
MMAI				pPKPbc		sPKPdf	00 35 03.1	+0.8
	comp=Z,6.3nm,0.6s,baz=76,slow=6.1,SNR=9.5							
HFS	Hagfors	151.99	347	PKPbc		PKPbc	00 34 49.5	-0.3
	comp=Z,6.9nm,0.9s,baz=90,slow=6.2,SNR=11							
HFS				PKPab		PKPab	00 34 59.4	+0.1
	comp=Z,5.5nm,0.4s,baz=70,slow=4.7,SNR=31	

2.2nm,0.3s,baz=336,slow=11,SNR=102
ASAR S **S** **00 46 16.4 -1.9**
0.9nm,0.3s,baz=312,slow=18,SNR=6.9
NWAO Narrogin (SRO) 26.65 200 P **P** **00 44 52.4 +2.0**
13nm,1.0s,baz=268,slow=5.9,SNR=4.2
NWAO Narrogin (SRO) 26.65 200 *e*P **P** **00 44 52.1 +1.7**
20nm,0.8s
STKA Stephens Creek 27.15 153 P **P** **00 44 57.5 +2.6**
4.4nm,0.9s,baz=327,slow=14,SNR=3.2
COCO West Island 30.56 260 P **P** **00 45 23.9 -1.3**
175nm,0.5s
CHTO Chiang Mai 38.79 314 P **P** **00 46 34.2 -1.7**
0.5nm,0.4s
SONM Songino Array 58.61 343 P **P** **00 49 05.6 -1.2**
0.3nm,0.4s,baz=189,slow=7.2,SNR=2.7
VNDA Vanda 71.82 173 P **P** **00 50 32.7 +1.4**
0.7nm,0.4s,baz=318,slow=9.1,SNR=13
QSPA South Pole Qui 82.04 180 P **P** **00 51 30.0 +1.1**
1.6nm,0.7s,baz=305,slow=5.5,SNR=5.2
TORD Torodi Ar. Bea 126.63 280 PKP **PKPdf** **00 58 10.4 -1.7**
0.5nm,0.8s,baz=68,slow=1.8
CPUP Villa Florida 145.60 172 PKPbc **PKPdf** **00 58 47.7 +0.9**
1.5nm,0.6s,baz=187,slow=8.1,SNR=3.2
LPAZ La Paz 151.34 147 PKPbc **PKPbc** **00 59 03.7 +0.4**
0.7nm,0.5s,baz=212,slow=3.5,SNR=4.4

NNC 30 00:39:54.5±3.4, 36°.70N×70°.66E, h172km±111km, mb2.9, mpv3.7, 6C-1D, Error ellipse: s-maj=71.5km s-min=21.8km az=64.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.99**	**33**	⇑P	Pn	00 40 55.3	-0.2
	15nm,0.4s						
SFK				⇑S	Sn	00 41 44.0	+0.9
	6.2nm,0.4s						
MNAS	**Manas**	**5.95**	**13**	⇑P	Pn	00 41 20.7	-0.1
	3.7nm,0.6s						
MNAS				⇑S	Sn	00 42 28.6	-0.1
	1.7nm,0.4s						
KK31	**Karatay Array**	**6.39**	**359**	⇑P	Pn	00 41 26.4	-0.2
	2.1nm,0.4s,baz=174,slow=12,SNR=16						
KK31				⇓S	Sn	00 42 39.7	+0.6
	1.0nm,0.3s						
AB31	**Akbulak array**	**14.77**	**331**	⇑P	P	00 43 16.3	-0.2
	1.8nm,0.5s						

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*ISCJB **30** 00:46:47.3±0.2, 43°.43N±0°.02×84°.87E±0°.03, h10km, mb4.3/66, MS4.3/10, Error ellipse: s-maj=3.5km s-min=2.7km az=11.1*
*BJI **30** 00:46:48.9, 43°.41N×84°.83E, h5km, mb4.4/26, mB4.6/17, ML4.6/12, Ms4.1/14, Ms7 3.8/10*
*NEIC **30** 00:46:49.0±0.2, 43°.44N×84°.90E, h10km, mb4.5/24, Error ellipse: s-maj=5.2km s-min=4.7km az=197.0*
*SOME **30** 00:46:49.7, 43°.40N×84°.62E, h0km, MS3.9*
*IDC **30** 00:46:50.6±2.4, 43°.50N×84°.88E, h24km±15km, mb4.0/25, mb1 4.1/31, mb1mx3.9/64, mbtmp4.1/31, ML3.8/6, MS3.4/1, Ms1 3.4/1, ms1mx2.8/63, Error ellipse: s-maj=14.7km s-min=8.8km az=49.0*
*MOS **30** 00:46:50.3±1.2, 43°.53N×84°.83E, h29km, mb4.5/23, Error ellipse: s-maj=6.9km s-min=5.0km az=117.0*
*NNC **30** 00:46:52.6±2.4, 43°.59N×84°.55E, h21km±10km, mb4.6, mpv4.3, Error ellipse: s-maj=17.7km s-min=8.8km az=111.0*
ISC 30 00:46:48.9±0.3, 43°.44N±0°.03×84°.80E±0°.02, h10km, n261, σ2°.09/290, mb4.4/72, MS4.3/10, 26C-40D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**2.13**	**79**	Pn	**Pb**	**00 47 28.0**	**+0.3**
WMQ				Sg	**Sg**	**00 47 55.5**	**-2.0**
WMQ				smax	smax		
	comp=N,9μm,0.7s						
WMQ				smax	smax		
	comp=E,8μm,0.7s						
DJR	**Jarkent**	**3.73**	**286**	*e*P	**Pb**	**00 47 58.1**	**+3.1**
	229nm,0.4s						
DJR				*e*S	**Sg**	**00 48 46.9**	**-1.8**
	590nm,0.6s						
MK01	**Makanchi Array**	**3.78**	**333**	*e*Pn	**Pn**	**00 47 49.1**	**+1.9**
MK31	**Makanchi Array**	**3.80**	**333**	⇑Pn	**Pn**	**00 47 45.9**	**-1.6**
	4.8nm,0.3s,baz=149,slow=14,SNR=1343						
MK31				⇓Pg	**Pb**	**00 47 59.1**	**+3.0**
	78nm,0.4s,baz=144,slow=16,SNR=66						
MK31				⇓Lg	Lg	00 48 47.6	
	763nm,0.6s,baz=149,slow=31,SNR=12						
MK31	**Makanchi Array**	**3.80**	**333**	*e*Pn	**Pn**	**00 47 49.8**	**+2.3**
MK31	**Makanchi Array**	**3.80**	**333**	P	**Pn**	**00 47 49.2**	**+1.7**
MK31				pmax	pmax		
	comp=Z,11nm,0.3s						
MK31				pmax	pmax		
	comp=Z,76nm,0.4s						
MKAR	**Makanchi Array**	**3.80**	**333**	Pn	**Pn**	**00 47 49.6**	**+2.1**
	comp=Z,12nm,0.3s,baz=149,slow=14,SNR=124						
MKAR				Pg	**Pb**	**00 47 59.0**	**+3.0**
	comp=Z,85nm,0.3s,baz=150,slow=17,SNR=105						
MKAR				Sn	**Sn**	**00 48 32.5**	**+0.2**
	comp=Z,114nm,0.3s,baz=152,slow=17,SNR=5.6						
MKAR				Lg	Lg	00 48 49.3	
	comp=Z,299nm,0.3s,baz=147,slow=29,SNR=13						
PDGK	**Podgornoye**	**3.87**	**270**	⇓Pn	**Pn**	**00 47 47.2**	**-1.5**
	comp=Z,209nm,0.6s						
PDGK				⇓Lg	Lg	00 48 48.6	
	comp=Z,1μm,0.9s						
PDGK	**Podgornoye**	**3.87**	**270**	P	**Pn**	**00 47 51.6**	**+3.0**
PDGK				pmax	pmax		
	comp=Z,209nm,0.6s						
SHLS	**Shalkode**	**3.91**	**268**	*e*P	**Pn**	**00 47 52.5**	**+3.4**
	comp=Z,479nm,0.5s						
SHLS				*e*S	**Sn**	**00 48 37.9**	**+2.8**
	comp=Z,2μm,0.6s						
MAKZ	**Makanchi**	**3.92**	**330**	⇑Pn	**Pn**	**00 47 51.0**	**+1.9**
	comp=Z,7.3nm,0.3s						
MAKZ				⇓Pg	**Pb**	**00 47 56.6**	**-1.5**
	comp=Z,128nm,0.5s						
MAKZ				⇓Lg	Lg	00 48 51.7	
	comp=Z,818nm,0.8s						
MAKZ	**Makanchi**	**3.92**	**330**	*e*Pn	**Pn**	**00 47 51.1**	**+1.9**
MAKZ	**Makanchi**	**3.92**	**330**	*e*P	**Pn**	**00 47 51.1**	**+1.9**
ZSN	**Zaisan**	**4.01**	**1**	*e*P	**Pg**	**00 48 05.7**	**-0.1**
	comp=Z,45nm,0.5s						
ZSN				*e*S	**Sg**	**00 49 00.6**	**+2.8**
	comp=Z,409nm,0.8s						
UZB	**Uzynbulak**	**4.23**	**268**	*e*P	**Pb**	**00 48 06.5**	**+3.0**
	comp=Z,179nm,0.5s						
UZB				*e*S	**Sg**	**00 49 02.1**	**-2.6**
	comp=Z,360nm,0.5s						
KAPS	**Kapalarasan**	**4.32**	**297**	*e*P	**Pb**	**00 48 08.7**	**+3.8**
	comp=Z,175nm,1.1s						
KAPS				*e*S	**Sg**	**00 49 05.5**	**-2.0**
	comp=Z,826nm,0.5s						
KPKS	**Kokpek**	**4.46**	**272**	*e*P	**Pb**	**00 48 09.6**	**+2.4**
	comp=Z,225nm,0.7s						
KPKS				*e*S	**Sg**	**00 49 07.6**	**-4.3**
	comp=Z,1μm,0.6s						
ZHN	**Zhinishke**	**4.66**	**269**	*e*P	**Pb**	**00 48 13.0**	**+2.3**
	comp=Z,117nm,0.3s						
ZHN				*e*S	**Sb**	**00 49 13.1**	**+6.3**
	comp=Z,575nm,0.4s						
SATY	**Saty**	**4.69**	**268**	*e*P	**Pb**	**00 48 12.7**	**+1.5**
	comp=Z,326nm,0.7s						
SATY				*e*S	**Sb**	**00 49 12.6**	**+4.8**
	comp=Z,568nm,0.4s						
PRZ	**Przheval'sk**	**4.79**	**261**	*e*Pn	**Pn**	**00 48 04.5**	**+3.2**
PRZ	**Przheval'sk**	**4.79**	**261**	*e*P	**Pn**	**00 48 04.5**	**+3.2**
KURS	**Kuram**	**4.83**	**273**	*e*P	**Pb**	**00 48 17.5**	**+3.9**
	comp=Z,121nm,0.8s						
KURS				*e*S	**Sg**	**00 49 21.2**	**-2.7**
	comp=Z,203nm,0.8s						
TDK	**Taldyqorghan**	**4.86**	**291**	*e*P	**Pg**	**00 48 19.9**	**-1.9**
	comp=Z,795nm,0.8s						
TDK				*e*S	**Sg**	**00 49 25.6**	**+0.8**
	comp=Z,3μm,0.6s						
MDOK	**Medeo**	**5.67**	**270**	⇓Pn	**Pn**	**00 48 15.0**	**+1.7**
	comp=Z,17nm,0.4s						
MDOK				⇓Pg	**Pb**	**00 48 32.0**	**+4.1**
	comp=Z,84nm,0.5s						
MDOK				⇓Lg	Lg	00 49 46.7	
	comp=Z,240nm,0.7s						
MDOK	**Medeo**	**5.67**	**270**	*e*P	**Pb**	**00 48 31.7**	**+3.8**
	comp=Z,119nm,0.6s						
MDOK				*e*S	**Sg**	**00 49 44.8**	**-5.9**
	comp=Z,153nm,1.0s						
AAA	**Alma-Ata**	**5.76**	**270**	*e*P	**Pb**	**00 48 33.0**	**+3.6**
AAA				pmax	pmax		
	comp=Z,66nm,0.3s						
ULHL	**Ulahol**	**6.41**	**262**	P	**Pn**	**00 48 25.6**	**+2.1**
	SNR=8.1						
DGZ	**Jazzator, Alta**	**6.52**	**15**	*i* P	**Pn**	**00 48 28.0**	**+3.0**
TKM2	**Tokmak 2**	**6.75**	**269**	⇓Pn	**Pn**	**00 48 30.4**	**+2.2**
	comp=Z,14nm,0.5s						
TKM2				⇑Lg	Lg	00 50 22.1	
	comp=Z,191nm,0.7s						
TKM2	**Tokmak 2**	**6.75**	**269**	P	**Pn**	**00 48 31.4**	**+3.2**
	SNR=34						
TKM2	**Tokmak 2**	**6.75**	**269**	P	**Pn**	**00 48 30.4**	**+2.2**
TKM2				pmax	pmax		
	comp=Z,14nm,0.5s						
NRN	**Naryn**	**6.81**	**256**	*e*Pn	**Pn**	**00 48 31.1**	**+1.9**
NRN	**Naryn**	**6.81**	**256**	*e*P	**Pn**	**00 48 31.1**	**+1.9**
KZA	**Kyzart**	**7.16**	**262**	P	**Pn**	**00 48 36.0**	**+1.9**
	SNR=35						
KBK	**Karagaybulak**	**7.26**	**267**	P	**Pn**	**00 48 37.6**	**+2.4**
	SNR=15						
CHMS	**Chumysh**	**7.36**	**270**	P	**Pn**	**00 48 39.7**	**+3.3**
	SNR=7.7						
USP	**Ospenovka**	**7.51**	**272**	P	**Pn**	**00 48 41.7**	**+3.2**
	SNR=11						
AAK	**Ala-Archa**	**7.59**	**268**	⇓Pn	**Pn**	**00 48 40.2**	**+0.5**
	comp=Z,9.7nm,0.7s						
AAK				⇓Pg	**Pg**	**00 49 10.1**	**-4.1**
	comp=Z,49nm,0.8s						
AAK				⇑Lg	Lg	00 50 49.4	
	comp=Z,150nm,0.8s						
AAK	**Ala-Archa**	**7.59**	**268**	P	**Pn**	**00 48 40.2**	**+0.5**
AAK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
UCH	**Uchtor**	**7.66**	**264**	P	**Pn**	**00 48 43.3**	**+2.4**
	SNR=22						
KSH	**Kashi**	**7.70**	**242**	P	Pn	00 48 50.0	+8.9
KSH				S	Sb	00 50 22.0	-12
KSH				sS	Sn	00 50 29.5	+21
KSH				pmax	pmax		
	comp=Z,230nm,4.0s						
KSH				LR	LR		
	comp=Z,1μm,4.4s						
KSH				LR	LR		
	comp=Z,780nm,8.5s						
KURBB	**Kurchatov Arra**	**8.37**	**331**	Pn	**Pn**	**00 48 48.9**	**-1.2**
	comp=Z,0.9nm,0.3s,baz=241,slow=12,SNR=38						
KURBB				Sn	**Sn**	**00 50 22.2**	**-2.4**
	comp=Z,3.0nm,0.3s,baz=154,slow=21,SNR=7.3						
KURBB				Lg	Lg	00 51 13.5	
	comp=Z,5.7nm,0.3s,baz=146,slow=30,SNR=11						
KURBB	**Kurchatov Arra**	**8.37**	**331**	⇓Pn	**Pn**	**00 48 50.4**	**+0.3**
	comp=Z,17nm,0.5s						
KURBB				⇓Sn	**Sn**	**00 50 20.9**	**-3.6**
	comp=Z,162nm,0.7s						
KURBB				⇓Lg	Lg	00 51 12.5	
	comp=Z,984nm,0.7s						
KURK	**Kurchatov**	**8.41**	**332**	⇑Pn	**Pn**	**00 48 51.4**	**+0.6**
	comp=Z,8.7nm,0.8s						
KURK				⇑Sn	**Sn**	**00 50 23.0**	**-2.7**
	comp=Z,146nm,0.9s						
KURK				⇑Lg	Lg	00 51 13.2	
	comp=Z,325nm,0.7s						
KURK	**Kurchatov**	**8.41**	**332**	*e*Pn	**Pn**	**00 48 50.9**	**+0.2**
KURK				Sn	**Sn**	**00 50 22.2**	**-3.5**
KURK	**Kurchatov**	**8.41**	**332**	*d i*P	**Pn**	**00 48 50.8**	**0.0**
MNAS	**Manas**	**9.07**	**268**	⇓Pn	**Pn**	**00 48 58.9**	**-1.1**
	comp=Z,5.1nm,0.9s						
MNAS				⇑Lg	Lg	00 51 34.3	
	comp=Z,82nm,1.3s						
MNAS	**Manas**	**9.07**	**268**	P	**Pn**	**00 48 58.9**	**-1.1**
MNAS				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SFK	**Sufi-Kurgan**	**9.11**	**252**	⇓Pn	**Pn**	**00 49 03.8**	**+3.1**
	comp=Z,1.7nm,0.6s						
SFK	**Sufi-Kurgan**	**9.11**	**252**	P	**Pn**	**00 49 03.8**	**+3.1**
SFK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
HVS	**Khovu-Aksy**	**9.79**	**35**	⇓*e*P	**Pn**	**00 49 12.2**	**+2.5**
OTUK	**Ortayu**	**9.94**	**303**	⇓Pn	**Pn**	**00 49 07.8**	**-3.9**
	comp=Z,9.0nm,0.6s						
OTUK				⇓Sn	**Sn**	**00 51 00.0**	**-3.2**
	comp=Z,16nm,0.4s						
OTUK				⇑Lg	Lg	00 52 02.0	
	comp=Z,149nm,0.8s						
OTUK	**Ortayu**	**9.94**	**303**	P	**Pn**	**00 49 07.8**	**-3.9**
OTUK				S	**Sn**	**00 51 00.3**	**-2.9**
OTUK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
OTUK				smax	smax		
	comp=N,16nm,0.4s						
KK31	**Karatay Array**	**10.43**	**273**	⇓Pn	**Pn**	**00 49 16.4**	**-2.1**
	comp=N,9.1nm,0.8s,baz=92,slow=15,SNR=45						
KK31				⇑Lg	Lg	00 52 17.0	
	comp=N,21nm,0.5s,baz=76,slow=27,SNR=3.8						
KK31	**Karatay Array**	**10.43**	**273**	*e*Pn	**Pn**	**00 49 21.5**	**+3.0**
KKAR	**Karatay Array**	**10.43**	**273**	*e*Pn	**Pn**	**00 49 21.5**	**+3.0**
ZAA0	**Zalesovo Array**	**10.52**	**0**	⇓Pn	**Pn**	**00 49 18.9**	**-0.8**
	comp=N,25nm,0.6s						
ZAA0				⇑Sn	**Sn**	**00 51 12.0**	**-5.4**
	comp=N,48nm,0.9s						
ZAA0	**Zalesovo Array**	**10.52**	**0**	*e*Pn	**Pn**	**00 49 19.1**	**-0.5**
ZALV	**Zalesovo Beam**	**10.52**	**0**	Pn	**Pn**	**00 49 18.9**	**-0.7**
	comp=N,3.5nm,0.3s,baz=184,slow=14,SNR=71						
ZALV				Sn	**Sn**	**00 51 14.7**	**-2.7**
	comp=N,13nm,0.3s,baz=176,slow=26,SNR=15						
ZALV				Lg	Lg	00 52 22.1	
	baz=196,slow=24,SNR=2.2						
NVS	**Novosibirsk**	**11.46**	**355**	⇑*i*P	**Pn**	**00 49 32.4**	**-0.1**
NVS				*e*S	**Sn**	**00 51 34.3**	**-6.1**
NVS				pmax	pmax		
	comp=N,3.0nm,0.5s						
NVS				pmax	pmax		
	comp=E,2.0nm,0.5s						
NVS				pmax	pmax		
	comp=Z,5.0nm,0.5s						
NVS				smax	smax		
	comp=N,25nm,0.6s						
NVS				smax	smax		
	comp=E,68nm,0.6s						
GTA	**Gaotai**	**11.96**	**105**	*e*P	Pn	00 49 50.3	+11
GTA				pP		00 49 54.5	
GTA				sP		00 49 57.8	
GTA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
CHCP	**Chirah Chowk**	**13.29**	**227**	P	**Pn**	**00 49 56.7**	**-0.8**
NIL	**Nilore**	**13.30**	**227**	*e*Pn	**Pn**	**00 49 56.6**	**-1.1**
NIL	**Nilore**	**13.30**	**227**	*e*P	**Pn**	**00 49 56.6**	**-1.1**
BVA0	**Borovoye Array**	**13.55**	**320**	⇓Pn	**Pn**	**00 50 00.6**	**-0.5**
	comp=Z,6.0nm,0.7s,baz=117,slow=12,SNR=40						
BVA0				Sn	**Sn**	**00 52 28.9**	**-2.7**
	comp=Z,0.6nm,0.5s,baz=138,slow=20,SNR=4.8						
BVA0				Lg	Lg	00 53 54.3	
	comp=Z,3.4nm,0.7s,baz=130,slow=25,SNR=4.7						
BVA0	**Borovoye Array**	**13.55**	**320**	P	**Pn**	**00 50 00.6**	**-0.5**
BVA0				S	**Sn**	**00 52 28.9**	**-2.7**
BVA0				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BVA0				smax	smax		
	comp=N,1.0nm,0.5s						
BVAR	**Borovoye Array**	**13.55**	**320**	Pn	**Pn**	**00 50 00.3**	**-0.7**
	comp=N,0.4nm,0.3s,baz=118,slow=13,SNR=8.9						
BVAR				Sn	Sn	00 52 21.3	-10
	baz=111,slow=22,SNR=3.0						
BVAR				Lg	Lg	00 53 59.8	
	comp=N,1.1nm,0.3s,baz=132,slow=27,SNR=6.5						
BRVK	**Borovoye**	**13.62**	**320**	⇑Pn	**Pn**	**00 50 03.1**	**+1.1**
	comp=N,11nm,0.7s						
BRVK				⇓Sn	**Sn**	**00 52 31.0**	**-2.3**
	comp=N,9.3nm,0.5s						
BRVK				⇑Lg	Lg	00 53 57.3	
	comp=N,158nm,1.2s						
BRVK	**Borovoye**	**13.62**	**320**	*e*Pn	**Pn**	**00 50 04.6**	**+2.6**
BRVK	**Borovoye**	**13.62**	**320**	*de*P	**Pn**	**00 50 04.0**	**+2.0**
MOY	**Mondy**	**13.66**	**47**	*e*P	**P**	**00 50 13.0**	**+1.4**
CEP	**Cherat**	**13.90**	**231**	P	**Pn**	**00 50 05.2**	**-0.8**
CEP				S	**Sn**	**00 52 36.0**	**-4.5**
ZAK	**Zakamensk**	**14.39**	**55**	*e*P	**Pn**	**00 50 13.0**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
LSA	**Lhasa**	**14.62**	**158**	Pn	**Pn**	**00 50 16.8**	**+0.6**
	comp=Z,12nm,0.8s						
LSA	**Lhasa**	**14.62**	**158**	P	**Pn**	**00 50 16.8**	**+0.6**
LSA				pmax	pmax		
	comp=Z,12nm,0.8s						
THW	**Thamme Wali**	**14.76**	**228**	P	**Pn**	**00 50 16.8**	**-0.9**
KBL	**Kabul**	**15.12**	**239**	*e*Pn	**P**	**00 50 26.3**	**-1.6**
	comp=Z,14nm,1.1s						
KBL	**Kabul**	**15.12**	**239**	*e*P	**P**	**00 50 26.3**	**-1.6**
KBL				pmax	pmax		
	comp=Z,14nm,1.1s						
TLY	**Talaya**	**15.13**	**50**	Lg	Lg	00 54 42.8	
	comp=Z,0.0nm,0.3s,baz=225,slow=16,SNR=3.3						
PYUN	**Piuthan**	**15.37**	**186**	*e*P	**Pn**	**00 50 23.6**	**-2.5**
	comp=Z,42nm,0.7s						
PYUN	**Piuthan**	**15.37**	**186**	*e*P	**Pn**	**00 50 24.0**	**-2.1**
	comp=Z,42nm,0.7s						
GKN	**Gorkha**	**15.40**	**181**	*e*P	**Pn**	**00 50 24.6**	**-1.8**
GUN	**Gumba**	**15.52**	**176**	*e*P	**Pn**	**00 50 26.5**	**-1.6**
	comp=Z,64nm,0.8s						
GUN	**Gumba**	**15.52**	**176**	*e*P	**Pn**	**00 50 26.9**	**-1.2**
	comp=Z,64nm,0.8s						
KKN	**Kakani**	**15.62**	**178**	*e*P	**Pn**	**00 50 27.3**	**-2.0**
KOLN	**Koldanda**	**15.66**	**184**	*e*P	**Pn**	**00 50 28.4**	**-1.4**
KOLN	**Koldanda**	**15.66**	**184**	*e*P	**Pn**	**00 50 28.4**	**-1.4**
	comp=Z,12nm,0.3s						
SONM	**Songino Array**	**15.72**	**66**	Pn	**Pn**	**00 50 30.8**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=260,slow=11,SNR=20						
SONM				Sn	**Sn**	**00 53 14.4**	**-10**
	comp=Z,0.2nm,0.3s,baz=251,slow=13,SNR=2.4						
SONM				Lg	Lg	00 54 58.4	
	comp=Z,0.2nm,0.3s,baz=261,slow=28,SNR=3.5						
SONM	**Songino Array**	**15.72**	**66**	*e*P	**P**	**00 50 32.8**	**-1.6**
SONA1	**Songino Array**	**15.72**	**66**	*e*Pn	**Pn**	**00 50 30.9**	**+0.5**
JIRN	**Jiri**	**15.78**	**175**	*e*P	**Pn**	**00 50 30.4**	**-1.1**
	comp=Z,32nm,0.5s						
JIRN	**Jiri**	**15.78**	**175**	*e*P	**Pn**	**00 50 30.6**	**-0.9**
	comp=Z,39nm,0.5s						
PKIN	**Phulchoki**	**15.83**	**178**	*e*P	**Pn**	**00 50 30.6**	**-1.5**
	comp=Z,17nm,0.5s						
PKIN	**Phulchoki**	**15.83**	**178**	*e*P	**Pn**	**00 50 30.8**	**-1.3**
	comp=Z,38nm,0.8s						
TAPN	**Taplejung**	**16.22**	**171**	*e*P	**Pn**	**00 50 37.7**	**+0.5**
	comp=Z,28nm,0.7s						
LZH	**Lanzhou**	**16.36**	**110**	*e*P	**P**	**00 50 42.8**	**+1.2**
LZH				pP	sP	00 50 45.0	-0.8
LZH				sP	pP	00 50 47.3	+2.8
LZH				S	**Sn**	**00 53 40.0**	**-0.3**
LZH				sS	S	00 53 49.5	-3.4
LZH				SS	**SnSn**	**00 54 03.8**	**+11**
LZH				pmax	pmax		
	comp=Z,23nm,1.2s						
LZH				pmax	pmax		
	comp=Z,150nm,4.6s						
LZH				LR	LR		
	comp=Z,750nm,10.8s						
LZH				LR	LR		
	comp=Z,500nm,10.5s						
LZH				LR	LR		
	comp=Z,570nm,11.1s						
RAMN	**Ramite**	**16.51**	**174**	*e*P	**Pn**	**00 50 38.9**	**-1.9**
	comp=Z,15nm,0.4s						
RAMN	**Ramite**	**16.51**	**174**	*e*P	**Pn**	**00 50 41.0**	**+0.2**
	comp=Z,15nm,0.4s						
AB31	**Akbulak array**	**18.08**	**297**	⇑Pn	**Pn**	**00 50 60.0**	**-0.1**
	comp=Z,2.9nm,0.6s						
ABKAR	**Akbulak array**	**18.08**	**297**	*e*Pn	**Pn**	**00 50 59.5**	**-0.6**
SHL	**Shillong**	**18.74**	**160**	P	**Pn**	**00 51 12.3**	**+3.9**
SHL				pmax	pmax		
	comp=Z,25nm,0.8s						
AKTO	**Aktyubinsk**	**19.52**	**300**	P	**Pn**	**00 51 17.6**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=111,slow=14,SNR=10						
AKTO				S	**Sn**	**00 54 48.7**	**-7.6**
	comp=Z,0.1nm,0.3s,baz=270,slow=18,SNR=2.0						
AKTO				Lg	Lg	00 57 04.3	
	comp=Z,0.1nm,0.3s,baz=195,slow=19,SNR=3.2						
AKTO	**Aktyubinsk**	**19.52**	**300**	⇓Pn	**Pn**	**00 51 17.9**	**+0.5**
	comp=Z,10nm,1.0s						
CD2	**Chengdu**	**19.55**	**123**	P	**P**	**00 51 15.5**	**-1.3**
CD2				pmax	pmax		
	comp=Z,30nm,0.6s						
CD2				LR	LR		
	comp=Z,350nm,12.0s						
CD2				LR	LR		
	comp=Z,410nm,15.6s						
HHC	**Hu-ho-hao-te**	**19.98**	**88**	*e*P	**Pn**	**00 51 24.0**	**+0.8**
HHC				pP	sP	00 51 28.0	+2.4
HHC				sP	pP	00 51 31.0	+6.7
HHC				S	**S**	**00 55 02.0**	**-4.2**
HHC				sS	Sn	00 55 08.8	+0.9
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,55nm,5.5s						
HHC				LR	LR		
	comp=Z,550nm,12.2s						
HHC				LR	LR		
	comp=Z,560nm,11.5s						
HHC				LR	LR		
	comp=Z,320nm,10.8s						
SVE	**Sverdlovsk**	**20.34**	**320**	*e*P	**P**	**00 51 26.3**	**+1.2**
SVE				pmax	pmax		
	comp=Z,18nm,0.7s						
GEYT	**Alibeck**	**20.93**	**264**	P	**P**	**00 51 32.2**	**+0.6**
	comp=Z,28nm,1.0s,baz=75,slow=7.6,SNR=2.4						
GYA0B	**ALIBECK ARRAY**	**20.93**	**264**	Pn	**P**	**00 51 32.3**	**+0.7**
GYA0B	**ALIBECK ARRAY**	**20.93**	**264**	*e*P	**P**	**00 51 32.9**	**+1.2**
	comp=Z,7.7nm,0.6s						
XAN	**Xi'an**	**20.96**	**108**	P	Pn	00 51 33.3	-1.3
XAN				pP	sP	00 51 39.8	+3.6
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ARU	**Arti**	**21.15**	**317**	P	**P**	**00 51 33.9**	**0.0**
	comp=Z,5.2nm,0.4s,baz=117,slow=6.6,SNR=9.5						
ARU				Lg	Lg	00 57 55.3	
	comp=Z,4.2nm,0.6s,baz=4.4,slow=19,SNR=5.0						
ARU				LR	LR	00 58 44.4	
	comp=Z,107nm,21.0s,baz=146,slow=34						
ARU	**Arti**	**21.15**	**317**	*e*P	**P**	**00 51 34.1**	**+0.2**
	comp=Z,13nm,0.5s						
ARU	**Arti**	**21.15**	**317**	*c i*P	**P**	**00 51 33.9**	**0.0**
ARU				PPP	PPP	00 51 59.1	
ARU				S	**S**	**00 55 29.9**	**+1.0**
ARU				SS	**SnSn**	**00 55 49.5**	**-0.8**
ARU				pmax	pmax		
	comp=Z,12nm,1.0s						
BRDH	**Bariadhala**	**21.47**	**163**	P	**P**	**00 51 37.9**	**+0.4**
	comp=Z,43nm,0.3s,baz=319,slow=2.9,SNR=3.6						
BOD	**Bodaibo

comp=Z,14nm,0.8s
KLR Kul'dur 32.50 63⇓ eP P 00 53 19.1 -0.4
OBN Obninsk 32.91 308⇓ eP P 00 53 23.0 0.0
OBN e*SP sP 00 53 31.8 +4.5
OBN pmax pmax
comp=Z,5.0nm,1.0s
KSAR Wonju Array Be 33.05 86 P P 00 53 23.8 -0.6
KSAR Wonju Array Be 33.05 86 P P 00 53 23.8 -0.6
KSRS Korea Array 33.07 85 P P 00 53 23.8 -0.8
comp=Z,1.3nm,0.7s,baz=280,slow=8.5,SNR=3.8
ANN Anapa 33.66 289 eP P 00 53 29.6 0.0
ANN pmax pmax
comp=Z,25nm,0.8s
AKASG Malin Array Be 37.76 301 P P 00 54 04.2 -0.5
comp=Z,1.1nm,0.5s,baz=62,slow=8.8,SNR=4.9
KIEV Kiev 37.77 301⇑ eP P 00 54 04.7 -0.1
KIEV pmax pmax
comp=Z,4.0nm,1.1s
RAYN Ar Rayn 37.88 251 eP P 00 54 06.3 +0.1
comp=Z,5.2nm,0.8s
RAYN Ar Rayn 37.88 251 P P 00 54 06.2 +0.1
RAYN pmax pmax
comp=Z,5.0nm,0.8s
BR131 Keskin Array S 37.96 282 eP P 00 54 07.6 +0.8
BRTR Keskin Array B 37.96 282 P P 00 54 07.5 +0.6
comp=Z,4.7nm,0.8s,baz=105,slow=7.3,SNR=28
FIA1 FINESS Array S 38.51 319 eP P 00 54 12.1 +1.2
FINES FINESS Array B 38.51 319 P P 00 54 10.9 0.0
comp=Z,1.3nm,0.4s,baz=100,slow=9.0,SNR=25
FINES FINESS Array B 38.51 319 eP P 00 54 11.7 +0.8
FINES pmax pmax
comp=Z,1.0nm,0.4s
ANTO Ankara 38.51 283 eP P 00 54 12.1 +0.8
comp=Z,9.1nm,0.9s
ANTO Ankara 38.51 283 eP P 00 54 12.1 +0.8
ANTO pmax pmax
comp=Z,9.0nm,0.9s
SORM Soroca 38.89 297 ⇓ iP P 00 54 13.6 -0.7
ARCES ARCESS Array B 39.45 332 P P 00 54 18.9 +0.2
comp=Z,0.8nm,0.4s,baz=88,slow=7.3,SNR=21
ARCES ARCESS Array B 39.45 332 eP P 00 54 20.3 +1.5
ARCES ARCESS Array B 39.45 332 P P 00 54 19.0 +0.2
ARCES pmax pmax
comp=Z,1.0nm,0.4s
MMAI Mount Meron Ar 39.66 272 P P 00 54 21.2 +0.2
comp=Z,1.2nm,0.7s,baz=68,slow=12,SNR=5.3
CFR Carcaliu 39.88 293 ⇓ iP P 00 54 22.1 -0.5
GIRR Girov 40.42 296 ⇑ iP P 00 54 28.4 +1.3
VRI Vrincioaia 40.60 294 ⇓ iP P 00 54 29.8 +1.2
BIZ Bicaz 40.68 296 ⇓ iP P 00 54 30.7 +1.4
BURAR Bucovina Array 41.06 297 ⇑ iP P 00 54 32.7 +0.2
BUR04 Bucovina Ar. S 41.06 297 eP P 00 54 33.2 +0.6
BUR08 Bucovina Ar. S 41.06 297 eP P 00 54 33.0 +0.5
MLR Muntele Rosu 41.24 294 P P 00 54 34.4 +0.4
comp=Z,0.3nm,0.6s,baz=56,slow=15,SNR=4.8
MLR Muntele Rosu 41.24 294 ⇓ iP P 00 54 35.9 +1.9
MLR Muntele Rosu 41.24 294 eP P 00 54 35.1 +1.1
comp=Z,4.4nm,0.8s
DOPR Dopca 41.45 295 ⇓ iP P 00 54 36.9 +1.2
ARCR ARCALIA 41.78 297 ⇑ iP P 00 54 39.7 +1.4
KWP Kalwaria Pacla 42.08 301 eP P 00 54 41.5 +0.8
comp=Z,230nm,1.4s
KWP Kalwaria Pacla 42.08 301 eP P 00 54 41.5 +0.8
KWP pmax pmax
comp=Z,230nm,1.4s
ARR Arges 42.15 294 ⇑ iP P 00 54 43.0 +1.6
MA2 Magadan 42.21 44 eP P 00 54 42.1 +0.6
comp=Z,29nm,0.8s
MA2 Magadan 42.21 44 eP P 00 54 42.2 +0.6
MA2 pmax pmax
comp=Z,29nm,0.8s
TRPA Tarpa 42.63 299 ⇓ iP P 00 54 46.6 +1.5
LOT Lotru 42.70 295 ⇓ iP P 00 54 46.7 +0.8
DRGR 42.94 297 ⇑ iP P 00 54 48.8 +1.0
SPA0 Spitsbergen Ar 43.48 344 eP P 00 54 51.4 -0.3
SPITS Spitsbergen Ar 43.48 344 P P 00 54 51.8 +0.1
comp=Z,3.5nm,0.8s,baz=90,slow=7.2,SNR=4.8
NIE Niedzica 43.65 301 P P 00 54 55.4 +2.0
NIE pmax pmax
comp=Z,4.0nm,0.9s
OJC Ojcow 43.72 303 eP P 00 54 54.2 +0.2
comp=Z,6.7nm,0.7s
OJC Ojcow 43.72 303 eP P 00 54 54.2 +0.2
OJC pmax pmax
comp=Z,7.0nm,0.7s
BZS Buzias 44.06 296 ⇓ iP P 00 54 49.1 -7.6
VTS Vitosha 44.12 291 ⇓ iP P 00 54 58.8 +1.3
HFS Hagfors 44.67 318 P P 00 55 01.0 -0.5
comp=Z,3.0nm,0.7s,baz=81,slow=12,SNR=19
HFS Hagfors 44.67 318 P P 00 55 01.0 -0.5
OKC Ostrava-Krasne 44.85 303 AMS AMS 01 15 50.0
comp=Z,200nm,11.9s
NC405 NORSAR Array S 45.43 319 eP P 00 55 06.7 -0.8
NC303 NORSAR Array S 45.57 319 eP P 00 55 09.2 +0.6
NC602 NORSAR Array S 45.59 319 eP P 00 55 09.1 +0.3
LIT Litokhoron 45.64 288 eP P 00 55 09.8 +0.3
comp=Z,7.0nm,1.0s
LIT Litokhoron 45.64 288 eP P 00 55 09.8 +0.3
LIT pmax pmax
comp=Z,7.0nm,1.0s
NB201 NORSAR Array S 45.64 319 eP P 00 55 09.7 +0.5
NB2 NORSAR Subarra 45.68 319 P P 00 55 09.1 -0.4
comp=Z,1.7nm,0.6s,baz=78,slow=7.9
NB2 NORSAR Subarra 45.68 319 P P 00 55 08.5 -1.0
DIVS Divibare 45.70 294 eP P 00 55 10.0 +0.1
comp=Z,3.7nm,0.8s
DPC Dobruska-Polom 45.79 304 eP P 00 55 11.7 +1.1
DPC AMS AMS 01 15 50.0
comp=Z,200nm,13.4s
DPC Dobruska-Polom 45.79 304 eP P 00 55 11.7 +1.1
DPC MLR MLR
comp=Z,200nm,13.4s
NC204 NORSAR Array S 45.84 320 eP P 00 55 11.3 +0.5
NAO01 NORSAR Array S 45.88 319 eP P 00 55 11.6 +0.5
UPC Upice 45.93 304 eP P 00 55 12.6 +1.0
UPC epP sP 00 55 17.9 +1.9
UPC AMS AMS 01 15 20.0
comp=Z,200nm,13.6s
UPC Upice 45.93 304 eP P 00 55 12.6 +1.0
UPC e 00 55 17.9
UPC MLR MLR
comp=Z,200nm,13.6s
IDI Anoyia 46.15 281 P P 00 55 13.0 -0.6
comp=Z,13nm,0.9s,baz=44,slow=15,SNR=7.2
PVCC Panska Ves 46.79 305 AMS AMS 01 15 10.0
comp=Z,200nm,10.5s
PDG Podgorica 46.86 293 ⇑ iP P 00 55 19.5 +0.5
GOPC GO Pecny, Ondr 46.87 304 AMS AMS 01 15 40.0
comp=Z,300nm,13.9s
CONA Conrad Observa 46.92 301 i pP pP 00 55 21.4 -1.3
comp=Z,5.8nm,1.0s
PRU Pruhonice 46.99 304 AMS AMS 01 15 20.0
comp=Z,300nm,18.1s
PRA Prague 47.03 304 AMS AMS 01 15 30.0
comp=Z,400nm,13.5s
ARSA Arzberg 47.38 300 i P P 00 55 23.0 -0.1
comp=Z,1.8nm,0.6s
CLL Collm 47.46 306 i P P 00 55 23.7 +0.2
comp=Z,18nm,1.7s
CLL Collm 47.46 306 eP P 00 55 23.6 +0.1
comp=Z,4.4nm,0.8s
CLL Collm 47.46 306 eP P 00 55 23.6 +0.1
CLL pmax pmax
comp=Z,4.0nm,0.8s
BILL Bilibino 47.51 30⇑ eP P 00 55 24.3 +0.6
BILL e*PP sP 00 55 30.4 +2.3
BILL e 00 55 38.4
BILL 00 57 10.0
BILL pmax pmax
comp=Z,2.0nm,1.0s
KHC Kasperske Hory 47.89 303 eP P 00 55 28.3 +1.3
KHC ex x 00 55 37.1
KHC AMS AMS 01 15 10.0
comp=Z,300nm,18.4s
KHC Kasperske Hory 47.89 303 eP P 00 55 28.3 +1.3
KHC e 00 55 37.1
KHC MLR MLR
comp=Z,300nm,18.4s
SOKA Soboth 47.91 299 epP P 00 55 28.1 +0.8
comp=Z,4.2nm,1.1s
GERES GERESS Array B 47.92 303 P P 00 55 26.9 -0.3
comp=Z,0.4nm,0.5s,baz=61,slow=8.0,SNR=5.5
GERES GERESS Array B 47.92 303 eP P 00 55 28.4 +1.1
GERES pmax pmax
comp=Z,1.0nm,0.5s
GEA0 GERESS Array S 47.92 303 eP P 00 55 27.4 +0.1
MOA Molln 47.94 301 i P P 00 55 27.9 +0.5
comp=Z,1.4nm,0.7s
OBKA Obir 48.28 299 i P P 00 55 30.6 +0.5
comp=Z,2.5nm,0.6s
KBA Koelnbreinsper 48.82 301 i pP P 00 55 35.2 +0.9
comp=Z,2.7nm,0.6s
WTTA Wattenberg 49.81 301 i pP P 00 55 42.9 +1.0
comp=Z,5.4nm,0.6s
WATA Walderalm 49.82 302 i pP P 00 55 43.0 +1.1
comp=Z,3.2nm,0.5s
TIP Timpagrande 50.00 290 eP P 00 55 43.9 +0.6
comp=Z,5.6nm,1.1s
MOTA Moosalm 50.11 302 i pP P 00 55 44.8 +0.6
comp=Z,1.0nm,0.4s
RETA Reutte 50.26 302 i pP P 00 55 46.6 +1.4
comp=Z,2.5nm,0.8s
FUORN Ofenpass-Fuorn 50.93 301 eP P 00 55 51.4 +0.8
comp=Z,12nm,1.5s
DAVOX Davos/Dischmat 51.10 302 P P 00 55 51.2 -0.5
comp=Z,2.5nm,0.4s,baz=63,slow=2.3,SNR=6.7
TUE Stuetta 51.57 301 eP P 00 55 56.2 +1.0
comp=Z,3.9nm,0.8s
BNI Bardonecchia 53.88 301 eP P 00 56 12.7 +0.5
comp=Z,13nm,1.4s
BNI Bardonecchia 53.88 301 eP P 00 56 12.7 +0.5
BNI pmax pmax
comp=Z,13nm,1.4s
THTN Thala 57.37 290 eP P 00 56 37.5 +0.1
comp=Z,6.6nm,1.3s
IM3 Indian Mountai 62.00 23 eP P 00 57 08.4 -0.3
COLD Coldfoot 62.07 21 eP P 00 57 09.5 +0.4
comp=Z,2.9nm,0.9s
ESDC Sonseca Array 63.40 300 P P 00 57 18.0 -0.6
comp=Z,0.2nm,0.3s,baz=52,slow=6.5,SNR=7.3
BPAW Bear Paw Mtn. 64.18 24 eP P 00 57 24.2 +1.0
comp=Z,3.3nm,0.8s
PPLA Purkeypile 64.71 25 eP P 00 57 26.8 -0.1
comp=Z,6.0nm,0.7s
IL1 Eielson Array 64.82 22 eP P 00 57 26.5 -0.9
ILAR Eielson Array 64.82 22 P P 00 57 26.4 -1.1
comp=Z,0.8nm,0.7s,baz=321,slow=5.7,SNR=11
SVW2 Sparrevohn 64.92 28 eP P 00 57 29.1 +1.0
comp=Z,15nm,1.9s
INK Inuvik 64.94 15 eP P 00 57 28.9 +0.8
comp=Z,3.3nm,0.8s
INK Inuvik 64.94 15 eP P 00 57 28.9 +0.8
INK pmax pmax
comp=Z,3.0nm,0.8s
DHY Denali Highway 66.01 23 eP P 00 57 34.7 -0.6
comp=Z,3.7nm,0.9s
SCM Sheep Creek Mo 66.99 24 eP P 00 57 41.4 -0.1
comp=Z,6.8nm,0.6s
SCM Sheep Creek Mo 66.99 24 eP P 00 57 41.4 -0.1
SCM pmax pmax
comp=Z,7.0nm,0.6s
FITZ Fitzroy Crossi 71.78 139 P P 00 58 10.6 -0.9
comp=Z,2.1nm,1.0s,baz=332,slow=7.8,SNR=3.5
YKA Yellowknife Ar 73.28 9 P P 00 58 18.3 -1.6
comp=Z,0.7nm,0.5s,baz=339,slow=5.8,SNR=4.2
YKA Yellowknife Ar 73.28 9 eP P 00 58 18.8 -1.1
YKA pmax pmax
comp=Z,1.0nm,0.5s
TOA0 Torodi Ar. Sit 76.11 275 eP P 00 58 36.2 -0.9
TORD Torodi Ar. Bea 76.11 275 P P 00 58 35.6 -1.6
comp=Z,1.8nm,0.6s,baz=42,slow=5.0
WRA Warramunga Arr 77.73 133 P P 00 58 45.0 -1.0
comp=Z,1.8nm,0.8s,baz=333,slow=5.3,SNR=9.5
WRA Warramunga Arr 77.73 133 P P 00 58 45.0 -1.0
WRA Warramunga Arr 77.73 133 eP P 00 58 44.1 -1.9
WRA pmax pmax
comp=Z,2.0nm,0.8s
WB2 Warramunga Arr 77.74 133 eP P 00 58 45.7 -0.3
comp=Z,6.9nm,0.8s
KOWA Kowa 79.34 280 P P 00 58 54.7 -0.4
comp=Z,2.5nm,0.7s,baz=64,slow=7.8,SNR=9.7
ASAR Alice Springs 80.57 135 P P 00 59 00.9 -0.5
comp=Z,0.6nm,0.7s,baz=332,slow=5.7,SNR=3.9
ASAR Alice Springs 80.57 135 P P 00 59 01.0 -0.5
DBIC Dimbokro 85.22 275 P P 00 59 24.9 -0.9
comp=Z,3.6nm,0.7s,baz=32,slow=9.5,SNR=3.4
DBIC Dimbokro 85.22 275 P P 00 59 25.0 -0.9
ULM Lac du Bonnet 86.69 0 P P 00 59 32.1 -0.5
comp=Z,1.3nm,0.6s,baz=299,slow=10,SNR=2.2
LCMT Little Creek M 98.27 15 eP Pdif 01 00 27.2 +0.4
comp=Z,9.3nm,1.1s
NVL N'lazarevskaya 125.15 203 ePKIKP PKPdf 01 06 00.1 +12
NVL MLR MLR
comp=Z,540nm,21.0s
LPAZ La Paz 144.48 311 PKP PKPab 01 06 23.0 -1.8
comp=Z,0.6nm,0.5s,baz=196,slow=0.6,SNR=4.7
CPUP Villa Florida 144.92 287 PKP PKPab 01 06 24.4 -0.9
comp=Z,3.9nm,1.1s,baz=52,slow=3.8,SNR=3.3

*ISCJB **30** 00:52:21.5±0.9, 14°.86N±0°.07×92°.96W±0°.06, h54km±10km, mb3.3/3, Error ellipse: s-maj=14.0km s-min=6.8km az=40.5*
*MEX **30** 00:52:22.4±0.7, 14°.85N×92°.92W, h67km±12km, MD4.0*
*NEIC **30** 00:52:22.8±0.0, 14°.78N×92°.98W, h47km, MD4.0(MEX), After MEX.*
*IDC **30** 00:52:28.9±5.6, 15°.10N×92°.56W, h111km±74km, mb3.0/2, mb1 3.4/4, mb1mx3.1/45, mbtmp3.5/4, ML3.5/2, Error ellipse: s-maj=252.6km s-min=37.2km az=36.0*
ISC 30 00:52:22.5±1.3, 14°.86N±0°.07×93°.00W±0°.06, h41km±17km, n16, σ1s25/25, Near coast of Chiapas
Code Station Name Δ° AZ° Phase ID Time Res
Op ISC h m s ISC
THIG 0.71 86 eP Pn 00 52 34.8 -1.3
THIG i S Sn 00 52 44.8 -1.1
THIG 0.71 86 eP Pn 00 52 34.9 -1.1
THIG eS Sn 00 52 45.3 -0.5
PCIG 0.87 346 i P Pn 00 52 38.2 0.0
PCIG i S Sn 00 52 50.2 +0.5
PCIG 0.87 346 i P Pn 00 52 38.2 0.0
PCIG i S Sn 00 52 50.2 +0.5
CCIG Comitan 1.64 30 eP Pn 00 52 49.8 +0.8
CCIG eS Sn 00 53 07.6 -1.4
CCIG Comitan 1.64 30 eP Pn 00 52 49.3 +0.3
CCIG eS Sn 00 53 07.6 -1.4
TGIG 1.91 356 eP Pn 00 52 52.6 0.0
TGIG eS Sn 00 53 14.5 -1.1
TGIG 1.91 356 eP Pn 00 52 52.6 0.0
TGIG eS Sn 00 53 14.5 -1.1
HUIG Huatulco 3.13 287 eP Pn 00 53 07.9 -1.5
HUIG Huatulco 3.13 287 eP Pn 00 53 07.9 -1.5
VHO Vista Hermosa 4.21 302 eP Pn 00 53 25.7 +1.3
VHO Vista Hermosa 4.21 302 eP Pn 00 53 25.7 +1.3
JTS JuntasAbangare 9.07 119 P Pn 00 54 33.4 +2.4
0.5nm,0.3s,baz=273,slow=18,SNR=3.7
JTS S Sn 00 56 12.3 +0.4
0.5nm,0.3s,baz=356,slow=19,SNR=2.6
TXAR Lajitas Array 17.45 327 P P 00 56 26.0 +2.1
0.0nm,0.3s,baz=151,slow=13,SNR=5.2
NVAR Mina Array Bea 32.40 321 P P 00 58 49.1 +0.4
0.4nm,0.7s,baz=142,slow=10,SNR=3.6
ILAR Eielson Array 61.67 337 P P 01 02 34.5 -1.6
0.2nm,0.7s,baz=146,slow=6.6,SNR=3.5

NNC 30 00:55:01.1±11.0, 43°.46N×84°.63E, h0km, mb3.7, mpv3.3, 2C-2D, Error ellipse: s-maj=80.9km s-min=42.4km az=131.0, Northern Xinjiang
Code Station Name Δ° AZ° Phase ID Time Res
Op ISC h m s ISC
MK31 Makanchi Array 3.72 334 ⇓Pg Pb 00 56 09.3 +1.6
4.9nm,0.6s,baz=140,slow=17,SNR=11
MK31 ⇑Lg Lg 00 56 58.7
5.5nm,0.3s,baz=147,slow=29,SNR=8.5
PDGK Podgornoye 3.75 270 ⇓Lg Lg 00 56 59.5
21nm,0.5s
MAKZ Makanchi 3.84 332 ⇑Lg Lg 00 57 03.5
18nm,0.9s

IDC 30 00:59:06.0±8.5, 6°.07S×150°.70E, h90km±60km, mb2.7/2, mb1 3.2/3, mb1mx3.0/44, mbtmp3.4/3, ML2.1/1, Error ellipse: s-maj=109.5km s-min=56.1km az=123.0, New Britain region
Code Station Name Δ° AZ° Phase ID Time Res
Op ISC h m s ISC
PMG Port Moresby 4.83 226 P Pn 01 00 16.9 +0.6
5.7nm,0.3s,baz=39,slow=12,SNR=9.6
PMG S Sn 01 01 11.1 +0.1
3.8nm,0.3s,baz=21,slow=8.6,SNR=3.1
WRA Warramunga Arr 21.05 228 P P 01 03 43.3 +0.4
0.4nm,0.6s,baz=53,slow=10,SNR=6.0
ASAR Alice Springs 23.82 221 P P 01 04 11.3 +0.4
0.2nm,0.3s,baz=58,slow=8.5,SNR=3.3
TORD Torodi Ar. Bea 148.67 285 PKPbc PKPbc 01 18 42.9 -1.0
baz=92,slow=1.5

*ISCJB **30** 01:00:44.5±0.5, 72°.04N±0°.05×0°.1E±0°.2, h10km, mb3.7/12, MS3.7/16, Error ellipse: s-maj=9.9km s-min=6.2km az=142.1*
*IDC **30** 01:00:45.2±0.7, 71°.98N×0°.29W, h0km, mb3.7/11, mb1 3.9/15, mb1mx3.7/68, mbtmp3.7/15, ML3.3/4, MS3.7/22, Ms1 3.7/22, ms1mx3.5/64, Error ellipse: s-maj=21.3km s-min=12.6km az=45.0*
*NAO **30** 01:00:45.1±3.9, 71°.91N×0°.28W, ML3.5*
*BER **30** 01:00:48.2±3.2, 72°.00N×0°.13W, h2km±34km, ML2.4, ML3.5(NAO)*
ISC 30 01:00:46.2±0.5, 71°.94N±0°.06×0°.11W±0°.06, h10km, n57, σ2s24/48, mb3.7/12, MS3.6/17, Jan Mayen Island region
Code Station Name Δ° AZ° Phase ID Time Res
Op ISC h m s ISC
JMIC Jan Mayen 2.85 254 LR LR 01 02 30.3
comp=Z,522nm,20.3s,baz=66,slow=38
JMIC Jan Mayen 2.85 254 e Sn 01 02 03.2 -2.7
LOF Lofoten 6.03 123 eP Pn 01 02 16.4 +1.1
LOF IAmb IAmb 01 02 24.7
comp=Z,18nm,0.6s
LOF eS Sn 01 03 21.1 -3.2
LOF IAML 01 08 16.4
comp=Z,8.9nm,0.6s
STEI Steigen 6.63 120 eP Pn 01 02 24.0 +0.5
STEI eS Sn 01 03 34.4 -4.5
STEI IAML 01 03 38.5
comp=Z,5.6nm,0.5s
STEI e 01 07 59.0
TRO Tromso 6.68 101 eP Pn 01 02 24.4 +0.1
KONS Konsvik 7.19 133 eP Pn 01 02 32.3 +1.0
KONS IAmb IAmb 01 02 33.8
comp=Z,13nm,0.9s
KONS eS Sn 01 03 48.9 -4.0
KONS IAML 01 03 52.0
comp=Z,5.1nm,0.3s
SPA0 Spitsbergen Ar 7.53 27 Pn Pn 01 02 36.0 +0.1
baz=219,slow=14
SPA0 Spitsbergen Ar 7.53 27 Pn Pn 01 02 36.0 +0.1
baz=219,slow=14
SPA0 IAmb IAmb 01 02 37.2
comp=Z,10nm,0.6s
SPITS Spitsbergen Ar 7.53 27 Pn Pn 01 02 35.8 -0.2
baz=222,slow=14,SNR=27
SPITS LR LR 01 04 54.8
comp=Z,280nm,18.7s,baz=260,slow=33
KBS Kingsbay 7.62 18 Pn Pn 01 02 35.8 -1.3
KBS Kingsbay 7.62 18 eP Pn 01 02 35.8 -1.3
MOR8 Moi Rana 7.77 131 eP Pn 01 02 40.5 +1.3
NSS Namsos 8.67 143 eP Pn 01 02 52.7 +1.3
NSS eS Sn 01 04 21.9 -7.2
NSS IAML 01 04 27.4
comp=Z,5.6nm,0.5s
ARA0 ARCESS Array S 8.76 94 Pn Pn 01 02 52.8 0.0
baz=300,slow=12
ARA0 ARCESS Array S 8.76 94 Pn Pn 01 02 52.8 0.0
baz=300,slow=12
ARCES ARCESS Array B 8.76 94 Pn Pn 01 02 52.8 0.0
comp=Z,0.7nm,0.3s,baz=301,slow=11,SNR=21
ARCES Sn Sn 01 04 27.3 -4.2
comp=Z,0.1nm,0.3s,baz=303,slow=20,SNR=2.9
ARCES LR LR 01 06 02.6
comp=Z,314nm,19.2s,baz=307,slow=36
ARE0 ARCESS Array S 8.76 94 eP Pn 01 02 52.9 +0.1
SUMG Summit 11.57 291 i P Pn 01 03 30.1 -1.4
comp=Z,16nm,1.1s
NB2 NORSAR Subarra 11.81 152 Pn Pn 01 03 34.0 -0.5
baz=339,slow=12
NB2 NORSAR Subarra 11.81 152 Pn Pn 01 03 34.0 -0.5
baz=339,slow=12
NOA NORSAR Array B 11.81 152 LR LR 01 07 59.4
comp=Z,406nm,20.3s,baz=345,slow=37
NRA0 NORESS Array S 12.15 152 Pn Pn 01 03 40.3 +1.2
baz=337,slow=14
NRA0 NORESS Array S 12.15 152 Pn Pn 01 03 40.3 +1.2
baz=337,slow=14
HFS Hagfors 13.06 148 Pn Pn 01 03 52.7 +1.2
comp=Z,0.4nm,0.3s,baz=358,slow=13,SNR=14
HFS Sn Sn 01 06 10.6 -6.0
comp=Z,0.1nm,0.3s,baz=357,slow=23,SNR=3.0
HFS LR LR 01 08 48.3
comp=Z,462nm,19.8s,baz=3.0,slow=37
HFS Hagfors 13.06 148 Pn Pn 01 03 52.5 +1.0
baz=357,slow=14
HFS Hagfors 13.06 148 Pn Pn 01 03 52.5 +1.0
baz=357,slow=14
FIA0 FINESS Array S 14.60 123 P Pn 01 04 12.8 +0.3
baz=331,slow=16
FIA0 FINESS Array S 14.60 123 P Pn 01 04 12.8 +0.3
baz=331,slow=16
FINES FINESS Array B 14.60 123 Pn Pn 01 04 12.7 +0.3
comp=Z,0.2nm,0.3s,baz=330,slow=11,SNR=5.9
SFJD Kangerlussuaq 17.90 279 LR LR 01 10 50.9
comp=Z,249nm,20.4s,baz=24,slow=34
KLMR Klimovskoe 18.90 105 ePn Pn 01 05 07.5 +0.4
KLMR AMP 01 05 08.5
comp=Z,18nm,1.0s
CLL Collm 21.52 157 eP P 01 05 37.0 +2.0
CLL e(sP) sP 01 05 44.0 +4.9
CLL L L 01 13 00.0
comp=Z,200nm,21.2s
BRG Berggiesshubel 22.06 156 eP P 01 05 44.2 +3.3
comp=Z,14nm,1.6s
BRG e 01 05 53.3
comp=Z,25nm,2.1s
BRG e 01 11 36.8
comp=Z,5.2nm,1.4s
comp=N,260nm,24.2s
comp=E,137nm,14.6s
comp=Z,279nm,20.6s
GERES GERESS Array B 24.03 157 P P 01 06 02.9 +1.9
comp=Z,1.3nm,0.8s,baz=0.8,slow=9.3,SNR=11
RES Resolute Bay 24.63 321 LR LR 01 15 24.8
comp=Z,390nm,19.0s,baz=40,slow=36
AKASG Malin Array Be 25.02 133 P P 01 06 10.6 +0.7
comp=Z,2.6nm,0.7s,baz=337,slow=10,SNR=9.4
AKASG LR LR 01 15 40.4
comp=Z,308nm,20.0s,baz=325,slow=36
FRB Frobisher Bay 25.58 287 LR LR 01 15 49.7
comp=Z,157nm,18.6s,baz=8.0,slow=35
ARU Arti 28.35 92 LR LR 01 17 53.4
comp=Z,116nm,19.5s,baz=334,slow=36
AKTO Aktyubinsk 33.30 98 LR LR 01 20 56.8
comp=Z,118nm,18.6s,baz=355,slow=36
BVAR Borovoye Array 34.91 84 P P 01 07 38.2 +0.7
comp=Z,0.6nm,0.7s,baz=324,slow=7.1,SNR=4.9
KBZ Khabaz 34.94 120 LR LR 01 21 53.0
comp=Z,200nm,18.8s,baz=354,slow=36
VAE Valguarnera 35.33 160 LR LR 01 23 02.8
comp=Z,155nm,18.6s,baz=350,slow=38
BRTR Keskin Array B 36.41 134 P P 01 07 52.2 +1.6
comp=Z,0.8nm,1.1s,baz=351,slow=4.8,SNR=2.9
BRTR LR LR 01 22 21.0
comp=Z,59nm,21.0s,baz=330,slow=36
ZALV Zalesovo Beam 38.50 71 LR LR 01 27 25.2
comp=Z,58nm,19.8s,baz=252,slow=42
YKA Yellowknife Ar 38.60 317 P P 01 08 08.2 -0.6
comp=Z,1.5nm,1.0s,baz=26,slow=8.9,SNR=4.4
YKA LR LR 01 23 31.0
comp=Z,19nm,18.8s,baz=347,slow=36
GNI Garni 38.77 120 LR LR 01 24 14.4
comp=Z,93nm,18.4s,baz=357,slow=36
IDI Anoyia 38.95 147 LR LR 01 25 45.5
comp=Z,86nm,18.3s,baz=268,slow=38
ILAR Eielson Array 41.70 339 P P 01 08 34.3 -0.1
comp=Z,1.5nm,0.9s,baz=8.2,slow=6.5,SNR=16
ULM Lac du Bonnet 44.90 295 LR LR 01 27 13.3
comp=Z,249nm,19.1s,baz=354,slow=35
PDAR Pinedale Array 55.50 303 P P 01 10 22.0 +0.8
comp=Z,0.2nm,0.5s,baz=343,slow=3.1,SNR=3.8
TORD Torodi Ar. Bea 58.77 178 P P 01 10 44.9 +0.6
comp=Z,1.5nm,0.8s,baz=351,slow=6.1
YBH Yreka Blue Hor 59.71 313 LR LR 01 36 14.1
comp=Z,141nm,19.3s,baz=40,slow=36
NVAR Mina Array Bea 61.81 308 P P 01 11 05.0 -0.1

comp=Z,0.2nm,0.5s,baz=21,slow=3.9,SNR=2.8
ANMO Albuquerque 61.99 297 LR LR 01 37 45.0
comp=Z,133nm,18.8s,baz=20,slow=36
TXAR Lajitas Array 66.47 292 P **P 01 11 35.2 -0.4**
comp=Z,0.6nm,0.9s,baz=54,slow=6.4,SNR=4.3
MJAR Matsushiro Arr 67.94 35 P **P 01 11 45.1 +0.4**
comp=Z,0.7nm,0.4s,baz=339,slow=4.3,SNR=4.2
JTS Juntas Abangare 78.68 268 LR LR 01 48 04.8
comp=Z,33nm,18.2s,baz=38,slow=36

HEL 30 01:00:59.5±0.3, 67°.86N×20°.15E, h0km, ML1.4, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LANU	**Lannavaara**	**0.72**	**74**	PG	Pg	01 01 12.2	-1.1
baz=263							
LANU				SG	Sg	01 01 22.1	-0.5
KIF	**Kilpisjarvi**	**1.18**	**12**	PN	Pn	01 01 23.7	+0.5
baz=187							
KIF				MSG		01 01 36.3	
comp=Z,2.3nm,0.2s							
KIF				SB	Sg	01 01 37.2	-0.1
HEF	**Hetta**	**1.43**	**66**	PN	Pn	01 01 26.5	-0.2
baz=250							
HEF				MSG		01 01 42.5	
comp=Z,1.6nm,0.2s							
TOF	**Tornio**	**2.43**	**135**	PB	Pn	01 01 40.9	+0.6
TOF				MSG		01 02 11.3	
comp=Z,2.5nm,0.2s							
TOF				SG	Sb	01 02 13.7	-0.6
RNF	**Rovaniemi**	**2.60**	**116**	PB	Pn	01 01 44.8	+2.0
baz=296							
RNF				SB	Sb	01 02 17.6	-1.8

*ISCJB **30** 01:07:04.5±0.4, 19°.5S±0°.1×177°.9W±0°.1, h400km, mb3.6/14, Error ellipse: s-maj=16.6km s-min=9.3km az=136.7*
*IDC **30** 01:07:05.4±2.2, 19°.52S×177°.82W, h394km±23km, mb3.4/14, mb1 3.6/16, mb1mx3.5/44, mbtmp4.1/16, Error ellipse: s-maj=16.6km s-min=11.8km az=135.0*
ISC 30 01:07:05.4±0.5, 19°.4S±0°.1×177°.8W±0°.1, h400km, n27, σ1°36/28, mb3.7/14, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.94**	**47**	P	**P**	**01 09 00.6**	**+0.3**
6.9nm,0.3s,baz=180,slow=7.1,SNR=7.8							
AFI				S	**S**	**01 10 29.3**	**-4.4**
4.3nm,0.3s,baz=209,slow=19,SNR=2.3							
URZ	**Urewera**	**19.29**	**192**	P	**P**	**01 11 01.6**	**-1.5**
1.1nm,0.3s,baz=31,slow=5.9,SNR=6.7							
STKA	**Stephens Creek**	**38.45**	**243**	P	**P**	**01 13 51.3**	**+0.4**
5.1nm,0.8s,baz=84,slow=7.0,SNR=6.4							
WRA	**Warramunga Arr**	**44.96**	**261**	P	**P**	**01 14 42.6**	**-0.4**
1.7nm,0.5s,baz=98,slow=5.9,SNR=27							
WRA				S	**S**	**01 20 48.1**	**-2.9**
0.9nm,0.9s,baz=95,slow=15,SNR=3.4							
ASAR	**Alice Springs**	**44.97**	**256**	P	**P**	**01 14 43.2**	**+0.1**
5.9nm,0.7s,baz=89,slow=8.4,SNR=52							
FITZ	**Fitzroy Crossi**	**53.38**	**262**	P	**P**	**01 15 46.2**	**+0.2**
1.1nm,0.7s,baz=90,slow=3.0,SNR=4.2							
VNDA	**Vanda**	**59.00**	**185**	P	**P**	**01 16 24.8**	**+0.6**
0.3nm,0.6s,baz=47,slow=6.3,SNR=5.6							
MJAR	**Matsushiro Arr**	**69.47**	**323**	P	**P**	**01 17 32.7**	**+0.7**
1.6nm,0.4s,baz=161,slow=6.2,SNR=6.5							
QSPA	**South Pole Qui**	**70.64**	**180**	P	**P**	**01 17 39.0**	**+0.3**
2.0nm,0.6s,baz=138,slow=3.9,SNR=8.4							
YBH	**Yreka Blue Hor**	**79.32**	**39**	P	**P**	**01 18 29.8**	**+1.8**
1.1nm,0.7s,baz=211,slow=5.9,SNR=4.0							
NVAR	**Mina Array Bea**	**80.10**	**43**	P	**P**	**01 18 33.6**	**+1.2**
0.6nm,0.6s,baz=224,slow=8.2,SNR=5.6							
TXAR	**Lajitas Array**	**86.30**	**57**	P	**P**	**01 19 05.8**	**+2.0**
0.6nm,0.7s,baz=237,slow=4.8,SNR=8.4							
ANMO	**Albuquerque**	**86.57**	**51**	P	**P**	**01 19 06.4**	**+1.4**
1.0nm,0.7s,baz=270,slow=7.5,SNR=4.2							
ILAR	**Eielson Array**	**87.22**	**13**	P	**P**	**01 19 06.9**	**-0.2**
0.4nm,0.4s,baz=243,slow=4.0,SNR=4.0							
PDAR	**Pinedale Array**	**88.04**	**43**	P	**P**	**01 19 12.2**	**+0.4**
0.4nm,0.7s,baz=177,slow=3.0,SNR=4.0							
SNAA	**Sanae**	**89.08**	**178**	P	**P**	**01 19 15.1**	**-0.9**
SNAA	**Sanae**	**89.08**	**178**	P	**P**	**01 19 14.7**	**-1.3**
1.3nm,1.0s,baz=190,slow=11,SNR=3.5							
VNA3	**Neumayer Olymp**	**89.20**	**176**	P	**P**	**01 19 15.9**	**-0.6**
VNA2	**Neumayer--Watz**	**89.65**	**177**	P	**P**	**01 19 18.2**	**-0.4**
baz=178,slow=3.3							
VNA1	**Neumayer--Stat**	**89.87**	**177**	P	**P**	**01 19 19.0**	**-0.6**
BVAR	**Borovoye Array**	**118.38**	**320**	PKP	**PKPdf**	**01 25 06.1**	**+0.3**
0.8nm,0.4s,baz=83,slow=1.2,SNR=5.4							
ARCES	**ARCESS Array B**	**127.90**	**350**	PKP	**PKPdf**	**01 25 24.4**	**+0.7**
1.1nm,0.4s,baz=17,slow=1.2,SNR=16							
FINES	**FINESS Array B**	**134.79**	**344**	PKhKP	PKPpre	01 25 32.2	
1.9nm,0.9s,baz=258,slow=5.5,SNR=3.1							
BRTR	**Keskin Array B**	**146.26**	**314**	PKPbc	**PKPbc**	**01 26 00.0**	**-0.1**
1.1nm,0.8s,baz=135,slow=3.7,SNR=5.8							
MMAI	**Mount Meron Ar**	**147.44**	**301**	PKPbc	**PKPbc**	**01 26 03.7**	**+0.1**
0.7nm,0.5s,baz=55,slow=6.3,SNR=5.2							
GERES	**GERESS Array B**	**149.22**	**345**	PKPbc	**PKPbc**	**01 26 07.1**	**-0.4**
1.6nm,0.6s,baz=22,slow=2.7,SNR=17							
TORD	**Torodi Ar. Bea**	**173.75**	**175**	PKPab	**PKPab**	**01 28 00.1**	**-0.7**
baz=175,slow=2.7							

SOME 30 01:09:54.1, 42°.85N×86°.00E, h0km, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZSN	**Zaisan**	**4.67**	**351**	*e*P	Pg	01 11 22.7	-0.9
5.2nm,0.6s							
ZSN				*e*S	Sg	01 12 26.0	+1.9
16nm,0.7s							
DJR	**Jarkent**	**4.75**	**290**	*e*P	Pb	01 11 19.8	+1.5
8.3nm,0.4s							
SHLS	**Shalkode**	**4.80**	**276**	*e*P	Pb	01 11 18.4	-0.8
52nm,0.5s							
SHLS				*e*S	Sb	01 12 19.1	+1.5
266nm,0.4s							
UZB	**Uzynbulak**	**5.13**	**276**	*e*P	Pg	01 11 29.5	-2.8
10.0nm,0.5s							
UZB				*e*S	Sg	01 12 38.4	-0.4
50nm,0.4s							
KAPS	**Kapalarasan**	**5.37**	**299**	*e*P	Pb	01 11 31.9	+3.1
16nm,0.3s							
KAPS				*e*S	Sg	01 12 42.8	-3.7
76nm,0.6s							
KPKS	**Kokpek**	**5.39**	**279**	*e*P	Pg	01 11 37.0	-0.3
33nm,0.5s							
KPKS				*e*S	Sg	01 12 50.7	+3.5
137nm,0.5s							
SATY	**Saty**	**5.58**	**275**	*e*P	Pg	01 11 39.4	-1.5
27nm,0.6s							
SATY				*e*S	Sg	01 12 55.2	+2.0
77nm,0.2s							
KURS	**Kuram**	**5.76**	**279**	*e*P	Pg	01 11 41.6	-2.8
9.4nm,0.7s							
KURS				*e*S	Sg	01 12 59.2	0.0
24nm,0.8s							
MDOK	**Medeo**	**6.57**	**276**	*e*P	Pg	01 11 55.2	-4.8
4.4nm,0.6s							
MDOK				*e*S	Sg	01 13 22.7	-2.4
20nm,1.0s							

*BJI **30** 01:10:29.7, 43°.40N×84°.72E, h8km, mb3.9/1, ML3.4/9*
*NNC **30** 01:10:32.9±2.6, 43°.59N×84°.54E, h0km, mb4.3, mpv4.0, Error ellipse: s-maj=18.2km s-min=8.1km az=119.0*
*SOME **30** 01:10:38.3, 43°.75N×84°.12E, h0km*
ISC 30 01:10:29.2±1.2, 43°.36N±0°.06×84°.73E±0°.04, h10km, n21, σ2°84/20, 6C-10D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**2.21**	**77**	Pn	**Pb**	**01 11 08.8**	**-0.4**
WMQ				Sg	**Sg**	**01 11 39.0**	**-1.0**
WMQ				smax	smax		
comp=N,1μm,0.5s							
WMQ				smax	smax		
comp=E,630nm,0.5s							
DJR	**Jarkent**	**3.70**	**287**	*e*P	**Pg**	**01 11 38.5**	**-1.6**
32nm,0.6s							
DJR				*e*S	**Sb**	**01 12 21.6**	**+2.0**
57nm,0.4s							
PDGK	**Podgornoye**	**3.82**	**271**	⇓Pg	**Pb**	**01 11 38.8**	**+2.1**
28nm,0.5s							
PDGK				⇑Lg	Lg	01 12 28.3	
44nm,0.5s							
MK31	**Makanchi Array**	**3.84**	**334**	⇑Pg	**Pb**	**01 11 38.0**	**+0.9**
18nm,0.5s,baz=152,slow=29,SNR=7.2							
MK31				⇓Lg	Lg	01 12 26.8	
37nm,0.4s,baz=149,slow=28,SNR=6.8							
SHLS	**Shalkode**	**3.85**	**269**	*e*P	**Pb**	**01 11 36.4**	**-0.8**
70nm,0.2s							
SHLS				*e*S	**Sn**	**01 12 18.4**	**+4.5**
309nm,0.4s							
MAKZ	**Makanchi**	**3.96**	**332**	⇑Pg	**Pb**	**01 11 40.5**	**+1.4**
16nm,0.6s							
MAKZ				⇓Lg	Lg	01 12 30.1	
52nm,0.5s							
ZSN	**Zaisan**	**4.09**	**1**	*e*P	**Pg**	**01 11 47.1**	**-0.4**
5.2nm,0.6s							
ZSN				*e*S	**Sg**	**01 12 36.9**	**-3.6**
20nm,0.5s							
UZB	**Uzynbulak**	**4.17**	**269**	*e*P	**Pg**	**01 11 47.3**	**-1.8**
18nm,0.3s							
UZB				*e*S	**Sb**	**01 12 37.0**	**+3.8**
51nm,0.5s							
KPKS	**Kokpek**	**4.40**	**273**	*e*P	**Pg**	**01 11 52.4**	**-1.1**
66nm,0.5s							
KPKS				*e*S	**Sg**	**01 12 45.7**	**-4.8**
179nm,0.6s							
SATY	**Saty**	**4.63**	**268**	*e*P	**Pg**	**01 11 56.9**	**-0.9**
41nm,0.5s							
SATY				*e*S	**Sg**	**01 12 53.4**	**-4.4**
65nm,0.2s							
TDK	**Taldyqorghan**	**4.83**	**292**	*e*P	**Pg**	**01 11 58.2**	**-3.5**
115nm,0.6s							
TDK				*e*S	**Sb**	**01 12 55.6**	**+3.5**
268nm,0.8s							
MDOK	**Medeo**	**5.61**	**271**	⇑Pg	**Pg**	**01 12 15.5**	**-1.1**
7.9nm,0.5s							
MDOK				⇓Lg	Lg	01 13 28.8	
48nm,0.8s							
TKM2	**Tokmak 2**	**6.69**	**269**	⇑Lg	Lg	01 14 01.0	
8.8nm,0.6s							
AAK	**Ala-Archa**	**7.54**	**268**	⇓Lg	Lg	01 14 30.9	
8.4nm,0.7s							
KURBB	**Kurchatov Arra**	**8.41**	**332**	⇓Lg	Lg	01 14 53.2	
81nm,0.7s							
KURK	**Kurchatov**	**8.46**	**333**	⇓Lg	Lg	01 14 51.9	
20nm,0.6s							
MNAS	**Manas**	**9.01**	**269**	⇓Lg	Lg	01 15 16.4	
5.0nm,0.9s							
OTUK	**Ortayu**	**9.93**	**304**	⇓Lg	Lg	01 15 41.0	
34nm,1.5s							
KK31	**Karatay Array**	**10.38**	**273**	Lg	Lg	01 16 00.3	
3.8nm,0.8s,baz=68,slow=24,SNR=4.3							
BVA0	**Borovoye Array**	**13.58**	**320**	⇑Lg	Lg	01 17 35.3	
8.7nm,1.4s,baz=131,slow=22,SNR=4.3							
BRVK	**Borovoye**	**13.65**	**320**	⇓Lg	Lg	01 17 34.1	
14nm,1.0s							

*IDC **30** 01:36:37.9±8.5, 0°.03N×123°.59E, h100km±82km, mb3.7/7, mb1 3.9/8, mb1mx3.5/57, mbtmp4.1/8, ML4.5/1, Error ellipse: s-maj=41.9km s-min=18.5km az=84.0*
*NEIC **30** 01:36:39.8±5.2, 0°.03N×123°.62E, h120km±51km, mb4.0/3, Error ellipse: s-maj=27.5km s-min=14.9km az=85.0*
*ISCJB **30** 01:36:41.5±0.5, 0°.05N±0°.05×123°.63E±0°.06, h157km, mb3.9/10, Error ellipse: s-maj=9.4km s-min=7.3km az=23.3*
*DJA **30** 01:36:43.0±0.5, 0°S±3°×12°.4E±°, h101km±9km, M4.2/9, mB4.5/1, mb4.0/1, MLv4.3/9, Mw(mB)3.7/1*
ISC 30 01:36:42.6±0.6, 0°.05N±0°.06×123°.76E±0°.05, h157km, n26, σ2°93/29, mb4.0/10, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.56**	**23**	P	**Pn**	**01 37 02.8**	**-2.2**
LUWI	**Luwuk**	**1.47**	**222**	P	**Pn**	**01 37 08.6**	**-3.8**
LUWI				S	**Sn**	**01 37 28.1**	**-7.1**
MRSI	**Marisa**	**1.87**	**283**	P	**Pn**	**01 37 14.6**	**-2.0**
MRSI				S	**Sn**	**01 37 37.4**	**-5.4**
APSI	**Ampana**	**2.32**	**246**	P	**Pn**	**01 37 19.7**	**-2.1**
LBMI	**Labuha**	**3.80**	**100**	P	**Sn**	**01 38 20.7**	**-4.8**
KDI	**Kendari**	**4.14**	**196**	P	**Pn**	**01 37 43.5**	**-1.4**
NLAI	**Namlea**	**4.67**	**134**	P	**Pn**	**01 37 49.7**	**-2.1**
TTSI	**Tana Toraja**	**5.00**	**232**	P	**Pn**	**01 37 55.3**	**-0.8**
SPSI	**Sidrap Palu**	**5.64**	**225**	P	**Pn**	**01 38 05.0**	**+0.4**
SPSI				S	**Sn**	**01 39 06.6**	**-2.2**
BNSI	**Bone**	**5.74**	**219**	P	**Pn**	**01 38 07.1**	**+1.2**
BKSI	**Bulukumba**	**6.46**	**214**	P	**Sn**	**01 39 33.8**	**+5.5**
FITZ	**Fitzroy Crossi**	**18.13**	**174**	P	**Pn**	**01 40 43.7**	**-0.9**
1.1nm,0.3s,baz=9.7,slow=7.0,SNR=12							
KLI	**Kotabumi**	**19.50**	**255**	P	**P**	**01 40 52.8**	**-5.0**
RGRI	**Rengat**	**21.43**	**269**	P	P	01 41 27.3	+8.8
WRAB	**Tennant Creek**	**22.41**	**153**	*e*P	**P**	**01 41 28.7**	**+0.4**
2.9nm,0.5s							
WRA	**Warramunga Arr**	**22.41**	**153**	P	**P**	**01 41 28.6**	**+0.2**
4.4nm,0.6s,baz=333,slow=9.9,SNR=17							
ASAR	**Alice Springs**	**25.55**	**158**	P	**P**	**01 41 57.9**	**+0.9**
1.4nm,0.6s,baz=336,slow=8.8,SNR=15							
MJAR	**Matsushiro Arr**	**38.70**	**19**	P	**P**	**01 43 52.0**	**+0.7**
2.4nm,0.7s,baz=200,slow=9.9,SNR=9.5							
SONM	**Songino Array**	**49.93**	**345**	P	**P**	**01 45 21.4**	**+1.0**
0.5nm,0.5s,baz=164,slow=7.5,SNR=3.0							
MKAR	**Makanchi Array**	**58.97**	**328**	P	**P**	**01 46 26.9**	**+1.3**
1.4nm,0.6s,baz=118,slow=9.1,SNR=6.3							
MKAR				PcP	**PcP**	**01 47 14.3**	**+1.3**
0.7nm,0.5s,baz=126,slow=3.5,SNR=4.8							
PETK	**Petropavlovsk-**	**59.94**	**23**	P	**P**	**01 46 35.2**	**+3.1**
2.3nm,0.8s,baz=189,slow=5.5							
KURBB	**Kurchatov Arra**	**63.30**	**330**	P	**P**	**01 46 55.5**	**+0.9**
1.1nm,0.6s,baz=134,slow=6.6,SNR=12							
KURK	**Kurchatov**	**63.31**	**330**	*e*P	**P**	**01 46 54.4**	**-0.2**
RAYN	**Ar Rayn**	**79.21**	**294**	*e*P	**P**	**01 48 31.4**	**+0.6**
2.5nm,0.9s							
INK	**Inuvik**	**94.65**	**21**	*e*P	**P**	**01 49 47.0**	**+1.7**
0.8nm,0.5s							
TORD	**Torodi Ar. Bea**	**121.13**	**285**	PKP	**PKPdf**	**01 55 19.3**	**+1.5**
0.3nm,0.5s,baz=84,slow=1.5							

*NEIC **30** 01:53:53.8±0.0, 40°.73N×125°.20W, h7km, mb3.6/1, MW4.0(BRK), After NCEDC.*
NEIC Felt [II] at Arcata. Also felt at Eureka and Trinidad.
*IDC **30** 01:53:55.1±2.7, 40°.87N×124°.88W, h0km, mb3.3/2, mb1 3.8/5, mb1mx3.4/63, mbtmp3.4/5, ML3.8/2, MS3.0/3, Ms1 3.0/3, ms1mx2.6/21, Error ellipse: s-maj=30.2km s-min=19.8km az=91.0*
ISC 30 01:53:52.6±2.0, 40°.70N±0°.03×125°.14W±0°.07, h10km±12km, n130, σ1°90/148, Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KJJM	**Johnny Jack Ri**	**0.78**	**125**	*e*Pg	**Pn**	**01 54 09.9**	**0.0**
JCC	**Jacoby Creek,**	**0.85**	**82**	*e*Pg	**Pb**	**01 54 10.3**	**+0.7**
JCC				*e*Sg	**Sb**	**01 54 21.1**	**+0.1**
KSMM	**Slide Mountain**	**0.90**	**125**	*e*Pg	**Pb**	**01 54 11.4**	**+1.0**
KCRM	**Chalk Rock**	**1.04**	**105**	*e*Pg	**Pn**	**01 54 13.8**	**+0.4**
KHMM	**Horse Mountain**	**1.08**	**80**	*e*Pg	**Pb**	**01 54 13.9**	**+0.3**
KMRM	**Mail Ridge**	**1.19**	**113**	*e*Pn	**Pg**	**01 54 16.2**	**+0.7**
KMRM				*e*Sn	**Sb**	**01 54 31.3**	**+0.3**
KCSM	**Cold Springs**	**1.25**	**97**	*e*Pn	**Pb**	**01 54 16.9**	**+0.5**
KOMM	**Orleans Mounta**	**1.40**	**65**	*e*Pn	**Pn**	**01 54 18.3**	**-0.1**
KKPM	**Kettenpom Peak**	**1.49**	**111**	*e*Pn	**Pn**	**01 54 19.2**	**-0.4**
KIPM	**Iron Peak**	**1.55**	**125**	*e*Pn	**Pn**	**01 54 21.1**	**+0.6**
KCPM	**Cahto Peak**	**1.57**	**130**	*e*Pn	**Pn**	**01 54 21.1**	**+0.4**
KCPM				*e*Sn	**Sn**	**01 54 38.7**	**-2.4**
KBO	**Bosley Butte**	**1.66**	**24**	*e*Pn	**Pn**	**01 54 21.5**	**-0.4**
KBO				*e*Sn	**Sn**	**01 54 37.6**	**-5.7**
KFPM	**Farley Peak**	**1.69**	**128**	*e*Pn	**Pn**	**01 54 22.8**	**+0.5**
KBNM	**Bluenose Ridge**	**1.69**	**118**	*e*Pn	**Pn**	**01 54 23.6**	**+1.2**
GTC	**Three Chop Rid**	**1.78**	**136**	*e*Pn	**Pn**	**01 54 23.9**	**+0.4**
L02D	**Cave Junction,**	**1.86**	**38**	P	**Pn**	**01 54 24.6**	**0.0**
baz=220,SNR=27							
L02D				S	**Sn**	**01 54 45.4**	**-2.7**
baz=220							
M02C	**Callahan**	**1.86**	**68**	P	**Pn**	**01 54 24.5**	**-0.2**
baz=250,SNR=44							
M02C				S	**Sn**	**01 54 46.6**	**-1.7**
baz=250							
N02D	**Trinity Center**	**1.87**	**81**	P	**Pn**	**01 54 24.8**	**0.0**
baz=263,SNR=128							
N02D				S	**Sn**	**01 54 47.4**	**-1.1**
baz=263							
KRKM	**Rackout Spring**	**1.88**	**127**	*e*Pn	**Pn**	**01 54 25.6**	**+0.6**
GNAM	**Navarro Ridge**	**1.90**	**142**	*e*Pn	**Pn**	**01 54 25.2**	**+0.1**
WDC	**Whiskeytown Da**	**1.98**	**93**	*e*Pn	**Pn**	**01 54 26.7**	**+0.4**
GHOM	**Hamilton Openi**	**2.06**	**143**	*e*Pn	**Pn**	**01 54 27.5**	**0.0**
YBH	**Yreka Blue Hor**	**2.10**	**60**	Pn	**Pn**	**01 54 28.4**	**+0.4**
5.2nm,0.3s,baz=248,slow=15,SNR=76							
YBH				LR	LR	01 54 35.7	
comp=Z,20nm,21.5s,baz=246,slow=22							
YBH				Sn	**Sn**	**01 54 52.8**	**-1.5**
74nm,0.3s,baz=156,slow=18,SNR=35							
YBH	**Yreka Blue Hor**	**2.10**	**60**	*e*Pn	**Pn**	**01 54 26.5**	**-1.5**
YBH				*e*Sn	**Sn**	**01 54 52.6**	**-1.7**
GASB	**Alder Springs**	**2.13**	**119**	*e*Pn	**Pn**	**01 54 29.2**	**+0.8**
GGUM	**Gualala**	**2.24**	**145**	*e*Pn	**Pn**	**01 54 30.1**	**+0.3**
KEBM	**Edson Butte**	**2.25**	**15**	*e*Pn	**Pn**	**01 54 30.1**	**0.0**
GSNM	**Snow Mountain**	**2.31**	**139**	*e*Pn	**Pn**	**01 54 31.4**	**+0.5**
LGBM	**Gray Butte**	**2.32**	**73**	*e*Pn	**Pn**	**01 54 32.3**	**+1.1**
GHLM	**Highland Sprin**	**2.33**	**135**	*e*Pn	**Pn**	**01 54 31.6**	**+0.5**
HOPS	**Hopland Field**	**2.33**	**136**	*e*Pn	**Pn**	**01 54 31.4**	**+0.3**
HOPS				*e*Sn	**Sn**	**01 54 55.4**	**-4.4**
B040	**Montague**	**2.34**	**60**	*e*Pn	**Pn**	**01 54 32.3**	**+1.1**
LMPM	**Military Pass**	**2.38**	**70**	*e*Pn	**Pb**	**01 54 34.5**	**-1.3**
HUMO	**Hull Mountain**	**2.51**	**40**	*e*Pn	**Pn**	**01 54 33.8**	**+0.2**
HUMO				*e*Sn	**Sn**	**01 55 00.5**	**-3.8**
O03D	**Paynes Creek**	**2.58**	**98**	P	**Pn**	**01 54 34.8**	**+0.3**
baz=281,SNR=170							
O03D	**Paynes Creek**	**2.58**	**98**	*e*Pn	**Pn**	**01 54 34.9**	**+0.3**
GDXM	**Geysers**	**2.62**	**136**	*e*Pn	**Pn**	**01 54 36.5**	**+1.5**
FTR	**Fort Ross**	**2.66**	**144**	*e*Pn	**Pn**	**01 54 36.3**	**+0.6**
M04C	**Macdoel**	**2.71**	**65**	P	**Pn**	**01 54 38.3**	**+1.9**
baz=248,SNR=24							
DBO	**Dodson Butte**	**2.80**	**30**	*e*Pn	**Pn**	**01 54 38.5**	**+0.9**
LRDM	**Redding Peak**	**2.81**	**94**	*e*Pn	**Pn**	**01 54 39.5**	**+1.7**
LBCM	**Butte Creek Ri**	**2.88**	**86**	*e*Pn	**Pn**	**01 54 39.6**	**+0.8**
OGOM	**Van Goodin Ran**	**2.90**	**110**	*e*Pn	**Pn**	**01 54 39.2**	**+0.3**
OSUM	**Sutter Buttes**	**2.90**	**118**	*e*Pn	**Pn**	**01 54 39.3**	**+0.4**
ORV	**Oroville**	**3.02**	**111**	*e*Pn	**Pn**	**01 54 40.8**	**+0.3**
ORV				*e*Sn	**Sn**	**01 55 15.2**	**-1.6**
OSTM	**Stimpson Lane**	**3.03**	**115**	*e*Pn	**Pn**	**01 54 40.9**	**+0.2**
MCCM	**Marconi Confer**	**3.10**	**145**	*e*Pn	**Pn**	**01 54 41.5**	**0.0**
MCCM				*e*Sn	**Sn**	**01 55 17.9**	**-0.8**
HSO	**Harness Mounta**	**3.21**	**28**	*e*Pn	**Pn**	**01 54 44.5**	**+1.3**
I03D	**Drain, OR**	**3.27**	**23**	P	**Pn**	**01 54 45.6**	**+1.6**
baz=205,SNR=441							
J04D	**Umpqua Nationa**	**3.40**	**41**	P	**Pn**	**01 54 48.8**	**+2.8**
baz=223,SNR=14							
AFDM	**Forest Hills D**	**3.66**	**117**	*e*Pn	**Pn**	**01 54 50.1**	**+0.8**
I04A	**Tendick Farm,**	**3.69**	**32**	P	**Pn**	**01 54 51.9**	**+2.0**
baz=214,SNR=35							
JSBM	**San Bruno Moun**	**3.70**	**144**	*e*Pn	**Pn**	**01 54 50.4**	**+0.6**
BEKR	**Beckworth**	**3.75**	**101**	*e*Pn	**Pn**	**01 54 52.3**	**+1.6**
BEKR				*e*Sn	**Sn**	**01 55 37.5**	**+2.4**
K05A	**Summer Lake**	**3.77**	**56**	*e*Pn	**Pn**	**01 54 52.5**	**+1.5**
SAC	**San Andreas**	**3.77**	**145**	*e*Pn	**Pn**	**01 54 51.3**	**+0.5**
MOD	**Modoc Plateau**	**3.84**	**70**	*e*Pn	**Pn**	**01 54 52.0**	**+0.1**
JCHM	**Cahill Ridge**	**3.84**	**145**	*e*Pn	**Pn**	**01 54 52.2**	**+0.4**
J05D	**Fort Rock, OR**	**3.89**	**47**	P	**Pn**	**01 54 55.2**	**+2.6**
baz=230,SNR=17							
IRO	**Indian Ridge**	**3.93**	**32**	*e*Pn	**Pn**	**01 54 55.6**	**+2.4**
DONR	**Donner Summit**	**3.94**	**108**	*e*Pn	**Pn**	**01 54 55.9**	**+2.5**
JFP	**Foothills Park**	**4.05**	**145**	*e*Pn	**Pn**	**01 54 55.0**	**+0.3**
COR	**Corvallis**	**4.11**	**19**	*e*Pn	**Pn**	**01 54 55.7**	**+0.2**
RUBR	**Rubicon Trail**	**4.17**	**112**	*e*Pn	**Pn**	**01 54 58.6**	**+2.0**
MOON	**Moon Mountain**	**4.22**	**36**	*e*Pn	**Pn**	**01 55 00.1**	**+3.0**
JBNB	**Ben Lomond Mou**	**4.26**	**146**	*e*Pn	**Pn**	**01 54 57.9**	**+0.2**
JSTM	**Santa Teresa H**	**4.36**	**142**	*e*Pn	**Pn**	**01 54 59.0**	**+0.1**
PINE	**Pine Mountain**	**4.39**	**44**	*e*Pn	**Pn**	**01 55 02.7**	**+3.1**
VCNR	**Virginia City**	**4.44**	**107**	*e*Pn	**Pn**	**01 55 02.7**	**+2.3**
PAHR	**Pah Rah Range**	**4.52**	**101**	*e*Pn	**Pn**	**01 55 02.6**	**+1.3**
H04A	**Detroit Lake**	**4.54**	**28**	*e*Pn	**Pn**	**01 55 03.3**	**+1.9**
H04A				*e*Sn	**Sn**	**01 55 52.1**	**-2.1**
CMB	**Columbia Colle**	**4.55**	**124**	*e*Pn	**Pn**	**01 55 03.9**	**+2.3**
PNTR	**Pine Nut**	**4.56**	**109**	*e*Pn	**Pn**	**01 55 04.2**	**+2.4**
HJGM	**San Juan Grade**	**4.79**	**143**	*e*Pn	**Pn**	**01 55 05.0**	**+0.1**
YERR	**Yerington**	**4.85**	**109**	*e*Pn	**Pn**	**01 55 08.0**	**+2.0**
SAO	**San Andreas Ge**	**4.88**	**143**	*e*Pn	**Pn**	**01 55 06.1**	**0.0**
SAO				*e*Sn	**Sn**	**01 56 00.8**	**-1.8**
BVYM	**Vineyard**	**4.91**	**142**	*

ISC 30 01:56:09.0±0.8, 33°18S±0°10×178°4W±0°1, h32km, n30, σ0°63/29, mb4.3/7, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.25**	**214**	Pn	**Pn**	**01 57 38.7**	**-0.3**
	3.0nm,0.3s,baz=356,slow=15,SNR=22						
URZ				Sn	**Sn**	**01 58 48.8**	**-0.4**
	6.8nm,0.3s,baz=108,slow=19,SNR=9.0						
RPZ	**Rata Peaks**	**13.36**	**215**	Pn	**Pn**	**01 59 15.7**	**-0.7**
	0.7nm,0.3s,baz=69,slow=8.6,SNR=3.5						
RPZ				Sn	Sn	02 01 31.0	-13
	0.5nm,0.3s,baz=335,slow=20,SNR=4.0						
DZM	**Mont Dzumac**	**17.37**	**306**	P	**P**	**02 00 09.9**	**-0.4**
	baz=121,slow=17,SNR=1.8						
DZM				LR	LR	02 05 49.2	
	comp=Z,231nm,20.5s,baz=198,slow=34						
DZM	**Mont Dzumac**	**17.37**	**306**	eLR	LR	02 04 22.2	
	217nm,23.4s						
AFI	**Afiamalu**	**20.11**	**19**	*e*P	**P**	**02 00 39.7**	**-0.6**
	17nm,0.6s						
PPT2	**Papeete2**	**30.19**	**66**	eLR	LR	02 10 56.7	
	100nm,23.0s						
STKA	**Stephens Creek**	**33.61**	**261**	LR	LR	02 16 42.9	
	comp=Z,136nm,18.7s,baz=37,slow=37						
CTA	**Charters Tower**	**34.01**	**284**	P	**P**	**02 02 51.0**	**+0.9**
	2.9nm,0.5s,baz=106,slow=9.8,SNR=12						
CTAO	**Charters Tower**	**34.01**	**284**	*e*P	**P**	**02 02 51.4**	**+1.3**
ASAR	**Alice Springs**	**42.69**	**270**	P	**P**	**02 04 03.0**	**-0.1**
	4.1nm,0.6s,baz=109,slow=7.4,SNR=44						
ASAR	**Alice Springs**	**42.69**	**270**	P	**P**	**02 04 03.0**	**-0.1**
WRAB	**Tennant Creek**	**43.93**	**275**	*e*P	**P**	**02 04 12.6**	**-0.5**
	2.7nm,0.6s						
WRA	**Warramunga Arr**	**43.93**	**275**	P	**P**	**02 04 12.8**	**-0.4**
	2.4nm,0.4s,baz=115,slow=7.8,SNR=41						
CASY	**Casey**	**52.54**	**209**	*e*P	**P**	**02 05 19.4**	**+0.5**
	2.1nm,0.6s						
QSPA	**South Pole Qui**	**56.94**	**180**	P	**P**	**02 05 51.5**	**+0.5**
	2.2nm,0.8s,baz=55,slow=3.1,SNR=7.3						
QSPA	**South Pole Qui**	**56.94**	**180**	*e*P	**P**	**02 05 51.7**	**+0.7**
SNAA	**Sanae**	**75.40**	**179**	P	**P**	**02 07 49.0**	**-0.1**
SNAA	**Sanae**	**75.40**	**179**	P	**P**	**02 07 49.1**	**-0.1**
	0.5nm,0.7s,baz=180,slow=9.1,SNR=4.0						
VNA3	**Neumayer Olymp**	**75.57**	**176**	P	**P**	**02 07 50.3**	**+0.3**
VNA2	**Neumayer--Watz**	**75.99**	**177**	P	**P**	**02 07 52.8**	**+0.3**
	baz=169,slow=4.5						
VNA1	**Neumayer--Stat**	**76.23**	**177**	P	**P**	**02 07 54.1**	**+0.3**
KURK	**Kurchatov**	**122.69**	**313**	PKP	**PKPdf**	**02 15 00.3**	**-0.7**
KURBB	**Kurchatov Arra**	**122.72**	**312**	PKP	**PKPdf**	**02 15 00.3**	**-0.8**
	0.3nm,0.5s,baz=115,slow=2.3,SNR=4.5						
BVAR	**Borovoye Array**	**128.12**	**314**	PKP	**PKPdf**	**02 15 12.7**	**+1.4**
	0.4nm,0.7s,baz=352,slow=2.0,SNR=4.3						
FINES	**FINESS Array B**	**147.61**	**338**	PKPbc	**PKPbc**	**02 15 48.7**	**-0.6**
	6.3nm,0.7s,baz=40,slow=3.6,SNR=20						
NB2	**NORSAR Subarra**	**151.43**	**350**	PKP	**PKPbc**	**02 15 58.5**	**-0.4**
	comp=Z,11nm,1.4s,baz=15,slow=4.0						
MMAI	**Mount Meron Ar**	**151.74**	**279**	PKPbc	**PKPbc**	**02 16 01.1**	**+0.5**
	comp=Z,2.3nm,0.6s,baz=73,slow=5.0,SNR=7.2						
HFS	**Hagfors**	**151.88**	**347**	PKPbc	**PKPbc**	**02 15 59.7**	**-0.2**
	comp=Z,6.1nm,1.1s,baz=54,slow=2.5,SNR=4.4						
BRTR	**Keskin Array B**	**153.50**	**293**	PKPbc	**PKPbc**	**02 16 04.4**	**0.0**
	comp=Z,0.6nm,0.5s,baz=146,slow=4.0,SNR=5.4						
BRTR				PKPab	**pPKPbc**	**02 16 15.0**	**+0.1**
	comp=Z,1.2nm,0.8s,baz=116,slow=4.0,SNR=5.7						
TORD	**Torodi Ar. Bea**	**160.06**	**180**	PKPab	**PKPab**	**02 16 44.2**	**-1.0**
	baz=181,slow=4.7						

MEX 30 02:14:54.0±0.6, 14°90N×93°74W, h13km, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.94**	**32**	*e*P	Pb	02 15 08.2	-4.0
PCIG				*e*S	Sg	02 15 20.8	-3.8
TGIG		**1.96**	**18**	*e*P	Pn	02 15 24.4	-2.6
TGIG				*e*S	Sn	02 15 50.5	-0.9
CCIG	**Comitan**	**2.07**	**48**	*e*P	Pn	02 15 27.7	-0.9
CCIG				*e*S	Sn	02 15 46.7	-7.7

*IDC **30** 02:51:03.1±1.2, 30°89N×103°73E, h0km, mb3.7/5, mb1 3.9/6, mb1mx3.5/69, mbtmp3.7/6, ML3.7/1, MS2.8/3, Ms1 2.9/3, ms1mx2.5/59, Error ellipse: s-maj=40.9km s-min=21.0km az=57.0*

*BJI **30** 02:51:05.9, 31°16N×103°58E, h23km, ML3.7/14, Ms3.5/3, Ms7 3.3/2*

ISC 30 02:51:04.4±0.8, 31°32N±0°03×103°70E±0°07, h13km, n13, σ3°23/18, mb3.7/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.41**	**173**	Pg	**Pg**	**02 51 09.8**	**-2.8**
CD2				Sg	**Sg**	**02 51 15.3**	**-2.8**
CD2				smax	smax		
	comp=N,37μm,0.6s						
CD2				smax	smax		
	comp=E,12μm,0.6s						
LZH	**Lanzhou**	**4.76**	**1**	Pn	**Pb**	**02 52 23.5**	**-4.3**
LZH				Pg	**Pg**	**02 52 32.3**	**-3.3**
LZH				Sn	**Sn**	**02 53 16.8**	**+5.7**
LZH				Sg	**Sg**	**02 53 35.0**	**-2.2**
LZH				smax	smax		
	comp=N,85nm,0.9s						
LZH				smax	smax		
	comp=E,91nm,0.9s						
LZH				LR	LR		
	comp=N,580nm,6.2s						
LZH				LR	LR		
	comp=E,630nm,7.1s						
LZH				LR	LR		
	comp=Z,460nm,6.5s						
XAN	**Xi'an**	**5.17**	**57**	Pn	**Pn**	**02 52 23.0**	**+1.5**
XAN				Pg	**Pg**	**02 52 41.8**	**-1.6**
XAN				Sn	**Sn**	**02 53 23.3**	**+2.2**
XAN				Sg	**Sg**	**02 53 47.5**	**-2.9**
XAN				smax	smax		
	comp=N,110nm,0.5s						
XAN				smax	smax		
	comp=E,100nm,0.6s						
GYA	**Guiyang**	**5.49**	**151**	Pg	**Pb**	**02 52 43.0**	**+2.7**
GYA				Sg	**Sg**	**02 54 01.0**	**+0.2**
GYA				smax	smax		
	comp=N,80nm,0.6s						
GYA				smax	smax		
	comp=E,80nm,0.7s						
CMAR	**Chiang Mai Arr**	**13.51**	**200**	LR	LR	02 59 41.0	
	comp=Z,22nm,18.1s,baz=200,slow=40						
SONM	**Songino Array**	**16.62**	**6**	P	**P**	**02 55 03.1**	**+3.4**
	0.2nm,0.3s,baz=196,slow=10,SNR=5.5						
WMQ	**Urumqi**	**17.76**	**319**	*e*P	**P**	**02 55 11.3**	**-0.9**
KSRS	**Korea Array**	**20.88**	**66**	P	Pn	02 55 47.6	-1.1
	3.2nm,0.6s,baz=263,slow=11,SNR=8.8						
KSRS				LR	LR	03 05 35.9	
	comp=Z,12nm,19.8s,baz=65,slow=42						
MKAR	**Makanchi Array**	**22.59**	**319**	P	**P**	**02 56 08.0**	**+3.3**
	0.6nm,0.8s,baz=124,slow=12,SNR=4.7						
KURBB	**Kurchatov Arra**	**26.86**	**323**	P	**P**	**02 56 49.1**	**+4.4**
	0.4nm,0.3s,baz=123,slow=10,SNR=4.2						
WRA	**Warramunga Arr**	**58.84**	**146**	P	**P**	**03 01 01.2**	**-1.7**
	1.6nm,0.6s,baz=326,slow=9.2,SNR=19						
ASAR	**Alice Springs**	**61.85**	**148**	P	**P**	**03 01 21.6**	**-1.9**
	0.6nm,0.6s,baz=340,slow=6.8,SNR=4.6						
HFS	**Hagfors**	**63.40**	**326**	LR	LR	03 29 33.3	
	comp=Z,33nm,19.0s,baz=174,slow=36						

IDC 30 03:00:08.9±4.2, 12°37S×166°53E, h0km, mb4.0/7, mb1 4.1/7, mb1mx3.7/49, mbtmp4.0/7, MS3.3/4, Ms1 3.3/4, ms1mx2.9/36, Error ellipse: s-maj=144.1km s-min=28.5km az=134.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.09**	**294**	LR	LR	03 04 47.3	
	comp=Z,181nm,19.9s,baz=84,slow=39						
PMG	**Port Moresby**	**19.25**	**277**	LR	LR	03 10 49.8	
	comp=Z,85nm,20.9s,baz=94,slow=33						
CTA	**Charters Tower**	**20.91**	**246**	P	P	03 04 54.3	+1.1
	4.1nm,1.0s,baz=65,slow=14,SNR=5.1						
AFI	**Afiamalu**	**21.18**	**97**	LR	LR	03 10 38.5	
	comp=Z,107nm,18.0s,baz=182,slow=30						
STKA	**Stephens Creek**	**30.04**	**226**	LR	LR	03 16 20.9	
	comp=Z,76nm,18.6s,baz=30,slow=32						
WRA	**Warramunga Arr**	**31.78**	**252**	P	P	03 06 34.8	-0.4
	0.9nm,1.0s,baz=84,slow=8.7,SNR=4.2						
ASAR	**Alice Springs**	**32.91**	**245**	P	P	03 06 44.7	-0.5

	0.8nm,0.8s,baz=72,slow=9.9,SNR=6.8						
SONM	**Songino Array**	**80.18**	**324**	P	P	03 12 20.9	-0.4
	1.0nm,0.7s,baz=123,slow=5.3,SNR=6.4						
ILAR	**Eielson Array**	**84.52**	**18**	P	P	03 12 43.4	0.0
	0.1nm,0.7s,baz=272,slow=4.2,SNR=3.0						
MKAR	**Makanchi Array**	**95.01**	**317**	P	P	03 13 34.2	+0.6
	2.5nm,0.7s,baz=96,slow=6.1,SNR=24						
ZALV	**Zalesovo Beam**	**95.07**	**324**	P	P	03 13 33.4	-0.2
	0.7nm,0.3s,baz=87,slow=3.0,SNR=4.3						

*ISK **30** 03:11:56.8, 39°13N×29°15E, h10km, ML3.6/44*

*DDA **30** 03:11:57.3, 39°12N×29°13E, h7km, Ml3.7*

*ISCJB **30** 03:11:57.1±0.3, 39°13N±0°01×29°12E±0°02, h6km±2km, Error ellipse: s-maj=2.3km s-min=2.3km az=149.5*

*CSEM **30** 03:11:57.5±0.1, 39°11N×29°15E, h8km, ML3.6, Error ellipse: s-maj=1.5km s-min=1.4km az=112.0*

*THE **30** 03:11:59.0, 39°04N×29°06E, h4km±1km, ML3.1/5, Error ellipse: s-maj=1.5km s-min=0.5km az=54.0*

*ATH **30** 03:12:04.3, 39°32N×28°34E, h10km±2km, ML2.8/3, Error ellipse: s-maj=3.0km s-min=1.7km az=300.0*

ISC 30 03:11:57.7±0.8, 39°12N±0°01×29°13E±0°01, h9km±5km, n250, σ0°87/328, 4C-11D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMAA	**Simav-Kutahya**	**0.12**	**260**	PG	**Pg**	**03 12 00.7**	**+0.2**
SMAA	**Simav-Kutahya**	**0.12**	**260**	*e*Pg	**Pg**	**03 12 00.7**	**+0.2**
SIMA	**Simav-Kutahya**	**0.12**	**252**	PG	**Pg**	**03 12 00.6**	**+0.1**
SIMA				SG	**Sg**	**03 12 02.8**	**+0.3**
SIMA	**Simav-Kutahya**	**0.12**	**252**	*e*Pg	**Pg**	**03 12 00.6**	**+0.1**
SIMA				*e*Sg	**Sg**	**03 12 02.8**	**+0.3**
SHAP	**Saphane-Kutahy**	**0.12**	**144**	PG	**Pg**	**03 12 00.3**	**-0.2**
SHAP				SG	**Sg**	**03 12 02.2**	**-0.3**
SHAP	**Saphane-Kutahy**	**0.12**	**144**	*e*Pg	**Pg**	**03 12 00.3**	**-0.2**
SHAP				*e*Sg	**Sg**	**03 12 02.2**	**-0.3**
GEDZ	**Gediz**	**0.23**	**109**	PG	**Pg**	**03 12 02.3**	**-0.1**
GEDZ				SG	**Sg**	**03 12 05.5**	**-0.1**
GEDZ	**Gediz**	**0.23**	**109**	*e*Pg	**Pg**	**03 12 02.3**	**-0.1**
GEDZ				*e*Sg	**Sg**	**03 12 05.5**	**-0.1**
DEMI	**Demirci**	**0.33**	**256**	*i* P	**Pg**	**03 12 04.3**	**+0.1**
DEMI				*i* S	**Sg**	**03 12 09.0**	**+0.3**
DEMI	**Demirci**	**0.33**	**256**	P	**Pg**	**03 12 04.3**	**+0.1**
DEMI				S	**Sg**	**03 12 09.0**	**+0.3**
TVSB	**Tavsanli**	**0.42**	**38**	PG	**Pg**	**03 12 04.7**	**-1.2**
TVSB	**Tavsanli**	**0.42**	**38**	*e*Pg	**Pg**	**03 12 04.7**	**-1.2**
DST	**Dursunbey**	**0.62**	**321**	PG	**Pg**	**03 12 09.0**	**-0.7**
DST	**Dursunbey**	**0.62**	**321**	*e*Pg	**Pg**	**03 12 09.0**	**-0.7**
DURS	**Dursunbey**	**0.70**	**313**	*i* P	**Pg**	**03 12 11.2**	**0.0**
DURS				*i* S	**Sn**	**03 12 25.1**	**+0.2**
DURS	**Dursunbey**	**0.70**	**313**	P	**Pg**	**03 12 11.1**	**0.0**
DURS				S	**Sn**	**03 12 25.1**	**+0.2**
KULA	**Kula-Manisa**	**0.71**	**211**	PG	**Pg**	**03 12 10.8**	**-0.5**
KULA	**Kula-Manisa**	**0.71**	**211**	*e*Pg	**Pg**	**03 12 10.8**	**-0.5**
KUTH	**Kutahya**	**0.74**	**68**	PG	**Pg**	**03 12 11.5**	**-0.5**
KUTH	**Kutahya**	**0.74**	**68**	*e*Pg	**Pg**	**03 12 11.5**	**-0.5**
MANT	**Manisa**	**0.77**	**216**	*i* P	**Pg**	**03 12 11.9**	**-0.7**
MANT				*i* S	**Sg**	**03 12 21.9**	**-0.8**
MANT	**Manisa**	**0.77**	**216**	P	**Pg**	**03 12 11.9**	**-0.7**
MANT				S	**Sg**	**03 12 21.9**	**-0.8**
KHL	**Karahalli**	**0.85**	**159**	PG	**Pg**	**03 12 13.9**	**-0.2**
KHL	**Karahalli**	**0.85**	**159**	*e*Pg	**Pg**	**03 12 13.9**	**-0.2**
AUBOZ	**BOZOYUK**	**1.05**	**41**	PG	**Pg**	**03 12 16.9**	**-1.0**
AUBOZ	**BOZOYUK**	**1.05**	**41**	*i* P	**Pg**	**03 12 17.9**	**0.0**
AUBOZ				*i* S	**Sb**	**03 12 32.7**	**+0.6**
AUBOZ	**BOZOYUK**	**1.05**	**41**	*e*Pg	**Pg**	**03 12 16.9**	**-1.0**
AUBOZ	**BOZOYUK**	**1.05**	**41**	P	**Pg**	**03 12 17.9**	**0.0**
AUBOZ				S	**Sb**	**03 12 32.7**	**+0.6**
AKHS	**Akhisar**	**1.05**	**257**	*i* P	**Pb**	**03 12 17.9**	**-0.1**
AKHS				*i* S	**Sb**	**03 12 32.1**	**+0.1**
AKHS	**Akhisar**	**1.05**	**257**	P	**Pb**	**03 12 18.0**	**-0.1**
AKHS				S	**Sb**	**03 12 32.1**	**+0.1**
AKS	**Akhisar**	**1.05**	**257**	PG	**Pg**	**03 12 17.3**	**-0.6**
AKS	**Akhisar**	**1.05**	**257**	*e*Pg	**Pg**	**03 12 17.3**	**-0.6**
AUKUT	**KUTAHYA**	**1.08**	**39**	*i* P	Pg	03 12 11.6	-6.9
AUKUT				*i* S	Sg	03 12 21.9	-11
STEP	**BALIKESIR_Sava**	**1.12**	**284**	*i* P	**Pn**	**03 12 19.7**	**0.0**
STEP				*i* S	**Sn**	**03 12 35.4**	**+0.1**
STEP	**BALIKESIR_Sava**	**1.12**	**284**	P	**Pn**	**03 12 19.7**	**0.0**
STEP				S	**Sn**	**03 12 35.4**	**+0.1**
KZIL	**AFYON_Kizioren**	**1.17**	**137**	*i* P	**Pg**	**03 12 19.4**	**-0.8**
KZIL				*i* S	**Sn**	**03 12 35.9**	**-0.6**
KZIL	**AFYON_Kizioren**	**1.17**	**137**	P	**Pg**	**03 12 19.4**	**-0.8**
KZIL				S	**Sn**	**03 12 35.9**	**-0.6**
CAVI	**Cavuskoy**	**1.21**	**27**	PN	**Pb**	**03 12 20.2**	**-0.6**
CAVI	**Cavuskoy**	**1.21**	**27**	*e*Pn	**Pb**	**03 12 20.2**	**-0.6**
IZI	**Iznik**	**1.24**	**12**	PN	**Pn**	**03 12 21.0**	**-0.3**
IZI	**Iznik**	**1.24**	**12**	*e*Pn	**Pn**	**03 12 21.0**	**-0.3**
MDNY	**Mudanya-Bursa**	**1.26**	**351**	PN	**Pn**	**03 12 21.1**	**-0.4**
MDNY	**Mudanya-Bursa**	**1.26**	**351**	*e*Pn	**Pn**	**03 12 21.1**	**-0.4**
BORA	**Eskisehir**	**1.27**	**53**	PN	**Pn**	**03 12 20.8**	**-1.0**
BORA	**Eskisehir**	**1.27**	**53**	*i* P	**Pn**	**03 12 21.6**	**-0.1**
BORA				*i* S	**Sg**	**03 12 38.6**	**-0.1**
BORA	**Eskisehir**	**1.27**	**53**	*e*Pn	**Pn**	**03 12 20.8**	**-1.0**
BORA	**Eskisehir**	**1.27**	**53**	P	**Pn**	**03 12 21.6**	**-0.1**
BORA				S	**Sg**	**03 12 38.6**	**-0.1**
KCTX	**Karacabey (Bur**	**1.29**	**333**	PN	**Pn**	**03 12 21.9**	**0.0**
KCTX	**Karacabey (Bur**	**1.29**	**333**	*e*Pn	**Pn**	**03 12 21.9**	**0.0**
DENT	**Denizli**	**1.37**	**183**	PN	**Pb**	**03 12 23.1**	**-0.4**
DENT	**Denizli**	**1.37**	**183**	*e*Pn	**Pb**	**03 12 23.1**	**-0.4**
ADVT	**Abdulvahap**	**1.39**	**19**	PN	**Pn**	**03 12 23.5**	**+0.2**
ADVT	**Abdulvahap**	**1.39**	**19**	*e*Pn	**Pn**	**03 12 23.5**	**+0.2**
ESKT	**Eskisehir**	**1.39**	**73**	PN	**Pn**	**03 12 23.2**	**-0.2**
ESKT	**Eskisehir**	**1.39**	**73**	*e*Pn	**Pn**	**03 12 23.2**	**-0.2**
DNZL	**Cakiroluk**	**1.43**	**183**	*i* P	**Pb**	**03 12 24.2**	**-0.4**
DNZL				*i* S	**Sg**	**03 12 45.5**	**+1.8**
DNZL	**Cakiroluk**	**1.43**	**183**	P	**Pb**	**03 12 24.2**	**-0.4**
DNZL				S	**Sg**	**03 12 45.5**	**+1.8**
GONE	**Gonen-Balikesi**	**1.45**	**310**	PN	**Pn**	**03 12 24.3**	**+0.2**
GONE	**Gonen-Balikesi**	**1.45**	**310**	*e*Pn	**Pn**	**03 12 24.3**	**+0.2**
YLV	**Yalova**	**1.46**	**7**	PN	**Pn**	**03 12 23.9**	**-0.4**
YLV	**Yalova**	**1.46**	**7**	*e*Pn	**Pn**	**03 12 23.9**	**-0.4**
BOLV	**Bolvadin**	**1.48**	**105**	*i* P	**Pg**	**03 12 25.6**	**-0.4**
BOLV				*i* S	**Sg**	**03 12 45.5**	**+0.4**
BOLV	**Bolvadin**	**1.48**	**105**	P	**Pg**	**03 12 25.6**	**-0.4**
BOLV				S	**Sg**	**03 12 45.5**	**+0.4**
SBT5	**Esenkoy-Cinarc**	**1.52**	**353**	PN	**Pn**	**03 12 25.3**	**+0.3**
SBT5	**Esenkoy-Cinarc**	**1.52**	**353**	*e*Pn	**Pn**	**03 12 25.3**	**+0.3**
AYDB	**Zeytinkoy-Aydi**	**1.52**	**220**	PN	**Pn**	**03 12 24.5**	**-0.7**
AYDB	**Zeytinkoy-Aydi**	**1.52**	**220**	*e*Pn	**Pn**	**03 12 24.5**	**-0.7**
EDC	**Edincik**	**1.57**	**322**	PN	**Pn**	**03 12 25.6**	**-0.1**
EDC	**Edincik**	**1.57**	**322**	*e*Pn	**Pn**	**03 12 25.6**	**-0.1**
BRDR	**BURDUR-Merkez**	**1.60**	**153**	*i* P	**Pb**	**03 12 27.3**	**-0.2**
BRDR				*i* S	**Sg**	**03 12 52.9**	**+3.8**
BRDR	**BURDUR-Merkez**	**1.60**	**153**	P	**Pb**	**03 12 27.3**	**-0.2**
GEYV	**SAKARYA_Geyve**	**1.63**	**33**	*i* P	**Pb**	**03 12 28.3**	**+0.4**
GEYV				*i* S	**Sg**	**03 12 51.0**	**+0.9**
GEYV	**SAKARYA_Geyve**	**1.63**	**33**	P	**Pb**	**03 12 28.3**	**+0.4**
GEYV				S	**Sg**	**03 12 51.0**	**+0.9**
TAVA	**DENIZLI_Tavas**	**1.66**	**186**	*i* P	**Pb**	**03 12 28.1**	**-0.4**
TAVA				*i* S	**Sg**	**03 12 52.9**	**+1.8**
TAVA	**DENIZLI_Tavas**	**1.66**	**186**	P	**Pb**	**03 12 28.1**	**-0.4**
TAVA				S	**Sg**	**03 12 52.9**	**+1.8**
KNL	**Bal¯–kesir**	**1.69**	**313**	*i* P	**Pb**	**03 12 28.9**	**-0.1**
KNL				*i* S	**Sg**	**03 12 52.5**	**+0.6**
GULT	**Gulveren**	**1.69**	**39**	PN	**Pn**	**03 12 27.4**	**-0.1**
GULT	**Gulveren**	**1.69**	**39**	*e*Pn	**Pn**	**03 12 27.4**	**-0.1**
ISP	**Isparta**	**1.70**	**139**	PN	**Pn**	**03 12 27.4**	**-0.2**
ISP	**Isparta**	**1.70**	**139**	↓*i* P	**Pn**	**03 12 26.9**	**-0.7**
ISP				*i* S	**Sb**	**03 12 50.5**	**-0.1**
ISP	**Isparta**	**1.70**	**139**	P	**Pn**	**03 12 27.1**	**-0.5**
ISP				S	**Sn**	**03 12 49.4**	**-0.1**
ISP	**Isparta**	**1.70**	**139**	P	**Pn**	**03 12 27.1**	**-0.5**
ISP				S	**Sn**	**03 12 49.4**	**-0.1**
ISP	**Isparta**	**1.70**	**139**	P	**Pn**	**03 12 27.1**	**-0.5**
ISP	**Isparta**	**1.70**	**139**	*e*Pn	**Pn**	**03 12 27.4**	**-0.2**
ISP				S	**Sn**	**03 12 49.4**	**-0.1**
BAGO	**Egridir - ISPA**	**1.72**	**130**	*i* P	**Pg**	**03 12 30.5**	**-0.2**
BAGO				*i* S	**Sg**	**03 12 57.2**	**+4.2**
BUY	**Buyukada**	**1.73**	**360**	PN	**Pn**	**03 12 27.5**	**-0.4**
BUY	**Buyukada**	**1.73**	**360**	*i* P	**Pn**	**03 12 27.3**	**-0.6**
BUY				*i* S	**Sg**	**03 12 52.4**	**-0.9**
BUY	**Buyukada**	**1.73**	**360**	*e*Pn	**Pn**	**03 12 27.5**	**-0.4**
BUY				S	**Sg**	**03 12 52.4**	**-0.9**
DKL	**Dikili**	**1.73**	**269**	PN	**Pn**	**03 12 27.8**	**-0.1**
DKL	**Dikili**	**1.73**	**269**	*e*Pn	**Pn**	**03 12 27.8**	**-0.1**
AYDN	**Tasoluk**	**1.76**	**214**	*i* P	**Pn**	**03 12 27.9**	**-0.4**
AYDN				*i* S	**Sb**	**03 12 53.0**	**+0.6**
AYDN	**Tasoluk**	**1.76**	**214**	P	**Pn**	**03 12 28.0**	**-0.4**

AYDN				S	**Sb**	**03 12 53.0**	**+0.6**
BLCB	**Balcova**	**1.79**	**246**	PN	**Pn**	**03 12 28.6**	**-0.2**
BLCB	**Balcova**	**1.79**	**246**	*e*Pn	**Pn**	**03 12 28.6**	**-0.2**
SPNC	**Sapanca-Adapaz**	**1.81**	**30**	PN	**Pn**	**03 12 28.7**	**-0.3**
SPNC	**Sapanca-Adapaz**	**1.81**	**30**	*e*Pn	**Pn**	**03 12 28.7**	**-0.3**
SAUV	**Serdivan-Sakar**	**1.86**	**29**	PN	**Pn**	**03 12 29.5**	**-0.2**
SAUV	**Serdivan-Sakar**	**1.86**	**29**	*e*Pn	**Pn**	**03 12 29.5**	**-0.2**
KRBG	**Karabiga-Canak**	**1.90**	**313**	PN	**Pn**	**03 12 30.5**	**+0.2**
KRBG	**Karabiga-Canak**	**1.90**	**313**	*e*Pn	**Pn**	**03 12 30.5**	**+0.2**
AYVA	**Ayvalik**	**1.91**	**276**	*i* P	**Pn**	**03 12 30.5**	**+0.2**
AYVA				*i* S	**Sg**	**03 12 59.8**	**+1.0**
AYVA	**Ayvalik**	**1.91**	**276**	P	**Pn**	**03 12 30.5**	**+0.2**
AYVA				S	**Sg**	**03 12 59.8**	**+1.0**
GOLH	**Golhisar**	**1.91**	**170**	*i* P	**Pn**	**03 12 29.9**	**-0.6**
GOLH				*i* S	**Sg**	**03 13 02.4**	**+3.2**
GOLH	**Golhisar**	**1.91**	**170**	P	**Pn**	**03 12 29.9**	**-0.6**
KAVV	**Kandilli-Istan**	**1.94**	**358**	PN	**Pn**	**03 12 30.2**	**-0.6**
KAVV	**Kandilli-Istan**	**1.94**	**358**	*e*Pn	**Pn**	**03 12 30.2**	**-0.6**
ISK	**Istanbul-Kandi**	**1.94**	**358**	PN	**Pn**	**03 12 30.2**	**-0.7**
ISK	**Istanbul-Kandi**	**1.94**	**358**	*e*Pn	**Pn**	**03 12 30.2**	**-0.7**
AUMIH	**MIHALICIK**	**1.97**	**67**	PN	**Pn**	**03 12 30.6**	**-0.8**
AUMIH	**MIHALICIK**	**1.97**	**67**	*i* P	**Pg**	**03 12 35.0**	**-0.4**
AUMIH				*i* S	**Sg**	**03 13 03.3**	**+2.4**
AUMIH	**MIHALICIK**	**1.97**	**67**	*e*Pn	**Pn**	**03 12 30.6**	**-0.8**
AUMIH	**MIHALICIK**	**1.97**	**67**	P	**Pg**	**03 12 35.0**	**-0.4**
SBT3	**Marmara-Eregli**	**1.97**	**334**	PN	**Pn**	**03 12 31.1**	**0.0**
SBT3	**Marmara-Eregli**	**1.97**	**334**	*e*Pn	**Pn**	**03 12 31.1**	**0.0**
BTAS	**Taskesti**	**2.04**	**44**	*i* P	**Pg**	**03 12 36.0**	**-0.8**
BTAS				*i* S	**Sg**	**03 13 04.9**	**+1.7**
BTAS	**Taskesti**	**2.04**	**44**	P	**Pg**	**03 12 36.0**	**-0.8**
GCAM	**G?zelcaml?**	**2.06**	**227**	PN	**Pn**	**03 12 31.6**	**-0.8**
GCAM	**G?zelcaml?**	**2.06**	**227**	*i* P	**Pn**	**03 12 33.3**	**+0.9**
GCAM	**G?zelcaml?**	**2.06**	**227**	*e*Pn	**Pn**	**03 12 31.6**	**-0.8**
GCAM	**G?zelcaml?**	**2.06**	**227**	P	**Pn**	**03 12 33.3**	**+0.9**
DGB	**¯zmir**	**2.06**	**239**	*i* P	**Pb**	**03 12 35.6**	**+0.4**
DGB				*i* S	**Sg**	**03 13 03.5**	**-0.4**
SILT	**Sile**	**2.07**	**11**	PN	**Pn**	**03 12 32.4**	**-0.2**
SILT	**Sile**	**2.07**	**11**	*e*Pn	**Pn**	**03 12 32.4**	**-0.2**
MDUB	**Mudurnu**	**2.09**	**49**	PN	**Pn**	**03 12 32.6**	**-0.4**
MDUB	**Mudurnu**	**2.09**	**49**	*e*Pn	**Pn**	**03 12 32.6**	**-0.4**
YER	**Yerkesik**	**2.09**	**199**	PN	**Pn**	**03 12 32.7**	**-0.3**
YER	**Yerkesik**	**2.09**	**199**	P	**Pn**	**03 12 32.0**	**-1.0**
YER				S	**Sn**	**03 12

SIGR	SIGRI	2.55 273	P	Pn	03 12 39.4	+0.2
SIGR	SIGRI	2.55 273	*e*Pn	Pn	03 12 39.9	+0.7
SIGR			S	Sn	03 13 10.4	+0.1
DAT	Datca	2.69 208	PN	Pn	03 12 40.7	-0.5
DAT	Datca	2.69 208	*e*Pn	Pn	03 12 40.7	-0.5
GADA	Gvkgeada	2.71 294	PN	Pn	03 12 41.8	+0.3
GADA	Gvkgeada	2.71 294	P	Pn	03 12 42.0	+0.5
GADA			S	Sn	03 13 15.1	+0.7
GADA	Gvkgeada	2.71 294	P	Pn	03 12 42.0	+0.5
GADA	Gvkgeada	2.71 294	*e*Pn	Pn	03 12 41.8	+0.3
GADA			S	Sn	03 13 15.1	+0.7
ALN	Alexandroupoli	2.96 308	P	Pn	03 12 45.1	+0.3
ALN	Alexandroupoli	2.96 308	P	Pn	03 12 45.2	+0.3
ALN			S	Sn	03 13 21.6	+1.1
ALN	Alexandroupoli	2.96 308	P	Pn	03 12 45.2	+0.3
ALN	Alexandroupoli	2.96 308	P	Pn	03 12 45.2	+0.3
ALN			S	Sn	03 13 21.6	+1.1
SMTH	Samothraki Isl	3.08 297	P	Pn	03 12 47.1	+0.5
SMTH	Samothraki Isl	3.08 297	P	Pn	03 12 47.0	+0.5
SMTH			S	Sn	03 13 25.0	+1.4
SMTH	Samothraki Isl	3.08 297	P	Pn	03 12 47.0	+0.5
SMTH	Samothraki Isl	3.08 297	P	Pn	03 12 46.9	+0.3
SMTH			S	Sn	03 13 25.0	+1.4
LIA	Limnos Island	3.15 285	P	Pn	03 12 47.7	+0.2
LIA	Limnos Island	3.15 285	P	Pn	03 12 47.6	+0.2
RDO	Rodhopi	3.42 307	P	Pn	03 12 52.1	+1.0
RDO	Rodhopi	3.42 307	P	Pn	03 12 51.9	+0.8
RDO			S	Sn	03 13 33.3	+1.6
RDO	Rodhopi	3.42 307	P	Pn	03 12 51.9	+0.8
RDO	Rodhopi	3.42 307	P	Pn	03 12 51.9	+0.8
RDO			S	Sn	03 13 33.3	+1.6
PAIG	Paliouri	4.29 283	P	Pn	03 13 02.8	-0.3
PAIG	Paliouri	4.29 283	P	Pn	03 13 03.3	+0.2
NVR	Nevrokopi	4.61 301	P	Pn	03 13 08.0	+0.4
NVR	Nevrokopi	4.61 301	P	Pn	03 13 08.1	+0.6
TIRR	Tirgusor	5.36 354 ⇓	*i*P	Pn	03 13 18.2	+0.4
TIRR	Tirgusor	5.36 354 ⇓	*i*P	Pn	03 13 18.2	+0.4
TLB	Topalu	5.52 352 ⇓	*i*P	Pn	03 13 20.5	+0.5
TLB	Topalu	5.52 352 ⇓	*i*P	Pn	03 13 20.5	+0.5
CFR	Carcaliu	6.10 353 ⇓	*i*P	Pn	03 13 27.9	0.0
CFR	Carcaliu	6.10 353 ⇓	*i*P	Pn	03 13 27.9	0.0
MLR	Muntele Rosu	6.79 341 ⇓	*i*P	Pn	03 13 39.0	+1.4
MLR	Muntele Rosu	6.79 341 ⇓	*i*P	Pn	03 13 39.0	+1.4
VRI	Vrincioaia	6.97 346 ⇑	*i*P	Pn	03 13 41.1	+1.1
VRI	Vrincioaia	6.97 346 ⇑	*i*P	Pn	03 13 41.1	+1.1
VOIR		7.00 336 ⇑	*i*P	Pn	03 13 41.2	+0.8
VOIR		7.00 336 ⇑	*i*P	Pn	03 13 41.2	+0.8
DOPR	Dopca	7.38 339 ⇓	*i*P	Pn	03 13 45.2	-0.3
DOPR	Dopca	7.38 339 ⇓	*i*P	Pn	03 13 45.2	-0.3

DJA 30 03:14:34.2±1.0, 2°N±5°×9°4E±°, h72km±51km, M4.2/6, mB5.2/1, mb4.6/1, MLv4.1/6, Mw(mB)4.6/1, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	2.18	80	P	Pn	03 15 08.2	-0.1
SNSI				S	Sn	03 15 37.3	+3.0
MLSI	Meulaboh, Aceh	3.13	45	P	Pn	03 15 19.9	-1.4
MLSI				S	Sn	03 15 57.7	+0.1
TPTI		3.23	68	P	Pn	03 15 22.2	-0.4
TPTI				S	Sn	03 16 01.3	+1.3
GSI	Gunungsitoli	3.47	102	P	Pn	03 15 26.3	+0.4
GSI				S	Sn	03 16 06.7	+0.8
BSI	Banda Aceh	3.61	18	P	Pn	03 15 23.5	-4.3
BSI				S	Sn	03 16 03.9	-5.4
KCSI	Kotacane, Aceh	3.88	68	P	Pn	03 15 33.2	+1.8
KCSI				S	Sn	03 16 16.0	+0.2
PBSI	Pulau Batu	4.60	117	P	Pn	03 15 41.2	0.0
PBSI				S	Sn	03 16 32.7	-0.7
MNSI	Mandailing Nat	5.54	103	P	Pn	03 15 54.6	+0.5
MNSI				S	Sn	03 16 57.2	+0.7

NIED ***30*** *03:22:00, 26°.70N×130°.00E, h5km, Mw4.2 Best double couple: M0=2.37000×10^15 NP1:φ0=211.00000°, δ43.00000°, λ-91.00000°. NP2:φ0=33.00000°, δ47.00000°, λ-89.00000°.*
IDC ***30*** *03:22:31.1±0.7, 26°.74N×129°.94E, h0km, mb3.9/19, mb1 4.1/22, mb1mx4.0/57, mbtmp4.0/22, ML4.1/2, MS3.5/15, Ms1 3.5/15, ms1mx3.2/58, Error ellipse: s-maj=21.9km s-min=14.3km az=81.0*
ISCJB ***30*** *03:22:32.5±1.1, 26°.76N±0°.03×129°.94E±0°.04, h20km±8km, mb4.0/28, MS3.6/13, Error ellipse: s-maj=5.6km s-min=5.1km az=29.5*
NEIC ***30*** *03:22:32.4±3.6, 26°.73N×129°.94E, h8km±22km, mb4.3/7, Error ellipse: s-maj=8.6km s-min=6.2km az=79.0*
JMA ***30*** *03:22:33.4, 26°.70N×129°.97E, h50km, M3.9*
ISC 30 03:22:33.0±4.3, 26.73N±0°.04×129.96E±0°.04, h15km±27km, n57, σ1°34/62, mb4.2/28, MS3.6/13, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	Tokunoshima	1.38	320	P	Pn	03 22 57.7	-0.2
JTK				*e*S	Sb	03 23 14.2	-2.0
JOKE	Okinoerabujima	1.39	297	P	Pn	03 22 57.6	-0.4
JOKE				S	Sb	03 23 14.0	-2.4
JMZ	Minamidaito 2	1.45	128	P	Pn	03 22 57.3	-1.4
JMZ				S	Sb	03 23 14.7	-3.3
JOW	Kunigami	1.51	274	P	Pn	03 22 59.0	-0.6
JZK	Kikaishima	1.58	0	P	Pn	03 23 00.4	-0.1
JAMN	Amaminishikomi	1.66	335	P	Pn	03 23 01.1	-0.6
JAMN				S	Sn	03 23 20.7	-2.0
JAM	Amami Oshima	1.70	349	P	Pn	03 23 01.8	-0.4
JAM				*e*S	Sn	03 23 20.7	-3.1
JNTH	Nagotoyohara	1.75	264	P	Pn	03 23 01.9	-1.0
JNTH				*e*S	Sn	03 23 22.4	-2.5
JIH	Iheya	1.81	280	P	Pn	03 23 03.4	-0.3
JIH				S	Sn	03 23 24.6	-1.7
JJT3	Tamagusuku3	2.04	254	P	Pn	03 23 06.7	-0.1
JJT3				*e*S	Sn	03 23 30.2	-1.9
JAGN	Aguni-jima	2.44	267	P	Pn	03 23 11.7	-0.6
JTAJ	Takarajima	2.51	345	P	Pn	03 23 12.6	-0.7
JTAJ				*e*S	Sn	03 23 40.7	-2.9
JKE	Kume jima 2	2.87	263	P	Pn	03 23 17.3	-1.0
JNN	Nakanoshima	3.10	359	P	Pn	03 23 21.7	+0.2
JNN				*e*S	Sn	03 23 55.9	-2.4
JYAK	Yakushimahirau	3.53	8	P	Pn	03 23 27.5	+0.2
JYAK				*e*S	Sn	03 24 05.3	-3.5
JNU	Nakatsue	6.42	7	Pn	Pn	03 24 07.5	+0.4
	4.2nm,0.3s,baz=227,slow=3.3,SNR=21						
JNU				Sn	Sn	03 25 17.1	-3.1
	0.5nm,0.3s,baz=233,slow=20,SNR=2.8						
JHJ	Hachijo jima 2	10.63	51	Pn	Pn	03 25 06.3	+1.4
	5.2nm,0.3s,baz=68,slow=19,SNR=2.0						
JHJ				LR	LR	03 28 17.3	
	comp=Z,78nm,20.1s,baz=251,slow=32						
KSRS	Korea Array	10.83	351	LR	LR	03 29 29.3	
	comp=Z,24nm,21.6s,baz=185,slow=39						
USRK	Ussuriysk Ar.	17.51	5	P	Pn	03 26 36.8	+0.2
	baz=190,slow=7.3						
GUMO	Guam	19.12	130	LR	LR	03 32 42.2	
	comp=Z,83nm,20.1s,baz=316,slow=32						
ASAJ	Asahikawa	20.13	27	P	P	03 27 06.5	+0.1
	2.4nm,0.7s,baz=204,slow=7.6,SNR=2.8						
KLR	Kul'dur	22.51	3	P	P	03 27 31.9	-0.1
	0.1nm,0.6s,baz=189,slow=4.4,SNR=4.8						
SONM	Songino Array	28.01	325	P	P	03 28 23.9	+0.4
	0.3nm,0.4s,baz=132,slow=11,SNR=2.5						
SONM				LR	LR	03 40 54.2	
	comp=Z,69nm,19.2s,baz=128,slow=39						
MKAR	Makanchi Array	42.37	311	P	P	03 30 28.4	+1.7
	0.5nm,0.6s,baz=101,slow=10,SNR=5.9						
MKAR				LR	LR	03 50 57.3	
	comp=Z,37nm,18.0s,baz=42,slow=40						
ZALV	Zalesovo Beam	42.80	322	P	P	03 30 30.1	+0.1
	0.8nm,0.5s,baz=150,slow=6.3,SNR=4.0						
FITZ	Fitzroy Crossi	44.76	186	P	P	03 30 46.5	+0.5
	2.4nm,0.8s,baz=36,slow=8.7,SNR=4.6						
KURK	Kurchatov	45.53	316	P	P	03 30 52.0	+0.1
KURBB	Kurchatov Arra	45.57	316	P	P	03 30 52.0	-0.2
	1.5nm,0.8s,baz=101,slow=8.5,SNR=9.8						
WRAB	Tennant Creek	46.58	174	*e*P	P	03 31 00.7	+0.2
	1.6nm,0.5s						
WRA	Warramunga Arr	46.59	174	P	P	03 31 00.8	+0.2
	2.4nm,0.6s,baz=354,slow=8.5,SNR=31						
ASAR	Alice Springs	50.25	175	P	P	03 31 29.4	+0.6
	1.7nm,0.8s,baz=5.9,slow=14,SNR=20						
BVAR	Borovoye Array	50.94	318	P	P	03 31 33.8	0.0
	1.4nm,0.6s,baz=81,slow=8.9,SNR=7.0						
BVAR				LR	LR	03 55 14.0	
	comp=Z,149nm,18.6s,baz=102,slow=38						
BRVK	Borovoye	51.01	318	*e*P	P	03 31 34.5	+0.3
	2.4nm,0.6s						
ARU	Arti	57.96	322	*e*P	P	03 32 25.2	+0.5
	1.6nm,0.4s						
AKTO	Aktyubinsk	58.59	315	P	P	03 32 29.0	-0.3
	1.6nm,0.7s,baz=85,slow=13,SNR=4.5						
AKTO				LR	LR	03 59 26.3	
	comp=Z,39nm,19.8s,baz=84,slow=38						
GEYT	Alibeck	60.38	300	LR	LR	04 01 45.7	
	comp=Z,53nm,19.7s,baz=125,slow=39						
ILAR	Eielson Array	63.26	28	P	P	03 33 00.6	-0.2
	0.3nm,0.7s,baz=269,slow=7.6,SNR=5.4						
GNI	Garni	69.85	306	LR	LR	04 06 53.0	
	comp=Z,33nm,20.0s,baz=194,slow=38						
KBZ	Khabaz	70.04	310	LR	LR	04 07 00.7	
	comp=Z,39nm,20.8s,baz=168,slow=38						
FINES	FINESS Array B	73.19	331	P	P	03 34 03.5	+0.4
	1.4nm,0.6s,baz=71,slow=8.3,SNR=6.4						
FINES				LR	LR	04 09 46.3	
	comp=Z,33nm,18.2s,baz=71,slow=39						
AKASG	Malin Array Be	76.15	320	P	P	03 34 20.8	+0.4
	1.3nm,0.5s,baz=56,slow=6.6,SNR=5.9						
AKASG				LR	LR	04 10 46.5	
	comp=Z,80nm,18.5s,baz=65,slow=38						
KIEV	Kiev	76.17	320	*e*P	P	03 34 20.6	+0.2
YKA	Yellowknife Ar	77.41	25	P	P	03 34 28.0	+0.7
	0.3nm,0.7s,baz=320,slow=4.9,SNR=4.6						
BRTR	Keskin Array B	77.95	308	P	P	03 34 31.5	+0.6
	1.2nm,0.8s,baz=97,slow=5.2,SNR=8.3						
HFS	Hagfors	79.09	333	P	P	03 34 36.2	-0.5
	1.8nm,0.7s,baz=100,slow=6.0,SNR=3.8						
HFS				LR	LR	04 13 29.4	
	comp=Z,29nm,18.9s,baz=137,slow=39						
NB2	NORSAR Subarra	79.54	334	P	P	03 34 38.9	-0.3
	comp=Z,3.2nm,0.8s,baz=52,slow=5.9						
NOA	NORSAR Array B	79.54	334	LR	LR	04 15 05.6	
	comp=Z,20nm,18.0s,baz=70,slow=40						
CLL	Collm	84.62	326	*i* P	P	03 35 07.1	+1.2
	comp=Z,6.0nm,1.0s						
GERES	GERESS Array B	85.73	324	P	P	03 35 12.0	+0.3
	comp=Z,1.0nm,0.8s,baz=46,slow=5.8,SNR=5.6						
GERES				LR	LR	04 16 19.8	
	comp=Z,43nm,19.4s,baz=126,slow=38						
MOD	Modoc Plateau	85.86	45	*e*P	P	03 35 14.0	+1.4
	comp=Z,1.5nm,0.5s						
BMO	Blue Mountains	86.06	41	*e*P	P	03 35 14.5	+1.0
	comp=Z,0.5nm,0.3s						
FFC	Flin Flon	87.44	27	*e*P	P	03 35 20.3	+0.4
	comp=Z,1.5nm,0.6s						
MFID	Camas Ranch	87.76	42	*e*P	P	03 35 22.6	+0.9
	comp=Z,0.8nm,0.6s						
NVAR	Mina Array Bea	89.04	47	P	P	03 35 28.9	+0.9
	comp=Z,0.4nm,0.7s,baz=256,slow=4.3,SNR=4.1						
PPT	Papeete	89.59	110	LR	LR	04 10 57.3	
	comp=Z,29nm,20.3s,baz=315,slow=32						
PDAR	Pinedale Array	91.80	39	P	P	03 35 41.5	+0.6
	comp=Z,0.8nm,0.9s,baz=180,slow=0.3,SNR=6.2						
SAML	Samuel	158.37	38	*e*PKPdf	PKPdf	03 42 30.3	-0.3

ISK ***30*** *03:24:14.5, 38°.39N×39°.22E, h8km, ML2.1/4*
IASPEI ***30*** *03:24:15.4±0.9, 38°.39N±0°.03×39°.25E±0°.02, h6km±5km, Error ellipse: s-maj=4.1km s-min=3.0km az=33.4, GT5 selection from ISC bulletin GT5 identified by Bond˘jr and McLaughlin (2009) selection criteria Bond˘jr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
ISCJB ***30*** *03:24:15.3±0.5, 38°.40N±0°.03×39°.25E±0°.02, h1km±4km, Error ellipse: s-maj=4.5km s-min=3.1km az=17.3*
DDA ***30*** *03:24:15.4, 38°.41N×39°.26E, h7km, Ml2.6*
CSEM ***30*** *03:24:15.3±0.2, 38°.41N×39°.25E, h2km, ML2.1, Error ellipse: s-maj=3.8km s-min=3.1km az=15.0*
ISC 30 03:24:15.4±0.9, 38°.40N±0°.02×39°.25E±0°.02, h7km±5km, n33, σ0°52/60, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVRC	Sivrice-ELAZID	0.05	113	PG	Pg	03 24 16.9	-0.2
SVRC				SG	Sg	03 24 18.3	0.0
SVRC	Sivrice-ELAZID	0.05	113	*i* Pg	Pg	03 24 16.9	-0.2
SVRC				*e*Sg	Sg	03 24 18.3	0.0
ELZG	Elazig	0.23	296	*i* P	Pg	03 24 20.2	+0.1
ELZG				*i* S	Sg	03 24 24.2	+1.0
ELZG	Elazig	0.23	296	P	Pg	03 24 20.2	+0.1
ELZG				S	Sg	03 24 24.2	+1.0
PTK	Pertek	0.51	13	PG	Pg	03 24 25.1	-0.2
PTK	Pertek	0.51	13	*e*Pg	Pg	03 24 25.1	-0.2
MALT	Malatya	0.65	263	PG	Pg	03 24 27.2	-0.8
MALT				SG	Sg	03 24 36.3	-0.2
MALT	Malatya	0.65	263	*e*Pg	Pg	03 24 27.2	-0.8
MALT				*e*Sg	Sg	03 24 36.3	-0.2
DIYA	Diyarbakir	0.83	124	*i* P	Pg	03 24 31.6	+0.2
DIYA				*i* S	Sb	03 24 43.5	-0.3
DIYA	Diyarbakir	0.83	124	P	Pg	03 24 31.6	+0.2
DIYA				S	Sb	03 24 43.5	-0.3
HANI	Diyarbakir_Han	0.90	89	*i* P	Pg	03 24 32.7	-0.1
HANI				*i* S	Sb	03 24 45.8	0.0
HANI	Diyarbakir_Han	0.90	89	P	Pg	03 24 32.7	-0.1
HANI				S	Sb	03 24 45.8	0.0
URFA	Urfa	1.01	200	PG	Pg	03 24 34.1	-0.8
URFA				SG	Sg	03 24 48.3	+0.3
URFA	Urfa	1.01	200	*e*Pg	Pg	03 24 34.1	-0.8
URFA				*e*Sg	Sg	03 24 48.3	+0.3
KEMA	Kemaliye	1.05	326	*i* P	Pg	03 24 35.3	-0.4
KEMA				*i* S	Sb	03 24 49.9	-0.2
KEMA	Kemaliye	1.05	326	P	Pg	03 24 35.3	-0.4
KEMA				S	Sb	03 24 49.9	-0.2
HEKM	Malatya_Hekimh	1.12	296	*i* P	Pg	03 24 36.2	-0.7
HEKM				*i* S	Sn	03 24 53.7	+0.1
HEKM	Malatya_Hekimh	1.12	296	P	Pg	03 24 36.2	-0.7
HEKM				S	Sn	03 24 53.7	+0.1
ATAB	Bozova	1.20	219	*i* P	Pn	03 24 38.8	+0.1
ATAB				*i* S	Sn	03 24 55.3	+0.1
ATAB	Bozova	1.20	219	P	Pn	03 24 38.8	+0.1
ATAB				S	Sn	03 24 55.3	+0.1
SANL	SANLIURFA_Merk	1.24	190	*i* P	Pn	03 24 39.9	+0.6
SANL				*i* S	Sb	03 24 55.9	+0.4
SANL	SANLIURFA_Merk	1.24	190	P	Pn	03 24 39.9	+0.6
SANL				S	Sb	03 24 55.9	+0.4
MAZI	Mazidag	1.33	134	PN	Pn	03 24 40.1	-0.5
MAZI	Mazidag	1.33	134	*e*Pn	Pn	03 24 40.1	-0.5
SVAN	Silvan-Diyarba	1.55	99	PN	Pn	03 24 43.1	-0.5
SVAN	Silvan-Diyarba	1.55	99	*e*Pn	Pn	03 24 43.1	-0.5
SURC	SANLIURFA_SURC	1.60	199	*e*P	Pg	03 24 46.4	+0.2
SURC				*i* S	Sb	03 25 06.1	+0.3
SURC	SANLIURFA_SURC	1.60	199	P	Pg	03 24 46.3	+0.2
SURC				S	Sb	03 25 06.1	+0.3
MARD	Mardin	1.62	131	*i* P	Pn	03 24 43.3	-1.4
MARD				*i* S	Sn	03 25 05.1	-0.8
BTMN	Batman	1.67	107	*i* P	Pn	03 24 45.2	-0.1
BTMN				*i* S	Sb	03 25 08.4	+0.5
BTMN	Batman	1.67	107	P	Pn	03 24 45.2	-0.1
BTMN				S	Sb	03 25 08.4	+0.5
SRTM	Siirt_Merkez	2.14	100	*i* P	Pn	03 24 53.0	+1.2
SRTM				*i* S	Sb	03 25 21.5	-0.1
SRTM	Siirt_Merkez	2.14	100	P	Pn	03 24 53.0	+1.2
SRTM				S	Sb	03 25 21.5	-0.1

CSEM ***30*** *03:27:39.2, 42°.99N×46°.55E, h13km, mb3.9*
MOS ***30*** *03:27:39.2±2.2, 42°.99N×46°.55E, h13km, mb3.9/1, Error ellipse: s-maj=7.5km s-min=5.7km az=131.0*
ISC 30 03:27:39.7±1.1, 42.97N±0°.02×46.52E±0°.02, h2km±9km, n56, σ1°64/89, 6C-3D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DLMR	Dylym	0.13	40 ⇓	*i*PG	Pg	03 27 42.0	-0.2
DLMR				pmax	pmax		
	comp=Z,862nm,0.1s						
DLMR	Dylym	0.13	40	*i* Pg	Pg	03 27 42.0	-0.2
	comp=Z,862nm,0.1s						
DBC	Dubki	0.23	78 ⇑	*i*PG	Pg	03 27 43.9	-0.3
DBC				*i*		03 27 48.5	
DBC	Dubki	0.23	78	*i* Pg	Pg	03 27 43.9	-0.3
DBC				*i* Sg	Sg	03 27 48.5	+1.3
KRNR	Karanay	0.32	117 ⇓	*i*PG	Pg	03 27 45.0	-0.8
KRNR				*i* S	Sg	03 27 50.5	+0.5
KRNR				pmax	pmax		
	comp=Z,99nm,0.1s						
KRNR	Karanay	0.32	117	*i* Pg	Pg	03 27 45.0	-0.8
	comp=Z,99nm,0.1s						
KRNR				*i* Sg	Sg	03 27 50.5	+0.5
UNCR	Uncukul	0.33	142 ⇓	*i*PG	Pg	03 27 45.0	-1.0
UNCR				*e*S	Sg	03 27 50.5	+0.2
UNCR				pmax	pmax		
	comp=Z,127nm,0.1s						
UNCR	Uncukul	0.33	142	*i* Pg	Pg	03 27 45.0	-1.0
	comp=Z,127nm,0.1s						
UNCR				*e*Sg	Sg	03 27 50.5	+0.2
BTLR	Botlikh	0.38	215 ⇑	*i*PG	Pg	03 27 45.4	-1.6
BTLR				pmax	pmax		
	comp=Z,54nm,0.3s						
BTLR	Botlikh	0.38	215	*i* Pg	Pg	03 27 45.4	-1.6
	comp=Z,54nm,0.3s						
XNZR	Khunzakh	0.45	162 ⇑	*e*PG	Pg	03 27 47.5	-0.9
XNZR				*e*		03 27 54.4	
XNZR	Khunzakh	0.45	162	*e*Pg	Pg	03 27 47.5	-0.9
XNZR				*e*Sg	Sg	03 27 54.4	+0.2
BUJR	Buynaksk	0.46	109	*e*PG	Pg	03 27 49.0	+0.5
BUJR				S	Sb	03 27 57.0	-0.8
BUJR				pmax	pmax		
	comp=Z,81nm,0.2s						
BUJR	Buynaksk	0.46	109	*e*Pg	Pg	03 27 49.0	+0.5
	comp=Z,81nm,0.2s						
BUJR				Sg	Sb	03 27 57.0	-0.8
ARKR	Arakani	0.51	136	*e*PG	Pg	03 27 49.0	-0.4
ARKR				*i* S	Sg	03 27 56.0	0.0
ARKR	Arakani	0.51	136	*e*Pg	Pg	03 27 49.0	-0.4
ARKR				*i* Sg	Sg	03 27 56.0	0.0
GROC	Groznyy	0.58	294	*e*PG	Pg	03 27 49.7	-1.1
GROC				*e*S	Sg	03 27 58.8	+0.5
GROC				pmax	pmax		
	comp=Z,34nm,0.3s						
GROC				smax	smax		
	comp=N,76nm,0.6s						
GROC				smax	smax		
	comp=N,154nm,1.0s						
GROC	Groznyy	0.58	294	*e*Pg	Pg	03 27 49.7	-1.1
	comp=N,34nm,0.3s						
GROC				*e*Sg	Sg	03 27 58.8	+0.5
	comp=N,154nm,1.0s						
GNBR	Gunib	0.67	151 ⇑	*e*PG	Pg	03 27 52.8	+0.3
GNBR				*e*		03 28 03.0	
GNBR				pmax	pmax		
	comp=Z,44nm,0.4s						
GNBR				smax	smax		
	comp=N,245nm,0.4s						
GNBR	Gunib	0.67	151	*e*Pg	Pg	03 27 52.8	+0.3
	comp=N,44nm,0.4s						
GNBR				*e*Sg	Sb	03 28 03.0	-0.9
	comp=N,245nm,0.4s						
MAK	Makhachkala	0.72	91	*e*PG	Pn	03 27 57.0	0.0
MAK				*e*		03 28 08.9	
MAK				pmax	pmax		
	comp=Z,73nm,0.3s						
MAK				smax	smax		
	comp=N,459nm,0.4s						
MAK				smax	smax		
	comp=N,374nm,0.5s						
MAK	Makhachkala	0.72	91	*e*Pg	Pn	03 27 57.0	0.0
	comp=N,73nm,0.3s						
MAK				*e*Sg	Sn	03 28 08.9	+0.3
	comp=N,374nm,0.5s						
URKR	Urkarakh	1.15	134 ⇑	*e*PG	Pn	03 28 02.4	-0.6
URKR				*e*		03 28 19.4	
URKR	Urkarakh	1.15	134	*e*Pg	Pn	03 28 02.4	-0.6
URKR				*e*Sg	Sn	03 28 19.4	0.0
KMGR	Komgaron	1.22	275	*e*PG	Pg	03 28 02.4	-0.6
KMGR				*e*S	Sg	03 28 17.5	-1.3
KMGR	Komgaron	1.22	275	*e*Pg	Pg	03 28 02.4	-0.6
KMGR				*e*Sg	Sg	03 28 17.5	-1.3
VLKR	Vladikavkaz	1.35	274	*e*PG	Pg	03 28 09.9	+4.3
VLKR				*e*S	Sn	03 28 27.0	+2.7
VLKR	Vladikavkaz	1.35	274	*e*Pg	Pg	03 28 09.9	+4.3
VLKR				*e*Sg	Sn	03 28 27.0	+2.7
DDFL	Dedoflistskaro	1.56	191	P	Pg	03 28 12.2	+2.7
DDFL				S	Sg	03 28 36.3	+6.6
GUDG	Gudauri	1.59	252	P	Pn	03 28 08.8	-0.3
GUDG				S	Sg	03 28 31.3	+0.6
DUS	Dusheti	1.61	237	P	Pb	03 28 09.7	-0.5
DUS				S	Sg	03 28 32.5	+1.2
DUS	Dusheti	1.61	237	*e*PN	Pb	03 28 09.7	-0.5
DUS				*e*S	Sg	03 28 32.5	+1.2
DUS	Dusheti	1.61	237	*e*Pn	Pb	03 28 09.7	-0.5
DUS				*e*Sg	Sg	03 28 32.5	+1.2
AKT	Akhty	1.74	149	*e*PN	Pb	03 28 12.0	-0.5
AKT				*e*		03 28 34.5	
AKT				pmax	pmax		
	comp=Z,12nm,0.2s						
AKT				smax	smax		
	comp=N,26nm,0.2s						
AKT				smax	smax		
	comp=E,70nm,0.3s						
AKT				smax	smax		
	comp=E,58nm,0.3s						
AKT	Akhty	1.74	149	*e*Pn	Pb	03 28 12.0	-0.5
	comp=E,12nm,0.2s						
AKT				*e*Sg	Sb	03 28 34.5	-0.3
	comp=E,26nm,0.2s						
KSMR	Kasumkent	1.82	138	PN	Pg	03 28 14.0	-0.5
KSMR				*e*S	Sg	03 28 42.0	+4.0
KSMR	Kasumkent	1.82	138	Pn	Pg	03 28 14.0	-0.5
KSMR				*e*Sg	Sg	03 28 42.0	+4.0
STDR	Stavd-Durt	1.84	283	*e*PN	Pn

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	comp=E,2μm,0.4s						
KMO	**Kumora**	**1.46**	**290**	⇑*i*Pg	Pb	03 53 07.8	-0.3
KMO				*e*Sg	Sb	03 53 27.0	+0.7
KMO				Pmax			
	comp=E,75nm,0.1s						
KMO				Smax			
	comp=E,214nm,0.4s						
KMO	**Kumora**	**1.46**	**290**	*e*PG	Pb	03 53 07.8	-0.3
KMO				*e*		03 53 26.5	
KMO				pmax	pmax		
	comp=Z,129nm,0.3s						
KMO				smax	smax		
	comp=E,212nm,0.6s						
YLYR	**Ulyunkhan**	**1.52**	**250**	⇑*i*Pg	Pb	03 53 09.1	0.0
YLYR				*e*Sg	Sg	03 53 29.9	-0.7
YLYR				Pmax			
	comp=E,38nm,0.2s						
YLYR				Smax			
	comp=E,283nm,0.2s						
YLYR	**Ulyunkhan**	**1.52**	**250**	*e*PG	Pb	03 53 09.3	+0.2
YLYR				*e*		03 53 30.1	
YLYR				pmax	pmax		
	comp=Z,60nm,0.4s						
YLYR				smax	smax		
	comp=E,380nm,0.3s						
NLYR	**Nelyaty**	**1.59**	**46**	*e*Pg	Pb	03 53 09.8	-0.4
NLYR				*e*Sg	Sb	03 53 30.3	+0.4
NLYR				Pmax			
	comp=E,71nm,0.3s						
NLYR				Smax			
	comp=E,868nm,0.9s						
NLYR	**Nelyaty**	**1.59**	**46**	*e*PN	Pb	03 53 10.5	+0.3
NLYR				*e*		03 53 31.9	
NLYR				pmax	pmax		
	comp=Z,67nm,0.7s						
NLYR				smax	smax		
	comp=N,754nm,0.8s						
NIZ	**Nizh Angarsk**	**2.35**	**281**	*e*Pn	Pn	03 53 20.7	+1.6
NIZ				*e*Pg	Pb	03 53 23.3	0.0
NIZ				*e*Sn	Sn	03 53 47.4	-0.1
NIZ				*e*Sg	Sg	03 53 54.7	-2.5
NIZ				Pmax			
	comp=N,23nm,0.3s						
NIZ				Smax			
	comp=N,73nm,0.3s						
BOD	**Bodaibo**	**2.42**	**5**	*e*Pn	Pn	03 53 20.3	+0.2
BOD				*e*Pg	Pb	03 53 24.0	-0.4
BOD				*e*Sn	Sn	03 53 49.4	+0.2
BOD				*e*Sg	Sb	03 53 55.5	+1.6
BOD				Pmax			
	comp=N,18nm,0.2s						
BOD				Smax			
	comp=N,68nm,0.4s						
SYVR	**Suvo**	**2.75**	**232**	*e*Pn	Pn	03 53 24.5	-0.1
SYVR				*e*Pg	Pb	03 53 30.3	+0.2
SYVR				*e*Sn	Sn	03 53 57.0	-0.3
SYVR				*e*Sg	Sg	03 54 06.7	-3.2
SYVR				Pmax			
	comp=N,19nm,0.5s						
SYVR				Smax			
	comp=N,105nm,0.4s						
MXMB	**Maximikha**	**3.58**	**235**	*e*Pn	Pn	03 53 36.5	+0.5
MXMB				*e*Pg	Pb	03 53 46.1	+1.9
MXMB				*e*Sn	Sn	03 54 17.5	-0.3
MXMB				*e*Sg	Sg	03 54 33.5	-3.0
TUP	**Tupik**	**3.77**	**103**	*e*Pn	Pn	03 53 39.7	+1.0
TUP				*e*Pg	Pb	03 53 50.0	+2.5
TUP				*e*Sn	Sn	03 54 22.5	0.0
TUP				*e*Sg	Sg	03 54 39.5	-3.1
TUP				Pmax			
	comp=N,11nm,0.3s						
TUP				Smax			
	comp=N,69nm,0.5s						
TUP	**Tupik**	**3.77**	**103**	*e*PN	Pn	03 53 39.8	+1.1
TUP				*e*		03 53 50.2	
TUP				*e*		03 54 40.8	
TUP				pmax	pmax		
	comp=Z,13nm,0.5s						
TUP				smax	smax		
	comp=N,65nm,0.8s						
OGRR	**Ongureny**	**3.94**	**246**	*e*Pn	Pn	03 53 42.1	+1.2
OGRR				*e*Pg	Pb	03 53 51.6	+1.3
OGRR				*e*		03 54 01.3	
OGRR				*e*Sn	Sn	03 54 26.2	-0.4
OGRR				*e*Sg	Sg	03 54 43.7	-4.3
OGRR				Pmax			
	comp=N,12nm,0.5s						
OGRR				Smax			
	comp=N,38nm,0.3s						
KELR	**Kotokel**	**4.21**	**233**	*e*Pg	Pb	03 53 57.3	+2.3
KELR				*e*Sn	Sn	03 54 32.9	-0.4
KELR				*e*Sg	Sg	03 54 53.1	-3.6
UUDB	**Ulan-Yde**	**5.02**	**228**	*e*Pg	Pb	03 54 12.7	+3.9
UUDB				*e*Sg	Sg	03 55 17.1	-5.5
UUDB				Pmax			
	comp=N,10.0nm,0.8s						
UUDB				Smax			
	comp=N,83nm,1.0s						
TRG	**Tyrgan**	**5.05**	**241**	*e*Pg	Pb	03 54 11.6	+2.4
TRG				*e*Sg	Sg	03 55 17.3	-6.1
TRG				Pmax			
	comp=N,4.0nm,0.2s						
TRG				Smax			
	comp=N,31nm,0.7s						
HRMR	**Khuramsha**	**5.50**	**229**	*e*Pn	Pn	03 54 04.5	+2.2
HRMR				*e*Sg	Sg	03 55 32.6	-5.3
KPC	**Khapcheranga**	**5.77**	**188**	*e*Pn	Pn	03 54 07.5	+1.4
KPC				*e*Pg	Pb	03 54 25.7	+4.2
KPC				*e*Sg	Sg	03 55 39.7	-6.8
KPC				Pmax			
	comp=N,1.0nm,0.1s						
KPC				Smax			
	comp=N,16nm,0.6s						
BGT	**Bolshoye Golou**	**5.94**	**239**	*e*Sg	Sg	03 55 44.5	-7.3
IVK	**Ivanovka**	**6.57**	**240**	*e*Sg	Sg	03 56 04.5	-7.7
IVK				Smax			
	comp=N,13nm,1.3s						
TLY	**Talaya**	**7.03**	**242**	*e*Pg	Pb	03 54 47.8	+4.9
TLY				*e*Sg	Sg	03 56 18.3	-8.5
TLY				Pmax			
	comp=N,1.0nm,0.1s						
TLY				Smax			
	comp=N,8.0nm,0.5s						
ARS	**Arshan**	**7.52**	**247**	*e*Sg	Sb	03 56 34.3	+14
ARS				Smax			
	comp=N,25nm,0.4s						
ORL	**Orlik**	**8.64**	**256**	*e*Pn	Pn	03 54 47.6	+2.0
ORL				*e*		03 56 35.5	
ORL				*e*Sg	Sn	03 57 08.0	+46
ORL				Smax			
	comp=N,8.0nm,1.1s						

MEX 30 03:59:36.5±0.5, 16°.59N×95°.05W, h109km±18km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.31**	**231**	*e*P	Pn	03 59 59.4	-1.6
HUIG				*e*S	Sn	04 00 18.0	-1.6
VHO	**Vista Hermosa**	**1.68**	**287**	*e*P	Pn	04 00 05.0	-0.7
VHO				*e*S	Sn	04 00 26.1	-1.8
TGIG		**1.85**	**84**	*e*P	Pn	04 00 06.7	-1.0
TGIG				*e*S	Sn	04 00 29.7	-1.8
PCIG		**1.97**	**116**	*e*P	Pn	04 00 07.7	-1.3
PCIG				*e*S	Sn	04 00 32.8	-1.0
CCIG	**Comitan**	**2.81**	**96**	*e*P	Pn	04 00 27.1	+6.9
CCIG				*e*S	Sn	04 00 59.1	+5.4

*IDC **30** 04:06:01.9±1.1, 43°.41N×84°.75E, h0km, mb3.6/5, mb1 3.7/10, mb1mx3.5/66, mbtmp3.6/10, ML3.3/4, MS2.7/1, Ms1 2.7/1, ms1mx2.2/58, Error ellipse: s-maj=27.7km s-min=13.7km az=59.0*
*SOME **30** 04:06:04.6, 43°.48N×84°.60E, h0km*
*BJI **30** 04:06:06.1, 43°.41N×84°.76E, h7km, mb3.9/2, ML3.7/11*
*NNC **30** 04:06:10.7±2.0, 43°.67N×84°.38E, h17km±8km, mb4.0, mpv3.6, Error ellipse: s-maj=15.8km s-min=7.7km az=116.0*
ISC 30 04:06:05.2±0.8, 43°.49N±0°.05×84°.83E±0°.04, h10km, n31, σ2°.67/46, mb3.5/5, 13C-15D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**2.10**	**80**	**Pn**	**Pn**	**04 06 43.5**	**+3.0**
WMQ				Sg	**Sb**	**04 07 13.5**	**+3.8**
WMQ				smax	smax		
	comp=N,2μm,0.7s						
WMQ				smax	smax		
	comp=E,1μm,0.7s						
DJR	**Jarkent**	**3.74**	**285**	*e*P	**Pb**	**04 07 10.4**	**-0.9**
	8.0nm,0.3s						
DJR				*e*S	**Sb**	**04 07 58.2**	**+1.5**
	53nm,0.3s						
MK31	**Makanchi Array**	**3.76**	**332**	⇑Pn	**Pn**	**04 07 04.3**	**+1.1**
	1.1nm,0.2s,baz=152,slow=14,SNR=150						
MK31				⇓Pg	**Pb**	**04 07 14.2**	**+2.5**
	16nm,0.5s,baz=147,slow=17,SNR=27						
MK31				Lg	Lg	04 08 01.5	
	48nm,0.4s,baz=139,slow=30,SNR=12						
MKAR	**Makanchi Array**	**3.76**	**332**	Pn	**Pn**	**04 07 04.6**	**+1.3**
	3.7nm,0.3s,baz=152,slow=15,SNR=120						
MKAR				Pg	**Pb**	**04 07 14.3**	**+2.6**
	11nm,0.3s,baz=147,slow=20,SNR=56						
MKAR				Lg	Lg	04 08 02.1	
	26nm,0.3s,baz=154,slow=31,SNR=12						
MAKZ	**Makanchi**	**3.88**	**330**	⇑Pn	**Pn**	**04 07 05.9**	**+1.0**
	5.4nm,0.5s						
MAKZ				⇓Pg	**Pb**	**04 07 16.6**	**+2.9**
	7.3nm,0.3s						
MAKZ				⇑Lg	Lg	04 08 06.0	
	106nm,0.7s						
PDGK	**Podgornoye**	**3.90**	**269**	⇓Pn	**Pn**	**04 07 06.3**	**+1.1**
	7.3nm,0.5s						
PDGK				⇑Pg	**Pb**	**04 07 13.5**	**-0.5**
	19nm,0.5s						
PDGK				⇑Lg	Lg	04 08 02.7	
	83nm,0.5s						
SHLS	**Shalkode**	**3.93**	**267**	*e*P	**Pn**	**04 07 08.8**	**+3.1**
	52nm,0.1s						
SHLS				*e*S	**Sn**	**04 07 55.5**	**+3.6**
	319nm,0.6s						
ZSN	**Zaisan**	**3.96**	**0**	*e*P	**Pb**	**04 07 19.5**	**+4.5**
	3.3nm,0.1s						
ZSN				*e*S	**Sg**	**04 08 14.3**	**+2.0**
	33nm,0.4s						
UZB	**Uzynbulak**	**4.25**	**267**	*e*P	**Pb**	**04 07 20.2**	**+0.1**
	16nm,0.4s						
UZB				*e*S	**Sb**	**04 08 14.7**	**+3.2**
	57nm,0.6s						
KAPS	**Kapalarasan**	**4.32**	**296**	*e*P	**Pb**	**04 07 22.3**	**+1.2**
	20nm,0.5s						
KAPS				*e*S	**Sb**	**04 08 18.8**	**+5.5**
	64nm,0.9s						
KPKS	**Kokpek**	**4.47**	**272**	*e*P	**Pb**	**04 07 23.6**	**-0.2**
	27nm,0.5s						
KPKS				*e*S	**Sb**	**04 08 20.8**	**+2.9**
	134nm,0.5s						
SATY	**Saty**	**4.71**	**267**	*e*P	**Pb**	**04 07 28.9**	**+0.9**
	34nm,0.5s						
SATY				*e*S	**Sb**	**04 08 29.7**	**+5.0**
	67nm,0.5s						
MDOK	**Medeo**	**5.69**	**269**	⇑Pn	**Pn**	**04 07 30.6**	**+0.7**
	2.3nm,0.4s						
MDOK				⇑Pg	**Pb**	**04 07 48.8**	**+4.3**
	10nm,0.5s						
MDOK				⇓Lg	Lg	04 09 01.4	
	52nm,0.8s						
TKM2	**Tokmak 2**	**6.77**	**268**	⇓Pn	**Pn**	**04 07 46.4**	**+1.6**
	2.6nm,0.8s						
TKM2				⇓Pg	**Pb**	**04 08 07.3**	**+4.2**
	5.5nm,0.6s						
TKM2				⇓Lg	Lg	04 09 36.1	
	14nm,0.6s						
AAK	**Ala-Archa**	**7.62**	**267**	⇓Pg	Pb	04 08 22.9	+5.5
	5.7nm,0.9s						
AAK				⇓Lg	Lg	04 10 03.3	
	16nm,0.7s						
KURBB	**Kurchatov Arra**	**8.33**	**331**	Pn	**Pn**	**04 08 05.0**	**-0.8**
	0.4nm,0.3s,baz=147,slow=12,SNR=24						
KURBB				Sn	**Sn**	**04 09 36.8**	**-3.2**
	0.3nm,0.3s,baz=150,slow=17,SNR=4.6						
KURBB				Lg	Lg	04 10 26.9	
	0.5nm,0.3s,baz=154,slow=30,SNR=9.8						
KURBB	**Kurchatov Arra**	**8.33**	**331**	⇑Pn	**Pn**	**04 08 05.0**	**-0.8**
	2.8nm,0.5s						
KURBB				⇑Sn	**Sn**	**04 09 35.9**	**-4.0**
	8.3nm,0.5s						
KURBB				⇑Lg	Lg	04 10 25.5	
	118nm,0.9s						
KURK	**Kurchatov**	**8.38**	**332**	⇑Sn	**Sn**	**04 09 37.1**	**-4.0**
	4.1nm,0.4s						
KURK				⇓Lg	Lg	04 10 27.7	
	53nm,0.8s						
MNAS	**Manas**	**9.09**	**268**	⇑Lg	Lg	04 10 51.3	
	6.4nm,1.2s						
OTUK	**Ortayu**	**9.92**	**303**	⇓Pn	**Pn**	**04 08 28.7**	**+0.9**
	1.1nm,0.6s						
OTUK				⇑Sn	**Sn**	**04 10 15.7**	**-3.5**
	1.8nm,0.4s						
OTUK				⇓Lg	Lg	04 11 16.4	
	28nm,1.2s						
KK31	**Karatay Array**	**10.45**	**273**	⇓Pn	**Pn**	**04 08 35.2**	**+0.2**
	0.9nm,0.7s,baz=71,slow=15,SNR=4.5						
KK31				⇓Lg	Lg	04 11 34.3	
	5.9nm,0.9s,baz=81,slow=26,SNR=4.0						
ZAA0	**Zalesovo Array**	**10.47**	**360**	⇓Pn	**Pn**	**04 08 33.3**	**-1.8**
	2.9nm,0.5s						
ZALV	**Zalesovo Beam**	**10.47**	**360**	Pn	**Pn**	**04 08 34.0**	**-1.2**
	1.1nm,0.3s,baz=183,slow=13,SNR=14						
ZALV				Sn	**Sn**	**04 10 29.1**	**-3.3**
	1.8nm,0.3s,baz=168,slow=23,SNR=8.1						
ZALV				Lg	Lg	04 11 36.5	
	0.3nm,0.3s,baz=188,slow=29,SNR=2.9						
BVAR	**Borovoye Array**	**13.52**	**320**	Pn	**Pn**	**04 09 15.0**	**-2.0**
	0.1nm,0.3s,baz=115,slow=13,SNR=2.7						
BVAR				Lg	Lg	04 13 12.3	
	0.2nm,0.3s,baz=123,slow=28,SNR=2.7						
TLY	**Talaya**	**15.08**	**51**	LR	LR	04 15 48.3	
	comp=Z,28nm,21.4s,baz=243,slow=39						
SONM	**Songino Array**	**15.68**	**66**	Pn	**Pn**	**04 09 46.8**	**+0.7**
	baz=261,slow=13,SNR=3.0						
SONM				Lg	Lg	04 14 23.4	
	0.4nm,0.3s,baz=268,slow=30,SNR=3.0						
FINES	**FINESS Array B**	**38.48**	**319**	P	**P**	**04 13 24.9**	**-2.0**
	1.3nm,0.7s,baz=143,slow=6.7,SNR=5.9						
ARCES	**ARCESS Array B**	**39.42**	**332**	P	**P**	**04 13 33.4**	**-1.3**
	3.4nm,0.9s,baz=94,slow=7.3,SNR=3.5						
YKA	**Yellowknife Ar**	**73.22**	**9**	P	**P**	**04 17 34.1**	**-1.7**
	0.3nm,0.7s,baz=329,slow=7.2,SNR=3.0						
TORD	**Torodi Ar. Bea**	**76.13**	**275**	P	**P**	**04 17 51.5**	**-2.0**
	0.3nm,0.9s,baz=35,slow=4.8						
WRA	**Warramunga Arr**	**77.76**	**133**	P	**P**	**04 18 00.5**	**-1.9**
	0.2nm,0.8s,baz=328,slow=4.3,SNR=4.6						

*CSEM **30** 04:33:52.9±0.3, 39°.67N×38°.83E, h5km, ML2.4, Error ellipse: s-maj=5.5km s-min=4.4km az=96.0*
*ISK **30** 04:33:52.5, 39°.65N×38°.79E, h8km, ML2.4/6*
*DDA **30** 04:33:53.0, 39°.66N×38°.79E, h7km, Ml2.6*
ISC 30 04:33:52.8±1.1, 39°.67N±0°.02×38°.82E±0°.03, h6km±9km, n27, σ0°.59/46, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILIC	**ilic-Erzincan**	**0.29**	**222**	PG	**Pg**	**04 33 58.1**	**-0.4**
ILIC				SG	**Sg**	**04 34 02.4**	**+0.1**
ILIC	**ilic-Erzincan**	**0.29**	**222**	*e*Pg	**Pg**	**04 33 58.1**	**-0.4**
ILIC				*e*Sg	**Sg**	**04 34 02.4**	**+0.1**
KEMA	**Kemaliye**	**0.47**	**212**	*i* P	**Pg**	**04 34 01.4**	**-0.5**
KEMA				*i* S	**Sg**	**04 34 08.3**	**+0.3**
KEMA	**Kemaliye**	**0.47**	**212**	P	**Pg**	**04 34 01.4**	**-0.5**
KEMA				S	**Sg**	**04 34 08.3**	**+0.3**
KELT	**Kelkit**	**0.59**	**35**	*i* P	**Pg**	**04 34 04.8**	**+0.6**
KELT				*i* S	**Sb**	**04 34 13.9**	**-0.5**
KELT	**Kelkit**	**0.59**	**35**	P	**Pg**	**04 34 04.8**	**+0.6**
KELT				S	**Sb**	**04 34 13.9**	**-0.5**
ERZN	**Erzincan**	**0.70**	**96**	PG	**Pg**	**04 34 06.2**	**-0.2**
ERZN				SG	**Sb**	**04 34 17.6**	**0.0**
SUSE	**Susehri**	**0.72**	**319**	*i* P	**Pg**	**04 34 06.3**	**-0.4**
SUSE				*i* S	**Sb**	**04 34 17.2**	**-0.8**
SUSE	**Susehri**	**0.72**	**319**	P	**Pg**	**04 34 06.3**	**-0.4**
SUSE				S	**Sb**	**04 34 17.2**	**-0.8**
PTK	**Pertek**	**0.89**	**150**	PG	**Pg**	**04 34 10.0**	**0.0**
PTK				SG	**Sb**	**04 34 23.0**	**-0.1**
PTK	**Pertek**	**0.89**	**150**	*e*Pg	**Pg**	**04 34 10.0**	**0.0**
PTK				*e*Sg	**Sb**	**04 34 23.0**	**-0.1**
HEKM	**Malatya_Hekimh**	**1.03**	**220**	*i* P	**Pb**	**04 34 12.7**	**-0.5**
HEKM				*i* S	**Sb**	**04 34 27.4**	**+0.4**
HEKM	**Malatya_Hekimh**	**1.03**	**220**	P	**Pb**	**04 34 12.7**	**-0.5**
HEKM				S	**Sb**	**04 34 27.4**	**+0.4**
CUKAN	**kangal_SIVAS**	**1.10**	**252**	*i* P	**Pn**	**04 34 15.7**	**+0.8**
CUKAN				*i* S	**Sn**	**04 34 31.5**	**+1.0**
CUKAN	**kangal_SIVAS**	**1.10**	**252**	P	**Pn**	**04 34 15.7**	**+0.8**
CUKAN				S	**Sn**	**04 34 31.5**	**+1.0**
ELZG	**Elazig**	**1.17**	**174**	*i* P	**Pn**	**04 34 15.8**	**-0.2**
ELZG				*i* S	**Sn**	**04 34 31.8**	**-0.5**
ELZG	**Elazig**	**1.17**	**174**	P	**Pn**	**04 34 15.8**	**-0.2**
ELZG				S	**Sn**	**04 34 31.8**	**-0.5**
SVRC	**Sivrice-ELAZID**	**1.34**	**163**	PN	**Pn**	**04 34 18.1**	**-0.2**
SVRC	**Sivrice-ELAZID**	**1.34**	**163**	*e*Pn	**Pn**	**04 34 18.1**	**-0.2**
MALT	**Malatya**	**1.38**	**193**	PN	**Pn**	**04 34 18.3**	**-0.5**
MALT	**Malatya**	**1.38**	**193**	*e*Pn	**Pn**	**04 34 18.3**	**-0.5**
SVSK	**Karacayir**	**1.42**	**281**	PN	**Pb**	**04 34 19.2**	**-0.5**
SVSK	**Karacayir**	**1.42**	**281**	*e*Pn	**Pb**	**04 34 19.2**	**-0.5**
DARE	**Darende-Malaty**	**1.51**	**224**	PN	**Pn**	**04 34 20.3**	**-0.1**
DARE	**Darende-Malaty**	**1.51**	**224**	*e*Pn	**Pn**	**04 34 20.3**	**-0.1**
AKCD	**Akcadag**	**1.54**	**207**	*i* P	**Pg**	**04 34 22.4**	**+0.1**
AKCD				*i* S	**Sg**	**04 34 43.8**	**+1.6**
AKCD	**Akcadag**	**1.54**	**207**	P	**Pg**	**04 34 22.4**	**+0.1**
AKCD				S	**Sg**	**04 34 43.8**	**+1.6**

*ISCJB **30** 04:37:53.1±0.9, 1°.9N±0°.1×89°.5E±0°.1, h10km, mb3.8/8, MS3.0/2, Error ellipse: s-maj=24.1km s-min=14.5km az=33.9*
*IDC **30** 04:37:53.6±1.1, 1°.86N×89°.54E, h0km, mb3.7/8, mb1 3.9/10, mb1mx3.7/59, mbtmp3.8/10, ML4.5/2, MS3.1/2, Ms1 3.1/2, ms1mx2.5/57, Error ellipse: s-maj=40.6km s-min=19.6km az=44.0*
ISC 30 04:37:55.1±1.2, 1°.9N±0°.2×89°.6E±0°.2, h10km, n18, σ0°.37/10, mb3.7/8, North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	**Pallekele**	**10.31**	**302**	Pn	**Pn**	**04 40 22.9**	**-0.3**
	2.3nm,0.3s,baz=115,slow=13,SNR=7.3						
PALK				Sn	Sn	04 42 09.1	-10
	8.0nm,0.3s,baz=117,slow=4.5,SNR=10						
CMAR	**Chiang Mai Arr**	**18.87**	**29**	P	**Pn**	**04 42 16.1**	**-0.2**
	0.8nm,0.3s,baz=212,slow=11,SNR=3.1						
H08S3	**Diego Garcia H**	**19.47**	**241**	T	T	05 02 30.5	
	baz=60,SNR=32						
H08S2	**Diego Garcia H**	**19.47**	**241**	T	T	05 02 31.7	
	baz=60,SNR=3.3						
H08S1	**Diego Carcia H**	**19.49**	**241**	T	T	05 02 31.7	
	baz=60						
BRDH	**Bariadhala**	**20.77**	**5**	LR	LR	04 51 26.1	
	comp=Z,71nm,18.4s,baz=188,slow=39						
H01W3	**Cape Leeuwin H**	**43.24**	**150**	T	T	05 31 54.4	
	baz=325,slow=74,SNR=5.4						
H01W2	**Cape Leeuwin H**	**43.25**	**150**	T	T	05 31 51.6	
	baz=325,slow=74,SNR=7.2						
H01W1	**Cape Leeuwin H**	**43.25**	**150**	T	T	05 31 49.4	
	baz=325,slow=74,SNR=4.1						
SONM	**Songino Array**	**48.04**	**15**	P	**P**	**04 46 34.9**	**+0.2**
	0.8nm,0.5s,baz=197,slow=8.9,SNR=3.9						
WRA	**Warramunga Arr**	**48.99**	**119**	P	**P**	**04 46 42.2**	**-0.2**
	0.8nm,0.9s,baz=297,slow=8.5,SNR=3.9						
KURBB	**Kurchatov Arra**	**49.45**	**351**	P	**P**	**04 46 45.4**	**+0.1**
	0.5nm,0.8s,baz=176,slow=7.4,SNR=5.2						
KSRS	**Korea Array**	**49.96**	**40**	LR	LR	05 08 40.6	
	comp=Z,15nm,18.5s,baz=225,slow=37						
ASAR	**Alice Springs**	**50.05**	**123**	P	**P**	**04 46 50.4**	**-0.1**
	0.4nm,0.8s,baz=294,slow=7.0,SNR=3.0						
BVAR	**Borovoye Array**	**53.39**	**346**	P	**P**	**04 47 14.8**	**-0.1**
	0.5nm,0.6s,baz=188,slow=9.6,SNR=3.1						
BRTR	**Keskin Array B**	**63.07**	**314**	P	**P**	**04 48 23.0**	**-0.1**
	0.6nm,0.6s,baz=125,slow=6.0,SNR=4.3						
FINES	**FINESS Array B**	**75.92**	**334**	P	**P**	**04 49 41.7**	**-0.2**
	3.1nm,1.0s,baz=179,slow=5.6,SNR=2.2						
GERES	**GERESS Array B**	**79.28**	**319**	P	**P**	**04 50 01.9**	**+0.8**
	0.3nm,0.5s,baz=87,slow=6.0,SNR=3.3						

NNC 30 04:43:04.9±3.1, 43°.53N×84°.55E, h7km±19km, mb3.5, mpv3.2, 5C-3D, Error ellipse: s-maj=23.0km s-min=10.1km az=123.0, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**3.63**	**335**	Pn	Pn	04 44 01.6	0.0
	0.6nm,0.1s,baz=152,slow=15,SNR=7.6						
MK31				Pg	Pb	04 44 10.8	+1.3
	2.2nm,0.3s,baz=152,slow=17,SNR=14						
MK31				Lg	Lg	04 45 01.2	
	8.2nm,0.2s,baz=144,slow=29,SNR=7.8						
PDGK	**Podgornoye**	**3.69**	**269**	⇓Pg	Pb	04 44 13.0	+2.5
	4.6nm,0.5s						
PDGK				⇓Lg	Lg	04 45 00.6	
	15nm,0.7s						
MAKZ	**Makanchi**	**3.74**	**332**	⇑Pg	Pb	04 44 13.3	+1.9
	0.9nm,0.2s						
MAKZ				⇑Lg	Lg	04 45 04.0	
	5.6nm,0.5s						
MDOK	**Medeo**	**5.48**	**269**	⇓Lg	Lg	04 45 58.6	
	5.2nm,0.7s						
TKM2	**Tokmak 2**	**6.57**	**268**	⇑Lg	Lg	04 46 32.7	
	3.6nm,0.8s						
KURBB	**Kurchatov Arra**	**8.19**	**332**	⇑Lg	Lg	04 47 26.2	
	7.5nm,0.6s						
KURK	**Kurchatov**	**8.24**	**333**	⇑Lg	Lg	04 47 26.5	
	3.6nm,0.8s						

*IDC **30** 04:55:57.9±6.8, 15°.02N×93°.37W, h0km, mb3.5/5, mb1 3.9/6, mb1mx3.6/41, mbtmp3.5/6, ML3.7/1, Error ellipse: s-maj=160.4km s-min=92.3km az=31.0*
*ISCJB **30** 04:56:01.4±1.2, 14°.69N±0°.10×94°.12W±0°.06, h35km, mb3.5/5, Error ellipse: s-maj=14.2km s-min=8.5km az=175.4*
*MEX **30** 04:56:04.1±0.3, 14°.74N×94°.08W, h10km, MD4.1*
ISC 30 04:56:03.2±1.4, 14°.7N±0°.1×94°.06W±0°.09, h35km, n9, σ0°.66/12, mb3.6/5, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.26**	**40**	*e*P	**Pn**	**04 56 23.9**	**-0.5**
PCIG				*e*S	**Sn**	**04 56 39.7**	**-0.4**
THIG		**1.74**	**84**	*e*P	**Pn**	**04 56 31.2**	**+0.2**
THIG				*e*S	**Sn**	**04 56 52.4**	**+0.3**
TGIG		**2.23**	**24**	*e*P	**Pn**	**04 56 37.9**	**+0.2**
TGIG				*e*S	**Sn**	**04 57 05.2**	**+1.1**
TXAR	**Lajitas Array**	**17.03**	**330**	P	**Pn**	**04 59 58.7**	**-0.1**
	0.1nm,0.3s,baz=153,slow=12,SNR=6.4						
ANMO	**Albuquerque**	**23.02**	**333**	P	**P**	**05 01 05.4**	**-0.1**
	0.6nm,0.8s,baz=156,slow=8.5,SNR=4.0						
PDAR	**Pinedale Array**	**30.96**	**338**	P	**P**	**05 02 17.2**	**-0.1**

GSI	Gunungsitoli	3.58	326	P	Pn	05 18 26.2	+0.9
MNAI	Manna	4.30	128	P	Pn	05 18 37.7	+2.5
MNAI				S	Sn	05 19 23.3	-2.7
MDSI	Maura Dua	5.37	121	P	Pn	05 18 52.8	+2.9
TPTI		5.46	334	P	Pn	05 18 52.8	+1.6
KCSI	Kotacane, Aceh	5.47	341	P	Pn	05 18 52.4	+1.0
H08S2	Diego Garcia H baz=78,slow=74	27.63	257	T	T	05 51 26.3	
H08S3	Diego Garcia H baz=78,slow=74	27.63	257	T	T	05 51 26.2	
H08S1	Diego Carcia H baz=78	27.65	257	T	T	05 51 54.5	
WRA	Warramunga Arr 0.2nm,0.5s,baz=302,slow=9.3,SNR=5.5	38.52	121	P	P	05 24 51.6	-1.3
ASAR	Alice Springs 0.3nm,0.5s,baz=293,slow=8.7,SNR=3.4	39.78	126	P	P	05 25 03.2	-0.3
MKAR	Makanchi Array 0.2nm,0.3s,baz=151,slow=8.3,SNR=3.6	50.61	345	P	P	05 26 29.2	0.0

*IDC **30** 05:17:35.8±1.3, 7.°23N×36.°07W, h0km, mb3.9/11, mb1 4.0/11, mb1mx3.8/56, mbtmp3.9/11, MS3.4/13, Ms1 3.4/13, ms1mx3.0/53, Error ellipse: s-maj=46.4km s-min=18.9km az=176.0*

*ISCJB **30** 05:17:37.2±0.7, 7.°4N±0.°2×36.°05W±0.°10, h15km, mb3.8/12, MS3.4/13, Error ellipse: s-maj=27.4km s-min=12.0km az=165.1*

*NEIC **30** 05:17:38.1±0.5, 7.°44N×36.°09W, h10km, mb4.4/2, Error ellipse: s-maj=20.8km s-min=9.5km az=165.0*

ISC 30 05:17:39.0±0.9, 7.°4N±0.°2×36.°1W±0.°1, h15km, n37, σ0°76/17, mb4.0/12, MS3.4/13, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SACV	Santiago Islan	14.35	57	ePn	Pn	05 20 55.4	-6.3
PTGA	Pitinga 1.0nm,0.3s,baz=330,slow=22,SNR=1.0	25.17	252	P	P	05 23 02.7	-1.4
PTGA				LR	LR	05 32 08.4	
H10N3	ASCENSION HYDR baz=305,slow=75,SNR=22	26.29	125	T	T	05 50 49.7	
H10N2	ASCENSION HYDR baz=305,slow=75,SNR=19	26.30	125	T	T	05 50 49.8	
H10N1	ASCENSION HYDR baz=305,slow=75,SNR=23	26.31	125	T	T	05 50 51.2	
H10S3	ASCENSION HYDR baz=306,slow=74	26.80	127	T	T	05 51 27.8	
H10S1	ASCENSION HYDR baz=306,slow=74	26.81	127	T	T	05 51 31.7	
H10S2	ASCENSION HYDR baz=306,slow=74	26.82	127	T	T	05 51 31.8	
PMOZ	Porto Moniz, M	30.77	32	eT	T	05 55 43.3	
FUL	Funchal	30.80	33	eT	T	05 55 38.8	
PMAR	Madeira	30.85	33	eT	T	05 55 39.6	
DBIC	Dimbokro 5.2nm,1.0s,baz=272,slow=12,SNR=3.1	30.98	89	P	P	05 23 55.1	-0.9
DBIC	Dimbokro 15nm,1.1s	30.98	89	eP	P	05 23 56.7	+0.7
KOWA	Kowa 2.9nm,0.8s,baz=265,slow=9.8,SNR=8.0	32.22	75	P	P	05 24 07.0	+0.1
TOA1	Torodi Ar. Sit	37.56	78	eP	P	05 24 52.9	-0.2
TOA0	Torodi Ar. Sit	37.56	78	eP	P	05 24 53.1	0.0
TORD	Torodi Ar. Bea 1.5nm,0.7s,baz=273,slow=8.5	37.56	78	P	P	05 24 52.9	-0.2
MDT	Midelt 0.8nm,0.6s,baz=261,slow=4.7,SNR=4.4	38.61	45	P	P	05 25 02.6	+0.7
MDT				LR	LR	05 39 35.5	
LPAZ	La Paz comp=Z,50nm,18.4s,baz=226,slow=34	39.51	233	LR	LR	05 41 26.3	
LPAZ	La Paz comp=Z,74nm,18.6s,baz=123,slow=36	39.51	233	eP	P	05 25 11.1	+1.0
LPAZ	La Paz 3.6nm,1.1s	39.51	233	eP	P	05 25 11.1	+1.0
NNA	Nana comp=Z,42nm,19.1s,baz=118,slow=36	44.89	245	LR	LR	05 44 22.4	
KEST	Kesra comp=Z,62nm,20.3s,baz=288,slow=34	50.15	49	LR	LR	05 46 17.1	
TKL	Tuckaleechee C comp=Z,16nm,19.9s,baz=12,slow=31	51.85	310	LR	LR	05 44 19.0	
DAVOX	Davos/Dischmat comp=Z,36nm,21.0s,baz=256,slow=32	55.47	37	LR	LR	05 47 35.5	
GERES	GERESS Array B comp=Z,14nm,20.0s,baz=188,slow=34	58.72	36	LR	LR	05 50 29.7	
IDI	Anoyia comp=Z,44nm,22.0s,baz=256,slow=35	62.13	54	LR	LR	05 54 11.9	
NOA	NORSAR Array B comp=Z,17nm,21.2s,baz=260,slow=32	63.95	23	LR	LR	05 51 51.8	
MLR	Muntele Rosu 1.0nm,0.7s,baz=311,slow=5.3,SNR=7.8	65.27	43	P	P	05 28 21.0	+0.5
TXAR	Lajitas Array 0.1nm,0.4s,baz=105,slow=6.6,SNR=3.1	66.90	299	P	P	05 28 30.9	-0.3
AKASG	Malin Array Be 0.6nm,0.6s,baz=253,slow=5.9,SNR=4.4	68.76	38	P	P	05 28 41.8	-0.5
BR101	Keskin Array S	69.71	50	eP	P	05 28 47.8	-0.9
BRTR	Keskin Array B 0.2nm,0.4s,baz=252,slow=6.2,SNR=3.4	69.71	50	P	P	05 28 47.8	-0.9
ANMO	Albuquerque comp=Z,28nm,19.2s,baz=86,slow=34	69.74	304	LR	LR	05 56 49.1	
FIA0	FINESS Array S	70.44	27	eP	P	05 28 52.0	-0.5
FINES	FINESS Array B 2.2nm,0.9s,baz=262,slow=5.2,SNR=4.2	70.44	27	P	P	05 28 52.0	-0.5
FINES				LR	LR	05 56 59.3	
YKA	Yellowknife Ar 0.3nm,0.5s,baz=100,slow=6.3,SNR=5.9	78.19	332	P	P	05 29 38.5	+0.9
YBH	Yreka Blue Hor comp=Z,19nm,19.5s,baz=92,slow=34	82.64	311	LR	LR	06 04 21.3	

*SOME **30** 05:32:48.2, 43.°35N×84.°63E, h5km*

*BJI **30** 05:32:49.8, 43.°39N×84.°77E, h6km, mb4.2/3, mB4.2/1, ML3.8/10, Ms3.6/1, Ms7 3.2/1*

*IDC **30** 05:32:50.0±3.5, 43.°61N×84.°49E, h0km, mb1 3.5/5, mb1mx3.3/73, mbtmp3.5/5, ML3.3/5, Error ellipse: s-maj=40.5km s-min=23.3km az=27.0*

*NNC **30** 05:32:54.0±1.2, 43.°65N×84.°51E, h14km±4km, mb4.0, mpv3.7, Error ellipse: s-maj=9.4km s-min=4.3km az=115.0*

ISC 30 05:32:50.3±1.0, 43.°48N±0.°05×84.°73E±0.°04, h10km, n31, σ2°68/51, 16C-16D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	Urumqi	2.18	80	Pn	Pn	05 33 27.5	+0.8
WMQ				Sg	Sb	05 33 57.5	+0.5
WMQ	comp=N,2μm,0.5s			smax	smax		
WMQ	comp=E,2μm,0.7s			smax	smax		
KTMS	Ketmen 123nm,0.7s	3.19	271	eP	Pb	05 33 46.7	-0.4
KTMS	267nm,0.5s			eS	Sb	05 34 29.4	+3.4
DJR	Jarkent 53nm,0.7s	3.67	285	eP	Pb	05 33 54.3	-1.0
DJR	103nm,0.7s			eS	Sb	05 34 42.5	+2.6
MK31	Makanchi Array 2.1nm,0.3s,baz=149,slow=15,SNR=480	3.74	333	Pn	Pn	05 33 48.9	+0.8
MK31	12nm,0.3s,baz=147,slow=16,SNR=84			↑Pg	Pb	05 33 58.4	+2.0
MK31	30nm,0.3s,baz=148,slow=29,SNR=7.8			Lg	Lg	05 34 45.8	
MKAR	Makanchi Array 2.8nm,0.3s,baz=152,slow=14,SNR=76	3.74	333	Pn	Pn	05 33 48.9	+0.9
MKAR	21nm,0.3s,baz=150,slow=17,SNR=70			Pg	Pb	05 33 57.7	+1.3
MKAR	56nm,0.3s,baz=150,slow=30,SNR=12			Lg	Lg	05 34 46.9	
PDGK	Podgornoye 11nm,0.7s	3.82	270	↓Pn	Pn	05 33 50.3	+1.0
PDGK	34nm,0.5s			↑Pg	Pb	05 34 00.4	+2.5
PDGK	134nm,0.6s			↓Lg	Lg	05 34 49.4	
MAKZ	Makanchi 2.5nm,0.5s	3.86	331	↓Pn	Pn	05 33 49.7	0.0
MAKZ	22nm,0.5s			↑Pg	Pb	05 34 00.5	+2.1
MAKZ	98nm,0.6s			↓Lg	Lg	05 34 50.3	
SHLS	Shalkode 70nm,0.3s	3.86	267	eP	Pn	05 33 51.3	+1.5
SHLS	308nm,0.6s			eS	Sn	05 34 37.5	+2.2
ZSN	Zaisan	3.97	1	eP	Pg	05 34 04.6	-1.8
ZSN	6.3nm,0.7s			eS	Sg	05 34 59.8	+1.9
KAPS	Kapalarasan 22nm,0.5s	4.25	297	eP	Pb	05 34 05.8	+0.5
KAPS	79nm,0.8s			eS	Sb	05 35 01.7	+5.0
KPKS	Kokpek 46nm,0.3s	4.40	272	eP	Pb	05 34 08.4	+0.6
KPKS	190nm,0.5s			eS	Sb	05 35 06.6	+5.7
MNBS	Baschi 26nm,0.4s	4.62	280	eP	Pb	05 34 12.9	+1.4
MNBS	125nm,0.6s			eS	Sg	05 35 14.3	-4.4
SATY	Saty 64nm,0.7s	4.64	267	eP	Pb	05 34 11.0	-0.8
SATY	93nm,0.4s			eS	Sb	05 35 10.9	+3.1
KURS	Kuram 17nm,0.6s	4.77	272	eP	Pb	05 34 15.0	+0.9
KURS	46nm,0.8s			eS	Sb	05 35 17.3	+5.7
ARXS	Arharly 22nm,0.6s	5.05	281	eP	Pb	05 34 21.1	+2.4
ARXS	66nm,0.7s			eS	Sg	05 35 28.2	-4.1
MDOK	Medeo 3.3nm,0.4s	5.61	269	↓Pn	Pn	05 34 15.1	+1.1
MDOK	15nm,0.6s			↑Pg	Pb	05 34 32.7	+4.3
MDOK	34nm,0.5s			↓Lg	Lg	05 35 48.0	
IZV	Izvestkoviy 18nm,0.4s	5.94	269	eP	Pb	05 34 37.1	+3.0
IZV	53nm,0.8s			eS	Sg	05 35 55.8	-5.3
TKM2	Tokmak 2 2.5nm,0.6s	6.70	268	↑Pn	Pn	05 34 32.5	+3.6
TKM2	8.1nm,0.6s			↑Pg	Pg	05 34 54.3	-4.2
TKM2	44nm,0.8s			↓Lg	Lg	05 36 23.1	
AAK	Ala-Archa 7.6nm,0.8s	7.54	267	↑Pg	Pb	05 35 06.9	+5.6
AAK	28nm,1.0s			↓Lg	Lg	05 36 49.4	
KURBB	Kurchatov Arra 0.2nm,0.3s,baz=147,slow=12,SNR=13	8.30	332	Pn	Pn	05 34 49.8	-0.9
KURBB	0.7nm,0.3s,baz=150,slow=22,SNR=8.0			Sn	Sn	05 36 20.1	-4.4
KURBB	0.5nm,0.3s,baz=144,slow=29,SNR=3.3			Lg	Lg	05 37 08.8	
KURBB	Kurchatov Arra 1.1nm,0.3s	8.30	332	↓Pn	Pn	05 34 50.1	-0.6
KURBB	20nm,0.7s			↑Sn	Sn	05 36 22.0	-2.5
KURBB	86nm,0.7s			↑Lg	Lg	05 37 10.7	
KURK	Kurchatov 0.7nm,0.4s	8.35	332	↑Pn	Pn	05 34 50.2	-1.1
KURK	11nm,0.6s			↓Sn	Sn	05 36 23.4	-2.2
KURK	53nm,1.0s			↑Lg	Lg	05 37 11.8	
MNAS	Manas 2.7nm,0.8s	9.02	268	↓Pg	Pn	05 35 35.0	+34
MNAS	8.6nm,0.9s			↓Lg	Lg	05 37 36.6	
SFK	Sufi-Kurgan 0.5nm,0.3s	9.08	251	↑Pg	Pn	05 35 37.6	+36
SFK	4.0nm,0.6s			↑Lg	Lg	05 37 37.6	
OTUK	Ortayu 3.3nm,1.1s	9.87	303	↓Pn	Pn	05 35 12.1	-0.1
OTUK	44nm,1.3s			↓Lg	Lg	05 38 00.9	
KK31	Karatay Array 0.9nm,0.7s,baz=98,slow=5.1,SNR=5.5	10.38	273	Pn	Pn	05 35 19.9	+0.7
KK31	1.0nm,0.5s,baz=67,slow=15,SNR=3.5			↓Pg		05 35 59.2	
KK31	3.5nm,0.5s,baz=74,slow=28,SNR=3.7			↑Lg	Lg	05 38 18.7	
ZAA0	Zalesovo Array 2.1nm,0.5s	10.48	0	↑Pn	Pn	05 35 21.1	+0.7
ZAA0	4.2nm,0.5s			↑Sn	Sn	05 37 17.1	-0.7
ZALV	Zalesovo Beam 0.8nm,0.3s,baz=186,slow=14,SNR=8.6	10.48	0	Pn	Pn	05 35 18.5	-2.0
ZALV	1.0nm,0.3s,baz=188,slow=26,SNR=7.8			Sn	Sn	05 37 13.4	-4.4
ZALV	baz=179,slow=28,SNR=1.5			Lg	Lg	05 38 18.1	
BVA0	Borovoye Array 1.5nm,0.8s,baz=122,slow=14,SNR=4.0	13.48	320	Pn	Pn	05 36 02.0	+0.5
BVA0	1.8nm,0.7s			↓Sn	Sn	05 38 31.4	0.0
BVA0	9.7nm,0.8s,baz=129,slow=29,SNR=4.5			Lg	Lg	05 39 53.5	
BVAR	Borovoye Array 0.2nm,0.3s,baz=130,slow=12,SNR=2.0	13.48	320	Pn	Pn	05 35 57.4	-4.2
BVAR	0.1nm,0.3s,baz=135,slow=28,SNR=1.4			Sn	Sn	05 38 23.3	-8.1
BVAR	0.2nm,0.3s,baz=129,slow=26,SNR=1.8			Lg	Lg	05 39 52.8	
SONM	Songino Array 0.2nm,0.3s,baz=257,slow=9.9,SNR=2.6	15.75	66	Pn	P	05 36 35.8	-0.5
SONM	0.1nm,0.3s,baz=269,slow=28,SNR=1.6			Lg	Lg	05 41 13.8	

IDC 30 05:38:40.7±2.7, 3.°90N×64.°13E, h0km, mb3.9/5, mb1 4.0/5, mb1mx3.4/65, mbtmp3.9/5, MS3.5/2, Ms1 3.5/2, ms1mx2.7/59, Error ellipse: s-maj=95.7km s-min=28.4km az=65.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08N2	Diego Garcia H baz=324,slow=76,SNR=55	12.26	146	T	T	05 54 01.6	
H08N3	Diego Garcia H baz=324,slow=76,SNR=43	12.27	146	T	T	05 54 05.3	
H08N1	Diego Carcia H baz=324,slow=76,SNR=52	12.28	146	T	T	05 54 03.2	
PALK	Pallekele comp=Z,91nm,19.5s,baz=295,slow=31	16.83	78	LR	LR	05 47 24.3	
AKTO	Aktyubinsk 0.5nm,0.3s,baz=174,slow=9.2,SNR=1.6	46.66	355	P	P	05 47 11.3	+0.4
ZALV	Zalesovo Beam 0.4nm,0.4s,baz=197,slow=8.6,SNR=3.9	52.68	15	P	P	05 47 56.2	-0.6
SONM	Songino Array 0.4nm,0.6s,baz=256,slow=4.3,SNR=2.4	56.81	33	P	P	05 48 27.2	+0.1
SONM	comp=Z,58nm,19.1s,baz=50,slow=37			LR	LR	06 13 17.8	
H01W3	Cape Leeuwin H baz=299	60.74	134	T	T	06 54 39.0	
H01W2	Cape Leeuwin H baz=299	60.75	134	T	T	06 54 37.8	
H01W1	Cape Leeuwin H baz=299	60.76	134	T	T	06 54 41.4	
WRA	Warramunga Arr 1.7nm,0.7s,baz=290,slow=5.1,SNR=18	72.85	112	P	P	05 50 12.1	0.0
ASAR	Alice Springs 1.0nm,0.6s,baz=288,slow=5.5,SNR=12	73.18	116	P	P	05 50 14.2	+0.2
TXAR	Lajitas Array 0.4nm,0.7s,baz=96,slow=0.9,SNR=5.6	144.94	341	PKP	PKPab	05 58 19.8	-0.1

*NIED **30** 05:50:00, 35.°40N×140.°50E, h32km, Mw4.1 Best double couple: M0=1.40000×10^15 NP1:φs=209.00000°, δ65.00000°, λ-21.00000°. NP2:φs=308.00000°, δ71.00000°, λ-153.00000°.*

*ISCJB **30** 05:50:25.3±0.4, 35.°28N±0.°03×140.°54E±0.°05, h40km±4km, mb4.3/19, MS3.1/7, Error ellipse: s-maj=7.5km s-min=4.8km az=175.5*

*JMA **30** 05:50:26.4±0.1, 35.°39N×140.°37E, h26km±2km, M3.8 Broadband fault plane solution: P waves. NP1: φs=222.00000°, δ72.00000°, λ-46.00000°. NP2: φs=331.00000°, δ47.00000°, λ-154.00000°. Principal axes: T Plg15.0000°, Azm282.0000°; N Plg41.0000°, Azm25.0000°; P Plg45.0000°, Azm176.0000°;*

JMA Felt II J1.

*NEIC **30** 05:50:26.8±2.1, 35.°31N×140.°48E, h34km±15km, mb4.5/12 Error ellipse: s-maj=8.2km s-min=4.8km az=81.0*

NEIC Recorded [2 JMA] in Chiba.

*IDC **30** 05:50:26.7±4.5, 35.°30N×140.°41E, h33km±36km, mb3.7/8, mb1 3.9/11, mb1mx3.5/70, mbtmp4.0/11, ML3.9/2, MS2.9/11, Ms1 3.0/11, ms1mx2.8/64, Error ellipse: s-maj=28.7km s-min=14.9km az=79.0*

ISC 30 05:50:26.7±0.9, 35.°34N±0.°04×140.°47E±0.°05, h34km±3km, n64, σ0°99/57, mb4.3/19, MS3.1/7, 1C-2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTR	Katsuura	0.23	213	↑P	Pn	05 50 32.5	-0.6
KTR				S	Sb	05 50 37.4	-0.9
JCN	Nagara	0.23	290	↓P	Pn	05 50 32.1	-1.0
BSO4	Boso 4	0.36	197	P	Pn	05 50 35.3	-0.3
CHOJ	Chosi	0.48	41	P	Pb	05 50 36.5	-0.6
CHOJ				S	Sb	05 50 44.0	-0.3
BSO3	Boso 3	0.54	176	↓P	Pn	05 50 37.6	-0.2
BSO3				X		05 50 48.2	
JYT	Yasato	0.91	346	P	Pn	05 50 41.9	-1.3
JYT				S	Sn	05 50 53.4	-1.8
MJAR	Matsushiro Arr 13nm,0.3s,baz=126,slow=17,SNR=28	2.19	304	Pn	Pn	05 51 00.9	+0.2
MJAR	11nm,0.3s,baz=119,slow=13,SNR=6.5			Sn	Sb	05 51 31.4	-1.1
MAJO	Matsushiro	2.19	304	ePn	Pn	05 51 01.8	+1.0
MAJO				eSn	Sb	05 51 31.4	-1.1
MAT	Matsushiro	2.19	304	P	Pn	05 51 00.2	-0.6
MAT				eS	Sn	05 51 28.8	+2.0
MJB9	Matsu-Tunnel	2.19	304	ePn	Pn	05 51 02.0	+1.1
JHJ	Hachijo jima 2 195nm,0.3s,baz=333,slow=15,SNR=112	2.29	194	Pn	Pn	05 51 01.1	-1.0
JHJ	174nm,0.3s,baz=59,slow=24,SNR=11			Sn	Sn	05 51 27.1	-2.0
JHJ	comp=Z,89nm,20.9s,baz=80,slow=27			LR	LR	05 51 27.8	
JHJ2	Mitsune	2.29	194	ePn	Pn	05 51 01.0	-1.1
INU	Inuyama	2.82	271	ePn	Pn	05 51 10.8	+1.4
JNU	Nakatsue comp=Z,128nm,20.9s,baz=122,slow=39	8.24	257	LR	LR	05 55 48.3	
CBIJ	Chichi jima	8.35	169	ePn	Pn	05 52 24.6	-0.8
JCJ	Chichijima	8.35	169	Pn	Pn	05 52 24.8	-0.6
KSRS	Korea Array comp=Z,61nm,19.7s,baz=152,slow=37	10.33	285	LR	LR	05 56 45.2	
KLR	Kul'dur comp=Z,7.2nm,18.2s,baz=135,slow=36	15.29	338	LR	LR	05 59 44.1	
PETK	Petropavlovsk- comp=Z,35nm,20.9s,baz=240,slow=36	21.54	29	LR	LR	06 03 22.7	
MA2	Magadan 1.2nm,0.4s,baz=196,slow=18,SNR=2.7	25.17	12	P	P	05 55 48.6	-0.1
MA2	comp=Z,45nm,18.4s,baz=214,slow=38			LR	LR	06 06 19.9	
YAK	Yakutsk comp=Z,50nm,20.2s,baz=117,slow=39	27.57	349	LR	LR	06 08 21.3	
H11N2	WAKE ISLAND Hy baz=309,slow=75,SNR=278	28.01	117	T	T	06 25 29.5	
H11N1	WAKE ISLAND Hy baz=309,slow=75,SNR=304	28.01	117	T	T	06 25 29.9	
H11N3	WAKE ISLAND Hy baz=309,slow=75,SNR=209	28.02	117	T	T	06 25 30.7	
H11S1	WAKE ISLAND Hy baz=312,slow=75,SNR=230	28.65	119	T	T	06 26 19.1	
H11S3	WAKE ISLAND Hy baz=312,slow=75,SNR=181	28.65	119	T	T	06 26 14.9	
H11S2	WAKE ISLAND Hy baz=312,slow=75,SNR=160	28.66	119	T	T	06 26 19.4	
DAV	Davao City (W) comp=Z,21nm,18.8s,baz=331,slow=37	31.28	209	LR	LR	06 09 40.3	
ZAA1	Zalesovo Array	42.51	314	eP	P	05 58 18.6	-0.1
ZALV	Zalesovo Beam 0.7nm,0.4s,baz=94,slow=5.8,SNR=4.3	42.51	314	P	P	05 58 18.6	0.0
SAUI	Saumlaki 361nm,1.1s	43.95	193	eP	P	05 58 29.7	-0.9
MK01	Makanchi Array	44.38	303	eP	P	05 58 34.1	+0.2
MK31	Makanchi Array	44.39	303	eP	P	05 58 33.9	-0.1
MK32	Makanchi Array	44.39	303	eP	P	05 58 33.4	-0.6
MKAR	Makanchi Array 0.6nm,0.7s,baz=94,slow=7.9,SNR=4.4	44.39	303	P	P	05 58 33.4	-0.6
MKAR	Makanchi Array 7.0nm,1.0s	44.39	303	eP	P	05 58 33.7	-0.3
KURK	Kurchatov 6.1nm,0.8s	46.39	309	eP	P	05 58 49.4	-0.3
KURBB	Kurchatov Arra 1.9nm,0.7s,baz=84,slow=7.7,SNR=14	46.45	309	P	P	05 58 49.8	-0.4
COEN	Coen 3.3nm,1.0s	49.09	177	eP	P	05 59 12.3	+1.4
SUA	Susitna One 1.4nm,0.7s	49.67	36	eP	P	05 59 14.4	-0.7
IL1	Eielson Array	51.34	32	eP	P	05 59 27.5	0.0
ILAR	Eielson Array 0.7nm,0.8s,baz=274,slow=6.9,SNR=9.3	51.34	32	P	P	05 59 28.0	+0.5
ILB	Eielson Array	51.34	32	eP	P	05 59 28.0	+0.5
MID	Middleton Isla 43nm,1.0s	51.99	38	eP	P	05 59 32.5	+0.1
DOT	Dot Lake 6.5nm,1.0s	52.64	33	eP	P	05 59 37.2	0.0
BMRM	Bremner River 4.1nm,0.6s	52.67	36	eP	P	05 59 38.3	+0.7
FITZ	Fitzroy Crossi 1.9nm,0.9s,baz=27,slow=15,SNR=3.2	54.98	197	P	P	05 59 54.3	-0.4
FITZ	Fitzroy Crossi 4.1nm,1.0s	54.98	197	eP	P	05 59 54.3	-0.4
WRAB	Tennant Creek 5.9nm,1.1s	55.27	187	eP	P	05 59 56.4	-0.4
WB2	Warramunga Arr 6.3nm,1.0s	55.28	187	eP	P	05 59 56.4	-0.5
WR1	Warramunga Arr 5.0nm,1.1s	55.28	187	eP	P	05 59 56.3	-0.6
WRA	Warramunga Arr 1.2nm,0.4s,baz=23,slow=7.3,SNR=37	55.28	187	P	P	05 59 56.3	-0.6
AS01	Alice Springs	59.01	187	eP	P	06 00 23.0	-0.2
AS31	Alice Springs 0.7nm,0.6s	59.01	187	eP	P	06 00 23.4	+0.2
ASAR	Alice Springs 0.5nm,0.5s,baz=19,slow=12,SNR=7.6	59.01	187	P	P	06 00 23.4	+0.2
SPITS	Spitsbergen Ar comp=Z,22nm,18.6s,baz=205,slow=37	62.03	349	LR	LR	06 28 44.1	
VALT	Mount Saint He	70.01	47	eP	P	06 01 39.4	+4.2
BLTW	Bickleton	71.37	47	eP	P	06 01 43.6	+0.3
AKASG	Malin Array Be 0.6nm,0.6s,baz=220,slow=37	75.16	322	LR	LR	06 37 04.6	
NOA	NORSAR Array B comp=Z,13nm,18.2s,baz=260,slow=40	75.45	337	LR	LR	06 41 00.0	
CLL	Collm	82.18	330	eP	P	06 02 44.0	-0.1
PMSA	Palmer Station	147.04	161	ePKPbc	PKPab	06 10 07.2	+0.6
LPAZ	La Paz 0.5nm,0.9s,baz=333,slow=6.8,SNR=2.4	148.20	61	ePKPbc	PKPbc	06 10 10.4	0.0
LPAZ	La Paz	148.20	61	ePKPdf	PKPab	06 10 12.6	-0.8
LPAZ				ePKPbc	PKiKP	06 10 12.9	+0.7

DJA 30 06:10:48.4±1.8, 1.°S±38.°×13.°3E±.°, h19km±53km, M3.7/3, MLv3.7/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKPI	Ransiki, Papua	1.17	127	P	Pn	06 11 09.8	+0.1
RKPI				S	Sn	06 11 25.3	+0.1
FAKI	Fak Fak	2.32	205	P	Pn	06 11 26.2	+0.6
FAKI				S	Sn	06 11 54.0	+0.4

*DDA **30** 06:12:05.7, 34.°20N×32.°66E, h16km, Ml3.4*

*NIC **30** 06:12:07.2±0.3, 34.°25N×32.°90E, h2km, ML3.4*

*ISK **30** 06:12:08.1, 34.°29N×32.°89E, h18km, ML3.0/12*

*ISCJB **30** 06:12:10.4±0.7, 34.°43N±0.°02×32.°78E±0.°04, h11km±5km, Error ellipse: s-maj=6.3km s-min=3.5km az=166.8*

*CSEM **30** 06:12:11.2±0.2, 34.°48N×32.°79E, h10km, ML3.4, Error ellipse: s-maj=5.5km s-min=2.7km az=74.0*

*GII **30** 06:12:11.8±0.2, 34.°47N×32.°86E, h10km, MD2.6/7*

ISC 30 06:12:10.7±1.3, 34.°48N±0.°03×32.°82E±0.°03, h4km±10km, n106, σ1°17/138, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SZAC	Souni baz=178	0.28	10	P	Pg	06 12 17.1	+1.0
SZAC				S	Sb	06 12 25.5	+2.1
SZAC	Souni	0.28	10	P	Pg	06 12 17.1	+1.0
SZAC				S	Sb	06 12 25.5	+2.1
PPCY	Paphos baz=143	0.56	316	P	Pb	06 12 22.7	-0.4
PPCY	Paphos	0.56	316	P	Pb	06 12 22.7	-0.4
CSS	Mathiatis	0.64	41	PG	Pg	06 12 23.5	+0.5
CSS				SG	Sb	06 12 34.3	+0.6
CSS	Mathiatis	0.64	41	PG	Pb	06 12 24.1	-0.3

CSS				SG	Sg	06 12 28.3	-3.0
CSS	**Mathiatis**	**0.64**	**41**	P	Pg	06 12 23.2	+0.2
	baz=206						
CSS				S	Sb	06 12 34.5	+0.8
CSS	**Mathiatis**	**0.64**	**41**	Pg	Pg	06 12 23.2	+0.2
CSS	**Mathiatis**	**0.64**	**41**	P	Pg	06 12 23.2	+0.2
CSS	**Mathiatis**	**0.64**	**41**	*e*Pg	Pg	06 12 23.5	+0.5
CSS				*e*Sg	Sb	06 12 34.3	+0.6
LEF	**Lefka**	**0.64**	**5**	PG	Pb	06 12 24.5	+0.1
LEF	**Lefka**	**0.64**	**5**	PG	Pg	06 12 23.1	+0.1
LEF				SG	Sg	06 12 26.3	-5.0
LEF	**Lefka**	**0.64**	**5**	P	Pb	06 12 24.3	-0.1
LEF	**Lefka**	**0.64**	**5**	*e*Pg	Pb	06 12 24.5	+0.1
LEF				S	Sn	06 12 36.2	-1.0
AKMC	**Akamas**	**0.68**	**324**	P	Pg	06 12 24.7	+1.0
	baz=148						
AKMC	**Akamas**	**0.68**	**324**	P	Pg	06 12 24.7	+1.0
ALFC	**Alefka**	**0.70**	**345**	P	Pb	06 12 25.3	-0.2
	baz=164						
ALFC				S	Sn	06 12 39.5	+0.8
ALFC	**Alefka**	**0.70**	**345**	P	Pb	06 12 25.3	-0.2
AKIN	**Ak˘nc˘–lar- K**	**0.75**	**45**	PG	Pg	06 12 25.5	+0.4
AKIN				SG	Sb	06 12 37.7	+0.7
AKIN	**Ak˘nc˘–lar- K**	**0.75**	**45**	PG	Pg	06 12 25.7	+0.6
AKIN	**Ak˘nc˘–lar- K**	**0.75**	**45**	*e*Pg	Pg	06 12 25.5	+0.4
AKIN				*e*Sg	Sb	06 12 37.7	+0.7
AKDN	**Akdeniz- K˘–br**	**0.82**	**8**	PG	Pb	06 12 27.7	+0.1
AKDN				SG	Sn	06 12 42.7	+1.0
AKDN	**Akdeniz- K˘–br**	**0.82**	**8**	PG	Pg	06 12 23.5	-3.0
AKDN	**Akdeniz- K˘–br**	**0.82**	**8**	*e*Pg	Pb	06 12 27.7	+0.1
AKDN				*e*Sg	Sn	06 12 42.7	+1.0
EREN	**Erenkoy**	**1.52**	**46**	PN	Pn	06 12 36.8	-1.9
EREN	**Erenkoy**	**1.52**	**46**	PG	Pn	06 12 38.1	-0.6
EREN	**Erenkoy**	**1.52**	**46**	*e*Pn	Pn	06 12 36.8	-1.9
BOZY	**Bozyazi-Mersin**	**1.63**	**4**	PN	Pn	06 12 38.9	-1.2
BOZY	**Bozyazi-Mersin**	**1.63**	**4**	PG	Pn	06 12 38.3	-1.8
BOZY	**Bozyazi-Mersin**	**1.63**	**4**	*e*Pn	Pn	06 12 38.9	-1.2
AKKU	**Akkuyu-Mersin**	**1.78**	**19**	PN	Pn	06 12 41.1	-1.1
AKKU	**Akkuyu-Mersin**	**1.78**	**19**	PN	Pn	06 12 40.3	-1.9
AKKU	**Akkuyu-Mersin**	**1.78**	**19**	*e*Pn	Pn	06 12 41.1	-1.1
GAZI	**Gazipasa**	**1.80**	**347**	PN	Pn	06 12 41.9	-0.6
GAZI	**Gazipasa**	**1.80**	**347**	PN	Pn	06 12 41.9	-0.6
GAZI	**Gazipasa**	**1.80**	**347**	*i* P	Pn	06 12 42.1	-0.3
GAZI				*i* S	Sg	06 13 09.6	+1.0
GAZI	**Gazipasa**	**1.80**	**347**	*e*Pn	Pn	06 12 41.9	-0.6
GAZI	**Gazipasa**	**1.80**	**347**	P	Pn	06 12 42.2	-0.3
GULN	**MERSIN_Gulnar**	**1.80**	**19**	*i* P	Pn	06 12 42.4	-0.1
GULN				*i* S	Sg	06 13 09.1	+0.6
GULN	**MERSIN_Gulnar**	**1.80**	**19**	P	Pn	06 12 42.4	-0.1
YESI	**Yesilovacik-Me**	**1.84**	**21**	PN	Pn	06 12 41.7	-1.3
IKL	**Isikli**	**1.89**	**22**	PN	Pn	06 12 42.7	-1.0
IKL	**Isikli**	**1.89**	**22**	PN	Pn	06 12 42.9	-0.8
IKL	**Isikli**	**1.89**	**22**	*e*Pn	Pn	06 12 42.7	-1.0
BERE	**Bereket-Mersin**	**1.89**	**10**	PN	Pn	06 12 42.9	-1.0
BERE	**Bereket-Mersin**	**1.89**	**10**	PN	Pn	06 12 42.9	-1.0
BERE	**Bereket-Mersin**	**1.89**	**10**	*e*Pn	Pn	06 12 42.9	-1.0
KEBE	**Keben-Mersin**	**2.09**	**20**	PN	Pn	06 12 45.4	-1.2
KEBE	**Keben-Mersin**	**2.09**	**20**	PN	Pn	06 12 45.8	-0.8
KEBE	**Keben-Mersin**	**2.09**	**20**	*e*Pn	Pn	06 12 45.4	-1.2
ERMK	**Ermenek**	**2.16**	**2**	*i* P	Pn	06 12 49.2	+1.6
ERMK				*i* S	Sg	06 13 24.5	+4.5
ERMK	**Ermenek**	**2.16**	**2**	P	Pn	06 12 49.2	+1.6
HNTI	**Hanita**	**2.40**	**125**	Pn	Pn	06 12 50.9	+0.1
HNTI				Sn	Sn	06 13 19.6	-1.1
HNTI	**Hanita**	**2.40**	**125**	Pn	Pn	06 12 50.9	+0.1
HNTI				Sn	Sn	06 13 19.6	-1.1
OFRI	**'Ofer**	**2.59**	**135**	Pn	Pn	06 12 53.3	-0.1
OFRI				Sn	Sn	06 13 24.1	-1.2
OFRI	**'Ofer**	**2.59**	**135**	Pn	Pn	06 12 53.3	-0.1
OFRI				Sn	Sn	06 13 24.1	-1.2
MMA0B	**Mount Meron ar**	**2.60**	**123**	Pn	Pn	06 12 53.1	-0.4
MMA0B	**Mount Meron ar**	**2.60**	**123**	Pn	Pn	06 12 53.1	-0.4
KEPZ	**Antalya-Kepez**	**2.61**	**338**	*i* P	Pn	06 12 53.3	-0.4
KEPZ				*i* S	Sb	06 13 32.0	+1.5
KEPZ	**Antalya-Kepez**	**2.61**	**338**	P	Pn	06 12 53.3	-0.4
BLGI	**Bet Lehem HaGe**	**2.63**	**131**	Pn	Pn	06 12 54.0	0.0
BLGI	**Bet Lehem HaGe**	**2.63**	**131**	Pn	Pn	06 12 54.0	0.0
KSDI	**Kefar Szold**	**2.69**	**118**	Pn	Pn	06 12 54.4	-0.3
KSDI	**Kefar Szold**	**2.69**	**118**	Pn	Pn	06 12 54.4	-0.3
MERS	**Mersin**	**2.76**	**30**	PN	Pn	06 12 54.7	-1.0
MERS	**Mersin**	**2.76**	**30**	PN	Pn	06 12 55.4	-0.3
MERS	**Mersin**	**2.76**	**30**	*e*Pn	Pn	06 12 54.7	-1.0
SLTI	**Sal'it**	**2.90**	**140**	Pn	Pn	06 12 58.2	+0.5
SLTI				Sn	Sn	06 13 33.0	0.0
SLTI	**Sal'it**	**2.90**	**140**	Pn	Pn	06 12 58.2	+0.5
SLTI				Sn	Sn	06 13 33.0	0.0
KSHT	**Keshet**	**2.91**	**120**	Pn	Pn	06 12 58.5	+0.8
KSHT	**Keshet**	**2.91**	**120**	Pn	Pn	06 12 58.5	+0.8
MMLI	**Mount Malkishu**	**2.98**	**132**	Pn	Pn	06 12 58.9	+0.2
MMLI	**Mount Malkishu**	**2.98**	**132**	Pn	Pn	06 12 58.9	+0.2
YAYL	**Yayladag**	**3.10**	**59**	*i* P	Pn	06 13 00.3	-0.2
YAYL				*i* S	Sn	06 13 38.1	0.0
YAYL	**Yayladag**	**3.10**	**59**	P	Pn	06 13 00.3	-0.2
YAYL				S	Sn	06 13 38.2	0.0
KERG	**Konya-Eregli**	**3.11**	**19**	*i* P	Pn	06 13 03.3	+2.6
KERG				*i* S	Sb	06 13 45.5	+0.4
KERG	**Konya-Eregli**	**3.11**	**19**	P	Pn	06 13 03.3	+2.6
HMDT	**Nahal Hemdat**	**3.17**	**134**	Pn	Pn	06 13 02.2	+0.9
HMDT				Sn	Sn	06 13 39.6	0.0
HMDT	**Nahal Hemdat**	**3.17**	**134**	Pn	Pn	06 13 02.2	+0.9
HMDT				Sn	Sn	06 13 39.6	0.0
GULE	**Gulek**	**3.22**	**29**	*i* P	Pn	06 13 04.4	+2.3
GULE				*i* S	Sb	06 13 46.0	-2.1
GULE	**Gulek**	**3.22**	**29**	P	Pn	06 13 04.4	+2.3
AMAZ	**Amatzia**	**3.42**	**149**	Pn	Pn	06 13 05.4	+0.6
AMAZ	**Amatzia**	**3.42**	**149**	Pn	Pn	06 13 05.4	+0.6
DSI	**Dead Sea**	**3.61**	**143**	Pn	Pn	06 13 08.1	+0.7
DSI	**Dead Sea**	**3.61**	**143**	Pn	Pn	06 13 08.1	+0.7
YTIR	**Yattir**	**3.66**	**148**	Pn	Pn	06 13 09.0	+0.9
YTIR	**Yattir**	**3.66**	**148**	Pn	Pn	06 13 09.0	+0.9
FETY	**Fethiye**	**3.73**	**306**	P	Pn	06 13 07.1	-1.9
FETY				S	Sn	06 13 50.5	-2.9
KZIT	**Kziot**	**3.80**	**159**	Pn	Pn	06 13 10.0	0.0
KZIT	**Kziot**	**3.80**	**159**	Pn	Pn	06 13 10.0	0.0
MZDA	**Masada**	**3.82**	**145**	Pn	Pn	06 13 10.7	+0.6
MZDA	**Masada**	**3.82**	**145**	Pn	Pn	06 13 10.7	+0.6
RMNI	**Mount Ramon**	**4.20**	**157**	Pn	Pn	06 13 16.3	+0.7
RMNI	**Mount Ramon**	**4.20**	**157**	Pn	Pn	06 13 16.3	+0.7
ZFRI	**Zfri**	**4.39**	**152**	Pn	Pn	06 13 18.1	0.0
ZFRI	**Zfri**	**4.39**	**152**	Pn	Pn	06 13 18.1	0.0
PRNI	**Paran**	**4.51**	**155**	Pn	Pn	06 13 19.5	-0.3
PRNI				Sn	Sn	06 14 12.3	-0.4
PRNI	**Paran**	**4.51**	**155**	Pn	Pn	06 13 19.5	-0.3
PRNI				Sn	Sn	06 14 12.3	-0.4
KRMI	**Paran Flat**	**4.64**	**159**	Pn	Pn	06 13 21.3	-0.2
KRMI	**Paran Flat**	**4.64**	**159**	Pn	Pn	06 13 21.3	-0.2
HRFI	**Mount Harif**	**4.81**	**156**	Pn	Pn	06 13 24.1	+0.2
HRFI	**Mount Harif**	**4.81**	**156**	Pn	Pn	06 13 24.1	+0.2
MBRI	**Mt Berech**	**5.00**	**159**	Pn	Pn	06 13 26.7	+0.2
MBRI	**Mt Berech**	**5.00**	**159**	Pn	Pn	06 13 26.7	+0.2
EIL	**Elat**	**5.12**	**159**	Pn	Pn	06 13 27.8	-0.4
EIL	**Elat**	**5.12**	**159**	Pn	Pn	06 13 27.8	-0.4

NIED ***30*** *06:34:00, 36˚.30N×141˚.10E, h32km, Mw4.2 Best double couple: M0 2.32000×10^15 NP1:φs 349.00000°, δ7.00000°, λ-130.00000°. NP2:φs 210.00000°, δ85.00000°, λ-85.00000°.*
IDC ***30*** *06:34:00.1±0.5, 36˚.23N×141˚.07E, h0km, mb4.2/21, mb1 4.3/25, mb1mx4.1/67, mbtmp4.2/25, ML4.0/3, MS3.3/21, Ms1 3.3/21, ms1mx3.2/64, Error ellipse: s-maj=14.2km s-min=13.0km az=93.0*
JMA ***30*** *06:34:04.7±0.1, 36˚.29N×141˚.04E, h45km±1km, M4.2*
JMA Felt II J1.
MOS ***30*** *06:34:05.7±1.0, 36˚.43N×140˚.92E, h45km, mb4.6/18, Error ellipse: s-maj=9.9km s-min=7.2km az=111.9*
NEIC ***30*** *06:34:06.7±0.6, 36˚.29N×140˚.98E, h44km±5km, mb4.4/39, Error ellipse: s-maj=4.6km s-min=4.0km az=110.0*
NEIC Recorded [2 JMA] in Fukushima, Ibaraki and Tochigi.
ISC 30 06:34:00.6±2.0, 36˚.24N±0˚.03×141˚.12E±0˚.05, h6km±12km, n156, σ1§56/161, mb4.4/61, MS3.4/14, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC	Res
CHOJ	**Chosi**	**0.58**	**202**	P	Pn	06 34 17.0		+1.6
CHOJ				S	Sn	06 34 25.8		+0.6
JHO	**Hitachi**	**0.58**	**310**	P	Pn	06 34 15.4		-0.1
JHO				S	Sn	06 34 22.7		-2.7
JYT	**Yasato**	**0.75**	**269**	P	Pn	06 34 18.1		+0.3
JYT				S	Sn	06 34 27.5		-2.0
ONAJ	**Iwakimizuishiy**	**0.90**	**343**	P	Pn	06 34 19.7		-0.2
ONAJ				S	Sb	06 34 30.0		-1.0
JFK	**Kawauchi**	**1.14**	**350**	P	Pb	06 34 23.0		+0.1
JFK				S	Sg	06 34 35.7		-1.7
JAG	**Ashikaga**	**1.36**	**278**	P	Pn	06 34 26.8		+0.6
JAG				S	Sb	06 34 42.6		-1.6
MJAR	**Matsushiro Arr**	**2.37**	**278**	Pn	Pn	06 34 40.5		+0.4
	57nm,0.3s,baz=90,slow=10,SNR=181							
MJAR				Sn	Sn	06 35 08.7		-0.9
	56nm,0.3s,baz=79,slow=10,SNR=4.4							
MJAR				LR	LR	06 35 48.2		
	comp=Z,706nm,19.8s,baz=115,slow=47							
MAJO	**Matsushiro**	**2.37**	**278**	*e*Pn	Pb	06 34 42.0		-1.7
MAJO				*e*Sn	Sn	06 35 08.7		-0.9
MAJO	**Matsushiro**	**2.37**	**278**	*e*P	Pb	06 34 42.1		-1.7
MAJO				*e*		06 35 08.7		
MAT	**Matsushiro**	**2.37**	**278**	P	Pb	06 34 41.6		-2.2
MAT				S	Sn	06 35 10.1		+0.5
MJB9	**Matsu-Tunnel**	**2.37**	**278**	*e*Pn	Pb	06 34 42.1		-1.7
JHJ2	**Mitsune**	**3.30**	**199**	*e*Pn	Pb	06 34 57.4		-2.2
JHJ	**Hachijo jima 2**	**3.30**	**200**	Pn	Pn	06 34 56.0		+3.1
	28nm,0.3s,baz=314,slow=18,SNR=1.9							
JHJ				Sn	Sn	06 35 35.5		+3.0
	43nm,0.3s,baz=108,slow=22,SNR=2.2							
JHJ				LR	LR	06 35 59.7		
	comp=Z,107nm,18.9s,baz=58,slow=36							
INU	**Inuyama**	**3.45**	**256**	*e*Pn	Pb	06 35 00.3		-1.9
ASAJ	**Asahikawa**	**7.95**	**8**	Pn	Pn	06 35 57.8		+1.1
	3.0nm,0.3s,baz=201,slow=12,SNR=7.6							
ASAJ				Sn	Sn	06 37 26.9		0.0
	1.1nm,0.3s,baz=255,slow=31,SNR=2.0							
ASAJ				LR	LR	06 39 28.8		
	comp=Z,102nm,21.3s,baz=176,slow=41							
YUK	**Yuzh-Kuril'sk**	**8.59**	**24**	P	Pn	06 36 05.1		-0.4
YUK				*e*S	Sn	06 37 35.6		-7.1
YUK				pmax	pmax			
	comp=Z,69nm,0.3s							
YUK				pmax	pmax			
	comp=N,144nm,0.4s							
YUK				pmax	pmax			
	comp=E,25nm,0.3s							
YUK				MLR	MLR			
	comp=Z,114nm,13.0s							
SHO	**Shikotan**	**8.79**	**28**	*e*P	Pn	06 36 06.3		-1.9
SHO				pmax	pmax			
	comp=Z,13nm,0.4s							
SHO				pmax	pmax			
	comp=N,8.0nm,0.3s							
SHO				pmax	pmax			
	comp=E,6.0nm,0.2s							
JNU	**Nakatsue**	**8.99**	**253**	Pn	Pn	06 36 14.6		+3.4
	comp=E,0.3nm,0.3s,baz=58,slow=9.5,SNR=2.8							
JNU				LR	LR	06 40 10.7		
	comp=E,340nm,18.1s,baz=119,slow=41							
CBIJ	**Chichi jima**	**9.16**	**174**	*e*Pn	Pn	06 36 12.9		-0.5
CBIJ				Sn	Sn	06 37 50.1		-6.8
JCJ	**Chichijima**	**9.16**	**174**	Pn	Pn	06 36 12.9		-0.5
	comp=E,13nm,0.3s,baz=317,slow=17,SNR=5.3							
JCJ				Sn	Sn	06 37 50.1		-6.8
	baz=221,slow=19							
KUR	**Kuril'sk**	**10.34**	**28**	P	Pn	06 36 30.6		+1.2
KUR				*e*S	Sn	06 38 17.9		-7.6
KUR				pmax	pmax			
	comp=N,5.0nm,0.3s							
KUR				pmax	pmax			
	comp=Z,12nm,0.3s							
KUR				pmax	pmax			
	comp=E,5.0nm,0.2s							
USRK	**Ussuriysk Ar.**	**10.57**	**322**	Pn	Pn	06 36 37.1		+4.3
	baz=142,slow=14							
USRK				LR	LR	06 40 33.9		
	comp=E,232nm,18.4s,baz=146,slow=37							
KSRS	**Korea Array**	**10.65**	**280**	Pn	Pn	06 36 34.6		+0.9
	comp=E,0.2nm,0.3s,baz=96,slow=14,SNR=3.9							
KSRS				LR	LR	06 40 43.4		
	comp=E,194nm,18.3s,baz=90,slow=38							
KSAR	**Wonju Array Be**	**10.68**	**280**	Pn	Pn	06 36 34.6		+0.4
KSAR	**Wonju Array Be**	**10.68**	**280**	P	Pn	06 36 34.6		+0.4
KLR	**Kul'dur**	**14.68**	**335**	Pn	Pn	06 37 28.4		-0.4
	comp=E,0.0nm,0.3s,baz=135,slow=14,SNR=2.7							
KLR				LR	LR	06 43 13.4		
	comp=E,15nm,18.4s,baz=98,slow=38							
ZEA	**Zeya**	**20.00**	**335**	*e*P	P	06 38 34.2		+0.4
PETK	**Petropavlovsk-**	**20.49**	**29**	LR	LR	06 45 57.6		
	comp=E,46nm,22.0s,baz=228,slow=35							
MA2	**Magadan**	**24.18**	**12**	P	P	06 39 18.1		+0.5
	comp=E,3.6nm,0.8s,baz=177,slow=17,SNR=3.6							
MA2				LR	LR	06 49 23.2		
	comp=E,41nm,19.2s,baz=192,slow=38							
MA2	**Magadan**	**24.18**	**12**	*e*P	P	06 39 19.0		+1.4
	comp=E,9.3nm,0.9s							
MA2	**Magadan**	**24.18**	**12**	*e*P	P	06 39 19.0		+1.4
MA2				pmax	pmax			
	comp=Z,9.0nm,0.9s							
YAK	**Yakutsk**	**26.79**	**348**	P	P	06 39 42.5		+1.3
	comp=Z,21nm,0.4s,baz=162,slow=0.2,SNR=2.6							
YAK				LR	LR	06 50 38.3		
	comp=Z,83nm,18.4s,baz=111,slow=37							
YAK	**Yakutsk**	**26.79**	**348**	*e*P	P	06 39 42.7		+1.5
	comp=Z,31nm,0.4s							
SEY	**Seymchan**	**27.61**	**11**	P	P	06 39 49.0		+0.5
	comp=Z,2.1nm,0.7s,baz=200,slow=9.2,SNR=2.1							
H11N2	**WAKE ISLAND Hy**	**27.96**	**119**	T	T	07 09 13.7		
	baz=312,slow=75,SNR=209							
H11N1	**WAKE ISLAND Hy**	**27.96**	**119**	T	T	07 09 16.8		
	baz=312,slow=75,SNR=376							
H11N3	**WAKE ISLAND Hy**	**27.97**	**119**	T	T	07 09 14.9		
	baz=312,slow=75,SNR=265							
SONA1	**Songino Array**	**28.04**	**305**	*e*P	P	06 39 52.2		-0.5
SONA0	**Songino Array**	**28.04**	**305**	*e*P	P	06 39 52.2		-0.6
SONM	**Songino Array**	**28.04**	**305**	P	P	06 39 52.2		-0.6
	comp=Z,3.3nm,0.7s,baz=102,slow=8.8,SNR=9.3							
SONM				LR	LR	06 51 32.4		
	comp=Z,75nm,19.3s,baz=57,slow=38							
BOD	**Bodaibo**	**28.08**	**329**	*e*P	P	06 39 52.5		-0.3
BOD				pmax	pmax			
	comp=Z,4.0nm,0.9s							
H11S1	**WAKE ISLAND Hy**	**28.64**	**121**	T	T	07 09 59.7		
	baz=314,slow=75,SNR=743							
H11S3	**WAKE ISLAND Hy**	**28.64**	**121**	T	T	07 09 57.7		
	baz=314,slow=75,SNR=477							
H11S2	**WAKE ISLAND Hy**	**28.65**	**121**	T	T	07 09 58.8		
	baz=314,slow=75,SNR=453							
DAV	**Davao City (W)**	**32.33**	**210**	LR	LR	06 51 07.0		
	comp=Z,38nm,20.3s,baz=146,slow=32							
CMAR	**Chiang Mai Arr**	**41.07**	**256**	LR	LR	07 00 33.5		
	comp=Z,43nm,18.3s,baz=67,slow=39							
ZAA0	**Zalesovo Array**	**42.28**	**313**	*e*P	P	06 41 54.1		-0.7
	comp=Z,7.5nm,0.6s							
ZAA1	**Zalesovo Array**	**42.28**	**313**	*e*P	P	06 41 54.8		0.0
ZAA1				*e*PcP	PcP	06 43 48.1		-0.4
ZALV	**Zalesovo Beam**	**42.28**	**313**	P	P	06 41 54.8		0.0
	comp=Z,3.5nm,0.5s,baz=91,slow=6.6,SNR=9.7							
ZALV				PcP	PcP	06 43 48.1		-0.4
	comp=Z,0.6nm,0.3s,baz=104,slow=4.6,SNR=2.8							
ZALV				LR	LR	07 00 11.6		
	comp=Z,41nm,19.2s,baz=64,slow=37							
ZALV	**Zalesovo Beam**	**42.28**	**313**	*e*P	P	06 41 54.5		-0.3
ZALV				PcP	PcP	06 43 48.1		-0.4
MK01	**Makanchi Array**	**44.34**	**303**	*e*P	P	06 42 10.7		-0.9
MK31	**Makanchi Array**	**44.34**	**303**	*e*P	P	06 42 11.6		0.0
MK31	**Makanchi Array**	**44.34**	**303**	*e*P	P	06 42 11.6		0.0
MK32	**Makanchi Array**	**44.34**	**303**	*e*P	P	06 42 12.2		+0.6
MKAR	**Makanchi Array**	**44.34**	**303**	P	P	06 42 12.2		+0.6
	comp=Z,1.9nm,0.7s,baz=94,slow=10,SNR=7.8							
MKAR				LR	LR	07 01 18.4		
	comp=Z,67nm,21.1s,baz=44,slow=37							
MKAR	**Makanchi Array**	**44.34**	**303**	*e*P	P	06 42 11.7		+0.1
	comp=Z,21nm,0.8s							
MAKZ	**Makanchi**	**44.56**	**303**	*e*P	P	06 42 14.3		+1.0
	comp=Z,3.2nm,0.8s							
MAKZ	**Makanchi**	**44.56**	**303**	*e*P	P	06 42 14.3		+1.0
MAKZ				pmax	pmax			
	comp=Z,3.0nm,0.8s							
KURK	**Kurchatov**	**46.24**	**309**	*e*P	P	06 42 26.1		-0.5
	comp=Z,9.2nm,0.8s							
KURK	**Kurchatov**	**46.24**	**309**	*e*P	P	06 42 26.1		-0.5
KURK				pmax	pmax			
	comp=Z,9.0nm,0.8s							
SVW2	**Sparrevohn**	**46.30**	**37**	*e*P	P	06 42 29.3		+2.4
	comp=Z,5.7nm,1.1s							
KURBB	**Kurchatov Arra**	**46.31**	**309**	P	P	06 42 26.9		-0.2
	comp=Z,7.7nm,0.5s,baz=83,slow=7.7,SNR=37							
KURBB				PcP	PcP	06 44 01.9		-0.4
	comp=Z,0.3nm,0.4s,baz=86,slow=3.7,SNR=2.6							
RAMN	**Ramite**	**46.83**	**275**	*e*P	P	06 42 31.1		-0.7
	comp=Z,16nm,0.6s							
JIRN	**Jiri**	**46.86**	**276**	*e*P	P	06 42 32.6		+0.4
	comp=Z,21nm,0.6s							
GKN	**Gorkha**	**47.96**	**277**	*e*P	P	06 42 40.6		+0.1
DANN	**Dangsing**	**48.52**	**278**	*e*P	P	06 42 45.5		+0.5
	comp=Z,32nm,0.8s							
TARG	**Taragay, Kyrgy**	**48.54**	**297**	*e*P	P	06 42 45.8		+0.7
	comp=Z,7.2nm,0.9s							
MLY	**Manley**	**48.65**	**32**	*e*P	P	06 42 47.3		+2.1
	comp=Z,3.6nm,0.8s							
PYUN	**Piuthan**	**49.24**	**278**	*e*P	P	06 42 51.4		+1.0
	comp=Z,32nm,0.9s							
MDM	**Murphy Dome**	**49.71**	**32**	*e*P	P	06 42 54.5		+1.2
	comp=Z,7.6nm,0.8s							
MTN	**Manton Dam**	**49.72**	**193**	*e*P	P	06 42 54.2		+0.5
	comp=Z,6.6nm,0.8s							
WRH	**Wood River Hil**	**49.78**	**32**	*e*P	P	06 42 55.0		+1.2
	comp=Z,2.5nm,0.8s							
COEN	**Coen**	**49.96**	**177**	*e*P	P	06 42 56.4		+0.8
	comp=Z,5.8nm,1.0s							
ILAR	**Eielson Array**	**50.29**	**32**	P	P	06 42 58.5		+0.8
	comp=Z,2.6nm,0.8s,baz=269,slow=6.4,SNR=44							
ILB	**Eielson Array**	**50.29**	**32**	*e*P	P	06 42 58.4		+0.8
IL1	**Eielson Array**	**50.29**	**32**	*e*P	P	06 42 58.7		+1.0
BVAR	**Borovoye Array**	**50.94**	**313**	P	P	06 43 02.4		-0.2
	comp=Z,1.9nm,0.5s,baz=81,slow=7.5,SNR=14							
BVAR				PcP	PcP	06 44 18.7		-0.3
	comp=Z,0.5nm,0.7s,baz=87,slow=4.9,SNR=1.9							
BVAR				LR	LR	07 04 22.7		
	comp=Z,35nm,20.7s,baz=121,slow=36							
BRVK	**Borovoye**	**50.99**	**313**	*e*P	P	06 43 03.2		+0.1
	comp=Z,3.2nm,0.6s							
BRVK	**Borovoye**	**50.99**	**313**	*e*P	P	06 43 03.2		+0.1
BRVK				pmax	pmax			
	comp=Z,3.0nm,0.6s							
EGAK	**Eagle**	**52.74**	**32**	*e*P	P	06 43 16.9		+1.0
	comp=Z,5.7nm,1.4s							
KK31	**Karatay Array**	**53.32**	**301**	*e*P	P	06 43 19.4		-1.2
KK31	**Karatay Array**	**53.32**	**301**	*e*P	P	06 43 19.4		-1.2
KKAR	**Karatay Array**	**53.32**	**301**	*e*P	P	06 43 19.5		-1.1
KKAR	**Karatay Array**	**53.32**	**301**	*e*P	P	06 43 19.5		-1.1
FITZ	**Fitzroy Crossi**	**55.99**	**198**	P	P	06 43 40.6		+0.6
	comp=Z,2.8nm,1.0s,baz=16,slow=7.4,SNR=8.5							
FITZ				LR	LR	07 08 44.1		
	comp=Z,32nm,18.1s,baz=103,slow=37							
FITZ	**Fitzroy Crossi**	**55.99**	**198**	*e*P	P	06 43 40.6		+0.6
	comp=Z,6.0nm,1.1s							
WB2	**Warramunga Arr**	**56.24**	**188**	*e*P	P	06 43 42.0		+0.2
	comp=Z,8.0nm,1.1s							
WR1	**Warramunga Arr**	**56.24**	**188**	*e*P	P	06 43 41.6		-0.2
	comp=Z,10nm,1.1s							
WRA	**Warramunga Arr**	**56.24**	**188**	P	P	06 43 41.6		-0.2
	comp=Z,4.1nm,0.8s,baz=5.2,slow=7.5,SNR=54							
ARU	**Arti**	**56.80**	**319**	*e*P	P	06 43 45.5		0.0
	comp=Z,4.6nm,0.7s							
ARU	**Arti**	**56.80**	**319**	*e*P	P	06 43 45.5

comp=Z,4.0nm,0.9s
U15A North Rim 80.69 52 *e*P **P 06 46 15.5 +0.4**
comp=Z,1.4nm,0.8s
CLL Collm 81.67 330 *i* pP P 06 46 32.0 +12
comp=Z,6.0nm,1.0s
CLL Collm 81.67 330 *i* P P 06 46 32.0 +12
CLL pmax pmax
comp=Z,6.0nm,1.0s
GERES GERESS Array B 83.26 328 P **P 06 46 28.2 0.0**
comp=Z,0.1nm,0.3s,baz=46,slow=7.0,SNR=4.0
TX31 Lajitas Ar. Si 90.79 52 *e*P **P 06 47 06.0 +0.8**
TXAR Lajitas Array 90.79 52 P **P 06 47 05.4 +0.2**
comp=Z,0.9nm,0.8s,baz=319,slow=2.6,SNR=10.0
SNAA Sanae 139.92 197 *e*PKPdf **PKPdf 06 53 30.4 +1.6**
SNAA Sanae 139.92 197 *e*PKIKP **PKPdf 06 53 30.4 +1.6**
LPAZ La Paz 147.29 60 PKPbc **PKPbc 06 53 46.5 +0.1**
comp=Z,2.6nm,0.7s,baz=341,slow=2.3,SNR=17
LPAZ La Paz 147.29 60 *e*PKPbc **PKPbc 06 53 46.3 -0.1**
LCO Las Campanas 152.33 84 *e*PKPbc **PKPbc 06 53 58.5 +0.4**
LCO Las Campanas 152.33 84 *e*PKIKP **PKPbc 06 53 58.5 +0.4**

SJA ***30*** *06:42:48.4±1.1,24.°19S×67.°02W,h192km±16km,ML2.7, MW2.7*
ISCJB ***30*** *06:42:49.1±0.5,24.°24S±0.°03×67.°08W±0.°05,h181km, Error ellipse: s-maj=6.7km s-min=3.8km az=149.4*
GUC ***30*** *06:42:50.4±0.5,24.°09S×67.°60W,h235km±12km,ML3.9*
ISC 30 06:42:49.2±1.2,24.°22S±0.°04×67.°04W±0.°05,h181km,n16, σ1§17/31,**3C-1D,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB15	**IPOC Station P**	**2.44**	**294**	⇑*i*P	**Pn**	**06 43 32.8**	**+1.3**
PB15				*i* S	**Sn**	**06 44 05.0**	**+0.6**
YJA	**Yavi**	**2.47**	**35**	*e*P	**Pn**	**06 43 32.6**	**+0.5**
YJA				*e*S	**Sn**	**06 44 05.5**	**+0.1**
YJA				IAML		06 44 07.0	
comp=E,15nm,0.6s							
PB06	**IPOC Station P**	**2.77**	**302**	⇑*i*P	**Pn**	**06 43 36.2**	**+0.9**
PB06				*i* S	**Sn**	**06 44 10.8**	**-0.4**
PB06				IAML		06 44 13.7	
comp=N,445nm,0.2s							
AHML	**Horco Molle**	**2.99**	**149**	*e*P	**Pn**	**06 43 38.5**	**+0.7**
AHML				IAML		06 43 38.8	
comp=Z,6.9nm,0.4s							
AHML				*e*S	**Sn**	**06 44 15.5**	**-0.3**
PB14	**IPOC Station P**	**3.09**	**262**	*e*P	**Pn**	**06 43 40.6**	**+1.3**
PB14				*e*S	**Sn**	**06 44 17.6**	**-0.7**
PB14	**IPOC Station P**	**3.09**	**262**	*e*P	**Pn**	**06 43 39.9**	**+0.6**
PB14				*e*S	**Sn**	**06 44 17.8**	**-0.5**
PB14				IAML		06 44 23.9	
comp=E,150nm,0.2s							
PB09	**IPOC Station P**	**3.15**	**320**	⇓*i*P	**Pn**	**06 43 41.0**	**+1.1**
PB09				*i* S	**Sn**	**06 44 19.7**	**+0.2**
PB09				IAML		06 44 20.4	
comp=N,116nm,0.4s							
PB05	**IPOC Station P**	**3.20**	**294**	*e*P	**Pn**	**06 43 41.0**	**+0.4**
PB05				*i* S	**Sn**	**06 44 18.7**	**-1.8**
PB05				IAML		06 44 23.0	
comp=E,132nm,0.1s							
PB10	**IPOC Station P**	**3.29**	**282**	*e*P	**Pn**	**06 43 42.2**	**+0.7**
PB10				*e*S	**Sn**	**06 44 22.0**	**-0.3**
PB10	**IPOC Station P**	**3.29**	**282**	⇑*i*P	**Pn**	**06 43 42.2**	**+0.7**
PB10				*e*S	**Sn**	**06 44 20.9**	**-1.3**
PB10				IAML		06 44 25.7	
comp=E,121nm,0.3s							
PB03	**IPOC Station P**	**3.30**	**310**	*e*P	**Pn**	**06 43 42.1**	**+0.4**
PB03				*i* S	**Sn**	**06 44 21.2**	**-1.5**
PB03				IAML		06 44 24.6	
comp=E,270nm,0.1s							
PB07	**IPOC Station P**	**3.61**	**313**	*e*P	**Pn**	**06 43 45.5**	**-0.1**
PB07				*i* S	**Sn**	**06 44 27.4**	**-2.2**
VCA	**Vinchina**	**4.62**	**193**	*e*S	**Pn**	**06 44 00.3**	**+1.9**
ACLC	**CERRO LA CRUZ**	**5.19**	**179**	*e*P	**Pn**	**06 44 06.1**	**+0.3**
ACLC				*e*S	**Sn**	**06 45 05.1**	**-1.0**
AGUA	**GUANDACOL**	**5.41**	**194**	*e*P	**Pn**	**06 44 10.1**	**+1.5**
AGUA				*e*S	**Sn**	**06 45 10.9**	**-0.1**
APLL	**PUNTA DE LOS L**	**6.17**	**176**	*e*P	**Pn**	**06 44 17.8**	**-0.7**
APLL				IAML		06 44 18.5	
comp=Z,5.4nm,0.3s							
APLL				*e*S	**Sn**	**06 45 25.8**	**-3.1**

NIED ***30*** *07:11:00,38.°20N×141.°90E,h62km,Mw4.9 Best double couple: M0=2.68000×10^16 NP1:φs=4.00000°,δ41.00000°, λ105.00000°. NP2:φs=164.00000°,δ50.00000°,λ77.00000°.*
BJI ***30*** *07:11:46.8,38.°08N×141.°71E,h78km,mb4.8/54,mB4.9/37, Ms4.3/40,Ms7 4.1/37*
JMA ***30*** *07:11:46.5±0.1,38.°20N×141.°87E,h64km±1km,M4.8*
JMA Felt III J1.
ISCJB ***30*** *07:11:46.8±0.3,38.°24N±0.°03×141.°78E±0.°03,h73km±2km, mb4.6/240,Error ellipse: s-maj=4.8km s-min=3.0km az=145.9*
MOS ***30*** *07:11:47.2±0.9,38.°50N×141.°77E,h69km,mb5.0/64,Error ellipse: s-maj=6.5km s-min=4.5km az=89.4*
IDC ***30*** *07:11:48.5±1.9,38.°21N×141.°87E,h81km±17km,mb4.3/29, mb1 4.4/34,mb1mx4.2/65,mbtmp4.6/34,MS3.8/37, Ms1 3.8/37,ms1mx3.7/52,Error ellipse: s-maj=13.5km s-min=9.9km az=105.0*
NEIC ***30*** *07:11:48.9±0.4,38.°24N×141.°75E,h80km±4km,mb4.6/168, Error ellipse: s-maj=4.1km s-min=2.8km az=143.0*
NEIC Felt in Sendai. Recorded [3 JMA] in Iwate and Miyagi.
GCMT ***30*** *07:11:48.9±0.3,38.°28N×141.°93E,h62km±1km,MW4.9/73, Moment Tensor Solution. s45,c55; s73,c106; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.74±.14; Mθθ0.56±.11; Mφφ-3.30±.09; Mrθ0.38±.09; Mφθ0.68±.10; Mφr-0.47±.09; Best double couple: M0=3.14300×10^16 NP1:φs=163.00000°,δ50.00000°,λ80.00000°. NP2: φs=358.00000°,δ41.00000°,λ102.00000°. Principal axes: T 2.8240, Plg81.0000°, Azm22.0000°; N 0.6340, Plg8.0000°, Azm169.0000°; P -3.4620, Plg5.0000°, Azm260.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 30 07:11:47.2±0.5,38.°22N±0.°04×141.°88E±0.°04,h71km±3km, n463, σ1§65/467,**mb4.7**/242,**17C-8D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**0.47**	**299**	P	**Pn**	**07 11 58.8**	**-1.0**
JIO				S	**Sn**	**07 12 07.4**	**-1.7**
OFUJ	**Ofunato**	**0.87**	**349**	P	**Pn**	**07 12 03.4**	**-0.7**
OFUJ				*e*S	**Sn**	**07 12 15.8**	**-0.9**
JMK	**Ichinoseki**	**0.89**	**325**	P	**Pn**	**07 12 03.9**	**-0.5**
JMK				*e*S	**Sn**	**07 12 16.5**	**-0.6**
JMM	**Marumori**	**0.93**	**248**	P	**Pn**	**07 12 03.5**	**-1.3**
JMM				S	**Sn**	**07 12 16.0**	**-1.9**
JOU	**Okura**	**0.96**	**279**	P	**Pn**	**07 12 04.5**	**-0.8**
JOU				S	**Sn**	**07 12 17.8**	**-0.9**
JFK	**Kawauchi**	**1.17**	**223**	P	**Pn**	**07 12 06.5**	**-1.4**
JFK				S	**Sn**	**07 12 21.2**	**-2.1**
JOM	**Ohasama**	**1.33**	**340**	P	**Pn**	**07 12 09.5**	**-0.4**
JOM				*e*S	**Sn**	**07 12 26.6**	**-0.4**
JYK	**Kaneyama**	**1.38**	**301**	P	**Pn**	**07 12 10.1**	**-0.4**
JFT	**Otama**	**1.41**	**240**	P	**Pn**	**07 12 10.4**	**-0.6**
JFT				*e*S	**Sn**	**07 12 28.1**	**-0.7**
JYS	**Shirataka**	**1.43**	**270**	P	**Pn**	**07 12 10.8**	**-0.4**
JYS				*e*S	**Sn**	**07 12 29.0**	**-0.3**
JRG	**Rokugo**	**1.52**	**321**	P	**Pn**	**07 12 12.3**	**-0.1**
JYA	**Atsumi**	**1.74**	**283**	P	**Pn**	**07 12 14.9**	**-0.4**
MJAR	**Matsushiro Arr**	**3.37**	**241**	P	**Pn**	**07 12 37.4**	**-0.1**
37nm,0.3s,baz=328,slow=10,SNR=179							
MJAR				S	**Sn**	**07 13 18.8**	**+2.6**
20nm,0.3s,baz=191,slow=28,SNR=4.5							
MJAR				LR	LR	07 14 05.8	
comp=Z,3μm,21.0s,baz=60,slow=41							
MAJO	**Matsushiro**	**3.37**	**241**	*e*Pn	**Pn**	**07 12 38.1**	**+0.6**
MAJO	**Matsushiro**	**3.37**	**241**	*d i* P	**Pn**	**07 12 38.2**	**+0.8**
MAT	**Matsushiro**	**3.37**	**241**	P	**Pn**	**07 12 38.0**	**+0.6**
MAT				*e*S	**Sn**	**07 13 16.9**	**+0.6**
MJB9	**Matsu-Tunnel**	**3.37**	**241**	*e*Pn	**Pn**	**07 12 38.2**	**+0.8**
INU	**Inuyama**	**4.84**	**235**	*e*Pn	**Pn**	**07 12 57.5**	**0.0**
JHJ2	**Mitsune**	**5.37**	**199**	*e*Pn	**Pn**	**07 13 02.2**	**-2.5**
JHJ2				*e*Sn	**Sn**	**07 14 01.2**	**-4.0**
JHJ	**Hachijo jima 2**	**5.37**	**199**	P	**Pn**	**07 13 02.3**	**-2.4**
54nm,0.3s,baz=324,slow=18,SNR=35							
JHJ				S	**Sn**	**07 13 59.4**	**-5.8**
223nm,0.3s,baz=70,slow=22,SNR=12							
ASAJ	**Asahikawa**	**5.91**	**5**	P	**Pn**	**07 13 10.7**	**-1.4**
12nm,0.3s,baz=214,slow=12,SNR=60							
ASAJ				S	**Sn**	**07 14 15.8**	**-2.6**
16nm,0.3s,baz=127,slow=26,SNR=4.0							
ASAJ	**Asahikawa**	**5.91**	**5**	*e*Pn	**Pn**	**07 13 10.4**	**-1.7**
ASAJ				S	**Sn**	**07 14 15.8**	**-2.6**
GLVR	**Golovnino**	**6.16**	**25**	*e*P	**Pn**	**07 13 13.1**	**-2.4**
GLVR				*i* S	**Sn**	**07 14 18.7**	**-5.7**
GLVR				pmax	pmax		
comp=E,281nm,0.5s							
GLVR				pmax	pmax		
comp=Z,390nm,0.5s							
GLVR				pmax	pmax		
comp=N,249nm,0.2s							
GLVR				smax	smax		
comp=N,5μm,0.2s							
GLVR				smax	smax		
comp=E,5μm,0.3s							
GLVR				MLR	MLR		
comp=Z,7μm,12.0s							
GRPR	**Tuman**	**6.47**	**26**	*e*P	**Pn**	**07 13 17.1**	**-2.6**
GRPR				*i* S	**Sn**	**07 14 25.3**	**-6.7**
GRPR				pmax	pmax		
comp=Z,174nm,0.2s							
GRPR				pmax	pmax		
comp=E,334nm,0.4s							
GRPR				pmax	pmax		
comp=N,83nm,0.2s							
GRPR				smax	smax		
comp=N,4μm,0.4s							
GRPR				smax	smax		
comp=E,3μm,0.3s							
LAGR	**Lagunnoye**	**6.53**	**26**	*e*P	**Pn**	**07 13 18.4**	**-2.1**
LAGR				*i* S	**Sn**	**07 14 27.9**	**-5.6**
LAGR				pmax	pmax		
comp=Z,684nm,0.4s							
LAGR				pmax	pmax		
comp=N,266nm,0.2s							
LAGR				pmax	pmax		
comp=E,338nm,0.4s							
LAGR				smax	smax		
comp=N,4μm,0.5s							
LAGR				smax	smax		
comp=E,6μm,0.9s							
YUK	**Yuzh-Kuril'sk**	**6.54**	**26**	*e*P	**Pn**	**07 13 17.9**	**-2.7**
YUK				*i* S	**Sn**	**07 14 26.9**	**-6.8**
YUK				pmax	pmax		
comp=Z,479nm,0.3s							
YUK				pmax	pmax		
comp=N,58nm,0.1s							
YUK				pmax	pmax		
comp=E,157nm,0.3s							
YUK				smax	smax		
comp=E,2μm,0.2s							
YUK				smax	smax		
comp=N,3μm,0.7s							
YUK				MLR	MLR		
comp=Z,717nm,19.0s							
SHO	**Shikotan**	**6.77**	**32**	*d i* P	Pn	07 13 20.0	-3.8
SHO				*e*S	Sn	07 14 30.1	-9.3
SHO				pmax	pmax		
comp=Z,86nm,0.3s							
SHO				pmax	pmax		
comp=N,55nm,0.2s							
SHO				pmax	pmax		
comp=E,33nm,0.2s							
SHO				MLR	MLR		
comp=N,696nm,18.0s							
SHO				MLR	MLR		
comp=Z,689nm,18.0s							
SHO				MLR	MLR		
comp=E,445nm,15.0s							
TEY	**Ternei**	**7.87**	**332**	⇑*e*P	**Pn**	**07 13 41.8**	**+3.0**
TEY				pmax	pmax		
comp=E,50nm,1.0s							
TEY				pmax	pmax		
comp=N,70nm,0.9s							
TEY				pmax	pmax		
comp=Z,80nm,0.9s							
TEY				pmax	pmax		
comp=N,900nm,11.2s							
TEY				MLR	MLR		
comp=Z,1μm,15.0s							
KUR	**Kuril'sk**	**8.31**	**31**	*c i* P	**Pn**	**07 13 42.8**	**-2.0**
KUR				*i* S	**Sn**	**07 15 10.4**	**-6.7**
KUR				pmax	pmax		
comp=Z,46nm,0.5s							
KUR				pmax	pmax		
comp=E,49nm,0.6s							
KUR				pmax	pmax		
comp=N,43nm,0.3s							
KUR				MLR	MLR		
comp=Z,502nm,21.0s							
YSS	**Yuzh-Sakhalins**	**8.75**	**4**	*e*Pn	**Pn**	**07 13 50.6**	**-0.2**
YSS	**Yuzh-Sakhalins**	**8.75**	**4**	⇑*e*P	**Pn**	**07 13 49.3**	**-1.5**
YSS				*e*S	**Sn**	**07 15 24.1**	**-3.7**
YSS				pmax	pmax		
comp=Z,100nm,0.9s							
YSS				MLR	MLR		
comp=Z,260nm,12.0s							
MSHR	**Mys Shultsa**	**9.26**	**301**	*c e*P	**Pn**	**07 13 59.0**	**+1.2**
USRK	**Ussuriysk Ar.**	**9.54**	**312**	P	**Pn**	**07 14 02.8**	**+1.1**
baz=129,slow=14							
USRK				LR	LR	07 17 28.9	
comp=Z,743nm,21.1s,baz=115,slow=36							
JNU	**Nakatsue**	**10.29**	**244**	P	**Pn**	**07 14 11.9**	**0.0**
comp=Z,0.9nm,0.3s,baz=49,slow=7.4,SNR=9.4							
JNU				LR	LR	07 18 38.7	
comp=Z,2μm,20.6s,baz=118,slow=40							
JNU	**Nakatsue**	**10.29**	**244**	*e*Pn	**Pn**	**07 14 12.8**	**+0.8**
KSRS	**Korea Array**	**11.06**	**270**	P	**Pn**	**07 14 25.3**	**+2.9**
comp=Z,1.9nm,0.3s,baz=82,slow=14,SNR=25							
KSRS				LR	LR	07 18 37.2	
comp=Z,531nm,18.9s,baz=81,slow=37							
KS01	**Wonju Array Si**	**11.08**	**270**	*e*Pn	**Pn**	**07 14 24.8**	**+2.1**
KS15	**Wonju Array Si**	**11.09**	**270**	*e*Pn	**Pn**	**07 14 25.0**	**+2.1**
KSAR	**Wonju Array Be**	**11.09**	**270**	P	**Pn**	**07 14 25.3**	**+2.4**
KSAR	**Wonju Array Be**	**11.09**	**270**	P	**Pn**	**07 14 25.3**	**+2.4**
CBIJ	**Chichi jima**	**11.10**	**179**	*e*Pn	Pn	07 14 18.6	-4.4
CBIJ				S	Sn	07 16 13.2	-12
JCJ	**Chichijima**	**11.10**	**179**	P	Pn	07 14 18.9	-4.2
comp=Z,13nm,0.3s,baz=292,slow=21,SNR=7.6							
JCJ				S	Sn	07 16 13.2	-12
MDJ	**Mudanjiang**	**11.21**	**309**	P	**Pn**	**07 14 28.3**	**+3.9**
MDJ	**Mudanjiang**	**11.21**	**309**	*e*Pn	Pn	07 14 30.6	+6.1
TYV	**Tymovskoe**	**12.65**	**2**	*e*P	**Pn**	**07 14 40.2**	**-3.8**
TYV				*e*S	Sn	07 16 53.0	-10
TYV				pmax	pmax		
comp=Z,200nm,2.9s							
TYV				pmax	pmax		
comp=Z,14nm,0.8s							
TYV				smax	smax		
comp=E,12nm,2.0s							
TYV				smax	smax		
comp=N,200nm,6.8s							
KLR	**Kul'dur**	**13.20**	**330**	P	**Pn**	**07 14 49.5**	**-2.0**
comp=N,0.1nm,0.3s,baz=130,slow=13,SNR=12							
KLR	**Kul'dur**	**13.20**	**330**	*d i* P	**Pn**	**07 14 49.8**	**-1.6**
CN2	**Changchun**	**13.59**	**299**	*e*P	**P**	**07 15 01.5**	**-1.7**
CN2				pmax	pmax		
comp=N,10.0nm,1.0s							
CN2				pmax	pmax		
comp=N,200nm,4.0s							
CN2				LR	LR		
comp=N,440nm,18.0s							
CN2				LR	LR		
comp=N,430nm,18.0s							
CN2				LR	LR		
comp=N,520nm,20.0s							
SKR	**Severo-Kuril's**	**16.04**	**34**	*e*P	**P**	**07 15 34.3**	**+4.0**
SKR				*e*S	**Sn**	**07 18 25.6**	**+0.4**
SKR				pmax	pmax		
comp=Z,53nm,0.8s							
SKR				MLR	MLR		
comp=Z,400nm,19.0s							
PEA0B	**Petropavlovsk-**	**18.48**	**31**	*e*P	**P**	**07 15 57.9**	**+0.7**
comp=Z,25nm,0.9s							
PETK	**Petropavlovsk-**	**18.48**	**31**	P	**P**	**07 15 56.8**	**-0.4**
baz=198,slow=7.0							
PETK				LR	LR	07 24 03.1	
comp=Z,212nm,18.1s,baz=215,slow=40							
PETK	**Petropavlovsk-**	**18.48**	**31**	*e*P	**Pn**	**07 15 58.5**	**+0.4**
PETK	**Petropavlovsk-**	**18.48**	**31**	*e*P	**Pn**	**07 15 58.5**	**+0.4**
ZEA	**Zeya**	**18.49**	**332**	*e*P	**P**	**07 15 56.6**	**-0.7**
ZEA				pmax	pmax		
comp=Z,35nm,1.0s							
PET	**Petropavlovsk**	**18.82**	**33**	*e*P	**Pn**	**07 16 07.8**	**+5.7**
PET				*e*S	**S**	**07 19 30.0**	**-0.8**
PET				MLR	MLR		
comp=Z,300nm,19.0s							
NJ2	**Nanjing**	**19.79**	**259**	*e*P	**P**	**07 16 11.8**	**+0.1**
NJ2				pmax	pmax		
comp=Z,30nm,0.7s							
TIA	**Tai'an**	**19.80**	**272**	P	**P**	**07 16 11.5**	**-0.3**
TIA				pmax	pmax		
comp=Z,9.0nm,1.1s							
TIA				LR	LR		
comp=Z,130nm,15.2s							
TIA				LR	LR		
comp=Z,180nm,18.9s							
TIA				LR	LR		
comp=Z,270nm,23.0s							
BJI	**Beijing**	**20.00**	**283**	P	**P**	**07 16 11.8**	**-2.1**
BJI				S	**S**	**07 19 47.0**	**-7.9**
BJI				pmax	pmax		
comp=Z,15nm,0.5s							
BJI				LR	LR		
comp=Z,670nm,12.7s							
BJI				LR	LR		
comp=Z,440nm,21.6s							
BJI				LR	LR		
comp=Z,2μm,51.0s							
BJT	**Baijiatuau**	**20.01**	**283**	*e*P	**P**	**07 16 11.9**	**-2.1**
comp=Z,18nm,0.6s							
BJT	**Baijiatuau**	**20.01**	**283**	*e*P	**P**	**07 16 11.9**	**-2.1**
BJT				pmax	pmax		
comp=Z,18nm,0.6s							
YOJ	**Yonaguni jima**	**21.11**	**235**	*e*P	**P**	**07 16 26.8**	**+0.8**
comp=Z,196nm,1.3s							
YOJ	**Yonaguni jima**	**21.11**	**235**	*e*P	**P**	**07 16 26.8**	**+0.8**
YOJ				pmax	pmax		
comp=Z,196nm,1.3s							
CLNS	**Chul'man**	**21.76**	**334**	*e*P	**P**	**07 16 35.5**	**+2.8**
CLNS				pmax	pmax		
comp=N,7.0nm,1.0s							
CLNS				pmax	pmax		
comp=E,12nm,1.1s							
CLNS				pmax	pmax		
comp=Z,14nm,0.8s							
MA2	**Magadan**	**22.11**	**12**	P	**P**	**07 16 36.0**	**-0.5**
comp=Z,23nm,0.7s,baz=197,slow=6.2,SNR=15							
MA2	**Magadan**	**22.11**	**12**	P	**P**	**07 16 36.0**	**-0.5**
NACB	**Ninganchiao**	**22.23**	**237**	*e*P	**P**	**07 16 40.3**	**+2.3**
comp=Z,20nm,0.9s							
YULB	**Yu-li**	**22.97**	**236**	*e*P	**P**	**07 16 45.7**	**-0.1**
comp=Z,27nm,1.4s							
HHC	**Hu-ho-hao-te**	**23.47**	**286**	*e*P	**P**	**07 16 50.5**	**0.0**
HHC				pP	pP	07 17 06.8	+0.6
HHC				sP	sP	07 17 18.3	+3.4
HHC				S	**S**	**07 20 53.5**	**-5.2**
HHC				sS	Sn	07 21 23.0	-0.9
HHC				pmax	pmax		
comp=Z,13nm,1.0s							
HHC				LR	LR		
comp=Z,1μm,15.6s							
HHC				LR	LR		
comp=Z,1μm,15.6s							
HHC				LR	LR		
comp=Z,1μm,15.6s							
TPUB	**Ta-pu**	**23.47**	**237**	*e*P	**P**	**07 16 51.6**	**+1.0**
comp=Z,75nm,1.4s							
WHN	**Wuhan**	**23.91**	**260**	⇑P	**P**	**07 16 54.8**	**+0.3**
WHN				S	**S**	**07 21 00.3**	**-5.5**
WHN				pmax	pmax		
comp=Z,62nm,1.0s							
WHN				LR	LR		
comp=Z,520nm,4.0s							
WHN				LR	LR		
comp=Z,1μm,11.6s							
WHN				LR	LR		
comp=Z,1μm,16.9s							
YAK	**Yakutsk**	**25.00**	**346**	P	**P**	**07 17 04.6**	**+0.6**
comp=Z,27nm,0.3s,baz=3.5,slow=4.3,SNR=8.4							
YAK	**Yakutsk**	**25.00**	**346**	*e*P	**P**	**07 17 03.4**	**-0.6**
YAK				*e**PP	**pP**	**07 17 17.7**	**-2.9**
YAK				*e*PPP	PPP	07 17 44.6	
YAK				*e*		07 20 45.1	
YAK				*e*S	**S**	**07 21 20.4**	**-2.1**
YAK				*e**SS	sS	07 21 43.8	-7.3
YAK				*e*		07 28 05.0	
YAK				pmax	pmax		
comp=Z,31nm,0.9s							
YAK				pmax	pmax		
comp=N,8.0nm,1.3s							
YAK				pmax	pmax		
comp=E,7.0nm,0.9s							
YAK				pmax	pmax		
comp=Z,67nm,2.3s							
YAK				pmax	pmax		
comp=N,39nm,1.8s							
YAK				pmax	pmax		
comp=E,24nm,1.8s							
YAK				smax	smax		
comp=N,178nm,2.3s							
YAK				smax	smax		
comp=E,160nm,2.7s							
SEY	**Seymchan**	**25.55**	**11**	P	**P**	**07 17 09.8**	**+0.8**
comp=E,11nm,0.8s,baz=198,slow=6.9,SNR=34							
XAN	**Xi'an**	**26.86**	**271**	P	**P**	**07 17 21.3**	**+0.1**
XAN				pmax	pmax		
comp=E,10.0nm,0.7s							
SONA1	**Songino Array**	**27.44**	**302**	*e*P	**P**	**07 17 27.2**	**+0.8**
SONM	**Songino Array**	**27.45**	**302**	P	**P**	**07 17 27.1**	**+0.7**
comp=E,4.8nm,0.7s,baz=96,slow=8.1,SNR=18							
SONM				LR	LR	07 28 43.4	
comp=E,193nm,19.9s,baz=86,slow=37							
ENH	**Enshi**	**27.82**	**263**	*e*P	**P**	**07 17 29.5**	**-0.3**
comp=E,79nm,0.8s							
H11N2	**WAKE ISLAND Hy**	**28.47**	**123**	T	T	07 47 53.7	
baz=316,slow=75,SNR=1171							
H11N1	**WAKE ISLAND Hy**	**28.48**	**123**	T	T	07 47 54.3	
baz=316,slow=75,SNR=2653							
H11N3	**WAKE ISLAND Hy**	**28.49**	**123**	T	T	07 47 55.0	
baz=316,slow=75,SNR=1911							
H11S1	**WAKE ISLAND Hy**	**29.22**	**125**	T	T	07 48 57.1	
baz=318,slow=76,SNR=787							
H11S3	**WAKE ISLAND Hy**	**29.22**	**125**	T	T	07 48 54.3	
baz=318,slow=76,SNR=1408							
H11S2	**WAKE ISLAND Hy**	**29.24**	**125**	T	T	07 48 56.9	
baz=318,slow=76,SNR=843							
ZAK	**Zakamensk**	**29.84**	**307**	*e*P	**P**	**07 17 47.3**	**-0.3**
ZAK				pmax	pmax		
comp=Z,4.0nm,1.0s							
TLY	**Talaya**	**29.84**	**309**	P	**P**	**07 17 48.5**	**+0.9**
comp=Z,4.1nm,0.7s,baz=88,slow=5.7,SNR=8.1							
LZH	**Lanzhou**	**30.25**	**278**	*e*P	**P**	**07 17 52.5**	**+1.0**
LZH				pP	pP	07 18 10.3	+2.0
LZH				sP	sP	07 18 18.8	+2.2
LZH				S	**S**	**07 22 46.5**	**+0.4**
LZH				sS	sS	07 23 15.0	-0.1
LZH				pmax	pmax		
comp=Z,37nm,1.1s							
LZH				pmax	pmax		
comp=Z,160nm,4.3s							
LZH				LR	LR		
comp=Z,450nm,13.0s							
LZH				LR	LR		
comp=Z,550nm,14.6s							
LZH				LR	LR		
comp=Z,770nm,16.0s							
GYA	**Guiyang**	**31.80**	**259**	*e*P	**P**	**07 18 06.8**	**+1.7**
GYA				pmax	pmax		
comp=Z,10.0nm,0.8s							
GTA	**Gaotai**	**32.58**	**285**	*e*P	**P**	**07 18 12.8**	**+0.9**
GTA				S	**S**	**07 23 20.3**	**-2.1**
GTA				sS	sS	07 23 48.5	-3.0
GTA				SS	**SnSn**	**07 25 20.5**	**-2.5**
GTA				pmax	pmax		
comp=Z,9.0nm,0.6s							
GTA				pmax	pmax		
comp=Z,33nm,4.1s							
GTA				LR	LR		
comp=Z,130nm,14.1s							
GTA				LR	LR		
comp=Z,330nm,17.2s							
GTA				LR	LR		
comp=Z,490nm,18.9s							
BILL	**Bilibino**	**32.78**	**17**	*e*P	**P**	**07 18 13.2**	**+0.1**
comp=Z,16nm,1.5s							
BILL	**Bilibino**	**32.78**	**17**	⇓*e*P	**P**	**07 18 13.2**	**+0.1**
BILL				*

BILL e 07 20 57.1
BILL S S 07 23 15.0 -10
BILL pmax pmax
comp=Z,11nm,1.3s
BILL MLR MLR
comp=Z,232nm,22.0s
DAV Davao City (W) 34.35 210 LR LR 07 30 29.5
comp=Z,78nm,20.9s,baz=352,slow=33
KMI Kunming 35.52 260 P **P 07 18 38.0 +0.5**
KMI pP pP 07 18 59.0 +4.4
KMI sP sP 07 19 10.5 +7.6
KMI S **S 07 24 03.0 -5.2**
KMI SS **SnSn 07 26 27.3 -7.2**
KMI pmax pmax
comp=Z,34nm,0.8s
KMI pmax pmax
comp=Z,82nm,3.8s
KMI LR LR
comp=Z,270nm,16.3s
KMI LR LR
comp=Z,220nm,20.9s
KMI LR LR
comp=Z,320nm,21.4s
DGZ Jazzator, Alta 40.00 305 *i* P **P 07 19 16.1 +1.1**
DGZ pmax pmax
comp=Z,17nm,0.8s
WMQ Urumqi 40.64 296 P **P 07 19 22.5 +2.2**
WMQ pP pP 07 19 42.0 +4.4
WMQ sP sP 07 19 52.8 +7.0
WMQ pmax pmax
comp=Z,96nm,0.9s
WMQ pmax pmax
comp=Z,490nm,4.5s
WMQ LR LR
comp=Z,540nm,21.7s
WMQ LR LR
comp=Z,320nm,22.5s
WMQ LR LR
comp=Z,460nm,22.5s
ZAA0 Zalesovo Array 41.39 311 *e*P **P 07 19 25.4 -0.8**
comp=Z,20nm,1.2s
ZALV Zalesovo Beam 41.39 311 P **P 07 19 26.4 +0.2**
comp=Z,5.2nm,0.5s,baz=88,slow=6.8,SNR=16
ZALV PcP **PcP 07 21 23.0 0.0**
comp=Z,1.6nm,0.5s,baz=66,slow=2.9,SNR=3.1
CMAR Chiang Mai Arr 42.16 254 LR LR 07 38 18.5
comp=Z,109nm,18.6s,baz=66,slow=38
NVS Novosibirsk 42.29 313 *e*P **P 07 19 33.9 +0.4**
NVS pmax pmax
comp=N,4.0nm,1.4s
NVS pmax pmax
comp=E,20nm,1.4s
NVS pmax pmax
comp=Z,26nm,1.4s
SHL Shillong 43.80 268 P **P 07 19 46.0 -0.3**
SHL pmax pmax
comp=Z,20nm,0.7s
MK01 Makanchi Array 43.80 301 *e*P **P 07 19 45.4 -0.5**
MK31 Makanchi Array 43.81 301 *e*P **P 07 19 45.8 -0.1**
MK31 Makanchi Array 43.81 301 *e*P **P 07 19 45.8 -0.1**
MKAR Makanchi Array 43.81 301 *e*P **P 07 19 46.1 +0.2**
comp=Z,105nm,0.6s
MKAR Makanchi Array 43.81 301 *e*P **P 07 19 46.1 +0.2**
MKAR pmax pmax
comp=Z,105nm,0.6s
MAKZ Makanchi 44.02 301 *e*P **P 07 19 47.9 +0.3**
comp=Z,11nm,0.6s
MAKZ Makanchi 44.02 301 *e*P **P 07 19 47.9 +0.3**
MAKZ pmax pmax
comp=Z,11nm,0.6s
SVW2 Sparrevohn 44.36 38 *e*P **P 07 19 51.9 +1.8**
comp=Z,7.2nm,0.8s
IM3 Indian Mountai 45.44 31 *e*P **P 07 19 59.4 +0.8**
BRDH Bariadhala 45.45 265 LR LR 07 42 44.9
comp=Z,220nm,18.0s,baz=145,slow=41
KURK Kurchatov 45.49 307 *e*P **P 07 19 59.1 -0.2**
comp=Z,30nm,0.9s
KURK Kurchatov 45.49 307⇑ *i*P **P 07 19 59.0 -0.2**
KURK pmax pmax
comp=Z,11nm,0.6s
KURBB Kurchatov Arra 45.57 307 P **P 07 19 59.8 0.0**
comp=Z,11nm,0.4s,baz=81,slow=8.1,SNR=81
KDAK Kodiak Island 45.97 43 *i* P **P 07 20 03.4 +0.5**
PPLA Purkeypile 45.99 36 *e*P **P 07 20 04.0 +0.9**
comp=Z,7.7nm,0.9s
CAST Castle Rocks 46.04 35 *e*P **P 07 20 05.2 +1.9**
comp=Z,8.2nm,0.8s
SKT Skwentna 46.30 37 *e*P **P 07 20 06.4 +1.0**
comp=Z,3.0nm,0.8s
PDGK Podgornoye 46.55 297 P **P 07 20 07.1 -0.7**
PDGK pmax pmax
comp=Z,52nm,1.1s
MLY Manley 46.65 33 *e*P **P 07 20 09.2 +1.0**
comp=Z,6.9nm,0.7s
SUA Susitna One 46.69 38 *e*P **P 07 20 09.6 +0.9**
comp=Z,7.6nm,0.9s
ODAN Odare 46.71 273 *e*P **P 07 20 10.3 +0.9**
comp=Z,46nm,0.9s
TRF Thorofare Moun 46.84 35 *e*P **P 07 20 11.7 +1.8**
comp=Z,6.8nm,0.8s
COLD Coldfoot 46.94 30 *e*P **P 07 20 12.2 +1.9**
comp=Z,2.1nm,0.9s
RC01 Rabbit Creek A 47.20 38 *e*P **P 07 20 13.1 +0.7**
comp=Z,7.6nm,0.9s
BWN Browne 47.20 34 *e*P **P 07 20 14.7 +2.3**
comp=Z,36nm,1.0s
TOLK Toolik Lake Re 47.25 28 *e*P **P 07 20 14.2 +1.4**
comp=Z,6.3nm,1.0s
JIRN Jiri 47.28 274 *e*P **P 07 20 14.8 +0.8**
RAMN Ramite 47.29 273 *e*P **P 07 20 14.5 +0.6**
comp=Z,64nm,0.9s
GUN Gumba 47.41 275 *e*P **P 07 20 15.4 +0.4**
comp=Z,62nm,0.7s
MCK McKinley 47.44 34 *e*P **P 07 20 15.9 +1.5**
comp=Z,7.1nm,0.8s
PMR Palmer 47.45 37 *e*P **P 07 20 14.7 +0.3**
comp=Z,8.8nm,1.0s
PMR Palmer 47.45 37 *e*P **P 07 20 14.7 +0.3**
PMR pmax pmax
comp=Z,9.0nm,1.0s
PMG Port Moresby 47.64 173 LR LR 07 39 24.2
comp=Z,31nm,21.8s,baz=46,slow=35
MDM Murphy Dome 47.72 33 *e*P **P 07 20 17.3 +0.8**
comp=Z,9.2nm,0.9s
WRH Wood River Hil 47.79 33 *e*P **P 07 20 18.0 +1.0**
comp=Z,4.8nm,0.8s
SML Sawmill 47.82 37 *e*P **P 07 20 18.4 +1.1**
comp=Z,15nm,0.8s
SML Sawmill 47.82 37 *e*P **P 07 20 18.4 +1.1**
SML pmax pmax
comp=Z,15nm,0.8s
COLA College 47.88 33 *e*P **P 07 20 19.8 +2.2**
comp=Z,9.2nm,0.8s
COLA College 47.88 33 *e*P **P 07 20 19.8 +2.2**
COLA pmax pmax
comp=Z,9.0nm,0.8s
CCB Clear Creek Bu 47.91 33 *e*P **P 07 20 19.5 +1.6**
comp=Z,2.7nm,0.6s
KKN Kakani 47.94 275 *e*P **P 07 20 19.7 +0.8**
DMN Daman 48.16 275 *e*P **P 07 20 21.4 +0.8**
TARG Taragay, Kyrgy 48.21 295 *e*P **P 07 20 23.3 +2.2**
comp=Z,14nm,0.6s
SCM Sheep Creek Mo 48.29 37 *e*P **P 07 20 21.4 +0.4**
comp=Z,10nm,0.8s
SCM Sheep Creek Mo 48.29 37 *e*P **P 07 20 21.4 +0.4**
SCM pmax pmax
comp=Z,10.0nm,0.8s
IL1 Eielson Array 48.30 33 *e*P **P 07 20 21.4 +0.5**
ILAR Eielson Array 48.30 33 P **P 07 20 21.2 +0.3**
comp=Z,7.0nm,0.7s,baz=269,slow=6.4,SNR=96
ILAR LR LR 07 41 50.6
comp=Z,52nm,20.6s,baz=288,slow=37
ILB Eielson Array 48.30 33 *e*P **P 07 20 21.4 +0.6**
GKN Gorkha 48.34 276 *e*P **P 07 20 22.3 +0.3**
comp=Z,102nm,1.1s
DANN Dangsing 48.87 276 *e*P **P 07 20 26.8 +0.6**
comp=Z,136nm,0.8s
FYU Fort Yukon 48.90 30 *e*P **P 07 20 27.8 +2.4**
comp=Z,14nm,1.1s
KLU Klutina 49.00 37 *e*P **P 07 20 27.5 +1.1**
comp=Z,6.3nm,0.7s
DIV Divide 49.11 38 *e*P **P 07 20 29.2 +1.9**
comp=Z,9.7nm,0.7s
KOLN Koldanda 49.26 276 *e*P **P 07 20 30.3 +1.2**
TKM2 Tokmak 2 49.40 298 P **P 07 20 29.7 -0.2**
TKM2 pmax pmax
comp=Z,16nm,0.9s

PYUN Piuthan 49.59 277 *e*P **P 07 20 32.6 +1.1**
comp=Z,95nm,0.9s
BMRM Bremner River 49.69 38 *e*P **P 07 20 32.4 +0.7**
comp=Z,9.4nm,0.9s
OTUK Ortayu 50.03 305 P **P 07 20 32.8 -1.6**
OTUK pmax pmax
comp=Z,15nm,1.2s
BVA0 Borovoye Array 50.05 312 *i* P **P 07 20 33.7 -0.7**
BVA0 pmax pmax
comp=Z,10.0nm,1.0s
BVAR Borovoye Array 50.05 312 P **P 07 20 34.5 +0.1**
comp=Z,1.7nm,0.4s,baz=76,slow=8.5,SNR=17
BVAR PcP **PcP 07 21 53.7 +0.4**
comp=Z,2.4nm,0.5s,baz=102,slow=4.3,SNR=4.3
BRVK Borovoye 50.10 312 *e*P **P 07 20 35.0 +0.2**
comp=Z,10.0nm,1.0s
BRVK Borovoye 50.10 312 *ce*P **P 07 20 34.7 -0.1**
BRVK pmax pmax
comp=Z,14nm,2.5s
FRU Bishkek 50.10 298 *e*P P 07 20 40.0 +4.9
FRU *e* 07 20 56.0
KSH Kashi 50.26 293 P P 07 20 43.0 +6.6
KSH pP sP 07 21 00.8 -1.6
KSH S **S 07 27 46.0 +2.3**
KSH SS **SS 07 31 19.5 +1.9**
KSH pmax pmax
comp=Z,18nm,0.9s
KSH pmax pmax
comp=Z,220nm,4.1s
KSH LR LR
comp=Z,220nm,7.6s
KSH LR LR
comp=Z,170nm,6.0s
KSH LR LR
comp=Z,240nm,6.9s
HNR Honiara 50.32 157 LR LR 07 40 31.9
comp=Z,69nm,20.6s,baz=344,slow=34
EGAK Eagle 50.74 33 *e*P **P 07 20 40.2 +0.8**
comp=Z,3.6nm,1.1s
DAWY Dawson 51.61 33 *e*P **P 07 20 47.8 +1.8**
comp=Z,1.9nm,0.9s
MNAS Manas 51.69 298 P **P 07 20 47.1 0.0**
MNAS pmax pmax
comp=Z,12nm,0.9s
SFK Sufi-Kurgan 51.86 295 P **P 07 20 48.5 0.0**
SFK pmax pmax
comp=Z,13nm,0.9s
COEN Coen 51.92 178 *e*P **P 07 20 49.5 +0.8**
comp=Z,26nm,1.2s
KK31 Karatay Array 52.85 299 *e*P **P 07 20 55.8 +0.2**
KK31 Karatay Array 52.85 299 *e*P **P 07 20 55.8 +0.2**
KKAR Karatay Array 52.85 299 *e*P **P 07 20 55.8 +0.2**
KKAR Karatay Array 52.85 299 *e*P **P 07 20 55.8 +0.2**
INK Inuvik 53.16 28 *e*P **P 07 20 58.5 +1.1**
comp=Z,5.6nm,0.8s
INK Inuvik 53.16 28 *e*P **P 07 20 58.5 +1.1**
INK pmax pmax
comp=Z,6.0nm,0.8s
SVE Sverdlovsk 54.50 318⇓ *i*P **P 07 21 07.9 +0.6**
SVE pmax pmax
comp=Z,19nm,0.6s
NIL Nilore 54.60 288 *e*P **P 07 21 08.3 -0.1**
comp=Z,21nm,0.6s
NIL Nilore 54.60 288 *e*P **P 07 21 08.3 -0.1**
NIL pmax pmax
comp=Z,21nm,0.6s
ARU Arti 55.72 318 *e*P **P 07 21 16.2 +0.1**
comp=Z,23nm,0.5s
ARU Arti 55.72 318 *c i*P **P 07 21 16.1 0.0**
ARU *PP **pP 07 21 31.6 -2.6**
ARU 07 22 12.3
ARU 07 23 17.8
ARU S **S 07 29 00.3 +3.3**
ARU SS **SS 07 32 40.9 -1.7**
ARU pmax pmax
comp=Z,44nm,1.7s
AB31 Akbulak array 57.46 310 P P 07 21 19.0 -10
AB31 pmax pmax
comp=Z,1.0nm,0.5s
DLBC Dease Lake 57.47 39 *e*P **P 07 21 30.8 +2.2**
comp=Z,11nm,1.2s
FITZ Fitzroy Crossi 58.06 198 P **P 07 21 33.1 +0.1**
comp=Z,2.4nm,0.6s,baz=16,slow=6.7,SNR=8.4
FITZ LR LR 07 43 50.3
comp=Z,33nm,21.9s,baz=5.5,slow=33
FITZ Fitzroy Crossi 58.06 198 *e*P **P 07 21 33.4 +0.4**
comp=Z,4.9nm,1.1s
AKTO Aktyubinsk 58.16 312 P **P 07 21 32.5 -0.9**
AKTO pmax pmax
comp=Z,10.0nm,1.1s
WRAB Tennant Creek 58.28 188 *e*P **P 07 21 33.7 -0.8**
comp=Z,26nm,1.4s
WRAB Tennant Creek 58.28 188 *e*P **P 07 21 33.7 -0.8**
WRAB pmax pmax
comp=Z,26nm,1.4s
WB2 Warramunga Arr 58.29 188 *e*P **P 07 21 33.8 -0.8**
comp=Z,33nm,1.4s
WRA Warramunga Arr 58.29 188 P **P 07 21 33.7 -0.9**
comp=Z,6.2nm,0.6s,baz=6.3,slow=7.0,SNR=76
SPITS Spitsbergen Ar 59.43 349 P **P 07 21 41.8 -0.1**
comp=Z,1.6nm,0.4s,baz=55,slow=15,SNR=7.9
PRGR Permogore 59.97 327 *e*P **P 07 21 45.7 0.0**
PRGR pmax pmax
comp=Z,15nm,0.7s
RES Resolute Bay 61.36 15 *e*P **P 07 21 54.7 -0.3**
comp=Z,8.7nm,0.6s
RES Resolute Bay 61.36 15 *e*P **P 07 21 54.7 -0.3**
RES pmax pmax
comp=Z,9.0nm,0.6s
AS01 Alice Springs 62.01 188 *e*P **P 07 21 59.7 -0.3**
AS31 Alice Springs 62.02 188 *e*P **P 07 21 59.9 -0.2**
comp=Z,1.4nm,0.6s
ASAR Alice Springs 62.02 188 P **P 07 21 59.6 -0.4**
comp=Z,2.7nm,0.6s,baz=3.7,slow=4.5,SNR=38
ASAR LR LR 07 49 31.5
comp=Z,38nm,19.0s,baz=352,slow=36
YKW3 Yellowknife Ar 62.56 30 *e*P **P 07 22 03.9 +0.7**
comp=Z,8.0nm,1.3s
YKA Yellowknife Ar 62.60 31 P **P 07 22 03.7 +0.2**
comp=Z,1.6nm,0.6s,baz=304,slow=6.8,SNR=21
YKA PcP **PcP 07 22 42.6 +0.8**
comp=Z,1.1nm,0.6s,baz=298,slow=3.7,SNR=7.8
YKA LR LR 07 51 37.3
comp=Z,5.0nm,19.8s,baz=296,slow=38
KLMR Klimovskoe 62.95 328 *e*P **P 07 22 03.4 -2.4**
KLMR *e* 07 24 21.0
KLMR pmax pmax
comp=Z,9.0nm,1.0s
KLMR Klimovskoe 62.95 328 *e*P **P 07 22 03.4 -2.4**
KLMR AMP 07 22 06.8
comp=Z,9.0nm,1.0s
KLMR *e*PP **PP 07 24 21.0 -3.5**
ARCES ARCESS Array B 63.01 339 P **P 07 22 06.6 +0.4**
comp=Z,7.2nm,0.8s,baz=56,slow=7.9,SNR=18
ARCES LR LR 07 52 26.3
comp=Z,64nm,21.7s,baz=158,slow=39
GEYT Alibeck 63.58 299 LR LR 07 51 08.3
comp=Z,104nm,19.1s,baz=220,slow=37
SGF Sodankyl 64.00 337 *e*P **P 07 22 13.4 +0.7**
SGF pmax pmax
comp=Z,24nm,0.8s
DZM Mont Dzumac 64.26 155 LR LR 07 47 33.9
comp=Z,102nm,20.9s,baz=20,slow=33
DZM Mont Dzumac 64.26 155 *e*LR LR 07 41 40.0
comp=Z,152nm,22.2s
DAG Danmarks Havn 64.62 355 *i* P **P 07 22 16.2 -0.4**
comp=Z,6.7nm,0.7s
DAG Danmarks Havn 64.62 355 P **P 07 22 16.4 -0.2**
MOS Moscow 66.51 323 *e*P **P 07 22 29.0 -0.1**
MOS *e* 07 22 44.6
MOS *e* 07 22 57.8
FIA1 FINESS Array S 67.93 332 *e*P **P 07 22 37.9 -0.1**
FINES FINESS Array B 67.93 332 P **P 07 22 37.8 -0.2**
comp=Z,8.8nm,0.7s,baz=57,slow=7.0,SNR=20
H04A Detroit Lake 68.06 50 *e*P **P 07 22 40.7 +1.6**
comp=Z,12nm,1.0s
VSR Storozhevoye 68.28 319 *e*P **P 07 22 40.0 -0.3**
VSR pmax pmax
comp=Z,10.0nm,0.7s
PINE Pine Mountain 69.29 50 *e*P **P 07 22 48.0 +1.0**
comp=Z,13nm,1.0s
YBH Yreka Blue Hor 69.33 53 LR LR 07 48 36.2
comp=Z,34nm,20.9s,baz=312,slow=32
YBH Yreka Blue Hor 69.33 53 *e*P **P 07 22 48.5 +1.3**
comp=Z,5.7nm,1.0s
YBH Yreka Blue Hor 69.33 53 *e*P **P 07 22 48.5 +1.3**

YBH pmax pmax
comp=Z,6.0nm,1.0s
SUMG Summit 69.50 0 *i* P **P 07 22 49.1 +1.1**
comp=Z,7.1nm,0.6s
SUMG Summit 69.50 0 *e*P **P 07 22 48.5 +0.5**
comp=Z,27nm,1.4s
SUMG Summit 69.50 0 *e*P **P 07 22 48.5 +0.5**
SUMG pmax pmax
comp=Z,27nm,1.4s
VSU Vasula 69.61 329 *ce*P **P 07 22 50.9 +2.4**
VSU pmax pmax
comp=Z,43nm,1.3s
STKA Stephens Creek 69.74 180 P **P 07 22 49.7 +0.2**
comp=Z,1.9nm,0.7s,baz=360,slow=14,SNR=3.4
K05A Summer Lake 69.91 51 *e*P **P 07 22 52.6 +1.7**
comp=Z,12nm,0.9s
WDC Whiskeytown Da 70.07 54 *e*P **P 07 22 53.4 +1.8**
comp=Z,6.0nm,1.1s
WDC Whiskeytown Da 70.07 54 *e*P **P 07 22 53.4 +1.8**
WDC pmax pmax
comp=Z,6.0nm,1.1s
WALA Waterton Lakes 70.31 43 *e*P **P 07 22 54.5 +1.3**
comp=Z,14nm,1.1s
ZEI Tsey 70.33 309 *e*P **P 07 22 53.4 0.0**
KIV Kislovodsk 70.41 311 *e*P **P 07 22 54.0 +0.3**
KIV pmax pmax
comp=Z,15nm,0.9s
KIV MLR MLR
comp=Z,231nm,17.0s
KBZ Khabaz 70.41 311 P **P 07 22 54.4 +0.8**
comp=Z,5.0nm,0.7s,baz=8.9,slow=4.1,SNR=9.6
MOD Modoc Plateau 70.73 52 *e*P **P 07 22 57.0 +1.2**
BMO Blue Mountains 70.86 48 *e*P **P 07 22 57.4 +0.9**
comp=Z,5.6nm,1.0s
BMO Blue Mountains 70.86 48 *e*P **P 07 22 57.4 +0.9**
BMO pmax pmax
comp=Z,6.0nm,1.0s
JTMT Jette 70.88 44 *e*P **P 07 22 58.4 +1.7**
comp=Z,12nm,0.9s
J08A Circle Bar Ran 71.02 49 *e*P **P 07 22 59.0 +1.5**
comp=Z,5.5nm,1.0s
GNI Garni 71.29 307 LR LR 07 56 37.8
comp=Z,125nm,19.8s,baz=57,slow=38
WVOR Wild Horse Val 71.45 50 *e*P **P 07 23 01.4 +1.3**
comp=Z,9.5nm,1.1s
WVOR Wild Horse Val 71.45 50 *e*P **P 07 23 01.4 +1.3**
WVOR pmax pmax
comp=Z,9.0nm,1.1s
MSO Missoula 71.61 45 *e*P **P 07 23 01.5 +0.5**
comp=Z,2.6nm,1.0s
BEKR Beckworth 71.85 53 *e*P **P 07 23 03.6 +1.0**
comp=Z,6.6nm,0.9s
FFC Flin Flon 72.51 33 *e*P **P 07 23 06.7 +0.6**
comp=Z,7.5nm,0.8s
FFC Flin Flon 72.51 33 *e*P **P 07 23 06.7 +0.6**
FFC pmax pmax
comp=Z,7.0nm,0.8s
MFID Camas Ranch 72.56 48 *e*P **P 07 23 07.6 +0.8**
comp=Z,9.3nm,1.0s
VCNR Virginia City 72.63 54 *e*P **P 07 23 09.0 +1.6**
comp=Z,4.0nm,0.9s
PNTR Pine Nut 72.78 54 *e*P **P 07 23 10.4 +2.1**
comp=Z,6.5nm,1.0s
HRY Holter Researc 72.84 44 *e*P **P 07 23 09.7 +1.4**
CMB Columbia Colle 72.88 55 *e*P **P 07 23 09.4 +0.7**
comp=Z,3.6nm,0.8s
CMB Columbia Colle 72.88 55 *e*P **P 07 23 09.4 +0.7**
CMB pmax pmax
comp=Z,4.0nm,0.8s
LRM Limekiln Ridge 73.04 45 *e*P **P 07 23 10.8 +1.0**
YERR Yerington 73.07 54 *e*P **P 07 23 11.3 +1.4**
comp=Z,8.9nm,1.0s
EGMT Eagleton 73.14 42 *e*P **P 07 23 10.2 +0.2**
comp=Z,21nm,1.0s
HFS Hagfors 73.16 336 P **P 07 23 10.2 +0.4**
comp=Z,3.5nm,0.5s,baz=63,slow=6.6,SNR=22
HFS LR LR 07 58 13.5
comp=Z,121nm,19.5s,baz=45,slow=38
NC204 NORSAR Array S 73.18 338 *e*P **P 07 23 10.2 +0.2**
WAKR Walker 73.22 54 *e*P **P 07 23 12.3 +1.4**
comp=Z,3.8nm,0.9s
NB2 NORSAR Subarra 73.23 337 P **P 07 23 09.7 -0.5**
comp=Z,17nm,1.2s,baz=38,slow=6.2
NB2 NORSAR Subarra 73.23 337 P **P 07 23 09.8 -0.5**
NOA NORSAR Array B 73.23 337 LR LR 07 57 53.8
comp=Z,75nm,21.8s,baz=65,slow=38
DLMT Dillon 73.24 45 *e*P **P 07 23 11.9 +1.1**
comp=Z,14nm,1.3s
HLID Hailey 73.30 48 *e*P **P 07 23 11.7 +0.5**
comp=Z,3.2nm,0.9s
BMN Battle Mountai 73.48 51 *e*P **P 07 23 14.1 +1.8**
comp=Z,9.0nm,1.0s
AKASG Malin Array Be 73.58 322 P **P 07 23 12.1 -0.4**
comp=Z,3.6nm,0.5s,baz=46,slow=6.2,SNR=20
AKASG LR LR 07 56 12.0
comp=Z,71nm,21.9s,baz=60,slow=36
AKBB Malin Array Si 73.58 322 *e*P **P 07 23 12.4 -0.1**
comp=Z,9.1nm,0.9s
KIEV Kiev 73.59 322 *e*P **P 07 23 12.3 -0.3**
comp=Z,8.9nm,0.9s
KIEV Kiev 73.59 322⇑ *i*P **P 07 23 12.2 -0.3**
KIEV pmax pmax
comp=Z,9.0nm,0.9s
BOZ Bozeman (W) 73.64 45 *e*P **P 07 23 14.0 +0.9**
comp=Z,6.6nm,0.9s
BOZ Bozeman (W) 73.64 45 *e*P **P 07 23 14.0 +0.9**
BOZ pmax pmax
comp=Z,7.0nm,0.9s
KVN Kaiserville 73.75 53 *e*P **P 07 23 15.5 +1.6**
comp=Z,10nm,1.1s
KVN Kaiserville 73.75 53 *e*P **P 07 23 15.5 +1.6**
KVN pmax pmax
comp=Z,11nm,1.1s
MDPB Devils Postpil 73.96 55 *e*P **P 07 23 16.5 +1.2**
comp=Z,4.3nm,0.9s
NV01 Mina Array Sit 73.98 54 *e*P **P 07 23 16.5 +1.1**
NVAR Mina Array Bea 73.98 54 P **P 07 23 16.6 +1.2**
comp=Z,3.4nm,0.8s,baz=285,slow=5.5,SNR=30
NVAR LR LR 07 50 04.4
comp=Z,54nm,21.7s,baz=104,slow=31
NV11 Mina Array Sit 74.08 54 *e*P **P 07 23 16.9 +1.1**
comp=Z,0.5nm,1.2s
YHB Horse Butte 74.40 45 *e*P **P 07 23 19.0 +1.3**
comp=Z,8.4nm,0.9s
YMR Madison River 74.58 45 *e*P **P 07 23 20.7 +2.0**
comp=Z,8.4nm,0.9s
GCMT Greycliff 74.59 44 *e*P **P 07 23 20.2 +1.6**
SFJD Kangerlussuaq 74.67 5 LR LR 07 55 40.8
comp=Z,45nm,22.0s,baz=354,slow=35
YFT Old Faithful 74.79 45 *e*P **P 07 23 22.9 +3.0**
comp=Z,8.0nm,0.9s
YPP Pitchstone Pla 74.92 45 *e*P **P 07 23 22.6 +1.8**
comp=Z,3.7nm,0.8s
H17A Grant Village 74.97 45 *e*P **P 07 23 23.3 +2.3**
comp=Z,8.7nm,0.8s
IMW Indian Meadow 75.08 46 *e*P **P 07 23 23.6 +1.9**
comp=Z,8.7nm,0.8s
FXWY Fox Creek 75.19 46 *e*P **P 07 23 24.4 +2.2**
comp=Z,6.5nm,0.9s
RLMT Red Lodge 75.23 44 *e*P **P 07 23 23.5 +1.1**
comp=Z,5.7nm,0.9s
MOOW Moose Ponds 75.28 46 *e*P **P 07 23 24.8 +2.0**
comp=Z,6.6nm,1.0s
TPAW Teton Pass 75.33 46 *e*P **P 07 23 24.8 +1.7**
comp=Z,6.8nm,0.8s
SNOW Snow King Moun 75.45 46 *e*P **P 07 23 25.9 +2.0**
comp=Z,6.1nm,0.8s
REDW Red Top Meadow 75.46 46 *e*P **P 07 23 25.6 +1.8**
comp=Z,3.7nm,0.9s
ISA Isabella, Lake 75.52 56 *e*P **P 07 23 24.5 +0.4**
comp=Z,3.2nm,0.9s
ISA Isabella, Lake 75.52 56 *e*P **P 07 23 24.5 +0.4**
ISA pmax pmax
comp=Z,3.0nm,0.9s
AHID Auburn Hatcher 75.70 47 *e*P **P 07 23 26.6 +1.5**
comp=Z,6.0nm,0.8s
DAC Darwin (Calif) 75.72 55 *e*P **P 07 23 26.4 +1.0**
comp=Z,3.0nm,0.9s
DAC Darwin (Calif) 75.72 55 *e*P **P 07 23 26.4 +1.0**
DAC pmax pmax
comp=Z,3.0nm,0.9s
R11A Troy Canyon, C 75.74 52 *e*P **P 07 23 26.1 +0.7**
comp=Z,5.4nm,1.0s
LAO LASA Array 75.84 41 *e*P **P 07 23 26.7 +1.0**
comp=Z,20nm,1.2s
HWUT Hardware Ranch 76.16 48 *e*P **P 07 23 29.1 +1.4**
comp=Z,9.5nm,1.1s

TPNV	**Topopah Spring**	76.17	54	*e*P		P	07 23 28.9 +1.0
	comp=Z,8.1nm,0.9s						
TPNV	**Topopah Spring**	76.17	54	*e*P		P	07 23 28.9 +1.0
TPNV				pmax	pmax		
	comp=Z,8.0nm,0.9s						
DUG	**Dugway, Tooele**	76.30	50	*e*P		P	07 23 30.0 +1.5
	comp=Z,6.2nm,0.8s						
DUG	**Dugway, Tooele**	76.30	50	*e*P		P	07 23 30.0 +1.5
DUG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BW06	**Boulder Array**	76.57	46	*e*P		P	07 23 30.7 +0.5
	comp=Z,5.9nm,0.8s						
PD31	**Pinedale Array**	76.57	46	*e*P		P	07 23 30.8 +0.7
PDAR	**Pinedale Array**	76.57	46	P		P	07 23 30.7 +0.5
	comp=Z,5.9nm,0.7s,baz=263,slow=1.5,SNR=51						
PDAR				LR		LR	07 53 04.0
	comp=Z,30nm,21.9s,baz=336,slow=32						
PDAR	**Pinedale Array**	76.57	46	*e*P		P	07 23 31.0 +0.8
PSUT	**Pine Spring**	76.70	51	*e*P		P	07 23 31.7 +0.7
	comp=Z,6.4nm,1.1s						
MPU	**Maple Canyon**	77.12	49	*e*P		P	07 23 34.9 +1.6
	comp=Z,10nm,1.0s						
SHPR	**Sheep Range**	77.14	54	*e*P		P	07 23 34.7 +1.4
	comp=Z,4.7nm,0.9s						
BUR08	**Bucovina Ar. S**	77.59	322	*e*P		P	07 23 36.4 +0.8
BUR04	**Bucovina Ar. S**	77.61	322	*e*P		P	07 23 36.0 +0.3
BURAR	**Bucovina Array**	77.61	322	⇓*i*P		P	07 23 36.6 +0.9
CCUT	**Cedar City**	77.62	52	*e*P		P	07 23 37.5 +1.4
	comp=Z,4.2nm,0.9s						
TESR	**Tescani**	77.66	320	⇑*i*P		P	07 23 34.7 -1.1
MSU	**Marysvale**	77.74	51	*e*P		P	07 23 38.6 +1.8
MSU	**Marysvale**	77.74	51	*e*P		P	07 23 38.6 +1.8
SZCU	**Shurtz Canyon**	77.76	52	*e*P		P	07 23 38.3 +1.4
	comp=Z,4.6nm,0.9s						
TMUT	**Trail Mountain**	77.83	49	*e*P		P	07 23 38.9 +1.6
	comp=Z,2.4nm,0.8s						
P17A	**Butcher Ranch,**	78.00	49	*e*P		P	07 23 39.8 +1.7
	comp=Z,22nm,1.2s						
LCMT	**Little Creek M**	78.03	52	*e*P		P	07 23 40.1 +1.8
	comp=Z,6.1nm,0.9s						
MTPU	**Mount Pierson**	78.03	51	*e*P		P	07 23 40.4 +1.9
	comp=Z,7.7nm,0.9s						
VRI	**Vrincioaia**	78.06	320	⇓*i*P		P	07 23 39.4 +1.3
VRI	**Vrincioaia**	78.06	320	P		P	07 23 41.5 +3.4
P18A	**Preston Nutter**	78.19	49	*e*P		P	07 23 41.0 +1.7
	comp=Z,7.3nm,0.9s						
KNB	**Kanab**	78.29	52	*e*P		P	07 23 40.9 +1.1
	comp=Z,8.7nm,1.1s						
KNB	**Kanab**	78.29	52	*e*P		P	07 23 40.9 +1.1
KNB				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ULM	**Lac du Bonnet**	78.31	34	P		P	07 23 39.7 +0.3
	comp=Z,3.2nm,0.6s,baz=311,slow=4.2,SNR=5.7						
ULM				LR		LR	07 58 59.1
	comp=Z,36nm,21.8s,baz=62,slow=36						
ULM	**Lac du Bonnet**	78.31	34	*e*P		P	07 23 40.0 +0.6
	comp=Z,6.6nm,0.9s						
ULM	**Lac du Bonnet**	78.31	34	*e*P		P	07 23 40.0 +0.6
ULM				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BRTR	**Keskin Array B**	78.34	312	P		P	07 23 40.5 +0.5
	comp=Z,0.6nm,0.4s,baz=143,slow=3.1,SNR=5.9						
BRTR				LR		LR	08 02 16.3
	comp=Z,54nm,18.4s,baz=48,slow=39						
SRU	**San Rafael Swe**	78.36	49	*e*P		P	07 23 41.5 +1.4
	comp=Z,8.9nm,0.7s						
SRU	**San Rafael Swe**	78.36	49	*e*P		P	07 23 41.5 +1.4
SRU				pmax	pmax		
	comp=Z,9.0nm,0.7s						
TRPA	**Tarpa**	78.52	323	⇑*i*P		P	07 23 41.0 +0.4
RWWY	**Rawlins**	78.60	46	*e*P		P	07 23 42.6 +1.1
	comp=Z,11nm,0.9s						
DOPR	**Dopca**	78.66	320	⇑*i*P		P	07 23 41.8 +0.3
RSSD	**Black Hills**	78.70	42	*e*P		P	07 23 42.4 +0.5
	comp=Z,9.9nm,1.1s						
RSSD	**Black Hills**	78.70	42	*e*P		P	07 23 42.4 +0.5
RSSD				pmax	pmax		
	comp=Z,10.0nm,1.1s						
U15A	**North Rim**	78.99	52	*e*P		P	07 23 45.3 +1.5
	comp=Z,6.6nm,0.9s						
O20A	**White River Ci**	79.03	47	*e*P		P	07 23 44.5 +0.6
	comp=Z,8.2nm,1.0s						
VOIR		79.20	320	⇓*i*P		P	07 23 42.3 -2.2
KSP	**Ksiaz**	79.28	328	P		P	07 23 47.1 +2.4
KSP				pmax	pmax		
	comp=Z,9.0nm,1.6s						
ARR	**Arges**	79.46	320	⇑*i*P		P	07 23 46.8 +0.9
PV09	**Paradox Valley**	79.58	49	*e*P		P	07 23 48.2 +1.3
DPC	**Dobruska-Polom**	79.64	328	*e*P		P	07 23 47.5 +0.7
DPC	**Dobruska-Polom**	79.64	328	*e*P		P	07 23 47.5 +0.7
PV10	**Paradox Valley**	79.72	49	*e*P		P	07 23 49.0 +1.3
	comp=Z,36nm,1.2s						
AGMN	**Agassiz Nation**	79.75	35	*e*P		P	07 23 46.8 -0.5
	comp=Z,6.0nm,1.0s						
PV04	**Paradox Valley**	79.78	49	*e*P		P	07 23 48.9 +1.0
	comp=Z,10nm,1.1s						
PHWY	**Pilot Hill**	79.84	45	*e*P		P	07 23 48.6 +0.3
	comp=Z,9.1nm,1.4s						
N23A	**Red Feather La**	79.84	45	*e*P		P	07 23 49.5 +1.3
	comp=Z,9.9nm,1.3s						
PV03	**Paradox Valley**	79.91	49	*e*P		P	07 23 50.2 +1.6
	comp=Z,4.1nm,0.9s						
VYHS	**Vyhne**	79.95	326	*e*P		P	07 23 49.6 +1.2
VYHS				pmax	pmax		
	comp=Z,12nm,2.0s						
VYHS	**Vyhne**	79.95	326	*e*P		P	07 23 49.6 +1.2
Y14A	**Wickenburg**	80.12	55	*e*P		P	07 23 50.7 +1.1
	comp=Z,5.8nm,0.8s						
PV01	**Paradox Valley**	80.15	49	*e*P		P	07 23 51.2 +1.2
	comp=Z,4.3nm,1.0s						
JAVC	**Velka Javorina**	80.19	326	*e*P		P	07 23 51.2 +1.4
CLL	**Collm**	80.25	330	*i*P		P	07 23 49.9 0.0
	comp=Z,10.0nm,1.1s						
CLL				*i*			07 24 06.7
CLL				*i*pP		pP	07 24 13.0 +3.9
CLL				*es*P		sP	07 24 22.0 +5.2
CLL				LmV			08 05 00.0
	comp=Z,100nm,18.8s						
CLL	**Collm**	80.25	330	*e*P		P	07 23 50.0 0.0
	comp=Z,5.7nm,0.9s						
CLL	**Collm**	80.25	330	*e*P		P	07 23 50.0 0.0
CLL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VRAC	**Vranov**	80.32	327	*e*P		P	07 23 51.1 +0.7
113A	**Mohawk Valley,**	80.37	56	*e*P		P	07 23 52.3 +1.4
	comp=Z,4.9nm,0.8s						
SMCO	**Snowmass**	80.40	47	*e*P		P	07 23 52.5 +1.0
	comp=Z,6.1nm,1.3s						
RAYN	**Ar Rayn**	80.54	292	*e*P		P	07 23 52.2 +0.2
	comp=Z,7.2nm,1.0s						
RAYN	**Ar Rayn**	80.54	292	P		P	07 23 52.2 +0.2
RAYN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KRUC	**Moravsky**	80.59	327	*e*P		P	07 23 52.3 +0.5
GOPC	**GO Pecny, Ondr**	80.61	328	*e*P		P	07 23 53.9 +1.9
GOPC	**GO Pecny, Ondr**	80.61	328	*e*P		P	07 23 53.9 +1.9
B35A	**Bob, Littlefor**	80.66	34	*e*P		P	07 23 52.3 +0.1
	comp=Z,7.4nm,0.9s						
PRU	**Pruhonice**	80.66	329	*e*P		P	07 23 53.5 +1.4
PRU	**Pruhonice**	80.66	329	*e*P		P	07 23 53.5 +1.4
ISCO	**Idaho Springs**	80.76	46	*e*P		P	07 23 54.3 +1.0
	comp=Z,3.6nm,0.9s						
ISCO	**Idaho Springs**	80.76	46	*e*P		P	07 23 54.3 +1.0
ISCO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MVCO	**Mesa Verde**	80.80	50	*e*P		P	07 23 55.4 +2.0
	comp=Z,5.8nm,1.1s						
X16A	**Lo Mia Camp, P**	80.81	53	*e*P		P	07 23 55.3 +1.8
	comp=Z,5.0nm,0.8s						
G32A	**Webster**	81.21	38	*e*P		P	07 23 55.8 +0.6
	comp=Z,28nm,0.9s						
S22A	**4UR Ranch, Cre**	81.44	48	*e*P		P	07 23 57.9 +0.9
	comp=Z,6.3nm,1.1s						
MMAI	**Mount Meron Ar**	81.58	305	LR		LR	08 04 43.3
	comp=Z,46nm,21.0s,baz=325,slow=39						
CONA	**Conrad Observa**	81.69	327	*e*P		P	07 23 58.5 +0.7
	comp=Z,8.4nm,1.6s						
KHC	**Kasperske Hory**	81.72	329	*e*P		P	07 23 58.8 +0.9
KHC				*ex*		x	07 24 14.9
KHC	**Kasperske Hory**	81.72	329	*e*P		P	07 23 58.8 +0.9
KHC				*e*			07 24 14.9
GERES	**GERESS Array B**	81.89	328	P		P	07 23 58.7 -0.2
	comp=Z,1.0nm,0.6s,baz=36,slow=5.0,SNR=11						
GERES				LR		LR	08 02 51.1
	comp=Z,107nm,20.6s,baz=55,slow=37						
GEA0	**GERESS Array S**	81.90	328	*e*P		P	07 23 58.7 -0.2
WET	**Wettzell**	82.00	329	P		P	07 24 02.0 +2.7
VTS	**Vitosha**	82.16	319	⇑*i*P		P	07 23 51.4 -9.0
MOA	**Molln**	82.43	327	*e*PcP		P	07 24 03.4 +1.8
	comp=Z,4.4nm,1.1s						
TUC	**Tucson**	82.59	55	*e*P		P	07 24 04.1 +1.3
	comp=Z,2.8nm,0.9s						
TUC	**Tucson**	82.59	55	*e*P		P	07 24 04.1 +1.3
TUC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ECSD	**EROS Data Cent**	82.76	39	*e*P		P	07 24 03.0 -0.4
	comp=Z,7.6nm,1.1s						
E38A	**The Farm, Brul**	82.95	34	*e*P		P	07 24 04.6 +0.3
	comp=Z,7.8nm,0.8s						
SOKA	**Soboth**	83.01	326	*e*P		P	07 24 04.8 +0.1
	comp=Z,8.3nm,0.9s						
T25A	**Trinidad**	83.26	47	*e*P		P	07 24 07.2 +0.9
	comp=Z,6.3nm,0.9s						
KBA	**Koelnbreinsper**	83.42	327	P		P	07 24 09.1 +2.2
KBA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ANMO	**Albuquerque**	83.54	50	P		P	07 24 08.8 +1.0
	comp=Z,3.2nm,0.9s,baz=323,slow=16,SNR=12						
ANMO				LR		LR	07 57 19.2
	comp=Z,31nm,20.8s,baz=338,slow=33						
ANMO	**Albuquerque**	83.54	50	*e*P		P	07 24 09.4 +1.6
	comp=Z,6.5nm,1.1s						
ANMO	**Albuquerque**	83.54	50	*ce*P		P	07 24 08.7 +1.0
ANMO				pmax	pmax		
	comp=Z,11nm,1.7s						
BNM	**Barren Site**	83.98	51	*e*P		P	07 24 11.2 +1.1
ABTA	**Abfaltersbach**	84.04	328	*e*P		P	07 24 09.8 -0.2
	comp=Z,5.1nm,1.4s						
I37A	**Lemond, Waseca**	84.09	37	*e*P		P	07 24 10.9 +0.7
	comp=Z,24nm,0.8s						
SCHQ	**Schefferville**	84.09	16	P		P	07 24 09.9 -0.1
	comp=Z,4.5nm,0.7s,baz=225,slow=16,SNR=4.2						
MOTA	**Moosalm**	84.15	329	*e*PcP		P	07 24 11.2 +0.6
	comp=Z,5.4nm,1.0s						
J36A	**Seneca 1, Swea**	84.16	38	*e*P		P	07 24 11.0 +0.5
	comp=Z,7.1nm,0.9s						
RETA	**Reutte**	84.17	329	*i*P		P	07 24 10.7 +0.1
	comp=Z,9.0nm,1.1s						
PDG	**Podgorica**	84.27	321	⇑*i*P		P	07 24 07.9 -3.2
TTG	**Podgorica**	84.27	321	*e*P		P	07 24 11.3 +0.3
	comp=Z,12nm,1.1s						
LIT	**Litokhoron**	84.32	318	*e*P		P	07 24 11.2 -0.2
	comp=Z,9.3nm,0.9s						
LIT	**Litokhoron**	84.32	318	*e*P		P	07 24 11.2 -0.2
LIT				pmax	pmax		
	comp=Z,9.0nm,0.9s						
PMOR	**Pomariorio Ree**	84.32	114	*e*T		T	08 57 43.8
	comp=Z,67nm,0.2s						
COWI	**Conover**	84.39	33	*e*P		P	07 24 11.8 +0.1
	comp=Z,5.6nm,0.8s						
BFO	**Black Forest**	84.44	331	*e*P		P	07 24 12.7 +0.7
	comp=Z,2.4nm,1.3s						
BFO	**Black Forest**	84.44	331	*i*P		P	07 24 12.6 +0.7
FETA	**Feichten**	84.56	329	*e*P		P	07 24 12.3 -0.4
	comp=Z,7.5nm,1.2s						
G40A	**Rib Lake**	84.58	34	*e*P		P	07 24 13.0 +0.4
	comp=Z,6.8nm,0.9s						
DAVA	**Damuels**	84.69	329	*e*P		P	07 24 13.2 -0.1
	comp=Z,13nm,1.2s						
F41A	**Three Lakes**	84.69	33	*e*P		P	07 24 13.5 +0.3
	comp=Z,11nm,1.2s						
CDF	**Champ du Feu**	84.78	332	*e*P		P	07 24 14.3 +0.6
CDF				pmax	pmax		
	comp=Z,6.0nm,0.9s						
PPT	**Papeete**	84.84	117	LR		LR	07 53 08.9
	comp=Z,96nm,21.8s,baz=330,slow=29						
PPT2	**Papeete2**	84.86	117	*e*LR		LR	07 51 03.2
	comp=Z,188nm,25.2s						
PPT2	**Papeete2**	84.86	117	*e*T		T	08 58 19.4
	comp=Z,5.0nm,0.3s						
PAE	**Paea**	84.90	117	*e*T		T	08 58 21.2
	comp=Z,1.0nm,0.2s						
TIAR	**Tiarei**	85.00	117	*e*T		T	08 58 28.0
	comp=Z,3.2nm,0.2s						
FUORN	**Ofenpass-Fuorn**	85.07	329	*e*P		P	07 24 15.8 +0.4
	comp=Z,8.8nm,0.8s						
I39A	**Houston**	85.08	36	*e*P		P	07 24 15.0 -0.2
	comp=Z,8.3nm,0.8s						
DAVOX	**Davos/Dischmat**	85.10	329	LR		LR	08 07 15.5
	comp=Z,94nm,19.1s,baz=85,slow=39						
HINF	**Hinteralfeld**	85.43	331	*e*P		P	07 24 16.3 -0.6
HINF				pmax	pmax		
	comp=Z,19nm,1.6s						
HAU	**Haudompre**	85.46	332	*e*P		P	07 24 16.5 -0.5
HAU				pmax	pmax		
	comp=Z,3.0nm,0.6s						
TAOE	**Nuku Hiva Isla**	86.11	104	*e*LR		LR	07 51 38.6
	comp=Z,162nm,25.2s						
N37A	**Lee Faris, Mou**	86.16	39	*e*P		P	07 24 21.5 +0.9
	comp=Z,22nm,1.0s						
I42A	**Draeger Farm,**	86.23	34	*e*P		P	07 24 21.4 +0.5
	comp=Z,11nm,0.9s						
JFWS	**Jewell Farm**	86.40	36	*e*P		P	07 24 22.3 +0.6
	comp=Z,8.9nm,0.9s						
JFWS	**Jewell Farm**	86.40	36	*e*P		P	07 24 22.3 +0.6
JFWS				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MNTX	**Cornudas Mount**	86.41	52	*e*P		P	07 24 22.9 +0.9
	comp=Z,2.6nm,0.8s						
AMTX	**Amarillo**	86.42	48	*e*P		P	07 24 23.4 +1.3
	comp=Z,8.3nm,0.9s						
IDI	**Anoyia**	86.44	313	*e*P		P	07 24 21.4 -0.8
	comp=Z,54nm,1.5s						
N39A	**Derby Farms, D**	86.91	38	*e*P		P	07 24 24.9 +0.7
	comp=Z,20nm,1.4s						
LDF	**La Druitiere**	87.20	336	*e*P		P	07 24 25.9 +0.4
LDF				pmax	pmax		
	comp=Z,30nm,1.4s						
SSF	**Saint Saulge**	87.29	333	*e*P		P	07 24 26.7 +0.7
P38A	**Dawn**	87.36	40	*e*P		P	07 24 27.2 +0.7
	comp=Z,10nm,0.7s						
AVF	**Avril sur Loir**	87.58	333	*e*P		P	07 24 27.3 0.0
AVF				pmax	pmax		
	comp=Z,5.0nm,0.8s						
P40A	**Paris**	88.17	39	*e*P		P	07 24 30.8 +0.5
	comp=Z,12nm,0.8s						
LPIG	**La Paz**	88.28	61	LR		LR	07 56 01.0
	comp=Z,41nm,21.3s,baz=200,slow=30						
TCF	**Toulx Ste Croi**	88.42	333	*e*P		P	07 24 31.4 0.0
TCF				pmax	pmax		
	comp=Z,34nm,1.8s						
HDIL	**Hopedale**	88.69	36	*e*P		P	07 24 33.4 +0.6
	comp=Z,13nm,0.8s						
TBI	**Tubuai**	88.82	121	*e*LR		LR	07 52 31.6
	comp=Z,121nm,32.2s						
TBI	**Tubuai**	88.82	121	*e*T		T	09 03 08.1
	comp=Z,92nm,0.3s						
S39A	**Bolivar**	88.94	41	*e*P		P	07 24 33.9 -0.1
	comp=Z,12nm,1.3s						
P42A	**Winchester**	88.96	38	*e*P		P	07 24 34.0 0.0
	comp=Z,20nm,1.3s						
R40A	**Maddies Statio**	89.01	40	*e*P		P	07 24 34.5 +0.3
	comp=Z,6.1nm,0.7s						
TX31	**Lajitas Ar. Si**	89.11	53	*e*P		P	07 24 35.9 +0.8
TXAR	**Lajitas Array**	89.11	53	P		P	07 24 35.8 +0.8
	comp=Z,5.0nm,0.7s,baz=295,slow=3.3,SNR=49						
TXAR				LR		LR	07 59 58.7
	comp=Z,30nm,21.0s,baz=0.0,slow=32						
HHAR	**Hobbs**	89.69	42	*e*P		P	07 24 38.5 +1.0
	comp=Z,3.7nm,0.8s						
CCM	**Cathedral Cave**	89.71	39	*e*P		P	07 24 38.0 +0.5
	comp=Z,12nm,1.0s						
CCM	**Cathedral Cave**	89.71	39	*e*P		P	07 24 38.0 +0.5
CCM				pmax	pmax		
	comp=Z,12nm,1.0s						
VAE	**Valguarnera**	90.45	321	LR		LR	08 07 41.5
	comp=Z,54nm,19.7s,baz=146,slow=37						
T42A	**Van Buren**	90.58	40	*e*P		P	07 24 42.1 +0.5
	comp=Z,10nm,1.3s						
PBMO	**Poplar Bluff**	91.11	39	*e*P		P	07 24 44.2 +0.1
	comp=Z,8.5nm,1.0s						
MIAR	**Mount Ida**	91.20	43	*e*P		P	07 24 45.4 +0.9
	comp=Z,5.1nm,0.8s						
MIAR	**Mount Ida**	91.20	43	*e*P		P	07 24 45.4 +0.9
MIAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
H06N1	**SOCORRO T-PHAS**	91.25	65	T		T	09 06 45.6
	SNR=26						
WHAR	**Wooly Hollow**	91.31	42	*e*P		P	07 24 45.5 +0.5
	comp=Z,8.3nm,0.8s						
TKL	**Tuckaleechee C**	95.21	36	P		P	07 25 02.8 -0.2
	comp=Z,3.0nm,0.7s,baz=0.0,slow=3.0,SNR=5.7						
TKL				LR		LR	08 10 44.7
	comp=Z,32nm,19.8s,baz=342,slow=37						
ESDC	**Sonseca Array**	96.38	334	LR		LR	08 12 09.4
	comp=Z,52nm,20.5s,baz=115,slow=38						
VNDA	**Vanda**	116.13	175	*e*PKPdf		PKPdf	07 30 23.1 +2.3
VNDA	**Vanda**	116.13	175	*e*PKIKP		PKPdf	07 30 23.1 +2.3
CRZF	**Crozet Islands**	116.43	231	*e*PKPdf		PKPdf	07 30 23.6 +1.4
QSPA	**South Pole Qui**	127.97	180	PKP		PKPdf	07 30 43.5 -0.3
	comp=Z,0.7nm,0.5s,baz=298,slow=2.1,SNR=6.8						
QSPA	**South Pole Qui**	127.97	180	*e*PKPdf		PKPdf	07 30 43.9 0.0
SNAA	**Sanae**	141.99	197	PKhKP		PKPpre	07 31 04.3
	comp=Z,0.7nm,0.5s,baz=153,slow=2.3,SNR=7.8						
LPAZ	**La Paz**	145.77	59	PKPbc		PKPdf	07 31 19.4 +0.6
	comp=Z,13nm,0.8s,baz=345,slow=2.3,SNR=55						
LCO	**Las Campanas**	151.48	81	*e*PKPbc		PKPbc	07 31 34.0 +0.5

NNC 30 07:15:29.3±3.6, 37.77N×71.28E, h0km, mb3.8, mpv3.4, 3C-3D, Error ellipse: s-maj=27.7km s-min=24.2km az=178.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	2.83	37	⇑P	Pn	07 16 15.6	-0.4
	1.5nm,0.1s						
SFK				⇓S	Sn	07 16 53.2	+2.3
	7.1nm,0.2s						
MNAS	**Manas**	4.80	11	⇑P	Pn	07 16 43.4	+0.4
	2.8nm,0.4s						
MNAS				⇓S	Sn	07 17 39.8	+0.3
	7.3nm,0.8s						
KK31	**Karatay Array**	5.36	354	P	Pn	07 16 52.2	+1.6
	2.9nm,0.5s,baz=176,slow=12,SNR=33						
KK31				S	Sn	07 17 54.6	+1.6
	6.1nm,0.6s,baz=185,slow=9.8,SNR=16						
AAK	**Ala-Archa**	5.45	26	⇓P	Pn	07 16 50.4	-1.5
	2.2nm,0.6s						
AAK				⇑S	Sn	07 17 54.4	-0.9
	1.7nm,0.4s						

*IDC **30** 07:33:22.4±6.7, 14.89N×93.85W, h0km, mb3.5/5, mb1 3.9/6, mb1mx3.7/44, mbtmp3.5/6, ML3.6/1, Error ellipse: s-maj=151.5km s-min=95.4km az=31.0*
*MEX **30** 07:33:24.6±0.7, 14.65N×94.39W, h15km±999km, MD4.2*
*NEIC **30** 07:33:25.7±0.0, 14.56N×94.19W, h6km, mb4.2/15, MD4.2(MEX), After MEX.*

ISC 30 07:33:22.0±2.8, 14.70N±0.08×94.16W±0.05, h3km±17km, n32, σ0.93/39, mb4.1/19, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		1.35	42	*e*P	Pn	07 33 47.8	+0.1
PCIG				*e*S	Sg	07 34 06.5	+1.1
PCIG		1.35	42	*e*P	Pn	07 33 47.9	+0.1
PCIG				*e*S	Sn	07 34 06.2	0.0
THIG		1.85	83	*e*P	Pn	07 33 55.3	+0.7
THIG				*e*S	Sb	07 34 19.9	0.0
THIG		1.85	83	*e*P	Pb	07 33 55.8	-0.6
THIG				*e*S	Sb	07 34 19.9	0.0
TGIG		2.29	26	*e*P	Pn	07 34 01.9	+1.1
TGIG				*e*S	Sb	07 34 32.0	-0.8
TGIG		2.29	26	*e*P	Pn	07 34 01.9	+1.1
TGIG				*e*S	Sn	07 34 30.0	+0.4
CCIG	**Comitan**	2.50	51	*e*Pn	Pb	07 34 06.2	-1.6
CCIG				*e*S	Sb	07 34 39.7	+0.6
CCIG	**Comitan**	2.50	51	*e*P	Pb	07 34 06.2	-1.6
CCIG				*e*S	Sb	07 34 39.7	+0.6
TLIG	**Tlapa**	5.10	304	*e*Pn	Pn	07 34 39.9	+0.4
TX31	**Lajitas Ar. Si**	17.00	330	*e*Pn	Pn	07 37 20.8	-0.3
TXAR	**Lajitas Array**	17.00	330	Pn	P	07 37 22.6	-0.4
	0.1nm,0.3s,baz=158,slow=13,SNR=12						
WMOK	**Wichita Mounta**	20.38	349	*e*P	Pn	07 38 01.8	-0.2
	1.9nm,0.8s						
AMTX	**Amarillo**	21.20	343	*e*P	P	07 38 09.4	+0.4
	9.5nm,0.6s						
HHAR	**Hobbs**	21.49	0	*e*P	P	07 38 13.1	+1.1
	3.0nm,0.5s						
S39A	**Bolivar**	22.91	2	*e*P	P	07 38 27.1	0.0
	5.4nm,0.9s						
ANMO	**Albuquerque**	23.00	333	P	P	07 38 28.3	0.0
	0.8nm,0.6s,baz=137,slow=3.5,SNR=5.5						
CCM	**Cathedral Cave**	23.40	6	*e*P	P	07 38 31.1	-1.1
	3.7nm,0.8s						
R40A	**Maddies Statio**	23.55	4	*e*P	P	07 38 32.4	-1.3
	3.8nm,0.9s						
P40A	**Paris**	24.80	4	*e*P	P	07 38 43.9	-1.4
	4.3nm,0.6s						
SDCO	**Great Sand Dun**	25.06	338	*e*P	P	07 38 48.9	+0.9
	1.6nm,1.1s						
N37A	**Lee Faris, Mou**	25.96	360	*e*P	P	07 38 54.9	-0.9
	11nm,0.7s						
N39A	**Derby Farms, D**	26.12	3	*e*P	P	07 38 55.9	-1.3
	7.1nm,0.7s						
SPMN	**Marine on St.**	30.44	2	*e*P	P	07 39 33.9	-1.9
	6.5nm,0.6s						
PDAR	**Pinedale Array**	30.95	338	P	P	07 39 41.3	+0.7
	0.3nm,0.8s,baz=165,slow=7.1,SNR=2.8						
NVAR	**Mina Array Bea**	31.82	322	P	P	07 39 50.1	+1.

comp=Z,4μm,0.7s
MK01 Makanchi Array 3.80 336 *e*Pn **Pn 07 36 55.7 +0.8**
MK01 *e*Pg **Pb 07 37 05.3 +1.9**
MK01 *e*Sg **Sb 07 37 50.5 +1.0**
MK31 Makanchi Array 3.82 336 Pn **Pn 07 36 56.0 +0.8**
comp=Z,12nm,0.3s,baz=150,slow=14,SNR=3149
MK31 ⇑Pg **Pb 07 37 05.4 +1.6**
comp=Z,116nm,0.4s,baz=151,slow=16,SNR=88
MK31 ⇑Lg Lg 07 37 53.4
comp=Z,382nm,0.5s,baz=146,slow=29,SNR=7.6
MK31 Makanchi Array 3.82 336 *e*Pn **Pn 07 36 56.2 +1.0**
MK31 *e*Pg **Pb 07 37 06.0 +2.2**
MK31 *e*Sg **Sb 07 37 52.5 +2.4**
MK31 Makanchi Array 3.82 336 P **Pn 07 36 56.0 +0.8**
MK31 pmax pmax
comp=Z,12nm,0.4s
MK31 pmax pmax
comp=Z,116nm,0.4s
MKAR Makanchi Array 3.82 336 *e*Pn **Pn 07 36 56.2 +1.0**
MKAR *e*Pg **Pb 07 37 05.9 +2.1**
MKAR Makanchi Array 3.82 336 *e*P **Pn 07 36 56.2 +1.0**
MAKZ Makanchi 3.93 333 ⇓Pn **Pn 07 36 57.5 +0.8**
comp=Z,43nm,0.8s
MAKZ ⇑Pg **Pb 07 37 07.3 +1.6**
comp=Z,245nm,0.6s
MAKZ ⇑Lg Lg 07 37 56.8
comp=Z,1μm,1.1s
MAKZ Makanchi 3.93 333 *e*Pn **Pn 07 36 57.8 +1.1**
MAKZ *e*Pg **Pb 07 37 07.5 +1.9**
MAKZ *e*Sg **Sg 07 37 58.7 -3.7**
MAKZ Makanchi 3.93 333 P **Pn 07 36 57.5 +0.8**
MAKZ pmax pmax
comp=Z,43nm,0.8s
MAKZ pmax pmax
comp=Z,245nm,0.6s
UZB Uzynbulak 4.03 269 *e*P **Pg 07 37 10.9 -2.6**
comp=Z,194nm,0.4s
UZB *e*S **Sg 07 38 02.5 -3.2**
comp=Z,1μm,0.8s
ZSN Zaisan 4.14 3 *e*P **Pg 07 37 13.3 -2.3**
comp=Z,63nm,0.4s
ZSN *e*S **Sg 07 38 06.8 -2.3**
comp=Z,581nm,1.0s
KAPS Kapalarasan 4.20 300 *e*P **Pb 07 37 13.3 +3.0**
comp=Z,134nm,0.6s
KAPS *e*S **Sg 07 38 06.8 -4.5**
comp=Z,867nm,1.1s
KPKS Kokpek 4.27 274 *e*P **Pb 07 37 14.2 +2.7**
comp=Z,349nm,0.7s
KPKS *e*S **Sg 07 38 08.4 -4.8**
comp=Z,2μm,0.5s
ZHN Zhinishke 4.46 270 *e*P **Pg 07 37 18.7 -3.0**
comp=Z,156nm,0.7s
ZHN *e*S **Sg 07 38 16.3 -3.1**
comp=Z,1μm,0.2s
SATY Saty 4.49 269 *e*P **Pg 07 37 19.1 -3.2**
comp=Z,479nm,1.1s
SATY *e*S **Sg 07 38 16.8 -3.6**
comp=Z,1μm,0.9s
MNBS Baschi 4.51 282 *e*P **Pb 07 37 16.4 +0.7**
comp=Z,150nm,0.7s
MNBS *e*S **Sb 07 38 12.1 +2.0**
comp=Z,582nm,1.1s
PRZ Przheval'sk 4.58 262 *e*Pn Pn 07 37 10.9 +5.0
PRZ *e*Pg **Pg 07 37 23.3 -0.8**
PRZ Przheval'sk 4.58 262 *e*P Pn 07 37 10.9 +5.0
ARXS Arharly 4.94 283 *e*P **Pg 07 37 28.0 -2.9**
comp=Z,176nm,1.0s
ARXS *e*S **Sg 07 38 31.7 -3.2**
comp=Z,2μm,0.8s
TARG Taragay, Kyrgy 5.22 255 *e*Pn **Pn 07 37 19.1 +4.3**
TARG *e*Pg **Pg 07 37 35.1 -1.2**
MDOK Medeo 5.47 271 ⇑Pn **Pn 07 37 20.4 +2.4**
comp=Z,20nm,0.6s
MDOK ⇓Pg **Pg 07 37 39.3 -1.8**
comp=Z,136nm,0.8s
MDOK ⇓Lg Lg 07 38 50.9
comp=Z,853nm,0.9s
MDOK Medeo 5.47 271 *e*P **Pg 07 37 38.6 -2.5**
comp=Z,120nm,0.9s
MDOK *e*S **Sg 07 38 50.0 -1.9**
comp=Z,532nm,0.9s
IZV Izvestkoviy 5.80 270 *e*P **Pg 07 37 43.4 -4.0**
comp=Z,122nm,0.8s
IZV *e*S **Sg 07 38 58.5 -3.9**
comp=Z,677nm,1.0s
ULHL Ulahol 6.20 263 P **Pn 07 37 30.2 +2.2**
SNR=10
TKM2 Tokmak 2 6.55 270 ⇓Pn **Pn 07 37 36.2 +3.3**
comp=Z,14nm,0.8s
TKM2 ⇑Pg **Pg 07 37 57.4 -4.3**
comp=Z,103nm,0.8s
TKM2 ⇓Lg Lg 07 39 22.3
comp=Z,394nm,0.8s
TKM2 Tokmak 2 6.55 270 P **Pn 07 37 36.3 +3.3**
SNR=25
TKM2 Tokmak 2 6.55 270 P **Pn 07 37 36.2 +3.3**
TKM2 pmax pmax
comp=Z,14nm,0.8s
NRN Naryn 6.60 256 *e*Pn **Pn 07 37 35.6 +2.0**
NRN Naryn 6.60 256 *e*P **Pn 07 37 35.6 +2.0**
DGZ Jazzator, Alta 6.69 16 *i* P **Pn 07 37 36.4 +1.7**
DGZ pmax pmax
comp=Z,32nm,0.6s
KZA Kyzart 6.95 263 P **Pn 07 37 42.1 +3.6**
SNR=27
KBK Karagaybulak 7.06 268 P **Pn 07 37 44.3 +4.4**
SNR=8.7
FRU Bishkek 7.28 270 ⇓*e*P **Pn 07 37 45.0 +2.3**
FRU pmax pmax
comp=Z,40nm,2.0s
USP Ospenovka 7.32 273 P Pn 07 37 48.5 +5.1
SNR=8.4
AAK Ala-Archa 7.40 268 ⇓Pn **Pn 07 37 47.1 +2.7**
comp=Z,6.1nm,0.6s
AAK ⇓Pg Pg 07 38 12.1 -5.8
comp=Z,77nm,1.1s
AAK ⇓Lg Lg 07 39 52.1
comp=Z,366nm,0.9s
AAK Ala-Archa 7.40 268 P **Pn 07 37 47.1 +2.7**
AAK pmax pmax
comp=Z,6.0nm,0.6s
UCH Uchtor 7.46 265 P **Pn 07 37 49.1 +3.6**
SNR=19
KSH Kashi 7.47 242 P Pn 07 37 55.5 +10
KSH sP Pb 07 38 03.3 -2.8
KSH S **Sb 07 39 27.5 -7.7**
KSH sS Sg 07 39 38.0 -18
KSH pmax pmax
comp=Z,28nm,0.6s
KSH LR LR
comp=Z,2μm,6.5s
KURBB Kurchatov Arra 8.38 333 Pn **Pn 07 37 57.0 -0.7**
comp=Z,1.0nm,0.3s,baz=145,slow=13,SNR=43
KURBB Sn **Sn 07 39 27.6 -4.7**
comp=Z,1.6nm,0.3s,baz=137,slow=18,SNR=5.6
KURBB Lg Lg 07 40 18.8
comp=Z,2.7nm,0.3s,baz=148,slow=31,SNR=13
KURBB Kurchatov Arra 8.38 333 ⇑Pn **Pn 07 37 56.8 -0.9**
comp=Z,41nm,0.8s
KURBB ⇑Sn **Sn 07 39 28.4 -3.9**
comp=Z,154nm,0.7s
KURBB ⇑Lg Lg 07 40 15.5
comp=Z,650nm,0.8s
KURK Kurchatov 8.43 333 ⇑Pn **Pn 07 37 57.4 -0.9**
comp=Z,18nm,0.6s
KURK ⇑Sn **Sn 07 39 28.7 -4.8**
comp=Z,110nm,0.9s
KURK ⇓Lg Lg 07 40 17.7
comp=Z,450nm,0.8s
KURK Kurchatov 8.43 333 *e*Pn **Pn 07 37 58.2 -0.2**
KURK Sn **Sn 07 39 27.6 -5.9**
KURK Lg Lg 07 40 18.8
KURK Kurchatov 8.43 333 *ce*P **Pn 07 37 57.3 -1.1**
KURK pmax pmax
comp=Z,4.0nm,0.5s
MNAS Manas 8.87 269 ⇑Pn **Pn 07 38 07.6 +3.0**
comp=Z,9.6nm,0.9s
MNAS ⇓Pg Pg 07 38 41.3 -4.7
comp=Z,26nm,0.8s
MNAS ⇓Lg Lg 07 40 39.9
comp=Z,186nm,1.3s
MNAS Manas 8.87 269 P **Pn 07 38 07.6 +3.0**
MNAS pmax pmax
comp=Z,26nm,0.8s
SFK Sufi-Kurgan 8.89 252 ⇑Pn **Pn 07 38 08.6 +3.6**
comp=Z,4.2nm,0.7s
SFK ⇑Pg **Pg 07 38 42.6 -3.9**
comp=Z,54nm,1.0s
SFK ⇑Lg Lg 07 40 41.8
comp=Z,167nm,1.3s
SFK Sufi-Kurgan 8.89 252 P **Pn 07 38 08.6 +3.6**
SFK pmax pmax
comp=Z,4.0nm,0.7s
OTUK Ortayu 9.84 304 ⇑Pn **Pn 07 38 18.1 +0.3**
comp=Z,37nm,1.1s
OTUK ⇑Lg Lg 07 41 04.2
comp=Z,404nm,1.3s
OTUK Ortayu 9.84 304 P **Pn 07 38 18.0 +0.3**
OTUK pmax pmax
comp=Z,37nm,1.1s
HVS Khovu-Aksy 9.99 35 *i* P **Pn 07 38 23.0 +3.1**
KK31 Karatay Array 10.24 274 ⇑Pn **Pn 07 38 25.6 +2.3**
comp=Z,11nm,0.9s,baz=78,slow=14,SNR=7.0
KK31 ⇑Pg 07 39 08.0
comp=Z,4.9nm,0.6s,baz=68,slow=15,SNR=5.2
KK31 ⇓Lg 07 41 18.6
comp=Z,52nm,0.8s,baz=76,slow=26,SNR=3.6
KK31 Karatay Array 10.24 274 *e*Pn Pn 07 38 29.0 +5.7
KK31 Karatay Array 10.24 274 *i* P Pn 07 38 28.2 +4.9
KK31 pmax pmax
comp=Z,11nm,1.0s
KKAR Karatay Array 10.24 274 *e*Pn **Pn 07 38 25.5 +2.2**
KKAR Karatay Array 10.24 274 *e*P **Pn 07 38 25.5 +2.2**
ZAA0 Zalesovo Array 10.64 1 ⇑Pn **Pn 07 38 26.6 -2.1**
comp=Z,20nm,0.9s
ZAA0 ⇓Sn **Sn 07 40 22.7 -5.0**
comp=Z,93nm,0.8s
ZAA0 Zalesovo Array 10.64 1 *e*Pn **Pn 07 38 26.8 -1.8**
ZALV Zalesovo Beam 10.64 1 Pn **Pn 07 38 26.8 -1.9**
comp=Z,2.3nm,0.3s,baz=187,slow=13,SNR=26
ZALV Sn **Sn 07 40 21.1 -6.6**
comp=Z,14nm,0.3s,baz=180,slow=25,SNR=17
ZALV Lg Lg 07 41 29.5
comp=Z,2.0nm,0.3s,baz=180,slow=26,SNR=6.2
NVS Novosibirsk 11.56 356 *e*P **Pn 07 38 40.2 -1.1**
NVS *e*S **Sn 07 40 44.4 -5.9**
NVS pmax pmax
comp=N,5.0nm,0.8s
NVS pmax pmax
comp=E,5.0nm,0.8s
NVS pmax pmax
comp=Z,10.0nm,0.8s
NVS smax smax
comp=N,30nm,0.8s
NVS smax smax
comp=E,47nm,0.8s
GTA Gaotai 12.12 104 *e*P **Pn 07 38 48.3 -0.9**
GTA pP 07 38 52.5
GTA sP 07 38 55.5
GTA S **Sn 07 41 00.5 -4.0**
GTA pmax pmax
comp=E,6.0nm,0.8s
GTA pmax pmax
comp=E,39nm,6.0s
GTA LR LR
comp=E,860nm,4.0s
GTA LR LR
comp=E,560nm,3.1s
GTA LR LR
comp=E,290nm,7.9s
CHCP Chirah Chowk 13.06 226 P **Pn 07 39 03.0 +1.0**
NIL Nilore 13.08 226 *e*Pn **Pn 07 39 02.6 +0.5**
NIL Nilore 13.08 226 *e*P **Pn 07 39 02.6 +0.5**
BVA0 Borovoye Array 13.52 321 ⇑Pn **Pn 07 39 08.2 +0.2**
comp=E,11nm,0.8s,baz=147,slow=16,SNR=29
BVA0 Borovoye Array 13.52 321 P **Pn 07 39 08.2 +0.2**
BVA0 pmax pmax
comp=Z,11nm,0.9s
BVAR Borovoye Array 13.52 321 Pn **Pn 07 39 08.2 +0.2**
comp=Z,0.9nm,0.3s,baz=125,slow=14,SNR=18
BVAR Lg Lg 07 42 55.5
comp=Z,1.0nm,0.3s,baz=114,slow=21,SNR=4.0
BVAR LR LR 07 44 17.4
comp=Z,346nm,18.4s,baz=125,slow=37
BRVK Borovoye 13.59 321 ⇓Pn **Pn 07 39 08.6 -0.3**
comp=Z,23nm,0.8s
BRVK ⇑Lg Lg 07 43 05.1
comp=Z,204nm,1.4s
BRVK Borovoye 13.59 321 *e*Pn **Pn 07 39 08.9 -0.1**
BRVK Borovoye 13.59 321 *ce*P **Pn 07 39 08.5 -0.4**
BRVK pmax pmax
comp=Z,3.0nm,0.6s
THW Thamme Wali 14.54 228 P **Pn 07 39 21.3 -0.8**
ZAK Zakamensk 14.62 55 *e*P **P 07 39 29.2 -0.4**
ZAK pmax pmax
comp=Z,40nm,1.0s
KBL Kabul 14.89 239 *e*Pn **Pn 07 39 27.1 +0.1**
comp=Z,9.7nm,0.6s
KBL Kabul 14.89 239 *e*P **Pn 07 39 27.1 +0.1**
KBL pmax pmax
comp=Z,10.0nm,0.6s
DANN Dangsing 14.95 183 *e*P **Pn 07 39 29.8 +1.8**
comp=Z,27nm,0.6s
PYUN Piuthan 15.24 185 *e*P **Pn 07 39 32.4 +0.7**
comp=Z,32nm,0.7s
TLY Talaya 15.35 50 *e*P **Pn 07 39 33.2 +0.3**
TLY pmax pmax
comp=Z,2.0nm,0.6s
TLY MLR MLR
comp=Z,278nm,11.0s
GUN Gumba 15.41 176 *e*P **Pn 07 39 35.0 +0.8**
comp=Z,56nm,0.7s
KKN Kakani 15.51 178 *e*P **Pn 07 39 36.5 +1.2**
comp=Z,24nm,0.6s
DMN Daman 15.68 178 *e*P **Pn 07 39 38.5 +0.9**
JIRN Jiri 15.68 175 *e*P **Pn 07 39 38.3 +0.6**
comp=Z,63nm,0.8s
PKIN Phulchoki 15.72 177 *e*P **Pn 07 39 39.0 +0.9**
comp=Z,45nm,0.8s
SONM Songino Array 15.94 66 Pn **Pn 07 39 40.5 -0.3**
comp=Z,0.3nm,0.3s,baz=260,slow=13,SNR=23
SONM Lg Lg 07 44 15.9
comp=Z,0.1nm,0.3s,baz=259,slow=23,SNR=3.7
SONM LR LR 07 46 10.5
comp=Z,482nm,20.1s,baz=256,slow=39
IRK Irkutsk 15.95 49 *e*P **Pn 07 39 39.5 -1.1**
IRK pmax pmax
comp=Z,20nm,2.3s
SONA1 Songino Array 15.95 66 *e*Pn **Pn 07 39 40.5 -0.3**
RAMN Ramite 16.42 173 *e*P **Pn 07 39 46.8 -0.2**
comp=Z,29nm,0.5s
LZH Lanzhou 16.50 109 *e*P **P 07 39 50.3 -0.4**
LZH pP pP 07 39 53.3 -0.2
LZH sP sP 07 39 55.5 +0.7
LZH S **Sn 07 42 52.0 +0.8**
LZH sS S 07 43 02.8 -0.5
LZH SS **SnSn 07 43 13.0 +8.9**
LZH pmax pmax
comp=Z,26nm,1.1s
LZH pmax pmax
comp=Z,110nm,4.6s
LZH LR LR
comp=Z,2μm,10.7s
LZH LR LR
comp=Z,1μm,10.8s
LZH LR LR
comp=Z,1μm,11.4s
AB31 Akbulak array 17.96 298 Pn **Pn 07 40 05.3 -0.7**
comp=Z,16nm,1.1s,baz=97,slow=12,SNR=43
AB31 ⇑Lg Lg 07 45 21.1
comp=Z,18nm,1.1s,baz=0.0,slow=0.1,SNR=2.7
AB31 Akbulak array 17.96 298 P **Pn 07 40 05.3 -0.7**
AB31 pmax pmax
comp=Z,17nm,1.1s
ABKAR Akbulak array 17.96 298 *e*Pn **Pn 07 40 05.3 -0.7**
SHL Shillong 18.70 159 *e*P **P 07 40 14.5 -0.5**
comp=Z,22nm,1.1s
SHL Shillong 18.70 159 *e*P **P 07 40 14.5 -0.5**
SHL pmax pmax
comp=Z,22nm,1.1s
AKTO Aktyubinsk 19.41 301 P **Pn 07 40 23.7 +0.2**
comp=Z,0.7nm,0.3s,baz=97,slow=14,SNR=22
AKTO Lg Lg 07 46 13.1
comp=Z,0.2nm,0.3s,baz=190,slow=20,SNR=4.2
AKTO Aktyubinsk 19.41 301 ⇓Pn **Pn 07 40 23.3 -0.2**
comp=Z,40nm,1.2s
AKTO ⇓Sn **Sn 07 43 56.3 -4.8**
comp=Z,15nm,1.4s
AKTO ⇑Lg Lg 07 46 05.9
comp=Z,49nm,1.5s
CD2 Chengdu 19.65 123 P **P 07 40 24.3 -1.0**
CD2 sP sP 07 40 34.0 +4.6
CD2 S **Sn 07 44 08.3 +1.0**
CD2 sS sS 07 44 13.3 +1.8
CD2 SS **SnSn 07 44 28.3 +6.8**
CD2 pmax pmax
comp=Z,20nm,0.4s
CD2 pmax pmax
comp=Z,110nm,3.3s
CD2 LR LR
comp=Z,350nm,12.0s
CD2 LR LR
comp=Z,380nm,12.0s
HHC Hu-ho-hao-te 20.18 88 *e*P **P 07 40 31.8 +0.7**
HHC pP sP 07 40 35.8 +0.6
HHC sP pP 07 40 38.8 +4.9
HHC S **S 07 44 10.8 -6.8**
HHC sS Sn 07 44 17.8 -2.3
HHC pmax pmax
comp=Z,14nm,0.8s
HHC pmax pmax
comp=Z,44nm,5.1s
HHC LR LR
comp=Z,2μm,18.7s
HHC LR LR
comp=Z,1μm,18.0s
HHC LR LR
comp=Z,1μm,14.4s
SVE Sverdlovsk 20.30 320 *e*P Pn 07 40 33.7 -0.4
SVE pmax pmax
comp=Z,22nm,0.9s
GEYT Alibeck 20.72 264 P **P 07 40 38.0 +1.2**
comp=Z,4.1nm,0.7s,baz=53,slow=7.9,SNR=8.8
GYA0B ALIBECK ARRAY 20.72 264 *e*P **P 07 40 37.7 +0.8**
comp=Z,9.6nm,0.9s
ARU Arti 21.10 317 P **P 07 40 41.0 +0.3**
comp=Z,5.6nm,0.4s,baz=106,slow=5.8,SNR=15
ARU Lg Lg 07 47 05.1
comp=Z,2.3nm,0.3s,baz=70,slow=13,SNR=2.2
ARU Arti 21.10 317 *e*P **P 07 40 41.0 +0.3**
comp=Z,20nm,1.0s
ARU Lg Lg 07 47 05.1
ARU Arti 21.10 317 *c i*P **P 07 40 41.8 +1.0**
ARU 07 41 02.5
ARU S Sn 07 44 38.8 -3.0
ARU SS **SnSn 07 45 00.1 +3.5**
ARU pmax pmax
comp=Z,17nm,1.0s
BRDH Bariadhala 21.41 162 P **P 07 40 45.9 +1.6**
comp=Z,56nm,0.3s,baz=50,slow=5.3,SNR=4.5
TIY Taiyuan 21.88 95 *e*P **P 07 40 52.8 +3.4**
TIY pmax pmax
comp=Z,23nm,0.5s
TIY LR LR
comp=Z,320nm,4.9s
TIY LR LR
comp=Z,230nm,4.1s
BOD Bodaibo 23.43 41 *e*P **P 07 41 04.2 -1.2**
BOD pmax pmax
comp=Z,13nm,1.2s
KMI Kunming 23.49 135 P **P 07 41 05.8 -0.7**
KMI pP pP 07 41 08.8 -0.6
KMI S **S 07 45 15.5 -4.8**
KMI sS sS 07 45 25.3 -0.1
KMI pmax pmax
comp=Z,16nm,0.5s
KMI pmax pmax
comp=Z,53nm,3.3s
KMI LR LR
comp=Z,220nm,13.5s
KMI LR LR
comp=Z,470nm,12.8s
GYA Guiyang 24.63 126 *e*P **P 07 41 18.0 +0.9**
GYA pmax pmax
comp=Z,10.0nm,0.7s
CM31 Chiang Mai Arr 27.61 149 *e*P **P 07 41 45.3 +1.4**
CMAR Chiang Mai Arr 27.61 149 P **P 07 41 45.1 +1.2**
comp=Z,2.5nm,0.5s,baz=323,slow=9.2,SNR=15
CM01 Chiang Mai Arr 27.65 149 *e*P **P 07 41 45.3 +1.1**
NJ2 Nanjing 29.20 101 *e*P **P 07 41 57.5 -0.5**
NJ2 pmax pmax
comp=Z,13nm,0.6s
GNI Garni 29.67 278 *ce*P **P 07 42 03.6 +1.3**
GNI pmax pmax
comp=Z,28nm,1.3s
KBZ Khabaz 29.97 285 P **P 07 42 05.5 +0.9**
comp=Z,1.6nm,0.7s,baz=68,slow=5.4,SNR=3.4
KIV Kislovodsk 30.06 286 *e*P **P 07 42 04.6 -1.0**
KIV pmax pmax
comp=Z,4.0nm,0.7s
VORD Divnogorie 31.29 300 *e*P **P 07 42 16.5 +0.3**
VORD pmax pmax
comp=Z,10.0nm,0.7s
VSR Storozhevoye 31.35 301 *e*P **P 07 42 17.1 +0.3**
VSR pmax pmax
comp=Z,10.0nm,1.0s
KLMR Klimovskoe 31.93 319 *e*P **P 07 42 21.6 -0.2**
KLMR pmax pmax
comp=Z,18nm,0.8s
KLMR Klimovskoe 31.93 319 *e*P **P 07 42 21.7 -0.1**
KLMR AMP 07 42 23.1
comp=Z,18nm,0.8s
QIZ Qiongzhong 32.25 131 P **P 07 42 26.5 +1.5**
QIZ S **S 07 47 41.0 +2.7**
QIZ LR LR
comp=Z,160nm,11.2s
QIZ LR LR
comp=Z,270nm,15.5s
YAK Yakutsk 32.27 39 LR LR 07 54 44.3
comp=Z,76nm,18.2s,baz=269,slow=35
KLR Kul'dur 32.73 63 P **P 07 42 29.0 0.0**
comp=Z,0.2nm,0.8s,baz=270,slow=10,SNR=7.4
KLR Kul'dur 32.73 63 *i* P **P 07 42 32.3 +3.4**
OBN Obninsk 32.83 308 ⇑*e*P **P 07 42 30.2 +0.5**
OBN *e* 07 42 35.2
OBN pmax pmax
comp=Z,16nm,0.5s
OBN MLR MLR
comp=Z,201nm,17.0s
KSAR Wonju Array Be 33.25 85 P **P 07 42 33.6 +0.1**
KSAR Wonju Array Be 33.25 85 P **P 07 42 33.7 +0.1**
KSRS Korea Array 33.27 85 P **P 07 42 33.6 -0.1**
comp=Z,1.6nm,0.5s,baz=288,slow=8.9,SNR=8.8
KSRS LR LR 07 57 25.1
comp=Z,72nm,18.1s,baz=288,slow=39
KSRS Korea Array 33.27 85 P **P 07 42 33.7 -0.1**
KSRS pmax pmax
comp=Z,1.0nm,0.5s
KSRS MLR MLR
comp=Z,72nm,18.1s
USRK Ussuriysk Ar. 33.91 72 LR LR 07 58 02.7
comp=Z,77nm,19.0s,baz=273,slow=39
SIM Simferopol' 35.75 290 *e*P **P 07 42 56.5 +1.3**
SIM MLR MLR
comp=Z,90nm,16.0s
JOF Joensuu 36.12 322 P **P 07 42 59.3 +1.2**
JOF pmax pmax
comp=Z,27nm,0.9s
JNU Nakatsue 37.38 90 LR LR 07 58 12.1
comp=Z,83nm,21.7s,baz=281,slow=36
AKASG Malin Array Be 37.65 301 P **P 07 43 12.0 +0.7**
comp=Z,5.0nm,0.7s,baz=67,slow=8.8,SNR=13
AKASG Malin Array Be 37.65 301 P **P 07 43 12.0 +0.7**
AKASG pmax pmax
comp=Z,4.0nm,0.8s
AKBB Malin Array Si 37.65 301 *e*P **P 07 43 10.9 -0.3**
comp=Z,11nm,0.9s
AKBB Malin Array Si 37.65 301 *e*P **P 07 43 11.0 -0.3**
AKBB pmax pmax
comp=Z,11nm,0.9s
RAYN Ar Rayn 37.66 251 *e*P **P 07 43 12.8 +1.0**
comp=Z,8.6nm,0.8s
RAYN Ar Rayn 37.66 251 P **P 07 43 12.7 +1.0**
KIEV Kiev 37.66 301 *e*P **P 07 43 11.3 0.0**
comp=Z,10nm,0.9s
KIEV Kiev 37.66 301 ⇑*i*P **P 07 43 11.5 +0.1**
KIEV pmax pmax
comp=Z,11nm,0.9s
AK11 Malin Array Si 37.69 301 *e*P **P 07 43 12.1 +0.5**
BR131 Keskin Array S 37.80 282 *e*P **P 07 43 14.6 +1.8**
BRTR Keskin Array B 37.80 282 P **P 07 43 14.7 +1.8**
comp=Z,2.9nm,0.9s,baz=91,slow=6.2,SNR=14
VSU Vasula 38.19 314 *ce*P **P 07 43 16.5 +0.8**
VSU pmax pmax
comp=Z,65nm,1.7s
FINES FINESS Array B 38.47 319 P **P 07 43 18.4 +0.4**
comp=Z,2.1nm,0.5s,baz=88,slow=7.5,SNR=13
ARCES ARCESS Array B 39.46 332 P **P 07 43 26.4 +0.1**

comp=Z,1.4nm,0.5s,baz=90,slow=7.3,SNR=10
CFR Carcaliu 39.74 293 ⇑*i*P **P 07 43 29.7 +0.8**
TLB Topalu 39.99 292 ⇓*i*P **P 07 43 32.3 +1.4**
HARR Harsova 40.03 292 ⇑*i*P **P 07 43 32.7 +1.4**
TESR Tescani 40.33 295 ⇑*i*P **P 07 43 34.0 +0.2**
PRAR RASCA 40.36 297 ⇓*i*P **P 07 43 34.3 +0.3**
VRI Vrincioaia 40.47 294 ⇓*i*P **P 07 43 36.6 +1.6**
PLOR Plostina 40.53 294 ⇓*i*P **P 07 43 37.7 +2.2**
BIZ Bicaz 40.56 296 ⇓*i*P **P 07 43 37.1 +1.4**
ISR Istrita 40.83 293 P **P 07 43 40.2 +2.2**
ISR pmax pmax
comp=Z,32nm,0.7s
BURAR Bucovina Array 40.94 297 ⇓*i*P **P 07 43 39.7 +0.8**
BUR04 Bucovina Ar. S 40.94 297 *e*P **P 07 43 39.7 +0.7**
BUR08 Bucovina Ar. S 40.95 297 *e*P **P 07 43 39.9 +0.9**
MLR Muntele Rosu 41.11 294 P **P 07 43 41.5 +1.2**
comp=Z,0.9nm,0.6s,baz=180,slow=3.0,SNR=7.7
MLR Muntele Rosu 41.11 294 ⇑*i*P **P 07 43 42.1 +1.7**
MLR Muntele Rosu 41.11 294 *e*P **P 07 43 41.7 +1.3**
comp=Z,6.0nm,0.8s
MJAR Matsushiro Arr 41.11 81 LR LR 08 01 20.9
comp=Z,57nm,19.3s,baz=290,slow=37
ASAJ Asahikawa 41.21 68 LR LR 08 00 52.0
comp=Z,50nm,20.6s,baz=172,slow=36
DOPR Dopca 41.33 295 ⇑*i*P **P 07 43 43.7 +1.7**
VOIR 41.72 294 ⇓*i*P **P 07 43 46.1 +0.7**
KWP Kalwaria Pacla 41.98 301 *e*P **P 07 43 48.6 +1.3**
comp=Z,312nm,1.3s
KWP Kalwaria Pacla 41.98 301 *e*P **P 07 43 48.6 +1.3**
KWP pmax pmax
comp=Z,312nm,1.3s
ARR Arges 42.02 294 ⇑*i*P **P 07 43 49.6 +1.8**
TRPA Tarpa 42.51 299 ⇑*i*P **P 07 43 53.5 +1.9**
DRGR 42.82 297 ⇓*i*P **P 07 43 55.9 +1.6**
DRGR 42.82 297 P **P 07 43 56.1 +1.8**
DRGR pmax pmax
comp=Z,11nm,0.9s
SPITS Spitsbergen Ar 43.54 344 LR LR 08 07 02.7
comp=Z,60nm,19.5s,baz=105,slow=43
OJC Ojcow 43.61 303 *e*P **P 07 44 01.6 +1.0**
comp=Z,19nm,1.2s
OJC Ojcow 43.61 303 *e*P **P 07 44 01.6 +1.0**
OJC pmax pmax
comp=Z,19nm,1.2s
JHJ Hachijo jima 2 43.87 84 LR LR 08 03 35.6
comp=Z,44nm,21.2s,baz=182,slow=38
VTS Vitosha 43.98 291 ⇑*i*P **P 07 44 05.5 +1.7**
VTS Vitosha 43.98 291 *e*P **P 07 44 05.0 +1.2**
comp=Z,4.8nm,0.7s
VTS Vitosha 43.98 291 *e*P **P 07 44 05.0 +1.2**
VTS pmax pmax
comp=Z,5.0nm,0.7s
SRS Serrai 44.30 289 P **P 07 44 07.4 +1.2**
SRS pmax pmax
comp=Z,11nm,1.6s
HFS Hagfors 44.62 318 P **P 07 44 08.5 0.0**
comp=Z,3.0nm,0.5s,baz=94,slow=10,SNR=22
OKC Ostrava-Krasne 44.74 303 AMS AMS 08 03 20.0
comp=Z,200nm,13.0s
VYHS Vyhne 44.75 301 *e*P **P 07 44 11.1 +1.4**
VYHS Vyhne 44.75 301 *e*P **P 07 44 11.1 +1.4**
NC405 NORSAR Array S 45.39 319 *e*P **P 07 44 14.5 -0.1**
DIVS Divibare 45.56 294 *e*P **P 07 44 17.2 +0.9**
comp=Z,7.4nm,0.9s
NB2 NORSAR Subarra 45.64 319 P **P 07 44 16.8 +0.2**
comp=Z,3.8nm,0.7s,baz=76,slow=7.9
NB2 NORSAR Subarra 45.64 319 P **P 07 44 14.5 -2.1**
DPC Dobruska-Polom 45.70 304 *e*P **P 07 44 19.1 +1.9**
DPC Dobruska-Polom 45.70 304 *e*P **P 07 44 19.1 +1.9**
NC204 NORSAR Array S 45.81 320 *e*P **P 07 44 18.3 +0.4**
UPC Upice 45.83 304 *e*P **P 07 44 20.0 +1.7**
UPC AMS AMS 08 04 00.0
comp=Z,200nm,13.2s
UPC Upice 45.83 304 *e*P **P 07 44 20.0 +1.7**
UPC MLR MLR
comp=Z,200nm,13.2s
NAO01 NORSAR Array S 45.84 319 *e*P **P 07 44 18.4 +0.3**
NBO00 NORSAR Array S 45.85 319 *e*P **P 07 44 18.9 +0.6**
IDI Anoyia 45.98 281 P **P 07 44 20.4 +0.7**
comp=Z,6.6nm,0.6s,baz=54,slow=8.7,SNR=3.4
AGG Agios Georgios 46.07 287 P **P 07 44 20.8 +0.5**
PDG Podgorica 46.72 293 ⇑*i*P **P 07 44 26.2 +0.9**
TTG Podgorica 46.72 293 *e*P **P 07 44 26.5 +1.2**
comp=Z,4.7nm,0.8s
TTG Podgorica 46.72 293 *e*P **P 07 44 26.5 +1.2**
TTG pmax pmax
comp=Z,5.0nm,0.8s
GOPC GO Pecny, Ondr 46.77 304 AMS AMS 08 04 30.0
comp=Z,200nm,14.0s
CONA Conrad Observa 46.81 301 *e*pP **P 07 44 27.8 +1.8**
comp=Z,3.5nm,0.7s
PRU Pruhonice 46.90 304 AMS AMS 08 04 40.0
comp=Z,200nm,7.9s
BRG Berggiesshubel 46.96 305 *e*(P) **P 07 44 28.7 +1.7**
comp=Z,3.3nm,0.9s
BRG Berggiesshubel 46.96 305 *e*P **P 07 44 28.7 +1.7**
BRG pmax pmax
comp=Z,3.0nm,0.9s
CLL Collm 47.37 306 *i*P **P 07 44 31.0 +0.8**
comp=Z,9.0nm,0.8s
CLL Collm 47.37 306 *e*P **P 07 44 30.8 +0.6**
comp=Z,8.2nm,0.8s
CLL Collm 47.37 306 *e*P **P 07 44 30.8 +0.6**
CLL pmax pmax
comp=Z,8.0nm,0.8s
BILL Biiibino 47.71 30 ⇑*i*P P 07 44 39.4 +6.7
BILL *e* 07 44 42.7
BILL 07 46 30.0
BILL S **S 07 51 34.0 +5.6**
BILL pmax pmax
comp=Z,2.0nm,0.5s
PETK Petropavlovsk- 47.71 51 P **P 07 44 34.9 +2.0**
comp=Z,3.5nm,0.9s,baz=343,slow=9.2
PETK LR LR 08 04 03.8
comp=Z,71nm,18.7s,baz=297,slow=36
KHC Kasperske Hory 47.79 303 *e*P **P 07 44 37.7 +4.1**
KHC AMS AMS 08 05 10.0
comp=Z,200nm,12.6s
KHC Kasperske Hory 47.79 303 *e*P **P 07 44 37.7 +4.1**
KHC MLR MLR
comp=Z,200nm,12.6s
SOKA Soboth 47.80 299 *i*P **P 07 44 34.7 +0.9**
comp=Z,2.6nm,0.6s
GERES GERESS Array B 47.82 303 P **P 07 44 35.1 +1.2**
comp=Z,0.9nm,0.6s,baz=67,slow=7.4,SNR=9.2
GEA0 GERESS Array S 47.82 303 *e*P **P 07 44 34.7 +0.8**
OBKA Obir 48.17 299 *e*P **P 07 44 37.6 +0.9**
comp=Z,4.1nm,0.8s
KBA Koelnbreinsper 48.71 301 *e*P **P 07 44 41.6 +0.7**
comp=Z,2.3nm,0.6s
KBA Koelnbreinsper 48.71 301 P **P 07 44 41.3 +0.4**
KBA pmax pmax
comp=Z,3.0nm,0.7s
WTTA Wattenberg 49.70 301 *i*P **P 07 44 49.5 +1.0**
comp=Z,11nm,0.8s
WATA Walderalm 49.71 302 *i*P **P 07 44 49.5 +0.9**
comp=Z,4.9nm,0.6s
TIP Timpagrande 49.86 290 ⇑*i*P **P 07 44 50.4 +0.7**
TIP Timpagrande 49.86 290 *e*P **P 07 44 50.4 +0.7**
comp=Z,15nm,1.3s
MOTA Moosalm 50.00 302 *i*pP **P 07 44 52.2 +1.4**
comp=Z,12nm,1.0s
CUC Castrocucco 50.12 291 *e*P **P 07 44 52.8 +1.1**
comp=Z,10nm,1.0s
RETA Reutte 50.16 302 *i*P **P 07 44 53.0 +1.1**
comp=Z,3.1nm,0.6s
FETA Feichten 50.37 301 *i*pP **P 07 44 55.0 +1.5**
comp=Z,7.3nm,0.9s
DAVA Damuels 50.78 302 *i*pP **P 07 44 58.2 +1.5**
comp=Z,5.3nm,0.9s
FUORN Ofenpass-Fuorn 50.83 301 *e*P **P 07 44 58.0 +0.9**
comp=Z,5.0nm,0.8s
DAV Davao City (W) 50.96 123 LR LR 08 07 37.6
comp=Z,87nm,20.1s,baz=342,slow=37
DAVOX Davos/Dischmat 51.00 301 P **P 07 44 59.2 +0.9**
comp=Z,6.0nm,0.7s,baz=108,slow=12,SNR=10.0
TUE Stuetta 51.46 301 *e*P **P 07 45 02.6 +0.7**
comp=Z,5.8nm,0.6s
VLC Villacollemand 51.82 298 *e*P **P 07 45 05.4 +1.0**
comp=Z,21nm,1.1s
BNI Bardonecchia 53.77 301 *e*P **P 07 45 19.8 +0.9**
comp=Z,8.2nm,1.0s
BNI Bardonecchia 53.77 301 *e*P **P 07 45 19.8 +0.9**
BNI pmax pmax
comp=Z,8.0nm,1.0s
SSB Saint Sauveur 54.99 302 *e*P **P 07 45 28.5 +0.8**
comp=Z,9.3nm,1.3s
SSB Saint Sauveur 54.99 302 *e*P **P 07 45 28.5 +0.8**
SSB pmax pmax
comp=Z,9.0nm,1.3s
IM3 Indian Mountai 62.18 23 *e*P **P 07 46 16.4 -0.9**
ES19 SONSECA Array 63.23 300 *e*P **P 07 46 25.4 +0.5**
ESDC Sonseca Array 63.29 300 P **P 07 46 25.0 -0.3**
comp=Z,2.4nm,0.8s,baz=53,slow=6.9,SNR=12
MLY Manley 63.74 23 *e*P **P 07 46 27.6 -0.1**
comp=Z,2.1nm,0.7s
IL1 Eielson Array 65.00 22 *e*P **P 07 46 34.2 -1.8**
ILAR Eielson Array 65.00 22 P **P 07 46 34.5 -1.5**
comp=Z,0.3nm,0.7s,baz=313,slow=4.7,SNR=6.0
ILAR LR LR 08 16 59.4
comp=Z,62nm,19.0s,baz=294,slow=38
YKA Yellowknife Ar 73.42 9 P **P 07 47 27.7 -0.5**
comp=Z,0.2nm,0.6s,baz=337,slow=5.9,SNR=3.4
TOA0 Torodi Ar. Sit 75.93 275 *e*P **P 07 47 44.3 +0.8**
comp=Z,4.9nm,1.0s
TORD Torodi Ar. Bea 75.93 275 P **P 07 47 43.4 -0.1**
comp=Z,2.0nm,0.7s,baz=41,slow=4.8
WRAB Tennant Creek 77.80 133 *e*P **P 07 47 53.8 0.0**
comp=Z,6.8nm,0.9s
WRAB Tennant Creek 77.80 133 *e*P **P 07 47 53.8 0.0**
WRAB pmax pmax
comp=Z,7.0nm,0.9s
WRA Warramunga Arr 77.80 133 P **P 07 47 53.8 0.0**
comp=Z,1.4nm,0.7s,baz=337,slow=5.7,SNR=16
WRA LR LR 08 25 58.1
comp=Z,40nm,19.5s,baz=105,slow=39
WB2 Warramunga Arr 77.81 133 *e*P **P 07 47 54.2 +0.3**
comp=Z,6.5nm,1.0s
KOWA Kowa 79.17 280 P **P 07 48 01.6 0.0**
comp=Z,1.6nm,0.6s,baz=118,slow=1.7,SNR=2.9
SCHQ Schefferville 79.22 344 LR LR 08 26 51.5
comp=Z,31nm,19.8s,baz=18,slow=39
ASAR Alice Springs 80.63 135 P **P 07 48 08.6 -0.6**
comp=Z,0.5nm,0.6s,baz=324,slow=4.5,SNR=3.5
YBH Yreka Blue Hor 91.85 20 LR LR 08 33 13.8
comp=Z,30nm,19.0s,baz=341,slow=38
PDAR Pinedale Array 93.37 10 LR LR 08 36 29.9
comp=Z,27nm,18.6s,baz=26,slow=39
NVAR Mina Array Bea 96.03 18 LR LR 08 37 07.2
comp=Z,31nm,19.5s,baz=74,slow=38
LPAZ La Paz 144.41 311 PKP **PKPdf 07 55 35.4 +1.5**
comp=Z,0.4nm,0.7s,baz=9.5,slow=6.1,SNR=2.2

*CSEM **30** 07:41:19.4±0.1, 45.°99N×15.°49E, h2km, ML1.7/4, Error ellipse: s-maj=3.0km s-min=2.2km az=65.0*
*VIE **30** 07:41:19.2±0.8, 45.°98N×15.°48E, h8km±10km, mb0.8/1, ml1.5/2, Error ellipse: s-maj=5.4km s-min=2.2km az=104.0*
1 km N of Krsko
LJU 30 07:41:19.3, 46.°00N×15.°48E, h0km, ML1.2, 4C-7D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CESS	**Cesta pri Krsk**	**0.02**	**204**	⇓	*i*Pg	Pg	07 41 19.4	-0.3
CESS					*i* Sg	Sg	07 41 19.7	-0.3
comp=Z,4μm,0.1s								
CESS	**Cesta pri Krsk**	**0.02**	**204**		Pg	Pg	07 41 19.4	-0.3
CESS					*i* Sg	Sg	07 41 19.7	-0.3
comp=Z,4μm,0.1s								
GOLS	**Golise**	**0.10**	**81**	⇓	*i*Pg	Pg	07 41 21.8	+0.5
comp=Z,66nm,0.1s								
GOLS	**Golise**	**0.10**	**81**	⇓	*i*Pg	Pg	07 41 21.8	+0.5
comp=Z,66nm,0.1s								
LEGS	**Legarje**	**0.12**	**247**	⇑	*i*Pg	Pg	07 41 21.5	-0.1
LEGS					*e*Sg	Sg	07 41 23.7	+0.6
LEGS	**Legarje**	**0.12**	**247**	⇑	*i*Pg	Pg	07 41 21.5	-0.1
LEGS					*e*Sg	Sg	07 41 23.7	+0.6
DOBS	**Dobrina**	**0.15**	**358**	⇓	*i*Pg	Pg	07 41 22.7	+0.5
comp=Z,26nm,0.1s								
DOBS	**Dobrina**	**0.15**	**358**	⇓	*i*Pg	Pg	07 41 22.7	+0.4
comp=Z,26nm,0.1s								
GCIS	**Gornji Cirnik**	**0.17**	**141**		*e*Pg	Pg	07 41 22.4	-0.1
comp=Z,14nm,0.1s								
GCIS	**Gornji Cirnik**	**0.17**	**141**		*e*Pg	Pg	07 41 22.4	-0.1
comp=Z,14nm,0.1s								
CRES	**Cresnjev**	**0.17**	**185**	⇓	*i*Pg	Pg	07 41 22.1	-0.4
CRES					*i* Sg	Sg	07 41 25.1	+0.4
comp=Z,12nm,0.1s								
CRES	**Cresnjev**	**0.17**	**185**	⇓	*i*Pg	Pg	07 41 22.1	-0.4
CRES					*i* Sg	Sg	07 41 25.1	+0.4
comp=Z,12nm,0.1s								
PDKS	**Podkum**	**0.34**	**281**		*i* Pg	Pg	07 41 26.2	+0.4
PDKS					*e*Sg	Sg	07 41 31.3	+1.1
comp=Z,7.0nm,0.1s								
PDKS	**Podkum**	**0.34**	**281**		*i* Pg	Pg	07 41 26.2	+0.4
PDKS					*e*Sg	Sg	07 41 31.3	+1.1
comp=Z,7.0nm,0.1s								
OZLJ	**Ozalj**	**0.38**	**181**		*e*Pg	Pg	07 41 26.9	+0.3
OZLJ					Sg	Sg	07 41 32.5	+1.0
OZLJ	**Ozalj**	**0.38**	**181**		*e*Pg	Pg	07 41 26.8	+0.2
OZLJ					Sg	Sg	07 41 32.4	+0.9
VNDS	**Vrh nad Dolski**	**0.55**	**281**	⇑	*i*Pg	Pg	07 41 30.1	+0.2
VNDS	**Vrh nad Dolski**	**0.55**	**281**	⇑	*i*Pg	Pg	07 41 30.1	+0.3
SOKA	**Soboth**	**0.75**	**336**		*e*Pg	Pg	07 41 33.9	+0.2
comp=Z,0.1nm,0.0s								
SOKA					Sg	Sg	07 41 43.8	+0.4
comp=Z,0.9nm,0.1s								
SOKA	**Soboth**	**0.75**	**336**		Pg	Pg	07 41 33.9	+0.2
comp=Z,0.1nm,0.0s								
SOKA					Sg	Sg	07 41 43.8	+0.4
comp=Z,0.9nm,0.1s								
OBKA	**Obir**	**0.82**	**309**		*e*Pg	Pg	07 41 35.8	+0.7
comp=Z,0.7nm,0.1s								
OBKA					Sg	Sb	07 41 47.3	-1.0
comp=Z,5.0nm,0.2s								
OBKA	**Obir**	**0.82**	**309**		Pg	Pg	07 41 35.8	+0.7
comp=Z,0.7nm,0.1s								
OBKA					Sg	Sb	07 41 47.3	-0.9
comp=Z,5.0nm,0.2s								
NVLJ	**Novalja**	**1.49**	**197**		Sg	Sn	07 42 08.8	+1.3
NVLJ	**Novalja**	**1.49**	**197**		Sg	Sn	07 42 08.8	+1.3

*GUC **30** 08:06:05.5±0.4, 35.°95S×70.°35W, h15km±18km, ML3.6*
*SJA **30** 08:06:08.3±1.1, 35.°68S×70.°59W, h16km±999km, ML3.6, MW3.9*
ISC 30 08:06:11.3±1.9, 35.°71S±0.°04×70.°61W±0.°08, h23km±17km, n22, σ1°95/26, 1C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NICH	**Los Niches**	**0.86**	**324**		*e*P	**Pb**	**08 06 25.5**	**-2.1**
NICH					IAML		08 06 52.5	
comp=N,824nm,1.8s								
GO05	**HualaæØ**	**1.28**	**302**		*e*P	**Pn**	**08 06 32.4**	**-1.5**
GO05	**HualaæØ**	**1.28**	**302**		*e*P	**Pn**	**08 06 32.0**	**-1.8**
GO05					*i* S	**Sb**	**08 06 52.2**	**+1.4**
GO05					IAML		08 06 59.2	
comp=E,376nm,0.6s								
CCHI	**Chillan**	**1.48**	**232**		*e*P	**Pb**	**08 06 37.4**	**-0.8**
CCHI	**Chillan**	**1.48**	**232**		*e*P	**Pb**	**08 06 36.8**	**-1.3**
CCHI					*e*S	**Sb**	**08 07 00.8**	**+4.2**
CCHI					IAML		08 07 06.5	
comp=E,877nm,0.9s								
CANA	**Caviahue**	**2.21**	**189**		*e*P	**Pn**	**08 06 46.7**	**-0.1**
CLCH	**Cerro Calan**	**2.31**	**2**		*e*P	**Pn**	**08 06 46.7**	**-1.3**
CLCH					*e*S	**Sn**	**08 07 17.9**	**+2.3**
CLCH					IAML		08 07 23.0	
comp=E,766nm,0.7s								
FCH	**Farellones**	**2.39**	**7**	⇓	*i*P	**Pn**	**08 06 48.1**	**-1.2**
FCH					*i* S	**Sn**	**08 07 19.9**	**+1.9**
FCH					IAML		08 07 22.2	
comp=E,172nm,0.4s								
PEL	**Peldehue**	**2.56**	**359**	⇑	*i*P	**Pn**	**08 06 50.5**	**-0.9**
PEL					*e*S	**Sn**	**08 07 24.7**	**+2.8**
PEL					IAML		08 07 32.5	
comp=E,439nm,1.2s								
ROC1	**El Roble**	**2.74**	**353**		*e*P	**Pn**	**08 06 53.9**	**-0.3**
ROCH	**El Roble**	**2.75**	**353**		*e*P	**Pn**	**08 06 53.7**	**-0.5**
ROCH					*e*S	**Sn**	**08 07 30.1**	**+3.4**
ROCH					IAML		08 07 37.2	
comp=E,436nm,0.5s								
AAGR	**Agrelo**	**3.00**	**30**		*e*P	**Pn**	**08 06 55.5**	**-2.1**
ARCO	**CERRO ARCO**	**3.18**	**26**		*e*P	**Pn**	**08 07 00.6**	**+0.6**
ARCO					IAML		08 07 45.0	
comp=Z,131nm,0.3s								
ASAL	**Salagasta**	**3.44**	**26**		*e*P	**Pn**	**08 07 03.7**	**+0.1**
AUSP	**Uspallata**	**3.62**	**17**		*e*P	**Pn**	**08 07 06.7**	**+0.5**
RTLS	**Leoncito**	**4.05**	**16**		*e*P	**Pn**	**08 07 13.2**	**+1.0**
MRA	**San Martin**	**5.22**	**53**		IAML		08 08 52.2	
comp=Z,51nm,0.6s								
APLL	**PUNTA DE LOS L**	**6.31**	**34**		IAML		08 09 27.3	
comp=Z,16nm,0.5s								
VNA3	**Neumayer Olymp**	**47.34**	**157**		P	**P**	**08 14 41.2**	**-1.8**
VNA1	**Neumayer--Stat**	**47.65**	**156**		P	**P**	**08 14 46.0**	**+0.7**
VNA2	**Neumayer--Watz**	**47.99**	**157**		P	**P**	**08 14 46.1**	**-1.8**
baz=288,slow=9.1								
SNAA	**Sanae**	**49.56**	**157**		P	**P**	**08 14 57.4**	**-2.7**

*ISCJB **30** 08:14:20.0±0.9, 22.°68N±0.°09×142.°0E±0.°2, h250km, mb3.6/8, Error ellipse: s-maj=28.3km s-min=11.9km az=7.4*
*IDC **30** 08:14:20.5±2.5, 22.°59N×142.°10E, h244km±23km, mb3.4/8, mb1 3.6/10, mb1mx3.1/66, mbtmp4.0/10, Error ellipse: s-maj=26.2km s-min=16.3km az=110.0*
ISC 30 08:14:21.4±0.9, 22.°7N±0.°1×142.°0E±0.°2, h250km, n10, σ1°22/11, mb3.6/8, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**4.37**	**2**		P	**Pn**	**08 15 30.6**	**+1.0**
25nm,0.3s,baz=280,slow=21,SNR=5.1								
JCJ					S	**S**	**08 16 22.1**	**-1.7**
10nm,0.3s,baz=263,slow=23,SNR=3.3								
MJAR	**Matsushiro Arr**	**14.18**	**347**		P	**Pn**	**08 17 30.6**	**-1.0**
0.0nm,0.3s,baz=163,slow=11,SNR=2.5								
WRA	**Warramunga Arr**	**43.05**	**191**		P	**P**	**08 21 55.3**	**-1.6**
0.2nm,0.3s,baz=7.9,slow=8.1,SNR=12								
PALK	**Pallekele**	**60.79**	**266**		P	**P**	**08 24 08.5**	**+0.7**
6.6nm,0.8s,baz=111,slow=7.9,SNR=2.5								
BVAR	**Borovoye Array**	**61.21**	**319**		P	**P**	**08 24 10.0**	**+0.2**
0.7nm,0.5s,baz=104,slow=6.1,SNR=3.3								
ILAR	**Eielson Array**	**61.64**	**27**		P	**P**	**08 24 11.9**	**-0.6**
0.5nm,0.6s,baz=255,slow=6.0,SNR=6.2								
YKA	**Yellowknife Ar**	**76.07**	**28**		P	**P**	**08 25 41.6**	**+0.5**
0.6nm,0.6s,baz=292,slow=6.1,SNR=7.9								
ARCES	**ARCESS Array B**	**77.63**	**341**		P	**P**	**08 25 51.4**	**+1.6**
0.9nm,0.6s,baz=88,slow=7.4,SNR=4.2								
FINES	**FINESS Array B**	**81.81**	**334**		P	**P**	**08 26 12.3**	**0.0**
2.0nm,0.3s,baz=58,slow=4.6,SNR=35								
NVAR	**Mina Array Bea**	**83.36**	**51**		P	**P**	**08 26 21.8**	**+0.8**
0.8nm,0.6s,baz=278,slow=5.2,SNR=10.0								

*ISCJB **30** 08:27:07.5±0.4, 22.°32S±0.°03×68.°50W±0.°06, h112km±6km, mb3.9/9, Error ellipse: s-maj=9.6km s-min=4.6km az=178.8*
*NEIC **30** 08:27:09.0±0.0, 22.°23S×68.°73W, h117km, mb3.9/6, ML4.3(GUC), After GUC.*
*GUC **30** 08:27:09.5±0.5, 22.°23S×68.°73W, h117km±3km, ML4.3*
*IDC **30** 08:27:10.1±0.7, 22.°14S×68.°29W, h113km±6km, mb3.9/6, mb1 3.9/10, mb1mx3.6/36, mbtmp4.2/10, MS2.7/3, Ms1 2.7/3, ms1mx2.5/36, Error ellipse: s-maj=20.2km s-min=12.0km az=100.0*
*SJA **30** 08:27:23.1±0.7, 23.°52S×68.°31W, h222km±50km, ML3.2, MW3.5*
ISC 30 08:27:08.9±0.6, 22.°29S±0.°04×68.°46W±0.°06, h107km±6km, n54, σ1°96/72, mb3.9/10, 10C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.88**	**304**	⇑	*i*P	**Pn**	**08 27 28.9**	**+0.2**
PB09					*e*S	**Sn**	**08 27 43.1**	**-0.6**
PB09					IAML		08 27 44.0	
comp=N,24μm,0.7s								
PB06	**IPOC Station P**	**1.11**	**248**	⇑	*i*P	**Pn**	**08 27 31.0**	**-0.2**
PB06					*e*S	**Sn**	**08 27 47.1**	**-0.8**
PB06					IAML		08 27 48.0	
comp=E,8μm,0.2s								
PB03	**IPOC Station P**	**1.22**	**281**	⇑	*i*P	**Pn**	**08 27 31.8**	**-0.6**
PB03					*i* S	**Sn**	**08 27 48.5**	**-1.7**
PB03					IAML		08 27 49.6	
comp=N,7μm,0.2s								
PB15	**IPOC Station P**	**1.31**	**225**	⇑	*i*P	**Pn**	**08 27 34.0**	**+0.6**
PB15					*e*S	**Sn**	**08 27 52.8**	**+0.8**
PB07	**IPOC Station P**	**1.44**	**293**	⇑	*i*P	**Pn**	**08 27 34.2**	**-0.7**
PB07					*i* S	**Sn**	**08 27 52.6**	**-2.1**
PB07					IAML		08 27 52.9	
comp=N,15μm,0.3s								
PB04	**IPOC Station P**	**1.56**	**268**		*e*Pn	**Pn**	**08 27 35.5**	**-1.0**
PB04					*e*Sn	**Sn**	**08 27 55.3**	**-2.1**
PB04	**IPOC Station P**	**1.56**	**268**	⇑	*i*P	**Pn**	**08 27 35.5**	**-1.0**
PB04					*i* S	**Sn**	**08 27 55.3**	**-2.1**
PB04					IAML		08 27 57.3	
comp=N,4μm,0.3s								
PB01	**IPOC Station P**	**1.56**	**322**		*e*Pn	**Pn**	**08 27 35.7**	**-0.7**
PB01					*e*Sn	**Sn**	**08 27 55.7**	**-1.6**
PB01	**IPOC Station P**	**1.56**	**322**	⇑	*i*P	**Pn**	**08 27 35.8**	**-0.7**
PB01					*i* S	**Sn**	**08 27 55.6**	**-1.6**
PB01					IAML		08 27 56.9	
comp=N,5μm,0.2s								
PB02	**IPOC Station P**	**1.65**	**306**	⇑	*i*P	**Pn**	**08 27 36.5**	**-0.9**
PB02					*e*S	**Sn**	**08 27 56.6**	**-2.4**
PB05	**IPOC Station P**	**1.71**	**250**	⇑	*i*P	**Pn**	**08 27 37.2**	**-0.9**
PB05					*i* S	**Sn**	**08 27 58.3**	**-2.1**
PB05					IAML		08 28 02.1	
comp=E,2μm,0.4s								
PB08	**IPOC Station P**	**2.23**	**343**	⇓	*i*P	**Pn**	**08 27 45.7**	**+0.6**
PB08					*i* S	**Sn**	**08 28 13.4**	**+0.7**
PB08					IAML		08 28 17.4	
comp=E,1μm,0.6s								
PB10	**IPOC Station P**	**2.28**	**237**	⇑	*i*P	**Pn**	**08 27 44.8**	**-0.6**
PB10					*i* S	**Sn**	**08 28 10.8**	**-2.5**
GO02	**Mina Guanaco**	**3.04**	**200**		*e*Pn	**Pn**	**08 27 55.8**	**+0.1**
GO02					*e*Sn	**Sn**	**08 28 25.5**	**-6.2**
MNMC	**Minye Minye**	**3.32**	**341**		*e*Pn	**Pn**	**08 27 58.2**	**-1.1**
MNMC					*e*Sn	Sn	08 28 28.7	-9.5
AHML	**Horco Molle**	**5.30**	**148**		*e*P	**Pn**	**08 28 28.8**	**+2.9**
AHML					IAML		08 28 32.1	
comp=Z,14nm,0.5s								
AHML					*e*S	Sn	08 29 17.7	-8.0
GO03	**Copiap**	**5.52**	**197**		*e*Pn	**Pn**	**08 28 26.5**	**-2.3**
LPAZ	**La Paz**	**5.98**	**3**		P	**Pn**	**08 28 36.1**	**+0.6**
comp=Z,4.9nm,0.3s,baz=160,slow=6.3,SNR=213								
LPAZ					S	Sn	08 29 25.9	-17
comp=Z,1.5nm,0.3s,baz=202,slow=14,SNR=4.5								
LPAZ					LR	LR	08 31 42.0	
comp=Z,79nm,19.7s,baz=232,slow=47								
LPAZ	**La Paz**	**5.98**	**3**		*e*Pn	**Pn**	**08 28 36.5**	**+1.0**
LPAZ					S	Sn	08 29 25.9	-17
VCA	**Vinchina**	**6.42**	**178**		*e*P	**Pn**	**08 28 41.8**	**+0.7**
VCA					IAML		08 29 12.8	
comp=Z,24nm,0.5s								
CYA	**Choya**	**6.58**	**159**		*e*P	**Pn**	**08 28 44.0**	**+0.8**
CYA					IAML		08 29 20.5	
comp=Z,7.6nm,0.6s								
LCO	**Las Campanas**	**6.99**	**196**		*e*Pn	**Pn**	**08 28 45.2**	**-3.7**
AGUA	**GUANDACOL**	**7.17**	**180**		*e*P	**Pn**	**08 28 50.8**	**-0.4**
ACLC	**CERRO LA CRUZ**	**7.24**	**169**		*e*P	**Pn**	**08 28 52.4**	**+0.3**
ACDV	**Cuesta del Vie**	**7.87**	**184**		*e*P	**Pn**	**08 28 59.8**	**-0.9**
GO04	**Tololo Observa**	**8.13**	**194**		*e*Pn	**Pn**	**08 29 00.5**	**-3.8**
APLL	**PUNTA DE LOS L**	**8.26**	**168**		*e*P	**Pn**	**08 29 05.1**	**-0.8**
**AMO

comp=Z,3.6nm,1.0s
RUSC La Rusia 28.37 350 *e*P **P 08 32 54.7 +1.0**
comp=Z,1.8nm,0.9s
VNA3 Neumayer Olymp 59.20 161 P P 08 37 08.1 +10
VNA2 Neumayer--Watz 59.77 161 P P 08 37 11.5 +9.2
baz=288,slow=6.7
SNAA Sanae 61.40 161 P **P 08 37 15.1 +1.7**
SNAA Sanae 61.40 161 P **P 08 37 14.2 +0.8**
comp=Z,1.1nm,1.0s,baz=250,slow=15,SNR=3.2
TXAR Lajitas Array 61.51 325 P **P 08 37 14.3 -0.4**
comp=Z,0.1nm,0.8s,baz=150,slow=7.3,SNR=2.5
TXAR pP **pP 08 37 43.1 +2.2**
comp=Z,0.7nm,0.9s,baz=138,slow=8.2,SNR=6.0
ANMO Albuquerque 67.38 327 pP pP 08 38 21.7 +2.1
comp=Z,0.9nm,0.7s,baz=135,slow=9.3,SNR=3.7
QSPA South Pole Qui 67.91 180 P **P 08 37 57.6 +1.8**
comp=Z,2.2nm,0.5s,baz=187,slow=3.2,SNR=18
QSPA pP **PcP 08 38 25.7 +4.2**
comp=Z,2.8nm,0.8s,baz=124,slow=4.2,SNR=5.2
DBIC Dimbokro 68.56 73 P **P 08 38 00.4 -0.2**
comp=Z,9.2nm,0.9s,baz=243,slow=5.8,SNR=7.0
KOWA Kowa 72.95 66 P **P 08 38 26.9 -0.2**
comp=Z,3.5nm,0.7s,baz=240,slow=5.0,SNR=6.6
YKA Yellowknife Ar 92.07 340 P **P 08 40 04.8 -0.7**
comp=Z,0.3nm,0.7s,baz=247,slow=8.4,SNR=3.8
YKA pP **pP 08 40 35.5 +2.1**
comp=Z,1.0nm,0.7s,baz=133,slow=4.4,SNR=9.7
WRA Warramunga Arr 132.48 210 PKP **PKPdf 08 46 13.1 +1.5**
comp=Z,0.5nm,1.0s,baz=102,slow=0.8,SNR=3.0
WRA pPKP **pPKPdf 08 46 40.9 +0.1**
comp=Z,0.4nm,0.8s,baz=152,slow=1.5,SNR=2.2
ZALV Zalesovo Beam 142.48 26 PKP **PKPdf 08 46 30.7 +1.8**
comp=Z,0.5nm,0.3s,baz=323,slow=2.2,SNR=3.9
CD2 Chengdu 168.95 37 PKP **PKPdf 08 47 01.5 -2.3**

GUC 30 09:12:01.3±0.5, 23°.88S×67°.06W, h200km±22km, ML3.8, 8C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO02	**Mina Guanaco**	**2.64**	**240**	⇑*i*P	Pn	09 12 48.6	+1.6
GO02				*i* S	Sn	09 13 25.2	+2.5
GO02				IAML		09 13 25.6	
	comp=N,327nm,0.3s						
PB09	**IPOC Station P**	**2.89**	**315**	⇑*i*P	Pn	09 12 52.4	+2.6
PB09				*i* S	Sn	09 13 30.8	+3.2
PB09				IAML		09 13 34.1	
	comp=E,70nm,0.5s						
PB05	**IPOC Station P**	**3.06**	**289**	⇑*i*P	Pn	09 12 53.9	+2.1
PB05				*i* S	Sn	09 13 33.0	+1.8
PB05				IAML		09 13 36.8	
	comp=E,77nm,0.3s						
ANCH	**Antofagasta**	**3.07**	**273**	⇑*i*P	Pn	09 13 29.3	+38
ANCH				*i* S	Sn	09 14 08.9	+38
PB03	**IPOC Station P**	**3.08**	**306**	⇑*i*P	Pn	09 12 54.0	+2.0
PB03				*i* S	Sn	09 13 33.8	+2.2
PB03				IAML		09 13 34.5	
	comp=E,180nm,0.1s						
PB14	**IPOC Station P**	**3.14**	**256**	⇑*i*P	Pn	09 12 54.5	+1.6
PB14				*i* S	Sn	09 13 35.0	+1.7
PB10	**IPOC Station P**	**3.22**	**276**	⇑*i*P	Pn	09 12 55.8	+2.2
PB10				*i* S	Sn	09 13 36.9	+2.4
PB07	**IPOC Station P**	**3.37**	**309**	⇑*i*P	Pn	09 12 57.4	+1.8
PB07				*i* S	Sn	09 13 39.5	+1.5
PB01	**IPOC Station P**	**3.60**	**321**	⇓*i*P	Pn	09 12 59.7	+1.4
PB01				*i* S	Sn	09 13 44.9	+1.9

DJA 30 09:19:38.5±0.7, 1°.N±5°.×9°.7E±°, h30km±5km, M3.6/6, MLv3.6/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.37**	**70**	P	Pn	09 19 47.5	-0.3
GSI				S	Sn	09 19 55.9	+1.9
SNSI	**Sinabang, Aceh**	**1.52**	**324**	P	Pn	09 20 04.4	+0.8
SNSI				S	Sn	09 20 22.3	-0.1
PBSI	**Pulau Batu**	**1.61**	**139**	P	Pn	09 20 04.5	-0.5
TPTI		**2.07**	**359**	P	Pn	09 20 10.8	-0.4
TPTI				S	Sn	09 20 36.1	+0.1
MNSI	**Mandailing Nat**	**2.38**	**99**	P	Pn	09 20 16.0	+0.5
MNSI				S	Sn	09 20 43.3	-0.4
KCSI	**Kotacane, Aceh**	**2.39**	**13**	P	Pn	09 20 16.3	+0.7

NNC 30 09:38:17.9±2.8, 37°.27N×70°.94E, h0km, mb3.6, mpv3.2, 4C, Error ellipse: s-maj=22.5km s-min=20.0km az=54.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.40**	**35**	⇑P	Pn	09 39 12.3	-0.1
	1.1nm,0.3s						
SFK				⇑S	Sn	09 39 55.2	+1.8
	6.2nm,0.4s						
MNAS	**Manas**	**5.35**	**12**	⇑P	Pn	09 39 39.0	-0.1
	1.6nm,0.5s						
MNAS				⇑S	Sn	09 40 41.5	0.0
	3.2nm,0.4s						
KK31	**Karatay Array**	**5.84**	**357**	P	Pn	09 39 45.9	+0.2
	1.6nm,0.2s,baz=178,slow=12,SNR=39						
KK31				S	Sn	09 40 55.4	+2.0
	2.6nm,0.4s,baz=177,slow=17,SNR=8.0						

*ISCJB **30** 09:45:38.4±1.5, 8°.19N±0°.06×127°.16E±0°.05, h5km±7km, mb3.5/4, MS2.7/1, Error ellipse: s-maj=10.1km s-min=8.4km az=18.8*
*IDC **30** 09:45:38.0±1.1, 8°.26N×127°.07E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/53, mbtmp3.6/4, MS2.8/1, Ms1 2.8/1, ms1mx2.2/48, Error ellipse: s-maj=34.9km s-min=22.9km az=109.0*
*MAN **30** 09:45:53.2, 8°.20N×126°.19E, h1km, mb4.4, ML3.3, MS3.0*
ISC 30 09:45:38.1±2.3, 8°.17N±0°.05×127°.04E±0°.08, h1km±14km, n15, σ1°84/21, mb3.4/4, 3C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.67**	**271**	⇑*e*P	**Pn**	**09 45 54.1**	**-0.6**
BIPH				*e*S	**Sb**	**09 46 02.6**	**+0.2**
MATI	**Mati**	**1.44**	**212**	*e*P	**Sg**	**09 46 21.3**	**-3.3**
BUTP	**Butuan**	**1.61**	**300**	*e*P	**Pg**	**09 46 11.3**	**+2.3**
BUTP				*e*S	**Sg**	**09 46 31.2**	**+1.3**
DAV	**Davao City (W)**	**1.81**	**233**	Pn	**Pg**	**09 46 13.6**	**+0.7**
	108nm,0.3s,baz=92,slow=1.0,SNR=2.5						
DAV				Sn	**Sb**	**09 46 36.4**	**+1.1**
	59nm,0.3s,baz=288,slow=12,SNR=5.4						
DMPH	**Davao City--Mi**	**1.86**	**235**	⇑*e*P	**Pg**	**09 46 14.4**	**+0.6**
DMPH				*e*S	**Sb**	**09 46 38.5**	**+1.7**
BUKP	**Musuan**	**1.98**	**262**	*e*P	**Pg**	**09 46 15.9**	**-0.1**
BUKP				*e*S	**Sb**	**09 46 41.5**	**+1.4**
CGP	**Cagayan de Oro**	**2.33**	**277**	⇑*e*P	**Pg**	**09 46 22.2**	**-0.7**
CGP				*e*S	**Sb**	**09 46 50.0**	**-0.4**
MSLP	**Maasin**	**2.90**	**312**	*e*P	**Pg**	**09 46 33.4**	**-0.4**
LLP	**Lapu-Lapu**	**3.71**	**305**	*e*P	**Pn**	**09 46 38.3**	**+1.8**
LLP				*e*S	**Sb**	**09 47 24.8**	**-5.0**
WRA	**Warramunga Arr**	**28.85**	**166**	P	**P**	**09 51 38.3**	**0.0**
	0.4nm,0.7s,baz=345,slow=8.5,SNR=6.5						
KSRS	**Korea Array**	**29.16**	**1**	LR	LR	10 03 53.2	
	comp=Z,19nm,19.6s,baz=192,slow=38						
ASAR	**Alice Springs**	**32.35**	**168**	P	**P**	**09 52 09.9**	**+0.7**
	0.2nm,0.4s,baz=341,slow=7.3,SNR=12						
ILAR	**Eielson Array**	**80.99**	**26**	P	**P**	**09 57 54.7**	**+0.4**
	0.3nm,0.8s,baz=246,slow=5.0,SNR=4.3						
FINES	**FINESS Array B**	**88.08**	**332**	P	**P**	**09 58 28.7**	**-1.5**
	1.0nm,0.6s,baz=108,slow=6.2,SNR=6.2						
TXAR	**Lajitas Array**	**118.60**	**50**	PKP	**PKPdf**	**10 04 29.3**	**+0.6**
	0.1nm,0.6s,baz=333,slow=1.0,SNR=2.1						

*NEIC **30** 09:56:08.9±0.0, 16°.10N×98°.27W, h6km, MD4.1(MEX), After MEX.*
MEX 30 09:56:08.3±0.4, 16°.07N×98°.73W, h33km±999km, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.50**	**6**	*e*P	Pn	09 56 31.2	-1.7
TLIG				*e*S	Sn	09 56 48.6	-2.8
TLIG	**Tlapa**	**1.50**	**6**	*e*P	Pn	09 56 31.2	-1.8
TLIG				*e*S	Sn	09 56 48.5	-2.9
CAIG	**El Cayaco**	**1.77**	**304**	*e*P	Pn	09 56 15.3	-21
CAIG				*e*S	Sb	09 57 02.1	+0.2
CAIG	**El Cayaco**	**1.77**	**304**	*e*P	Pn	09 56 34.7	-1.8
CAIG				*e*S	Sn	09 56 56.1	-1.8
MEIG	**Mezcala**	**2.03**	**335**	*e*P	Pb	09 56 43.5	-1.2
MEIG				*e*S	Sb	09 57 09.8	+0.2
MEIG	**Mezcala**	**2.03**	**335**	*e*P	Pn	09 56 41.2	+0.9
MEIG				*e*S	Sb	09 57 09.8	+0.2
VHO	**Vista Hermosa**	**2.16**	**62**	*e*P	Pn	09 56 40.5	-1.8
VHO				*e*S	Sn	09 57 07.1	-0.9
PLIG	**Platanillo**	**2.43**	**342**	*e*P	Pb	09 56 48.9	-2.5
PLIG				*e*S	Sb	09 57 19.8	-1.2
PLIG	**Platanillo**	**2.43**	**342**	*e*P	Pb	09 56 48.9	-2.5
PLIG				*e*S	Sb	09 57 19.8	-1.2
HUIG	**Huatulco**	**2.54**	**96**	*e*P	Pb	09 56 53.5	+0.2
ARIG	**Puente Sto Nin**	**2.69**	**325**	*e*P	Pb	09 56 54.7	-1.1
ARIG				*e*S	Sb	09 57 30.2	+1.8
ARIG	**Puente Sto Nin**	**2.69**	**325**	*e*P	Pb	09 56 54.7	-1.1
ARIG				*e*S	Sb	09 57 30.2	+1.8

*IDC **30** 10:03:20.2±2.2, 33°.42S×178°.51W, h0km, mb4.3/3, mb1 4.4/4, mb1mx3.8/41, mbtmp4.2/4, ML3.7/1, MS3.5/2, Ms1 3.6/2, ms1mx2.7/39, Error ellipse: s-maj=51.9km s-min=34.5km az=125.0*
ISC 30 10:03:25.0±2.4, 33°.55S±0°.2×178°.4W±0°.4, h41km, n8, σ1°57/7, mb4.2/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.00**	**216**	Pn	**Pn**	**10 04 49.5**	**-1.7**
	2.0nm,0.3s,baz=268,slow=4.4,SNR=27						
URZ				Sn	**Sn**	**10 06 00.4**	**+1.8**
	2.0nm,0.3s,baz=289,slow=6.0,SNR=5.0						
DZM	**Mont Dzumac**	**17.60**	**306**	LR	LR	10 13 11.2	
	comp=Z,149nm,18.2s,baz=106,slow=34						
CTA	**Charters Tower**	**34.12**	**284**	P	**P**	**10 10 06.4**	**+0.3**
	1.9nm,0.5s,baz=121,slow=11,SNR=8.0						
ASAR	**Alice Springs**	**42.73**	**270**	P	**P**	**10 11 18.1**	**-0.3**
	3.4nm,0.7s,baz=110,slow=7.5,SNR=50						
WRA	**Warramunga Arr**	**44.00**	**276**	P	**P**	**10 11 27.9**	**-0.7**
	1.6nm,0.5s,baz=116,slow=7.6,SNR=16						
CMAR	**Chiang Mai Arr**	**94.13**	**289**	LR	LR	11 03 05.9	
	comp=Z,21nm,18.3s,baz=200,slow=38						
FINES	**FINESS Array B**	**147.93**	**338**	PKPbc	**PKPbc**	**10 23 05.1**	**+0.1**
	2.4nm,0.8s,baz=29,slow=4.4,SNR=7.5						
MMAI	**Mount Meron Ar**	**151.83**	**278**	PKPbc	**PKPbc**	**10 23 17.2**	**+1.7**
	1.9nm,0.5s,baz=91,slow=6.1,SNR=4.5						

EAF 30 10:03:38.1±20.0, 4°.20S×34°.39E, h10km±259km, Tanzania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOND	**Kondoa**	**1.56**	**117**	*i* P	Pg	10 04 11.4	+3.2
KOND				*i* S	Sn	10 04 26.2	-0.4
KIBA	**Kibaya**	**2.44**	**117**	*i* P	Pn	10 04 18.5	+0.3
KIBA				*i* S	Sn	10 04 41.8	-6.4

PRE 30 10:05:55.4±1.8, 26°.38S×27°.56E, h2km, ML2.0, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLR	**Silverton**	**0.91**	**46**	*e*P	Pg	10 06 12.8	-0.1
SLR				*e*S	Sb	10 06 26.0	-0.6
SLR				AML	AML	10 06 33.2	
	comp=Z,24nm,0.5s						
LBTB	**Lobatse**	**2.23**	**307**	*e*P	Pn	10 06 33.2	-0.2
LBTB				*e*S	Sn	10 07 02.4	+0.8
LBTB				AML	AML	10 07 04.7	
	comp=Z,23nm,0.3s						
BOSA	**Boshof**	**3.02**	**222**	*i* P	Pn	10 06 43.4	-1.1
BOSA	**Boshof**	**3.02**	**222**	*e*P	Pn	10 06 43.5	-0.9
BOSA				*e*S	Sn	10 07 22.4	+1.1
BOSA				AML	AML	10 07 26.2	
	comp=Z,4.6nm,0.3s						
BOSA	**Boshof**	**3.02**	**222**	*i* P	Pn	10 06 43.4	-1.1

IDC 30 10:08:29.2±1.6, 45°.89S×33°.92E, h0km, mb4.0/4, mb1 4.2/5, mb1mx3.8/51, mbtmp4.0/5, ML4.1/1, MS3.6/9, Ms1 3.6/9, ms1mx3.2/48, Error ellipse: s-maj=55.7km s-min=32.8km az=79.0, Prince Edward Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	**Sutherland**	**16.86**	**319**	LR	LR	10 17 29.3	
	comp=Z,129nm,18.1s,baz=152,slow=32						
BOSA	**Boshof**	**18.55**	**335**	P	P	10 12 47.5	-0.1
	0.4nm,0.3s,baz=156,slow=10,SNR=5.2						
BOSA				LR	LR	10 18 43.7	
	comp=Z,95nm,20.1s,baz=176,slow=33						
LBTB	**Lobatse**	**21.88**	**339**	LR	LR	10 20 36.0	
	comp=Z,141nm,20.8s,baz=162,slow=33						
TSUM	**Tsumeb**	**29.85**	**328**	LR	LR	10 26 15.5	
	comp=Z,95nm,18.4s,baz=148,slow=36						
SNAA	**Sanae**	**31.13**	**201**	LR	LR	10 24 27.1	
	comp=Z,88nm,20.8s,baz=140,slow=31						
QSPA	**South Pole Qui**	**44.33**	**180**	P	P	10 16 40.4	-0.3
	0.9nm,0.8s,baz=216,slow=2.9,SNR=3.5						
PMSA	**Palmer Station**	**52.76**	**212**	LR	LR	10 34 26.6	
	comp=Z,82nm,21.6s,baz=202,slow=30						
VNDA	**Vanda**	**52.76**	**168**	P	P	10 17 45.3	0.0
	1.6nm,0.8s,baz=224,slow=5.1,SNR=9.7						
VNDA				LR	LR	10 39 36.5	
	comp=Z,68nm,18.1s,baz=212,slow=35						
H10S2	**ASCENSION HYDR**	**55.44**	**296**	T	T	11 17 53.7	
	baz=141,slow=74						
H10S1	**ASCENSION HYDR**	**55.45**	**296**	T	T	11 18 03.4	
	baz=141,slow=74						
H10S3	**ASCENSION HYDR**	**55.45**	**296**	T	T	11 17 54.8	
	baz=141						
ASAR	**Alice Springs**	**79.94**	**113**	P	P	10 20 40.6	+0.3
	3.0nm,0.7s,baz=222,slow=4.8,SNR=48						
WRA	**Warramunga Arr**	**82.89**	**111**	P	P	10 20 55.6	-0.3
	0.7nm,0.6s,baz=227,slow=4.0,SNR=7.8						
DAVOX	**Davos/Dischmat**	**94.68**	**344**	LR	LR	11 07 04.8	
	comp=Z,42nm,19.4s,baz=262,slow=37						
GERES	**GERESS Array B**	**95.99**	**347**	LR	LR	11 06 54.2	
	comp=Z,32nm,19.4s,baz=117,slow=36						
TXAR	**Lajitas Array**	**143.04**	**258**	PKhKP	PKPpre	10 28 00.6	
	0.2nm,0.7s,baz=124,slow=6.2,SNR=3.8						

*SOME **30** 10:08:53.6, 43°.23N×84°.70E, h10km, MS3.4*
*IDC **30** 10:08:53.7±0.9, 43°.53N×85°.04E, h0km, mb3.6/8, mb1 3.8/12, mb1mx3.6/65, mbtmp3.7/12, ML3.6/4, MS3.1/1, Ms1 3.1/1, ms1mx2.3/57, Error ellipse: s-maj=26.7km s-min=13.7km az=55.0*
*MOS **30** 10:08:55.1±1.3, 43°.52N×84°.90E, h14km, mb4.0/6, Error ellipse: s-maj=8.1km s-min=6.0km az=121.1*
*BJI **30** 10:08:56.5, 43°.38N×84°.76E, h9km, mb4.3/14, mB4.4/8, ML4.1/7, Ms3.9/4, Ms7 3.8/4*
*NEIC **30** 10:08:58.6±0.5, 43°.54N×84°.69E, h10km, mb4.6/6, Error ellipse: s-maj=7.1km s-min=6.5km az=135.0*
*NNC **30** 10:09:00.9±1.9, 43°.62N×84°.49E, h13km±7km, mb4.2, mpv4.0, Error ellipse: s-maj=15.0km s-min=6.8km az=111.0*
ISC 30 10:08:56.5±0.4, 43°.42N±0°.04×84°.77E±0°.03, h10km, n108, σ2°79/132, mb3.9/17, 16C-21D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**2.16**	**78**	Pn	**Pb**	**10 09 34.8**	**-1.0**
WMQ				Sg	**Sb**	**10 10 03.0**	**+0.3**
WMQ				smax	smax		
	comp=N,4μm,0.5s						
WMQ				smax	smax		
	comp=E,3μm,0.7s						
KTMS	**Ketmen**	**3.22**	**272**	*e*P	**Pb**	**10 09 52.3**	**-1.5**
	282nm,0.6s						
KTMS				*e*S	**Sb**	**10 10 34.7**	**+1.6**
	581nm,0.4s						
DJR	**Jarkent**	**3.71**	**286**	*e*P	**Pb**	**10 10 00.4**	**-1.8**
	136nm,0.6s						
DJR				*e*S	**Sb**	**10 10 48.5**	**+1.2**
	189nm,0.5s						
MK01	**Makanchi Array**	**3.78**	**333**	*e*Pn	**Pn**	**10 09 55.6**	**+0.8**
MK31	**Makanchi Array**	**3.80**	**333**	⇓Pn	**Pn**	**10 09 55.5**	**+0.3**
	7.2nm,0.4s,baz=150,slow=15,SNR=64						
MK31				⇑Pg	**Pb**	**10 10 04.7**	**+1.0**
	51nm,0.5s,baz=150,slow=18,SNR=43						
MK31				⇓Lg	Lg	10 10 56.0	
	77nm,0.3s,baz=171,slow=31,SNR=7.7						
MK31	**Makanchi Array**	**3.80**	**333**	*e*Pn	**Pn**	**10 09 56.2**	**+1.0**
MK31	**Makanchi Array**	**3.80**	**333**	*e*P	**Pn**	**10 09 55.3**	**+0.1**
MK31				pmax	pmax		
	comp=Z,7.0nm,0.4s						
MK31				pmax	pmax		
	comp=Z,51nm,0.5s						
MKAR	**Makanchi Array**	**3.80**	**333**	*e*Pn	**Pn**	**10 09 56.4**	**+1.2**
MKAR	**Makanchi Array**	**3.80**	**333**	*e*P	**Pn**	**10 09 56.4**	**+1.2**
PDGK	**Podgornoye**	**3.85**	**270**	⇓Pn	**Pn**	**10 09 57.4**	**+1.5**
	comp=Z,82nm,0.7s						
PDGK				⇑Lg	Lg	10 10 54.3	
	comp=Z,253nm,0.5s						
PDGK	**Podgornoye**	**3.85**	**270**	P	**Pn**	**10 09 57.5**	**+1.5**
PDGK				pmax	pmax		
	comp=Z,82nm,0.7s						
SHLS	**Shalkode**	**3.88**	**268**	*e*P	**Pn**	**10 09 59.4**	**+3.0**
	comp=Z,274nm,0.4s						
SHLS				*e*S	**Sn**	**10 10 46.7**	**+4.6**
	comp=Z,775nm,0.5s						
MAKZ	**Makanchi**	**3.92**	**331**	⇓Pn	**Pn**	**10 09 57.3**	**+0.5**
	comp=Z,4.6nm,0.4s						
MAKZ				⇑Pg	**Pb**	**10 10 07.4**	**+1.6**
	comp=Z,71nm,0.8s						
MAKZ				⇑Lg	Lg	10 11 00.7	
	comp=Z,289nm,1.0s						
MAKZ	**Makanchi**	**3.92**	**331**	*e*Pn	**Pn**	**10 09 57.7**	**+0.9**
MAKZ	**Makanchi**	**3.92**	**331**	P	**Pn**	**10 09 57.3**	**+0.5**
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MAKZ				pmax	pmax		
	comp=Z,71nm,0.8s						
ZSN	**Zaisan**	**4.03**	**1**	*e*P	**Pg**	**10 10 11.5**	**-2.2**
	comp=Z,21nm,0.5s						
ZSN				*e*S	**Sg**	**10 11 07.8**	**+1.9**
	comp=Z,127nm,0.5s						
UZB	**Uzynbulak**	**4.21**	**268**	*e*P	**Pb**	**10 10 09.2**	**-1.5**
	comp=Z,71nm,0.5s						
UZB				*e*S	**Sb**	**10 11 03.6**	**+2.0**
	comp=Z,212nm,0.6s						
KAPS	**Kapalarasan**	**4.31**	**298**	*e*P	**Pb**	**10 10 13.8**	**+1.5**
	comp=Z,57nm,0.4s						
KAPS				*e*S	**Sg**	**10 11 11.8**	**-3.0**
	comp=Z,303nm,0.5s						
KPKS	**Kokpek**	**4.43**	**273**	*e*P	**Pb**	**10 10 14.6**	**+0.1**
	comp=Z,75nm,0.5s						
KPKS				*e*S	**Sg**	**10 11 13.3**	**-5.5**
	comp=Z,395nm,0.5s						
ZHN	**Zhinishke**	**4.63**	**269**	*e*P	**Pb**	**10 10 19.7**	**+1.8**
	comp=Z,68nm,0.4s						
ZHN				*e*S	**Sg**	**10 11 21.5**	**-3.7**
	comp=Z,325nm,0.4s						
MNBS	**Baschi**	**4.66**	**280**	*e*P	**Pb**	**10 10 17.3**	**-1.2**
	comp=Z,49nm,0.8s						
MNBS				*e*S	**Sb**	**10 11 17.5**	**+2.8**
	comp=Z,150nm,0.8s						
SATY	**Saty**	**4.66**	**268**	*e*P	**Pb**	**10 10 19.7**	**+1.2**
	comp=Z,128nm,0.7s						
SATY				*e*S	**Sg**	**10 11 21.8**	**-4.5**
	comp=Z,157nm,0.4s						
PRZ	**Przheval'sk**	**4.77**	**261**	*e*Pn	**Pn**	**10 10 11.5**	**+2.9**
PRZ	**Przheval'sk**	**4.77**	**261**	*e*P	**Pn**	**10 10 11.5**	**+2.9**
TDK	**Taldyqorghan**	**4.84**	**291**	*e*P	**Pb**	**10 10 23.5**	**+2.1**
	comp=Z,243nm,0.7s						
TDK				*e*S	**Sg**	**10 11 28.4**	**-3.5**
	comp=Z,898nm,0.9s						
ARXS	**Arharly**	**5.09**	**281**	*e*P	**Pb**	**10 10 27.5**	**+1.9**
	comp=Z,41nm,0.5s						
ARXS				*e*S	**Sg**	**10 11 35.4**	**-4.4**
	comp=Z,297nm,0.6s						
TARG	**Taragay, Kyrgy**	**5.41**	**254**	*e*Pn	**Pn**	**10 10 20.1**	**+2.4**
MDOK	**Medeo**	**5.64**	**270**	⇓Pn	**Pn**	**10 10 21.3**	**+0.7**
	comp=Z,2.8nm,0.4s						
MDOK				⇓Pg	**Pb**	**10 10 37.8**	**+2.6**
	comp=Z,26nm,0.6s						
MDOK				⇑Lg	Lg	10 11 55.5	
	comp=Z,133nm,0.8s						
MDOK	**Medeo**	**5.64**	**270**	*e*P	**Pb**	**10 10 35.7**	**+0.5**
	comp=Z,22nm,0.5s						
MDOK				*e*S	**Sb**	**10 11 49.3**	**+6.4**
	comp=Z,103nm,0.9s						
AAA	**Alma-Ata**	**5.74**	**271**	*e*P	**Pg**	**10 10 42.3**	**-4.0**
AAA				pmax	pmax		
	comp=Z,43nm,0.3s						
IZV	**Izvestkoviy**	**5.97**	**269**	*e*P	**Pb**	**10 10 42.0**	**+1.2**
	comp=Z,35nm,0.6s						
IZV				*e*S	**Sg**	**10 12 00.1**	**-8.1**
	comp=Z,74nm,0.7s						
DGZ	**Jazzator, Alta**	**6.54**	**15**	*i* P	**Pn**	**10 10 34.3**	**+1.3**
TKM2	**Tokmak 2**	**6.73**	**269**	⇓Pn	**Pn**	**10 10 37.2**	**+1.7**
	comp=Z,19nm,0.7s						
TKM2				⇓Pg	**Pg**	**10 11 01.3**	**-4.0**
	comp=Z,19nm,0.7s						
TKM2				⇓Lg	Lg	10 12 27.9	
	comp=Z,57nm,0.7s						
TKM2	**Tokmak 2**	**6.73**	**269**	P	**Pn**	**10 10 37.2**	**+1.7**
TKM2				pmax	pmax		
	comp=Z,8.0nm,0.7s						
NRN	**Naryn**	**6.79**	**256**	*e*Pn	**Pn**	**10 10 37.6**	**+1.2**
NRN	**Naryn**	**6.79**	**256**	*e*P	**Pn**	**10 10 37.6**	**+1.2**
FRU	**Bishkek**	**7.45**	**269**	*e*P	Pb	10 11 00.0	-5.9
FRU				pmax	pmax		
	comp=Z,30nm,1.5s						
FRU				pmax	pmax		
	comp=N,220nm,2.0s						
AAK	**Ala-Archa**	**7.57**	**268**	⇓Pn	**Pn**	**10 10 51.5**	**+4.5**
	comp=N,3.1nm,0.6s						
AAK				⇑Pg	Pb	10 11 14.3	+6.3
	comp=N,22nm,0.9s						
AAK				⇑Lg	Lg	10 12 55.5	
	comp=N,77nm,1.2s						
AAK	**Ala-Archa**	**7.57**	**268**	P	**Pn**	**10 10 51.4**	**+4.3**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AAK				pmax	pmax		
	comp=Z,22nm,1.0s						
KSH	**Kashi**	**7.67**	**242**	P	Pn	10 10 57.0	+8.6
KSH				pP	Pb	10 11 01.0	-8.7
KSH				S	Sn	10 12 27.5	+12
KSH				sS	Sb	10 12 33.8	-7.4
KSH				pmax	pmax		
	comp=Z,230nm,4.5s						
KSH				LR	LR		
	comp=Z,330nm,8.0s						
KURBB	**Kurchatov Arra**	**8.37**	**332**	Pn	**Pn**	**10 10 56.6**	**-1.2**
	comp=Z,0.6nm,0.3s,baz=147,slow=12,SNR=4.0						
KURBB				Sn	**Sn**	**10 12 28.6**	**-3.7**
	comp=

comp=Z,1.5nm,0.5s,baz=78,slow=16,SNR=3.6
KK31 ||Lg Lg 10 14 24.3
comp=Z,10nm,0.6s,baz=75,slow=28,SNR=4.3
KK31 Karatay Array 10.41 273 *e*Pn **Pn 10 11 27.2 +1.4**
KK31 Karatay Array 10.41 273 *e*P **Pn 10 11 27.2 +1.4**
KKAR Karatay Array 10.41 273 *e*Pn **Pn 10 11 27.2 +1.4**
ZAL Zalesovo 10.53 0 *e*P **Pn 10 11 26.1 -1.2**
ZAA0 Zalesovo Array 10.54 0 *e*Pn **Pn 10 11 26.1 -1.4**
ZAA0 *e*Sn **Sn 10 13 20.2 -5.3**
ZALV Zalesovo Beam 10.54 0 Pn **Pn 10 11 25.2 -2.3**
comp=Z,1.4nm,0.3s,baz=184,slow=14,SNR=13
ZALV Sn **Sn 10 13 20.7 -4.8**
comp=Z,2.5nm,0.3s,baz=172,slow=24,SNR=10.0
ZALV Lg Lg 10 14 27.3
baz=190,slow=25,SNR=2.5
ZALV Zalesovo Beam 10.54 0 *e*Pn **Pn 10 11 26.1 -1.4**
ZALV *e*Sn **Sn 10 13 20.0 -5.4**
ZALV Zalesovo Beam 10.54 0 *e*P **Pn 10 11 26.1 -1.4**
ZALV *e* 10 13 20.0
GTA Gaotai 11.98 104 *e*P Pn 10 11 52.8 +5.3
GTA pP 10 11 57.0
GTA sP 10 12 00.3
GTA pmax pmax
comp=Z,5.0nm,0.8s
CHCP Chirah Chowk 13.26 227 P **Pn 10 12 03.1 -1.7**
NIL Nilore 13.27 227 *e*Pn **Pn 10 12 03.1 -1.9**
NIL Nilore 13.27 227 *e*P **Pn 10 12 03.1 -1.9**
BVA0 Borovoye Array 13.55 320 ||Pn **Pn 10 12 10.4 +1.7**
comp=Z,1.9nm,0.6s,baz=125,slow=11,SNR=6.9
BVA0 ||Sn **Sn 10 14 36.5 -2.7**
comp=Z,4.5nm,0.9s,baz=135,slow=20,SNR=4.7
BVA0 ||Lg Lg 10 16 04.8
comp=Z,35nm,1.3s,baz=135,slow=26,SNR=3.8
BVA0 Borovoye Array 13.55 320 P **Pn 10 12 10.4 +1.7**
BVA0 S **Sn 10 14 36.5 -2.7**
BVA0 pmax pmax
comp=Z,2.0nm,0.6s
BVA0 smax smax
comp=N,5.0nm,0.9s
BVAR Borovoye Array 13.55 320 Pn **Pn 10 12 09.5 +0.8**
comp=N,0.4nm,0.3s,baz=110,slow=12,SNR=4.5
BVAR Sn **Sn 10 14 32.7 -6.5**
comp=N,0.5nm,0.3s,baz=133,slow=22,SNR=3.8
BVAR Lg Lg 10 15 58.6
comp=N,0.3nm,0.3s,baz=115,slow=21,SNR=3.4
BRVK Borovoye 13.62 320 ⇑Pn **Pn 10 12 07.4 -2.2**
comp=N,2.3nm,0.5s
BRVK ||Sn **Sn 10 14 37.7 -3.1**
comp=N,2.7nm,0.4s
BRVK ⇑Lg Lg 10 16 02.9
comp=N,47nm,1.3s
BRVK Borovoye 13.62 320 *e*Pn **Pn 10 12 09.2 -0.4**
BRVK Borovoye 13.62 320 *i*P **Pn 10 12 10.1 +0.5**
KBL Kabul 15.09 239 *e*Pn **Pn 10 12 31.0 +1.1**
comp=N,6.2nm,0.4s
KBL Kabul 15.09 239 *e*P **Pn 10 12 31.0 +1.1**
KBL pmax pmax
comp=Z,6.0nm,0.4s
TLY Talaya 15.15 50 Lg Lg 10 16 54.0
comp=Z,0.0nm,0.3s,baz=228,slow=19,SNR=2.6
SONM Songino Array 15.74 66 Pn **Pn 10 12 34.9 -3.5**
comp=Z,0.3nm,0.3s,baz=280,slow=16,SNR=2.8
SONM Lg Lg 10 17 12.9
comp=Z,0.5nm,0.3s,baz=272,slow=32,SNR=2.9
SONA1 Songino Array 15.75 66 *e*Pn **P 10 12 41.4 -1.1**
LZH Lanzhou 16.38 110 *e*P **Pn 10 12 44.8 -1.8**
LZH pP P 10 12 47.8 -1.7
LZH pmax pmax
comp=Z,25nm,1.1s
LZH pmax pmax
comp=Z,98nm,4.6s
LZH LR LR
comp=Z,270nm,10.8s
LZH LR LR
comp=Z,300nm,11.1s
AB31 Akbulak array 18.07 297 Pn **Pn 10 13 06.5 -1.0**
comp=Z,1.8nm,0.8s,baz=103,slow=12,SNR=9.4
AB31 Akbulak array 18.07 297 P **Pn 10 13 06.5 -1.0**
AB31 pmax pmax
comp=Z,2.0nm,0.9s
ABKAR Akbulak array 18.07 297 *e*Pn **Pn 10 13 07.5 0.0**
AKTO Aktyubinsk 19.50 300 P **Pn 10 13 25.5 +0.6**
comp=Z,0.3nm,0.3s,baz=110,slow=14,SNR=4.0
CD2 Chengdu 19.56 123 P **Pn 10 13 27.3 +1.5**
CD2 pmax pmax
comp=Z,20nm,0.5s
HHC Hu-ho-hao-te 20.01 88 *e*P Pn 10 13 32.5 +1.4
HHC pP sP 10 13 36.8 +3.3
HHC sP pP 10 13 39.3 +7.1
HHC S **S 10 17 12.0 -2.3**
HHC sS sS 10 17 17.8 -1.0
HHC pmax pmax
comp=Z,12nm,0.8s
HHC LR LR
comp=Z,1μm,13.0s
ARU Arti 21.15 317 P **P 10 13 43.4 +1.9**
comp=Z,2.3nm,0.3s,baz=105,slow=19,SNR=3.5
ARU Arti 21.15 317 *e*P **P 10 13 41.8 +0.4**
comp=Z,3.8nm,0.7s
ARU Arti 21.15 317 *c i*P **P 10 13 46.4 +5.0**
ARU 10 14 03.8
ARU S Sn 10 17 48.4 +5.3
ARU SS **SnSn 10 18 12.1 +14**
ARU pmax pmax
comp=Z,4.0nm,0.8s
GYA Guiyang 24.55 126 *e*P **P 10 14 20.0 +3.4**
GYA pmax pmax
comp=Z,10.0nm,0.8s
CM31 Chiang Mai Arr 27.61 150 *e*P **P 10 14 47.4 +3.3**
CMAR Chiang Mai Arr 27.61 150 P **P 10 14 46.4 +2.2**
comp=Z,0.9nm,0.6s,baz=327,slow=8.5,SNR=4.7
CM01 Chiang Mai Arr 27.65 150 *e*P **P 10 14 47.4 +2.9**
NCK Nalchik 29.67 285 *i*P **P 10 15 03.5 +1.2**
NCK pmax pmax
comp=Z,6.0nm,0.8s
UOSS Minazif 29.75 241 *e*P **P 10 15 04.5 +1.3**
comp=Z,23nm,1.4s
GNI Garni 29.83 278 *e*P **P 10 15 04.5 +0.6**
comp=Z,24nm,1.5s
GNI Garni 29.83 278 *i*P **P 10 15 05.5 +1.6**
GNI pmax pmax
comp=Z,23nm,1.1s
AKH Akhalkalaki 30.32 281 *e*P **P 10 15 09.1 +0.8**
comp=Z,7.2nm,0.4s
AKH Akhalkalaki 30.32 281 *e*P **P 10 15 09.1 +0.8**
AKH pmax pmax
comp=Z,7.0nm,0.4s
KLR Kul'dur 32.53 63 *i*P **P 10 15 28.0 +0.6**
KS15 Wonju Array Si 33.07 85 *e*P **P 10 15 34.4 +2.1**
JNU Nakatsue 37.21 90 LR LR 10 33 22.1
comp=Z,26nm,18.3s,baz=119,slow=40
BRTR Keskin Array B 37.94 282 P **P 10 16 13.6 -0.7**
comp=Z,0.9nm,0.8s,baz=77,slow=7.0,SNR=4.9
FINES FINESS Array B 38.50 319 P **P 10 16 17.4 -1.1**
comp=Z,0.4nm,0.3s,baz=101,slow=9.9,SNR=5.4
ARCES ARCESS Array B 39.46 332 P **P 10 16 25.5 -1.0**
comp=Z,1.7nm,0.8s,baz=98,slow=7.5,SNR=4.5
HFS Hagfors 44.67 318 P **P 10 17 08.2 -0.9**
comp=Z,2.0nm,0.8s,baz=98,slow=10,SNR=5.9
CLL Collm 47.45 306 *e*P **P 10 17 31.0 -0.1**
ILAR Eielson Array 64.84 22 P **P 10 19 33.3 -1.9**
comp=Z,0.1nm,0.5s,baz=319,slow=4.6,SNR=2.4
YKA Yellowknife Ar 73.29 9 P **P 10 20 24.1 -3.6**
comp=Z,0.2nm,0.6s,baz=338,slow=6.2,SNR=3.8
WRA Warramunga Arr 77.74 133 P **P 10 20 51.7 -2.0**
comp=Z,0.5nm,0.7s,baz=334,slow=5.1,SNR=6.3
ASAR Alice Springs 80.58 135 P **P 10 21 08.9 -0.3**
comp=Z,0.4nm,0.8s,baz=329,slow=6.9,SNR=2.9
F10A Beach Ranch, E 88.87 15 *e*P **P 10 21 53.6 +2.7**
comp=Z,3.9nm,1.2s
M46A Old House Fiel 95.18 353 *e*P **P 10 22 23.1 +3.0**
comp=Z,33nm,0.6s

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*ISCJB **30** 10:19:26.7±0.7, 12°.6S±0°.1×167°.0E±0°.1, h220km, mb3.9/12, Error ellipse: s-maj=18.0km s-min=15.8km az=34.9*
*IDC **30** 10:19:27.9±3.2, 12°.55S×167°.02E, h216km±29km, mb3.7/12, mb1 3.8/12, mb1mx3.5/46, mbtmp4.2/12, Error ellipse: s-maj=17.2km s-min=16.4km az=84.0*
ISC 30 10:19:28.0±0.7, 12°.6S±0°.1×167°.0E±0°.2, h220km, n14, σ0°97/16, mb4.0/12, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**21.25**	**247**	P	**P**	**10 23 57.9**	**+0.5**
	2.9nm,0.5s,baz=77,slow=13,SNR=9.3						
URZ	**Urewera**	**27.13**	**162**	P	**P**	**10 24 51.6**	**+0.8**
	2.8nm,0.4s,baz=289,slow=5.2,SNR=4.6						
RPZ	**Rata Peaks**	**31.24**	**174**	P	**P**	**10 25 27.2**	**+0.2**
	13nm,0.9s,baz=292,slow=2.4,SNR=5.5						
WRA	**Warramunga Arr**	**32.15**	**253**	P	**P**	**10 25 35.2**	**-0.2**
	1.0nm,0.4s,baz=84,slow=9.0,SNR=22						
ASAR	**Alice Springs**	**33.25**	**246**	P	**P**	**10 25 44.9**	**0.0**
	0.9nm,0.6s,baz=72,slow=9.4,SNR=17						
ASAR				pP	**pP**	**10 26 27.4**	**-2.3**
	1.2nm,0.8s,baz=74,slow=9.0,SNR=5.7						
ASAR				ScP	**ScP**	**10 31 46.0**	**+0.6**
	0.5nm,0.8s,baz=90,slow=3.0,SNR=4.8						
FITZ	**Fitzroy Crossi**	**40.20**	**257**	P	**P**	**10 26 44.1**	**+0.6**
	1.7nm,0.3s,baz=64,slow=7.7,SNR=18						
ASAJ	**Asahikawa**	**60.62**	**340**	P	**P**	**10 29 16.7**	**+1.1**
	2.8nm,0.9s,baz=209,slow=7.4,SNR=4.3						
QSPA	**South Pole Qui**	**77.45**	**180**	P	**P**	**10 30 59.8**	**+0.8**
	1.1nm,0.5s,baz=197,slow=0.5,SNR=7.2						
ILAR	**Eielson Array**	**84.56**	**18**	P	**P**	**10 31 35.8**	**-0.3**
	1.9nm,0.6s,baz=245,slow=5.1,SNR=44						
TXAR	**Lajitas Array**	**95.48**	**61**	P	**P**	**10 32 27.9**	**-0.4**
	0.3nm,0.8s,baz=243,slow=5.5,SNR=4.8						
SNAA	**Sanae**	**95.69**	**183**	P	**P**	**10 32 28.0**	**-0.4**
	0.6nm,0.6s,baz=202,slow=5.4,SNR=5.9						
YKA	**Yellowknife Ar**	**95.75**	**27**	P	**P**	**10 32 27.7**	**-1.0**
	0.2nm,0.4s,baz=259,slow=4.7,SNR=8.2						
ARCES	**ARCESS Array B**	**118.10**	**346**	PKP	**PKPdf**	**10 37 47.6**	**-0.6**
	0.9nm,0.4s,baz=66,slow=1.6,SNR=8.1						
ESDC	**Sonseca Array**	**151.84**	**345**	PKPab	**PKPab**	**10 39 08.2**	**+1.3**
	0.3nm,0.3s,baz=29,slow=3.4,SNR=7.1						

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*ISCJB **30** 10:46:22.9±0.7, 60°.80N±0°.10×43°.6W±0°.1, h10km, mb3.8/11, MS2.9/2, Error ellipse: s-maj=14.5km s-min=8.3km az=16.6*
*IDC **30** 10:46:23.7±0.8, 60°.54N×43°.90W, h0km, mb3.8/11, mb1 4.0/12, mb1mx3.6/64, mbtmp3.8/12, ML4.0/1, MS2.9/2, Ms1 2.9/2, ms1mx2.4/62, Error ellipse: s-maj=23.7km s-min=16.1km az=8.0*
ISC 30 10:46:25.7±0.8, 60°.87N±0°.09×43°.82W±0°.07, h10km, n18, σ1°77/19, mb3.8/11, Western Kalaallit Nunaat

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRS	**Narsarsuaq**	**0.83**	**291**	*i* P	**Pg**	**10 46 41.4**	**-0.3**
NRS				*i* S	**Sb**	**10 46 53.5**	**+0.1**
SFJD	**Kangerlussuaq**	**6.83**	**337**	Pn	**Pn**	**10 48 07.2**	**+1.4**
	2.9nm,0.3s,baz=173,slow=8.1,SNR=5.4						
SFJD				Sn	**Sn**	**10 49 22.0**	**-1.5**
	11nm,0.3s,baz=25,slow=7.1,SNR=7.6						
SFJD				Lg	Lg	10 49 55.5	
	15nm,0.3s,baz=80,slow=15,SNR=8.0						
SFJD	**Kangerlussuaq**	**6.83**	**337**	*i* P	**Pn**	**10 48 07.0**	**+1.2**
SFJD				*e*S	**Sn**	**10 49 22.0**	**-1.5**
SUMG	**Summit**	**11.94**	**8**	*i* P	**Pn**	**10 49 14.8**	**-1.2**
SUMG				*e*S	**Sn**	**10 51 25.4**	**-3.8**
NOA	**NORSAR Array B**	**26.06**	**65**	LR	LR	11 01 03.4	
	comp=Z,12nm,19.0s,baz=200,slow=34						
ARCES	**ARCESS Array B**	**28.70**	**43**	P	**P**	**10 52 25.4**	**+3.0**
	2.2nm,0.9s,baz=312,slow=8.0,SNR=3.3						
ULM	**Lac du Bonnet**	**30.48**	**273**	P	**P**	**10 52 37.5**	**-0.8**
	1.7nm,0.6s,baz=58,slow=5.6,SNR=3.1						
YKA	**Yellowknife Ar**	**32.09**	**304**	P	**P**	**10 52 52.9**	**+0.5**
	0.3nm,0.7s,baz=59,slow=9.1,SNR=4.3						
ILAR	**Eielson Array**	**42.22**	**322**	P	**P**	**10 54 20.1**	**+1.9**
	1.2nm,0.8s,baz=44,slow=7.6,SNR=17						
PDAR	**Pinedale Array**	**42.43**	**276**	P	**P**	**10 54 19.4**	**-1.2**
	0.4nm,0.4s,baz=64,slow=8.0,SNR=6.3						
YBH	**Yreka Blue Hor**	**49.54**	**285**	LR	LR	11 16 34.3	
	comp=Z,27nm,20.0s,baz=101,slow=36						
NVAR	**Mina Array Bea**	**50.01**	**279**	P	**P**	**10 55 20.5**	**+0.3**
	0.6nm,0.6s,baz=46,slow=6.8,SNR=10						
TXAR	**Lajitas Array**	**50.23**	**259**	P	**P**	**10 55 20.8**	**-1.0**
	0.4nm,0.8s,baz=56,slow=6.8,SNR=3.6						
KOWA	**Kowa**	**54.48**	**130**	P	**P**	**10 55 51.5**	**-1.7**
	1.7nm,0.5s,baz=6.6,slow=4.0,SNR=4.2						
BVAR	**Borovoye Array**	**54.98**	**42**	P	**P**	**10 55 58.2**	**+1.7**
	0.7nm,0.6s,baz=309,slow=7.3,SNR=3.9						
TORD	**Torodi Ar. Bea**	**57.92**	**125**	P	**P**	**10 56 15.9**	**-2.0**
	0.5nm,0.5s,baz=318,slow=5.8						
KURBB	**Kurchatov Arra**	**59.63**	**39**	P	**P**	**10 56 30.2**	**+0.9**
	0.5nm,0.5s,baz=333,slow=6.7,SNR=3.5						
ASAR	**Alice Springs**	**142.78**	**3**	PKhKP	PKPpre	11 05 54.8	
	0.4nm,0.4s,baz=359,slow=3.0,SNR=7.1						

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*IDC **30** 10:48:58.4±1.6, 33°.33S×178°.48W, h0km, mb4.6/3, mb1 4.8/4, mb1mx3.9/42, mbtmp4.7/4, ML4.3/1, Error ellipse: s-maj=52.5km s-min=34.7km az=154.0*
*ISCJB **30** 10:49:03.5±1.0, 33°.5S±0°.1×178°.7W±0°.2, h41km, mb4.5/3, Error ellipse: s-maj=20.7km s-min=13.8km az=23.5*
ISC 30 10:49:05.1±1.2, 33°.4S±0°.1×178°.6W±0°.2, h41km, n12, σ0°97/13, mb4.5/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**5.93**	**215**	Pn	**Pn**	**10 50 29.5**	**-0.8**
	8.2nm,0.3s,baz=270,slow=1.9,SNR=42						
URZ				Sn	**Sn**	**10 51 38.0**	**+1.1**
	3.3nm,0.3s,baz=240,slow=5.5,SNR=6.9						
CTA	**Charters Tower**	**33.90**	**284**	P	**P**	**10 55 44.9**	**+0.6**
	4.3nm,0.4s,baz=122,slow=10,SNR=12						
ASAR	**Alice Springs**	**42.52**	**271**	P	**P**	**10 56 56.2**	**-0.6**
	6.6nm,0.6s,baz=110,slow=7.5,SNR=72						
WRA	**Warramunga Arr**	**43.78**	**276**	P	**P**	**10 57 06.3**	**-0.7**
	4.5nm,0.5s,baz=116,slow=7.6,SNR=31						
SNAA	**Sanae**	**75.13**	**179**	P	**P**	**11 00 42.0**	**-0.6**
VNA3	**Neumayer Olymp**	**75.31**	**176**	P	**P**	**11 00 44.0**	**+0.5**
VNA2	**Neumayer--Watz**	**75.74**	**177**	P	**P**	**11 00 47.3**	**+1.4**
baz=178,slow=4.2							
VNA1	**Neumayer--Stat**	**75.97**	**177**	P	**P**	**11 00 45.7**	**-1.6**
FINES	**FINESS Array B**	**147.79**	**338**	PKPbc	**PKPdf**	**11 08 42.8**	**+1.0**
	1.9nm,0.4s,baz=42,slow=4.7,SNR=16						
MMAI	**Mount Meron Ar**	**151.61**	**279**	PKPbc	**PKPbc**	**11 08 55.5**	**+0.4**
	4.4nm,0.6s,baz=70,slow=7.2,SNR=6.2						
HFS	**Hagfors**	**152.10**	**347**	PKPbc	**PKPbc**	**11 08 55.4**	**+0.1**
	1.6nm,0.6s,baz=64,slow=13,SNR=2.7						
BRTR	**Keskin Array B**	**153.45**	**293**	PKPbc	**PKPbc**	**11 08 58.7**	**-0.4**
	0.4nm,0.6s,baz=151,slow=3.3,SNR=3.1						

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*IDC **30** 10:49:27.8±1.9, 33°.22S×178°.45W, h0km, mb4.6/3, mb1 4.8/4, mb1mx3.9/42, mbtmp4.6/4, ML4.4/1, Error ellipse: s-maj=54.6km s-min=40.6km az=151.0*
*ISCJB **30** 10:49:30.3±5.4, 33°.4S±0°.2×178°.4W±0°.8, h32km, mb4.5/3, Error ellipse: s-maj=96.7km s-min=14.8km az=13.7*
ISC 30 10:49:32.4±2.2, 33°.3S±0°.2×178°.4W±0°.3, h32km, n7, σ0°86/8, mb4.5/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.11**	**215**	Pn	**Pn**	**10 51 00.3**	**0.0**
	9.2nm,0.3s,baz=288,slow=4.0,SNR=6.1						
URZ				Sn	**Sn**	**10 52 09.1**	**0.0**
	3.8nm,0.3s,baz=319,slow=20,SNR=2.5						
CTA	**Charters Tower**	**34.03**	**284**	P	**P**	**10 56 14.5**	**+0.9**
	3.7nm,0.5s,baz=118,slow=11,SNR=6.8						
ASAR	**Alice Springs**	**42.68**	**270**	P	**P**	**10 57 26.1**	**-0.2**
	7.8nm,0.7s,baz=110,slow=7.2,SNR=13						
WRA	**Warramunga Arr**	**43.93**	**275**	P	**P**	**10 57 35.1**	**-1.3**
	4.5nm,0.5s,baz=117,slow=7.5,SNR=9.7						
FINES	**FINESS Array B**	**147.75**	**338**	PKPbc	**PKPbc**	**11 09 12.4**	**-0.6**
	3.4nm,0.6s,baz=44,slow=3.9,SNR=6.2						
MMAI	**Mount Meron Ar**	**151.75**	**279**	PKPbc	**PKPbc**	**11 09 24.7**	**+0.8**
	5.3nm,0.6s,baz=82,slow=7.6,SNR=5.7						
BRTR	**Keskin Array B**	**153.55**	**293**	PKPbc	**PKPbc**	**11 09 28.1**	**+0.4**
	0.9nm,0.7s,baz=138,slow=7.5,SNR=4.2						

MEX 30 10:49:41.6±0.4, 15°.30N×92°.08W, h170km±10km, MD3.7, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCIG	**Comitan**	**0.98**	**357**	*e*P	Pn	10 50 06.9	-1.4
CCIG				*e*S	Sn	10 50 26.7	-2.3
PCIG		**1.17**	**290**	*e*P	Pn	10 50 08.3	-1.3
PCIG				*e*S	Sn	10 50 29.6	-1.6

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*NEIC **30** 10:55:19.4±0.9, 17°.85N×120°.88E, h57km±9km, mb4.3/10, Error ellipse: s-maj=11.2km s-min=8.9km az=114.0*
NEIC Felt [II PIVS] at Bacarra, Laoag, Paoay and Pasuquin and [I PIVS] at Sinait.
*ISCJB **30** 10:55:22.4±0.3, 18°.16N±0°.02×120°.83E±0°.05, h84km±4km, mb4.0/18, Error ellipse: s-maj=8.4km s-min=3.7km az=6.2*
*MAN **30** 10:55:23.0, 18°.13N×120°.77E, h61km, mb5.1, ML4.0, MS4.1*
*IDC **30** 10:55:25.8±1.8, 17°.88N×121°.08E, h114km±18km, mb3.6/13, mb1 3.8/15, mb1mx3.5/62, mbtmp4.1/15, MS2.9/6, Ms1 2.9/6, ms1mx2.6/51, Error ellipse: s-maj=24.1km s-min=10.1km az=87.0*
ISC 30 10:55:22.8±0.6, 18°.11N±0°.03×120°.80E±0°.05, h81km±6km, n54, σ1°73/64, mb4.1/18, 3D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABRA	**Dolores**	**0.47**	**190**	*e*P	**Pn**	**10 55 36.9**	**+0.5**
ABRA				*e*S	**Sn**	**10 55 47.2**	**+0.8**
APYP	**Conner**	**0.49**	**120**	*e*P	**Pn**	**10 55 37.0**	**+0.5**
APYP				*e*S	**Sn**	**10 55 47.0**	**+0.3**
CVP	**Callao Caves**	**1.05**	**112**	||*i*P	**Pn**	**10 55 43.5**	**+1.0**
CVP				*i* S	**Sn**	**10 55 57.9**	**+0.6**
SGCP	**Mt. Cagua**	**1.19**	**83**	*e*P	**Pn**	**10 55 45.1**	**+0.9**
CAUP	**Cauayan**	**1.52**	**140**	*e*P	**Pn**	**10 55 50.4**	**+2.1**
BOLP	**Bolinao**	**1.92**	**206**	*e*P	**Pn**	**10 55 54.4**	**+0.8**
BOLP				*e*S	**Sn**	**10 56 18.8**	**+1.7**
BALP	**Baler**	**2.47**	**162**	*e*P	**Pn**	**10 56 01.5**	**+0.5**
BALP				*e*S	**Sn**	**10 56 35.4**	**+5.1**
SCZP	**Santa Cruz**	**2.47**	**200**	*e*P	**Pn**	**10 56 01.5**	**+0.4**
SCZP				*e*S	**Sn**	**10 56 33.9**	**+3.6**
PCPH	**Palayan**	**2.55**	**174**	*e*P	**Pn**	**10 56 02.9**	**+0.8**
PCPH				*e*S	**Sn**	**10 56 34.7**	**+2.4**
BBP	**Basco**	**2.57**	**25**	*e*P	**Pn**	**10 56 03.3**	**+1.0**
TGY	**Tagaytay City**	**3.99**	**178**	P	**Pn**	**10 56 23.6**	**+2.0**
	25nm,0.3s,baz=192,slow=5.3,SNR=3.4						
TGY				S	**Sn**	**10 57 06.3**	**-0.9**
	62nm,0.3s,baz=319,slow=9.7,SNR=3.7						
TGY	**Tagaytay City**	**3.99**	**178**	||*i*P	**Pn**	**10 56 23.3**	**+1.7**
GQP	**Guinayangan**	**4.47**	**159**	||*e*P	Pn	10 56 35.1	+6.9
TWG	**Pinlang**	**4.69**	**3**	*e*Pn	**Pn**	**10 56 31.6**	**+0.4**
TWG				*e*Sn	**Sn**	**10 57 23.4**	**-1.0**
TPUB	**Ta-pu**	**5.17**	**358**	*e*Pn	**Pn**	**10 56 37.8**	**+0.1**
TPUB				*e*Sn	**Sn**	**10 57 37.6**	**+1.6**
YULB	**Yu-li**	**5.28**	**5**	*e*Pn	**Pn**	**10 56 39.2**	**+0.1**
YULB				*e*Sn	**Sn**	**10 57 40.9**	**+2.3**
SSLB	**Suanglung**	**5.65**	**1**	*e*Pn	**Pn**	**10 56 44.6**	**+0.4**
SSLB				*e*Sn	**Sn**	**10 57 47.4**	**-0.4**
NACB	**Ninganchiao**	**6.08**	**7**	*e*Pn	**Pn**	**10 56 49.5**	**-0.6**
NACB				*e*Sn	**Sn**	**10 57 57.2**	**-1.0**
YHNB	**Yeheng**	**6.55**	**5**	*e*Pn	**Pn**	**10 56 56.9**	**+0.4**
YHNB				*e*Sn	**Sn**	**10 58 11.1**	**+1.3**
YOJ	**Yonaguni jima**	**6.65**	**18**	*e*Pn	**Pn**	**10 56 58.0**	**+0.2**
TATO	**Taipei**	**6.86**	**5**	*e*Pn	**Pn**	**10 57 00.8**	**0.0**
QIZ	**Qiongzhong**	**10.43**	**277**	*e*Pn	**Pn**	**10 57 47.9**	**-1.6**
QIZ				*e*Sn	**Sn**	**10 59 42.1**	**-2.6**
JOW	**Kunigami**	**11.09**	**37**	*e*Pn	**Pn**	**10 57 57.8**	**-0.6**
DAV	**Davao City (W)**	**11.92**	**156**	LR	LR	11 03 19.2	
	comp=Z,42nm,19.1s,baz=339,slow=41						
ENH	**Enshi**	**15.89**	**322**	*e*Pn	**Pn**	**10 59 02.2**	**+0.5**
	26nm,1.5s						
JNU	**Nakatsue**	**17.48**	**29**	P	**P**	**10 59 22.8**	**+1.4**
	1.5nm,0.3s,baz=181,slow=6.9,SNR=6.9						
JNU				LR	LR	11 05 44.9	
	comp=Z,40nm,20.4s,baz=121,slow=35						
JNU	**Nakatsue**	**17.48**	**29**	*e*Pn	**Pn**	**10 59 19.9**	**-1.4**
	28nm,0.9s						
TNTI	**Ternate**	**18.40**	**159**	*e*P	**P**	**10 59 26.7**	**-4.9**
	11nm,0.7s						
KS15	**Wonju Array Si**	**20.24**	**16**	*e*P	**P**	**10 59 52.5**	**+1.1**
KSRS	**Korea Array**	**20.26**	**17**	P	**P**	**10 59 52.6**	**+1.0**
	9.6nm,0.6s,baz=198,slow=11,SNR=45						
KSRS				LR	LR	11 07 02.4	
	comp=Z,24nm,20.0s,baz=192,slow=34						
KS01	**Wonju Array Si**	**20.27**	**16**	*e*P	**P**	**10 59 52.8**	**+1.0**
CMAR	**Chiang Mai Arr**	**20.76**	**274**	P	**P**	**10 59 59.8**	**+2.5**
	0.9nm,0.7s,baz=68,slow=9.4,SNR=6.3						
CBIJ	**Chichi jima**	**21.65**	**62**	*e*P	**P**	**11 00 05.8**	**-0.8**
	64nm,1.1s						
BJT	**Baijiatuau**	**22.20**	**351**	*e*P	**P**	**11 00 14.2**	**+1.8**
	17nm,1.2s						
JHJ	**Hachijo jima 2**	**22.67**	**45**	LR	LR	11 08 49.3	
	comp=Z,13nm,18.7s,baz=324,slow=36						
SONM	**Songino Array**	**31.90**	**342**	P	**P**	**11 01 43.0**	**+2.4**
	0.5nm,0.3s,baz=154,slow=7.9,SNR=1.8						
KLR	**Kul'dur**	**32.28**	**13**	P	**P**	**11 01 45.3**	**+1.6**
	0.5nm,0.8s,baz=229,slow=7.5,SNR=17						
FITZ	**Fitzroy Crossi**	**36.30**	**172**	P	**P**	**11 02 16.0**	**-2.7**
	1.0nm,0.4s,baz=0.2,slow=9.2,SNR=6.5						
FITZ				LR	LR	11 19 07.7	
	comp=Z,34nm,19.1s,baz=132,slow=40						
WRA	**Warramunga Arr**	**40.08**	**160**	P	P	11 02 46.6	-3.9
	1.4nm,0.7s,baz=345,slow=8.7,SNR=10.0						
WRA				PcP	**PcP**	**11 04 53.5**	**-0.3**
	0.5nm,0.5s,baz=342,slow=3.0,SNR=5.4						
AS31	**Alice Springs**	**43.45**	**162**	*e*P	**P**	**11 03 15.4**	**-2.5**
	4.4nm,1.8s						
ASAR	**Alice Springs**	**43.45**	**162**	P	**P**	**11 03 15.1**	**-2.9**
	1.1nm,0.4s,baz=337,slow=7.0,SNR=37						
PETK	**Petropavlovsk-**	**45.17**	**31**	P	**P**	**11 03 31.8**	**+0.5**
	3.4nm,0.7s,baz=197,slow=4.4						
KURBB	**Kurchatov Arra**	**46.65**	**324**	P	**P**	**11 03 45.2**	**+2.2**
	0.6nm,0.6s,baz=122,slow=8.0,SNR=5.2						
NWAO	**Narrogin (SRO)**	**50.86**	**184**	P	**P**	**11 04 14.3**	**-1.0**
	4.0nm,0.6s,baz=338,slow=5.4,SNR=3.2						
STKA	**Stephens Creek**	**53.55**	**158**	P	P	11 04 31.3	-4.1
	1.4nm,0.6s,baz=338,slow=5.4,SNR=3.5						
CAST	**Castle Rocks**	**72.70**	**28**	*e*P	**P**	**11 06 43.3**	**+1.5**
	6.6nm,0.8s						
MLY	**Manley**	**73.11**	**26**	*e*P	**P**	**11 06 45.8**	**+1.6**
	4.6nm,0.9s						
MDM	**Murphy Dome**	**74.17**	**26**	*e*P	**P**	**11 06 51.9**	**+1.5**
	3.3nm,0.8s						
PMR	**Palmer**	**74.29**	**30**	*e*P	**P**	**11 06 50.9**	**-0.1**
	3.8nm,0.9s		

YKA	**Yellowknife Ar**	84.69	27	P	P	11 26 26.0	0.0
	0.2nm,0.6s,baz=284,slow=5.1,SNR=2.8						
NVAR	**Mina Array Bea**	88.91	51	P	P	11 26 48.0	+0.6
	0.1nm,0.4s,baz=268,slow=5.4,SNR=2.6						

*IDC **30** 11:42:22.0±1.7, 7°.25S×129°.82E, h0km, mb3.9/2, mb1 4.4/5, mb1mx3.7/53, mbtmp4.2/5, ML4.3/3, Error ellipse: s-maj=72.0km s-min=25.3km az=72.0*
*ISCJB **30** 11:42:28.8±0.3, 7°.39S±0°.03×129°.99E±0°.04, h150km, mb4.5/6, Error ellipse: s-maj=5.9km s-min=3.7km az=178.5*
*NEIC **30** 11:42:29.3±0.6, 7°.36S×129°.91E, h140km±8km, mb4.4/4, Error ellipse: s-maj=9.6km s-min=8.1km az=75.0*
*DJA **30** 11:42:31.7±0.4, 7°.S±2°×13°.0E±°, h115km±9km, M4.6/12, mb4.6/7, mB4.9/5, MLv4.7/12, Mw(mB)4.2/5*

ISC 30 11:42:29.1±0.6, 7°.44S±0°.04×129°.98E±0°.05, h150km, n35, σ2°.40/48, mb4.6/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.42**	**112**	P	**Pn**	**11 42 58.4**	**+0.6**
SAUI				S	**Sn**	**11 43 18.8**	**-0.9**
SAUI	**Saumlaki**	**1.42**	**112**	*e*Pn	**Pn**	**11 42 58.0**	**+0.2**
SAUI				*e*Sn	**Sn**	**11 43 15.5**	**-4.2**
BNDI	**Bandanaira**	**2.90**	**359**	P	**Pn**	**11 43 15.8**	**+0.5**
BNDI				S	**Sn**	**11 43 48.6**	**-2.4**
AAI	**Ambon**	**4.13**	**334**	P	**Pn**	**11 43 32.1**	**+1.0**
AAI				S	**Sn**	**11 44 16.4**	**-2.9**
MSAI	**Masohi**	**4.20**	**346**	P	**Pn**	**11 43 33.8**	**+1.8**
FAKI	**Fak Fak**	**5.03**	**27**	P	**Pn**	**11 43 42.8**	**-0.2**
FAKI				S	**Sn**	**11 44 37.3**	**-3.3**
FAKI	**Fak Fak**	**5.03**	**27**	*e*Pn	**Pn**	**11 43 41.7**	**-1.3**
FAKI				*e*Sn	**Sn**	**11 44 35.9**	**-4.7**
NLAI	**Namlea**	**5.06**	**325**	P	**Pn**	**11 43 45.9**	**+2.5**
KMPI	**Kaimana, Papua**	**5.28**	**45**	P	**Pn**	**11 43 47.4**	**+1.1**
KMPI				S	**Sn**	**11 44 43.4**	**-3.1**
MTN	**Manton Dam**	**5.49**	**168**	*e*Pn	**Pn**	**11 43 50.6**	**+1.6**
MTN				*e*Sn	**Sn**	**11 44 52.7**	**+1.2**
SOEI	**Soe**	**6.10**	**247**	P	**Pn**	**11 43 59.0**	**+1.8**
SOEI				S	**Sn**	**11 45 07.3**	**+1.1**
SOEI	**Soe**	**6.10**	**247**	*e*Pn	**Pn**	**11 43 57.0**	**-0.3**
SOEI				*e*Sn	**Sn**	**11 45 05.0**	**-1.2**
SANI	**Sanana**	**6.67**	**323**	P	Pn	11 44 08.6	+3.8
RKPI	**Ransiki, Papua**	**7.23**	**36**	P	**Pn**	**11 44 13.6**	**+1.3**
RKPI				S	**Sn**	**11 45 31.1**	**-2.1**
LUWI	**Luwuk**	**9.59**	**311**	*e*Pn	**Pn**	**11 44 44.2**	**+0.4**
FITZ	**Fitzroy Crossi**	**11.40**	**201**	Pn	**Pn**	**11 45 07.8**	**+0.2**
	1.3nm,0.3s,baz=30,slow=12,SNR=39						
FITZ				Sn	**Sn**	**11 47 08.8**	**-5.0**
	3.7nm,0.3s,baz=236,slow=16,SNR=8.9						
FITZ	**Fitzroy Crossi**	**11.40**	**201**	*e*Pn	**Pn**	**11 45 08.4**	**+0.8**
FITZ				Sn	**Sn**	**11 47 08.8**	**-5.0**
WRAB	**Tennant Creek**	**13.12**	**162**	*e*Pn	**Pn**	**11 45 31.0**	**+1.1**
WRAB				*e*Sn	**Sn**	**11 47 50.4**	**-4.7**
WRA	**Warramunga Arr**	**13.13**	**162**	Pn	**Pn**	**11 45 31.1**	**+1.1**
	2.1nm,0.3s,baz=345,slow=13,SNR=55						
WRA				Sn	Sn	11 47 48.1	-7.2
	2.3nm,0.3s,baz=333,slow=21,SNR=7.3						
WB2	**Warramunga Arr**	**13.13**	**162**	*e*Pn	**Pn**	**11 45 31.4**	**+1.3**
WB2				*e*Sn	Sn	11 47 47.7	-7.7
WC3	**Warramunga Arr**	**13.15**	**162**	*e*Pn	**Pn**	**11 45 31.5**	**+1.2**
COEN	**Coen**	**14.49**	**118**	*e*Pn	**P**	**11 45 50.4**	**+0.6**
COEN				*e*Sn	Sn	11 48 20.3	-7.9
AS31	**Alice Springs**	**16.57**	**167**	*e*P	**Pn**	**11 46 14.8**	**+1.9**
	2.8nm,0.4s						
ASAR	**Alice Springs**	**16.57**	**167**	Pn	**Pn**	**11 46 16.5**	**+3.6**
	1.1nm,0.3s,baz=346,slow=10,SNR=59						
ASAR				Sn	**S**	**11 49 12.1**	**-5.0**
	0.6nm,0.3s,baz=356,slow=27,SNR=7.0						
AS01	**Alice Springs**	**16.57**	**167**	*e*P	**Pn**	**11 46 16.4**	**+3.5**
MBWA	**Marble Bar**	**16.85**	**215**	*e*P	**P**	**11 46 16.2**	**+0.3**
	43nm,1.4s						
CISI	**Cisompet, Garu**	**21.97**	**268**	*e*P	**P**	**11 47 08.6**	**-2.8**
	102nm,1.3s						
FORT	**Forrest**	**23.29**	**184**	*e*P	**P**	**11 47 24.7**	**+1.2**
	65nm,1.5s						
STKA	**Stephens Creek**	**26.61**	**158**	P	P	11 48 06.0	+12
	3.3nm,1.1s,baz=333,slow=12,SNR=3.1						
STKA	**Stephens Creek**	**26.61**	**158**	*e*P	**P**	**11 47 55.8**	**+2.2**
	11nm,1.9s						
HNR	**Honiara**	**29.71**	**96**	*e*P	**P**	**11 48 23.4**	**+2.0**
	61nm,1.1s						
HHC	**Hu-ho-hao-te**	**50.95**	**342**	*e*P	**P**	**11 51 16.5**	**+1.1**
HHC				S	**S**	**11 58 20.8**	**0.0**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,54nm,5.3s						
HHC				LR	LR		
	comp=N,280nm,18.1s						
HHC				LR	LR		
	comp=E,140nm,18.2s						
HHC				LR	LR		
	comp=Z,360nm,20.7s						
WMQ	**Urumqi**	**63.75**	**327**	P	**P**	**11 52 46.0**	**+1.0**
WMQ				LR	LR		
	comp=N,80nm,18.7s						
WMQ				LR	LR		
	comp=Z,43nm,16.3s						
MKAR	**Makanchi Array**	**68.58**	**327**	P	P	11 53 25.0	+9.3
	comp=Z,0.4nm,0.4s,baz=123,slow=8.0,SNR=6.5						
LOHW	**Long Hollow**	**116.25**	**45**	*e*PKPdf	**PKPdf**	**12 00 55.5**	**+0.3**

*SOME **30** 12:19:02.3, 40°.28N×77°.50E, h0km*
*KRNET **30** 12:19:04.3±0.1, 40°.37N×77°.44E, mb3.2*
*NNC **30** 12:19:06.3±1.3, 40°.44N×77°.54E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=12.0km s-min=5.6km az=141.0*

ISC 30 12:19:06.3±1.4, 40°.39N±0°.06×77°.43E±0°.04, h10km, n44, σ1°.77/73, 38C-8D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.37**	**12**	⇑*i*P	**Pn**	**12 19 30.5**	**-1.4**
	baz=11						
TARG				⇑*i*S	**Sn**	**12 19 50.5**	**+0.1**
	baz=11						
NRN	**Naryn**	**1.50**	**314**	⇑*i*P	**Pn**	**12 19 33.0**	**-0.7**
	baz=14						
NRN				⇑*i*S	**Sn**	**12 19 54.4**	**+0.9**
	baz=14						
ULHL	**Ulahol**	**2.06**	**335**	P	**Pb**	**12 19 44.6**	**+0.7**
	SNR=13						
ULHL	**Ulahol**	**2.06**	**335**	⇑*i*P	**Pb**	**12 19 42.7**	**-1.3**
	baz=35						
ULHL				⇑*i*S	**Sb**	**12 20 11.0**	**+1.3**
	baz=35						
PRZ	**Przheval'sk**	**2.22**	**19**	⇑*i*P	**Pb**	**12 19 44.7**	**-1.9**
	baz=19						
PRZ				⇑*i*S	**Sb**	**12 20 14.4**	**+0.2**
	baz=19						
KZA	**Kyzart**	**2.36**	**317**	P	**Pb**	**12 19 49.2**	**+0.1**
	SNR=25						
KZA	**Kyzart**	**2.36**	**317**	⇑*e*P	**Pn**	**12 19 46.8**	**+1.3**
	baz=17						
KZA				⇑*i*S	**Sb**	**12 20 17.7**	**-0.7**
	baz=17						
BOOM	**Boomskoye usch**	**2.38**	**332**	⇑*i*P	**Pn**	**12 19 47.0**	**+1.4**
	baz=33						
BOOM				⇑*i*S	**Sb**	**12 20 17.9**	**-1.0**
	baz=33						
TNSS	**Tian-Shan**	**2.67**	**352**	*e*P	**Pb**	**12 19 54.7**	**+0.2**
	100nm,0.6s						
TNSS				*e*S	**Sg**	**12 20 32.4**	**+0.2**
	71nm,0.8s						
IZV	**Izvestkoviy**	**2.72**	**347**	*e*P	**Pb**	**12 19 54.9**	**-0.2**
	35nm,0.7s						
IZV				*e*S	**Sg**	**12 20 33.0**	**-0.6**
	50nm,0.9s						
SATY	**Saty**	**2.77**	**15**	⇑*i*P	**Pb**	**12 19 55.7**	**-0.2**
	29nm,0.5s						
SATY				⇑*i*S	**Sg**	**12 20 34.5**	**-0.7**
	77nm,1.0s						
MDOK	**Medeo**	**2.79**	**354**	⇓Pg	**Pb**	**12 19 56.8**	**+0.5**
	30nm,0.5s						
MDOK				⇑Lg	Lg	12 20 34.6	
	133nm,0.6s						
MDOK	**Medeo**	**2.79**	**354**	*e*P	**Pb**	**12 19 55.9**	**-0.4**
	30nm,0.6s						
MDOK				*e*S	**Sg**	**12 20 34.6**	**-1.3**
	72nm,0.9s						
MTBS	**Maitube**	**2.84**	**345**	*e*P	**Pb**	**12 19 57.3**	**+0.1**
	9.9nm,0.2s						
MTBS				*e*S	**Sg**	**12 20 36.8**	**-0.8**
	22nm,0.5s						
KOTS	**Kotyrbulak**	**2.85**	**355**	*e*P	**Pb**	**12 19 57.1**	**-0.3**
	29nm,0.4s						
KOTS				*e*S	**Sg**	**12 20 36.6**	**-1.5**
	50nm,0.8s						
UCH	**Uchtor**	**2.86**	**311**	P	**Pb**	**12 19 55.9**	**-1.9**
	SNR=19						
UCH	**Uchtor**	**2.86**	**311**	⇑*e*P	**Pn**	**12 19 54.1**	**+1.6**
	baz=11						
UCH				⇑*i*S	**Sn**	**12 20 30.5**	**+3.3**
	baz=11						
KST	**Kastek**	**2.87**	**338**	*e*P	**Pb**	**12 19 58.1**	**+0.3**
	12nm,0.4s						
KST				⇑*i*S	**Sg**	**12 20 38.1**	**-0.5**
	34nm,0.5s						
TKM2	**Tokmak 2**	**2.88**	**332**	P	**Pb**	**12 19 56.0**	**-1.9**
	SNR=21						
TKM2	**Tokmak 2**	**2.88**	**332**	⇑*e*P	**Pn**	**12 19 54.2**	**+1.7**
	baz=32						
TKM2				⇑*i*S	**Sn**	**12 20 31.0**	**+3.7**
	baz=32						
ZHN	**Zhinishke**	**2.88**	**15**	*e*P	**Pb**	**12 19 57.1**	**-0.8**
	10nm,0.3s						
ZHN				*e*S	**Sg**	**12 20 36.8**	**-2.0**
	35nm,0.4s						
KBK	**Karagaybulak**	**2.94**	**321**	P	**Pb**	**12 19 59.7**	**+0.9**
	SNR=12						
UZB	**Uzynbulak**	**3.00**	**23**	*e*P	**Pb**	**12 19 59.1**	**-0.9**
	12nm,0.6s						
UZB				*e*S	**Sg**	**12 20 40.1**	**-2.7**
	56nm,0.8s						
SFK	**Sufi-Kurgan**	**3.03**	**264**	⇑P	**Pn**	**12 19 56.7**	**+2.2**
	4.2nm,0.3s						
SFK				⇑S	**Sb**	**12 20 35.4**	**-2.2**
	28nm,0.4s						
SFK	**Sufi-Kurgan**	**3.03**	**264**	⇑*i*P	**Pn**	**12 19 56.5**	**+2.0**
	baz=65						
SFK				⇑*i*S	**Sn**	**12 20 34.1**	**+3.1**
	baz=65						
AAK	**Ala-Archa**	**3.15**	**317**	⇓Pg	**Pb**	**12 20 03.0**	**+0.6**
	5.9nm,0.4s						
AAK				⇓Lg	Lg	12 20 46.0	
	64nm,0.9s						
AAK	**Ala-Archa**	**3.15**	**317**	⇑*i*P	**Pn**	**12 19 58.1**	**+2.0**
	baz=17						
AAK				⇑*i*S	**Sn**	**12 20 36.7**	**+2.9**
	baz=17						
SHLS	**Shalkode**	**3.16**	**28**	*e*P	**Pb**	**12 20 03.8**	**+1.2**
	16nm,0.5s						
SHLS				*e*S	**Sg**	**12 20 48.0**	**+0.2**
	81nm,0.5s						
KPKS	**Kokpek**	**3.22**	**17**	*e*P	**Pb**	**12 20 03.0**	**-0.6**
	19nm,0.5s						
KPKS				*e*S	**Sg**	**12 20 46.9**	**-2.7**
	90nm,0.3s						
PDGK	**Podgornoye**	**3.32**	**27**	⇑Pg	**Pb**	**12 20 04.7**	**-0.6**
	7.5nm,0.5s						
PDGK				⇑Lg	Lg	12 20 49.1	
	135nm,0.8s						
PDGK	**Podgornoye**	**3.32**	**27**	⇓*i*P	**Pn**	**12 20 00.3**	**+1.9**
	baz=27						
PDGK				⇓*i*S	**Sn**	**12 20 40.4**	**+2.4**
	baz=27						
KTBS	**Karatobe**	**3.37**	**351**	*e*P	**Pb**	**12 20 06.8**	**+0.7**
	19nm,0.6s						
KTBS				*e*S	**Sg**	**12 20 53.0**	**-1.5**
	19nm,0.4s						
CHKK	**Chushkaly**	**3.48**	**355**	⇑*i*P	**Pb**	**12 20 08.2**	**+0.2**
	25nm,0.5s						
CHKK				⇑*i*S	**Sg**	**12 20 55.5**	**-2.6**
	62nm,0.7s						
ARSB	**Arslanbob**	**3.50**	**287**	⇑*i*P	**Pn**	**12 20 02.8**	**+1.9**
	baz=87						
ARSB				⇑*i*S	**Sn**	**12 20 44.7**	**+2.2**
	baz=87						
EKS2	**Erkin-Say**	**3.56**	**311**	P	**Pb**	**12 20 06.2**	**-3.2**
	SNR=7.6						
KUU	**Kurty**	**3.60**	**347**	*e*P	**Pb**	**12 20 10.4**	**+0.4**
	9.1nm,0.5s						
KUU				*e*S	**Sg**	**12 20 59.7**	**-2.1**
	16nm,0.8s						
USP	**Ospenovka**	**3.62**	**324**	P	**Pb**	**12 20 11.7**	**+1.4**
	SNR=16						
MNBS	**Baschi**	**3.76**	**11**	*e*P	**Pb**	**12 20 12.6**	**-0.3**
	11nm,0.3s						
MNBS				*e*S	**Sb**	**12 21 03.2**	**+4.7**
	37nm,0.7s						
ARXS	**Arharly**	**3.84**	**4**	*e*P	**Pb**	**12 20 15.1**	**+1.0**
	7.9nm,0.6s						
ARXS				*e*S	**Sg**	**12 21 07.4**	**-2.1**
	38nm,0.7s						
MNAS	**Manas**	**4.25**	**301**	⇓Pn	**Pn**	**12 20 15.0**	**+3.7**
	1.2nm,0.6s						
MNAS				⇑Lg	Lg	12 21 22.4	
	11nm,0.9s						
ARK	**Arkit**	**4.36**	**291**	⇑*i*P	**Pn**	**12 20 13.6**	**+0.8**
	baz=91						
ARK				⇑*i*S	**Sn**	**12 21 04.9**	**+1.2**
	baz=91						
KK31	**Karatay Array**	**5.84**	**300**	⇑Pg	**Pg**	**12 20 54.7**	**-3.5**
	0.5nm,0.4s						
KK31				⇓Lg	Lg	12 22 14.6	
	3.3nm,0.6s						
MAKZ	**Makanchi**	**7.22**	**26**	⇑Lg	Lg	12 22 52.8	
	4.2nm,1.2s						
MK31	**Makanchi Array**	**7.31**	**27**	⇑Sn	**Sn**	**12 22 16.9**	**+0.7**
	1.6nm,0.7s						
MK31				⇓Lg	Lg	12 22 55.0	
	1.2nm,0.6s,baz=204,slow=28,SNR=3.8						

IDC 30 12:19:21.6±3.2, 33°.09S×178°.82W, h0km, mb4.0/2, mb1 4.3/3, mb1mx3.7/41, mbtmp4.0/3, ML3.6/1, MS3.6/2, Ms1 3.6/2, ms1mx2.8/35, Error ellipse: s-maj=70.8km s-min=46.6km az=119.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.13**	**212**	Pn	Pn	12 20 52.5	-0.8
	1.5nm,0.3s,baz=56,slow=7.3,SNR=15						
URZ				Sn	Sn	12 22 01.3	-2.9
	1.7nm,0.3s,baz=171,slow=22,SNR=7.2						
DZM	**Mont Dzumac**	**17.04**	**306**	LR	LR	12 28 18.4	
	comp=Z,144nm,20.1s,baz=138,slow=32						
PMG	**Port Moresby**	**39.21**	**299**	LR	LR	12 38 45.9	
	comp=Z,155nm,21.9s,baz=88,slow=30						
ASAR	**Alice Springs**	**42.34**	**270**	P	P	12 27 17.8	+0.2
	2.2nm,0.8s,baz=107,slow=7.4,SNR=21						
WRA	**Warramunga Arr**	**43.58**	**275**	P	P	12 27 27.3	-0.3
	2.3nm,0.9s,baz=115,slow=8.0,SNR=12						
FINES	**FINESS Array B**	**147.40**	**338**	PKPbc	PKPbc	12 39 05.7	-0.8
	2.1nm,0.8s,baz=64,slow=3.2,SNR=4.4						

*ISCJB **30** 12:32:36.1±0.5, 18°.85N±0°.05×145°.4E±0°.2, h214km, mb3.8/15, Error ellipse: s-maj=22.0km s-min=7.1km az=177.5*
*IDC **30** 12:32:38.6±2.0, 18°.84N×145°.43E, h222km±20km, mb3.6/14, mb1 3.6/17, mb1mx3.4/62, mbtmp4.1/17, Error ellipse: s-maj=20.8km s-min=8.9km az=87.0*

ISC 30 12:32:37.5±0.6, 18°.85N±0°.07×145°.4E±0°.2, h214km, n19, σ1°.00/20, mb3.9/15, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.25**	**186**	P	**Pn**	**12 33 57.2**	**+1.6**
	13nm,0.3s,baz=157,slow=0.5,SNR=14						
GUMO				S	**S**	**12 34 55.7**	**-1.4**
	17nm,0.3s,baz=209,slow=19,SNR=3.8						
JCJ	**Chichijima**	**8.73**	**341**	P	**Pn**	**12 34 39.5**	**-0.7**
	baz=90,slow=20						
JCJ				S	S	12 36 08.6	-10
	baz=335,slow=15						
MJAR	**Matsushiro Arr**	**18.73**	**342**	P	**P**	**12 36 41.1**	**+0.7**
	0.3nm,0.3s,baz=169,slow=12,SNR=4.7						
ASAJ	**Asahikawa**	**25.30**	**355**	P	**P**	**12 37 46.2**	**+1.8**
	2.0nm,0.6s,baz=190,slow=11,SNR=8.1						
CTA	**Charters Tower**	**38.70**	**179**	P	**P**	**12 39 40.9**	**-0.1**
	3.8nm,0.7s,baz=4.4,slow=9.2,SNR=7.4						
WRA	**Warramunga Arr**	**40.05**	**196**	P	**P**	**12 39 52.8**	**+0.7**
	15nm,0.7s,baz=34,slow=9.3,SNR=65						
FITZ	**Fitzroy Crossi**	**41.54**	**209**	P	**P**	**12 40 05.1**	**+0.8**
	7.0nm,0.6s,baz=32,slow=9.0,SNR=50						
ASAR	**Alice Springs**	**43.72**	**195**	P	**P**	**12 40 22.1**	**+0.3**
	2.6nm,0.5s,baz=13,slow=6.5,SNR=40						
DZM	**Mont Dzumac**	**45.58**	**152**	P	**P**	**12 40 36.7**	**+0.2**
	9.6nm,0.9s,baz=280,slow=3.5,SNR=10						
STKA	**Stephens Creek**	**50.57**	**184**	P	**P**	**12 41 13.4**	**-1.0**
	1.4nm,0.5s,baz=359,slow=8.1,SNR=7.3						
MKAR	**Makanchi Array**	**58.16**	**314**	P	**P**	**12 42 10.0**	**+1.0**
	0.3nm,0.7s,baz=90,slow=9.7,SNR=3.8						
KURBB	**Kurchatov Arra**	**61.03**	**318**	P	**P**	**12 42 28.5**	**0.0**
	0.6nm,0.5s,baz=95,slow=7.2,SNR=6.0						
ILAR	**Eielson Array**	**63.63**	**26**	P	**P**	**12 42 44.8**	**-0.7**
	0.3nm,0.5s,baz=275,slow=5.3,SNR=4.6						
URZ	**Urewera**	**64.13**	**153**	P	**P**	**12 42 47.9**	**-1.1**
	4.7nm,0.6s,baz=284,slow=4.2,SNR=3.8						
BVAR	**Borovoye Array**	**66.19**	**320**	P	**P**	**12 43 01.8**	**-0.4**
	0.9nm,0.6s,baz=116,slow=6.6,SNR=6.0						
YKA	**Yellowknife Ar**	**77.99**	**28**	P	**P**	**12 44 12.1**	**+0.2**
	0.4nm,0.6s,baz=291,slow=5.6,SNR=5.9						
NVAR	**Mina Array Bea**	**83.26**	**52**	P	**P**	**12 44 41.7**	**+1.0**
	1.1nm,0.6s,baz=268,slow=5.9,SNR=14						
FINES	**FINESS Array B**	**86.64**	**335**	P	**P**	**12 44 55.2**	**-1.5**
	2.3nm,0.9s,baz=73,slow=6.4,SNR=4.2						
LPAZ	**La Paz**	**147.95**	**91**	PKPbc	**PKPbc**	**12 51 59.4**	**+0.2**
	1.1nm,0.6s,baz=272,slow=2.9,SNR=4.7						

*IDC **30** 12:33:31.4±2.8, 8°.23S×156°.19E, h98km±32km, mb3.7/8, mb1 3.8/10, mb1mx3.6/48, mbtmp4.1/10, MS3.4/13, Ms1 3.4/13, ms1mx3.2/34, Error ellipse: s-maj=35.3km s-min=17.8km az=133.0*

ISC 30 12:33:22.3±0.7, 8°.1S±0°.1×156°.47E±0°.07, h18km, n20, σ2°.05/14, mb4.1/8, MS3.4/11, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.69**	**112**	P	**Pb**	**12 34 28.0**	**+1.0**
HNR				S	**Sg**	**12 35 19.0**	**-1.8**
HNR	**Honiara**	**3.69**	**112**	P	**Pb**	**12 34 28.9**	**+2.0**
	7.8nm,0.3s,baz=310,slow=1.8,SNR=6.1						
HNR				S	**Sg**	**12 35 21.1**	**+0.3**
	12nm,0.3s,baz=291,slow=17,SNR=3.2						
HNR				LR	LR	12 35 50.8	
	comp=Z,294nm,20.9s,baz=137,slow=36						
PMG	**Port Moresby**	**9.30**	**261**	P	**Pn**	**12 35 39.1**	**+3.5**
	1.0nm,0.3s,baz=111,slow=12,SNR=3.9						
CTA	**Charters Tower**	**15.50**	**219**	P	**P**	**12 37 04.7**	**+0.2**
	0.1nm,0.3s,baz=35,slow=9.7,SNR=6.1						
DZM	**Mont Dzumac**	**16.90**	**146**	LR	LR	12 43 35.4	
	comp=Z,258nm,18.0s,baz=302,slow=36						
GUMO	**Guam**	**24.42**	**332**	LR	LR	12 47 01.7	
	comp=Z,49nm,20.9s,baz=146,slow=33						
WRA	**Warramunga Arr**	**24.46**	**239**	P	**P**	**12 38 38.7**	**-1.8**
	8.6nm,0.9s,baz=65,slow=9.3,SNR=33						
ASAR	**Alice Springs**	**26.61**	**232**	P	**P**	**12 38 58.2**	**-1.7**
	1.7nm,0.8s,baz=63,slow=8.8,SNR=21						
ASAR				LR	LR	12 48 31.8	
	comp=Z,99nm,20.7s,baz=50,slow=34						
FITZ	**Fitzroy Crossi**	**31.59**	**249**	P	**P**	**12 39 41.6**	**-2.7**
	1.9nm,0.7s,baz=84,slow=9.3,SNR=10						
FITZ				LR	LR	12 52 27.6	
	comp=Z,110nm,18.3s,baz=79,slow=36						
AFI	**Afiamalu**	**31.68**	**103**	LR	LR	12 52 06.6	
	comp=Z,74nm,18.6s,baz=179,slow=35						
DAV	**Davao City (W)**	**34.28**	**295**	LR	LR	12 51 42.0	
	comp=Z,22nm,21.0s,baz=157,slow=32						
URZ	**Urewera**	**35.35**	**151**	LR	LR	12 52 34.9	
	comp=Z,95nm,19.1s,baz=4.5,slow=32						
RPZ	**Rata Peaks**	**37.72**	**163**	LR	LR	12 56 19.8	
	comp=Z,70nm,18.4s,baz=28,slow=36						
MJAR	**Matsushiro Arr**	**47.59**	**340**	P	**P**	**12 41 56.3**	**-0.9**
	2.4nm,0.8s,baz=173,slow=7.5,SNR=7.4						
JNU	**Nakatsue**	**47.67**	**331**	LR	LR	12 59 53.5	
	comp=Z,27nm,20.9s,baz=123,slow=33						
KSRS	**Korea Array**	**52.58**	**331**	P	**P**	**12 42 36.6**	**+1.6**
	1.3nm,0.8s,baz=156,slow=6.2,SNR=4.4						
KSRS				LR	LR	13 03 25.5	
	comp=Z,19nm,19.3s,baz=170,slow=34						
PETK	**Petropavlovsk-**	**60.96**	**1**	P	**P**	**12 43 35.9**	**+1.6**
	2.6nm,0.9s,baz=158,slow=6.1						
SONM	**Songino Array**	**71.04**	**327**	P	**P**	**12 44 36.8**	**-2.6**
	0.8nm,0.5s,baz=141,slow=5.5,SNR=2.8						
SONM				LR	LR	13 15 45.7	
	comp=Z,25nm,19.9s,baz=87,slow=36						
ZALV	**Zalesovo Beam**	**85.90**	**326**	P	**P**	**12 46 00.5**	**-0.5**
	0.6nm,0.5s,baz=117,slow=5.0,SNR=3.0						
BVAR	**Borovoye Array**	**94.04**	**323**	LR	LR	13 28 06.4	
	comp=Z,13nm,21.8s,baz=220,slow=35						

*NIED **30** 12:42:00, 37°.70N×141°.70E, h59km, Mw3.4 Best double couple: M0 1.67000×10^14 NP1:φ0=199.00000°, δ51.00000°, λ128.00000°. NP2:φ0=328.00000°, δ52.00000°, λ53.00000°.*

JMA 30 12:42:20.0, 37°.69N×141°.74E, h45km±1km, M3.6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.76**	**245**	P	Pn	12 42 34.4	0.0
JFK				*e*S	Sn	12 42 44.5	-0.3
JMM	**Marumori**	**0.77**	**283**	P	Pn	12 42 34.6	+0.1
JMM				*e*S	Sn	12 42 45.0	0.0
JIO	**Ouri**	**0.82**	**338**	P	Pn	12 42 35.3	+0.1
JIO				S	Sn	12 42 45.9	-0.4
ONAJ	**Iwakimizuishiy**	**0.95**	**232**	P	Pn	12 42 36.9	-0.1
ONAJ				S	Sn	12 42 48.9	-0.6
JOU	**Okura**	**1.08**	**309**	P	Pn	12 42 39.0	+0.2
JOU				S	Sn	12 42 53.3	+0.6
JFT	**Otama**	**1.13**	**262**	P	Pn	12 42 40.2	+0.8
JFT				S	Sn	12 42 54.8	+1.1
JMK	**Ichinoseki**	**1.32**	**342**	P	Pn	12 42 42.6	+0.6
JMK				*e*S	Sn	12 42 58.9	+0.4
JYS	**Shirataka**	**1.43**	**292**	P	Pn	12 42 44.1	+0.7
**JY

28nm,0.6s
MK31 Makanchi Array 3.62 336 Pn **Pn 12 48 34.3 +0.1**
0.7nm,0.3s,baz=151,slow=15,SNR=105
MK31 ⇑Pg **Pb 12 48 44.4 +2.2**
1.5nm,0.2s,baz=147,slow=15,SNR=24
MK31 ⇑Lg Lg 12 49 30.6
29nm,0.5s,baz=142,slow=29,SNR=14
SHLS Shalkode 3.64 266 *e*P **Pb 12 48 40.9 -1.6**
7.5nm,0.3s
SHLS *e*S **Sb 12 49 25.9 -0.9**
77nm,0.4s
MAKZ Makanchi 3.74 333 ⇑Pn **Pn 12 48 35.7 0.0**
2.0nm,0.6s
MAKZ ⇑Pg **Pb 12 48 46.0 +1.9**
5.3nm,0.5s
MAKZ ⇑Lg Lg 12 49 36.0
46nm,0.6s
UZB Uzynbulak 3.96 267 *e*P **Pg 12 48 52.1 -1.8**
3.9nm,0.2s
UZB *e*S **Sg 12 49 44.1 -1.2**
20nm,0.4s
ZSN Zaisan 3.96 4 *e*P **Pb 12 48 48.6 +0.7**
3.8nm,0.3s
ZSN *e*S **Sb 12 49 38.2 +2.3**
17nm,0.5s
KAPS Kapalarasan 4.05 298 *e*P **Pg 12 48 55.3 -0.3**
3.0nm,0.3s
KAPS *e*S **Sg 12 49 50.1 +2.1**
28nm,0.5s
MNBS Baschi 4.40 280 *e*P **Pb 12 48 58.4 +2.9**
5.6nm,0.6s
MNBS *e*S **Sg 12 49 55.6 -3.8**
12nm,0.4s
SATY Saty 4.42 266 *e*P **Pb 12 48 59.6 +3.8**
14nm,0.5s
SATY *e*S **Sg 12 49 57.9 -2.0**
37nm,0.3s
KURS Kuram 4.55 272 *e*P **Pb 12 49 02.3 +4.2**
2.5nm,0.4s
KURS *e*S **Sg 12 50 02.3 -2.0**
14nm,0.6s
MDOK Medeo 5.39 269 ⇓Pg **Pb 12 49 16.7 +4.2**
2.9nm,0.7s
MDOK ⇓Lg Lg 12 50 28.2
14nm,0.6s
TNSS Tian-Shan 5.48 268 *e*P **Pg 12 49 20.6 -2.5**
5.2nm,0.3s
TNSS *e*S **Sg 12 50 34.1 0.0**
8.1nm,0.3s
IZV Izvestkoviy 5.73 268 *e*P **Pg 12 49 25.2 -2.5**
2.2nm,0.4s
IZV *e*S **Sg 12 50 40.9 -0.9**
17nm,0.3s
TKM2 Tokmak 2 6.48 268 ⇑Pn **Pn 12 49 14.0 +0.4**
1.1nm,0.5s
TKM2 ⇓Pg Pg 12 49 37.4 -4.7
2.6nm,0.8s
TKM2 ⇓Lg Lg 12 51 06.3
3.9nm,0.5s
KURBB Kurchatov Arra 8.18 333 ⇑Pn **Pn 12 49 35.2 -1.5**
0.9nm,0.4s
KURBB ⇑Sn **Sn 12 51 08.7 -0.5**
7.0nm,0.7s
KURBB ⇓Lg Lg 12 51 58.8
38nm,0.7s
KURK Kurchatov 8.23 333 ⇑Pn **Pn 12 49 37.1 -0.3**
1.6nm,0.8s
KURK ⇓Sn **Sn 12 51 07.7 -2.7**
2.2nm,0.5s
KURK ⇑Lg Lg 12 51 57.9
20nm,0.8s

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*ISCJB **30** 12:48:03.5±0.7, 47°.06N±0°.09×152°.8E±0°.1, h56km, mb3.8/9, Error ellipse: s-maj=17.7km s-min=4.6km az=136.4*
*SKHL **30** 12:48:03.7±0.3, 46°.91N×152°.92E, h60km±3km, mb4.5/4*
*MOS **30** 12:48:03.7±1.4, 46°.93N×152°.90E, h61km, mb4.5/4, Error ellipse: s-maj=23.2km s-min=11.4km az=54.2*
*IDC **30** 12:48:07.8±3.0, 47°.05N×152°.86E, h80km±26km, mb3.5/9, mb1 3.6/11, mb1mx3.3/65, mbtmp3.8/11, Error ellipse: s-maj=29.0km s-min=18.1km az=136.0*
ISC 30 12:48:04.6±0.9, 46°.9N±0°.1×152°.9E±0°.1, h56km, n32, σ1°55/32, mb3.8/9, 1C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.91**	**246**	*e*P	**Pn**	**12 49 01.7**	**-0.4**
KUR				AMB	AMB	12 49 12.0	
	73nm,0.3s						
KUR				AMB	AMB	12 49 12.0	
	16nm,0.3s						
KUR				AMB	AMB	12 49 12.0	
	32nm,0.3s						
KUR				*e*S	**Sn**	**12 49 45.0**	**-1.6**
KUR				A	A	12 49 53.5	
	112nm,0.3s						
KUR				A	A	12 49 53.5	
	48nm,0.3s						
KUR	**Kuril'sk**	**3.91**	**246**	*e*PN	**Pn**	**12 49 03.6**	**+1.5**
KUR				*e*S	**Sn**	**12 49 47.4**	**+0.8**
KUR				pmax	pmax		
	comp=Z,32nm,0.3s						
KUR				pmax	pmax		
	comp=E,16nm,0.4s						
KUR				pmax	pmax		
	comp=N,16nm,0.2s						
KUR				smax	smax		
	comp=N,93nm,0.3s						
KUR				smax	smax		
	comp=E,30nm,0.3s						
SKR	**Severo-Kuril's**	**4.30**	**28**	*e*P	**Pn**	**12 49 07.1**	**-0.4**
SKR				*e*S	**Sn**	**12 49 54.9**	**-1.4**
SKR				A	A	12 49 56.4	
	comp=E,70nm,0.4s						
SKR				A	A	12 49 56.4	
	comp=E,63nm,0.4s						
SKR	**Severo-Kuril's**	**4.30**	**28**	*e*PN	**Pn**	**12 49 09.0**	**+1.5**
SKR				*e*S	**Sn**	**12 49 55.0**	**-1.4**
SKR				smax	smax		
	comp=E,73nm,0.4s						
SKR				smax	smax		
	comp=N,79nm,0.3s						
PAU	**Pauzhetka**	**5.20**	**28**	*e*P	**Pn**	**12 49 19.7**	**-0.1**
PAU				AMB	AMB	12 49 26.3	
	comp=N,122nm,0.9s						
PAU				*e*S	**Sn**	**12 50 17.3**	**-1.1**
PAU				A	A	12 50 18.3	
	comp=N,190nm,0.9s						
PAU				A	A	12 50 18.3	
	comp=N,354nm,0.9s						
SHO	**Shikotan**	**5.27**	**237**	*i* P	**Pn**	**12 49 18.0**	**-2.7**
SHO				AMB	AMB	12 49 29.0	
	comp=N,9.0nm,0.4s						
SHO				AMB	AMB	12 49 29.0	
	comp=N,14nm,0.4s						
SHO				*i* S	**Sn**	**12 50 16.1**	**-4.0**
SHO				A	A	12 50 37.6	
	comp=N,58nm,0.4s						
SHO				A	A	12 50 37.6	
	comp=N,63nm,0.4s						
SHO	**Shikotan**	**5.27**	**237**	*c i*PN	**Pn**	**12 49 18.8**	**-1.9**
SHO				pmax	pmax		
	comp=N,9.0nm,0.4s						
SHO				pmax	pmax		
	comp=E,9.0nm,0.4s						
SHO				pmax	pmax		
	comp=Z,14nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**5.75**	**242**	*e*P	**Pn**	**12 49 27.3**	**0.0**
YUK				AMB	AMB	12 49 39.0	
	comp=Z,24nm,0.4s						
YUK				AMB	AMB	12 49 39.0	
	comp=Z,30nm,0.4s						
YUK				AMB	AMB	12 49 39.0	
	comp=Z,45nm,0.4s						
YUK				*e*S	**Sn**	**12 50 29.1**	**-2.8**
YUK				A	A	12 50 55.0	
	comp=Z,94nm,0.5s						
YUK				A	A	12 50 55.0	
	comp=Z,152nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**5.75**	**242**	*e*PN	**Pn**	**12 49 27.7**	**+0.4**
YUK				*e*S	**Sn**	**12 50 32.6**	**+0.7**
YUK				pmax	pmax		
	comp=N,45nm,0.5s						
YUK				pmax	pmax		
	comp=Z,24nm,0.5s						
YUK				pmax	pmax		
	comp=E,30nm,0.2s						
YUK				smax	smax		
	comp=E,152nm,0.5s						
YUK				smax	smax		
	comp=N,94nm,0.4s						
PETK	**Petropavlovsk-**	**6.90**	**25**	P	**Pn**	**12 49 44.6**	**+1.5**
	baz=185,slow=12						
JKA	**Kamikawa-asahi**	**7.78**	**253**	*e*P	**Pn**	**12 49 57.6**	**+2.5**
ASAJ	**Asahikawa**	**7.78**	**253**	P	**Pn**	**12 49 57.6**	**+2.5**
	comp=N,0.6nm,0.3s,baz=95,slow=19,SNR=14						
TYV	**Tymovskoe**	**7.83**	**304**	*e*P	**Pn**	**12 49 55.6**	**-0.1**
KSRS	**Korea Array**	**20.73**	**252**	P	Pn	12 52 44.0	+0.8
	comp=N,1.2nm,0.8s,baz=52,slow=8.4,SNR=4.0						
KSRS	**Korea Array**	**20.73**	**252**	P	Pn	12 52 44.0	+0.8
H11N2	**WAKE ISLAND Hy**	**29.44**	**152**	T	T	13 25 34.4	
	baz=340,slow=76,SNR=80						
H11N1	**WAKE ISLAND Hy**	**29.45**	**152**	T	T	13 25 36.9	
	baz=340,slow=76,SNR=44						
H11N3	**WAKE ISLAND Hy**	**29.46**	**152**	T	T	13 25 41.3	
	baz=340,slow=76,SNR=25						
H11S1	**WAKE ISLAND Hy**	**30.53**	**154**	T	T	13 26 49.3	
	baz=341,slow=76,SNR=76						
H11S3	**WAKE ISLAND Hy**	**30.54**	**154**	T	T	13 26 50.1	
	baz=341,slow=76,SNR=88						
H11S2	**WAKE ISLAND Hy**	**30.55**	**154**	T	T	13 26 42.6	
	baz=341,slow=76,SNR=80						
KURK	**Kurchatov**	**47.16**	**303**	*e*P	**P**	**12 56 30.6**	**-0.5**
KURK	**Kurchatov**	**47.16**	**303**	P	**P**	**12 56 30.6**	**-0.5**
KURBB	**Kurchatov Arra**	**47.25**	**303**	P	**P**	**12 56 30.6**	**-1.2**
	comp=N,0.3nm,0.4s,baz=66,slow=8.7,SNR=3.4						
YKA	**Yellowknife Ar**	**50.85**	**37**	P	**P**	**12 57 00.6**	**+1.4**
	comp=N,0.5nm,0.8s,baz=294,slow=7.0,SNR=3.6						
CMAR	**Chiang Mai Arr**	**52.29**	**256**	P	**P**	**12 57 11.5**	**+1.0**
	comp=N,0.8nm,0.5s,baz=34,slow=6.6,SNR=3.6						
FINES	**FINESS Array B**	**63.82**	**335**	P	**P**	**12 58 30.1**	**-0.4**
	comp=N,0.8nm,0.3s,baz=36,slow=7.6,SNR=14						
NB2	**NORSAR Subarra**	**68.01**	**341**	P	**P**	**12 58 57.1**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=27,slow=6.2						
HFS	**Hagfors**	**68.24**	**339**	P	**P**	**12 58 58.9**	**+0.1**
	comp=Z,2.6nm,0.4s,baz=56,slow=5.4,SNR=24						
AKASG	**Malin Array Be**	**71.32**	**326**	P	**P**	**12 59 17.7**	**-0.2**
	comp=Z,1.5nm,0.3s,baz=34,slow=6.0,SNR=4.8						
ASAR	**Alice Springs**	**72.34**	**198**	P	**P**	**12 59 24.8**	**+0.5**
	comp=Z,0.2nm,0.7s,baz=18,slow=5.1,SNR=4.5						
TXAR	**Lajitas Array**	**77.51**	**60**	P	**P**	**12 59 54.5**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=303,slow=4.2,SNR=5.1						

MAN 30 13:09:12.6, 13°.71N×120°.64E, h33km, mb4.1, ML2.9, MS2.5, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.38**	**274**	*e*P	Pn	13 09 22.9	+1.0
LUBP				*e*S	Sn	13 09 29.8	+1.8
LQP	**Lukban**	**0.96**	**65**	⇑*e*P	Pn	13 09 26.6	-3.4
BOAC	**Boac**	**1.20**	**102**	*e*P	Pn	13 09 32.3	-0.8
BOAC				*e*S	Sn	13 09 48.9	+0.7
SJMP	**San Jose**	**1.32**	**159**	*e*P	Pn	13 09 34.8	-0.1
SJMP				*e*S	Sn	13 09 51.3	0.0
BUSP	**Coron**	**1.75**	**194**	*e*P	Pn	13 09 41.4	+0.7
BUSP				*e*S	Sn	13 10 02.5	+0.7
OTRP	**Odiongan**	**1.90**	**135**	*e*P	Pn	13 09 43.7	+1.0

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*SOME **30** 13:10:48.8, 44°.80N×81°.88E, h0km*
*NNC **30** 13:10:48.5±2.3, 44°.70N×82°.22E, h0km, mb3.2, mpv2.8, Error ellipse: s-maj=30.6km s-min=5.6km az=116.0*
ISC 30 13:10:49.5±2.8, 44°.76N±0°.05×81°.96E±0°.09, h5km±18km, n10, σ0°81/19, 3C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.75**	**222**	*e*P	**Pb**	**13 11 22.2**	**0.0**
KTMS				*e*S	**Sg**	**13 11 46.6**	**+0.8**
	13nm,0.2s						
KAPS	**Kapalarasan**	**1.92**	**287**	⇓*i*P	**Pb**	**13 11 24.9**	**-0.1**
KAPS				*e*S	**Sg**	**13 11 51.0**	**-0.2**
	8.7nm,0.4s						
MK31	**Makanchi Array**	**2.05**	**6**	P	**Pn**	**13 11 24.7**	**+0.2**
	3.4nm,0.3s,baz=191,slow=14,SNR=117						
MK31				⇑S	**Sb**	**13 11 52.9**	**+0.1**
	1.3nm,0.2s,baz=187,slow=29,SNR=27						
MAKZ	**Makanchi**	**2.05**	**0**	⇓P	**Pn**	**13 11 24.8**	**+0.3**
	1.7nm,0.3s						
MAKZ				⇑S	**Sb**	**13 11 53.2**	**+0.3**
	12nm,0.5s						
PDGK	**Podgornoye**	**2.29**	**232**	⇑S	**Sb**	**13 12 00.8**	**+0.9**
	12nm,0.5s						
SHLS	**Shalkode**	**2.42**	**229**	*e*P	**Pn**	**13 11 29.4**	**-0.3**
	5.2nm,0.3s						
SHLS				*e*S	**Sn**	**13 11 58.5**	**-1.1**
	16nm,0.4s						
MNBS	**Baschi**	**2.64**	**256**	*e*P	**Pb**	**13 11 38.0**	**+0.7**
	4.0nm,0.3s						
MNBS				*e*S	**Sg**	**13 12 13.6**	**-0.8**
	11nm,0.2s						
KPKS	**Kokpek**	**2.69**	**242**	*e*P	**Pb**	**13 11 37.7**	**-0.5**
	4.8nm,0.1s						
KPKS				*e*S	**Sb**	**13 12 12.8**	**+1.3**
	19nm,0.4s						
ARXS	**Arharly**	**3.01**	**261**	*e*P	**Pb**	**13 11 44.5**	**+1.0**
	2.4nm,0.3s						
ARXS				*e*S	**Sg**	**13 12 25.1**	**-1.1**
	10nm,0.4s						
SATY	**Saty**	**3.08**	**238**	*e*P	**Pb**	**13 11 43.9**	**-1.0**
	4.4nm,0.2s						
SATY				*e*S	**Sb**	**13 12 23.6**	**+0.9**
	4.9nm,0.3s						

MAN 30 13:22:58.6, 9°.29N×125°.77E, h1km, mb3.7, ML2.4, MS1.9, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.35**	**205**	*e*P	Pg	13 23 05.7	+0.3
BUTP				*e*S	Sb	13 23 12.5	-1.2
SCPH	**Surigao**	**0.56**	**330**	⇓*e*P	Pg	13 23 09.8	+0.3
BUKP	**Musuan**	**1.57**	**207**	*e*P	Pn	13 23 27.0	-0.6
BUKP				*e*S	Sg	13 23 49.1	+0.1

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*NEIC **30** 13:40:50.0±0.0, 16°.42N×95°.08W, h96km, MD4.0(MEX), After MEX.*
MEX 30 13:40:45.9±0.6, 16°.53N×95°.01W, h109km±15km, MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.30**	**235**	*e*P	Pn	13 41 08.6	-1.7
HUIG				*e*S	Sn	13 41 27.2	-1.6
HUIG	**Huatulco**	**1.30**	**235**	*e*P	Pn	13 41 08.8	-1.5
HUIG				*e*S	Sn	13 41 27.2	-1.6
VHO	**Vista Hermosa**	**1.73**	**288**	*i* P	Pn	13 41 14.7	-1.0
TGIG		**1.83**	**82**	*e*P	Pn	13 41 14.4	-2.4
TGIG				*e*S	Sn	13 41 38.7	-1.6
TGIG		**1.83**	**82**	*e*P	Pn	13 41 16.5	-0.3
TGIG				*i* S	Sn	13 41 38.7	-1.6
PCIG		**1.91**	**115**	*e*P	Pn	13 41 16.8	-0.9
PCIG				*e*S	Sn	13 41 43.1	+1.1
PCIG		**1.91**	**115**	*e*P	Pn	13 41 16.9	-0.8
PCIG				*e*S	Sn	13 41 42.6	+0.6
CCIG	**Comitan**	**2.77**	**95**	*e*P	Pn	13 41 31.6	+2.6
CCIG				*e*S	Sn	13 42 05.3	+3.1
CCIG	**Comitan**	**2.77**	**95**	*e*P	Pn	13 41 30.7	+1.7
CCIG				*e*S	Sn	13 42 05.3	+3.1

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*ISK **30** 14:28:58.6, 38°.14N×27°.22E, h13km, ML2.3/6*
*ISCJB **30** 14:28:59.1±0.5, 38°.14N±0°.04×27°.24E±0°.05, h4km±12km, Error ellipse: s-maj=7.7km s-min=4.1km az=44.6*
*CSEM **30** 14:28:59.3±0.2, 38°.13N×27°.23E, h10km, ML2.3, Error ellipse: s-maj=4.7km s-min=3.0km az=46.0*
*DDA **30** 14:28:59.9, 38°.10N×27°.18E, h7km, Ml2.7*
ISC 30 14:28:59.4±0.9, 38°.14N±0°.02×27°.24E±0°.02, h11km±10km, n24, σ0°52/39, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLCB	**Balcova**	**0.29**	**328**	PG	**Pg**	**14 29 05.6**	**+0.3**
BLCB				SG	**Sg**	**14 29 09.5**	**+0.3**
DGB	**˜zmir**	**0.29**	**253**	*i* P	**Pg**	**14 29 05.3**	**0.0**
DGB				*i* S	**Sg**	**14 29 09.0**	**-0.3**
GCAM	**G?zelcaml?**	**0.44**	**181**	PG	**Pg**	**14 29 07.6**	**-0.4**
GCAM				SG	**Sg**	**14 29 13.9**	**0.0**
GCAM	**G?zelcaml?**	**0.44**	**181**	*i* P	**Pg**	**14 29 07.8**	**-0.2**
GCAM				*i* S	**Sg**	**14 29 14.4**	**+0.5**
GCAM	**G?zelcaml?**	**0.44**	**181**	P	**Pg**	**14 29 07.8**	**-0.2**
GCAM				*e*Sg	**Sg**	**14 29 13.9**	**0.0**
GCAM				S	**Sg**	**14 29 14.4**	**+0.5**
AYDB	**Zeytinkoy-Aydi**	**0.55**	**110**	PG	**Pg**	**14 29 09.5**	**-0.7**
AYDB	**Zeytinkoy-Aydi**	**0.55**	**110**	*e*Pg	**Pg**	**14 29 09.5**	**-0.7**
URLA	**Izmir**	**0.55**	**294**	PG	**Pg**	**14 29 09.4**	**-0.8**
URLA				SG	**Sg**	**14 29 17.2**	**-0.3**
URLA	**Izmir**	**0.55**	**294**	*i* P	**Pg**	**14 29 09.2**	**-1.0**
URLA				*i* S	**Sg**	**14 29 17.3**	**-0.2**
URLA	**Izmir**	**0.55**	**294**	*e*Pg	**Pg**	**14 29 09.4**	**-0.8**
URLA				*e*Sg	**Sg**	**14 29 17.2**	**-0.3**
ZEY	**˜zmir**	**0.59**	**280**	*i* P	**Pg**	**14 29 10.9**	**0.0**
ZEY				*i* S	**Sb**	**14 29 19.3**	**-0.7**
AYDN	**Tasoluk**	**0.70**	**133**	*i* P	**Pb**	**14 29 13.4**	**-0.2**
AYDN				*i* S	**Sg**	**14 29 22.0**	**-0.1**
AYDN	**Tasoluk**	**0.70**	**133**	P	**Pb**	**14 29 13.4**	**-0.2**
AYDN				S	**Sg**	**14 29 22.0**	**-0.1**
MLSB	**Milas**	**0.95**	**153**	PG	**Pg**	**14 29 17.3**	**-0.3**
MLSB	**Milas**	**0.95**	**153**	*e*Pg	**Pg**	**14 29 17.3**	**-0.3**
CHOS	**Chios island**	**0.96**	**285**	PG	**Pb**	**14 29 17.9**	**-0.3**
CHOS	**Chios island**	**0.96**	**285**	*e*Pg	**Pb**	**14 29 17.9**	**-0.3**
DKL	**Dikili**	**0.96**	**344**	PG	**Pg**	**14 29 17.7**	**-0.3**
DKL	**Dikili**	**0.96**	**344**	*e*Pg	**Pg**	**14 29 17.7**	**-0.3**
MANT	**Manisa**	**1.09**	**71**	*i* P	**Pn**	**14 29 22.1**	**+1.2**
MANT				*i* S	**Sg**	**14 29 34.3**	**-0.5**
MANT	**Manisa**	**1.09**	**71**	P	**Pn**	**14 29 22.1**	**+1.2**
MANT				S	**Sg**	**14 29 34.3**	**-0.5**
KULA	**Kula-Manisa**	**1.18**	**71**	PN	**Pb**	**14 29 21.5**	**-0.3**
KULA	**Kula-Manisa**	**1.18**	**71**	*e*Pn	**Pb**	**14 29 21.5**	**-0.3**

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*NEIC **30** 14:33:47.0±1.0, 33°.59S×178°.16W, h10km, mb4.2/1, Error ellipse: s-maj=24.5km s-min=17.8km az=114.0*
*IDC **30** 14:33:46.4±0.9, 33°.17S×178°.33W, h0km, mb4.5/5, mb1 4.6/6, mb1mx4.0/40, mbtmp4.5/6, ML4.1/1, MS3.5/5, Ms1 3.5/5, ms1mx3.0/40, Error ellipse: s-maj=30.8km s-min=28.1km az=2.0*
*WEL **30** 14:33:46.1±0.9, 33°.S±8°.×17°.8W±2°.0, h0km, ML5.0/15*
*ISCJB **30** 14:33:48.5±1.0, 33°.37S±0°.06×178°.2W±0°.2, h34km, mb4.4/6, MS3.7/3, Error ellipse: s-maj=20.9km s-min=6.0km az=18.3*
ISC 30 14:33:50.8±1.0, 33°.31S±0°.08×178°.2W±0°.1, h34km, n49, σ1°55/55, mb4.4/6, MS3.7/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.04**	**3**	S	**Sn**	**14 35 31.5**	**-4.9**
MXZ	**Matakaoa Point**	**5.12**	**213**	P	**Pn**	**14 35 03.6**	**-1.5**
MXZ				S	**Sn**	**14 36 01.5**	**-1.4**
WMGZ	**Waiomatatini S**	**5.28**	**211**	P	**Pn**	**14 35 06.2**	**-1.1**
WMGZ				S	**Sn**	**14 36 07.3**	**+0.2**
HAZ	**Te Kaha**	**5.52**	**215**	P	**Pn**	**14 35 10.0**	**-0.6**
HAZ				S	**Sn**	**14 36 13.3**	**+0.4**
PUZ	**Puketiti**	**5.56**	**210**	P	**Pn**	**14 35 08.5**	**-2.7**
PUZ				S	**Sn**	**14 36 13.2**	**-0.8**
RUGZ	**Raukumara Rang**	**5.74**	**215**	P	**Pn**	**14 35 11.8**	**-1.9**
RUGZ				S	**Sn**	**14 36 17.6**	**-0.8**
TWGZ	**Tauwhareparae**	**5.77**	**212**	P	**Pn**	**14 35 11.7**	**-2.4**
TWGZ				S	**Sn**	**14 36 19.1**	**0.0**
CNGZ	**Carnagh Statio**	**5.94**	**208**	P	**Pn**	**14 35 14.2**	**-2.0**
CNGZ				S	**Sn**	**14 36 24.2**	**+1.1**
MWZ	**Matawai**	**6.10**	**214**	P	**Pn**	**14 35 15.7**	**-3.0**
MWZ				S	**Sn**	**14 36 26.3**	**-1.0**
OPRZ	**Ohinepanea**	**6.23**	**222**	P	**Pn**	**14 35 20.5**	**+0.1**
OPRZ				S	**Sn**	**14 36 30.4**	**+0.1**
URZ	**Urewera**	**6.25**	**216**	Pn	**Pn**	**14 35 19.2**	**-1.4**
	4.3nm,0.3s,baz=295,slow=1.7,SNR=28						
URZ				Sn	**Sn**	**14 36 28.5**	**-2.2**
	8.8nm,0.3s,baz=228,slow=3.0,SNR=11						
URZ	**Urewera**	**6.25**	**216**	P	**Pn**	**14 35 19.1**	**-1.4**
URZ				S	**Sn**	**14 36 28.5**	**-2.2**
RAGZ	**Rawiri**	**6.29**	**213**	P	**Pn**	**14 35 20.8**	**-0.4**
RAGZ				S	**Sn**	**14 36 29.6**	**-2.3**
RIGZ	**Rimuhau**	**6.31**	**210**	P	**Pn**	**14 35 20.1**	**-1.3**
RIGZ				S	**Sn**	**14 36 31.0**	**-1.3**
PRGZ	**Paritu Road**	**6.44**	**208**	P	**Pn**	**14 35 24.1**	**+0.8**
PRGZ				S	**Sn**	**14 36 33.1**	**-2.5**
KARZ	**Kaharoa**	**6.53**	**222**	P	**Pn**	**14 35 24.9**	**+0.5**
SNGZ	**Shannon Statio**	**6.55**	**212**	P	**Pn**	**14 35 24.0**	**-0.9**
MUGZ	**Murupara**	**6.58**	**217**	P	**Pn**	**14 35 23.9**	**-1.3**
KMRZ	**Kaimai**	**6.58**	**225**	P	**Pn**	**14 35 25.0**	**-0.3**
RAHZ	**Arahi**	**6.78**	**213**	P	**Pn**	**14 35 27.1**	**-0.8**
TOZ	**Tahuroa Road**	**6.78**	**228**	P	**Pn**	**14 35 28.9**	**+1.0**
PRRZ	**Plateau Road**	**6.79**	**219**	P	**Pn**	**14 35 27.1**	**-1.0**
MTHZ	**Maungataniwha**	**6.84**	**215**	P	**Pn**	**14 35 28.9**	**+0.1**
RPZ	**Rata Peaks**	**13.36**	**216**	Pn	Pn	14 36 52.0	-6.1
	0.6nm,0.3s,baz=32,slow=9.5,SNR=3.8						
RPZ				Sn	Sn	14 39 10.7	-15
	1.2nm,0.3s,baz=360,slow=20,SNR=7.1						
RPZ				LR	LR	14 42 53.6	
	comp=Z,146nm,19.1s,baz=63,slow=41						
DZM	**Mont Dzumac**	**17.60**	**306**	P	**P**	**14 37 56.8**	**+2.5**
	0.3nm,0.3s,baz=148,slow=15,SNR=10.0						
DZM				LR	LR	14 43 26.8	
	comp=Z,139nm,18.7s,baz=138,slow=33						
STKA	**Stephens Creek**	**33.77**	**261**	LR	LR	14 53 02.2	
	comp=Z,58nm,19.5s,baz=144,slow=34						
CTA	**Charters Tower**	**34.21**	**284**	P	**P**	**14 40 34.1**	**+0.7**
	4.2nm,0.5s,baz=115,slow=12,SNR=20						
CTAO	**Charters Tower**	**34.21**	**284**	*e*P	**P**	**14 40 33.5**	**0.0**
ASAR	**Alice Springs**	**42.87**	**270**	P	**P**	**14 41 45.5**	**-0.7**
	9.6nm,0.7s,baz=109,slow=7.4,SNR=164						
WRAB	**Tennant Creek**	**44.12**	**275**	*e*P	**P**	**14 41 53.5**	**-2.7**
	2.4nm,0.6s						
WRA	**Warramunga Arr**	**44.12**	**275**	P	**P**	**14 41 55.2**	**-1.1**
	4.6nm,0.6s,baz=116,slow=7.5,SNR=61						
FITZ	**Fitzroy Crossi**	**52.25**	**272**	P	**P**	**14 42 58.2**	**-0.7**
	3.0nm,0.7s,baz=161,slow=8.5,SNR=12						
QSPA	**South Pole Qui**	**56.81**	**180**	P	**P**	**14 43 33.8**	**+2.2**
	3.1nm,0.8s,baz=62,slow=4.1,SNR=10						
SNAA	**Sanae**	**75.26**	**178**	P	P	14 45 42.7	+13
VNA3	**Neumayer Olymp**	**75.42**	**176**	P	P	14 45 43.8	+13
VNA2	**Neumayer--Watz**	**75.85**	**177**	P	P	14 45 46.4	+13
	baz=175,slow=4.9						
VNA1	**Neumayer--Stat**	**76.08**	**177**	P	P	14 45 47.9	+13
LPIG	**La Paz**	**86.20**	**58**	LR	LR	15 18 02.2	
	comp=Z,27nm,18.6s,baz=252,slow=31						
JTS	**JuntasAbangare**	**98.25**	**83**	LR	LR	15 22 16.5	
	comp=Z,51nm,21.8s,baz=38,slow=30						
ZALV	**Zalesovo Beam**	**120.07**	**317**	PKP	**PKPdf**	**14 52 37.6**	**+0.2**
	0.4nm,0.4s,baz=169,slow=1.5,SNR=2.5						
KURK	**Kurchatov**	**122.92**	**312**	PKP	**PKPdf**	**14 52 43.0**	**0.0**
KURBB	**Kurchatov Arra**	**122.95**	**312**	PKP	**PKPdf**	**14 52 43.0**	**0.0**
	1.0nm,0.7s,baz=117,slow=2.0,SNR=8.3						
BVAR	**Borovoye Array**	**128.34**	**314**	PKP	**PKPdf**	**14 52 53.7**	**+0.5**
	0.5nm,0.4s,baz=128,slow=2.4,SNR=5.5						
FINES	**FINESS Array B**	**147.80**	**338**	PKPbc	**PKPbc**	**14 53 31.4**	**0.0**
	3.0nm,0.6s,baz=38,slow=3.6,SNR=21						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.30**	**60**	PG	**Pn**	**14 42 58.7**	**-0.6**
ARG				SG	**Sn**	**14 43 05.9**	**+0.1**
ARG	**Arkhangelos**	**0.30**	**60**	P	**Pn**	**14 42 59.5**	**+0.2**
ARG				S	**Sn**	**14 43 05.8**	**+0.1**
ARG				AML	AML	14 43 06.8	
	comp=E,6868μm,0.2s						
ARG				AML	AML	14 43 06.8	
	comp=N,3965μm,0.2s						
ARG	**Arkhangelos**	**0.30**	**60**	P	**Pn**	**14 42 59.3**	**0.0**
ARG				S	**Sn**	**14 43 06.3**	**+0.6**
ARG	**Arkhangelos**	**0.30**	**60**	*e*Pg	**Pn**	**14 42 58.7**	**-0.6**
ARG	**Arkhangelos**	**0.30**	**60**	P	**Pn**	**14 42 59.3**	**0.0**
ARG				*e*Sg	**Sn**	**14 43 05.9**	**+0.1**
ARG				S		14 43 06.3	
DAT	**Datca**	**0.69**	**345**	PG	**Pn**	**14 43 03.2**	**-0.7**
DAT				SG	**Sn**	**14 43 13.8**	**+0.1**
DAT	**Datca**	**0.69**	**345**	*i* P	**Pn**	**14 43 03.7**	**-0.2**
DAT				*i* S	**Sn**	**14 43 12.5**	**-1.2**
DAT	**Datca**	**0.69**	**345**	*e*Pg	**Pn**	**14 43 03.2**	**-0.7**
DAT	**Datca**	**0.69**	**345**	P	**Pn**	**14 43 03.7**	**-0.2**
DAT				S	**Sn**	**14 43 12.5**	**-1.2**
DAT				*e*Sg		14 43 13.8	
DATC	**Datca-Mugla**	**0.70**	**351**	PG	**Pn**	**14 43 03.4**	**-0.5**
DATC				SG	**Sn**	**14 43 14.6**	**+0.7**
DATC	**Datca-Mugla**	**0.70**	**351**	*e*Pg	**Pn**	**14 43 03.4**	**-0.5**
DATC				*e*Sg	**Sn**	**14 43 14.6**	**+0.7**
MRSB	**Marmaris-Mugla**	**0.72**	**26**	PG	**Pn**	**14 43 04.0**	**-0.3**
MRSB	**Marmaris-Mugla**	**0.72**	**26**	*e*Pg	**Pn**	**14 43 04.0**	**-0.3**
NISR	**Nisiros**	**0.77**	**315**	P	**Pn**	**14 43 04.9**	**+0.1**
NISR				S	**Sn**	**14 43 16.2**	**+0.8**
NISR				AML	AML	14 43 20.5	
	comp=E,852μm,0.3s						
NISR				AML	AML	14 43 20.9	
	comp=N,457μm,0.4s						
NISR	**Nisiros**	**0.77**	**315**	P	**Pn**	**14 43 04.7**	**-0.1**
NISR	**Nisiros**	**0.77**	**315**	P	**Pn**	**14 43 04.6**	**-0.2**
NISR				S	**Sn**	**14 43 16.1**	**+0.7**
DALY	**Dalyan (Mu¨la**	**1.02**	**42**	PN	**Pn**	**14 43 08.4**	**+0.3**
DALY	**Dalyan (Mu¨la**	**1.02**	**42**	*i* P	**Pn**	**14 43 09.0**	**+0.9**
DALY				*i* S	**Sn**	**14 43 24.4**	**+3.0**
DALY	**Dalyan (Mu¨la**	**1.02**	**42**	*e*Pn	**Pn**	**14 43 08.4**	**+0.3**
DALY	**Dalyan (Mu¨la**	**1.02**	**42**	P	**Pn**	**14 43 09.0**	**+0.9**
DALY				S	**Sn**	**14 43 24.4**	**+3.0**
TURN	**Turunc**	**1.03**	**38**	PG	**Pn**	**14 43 05.1**	**-3.2**
TURN	**Turunc**	**1.03**	**38**	*i* P	**Pn**	**14 43 05.2**	**-3.1**
TURN				*i* S	**Sn**	**14 43 17.0**	**-4.7**
TURN	**Turunc**	**1.03**	**38**	P	**Pn**	**14 43 05.2**	**-3.1**
TURN				S	**Sn**	**14 43 17.0**	**-4.7**
BDRM	**Kayabasi**	**1.04**	**344**	*i* P	**Pn**	**14 43 08.1**	**-0.3**
BDRM				*i* S	**Sn**	**14 43 21.9**	**0.0**
BDRM	**Kayabasi**	**1.04**	**344**	P	**Pn**	**14 43 08.1**	**-0.3**
BDRM				S	**Sn**	**14 43 21.9**	**0.0**
BODT	**Bodrum**	**1.07**	**338**	PN	**Pn**	**14 43 07.6**	**-1.3**
BODT	**Bodrum**	**1.07**	**338**	P	**Pn**	**14 43 07.5**	**-1.3**
BODT				S	**Sn**	**14 43 21.7**	**-1.0**
BODT	**Bodrum**	**1.07**	**338**	*e*Pn	**Pn**	**14 43 07.6**	**-1.3**
BODT				S	**Sn**	**14 43 21.7**	**-1.0**
YER	**Yerkesik**	**1.14**	**20**	PN	**Pn**	**14 43 10.1**	**+0.3**
YER	**Yerkesik**	**1.14**	**20**	P	**Pn**	**14 43 09.4**	**-0.4**
YER				S	**Sn**	**14 43 24.2**	**-0.1**
YER	**Yerkesik**	**1.14**	**20**	P	**Pn**	**14 43 09.4**	**-0.4**
YER	**Yerkesik**	**1.14**	**20**	*e*Pn	**Pn**	**14 43 10.1**	**+0.3**
YER				S	**Sn**	**14 43 24.2**	**-0.1**
FETY	**Fethiye**	**1.18**	**61**	PN	**Pn**	**14 43 08.9**	**-1.5**
FETY	**Fethiye**	**1.18**	**61**	P	**Pn**	**14 43 08.9**	**-1.5**
FETY				S	**Sn**	**14 43 24.2**	**-1.2**
FETY	**Fethiye**	**1.18**	**61**	P	**Pn**	**14 43 08.9**	**-1.5**
FETY				S	**Sn**	**14 43 24.2**	**-1.2**
MLSB	**Milas**	**1.23**	**359**	PN	**Pn**	**14 43 11.0**	**0.0**
MLSB	**Milas**	**1.23**	**359**	*e*Pn	**Pn**	**14 43 11.0**	**0.0**
KSL	**Kastellorizon**	**1.45**	**86**	P	**Pn**	**14 43 13.5**	**-0.4**
KSL				S	**Sn**	**14 43 30.8**	**-1.0**
KSL				AML	AML	14 43 32.7	
	comp=E,296μm,0.2s						
KSL				AML	AML	14 43 32.9	
	comp=N,197μm,0.3s						
KSL	**Kastellorizon**	**1.45**	**86**	P	**Pn**	**14 43 12.1**	**-1.8**
KSL				S	**Sn**	**14 43 30.6**	**-1.1**
KSL	**Kastellorizon**	**1.45**	**86**	P	**Pn**	**14 43 13.5**	**-0.4**
KSL				S	**Sn**	**14 43 31.2**	**-0.5**
AKAS	**Kas**	**1.47**	**83**	PN	**Pn**	**14 43 12.9**	**-1.5**
AKAS	**Kas**	**1.47**	**83**	*i* P	**Pn**	**14 43 12.9**	**-1.5**
AKAS				*i* S	**Sn**	**14 43 30.4**	**-2.1**
AKAS	**Kas**	**1.47**	**83**	*e*Pn	**Pn**	**14 43 12.9**	**-1.5**
AKAS				S	**Sn**	**14 43 30.4**	**-2.1**
AYDN	**Tasoluk**	**1.59**	**2**	*i* P	**Pn**	**14 43 16.2**	**+0.2**
AYDN				*i* S	**Sn**	**14 43 34.9**	**-0.6**
AYDN	**Tasoluk**	**1.59**	**2**	P	**Pn**	**14 43 16.2**	**+0.2**
AYDN				S	**Sn**	**14 43 34.9**	**-0.6**
ZKR	**Zakros**	**1.60**	**234**	P	**Pn**	**14 43 17.5**	**+1.4**
ZKR				S	**Sn**	**14 43 37.8**	**+2.2**
ZKR				AML	AML	14 43 41.2	
	comp=N,180μm,0.7s						
ZKR				AML	AML	14 43 42.3	
	comp=E,302μm,0.3s						
ZKR	**Zakros**	**1.60**	**234**	P	**Pn**	**14 43 16.6**	**+0.5**
ZKR				S	**Sn**	**14 43 36.1**	**+0.5**
ZKR	**Zakros**	**1.60**	**234**	P	**Pn**	**14 43 16.6**	**+0.5**
ZKR				S	**Sn**	**14 43 36.1**	**+0.5**
TAVA	**DENIZLI_Tavas**	**1.66**	**32**	*i* P	**Pn**	**14 43 18.4**	**+1.4**
TAVA				*i* S	**Sn**	**14 43 41.5**	**+4.4**
TAVA	**DENIZLI_Tavas**	**1.66**	**32**	P	**Pn**	**14 43 18.4**	**+1.4**
TAVA				S	**Sn**	**14 43 41.5**	**+4.4**
ANAF	**Anafi Island**	**1.67**	**281**	P	**Pn**	**14 43 17.6**	**+0.7**
ANAF				S	**Sn**	**14 43 36.4**	**-0.8**
ANAF	**Anafi Island**	**1.67**	**281**	P	**Pn**	**14 43 16.8**	**-0.2**
ANAF				S	**Sn**	**14 43 36.8**	**-0.4**
ANAF	**Anafi Island**	**1.67**	**281**	P	**Pn**	**14 43 16.8**	**-0.2**
ANAF				S	**Sn**	**14 43 37.0**	**-0.2**
GCAM	**G?zelcaml?**	**1.69**	**345**	PN	**Pn**	**14 43 17.4**	**+0.1**
GCAM	**G?zelcaml?**	**1.69**	**345**	*i* P	**Pn**	**14 43 17.4**	**+0.1**
GCAM				*i* S	**Sn**	**14 43 37.7**	**-0.1**
GCAM	**G?zelcaml?**	**1.69**	**345**	P	**Pn**	**14 43 17.4**	**+0.1**
GCAM				S	**Sn**	**14 43 37.7**	**-0.1**
AMGA	**Amorgos Island**	**1.72**	**297**	P	**Pn**	**14 43 17.2**	**-0.5**
AMGA				S	**Sn**	**14 43 37.2**	**-1.3**
AMGA	**Amorgos Island**	**1.72**	**297**	P	**Pn**	**14 43 16.6**	**-1.1**
AMGA	**Amorgos Island**	**1.72**	**297**	P	**Pn**	**14 43 17.4**	**-0.3**
AMGA				S	**Sn**	**14 43 37.9**	**-0.6**
SMG	**Samos**	**1.81**	**335**	P	**Pn**	**14 43 18.8**	**-0.3**
SMG				S	**Sn**	**14 43 41.1**	**+0.3**
SMG				AML	AML	14 43 41.6	
	comp=N,361μm,0.4s						
SMG				AML	AML	14 43 42.9	
	comp=E,310μm,0.4s						
SMG	**Samos**	**1.81**	**335**	P	**Pn**	**14 43 18.6**	**-0.4**
SMG				S	**Sn**	**14 43 40.5**	**-0.3**
SMG	**Samos**	**1.81**	**335**	P	**Pn**	**14 43 18.7**	**-0.3**
SMG				S	**Sn**	**14 43 40.5**	**-0.3**
ELL	**Elmali**	**1.83**	**68**	PN	**Pn**	**14 43 19.3**	**0.0**
ELL	**Elmali**	**1.83**	**68**	*e*Pn	**Pn**	**14 43 19.3**	**0.0**
GOLH	**Golhisar**	**1.84**	**50**	*i* P	**Pn**	**14 43 19.3**	**-0.1**
GOLH				*i* S	**Sn**	**14 43 48.6**	**+7.1**
GOLH	**Golhisar**	**1.84**	**50**	P	**Pn**	**14 43 19.3**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	**1.88**	**2**	PN	**Pn**	**14 43 19.9**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	**1.88**	**2**	*e*Pn	**Pn**	**14 43 19.9**	**-0.1**
SANT	**Santorini**	**1.92**	**280**	PN	**Pn**	**14 43 18.2**	**-2.2**
SANT	**Santorini**	**1.92**	**280**	*e*Pn	**Pn**	**14 43 18.2**	**-2.2**
DENT	**Denizli**	**1.95**	**30**	PN	**Pn**	**14 43 21.4**	**+0.5**
DENT	**Denizli**	**1.95**	**30**	*e*Pn	**Pn**	**14 43 21.4**	**+0.5**
NPS	**Neapolis**	**1.95**	**246**	P	**Pn**	**14 43 20.2**	**-0.8**
NPS				AML	AML	14 43 48.7	
	comp=N,706μm,0.4s						
NPS				AML	AML	14 43 48.9	
	comp=E,838μm,0.4s						
NPS	**Neapolis**	**1.95**	**246**	P	**Pn**	**14 43 20.5**	**-0.4**
NPS				S	**Sn**	**14 43 43.7**	**-0.6**
NPS	**Neapolis**	**1.95**	**246**	P	**Pn**	**14 43 20.7**	**-0.2**
NPS				S	**Sn**	**14 43 43.7**	**-0.6**
STAX	**Taxiarchis Har**	**1.97**	**280**	P	**Pn**	**14 43 21.1**	**+0.1**
STAX	**Taxiarchis Har**	**1.97**	**280**	P	**Pn**	**14 43 21.1**	**+0.1**
THR3	**Thira Island,**	**1.97**	**281**	P	**Pn**	**14 43 20.9**	**-0.2**
THR3	**Thira Island,**	**1.97**	**281**	P	**Pn**	**14 43 20.6**	**-0.5**
THR3	**Thira Island,**	**1.97**	**281**	P	**Pn**	**14 43 21.0**	**-0.1**
THR5	**Thira Island,**	**2.01**	**281**	P	**Pn**	**14 43 22.0**	**+0.2**
THR5	**Thira Island,**	**2.01**	**281**	P	**Pn**	**14 43 21.9**	**+0.2**
APE	**Apeiranthos**	**2.08**	**299**	PN	**Pn**	**14 43 21.3**	**-1.4**
APE	**Apeiranthos**	**2.08**	**299**	P	**Pn**	**14 43 22.5**	**-0.2**
APE	**Apeiranthos**	**2.08**	**299**	P	**Pn**	**14 43 22.5**	**-0.2**
APE	**Apeiranthos**	**2.08**	**299**	*e*Pn	**Pn**	**14 43 21.3**	**-1.4**
APE	**Apeiranthos**	**2.08**	**299**	P	**Pn**	**14 43 22.6**	**-0.1**
LAST	**Lasithi**	**2.10**	**245**	P	**Pn**	**14 43 21.9**	**-1.0**
LAST				S	**Sn**	**14 43 48.2**	**+0.4**
LAST				AML	AML	14 43 53.6	
	comp=N,138μm,0.5s						
LAST				AML	AML	14 43 55.1	
	comp=E,143μm,0.4s						
LAST	**Lasithi**	**2.10**	**245**	P	**Pn**	**14 43 22.4**	**-0.5**
LAST				S	**Sn**	**14 43 47.8**	**0.0**
LAST	**Lasithi**	**2.10**	**245**	P	**Pn**	**14 43 22.5**	**-0.5**
LAST				S	**Sn**	**14 43 47.8**	**0.0**
IOSP	**Ios island**	**2.13**	**289**	P	**Pn**	**14 43 22.8**	**-0.5**
IOSP	**Ios island**	**2.13**	**289**	P	**Pn**	**14 43 23.1**	**-0.2**
KORT	**Korkueli**	**2.25**	**65**	PN	**Pn**	**14 43 25.4**	**+0.2**
KORT	**Korkueli**	**2.25**	**65**	*e*Pn	**Pn**	**14 43 25.4**	**+0.2**
ZEY	**¨zmir**	**2.41**	**335**	*i* P	**Pn**	**14 43 26.6**	**-0.5**
ZEY				*i* S	**Sn**	**14 43 54.1**	**-1.2**
URLA	**Izmir**	**2.48**	**338**	PN	**Pn**	**14 43 26.8**	**-1.4**
URLA	**Izmir**	**2.48**	**338**	*i* P	**Pn**	**14 43 26.6**	**-1.6**
URLA				*i* S	**Sn**	**14 43 56.4**	**-1.0**
URLA	**Izmir**	**2.48**	**338**	*e*Pn	**Pn**	**14 43 26.8**	**-1.4**
URLA				S	**Sn**	**14 43 56.3**	**-1.0**
IDI	**Anoyia**	**2.49**	**253**	PN	**Pn**	**14 43 25.6**	**-2.8**
IDI	**Anoyia**	**2.49**	**253**	*e*Pn	**Pn**	**14 43 25.6**	**-2.8**
MANT	**Manisa**	**2.50**	**14**	*i* P	**Pn**	**14 43 29.9**	**+1.4**
MANT				*i* S	**Sn**	**14 43 58.4**	**+0.5**
MANT	**Manisa**	**2.50**	**14**	P	**Pn**	**14 43 29.9**	**+1.4**
MANT				S	**Sn**	**14 43 58.4**	**+0.5**
KULA	**Kula-Manisa**	**2.54**	**15**	PN	**Pn**	**14 43 29.8**	**+0.8**
KULA	**Kula-Manisa**	**2.54**	**15**	*e*Pn	**Pn**	**14 43 29.8**	**+0.8**
SIVA	**Sivas**	**2.65**	**248**	P	**Pn**	**14 43 31.9**	**+1.5**
SIVA	**Sivas**	**2.65**	**248**	P	**Pn**	**14 43 31.4**	**+0.9**
CHOS	**Chios island**	**2.70**	**330**	PN	**Pn**	**14 43 30.9**	**-0.4**
CHOS	**Chios island**	**2.70**	**330**	P	**Pn**	**14 43 31.4**	**+0.1**
CHOS	**Chios island**	**2.70**	**330**	*e*Pn	**Pn**	**14 43 30.9**	**-0.4**
CHOS	**Chios island**	**2.70**	**330**	P	**Pn**	**14 43 31.3**	**+0.1**
AKHS	**Akhisar**	**2.81**	**0**	*i* P	**Pn**	**14 43 32.3**	**-0.3**
AKHS				*i* S	**Sn**	**14 44 05.0**	**-0.3**
AKHS	**Akhisar**	**2.81**	**0**	P	**Pn**	**14 43 32.3**	**-0.3**
AKHS				S	**Sn**	**14 44 05.0**	**-0.3**
VAM	**Vamos**	**3.00**	**258**	P	**Pn**	**14 43 36.4**	**+1.1**
VAM				S	**Sn**	**14 44 08.6**	**-1.5**
VAM	**Vamos**	**3.00**	**258**	P	**Pn**	**14 43 36.1**	**+0.8**
VAM				S	**Sn**	**14 44 09.4**	**-0.6**
IMMV	**Iera Moni Meta**	**3.17**	**260**	P	**Pn**	**14 43 38.3**	**+1.0**
IMMV				AML	AML	14 44 20.4	
	comp=E,210μm,0.6s						
IMMV				AML	AML	14 44 22.5	
	comp=N,183μm,0.3s						
IMMV	**Iera Moni Meta**	**3.17**	**260**	P	**Pn**	**14 43 38.3**	**+0.8**
GVDS	**Gavdos**	**3.27**	**249**	P	**Pn**	**14 43 39.2**	**+0.3**
GVDS	**Gavdos**	**3.27**	**249**	P	**Pn**	**14 43 39.2**	**+0.3**
GVD	**Gavdhos**	**3.27**	**249**	P	**Pn**	**14 43 40.6**	**+1.7**
GVD				AML	AML	14 44 28.0	
	comp=N,92μm,0.3s						
GVD				AML	AML	14 44 33.3	
	comp=E,129μm,0.4s						
GVD	**Gavdhos**	**3.27**	**249**	P	**Pn**	**14 43 39.3**	**+0.4**
GVD	**Gavdhos**	**3.27**	**249**	P	**Pn**	**14 43 39.3**	**+0.4**
STEP	**BALIKESIR_Sava**	**3.31**	**359**	*i* P	**Pn**	**14 43 39.9**	**+0.4**
STEP				*i* S	**Sn**	**14 44 17.6**	**0.0**
STEP	**BALIKESIR_Sava**	**3.31**	**359**	P	**Pn**	**14 43 39.9**	**+0.4**
STEP				S	**Sn**	**14 44 17.6**	**0.0**
VLI	**Veliai**	**3.98**	**281**	P	**Pn**	**14 43 49.9**	**+1.2**
VLI	**Veliai**	**3.98**	**281**	P	**Pn**	**14 43 49.6**	**+1.0**

*NEIC **30** 15:21:02.1±0.0, 65°.43N×144°.72W, h9km, ML2.8(AEIC), After AEIC.*

PGC 30 15:21:04.1±1.3, 65°.42N×144°.50W, h12km, ML2.9/2, 163km east of Fairbanks, Ak Northern Alaska, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRP	**Porcupine Dome**	**0.44**	**284**	P	Pg	15 21 08.6	-4.2
PRP				S	Sg	15 21 13.2	-5.4
FYU	**Fort Yukon**	**1.19**	**346**	P	Pn	15 21 24.1	-2.5
FYU				S	Sb	15 21 39.7	-2.2
ILB	**Eielson Array**	**1.20**	**238**	P	Pn	15 21 22.8	-3.9
GLM	**Gilmore Dome**	**1.29**	**252**	P	Pn	15 21 24.7	-3.3
GLM				S	Sb	15 21 41.2	-3.6
PS08	**TAPS Pump Stn8**	**1.32**	**229**	P	Pn	15 21 25.4	-2.9
PS08				S	Sb	15 21 42.8	-2.9
HDA	**Harding Lake**	**1.45**	**227**	P	Pn	15 21 27.9	-2.3
HDA				S	Sn	15 21 46.5	-2.6
SCRK	**Sand Creek**	**1.46**	**171**	P	Pn	15 21 29.5	-0.9
SCRK				S	Sn	15 21 48.7	-0.8
COLA	**College**	**1.52**	**250**	P	Pn	15 21 28.6	-2.4
COLA				S	Sn	15 21 48.7	-1.9
EGAK	**Eagle**	**1.55**	**113**	P	Pn	15 21 31.1	-0.4
EGAK				S	Sn	15 21 51.7	+0.2
CCB	**Clear Creek Bu**	**1.60**	**243**	P	Pn	15 21 29.1	-3.0
CCB				S	Sn	15 21 50.5	-2.2
MDM	**Murphy Dome**	**1.64**	**255**	P	Pn	15 21 29.6	-3.1
MDM				S	Sn	15 21 51.8	-1.9
RIDG	**Independ'e Rid**	**1.69**	**185**	P	Pn	15 21 32.5	-1.0
RIDG				S	Sn	15 21 55.4	+0.4
DOT	**Dot Lake**	**1.79**	**174**	Pn	Pn	15 21 34.5	-0.2
DOT				Pg	Pb	15 21 36.6	-0.2
DOT				Sn	Sb	15 21 58.2	-0.8
DOT				Sg	Sg	15 21 59.6	-1.9
WRH	**Wood River Hil**	**1.80**	**240**	P	Pn	15 21 32.1	-2.8
BM3	**Burnt Mountain**	**2.01**	**359**	P	Pn	15 21 35.9	-2.0
NEA	**Nenana**	**2.12**	**249**	P	Pn	15 21 36.1	-3.2
PAX	**Paxson**	**2.49**	**190**	Pn	Pn	15 21 44.0	-0.5
PAX				Sn	Sn	15 22 13.5	-1.3
PAX				Sg	Sb	15 22 20.1	+0.7
DAWY	**Dawson**	**2.58**	**119**	Pn	Pn	15 21 44.7	-0.9
DAWY				Pg	Pb	15 21 50.5	+0.3
DAWY				Sg	Sb	15 22 23.6	+1.8
DAWY	**Dawson**	**2.58**	**119**	*e*Pn	Pn	15 21 43.4	-2.3
DAWY				*e*Sg	Sb	15 22 23.3	+1.5
BCA3	**Beaver Creek A**	**2.64**	**152**	P	Pn	15 21 45.6	-0.9
MLY	**Manley**	**2.66**	**264**	P	Pn	15 21 43.2	-3.5
COLD	**Coldfoot**	**2.93**	**311**	Pn	Pn	15 21 49.5	-1.0
COLD				Sn	Sn	15 22 24.1	-1.4
HARP	**HAARP**	**3.04**	**186**	Pn	Pn	15 21 52.5	+0.6
BPAW	**Bear Paw Mtn.**	**3.08**	**248**	P	Pn	15 21 49.0	-3.5
TRF	**Thorofare Moun**	**3.19**	**234**	P	Pn	15 21 52.3	-1.9
KTH	**Kantishna Hill**	**3.35**	**239**	P	Pn	15 21 53.5	-2.8
TOLK	**Toolik Lake Re**	**3.80**	**331**	P	Pn	15 22 01.6	-0.8
IM3	**Indian Mountai**	**3.87**	**283**	P	Pn	15 21 59.9	-3.4
SKT	**Skwentna**	**4.66**	**225**	P	Pn	15 22 12.9	-1.2
INK	**Inuvik**	**5.21**	**51**	Pn	Pn	15 22 20.7	-1.0
HYT	**Haines Junctio**	**5.59**	**142**	Pn	Pn	15 22 25.9	-1.2
HYT				Sg	Sg	15 23 57.9	-5.6

*ISK **30** 15:23:06.9, 37°.23N×28°.19E, h7km, ML2.3/10*
*ISCJB **30** 15:23:07.4±0.4, 37°.25N±0°.03×28°.21E±0°.03, h0km, Error ellipse: s-maj=4.2km s-min=2.7km az=31.5*
*CSEM **30** 15:23:07.4±0.2, 37°.24N×28°.21E, h1km, ML2.3, Error ellipse: s-maj=4.1km s-min=2.6km az=34.0, Suspected Mining explosion.*
*DDA **30** 15:23:07.2, 37°.23N×28°.21E, h7km, Ml2.6, Suspected Mining explosion.*

ISC 30 15:23:06.4±0.8, 37°.24N±0°.02×28°.10E±0°.03, h0km, n37, σ0s76/58, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.18**	**127**	PG	**Pg**	**15 23 09.8**	**0.0**
YER				SG	**Sg**	**15 23 13.2**	**+1.1**
YER	**Yerkesik**	**0.18**	**127**	*e*Pg	**Pg**	**15 23 09.8**	**0.0**
YER				*e*Sg	**Sg**	**15 23 13.2**	**+1.1**
MLSB	**Milas**	**0.27**	**281**	PG	**Pb**	**15 23 14.1**	**0.0**
MLSB				SG	**Sb**	**15 23 19.3**	**+0.1**
MLSB	**Milas**	**0.27**	**281**	*e*Pg	**Pb**	**15 23 14.1**	**0.0**
MLSB				*e*Sg	**Sb**	**15 23 19.3**	**+0.1**
AYDN	**Tasoluk**	**0.45**	**337**	*i* P	**Pb**	**15 23 17.0**	**-0.3**
AYDN				*i* S	**Sb**	**15 23 24.7**	**+0.1**
TURN	**Turunc**	**0.54**	**133**	PG	**Pg**	**15 23 15.9**	**-0.9**
TURN				SG	**Sg**	**15 23 22.9**	**-0.9**
TURN	**Turunc**	**0.54**	**133**	*i* P	**Pg**	**15 23 15.9**	**-0.9**
TURN				*i* S	**Sg**	**15 23 22.9**	**-0.9**
TURN	**Turunc**	**0.54**	**133**	P	**Pg**	**15 23 15.9**	**-0.9**
TURN				S	**Sg**	**15 23 22.9**	**-0.9**
BDRM	**Kayabasi**	**0.56**	**252**	*i* P	**Pb**	**15 23 19.5**	**+0.4**
BDRM				*i* S	**Sb**	**15 23 29.2**	**+1.7**
DALY	**Dalyan (Mu¨la**	**0.61**	**134**	PG	**Pg**	**15 23 17.9**	**-0.2**
DALY				SG	**Sg**	**15 23 26.3**	**+0.3**
DALY	**Dalyan (Mu¨la**	**0.61**	**134**	*i* P	**Pg**	**15 23 18.2**	**+0.1**
DALY				*i* S	**Sb**	**15 23 27.8**	**-1.3**
DALY	**Dalyan (Mu¨la**	**0.61**	**134**	*e*Pg	**Pg**	**15 23 17.9**	**-0.2**
DALY	**Dalyan (Mu¨la**	**0.61**	**134**	P	**Pg**	**15 23 18.2**	**+0.1**
DALY				*e*Sg	**Sg**	**15 23 26.3**	**+0.3**
DALY				S	**Sb**	**15 23 27.8**	**-1.3**
BODT	**Bodrum**	**0.66**	**254**	PG	**Pb**	**15 23 20.7**	**-0.1**
BODT	**Bodrum**	**0.66**	**254**	*e*Pg	**Pb**	**15 23 20.7**	**-0.1**
DAT	**Datca**	**0.66**	**220**	PG	**Pb**	**15 23 21.0**	**+0.1**
DAT	**Datca**	**0.66**	**220**	*i* P	**Pb**	**15 23 21.3**	**+0.4**
DAT				*i* S	**Sn**	**15 23 34.1**	**-0.2**
DAT	**Datca**	**0.66**	**220**	*e*Pg	**Pb**	**15 23 21.0**	**+0.1**
DAT				S	**Sn**	**15 23 34.2**	**-0.2**
TAVA	**DENIZLI_Tavas**	**0.68**	**71**	*i* P	**Pg**	**15 23 19.3**	**-0.2**
TAVA				*i* S	**Sg**	**15 23 28.2**	**-0.1**
TAVA	**DENIZLI_Tavas**	**0.68**	**71**	P	**Pg**	**15 23 19.3**	**-0.2**
TAVA				S	**Sg**	**15 23 28.2**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	**0.72**	**347**	PG	**Pb**	**15 23 21.9**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**0.72**	**347**	*e*Pg	**Pb**	**15 23 21.9**	**0.0**
GCAM	**G?zelcaml?**	**0.83**	**304**	PG	**Pn**	**15 23 24.7**	**-0.6**
GCAM	**G?zelcaml?**	**0.83**	**304**	*i* P	**Pn**	**15 23 26.1**	**+0.8**
GCAM				*i* S	**Sn**	**15 23 37.7**	**-0.6**
GCAM	**G?zelcaml?**	**0.83**	**304**	*e*Pg	**Pn**	**15 23 24.7**	**-0.6**
GCAM	**G?zelcaml?**	**0.83**	**304**	P	**Pn**	**15 23 26.1**	**+0.8**
GCAM				S	**Sn**	**15 23 37.7**	**-0.6**
FETY	**Fethiye**	**0.99**	**127**	PG	**Pg**	**15 23 25.3**	**-0.1**
FETY	**Fethiye**	**0.99**	**127**	*e*Pg	**Pg**	**15 23 25.3**	**-0.1**
FETY	**Fethiye**	**0.99**	**127**	P	**Pn**	**15 23 28.4**	**+0.8**
FETY				S	**Sb**	**15 23 41.0**	**+0.9**
ARG	**Arkhangelos**	**1.02**	**179**	PG	**Pb**	**15 23 26.7**	**-0.3**
ARG	**Arkhangelos**	**1.02**	**179**	*e*Pg	**Pb**	**15 23 26.7**	**-0.3**
GOLH	**Golhisar**	**1.16**	**90**	*i* P	**Pg**	**15 23 27.5**	**-1.2**
GOLH				*i* S	**Sn**	**15 23 49.8**	**+3.1**
GOLH	**Golhisar**	**1.16**	**90**	P	**Pg**	**15 23 27.5**	**-1.2**
KULA	**Kula-Manisa**	**1.34**	**19**	PN	**Pb**	**15 23 32.7**	**+0.2**
KULA	**Kula-Manisa**	**1.34**	**19**	*e*Pn	**Pb**	**15 23 32.7**	**+0.2**
AKAS	**Kas**	**1.57**	**129**	PN	**Pn**	**15 23 35.2**	**-0.5**
AKAS	**Kas**	**1.57**	**129**	*e*Pn	**Pn**	**15 23 35.2**	**-0.5**

*WEL **30** 15:26:29.0±1.2, 33°.5S±11°×17°.8W±2°.9, h0km, ML5.2/9*
*BJI **30** 15:26:30.0, 33°.50S×177°.80W, h25km, mb5.1/4, mB5.3/1, Ms4.5/2, Ms7 4.2/1*
*NEIC **30** 15:26:30.7±0.6, 33°.19S×178°.15W, h10km, mb4.7/4, Error ellipse: s-maj=16.5km s-min=7.3km az=113.0*
*IDC **30** 15:26:30.5±0.7, 32°.98S×178°.33W, h0km, mb4.5/12, mb1 4.7/12, mb1mx4.3/39, mbtmp4.5/12, MS3.9/11, Ms1 3.9/11, ms1mx3.5/42, Error ellipse: s-maj=24.3km s-min=23.0km az=176.0*
*ISCJB **30** 15:26:32.2±0.6, 33°.34S±0°.05×178°.1W±0°.1, h34km, mb4.6/17, MS3.9/12, Error ellipse: s-maj=14.9km s-min=4.4km az=21.7*

**ISC 30 15:26:34.2±0.6, 33°.22

baz=175,slow=4.4
VNA1 Neumayer--Stat 76.17 177 P P 15 38 32.3 +14
MJAR Matsushiro Arr 80.54 326 P **P** **15 38 42.5 -0.4**
1.2nm,0.9s,baz=159,slow=5.9,SNR=3.3
JNU Nakatsue 81.65 319 LR LR 16 11 32.1
comp=Z,29nm,18.4s,baz=123,slow=33
ASAJ Asahikawa 84.92 333 P **P** **15 39 06.2 +0.8**
4.9nm,0.8s,baz=166,slow=4.2,SNR=3.9
KSRS Korea Array 86.48 320 P **P** **15 39 13.2 -0.1**
1.3nm,0.8s,baz=142,slow=6.1,SNR=5.1
KSAR Wonju Array Be 86.49 320 P **P** **15 39 13.2 -0.2**
NJ2 Nanjing 88.06 311 *e*P **P** **15 39 21.5 +0.4**
NJ2 pmax pmax
comp=Z,8.0nm,0.6s
PETK Petropavlovsk- 88.53 346 P **P** **15 39 23.0 +0.2**
6.1nm,0.9s,baz=132,slow=6.0
PETK Petropavlovsk- 88.53 346 *e*P **P** **15 39 22.0 -0.8**
USRK Ussuriysk Ar. 89.49 327 P **P** **15 39 28.4 +0.9**
2.7nm,0.8s,baz=134,slow=8.3
NV01 Mina Array Sit 90.32 43 *e*P **P** **15 39 30.4 -1.5**
NVAR Mina Array Bea 90.32 43 P **P** **15 39 33.6 +1.7**
0.2nm,0.5s,baz=228,slow=6.7,SNR=3.8
NNA Nana 92.67 106 LR LR 16 13 45.7
comp=Z,82nm,18.4s,baz=200,slow=30
GYA Guiyang 92.93 300 *e*P **P** **15 39 44.3 +0.1**
GYA pP pP 15 39 55.8 +0.8
GYA PP **PP** **15 43 31.0 +3.6**
GYA SKS **SKSac** **15 50 15.5 -0.2**
GYA S **S** **15 50 47.5 -0.3**
GYA pmax pmax
comp=Z,10.0nm,1.0s
CD2 Chengdu 97.56 302 P **P** **15 40 04.8 -0.3**
HHC Hu-ho-hao-te 98.17 314 *e*P **P** **15 40 06.5 -1.2**
HHC pP pP 15 40 17.3 -1.2
HHC sP sP 15 40 21.0 -1.4
HHC S **S** **15 51 29.5 -3.1**
HHC sS pS 15 51 47.5 +0.9
HHC pmax pmax
comp=Z,29nm,5.0s
HHC LR LR
comp=N,33nm,15.6s
HHC LR LR
comp=E,41nm,16.4s
PDAR Pinedale Array 98.18 44 *e*P **P** **15 40 04.5 -3.4**
LZH Lanzhou 100.38 306 *e*P **Pdif** **15 40 17.5 -0.2**
LZH pP pPdif 15 40 25.0 -3.6
LZH sP pP 15 40 28.0 -0.7
WMQ Urumqi 114.93 307 PKP PKPdf 15 45 10.0 -1.3
WMQ LR LR
comp=N,77nm,22.1s
WMQ LR LR
comp=E,62nm,23.5s
WMQ LR LR
comp=Z,59nm,18.1s
CBN Corbin Frederi 117.25 61 *e*PKPdf **PKPdf** **15 45 15.4 -0.5**
KSH Kashi 121.62 299 PKP **PKPdf** **15 45 24.5 +0.1**
KSH PP **PP** **15 47 04.0 +6.4**
KURK Kurchatov 122.95 313 PKP **PKPdf** **15 45 26.8 +0.4**
KURBB Kurchatov Arra 122.99 312 PKP **PKPdf** **15 45 26.8 +0.3**
1.0nm,0.5s,baz=101,slow=1.9,SNR=13
BVAR Borovoye Array 128.38 314 PKP **PKPdf** **15 45 37.7 +0.9**
1.0nm,0.5s,baz=111,slow=3.2,SNR=8.1
ARCES ARCESS Array B 141.33 347 PKhKP PKPpre 15 45 55.5
1.6nm,0.8s,baz=57,slow=4.5,SNR=4.1
ARCES PKP **PKPdf** **15 46 01.0 +0.6**
1.5nm,0.9s,baz=57,slow=3.3,SNR=4.1
KBZ Khabaz 146.59 300 PKPbc **PKPab** **15 46 12.4 -0.6**
6.2nm,1.0s,baz=162,slow=2.1,SNR=7.2
FINES FINESS Array B 147.76 338 PKPbc **PKPbc** **15 46 15.1 +0.4**
12nm,0.7s,baz=56,slow=3.5,SNR=41
NB2 NORSAR Subarra151.52 351 PKP **PKPbc** **15 46 25.2 +1.2**
comp=Z,9.3nm,1.1s,baz=17,slow=2.6
HFS Hagfors 151.99 347 PKPbc **PKPbc** **15 46 25.8 +0.7**
comp=Z,3.8nm,0.6s,baz=62,slow=3.4,SNR=9.7
MMAI Mount Meron Ar 152.07 279 PKPbc **PKPbc** **15 46 28.3 +2.1**
comp=Z,18nm,0.8s,baz=73,slow=4.8,SNR=17
AKASG Malin Array Be 153.47 319 PKPbc **PKPbc** **15 46 29.0 +0.4**
comp=Z,0.7nm,0.4s,baz=56,slow=2.7,SNR=6.6
AK11 Malin Array Si 153.51 319 *e*PKPbc **PKPbc** **15 46 29.6 +0.9**
BR131 Keskin Array S 153.81 293 *e*PKPbc **PKPbc** **15 46 30.9 +1.0**
BRTR Keskin Array B 153.81 293 PKPbc **PKPbc** **15 46 30.6 +0.6**
comp=Z,4.5nm,0.8s,baz=139,slow=4.3,SNR=18
BRTR PKPab **PKPab** **15 46 42.7 -0.4**
comp=Z,1.7nm,0.5s,baz=128,slow=3.2,SNR=5.6
TORD Torodi Ar. Bea 160.02 179 PKPab **PKPab** **15 47 12.5 +2.6**
baz=171,slow=2.8
CLL Collm 160.21 339 *i* PKPab **PKPab** **15 47 10.6 +0.7**
comp=Z,6.0nm,1.0s
BRG Berggiesshubel 160.29 337 *e*P **PKPab** **15 47 11.1 +0.7**
comp=Z,4.6nm,1.1s
GERES GERESS Array B 162.09 334 PKPab **PKPab** **15 47 17.9 -0.4**
comp=Z,0.4nm,0.5s,baz=35,slow=5.4,SNR=6.4
FUORN Ofenpass-Fuorn 165.19 337 *e*PKPab **PKPab** **15 47 33.5 +1.2**

*ISCJB **30** 15:35:12.1±0.5, 6°.85N±0°.04×73°.13W±0°.04, h158km±4km, mb3.2/3, Error ellipse: s-maj=7.1km s-min=5.0km az=38.8*
*IDC **30** 15:35:12.3±0.8, 6°.73N×72°.97W, h164km±13km, mb2.9/3, mb1 3.4/5, mb1mx3.1/41, mbtmp3.5/5, Error ellipse: s-maj=40.0km s-min=7.8km az=132.0*
*RSNC **30** 15:35:13.8±0.8, 6°.81N×73°.15W, h150km±4km, ML3.2, Mw3.8*

ISC 30 15:35:12.5±0.8, 6°.84N±0°.04×73°.13W±0°.04, h156km±6km, n25, σ0°70/39, mb3.3/3, 3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.25**	**192**	*i* P	**Pn**	**15 35 34.0**	**+0.1**
BARC				*e*S	**Sn**	**15 35 49.4**	**-0.9**
BARC				*i*		15 35 50.8	
comp=Z,272nm,0.2s							
BRRC	**Barranca, Sant**	**0.64**	**295**	⇓*i*P	**Pn**	**15 35 36.0**	**+0.7**
BRRC				*i*		15 35 37.3	
comp=Z,312nm,0.1s							
BRRC				*e*S	**Sn**	**15 35 53.1**	**+0.4**
PAMC	**Pamplona, Colo**	**0.66**	**41**	*i* P	**Pn**	**15 35 36.8**	**+0.8**
PAMC				*e*S	**Sn**	**15 35 54.2**	**+0.2**
PAMC				*i*		15 35 55.9	
comp=Z,139nm,0.5s							
RUSC	**La Rusia**	**0.94**	**177**	⇓*i*P	**Pn**	**15 35 37.9**	**-0.1**
RUSC				*e*S	**Sn**	**15 35 56.7**	**-0.7**
RUSC				*i*		15 35 59.2	
comp=Z,128nm,0.5s							
PTBC	**PUERTO BERRIO,**	**1.35**	**257**	*e*P	**Pn**	**15 35 40.5**	**-0.5**
PTBC				*e*S	**Sn**	**15 36 01.6**	**-1.3**
PTBC				*i*		15 36 07.8	
comp=Z,171nm,0.3s							
TAMC	**Tame, Arauca**	**1.39**	**107**	⇓*i*P	**Pn**	**15 35 42.2**	**+0.7**
TAMC				*e*S	**Sn**	**15 36 03.8**	**+0.1**
OCAC	**Ocana**	**1.41**	**352**	*e*P	**Pn**	**15 35 42.3**	**+0.5**
OCAC				*e*S	**Sn**	**15 36 04.1**	**-0.2**
OCAC				*i*		15 36 09.8	
comp=Z,394nm,0.2s							
YOPC	**Yopal, Colombi**	**1.63**	**154**	*e*P	**Pn**	**15 35 44.5**	**+0.4**
ZARC	**Zaragoza, Cauc**	**1.83**	**291**	*e*P	**Pn**	**15 35 46.6**	**+0.4**
ZARC				*i*		15 36 18.3	
comp=Z,240nm,0.4s							
NORC	**Norcasia**	**2.14**	**234**	*e*P	**Pn**	**15 35 49.8**	**+0.1**
NORC				*e*S	**Sn**	**15 36 18.3**	**-0.1**
CHIC	**Chingaza**	**2.27**	**195**	*e*P	**Pn**	**15 35 51.9**	**+0.3**
CHIC				*e*S	**Sn**	**15 36 21.0**	**-0.8**
CHIC				*i*		15 36 27.2	
comp=Z,69nm,0.3s							
ROSC	**El Rosal**	**2.31**	**211**	P	**Pn**	**15 35 53.9**	**+1.8**
comp=Z,19nm,0.3s,baz=44,slow=8.1,SNR=18							
ROSC				S	**Sn**	**15 36 23.1**	**+0.6**
comp=Z,18nm,0.3s,baz=287,slow=19,SNR=10							
HELC	**Santa Helena**	**2.47**	**255**	*e*P	**Pn**	**15 35 54.0**	**+0.1**
HELC				*e*S	**Sn**	**15 36 26.0**	**+0.2**
HELC				*i*		15 36 32.8	
comp=Z,104nm,0.3s							
UREC	**San Jos¨ de U**	**2.55**	**291**	*e*P	**Pn**	**15 35 53.9**	**-0.7**
GUYC	**Guyana, Colomb**	**2.76**	**235**	*e*P	**Pn**	**15 35 58.1**	**+0.5**
GUYC				*e*S	**Sn**	**15 36 33.7**	**+1.3**
GUYC				*i*		15 36 41.5	
comp=Z,158nm,0.4s							
VILC	**Villavicencio,**	**2.76**	**192**	*e*P	**Pn**	**15 35 57.2**	**-0.2**
VILC				*e*S	**Sn**	**15 36 31.8**	**-0.2**
VILC				*i*		15 36 38.8	
comp=Z,46nm,0.6s							
DBBC	**Dabeiba**	**3.06**	**274**	*e*P	**Pn**	**15 36 01.8**	**+0.8**
CODC	**Agust`›n Codaz**	**3.10**	**354**	*e*P	**Pn**	**15 36 01.8**	**+0.4**
CODC				*i*		15 36 46.2	
comp=Z,42nm,0.4s							

TOLC	**Tolima**	**3.12**	**224**	*e*P	**Pn**	**15 36 02.6**	**+0.6**
SDV	**Santo Domingo**	**3.21**	**50**	P	**Pn**	**15 36 03.4**	**+0.5**
comp=Z,22nm,0.3s,baz=211,slow=2.4,SNR=16							
SDV				S	**Sn**	**15 36 41.4**	**-0.6**
comp=Z,16nm,0.3s,baz=246,slow=19,SNR=14							
SDV	**Santo Domingo**	**3.21**	**50**	*e*P	**Pn**	**15 36 03.2**	**+0.3**
TXAR	**Lajitas Array**	**36.44**	**312**	P	**P**	**15 42 03.1**	**+0.5**
comp=Z,0.3nm,0.7s,baz=125,slow=7.8,SNR=3.2							
PDAR	**Pinedale Array**	**46.06**	**324**	P	**P**	**15 43 37.1**	**+0.6**
comp=Z,0.2nm,0.3s,baz=119,slow=9.4,SNR=2.6							
YKA	**Yellowknife Ar**	**63.25**	**340**	P	**P**	**15 45 23.4**	**-0.7**
comp=Z,0.3nm,0.5s,baz=131,slow=6.2,SNR=4.5							
WRA	**Warramunga Arr**	**150.33**	**241**	PKPbc	**PKPbc**	**15 54 44.9**	**-1.4**
comp=Z,0.2nm,0.4s,baz=108,slow=2.6,SNR=6.0							

IDC 30 15:39:16.1±1.5, 3°.71N×126°.16E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.5/53, mbtmp3.7/6, MS3.6/1, Ms1 3.6/1, ms1mx2.4/53, Error ellipse: s-maj=123.0km s-min=18.4km az=69.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.67**	**181**	P	P	15 44 07.2	-1.3
1.2nm,1.1s,baz=0.0,slow=13,SNR=2.4							
WRA	**Warramunga Arr**	**24.84**	**161**	P	P	15 44 40.8	+0.5
1.0nm,0.8s,baz=342,slow=10,SNR=12							
ASAR	**Alice Springs**	**28.23**	**165**	P	P	15 45 11.3	+0.3
0.8nm,1.0s,baz=352,slow=7.5,SNR=5.1							
PETK	**Petropavlovsk-**	**55.67**	**22**	LR	LR	16 11 50.1	
comp=Z,55nm,21.9s,baz=153,slow=35							
MKAR	**Makanchi Array**	**57.25**	**326**	P	P	15 49 06.4	+0.9
1.2nm,0.6s,baz=123,slow=8.3,SNR=7.3							
KURBB	**Kurchatov Arra**	**61.45**	**328**	P	P	15 49 33.9	-0.5
1.6nm,0.7s,baz=126,slow=6.4,SNR=14							
BVAR	**Borovoye Array**	**67.03**	**327**	P	P	15 50 10.4	-0.5
0.3nm,0.4s,baz=102,slow=6.6,SNR=4.0							

*IDC **30** 15:47:02.9±0.9, 32°.67N×85°.96E, h0km, mb3.8/11, mb1 4.0/14, mb1mx3.7/66, mbtmp3.8/14, ML3.4/2, MS3.2/14, Ms1 3.2/14, ms1mx3.0/58, Error ellipse: s-maj=32.3km s-min=16.1km az=53.0*
*ISCJB **30** 15:47:05.9±0.6, 32°.68N±0°.08×85°.84E±0°.07, h33km, mb3.8/11, MS3.3/13, Error ellipse: s-maj=12.4km s-min=8.0km az=12.9*

ISC 30 15:47:08.1±0.8, 32°.7N±0°.1×85°.93E±0°.09, h35km, n25, σ0°67/18, mb3.8/11, MS3.1/13, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHCP	**Chirah Chowk**	**10.65**	**279**	P	**Pn**	**15 49 39.4**	**+1.1**
CEP	**Cherat**	**11.79**	**279**	P	**Pn**	**15 49 53.3**	**-0.6**
CEP				S	**Sn**	**15 52 04.0**	**-0.3**
THW	**Thamme Wali**	**11.94**	**274**	P	**Pn**	**15 49 55.0**	**-0.9**
MKAR	**Makanchi Array**	**14.34**	**350**	Pn	**Pn**	**15 50 27.8**	**-0.7**
baz=165,slow=14,SNR=5.0							
MKAR				LR	LR	15 56 58.6	
comp=Z,40nm,18.7s,baz=198,slow=41							
CMAR	**Chiang Mai Arr**	**18.39**	**137**	P	**Pn**	**15 51 20.6**	**+0.2**
0.1nm,0.3s,baz=314,slow=11,SNR=8.4							
CMAR				LR	LR	15 59 03.7	
comp=Z,15nm,21.5s,baz=110,slow=39							
KURBB	**Kurchatov Arra**	**18.71**	**345**	P	**P**	**15 51 23.6**	**+0.1**
0.0nm,0.3s,baz=156,slow=11,SNR=20							
ZALV	**Zalesovo Beam**	**21.25**	**358**	P	**P**	**15 51 51.9**	**+0.9**
1.9nm,0.6s,baz=181,slow=11,SNR=11							
ZALV				LR	LR	16 01 43.8	
comp=Z,39nm,18.6s,baz=244,slow=41							
SONM	**Songino Array**	**21.63**	**40**	P	**P**	**15 51 55.3**	**0.0**
2.1nm,0.8s,baz=232,slow=12,SNR=10							
SONM				LR	LR	16 00 56.1	
comp=Z,72nm,21.0s,baz=222,slow=38							
GEYT	**Alibeck**	**23.24**	**291**	LR	LR	16 02 58.5	
comp=Z,50nm,20.3s,baz=55,slow=41							
WSAR	**Wadi Sarin**	**25.82**	**256**	LR	LR	16 05 43.5	
comp=Z,78nm,18.9s,baz=252,slow=43							
AKTO	**Aktyubinsk**	**27.14**	**319**	P	**P**	**15 52 48.1**	**+0.3**
0.9nm,0.6s,baz=140,slow=11,SNR=4.4							
AKTO				LR	LR	16 04 11.0	
comp=Z,45nm,20.2s,baz=171,slow=38							
GNI	**Garni**	**33.72**	**295**	LR	LR	16 09 51.2	
comp=Z,33nm,19.8s,baz=111,slow=40							
KSRS	**Korea Array**	**34.48**	**70**	LR	LR	16 10 04.0	
comp=Z,29nm,19.3s,baz=290,slow=40							
BRTR	**Keskin Array B**	**42.26**	**295**	LR	LR	16 14 03.5	
comp=Z,24nm,18.6s,baz=252,slow=38							
AKASG	**Malin Array Be**	**44.81**	**311**	P	**P**	**15 55 18.5**	**0.0**
1.1nm,0.5s,baz=80,slow=7.2,SNR=6.8							
AKASG				LR	LR	16 16 43.1	
comp=Z,32nm,19.0s,baz=220,slow=40							
FINES	**FINESS Array B**	**47.54**	**326**	P	**P**	**15 55 40.2**	**+0.5**
1.5nm,0.7s,baz=116,slow=9.7,SNR=3.4							
FINES				LR	LR	16 16 31.2	
comp=Z,38nm,19.1s,baz=104,slow=37							
HFS	**Hagfors**	**53.53**	**324**	P	**P**	**15 56 24.3**	**-0.7**
6.8nm,1.1s,baz=95,slow=13,SNR=3.8							
NOA	**NORSAR Array B**	**54.69**	**325**	LR	LR	16 21 49.4	
comp=Z,27nm,18.0s,baz=155,slow=38							
GERES	**GERESS Array B**	**54.99**	**310**	P	**P**	**15 56 36.9**	**+1.0**
0.5nm,0.6s,baz=69,slow=5.4,SNR=5.1							
DAVOX	**Davos/Dischmat**	**57.97**	**308**	LR	LR	16 24 35.1	
comp=Z,60nm,18.2s,baz=84,slow=39							
WRA	**Warramunga Arr**	**69.87**	**131**	P	**P**	**15 58 15.4**	**-0.2**
1.1nm,0.8s,baz=326,slow=6.6,SNR=11							
ASAR	**Alice Springs**	**72.38**	**134**	P	**P**	**15 58 30.6**	**-0.1**
0.6nm,0.6s,baz=328,slow=6.8,SNR=6.0							
ILAR	**Eielson Array**	**74.48**	**21**	P	**P**	**15 58 41.8**	**-0.8**
0.6nm,0.9s,baz=294,slow=4.4,SNR=6.0							
HNR	**Honiara**	**81.87**	**107**	LR	LR	16 35 41.8	
comp=Z,329nm,19.5s,baz=164,slow=36							
YKA	**Yellowknife Ar**	**83.70**	**9**	P	**P**	**15 59 33.3**	**+0.3**
0.9nm,0.8s,baz=349,slow=5.2,SNR=8.7							

MEX 30 15:52:15.6±0.4, 31°.70N×115°.49W, h16km±999km, MD3.8, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPIG	**San Pedro Mart**	**0.65**	**179**	*e*P	Pg	15 52 26.5	-2.0
SPIG				*e*S	Sg	15 52 34.8	-2.3
SPX	**San Pedro Mart**	**0.65**	**178**	*e*P	Pg	15 52 26.1	-2.3
SPX				*e*S	Sg	15 52 34.3	-2.9
CBX	**Cerro Bola**	**1.18**	**302**	*e*P	Pn	15 52 34.0	-3.5
CBX				*e*S	Sb	15 52 47.8	-4.8
TJIG	**Tijuana**	**1.25**	**306**	*e*P	Pn	15 52 34.3	-4.1
TJIG				*e*S	Sb	15 52 49.5	-5.1

*ISCJB **30** 16:01:50.5±0.2, 46°.42N±0°.01×6°.39E±0°.02, h8km±2km, Error ellipse: s-maj=2.0km s-min=1.7km az=176.1*
*CSEM **30** 16:01:51.5±0.1, 46°.41N×6°.44E, h10km, ML3.1/31, Error ellipse: s-maj=1.4km s-min=1.4km az=118.0*
*LDG **30** 16:01:52.7±0.1, 46°.39N×6°.49E, h10km, Md3.1/3, Ml3.1/33, Error ellipse: s-maj=1.0km s-min=1.0km az=14.0*
*ROM **30** 16:01:52.3±0.1, 46°.43N±0°.01×6°.48E±0°.02, h10km, ML2.3/9*
*STR **30** 16:01:52.8±0.2, 46°N±1°×±°, h9km±3km, M2.7/6, MLv2.8/1, MLv2.6/6*
*ZUR **30** 16:01:52.1, 46°.41N×6°.49E, h6km±2km, ML2.3/18*

ISC 30 16:01:51.6±0.9, 46°.40N±0°.01×6°.45E±0°.01, h18km±3km, n209, σ1°02/308, 13C-13D, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GIMEL	**St. Georges /**	**0.19**	**317**	⇓*i*Pg	**Pb**	**16 01 56.6**	**+0.3**
125nm,0.8s							
GIMEL	**St. Georges /**	**0.19**	**317**	P	**Pb**	**16 01 56.6**	**+0.3**
GIMEL				S	**Sg**	**16 01 59.0**	**-0.7**
GIMEL	**St. Georges /**	**0.19**	**317**	P	**Pb**	**16 01 56.6**	**+0.3**
GIMEL				S	**Sg**	**16 01 60.0**	**+0.3**
NOV1	**NOV1**	**0.25**	**92**	⇓*i*Pg	**Pg**	**16 01 57.0**	**-0.4**
88nm,0.6s							
NOV1	**NOV1**	**0.25**	**92**	⇓*i*Pg	**Pg**	**16 01 57.0**	**-0.4**
NOV4	**La Tour-de-Pel**	**0.29**	**80**	⇓*e*Pg	**Pg**	**16 01 57.6**	**-0.3**
88nm,0.5s							
NOV4	**La Tour-de-Pel**	**0.29**	**80**	⇓*e*Pg	**Pg**	**16 01 57.6**	**-0.3**
OG02	**Monnetier-Morn**	**0.29**	**213**	Pg	**Pb**	**16 01 58.9**	**+0.6**
OG02	**Monnetier-Morn**	**0.29**	**213**	Pg	**Pb**	**16 01 58.9**	**+0.6**
OG02				Sg	**Sb**	**16 02 02.9**	**+0.1**
NOV2	**NOV2**	**0.29**	**95**	⇑*i*Pg	**Pg**	**16 01 58.0**	**-0.1**
35nm,0.6s							
NOV2	**NOV2**	**0.29**	**95**	⇑*i*Pg	**Pg**	**16 01 58.0**	**-0.1**

CABF	**La Chapelle**	**0.33**	**310**	*e*Pg	**Pb**	**16 01 59.0**	**0.0**
SNR=1.0							
CABF				*e*Sg	**Sb**	**16 02 03.9**	**-0.1**
73nm,0.2s							
CABF	**La Chapelle**	**0.33**	**310**	*e*Pg	**Pb**	**16 01 59.0**	**0.0**
SNR=1.0							
CABF				*e*Sg	**Sb**	**16 02 03.9**	**-0.1**
36nm,0.2s							
NOV3	**NOV3**	**0.34**	**84**	⇓*i*Pg	**Pg**	**16 01 58.9**	**0.0**
52nm,0.4s							
NOV3	**NOV3**	**0.34**	**84**	⇓*i*Pg	**Pg**	**16 01 58.9**	**0.0**
AIGLE	**Aigle**	**0.35**	**99**	⇓*i*Pg	**Pg**	**16 01 59.0**	**-0.1**
36nm,1.1s							
AIGLE	**Aigle**	**0.35**	**99**	⇓*i*Pg	**Pg**	**16 01 59.0**	**-0.1**
OGSI	**Sixt**	**0.39**	**147**	⇑*i*Pg	**Pg**	**16 02 00.0**	**+0.2**
SALAN	**Lac Salanfe**	**0.44**	**125**	*i* Pg	**Pg**	**16 02 00.7**	**0.0**
147nm,0.4s							
SALAN				*i* Sg	**Sg**	**16 02 06.6**	**-0.3**
147nm,0.4s							
SALAN	**Lac Salanfe**	**0.44**	**125**	*i* Pg	**Pg**	**16 02 00.7**	**0.0**
SALAN				*i* Sg	**Sg**	**16 02 06.6**	**-0.3**
GRYON	**Gryon**	**0.48**	**108**	⇓*i*Pg	**Pg**	**16 02 01.3**	**-0.1**
76nm,0.7s							
GRYON	**Gryon**	**0.48**	**108**	⇓*i*Pg	**Pg**	**16 02 01.3**	**-0.1**
TORNY	**Torny/Romont**	**0.51**	**43**	*e*Pg	**Pb**	**16 02 02.4**	**+0.3**
544nm,0.8s							
TORNY	**Torny/Romont**	**0.51**	**43**	*e*Pg	**Pb**	**16 02 02.4**	**+0.3**
BRANT	**Les Verrieres**	**0.54**	**2**	⇑*i*Pg	**Pb**	**16 02 02.7**	**+0.1**
341nm,0.7s							
BRANT	**Les Verrieres**	**0.54**	**2**	⇑*i*Pg	**Pb**	**16 02 02.7**	**+0.1**
SENIN	**Lac Senin/Sane**	**0.59**	**93**	⇓*i*Pg	**Pg**	**16 02 03.4**	**0.0**
201nm,0.6s							
SENIN	**Lac Senin/Sane**	**0.59**	**93**	⇓*i*Pg	**Pg**	**16 02 03.4**	**0.0**
OG35	**Corcelles**	**0.70**	**240**	Pg	**Pn**	**16 02 07.2**	**+0.5**
OG35	**Corcelles**	**0.70**	**240**	Pg	**Pn**	**16 02 07.2**	**+0.5**
OG35				Sg	**Sb**	**16 02 15.8**	**+1.0**
RSL	**Roselend**	**0.72**	**170**	⇑*i*Pg	**Pb**	**16 02 06.1**	**+0.4**
RSL	**Roselend**	**0.72**	**170**	Pg	**Pb**	**16 02 05.9**	**+0.2**
RSL	**Roselend**	**0.72**	**170**	⇑*i*Pg	**Pg**	**16 02 05.8**	**0.0**
RSL				Sg	**Sb**	**16 02 16.6**	**+1.3**
DIX	**Grande Dixence**	**0.74**	**115**	*e*Pg	**Pg**	**16 02 05.8**	**-0.3**
245nm,0.3s							
DIX	**Grande Dixence**	**0.74**	**115**	P	**Pg**	**16 02 06.2**	**+0.1**
DIX				S	**Sg**	**16 02 15.0**	**-1.0**
DIX	**Grande Dixence**	**0.74**	**115**	P	**Pg**	**16 02 06.2**	**+0.1**
DIX				S	**Sg**	**16 02 16.0**	**0.0**
MRGE	**Morge**	**0.76**	**146**	P	**Pg**	**16 02 06.6**	**+0.1**
MRGE	**Morge**	**0.76**	**146**	P	**Pg**	**16 02 06.6**	**+0.1**
MRGE				AML	AML		
comp=E,462μm,0.4s							
MRGE				AML	AML		
comp=N,327μm,0.8s							
MRGE				AML	AML		
comp=E,462μm,0.4s							
MRGE				AML	AML		
comp=N,327μm,0.8s							
MRGE				AML	AML		
comp=E,462μm,0.4s							
MRGE				AML	AML		
comp=N,327μm,0.8s							
LKBD	**Leukerbad**	**0.81**	**90**	⇑*i*Pg	**Pg**	**16 02 06.2**	**-1.4**
comp=N,321nm,0.2s							
LKBD	**Leukerbad**	**0.81**	**90**	⇑*i*Pg	**Pb**	**16 02 07.6**	**+0.3**
LKBD2	**Leukerbad 2**	**0.83**	**91**	*e*Pg	**Pg**	**16 02 07.6**	**-0.2**
comp=N,60nm,0.1s							
LKBD2	**Leukerbad 2**	**0.83**	**91**	*e*Pg	**Pb**	**16 02 08.0**	**+0.4**
WIMIS	**Wimmis**	**0.85**	**71**	*e*Pg	**Pg**	**16 02 08.0**	**-0.3**
comp=N,161nm,0.6s							
WIMIS	**Wimmis**	**0.85**	**71**	*e*Pg	**Pb**	**16 02 08.4**	**+0.5**
CHMF	**Charmoille**	**0.86**	**9**	⇑*i*Pg	**Pb**	**16 02 08.5**	**+0.5**
comp=N,2μm,0.5s							
CHMF	**Charmoille**	**0.86**	**9**	Pg	**Pb**	**16 02 08.6**	**+0.5**
CHMF	**Charmoille**	**0.86**	**9**	⇑*i*Pg	**Pb**	**16 02 08.5**	**+0.5**
CHMF				Sg	**Sb**	**16 02 20.7**	**+1.4**
LPL	**La Plagne**	**0.91**	**167**	*e*Pg	**Pg**	**16 02 09.2**	**-0.1**
SNR=1.0							
LPL				*e*Sg	**Sg**	**16 02 20.8**	**-0.4**
comp=N,70nm,0.3s,SNR=1.0							
LPL	**La Plagne**	**0.91**	**167**	*e*Pg	**Pg**	**16 02 09.2**	**-0.1**
SNR=1.0							
LPL				*e*Sg	**Sg**	**16 02 20.8**	**-0.4**
comp=N,35nm,0.3s,SNR=1.0							
LAUCH	**Lauchernalp**	**0.92**	**89**	*e*Pg	**Pg**	**16 02 08.5**	**-1.0**
comp=N,821nm,0.2s							
LAUCH	**Lauchernalp**	**0.92**	**89**	*e*Pg	**Pb**	**16 02 09.4**	**+0.3**
LPG	**La Plagne**	**0.93**	**167**	*e*Pg	**Pb**	**16 02 09.9**	**+0.6**
SNR=1.0							
LPG				*e*Sg	**Sg**	**16 02 21.3**	**-0.6**
comp=N,202nm,0.3s,SNR=1.0							
LPG	**La Plagne**	**0.93**	**167**	*e*Pg	**Pb**	**16 02 09.9**	**+0.6**
SNR=1.0							
LPG				*e*Sg	**Sg**	**16 02 21.3**	**-0.6**
comp=N,101nm,0.3s,SNR=1.0							
OGSM	**Saint Maurice**	**0.95**	**214**	Pg	**Pn**	**16 02 10.9**	**+0.8**
OGSM	**Saint Maurice**	**0.95**	**214**	Pg	**Pn**	**16 02 10.9**	**+0.8**
OGSM				Sg	**Sn**	**16 02 23.9**	**+0.8**
LOMF	**Lomont**	**0.99**	**15**	Pg	**Pn**	**16 02 11.0**	**+0.3**
LOMF	**Lomont**	**0.99**	**15**	Pg	**Pg**	**16 02 10.0**	**-0.8**
LOMF				Sg	**Sn**	**16 02 25.3**	**+1.1**
MMK	**Mattmark**	**1.11**	**108**	P	**Pn**	**16 02 13.2**	**+0.8**
MMK	**Mattmark**	**1.11**	**108**

SNR=1.0
HINF eSn **Sn** **16 02 36.0 +0.6**
comp=N,40nm,0.2s,SNR=1.0
HINF eSg **Sg** **16 02 37.7 -0.6**
comp=N,31nm,0.2s
MOF Molkenrain 1.53 18 Pn **Pn** **16 02 18.4 +0.3**
MOF Molkenrain 1.53 18 Pn **Pn** **16 02 18.4 +0.3**
FUSIO Fusio 1.53 87 P **Pn** **16 02 19.0 +0.8**
FUSIO Fusio 1.53 87 P **Pb** **16 02 20.0 +0.4**
ORIF Oris-en-Rattie 1.53 195 ePn **Pn** **16 02 19.1 +0.9**
SNR=1.0
ORIF Oris-en-Rattie 1.53 195 ePg **Pg** **16 02 21.3 +0.2**
ORIF eSn **Sn** **16 02 38.4 +0.7**
comp=N,50nm,0.2s,SNR=1.0
ORIF eSg **Sg** **16 02 41.0 -0.1**
comp=N,52nm,0.2s
ORIF Oris-en-Rattie 1.53 195 Pg **Pg** **16 02 21.1 0.0**
ORIF Oris-en-Rattie 1.53 195 ePn **Pn** **16 02 19.1 +0.9**
SNR=1.0
ORIF Oris-en-Rattie 1.53 195 ePg **Pg** **16 02 21.3 +0.2**
ORIF eSn **Sn** **16 02 38.4 +0.7**
comp=N,25nm,0.2s,SNR=1.0
ORIF eSg **Sg** **16 02 41.0 -0.1**
comp=N,26nm,0.2s
ORIF Oris-en-Rattie 1.53 195 P **Pb** **16 02 19.8 +0.2**
ORIF S **Sg** **16 02 42.0 +0.9**
ORIF AML AML
comp=E,166µm,0.4s
ORIF AML AML
comp=N,70µm,1.0s
ORIF AML AML
comp=E,166µm,0.4s
ORIF AML AML
comp=N,70µm,1.0s
HAU Haudompre 1.61 358 ePn **Pn** **16 02 18.7 -0.4**
SNR=1.0
HAU Haudompre 1.61 358 ePg **Pg** **16 02 22.0 -0.6**
HAU eSn **Sn** **16 02 39.9 +0.4**
comp=N,63nm,0.2s,SNR=1.0
HAU eSg **Sg** **16 02 43.4 -0.1**
comp=N,80nm,0.3s
HAU Haudompre 1.61 358 ePn **Pn** **16 02 18.7 -0.4**
SNR=1.0
HAU Haudompre 1.61 358 ePg **Pg** **16 02 22.0 -0.6**
HAU eSn **Sn** **16 02 39.9 +0.4**
comp=N,32nm,0.2s,SNR=1.0
HAU eSg **Sg** **16 02 43.4 -0.1**
comp=N,40nm,0.3s
BHB Bricherasio 1.66 160 P **Pb** **16 02 22.4 +0.8**
BHB Bricherasio 1.66 160 P **Pb** **16 02 22.4 +0.8**
BHB AML AML
comp=E,56µm,0.4s
BHB AML AML
comp=N,45µm,0.6s
BHB AML AML
comp=N,45µm,0.6s
BHB AML AML
comp=E,56µm,0.4s
MBDF Montbardon 1.69 172 ePg **Pb** **16 02 23.2 +1.0**
SNR=1.0
MBDF eSg **Sg** **16 02 45.3 -0.7**
comp=E,21nm,0.4s,SNR=1.0
MBDF Montbardon 1.69 172 ePg **Pb** **16 02 23.2 +1.0**
SNR=1.0
MBDF eSg **Sg** **16 02 45.3 -0.7**
comp=E,10nm,0.4s,SNR=1.0
SSB Saint Sauveur 1.74 231 Pn **Pn** **16 02 21.8 +0.8**
SSB Pg **Pg** **16 02 25.6 +0.4**
SSB Saint Sauveur 1.74 231 Pn **Pn** **16 02 21.8 +0.8**
SSB Saint Sauveur 1.74 231 Pg **Pg** **16 02 25.5 +0.4**
SMF Signal de Mont 1.82 279 ePn **Pn** **16 02 23.4 +1.4**
SMF Signal de Mont 1.82 279 ePg **Pg** **16 02 26.4 -0.1**
SNR=1.0
SMF eSg **Sg** **16 02 50.2 0.0**
comp=E,34nm,0.2s,SNR=1.0
SMF Signal de Mont 1.82 279 ePn **Pn** **16 02 23.4 +1.4**
SMF Signal de Mont 1.82 279 ePg **Pg** **16 02 26.4 -0.1**
SNR=1.0
SMF eSg **Sg** **16 02 50.2 0.0**
comp=E,17nm,0.2s,SNR=1.0
KIZ Kirchzarten 1.85 32 Pg **Pg** **16 02 26.8 -0.4**
KIZ Kirchzarten 1.85 32 Pg **Pg** **16 02 26.8 -0.4**
ECH Echery 1.88 15 Pn **Pn** **16 02 23.1 +0.2**
ECH Pg **Pg** **16 02 27.4 -0.4**
ECH Echery 1.88 15 Pn **Pn** **16 02 23.1 +0.2**
ECH Echery 1.88 15 Pg **Pg** **16 02 27.4 -0.4**
ECH Sg **Sg** **16 02 52.2 0.0**
PZZ Stroppo 1.95 166 AML AML
comp=E,68µm,0.8s
PZZ AML AML
comp=N,90µm,0.9s
PZZ AML AML
comp=N,90µm,0.9s
PZZ AML AML
comp=E,68µm,0.8s
LOR Lormes 1.98 297 ePn **Pn** **16 02 25.6 +1.4**
SNR=1.0
LOR Lormes 1.98 297 ePg **Pg** **16 02 29.1 -0.5**
LOR eSg **Sg** **16 02 54.8 -0.5**
comp=E,19nm,0.2s,SNR=1.0
LOR Lormes 1.98 297 Pn **Pn** **16 02 25.3 +1.1**
LOR Pg **Pg** **16 02 29.3 -0.3**
LOR Lormes 1.98 297 ePn **Pn** **16 02 25.6 +1.4**
SNR=1.0
LOR Lormes 1.98 297 ePg **Pg** **16 02 29.1 -0.5**
LOR eSg **Sg** **16 02 54.8 -0.5**
comp=E,9.6nm,0.2s,SNR=1.0
VIVF Saint-Julien-l 1.98 220 ePn **Pn** **16 02 25.4 +1.1**
SNR=1.0
VIVF Saint-Julien-l 1.98 220 ePg **Pg** **16 02 29.1 -0.6**
VIVF eSg **Sg** **16 02 54.6 -0.9**
comp=E,38nm,0.2s
VIVF Saint-Julien-l 1.98 220 ePn **Pn** **16 02 25.4 +1.1**
SNR=1.0
VIVF Saint-Julien-l 1.98 220 ePg **Pg** **16 02 29.1 -0.6**
VIVF eSg **Sg** **16 02 54.6 -0.9**
comp=E,19nm,0.2s
TUE Stuetta 2.00 87 ⇑Pn **Pb** **16 02 27.8 +0.2**
TUE Stuetta 2.00 87 P **Pb** **16 02 27.9 +0.2**
TUE AML AML
comp=E,38µm,1.6s
TUE AML AML
comp=N,58µm,0.4s
TUE AML AML
comp=N,58µm,0.4s
TUE AML AML
comp=E,38µm,1.6s
SFTF Sexfontaines 2.05 333 ePn **Pn** **16 02 26.1 +1.0**
SFTF Sexfontaines 2.05 333 ePg **Pg** **16 02 30.3 -0.6**
SFTF eSg **Sg** **16 02 57.4 0.0**
comp=E,26nm,0.2s
SFTF Sexfontaines 2.05 333 ePn **Pn** **16 02 26.1 +1.0**
SFTF Sexfontaines 2.05 333 ePg **Pg** **16 02 30.3 -0.6**
SFTF eSg **Sg** **16 02 57.4 0.0**
comp=E,13nm,0.2s
CDF Champ du Feu 2.09 15 ePn **Pn** **16 02 25.8 0.0**
SNR=1.0
CDF Champ du Feu 2.09 15 ePg **Pg** **16 02 30.9 -0.8**
CDF eSg **Sg** **16 02 58.4 -0.5**
comp=E,20nm,0.4s,SNR=1.0
CDF Champ du Feu 2.09 15 ePn **Pn** **16 02 25.8 0.0**
SNR=1.0
CDF Champ du Feu 2.09 15 ePg **Pg** **16 02 30.9 -0.8**
CDF eSg **Sg** **16 02 58.4 -0.5**
comp=E,10.0nm,0.4s,SNR=1.0
WLS Welschbruch 2.11 17 Pn **Pn** **16 02 26.2 +0.2**
WLS Welschbruch 2.11 17 Pn **Pn** **16 02 26.2 +0.2**
COLF Collangettes 2.11 246 Pn **Pn** **16 02 26.9 +0.8**
COLF Collangettes 2.11 246 Pg **Pg** **16 02 32.6 +0.4**
SSF Saint Saulge 2.13 289 ePn **Pn** **16 02 27.6 +1.3**
SNR=1.0
SSF Saint Saulge 2.13 289 ePg **Pg** **16 02 32.3 -0.2**
SSF eSn **Sn** **16 02 53.4 +1.1**
SNR=1.0
SSF eSg **Sg** **16 03 00.3 +0.2**
comp=E,14nm,0.2s,SNR=1.0
SSF Saint Saulge 2.13 289 ePn **Pn** **16 02 27.6 +1.3**
SNR=1.0
SSF Saint Saulge 2.13 289 ePg **Pg** **16 02 32.3 -0.2**
SSF eSn **Sn** **16 02 53.4 +1.1**
SNR=1.0
SSF eSg **Sg** **16 03 00.3 +0.2**
comp=E,6.9nm,0.2s,SNR=1.0
AVF Avril sur Loir 2.17 282 ePn **Pn** **16 02 28.0 +1.2**
SNR=1.0
AVF eSn **Sn** **16 02 53.8 +0.6**
SNR=1.0
AVF eSg **Sg** **16 03 00.5 -0.9**
comp=E,14nm,0.4s,SNR=1.0
AVF Avril sur Loir 2.17 282 ePn **Pn** **16 02 28.0 +1.2**
SNR=1.0
AVF eSn **Sn** **16 02 53.8 +0.6**
SNR=1.0
AVF eSg **Sg** **16 03 00.5 -0.9**
comp=E,6.8nm,0.4s,SNR=1.0
PAGF Fort de Pagny 2.21 347 ePg **Pg** **16 02 33.8 -0.2**
PAGF eSg **Sg** **16 03 01.8 -1.0**
comp=E,12nm,0.3s
PAGF Fort de Pagny 2.21 347 ePg **Pg** **16 02 33.8 -0.2**
PAGF eSg **Sg** **16 03 01.8 -1.0**
comp=E,5.8nm,0.3s
MEZF Maizieres J'vi 2.31 336 ePg **Pb** **16 02 34.0 +1.3**
SNR=1.0
MEZF eSn **Sn** **16 02 56.8 +0.2**
comp=E,35nm,0.4s,SNR=1.0
MEZF eSg **Sg** **16 03 05.2 -0.6**
comp=E,15nm,0.3s
MEZF Maizieres J'vi 2.31 336 ePg **Pb** **16 02 34.0 +1.3**
SNR=1.0
MEZF eSn **Sn** **16 02 56.8 +0.2**
comp=E,18nm,0.4s,SNR=1.0
MEZF eSg **Sg** **16 03 05.2 -0.6**
comp=E,7.4nm,0.3s
AGO Saint Agoulin 2.33 263 Pn **Pn** **16 02 29.9 +0.9**
AGO Saint Agoulin 2.33 263 Pn **Pn** **16 02 29.9 +0.9**
BGF Bois d'Agland 2.50 275 ePn **Pn** **16 02 32.5 +1.2**
SNR=1.0
BGF Bois d'Agland 2.50 275 ePg **Pg** **16 02 39.2 -0.2**
BGF eSg **Sg** **16 03 11.3 -0.5**
comp=E,21nm,0.2s,SNR=1.0
BGF Bois d'Agland 2.50 275 ePn **Pn** **16 02 32.5 +1.2**
SNR=1.0
BGF Bois d'Agland 2.50 275 ePg **Pg** **16 02 39.2 -0.2**
BGF eSg **Sg** **16 03 11.3 -0.5**
comp=E,11nm,0.2s,SNR=1.0
SMRF Simiane la Rot 2.50 195 ePg **Pg** **16 02 38.9 -0.7**
SNR=1.0
SMRF eSg **Sg** **16 03 10.3 -1.7**
comp=E,2.9nm,0.2s
SMRF Simiane la Rot 2.50 195 ePg **Pg** **16 02 38.9 -0.7**
SNR=1.0
SMRF eSg **Sg** **16 03 10.3 -1.7**
comp=E,1.5nm,0.2s
DAVA Damuels 2.52 68 ePg **Pg** **16 02 39.2 -0.7**
comp=E,0.3nm,0.1s
DAVA Sg **Sg** **16 03 12.7 +0.2**
comp=E,14nm,0.5s
DAVA Damuels 2.52 68 Pg **Pg** **16 02 39.2 -0.7**
comp=E,0.3nm,0.1s
DAVA Sg **Sg** **16 03 12.7 +0.2**
comp=E,14nm,0.5s
LBL Lubilhac 2.52 244 Pn **Pn** **16 02 32.2 +0.4**
LBL Lubilhac 2.52 244 Pn **Pn** **16 02 32.2 +0.4**
ORZI Orzinuovi 2.63 111 S **Sg** **16 03 14.0 -2.0**
SBF Sospel 2.63 164 ePn **Pn** **16 02 33.5 +0.3**
SBF eSn **Sn** **16 03 03.2 -1.5**
comp=E,4.3nm,0.2s
SBF Sospel 2.63 164 ePn **Pn** **16 02 33.5 +0.3**
SBF eSn **Sn** **16 03 03.2 -1.5**
comp=E,2.2nm,0.2s
CNCS Concesio 2.74 105 Pn **Pn** **16 02 37.6 +2.9**
CNCS Concesio 2.74 105 P **Pn** **16 02 37.6 +2.9**
HYF Humbligny 2.76 290 ePn **Pn** **16 02 36.3 +1.4**
HYF eSn **Sn** **16 03 07.7 0.0**
HYF Humbligny 2.76 290 ePn **Pn** **16 02 36.3 +1.4**
HYF eSn **Sn** **16 03 07.7 0.0**
FRF La Foret Royal 2.84 177 ePn **Pn** **16 02 36.8 +0.7**
SNR=1.0
FRF La Foret Royal 2.84 177 ePg **Pg** **16 02 45.0 -1.1**
FRF eSn **Sn** **16 03 09.5 -0.3**
SNR=1.0
FRF eSg **Sg** **16 03 21.3 -1.6**
comp=E,6.3nm,0.3s,SNR=1.0
FRF La Foret Royal 2.84 177 ePn **Pn** **16 02 36.8 +0.7**
SNR=1.0
FRF La Foret Royal 2.84 177 ePg **Pg** **16 02 45.0 -1.1**
FRF eSn **Sn** **16 03 09.5 -0.3**
SNR=1.0
FRF eSg **Sg** **16 03 21.3 -1.6**
comp=E,3.2nm,0.3s,SNR=1.0
TCF Toulx Ste Croi 2.94 269 ePn **Pn** **16 02 38.0 +0.6**
SNR=1.0
TCF eSn **Sn** **16 03 12.8 +0.5**
SNR=1.0
TCF eSg **Sg** **16 03 25.0 -1.0**
comp=E,3.7nm,0.2s,SNR=1.0
TCF Toulx Ste Croi 2.94 269 ePn **Pn** **16 02 38.0 +0.6**
SNR=1.0
TCF eSn **Sn** **16 03 12.8 +0.5**
SNR=1.0
TCF eSg **Sg** **16 03 25.0 -1.0**
comp=E,1.9nm,0.2s,SNR=1.0
LASF Ste Croix 2.96 219 ePn **Pn** **16 02 38.8 +1.1**
SNR=1.0
LASF Ste Croix 2.96 219 ePg **Pg** **16 02 47.6 -0.7**
LASF eSn **Sn** **16 03 12.3 -0.4**
SNR=1.0
LASF eSg **Sg** **16 03 25.5 -1.1**
comp=E,25nm,0.3s,SNR=1.0
LASF Ste Croix 2.96 219 ePn **Pn** **16 02 38.8 +1.1**
SNR=1.0
LASF Ste Croix 2.96 219 ePg **Pg** **16 02 47.6 -0.7**
LASF eSn **Sn** **16 03 12.3 -0.4**
SNR=1.0
LASF eSg **Sg** **16 03 25.5 -1.1**
comp=E,12nm,0.3s,SNR=1.0
FETA Feichten 3.01 77 ePn **Pb** **16 02 46.2 +1.4**
comp=E,0.2nm,0.1s
FETA eSg **Sg** **16 03 28.4 +0.1**
comp=E,4.0nm,0.6s
LMR La Mourre 3.07 179 ePn **Pn** **16 02 39.8 +0.7**
SNR=1.0
LMR La Mourre 3.07 179 ePg **Pg** **16 02 49.2 -1.1**
LMR eSn **Sn** **16 03 14.1 -1.2**
SNR=1.0
LMR eSg **Sg** **16 03 27.7 -2.4**
comp=E,3.6nm,0.2s,SNR=1.0
LMR La Mourre 3.07 179 ePn **Pn** **16 02 39.8 +0.7**
SNR=1.0
LMR La Mourre 3.07 179 ePg **Pg** **16 02 49.2 -1.1**
LMR eSn **Sn** **16 03 14.1 -1.2**
SNR=1.0
LMR eSg **Sg** **16 03 27.7 -2.4**
comp=E,1.8nm,0.2s,SNR=1.0
RETA Reutte 3.15 68 ePg **Pg** **16 02 51.9 0.0**
comp=E,0.5nm,0.1s
RETA Sg **Sg** **16 03 31.0 -1.7**
comp=E,2.0nm,0.4s
RETA Reutte 3.15 68 Pg **Pg** **16 02 51.9 0.0**
comp=E,0.5nm,0.1s
RETA Sg **Sg** **16 03 31.0 -1.7**
comp=E,2.0nm,0.4s
CAF Calviac 3.41 246 ePn **Pn** **16 02 45.1 +1.2**
CAF eSn **Sn** **16 03 23.8 -0.1**
CAF Calviac 3.41 246 ePn **Pn** **16 02 45.1 +1.2**
CAF eSn **Sn** **16 03 23.8 -0.1**
RJF Les Rejaudoux 3.62 254 eSg **Sg** **16 03 46.1 -1.6**
comp=E,12nm,0.5s,SNR=1.0
RJF Les Rejaudoux 3.62 254 eSg **Sg** **16 03 46.1 -1.6**
comp=E,5.9nm,0.5s,SNR=1.0
T0820 Chiesuol del F 3.94 112 ⇑Pg **Pg** **16 03 06.0 -1.0**
T0820 Chiesuol del F 3.94 112 P **Pg** **16 03 06.0 -1.0**
BAIF Baives 3.96 339 ePn **Pn** **16 02 52.2 +0.8**
SNR=1.0
BAIF Baives 3.96 339 ePn **Pn** **16 02 52.2 +0.8**
SNR=1.0
LFF La Frestale 4.26 252 ePn **Pn** **16 02 56.6 +1.1**
LFF La Frestale 4.26 252 ePg **Pg** **16 03 11.7 -1.5**
LFF eSg **Sg** **16 04 06.2 -2.1**
comp=E,3.7nm,0.3s
LFF La Frestale 4.26 252 ePn **Pn** **16 02 56.6 +1.1**
LFF La Frestale 4.26 252 ePg **Pg** **16 03 11.7 -1.5**
LFF eSg **Sg** **16 04 06.2 -2.1**
comp=E,1.9nm,0.3s
MTLF Montolieu 4.29 226 ePn **Pn** **16 02 56.9 +0.9**
MTLF Montolieu 4.29 226 ePg **Pg** **16 03 12.2 -1.5**
MTLF eSg **Sg** **16 04 07.1 -2.2**
SNR=1.0
MTLF Montolieu 4.29 226 ePn **Pn** **16 02 56.9 +0.9**
MTLF Montolieu 4.29 226 ePg **Pg** **16 03 12.2 -1.5**
MTLF eSg **Sg** **16 04 07.1 -2.2**
SNR=1.0
MFF Saint Martin d 4.56 275 ePn **Pn** **16 03 00.5 +0.9**
SNR=1.0
MFF Saint Martin d 4.56 275 ePn **Pn** **16 03 00.5 +0.9**
SNR=1.0
LDF La Druitiere 4.96 299 ePn **Pn** **16 03 06.4 +1.2**
SNR=1.0
LDF eSg **Sg** **16 04 28.2 -2.7**
comp=E,2.5nm,0.3s,SNR=1.0
LDF La Druitiere 4.96 299 ePn **Pn** **16 03 06.4 +1.2**
SNR=1.0
LDF eSg **Sg** **16 04 28.2 -2.7**
comp=E,1.2nm,0.3s,SNR=1.0
PIEI Pieia 5.18 121 P **Pb** **16 03 24.6 +2.9**
FLN La Foliniere 5.25 299 ePn **Pn** **16 03 09.8 +0.7**
SNR=1.0
FLN La Foliniere 5.25 299 ePn **Pn** **16 03 09.8 +0.7**
SNR=1.0
MURB Monte Urbino 5.34 124 P **Pb** **16 03 20.8 -3.5**
GRR Gorron 5.35 294 ePn **Pn** **16 03 11.2 +0.8**
SNR=1.0
GRR Gorron 5.35 294 ePn **Pn** **16 03 11.2 +0.8**
SNR=1.0
LATE Laterza 5.38 133 P **Pn** **16 03 14.7 +3.7**
FDMO Fiordimonte 5.80 123 P **Pb** **16 03 35.7 +3.5**
ARRO Arrone 5.92 128 P **Pn** **16 03 22.4 +4.1**
SGMF Saint Gilles 6.40 290 ePn **Pn** **16 03 25.4 +0.5**
SNR=1.0
SGMF Saint Gilles 6.40 290 ePn **Pn** **16 03 25.4 +0.5**
SNR=1.0
QUIF Quistinic 6.73 287 eSn **Sn** **16 04 43.4 -2.2**
comp=E,7.8nm,0.8s,SNR=1.0

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*SOME **30** 16:04:26.6, 40°.88N×74°.78E, h5km*
*KRNET **30** 16:04:26.3±0.1, 40°.87N×74°.87E, h20km, mb3.3*
*NNC **30** 16:04:27.0±1.0, 40°.83N×74°.83E, h0km, mb3.7, mpv3.4,*
Error ellipse: s-maj=11.7km s-min=4.9km az=121.0
*KNET **30** 16:04:30.0±0.6, 41°.10N×74°.89E, h7km±3km, ml2.6, Error ellipse: s-maj=3.9km s-min=2.7km az=45.0*
ISC 30 16:04:25.4±1.3, 40°.84N±0°.04×75°.00E±0°.03, h6km±11km, n57, σ0.994/99, 46C-31D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	**Naryn**	**0.96**	**52**	⇑*iP*	**Pn**	**16 04 45.3**	**-0.4**
NRN	baz=56			⇑*iS*	**Sn**	**16 04 59.1**	**-0.7**
KZA	**Kyzart**	**1.25**	**8**	⇑P	**Pn**	**16 04 49.9**	**+0.1**
KZA	3.8nm,0.1s,SNR=43			⇑S	**Sb**	**16 05 06.2**	**+0.1**
KZA	**Kyzart**	**1.25**	**8**	⇑*iP*	**Pn**	**16 04 49.8**	**+0.1**
KZA	baz=13			⇑*iS*	**Sb**	**16 05 06.0**	**-0.1**
SFK	**Sufi-Kurgan**	**1.41**	**235**	⇑P	**Pn**	**16 04 50.8**	**-1.0**
SFK	13nm,0.3s			⇑S	**Sb**	**16 05 09.6**	**-1.0**
SFK	**Sufi-Kurgan**	**1.41**	**235**	⇓*iP*	**Pn**	**16 04 51.0**	**-0.8**
SFK	baz=31			⇓*iS*	**Sb**	**16 05 09.6**	**-1.0**
UCH	**Uchtor**	**1.43**	**345**	⇑P	**Pn**	**16 04 52.1**	**-0.3**
UCH	11nm,0.2s,SNR=30			⇑S	**Sb**	**16 05 10.3**	**-1.1**
UCH	**Uchtor**	**1.43**	**345**	⇑*iP*	**Pn**	**16 04 52.0**	**-0.3**
UCH	baz=49			⇑*eS*	**Sb**	**16 05 11.1**	**-0.3**
ARSB	**Arslanbob**	**1.60**	**288**	⇑*eP*	**Pn**	**16 04 54.0**	**-0.4**
ARSB	baz=88			⇑*iS*	**Sn**	**16 05 14.4**	**-1.0**
AML	**Almayashu**	**1.62**	**323**	⇓*iP*	**Pn**	**16 04 54.6**	**-0.3**
AML	baz=25			⇓*iS*	**Sn**	**16 05 15.2**	**-1.1**
ULHL	**Ulahol**	**1.68**	**33**	⇑P	**Pg**	**16 04 58.1**	**+0.4**
ULHL	6.3nm,0.1s,SNR=96			⇑S	**Sg**	**16 05 21.1**	**+1.6**
ULHL	**Ulahol**	**1.68**	**33**	⇑*iP*	**Pg**	**16 04 58.2**	**+0.6**
ULHL	baz=36			⇑*iS*	**Sg**	**16 05 20.9**	**+1.4**
BOOM	**Boomskoye usch**	**1.79**	**23**	⇑*iP*	**Pg**	**16 04 59.5**	**-0.2**
BOOM	baz=26			⇑*iS*	**Sg**	**16 05 23.5**	**+0.6**
KBK	**Karagaybulak**	**1.81**	**359**	⇓P	**Pb**	**16 04 59.7**	**+0.6**
KBK	47nm,0.1s,SNR=28			⇓S	**Sg**	**16 05 23.0**	**-0.6**
KBK	**Karagaybulak**	**1.81**	**359**	⇓*iP*	**Pb**	**16 04 59.2**	**+0.1**
KBK	baz=2.0			⇓*iS*	**Sg**	**16 05 23.1**	**-0.6**
AAK	**Ala-Archa**	**1.83**	**348**	⇑Pn	**Pb**	**16 04 59.5**	**+0.1**
AAK	8.5nm,0.3s			⇓Sn	**Sb**	**16 05 23.3**	**+0.6**
AAK	**Ala-Archa**	**1.83**	**348**	⇓P	**Pb**	**16 04 59.6**	**+0.2**
AAK	14nm,0.3s,SNR=16			⇑S	**Sb**	**16 05 22.8**	**+0.1**
AAK	**Ala-Archa**	**1.83**	**348**	⇓*iP*	**Pb**	**16 04 58.9**	**-0.5**
AAK	baz=51			⇓*iS*	**Sb**	**16 05 22.6**	**-0.1**
FRU1	**Bishkek**	**1.99**	**352**	⇑*eP*	**Pb**	**16 05 01.2**	**-0.8**
FRU1	baz=55			⇑*iS*	**Sb**	**16 05 27.7**	**+0.7**
EKS2	**Erkin-Say**	**2.04**	**334**	⇓P	**Pb**	**16 05 02.5**	**-0.3**
EKS2	5.7nm,0.3s,SNR=11			⇓S	**Sg**	**16 05 34.1**	**+0.4**
EKS2	**Erkin-Say**	**2.04**	**334**	⇑*iP*	**Pb**	**16 05 02.4**	**-0.5**
EKS2	baz=36			⇑*iS*	**Sb**	**16 05 28.6**	**+0.1**
TKM2	**Tokmak 2**	**2.12**	**12**	⇑Pn	**Pg**	**16 05 05.9**	**-0.2**
TKM2	7.1nm,0.3s			⇓Sn	**Sg**	**16 05 34.1**	**+0.4**
TKM2	**Tokmak 2**	**2.12**	**12**	⇓P	**Pg**	**16 05 06.0**	**-0.1**
TKM2	15nm,0.1s,SNR=31						
TKM2	**Tokmak 2**	**2.12**	**12**	⇑*iP*	**Pb**	**16 05 05.2**	**+0.8**
TKM2	baz=15			⇑*iS*	**Sg**	**16 05 32.8**	**-0.8**
CHMS	**Chumysh**	**2.16**	**355**	⇑P	**Pb**	**16 05 05.6**	**+0.7**
CHMS	8.4nm,0.1s,SNR=25						
CHMS	**Chumysh**	**2.16**	**355**	⇓*iP*	**Pb**	**16 05 04.8**	**-0.2**
CHMS	baz=58			⇓*iS*	**Sb**	**16 05 32.4**	**+0.3**
KST	**Kastek**	**2.31**	**18**	⇑*iP*	**Pg**	**16 05 09.5**	**-0.2**
KST	31nm,0.3s			⇓*iS*	**Sg**	**16 05 40.0**	**+0.4**
MRKS	**Merke**	**2.32**	**326**	⇑*iP*	**Pb**	**16 05 07.2**	**-0.5**
MRKS	83nm,0.3s			⇑*iS*	**Sb**	**16 05 36.5**	**-0.1**
USP	**Ospenovka**	**2.45**	**351**	⇑P	**Pb**	**16 05 10.5**	**+0.6**
USP	32nm,0.2s,SNR=42						
USP	**Ospenovka**	**2.45**	**351**	⇓*iP*	**Pb**	**16 05 09.0**	**-0.9**
USP	baz=54			⇓*iS*	**Sb**	**16 05 39.8**	**-0.6**
DGS	**Degeres**	**2.47**	**13**	*eP*	**Pg**	**16 05 12.2**	**-0.5**
DGS	34nm,0.4s			*eS*	**Sg**	**16 05 45.3**	**+0.7**
ARK	**Arkit**	**2.48**	**294**	⇓*iP*	**Pn**	**16 05 07.3**	**+0.9**
ARK	baz=94			⇓*iS*	**Sn**	**16 05 37.1**	**0.0**
MNAS	**Manas**	**2.49**	**312**	⇑Pn	**Pb**	**16 05 10.0**	**-0.7**
MNAS	16nm,0.4s			⇑Sn	**Sb**	**16 05 40.2**	**-1.4**
MNAS	**Manas**	**2.49**	**312**	⇓*iP*	**Pn**	**16 05 08.5**	**+1.9**
	baz=13						

MNAS ⇓*i*S **Sn** **16 05 38.9 +1.5**
baz=13
IZV Izvestkoviy 2.50 28 *e*P **Pg** **16 05 13.7 +0.4**
16nm,0.3s
IZV *e*S **Sg** **16 05 47.2 +1.5**
175nm,0.3s
MTBS Maitube 2.52 24 ⇑*i*P **Pg** **16 05 13.9 +0.2**
16nm,0.2s
MTBS ⇑*i*S **Sg** **16 05 47.7 +1.3**
127nm,0.2s
TNSS Tian-Shan 2.63 33 *e*P **Pg** **16 05 15.7 -0.1**
25nm,0.2s
TNSS *e*S **Sg** **16 05 51.4 +1.5**
72nm,0.5s
AAA Alma-Ata 2.76 30 *e*P **Pg** **16 05 18.8 +0.5**
29nm,0.2s
AAA *e*S **Sg** **16 05 56.5 +2.4**
122nm,0.4s
MDOK Medeo 2.78 33 ⇓Pg **Pg** **16 05 18.5 0.0**
24nm,0.7s
MDOK ⇓Lg Lg 16 05 57.1
52nm,0.6s
MDOK Medeo 2.78 33 *e*P **Pg** **16 05 19.2 +0.6**
26nm,0.6s
MDOK ⇓*i*S **Sg** **16 05 56.7 +2.2**
65nm,0.4s
DRK Karamyk 2.81 242 ⇑*i*P **Pn** **16 05 12.6 +1.5**
baz=40
DRK ⇑*i*S **Sn** **16 05 47.0 +1.6**
baz=40
KOTS Kotyrbulak 2.86 33 *e*P **Pg** **16 05 20.0 -0.2**
9.0nm,0.3s
KOTS *e*S **Sg** **16 05 58.8 +1.6**
140nm,0.4s
KTBS Karatobe 3.13 23 *e*P **Pg** **16 05 24.2 -1.1**
7.8nm,0.2s
KTBS *e*S **Sg** **16 06 05.3 -0.5**
92nm,0.3s
KUU Kurty 3.21 18 ⇓*i*P **Pg** **16 05 25.1 -1.7**
7.7nm,0.2s
KUU ⇓*i*S **Sg** **16 06 07.6 -0.7**
158nm,0.4s
CHKK Chushkaly 3.35 25 *e*P **Pg** **16 05 28.7 -0.9**
3.7nm,0.4s
CHKK *e*S **Sg** **16 06 13.1 +0.1**
106nm,0.3s
SATY Saty 3.37 48 *e*P **Pg** **16 05 29.3 -0.7**
18nm,0.3s
SATY ⇑*i*S **Sg** **16 06 14.2 +0.7**
40nm,0.4s
UZB Uzynbulak 3.78 51 *e*P **Pg** **16 05 36.7 -1.0**
6.8nm,0.6s
UZB *e*S **Sg** **16 06 26.6 -0.1**
23nm,0.4s
KPKS Kokpek 3.79 45 *e*P **Pg** **16 05 36.7 -1.3**
11nm,0.4s
KPKS *e*S **Sg** **16 06 26.7 -0.4**
48nm,0.6s
IUG Iuzhnay 3.96 291 *e*P **Pb** **16 05 36.2 +0.7**
15nm,0.4s
IUG *e*S **Sb** **16 06 26.4 +2.7**
25nm,0.6s
ARXS Arharly 3.96 31 *e*P **Pg** **16 05 39.3 -1.9**
4.5nm,0.5s
ARXS *e*S **Sg** **16 06 31.3 -1.3**
32nm,0.5s
KK31 Karatay Array 4.04 305 ⇑Pg **Pb** **16 05 37.0 +0.1**
1.6nm,0.3s
KK31 ⇓Lg Lg 16 06 29.2
6.2nm,0.3s
MNBS Baschi 4.10 37 *e*P **Pg** **16 05 42.5 -1.4**
6.7nm,0.3s
MNBS *e*S **Sg** **16 06 37.0 +0.1**
26nm,0.8s
PDGK Podgornoye 4.16 52 ⇑Pg **Pg** **16 05 45.2 +0.1**
8.8nm,0.6s
PDGK ⇑Lg Lg 16 06 40.3
14nm,0.5s
KAPS Kapalarasan 5.47 34 *e*P **Pg** **16 06 08.1 -1.9**
2.4nm,0.3s
KAPS *e*S **Sg** **16 07 20.9 +0.1**
12nm,0.6s
OTUK Ortayu 7.64 346 ⇑Lg Lg 16 08 29.2
12nm,1.0s
MK31 Makanchi Array 7.95 39 Lg Lg 16 08 41.2
1.0nm,0.6s,baz=224,slow=27,SNR=4.1
KURBB Kurchatov Arra 10.09 13 ⇑Lg Lg 16 09 48.1
13nm,0.8s
KURK Kurchatov 10.19 13 ⇓Lg Lg 16 09 49.2
8.9nm,1.0s

*IDC **30** 16:09:08.7±0.9, 32°.61N×85°.96E, h0km, mb3.7/10, mb1 3.9/13, mb1mx3.6/61, mbtmp3.7/13, ML3.2/3, MS3.0/2, Ms1 3.0/2, ms1mx2.4/59, Error ellipse: s-maj=28.5km s-min=16.4km az=50.0*
*ISCJB **30** 16:09:11.9±0.7, 32°.72N±0°.08×86°.0E±0°.2, h33km, mb3.7/10, MS2.9/2, Error ellipse: s-maj=19.9km s-min=9.0km az=153.5*

ISC 30 16:09:13.9±1.0, 32°.7N±0°.1×86°.0E±0°.2, h35km, n15, σ0§61/14, mb3.7/10, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**14.37**	**350**	Pn	**Pn**	**16 12 34.3**	**-0.4**
	0.1nm,0.3s,baz=158,slow=13,SNR=11						
MKAR				Sn	**Sn**	**16 15 12.0**	**-0.7**
	0.0nm,0.3s,baz=197,slow=15,SNR=2.3						
CMAR	**Chiang Mai Arr**	**18.35**	**137**	P	**P**	**16 13 24.7**	**-0.8**
	0.1nm,0.3s,baz=313,slow=11,SNR=2.8						
KURBB	**Kurchatov Arra**	**18.74**	**345**	P	**P**	**16 13 29.4**	**-0.1**
	0.0nm,0.3s,baz=153,slow=11,SNR=26						
ZALV	**Zalesovo Beam**	**21.27**	**358**	P	**P**	**16 13 57.1**	**+0.2**
	1.2nm,0.6s,baz=175,slow=11,SNR=5.4						
SONM	**Songino Array**	**21.62**	**40**	P	**P**	**16 14 02.2**	**+1.2**
	1.7nm,0.8s,baz=231,slow=11,SNR=7.4						
BVAR	**Borovoye Array**	**23.22**	**336**	LR	LR	16 24 21.2	
	comp=Z,40nm,19.6s,baz=141,slow=39						
GNI	**Garni**	**33.77**	**295**	LR	LR	16 34 04.7	
	comp=Z,23nm,19.0s,baz=109,slow=44						
KSRS	**Korea Array**	**34.45**	**70**	P	**P**	**16 15 58.3**	**+0.1**
	0.7nm,0.6s,baz=279,slow=9.0,SNR=4.2						
AKASG	**Malin Array Be**	**44.86**	**311**	P	**P**	**16 17 24.5**	**-0.1**
	1.6nm,0.7s,baz=79,slow=7.7,SNR=7.1						
MLR	**Muntele Rosu**	**47.28**	**304**	P	**P**	**16 17 44.2**	**+0.3**
	0.4nm,0.7s,baz=90,slow=9.1,SNR=3.8						
GERES	**GERESS Array B**	**55.03**	**310**	P	**P**	**16 18 43.0**	**+1.0**
	0.7nm,0.8s,baz=55,slow=7.0,SNR=7.2						
WRA	**Warramunga Arr**	**69.83**	**131**	P	**P**	**16 20 20.8**	**-0.4**
	0.8nm,0.5s,baz=326,slow=6.6,SNR=20						
ASAR	**Alice Springs**	**72.33**	**134**	P	**P**	**16 20 36.4**	**+0.2**
	0.4nm,0.6s,baz=317,slow=7.0,SNR=8.8						
ILAR	**Eielson Array**	**74.49**	**21**	P	**P**	**16 20 48.0**	**-0.4**
	0.5nm,0.9s,baz=272,slow=3.6,SNR=4.9						
YKA	**Yellowknife Ar**	**83.71**	**9**	P	**P**	**16 21 38.9**	**+0.2**
	0.8nm,0.7s,baz=340,slow=4.8,SNR=6.1						

*BJI **30** 16:24:33.7, 22°.25S×171°.54E, h93km, mb4.8/38, mB5.0/27*
*ISCJB **30** 16:24:35.6±0.9, 22°.13S±0°.03×170°.95E±0°.03, h89km±8km, mb4.9/120, Error ellipse: s-maj=5.8km s-min=4.3km az=179.5*
*NEIC **30** 16:24:37.0±0.7, 22°.09S×170°.99E, h92km±6km, mb5.0/89, Error ellipse: s-maj=4.4km s-min=3.8km az=171.0*
*IDC **30** 16:24:36.1±1.1, 22°.15S×171°.06E, h88km±8km, mb4.6/24, mb1 4.7/27, mb1mx4.6/41, mbtmp5.0/27, MS4.2/37, Ms1 4.2/37, ms1mx4.2/42, Error ellipse: s-maj=11.9km s-min=10.9km az=172.0*
*GCMT **30** 16:24:37.0±0.1, 22°.20S×170°.95E, h92km, MW5.5/120, Moment Tensor Solution. s120,c217; s119,c229; Duration: 1§4 Moment tensor: Scale 10^17^Nm; Mrr-0.78±.02; Mθθ-0.13±.03; Mφφ0.91±.03; Mrθ-0.50±.02; Mθφ1.86±.03; Mφr0.81±.02; Best double couple: M0=2.24900×10^17^ NP1:φs=178.00000°, δ72.00000°, λ-150.00000°. NP2:φs=77.00000°, δ62.00000°, λ-21.00000°. Principal axes: T 2.3630, Plg7.0000°, Azm306.0000°; N -0.2290, Plg55.0000°, Azm206.0000°; P -2.1350, Plg34.0000°, Azm40.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*MOS **30** 16:24:38.4±1.2, 22°.12S×170°.93E, h112km, mb5.1/34, MS4.4/22 Error ellipse: s-maj=9.7km s-min=8.8km az=25.1*

ISC 30 16:24:36.6±0.3, 22°.17S±0°.04×171°.02E±0°.04, h90km±2km, h90km:pP-P, n405, σ1§15/442, mb5.0/120, 12C-3D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
DZM	**Mont Dzumac**	**4.25**	**270**	P	**Pn**	**16 25 38.8**	**-0.3**
	424nm,0.3s,baz=120,slow=10,SNR=420						
DZM				S	**Sn**	**16 26 25.5**	**-2.1**
	2μm,0.3s,baz=120,slow=20,SNR=31						
DZM				LR	LR	16 26 37.5	
	comp=Z,3μm,18.3s,baz=96,slow=28						
DZM	**Mont Dzumac**	**4.25**	**270**	*e*Pn	**Pn**	**16 25 38.4**	**-0.7**
	2μm,0.2s						
DZM				*e*Sn	**Sn**	**16 26 25.1**	**-2.5**
	8μm,0.3s						
DZM				*e*LR	LR	16 26 43.3	
	9μm,29.1s						
NFK	**Norfolk Island**	**7.39**	**201**	P	**Pn**	**16 26 21.5**	**-0.3**
	baz=7.6,SNR=305						
RAO	**Raoul Island**	**12.21**	**128**	P	**Pn**	**16 27 26.0**	**-1.3**
	31nm,0.3s,baz=270,slow=20,SNR=2.0						
RAO				LR	LR	16 30 20.3	
	comp=Z,811nm,21.1s,baz=297,slow=28						
RAO	**Raoul Island**	**12.21**	**128**	P	**Pn**	**16 27 26.0**	**-1.3**
RAO				pmax	pmax		
	comp=Z,31nm,0.3s						
RAO				MLR	MLR		
	comp=Z,811nm,21.1s						
OUZ	**Omahuta**	**13.20**	**171**	*e*Pn	**Pn**	**16 27 42.5**	**+2.1**
OUZ				*e*Sn	**Sn**	**16 30 02.6**	**-2.9**
LHI	**Lord Howe Isla**	**14.16**	**226**	P	**Pn**	**16 27 54.4**	**+1.4**
	baz=14,SNR=4.9						
FUNA	**Funafuti**	**15.68**	**31**	*e*Pn	**Pn**	**16 28 11.8**	**-0.6**
	comp=Z,302nm,1.1s						
HNR	**Honiara**	**16.53**	**318**	P	**Pn**	**16 28 22.0**	**-1.1**
HNR	**Honiara**	**16.53**	**318**	P	**Pn**	**16 28 23.5**	**+0.4**
	comp=Z,8.9nm,0.3s,baz=143,slow=7.8,SNR=22						
HNR	**Honiara**	**16.53**	**318**	*e*Pn	**Pn**	**16 28 22.9**	**-0.3**
	comp=Z,396nm,0.9s						
MXZ	**Matakaoa Point**	**16.59**	**159**	*e*Pn	**Pn**	**16 28 24.0**	**+0.4**
	comp=Z,49nm,1.0s						
HIZ	**Hauiti**	**16.62**	**169**	*e*Pn	**P**	**16 28 26.1**	**+1.1**
	comp=Z,307nm,1.6s						
URZ	**Urewera**	**16.88**	**163**	P	**P**	**16 28 29.1**	**+1.3**
	comp=Z,2.9nm,0.3s,baz=325,slow=5.1,SNR=39						
URZ				LR	LR	16 32 35.1	
	comp=Z,1μm,21.0s,baz=349,slow=28						
URZ	**Urewera**	**16.88**	**163**	*e*Pn	**P**	**16 28 29.5**	**+1.7**
	comp=Z,180nm,1.0s						
BKZ	**Black Stump Fm**	**17.58**	**166**	*e*P	**Pn**	**16 28 37.3**	**+1.5**
	comp=Z,148nm,1.1s						
AFI	**Afiamalu**	**18.29**	**66**	P	**P**	**16 28 41.3**	**-2.3**
	comp=Z,3.9nm,0.3s,baz=260,slow=8.4,SNR=5.2						
AFI	**Afiamalu**	**18.29**	**66**	*e*P	**P**	**16 28 41.6**	**-2.0**
	comp=Z,214nm,1.3s						
AFI	**Afiamalu**	**18.29**	**66**	*e*P	**P**	**16 28 41.6**	**-2.0**
AFI				pmax	pmax		
	comp=Z,214nm,1.3s						
EIDS	**Eidsvold**	**18.53**	**256**	P	**Pn**	**16 28 48.5**	**+1.2**
	baz=19,SNR=15						
EIDS	**Eidsvold**	**18.53**	**256**	*e*P	**Pn**	**16 28 48.3**	**+1.0**
	comp=Z,105nm,0.9s						
BFZ	**Birch Farm**	**18.98**	**168**	*e*P	**Pn**	**16 28 51.9**	**-0.7**
	comp=Z,106nm,1.1s						
ARMA	**Armidale**	**19.21**	**241**	P	**Pn**	**16 28 56.8**	**+1.3**
	baz=19,SNR=18						
ARMA	**Armidale**	**19.21**	**241**	*e*P	**Pn**	**16 28 56.3**	**+0.8**
	comp=Z,36nm,0.4s						
THZ	**Tophouse**	**19.61**	**176**	*e*P	**Pn**	**16 28 59.3**	**-0.7**
	comp=Z,122nm,1.5s						
KHZ	**Kahutara**	**20.30**	**175**	*e*P	**P**	**16 29 06.1**	**+0.9**
	comp=Z,118nm,1.3s						
LTZ	**Lake Taylor**	**20.59**	**177**	*e*P	Pn	16 29 10.2	-1.1
LTZ				*e*pP	pP	16 29 25.8	-0.1
RMQ	**Roma**	**20.73**	**254**	P	Pn	16 29 12.4	-0.8
	baz=21,SNR=33						
MGCD	**Mangrove Creek**	**20.75**	**234**	P	Pn	16 29 13.2	-0.1
	baz=21,SNR=5.8						
RIV	**Riverview**	**21.00**	**232**	P	**P**	**16 29 13.4**	**+0.6**
	baz=21,SNR=5.6						
OXZ	**Oxford**	**21.12**	**178**	*e*P	**P**	**16 29 14.7**	**+0.7**
	comp=Z,50nm,0.9s						
FOZ	**Fox Glacier**	**21.33**	**182**	*e*P	**P**	**16 29 18.0**	**+1.8**
FOZ				*e*pP	**pP**	**16 29 34.6**	**+0.6**
RPZ	**Rata Peaks**	**21.49**	**180**	P	**P**	**16 29 18.2**	**+0.2**
	comp=Z,16nm,0.9s,baz=8.4,slow=2.1,SNR=4.8						
RPZ				LR	LR	16 36 50.2	
	comp=Z,1μm,18.6s,baz=0.5,slow=34						
RPZ	**Rata Peaks**	**21.49**	**180**	*e*P	**P**	**16 29 19.3**	**+1.4**
RPZ				*e*pP	**pP**	**16 29 35.2**	**-0.5**
CNB	**Canberra Magne**	**23.01**	**231**	P	**P**	**16 29 35.9**	**+1.9**
	baz=23,SNR=15						
CTA	**Charters Tower**	**23.19**	**271**	P	**P**	**16 29 36.1**	**+0.3**
	comp=Z,33nm,0.7s,baz=91,slow=12,SNR=46						
CTA				ScP	**ScP**	**16 36 53.6**	**+2.3**
	comp=Z,2.1nm,0.8s,baz=111,slow=5.5,SNR=3.7						
CTA				LR	LR	16 38 45.8	
	comp=Z,2μm,18.9s,baz=94,slow=37						
CTAO	**Charters Tower**	**23.19**	**271**	*e*P	**P**	**16 29 36.3**	**+0.5**
	comp=Z,56nm,0.9s						
CTAO	**Charters Tower**	**23.19**	**271**	*e*P	**P**	**16 29 36.3**	**+0.5**
CTAO				pmax	pmax		
	comp=Z,56nm,0.9s						
YNG	**Young**	**23.25**	**234**	P	**P**	**16 29 37.5**	**+1.3**
	baz=23,SNR=12						
CAN	**Canberra**	**23.27**	**231**	*e*P	**P**	**16 29 38.1**	**+1.6**
CAN				*e*pP	**pP**	**16 29 55.6**	**+0.4**
CAN	**Canberra**	**23.27**	**231**	*e*P	**P**	**16 29 38.1**	**+1.6**
CMSA	**Cobar Meteorol**	**24.40**	**242**	P	**P**	**16 29 47.6**	**+0.9**
	baz=24,SNR=30						
QLP	**Quilpie**	**24.77**	**254**	P	**P**	**16 29 50.7**	**+0.6**
	baz=25,SNR=17						
MTSU	**Mount Surprise**	**25.37**	**274**	P	**P**	**16 29 56.6**	**+0.9**
	baz=25,SNR=199						
PMG	**Port Moresby**	**26.18**	**295**	P	**P**	**16 30 02.6**	**-0.3**
	comp=Z,46nm,0.7s,baz=84,slow=9.9,SNR=13						
PMG				LR	LR	16 38 46.2	
	comp=Z,990nm,21.8s,baz=106,slow=32						
PMG	**Port Moresby**	**26.18**	**295**	*e*P	**P**	**16 30 02.9**	**0.0**
	comp=Z,53nm,0.8s						
PMG	**Port Moresby**	**26.18**	**295**	*e*P	**P**	**16 30 02.9**	**0.0**
PMG				pmax	pmax		
	comp=Z,53nm,0.8s						
TOO	**Toolangi**	**26.82**	**229**	P	**P**	**16 30 10.0**	**+1.5**
	baz=27,SNR=4.4						
RAR	**Rarotonga**	**27.14**	**94**	LR	LR	16 38 52.4	
	comp=Z,600nm,21.8s,baz=272,slow=32						
RAR	**Rarotonga**	**27.14**	**94**	*e*P	**P**	**16 30 12.9**	**+1.4**
	comp=Z,39nm,1.0s						
RAR	**Rarotonga**	**27.14**	**94**	*e*P	**P**	**16 30 12.9**	**+1.4**
RAR				pmax	pmax		
	comp=Z,39nm,1.0s						
COEN	**Coen**	**27.67**	**282**	P	**P**	**16 30 17.3**	**+1.0**
	baz=28,SNR=24						
COEN	**Coen**	**27.67**	**282**	*e*P	**P**	**16 30 17.3**	**+1.0**
	comp=Z,104nm,1.3s						
STKA	**Stephens Creek**	**27.87**	**243**	P	**P**	**16 30 18.5**	**+0.6**
	comp=Z,13nm,0.7s,baz=90,slow=9.6,SNR=25						
STKA				PcP	**PcP**	**16 33 32.2**	**+0.5**
	comp=Z,1.5nm,0.4s,baz=117,slow=6.8,SNR=5.6						
STKA				ScP	**ScP**	**16 37 05.6**	**+1.1**
	comp=Z,3.2nm,0.9s,baz=29,slow=4.3,SNR=3.3						
STKA				LR	LR	16 41 13.8	
	comp=Z,424nm,18.1s,baz=69,slow=36						
STKA	**Stephens Creek**	**27.87**	**243**	P	**P**	**16 30 18.7**	**+0.8**
	baz=28,SNR=14						
STKA	**Stephens Creek**	**27.87**	**243**	*e*P	**P**	**16 30 17.8**	**-0.2**
	comp=Z,11nm,1.0s						
STKA				PcP	**PcP**	**16 33 32.2**	**+0.5**
STKA				ScP	**ScP**	**16 37 05.6**	**+1.1**
QIS	**Mount Isa**	**29.28**	**267**	P	**P**	**16 30 30.7**	**+0.2**
	baz=29,SNR=12						
HTT	**Hallett**	**30.42**	**241**	P	**P**	**16 30 41.1**	**+0.6**
	baz=31,SNR=7.7						
BBOO	**Buckleboo**	**32.64**	**243**	P	**P**	**16 31 00.3**	**+0.2**
	baz=33,SNR=8.5						
BBOO	**Buckleboo**	**32.64**	**243**	*e*P	**P**	**16 31 00.2**	**+0.1**
	comp=Z,47nm,0.9s						
AS01	**Alice Springs**	**34.12**	**260**	*e*P	**P**	**16 31 12.0**	**-1.0**
AS31	**Alice Springs**	**34.16**	**260**	*e*P	**P**	**16 31 12.8**	**-0.7**
	comp=Z,31nm,0.9s						
ASAR	**Alice Springs**	**34.16**	**260**	P	**P**	**16 31 13.2**	**-0.1**
	comp=Z,86nm,0.8s,baz=94,slow=9.3,SNR=658						
ASAR				PcP	**PcP**	**16 33 49.2**	**+0.5**
	comp=Z,3.9nm,0.9s,baz=107,slow=3.1,SNR=5.1						
ASAR				S	**S**	**16 36 32.9**	**-0.5**
	comp=Z,2.9nm,1.0s,baz=87,slow=18,SNR=4.8						
ASAR				ScP	**ScP**	**16 37 27.3**	**+1.7**
	comp=Z,10.0nm,0.9s,baz=104,slow=3.7,SNR=25						
ASAR				PKiKP	**PKiKP**	**16 41 10.6**	**-1.9**
	comp=Z,0.6nm,0.7s,baz=88,slow=1.3,SNR=8.4						
ASAR				LR	LR	16 44 38.2	
	comp=Z,630nm,21.2s,baz=102,slow=35						
ASAR	**Alice Springs**	**34.16**	**260**	P	**P**	**16 31 13.3**	**-0.1**
ASAR						16 33 49.2	
ASAR				S	**S**	**16 36 32.9**	**-0.5**
ASAR				pmax	pmax		
	comp=Z,87nm,0.8s						
ASAR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ASAR				smax	smax		
	comp=N,3.0nm,1.0s						
ASAR				pmax	pmax		
	comp=N,10.0nm,0.9s						
ASAR				MLR	MLR		
	comp=Z,630nm,21.2s						
WB2	**Warramunga Arr**	**34.24**	**267**	*e*P	**P**	**16 31 13.0**	**-1.1**
WRAB	**Tennant Creek**	**34.24**	**267**	*e*P	**P**	**16 31 13.0**	**-1.2**
	comp=Z,53nm,1.3s						
WRAB	**Tennant Creek**	**34.24**	**267**	*i* P	**P**	**16 31 12.9**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,57nm,1.4s						
WRA	**Warramunga Arr**	**34.25**	**267**	P	**P**	**16 31 13.0**	**-1.2**
	comp=Z,21nm,0.9s,baz=97,slow=8.5,SNR=101						
WRA				PcP	**PcP**	**16 33 49.3**	**+0.3**
	comp=Z,3.4nm,1.0s,baz=90,slow=7.0,SNR=4.5						
WRA				S	**S**	**16 36 31.6**	**-3.2**
	comp=Z,2.2nm,1.0s,baz=97,slow=14,SNR=4.8						
WRA				ScP	**ScP**	**16 37 27.4**	**+1.4**
	comp=Z,6.7nm,0.9s,baz=94,slow=3.8,SNR=13						
WRA				PKiKP	**PKiKP**	**16 41 10.9**	**-1.7**
	comp=Z,0.3nm,0.8s,baz=55,slow=0.3,SNR=8.4						
WRA				LR	LR	16 45 18.4	
	comp=Z,601nm,19.8s,baz=100,slow=36						
GENI	**Genyem**	**35.72**	**299**	P	**P**	**16 31 27.2**	**+0.4**
TBI	**Tubuai**	**36.38**	**100**	*e*S	S	16 37 19.2	+12
	comp=Z,368nm,33.2s						
TBI				*e*LQ	LQ	16 40 00.3	
	comp=Z,2μm,29.2s						
TBI				*e*LR	LR	16 41 48.6	
	comp=Z,2μm,28.8s,baz=267						
PPT2	**Papeete2**	**37.26**	**90**	*e*S	S	16 37 33.2	+12
	comp=Z,351nm,29.2s						
PPT2				*e*LQ	LQ	16 40 06.1	
	comp=Z,4μm,27.0s						
PPT2				*e*LR	LR	16 41 59.9	
	comp=Z,2μm,29.0s,baz=248						
PPT	**Papeete**	**37.27**	**90**	LR	LR	16 43 09.4	
	comp=Z,566nm,19.6s,baz=260,slow=30						
KDU	**Kakadu**	**37.87**	**278**	P	**P**	**16 31 44.4**	**-0.7**
	baz=38,SNR=15						
MTN	**Manton Dam**	**39.05**	**277**	P	**P**	**16 31 54.2**	**-0.8**
	baz=39,SNR=42						
MTN	**Manton Dam**	**39.05**	**277**	*e*P	**P**	**16 31 54.3**	**-0.7**
	comp=Z,35nm,0.7s						
WRKA	**Warakurna**	**39.14**	**257**	P	**P**	**16 31 55.4**	**-0.3**
	baz=39,SNR=50						
FORT	**Forrest**	**39.21**	**248**	P	**P**	**16 31 56.1**	**0.0**
	baz=39,SNR=11						
FORT	**Forrest**	**39.21**	**248**	*e*P	**P**	**16 31 56.2**	**0.0**
	comp=Z,100nm,0.8s						
KNRA	**Kununurra**	**40.39**	**272**	P	**P**	**16 32 05.6**	**-0.5**
	baz=40,SNR=35						
FAKI	**Fak Fak**	**42.20**	**291**	P	**P**	**16 32 20.7**	**-0.3**
FITZ	**Fitzroy Crossi**	**42.68**	**267**	P	**P**	**16 32 25.1**	**+0.3**
	comp=Z,45nm,0.9s,baz=121,slow=7.6,SNR=86						
FITZ				LR	LR	16 50 46.8	
	comp=Z,689nm,18.0s,baz=104,slow=37						
FITZ	**Fitzroy Crossi**	**42.68**	**267**	P	**P**	**16 32 25.0**	**+0.3**
	baz=43,SNR=65						
FITZ	**Fitzroy Crossi**	**42.68**	**267**	*e*P	**P**	**16 32 24.8**	**0.0**
	comp=Z,102nm,1.3s						
GUMO	**Guam**	**43.82**	**322**	LR	LR	16 48 39.6	
	comp=Z,231nm,21.7s,baz=134,slow=33						
KMBL	**Kambalda**	**44.52**	**247**	P	**P**	**16 32 39.5**	**+0.1**
	baz=45,SNR=8.5						
AAI	**Ambon**	**45.38**	**288**	P	**P**	**16 32 45.8**	**-0.6**
AAI				pmax	pmax		
	comp=Z,76nm,1.3s						
SOEI	**Soe**	**46.43**	**278**	*e*P	**P**	**16 32 54.9**	**0.0**
	comp=Z,43nm,0.9s						
LBMI	**Labuha**	**47.45**	**291**	P	**P**	**16 33 03.2**	**+0.6**
MBWA	**Marble Bar**	**47.49**	**261**	*e*P	**P**	**16 33 02.8**	**-0.1**
	comp=Z,63nm,0.9s						
MEEK	**Meekatharra**	**47.67**	**254**	P	**P**	**16 33 03.6**	**-0.7**
	baz=48,SNR=32						
KLBR	**Kellerberrin**	**48.03**	**247**	P	**P**	**16 33 06.2**	**-0.7**
	baz=48,SNR=24						
SANI	**Sanana**	**48.09**	**288**	P	**P**	**16 33 08.3**	**+0.8**
NWAO	**Narrogin (SRO)**	**48.43**	**245**	P	**P**	**16 33 09.7**	**-0.3**
	comp=Z,41nm,0.9s,baz=329,slow=9.4,SNR=16						
NWAO				LR	LR	16 52 02.9	
	comp=Z,490nm,21.8s,baz=318,slow=34						
NWAO	**Narrogin (SRO)**	**48.43**	**245**	P	**P**	**16 33 10.0**	**0.0**
	baz=48,SNR=9.7						
NWAO	**Narrogin (SRO)**	**48.43**	**245**	*e*P	**P**	**16 33 10.0**	**0.0**
	comp=Z,52nm,1.0s						
NWAO				*e*pP	**pP**	**16 33 29.4**	**-2.4**
NWAO	**Narrogin (SRO)**	**48.43**	**245**	*e*P	**P**	**16 33 10.0**	**0.0**
NWAO				pmax	pmax		
	comp=Z,52nm,1.0s						
TAOE	**Nuku Hiva Isla**	**48.67**	**82**	*e*S	S	16 40 17.8	+10
	comp=Z,241nm,26.0s						
TAOE				*e*LQ	LQ	16 44 36.7	
	comp=Z,3μm,26.6s						
TAOE				*e*LR	LR	16 47 28.8	
	comp=Z,2μm,26.4s,baz=249						
MMRI	**Maumere**	**48.71**	**278**	P	**P**	**16 33 12.7**	**+0.4**
MMRI	**Maumere**	**48.71**	**278**	*e*P	**P**	**16 33 11.3**	**-1.1**
	comp=Z,63nm,0.8s						
BLDU	**Ballidu**	**48.98**	**248**	P	**P**	**16 33 13.4**	**-0.9**
	baz=49,SNR=28						
EDFI	**Ende, Flores**	**49.17**	**278**	P	**P**	**16 33 16.5**	**+0.5**
MUN	**Mundaring**	**49.33**	**246**	P	**P**	**16 33 16.7**	**-0.2**
	baz=49,SNR=3.8						
RKT	**Rikitea**	**49.61**	**102**	*e*LR	LR	16 47 46.3	
	comp=Z,1μm,30.2s						
BASI	**Baing, Sumba**	**49.67**	**275**	P	**P**	**16 33 20.5**	**+0.8**
MORW	**Morawa**	**49.69**	**250**	P	**P**	**16 33 19.2**	**-0.4**
	baz=50,SNR=10						
LUWI	**Luwuk**	**51.40**	**287**	P	**P**	**16 33 33.6**	**+0.9**
LUWI	**Luwuk**	**51.40**	**287**	*e*P	**P**	**16 33 33.2**	**+0.5**
	comp=Z,145nm,1.1s						
BKSI	**Bulukumba**	**51.92**	**281**	P	**P**	**16 33 36.3**	**-0.3**
APSI	**Ampana**	**52.45**	**287**	P	**P**	**16 33 41.4**	**+0.9**
SPSI	**Sidrap Palu**	**52.80**	**282**	P	**P**	**16 33 42.5**	**-0.6**
MRSI	**Marisa**	**52.84**	**289**	P	**P**	**16 33 43.0**	**-0.4**
	comp=Z,13nm,0.9s						
DAV	**Davao City (W)**	**53.15**	**298**	LR	LR	16 57 13.0	
	comp=Z,124nm,18.6s,baz=132,slow=37						
TWSI	**Taliwang, Sumb**	**53.60**	**276**	P	**P**	**16 33 49.6**	**+0.7**
PCI	**Palu**	**54.06**	**

comp=Z,49nm,19.4s,baz=123,slow=35
QSPA South Pole Qui 67.90 180 P **P 16 35 24.9 -0.5**
comp=Z,24nm,0.9s,baz=14,slow=0.9,SNR=56
ASAJ Asahikawa 70.92 339 P **P 16 35 44.8 +0.9**
comp=Z,3.9nm,0.6s,baz=211,slow=3.8,SNR=12
ASAJ LR LR 17 01 43.5
comp=Z,196nm,22.0s,baz=162,slow=31
RPN Rapa Nui 71.42 112 LR LR 16 58 46.7
comp=Z,233nm,21.2s,baz=274,slow=29
KSRS Korea Array 71.85 325 P **P 16 35 49.8 +0.1**
comp=Z,1.1nm,0.7s,baz=145,slow=5.8,SNR=5.1
KSRS LR LR 17 05 01.6
comp=Z,102nm,20.1s,baz=128,slow=34
KSAR Wonju Array Be 71.86 325 P **P 16 35 49.8 0.0**
KSAR Wonju Array Be 71.86 325 P **P 16 35 49.8 0.0**
YSS Yuzh-Sakhalins 73.38 340 *e*P **P 16 35 59.4 +0.8**
comp=Z,15nm,0.7s
YSS *e*PcP **PcP 16 36 16.8 +2.5**
YSS Yuzh-Sakhalins 73.38 340 *ce*P **P 16 35 58.0 -0.6**
YSS *e* 16 36 16.8
YSS *e**PP **pP 16 36 25.4 +3.5**
YSS *e* 16 36 41.4
YSS *i* S **SKiKP 16 45 23.0 +2.0**
YSS pmax pmax
comp=Z,100nm,3.3s
NJ2 Nanjing 73.46 316 *e*P **P 16 36 02.3 +2.9**
NJ2 pmax pmax
comp=Z,17nm,0.5s
SKR Severo-Kuril's 73.71 350 *e*P **P 16 35 59.3 -1.1**
SKR *e* 16 38 53.8
SKR *e*S **S 16 45 25.5 +1.6**
SKR *e* 16 46 02.0
SKR pmax pmax
comp=Z,100nm,6.8s
SKR pmax pmax
comp=Z,200nm,4.3s
SKR pmax pmax
comp=Z,38nm,1.5s
SKR MLR MLR
comp=Z,100nm,16.0s
PSI Prapat 74.55 280 *e*P **P 16 36 04.3 -2.0**
comp=Z,24nm,1.1s
PSI *e*PcP **pP 16 36 25.5 -4.3**
PSI Prapat 74.55 280 *e*P **P 16 36 04.3 -2.0**
PSI *e* 16 36 25.5
PSI pmax pmax
comp=Z,24nm,1.1s
USRK Ussuriysk Ar. 75.09 332 LR LR 17 06 02.3
comp=Z,69nm,21.9s,baz=138,slow=33
GSI Gunungsitoli 75.19 278 *e*P **P 16 36 10.5 +0.6**
comp=Z,36nm,1.0s
PET Petropavlovsk 75.64 352 *e*P **P 16 36 11.4 -0.1**
PET *e**SP **sP 16 36 44.5 -0.2**
PET *e*S **S 16 45 43.4 -1.8**
PET *e*SP **ScS 16 46 16.3 -0.6**
PET pmax pmax
comp=Z,18nm,0.5s
PET pmax pmax
comp=Z,100nm,17.2s
PET MLR MLR
comp=Z,200nm,17.0s
PETK Petropavlovsk- 75.84 352 P **P 16 36 13.2 +0.5**
comp=Z,1.1nm,0.8s,baz=131,slow=5.7
SKNT Sakolnakorn 76.28 295 P **P 16 36 15.6 -0.4**
comp=Z,13nm,0.9s
MAW Mawson 76.36 202 LR LR 17 07 49.9
comp=Z,139nm,18.0s,baz=76,slow=34
MAW Mawson 76.36 202 *e*P **P 16 36 16.3 +0.7**
MAW *e*PcP **PcP 16 36 29.5 +2.4**
MAW Mawson 76.36 202 *e*P **P 16 36 16.3 +0.7**
MAW *e* 16 36 29.5
NIKH Nikolski High 76.84 12 *e*P **P 16 36 18.4 +0.1**
comp=Z,49nm,0.8s
PBKT Sadao Pong 78.64 293 P **P 16 36 30.3 +1.2**
comp=Z,12nm,1.4s
GRNR Gornyy 78.77 338 *e*P **P 16 36 31.1 +2.0**
GYA Guiyang 78.85 305 P **P 16 36 32.0 +1.7**
GYA pP pP 16 36 57.8 +3.9
GYA PP **PP 16 39 34.0 +3.8**
GYA S **S 16 46 21.3 -0.2**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,120nm,5.6s
KLR Kul'dur 79.21 335 *i* P **P 16 36 32.2 +0.6**
UTHA Uthaitani 79.49 292 P **P 16 36 36.9 +3.1**
comp=Z,6.8nm,1.3s
NANT Nan 79.89 295 P **P 16 36 38.2 +2.3**
comp=Z,3.0nm,1.1s
CM01 Chiang Mai Arr 81.19 294 *e*P **P 16 36 43.7 +0.9**
CMAR Chiang Mai Arr 81.22 294 P **P 16 36 44.2 +1.2**
comp=Z,2.7nm,0.9s,baz=141,slow=4.0,SNR=14
CMAR PKKPbc **PKKPbc 16 55 17.6 -0.6**
comp=Z,0.7nm,0.6s,baz=281,slow=3.8,SNR=5.6
CMAR LR LR 17 13 25.0
comp=Z,80nm,21.0s,baz=120,slow=36
KMI Kunming 81.22 302 P **P 16 36 45.0 +1.8**
KMI pP pP 16 37 09.3 +2.4
KMI sP sP 16 37 17.8 +1.2
KMI PP **PP 16 39 53.5 +3.4**
KMI S **S 16 46 48.5 +1.8**
KMI sS sS 16 47 30.0 +2.8
KMI SS **SS 16 52 09.8 +5.4**
KMI pmax pmax
comp=Z,16nm,1.4s
KMI pmax pmax
comp=Z,65nm,4.4s
KMI LR LR
comp=Z,84nm,15.7s
KMI LR LR
comp=Z,190nm,16.2s
KMI LR LR
comp=Z,140nm,18.2s
XAN Xi'an 81.30 312 P **P 16 36 43.5 +0.3**
XAN pmax pmax
comp=Z,14nm,1.4s
CMMT Chiang Mai 81.37 294 P **P 16 36 45.0 +1.1**
comp=Z,10nm,1.3s
CHTO Chiang Mai 81.37 294 *e*P **P 16 36 45.1 +1.2**
CHTO *e*pP **pP 16 37 08.2 +0.6**
CHTO Chiang Mai 81.37 294 *e*P **P 16 36 45.1 +1.2**
CMAI Chiengmai2 81.79 295 P **P 16 36 48.6 +2.3**
comp=Z,2μm,0.8s
SYO Syowa Base 82.59 196 ⇑ *e*X pP 16 37 06.0 -7.1
CD2 Chengdu 83.33 307 P **P 16 36 55.0 +1.1**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
HHC Hu-ho-hao-te 83.51 319 *e*P **P 16 36 53.3 -1.4**
HHC pP pP 16 37 18.8 +0.3
HHC sP sP 16 37 29.3 +1.2
HHC S **S 16 47 06.0 -3.2**
HHC pmax pmax
comp=Z,13nm,0.8s
HHC pmax pmax
comp=Z,41nm,5.4s
HHC LR LR
comp=Z,380nm,19.0s
HHC LR LR
comp=Z,490nm,20.7s
HHC LR LR
comp=Z,550nm,19.0s
PMSA Palmer Station 83.60 159 P **P 16 36 54.4 -0.2**
comp=Z,27nm,0.9s,baz=238,slow=3.0,SNR=3.9
ZEA Zeya 84.50 336 *e*P **P 16 37 00.5 +1.3**
ZEA pmax pmax
comp=Z,21nm,1.2s
LZH Lanzhou 85.91 312 *e*P **P 16 37 07.8 +0.9**
LZH pP pP 16 37 32.3 +1.5
LZH sP sP 16 37 42.8 +2.3
LZH PP **PP 16 40 27.3 -0.8**
LZH SKS **SKSac 16 47 21.3 -3.5**
LZH *e*S **SKKSac 16 47 27.5 -4.8**
LZH sS sS 16 48 15.8 +1.5
LZH pmax pmax
comp=Z,38nm,1.3s
LZH pmax pmax
comp=Z,150nm,4.1s
LZH LR LR
comp=Z,1μm,16.6s
LZH LR LR
comp=Z,1μm,16.5s
LZH LR LR
comp=Z,1μm,18.8s
NVL N'lazarevskaya 86.17 187 ⇓ *i*P **P 16 37 06.0 -1.4**
NVL *e**PP **pP 16 37 33.2 +1.9**
NVL *e*S **SKSac 16 47 20.7 -4.4**
NVL pmax pmax
comp=Z,20nm,0.9s
SNAA Sanae 86.32 182 P **P 16 37 06.9 -1.4**
SNAA Sanae 86.32 182 P **P 16 37 06.7 -1.5**
comp=Z,22nm,0.8s,baz=191,slow=4.8,SNR=86
SNAA LR LR 17 12 41.4
comp=Z,110nm,20.6s,baz=182,slow=33
SNAA Sanae 86.32 182 *e*P **P 16 37 06.5 -1.8**
comp=Z,23nm,0.9s
HOPS Hopland Field 86.57 45 *e*P **P 16 37 11.2 +1.4**
comp=Z,15nm,1.0s
KCPM Cahto Peak 86.61 45 *e*P **P 16 37 10.8 +0.6**
comp=Z,23nm,0.8s
GDXM Geysers 86.66 46 *e*P **P 16 37 11.0 +0.6**
comp=Z,4.7nm,0.9s
SMMC Simmler 86.79 50 P **P 16 37 12.2 +1.2**
baz=240
KMRM Mail Ridge 86.81 44 *e*P **P 16 37 11.9 +0.8**
comp=Z,14nm,0.9s
VNA3 Neumayer Olymp 86.84 180 P **P 16 37 09.2 -1.6**
KHMM Horse Mountain 87.15 44 *e*P **P 16 37 13.5 +0.6**
comp=Z,15nm,0.9s
VNA2 Neumayer--Watz 87.16 181 P **P 16 37 11.3 -1.0**
baz=164,slow=4.6
VNA1 Neumayer--Stat 87.44 180 P **P 16 37 12.9 -0.7**
WDC Whiskeytown Da 87.75 44 *e*P **P 16 37 15.9 +0.4**
comp=Z,12nm,1.2s
WDC Whiskeytown Da 87.75 44 *e*P **P 16 37 15.9 +0.4**
WDC pmax pmax
comp=Z,12nm,1.2s
N02D Trinity Center 87.86 44 P **P 16 37 16.9 +0.8**
baz=238,SNR=7.8
CMB Columbia Colle 87.88 47 *e*P **P 16 37 16.2 0.0**
comp=Z,13nm,1.3s
CMB Columbia Colle 87.88 47 *e*P **P 16 37 16.2 0.0**
CMB pmax pmax
comp=Z,13nm,1.3s
L02D Cave Junction, 87.92 43 P **P 16 37 17.6 +1.3**
baz=238
BFSC Mount Baldy Ra 87.94 52 P **P 16 37 17.3 +0.5**
baz=241
AFDM Forest Hills D 87.94 46 *e*P **P 16 37 16.6 +0.1**
comp=Z,9.3nm,1.0s
M02C Callahan 87.98 44 P **P 16 37 17.4 +0.7**
baz=238,SNR=14
EDW2 Edwards Air Fo 88.01 51 P **P 16 37 17.8 +0.9**
baz=241
ISA Isabella, Lake 88.04 50 P **P 16 37 18.0 +0.9**
baz=241
ISA Isabella, Lake 88.04 50 *e*P **P 16 37 17.1 0.0**
comp=Z,14nm,0.9s
ISA Isabella, Lake 88.04 50 *e*P **P 16 37 17.1 0.0**
ISA pmax pmax
comp=Z,14nm,0.9s
O03D Paynes Creek 88.09 45 P **P 16 37 17.8 +0.5**
baz=239,SNR=10
MONP2 Monument Peak 88.22 53 P **P 16 37 18.3 +0.1**
baz=242
YBH Yreka Blue Hor 88.25 43 P **P 16 37 18.2 +0.2**
comp=Z,5.4nm,0.9s,baz=210,slow=1.3,SNR=19
YBH LR LR 17 09 40.6
comp=Z,161nm,21.4s,baz=242,slow=31
YBH Yreka Blue Hor 88.25 43 *e*P **P 16 37 18.4 +0.4**
comp=Z,9.2nm,1.1s
IKP In-Ko-Pah, Jac 88.34 54 P **P 16 37 19.4 +0.7**
baz=242
LRMC Laurel Mtn Rad 88.52 51 P **P 16 37 20.1 +0.6**
baz=241
HUMO Hull Mountain 88.56 42 *e*P **P 16 37 20.0 +0.6**
comp=Z,11nm,1.0s
MDPB Devils Postpil 88.58 48 *e*P **P 16 37 19.7 -0.1**
comp=Z,9.1nm,1.1s
MDPB *e*pP **pP 16 37 45.9 +2.0**
OMMB Old Mammoth Mi 88.62 48 *e*P **P 16 37 20.3 +0.2**
comp=Z,11nm,1.3s
CWC Cottonwood Cre 88.69 50 P **P 16 37 20.7 +0.4**
baz=241
SWSC Sam W. Stewart 88.71 54 P **P 16 37 20.7 +0.5**
baz=242
WAKR Walker 88.76 47 *e*P **P 16 37 21.0 +0.4**
comp=Z,18nm,1.2s
BEKR Beckworth 88.82 46 *e*P **P 16 37 20.8 0.0**
comp=Z,12nm,1.2s
I03D Drain, OR 88.90 41 P **P 16 37 21.3 +0.5**
baz=238
MPMC Manual Prospec 88.93 50 P **P 16 37 21.7 +0.2**
baz=242,SNR=8.7
PNTR Pine Nut 88.94 47 *e*P **P 16 37 21.8 +0.3**
comp=Z,16nm,0.9s
DAC Darwin (Calif) 88.96 50 *e*P **P 16 37 21.6 0.0**
comp=Z,4.9nm,0.9s
DAC Darwin (Calif) 88.96 50 *e*P **P 16 37 21.6 0.0**
DAC pmax pmax
comp=Z,5.0nm,0.9s
BELC Belle Mtn. Jos 89.05 53 P **P 16 37 22.3 +0.3**
baz=242,SNR=9.9
YERR Yerington 89.13 47 *e*P **P 16 37 22.4 +0.1**
comp=Z,10nm,1.0s
HEC Hector,Ludlow 89.19 52 P **P 16 37 23.0 +0.5**
baz=242
LPIG La Paz 89.19 64 LR LR 17 08 11.7
comp=Z,281nm,21.7s,baz=230,slow=29
BC3 Big Chuckawall 89.29 53 P **P 16 37 23.4 +0.3**
baz=243
PAHR Pah Rah Range 89.39 46 *e*P **P 16 37 24.0 +0.5**
comp=Z,16nm,1.1s
J04D Umpqua Nationa 89.42 42 P **P 16 37 24.0 +0.4**
baz=238
RYN Ryan 89.44 48 *e*P **P 16 37 23.2 -0.6**
comp=Z,10nm,0.9s
GRAC Grapevine Rang 89.47 49 P **P 16 37 24.1 +0.4**
baz=242,SNR=12
GLA Glamis 89.48 54 P **P 16 37 24.2 +0.2**
baz=243,SNR=7.5
GLA Glamis 89.48 54 *e*P **P 16 37 24.1 +0.2**
comp=Z,20nm,0.9s
GLA Glamis 89.48 54 *e*P **P 16 37 24.1 +0.2**
GLA pmax pmax
comp=Z,20nm,0.9s
NV01 Mina Array Sit 89.50 48 *e*P **P 16 37 23.6 -0.5**
NVAR Mina Array Bea 89.50 48 P **P 16 37 23.9 -0.1**
comp=Z,13nm,1.0s,baz=226,slow=8.0,SNR=49
NVAR LR LR 17 10 04.1
comp=Z,232nm,20.9s,baz=100,slow=30
I04A Tendick Farm, 89.53 42 P **P 16 37 24.5 +0.6**
baz=238
DIB Dawson Inlet, 89.53 30 *e*P **P 16 37 24.4 +0.9**
comp=Z,22nm,1.1s
FURC Furnace Creek, 89.57 50 P **P 16 37 24.3 +0.2**
baz=242,SNR=6.4
NV11 Mina Array Sit 89.60 48 *e*P **P 16 37 24.5 0.0**
comp=Z,0.9nm,0.9s
GMRC Granite Mounta 89.66 52 P **P 16 37 25.3 +0.5**
baz=243,SNR=7.1
IRM Iron Mountain 89.75 53 P **P 16 37 25.7 +0.5**
baz=243,SNR=8.8
G03D McMinnville, O 89.76 40 P **P 16 37 25.9 +1.0**
baz=238
TUQ Turquoise Moun 89.77 51 P **P 16 37 25.2 -0.2**
baz=242
MOD Modoc Plateau 89.88 44 *e*P **P 16 37 25.6 -0.1**
comp=Z,15nm,1.2s
K05A Summer Lake 89.92 43 *e*P **P 16 37 26.1 +0.2**
comp=Z,20nm,1.3s
KVN Kaiserville 89.94 47 *e*P **P 16 37 26.1 0.0**
comp=Z,14nm,0.9s
KVN *e*pP **pP 16 37 50.5 +0.3**
KVN Kaiserville 89.94 47 *e*P **P 16 37 26.1 0.0**
KVN pmax pmax
comp=Z,14nm,0.9s
J05D Fort Rock, OR 89.99 43 P **P 16 37 26.8 +0.6**
baz=239
BILL Bilibino 90.00 358 ⇑ *i*P **P 16 37 25.7 +0.3**
BILL *e* 16 38 02.4
BILL PPP PPP 16 42 56.0
BILL *e* 16 48 06.8
BILL *e* 16 49 51.9
BILL *e*SS SS 16 54 13.4 +2.1
BILL pmax pmax
comp=Z,12nm,1.6s
Y12C Blythe 90.03 53 P **P 16 37 27.1 +0.7**
baz=243
Y12C Blythe 90.03 53 *e*P **P 16 37 26.8 +0.4**
comp=Z,12nm,1.0s
CAST Castle Rocks 90.09 16 *e*P **P 16 37 24.6 -1.4**
comp=Z,9.2nm,1.5s
H04A Detroit Lake 90.13 41 *e*P **P 16 37 26.8 +0.2**
comp=Z,25nm,1.5s
YAK Yakutsk 90.15 342 *i* P **P 16 37 26.1 -0.1**
YAK pmax pmax
comp=Z,10.0nm,0.5s
113A Mohawk Valley, 90.16 55 *e*P **P 16 37 27.5 +0.5**
SHL Shillong 90.18 297 P **P 16 37 28.1 +0.6**
LDFC Landfair 90.19 52 *e*P **P 16 37 27.7 +0.4**
comp=Z,24nm,1.0s
TPNV Topopah Spring 90.23 50 P **P 16 37 27.8 +0.3**
baz=242,SNR=20
TPNV Topopah Spring 90.23 50 *e*P **P 16 37 27.5 0.0**
comp=Z,12nm,0.8s
TPNV Topopah Spring 90.23 50 *e*P **P 16 37 27.5 0.0**
TPNV pmax pmax
comp=Z,12nm,0.8s
E03A Lebam 90.30 39 *e*P **P 16 37 27.5 +0.2**
comp=Z,34nm,1.1s
GTA Gaotai 90.33 313 *e*P **P 16 37 28.0 +0.1**
GTA pP pP 16 37 53.3 +1.4
GTA sP sP 16 38 04.5 +3.0
GTA pmax pmax
comp=Z,6.0nm,1.6s
PINE Pine Mountain 90.44 42 *e*P **P 16 37 28.5 +0.2**
comp=Z,12nm,0.9s
PINE *e*pP **pP 16 37 52.8 +0.4**
I05D Terrebonne, OR 90.47 42 P **P 16 37 28.9 +0.7**
baz=239
214A Organ Pipe Nat 90.53 56 P **P 16 37 29.0 +0.2**
baz=244
SONM Songino Array 90.55 322 P **P 16 37 28.2 -0.5**
comp=Z,2.7nm,0.9s,baz=143,slow=5.0,SNR=15
SONM PKKPbc **PKKPdf 16 54 55.6 +1.6**
comp=Z,0.9nm,0.5s,baz=298,slow=2.5,SNR=4.5
SONM LR LR 17 17 34.6
comp=Z,48nm,19.0s,baz=100,slow=35
SONA1 Songino Array 90.55 323 *e*P **P 16 37 27.9 -0.8**
SONA1 *e*pP **pP 16 37 53.6 +0.9**
PDMCI Parker Dam,Lak 90.56 53 P **P 16 37 29.1 +0.2**
baz=243
HSIG 90.72 59 *e*P **P 16 37 30.3 +0.6**
comp=Z,11nm,0.9s
SHPR Sheep Range 90.81 51 *e*P **P 16 37 30.3 +0.1**
comp=Z,6.4nm,1.1s
W13A Hualapai Mount 91.10 52 *e*P **P 16 37 31.8 +0.2**
W13A *e*pP **pP 16 37 59.2 +3.5**
BMN Battle Mountai 91.19 46 *e*P **P 16 37 32.0 +0.1**
comp=Z,12nm,1.1s
BMN Battle Mountai 91.19 46 *e*P **P 16 37 32.0 +0.1**
BMN pmax pmax
comp=Z,12nm,1.1s
WVOR Wild Horse Val 91.22 44 *e*P **P 16 37 32.5 +0.6**
comp=Z,10nm,1.2s
WVOR Wild Horse Val 91.22 44 *e*P **P 16 37 32.5 +0.6**
WVOR pmax pmax
comp=Z,10.0nm,1.2s
R11A Troy Canyon, C 91.34 49 P **P 16 37 32.6 -0.1**
baz=243
R11A Troy Canyon, C 91.34 49 *e*P **P 16 37 32.8 +0.1**
comp=Z,4.1nm,0.9s
PGC Sidney 91.50 37 *e*P **P 16 37 33.5 +0.8**
J08A Circle Bar Ran 91.78 43 *e*P **P 16 37 34.9 +0.5**
comp=Z,8.6nm,1.0s
IM3 Indian Mountai 91.85 14 *e*P **P 16 37 31.8 -2.2**
A04D Lummi Island 91.95 37 P **P 16 37 35.7 +0.8**
baz=238
WRH Wood River Hil 91.97 16 *e*P **P 16 37 33.6 -1.0**
B05A Bryant 92.06 38 P **P 16 37 35.9 +0.5**
baz=238
CCB Clear Creek Bu 92.19 16 *e*P **P 16 37 33.9 -1.7**
comp=Z,7.8nm,1.6s
TUC Tucson 92.23 56 P **P 16 37 36.9 +0.2**
baz=245
TUC Tucson 92.23 56 *e*P **P 16 37 36.8 0.0**
comp=Z,5.5nm,1.0s
TUC Tucson 92.23 56 P **P 16 37 36.8 0.0**
TUC pmax pmax
comp=Z,6.0nm,1.0s
MDM Murphy Dome 92.32 16 *e*P **P 16 37 35.0 -1.3**
LCMT Little Creek M 92.41 51 *e*P **P 16 37 37.9 +0.3**
comp=Z,7.4nm,1.0s
G08A Pilot Rock 92.41 42 *e*P **P 16 37 37.8 +0.4**
comp=Z,4.5nm,0.8s
ILAR Eielson Array 92.53 17 P **P 16 37 35.2 -2.1**
comp=Z,1.9nm,0.9s,baz=234,slow=5.4,SNR=14
ILAR LR LR 17 15 22.4
comp=Z,111nm,19.5s,baz=230,slow=33
IL1 Eielson Array 92.53 17 *e*P **P 16 37 34.6 -2.6**
IL1 *e*pP **pP 16 38 01.6 +0.3**
CCUT Cedar City 92.56 50 *e*P **P 16 37 38.7 +0.4**
comp=Z,11nm,1.3s
PSUT Pine Spring 92.64 49 *e*P **P 16 37 38.8 +0.2**
comp=Z,12nm,1.7s
KNB Kanab 92.71 51 *e*P **P 16 37 39.7 +0.7**
comp=Z,5.9nm,0.9s
KNB Kanab 92.71 51 *e*P **P 16 37 39.7 +0.7**
KNB pmax pmax
comp=Z,6.0nm,0.9s
PALK Pallekele 93.00 277 LR LR 17 18 42.9
comp=Z,135nm,21.8s,baz=86,slow=35
WUAZ Wupatki 93.13 53 P **P 16 37 41.7 +0.8**
baz=245
WUAZ Wupatki 93.13 53 *e*P **P 16 37 42.0 +1.0**
comp=Z,6.0nm,0.9s
MTPU Mount Pierson 93.61 50 *e*P **P 16 37 44.0 +0.6**
comp=Z,17nm,1.9s
ZAK Zakamensk 93.63 324 *e*P **P 16 37 41.2 -1.6**
ZAK pmax pmax
comp=Z,6.0nm,1.6s
COLD Coldfoot 93.68 14 *e*P **P 16 37 43.3 +0.8**
comp=Z,3.8nm,1.1s
F10A Beach Ranch, E 93.81 42 *e*P **P 16 37 43.6 -0.1**
comp=Z,3.0nm,0.8s
EGAK Eagle 94.14 19 *e*P **P 16 37 43.3 -1.4**
comp=Z,5.9nm,0.9s
HLID Hailey 94.49 45 *e*P **P 16 37 47.6 +0.6**
comp=Z,4.6nm,1.5s
HVU Hansel Valley 94.80 47 *e*P **P 16 37 49.5 +1.0**
comp=Z,7.3nm,1.2s
HVU Hansel Valley 94.80 47 *e*P **P 16 37 49.5 +1.0**
HVU pmax pmax
comp=Z,7.0nm,1.2s
TMUT Trail Mountain 94.83 50 *e*P **P 16 37 49.5 +0.6**
comp=Z,8.0nm,1.4s
PLCA Paso Flores 95.25 138 P **P 16 37 50.5 -0.1**
comp=Z,8.7nm,0.9s,baz=236,slow=6.7,SNR=12
PLCA LR LR 17 10 43.0
comp=Z,78nm,21.4s,baz=258,slow=29
PLCA Paso Flores 95.25 138 *e*P **P 16 37 50.7 +0.1**
comp=Z,14nm,1.0s
PLCA Paso Flores 95.25 138 *e*P **P 16 37 50.7 +0.1**
PLCA pmax pmax
comp=Z,14nm,1.0s
MNTX Cornudas Mount 96.20 58 P **P 16 37 55.0 +0.1**
baz=248
ANMO Albuquerque 96.59 55 LR LR 17 12 33.8
comp=Z,254nm,21.8s,baz=242,slow=30
TXAR Lajitas Array 96.70 61 P **P 16 37 57.7 +0.4**
comp=Z,0.6nm,0.8s,baz=226,slow=4.8,SNR=4.7
TXAR PKKP **PKKPbc 16 54 41.1 +0.8**
comp=Z,0.1nm,0.3s,baz=103,slow=4.4,SNR=4.5
TXAR LR LR 17 12 40.5
comp=Z,209nm,21.6s,baz=0.0,slow=30
S22A 4UR Ranch, Cre 97.37 52 P Pdif 16 38 00.7 +0.2
baz=248
PD31 Pinedale Array 97.38 47 *e*P Pdif 16 38 01.2 +0.9
PDAR Pinedale Array 97.38 47 P **P 16 37 59.4 -0.9**
comp=Z,0.9nm,0.7s,baz=205,slow=4.4,SNR=7.0
PDAR LR LR 17 14 14.9
comp=Z,107nm,21.1s,baz=240,slow=31
PDAR Pinedale Array 97.38 47 *e*P Pdif 16 38 01.7 +1.4
WMQ Urumqi 100.42 313 P **Pdif 16 38 15.3 +1.7**
WMQ pmax pmax
comp=Z,25nm,1.3s
WMQ LR LR
comp=Z,350nm,21.7s
WMQ LR LR
comp=Z,410nm,25.7s
WMQ LR LR
comp=Z,350nm,21.5s
KURK Kurchatov 108.31 318 PKiKP **PKiKP 16 42 53.6 -0.6**
KURBB Kurchatov Arra 108.35 318 PKiKP **PKiKP 16 42 53.6 -0.6**
comp=Z,0.8nm,0.7s,baz=113,slow=2.1,SNR=9.3
BVAR Borovoye Array 113.72 320 PKiKP **PKiKP 16 43 02.6 -1.8**
comp=Z,1.0nm,0.3s,baz=48,slow=2.1,SNR=18
BOSA Boshof 119.68 215 PKP **PKPdf 16 43 16.8 -0.1**
comp=Z,4.5nm,0.8s,baz=174,slow=2.6,SNR=4.3

ARU	**Arti**	**120.57 323**	*i* PKIKP	**PKPdf**	**16 43 16.3**	**-1.1**
ARU					16 44 45.5	
ARU					16 50 19.7	
ARU			SP	SP	16 54 24.5	-2.1
ARU			SS	**SKKSdf**	**17 01 01.7**	**-1.1**
GEYT	**Alibeck**	**120.99 302**	PKP	**PKPdf**	**16 43 19.2**	**+0.3**
	comp=Z,598nm,0.4s,baz=322,slow=6.4,SNR=5.3					
AKTO	**Aktyubinsk**	**121.33 316**	PKP	**PKPdf**	**16 43 19.2**	**+0.1**
	comp=Z,3.2nm,0.8s,baz=30,slow=3.8,SNR=7.6					
AKTO			SKP		16 46 45.3	
	comp=Z,2.2nm,0.8s,baz=95,slow=6.4,SNR=5.1					
SPITS	**Spitsbergen Ar**	**122.67 354**	PKP	**PKPdf**	**16 43 19.8**	**-1.1**
	comp=Z,4.1nm,0.6s,baz=40,slow=9.5,SNR=7.8					
ARCES	**ARCESS Array B**	**128.31 345**	PKP	**PKPdf**	**16 43 30.8**	**-1.1**
	comp=Z,4.1nm,0.6s,baz=76,slow=2.2,SNR=22					
KLMR	**Klimovskoe**	**128.89 332**	*e*PKIKP	**PKPdf**	**16 43 31.9**	**-1.3**
KLMR			pmax	pmax		
	comp=Z,25nm,1.6s					
KLMR	**Klimovskoe**	**128.89 332**	*e*PKPdf	**PKPdf**	**16 43 31.9**	**-1.3**
KLMR			AMP		16 43 33.8	
	comp=Z,25nm,1.6s					
VSR	**Storozhevoye**	**132.89 320**	*e*PKIKP	**PKPdf**	**16 43 40.5**	**-0.6**
VSR			pmax	pmax		
	comp=Z,10.0nm,1.1s					
VORD	**Divnogorie**	**132.90 320**	*e*PKIKP	**PKPdf**	**16 43 41.5**	**+0.4**
VORD			pmax	pmax		
	comp=Z,10.0nm,0.6s					
FINES	**FINESS Array B**	**133.91 337**	PKP	**PKPdf**	**16 43 41.7**	**-1.0**
	comp=Z,4.0nm,0.8s,baz=73,slow=1.6,SNR=12					
FINES			SKPbc	**SKPbc**	**16 47 01.4**	**-2.3**
	comp=Z,4.3nm,0.8s,baz=29,slow=3.2,SNR=7.5					
NB2	**NORSAR Subarra**	**138.69 345**	PKP	PKPpre	16 43 42.7	
	comp=Z,0.4nm,0.6s,baz=17,slow=2.6					
AKASG	**Malin Array Be**	**138.83 323**	PKhKP	PKPpre	16 43 45.0	
	comp=Z,0.7nm,0.4s,baz=52,slow=3.6,SNR=4.4					
AKASG			PKP	**PKPdf**	**16 43 52.9**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=49,slow=2.6,SNR=8.1					
AKASG			SKPbc	**SKPbc**	**16 47 17.9**	**-1.1**
	comp=Z,6.6nm,0.8s,baz=47,slow=3.6,SNR=17					
AKASG			SKPab	**SKiKP**	**16 47 25.2**	**+2.8**
	comp=Z,0.8nm,0.6s,baz=50,slow=4.7,SNR=4.3					
MMAI	**Mount Meron Ar**	**139.47 295**	SKPbc	**SKPbc**	**16 47 21.7**	**+0.2**
	comp=Z,6.1nm,0.9s,baz=68,slow=3.9,SNR=5.8					
BRTR	**Keskin Array B**	**139.90 306**	PKP	**PKPdf**	**16 43 55.1**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=100,slow=3.2,SNR=5.4					
BRTR			SKPbc	**SKPbc**	**16 47 22.0**	**-0.5**
	comp=Z,2.5nm,0.9s,baz=115,slow=3.0,SNR=9.7					
LVV	**L`vov**	**142.12 325**	*e*PKIKP	PKPpre	16 43 54.2	
MLR	**Muntele Rosu**	**143.25 318**	PKP	PKPbc	16 43 59.0	+1.3
	comp=Z,0.7nm,0.5s,baz=299,slow=3.6,SNR=10					
MLR			SKPbc	**SKPbc**	**16 47 29.6**	**-1.2**
	comp=Z,1.2nm,1.0s,baz=90,slow=3.0,SNR=3.8					
UZH	**Uzhgorod**	**143.74 324**	*e*PKIKP	PKPbc	16 43 59.1	+0.3
CRVS	**Cervenica-Dubn**	**144.02 325**	*e*PKIKP	**PKPdf**	**16 44 00.9**	**-0.7**
CRVS	**Cervenica-Dubn**	**144.02 325**	*e*PKP	**PKPdf**	**16 44 00.9**	**-0.7**
OJC	**Ojcow**	**144.04 328**	*e*PKP	PKPbc	16 43 59.6	-0.1
OJC	**Ojcow**	**144.04 328**	*e*PKIKP	PKPbc	16 43 59.6	-0.1
NIE	**Niedzica**	**144.30 327**	*e*PKP	**PKPdf**	**16 44 01.6**	**-0.5**
NIE	**Niedzica**	**144.30 327**	*e*PKIKP	**PKPdf**	**16 44 01.6**	**-0.5**
LTVH	**L`^tav`^rtes,**	**144.67 323⇑**	*e*PKPbc	**PKPdf**	**16 44 03.1**	**+0.4**
KECS	**Kecovo**	**144.79 325**	*e*PKIKP	**PKPdf**	**16 44 02.8**	**-0.1**
KECS	**Kecovo**	**144.79 325**	*e*PKP	**PKPdf**	**16 44 02.8**	**-0.1**
LANS	**Liptovska Anna**	**144.89 327**	*e*PKIKP	**PKPdf**	**16 44 04.0**	**+0.9**
LANS	**Liptovska Anna**	**144.89 327**	*e*PKP	**PKPdf**	**16 44 04.0**	**+0.9**
OKC	**Ostrava-Krasne**	**145.09 329**	*e*PKP	**PKPbc**	**16 44 02.8**	**-0.2**
OKC	**Ostrava-Krasne**	**145.09 329**	*e*PKIKP	**PKPbc**	**16 44 02.8**	**-0.2**
KSP	**Ksiaz**	**145.24 332**	*e*PKP	**PKPbc**	**16 44 03.2**	**-0.2**
KSP	**Ksiaz**	**145.24 332**	*e*PKIKP	**PKPbc**	**16 44 03.2**	**-0.2**
PSZ	**Piszkesteto**	**145.45 325⇓**	*e*PKPbc	**PKPab**	**16 44 05.2**	**+0.6**
KRLC	**Kraliky**	**145.56 330**	*e*PKP	**PKPab**	**16 44 05.1**	**+0.2**
KRLC	**Kraliky**	**145.56 330**	*e*PKP2	**PKPab**	**16 44 05.1**	**+0.2**
DPC	**Dobruska-Polom**	**145.58 331**	*e*PKP	**PKPab**	**16 44 05.0**	**0.0**
DPC			AMS	AMS	17 44 50.0	
	comp=Z,300nm,26.6s					
DPC	**Dobruska-Polom**	**145.58 331**	*e*PKP2	**PKPab**	**16 44 05.0**	**0.0**
DPC			MLR	MLR		
	comp=Z,300nm,26.6s					
UPC	**Upice**	**145.60 331**	*e*PKP	**PKPbc**	**16 44 04.5**	**-0.1**
UPC			*es*PKP		16 44 42.6	
UPC			AMS	AMS	17 44 50.0	
	comp=Z,200nm,17.1s					
UPC	**Upice**	**145.60 331**	*e*PKP2	**PKPbc**	**16 44 04.5**	**-0.1**
UPC			MLR	MLR		
	comp=Z,200nm,17.1s					
VYHS	**Vyhne**	**145.63 327**	*e*PKP2	**PKPab**	**16 44 06.0**	**+0.8**
VYHS	**Vyhne**	**145.63 327**	*e*PKP	**PKPab**	**16 44 06.0**	**+0.8**
JAVC	**Velka Javorina**	**145.98 328**	*e*PKP	**PKPbc**	**16 44 06.1**	**+0.2**
VRAC	**Vranov**	**146.19 329**	*e*PKP	**PKPdf**	**16 44 04.8**	**-0.5**
PVCC	**Panska Ves**	**146.22 333**	*e*PKP	**PKPbc**	**16 44 06.8**	**+0.3**
PVCC	**Panska Ves**	**146.22 333**	*e*PKP2	**PKPbc**	**16 44 06.8**	**+0.3**
BRG	**Berggiesshubel**	**146.22 334**	*e*PKP	**PKPbc**	**16 44 05.9**	**-0.6**
	comp=Z,42nm,0.9s					
BRG			*e*		16 44 33.0	
	comp=Z,15nm,1.0s					
BRG			*i*		16 44 41.5	
	comp=Z,32nm,1.4s					
	comp=N,150nm,20.3s					
	comp=E,146nm,25.7s					
	comp=Z,256nm,21.3s					
BRG	**Berggiesshubel**	**146.22 334**	*e*PKP2	**PKPbc**	**16 44 05.9**	**-0.6**
BRG			pmax	pmax		
	comp=Z,42nm,0.9s					
BRG			MLR	MLR		
	comp=N,150nm,20.3s					
BRG			MLR	MLR		
	comp=E,146nm,25.7s					
BRG			MLR	MLR		
	comp=Z,256nm,21.3s					
CLL	**Collm**	**146.26 335**	*e*PKPdf	**PKPdf**	**16 44 05.0**	**-0.3**
CLL			*i* PKPbc	**PKPab**	**16 44 07.1**	**-0.3**
	comp=Z,38nm,0.9s					
CLL			*es*PKPdf	**sPKPdf**	**16 44 40.0**	**+0.2**
CLL			*i* sPKPbc	sPKPab	16 44 41.7	+0.3
	comp=Z,32nm,1.3s					
CLL			L	L	17 48 00.0	
	comp=Z,100nm,21.0s					
CLL	**Collm**	**146.26 335**	*i* PKP2	**PKPab**	**16 44 07.1**	**-0.3**
CLL			pmax	pmax		
	comp=Z,38nm,0.9s					
KRUC	**Moravsky**	**146.45 329**	*e*PKP	**PKPdf**	**16 44 05.5**	**-0.2**
MODS	**Modra-Piesok**	**146.50 328**	*e*PKIKP	**PKPdf**	**16 44 05.7**	**-0.2**
MODS			*e*		16 44 07.9	
MODS	**Modra-Piesok**	**146.50 328**	*e*PKP	**PKPdf**	**16 44 05.7**	**-0.2**
MODS			*e*		16 44 07.9	
GOPC	**GO Pecny, Ondr**	**146.58 332**	*e*PKP	**PKPbc**	**16 44 07.7**	**+0.1**
GOPC			AMS	AMS	17 45 30.0	
	comp=Z,200nm,19.0s					
GOPC	**GO Pecny, Ondr**	**146.58 332**	*e*PKP2	**PKPbc**	**16 44 07.7**	**+0.1**
GOPC			MLR	MLR		
	comp=Z,200nm,19.0s					
PRA	**Prague**	**146.62 332**	*e*PKP	**PKPab**	**16 44 09.1**	**+0.2**
PRA	**Prague**	**146.62 332**	*e*PKP2	**PKPab**	**16 44 09.1**	**+0.2**
PRU	**Pruhonice**	**146.63 332**	*e*PKP	**PKPbc**	**16 44 08.1**	**+0.4**
PRU			*es*PKP		16 44 44.3	
PRU			AMS	AMS	17 46 50.0	
	comp=Z,200nm,22.4s					
PRU	**Pruhonice**	**146.63 332**	*e*PKP2	**PKPbc**	**16 44 08.1**	**+0.4**
PRU			MLR	MLR		
	comp=Z,200nm,22.4s					
MORH	**M¨‡r¨¡gy, Hung**	**147.16 324⇓**	*e*PKPdf	**PKPbc**	**16 44 09.1**	**-0.2**
NKC	**Novy Kostel**	**147.32 334**	*e*PKP	**PKPbc**	**16 44 09.5**	**-0.2**
NKC			*ep*PKP	**sPKPdf**	**16 44 39.7**	**-2.0**
NKC	**Novy Kostel**	**147.32 334**	*e*PKP2	**PKPbc**	**16 44 09.5**	**-0.2**
CONA	**Conrad Observa**	**147.50 328**	*i* PKPbc	**PKPbc**	**16 44 09.9**	**-0.4**
	comp=Z,16nm,0.8s,SNR=22					
KHC	**Kasperske Hory**	**147.69 332**	*e*PKP	**PKPdf**	**16 44 07.5**	**-0.3**
KHC			*ex*	x	16 44 10.5	
KHC			*ep*PKP	**pPKPab**	**16 44 37.7**	**+0.1**
KHC			*es*PKP		16 44 48.8	
KHC			AMS	AMS	17 48 40.0	
	comp=Z,200nm,25.2s					
KHC	**Kasperske Hory**	**147.69 332**	*e*PKIKP	**PKPdf**	**16 44 07.5**	**-0.3**
KHC			*e*		16 44 10.5	
KHC			*e*		16 44 37.7	
KHC			*e*		16 44 48.8	
KHC			MLR	MLR		
	comp=Z,200nm,25.2s					
IDI	**Anoyia**	**147.71 301**	PKPbc	**PKPbc**	**16 44 10.7**	**-0.6**
	comp=Z,7.4nm,0.3s,baz=180,slow=1.0,SNR=12					
GERES	**GERESS Array B**	**147.84 331**	PKPbc	**PKPbc**	**16 44 10.5**	**-0.7**
	comp=Z,24nm,0.7s,baz=38,slow=2.1,SNR=125					
GERES			SKPbc	**SKPbc**	**16 47 40.1**	**-1.0**
	comp=Z,0.5nm,0.7s,baz=64,slow=2.3,SNR=3.3					
ARSA	**Arzberg**	**148.13 328**	*i* PKPbc	**PKPbc**	**16 44 11.9**	**-0.1**
	comp=Z,6.2nm,0.8s,SNR=5.1					
MOA	**Molln**	**148.31 330**	*i* PKPbc	**PKPbc**	**16 44 12.6**	**+0.2**
	comp=Z,10nm,0.6s,SNR=9.4					
PERS	**Pernice**	**148.75 327**	*i* PKP	**PKPbc**	**16 44 13.0**	**-0.6**
SOKA	**Soboth**	**148.76 327**	*i* PKPbc	**PKPbc**	**16 44 12.7**	**-0.9**
	comp=Z,15nm,0.8s,SNR=25					
OBKA	**Obir**	**149.12 328**	*i* PKPbc	**PKPbc**	**16 44 14.3**	**-0.3**
	comp=Z,14nm,0.7s,SNR=9.4					
BEBN	**Eben Emael**	**149.21 342**	⇑PKP	**PKPbc**	**16 44 14.9**	**+0.4**
MEM	**Membach**	**149.28 341**	⇑PKP	**PKPbc**	**16 44 14.0**	**-0.7**
MEM			⇑APKP	**pPKPab**	**16 44 42.4**	**-1.4**
KBA	**Koelnbreinsper**	**149.30 329**	*i* PKPbc	**PKPbc**	**16 44 14.6**	**-0.5**
	comp=Z,15nm,0.4s,SNR=19					
MYKA	**Terra Mystica**	**149.48 329**	*i* PKPbc	**PKPbc**	**16 44 13.9**	**-1.6**
	comp=Z,23nm,0.5s,SNR=25					
UCC	**Uccle**	**149.57 343**	⇑PKP	**PKPbc**	**16 44 15.8**	**+0.4**
BCLA	**Clavier**	**149.65 342**	⇑PKP	**PKPbc**	**16 44 15.2**	**-0.4**
SNF	**Seneffe**	**149.86 343**	⇑PKP	**PKPbc**	**16 44 16.5**	**+0.4**
WATA	**Walderalm**	**149.92 332**	*i* PKPbc	**PKPbc**	**16 44 15.1**	**-1.5**
	comp=Z,16nm,0.6s,SNR=17					
ABTA	**Abfaltersbach**	**149.94 330**	*i* PKPbc	**PKPbc**	**16 44 14.9**	**-1.6**
	comp=Z,27nm,0.5s,SNR=14					
WTTA	**Wattenberg**	**149.95 331**	*i* PKPbc	**PKPbc**	**16 44 15.7**	**-1.0**
	comp=Z,16nm,0.4s,SNR=11					
WLF	**Walferdange**	**150.06 340**	⇑PKP	**PKPbc**	**16 44 16.3**	**-0.4**
WLF			⇑APKP	**pPKPbc**	**16 44 40.6**	**-1.0**
MOTA	**Moosalm**	**150.12 332**	*i* PKPbc	**PKPbc**	**16 44 15.7**	**-1.4**
	comp=Z,50nm,0.8s,SNR=29					
RETA	**Reutte**	**150.16 333**	*i* PKPbc	**PKPbc**	**16 44 17.0**	**-0.1**
	comp=Z,17nm,0.8s,SNR=10.0					
BFO	**Black Forest**	**150.45 336**	*i* PKIKP	**PKPbc**	**16 44 17.7**	**0.0**
FETA	**Feichten**	**150.53 332**	*i* PKPbc	**PKPbc**	**16 44 17.2**	**-0.8**
	comp=Z,51nm,0.9s,SNR=17					
DAVA	**Damuels**	**150.69 333**	*i* PKPbc	**PKPbc**	**16 44 17.3**	**-1.1**
	comp=Z,17nm,0.7s,SNR=8.6					
DAVOX	**Davos/Dischmat**	**151.09 333**	PKPbc	**PKPbc**	**16 44 18.9**	**-0.5**
	comp=Z,36nm,0.4s,baz=79,slow=2.8,SNR=80					
ESDC	**Sonseca Array**	**162.03 347**	PKPab	**PKPab**	**16 45 13.2**	**-1.0**
	comp=Z,1.1nm,0.7s,baz=7.4,slow=3.9,SNR=5.8					
DBIC	**Dimbokro**	**164.09 195**	PKP	**PKPdf**	**16 44 30.7**	**+0.3**
	comp=Z,7.2nm,0.8s,baz=121,slow=0.5,SNR=5.7					
TORD	**Torodi Ar. Bea**	**166.45 230**	PKP	**PKPdf**	**16 44 31.8**	**-0.5**
	comp=Z,12nm,1.0s,baz=40,slow=0.6					
TORD			PKPab	**PKPab**	**16 45 34.4**	**+0.1**
	baz=124,slow=3.1					

SJA 30 16:28:29.9±0.6, 27°.20S×66°.14W, h36km±31km, ML3.2, MW3.5, Catamarca Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AHML	**Horco Molle**	**0.83**	**60**	*eP*	Pn	16 28 54.6	+9.4
AHML				*eS*	Sn	16 28 59.2	+3.0
CYA	**Choya**	**1.27**	**166**	*eP*	Pn	16 28 55.9	+4.7
CYA				*eS*	Sn	16 29 13.4	+6.4
CYA				IAML		16 29 16.7	
	comp=Z,15nm,0.1s						
ACLC	**CERRO LA CRUZ**	**2.33**	**198**	*eP*	Pn	16 29 08.3	+2.4
ACLC				IAML		16 29 11.0	
	comp=Z,20μm,0.1s						
ACLC				*eS*	Sn	16 29 38.5	+5.2
VCA	**Vinchina**	**2.38**	**230**	*eP*	Pn	16 29 09.0	+2.4
VCA				IAML		16 29 11.1	
	comp=Z,29nm,0.2s						
VCA				*eS*	Sn	16 29 37.5	+3.0
AGUA	**GUANDACOL**	**3.08**	**222**	*eS*	Sn	16 29 55.5	+3.8
APLL	**PUNTA DE LOS L**	**3.20**	**186**	*eP*	Pn	16 29 20.3	+2.6

IDC 30 16:43:58.7±1.6, 9°.98S×160°.29E, h0km, mb3.5/3, mb1 3.9/3, mb1mx3.5/45, mbtmp3.5/3, Error ellipse: s-maj=30.0km s-min=18.8km az=79.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**0.64**	**328**	*i P*	Pn	16 44 15.0	0.0
HNR				*i S*	Sn	16 44 25.0	-0.9
HNR	**Honiara**	**0.64**	**328**	Pn	Pn	16 44 15.4	+0.3
	179nm,0.3s,baz=156,slow=4.7,SNR=72						
HNR				Sn	Sn	16 44 25.9	0.0
	1μm,0.3s,baz=143,slow=20,SNR=80						
WRA	**Warramunga Arr**	**26.91**	**245**	P	P	16 49 41.8	0.0
	0.7nm,0.9s,baz=76,slow=9.5,SNR=7.0						
ASAR	**Alice Springs**	**28.62**	**238**	P	P	16 49 57.0	-0.1
	0.2nm,0.5s,baz=64,slow=10.0,SNR=5.2						
NVAR	**Mina Array Bea**	**89.49**	**51**	P	P	16 56 58.2	-0.1
	0.2nm,0.4s,baz=243,slow=5.6,SNR=2.6						

IDC 30 17:00:24.8±4.7, 19°.40S×173°.99E, h0km, mb4.3/4, mb1 4.4/4, mb1mx3.7/40, mbtmp4.3/4, Error ellipse: s-maj=119.5km s-min=57.1km az=9.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**26.11**	**264**	P	P	17 05 59.7	-0.9
	0.7nm,0.3s,baz=95,slow=13,SNR=2.6						
STKA	**Stephens Creek**	**31.61**	**240**	P	P	17 06 50.1	+0.5
	2.4nm,0.5s,baz=79,slow=9.6,SNR=12						
WRA	**Warramunga Arr**	**37.28**	**262**	P	P	17 07 39.1	+0.3
	2.7nm,0.4s,baz=97,slow=7.6,SNR=104						
ASAR	**Alice Springs**	**37.45**	**256**	P	P	17 07 39.9	-0.4
	4.2nm,0.5s,baz=89,slow=7.9,SNR=107						

*GUC **30** 17:04:39.2±0.5, 31°.78S×67°.40W, h154km±50km, ML4.0*
*NEIC **30** 17:04:39.2±0.0, 31°.78S×67°.40W, h154km, ML4.0(GUC), After GUC.*
*SJA **30** 17:04:40.3±1.1, 31°.73S×67°.81W, h11km±10km, ML3.4, MW3.4*

ISC 30 17:04:38.2±1.2, 31°.77S±0°.03×67°.78W±0°.03, h7km±12km, n32, σ1°.74/43, 5D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTCV	**Cerro Valdivia**	**0.66**	**262⇓**	*eP*	**Pn**	**17 04 52.6**	**-1.4**
ACAN	**Cantantal**	**0.71**	**135**	*eP*	**Pn**	**17 04 55.1**	**+0.5**
SJA	**San Juan**	**0.71**	**290**	*eP*	**Pn**	**17 04 53.9**	**-0.9**
SJA				*eS*	**Sb**	**17 05 03.8**	**+0.8**
RTLL	**Cerro Villicun**	**0.74**	**306**	*eP*	**Pb**	**17 04 54.2**	**+0.7**
RTLL				*eS*	**Sg**	**17 05 01.9**	**-0.2**
RTLL				IAML		17 05 06.2	
	comp=Z,578nm,0.3s						
ZON	**Zonda**	**0.80**	**286**	*eP*	**Pb**	**17 04 54.9**	**+0.4**
ZON				*eS*	**Sb**	**17 05 06.1**	**+0.5**
AMOG	**MOGNA**	**1.03**	**323**	*eP*	**Pn**	**17 04 59.7**	**+0.5**
ASAL	**Salagasta**	**1.21**	**227**	*eP*	**Pn**	**17 05 03.8**	**+2.1**
AUSP	**Uspallata**	**1.44**	**251**	*eP*	**Pg**	**17 05 07.2**	**+1.3**
ARCO	**CERRO ARCO**	**1.45**	**222**	*eP*	**Pg**	**17 05 08.2**	**+2.2**
ARCO				IAML		17 05 29.6	
	comp=Z,229nm,0.4s						
AAGR	**Agrelo**	**1.58**	**214⇓**	*eP*	**Pg**	**17 05 11.0**	**+2.5**
APLL	**PUNTA DE LOS L**	**1.74**	**38**	*eP*	**Pg**	**17 05 12.6**	**+1.0**
MRA	**San Martin**	**1.86**	**111**	*eP*	**Pg**	**17 05 14.8**	**+0.8**
MRA				IAML		17 05 44.2	
	comp=Z,384nm,0.2s						
AROD	**Rodeo**	**2.16**	**317**	*eP*	**Pb**	**17 05 19.3**	**+1.4**
AGUA	**GUANDACOL**	**2.36**	**345**	*eP*	**Pb**	**17 05 22.4**	**+1.3**
FCH	**Farellones**	**2.63**	**233**	*eP*	**Pg**	**17 05 26.8**	**-1.8**
FCH				*eS*	**Sg**	**17 06 02.5**	**-0.3**
FCH				IAML		17 06 03.8	
	comp=E,158nm,0.9s						
TCA	**Tanti**	**2.75**	**82⇓**	*eP*	**Pb**	**17 05 26.6**	**-1.1**
TCA				IAML		17 06 08.5	
	comp=Z,128nm,0.2s						
PEL	**Peldehue**	**2.81**	**240**	*ePn*	**Pb**	**17 05 29.1**	**+0.3**
PEL				*eSn*	**Sg**	**17 06 07.0**	**-1.6**
PEL	**Peldehue**	**2.81**	**240**	*eP*	**Pb**	**17 05 28.8**	**0.0**
PEL				*eS*	**Sg**	**17 06 06.3**	**-2.3**
CLCH	**Cerro Calan**	**2.84**	**234⇓**	*eP*	**Pb**	**17 05 28.7**	**-0.6**
CLCH				*eS*	**Sg**	**17 06 08.3**	**-1.1**
ROCH	**El Roble**	**2.99**	**246**	*eP*	**Pb**	**17 05 31.2**	**-0.7**
ROCH				*eS*	**Sg**	**17 06 10.5**	**-3.7**
ROCH				IAML		17 06 16.3	
	comp=E,208nm,0.6s						
ROC1	**El Roble**	**2.99**	**245**	*ePn*	**Pb**	**17 05 31.2**	**-0.8**
GO04	**Tololo Observa**	**3.05**	**301**	*ePn*	**Pb**	**17 05 32.0**	**-0.9**
GO04	**Tololo Observa**	**3.05**	**301**	*eP*	**Pb**	**17 05 32.1**	**-0.8**
GO04				*eS*	**Sb**	**17 06 12.3**	**+1.9**
VCA	**Vinchina**	**3.05**	**353⇓**	*eP*	**Pg**	**17 05 35.8**	**-0.8**
VCA				IAML		17 06 17.9	
	comp=Z,353nm,0.6s						
TLL	**Tololo Astrono**	**3.05**	**301**	*eP*	**Pb**	**17 05 34.4**	**+1.4**
TLL				*eS*	**Sb**	**17 06 12.7**	**+2.1**
TLL				IAML		17 06 17.6	
	comp=N,370nm,0.7s						
CYA	**Choya**	**3.73**	**28**	*eP*	**Pn**	**17 05 40.1**	**+3.8**
CYA				IAML		17 06 48.4	
	comp=Z,71nm,0.6s						
LCO	**Las Campanas**	**3.74**	**317**	*ePn*	**Pb**	**17 05 41.4**	**-3.3**
GO03	**Copiap**	**4.68**	**332**	*ePn*	**Pn**	**17 05 50.6**	**+1.2**
GO05	**HualaaeØ**	**4.74**	**226**	*ePn*	**Pn**	**17 05 53.0**	**+2.8**
GO02	**Mina Guanaco**	**6.78**	**346**	*ePn*	**Pn**	**17 06 20.7**	**+2.3**
TRQA	**Tornquist**	**7.87**	**144**	*ePn*	**Pn**	**17 06 35.3**	**+2.2**
TRQA				*eSn*	**Sn**	**17 08 00.2**	**-2.3**
CPUP	**Villa Florida**	**10.62**	**62**	*ePn*	**Pn**	**17 07 10.2**	**-0.6**

*IDC **30** 17:04:39.5±0.8, 10°.03S×118°.21E, h0km, mb4.0/14, mb1 4.1/16, mb1mx3.9/52, mbtmp4.0/16, ML3.9/2, Error ellipse: s-maj=37.2km s-min=16.9km az=54.0*
*ISCJB **30** 17:04:41.8±0.3, 10°.23S±0°.04×118°.20E±0°.03, h35km, mb4.4/22, Error ellipse: s-maj=6.4km s-min=3.6km az=27.9*
*NEIC **30** 17:04:41.8±2.7, 10°.16S×118°.19E, h20km±18km, mb4.7/15, Error ellipse: s-maj=9.3km s-min=5.5km az=210.0*
*DJA **30** 17:04:43.4±0.4, 10°.5±6°×11°.8E±°, h10km, M4.6/18, mb4.7/9, mB5.2/3, MLv4.5/18, Mw(mB)4.5/3*

ISC 30 17:04:43.1±0.4, 10°.28S±0°.05×118°.25E±0°.05, h35km, n85, σ1°.93/86, mb4.2/23, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**1.52**	**342**	P	**Pn**	**17 05 05.4**	**-2.4**
PLAI				S	**Sn**	**17 05 22.0**	**-4.3**
TWSI	**Taliwang, Sumb**	**2.04**	**318**	P	**Pn**	**17 05 13.7**	**-1.3**
WSI	**Waingapu**	**2.10**	**73**	P	**Pn**	**17 05 16.9**	**+1.0**
BASI	**Baing, Sumba**	**2.29**	**89**	P	**Pn**	**17 05 22.4**	**+4.0**
IGBI	**Denpasar**	**3.39**	**295**	P	**Pn**	**17 05 34.1**	**+0.5**
DNP	**Denpasar**	**3.40**	**298**	P	**Pn**	**17 05 35.5**	**+1.8**
SRBI	**Singaraja**	**3.71**	**306**	P	**Pn**	**17 05 39.3**	**+1.3**
EDFI	**Ende, Flores**	**3.72**	**66**	P	**Pn**	**17 05 40.2**	**+2.0**
MMRI	**Maumere**	**4.26**	**68**	P	**Pn**	**17 05 47.6**	**+2.1**
MMRI	**Maumere**	**4.26**	**68**	*ePn*	**Pn**	**17 05 47.5**	**+2.0**
JAGI	**Jajag, Banyuwa**	**4.43**	**294**	P	**Pn**	**17 05 47.4**	**-0.5**
JAGI	**Jajag, Banyuwa**	**4.43**	**294**	*ePn*	**Pn**	**17 05 47.3**	**-0.6**
JAGI				*eSn*	**Sn**	**17 06 37.3**	**-0.9**
GMJI	**Gumukmas**	**5.15**	**292**	P	**Pn**	**17 05 57.5**	**-0.2**
BLJI	**Banyuglugur**	**5.24**	**298**	P	**Pn**	**17 06 00.0**	**+0.9**
BKSI	**Bulukumba**	**5.26**	**21**	P	**Pn**	**17 06 01.9**	**+2.6**
SOEI	**Soe**	**5.95**	**85**	P	**Pn**	**17 06 11.6**	**+2.7**
	71nm,0.8s,916nm0.2nm						
SOEI	**Soe**	**5.95**	**85**	*ePn*	**Pn**	**17 06 11.2**	**+2.3**
SPSI	**Sidrap Palu**	**6.45**	**14**	P	Pn	17 06 21.5	+5.8
PWJI	**Pagerwojo**	**6.75**	**289**	P	**Pn**	**17 06 19.9**	**+0.1**
TTSI	**Tana Toraja**	**7.35**	**12**	P	**Pn**	**17 06 31.4**	**+3.3**
WOJI	**Wonogiri, Jawa**	**7.63**	**288**	P	**Pn**	**17 06 33.1**	**+1.2**
	38nm,1.9s,0.3nm						
UGM	**Wanagama**	**7.99**	**286**	P	**Pn**	**17 06 38.5**	**+1.7**
	138nm,1.8s,1.1nm						
UGM	**Wanagama**	**7.99**	**286**	*ePn*	**Pn**	**17 06 36.4**	**-0.4**
UGM				*eSn*	**Sn**	**17 08 01.7**	**-4.3**
SMRI	**Semarang**	**8.36**	**292**	*ePn*	**Pn**	**17 06 41.6**	**-0.4**
KPJI	**Karang Pucung**	**9.67**	**287**	P	**Pn**	**17 07 02.3**	**+2.5**
FITZ	**Fitzroy Crossi**	**10.57**	**138**	Pn	**Pn**	**17 07 13.6**	**+1.5**
	1.3nm,0.3s,baz=334,slow=12,SNR=38						
FITZ			

1.2nm,0.6s,baz=86,slow=8.9,SNR=3.7
KBZ Khabaz 86.66 315 P **P 17 17 24.7 +1.4**
1.1nm,0.8s,baz=33,slow=1.3,SNR=3.9
MMAI Mount Meron Ar 89.61 304 P **P 17 17 40.2 +2.5**
0.5nm,0.5s,baz=120,slow=8.5,SNR=2.6
BR101 Keskin Array S 92.39 310 *eP* **P 17 17 51.6 +1.1**
BRTR Keskin Array B 92.39 310 P **P 17 17 51.7 +1.1**
0.6nm,0.8s,baz=64,slow=6.9,SNR=3.4
TORD Torodi Ar. Bea 117.95 279 PKP **PKPdf 17 23 28.7 +1.6**
0.3nm,0.6s,baz=80,slow=3.2
TOA1 Torodi Ar. Sit 117.95 279 *e*PKPdf **PKPdf 17 23 28.7 +1.6**

IDC 30 17:10:46.6±5.6, 17°.33S×174°.28W, h107km±36km, mb3.4/5, mb1 3.8/6, mb1mx3.4/44, mbtmp3.8/6, MS3.5/1, Ms1 3.5/1, ms1mx2.6/23, Error ellipse: s-maj=141.4km s-min=19.5km az=148.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.17**	**36**	P	Pn	17 11 48.2	0.0
	5.6nm,0.3s,baz=225,slow=3.6,SNR=26						
AFI				S	Sn	17 12 30.8	-5.2
	28nm,0.3s,baz=57,slow=21,SNR=13						
URZ	**Urewera**	**22.18**	**198**	LR	LR	17 23 36.1	
	comp=Z,123nm,18.2s,baz=310,slow=35						
WRA	**Warramunga Arr**	**48.61**	**258**	P	P	17 19 19.4	-0.4
	0.4nm,0.5s,baz=97,slow=7.3,SNR=14						
ASAR	**Alice Springs**	**48.73**	**259**	P	P	17 19 20.9	+0.1
	1.8nm,0.5s,baz=89,slow=8.8,SNR=53						
NVAR	**Mina Array Bea**	**76.32**	**42**	P	P	17 22 24.5	+0.4
	0.6nm,1.0s,baz=218,slow=12,SNR=3.6						
PDAR	**Pinedale Array**	**84.26**	**42**	P	P	17 23 06.4	-0.2
	0.6nm,0.6s,baz=217,slow=4.7,SNR=5.8						
ILAR	**Eielson Array**	**84.49**	**11**	P	P	17 23 06.8	-0.2
	0.6nm,0.6s,baz=215,slow=6.2,SNR=2.8						

*NEIC **30** 18:06:04.0±1.4, 33°.25S×177°.99W, h10km, mb4.2/2, Error ellipse: s-maj=30.4km s-min=9.3km az=103.0*
*IDC **30** 18:06:05.2±3.2, 33°.20S×178°.43W, h0km, mb3.7/2, mb1 4.0/3, mb1mx3.5/43, mbtmp3.8/3, ML3.8/1, Error ellipse: s-maj=72.2km s-min=36.4km az=116.0*
ISC 30 18:06:03.2±1.7, 33°.4S±0°.1×177°.9W±0°.2, h10km, n21, σ1°88/25, mb3.7/4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.09**	**360**	*e*Pn	**Pn**	**18 07 04.6**	**-1.2**
MXZ	**Matakaoa Point**	**5.21**	**215**	*e*Pn	**Pn**	**18 07 23.0**	**+1.8**
MXZ				*e*Sn	**Sn**	**18 08 22.9**	**+1.6**
URZ	**Urewera**	**6.35**	**218**	Pn	**Pn**	**18 07 38.7**	**+1.9**
	2.2nm,0.3s,baz=267,slow=4.5,SNR=20						
URZ				Sn	**Sn**	**18 08 48.4**	**-0.9**
	2.4nm,0.3s,baz=354,slow=22,SNR=8.9						
URZ	**Urewera**	**6.35**	**218**	*e*Pn	**Pn**	**18 07 38.4**	**+1.6**
URZ				*e*Sn	**Sn**	**18 08 45.9**	**-3.4**
OUZ	**Omahuta**	**7.28**	**253**	*e*Pn	**Pn**	**18 07 52.3**	**+2.8**
BKZ	**Black Stump Fm**	**7.35**	**216**	*e*Pn	**Pn**	**18 07 51.3**	**+0.7**
BKZ				*e*Sn	Sn	18 08 57.6	-17
HIZ	**Hauiti**	**7.80**	**227**	*e*Pn	**Pn**	**18 07 55.5**	**-1.3**
BFZ	**Birch Farm**	**8.68**	**211**	*e*Pn	**Pn**	**18 08 11.5**	**+2.8**
BFZ				*e*Sn	**Sn**	**18 09 43.4**	**-3.2**
SNZO	**South Karori**	**9.88**	**214**	*e*Pn	**Pn**	**18 08 25.8**	**+0.6**
SNZO				*e*Sn	Sn	18 10 08.0	-8.0
THZ	**Tophouse**	**11.11**	**218**	*e*Pn	**Pn**	**18 08 42.0**	**-0.2**
THZ				*e*Sn	Sn	18 10 38.5	-7.9
KHZ	**Kahutara**	**11.28**	**214**	*e*Pn	**Pn**	**18 08 47.8**	**+3.3**
KHZ				*e*Sn	Sn	18 10 42.7	-7.9
LTZ	**Lake Taylor**	**12.17**	**217**	*e*Pn	**Pn**	**18 08 56.9**	**+0.3**
OXZ	**Oxford**	**12.69**	**215**	*e*Pn	**Pn**	**18 09 06.4**	**+2.7**
RPZ	**Rata Peaks**	**13.46**	**217**	*e*Pn	**Pn**	**18 09 16.0**	**+1.8**
AS01	**Alice Springs**	**43.07**	**270**	*e*P	**P**	**18 14 04.3**	**+0.8**
AS31	**Alice Springs**	**43.11**	**270**	*e*P	**P**	**18 14 03.2**	**-0.6**
	0.8nm,0.6s						
ASAR	**Alice Springs**	**43.11**	**270**	P	**P**	**18 14 04.0**	**+0.2**
	1.1nm,0.6s,baz=109,slow=7.9,SNR=26						
WB2	**Warramunga Arr**	**44.35**	**275**	*e*P	**P**	**18 14 13.7**	**-0.2**
WR1	**Warramunga Arr**	**44.37**	**275**	*e*P	**P**	**18 14 13.8**	**-0.2**
	32nm,1.9s						
WRA	**Warramunga Arr**	**44.37**	**275**	P	**P**	**18 14 13.8**	**-0.2**
	0.3nm,0.3s,baz=116,slow=8.1,SNR=10						
FINES	**FINESS Array B**	**147.93**	**338**	PKPbc	**PKPab**	**18 25 49.8**	**-0.7**
	2.4nm,1.0s,baz=54,slow=7.1,SNR=4.4						

*NIED **30** 18:11:00, 35°.80N×140°.90E, h32km, Mw4.0 Best double couple: M0:9.91000×10^14 NP1:φ0=7.00000°, δ11.00000°, λ-155.00000°. NP2:φ0=252.00000°, δ85.00000°, λ-80.00000°.*
*IDC **30** 18:11:52.7±0.6, 35°.71N×140°.90E, h0km, mb3.9/19, mb1 4.1/22, mb1mx3.9/67, mbtmp4.0/22, ML4.2/3, MS3.1/8, Ms1 3.1/8, ms1mx2.8/62, Error ellipse: s-maj=17.1km s-min=13.2km az=85.0*
*NEIC **30** 18:11:55.0±2.5, 35°.74N×140°.98E, h15km±15km, mb4.2/10, Error ellipse: s-maj=7.3km s-min=5.4km az=91.0*
NEIC Recorded [2 JMA] in Chiba and Ibaraki.
*ISCJB **30** 18:11:55.7±0.6, 35°.78N±0°.03×141°.01E±0°.05, h32km±3km, mb4.0/26, MS2.9/3, Error ellipse: s-maj=6.9km s-min=5.2km az=161.2*
*JMA **30** 18:11:56.7±0.2, 35°.81N×140°.93E, h31km±1km, M3.8*
JMA Felt II J1.
ISC 30 18:11:56.3±1.0, 35°.77N±0°.04×141°.00E±0°.07, h25km±7km, n73, σ1°35/70, mb3.9/26, MS2.8/3, 1C-1D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.13**	**238**	⇑P	**Pn**	**18 12 02.1**	**-0.7**
CHOJ				*e*S	**Sb**	**18 12 06.1**	**+1.5**
JIHU	**Itakohorinouch**	**0.43**	**297**	P	**Pb**	**18 12 05.6**	**+0.2**
JHYU	**Hitachinakayam**	**0.66**	**330**	P	**Pb**	**18 12 08.6**	**-0.6**
JHYU				S	**Sb**	**18 12 17.2**	**-0.7**
JYT	**Yasato**	**0.79**	**305**	P	**Pb**	**18 12 10.0**	**-1.5**
JYT				S	**Sb**	**18 12 19.6**	**-2.2**
JHO	**Hitachi**	**0.90**	**338**	⇓P	**Pb**	**18 12 12.0**	**-1.4**
BSO4	**Boso 4**	**0.95**	**215**	P	**Pn**	**18 12 15.0**	**+1.0**
BSO3	**Boso 3**	**1.05**	**202**	P	**Pb**	**18 12 16.4**	**+0.7**
MJAR	**Matsushiro Arr**	**2.38**	**290**	Pn	**Pn**	**18 12 33.1**	**-0.7**
	7.4nm,0.3s,baz=106,slow=5.3,SNR=89						
MJAR				Sn	**Sn**	**18 13 03.2**	**+1.0**
	12nm,0.3s,baz=15,slow=39,SNR=8.2						
MJAR				LR	LR	18 13 30.9	
	comp=Z,277nm,19.1s,baz=105,slow=43						
MAJO	**Matsushiro**	**2.38**	**290**	*e*Pn	**Pn**	**18 12 33.5**	**-0.3**
MAJO				*e*Sn	**Sn**	**18 13 03.2**	**+0.9**
MAT	**Matsushiro**	**2.38**	**290**	P	**Pn**	**18 12 33.9**	**+0.1**
MAT				S	**Sn**	**18 13 01.5**	**-0.8**
MJB9	**Matsu-Tunnel**	**2.39**	**290**	*e*Pn	**Pn**	**18 12 34.0**	**+0.2**
JHJ2	**Mitsune**	**2.83**	**201**	*e*Pn	**Pn**	**18 12 40.7**	**+0.8**
JHJ	**Hachijo jima 2**	**2.83**	**201**	Pn	**Pn**	**18 12 40.5**	**+0.6**
	30nm,0.3s,baz=122,slow=23,SNR=9.3						
JHJ				Sn	**Sn**	**18 13 13.4**	**+0.2**
	16nm,0.3s,baz=90,slow=20,SNR=3.5						
INU	**Inuyama**	**3.27**	**264**	*e*Pn	**Pn**	**18 12 48.3**	**+2.3**
ASAJ	**Asahikawa**	**8.42**	**8**	Pn	**Pn**	**18 13 55.7**	**-1.0**
	3.7nm,0.3s,baz=222,slow=10,SNR=51						
ASAJ				LR	LR	18 18 18.5	
	comp=Z,66nm,18.6s,baz=180,slow=45						
ASAJ	**Asahikawa**	**8.42**	**8**	*e*Pn	**Pn**	**18 13 55.5**	**-1.2**
CBIJ	**Chichi jima**	**8.71**	**173**	*e*Pn	**Pn**	**18 13 58.9**	**-1.8**
CBIJ				Sn	**Sn**	**18 15 32.7**	**-5.4**
JCJ	**Chichijima**	**8.71**	**173**	Pn	**Pn**	**18 13 58.8**	**-1.9**
	10nm,0.3s,baz=357,slow=8.7,SNR=7.2						
JCJ				Sn	**Sn**	**18 15 32.7**	**-5.4**
	2.4nm,0.3s,baz=288,slow=19,SNR=1.9						
JNU	**Nakatsue**	**8.77**	**255**	LR	LR	18 17 40.4	
	comp=Z,169nm,19.2s,baz=304,slow=40						
KSRS	**Korea Array**	**10.64**	**283**	LR	LR	18 18 29.0	
	comp=Z,101nm,21.2s,baz=96,slow=37						
USRK	**Ussuriysk Ar.**	**10.88**	**323**	LR	LR	18 18 27.2	
	comp=Z,147nm,19.0s,baz=148,slow=36						
YSS	**Yuzh-Sakhalins**	**11.25**	**6**	*e*Pn	**Pn**	**18 14 34.5**	**-0.8**
PETK	**Petropavlovsk-**	**20.95**	**29**	LR	LR	18 25 40.0	
	comp=Z,24nm,19.7s,baz=278,slow=39						
MA2	**Magadan**	**24.65**	**12**	P	**P**	**18 17 15.6**	**+0.9**
	1.2nm,0.4s,baz=183,slow=14,SNR=3.9						
H11N2	**WAKE ISLAND Hy 27.82**	**118**		T	T	18 46 52.4	
	baz=311,slow=75,SNR=192						
H11N1	**WAKE ISLAND Hy 27.83**	**118**		T	T	18 46 53.0	
	baz=311,slow=75,SNR=161						
H11N3	**WAKE ISLAND Hy 27.84**	**118**		T	T	18 46 53.3	
	baz=311,slow=75,SNR=180						
SEY	**Seymchan**	**28.09**	**11**	P	**P**	**18 17 47.0**	**+1.4**
	1.2nm,0.9s,baz=90,slow=20,SNR=4.1						
H11S1	**WAKE ISLAND Hy 28.49**	**120**		T	T	18 47 41.6	
	baz=312,slow=75,SNR=184						
H11S3	**WAKE ISLAND Hy 28.49**	**120**		T	T	18 47 35.4	
	baz=312,slow=75,SNR=164						
H11S2	**WAKE ISLAND Hy 28.50**	**120**		T	T	18 47 39.6	
	baz=312,slow=75,SNR=130						
DAV	**Davao City (W)**	**31.88**	**210**	LR	LR	18 28 56.2	
	comp=Z,21nm,20.9s,baz=76,slow=32						
ZAA1	**Zalesovo Array**	**42.52**	**313**	*e*P	**P**	**18 19 49.6**	**+0.1**
ZALV	**Zalesovo Beam**	**42.52**	**313**	P	**P**	**18 19 49.6**	**+0.1**
	0.9nm,0.5s,baz=108,slow=7.9,SNR=3.6						
ZALV	**Zalesovo Beam**	**42.52**	**313**	*e*P	**P**	**18 19 49.4**	**-0.1**
MK01	**Makanchi Array**	**44.51**	**303**	*e*P	**P**	**18 20 05.7**	**+0.1**
MK31	**Makanchi Array**	**44.51**	**303**	*e*P	**P**	**18 20 05.5**	**-0.2**
MK32	**Makanchi Array**	**44.51**	**303**	*e*P	**P**	**18 20 05.4**	**-0.3**
MKAR	**Makanchi Array**	**44.51**	**303**	P	**P**	**18 20 05.4**	**-0.3**
	1.1nm,0.7s,baz=89,slow=9.8,SNR=13						
MKAR	**Makanchi Array**	**44.51**	**303**	*e*P	**P**	**18 20 05.3**	**-0.3**
	14nm,0.9s						
MAKZ	**Makanchi**	**44.73**	**303**	*e*P	**P**	**18 20 07.3**	**-0.1**
	3.0nm,0.9s						
KURK	**Kurchatov**	**46.45**	**309**	*e*P	**P**	**18 20 20.6**	**-0.4**
	5.0nm,1.0s						
KURBB	**Kurchatov Arra**	**46.52**	**309**	P	**P**	**18 20 20.6**	**-0.8**
	4.2nm,0.2s,baz=84,slow=7.8,SNR=6.2						
CAST	**Castle Rocks**	**48.46**	**34**	*e*P	**P**	**18 20 37.8**	**+1.4**
	1.0nm,0.8s						
MDM	**Murphy Dome**	**50.16**	**32**	*e*P	**P**	**18 20 50.8**	**+1.4**
	3.0nm,0.8s						
ILAR	**Eielson Array**	**50.74**	**32**	P	**P**	**18 20 54.4**	**+0.7**
	1.4nm,0.8s,baz=273,slow=6.3,SNR=18						
ILB	**Eielson Array**	**50.74**	**32**	*e*P	**P**	**18 20 54.1**	**+0.4**
BVAR	**Borovoye Array**	**51.18**	**313**	P	**P**	**18 20 57.5**	**+0.3**
	0.6nm,0.6s,baz=98,slow=6.5,SNR=5.5						
FITZ	**Fitzroy Crossi**	**55.52**	**198**	P	**P**	**18 21 29.4**	**+0.1**
	1.3nm,0.8s,baz=1.4,slow=7.9,SNR=4.8						
FITZ	**Fitzroy Crossi**	**55.52**	**198**	*e*P	**P**	**18 21 29.2**	**-0.1**
	1.8nm,0.8s						
INK	**Inuvik**	**55.66**	**27**	P	**P**	**18 21 30.9**	**+1.1**
	1.7nm,0.7s,baz=319,slow=5.7,SNR=5.8						
INK	**Inuvik**	**55.66**	**27**	*e*P	**P**	**18 21 31.1**	**+1.3**
	3.0nm,1.0s						
WB2	**Warramunga Arr**	**55.77**	**188**	*e*P	**P**	**18 21 30.4**	**-0.7**
WR1	**Warramunga Arr**	**55.77**	**188**	*e*P	**P**	**18 21 30.2**	**-0.9**
	3.2nm,0.9s						
WRA	**Warramunga Arr**	**55.77**	**188**	P	**P**	**18 21 30.2**	**-0.9**
	1.8nm,0.8s,baz=2.4,slow=7.6,SNR=28						
AS31	**Alice Springs**	**59.50**	**188**	*e*P	**P**	**18 21 56.9**	**-0.4**
	0.6nm,1.0s						
ASAR	**Alice Springs**	**59.50**	**188**	P	**P**	**18 21 57.1**	**-0.2**
	0.4nm,0.5s,baz=6.7,slow=15,SNR=8.2						
STKA	**Stephens Creek**	**67.30**	**179**	P	**P**	**18 22 48.9**	**+0.1**
	1.7nm,0.8s,baz=331,slow=13,SNR=2.9						
STKA	**Stephens Creek**	**67.30**	**179**	*e*P	**P**	**18 22 48.4**	**-0.4**
	0.2nm,0.8s						
FIA0	**FINESS Array S**	**69.77**	**332**	*e*P	**P**	**18 23 04.1**	**+0.1**
FINES	**FINESS Array B**	**69.77**	**332**	P	**P**	**18 23 04.1**	**+0.1**
	1.5nm,0.8s,baz=56,slow=5.2,SNR=3.5						
AKASG	**Malin Array Be**	**75.09**	**322**	P	**P**	**18 23 35.7**	**-0.1**
	0.4nm,0.4s,baz=50,slow=6.3,SNR=2.6						
HFS	**Hagfors**	**75.09**	**336**	P	**P**	**18 23 36.5**	**+0.8**
	1.7nm,0.8s,baz=302,slow=8.3,SNR=3.7						
NB2	**NORSAR Subarra**	**75.22**	**337**	P	**P**	**18 23 34.4**	**-2.1**
	comp=Z,8.1nm,1.4s,baz=39,slow=6.2						
NOA	**NORSAR Array B**	**75.22**	**337**	LR	LR	18 59 42.8	
	comp=Z,21nm,19.4s,baz=190,slow=38						
NV01	**Mina Array Sit**	**76.01**	**53**	*e*P	**P**	**18 23 43.4**	**+1.7**
NVAR	**Mina Array Bea**	**76.01**	**53**	P	**P**	**18 23 43.2**	**+1.6**
	comp=Z,0.4nm,0.6s,baz=292,slow=6.2,SNR=5.6						
PDAR	**Pinedale Array**	**78.79**	**45**	P	**P**	**18 23 58.0**	**+0.9**
	comp=Z,0.4nm,0.6s,baz=196,slow=1.1,SNR=4.7						
BR101	**Keskin Array S**	**79.43**	**312**	*e*P	**P**	**18 24 01.4**	**+0.8**
BRTR	**Keskin Array B**	**79.43**	**312**	P	**P**	**18 24 01.5**	**+0.8**
	comp=Z,0.6nm,0.8s,baz=98,slow=2.9,SNR=3.2						
TXAR	**Lajitas Array**	**91.16**	**52**	P	**P**	**18 25 00.3**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=301,slow=3.7,SNR=4.0						
LPAZ	**La Paz**	**147.61**	**61**	PKPbc	**PKPbc**	**18 31 40.7**	**+1.0**
	comp=Z,1.1nm,0.6s,baz=263,slow=1.6,SNR=6.5						
LPAZ	**La Paz**	**147.61**	**61**	*e*PKPbc	**PKPbc**	**18 31 40.5**	**+0.8**

*ISCJB **30** 18:33:07.7±0.4, 53°.37N±0°.05×168°.17W±0°.05, h103km±3km, mb3.6/14, Error ellipse: s-maj=8.3km s-min=4.8km az=159.3*
*NEIC **30** 18:33:08.9±0.7, 53°.44N×168°.19W, h93km±6km, ML3.7(AEIC), Error ellipse: s-maj=14.7km s-min=6.5km az=163.0*
*IDC **30** 18:33:10.4±3.7, 53°.62N×168°.14W, h104km±33km, mb3.4/14, mb1 3.5/16, mb1mx3.3/73, mbtmp3.7/16, Error ellipse: s-maj=28.1km s-min=12.5km az=13.0*
ISC 30 18:33:08.9±0.7, 53°.38N±0°.07×168°.12W±0°.05, h100km±6km, n100, σ1°57/101, mb3.6/14, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKTU	**Okmok Mt. Tuli**	**0.04**	**82**	*e*Pn	**Pn**	**18 33 21.9**	**-1.0**
OKER	**Okmok East Rim**	**0.09**	**27**	*e*Pn	**Pn**	**18 33 21.8**	**-1.2**
OKAK	**Okmok**	**0.25**	**324**	*e*Pn	**Pn**	**18 33 21.8**	**-1.4**
NIKH	**Nikolski High**	**0.60**	**228**	*e*Pn	**Pn**	**18 33 24.4**	**-1.1**
NIKH				*e*Sn	**Sn**	**18 33 36.0**	**-1.9**
MCIR	**Makushin Cirqu**	**0.93**	**51**	*e*Pn	**Pn**	**18 33 28.5**	**-0.1**
MTBL	**Makushin Table**	**1.04**	**55**	*e*Pn	**Pn**	**18 33 29.8**	**0.0**
UNV	**Unalaska Valle**	**1.07**	**63**	*e*Pn	**Pn**	**18 33 30.0**	**-0.1**
UNV				*e*Sn	**Sn**	**18 33 45.6**	**-0.4**
AKMO	**Akutan Morgan**	**1.44**	**59**	*e*Pn	**Pn**	**18 33 34.9**	**+0.5**
AKMO				*e*Sn	**Sn**	**18 33 55.1**	**+1.4**
ZRO	**Akutan Zero**	**1.46**	**60**	*e*Pn	**Pn**	**18 33 35.3**	**+0.7**
HSB	**Akutan Spr's B**	**1.54**	**57**	P	**Pn**	**18 33 36.1**	**+0.5**
AKUT	**Akutan**	**1.58**	**60**	*e*Pn	**Pn**	**18 33 36.6**	**+0.5**
AKUT				*e*Sn	**Sn**	**18 33 56.9**	**0.0**
WESP	**Westdahl Peak**	**2.30**	**60**	*e*Sn	**Sn**	**18 34 15.1**	**+1.8**
FALS	**False Pass**	**3.14**	**60**	*e*Pn	**Pn**	**18 33 58.0**	**+1.6**
FALS				*e*Sn	**Sn**	**18 34 34.3**	**+1.3**
DRIA	**Deer Island**	**3.79**	**63**	P	**Pn**	**18 34 06.1**	**+0.9**
ATKA	**Atka Island**	**3.87**	**255**	*e*Pn	**Pn**	**18 34 07.4**	**+1.1**
SPIA	**Saint Paul Isl**	**4.00**	**343**	*e*Pn	**Pn**	**18 34 06.5**	**-1.4**
SPIA				*e*Sn	**Sn**	**18 34 56.1**	**+2.4**
SDPT	**Sand Point**	**4.88**	**63**	*e*Pn	**Pn**	**18 34 20.3**	**+0.4**
SDPT				*e*Sn	**Sn**	**18 35 11.3**	**-3.9**
CHGN	**Chignik**	**6.32**	**59**	*e*Pn	**Pn**	**18 34 39.8**	**+0.4**
CHGN				*e*Sn	**Sn**	**18 35 42.3**	**-7.7**
OHAK	**Old Harbor**	**9.29**	**60**	*e*Pn	**Pn**	**18 35 18.0**	**-1.7**
KDAK	**Kodiak Island**	**9.83**	**57**	P	**Pn**	**18 35 25.1**	**-2.0**
	1.4nm,0.3s,baz=186,slow=4.3,SNR=15						
KDAK				S	Sn	18 37 05.9	-10
	0.3nm,0.3s,baz=60,slow=20,SNR=2.8						
KDAK	**Kodiak Island**	**9.83**	**57**	*e*Pn	**Pn**	**18 35 24.9**	**-2.1**
SVW2	**Sparrevohn**	**10.28**	**36**	*e*Pn	**Pn**	**18 35 34.5**	**+1.3**
GAMB	**Gambell**	**10.59**	**351**	*e*Pn	**Pn**	**18 35 36.8**	**-0.6**
SMY	**Shemya**	**10.73**	**274**	*e*Pn	**Pn**	**18 35 36.9**	**-2.4**
RSO	**Redoubt South**	**10.97**	**44**	*e*Pn	**Pn**	**18 35 39.6**	**-3.1**
HOM	**Homer**	**11.04**	**49**	*e*Pn	**Pn**	**18 35 41.6**	**-1.9**
CNPM	**China Poot**	**11.17**	**50**	*e*Pn	**Pn**	**18 35 44.7**	**-0.6**
BRLK	**Bradley Lake**	**11.43**	**49**	*e*Pn	**Pn**	**18 35 47.1**	**-1.7**
SPU	**Mount Spurr**	**11.66**	**42**	*e*Pn	**Pn**	**18 35 49.7**	**-2.2**
SKT	**Skwentna**	**12.34**	**39**	*e*Pn	**Pn**	**18 36 01.6**	**+0.8**
SUA	**Susitna One**	**12.35**	**42**	*e*Pn	**Pn**	**18 36 01.4**	**+0.4**
RC01	**Rabbit Creek A**	**12.56**	**45**	*e*Pn	**Pn**	**18 36 04.1**	**+0.3**
PPLA	**Purkeypile**	**12.68**	**35**	*e*Pn	**Pn**	**18 36 08.2**	**+2.8**
CAST	**Castle Rocks**	**13.07**	**33**	*e*Pn	**Pn**	**18 36 12.8**	**+2.4**
GHO	**Glory Hole Cre**	**13.25**	**43**	*e*Pn	**Pn**	**18 36 12.8**	**0.0**
MID	**Middleton Isla**	**13.46**	**55**	*e*Pn	**Pn**	**18 36 14.5**	**-0.9**
SML	**Sawmill**	**13.51**	**43**	*e*Pn	**Pn**	**18 36 14.8**	**-1.3**
KTH	**Kantishna Hill**	**13.54**	**44**	*e*Pn	**Pn**	**18 36 16.2**	**-0.4**
TRF	**Thorofare Moun**	**13.70**	**36**	*e*Pn	**Pn**	**18 36 17.5**	**-1.2**
BPAW	**Bear Paw Mtn.**	**13.89**	**33**	*e*Pn	**Pn**	**18 36 21.1**	**0.0**
SCM	**Sheep Creek Mo**	**13.94**	**44**	*e*Pn	**Pn**	**18 36 19.7**	**-2.0**
DIV	**Divide**	**14.31**	**48**	*e*Pn	**Pn**	**18 36 24.8**	**-1.8**
KLU	**Klutina**	**14.39**	**47**	*e*Pn	**Pn**	**18 36 25.9**	**-1.7**
BWN	**Browne**	**14.44**	**34**	*e*Pn	**Pn**	**18 36 28.1**	**0.0**
IM3	**Indian Mountai**	**14.52**	**24**	*e*Pn	**Pn**	**18 36 29.6**	**+0.5**
DHY	**Denali Highway**	**14.55**	**40**	*e*Pn	**Pn**	**18 36 29.6**	**-0.1**
RAGM	**Ragged Mountai**	**14.55**	**52**	*e*Pn	**Pn**	**18 36 28.9**	**-0.7**
MLY	**Manley**	**14.61**	**30**	*e*Pn	**P**	**18 36 32.9**	**-1.1**
BMRM	**Bremner River**	**14.78**	**50**	*e*Pn	**Pn**	**18 36 30.4**	**-2.1**
HARP	**HAARP**	**15.11**	**44**	*e*Pn	**Pn**	**18 36 37.5**	**+0.8**
CCB	**Clear Creek Bu**	**15.30**	**34**	*e*Pn	**Pn**	**18 36 38.6**	**-0.4**
MDM	**Murphy Dome**	**15.35**	**33**	*e*Pn	**Pn**	**18 36 39.7**	**0.0**
CRQM	**Cirque**	**15.39**	**51**	*e*Pn	**Pn**	**18 36 41.0**	**+0.6**
HDA	**Harding Lake**	**15.45**	**36**	*e*Pn	**P**	**18 36 41.9**	**-1.3**
TGL	**Tana Glacier**	**15.53**	**52**	*e*Pn	**Pn**	**18 36 42.1**	**0.0**
ILAR	**Eielson Array**	**15.69**	**35**	P	**Pn**	**18 36 42.6**	**-1.3**
	0.3nm,0.3s,baz=239,slow=10,SNR=12						
ILB	**Eielson Array**	**15.69**	**35**	*e*Pn	**Pn**	**18 36 44.2**	**+0.3**
IL1	**Eielson Array**	**15.69**	**35**	*e*Pn	**Pn**	**18 36 42.7**	**-1.2**
BALM	**Baldy**	**15.84**	**51**	*e*Pn	**Pn**	**18 36 44.4**	**-1.6**
RIDG	**Independ'e Rid**	**15.87**	**40**	*e*Pn	**P**	**18 36 47.1**	**-0.8**
SCRK	**Sand Creek**	**16.31**	**40**	*e*Pn	**Pn**	**18 36 50.6**	**-1.2**
COLD	**Coldfoot**	**16.38**	**25**	*e*Pn	**P**	**18 36 53.2**	**-0.2**
YKU2	**Yakutat**	**16.79**	**57**	*e*Pn	**P**	**18 36 58.4**	**+0.4**
FYU	**Fort Yukon**	**17.33**	**31**	*e*P	**P**	**18 37 05.5**	**+1.5**
EGAK	**Eagle**	**17.78**	**40**	*e*P	**Pn**	**18 37 09.4**	**-0.1**
DAWY	**Dawson**	**18.17**	**43**	*e*P	**Pn**	**18 37 14.0**	**-0.3**
SKAG	**Skagway**	**18.98**	**58**	*e*P	**Pn**	**18 37 23.9**	**-0.1**
BILL	**Billbino**	**19.08**	**330**	*e*P	**Pn**	**18 37 24.6**	**-0.4**
BESE	**Bessie Mountai**	**19.19**	**61**	*e*P	**Pn**	**18 37 26.3**	**-0.1**
JIS	**Juneau Island**	**19.43**	**62**	*e*P	**Pn**	**18 37 28.8**	**-0.3**
PETK	**Petropavlovsk-**	**20.35**	**283**	P	Pn	18 37 38.9	-1.0
	1.4nm,0.6s,baz=80,slow=12						
DLBC	**Dease Lake**	**21.72**	**61**	P	**P**	**18 37 54.3**	**+2.6**
	6.2nm,0.9s,baz=288,slow=11,SNR=7.9						
DLBC	**Dease Lake**	**21.72**	**61**	*e*P	**P**	**18 37 55.4**	**+3.7**
INK	**Inuvik**	**22.09**	**34**	P	**P**	**18 37 54.3**	**-1.0**
	2.2nm,0.4s,baz=277,slow=6.4,SNR=14						
INK	**Inuvik**	**22.09**	**34**	*e*P	**P**	**18 37 54.2**	**-1.1**
SEY	**Seymchan**	**22.57**	**311**	P	**P**	**18 37 60.0**	**-0.4**
	1.7nm,0.6s,baz=75,slow=23,SNR=17						
MA2	**Magadan**	**23.23**	**302**	P	**P**	**18 38 08.2**	**+1.3**
	2.2nm,0.5s,baz=88,slow=15,SNR=4.6						
MA2	**Magadan**	**23.23**	**302**	*e*P	**P**	**18 38 06.5**	**-0.4**
BBB	**Bella Bella**	**24.01**	**77**	*e*P	**P**	**18 38 14.3**	**+0.3**
YKA	**Yellowknife Ar**	**29.01**	**50**	P	**P**	**18 38 59.2**	**+0.5**
	0.3nm,0.4s,baz=274,slow=8.0,SNR=5.7						
YBH	**Yreka Blue Hor**	**32.24**	**93**	P	**P**	**18 39 28.4**	**+0.8**
	0.5nm,0.3s,baz=278,slow=7.1,SNR=5.3						
CNIC	**Niles Canyon**	**35.30**	**98**	*e*S	**S**	**18 45 19.6**	**-0.9**
NV01	**Mina Array Sit**	**36.94**	**93**	*e*P	**P**	**18 40 10.1**	**+1.9**
NVAR	**Mina Array Bea**	**36.94**	**93**	P	**P**	**18 40 10.8**

PRK	Paraskevi	1.51	346	P	Pn	18 33 53.5	-0.9
PRK				S	Sb	18 34 14.5	-0.1
SIGR	SIGRI	1.59	334	PN	Pb	18 33 56.9	0.0
SIGR	SIGRI	1.59	334	P	Pn	18 33 55.7	+0.1
SIGR	SIGRI	1.59	334	P	Pn	18 33 55.6	+0.1
SIGR	SIGRI	1.59	334	*e*Pn	Pb	18 33 56.9	0.0
KULA	Kula-Manisa	1.68	63	PN	Pb	18 33 57.9	-0.5
KULA	Kula-Manisa	1.68	63	*e*Pn	Pb	18 33 57.9	-0.5
TURN	Turunc	1.73	121	PN	Pn	18 33 56.4	-1.0
TURN	Turunc	1.73	121	*e*Pn	Pn	18 33 56.4	-1.0

*CSEM **30** 18:34:53.7±0.2, 45°.52N×26°.42E, h128km±2km, MD3.9, Error ellipse: s-maj=3.2km s-min=2.9km az=13.0*

BUC 30 18:34:53.7±0.8, 45°.53N×26°.39E, h133km±7km, MD3.9/5, 76C-21D, Error ellipse: s-maj=5.2km s-min=4.2km az=315.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLR	Muntele Rosu	0.32	263	⇑*i*P	Pn	18 35 12.4	-0.1
MLR	Muntele Rosu	0.32	263	⇑*i*P	Pn	18 35 12.4	-0.1
MLR				*i* S	Sn	18 35 25.8	-0.8
MLR	Muntele Rosu	0.32	263	⇑*i*P	Pn	18 35 12.4	-0.1
MLR				*i* S	Sn	18 35 25.8	-0.8
PLOR	Plostina	0.37	29	⇑*i*P	Pn	18 35 12.3	-0.2
PLOR	Plostina	0.37	29	⇑*i*P	Pn	18 35 12.3	-0.2
PLOR				*i* S	Sn	18 35 25.9	-1.0
PLOR	Plostina	0.37	29	P	Pn	18 35 12.2	-0.3
PLOR				S	Sn	18 35 26.2	-0.7
VRI	Vrincioaia	0.41	35	⇑*i*P	Pn	18 35 12.7	0.0
VRI	Vrincioaia	0.41	35	⇑*i*P	Pn	18 35 12.7	0.0
VRI				*i* S	Sn	18 35 26.5	-0.6
VRI	Vrincioaia	0.41	35	⇑*i*P	Pn	18 35 12.7	0.0
VRI				*i* S	Sn	18 35 26.5	-0.6
ISR	Istrita	0.43	166	⇓*i*P	Pn	18 35 12.8	0.0
ISR	Istrita	0.43	166	⇓*i*P	Pn	18 35 12.8	0.0
ISR				*i* S	Sn	18 35 26.9	-0.4
ISR	Istrita	0.43	166	⇓*i*P	Pn	18 35 12.8	0.0
ISR				*i* S	Sn	18 35 26.9	-0.4
GRER		0.44	110	⇑*i*P	Pn	18 35 13.5	+0.7
GRER		0.44	110	⇑*i*P	Pn	18 35 13.5	+0.7
GRER		0.44	110	⇑*i*P	Pn	18 35 13.5	+0.7
SECR		0.55	205	⇑*i*P	Pn	18 35 13.6	+0.2
SECR				S	Sn	18 35 28.9	+0.6
SECR		0.55	205	⇑*i*P	Pn	18 35 13.6	+0.2
SECR				*i* S	Sn	18 35 28.9	+0.6
SECR		0.55	205	⇑*i*P	Pn	18 35 13.6	+0.2
SECR				*i* S	Sn	18 35 28.9	+0.6
PETR	Petresti	0.62	72	⇑*i*P	Pn	18 35 14.1	+0.3
PETR	Petresti	0.62	72	⇑*i*P	Pn	18 35 14.1	+0.3
PETR				*i* S	Sn	18 35 28.7	-0.3
PETR	Petresti	0.62	72	⇑*i*P	Pn	18 35 14.1	+0.3
PETR				*i* S	Sn	18 35 28.7	-0.3
PLAR	PLOIESTI	0.67	203	⇑*i*P	Pn	18 35 14.5	+0.3
PLAR	PLOIESTI	0.67	203	⇑*i*P	Pn	18 35 14.5	+0.3
PLAR				*i* S	Sn	18 35 30.2	+0.5
PLAR	PLOIESTI	0.67	203	⇑*i*P	Pn	18 35 14.5	+0.3
PLAR				*i* S	Sn	18 35 30.2	+0.5
PGOR	Pogoanele	0.75	146	S	Sn	18 35 30.7	0.0
PGOR	Pogoanele	0.75	146	*i* S	Sn	18 35 30.7	0.0
PGOR	Pogoanele	0.75	146	*i* S	Sn	18 35 30.7	0.0
DOPR	Dopca	0.83	302	⇑*i*P	Pn	18 35 15.4	0.0
DOPR	Dopca	0.83	302	⇑*i*P	Pn	18 35 15.4	0.0
DOPR				*i* S	Sn	18 35 30.9	-1.0
DOPR	Dopca	0.83	302	⇑*i*P	Pn	18 35 15.4	0.0
DOPR				*i* S	Sn	18 35 30.9	-1.0
SULR		0.86	187	⇑*i*P	Pn	18 35 15.8	+0.2
SULR		0.86	187	⇑*i*P	Pn	18 35 15.8	+0.2
SULR				*i* S	Sn	18 35 32.3	+0.1
SULR		0.86	187	⇑*i*P	Pn	18 35 15.8	+0.2
SULR				*i* S	Sn	18 35 32.3	+0.1
VOIR		0.95	265	⇑*i*P	Pn	18 35 16.5	0.0
VOIR		0.95	265	⇑*i*P	Pn	18 35 16.5	0.0
VOIR				*i* S	Sn	18 35 32.6	-1.2
VOIR		0.95	265	⇑*i*P	Pn	18 35 16.5	0.0
VOIR				*i* S	Sn	18 35 32.6	-1.2
MTUR	Matau	0.99	252	⇓*i*P	Pn	18 35 16.9	0.0
MTUR	Matau	0.99	252	⇓*i*P	Pn	18 35 16.9	0.0
MTUR	Matau	0.99	252	⇓*i*P	Pn	18 35 16.9	0.0
TESR	Tescani	1.00	10	⇑*i*P	Pn	18 35 15.9	-1.0
TESR	Tescani	1.00	10	⇑*i*P	Pn	18 35 15.9	-1.0
TESR	Tescani	1.00	10	⇑*i*P	Pn	18 35 15.9	-1.0
TESR				S	Sn	18 35 32.0	-2.5
AMRR	Amara	1.14	144	⇑*i*P	Pn	18 35 18.1	-0.1
AMRR	Amara	1.14	144	⇑*i*P	Pn	18 35 18.1	-0.1
AMRR				*i* S	Sn	18 35 35.8	-0.9
AMRR	Amara	1.14	144	⇑*i*P	Pn	18 35 18.1	-0.1
AMRR				*i* S	Sn	18 35 35.8	-0.9
BUC1	Bucharest	1.21	192	S	Sn	18 35 37.2	-0.9
BUC1	Bucharest	1.21	192	*i* S	Sn	18 35 37.2	-0.9
BUC1	Bucharest	1.21	192	*i* S	Sn	18 35 37.2	-0.9
GOLR		1.23	236	S	Sn	18 35 39.0	+0.6
GOLR		1.23	236	*i* S	Sn	18 35 39.0	+0.6
GOLR		1.23	236	*i* S	Sn	18 35 39.0	+0.6
ARR	Arges	1.25	263	S	Sn	18 35 38.6	-0.3
ARR	Arges	1.25	263	*i* S	Sn	18 35 38.6	-0.3
ARR	Arges	1.25	263	*i* S	Sn	18 35 38.6	-0.3
GIUM	Giurgiulesti	1.28	91	⇑*i*P	Pn	18 35 20.1	+0.5
GIUM	Giurgiulesti	1.28	91	⇑*i*P	Pn	18 35 20.1	+0.5
GIUM				*i* S	Sn	18 35 38.4	-0.9
GIUM	Giurgiulesti	1.28	91	⇑*i*P	Pn	18 35 20.1	+0.5
GIUM				*i* S	Sn	18 35 38.4	-0.9
CFR	Carcaliu	1.28	105	⇑*i*P	Pn	18 35 19.0	-0.6
CFR	Carcaliu	1.28	105	⇑*i*P	Pn	18 35 19.0	-0.6
CFR				*i* S	Sn	18 35 36.8	-2.5
CFR	Carcaliu	1.28	105	⇑*i*P	Pn	18 35 19.0	-0.6
SGRR	Singureni	1.34	193	⇑*i*P	Pn	18 35 20.3	0.0
SGRR	Singureni	1.34	193	⇑*i*P	Pn	18 35 20.3	0.0
SGRR				*i* S	Sn	18 35 39.5	-1.0
SGRR	Singureni	1.34	193	⇑*i*P	Pn	18 35 20.3	0.0
SGRR				*i* S	Sn	18 35 39.5	-1.0
HARR	Harsova	1.38	127	⇑*i*P	Pn	18 35 20.4	-0.2
HARR	Harsova	1.38	127	⇑*i*P	Pn	18 35 20.4	-0.2
HARR	Harsova	1.38	127	⇑*i*P	Pn	18 35 20.4	-0.2
HUMR	Humele	1.42	225	⇑*i*P	Pn	18 35 21.1	0.0
HUMR	Humele	1.42	225	⇑*i*P	Pn	18 35 21.1	0.0
HUMR				*i* S	Sn	18 35 41.0	-1.0
HUMR	Humele	1.42	225	⇑*i*P	Pn	18 35 21.1	0.0
HUMR				*i* S	Sn	18 35 41.0	-1.0
BIZ	Bicaz	1.42	352	⇑*i*P	Pn	18 35 22.4	+1.3
BIZ	Bicaz	1.42	352	⇑*i*P	Pn	18 35 22.4	+1.3
BIZ				*i* S	Sn	18 35 42.2	+0.1
BIZ	Bicaz	1.42	352	⇑*i*P	Pn	18 35 22.4	+1.3
BIZ				*i* S	Sn	18 35 42.2	+0.1
TLB	Topalu	1.50	128	⇓*i*P	Pn	18 35 21.7	-0.3
TLB	Topalu	1.50	128	⇓*i*P	Pn	18 35 21.7	-0.3
TLB				*i* S	Sn	18 35 41.5	-2.1
TLB	Topalu	1.50	128	⇓*i*P	Pn	18 35 21.7	-0.3
TLB				*i* S	Sn	18 35 41.5	-2.1
LEOM	Leova	1.60	53	⇑*i*P	Pn	18 35 23.2	+0.1
LEOM	Leova	1.60	53	⇑*i*P	Pn	18 35 23.2	+0.1
LEOM				*i* S	Sn	18 35 44.4	-1.1
LEOM	Leova	1.60	53	⇑*i*P	Pn	18 35 23.2	+0.1
LEOM				*i* S	Sn	18 35 44.4	-1.1
CVDA	Cernavoda	1.67	135	⇑*i*P	Pn	18 35 23.9	0.0
CVDA	Cernavoda	1.67	135	⇑*i*P	Pn	18 35 23.9	0.0
CVDA				*i* S	Sn	18 35 46.0	-1.0
CVDA	Cernavoda	1.67	135	⇑*i*P	Pn	18 35 23.9	0.0
CVDA				*i* S	Sn	18 35 46.0	-1.0
ICOR	Ion Corvin	1.73	144	⇓*i*P	Pn	18 35 24.7	+0.1
ICOR				S	Sn	18 35 47.2	-1.1
ICOR	Ion Corvin	1.73	144	⇓*i*P	Pn	18 35 24.7	+0.1
ICOR				*i* S	Sn	18 35 47.2	-1.1
ICOR	Ion Corvin	1.73	144	⇓*i*P	Pn	18 35 24.7	+0.1
ICOR				*i* S	Sn	18 35 47.2	-1.1
TLCR		1.74	101	⇑*i*P	Pn	18 35 24.6	-0.1
TLCR		1.74	101	⇑*i*P	Pn	18 35 24.6	-0.1
TLCR				*i* S	Sn	18 35 48.0	-0.4
TLCR		1.74	101	P	Pn	18 35 24.7	0.0
TLCR				*i* S	Sn	18 35 48.0	-0.4
TIRR	Tirgusor	1.79	126	⇓*i*P	Pn	18 35 25.0	-0.3
TIRR	Tirgusor	1.79	126	⇓*i*P	Pn	18 35 25.0	-0.3
TIRR				*i* S	Sn	18 35 47.5	-1.9
TIRR	Tirgusor	1.79	126	⇓*i*P	Pn	18 35 25.0	-0.3
TIRR				*i* S	Sn	18 35 47.5	-1.9
LOT	Lotru	1.85	268	S	Sn	18 35 50.6	-0.3
LOT	Lotru	1.85	268	*i* S	Sn	18 35 50.6	-0.3
LOT	Lotru	1.85	268	*i* S	Sn	18 35 50.6	-0.3
IAS	Iasi	1.85	26	S	Sn	18 35 49.1	-1.6
IAS	Iasi	1.85	26	*i* S	Sn	18 35 49.1	-1.6
IAS	Iasi	1.85	26	*i* S	Sn	18 35 49.1	-1.6
EFOR	EFORIE	2.16	132	S	Sn	18 35 55.2	-2.1
EFOR	EFORIE	2.16	132	*i* S	Sn	18 35 55.2	-2.1
EFOR	EFORIE	2.16	132	S	Sn	18 35 55.8	-1.5
KIS	Kishinev	2.23	48	⇑*i*P	Pn	18 35 31.0	+0.4
KIS				S	Sn	18 35 57.3	-1.7
KIS	Kishinev	2.23	48	⇑*i*P	Pn	18 35 31.0	+0.4
KIS				*i* S	Sn	18 35 57.3	-1.7
KIS	Kishinev	2.23	48	⇑*i*P	Pn	18 35 31.0	+0.4
KIS				*i* S	Sn	18 35 57.3	-1.7
BURAR	Bucovina Array	2.24	339	⇑*i*P	Pn	18 35 32.4	+1.6
BURAR	Bucovina Array	2.24	339	⇑*i*P	Pn	18 35 32.4	+1.6
BURAR	Bucovina Array	2.24	339	⇑*i*P	Pn	18 35 32.4	+1.6
MANR	Mangalia	2.32	137	⇓*i*P	Pn	18 35 31.2	-0.6
MANR	Mangalia	2.32	137	⇓*i*P	Pn	18 35 31.2	-0.6
MANR	Mangalia	2.32	137	⇓*i*P	Pn	18 35 31.2	-0.6
DRGR		2.85	298	⇓*i*P	Pn	18 35 38.4	-0.1
DRGR		2.85	298	⇓*i*P	Pn	18 35 38.4	-0.1
DRGR		2.85	298	⇓*i*P	Pn	18 35 38.4	-0.1
HERR	Herculane	2.88	258	⇑*i*P	Pn	18 35 38.7	-0.2
HERR	Herculane	2.88	258	⇑*i*P	Pn	18 35 38.7	-0.2
HERR				*i* S	Sn	18 36 11.6	-2.2
HERR	Herculane	2.88	258	⇑*i*P	Pn	18 35 38.7	-0.2
SORM	Soroca	2.93	27	⇑*i*P	Pn	18 35 39.2	-0.2
SORM	Soroca	2.93	27	⇑*i*P	Pn	18 35 39.2	-0.2
SORM				*i* S	Sn	18 36 12.0	-2.8
SORM	Soroca	2.93	27	⇑*i*P	Pn	18 35 39.2	-0.2
SORM				S	Sn	18 36 11.6	-3.2
MDVR	Moldovita	3.40	259	⇑*i*P	Pn	18 35 45.5	-0.1
MDVR	Moldovita	3.40	259	⇑*i*P	Pn	18 35 45.5	-0.1
MDVR				*i* S	Sn	18 36 22.9	-2.8
MDVR	Moldovita	3.40	259	⇑*i*P	Pn	18 35 45.5	-0.1

JMA 30 18:35:49.6±0.2, 23°.36N×123°.89E, h44km±3km, M3.5, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	Hateruma jima	0.70	354	P	Pn	18 36 03.1	0.0
HATJ				S	Sn	18 36 12.8	0.0
JKRS	Kuro-shima	0.88	7	P	Pn	18 36 06.0	+0.4
JKRS				S	Sn	18 36 18.4	+1.2
IRIF	Iriomote-Funau	0.98	351	P	Pn	18 36 07.5	+0.5
IRIF				S	Sn	18 36 20.2	+0.5
JIJ	Ishigaki jima	1.02	13	P	Pn	18 36 07.8	+0.2
JIJ				S	Sn	18 36 20.4	-0.4
JISG	Ishigakijimahi	1.28	17	P	Pn	18 36 11.4	+0.4
JISG				S	Sn	18 36 27.6	+0.6
YOJ	Yonaguni jima	1.36	324	P	Pn	18 36 12.8	+0.7
YOJ				S	Sn	18 36 29.2	+0.2
JYNG	Yonagunijimaku	1.39	322	P	Pn	18 36 13.1	+0.6
JYNG				*e*S	Sn	18 36 29.0	-0.7
JTJ	Tarama	1.48	30	P	Pn	18 36 14.4	+0.7
JTJ				S	Sn	18 36 33.2	+1.4
JIRB	Irabujima	1.87	38	P	Pn	18 36 19.6	+0.4
JIRB				*e*S	Sn	18 36 42.2	+0.6
JMJ	Miyako jima 2	1.94	41	P	Pn	18 36 21.1	+1.1
JMJ				*e*S	Sn	18 36 44.6	+1.5
JOGS	Gusukube	1.97	45	P	Pn	18 36 21.2	+0.8
JIKM	Ikemajima	1.99	38	P	Pn	18 36 21.4	+0.6
JIKM				S	Sn	18 36 45.9	+1.4

*IDC **30** 18:59:06.1±0.6, 21°.96S×168°.83E, h0km, mb4.4/19, mb1 4.4/21, mb1mx4.3/48, mbtmp4.4/21, ML4.3/2, MS3.7/13, Ms1 3.7/13, ms1mx3.3/41, Error ellipse: s-maj=17.3km s-min=15.7km az=122.0*

*NEIC **30** 18:59:07.8±4.5, 21°.85S×168°.80E, h11km±26km, mb4.7/30, Error ellipse: s-maj=11.3km s-min=8.1km az=72.0*

*ISCJB **30** 18:59:08.8±0.4, 21°.91S±0°.06×168°.82E±0°.05, h31km, mb4.5/39, MS3.7/12, Error ellipse: s-maj=8.4km s-min=7.1km az=162.1*

ISC 30 18:59:10.3±0.4, 21°.95S±0°.07×168°.84E±0°.07, h31km, n113, σ1°.40/109, mb4.6/39, MS3.8/12, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	2.22	266	Pn	Pn	18 59 43.1	-2.0
	30nm,0.3s,baz=82,slow=17,SNR=201						
DZM				Sn	Sn	19 00 12.6	+1.0
	82nm,0.3s,baz=23,slow=21,SNR=18						
DZM	Mont Dzumac	2.22	266	*e*Pn	Pn	18 59 43.2	-2.0
DZM				*e*Sn	Sn	19 00 11.8	+0.2
HNR	Honiara	15.10	324	Pn	Pn	19 02 40.2	-1.3
	4.0nm,0.3s,baz=29,slow=1.8,SNR=4.9						
HNR	Honiara	15.10	324	*e*Pn	Pn	19 02 39.7	-1.7
	51nm,0.9s						
EIDS	Eidsvold	16.62	255	*e*Pn	Pn	19 03 00.4	-0.7
	39nm,1.6s						
ARMA	Armidale	17.58	238	*e*Pn	P	19 03 15.0	+1.0
	56nm,1.4s						
URZ	Urewera	17.75	158	LR	LR	19 08 07.3	
	comp=Z,71nm,20.6s,baz=360,slow=30						
URZ	Urewera	17.75	158	*e*Pn	Pn	19 03 10.9	-4.1
	41nm,1.5s						
THZ	Tophouse	20.05	171	*e*P	P	19 03 41.4	+0.4
	85nm,1.8s						
AFI	Afiamalu	20.09	70	LR	LR	19 10 04.0	
	comp=Z,170nm,21.1s,baz=267,slow=33						
KHZ	Kahutara	20.79	170	*e*P	P	19 03 50.9	+2.2
	75nm,1.5s						
CTA	Charters Tower	21.16	271	P	P	19 03 52.6	-0.5
	10nm,0.9s,baz=94,slow=15,SNR=12						
CTAO	Charters Tower	21.16	271	*e*P	P	19 03 52.3	-0.8
	56nm,1.6s						
PMG	Port Moresby	24.27	298	P	P	19 04 25.8	+0.9
	16nm,0.9s,baz=128,slow=11,SNR=4.2						
PMG				LR	LR	19 11 56.4	
	comp=Z,113nm,20.7s,baz=112,slow=32						
COEN	Coen	25.64	284	*e*P	P	19 04 38.2	+0.8
	12nm,0.8s						
STKA	Stephens Creek	26.16	242	P	P	19 04 41.7	-0.3
	6.2nm,0.9s,baz=96,slow=14,SNR=2.9						
STKA				LR	LR	19 14 08.2	
	comp=Z,167nm,20.7s,baz=29,slow=34						
STKA	Stephens Creek	26.16	242	*e*P	P	19 04 43.5	+1.5
	12nm,1.9s						
BBOO	Buckleboo	30.93	242	*e*P	P	19 05 26.1	+1.5
	123nm,1.9s						
AS01	Alice Springs	32.16	260	*e*P	P	19 05 35.1	-0.3
AS31	Alice Springs	32.20	260	*e*P	P	19 05 35.3	-0.5
	2.0nm,0.9s						
ASAR	Alice Springs	32.20	260	P	P	19 05 35.7	-0.1
	4.2nm,0.8s,baz=84,slow=9.1,SNR=36						
ASAR				LR	LR	19 18 06.8	
	comp=Z,108nm,19.2s,baz=103,slow=35						
WC3	Warramunga Arr	32.21	267	*e*P	P	19 05 35.7	-0.2
	21nm,1.8s						
WB2	Warramunga Arr	32.23	267	*e*P	P	19 05 35.3	-0.8
	16nm,1.5s						
WR1	Warramunga Arr	32.24	267	*e*P	P	19 05 35.5	-0.7
	7.8nm,1.1s						
WRA	Warramunga Arr	32.24	267	P	P	19 05 35.5	-0.7
	2.2nm,0.8s,baz=96,slow=8.2,SNR=18						
MTN	Manton Dam	37.02	278	*e*P	P	19 06 17.7	+0.3
	4.4nm,0.7s						
FORT	Forrest	37.41	248	*e*P	P	19 06 21.4	+0.7
	24nm,0.9s						
FAKI	Fak Fak	40.24	293	*e*P	P	19 06 44.2	-0.4
	51nm,1.2s						
FITZ	Fitzroy Crossi	40.67	267	P	P	19 06 48.7	+0.7
	7.3nm,0.8s,baz=122,slow=8.6,SNR=12						
FITZ				LR	LR	19 23 39.1	
	comp=Z,167nm,18.3s,baz=96,slow=36						
FITZ	Fitzroy Crossi	40.67	267	*e*P	P	19 06 48.2	+0.2
	8.9nm,0.9s						
MBWA	Marble Bar	45.52	261	*e*P	P	19 07 27.3	0.0
	32nm,1.3s						
NWAO	Narrogin (SRO)	46.68	245	P	P	19 07 36.8	+0.5
	8.0nm,0.8s,baz=307,slow=5.1,SNR=4.5						
NWAO				LR	LR	19 26 27.3	
	comp=Z,210nm,20.9s,baz=1.0,slow=35						
CBIJ	Chichi jima	55.16	331	*e*P	P	19 08 42.6	+2.6
	95nm,1.2s						
VNDA	Vanda	55.72	182	P	P	19 08 44.2	+0.7
	1.2nm,0.8s,baz=3.0,slow=5.7,SNR=6.9						
VNDA	Vanda	55.72	182	*e*P	P	19 08 44.8	+1.4
SBA	Scott Base	55.96	181	*e*P	P	19 08 47.3	+2.2
	8.1nm,0.9s						
CASY	Casey	57.51	204	*e*P	P	19 08 53.0	-3.2
	5.5nm,0.9s						
QSPA	South Pole Qui	68.12	180	P	P	19 10 07.8	+0.7
	3.6nm,0.9s,baz=26,slow=0.9,SNR=10.0						
ASAJ	Asahikawa	70.00	340	*e*P	P	19 10 20.1	+1.3
	7.3nm,0.9s,baz=153,slow=4.5,SNR=6.0						
ASAJ	Asahikawa	70.00	340	*e*P	P	19 10 18.4	-0.4
	9.0nm,0.9s						
KSRS	Korea Array	70.53	326	P	P	19 10 23.0	+0.9
	0.8nm,0.8s,baz=157,slow=6.6,SNR=3.5						
KS15	Wonju Array Si	70.54	326	*e*P	P	19 10 22.9	+0.6
KSAR	Wonju Array Be	70.54	326	P	P	19 10 23.0	+0.8
YSS	Yuzh-Sakhalins	72.51	342	*e*P	P	19 10 31.6	-2.4
	7.7nm,0.8s						
PSI	Prapat	72.52	280	*e*P	P	19 10 32.7	-2.1
	9.1nm,1.1s						
GSI	Gunungsitoli	73.15	278	*e*P	P	19 10 35.7	-2.8
	57nm,2.0s						
USRK	Ussuriysk Ar.	73.97	333	P	P	19 10 44.2	+1.7
	3.5nm,0.8s,baz=180,slow=4.2						
PETK	Petropavlovsk-	75.36	353	P	P	19 10 51.9	+1.4
	4.5nm,0.8s,baz=159,slow=9.1						
PETK	Petropavlovsk-	75.36	353	*e*P	P	19 10 50.8	+0.3
PEA1	Petropavlovsk-	75.37	353	*e*P	P	19 10 51.9	+1.4
MAW	Mawson	75.79	202	P	P	19 10 54.3	+1.4
	3.1nm,0.8s,baz=102,slow=8.4,SNR=6.7						
MAW	Mawson	75.79	202	*e*P	P	19 10 54.6	+1.7
	1.2nm,0.9s						
ENH	Enshi	77.11	310	*e*P	P	19 11 00.7	-0.3
	12nm,1.2s						
CM01	Chiang Mai Arr	79.25	295	*e*P	P	19 11 14.3	+1.2
CM31	Chiang Mai Arr	79.28	295	*e*P	P	19 11 15.6	+2.4
CMAR	Chiang Mai Arr	79.28	295	P	P	19 11 14.7	+1.5
	3.7nm,0.9s,baz=142,slow=3.9,SNR=18						
CHTO	Chiang Mai	79.44	295	*e*P	P	19 11 15.5	+1.4
	7.4nm,1.0s						
SEY	Seymchan	85.59	353	P	P	19 11 43.0	-2.2
	0.9nm,0.7s,baz=280,slow=6.1,SNR=3.5						
SNAA	Sanae	86.45	183	P	P	19 11 50.1	+0.5
	4.4nm,0.9s,baz=192,slow=4.9,SNR=13						
SNAA				LR	LR	19 47 47.1	
	comp=Z,50nm,20.4s,baz=164,slow=34						
SNAA	Sanae	86.45	183	*e*P	P	19 11 49.8	+0.2
	5.5nm,0.9s						
SONA0	Songino Array	89.15	323	*e*P	P	19 12 02.6	-0.3
SONM	Songino Array	89.15	323	P	P	19 12 02.6	-0.3
	1.6nm,0.9s,baz=139,slow=4.0,SNR=6.6						
SONA1	Songino Array	89.16	323	*e*P	P	19 12 02.6	-0.3
YBH	Yreka Blue Hor	89.50	44	LR	LR	19 47 11.5	
	comp=Z,27nm,18.9s,baz=267,slow=32						
GNO	Genoa	90.03	48	*e*P	P	19 12 07.8	+0.6
NV01	Mina Array Sit	90.87	49	*e*P	P	19 12 08.5	-2.7
NVAR	Mina Array Bea	90.87	49	P	P	19 12 11.1	-0.2
	0.6nm,0.8s,baz=231,slow=8.1,SNR=5.2						
NVAR				LR	LR	19 47 48.8	
	comp=Z,34nm,18.4s,baz=92,slow=32						
LPIG	La Paz	90.92	64	LR	LR	19 43 57.1	
	comp=Z,41nm,21.2s,baz=259,slow=30						
BBB	Bella Bella	91.94	33	P	P	19 12 14.4	-1.0
	13nm,1.1s,baz=266,slow=15,SNR=2.8						
ANMO	Albuquerque	98.14	56	LR	LR	19 49 06.5	
	comp=Z,36nm,20.4s,baz=266,slow=31						
ANMO	Albuquerque	98.14	56	*e*P	P	19 12 43.2	-1.4
	4.7nm,1.6s						
TXAR	Lajitas Array	98.38	62	LR	LR	19 48 39.0	
	comp=Z,32nm,21.2s,baz=0.0,slow=30						
ARA0	ARCESS Array S	127.57	345	*e*PKPdf	PKPdf	19 18 11.5	-0.1
ARCES	ARCESS Array B	127.57	345	PKP	PKPdf	19 18 11.5	-0.1
	2.9nm,0.8s,baz=20,slow=3.9,SNR=3.6						
BR101	Keskin Array S	138.12	305	*e*PKPdf	PKPdf	19 18 34.2	+1.6
BRTR	Keskin Array B	138.12	305	PKP	PKPdf	19 18 34.2	+1.6
	0.3nm,0.5s,baz=120,slow=7.2,SNR=2.5						
VYHS	Vyhne	144.32	325	*e*PKP	PKPdf	19 18 42.7	-0.5
KRLC	Kraliky	144.35	329	*e*PKP	PKPdf	19 18 50.9	+7.6

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENLB	**Shoufeng** baz=316	**0.24**	**303**	P	**Pb**	**19 26 11.8**	**0.0**
ENLB	baz=316			S	**Sg**	**19 26 15.8**	**+1.5**
HWA	**Hwalien** baz=327	**0.28**	**316**	*e*P	**Pb**	**19 26 12.2**	**-0.3**
HWA	baz=327			*e*S	**Sb**	**19 26 17.2**	**0.0**
ESL	**Shilin** baz=273	**0.36**	**277**	P	**Pg**	**19 26 12.8**	**-0.1**
ESL	baz=273			S	**Sg**	**19 26 17.7**	**-0.1**
TWD	**Chiawan** baz=337	**0.37**	**326**	P	**Pg**	**19 26 13.3**	**+0.2**
TWD	baz=337			*e*S	**Sb**	**19 26 18.8**	**-0.8**
EGFH	**Guangfu** baz=246	**0.38**	**254**	*e*P	**Pb**	**19 26 13.8**	**-0.2**
EGFH	baz=246			*e*S	**Sb**	**19 26 19.1**	**-0.7**
NACB	**Ninganchiao** baz=342	**0.45**	**333**	P	**Pg**	**19 26 14.5**	**-0.1**
NACB	baz=342			S	**Sg**	**19 26 20.4**	**-0.2**
HGSD	**Ruisui** baz=218	**0.46**	**233**	*e*P	**Pb**	**19 26 15.3**	**-0.2**
EHY	**Hungye** baz=237	**0.53**	**240**	P	**Pb**	**19 26 16.4**	**-0.3**
EHY	baz=237			*e*S	**Sb**	**19 26 23.7**	**-0.5**
YULB	**Yu-li** baz=230	**0.61**	**232**	*e*P	**Pg**	**19 26 17.8**	**+0.2**
YULB	baz=230			*e*S	**Sb**	**19 26 26.6**	**-0.1**
VWDT	**VWDT** baz=266	**0.62**	**268**	*e*P	**Pg**	**19 26 17.9**	**0.0**
VWDT	baz=266			S	**Sb**	**19 26 26.3**	**-0.6**
TWF1	**Yuli** baz=214	**0.64**	**229**	*e*P	**Pb**	**19 26 18.6**	**0.0**
NANB	**Nanao** baz=355	**0.66**	**354**	P	**Pb**	**19 26 18.6**	**-0.2**
NANB	baz=355			S	**Sb**	**19 26 27.9**	**+0.1**
ENA	**Nanau** baz=355	**0.66**	**354**	P	**Pb**	**19 26 18.7**	**-0.2**
ENA	baz=355			*e*S	**Sb**	**19 26 28.1**	**+0.2**
CHGB	**Renai** baz=297	**0.66**	**296**	P	**Pg**	**19 26 18.1**	**-0.5**
CHGB	baz=297			*e*S	**Sg**	**19 26 27.1**	**-0.2**
ENAH	**Nanao** baz=360	**0.67**	**359**	*e*P	**Pb**	**19 26 19.1**	**-0.1**
ENAH	baz=360			*e*S	**Sb**	**19 26 29.5**	**+1.2**
FULB	**Fuli** baz=208	**0.75**	**220**	*e*P	**Pg**	**19 26 20.0**	**-0.2**
NNSB	**Datong** baz=323	**0.77**	**329**	P	**Pg**	**19 26 20.3**	**-0.3**
NNSB	baz=323			S	**Sg**	**19 26 30.3**	**-0.3**
NNSH	**Datong** baz=323	**0.77**	**329**	*e*P	**Pg**	**19 26 20.1**	**-0.4**
NNSH	baz=323			*e*S	**Sg**	**19 26 30.2**	**-0.5**
TDCB	**Techi** baz=311	**0.77**	**308**	*e*P	**Pg**	**19 26 20.4**	**-0.3**
TDCB	baz=311			*e*S	**Sg**	**19 26 30.3**	**-0.6**
NNS	**Nan Shan** baz=324	**0.78**	**328**	P	**Pg**	**19 26 20.6**	**-0.3**
NNS	baz=324			*e*S	**Sg**	**19 26 30.8**	**-0.4**
CHKT	**Chengkung** baz=188	**0.79**	**212**	*e*P	**Pg**	**19 26 21.1**	**+0.2**
SSLB	**Suanglung** baz=269	**0.79**	**271**	*e*P	**Pg**	**19 26 20.5**	**-0.6**
SSLB	baz=269			*e*S	**Sg**	**19 26 30.1**	**-1.4**
TWC	**Suao** baz=360	**0.83**	**2**	P	**Pb**	**19 26 22.1**	**+0.3**
TWC	baz=360			*e*S	**Sb**	**19 26 34.2**	**+1.2**
SMLT	**Sun Moon Lake** baz=276	**0.85**	**278**	P	**Pg**	**19 26 21.6**	**-0.5**
SMLT	baz=276			*e*S	**Sg**	**19 26 32.9**	**-0.4**
DPDB	**Guoxing** baz=287	**0.86**	**288**	*e*P	**Pg**	**19 26 21.5**	**-0.8**
TYC	**Yuchr** baz=268	**0.89**	**279**	*e*P	**Pg**	**19 26 22.3**	**-0.6**
ENTT	**Nioudou** baz=352	**0.89**	**345**	P	**Pb**	**19 26 22.9**	**-0.1**
ENTT	baz=352			*e*S	**Sb**	**19 26 35.1**	**+0.3**
ELDTW	**Lidau** baz=226	**0.94**	**232**	*e*P	**Pg**	**19 26 22.6**	**-1.3**
TWE	**Neicheng** baz=359	**0.95**	**352**	*e*P	**Pg**	**19 26 23.7**	**-0.4**
ALS	**Alishan** baz=250	**0.97**	**255**	*e*P	**Pg**	**19 26 24.1**	**-0.3**
ALS	baz=250			*e*S	**Sg**	**19 26 36.8**	**-0.3**
YHNB	**Yeheng** baz=343	**0.98**	**336**	*e*P	**Pg**	**19 26 24.0**	**-0.6**
YHNB	baz=343			*e*S	**Sg**	**19 26 36.8**	**-0.7**
NSK	**Sanguang** baz=342	**0.99**	**335**	P	**Pg**	**19 26 24.4**	**-0.4**
NSK	baz=342			S	**Sg**	**19 26 37.3**	**-0.6**
WJS	**Zhushan** baz=271	**1.00**	**273**	*e*P	**Pn**	**19 26 25.4**	**+0.1**
NWLT	**Wulai** baz=339	**1.04**	**344**	*e*P	**Pg**	**19 26 25.2**	**-0.6**
NWLT	baz=339			*e*S	**Sb**	**19 26 39.1**	**+0.1**
WNT	**Mingjian** baz=274	**1.05**	**276**	*e*P	**Pn**	**19 26 25.9**	**0.0**
WNT	baz=274			S	**Sn**	**19 26 40.2**	**-0.1**
CHN5	**Tsauling** baz=257	**1.06**	**261**	P	**Pn**	**19 26 26.2**	**0.0**
CHN5	baz=257			*e*S	**Sb**	**19 26 40.1**	**+0.5**
TCU	**Taichung** baz=290	**1.11**	**290**	*e*P	**Pn**	**19 26 27.4**	**+0.6**
NSTT	**Nanjuang** baz=322	**1.14**	**319**	P	**Pb**	**19 26 26.9**	**-0.2**
LIOB	**Emei** baz=323	**1.14**	**320**	P	**Pg**	**19 26 27.3**	**-0.3**
STYT	**Tauyuan** baz=232	**1.15**	**238**	*e*P	**Pb**	**19 26 26.8**	**-0.5**
WGK	**Gukeng** baz=262	**1.16**	**266**	*e*P	**Pb**	**19 26 27.5**	**+0.1**
WGK	baz=262			*e*S	**Sn**	**19 26 43.6**	**+0.6**
NSY	**Sanyi** baz=314	**1.16**	**304**	*e*P	**Pn**	**19 26 28.2**	**+0.7**
NSY	baz=314			*e*S	**Sn**	**19 26 43.1**	**-0.1**
WDLH	**Douliu** baz=262	**1.18**	**266**	*e*S	**Sn**	**19 26 44.6**	**+1.1**
TPUB	**Ta-pu** baz=241	**1.19**	**247**	*e*P	**Pb**	**19 26 28.0**	**-0.1**
TPUB	baz=241			*e*S	**Sn**	**19 26 44.1**	**+0.2**
TIPB	**Shuangxi** baz=353	**1.19**	**0**	*e*P	**Pb**	**19 26 27.3**	**-0.8**
WLTB	**Daxi** baz=339	**1.19**	**334**	*e*P	**Pg**	**19 26 28.8**	**+0.1**
WCHH	**Zhanghua** baz=284	**1.20**	**285**	*e*P	**Pg**	**19 26 28.8**	**+0.1**
WCHH	baz=284			*e*S	**Sn**	**19 26 45.1**	**+1.2**
NMLH	**Miaoli** baz=312	**1.21**	**309**	*e*S	**Sn**	**19 26 45.4**	**+1.0**
TWA	**Mucha** baz=344	**1.22**	**350**	*e*P	**Pn**	**19 26 28.5**	**+0.2**
TWA	baz=344			*e*S	**Sn**	**19 26 44.9**	**+0.2**
WTP	**Ta-pu** baz=239	**1.23**	**245**	*e*P	**Pn**	**19 26 28.5**	**+0.1**
WTP	baz=239			*e*S	**Sn**	**19 26 46.1**	**+1.2**
JYNG	**Yonagunijimaku** baz=355	**1.23**	**56**	P	**Pn**	**19 26 28.5**	**+0.1**
JYNG	baz=355			*e*S	**Sb**	**19 26 44.2**	**-0.2**
TATO	**Taipei** baz=63	**1.23**	**346**	*e*P	**Pn**	**19 26 28.8**	**+0.3**
TATO	baz=63			*e*S	**Sn**	**19 26 45.7**	**+0.7**
YOJ	**Yonaguni jima** baz=253	**1.28**	**58**	*e*P	**Pn**	**19 26 29.8**	**+0.6**
YOJ	baz=253			*e*S	**Sb**	**19 26 46.3**	**+0.3**
CHY	**Chiayi** baz=241	**1.31**	**258**	*e*S	**Sg**	**19 26 47.5**	**-0.4**
TWK	**Hsinying** baz=241	**1.32**	**248**	*e*P	**Pb**	**19 26 30.3**	**0.0**
TWK	baz=241			*e*S	**Sg**	**19 26 48.8**	**+0.4**
SGST	**Jiashian** baz=232	**1.33**	**239**	*e*P	**Pn**	**19 26 30.3**	**+0.5**
SGST	baz=232			*e*S	**Sg**	**19 26 48.6**	**+0.1**
SLGT	**Liugui** baz=228	**1.33**	**235**	*e*P	**Pn**	**19 26 30.1**	**+0.3**
WLGB	**Puzi** baz=253	**1.43**	**258**	*e*S	**Sg**	**19 26 51.0**	**-0.7**
WSF	**Szhu** baz=262	**1.47**	**265**	P	**Pb**	**19 26 32.6**	**-0.1**
SSD	**Sandimen** baz=201	**1.50**	**227**	*e*P	**Pn**	**19 26 32.5**	**+0.4**
SSD	baz=201			*e*S	**Sb**	**19 26 52.9**	**+0.8**
MASBT	**Mashibuluo** baz=218	**1.59**	**224**	*e*P	**Pn**	**19 26 34.1**	**+0.7**
IRIF	**Iriomote-Funau**	**1.83**	**72**	*e*S	**Sn**	**19 26 59.7**	**0.0**
HATJ	**Hateruma jima**	**1.84**	**81**	*e*S	**Sn**	**19 26 59.5**	**-0.3**
JKRS	**Kuro-shima**	**2.05**	**77**	P	**Pn**	**19 26 40.9**	**+1.2**
JKRS				*e*S	**Sn**	**19 27 05.5**	**+0.3**
PNG	**Penghu** baz=241	**2.09**	**265**	*e*P	**Pn**	**19 26 40.2**	**0.0**
PNG	baz=241			*e*S	**Sn**	**19 27 05.9**	**-0.1**
JIJ	**Ishigaki jima** baz=232	**2.20**	**74**	P	**Pn**	**19 26 42.0**	**+0.2**
JIJ				S	**Sn**	**19 27 08.3**	**-0.6**
JISG	**Ishigakijimahi**	**2.41**	**70**	P	**Pn**	**19 26 44.8**	**+0.1**
JISG				*e*S	**Sn**	**19 27 12.6**	**-1.5**
JTJ	**Tarama**	**2.77**	**71**	*e*S	**Sn**	**19 27 23.7**	**+0.9**

IDC ***30*** *19:43:19.4±0.4, 28°.65N×96°.44E, h0km, mb4.4/36, mb1 4.5/37, mb1mx4.4/63, mbtmp4.4/37, ML5.3/1, MS3.7/35, Ms1 3.7/35, ms1mx3.6/62, Error ellipse: s-maj=13.3km s-min=9.7km az=43.0*

MOS ***30*** *19:43:20.1±1.0, 28°.62N×96°.44E, h17km, mb4.8/51, Error ellipse: s-maj=7.2km s-min=4.4km az=113.0*

NDI ***30*** *19:43:20.7±2.7, 28°.93N×96°.55E, h43km, mb4.7, ML4.8, mb4.7(NEIC)*

BJI ***30*** *19:43:21.2, 28°.51N×96°.37E, h11km, mb4.9/40, mB4.8/24, ML4.4/8, Ms4.3/45, Ms7 4.1/41*

ISCJB ***30*** *19:43:22.4±0.4, 28°.58N±0°.02×96°.32E±0°.02, h34km±4km, mb4.6/126, MS3.7/40, Error ellipse: s-maj=3.4km s-min=2.7km az=179.6*

NEIC ***30*** *19:43:25.2±0.5, 28°.64N×96°.39E, h43km±4km, mb4.7/51, Error ellipse: s-maj=3.8km s-min=2.9km az=223.0*

ISC 30 19:43:23.2±0.5, 28°.62N±0°.03×96°.31E±0°.03, h25km±3km, n333, σ1§86/366, mb4.6/127, MS3.7/40, 21C-10D, Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKP	**Lekhapani**	**1.34**	**198**	*e*P	**Pb**	**19 43 48.8**	**+1.1**
LKP				*e*S	**Sb**	**19 44 06.9**	**+2.5**
LKP	comp=E,13μm,0.7s			IAML		19 44 08.8	
LKP	comp=N,14μm,0.1s			IAML		19 44 09.1	
ZIRO	**ZIRO**	**2.43**	**244**	*e*P	**Pn**	**19 44 03.6**	**+2.1**
ZIRO				*e*S	**Sb**	**19 44 34.0**	**-2.0**
JORH	**JORHAT**	**2.61**	**225**	*e*P	**Pn**	**19 44 05.0**	**+1.2**
JORH				*e*S	**Sb**	**19 44 40.1**	**-0.8**
ITAN	**ITANAGAR**	**2.72**	**238**	*e*P	**Pn**	**19 44 07.7**	**+2.4**
ITAN				*e*S	**Sn**	**19 44 39.0**	**+1.6**
ITAN	comp=E,5μm,1.2s			IAML		19 44 50.7	
ITAN	comp=N,9μm,0.2s			IAML		19 44 52.3	
MOKO	**MOKOCHONG**	**2.79**	**215**	*e*P	**Pn**	**19 44 08.5**	**+2.1**
MOKO				*e*S	**Sb**	**19 44 43.6**	**-2.6**
MOKO	comp=E,5μm,0.7s			IAML		19 44 53.5	
MOKO	comp=N,6μm,0.5s			IAML		19 44 53.8	
KOHI	**KOHIMA**	**3.49**	**215**	*ex*	**Pn**	**19 44 17.5**	**+1.5**
KOHI				*e*S	**Sn**	**19 44 54.0**	**-2.5**
TEZP	**TEZPUR**	**3.70**	**238**	*e*P	**Pn**	**19 44 19.7**	**+1.0**
TEZP				*e*S	**Sn**	**19 45 04.8**	**+3.3**
TEZP	comp=E,2μm,0.2s			IAML		19 45 21.3	
TEZP	comp=N,3μm,0.2s			IAML		19 45 21.8	
LSA	**Lhasa**	**4.64**	**285**	Pn	**Pn**	**19 44 35.5**	**+3.4**
LSA				Sn	**Sn**	**19 45 30.0**	**+4.5**
LSA	**Lhasa**	**4.64**	**285**	*e*Pn	**Pn**	**19 44 35.8**	**+3.6**
LSA	**Lhasa**	**4.64**	**285**	*e*P	**Pn**	**19 44 35.8**	**+3.6**
GUWA	**GUWAHATI**	**4.76**	**241**	*e*P	**Pn**	**19 44 33.2**	**-0.2**
GUWA				*e*S	**Sn**	**19 45 28.1**	**+0.3**
SHL	**Shillong**	**4.98**	**233**	‖*i*P	**Pn**	**19 44 37.0**	**+0.5**
SHL				*e*S	**Sn**	**19 45 32.0**	**-1.4**
SHL	**Shillong**	**4.98**	**233**	*e*Pn	**Pn**	**19 44 36.5**	**0.0**
SHL				*e*Sn	**Sn**	**19 45 32.6**	**-0.8**
SHL	**Shillong**	**4.98**	**233**	*e*P	**Pn**	**19 44 36.5**	**0.0**
SHL				*e*		19 45 32.6	
DHUB	**DHUBRI**	**6.18**	**247**	*e*P	**Pn**	**19 44 53.3**	**+0.4**
DHUB				*e*S	**Sn**	**19 46 01.3**	**-1.5**
DHUB	comp=N,588nm,0.8s			IAML		19 46 39.7	
DHUB	comp=E,410nm,0.3s			IAML		19 46 46.5	
AGT	**Agartala**	**6.54**	**225**	*e*P	**Pn**	**19 44 59.2**	**+1.4**
AGT				*e*S	**Sn**	**19 46 10.4**	**-1.3**
KMI	**Kunming**	**6.71**	**120**	Pn	**Pn**	**19 45 01.0**	**+0.6**
KMI				Sn	**Sn**	**19 46 19.3**	**+3.1**
KMI	comp=E,180nm,1.6s			smax	smax		
KMI	comp=E,100nm,1.4s			smax	smax		
KMI	comp=E,2μm,7.3s			LR	LR		
KMI	comp=E,1μm,7.6s			LR	LR		
KMI	comp=E,750nm,9.5s			LR	LR		
SAIH	**SAIHA**	**6.80**	**207**	*e*P	**Pn**	**19 45 02.4**	**+0.9**
SAIH				*e*S	**Sn**	**19 46 16.9**	**-1.3**
CD2	**Chengdu**	**6.87**	**69**	Pn	**Pn**	**19 45 05.0**	**+2.7**
CD2				Pg	**Pb**	**19 45 20.3**	**-1.5**
CD2				Sg	Sb	19 47 01.3	+18
CD2	comp=E,100nm,1.1s			smax	smax		
CD2	comp=E,180nm,1.7s			smax	smax		
CD2	comp=E,1μm,5.4s			LR	LR		
CD2	comp=E,2μm,10.2s			LR	LR		
BELO	**BELONIA**	**6.91**	**220**	*e*P	**Pn**	**19 45 03.6**	**+0.8**
BELO				*e*S	**Sn**	**19 46 17.1**	**-3.5**
GTK	**Tadong**	**6.94**	**261**	*e*P	**Pn**	**19 45 01.6**	**-1.9**
GTK				*e*S	**Sn**	**19 46 16.1**	**-5.6**
GTK	comp=E,163nm,0.5s			IAML		19 47 07.4	
GTK	comp=N,27μm,1.6s			IAML		19 47 10.3	
BRDH	**Bariadhala**	**7.26**	**217**	Pn	**Pn**	**19 45 09.2**	**+1.5**
BRDH	comp=N,51nm,0.3s,baz=70,slow=11,SNR=4.3			Sn	**Sn**	**19 46 27.4**	**-1.9**
BRDH	comp=N,26nm,0.3s,baz=323,slow=20,SNR=3.3			LR	LR	19 49 14.1	
BRDH	comp=N,970nm,18.5s,baz=46,slow=48						
TAPN	**Taplejung**	**7.71**	**263**	*e*Pn	**Pn**	**19 45 15.4**	**+1.3**
TAPN				*e*Sn	**Sn**	**19 46 40.0**	**-0.8**
TAPN	comp=N,379nm,0.8s						
ODAN	**Odare**	**8.10**	**260**	*e*Pn	**Pn**	**19 45 20.0**	**+0.6**
ODAN				*e*Sn	**Sn**	**19 46 50.4**	**+0.1**
ODAN	comp=N,450nm,0.7s						
RAMN	**Ramite**	**8.76**	**261**	*e*Pn	**Pn**	**19 45 29.3**	**+0.8**
RAMN				*e*Sn	**Sn**	**19 47 05.6**	**-1.0**
JIRN	**Jiri**	**8.99**	**266**	*e*Pn	**Pn**	**19 45 32.4**	**+0.7**
JIRN				*e*Sn	**Sn**	**19 47 10.2**	**-2.1**
CMAI	**Chiengmai2**	**8.99**	**163**	P	**Pn**	**19 45 34.3**	**+2.6**
GUN	**Gumba**	**9.23**	**268**	*e*Pn	**Pn**	**19 45 35.4**	**+0.4**
GYA	**Guiyang**	**9.44**	**101**	‖*i*P	**Pn**	**19 45 40.3**	**+2.6**
GYA				PP	**PnPn**	**19 45 49.0**	**+3.7**
GYA				S	**Sn**	**19 47 26.5**	**+3.5**
GYA				SS	**SnSn**	**19 47 39.3**	**+4.7**
GYA	comp=N,30nm,0.7s			pmax	pmax		
GYA	comp=N,120nm,4.8s			pmax	pmax		
GYA	comp=N,410nm,9.2s			LR	LR		
GYA	comp=N,390nm,10.7s			LR	LR		
GYA	comp=N,360nm,10.4s			LR	LR		
PKIN	**Phulchoki**	**9.70**	**266**	*e*Pn	**Pn**	**19 45 41.7**	**+0.4**
KKN	**Kakani**	**9.77**	**268**	*e*Pn	**Pn**	**19 45 42.4**	**+0.1**
KKN				*e*Sn	**Sn**	**19 47 27.6**	**-3.7**
LZH	**Lanzhou**	**9.80**	**39**	*e*P	**Pn**	**19 45 44.3**	**+1.7**
LZH				pP		19 45 46.8	
LZH				PP	**PnPn**	**19 45 51.0**	**+0.6**
LZH				*e*S	**Sn**	**19 47 30.3**	**-1.6**
LZH	comp=N,150nm,1.0s			pmax	pmax		
LZH	comp=N,460nm,4.0s			pmax	pmax		
LZH	comp=N,2μm,10.8s			LR	LR		
LZH	comp=N,1μm,10.0s			LR	LR		
LZH	comp=N,3μm,11.0s			LR	LR		
DMN	**Daman**	**9.95**	**267**	*e*Pn	**Pn**	**19 45 45.2**	**+0.4**
DMN				*e*Sn	**Sn**	**19 47 31.5**	**-4.2**
CHTO	**Chiang Mai** comp=N,92nm,1.4s	**10.05**	**166**	P	**Pn**	**19 45 48.9**	**+2.9**
CHTO	**Chiang Mai**	**10.05**	**166**	*e*Pn	**Pn**	**19 45 47.2**	**+1.2**
CHTO	**Chiang Mai**	**10.05**	**166**	*e*P	**Pn**	**19 45 47.2**	**+1.2**
CMMT	**Chiang Mai** comp=N,20nm,1.4s	**10.05**	**166**	P	**Pn**	**19 45 47.8**	**+1.8**
GKN	**Gorkha**	**10.31**	**269**	*e*Pn	**Pn**	**19 45 49.0**	**-0.6**
CM31	**Chiang Mai Arr**	**10.39**	**166**	*e*Pn	**Pn**	**19 45 52.0**	**+1.3**
CMAR	**Chiang Mai Arr** comp=N,0.9nm,0.3s,baz=338,slow=13,SNR=66	**10.39**	**166**	Pn	**Pn**	**19 45 53.1**	**+2.4**
CMAR				Lg	Lg	19 48 48.5	
CMAR	comp=N,0.2nm,0.3s,baz=350,slow=25,SNR=3.3			LR	LR	19 50 10.7	
CM01	**Chiang Mai Arr** comp=N,647nm,18.9s,baz=343,slow=40	**10.43**	**166**	*e*Pn	**Pn**	**19 45 52.7**	**+1.4**
BOK	**Bokaro**	**10.52**	**245**	*e*P	**Pn**	**19 45 52.8**	**+0.4**
BOK				*e*S	**Sn**	**19 47 42.7**	**-6.7**
DANN	**Dangsing**	**11.05**	**272**	*e*Pn	**Pn**	**19 45 58.3**	**-1.6**
DANN				*e*Sn	**Sn**	**19 47 56.1**	**-6.7**
GTA	**Gaotai** comp=N,196nm,0.6s	**11.15**	**14**	*e*P	**Pn**	**19 46 02.5**	**+1.4**
GTA				pP		19 46 10.0	
GTA				sP		19 46 14.8	
GTA				S	**Sn**	**19 48 05.3**	**+0.3**
GTA				sS		19 48 17.5	
GTA				SS	**SnSn**	**19 48 21.0**	**+3.7**
GTA	comp=N,5.0nm,1.0s			pmax	pmax		
GTA	comp=N,65nm,6.0s			pmax	pmax		
GTA	comp=N,890nm,11.7s			LR	LR		
GTA	comp=N,280nm,10.0s			LR	LR		
GTA	comp=N,1μm,12.2s			LR	LR		
KOLN	**Koldanda**	**11.25**	**269**	*e*Pn	**Pn**	**19 46 01.2**	**-1.3**
KOLN				*e*Sn	**Sn**	**19 48 02.1**	**-5.5**
ENH	**Enshi** comp=N,155nm,0.6s	**11.60**	**79**	*e*Pn	**Pn**	**19 46 06.4**	**-0.9**
PYUN	**Piuthan**	**11.75**	**271**	*e*Pn	**Pn**	**19 46 07.5**	**-1.9**
PYUN				*e*Sn	**Sn**	**19 48 13.3**	**-6.5**
XAN	**Xi'an** comp=N,167nm,0.7s	**12.06**	**60**	P	**Pn**	**19 46 13.5**	**0.0**
XAN				pP	P	19 46 19.8	-6.3
XAN	comp=N,30nm,0.8s			pmax	pmax		
XAN	comp=N,76nm,8.8s			pmax	pmax		
XAN	comp=N,300nm,7.2s			LR	LR		
XAN	comp=N,270nm,7.9s			LR	LR		
XAN	comp=N,430nm,12.9s			LR	LR		
SKNT	**Sakolnakorn** comp=N,7.2nm,0.8s	**13.57**	**147**	P	**P**	**19 46 42.3**	**-0.6**
SRAK	**Srakaew** comp=N,69nm,0.7s,comp=N,617nm	**15.47**	**159**	P	**P**	**19 47 07.3**	**+3.2**
QIZ	**Qiongzhong**	**15.62**	**125**	P	**Pn**	**19 47 03.0**	**+1.3**
QIZ				S	**Sn**	**19 49 55.0**	**+0.9**
QIZ	comp=N,280nm,8.2s			LR	LR		
QIZ	comp=N,290nm,10.8s			LR	LR		
QIZ	comp=N,500nm,10.8s			LR	LR		
WHN	**Wuhan**	**15.81**	**79**	⇑P	**Pn**	**19 47 02.3**	**-1.9**
WHN				S	**Sn**	**19 49 58.0**	**-0.7**
WHN	comp=N,730nm,10.5s			LR	LR		
WHN	comp=N,400nm,11.5s			LR	LR		
WHN	comp=N,1μm,12.4s			LR	LR		
DDI	**Dehra Dun**	**15.99**	**281**	*e*P	**Pn**	**19 47 05.0**	**-1.6**
VIS	**Vishakhapatnam**	**16.11**	**230**	*e*P	**Pn**	**19 47 08.6**	**+0.6**
VIS				IAmb	IAmb	19 47 17.2	
TIY	**Taiyuan** comp=Z,48nm,0.4s	**16.25**	**52**	*e*P	**Pn**	**19 47 10.3**	**+0.5**
TIY				pP	**sP**	**19 47 22.0**	**-0.9**
TIY				S	**Sn**	**19 50 11.5**	**+2.2**
TIY				pmax	pmax		
TIY	comp=Z,27nm,0.5s			LR	LR		
TIY	comp=Z,260nm,7.3s			LR	LR		
TIY	comp=Z,130nm,8.7s			LR	LR		
TIY	comp=Z,360nm,18.9s			LR	LR		
BTO	**Baotou**	**16.42**	**40**	*e*P	**Pn**	**19 47 08.8**	**-3.2**
WMQ	**Urumqi**	**16.68**	**338**	P	**Pn**	**19 47 14.5**	**-0.7**
WMQ				pP	pP	19 47 24.5	+0.2
WMQ				sP	sP	19 47 27.5	-0.1
WMQ				S	**Sn**	**19 50 21.3**	**+1.7**
WMQ	comp=Z,100nm,0.7s			pmax	pmax		
WMQ	comp=Z,190nm,3.7s			pmax	pmax		
WMQ	comp=Z,850nm,14.1s			LR	LR		
WMQ	comp=Z,420nm,15.5s			LR	LR		
WMQ	comp=Z,980nm,13.5s			LR	LR		
SMLA	**Simla**	**16.80**	**283**	*e*P	**Pn**	**19 47 13.2**	**-3.4**
SMLA				IAmb	IAmb	19 47 13.6	
SMLA	comp=Z,7.4nm,0.4s			*ex*	x	19 50 00.5	
PBA	**Port Blair**	**17.20**	**192**	*e*P	P	19 47 22.8	-0.4
HHC	**Hu-ho-hao-te**	**17.46**	**42**	*e*P	**Pn**	**19 47 23.8**	**-1.3**
HHC				pP	pP	19 47 31.5	-1.6
HHC				sP	sP	19 47 36.0	-0.4
HHC				S	**Sn**	**19 50 34.5**	**-4.3**
HHC				sS	S	19 50 46.8	+0.2
HHC				LR	LR		
HHC	comp=Z,2μm,11.6s			LR	LR		
HHC	comp=Z,1μm,12.8s			LR	LR		
HHC	comp=Z,2μm,11.6s			LR	LR		

DHRM	DHARAMSHALA	17.63	287	*e*P		Pn	19 47 26.7 -0.6
BHPL	Bhopal	17.80	257	*e*P		Pn	19 47 26.9 -2.5
BHPL				IAmb		IAmb	19 47 31.6
comp=Z,242nm,2.8s							
NJ2	Nanjing	19.75	74	*e*P		P	19 47 51.5 +0.3
NJ2				pmax		pmax	
comp=Z,11nm,0.6s							
HYB	Hyderabad	19.76	239	*i* P		Pn	19 47 53.0 0.0
HYB				*e*S		S	19 51 22.0 -11
HYB	Hyderabad	19.76	239	*e*P		P	19 47 51.8 +0.3
HYB				IAmb		IAmb	19 47 57.2
comp=Z,77nm,1.7s							
SHLS	Shalkode	19.87	321	*e*P		P	19 47 51.4 -1.2
comp=Z,9.2nm,0.8s							
SHLS				LR		LR	19 56 22.1
comp=Z,71nm,14.0s							
BJT	Baijiatuau	19.91	50	*e*P		P	19 47 52.7 -0.2
comp=Z,13nm,0.6s							
BJT	Baijiatuau	19.91	50	*e*P		P	19 47 52.7 -0.2
BJT				pmax		pmax	
comp=Z,13nm,0.6s							
BJI	Beijing	19.93	50	P		P	19 47 53.0 -0.1
TARG	Taragay, Kyrgy	19.95	316	*e*P		Pn	19 47 54.9 -0.6
comp=Z,30nm,0.9s							
PDGK	Podgornoye	19.97	322	P		P	19 47 54.2 +0.6
PDGK				pmax		pmax	
comp=Z,18nm,1.1s							
KSH	Kashi	20.01	308	P		Pn	19 47 57.5 +1.6
KSH				pP		sP	19 48 09.5 +5.1
KSH				PP		PnPn	19 48 23.0 +13
KSH				S		S	19 51 33.0 -4.9
KSH				sS		pS	19 51 54.5 +1.0
KSH				SS		SnSn	19 52 09.5 +15
KSH				pmax		pmax	
comp=Z,25nm,0.7s							
KSH				LR		LR	
comp=Z,430nm,10.0s							
KSH				LR		LR	
comp=Z,360nm,6.7s							
KSH				LR		LR	
comp=Z,520nm,13.4s							
PRZ	Przheval'sk	20.04	318	*e*P		Pn	19 47 56.2 -0.2
comp=Z,37nm,0.6s							
PRZ	Przheval'sk	20.04	318	*e*P		Pn	19 47 56.2 -0.2
PRZ				pmax		pmax	
comp=Z,37nm,0.6s							
UZB	Uzynbulak	20.11	321	*e*P		Pn	19 47 56.5 -0.6
comp=Z,2.5nm,0.6s							
UZB				LR		LR	19 57 34.2
comp=Z,49nm,10.7s							
NIL	Nilore	20.35	290	*e*P		P	19 47 58.4 +0.6
comp=Z,25nm,0.9s							
NIL	Nilore	20.35	290	*e*P		P	19 47 58.4 +0.6
NIL				pmax		pmax	
comp=Z,25nm,0.9s							
SATY	Saty	20.39	320⇑	*e*P		Pn	19 47 60.0 -0.5
comp=Z,17nm,0.7s							
SATY				LR		LR	19 57 47.8
comp=Z,77nm,11.5s							
ZHN	Zhinishke	20.45	320	*e*P		Pn	19 48 00.3 -0.8
comp=Z,105nm,13.9s							
KRAB	Krabi	20.47	172	P		Pn	19 48 01.9 +0.6
comp=Z,33nm,0.8s,comp=Z,416nm							
KPKS	Kokpek	20.50	321⇑	*i* P		Pn	19 48 00.7 -0.9
comp=Z,13nm,0.6s							
SONA0	Songino Array	20.73	19	*e*P		P	19 48 01.9 +0.1
SONM	Songino Array	20.73	19	P		P	19 48 01.9 +0.1
comp=Z,9.9nm,0.5s,baz=205,slow=11,SNR=41							
SONM				LR		LR	19 56 47.4
comp=Z,388nm,21.5s,baz=234,slow=39							
SONA1	Songino Array	20.74	19	*e*P		P	19 48 01.3 -0.7
ZSN	Zaisan	20.81	338	*e*P		P	19 48 03.8 +1.2
comp=Z,12nm,0.7s							
TRTT	Trang	20.91	171	P		Pn	19 48 09.9 +3.4
comp=Z,14nm,1.4s							
NRN	Naryn	20.92	313	*e*P		Pn	19 48 05.8 -1.0
comp=Z,17nm,0.9s							
NRN	Naryn	20.92	313	*e*P		Pn	19 48 05.8 -1.0
NRN				pmax		pmax	
comp=Z,17nm,0.9s							
MK01	Makanchi Array	21.19	333	*e*P		P	19 48 06.1 -0.6
ULHL	Ulahol	21.20	315	P		P	19 48 09.1 +2.0
SNR=28							
MK31	Makanchi Array	21.21	333	*e*P		P	19 48 06.8 -0.2
MK31	Makanchi Array	21.21	333	*e*P		P	19 48 06.7 -0.2
MK31				pmax		pmax	
comp=Z,65nm,1.3s							
MK32	Makanchi Array	21.21	333	*e*P		P	19 48 07.3 +0.4
MKAR	Makanchi Array	21.21	333	P		P	19 48 07.3 +0.4
comp=Z,12nm,0.5s,baz=144,slow=14,SNR=78							
MKAR				LR		LR	19 57 11.8
comp=Z,268nm,18.8s,baz=144,slow=39							
MKAR	Makanchi Array	21.21	333	*e*P		P	19 48 06.8 -0.2
comp=Z,117nm,0.6s							
MDOK	Medeo	21.24	318	*e*P		P	19 48 09.1 +1.6
comp=Z,456nm,0.7s							
MDOK				LR		LR	19 57 12.1
comp=Z,225nm,14.0s							
AAA	Alma-Ata	21.35	318	*e*P		P	19 48 11.0 +2.5
comp=Z,32nm,0.9s							
AAA				LR		LR	19 57 24.0
comp=Z,181nm,13.4s							
MAKZ	Makanchi	21.35	332	*e*P		P	19 48 07.4 -1.0
comp=Z,21nm,0.8s							
MAKZ	Makanchi	21.35	332	P		P	19 48 08.3 -0.1
MAKZ				pmax		pmax	
comp=Z,51nm,1.5s							
MDRS	Chennai	21.52	227	*e*P		P	19 48 10.3 -0.1
MDRS				IAmb		IAmb	19 48 13.4
comp=Z,58nm,1.0s							
TDK	Taldygorghan	21.67	324	*e*P		P	19 48 13.3 +1.4
comp=Z,20nm,0.8s							
TDK				LR		LR	19 57 25.7
comp=Z,72nm,9.2s							
KZA	Kyzart	21.73	314	P		P	19 48 14.8 +1.8
SNR=19							
SFK	Sufi-Kurgan	21.94	307	P		P	19 48 16.2 +1.1
SFK				pmax		pmax	
comp=Z,24nm,0.9s							
TKM2	Tokmak 2	21.97	316	P		P	19 48 17.2 +1.8
SNR=14							
TKM2	Tokmak 2	21.97	316	P		P	19 48 16.5 +1.1
TKM2				pmax		pmax	
comp=Z,10.0nm,0.8s							
KUU	Kurty	22.09	319	*e*P		P	19 48 17.3 +0.8
comp=Z,23nm,0.7s							
KUU				*e*S		S	19 52 21.7 +3.0
KUU				LR		LR	19 58 39.5
comp=Z,101nm,11.6s							
DGZ	Jazzator, Alta	22.12	345	*i* P		P	19 48 17.5 +0.6
KBK	Karagaybulak	22.23	315	P		P	19 48 20.3 +2.2
SNR=24							
UCH	Uchtor	22.28	313	P		P	19 48 20.2 +1.3
SNR=8.5							
ZAK	Zakamensk	22.37	12	*e*P		P	19 48 19.2 -0.3
ZAK				pmax		pmax	
comp=Z,39nm,1.1s							
AAK	Ala-Archa	22.50	314	P		P	19 48 22.4 +1.4
AAK				pmax		pmax	
comp=Z,14nm,1.0s							
FRU	Bishkek	22.53	315	*e*P		P	19 48 21.0 -0.2
FRU				*e*			19 48 48.0
CHMS	Chumysh	22.53	315	P		P	19 48 22.2 +1.0
SNR=7.0							
HVS	Khovu-Aksy	22.58	356*d*	*i* P		P	19 48 23.2 +1.5
HVS				pmax		pmax	
comp=Z,132nm,0.8s							
AML	Almayashu	22.76	312	P		P	19 48 25.6 +1.6
SNR=10.0							
USP	Ospenovka	22.83	316	P		P	19 48 26.7 +2.3
SNR=13							
POO	Poona	22.87	249	*e*P		P	19 48 23.7 -1.2
POO	Poona	22.87	249	*ex*		P	19 48 32.0 +7.1
EKS2	Erkin-Say	22.97	314	P		P	19 48 27.3 +1.4
SNR=14							
LHMI	Lhok Sumawe	23.27	178	P		P	19 48 31.0 +2.1
MOY	Mondy	23.29	7	*e*P		P	19 48 30.9 +1.9
MOY				pmax		pmax	
comp=Z,44nm,2.1s							
TLY	Talaya	23.69	11	LR		LR	19 58 26.7
comp=Z,254nm,18.1s,baz=208,slow=38							
TLY	Talaya	23.69	11	*e*P		P	19 48 33.0 +0.2
TLY				*e*S		S	19 52 47.9 +1.8
TLY				pmax		pmax	
comp=Z,17nm,1.0s							
TLY				MLR		MLR	
comp=Z,197nm,12.0s							
MNAS	Manas	23.71	312	P		P	19 48 34.6 +1.4
MNAS				pmax		pmax	
comp=Z,21nm,1.0s							
KBL	Kabul	23.93	291	*e*P		P	19 48 35.6 +0.1
comp=Z,21nm,0.8s							
KBL	Kabul	23.93	291	*e*P		P	19 48 35.6 +0.1
KBL				pmax		pmax	
comp=Z,21nm,0.8s							
BTLS	Baital	24.10	319	*i* P		P	19 48 37.5 +0.8
comp=Z,9.4nm,0.7s							
MLSI	Meulaboh, Aceh	24.21	180	P		P	19 48 35.9 -2.1
IRK	Irkutsk	24.34	12	*e*P		P	19 48 39.7 +0.9
IRK				pmax		pmax	
comp=Z,56nm,1.2s							
DZA	Taraz	24.66	312	*e*P		P	19 48 43.6 +1.7
comp=Z,2.4nm,0.6s							
SEM	Semipalatinsk	24.94	335	*e*P		P	19 48 44.6 +0.1
comp=Z,2.5nm,0.8s							
KCSI	Kotacane, Aceh	24.99	177	P		P	19 48 44.4 -0.7
comp=Z,22nm,1.0s							
IUG	Iuzhnay	25.21	309	*e*P		P	19 48 48.6 +1.7
comp=Z,11nm,0.8s							
TPTI		25.23	178	P		P	19 48 45.8 -1.4
KK31	Karatay Array	25.29	312	*e*P		P	19 48 48.6 +1.0
KK31	Karatay Array	25.29	312	P		P	19 48 48.9 +1.3
KK31				pmax		pmax	
comp=Z,10.0nm,0.9s							
KKAR	Karatay Array	25.29	312	*e*P		P	19 48 48.4 +0.8
KKAR	Karatay Array	25.29	312	*e*P		P	19 48 48.4 +0.8
KURBB	Kurchatov Arra	25.77	333	P		P	19 48 52.6 +0.8
comp=Z,7.2nm,0.7s,baz=142,slow=11,SNR=43							
KURBB				ScP		ScP	19 55 58.5 -0.5
comp=Z,0.7nm,0.9s,baz=145,slow=2.6,SNR=4.1							
KURK	Kurchatov	25.81	334	*e*P		P	19 48 52.6 +0.5
KURK	Kurchatov	25.81	334	*ce*P		P	19 48 52.3 +0.2
KURK				pmax		pmax	
comp=Z,23nm,1.3s							
PALK	Pallekele	25.84	218	P		P	19 48 54.2 +1.4
comp=Z,16nm,0.9s,baz=121,slow=0.9,SNR=6.6							
PALK				LR		LR	20 00 54.5
comp=Z,156nm,21.0s,baz=117,slow=41							
PALK	Pallekele	25.84	218	*e*P		P	19 48 54.1 +1.2
comp=Z,29nm,1.1s							
SNSI	Sinabang, Aceh	26.06	180	P		P	19 48 51.5 -3.2
ZAA0	Zalesovo Array	26.67	345	*e*P		P	19 49 00.1 +0.2
comp=Z,21nm,0.6s							
ZALV	Zalesovo Beam	26.67	345	P		P	19 49 00.4 +0.5
comp=Z,22nm,0.6s,baz=164,slow=9.5,SNR=59							
ZALV				LR		LR	20 00 19.1
comp=Z,205nm,18.3s,baz=250,slow=38							
ZAA1	Zalesovo Array	26.68	345	*e*P		P	19 49 00.4 +0.5
OTUK	Ortayu	26.96	323	P		P	19 49 03.7 +1.1
OTUK				pmax		pmax	
comp=Z,34nm,0.8s							
TGY	Tagaytay City	27.02	117	LR		LR	20 00 20.1
comp=Z,105nm,18.6s,baz=92,slow=38							
TRD	Trivandrum	27.06	226	*e*P		P	19 49 01.5 -2.3
GSI	Gunungsitoli	27.18	177	P		P	19 49 04.5 -0.4
GSI	Gunungsitoli	27.18	177	*e*P		P	19 49 04.0 -0.8
comp=Z,21nm,0.7s							
KRAR	Krasnoyarsk	27.49	356	*i* P		P	19 49 08.1 +0.9
CN2	Changchun	27.79	49	*e*P		P	19 49 11.0 +0.9
CN2				pmax		pmax	
comp=Z,30nm,0.7s							
KS15	Wonju Array Si	27.79	63	*e*P		P	19 49 08.8 -1.4
KSAR	Wonju Array Be	27.79	63	P		P	19 49 08.7 -1.5
KSAR	Wonju Array Be	27.79	63	P		P	19 49 08.7 -1.5
KSRS	Korea Array	27.83	63	P		P	19 49 08.7 -1.8
comp=Z,2.9nm,0.6s,baz=256,slow=9.2,SNR=19							
KSRS				LR		LR	20 01 50.6
comp=Z,70nm,18.7s,baz=242,slow=40							
NVS	Novosibirsk	27.87	344	*e*P		P	19 49 11.1 +0.5
NVS				pmax		pmax	
comp=N,6.0nm,0.7s							
NVS				pmax		pmax	
comp=E,5.0nm,0.7s							
NVS				pmax		pmax	
comp=Z,9.0nm,0.7s							
BRZS	Berezniki	27.89	326⇑	*e*P		P	19 49 12.3 +1.3
comp=Z,11nm,1.1s							
JNU	Nakatsue	29.93	73	P		P	19 49 28.9 -0.4
comp=Z,20nm,0.9s,baz=263,slow=6.0,SNR=3.7							
JNU				LR		LR	20 02 51.1
comp=Z,160nm,18.1s,baz=301,slow=39							
JNU	Nakatsue	29.93	73	*e*P		P	19 49 29.2 -0.1
comp=Z,29nm,1.1s							
BVA0	Borovoye Array	30.98	329	P		P	19 49 38.6 +0.3
BVA0				pmax		pmax	
comp=Z,6.0nm,0.8s							
BVAR	Borovoye Array	30.98	329	P		P	19 49 39.4 +1.1
comp=Z,7.2nm,0.8s,baz=137,slow=10.0,SNR=36							
BVAR				LR		LR	20 03 04.5
comp=Z,151nm,21.2s,baz=120,slow=38							
BRVK	Borovoye	31.05	329	*e*P		P	19 49 39.4 +0.5
comp=Z,12nm,0.8s							
BRVK	Borovoye	31.05	329	*ce*P		P	19 49 39.8 +0.9
BRVK				pmax		pmax	
comp=Z,16nm,1.0s							
BOD	Bodaibo	31.71	18	*e*P		P	19 49 35.9 -8.7
BOD				pmax		pmax	
comp=Z,8.0nm,1.9s							
USRK	Ussuriysk Ar.	32.36	52	LR		LR	20 04 27.7
comp=Z,79nm,18.8s,baz=261,slow=39							
GEYT	Alibeck	33.07	296	P		P	19 49 56.4 -0.4
comp=Z,0.6nm,0.6s,baz=84,slow=15,SNR=2.7							
GEYT				LR		LR	20 06 50.9
comp=Z,48nm,20.2s,baz=155,slow=43							
ZEA	Zeya	33.77	33	*e*P		P	19 50 03.4 +0.7
ZEA				pmax		pmax	
comp=Z,10.0nm,0.8s							
ZEA				MLR		MLR	
comp=E,300nm,13.0s							
ZEA				MLR		MLR	
comp=Z,600nm,13.0s							
ZEA				MLR		MLR	
comp=N,400nm,14.0s							
KLR	Kul'dur	33.97	43*c*	*i* P		P	19 50 04.4 -0.1
WSAR	Wadi Sarin	34.21	270	LR		LR	20 05 07.5
comp=N,54nm,19.4s,baz=196,slow=38							
AB31	Akbulak array	34.53	317	*i* P		P	19 50 10.3 +0.9
AB31				pmax		pmax	
comp=Z,2.0nm,0.6s							
ABKAR	Akbulak array	34.53	317	*e*P		P	19 50 10.3 +0.9
DAV	Davao City (W)	34.97	122	LR		LR	20 05 06.7
comp=Z,80nm,18.5s,baz=310,slow=38							
MJB9	Matsu-Tunnel	35.95	66	*e*P		P	19 50 20.3 -1.5
comp=Z,6.1nm,0.7s							
MAJO	Matsushiro	35.95	66	*e*P		P	19 50 20.2 -1.6
comp=Z,6.1nm,0.6s							
MAJO	Matsushiro	35.95	66	*i* P		P	19 50 18.9 -2.9
MAJO				pmax		pmax	
comp=Z,6.0nm,1.0s							
MAT	Matsushiro	35.95	66	P		P	19 50 20.7 -1.1
MJAR	Matsushiro Arr	35.95	66	P		P	19 50 21.1 -0.7
comp=Z,2.7nm,0.6s,baz=273,slow=11,SNR=12							
MJAR				LR		LR	20 05 22.8
comp=Z,35nm,21.1s,baz=325,slow=37							
AKTO	Aktyubinsk	36.14	318	P		P	19 50 24.5 +1.2
comp=Z,3.6nm,0.7s,baz=114,slow=9.8,SNR=13							
AKTO				LR		LR	20 06 47.3
comp=Z,138nm,18.2s,baz=124,slow=39							
GRNR	Gornyy	37.34	42⇓	*i* P		P	19 50 35.1 +1.7
GRNR				pmax		pmax	
comp=Z,80nm,0.9s							
JHJ	Hachijo jima 2	37.39	72	LR		LR	20 07 28.0
comp=Z,115nm,18.5s,baz=290,slow=39							
SVE	Sverdlovsk	37.76	328⇓	*e*P		P	19 50 38.1 +1.3
SVE				pmax		pmax	
comp=Z,30nm,0.9s							
ARU	Arti	38.52	327	*e*P		P	19 50 43.8 +0.5
comp=Z,15nm,0.9s							
ARU	Arti	38.52	327*c*	*i* P		P	19 50 44.1 +0.8
ARU							19 52 12.4
ARU				PPP		PPP	19 52 36.0
ARU				S		S	19 56 40.7 +3.4
ARU				SS		SS	19 59 27.0 -0.2
ARU				pmax		pmax	
comp=Z,19nm,1.0s							
ASAJ	Asahikawa	39.81	54	P		P	19 50 53.6 -0.6
comp=Z,7.7nm,0.8s,baz=266,slow=14,SNR=11							
ASAJ				LR		LR	20 09 51.9
comp=Z,57nm,18.1s,baz=188,slow=40							
ASAJ	Asahikawa	39.81	54	*e*P		P	19 50 53.5 -0.8
comp=Z,11nm,0.8s							
YAK	Yakutsk	39.97	24	*e*P		P	19 50 54.4 -1.0
comp=Z,25nm,0.8s							
YAK	Yakutsk	39.97	24	*e*P		P	19 50 54.6 -0.7
YAK				*e**PP		pP	19 51 04.0 +1.0
YAK				*e*PPP		PPP	19 52 48.7
YAK				*e*			19 53 00.0
YAK				*e*S		S	19 56 58.2 -0.8
YAK				*e*SS		SS	19 59 56.7 +0.6
YAK				*e*SSS		SSS	20 00 18.8
YAK				*e*			20 00 57.4
YAK				pmax		pmax	
comp=Z,18nm,0.8s							
YAK				pmax		pmax	
comp=N,6.0nm,1.1s							
YAK				pmax		pmax	
comp=E,7.0nm,1.3s							
YAK				pmax		pmax	
comp=Z,66nm,3.8s							
YAK				pmax		pmax	
comp=N,37nm,3.5s							
YAK				pmax		pmax	
comp=E,32nm,3.2s							
YAK				smax		smax	
comp=N,17nm,2.0s							
YAK				smax		smax	
comp=E,17nm,1.9s							
YAK				MLR		MLR	
comp=Z,141nm,14.0s							
YAK				MLR		MLR	
comp=N,160nm,17.0s							
YAK				MLR		MLR	
comp=E,88nm,13.0s							
YSS	Yuzh-Sakhalins	40.35	50	*e*P		P	19 50 57.3 -1.4
YSS				*e*			19 51 06.7
YSS				MLR		MLR	
comp=Z,110nm,13.0s							
TYV	Tymovskoe	41.13	44	*e*P		P	19 51 04.0 -1.1
TYV				pmax		pmax	
comp=Z,14nm,1.1s							
KBZ	Khabaz	44.92	304	LR		LR	20 14 21.9
comp=Z,60nm,18.1s,baz=104,slow=41							
KIV	Kislovodsk	45.08	305	*e*P		P	19 51 36.9 -0.3
KIV				pmax		pmax	
comp=Z,5.0nm,1.1s							
KIV				MLR		MLR	
comp=Z,40nm,16.0s							
TIXI	Tiksi	46.64	14	*i* P		P	19 51 49.0 0.0
TIXI				pmax		pmax	
comp=Z,8.0nm,1.0s							
SOEI	Soe	46.74	141	*e*P		P	19 51 49.0 -1.5
comp=Z,56nm,0.9s							
PRGR	Permogore	46.79	330	*e*P		P	19 51 50.4 +0.1
PRGR				*e**PP		sP	19 52 00.8 -0.4
PRGR				pmax		pmax	
comp=Z,23nm,0.8s							
GUMO	Guam	47.38	98	LR		LR	20 11 45.2
comp=Z,16nm,20.6s,baz=176,slow=36							
VSR	Storozhevoye	47.90	315	*e*P		P	19 51 58.9 -0.2
VSR				pmax		pmax	
comp=Z,9.0nm,1.0s							
MA2	Magadan	47.91	34	*e*P		P	19 51 58.3 -0.8
comp=Z,18nm,0.9s							
MA2	Magadan	47.91	34⇑	*e*P		P	19 51 58.7 -0.4
MA2				pmax		pmax	
comp=Z,36nm,2.5s							
KLMR	Klimovskoe	49.37	327	*e*P		P	19 52 09.5 -0.7
KLMR				pmax		pmax	
comp=Z,23nm,0.8s							
KLMR	Klimovskoe	49.37	327	*e*P		P	19 52 09.6 -0.7
KLMR				AMP			19 52 11.4
comp=Z,23nm,0.8s							
PEA1	Petropavlovsk-	50.66	43	*e*P		P	19 52 20.0 -0.2
PETK	Petropavlovsk-	50.66	43	P		P	19 52 20.0 -0.2
comp=Z,13nm,0.7s,baz=240,slow=4.3							
PETK				LR		LR	20 16 17.2
comp=Z,145nm,18.0s,baz=265,slow=39							
PETK	Petropavlovsk-	50.66	43	*e*P		P	19 52 19.8 -0.4
PETK	Petropavlovsk-	50.66	43	*e*P		P	19 52 19.8 -0.4
ASF	Jabal al Asfar	50.81	290	P		P	19 52 23.3 +1.5
comp=Z,1.0nm,0.4s,baz=326,slow=3.6,SNR=2.8							
BR101	Keskin Array S	52.08	300	*e*P		P	19 52 30.9 -0.3
BR131	Keskin Array S	52.08	300	*e*P		P	19 52 29.9 -1.3
BRTR	Keskin Array B	52.08	300	P		P	19 52 30.9 -0.3
comp=Z,1.2nm,0.7s,baz=125,slow=8.1,SNR=10							
JOF	Joensuu	53.58	329	P		P	19 52 43.8 +2.1
APA	Apatity	53.59	335⇑	*i* P		P	19 52 41.1 -0.6
APA				pmax		pmax	
comp=Z,4.0nm,0.8s							
APA				MLR		MLR	
comp=Z,300nm,14.0s							
AKASG	Malin Array Be	54.17	314	P		P	19 52 46.0 -0.2
comp=Z,2.8nm,0.6s,baz=75,slow=7.0,SNR=13							
AKASG				LR		LR	20 18 15.7
comp=Z,88nm,19.8s,baz=35,slow=39							
AKASG	Malin Array Be	54.17	314	P		P	19 52 46.1 -0.2
AKASG				pmax		pmax	
comp=Z,4.0nm,0.6s							
AKASG				MLR		MLR	
comp=Z,88nm,19.8s							
AKBB	Malin Array Si	54.17	314	*e*P		P	19 52 44.8 -1.4
comp=Z,5.7nm,0.8s							
AKBB	Malin Array Si	54.17	314	*e*P		P	19 52 44.8 -1.4
AKBB				pmax		pmax	
comp=Z,6.0nm,0.8s							
KIEV	Kiev	54.18	314	*e*P		P	19 52 45.2 -1.1
comp=Z,5.8nm,0.9s							
KIEV	Kiev	54.18	314	*i* P		P	19 52 45.3 -1.1
KIEV				pmax		pmax	
comp=Z,4.0nm,0.8s							
AK11	Malin Array Si	54.21	314	*e*P		P	19 52 46.0 -0.5
FITZ	Fitzroy Crossi	54.41	145	P		P	19 52 47.4 -0.9
comp=Z,4.9nm,0.9s,baz=320,slow=8.5,SNR=8.0							
FITZ				LR		LR	20 21 09.5
comp=Z,40nm,18.2s,baz=323,slow=42							
FITZ	Fitzroy Crossi	54.41	145	*e*P		P	19 52 47.2 -1.2
comp=Z,4.9nm,0.8s							
SORM	Soroca	54.92	311⇑	*i* P		P	19 52 51.2 -0.5
VSU	Vasula	55.49	323*ce*	P		P	19 52 56.1 +0.5
VSU				pmax		pmax	
comp=Z,23nm,0.8s							
FIA0	FINESS Array S	55.90	327	*e*P		P	19 52 59.0 +0.5
FIA0	FINESS Array S	55.90	327	*e*P		P	19 52 59.1 +0.5
FINES	FINESS Array B	55.90	327	P		P	19 52 59.0 +0.5
comp=Z,6.4nm,0.8s,baz=91,slow=7.6,SNR=18							
FINES				LR		LR	20 19 07.7
comp=Z,128nm,18.0s,baz=88,slow=38							
VRI	Vrincioaia	56.28	308⇓	*i* P		P	19 53 02.4 +0.8
VRI	Vrincioaia	56.28	308	P		P	19 53 04.7 +3.1
VRI				pmax		pmax	
comp=Z,75nm,1.4s							
BILL	Bilibino	56.30	25	*e*P		P	19 53 01.5 +0.2
comp=Z,16nm,1.0s							
BILL	Bilibino	56.30	25*c*	*i* P		P	19 53 01.6 +0.2
BILL				*e**PP		pP	19 53 09.0 -0.3
BILL				*e*			19 53 57.1
BILL				S		S	20 00 49.0 -0.7
BILL				pmax		pmax	
comp=Z,14nm,0.8s							
BILL				MLR		MLR	
comp=Z,122nm,16.0s							
PLOR	Plostina	56.34	308⇑	*i* P		P	19 53 03.2 +1.2
ISR	Istrita	56.51	307⇓	*i* P		P	19 53 05.6 +2.3
ARA0	ARCESS Array S	56.79	337	*e*P		P	19 53 05.2 +0.3
ARCES	ARCESS Array B	56.79	337	P		P	19 53 05.2 +0.3
comp=Z,3.3nm,0.8s,baz=83,slow=8.3,SNR=6.4							
MLR	Muntele Rosu	56.88	308	P		P	19 53 07.2 +1.3
comp=Z,1.3nm,0.9s,baz=125,slow=1.9,SNR=12							
ML

comp=Z,8.4nm,0.9s,baz=65,slow=14,SNR=2.6
IDI Anoyia 59.79 296 *e*P **P 19 53 25.8 -0.7**
comp=Z,16nm,1.0s
SPA0 Spitsbergen Ar 60.14 346 *e*P **P 19 53 27.7 -0.4**
SPITS Spitsbergen Ar 60.14 346 P **P 19 53 28.2 +0.1**
comp=Z,1.6nm,0.5s,baz=79,slow=7.5,SNR=5.5
SPITS LR LR 20 24 54.5
comp=Z,69nm,18.7s,baz=95,slow=42
OJC Ojcow 60.21 314 *e*P **P 19 53 29.5 +0.5**
comp=Z,4.4nm,0.9s
OJC Ojcow 60.21 314 *e*P **P 19 53 29.5 +0.5**
OJC pmax pmax
comp=Z,4.0nm,0.9s
WRA Warramunga Arr 60.66 138 P **P 19 53 32.7 +0.3**
comp=Z,6.2nm,0.5s,baz=321,slow=8.6,SNR=149
WRAB Tennant Creek 60.66 138 *e*P **P 19 53 31.9 -0.4**
comp=Z,29nm,1.1s
WRAB Tennant Creek 60.66 138 *c*e*P **P 19 53 31.5 -0.9**
WRAB pmax pmax
comp=Z,8.0nm,0.6s
WR1 Warramunga Arr 60.66 138 *e*P **P 19 53 32.7 +0.3**
comp=Z,13nm,0.6s
WB2 Warramunga Arr 60.67 138 *e*P **P 19 53 32.5 +0.1**
comp=Z,15nm,0.6s
AGG Agios Georgios 60.81 301 *e*P **P 19 53 32.1 -1.2**
comp=Z,22nm,0.8s
AGG Agios Georgios 60.81 301 *e*P **P 19 53 32.1 -1.2**
AGG pmax pmax
comp=Z,23nm,0.8s
ITM Ithomi 61.59 299 *e*P **P 19 53 36.8 -1.8**
comp=Z,13nm,0.7s
HFS Hagfors 62.03 326 P **P 19 53 41.1 -0.1**
comp=Z,6.1nm,0.6s,baz=98,slow=6.4,SNR=25
PDG Podgorica 62.22 305 ||*i*P **P 19 53 42.7 0.0**
TTG Podgorica 62.22 305 *e*P **P 19 53 42.2 -0.5**
comp=Z,3.5nm,0.8s
TTG Podgorica 62.22 305 *e*P **P 19 53 42.2 -0.5**
TTG pmax pmax
comp=Z,4.0nm,0.8s
NC405 NORSAR Array S 62.83 327 *e*P **P 19 53 45.5 -1.0**
NC303 NORSAR Array S 62.97 327 *e*P **P 19 53 47.1 -0.3**
NB2 NORSAR Subarra 63.08 327 P **P 19 53 47.5 -0.7**
comp=Z,3.6nm,0.5s,baz=80,slow=6.5
NOA NORSAR Array B 63.08 327 LR LR 20 23 19.8
comp=Z,81nm,19.2s,baz=80,slow=38
CONA Conrad Observa 63.21 312 *i*P **P 19 53 50.2 +0.8**
comp=Z,4.9nm,0.9s
NC204 NORSAR Array S 63.25 327 *e*P **P 19 53 49.2 -0.1**
AS31 Alice Springs 63.35 141 *e*P **P 19 53 50.4 0.0**
comp=Z,1.4nm,0.5s
ASAR Alice Springs 63.35 141 P **P 19 53 50.8 +0.4**
comp=Z,2.9nm,0.5s,baz=325,slow=6.7,SNR=82
ASAR LR LR 20 24 36.9
comp=Z,56nm,18.6s,baz=330,slow=39
AS01 Alice Springs 63.37 141 *e*P **P 19 53 50.5 0.0**
ARSA Arzberg 63.60 311 *i*P **P 19 53 52.6 +0.8**
comp=Z,2.7nm,1.0s
SOKA Soboth 64.07 311 *i*P **P 19 53 56.2 +1.2**
comp=Z,3.6nm,1.4s
MOA Molln 64.27 312 *i*P **P 19 53 58.0 +1.8**
comp=Z,5.1nm,1.0s
NWAO Narrogin (SRO) 64.35 161 P **P 19 53 56.2 -0.5**
comp=Z,11nm,0.6s,baz=225,slow=2.9,SNR=11
NWAO LR LR 20 23 25.0
comp=Z,104nm,19.6s,baz=114,slow=37
GEC2 GERESS Array S 64.38 313 *e*P **P 19 53 57.3 +0.2**
comp=Z,2.2nm,0.9s
GEC2 GERESS Array S 64.38 313 *e*P **P 19 53 57.3 +0.2**
GEC2 pmax pmax
comp=Z,2.0nm,0.9s
GERES GERESS Array B 64.38 313 P **P 19 53 57.6 +0.5**
comp=Z,0.7nm,0.5s,baz=68,slow=6.2,SNR=9.4
GERES LR LR 20 26 59.6
comp=Z,47nm,18.2s,baz=104,slow=41
GEA0 GERESS Array S 64.38 313 *e*P **P 19 53 57.3 +0.2**
OBKA Obir 64.43 311 *i*P **P 19 53 59.7 +2.3**
comp=Z,3.7nm,1.6s
TIP Timpagrande 64.93 302 ⇑*i*P **P 19 53 58.7 -2.1**
TIP Timpagrande 64.93 302 *e*P **P 19 54 00.5 -0.3**
comp=Z,5.1nm,1.0s
MYKA Terra Mystica 65.00 311 *i*P **P 19 54 03.5 +2.4**
comp=Z,1.3nm,0.4s
KBA Koelnbreinsper 65.08 312 *i*P **P 19 53 58.5 -3.2**
comp=Z,0.4nm,0.1s
ABTA Abfaltersbach 65.72 311 *i*P **P 19 54 05.0 -0.7**
comp=Z,0.5nm,0.4s
WTTA Wattenberg 66.14 312 *i*P **P 19 54 08.3 -0.3**
comp=Z,3.3nm,0.6s
MOTA Moosalm 66.47 312 *i*pP pP 19 54 19.6 +0.9
RETA Reutte 66.65 313 *i*P **P 19 54 12.7 +1.0**
comp=Z,1.8nm,0.7s
FETA Feichten 66.81 312 *i*P **P 19 54 13.8 +1.0**
comp=Z,0.2nm,0.2s
DAVA Damuels 67.28 313 *i*P **P 19 54 13.7 -2.2**
comp=Z,0.5nm,0.3s
DAVOX Davos/Dischmat 67.44 312 P **P 19 54 16.8 0.0**
comp=Z,2.5nm,0.6s,baz=90,slow=9.1,SNR=5.9
DAVOX LR LR 20 28 02.7
comp=Z,67nm,18.4s,baz=87,slow=40
CTA Charters Tower 68.34 129 P **P 19 54 22.0 -0.6**
comp=Z,0.9nm,0.6s,baz=260,slow=11,SNR=3.9
KEST Kesra 71.65 301 P **P 19 54 43.2 +0.2**
comp=Z,4.5nm,0.7s,baz=184,slow=4.6,SNR=5.3
KEST Kesra 71.65 301 *e*P **P 19 54 43.6 +0.7**
comp=Z,8.8nm,1.1s
IM3 Indian Mountai 71.82 24 *e*P **P 19 54 43.1 -0.2**
MLY Manley 73.39 24 *e*P **P 19 54 53.0 +0.2**
comp=Z,9.7nm,1.1s
SVW2 Sparrevohn 73.52 29 *e*P **P 19 54 53.5 -0.1**
comp=Z,3.0nm,0.9s
CAST Castle Rocks 73.75 26 *e*P **P 19 54 55.1 +0.2**
comp=Z,3.7nm,0.8s
PPLA Purkeypile 73.98 26 *e*P **P 19 54 56.6 +0.2**
comp=Z,5.8nm,0.8s
STKA Stephens Creek 73.98 141 P **P 19 54 56.6 +0.1**
comp=Z,1.4nm,0.7s,baz=320,slow=8.1,SNR=3.3
STKA LR LR 20 29 52.7
comp=Z,18nm,19.6s,baz=221,slow=38
STKA Stephens Creek 73.98 141 *e*P **P 19 54 56.3 -0.2**
comp=Z,0.8nm,0.9s
MDM Murphy Dome 74.32 24 *e*P **P 19 54 58.3 +0.1**
comp=Z,8.0nm,0.9s
SUMG Summit 74.47 347 *e*P **P 19 54 58.5 -0.9**
comp=Z,6.5nm,0.7s
SUMG Summit 74.47 347 *e*P **P 19 54 58.5 -0.9**
SUMG pmax pmax
comp=Z,7.0nm,0.7s
WRH Wood River Hil 74.65 24 *e*P **P 19 54 59.8 -0.2**
comp=Z,1.9nm,0.7s
CCB Clear Creek Bu 74.65 24 *e*P **P 19 54 59.5 -0.5**
comp=Z,2.1nm,0.7s
IL1 Eielson Array 74.90 23 *e*P **P 19 55 00.1 -1.3**
ILAR Eielson Array 74.90 23 P **P 19 55 00.1 -1.3**
comp=Z,2.6nm,0.9s,baz=309,slow=5.9,SNR=24
ILAR PP **PP 19 57 41.5 -7.1**
comp=Z,0.8nm,0.9s,baz=297,slow=8.1,SNR=4.1
ILAR LR LR 20 31 40.4
comp=Z,57nm,18.5s,baz=335,slow=39
ILB Eielson Array 74.90 23 *e*P **P 19 55 00.8 -0.6**
SML Sawmill 76.08 26 *e*P **P 19 55 06.8 -1.6**
comp=Z,8.7nm,0.9s
SML Sawmill 76.08 26 *e*P **P 19 55 06.8 -1.6**
SML pmax pmax
comp=Z,9.0nm,0.9s
SCRK Sand Creek 76.38 23 *e*P **P 19 55 09.8 -0.4**
comp=Z,6.9nm,1.0s
INK Inuvik 76.62 17 *e*P **P 19 55 10.8 -0.4**
comp=Z,6.1nm,0.8s
INK Inuvik 76.62 17 *e*P **P 19 55 10.8 -0.4**
INK pmax pmax
comp=Z,6.0nm,0.8s
EGAK Eagle 76.83 22 *e*P **P 19 55 12.0 -0.5**
comp=Z,4.8nm,1.0s
KLU Klutina 77.20 26 *e*P **P 19 55 13.7 -1.1**
comp=Z,5.8nm,0.8s
BMRM Bremner River 78.03 26 *e*P **P 19 55 18.6 -0.8**
comp=Z,8.8nm,0.8s
ES19 SONSECA Array 79.46 309 *e*P **P 19 55 27.0 -0.6**
ESDC Sonseca Array 79.52 309 P **P 19 55 27.8 -0.2**
comp=Z,0.7nm,0.8s,baz=44,slow=6.1,SNR=5.1
YKA Yellowknife Ar 85.89 14 P **P 19 55 59.9 -0.5**
comp=Z,1.1nm,0.8s,baz=320,slow=4.1,SNR=9.3
YKA Yellowknife Ar 85.89 14 P **P 19 56 00.0 -0.5**
YKB5 Yellowknife Ar 85.89 14 *e*P **P 19 55 59.4 -1.1**
TOA0 Torodi Ar. Sit 87.78 284 *e*P **P 19 56 09.9 -0.7**
TOA1 Torodi Ar. Sit 87.78 284 *e*P **P 19 56 11.0 +0.4**
TORD Torodi Ar. Bea 87.78 284 P **P 19 56 11.0 +0.4**

comp=Z,1.0nm,0.8s,baz=63,slow=4.9
BOSA Boshof 88.63 236 P **P 19 56 16.1 +1.7**
comp=Z,2.1nm,0.9s,baz=135,slow=11,SNR=2.7
SCHQ Schefferville 95.64 350 LR LR 20 42 51.0
comp=Z,83nm,20.6s,baz=46,slow=37
TXAR Lajitas Array 119.29 20 PKP **PKPdf 20 02 10.4 -0.4**
comp=Z,0.1nm,0.4s,baz=270,slow=0.5,SNR=3.4
OTAV Otavalo 150.88 349 *e*PKPdf **PKPdf 20 03 08.1 -1.2**
OTAV *e*PKPbc **PKPbc 20 03 15.0 +0.1**

MOS ***30*** *19:58:45.7±1.7, 48°.82N×153°.91E, h150km, mb4.0/3, Error ellipse: s-maj=26.5km s-min=7.4km az=68.5*
KRSC ***30*** *19:58:47.6±1.8, 48°.43N×155°.91E, h149km±39km, ML4.1*
IDC ***30*** *19:58:50.5±7.0, 49°.25N×153°.74E, h158km±44km, mb3.0/7, mb1 3.2/8, mb1mx2.9/71, mbtmp3.5/8, Error ellipse: s-maj=88.7km s-min=22.1km az=179.0*
ISC 30 19:58:48.5±1.3, 49°.0N±0°.2×154°.2E±0°.1, h150km, n41, σ2§11/43, mb3.2/7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.11**	**35**	*e*P	**Pn**	**19 59 26.3**	**+1.4**
SKR				*e*S	**Sn**	**19 59 56.2**	**+3.3**
SKR	**Severo-Kuril's**	**2.11**	**35**	*e*PN	**Pn**	**19 59 26.7**	**+1.8**
SKR				*e*S	**Sn**	**19 59 55.2**	**+2.3**
SKR				smax	smax		
	comp=N,53nm,0.5s						
SKR				smax	smax		
	comp=E,81nm,0.6s						
PAU	**Pauzhetka**	**3.00**	**33**	*e*P	**Pn**	**19 59 37.0**	**+1.1**
PAU				*e*S	**Sn**	**20 00 14.8**	**+2.3**
PAU	**Pauzhetka**	**3.00**	**33**	PN	**Pn**	**19 59 37.0**	**+1.1**
PAU				S	**Sn**	**20 00 14.8**	**+2.3**
KDTR	**Khodutka, Kamc**	**3.77**	**40**	*e*P	**Pn**	**19 59 45.1**	**-0.5**
KDTR				*e*S	**Sn**	**20 00 27.8**	**-2.2**
MTVR	**Mutnovka**	**4.33**	**34**	*e*S	**Sn**	**20 00 43.6**	**+0.2**
RUS	**Russkaya**	**4.42**	**37**	*e*P	**Pn**	**19 59 53.6**	**-0.5**
RUS				*e*S	**Sn**	**20 00 42.8**	**-2.4**
RUS	**Russkaya**	**4.42**	**37**	PN	**Pn**	**19 59 53.6**	**-0.5**
RUS				S	**Sn**	**20 00 42.8**	**-2.4**
PETK	**Petropavlovsk-**	**4.69**	**27**	P	**Pn**	**19 59 59.0**	**+1.2**
	baz=204,slow=13						
PETK				S	Sn	20 01 03.2	+11
	baz=247,slow=25						
PETK	**Petropavlovsk-**	**4.69**	**27**	PN	**Pn**	**19 59 59.0**	**+1.2**
DALK	**Dalny**	**4.97**	**34**	*e*S	**Sn**	**20 00 59.0**	**+0.6**
UGLR	**Uglovaya**	**5.14**	**33**	*e*P	**Pn**	**20 00 05.6**	**+1.8**
UGLR	**Uglovaya**	**5.14**	**33**	PN	**Pn**	**20 00 05.6**	**+1.8**
AVH	**Avacha**	**5.16**	**32**	*e*P	**Pn**	**20 00 07.6**	**+3.6**
AVH	**Avacha**	**5.16**	**32**	PN	**Pn**	**20 00 07.6**	**+3.6**
KRER	**Koryakskii**	**5.19**	**32**	*e*P	**Pn**	**20 00 06.8**	**+2.2**
KRER	**Koryakskii**	**5.19**	**32**	PN	**Pn**	**20 00 06.8**	**+2.2**
SDLR	**Sedlovina**	**5.22**	**33**	*e*P	**Pn**	**20 00 05.2**	**+0.3**
SDLR	**Sedlovina**	**5.22**	**33**	PN	**Pn**	**20 00 05.2**	**+0.3**
GNL	**Ganaly**	**5.28**	**25**	*e*P	**Pn**	**20 00 07.6**	**+2.0**
GNL	**Ganaly**	**5.28**	**25**	PN	**Pn**	**20 00 07.6**	**+2.0**
SPN	**Mys Shipunski**	**5.52**	**39**	*e*P	**Pn**	**20 00 08.3**	**-0.5**
SPN				*e*S	**Sn**	**20 01 07.8**	**-3.7**
SPN	**Mys Shipunski**	**5.52**	**39**	PN	**Pn**	**20 00 08.3**	**-0.5**
SHO	**Shikotan**	**7.21**	**228**	PN	Pn	20 00 26.1	-5.2
SHO				*e*S	Sn	20 01 40.5	-11
SHO				pmax	pmax		
	comp=Z,3.0nm,0.5s						
SHO				pmax	pmax		
	comp=N,1.0nm,0.2s						
SHO				pmax	pmax		
	comp=E,1.0nm,0.2s						
MKZ	**Mys Kozlova**	**7.28**	**37**	*e*P	**Pn**	**20 00 31.2**	**-0.9**
MKZ				*e*S	**Sn**	**20 01 48.1**	**-5.4**
MKZ	**Mys Kozlova**	**7.28**	**37**	PN	**Pn**	**20 00 31.2**	**-0.9**
H11N2	**WAKE ISLAND Hy**	**30.91**	**156**	T	T	20 37 08.9	
	baz=339						
H11N1	**WAKE ISLAND Hy**	**30.93**	**156**	T	T	20 37 10.9	
	baz=339						
H11N3	**WAKE ISLAND Hy**	**30.93**	**156**	T	T	20 37 09.7	
	baz=339						
H11S1	**WAKE ISLAND Hy**	**32.03**	**157**	T	T	20 39 12.6	
	baz=346,slow=76,SNR=9.6						
H11S3	**WAKE ISLAND Hy**	**32.04**	**157**	T	T	20 39 09.4	
	baz=346,slow=76,SNR=8.1						
H11S2	**WAKE ISLAND Hy**	**32.05**	**157**	T	T	20 39 13.8	
	baz=346,slow=76,SNR=6.6						
ILAR	**Eielson Array**	**34.36**	**41**	P	**P**	**20 05 20.7**	**+0.1**
	comp=E,0.2nm,0.5s,baz=271,slow=5.9,SNR=6.0						
ILAR	**Eielson Array**	**34.36**	**41**	P	**P**	**20 05 20.7**	**+0.1**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MKAR	**Makanchi Array**	**46.60**	**296**	P	**P**	**20 06 59.3**	**-1.9**
	comp=Z,0.3nm,0.5s,baz=68,slow=8.9,SNR=3.9						
KURK	**Kurchatov**	**46.77**	**302**	P	**P**	**20 07 00.5**	**-1.9**
KURBB	**Kurchatov Arra**	**46.87**	**302**	P	**P**	**20 07 00.5**	**-2.7**
	comp=Z,0.2nm,0.5s,baz=69,slow=9.4,SNR=2.1						
FINES	**FINESS Array B**	**62.34**	**335**	P	**P**	**20 08 52.5**	**-1.9**
	comp=Z,0.9nm,0.8s,baz=46,slow=6.0,SNR=1.3						
PDAR	**Pinedale Array**	**62.86**	**55**	P	**P**	**20 09 01.5**	**+3.0**
	comp=Z,0.3nm,0.5s,baz=332,slow=1.3,SNR=4.0						
HFS	**Hagfors**	**66.63**	**340**	P	**P**	**20 09 22.1**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=42,slow=15,SNR=0.7						
TXAR	**Lajitas Array**	**75.77**	**62**	P	**P**	**20 10 19.1**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=303,slow=4.2,SNR=3.9						

ATH ***30*** *20:12:15.0, 37°.75N×26°.77E, h18km±4km, ML2.0/2, Error ellipse: s-maj=5.8km s-min=1.2km az=85.0*
ISCJB ***30*** *20:12:15.5±0.4, 37°.79N±0°.02×26°.76E±0°.04, h11km±4km, Error ellipse: s-maj=5.1km s-min=3.6km az=162.1*
DDA ***30*** *20:12:15.7, 37°.79N×26°.76E, h7km, Ml2.6*
ISK ***30*** *20:12:15.3, 37°.81N×26°.75E, h12km, ML2.5/6*
CSEM ***30*** *20:12:15.3±0.2, 37°.78N×26°.74E, h10km, ML2.0, Error ellipse: s-maj=3.6km s-min=3.3km az=47.0*
ISC 30 20:12:15.2±0.8, 37.79N±0°.02×26.76E±0°.03, h15km±6km, n29, σ0§49/49, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.10**	**142**	P	**Pg**	**20 12 18.6**	**+0.1**
SMG				S	**Sg**	**20 12 20.3**	**-0.4**
SMG				AML	AML	20 12 20.5	
	comp=N,4676μm,0.3s						
SMG				AML	AML	20 12 21.0	
	comp=E,2434μm,0.2s						
SMG	**Samos**	**0.10**	**142**	P	**Pg**	**20 12 18.4**	**-0.1**
SMG				S	**Sg**	**20 12 20.5**	**-0.2**
DGB	**˜zmir**	**0.28**	**21**	*i*P	**Pg**	**20 12 21.5**	**+0.4**
DGB				*i*S	**Sg**	**20 12 25.6**	**+0.5**
GCAM	**G?zelcaml?**	**0.39**	**103**	PG	**Pb**	**20 12 23.6**	**-0.2**
GCAM				SG	**Sb**	**20 12 29.9**	**+0.2**
GCAM	**G?zelcaml?**	**0.39**	**103**	*i*P	**Pb**	**20 12 23.6**	**-0.2**
GCAM				*i*S	**Sb**	**20 12 30.1**	**+0.4**
GCAM	**G?zelcaml?**	**0.39**	**103**	P	**Pb**	**20 12 23.6**	**-0.2**
GCAM				*e*Sg	**Sb**	**20 12 29.9**	**+0.2**
ZEY	**˜zmir**	**0.49**	**336**	*i*P	**Pb**	**20 12 25.9**	**+0.3**
ZEY				*i*S	**Sb**	**20 12 32.7**	**+0.1**
URLA	**Izmir**	**0.58**	**347**	PG	**Pg**	**20 12 26.9**	**+0.2**
URLA				SG	**Sg**	**20 12 35.0**	**+0.5**
URLA	**Izmir**	**0.58**	**347**	*i*P	**Pg**	**20 12 25.2**	**-1.5**
URLA				*i*S	**Sg**	**20 12 34.9**	**+0.4**
URLA	**Izmir**	**0.58**	**347**	P	**Pg**	**20 12 25.2**	**-1.5**
URLA	**Izmir**	**0.58**	**347**	*e*Pg	**Pg**	**20 12 26.9**	**+0.2**
URLA				S	**Sg**	**20 12 34.9**	**+0.4**
BLCB	**Balcova**	**0.63**	**21**	PG	**Pg**	**20 12 27.8**	**+0.1**
BLCB				SG	**Sb**	**20 12 37.0**	**+0.2**
BLCB	**Balcova**	**0.63**	**21**	*e*Pg	**Pg**	**20 12 27.8**	**+0.1**
BLCB				*e*Sg	**Sb**	**20 12 37.0**	**+0.2**
CHOS	**Chios island**	**0.81**	**317**	PG	**Pn**	**20 12 32.0**	**-0.3**
CHOS	**Chios island**	**0.81**	**317**	P	**Pg**	**20 12 30.6**	**-0.5**
CHOS				S	**Sn**	**20 12 43.5**	**-0.7**
CHOS				AML	AML	20 12 45.8	
	comp=E,148μm,0.4s						
CHOS				AML	AML	20 12 45.8	
	comp=N,91μm,0.4s						
CHOS	**Chios island**	**0.81**	**317**	P	**Pg**	**20 12 30.9**	**-0.1**
CHOS	**Chios island**	**0.81**	**317**	*e*Pg	**Pn**	**20 12 32.0**	**-0.3**
CHOS				S	**Sb**	**20 12 43.3**	**+1.3**
BODT	**Bodrum**	**0.85**	**149**	PG	**Pb**	**20 12 32.2**	**+0.5**
BODT	**Bodrum**	**0.85**	**149**	*e*Pg	**Pb**	**20 12 32.2**	**+0.5**
AYDN	**Tasoluk**	**0.90**	**98**	*i*P	**Pb**	**20 12 32.3**	**-0.3**
AYDN				*i*S	**Sb**	**20 12 45.1**	**+0.7**
AYDN	**Tasoluk**	**0.90**	**98**	P	**Pb**	**20 12 32.3**	**-0.3**
AYDN				S	**Sb**	**20 12 45.1**	**+0.7**
AYDB	**Zeytinkoy-Aydi**	**0.91**	**80**	PG	**Pb**	**20 12 32.9**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**0.91**	**80**	*e*Pg	**Pb**	**20 12 32.9**	**+0.1**
AMGA	**Amorgos Island**	**1.18**	**216**	P	**Pn**	**20 12 37.0**	**-0.3**
AMGA				S	**Sb**	**20 12 52.6**	**+0.1**
AMGA	**Amorgos Island**	**1.18**	**216**	P	**Pn**	**20 12 36.9**	**-0.3**
AMGA				S	**Sb**	**20 12 52.7**	**+0.2**
APE	**Apeiranthos**	**1.21**	**234**	PN	**Pg**	**20 12 38.8**	**+0.2**
APE	**Apeiranthos**	**1.21**	**234**	P	**Pn**	**20 12 37.7**	**-0.1**
APE				S	**Sg**	**20 12 54.5**	**0.0**
APE	**Apeiranthos**	**1.21**	**234**	P	**Pn**	**20 12 37.7**	**-0.1**
APE	**Apeiranthos**	**1.21**	**234**	*e*Pn	**Pg**	**20 12 38.8**	**+0.2**
APE				S	**Sg**	**20 12 54.4**	**0.0**

ISCJB ***30*** *20:13:12.4±1.0, 36°.85N±0°.04×26°.97E±0°.06, h7km±8km, Error ellipse: s-maj=7.7km s-min=7.0km az=178.3*
CSEM ***30*** *20:13:12.8±0.2, 36°.86N×26°.98E, h10km, ML2.5, Error ellipse: s-maj=3.8km s-min=3.5km az=5.0*
ISK ***30*** *20:13:12.3, 36°.88N×26°.98E, h8km, ML2.5/9*
DDA ***30*** *20:13:13.7, 36°.89N×27°.03E, h7km, Ml2.7*
ISC 30 20:13:12.9±1.1, 36°.88N±0°.04×26°.99E±0°.03, h13km±8km, n34, σ1§11/41, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BODT	**Bodrum**	**0.32**	**54**	PG	**Pg**	**20 13 18.5**	**-0.9**
BODT				SG	**Sg**	**20 13 23.9**	**+0.1**
BODT	**Bodrum**	**0.32**	**54**	*e*Pg	**Pg**	**20 13 18.5**	**-0.9**
BODT				*e*Sg	**Sg**	**20 13 23.9**	**+0.1**
BDRM	**Kayabasi**	**0.41**	**63**	*i*S	**Sb**	**20 13 27.7**	**-0.4**
BDRM	**Kayabasi**	**0.41**	**63**	*i*S	**Sb**	**20 13 27.9**	**-0.3**
BDRM	**Kayabasi**	**0.41**	**63**	S	**Sb**	**20 13 27.7**	**-0.5**
DAT	**Datca**	**0.50**	**107**	PG	**Pg**	**20 13 22.8**	**+0.1**
DAT				SG	**Sg**	**20 13 30.1**	**+0.8**
DAT	**Datca**	**0.50**	**107**	*i*P	**Pg**	**20 13 23.1**	**+0.4**
DAT				*i*S	**Sg**	**20 13 30.1**	**+0.8**
DAT	**Datca**	**0.50**	**107**	*e*Pg	**Pg**	**20 13 22.8**	**+0.1**
DAT	**Datca**	**0.50**	**107**	P	**Pg**	**20 13 23.1**	**+0.4**
DAT				S	**Sg**	**20 13 30.1**	**+0.8**
DATC	**Datca-Mugla**	**0.55**	**102**	PG	**Pg**	**20 13 23.8**	**+0.1**
DATC	**Datca-Mugla**	**0.55**	**102**	*e*Pg	**Pg**	**20 13 23.8**	**+0.1**
MLSB	**Milas**	**0.76**	**56**	PG	**Pg**	**20 13 27.6**	**0.0**
MLSB	**Milas**	**0.76**	**56**	*e*Pg	**Pg**	**20 13 27.6**	**0.0**
GCAM	**G?zelcaml?**	**0.84**	**13**	PG	**Pb**	**20 13 29.6**	**+0.2**
GCAM	**G?zelcaml?**	**0.84**	**13**	*i*P	**Pb**	**20 13 29.9**	**+0.5**
GCAM				*i*S	**Sn**	**20 13 42.6**	**-0.1**
GCAM	**G?zelcaml?**	**0.84**	**13**	*e*Pg	**Pb**	**20 13 29.6**	**+0.2**
GCAM	**G?zelcaml?**	**0.84**	**13**	P	**Pb**	**20 13 29.9**	**+0.5**
GCAM				S	**Sn**	**20 13 42.6**	**-0.1**
AYDN	**Tasoluk**	**1.06**	**42**	*i*P	**Pg**	**20 13 32.7**	**-0.6**
AYDN				*i*S	**Sb**	**20 13 47.5**	**+0.7**
AYDN	**Tasoluk**	**1.06**	**42**	P	**Pg**	**20 13 32.7**	**-0.6**
AYDN				S	**Sb**	**20 13 47.5**	**+0.7**
YER	**Yerkesik**	**1.07**	**76**	PG	**Pg**	**20 13 33.3**	**-0.2**
YER	**Yerkesik**	**1.07**	**76**	*e*Pg	**Pg**	**20 13 33.3**	**-0.2**
ARG	**Arkhangelos**	**1.13**	**125**	PN	**Pg**	**20 13 34.1**	**-0.5**
ARG	**Arkhangelos**	**1.13**	**125**	*e*Pn	**Pg**	**20 13 34.1**	**-0.5**
APE	**Apeiranthos**	**1.18**	**280**	PN	**Pg**	**20 13 35.2**	**-0.5**
APE	**Apeiranthos**	**1.18**	**280**	*e*Pn	**Pg**	**20 13 35.2**	**-0.5**
AYDB	**Zeytinkoy-Aydi**	**1.29**	**34**	PN	**Pb**	**20 13 37.3**	**+0.3**
AYDB	**Zeytinkoy-Aydi**	**1.29**	**34**	*e*Pn	**Pb**	**20 13 37.3**	**+0.3**
TURN	**Turunc**	**1.29**	**90**	PG	Pn	20 13 32.1	-4.5
TURN	**Turunc**	**1.29**	**90**	*i*P	Pn	20 13 32.4	-4.2
TURN				*i*S	**Sb**	**20 13 47.5**	**-6.0**
TURN	**Turunc**	**1.29**	**90**	P	Pn	20 13 32.4	-4.2
SANT	**Santorini**	**1.33**	**248**	PN	**Pn**	**20 13 37.6**	**+0.5**
SANT	**Santorini**	**1.33**	**248**	*e*Pn	**Pn**	**20 13 37.6**	**+0.5**
FETY	**Fethiye**	**1.70**	**98**	PN	**Pn**	**20 13 43.0**	**+0.8**
FETY	**Fethiye**	**1.70**	**98**	*e*Pn	**Pn**	**20 13 43.0**	**+0.8**

MEX 30 20:14:10.5±0.6, 15°.21N×94°.34W, h16km±9km, MD3.7, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.19**	**65**	*e*P	Pn	20 14 28.9	-3.6
PCIG				*e*S	Sb	20 14 42.4	-5.4
HUIG	**Huatulco**	**1.79**	**288**	*e*P	Pn	20 14 38.3	-2.5
HUIG				*e*S	Sn	20 14 57.8	-5.5
TGIG		**1.95**	**37**	*e*P	Pn	20 14 40.2	-2.8
TGIG				*e*S	Sn	20 15 02.9	-4.4
CCIG	**Comitan**	**2.38**	**63**	*e*P	Pn	20 14 46.9	-2.1
CCIG				*e*S	Sn	20 15 13.6	-4.4

JMA 30 20:25:12.9, 37°.80N×140°.02E, h8km±1km, M2.5, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYAR	**Yonezawaarcadi**	**0.15**	**41**	P	Pg	20 25 16.1	0.0
JYAR				S	Sg	20 25 18.5	+0.2
JFT	**Otama**	**0.38**	**138**	P	Pg	20 25 20.3	0.0
JFT				S	Sg	20 25 25.1	-0.2
JYS	**Shirataka**	**0.42**	**5**	P	Pg	20 25 21.4	+0.3
JYS				*e*S	Sg	20 25 27.2	+0.5
JFY	**Yanaizu**	**0.47**	**213**	P	Pg	20 25 21.9	0.0
JFY				*i*S	Sg	20 25 28.0	0.0
MAT	**Matsushiro**	**1.92**	**230**	P	Pn	20 25 46.7	+0.8
MAT				*e*S	Sb	20 26 11.7	-0.5

KRSC 30 20:33:15.7±1.6, 49°.34N×156°.28E, h159km±32km, ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.34**	**355**	*e*P	Pn	20 33 44.1	-0.2
SKR				*e*S	Sn	20 34 07.1	+0.6
PAU	**Pauzhetka**	**2.15**	**9**	*e*P	Pn	20 33 53.1	+0.1
PAU				*e*S	Sn	20 34 23.5	+1.5
KDTR	**Khodutka, Kamc**	**2.72**	**24**	*e*P	Pn	20 34 02.0	+2.2
KDTR				*e*S	Sn	20 34 35.9	+1.8
RUS	**Russkaya**	**3.40**	**24**	*e*P	Pn	20 34 10.1	+1.7
RUS				*e*S	Sn	20 34 50.7	+1.4
UGLR	**Uglovaya**	**4.19**	**21**	*e*P	Pn	20 34 21.5	+2.9
KRER	**Koryakskii**	**4.26**	**20**	*e*P	Pn	20 34

*CSEM **30** 20:56:50.3, 39.°29N×16.°55E, h27km, ML2.2/16*
ROM 30 20:56:50.3±0.2, 39.°285N±0.°005×16.°551E±0.°009, h27km±1km, ML2.2/7, 1D, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CELI	**Celico**	**0.12**	**345**	P	Pb	20 56 55.6	0.0
CELI				S	Sb	20 56 59.2	+0.1
CELI	**Celico**	**0.12**	**345**	P	Pb	20 56 55.6	+0.1
CELI				S	Sb	20 56 59.2	+0.1
CELI				AML	AML		
	comp=E,1750μm,0.3s						
CELI				AML	AML		
	comp=N,2475μm,0.6s						
CELI				AML	AML		
	comp=E,1750μm,0.3s						
CELI				AML	AML		
	comp=N,2475μm,0.6s						
CELI				AML	AML		
	comp=E,1750μm,0.3s						
CELI				AML	AML		
	comp=N,2475μm,0.6s						
TIP	**Timpagrande**	**0.19**	**123**	P	Pb	20 56 56.1	-0.1
TIP				S	Sb	20 56 59.9	-0.3
TIP	**Timpagrande**	**0.19**	**123**	P	Pb	20 56 56.1	0.0
TIP				S	Sb	20 56 59.9	-0.2
TIP				AML	AML		
	comp=E,168μm,0.4s						
TIP				AML	AML		
	comp=N,293μm,0.3s						
TIP				AML	AML		
	comp=E,168μm,0.4s						
TIP				AML	AML		
	comp=N,293μm,0.3s						
TIP				AML	AML		
	comp=E,168μm,0.4s						
TIP				AML	AML		
	comp=N,293μm,0.3s						
CAR1	**CAROLEI**	**0.27**	**263**	P	Pb	20 56 57.2	+0.2
CAR1				S	Sb	20 57 02.3	+0.7
CAR1	**CAROLEI**	**0.27**	**263**	P	Pb	20 56 57.2	+0.1
CAR1				S	Sb	20 57 02.4	+0.7
CAR1				AML	AML		
	comp=E,498μm,0.3s						
CAR1				AML	AML		
	comp=N,338μm,0.4s						
CAR1				AML	AML		
	comp=E,498μm,0.3s						
CAR1				AML	AML		
	comp=N,338μm,0.4s						
CAR1				AML	AML		
	comp=N,338μm,0.4s						
CAR1				AML	AML		
	comp=E,498μm,0.3s						
SERS	**Sersale**	**0.27**	**157**	P	Pb	20 56 57.3	+0.1
SERS				S	Sb	20 57 02.6	+0.7
SERS	**Sersale**	**0.27**	**157**	P	Pb	20 56 57.3	+0.1
SERS				S	Sb	20 57 02.6	+0.7
SERS				AML	AML		
	comp=E,1395μm,0.3s						
SERS				AML	AML		
	comp=N,637μm,0.3s						
SERS				AML	AML		
	comp=E,608μm,0.2s						
SERS				AML	AML		
	comp=N,1480μm,0.3s						
SERS				AML	AML		
	comp=E,608μm,0.2s						
SERS				AML	AML		
	comp=N,1480μm,0.3s						
SERS				AML	AML		
	comp=E,1392μm,0.3s						
SERS				AML	AML		
	comp=N,637μm,0.3s						
PIPA	**Pietrapaola**	**0.29**	**46**	P	Pb	20 56 57.8	+0.5
PIPA				S	Sn	20 57 03.4	-0.8
PIPA	**Pietrapaola**	**0.29**	**46**	P	Pb	20 56 57.8	+0.4
PIPA				S	Sn	20 57 03.4	-0.8
PIPA				AML	AML		
	comp=E,1325μm,0.7s						
PIPA				AML	AML		
	comp=N,842μm,0.7s						
PIPA				AML	AML		
	comp=E,1360μm,0.7s						
PIPA				AML	AML		
	comp=N,898μm,0.7s						
PIPA				AML	AML		
	comp=E,1325μm,0.7s						
PIPA				AML	AML		
	comp=N,842μm,0.8s						
PIPA				AML	AML		
	comp=E,1360μm,0.7s						
PIPA				AML	AML		
	comp=N,898μm,0.7s						
PIPA				AML	AML		
	comp=E,1325μm,0.7s						
PIPA				AML	AML		
	comp=E,1360μm,0.7s						
PIPA				AML	AML		
	comp=N,842μm,0.8s						
PIPA				AML	AML		
	comp=N,898μm,0.7s						
LADO	**San Nicola del**	**0.33**	**90**	P	Pb	20 56 57.9	-0.1
LADO				S	Sb	20 57 03.7	+0.5
LADO	**San Nicola del**	**0.33**	**90**	P	Pb	20 56 57.9	-0.1
LADO				S	Sb	20 57 03.7	+0.5
LADO				AML	AML		
	comp=E,259μm,0.6s						
LADO				AML	AML		
	comp=N,113μm,0.7s						
LADO				AML	AML		
	comp=E,258μm,0.6s						
LADO				AML	AML		
	comp=N,113μm,0.7s						
LADO				AML	AML		
	comp=N,113μm,0.7s						
LADO				AML	AML		
	comp=E,258μm,0.6s						
GRI	**Girifalco**	**0.47**	**192**	P	Pb	20 57 00.4	+0.2
GRI				S	Sb	20 57 07.8	+0.9
GRI	**Girifalco**	**0.47**	**192**	P	Pb	20 57 00.4	+0.2
GRI				S	Sb	20 57 07.8	+0.9
SALB	**San Lorenzo Be**	**0.61**	**345**	P	Pb	20 57 02.6	+0.1
SALB				S	Sb	20 57 10.7	-0.2
SALB	**San Lorenzo Be**	**0.61**	**345**	P	Pb	20 57 02.6	+0.1
SALB				S	Sb	20 57 10.7	-0.2
SALB				AML	AML		
	comp=E,153μm,0.3s						
SALB				AML	AML		
	comp=N,114μm,0.9s						
SALB				AML	AML		
	comp=N,114μm,0.9s						
SALB				AML	AML		
	comp=E,153μm,0.3s						
PZUN	**Potenza**	**1.47**	**337**	⇓Pg	Pn	20 57 14.8	-0.2
PZUN	**Potenza**	**1.47**	**337**	P	Pn	20 57 14.8	-0.2

*CSEM **30** 20:57:29.7, 39.°27N×16.°56E, h25km, ML1.5/2*
ROM 30 20:57:29.7±0.2, 39.°267N±0.°007×16.°560E±0.°006, h25km±1km, ML1.5/1, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CELI	**Celico**	**0.14**	**344**	P	Pb	20 57 34.7	-0.2
CELI				S	Sb	20 57 38.4	0.0
CELI	**Celico**	**0.14**	**344**	P	Pb	20 57 34.7	-0.2
CELI				S	Sb	20 57 38.4	0.0
TIP	**Timpagrande**	**0.18**	**120**	P	Pb	20 57 35.2	0.0
TIP				S	Sb	20 57 38.0	-0.9
TIP	**Timpagrande**	**0.18**	**120**	P	Pb	20 57 35.2	0.0
TIP				S	Sb	20 57 39.0	+0.1
SERS	**Sersale**	**0.25**	**157**	P	Pb	20 57 36.4	+0.3
SERS				S	Sn	20 57 41.8	-1.3
SERS	**Sersale**	**0.25**	**157**	P	Pb	20 57 36.4	+0.2
SERS				S	Sn	20 57 41.8	-1.3
SERS				AML	AML		
	comp=E,124μm,0.3s						
SERS				AML	AML		
	comp=N,118μm,0.3s						
SERS				AML	AML		
	comp=N,118μm,0.3s						
SERS				AML	AML		
	comp=E,124μm,0.3s						
CAR1	**CAROLEI**	**0.27**	**267**	P	Pb	20 57 36.4	+0.1
CAR1				S	Sb	20 57 41.4	+0.5
CAR1	**CAROLEI**	**0.27**	**267**	P	Pb	20 57 36.4	0.0
CAR1				S	Sb	20 57 41.4	+0.5
PIPA	**Pietrapaola**	**0.29**	**42**	P	Pb	20 57 36.0	-0.7
PIPA				S	Sb	20 57 42.3	+0.9
PIPA	**Pietrapaola**	**0.29**	**42**	P	Pb	20 57 37.0	+0.3
PIPA				S	Sb	20 57 42.3	+0.9
LADO	**San Nicola del**	**0.33**	**87**	P	Pb	20 57 36.9	-0.2
LADO				S	Sb	20 57 42.8	+0.6
LADO	**San Nicola del**	**0.33**	**87**	P	Pb	20 57 36.9	-0.2
LADO				S	Sb	20 57 42.9	+0.6

*IDC **30** 21:03:28.6±0.5, 15.°46N×147.°21E, h0km, mb4.4/30, mb1 4.5/31, mb1mx4.3/58, mbtmp4.4/31, ML4.1/1, MS3.9/27, Ms1 3.9/27, ms1mx3.7/53, Error ellipse: s-maj=16.6km s-min=11.0km az=100.0*
*BJI **30** 21:03:31.8, 15.°56N×147.°43E, h34km, mb4.8/48, mB4.9/41, Ms4.5/30, Ms7 4.2/27*
*ISCJB **30** 21:03:33.4±0.2, 15.°66N±0.°04×147.°01E±0.°03, h29km, mb4.7/131, MS4.0/37, Error ellipse: s-maj=5.3km s-min=4.0km az=161.6*
*MOS **30** 21:03:34.2±1.1, 15.°46N×147.°06E, h49km, mb5.0/33, Error ellipse: s-maj=10.4km s-min=6.6km az=109.0*
*NEIC **30** 21:03:35.5±0.2, 15.°54N×147.°02E, h35km, mb4.8/80, Error ellipse: s-maj=6.2km s-min=5.0km az=136.0*
NEIC Felt at Dededo, Guam.
ISC 30 21:03:34.6±0.4, 15.°54N±0.°05×147.°12E±0.°06, h29km, n264, σ1§38/261, mb4.8/131, MS4.0/37, 5C-3D, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.92**	**229**	Pn	Pn	21 04 18.4	-0.7
	26nm,0.3s,baz=32,slow=5.7,SNR=15						
GUMO				Sn	**Sn**	**21 04 52.9**	**-0.3**
	75nm,0.3s,baz=112,slow=22,SNR=12						
GUMO	**Guam**	**2.92**	**229**	*e*Pn	**Pn**	**21 04 18.9**	**-0.2**
GUMO				Sn	**Sn**	**21 04 52.9**	**-0.3**
GUMO	**Guam**	**2.92**	**229**	*e*P	**Pn**	**21 04 18.9**	**-0.2**
GUMO						21 04 52.9	
JCJ	**Chichijima**	**12.39**	**339**	Sn	**Sn**	**21 08 43.8**	**-2.4**
	1.5nm,0.3s,baz=311,slow=20,SNR=3.3						
JHJ2	**Mitsune**	**18.71**	**341**	*e*P	**P**	**21 07 50.5**	**-0.3**
	618nm,1.8s						
H11S3	**WAKE ISLAND Hy**	**18.94**	**78**	T	T	21 26 59.5	
	baz=263,slow=75,SNR=22						
H11S1	**WAKE ISLAND Hy**	**18.95**	**78**	T	T	21 27 00.4	
	baz=263,slow=75,SNR=16						
H11S2	**WAKE ISLAND Hy**	**18.95**	**78**	T	T	21 26 55.3	
	baz=263,slow=75,SNR=17						
H11N1	**WAKE ISLAND Hy**	**19.29**	**75**	T	T	21 27 24.0	
	baz=265,slow=75						
H11N2	**WAKE ISLAND Hy**	**19.30**	**75**	T	T	21 27 24.5	
	baz=265						
H11N3	**WAKE ISLAND Hy**	**19.31**	**75**	T	T	21 27 25.4	
	baz=265,slow=75						
JOW	**Kunigami**	**20.83**	**306**	*e*P	**P**	**21 08 13.9**	**-0.2**
	161nm,1.8s						
INU	**Inuyama**	**21.71**	**337**	*e*P	**P**	**21 08 23.6**	**+0.2**
	15nm,0.9s						
MJAR	**Matsushiro Arr**	**22.38**	**341**	P	**P**	**21 08 28.9**	**-1.7**
	3.9nm,0.8s,baz=171,slow=9.5,SNR=12						
MJAR				LR	LR	21 16 27.5	
	comp=Z,156nm,21.2s,baz=170,slow=35						
MAJO	**Matsushiro**	**22.38**	**341**	*e*P	**P**	**21 08 29.9**	**-0.7**
	22nm,1.1s						
MAJO	**Matsushiro**	**22.38**	**341**	*i* P	**P**	**21 08 30.2**	**-0.4**
MAJO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MAT	**Matsushiro**	**22.38**	**341**	P	**P**	**21 08 29.7**	**-0.9**
MAT				S	**S**	**21 12 32.8**	**-2.1**
MJB9	**Matsu-Tunnel**	**22.38**	**341**	*e*P	**P**	**21 08 29.9**	**-0.7**
	comp=Z,22nm,1.1s						
DAV	**Davao City (W)**	**22.72**	**251**	LR	LR	21 16 37.1	
	comp=Z,283nm,20.3s,baz=94,slow=35						
JNU	**Nakatsue**	**22.87**	**323**	LR	LR	21 16 14.9	
	comp=Z,266nm,21.4s,baz=123,slow=33						
FAKI	**Fak Fak**	**23.51**	**220**	*e*P	**P**	**21 08 41.4**	**-1.1**
	comp=Z,105nm,1.0s						
PMG	**Port Moresby**	**24.78**	**180**	P	**P**	**21 08 51.2**	**-2.9**
	comp=Z,7.8nm,0.6s,baz=324,slow=8.7,SNR=2.9						
PMG	**Port Moresby**	**24.78**	**180**	*e*P	**P**	**21 08 56.1**	**+2.0**
	comp=Z,28nm,1.0s						
PMG	**Port Moresby**	**24.78**	**180**	*e*P	**P**	**21 08 56.1**	**+2.0**
PMG				pmax	pmax		
	comp=Z,28nm,1.0s						
TWG	**Pinlang**	**25.62**	**290**	*e*P	**P**	**21 09 01.4**	**-0.4**
	comp=Z,164nm,1.5s						
KSRS	**Korea Array**	**27.67**	**326**	P	**P**	**21 09 18.4**	**-1.7**
	comp=Z,2.6nm,0.9s,baz=144,slow=9.8,SNR=7.2						
KSRS				LR	LR	21 19 13.4	
	comp=Z,363nm,21.4s,baz=142,slow=34						
KSAR	**Wonju Array Be**	**27.69**	**326**	P	**P**	**21 09 18.4**	**-1.8**
KSAR	**Wonju Array Be**	**27.69**	**326**	P	**P**	**21 09 18.4**	**-1.8**
HNR	**Honiara**	**27.87**	**152**	LR	LR	21 19 01.7	
	comp=Z,428nm,21.2s,baz=335,slow=34						
YUK	**Yuzh-Kuril'sk**	**28.43**	**358**	*e*P	**P**	**21 09 31.1**	**+4.4**
YUK				pmax	pmax		
	comp=Z,113nm,1.0s						
YUK				pmax	pmax		
	comp=E,35nm,0.5s						
ASAJ	**Asahikawa**	**28.75**	**353**	P	**P**	**21 09 29.9**	**+0.2**
	comp=E,14nm,0.9s,baz=221,slow=17,SNR=9.8						
ASAJ				LR	LR	21 21 01.7	
	comp=E,245nm,20.4s,baz=190,slow=36						
ASAJ	**Asahikawa**	**28.75**	**353**	*e*P	**P**	**21 09 29.8**	**+0.2**
	comp=E,24nm,1.0s						
NJ2	**Nanjing**	**30.52**	**308**	*e*P	**P**	**21 09 44.3**	**-1.1**
NJ2				pmax	pmax		
	comp=E,11nm,0.6s						
USRK	**Ussuriysk Ar.**	**31.33**	**339**	P	**P**	**21 09 51.5**	**-1.0**
	comp=E,1.2nm,0.6s,baz=139,slow=11						
YSS	**Yuzh-Sakhalins**	**31.54**	**354**	*e*P	**P**	**21 09 54.2**	**0.0**
YSS				*e**SP	**sP**	**21 10 11.0**	**+4.8**
YSS				*e*S	**S**	**21 14 59.7**	**-1.1**
WHN	**Wuhan**	**33.51**	**302**	⇓P	**P**	**21 10 12.0**	**+0.3**
WHN				S	S	21 15 24.0	-7.9
WHN				LR	LR		
	comp=E,570nm,16.7s						
QIZ	**Qiongzhong**	**35.72**	**281**	P	**P**	**21 10 30.8**	**-0.2**
QIZ				S	**S**	**21 16 05.3**	**-1.1**
QIZ				LR	LR		
	comp=E,270nm,15.1s						
QIZ				LR	LR		
	comp=E,250nm,18.0s						
KLR	**Kul'dur**	**35.88**	**343**	P	**P**	**21 10 30.9**	**-1.1**
	comp=E,0.3nm,0.6s,baz=161,slow=8.7,SNR=8.2						
KLR	**Kul'dur**	**35.88**	**343**	*i* P	**P**	**21 10 32.1**	**+0.2**
WRAB	**Tennant Creek**	**37.42**	**200**	*ce*P	P	21 10 42.0	-3.4
WRAB				pmax	pmax		
	comp=Z,4.0nm,1.0s						
WB2	**Warramunga Arr**	**37.43**	**200**	*e*P	**P**	**21 10 47.4**	**+1.9**
	comp=Z,12nm,1.0s						
WRA	**Warramunga Arr**	**37.43**	**200**	P	P	21 10 42.9	-2.6
	comp=Z,3.1nm,0.9s,baz=23,slow=9.5,SNR=11						
ENH	**Enshi**	**37.45**	**300**	*e*P	**P**	**21 10 45.7**	**0.0**
	comp=Z,28nm,1.3s						
PETK	**Petropavlovsk-**	**38.41**	**10**	LR	LR	21 26 24.3	
	comp=Z,162nm,19.7s,baz=197,slow=36						
GYA	**Guiyang**	**39.16**	**293**	*e*P	**P**	**21 11 00.3**	**+0.1**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
FITZ	**Fitzroy Crossi**	**39.56**	**213**	P	P	21 11 01.9	-1.6
	comp=Z,4.1nm,1.1s,baz=45,slow=10.0,SNR=5.6						
HHC	**Hu-ho-hao-te**	**39.80**	**316**	*e*P	**P**	**21 11 04.5**	**-0.9**
HHC				pP	pP	21 11 14.5	+0.5
HHC				sP	sP	21 11 18.5	+1.0
HHC				S	**S**	**21 17 04.8**	**-3.1**
HHC				sS	pS	21 17 21.0	+3.2
HHC				pmax	pmax		
	comp=Z,17nm,0.7s						
HHC				pmax	pmax		
	comp=Z,41nm,5.8s						
HHC				LR	LR		
	comp=Z,880nm,15.6s						
HHC				LR	LR		
	comp=Z,980nm,14.7s						
HHC				LR	LR		
	comp=Z,1μm,15.6s						
AS01	**Alice Springs**	**41.03**	**199**	*e*P	**P**	**21 11 16.3**	**+0.7**
ASAR	**Alice Springs**	**41.05**	**199**	P	P	21 11 13.6	-2.1
	comp=Z,1.2nm,1.0s,baz=22,slow=7.4,SNR=7.1						
ZEA	**Zeya**	**41.18**	**342**	*e*P	**P**	**21 11 15.0**	**-1.4**
ZEA				pmax	pmax		
	comp=Z,15nm,0.8s						
DZM	**Mont Dzumac**	**41.90**	**153**	LR	LR	21 26 09.2	
	comp=Z,377nm,21.4s,baz=34,slow=33						
CD2	**Chengdu**	**42.41**	**299**	P	**P**	**21 11 26.8**	**-0.1**
CD2				sP	sP	21 11 41.3	+2.2
CD2				PP	**PP**	**21 13 05.0**	**-0.4**
CD2				S	**S**	**21 17 45.5**	**-1.4**
CD2				sS	sS	21 18 03.0	+1.8
CD2				SS	**SS**	**21 20 55.0**	**-1.5**
CD2				pmax	pmax		
	comp=Z,30nm,0.6s						
CD2				pmax	pmax		
	comp=Z,120nm,3.5s						
CD2				LR	LR		
	comp=Z,300nm,9.0s						
CD2				LR	LR		
	comp=Z,300nm,14.4s						
KMI	**Kunming**	**42.53**	**290**	P	**P**	**21 11 29.8**	**+1.6**
KMI				pP	sP	21 11 43.5	+3.1
KMI				sP	pP	21 11 47.5	+11
KMI				S	**S**	**21 17 46.0**	**-3.2**
KMI				sS	sS	21 18 08.0	+4.5
KMI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KMI				pmax	pmax		
	comp=Z,49nm,3.5s						
KMI				LR	LR		
	comp=Z,91nm,19.1s						
KMI				LR	LR		
	comp=Z,130nm,20.0s						
KMI				LR	LR		
	comp=Z,190nm,15.9s						
SRAK	**Srakaew**	**43.56**	**274**	P	P	21 11 33.8	-2.5
	comp=Z,48nm,1.2s,comp=Z,499nm						
LZH	**Lanzhou**	**43.57**	**306**	*e*P	**P**	**21 11 37.0**	**+0.6**
LZH				pP	pP	21 11 45.8	+0.7
LZH				sP	sP	21 11 49.5	+0.9
LZH				PP	**PP**	**21 13 20.3**	**+2.3**
LZH				*e*S	**S**	**21 18 03.5**	**-0.6**
LZH				sS	sS	21 18 18.8	+0.4
LZH				pmax	pmax		
	comp=Z,57nm,1.3s						
LZH				pmax	pmax		
	comp=Z,210nm,4.1s						
LZH				LR	LR		
	comp=Z,1μm,13.8s						
LZH				LR	LR		
	comp=Z,1μm,14.6s						
LZH				LR	LR		
	comp=Z,1μm,14.9s						
MA2	**Magadan**	**44.05**	**3**	P	**P**	**21 11 40.0**	**+0.3**
	comp=Z,9.3nm,0.9s,baz=180,slow=3.5,SNR=5.6						
MA2	**Magadan**	**44.05**	**3**	*e*P	**P**	**21 11 40.5**	**+0.8**
	comp=Z,19nm,1.2s						
MA2	**Magadan**	**44.05**	**3⇑**	*e*P	**P**	**21 11 39.5**	**-0.2**
MA2				pmax	pmax		
	comp=Z,20nm,1.3s						
PBKT	**Sadao Pong**	**44.29**	**278**	P	**P**	**21 11 41.8**	**-0.4**
	comp=Z,26nm,1.1s,comp=Z,2μm						
PHIT	**Phitsanulok**	**44.76**	**279**	P	**P**	**21 11 47.4**	**+1.4**
	comp=Z,18nm,1.0s						
UTHA	**Uthaitani**	**45.85**	**277**	P	**P**	**21 11 56.6**	**+2.0**
	comp=Z,6.0nm,1.1s						
CMAI	**Chiengmai2**	**45.88**	**283**	P	**P**	**21 11 55.6**	**+0.6**
	comp=Z,310nm,1.3s						
CHTO	**Chiang Mai**	**46.04**	**281**	*e*P	**P**	**21 11 56.4**	**+0.3**
	comp=Z,11nm,1.2s						
CHTO	**Chiang Mai**	**46.04**	**281**	*e*P	**P**	**21 11 56.4**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,11nm,1.2s						
CM01	**Chiang Mai Arr**	**46.05**	**281**	*e*P	**P**	**21 11 55.9**	**-0.3**
CM31	**Chiang Mai Arr**	**46.06**	**281**	*e*P	**P**	**21 11 56.5**	**+0.2**
CMAR	**Chiang Mai Arr**	**46.06**	**281**	P	**P**	**21 11 56.7**	**+0.4**
	comp=Z,7.5nm,0.9s,baz=72,slow=6.3,SNR=39						
CMAR				LR	LR	21 33 09.3	
	comp=Z,105nm,18.1s,baz=116,slow=39						
SONM	**Songino Array**	**46.46**	**323**	P	**P**	**21 11 58.1**	**-1.0**
	comp=Z,5.7nm,1.0s,baz=131,slow=8.4,SNR=20						
SONM				LR	LR	21 31 17.5	
	comp=Z,245nm,20.4s,baz=111,slow=36						
SONA1	**Songino Array**	**46.46**	**323**	*e*P	**P**	**21 11 58.7**	**-0.5**
STKA	**Stephens Creek**	**47.44**	**186**	P	P	21 12 04.2	-2.5
	comp=Z,2.4nm,0.8s,baz=7.9,slow=13,SNR=4.3						
SEY	**Seymchan**	**47.48**	**3**	P	**P**	**21 12 07.2**	**+0.6**
	comp=Z,5.8nm,1.0s,baz=167,slow=5.2,SNR=7.8						
GTA	**Gaotai**	**47.57**	**310**	*e*P	**P**	**21 12 08.0**	**0.0**
GTA				pP	pP	21 12 17.0	+0.2
GTA				sP	sP	21 12 21.5	+1.3
GTA				S	**S**	**21 18 58.3**	**-3.3**
GTA				sS	pS	21 19 15.0	+3.1
GTA				SS	SS	21 22 20.0	-10
GTA				pmax	pmax		
	comp=Z,7.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,74nm,4.5s						
GTA				LR	LR		
	comp=Z,200nm,18.0s						
GTA				LR	LR		
	comp=Z,190nm,15.3s						
GTA				LR	LR		
	comp=Z,240nm,16.8s						
YAK	**Yakutsk**	**48.06**	**349**	P	**P**	**21 12 09.9**	**-1.2**
	comp=Z,18nm,0.4s,baz=195,slow=1.9,SNR=19						
YAK	**Yakutsk**	**48.06**	**349**	*e*P	**P**	**21 12 10.4**	**-0.8**
	comp=Z,53nm,0.9s						
YAK	**Yakutsk**	**48.06**	**349**	*e*P	**P**	**21 12 10.0**	**-1.2**
YAK				*e**PP	**pP**	**21 12 21.3**	**+1.3**
YAK				*e*		21 13 36.4	
YAK				*e*		21 14 02.0	
YAK				*e*PPP	PPP	21 14 48.5	
YAK				*e*S	**S**	**21 19 07.1**	**-0.5**
YAK				*e**SS	**sS**	**21 19 24.2**	**+2.2**
YAK				*e*		21 21 59.1	
YAK				*e*SSS	SSS	21 23 51.2	
YAK				pmax	pmax		
	comp=Z,45nm,0.9s						
YAK				pmax	pmax		
	comp=N,10.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,4.0nm,0.9s						
YAK				smax	smax		
	comp=N,11nm,2.0s						
YAK				smax	smax		
	comp=E,17nm,2.0s						
BOD	**Bodaibo**	**48.94**	**337**	*e*P	**P**	**21 12 16.0**	**-2.0**
ZAK	**Zakamensk**	**49.49**	**324**	*e*P	**P**	**21 12 20.5**	**-2.0**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
FORT	**Forrest**	**49.57**	**202**	*e*P	**P**	**21 12 24.4**	**+1.3**
	comp=Z,87nm,1.6s						
TLY	**Talaya**	**49.93**	**326**	*e*P	**P**	**21 12 25.6**	**-0.1**
	comp=Z,6.6nm,1.2s						
TLY	**Talaya**	**49.93**	**326**	*e*P	**P**	**21 12 24.7**	**-1.0**
TLY				*e*S	**S**	**21 19 37.7**	**+3.5**
TLY				pmax	pmax		
	comp=Z,8.0nm,1.4s						
AFI	**Afiamalu**	**50.08**	**124**	LR	LR	21 30 25.1	
	comp=Z,115nm,18.3s,baz=265,slow=32						
GSI	**Gunungsitoli**	**50.86**	**259**	*e*P	**P**	**21 12 32.9**	**-0.4**
	comp=Z,66nm,1.9s						
SHL	**Shillong**	**52.37**	**290**	*e*P	**P**	**21 12 45.0**	**+0.4**
SHL	**Shillong**	**52.37**	**290**	*e*P	**P**	**21 12 44.3**	**-0.4**
	comp=Z,13nm,0.8s						
SHL	**Shillong**	**52.37**	**290**	*e*P	**P**	**21 12 44.3**	**-0.4**
SHL				pmax	pmax		
	comp=Z,13nm,0.8s						
LSA	**Lhasa**	**53.09**	**296**	P	**P**	**21 12 51.3**	**+1.0**
LSA				pmax	pmax		
	comp=Z,14nm,1.0s						
LSA	**Lhasa**	**53.09**	**296**	*e*P	**P**	**21 12 50.9**	**+0.6**
	comp=Z,9.4nm,0.9s						
LSA	**Lhasa**	**53.09**	**296**	*e*P	**P**	**21 12 50.9**	**+0.6**
LSA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BILL	**Bilibino**	**53.90**	**9**	*e*P	**P**	**21 12 56.4**	**+1.4**
	comp=Z,17nm,1.3s						
BILL	**Bilibino**	**53.90**	**9⇓**	*e*P	**P**	**21 12 56.3**	**+1.3**

BILL e*SP **sP** **21 13 09.1 +1.7**
BILL SS **SKiKP** **21 24 09.0 +2.7**
BILL pmax pmax
comp=Z,13nm,1.7s
BILL MLR MLR
comp=Z,319nm,20.0s
SDPT Sand Point 56.33 33 *e*P **P** **21 13 12.8 +0.1**
comp=Z,46nm,1.2s
ODAN Odare 56.38 292 *e*P **P** **21 13 13.9 0.0**
comp=Z,48nm,1.1s
RAMN Ramite 57.09 292 *e*P **P** **21 13 18.8 -0.1**
comp=Z,56nm,1.3s
WMQ Urumqi 57.42 312 P **P** **21 13 21.5 +0.7**
WMQ pP sP 21 13 34.3 +1.1
WMQ sP pP 21 13 39.0 +9.3
WMQ S **S** **21 21 18.8 +2.8**
WMQ sS sS 21 21 32.3 +1.5
WMQ pmax pmax
comp=Z,52nm,1.3s
WMQ pmax pmax
comp=Z,290nm,4.5s
WMQ LR LR
comp=Z,280nm,21.5s
WMQ LR LR
comp=Z,410nm,17.3s
WMQ LR LR
comp=Z,230nm,18.3s
JIRN Jiri 57.43 293 *e*P **P** **21 13 21.8 +0.3**
comp=Z,104nm,1.3s
GUN Gumba 57.70 293 *e*P **P** **21 13 23.5 +0.1**
comp=Z,93nm,1.4s
PKIN Phulchoki 58.14 293 *e*P **P** **21 13 25.7 -0.7**
comp=Z,13nm,0.9s
DMN Daman 58.40 293 *e*P **P** **21 13 27.7 -0.5**
comp=Z,43nm,1.2s
DGZ Jazzator, Alta 58.78 319 *i*P **P** **21 13 30.1 -0.2**
DGZ pmax pmax
comp=Z,12nm,1.1s
GKN Gorkha 58.80 294 *e*P **P** **21 13 30.5 -0.3**
comp=Z,72nm,1.2s
DANN Dangsing 59.56 294 *e*P **P** **21 13 36.1 -0.2**
comp=Z,63nm,1.0s
KOLN Koldanda 59.72 293 *e*P **P** **21 13 36.9 -0.4**
comp=Z,13nm,0.9s
PYUN Piuthan 60.25 294 *e*P **P** **21 13 39.8 -1.1**
comp=Z,27nm,1.0s
SVW2 Sparrevohn 60.94 28 *e*P **P** **21 13 45.3 +0.5**
comp=Z,6.2nm,1.1s
KDAK Kodiak Island 61.27 32 *e*P **P** **21 13 47.8 +0.7**
comp=Z,9.3nm,1.0s
KDAK Kodiak Island 61.27 32 *i*P **P** **21 13 47.7 +0.7**
ZAA0 Zalesovo Array 61.35 323 *e*P **P** **21 13 46.4 -1.3**
comp=Z,10nm,1.0s
ZALV Zalesovo Beam 61.35 323 P **P** **21 13 46.4 -1.3**
comp=Z,12nm,1.1s,baz=97,slow=6.0,SNR=22
ZALV LR LR 21 40 03.7
comp=Z,125nm,21.0s,baz=70,slow=36
ZALV Zalesovo Beam 61.35 323 *e*P **P** **21 13 46.2 -1.4**
ZALV Zalesovo Beam 61.35 323 *e*P **P** **21 13 46.2 -1.4**
MKAR Makanchi Array 61.64 315 P **P** **21 13 49.1 -0.7**
comp=Z,5.8nm,0.8s,baz=97,slow=8.3,SNR=48
MKAR LR LR 21 40 40.5
comp=Z,74nm,20.6s,baz=86,slow=36
MKAR Makanchi Array 61.64 315 *e*P **P** **21 13 49.5 -0.3**
comp=Z,42nm,0.9s
MKAR Makanchi Array 61.64 315 *e*P **P** **21 13 49.5 -0.3**
MKAR pmax pmax
comp=Z,42nm,0.9s
MAKZ Makanchi 61.85 315 *e*P **P** **21 13 51.2 -0.1**
comp=Z,17nm,1.1s
MAKZ Makanchi 61.85 315 *e*P **P** **21 13 51.2 -0.1**
MAKZ pmax pmax
comp=Z,17nm,1.1s
NVS Novosibirsk 62.45 324⇑ *i*P **P** **21 13 54.4 -0.6**
NVS pmax pmax
comp=N,8.0nm,1.4s
NVS pmax pmax
comp=E,15nm,1.4s
NVS pmax pmax
comp=Z,23nm,1.4s
CNPM China Poot 62.46 30 *e*P **P** **21 13 55.0 -0.1**
comp=Z,15nm,1.0s
SKT Skwentna 63.07 28 *e*P **P** **21 13 59.1 0.0**
comp=Z,8.9nm,1.3s
PPLA Purkeypile 63.08 27 *e*P **P** **21 14 00.2 +0.9**
comp=Z,7.7nm,1.0s
PDGK Podgornoye 63.28 311 P **P** **21 14 00.6 -0.4**
PDGK pmax pmax
comp=Z,10.0nm,0.8s
CAST Castle Rocks 63.30 26 *e*P **P** **21 14 00.9 +0.3**
comp=Z,6.9nm,0.9s
IM3 Indian Mountai 63.56 23 *e*P **P** **21 14 02.5 +0.3**
RC01 Rabbit Creek A 63.62 29 *e*P **P** **21 14 03.0 +0.3**
comp=Z,11nm,0.7s
KTH Kantishna Hill 63.84 26 *e*P **P** **21 14 04.6 +0.4**
comp=Z,30nm,1.4s
BPAW Bear Paw Mtn. 63.99 26 *e*P **P** **21 14 05.7 +0.6**
comp=Z,11nm,1.1s
PRZ Przheval'sk 64.03 310 *e*P **P** **21 14 07.0 +0.9**
comp=Z,40nm,1.3s
PRZ Przheval'sk 64.03 310 *e*P **P** **21 14 07.0 +0.9**
PRZ pmax pmax
comp=Z,40nm,1.3s
TRF Thorofare Moun 64.08 26 *e*P **P** **21 14 05.8 -0.1**
comp=Z,10nm,1.2s
MLY Manley 64.39 25 *e*P **P** **21 14 08.4 +0.6**
comp=Z,9.7nm,1.1s
SML Sawmill 64.47 28 *e*P **P** **21 14 08.9 +0.6**
comp=Z,28nm,1.3s
SML Sawmill 64.47 28 *e*P **P** **21 14 08.9 +0.6**
SML pmax pmax
comp=Z,29nm,1.3s
KURK Kurchatov 64.53 319 *e*P **P** **21 14 08.1 -0.7**
comp=Z,61nm,1.1s
KURK Kurchatov 64.53 319 *e*P **P** **21 14 08.1 -0.7**
KURK pmax pmax
comp=Z,61nm,1.1s
KURBB Kurchatov Arra 64.58 319 P **P** **21 14 07.9 -1.3**
comp=Z,37nm,0.9s,baz=99,slow=6.5,SNR=157
BWN Browne 64.64 26 *e*P **P** **21 14 10.9 +1.6**
comp=Z,20nm,1.0s
SCM Sheep Creek Mo 64.94 28 *e*P **P** **21 14 11.9 +0.5**
comp=Z,18nm,1.0s
SCM Sheep Creek Mo 64.94 28 *e*P **P** **21 14 11.9 +0.5**
SCM pmax pmax
comp=Z,18nm,1.0s
DHY Denali Highway 65.23 27 *e*P **P** **21 14 13.6 +0.2**
comp=Z,4.3nm,1.0s
WRH Wood River Hil 65.30 26 *e*P **P** **21 14 13.2 -0.4**
comp=Z,6.6nm,1.0s
COLD Coldfoot 65.33 22 *e*P **P** **21 14 14.8 +1.0**
comp=Z,3.6nm,0.9s
MDM Murphy Dome 65.38 25 *e*P **P** **21 14 15.6 +1.4**
comp=Z,11nm,1.5s
CCB Clear Creek Bu 65.47 25 *e*P **P** **21 14 14.2 -0.5**
comp=Z,15nm,1.8s
KLU Klutina 65.51 29 *e*P **P** **21 14 16.5 +1.3**
comp=Z,4.5nm,0.7s
ULHL Ulahol 65.62 310 P **P** **21 14 15.9 -0.5**
SNR=7.2
NRN Naryn 65.80 309 *e*P **P** **21 14 17.2 -0.5**
comp=Z,7.4nm,1.2s
KSH Kashi 65.82 307 P **P** **21 14 20.5 +2.9**
KSH pP sP 21 14 33.0 +2.9
KSH PP **PP** **21 16 48.5 +5.9**
KSH S **S** **21 23 03.3 +0.5**
KSH sS sS 21 23 21.0 +3.2
KSH SS **SS** **21 27 26.8 +9.2**
KSH pmax pmax
comp=Z,250nm,4.0s
KSH LR LR
comp=Z,120nm,4.8s
KSH LR LR
comp=Z,120nm,4.4s
KSH LR LR
comp=Z,260nm,5.3s
IL1 Eielson Array 65.88 25 *e*P **P** **21 14 16.0 -1.4**
ILAR Eielson Array 65.88 25 P **P** **21 14 16.0 -1.4**
comp=Z,2.2nm,0.8s,baz=258,slow=5.3,SNR=23
ILAR LR LR 21 42 54.0
comp=Z,46nm,19.5s,baz=288,slow=36
ILB Eielson Array 65.88 25 *e*P **P** **21 14 16.3 -1.1**
BMRM Bremner River 66.02 30 *e*P **P** **21 14 18.9 +0.4**
comp=Z,16nm,1.2s
TKM2 Tokmak 2 66.11 310 P **P** **21 14 18.9 -0.7**
SNR=8.4
KZA Kyzart 66.36 309 P **P** **21 14 22.1 +0.7**
SNR=11
RIDG Independ'e Rid 66.50 27 *e*P **P** **21 14 21.6 +0.2**
comp=Z,16nm,1.4s
UCH Uchtor 66.91 310 P **P** **21 14 25.5 +0.6**
SNR=8.8
SCRK Sand Creek 66.92 27 *e*P **P** **21 14 24.4 +0.2**
comp=Z,15nm,1.5s
FYU Fort Yukon 67.01 24 *e*P **P** **21 14 25.8 +1.3**
comp=Z,37nm,1.3s
EKS2 Erkin-Say 67.45 310 P **P** **21 14 28.1 +0.1**
SNR=5.1
AML Almayashu 67.52 310 P **P** **21 14 29.1 +0.3**
SNR=7.1
SFK Sufi-Kurgan 67.71 307 P **P** **21 14 30.2 +0.4**
SFK pmax pmax
comp=Z,6.0nm,1.1s
NIL Nilore 68.27 300 *e*P **P** **21 14 33.2 0.0**
comp=Z,22nm,0.9s
NIL Nilore 68.27 300 *e*P **P** **21 14 33.2 0.0**
NIL pmax pmax
comp=Z,22nm,0.9s
EGAK Eagle 68.28 26 *e*P **P** **21 14 33.5 +0.9**
comp=Z,13nm,1.3s
MNAS Manas 68.39 310 P **P** **21 14 32.6 -1.4**
MNAS pmax pmax
comp=Z,3.0nm,0.9s
OTUK Ortayu 68.47 316 P **P** **21 14 33.8 -0.3**
OTUK pmax pmax
comp=Z,11nm,1.5s
DAWY Dawson 68.93 27 *e*P **P** **21 14 37.2 +0.5**
comp=Z,8.8nm,1.4s
BVAR Borovoye Array 69.77 321 P **P** **21 14 41.1 -1.0**
comp=Z,4.2nm,0.5s,baz=93,slow=6.3,SNR=44
BVAR LR LR 21 45 21.3
comp=Z,131nm,21.5s,baz=86,slow=36
KKAR Karatay Array 69.84 311 *e*P **P** **21 14 42.7 -0.1**
BRVK Borovoye 69.84 321 *e*P **P** **21 14 41.6 -0.8**
comp=Z,10nm,0.9s
BRVK Borovoye 69.84 321 *c e*P **P** **21 14 41.7 -0.8**
BRVK pmax pmax
comp=Z,15nm,1.3s
PPT Papeete 70.53 115 LR LR 21 38 43.0
comp=Z,130nm,21.2s,baz=330,slow=30
KBL Kabul 71.67 302 *e*P **P** **21 14 54.1 -0.2**
KBL Kabul 71.67 302 *e*P **P** **21 14 54.1 -0.2**
INK Inuvik 71.74 23 P **P** **21 14 52.1 -1.6**
comp=Z,2.3nm,0.7s,baz=293,slow=9.2,SNR=2.8
INK Inuvik 71.74 23 *e*P **P** **21 14 54.5 +0.7**
comp=Z,11nm,1.3s
INK Inuvik 71.74 23 *e*P **P** **21 14 54.5 +0.7**
INK pmax pmax
comp=Z,11nm,1.3s
H02S1 DAWSON INLET T 71.98 39 T T 22 33 42.3
DLBC Dease Lake 73.17 33 *e*P **P** **21 15 04.0 +1.4**
comp=Z,4.7nm,0.9s
SVE Sverdlovsk 75.24 325⇓ *e*P **P** **21 15 13.8 -0.8**
SVE pmax pmax
comp=Z,14nm,1.1s
ARU Arti 76.42 325 *e*P **P** **21 15 20.1 -1.2**
comp=Z,12nm,0.9s
ARU Arti 76.42 325 *c i*P **P** **21 15 20.4 -0.9**
ARU 21 18 08.3
ARU S **S** **21 25 05.8 +1.0**
ARU SS **SS** **21 29 58.4 -0.7**
ARU pmax pmax
comp=Z,13nm,0.8s
ARU MLR MLR
comp=Z,115nm,20.0s
ABKAR Akbulak array 76.58 318 *e*P **P** **21 15 21.3 -1.1**
AKTO Aktyubinsk 77.63 319 P **P** **21 15 27.4 -0.9**
comp=Z,1.3nm,0.6s,baz=97,slow=11,SNR=4.2
AKTO LR LR 21 50 19.8
comp=Z,121nm,21.9s,baz=72,slow=36
GEYT Alibeck 79.85 307 P **P** **21 15 40.4 -0.4**
comp=Z,4.6nm,1.0s,baz=64,slow=3.4,SNR=15
GEYT PP **PP** **21 18 43.4 +1.1**
comp=Z,1.8nm,1.1s,baz=84,slow=4.6,SNR=4.1
GEYT LR LR 21 52 36.0
comp=Z,58nm,21.7s,baz=70,slow=37
GYA0B ALIBECK ARRAY 79.85 307 *e*P **P** **21 15 41.2 +0.3**
comp=Z,8.6nm,1.0s
YBH Yreka Blue Hor 79.95 49 P **P** **21 15 40.3 -1.1**
comp=Z,1.7nm,0.9s,baz=293,slow=5.1,SNR=4.5
YBH Yreka Blue Hor 79.95 49 *e*P **P** **21 15 43.2 +1.8**
comp=Z,5.2nm,1.1s
YKW3 Yellowknife Ar 80.11 28 *e*P **P** **21 15 40.9 -0.7**
comp=Z,13nm,1.4s
YKA Yellowknife Ar 80.13 28 P **P** **21 15 38.9 -2.8**
comp=Z,2.1nm,0.6s,baz=284,slow=5.3,SNR=15
YKA Yellowknife Ar 80.13 28 P **P** **21 15 39.0 -2.8**
PINE Pine Mountain 80.79 47 *e*P **P** **21 15 46.4 +0.4**
comp=Z,10nm,1.0s
AFDM Forest Hills D 81.86 52 *e*P **P** **21 15 51.5 0.0**
comp=Z,4.1nm,1.1s
SPITS Spitsbergen Ar 82.49 351 LR LR 21 57 27.9
comp=Z,34nm,18.7s,baz=50,slow=39
CMB Columbia Colle 82.52 53 *e*P **P** **21 15 55.5 +0.5**
comp=Z,6.5nm,1.3s
CMB Columbia Colle 82.52 53 *e*P **P** **21 15 55.5 +0.5**
CMB pmax pmax
comp=Z,7.0nm,1.3s
J08A Circle Bar Ran 82.64 47 *e*P **P** **21 15 57.1 +1.5**
J08A *e*pP **pP** **21 16 05.5 +0.7**
BMO Blue Mountains 83.08 45 *e*P **P** **21 15 57.3 -0.6**
comp=Z,5.9nm,1.1s
BMO Blue Mountains 83.08 45 *e*P **P** **21 15 57.3 -0.6**
BMO pmax pmax
comp=Z,6.0nm,1.1s
YERR Yerington 83.16 52 *e*P **P** **21 15 59.5 +0.9**
comp=Z,6.9nm,1.2s
RYN Ryan 83.79 52 *e*P **P** **21 16 02.8 +1.1**
comp=Z,2.9nm,1.0s
KVN Kaiserville 84.00 51 *e*P **P** **21 16 02.6 -0.2**
comp=Z,4.9nm,1.1s
KVN Kaiserville 84.00 51 *e*P **P** **21 16 02.6 -0.2**
KVN pmax pmax
comp=Z,5.0nm,1.1s
NV01 Mina Array Sit 84.01 52 *e*P **P** **21 16 01.9 -1.0**
NVAR Mina Array Bea 84.01 52 P **P** **21 16 02.2 -0.7**
comp=Z,1.3nm,0.8s,baz=274,slow=6.0,SNR=8.8
NV11 Mina Array Sit 84.12 52 *e*P **P** **21 16 04.7 +1.3**
comp=Z,0.6nm,1.3s
MFID Camas Ranch 84.49 47 *e*P **P** **21 16 06.5 +1.4**
comp=Z,7.0nm,1.1s
KLMR Klimovskoe 84.87 332 *e*P P 21 16 03.0 -3.5
KLMR pmax pmax
comp=Z,12nm,1.2s
KLMR Klimovskoe 84.87 332 *e*P P 21 16 03.0 -3.5
KLMR AMP 21 16 05.7
comp=Z,12nm,1.2s
MPMC Manual Prospec 85.26 54 P **P** **21 16 08.9 -0.3**
baz=286
HLID Hailey 85.43 46 P **P** **21 16 10.5 +0.6**
baz=287
ARCES ARCESS Array B 85.90 343 P **P** **21 16 09.8 -1.7**
comp=Z,3.7nm,0.9s,baz=64,slow=5.7,SNR=8.3
TPNV Topopah Spring 85.97 53 P **P** **21 16 13.2 +0.4**
baz=286
GSC Goldstone, Bar 86.00 55 P **P** **21 16 13.0 +0.2**
baz=286
LRM Limekiln Ridge 86.08 44 *e*P **P** **21 16 14.2 +1.0**
R11A Troy Canyon, C 86.08 51 P **P** **21 16 13.2 -0.1**
baz=287
MCMT McKenzie Canyo 86.12 45 *e*P **P** **21 16 14.9 +1.4**
BOZ Bozeman (W) 86.70 44 P **P** **21 16 15.5 -0.7**
baz=289
MONP2 Monument Peak 86.98 57 P **P** **21 16 17.2 -0.6**
baz=287
GMRC Granite Mounta 87.05 55 P **P** **21 16 17.9 -0.1**
baz=287
EGMT Eagleton 87.11 41 P **P** **21 16 18.0 0.0**
baz=290
EGMT Eagleton 87.11 41 *e*P **P** **21 16 18.6 +0.6**
comp=Z,12nm,1.4s
PSUT Pine Spring 87.33 51 *e*P **P** **21 16 20.5 +1.1**
comp=Z,4.4nm,0.8s
SPUT South Promonto 87.50 48 *e*P **P** **21 16 21.6 +1.4**
comp=Z,4.9nm,1.1s
DUG Dugway, Tooele 87.59 49 P **P** **21 16 20.2 -0.4**
baz=288
DUG Dugway, Tooele 87.59 49 *e*P **P** **21 16 20.5 0.0**
comp=Z,4.2nm,0.8s
DUG Dugway, Tooele 87.59 49 *e*P **P** **21 16 20.5 0.0**
DUG pmax pmax
comp=Z,4.0nm,0.8s
IRM Iron Mountain 87.64 55 P **P** **21 16 20.3 -0.4**
baz=287
HWUT Hardware Ranch 88.03 47 *e*P **P** **21 16 24.0 +1.3**
comp=Z,3.9nm,0.8s
KNB Kanab 88.58 52 *e*P **P** **21 16 25.7 +0.4**
comp=Z,6.0nm,1.0s
KNB Kanab 88.58 52 *e*P **P** **21 16 25.7 +0.4**
KNB pmax pmax
comp=Z,6.0nm,1.0s
VSR Storozhevoye 88.85 323 *e*P **P** **21 16 23.6 -2.5**
VSR pmax pmax
comp=Z,10.0nm,1.5s
VORD Divnogorie 88.88 323 *e*P **P** **21 16 23.5 -2.7**
VORD pmax pmax
comp=Z,6.0nm,1.0s
PDAR Pinedale Array 89.05 46 P **P** **21 16 27.7 +0.1**
comp=Z,0.2nm,0.6s,baz=308,slow=4.4,SNR=3.6
U15A North Rim 89.17 52 *e*P **P** **21 16 29.1 +0.8**
comp=Z,6.9nm,1.3s
Q16A Castle Valley 89.20 50 *e*P **P** **21 16 29.6 +1.3**
comp=Z,5.0nm,1.1s
GNI Garni 89.28 312 LR LR 22 00 56.4
comp=Z,41nm,19.2s,baz=68,slow=39
KBZ Khabaz 89.33 315 P **P** **21 16 26.6 -1.8**
comp=Z,3.0nm,0.9s,baz=202,slow=5.2,SNR=5.0
KBZ LR LR 21 59 55.3
comp=Z,83nm,18.9s,baz=79,slow=38
KIV Kislovodsk 89.40 316 *e*P **P** **21 16 28.0 -0.9**
KIV pmax pmax
comp=Z,7.0nm,1.1s
Y14A Wickenburg 89.40 55 *e*P **P** **21 16 29.1 0.0**
comp=Z,5.3nm,1.0s
214A Organ Pipe Nat 90.17 57 P **P** **21 16 32.3 -0.4**
baz=288
FINES FINESS Array B 90.31 336 P **P** **21 16 30.4 -2.2**
comp=Z,2.0nm,0.8s,baz=82,slow=4.0,SNR=11
O20A White River Ci 90.91 48 P **P** **21 16 35.6 -0.6**
baz=291
PV01 Paradox Valley 91.38 50 *e*P **P** **21 16 39.5 +1.0**
comp=Z,2.6nm,0.9s
TUC Tucson 91.68 56 P **P** **21 16 40.1 +0.3**
baz=290
N23A Red Feather La 92.25 47 *e*P **P** **21 16 43.6 +1.1**
comp=Z,11nm,1.3s
RSSD Black Hills 92.27 43 P **P** **21 16 42.9 +0.4**
baz=294
S22A 4UR Ranch, Cre 92.81 50 P **P** **21 16 45.8 +0.6**
baz=292
VNDA Vanda 93.27 177 LR LR 21 56 10.1
comp=Z,43nm,19.2s,baz=298,slow=34
AKASG Malin Array Be 94.67 326 LR LR 22 01 09.0
comp=Z,82nm,21.7s,baz=70,slow=36
HFS Hagfors 95.81 339 LR LR 22 01 41.8
comp=Z,74nm,20.0s,baz=47,slow=36
NOA NORSAR Array B 95.99 340 LR LR 22 02 24.4
comp=Z,54nm,20.3s,baz=35,slow=37
MNTX Cornudas Mount 96.19 55 P **P** **21 17 01.1 +0.7**
baz=292
B35A Bob, Littlefor 96.59 36 P **P** **21 17 00.6 -1.3**
baz=302
BRTR Keskin Array B 97.28 315 LR LR 22 03 25.9
comp=Z,33nm,21.6s,baz=26,slow=37
TXAR Lajitas Array 98.46 56 P **P** **21 17 08.0 -2.9**
comp=Z,0.2nm,0.7s,baz=316,slow=7.5,SNR=3.5
TXAR Lajitas Array 98.46 56 P **P** **21 17 08.0 -2.9**
MLR Muntele Rosu 99.31 322 LR LR 22 03 22.2
comp=Z,26nm,21.8s,baz=72,slow=36
TOA0 Torodi Ar. Sit 135.48 308 *e*PKPdf **PKPdf** **21 22 52.4 -0.6**
TORD Torodi Ar. Bea 135.48 308 PKP **PKPdf** **21 22 52.0 -0.9**
comp=Z,1.8nm,1.1s,baz=34,slow=1.3
DBIC Dimbokro 144.54 306 PKP **PKPab** **21 23 07.2 -0.6**
comp=Z,5.6nm,0.8s,baz=26,slow=7.8,SNR=3.6
LPAZ La Paz 146.11 96 PKPbc **PKPdf** **21 23 11.8 -0.9**
comp=Z,2.1nm,0.7s,baz=280,slow=4.7,SNR=9.2
LPAZ La Paz 146.11 96 *e*PKPdf **PKPdf** **21 23 13.9 +1.2**
LPAZ La Paz 146.11 96 *e*PKP2 **PKPdf** **21 23 13.9 +1.2**
SAML Samuel 149.69 81 *e*PKPbc **PKPbc** **21 23 22.9 +0.3**
SAML Samuel 149.69 81 *e*PKP2 **PKPbc** **21 23 22.9 +0.3**

IDC 30 21:15:24.9±1.9, 4°.50S×133°.79E, h0km, mb3.5/1, mb1 4.1/5, mb1mx3.6/45, mbtmp3.9/5, ML3.7/4, Error ellipse: s-maj=66.9km s-min=27.8km az=71.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.36**	**178**	Pn	Pn	21 19 01.1	-2.0
	0.2nm,0.3s,baz=356,slow=13,SNR=17						
WRA				Sn	Sn	21 21 44.5	-10
	0.0nm,0.3s,baz=2.0,slow=24,SNR=1.6						
FITZ	**Fitzroy Crossi**	**15.69**	**210**	Pn	Pn	21 19 06.3	-1.1
	0.3nm,0.3s,baz=41,slow=17,SNR=2.0						
FITZ				Sn	Sn	21 21 54.9	-7.2
	0.2nm,0.3s,baz=102,slow=17,SNR=2.8						
ASAR	**Alice Springs**	**19.05**	**180**	P	Pn	21 19 50.5	+0.9
	0.4nm,0.3s,baz=5.3,slow=12,SNR=69						
ASAR				S	Sn	21 23 14.6	-9.2
	0.0nm,0.3s,baz=2.2,slow=26,SNR=2.5						
CTA	**Charters Tower**	**19.68**	**143**	P	P	21 19 55.4	-0.4
	0.2nm,0.3s,baz=315,slow=10,SNR=4.4						
MKAR	**Makanchi Array**	**68.30**	**325**	P	P	21 26 27.9	0.0
	0.2nm,0.4s,baz=116,slow=7.4,SNR=3.7						

*ISCJB **30** 21:27:37.9±0.5, 39°.18N±0°.04×42°.26E±0°.04, h13km±5km, Error ellipse: s-maj=6.1km s-min=5.0km az=157.3*
*DDA **30** 21:27:38.0, 39°.20N×42°.29E, h7km, Ml2.7*
*CSEM **30** 21:27:37.5±0.3, 39°.19N×42°.22E, h10km, ML2.7, Error ellipse: s-maj=7.4km s-min=5.8km az=148.0*
*ISK **30** 21:27:37.1, 39°.19N×42°.24E, h4km, ML2.1/5*
ISC 30 21:27:37.6±1.0, 39°.19N±0°.03×42°.23E±0°.03, h14km±11km, n18, σ0.64/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKAR	**Karacoban**	**0.15**	**295**	*i* P	**Pb**	**21 27 41.5**	**-0.8**
EKAR				*i* S	**Sb**	**21 27 45.5**	**+0.1**
EKAR	**Karacoban**	**0.15**	**295**	P	**Pb**	**21 27 41.5**	**-0.8**
EKAR				S	**Sb**	**21 27 45.5**	**+0.1**
TUTA	**Tutak**	**0.49**	**65**	*i* P	**Pg**	**21 27 47.2**	**-0.3**
TUTA				*i* S	**Sg**	**21 27 54.0**	**-0.2**
TUTA	**Tutak**	**0.49**	**65**	P	**Pg**	**21 27 47.2**	**-0.3**
TUTA				S	**Sg**	**21 27 54.0**	**-0.2**
ADCV	**BITLIS_Adilcev**	**0.54**	**135**	*i* P	**Pg**	**21 27 47.9**	**-0.5**
ADCV				*i* S	**Sb**	**21 27 56.4**	**-0.3**
ADCV	**BITLIS_Adilcev**	**0.54**	**135**	P	**Pg**	**21 27 47.9**	**-0.5**
ADCV				S	**Sb**	**21 27 56.4**	**-0.3**
GURO	**Guroymak-BITLI**	**0.66**	**194**	PG	**Pg**	**21 27 50.6**	**0.0**
GURO				SG	**Sg**	**21 28 00.0**	**+0.7**
GURO	**Guroymak-BITLI**	**0.66**	**194**	*e*Pg	**Pg**	**21 27 50.6**	**0.0**
GURO				*e*Sg	**Sg**	**21 28 00.0**	**+0.7**
AGRB	**Hanur-Agry**	**0.70**	**57**	PG	**Pg**	**21 27 51.1**	**-0.2**
AGRB				SG	**Sb**	**21 28 01.7**	**+0.4**
AGRB	**Hanur-Agry**	**0.70**	**57**	*e*Pg	**Pg**	**21 27 51.1**	**-0.2**
AGRB				*e*Sg	**Sb**	**21 28 01.7**	**+0.4**
BNGB	**Bing¶‖**	**1.23**	**261**	PN	**Pn**	**21 28 01.1**	**+0.7**
CLDR	**Caldiran**	**1.31**	**92**	PN	**Pb**	**21 28 02.5**	**+0.4**
CLDR	**Caldiran**	**1.31**	**92**	*e*Pn	**Pb**	**21 28 02.5**	**+0.4**
YEDI	**Yedisu-Bingol**	**1.33**	**281**	PN	**Pb**	**21 28 03.4**	**+0.9**
YEDI	**Yedisu-Bingol**	**1.33**	**281**	*e*Pn	**Pb**	**21 28 03.4**	**+0.9**
SENK	**Senkaya-Erzuru**	**1.37**	**4**	PN	**Pb**	**21 28 03.9**	**+0.8**
SENK	**Senkaya-Erzuru**	**1.37**	**4**	*e*Pn	**Pb**	**21 28 03.9**	**+0.8**
BINT	**Bingol**	**1.40**	**257**	*e*Pn	**Pn**	**21 28 01.1**	**-1.7**

IDC 30 21:31:12.8±1.6, 12°.96N×143°.50E, h215km±19km, mb3.0/4, mb1 3.2/4, mb1mx2.8/58, mbtmp3.5/4, Error ellipse: s-maj=52.4km s-min=19.5km az=101.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.47**	**65**	P	Pn	21 31 48.4	+0.9
	3.9nm,0.3s,baz=68,slow=2.1,SNR=7.0						
GUMO				S	Sn	21 32 14.6	+0.2
	7.1nm,0.3s,baz=1.7,slow=23,SNR=9.4						
WRA	**Warramunga Arr**	**33.92**	**196**	P	P	21 37 34.8	-1.0
	0.4nm,0.7s,baz=17,slow=9.6,SNR=2.7						
ASAR	**Alice Springs**	**37.60**	**195**	P	P	21 38 07.5	+0.5
	0.3nm,0.7s,baz=21,slow=14,SNR=4.6						
BVAR	**Borovoye Array**	**69.59**	**322**	P	P	21 41 58.6	0.0
	0.4nm,0.3s,baz=103,slow=6.4,SNR=6.1						
ILAR	**Eielson Array**	**69.70**	**25**	P	P	21 41 59.0	0.0
	0.3nm,0.5s,baz=258,slow=5.5,SNR=5.7						

*ISCJB **30** 21:43:38.5±1.1, 28.03N±0.03×18.2W±0.1, h10km, Error ellipse: s-maj=15.7km s-min=3.3km az=172.4*
*CSEM **30** 21:43:42.5, 27.68N×18.12W, h20km, ML3.6*
ISC 30 21:43:39.3±2.2, 27.95N±0.06×18.3W±0.1, h10km, n11, σ1°15/16, Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CORC	**Orchilla, El H**	**0.27**	**154**	P	**Pg**	**21 43 46.0**	**+1.1**
	3μm,0.1s,SNR=18						
CORC				S	**Sg**	**21 43 48.6**	**0.0**
	16μm,0.1s,SNR=7.9						
CTAN	**El Hierro**	**0.28**	**135**	P	**Pg**	**21 43 46.3**	**+1.3**
	1μm,0.1s,SNR=18						
CTAN				S	**Sg**	**21 43 49.1**	**+0.3**
	3μm,0.0s,SNR=7.9						
CJUL	**El Julon, El H**	**0.28**	**142**	P	**Pg**	**21 43 46.2**	**+1.1**
	2μm,0.1s,SNR=18						
CJUL				S	**Sg**	**21 43 48.8**	**-0.1**
	61μm,0.2s,SNR=7.9						
CCUM	**Cumbre, El Hie**	**0.30**	**133**	P	**Pg**	**21 43 46.4**	**+1.0**
	742nm,0.1s,SNR=18						
CCUM				S	**Sg**	**21 43 49.2**	**-0.3**
	10μm,0.2s,SNR=7.9						
CMCL	**Mercadel, El H**	**0.33**	**136**	P	**Pg**	**21 43 46.5**	**+0.5**
	2μm,0.2s,SNR=18						
CMCL				S	**Sg**	**21 43 49.6**	**-0.8**
	16μm,0.2s,SNR=7.9						
CTIG	**El Hierro**	**0.36**	**117**	P	**Pg**	**21 43 47.5**	**+1.1**
	922nm,0.2s,SNR=18						
CTIG				S	**Sg**	**21 43 51.4**	**+0.3**
	3μm,0.3s,SNR=7.9						
CRST	**La Restinga, E**	**0.41**	**140**	P	**Pg**	**21 43 46.5**	**-0.8**
	1μm,0.1s,SNR=18						
CRST				S	**Sg**	**21 43 49.8**	**-2.9**
	28μm,0.3s,SNR=7.9						
FUL	**Funchal**	**4.83**	**14**	*e*Sn	Sn	21 45 46.7	-1.4
PMAR	**Madeira**	**4.90**	**14**	*e*Sn	**Sn**	**21 45 49.7**	**-0.4**
PMAR				A	A	21 45 52.5	
	35nm,0.1s						
PMOZ	**Porto Moniz, M**	**4.94**	**11**	*e*Sn	Sn	21 45 49.3	-1.8
PMOZ				A	A	21 45 57.5	
	48nm,0.5s						
PMPS	**Porto Santo**	**5.36**	**18**	*e*Sn	**Sn**	**21 46 00.3**	**-0.8**

*ISCJB **30** 21:50:29.3±0.8, 32.43S±0.04×69.85W±0.05, h116km±7km, Error ellipse: s-maj=7.0km s-min=5.1km az=39.7*
*SJA **30** 21:50:29.9±1.0, 32.42S×69.77W, h108km±5km, ML2.7, MW3.1*
*GUC **30** 21:50:30.1±0.3, 32.37S×69.98W, h97km±6km, ML2.9*
ISC 30 21:50:29.3±1.7, 32.45S±0.05×69.84W±0.05, h117km±12km, n25, σ0°71/35, 5D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUSP	**Uspallata**	**0.45**	**59**	*e*P	**Pn**	**21 50 46.9**	**-0.1**
AUSP				*e*S	**Sn**	**21 50 59.4**	**-0.8**
RTLS	**Leoncito**	**0.80**	**35**	*e*P	**Pn**	**21 50 49.7**	**+0.1**
RTLS				*e*S	**Sn**	**21 51 04.6**	**-0.2**
RTLS				IAML		21 51 05.4	
	comp=Z,180nm,0.2s						
ARCO	**CERRO ARCO**	**0.86**	**117**	*e*P	**Pn**	**21 50 50.4**	**+0.5**
ARCO				IAML		21 50 50.6	
	comp=Z,172nm,0.2s						
ASAL	**Salagasta**	**0.86**	**99**	*e*P	**Pn**	**21 50 50.3**	**+0.5**
FCH	**Farellones**	**0.95**	**203**	*i*P	**Pn**	**21 50 51.6**	**+0.6**
FCH				*e*S	**Sn**	**21 51 08.3**	**+1.1**
FCH				IAML		21 51 08.6	
	comp=N,324nm,0.2s						
PEL	**Peldehue**	**0.99**	**226**	*e*P	**Pn**	**21 50 50.7**	**-0.3**
PEL				*e*S	**Sn**	**21 51 06.7**	**-0.8**
AAGR	**Agrelo**	**1.06**	**127**	*e*P	**Pn**	**21 50 52.8**	**+1.0**
CLCH	**Cerro Calan**	**1.11**	**212**	*e*P	**Pn**	**21 50 52.8**	**+0.5**
CLCH				*e*S	**Sn**	**21 51 09.9**	**+0.2**
CLCH				IAML		21 51 11.5	
	comp=E,233nm,0.5s						
ROCH	**El Roble**	**1.11**	**242**	*e*P	**Pn**	**21 50 52.4**	**-0.1**
ROCH				*e*S	**Sn**	**21 51 09.4**	**-0.6**
ROCH				IAML		21 51 11.0	
	comp=E,455nm,0.2s						
ROC1	**El Roble**	**1.12**	**242**	*e*S	**Sn**	**21 51 09.4**	**-0.8**
RTCV	**Cerro Valdivia**	**1.25**	**62**	*e*P	**Pn**	**21 50 54.0**	**+0.2**
RTCV				*e*S	**Sn**	**21 51 12.0**	**-0.2**
AVIZ	**Vizcacheras**	**1.51**	**133**	*e*P	**Pn**	**21 50 57.5**	**+0.8**
RTLL	**Cerro Villicun**	**1.61**	**46**	*e*P	**Pn**	**21 50 58.3**	**+0.3**
RTLL				*e*S	**Sn**	**21 51 19.3**	**-0.4**
AMOG	**MOGNA**	**1.90**	**38**	*e*P	**Pn**	**21 51 02.0**	**+0.6**
ACAN	**Cantantal**	**2.25**	**86**	*e*P	**Pn**	**21 51 05.9**	**+0.1**
AROD	**Rodeo**	**2.30**	**8**	*e*P	**Pn**	**21 51 08.2**	**+1.4**
ACDV	**Cuesta del Vie**	**2.36**	**15**	*e*P	**Pn**	**21 51 08.6**	**+1.2**
GO04	**Tololo Observa**	**2.42**	**340**	*e*P	**Pn**	**21 51 08.3**	**+0.1**
GO04				*e*S	**Sn**	**21 51 37.2**	**-0.8**
GO04				IAML		21 51 40.5	
	comp=E,134nm,0.5s						
TLL	**Tololo Astrono**	**2.42**	**340**	*e*P	**Pn**	**21 51 08.3**	**0.0**
TLL				*e*S	**Sn**	**21 51 37.5**	**-0.7**
TLL				IAML		21 51 42.1	
	comp=N,73nm,0.5s						
AGUA	**GUANDACOL**	**3.18**	**22**	*e*P	**Pn**	**21 51 19.4**	**+1.5**
MRA	**San Martin**	**3.49**	**91**	*e*P	**Pn**	**21 51 21.2**	**-0.9**
MRA				IAML		21 52 27.4	
	comp=Z,7.8nm,0.3s						
APLL	**PUNTA DE LOS L**	**3.50**	**55**	*e*P	**Pn**	**21 51 22.2**	**+0.1**
ACLC	**CERRO LA CRUZ**	**3.91**	**40**	*e*P	**Pn**	**21 51 27.8**	**0.0**
VCA	**Vinchina**	**3.96**	**21**	*e*S	**Pn**	**21 51 29.4**	**+0.9**
TCA	**Tanti**	**4.60**	**77**	*e*S	**Pn**	**21 51 36.4**	**-0.5**

*ISCJB **30** 22:07:25.8±0.4, 34.47N±0.05×138.03E±0.05, h280km±3km, mb3.4/7, Error ellipse: s-maj=7.6km s-min=6.1km az=164.7*
*JMA **30** 22:07:26.2±0.2, 34.39N×137.97E, h278km±2km, M3.2*
*IDC **30** 22:07:26.7±1.0, 34.38N×138.06E, h278km±12km, mb3.2/7, mb1 3.3/10, mb1mx3.0/61, mbtmp3.8/10, Error ellipse: s-maj=30.4km s-min=11.6km az=70.0*
ISC 30 22:07:26.5±0.8, 34.44N±0.06×138.01E±0.05, h277km±6km, n42, σ1°04/58, mb3.5/7, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TK04	**Tokai 4**	**0.12**	**242**	P	**Pn**	**22 08 02.5**	**+0.8**
TK04				*e*S	**S**	**22 08 30.1**	**+0.6**
JSG	**Sagara**	**0.28**	**33**	P	**Pn**	**22 08 02.7**	**+0.8**
JKKG	**Kakegawa**	**0.34**	**356**	P	**Pn**	**22 08 02.3**	**+0.4**
JHMK	**Hamakita**	**0.42**	**331**	P	**Pn**	**22 08 02.2**	**+0.2**
HMMJ	**Hamamatsu 2**	**0.47**	**331**	P	**Pn**	**22 08 02.5**	**+0.2**
HMMJ				S	**S**	**22 08 30.0**	**-0.7**
TK02	**Tokai 2**	**0.54**	**203**	P	**Pn**	**22 08 02.8**	**+0.5**
SHZ3	**Shizuoka 3**	**0.64**	**15**	P	**Pn**	**22 08 03.4**	**+0.5**
JIZS	**Izushimoda**	**0.77**	**69**	P	**Pn**	**22 08 03.6**	**+0.3**
JNY	**Yasuok**	**0.92**	**353**	P	**Pn**	**22 08 04.5**	**+0.5**
JAO	**Obara**	**1.03**	**323**	P	**Pn**	**22 08 04.8**	**+0.3**
JAO				*e*S	**S**	**22 08 34.3**	**-0.3**
JIE	**Ise**	**1.07**	**268**	P	**Pn**	**22 08 04.6**	**-0.1**
JIE				*e*S	**S**	**22 08 33.7**	**-1.3**
JYN	**Shimob**	**1.14**	**23**	P	**Pn**	**22 08 05.9**	**+0.8**
JOD2	**Odawara 2**	**1.21**	**47**	P	**Pn**	**22 08 06.1**	**+0.6**
JKN2	**Miekihoku**	**1.45**	**262**	P	**Pn**	**22 08 06.6**	**-0.4**
JEG	**Eigenji**	**1.50**	**298**	P	**Pn**	**22 08 07.5**	**+0.2**
JRY	**Ryogami san**	**1.73**	**25**	P	**Pn**	**22 08 10.1**	**+1.1**
JHJ	**Hachijo jima 2**	**1.98**	**131**	P	**Pn**	**22 08 11.3**	**+0.2**
	7.4nm,0.3s,baz=41,slow=19,SNR=6.2						
JHJ				S	**S**	**22 08 48.1**	**+1.7**
	7.7nm,0.3s,baz=343,slow=19,SNR=3.5						
BSO4	**Boso 4**	**2.00**	**73**	P	**Pn**	**22 08 11.8**	**+0.8**
BSO4				S	**S**	**22 08 46.1**	**-0.3**
JHJ2	**Mitsune**	**2.01**	**131**	P	**Pn**	**22 08 11.2**	**-0.1**
BSO3	**Boso 3**	**2.10**	**79**	P	**Pn**	**22 08 11.8**	**+0.1**
BSO3				S	**S**	**22 08 47.2**	**-0.4**
MJAR	**Matsushiro Arr**	**2.10**	**4**	P	**Pn**	**22 08 12.5**	**+0.5**
	8.5nm,0.3s,baz=194,slow=11,SNR=222						
MJAR				S	**S**	**22 08 47.8**	**-0.4**
	baz=197,slow=21,SNR=2.3						
MAT	**Matsushiro**	**2.10**	**4**	P	**Pn**	**22 08 12.7**	**+0.7**
MAT				S	**S**	**22 08 48.2**	**0.0**
MAT	**Matsushiro**	**2.10**	**4**	P	**Pn**	**22 08 12.7**	**+0.7**
MAT				S	**S**	**22 08 48.0**	**-0.2**
JWZ	**Kozaga**	**2.11**	**245**	P	**Pn**	**22 08 11.2**	**-1.0**
JKG	**Kaga**	**2.28**	**324**	P	**Pn**	**22 08 14.0**	**+0.4**
JWT	**Wachi**	**2.30**	**292**	P	**Pn**	**22 08 13.7**	**-0.1**
JWT				S	**S**	**22 08 49.5**	**-1.8**
JAG	**Ashikaga**	**2.30**	**30**	P	**Pn**	**22 08 13.8**	**0.0**
JAG				S	**S**	**22 08 49.6**	**-1.8**
BSO1	**Boso 1**	**2.46**	**84**	P	**Pn**	**22 08 14.6**	**-0.1**
BSO1				S	**S**	**22 08 52.7**	**-0.4**
JYT	**Yasato**	**2.52**	**45**	P	**Pn**	**22 08 15.7**	**-0.1**
JYT				S	**S**	**22 08 53.2**	**-1.9**
JHO	**Hitachi**	**3.01**	**43**	P	**Pn**	**22 08 20.5**	**-0.2**
JHO				*e*S	**S**	**22 09 01.8**	**-2.0**
JFK	**Kawauchi**	**3.73**	**38**	P	**Pn**	**22 08 28.5**	**0.0**
JFK				*e*S	**S**	**22 09 14.7**	**-3.3**
JCJ	**Chichijima**	**8.16**	**153**	P	**Pn**	**22 09 18.2**	**-3.7**
	2.5nm,0.3s,baz=288,slow=20,SNR=3.7						
JCJ				S	S	22 10 40.9	-14
	3.5nm,0.3s,baz=311,slow=20,SNR=3.9						
KSRS	**Korea Array**	**8.71**	**293**	P	**Pn**	**22 09 30.0**	**+1.4**
	0.2nm,0.3s,baz=107,slow=13,SNR=10						
ASAJ	**Asahikawa**	**10.29**	**19**	P	**Pn**	**22 09 48.5**	**+0.3**
	0.4nm,0.3s,baz=220,slow=12,SNR=5.3						
KLR	**Kul'dur**	**15.48**	**344**	P	**P**	**22 10 50.7**	**+0.8**
	0.0nm,0.3s,baz=149,slow=16,SNR=3.5						
SONM	**Songino Array**	**27.10**	**309**	P	**P**	**22 12 44.9**	**+0.7**
	0.3nm,0.5s,baz=115,slow=9.7,SNR=2.7						
MKAR	**Makanchi Array**	**43.20**	**304**	P	**P**	**22 15 01.2**	**+0.6**
	0.4nm,0.6s,baz=85,slow=8.7,SNR=4.3						
KURBB	**Kurchatov Arra**	**45.46**	**310**	P	**P**	**22 15 18.5**	**+0.3**
	1.8nm,0.2s,baz=93,slow=7.6,SNR=7.2						
WRA	**Warramunga Arr**	**54.20**	**184**	P	**P**	**22 16 23.2**	**-0.7**
	0.6nm,0.3s,baz=0.6,slow=7.6,SNR=22						
ASAR	**Alice Springs**	**57.92**	**184**	P	**P**	**22 16 49.8**	**-0.4**
	0.3nm,0.3s,baz=356,slow=3.7,SNR=14						
FINES	**FINESS Array B**	**69.79**	**332**	P	**P**	**22 18 07.5**	**+0.8**
	1.2nm,0.7s,baz=34,slow=5.1,SNR=7.7						
HFS	**Hagfors**	**75.27**	**335**	P	**P**	**22 18 39.6**	**+0.7**
	1.2nm,0.7s,baz=36,slow=7.6,SNR=3.5						

*NEIC **30** 22:24:17.2±2.7, 6.64S×129.66E, h92km±25km, mb4.3/3, Error ellipse: s-maj=24.8km s-min=12.9km az=50.0*
*IDC **30** 22:24:18.9±6.4, 6.68S×129.68E, h108km±58km, mb3.8/6, mb1 4.1/9, mb1mx3.6/46, mbtmp4.3/9, Error ellipse: s-maj=67.7km s-min=22.3km az=57.0*
*ISCJB **30** 22:24:20.9±0.4, 6.85S±0.04×129.51E±0.07, h139km, mb4.1/10, Error ellipse: s-maj=9.3km s-min=5.8km az=5.0*
*DJA **30** 22:24:27.6±0.9, 7.5S±5×13.0E±°, h128km±18km, M4.7/6, mB5.1/2, mb4.9/4, MLv4.7/6, Mw(mB)4.5/2*
ISC 30 22:24:22.3±0.6, 6.81S±0.06×129.54E±0.06, h139km, n22, σ2°95/26, mb4.1/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.10**	**124**	P	Pn	22 25 02.6	+4.7
SAUI				S	**Sn**	**22 25 27.7**	**+2.4**
BNDI	**Bandanaira**	**2.30**	**9**	P	**Pn**	**22 25 02.3**	**+1.9**
NLAI	**Namlea**	**4.30**	**325**	P	**Pn**	**22 25 30.4**	**+4.1**
NLAI				S	**Sn**	**22 26 08.3**	**-7.7**
FAKI	**Fak Fak**	**4.71**	**35**	P	**Pn**	**22 25 32.7**	**+0.9**
FAKI				S	**Sn**	**22 26 23.4**	**-2.4**
LBMI	**Labuha**	**6.46**	**342**	P	**Pn**	**22 25 58.9**	**+3.8**
RKPI	**Ransiki, Papua**	**7.01**	**41**	P	**Pn**	**22 26 04.1**	**+1.7**
RKPI				S	**Sn**	**22 27 20.3**	**-0.6**
FITZ	**Fitzroy Crossi**	**11.85**	**198**	P	**Pn**	**22 27 05.2**	**-1.8**
	2.9nm,0.3s,baz=16,slow=10,SNR=69						
FITZ				S	Sn	22 29 08.1	-10
	1.3nm,0.3s,baz=74,slow=20,SNR=2.5						
WRAB	**Tennant Creek**	**13.86**	**161**	*e*Pn	**Pn**	**22 27 31.3**	**-1.6**
	8.1nm,0.3s						
WRA	**Warramunga Arr**	**13.86**	**161**	P	**Pn**	**22 27 30.6**	**-2.4**
	1.7nm,0.3s,baz=331,slow=13,SNR=48						
WRA				S	Sn	22 29 55.0	-11
	3.1nm,0.3s,baz=341,slow=22,SNR=8.5						
ASAR	**Alice Springs**	**17.28**	**166**	P	**Pn**	**22 28 15.9**	**+0.8**
	1.6nm,0.3s,baz=351,slow=12,SNR=90						
ASAR				S	**S**	**22 31 19.1**	**-8.5**
	0.6nm,0.3s,baz=355,slow=26,SNR=6.0						
STKA	**Stephens Creek**	**27.36**	**157**	P	**P**	**22 29 55.3**	**+0.8**
	2.1nm,0.5s,baz=338,slow=10.0,SNR=6.5						
NWAO	**Narrogin (SRO)**	**28.39**	**202**	P	**P**	**22 30 04.9**	**+1.3**
	9.9nm,0.9s						
COCO	**West Island**	**32.68**	**258**	P	**P**	**22 30 42.4**	**+0.8**
	123nm,0.6s						
TAU	**Tasmania Unive**	**39.23**	**159**	P	**P**	**22 31 37.5**	**+0.6**
	4.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**39.26**	**310**	P	**P**	**22 31 37.9**	**+0.3**
	1.6nm,0.4s,baz=139,slow=7.2,SNR=6.0						
PALK	**Palekele**	**50.68**	**285**	P	**P**	**22 33 08.4**	**+0.3**
	1.3nm,0.7s						
MKAR	**Makanchi Array**	**67.82**	**327**	P	**P**	**22 35 05.6**	**+0.2**
	1.5nm,0.5s,baz=118,slow=8.0,SNR=9.1						
ZALV	**Zalesovo Beam**	**71.21**	**334**	P	**P**	**22 35 25.4**	**-0.6**
	0.5nm,0.5s,baz=145,slow=6.5,SNR=2.9						
KURBB	**Kurchatov Arra**	**72.11**	**329**	P	**P**	**22 35 31.0**	**-0.5**
	0.6nm,0.4s,baz=125,slow=4.7,SNR=12						
KURK	**Kurchatov**	**72.12**	**329**	P	**P**	**22 35 31.0**	**-0.5**
WSAR	**Wadi Sarin**	**75.37**	**296**	P	**P**	**22 35 52.2**	**+1.1**
	3.7nm,0.7s,baz=180,slow=4.1,SNR=6.5						
TORD	**Torodi Ar. Bea**	**128.32**	**281**	PKP	**PKPdf**	**22 43 12.2**	**-1.2**
	0.3nm,0.5s,baz=73,slow=2.0						

NNC 30 22:39:35.2±6.9, 37.07N×70.58E, h7km±218km, mb3.9, mpv3.6,3C-7D, Error ellipse: s-maj=232.6km s-min=31.0km az=15.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.73**	**37**	⇓P	Pn	22 40 34.0	+0.7
	4.2nm,0.3s						
SFK				⇑S	Sn	22 41 19.7	+2.1
	14nm,0.3s						
AML	**Almayashu**	**5.60**	**24**	P	Pn	22 40 59.0	-0.2
	SNR=38						
MNAS	**Manas**	**5.61**	**15**	⇓P	Pn	22 40 59.7	+0.6
	2.2nm,0.3s						
MNAS				⇓S	Sn	22 42 04.9	+1.1
	7.6nm,0.5s						
UCH	**Uchtor**	**5.98**	**29**	P	Pn	22 41 03.3	-1.1
	SNR=15						
KK31	**Karatay Array**	**6.03**	**360**	⇓P	Pn	22 41 05.8	+1.1
	0.6nm,0.3s,baz=178,slow=12						
KK31				⇑S	Sn	22 42 15.8	+1.9
	10nm,0.6s,baz=183,slow=23						
EKS2	**Erkin-Say**	**6.10**	**23**	P	Pn	22 41 05.9	+0.1
	SNR=7.2						
AAK	**Ala-Archa**	**6.32**	**27**	⇓P	Pn	22 41 07.7	-1.2
	2.4nm,0.4s						
AAK				⇑S	Sn	22 42 20.6	-0.9
	2.7nm,0.6s						
AAK	**Ala-Archa**	**6.32**	**27**	P	Pn	22 41 08.1	-0.8
	SNR=5.5						
ULHL	**Ulahol**	**6.77**	**38**	P	Pn	22 41 12.3	-2.8
	SNR=5.9						
TKM2	**Tokmak 2**	**7.00**	**32**	⇓P	Pn	22 41 15.8	-2.4
	6.9nm,0.7s						
TKM2				⇓S	Sn	22 42 37.2	-1.0
	1.5nm,0.7s						
TKM2	**Tokmak 2**	**7.00**	**32**	P	Pn	22 41 16.0	-2.3
	SNR=12						

*ISCJB **30** 22:39:49.6±0.4, 39.09N±0.02×28.15E±0.03, h7km±4km, Error ellipse: s-maj=4.2km s-min=3.4km az=155.6*
*CSEM **30** 22:39:49.9±0.2, 39.08N×28.15E, h10km, ML2.7, Error ellipse: s-maj=3.5km s-min=3.3km az=160.0*
*DDA **30** 22:39:49.2, 39.11N×28.15E, h7km, Ml2.8*
*ISK **30** 22:39:49.3, 39.10N×28.13E, h8km, ML2.7/9*
ISC 30 22:39:49.6±0.9, 39.09N±0.02×28.15E±0.02, h13km±8km, n43, σ0°55/62, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.34**	**230**	*i*P	**Pb**	**22 39 56.8**	**-0.7**
AKHS				*i*S	**Sg**	**22 40 01.6**	**+0.6**
AKHS	**Akhisar**	**0.34**	**230**	P	**Pb**	**22 39 56.8**	**-0.7**
AKHS				S	**Sg**	**22 40 01.6**	**+0.6**
AKS	**Akhisar**	**0.34**	**231**	PG	**Pg**	**22 39 56.2**	**-0.2**
AKS				SG	**Sg**	**22 40 01.4**	**+0.4**
AKS	**Akhisar**	**0.34**	**231**	*e*Pg	**Pg**	**22 39 56.2**	**-0.2**
AKS				*e*Sg	**Sg**	**22 40 01.4**	**+0.4**
STEP	**BALIKESIR_Sava**	**0.44**	**311**	*i*P	**Pg**	**22 39 57.6**	**-0.7**
STEP				*i*S	**Sg**	**22 40 04.2**	**+0.1**
STEP	**BALIKESIR_Sava**	**0.44**	**311**	P	**Pg**	**22 39 57.6**	**-0.7**
STEP				S	**Sg**	**22 40 04.2**	**+0.1**
DEMI	**Demirci**	**0.45**	**96**	*i*P	**Pb**	**22 39 58.9**	**-0.5**
DEMI				*i*S	**Sg**	**22 40 04.7**	**+0.3**
DEMI	**Demirci**	**0.45**	**96**	P	**Pb**	**22 39 58.9**	**-0.5**
DEMI				S	**Sg**	**22 40 04.7**	**+0.3**
DURS	**Dursunbey**	**0.57**	**27**	*i*P	**Pg**	**22 40 00.2**	**-0.5**
DURS				*i*S	**Sn**	**22 40 12.1**	**-0.7**
DURS	**Dursunbey**	**0.57**	**27**	P	**Pg**	**22 40 00.2**	**-0.5**
DURS				S	**Sn**	**22 40 12.1**	**-0.7**
DST	**Dursunbey**	**0.63**	**36**	PG	**Pb**	**22 40 02.6**	**+0.1**
DST				SG	**Sb**	**22 40 11.3**	**0.0**
DST	**Dursunbey**	**0.63**	**36**	*e*Pg	**Pb**	**22 40 02.6**	**+0.1**
DST				*e*Sg	**Sb**	**22 40 11.3**	**0.0**
SMAA	**Simav-Kutahya**	**0.65**	**89**	PG	**Pb**	**22 40 02.6**	**-0.3**
SMAA				SG	**Sb**	**22 40 11.7**	**-0.2**
SMAA	**Simav-Kutahya**	**0.65**	**89**	*e*Pg	**Pb**	**22 40 02.6**	**-0.3**
SMAA				*e*Sg	**Sb**	**22 40 11.7**	**-0.2**
SIMA	**Simav-Kutahya**	**0.65**	**91**	PG	**Pb**	**22 40 02.7**	**-0.2**
SIMA	**Simav-Kutahya**	**0.65**	**91**	*e*Pg	**Pb**	**22 40 02.7**	**-0.2**
MANT	**Manisa**	**0.68**	**152**	*i*P	**Pg**	**22 40 02.7**	**-0.2**
MANT				*i*S	**Sg**	**22 40 11.7**	**-0.2**
MANT	**Manisa**	**0.68**	**152**	P	**Pg**	**22 40 02.7**	**-0.2**
MANT				S	**Sg**	**22 40 11.7**	**-0.2**
KULA	**Kula-Manisa**	**0.70**	**145**	PG	**Pb**	**22 40 03.6**	**-0.2**
KULA	**Kula-Manisa**	**0.70**	**145**	*e*Pg	**Pb**	**22 40 03.6**	**-0.2**
SHAP	**Saphane-Kutahy**	**0.84**	**94**	PG	**Pb**	**22 40 06.0**	**-0.1**
SHAP	**Saphane-Kutahy**	**0.84**	**94**	*e*Pg	**Pb**	**22 40 06.0**	**-0.1**
GONE	**Gonen-Balikesi**	**1.02**	**340**	PG	**Pg**	**22 40 08.9**	**-0.3**
GONE	**Gonen-Balikesi**	**1.02**	**340**	*e*Pg	**Pg**	**22 40 08.9**	**-0.3**
TVSB	**Tavsanli**	**1.08**	**70**	PN	**Pg**	**22 40 09.9**	**-0.6**
TVSB	**Tavsanli**	**1.08**	**70**	*e*Pn	**Pg**	**22 40 09.9**	**-0.6**
AYDB	**Zeytinkoy-Aydi**	**1.16**	**190**	PN	**Pn**	**22 40 11.9**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**1.16**	**190**	*e*Pn	**Pn**	**22 40 11.9**	**+0.2**
EDC	**Edincik**	**1.27**	**350**	PN	**Pn**	**22 40 13.3**	**+0.2**
EDC	**Edincik**	**1.27**	**350**	*e*Pn	**Pn**	**22 40 13.3**	**+0.2**
BAYC	**CANAKKALE_Bayr**	**1.40**	**298**	*i*P	**Pg**	**22 40 17.1**	**+0.6**
BAYC				*i*S	**Sg**	**22 40 34.7**	**+0.1**
BAYC	**CANAKKALE_Bayr**	**1.40**	**298**	P	**Pg**	**22 40 17.1**	**+0.6**
BAYC				S	**Sg**	**22 40 34.7**	**+0.1**
DGB	**˜zmir**	**1.44**	**224**	*i*P	**Pb**	**22 40 16.2**	**0.0**
DGB				*i*S	**Sn**	**22 40 33.7**	**-0.4**
AYDN	**Tasoluk**	**1.45**	**188**	*i*P	**Pg**	**22 40 17.3**	**-0.1**
AYDN	**Tasoluk**	**1.45**	**188**	P	**Pg**	**22 40 17.3**	**-0.1**
YLV	**Yalova**	**1.75**	**32**	PN	**Pb**	**22 40 21.1**	**-0.5**
YLV	**Yalova**	**1.75**	**32**	*e*Pn	**Pb**	**22 40 21.1**	**-0.5**
ADVT	**Abdulvahap**	**1.81**	**42**	PN	**Pn**	**22 40 21.7**	**+1.1**
ADVT	**Abdulvahap**	**1.81**	**42**	*e*Pn	**Pn**	**22 40 21.7**	**+1.1**
BORA	**Eskisehir**	**1.95**	**66**	PN	**Pn**	**22 40 23.8**	**+1.3**
BORA	**Eskisehir**	**1.95**	**66**	*e*Pn	**Pn**	**22 40 23.8**	**+1.3**
GULT	**Gulveren**	**2.26**	**53**	PN	**Pn**	**22 40 28.2**	**+1.4**
GULT	**Gulveren**	**2.26**	**53**	*e*Pn	**Pn**	**22 40 28.2**	**+1.4**

*ISCJB **30** 22:50:46.9±0.6, 37.90N±0.05×26.86E±0.05, h9km±8km, Error ellipse: s-maj=10.1km s-min=4.2km az=39.4*
*DDA **30** 22:50:46.9, 37.88N×26.84E, h7km, Ml2.5*
*ISK **30** 22:50:46.7, 37.93N×26.88E, h8km, ML2.2/6*
*CSEM **30** 22:50:47.1±0.1, 37.94N×26.88E, h10km, ML2.2, Error ellipse: s-maj=5.3km s-min=2.2km az=43.0*
ISC 30 22:50:47.1±1.0, 37.94N±0.04×26.88E±0.04, h14km±11km, n22, σ0°53/34, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGB	**˜zmir**	**0.12**	**360**	*i*P	**Pb**	**22 50 51.0**	**-0.1**
DGB				*i*S	**Sb**	**22 50 53.5**	**-0.3**
GCAM	**G?zelcaml?**	**0.36**	**130**	PG	**Pg**	**22 50 54.4**	**-0.1**
GCAM				SG	**Sg**	**22 50 59.7**	**+0.3**
GCAM	**G?zelcaml?**	**0.36**	**130**	*i*P	**Pg**	**22 50 54.1**	**-0.4**
GCAM				*i*S	**Sg**	**22 50 59.5**	**0.0**
GCAM	**G?zelcaml?**	**0.36**	**130**	P	**Pg**	**22 50 54.1**	**-0.4**
GCAM	**G?zelcaml?**	**0.36**	**130**	*e*Pg	**Pg**	**22 50 54.4**	**-0.1**
GCAM				S	**Sg**	**22 50 59.5**	**0.0**
ZEY	**˜zmir**	**0.42**	**315**	*i*P	**Pg**	**22 50 55.6**	**0.0**
ZEY				*i*S	**Sb**	**22 51 02.5**	**-0.1**
URLA	**Izmir**	**0.48**	**332**	PG	**Pg**	**22 50 56.0**	**-0.6**
URLA				SG	**Sg**	**22 51 03.8**	**

CHTO	Chiang Mai	32.08	308	eP	P	23 03 19.6	-0.6
	6.3nm,1.0s						
NJ2	Nanjing	32.68	350	eP	P	23 03 25.3	+0.1
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
JNU	Nakatsue	33.58	8	LR	LR	23 15 43.9	
	comp=Z,19nm,19.7s,baz=121,slow=34						
STKA	Stephens Creek	35.04	155	P	P	23 03 46.8	+0.9
	1.2nm,0.5s,baz=324,slow=7.6,SNR=5.2						
CD2	Chengdu	37.12	328	P	P	23 04 04.0	+0.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
XAN	Xi'an	37.40	337	P	P	23 04 04.3	-1.6
XAN				pmax	pmax		
	comp=Z,5.0nm,2.2s						
KSAR	Wonju Array Be	37.55	3	P	P	23 04 06.6	-0.5
KSRS	Korea Array	37.57	3	P	P	23 04 06.6	-0.6
	1.1nm,0.7s,baz=178,slow=11,SNR=4.2						
KS01	Wonju Array Si	37.59	3	eP	P	23 04 07.6	+0.2
MAJO	Matsushiro	38.49	17	eP	P	23 04 14.9	-0.1
	25nm,1.7s						
MJAR	Matsushiro Arr	38.49	17	P	P	23 04 14.5	-0.5
	1.8nm,0.7s,baz=196,slow=9.0,SNR=7.9						
MJB9	Matsu-Tunnel	38.49	17	eP	P	23 04 14.8	-0.3
	24nm,1.7s						
LZH	Lanzhou	41.28	333	eP	P	23 04 38.8	+0.4
LZH				pP	sP	23 04 56.8	-0.5
LZH				sP	pP	23 05 02.5	+11
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC	Hu-ho-hao-te	42.75	345	eP	P	23 04 52.0	+1.7
HHC				pP	sP	23 05 10.5	+1.3
HHC				sP	pP	23 05 19.5	+16
HHC				S	S	23 11 11.5	+0.7
HHC				sS	sS	23 11 43.5	+11
HHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,22nm,5.5s						
HHC				LR	LR		
	comp=N,440nm,16.4s						
HHC				LR	LR		
	comp=E,550nm,16.4s						
HHC				LR	LR		
	comp=Z,330nm,16.4s						
USRK	Ussuriysk Ar.	44.63	7	P	P	23 05 05.3	+0.2
	2.5nm,0.7s,baz=144,slow=5.2						
PALK	Pallekele	45.12	280	LR	LR	23 23 43.0	
	comp=Z,53nm,20.9s,baz=118,slow=36						
GTA	Gaotai	45.83	332	eP	P	23 05 15.5	+0.5
GTA				pP	sP	23 05 34.0	0.0
GTA				sP	pP	23 05 43.0	+15
GTA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ASAJ	Asahikawa	46.76	17	P	P	23 05 22.4	+0.4
	3.7nm,0.8s,baz=192,slow=14,SNR=3.0						
SONM	Songino Array	50.62	344	P	P	23 05 49.9	-1.9
	2.2nm,0.8s,baz=159,slow=8.8,SNR=11						
SONM				LR	LR	23 27 48.3	
	comp=Z,34nm,20.6s,baz=144,slow=37						
SONA1	Songino Array	50.63	344	eP	P	23 05 52.1	+0.2
WMQ	Urumqi	55.21	327	P	P	23 06 27.0	+1.4
WMQ				sP	sP	23 06 54.8	+10
WMQ				pmax	pmax		
	comp=Z,30nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,200nm,3.9s						
WMQ				LR	LR		
	comp=N,86nm,20.9s						
WMQ				LR	LR		
	comp=E,58nm,20.9s						
WMQ				LR	LR		
	comp=Z,75nm,18.9s						
PETK	Petropavlovsk-	59.60	22	P	P	23 06 56.1	-0.1
	2.7nm,0.6s,baz=187,slow=11						
KSH	Kashi	59.90	317	P	P	23 07 00.3	+1.5
KSH				pP	sP	23 07 19.3	+1.2
KSH				PP	PP	23 09 17.0	+5.5
KSH				pmax	pmax		
	comp=Z,260nm,4.5s						
MK01	Makanchi Array	60.02	327	eP	P	23 06 58.8	-0.5
MK31	Makanchi Array	60.04	327	eP	P	23 06 59.1	-0.4
MKAR	Makanchi Array	60.04	327	P	P	23 06 57.6	-1.9
	3.3nm,0.7s,baz=119,slow=7.6,SNR=30						
MKAR	Makanchi Array	60.04	327	eP	P	23 06 59.0	-0.5
	20nm,0.8s						
ZALV	Zalesovo Beam	63.49	335	P	P	23 07 21.4	-1.1
	1.5nm,0.7s,baz=124,slow=7.7,SNR=7.3						
KURBB	Kurchatov Arra	64.33	329	P	P	23 07 26.7	-1.4
	4.0nm,0.8s,baz=127,slow=6.0,SNR=33						
KURK	Kurchatov	64.34	329	eP	P	23 07 28.5	+0.4
	47nm,0.5s						
KK31	Karatay Array	65.20	319	eP	P	23 07 34.2	+0.2
KKAR	Karatay Array	65.20	319	eP	P	23 07 33.3	-0.7
CASY	Casey	66.75	186	eP	P	23 07 39.9	-3.5
	0.9nm,0.4s						
BVAR	Borovoye Array	69.88	328	P	P	23 08 02.0	-1.3
	3.1nm,0.9s,baz=128,slow=5.9,SNR=17						
BRVK	Borovoye	69.95	328	eP	P	23 08 03.1	-0.6
	5.5nm,1.1s						
GEYT	Alibeck	72.30	310	P	P	23 08 17.4	-1.0
	0.7nm,0.7s,baz=119,slow=5.1,SNR=3.5						
ABKAR	Akbulak array	74.33	322	eP	P	23 08 29.4	-0.6
AKTO	Aktyubinsk	75.89	323	P	P	23 08 38.1	-0.9
	4.7nm,0.7s,baz=103,slow=6.2,SNR=18						
OPO	Ambohidratompo	78.68	251	P	P	23 08 55.4	0.0
	3.9nm,0.8s,baz=45,slow=2.9,SNR=4.8						
KBZ	Khabaz	84.67	314	P	P	23 09 26.3	0.0
	2.3nm,0.8s,baz=39,slow=2.4,SNR=4.2						
ASF	Jabal al Asfar	88.78	302	P	P	23 09 47.0	+0.3
	3.8nm,0.9s,baz=22,slow=3.6,SNR=8.4						
BRTR	Keskin Array B	91.44	310	P	P	23 09 57.2	-1.8
	0.9nm,0.8s,baz=70,slow=4.1,SNR=5.2						
CSS	Mathiatis	91.76	305	eP	P	23 10 00.1	-0.4
	7.2nm,0.9s						
MLR	Muntele Rosu	96.74	316	P	P	23 10 22.7	-0.5
	0.7nm,1.1s,baz=164,slow=7.4						
BUR04	Bucovina Ar. S	96.98	318	eP	P	23 10 24.0	-0.2
BUR08	Bucovina Ar. S	96.99	318	eP	P	23 10 23.6	-0.7
TORD	Torodi Ar. Bea	122.71	285	PKP	PKPdf	23 15 48.7	-0.3
	0.7nm,0.8s,baz=96,slow=1.5						

*IDC **30** 23:01:13.4±1.4, 12°.64S×165°.44E, h0km, mb3.8/6, mb1 4.0/8, mb1mx3.7/51, mbtmp3.9/8, ML4.1/2, Error ellipse: s-maj=36.8km s-min=26.2km az=124.0*
*ISCJB **30** 23:01:16.8±0.6, 12°.70S±0°.09×165°.34E±0°.07, h33km, mb4.1/13, Error ellipse: s-maj=13.6km s-min=8.6km az=31.4*
*NEIC **30** 23:01:18.8±1.2, 12°.66S×165°.41E, h36km±11km, mb4.2/7, Error ellipse: s-maj=11.2km s-min=8.9km az=205.0*

ISC 30 23:01:18.7±0.7, 12°.75±0°.1×165°.42E±0°.10, h35km, n16, σ0$69/17, mb4.1/13, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.25	300	Pn	Pn	23 02 48.6	+0.2
HNR	14nm,0.3s,baz=180,slow=14,SNR=3.6			Sn	Sn	23 03 58.7	0.0
	1.3nm,0.3s,baz=202,slow=19,SNR=2.3						
DZM	Mont Dzumac	9.42	174	Pn	Pn	23 03 32.2	+0.1
	0.5nm,0.3s,baz=348,slow=15,SNR=18						
PMG	Port Moresby	18.21	278	P	Pn	23 05 28.8	-0.1
	1.2nm,0.5s						
AFI	Afiamalu	22.23	96	P	P	23 06 12.2	-0.4
	22nm,0.1s						
WRAB	Tennant Creek	30.65	252	P	P	23 07 29.3	-0.8
	0.8nm,0.9s						
WRA	Warramunga Arr	30.66	252	P	P	23 07 29.5	-0.7
	0.4nm,0.7s,baz=85,slow=9.3,SNR=3.3						
ASAR	Alice Springs	31.82	245	P	P	23 07 39.8	-0.6
	0.7nm,0.8s,baz=68,slow=8.5,SNR=5.6						
FITZ	Fitzroy Crossi	38.68	257	P	P	23 08 39.7	+0.3
	2.4nm,0.6s,baz=66,slow=8.1,SNR=6.5						
CASY	Casey	64.78	201	P	P	23 11 53.6	+0.2
	0.5nm,0.6s						
HIA	Hailar	73.60	331	P	P	23 12 49.0	+0.7
	9.6nm,0.5s						
QSPA	South Pole Qui	77.37	180	P	P	23 13 10.4	+0.5
	4.2nm,1.1s						
SONM	Songino Array	79.76	324	P	P	23 13 24.5	+1.2
	0.3nm,0.4s,baz=108,slow=4.7,SNR=2.5						
ILAR	Eielson Array	85.12	19	P	P	23 13 50.8	0.0
	1.0nm,0.8s,baz=232,slow=5.1,SNR=10						
CMB	Columbia Colle	85.61	50	P	P	23 13 54.6	+0.7
	1.8nm,0.6s						
WALA	Waterton Lakes	93.42	41	P	P	23 14 29.5	-1.1
	1.3nm,0.6s						
MKAR	Makanchi Array	94.46	317	P	P	23 14 34.4	-0.9
	0.5nm,0.8s,baz=102,slow=3.4,SNR=3.7						

IDC 30 23:13:14.4±1.8, 8°.94S×125°.29E, h0km, mb3.6/1, mb1 4.0/4, mb1mx3.5/50, mbtmp3.8/4, ML3.8/3, Error ellipse: s-maj=100.0km s-min=27.3km az=66.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	9.12	178	Pn	Pn	23 15 27.4	+0.1
FITZ	0.6nm,0.3s,baz=3.1,slow=11,SNR=37			Sn	Sn	23 17 00.2	-10
	3.6nm,0.3s,baz=96,slow=19,SNR=14						
WRA	Warramunga Arr	14.01	142	Pn	Pn	23 16 34.2	-0.1
	0.7nm,0.3s,baz=316,slow=13,SNR=28						
WRA				Sn	Sn	23 18 57.3	-13
	1.3nm,0.3s,baz=325,slow=23,SNR=10						
ASAR	Alice Springs	16.81	152	Pn	Pn	23 17 11.3	0.0
	0.3nm,0.3s,baz=324,slow=11,SNR=20						
ASAR				Sn	Sn	23 20 03.9	-15
	0.3nm,0.3s,baz=323,slow=23,SNR=7.6						
MKAR	Makanchi Array	67.39	330	P	P	23 24 11.7	0.0
	0.3nm,0.5s,baz=135,slow=7.6,SNR=6.1						

IDC 30 23:15:42.7±2.0, 14°.95S×174°.21W, h0km, mb3.6/3, mb1 4.0/4, mb1mx3.6/45, mbtmp3.7/4, ML4.2/1, Error ellipse: s-maj=109.6km s-min=24.6km az=152.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.58	67	Pn	Pn	23 16 25.9	+0.1
	49nm,0.3s,baz=225,slow=11,SNR=60						
AFI				Sn	Sn	23 16 50.6	-7.3
	36nm,0.3s,baz=240,slow=20,SNR=8.2						
WRA	Warramunga Arr	49.19	256	P	P	23 24 33.5	+0.4
	0.2nm,0.5s,baz=93,slow=7.9,SNR=4.1						
ASAR	Alice Springs	49.51	252	P	P	23 24 35.0	-0.5
	1.5nm,0.6s,baz=86,slow=8.3,SNR=13						
ILAR	Eielson Array	82.16	11	P	P	23 28 05.0	-0.1
	0.2nm,0.6s,baz=213,slow=6.5,SNR=3.7						

MAN 30 23:17:49.5, 10°.28N×125°.13E, h6km, mb4.3, ML3.1, MS2.8, 1C-1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	Maasin	0.30	241	eP	Pb	23 17 56.8	-0.5
MSLP				eS	Sb	23 18 03.5	+1.0
SCPH	Surigao	0.61	144⇓	eP	Pb	23 18 02.4	-0.1
SCPH				eS	Sn	23 18 13.3	-1.6
PLP	Palo	0.89	351⇑	eP	Pg	23 18 05.5	-1.1
PLP				i S	Sg	23 18 18.0	-0.1
LLP	Lapu-Lapu	1.14	272	eP	Pg	23 18 10.3	-1.1
LLP				eS	Sn	23 18 28.2	+0.2
BESP	Borongan	1.34	13	eP	Pb	23 18 15.1	0.0
CNP	Catarman	2.26	348	eP	Pn	23 18 26.2	-1.2
CNP				eS	Sb	23 18 58.0	-1.0

*IDC **30** 23:22:26.1±1.6, 0°.89N×125°.93E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.5/50, mbtmp3.8/5, Error ellipse: s-maj=173.6km s-min=19.8km az=66.0*
*ISCJB **30** 23:22:27.7±1.1, 1°.5N±0°.1×127°.3E±0°.3, h35km, mb3.7/5, Error ellipse: s-maj=42.5km s-min=13.7km az=169.6*
*DJA **30** 23:22:32.7±3.8, 1°N±18°×12°.7E±2°.6, h129km±50km, M3.5/5, MLv3.5/5*

ISC 30 23:22:29.8±1.4, 1°.5N±0°.1×127°.3E±0°.3, h35km, n8, σ0$84/8, mb3.8/5, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	Labuha	2.12	173	P	Pn	23 23 04.2	+1.4
SANI	Sanana	3.73	200	P	Pn	23 23 25.5	+0.5
NLAI	Namlea	4.70	182	P	Pn	23 23 37.4	-0.8
WRA	Warramunga Arr	22.40	162	P	P	23 27 25.5	0.0
	2.9nm,0.6s,baz=337,slow=11,SNR=16						
ASAR	Alice Springs	25.83	166	P	P	23 27 57.5	-0.6
	0.5nm,0.5s,baz=348,slow=8.6,SNR=9.0						
MKAR	Makanchi Array	59.69	326	P	P	23 32 30.9	+0.1
	0.4nm,0.5s,baz=136,slow=7.2,SNR=8.5						
KURBB	Kurchatov Arra	63.90	328	P	P	23 32 59.4	+0.3
	0.5nm,0.3s,baz=120,slow=5.8,SNR=7.7						
VNDA	Vanda	81.15	173	P	P	23 34 40.7	-0.5
	0.5nm,0.9s,baz=335,slow=6.3,SNR=3.2						

TRN 30 23:30:01.0, 12°.43N×60°.06W, h27km, MD3.7, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBGH	Gun Hill	0.86	35	eP	Pb	23 30 20.2	+2.8
BBGH				eS	Sn	23 30 35.8	+6.7
BBGH	Gun Hill	0.86	35	e	Pb	23 30 42.5	+25
SVCV	St. Vincent, C	1.35	309	eP	Pn	23 30 24.5	+0.4
SVCV				eS	Sb	23 30 41.9	-0.6
FCV	Fort Charlotte	1.36	302	eP	Pn	23 30 25.0	+0.8
FCV				eS	Sb	23 30 43.5	+0.6
SSV	Crater Summit	1.42	309	eP	Pb	23 30 26.4	-0.4
SSV				eS	Sb	23 30 45.5	+0.9
SVV	Soufriere Volc	1.43	308	eP	Pn	23 30 25.6	+0.4
SVV				eS	Sb	23 30 44.8	-0.1
SVB	Belmont	1.43	306	eP	Pn	23 30 25.5	+0.3
SVB				eS	Sb	23 30 45.7	+0.8
GRSS	Sisters	1.52	265	eP	Pn	23 30 27.3	+0.9
GRSS				eS	Sb	23 30 46.4	-1.0
GRHS	Sauteurs	1.56	263	eP	Pb	23 30 28.1	-1.0
GRHS				eS	Sb	23 30 47.4	-1.0
GRGR	Grenville	1.58	259	eP	Pn	23 30 27.8	+0.6
GRGR				eS	Sn	23 30 47.9	+1.0
SLB	Belfond	1.69	326	eP	Pn	23 30 29.9	+1.1
SLB				eS	Sn	23 30 50.6	+1.1
BIM	Bigot	2.30	335	eP	Pn	23 30 38.8	+1.7
BIM				eS	Sn	23 31 05.1	+0.5
LPMF	Morne Lapointe	2.31	338	eP	Pb	23 30 39.7	-2.2
ZAM	Aeronautique	2.33	336	eP	Pb	23 30 40.8	-1.5
GBMF	Grand Be	2.59	336	eP	Pb	23 30 44.1	-2.7
BAMF	Morne Balai	2.60	336	eP	Pn	23 30 44.0	+2.7
PCM	Pelee Case Pet	2.62	335	eP	Pb	23 30 44.6	-2.7

*IDC **30** 23:40:32.7±2.3, 10°.33N×125°.33E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.4/55, mbtmp3.6/5, ML4.4/1, MS3.0/3, Ms1 3.1/3, ms1mx2.6/33, Error ellipse: s-maj=175.2km s-min=19.7km az=68.0*
*ISCJB **30** 23:40:34.7±1.0, 10°.30N±0°.03×125°.18E±0°.04, h14km±6km, mb3.5/4, MS3.3/2, Error ellipse: s-maj=6.6km s-min=5.4km az=160.3*
*MAN **30** 23:40:34.3, 10°.32N×125°.09E, h2km, mb4.6, ML3.5, MS3.3*

ISC 30 23:40:34.0±1.5, 10°.34N±0°.03×125°.10E±0°.04, h8km±12km, n17, σ1$15/23, mb3.5/4, 2C-2D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	Maasin	0.31	230	eP	Pb	23 40 41.3	-0.5
MSLP				eS	Sb	23 40 48.2	+1.2
SCPH	Surigao	0.67	145⇓	eP	Pg	23 40 47.1	+0.2
SCPH				eS	Sb	23 40 57.5	+0.1
PLP	Palo	0.83	352⇑	eP	Pg	23 40 50.6	+0.6
PLP				i S	Sb	23 41 03.2	+1.1
LLP	Lapu-Lapu	1.11	269⇓	eP	Pb	23 40 55.1	-0.5
LLP				eS	Sn	23 41 12.1	+0.6
BESP	Borongan	1.30	15	eP	Pn	23 40 57.7	-0.8
BESP				eS	Sb	23 41 15.5	-0.1
BUTP	Butuan	1.45	159	eP	Pb	23 41 01.2	0.0
CNP	Catarman	2.20	349	eP	Pb	23 41 13.5	-0.7
CNP				eS	Sb	23 41 41.5	-0.1
BUKP	Musuan	2.44	181	eP	Pn	23 41 14.0	-0.2
GUIM	Jordan	2.48	277	eP	Pb	23 41 18.0	-1.0
GUIM				eS	Sb	23 41 47.9	-1.8
RCP	Roxas	2.61	298⇑	eP	Pn	23 41 18.7	+2.1
RCP				eS	Sb	23 41 51.0	-2.4
DAV	Davao City (W)	3.28	172	Pn	Pn	23 41 25.9	+0.1
	41nm,0.3s,baz=350,slow=6.1,SNR=1.9						
DAV				LR	LR	23 42 20.1	
	comp=Z,91nm,19.6s,baz=328,slow=33						
WRA	Warramunga Arr	31.43	163	P	P	23 46 54.4	-1.6
	0.5nm,0.8s,baz=340,slow=9.7,SNR=2.9						
ASAR	Alice Springs	34.87	166	P	P	23 47 25.9	-0.1
	0.3nm,0.5s,baz=349,slow=6.7,SNR=6.8						
HNR	Honiara	39.85	118	LR	LR	00 03 27.3	
	comp=Z,35nm,19.2s,baz=297,slow=35						
MKAR	Makanchi Array	51.28	323	P	P	23 49 38.4	-0.2
	0.4nm,0.7s,baz=131,slow=6.5,SNR=2.7						
KURBB	Kurchatov Arra	55.37	326	P	P	23 50 10.3	+1.8
	0.4nm,0.6s,baz=124,slow=6.6,SNR=3.6						
NOA	NORSAR Array B	92.19	334	LR	LR	00 40 05.5	
	comp=Z,12nm,18.0s,baz=170,slow=39						

*ISCJB **30** 23:44:15.4±1.3, 12°.64N±0°.06×89°.00W±0°.05, h23km±7km, mb3.3/3, Error ellipse: s-maj=12.8km s-min=5.1km az=36.8*
*UCR **30** 23:44:17.5±1.5, 12°.76N×88°.96W, h26km±4km, ML3.8*
*IDC **30** 23:44:19.3±8.1, 14°.13N×87°.97W, h0km, mb3.4/3, mb1 3.9/4, mb1mx3.5/40, mbtmp3.6/4, ML2.8/1, Error ellipse: s-maj=273.0km s-min=34.2km az=32.0*

ISC 30 23:44:14.9±1.4, 12°.63N±0°.06×89°.01W±0°.05, h19km±3km, n36, σ1$07/45, mb3.4/3, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UESV	Ojushtada	0.78	16	eP	Pn	23 44 34.1	+3.2
UESV				eS	Sn	23 44 46.3	+4.2
UESV				IAML		23 44 51.8	
	comp=Z,4μm,0.3s						
LFRS	El Faro	0.99	357	eP	Pn	23 44 33.6	-0.3
SNVI	San Vicente	0.99	10	eP	Pn	23 44 33.7	-0.3
LOMA	San Marcos	1.03	351	eP	Pn	23 44 34.5	+0.1
LOMA				eS	Sb	23 44 46.7	-0.6
LOMA				IAML		23 44 48.4	
	comp=Z,5μm,0.3s						
SANM	San Marcos	1.04	351	eP	Pn	23 44 34.5	-0.1
SANM				IAML		23 44 34.8	
	comp=Z,2μm,0.2s						
SANM				eS	Sb	23 44 47.0	-0.7
LCY	Lacayo	1.05	41	eP	Pn	23 44 34.5	-0.3
COLS	Colinas	1.07	345	eP	Pg	23 44 35.5	-0.2
COLS				eS	Sb	23 44 48.2	-0.3
PACA	Pacayal	1.07	39	eP	Pn	23 44 34.9	-0.1
PACA				eS	Sg	23 44 49.6	-0.1
VSM	San Miguel	1.07	42	eP	Pn	23 44 34.8	-0.3
SNET	Serv Nac Est T	1.07	348	eP	Pn	23 44 35.1	0.0
SNET				eS	Sb	23 44 48.0	-0.7
SNET				IAML		23 44 48.6	
	comp=Z,3μm,0.4s						
OPAM	San Salvador	1.10	350	eP	Pn	23 44 35.4	+0.1
OPAM				eS	Sb	23 44 48.9	-0.4
OPAM				IAML		23 44 51.5	
	comp=Z,2μm,0.1s						
UDBS	Soyapango	1.10	352	eP	Pn	23 44 35.4	+0.1
UDBS				eS	Sb	23 44 48.4	-1.0
UDBS				IAML		23 44 49.6	
	comp=Z,4μm,0.3s						
LBRS	Las Brisas	1.10	358	eP	Pn	23 44 35.6	+0.2
UEES	San Salvador	1.11	348	eP	Pb	23 44 35.6	0.0
LFU	La Fuente	1.12	355	eP	Pb	23 44 35.9	+0.2
BOQS	Boqueron	1.13	346	eP	Pg	23 44 36.5	-0.4
CEDA	San Andres	1.23	342	eP	Pb	23 44 37.8	+0.3
CEDA				eS	Sn	23 44 53.1	-0.1
CEDA				IAML		23 45 00.5	
	comp=Z,4μm,0.4s						
CNCH	Conchagua	1.31	61	eP	Pg	23 44 40.2	-0.1
SBLS	San Blas	1.34	334	eP	Pb	23 44 39.9	+0.3
RTR	El Retiro	1.40	334	eP	Pb	23 44 40.8	+0.2
LLGN	La Laguna	1.53	2	eP	Pb	23 44 42.0	-0.8
LLGN				eS	Sn	23 45 00.2	-0.6
MTO3	Montecristo	1.79	349	eP	Pn	23 44 45.8	+0.8
IXG	Ixpaco	2.08	318	eP	Pn	23 44 50.5	+1.5
TGUH	Tegucigalpa,Un	2.21	50	eP	Pn	23 44 51.2	+0.7
CNGN	Cerro Negro	2.26	93	eP	Pn	23 44 52.2	+0.9
COPN	Copaltepe	2.40	100	eP	Pn	23 44 53.3	+0.1
MOMN	Momotombo	2.42	95	eP	Pn	23 44 53.7	+0.1
ESTN	Estel	2.62	79	eP	Pn	23 44 57.4	+1.2
MGAN	Managua	2.74	100	IAML		23 45 40.8	
	comp=E,108nm,0.6s						
RCON	San Juan de Ri	2.91	73	eP	Pn	23 45 01.2	+0.9
MATN	Matagalpa	3.02	84	eP	Pn	23 45 02.3	+0.5
BOAB	BOACO BROADBAN	3.27	93	eP	Pn	23 45 06.0	+0.8
SDV	Santo Domingo	18.43	100	P	P	23 48 28.6	-1.0
	comp=E,0.3nm,0.3s,baz=280,slow=11,SNR=3.1						
TXAR	Lajitas Array	21.49	323	P	P	23 49 04.2	+1.4
	comp=E,0.5nm,0.5s,baz=145,slow=11,SNR=7.4						
PDAR	Pinedale Array	34.91	333	P	P	23 51 06.1	+0.5
	comp=E,0.2nm,0.4s,baz=128,slow=9.4,SNR=2.3						
YKA	Yellowknife Ar	53.05	345	P	P	23 53 28.6	-1.9
	comp=E,0.2nm,0.4s,baz=137,slow=8.3,SNR=4.1						

ISC Computed Locations for June 2012

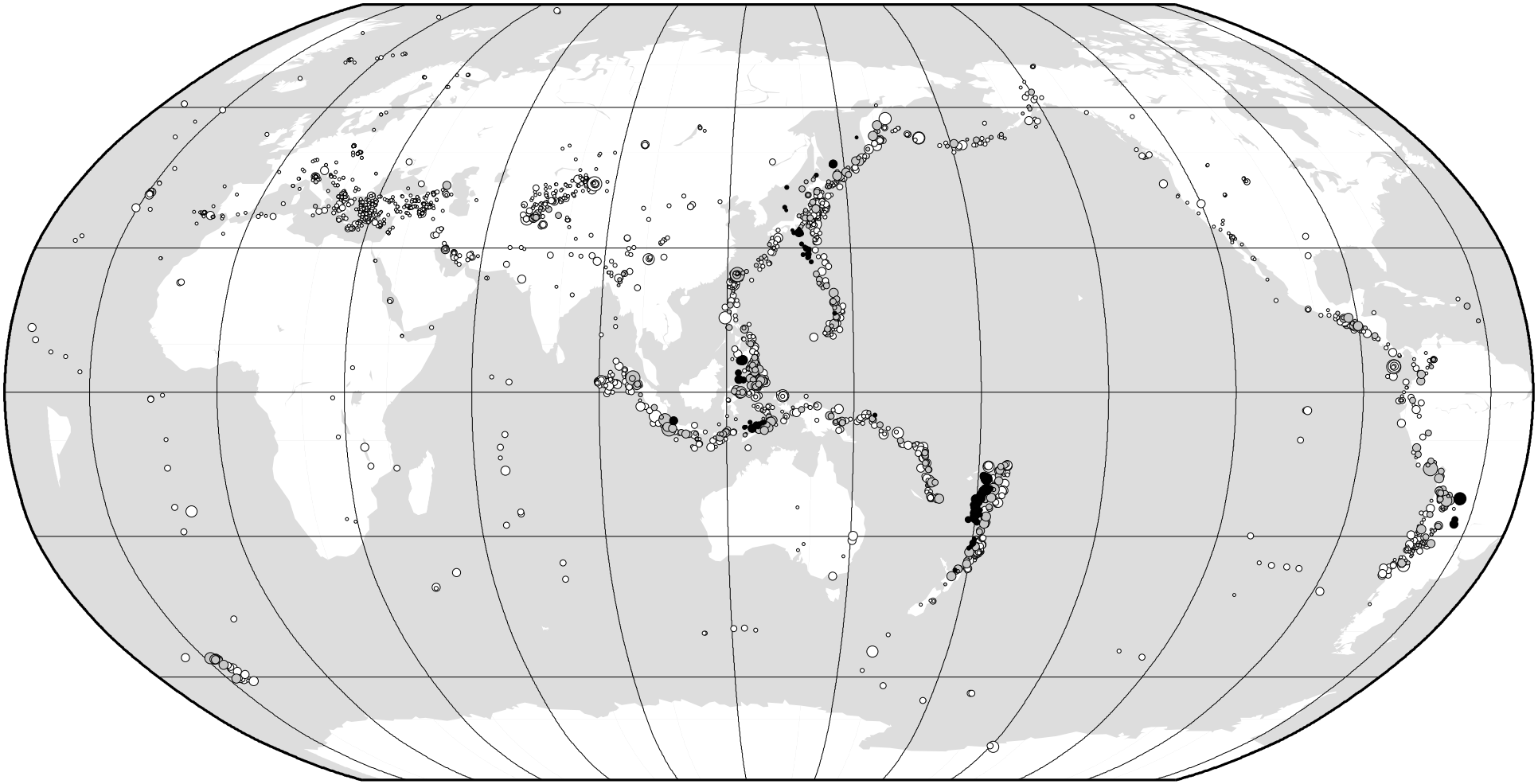

Depth (km)	0-70	70-300	>300
M=8	○	●	●
M=6.5	○	●	●
M=4	○	●	●

Robinson Projection, centred on 0˚N,130˚E

3047 Events